



# wwPDB X-ray Structure Validation Summary Report ⓘ

Oct 28, 2024 – 08:54 AM JST

PDB ID : 4YUU  
Title : Crystal structure of oxygen-evolving photosystem II from a red alga  
Authors : Ago, H.; Shen, J.-R.  
Deposited on : 2015-03-19  
Resolution : 2.77 Å(reported)

This is a wwPDB X-ray Structure Validation Summary Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

|                                |   |                                                                    |
|--------------------------------|---|--------------------------------------------------------------------|
| MolProbity                     | : | 4.02b-467                                                          |
| Mogul                          | : | 1.8.5 (274361), CSD as541be (2020)                                 |
| Xtriage (Phenix)               | : | 1.13                                                               |
| EDS                            | : | 3.0                                                                |
| buster-report                  | : | 1.1.7 (2018)                                                       |
| Percentile statistics          | : | 20231227.v01 (using entries in the PDB archive December 27th 2023) |
| CCP4                           | : | 9.0.003 (Gargrove)                                                 |
| Density-Fitness                | : | 1.0.11                                                             |
| Ideal geometry (proteins)      | : | Engh & Huber (2001)                                                |
| Ideal geometry (DNA, RNA)      | : | Parkinson et al. (1996)                                            |
| Validation Pipeline (wwPDB-VP) | : | 2.39                                                               |

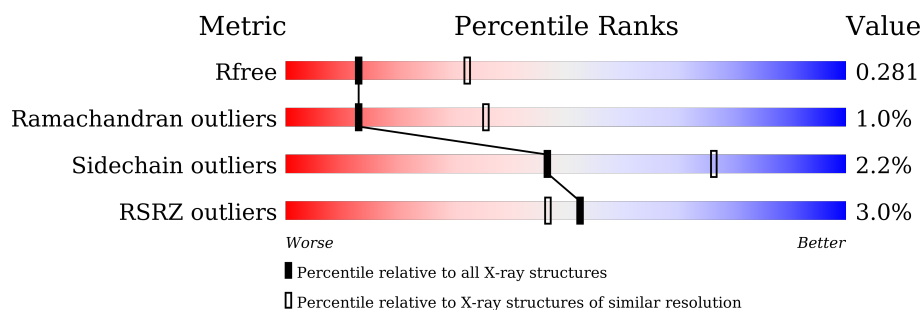
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.77 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



| Metric                | Whole archive<br>(#Entries) | Similar resolution<br>(#Entries, resolution range(Å)) |
|-----------------------|-----------------------------|-------------------------------------------------------|
| $R_{free}$            | 164625                      | 4924 (2.80-2.76)                                      |
| Ramachandran outliers | 177936                      | 5386 (2.80-2.76)                                      |
| Sidechain outliers    | 177891                      | 5388 (2.80-2.76)                                      |
| RSRZ outliers         | 164620                      | 4926 (2.80-2.76)                                      |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

| Mol | Chain | Length | Quality of chain                                                                  |
|-----|-------|--------|-----------------------------------------------------------------------------------|
| 1   | A1    | 344    | <div> <div>%</div> <div> <div></div> <div>99%</div> <div>.</div> </div> </div>    |
| 1   | A2    | 344    | <div> <div>%</div> <div> <div></div> <div>95%</div> <div>..</div> </div> </div>   |
| 1   | a1    | 344    | <div> <div></div> <div> <div>96%</div> <div>..</div> </div> </div>                |
| 1   | a2    | 344    | <div> <div></div> <div> <div>95%</div> <div>..</div> </div> </div>                |
| 2   | B1    | 509    | <div> <div>%</div> <div> <div></div> <div>93%</div> <div>• 5%</div> </div> </div> |
| 2   | B2    | 509    | <div> <div>%</div> <div> <div></div> <div>96%</div> <div>..</div> </div> </div>   |
| 2   | b1    | 509    | <div> <div></div> <div> <div>96%</div> <div>..</div> </div> </div>                |

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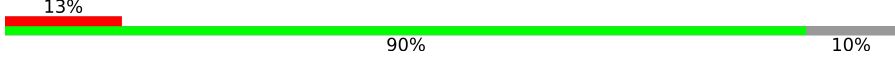
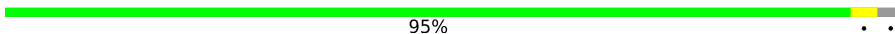
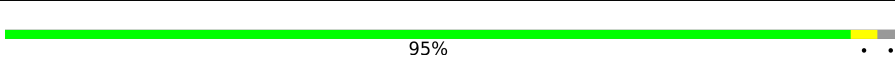
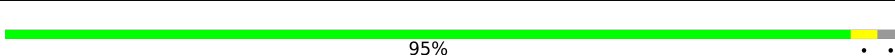
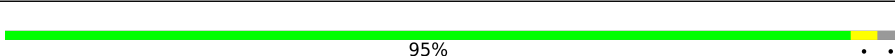
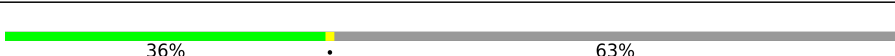
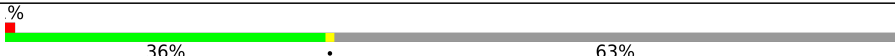
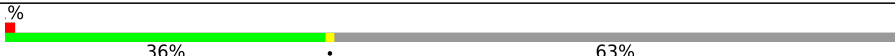
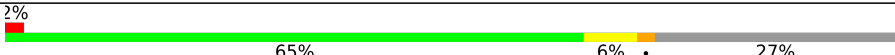
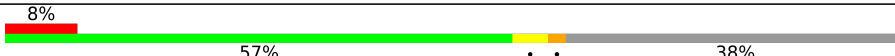
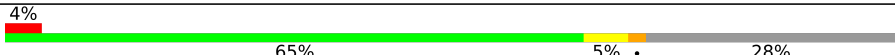
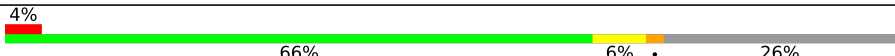
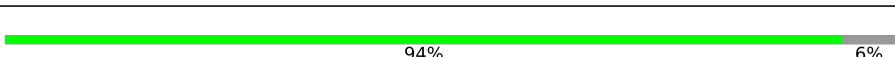
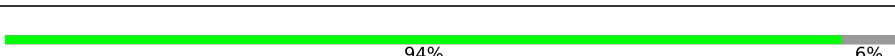
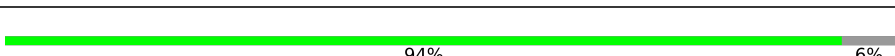
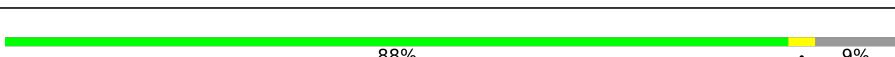
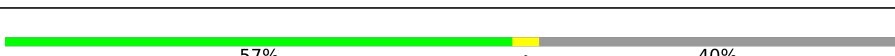


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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 2   | b2    | 509    | <br>2% 92% 6%    |
| 3   | C1    | 460    | <br>% 96% ..     |
| 3   | C2    | 460    | <br>8% 96% ..    |
| 3   | c1    | 460    | <br>% 96% ..     |
| 3   | c2    | 460    | <br>% 96% ..     |
| 4   | D1    | 351    | <br>% 95% ..     |
| 4   | D2    | 351    | <br>% 96% ..     |
| 4   | d1    | 351    | <br>% 96% ..     |
| 4   | d2    | 351    | <br>% 96% ..     |
| 5   | E1    | 84     | <br>6% 73% 27%   |
| 5   | E2    | 84     | <br>11% 75% 25%  |
| 5   | e1    | 84     | <br>2% 67% 32%   |
| 5   | e2    | 84     | <br>4% 71% 29%   |
| 6   | F1    | 43     | <br>63% 35%      |
| 6   | F2    | 43     | <br>14% 70% 28%  |
| 6   | f1    | 43     | <br>2% 65% 33%   |
| 6   | f2    | 43     | <br>5% 65% 33%   |
| 7   | H1    | 67     | <br>% 87% 10%    |
| 7   | H2    | 67     | <br>91% 7%       |
| 7   | h1    | 67     | <br>90% 7%       |
| 7   | h2    | 67     | <br>4% 90% 7%    |
| 8   | I1    | 38     | <br>87% 11%      |
| 8   | I2    | 38     | <br>3% 89% 8%    |
| 8   | i1    | 38     | <br>87% 11%      |
| 8   | i2    | 38     | <br>84% 13%      |

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| Mol | Chain | Length | Quality of chain                                                                     |
|-----|-------|--------|--------------------------------------------------------------------------------------|
| 9   | J1    | 39     |    |
| 9   | J2    | 39     |    |
| 9   | j1    | 39     |    |
| 9   | j2    | 39     |    |
| 10  | K1    | 41     |    |
| 10  | K2    | 41     |    |
| 10  | k1    | 41     |    |
| 10  | k2    | 41     |    |
| 11  | L1    | 38     |    |
| 11  | L2    | 38     |    |
| 11  | l1    | 38     |    |
| 11  | l2    | 38     |   |
| 12  | M1    | 108    |  |
| 12  | M2    | 108    |  |
| 12  | m1    | 108    |  |
| 12  | m2    | 108    |  |
| 13  | O1    | 329    |  |
| 13  | O2    | 329    |  |
| 13  | o1    | 329    |  |
| 13  | o2    | 329    |  |
| 14  | T1    | 32     |  |
| 14  | T2    | 32     |  |
| 14  | t1    | 32     |  |
| 14  | t2    | 32     |  |
| 15  | U1    | 155    |  |

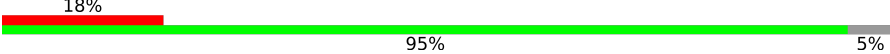
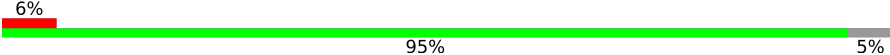
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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 15  | U2    | 155    |                  |
| 15  | u1    | 155    |                  |
| 15  | u2    | 155    |                  |
| 16  | V1    | 155    |                  |
| 16  | V2    | 155    |                  |
| 16  | v1    | 155    |                  |
| 16  | v2    | 155    |                  |
| 17  | Y1    | 35     |                  |
| 17  | Y2    | 35     |                  |
| 17  | y1    | 35     |                  |
| 17  | y2    | 35     |                  |
| 18  | X1    | 40     |                  |
| 18  | X2    | 40     |                  |
| 18  | x1    | 40     |                  |
| 18  | x2    | 40     |                  |
| 19  | S1    | 46     |                  |
| 19  | S2    | 46     |                  |
| 19  | s1    | 46     |                  |
| 19  | s2    | 46     |                  |
| 20  | W1    | 25     |                  |
| 20  | W2    | 25     |                  |
| 20  | w1    | 25     |                  |
| 20  | w2    | 25     |                  |
| 21  | Q2    | 218    |                  |
| 21  | q1    | 218    |                  |

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| Mol | Chain | Length | Quality of chain                                                                   |
|-----|-------|--------|------------------------------------------------------------------------------------|
| 22  | Z2    | 62     |  |
| 22  | z2    | 62     |  |

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 25  | CLA  | A1    | 403 | X         | -        | -       | -                |
| 25  | CLA  | A1    | 404 | X         | -        | -       | -                |
| 25  | CLA  | A1    | 405 | X         | -        | -       | -                |
| 25  | CLA  | A1    | 406 | X         | -        | -       | -                |
| 25  | CLA  | A2    | 402 | X         | -        | -       | -                |
| 25  | CLA  | A2    | 403 | X         | -        | -       | -                |
| 25  | CLA  | A2    | 404 | X         | -        | -       | -                |
| 25  | CLA  | B1    | 604 | X         | -        | -       | -                |
| 25  | CLA  | B1    | 605 | X         | -        | -       | -                |
| 25  | CLA  | B1    | 606 | X         | -        | -       | -                |
| 25  | CLA  | B1    | 607 | X         | -        | -       | -                |
| 25  | CLA  | B1    | 608 | X         | -        | -       | -                |
| 25  | CLA  | B1    | 609 | X         | -        | -       | -                |
| 25  | CLA  | B1    | 610 | X         | -        | -       | -                |
| 25  | CLA  | B1    | 612 | X         | -        | -       | -                |
| 25  | CLA  | B1    | 613 | X         | -        | -       | -                |
| 25  | CLA  | B1    | 614 | X         | -        | -       | -                |
| 25  | CLA  | B1    | 615 | X         | -        | -       | -                |
| 25  | CLA  | B1    | 616 | X         | -        | -       | -                |
| 25  | CLA  | B1    | 617 | X         | -        | -       | -                |
| 25  | CLA  | B1    | 618 | X         | -        | -       | -                |
| 25  | CLA  | B1    | 619 | X         | -        | -       | -                |
| 25  | CLA  | B2    | 604 | X         | -        | -       | -                |
| 25  | CLA  | B2    | 605 | X         | -        | -       | -                |
| 25  | CLA  | B2    | 606 | X         | -        | -       | -                |
| 25  | CLA  | B2    | 607 | X         | -        | -       | -                |
| 25  | CLA  | B2    | 608 | X         | -        | -       | -                |
| 25  | CLA  | B2    | 609 | X         | -        | -       | -                |
| 25  | CLA  | B2    | 610 | X         | -        | -       | -                |
| 25  | CLA  | B2    | 611 | X         | -        | -       | -                |
| 25  | CLA  | B2    | 612 | X         | -        | -       | -                |
| 25  | CLA  | B2    | 613 | X         | -        | -       | -                |
| 25  | CLA  | B2    | 614 | X         | -        | -       | -                |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 25  | CLA  | B2    | 615 | X         | -        | -       | -                |
| 25  | CLA  | B2    | 616 | X         | -        | -       | -                |
| 25  | CLA  | B2    | 617 | X         | -        | -       | -                |
| 25  | CLA  | B2    | 618 | X         | -        | -       | -                |
| 25  | CLA  | B2    | 619 | X         | -        | -       | -                |
| 25  | CLA  | C1    | 502 | X         | -        | -       | -                |
| 25  | CLA  | C1    | 503 | X         | -        | -       | -                |
| 25  | CLA  | C1    | 504 | X         | -        | -       | -                |
| 25  | CLA  | C1    | 505 | X         | -        | -       | -                |
| 25  | CLA  | C1    | 506 | X         | -        | -       | -                |
| 25  | CLA  | C1    | 507 | X         | -        | -       | -                |
| 25  | CLA  | C1    | 508 | X         | -        | -       | -                |
| 25  | CLA  | C1    | 509 | X         | -        | -       | -                |
| 25  | CLA  | C1    | 510 | X         | -        | -       | -                |
| 25  | CLA  | C1    | 511 | X         | -        | -       | -                |
| 25  | CLA  | C1    | 512 | X         | -        | -       | -                |
| 25  | CLA  | C1    | 513 | X         | -        | -       | -                |
| 25  | CLA  | C1    | 514 | X         | -        | -       | -                |
| 25  | CLA  | C2    | 503 | X         | -        | -       | -                |
| 25  | CLA  | C2    | 504 | X         | -        | -       | -                |
| 25  | CLA  | C2    | 505 | X         | -        | -       | -                |
| 25  | CLA  | C2    | 506 | X         | -        | -       | -                |
| 25  | CLA  | C2    | 507 | X         | -        | -       | -                |
| 25  | CLA  | C2    | 508 | X         | -        | -       | -                |
| 25  | CLA  | C2    | 509 | X         | -        | -       | -                |
| 25  | CLA  | C2    | 510 | X         | -        | -       | -                |
| 25  | CLA  | C2    | 511 | X         | -        | -       | -                |
| 25  | CLA  | C2    | 513 | X         | -        | -       | -                |
| 25  | CLA  | C2    | 516 | X         | -        | -       | -                |
| 25  | CLA  | C2    | 518 | X         | -        | -       | -                |
| 25  | CLA  | D1    | 402 | X         | -        | -       | -                |
| 25  | CLA  | D1    | 403 | X         | -        | -       | -                |
| 25  | CLA  | D2    | 401 | X         | -        | -       | -                |
| 25  | CLA  | D2    | 404 | X         | -        | -       | -                |
| 25  | CLA  | D2    | 406 | X         | -        | -       | -                |
| 25  | CLA  | K2    | 101 | X         | -        | -       | -                |
| 25  | CLA  | a1    | 403 | X         | -        | -       | -                |
| 25  | CLA  | a1    | 404 | X         | -        | -       | -                |
| 25  | CLA  | a1    | 405 | X         | -        | -       | -                |
| 25  | CLA  | a2    | 404 | X         | -        | -       | -                |
| 25  | CLA  | a2    | 405 | X         | -        | -       | -                |
| 25  | CLA  | a2    | 413 | X         | -        | -       | -                |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 25  | CLA  | b1    | 604 | X         | -        | -       | -                |
| 25  | CLA  | b1    | 605 | X         | -        | -       | -                |
| 25  | CLA  | b1    | 606 | X         | -        | -       | -                |
| 25  | CLA  | b1    | 607 | X         | -        | -       | -                |
| 25  | CLA  | b1    | 608 | X         | -        | -       | -                |
| 25  | CLA  | b1    | 609 | X         | -        | -       | -                |
| 25  | CLA  | b1    | 610 | X         | -        | -       | -                |
| 25  | CLA  | b1    | 611 | X         | -        | -       | -                |
| 25  | CLA  | b1    | 612 | X         | -        | -       | -                |
| 25  | CLA  | b1    | 613 | X         | -        | -       | -                |
| 25  | CLA  | b1    | 614 | X         | -        | -       | -                |
| 25  | CLA  | b1    | 615 | X         | -        | -       | -                |
| 25  | CLA  | b1    | 616 | X         | -        | -       | -                |
| 25  | CLA  | b1    | 617 | X         | -        | -       | -                |
| 25  | CLA  | b1    | 619 | X         | -        | -       | -                |
| 25  | CLA  | b1    | 620 | X         | -        | -       | -                |
| 25  | CLA  | b2    | 604 | X         | -        | -       | -                |
| 25  | CLA  | b2    | 606 | X         | -        | -       | -                |
| 25  | CLA  | b2    | 608 | X         | -        | -       | -                |
| 25  | CLA  | b2    | 609 | X         | -        | -       | -                |
| 25  | CLA  | b2    | 610 | X         | -        | -       | -                |
| 25  | CLA  | b2    | 611 | X         | -        | -       | -                |
| 25  | CLA  | b2    | 612 | X         | -        | -       | -                |
| 25  | CLA  | b2    | 613 | X         | -        | -       | -                |
| 25  | CLA  | b2    | 614 | X         | -        | -       | -                |
| 25  | CLA  | b2    | 615 | X         | -        | -       | -                |
| 25  | CLA  | b2    | 616 | X         | -        | -       | -                |
| 25  | CLA  | b2    | 617 | X         | -        | -       | -                |
| 25  | CLA  | b2    | 618 | X         | -        | -       | -                |
| 25  | CLA  | b2    | 619 | X         | -        | -       | -                |
| 25  | CLA  | b2    | 620 | X         | -        | -       | -                |
| 25  | CLA  | b2    | 624 | X         | -        | -       | -                |
| 25  | CLA  | c1    | 503 | X         | -        | -       | -                |
| 25  | CLA  | c1    | 504 | X         | -        | -       | -                |
| 25  | CLA  | c1    | 505 | X         | -        | -       | -                |
| 25  | CLA  | c1    | 506 | X         | -        | -       | -                |
| 25  | CLA  | c1    | 507 | X         | -        | -       | -                |
| 25  | CLA  | c1    | 508 | X         | -        | -       | -                |
| 25  | CLA  | c1    | 509 | X         | -        | -       | -                |
| 25  | CLA  | c1    | 510 | X         | -        | -       | -                |
| 25  | CLA  | c1    | 511 | X         | -        | -       | -                |
| 25  | CLA  | c1    | 512 | X         | -        | -       | -                |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 25  | CLA  | c1    | 513 | X         | -        | -       | -                |
| 25  | CLA  | c1    | 515 | X         | -        | -       | -                |
| 25  | CLA  | c1    | 516 | X         | -        | -       | -                |
| 25  | CLA  | c2    | 502 | X         | -        | -       | -                |
| 25  | CLA  | c2    | 503 | X         | -        | -       | -                |
| 25  | CLA  | c2    | 504 | X         | -        | -       | -                |
| 25  | CLA  | c2    | 505 | X         | -        | -       | -                |
| 25  | CLA  | c2    | 506 | X         | -        | -       | -                |
| 25  | CLA  | c2    | 507 | X         | -        | -       | -                |
| 25  | CLA  | c2    | 508 | X         | -        | -       | -                |
| 25  | CLA  | c2    | 509 | X         | -        | -       | -                |
| 25  | CLA  | c2    | 510 | X         | -        | -       | -                |
| 25  | CLA  | c2    | 511 | X         | -        | -       | -                |
| 25  | CLA  | c2    | 512 | X         | -        | -       | -                |
| 25  | CLA  | c2    | 513 | X         | -        | -       | -                |
| 25  | CLA  | c2    | 515 | X         | -        | -       | -                |
| 25  | CLA  | d1    | 401 | X         | -        | -       | -                |
| 25  | CLA  | d1    | 404 | X         | -        | -       | -                |
| 25  | CLA  | d1    | 406 | X         | -        | -       | -                |
| 25  | CLA  | d2    | 402 | X         | -        | -       | -                |
| 25  | CLA  | d2    | 404 | X         | -        | -       | -                |
| 25  | CLA  | d2    | 405 | X         | -        | -       | -                |

## 2 Entry composition

There are 40 unique types of molecules in this entry. The entry contains 92765 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Photosystem II protein D1.

| Mol | Chain | Residues | Atoms |      |     |     |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|---------|-------|
| 1   | A1    | 344      | Total | C    | N   | O   | S  | 0       | 0       | 0     |
|     |       |          | 2609  | 1708 | 425 | 462 | 14 |         |         |       |
| 1   | a1    | 334      | Total | C    | N   | O   | S  | 0       | 0       | 0     |
|     |       |          | 2564  | 1676 | 421 | 454 | 13 |         |         |       |
| 1   | A2    | 332      | Total | C    | N   | O   | S  | 0       | 1       | 0     |
|     |       |          | 2475  | 1607 | 411 | 444 | 13 |         |         |       |
| 1   | a2    | 334      | Total | C    | N   | O   | S  | 0       | 0       | 0     |
|     |       |          | 2513  | 1638 | 410 | 452 | 13 |         |         |       |

- Molecule 2 is a protein called Photosystem II CP47 reaction center protein.

| Mol | Chain | Residues | Atoms |      |     |     |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|---------|-------|
| 2   | B1    | 483      | Total | C    | N   | O   | S  | 0       | 0       | 0     |
|     |       |          | 3703  | 2426 | 624 | 641 | 12 |         |         |       |
| 2   | b1    | 503      | Total | C    | N   | O   | S  | 0       | 1       | 0     |
|     |       |          | 3881  | 2549 | 646 | 674 | 12 |         |         |       |
| 2   | B2    | 503      | Total | C    | N   | O   | S  | 0       | 0       | 0     |
|     |       |          | 3770  | 2460 | 645 | 654 | 11 |         |         |       |
| 2   | b2    | 481      | Total | C    | N   | O   | S  | 0       | 0       | 0     |
|     |       |          | 3681  | 2418 | 620 | 631 | 12 |         |         |       |

- Molecule 3 is a protein called Photosystem II CP43 reaction center protein.

| Mol | Chain | Residues | Atoms |      |     |     |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|---------|-------|
| 3   | C1    | 449      | Total | C    | N   | O   | S  | 0       | 0       | 0     |
|     |       |          | 3392  | 2215 | 573 | 594 | 10 |         |         |       |
| 3   | c1    | 449      | Total | C    | N   | O   | S  | 0       | 2       | 0     |
|     |       |          | 3439  | 2241 | 577 | 611 | 10 |         |         |       |
| 3   | C2    | 444      | Total | C    | N   | O   | S  | 0       | 0       | 0     |
|     |       |          | 3145  | 2028 | 545 | 564 | 8  |         |         |       |
| 3   | c2    | 448      | Total | C    | N   | O   | S  | 0       | 0       | 0     |
|     |       |          | 3386  | 2201 | 578 | 597 | 10 |         |         |       |



- Molecule 4 is a protein called Photosystem II D2 protein.

| Mol | Chain | Residues | Atoms |      |     |     |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|---------|-------|
| 4   | D1    | 337      | Total | C    | N   | O   | S  | 0       | 0       | 0     |
|     |       |          | 2615  | 1736 | 422 | 447 | 10 |         |         |       |
| 4   | d1    | 339      | Total | C    | N   | O   | S  | 0       | 0       | 0     |
|     |       |          | 2678  | 1775 | 433 | 460 | 10 |         |         |       |
| 4   | D2    | 340      | Total | C    | N   | O   | S  | 0       | 0       | 0     |
|     |       |          | 2585  | 1713 | 422 | 440 | 10 |         |         |       |
| 4   | d2    | 340      | Total | C    | N   | O   | S  | 0       | 0       | 0     |
|     |       |          | 2643  | 1756 | 425 | 452 | 10 |         |         |       |

- Molecule 5 is a protein called Cytochrome b559 subunit alpha.

| Mol | Chain | Residues | Atoms |     |    |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|---------|-------|
| 5   | E1    | 61       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 405   | 264 | 68 | 73 |         |         |       |
| 5   | e1    | 57       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 427   | 280 | 71 | 76 |         |         |       |
| 5   | E2    | 63       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 430   | 279 | 72 | 79 |         |         |       |
| 5   | e2    | 60       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 421   | 279 | 71 | 71 |         |         |       |

- Molecule 6 is a protein called Cytochrome b559 subunit beta.

| Mol | Chain | Residues | Atoms |     |    |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 6   | F1    | 28       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 213   | 144 | 36 | 32 | 1 |         |         |       |
| 6   | f1    | 29       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 227   | 158 | 36 | 32 | 1 |         |         |       |
| 6   | F2    | 31       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 229   | 153 | 41 | 34 | 1 |         |         |       |
| 6   | f2    | 29       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 225   | 157 | 34 | 33 | 1 |         |         |       |

- Molecule 7 is a protein called Photosystem II reaction center protein H.

| Mol | Chain | Residues | Atoms |     |    |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 7   | H1    | 60       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 433   | 289 | 69 | 73 | 2 |         |         |       |
| 7   | h1    | 62       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 470   | 317 | 71 | 80 | 2 |         |         |       |
| 7   | H2    | 62       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 443   | 294 | 72 | 75 | 2 |         |         |       |

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| Mol | Chain | Residues | Atoms |     |    |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 7   | h2    | 62       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 450   | 302 | 69 | 77 | 2 |         |         |       |

- Molecule 8 is a protein called Photosystem II reaction center protein I.

| Mol | Chain | Residues | Atoms |     |    |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 8   | I1    | 34       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 274   | 184 | 42 | 45 | 3 |         |         |       |
| 8   | i1    | 34       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 280   | 188 | 44 | 45 | 3 |         |         |       |
| 8   | I2    | 35       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 265   | 177 | 41 | 45 | 2 |         |         |       |
| 8   | i2    | 33       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 261   | 174 | 40 | 44 | 3 |         |         |       |

- Molecule 9 is a protein called Photosystem II reaction center protein J.

| Mol | Chain | Residues | Atoms |     |    |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|---------|-------|
| 9   | J1    | 32       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 220   | 148 | 33 | 39 |         |         |       |
| 9   | j1    | 32       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 224   | 152 | 33 | 39 |         |         |       |
| 9   | J2    | 35       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 231   | 154 | 36 | 41 |         |         |       |
| 9   | j2    | 33       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 228   | 153 | 34 | 41 |         |         |       |

- Molecule 10 is a protein called Photosystem II reaction center protein K.

| Mol | Chain | Residues | Atoms |     |    |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 10  | K1    | 37       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 279   | 195 | 39 | 44 | 1 |         |         |       |
| 10  | k1    | 37       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 280   | 198 | 39 | 42 | 1 |         |         |       |
| 10  | K2    | 37       | Total | C   | N  | O  |   | 0       | 0       | 0     |
|     |       |          | 250   | 171 | 39 | 40 |   |         |         |       |
| 10  | k2    | 37       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 269   | 185 | 40 | 43 | 1 |         |         |       |

- Molecule 11 is a protein called Photosystem II reaction center protein L.

| Mol | Chain | Residues | Atoms |     |    |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|---------|-------|
| 11  | L1    | 37       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 292   | 197 | 46 | 49 |         |         |       |
| 11  | l1    | 37       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 299   | 203 | 47 | 49 |         |         |       |
| 11  | L2    | 37       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 299   | 202 | 46 | 51 |         |         |       |
| 11  | l2    | 37       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 299   | 202 | 46 | 51 |         |         |       |

- Molecule 12 is a protein called PHOTOSYSTEM II REACTION CENTER PROTEIN M.

| Mol | Chain | Residues | Atoms |     |    |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 12  | M1    | 40       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 285   | 189 | 44 | 50 | 2 |         |         |       |
| 12  | m1    | 40       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 285   | 189 | 44 | 50 | 2 |         |         |       |
| 12  | M2    | 40       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 284   | 188 | 46 | 48 | 2 |         |         |       |
| 12  | m2    | 40       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 287   | 189 | 46 | 50 | 2 |         |         |       |

- Molecule 13 is a protein called PHOTOSYSTEM II MANGANESE-STABILIZING POLYPEPTIDE, PSBO.

| Mol | Chain | Residues | Atoms |      |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 13  | O1    | 240      | Total | C    | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1674  | 1074 | 276 | 316 | 8 |         |         |       |
| 13  | o1    | 238      | Total | C    | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1692  | 1070 | 282 | 332 | 8 |         |         |       |
| 13  | O2    | 205      | Total | C    | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1376  | 870  | 237 | 262 | 7 |         |         |       |
| 13  | o2    | 245      | Total | C    | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1768  | 1123 | 296 | 341 | 8 |         |         |       |

- Molecule 14 is a protein called Photosystem II reaction center protein T.

| Mol | Chain | Residues | Atoms |     |    |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 14  | T1    | 30       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 241   | 168 | 36 | 36 | 1 |         |         |       |
| 14  | t1    | 30       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 246   | 173 | 36 | 36 | 1 |         |         |       |
| 14  | T2    | 30       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 240   | 170 | 33 | 36 | 1 |         |         |       |

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| Mol | Chain | Residues | Atoms |     |    |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 14  | t2    | 29       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 235   | 167 | 32 | 35 | 1 |         |         |       |

- Molecule 15 is a protein called Photosystem II 12 kDa extrinsic protein, chloroplastic.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 15  | U1    | 93       | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 691   | 445 | 116 | 129 | 1 |         |         |       |
| 15  | u1    | 93       | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 703   | 449 | 119 | 134 | 1 |         |         |       |
| 15  | U2    | 90       | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 577   | 355 | 103 | 118 | 1 |         |         |       |
| 15  | u2    | 93       | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 708   | 455 | 120 | 132 | 1 |         |         |       |

There are 4 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment               | Reference  |
|-------|---------|----------|--------|-----------------------|------------|
| U1    | -51     | MET      | -      | initiating methionine | UNP Q9ZQS5 |
| u1    | -51     | MET      | -      | initiating methionine | UNP Q9ZQS5 |
| U2    | -51     | MET      | -      | initiating methionine | UNP Q9ZQS5 |
| u2    | -51     | MET      | -      | initiating methionine | UNP Q9ZQS5 |

- Molecule 16 is a protein called Cytochrome c-550.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 16  | V1    | 129      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 917   | 579 | 159 | 175 | 4 |         |         |       |
| 16  | v1    | 129      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 921   | 577 | 163 | 177 | 4 |         |         |       |
| 16  | V2    | 129      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 845   | 521 | 152 | 168 | 4 |         |         |       |
| 16  | v2    | 129      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 963   | 608 | 168 | 183 | 4 |         |         |       |

- Molecule 17 is a protein called Photosystem II reaction center protein Ycf12.

| Mol | Chain | Residues | Atoms |     |    |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|---------|-------|
| 17  | Y1    | 27       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 170   | 111 | 29 | 30 |         |         |       |
| 17  | y1    | 27       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 195   | 133 | 30 | 32 |         |         |       |

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| Mol | Chain | Residues | Atoms |     |    |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|---------|-------|
| 17  | Y2    | 25       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 159   | 104 | 27 | 28 |         |         |       |
| 17  | y2    | 27       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 188   | 126 | 30 | 32 |         |         |       |

- Molecule 18 is a protein called PHOTOSYSTEM II REACTION CENTER PROTEIN X.

| Mol | Chain | Residues | Atoms |     |    |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|---------|-------|
| 18  | X1    | 29       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 197   | 135 | 30 | 32 |         |         |       |
| 18  | x1    | 36       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 255   | 174 | 38 | 42 |         |         |       |
| 18  | X2    | 31       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 215   | 149 | 33 | 32 |         |         |       |
| 18  | x2    | 32       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 218   | 147 | 35 | 36 |         |         |       |

- Molecule 19 is a protein called PEPTIDE CHAIN UNASSIGNED.

| Mol | Chain | Residues | Atoms |     |    |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|---------|-------|
| 19  | S1    | 25       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 164   | 113 | 26 | 25 |         |         |       |
| 19  | s1    | 40       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 263   | 182 | 41 | 40 |         |         |       |
| 19  | S2    | 30       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 191   | 130 | 31 | 30 |         |         |       |
| 19  | s2    | 46       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 281   | 188 | 47 | 46 |         |         |       |

- Molecule 20 is a protein called PEPTIDE CHAIN UNASSIGNED.

| Mol | Chain | Residues | Atoms |     |    |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|---------|-------|
| 20  | W1    | 21       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 134   | 91  | 21 | 22 |         |         |       |
| 20  | w1    | 25       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 152   | 101 | 25 | 26 |         |         |       |
| 20  | W2    | 21       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 129   | 86  | 21 | 22 |         |         |       |
| 20  | w2    | 20       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 127   | 86  | 20 | 21 |         |         |       |

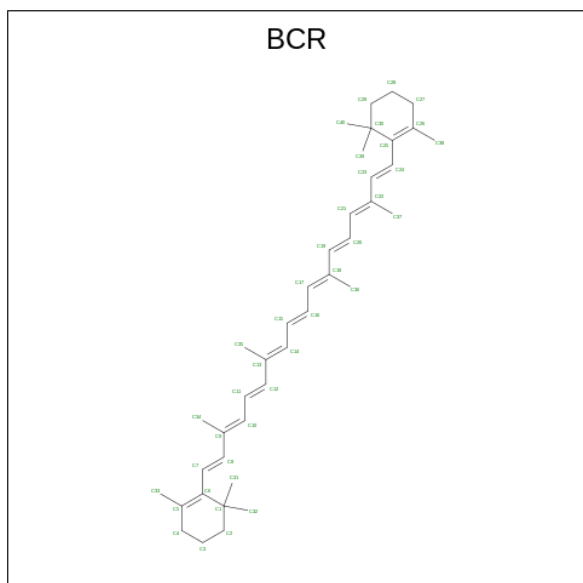
- Molecule 21 is a protein called Extrinsic protein in photosystem II.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 21  | q1    | 105      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 645   | 399 | 115 | 127 | 4 |         |         |       |
| 21  | Q2    | 111      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 676   | 417 | 123 | 133 | 3 |         |         |       |

- Molecule 22 is a protein called Photosystem II reaction center protein Z.

| Mol | Chain | Residues | Atoms |     |    |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 22  | Z2    | 59       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 351   | 224 | 61 | 65 | 1 |         |         |       |
| 22  | z2    | 59       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 381   | 250 | 63 | 67 | 1 |         |         |       |

- Molecule 23 is BETA-CAROTENE (three-letter code: BCR) (formula:  $C_{40}H_{56}$ ).



| Mol | Chain | Residues | Atoms |    | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|---------|---------|
| 23  | A1    | 1        | Total | C  | 0       | 0       |
|     |       |          | 40    | 40 |         |         |
| 23  | B1    | 1        | Total | C  | 0       | 0       |
|     |       |          | 40    | 40 |         |         |
| 23  | B1    | 1        | Total | C  | 0       | 0       |
|     |       |          | 40    | 40 |         |         |
| 23  | B1    | 1        | Total | C  | 0       | 0       |
|     |       |          | 40    | 40 |         |         |
| 23  | C1    | 1        | Total | C  | 0       | 0       |
|     |       |          | 40    | 40 |         |         |
| 23  | C1    | 1        | Total | C  | 0       | 0       |
|     |       |          | 40    | 40 |         |         |

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| Mol | Chain | Residues | Atoms            | ZeroOcc | AltConf |
|-----|-------|----------|------------------|---------|---------|
| 23  | D1    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | H1    | 1        | Total C<br>22 22 | 0       | 0       |
| 23  | J1    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | K1    | 1        | Total C<br>31 31 | 0       | 0       |
| 23  | a1    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | b1    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | b1    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | b1    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | c1    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | c1    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | d1    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | h1    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | k1    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | A2    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | B2    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | B2    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | B2    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | C2    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | F2    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | H2    | 1        | Total C<br>24 24 | 0       | 0       |
| 23  | K2    | 1        | Total C<br>40 40 | 0       | 0       |

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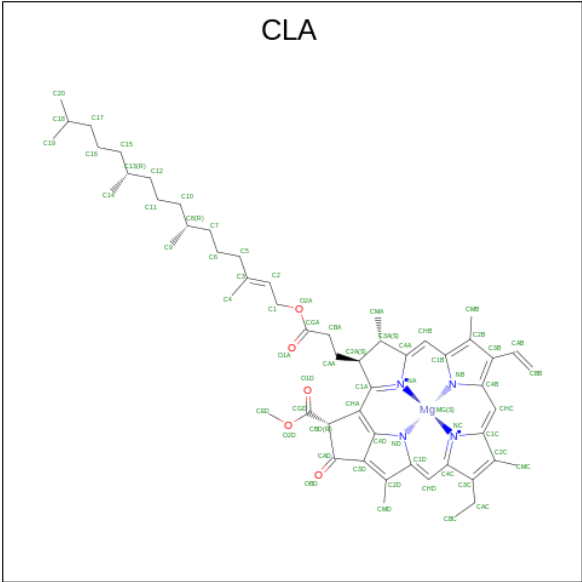
| Mol | Chain | Residues | Atoms            | ZeroOcc | AltConf |
|-----|-------|----------|------------------|---------|---------|
| 23  | K2    | 1        | Total C<br>29 29 | 0       | 0       |
| 23  | a2    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | b2    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | b2    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | b2    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | c2    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | d2    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | h2    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | j2    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | k2    | 1        | Total C<br>40 40 | 0       | 0       |
| 23  | z2    | 1        | Total C<br>40 40 | 0       | 0       |

- Molecule 24 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

| Mol | Chain | Residues | Atoms           | ZeroOcc | AltConf |
|-----|-------|----------|-----------------|---------|---------|
| 24  | A1    | 1        | Total Cl<br>1 1 | 0       | 0       |
| 24  | a1    | 1        | Total Cl<br>1 1 | 0       | 0       |
| 24  | A2    | 1        | Total Cl<br>1 1 | 0       | 0       |
| 24  | a2    | 1        | Total Cl<br>1 1 | 0       | 0       |

- Molecule 25 is CHLOROPHYLL A (three-letter code: CLA) (formula: C<sub>55</sub>H<sub>72</sub>MgN<sub>4</sub>O<sub>5</sub>).





| Mol | Chain | Residues | Atoms |    |    |   |   | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|---------|
| 25  | A1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | A1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 51    | 41 | 1  | 4 | 5 |         |         |
| 25  | A1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 55    | 45 | 1  | 4 | 5 |         |         |
| 25  | A1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | B1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 42    | 34 | 1  | 4 | 3 |         |         |
| 25  | B1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | B1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | B1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 60    | 50 | 1  | 4 | 5 |         |         |
| 25  | B1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | B1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | B1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | B1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 62    | 52 | 1  | 4 | 5 |         |         |
| 25  | B1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | B1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |

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| Mol | Chain | Residues | Atoms |    |    |   |   | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|---------|
| 25  | B1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | B1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | B1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | B1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | B1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 58    | 48 | 1  | 4 | 5 |         |         |
| 25  | B1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | C1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | C1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 60    | 50 | 1  | 4 | 5 |         |         |
| 25  | C1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | C1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | C1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | C1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | C1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | C1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | C1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | C1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 61    | 51 | 1  | 4 | 5 |         |         |
| 25  | C1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 45    | 35 | 1  | 4 | 5 |         |         |
| 25  | D1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | D1    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 51    | 41 | 1  | 4 | 5 |         |         |

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| Mol | Chain | Residues | Atoms       |         |         |        |        | ZeroOcc | AltConf |
|-----|-------|----------|-------------|---------|---------|--------|--------|---------|---------|
| 25  | a1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | a1    | 1        | Total<br>60 | C<br>50 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | a1    | 1        | Total<br>50 | C<br>40 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b1    | 1        | Total<br>59 | C<br>49 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |

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| Mol | Chain | Residues | Atoms       |         |         |        |        | ZeroOcc | AltConf |
|-----|-------|----------|-------------|---------|---------|--------|--------|---------|---------|
| 25  | c1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c1    | 1        | Total<br>50 | C<br>40 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c1    | 1        | Total<br>60 | C<br>50 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c1    | 1        | Total<br>55 | C<br>45 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | d1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | d1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | d1    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | A2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | A2    | 1        | Total<br>61 | C<br>51 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | A2    | 1        | Total<br>51 | C<br>41 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | B2    | 1        | Total<br>41 | C<br>33 | Mg<br>1 | N<br>4 | O<br>3 | 0       | 0       |
| 25  | B2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | B2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | B2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |

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| Mol | Chain | Residues | Atoms       |         |         |        |        | ZeroOcc | AltConf |
|-----|-------|----------|-------------|---------|---------|--------|--------|---------|---------|
| 25  | B2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | B2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | B2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | B2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | B2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | B2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | B2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | B2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | B2    | 1        | Total<br>54 | C<br>44 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | B2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | B2    | 1        | Total<br>60 | C<br>50 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | B2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | C2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | C2    | 1        | Total<br>46 | C<br>36 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | C2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | C2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | C2    | 1        | Total<br>45 | C<br>35 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | C2    | 1        | Total<br>50 | C<br>40 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | C2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | C2    | 1        | Total<br>45 | C<br>35 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | C2    | 1        | Total<br>50 | C<br>40 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |

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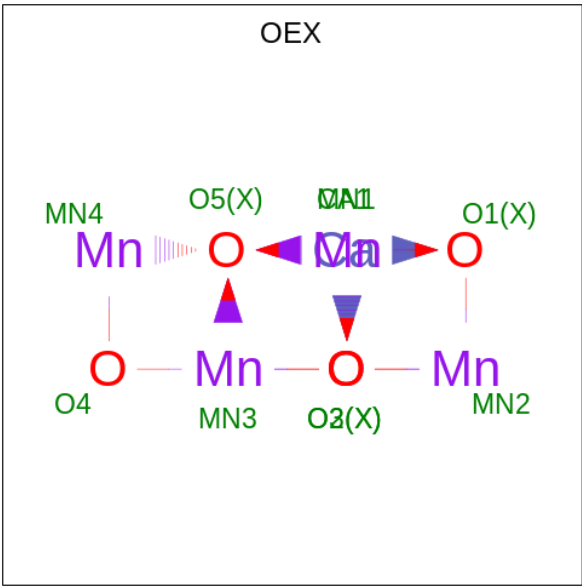
| Mol | Chain | Residues | Atoms |    |    |   |   | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|---------|
| 25  | C2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 53    | 43 | 1  | 4 | 5 |         |         |
| 25  | C2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 46    | 36 | 1  | 4 | 5 |         |         |
| 25  | C2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 41    | 33 | 1  | 4 | 3 |         |         |
| 25  | D2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | D2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 61    | 51 | 1  | 4 | 5 |         |         |
| 25  | D2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | K2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 55    | 45 | 1  | 4 | 5 |         |         |
| 25  | a2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | a2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | a2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 50    | 40 | 1  | 4 | 5 |         |         |
| 25  | b2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 42    | 34 | 1  | 4 | 3 |         |         |
| 25  | b2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | b2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | b2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 61    | 51 | 1  | 4 | 5 |         |         |
| 25  | b2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | b2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | b2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | b2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 65    | 55 | 1  | 4 | 5 |         |         |
| 25  | b2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 60    | 50 | 1  | 4 | 5 |         |         |
| 25  | b2    | 1        | Total | C  | Mg | N | O | 0       | 0       |
|     |       |          | 60    | 50 | 1  | 4 | 5 |         |         |

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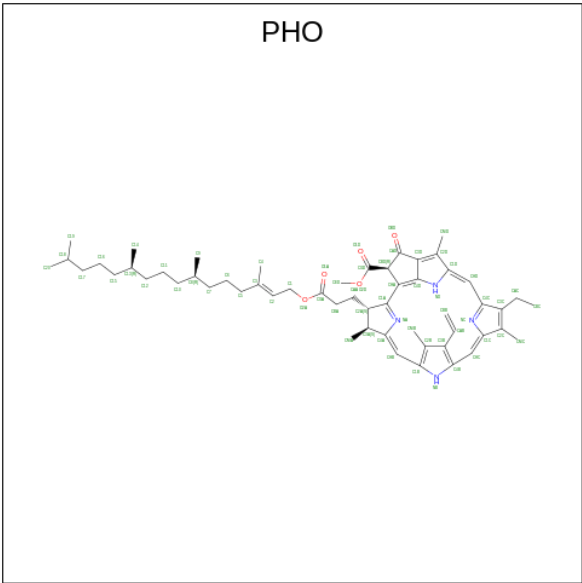
| Mol | Chain | Residues | Atoms       |         |         |        |        | ZeroOcc | AltConf |
|-----|-------|----------|-------------|---------|---------|--------|--------|---------|---------|
| 25  | b2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b2    | 1        | Total<br>59 | C<br>49 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | b2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c2    | 1        | Total<br>61 | C<br>51 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c2    | 1        | Total<br>54 | C<br>44 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c2    | 1        | Total<br>54 | C<br>44 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c2    | 1        | Total<br>54 | C<br>44 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | c2    | 1        | Total<br>46 | C<br>36 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | d2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | d2    | 1        | Total<br>50 | C<br>40 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |
| 25  | d2    | 1        | Total<br>65 | C<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       | 0       |

- Molecule 26 is CA-MN4-O5 CLUSTER (three-letter code: OEX) (formula:  $\text{CaMn}_4\text{O}_5$ ).



| Mol | Chain | Residues | Atoms |    |    |   | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---|---------|---------|
| 26  | A1    | 1        | Total | Ca | Mn | O | 0       | 0       |
|     |       |          | 10    | 1  | 4  | 5 |         |         |
| 26  | a1    | 1        | Total | Ca | Mn | O | 0       | 0       |
|     |       |          | 10    | 1  | 4  | 5 |         |         |
| 26  | A2    | 1        | Total | Ca | Mn | O | 0       | 0       |
|     |       |          | 10    | 1  | 4  | 5 |         |         |
| 26  | a2    | 1        | Total | Ca | Mn | O | 0       | 0       |
|     |       |          | 10    | 1  | 4  | 5 |         |         |

- Molecule 27 is PHEOPHYTIN A (three-letter code: PHO) (formula:  $\text{C}_{55}\text{H}_{74}\text{N}_4\text{O}_5$ ).





| Mol | Chain | Residues | Atoms |    |   |   | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|---|---|---------|---------|
| 27  | A1    | 1        | Total | C  | N | O | 0       | 0       |
|     |       |          | 64    | 55 | 4 | 5 |         |         |
| 27  | D1    | 1        | Total | C  | N | O | 0       | 0       |
|     |       |          | 63    | 54 | 4 | 5 |         |         |
| 27  | a1    | 1        | Total | C  | N | O | 0       | 0       |
|     |       |          | 64    | 55 | 4 | 5 |         |         |
| 27  | d1    | 1        | Total | C  | N | O | 0       | 0       |
|     |       |          | 64    | 55 | 4 | 5 |         |         |
| 27  | A2    | 1        | Total | C  | N | O | 0       | 0       |
|     |       |          | 64    | 55 | 4 | 5 |         |         |
| 27  | D2    | 1        | Total | C  | N | O | 0       | 0       |
|     |       |          | 64    | 55 | 4 | 5 |         |         |
| 27  | a2    | 1        | Total | C  | N | O | 0       | 0       |
|     |       |          | 64    | 55 | 4 | 5 |         |         |
| 27  | d2    | 1        | Total | C  | N | O | 0       | 0       |
|     |       |          | 64    | 55 | 4 | 5 |         |         |

- Molecule 28 is UNKNOWN LIGAND (three-letter code: UNL) (formula: ).

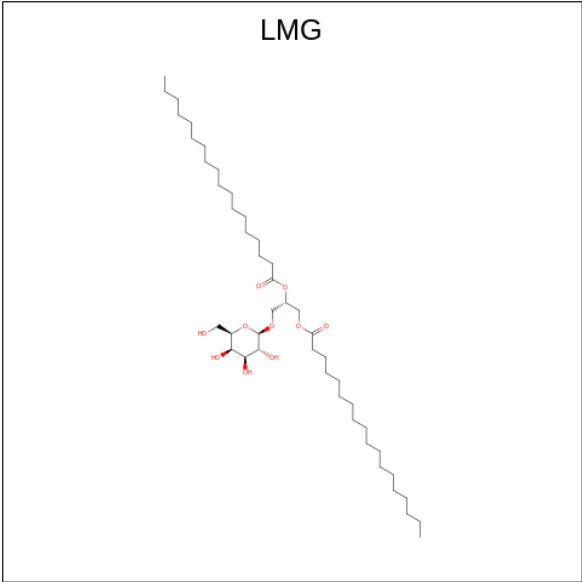
| Mol | Chain | Residues | Atoms |    | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|---------|---------|
| 28  | A1    | 1        | Total | C  | 0       | 0       |
|     |       |          | 14    | 14 |         |         |
| 28  | B1    | 3        | Total | C  | 0       | 0       |
|     |       |          | 41    | 41 |         |         |
| 28  | D1    | 1        | Total | C  | 0       | 0       |
|     |       |          | 6     | 6  |         |         |
| 28  | a1    | 1        | Total | C  | 0       | 0       |
|     |       |          | 11    | 11 |         |         |
| 28  | b1    | 7        | Total | C  | 0       | 0       |
|     |       |          | 92    | 92 |         |         |
| 28  | d1    | 1        | Total | C  | 0       | 0       |
|     |       |          | 12    | 12 |         |         |
| 28  | j1    | 1        | Total | C  | 0       | 0       |
|     |       |          | 17    | 17 |         |         |
| 28  | l1    | 1        | Total | C  | 0       | 0       |
|     |       |          | 12    | 12 |         |         |
| 28  | m1    | 1        | Total | C  | 0       | 0       |
|     |       |          | 6     | 6  |         |         |
| 28  | t1    | 2        | Total | C  | 0       | 0       |
|     |       |          | 27    | 27 |         |         |
| 28  | x1    | 1        | Total | C  | 0       | 0       |
|     |       |          | 15    | 15 |         |         |
| 28  | A2    | 2        | Total | C  | 0       | 0       |
|     |       |          | 28    | 28 |         |         |

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| Mol | Chain | Residues | Atoms            | ZeroOcc | AltConf |
|-----|-------|----------|------------------|---------|---------|
| 28  | B2    | 4        | Total C<br>58 58 | 0       | 0       |
| 28  | C2    | 2        | Total C<br>24 24 | 0       | 0       |
| 28  | F2    | 1        | Total C<br>16 16 | 0       | 0       |
| 28  | H2    | 1        | Total C<br>5 5   | 0       | 0       |
| 28  | I2    | 2        | Total C<br>31 31 | 0       | 0       |
| 28  | J2    | 1        | Total C<br>10 10 | 0       | 0       |
| 28  | K2    | 1        | Total C<br>5 5   | 0       | 0       |
| 28  | M2    | 1        | Total C<br>11 11 | 0       | 0       |
| 28  | X2    | 1        | Total C<br>7 7   | 0       | 0       |
| 28  | W2    | 1        | Total C<br>9 9   | 0       | 0       |
| 28  | a2    | 4        | Total C<br>55 55 | 0       | 0       |
| 28  | b2    | 1        | Total C<br>12 12 | 0       | 0       |
| 28  | c2    | 1        | Total C<br>15 15 | 0       | 0       |
| 28  | d2    | 2        | Total C<br>25 25 | 0       | 0       |
| 28  | i2    | 1        | Total C<br>14 14 | 0       | 0       |
| 28  | k2    | 4        | Total C<br>30 30 | 0       | 0       |
| 28  | m2    | 2        | Total C<br>36 36 | 0       | 0       |

- Molecule 29 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula: C<sub>45</sub>H<sub>86</sub>O<sub>10</sub>).



| Mol | Chain | Residues | Atoms |    |    | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---------|---------|
| 29  | A1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 43    | 33 | 10 |         |         |
| 29  | A1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 41    | 31 | 10 |         |         |
| 29  | B1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 31    | 21 | 10 |         |         |
| 29  | B1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 48    | 38 | 10 |         |         |
| 29  | C1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 48    | 38 | 10 |         |         |
| 29  | D1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 35    | 25 | 10 |         |         |
| 29  | M1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 31    | 27 | 4  |         |         |
| 29  | a1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 51    | 41 | 10 |         |         |
| 29  | b1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 38    | 28 | 10 |         |         |
| 29  | b1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 39    | 29 | 10 |         |         |
| 29  | b1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 40    | 30 | 10 |         |         |
| 29  | c1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 55    | 45 | 10 |         |         |
| 29  | d1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 33    | 23 | 10 |         |         |
| 29  | d1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 35    | 30 | 5  |         |         |

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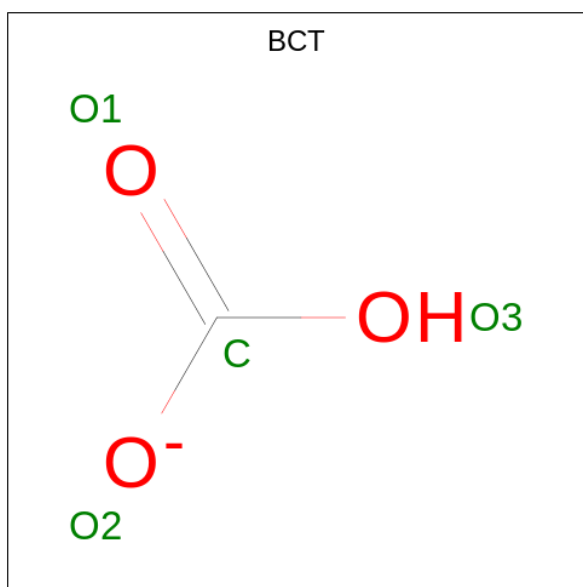
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| Mol | Chain | Residues | Atoms |    |    | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---------|---------|
| 29  | A2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 29    | 19 | 10 |         |         |
| 29  | B2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 40    | 30 | 10 |         |         |
| 29  | B2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 37    | 27 | 10 |         |         |
| 29  | C2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 24    | 14 | 10 |         |         |
| 29  | F2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 35    | 25 | 10 |         |         |
| 29  | I2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 34    | 24 | 10 |         |         |
| 29  | a2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 44    | 34 | 10 |         |         |
| 29  | b2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 39    | 29 | 10 |         |         |
| 29  | c2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 26    | 16 | 10 |         |         |
| 29  | d2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 27    | 17 | 10 |         |         |
| 29  | j2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 50    | 40 | 10 |         |         |

- Molecule 30 is FE (III) ION (three-letter code: FE) (formula: Fe).

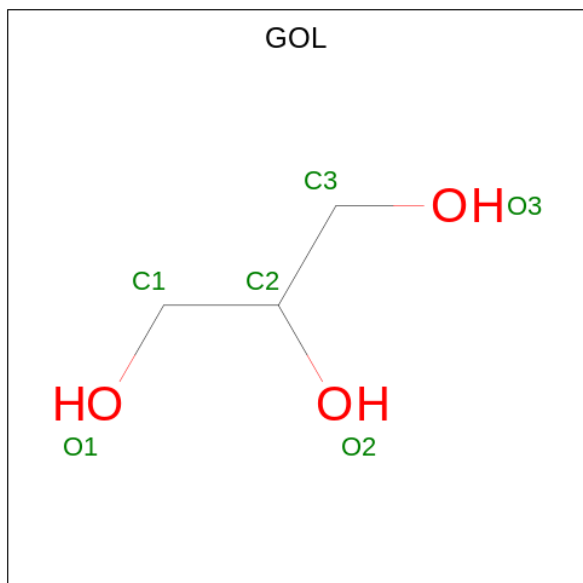
| Mol | Chain | Residues | Atoms |    | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|---------|---------|
| 30  | A1    | 1        | Total | Fe | 0       | 0       |
|     |       |          | 1     | 1  |         |         |
| 30  | a1    | 1        | Total | Fe | 0       | 0       |
|     |       |          | 1     | 1  |         |         |
| 30  | A2    | 1        | Total | Fe | 0       | 0       |
|     |       |          | 1     | 1  |         |         |
| 30  | a2    | 1        | Total | Fe | 0       | 0       |
|     |       |          | 1     | 1  |         |         |

- Molecule 31 is BICARBONATE ION (three-letter code: BCT) (formula: CHO<sub>3</sub>).



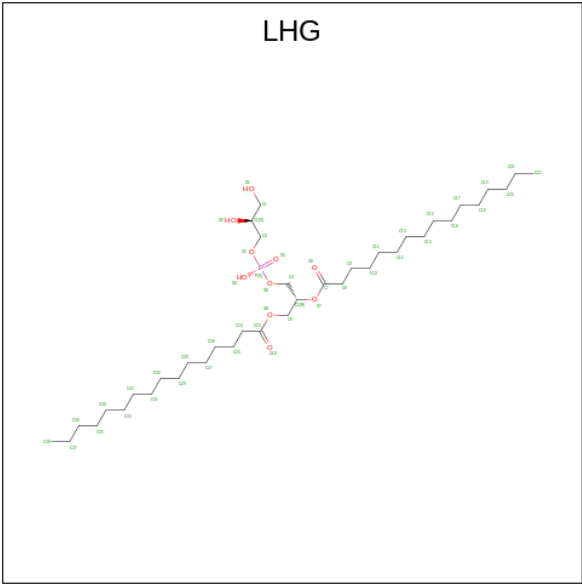
| Mol | Chain | Residues | Atoms |   |   | ZeroOcc | AltConf |
|-----|-------|----------|-------|---|---|---------|---------|
| 31  | A1    | 1        | Total | C | O | 0       | 0       |
|     |       |          | 4     | 1 | 3 |         |         |
| 31  | a1    | 1        | Total | C | O | 0       | 0       |
|     |       |          | 4     | 1 | 3 |         |         |
| 31  | A2    | 1        | Total | C | O | 0       | 0       |
|     |       |          | 4     | 1 | 3 |         |         |
| 31  | a2    | 1        | Total | C | O | 0       | 0       |
|     |       |          | 4     | 1 | 3 |         |         |

- Molecule 32 is GLYCEROL (three-letter code: GOL) (formula:  $C_3H_8O_3$ ).



| Mol | Chain | Residues | Atoms |   |   | ZeroOcc | AltConf |
|-----|-------|----------|-------|---|---|---------|---------|
| 32  | B1    | 1        | Total | C | O | 0       | 0       |
|     |       |          | 6     | 3 | 3 |         |         |
| 32  | C1    | 1        | Total | C | O | 0       | 0       |
|     |       |          | 6     | 3 | 3 |         |         |
| 32  | a1    | 1        | Total | C | O | 0       | 0       |
|     |       |          | 6     | 3 | 3 |         |         |
| 32  | b1    | 1        | Total | C | O | 0       | 0       |
|     |       |          | 6     | 3 | 3 |         |         |
| 32  | c1    | 1        | Total | C | O | 0       | 0       |
|     |       |          | 6     | 3 | 3 |         |         |
| 32  | i1    | 1        | Total | C | O | 0       | 0       |
|     |       |          | 6     | 3 | 3 |         |         |
| 32  | C2    | 1        | Total | C | O | 0       | 0       |
|     |       |          | 6     | 3 | 3 |         |         |
| 32  | a2    | 1        | Total | C | O | 0       | 0       |
|     |       |          | 6     | 3 | 3 |         |         |
| 32  | c2    | 1        | Total | C | O | 0       | 0       |
|     |       |          | 6     | 3 | 3 |         |         |

- Molecule 33 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula: C<sub>38</sub>H<sub>75</sub>O<sub>10</sub>P).



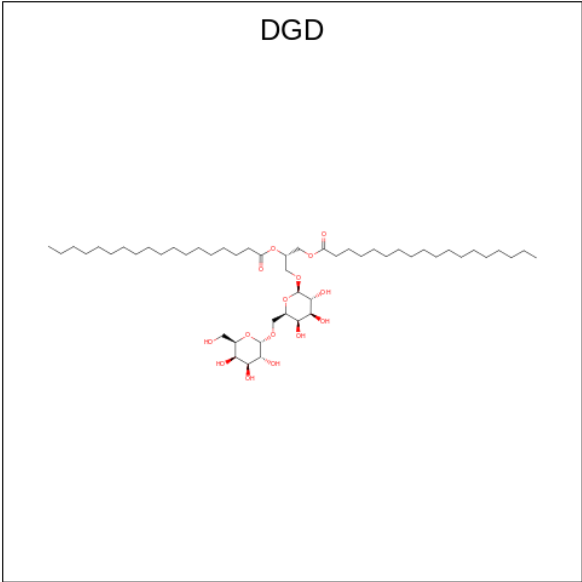
| Mol | Chain | Residues | Atoms |    |    |   | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---|---------|---------|
| 33  | B1    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 49    | 38 | 10 | 1 |         |         |
| 33  | D1    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 49    | 38 | 10 | 1 |         |         |

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| Mol | Chain | Residues | Atoms |    |    |   | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---|---------|---------|
| 33  | D1    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 49    | 38 | 10 | 1 |         |         |
| 33  | L1    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 41    | 30 | 10 | 1 |         |         |
| 33  | a1    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 43    | 32 | 10 | 1 |         |         |
| 33  | b1    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 49    | 38 | 10 | 1 |         |         |
| 33  | d1    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 32    | 21 | 10 | 1 |         |         |
| 33  | d1    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 49    | 38 | 10 | 1 |         |         |
| 33  | l1    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 49    | 38 | 10 | 1 |         |         |
| 33  | A2    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 33    | 22 | 10 | 1 |         |         |
| 33  | B2    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 42    | 31 | 10 | 1 |         |         |
| 33  | D2    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 49    | 38 | 10 | 1 |         |         |
| 33  | D2    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 49    | 38 | 10 | 1 |         |         |
| 33  | L2    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 49    | 38 | 10 | 1 |         |         |
| 33  | a2    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 30    | 19 | 10 | 1 |         |         |
| 33  | b2    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 43    | 32 | 10 | 1 |         |         |
| 33  | d2    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 49    | 38 | 10 | 1 |         |         |
| 33  | d2    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 49    | 38 | 10 | 1 |         |         |
| 33  | l2    | 1        | Total | C  | O  | P | 0       | 0       |
|     |       |          | 44    | 33 | 10 | 1 |         |         |

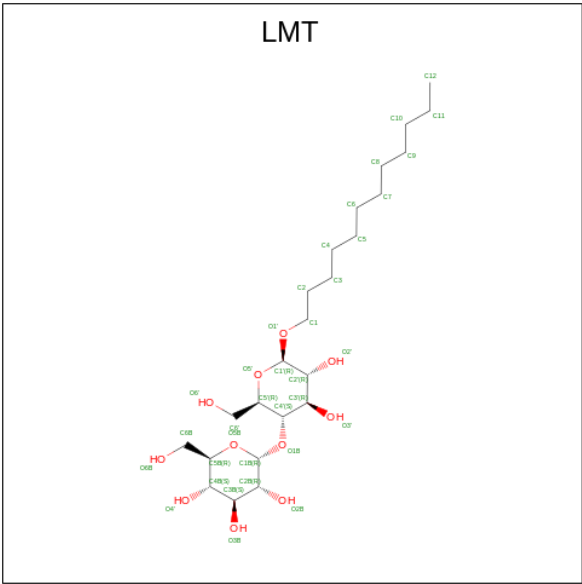
- Molecule 34 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (three-letter code: DGD) (formula: C<sub>51</sub>H<sub>96</sub>O<sub>15</sub>).



| Mol | Chain | Residues | Atoms |    |    | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---------|---------|
| 34  | C1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 52    | 37 | 15 |         |         |
|     |       |          |       |    |    |         |         |
| 34  | C1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 62    | 47 | 15 |         |         |
|     |       |          |       |    |    |         |         |
| 34  | C1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 64    | 49 | 15 |         |         |
|     |       |          |       |    |    |         |         |
| 34  | H1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 62    | 47 | 15 |         |         |
|     |       |          |       |    |    |         |         |
| 34  | c1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 51    | 36 | 15 |         |         |
|     |       |          |       |    |    |         |         |
| 34  | c1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 62    | 47 | 15 |         |         |
|     |       |          |       |    |    |         |         |
| 34  | c1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 62    | 47 | 15 |         |         |
|     |       |          |       |    |    |         |         |
| 34  | h1    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 62    | 47 | 15 |         |         |
|     |       |          |       |    |    |         |         |
| 34  | C2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 33    | 18 | 15 |         |         |
|     |       |          |       |    |    |         |         |
| 34  | H2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 62    | 47 | 15 |         |         |
|     |       |          |       |    |    |         |         |
| 34  | c2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 62    | 47 | 15 |         |         |
|     |       |          |       |    |    |         |         |
| 34  | c2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 52    | 37 | 15 |         |         |
|     |       |          |       |    |    |         |         |
| 34  | c2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 62    | 47 | 15 |         |         |
|     |       |          |       |    |    |         |         |
| 34  | h2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 62    | 47 | 15 |         |         |
|     |       |          |       |    |    |         |         |



- Molecule 35 is DODECYL-BETA-D-MALTOSIDE (three-letter code: LMT) (formula: C<sub>24</sub>H<sub>46</sub>O<sub>11</sub>).



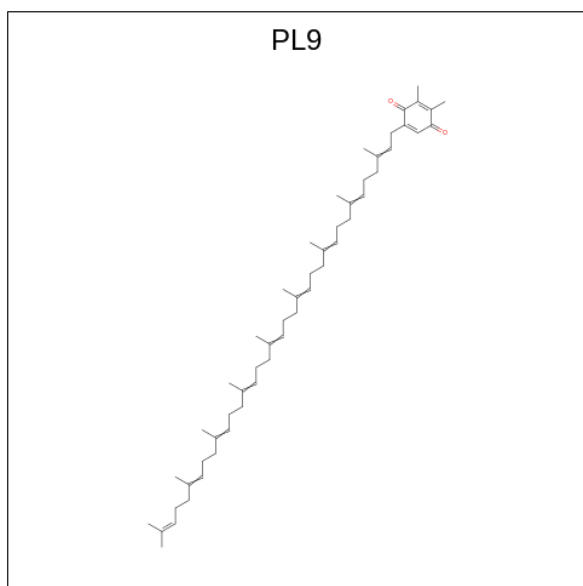
| Mol | Chain | Residues | Atoms                 | ZeroOcc | AltConf |
|-----|-------|----------|-----------------------|---------|---------|
| 35  | C1    | 1        | Total C O<br>35 24 11 | 0       | 0       |
| 35  | L1    | 1        | Total C<br>12 12      | 0       | 0       |
| 35  | M1    | 1        | Total C<br>11 11      | 0       | 0       |
| 35  | M1    | 1        | Total C O<br>24 18 6  | 0       | 0       |
| 35  | T1    | 1        | Total C<br>12 12      | 0       | 0       |
| 35  | c1    | 1        | Total C O<br>33 22 11 | 0       | 0       |
| 35  | l1    | 1        | Total C O<br>24 18 6  | 0       | 0       |
| 35  | m1    | 1        | Total C O<br>35 24 11 | 0       | 0       |
| 35  | a2    | 1        | Total C O<br>35 24 11 | 0       | 0       |
| 35  | b2    | 1        | Total C O<br>35 24 11 | 0       | 0       |
| 35  | b2    | 1        | Total C O<br>35 24 11 | 0       | 0       |
| 35  | i2    | 1        | Total C<br>7 7        | 0       | 0       |

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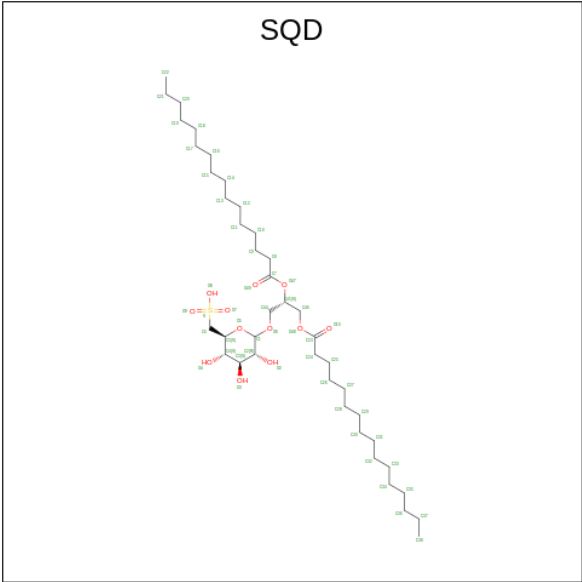
| Mol | Chain | Residues | Atoms |    |    | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---------|---------|
| 35  | m2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 30    | 19 | 11 |         |         |
| 35  | m2    | 1        | Total | C  | O  | 0       | 0       |
|     |       |          | 29    | 18 | 11 |         |         |

- Molecule 36 is 2,3-DIMETHYL-5-(3,7,11,15,19,23,27,31,35-NONAMETHYL-2,6,10,14,18,22,26,30,34-HEXATRIACONTANONAENYL-2,5-CYCLOHEXADIENE-1,4-DIONE-2,3-DIMETHYL-5-SOLANESYL-1,4-BENZOQUINONE (three-letter code: PL9) (formula:  $C_{53}H_{80}O_2$ ).



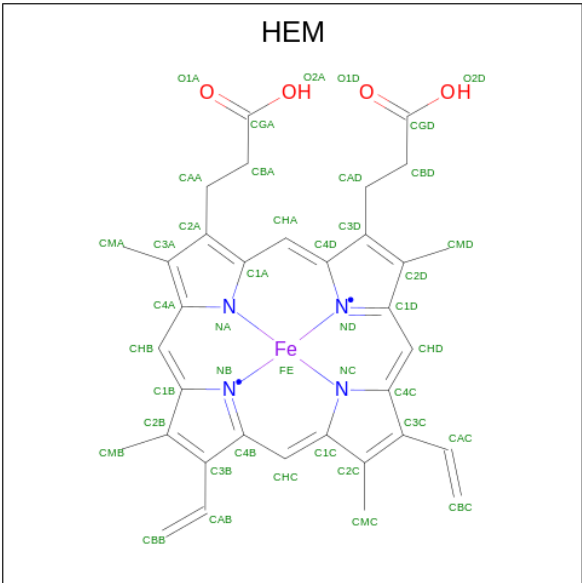
| Mol | Chain | Residues | Atoms |    |   | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|---|---------|---------|
| 36  | D1    | 1        | Total | C  | O | 0       | 0       |
|     |       |          | 55    | 53 | 2 |         |         |
| 36  | d1    | 1        | Total | C  | O | 0       | 0       |
|     |       |          | 55    | 53 | 2 |         |         |
| 36  | D2    | 1        | Total | C  | O | 0       | 0       |
|     |       |          | 55    | 53 | 2 |         |         |
| 36  | d2    | 1        | Total | C  | O | 0       | 0       |
|     |       |          | 55    | 53 | 2 |         |         |

- Molecule 37 is 1,2-DI-O-ACYL-3-O-[6-DEOXY-6-SULFO-ALPHA-D-GLUCOPYRANOSYL]-SN-GLYCEROL (three-letter code: SQD) (formula:  $C_{41}H_{78}O_{12}S$ ).



| Mol | Chain | Residues | Atoms |    |    |   | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---|---------|---------|
| 37  | D1    | 1        | Total | C  | O  | S | 0       | 0       |
|     |       |          | 35    | 22 | 12 | 1 |         |         |
| 37  | B2    | 1        | Total | C  | O  | S | 0       | 0       |
|     |       |          | 45    | 32 | 12 | 1 |         |         |
| 37  | D2    | 1        | Total | C  | O  | S | 0       | 0       |
|     |       |          | 25    | 12 | 12 | 1 |         |         |
| 37  | b2    | 1        | Total | C  | O  | S | 0       | 0       |
|     |       |          | 45    | 32 | 12 | 1 |         |         |

- Molecule 38 is PROTOPORPHYRIN IX CONTAINING FE (three-letter code: HEM) (formula: C<sub>34</sub>H<sub>32</sub>FeN<sub>4</sub>O<sub>4</sub>).



| Mol | Chain | Residues | Atoms       |         |         |        | ZeroOcc | AltConf |   |
|-----|-------|----------|-------------|---------|---------|--------|---------|---------|---|
| 38  | E1    | 1        | Total<br>43 | C<br>34 | Fe<br>1 | N<br>4 | O<br>4  | 0       | 0 |
| 38  | V1    | 1        | Total<br>43 | C<br>34 | Fe<br>1 | N<br>4 | O<br>4  | 0       | 0 |
| 38  | f1    | 1        | Total<br>43 | C<br>34 | Fe<br>1 | N<br>4 | O<br>4  | 0       | 0 |
| 38  | v1    | 1        | Total<br>43 | C<br>34 | Fe<br>1 | N<br>4 | O<br>4  | 0       | 0 |
| 38  | E2    | 1        | Total<br>43 | C<br>34 | Fe<br>1 | N<br>4 | O<br>4  | 0       | 0 |
| 38  | V2    | 1        | Total<br>43 | C<br>34 | Fe<br>1 | N<br>4 | O<br>4  | 0       | 0 |
| 38  | e2    | 1        | Total<br>43 | C<br>34 | Fe<br>1 | N<br>4 | O<br>4  | 0       | 0 |
| 38  | v2    | 1        | Total<br>43 | C<br>34 | Fe<br>1 | N<br>4 | O<br>4  | 0       | 0 |

- Molecule 39 is CALCIUM ION (three-letter code: CA) (formula: Ca).

| Mol | Chain | Residues | Atoms      |         | ZeroOcc | AltConf |
|-----|-------|----------|------------|---------|---------|---------|
| 39  | O1    | 1        | Total<br>1 | Ca<br>1 | 0       | 0       |
| 39  | o2    | 1        | Total<br>1 | Ca<br>1 | 0       | 0       |

- Molecule 40 is water.

| Mol | Chain | Residues | Atoms      |        | ZeroOcc | AltConf |
|-----|-------|----------|------------|--------|---------|---------|
| 40  | A1    | 2        | Total<br>2 | O<br>2 | 0       | 0       |
| 40  | B1    | 1        | Total<br>1 | O<br>1 | 0       | 0       |
| 40  | a1    | 4        | Total<br>4 | O<br>4 | 0       | 0       |
| 40  | c1    | 2        | Total<br>2 | O<br>2 | 0       | 0       |
| 40  | A2    | 2        | Total<br>2 | O<br>2 | 0       | 0       |
| 40  | a2    | 4        | Total<br>4 | O<br>4 | 0       | 0       |
| 40  | b2    | 1        | Total<br>1 | O<br>1 | 0       | 0       |
| 40  | c2    | 1        | Total<br>1 | O<br>1 | 0       | 0       |

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| Mol | Chain | Residues | Atoms |   | ZeroOcc | AltConf |
|-----|-------|----------|-------|---|---------|---------|
| 40  | d2    | 1        | Total | O | 0       | 0       |
|     |       |          | 1     | 1 |         |         |

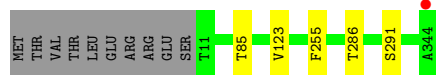
### 3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ( $RSRZ > 2$ ). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

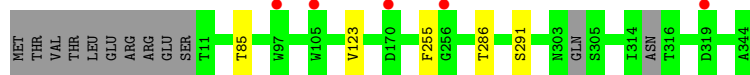
- Molecule 1: Photosystem II protein D1



- Molecule 1: Photosystem II protein D1



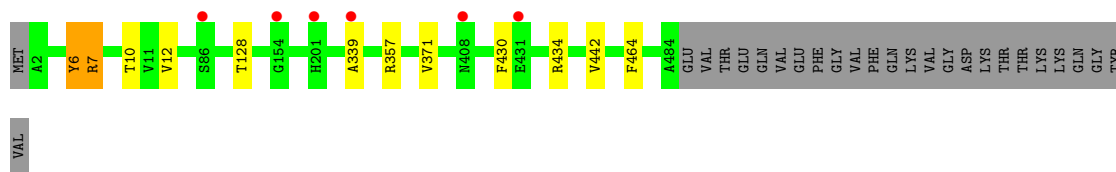
- Molecule 1: Photosystem II protein D1



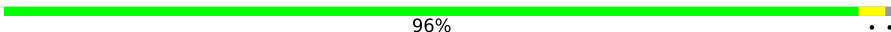
- Molecule 1: Photosystem II protein D1



- Molecule 2: Photosystem II CP47 reaction center protein

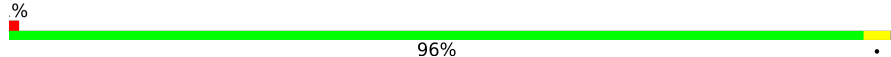


- Molecule 2: Photosystem II CP47 reaction center protein

Chain b1:  96%

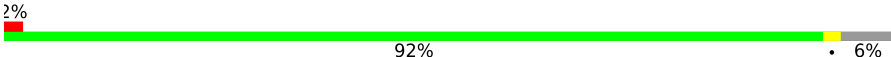


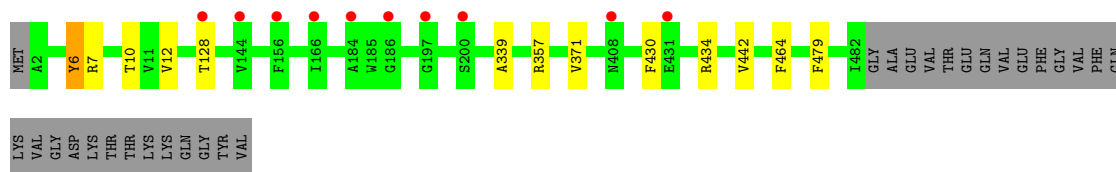
- Molecule 2: Photosystem II CP47 reaction center protein

Chain B2:  96%

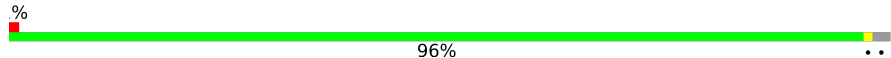


- Molecule 2: Photosystem II CP47 reaction center protein

Chain b2:  92% 6%

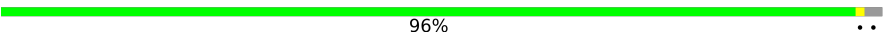


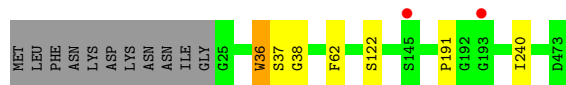
- Molecule 3: Photosystem II CP43 reaction center protein

Chain C1:  96%

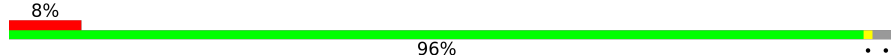


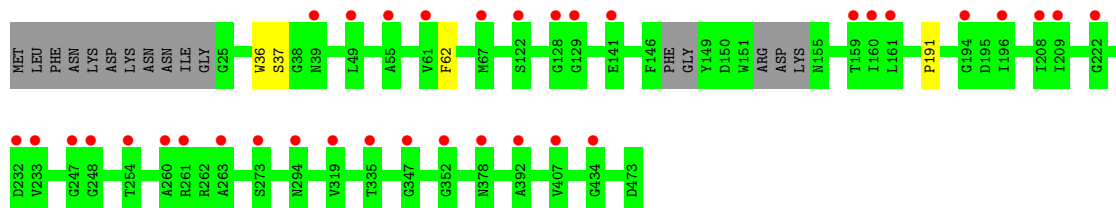
- Molecule 3: Photosystem II CP43 reaction center protein

Chain c1:  96%

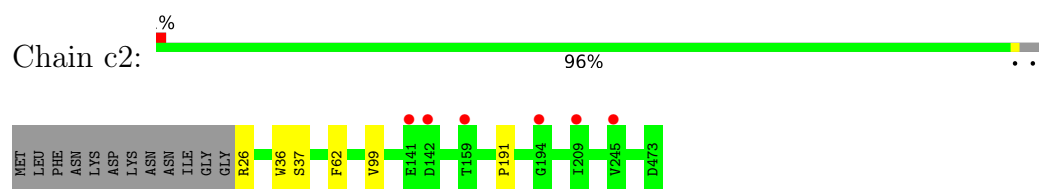


- Molecule 3: Photosystem II CP43 reaction center protein

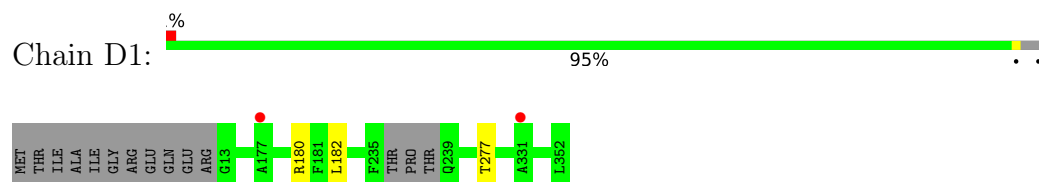
Chain C2:  96% 8%



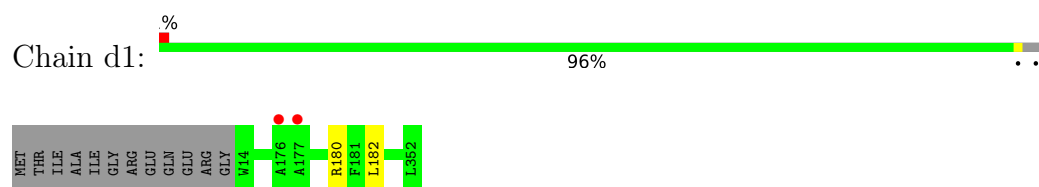
- Molecule 3: Photosystem II CP43 reaction center protein



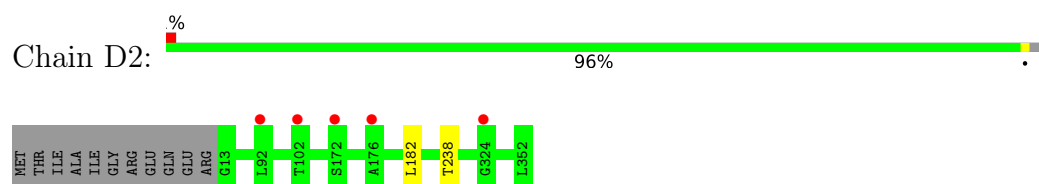
- Molecule 4: Photosystem II D2 protein



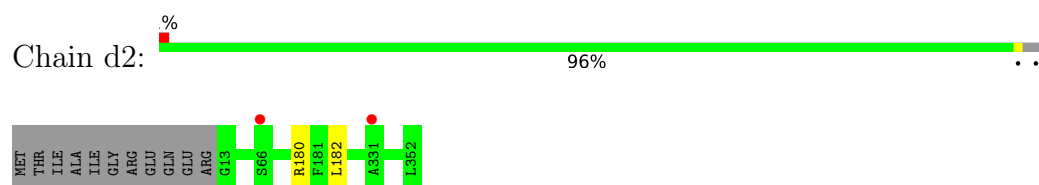
- Molecule 4: Photosystem II D2 protein



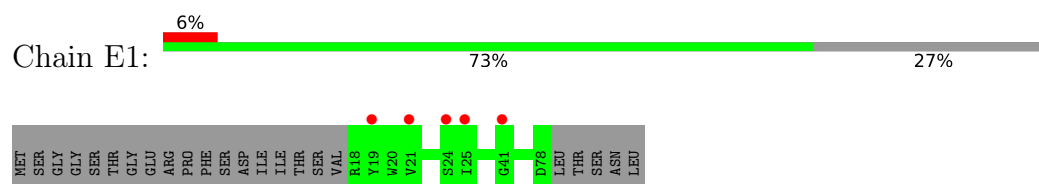
- Molecule 4: Photosystem II D2 protein



- Molecule 4: Photosystem II D2 protein



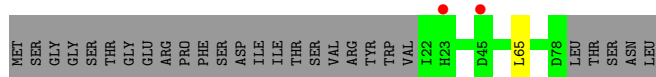
- Molecule 5: Cytochrome b559 subunit alpha



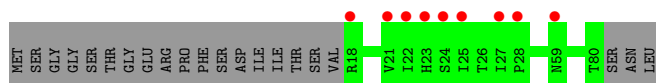
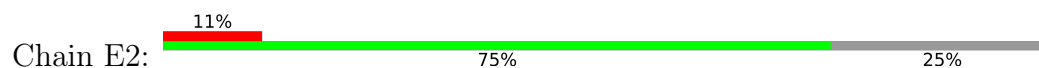
- Molecule 5: Cytochrome b559 subunit alpha



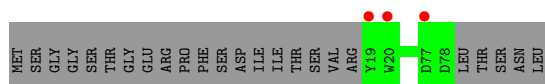




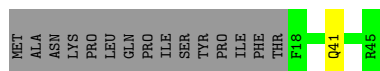
- Molecule 5: Cytochrome b559 subunit alpha



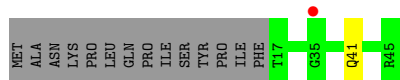
- Molecule 5: Cytochrome b559 subunit alpha



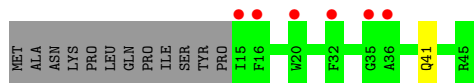
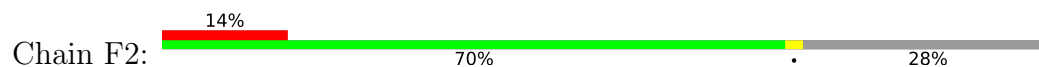
- Molecule 6: Cytochrome b559 subunit beta



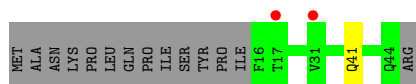
- Molecule 6: Cytochrome b559 subunit beta



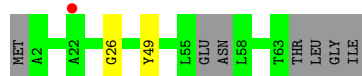
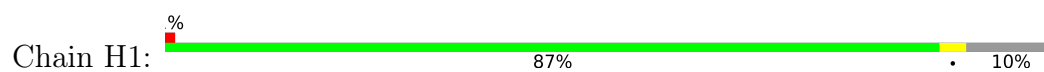
- Molecule 6: Cytochrome b559 subunit beta



- Molecule 6: Cytochrome b559 subunit beta



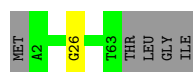
- Molecule 7: Photosystem II reaction center protein H



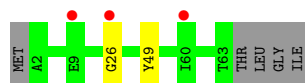
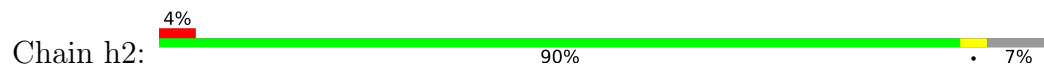
- Molecule 7: Photosystem II reaction center protein H



- Molecule 7: Photosystem II reaction center protein H



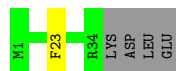
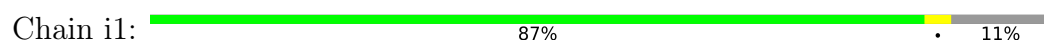
- Molecule 7: Photosystem II reaction center protein H



- Molecule 8: Photosystem II reaction center protein I



- Molecule 8: Photosystem II reaction center protein I

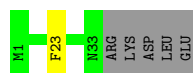


- Molecule 8: Photosystem II reaction center protein I



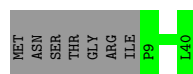
- Molecule 8: Photosystem II reaction center protein I

Chain i2:  84% 13%



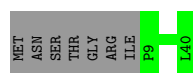
- Molecule 9: Photosystem II reaction center protein J

Chain J1:  82% 18%



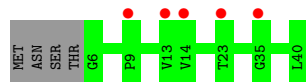
- Molecule 9: Photosystem II reaction center protein J

Chain j1:  82% 18%



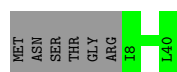
- Molecule 9: Photosystem II reaction center protein J

Chain J2:  13% 90% 10%



- Molecule 9: Photosystem II reaction center protein J

Chain j2:  85% 15%



- Molecule 10: Photosystem II reaction center protein K

Chain K1:  2% 85% 5% 10%

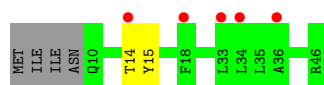
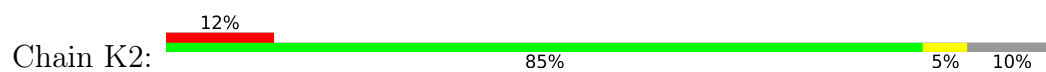


- Molecule 10: Photosystem II reaction center protein K

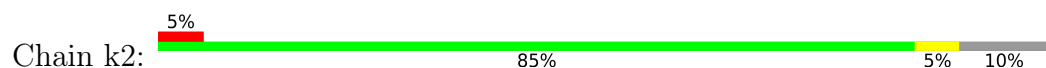
Chain k1:  85% 5% 10%



- Molecule 10: Photosystem II reaction center protein K



- Molecule 10: Photosystem II reaction center protein K



- Molecule 11: Photosystem II reaction center protein L



- Molecule 11: Photosystem II reaction center protein L



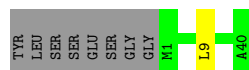
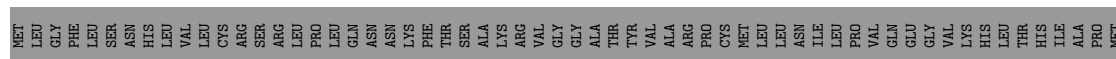
- Molecule 11: Photosystem II reaction center protein L



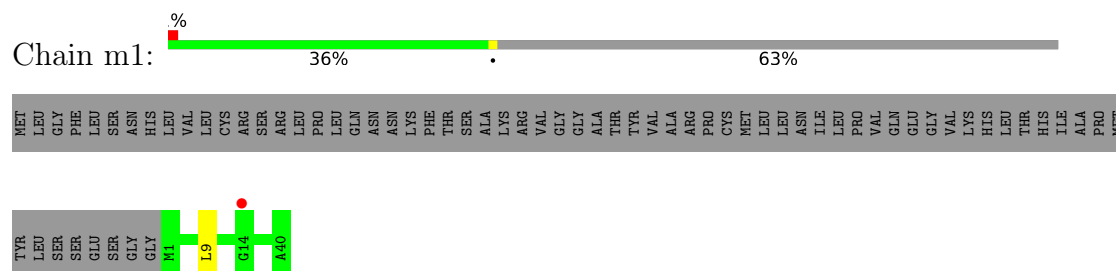
- Molecule 11: Photosystem II reaction center protein L



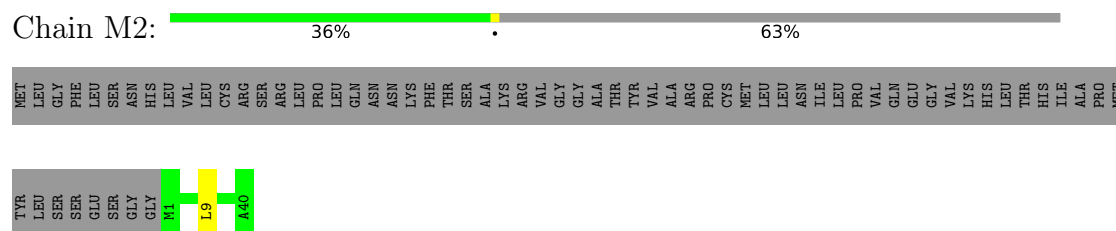
- Molecule 12: PHOTOSYSTEM II REACTION CENTER PROTEIN M



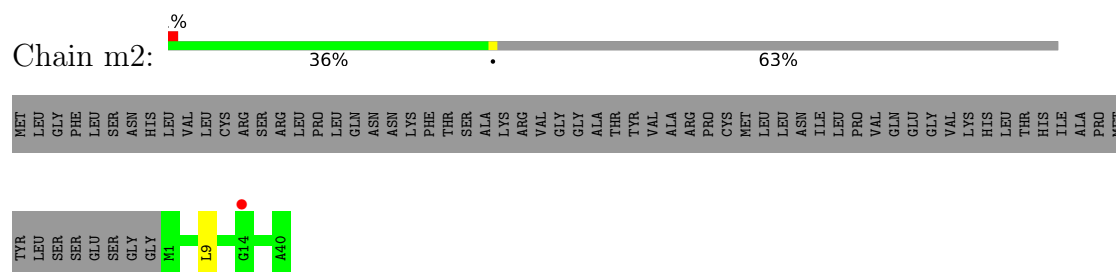
- Molecule 12: PHOTOSYSTEM II REACTION CENTER PROTEIN M



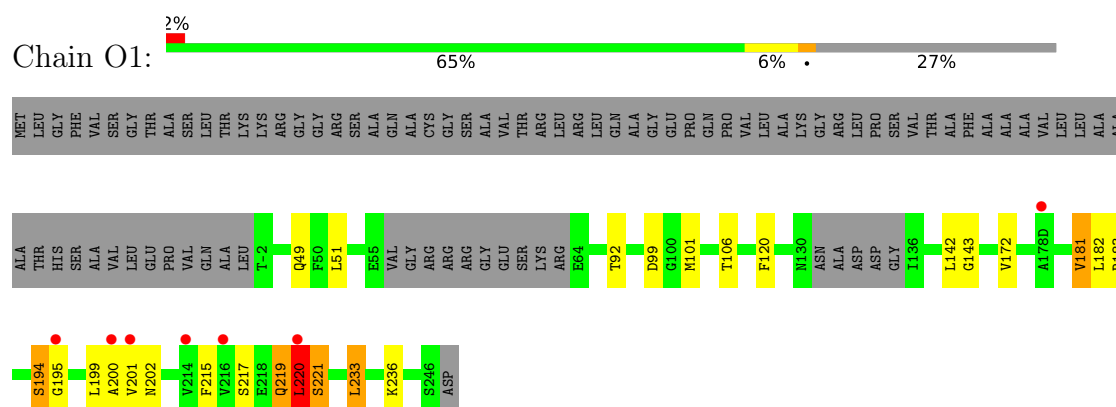
- Molecule 12: PHOTOSYSTEM II REACTION CENTER PROTEIN M



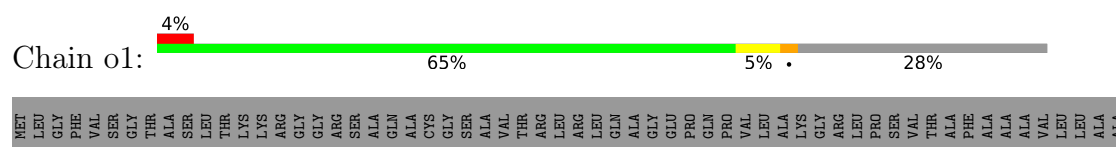
- Molecule 12: PHOTOSYSTEM II REACTION CENTER PROTEIN M

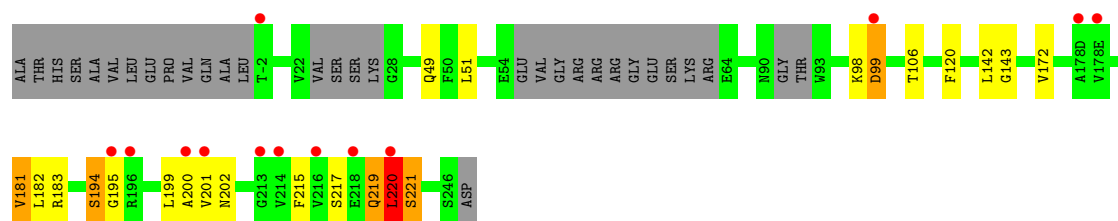


- Molecule 13: PHOTOSYSTEM II MANGANESE-STABILIZING POLYPEPTIDE, PSBO

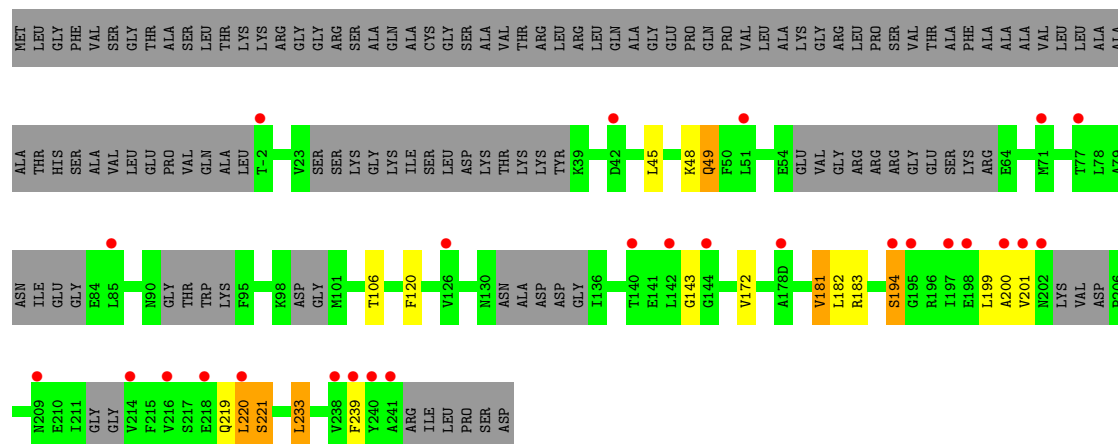


- Molecule 13: PHOTOSYSTEM II MANGANESE-STABILIZING POLYPEPTIDE, PSBO

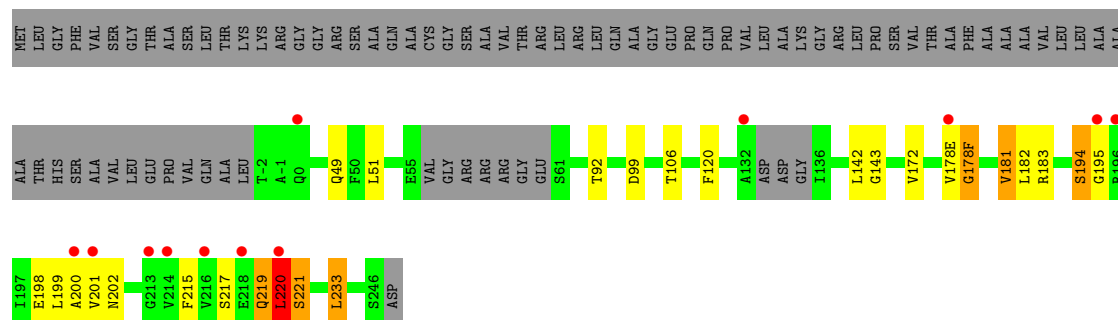




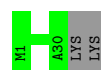
- Molecule 13: PHOTOSYSTEM II MANGANESE-STABILIZING POLYPEPTIDE, PSBO



- Molecule 13: PHOTOSYSTEM II MANGANESE-STABILIZING POLYPEPTIDE, PSBO

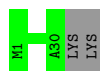


- Molecule 14: Photosystem II reaction center protein T



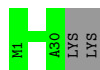
- Molecule 14: Photosystem II reaction center protein T





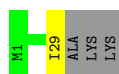
- Molecule 14: Photosystem II reaction center protein T

Chain T2: 94% 6%



- Molecule 14: Photosystem II reaction center protein T

Chain t2: 88% 9%



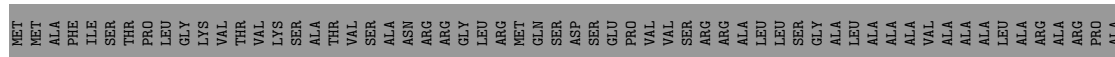
- Molecule 15: Photosystem II 12 kDa extrinsic protein, chloroplastic

Chain U1: 57% 40%



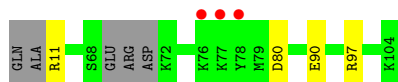
- Molecule 15: Photosystem II 12 kDa extrinsic protein, chloroplastic

Chain u1: 57% 40%



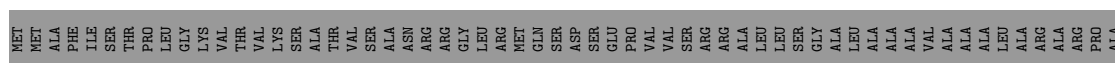
- Molecule 15: Photosystem II 12 kDa extrinsic protein, chloroplastic

Chain U2: 2% 55% 42%

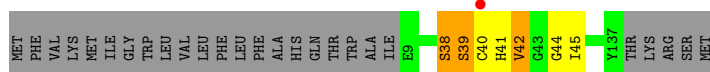
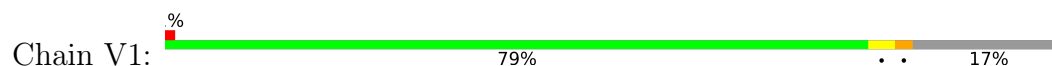


- Molecule 15: Photosystem II 12 kDa extrinsic protein, chloroplastic

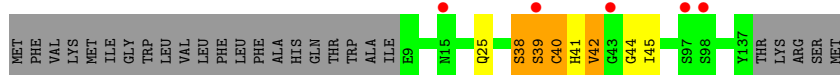
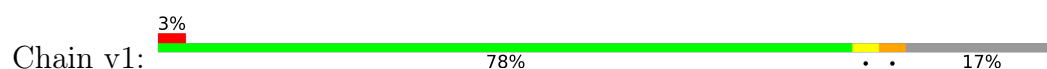
Chain u2: 1% 56% 40%



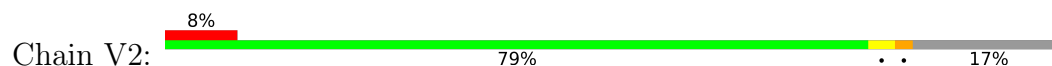
- Molecule 16: Cytochrome c-550



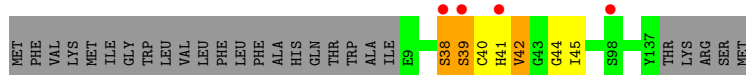
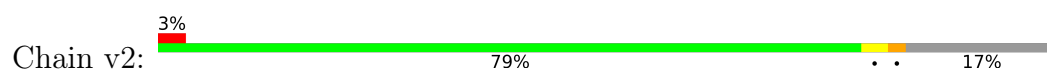
- Molecule 16: Cytochrome c-550



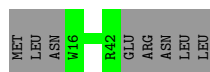
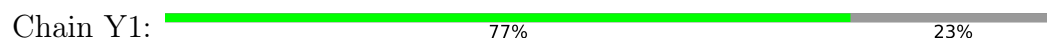
- Molecule 16: Cytochrome c-550



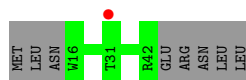
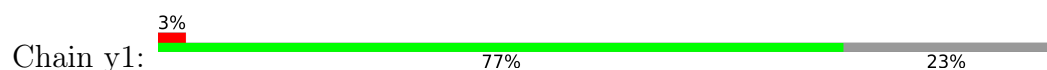
- Molecule 16: Cytochrome c-550



- Molecule 17: Photosystem II reaction center protein Ycf12



- Molecule 17: Photosystem II reaction center protein Ycf12





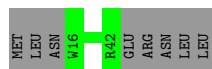
- Molecule 17: Photosystem II reaction center protein Ycf12

Chain Y2:  71% 29%



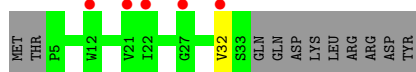
- Molecule 17: Photosystem II reaction center protein Ycf12

Chain y2:  77% 23%



- Molecule 18: PHOTOSYSTEM II REACTION CENTER PROTEIN X

Chain X1:  12% 70% 28%



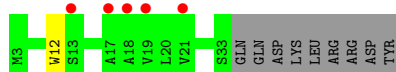
- Molecule 18: PHOTOSYSTEM II REACTION CENTER PROTEIN X

Chain x1:  15% 85% 5% 10%



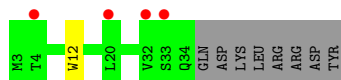
- Molecule 18: PHOTOSYSTEM II REACTION CENTER PROTEIN X

Chain X2:  12% 75% 22%



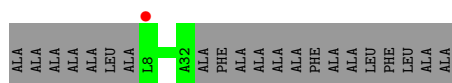
- Molecule 18: PHOTOSYSTEM II REACTION CENTER PROTEIN X

Chain x2:  10% 78% 20%

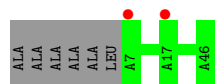
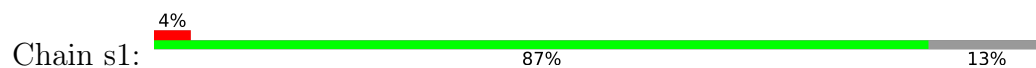


- Molecule 19: PEPTIDE CHAIN UNASSIGNED

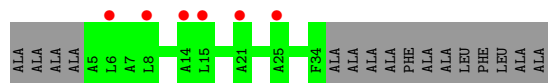
Chain S1:  2% 54% 46%



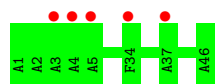
## ● Molecule 19: PEPTIDE CHAIN UNASSIGNED



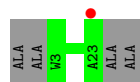
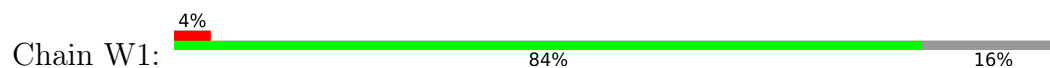
## ● Molecule 19: PEPTIDE CHAIN UNASSIGNED



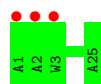
## ● Molecule 19: PEPTIDE CHAIN UNASSIGNED



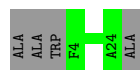
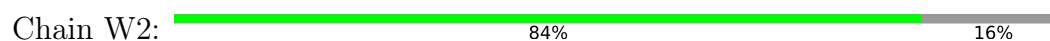
## ● Molecule 20: PEPTIDE CHAIN UNASSIGNED



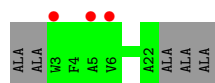
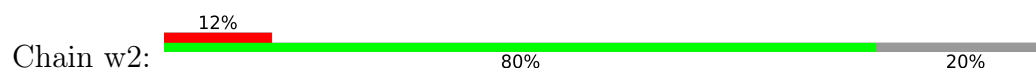
## ● Molecule 20: PEPTIDE CHAIN UNASSIGNED



## ● Molecule 20: PEPTIDE CHAIN UNASSIGNED



## ● Molecule 20: PEPTIDE CHAIN UNASSIGNED



- Chain z2:  95% 5% 6%
- 

## 4 Data and refinement statistics

| Property                                                                | Value                                                       | Source           |
|-------------------------------------------------------------------------|-------------------------------------------------------------|------------------|
| Space group                                                             | P 21 21 21                                                  | Depositor        |
| Cell constants<br>a, b, c, $\alpha$ , $\beta$ , $\gamma$                | 210.44Å 240.31Å 300.06Å<br>90.00° 90.00° 90.00°             | Depositor        |
| Resolution (Å)                                                          | 10.00 – 2.77<br>10.00 – 2.77                                | Depositor<br>EDS |
| % Data completeness<br>(in resolution range)                            | 99.7 (10.00-2.77)<br>97.5 (10.00-2.77)                      | Depositor<br>EDS |
| $R_{merge}$                                                             | 0.10                                                        | Depositor        |
| $R_{sym}$                                                               | (Not available)                                             | Depositor        |
| $\langle I/\sigma(I) \rangle$ <sup>1</sup>                              | 1.48 (at 2.76Å)                                             | Xtriage          |
| Refinement program                                                      | PHENIX 1.9_1692                                             | Depositor        |
| R, $R_{free}$                                                           | 0.249 , 0.278<br>0.254 , 0.281                              | Depositor<br>DCC |
| $R_{free}$ test set                                                     | 18742 reflections (5.01%)                                   | wwPDB-VP         |
| Wilson B-factor (Å <sup>2</sup> )                                       | 68.0                                                        | Xtriage          |
| Anisotropy                                                              | 0.616                                                       | Xtriage          |
| Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> ) | 0.35 , 78.8                                                 | EDS              |
| L-test for twinning <sup>2</sup>                                        | $\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.33$ | Xtriage          |
| Estimated twinning fraction                                             | No twinning to report.                                      | Xtriage          |
| $F_o, F_c$ correlation                                                  | 0.92                                                        | EDS              |
| Total number of atoms                                                   | 92765                                                       | wwPDB-VP         |
| Average B, all atoms (Å <sup>2</sup> )                                  | 68.0                                                        | wwPDB-VP         |

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.84% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: PHO, LMT, LMG, OEX, HEM, DGD, CA, CLA, UNL, CL, SQD, BCR, GOL, LHG, FE, PL9, BCT

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 5$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Chain | Bond lengths |               | Bond angles |               |
|-----|-------|--------------|---------------|-------------|---------------|
|     |       | RMSZ         | # Z  >5       | RMSZ        | # Z  >5       |
| 1   | A1    | 0.28         | 0/2685        | 0.43        | 0/3673        |
| 1   | A2    | 0.29         | 0/2548        | 0.43        | 0/3481        |
| 1   | a1    | 0.28         | 0/2642        | 0.42        | 0/3612        |
| 1   | a2    | 0.28         | 0/2586        | 0.43        | 0/3538        |
| 2   | B1    | 0.33         | 0/3830        | 0.48        | 3/5227 (0.1%) |
| 2   | B2    | 0.33         | 0/3897        | 0.48        | 2/5323 (0.0%) |
| 2   | b1    | 0.36         | 1/4015 (0.0%) | 0.49        | 2/5473 (0.0%) |
| 2   | b2    | 0.33         | 0/3808        | 0.48        | 2/5197 (0.0%) |
| 3   | C1    | 0.28         | 0/3501        | 0.43        | 0/4782        |
| 3   | C2    | 0.27         | 0/3242        | 0.42        | 0/4441        |
| 3   | c1    | 0.30         | 0/3555        | 0.43        | 0/4850        |
| 3   | c2    | 0.27         | 0/3495        | 0.42        | 0/4773        |
| 4   | D1    | 0.35         | 0/2704        | 0.46        | 0/3688        |
| 4   | D2    | 0.34         | 0/2675        | 0.46        | 0/3655        |
| 4   | d1    | 0.35         | 0/2772        | 0.46        | 0/3783        |
| 4   | d2    | 0.35         | 0/2736        | 0.46        | 0/3734        |
| 5   | E1    | 0.24         | 0/418         | 0.38        | 0/577         |
| 5   | E2    | 0.25         | 0/443         | 0.39        | 0/614         |
| 5   | e1    | 0.24         | 0/440         | 0.39        | 0/603         |
| 5   | e2    | 0.24         | 0/434         | 0.37        | 0/598         |
| 6   | F1    | 0.45         | 0/220         | 0.51        | 0/299         |
| 6   | F2    | 0.43         | 0/236         | 0.51        | 0/320         |
| 6   | f1    | 0.44         | 0/235         | 0.50        | 0/319         |
| 6   | f2    | 0.45         | 0/234         | 0.49        | 0/318         |
| 7   | H1    | 0.23         | 0/443         | 0.40        | 0/606         |
| 7   | H2    | 0.23         | 0/453         | 0.38        | 0/619         |
| 7   | h1    | 0.23         | 0/481         | 0.41        | 0/657         |
| 7   | h2    | 0.23         | 0/461         | 0.38        | 0/631         |
| 8   | I1    | 0.26         | 0/283         | 0.35        | 0/381         |
| 8   | I2    | 0.26         | 0/273         | 0.35        | 0/371         |
| 8   | i1    | 0.26         | 0/289         | 0.36        | 0/389         |

| Mol | Chain | Bond lengths |               | Bond angles |                |
|-----|-------|--------------|---------------|-------------|----------------|
|     |       | RMSZ         | # Z  >5       | RMSZ        | # Z  >5        |
| 8   | i2    | 0.27         | 0/270         | 0.34        | 0/364          |
| 9   | J1    | 0.23         | 0/225         | 0.35        | 0/307          |
| 9   | J2    | 0.22         | 0/236         | 0.35        | 0/324          |
| 9   | j1    | 0.23         | 0/229         | 0.34        | 0/313          |
| 9   | j2    | 0.22         | 0/233         | 0.36        | 0/319          |
| 10  | K1    | 0.38         | 0/289         | 0.53        | 0/399          |
| 10  | K2    | 0.38         | 0/258         | 0.52        | 0/359          |
| 10  | k1    | 0.37         | 0/290         | 0.53        | 0/401          |
| 10  | k2    | 0.38         | 0/278         | 0.52        | 0/385          |
| 11  | L1    | 0.49         | 0/301         | 0.58        | 0/410          |
| 11  | L2    | 0.47         | 0/308         | 0.57        | 0/419          |
| 11  | l1    | 0.49         | 0/308         | 0.58        | 0/418          |
| 11  | l2    | 0.48         | 0/308         | 0.58        | 0/418          |
| 12  | M1    | 0.39         | 0/288         | 0.59        | 0/391          |
| 12  | M2    | 0.38         | 0/287         | 0.58        | 0/390          |
| 12  | m1    | 0.38         | 0/288         | 0.59        | 0/391          |
| 12  | m2    | 0.38         | 0/290         | 0.59        | 0/394          |
| 13  | O1    | 0.66         | 2/1700 (0.1%) | 0.91        | 15/2315 (0.6%) |
| 13  | O2    | 0.63         | 1/1387 (0.1%) | 0.85        | 7/1881 (0.4%)  |
| 13  | o1    | 0.63         | 2/1716 (0.1%) | 0.90        | 13/2330 (0.6%) |
| 13  | o2    | 0.65         | 2/1794 (0.1%) | 0.91        | 14/2434 (0.6%) |
| 14  | T1    | 0.26         | 0/248         | 0.39        | 0/337          |
| 14  | T2    | 0.25         | 0/247         | 0.38        | 0/337          |
| 14  | t1    | 0.25         | 0/253         | 0.39        | 0/344          |
| 14  | t2    | 0.26         | 0/242         | 0.39        | 0/330          |
| 15  | U1    | 0.46         | 0/709         | 0.68        | 2/970 (0.2%)   |
| 15  | U2    | 0.45         | 0/588         | 1.15        | 3/809 (0.4%)   |
| 15  | u1    | 0.46         | 0/721         | 0.67        | 2/981 (0.2%)   |
| 15  | u2    | 0.44         | 0/726         | 0.66        | 2/988 (0.2%)   |
| 16  | V1    | 0.48         | 0/937         | 0.67        | 4/1281 (0.3%)  |
| 16  | V2    | 0.46         | 1/858 (0.1%)  | 0.62        | 1/1177 (0.1%)  |
| 16  | v1    | 0.47         | 0/941         | 0.67        | 4/1284 (0.3%)  |
| 16  | v2    | 0.46         | 0/983         | 0.66        | 4/1337 (0.3%)  |
| 17  | Y1    | 0.43         | 0/171         | 0.52        | 0/236          |
| 17  | Y2    | 0.44         | 0/159         | 0.53        | 0/219          |
| 17  | y1    | 0.41         | 0/198         | 0.50        | 0/274          |
| 17  | y2    | 0.42         | 0/191         | 0.50        | 0/264          |
| 18  | X1    | 0.26         | 0/202         | 0.43        | 0/278          |
| 18  | X2    | 0.25         | 0/222         | 0.43        | 0/307          |
| 18  | x1    | 0.29         | 0/262         | 0.44        | 0/363          |
| 18  | x2    | 0.34         | 0/225         | 0.46        | 0/312          |
| 19  | S1    | 0.25         | 0/167         | 0.36        | 0/231          |
| 19  | S2    | 0.25         | 0/194         | 0.36        | 0/268          |

| Mol | Chain | Bond lengths |                | Bond angles |                  |
|-----|-------|--------------|----------------|-------------|------------------|
|     |       | RMSZ         | # Z  >5        | RMSZ        | # Z  >5          |
| 19  | s1    | 0.26         | 0/269          | 0.33        | 0/371            |
| 19  | s2    | 0.24         | 0/285          | 0.34        | 0/395            |
| 20  | W1    | 0.20         | 0/134          | 0.37        | 0/186            |
| 20  | W2    | 0.20         | 0/129          | 0.38        | 0/179            |
| 20  | w1    | 0.20         | 0/152          | 0.36        | 0/211            |
| 20  | w2    | 0.21         | 0/127          | 0.37        | 0/176            |
| 21  | Q2    | 0.41         | 0/682          | 0.47        | 0/937            |
| 21  | q1    | 0.40         | 0/650          | 0.50        | 1/893 (0.1%)     |
| 22  | Z2    | 0.20         | 0/353          | 0.37        | 0/487            |
| 22  | z2    | 0.22         | 0/387          | 0.38        | 0/532            |
| All | All   | 0.37         | 9/79929 (0.0%) | 0.53        | 81/109188 (0.1%) |

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 13  | O1    | 0                   | 2                   |
| 13  | O2    | 0                   | 4                   |
| 13  | o1    | 0                   | 3                   |
| 13  | o2    | 0                   | 3                   |
| 16  | V1    | 0                   | 3                   |
| 16  | V2    | 0                   | 3                   |
| 16  | v1    | 0                   | 3                   |
| 16  | v2    | 0                   | 3                   |
| All | All   | 0                   | 24                  |

The worst 5 of 9 bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|------|-------------|----------|
| 13  | O1    | 221 | SER  | N-CA  | 6.20 | 1.58        | 1.46     |
| 13  | o2    | 221 | SER  | N-CA  | 6.10 | 1.58        | 1.46     |
| 13  | o1    | 221 | SER  | N-CA  | 6.00 | 1.58        | 1.46     |
| 13  | O1    | 220 | LEU  | N-CA  | 5.81 | 1.57        | 1.46     |
| 13  | o2    | 220 | LEU  | N-CA  | 5.81 | 1.57        | 1.46     |

The worst 5 of 81 bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms     | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 15  | U2    | 11  | ARG  | NE-CZ-NH1 | -19.49 | 110.56      | 120.30   |
| 15  | U2    | 11  | ARG  | NE-CZ-NH2 | 17.62  | 129.11      | 120.30   |

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| Mol | Chain | Res | Type | Atoms     | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 13  | o1    | 99  | ASP  | CB-CG-OD1 | -10.04 | 109.26      | 118.30   |
| 15  | U2    | 11  | ARG  | CD-NE-CZ  | 9.31   | 136.64      | 123.60   |
| 13  | o1    | 195 | GLY  | CA-C-O    | -8.28  | 105.69      | 120.60   |

There are no chirality outliers.

5 of 24 planarity outliers are listed below:

| Mol | Chain | Res | Type | Group   |
|-----|-------|-----|------|---------|
| 13  | O1    | 194 | SER  | Peptide |
| 13  | O1    | 220 | LEU  | Peptide |
| 16  | V1    | 38  | SER  | Peptide |
| 16  | V1    | 41  | HIS  | Peptide |
| 16  | V1    | 44  | GLY  | Peptide |

## 5.2 Too-close contacts [i](#)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

| Mol | Chain | Analysed      | Favoured  | Allowed | Outliers | Percentiles |     |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 1   | A1    | 342/344 (99%) | 328 (96%) | 14 (4%) | 0        | 100         | 100 |
| 1   | A2    | 327/344 (95%) | 318 (97%) | 9 (3%)  | 0        | 100         | 100 |
| 1   | a1    | 332/344 (96%) | 323 (97%) | 9 (3%)  | 0        | 100         | 100 |
| 1   | a2    | 332/344 (96%) | 323 (97%) | 9 (3%)  | 0        | 100         | 100 |
| 2   | B1    | 481/509 (94%) | 456 (95%) | 23 (5%) | 2 (0%)   | 30          | 58  |
| 2   | B2    | 501/509 (98%) | 474 (95%) | 26 (5%) | 1 (0%)   | 44          | 71  |
| 2   | b1    | 502/509 (99%) | 474 (94%) | 26 (5%) | 2 (0%)   | 30          | 58  |
| 2   | b2    | 479/509 (94%) | 454 (95%) | 23 (5%) | 2 (0%)   | 30          | 58  |

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| Mol | Chain | Analysed      | Favoured  | Allowed | Outliers | Percentiles |     |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 3   | C1    | 447/460 (97%) | 424 (95%) | 20 (4%) | 3 (1%)   | 19          | 45  |
| 3   | C2    | 438/460 (95%) | 416 (95%) | 19 (4%) | 3 (1%)   | 19          | 45  |
| 3   | c1    | 449/460 (98%) | 426 (95%) | 19 (4%) | 4 (1%)   | 14          | 38  |
| 3   | c2    | 446/460 (97%) | 424 (95%) | 19 (4%) | 3 (1%)   | 19          | 45  |
| 4   | D1    | 333/351 (95%) | 318 (96%) | 15 (4%) | 0        | 100         | 100 |
| 4   | D2    | 338/351 (96%) | 322 (95%) | 16 (5%) | 0        | 100         | 100 |
| 4   | d1    | 337/351 (96%) | 321 (95%) | 16 (5%) | 0        | 100         | 100 |
| 4   | d2    | 338/351 (96%) | 323 (96%) | 15 (4%) | 0        | 100         | 100 |
| 5   | E1    | 59/84 (70%)   | 57 (97%)  | 2 (3%)  | 0        | 100         | 100 |
| 5   | E2    | 61/84 (73%)   | 59 (97%)  | 2 (3%)  | 0        | 100         | 100 |
| 5   | e1    | 55/84 (66%)   | 54 (98%)  | 1 (2%)  | 0        | 100         | 100 |
| 5   | e2    | 58/84 (69%)   | 57 (98%)  | 1 (2%)  | 0        | 100         | 100 |
| 6   | F1    | 26/43 (60%)   | 26 (100%) | 0       | 0        | 100         | 100 |
| 6   | F2    | 29/43 (67%)   | 29 (100%) | 0       | 0        | 100         | 100 |
| 6   | f1    | 27/43 (63%)   | 27 (100%) | 0       | 0        | 100         | 100 |
| 6   | f2    | 27/43 (63%)   | 26 (96%)  | 1 (4%)  | 0        | 100         | 100 |
| 7   | H1    | 56/67 (84%)   | 53 (95%)  | 2 (4%)  | 1 (2%)   | 7           | 21  |
| 7   | H2    | 60/67 (90%)   | 54 (90%)  | 5 (8%)  | 1 (2%)   | 7           | 23  |
| 7   | h1    | 60/67 (90%)   | 57 (95%)  | 2 (3%)  | 1 (2%)   | 7           | 23  |
| 7   | h2    | 60/67 (90%)   | 56 (93%)  | 3 (5%)  | 1 (2%)   | 7           | 23  |
| 8   | I1    | 32/38 (84%)   | 32 (100%) | 0       | 0        | 100         | 100 |
| 8   | I2    | 33/38 (87%)   | 32 (97%)  | 1 (3%)  | 0        | 100         | 100 |
| 8   | i1    | 32/38 (84%)   | 32 (100%) | 0       | 0        | 100         | 100 |
| 8   | i2    | 31/38 (82%)   | 31 (100%) | 0       | 0        | 100         | 100 |
| 9   | J1    | 30/39 (77%)   | 30 (100%) | 0       | 0        | 100         | 100 |
| 9   | J2    | 33/39 (85%)   | 33 (100%) | 0       | 0        | 100         | 100 |
| 9   | j1    | 30/39 (77%)   | 30 (100%) | 0       | 0        | 100         | 100 |
| 9   | j2    | 31/39 (80%)   | 31 (100%) | 0       | 0        | 100         | 100 |
| 10  | K1    | 35/41 (85%)   | 31 (89%)  | 2 (6%)  | 2 (6%)   | 1           | 3   |
| 10  | K2    | 35/41 (85%)   | 31 (89%)  | 2 (6%)  | 2 (6%)   | 1           | 3   |
| 10  | k1    | 35/41 (85%)   | 31 (89%)  | 2 (6%)  | 2 (6%)   | 1           | 3   |

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| Mol | Chain | Analysed      | Favoured  | Allowed | Outliers | Percentiles |     |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 10  | k2    | 35/41 (85%)   | 31 (89%)  | 2 (6%)  | 2 (6%)   | 1           | 3   |
| 11  | L1    | 35/38 (92%)   | 33 (94%)  | 1 (3%)  | 1 (3%)   | 3           | 12  |
| 11  | L2    | 35/38 (92%)   | 33 (94%)  | 1 (3%)  | 1 (3%)   | 3           | 12  |
| 11  | l1    | 35/38 (92%)   | 33 (94%)  | 1 (3%)  | 1 (3%)   | 3           | 12  |
| 11  | l2    | 35/38 (92%)   | 33 (94%)  | 1 (3%)  | 1 (3%)   | 3           | 12  |
| 12  | M1    | 38/108 (35%)  | 30 (79%)  | 8 (21%) | 0        | 100         | 100 |
| 12  | M2    | 38/108 (35%)  | 30 (79%)  | 8 (21%) | 0        | 100         | 100 |
| 12  | m1    | 38/108 (35%)  | 30 (79%)  | 8 (21%) | 0        | 100         | 100 |
| 12  | m2    | 38/108 (35%)  | 30 (79%)  | 8 (21%) | 0        | 100         | 100 |
| 13  | O1    | 234/329 (71%) | 210 (90%) | 14 (6%) | 10 (4%)  | 2           | 6   |
| 13  | O2    | 187/329 (57%) | 165 (88%) | 14 (8%) | 8 (4%)   | 2           | 6   |
| 13  | o1    | 230/329 (70%) | 204 (89%) | 16 (7%) | 10 (4%)  | 2           | 6   |
| 13  | o2    | 239/329 (73%) | 212 (89%) | 15 (6%) | 12 (5%)  | 1           | 4   |
| 14  | T1    | 28/32 (88%)   | 28 (100%) | 0       | 0        | 100         | 100 |
| 14  | T2    | 28/32 (88%)   | 28 (100%) | 0       | 0        | 100         | 100 |
| 14  | t1    | 28/32 (88%)   | 28 (100%) | 0       | 0        | 100         | 100 |
| 14  | t2    | 27/32 (84%)   | 27 (100%) | 0       | 0        | 100         | 100 |
| 15  | U1    | 91/155 (59%)  | 85 (93%)  | 6 (7%)  | 0        | 100         | 100 |
| 15  | U2    | 86/155 (56%)  | 81 (94%)  | 5 (6%)  | 0        | 100         | 100 |
| 15  | u1    | 91/155 (59%)  | 87 (96%)  | 4 (4%)  | 0        | 100         | 100 |
| 15  | u2    | 91/155 (59%)  | 85 (93%)  | 6 (7%)  | 0        | 100         | 100 |
| 16  | V1    | 127/155 (82%) | 115 (91%) | 7 (6%)  | 5 (4%)   | 2           | 7   |
| 16  | V2    | 127/155 (82%) | 115 (91%) | 7 (6%)  | 5 (4%)   | 2           | 7   |
| 16  | v1    | 127/155 (82%) | 115 (91%) | 7 (6%)  | 5 (4%)   | 2           | 7   |
| 16  | v2    | 127/155 (82%) | 115 (91%) | 7 (6%)  | 5 (4%)   | 2           | 7   |
| 17  | Y1    | 25/35 (71%)   | 24 (96%)  | 1 (4%)  | 0        | 100         | 100 |
| 17  | Y2    | 23/35 (66%)   | 22 (96%)  | 1 (4%)  | 0        | 100         | 100 |
| 17  | y1    | 25/35 (71%)   | 24 (96%)  | 1 (4%)  | 0        | 100         | 100 |
| 17  | y2    | 25/35 (71%)   | 24 (96%)  | 1 (4%)  | 0        | 100         | 100 |
| 18  | X1    | 27/40 (68%)   | 27 (100%) | 0       | 0        | 100         | 100 |
| 18  | X2    | 29/40 (72%)   | 29 (100%) | 0       | 0        | 100         | 100 |

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| Mol | Chain | Analysed          | Favoured   | Allowed  | Outliers | Percentiles |     |
|-----|-------|-------------------|------------|----------|----------|-------------|-----|
| 18  | x1    | 34/40 (85%)       | 33 (97%)   | 1 (3%)   | 0        | 100         | 100 |
| 18  | x2    | 30/40 (75%)       | 30 (100%)  | 0        | 0        | 100         | 100 |
| 19  | S1    | 23/46 (50%)       | 23 (100%)  | 0        | 0        | 100         | 100 |
| 19  | S2    | 28/46 (61%)       | 27 (96%)   | 1 (4%)   | 0        | 100         | 100 |
| 19  | s1    | 38/46 (83%)       | 34 (90%)   | 4 (10%)  | 0        | 100         | 100 |
| 19  | s2    | 44/46 (96%)       | 37 (84%)   | 7 (16%)  | 0        | 100         | 100 |
| 20  | W1    | 19/25 (76%)       | 19 (100%)  | 0        | 0        | 100         | 100 |
| 20  | W2    | 19/25 (76%)       | 19 (100%)  | 0        | 0        | 100         | 100 |
| 20  | w1    | 23/25 (92%)       | 21 (91%)   | 2 (9%)   | 0        | 100         | 100 |
| 20  | w2    | 18/25 (72%)       | 18 (100%)  | 0        | 0        | 100         | 100 |
| 21  | Q2    | 107/218 (49%)     | 102 (95%)  | 3 (3%)   | 2 (2%)   | 6           | 20  |
| 21  | q1    | 101/218 (46%)     | 97 (96%)   | 3 (3%)   | 1 (1%)   | 13          | 36  |
| 22  | Z2    | 57/62 (92%)       | 55 (96%)   | 2 (4%)   | 0        | 100         | 100 |
| 22  | z2    | 57/62 (92%)       | 55 (96%)   | 2 (4%)   | 0        | 100         | 100 |
| All | All   | 10304/12316 (84%) | 9726 (94%) | 479 (5%) | 99 (1%)  | 13          | 36  |

5 of 99 Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 3   | C1    | 36  | TRP  |
| 3   | C1    | 37  | SER  |
| 10  | K1    | 14  | THR  |
| 13  | O1    | 49  | GLN  |
| 13  | O1    | 99  | ASP  |

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

| Mol | Chain | Analysed      | Rotameric | Outliers | Percentiles |    |
|-----|-------|---------------|-----------|----------|-------------|----|
| 1   | A1    | 261/282 (93%) | 256 (98%) | 5 (2%)   | 52          | 79 |
| 1   | A2    | 239/282 (85%) | 234 (98%) | 5 (2%)   | 48          | 77 |

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| Mol | Chain | Analysed      | Rotameric  | Outliers | Percentiles |     |
|-----|-------|---------------|------------|----------|-------------|-----|
| 1   | a1    | 261/282 (93%) | 256 (98%)  | 5 (2%)   | 52          | 79  |
| 1   | a2    | 249/282 (88%) | 243 (98%)  | 6 (2%)   | 44          | 74  |
| 2   | B1    | 360/415 (87%) | 351 (98%)  | 9 (2%)   | 42          | 73  |
| 2   | B2    | 351/415 (85%) | 341 (97%)  | 10 (3%)  | 38          | 69  |
| 2   | b1    | 380/415 (92%) | 369 (97%)  | 11 (3%)  | 37          | 68  |
| 2   | b2    | 352/415 (85%) | 342 (97%)  | 10 (3%)  | 38          | 69  |
| 3   | C1    | 320/364 (88%) | 317 (99%)  | 3 (1%)   | 75          | 91  |
| 3   | C2    | 261/364 (72%) | 260 (100%) | 1 (0%)   | 89          | 96  |
| 3   | c1    | 338/364 (93%) | 334 (99%)  | 4 (1%)   | 67          | 87  |
| 3   | c2    | 323/364 (89%) | 320 (99%)  | 3 (1%)   | 75          | 91  |
| 4   | D1    | 255/283 (90%) | 252 (99%)  | 3 (1%)   | 67          | 87  |
| 4   | D2    | 238/283 (84%) | 236 (99%)  | 2 (1%)   | 79          | 92  |
| 4   | d1    | 267/283 (94%) | 265 (99%)  | 2 (1%)   | 81          | 93  |
| 4   | d2    | 258/283 (91%) | 256 (99%)  | 2 (1%)   | 79          | 92  |
| 5   | E1    | 28/75 (37%)   | 28 (100%)  | 0        | 100         | 100 |
| 5   | E2    | 34/75 (45%)   | 34 (100%)  | 0        | 100         | 100 |
| 5   | e1    | 38/75 (51%)   | 37 (97%)   | 1 (3%)   | 41          | 72  |
| 5   | e2    | 33/75 (44%)   | 33 (100%)  | 0        | 100         | 100 |
| 6   | F1    | 18/36 (50%)   | 17 (94%)   | 1 (6%)   | 17          | 43  |
| 6   | F2    | 17/36 (47%)   | 16 (94%)   | 1 (6%)   | 16          | 41  |
| 6   | f1    | 20/36 (56%)   | 19 (95%)   | 1 (5%)   | 20          | 48  |
| 6   | f2    | 19/36 (53%)   | 18 (95%)   | 1 (5%)   | 19          | 46  |
| 7   | H1    | 39/58 (67%)   | 38 (97%)   | 1 (3%)   | 41          | 72  |
| 7   | H2    | 38/58 (66%)   | 38 (100%)  | 0        | 100         | 100 |
| 7   | h1    | 47/58 (81%)   | 46 (98%)   | 1 (2%)   | 48          | 77  |
| 7   | h2    | 42/58 (72%)   | 41 (98%)   | 1 (2%)   | 44          | 74  |
| 8   | I1    | 30/36 (83%)   | 29 (97%)   | 1 (3%)   | 33          | 64  |
| 8   | I2    | 26/36 (72%)   | 25 (96%)   | 1 (4%)   | 28          | 59  |
| 8   | i1    | 32/36 (89%)   | 31 (97%)   | 1 (3%)   | 35          | 66  |
| 8   | i2    | 28/36 (78%)   | 27 (96%)   | 1 (4%)   | 30          | 61  |
| 9   | J1    | 20/32 (62%)   | 20 (100%)  | 0        | 100         | 100 |

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| Mol | Chain | Analysed      | Rotameric | Outliers | Percentiles |     |
|-----|-------|---------------|-----------|----------|-------------|-----|
| 9   | J2    | 19/32 (59%)   | 19 (100%) | 0        | 100         | 100 |
| 9   | j1    | 22/32 (69%)   | 22 (100%) | 0        | 100         | 100 |
| 9   | j2    | 22/32 (69%)   | 22 (100%) | 0        | 100         | 100 |
| 10  | K1    | 26/36 (72%)   | 26 (100%) | 0        | 100         | 100 |
| 10  | K2    | 18/36 (50%)   | 18 (100%) | 0        | 100         | 100 |
| 10  | k1    | 27/36 (75%)   | 27 (100%) | 0        | 100         | 100 |
| 10  | k2    | 24/36 (67%)   | 24 (100%) | 0        | 100         | 100 |
| 11  | L1    | 31/35 (89%)   | 31 (100%) | 0        | 100         | 100 |
| 11  | L2    | 33/35 (94%)   | 33 (100%) | 0        | 100         | 100 |
| 11  | l1    | 33/35 (94%)   | 33 (100%) | 0        | 100         | 100 |
| 11  | l2    | 32/35 (91%)   | 32 (100%) | 0        | 100         | 100 |
| 12  | M1    | 26/88 (30%)   | 25 (96%)  | 1 (4%)   | 28          | 59  |
| 12  | M2    | 26/88 (30%)   | 25 (96%)  | 1 (4%)   | 28          | 59  |
| 12  | m1    | 26/88 (30%)   | 25 (96%)  | 1 (4%)   | 28          | 59  |
| 12  | m2    | 27/88 (31%)   | 26 (96%)  | 1 (4%)   | 29          | 60  |
| 13  | O1    | 148/266 (56%) | 138 (93%) | 10 (7%)  | 13          | 34  |
| 13  | O2    | 110/266 (41%) | 103 (94%) | 7 (6%)   | 14          | 37  |
| 13  | o1    | 156/266 (59%) | 148 (95%) | 8 (5%)   | 20          | 47  |
| 13  | o2    | 168/266 (63%) | 159 (95%) | 9 (5%)   | 18          | 45  |
| 14  | T1    | 24/28 (86%)   | 24 (100%) | 0        | 100         | 100 |
| 14  | T2    | 25/28 (89%)   | 25 (100%) | 0        | 100         | 100 |
| 14  | t1    | 26/28 (93%)   | 26 (100%) | 0        | 100         | 100 |
| 14  | t2    | 25/28 (89%)   | 24 (96%)  | 1 (4%)   | 27          | 57  |
| 15  | U1    | 63/122 (52%)  | 59 (94%)  | 4 (6%)   | 15          | 38  |
| 15  | U2    | 40/122 (33%)  | 37 (92%)  | 3 (8%)   | 11          | 30  |
| 15  | u1    | 66/122 (54%)  | 62 (94%)  | 4 (6%)   | 15          | 40  |
| 15  | u2    | 69/122 (57%)  | 64 (93%)  | 5 (7%)   | 12          | 31  |
| 16  | V1    | 88/132 (67%)  | 87 (99%)  | 1 (1%)   | 70          | 88  |
| 16  | V2    | 70/132 (53%)  | 69 (99%)  | 1 (1%)   | 62          | 85  |
| 16  | v1    | 88/132 (67%)  | 85 (97%)  | 3 (3%)   | 32          | 63  |
| 16  | v2    | 100/132 (76%) | 99 (99%)  | 1 (1%)   | 73          | 89  |

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| Mol | Chain | Analysed         | Rotameric  | Outliers | Percentiles |     |
|-----|-------|------------------|------------|----------|-------------|-----|
| 17  | Y1    | 11/33 (33%)      | 11 (100%)  | 0        | 100         | 100 |
| 17  | Y2    | 13/33 (39%)      | 13 (100%)  | 0        | 100         | 100 |
| 17  | y1    | 18/33 (54%)      | 18 (100%)  | 0        | 100         | 100 |
| 17  | y2    | 16/33 (48%)      | 16 (100%)  | 0        | 100         | 100 |
| 18  | X1    | 17/34 (50%)      | 16 (94%)   | 1 (6%)   | 16          | 41  |
| 18  | X2    | 16/34 (47%)      | 15 (94%)   | 1 (6%)   | 15          | 38  |
| 18  | x1    | 23/34 (68%)      | 21 (91%)   | 2 (9%)   | 8           | 24  |
| 18  | x2    | 17/34 (50%)      | 16 (94%)   | 1 (6%)   | 16          | 41  |
| 19  | S1    | 10/20 (50%)      | 10 (100%)  | 0        | 100         | 100 |
| 19  | S2    | 10/20 (50%)      | 10 (100%)  | 0        | 100         | 100 |
| 19  | s1    | 15/20 (75%)      | 15 (100%)  | 0        | 100         | 100 |
| 19  | s2    | 13/20 (65%)      | 13 (100%)  | 0        | 100         | 100 |
| 20  | W1    | 12/13 (92%)      | 12 (100%)  | 0        | 100         | 100 |
| 20  | W2    | 10/13 (77%)      | 10 (100%)  | 0        | 100         | 100 |
| 20  | w1    | 11/13 (85%)      | 11 (100%)  | 0        | 100         | 100 |
| 20  | w2    | 11/13 (85%)      | 11 (100%)  | 0        | 100         | 100 |
| 21  | Q2    | 35/175 (20%)     | 33 (94%)   | 2 (6%)   | 17          | 43  |
| 21  | q1    | 33/175 (19%)     | 32 (97%)   | 1 (3%)   | 36          | 67  |
| 22  | Z2    | 22/54 (41%)      | 22 (100%)  | 0        | 100         | 100 |
| 22  | z2    | 28/54 (52%)      | 28 (100%)  | 0        | 100         | 100 |
| All | All   | 7221/10010 (72%) | 7059 (98%) | 162 (2%) | 47          | 76  |

5 of 162 residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 15  | U2    | 97  | ARG  |
| 8   | i2    | 23  | PHE  |
| 21  | Q2    | 183 | ILE  |
| 2   | b2    | 357 | ARG  |
| 13  | o2    | 219 | GLN  |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 25 such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 13  | o1    | 109 | GLN  |
| 3   | C2    | 56  | HIS  |
| 18  | x2    | 34  | GLN  |
| 2   | B2    | 216 | HIS  |
| 13  | O2    | 109 | GLN  |

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

## 5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

## 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 353 ligands modelled in this entry, 10 are monoatomic and 52 are unknown - leaving 291 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Type | Chain | Res | Link | Bond lengths |      |             | Bond angles |      |             |
|-----|------|-------|-----|------|--------------|------|-------------|-------------|------|-------------|
|     |      |       |     |      | Counts       | RMSZ | $\# Z  > 2$ | Counts      | RMSZ | $\# Z  > 2$ |
| 23  | BCR  | B2    | 601 | -    | 41,41,41     | 0.70 | 0           | 56,56,56    | 1.92 | 15 (26%)    |
| 23  | BCR  | H2    | 103 | -    | 24,24,41     | 0.71 | 0           | 31,31,56    | 1.67 | 8 (25%)     |
| 25  | CLA  | C1    | 506 | -    | 65,73,73     | 1.50 | 6 (9%)      | 76,113,113  | 1.36 | 8 (10%)     |
| 25  | CLA  | D2    | 404 | -    | 61,69,73     | 1.56 | 5 (8%)      | 71,108,113  | 1.40 | 9 (12%)     |
| 25  | CLA  | C2    | 518 | -    | 41,49,73     | 1.86 | 5 (12%)     | 47,84,113   | 1.69 | 8 (17%)     |
| 29  | LMG  | d1    | 411 | -    | 34,34,55     | 1.10 | 2 (5%)      | 36,36,63    | 1.14 | 3 (8%)      |
| 32  | GOL  | i1    | 101 | -    | 5,5,5        | 0.42 | 0           | 5,5,5       | 0.20 | 0           |

| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 33  | LHG  | D2    | 405 | -    | 48,48,48     | 0.92 | 2 (4%)   | 51,54,54    | 1.02 | 4 (7%)   |
| 25  | CLA  | C1    | 511 | -    | 65,73,73     | 1.51 | 6 (9%)   | 76,113,113  | 1.37 | 7 (9%)   |
| 25  | CLA  | c2    | 507 | -    | 54,62,73     | 1.66 | 5 (9%)   | 62,99,113   | 1.48 | 7 (11%)  |
| 23  | BCR  | a1    | 401 | -    | 41,41,41     | 0.69 | 0        | 56,56,56    | 1.73 | 14 (25%) |
| 23  | BCR  | B2    | 603 | -    | 41,41,41     | 0.69 | 0        | 56,56,56    | 1.84 | 12 (21%) |
| 25  | CLA  | b2    | 615 | -    | 60,68,73     | 1.56 | 5 (8%)   | 70,107,113  | 1.41 | 8 (11%)  |
| 29  | LMG  | a1    | 412 | -    | 51,51,55     | 0.95 | 2 (3%)   | 59,59,63    | 1.07 | 4 (6%)   |
| 29  | LMG  | c2    | 519 | -    | 26,26,55     | 1.60 | 3 (11%)  | 32,33,63    | 1.30 | 2 (6%)   |
| 23  | BCR  | k1    | 101 | -    | 41,41,41     | 0.71 | 0        | 56,56,56    | 2.03 | 15 (26%) |
| 32  | GOL  | a1    | 406 | -    | 5,5,5        | 0.35 | 0        | 5,5,5       | 0.28 | 0        |
| 25  | CLA  | b1    | 612 | -    | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.39 | 8 (10%)  |
| 33  | LHG  | D2    | 403 | -    | 48,48,48     | 0.92 | 2 (4%)   | 51,54,54    | 1.03 | 3 (5%)   |
| 38  | HEM  | f1    | 101 | 6    | 41,50,50     | 1.97 | 7 (17%)  | 45,82,82    | 1.73 | 7 (15%)  |
| 33  | LHG  | a2    | 407 | -    | 29,29,48     | 1.09 | 2 (6%)   | 30,34,54    | 1.02 | 1 (3%)   |
| 25  | CLA  | b1    | 604 | -    | 65,73,73     | 1.54 | 5 (7%)   | 76,113,113  | 1.29 | 7 (9%)   |
| 29  | LMG  | b1    | 631 | -    | 40,40,55     | 1.08 | 2 (5%)   | 48,48,63    | 1.23 | 5 (10%)  |
| 25  | CLA  | B2    | 617 | -    | 65,73,73     | 1.50 | 5 (7%)   | 76,113,113  | 1.38 | 7 (9%)   |
| 25  | CLA  | C1    | 504 | -    | 65,73,73     | 1.53 | 5 (7%)   | 76,113,113  | 1.31 | 8 (10%)  |
| 25  | CLA  | d1    | 406 | -    | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.40 | 8 (10%)  |
| 23  | BCR  | b2    | 602 | -    | 41,41,41     | 0.70 | 0        | 56,56,56    | 2.13 | 17 (30%) |
| 29  | LMG  | C2    | 515 | -    | 24,24,55     | 1.18 | 2 (8%)   | 32,32,63    | 1.05 | 2 (6%)   |
| 25  | CLA  | b1    | 615 | -    | 59,67,73     | 1.54 | 6 (10%)  | 68,105,113  | 1.44 | 8 (11%)  |
| 33  | LHG  | B1    | 621 | -    | 48,48,48     | 0.92 | 2 (4%)   | 51,54,54    | 1.01 | 3 (5%)   |
| 35  | LMT  | m2    | 103 | -    | 31,31,36     | 0.44 | 0        | 42,42,47    | 0.91 | 1 (2%)   |
| 25  | CLA  | B2    | 610 | -    | 65,73,73     | 1.50 | 5 (7%)   | 76,113,113  | 1.36 | 7 (9%)   |
| 25  | CLA  | c1    | 512 | -    | 65,73,73     | 1.50 | 6 (9%)   | 76,113,113  | 1.39 | 7 (9%)   |
| 23  | BCR  | B1    | 603 | -    | 41,41,41     | 0.69 | 0        | 56,56,56    | 1.72 | 11 (19%) |
| 23  | BCR  | d2    | 401 | -    | 41,41,41     | 0.70 | 0        | 56,56,56    | 2.11 | 16 (28%) |
| 25  | CLA  | C2    | 511 | -    | 50,58,73     | 1.70 | 6 (12%)  | 58,95,113   | 1.62 | 9 (15%)  |
| 25  | CLA  | B2    | 608 | -    | 65,73,73     | 1.49 | 5 (7%)   | 76,113,113  | 1.38 | 9 (11%)  |
| 25  | CLA  | A2    | 404 | -    | 51,59,73     | 1.77 | 6 (11%)  | 59,96,113   | 1.47 | 9 (15%)  |
| 25  | CLA  | d2    | 404 | -    | 50,58,73     | 1.73 | 5 (10%)  | 58,95,113   | 1.53 | 8 (13%)  |
| 23  | BCR  | A1    | 401 | -    | 41,41,41     | 0.68 | 0        | 56,56,56    | 1.74 | 11 (19%) |
| 25  | CLA  | c2    | 511 | -    | 65,73,73     | 1.50 | 5 (7%)   | 76,113,113  | 1.35 | 7 (9%)   |
| 25  | CLA  | c2    | 512 | 3    | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.33 | 8 (10%)  |



| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 29  | LMG  | A1    | 412 | -    | 41,41,55     | 1.06 | 2 (4%)   | 49,49,63    | 1.02 | 3 (6%)   |
| 23  | BCR  | K2    | 104 | -    | 29,29,41     | 0.55 | 0        | 40,41,56    | 1.67 | 10 (25%) |
| 38  | HEM  | e2    | 101 | 5,6  | 41,50,50     | 1.97 | 5 (12%)  | 45,82,82    | 1.77 | 6 (13%)  |
| 25  | CLA  | B1    | 618 | -    | 58,66,73     | 1.60 | 7 (12%)  | 67,104,113  | 1.41 | 6 (8%)   |
| 25  | CLA  | B1    | 607 | -    | 60,68,73     | 1.58 | 5 (8%)   | 70,107,113  | 1.34 | 7 (10%)  |
| 23  | BCR  | F2    | 401 | -    | 41,41,41     | 0.72 | 0        | 56,56,56    | 2.18 | 18 (32%) |
| 25  | CLA  | C2    | 513 | -    | 53,61,73     | 1.71 | 5 (9%)   | 61,98,113   | 1.44 | 7 (11%)  |
| 25  | CLA  | c2    | 513 | -    | 54,62,73     | 1.64 | 6 (11%)  | 62,99,113   | 1.50 | 8 (12%)  |
| 25  | CLA  | c2    | 510 | -    | 54,62,73     | 1.68 | 6 (11%)  | 62,99,113   | 1.41 | 7 (11%)  |
| 23  | BCR  | J1    | 101 | -    | 41,41,41     | 0.75 | 0        | 56,56,56    | 2.10 | 16 (28%) |
| 25  | CLA  | C2    | 504 | -    | 46,54,73     | 1.76 | 5 (10%)  | 53,90,113   | 1.52 | 6 (11%)  |
| 23  | BCR  | c1    | 502 | -    | 41,41,41     | 0.75 | 0        | 56,56,56    | 2.09 | 14 (25%) |
| 33  | LHG  | L1    | 101 | -    | 40,40,48     | 1.01 | 2 (5%)   | 43,46,54    | 1.10 | 4 (9%)   |
| 25  | CLA  | C1    | 510 | -    | 65,73,73     | 1.52 | 6 (9%)   | 76,113,113  | 1.31 | 7 (9%)   |
| 34  | DGD  | c1    | 518 | -    | 63,63,67     | 0.87 | 2 (3%)   | 77,77,81    | 1.00 | 5 (6%)   |
| 25  | CLA  | b1    | 611 | -    | 65,73,73     | 1.50 | 5 (7%)   | 76,113,113  | 1.29 | 7 (9%)   |
| 23  | BCR  | B1    | 601 | -    | 41,41,41     | 0.69 | 0        | 56,56,56    | 1.90 | 15 (26%) |
| 27  | PHO  | a1    | 411 | -    | 51,69,69     | 1.67 | 7 (13%)  | 47,99,99    | 1.69 | 8 (17%)  |
| 33  | LHG  | a1    | 407 | -    | 42,42,48     | 1.01 | 2 (4%)   | 45,48,54    | 1.09 | 3 (6%)   |
| 25  | CLA  | C1    | 512 | -    | 65,73,73     | 1.48 | 6 (9%)   | 76,113,113  | 1.39 | 8 (10%)  |
| 25  | CLA  | B2    | 607 | -    | 65,73,73     | 1.53 | 6 (9%)   | 76,113,113  | 1.36 | 9 (11%)  |
| 25  | CLA  | A1    | 404 | -    | 51,59,73     | 1.71 | 6 (11%)  | 59,96,113   | 1.53 | 8 (13%)  |
| 29  | LMG  | B1    | 626 | -    | 48,48,55     | 0.98 | 2 (4%)   | 56,56,63    | 1.18 | 3 (5%)   |
| 25  | CLA  | C1    | 505 | -    | 65,73,73     | 1.48 | 5 (7%)   | 76,113,113  | 1.43 | 7 (9%)   |
| 25  | CLA  | b1    | 617 | -    | 65,73,73     | 1.52 | 6 (9%)   | 76,113,113  | 1.36 | 7 (9%)   |
| 23  | BCR  | B2    | 602 | -    | 41,41,41     | 0.68 | 0        | 56,56,56    | 2.02 | 14 (25%) |
| 33  | LHG  | d1    | 402 | -    | 31,31,48     | 1.16 | 2 (6%)   | 34,37,54    | 1.35 | 3 (8%)   |
| 25  | CLA  | B2    | 611 | -    | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.36 | 8 (10%)  |
| 25  | CLA  | B1    | 619 | 40   | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.39 | 8 (10%)  |
| 25  | CLA  | C1    | 509 | -    | 65,73,73     | 1.50 | 5 (7%)   | 76,113,113  | 1.48 | 8 (10%)  |
| 25  | CLA  | b1    | 610 | -    | 65,73,73     | 1.50 | 5 (7%)   | 76,113,113  | 1.38 | 8 (10%)  |
| 33  | LHG  | D1    | 404 | -    | 48,48,48     | 0.93 | 2 (4%)   | 51,54,54    | 1.04 | 4 (7%)   |
| 35  | LMT  | b2    | 623 | -    | 36,36,36     | 0.38 | 0        | 47,47,47    | 0.84 | 0        |
| 29  | LMG  | D1    | 406 | -    | 35,35,55     | 1.11 | 2 (5%)   | 43,43,63    | 1.07 | 3 (6%)   |
| 29  | LMG  | B1    | 622 | -    | 31,31,55     | 1.20 | 2 (6%)   | 39,39,63    | 1.19 | 4 (10%)  |

| Mol | Type | Chain | Res | Link   | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|--------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |        | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 25  | CLA  | B2    | 609 | -      | 65,73,73     | 1.49 | 6 (9%)   | 76,113,113  | 1.43 | 9 (11%)  |
| 25  | CLA  | c1    | 505 | -      | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.34 | 7 (9%)   |
| 26  | OEX  | A1    | 407 | 3,40,1 | 0,15,15      | -    | -        | -           | -    | -        |
| 25  | CLA  | d1    | 401 | -      | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.38 | 9 (11%)  |
| 25  | CLA  | B2    | 615 | -      | 65,73,73     | 1.49 | 5 (7%)   | 76,113,113  | 1.36 | 7 (9%)   |
| 32  | GOL  | C2    | 514 | -      | 5,5,5        | 0.36 | 0        | 5,5,5       | 0.31 | 0        |
| 25  | CLA  | D1    | 403 | -      | 51,59,73     | 1.69 | 5 (9%)   | 59,96,113   | 1.48 | 6 (10%)  |
| 38  | HEM  | v1    | 201 | 16     | 41,50,50     | 1.99 | 7 (17%)  | 45,82,82    | 1.64 | 5 (11%)  |
| 34  | DGD  | c2    | 517 | -      | 63,63,67     | 0.89 | 2 (3%)   | 77,77,81    | 0.84 | 2 (2%)   |
| 25  | CLA  | b1    | 614 | -      | 65,73,73     | 1.47 | 6 (9%)   | 76,113,113  | 1.42 | 8 (10%)  |
| 25  | CLA  | d1    | 404 | 40     | 65,73,73     | 1.57 | 5 (7%)   | 76,113,113  | 1.40 | 8 (10%)  |
| 25  | CLA  | b2    | 606 | -      | 65,73,73     | 1.49 | 6 (9%)   | 76,113,113  | 1.38 | 7 (9%)   |
| 33  | LHG  | B2    | 627 | -      | 41,41,48     | 1.03 | 2 (4%)   | 44,47,54    | 1.08 | 3 (6%)   |
| 25  | CLA  | b2    | 620 | 40     | 65,73,73     | 1.52 | 5 (7%)   | 76,113,113  | 1.41 | 8 (10%)  |
| 25  | CLA  | b2    | 616 | -      | 60,68,73     | 1.59 | 5 (8%)   | 70,107,113  | 1.41 | 8 (11%)  |
| 25  | CLA  | C2    | 508 | -      | 50,58,73     | 1.71 | 5 (10%)  | 58,95,113   | 1.57 | 9 (15%)  |
| 34  | DGD  | c1    | 514 | -      | 52,52,67     | 0.96 | 2 (3%)   | 66,66,81    | 1.04 | 4 (6%)   |
| 34  | DGD  | H2    | 101 | -      | 63,63,67     | 0.88 | 2 (3%)   | 77,77,81    | 0.91 | 3 (3%)   |
| 35  | LMT  | C1    | 519 | -      | 36,36,36     | 0.35 | 0        | 47,47,47    | 0.70 | 1 (2%)   |
| 33  | LHG  | b2    | 625 | -      | 42,42,48     | 1.00 | 2 (4%)   | 45,48,54    | 1.08 | 3 (6%)   |
| 35  | LMT  | T1    | 101 | -      | 11,11,36     | 0.25 | 0        | 10,10,47    | 0.58 | 0        |
| 25  | CLA  | C2    | 506 | -      | 65,73,73     | 1.49 | 5 (7%)   | 76,113,113  | 1.38 | 7 (9%)   |
| 25  | CLA  | b2    | 612 | -      | 65,73,73     | 1.55 | 8 (12%)  | 76,113,113  | 1.39 | 7 (9%)   |
| 25  | CLA  | B1    | 610 | -      | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.34 | 8 (10%)  |
| 25  | CLA  | B2    | 612 | -      | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.38 | 9 (11%)  |
| 27  | PHO  | D1    | 407 | -      | 50,68,69     | 1.77 | 7 (14%)  | 45,97,99    | 1.83 | 9 (20%)  |
| 25  | CLA  | B2    | 604 | -      | 41,49,73     | 1.88 | 5 (12%)  | 47,84,113   | 1.61 | 8 (17%)  |
| 25  | CLA  | a2    | 405 | -      | 65,73,73     | 1.47 | 5 (7%)   | 76,113,113  | 1.38 | 9 (11%)  |
| 25  | CLA  | b1    | 620 | -      | 65,73,73     | 1.53 | 5 (7%)   | 76,113,113  | 1.38 | 8 (10%)  |
| 25  | CLA  | C2    | 509 | -      | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.36 | 7 (9%)   |
| 25  | CLA  | a2    | 404 | -      | 65,73,73     | 1.54 | 8 (12%)  | 76,113,113  | 1.31 | 8 (10%)  |
| 25  | CLA  | A2    | 403 | -      | 61,69,73     | 1.58 | 5 (8%)   | 71,108,113  | 1.35 | 8 (11%)  |
| 29  | LMG  | F2    | 402 | -      | 35,35,55     | 1.13 | 2 (5%)   | 43,43,63    | 1.03 | 3 (6%)   |
| 25  | CLA  | c1    | 513 | 3      | 60,68,73     | 1.57 | 6 (10%)  | 70,107,113  | 1.43 | 8 (11%)  |
| 25  | CLA  | c1    | 516 | -      | 65,73,73     | 1.48 | 5 (7%)   | 76,113,113  | 1.37 | 8 (10%)  |

| Mol | Type | Chain | Res | Link   | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|--------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |        | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 29  | LMG  | C1    | 520 | -      | 48,48,55     | 0.97 | 2 (4%)   | 56,56,63    | 1.00 | 3 (5%)   |
| 25  | CLA  | B2    | 618 | -      | 60,68,73     | 1.61 | 6 (10%)  | 70,107,113  | 1.43 | 7 (10%)  |
| 23  | BCR  | C1    | 521 | -      | 41,41,41     | 0.69 | 0        | 56,56,56    | 1.94 | 13 (23%) |
| 25  | CLA  | a1    | 405 | -      | 50,58,73     | 1.70 | 5 (10%)  | 58,95,113   | 1.61 | 9 (15%)  |
| 25  | CLA  | a2    | 413 | -      | 50,58,73     | 1.72 | 6 (12%)  | 58,95,113   | 1.50 | 10 (17%) |
| 25  | CLA  | c2    | 508 | 40     | 65,73,73     | 1.52 | 5 (7%)   | 76,113,113  | 1.33 | 7 (9%)   |
| 34  | DGD  | C1    | 515 | -      | 53,53,67     | 0.96 | 2 (3%)   | 67,67,81    | 1.01 | 4 (5%)   |
| 25  | CLA  | a1    | 404 | -      | 60,68,73     | 1.62 | 6 (10%)  | 70,107,113  | 1.34 | 9 (12%)  |
| 25  | CLA  | B2    | 613 | -      | 65,73,73     | 1.52 | 6 (9%)   | 76,113,113  | 1.46 | 8 (10%)  |
| 34  | DGD  | C1    | 517 | -      | 65,65,67     | 0.86 | 2 (3%)   | 79,79,81    | 0.85 | 3 (3%)   |
| 25  | CLA  | B2    | 619 | -      | 65,73,73     | 1.50 | 5 (7%)   | 76,113,113  | 1.37 | 8 (10%)  |
| 25  | CLA  | B2    | 616 | -      | 54,62,73     | 1.67 | 6 (11%)  | 62,99,113   | 1.49 | 8 (12%)  |
| 25  | CLA  | C2    | 516 | -      | 46,54,73     | 1.75 | 5 (10%)  | 53,90,113   | 1.55 | 7 (13%)  |
| 35  | LMT  | m1    | 101 | -      | 36,36,36     | 0.42 | 0        | 47,47,47    | 0.68 | 0        |
| 32  | GOL  | c1    | 521 | -      | 5,5,5        | 0.36 | 0        | 5,5,5       | 0.31 | 0        |
| 29  | LMG  | d2    | 407 | -      | 27,27,55     | 1.36 | 2 (7%)   | 35,35,63    | 1.29 | 3 (8%)   |
| 31  | BCT  | a2    | 417 | 30     | 2,3,3        | 0.67 | 0        | 2,3,3       | 0.77 | 0        |
| 26  | OEX  | a2    | 408 | 3,40,1 | 0,15,15      | -    | -        | -           | -    | -        |
| 25  | CLA  | C1    | 507 | -      | 65,73,73     | 1.54 | 6 (9%)   | 76,113,113  | 1.33 | 9 (11%)  |
| 35  | LMT  | a2    | 406 | -      | 36,36,36     | 0.45 | 0        | 47,47,47    | 0.66 | 1 (2%)   |
| 25  | CLA  | C1    | 513 | 3      | 61,69,73     | 1.57 | 6 (9%)   | 71,108,113  | 1.39 | 7 (9%)   |
| 25  | CLA  | b1    | 616 | -      | 65,73,73     | 1.50 | 6 (9%)   | 76,113,113  | 1.36 | 8 (10%)  |
| 26  | OEX  | a1    | 408 | 3,40,1 | 0,15,15      | -    | -        | -           | -    | -        |
| 33  | LHG  | L2    | 101 | -      | 48,48,48     | 0.93 | 2 (4%)   | 51,54,54    | 1.10 | 4 (7%)   |
| 31  | BCT  | a1    | 413 | 30     | 2,3,3        | 0.67 | 0        | 2,3,3       | 0.72 | 0        |
| 34  | DGD  | h2    | 102 | -      | 63,63,67     | 0.87 | 2 (3%)   | 77,77,81    | 0.91 | 2 (2%)   |
| 27  | PHO  | A2    | 407 | -      | 51,69,69     | 1.68 | 7 (13%)  | 47,99,99    | 1.71 | 8 (17%)  |
| 25  | CLA  | b1    | 619 | -      | 65,73,73     | 1.53 | 6 (9%)   | 76,113,113  | 1.36 | 7 (9%)   |
| 29  | LMG  | d1    | 408 | -      | 33,33,55     | 1.15 | 2 (6%)   | 41,41,63    | 1.10 | 3 (7%)   |
| 25  | CLA  | C2    | 507 | -      | 45,53,73     | 1.81 | 6 (13%)  | 52,89,113   | 1.60 | 6 (11%)  |
| 25  | CLA  | B2    | 606 | -      | 65,73,73     | 1.52 | 5 (7%)   | 76,113,113  | 1.35 | 7 (9%)   |
| 25  | CLA  | d2    | 405 | -      | 65,73,73     | 1.49 | 5 (7%)   | 76,113,113  | 1.32 | 8 (10%)  |
| 25  | CLA  | A2    | 402 | -      | 65,73,73     | 1.59 | 7 (10%)  | 76,113,113  | 1.31 | 8 (10%)  |
| 29  | LMG  | A1    | 410 | -      | 43,43,55     | 1.03 | 2 (4%)   | 51,51,63    | 1.11 | 4 (7%)   |
| 35  | LMT  | i2    | 102 | -      | 6,6,36       | 0.28 | 0        | 5,5,47      | 0.44 | 0        |
| 23  | BCR  | j2    | 102 | -      | 41,41,41     | 0.73 | 0        | 56,56,56    | 2.08 | 18 (32%) |

| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 25  | CLA  | c2    | 502 | -    | 65,73,73     | 1.50 | 5 (7%)   | 76,113,113  | 1.36 | 8 (10%)  |
| 25  | CLA  | B1    | 612 | -    | 65,73,73     | 1.54 | 5 (7%)   | 76,113,113  | 1.38 | 8 (10%)  |
| 25  | CLA  | a1    | 403 | -    | 65,73,73     | 1.57 | 8 (12%)  | 76,113,113  | 1.30 | 8 (10%)  |
| 29  | LMG  | B2    | 620 | -    | 40,40,55     | 1.07 | 3 (7%)   | 48,48,63    | 1.05 | 4 (8%)   |
| 23  | BCR  | z2    | 101 | -    | 41,41,41     | 0.70 | 0        | 56,56,56    | 1.76 | 10 (17%) |
| 25  | CLA  | c1    | 508 | -    | 50,58,73     | 1.76 | 5 (10%)  | 58,95,113   | 1.53 | 10 (17%) |
| 25  | CLA  | D2    | 406 | -    | 65,73,73     | 1.52 | 5 (7%)   | 76,113,113  | 1.38 | 8 (10%)  |
| 25  | CLA  | D1    | 402 | -    | 65,73,73     | 1.47 | 5 (7%)   | 76,113,113  | 1.37 | 8 (10%)  |
| 25  | CLA  | b2    | 604 | -    | 42,50,73     | 1.85 | 5 (11%)  | 48,85,113   | 1.56 | 6 (12%)  |
| 25  | CLA  | b2    | 618 | -    | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.36 | 8 (10%)  |
| 25  | CLA  | A1    | 403 | -    | 65,73,73     | 1.57 | 9 (13%)  | 76,113,113  | 1.32 | 8 (10%)  |
| 25  | CLA  | C2    | 510 | -    | 45,53,73     | 1.78 | 5 (11%)  | 52,89,113   | 1.60 | 7 (13%)  |
| 25  | CLA  | c2    | 509 | -    | 65,73,73     | 1.49 | 5 (7%)   | 76,113,113  | 1.48 | 9 (11%)  |
| 34  | DGD  | C1    | 516 | -    | 63,63,67     | 0.85 | 2 (3%)   | 77,77,81    | 1.00 | 4 (5%)   |
| 38  | HEM  | E2    | 101 | 5    | 41,50,50     | 1.95 | 7 (17%)  | 45,82,82    | 1.73 | 7 (15%)  |
| 25  | CLA  | A1    | 405 | -    | 55,63,73     | 1.70 | 6 (10%)  | 64,101,113  | 1.44 | 9 (14%)  |
| 27  | PHO  | A1    | 408 | -    | 51,69,69     | 1.67 | 7 (13%)  | 47,99,99    | 1.72 | 9 (19%)  |
| 36  | PL9  | D1    | 408 | -    | 55,55,55     | 0.64 | 2 (3%)   | 68,69,69    | 1.76 | 16 (23%) |
| 35  | LMT  | b2    | 621 | -    | 36,36,36     | 0.41 | 0        | 47,47,47    | 0.69 | 0        |
| 25  | CLA  | b2    | 613 | -    | 65,73,73     | 1.52 | 5 (7%)   | 76,113,113  | 1.36 | 7 (9%)   |
| 25  | CLA  | c2    | 505 | -    | 65,73,73     | 1.48 | 5 (7%)   | 76,113,113  | 1.40 | 8 (10%)  |
| 25  | CLA  | b2    | 611 | -    | 65,73,73     | 1.50 | 5 (7%)   | 76,113,113  | 1.39 | 8 (10%)  |
| 23  | BCR  | H1    | 102 | -    | 22,22,41     | 0.69 | 0        | 29,29,56    | 1.71 | 6 (20%)  |
| 25  | CLA  | c2    | 515 | -    | 46,54,73     | 1.75 | 5 (10%)  | 53,90,113   | 1.56 | 7 (13%)  |
| 25  | CLA  | b2    | 619 | -    | 59,67,73     | 1.60 | 6 (10%)  | 68,105,113  | 1.40 | 6 (8%)   |
| 33  | LHG  | A2    | 405 | -    | 32,32,48     | 1.13 | 2 (6%)   | 35,38,54    | 1.07 | 2 (5%)   |
| 25  | CLA  | b1    | 609 | -    | 65,73,73     | 1.52 | 5 (7%)   | 76,113,113  | 1.35 | 8 (10%)  |
| 25  | CLA  | b2    | 617 | -    | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.34 | 8 (10%)  |
| 25  | CLA  | C2    | 505 | -    | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.36 | 7 (9%)   |
| 32  | GOL  | B1    | 620 | -    | 5,5,5        | 0.35 | 0        | 5,5,5       | 0.32 | 0        |
| 25  | CLA  | b1    | 613 | -    | 65,73,73     | 1.52 | 8 (12%)  | 76,113,113  | 1.40 | 7 (9%)   |
| 37  | SQD  | B2    | 623 | -    | 44,45,54     | 1.31 | 4 (9%)   | 53,56,65    | 1.22 | 6 (11%)  |
| 23  | BCR  | A2    | 401 | -    | 41,41,41     | 0.69 | 0        | 56,56,56    | 2.02 | 16 (28%) |
| 34  | DGD  | c2    | 514 | -    | 63,63,67     | 0.87 | 2 (3%)   | 77,77,81    | 0.97 | 4 (5%)   |
| 35  | LMT  | M1    | 103 | -    | 24,24,36     | 0.46 | 0        | 29,29,47    | 0.56 | 0        |

| Mol | Type | Chain | Res | Link   | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|--------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |        | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 23  | BCR  | a2    | 402 | -      | 41,41,41     | 0.67 | 0        | 56,56,56    | 1.64 | 12 (21%) |
| 23  | BCR  | d1    | 405 | -      | 41,41,41     | 0.71 | 0        | 56,56,56    | 1.86 | 12 (21%) |
| 26  | OEX  | A2    | 406 | 3,40,1 | 0,15,15      | -    | -        | -           | -    | -        |
| 25  | CLA  | B1    | 615 | -      | 65,73,73     | 1.49 | 5 (7%)   | 76,113,113  | 1.35 | 7 (9%)   |
| 27  | PHO  | D2    | 407 | -      | 51,69,69     | 1.73 | 7 (13%)  | 47,99,99    | 1.85 | 9 (19%)  |
| 29  | LMG  | M1    | 101 | -      | 30,30,55     | 1.20 | 3 (10%)  | 32,32,63    | 1.33 | 3 (9%)   |
| 23  | BCR  | h1    | 102 | -      | 41,41,41     | 0.68 | 0        | 56,56,56    | 1.89 | 17 (30%) |
| 29  | LMG  | B2    | 621 | -      | 37,37,55     | 0.95 | 3 (8%)   | 45,45,63    | 1.11 | 3 (6%)   |
| 25  | CLA  | c1    | 507 | -      | 65,73,73     | 1.51 | 6 (9%)   | 76,113,113  | 1.37 | 7 (9%)   |
| 33  | LHG  | d2    | 403 | -      | 48,48,48     | 0.94 | 2 (4%)   | 51,54,54    | 1.02 | 3 (5%)   |
| 34  | DGD  | c1    | 520 | -      | 63,63,67     | 0.87 | 2 (3%)   | 77,77,81    | 0.86 | 2 (2%)   |
| 25  | CLA  | C1    | 503 | -      | 60,68,73     | 1.55 | 5 (8%)   | 70,107,113  | 1.38 | 6 (8%)   |
| 34  | DGD  | c2    | 516 | -      | 53,53,67     | 0.96 | 2 (3%)   | 67,67,81    | 1.03 | 3 (4%)   |
| 23  | BCR  | k2    | 501 | -      | 41,41,41     | 0.68 | 0        | 56,56,56    | 2.04 | 16 (28%) |
| 23  | BCR  | c2    | 501 | -      | 41,41,41     | 0.80 | 1 (2%)   | 56,56,56    | 3.50 | 20 (35%) |
| 25  | CLA  | b1    | 606 | -      | 65,73,73     | 1.49 | 6 (9%)   | 76,113,113  | 1.38 | 8 (10%)  |
| 25  | CLA  | b1    | 608 | -      | 65,73,73     | 1.52 | 5 (7%)   | 76,113,113  | 1.38 | 8 (10%)  |
| 29  | LMG  | j2    | 101 | -      | 50,50,55     | 0.94 | 2 (4%)   | 58,58,63    | 1.03 | 2 (3%)   |
| 37  | SQD  | D1    | 409 | -      | 34,35,54     | 1.53 | 4 (11%)  | 43,46,65    | 1.41 | 6 (13%)  |
| 25  | CLA  | b2    | 608 | -      | 65,73,73     | 1.54 | 5 (7%)   | 76,113,113  | 1.32 | 8 (10%)  |
| 25  | CLA  | c1    | 504 | -      | 65,73,73     | 1.48 | 5 (7%)   | 76,113,113  | 1.36 | 7 (9%)   |
| 29  | LMG  | I2    | 101 | -      | 34,34,55     | 1.15 | 2 (5%)   | 42,42,63    | 1.13 | 3 (7%)   |
| 25  | CLA  | D2    | 401 | -      | 65,73,73     | 1.48 | 6 (9%)   | 76,113,113  | 1.39 | 8 (10%)  |
| 27  | PHO  | d1    | 403 | -      | 51,69,69     | 1.76 | 7 (13%)  | 47,99,99    | 1.77 | 6 (12%)  |
| 29  | LMG  | a2    | 412 | -      | 44,44,55     | 1.01 | 2 (4%)   | 52,52,63    | 1.11 | 5 (9%)   |
| 35  | LMT  | c1    | 517 | -      | 34,34,36     | 0.43 | 0        | 45,45,47    | 0.68 | 1 (2%)   |
| 23  | BCR  | B1    | 602 | -      | 41,41,41     | 0.69 | 0        | 56,56,56    | 1.95 | 12 (21%) |
| 34  | DGD  | h1    | 101 | -      | 63,63,67     | 0.88 | 2 (3%)   | 77,77,81    | 0.96 | 4 (5%)   |
| 25  | CLA  | b1    | 605 | -      | 65,73,73     | 1.52 | 6 (9%)   | 76,113,113  | 1.41 | 6 (7%)   |
| 23  | BCR  | b1    | 601 | -      | 41,41,41     | 0.69 | 0        | 56,56,56    | 1.83 | 14 (25%) |
| 23  | BCR  | c1    | 501 | -      | 41,41,41     | 0.70 | 0        | 56,56,56    | 2.10 | 13 (23%) |
| 33  | LHG  | l2    | 101 | -      | 43,43,48     | 1.00 | 2 (4%)   | 46,49,54    | 1.07 | 4 (8%)   |
| 35  | LMT  | l1    | 101 | -      | 24,24,36     | 0.47 | 0        | 29,29,47    | 0.83 | 2 (6%)   |
| 23  | BCR  | b2    | 603 | -      | 41,41,41     | 0.70 | 0        | 56,56,56    | 1.91 | 13 (23%) |
| 25  | CLA  | c1    | 509 | 40     | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.36 | 7 (9%)   |

| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 25  | CLA  | b2    | 609 | -    | 61,69,73     | 1.54 | 6 (9%)   | 71,108,113  | 1.43 | 7 (9%)   |
| 32  | GOL  | c2    | 518 | -    | 5,5,5        | 0.37 | 0        | 5,5,5       | 0.26 | 0        |
| 32  | GOL  | C1    | 518 | -    | 5,5,5        | 0.37 | 0        | 5,5,5       | 0.23 | 0        |
| 38  | HEM  | v2    | 201 | 16   | 41,50,50     | 2.00 | 6 (14%)  | 45,82,82    | 1.69 | 7 (15%)  |
| 34  | DGD  | C2    | 512 | -    | 34,34,67     | 1.16 | 2 (5%)   | 46,47,81    | 1.06 | 2 (4%)   |
| 25  | CLA  | c1    | 515 | -    | 55,63,73     | 1.63 | 5 (9%)   | 64,101,113  | 1.48 | 8 (12%)  |
| 29  | LMG  | b2    | 622 | -    | 39,39,55     | 1.07 | 2 (5%)   | 47,47,63    | 1.01 | 3 (6%)   |
| 25  | CLA  | B1    | 608 | -    | 65,73,73     | 1.49 | 5 (7%)   | 76,113,113  | 1.35 | 7 (9%)   |
| 25  | CLA  | c1    | 503 | -    | 65,73,73     | 1.46 | 5 (7%)   | 76,113,113  | 1.41 | 8 (10%)  |
| 23  | BCR  | D1    | 401 | -    | 41,41,41     | 0.72 | 0        | 56,56,56    | 1.98 | 13 (23%) |
| 23  | BCR  | K2    | 102 | -    | 41,41,41     | 0.72 | 0        | 56,56,56    | 2.07 | 16 (28%) |
| 31  | BCT  | A2    | 413 | 30   | 2,3,3        | 0.68 | 0        | 2,3,3       | 0.74 | 0        |
| 25  | CLA  | c2    | 504 | -    | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.35 | 8 (10%)  |
| 25  | CLA  | c1    | 510 | -    | 65,73,73     | 1.50 | 6 (9%)   | 76,113,113  | 1.44 | 8 (10%)  |
| 25  | CLA  | B1    | 605 | -    | 65,73,73     | 1.52 | 5 (7%)   | 76,113,113  | 1.34 | 8 (10%)  |
| 25  | CLA  | B2    | 614 | -    | 65,73,73     | 1.46 | 6 (9%)   | 76,113,113  | 1.37 | 8 (10%)  |
| 25  | CLA  | c2    | 503 | -    | 65,73,73     | 1.52 | 5 (7%)   | 76,113,113  | 1.35 | 6 (7%)   |
| 27  | PHO  | a2    | 416 | -    | 51,69,69     | 1.69 | 7 (13%)  | 47,99,99    | 1.71 | 8 (17%)  |
| 38  | HEM  | V2    | 201 | 16   | 41,50,50     | 1.99 | 6 (14%)  | 45,82,82    | 1.81 | 8 (17%)  |
| 33  | LHG  | D1    | 405 | -    | 48,48,48     | 0.93 | 2 (4%)   | 51,54,54    | 1.00 | 3 (5%)   |
| 25  | CLA  | d2    | 402 | -    | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.43 | 9 (11%)  |
| 36  | PL9  | d1    | 409 | -    | 55,55,55     | 0.64 | 2 (3%)   | 68,69,69    | 1.78 | 20 (29%) |
| 23  | BCR  | b1    | 603 | -    | 41,41,41     | 0.72 | 0        | 56,56,56    | 1.75 | 11 (19%) |
| 25  | CLA  | b1    | 607 | -    | 65,73,73     | 1.57 | 5 (7%)   | 76,113,113  | 1.36 | 8 (10%)  |
| 23  | BCR  | C1    | 501 | -    | 41,41,41     | 0.70 | 0        | 56,56,56    | 1.80 | 14 (25%) |
| 38  | HEM  | V1    | 201 | 16   | 41,50,50     | 2.00 | 7 (17%)  | 45,82,82    | 1.72 | 9 (20%)  |
| 25  | CLA  | C2    | 503 | -    | 65,73,73     | 1.49 | 5 (7%)   | 76,113,113  | 1.42 | 7 (9%)   |
| 25  | CLA  | c1    | 506 | 40   | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.43 | 8 (10%)  |
| 25  | CLA  | c1    | 511 | -    | 65,73,73     | 1.47 | 6 (9%)   | 76,113,113  | 1.40 | 8 (10%)  |
| 32  | GOL  | b1    | 618 | -    | 5,5,5        | 0.35 | 0        | 5,5,5       | 0.39 | 0        |
| 33  | LHG  | b1    | 622 | -    | 48,48,48     | 0.92 | 2 (4%)   | 51,54,54    | 1.04 | 5 (9%)   |
| 23  | BCR  | K1    | 101 | -    | 31,31,41     | 0.70 | 0        | 40,40,56    | 2.32 | 14 (35%) |
| 25  | CLA  | b2    | 610 | -    | 65,73,73     | 1.50 | 5 (7%)   | 76,113,113  | 1.36 | 8 (10%)  |
| 25  | CLA  | K2    | 101 | -    | 55,63,73     | 1.64 | 6 (10%)  | 64,101,113  | 1.44 | 7 (10%)  |
| 33  | LHG  | d2    | 406 | -    | 48,48,48     | 0.92 | 2 (4%)   | 51,54,54    | 1.00 | 4 (7%)   |
| 35  | LMT  | M1    | 102 | -    | 10,10,36     | 0.24 | 0        | 9,9,47      | 0.57 | 0        |



| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 29  | LMG  | b1    | 624 | -    | 39,39,55     | 1.08 | 2 (5%)   | 47,47,63    | 1.31 | 5 (10%)  |
| 25  | CLA  | B1    | 604 | -    | 42,50,73     | 1.87 | 5 (11%)  | 48,85,113   | 1.56 | 6 (12%)  |
| 33  | LHG  | d1    | 407 | -    | 48,48,48     | 0.91 | 2 (4%)   | 51,54,54    | 1.05 | 3 (5%)   |
| 37  | SQD  | b2    | 605 | -    | 44,45,54     | 1.30 | 4 (9%)   | 53,56,65    | 1.16 | 4 (7%)   |
| 25  | CLA  | A1    | 406 | -    | 65,73,73     | 1.56 | 5 (7%)   | 76,113,113  | 1.43 | 9 (11%)  |
| 33  | LHG  | l1    | 102 | -    | 48,48,48     | 0.92 | 2 (4%)   | 51,54,54    | 1.07 | 4 (7%)   |
| 38  | HEM  | E1    | 101 | 5,6  | 41,50,50     | 1.97 | 7 (17%)  | 45,82,82    | 1.74 | 6 (13%)  |
| 25  | CLA  | b2    | 614 | -    | 65,73,73     | 1.48 | 6 (9%)   | 76,113,113  | 1.37 | 7 (9%)   |
| 37  | SQD  | D2    | 402 | -    | 24,25,54     | 1.94 | 4 (16%)  | 31,35,65    | 1.66 | 6 (19%)  |
| 25  | CLA  | b2    | 624 | -    | 65,73,73     | 1.48 | 5 (7%)   | 76,113,113  | 1.38 | 8 (10%)  |
| 25  | CLA  | B1    | 606 | -    | 65,73,73     | 1.49 | 5 (7%)   | 76,113,113  | 1.37 | 8 (10%)  |
| 23  | BCR  | C2    | 502 | -    | 41,41,41     | 0.70 | 0        | 56,56,56    | 1.88 | 12 (21%) |
| 27  | PHO  | d2    | 408 | -    | 51,69,69     | 1.73 | 7 (13%)  | 47,99,99    | 1.73 | 8 (17%)  |
| 35  | LMT  | L1    | 102 | -    | 11,11,36     | 0.25 | 0        | 10,10,47    | 0.57 | 0        |
| 36  | PL9  | D2    | 408 | -    | 55,55,55     | 0.62 | 1 (1%)   | 68,69,69    | 1.73 | 19 (27%) |
| 25  | CLA  | B1    | 616 | -    | 65,73,73     | 1.56 | 6 (9%)   | 76,113,113  | 1.32 | 8 (10%)  |
| 23  | BCR  | h2    | 101 | -    | 41,41,41     | 0.68 | 0        | 56,56,56    | 1.79 | 14 (25%) |
| 25  | CLA  | B1    | 613 | -    | 65,73,73     | 1.54 | 7 (10%)  | 76,113,113  | 1.38 | 7 (9%)   |
| 25  | CLA  | C1    | 508 | -    | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.35 | 6 (7%)   |
| 25  | CLA  | c2    | 506 | -    | 61,69,73     | 1.57 | 6 (9%)   | 71,108,113  | 1.49 | 9 (12%)  |
| 25  | CLA  | B1    | 611 | -    | 62,70,73     | 1.58 | 5 (8%)   | 72,109,113  | 1.36 | 8 (11%)  |
| 25  | CLA  | C1    | 514 | -    | 45,53,73     | 1.80 | 5 (11%)  | 52,89,113   | 1.57 | 7 (13%)  |
| 35  | LMT  | m2    | 104 | -    | 30,30,36     | 0.47 | 0        | 41,41,47    | 0.81 | 1 (2%)   |
| 25  | CLA  | C1    | 502 | -    | 65,73,73     | 1.47 | 5 (7%)   | 76,113,113  | 1.40 | 8 (10%)  |
| 32  | GOL  | a2    | 415 | -    | 5,5,5        | 0.36 | 0        | 5,5,5       | 0.39 | 0        |
| 31  | BCT  | A1    | 413 | 30   | 2,3,3        | 0.94 | 0        | 2,3,3       | 0.26 | 0        |
| 29  | LMG  | A2    | 412 | -    | 29,29,55     | 1.07 | 2 (6%)   | 37,37,63    | 1.10 | 2 (5%)   |
| 34  | DGD  | H1    | 101 | -    | 63,63,67     | 0.88 | 2 (3%)   | 77,77,81    | 0.92 | 3 (3%)   |
| 36  | PL9  | d2    | 409 | -    | 55,55,55     | 0.64 | 1 (1%)   | 68,69,69    | 1.72 | 16 (23%) |
| 29  | LMG  | b1    | 621 | -    | 38,38,55     | 1.11 | 2 (5%)   | 46,46,63    | 1.07 | 2 (4%)   |
| 25  | CLA  | B1    | 609 | -    | 65,73,73     | 1.50 | 5 (7%)   | 76,113,113  | 1.61 | 11 (14%) |
| 25  | CLA  | B1    | 617 | -    | 65,73,73     | 1.48 | 5 (7%)   | 76,113,113  | 1.36 | 8 (10%)  |
| 29  | LMG  | c1    | 519 | -    | 55,55,55     | 0.91 | 2 (3%)   | 63,63,63    | 0.95 | 2 (3%)   |
| 25  | CLA  | B1    | 614 | -    | 65,73,73     | 1.48 | 6 (9%)   | 76,113,113  | 1.37 | 8 (10%)  |
| 23  | BCR  | b1    | 602 | -    | 41,41,41     | 0.69 | 0        | 56,56,56    | 2.05 | 18 (32%) |

| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 25  | CLA  | B2    | 605 | -    | 65,73,73     | 1.51 | 5 (7%)   | 76,113,113  | 1.38 | 7 (9%)   |
| 23  | BCR  | b2    | 601 | -    | 41,41,41     | 0.70 | 0        | 56,56,56    | 1.97 | 16 (28%) |

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

| Mol | Type | Chain | Res | Link | Chirals   | Torsions      | Rings   |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 25  | CLA  | C1    | 506 | -    | 1/1/15/20 | 15/37/115/115 | -       |
| 23  | BCR  | B2    | 601 | -    | -         | 0/29/63/63    | 0/2/2/2 |
| 23  | BCR  | H2    | 103 | -    | -         | 3/17/34/63    | 0/1/1/2 |
| 25  | CLA  | D2    | 404 | -    | 1/1/14/20 | 11/33/111/115 | -       |
| 25  | CLA  | C2    | 518 | -    | 1/1/10/20 | 4/8/86/115    | -       |
| 29  | LMG  | d1    | 411 | -    | -         | 2/36/36/70    | -       |
| 32  | GOL  | i1    | 101 | -    | -         | 2/4/4/4       | -       |
| 33  | LHG  | D2    | 405 | -    | -         | 16/53/53/53   | -       |
| 25  | CLA  | C1    | 511 | -    | 1/1/15/20 | 12/37/115/115 | -       |
| 25  | CLA  | c2    | 507 | -    | 1/1/12/20 | 5/24/102/115  | -       |
| 23  | BCR  | a1    | 401 | -    | -         | 2/29/63/63    | 0/2/2/2 |
| 23  | BCR  | B2    | 603 | -    | -         | 2/29/63/63    | 0/2/2/2 |
| 25  | CLA  | b2    | 615 | -    | 1/1/14/20 | 8/31/109/115  | -       |
| 29  | LMG  | a1    | 412 | -    | -         | 12/46/66/70   | 0/1/1/1 |
| 29  | LMG  | c2    | 519 | -    | -         | 3/20/40/70    | 0/1/1/1 |
| 23  | BCR  | b1    | 602 | -    | -         | 3/29/63/63    | 0/2/2/2 |
| 23  | BCR  | k1    | 101 | -    | -         | 5/29/63/63    | 0/2/2/2 |
| 25  | CLA  | b1    | 612 | -    | 1/1/15/20 | 11/37/115/115 | -       |
| 32  | GOL  | a1    | 406 | -    | -         | 2/4/4/4       | -       |
| 33  | LHG  | D2    | 403 | -    | -         | 10/53/53/53   | -       |
| 38  | HEM  | f1    | 101 | 6    | -         | 5/12/54/54    | -       |
| 33  | LHG  | a2    | 407 | -    | -         | 11/33/33/53   | -       |
| 25  | CLA  | b1    | 604 | -    | 1/1/15/20 | 14/37/115/115 | -       |
| 29  | LMG  | b1    | 631 | -    | -         | 7/35/55/70    | 0/1/1/1 |
| 25  | CLA  | B2    | 617 | -    | 1/1/15/20 | 7/37/115/115  | -       |
| 25  | CLA  | C1    | 504 | -    | 1/1/15/20 | 6/37/115/115  | -       |
| 25  | CLA  | d1    | 406 | -    | 1/1/15/20 | 14/37/115/115 | -       |

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| Mol | Type | Chain | Res | Link | Chirals   | Torsions      | Rings   |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 23  | BCR  | b2    | 602 | -    | -         | 6/29/63/63    | 0/2/2/2 |
| 29  | LMG  | C2    | 515 | -    | -         | 0/18/38/70    | 0/1/1/1 |
| 25  | CLA  | b1    | 615 | -    | 1/1/13/20 | 7/30/108/115  | -       |
| 33  | LHG  | B1    | 621 | -    | -         | 11/53/53/53   | -       |
| 35  | LMT  | m2    | 103 | -    | -         | 5/16/56/61    | 0/2/2/2 |
| 25  | CLA  | B2    | 610 | -    | 1/1/15/20 | 6/37/115/115  | -       |
| 25  | CLA  | c1    | 512 | -    | 1/1/15/20 | 15/37/115/115 | -       |
| 23  | BCR  | B1    | 603 | -    | -         | 1/29/63/63    | 0/2/2/2 |
| 25  | CLA  | C2    | 511 | -    | 1/1/12/20 | 4/19/97/115   | -       |
| 23  | BCR  | d2    | 401 | -    | -         | 8/29/63/63    | 0/2/2/2 |
| 25  | CLA  | B2    | 608 | -    | 1/1/15/20 | 18/37/115/115 | -       |
| 25  | CLA  | A2    | 404 | -    | 1/1/12/20 | 8/21/99/115   | -       |
| 25  | CLA  | d2    | 404 | -    | 1/1/12/20 | 2/19/97/115   | -       |
| 23  | BCR  | A1    | 401 | -    | -         | 2/29/63/63    | 0/2/2/2 |
| 25  | CLA  | c2    | 511 | -    | 1/1/15/20 | 15/37/115/115 | -       |
| 25  | CLA  | c2    | 512 | 3    | 1/1/15/20 | 13/37/115/115 | -       |
| 29  | LMG  | A1    | 412 | -    | -         | 7/36/56/70    | 0/1/1/1 |
| 23  | BCR  | K2    | 104 | -    | -         | 2/12/46/63    | 0/2/2/2 |
| 38  | HEM  | e2    | 101 | 5,6  | -         | 3/12/54/54    | -       |
| 25  | CLA  | B1    | 618 | -    | 1/1/13/20 | 3/29/107/115  | -       |
| 25  | CLA  | B1    | 607 | -    | 1/1/14/20 | 7/31/109/115  | -       |
| 25  | CLA  | C2    | 513 | -    | 1/1/12/20 | 0/23/101/115  | -       |
| 25  | CLA  | c2    | 513 | -    | 1/1/12/20 | 7/24/102/115  | -       |
| 23  | BCR  | F2    | 401 | -    | -         | 9/29/63/63    | 0/2/2/2 |
| 25  | CLA  | c2    | 510 | -    | 1/1/12/20 | 8/24/102/115  | -       |
| 25  | CLA  | C2    | 504 | -    | 1/1/11/20 | 8/15/93/115   | -       |
| 23  | BCR  | J1    | 101 | -    | -         | 9/29/63/63    | 0/2/2/2 |
| 23  | BCR  | c1    | 502 | -    | -         | 5/29/63/63    | 0/2/2/2 |
| 33  | LHG  | L1    | 101 | -    | -         | 14/45/45/53   | -       |
| 25  | CLA  | C1    | 510 | -    | 1/1/15/20 | 8/37/115/115  | -       |
| 34  | DGD  | c1    | 518 | -    | -         | 10/51/91/95   | 0/2/2/2 |
| 25  | CLA  | b1    | 611 | -    | 1/1/15/20 | 6/37/115/115  | -       |
| 23  | BCR  | B1    | 601 | -    | -         | 0/29/63/63    | 0/2/2/2 |
| 27  | PHO  | a1    | 411 | -    | -         | 5/37/103/103  | 0/5/6/6 |
| 33  | LHG  | a1    | 407 | -    | -         | 14/47/47/53   | -       |

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| Mol | Type | Chain | Res | Link | Chirals   | Torsions      | Rings   |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 25  | CLA  | B2    | 607 | -    | 1/1/15/20 | 7/37/115/115  | -       |
| 25  | CLA  | C1    | 512 | -    | 1/1/15/20 | 14/37/115/115 | -       |
| 25  | CLA  | A1    | 404 | -    | 1/1/12/20 | 7/21/99/115   | -       |
| 29  | LMG  | B1    | 626 | -    | -         | 12/43/63/70   | 0/1/1/1 |
| 25  | CLA  | b1    | 617 | -    | 1/1/15/20 | 3/37/115/115  | -       |
| 25  | CLA  | C1    | 505 | -    | 1/1/15/20 | 11/37/115/115 | -       |
| 23  | BCR  | B2    | 602 | -    | -         | 2/29/63/63    | 0/2/2/2 |
| 33  | LHG  | d1    | 402 | -    | -         | 12/36/36/53   | -       |
| 25  | CLA  | B2    | 611 | -    | 1/1/15/20 | 8/37/115/115  | -       |
| 25  | CLA  | B1    | 619 | 40   | 1/1/15/20 | 16/37/115/115 | -       |
| 25  | CLA  | C1    | 509 | -    | 1/1/15/20 | 18/37/115/115 | -       |
| 25  | CLA  | b1    | 610 | -    | 1/1/15/20 | 2/37/115/115  | -       |
| 33  | LHG  | D1    | 404 | -    | -         | 11/53/53/53   | -       |
| 35  | LMT  | b2    | 623 | -    | -         | 1/21/61/61    | 0/2/2/2 |
| 29  | LMG  | D1    | 406 | -    | -         | 4/30/50/70    | 0/1/1/1 |
| 29  | LMG  | B1    | 622 | -    | -         | 2/26/46/70    | 0/1/1/1 |
| 25  | CLA  | B2    | 609 | -    | 1/1/15/20 | 9/37/115/115  | -       |
| 25  | CLA  | c1    | 505 | -    | 1/1/15/20 | 5/37/115/115  | -       |
| 25  | CLA  | d1    | 401 | -    | 1/1/15/20 | 10/37/115/115 | -       |
| 25  | CLA  | B2    | 615 | -    | 1/1/15/20 | 11/37/115/115 | -       |
| 32  | GOL  | C2    | 514 | -    | -         | 2/4/4/4       | -       |
| 25  | CLA  | D1    | 403 | -    | 1/1/12/20 | 4/21/99/115   | -       |
| 38  | HEM  | v1    | 201 | 16   | -         | 3/12/54/54    | -       |
| 34  | DGD  | c2    | 517 | -    | -         | 7/51/91/95    | 0/2/2/2 |
| 25  | CLA  | b1    | 614 | -    | 1/1/15/20 | 14/37/115/115 | -       |
| 25  | CLA  | d1    | 404 | 40   | 1/1/15/20 | 8/37/115/115  | -       |
| 25  | CLA  | b2    | 606 | -    | 1/1/15/20 | 14/37/115/115 | -       |
| 33  | LHG  | B2    | 627 | -    | -         | 8/46/46/53    | -       |
| 25  | CLA  | b2    | 620 | 40   | 1/1/15/20 | 20/37/115/115 | -       |
| 25  | CLA  | b2    | 616 | -    | 1/1/14/20 | 9/31/109/115  | -       |
| 25  | CLA  | C2    | 508 | -    | 1/1/12/20 | 7/19/97/115   | -       |
| 34  | DGD  | c1    | 514 | -    | -         | 9/40/80/95    | 0/2/2/2 |
| 34  | DGD  | H2    | 101 | -    | -         | 7/51/91/95    | 0/2/2/2 |
| 35  | LMT  | C1    | 519 | -    | -         | 2/21/61/61    | 0/2/2/2 |

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| Mol | Type | Chain | Res | Link | Chirals   | Torsions      | Rings   |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 33  | LHG  | b2    | 625 | -    | -         | 5/47/47/53    | -       |
| 35  | LMT  | T1    | 101 | -    | -         | 0/9/9/61      | -       |
| 25  | CLA  | C2    | 506 | -    | 1/1/15/20 | 14/37/115/115 | -       |
| 25  | CLA  | b2    | 612 | -    | 1/1/15/20 | 10/37/115/115 | -       |
| 25  | CLA  | B1    | 610 | -    | 1/1/15/20 | 13/37/115/115 | -       |
| 25  | CLA  | B2    | 612 | -    | 1/1/15/20 | 9/37/115/115  | -       |
| 27  | PHO  | D1    | 407 | -    | -         | 3/35/101/103  | 0/5/6/6 |
| 25  | CLA  | B2    | 604 | -    | 1/1/10/20 | 4/8/86/115    | -       |
| 25  | CLA  | a2    | 405 | -    | 1/1/15/20 | 13/37/115/115 | -       |
| 25  | CLA  | b1    | 620 | -    | 1/1/15/20 | 16/37/115/115 | -       |
| 25  | CLA  | C2    | 509 | -    | 1/1/15/20 | 14/37/115/115 | -       |
| 25  | CLA  | a2    | 404 | -    | 1/1/15/20 | 7/37/115/115  | -       |
| 25  | CLA  | A2    | 403 | -    | 1/1/14/20 | 7/33/111/115  | -       |
| 29  | LMG  | F2    | 402 | -    | -         | 2/30/50/70    | 0/1/1/1 |
| 25  | CLA  | c1    | 513 | 3    | 1/1/14/20 | 5/31/109/115  | -       |
| 25  | CLA  | c1    | 516 | -    | 1/1/15/20 | 11/37/115/115 | -       |
| 29  | LMG  | C1    | 520 | -    | -         | 8/43/63/70    | 0/1/1/1 |
| 25  | CLA  | B2    | 618 | -    | 1/1/14/20 | 4/31/109/115  | -       |
| 25  | CLA  | a2    | 413 | -    | 1/1/12/20 | 5/19/97/115   | -       |
| 25  | CLA  | a1    | 405 | -    | 1/1/12/20 | 6/19/97/115   | -       |
| 25  | CLA  | c2    | 508 | 40   | 1/1/15/20 | 14/37/115/115 | -       |
| 23  | BCR  | C1    | 521 | -    | -         | 0/29/63/63    | 0/2/2/2 |
| 34  | DGD  | C1    | 515 | -    | -         | 10/41/81/95   | 0/2/2/2 |
| 25  | CLA  | a1    | 404 | -    | 1/1/14/20 | 7/31/109/115  | -       |
| 25  | CLA  | B2    | 613 | -    | 1/1/15/20 | 12/37/115/115 | -       |
| 34  | DGD  | C1    | 517 | -    | -         | 6/53/93/95    | 0/2/2/2 |
| 25  | CLA  | B2    | 619 | -    | 1/1/15/20 | 17/37/115/115 | -       |
| 25  | CLA  | C2    | 516 | -    | 1/1/11/20 | 6/15/93/115   | -       |
| 35  | LMT  | m1    | 101 | -    | -         | 8/21/61/61    | 0/2/2/2 |
| 32  | GOL  | c1    | 521 | -    | -         | 2/4/4/4       | -       |
| 29  | LMG  | d2    | 407 | -    | -         | 3/21/41/70    | 0/1/1/1 |
| 25  | CLA  | C1    | 507 | -    | 1/1/15/20 | 20/37/115/115 | -       |
| 35  | LMT  | a2    | 406 | -    | -         | 5/21/61/61    | 0/2/2/2 |
| 25  | CLA  | C1    | 513 | 3    | 1/1/14/20 | 13/33/111/115 | -       |

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| Mol | Type | Chain | Res | Link | Chirals   | Torsions      | Rings   |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 25  | CLA  | b1    | 616 | -    | 1/1/15/20 | 15/37/115/115 | -       |
| 33  | LHG  | L2    | 101 | -    | -         | 16/53/53/53   | -       |
| 34  | DGD  | h2    | 102 | -    | -         | 9/51/91/95    | 0/2/2/2 |
| 27  | PHO  | A2    | 407 | -    | -         | 8/37/103/103  | 0/5/6/6 |
| 25  | CLA  | b1    | 619 | -    | 1/1/15/20 | 17/37/115/115 | -       |
| 29  | LMG  | d1    | 408 | -    | -         | 2/28/48/70    | 0/1/1/1 |
| 25  | CLA  | C2    | 507 | -    | 1/1/11/20 | 6/13/91/115   | -       |
| 25  | CLA  | B2    | 606 | -    | 1/1/15/20 | 11/37/115/115 | -       |
| 25  | CLA  | d2    | 405 | -    | 1/1/15/20 | 9/37/115/115  | -       |
| 25  | CLA  | A2    | 402 | -    | 1/1/15/20 | 10/37/115/115 | -       |
| 29  | LMG  | A1    | 410 | -    | -         | 4/38/58/70    | 0/1/1/1 |
| 35  | LMT  | i2    | 102 | -    | -         | 0/4/4/61      | -       |
| 25  | CLA  | c2    | 502 | -    | 1/1/15/20 | 13/37/115/115 | -       |
| 23  | BCR  | j2    | 102 | -    | -         | 9/29/63/63    | 0/2/2/2 |
| 25  | CLA  | B1    | 612 | -    | 1/1/15/20 | 9/37/115/115  | -       |
| 25  | CLA  | a1    | 403 | -    | 1/1/15/20 | 6/37/115/115  | -       |
| 29  | LMG  | B2    | 620 | -    | -         | 8/35/55/70    | 0/1/1/1 |
| 25  | CLA  | c1    | 508 | -    | 1/1/12/20 | 5/19/97/115   | -       |
| 25  | CLA  | D2    | 406 | -    | 1/1/15/20 | 14/37/115/115 | -       |
| 25  | CLA  | b2    | 604 | -    | 1/1/10/20 | 4/10/88/115   | -       |
| 25  | CLA  | D1    | 402 | -    | 1/1/15/20 | 7/37/115/115  | -       |
| 25  | CLA  | b2    | 618 | -    | 1/1/15/20 | 4/37/115/115  | -       |
| 23  | BCR  | z2    | 101 | -    | -         | 0/29/63/63    | 0/2/2/2 |
| 25  | CLA  | A1    | 403 | -    | 1/1/15/20 | 10/37/115/115 | -       |
| 25  | CLA  | C2    | 510 | -    | 1/1/11/20 | 4/13/91/115   | -       |
| 25  | CLA  | c2    | 509 | -    | 1/1/15/20 | 11/37/115/115 | -       |
| 34  | DGD  | C1    | 516 | -    | -         | 9/51/91/95    | 0/2/2/2 |
| 38  | HEM  | E2    | 101 | 5    | -         | 2/12/54/54    | -       |
| 25  | CLA  | A1    | 405 | -    | 1/1/13/20 | 3/25/103/115  | -       |
| 27  | PHO  | A1    | 408 | -    | -         | 7/37/103/103  | 0/5/6/6 |
| 36  | PL9  | D1    | 408 | -    | -         | 7/53/73/73    | 0/1/1/1 |
| 35  | LMT  | b2    | 621 | -    | -         | 1/21/61/61    | 0/2/2/2 |
| 25  | CLA  | b2    | 613 | -    | 1/1/15/20 | 6/37/115/115  | -       |
| 25  | CLA  | c2    | 505 | -    | 1/1/15/20 | 14/37/115/115 | -       |
| 25  | CLA  | b2    | 611 | -    | 1/1/15/20 | 5/37/115/115  | -       |

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| Mol | Type | Chain | Res | Link | Chirals   | Torsions      | Rings   |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 23  | BCR  | H1    | 102 | -    | -         | 3/15/32/63    | 0/1/1/2 |
| 25  | CLA  | c2    | 515 | -    | 1/1/11/20 | 5/15/93/115   | -       |
| 25  | CLA  | b2    | 619 | -    | 1/1/13/20 | 10/30/108/115 | -       |
| 33  | LHG  | A2    | 405 | -    | -         | 10/37/37/53   | -       |
| 25  | CLA  | b1    | 609 | -    | 1/1/15/20 | 11/37/115/115 | -       |
| 25  | CLA  | b2    | 617 | -    | 1/1/15/20 | 16/37/115/115 | -       |
| 25  | CLA  | C2    | 505 | -    | 1/1/15/20 | 15/37/115/115 | -       |
| 32  | GOL  | B1    | 620 | -    | -         | 2/4/4/4       | -       |
| 25  | CLA  | b1    | 613 | -    | 1/1/15/20 | 6/37/115/115  | -       |
| 37  | SQD  | B2    | 623 | -    | -         | 2/40/60/69    | 0/1/1/1 |
| 23  | BCR  | A2    | 401 | -    | -         | 0/29/63/63    | 0/2/2/2 |
| 34  | DGD  | c2    | 514 | -    | -         | 16/51/91/95   | 0/2/2/2 |
| 35  | LMT  | M1    | 103 | -    | -         | 3/15/35/61    | 0/1/1/2 |
| 23  | BCR  | a2    | 402 | -    | -         | 3/29/63/63    | 0/2/2/2 |
| 23  | BCR  | d1    | 405 | -    | -         | 8/29/63/63    | 0/2/2/2 |
| 27  | PHO  | D2    | 407 | -    | -         | 6/37/103/103  | 0/5/6/6 |
| 25  | CLA  | B1    | 615 | -    | 1/1/15/20 | 15/37/115/115 | -       |
| 29  | LMG  | M1    | 101 | -    | -         | 4/31/31/70    | -       |
| 33  | LHG  | d2    | 403 | -    | -         | 13/53/53/53   | -       |
| 23  | BCR  | h1    | 102 | -    | -         | 5/29/63/63    | 0/2/2/2 |
| 29  | LMG  | B2    | 621 | -    | -         | 8/31/51/70    | 0/1/1/1 |
| 25  | CLA  | c1    | 507 | -    | 1/1/15/20 | 16/37/115/115 | -       |
| 34  | DGD  | c1    | 520 | -    | -         | 8/51/91/95    | 0/2/2/2 |
| 34  | DGD  | c2    | 516 | -    | -         | 6/41/81/95    | 0/2/2/2 |
| 25  | CLA  | C1    | 503 | -    | 1/1/14/20 | 11/31/109/115 | -       |
| 23  | BCR  | k2    | 501 | -    | -         | 0/29/63/63    | 0/2/2/2 |
| 23  | BCR  | c2    | 501 | -    | -         | 14/29/63/63   | 0/2/2/2 |
| 25  | CLA  | b1    | 606 | -    | 1/1/15/20 | 17/37/115/115 | -       |
| 25  | CLA  | b1    | 608 | -    | 1/1/15/20 | 15/37/115/115 | -       |
| 29  | LMG  | j2    | 101 | -    | -         | 7/45/65/70    | 0/1/1/1 |
| 37  | SQD  | D1    | 409 | -    | -         | 2/29/49/69    | 0/1/1/1 |
| 25  | CLA  | b2    | 608 | -    | 1/1/15/20 | 12/37/115/115 | -       |
| 25  | CLA  | c1    | 504 | -    | 1/1/15/20 | 7/37/115/115  | -       |
| 29  | LMG  | I2    | 101 | -    | -         | 3/29/49/70    | 0/1/1/1 |

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| Mol | Type | Chain | Res | Link | Chirals   | Torsions      | Rings   |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 25  | CLA  | D2    | 401 | -    | 1/1/15/20 | 6/37/115/115  | -       |
| 27  | PHO  | d1    | 403 | -    | -         | 3/37/103/103  | 0/5/6/6 |
| 29  | LMG  | a2    | 412 | -    | -         | 6/39/59/70    | 0/1/1/1 |
| 35  | LMT  | c1    | 517 | -    | -         | 1/19/59/61    | 0/2/2/2 |
| 23  | BCR  | B1    | 602 | -    | -         | 5/29/63/63    | 0/2/2/2 |
| 34  | DGD  | h1    | 101 | -    | -         | 9/51/91/95    | 0/2/2/2 |
| 25  | CLA  | b1    | 605 | -    | 1/1/15/20 | 7/37/115/115  | -       |
| 23  | BCR  | b1    | 601 | -    | -         | 0/29/63/63    | 0/2/2/2 |
| 23  | BCR  | c1    | 501 | -    | -         | 0/29/63/63    | 0/2/2/2 |
| 33  | LHG  | l2    | 101 | -    | -         | 20/48/48/53   | -       |
| 35  | LMT  | l1    | 101 | -    | -         | 3/15/35/61    | 0/1/1/2 |
| 25  | CLA  | c1    | 509 | 40   | 1/1/15/20 | 15/37/115/115 | -       |
| 25  | CLA  | b2    | 609 | -    | 1/1/14/20 | 10/33/111/115 | -       |
| 23  | BCR  | b2    | 603 | -    | -         | 0/29/63/63    | 0/2/2/2 |
| 32  | GOL  | c2    | 518 | -    | -         | 2/4/4/4       | -       |
| 32  | GOL  | C1    | 518 | -    | -         | 2/4/4/4       | -       |
| 38  | HEM  | v2    | 201 | 16   | -         | 1/12/54/54    | -       |
| 34  | DGD  | C2    | 512 | -    | -         | 1/20/60/95    | 0/2/2/2 |
| 25  | CLA  | c1    | 515 | -    | 1/1/13/20 | 9/25/103/115  | -       |
| 29  | LMG  | b2    | 622 | -    | -         | 0/34/54/70    | 0/1/1/1 |
| 25  | CLA  | B1    | 608 | -    | 1/1/15/20 | 14/37/115/115 | -       |
| 25  | CLA  | c1    | 503 | -    | 1/1/15/20 | 15/37/115/115 | -       |
| 23  | BCR  | D1    | 401 | -    | -         | 8/29/63/63    | 0/2/2/2 |
| 23  | BCR  | K2    | 102 | -    | -         | 7/29/63/63    | 0/2/2/2 |
| 25  | CLA  | c2    | 504 | -    | 1/1/15/20 | 10/37/115/115 | -       |
| 25  | CLA  | c1    | 510 | -    | 1/1/15/20 | 10/37/115/115 | -       |
| 25  | CLA  | B1    | 605 | -    | 1/1/15/20 | 9/37/115/115  | -       |
| 25  | CLA  | B2    | 614 | -    | 1/1/15/20 | 12/37/115/115 | -       |
| 25  | CLA  | c2    | 503 | -    | 1/1/15/20 | 13/37/115/115 | -       |
| 27  | PHO  | a2    | 416 | -    | -         | 6/37/103/103  | 0/5/6/6 |
| 38  | HEM  | V2    | 201 | 16   | -         | 2/12/54/54    | -       |
| 33  | LHG  | D1    | 405 | -    | -         | 14/53/53/53   | -       |
| 25  | CLA  | d2    | 402 | -    | 1/1/15/20 | 11/37/115/115 | -       |
| 36  | PL9  | d1    | 409 | -    | -         | 9/53/73/73    | 0/1/1/1 |
| 25  | CLA  | b1    | 607 | -    | 1/1/15/20 | 10/37/115/115 | -       |

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| Mol | Type | Chain | Res | Link | Chirals   | Torsions      | Rings   |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 23  | BCR  | b1    | 603 | -    | -         | 4/29/63/63    | 0/2/2/2 |
| 23  | BCR  | C1    | 501 | -    | -         | 4/29/63/63    | 0/2/2/2 |
| 38  | HEM  | V1    | 201 | 16   | -         | 3/12/54/54    | -       |
| 25  | CLA  | C2    | 503 | -    | 1/1/15/20 | 16/37/115/115 | -       |
| 25  | CLA  | c1    | 506 | 40   | 1/1/15/20 | 15/37/115/115 | -       |
| 25  | CLA  | c1    | 511 | -    | 1/1/15/20 | 10/37/115/115 | -       |
| 32  | GOL  | b1    | 618 | -    | -         | 4/4/4/4       | -       |
| 33  | LHG  | b1    | 622 | -    | -         | 14/53/53/53   | -       |
| 23  | BCR  | K1    | 101 | -    | -         | 5/26/43/63    | 0/1/1/2 |
| 25  | CLA  | b2    | 610 | -    | 1/1/15/20 | 7/37/115/115  | -       |
| 25  | CLA  | K2    | 101 | -    | 1/1/13/20 | 11/25/103/115 | -       |
| 33  | LHG  | d2    | 406 | -    | -         | 10/53/53/53   | -       |
| 35  | LMT  | M1    | 102 | -    | -         | 1/8/8/61      | -       |
| 29  | LMG  | b1    | 624 | -    | -         | 3/34/54/70    | 0/1/1/1 |
| 25  | CLA  | B1    | 604 | -    | 1/1/10/20 | 4/10/88/115   | -       |
| 33  | LHG  | d1    | 407 | -    | -         | 14/53/53/53   | -       |
| 37  | SQD  | b2    | 605 | -    | -         | 10/40/60/69   | 0/1/1/1 |
| 25  | CLA  | A1    | 406 | -    | 1/1/15/20 | 11/37/115/115 | -       |
| 33  | LHG  | l1    | 102 | -    | -         | 18/53/53/53   | -       |
| 38  | HEM  | E1    | 101 | 5,6  | -         | 3/12/54/54    | -       |
| 25  | CLA  | b2    | 614 | -    | 1/1/15/20 | 17/37/115/115 | -       |
| 37  | SQD  | D2    | 402 | -    | -         | 4/18/38/69    | 0/1/1/1 |
| 25  | CLA  | b2    | 624 | -    | 1/1/15/20 | 9/37/115/115  | -       |
| 25  | CLA  | B1    | 606 | -    | 1/1/15/20 | 18/37/115/115 | -       |
| 23  | BCR  | C2    | 502 | -    | -         | 0/29/63/63    | 0/2/2/2 |
| 27  | PHO  | d2    | 408 | -    | -         | 0/37/103/103  | 0/5/6/6 |
| 35  | LMT  | L1    | 102 | -    | -         | 1/9/9/61      | -       |
| 36  | PL9  | D2    | 408 | -    | -         | 7/53/73/73    | 0/1/1/1 |
| 25  | CLA  | B1    | 616 | -    | 1/1/15/20 | 9/37/115/115  | -       |
| 23  | BCR  | h2    | 101 | -    | -         | 4/29/63/63    | 0/2/2/2 |
| 25  | CLA  | B1    | 613 | -    | 1/1/15/20 | 13/37/115/115 | -       |
| 25  | CLA  | C1    | 508 | -    | 1/1/15/20 | 11/37/115/115 | -       |
| 25  | CLA  | c2    | 506 | -    | 1/1/14/20 | 11/33/111/115 | -       |
| 25  | CLA  | B1    | 611 | -    | -         | 10/34/112/115 | -       |
| 25  | CLA  | C1    | 514 | -    | 1/1/11/20 | 2/13/91/115   | -       |

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| Mol | Type | Chain | Res | Link | Chirals   | Torsions      | Rings   |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 35  | LMT  | m2    | 104 | -    | -         | 4/15/55/61    | 0/2/2/2 |
| 25  | CLA  | C1    | 502 | -    | 1/1/15/20 | 15/37/115/115 | -       |
| 32  | GOL  | a2    | 415 | -    | -         | 2/4/4/4       | -       |
| 29  | LMG  | A2    | 412 | -    | -         | 5/23/43/70    | 0/1/1/1 |
| 34  | DGD  | H1    | 101 | -    | -         | 12/51/91/95   | 0/2/2/2 |
| 36  | PL9  | d2    | 409 | -    | -         | 8/53/73/73    | 0/1/1/1 |
| 29  | LMG  | b1    | 621 | -    | -         | 6/33/53/70    | 0/1/1/1 |
| 25  | CLA  | B1    | 609 | -    | 1/1/15/20 | 10/37/115/115 | -       |
| 25  | CLA  | B1    | 617 | -    | 1/1/15/20 | 12/37/115/115 | -       |
| 29  | LMG  | c1    | 519 | -    | -         | 9/50/70/70    | 0/1/1/1 |
| 25  | CLA  | B1    | 614 | -    | 1/1/15/20 | 12/37/115/115 | -       |
| 25  | CLA  | B2    | 616 | -    | 1/1/12/20 | 7/24/102/115  | -       |
| 25  | CLA  | B2    | 605 | -    | 1/1/15/20 | 9/37/115/115  | -       |
| 23  | BCR  | b2    | 601 | -    | -         | 0/29/63/63    | 0/2/2/2 |

The worst 5 of 1015 bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 25  | d1    | 404 | CLA  | C4B-NB | 8.30 | 1.42        | 1.35     |
| 25  | A2    | 402 | CLA  | C4B-NB | 8.28 | 1.42        | 1.35     |
| 25  | A2    | 404 | CLA  | C4B-NB | 8.24 | 1.42        | 1.35     |
| 25  | b1    | 607 | CLA  | C4B-NB | 8.19 | 1.42        | 1.35     |
| 25  | A1    | 406 | CLA  | C4B-NB | 8.16 | 1.42        | 1.35     |

The worst 5 of 2013 bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms       | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|--------|-------------|----------|
| 23  | c2    | 501 | BCR  | C36-C18-C17 | -10.87 | 107.70      | 122.92   |
| 23  | c2    | 501 | BCR  | C24-C23-C22 | -9.36  | 112.09      | 126.23   |
| 23  | c2    | 501 | BCR  | C16-C17-C18 | 9.01   | 140.16      | 127.31   |
| 27  | a1    | 411 | PHO  | O2D-CGD-CBD | 7.32   | 120.27      | 111.00   |
| 27  | A1    | 408 | PHO  | O2D-CGD-CBD | 7.29   | 120.24      | 111.00   |

5 of 139 chirality outliers are listed below:

| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|------|
| 25  | A1    | 403 | CLA  | ND   |
| 25  | A1    | 404 | CLA  | ND   |
| 25  | A1    | 405 | CLA  | ND   |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|------|
| 25  | A1    | 406 | CLA  | ND   |
| 25  | B1    | 604 | CLA  | ND   |

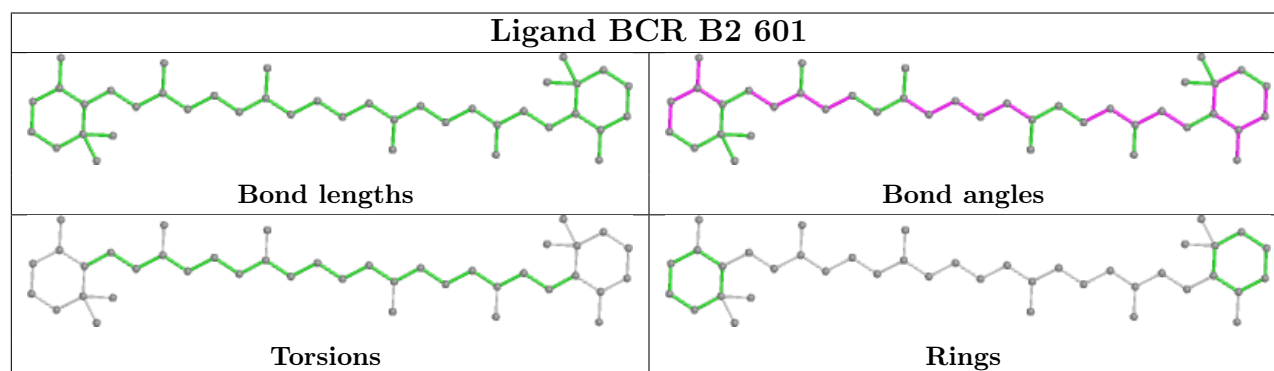
5 of 2184 torsion outliers are listed below:

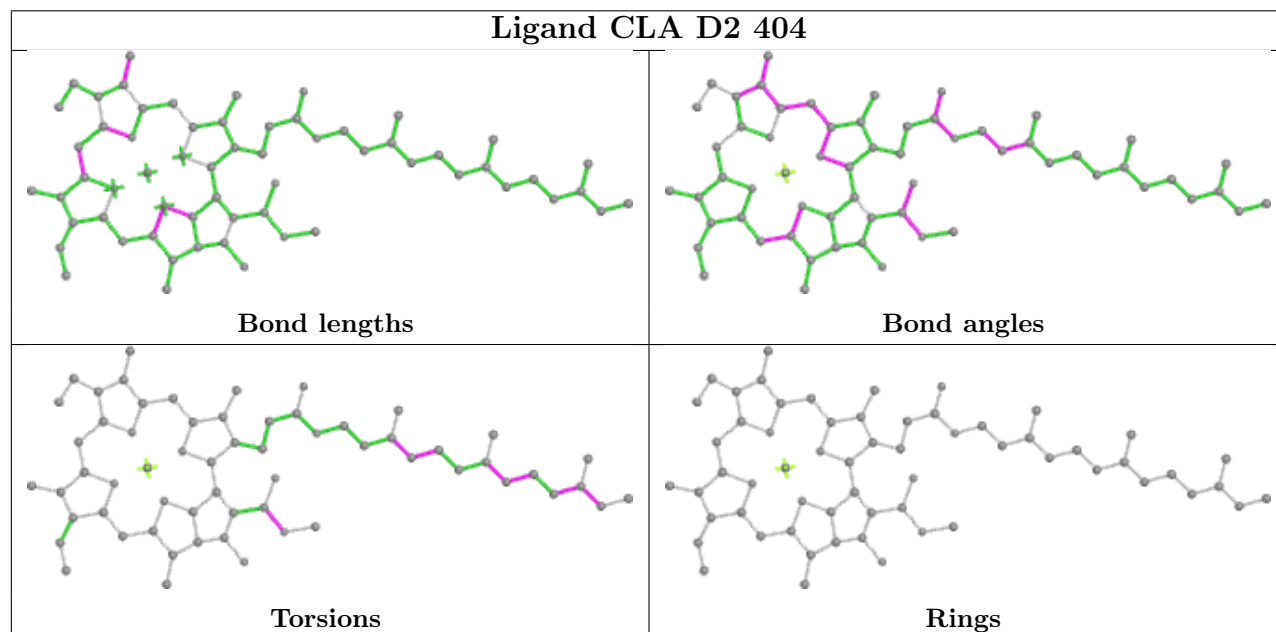
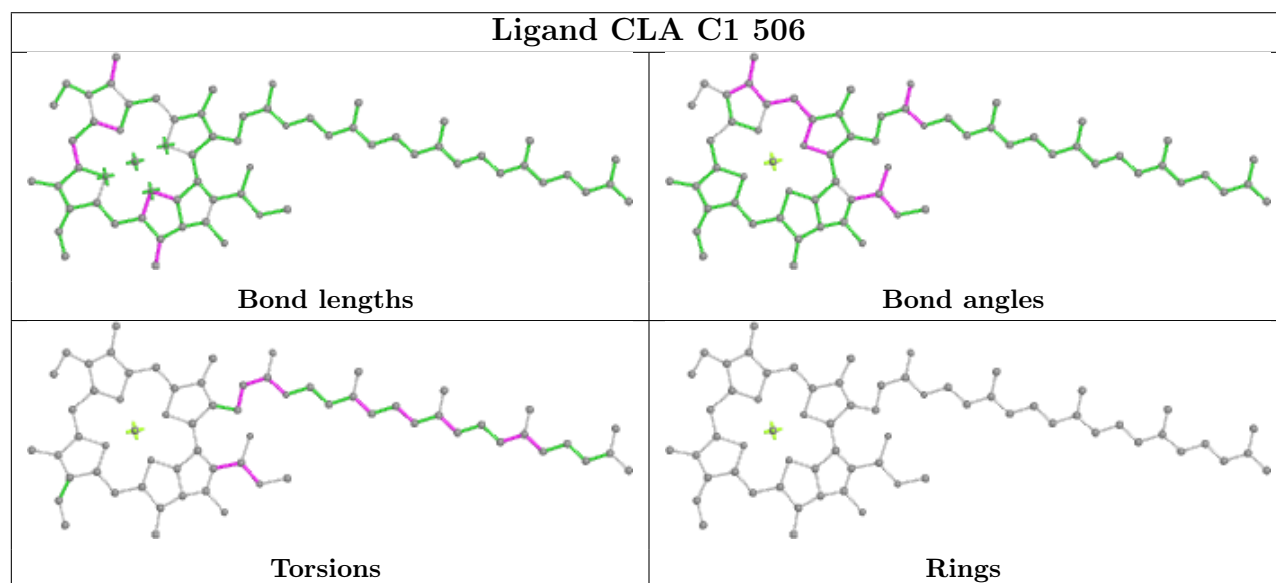
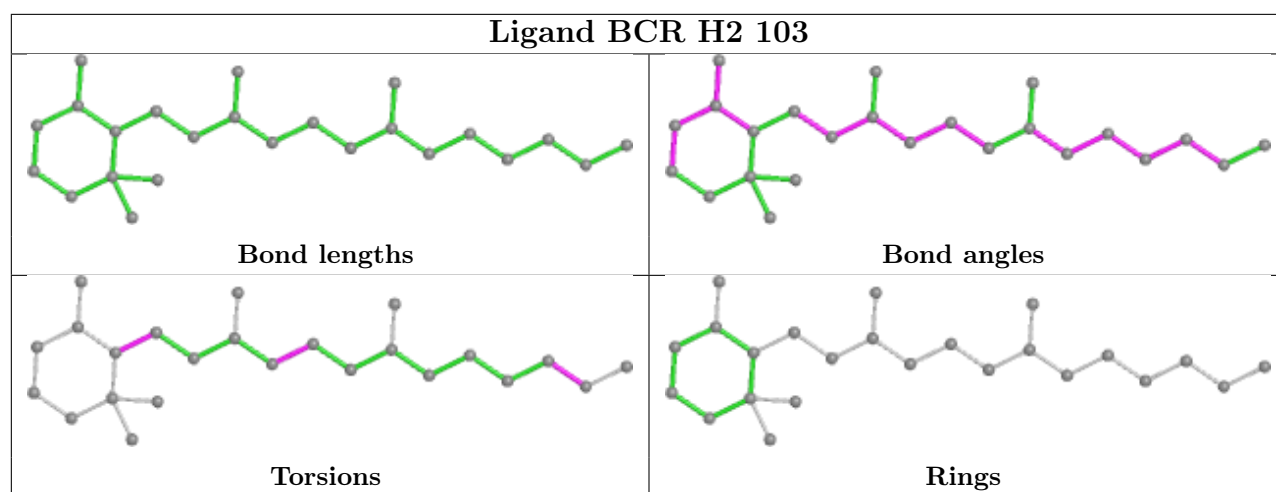
| Mol | Chain | Res | Type | Atoms        |
|-----|-------|-----|------|--------------|
| 23  | C1    | 501 | BCR  | C7-C8-C9-C10 |
| 23  | C1    | 501 | BCR  | C7-C8-C9-C34 |
| 23  | D1    | 401 | BCR  | C7-C8-C9-C10 |
| 23  | D1    | 401 | BCR  | C7-C8-C9-C34 |
| 23  | K1    | 101 | BCR  | C1-C6-C7-C8  |

There are no ring outliers.

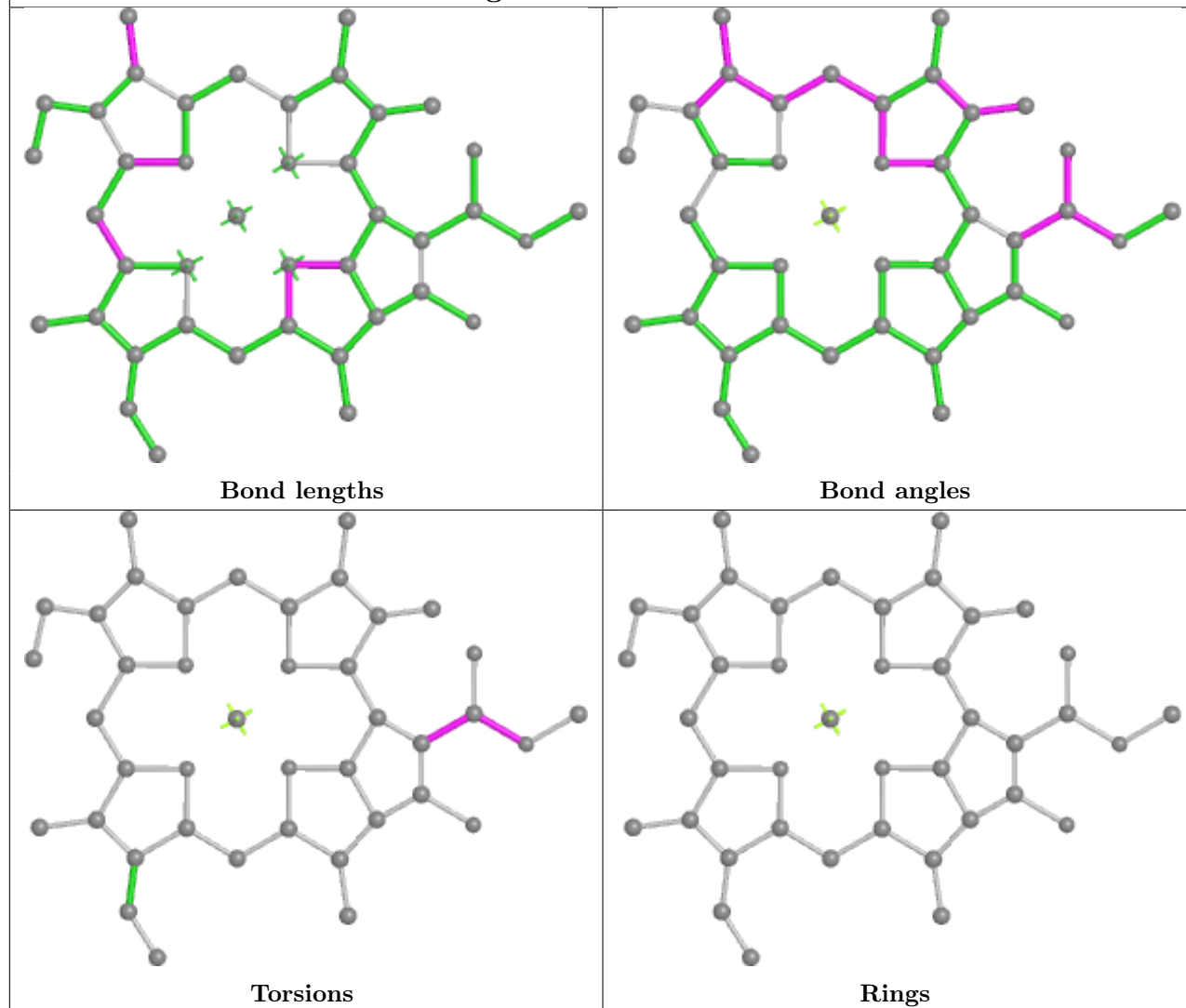
No monomer is involved in short contacts.

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

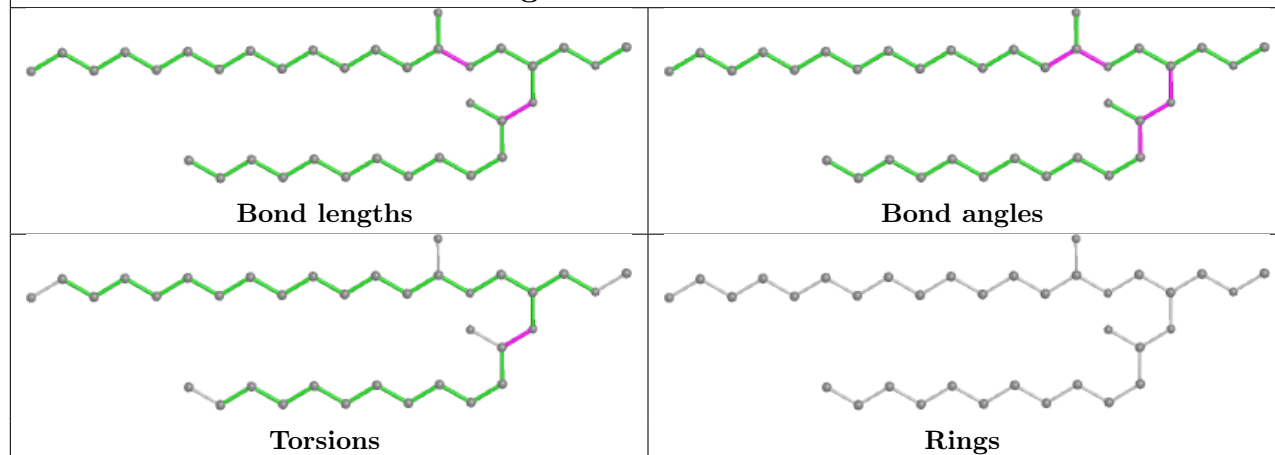


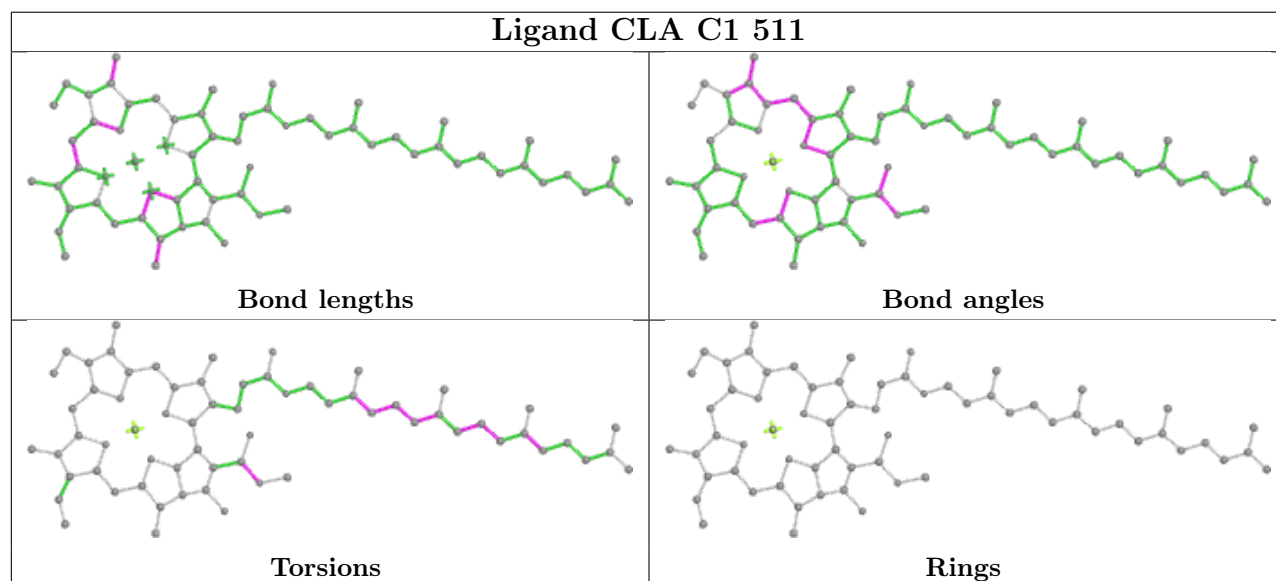
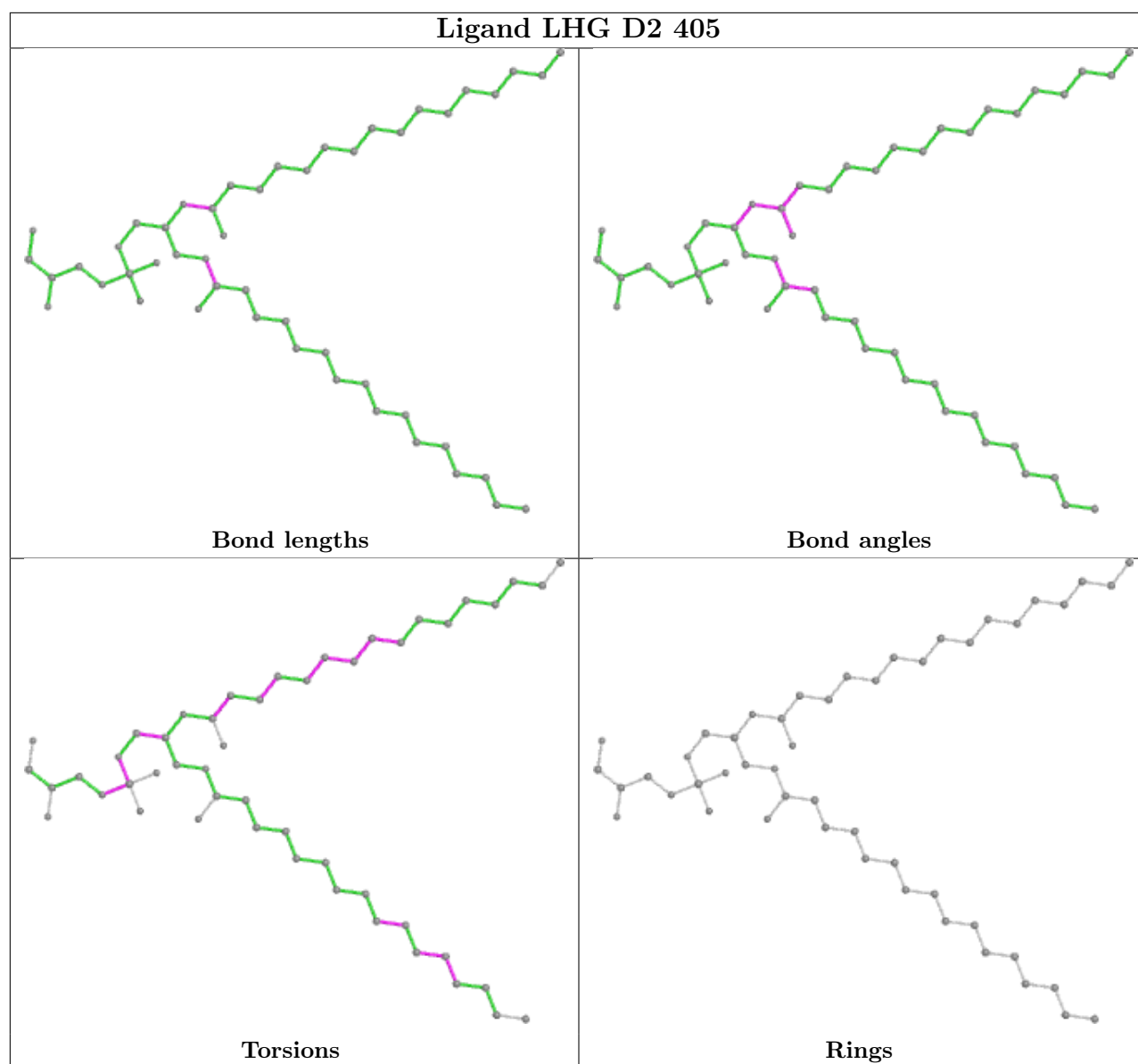


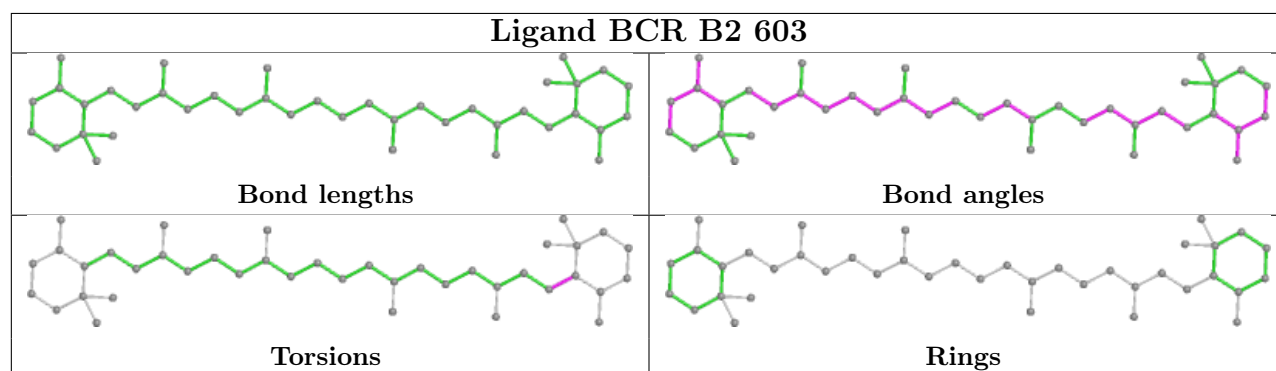
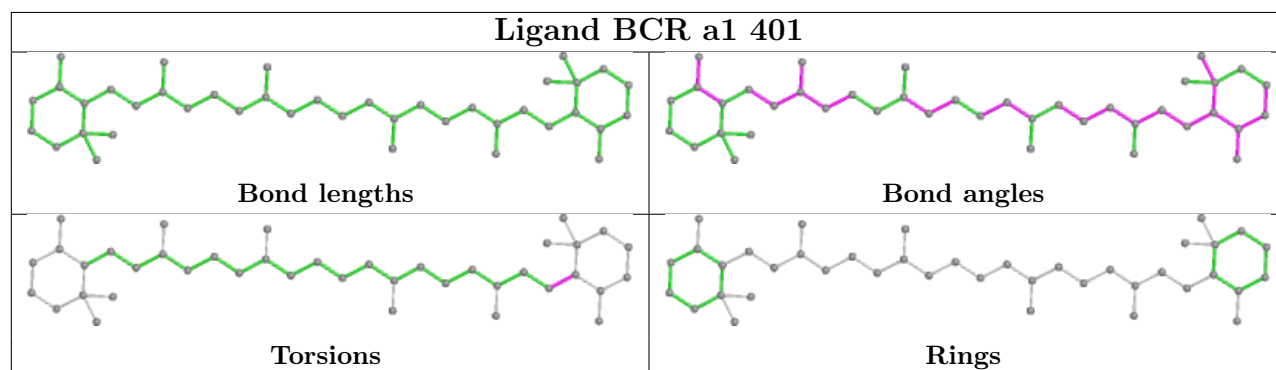
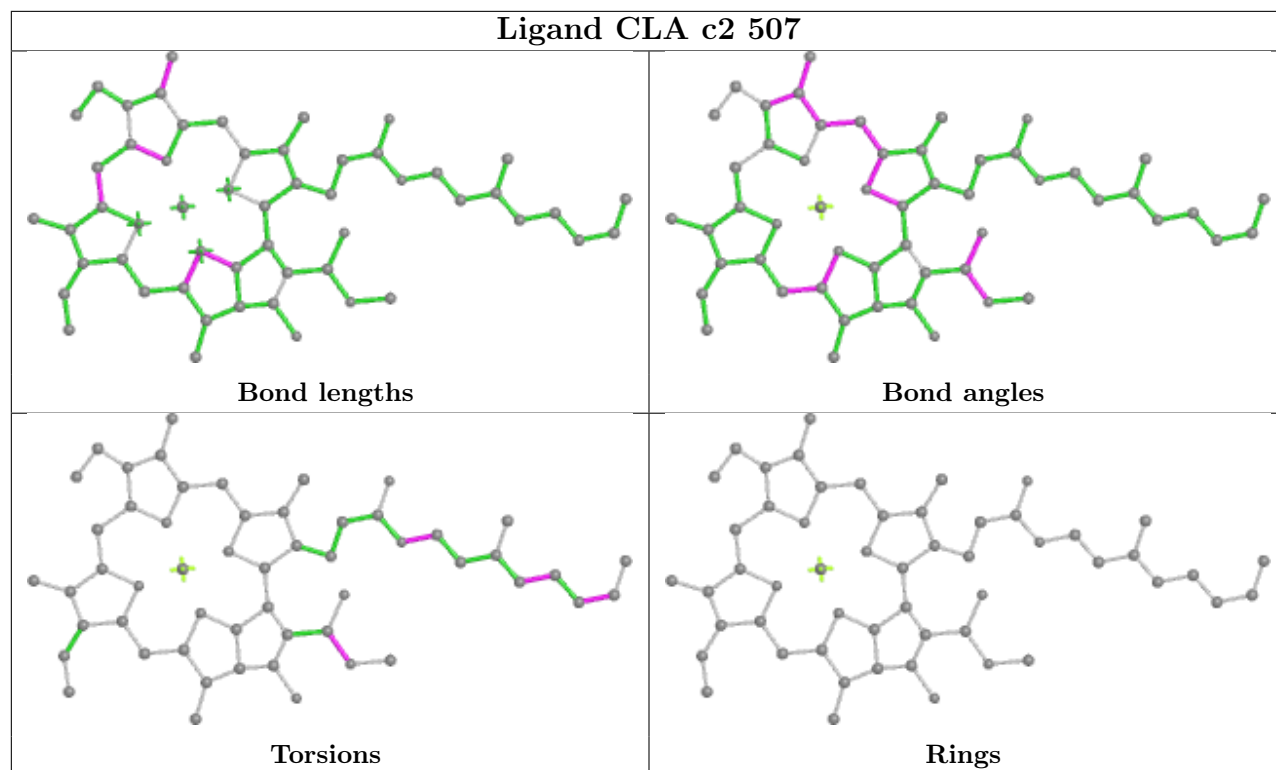
## Ligand CLA C2 518

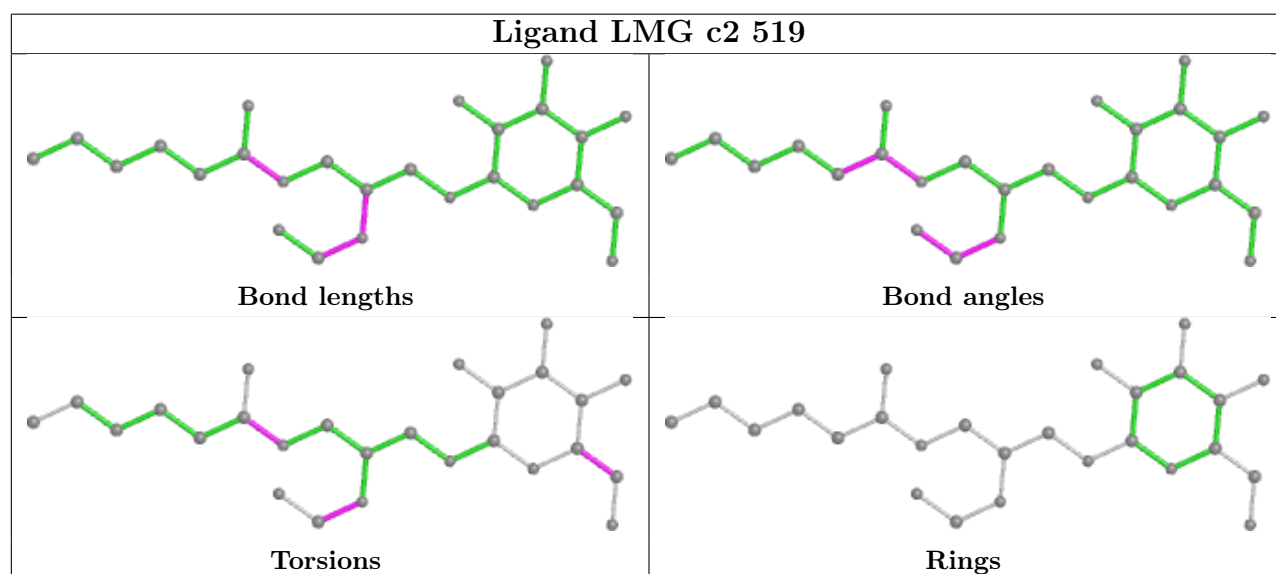
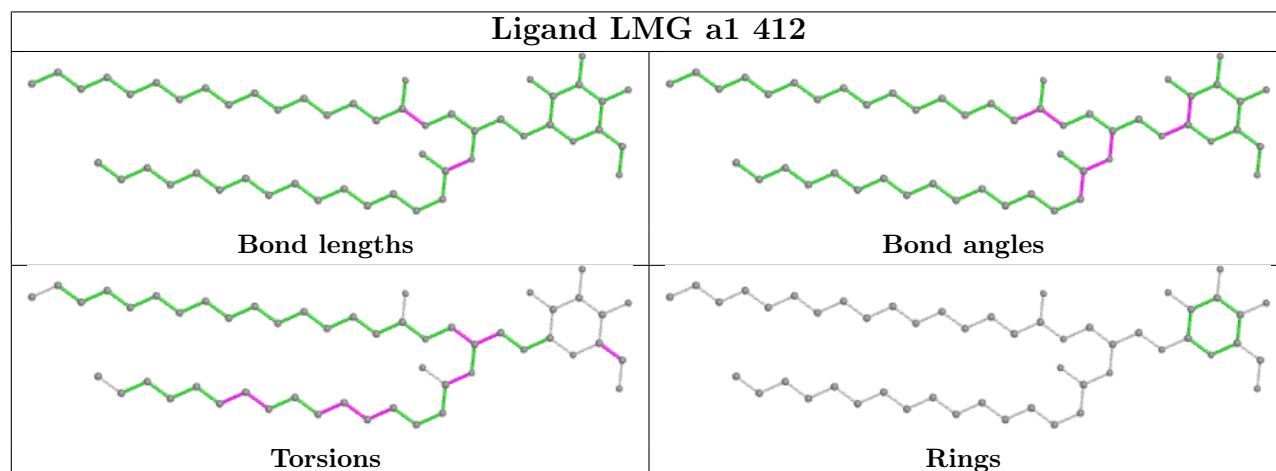
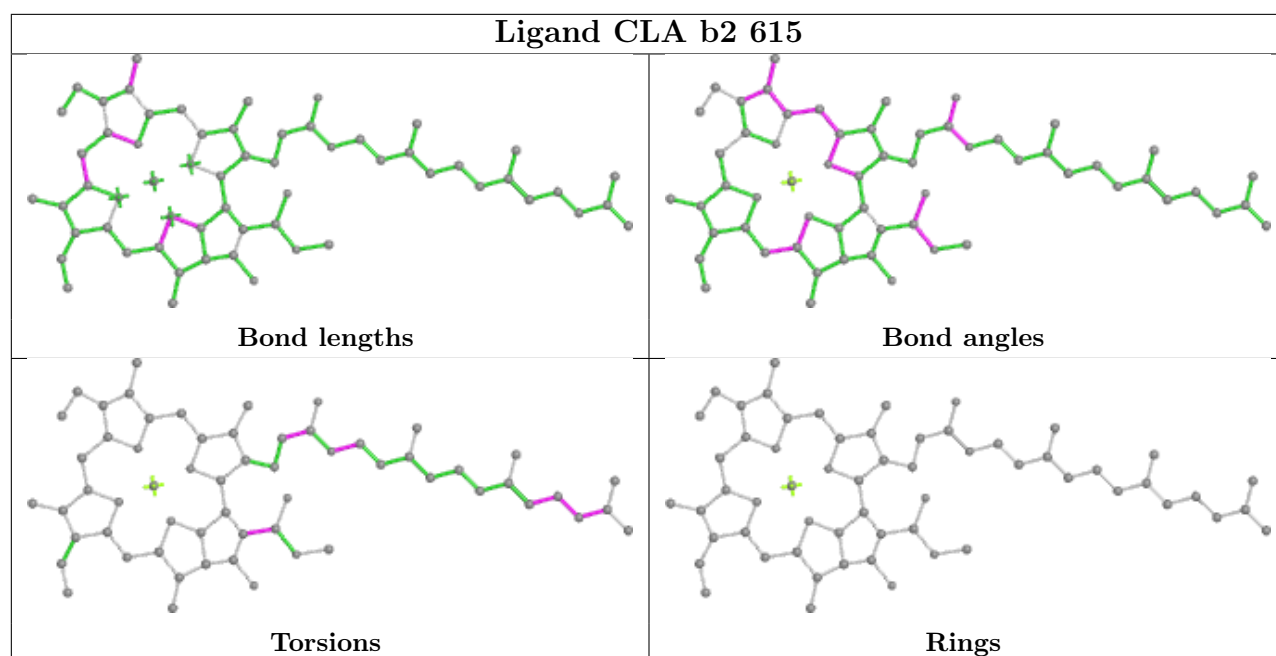


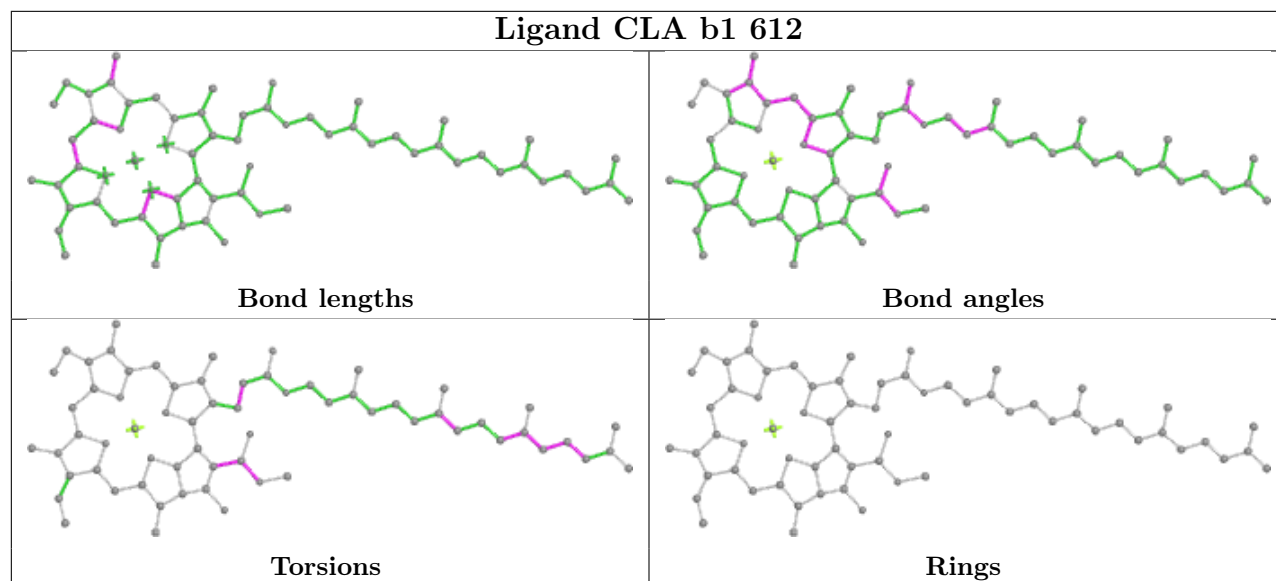
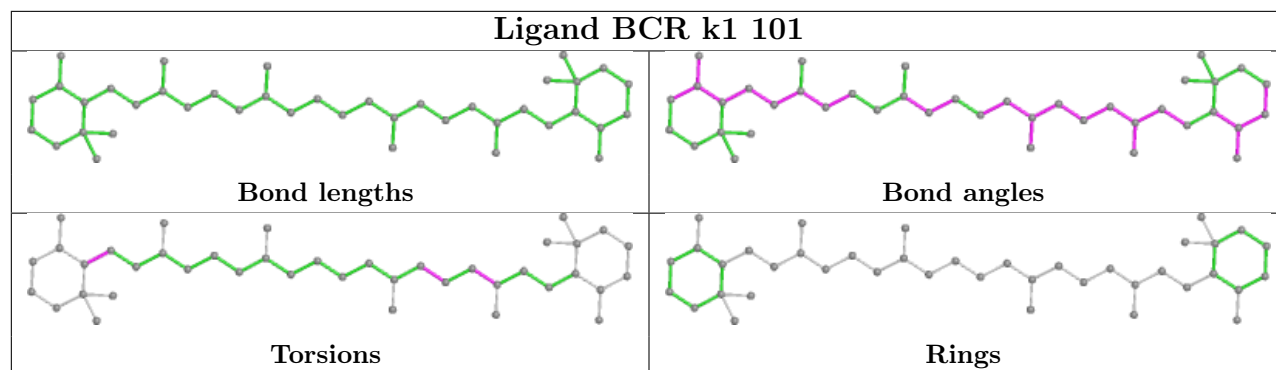
## Ligand LMG d1 411

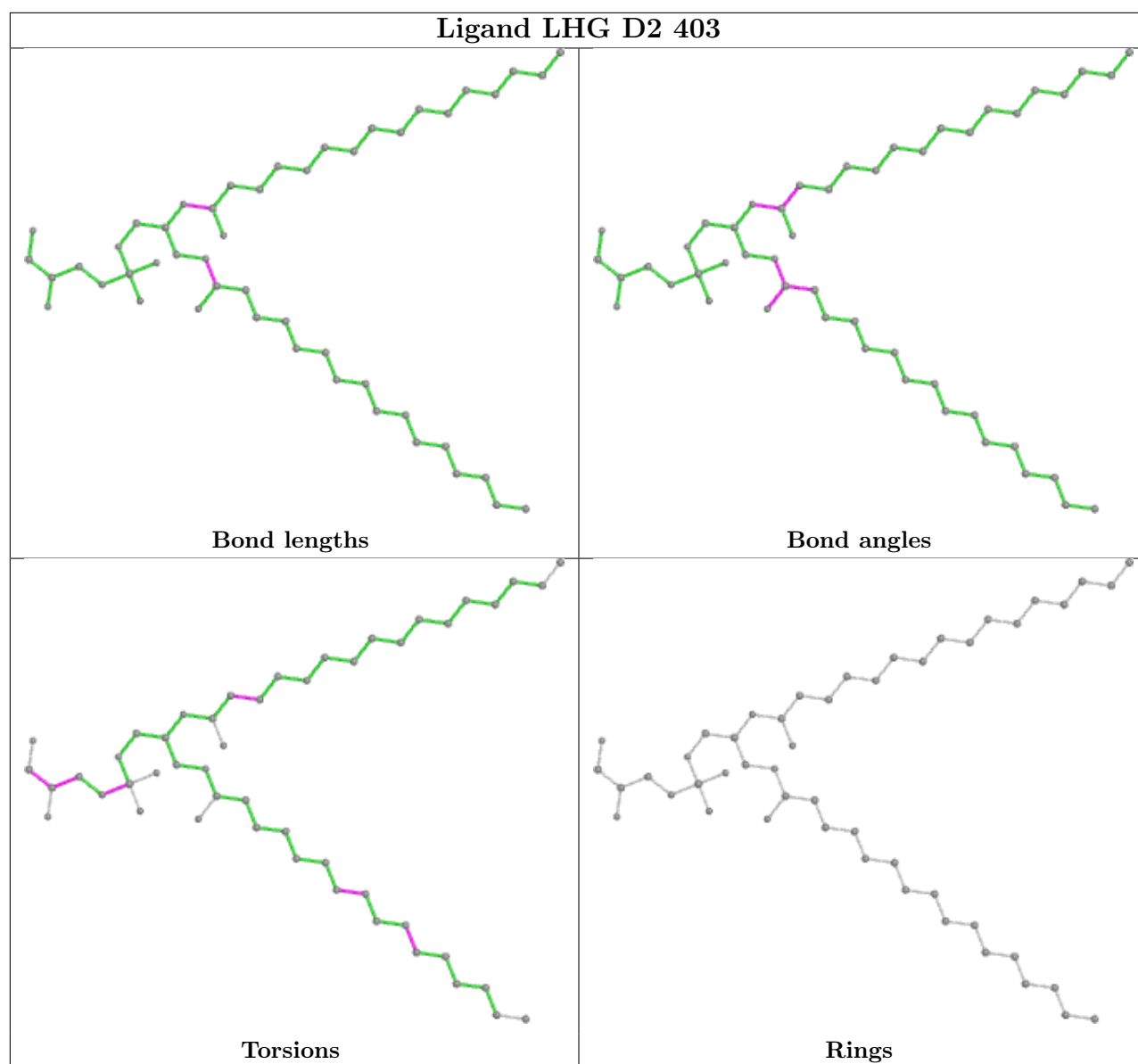




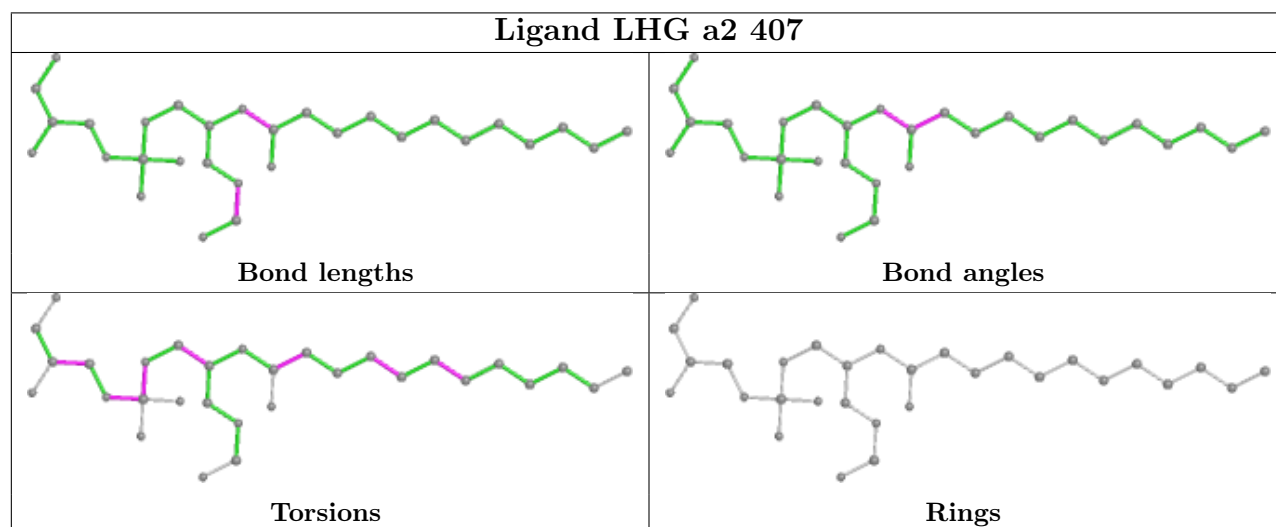
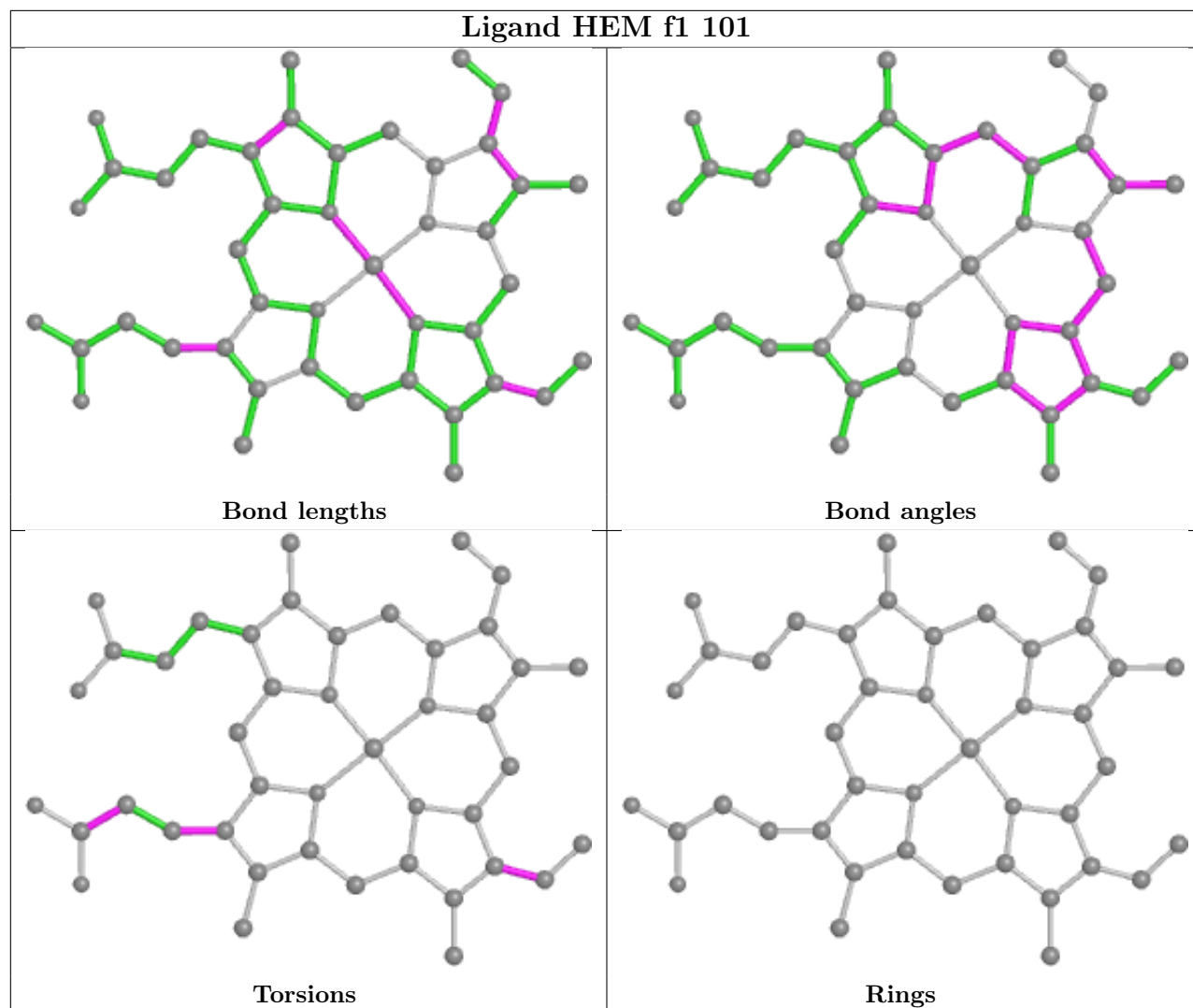


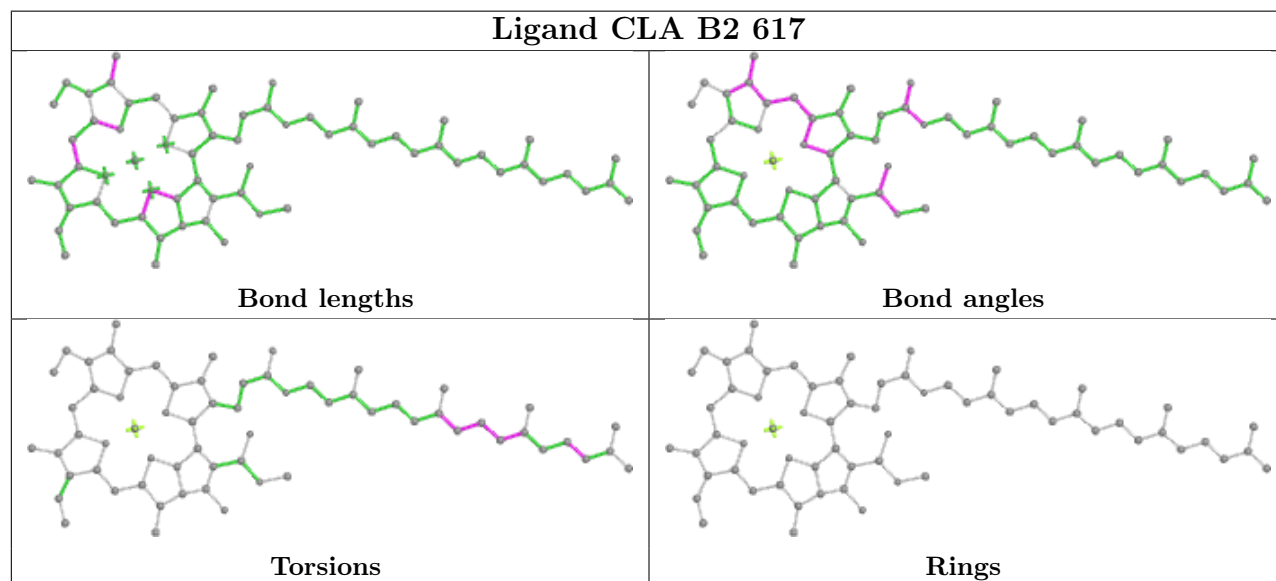
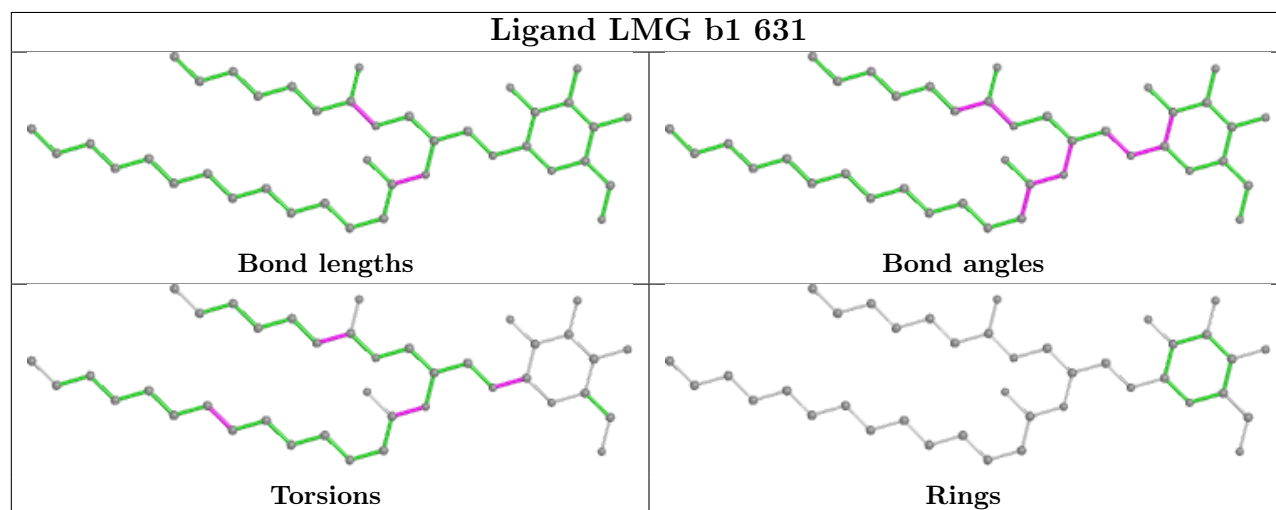
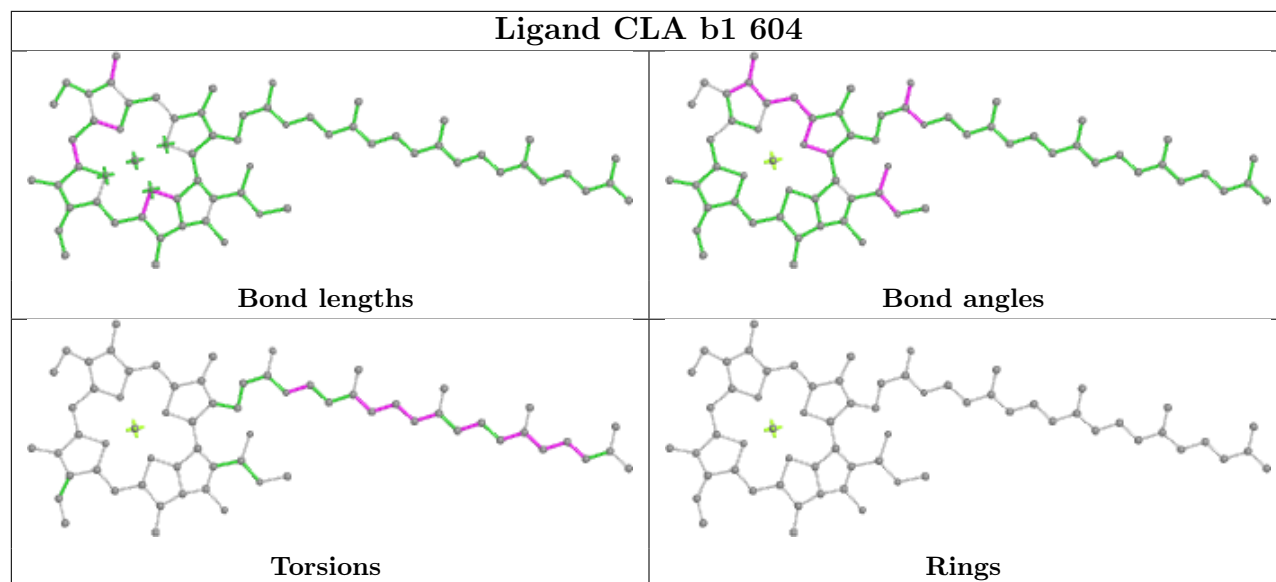


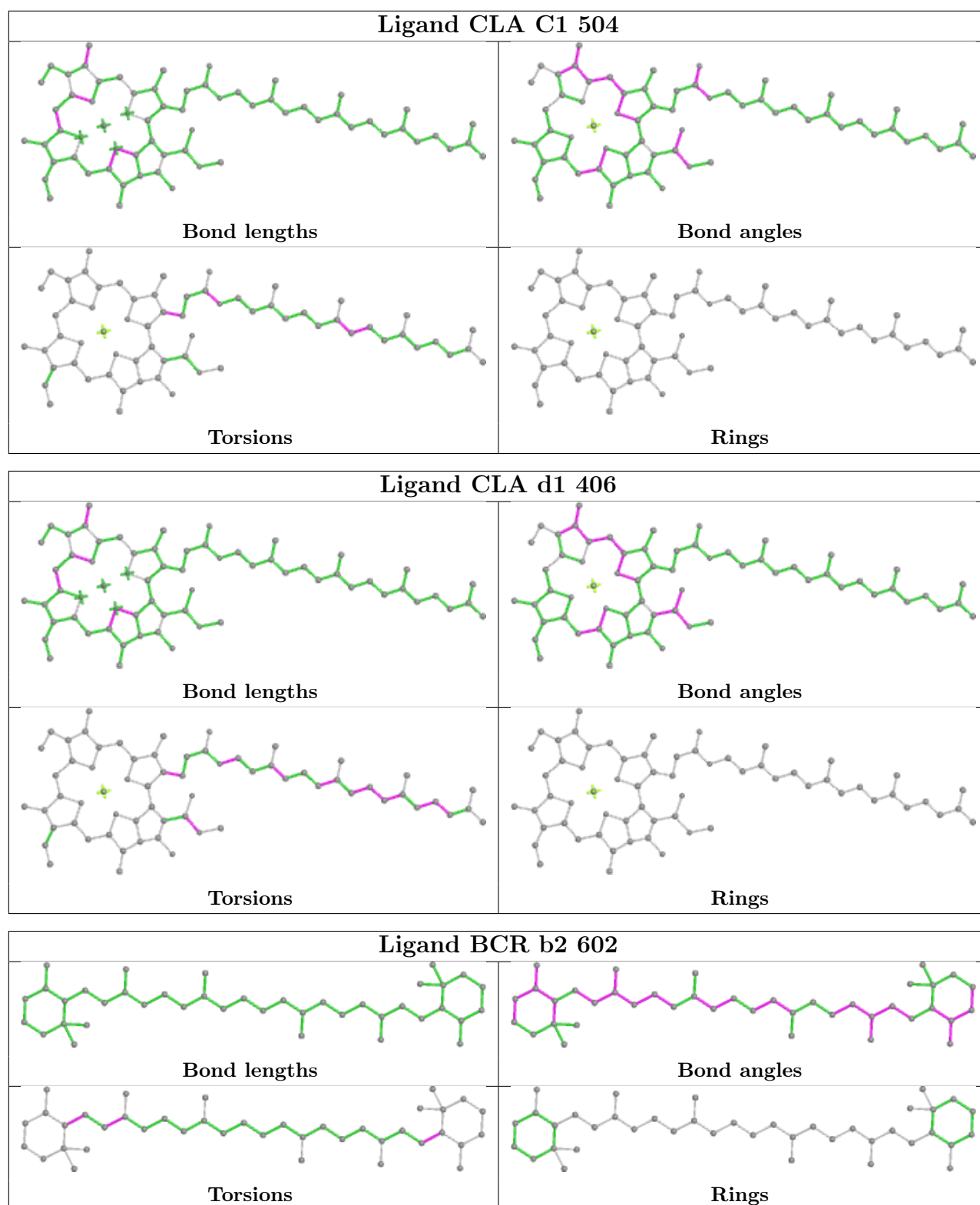


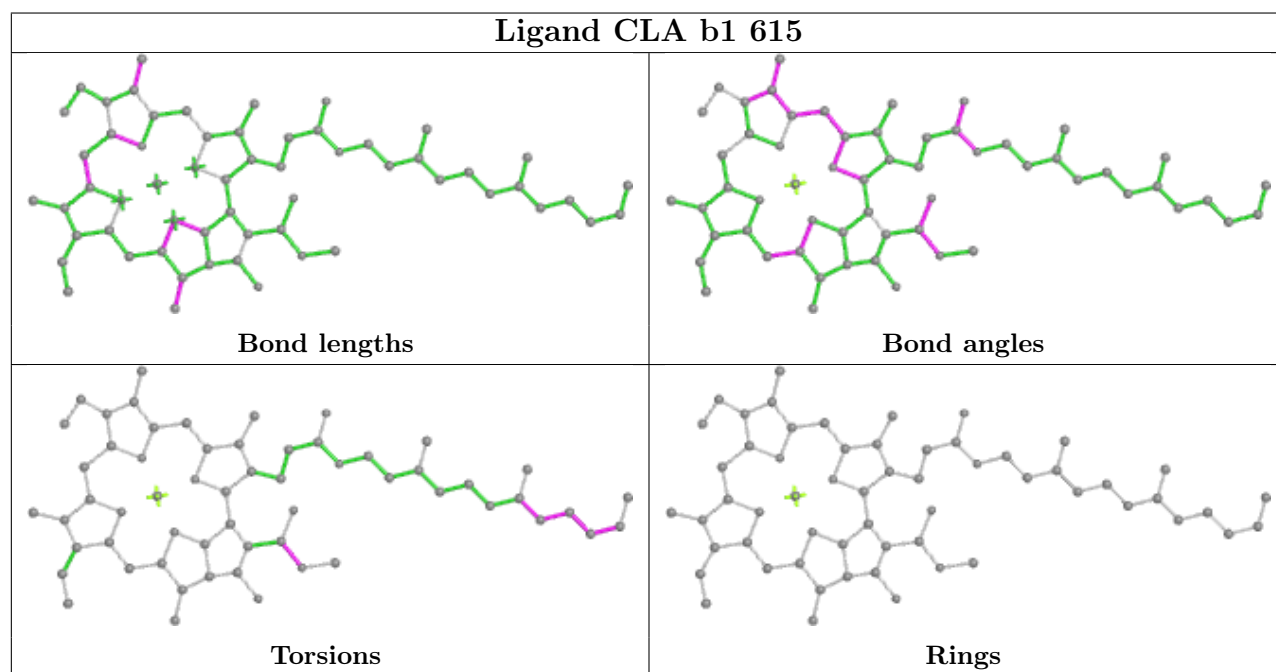
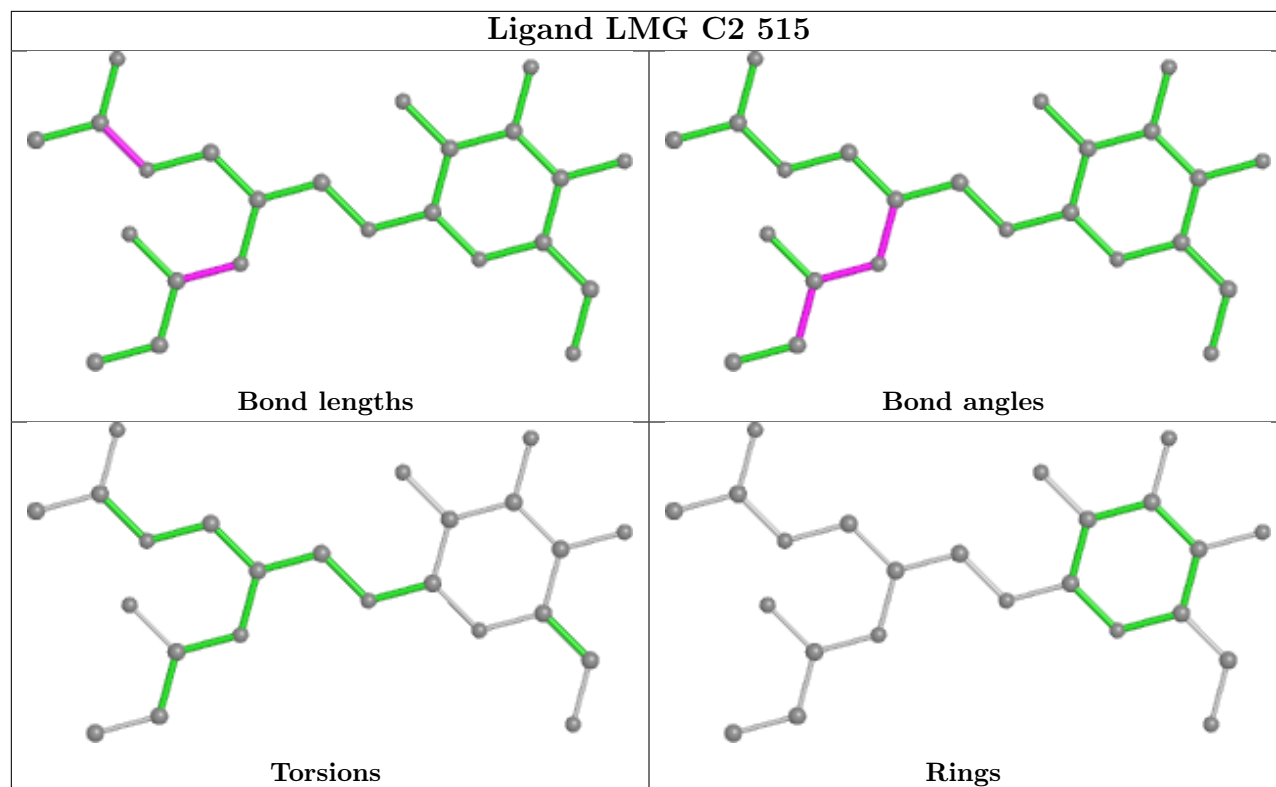


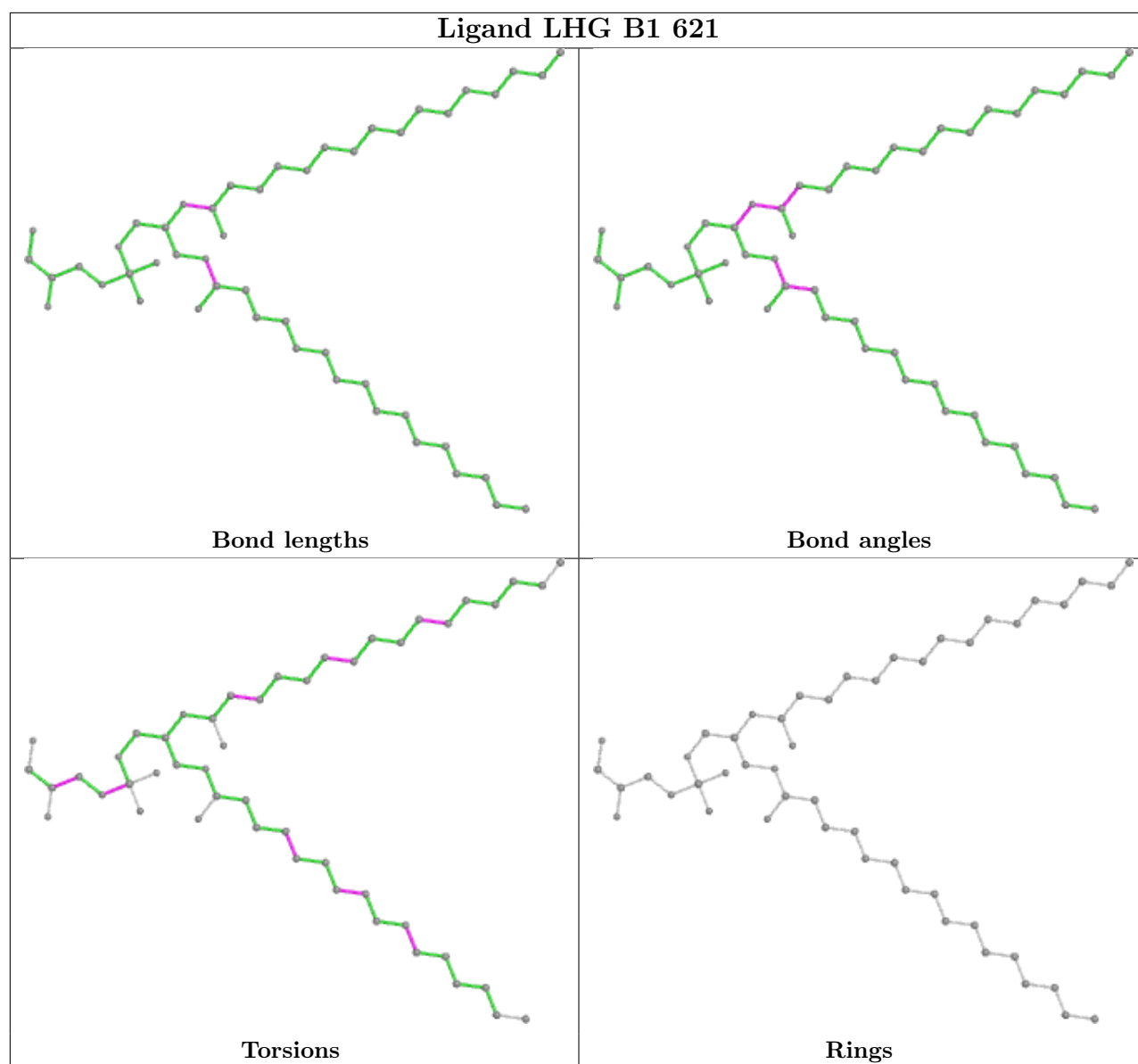


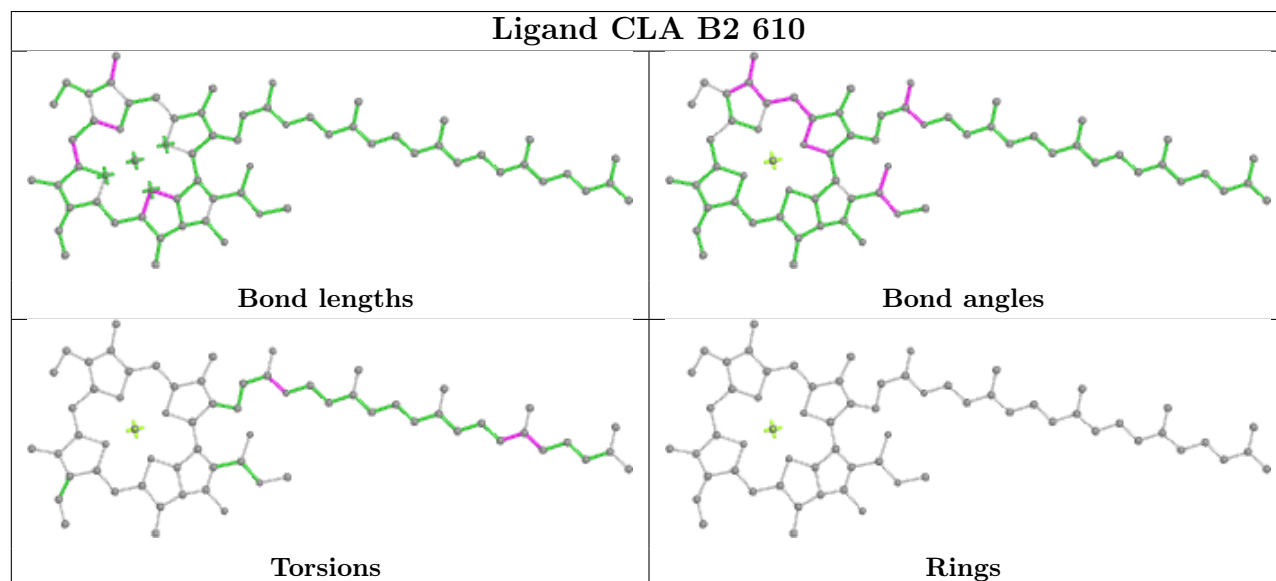
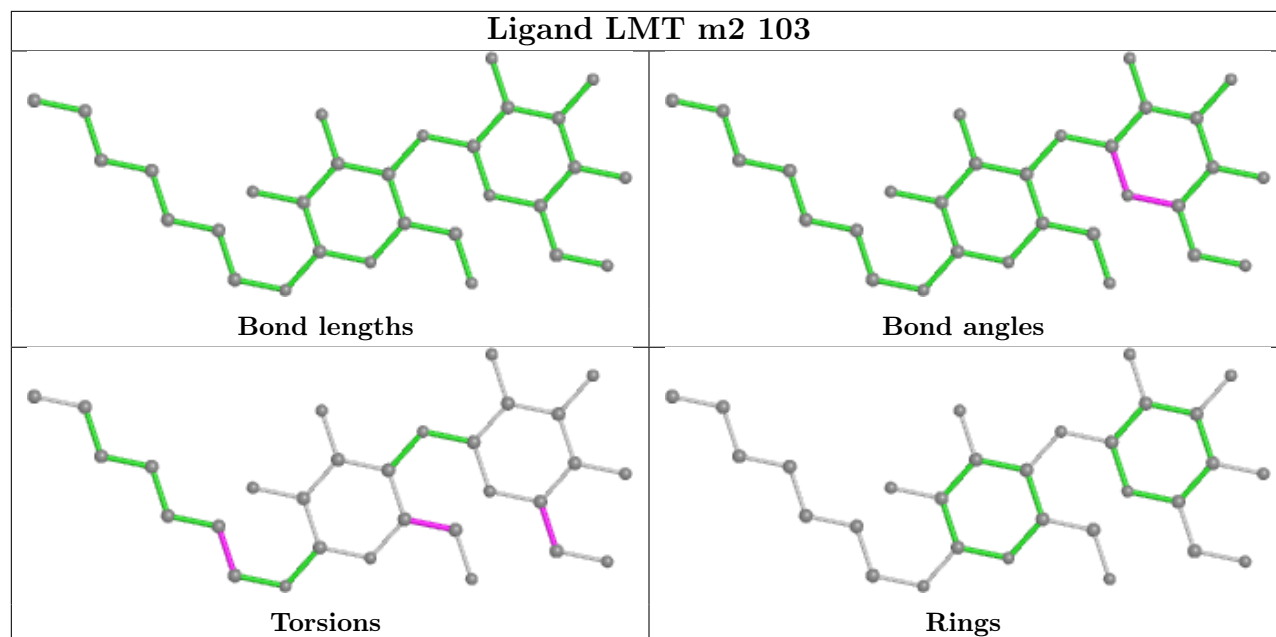


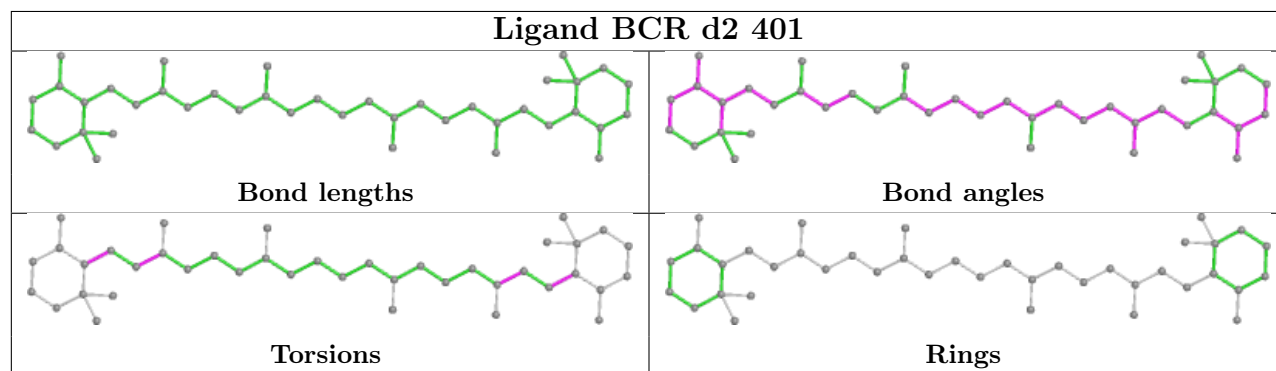
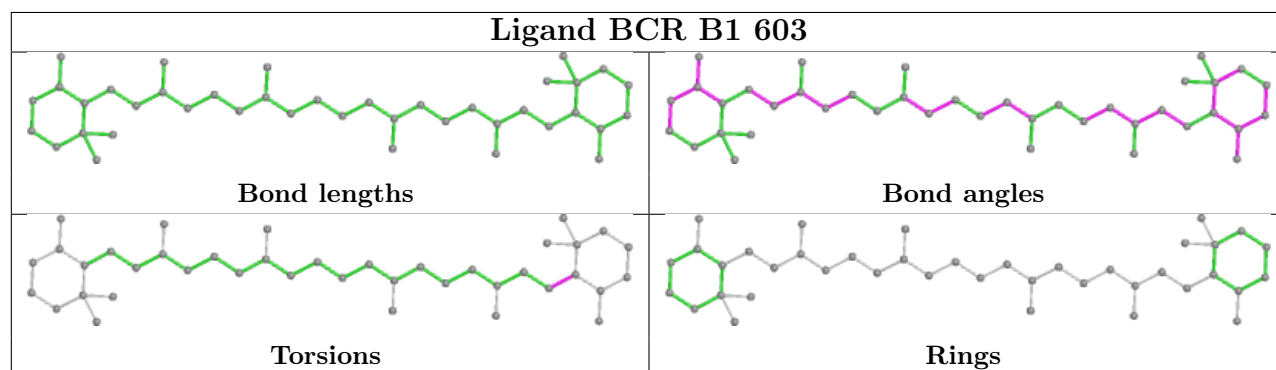
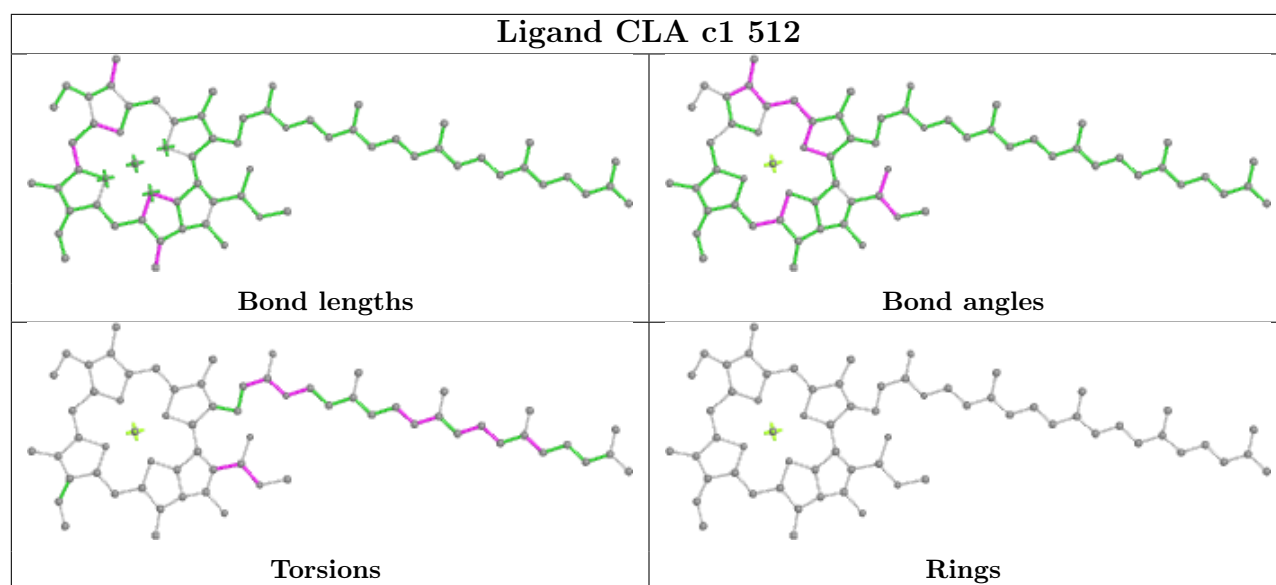


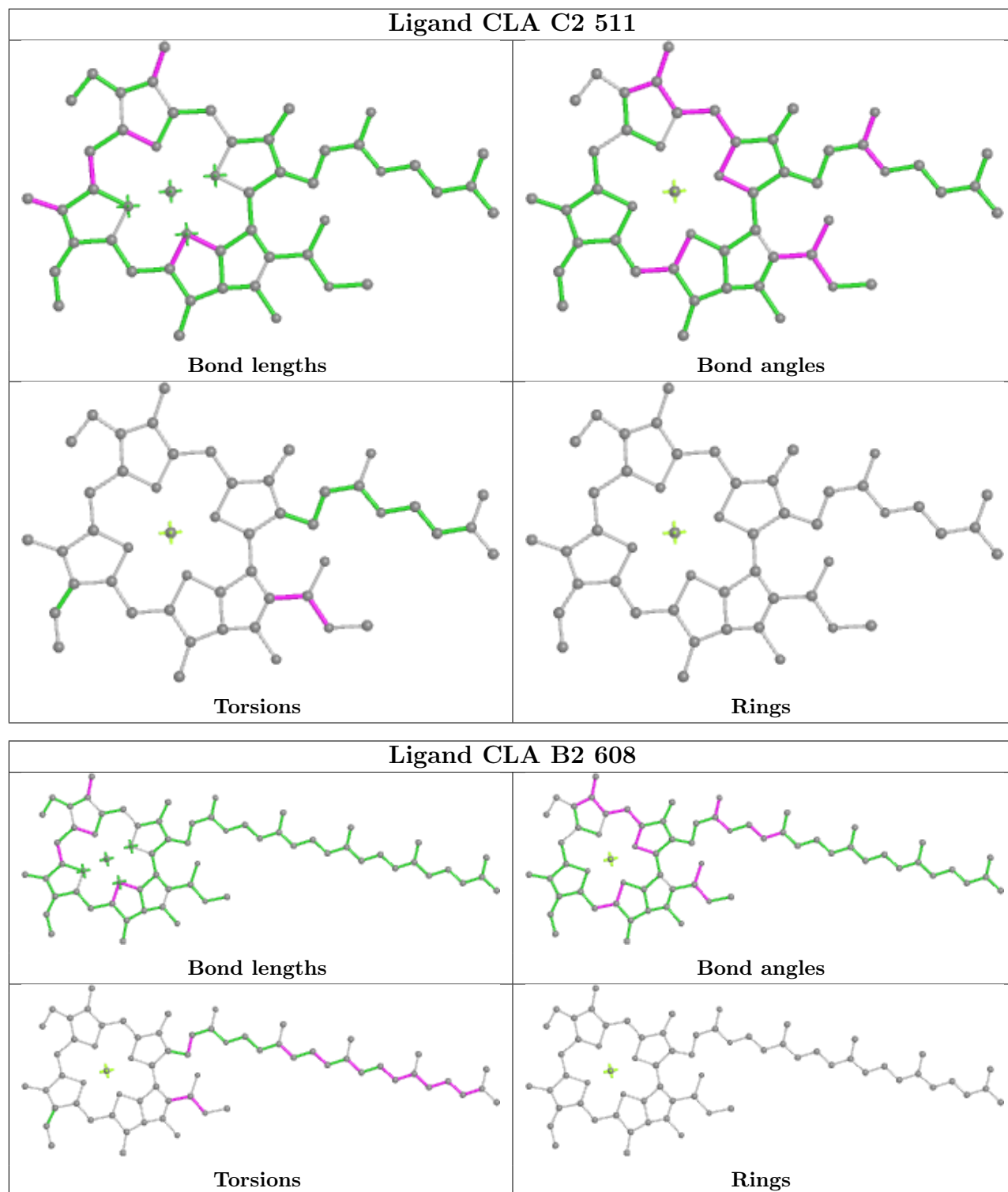






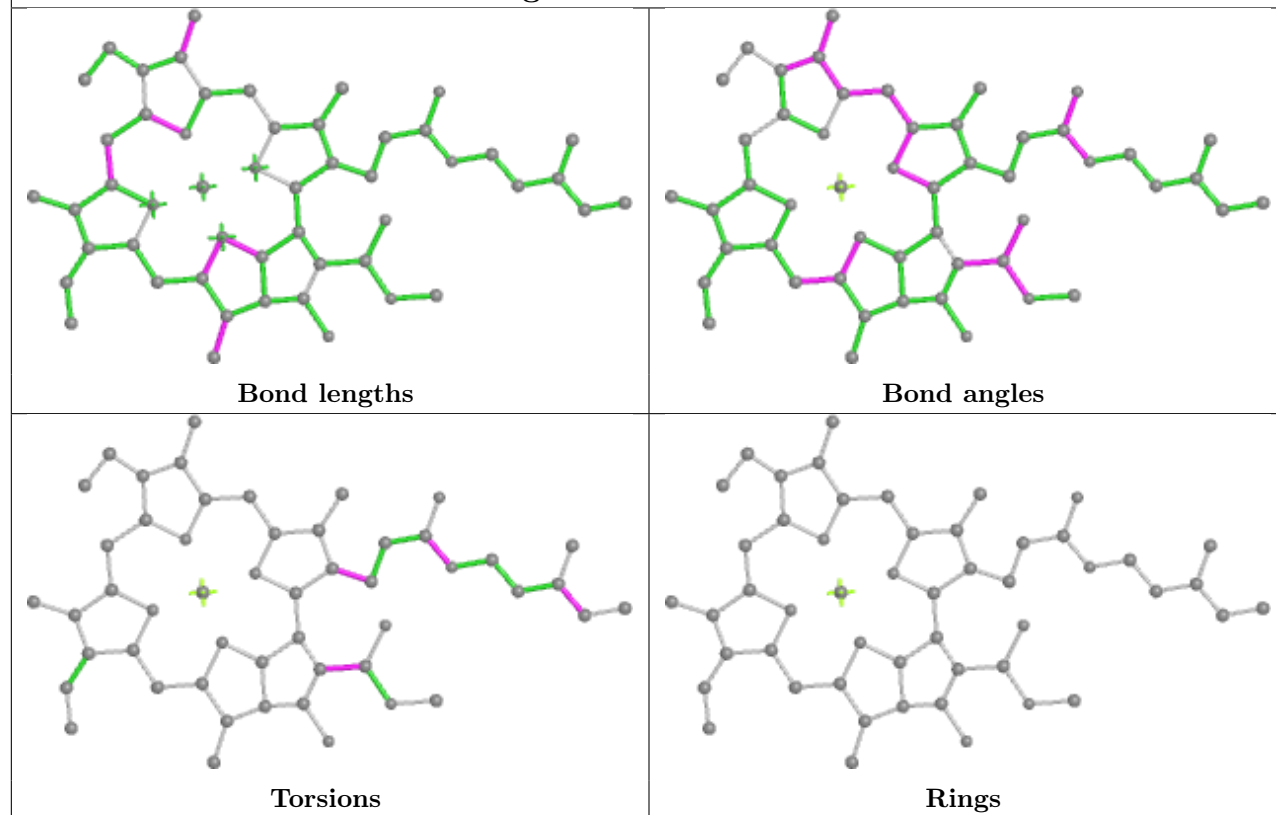




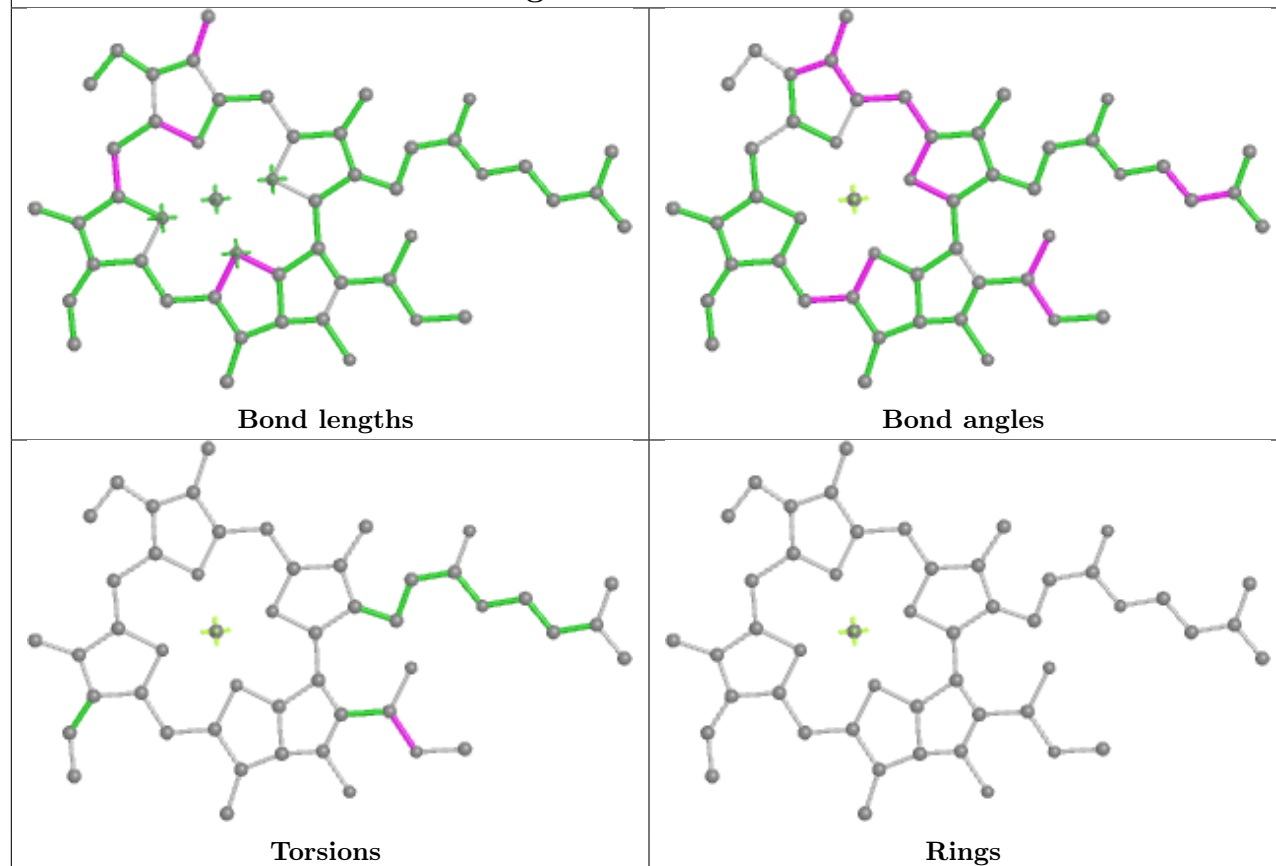


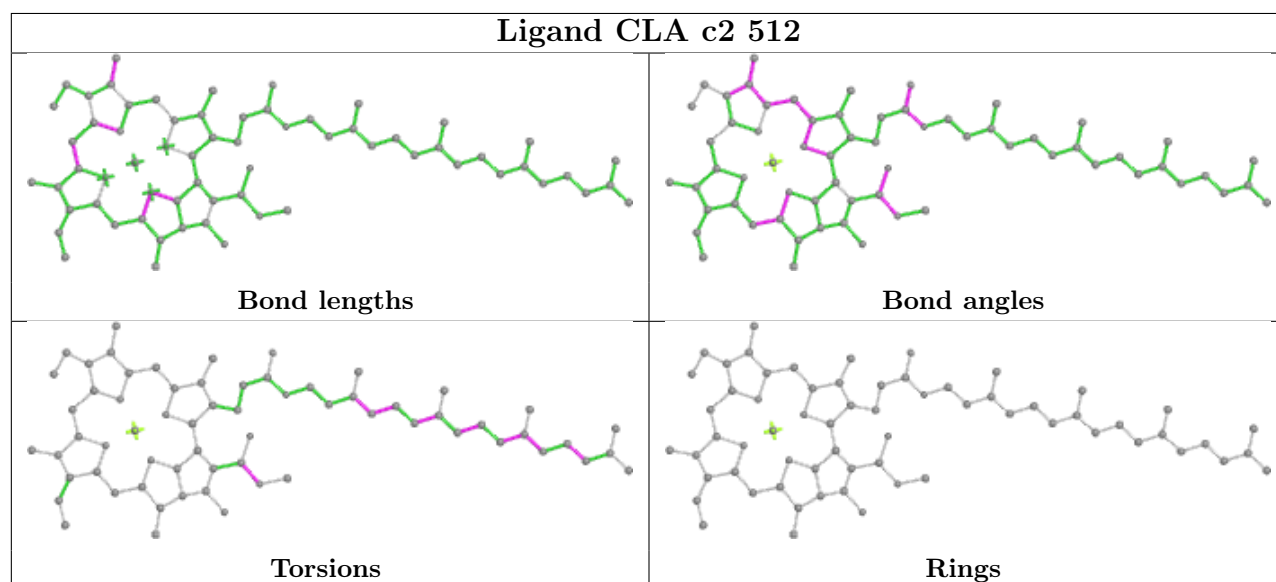
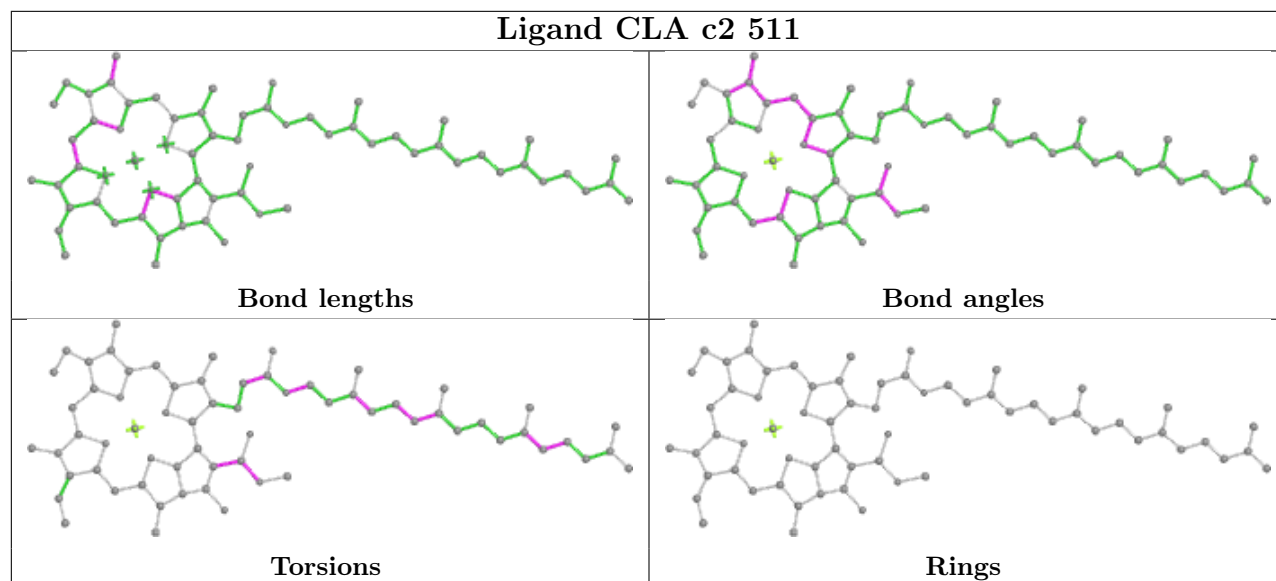
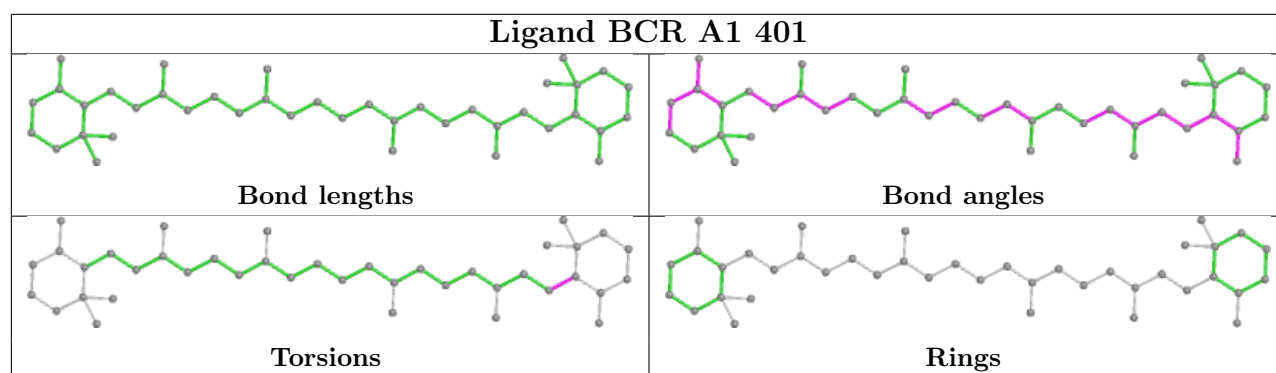


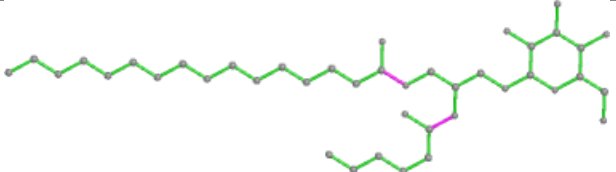
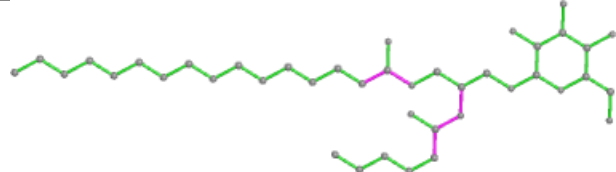
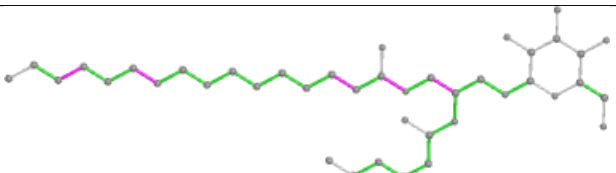
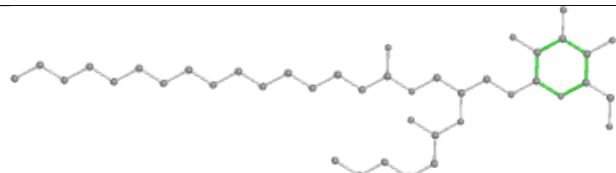
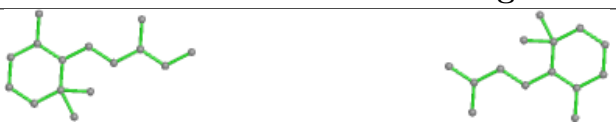
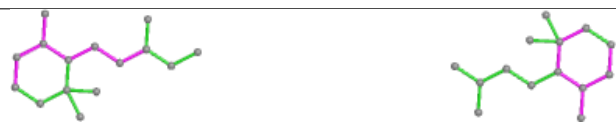
## Ligand CLA A2 404

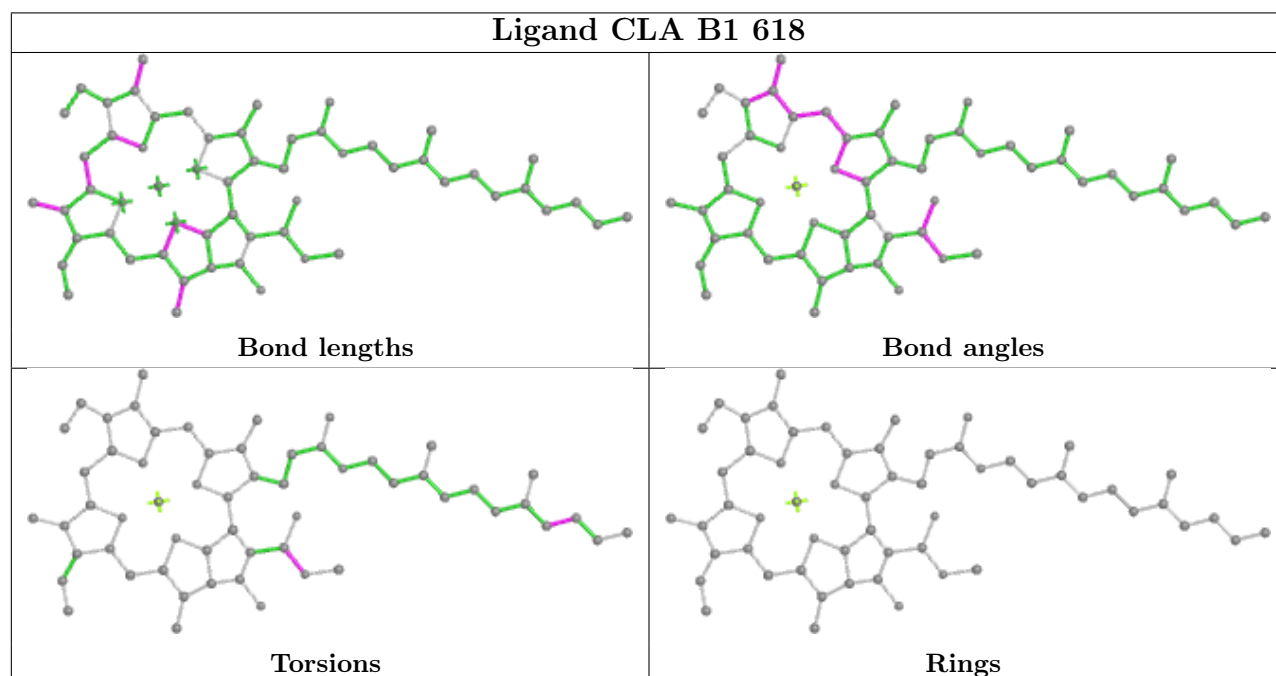
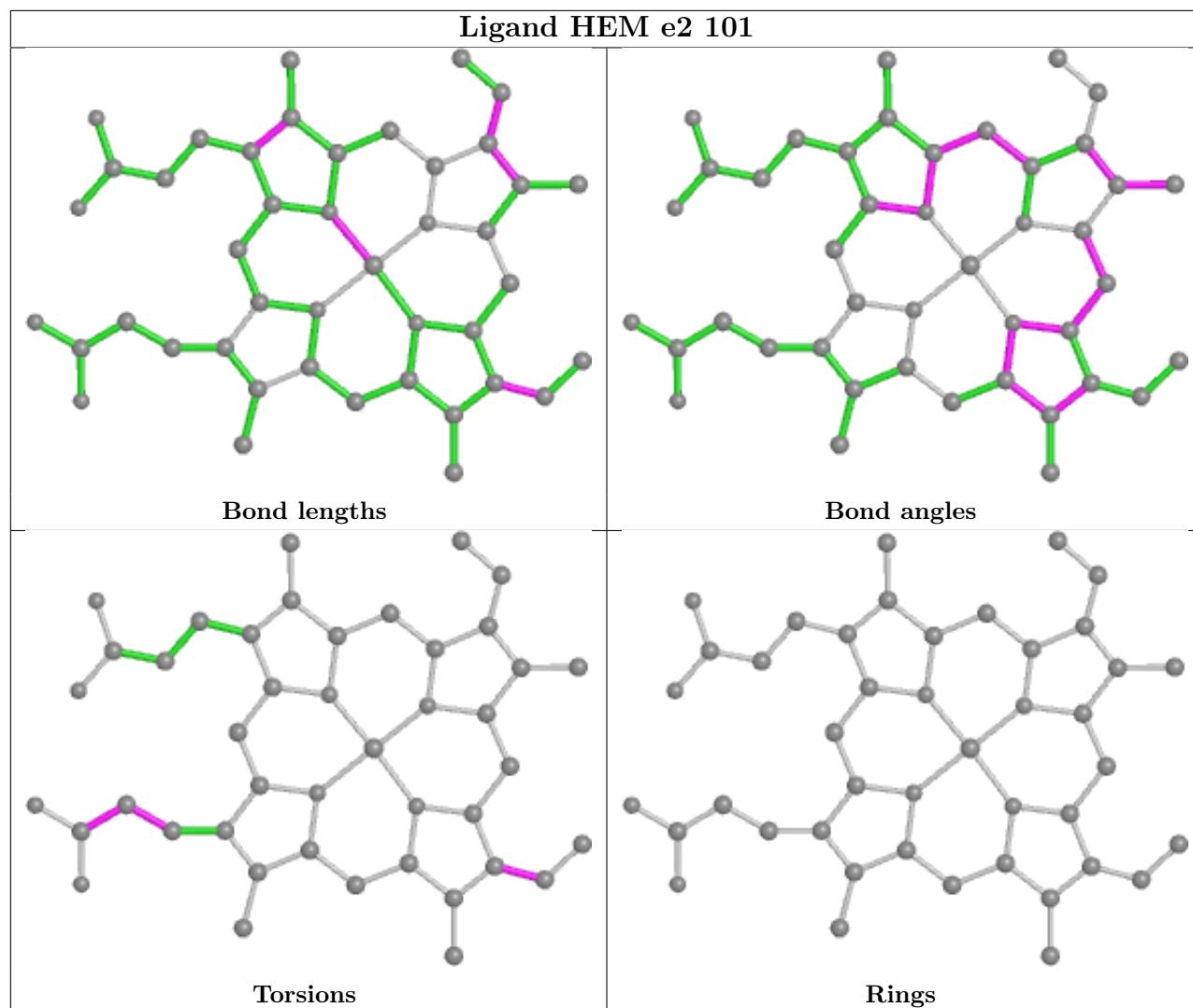


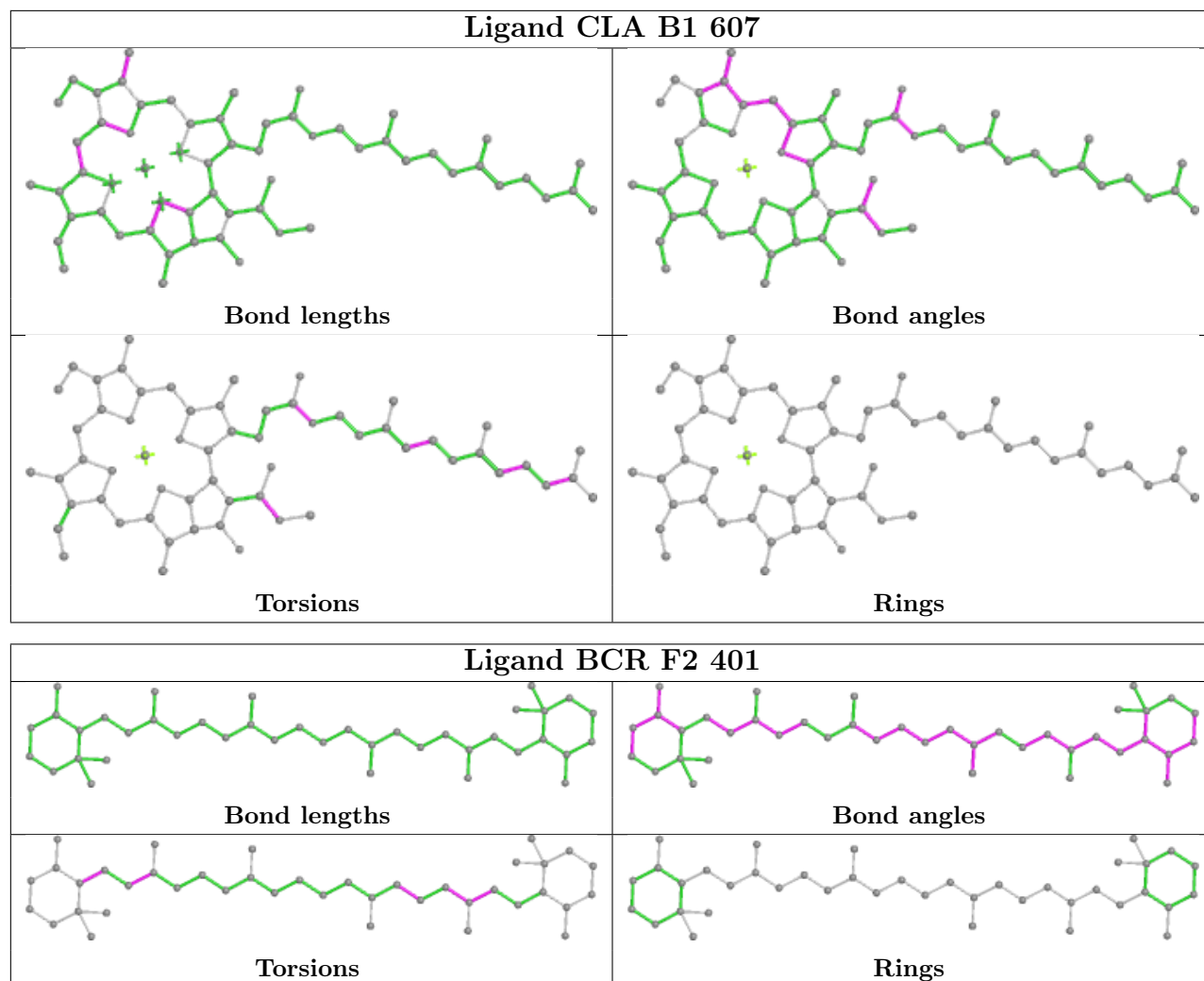
## Ligand CLA d2 404

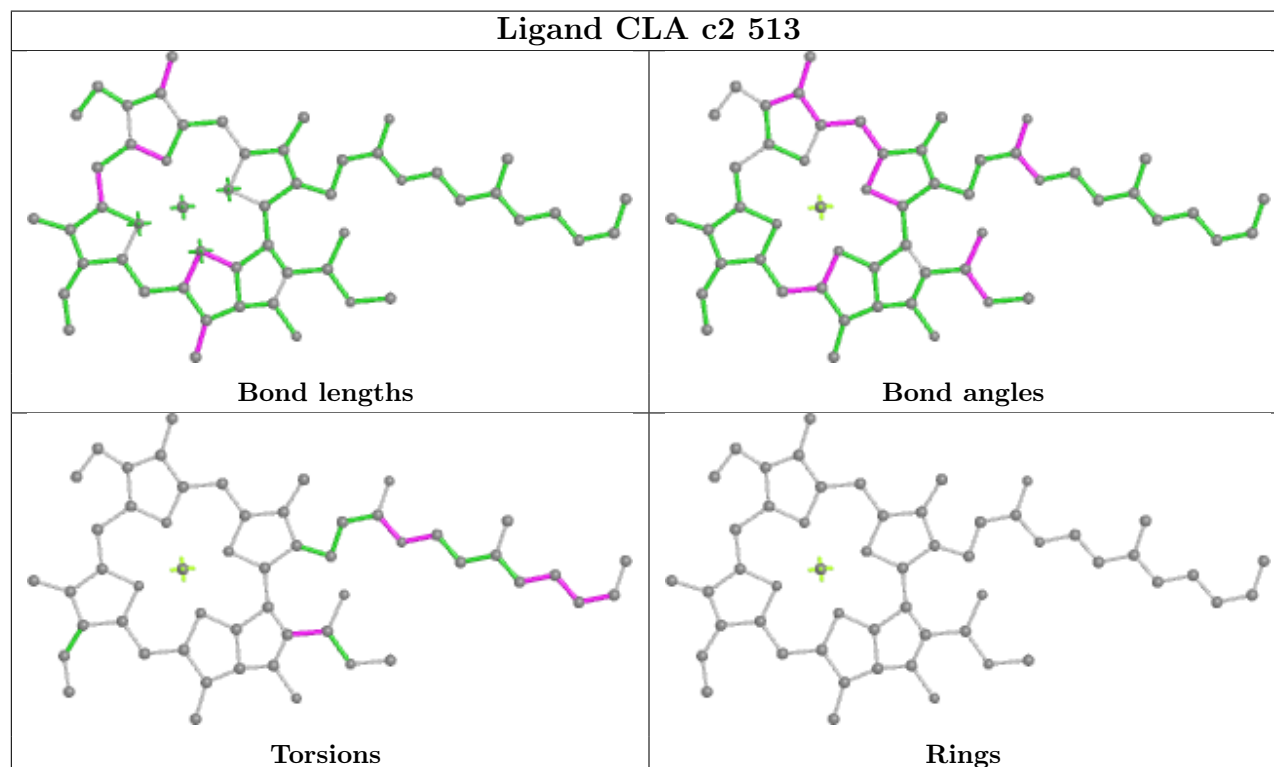
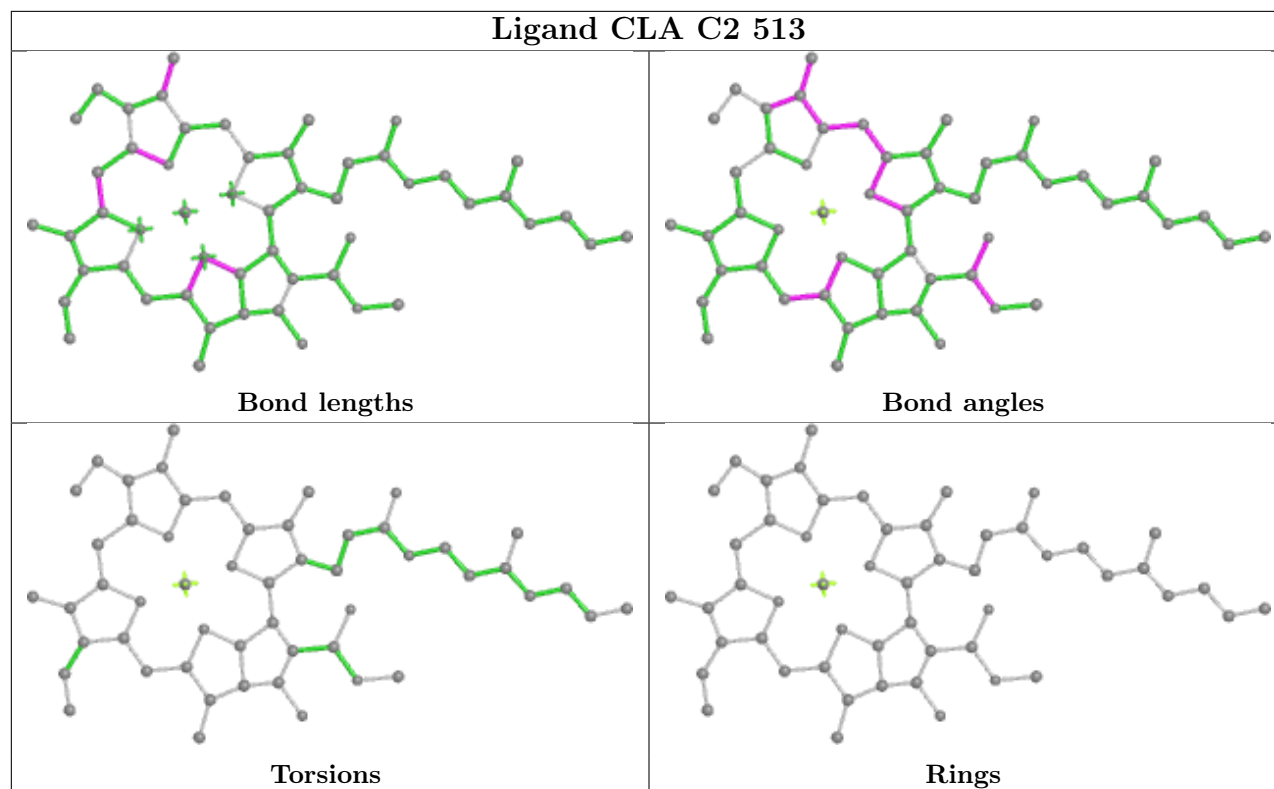


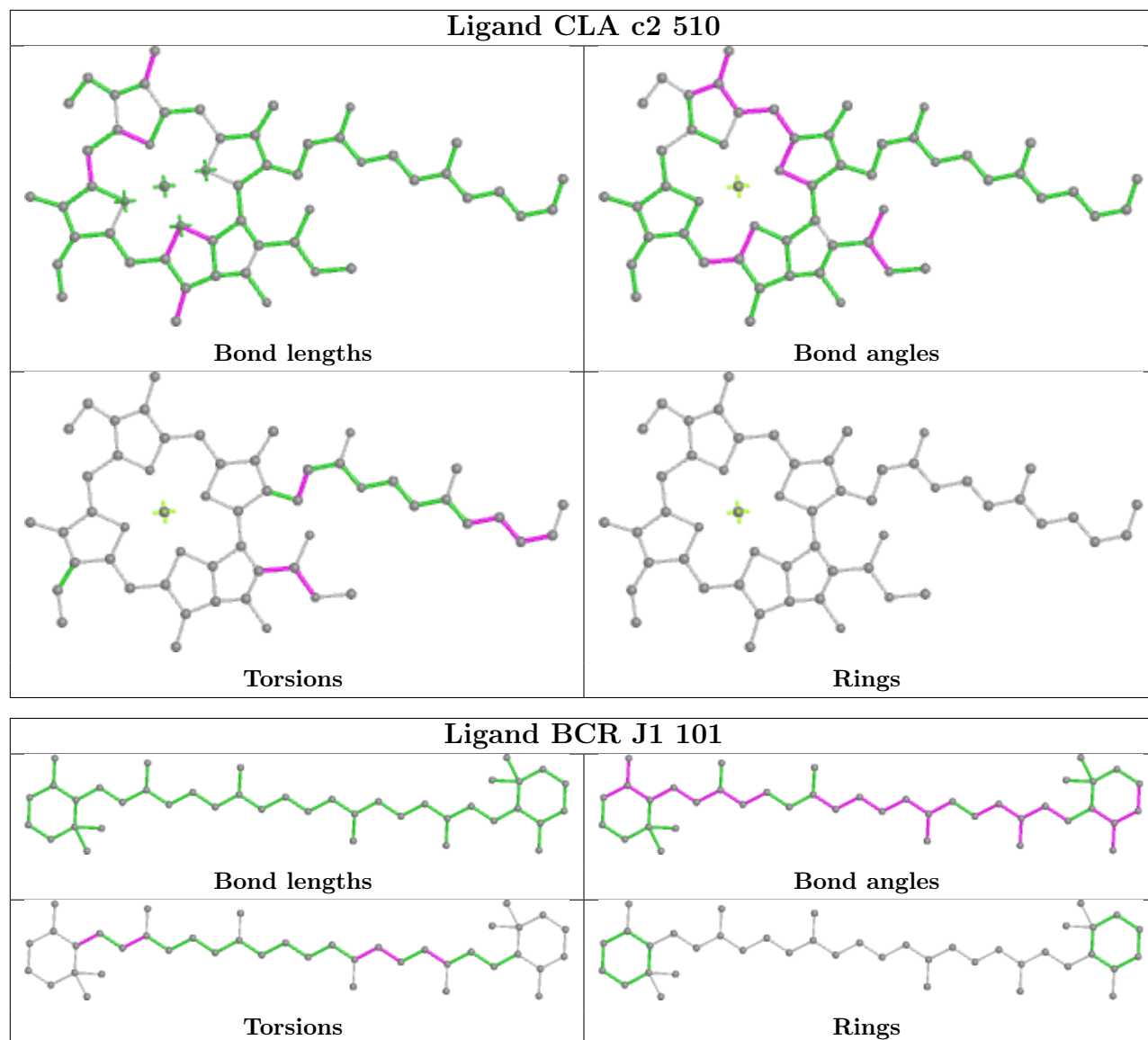


| Ligand LMG A1 412                                                                                     |  |                                                                                                       |  |
|-------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------|--|
|  <p>Bond lengths</p> |  |  <p>Bond angles</p> |  |
|  <p>Torsions</p>     |  |  <p>Rings</p>       |  |
| Ligand BCR K2 104                                                                                     |  |                                                                                                       |  |
|  <p>Bond lengths</p> |  |  <p>Bond angles</p> |  |
|  <p>Torsions</p>     |  |  <p>Rings</p>       |  |

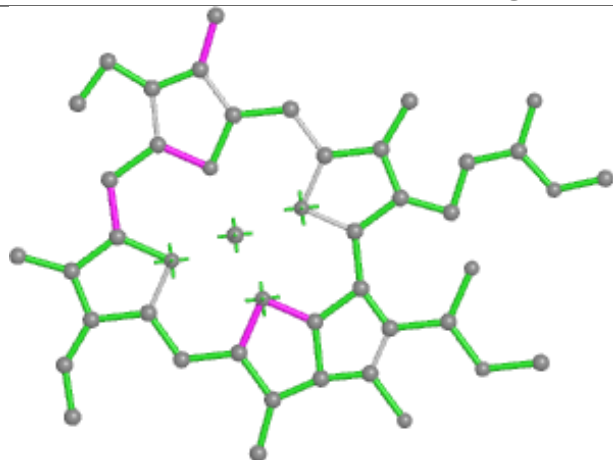




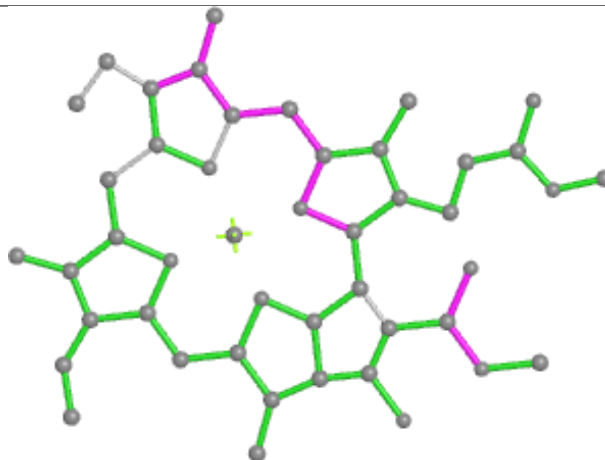




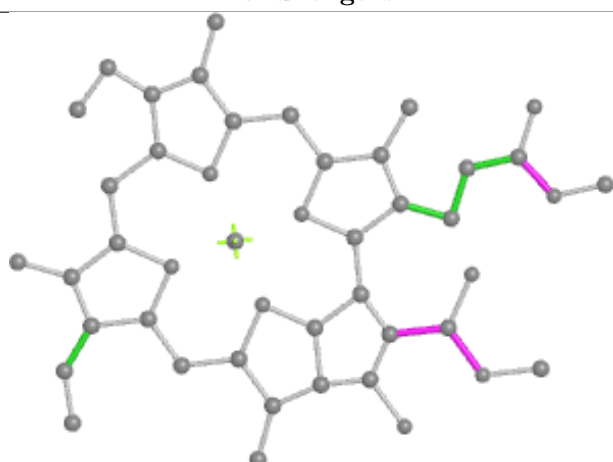
## Ligand CLA C2 504



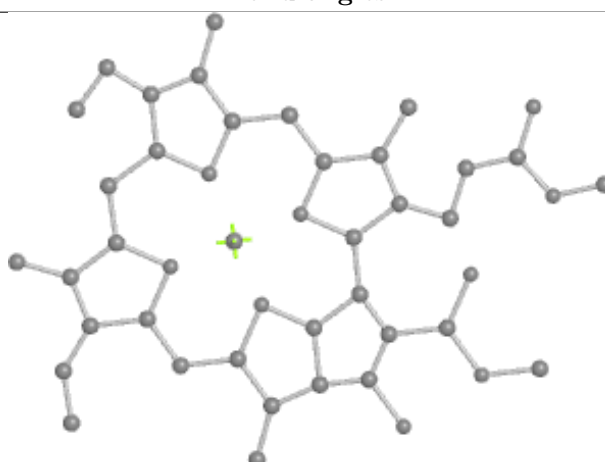
Bond lengths



Bond angles

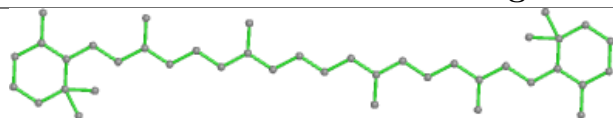


Torsions

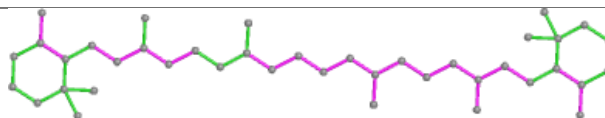


Rings

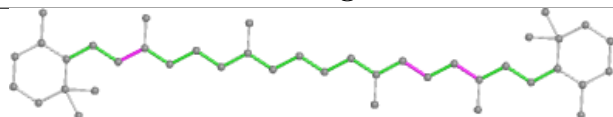
## Ligand BCR c1 502



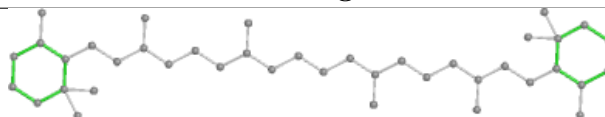
Bond lengths



Bond angles

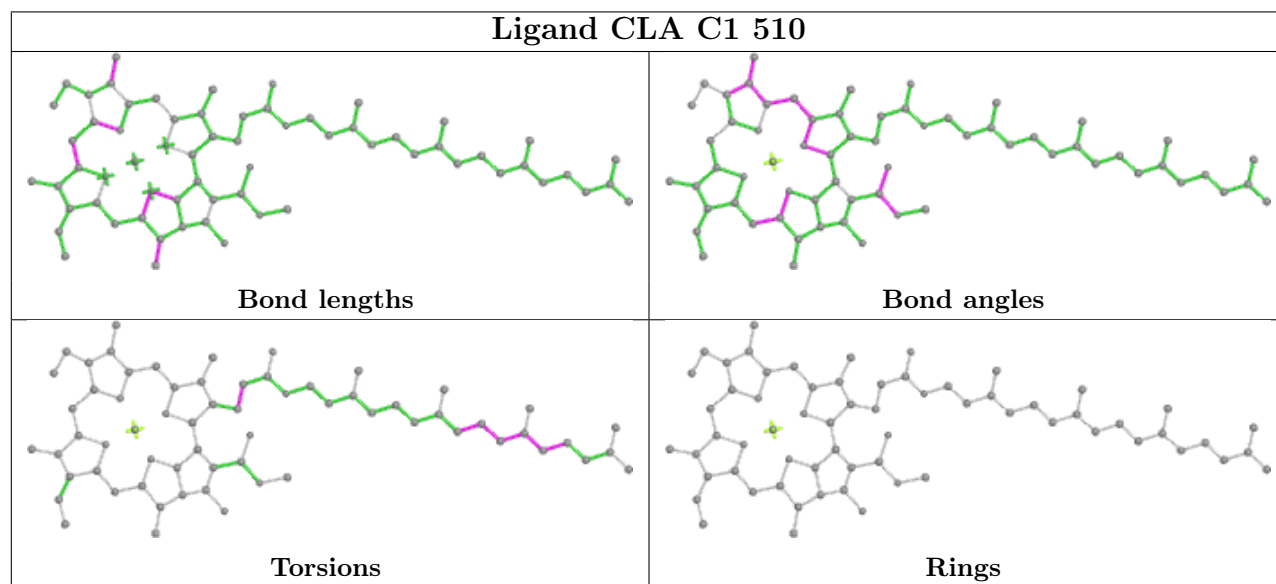
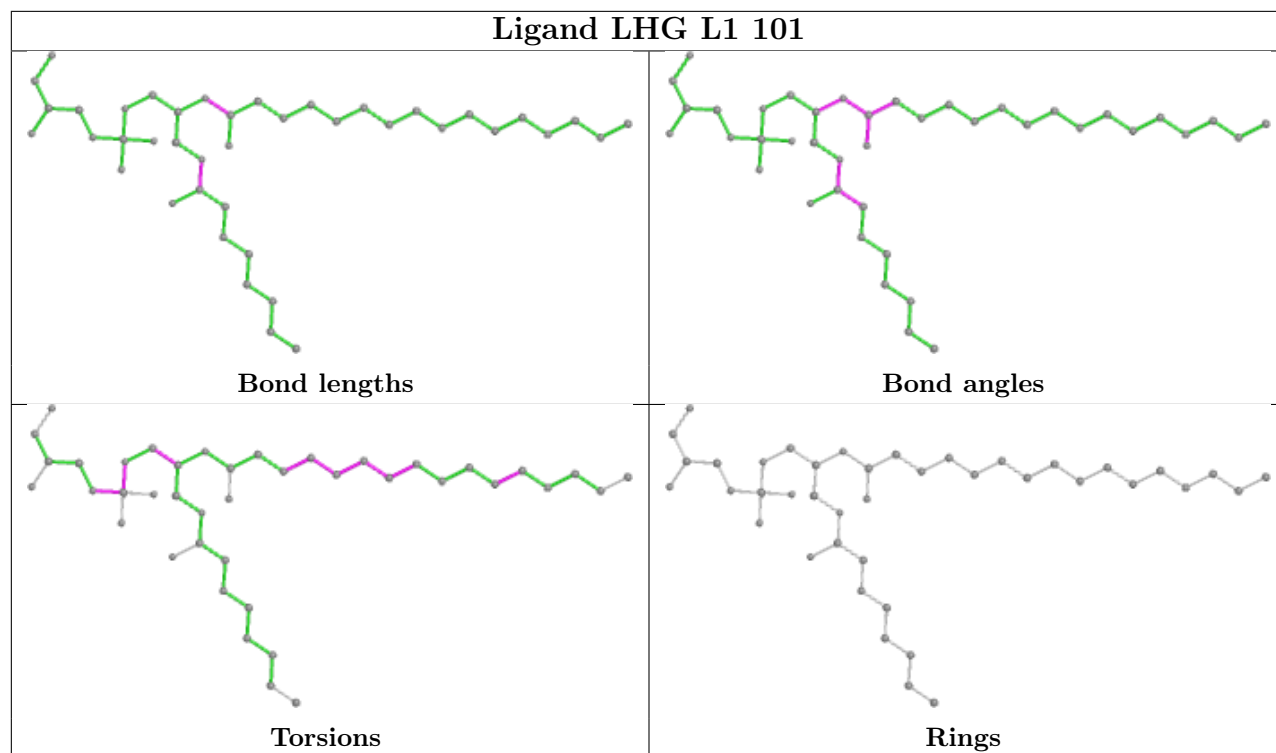


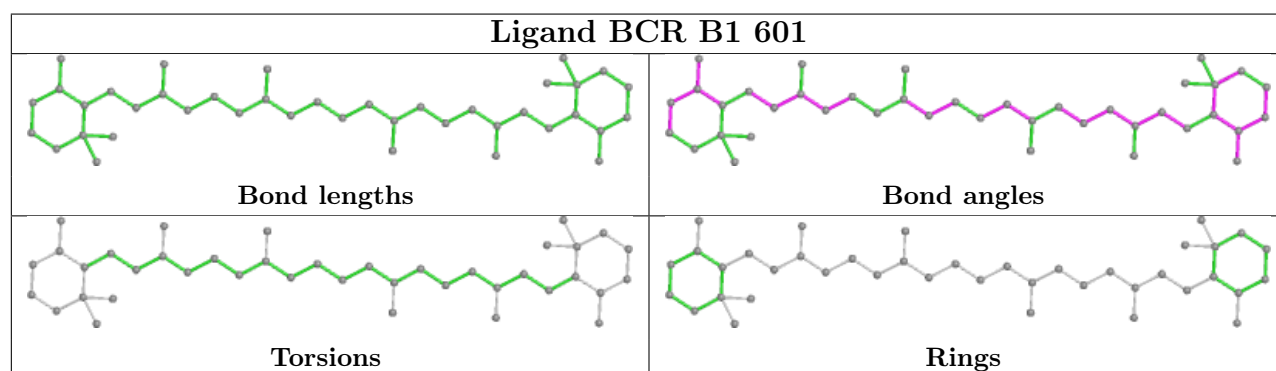
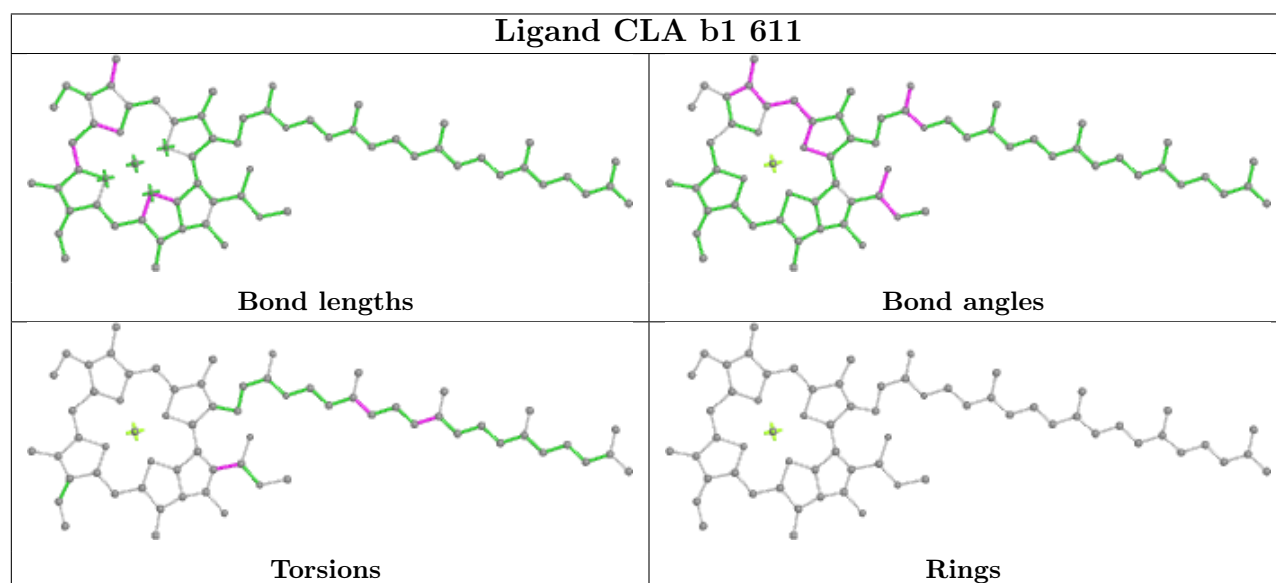
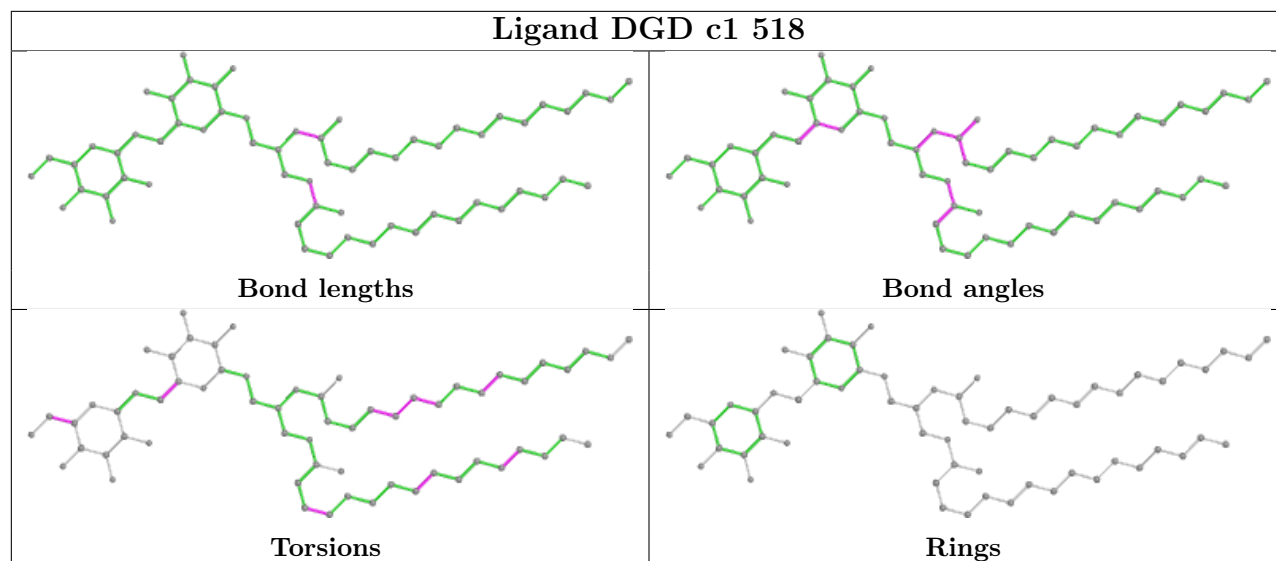
Torsions

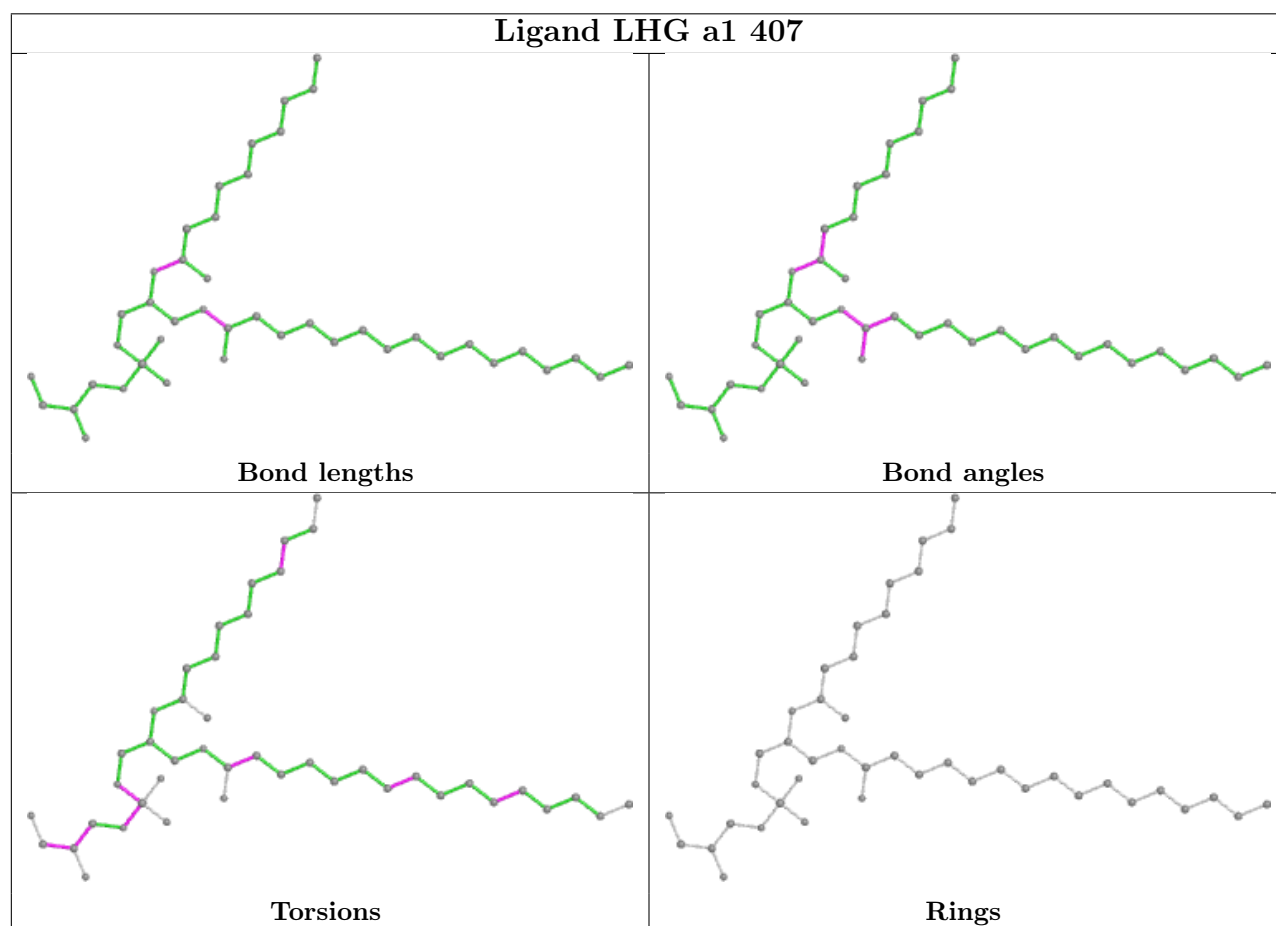
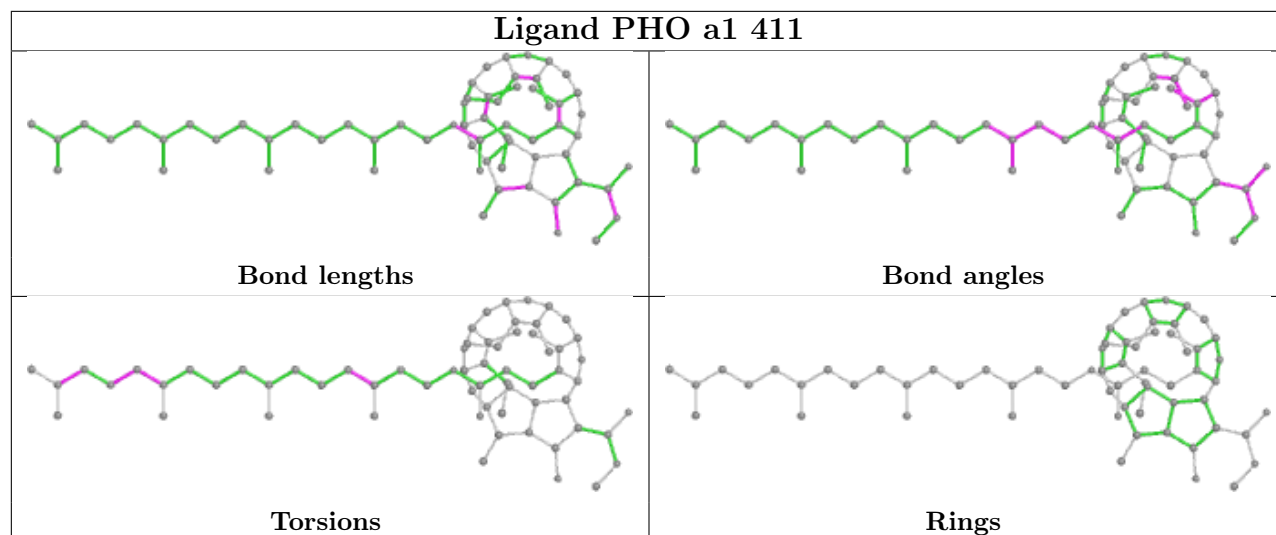


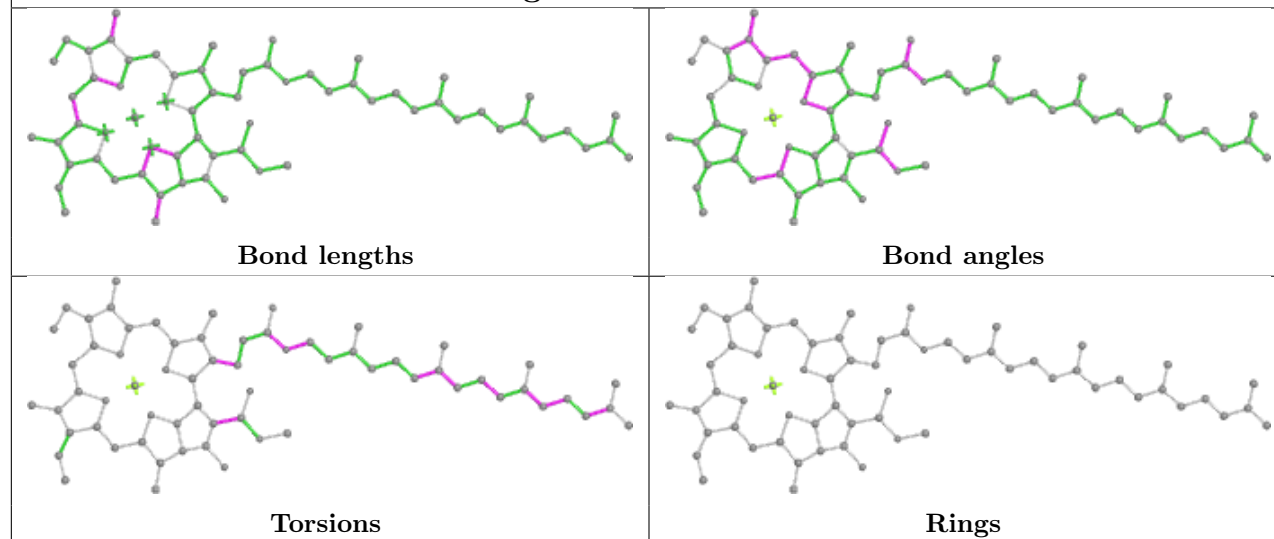
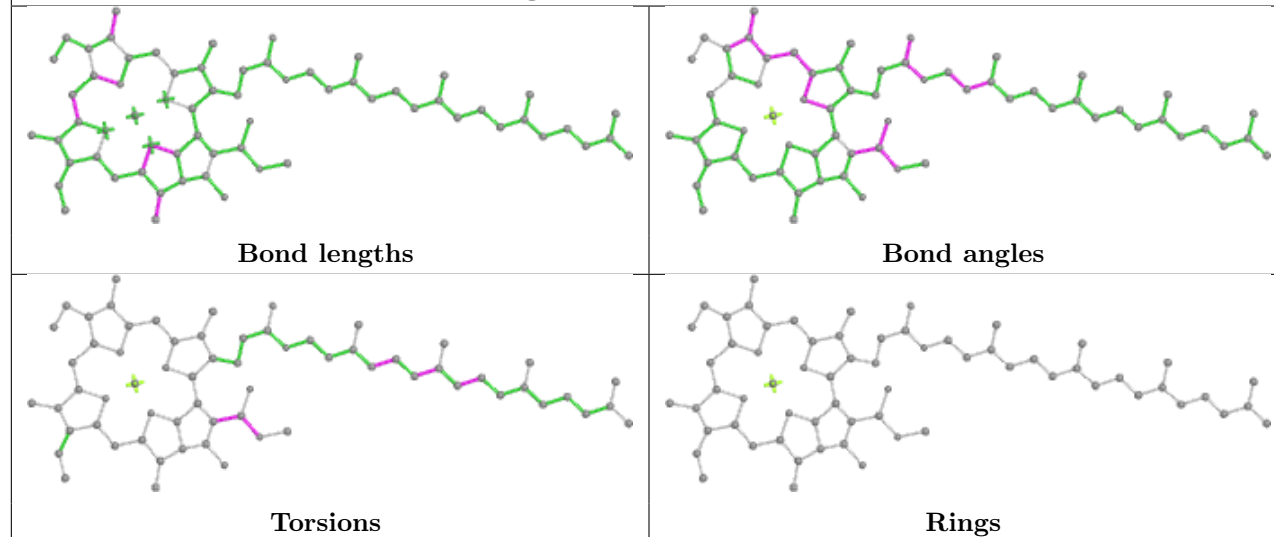
Rings

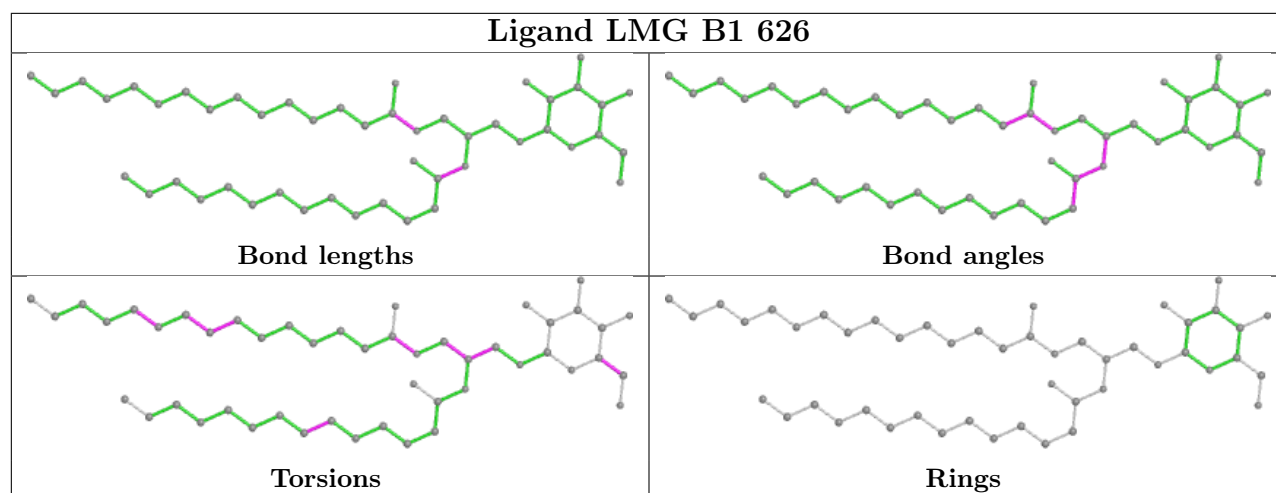
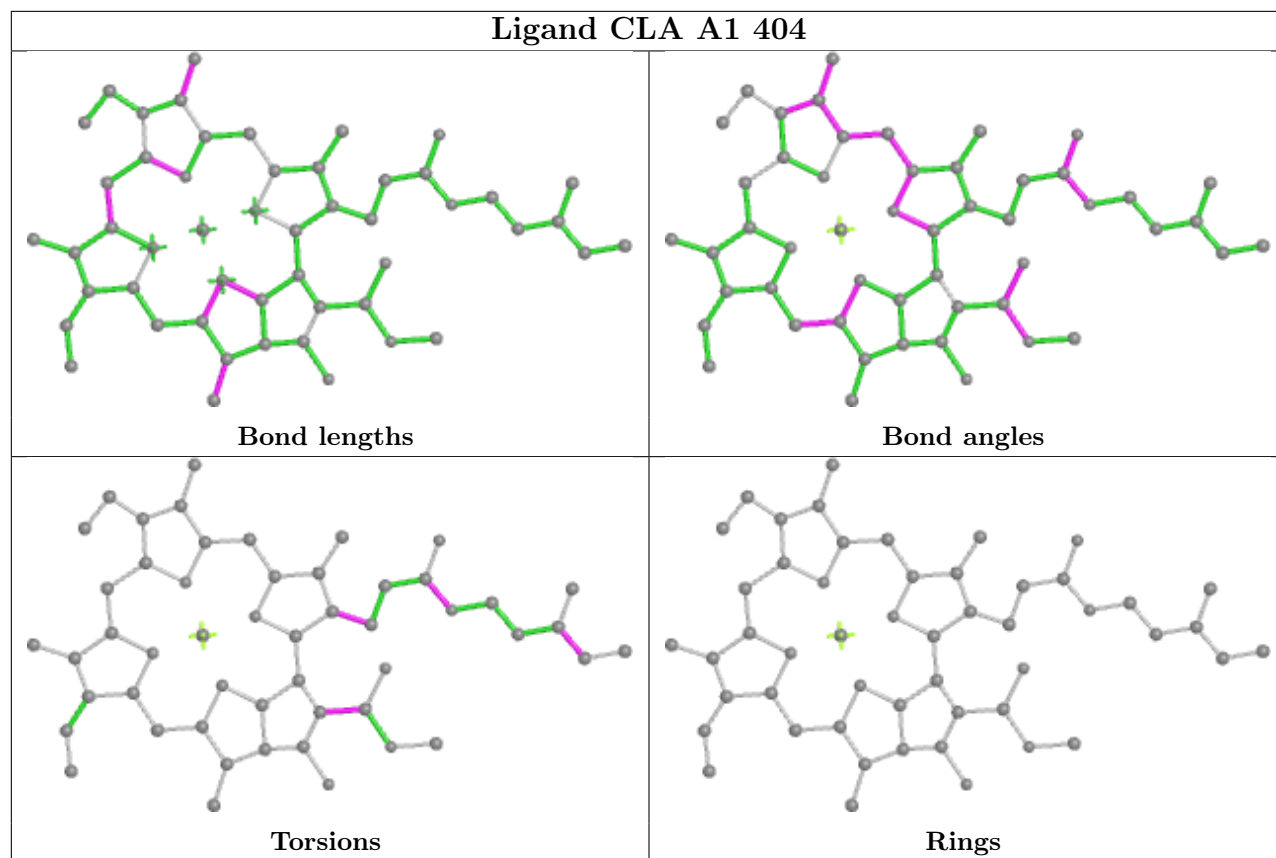




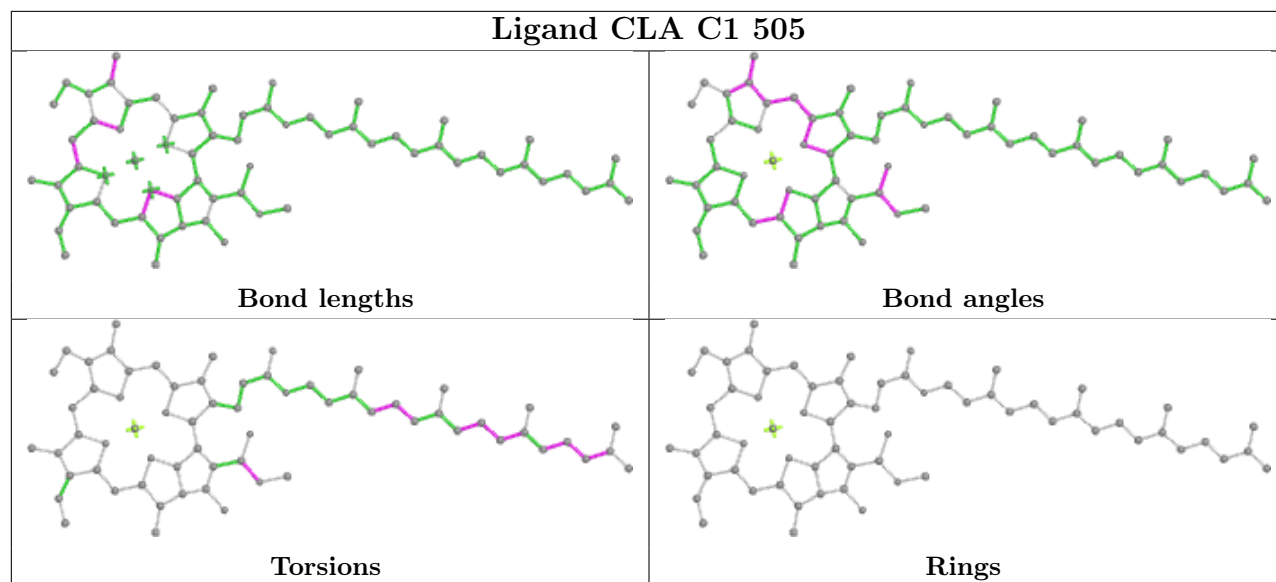




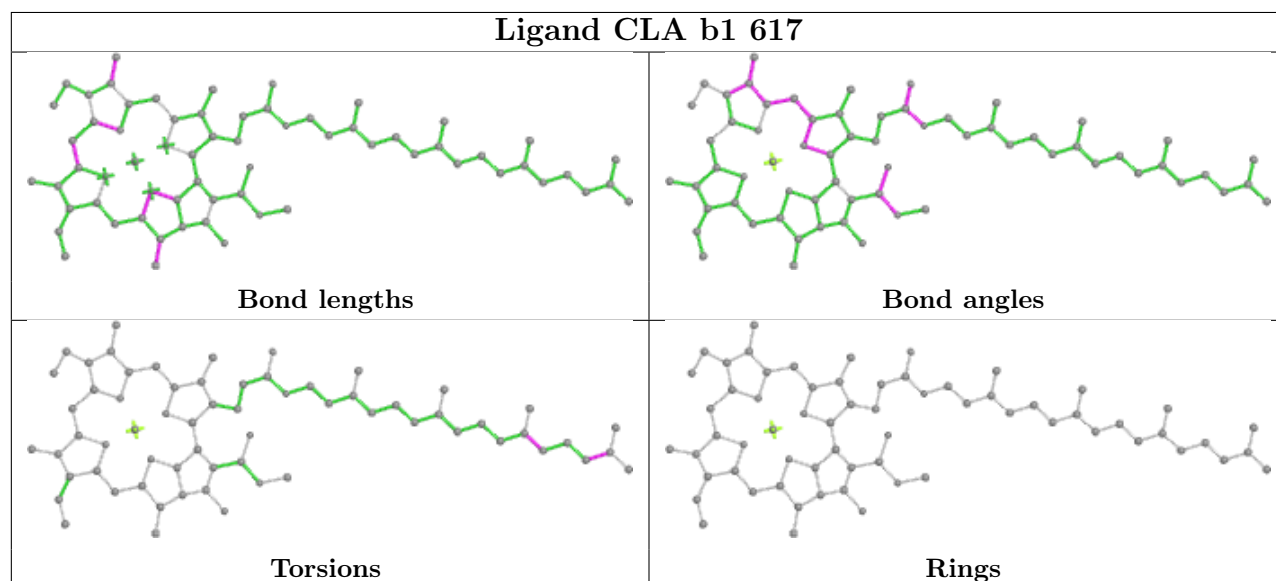
**Ligand CLA C1 512****Ligand CLA B2 607**



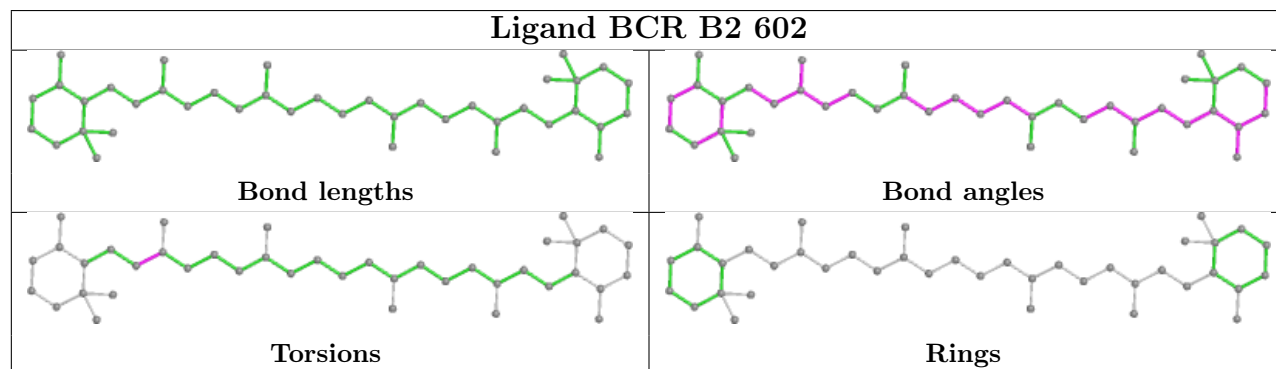
## Ligand CLA C1 505

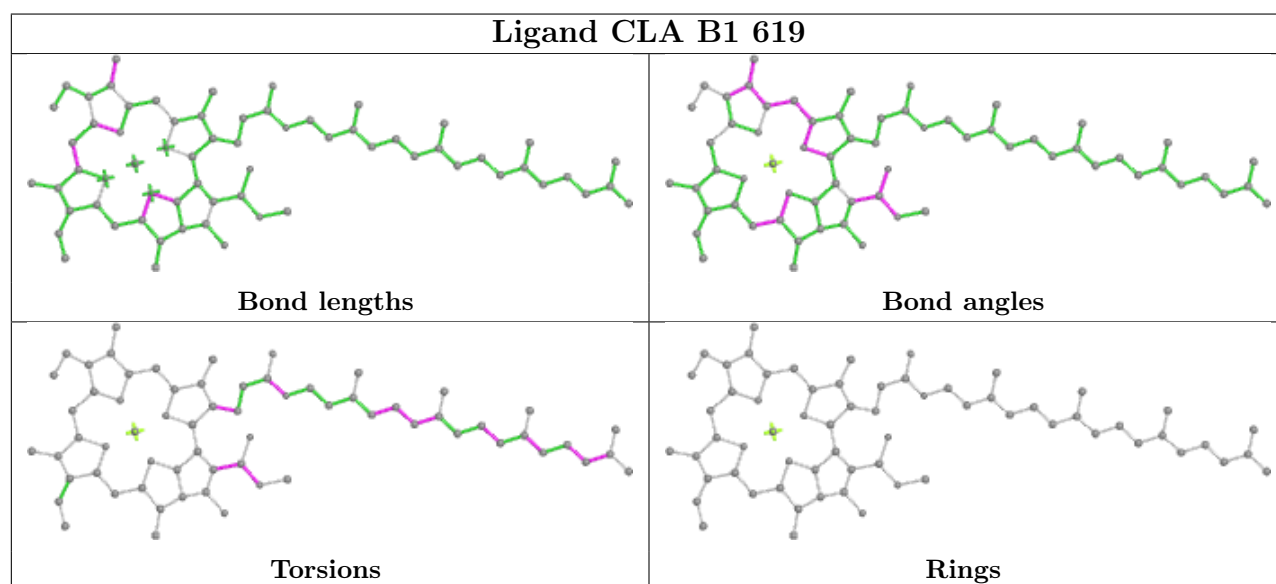
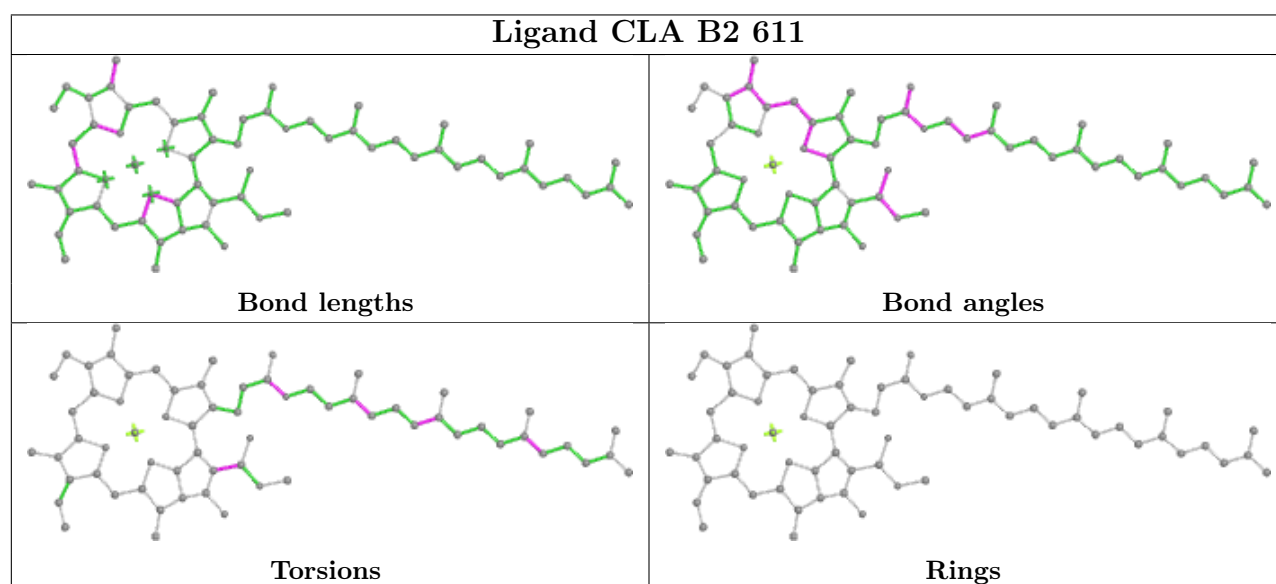
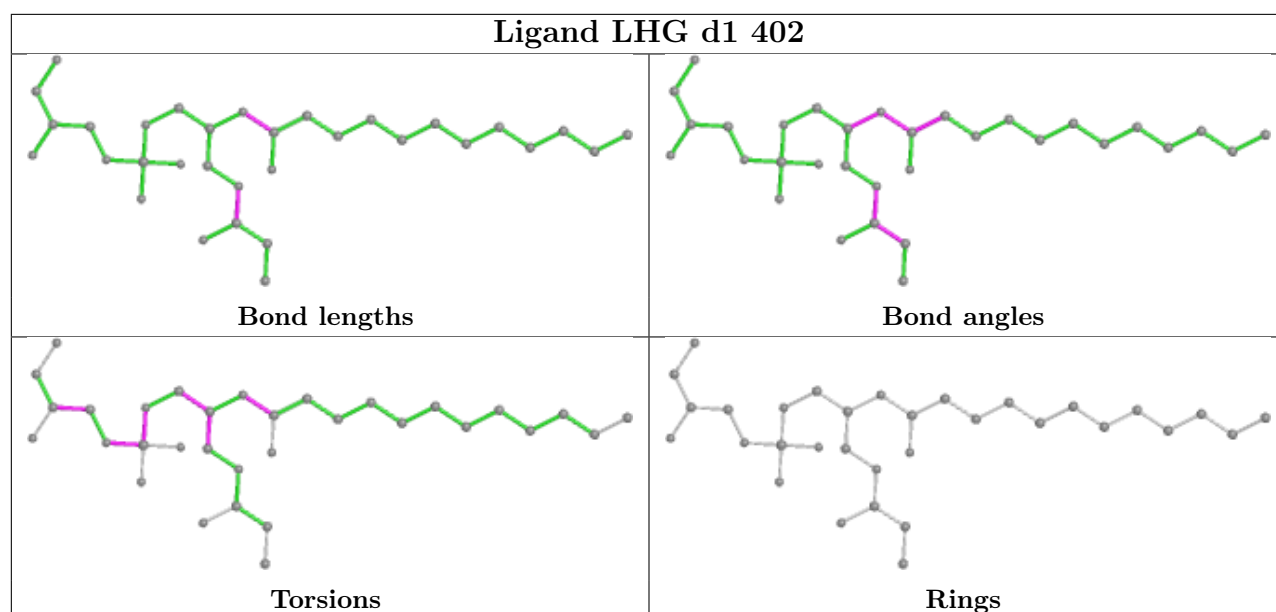


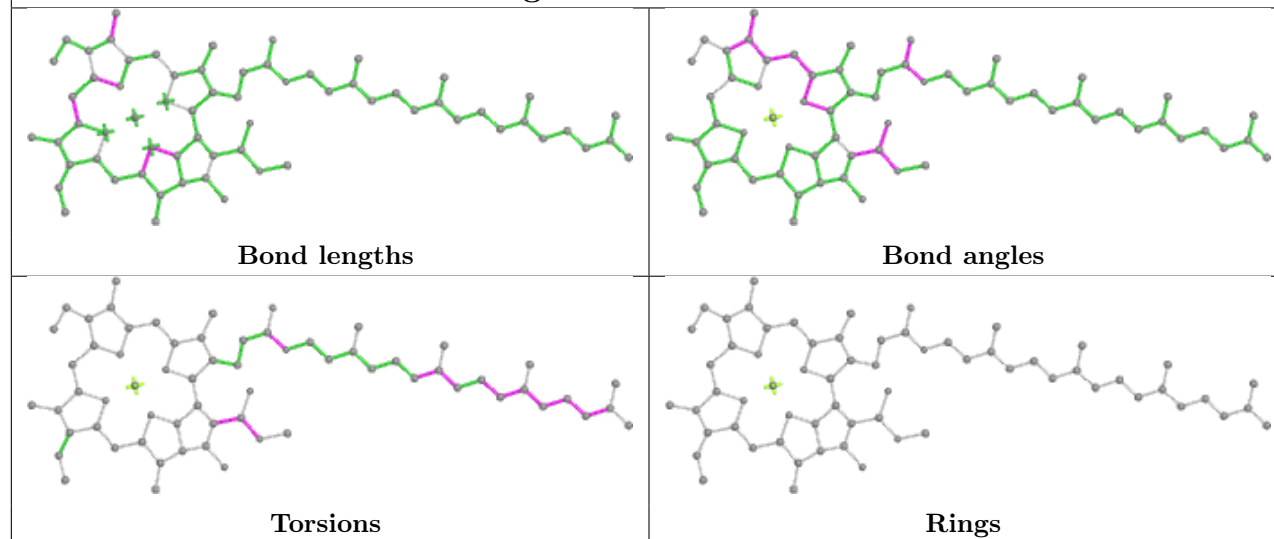
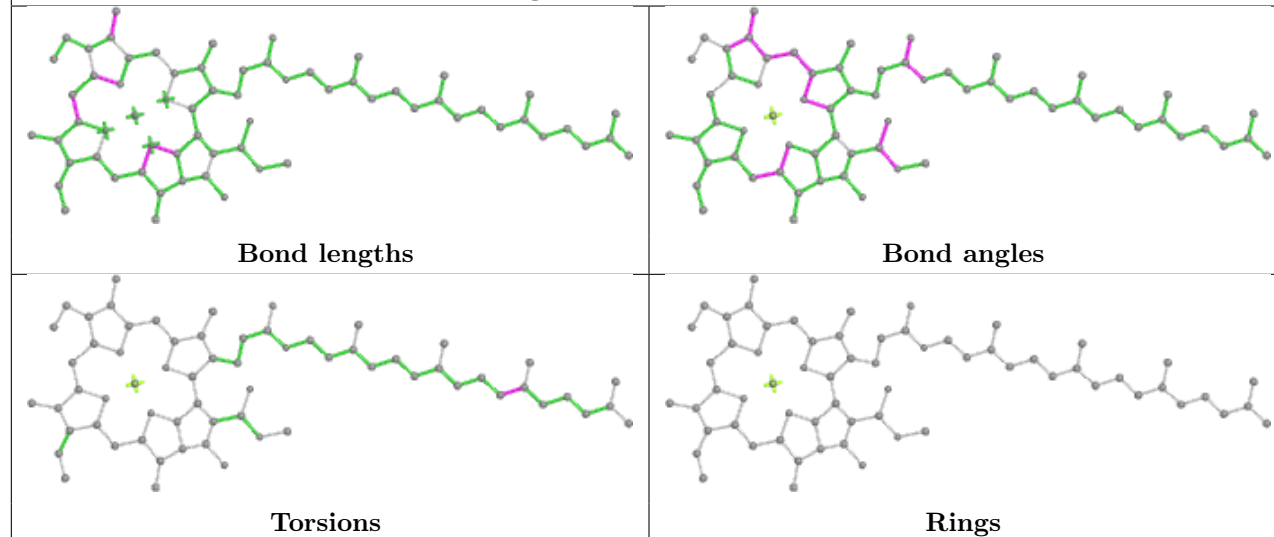
## Ligand CLA b1 617



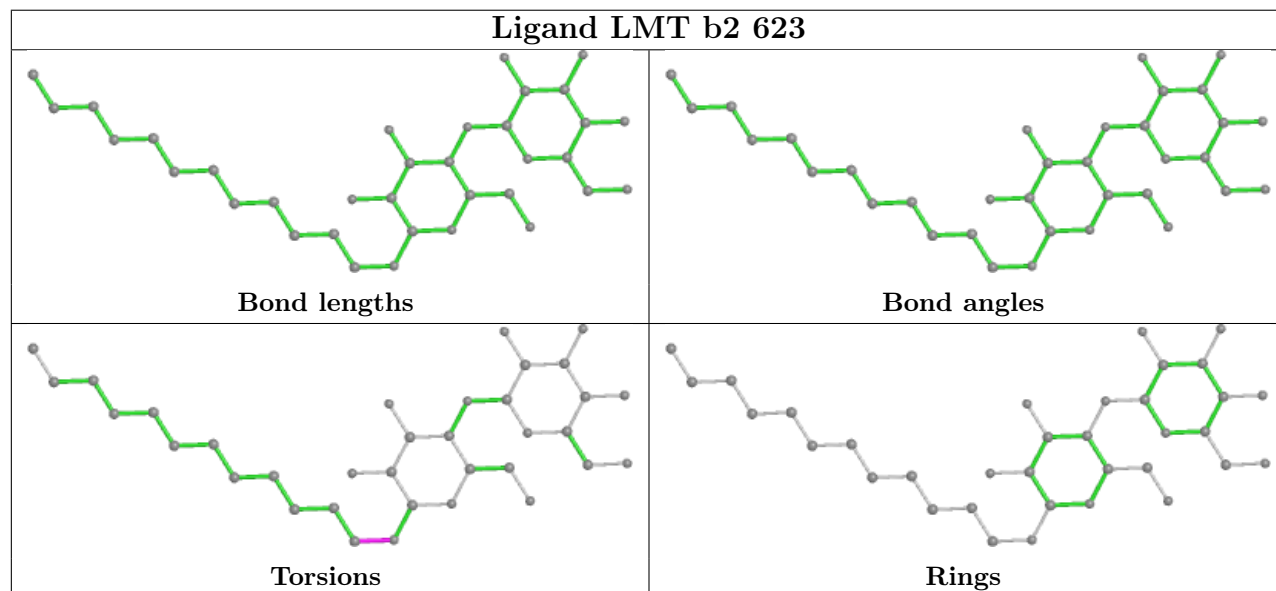
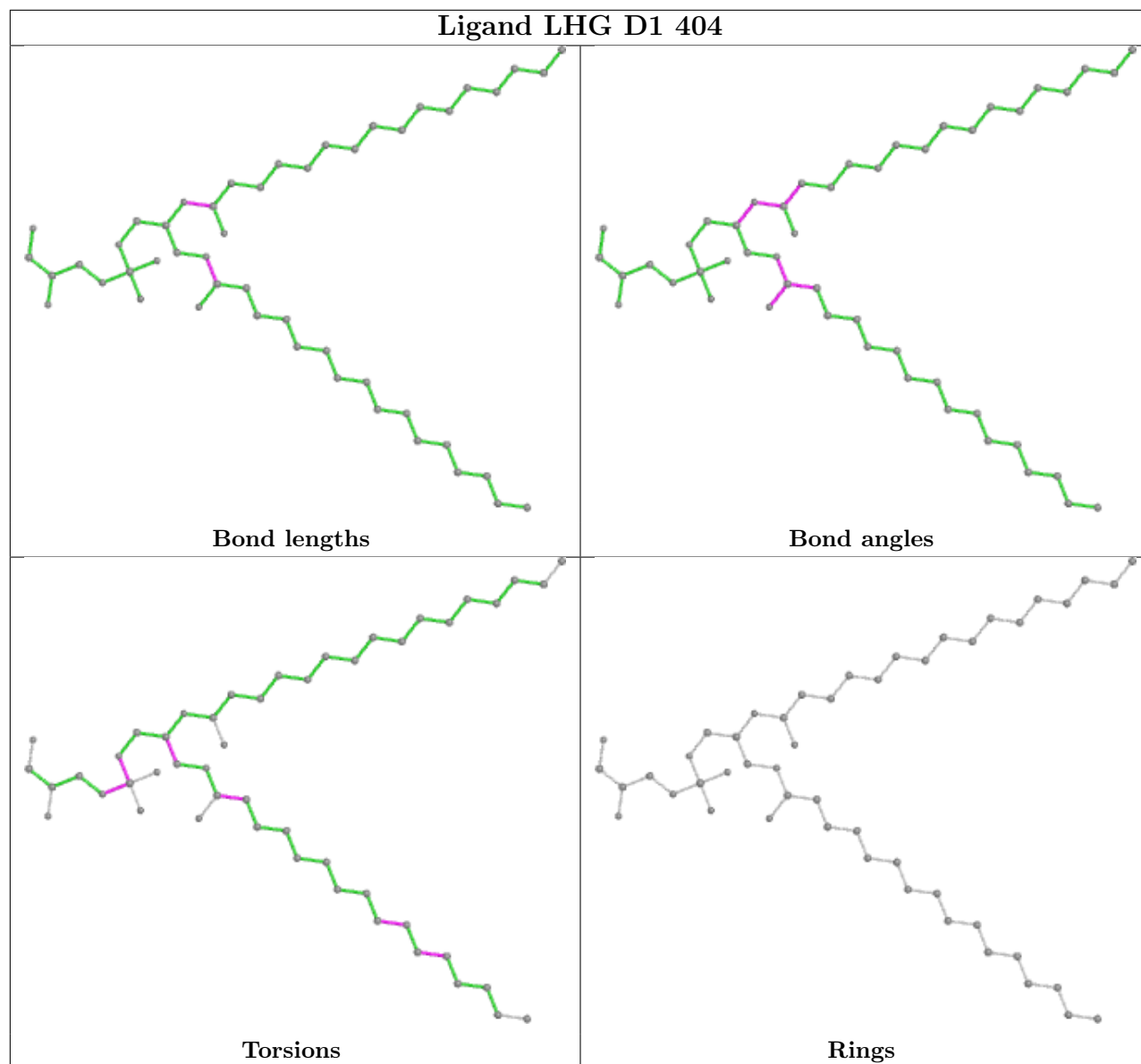
## Ligand BCR B2 602

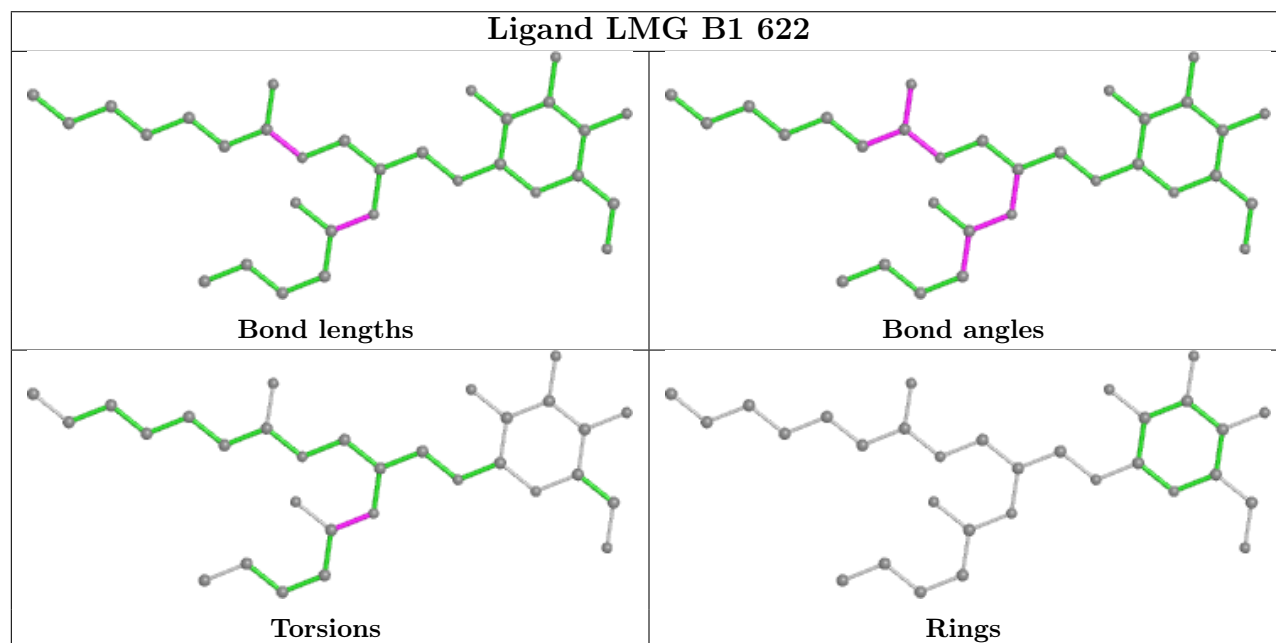
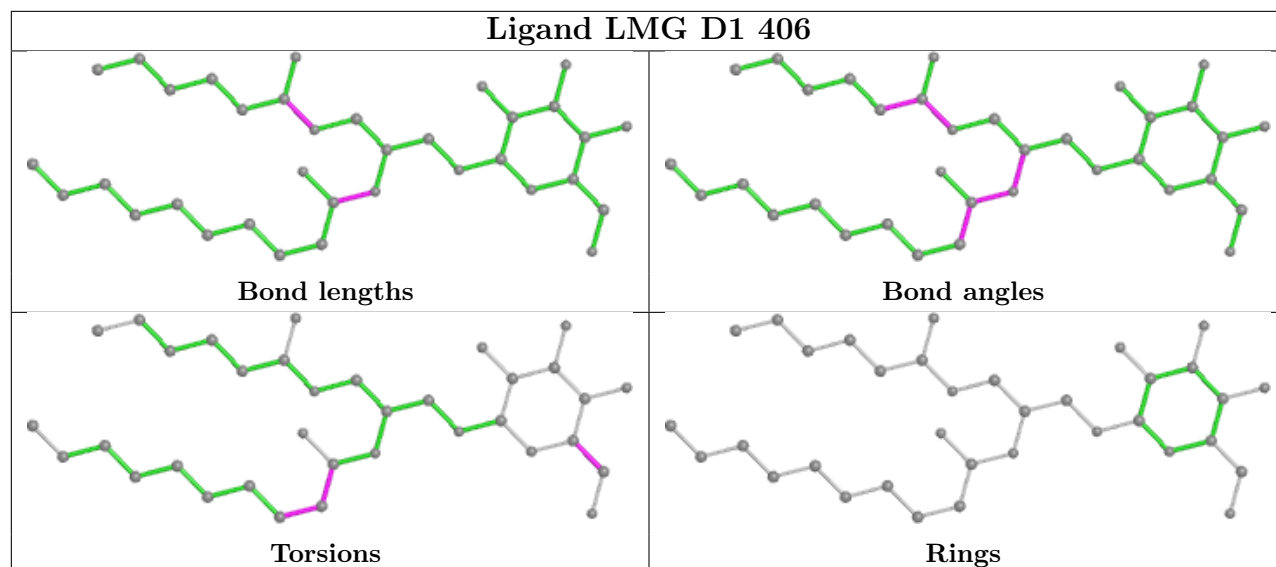




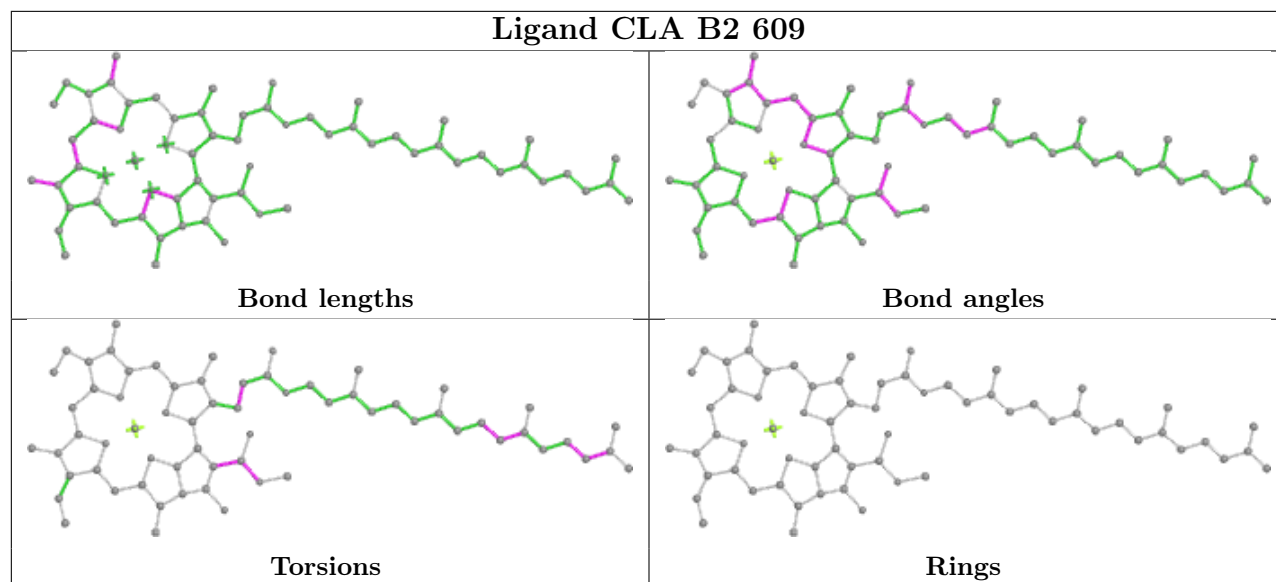
**Ligand CLA C1 509****Ligand CLA b1 610**



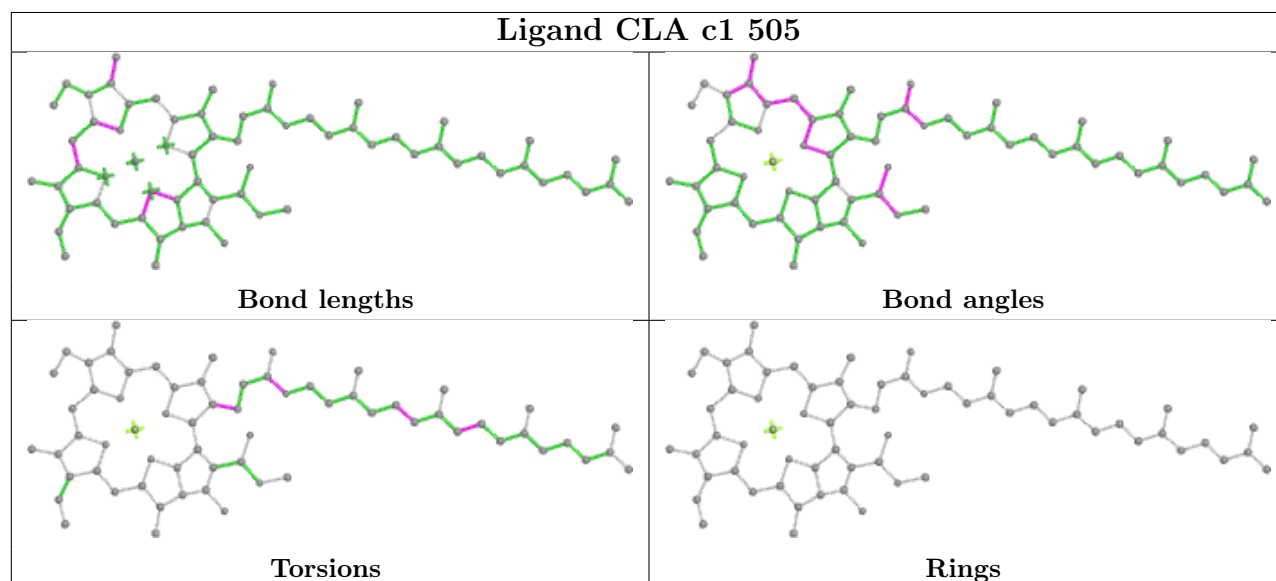




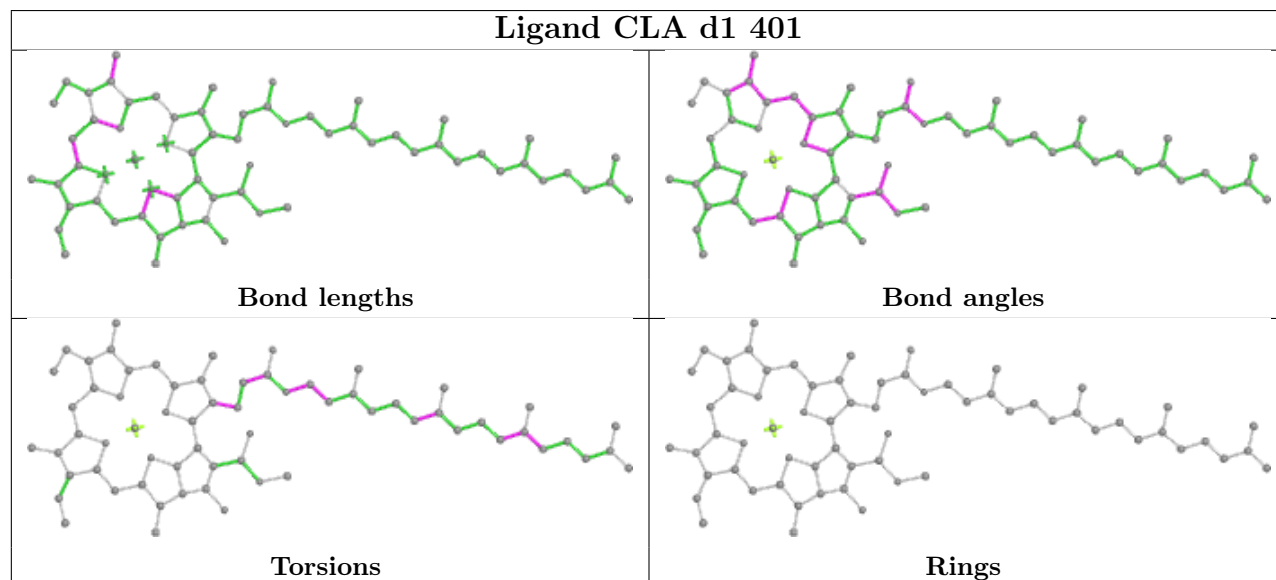
## Ligand CLA B2 609



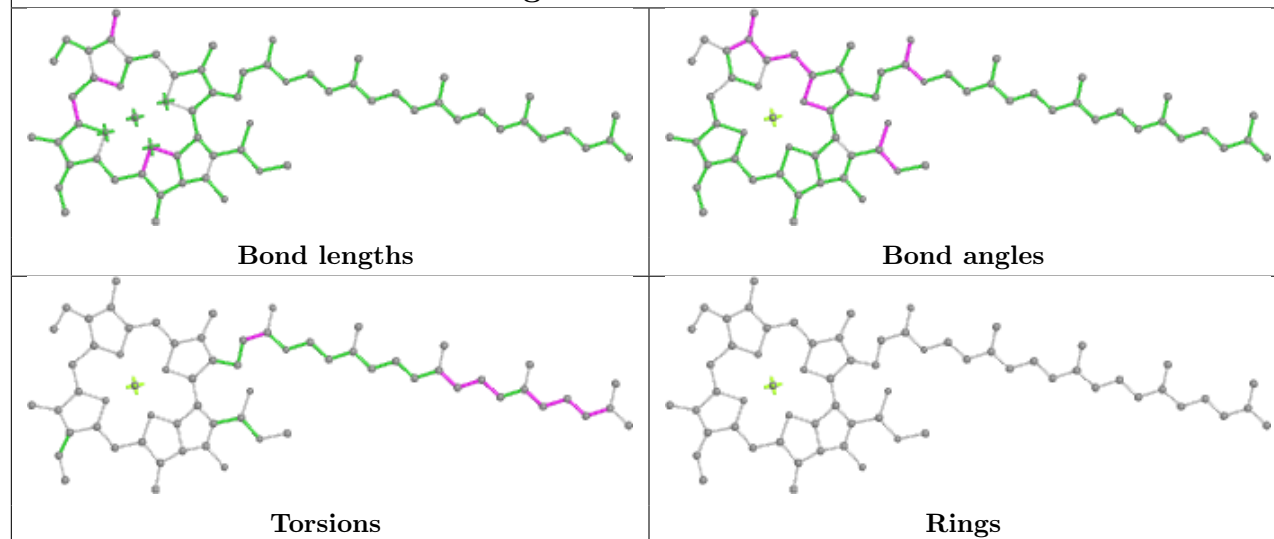
## Ligand CLA c1 505



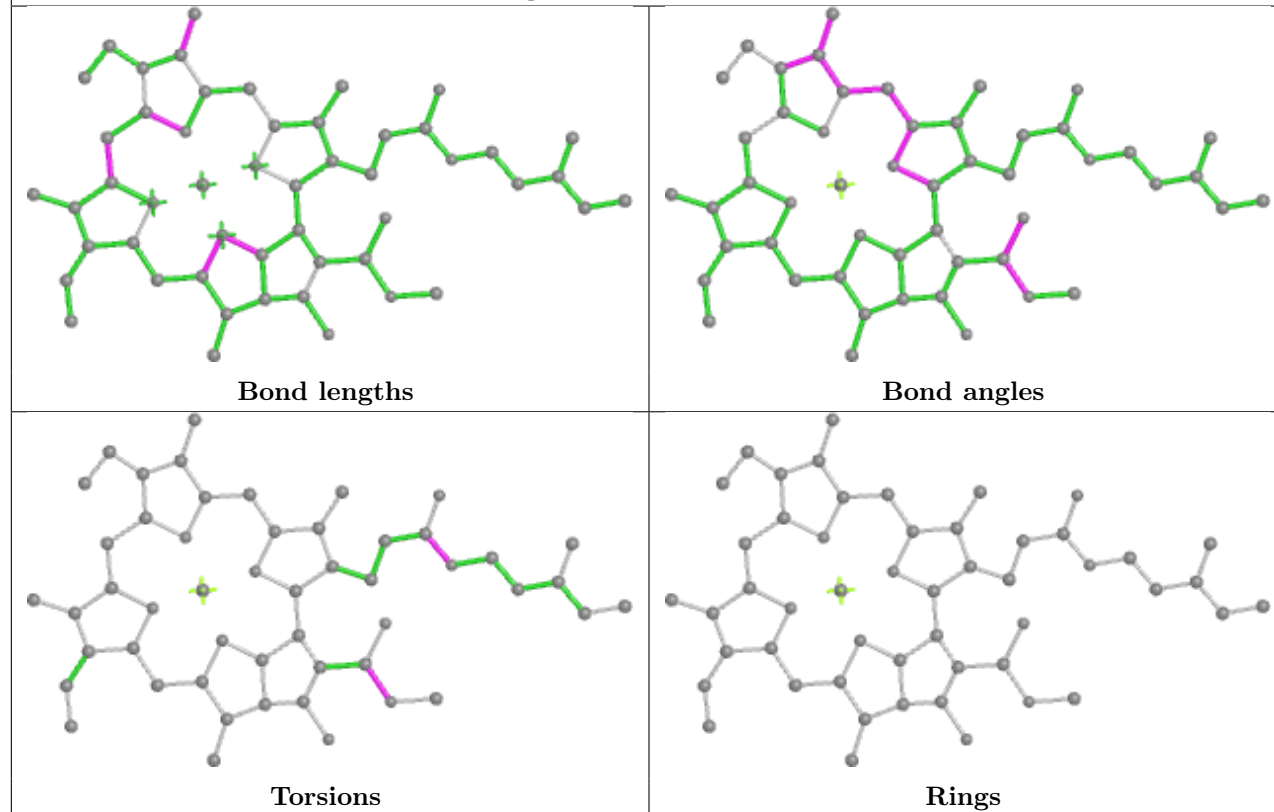
## Ligand CLA d1 401

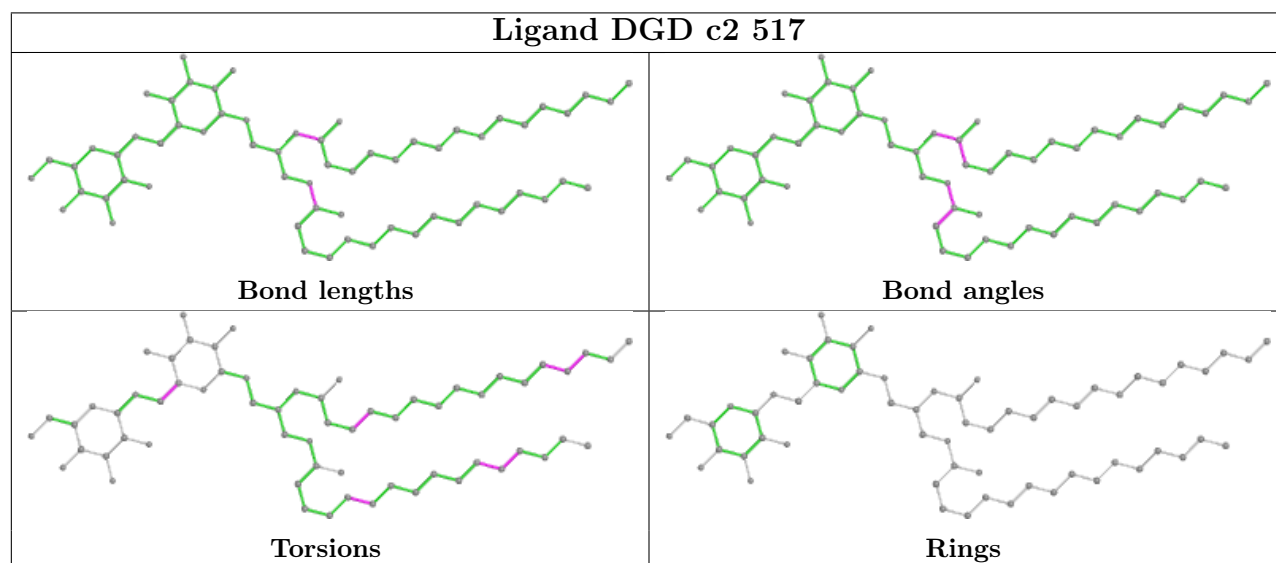
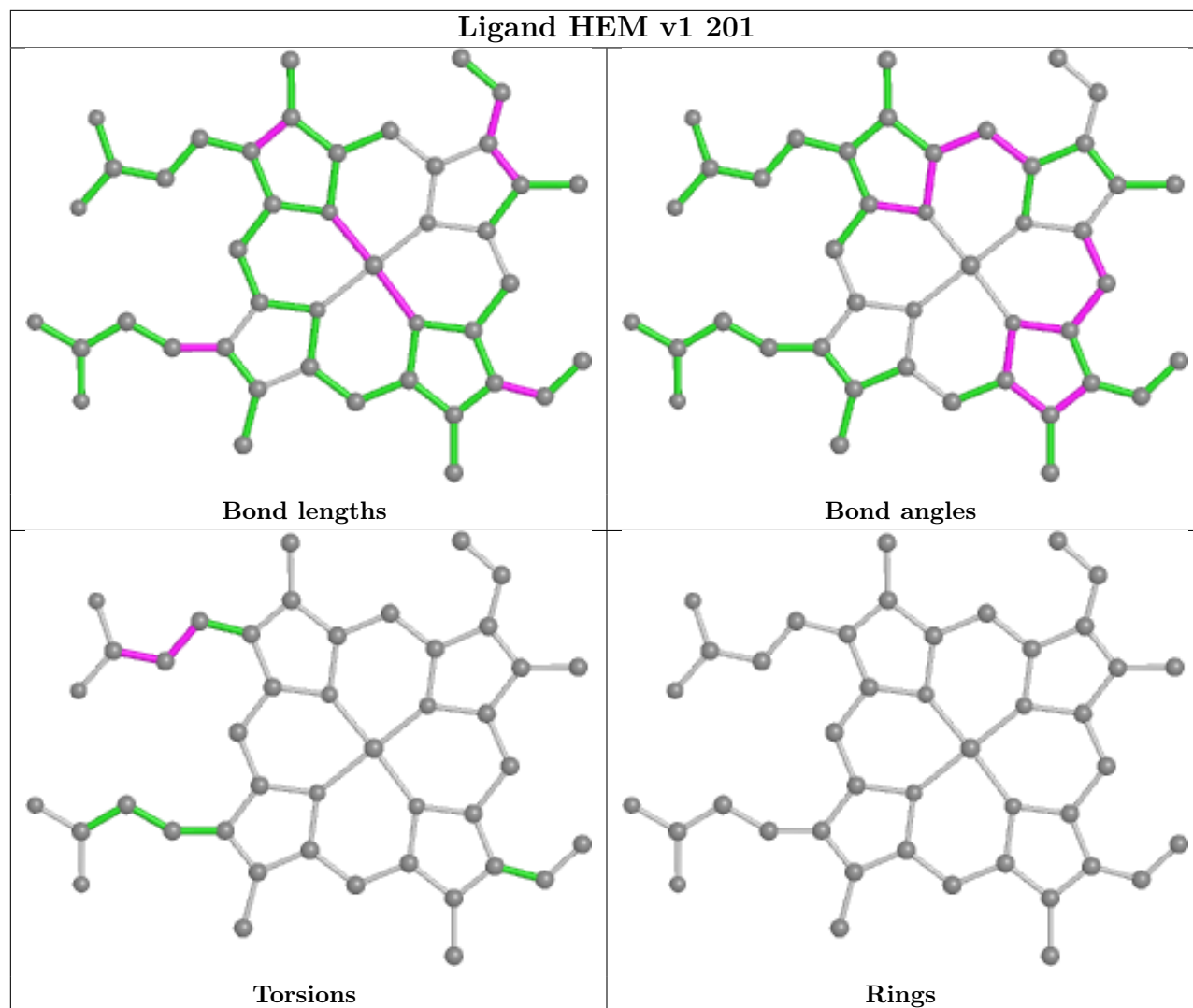


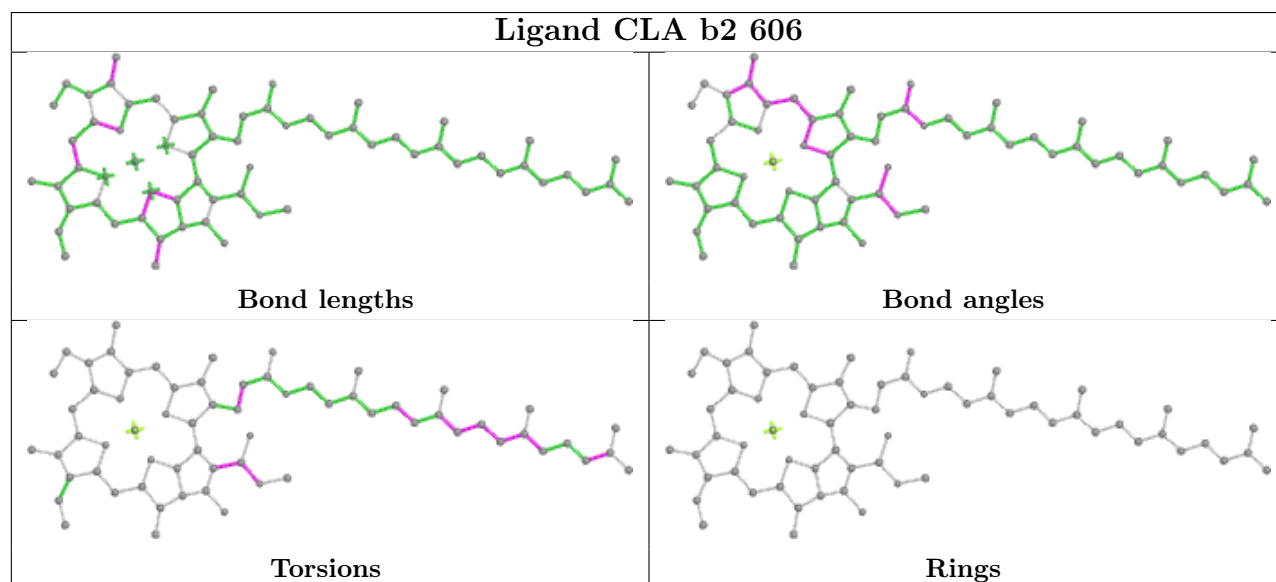
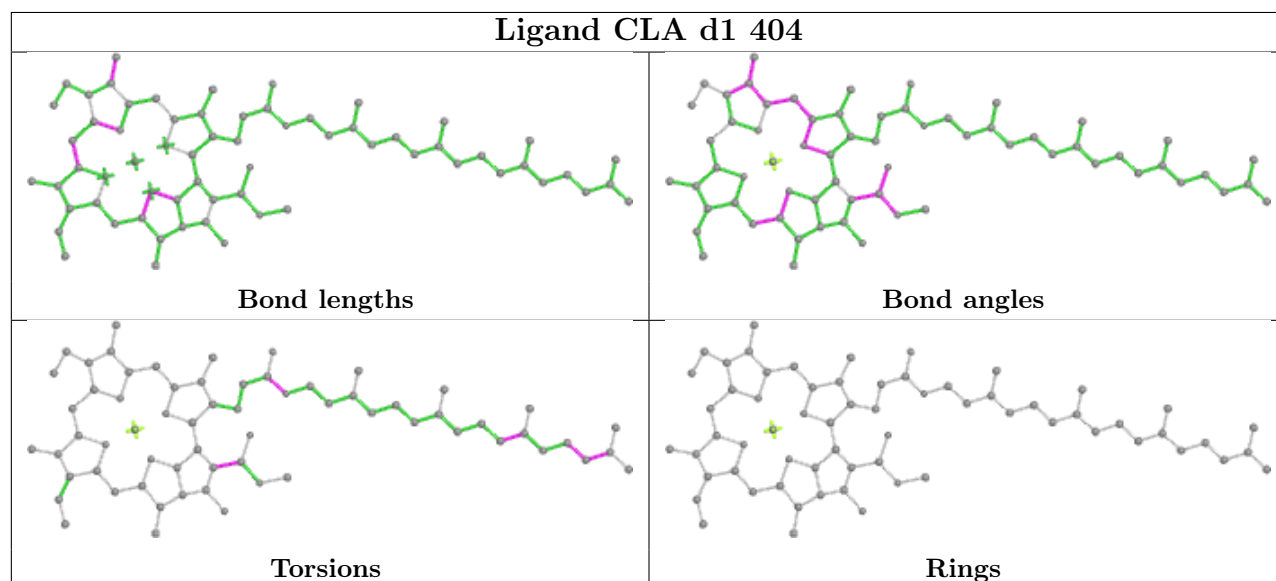
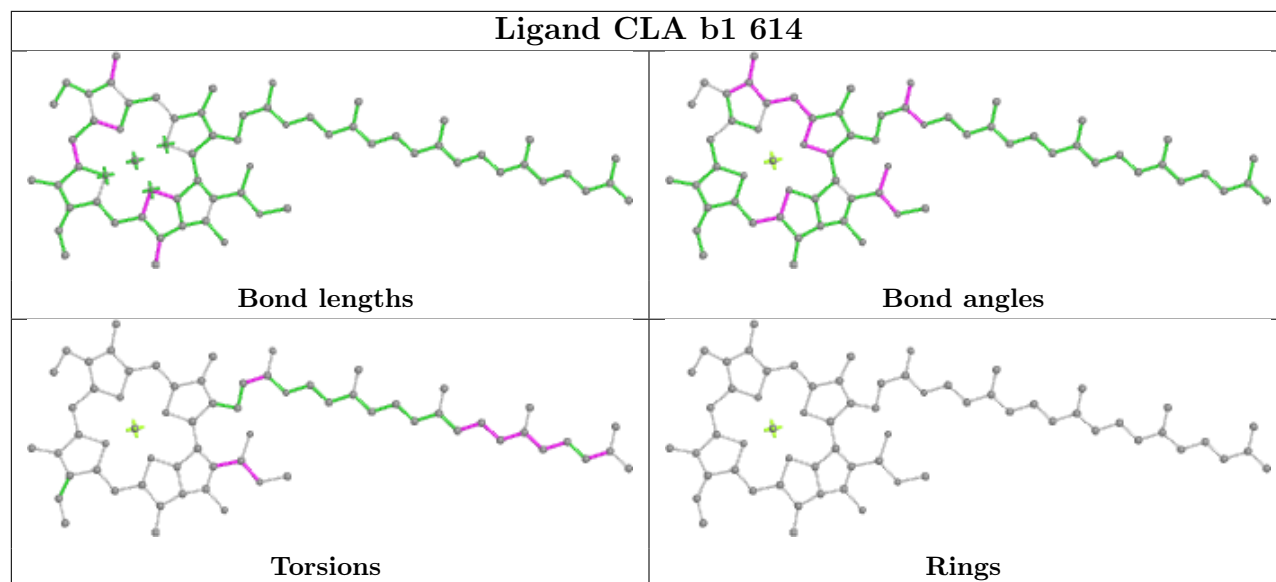
## Ligand CLA B2 615

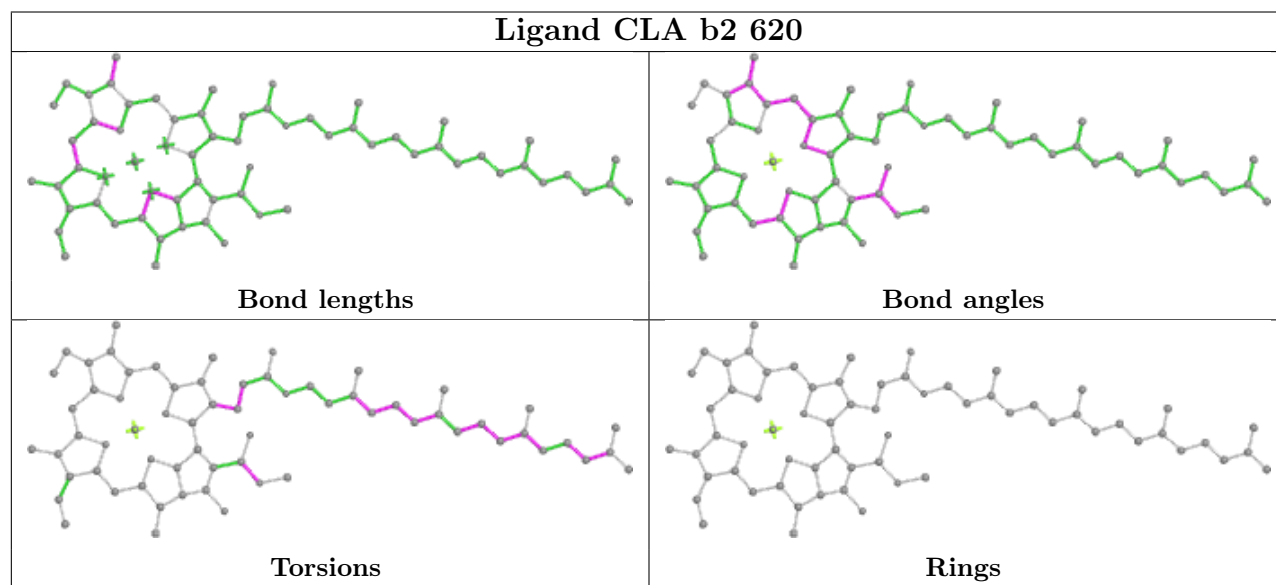
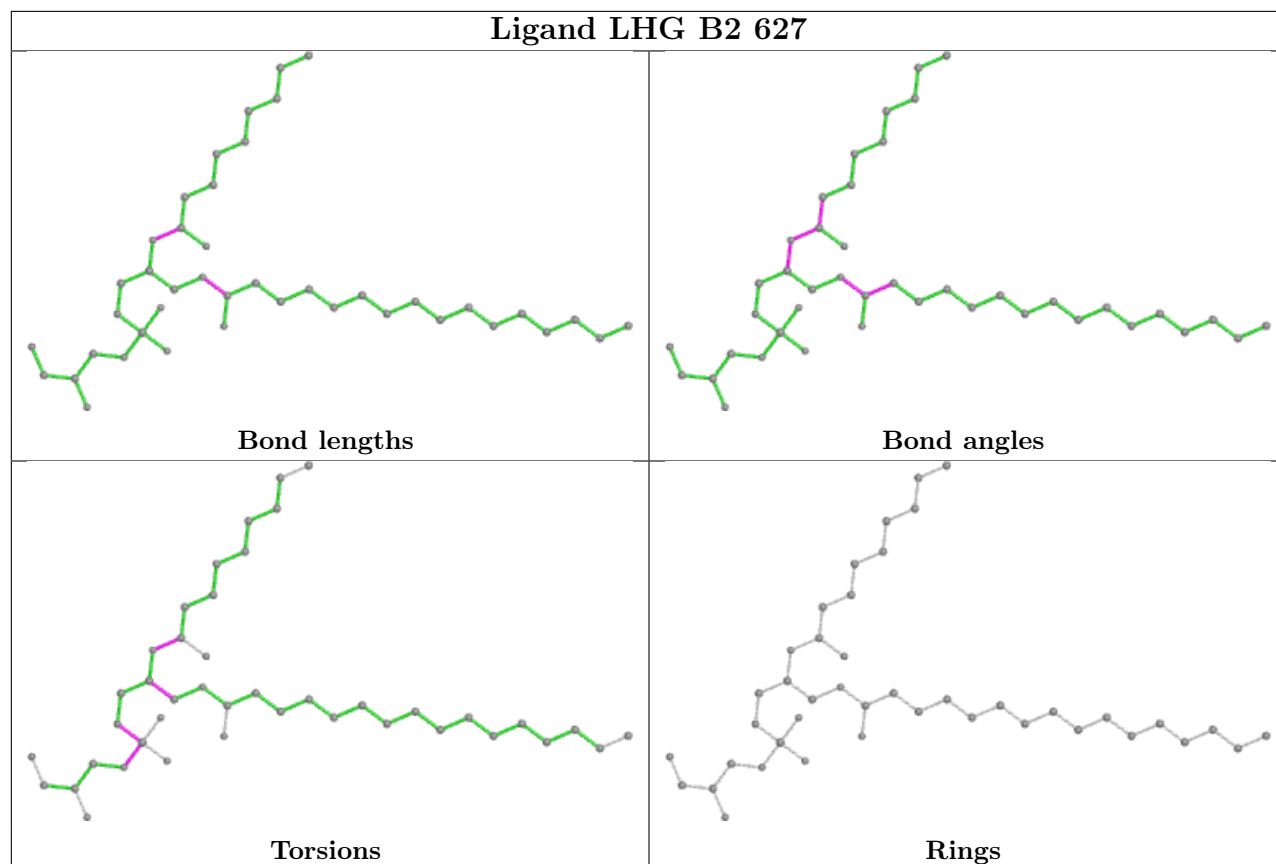


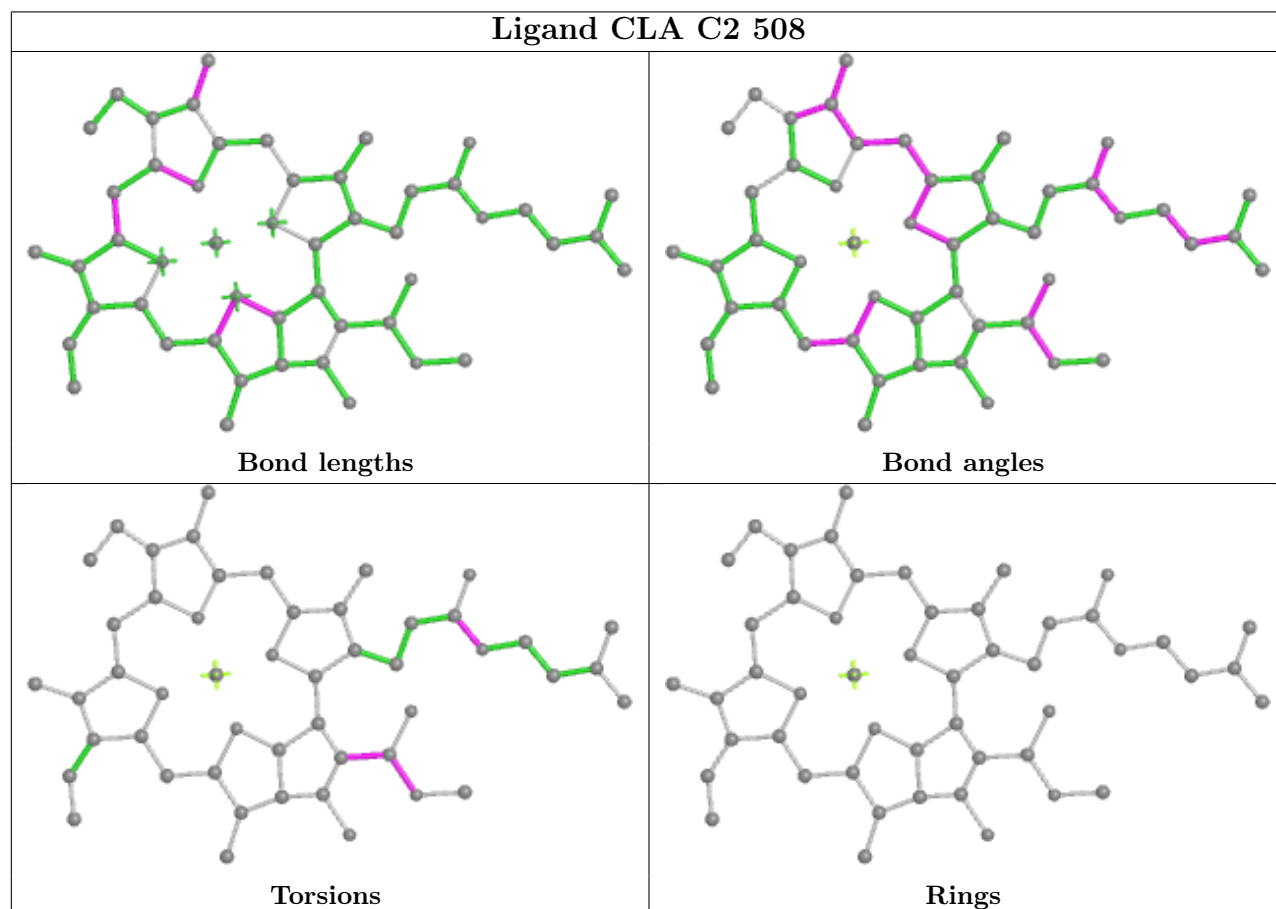
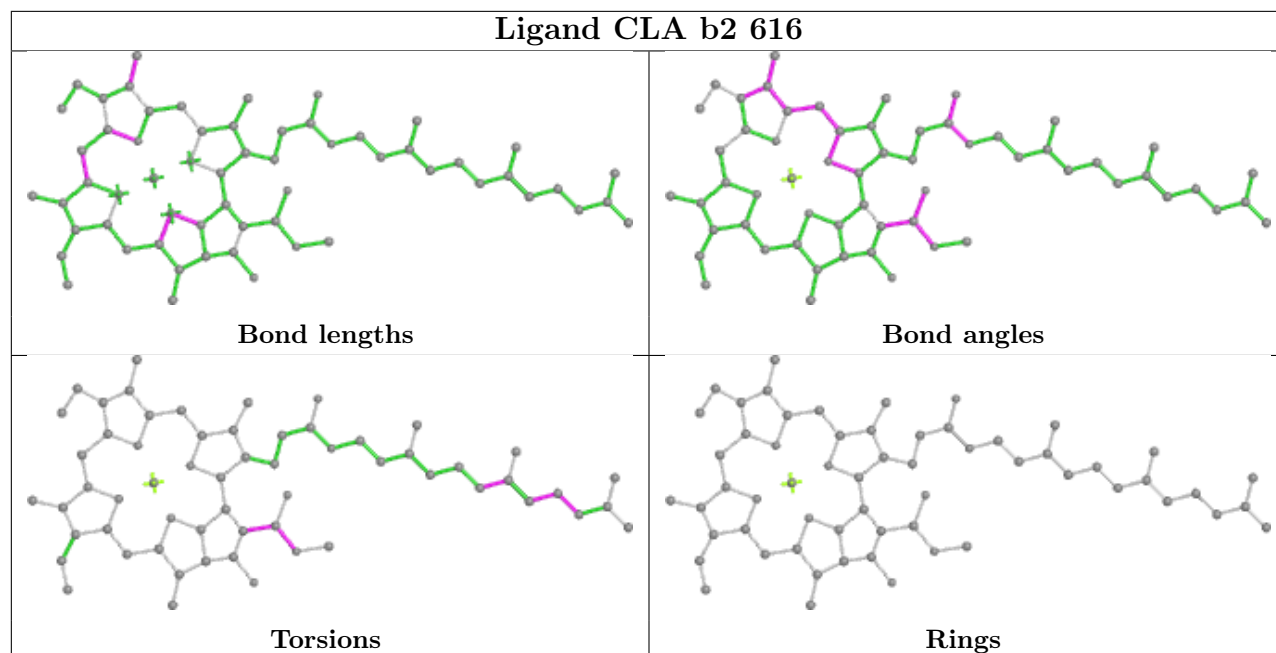
## Ligand CLA D1 403



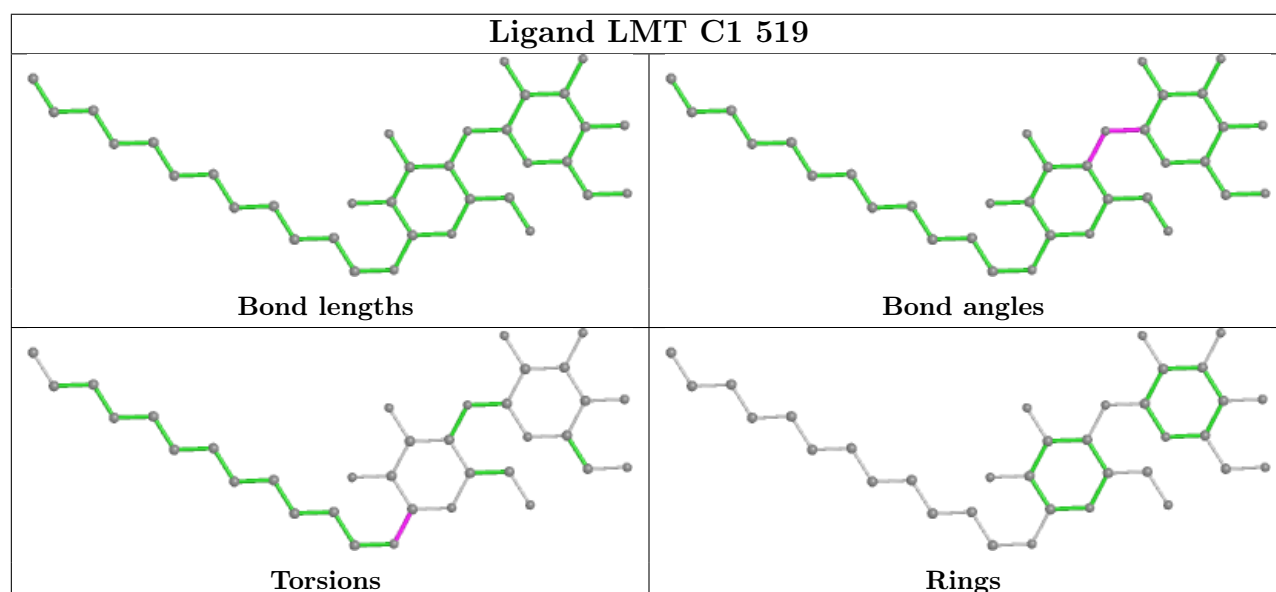
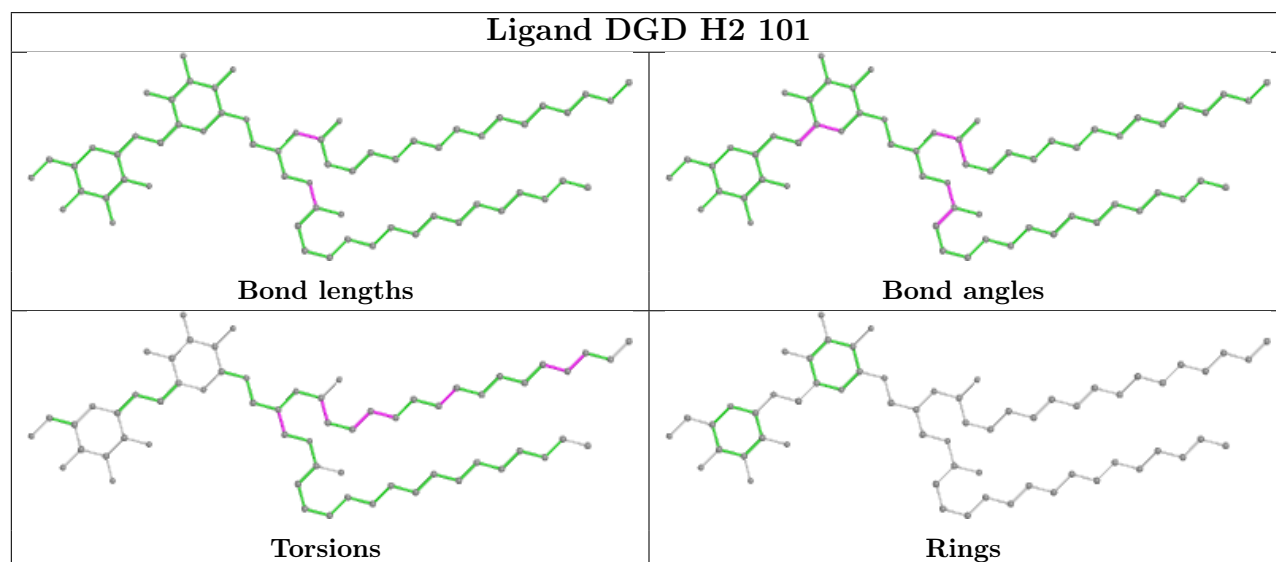
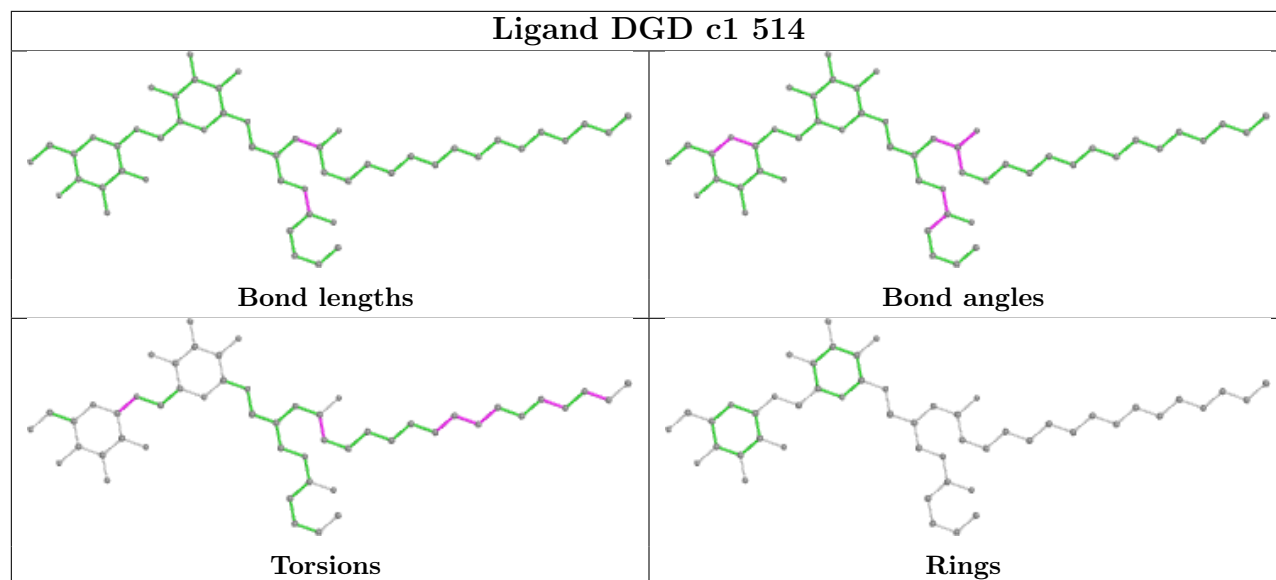


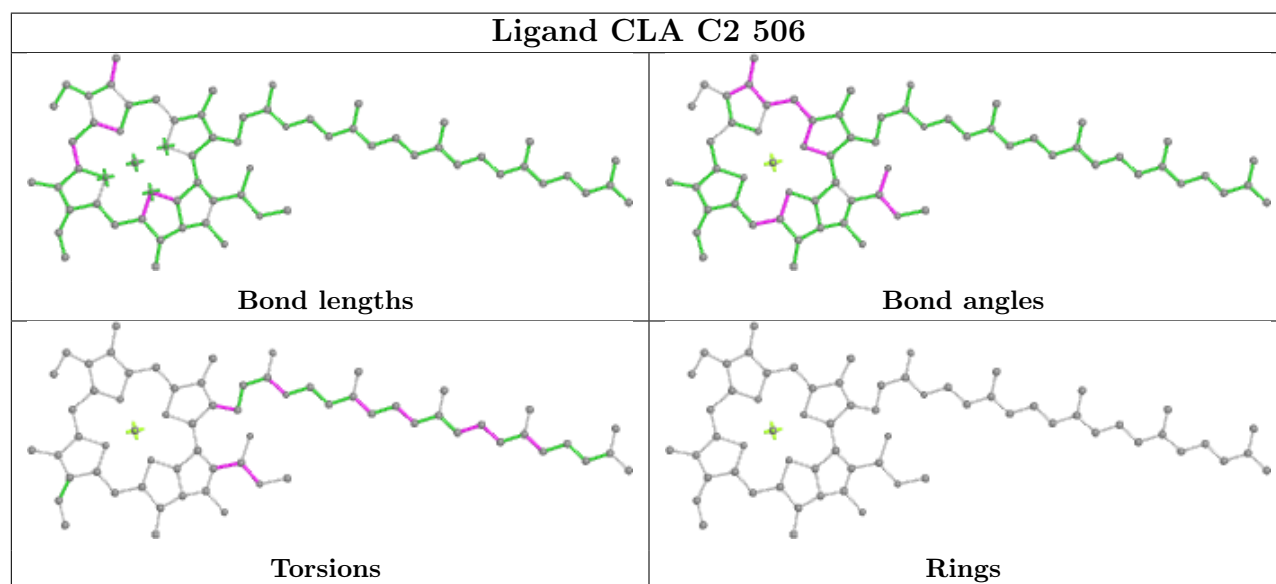
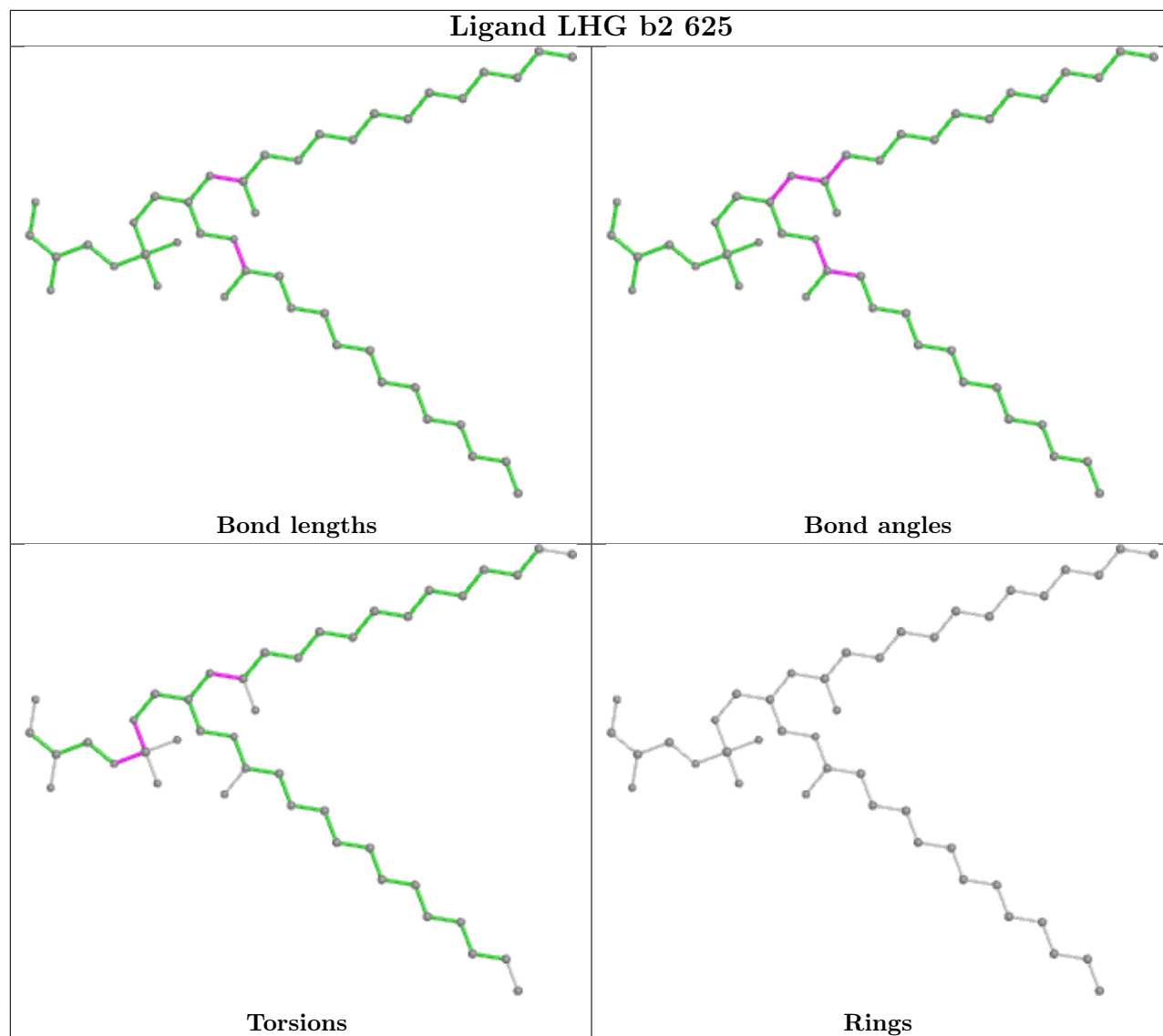


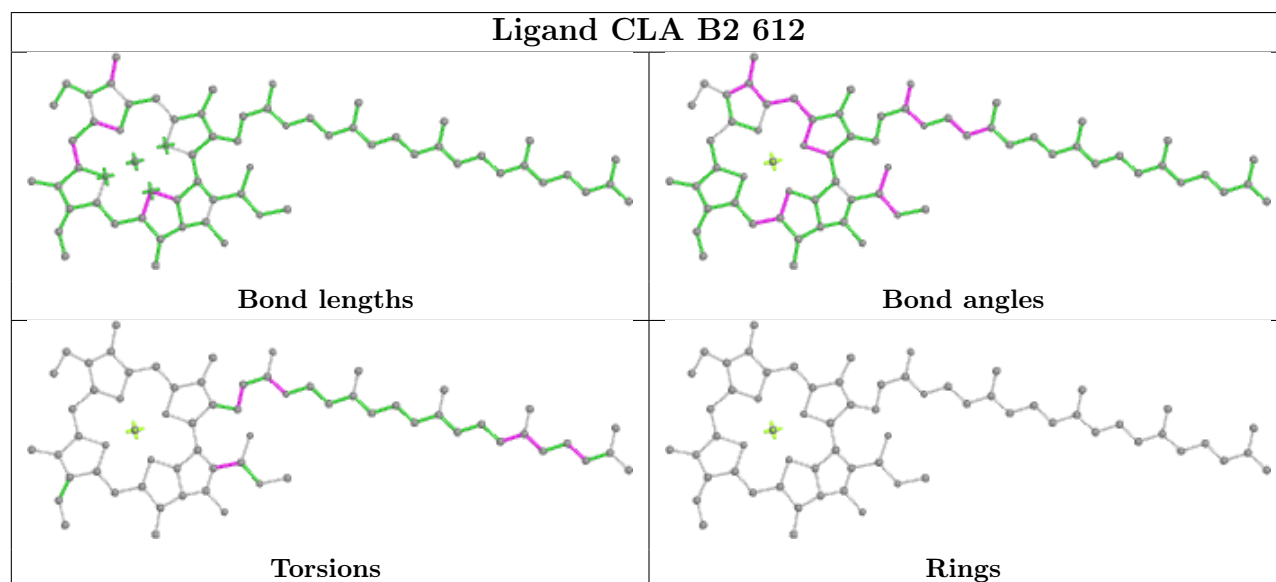
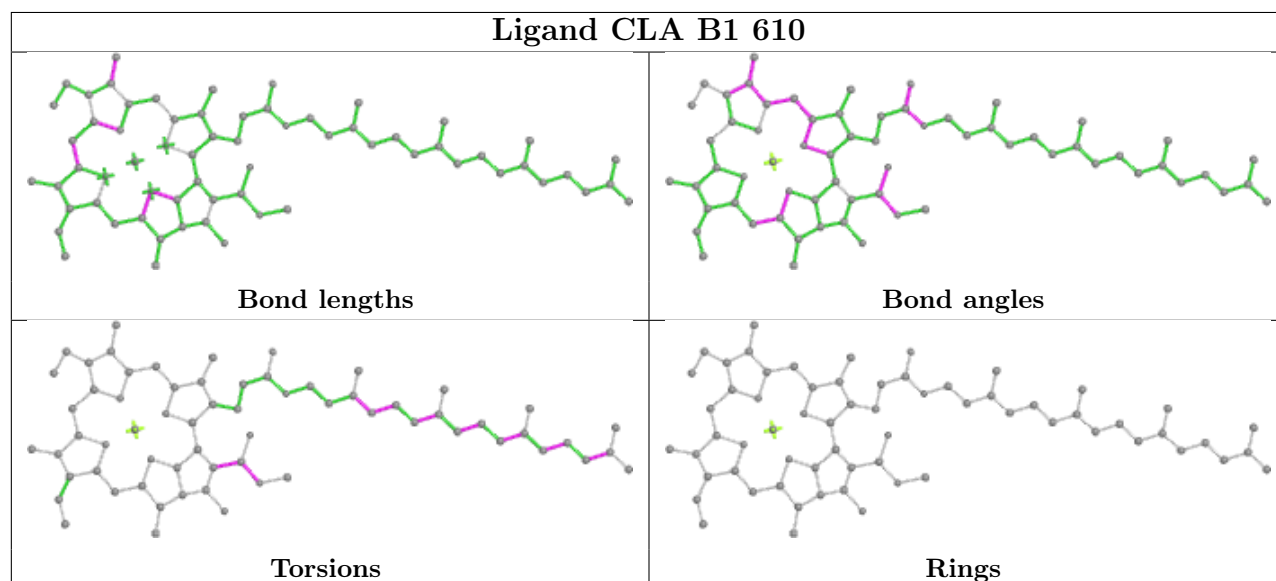
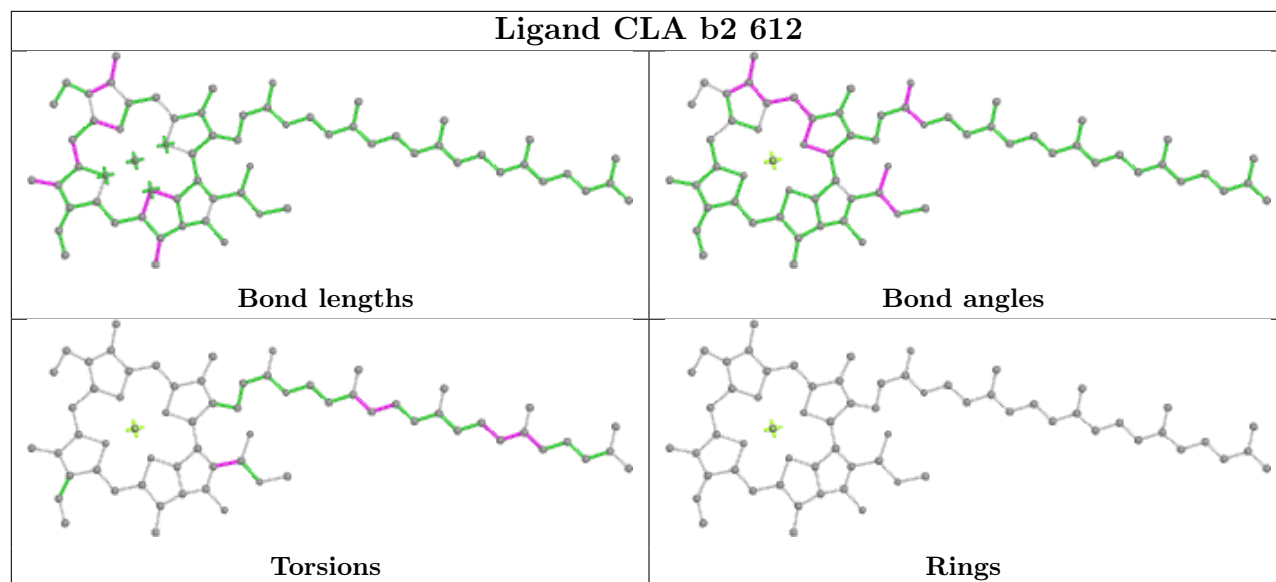


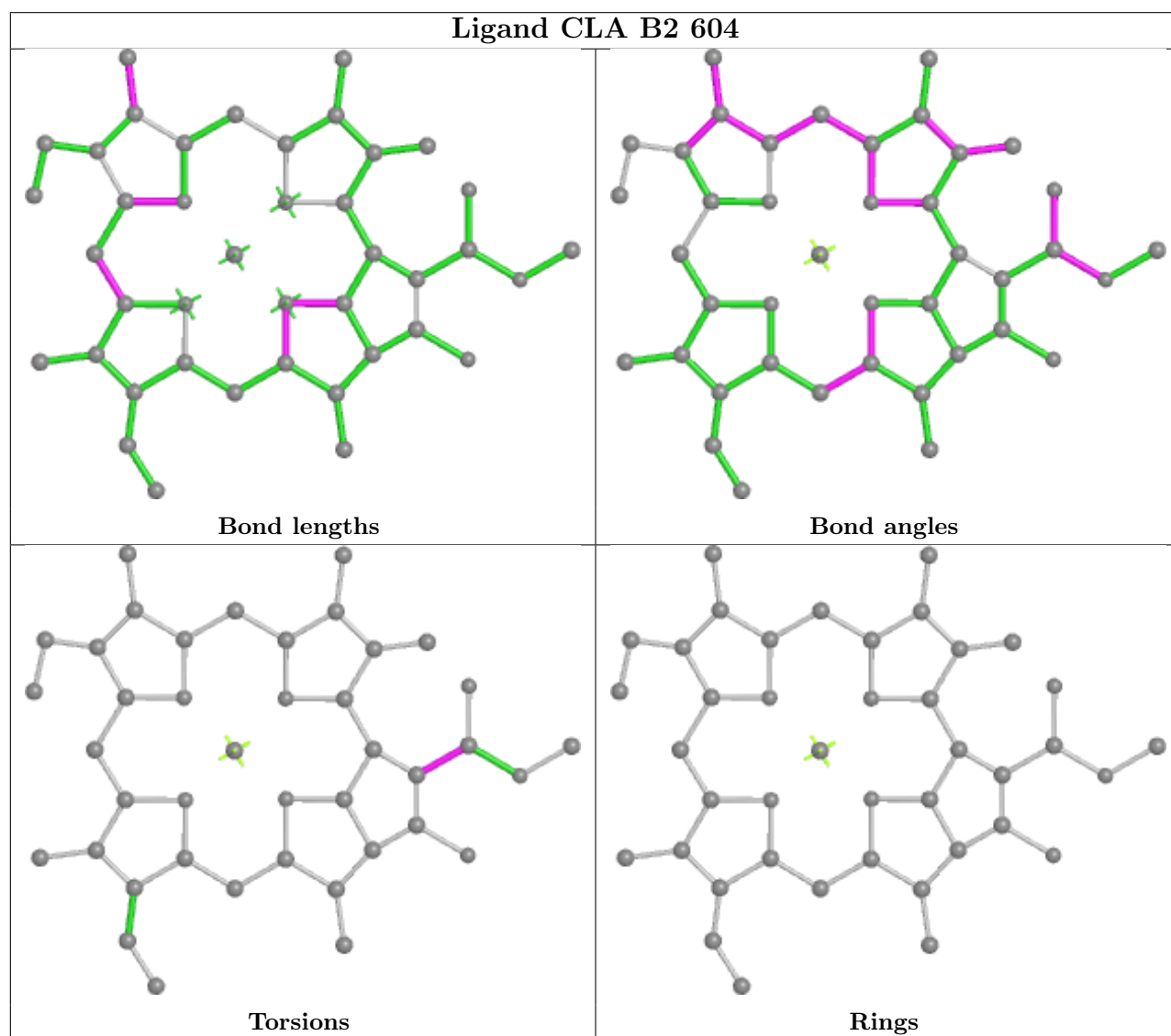
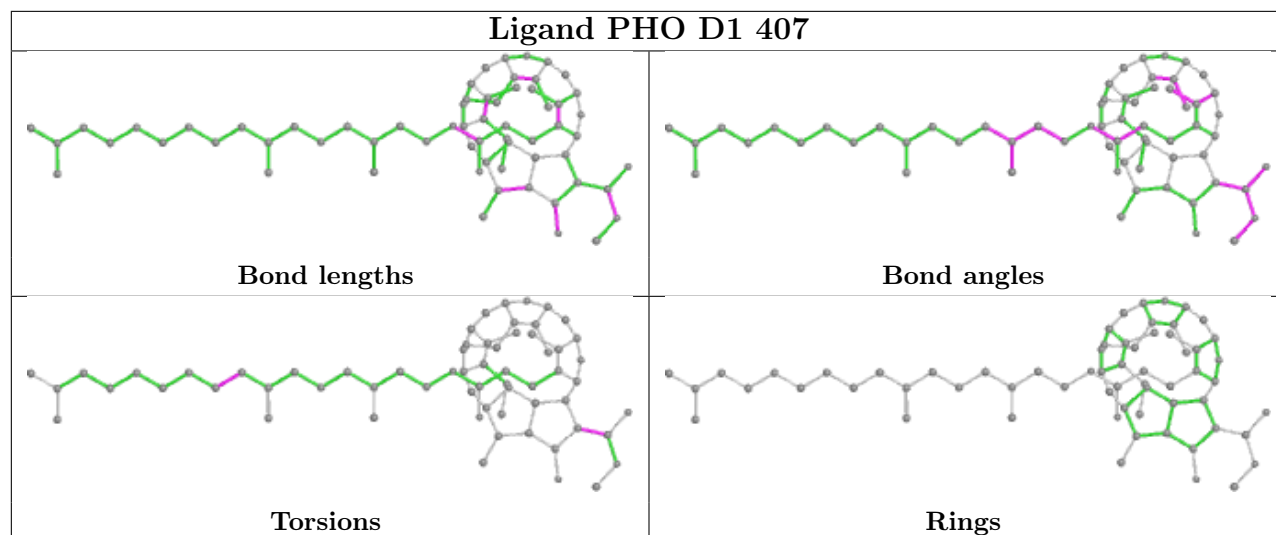


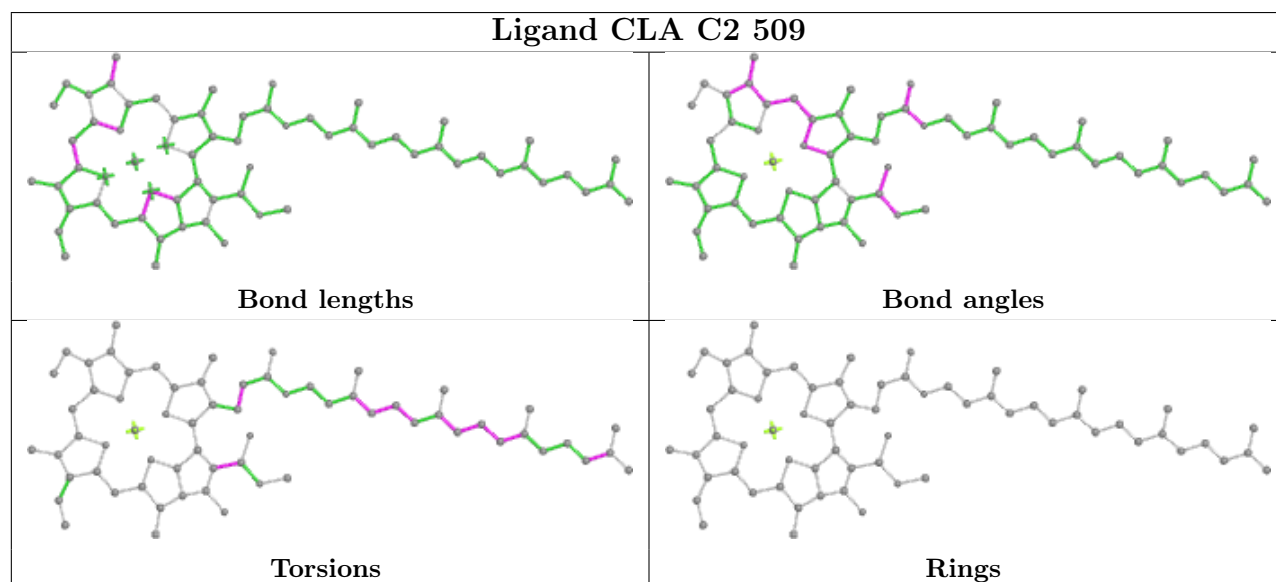
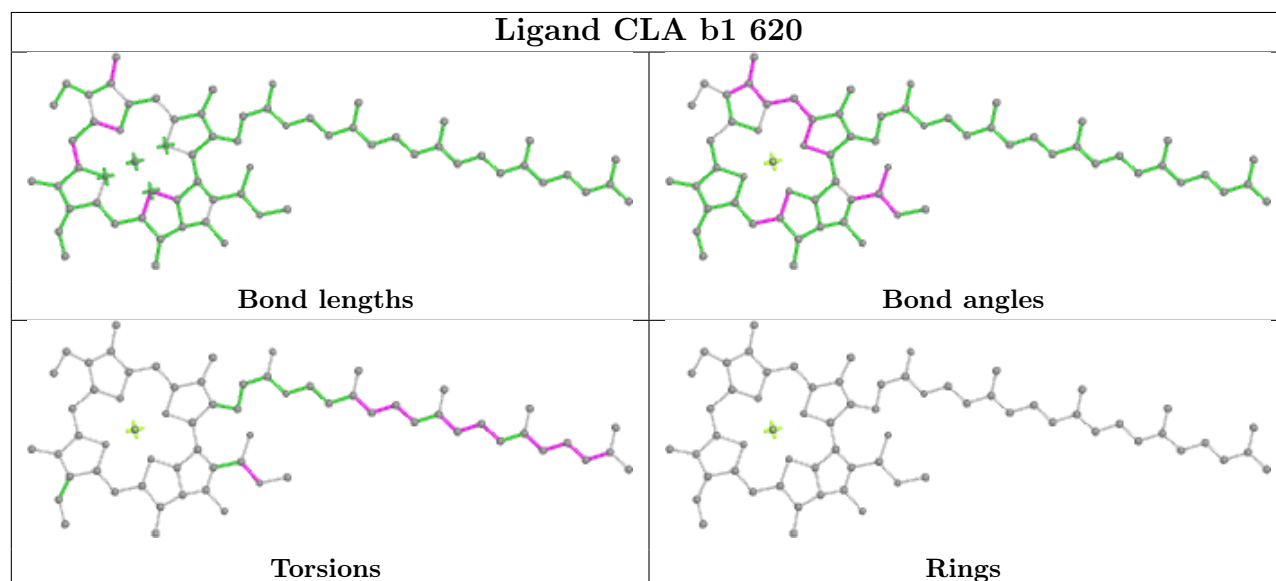
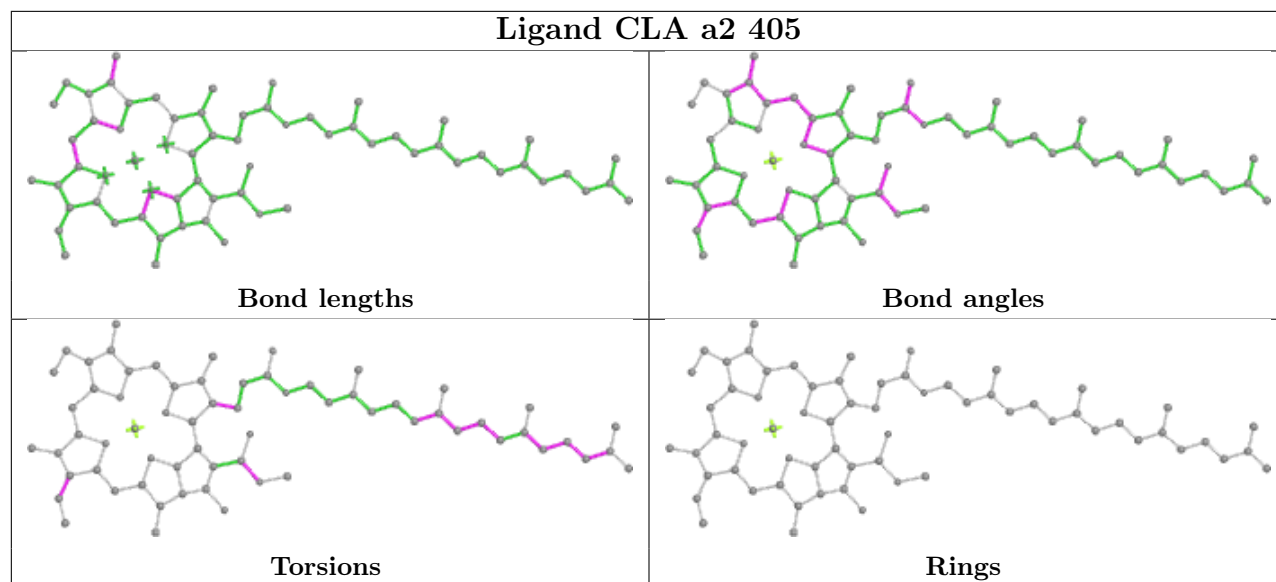


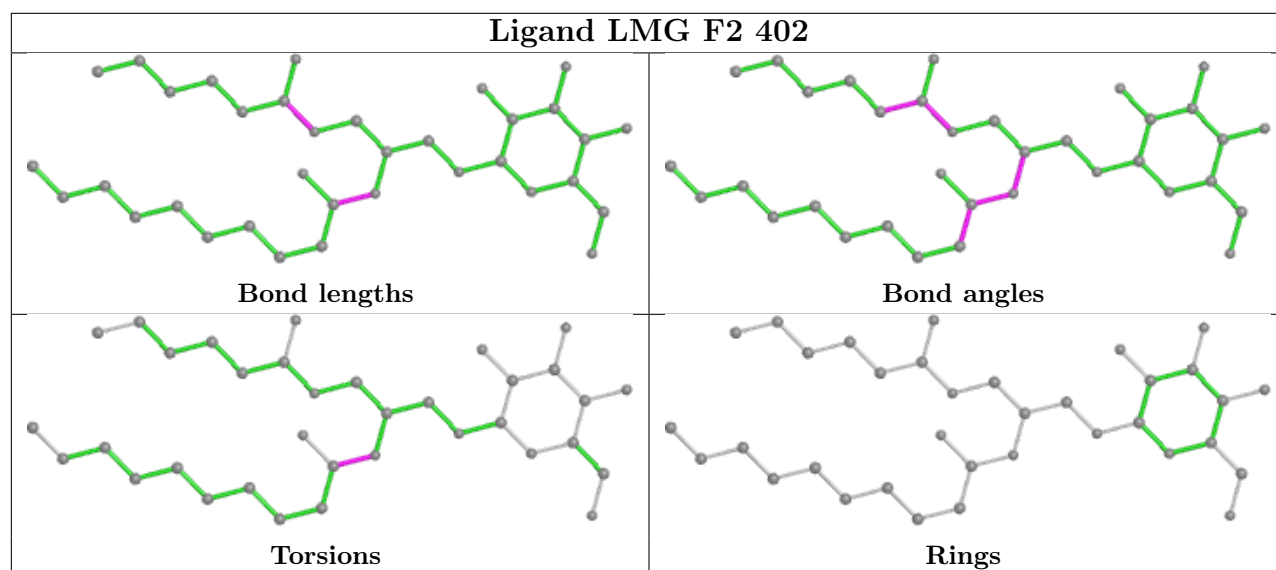
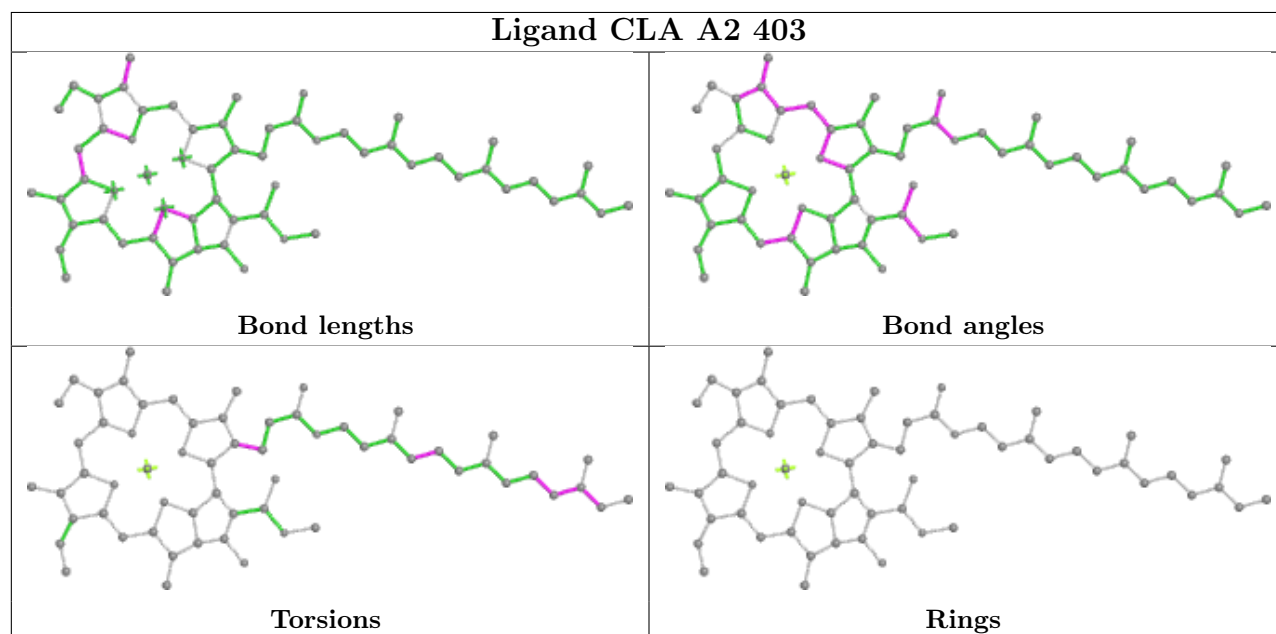
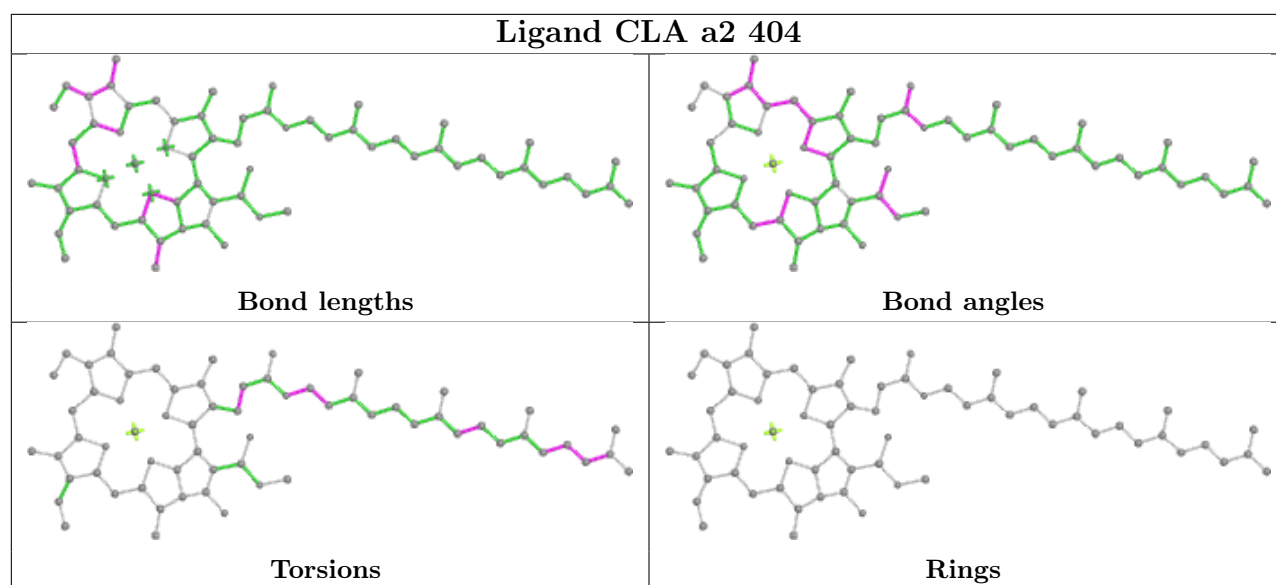


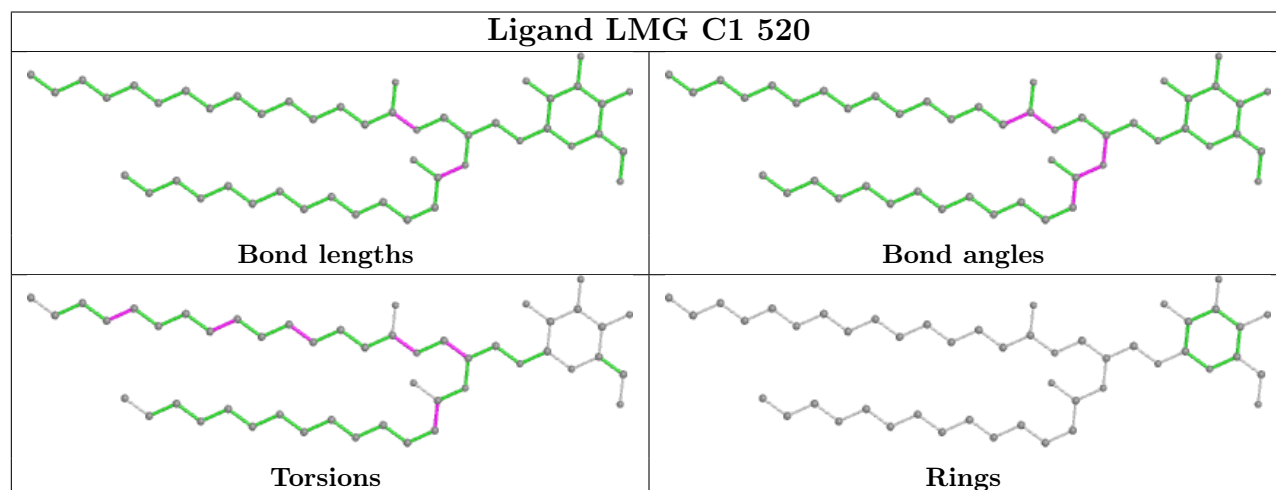
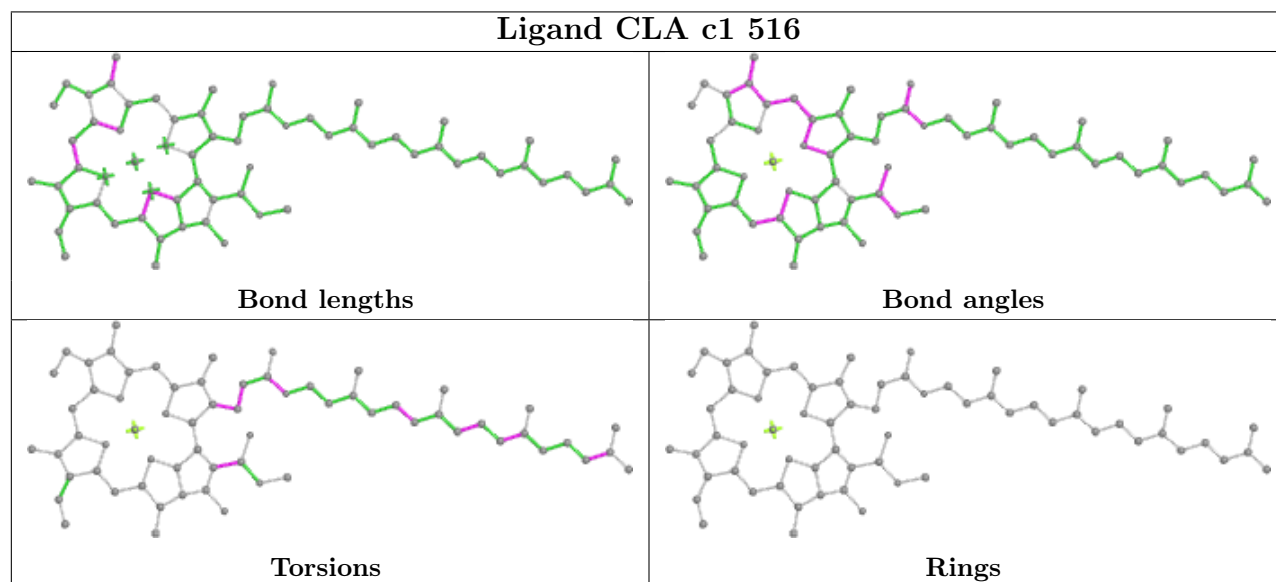
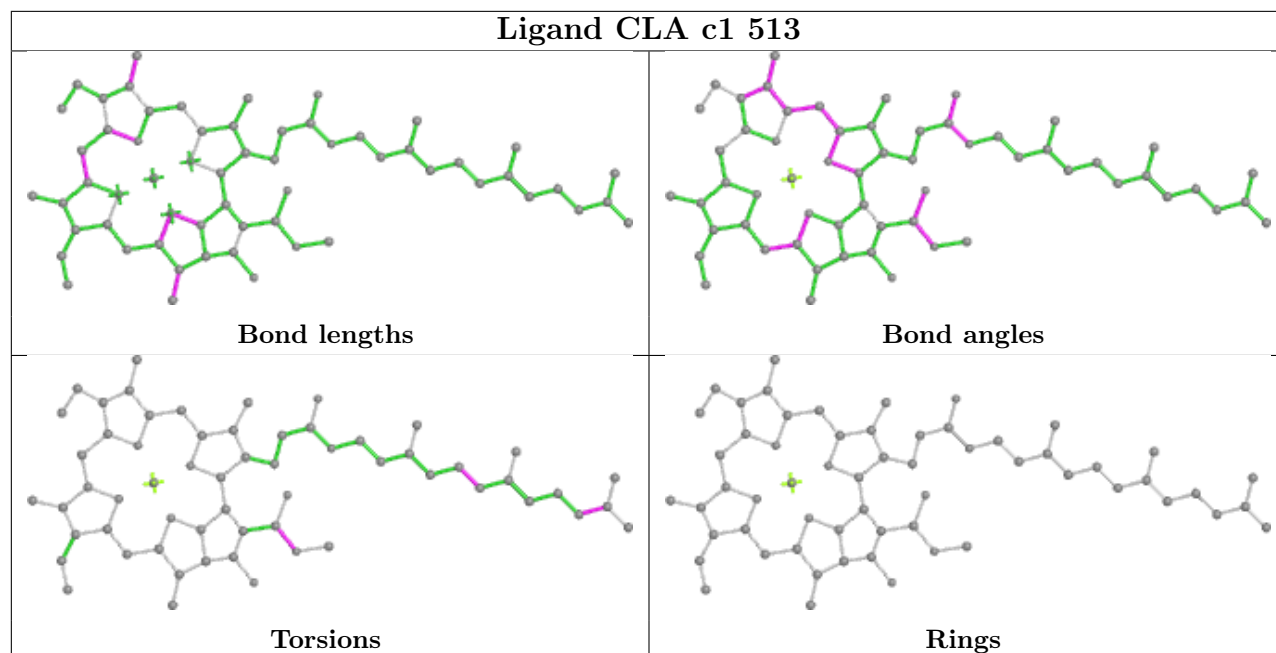


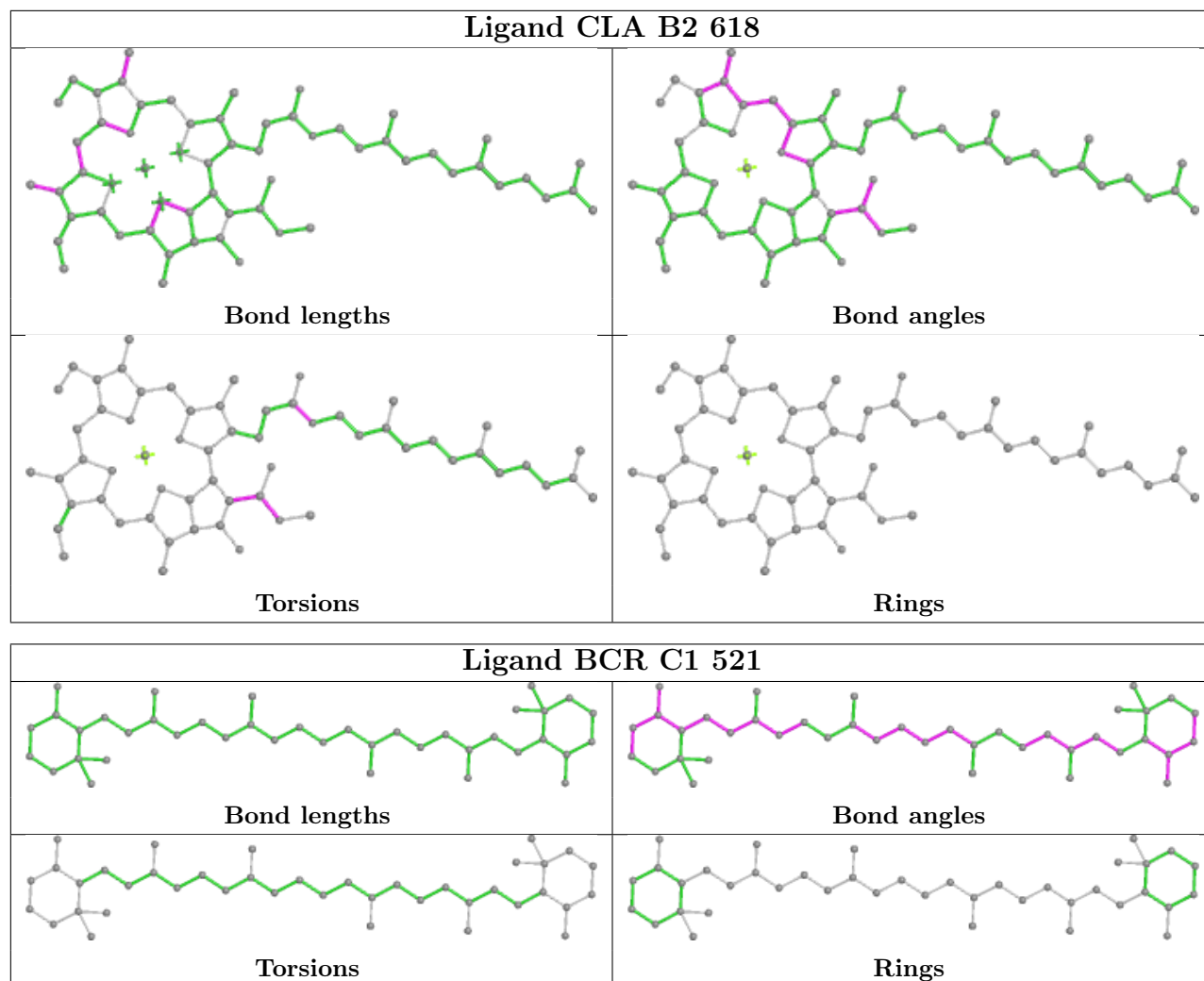




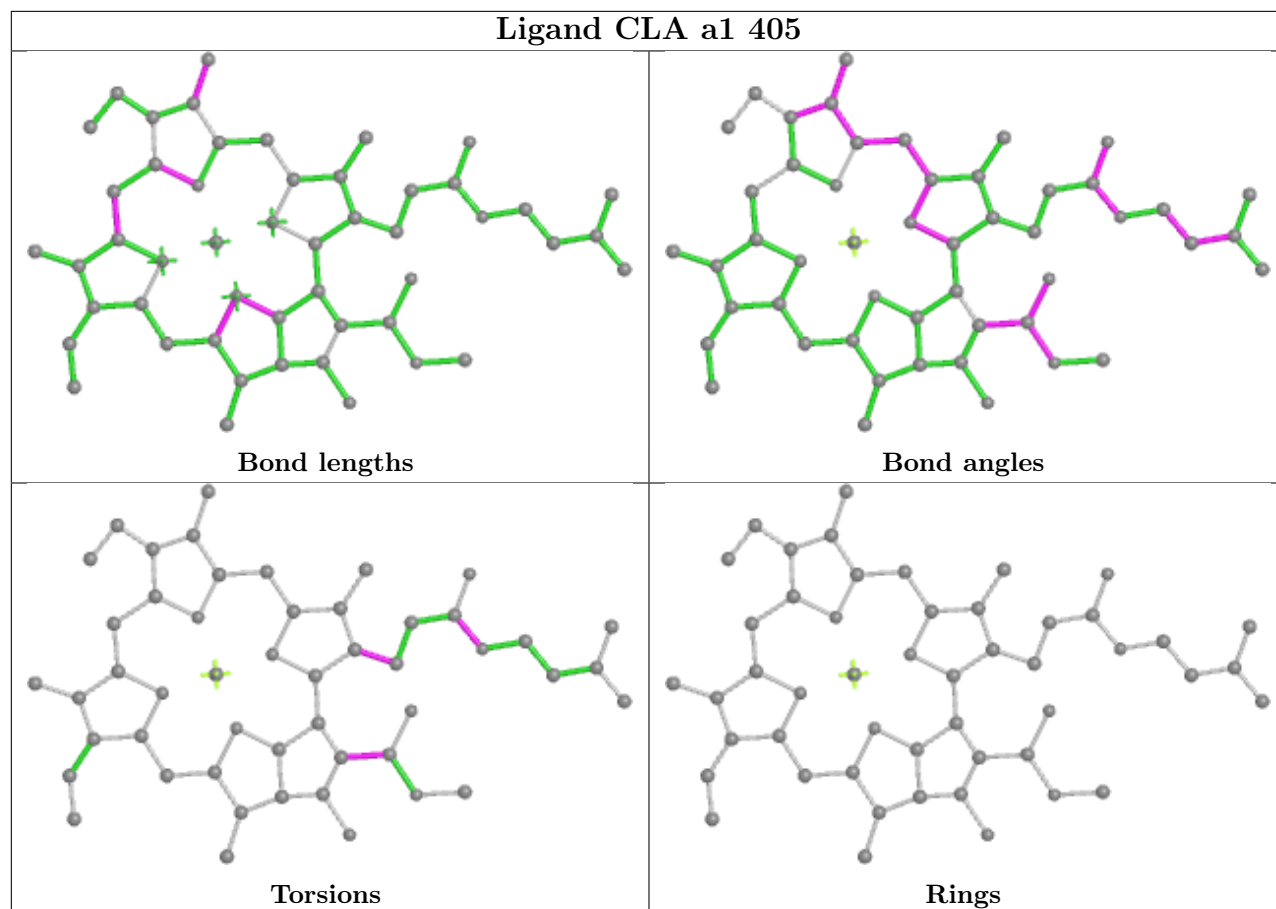


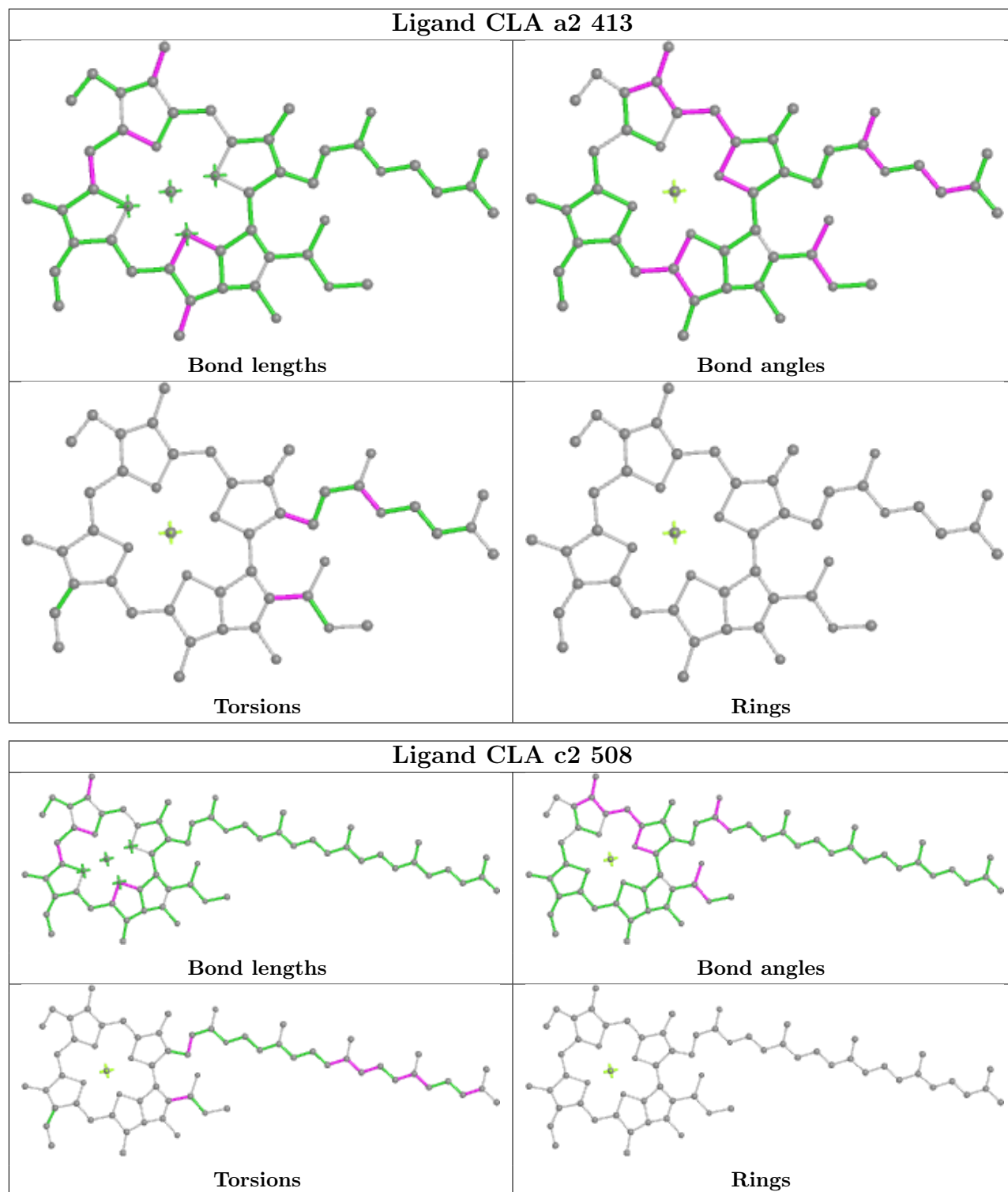




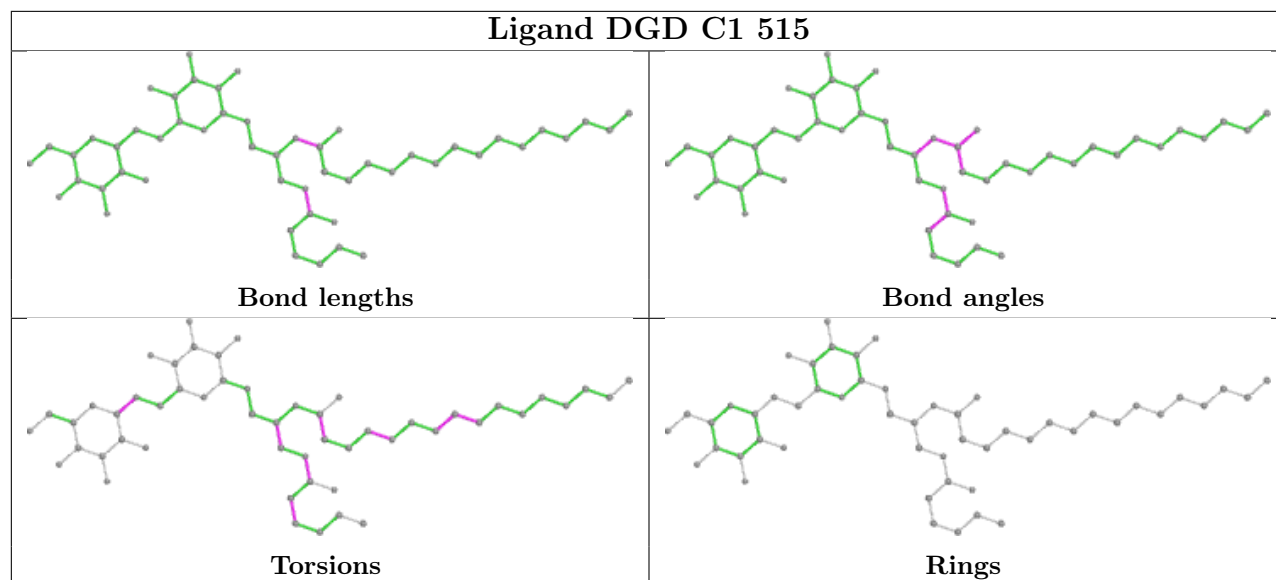




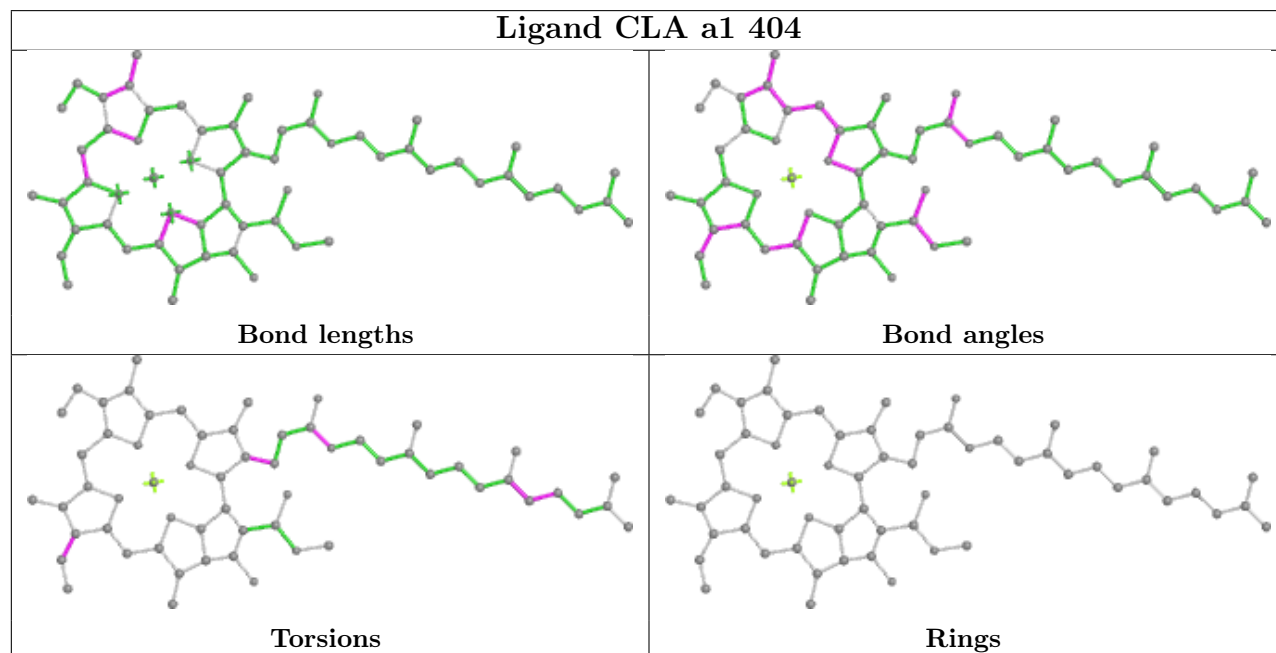




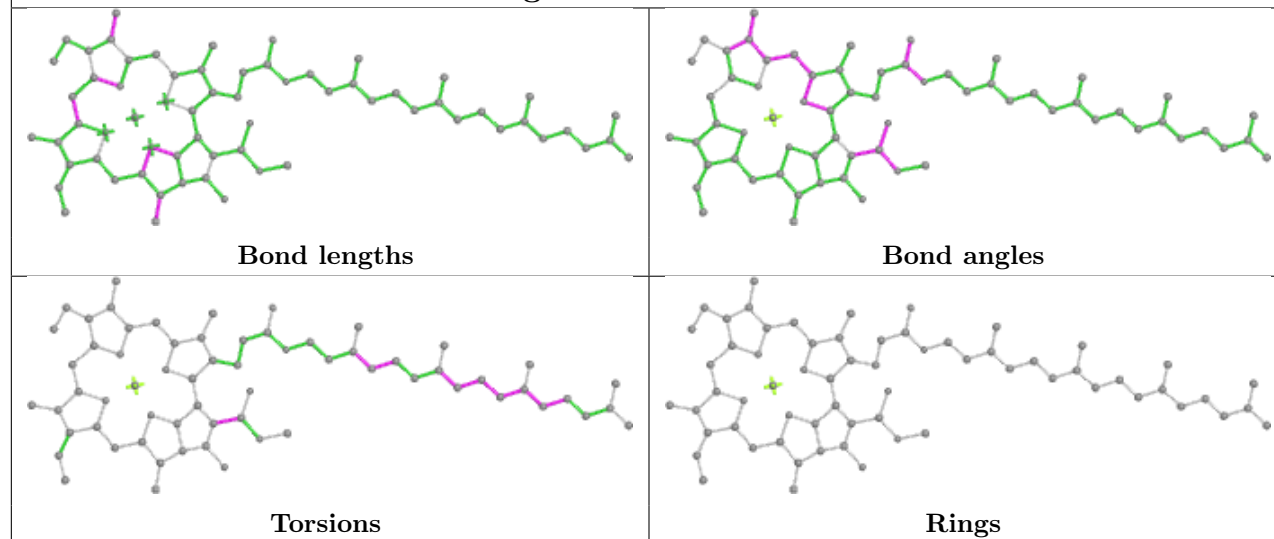
## Ligand DGD C1 515



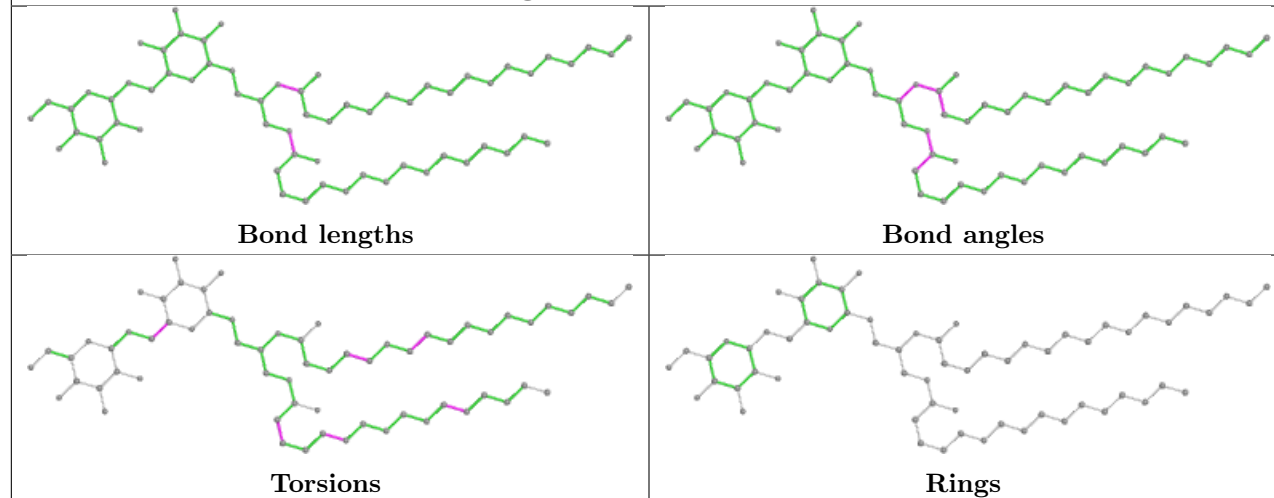
## Ligand CLA a1 404



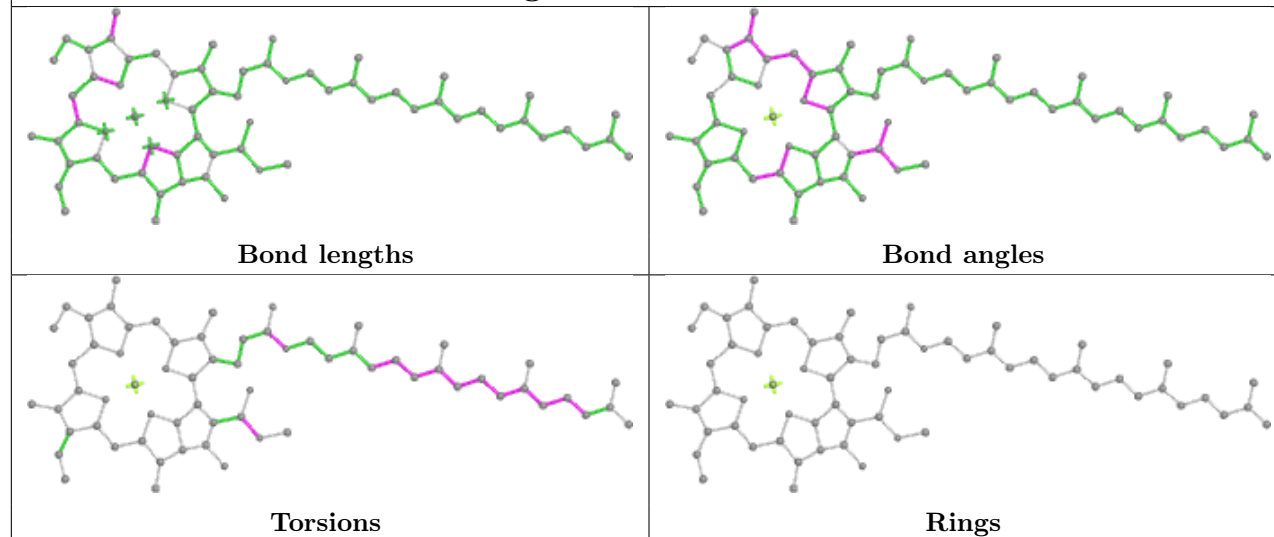
## Ligand CLA B2 613

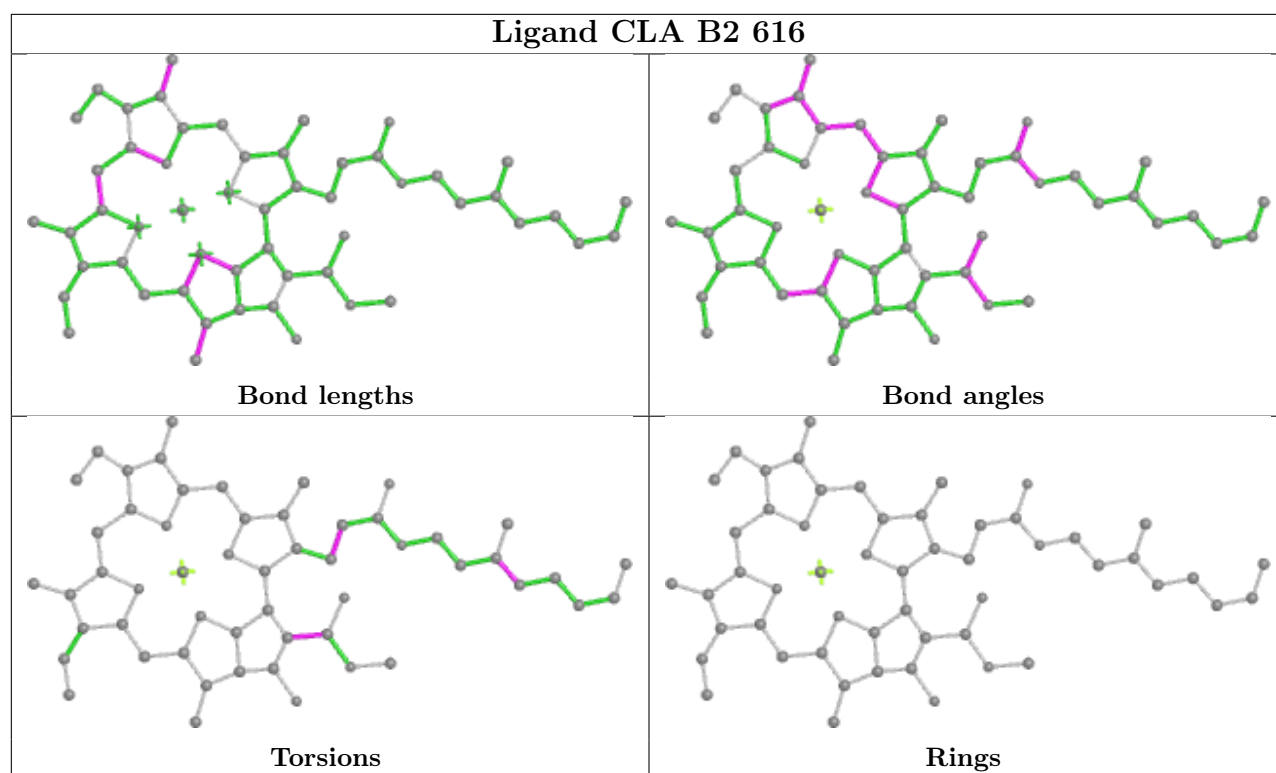


## Ligand DGD C1 517

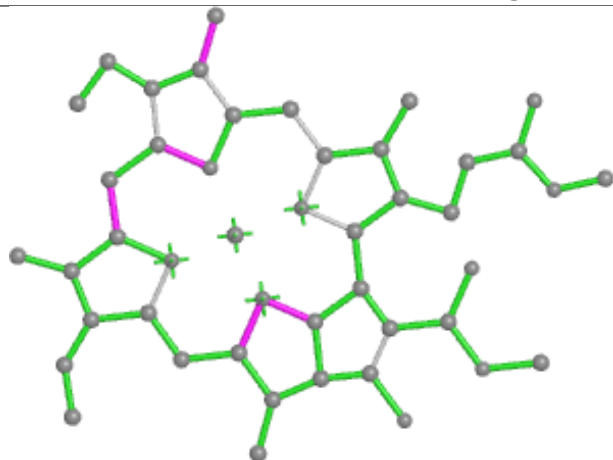


## Ligand CLA B2 619

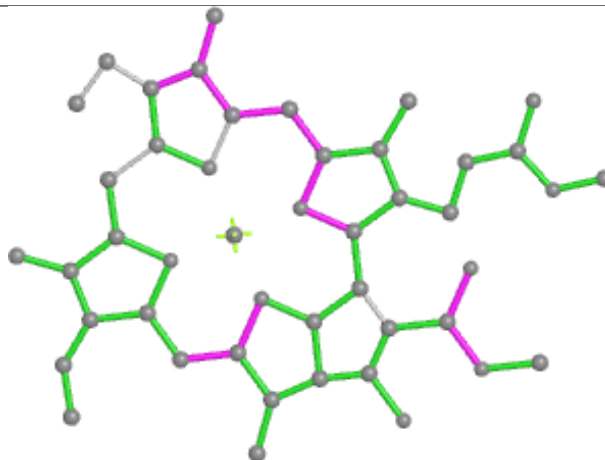




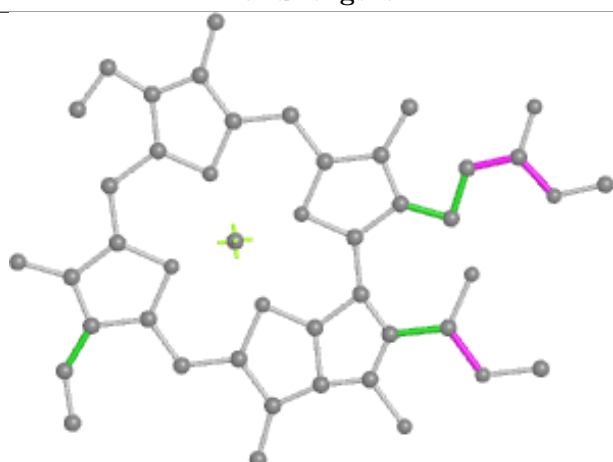
## Ligand CLA C2 516



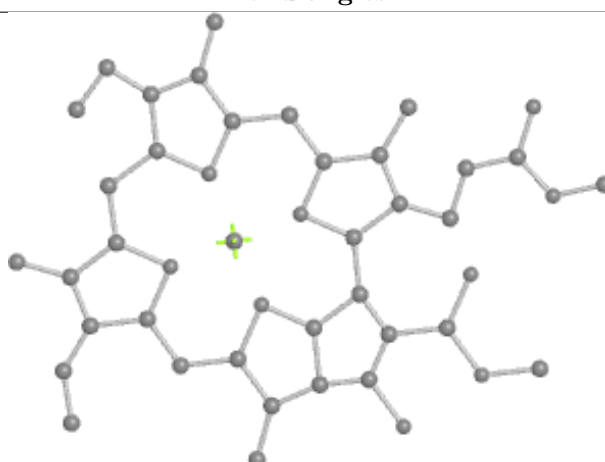
Bond lengths



Bond angles

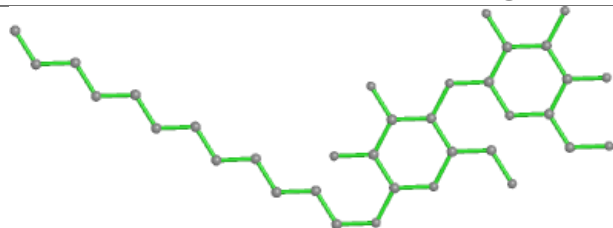


Torsions

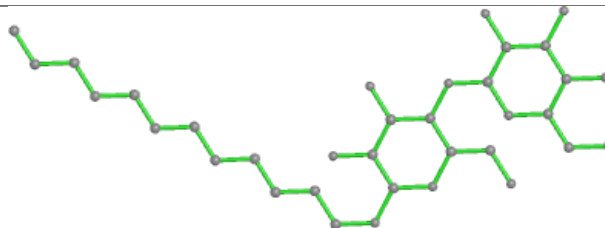


Rings

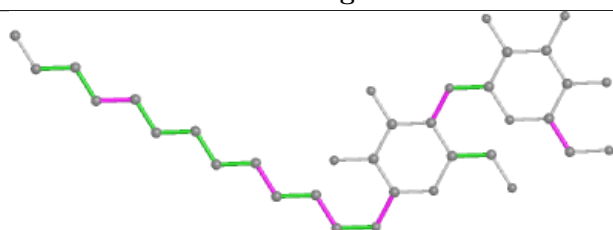
## Ligand LMT m1 101



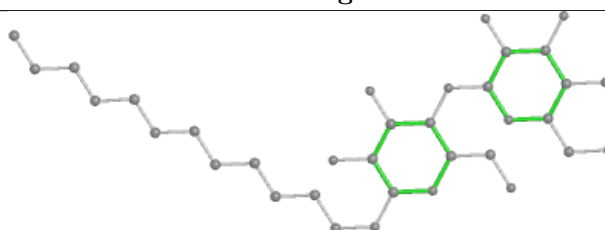
Bond lengths



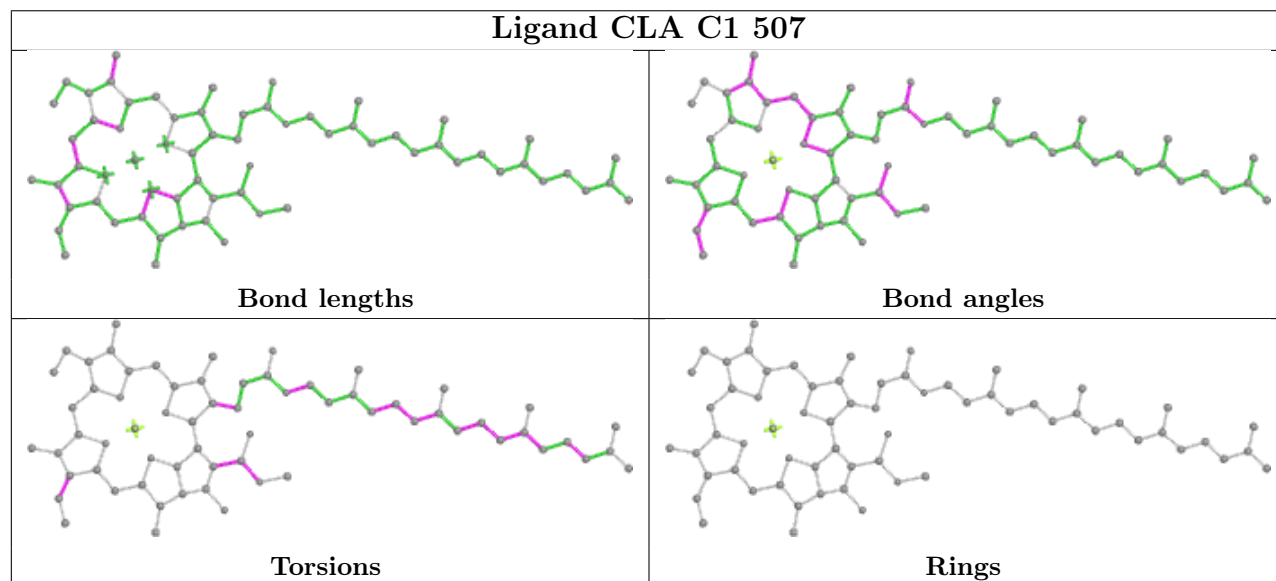
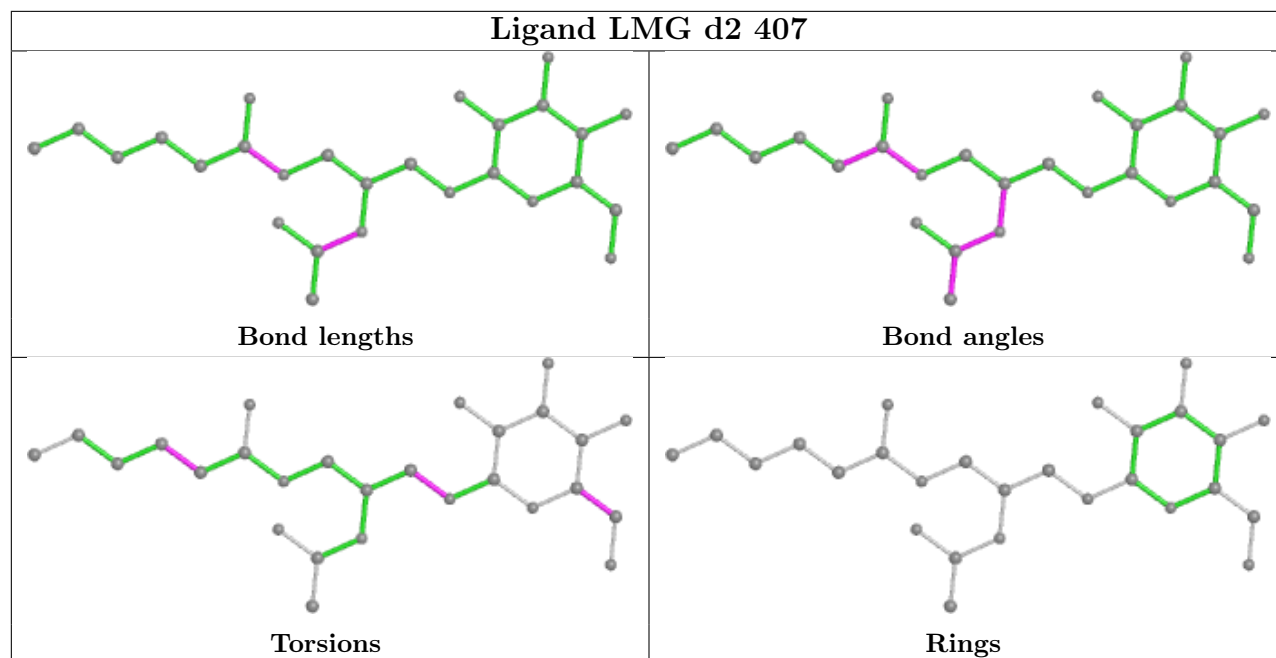
Bond angles

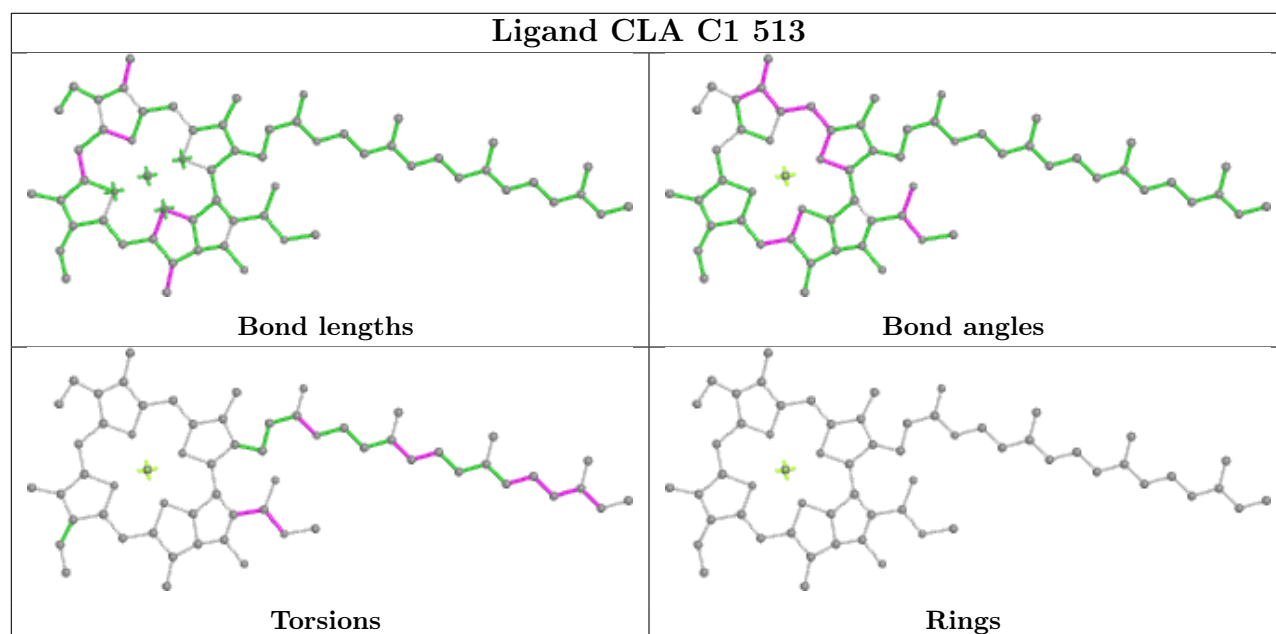
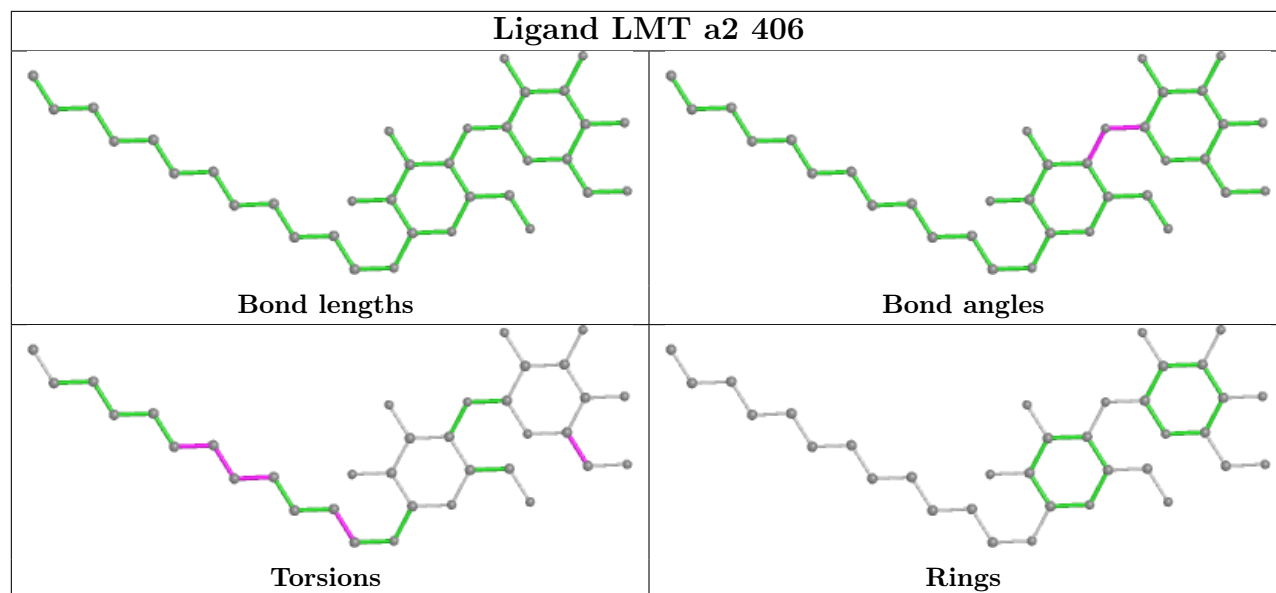


Torsions

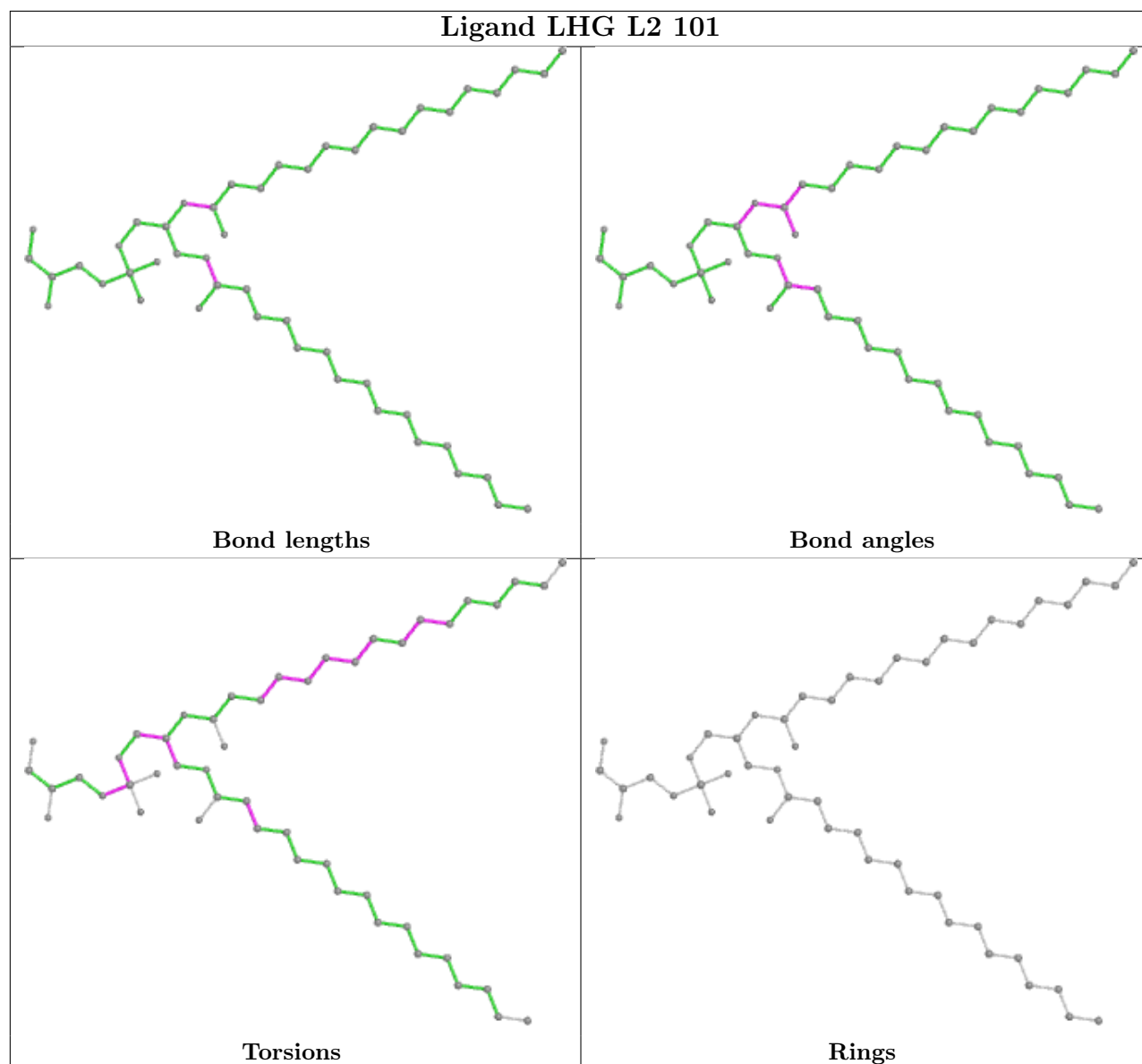
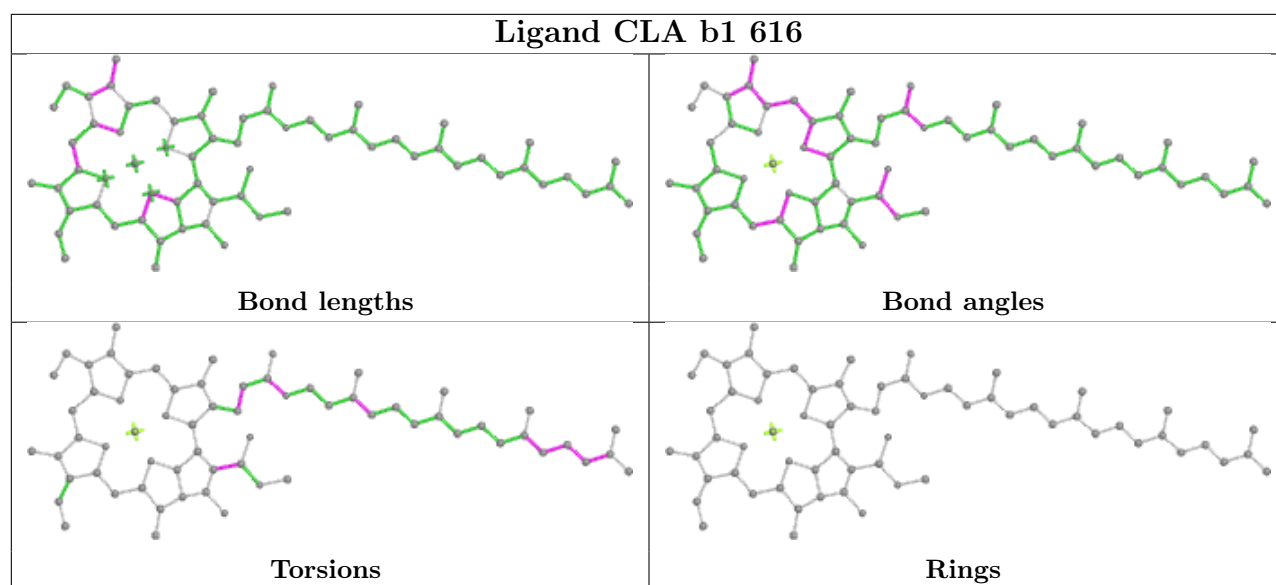


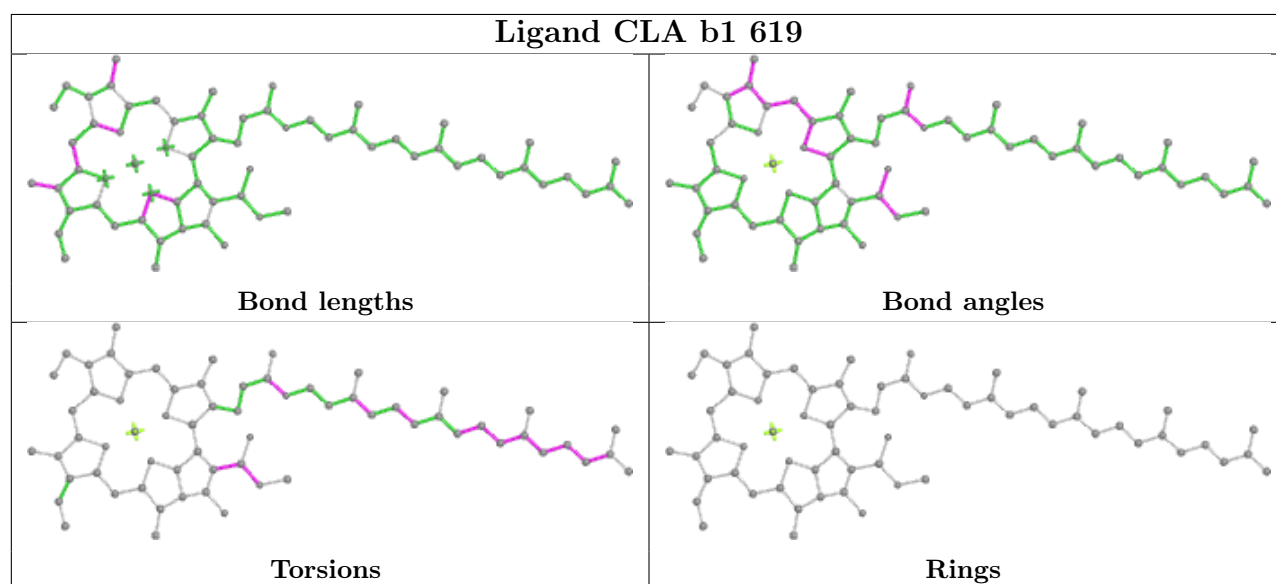
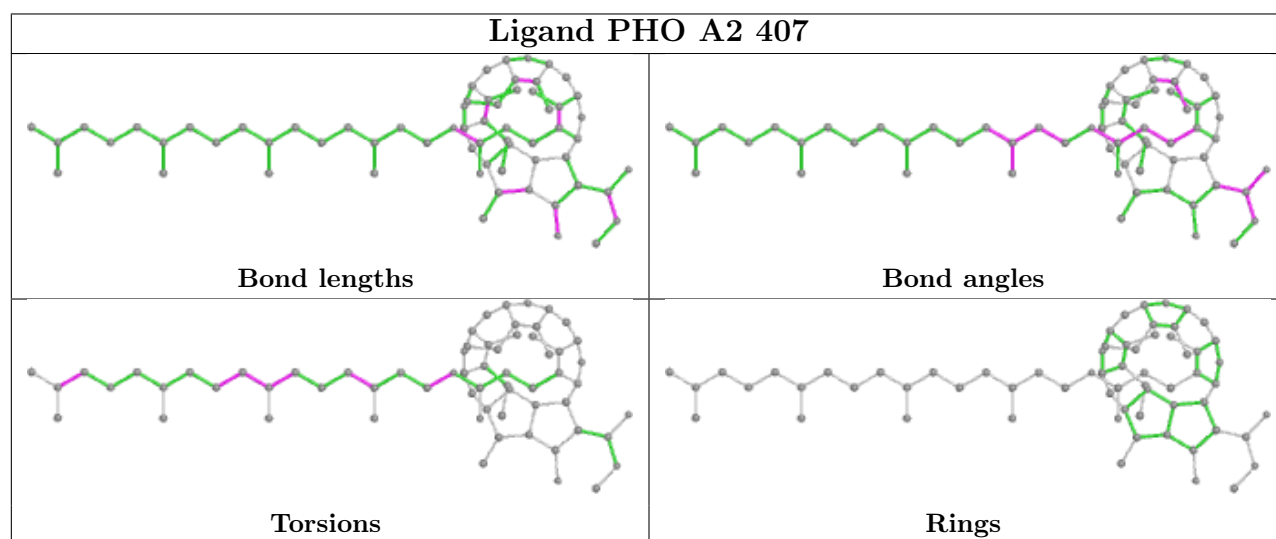
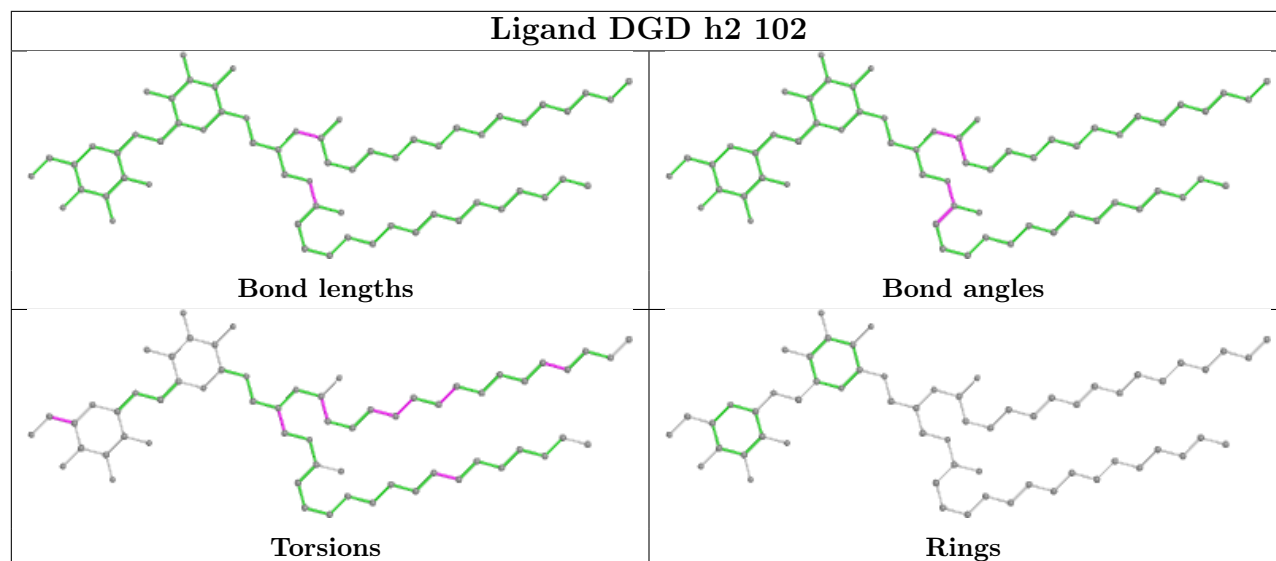
Rings

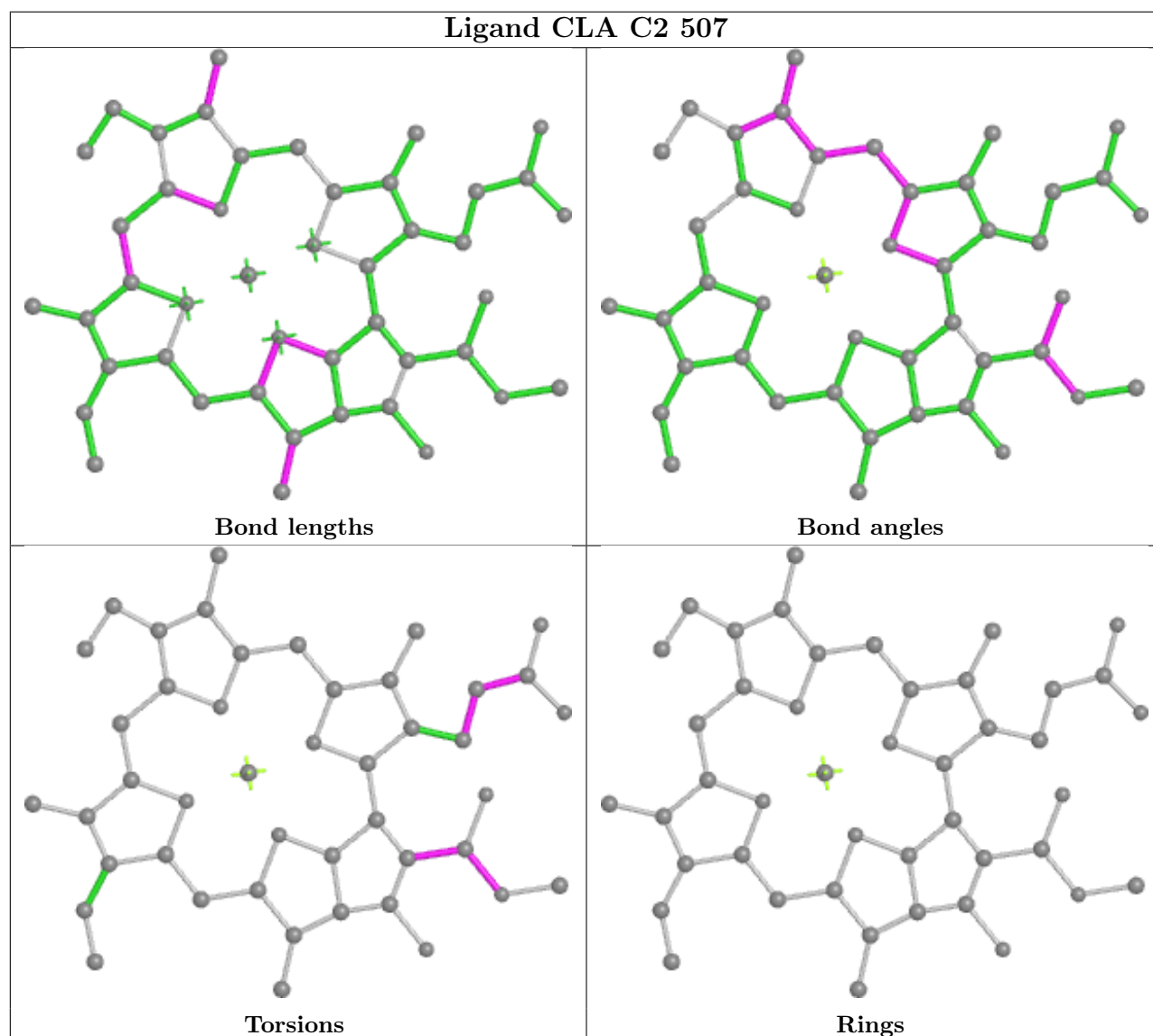
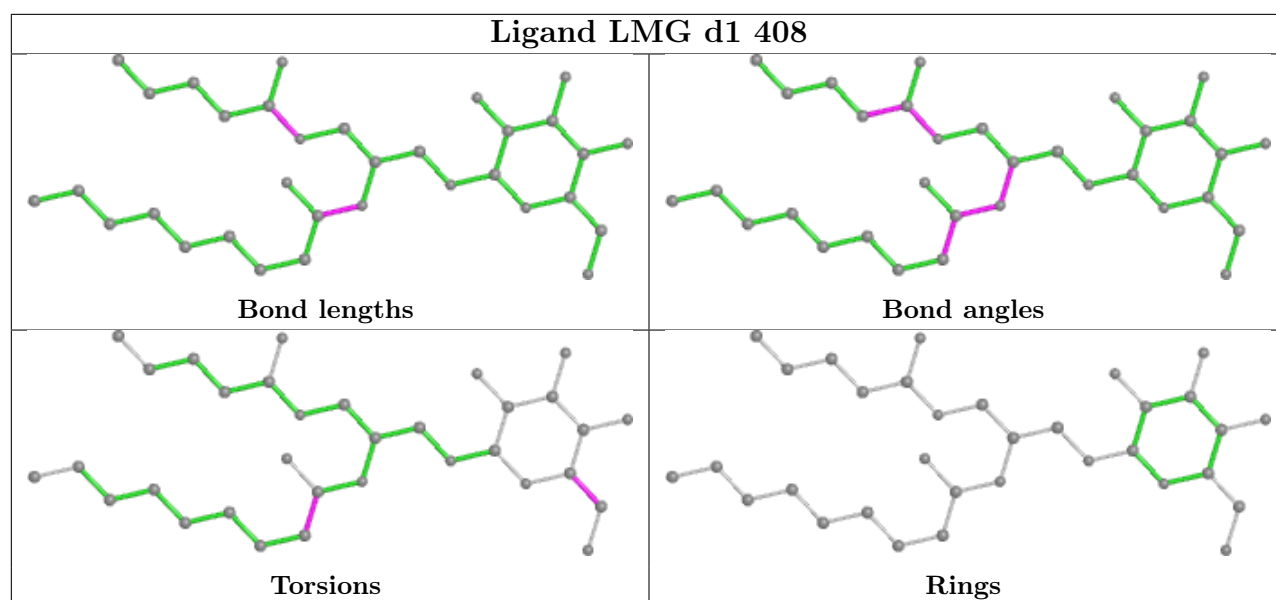




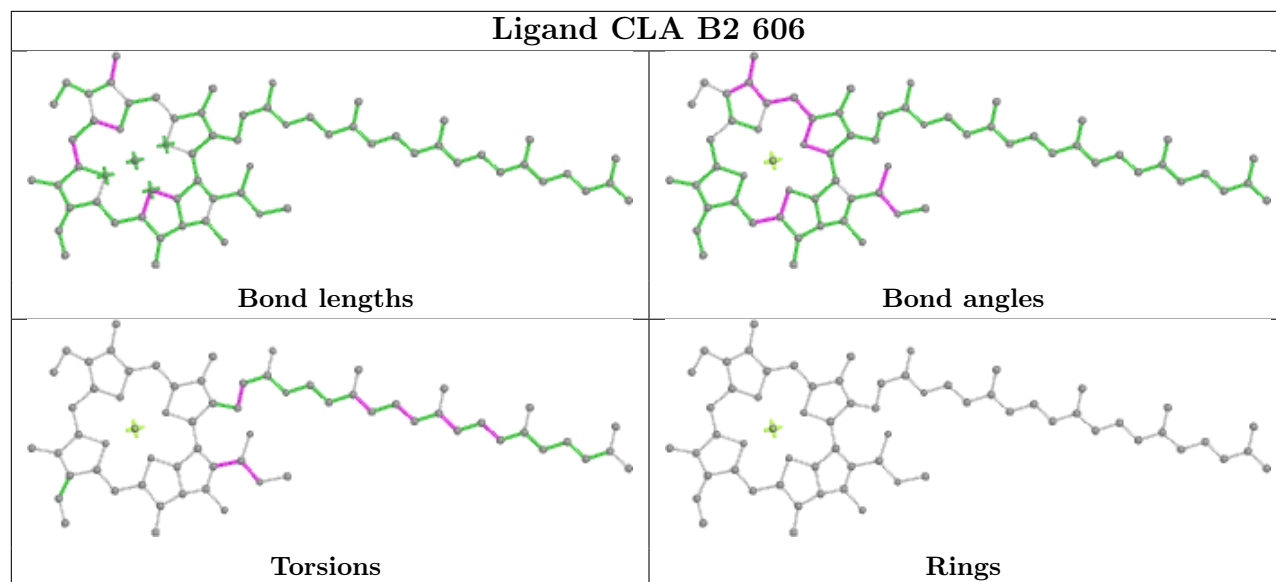




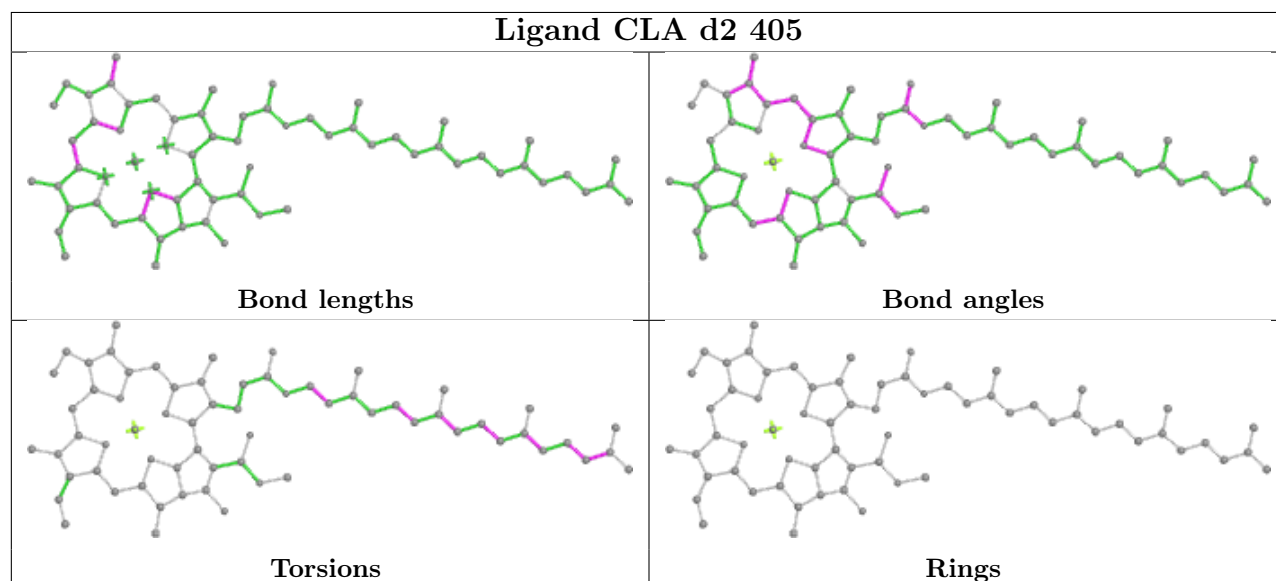




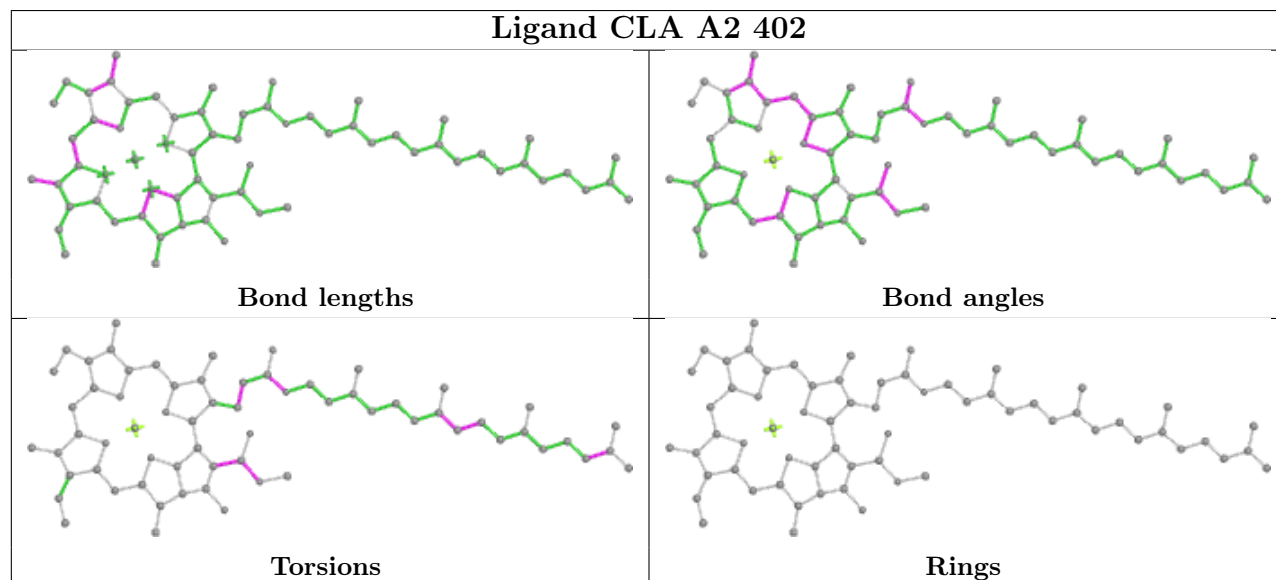
## Ligand CLA B2 606

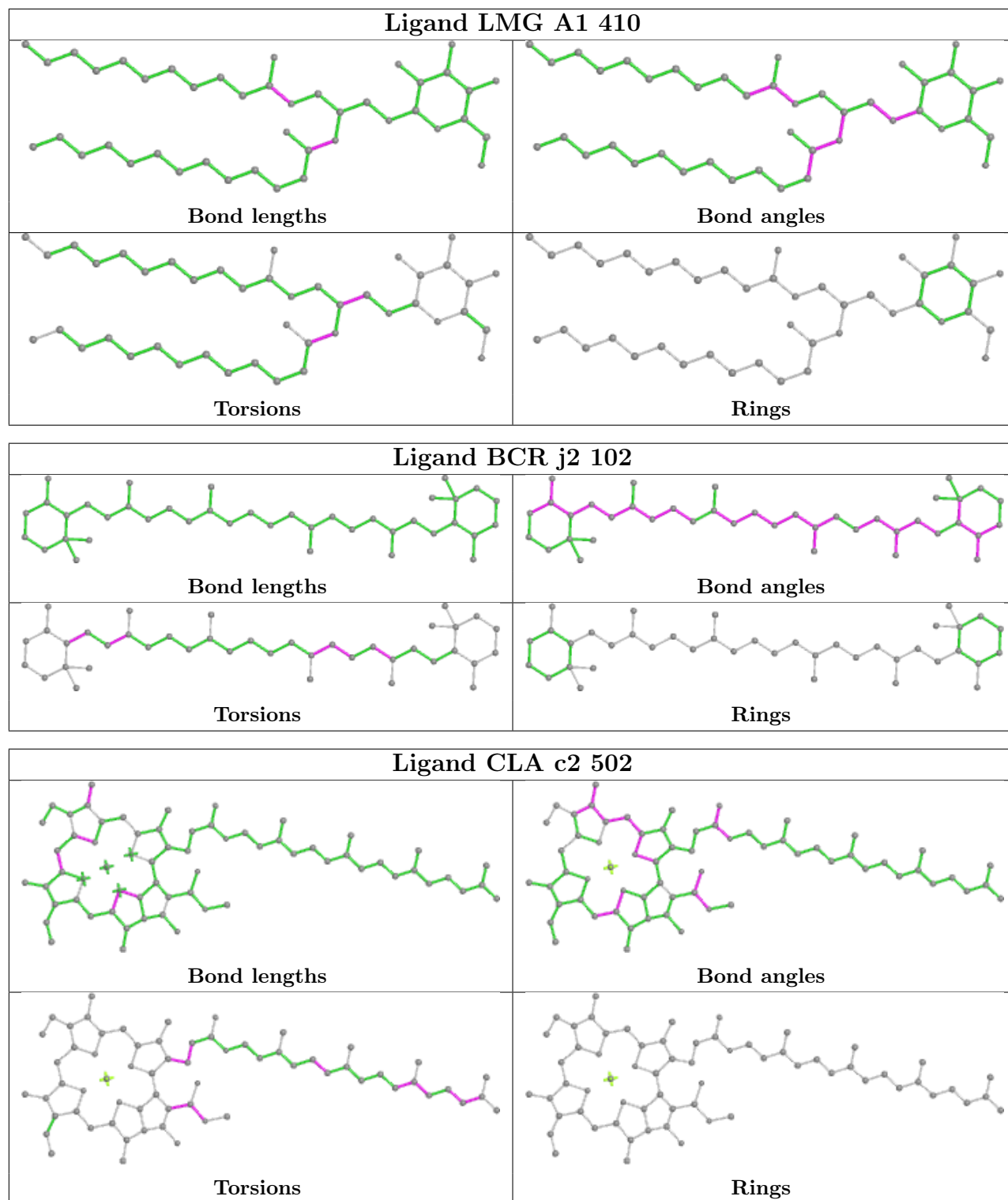


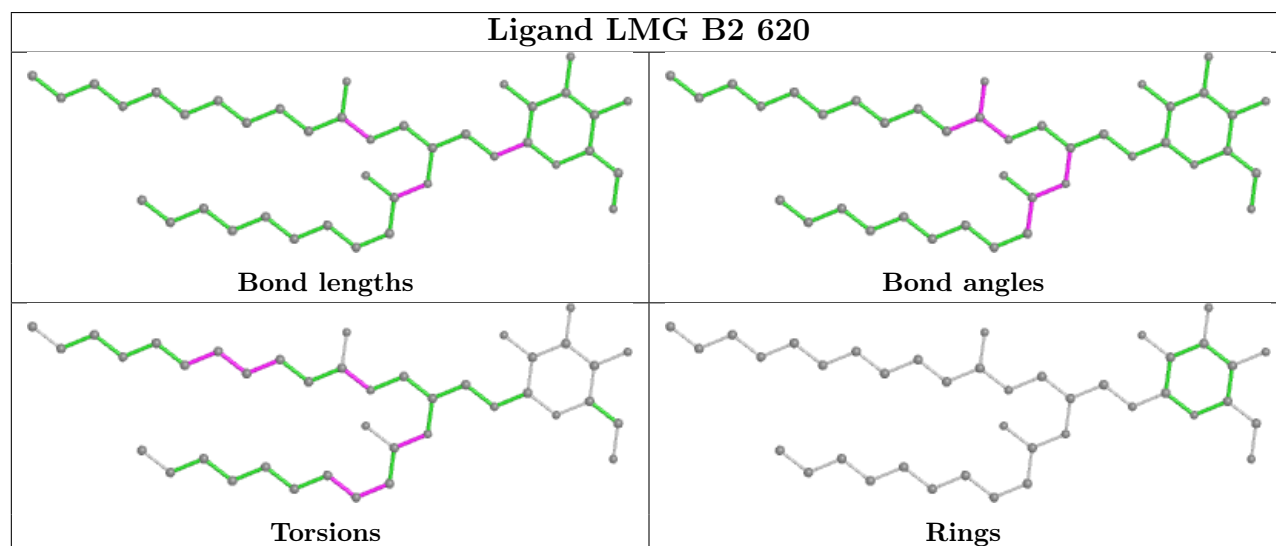
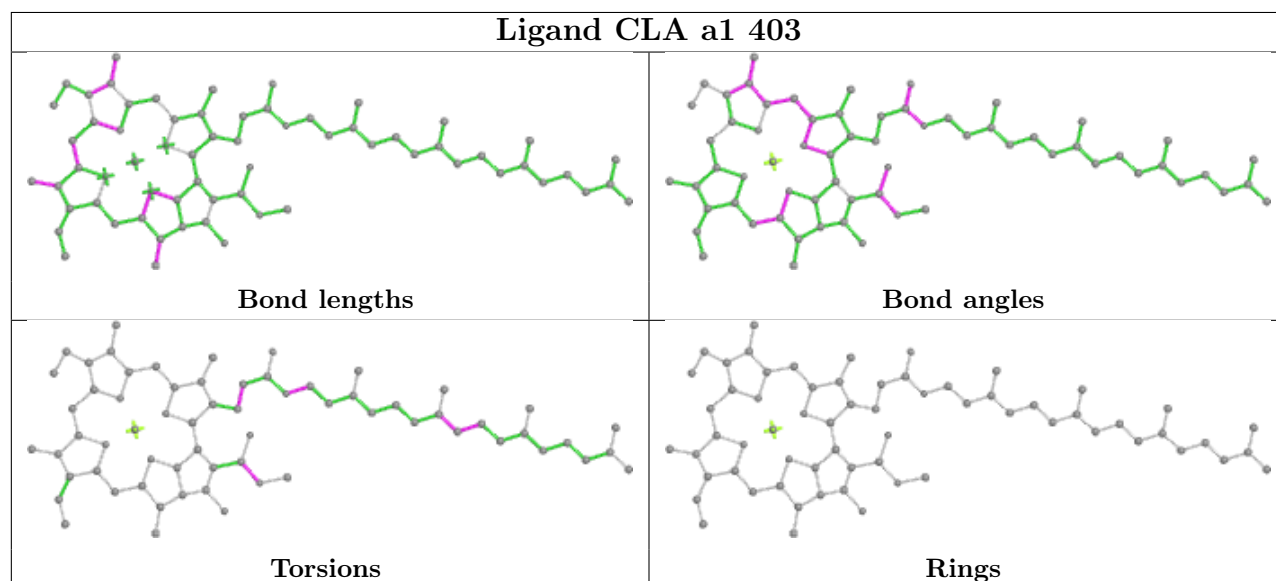
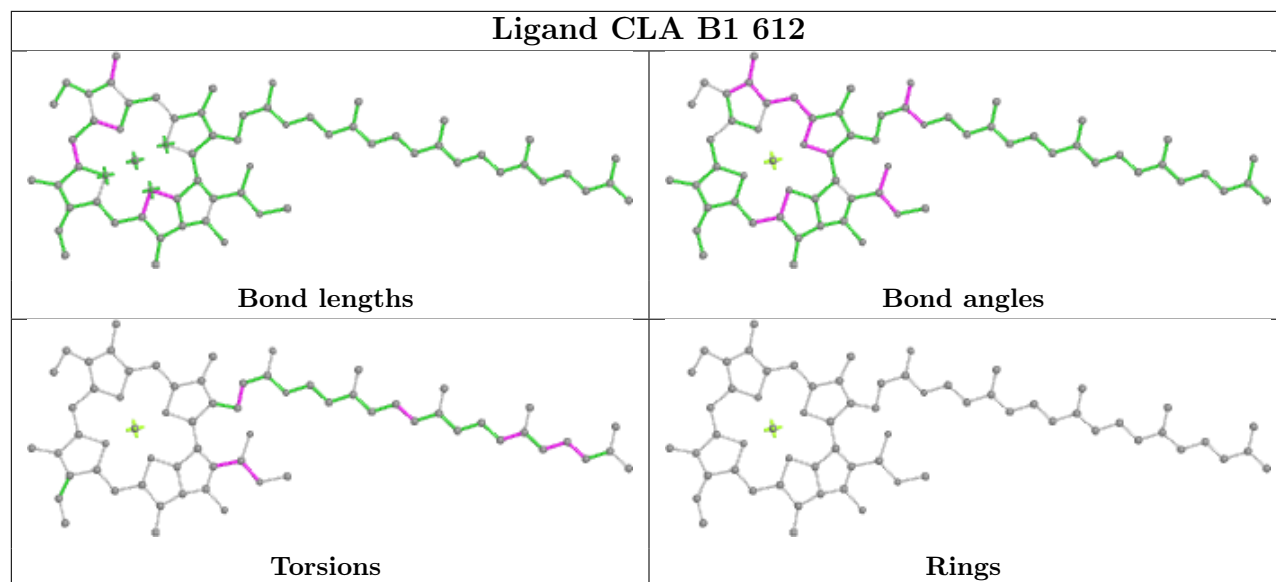
## Ligand CLA d2 405

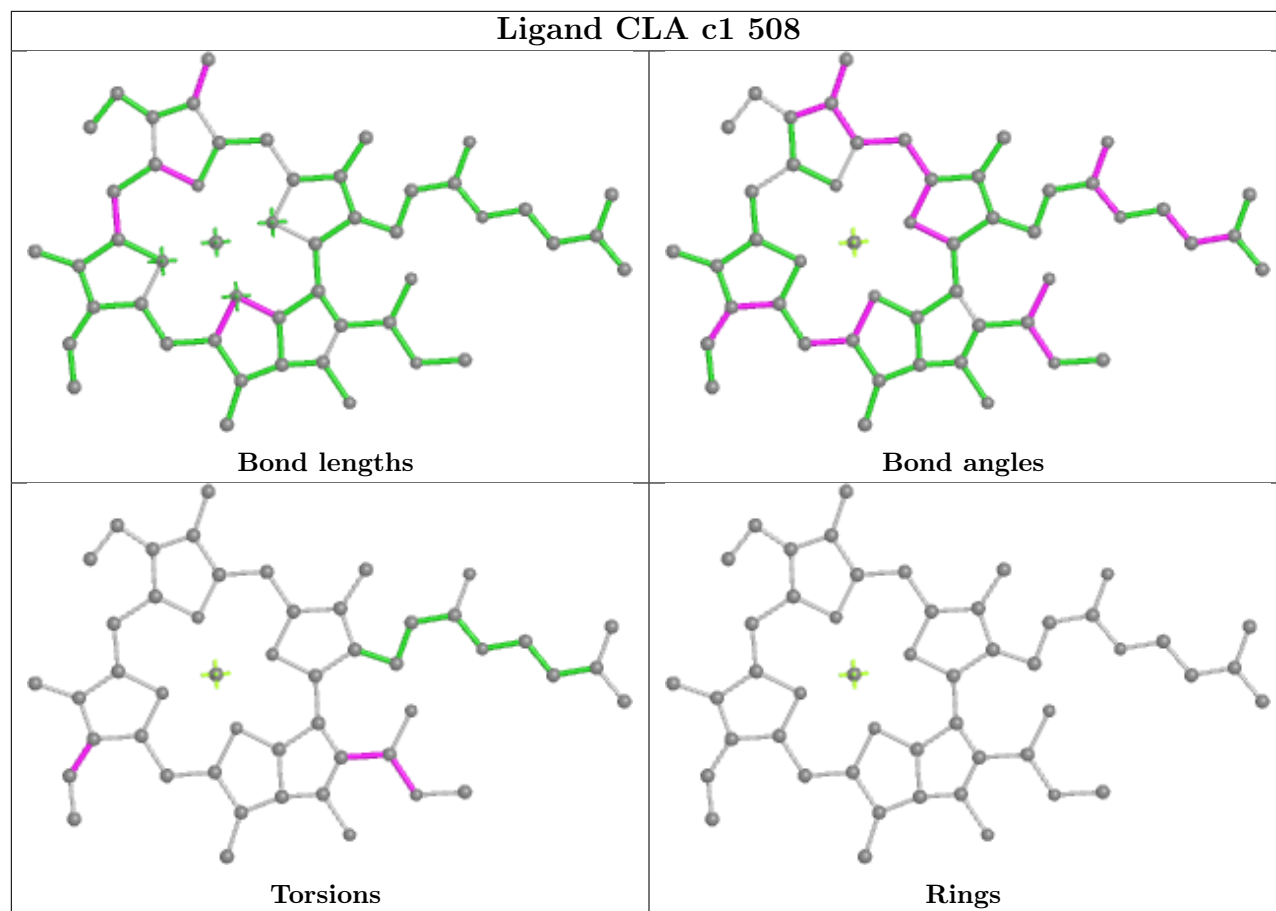
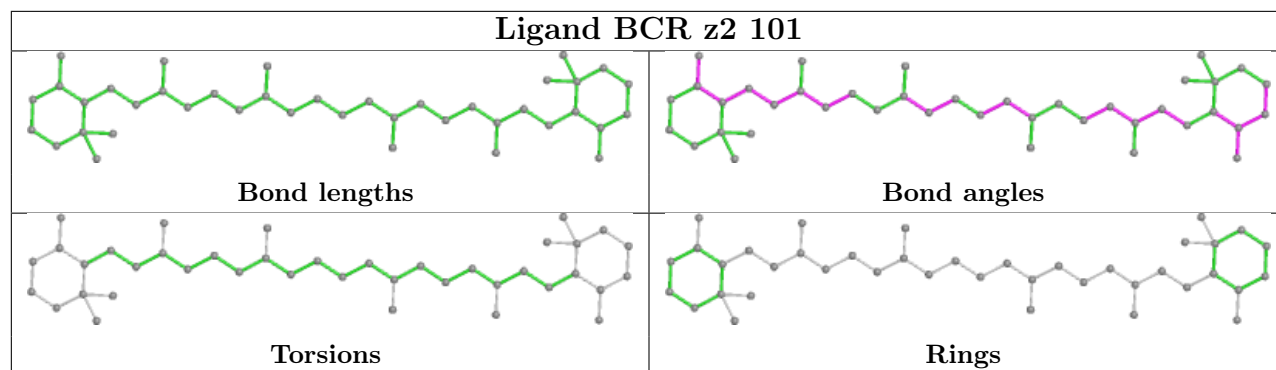


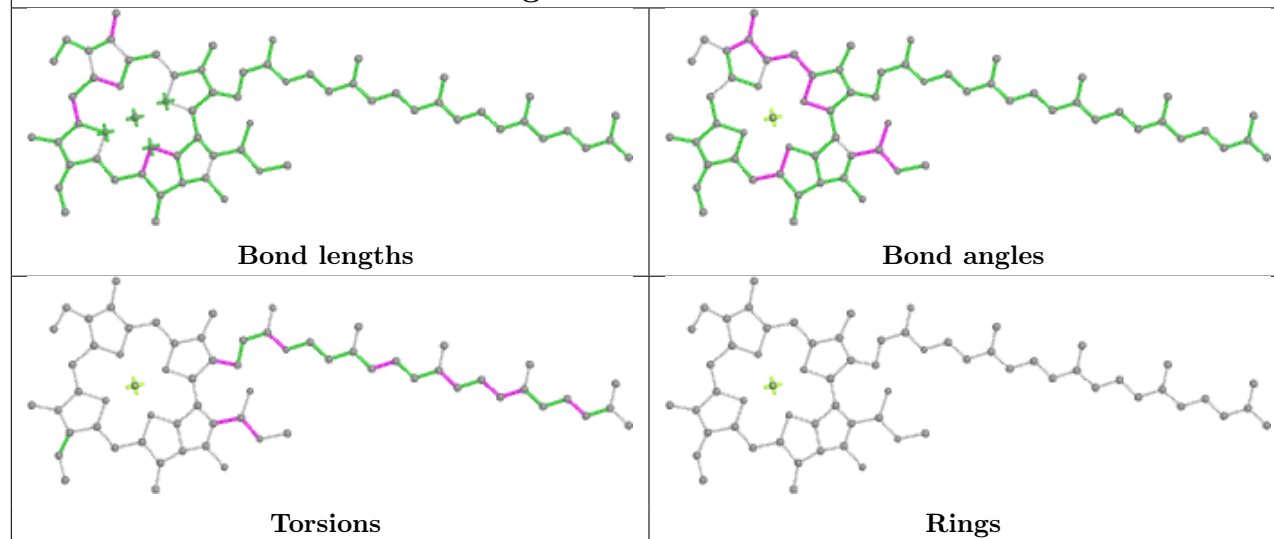
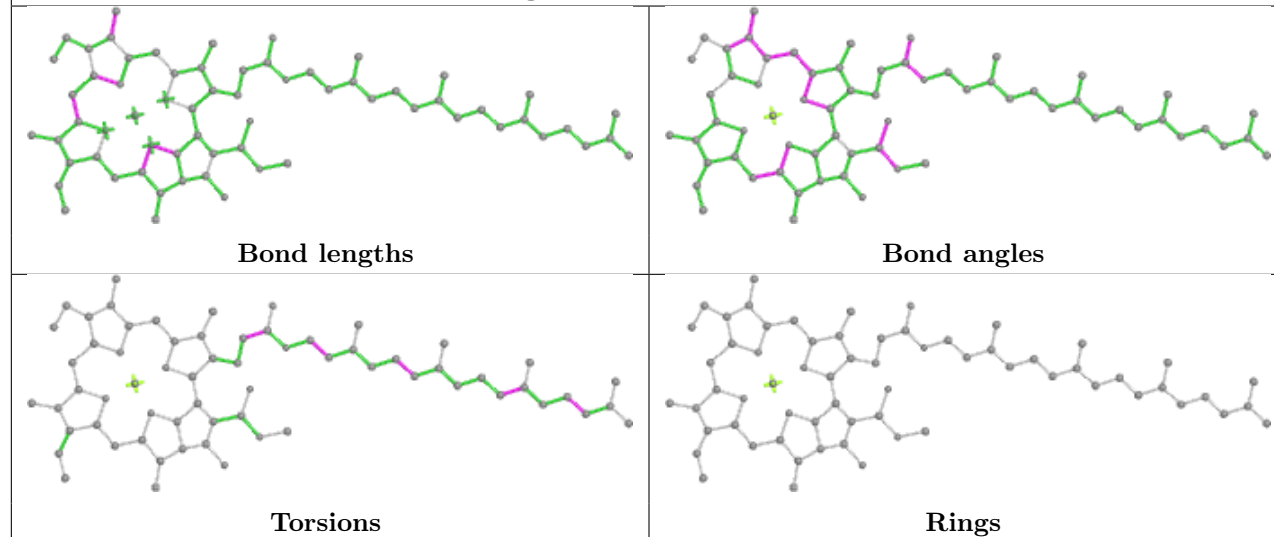
## Ligand CLA A2 402



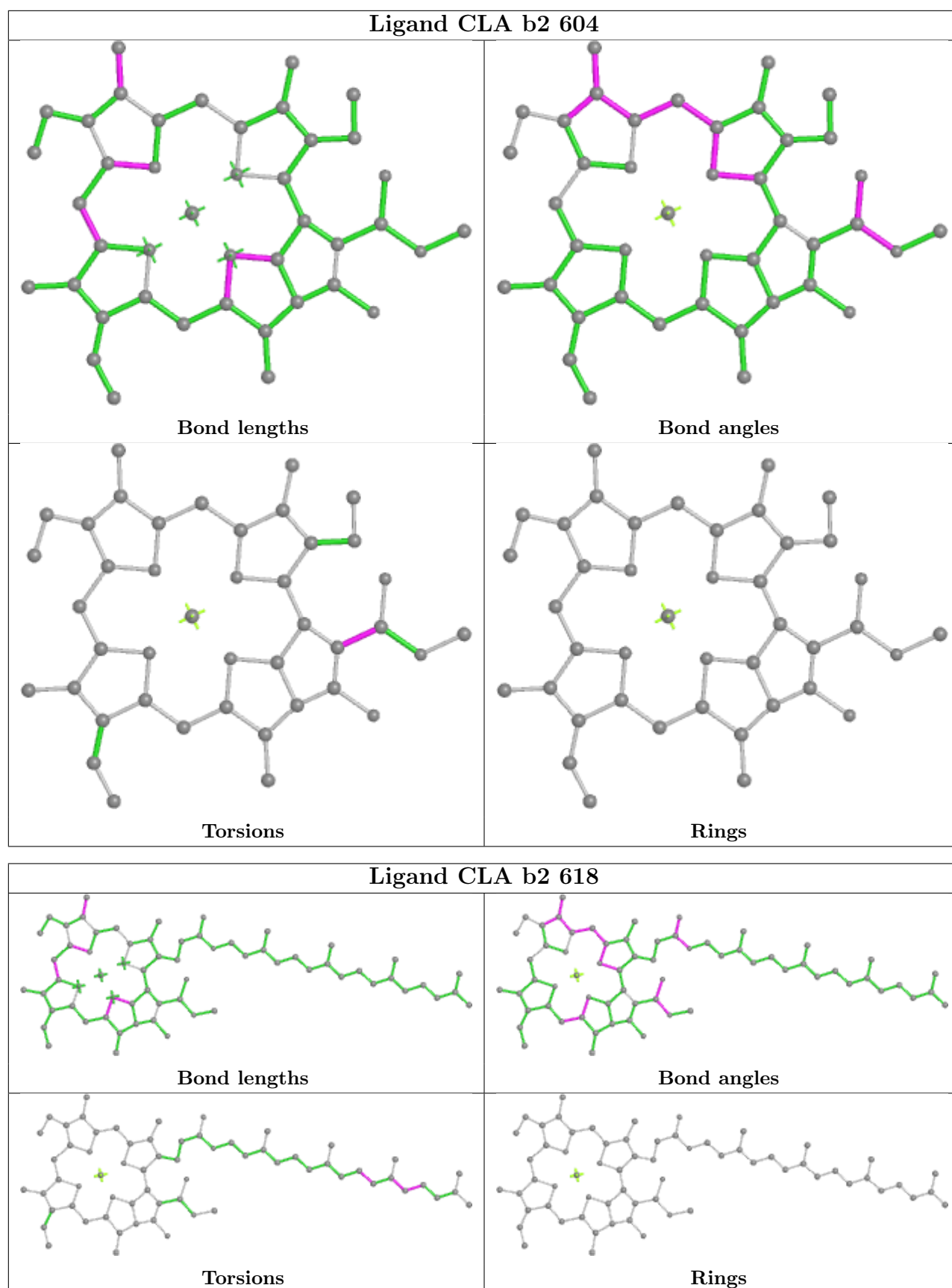




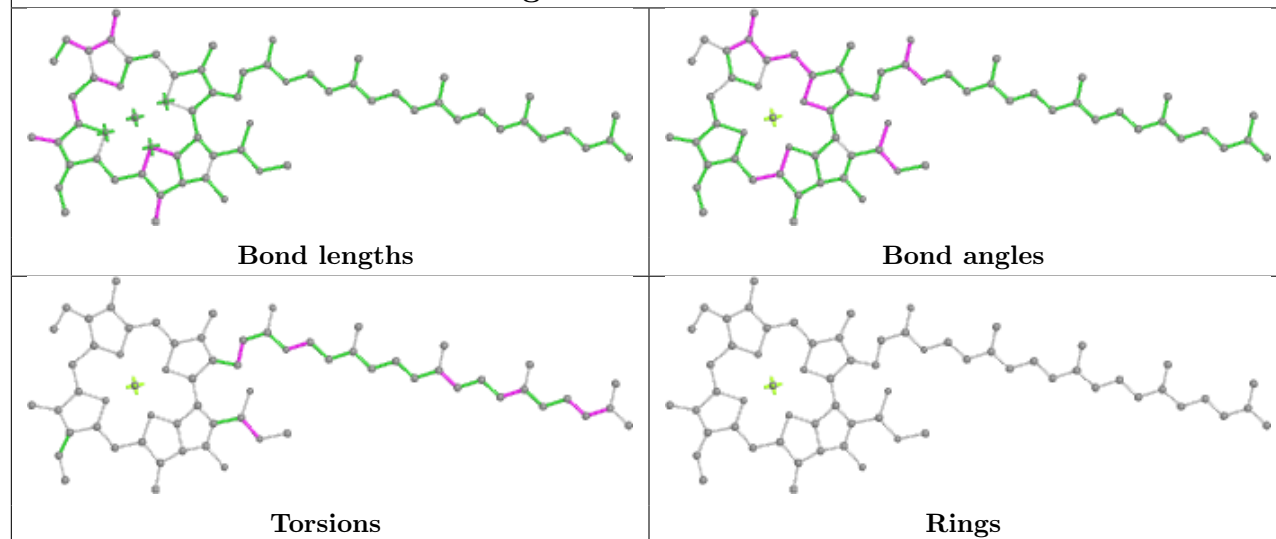


**Ligand CLA D2 406****Ligand CLA D1 402**

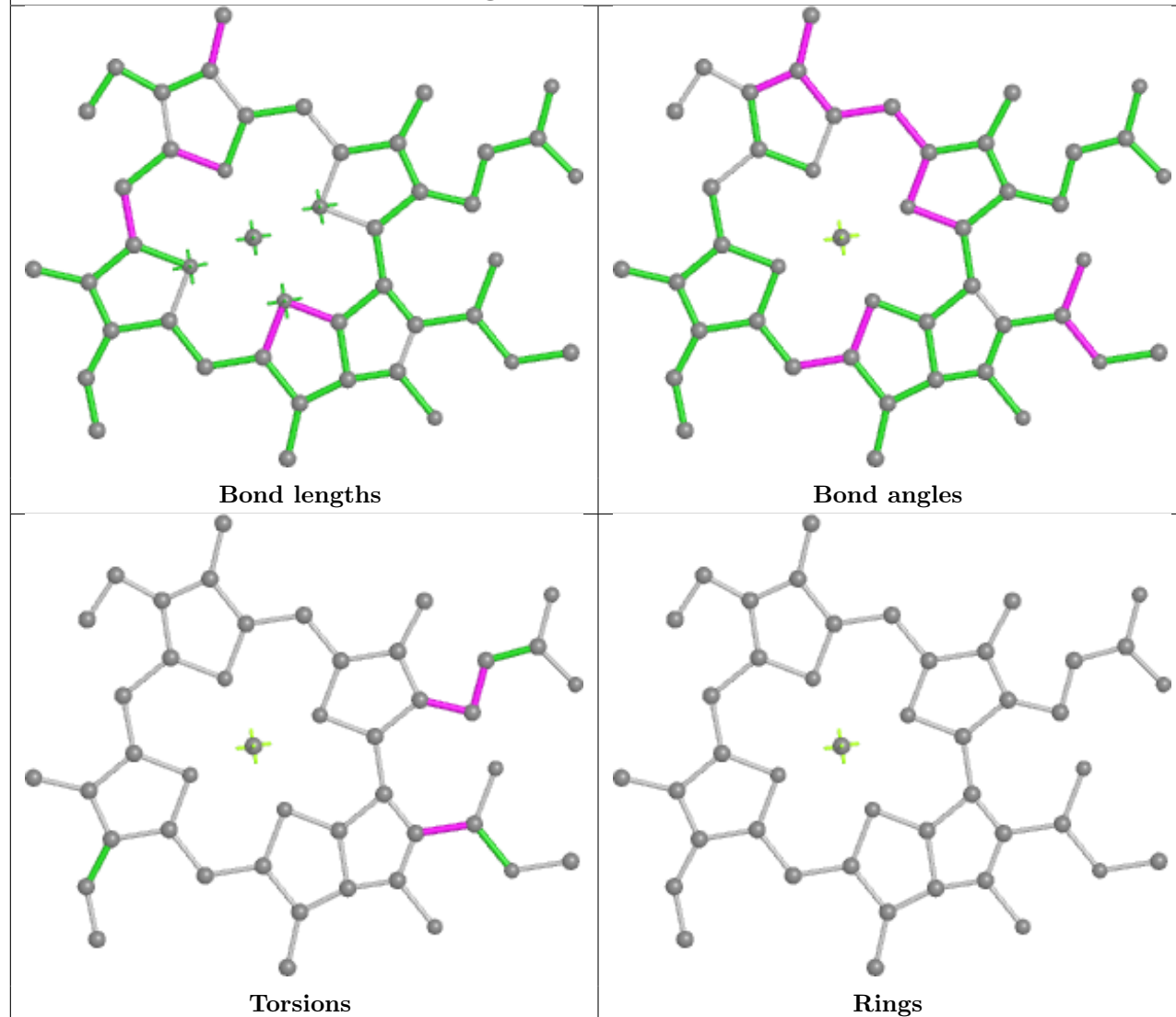


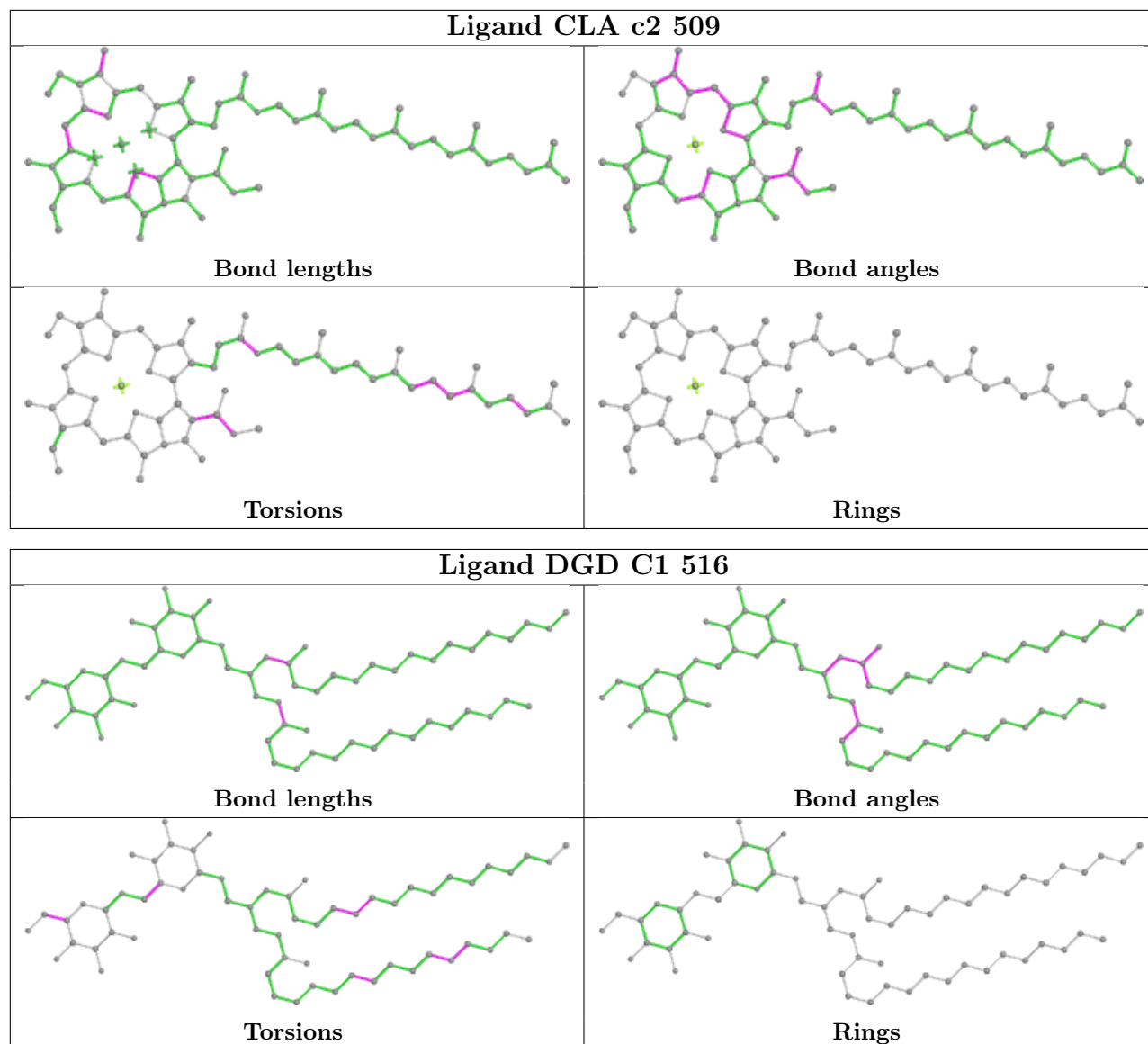


## Ligand CLA A1 403

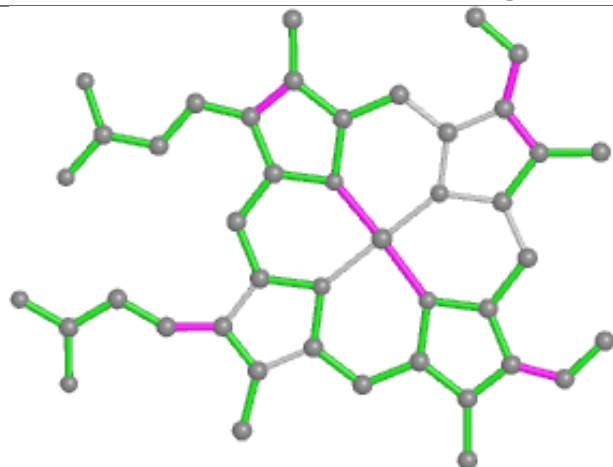


## Ligand CLA C2 510

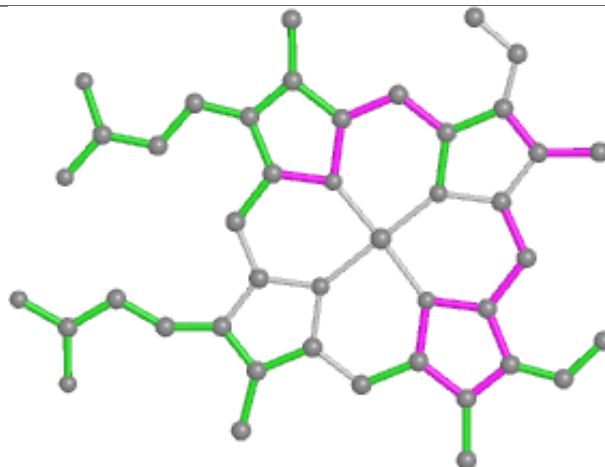




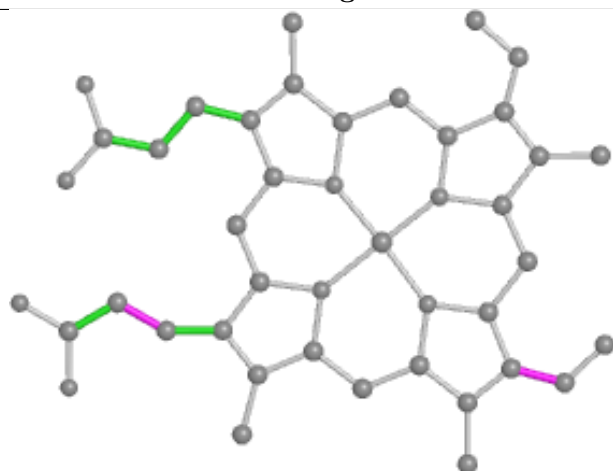
## Ligand HEM E2 101



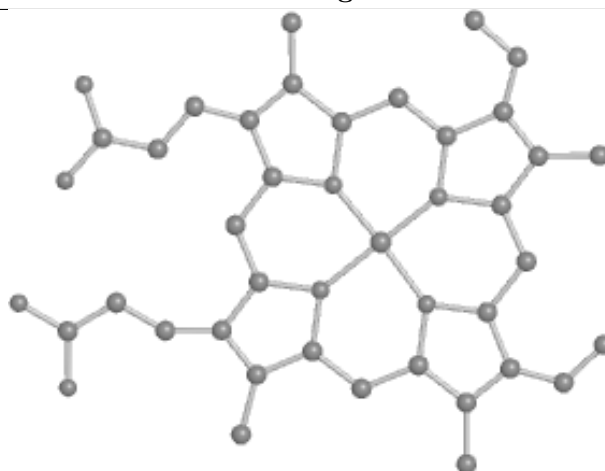
Bond lengths



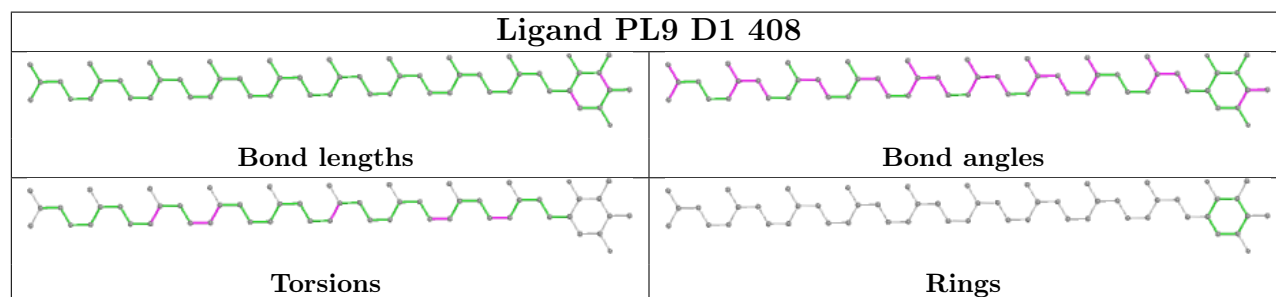
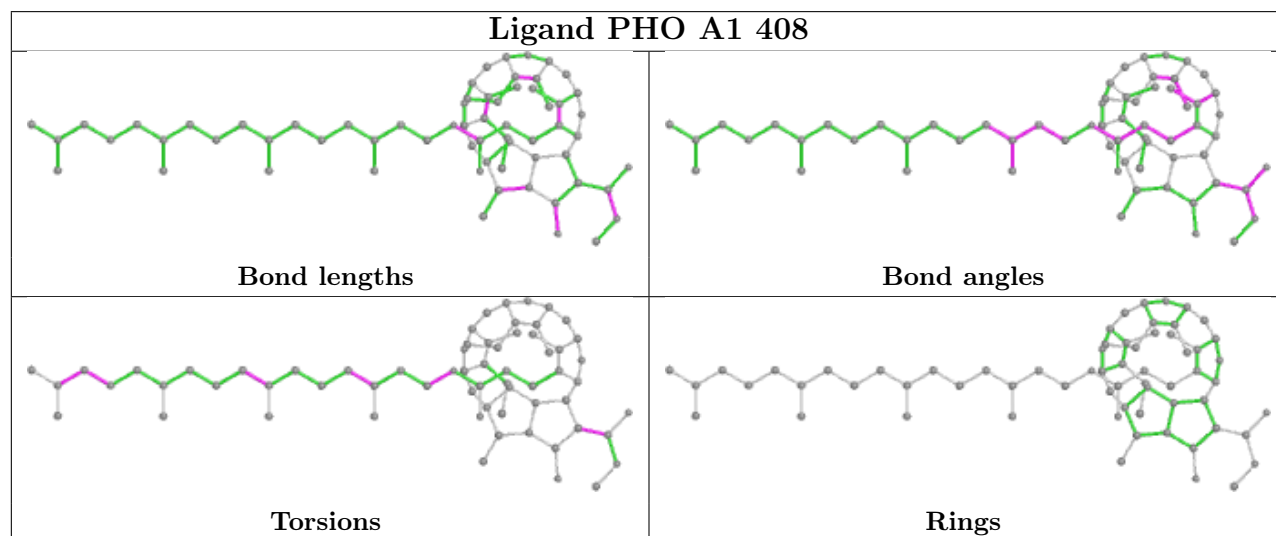
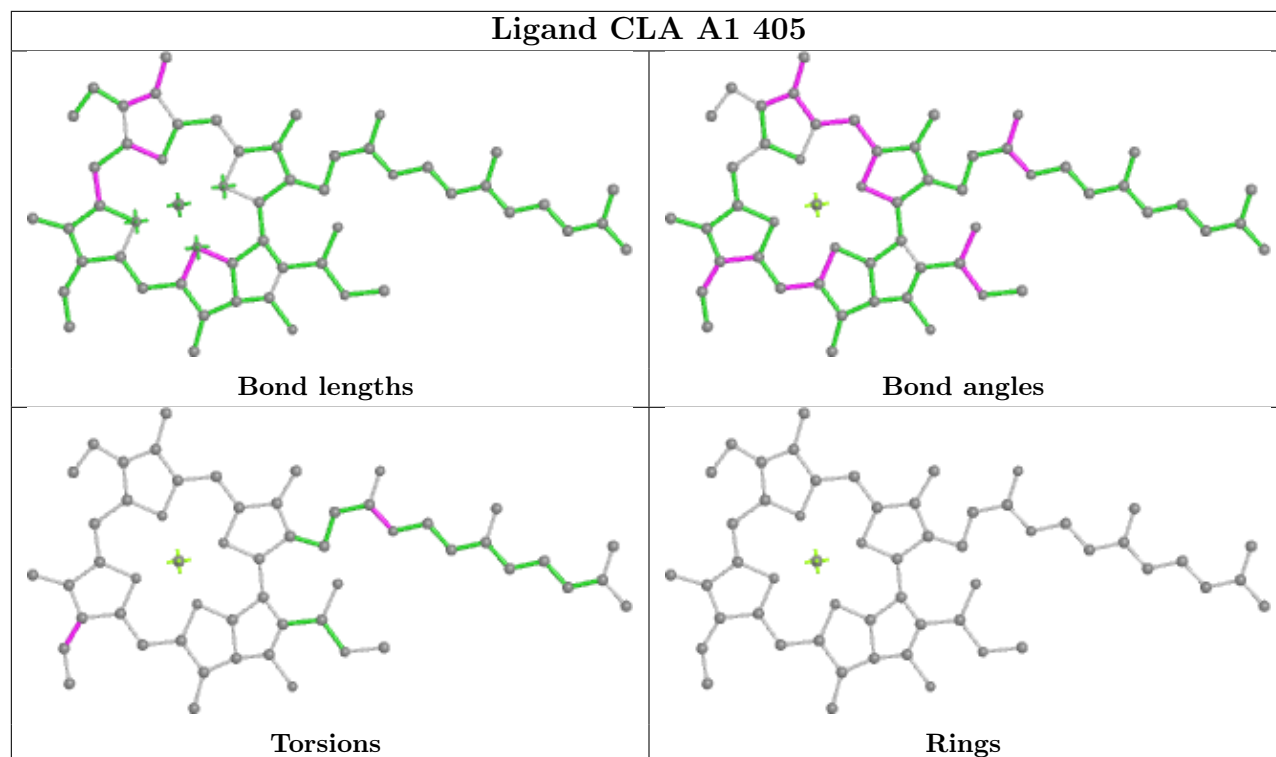
Bond angles

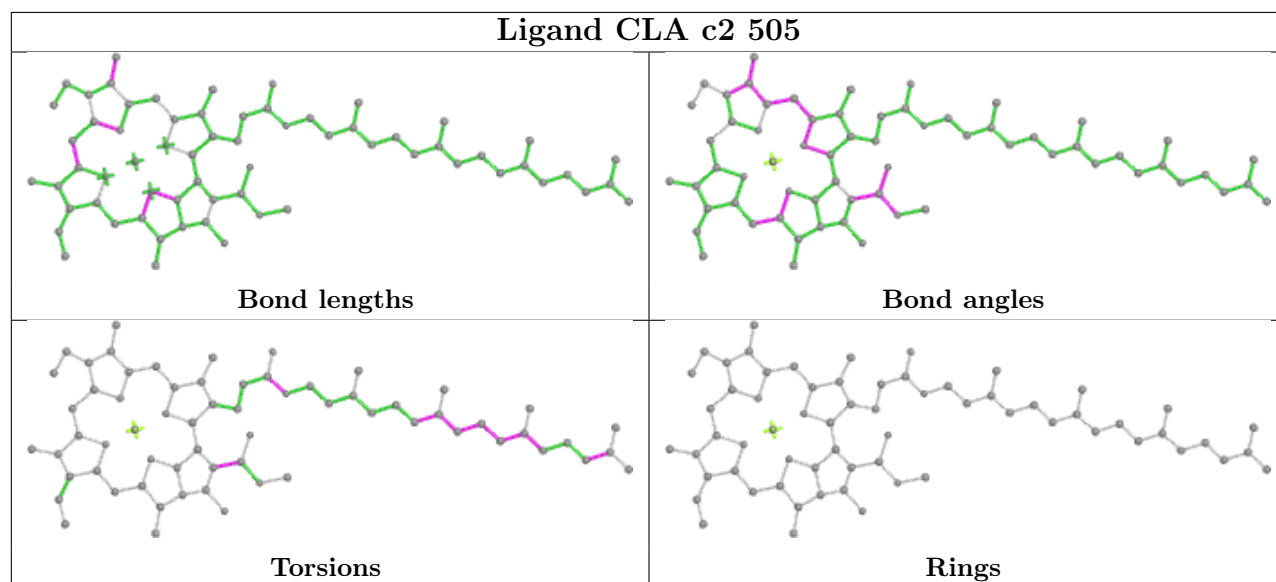
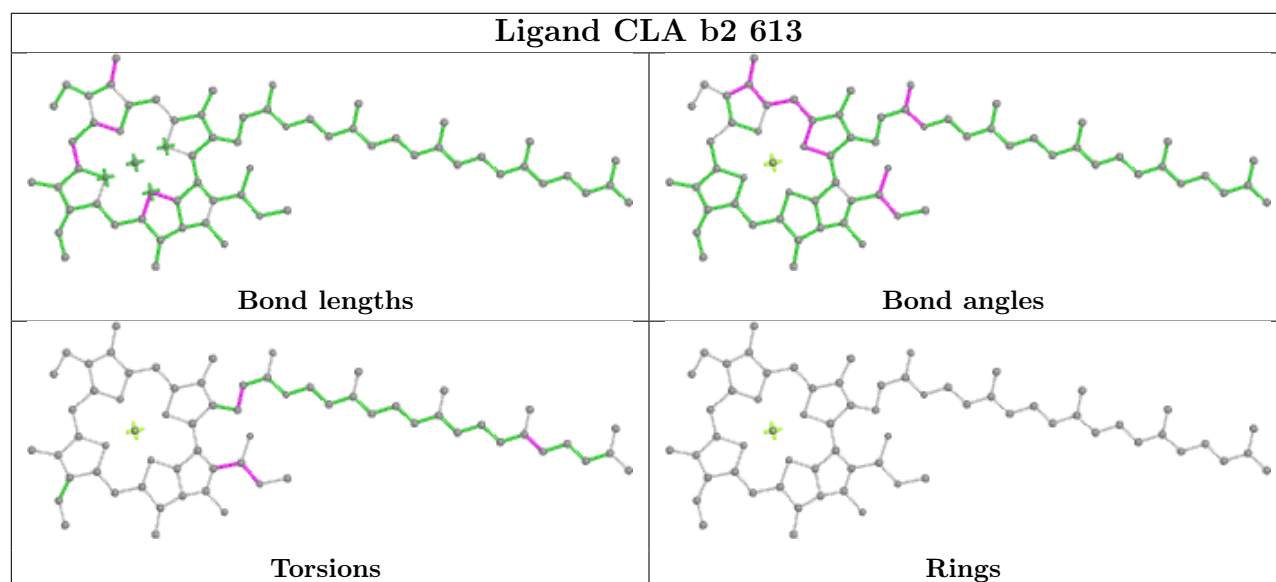
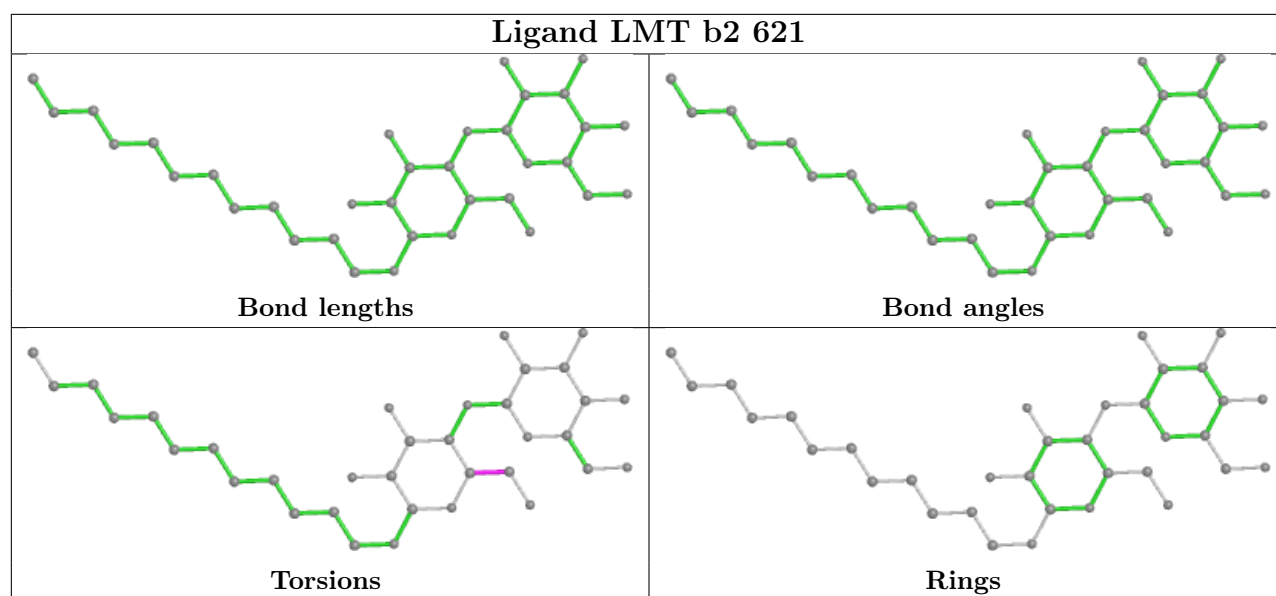


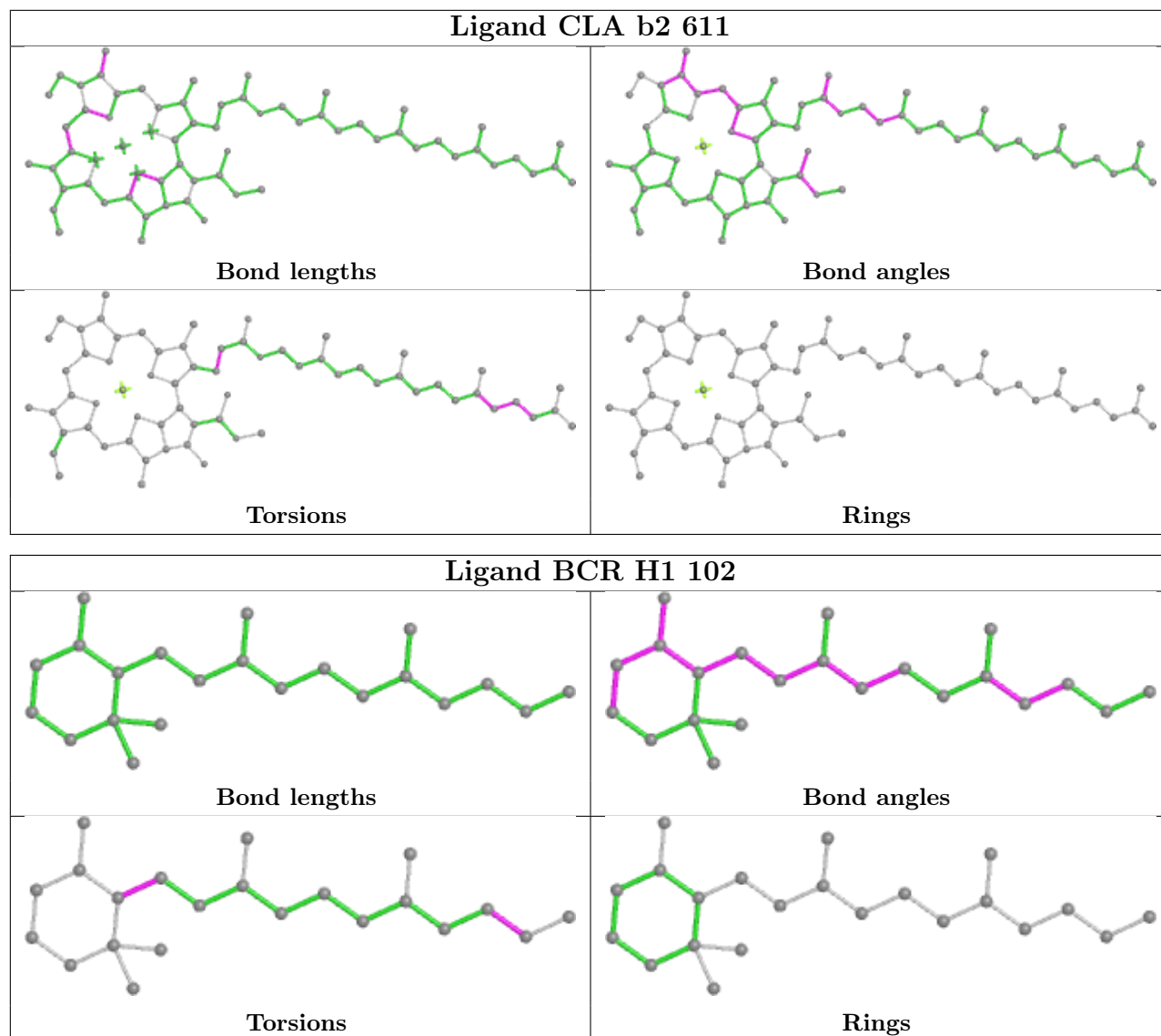
Torsions

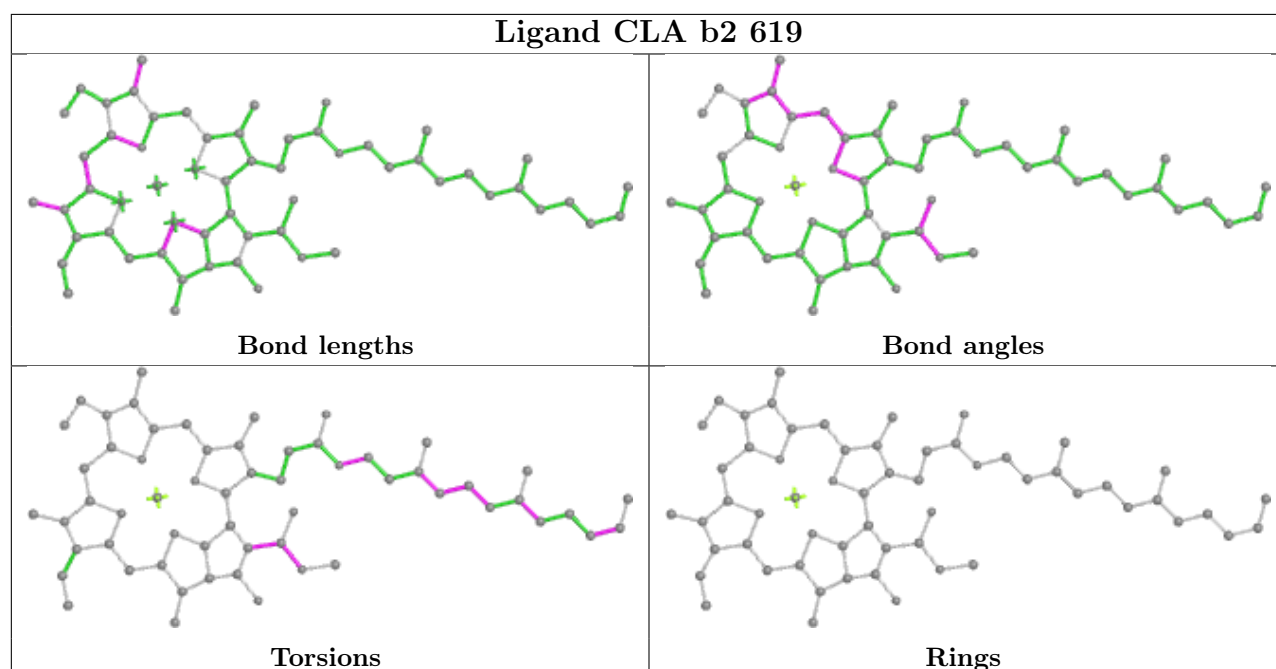
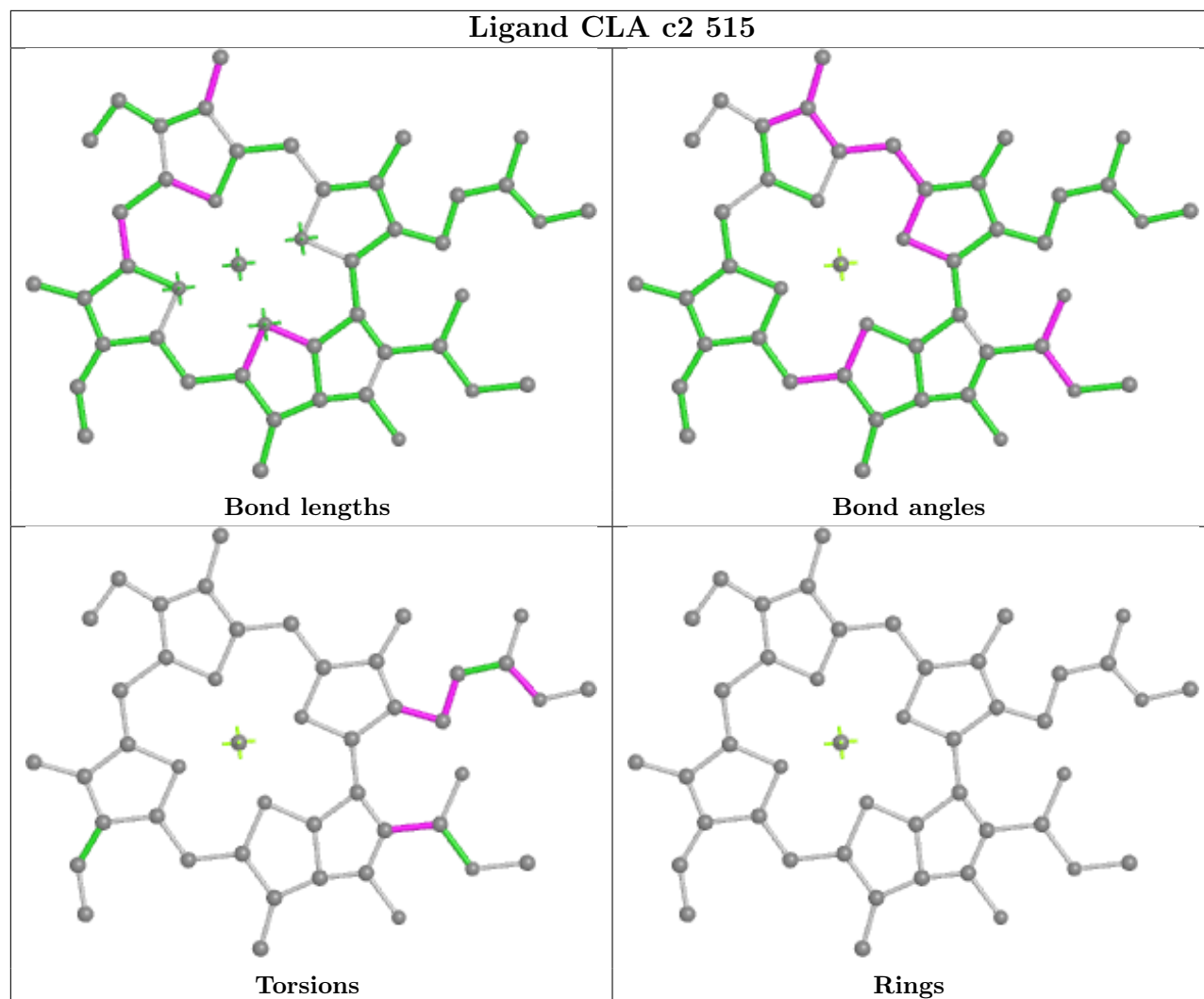


Rings

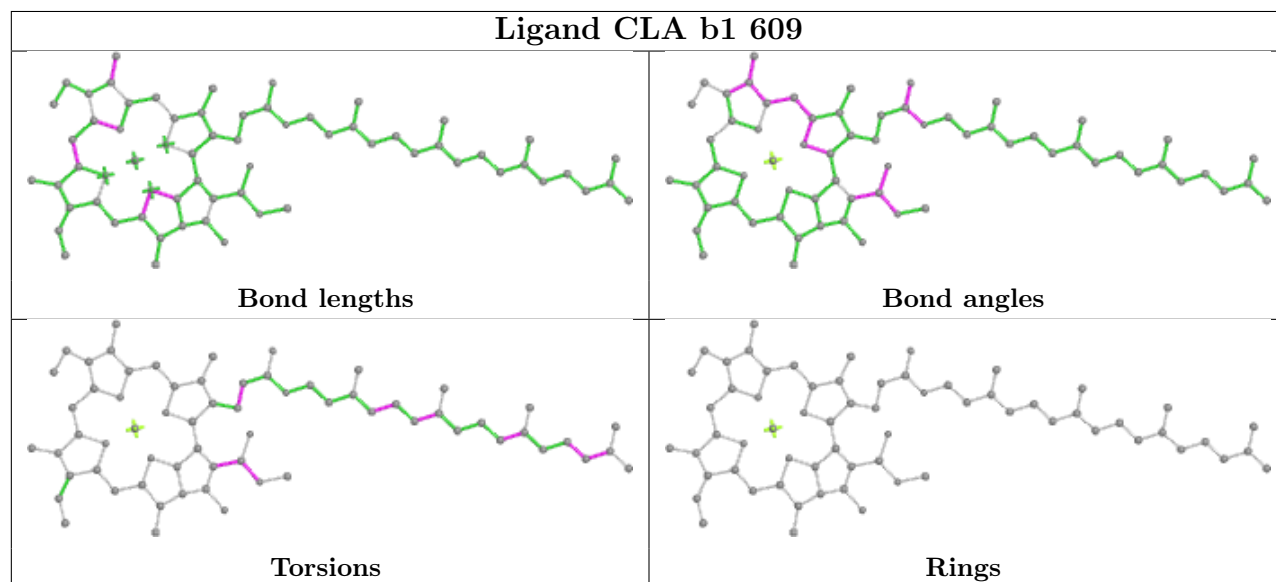
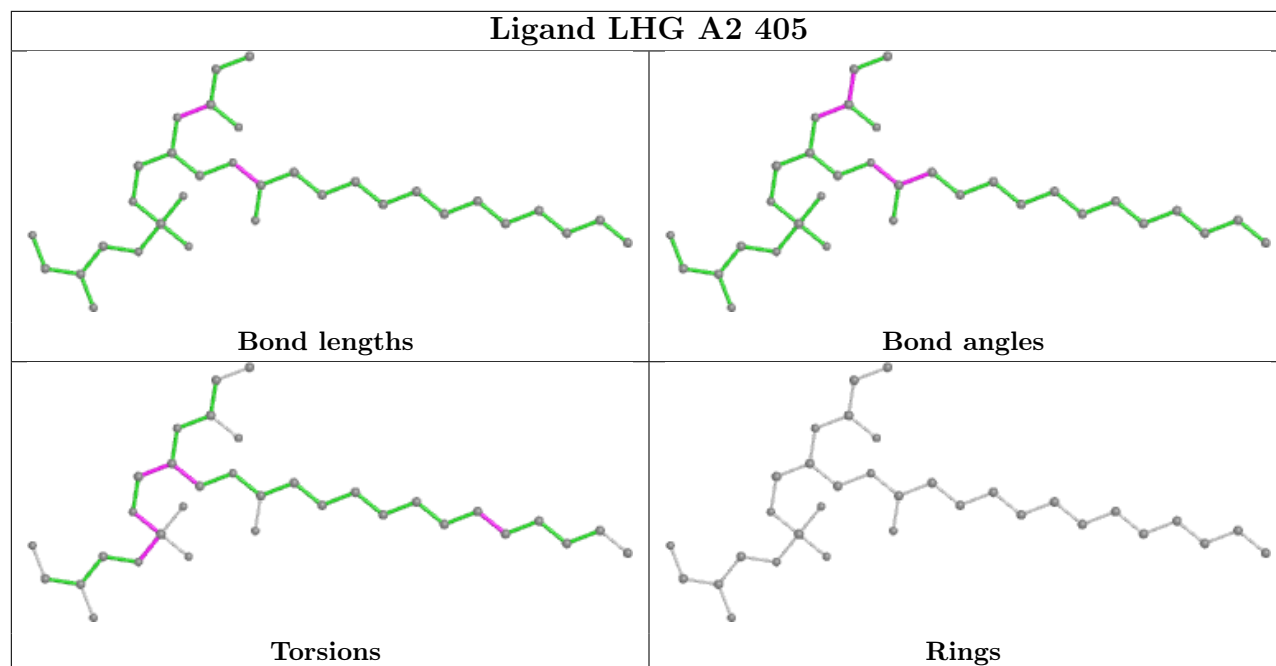


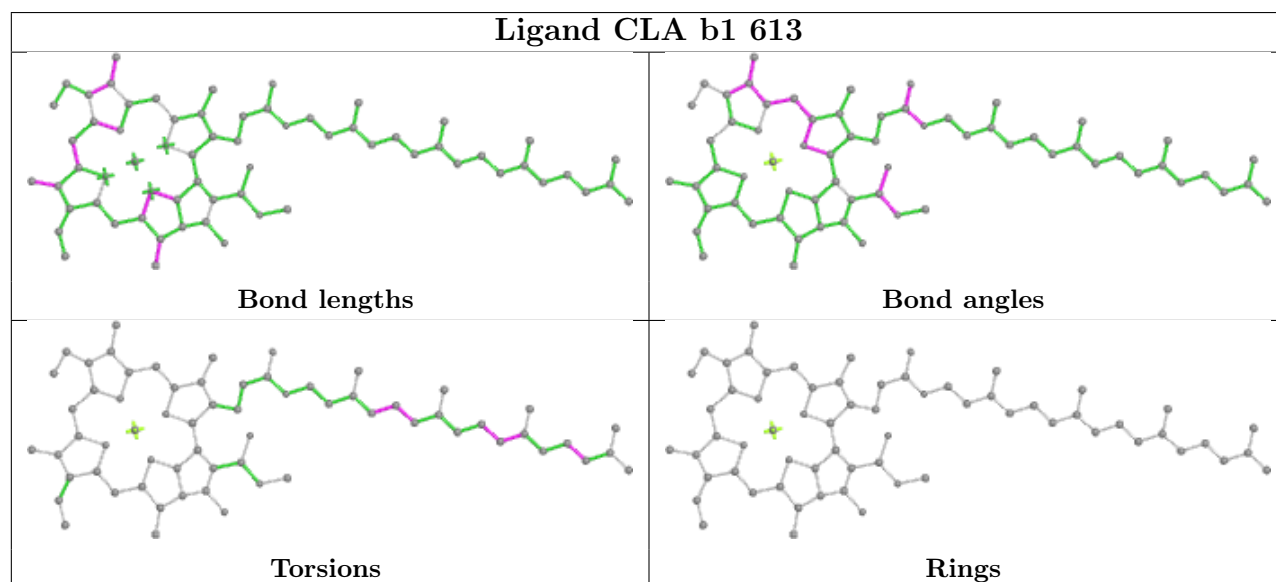
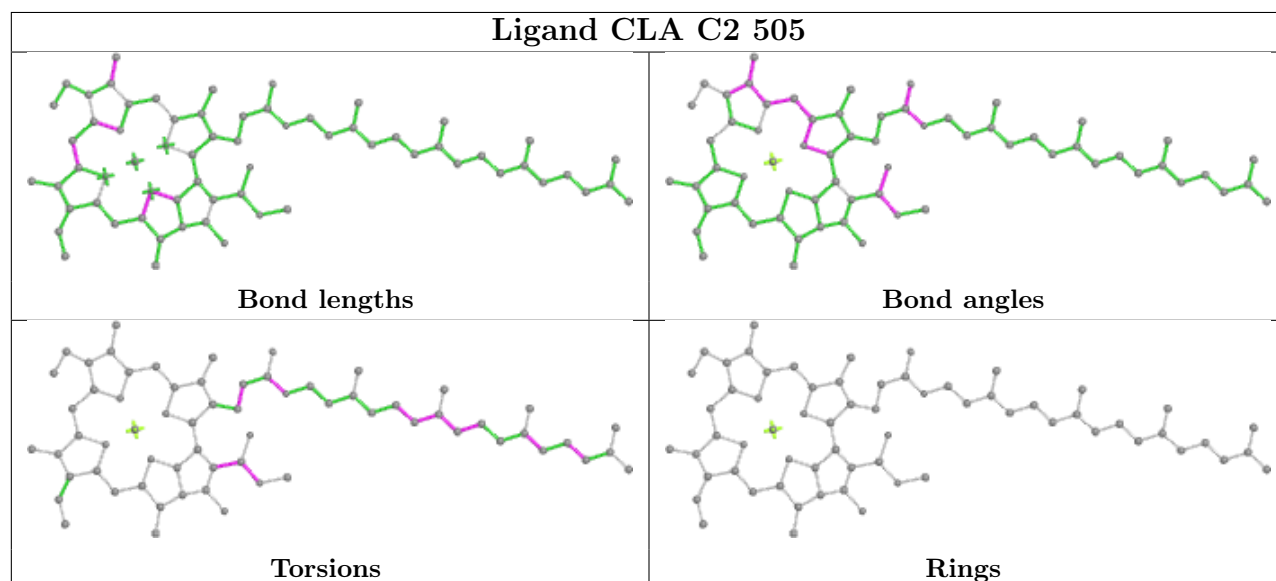
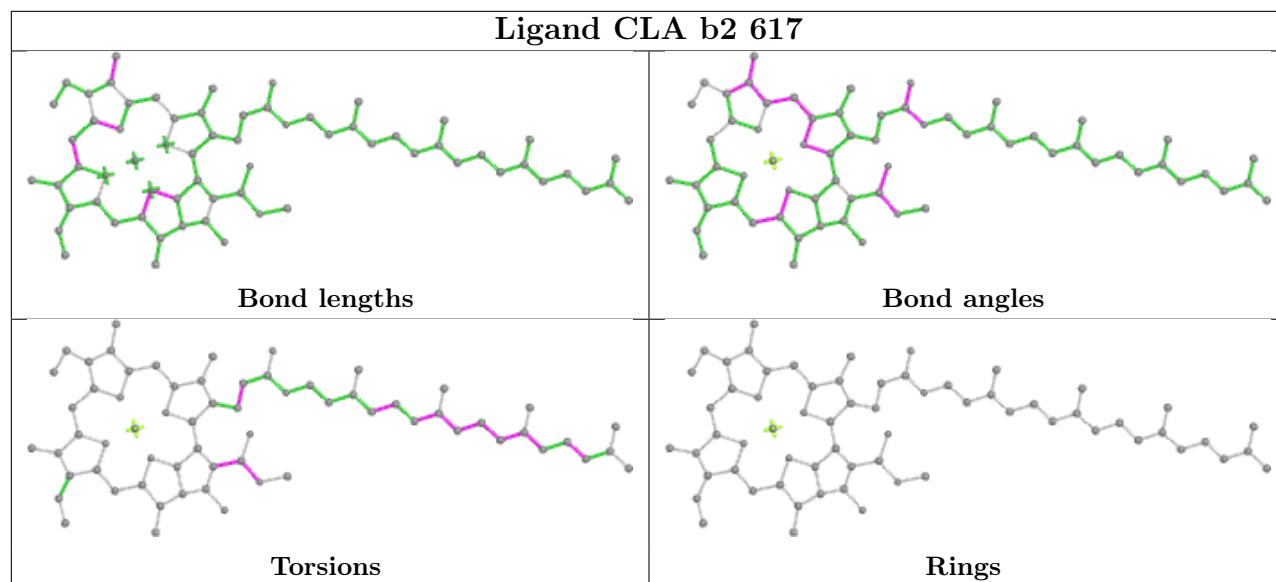


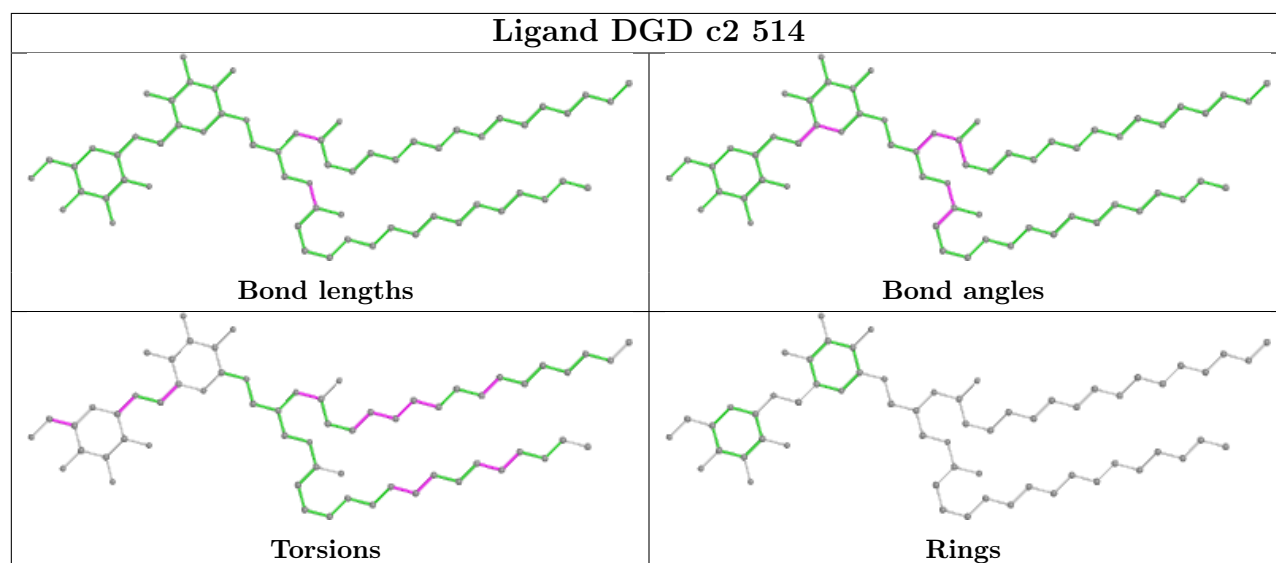
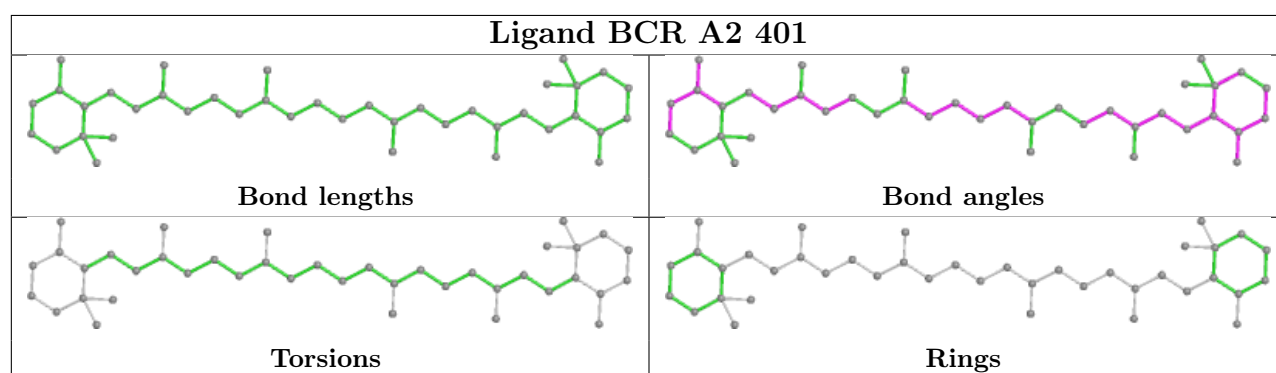
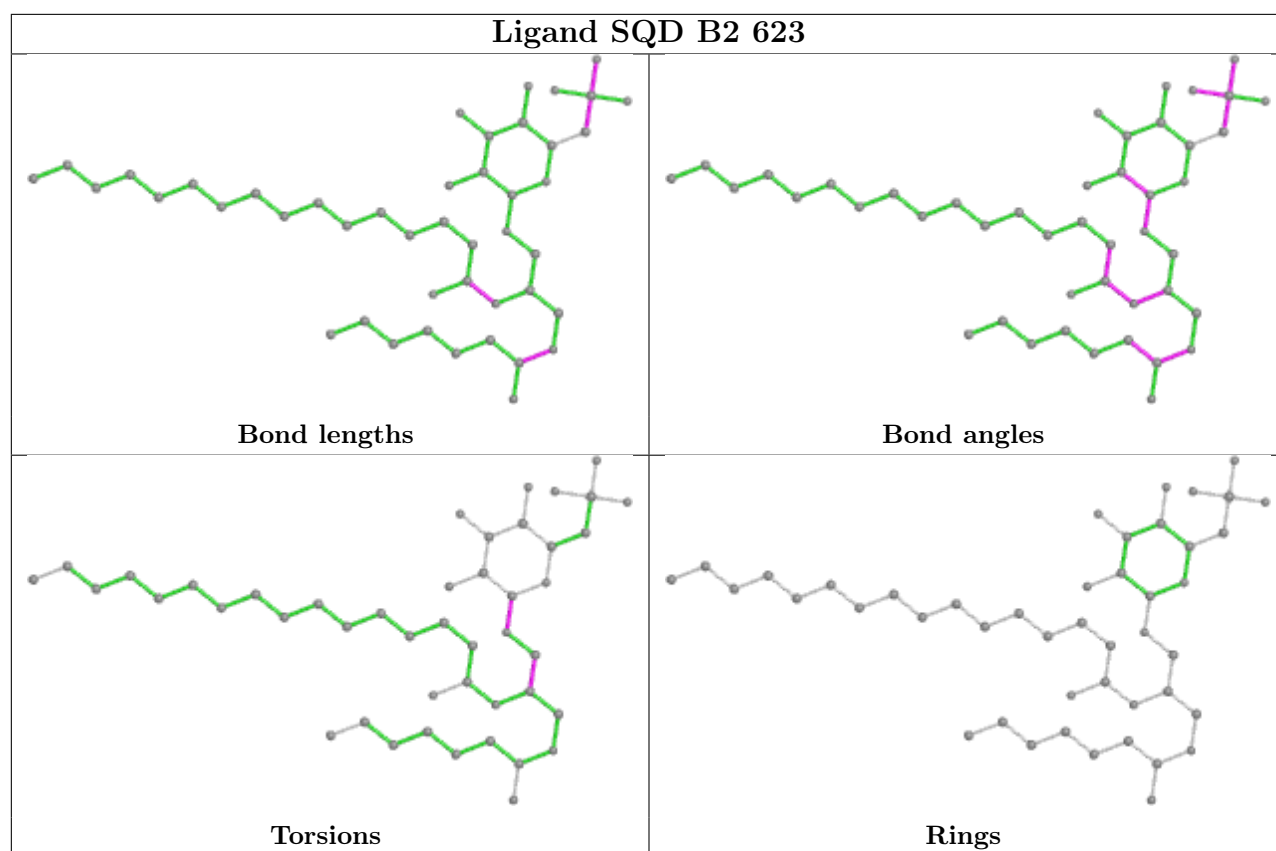


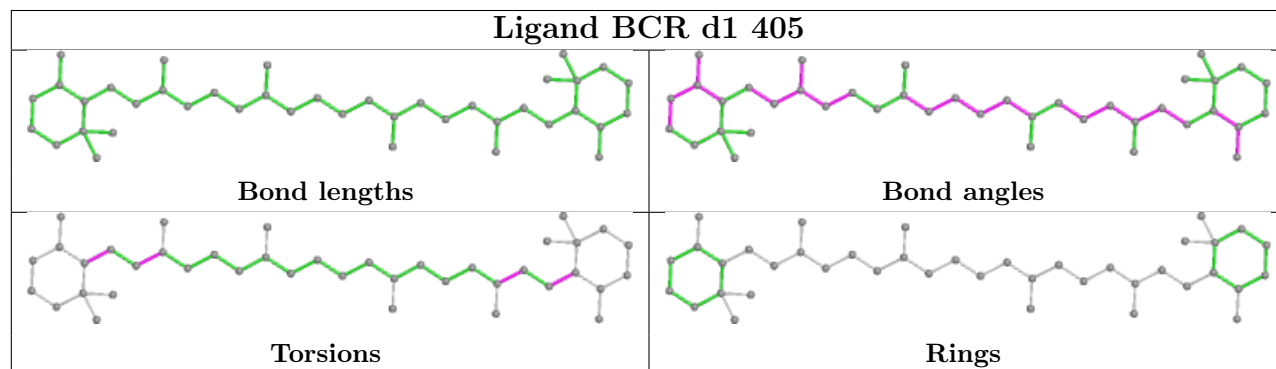
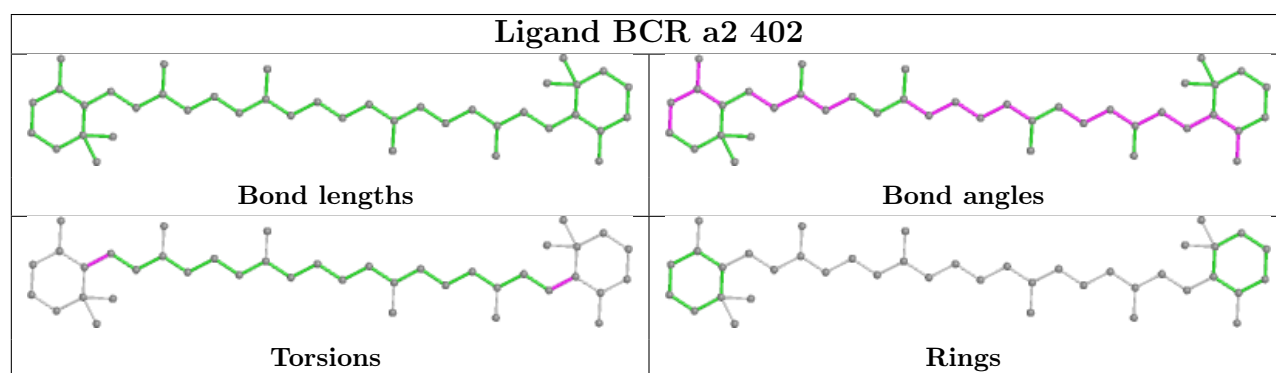
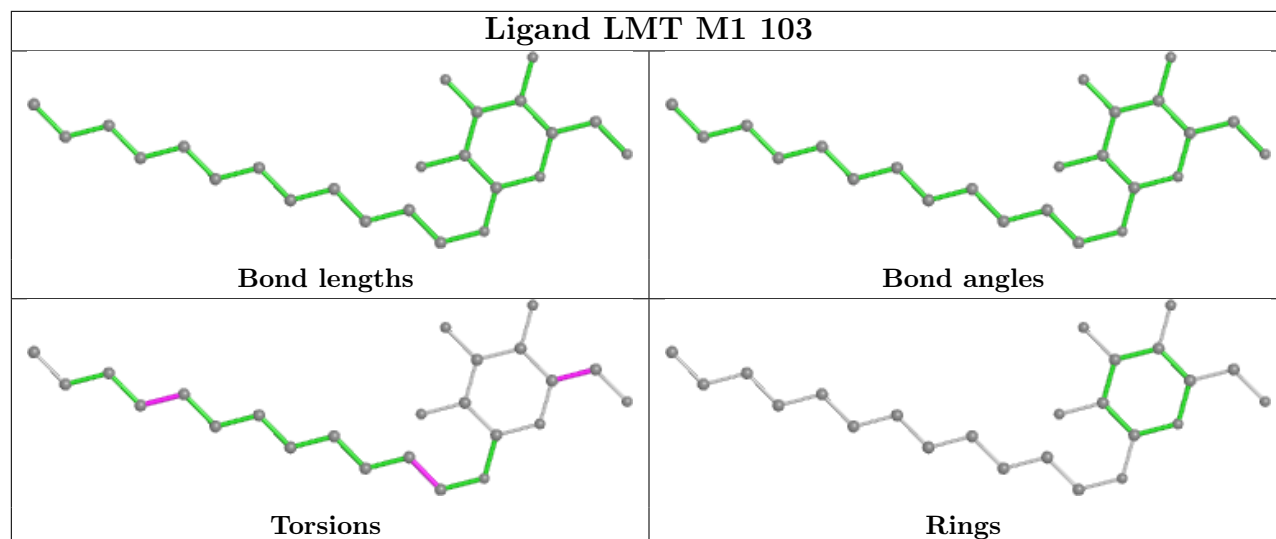




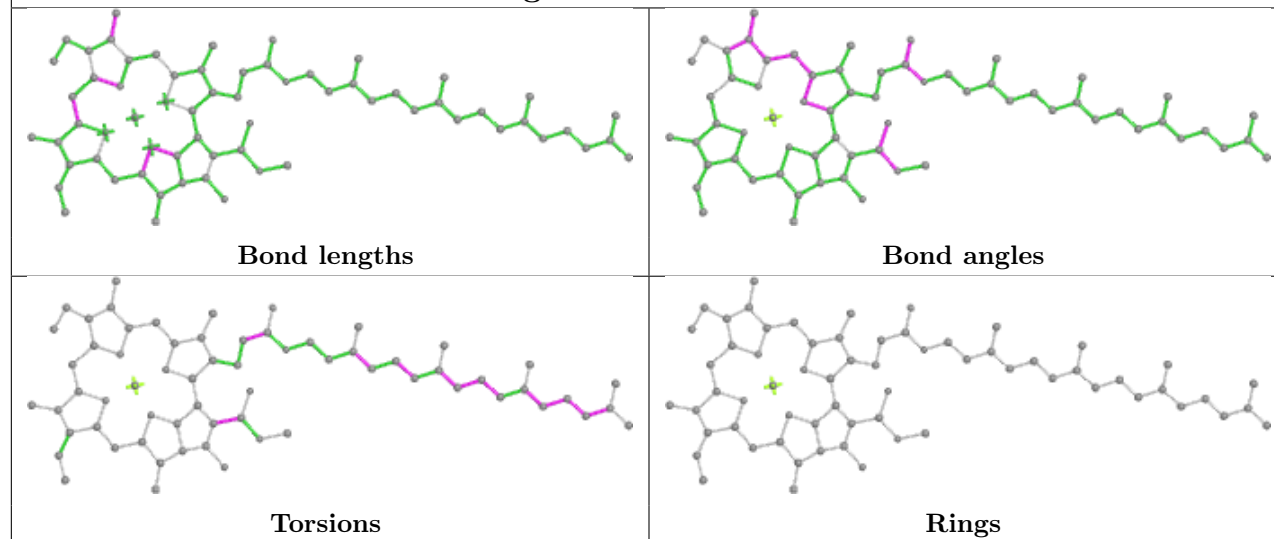




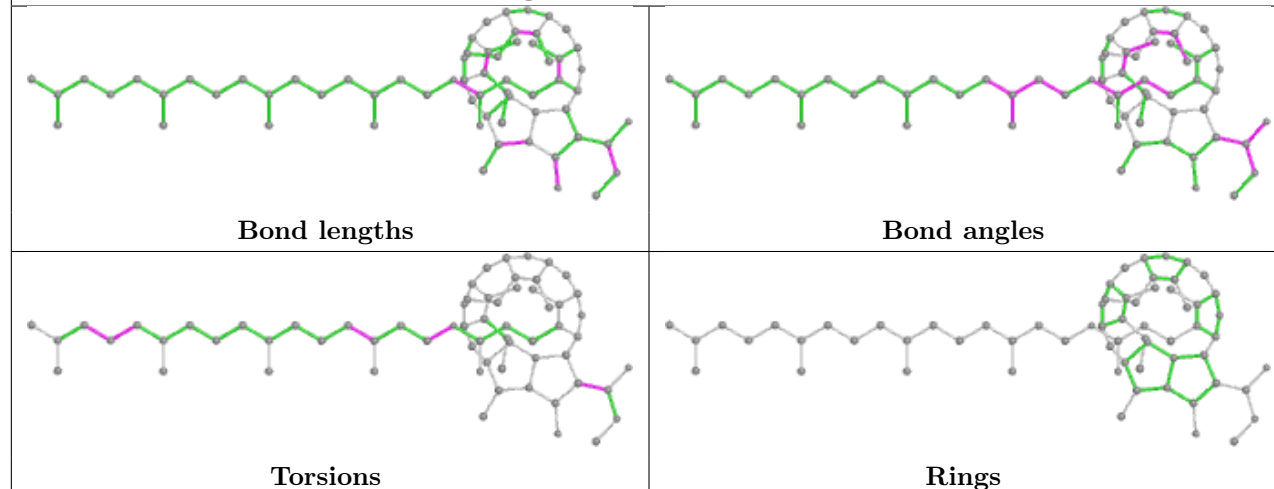




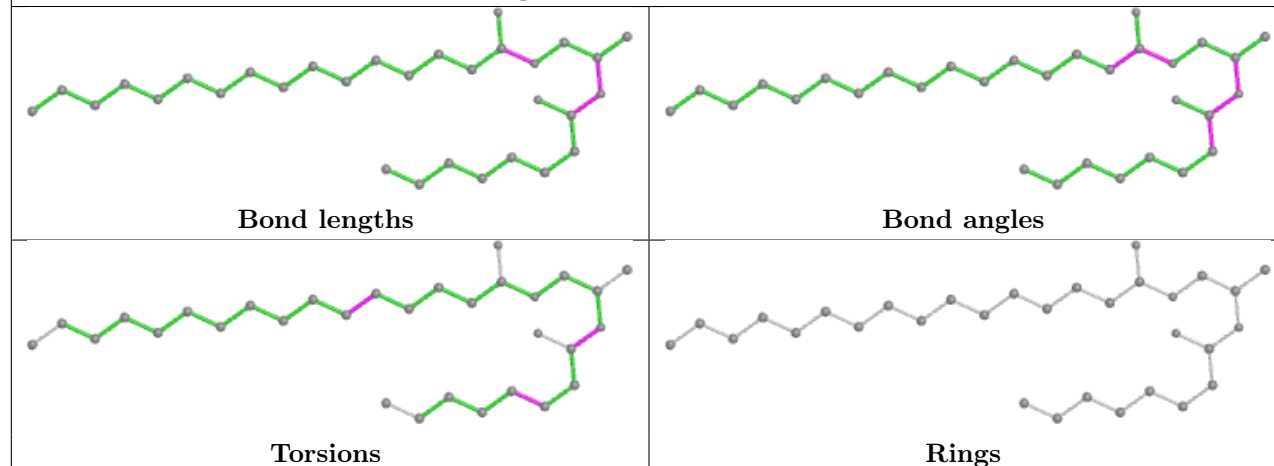
## Ligand CLA B1 615

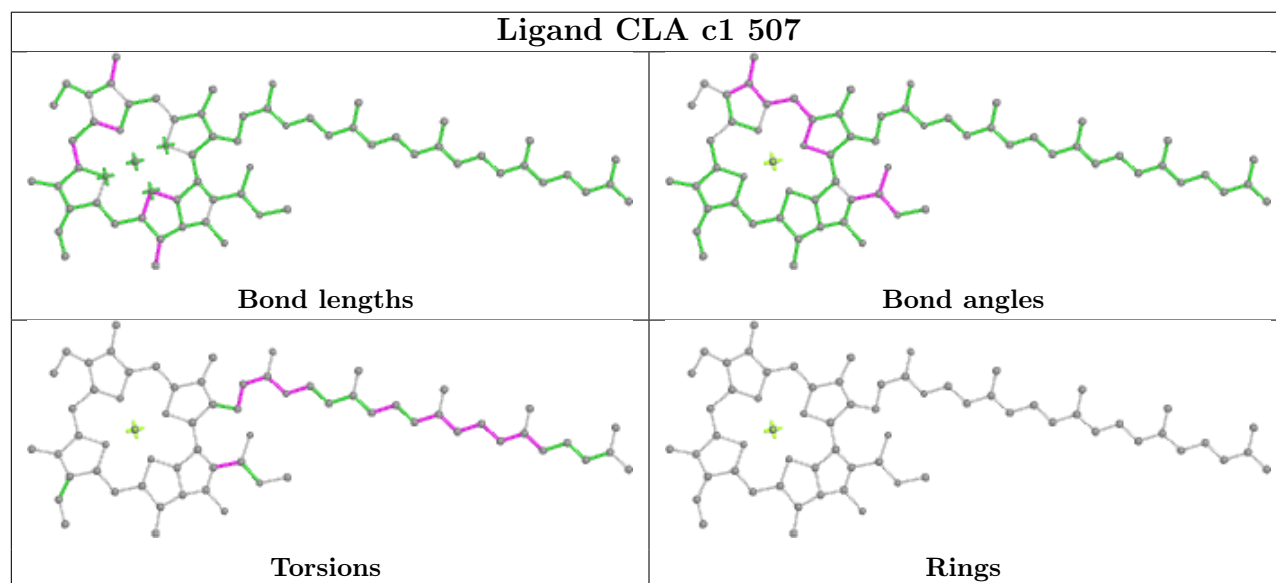
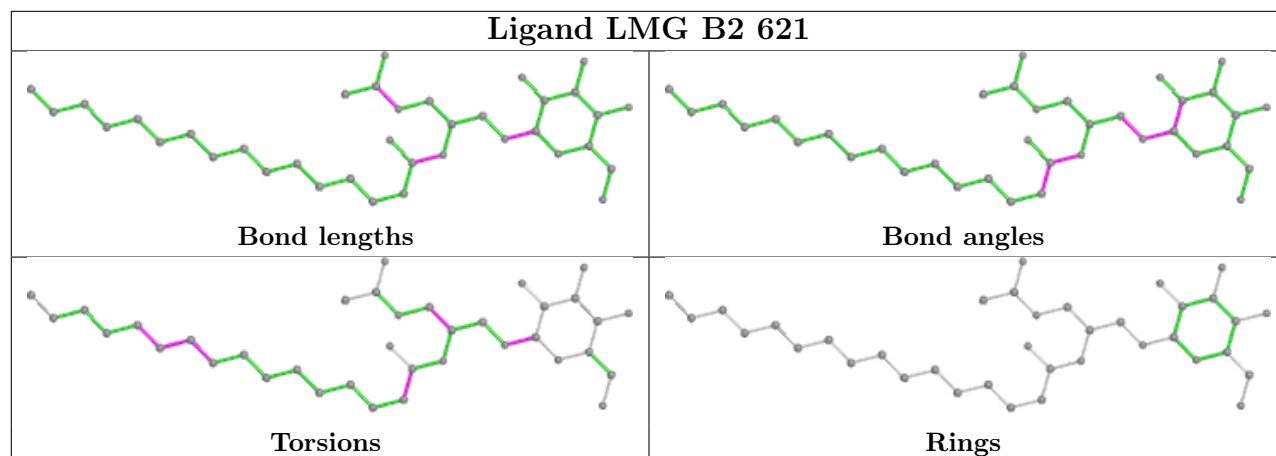
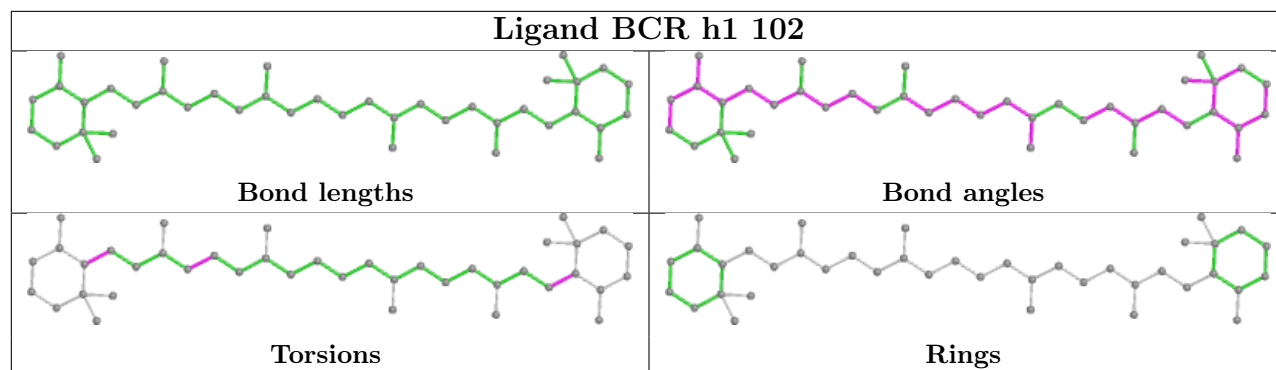


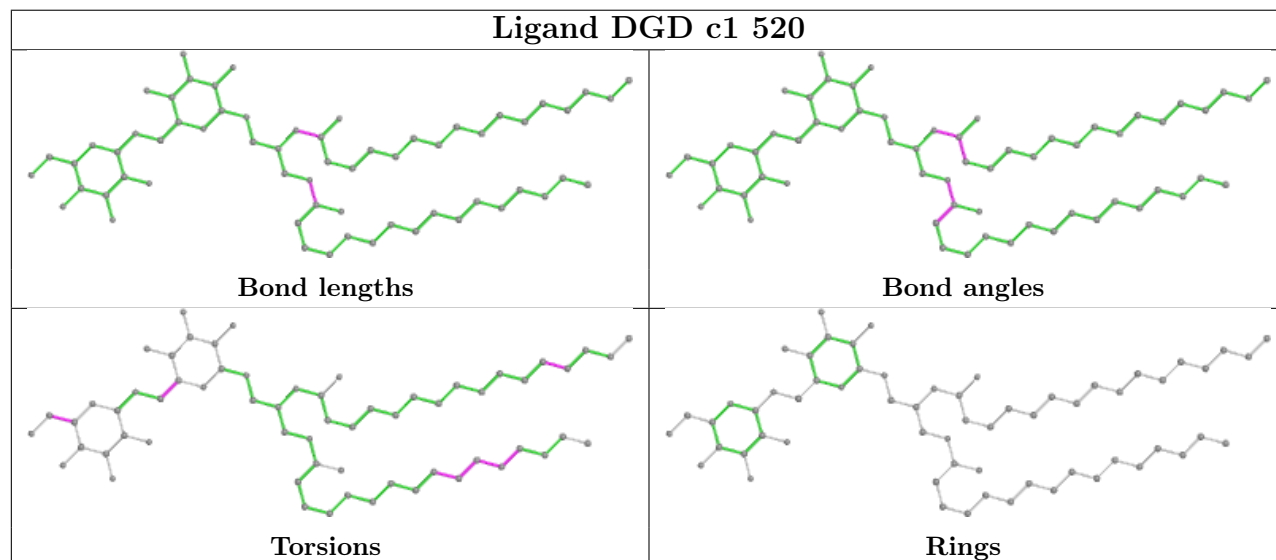
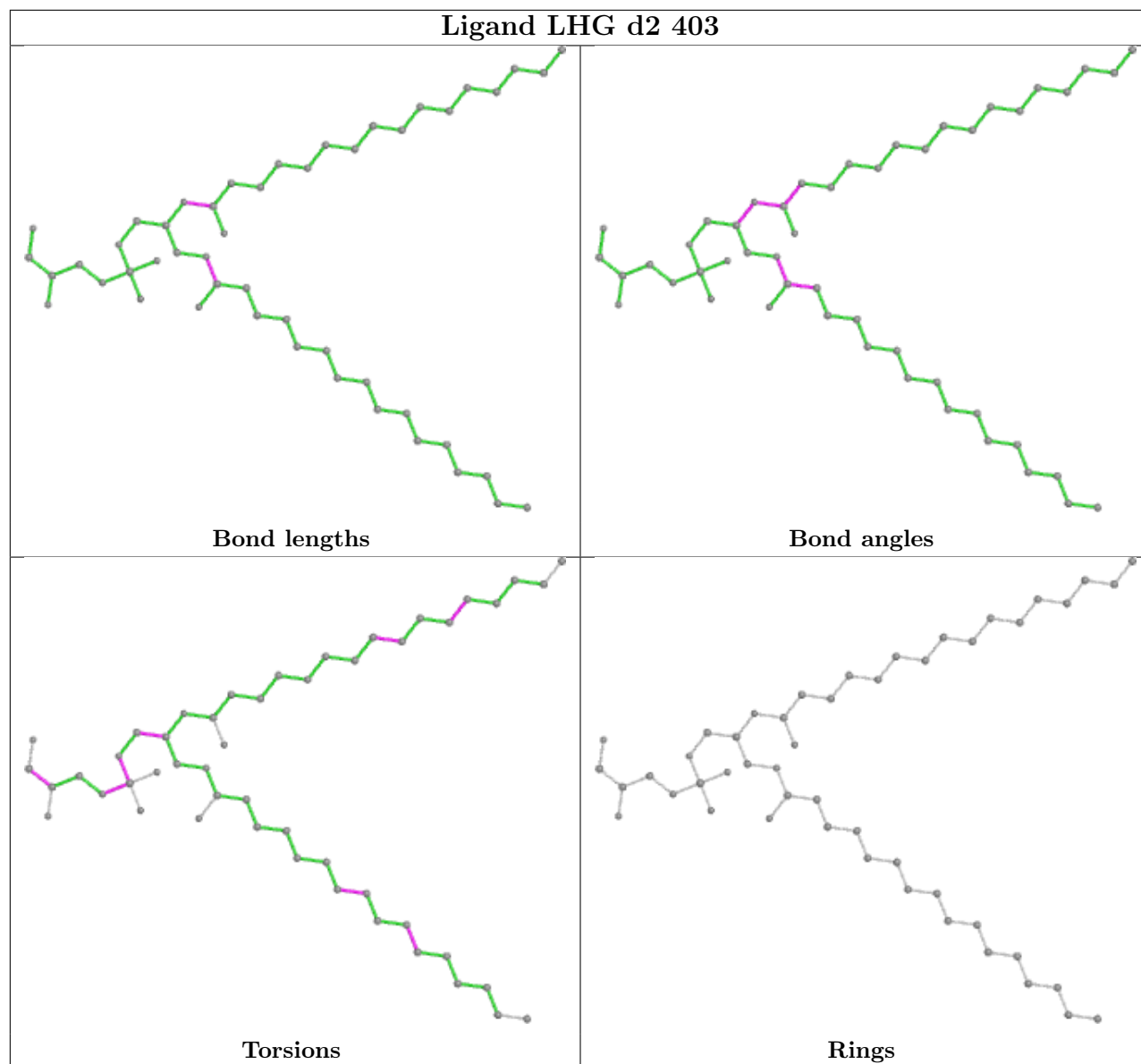
## Ligand PHO D2 407

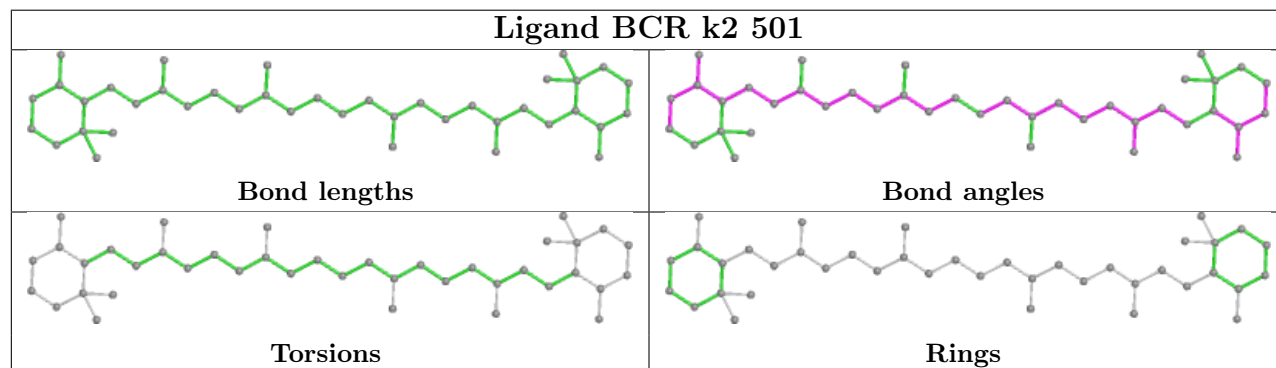
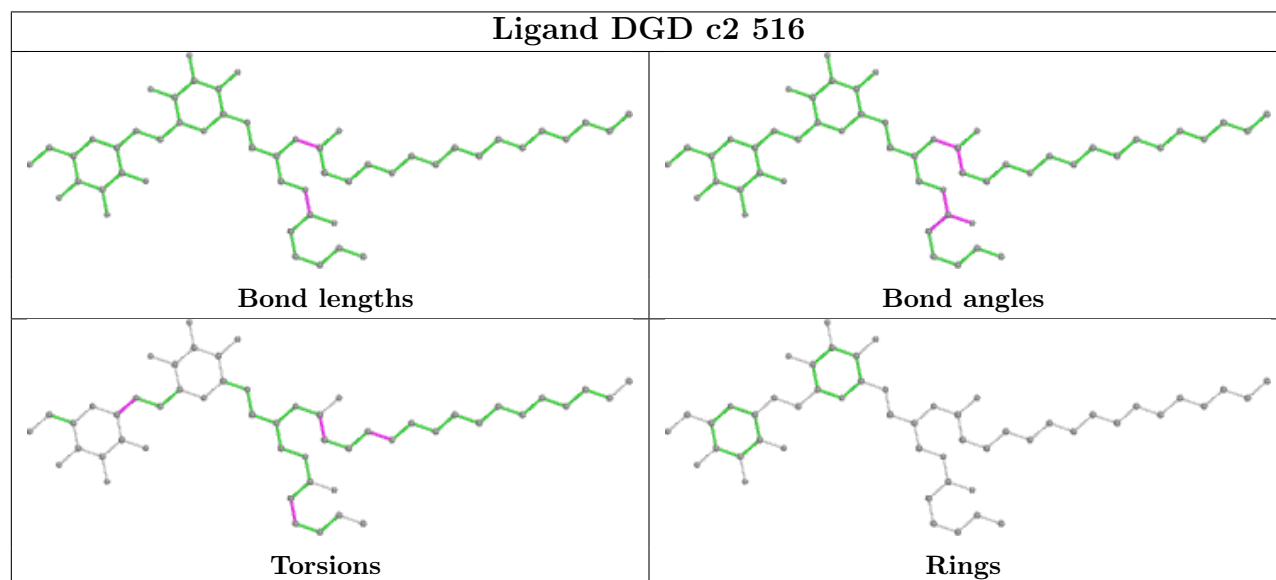
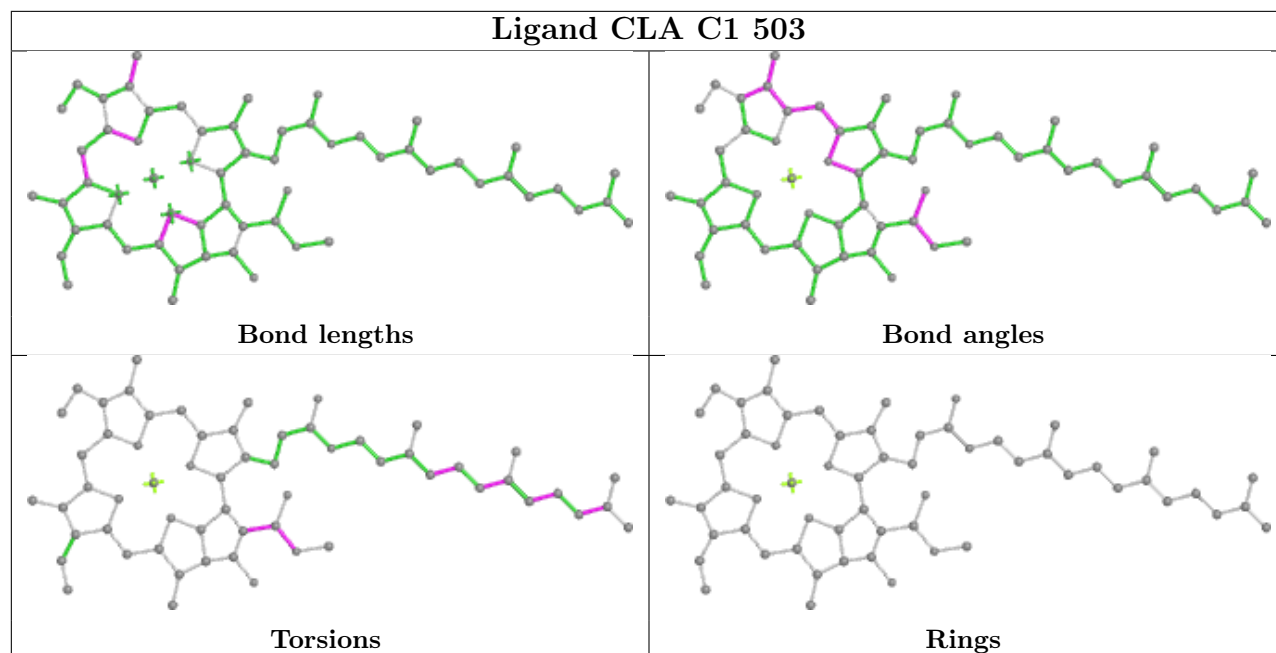


## Ligand LMG M1 101

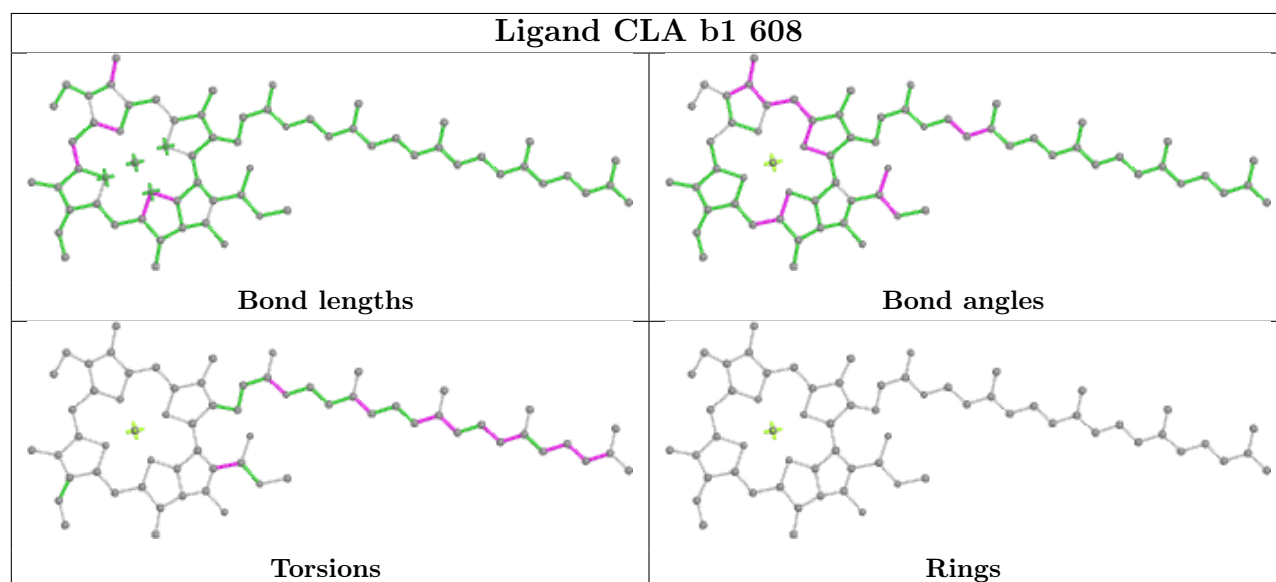
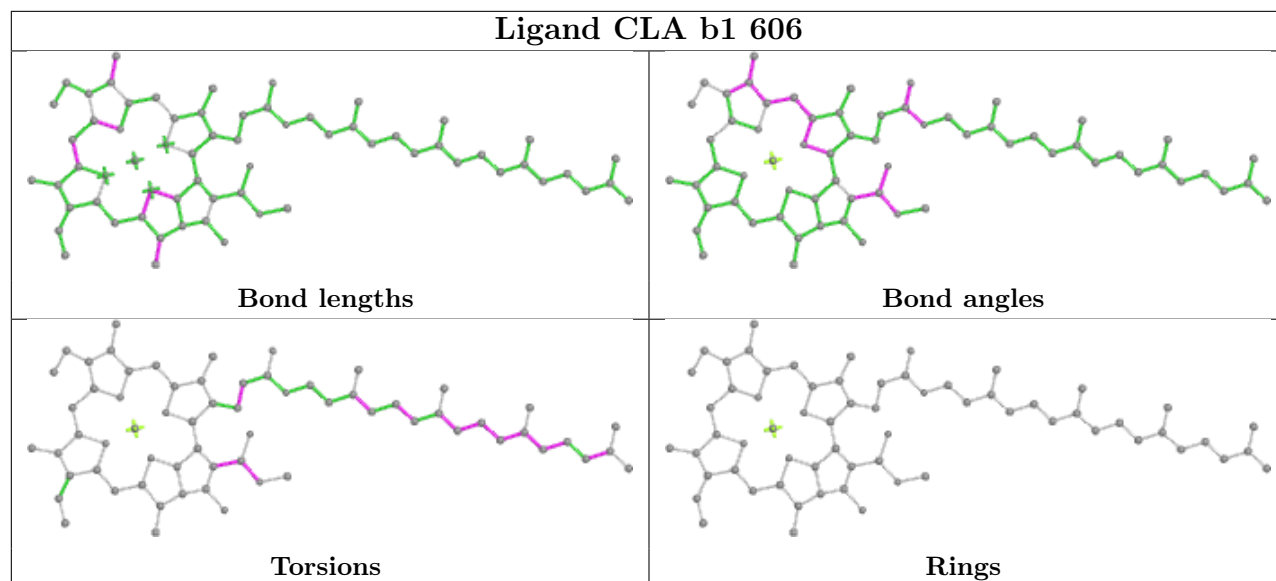
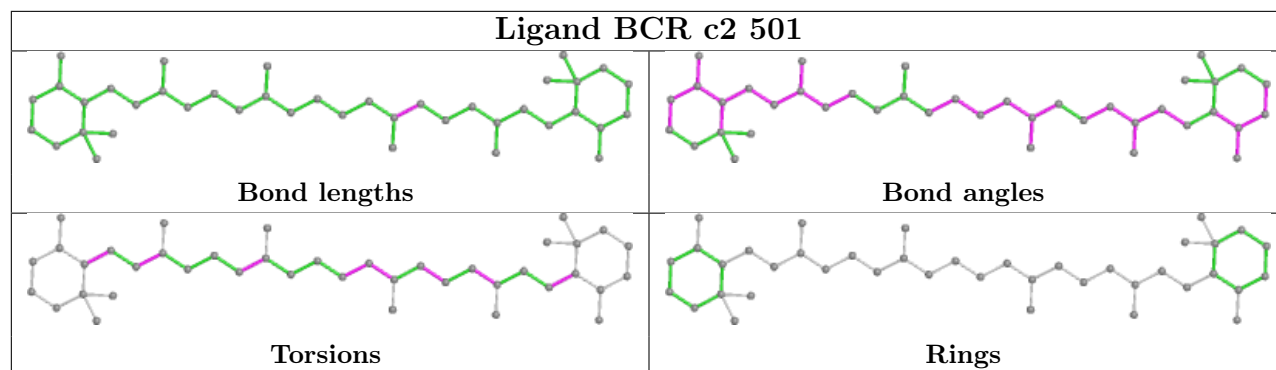


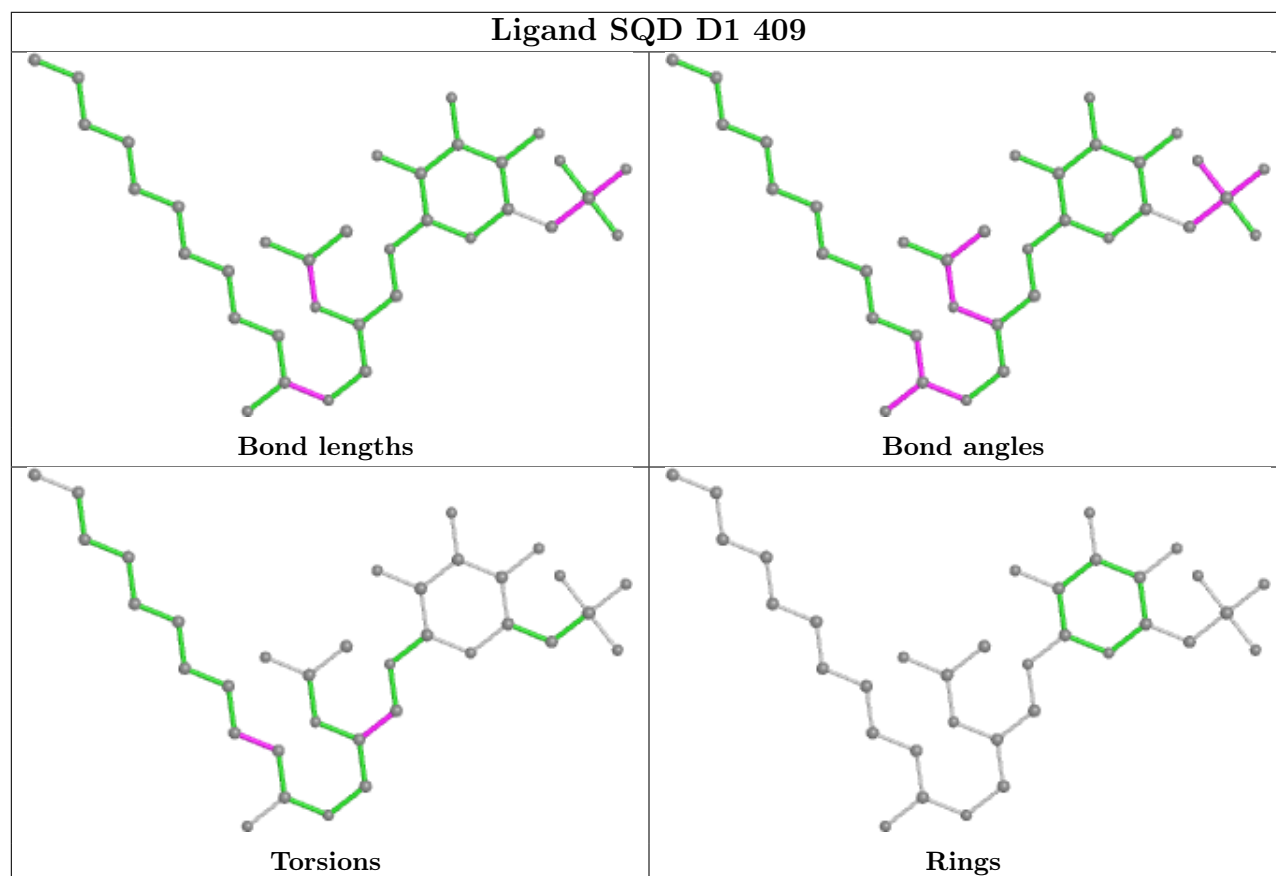
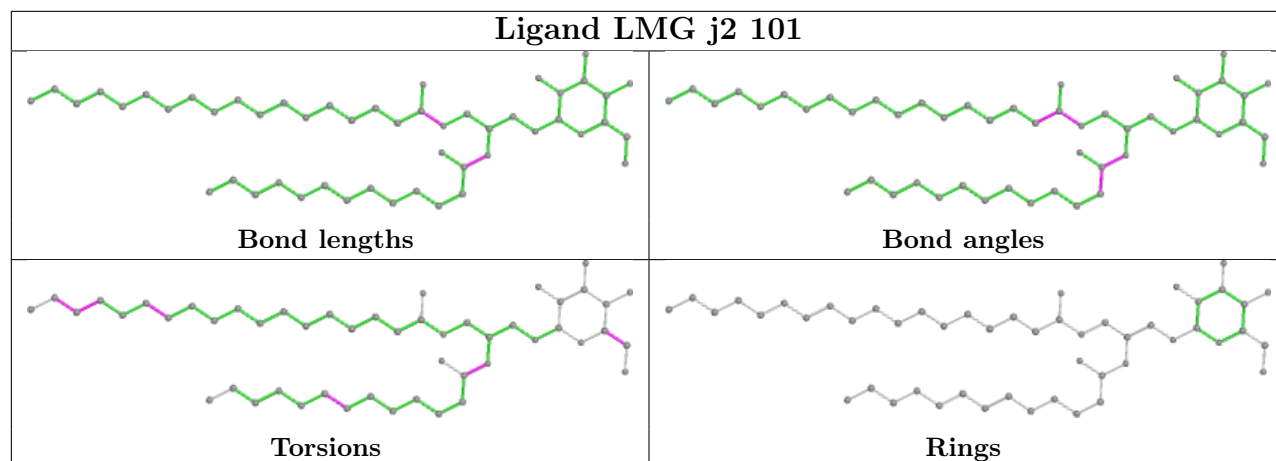


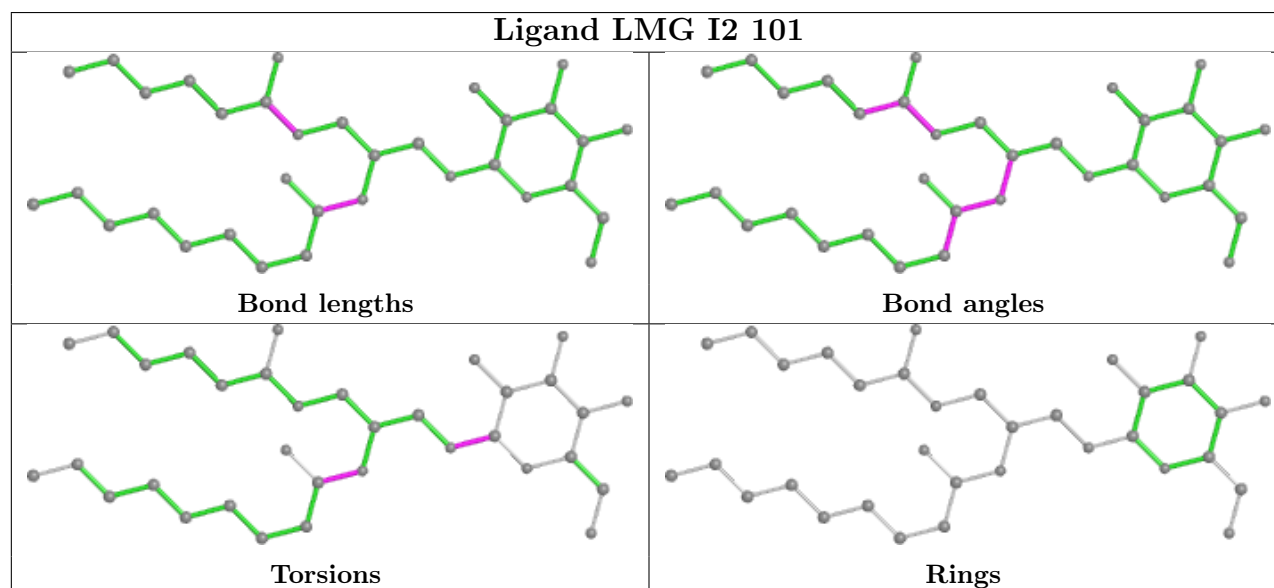
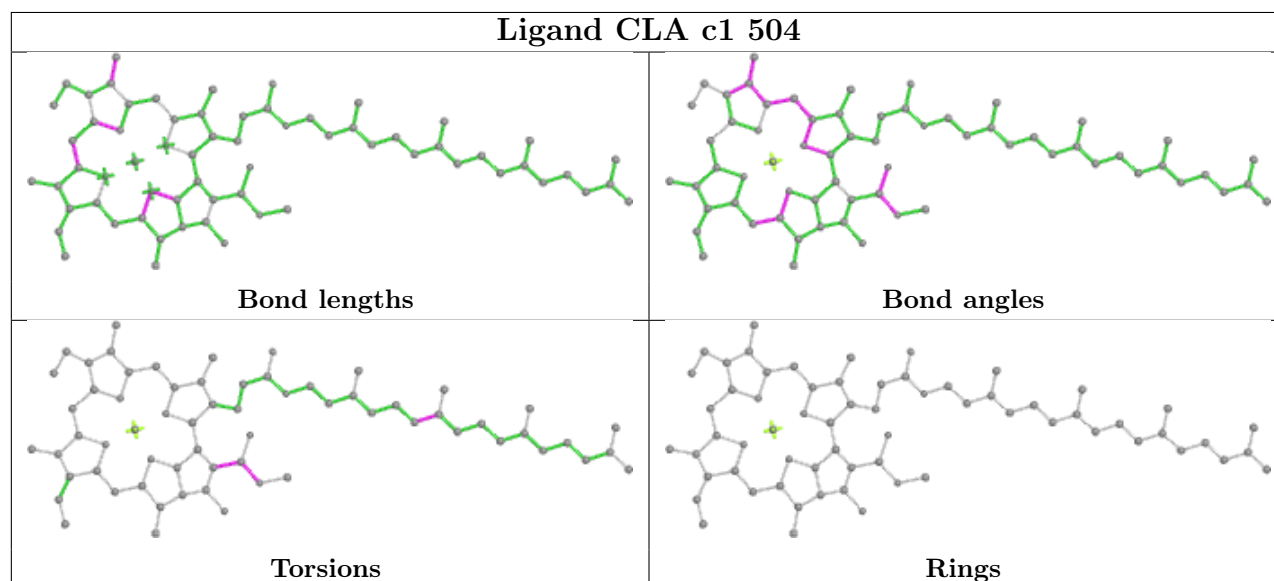
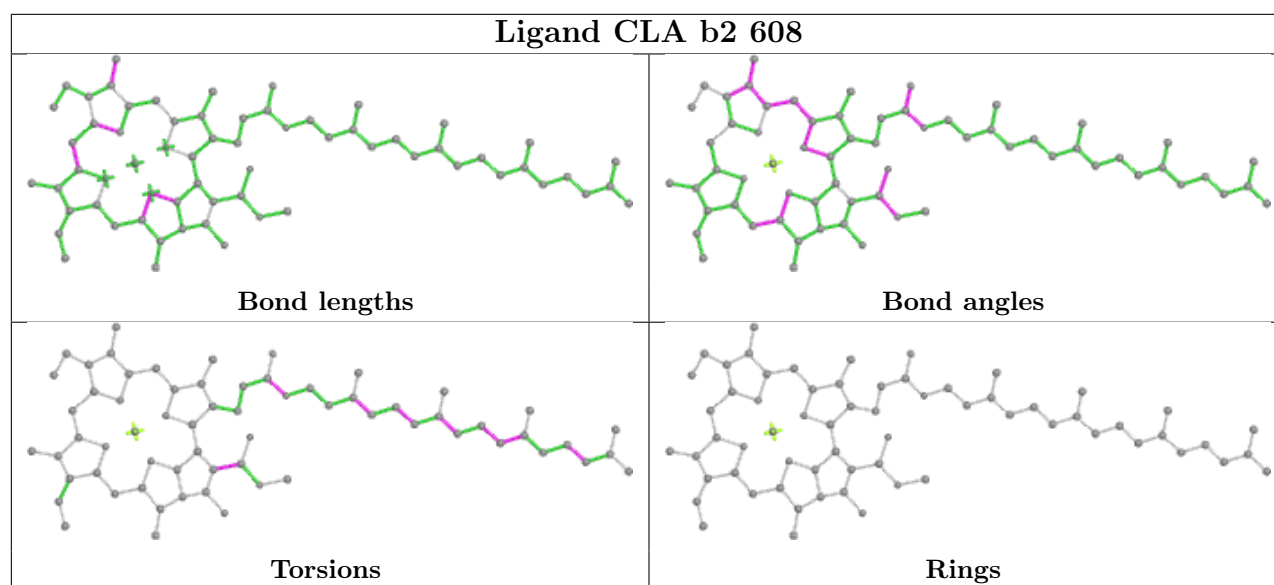


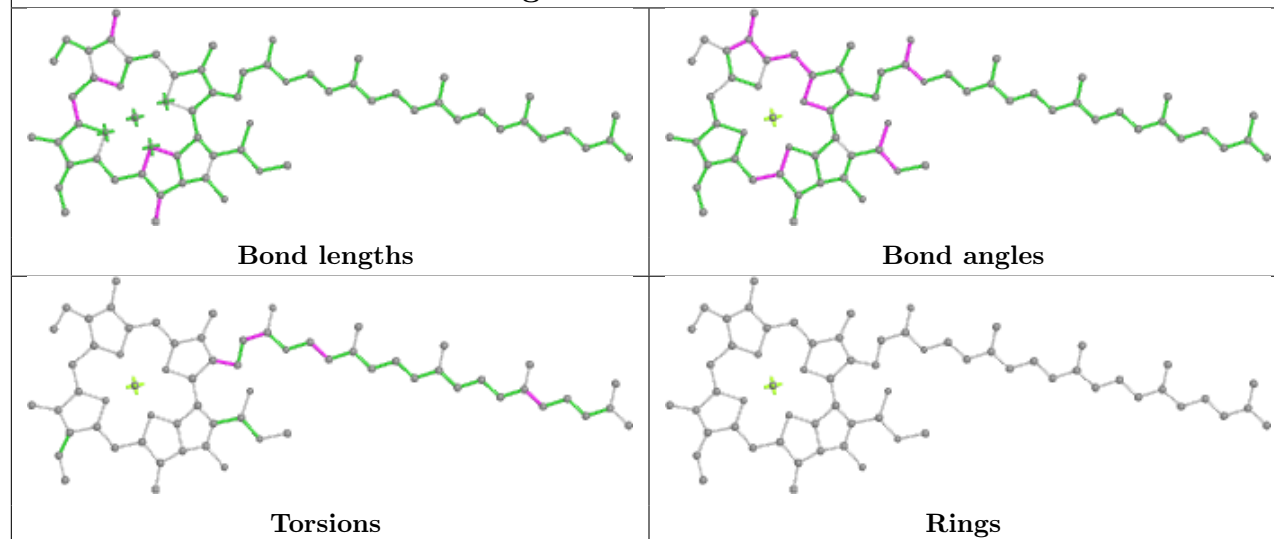
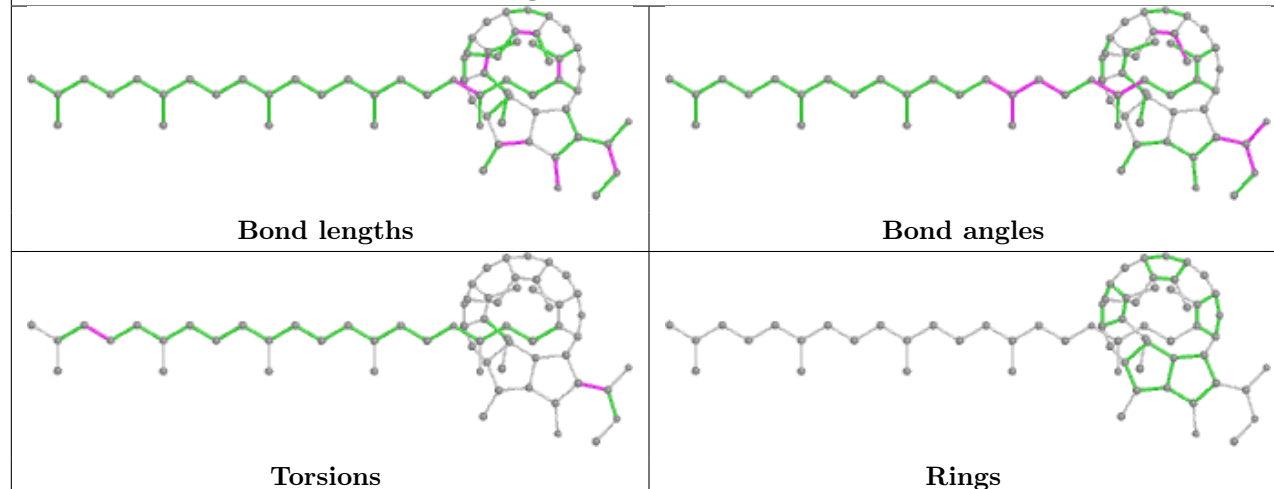
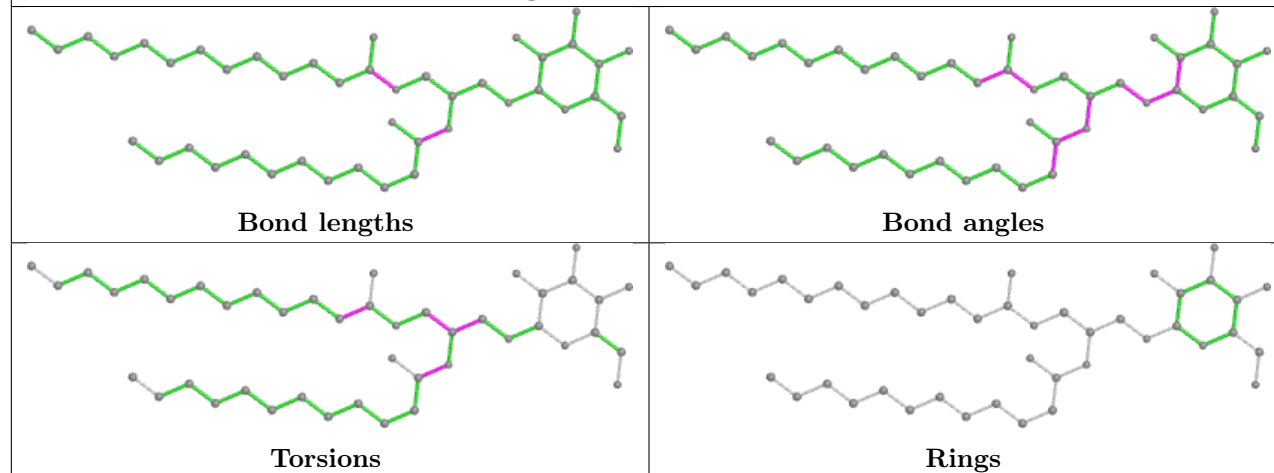


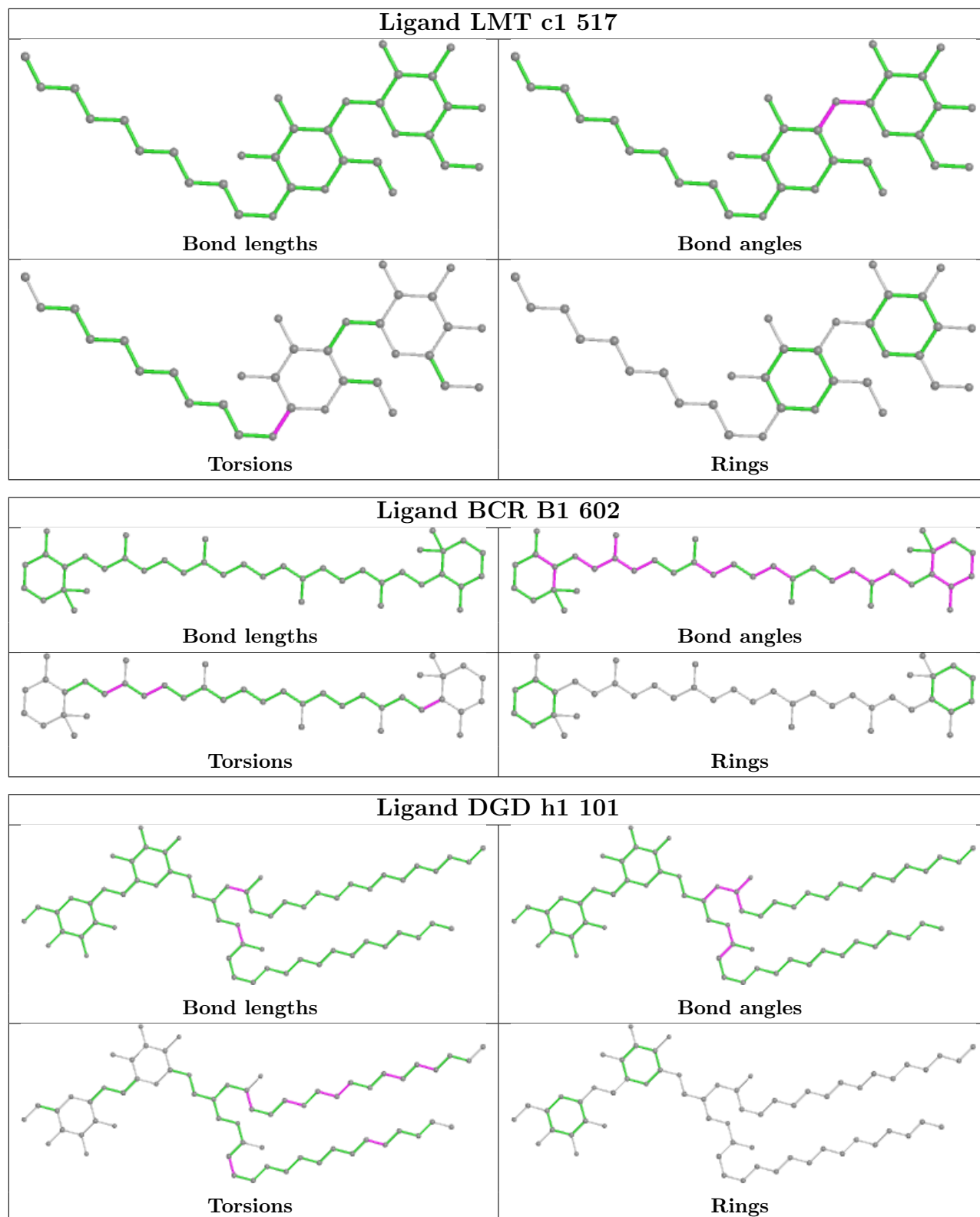


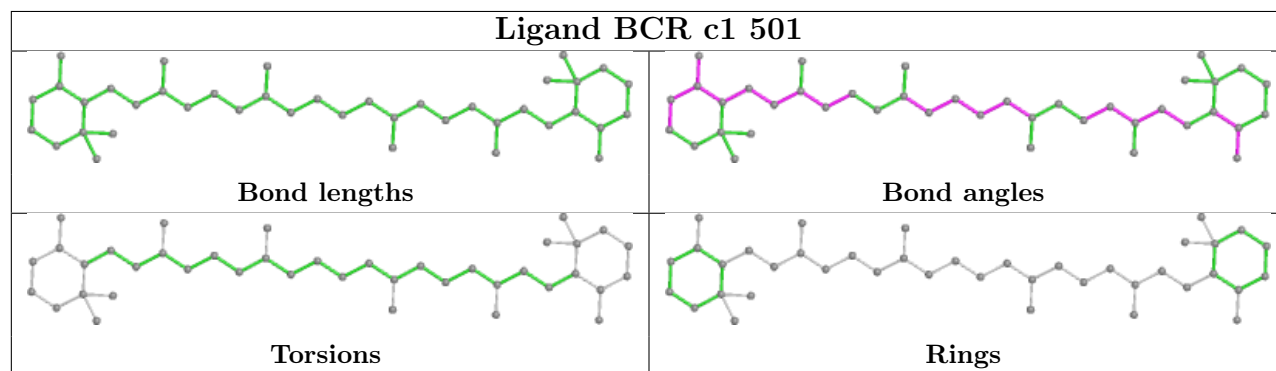
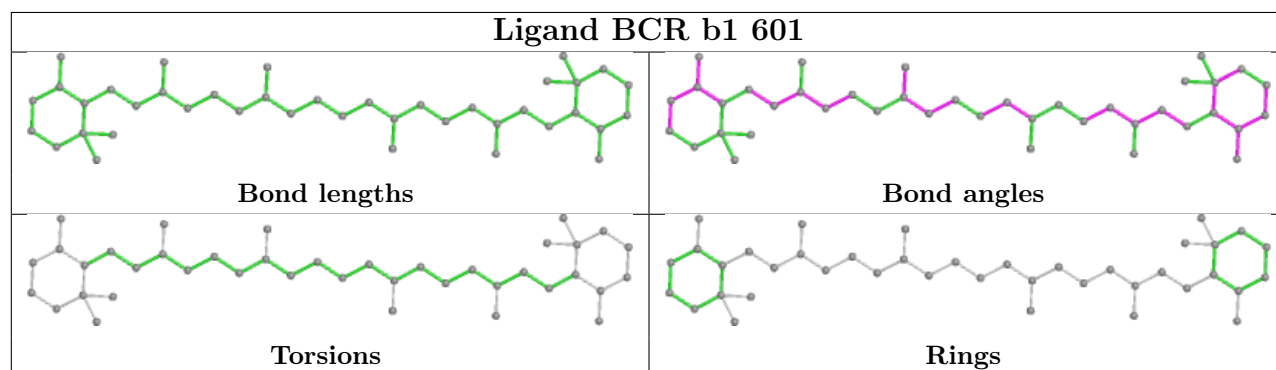
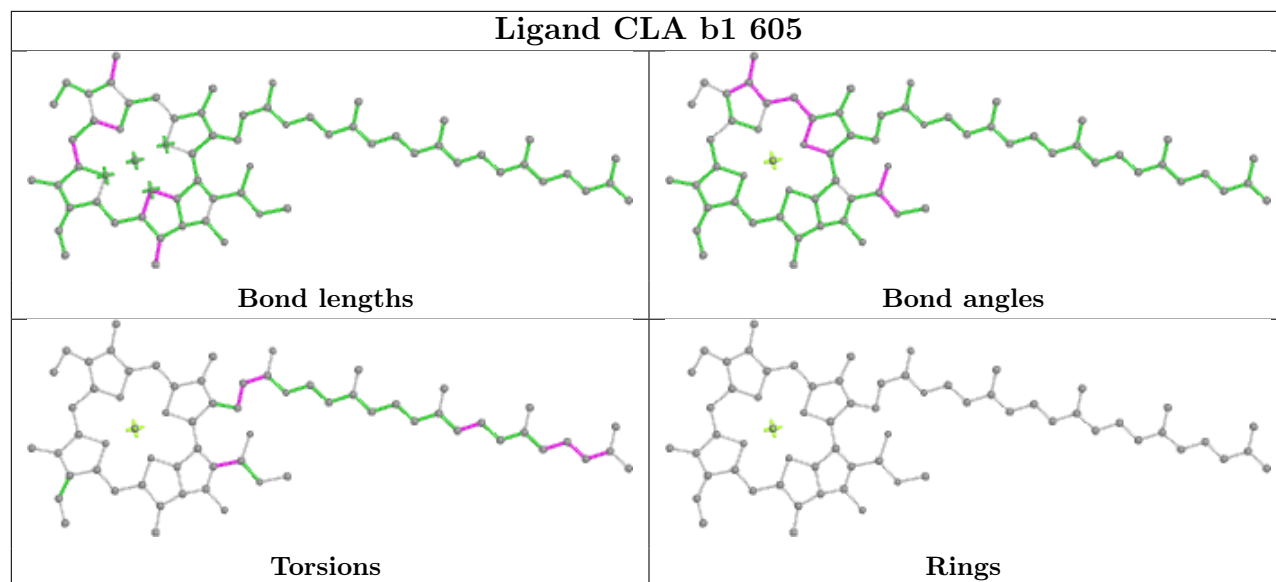


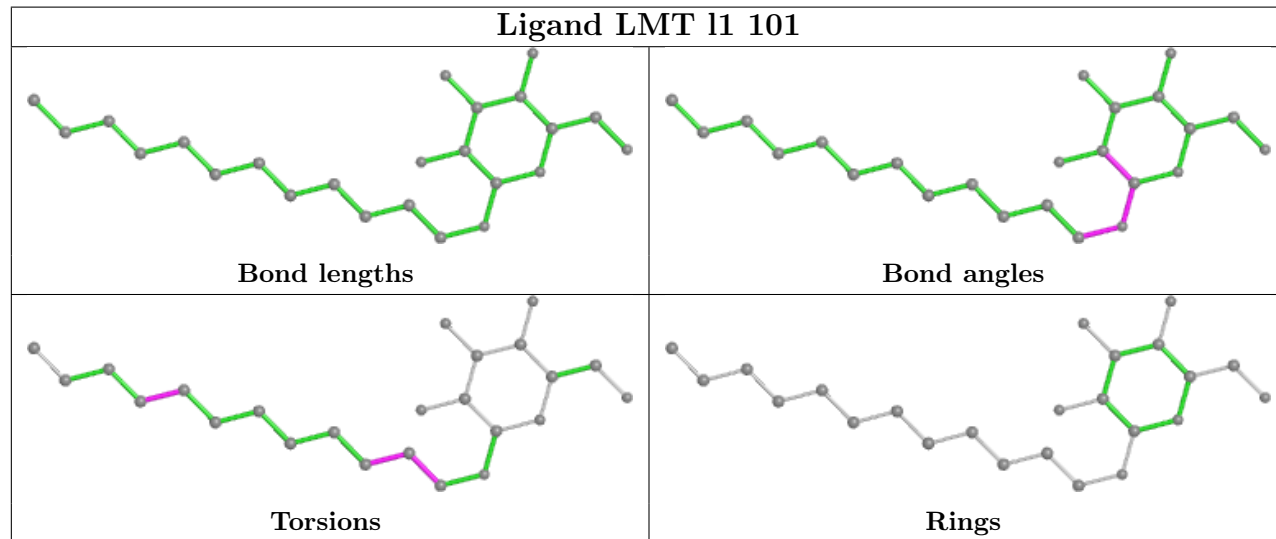
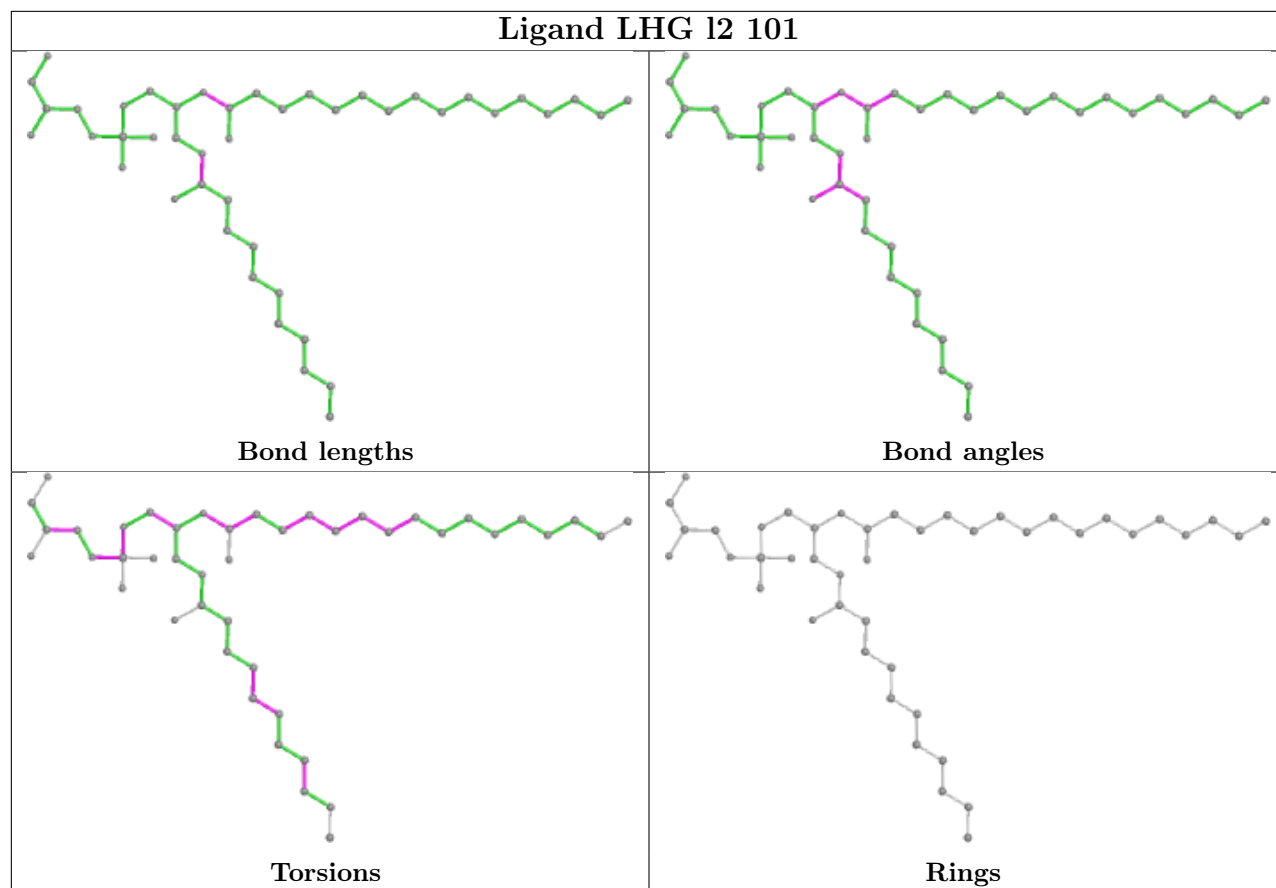


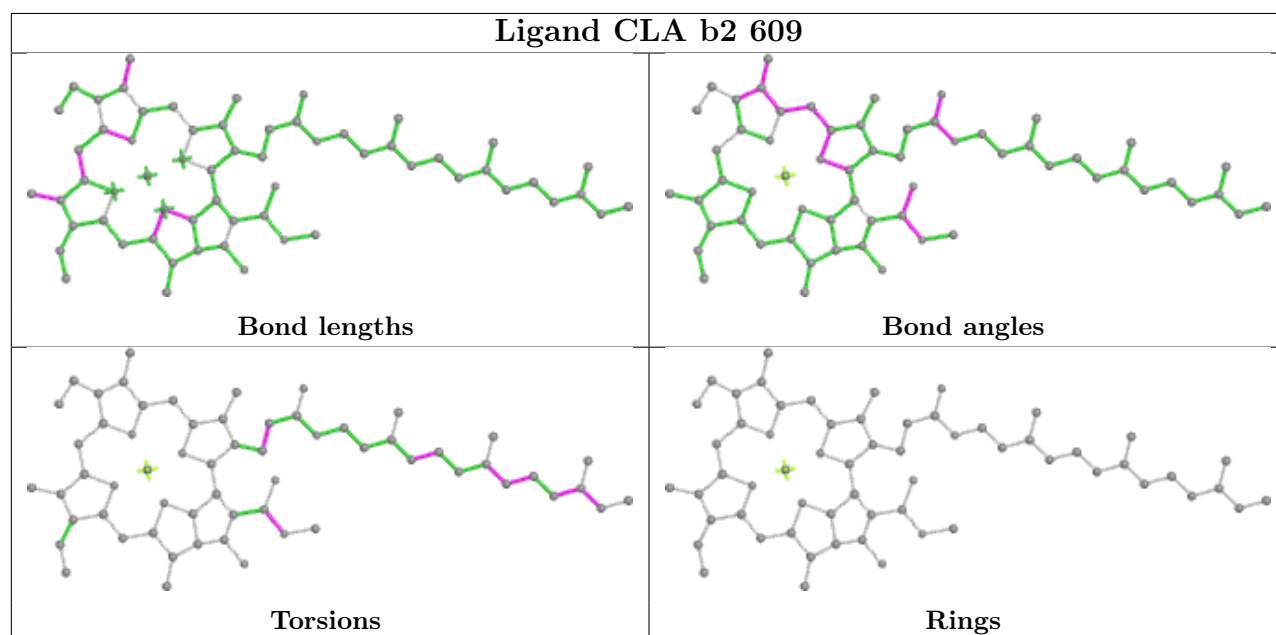
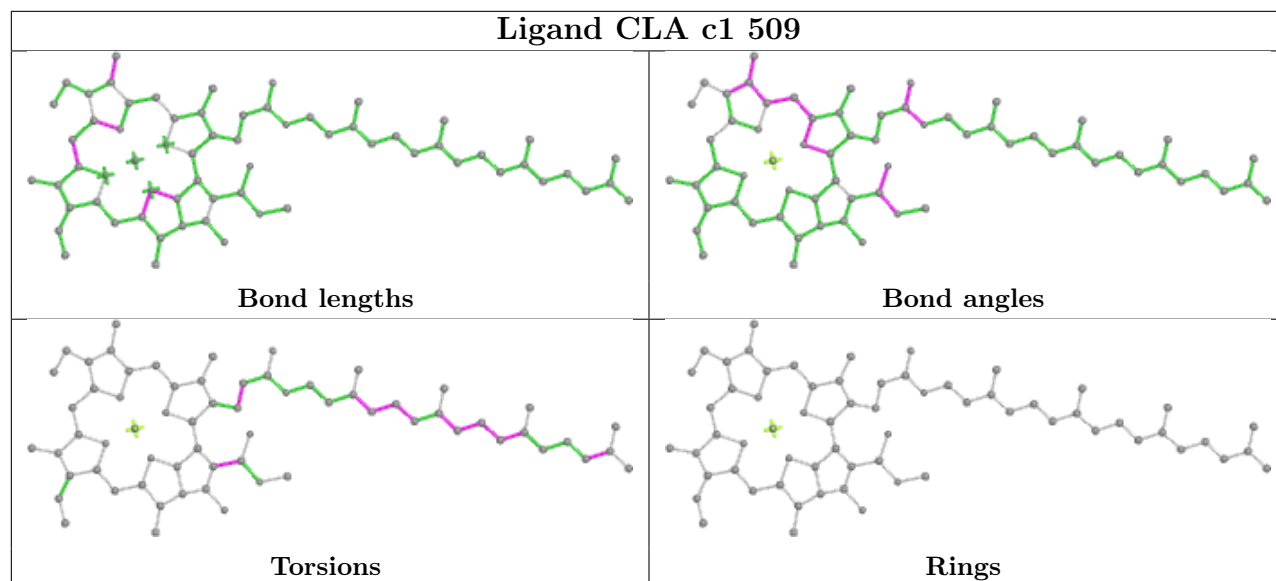
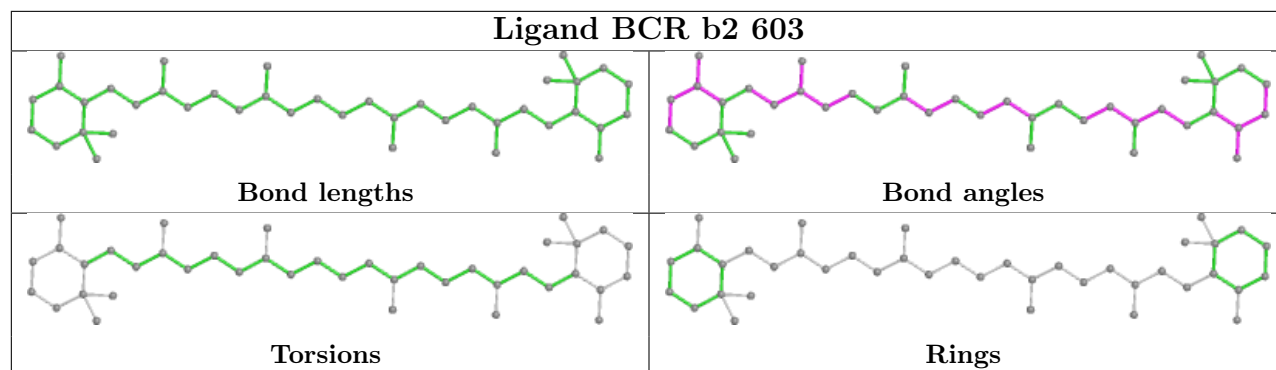


**Ligand CLA D2 401****Ligand PHO d1 403****Ligand LMG a2 412**

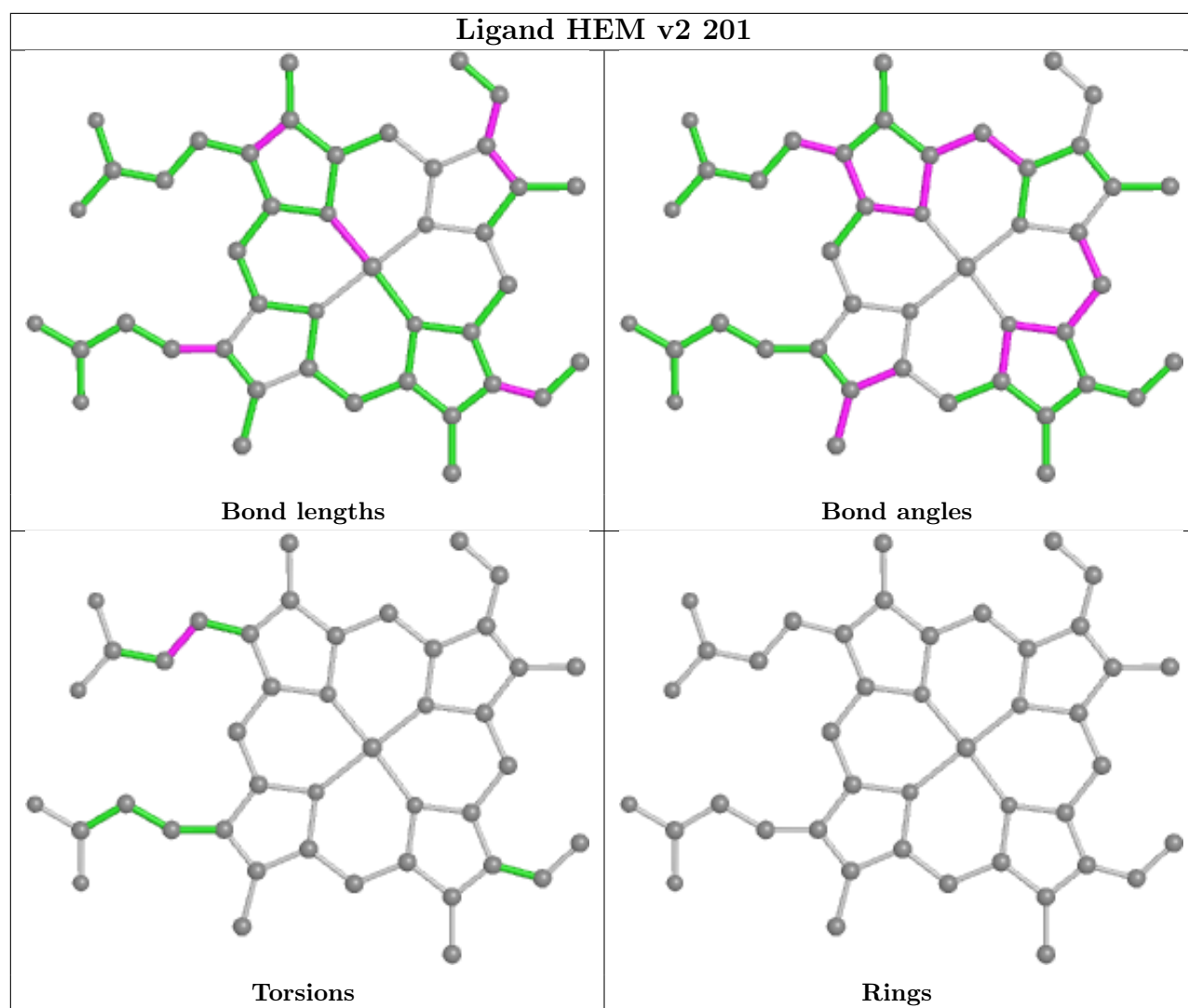




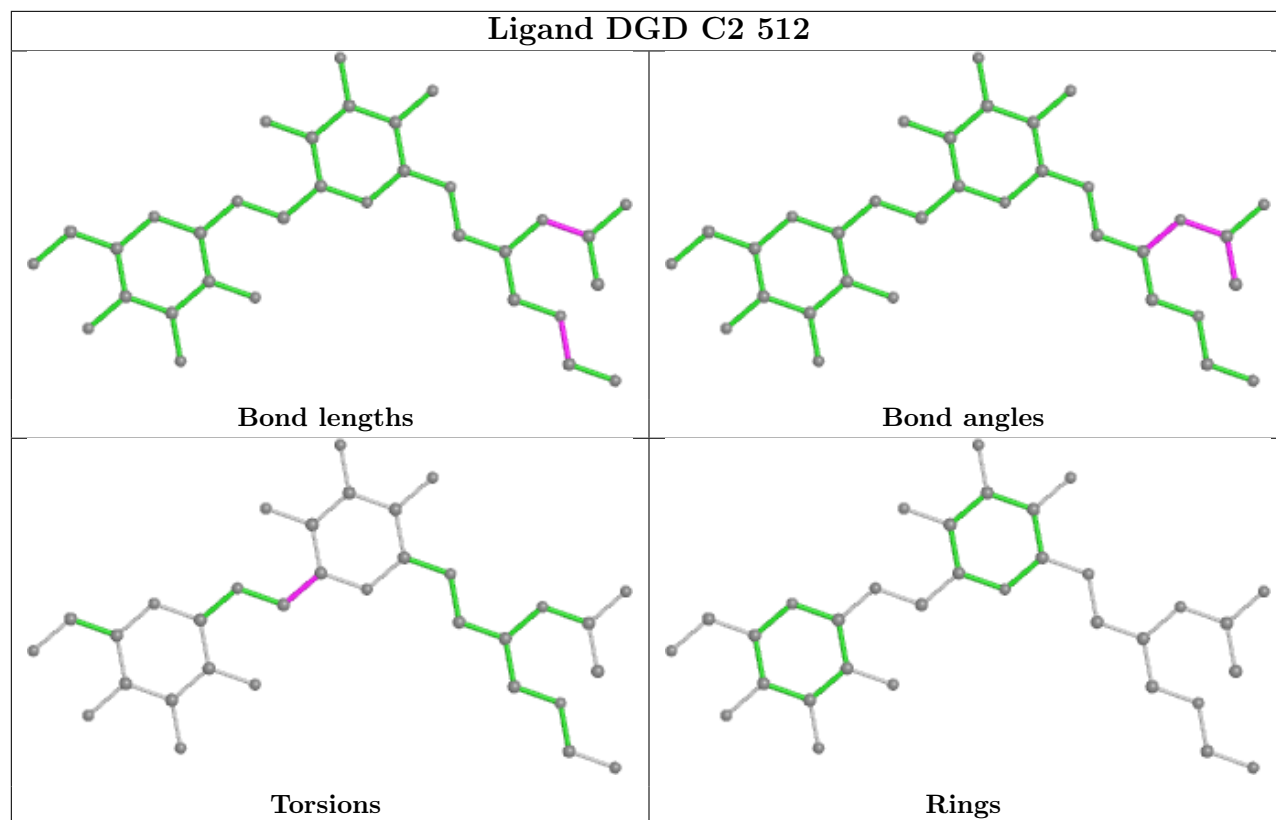




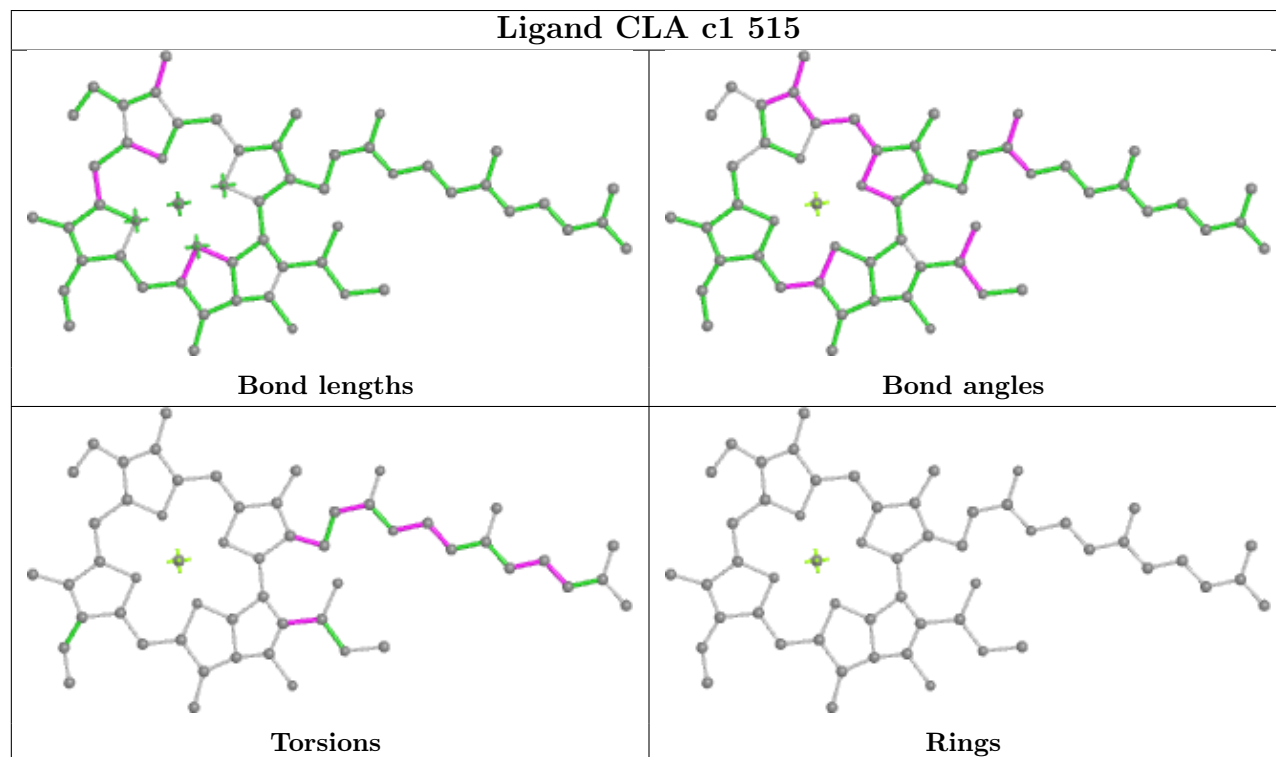


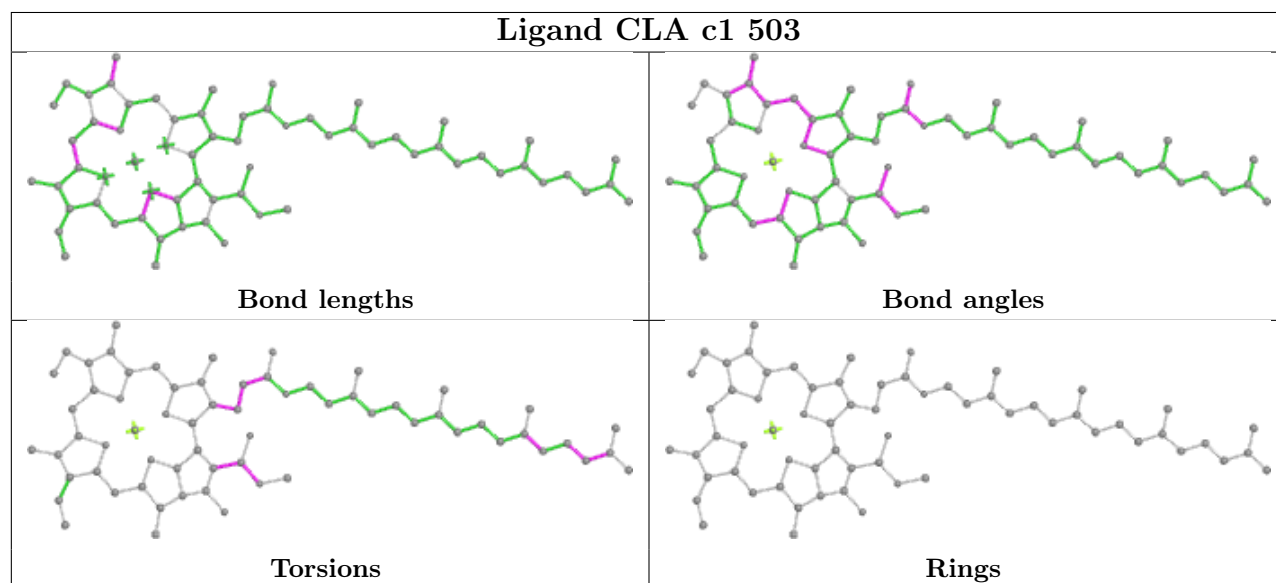
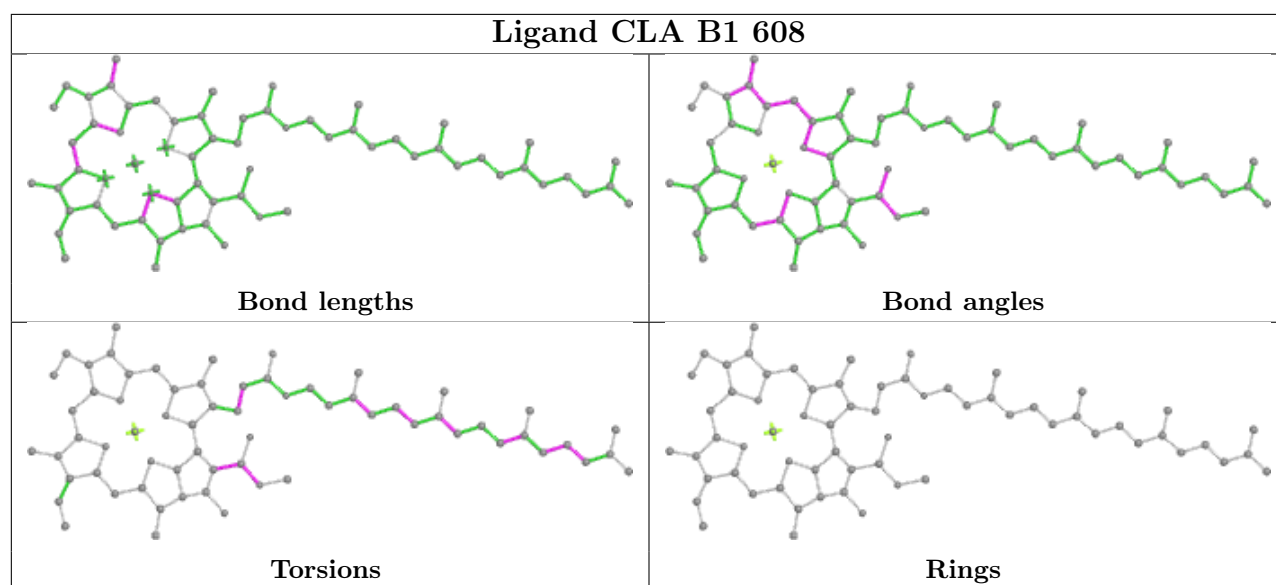
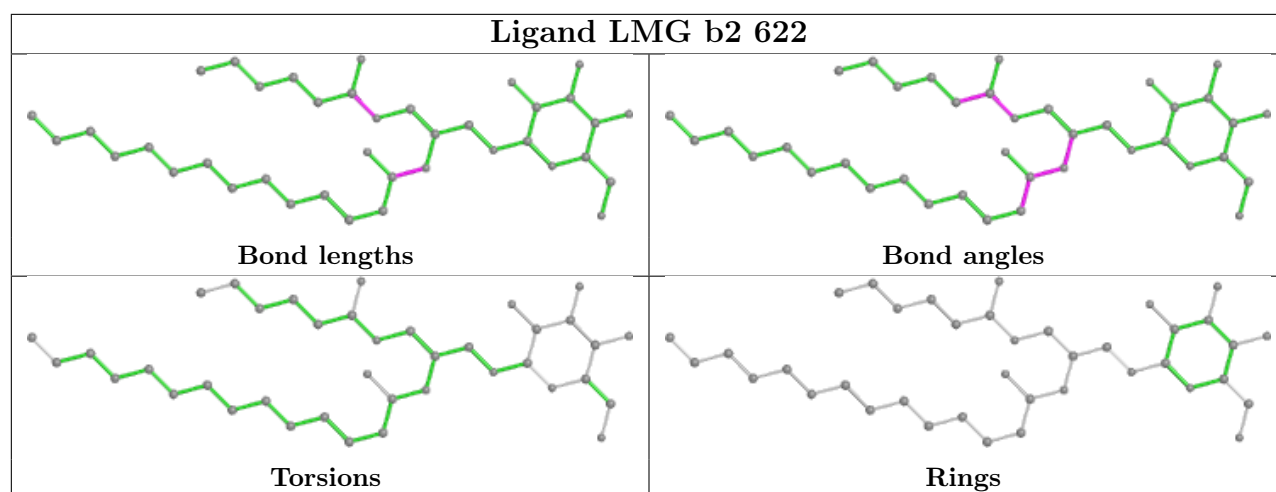


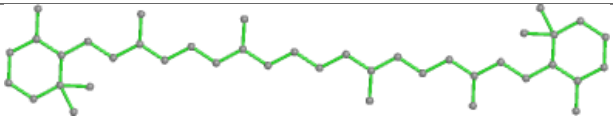
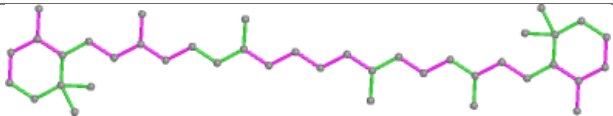
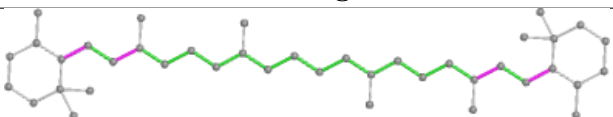
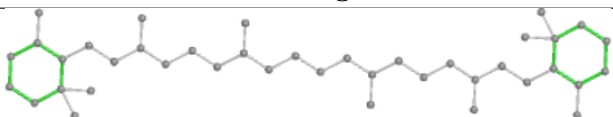
## Ligand DGD C2 512

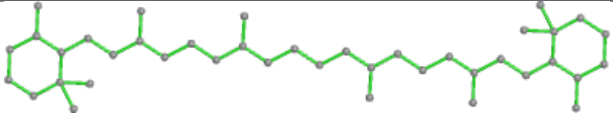
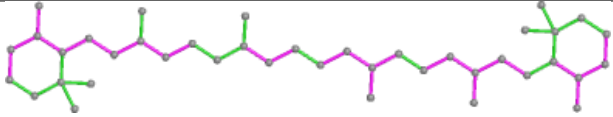
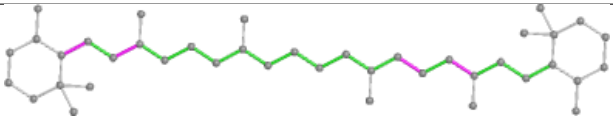
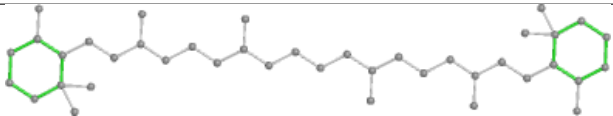


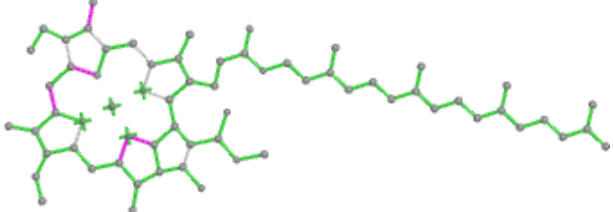
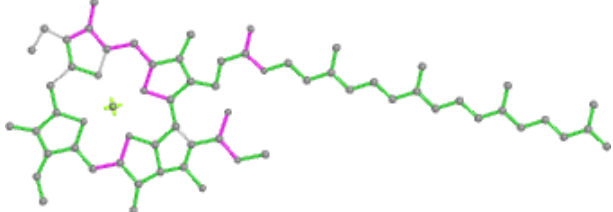
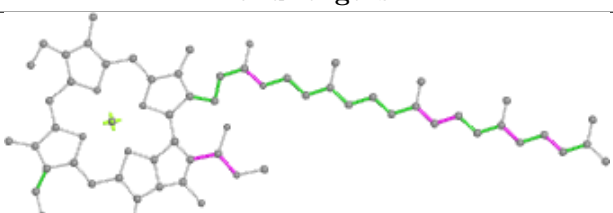
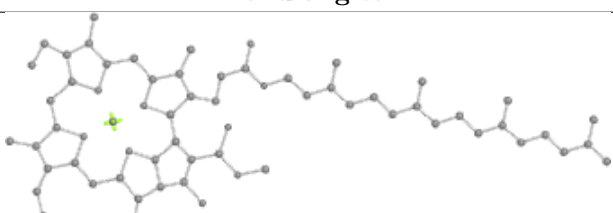
## Ligand CLA c1 515

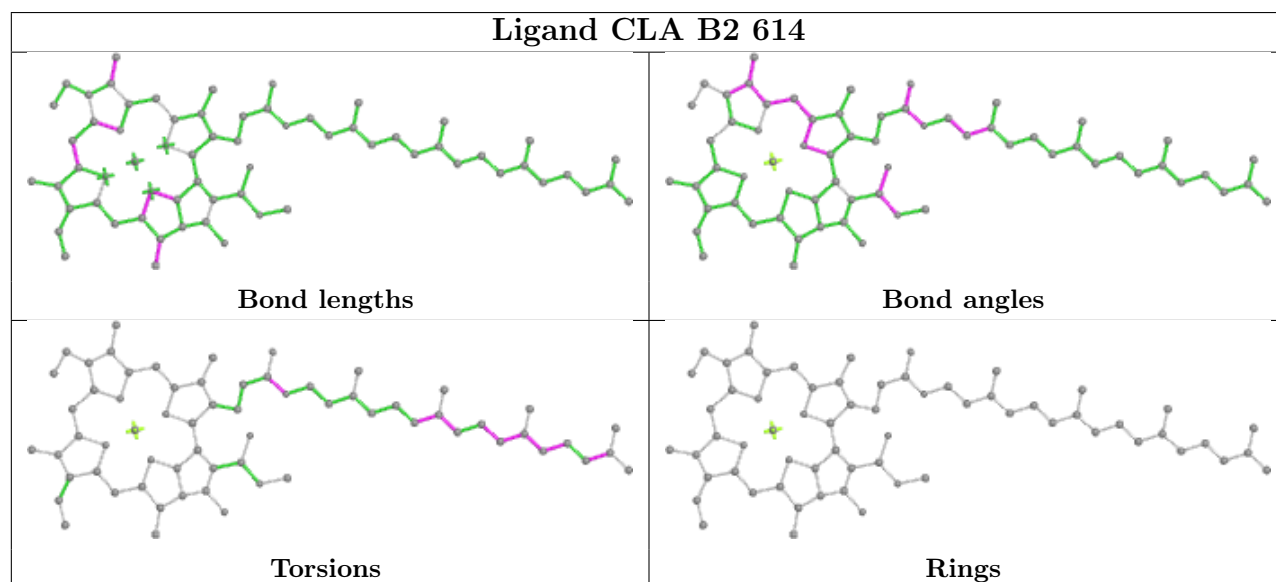
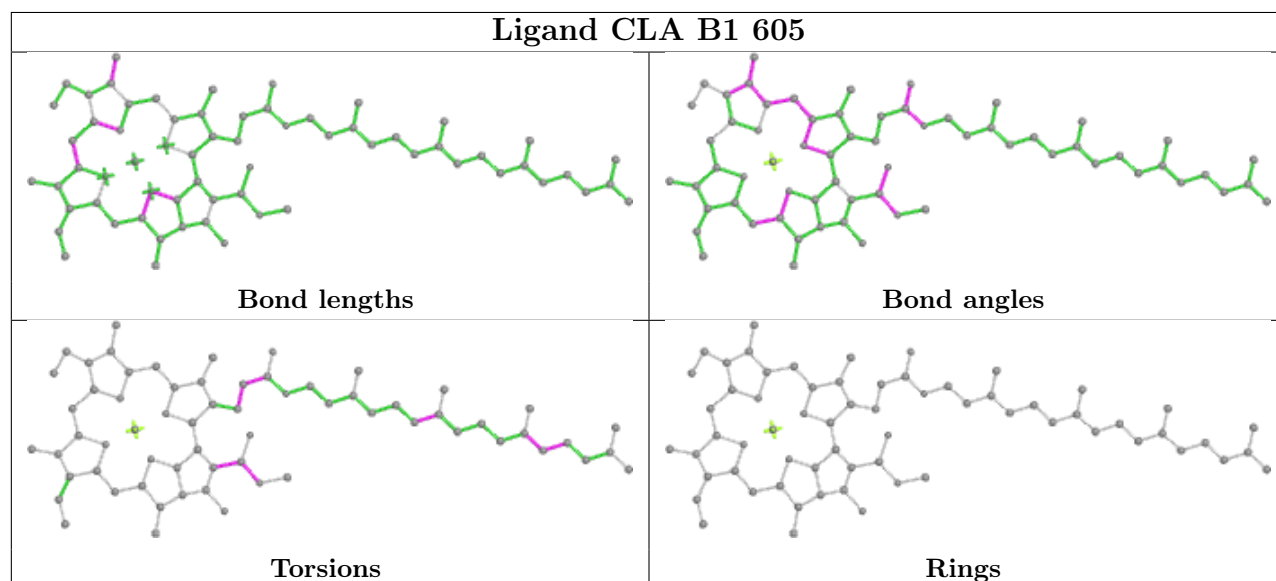
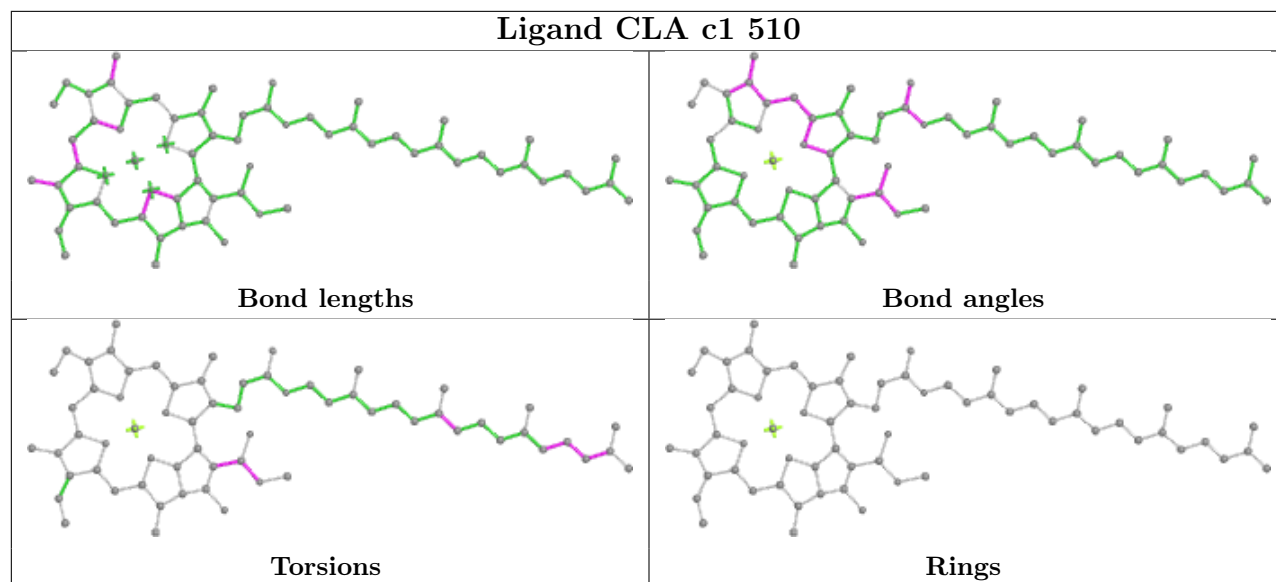


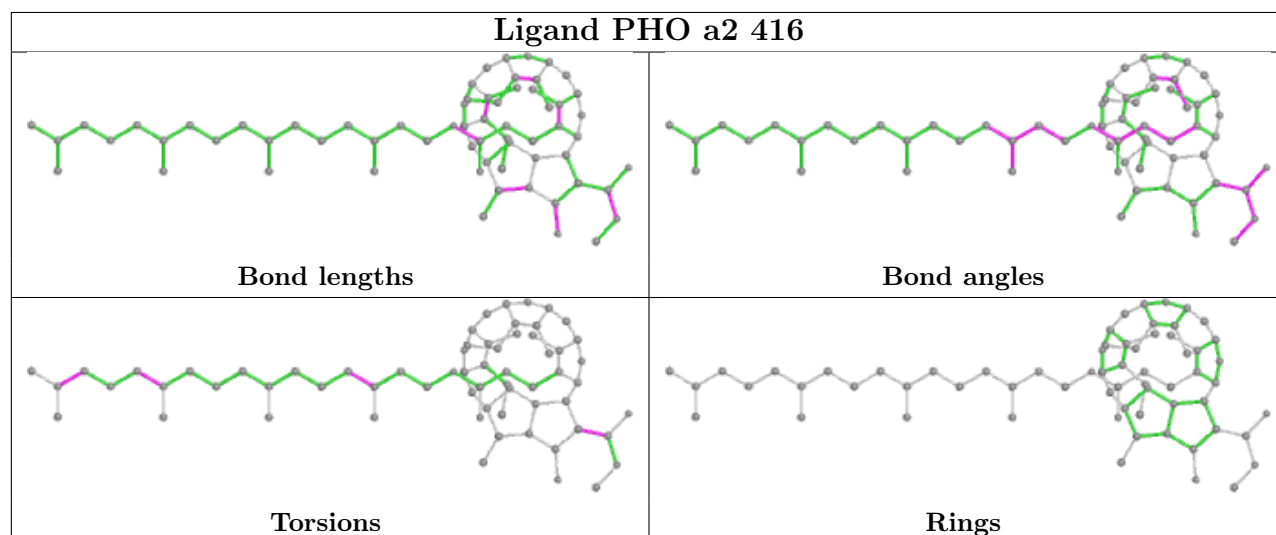
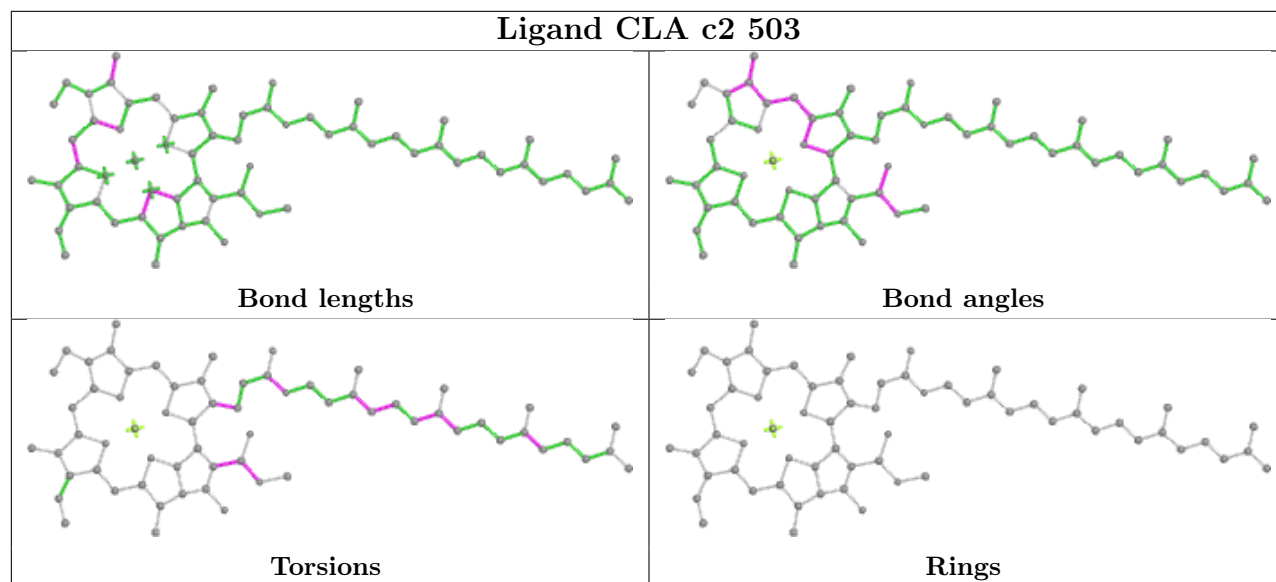


| Ligand BCR D1 401                                                                 |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| Bond lengths                                                                      | Bond angles                                                                        |
|  |  |
| Torsions                                                                          | Rings                                                                              |

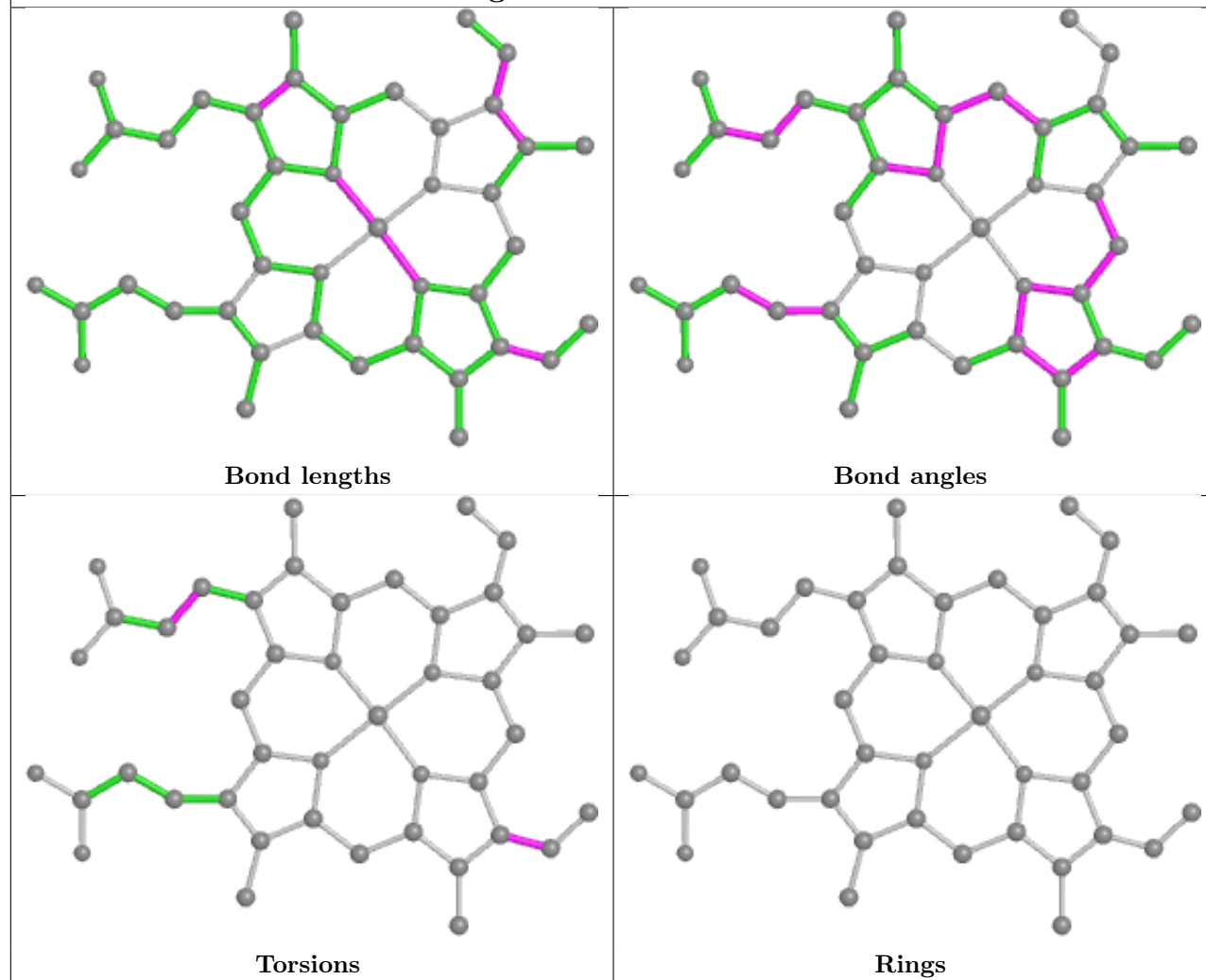
| Ligand BCR K2 102                                                                 |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| Bond lengths                                                                      | Bond angles                                                                        |
|  |  |
| Torsions                                                                          | Rings                                                                              |

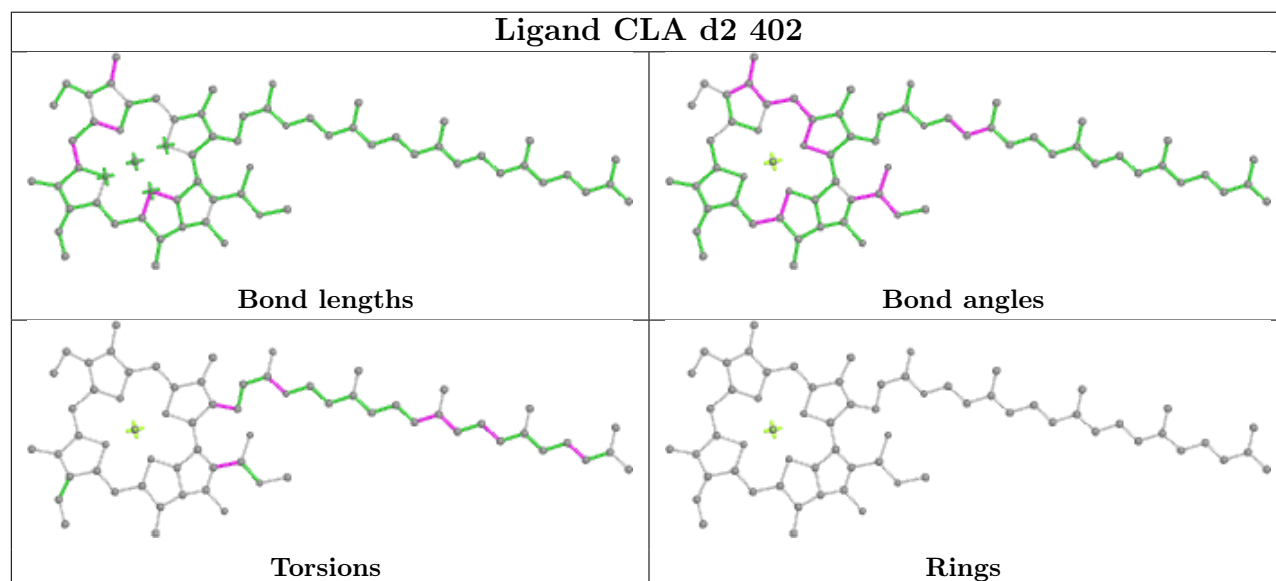
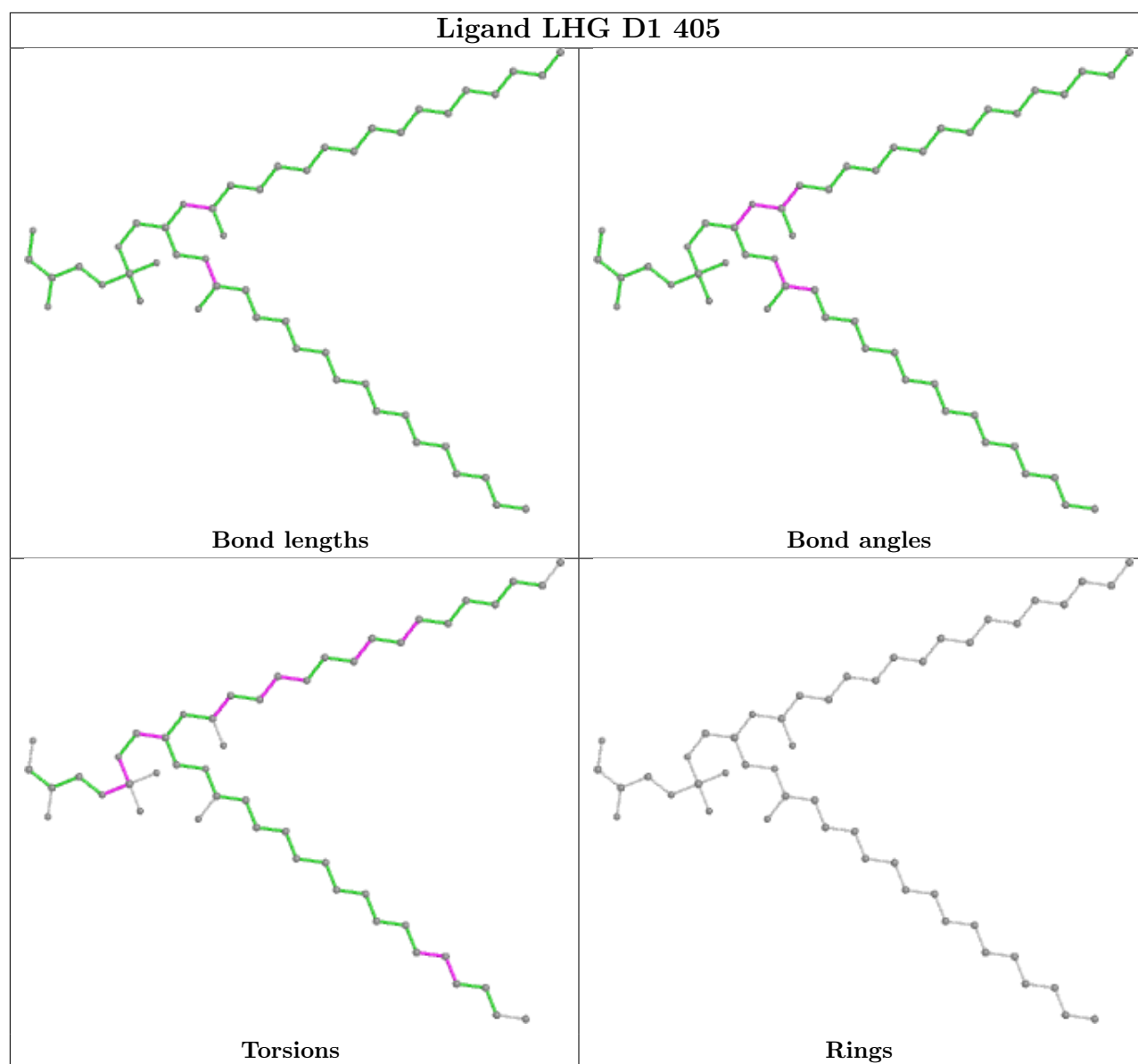
| Ligand CLA c2 504                                                                   |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|   |   |
| Bond lengths                                                                        | Bond angles                                                                          |
|  |  |
| Torsions                                                                            | Rings                                                                                |



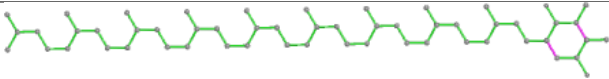
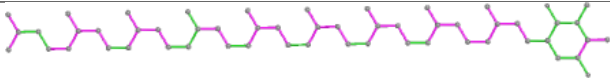
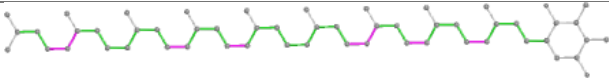
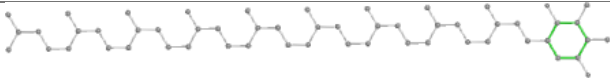


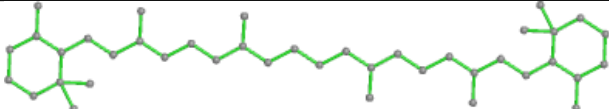
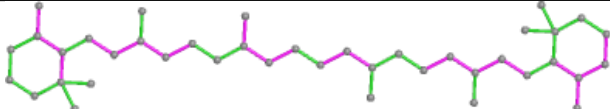
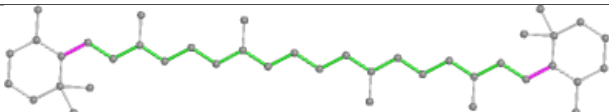
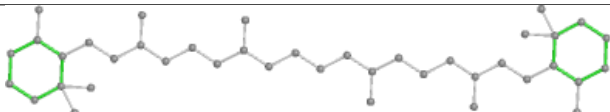
## Ligand HEM V2 201

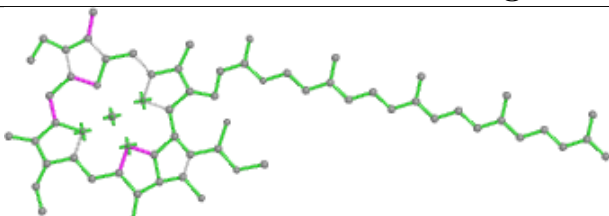
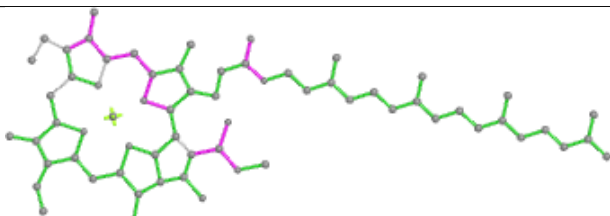
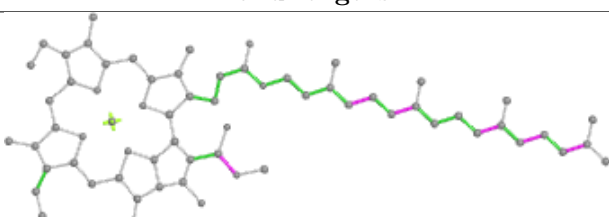
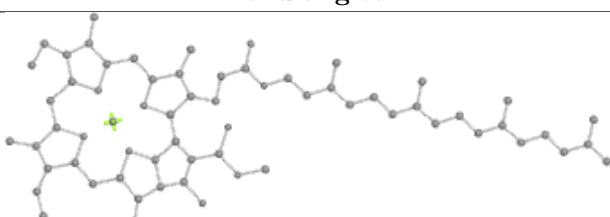


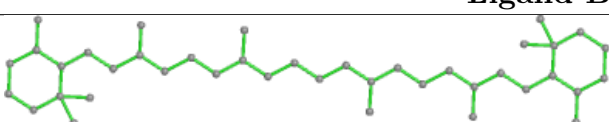
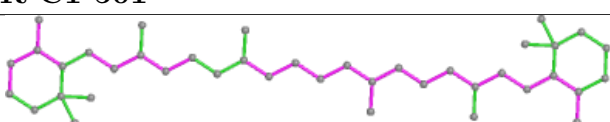
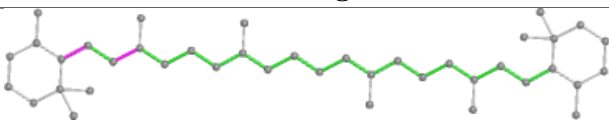
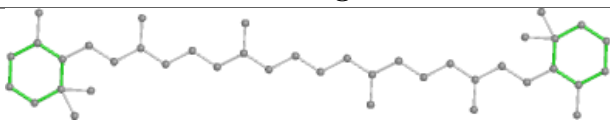




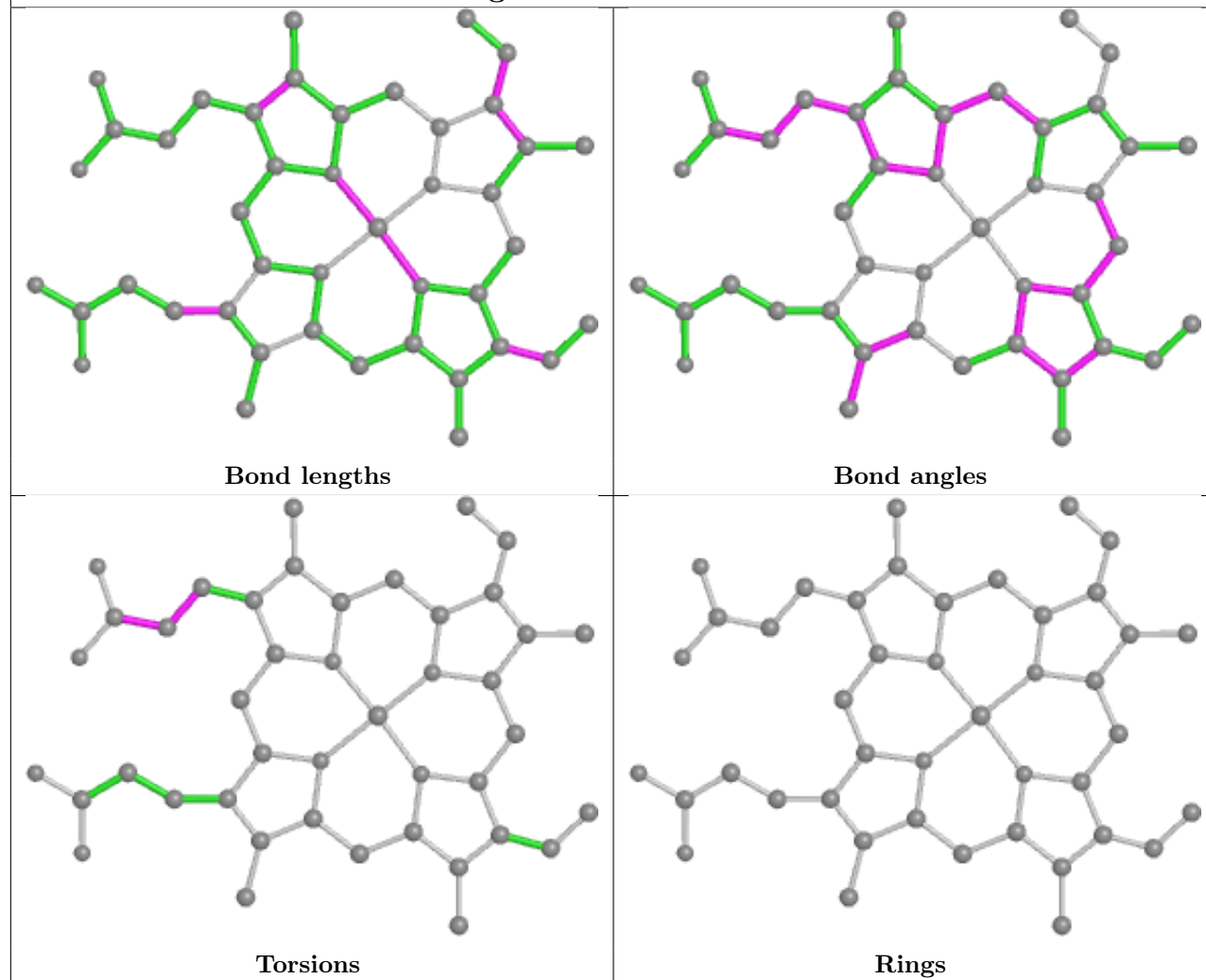
| Ligand PL9 d1 409                                                                                 |                                                                                                   |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <br>Bond lengths | <br>Bond angles |
| <br>Torsions     | <br>Rings       |

| Ligand BCR b1 603                                                                                 |                                                                                                   |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <br>Bond lengths | <br>Bond angles |
| <br>Torsions     | <br>Rings       |

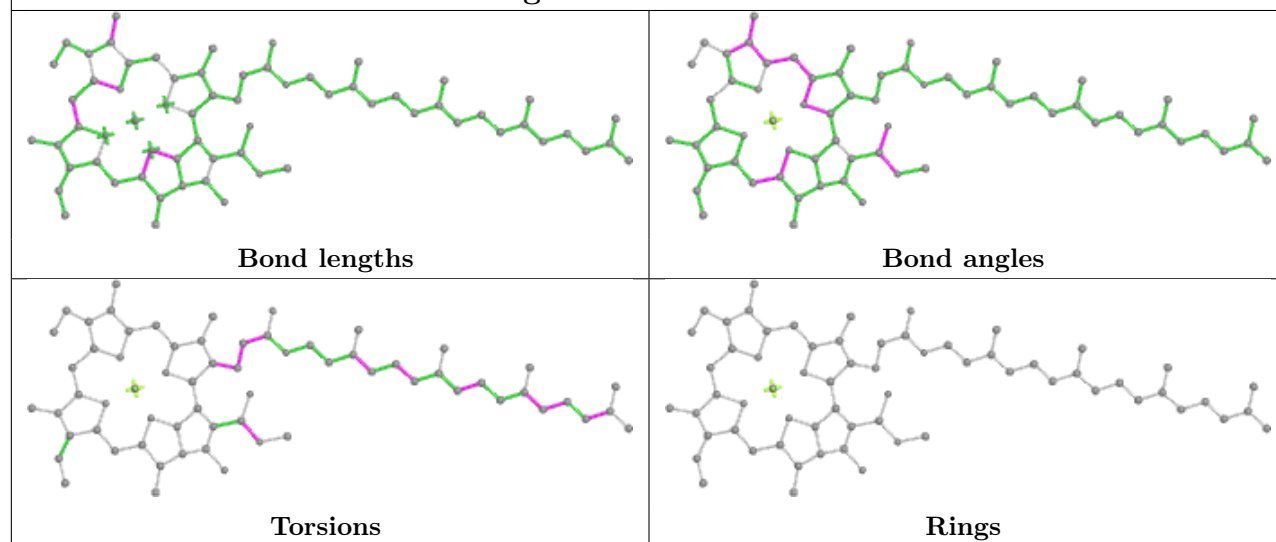
| Ligand CLA b1 607                                                                                  |                                                                                                    |
|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| <br>Bond lengths | <br>Bond angles |
| <br>Torsions    | <br>Rings      |

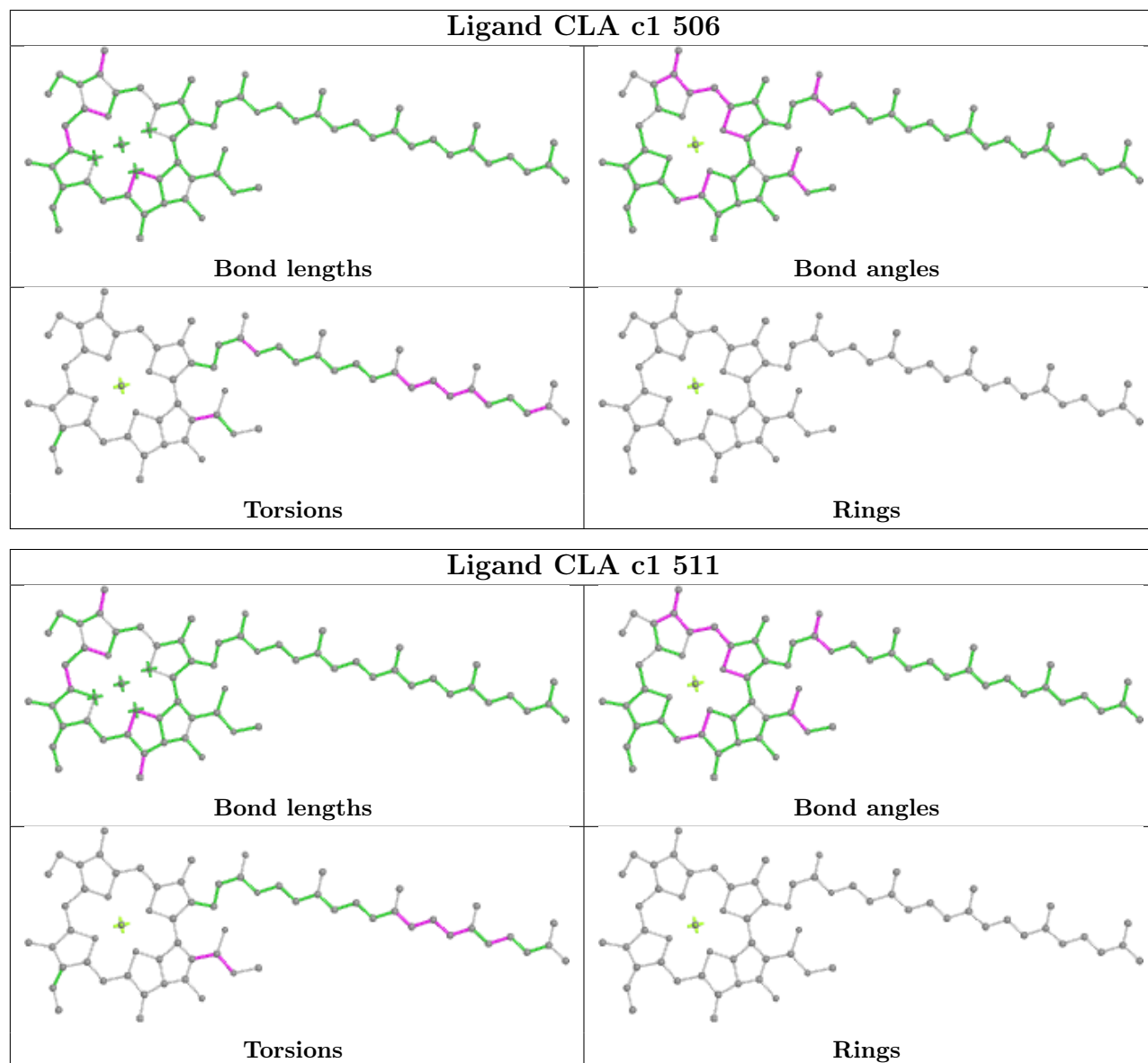
| Ligand BCR C1 501                                                                                   |                                                                                                     |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <br>Bond lengths | <br>Bond angles |
| <br>Torsions     | <br>Rings       |

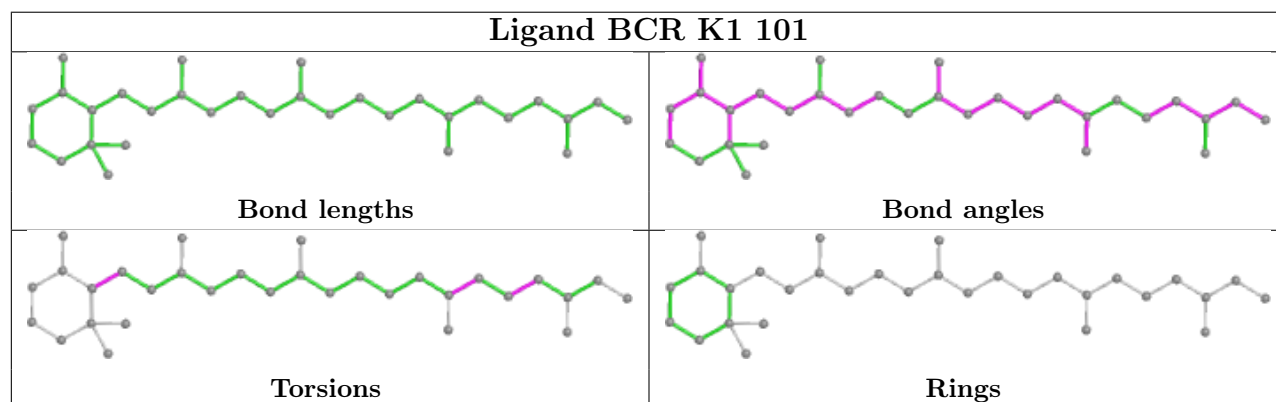
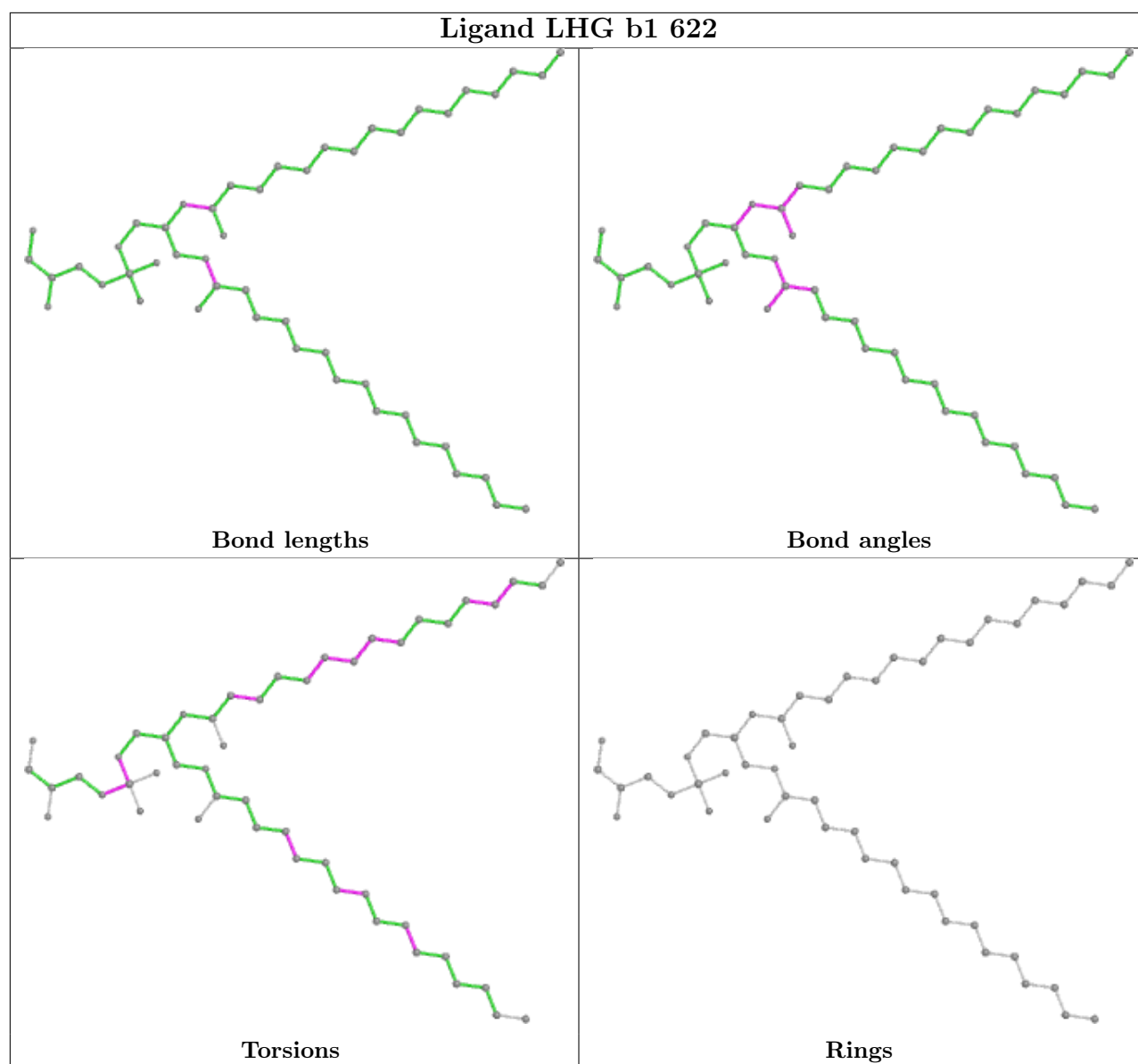
## Ligand HEM V1 201

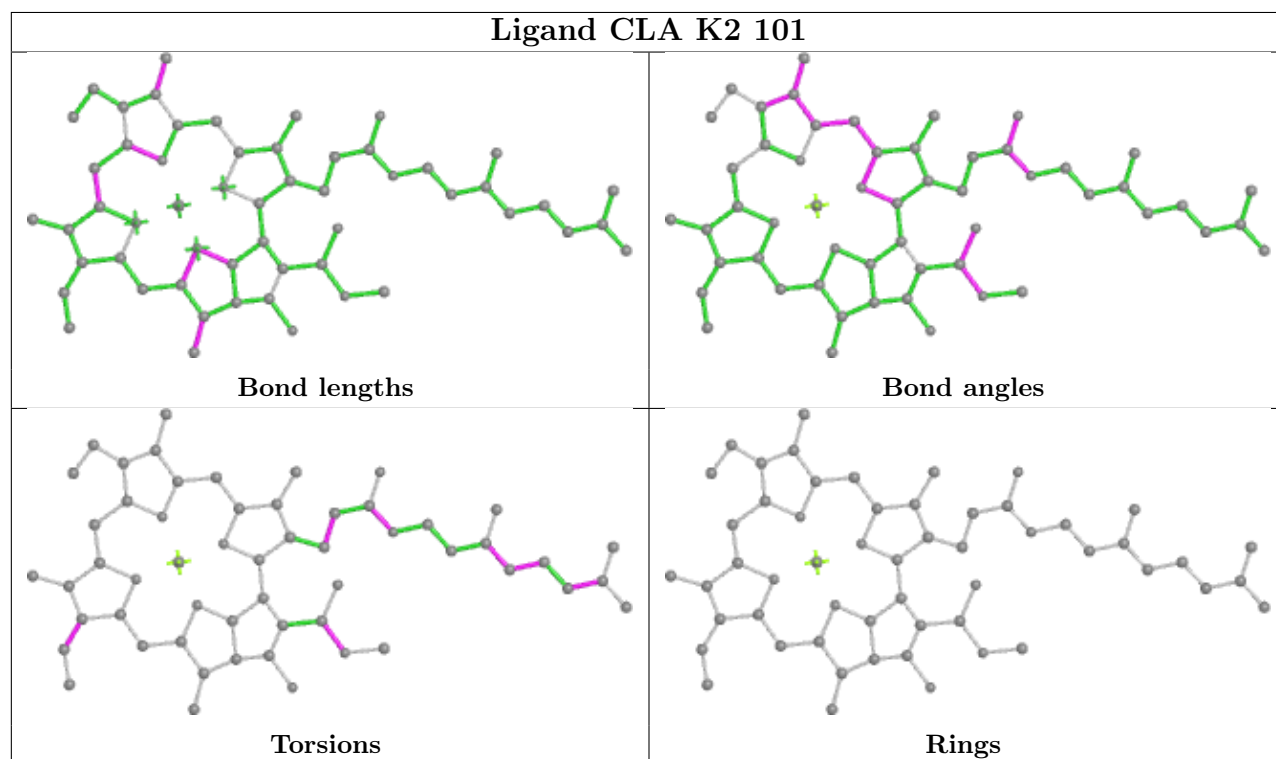
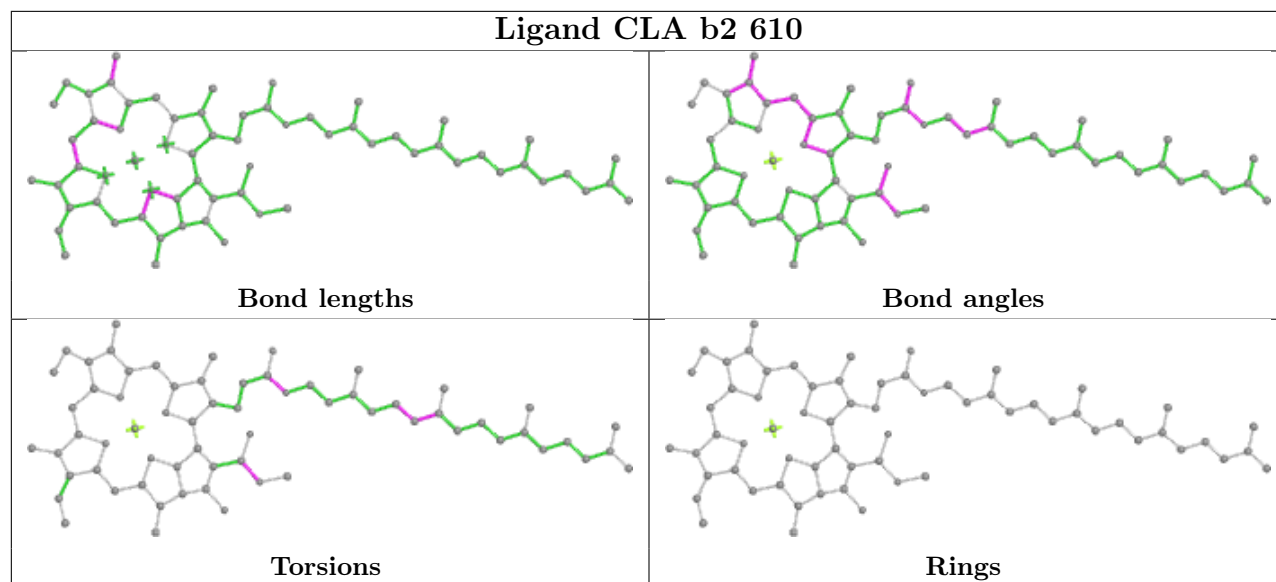


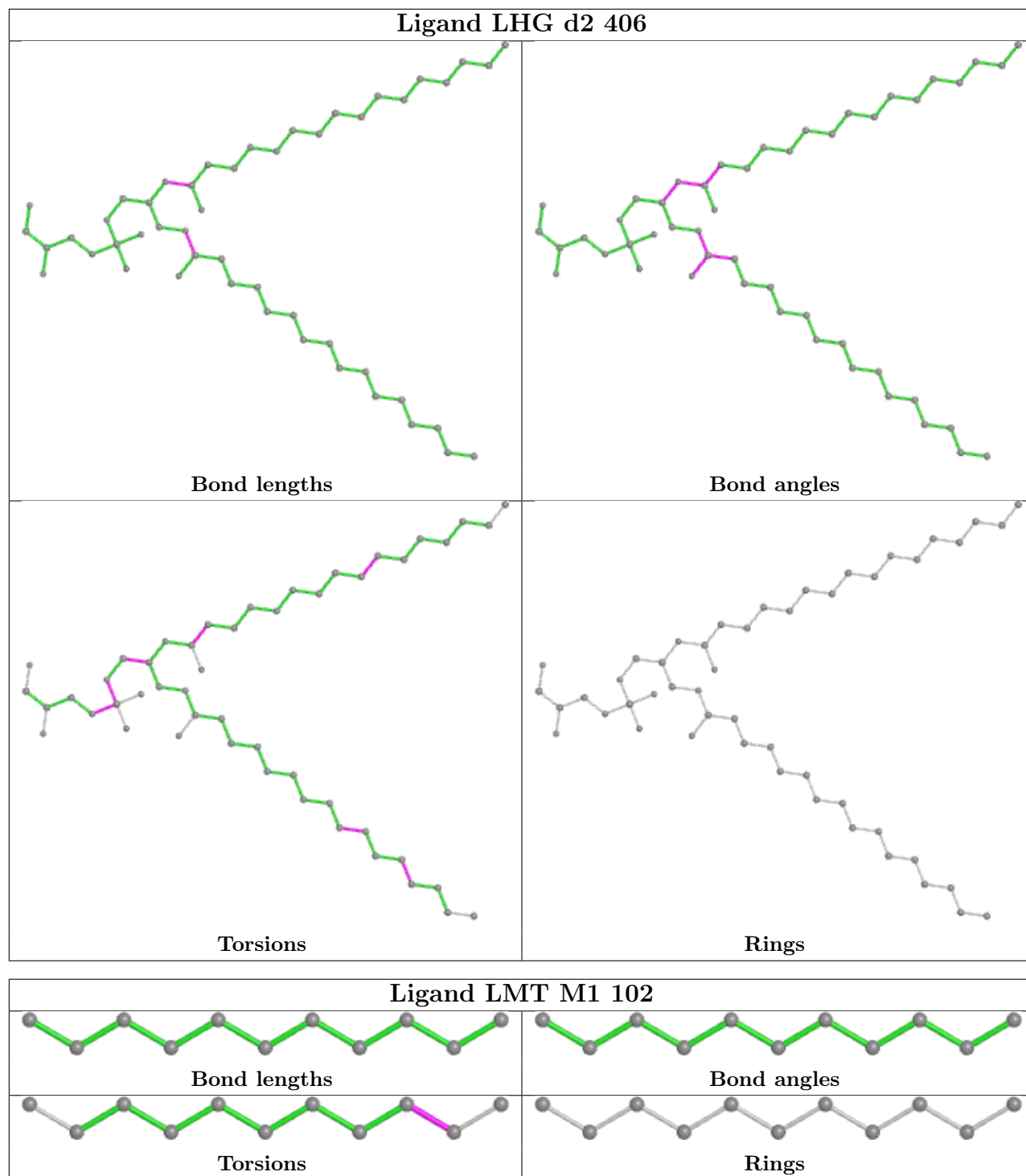
## Ligand CLA C2 503



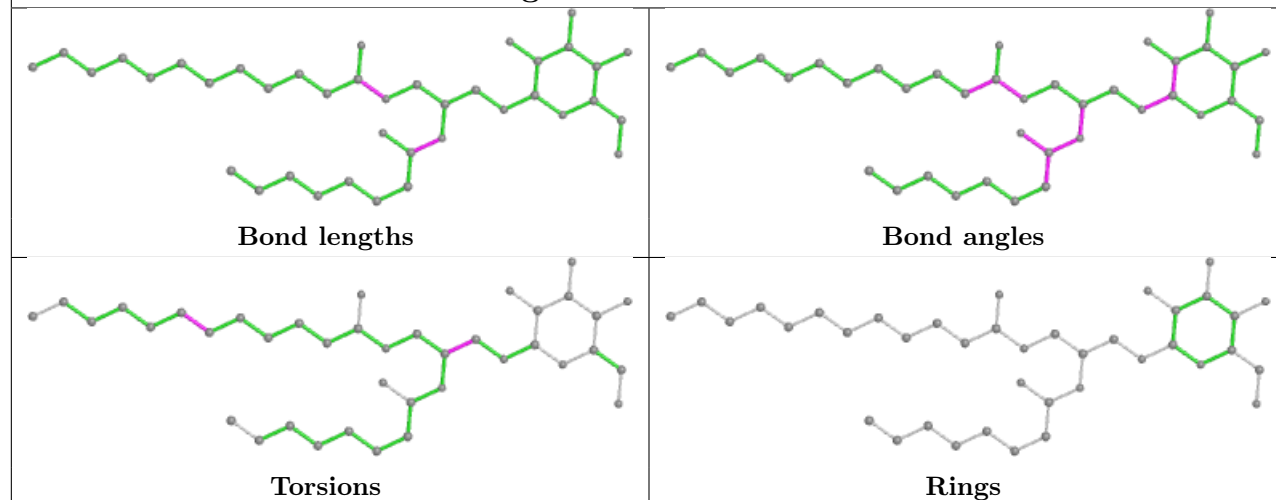




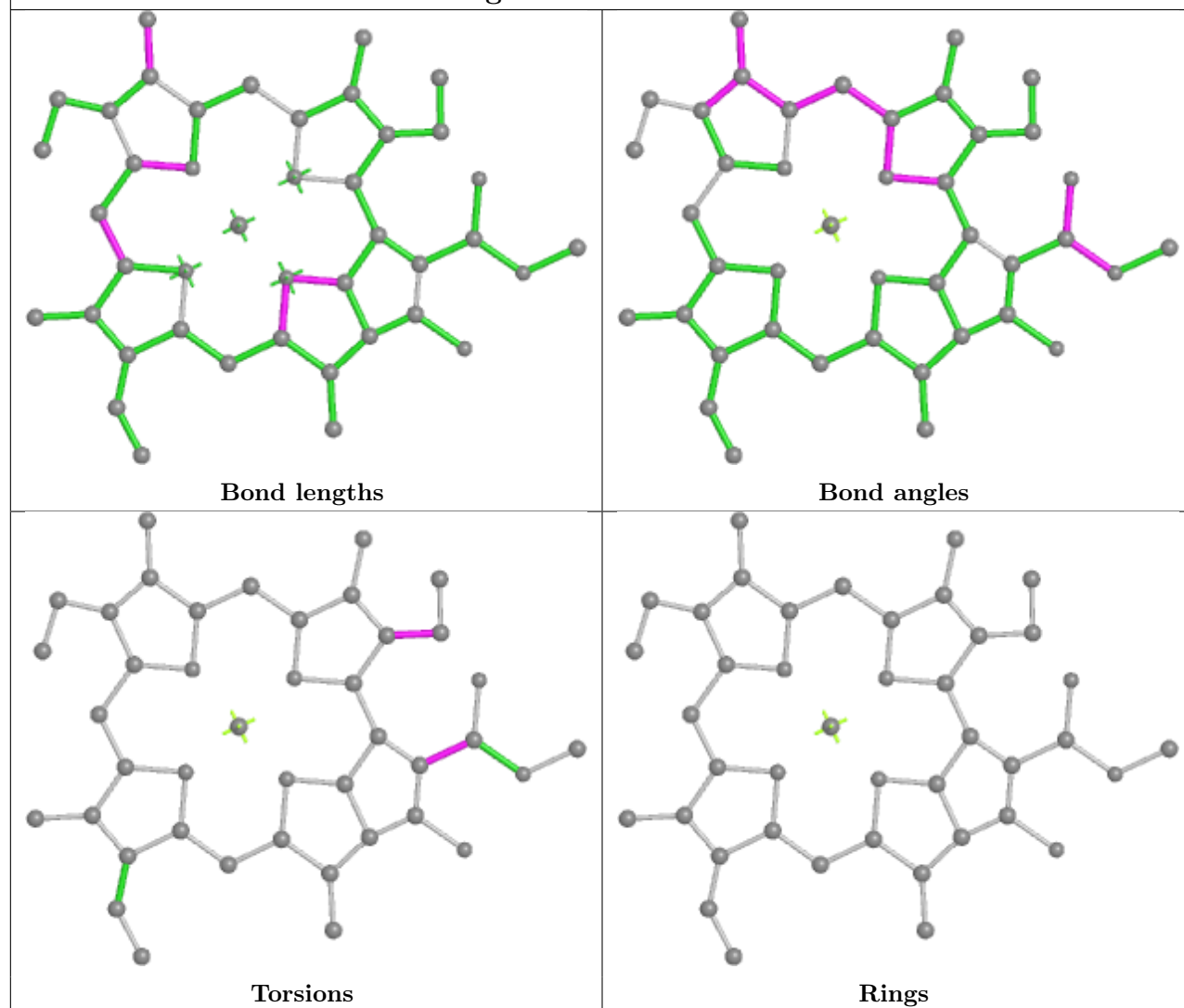


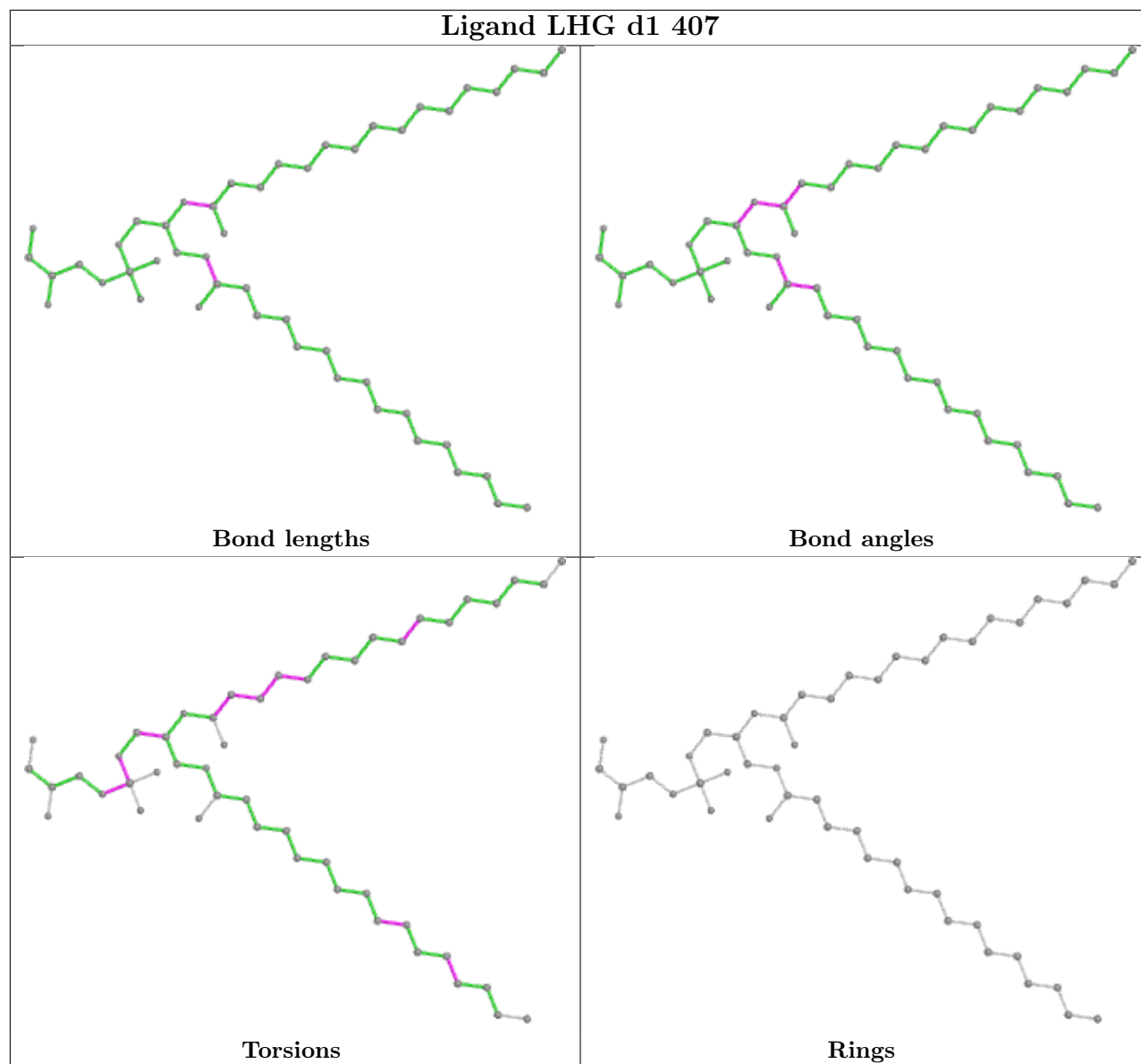


## Ligand LMG b1 624

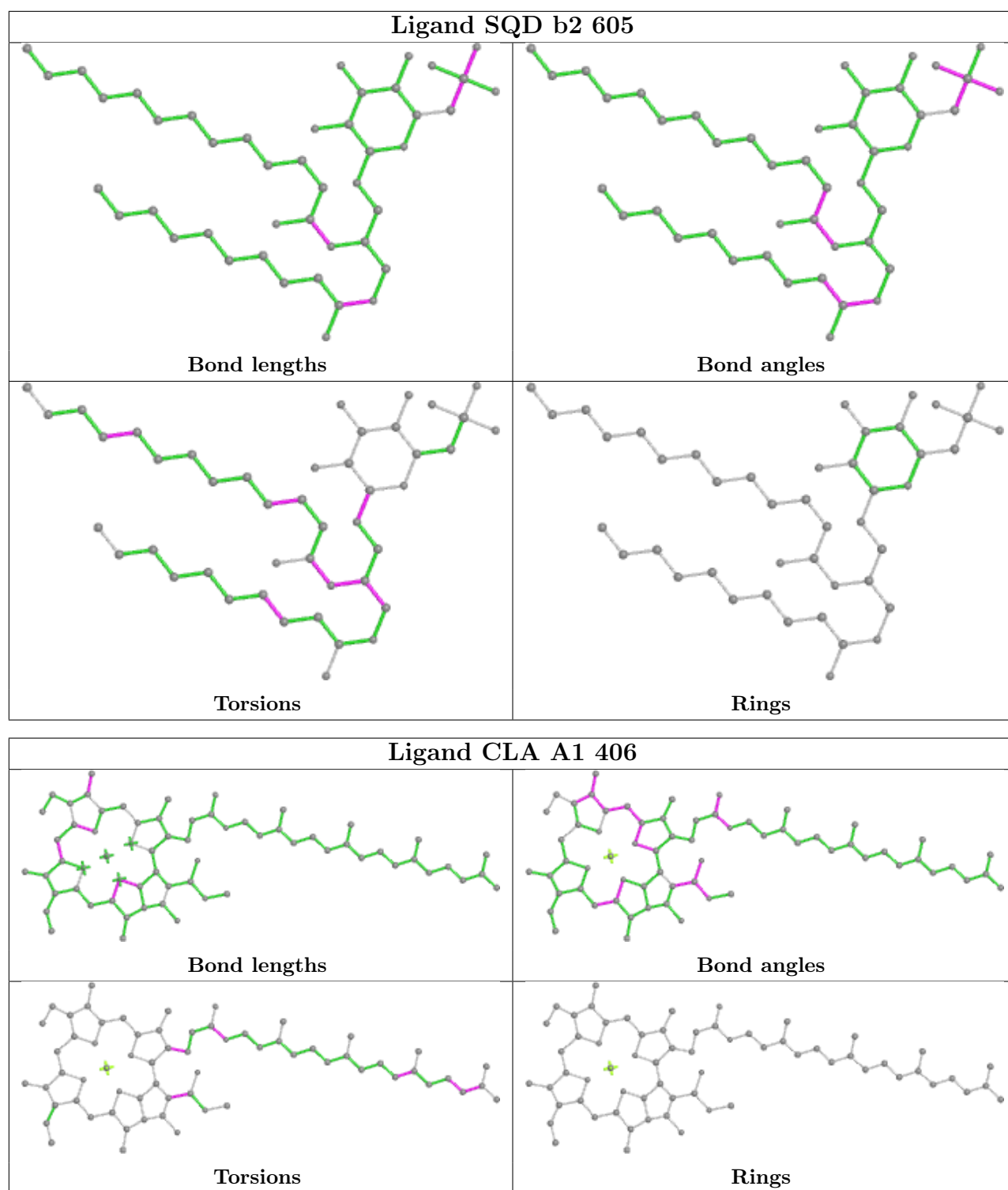


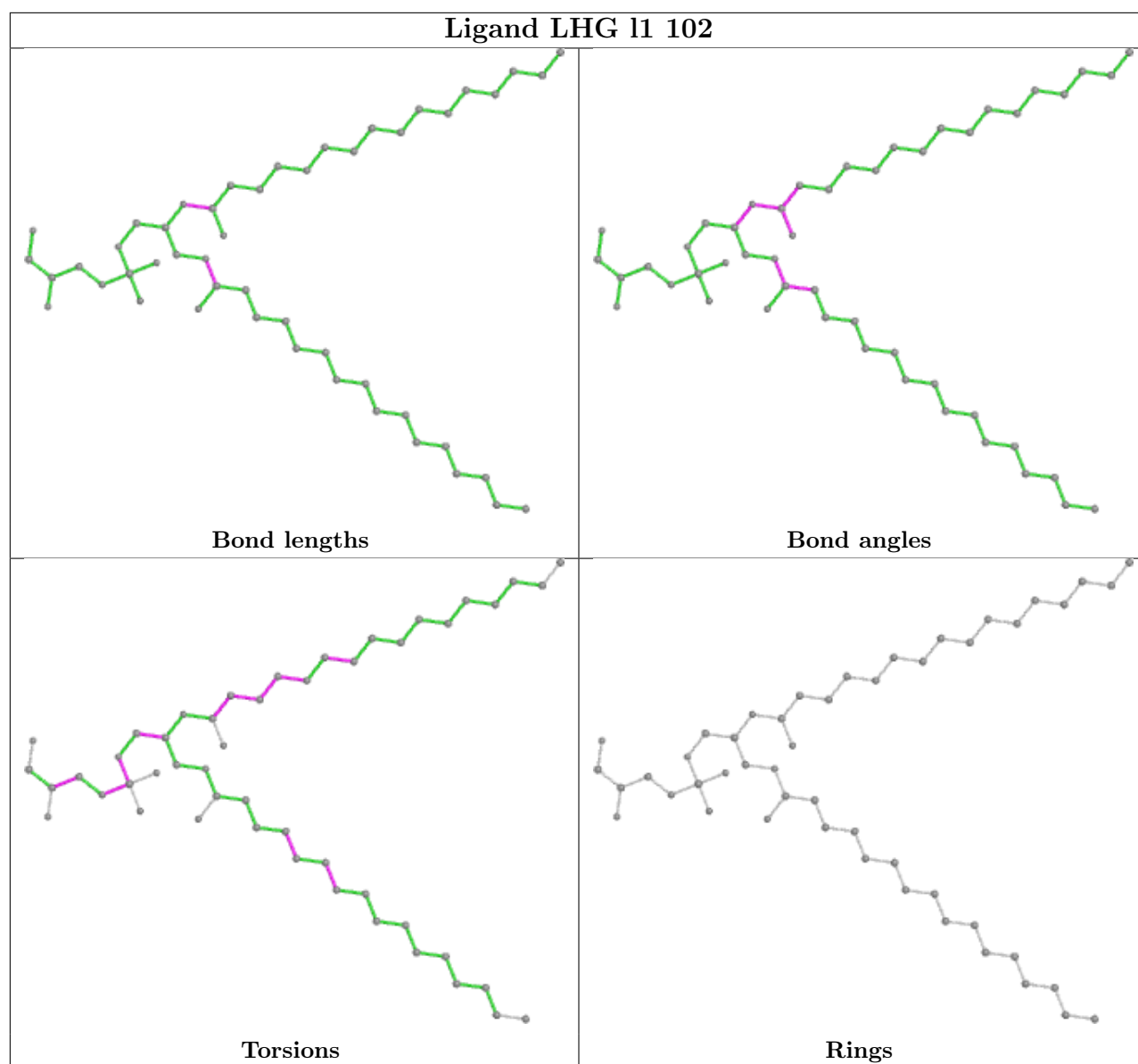
## Ligand CLA B1 604



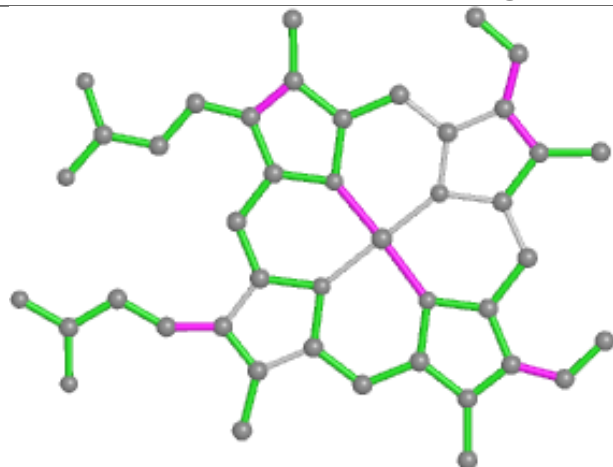




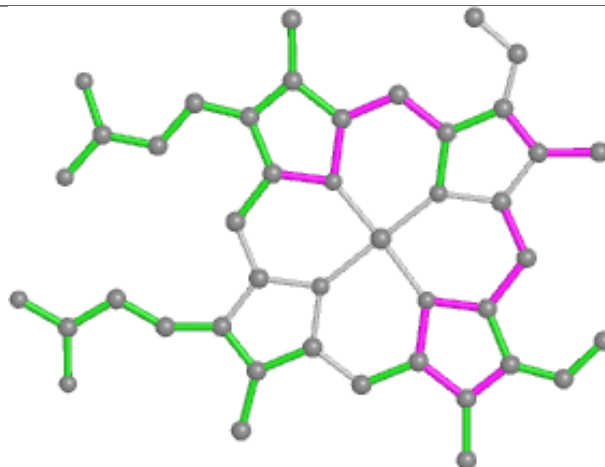




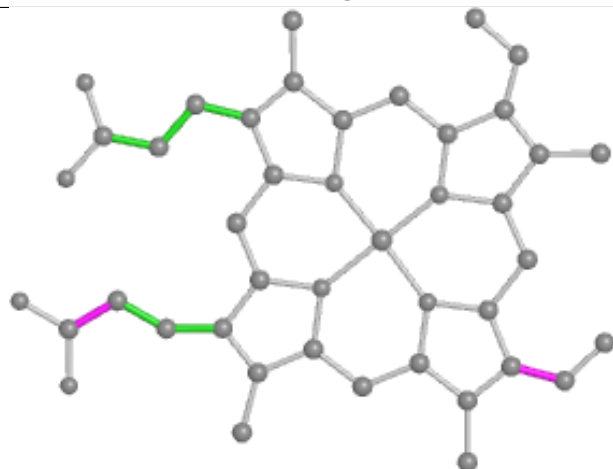
## Ligand HEM E1 101



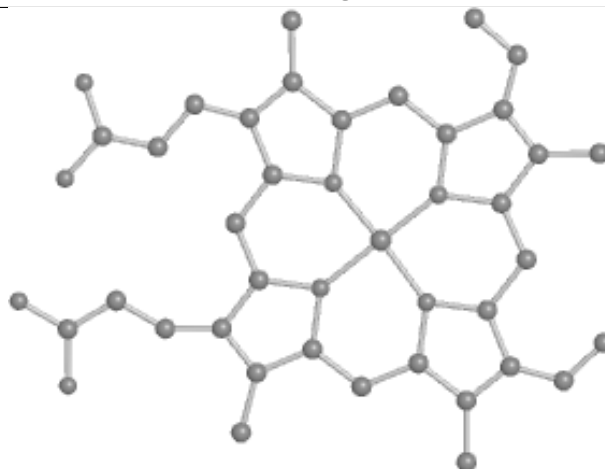
Bond lengths



Bond angles

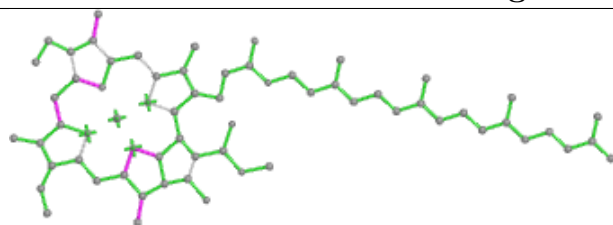


Torsions

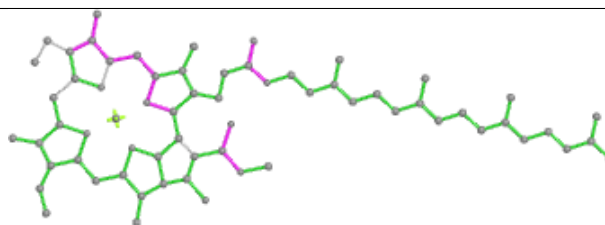


Rings

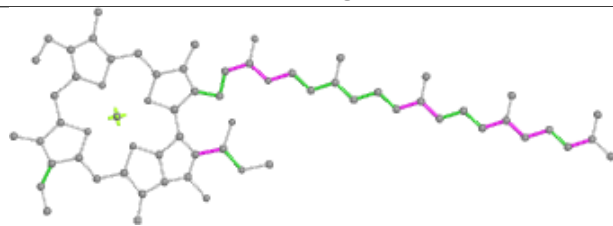
## Ligand CLA b2 614



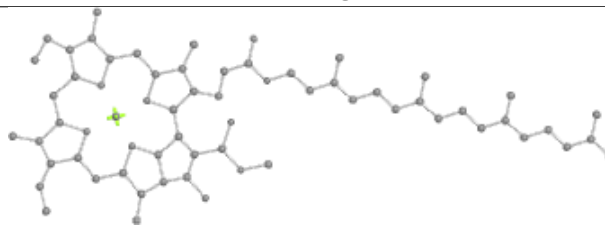
Bond lengths



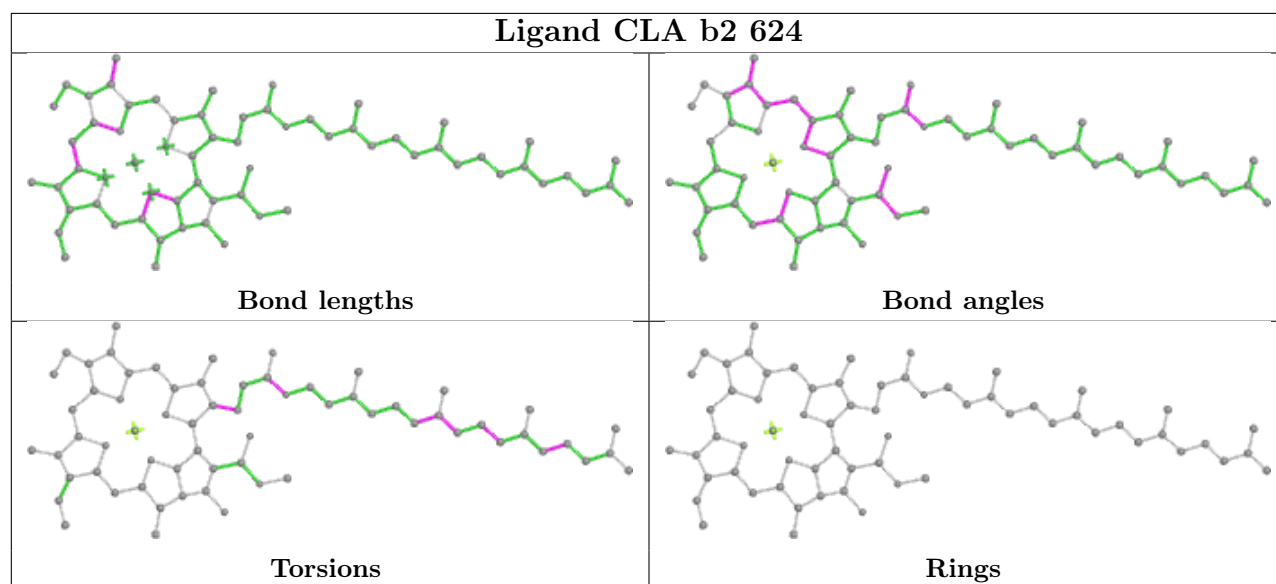
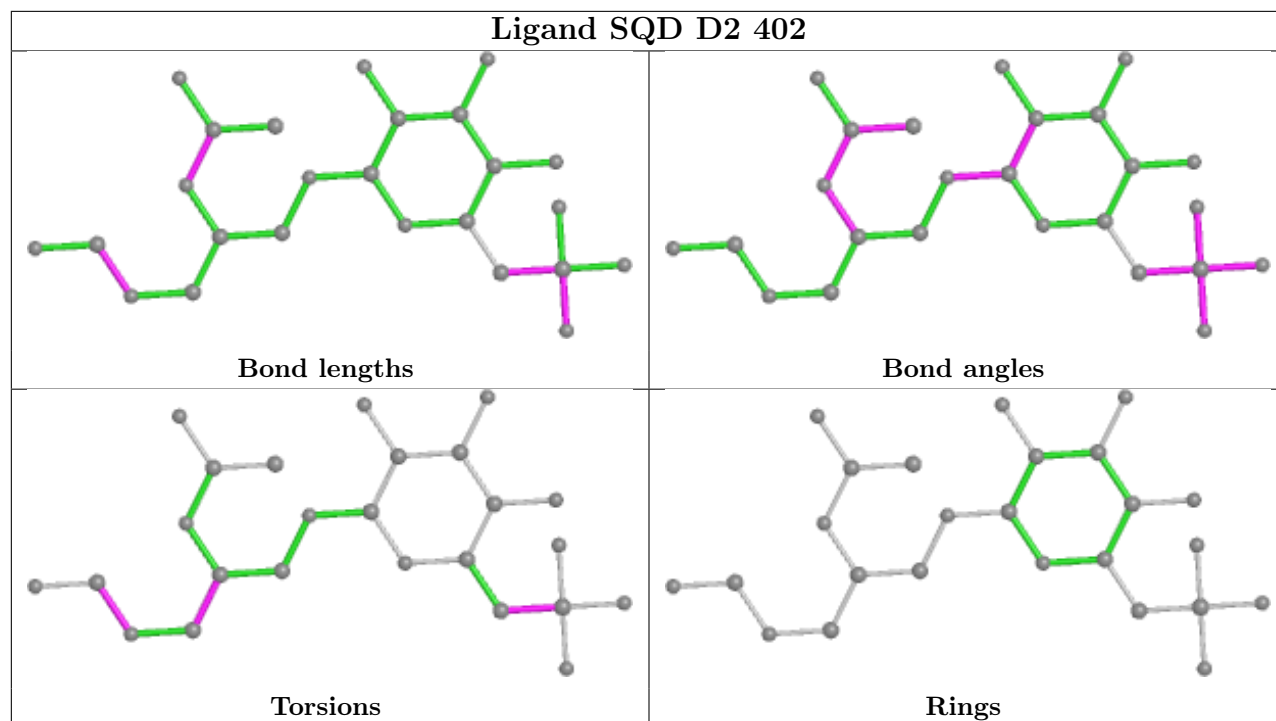
Bond angles

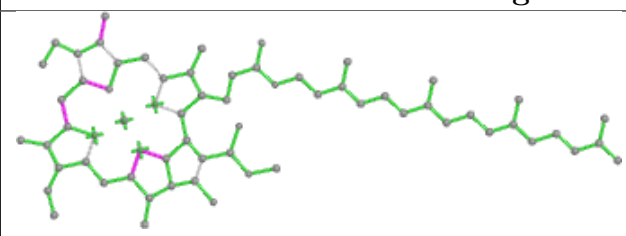
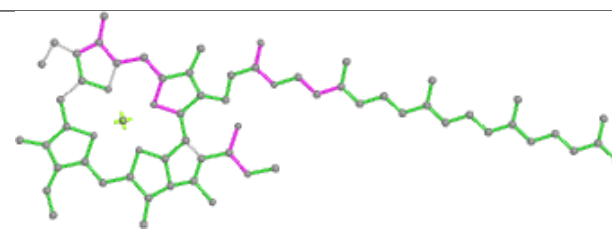
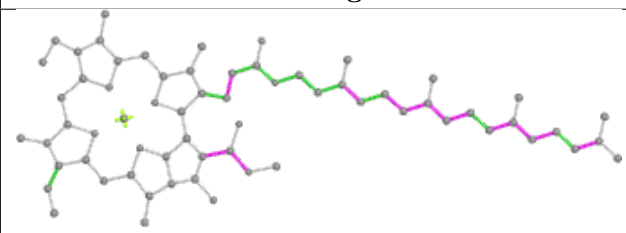
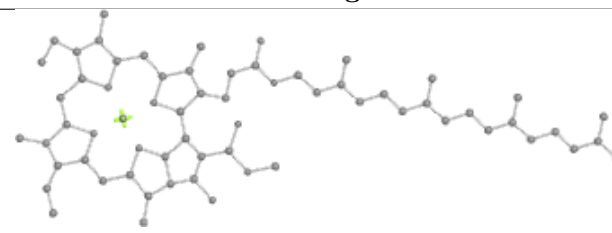


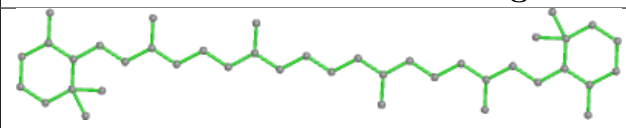
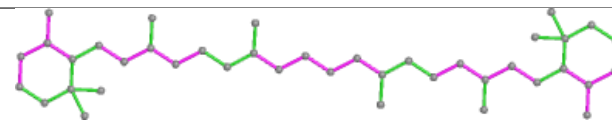
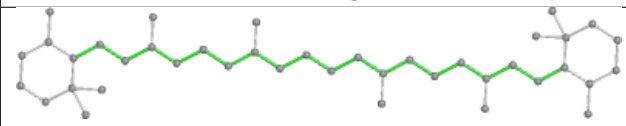
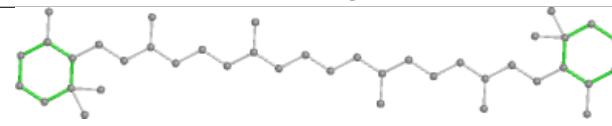
Torsions

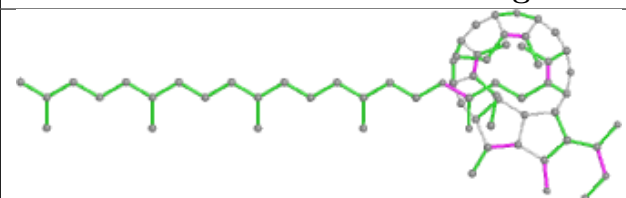
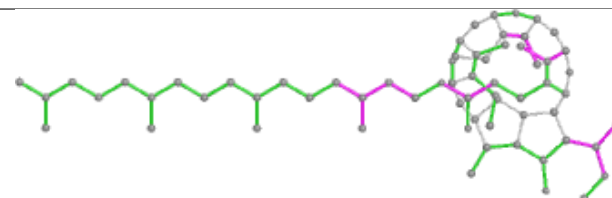
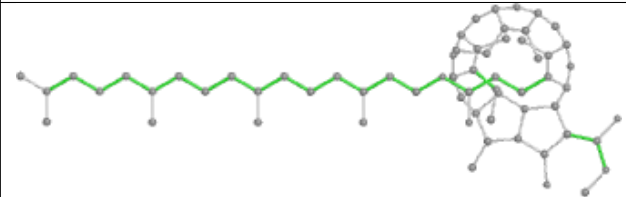
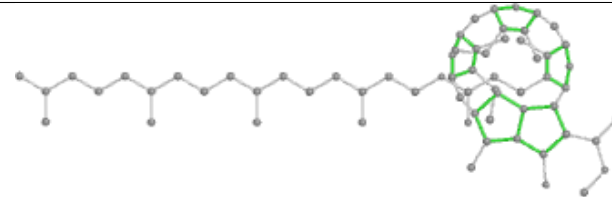


Rings

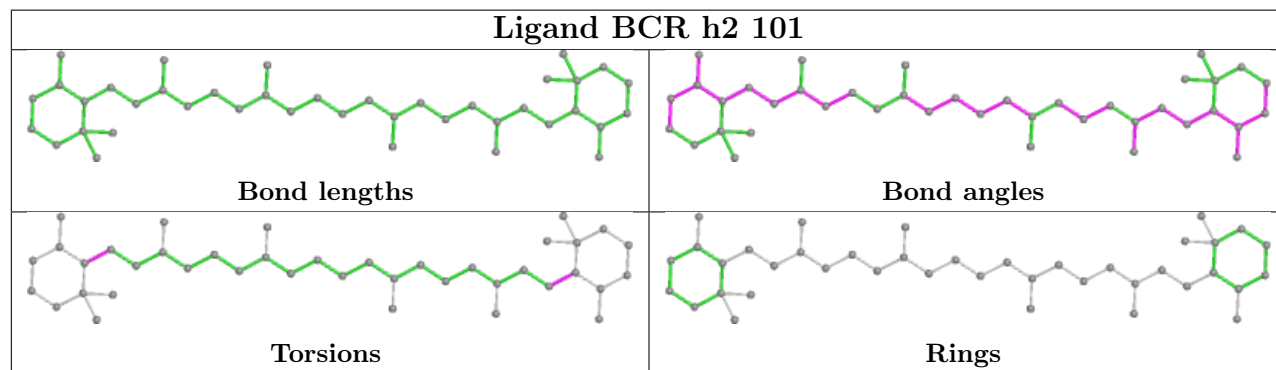
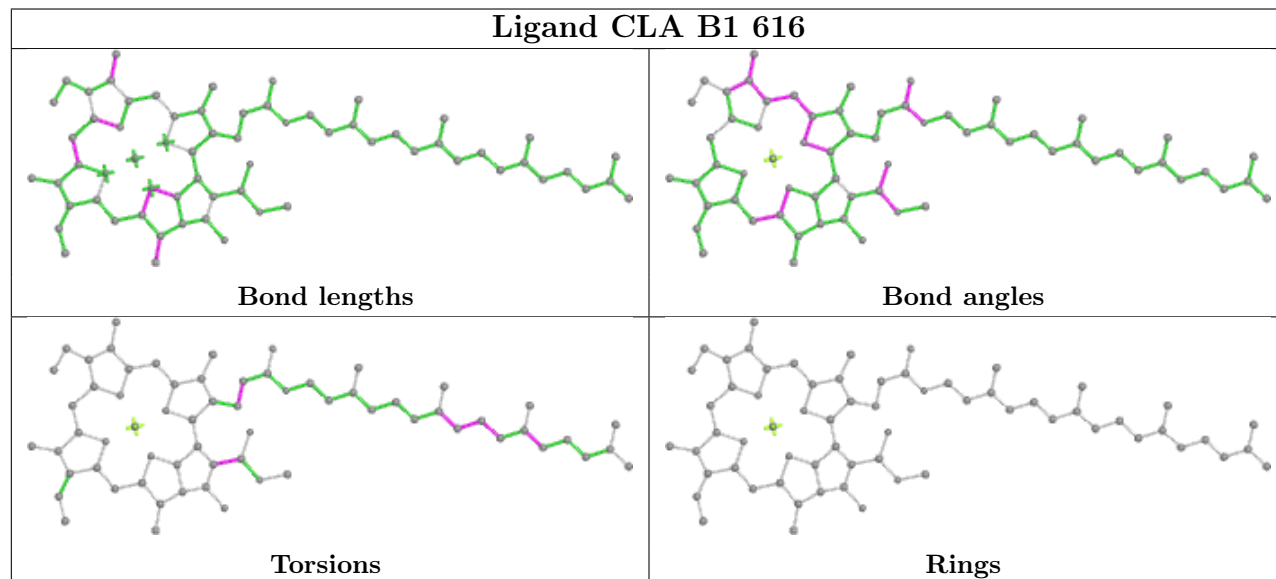
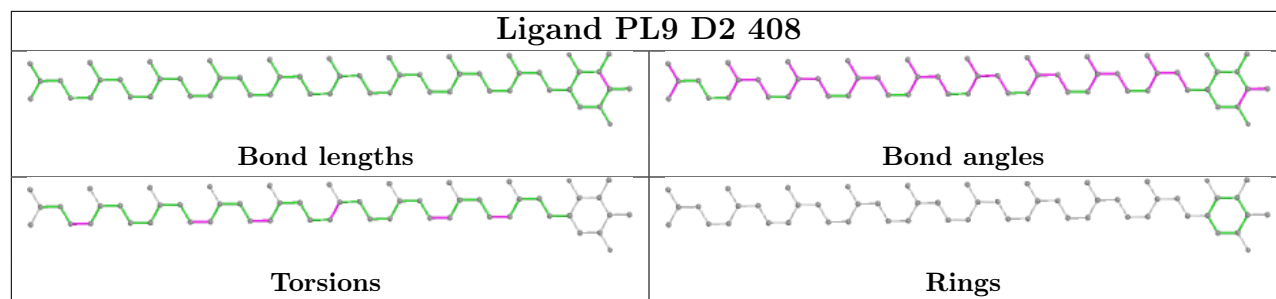


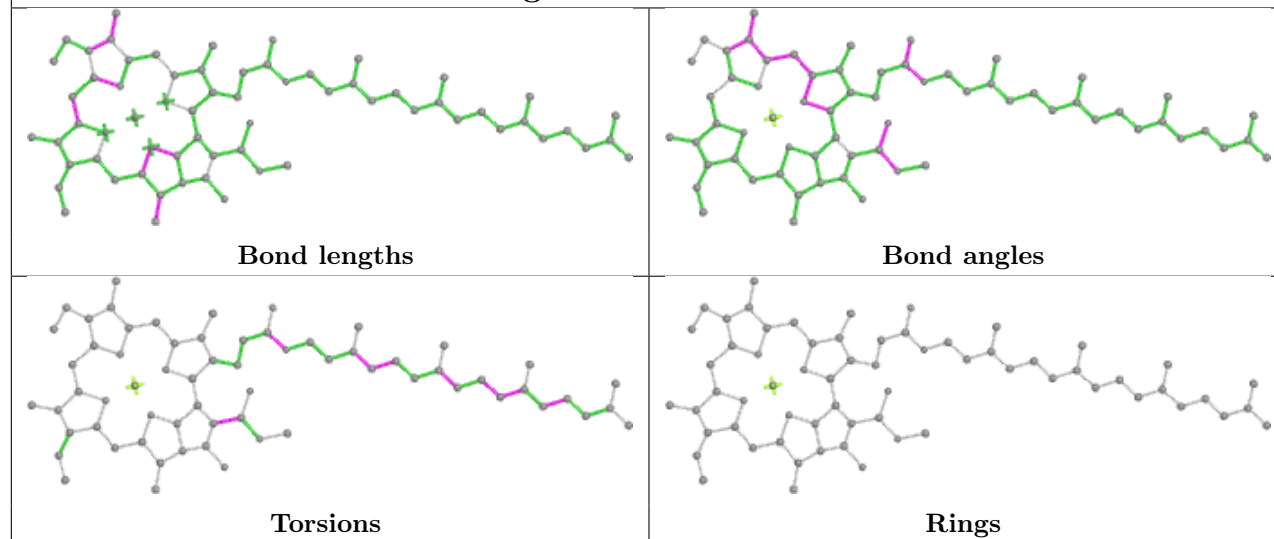
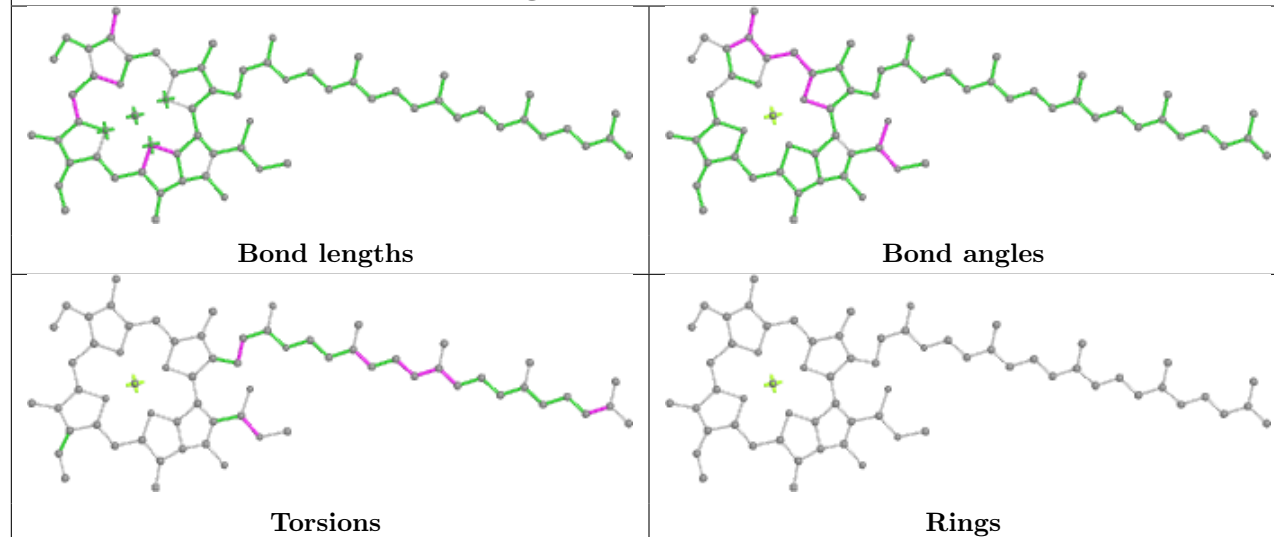
| Ligand CLA B1 606                                                                 |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| Bond lengths                                                                      | Bond angles                                                                        |
|  |  |
| Torsions                                                                          | Rings                                                                              |

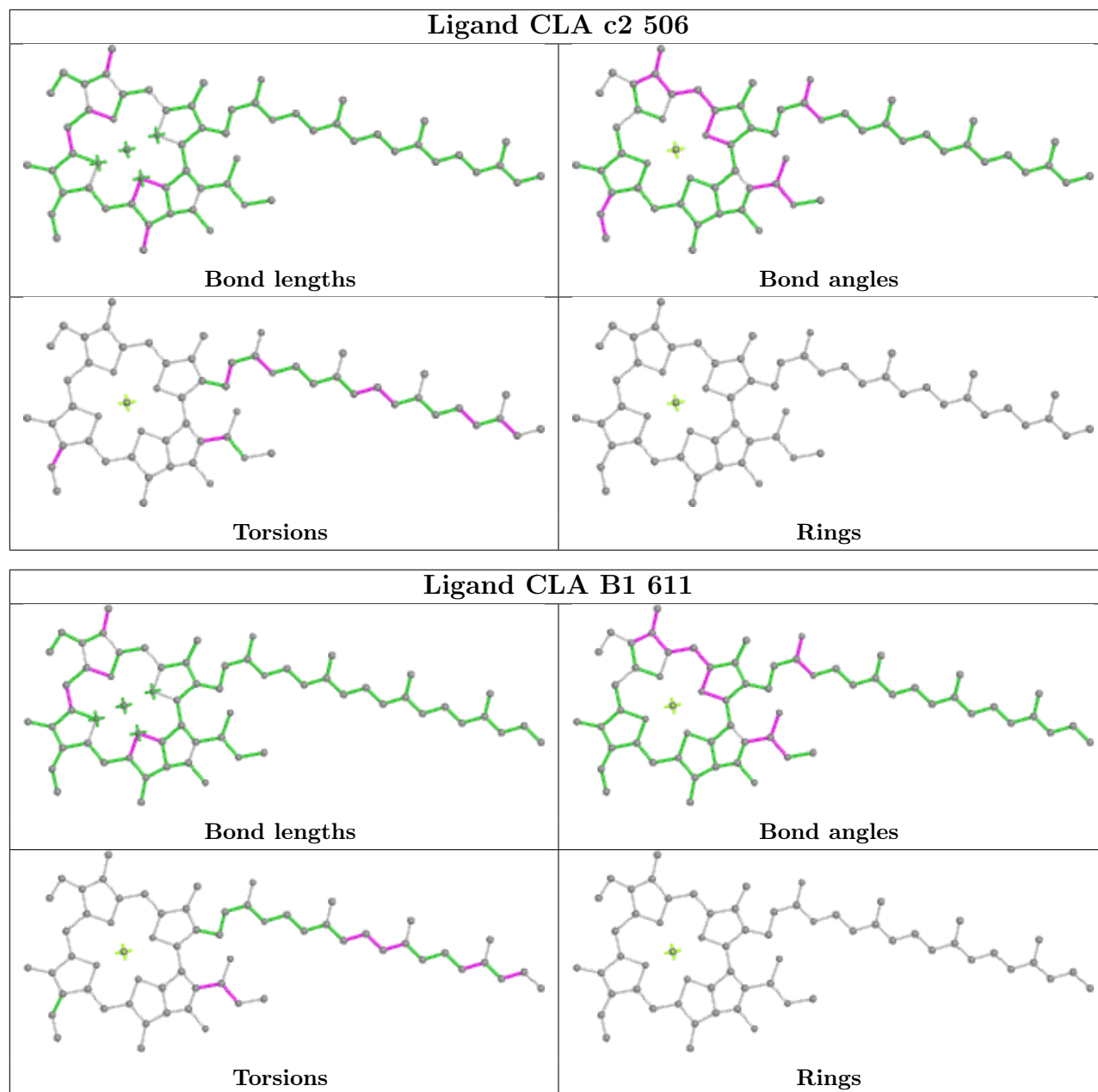
| Ligand BCR C2 502                                                                  |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|   |   |
| Bond lengths                                                                       | Bond angles                                                                         |
|  |  |
| Torsions                                                                           | Rings                                                                               |

| Ligand PHO d2 408                                                                   |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |
| Bond lengths                                                                        | Bond angles                                                                          |
|  |  |
| Torsions                                                                            | Rings                                                                                |

| Ligand LMT L1 102                                                                   |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |
| Bond lengths                                                                        | Bond angles                                                                          |
|  |  |
| Torsions                                                                            | Rings                                                                                |

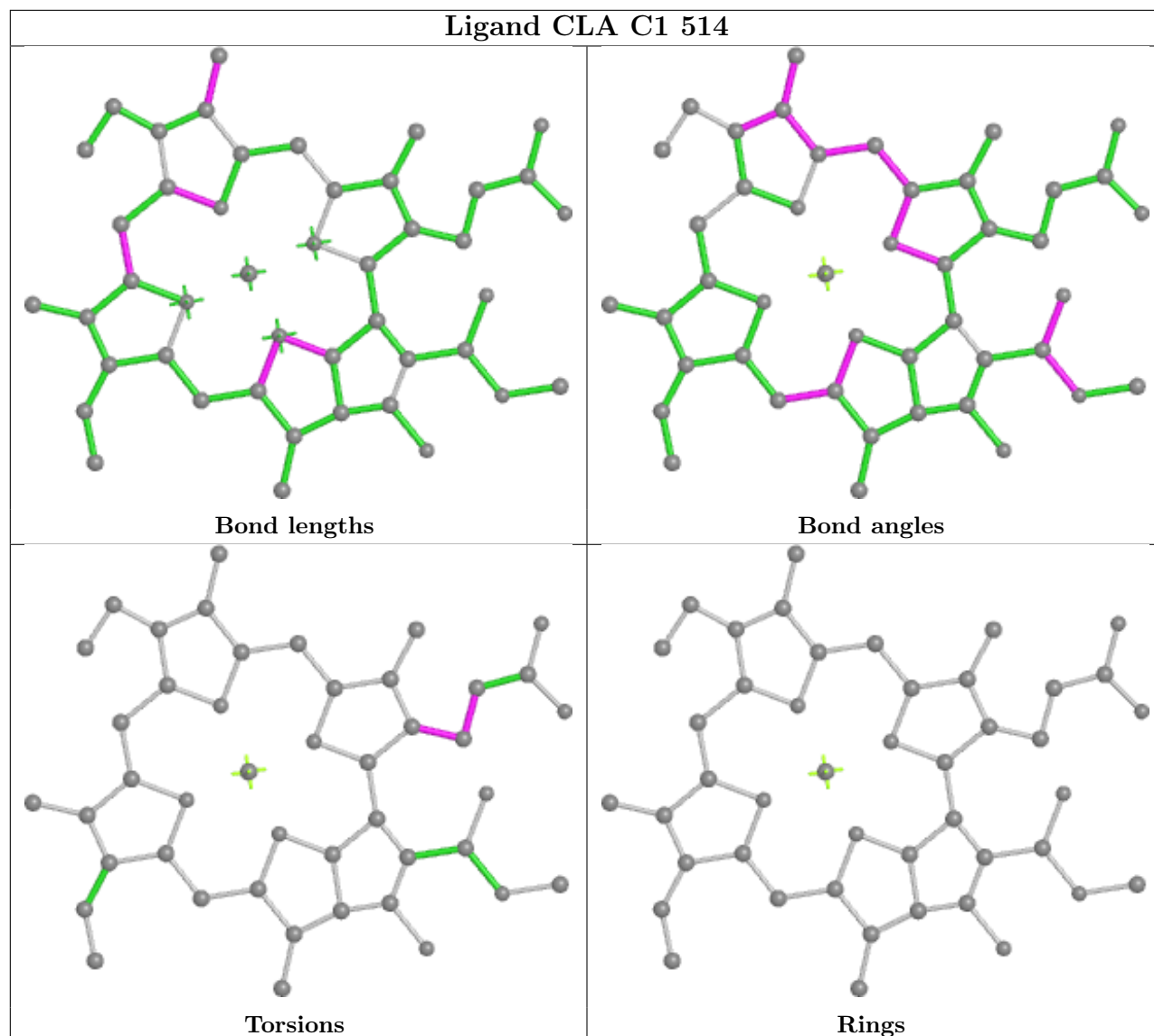


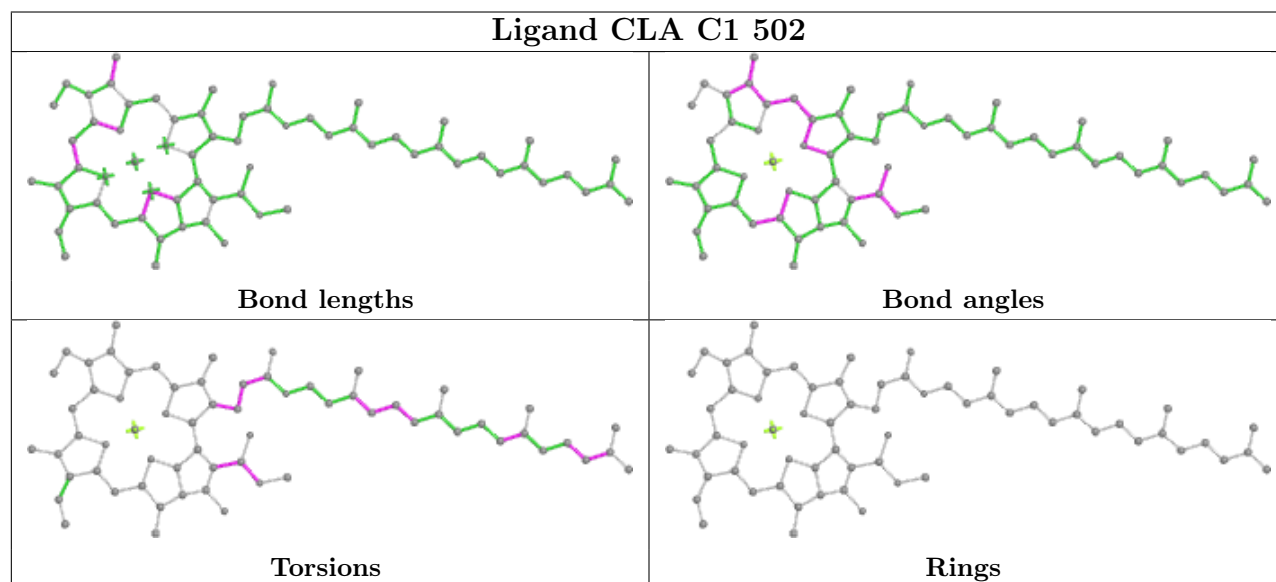
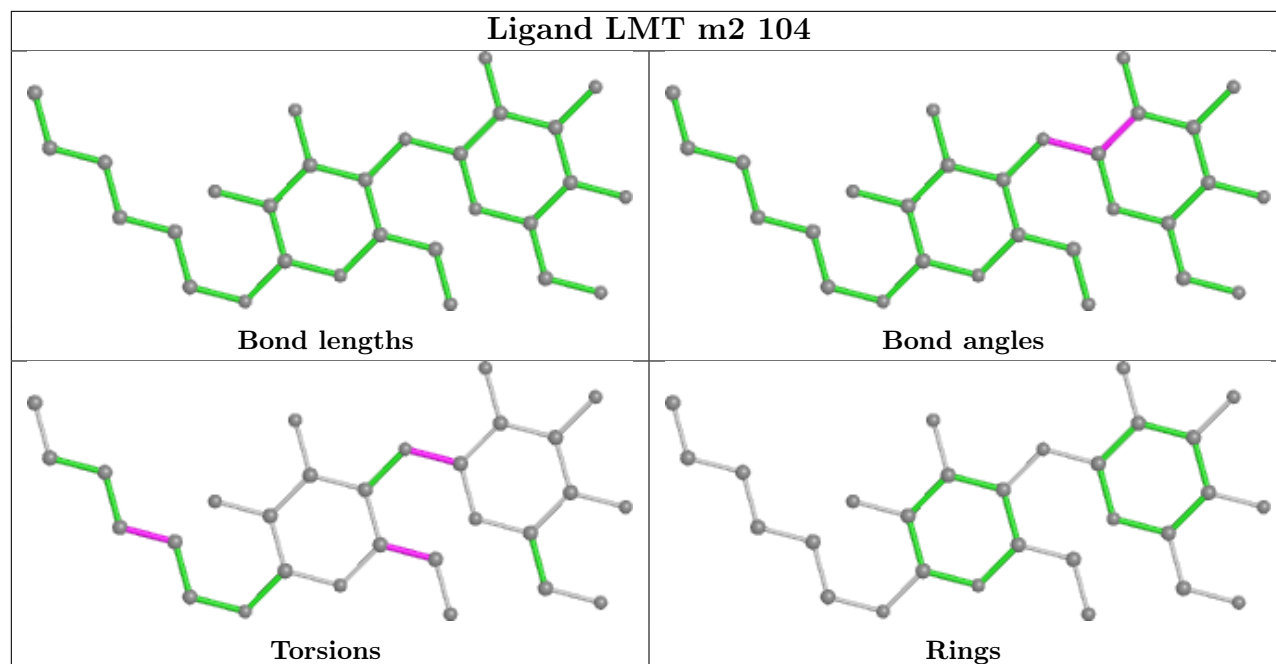
**Ligand CLA B1 613****Ligand CLA C1 508**

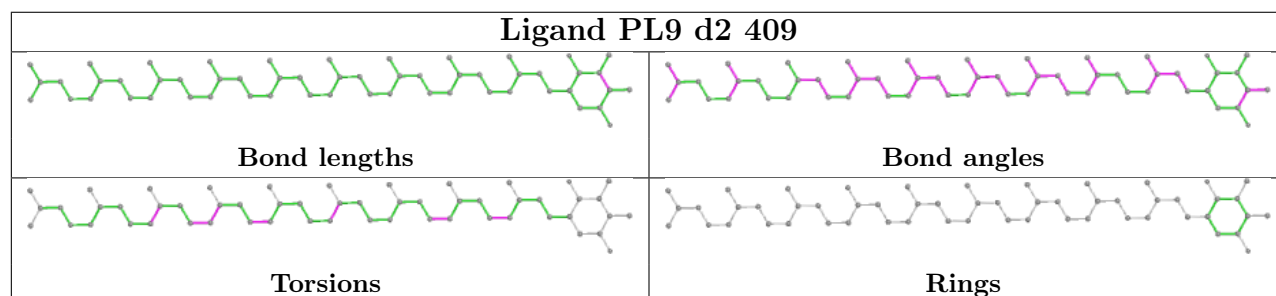
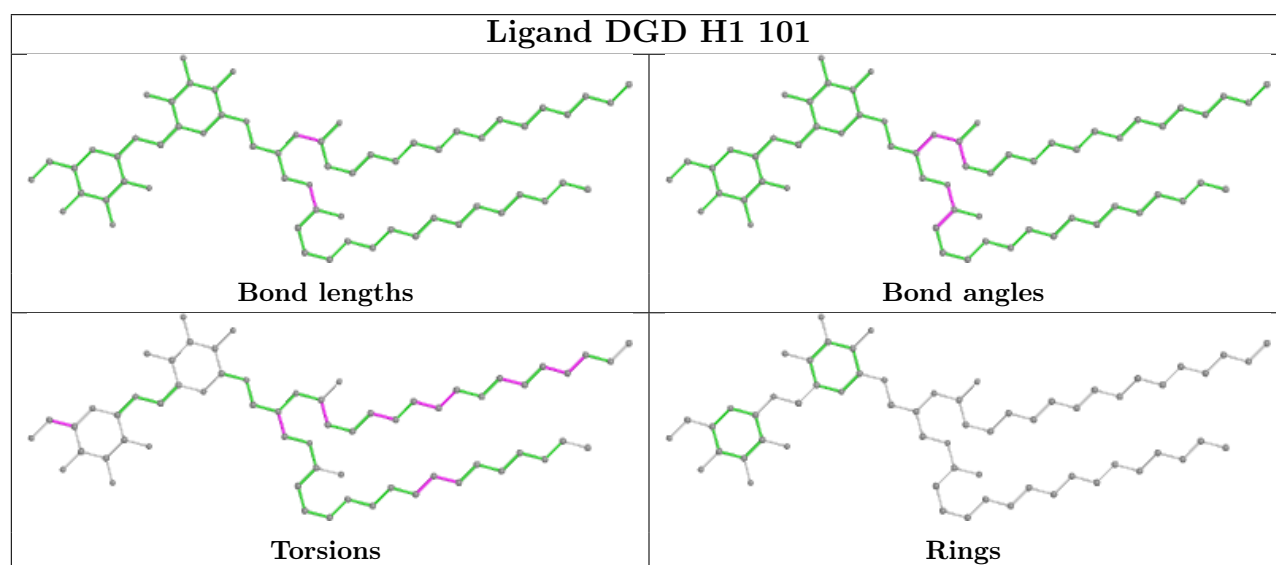
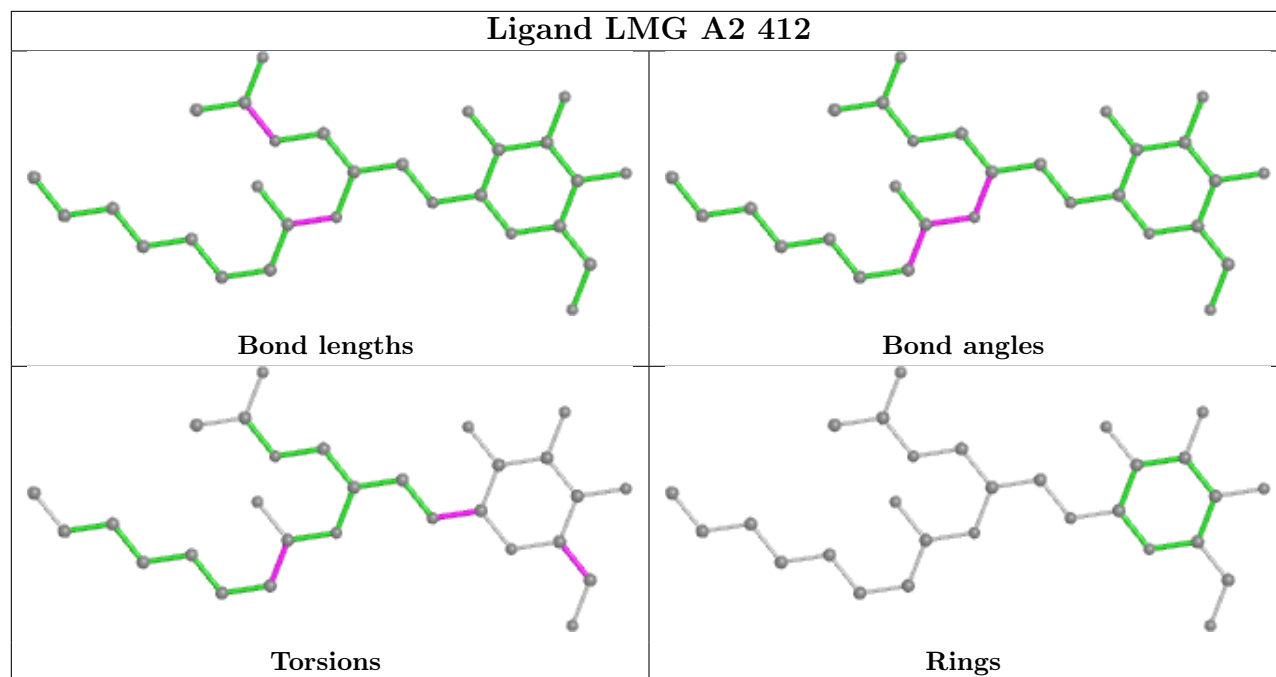


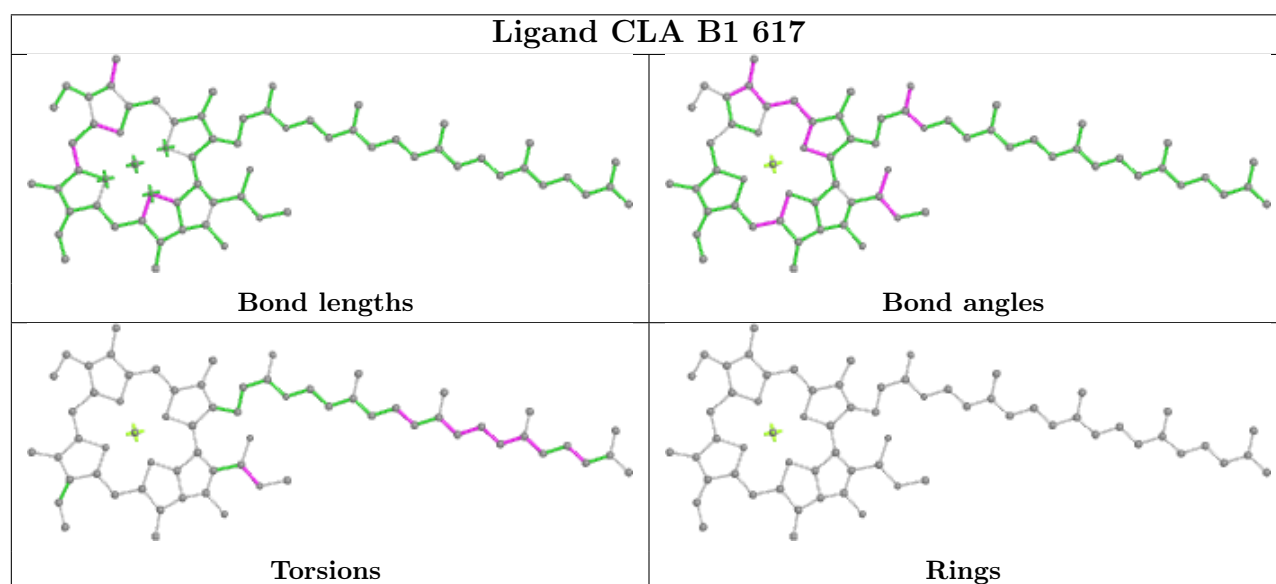
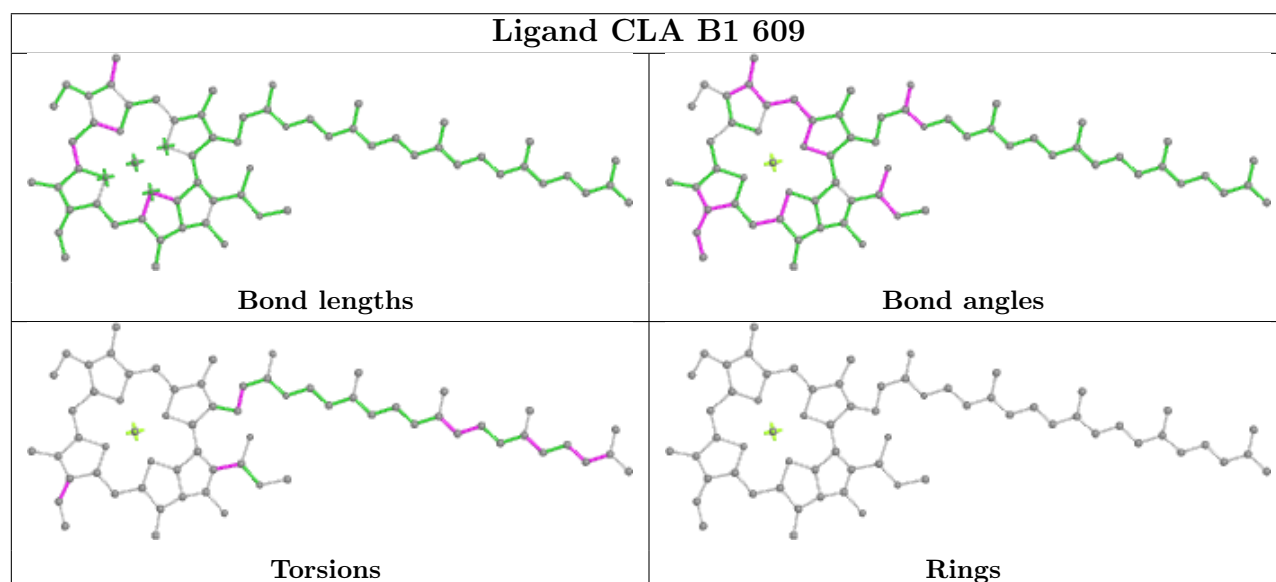
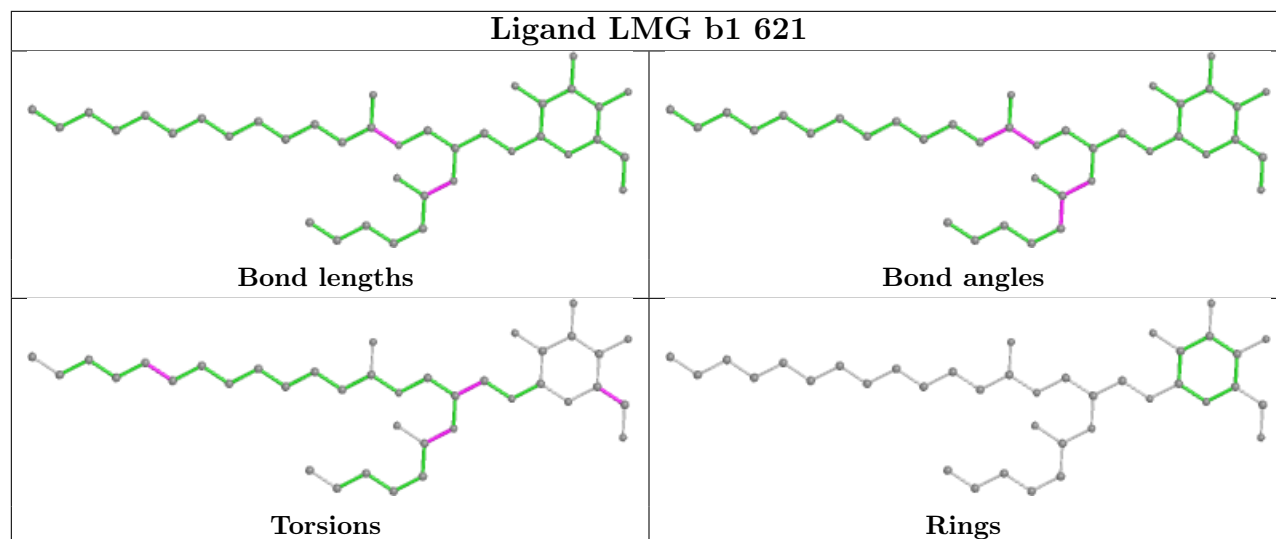


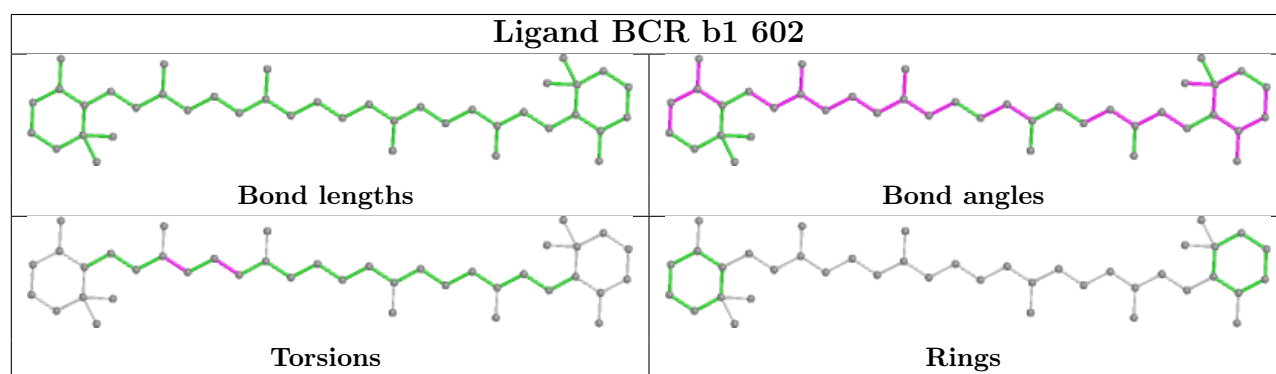
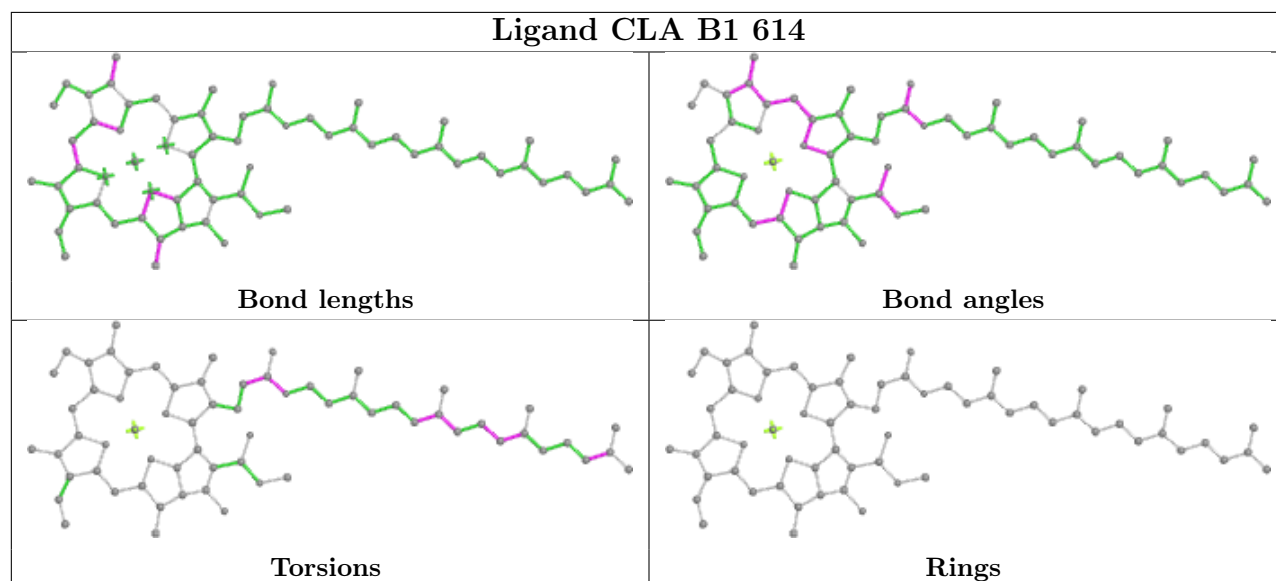
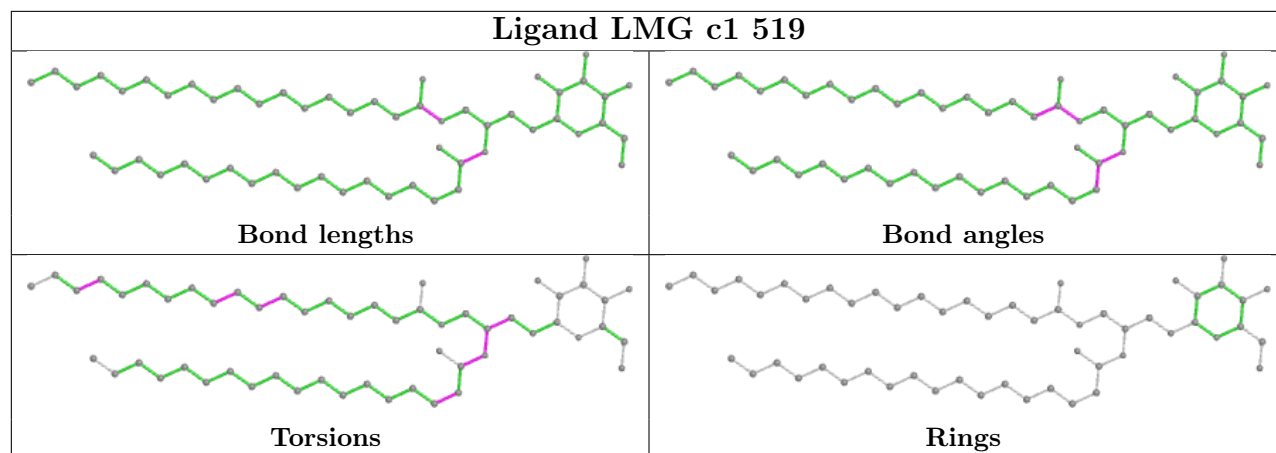
## Ligand CLA C1 514

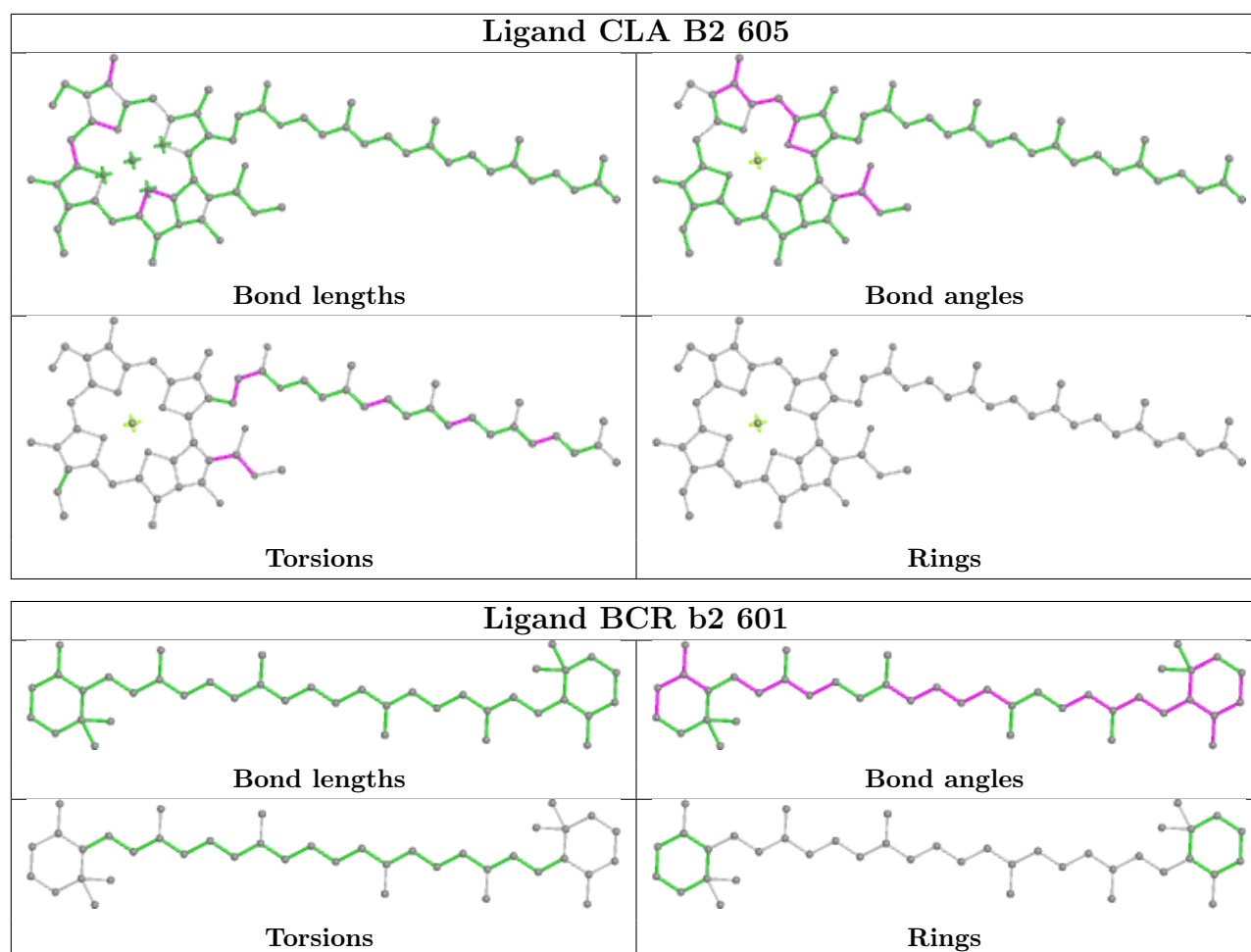












## 5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [\(i\)](#)

There are no chain breaks in this entry.

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

| Mol | Chain | Analysed       | <RSRZ> | #RSRZ>2       | OWAB(Å <sup>2</sup> ) | Q<0.9  |
|-----|-------|----------------|--------|---------------|-----------------------|--------|
| 1   | A1    | 344/344 (100%) | -0.30  | 3 (0%) 81 77  | 31, 48, 79, 104       | 0      |
| 1   | A2    | 332/344 (96%)  | 0.22   | 5 (1%) 71 67  | 48, 75, 91, 112       | 1 (0%) |
| 1   | a1    | 334/344 (97%)  | -0.33  | 1 (0%) 90 88  | 36, 48, 68, 105       | 0      |
| 1   | a2    | 334/344 (97%)  | -0.34  | 1 (0%) 90 88  | 34, 50, 83, 107       | 0      |
| 2   | B1    | 483/509 (94%)  | -0.02  | 6 (1%) 76 72  | 40, 63, 93, 108       | 0      |
| 2   | B2    | 503/509 (98%)  | 0.01   | 5 (0%) 79 75  | 46, 65, 93, 112       | 0      |
| 2   | b1    | 503/509 (98%)  | -0.24  | 1 (0%) 92 90  | 36, 53, 80, 99        | 1 (0%) |
| 2   | b2    | 481/509 (94%)  | 0.12   | 10 (2%) 63 57 | 43, 70, 99, 115       | 0      |
| 3   | C1    | 449/460 (97%)  | -0.17  | 5 (1%) 77 73  | 33, 59, 78, 93        | 0      |
| 3   | C2    | 444/460 (96%)  | 0.72   | 35 (7%) 20 17 | 73, 97, 117, 128      | 0      |
| 3   | c1    | 449/460 (97%)  | 0.01   | 2 (0%) 89 86  | 41, 62, 84, 101       | 2 (0%) |
| 3   | c2    | 448/460 (97%)  | 0.00   | 6 (1%) 74 70  | 39, 70, 93, 110       | 0      |
| 4   | D1    | 337/351 (96%)  | -0.28  | 2 (0%) 85 82  | 36, 56, 88, 94        | 0      |
| 4   | D2    | 340/351 (96%)  | 0.11   | 5 (1%) 71 67  | 51, 69, 85, 96        | 0      |
| 4   | d1    | 339/351 (96%)  | -0.43  | 2 (0%) 85 82  | 34, 45, 65, 94        | 0      |
| 4   | d2    | 340/351 (96%)  | -0.24  | 2 (0%) 85 82  | 36, 56, 88, 118       | 0      |
| 5   | E1    | 61/84 (72%)    | 0.44   | 5 (8%) 19 16  | 64, 87, 141, 158      | 0      |
| 5   | E2    | 63/84 (75%)    | 0.99   | 9 (14%) 7 7   | 77, 98, 131, 144      | 0      |
| 5   | e1    | 57/84 (67%)    | 0.13   | 2 (3%) 47 42  | 49, 65, 87, 91        | 0      |
| 5   | e2    | 60/84 (71%)    | 0.37   | 3 (5%) 35 30  | 59, 80, 144, 159      | 0      |
| 6   | F1    | 28/43 (65%)    | 0.15   | 0 100 100     | 62, 75, 123, 131      | 0      |
| 6   | F2    | 31/43 (72%)    | 1.06   | 6 (19%) 4 4   | 81, 92, 144, 146      | 0      |
| 6   | f1    | 29/43 (67%)    | -0.05  | 1 (3%) 48 42  | 50, 60, 95, 108       | 0      |
| 6   | f2    | 29/43 (67%)    | 0.38   | 2 (6%) 24 21  | 64, 73, 128, 149      | 0      |

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| Mol | Chain | Analysed      | <RSRZ> | #RSRZ>2       | OWAB(Å <sup>2</sup> ) | Q<0.9 |
|-----|-------|---------------|--------|---------------|-----------------------|-------|
| 7   | H1    | 60/67 (89%)   | 0.34   | 1 (1%) 69 64  | 70, 84, 93, 101       | 0     |
| 7   | H2    | 62/67 (92%)   | 0.23   | 0 100 100     | 63, 75, 92, 124       | 0     |
| 7   | h1    | 62/67 (92%)   | -0.23  | 0 100 100     | 47, 67, 78, 84        | 0     |
| 7   | h2    | 62/67 (92%)   | 0.42   | 3 (4%) 36 31  | 72, 87, 98, 122       | 0     |
| 8   | I1    | 34/38 (89%)   | -0.19  | 0 100 100     | 53, 61, 70, 71        | 0     |
| 8   | I2    | 35/38 (92%)   | 0.51   | 1 (2%) 54 48  | 82, 93, 105, 109      | 0     |
| 8   | i1    | 34/38 (89%)   | -0.09  | 0 100 100     | 54, 61, 71, 76        | 0     |
| 8   | i2    | 33/38 (86%)   | 0.02   | 0 100 100     | 60, 67, 75, 77        | 0     |
| 9   | J1    | 32/39 (82%)   | 0.03   | 0 100 100     | 51, 65, 89, 105       | 0     |
| 9   | J2    | 35/39 (89%)   | 0.93   | 5 (14%) 7 7   | 75, 87, 125, 136      | 0     |
| 9   | j1    | 32/39 (82%)   | -0.03  | 0 100 100     | 49, 63, 74, 81        | 0     |
| 9   | j2    | 33/39 (84%)   | 0.10   | 0 100 100     | 54, 70, 88, 110       | 0     |
| 10  | K1    | 37/41 (90%)   | 0.02   | 1 (2%) 56 50  | 56, 66, 78, 79        | 0     |
| 10  | K2    | 37/41 (90%)   | 0.94   | 5 (13%) 8 8   | 86, 96, 111, 117      | 0     |
| 10  | k1    | 37/41 (90%)   | 0.11   | 0 100 100     | 56, 67, 81, 81        | 0     |
| 10  | k2    | 37/41 (90%)   | 0.56   | 2 (5%) 32 27  | 67, 76, 89, 92        | 0     |
| 11  | L1    | 37/38 (97%)   | -0.40  | 0 100 100     | 39, 43, 67, 77        | 0     |
| 11  | L2    | 37/38 (97%)   | -0.16  | 0 100 100     | 49, 56, 61, 73        | 0     |
| 11  | l1    | 37/38 (97%)   | -0.29  | 0 100 100     | 36, 43, 63, 73        | 0     |
| 11  | l2    | 37/38 (97%)   | -0.28  | 0 100 100     | 43, 47, 73, 79        | 0     |
| 12  | M1    | 40/108 (37%)  | -0.24  | 0 100 100     | 32, 46, 62, 66        | 0     |
| 12  | M2    | 40/108 (37%)  | -0.23  | 0 100 100     | 45, 54, 67, 69        | 0     |
| 12  | m1    | 40/108 (37%)  | -0.18  | 1 (2%) 58 52  | 34, 44, 65, 67        | 0     |
| 12  | m2    | 40/108 (37%)  | -0.13  | 1 (2%) 58 52  | 44, 51, 65, 71        | 0     |
| 13  | O1    | 240/329 (72%) | 0.06   | 7 (2%) 54 48  | 38, 61, 96, 107       | 0     |
| 13  | O2    | 205/329 (62%) | 0.78   | 27 (13%) 8 8  | 54, 91, 119, 151      | 0     |
| 13  | o1    | 238/329 (72%) | 0.29   | 13 (5%) 32 27 | 38, 76, 121, 145      | 0     |
| 13  | o2    | 245/329 (74%) | 0.11   | 12 (4%) 36 31 | 41, 64, 103, 127      | 0     |
| 14  | T1    | 30/32 (93%)   | -0.37  | 0 100 100     | 37, 44, 60, 68        | 0     |
| 14  | T2    | 30/32 (93%)   | -0.02  | 0 100 100     | 54, 63, 76, 82        | 0     |
| 14  | t1    | 30/32 (93%)   | -0.35  | 0 100 100     | 40, 46, 60, 76        | 0     |

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Continued from previous page...

| Mol | Chain | Analysed          | <RSRZ> | #RSRZ>2        | OWAB(Å <sup>2</sup> ) | Q<0.9  |
|-----|-------|-------------------|--------|----------------|-----------------------|--------|
| 14  | t2    | 29/32 (90%)       | -0.43  | 0 100 100      | 38, 48, 68, 84        | 0      |
| 15  | U1    | 93/155 (60%)      | -0.24  | 0 100 100      | 44, 59, 75, 104       | 0      |
| 15  | U2    | 90/155 (58%)      | 0.35   | 3 (3%) 49 44   | 74, 91, 104, 115      | 0      |
| 15  | u1    | 93/155 (60%)      | -0.10  | 1 (1%) 77 73   | 53, 68, 88, 95        | 0      |
| 15  | u2    | 93/155 (60%)      | -0.31  | 1 (1%) 77 73   | 44, 58, 71, 86        | 0      |
| 16  | V1    | 129/155 (83%)     | 0.01   | 1 (0%) 82 79   | 47, 62, 87, 93        | 0      |
| 16  | V2    | 129/155 (83%)     | 0.77   | 12 (9%) 16 13  | 75, 96, 114, 127      | 0      |
| 16  | v1    | 129/155 (83%)     | 0.24   | 5 (3%) 44 38   | 47, 69, 108, 124      | 0      |
| 16  | v2    | 129/155 (83%)     | -0.06  | 4 (3%) 51 46   | 47, 63, 90, 105       | 0      |
| 17  | Y1    | 27/35 (77%)       | 0.05   | 0 100 100      | 64, 74, 103, 118      | 0      |
| 17  | Y2    | 25/35 (71%)       | 0.88   | 0 100 100      | 96, 100, 107, 109     | 0      |
| 17  | y1    | 27/35 (77%)       | 0.52   | 1 (3%) 45 40   | 64, 71, 105, 107      | 0      |
| 17  | y2    | 27/35 (77%)       | 0.39   | 0 100 100      | 72, 79, 92, 106       | 0      |
| 18  | X1    | 29/40 (72%)       | 1.20   | 5 (17%) 5 5    | 98, 113, 130, 135     | 0      |
| 18  | X2    | 31/40 (77%)       | 1.30   | 5 (16%) 5 5    | 83, 101, 114, 121     | 0      |
| 18  | x1    | 36/40 (90%)       | 0.78   | 6 (16%) 5 5    | 61, 83, 96, 102       | 0      |
| 18  | x2    | 32/40 (80%)       | 0.83   | 4 (12%) 9 9    | 83, 104, 122, 126     | 0      |
| 19  | S1    | 25/46 (54%)       | 0.50   | 1 (4%) 43 37   | 72, 79, 85, 98        | 0      |
| 19  | S2    | 30/46 (65%)       | 1.27   | 6 (20%) 3 3    | 98, 114, 120, 122     | 0      |
| 19  | s1    | 40/46 (86%)       | 0.63   | 2 (5%) 35 30   | 54, 78, 94, 95        | 0      |
| 19  | s2    | 46/46 (100%)      | 0.83   | 5 (10%) 12 11  | 75, 90, 106, 112      | 0      |
| 20  | W1    | 21/25 (84%)       | 0.52   | 1 (4%) 36 31   | 71, 79, 86, 90        | 0      |
| 20  | W2    | 21/25 (84%)       | 0.39   | 0 100 100      | 66, 76, 84, 89        | 0      |
| 20  | w1    | 25/25 (100%)      | 0.73   | 3 (12%) 10 9   | 73, 79, 96, 101       | 0      |
| 20  | w2    | 20/25 (80%)       | 0.76   | 3 (15%) 6 6    | 91, 96, 103, 111      | 0      |
| 21  | Q2    | 111/218 (50%)     | 1.18   | 17 (15%) 6 6   | 122, 132, 145, 151    | 0      |
| 21  | q1    | 105/218 (48%)     | 0.96   | 17 (16%) 5 5   | 103, 125, 138, 144    | 0      |
| 22  | Z2    | 59/62 (95%)       | 1.10   | 11 (18%) 4 4   | 108, 121, 134, 140    | 0      |
| 22  | z2    | 59/62 (95%)       | 0.75   | 4 (6%) 25 21   | 83, 101, 116, 127     | 0      |
| All | All   | 10516/12316 (85%) | 0.09   | 316 (3%) 52 47 | 31, 66, 113, 159      | 4 (0%) |

The worst 5 of 316 RSRZ outliers are listed below:

| Mol | Chain | Res | Type | RSRZ |
|-----|-------|-----|------|------|
| 3   | C2    | 392 | ALA  | 8.0  |
| 13  | o2    | 195 | GLY  | 7.5  |
| 13  | o1    | 195 | GLY  | 6.5  |
| 18  | X2    | 17  | ALA  | 6.1  |
| 13  | O1    | 195 | GLY  | 5.8  |

## 6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

## 6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

| Mol | Type | Chain | Res | Atoms | RSCC | RSR  | B-factors( $\text{\AA}^2$ ) | Q<0.9 |
|-----|------|-------|-----|-------|------|------|-----------------------------|-------|
| 28  | UNL  | I2    | 102 | 17/-  | 0.49 | 0.11 | 80,92,102,103               | 0     |
| 28  | UNL  | k2    | 505 | 6/-   | 0.51 | 0.10 | 70,80,84,87                 | 0     |
| 28  | UNL  | I2    | 103 | 14/-  | 0.55 | 0.10 | 62,93,102,104               | 0     |
| 32  | GOL  | a1    | 406 | 6/6   | 0.55 | 0.11 | 68,75,86,90                 | 0     |
| 28  | UNL  | a2    | 409 | 18/-  | 0.57 | 0.10 | 61,74,86,90                 | 0     |
| 28  | UNL  | C2    | 501 | 6/-   | 0.57 | 0.10 | 72,74,78,87                 | 0     |
| 28  | UNL  | J2    | 101 | 10/-  | 0.57 | 0.12 | 71,82,86,88                 | 0     |
| 28  | UNL  | b1    | 623 | 11/-  | 0.58 | 0.12 | 59,74,83,84                 | 0     |
| 23  | BCR  | K1    | 101 | 31/40 | 0.59 | 0.12 | 64,82,93,96                 | 0     |
| 28  | UNL  | D1    | 410 | 6/-   | 0.59 | 0.14 | 59,62,66,66                 | 0     |
| 28  | UNL  | F2    | 403 | 16/-  | 0.59 | 0.15 | 51,76,86,89                 | 0     |
| 28  | UNL  | A2    | 409 | 10/-  | 0.60 | 0.14 | 72,82,85,87                 | 0     |
| 28  | UNL  | c2    | 520 | 15/-  | 0.60 | 0.12 | 86,97,106,108               | 0     |
| 28  | UNL  | B1    | 624 | 18/-  | 0.61 | 0.10 | 43,71,79,81                 | 0     |
| 28  | UNL  | H2    | 102 | 5/-   | 0.62 | 0.14 | 72,81,84,85                 | 0     |
| 28  | UNL  | K2    | 103 | 5/-   | 0.63 | 0.16 | 79,83,88,90                 | 0     |
| 25  | CLA  | b2    | 604 | 42/65 | 0.63 | 0.13 | 82,109,116,127              | 0     |
| 25  | CLA  | C2    | 518 | 41/65 | 0.63 | 0.12 | 105,121,127,134             | 0     |
| 28  | UNL  | d2    | 410 | 13/-  | 0.63 | 0.12 | 74,92,108,111               | 0     |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR  | B-factors( $\text{\AA}^2$ ) | Q<0.9 |
|-----|------|-------|-----|-------|------|------|-----------------------------|-------|
| 28  | UNL  | C2    | 517 | 18/-  | 0.63 | 0.13 | 74,83,87,89                 | 0     |
| 28  | UNL  | b1    | 629 | 15/-  | 0.63 | 0.10 | 46,59,71,83                 | 0     |
| 28  | UNL  | m2    | 102 | 18/-  | 0.64 | 0.09 | 46,65,79,79                 | 0     |
| 29  | LMG  | C2    | 515 | 24/55 | 0.64 | 0.10 | 82,97,104,105               | 0     |
| 28  | UNL  | k2    | 502 | 9/-   | 0.64 | 0.09 | 72,78,84,86                 | 0     |
| 28  | UNL  | d1    | 410 | 12/-  | 0.65 | 0.13 | 49,72,77,79                 | 0     |
| 28  | UNL  | X2    | 101 | 7/-   | 0.65 | 0.24 | 83,85,91,93                 | 0     |
| 28  | UNL  | B2    | 626 | 15/-  | 0.66 | 0.10 | 79,83,92,95                 | 0     |
| 29  | LMG  | I2    | 101 | 34/55 | 0.66 | 0.13 | 82,103,109,114              | 0     |
| 25  | CLA  | C2    | 510 | 45/65 | 0.66 | 0.14 | 107,116,121,126             | 0     |
| 33  | LHG  | B2    | 627 | 42/49 | 0.66 | 0.10 | 67,88,120,132               | 0     |
| 35  | LMT  | m2    | 104 | 29/35 | 0.66 | 0.12 | 49,104,119,122              | 0     |
| 23  | BCR  | K2    | 102 | 40/40 | 0.67 | 0.13 | 84,99,113,115               | 0     |
| 33  | LHG  | b2    | 625 | 43/49 | 0.68 | 0.10 | 62,87,109,126               | 0     |
| 32  | GOL  | C1    | 518 | 6/6   | 0.68 | 0.11 | 65,73,77,81                 | 0     |
| 39  | CA   | o2    | 401 | 1/1   | 0.68 | 0.18 | 101,101,101,101             | 0     |
| 33  | LHG  | d1    | 402 | 32/49 | 0.69 | 0.14 | 45,63,76,86                 | 0     |
| 28  | UNL  | B1    | 623 | 16/-  | 0.69 | 0.09 | 53,68,72,74                 | 0     |
| 32  | GOL  | B1    | 620 | 6/6   | 0.69 | 0.10 | 63,75,81,82                 | 0     |
| 35  | LMT  | b2    | 621 | 35/35 | 0.69 | 0.11 | 69,110,123,123              | 0     |
| 24  | CL   | A2    | 410 | 1/1   | 0.69 | 0.08 | 87,87,87,87                 | 0     |
| 28  | UNL  | t1    | 101 | 18/-  | 0.69 | 0.10 | 43,60,66,67                 | 0     |
| 29  | LMG  | j2    | 101 | 50/55 | 0.70 | 0.12 | 60,78,97,107                | 0     |
| 29  | LMG  | F2    | 402 | 35/55 | 0.70 | 0.11 | 68,81,91,92                 | 0     |
| 28  | UNL  | j1    | 101 | 17/-  | 0.70 | 0.11 | 60,69,71,77                 | 0     |
| 33  | LHG  | a2    | 407 | 30/49 | 0.70 | 0.13 | 55,75,94,102                | 0     |
| 28  | UNL  | b2    | 607 | 12/-  | 0.71 | 0.12 | 64,75,80,87                 | 0     |
| 25  | CLA  | C2    | 503 | 65/65 | 0.71 | 0.12 | 94,104,112,116              | 0     |
| 25  | CLA  | D2    | 404 | 61/65 | 0.71 | 0.11 | 67,87,113,120               | 0     |
| 28  | UNL  | a2    | 401 | 18/-  | 0.71 | 0.11 | 46,56,70,86                 | 0     |
| 28  | UNL  | k2    | 504 | 9/-   | 0.71 | 0.09 | 66,74,80,88                 | 0     |
| 25  | CLA  | K2    | 101 | 55/65 | 0.71 | 0.10 | 86,98,104,109               | 0     |
| 28  | UNL  | a2    | 410 | 8/-   | 0.71 | 0.10 | 61,68,70,76                 | 0     |
| 28  | UNL  | i2    | 101 | 14/-  | 0.72 | 0.07 | 62,66,73,75                 | 0     |
| 28  | UNL  | M2    | 101 | 11/-  | 0.72 | 0.07 | 59,68,73,74                 | 0     |
| 35  | LMT  | c1    | 517 | 33/35 | 0.72 | 0.12 | 63,100,117,119              | 0     |
| 25  | CLA  | c2    | 513 | 54/65 | 0.73 | 0.10 | 75,94,102,105               | 0     |
| 23  | BCR  | c2    | 501 | 40/40 | 0.73 | 0.13 | 66,82,89,92                 | 0     |
| 28  | UNL  | b1    | 626 | 13/-  | 0.73 | 0.08 | 53,64,83,86                 | 0     |
| 32  | GOL  | C2    | 514 | 6/6   | 0.73 | 0.09 | 87,93,100,101               | 0     |
| 35  | LMT  | m2    | 103 | 30/35 | 0.73 | 0.14 | 52,89,111,113               | 0     |
| 23  | BCR  | K2    | 104 | 29/40 | 0.73 | 0.10 | 92,100,109,112              | 0     |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR  | B-factors( $\text{\AA}^2$ ) | Q<0.9 |
|-----|------|-------|-----|-------|------|------|-----------------------------|-------|
| 28  | UNL  | b1    | 630 | 17/-  | 0.73 | 0.09 | 48,57,74,75                 | 0     |
| 29  | LMG  | d1    | 411 | 35/55 | 0.74 | 0.11 | 58,76,94,99                 | 0     |
| 23  | BCR  | z2    | 101 | 40/40 | 0.74 | 0.12 | 80,95,100,101               | 0     |
| 28  | UNL  | m2    | 101 | 18/-  | 0.74 | 0.09 | 44,57,79,85                 | 0     |
| 28  | UNL  | B2    | 625 | 18/-  | 0.74 | 0.09 | 37,56,68,68                 | 0     |
| 29  | LMG  | A1    | 412 | 41/55 | 0.74 | 0.11 | 50,75,96,100                | 0     |
| 29  | LMG  | b1    | 621 | 38/55 | 0.74 | 0.10 | 52,63,76,82                 | 0     |
| 23  | BCR  | F2    | 401 | 40/40 | 0.75 | 0.11 | 67,81,107,113               | 0     |
| 29  | LMG  | B2    | 621 | 37/55 | 0.75 | 0.10 | 53,68,80,96                 | 0     |
| 25  | CLA  | C2    | 505 | 65/65 | 0.75 | 0.12 | 78,100,112,118              | 0     |
| 28  | UNL  | A2    | 408 | 18/-  | 0.75 | 0.10 | 62,83,92,93                 | 0     |
| 23  | BCR  | B1    | 602 | 40/40 | 0.75 | 0.11 | 49,62,74,78                 | 0     |
| 33  | LHG  | A2    | 405 | 33/49 | 0.75 | 0.10 | 70,80,90,97                 | 0     |
| 23  | BCR  | C2    | 502 | 40/40 | 0.75 | 0.13 | 95,106,118,120              | 0     |
| 28  | UNL  | k2    | 503 | 6/-   | 0.76 | 0.09 | 67,76,79,80                 | 0     |
| 23  | BCR  | J1    | 101 | 40/40 | 0.76 | 0.10 | 50,70,86,88                 | 0     |
| 35  | LMT  | i2    | 102 | 7/35  | 0.76 | 0.08 | 68,71,76,79                 | 0     |
| 29  | LMG  | A2    | 412 | 29/55 | 0.76 | 0.10 | 86,94,100,102               | 0     |
| 32  | GOL  | b1    | 618 | 6/6   | 0.76 | 0.08 | 60,69,80,80                 | 0     |
| 25  | CLA  | C2    | 509 | 65/65 | 0.76 | 0.12 | 90,101,106,108              | 0     |
| 35  | LMT  | C1    | 519 | 35/35 | 0.77 | 0.10 | 57,76,85,93                 | 0     |
| 35  | LMT  | M1    | 103 | 24/35 | 0.77 | 0.10 | 42,68,97,101                | 0     |
| 35  | LMT  | T1    | 101 | 12/35 | 0.77 | 0.10 | 46,51,54,56                 | 0     |
| 25  | CLA  | C2    | 511 | 50/65 | 0.77 | 0.11 | 85,93,100,104               | 0     |
| 23  | BCR  | k1    | 101 | 40/40 | 0.77 | 0.11 | 56,70,82,85                 | 0     |
| 25  | CLA  | B1    | 604 | 42/65 | 0.77 | 0.11 | 83,98,107,113               | 0     |
| 28  | UNL  | B2    | 622 | 17/-  | 0.77 | 0.09 | 57,71,76,78                 | 0     |
| 25  | CLA  | C1    | 512 | 65/65 | 0.77 | 0.10 | 63,82,102,121               | 0     |
| 25  | CLA  | c1    | 516 | 65/65 | 0.77 | 0.11 | 66,82,104,109               | 0     |
| 35  | LMT  | a2    | 406 | 35/35 | 0.78 | 0.11 | 43,80,92,94                 | 0     |
| 28  | UNL  | b1    | 627 | 16/-  | 0.78 | 0.09 | 42,56,75,77                 | 0     |
| 25  | CLA  | B1    | 611 | 62/65 | 0.78 | 0.10 | 58,78,87,89                 | 0     |
| 25  | CLA  | c1    | 515 | 55/65 | 0.78 | 0.10 | 69,82,90,94                 | 0     |
| 29  | LMG  | b1    | 624 | 39/55 | 0.78 | 0.12 | 58,73,84,87                 | 0     |
| 37  | SQD  | D1    | 409 | 35/54 | 0.78 | 0.11 | 61,75,92,97                 | 0     |
| 28  | UNL  | W2    | 101 | 9/-   | 0.78 | 0.08 | 64,77,83,87                 | 0     |
| 25  | CLA  | C2    | 504 | 46/65 | 0.79 | 0.11 | 72,88,95,96                 | 0     |
| 25  | CLA  | C1    | 513 | 61/65 | 0.79 | 0.10 | 49,68,74,78                 | 0     |
| 28  | UNL  | a2    | 411 | 11/-  | 0.79 | 0.07 | 51,55,65,67                 | 0     |
| 25  | CLA  | C2    | 507 | 45/65 | 0.79 | 0.11 | 73,93,102,113               | 0     |
| 23  | BCR  | b2    | 603 | 40/40 | 0.80 | 0.10 | 60,74,102,104               | 0     |
| 23  | BCR  | H2    | 103 | 24/40 | 0.80 | 0.12 | 65,76,82,85                 | 0     |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR  | B-factors( $\text{\AA}^2$ ) | Q<0.9 |
|-----|------|-------|-----|-------|------|------|-----------------------------|-------|
| 23  | BCR  | j2    | 102 | 40/40 | 0.80 | 0.11 | 59,75,86,87                 | 0     |
| 25  | CLA  | c2    | 515 | 46/65 | 0.80 | 0.11 | 81,100,104,109              | 0     |
| 29  | LMG  | C1    | 520 | 48/55 | 0.80 | 0.08 | 59,69,78,86                 | 0     |
| 29  | LMG  | a1    | 412 | 51/55 | 0.80 | 0.10 | 54,67,77,91                 | 0     |
| 25  | CLA  | C2    | 513 | 53/65 | 0.80 | 0.11 | 78,91,106,110               | 0     |
| 23  | BCR  | H1    | 102 | 22/40 | 0.80 | 0.12 | 75,88,95,100                | 0     |
| 23  | BCR  | D1    | 401 | 40/40 | 0.80 | 0.10 | 54,67,89,95                 | 0     |
| 23  | BCR  | b2    | 602 | 40/40 | 0.81 | 0.10 | 51,70,78,82                 | 0     |
| 25  | CLA  | C2    | 506 | 65/65 | 0.81 | 0.10 | 78,90,97,100                | 0     |
| 23  | BCR  | b1    | 602 | 40/40 | 0.81 | 0.10 | 35,57,65,73                 | 0     |
| 25  | CLA  | C2    | 508 | 50/65 | 0.81 | 0.13 | 87,103,112,115              | 0     |
| 34  | DGD  | H2    | 101 | 62/66 | 0.81 | 0.09 | 51,74,83,85                 | 0     |
| 25  | CLA  | C2    | 516 | 46/65 | 0.81 | 0.10 | 70,92,97,100                | 0     |
| 28  | UNL  | d2    | 411 | 12/-  | 0.81 | 0.08 | 55,67,73,79                 | 0     |
| 29  | LMG  | b2    | 622 | 39/55 | 0.81 | 0.10 | 47,60,85,90                 | 0     |
| 25  | CLA  | C1    | 514 | 45/65 | 0.82 | 0.10 | 73,84,92,96                 | 0     |
| 32  | GOL  | c2    | 518 | 6/6   | 0.82 | 0.11 | 50,55,59,64                 | 0     |
| 25  | CLA  | d2    | 404 | 50/65 | 0.82 | 0.10 | 57,74,83,88                 | 0     |
| 35  | LMT  | m1    | 101 | 35/35 | 0.82 | 0.11 | 44,80,103,112               | 0     |
| 25  | CLA  | B2    | 604 | 41/65 | 0.82 | 0.09 | 68,79,92,97                 | 0     |
| 28  | UNL  | x1    | 101 | 15/-  | 0.82 | 0.09 | 55,73,79,82                 | 0     |
| 25  | CLA  | c2    | 509 | 65/65 | 0.82 | 0.08 | 54,70,82,85                 | 0     |
| 23  | BCR  | C1    | 521 | 40/40 | 0.82 | 0.10 | 59,68,80,84                 | 0     |
| 34  | DGD  | C2    | 512 | 33/66 | 0.82 | 0.10 | 63,77,83,93                 | 0     |
| 29  | LMG  | B1    | 622 | 31/55 | 0.82 | 0.11 | 66,74,81,83                 | 0     |
| 37  | SQD  | B2    | 623 | 45/54 | 0.82 | 0.10 | 58,79,89,96                 | 0     |
| 37  | SQD  | b2    | 605 | 45/54 | 0.82 | 0.08 | 54,83,114,124               | 0     |
| 29  | LMG  | B1    | 626 | 48/55 | 0.82 | 0.09 | 55,70,89,94                 | 0     |
| 25  | CLA  | B2    | 611 | 65/65 | 0.83 | 0.10 | 51,73,81,86                 | 0     |
| 23  | BCR  | B2    | 602 | 40/40 | 0.83 | 0.10 | 47,59,80,86                 | 0     |
| 29  | LMG  | B2    | 620 | 40/55 | 0.83 | 0.09 | 62,74,97,98                 | 0     |
| 25  | CLA  | c1    | 503 | 65/65 | 0.83 | 0.10 | 55,66,71,75                 | 0     |
| 25  | CLA  | C1    | 502 | 65/65 | 0.83 | 0.09 | 51,63,68,70                 | 0     |
| 35  | LMT  | b2    | 623 | 35/35 | 0.83 | 0.08 | 63,90,98,101                | 0     |
| 28  | UNL  | B1    | 625 | 7/-   | 0.83 | 0.08 | 45,52,55,63                 | 0     |
| 25  | CLA  | b2    | 618 | 65/65 | 0.83 | 0.10 | 68,82,90,92                 | 0     |
| 23  | BCR  | h2    | 101 | 40/40 | 0.83 | 0.10 | 71,85,107,109               | 0     |
| 28  | UNL  | b1    | 625 | 10/-  | 0.83 | 0.10 | 50,62,68,69                 | 0     |
| 23  | BCR  | c1    | 502 | 40/40 | 0.83 | 0.10 | 57,66,72,72                 | 0     |
| 29  | LMG  | b1    | 631 | 40/55 | 0.83 | 0.10 | 29,52,85,92                 | 0     |
| 38  | HEM  | E1    | 101 | 43/43 | 0.83 | 0.13 | 108,134,152,155             | 0     |
| 29  | LMG  | c1    | 519 | 55/55 | 0.83 | 0.08 | 47,70,84,91                 | 0     |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR  | B-factors( $\text{\AA}^2$ ) | Q<0.9 |
|-----|------|-------|-----|-------|------|------|-----------------------------|-------|
| 28  | UNL  | m1    | 102 | 6/-   | 0.84 | 0.08 | 54,55,63,66                 | 0     |
| 28  | UNL  | a1    | 409 | 11/-  | 0.84 | 0.06 | 43,51,60,63                 | 0     |
| 25  | CLA  | c2    | 512 | 65/65 | 0.84 | 0.09 | 61,76,86,93                 | 0     |
| 23  | BCR  | d2    | 401 | 40/40 | 0.84 | 0.09 | 48,67,81,85                 | 0     |
| 25  | CLA  | B2    | 606 | 65/65 | 0.84 | 0.09 | 53,67,75,78                 | 0     |
| 23  | BCR  | k2    | 501 | 40/40 | 0.84 | 0.09 | 61,84,95,98                 | 0     |
| 25  | CLA  | b2    | 610 | 65/65 | 0.84 | 0.09 | 60,82,90,92                 | 0     |
| 25  | CLA  | b1    | 604 | 65/65 | 0.84 | 0.10 | 52,78,110,115               | 0     |
| 37  | SQD  | D2    | 402 | 25/54 | 0.84 | 0.09 | 85,90,96,98                 | 0     |
| 25  | CLA  | c2    | 502 | 65/65 | 0.84 | 0.09 | 60,78,85,90                 | 0     |
| 35  | LMT  | l1    | 101 | 24/35 | 0.84 | 0.08 | 42,55,89,90                 | 0     |
| 38  | HEM  | V2    | 201 | 43/43 | 0.84 | 0.12 | 83,98,102,107               | 0     |
| 38  | HEM  | e2    | 101 | 43/43 | 0.84 | 0.11 | 126,145,163,171             | 0     |
| 25  | CLA  | A2    | 403 | 61/65 | 0.84 | 0.11 | 80,89,98,102                | 0     |
| 25  | CLA  | D1    | 403 | 51/65 | 0.85 | 0.09 | 64,74,88,90                 | 0     |
| 29  | LMG  | a2    | 412 | 44/55 | 0.85 | 0.09 | 55,70,78,93                 | 0     |
| 25  | CLA  | b2    | 609 | 61/65 | 0.85 | 0.10 | 77,89,95,100                | 0     |
| 25  | CLA  | A2    | 404 | 51/65 | 0.85 | 0.08 | 47,58,70,73                 | 0     |
| 25  | CLA  | C1    | 509 | 65/65 | 0.85 | 0.09 | 48,59,71,80                 | 0     |
| 28  | UNL  | B2    | 624 | 8/-   | 0.85 | 0.07 | 46,51,54,55                 | 0     |
| 25  | CLA  | b2    | 619 | 59/65 | 0.85 | 0.10 | 71,80,106,109               | 0     |
| 23  | BCR  | c1    | 501 | 40/40 | 0.85 | 0.08 | 56,66,79,82                 | 0     |
| 32  | GOL  | i1    | 101 | 6/6   | 0.85 | 0.12 | 55,57,60,64                 | 0     |
| 25  | CLA  | c2    | 506 | 61/65 | 0.85 | 0.10 | 55,70,77,83                 | 0     |
| 32  | GOL  | a2    | 415 | 6/6   | 0.85 | 0.14 | 47,55,59,63                 | 0     |
| 25  | CLA  | c2    | 508 | 65/65 | 0.85 | 0.10 | 68,78,84,88                 | 0     |
| 28  | UNL  | b1    | 628 | 10/-  | 0.85 | 0.08 | 51,57,61,67                 | 0     |
| 25  | CLA  | B2    | 610 | 65/65 | 0.85 | 0.09 | 44,59,82,86                 | 0     |
| 25  | CLA  | c1    | 508 | 50/65 | 0.85 | 0.10 | 57,66,77,81                 | 0     |
| 25  | CLA  | c1    | 510 | 65/65 | 0.85 | 0.08 | 41,54,62,72                 | 0     |
| 25  | CLA  | c1    | 513 | 60/65 | 0.85 | 0.07 | 49,59,71,72                 | 0     |
| 34  | DGD  | c1    | 520 | 62/66 | 0.85 | 0.09 | 36,59,73,87                 | 0     |
| 25  | CLA  | B1    | 609 | 65/65 | 0.85 | 0.10 | 54,71,81,90                 | 0     |
| 25  | CLA  | C1    | 506 | 65/65 | 0.85 | 0.09 | 49,62,70,73                 | 0     |
| 34  | DGD  | c2    | 516 | 52/66 | 0.86 | 0.10 | 37,63,71,75                 | 0     |
| 34  | DGD  | c2    | 517 | 62/66 | 0.86 | 0.08 | 45,57,70,75                 | 0     |
| 25  | CLA  | c1    | 509 | 65/65 | 0.86 | 0.10 | 51,62,68,72                 | 0     |
| 29  | LMG  | A1    | 410 | 43/55 | 0.86 | 0.08 | 52,59,65,76                 | 0     |
| 25  | CLA  | a2    | 405 | 65/65 | 0.86 | 0.09 | 51,60,81,87                 | 0     |
| 25  | CLA  | c1    | 505 | 65/65 | 0.86 | 0.09 | 47,70,79,88                 | 0     |
| 28  | UNL  | t1    | 102 | 9/-   | 0.86 | 0.08 | 45,57,68,69                 | 0     |
| 34  | DGD  | C1    | 517 | 64/66 | 0.86 | 0.08 | 38,55,75,92                 | 0     |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR  | B-factors( $\text{\AA}^2$ ) | Q<0.9 |
|-----|------|-------|-----|-------|------|------|-----------------------------|-------|
| 38  | HEM  | E2    | 101 | 43/43 | 0.86 | 0.13 | 116,132,146,152             | 0     |
| 25  | CLA  | B1    | 606 | 65/65 | 0.86 | 0.10 | 60,71,77,82                 | 0     |
| 29  | LMG  | d2    | 407 | 27/55 | 0.86 | 0.09 | 49,60,64,70                 | 0     |
| 39  | CA   | O1    | 401 | 1/1   | 0.86 | 0.06 | 82,82,82,82                 | 0     |
| 25  | CLA  | c2    | 504 | 65/65 | 0.86 | 0.10 | 46,78,92,100                | 0     |
| 23  | BCR  | b2    | 601 | 40/40 | 0.87 | 0.09 | 51,61,69,72                 | 0     |
| 34  | DGD  | c1    | 514 | 51/66 | 0.87 | 0.09 | 46,54,62,64                 | 0     |
| 25  | CLA  | b1    | 609 | 65/65 | 0.87 | 0.10 | 42,58,84,104                | 0     |
| 25  | CLA  | b2    | 624 | 65/65 | 0.87 | 0.08 | 47,60,75,82                 | 0     |
| 25  | CLA  | b1    | 619 | 65/65 | 0.87 | 0.10 | 48,62,81,85                 | 0     |
| 27  | PHO  | D2    | 407 | 64/64 | 0.87 | 0.08 | 58,68,81,83                 | 0     |
| 25  | CLA  | b2    | 606 | 65/65 | 0.87 | 0.11 | 68,77,84,90                 | 0     |
| 25  | CLA  | C1    | 511 | 65/65 | 0.87 | 0.10 | 45,56,62,68                 | 0     |
| 35  | LMT  | L1    | 102 | 12/35 | 0.87 | 0.07 | 35,45,59,62                 | 0     |
| 29  | LMG  | M1    | 101 | 31/55 | 0.87 | 0.09 | 41,52,63,70                 | 0     |
| 25  | CLA  | c2    | 507 | 54/65 | 0.87 | 0.10 | 76,81,86,92                 | 0     |
| 25  | CLA  | B1    | 618 | 58/65 | 0.87 | 0.10 | 53,64,80,86                 | 0     |
| 29  | LMG  | c2    | 519 | 26/55 | 0.87 | 0.07 | 58,67,73,74                 | 0     |
| 28  | UNL  | l1    | 103 | 12/-  | 0.87 | 0.08 | 35,47,53,55                 | 0     |
| 25  | CLA  | b2    | 613 | 65/65 | 0.87 | 0.10 | 59,84,96,99                 | 0     |
| 25  | CLA  | c1    | 507 | 65/65 | 0.88 | 0.09 | 49,62,72,80                 | 0     |
| 23  | BCR  | B2    | 603 | 40/40 | 0.88 | 0.08 | 46,59,76,81                 | 0     |
| 25  | CLA  | B2    | 612 | 65/65 | 0.88 | 0.10 | 58,64,71,83                 | 0     |
| 25  | CLA  | c2    | 511 | 65/65 | 0.88 | 0.10 | 54,65,72,75                 | 0     |
| 25  | CLA  | B2    | 619 | 65/65 | 0.88 | 0.07 | 46,55,63,71                 | 0     |
| 25  | CLA  | B1    | 605 | 65/65 | 0.88 | 0.09 | 60,75,87,88                 | 0     |
| 25  | CLA  | C1    | 505 | 65/65 | 0.88 | 0.08 | 43,55,64,68                 | 0     |
| 34  | DGD  | C1    | 515 | 52/66 | 0.88 | 0.09 | 36,58,67,71                 | 0     |
| 25  | CLA  | c1    | 512 | 65/65 | 0.88 | 0.10 | 36,50,57,60                 | 0     |
| 36  | PL9  | D2    | 408 | 55/55 | 0.88 | 0.09 | 43,59,64,74                 | 0     |
| 27  | PHO  | D1    | 407 | 63/64 | 0.88 | 0.08 | 40,56,63,67                 | 0     |
| 23  | BCR  | C1    | 501 | 40/40 | 0.88 | 0.08 | 47,61,72,75                 | 0     |
| 25  | CLA  | C1    | 507 | 65/65 | 0.88 | 0.09 | 46,67,86,105                | 0     |
| 25  | CLA  | b2    | 616 | 60/65 | 0.88 | 0.09 | 51,64,82,82                 | 0     |
| 25  | CLA  | b1    | 616 | 65/65 | 0.88 | 0.09 | 39,46,57,69                 | 0     |
| 23  | BCR  | A2    | 401 | 40/40 | 0.88 | 0.12 | 58,84,90,91                 | 0     |
| 23  | BCR  | d1    | 405 | 40/40 | 0.88 | 0.09 | 38,51,94,99                 | 0     |
| 25  | CLA  | B1    | 617 | 65/65 | 0.88 | 0.08 | 59,67,74,75                 | 0     |
| 25  | CLA  | B2    | 605 | 65/65 | 0.88 | 0.07 | 63,71,77,82                 | 0     |
| 25  | CLA  | c1    | 506 | 65/65 | 0.88 | 0.08 | 40,54,68,73                 | 0     |
| 25  | CLA  | B2    | 614 | 65/65 | 0.89 | 0.08 | 46,58,66,68                 | 0     |
| 25  | CLA  | B2    | 616 | 54/65 | 0.89 | 0.08 | 43,51,57,59                 | 0     |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR  | B-factors( $\text{\AA}^2$ ) | Q<0.9 |
|-----|------|-------|-----|-------|------|------|-----------------------------|-------|
| 34  | DGD  | c1    | 518 | 62/66 | 0.89 | 0.07 | 41,61,69,79                 | 0     |
| 25  | CLA  | B2    | 617 | 65/65 | 0.89 | 0.08 | 52,63,70,74                 | 0     |
| 25  | CLA  | B2    | 618 | 60/65 | 0.89 | 0.08 | 59,65,80,85                 | 0     |
| 36  | PL9  | d1    | 409 | 55/55 | 0.89 | 0.09 | 28,41,50,61                 | 0     |
| 25  | CLA  | b2    | 617 | 65/65 | 0.89 | 0.08 | 47,58,65,72                 | 0     |
| 36  | PL9  | d2    | 409 | 55/55 | 0.89 | 0.09 | 33,44,56,57                 | 0     |
| 25  | CLA  | B1    | 610 | 65/65 | 0.89 | 0.09 | 46,58,73,76                 | 0     |
| 25  | CLA  | a1    | 404 | 60/65 | 0.89 | 0.10 | 49,57,82,89                 | 0     |
| 23  | BCR  | B1    | 603 | 40/40 | 0.89 | 0.07 | 45,56,78,85                 | 0     |
| 33  | LHG  | D1    | 404 | 49/49 | 0.89 | 0.09 | 48,60,84,90                 | 0     |
| 25  | CLA  | B1    | 607 | 60/65 | 0.89 | 0.09 | 45,56,68,72                 | 0     |
| 28  | UNL  | A1    | 409 | 14/-  | 0.89 | 0.06 | 44,48,57,68                 | 0     |
| 23  | BCR  | B1    | 601 | 40/40 | 0.89 | 0.08 | 41,55,65,65                 | 0     |
| 25  | CLA  | c2    | 505 | 65/65 | 0.89 | 0.08 | 48,61,71,80                 | 0     |
| 25  | CLA  | d1    | 406 | 65/65 | 0.89 | 0.08 | 44,58,94,99                 | 0     |
| 25  | CLA  | C1    | 508 | 65/65 | 0.89 | 0.09 | 47,66,76,80                 | 0     |
| 25  | CLA  | c2    | 503 | 65/65 | 0.90 | 0.10 | 53,62,83,89                 | 0     |
| 23  | BCR  | B2    | 601 | 40/40 | 0.90 | 0.07 | 41,56,66,68                 | 0     |
| 29  | LMG  | D1    | 406 | 35/55 | 0.90 | 0.08 | 50,57,71,74                 | 0     |
| 33  | LHG  | D2    | 405 | 49/49 | 0.90 | 0.07 | 52,60,66,68                 | 0     |
| 33  | LHG  | L2    | 101 | 49/49 | 0.90 | 0.08 | 42,57,70,78                 | 0     |
| 25  | CLA  | B1    | 616 | 65/65 | 0.90 | 0.08 | 39,49,58,66                 | 0     |
| 23  | BCR  | b1    | 603 | 40/40 | 0.90 | 0.08 | 40,58,69,77                 | 0     |
| 33  | LHG  | d2    | 403 | 49/49 | 0.90 | 0.08 | 42,59,69,73                 | 0     |
| 25  | CLA  | b2    | 611 | 65/65 | 0.90 | 0.10 | 66,72,80,83                 | 0     |
| 34  | DGD  | C1    | 516 | 62/66 | 0.90 | 0.07 | 44,53,60,61                 | 0     |
| 31  | BCT  | a1    | 413 | 4/4   | 0.90 | 0.07 | 43,48,48,50                 | 0     |
| 34  | DGD  | H1    | 101 | 62/66 | 0.90 | 0.08 | 50,71,84,89                 | 0     |
| 25  | CLA  | b2    | 612 | 65/65 | 0.90 | 0.08 | 39,54,64,70                 | 0     |
| 25  | CLA  | A1    | 405 | 55/65 | 0.90 | 0.08 | 38,46,59,65                 | 0     |
| 25  | CLA  | c2    | 510 | 54/65 | 0.90 | 0.10 | 64,69,77,79                 | 0     |
| 25  | CLA  | B2    | 607 | 65/65 | 0.90 | 0.08 | 49,59,73,78                 | 0     |
| 25  | CLA  | B2    | 609 | 65/65 | 0.90 | 0.08 | 51,67,76,82                 | 0     |
| 34  | DGD  | c2    | 514 | 62/66 | 0.90 | 0.07 | 47,59,67,69                 | 0     |
| 25  | CLA  | b1    | 611 | 65/65 | 0.90 | 0.08 | 37,59,68,73                 | 0     |
| 25  | CLA  | B1    | 619 | 65/65 | 0.90 | 0.08 | 32,50,57,73                 | 0     |
| 25  | CLA  | A2    | 402 | 65/65 | 0.90 | 0.09 | 47,57,69,77                 | 0     |
| 33  | LHG  | B1    | 621 | 49/49 | 0.90 | 0.08 | 41,57,67,73                 | 0     |
| 25  | CLA  | b1    | 617 | 65/65 | 0.90 | 0.07 | 47,56,65,68                 | 0     |
| 25  | CLA  | b2    | 614 | 65/65 | 0.91 | 0.08 | 51,66,73,75                 | 0     |
| 25  | CLA  | d1    | 401 | 65/65 | 0.91 | 0.08 | 30,36,44,47                 | 0     |
| 25  | CLA  | B2    | 615 | 65/65 | 0.91 | 0.07 | 44,56,73,86                 | 0     |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR  | B-factors( $\text{\AA}^2$ ) | Q<0.9 |
|-----|------|-------|-----|-------|------|------|-----------------------------|-------|
| 25  | CLA  | d2    | 405 | 65/65 | 0.91 | 0.08 | 34,44,61,77                 | 0     |
| 25  | CLA  | B1    | 615 | 65/65 | 0.91 | 0.08 | 35,47,73,80                 | 0     |
| 33  | LHG  | d2    | 406 | 49/49 | 0.91 | 0.07 | 36,50,59,66                 | 0     |
| 25  | CLA  | c1    | 504 | 65/65 | 0.91 | 0.09 | 36,53,83,98                 | 0     |
| 25  | CLA  | b2    | 620 | 65/65 | 0.91 | 0.09 | 42,56,63,72                 | 0     |
| 25  | CLA  | D2    | 401 | 65/65 | 0.91 | 0.08 | 43,53,71,76                 | 0     |
| 23  | BCR  | a1    | 401 | 40/40 | 0.91 | 0.08 | 47,56,64,65                 | 0     |
| 36  | PL9  | D1    | 408 | 55/55 | 0.91 | 0.08 | 28,42,52,63                 | 0     |
| 25  | CLA  | D2    | 406 | 65/65 | 0.91 | 0.07 | 45,57,65,67                 | 0     |
| 24  | CL   | a1    | 402 | 1/1   | 0.91 | 0.05 | 49,49,49,49                 | 0     |
| 23  | BCR  | h1    | 102 | 40/40 | 0.91 | 0.08 | 53,60,67,69                 | 0     |
| 25  | CLA  | b1    | 606 | 65/65 | 0.91 | 0.09 | 44,53,61,63                 | 0     |
| 29  | LMG  | d1    | 408 | 33/55 | 0.91 | 0.08 | 41,50,61,63                 | 0     |
| 25  | CLA  | A1    | 404 | 51/65 | 0.91 | 0.07 | 37,48,58,70                 | 0     |
| 25  | CLA  | C1    | 510 | 65/65 | 0.91 | 0.09 | 47,59,77,82                 | 0     |
| 25  | CLA  | B1    | 612 | 65/65 | 0.91 | 0.10 | 52,66,71,77                 | 0     |
| 38  | HEM  | f1    | 101 | 43/43 | 0.91 | 0.11 | 62,82,124,136               | 0     |
| 38  | HEM  | v1    | 201 | 43/43 | 0.91 | 0.10 | 60,66,72,75                 | 0     |
| 34  | DGD  | h2    | 102 | 62/66 | 0.91 | 0.08 | 47,67,82,96                 | 0     |
| 25  | CLA  | C1    | 503 | 60/65 | 0.91 | 0.07 | 38,53,67,73                 | 0     |
| 25  | CLA  | C1    | 504 | 65/65 | 0.91 | 0.07 | 49,64,74,77                 | 0     |
| 35  | LMT  | M1    | 102 | 11/35 | 0.91 | 0.08 | 47,52,56,58                 | 0     |
| 25  | CLA  | b1    | 620 | 65/65 | 0.91 | 0.08 | 31,43,56,60                 | 0     |
| 27  | PHO  | A2    | 407 | 64/64 | 0.92 | 0.08 | 53,64,72,80                 | 0     |
| 25  | CLA  | b1    | 612 | 65/65 | 0.92 | 0.07 | 45,54,60,68                 | 0     |
| 27  | PHO  | d2    | 408 | 64/64 | 0.92 | 0.08 | 45,56,62,64                 | 0     |
| 33  | LHG  | D2    | 403 | 49/49 | 0.92 | 0.07 | 45,60,68,73                 | 0     |
| 31  | BCT  | A2    | 413 | 4/4   | 0.92 | 0.07 | 65,69,71,72                 | 0     |
| 25  | CLA  | b2    | 608 | 65/65 | 0.92 | 0.08 | 65,77,85,86                 | 0     |
| 25  | CLA  | b1    | 615 | 59/65 | 0.92 | 0.08 | 31,43,58,64                 | 0     |
| 25  | CLA  | B2    | 613 | 65/65 | 0.92 | 0.07 | 41,52,68,70                 | 0     |
| 23  | BCR  | a2    | 402 | 40/40 | 0.92 | 0.07 | 33,51,62,67                 | 0     |
| 32  | GOL  | c1    | 521 | 6/6   | 0.92 | 0.08 | 54,56,60,65                 | 0     |
| 25  | CLA  | b1    | 607 | 65/65 | 0.92 | 0.08 | 33,46,69,76                 | 0     |
| 24  | CL   | A1    | 402 | 1/1   | 0.92 | 0.12 | 39,39,39,39                 | 0     |
| 25  | CLA  | d1    | 404 | 65/65 | 0.92 | 0.07 | 31,43,49,51                 | 0     |
| 25  | CLA  | b1    | 610 | 65/65 | 0.92 | 0.07 | 37,47,56,63                 | 0     |
| 25  | CLA  | B1    | 613 | 65/65 | 0.92 | 0.08 | 38,49,57,64                 | 0     |
| 27  | PHO  | d1    | 403 | 64/64 | 0.92 | 0.07 | 32,41,50,54                 | 0     |
| 33  | LHG  | b1    | 622 | 49/49 | 0.92 | 0.09 | 36,49,57,69                 | 0     |
| 34  | DGD  | h1    | 101 | 62/66 | 0.92 | 0.07 | 37,48,59,65                 | 0     |
| 25  | CLA  | D1    | 402 | 65/65 | 0.93 | 0.06 | 31,40,58,63                 | 0     |

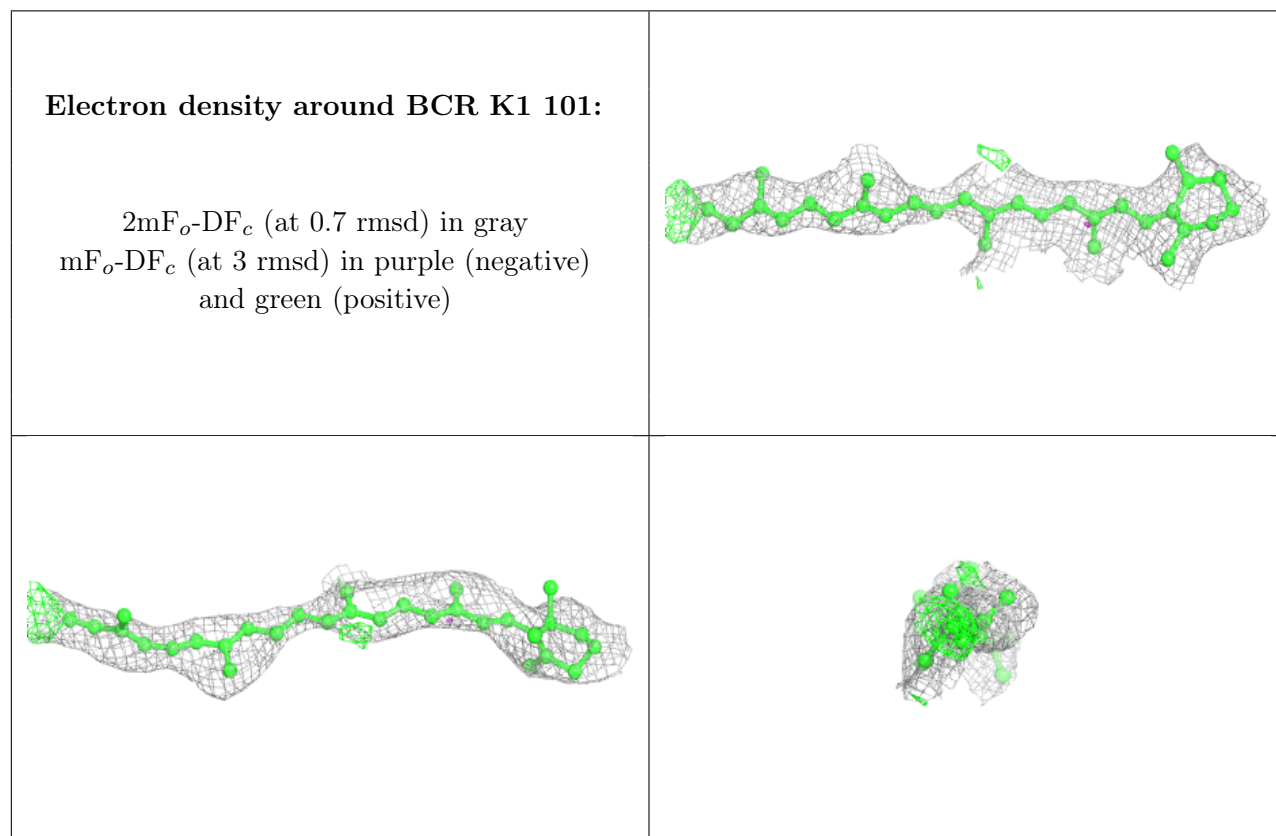
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| Mol | Type | Chain | Res | Atoms | RSCC | RSR  | B-factors( $\text{\AA}^2$ ) | Q<0.9 |
|-----|------|-------|-----|-------|------|------|-----------------------------|-------|
| 23  | BCR  | A1    | 401 | 40/40 | 0.93 | 0.07 | 36,48,54,58                 | 0     |
| 23  | BCR  | b1    | 601 | 40/40 | 0.93 | 0.07 | 36,47,56,57                 | 0     |
| 25  | CLA  | a1    | 405 | 50/65 | 0.93 | 0.07 | 25,33,49,55                 | 0     |
| 25  | CLA  | B1    | 614 | 65/65 | 0.93 | 0.07 | 43,55,62,67                 | 0     |
| 25  | CLA  | B2    | 608 | 65/65 | 0.93 | 0.07 | 43,53,70,76                 | 0     |
| 26  | OEX  | A2    | 406 | 10/10 | 0.93 | 0.09 | 68,84,93,94                 | 0     |
| 25  | CLA  | a2    | 404 | 65/65 | 0.93 | 0.07 | 30,42,52,53                 | 0     |
| 25  | CLA  | b1    | 605 | 65/65 | 0.93 | 0.07 | 38,52,60,66                 | 0     |
| 33  | LHG  | l2    | 101 | 44/49 | 0.93 | 0.06 | 36,53,66,72                 | 0     |
| 25  | CLA  | a2    | 413 | 50/65 | 0.93 | 0.06 | 33,46,57,66                 | 0     |
| 38  | HEM  | V1    | 201 | 43/43 | 0.93 | 0.08 | 35,61,66,71                 | 0     |
| 25  | CLA  | c1    | 511 | 65/65 | 0.93 | 0.08 | 38,53,71,78                 | 0     |
| 27  | PHO  | a2    | 416 | 64/64 | 0.93 | 0.07 | 35,46,53,62                 | 0     |
| 33  | LHG  | L1    | 101 | 41/49 | 0.93 | 0.06 | 30,46,61,85                 | 0     |
| 33  | LHG  | a1    | 407 | 43/49 | 0.93 | 0.06 | 36,52,66,70                 | 0     |
| 31  | BCT  | A1    | 413 | 4/4   | 0.93 | 0.06 | 54,60,62,63                 | 0     |
| 25  | CLA  | b1    | 613 | 65/65 | 0.93 | 0.07 | 36,44,54,68                 | 0     |
| 33  | LHG  | d1    | 407 | 49/49 | 0.93 | 0.07 | 34,44,53,67                 | 0     |
| 25  | CLA  | d2    | 402 | 65/65 | 0.94 | 0.06 | 24,37,48,52                 | 0     |
| 25  | CLA  | b2    | 615 | 60/65 | 0.94 | 0.07 | 45,54,67,74                 | 0     |
| 25  | CLA  | a1    | 403 | 65/65 | 0.94 | 0.07 | 29,37,48,51                 | 0     |
| 25  | CLA  | A1    | 406 | 65/65 | 0.94 | 0.07 | 28,37,46,55                 | 0     |
| 33  | LHG  | l1    | 102 | 49/49 | 0.94 | 0.07 | 25,43,67,75                 | 0     |
| 27  | PHO  | A1    | 408 | 64/64 | 0.94 | 0.07 | 30,42,50,56                 | 0     |
| 25  | CLA  | B1    | 608 | 65/65 | 0.94 | 0.07 | 46,58,71,81                 | 0     |
| 27  | PHO  | a1    | 411 | 64/64 | 0.94 | 0.06 | 33,41,47,50                 | 0     |
| 38  | HEM  | v2    | 201 | 43/43 | 0.94 | 0.09 | 47,60,66,78                 | 0     |
| 33  | LHG  | D1    | 405 | 49/49 | 0.94 | 0.06 | 35,45,54,56                 | 0     |
| 25  | CLA  | b1    | 614 | 65/65 | 0.94 | 0.08 | 35,45,54,56                 | 0     |
| 25  | CLA  | A1    | 403 | 65/65 | 0.95 | 0.06 | 27,37,49,54                 | 0     |
| 25  | CLA  | b1    | 608 | 65/65 | 0.95 | 0.07 | 37,48,58,63                 | 0     |
| 31  | BCT  | a2    | 417 | 4/4   | 0.96 | 0.05 | 59,65,67,73                 | 0     |
| 26  | OEX  | A1    | 407 | 10/10 | 0.97 | 0.08 | 45,49,63,68                 | 0     |
| 30  | FE   | A1    | 411 | 1/1   | 0.97 | 0.02 | 52,52,52,52                 | 0     |
| 30  | FE   | a1    | 410 | 1/1   | 0.98 | 0.07 | 49,49,49,49                 | 0     |
| 30  | FE   | a2    | 414 | 1/1   | 0.98 | 0.03 | 57,57,57,57                 | 0     |
| 26  | OEX  | a2    | 408 | 10/10 | 0.98 | 0.07 | 42,49,58,61                 | 0     |
| 26  | OEX  | a1    | 408 | 10/10 | 0.98 | 0.08 | 39,49,62,70                 | 0     |
| 24  | CL   | a2    | 403 | 1/1   | 0.98 | 0.03 | 37,37,37,37                 | 0     |
| 30  | FE   | A2    | 411 | 1/1   | 0.99 | 0.04 | 63,63,63,63                 | 0     |

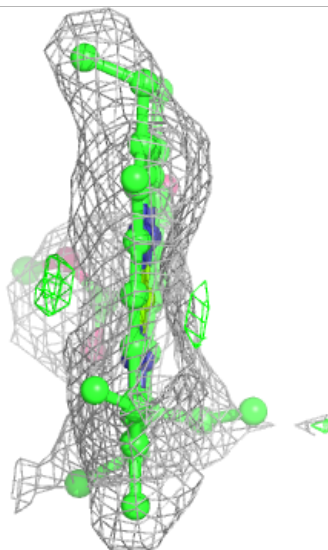
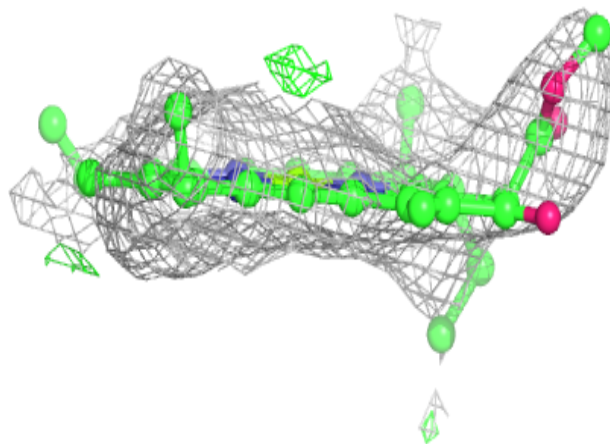
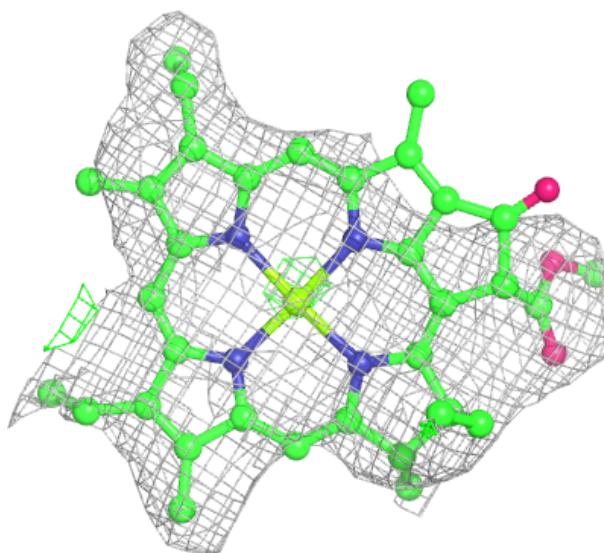
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers

as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.



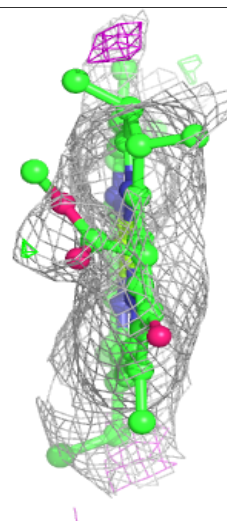
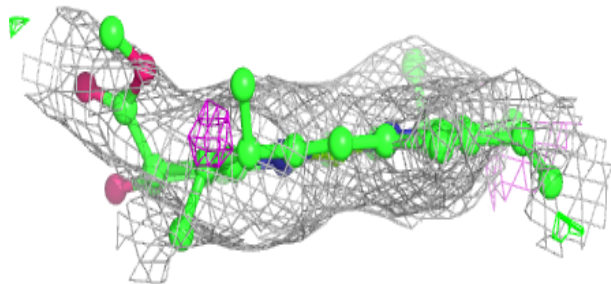
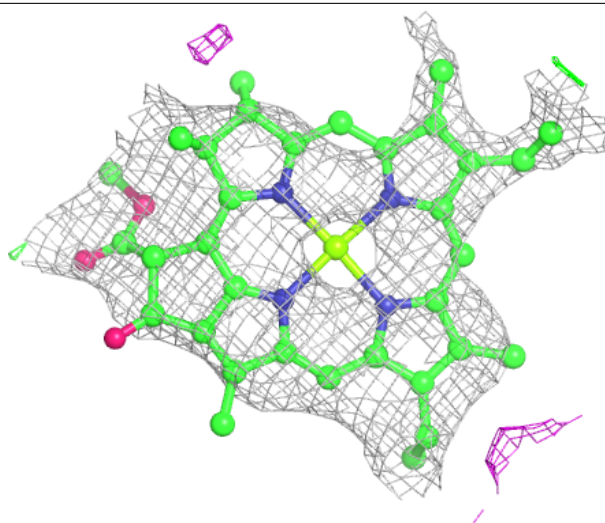
**Electron density around CLA b2 604:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



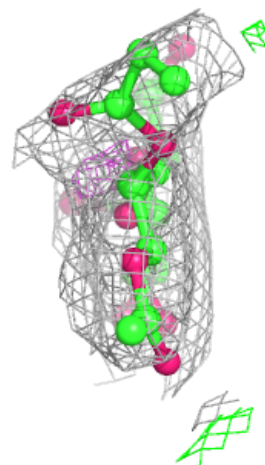
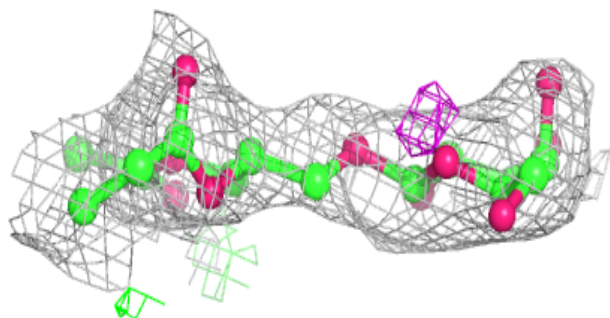
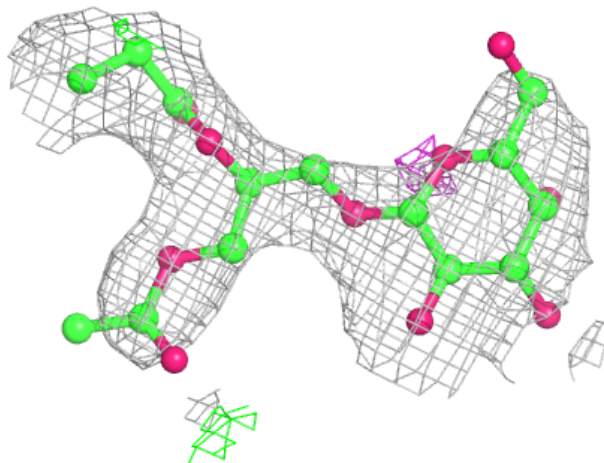
**Electron density around CLA C2 518:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



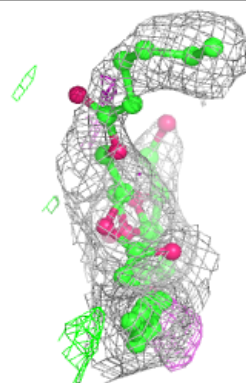
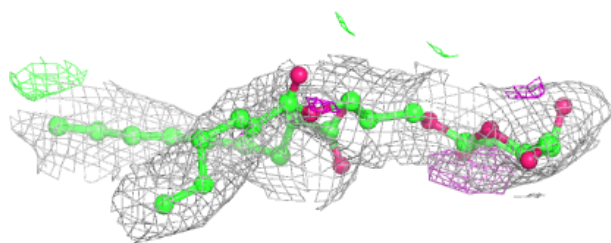
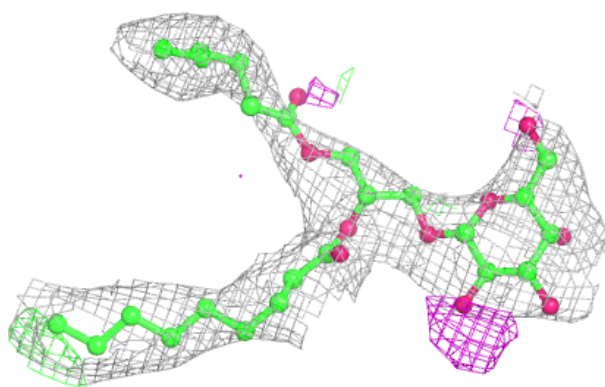
**Electron density around LMG C2 515:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around LMG I2 101:**

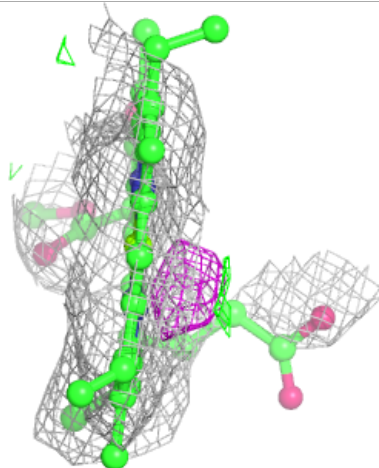
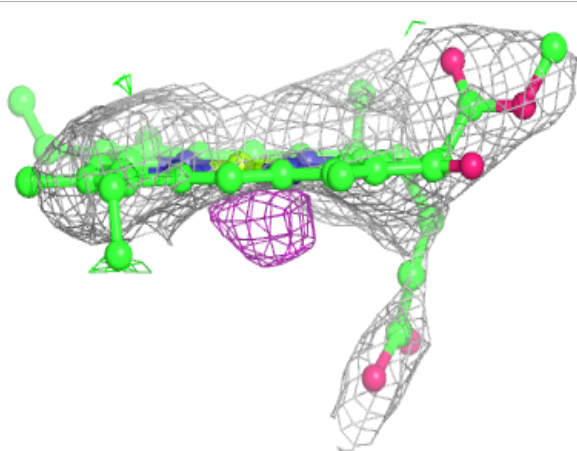
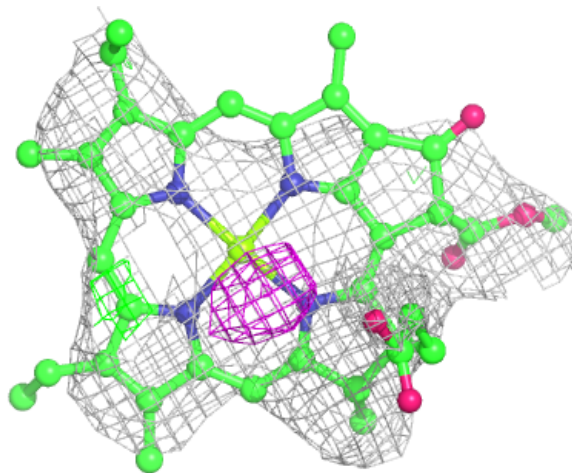
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





**Electron density around CLA C2 510:**

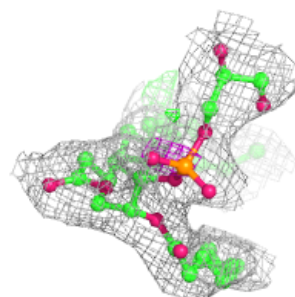
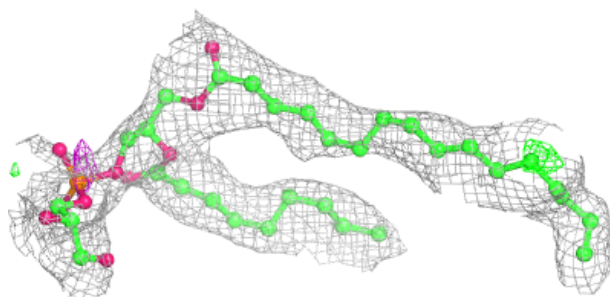
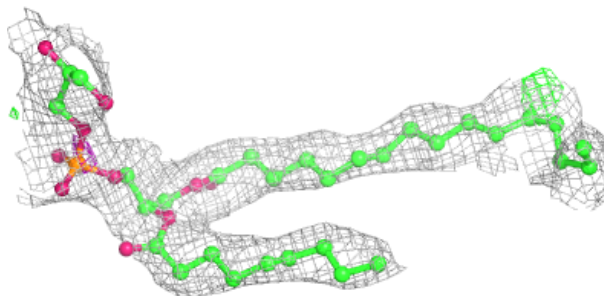
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



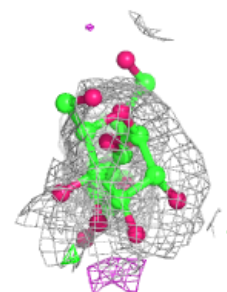
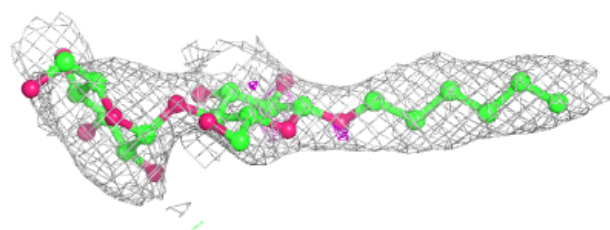
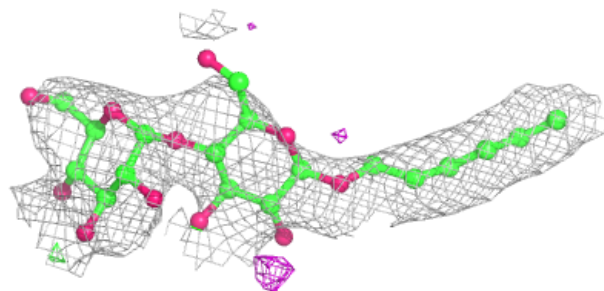


**Electron density around LHG B2 627:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

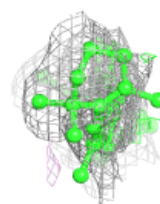
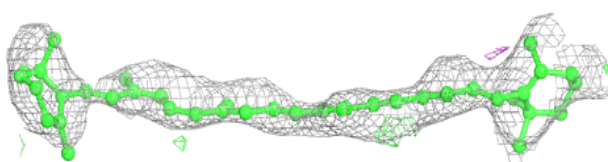
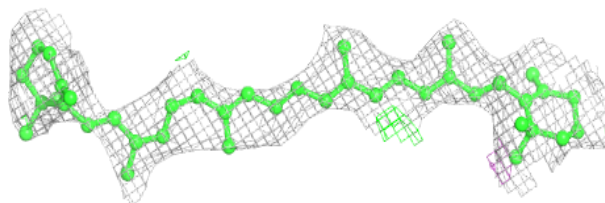
**Electron density around LMT m2 104:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

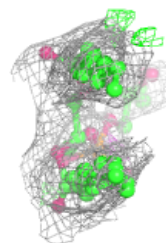
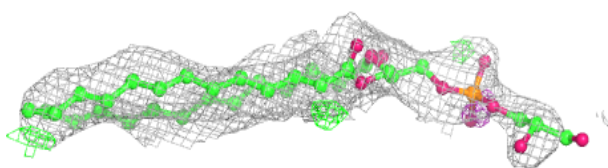
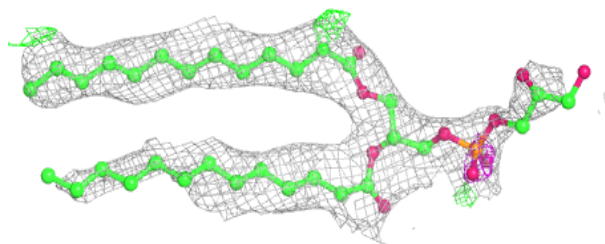


**Electron density around BCR K2 102:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

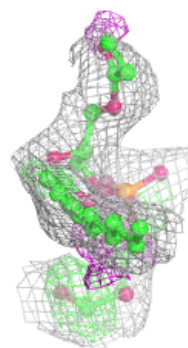
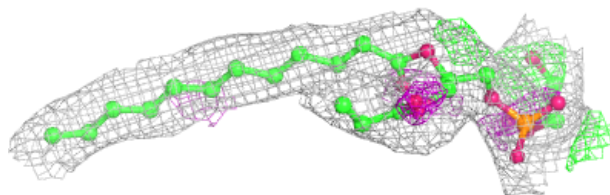
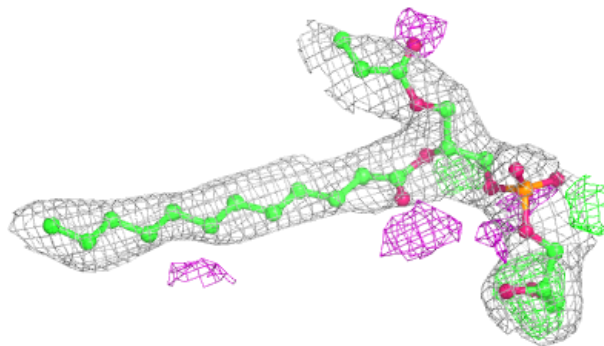
**Electron density around LHG b2 625:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

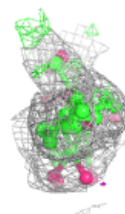
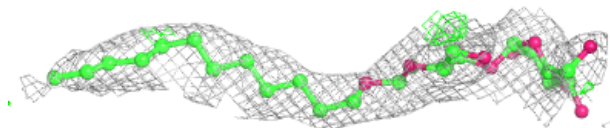
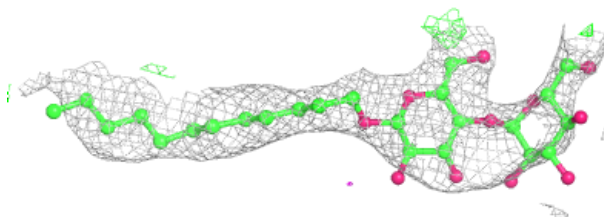


**Electron density around LHG d1 402:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

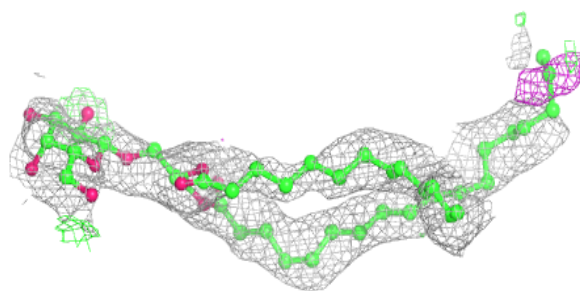
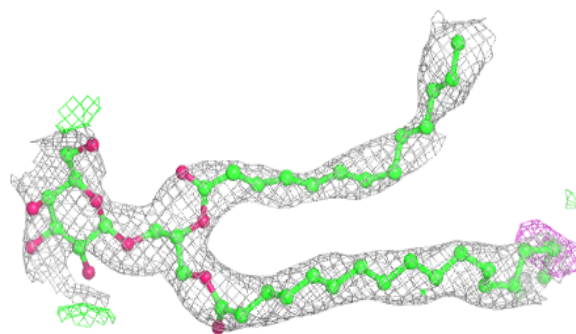
**Electron density around LMT b2 621:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

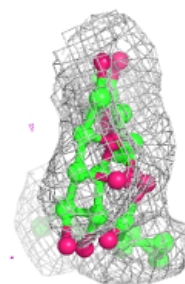
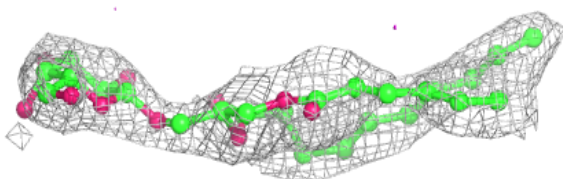
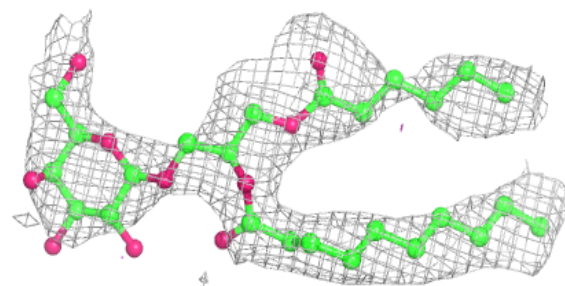


**Electron density around LMG j2 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

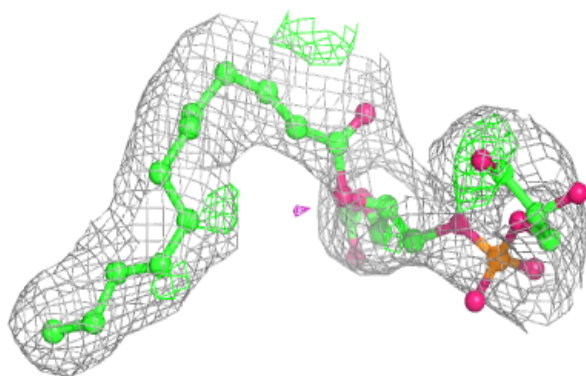
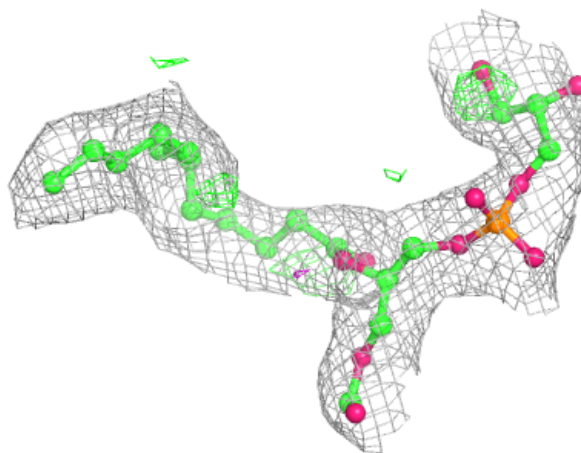
**Electron density around LMG F2 402:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around LHG a2 407:**

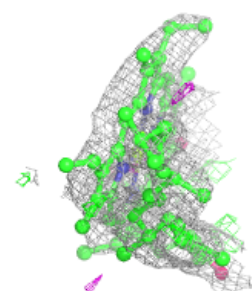
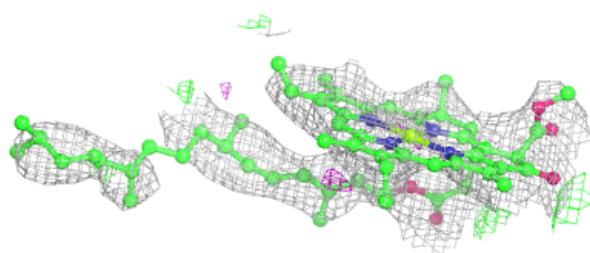
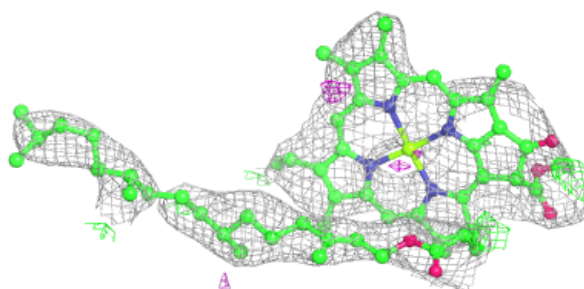
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



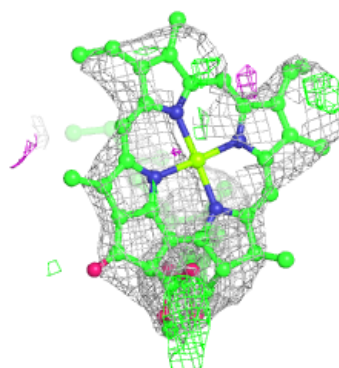
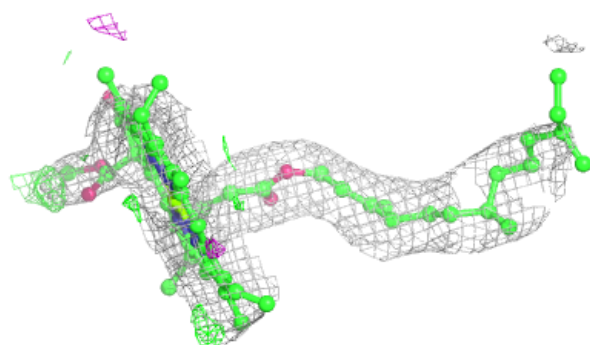
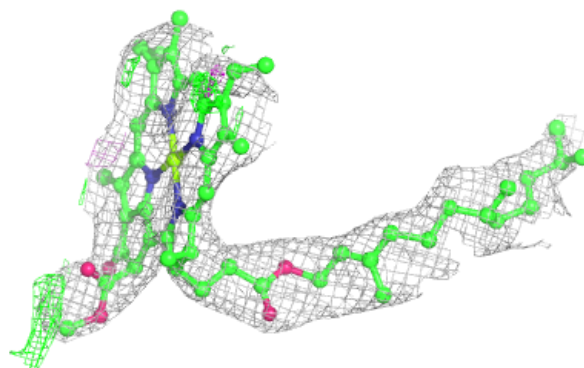


**Electron density around CLA C2 503:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

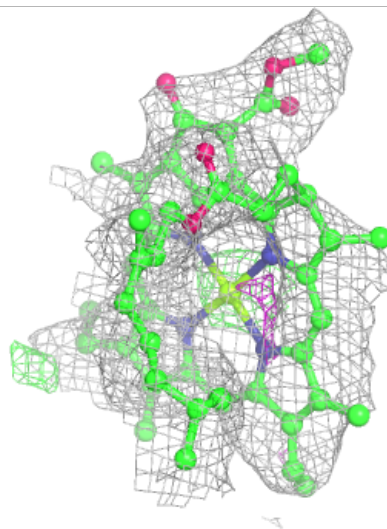
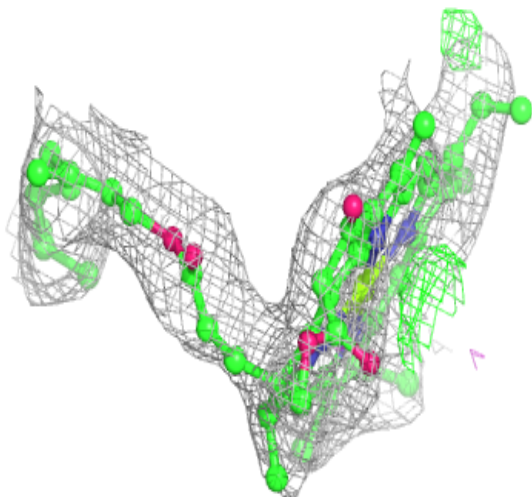
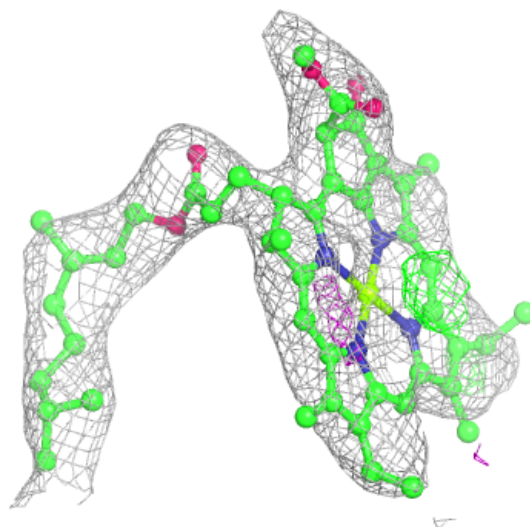
**Electron density around CLA D2 404:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



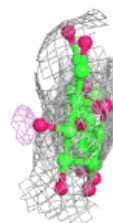
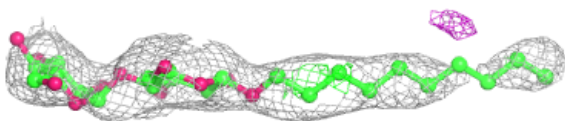
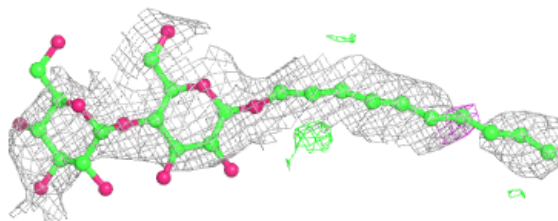
**Electron density around CLA K2 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around LMT c1 517:**

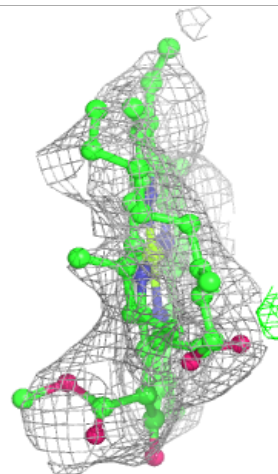
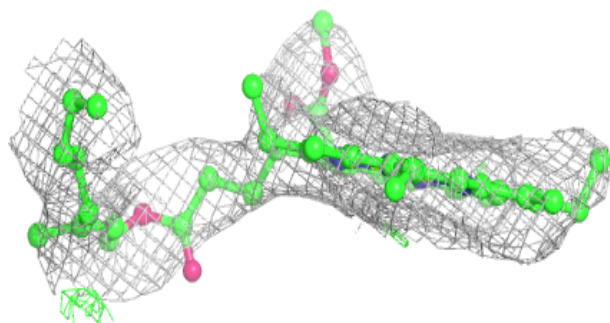
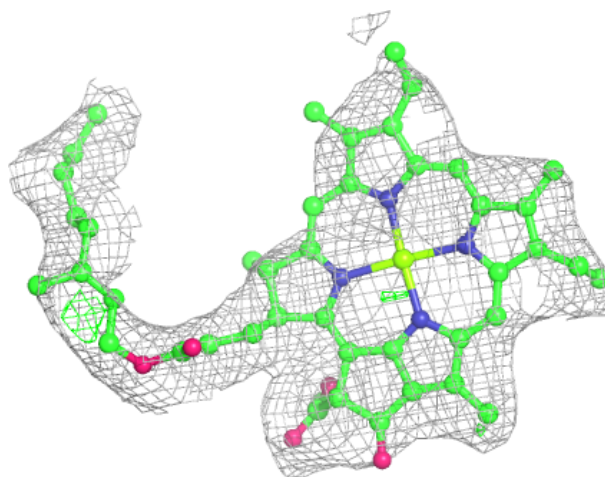
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





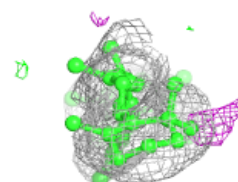
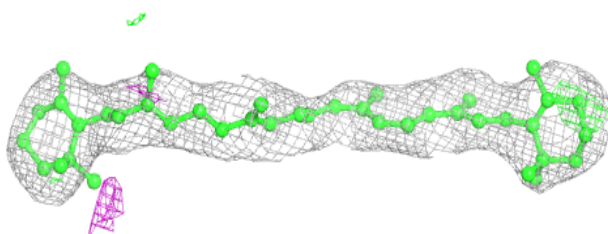
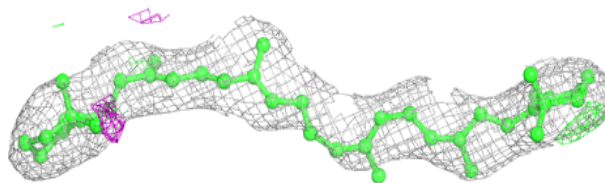
**Electron density around CLA c2 513:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

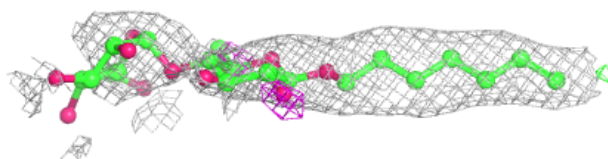
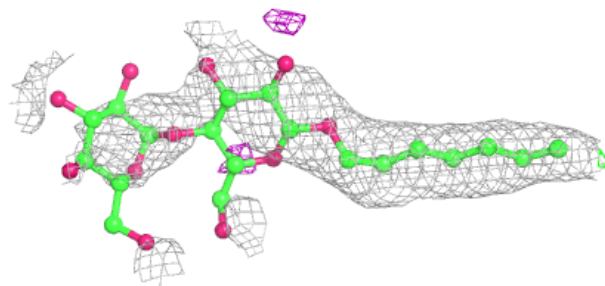


**Electron density around BCR c2 501:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

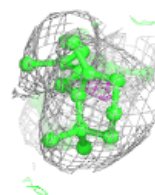
**Electron density around LMT m2 103:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

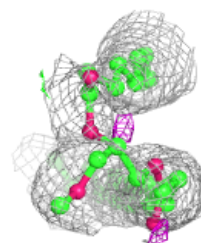
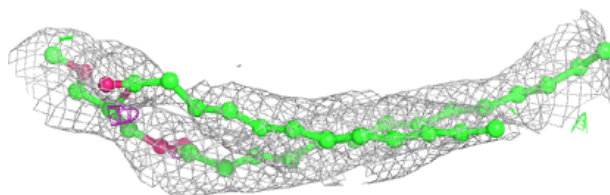
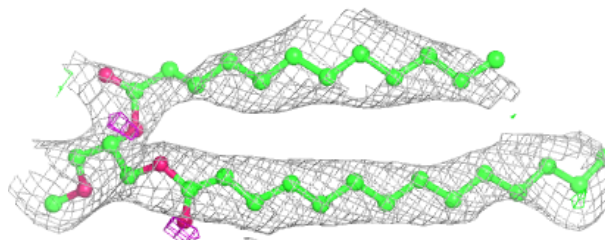


**Electron density around BCR K2 104:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

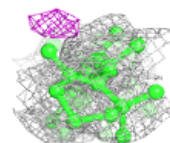
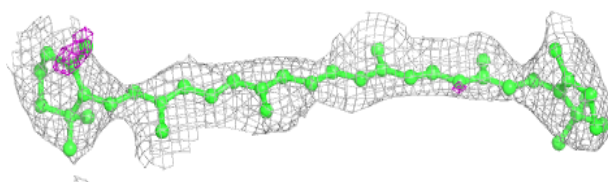
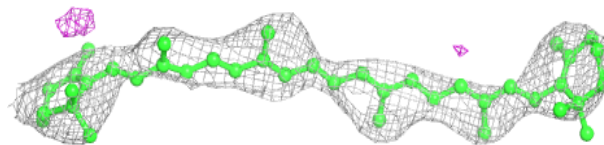
**Electron density around LMG d1 411:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

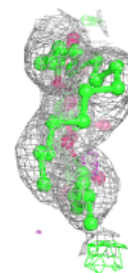
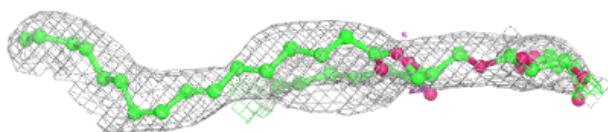
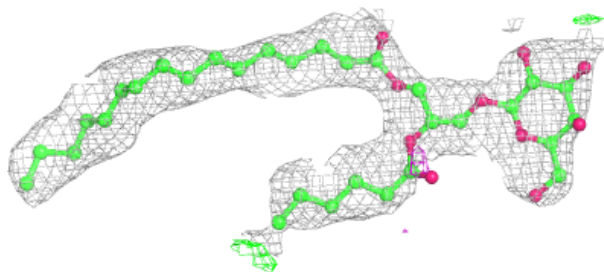


**Electron density around BCR z2 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

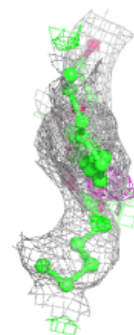
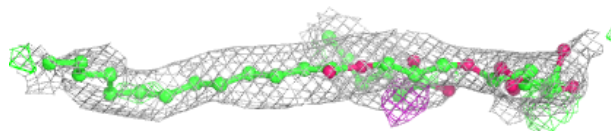
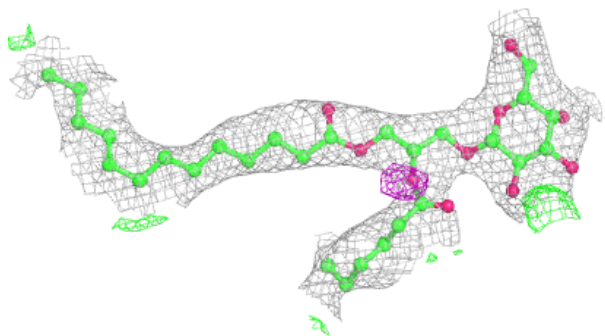
**Electron density around LMG A1 412:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

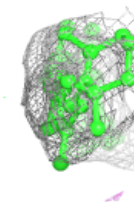
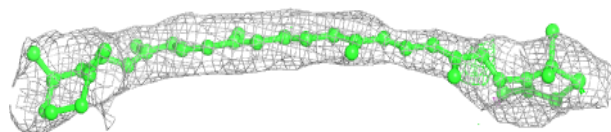
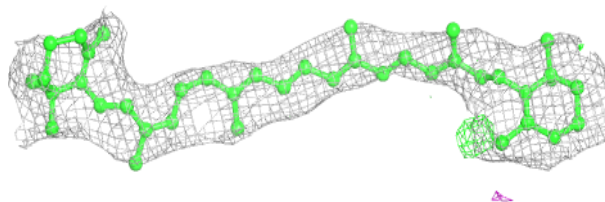


**Electron density around LMG b1 621:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

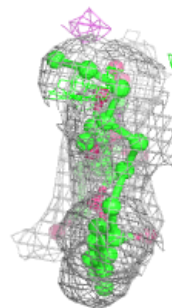
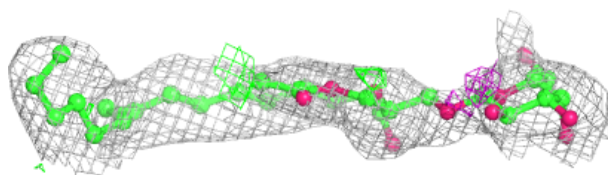
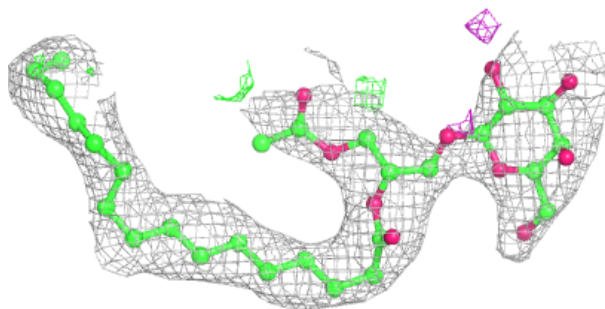
**Electron density around BCR F2 401:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around LMG B2 621:**

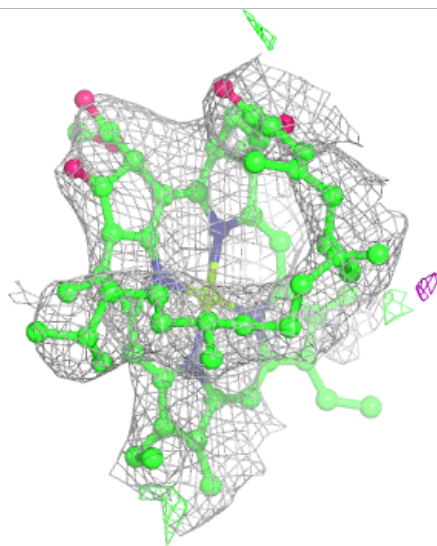
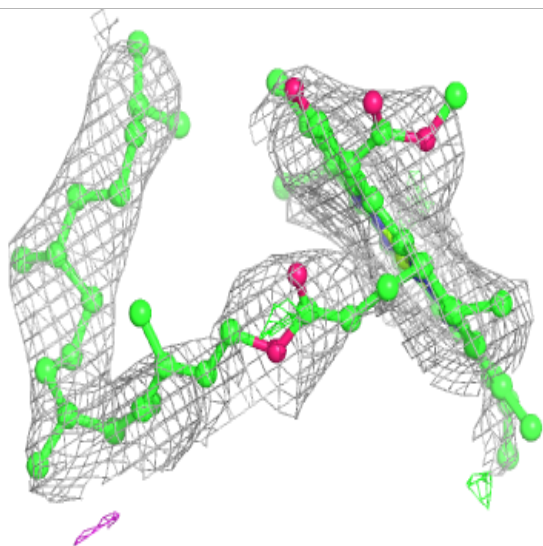
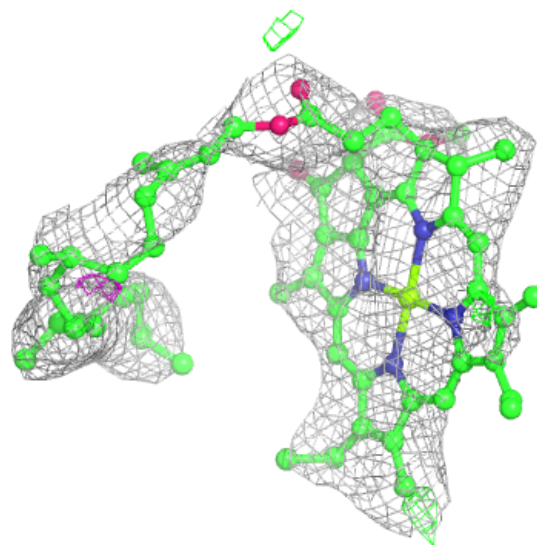
$2mF_o - DF_c$  (at 0.7 rmsd) in gray  
 $mF_o - DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





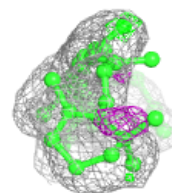
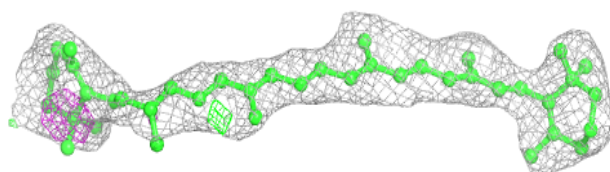
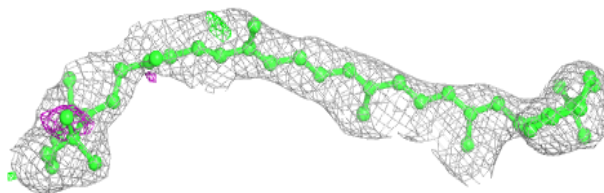
**Electron density around CLA C2 505:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around BCR B1 602:**

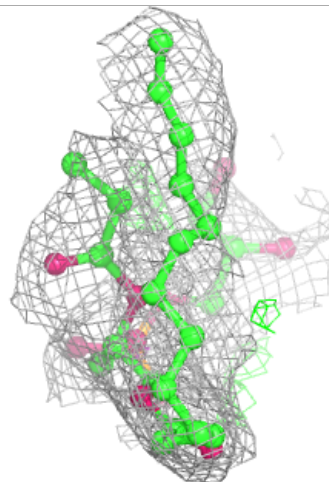
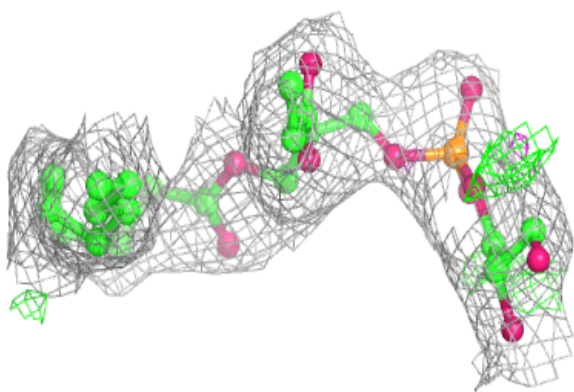
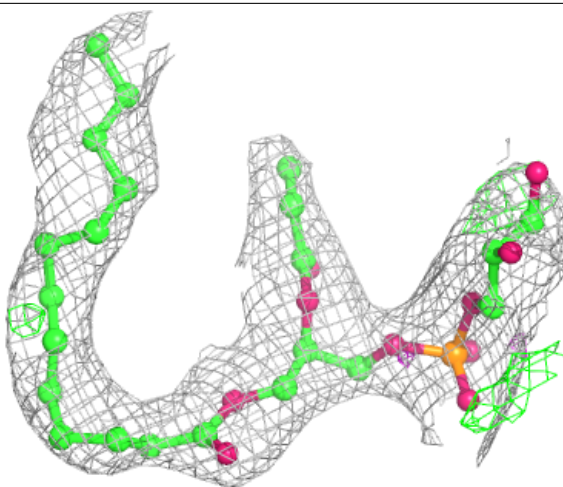
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





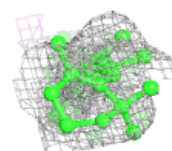
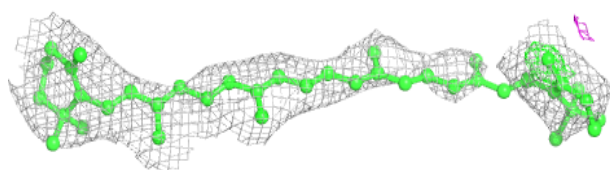
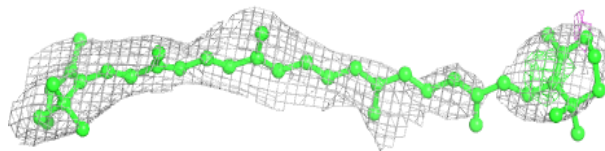
**Electron density around LHG A2 405:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

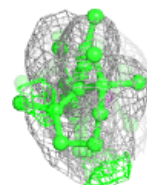
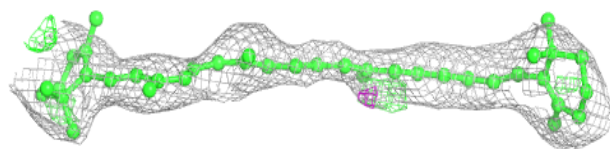
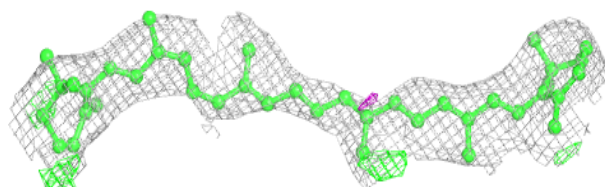


**Electron density around BCR C2 502:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

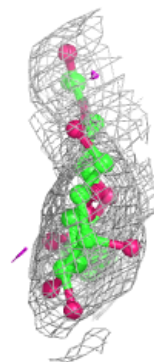
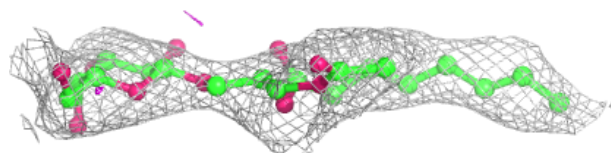
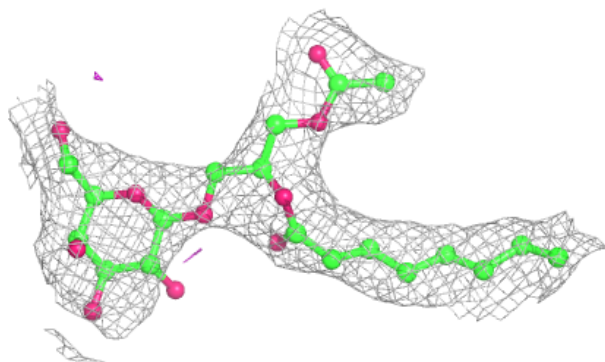
**Electron density around BCR J1 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



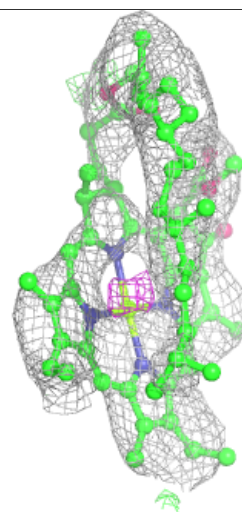
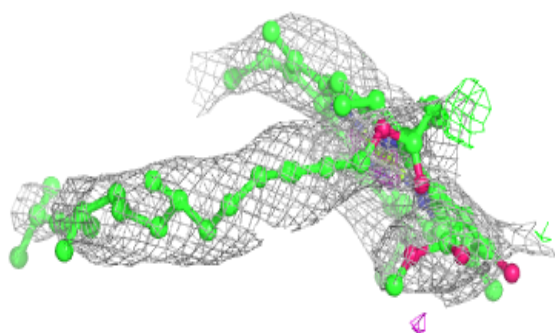
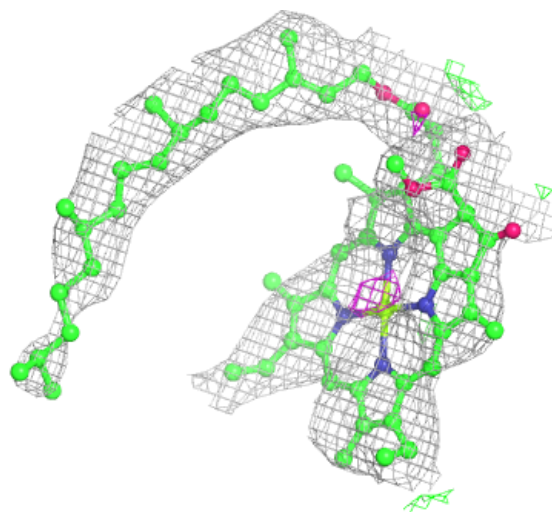
**Electron density around LMG A2 412:**

$2mF_o - DF_c$  (at 0.7 rmsd) in gray  
 $mF_o - DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



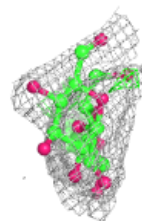
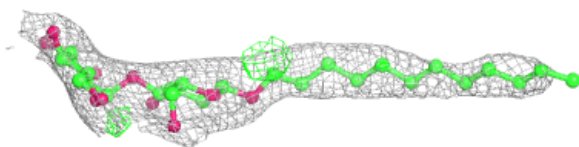
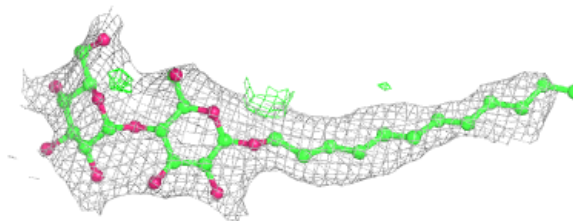
**Electron density around CLA C2 509:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

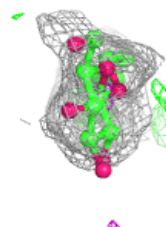
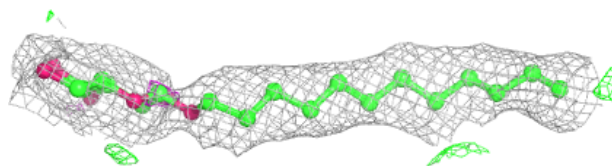
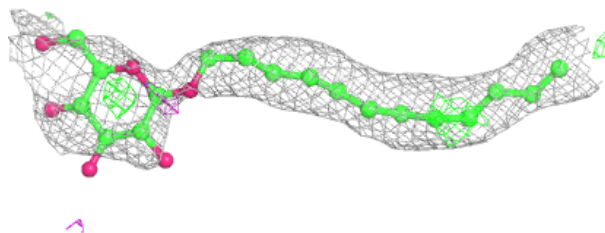


**Electron density around LMT C1 519:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

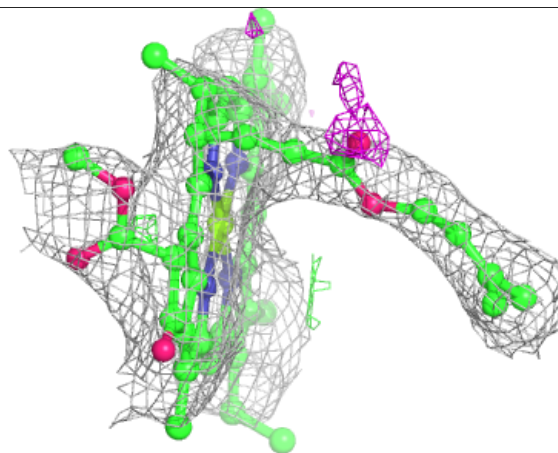
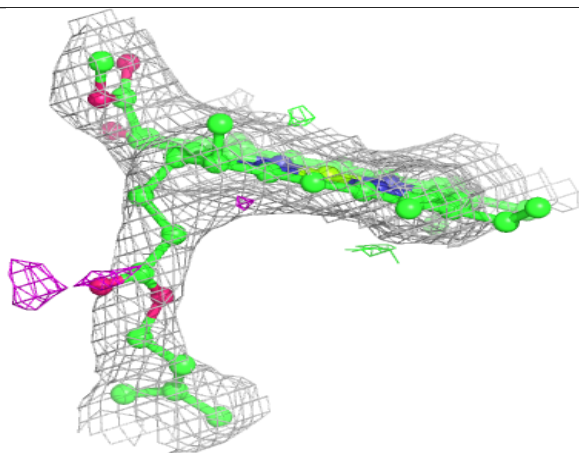
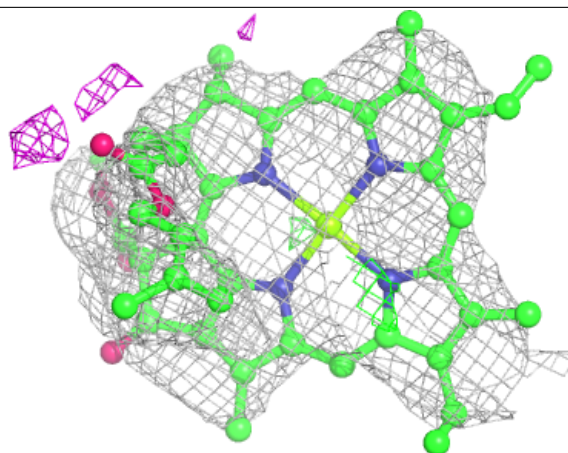
**Electron density around LMT M1 103:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

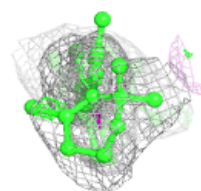
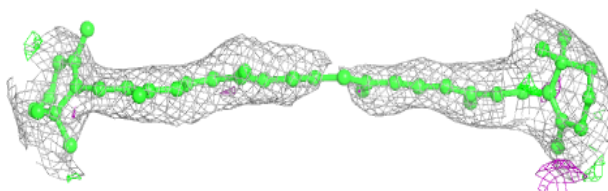
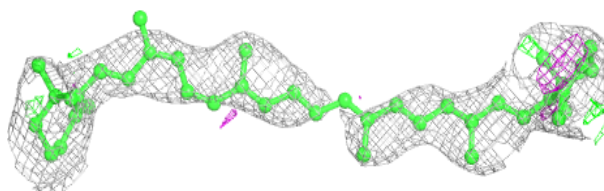


**Electron density around CLA C2 511:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around BCR k1 101:**

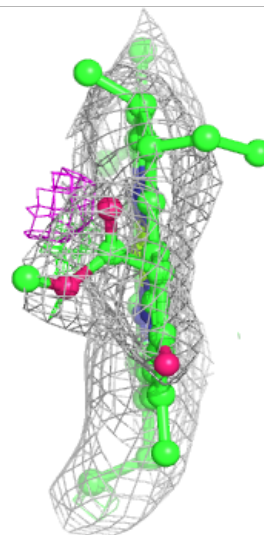
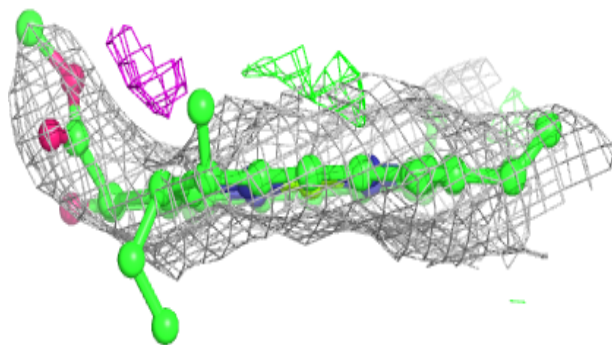
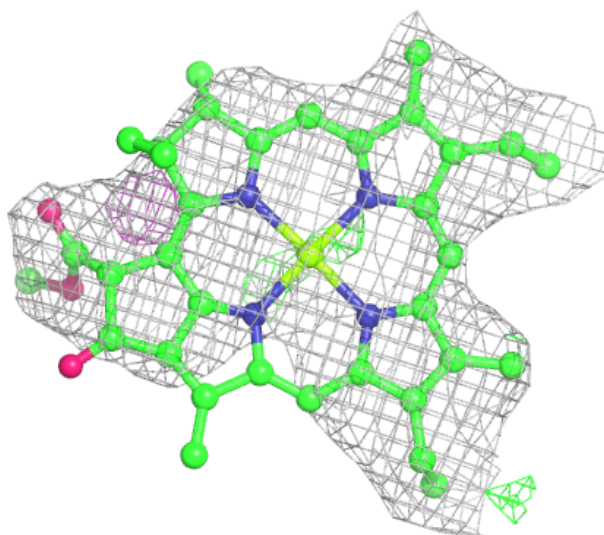
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





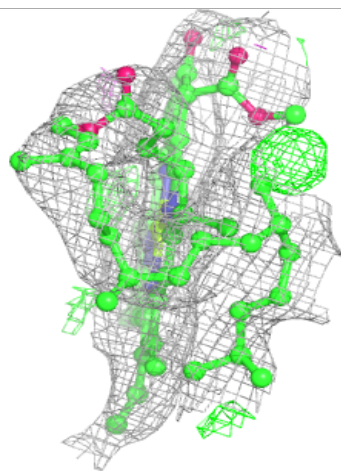
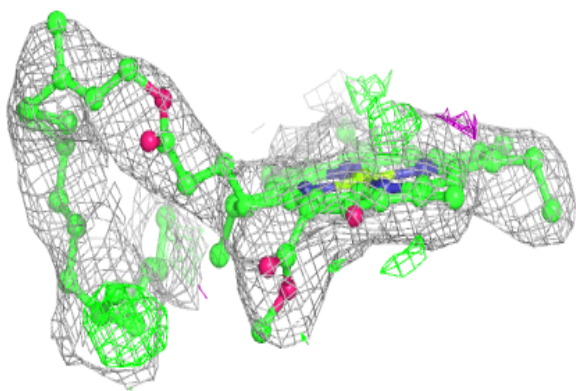
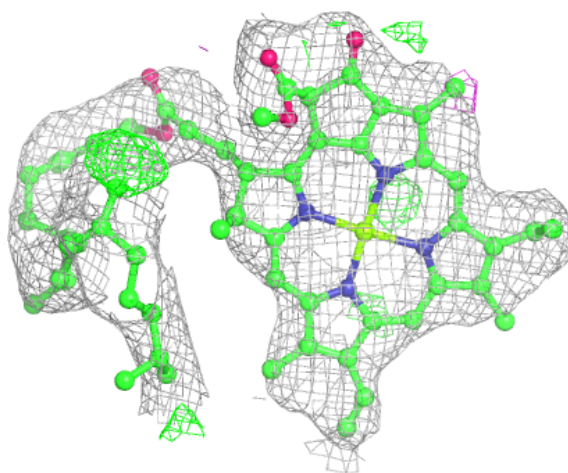
**Electron density around CLA B1 604:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around CLA C1 512:**

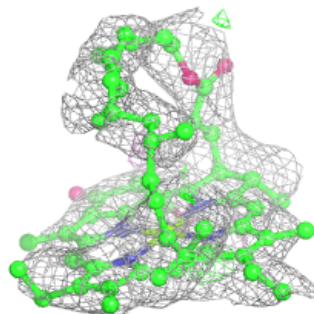
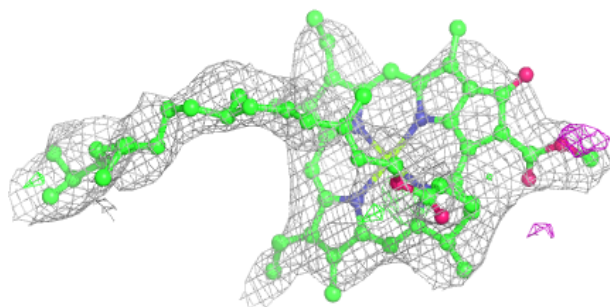
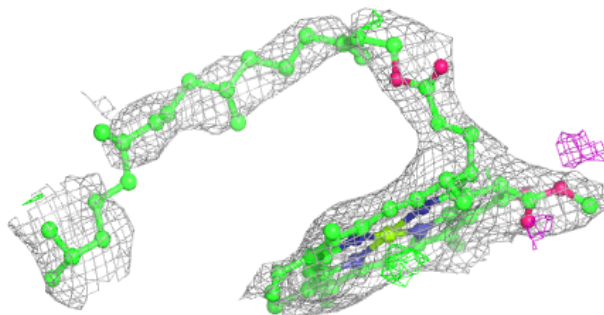
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



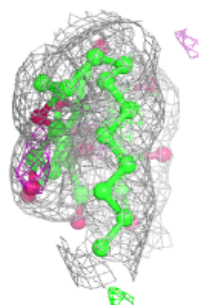
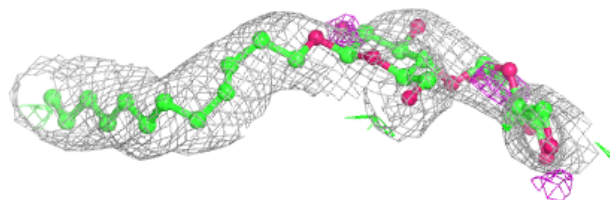
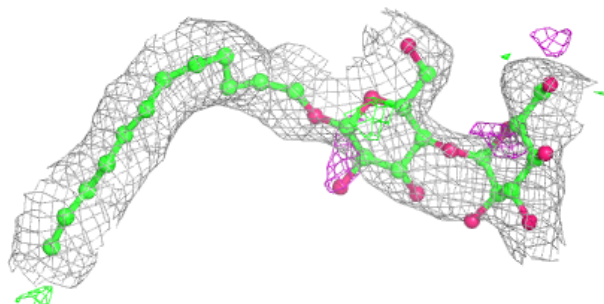


**Electron density around CLA c1 516:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

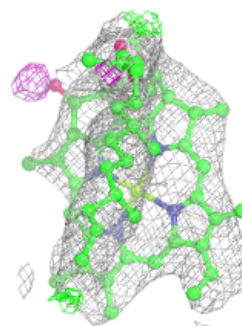
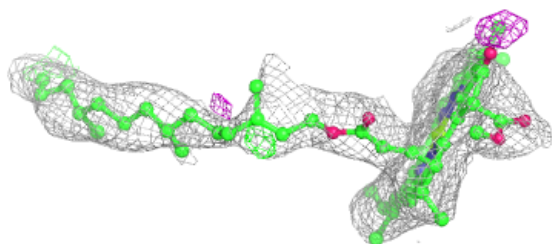
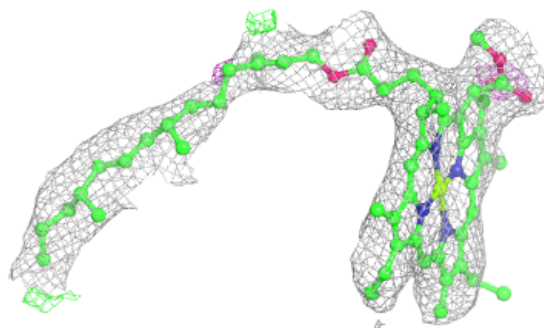
**Electron density around LMT a2 406:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



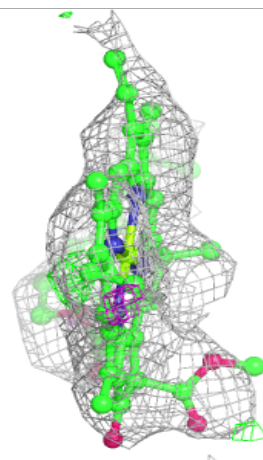
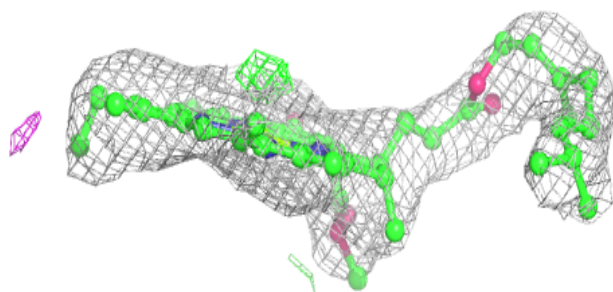
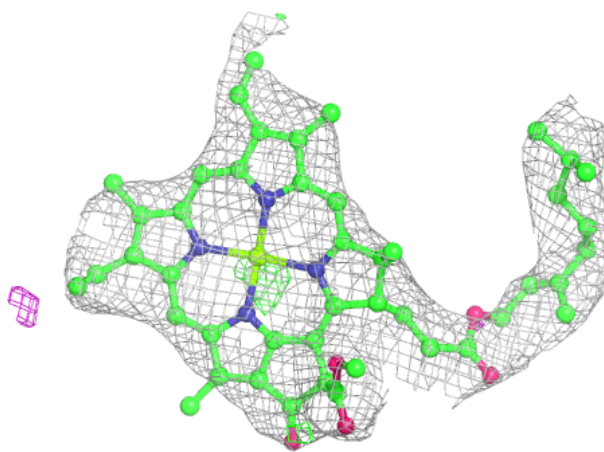
**Electron density around CLA B1 611:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



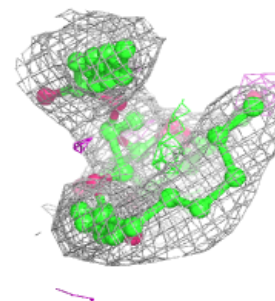
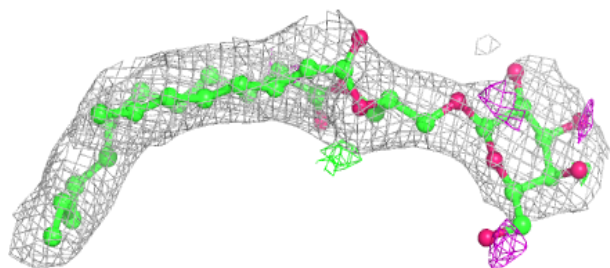
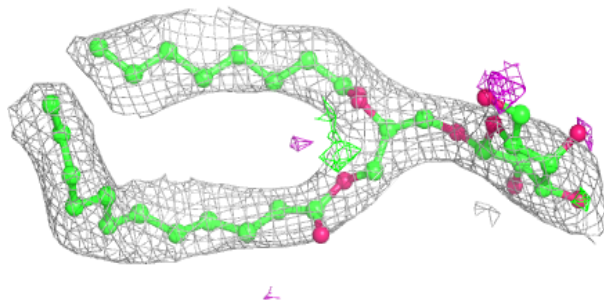
**Electron density around CLA c1 515:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

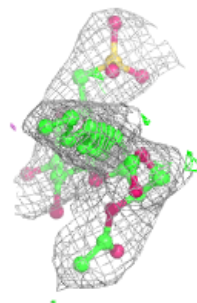
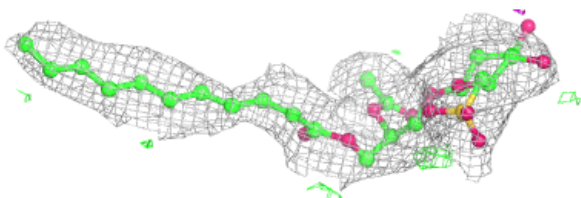
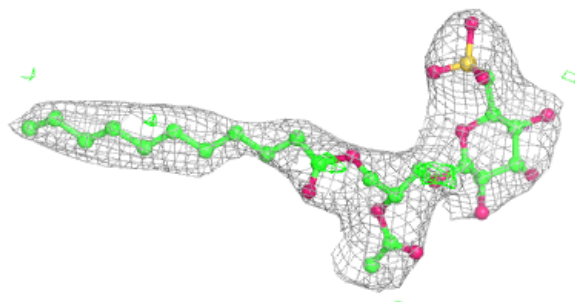


**Electron density around LMG b1 624:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

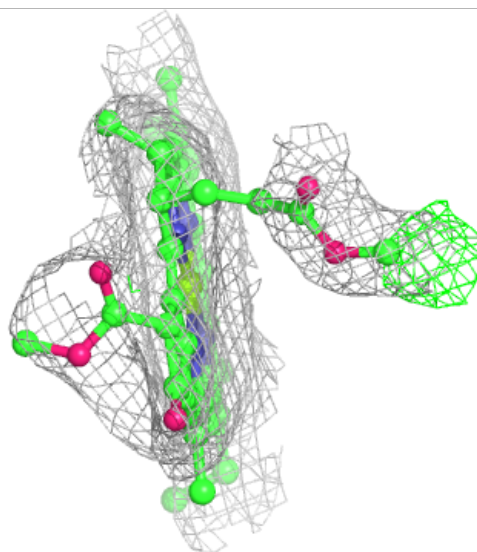
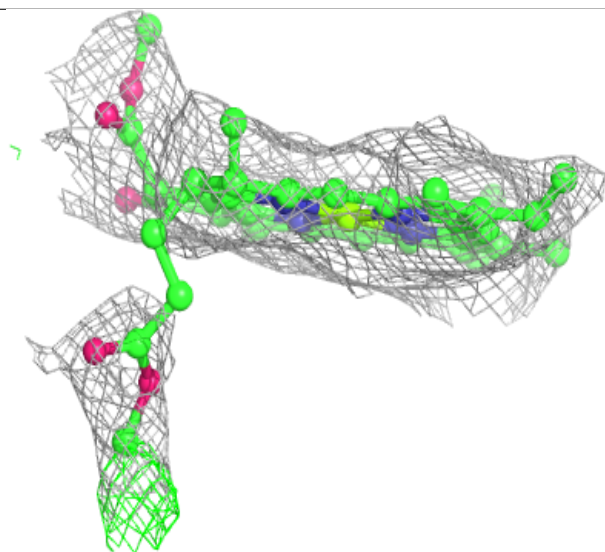
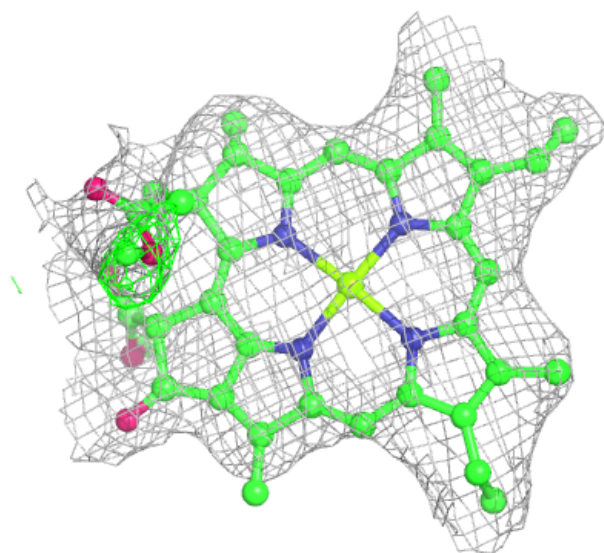
**Electron density around SQD D1 409:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



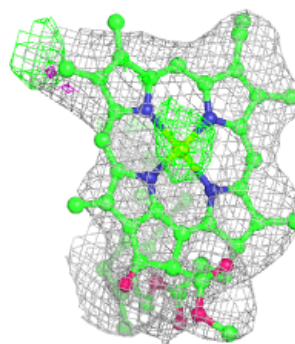
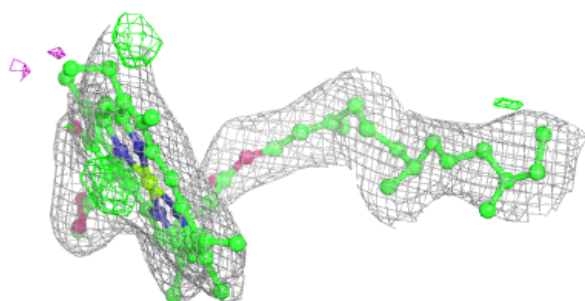
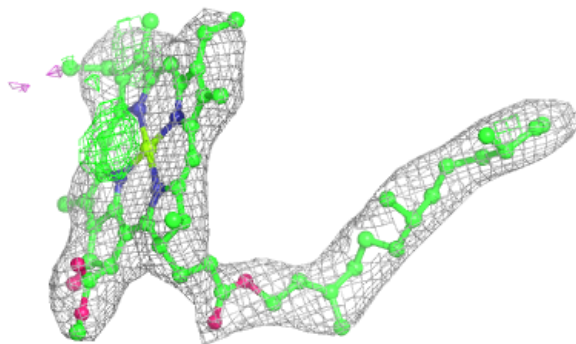
**Electron density around CLA C2 504:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around CLA C1 513:**

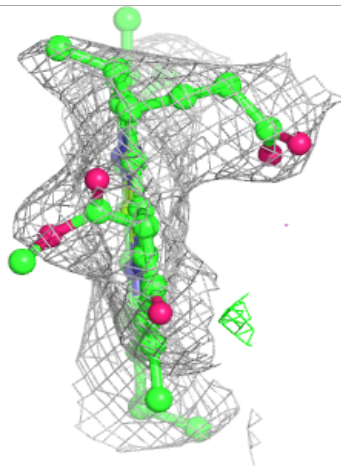
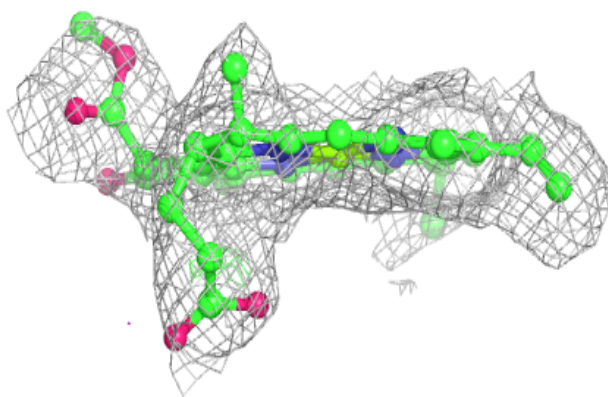
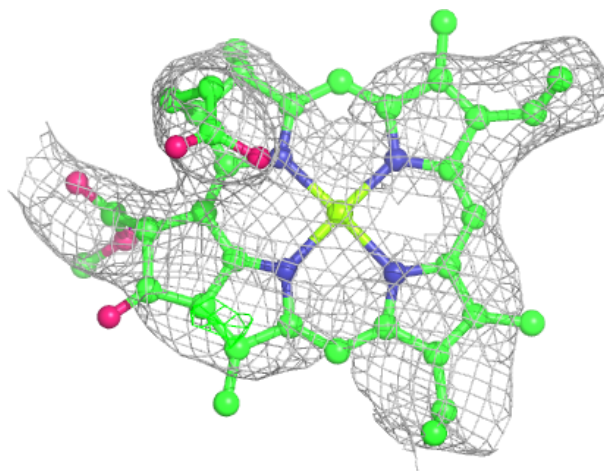
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





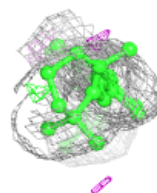
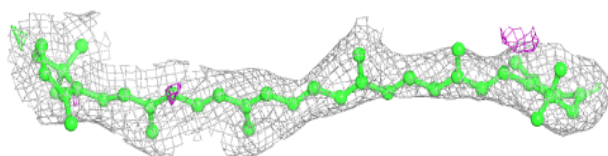
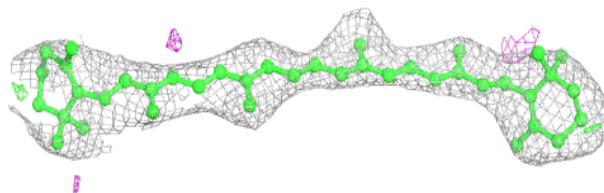
**Electron density around CLA C2 507:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

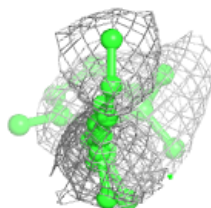
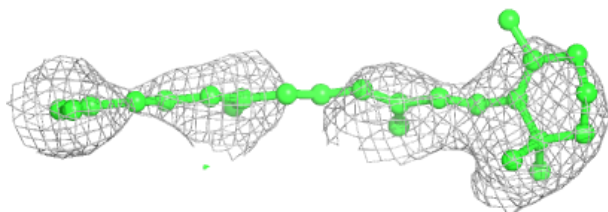
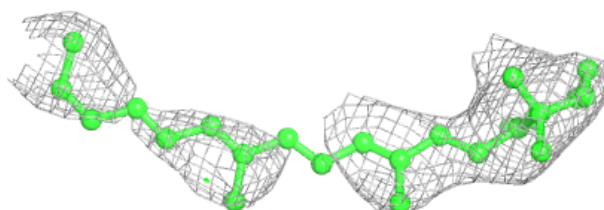


**Electron density around BCR b2 603:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around BCR H2 103:**

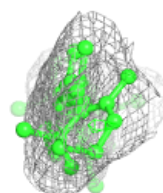
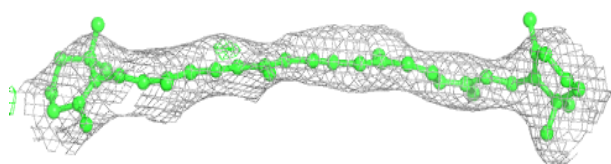
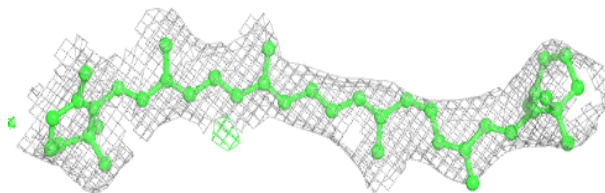
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





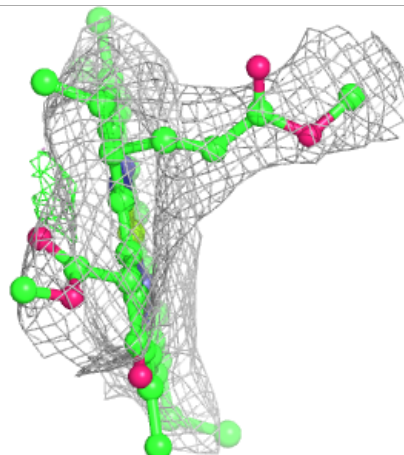
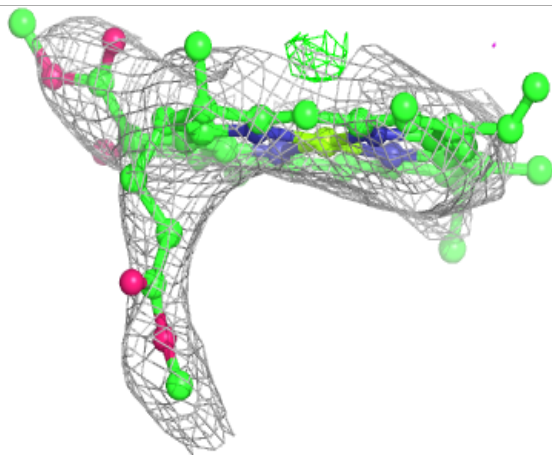
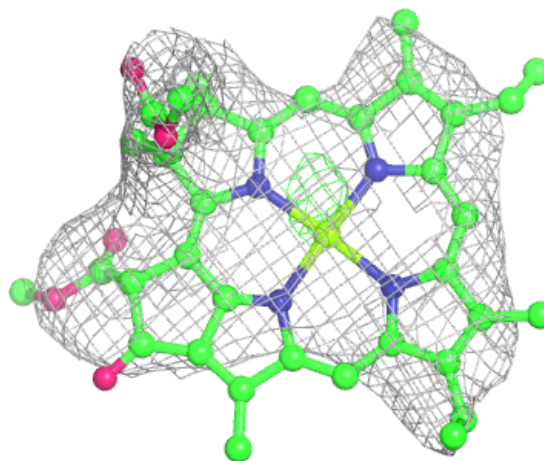
**Electron density around BCR j2 102:**

$2mF_o - DF_c$  (at 0.7 rmsd) in gray  
 $mF_o - DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



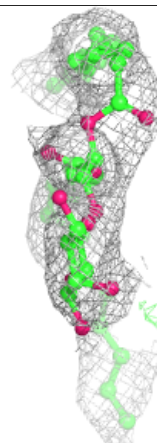
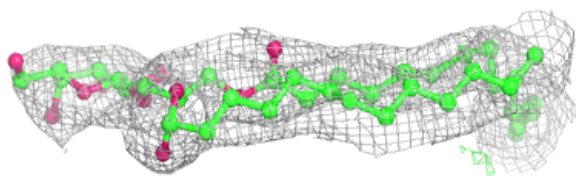
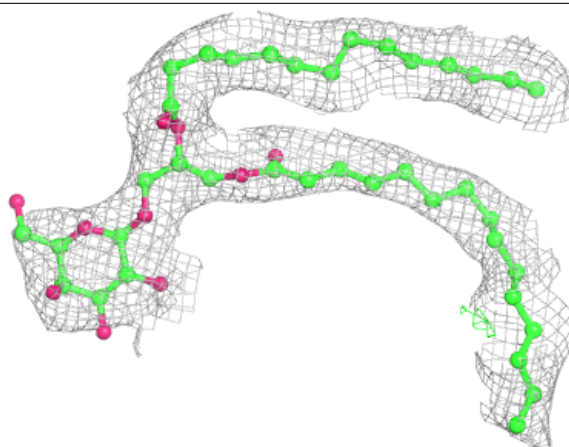
**Electron density around CLA c2 515:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

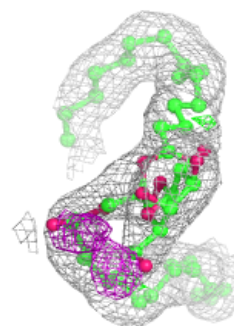
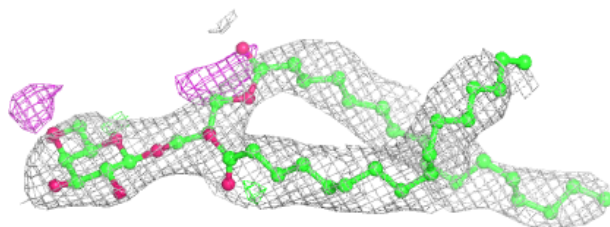
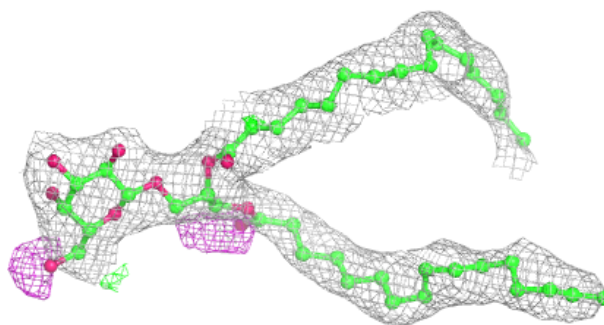


**Electron density around LMG C1 520:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

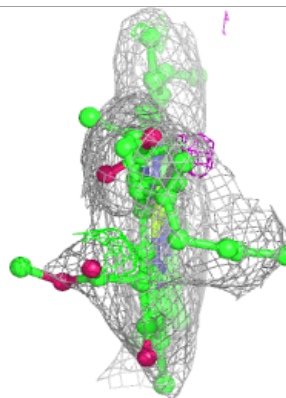
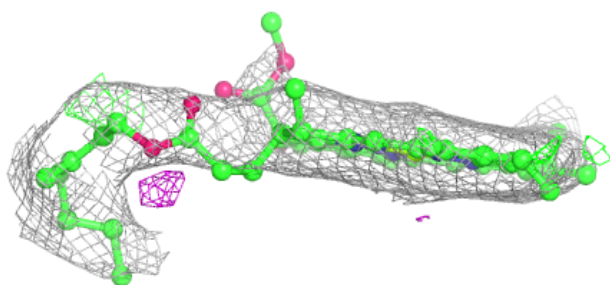
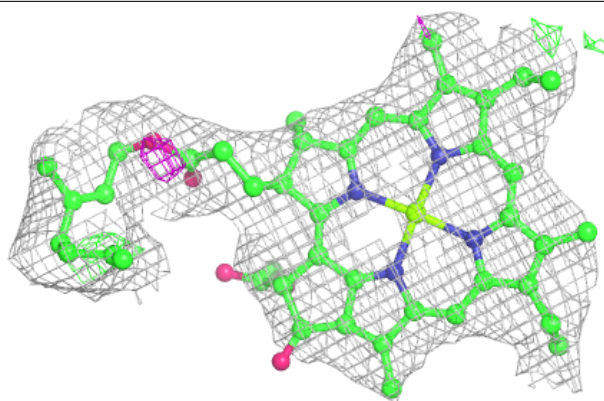
**Electron density around LMG a1 412:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

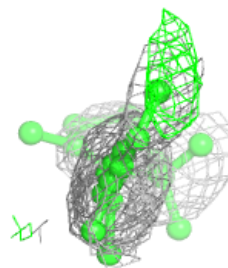
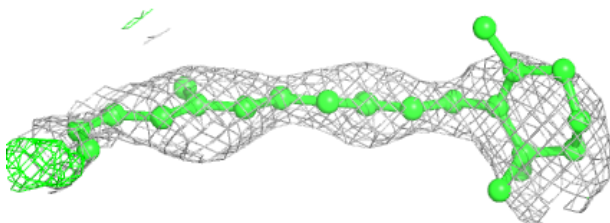
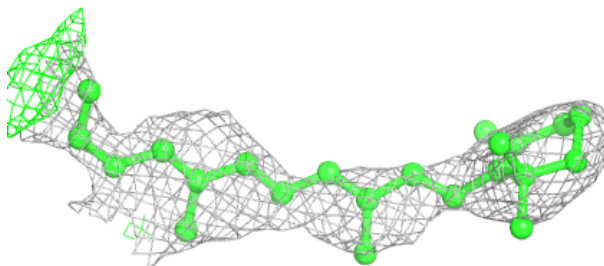


**Electron density around CLA C2 513:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

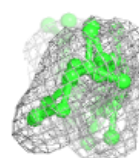
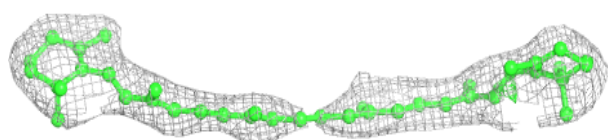
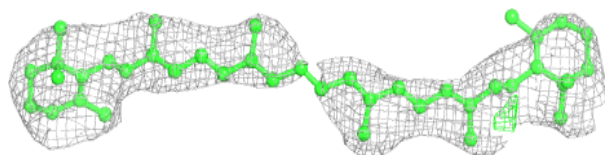
**Electron density around BCR H1 102:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

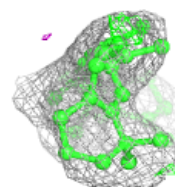
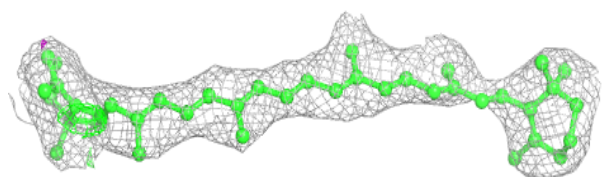
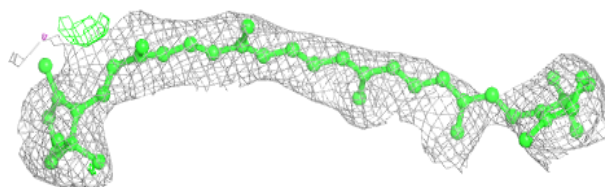


**Electron density around BCR D1 401:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

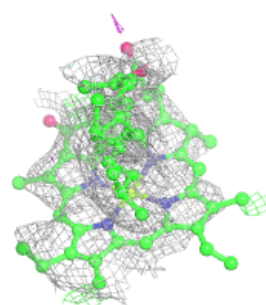
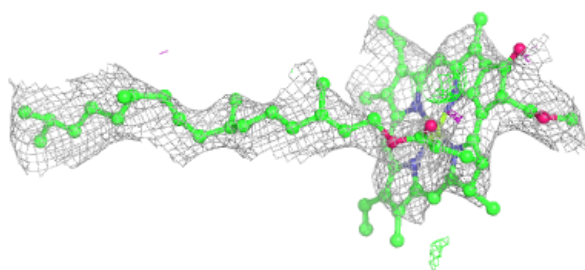
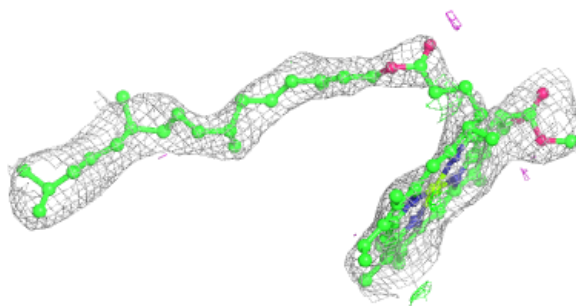
**Electron density around BCR b2 602:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

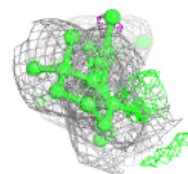
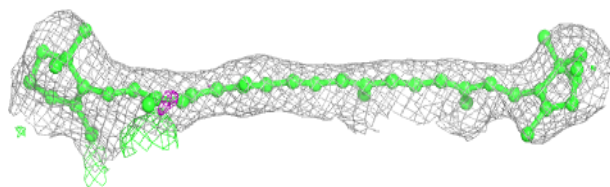
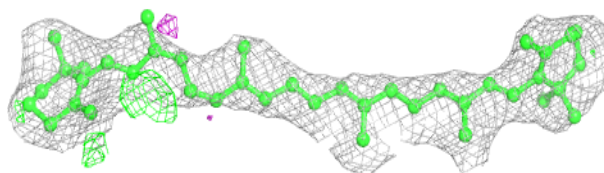


**Electron density around CLA C2 506:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around BCR b1 602:**

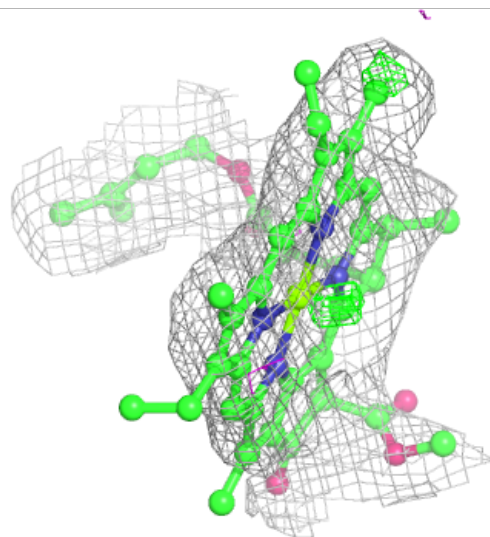
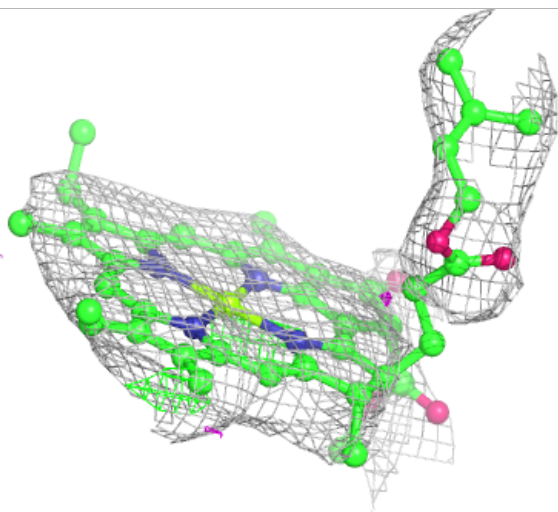
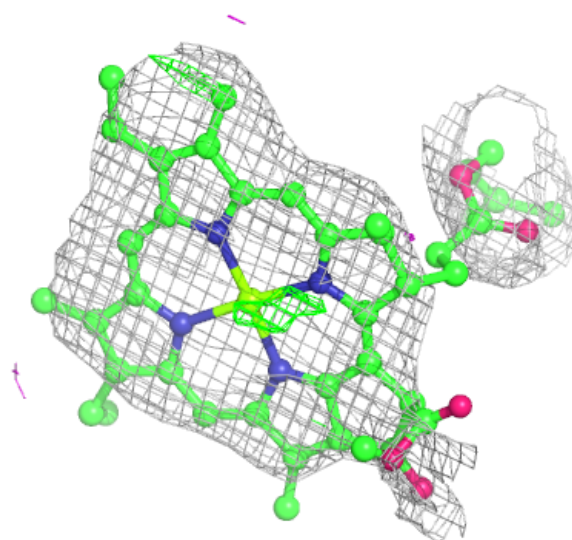
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





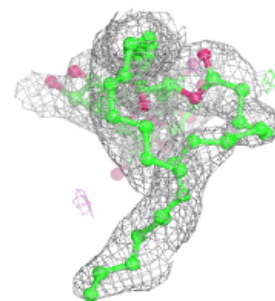
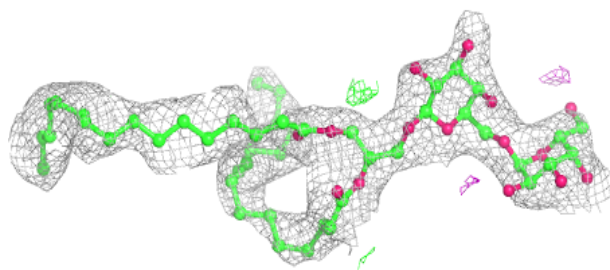
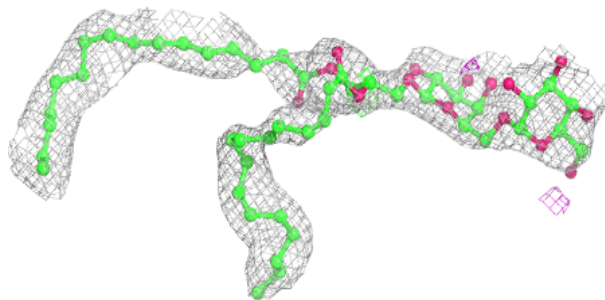
**Electron density around CLA C2 508:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around DGD H2 101:**

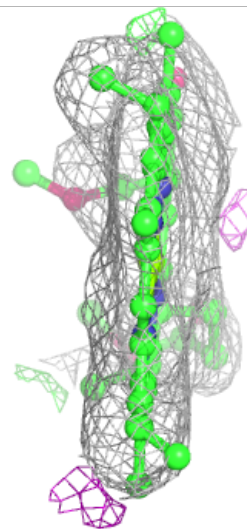
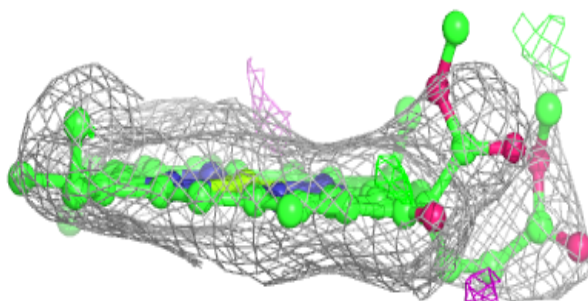
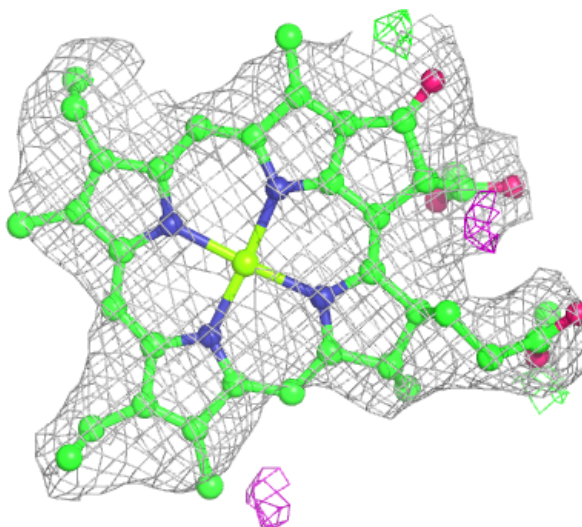
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





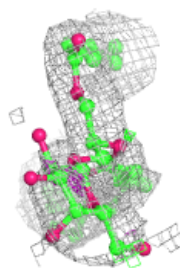
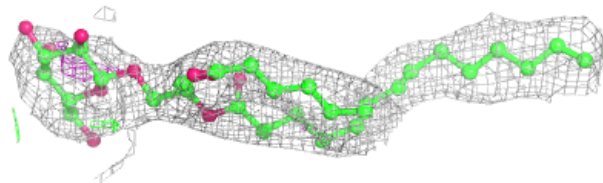
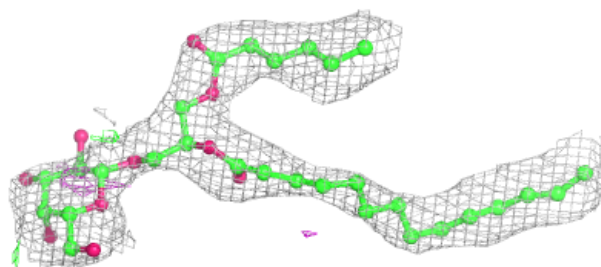
**Electron density around CLA C2 516:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



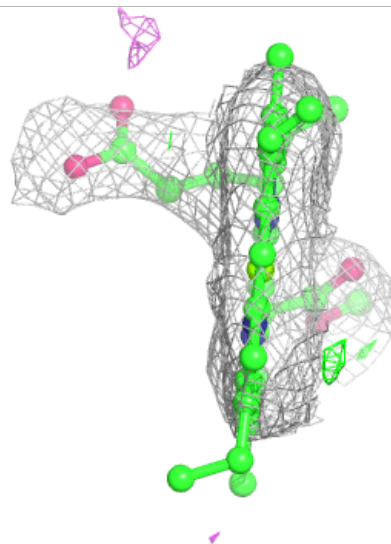
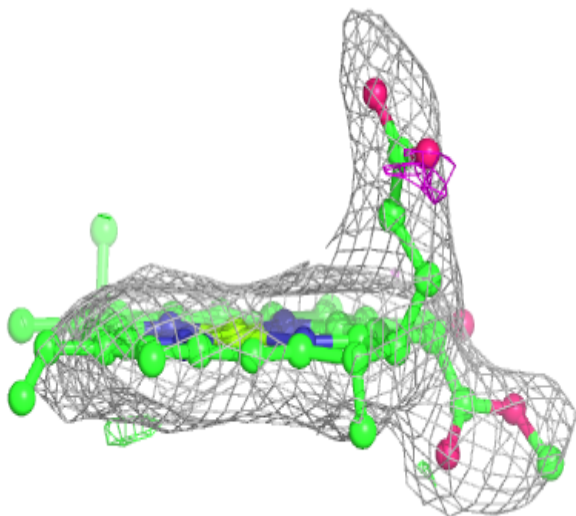
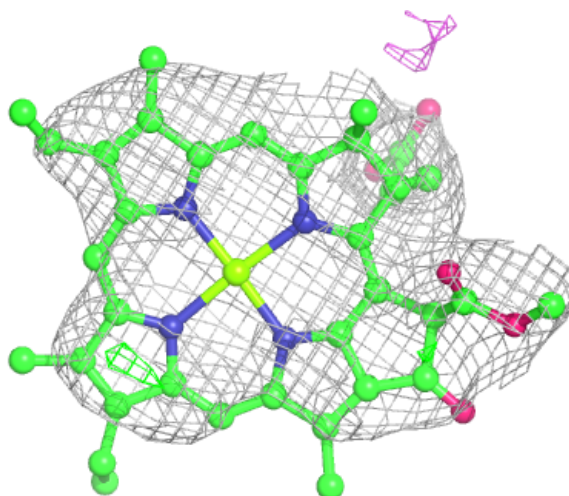
**Electron density around LMG b2 622:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



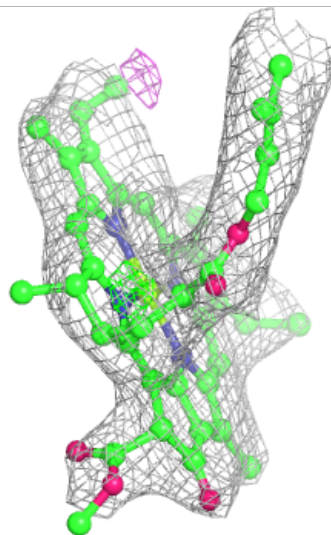
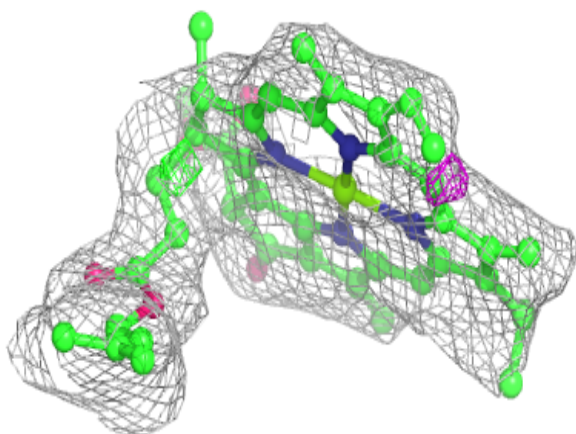
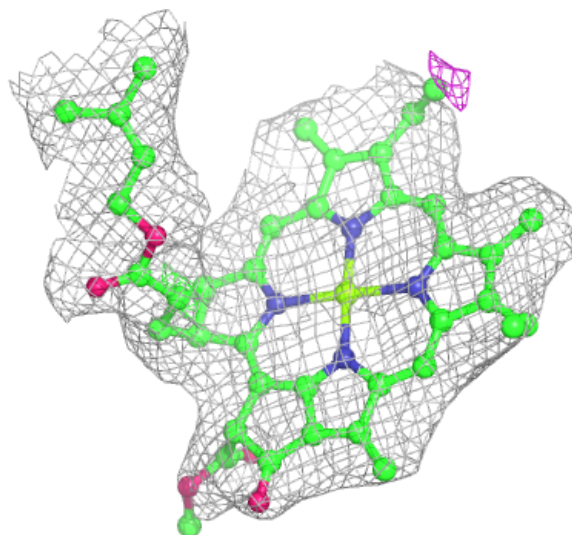
**Electron density around CLA C1 514:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



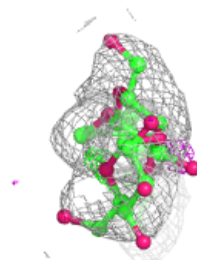
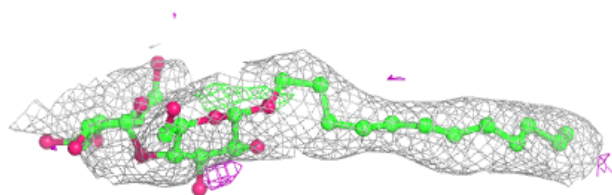
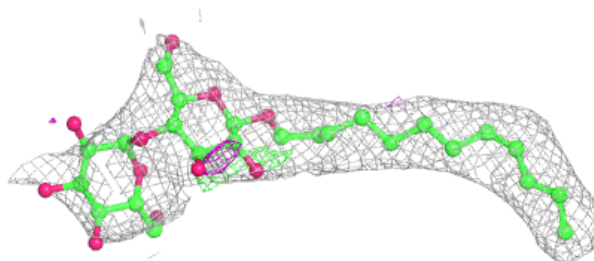
**Electron density around CLA d2 404:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



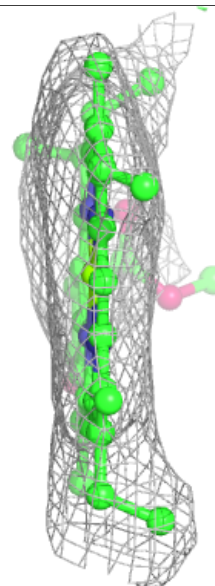
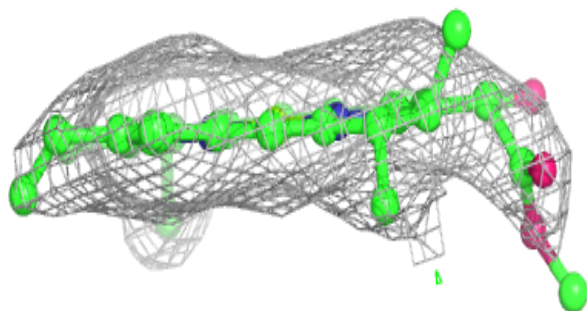
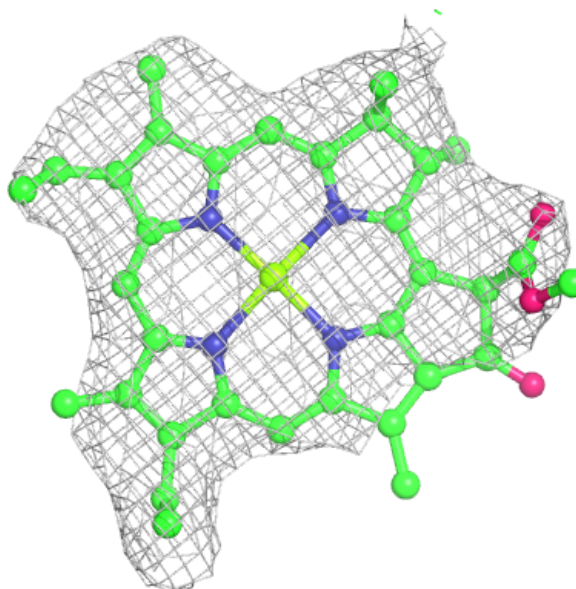
**Electron density around LMT m1 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around CLA B2 604:**

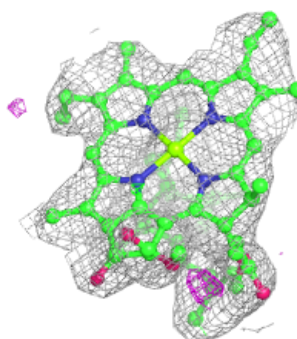
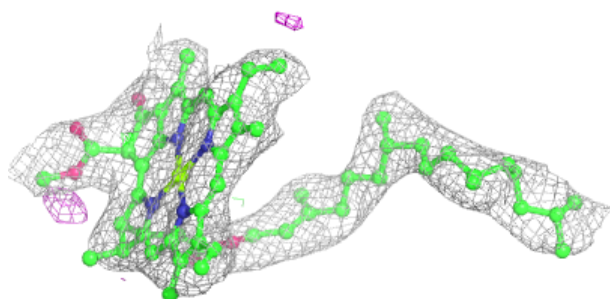
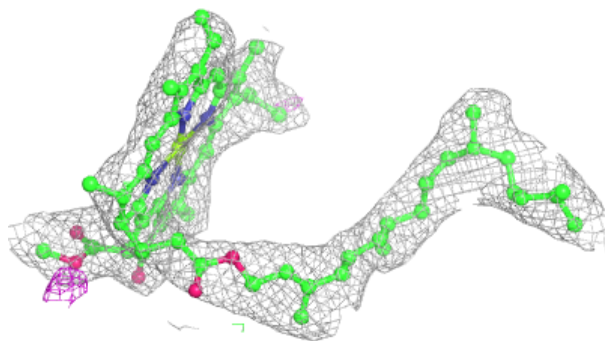
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



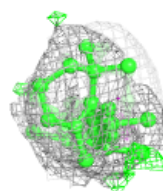
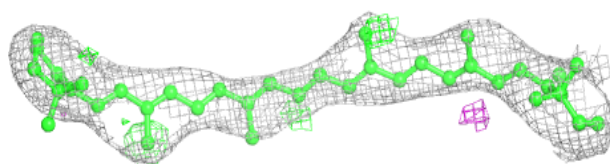
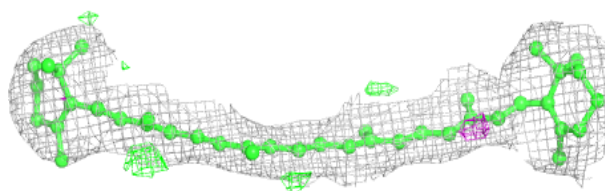


**Electron density around CLA c2 509:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

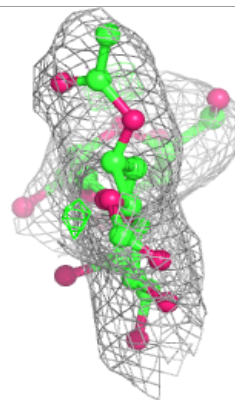
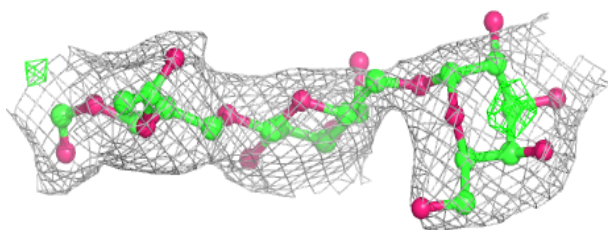
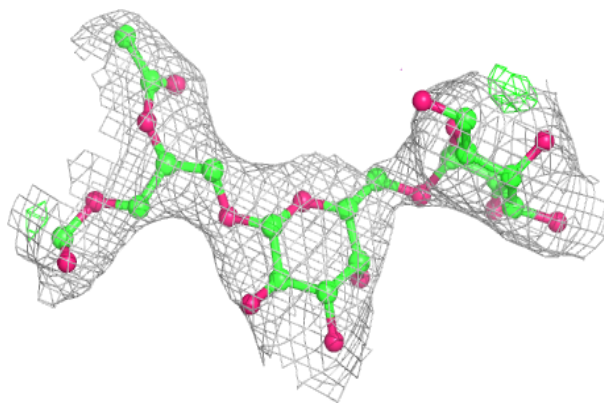
**Electron density around BCR C1 521:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

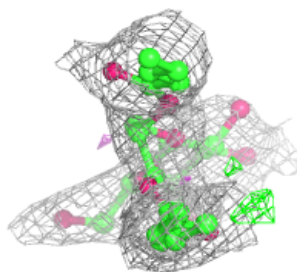
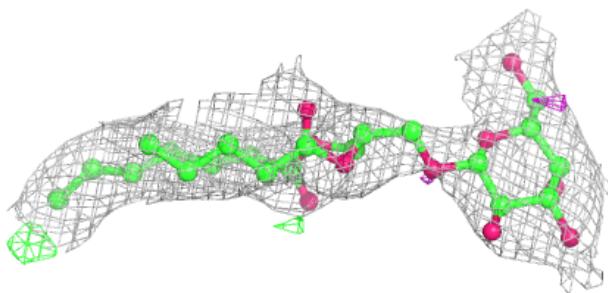
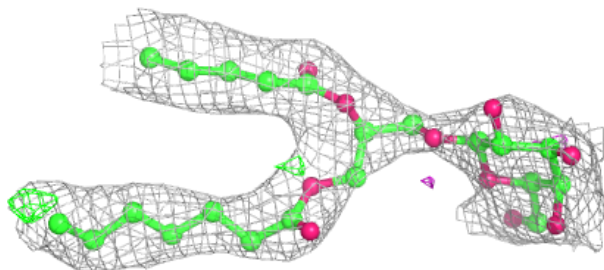


**Electron density around DGD C2 512:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around LMG B1 622:**

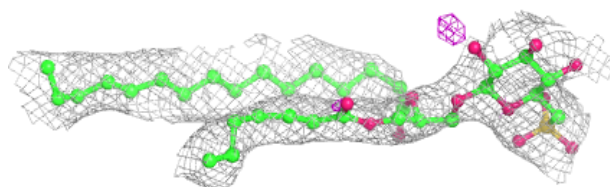
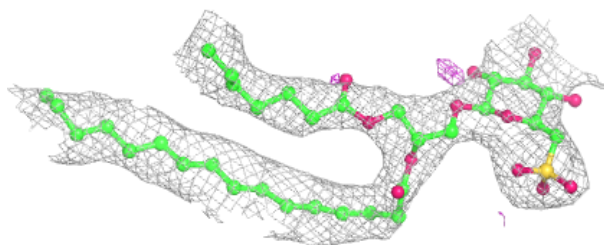
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



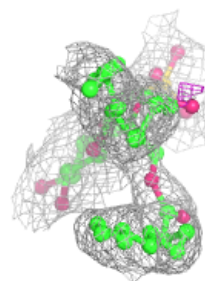
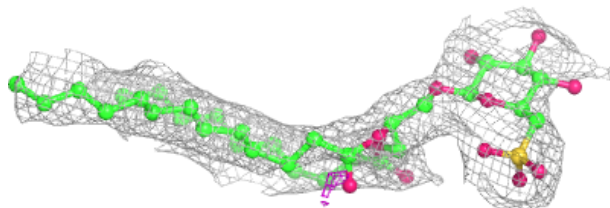
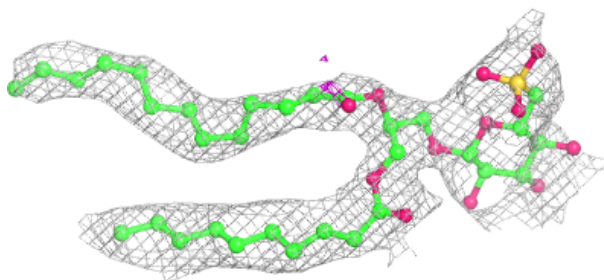


**Electron density around SQD B2 623:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

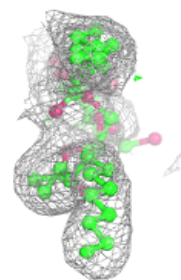
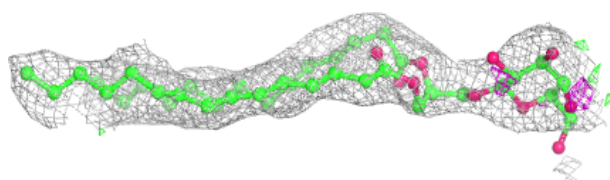
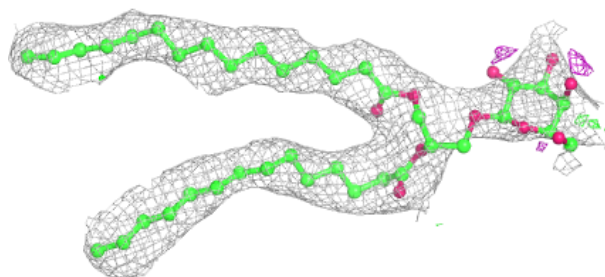
**Electron density around SQD b2 605:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

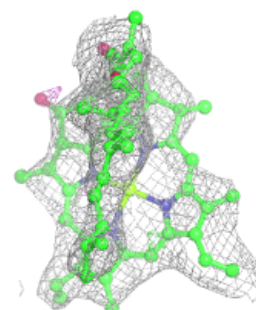
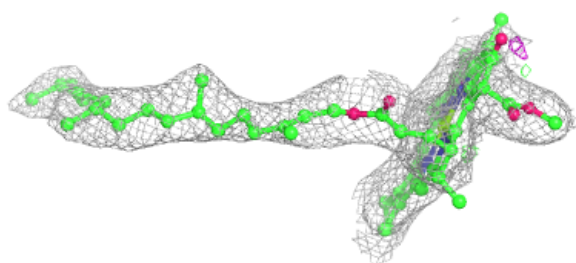
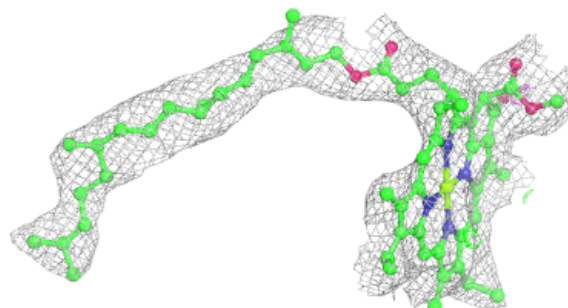


**Electron density around LMG B1 626:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

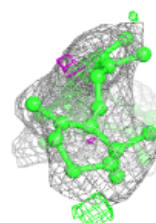
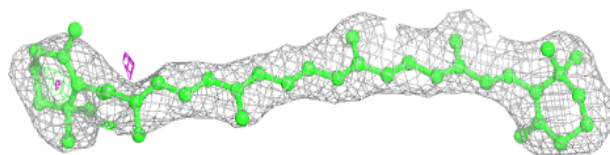
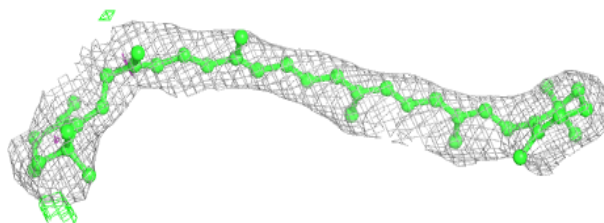
**Electron density around CLA B2 611:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

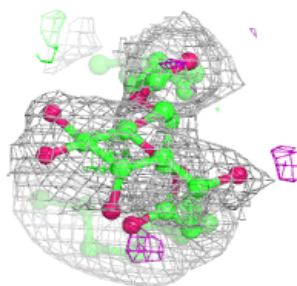
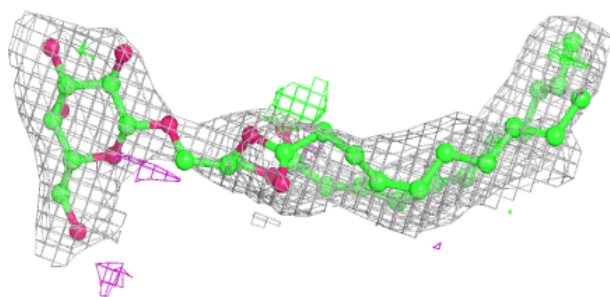
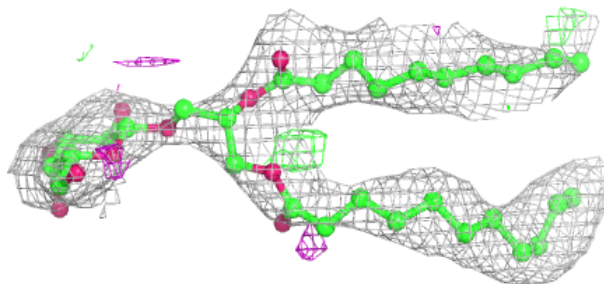


**Electron density around BCR B2 602:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

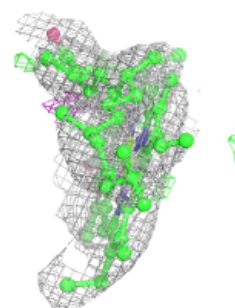
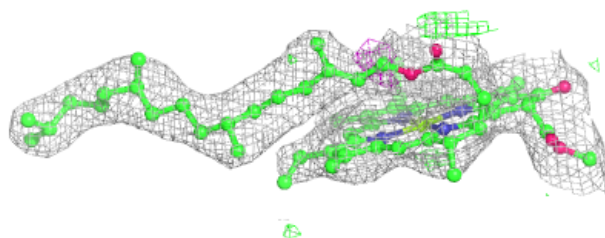
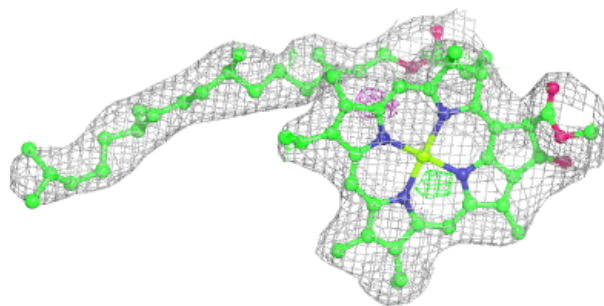
**Electron density around LMG B2 620:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

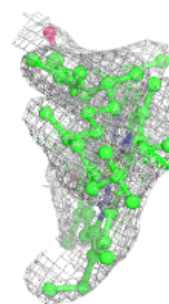
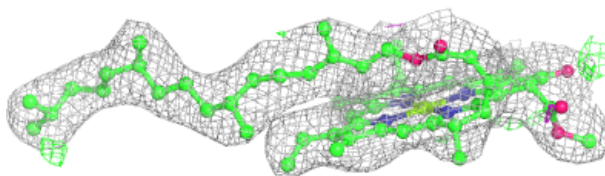
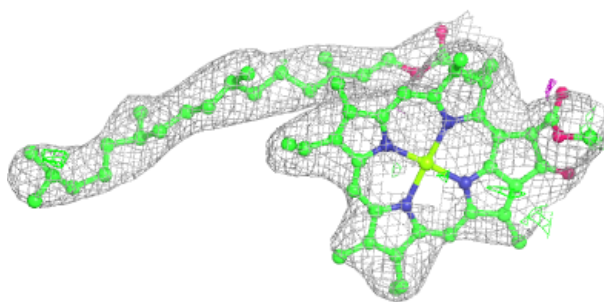


**Electron density around CLA c1 503:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

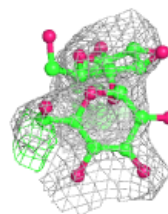
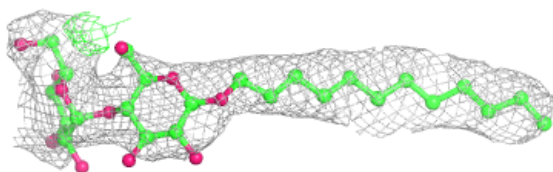
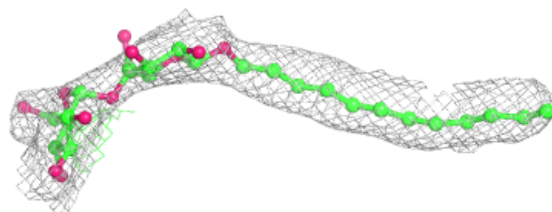
**Electron density around CLA C1 502:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around LMT b2 623:**

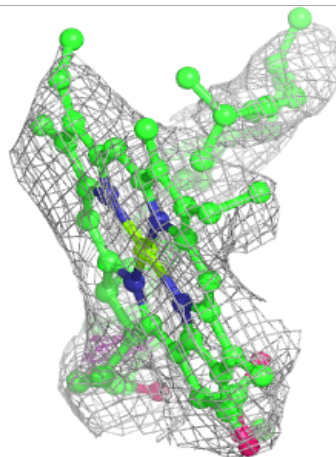
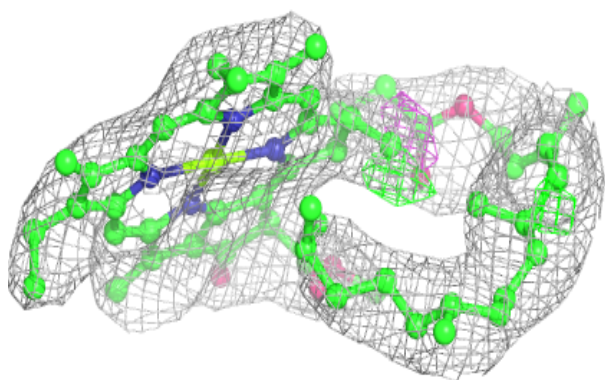
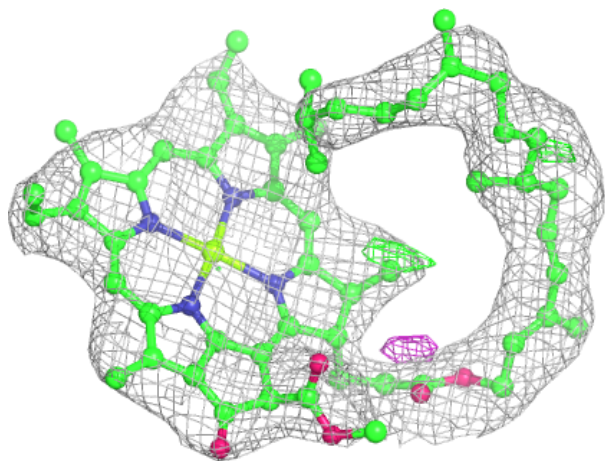
$2mF_o - DF_c$  (at 0.7 rmsd) in gray  
 $mF_o - DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





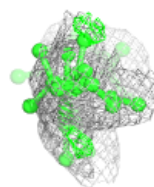
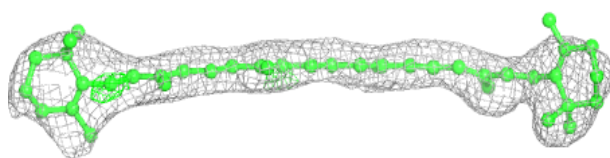
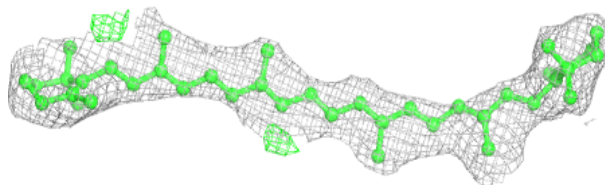
**Electron density around CLA b2 618:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

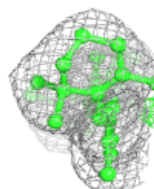
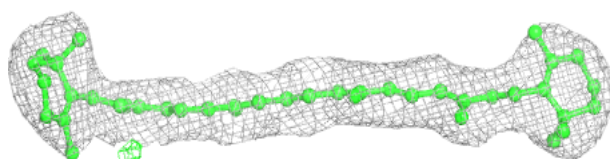
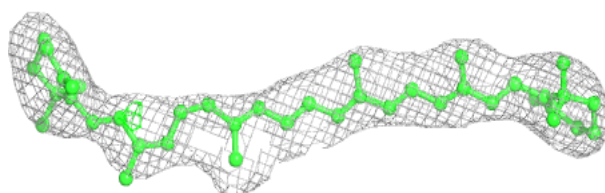


**Electron density around BCR h2 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

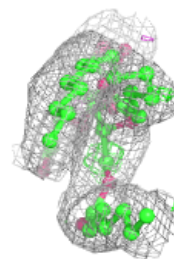
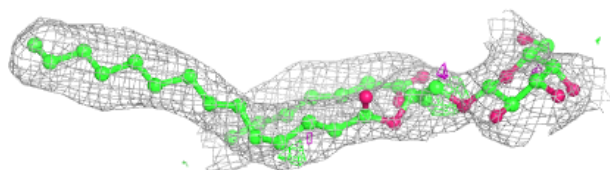
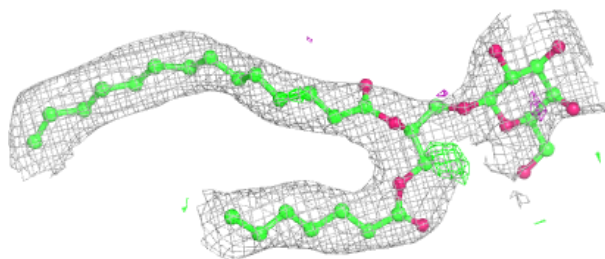
**Electron density around BCR c1 502:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around LMG b1 631:**

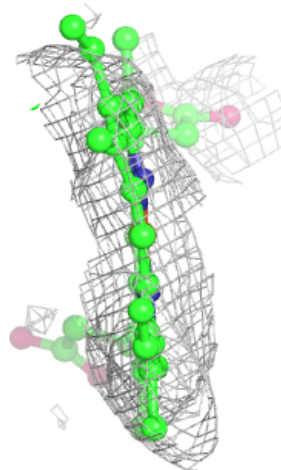
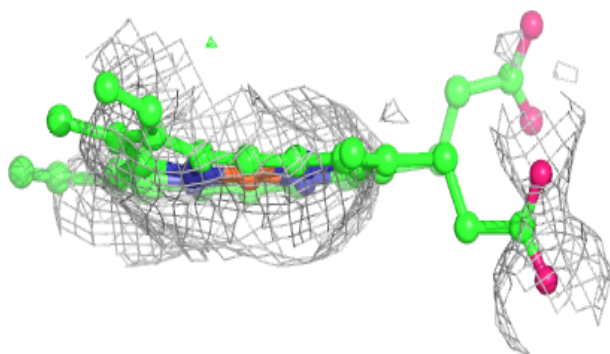
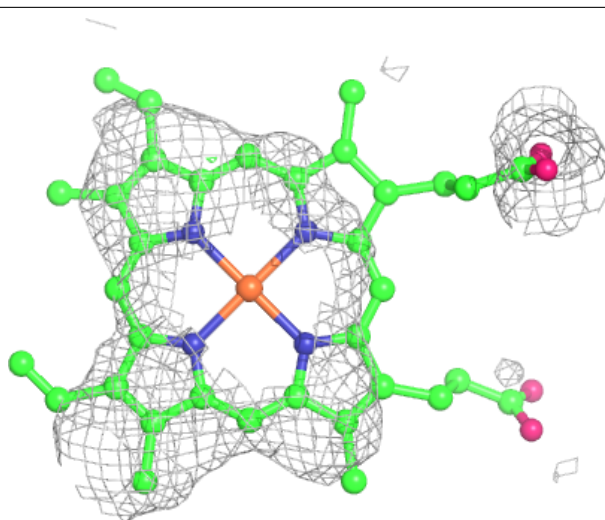
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





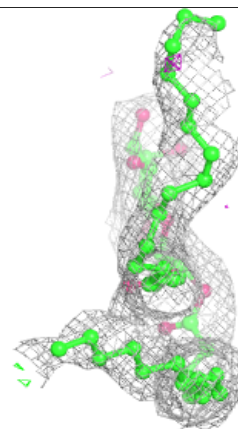
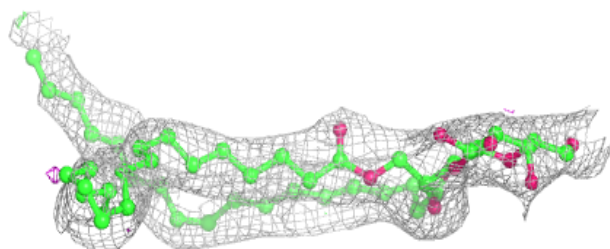
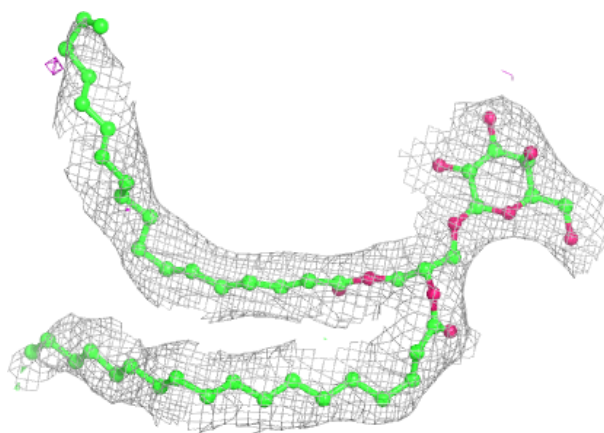
**Electron density around HEM E1 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

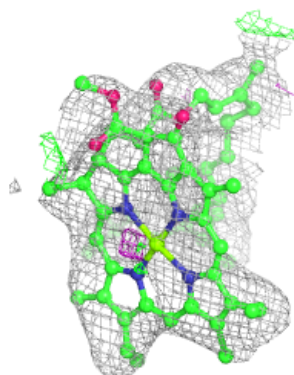
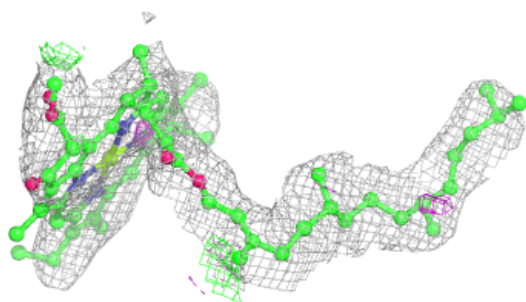
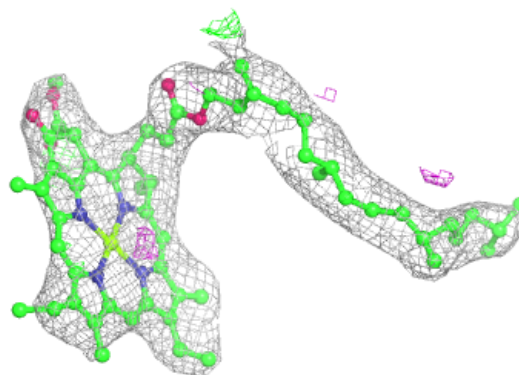


**Electron density around LMG c1 519:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

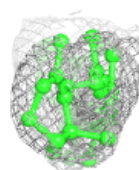
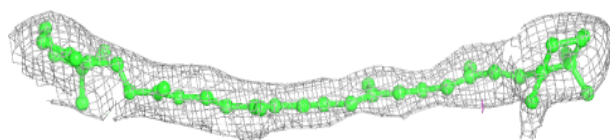
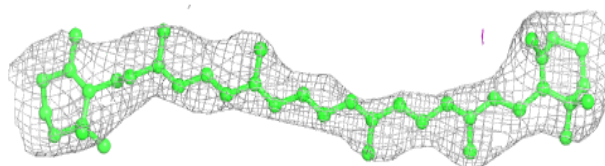
**Electron density around CLA c2 512:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

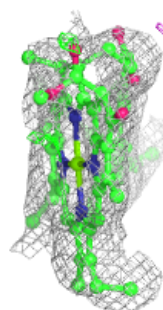
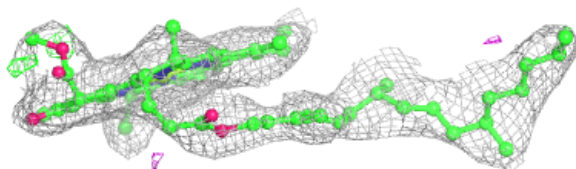
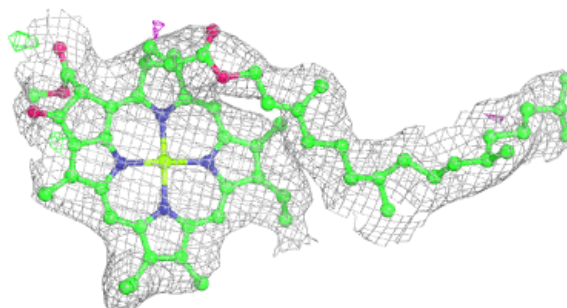


**Electron density around BCR d2 401:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

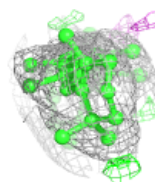
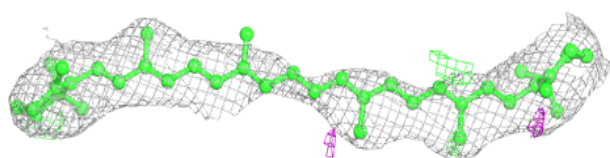
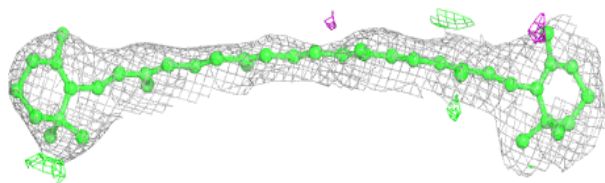
**Electron density around CLA B2 606:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

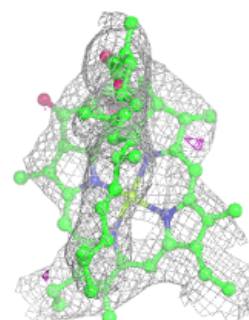
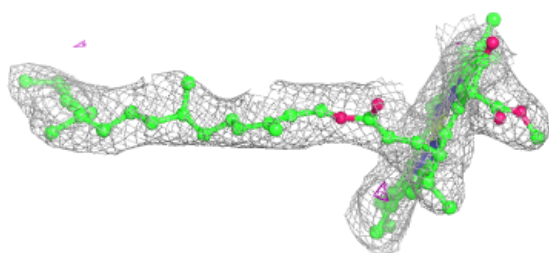
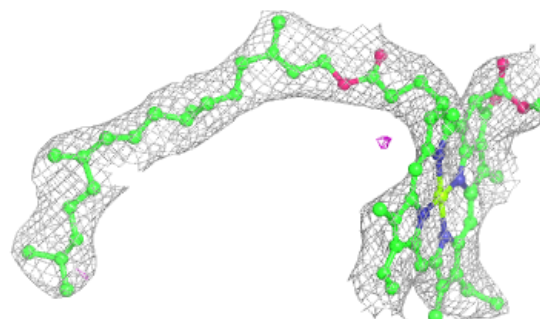


**Electron density around BCR k2 501:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

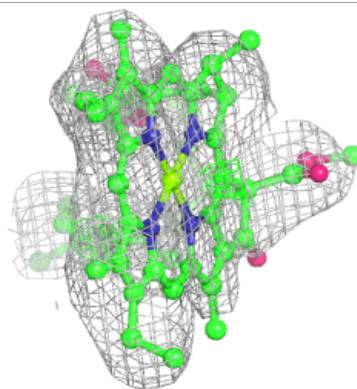
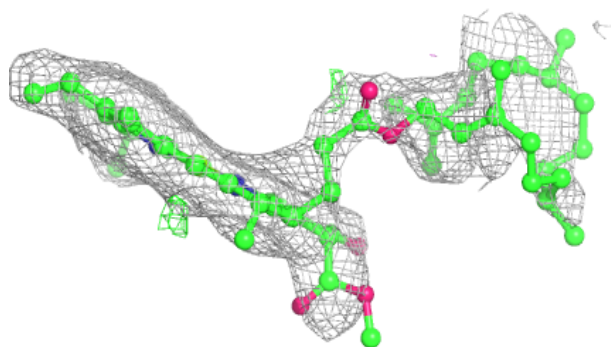
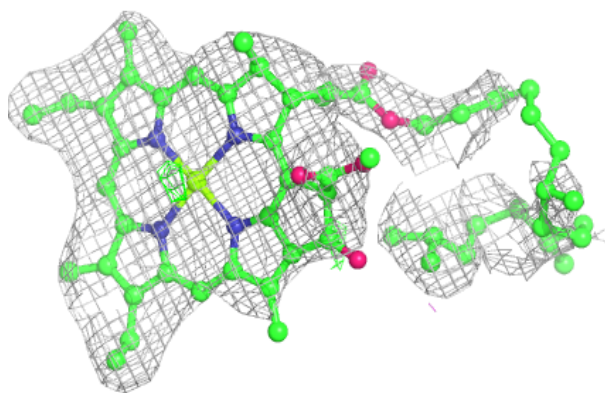
**Electron density around CLA b2 610:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

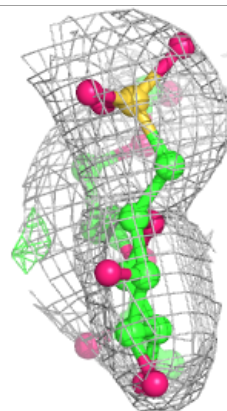
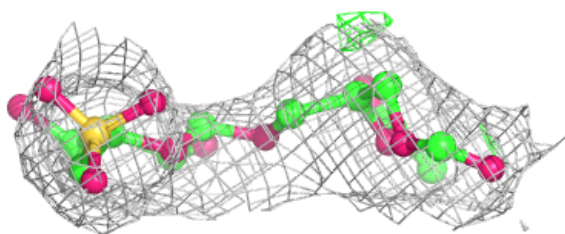
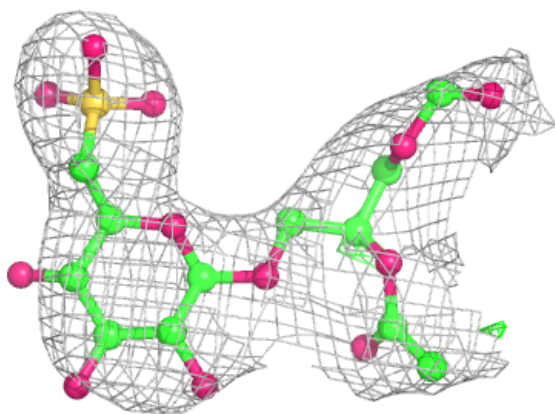


**Electron density around CLA b1 604:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around SQD D2 402:**

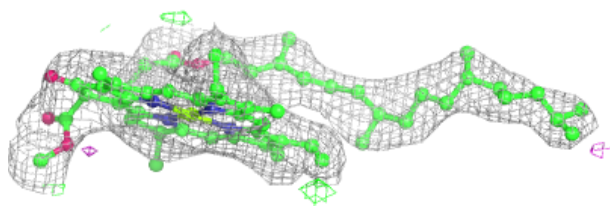
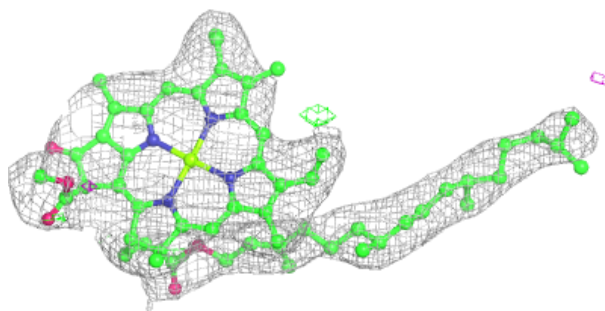
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



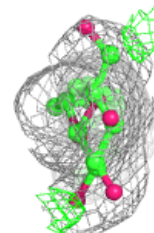
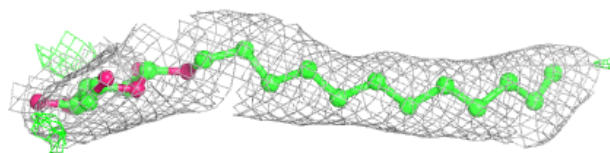
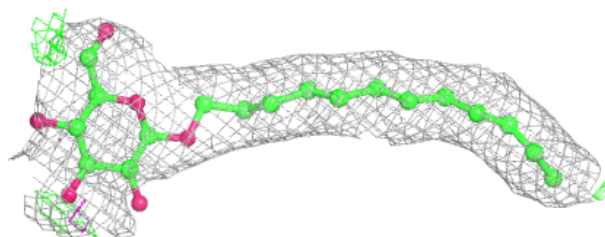


**Electron density around CLA c2 502:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

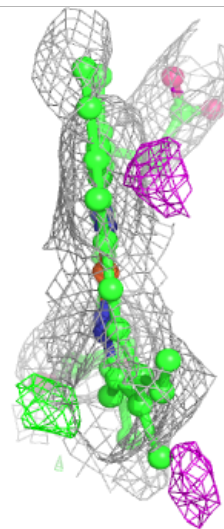
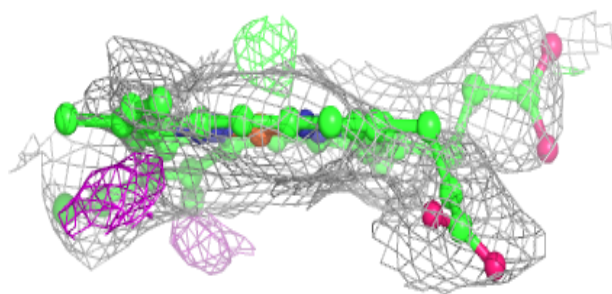
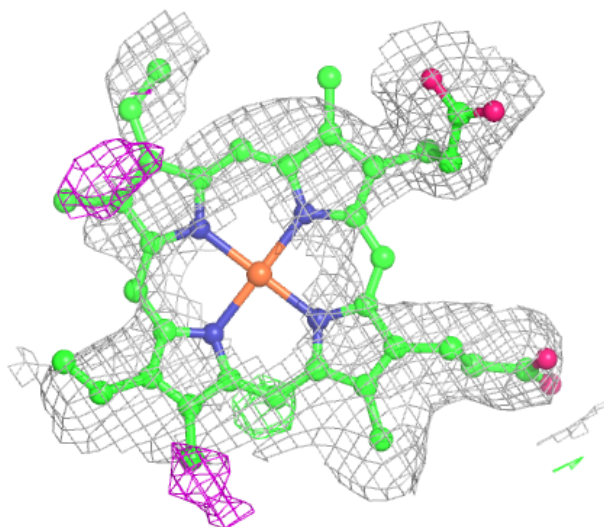
**Electron density around LMT l1 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



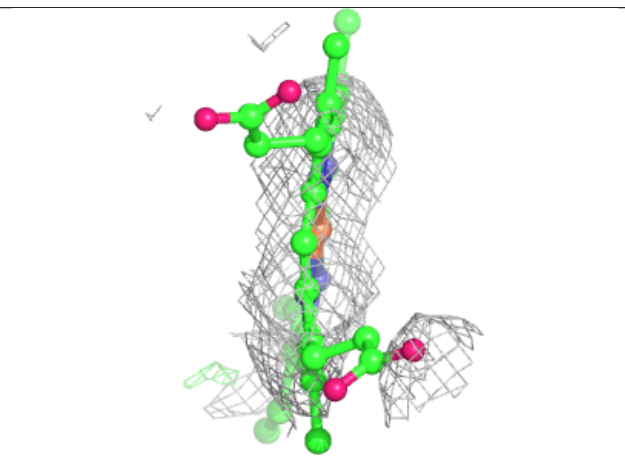
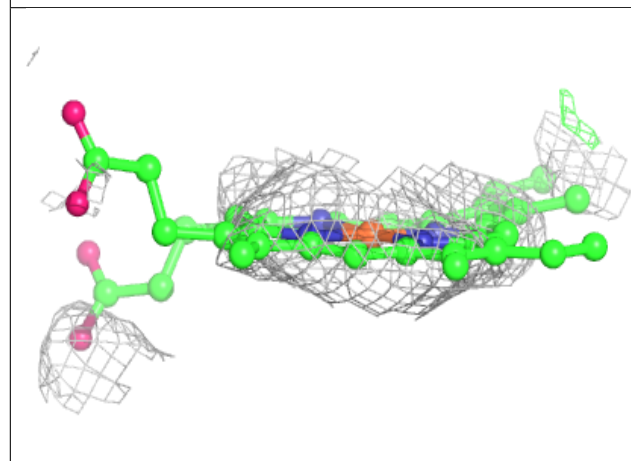
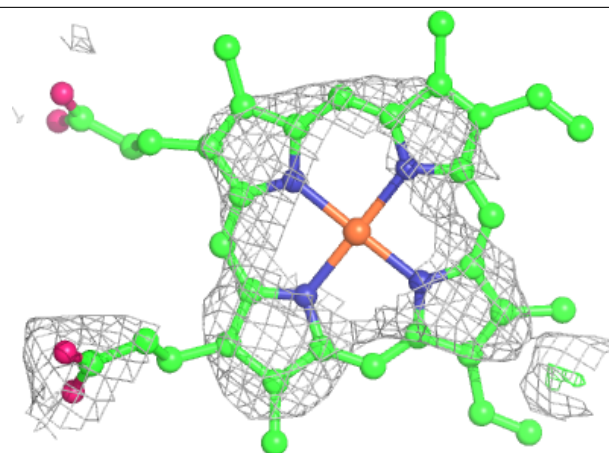
**Electron density around HEM V2 201:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around HEM e2 101:**

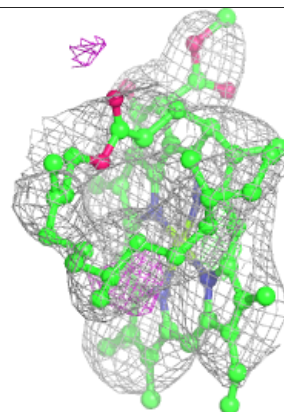
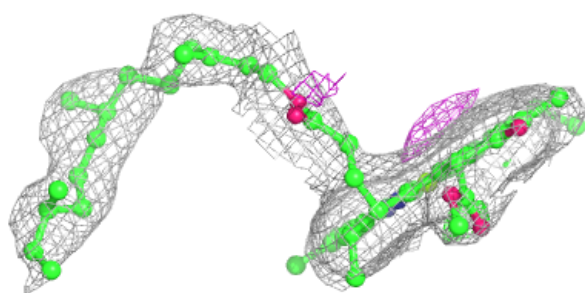
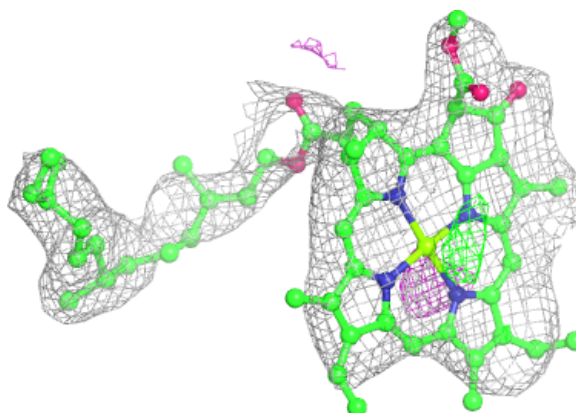
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





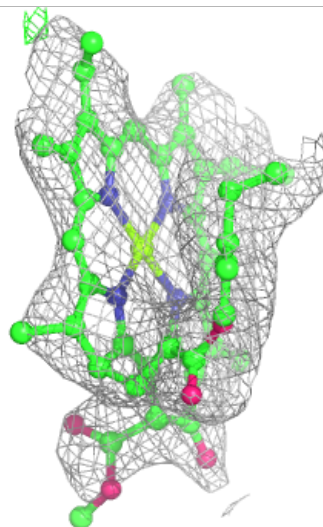
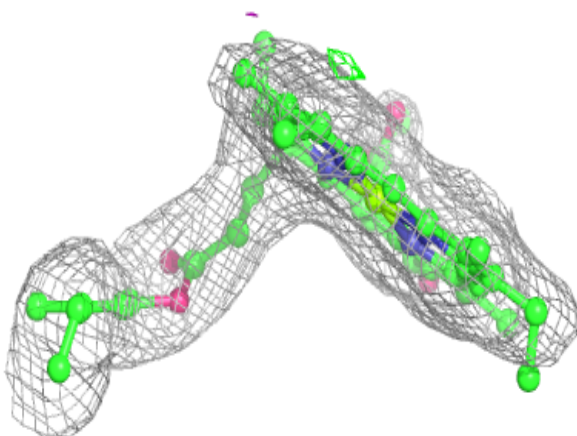
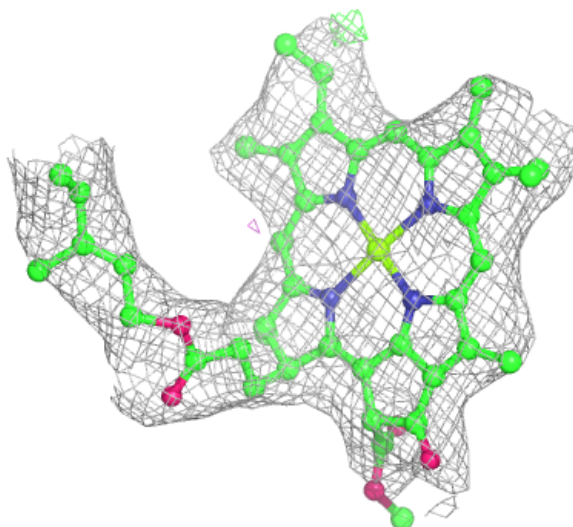
**Electron density around CLA A2 403:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



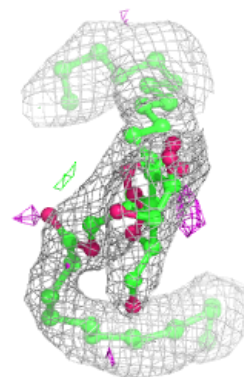
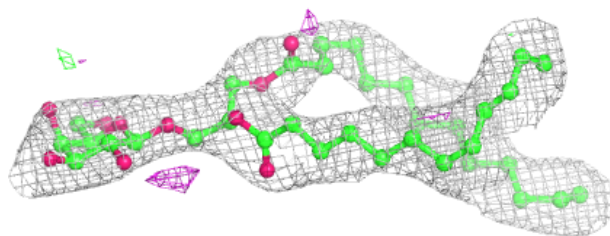
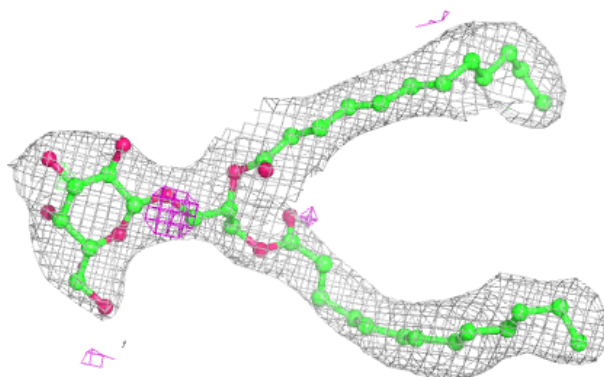
**Electron density around CLA D1 403:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

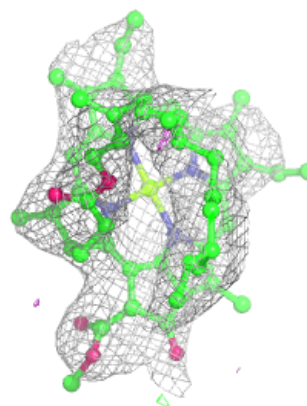
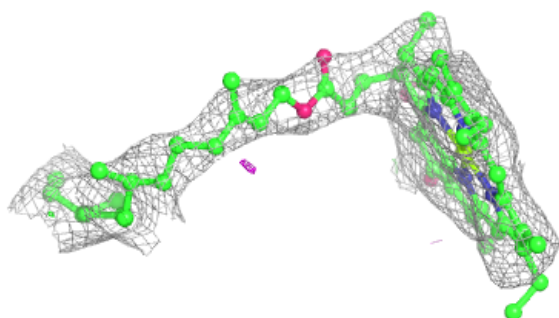
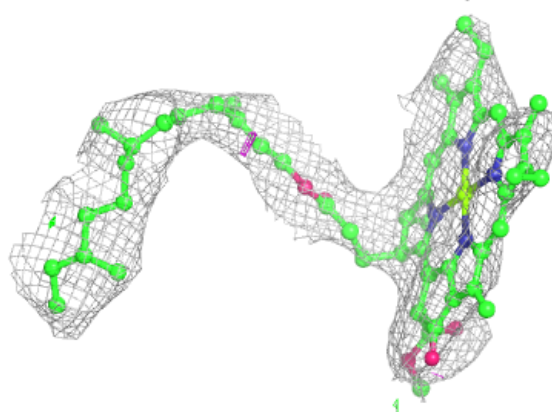


**Electron density around LMG a2 412:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

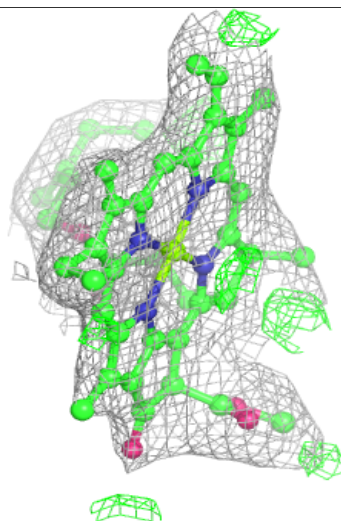
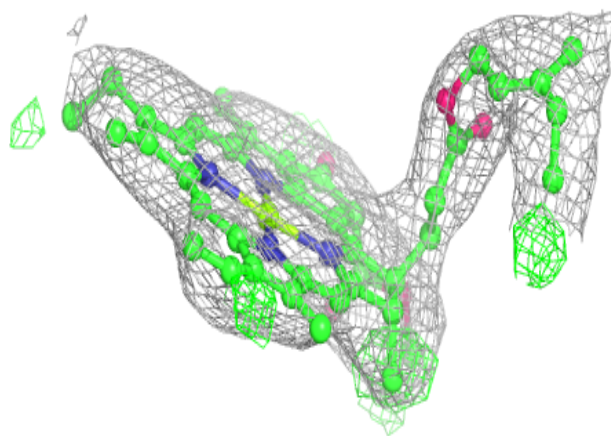
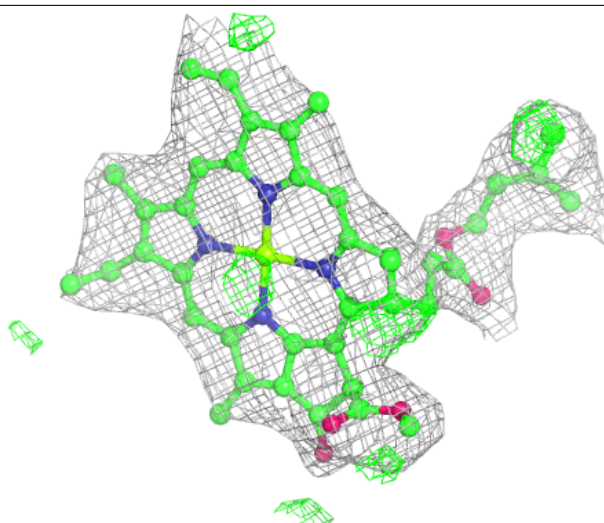
**Electron density around CLA b2 609:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



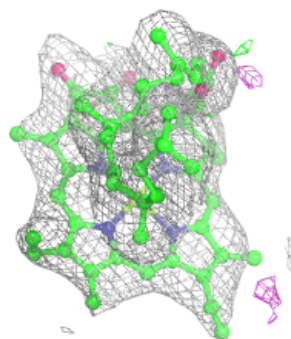
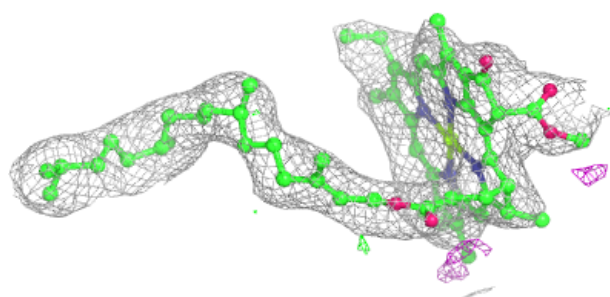
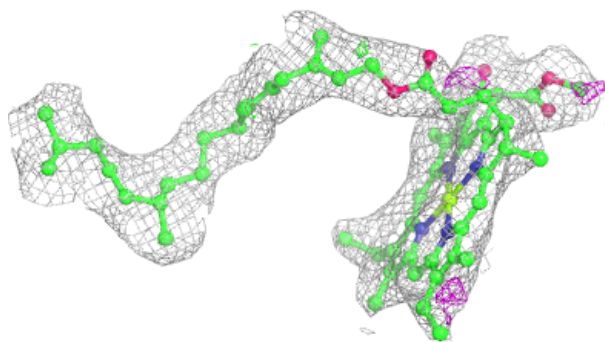
**Electron density around CLA A2 404:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

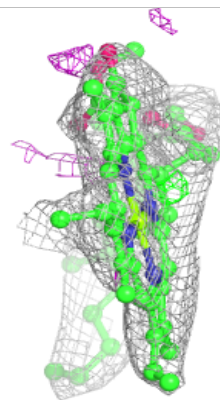
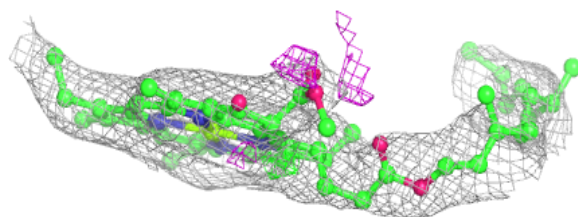
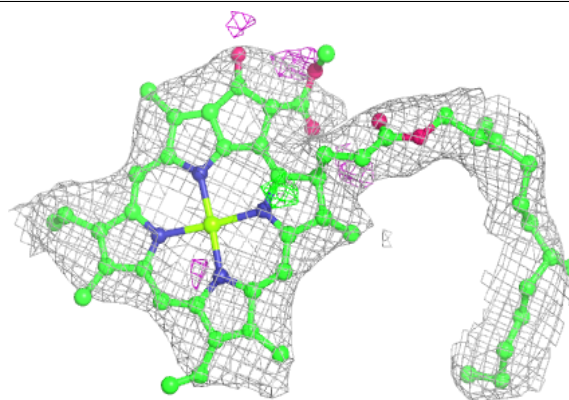


**Electron density around CLA C1 509:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around CLA b2 619:**

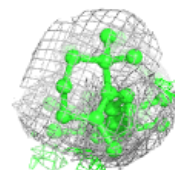
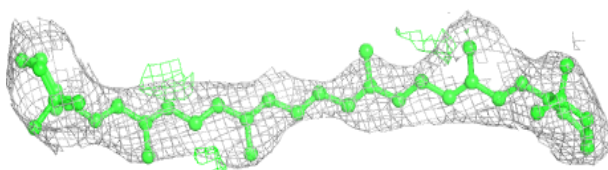
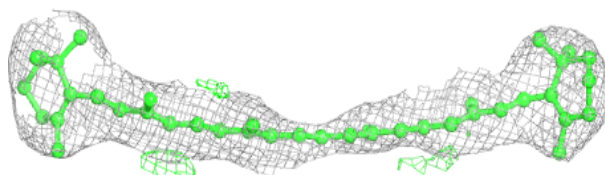
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



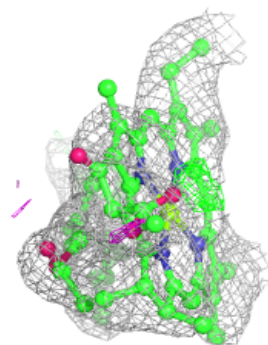
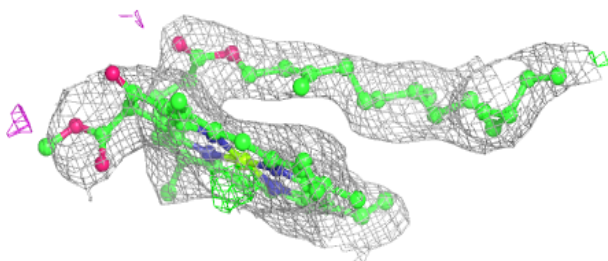
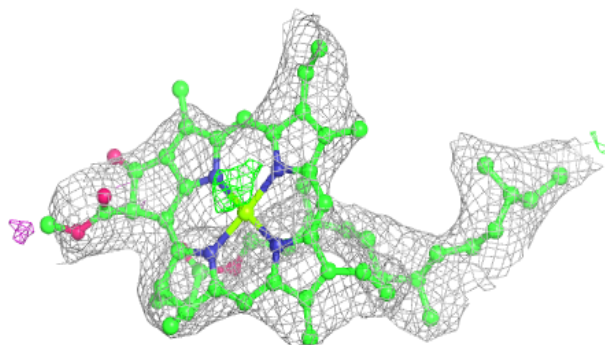


**Electron density around BCR c1 501:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

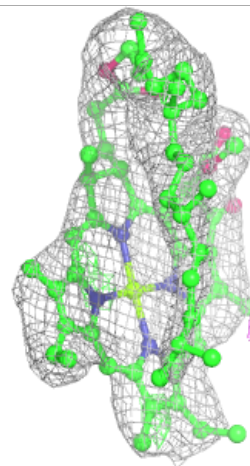
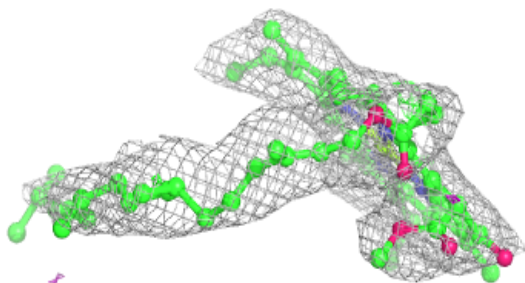
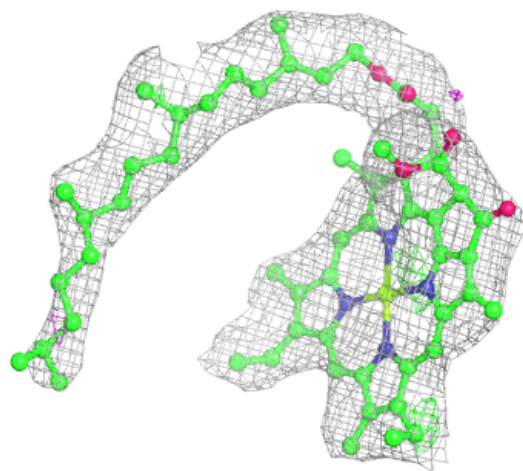
**Electron density around CLA c2 506:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



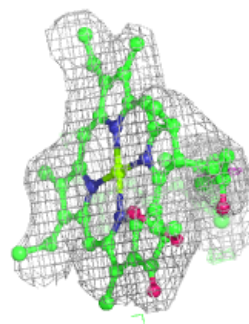
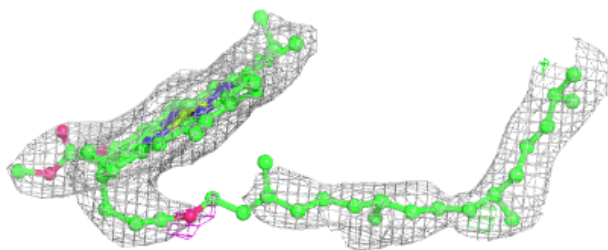
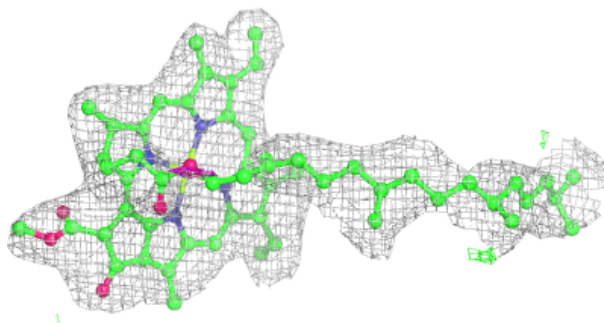
**Electron density around CLA c2 508:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around CLA B2 610:**

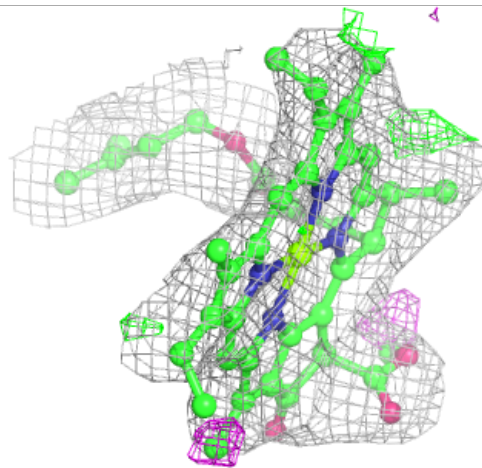
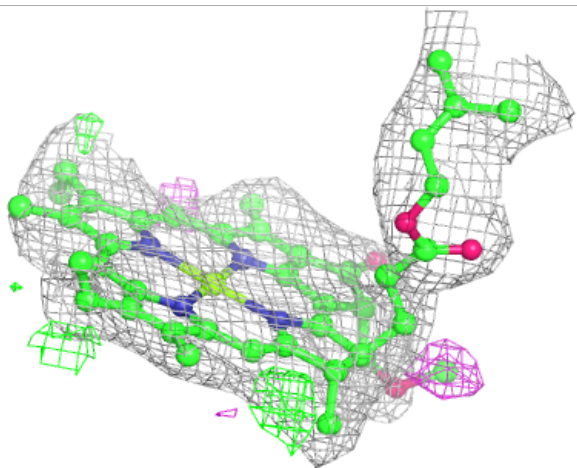
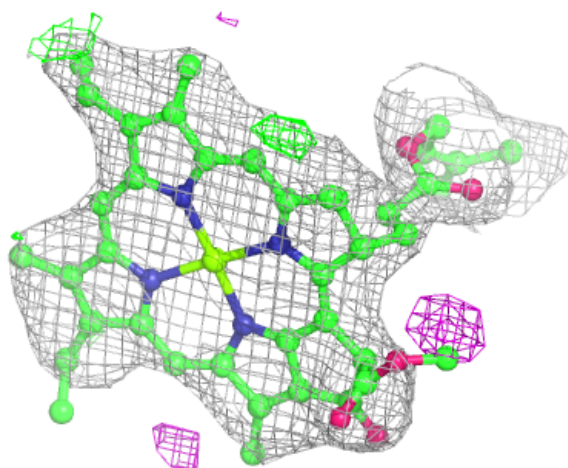
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





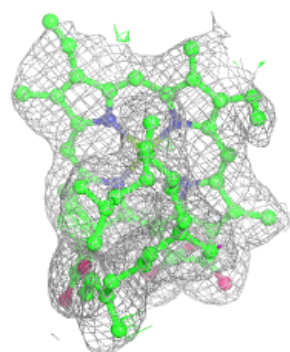
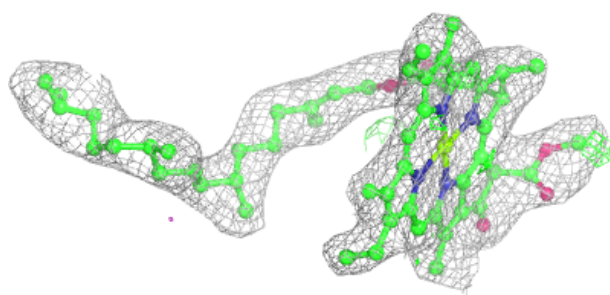
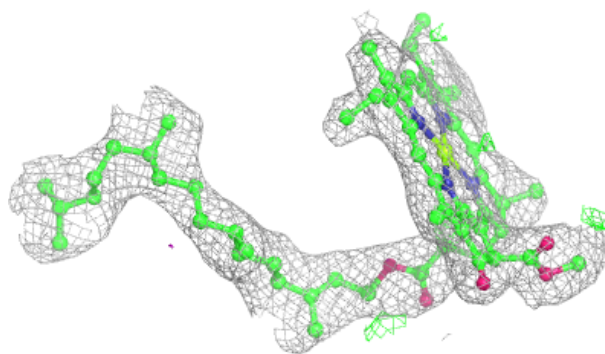
**Electron density around CLA c1 508:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

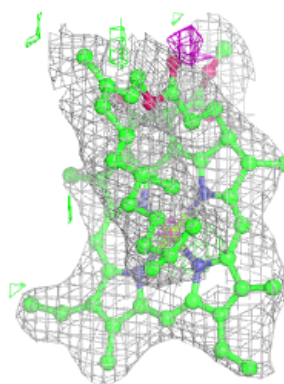
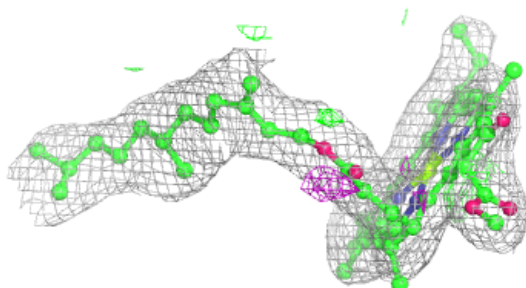
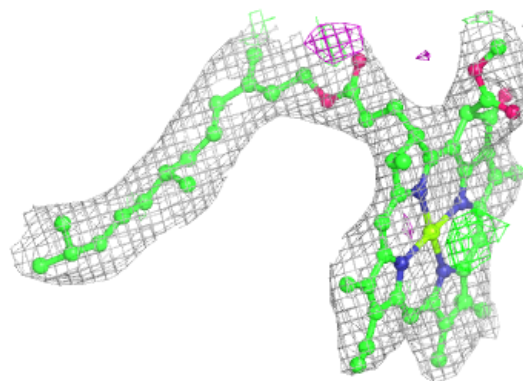


**Electron density around CLA c1 510:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

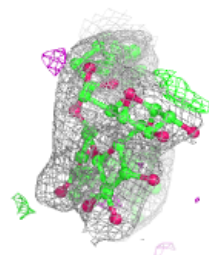
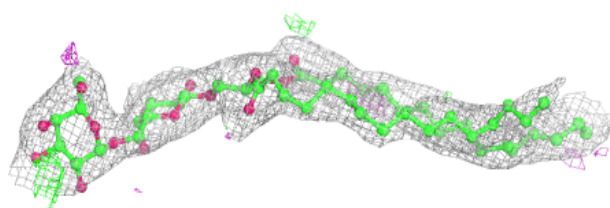
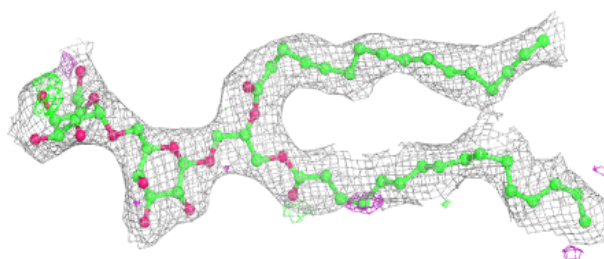
**Electron density around CLA c1 513:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

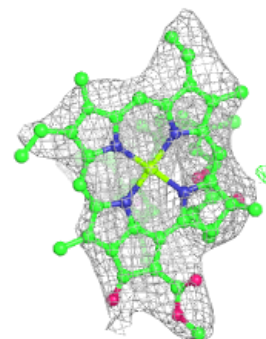
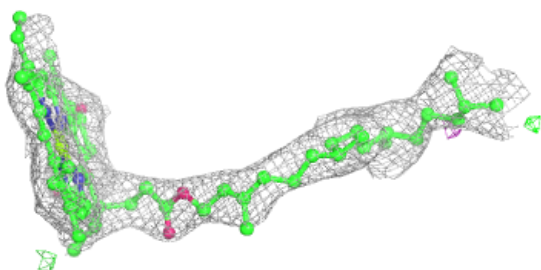
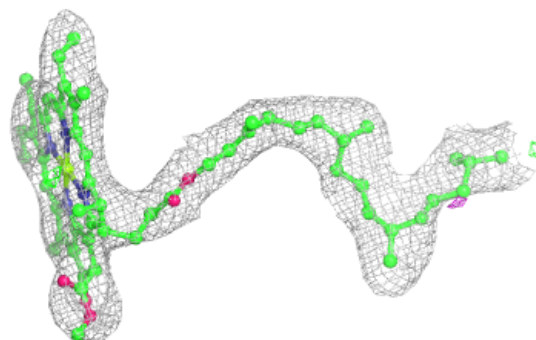


**Electron density around DGD c1 520:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

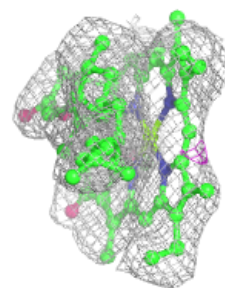
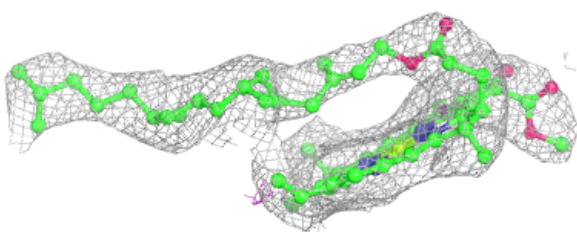
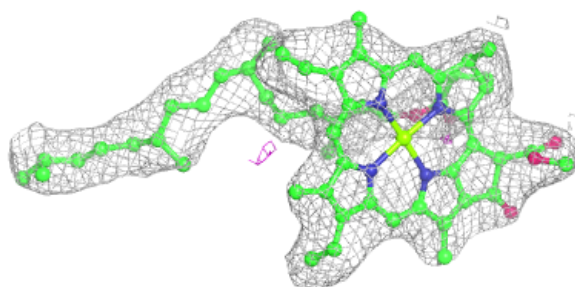
**Electron density around CLA B1 609:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

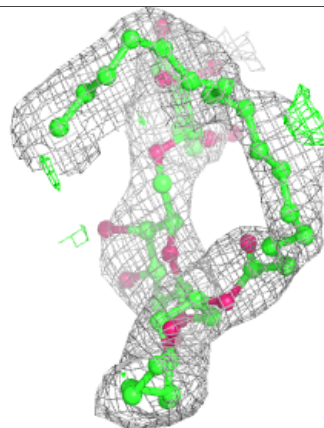
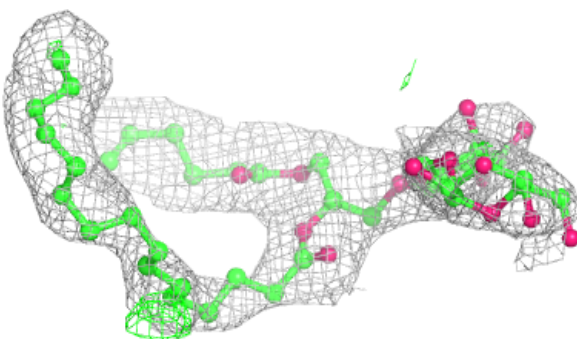
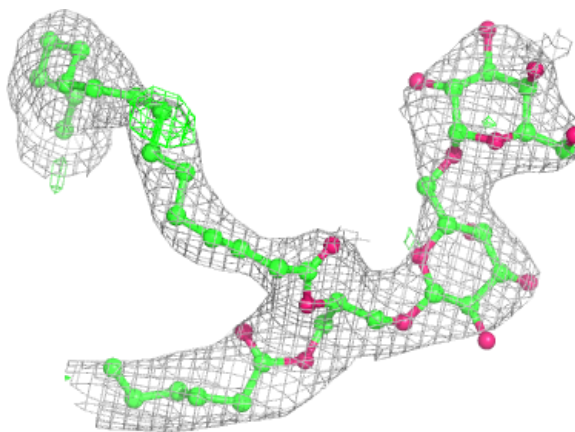


**Electron density around CLA C1 506:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

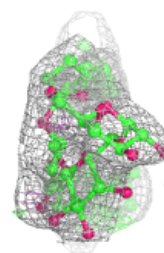
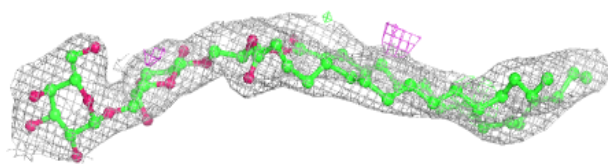
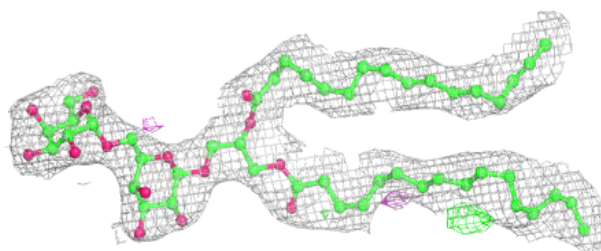
**Electron density around DGD c2 516:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around DGD c2 517:**

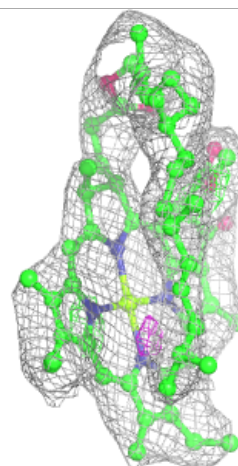
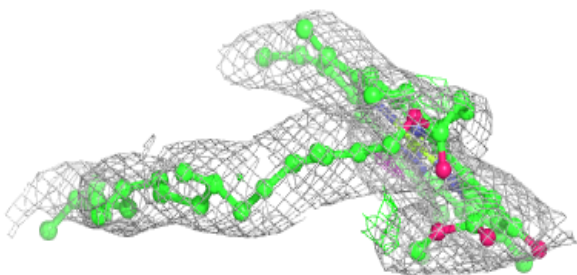
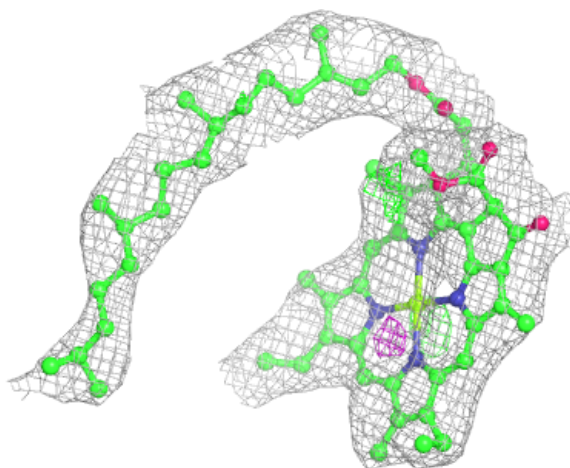
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





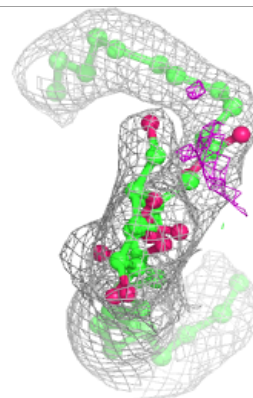
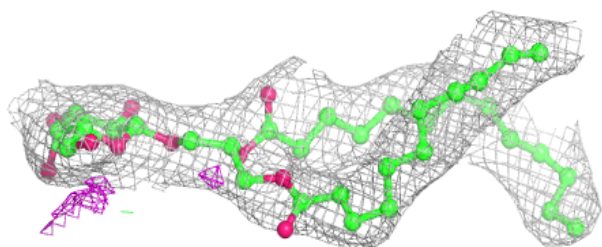
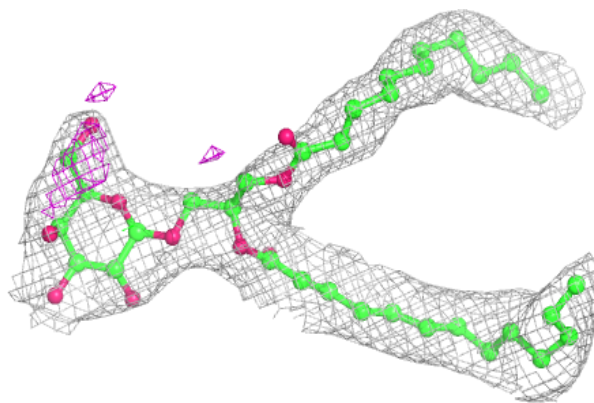
**Electron density around CLA c1 509:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

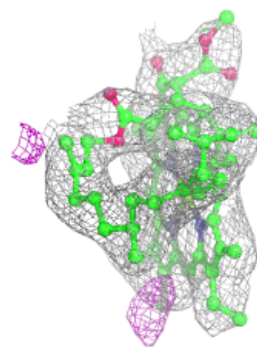
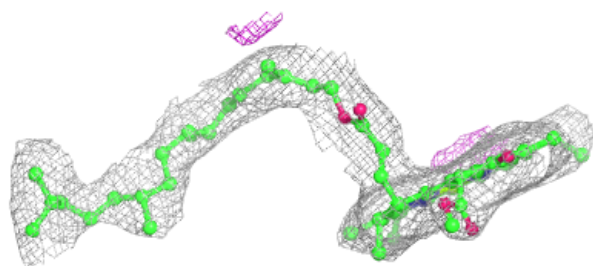
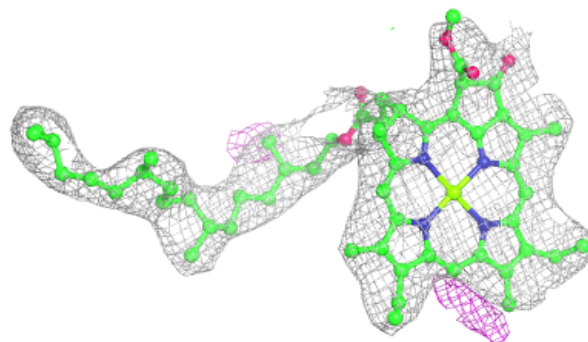


**Electron density around LMG A1 410:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

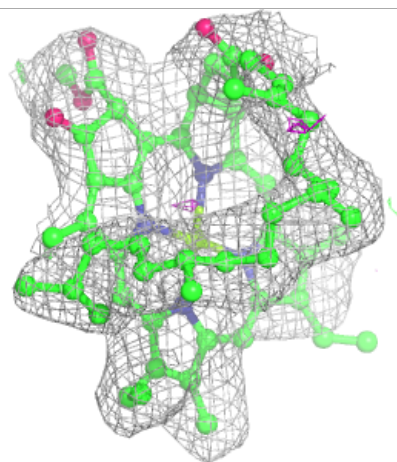
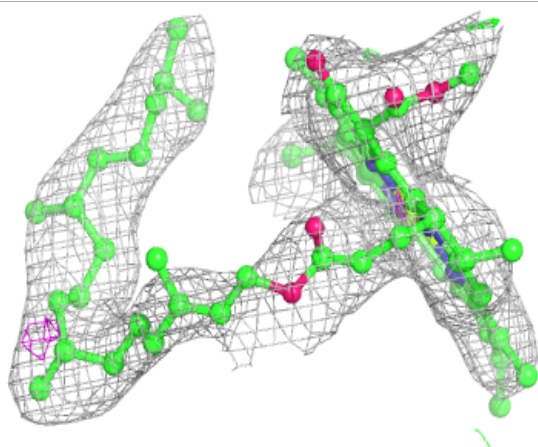
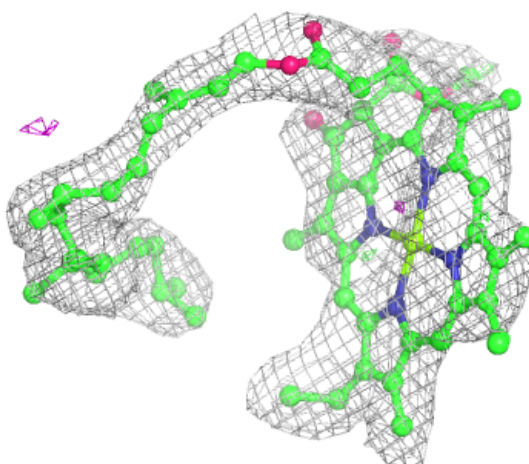
**Electron density around CLA a2 405:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around CLA c1 505:**

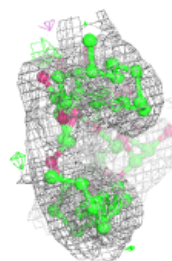
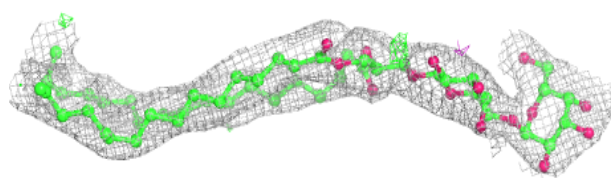
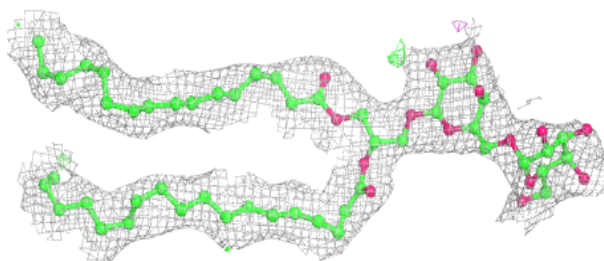
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





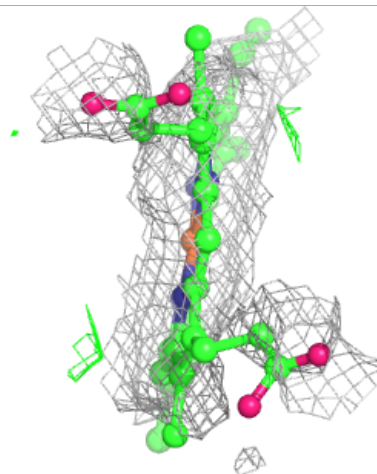
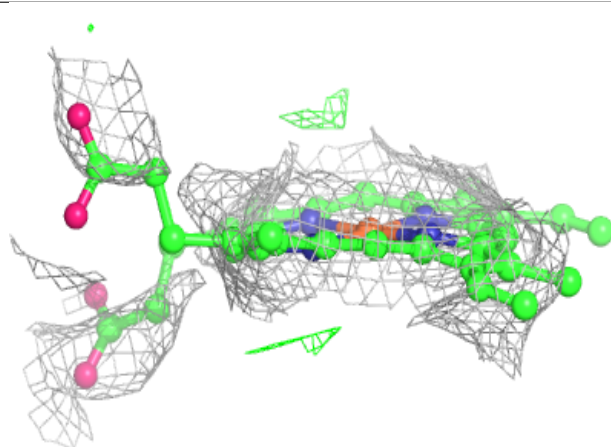
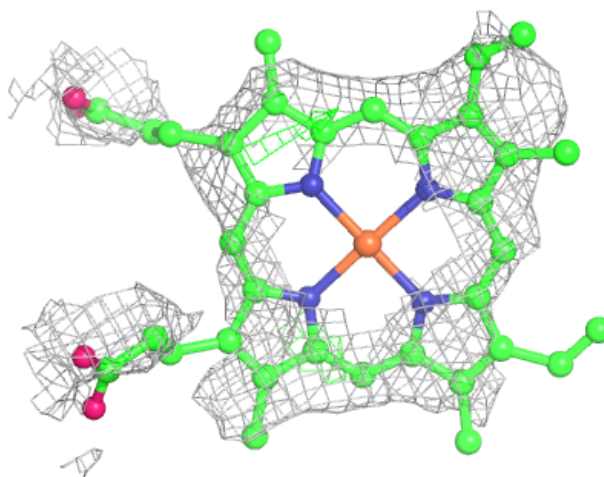
**Electron density around DGD C1 517:**

$2mF_o - DF_c$  (at 0.7 rmsd) in gray  
 $mF_o - DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



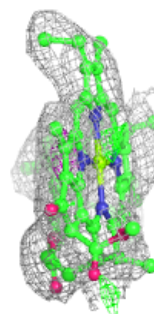
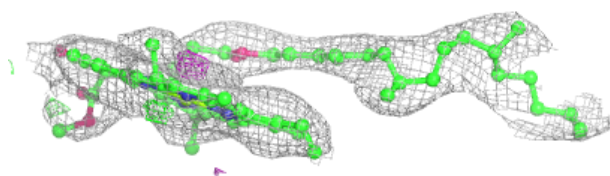
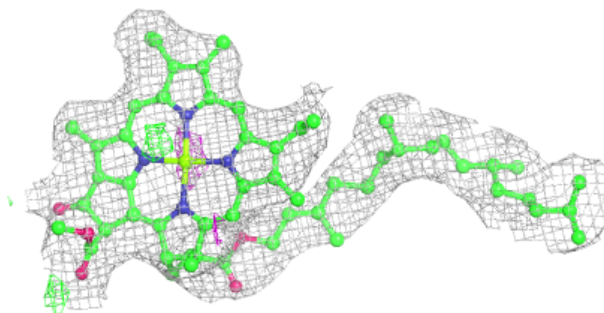
**Electron density around HEM E2 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

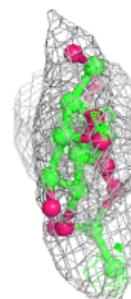
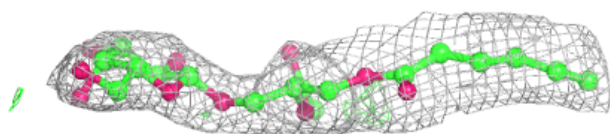
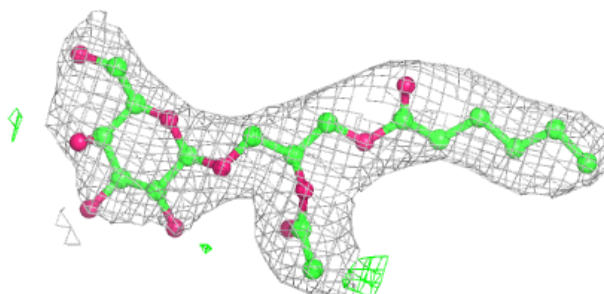


**Electron density around CLA B1 606:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

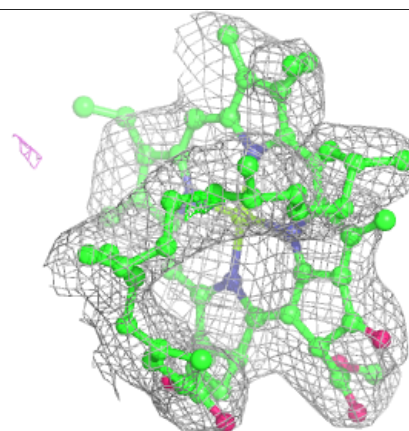
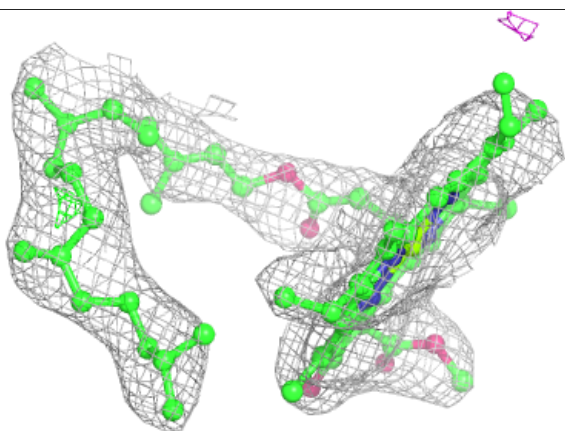
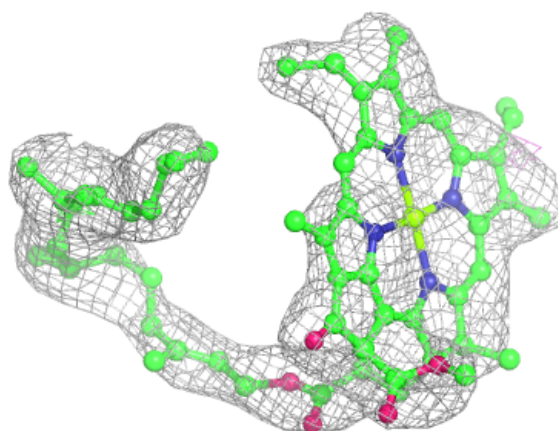
**Electron density around LMG d2 407:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

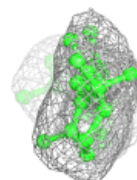
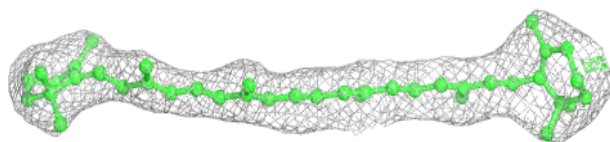
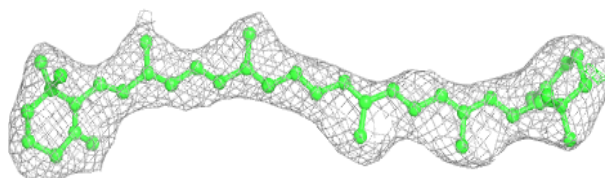


**Electron density around CLA c2 504:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

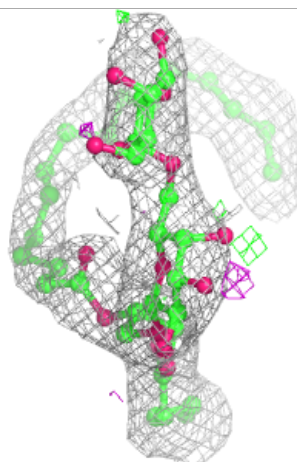
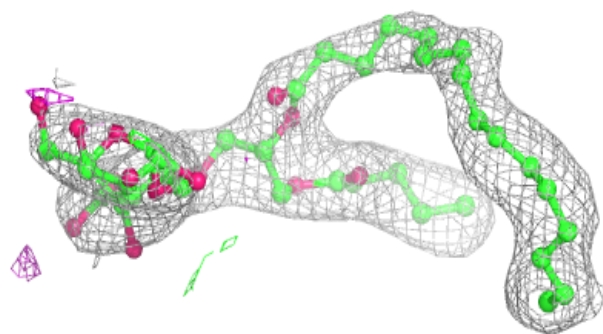
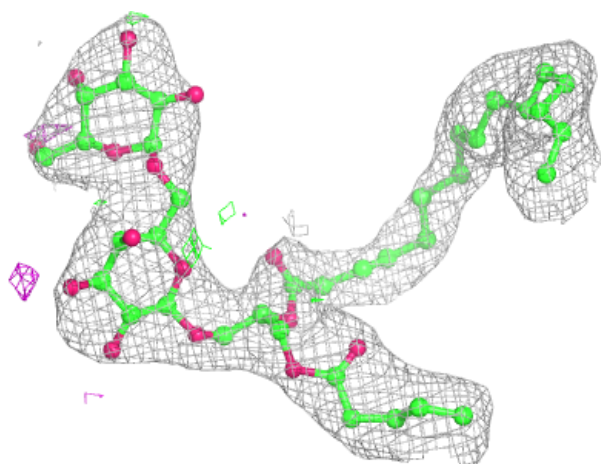
**Electron density around BCR b2 601:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around DGD c1 514:**

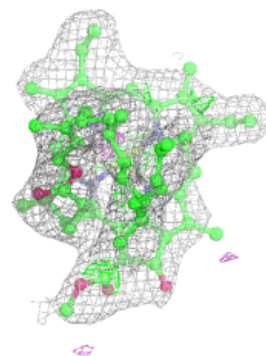
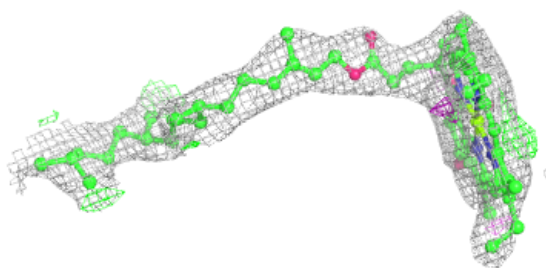
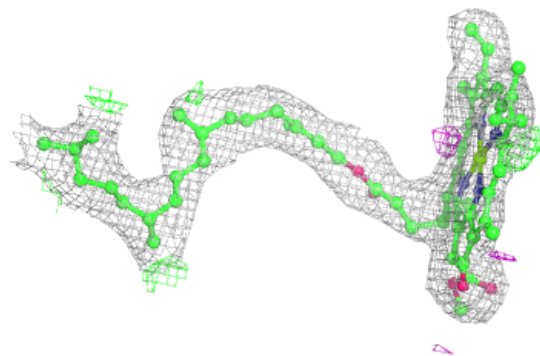
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



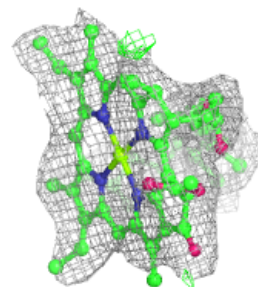
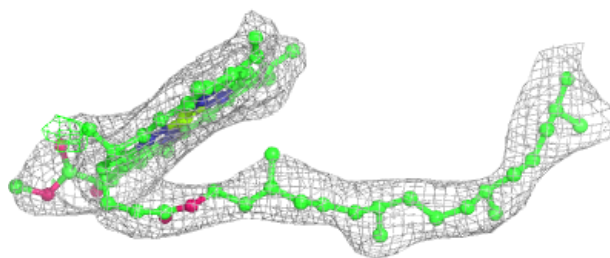
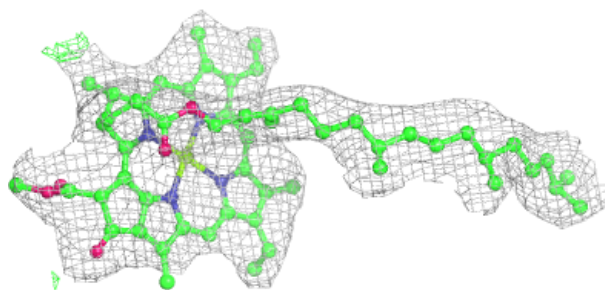


**Electron density around CLA b1 609:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

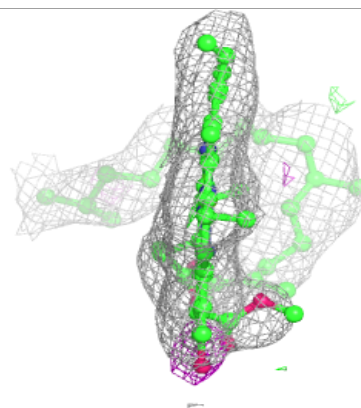
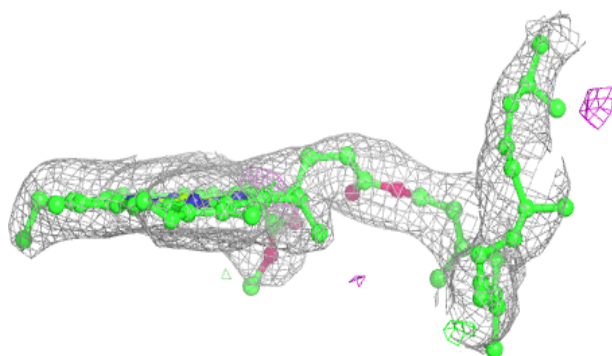
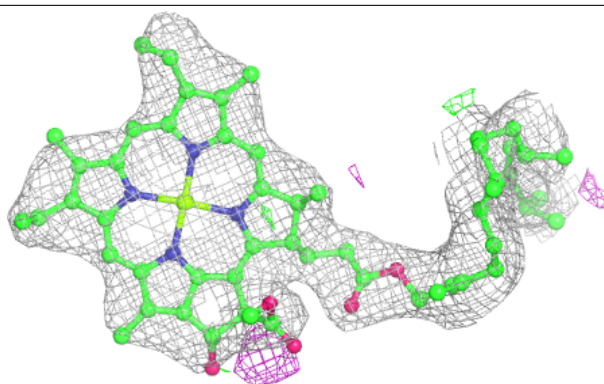
**Electron density around CLA b2 624:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

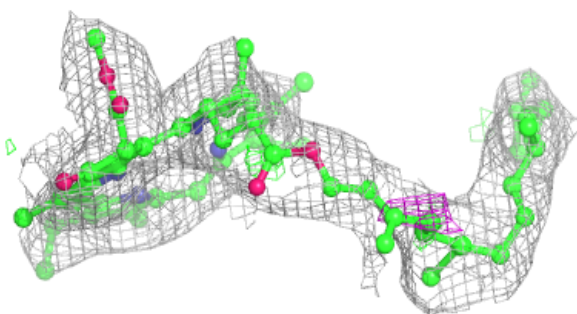
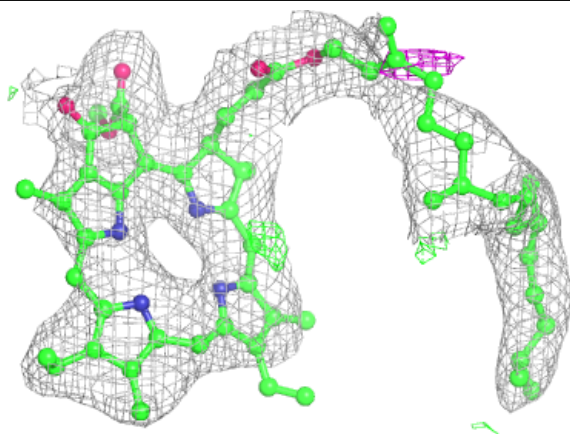


**Electron density around CLA b1 619:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

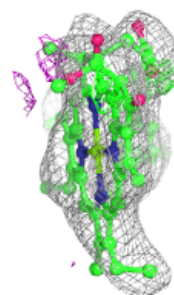
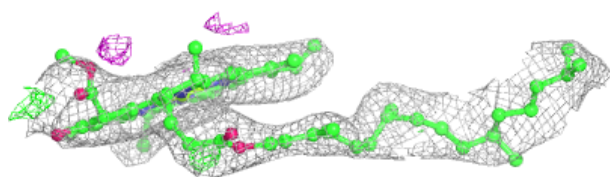
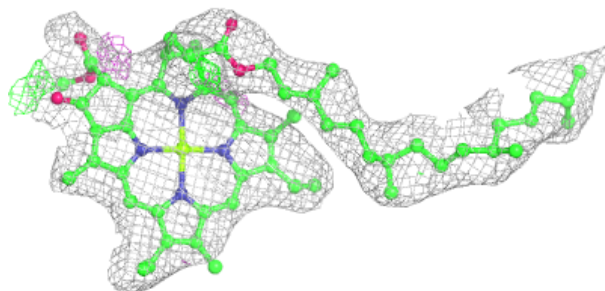
**Electron density around PHO D2 407:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around CLA b2 606:**

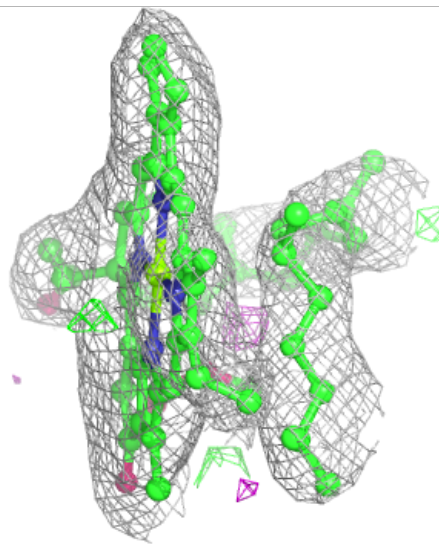
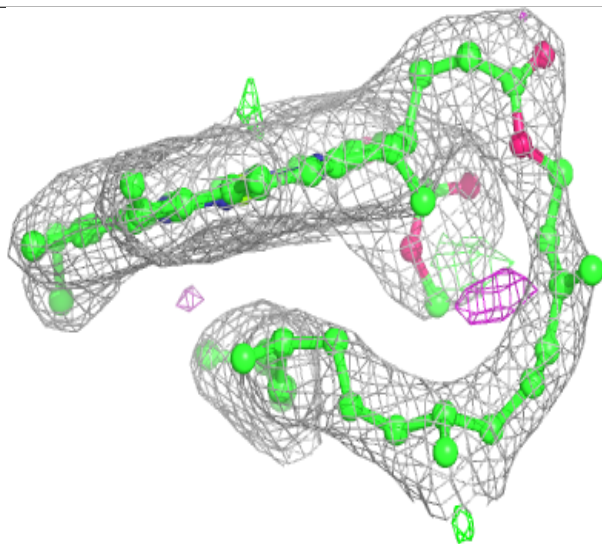
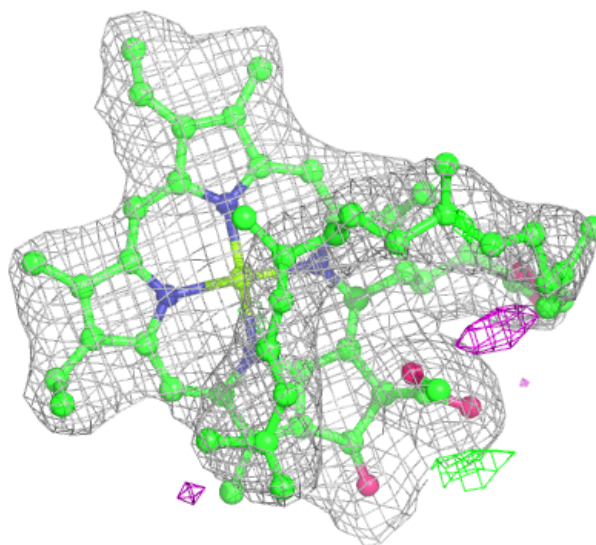
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





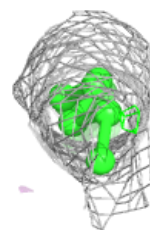
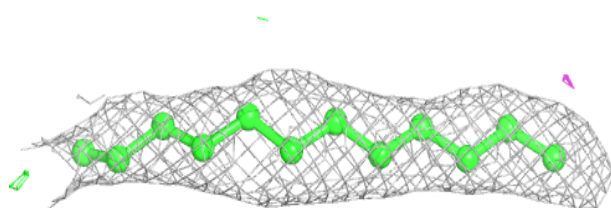
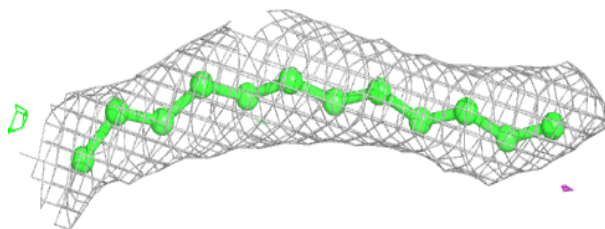
**Electron density around CLA C1 511:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

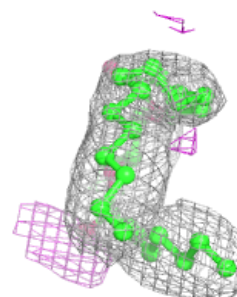
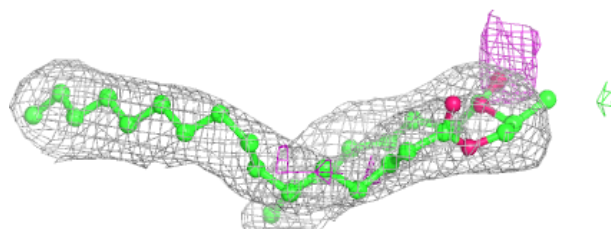
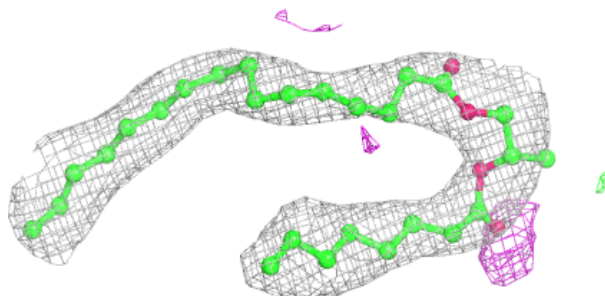


**Electron density around LMT L1 102:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

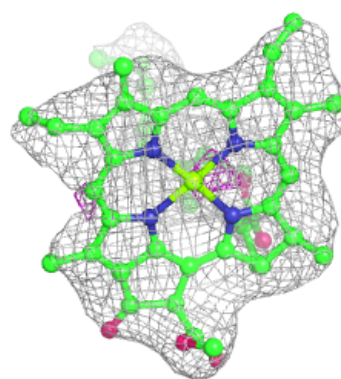
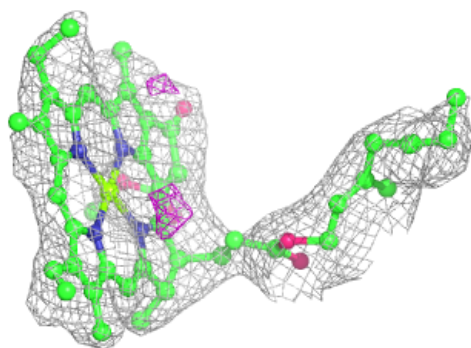
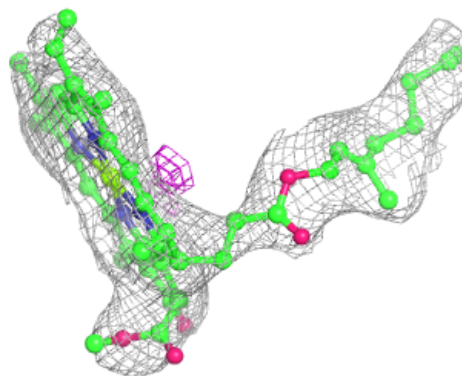
**Electron density around LMG M1 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

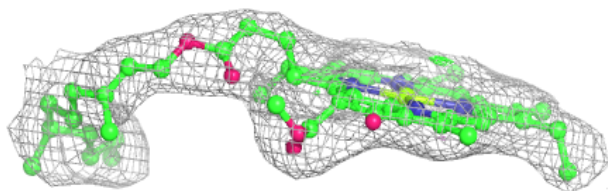
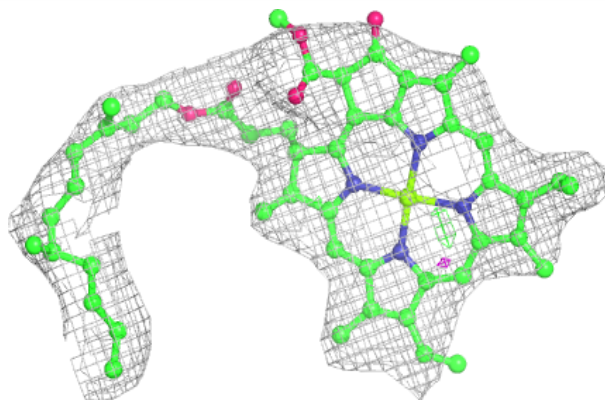


**Electron density around CLA c2 507:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

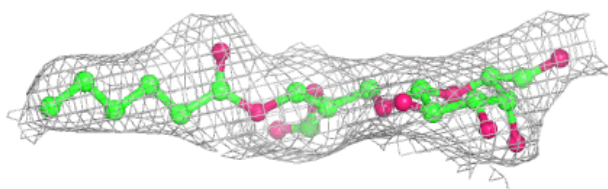
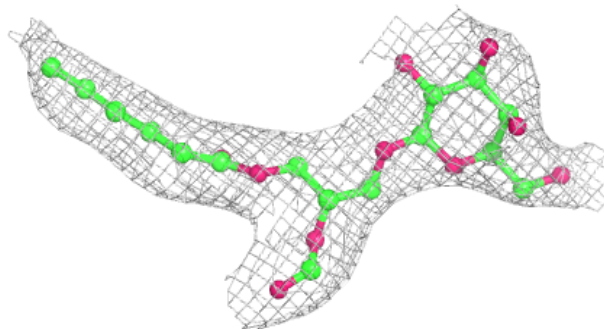
**Electron density around CLA B1 618:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

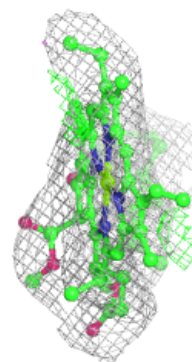
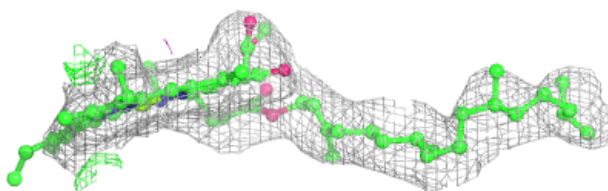
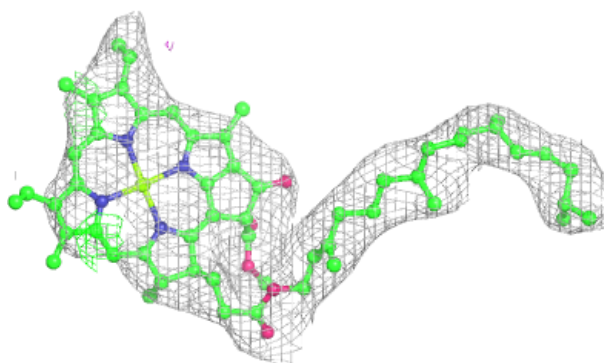


**Electron density around LMG c2 519:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around CLA b2 613:**

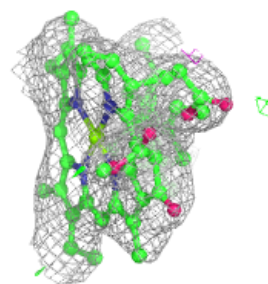
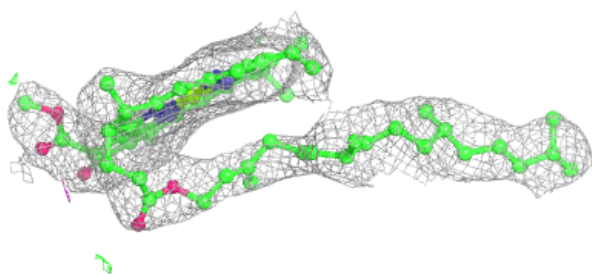
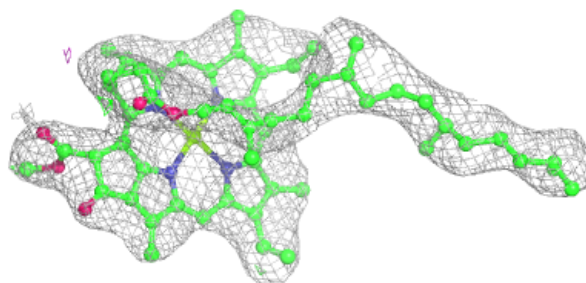
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



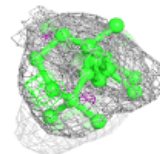
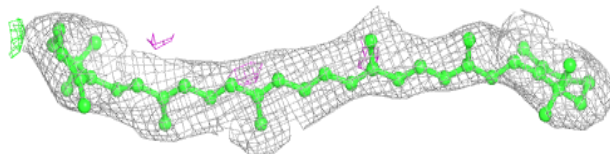
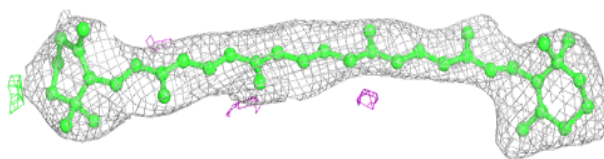


**Electron density around CLA c1 507:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

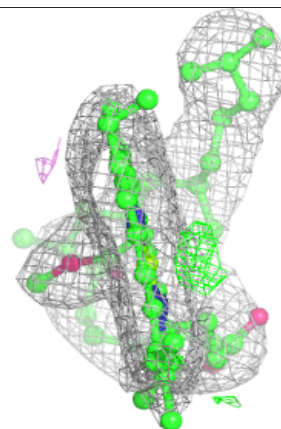
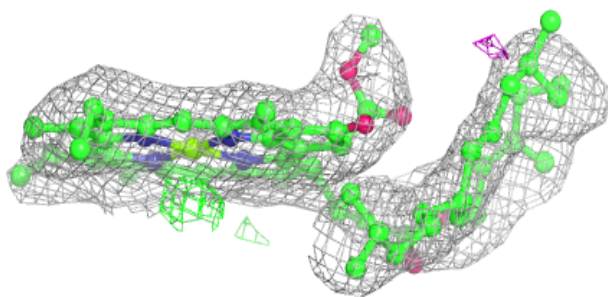
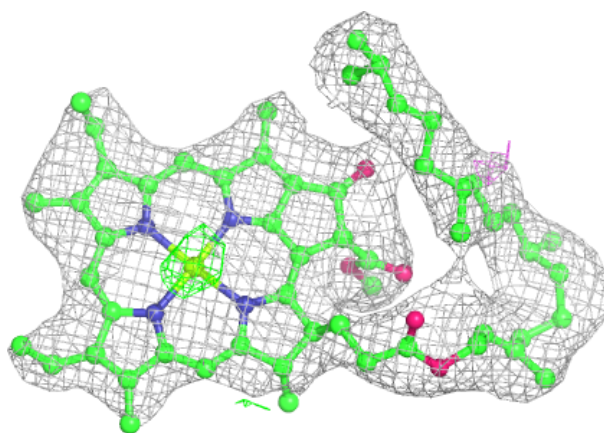
**Electron density around BCR B2 603:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



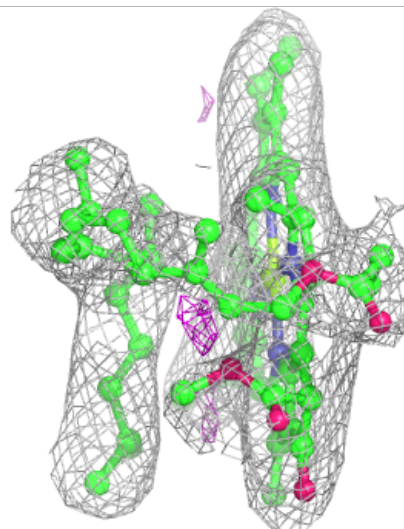
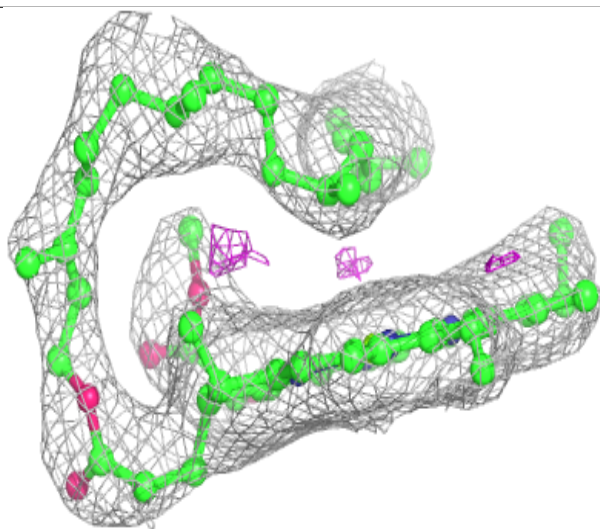
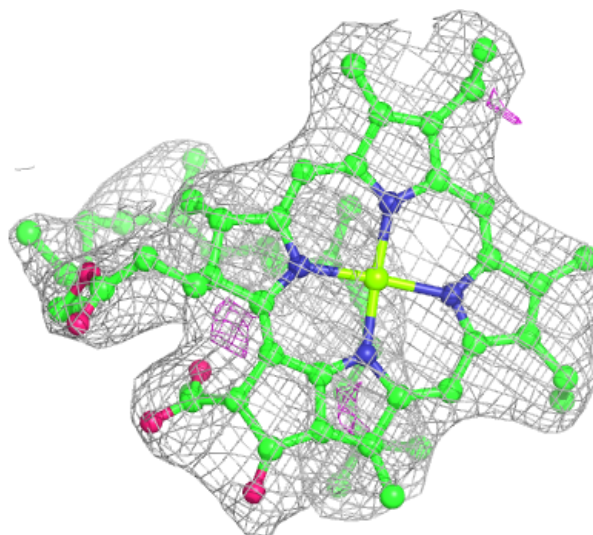
**Electron density around CLA B2 612:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



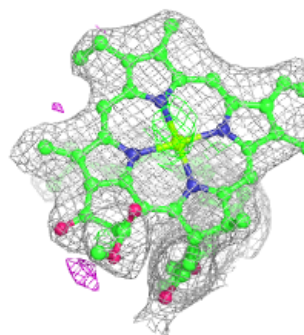
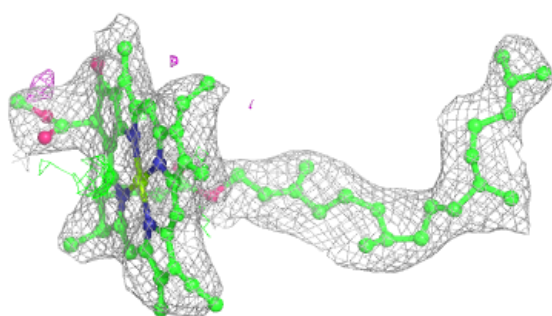
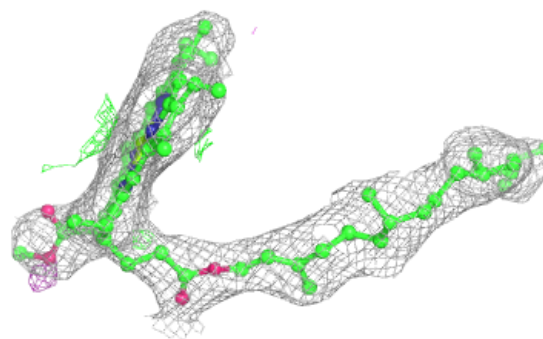
**Electron density around CLA c2 511:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

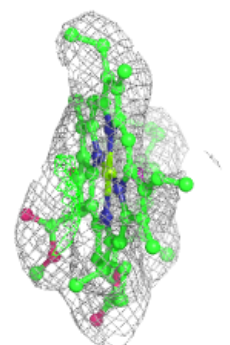
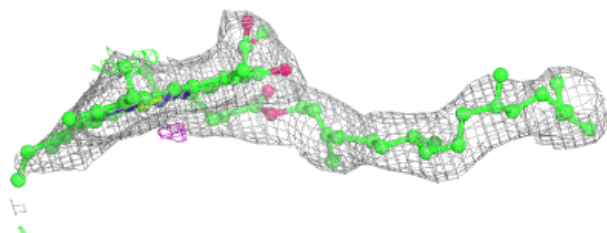
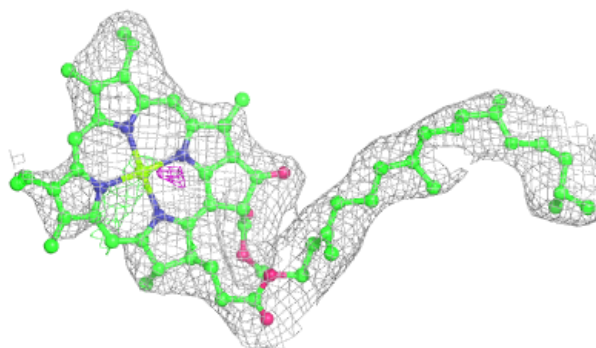


**Electron density around CLA B2 619:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around CLA B1 605:**

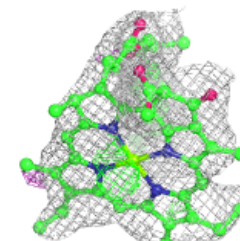
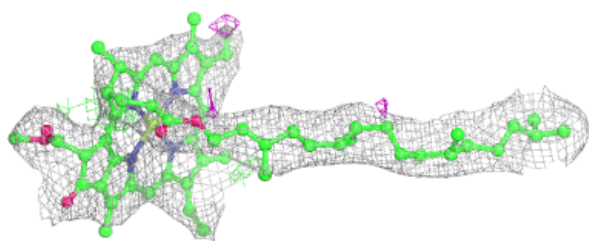
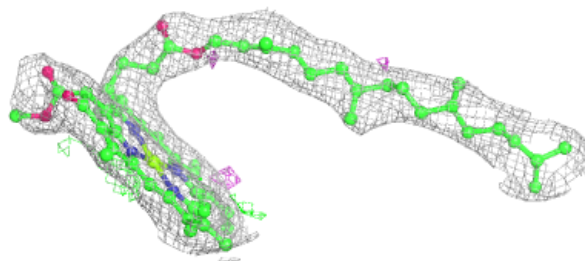
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





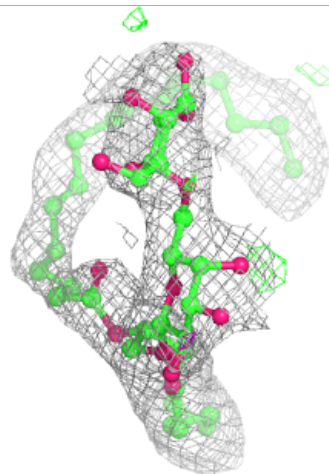
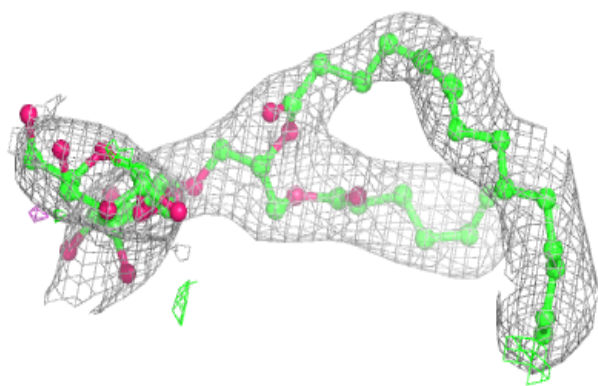
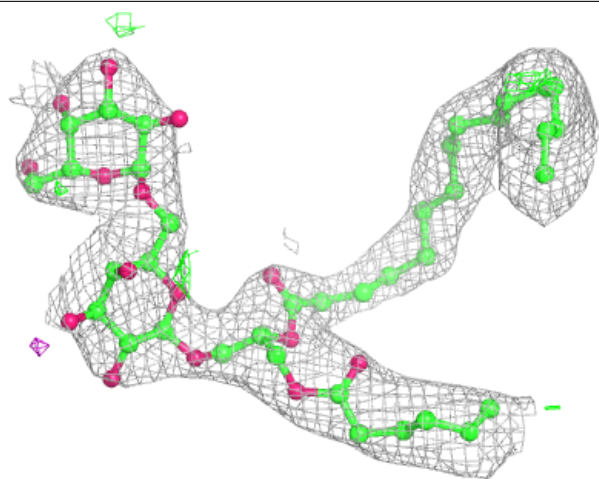
**Electron density around CLA C1 505:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



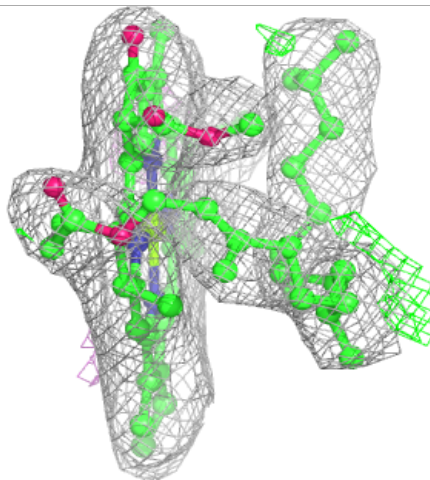
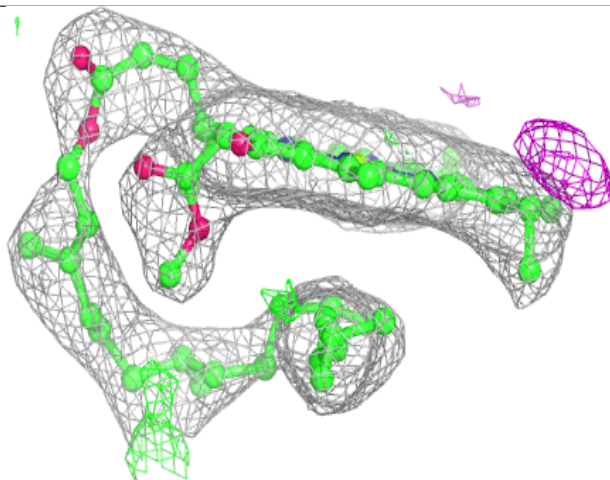
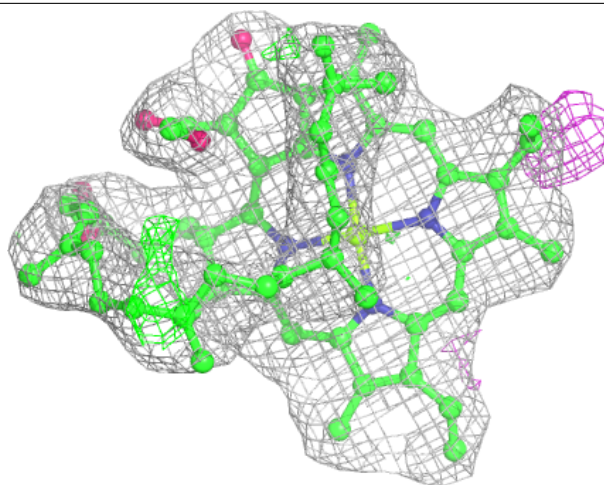
**Electron density around DGD C1 515:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



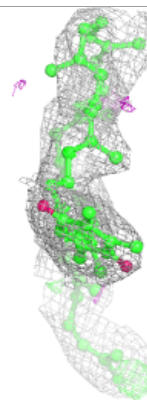
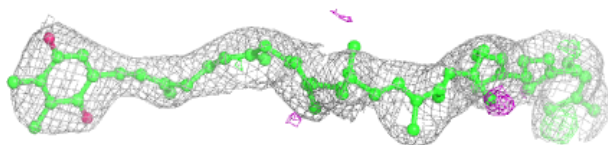
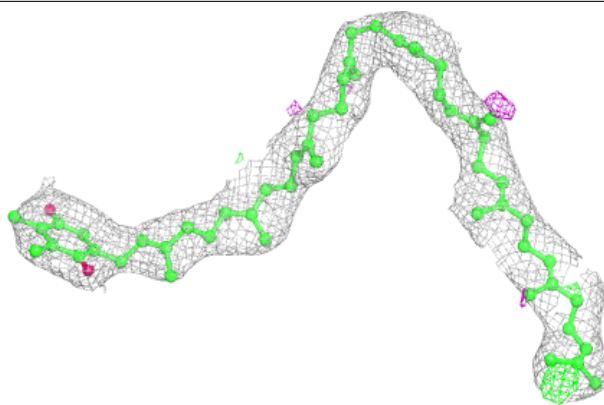
**Electron density around CLA c1 512:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

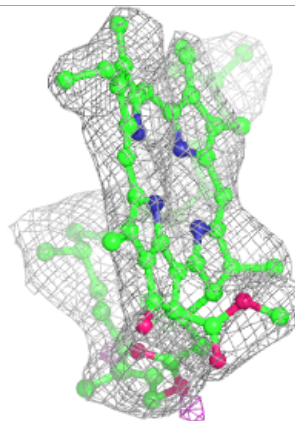
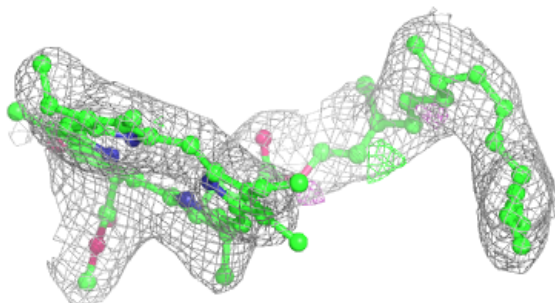
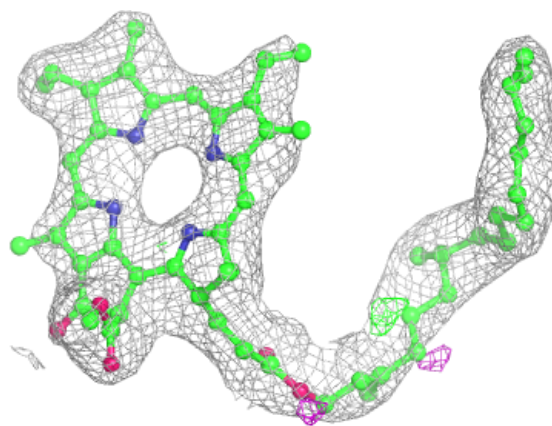


**Electron density around PL9 D2 408:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

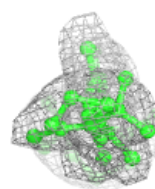
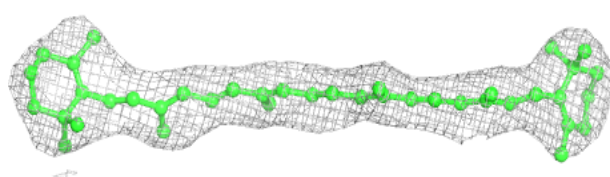
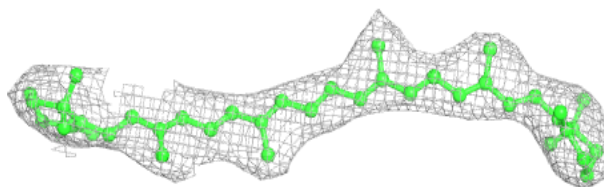
**Electron density around PHO D1 407:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

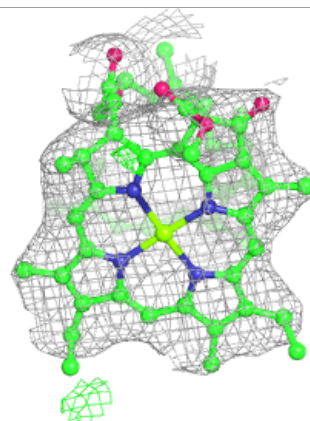
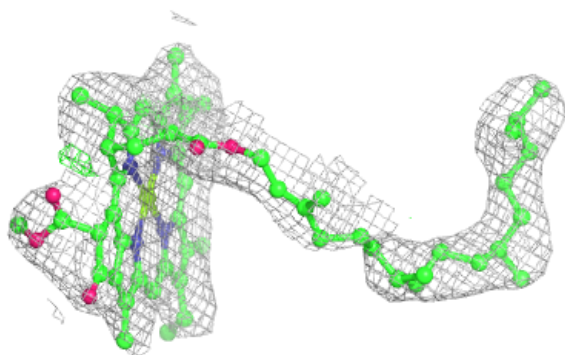
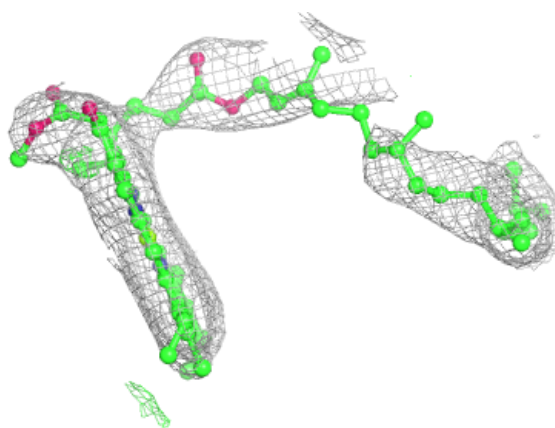


**Electron density around BCR C1 501:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around CLA C1 507:**

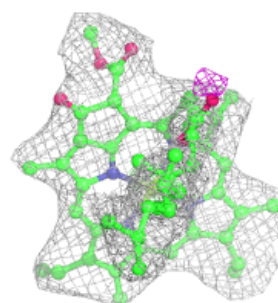
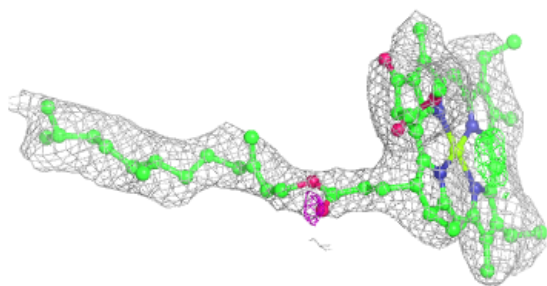
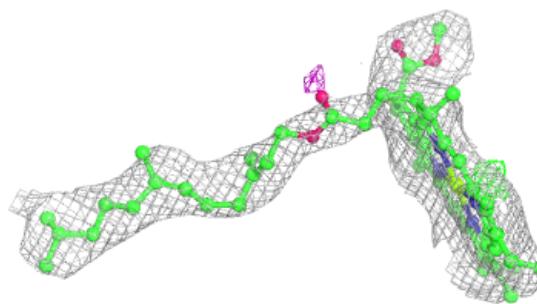
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



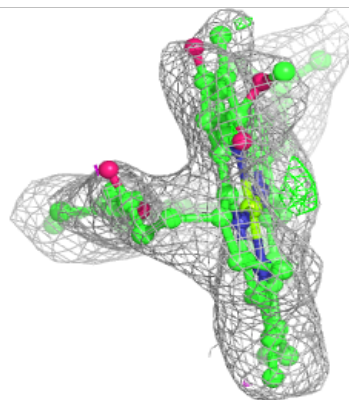
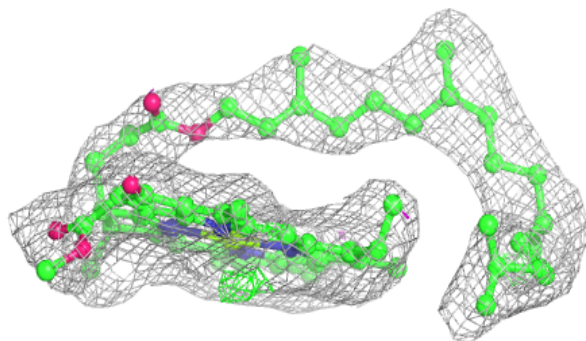
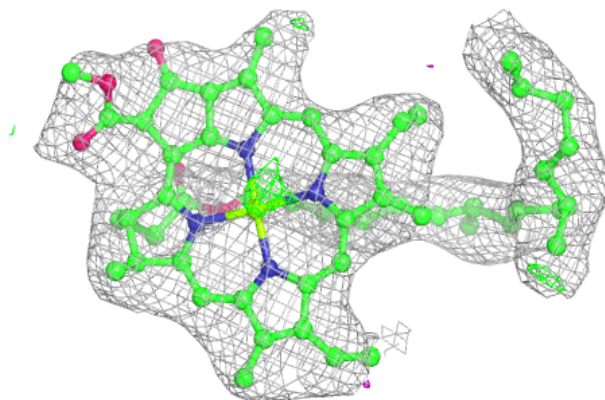


**Electron density around CLA b2 616:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

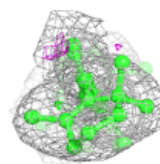
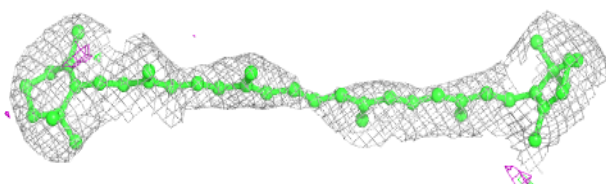
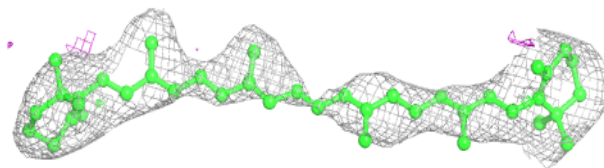
**Electron density around CLA b1 616:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

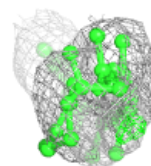
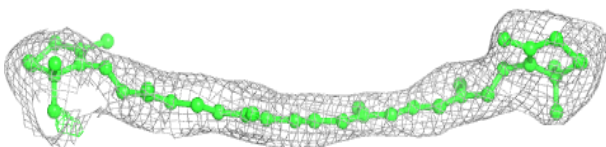
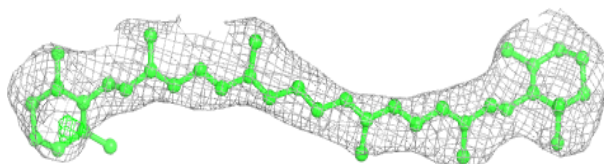


**Electron density around BCR A2 401:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

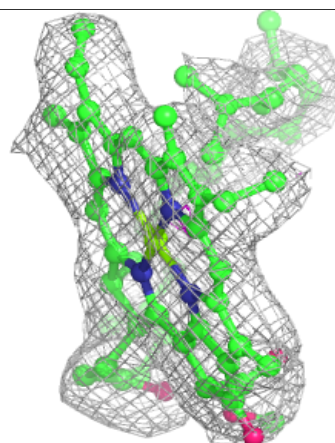
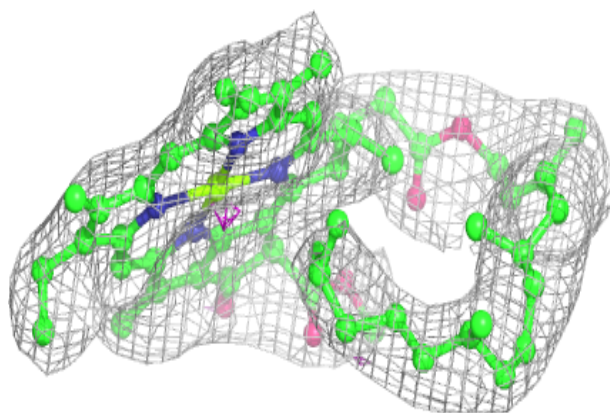
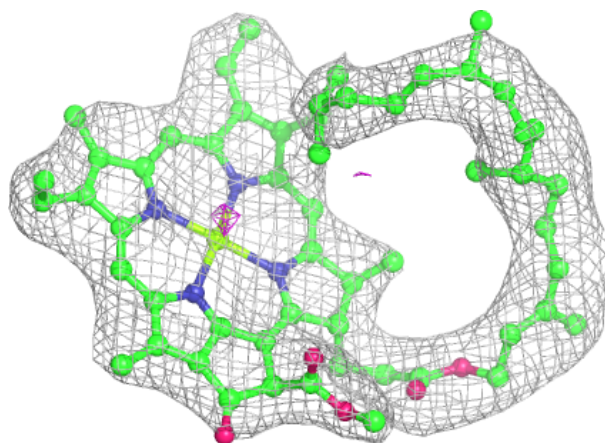
**Electron density around BCR d1 405:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around CLA B1 617:**

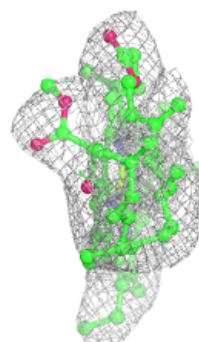
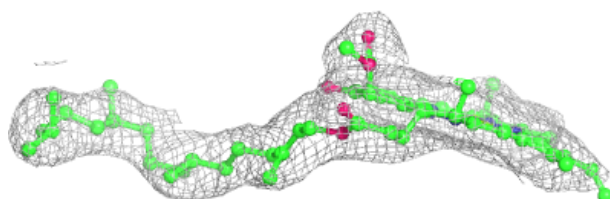
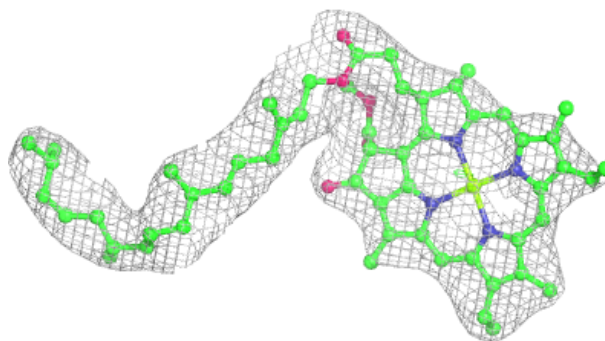
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



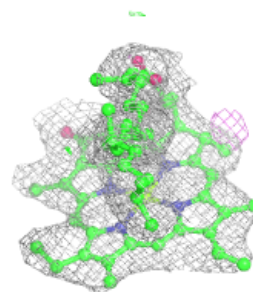
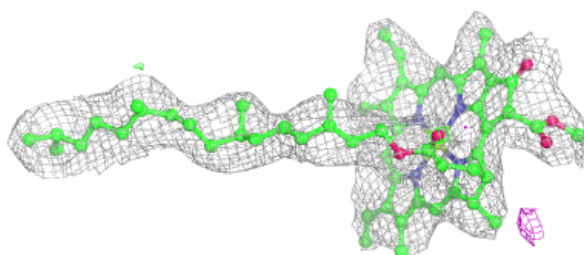
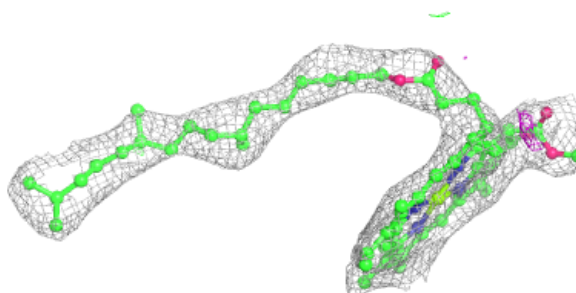


**Electron density around CLA B2 605:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

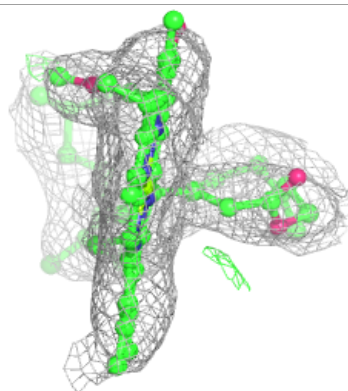
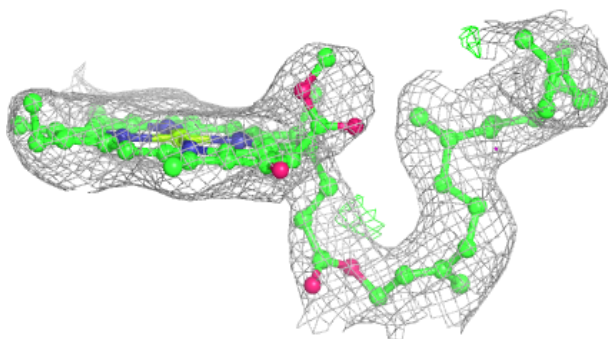
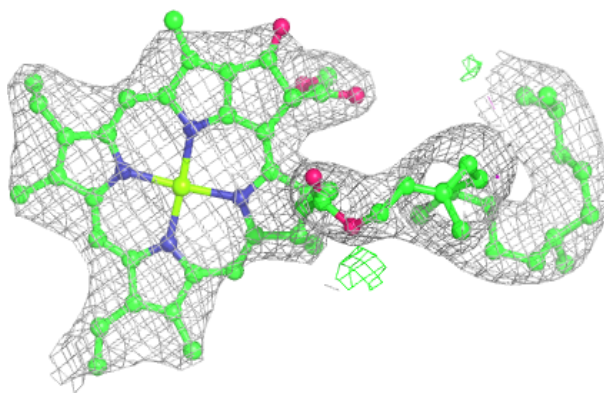
**Electron density around CLA c1 506:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

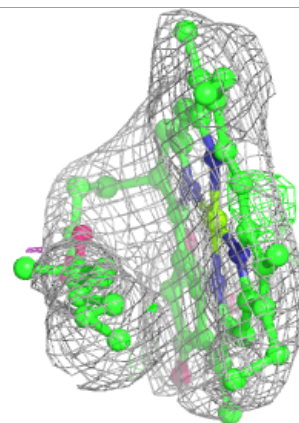
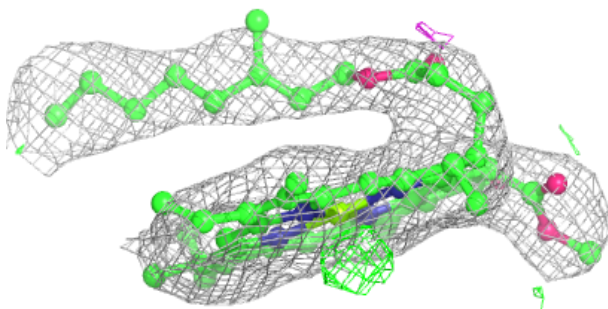
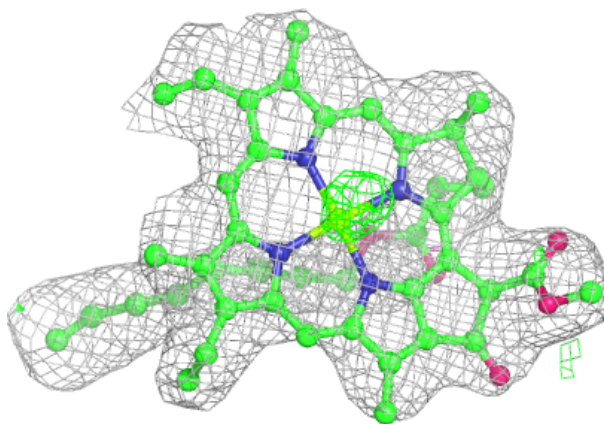


**Electron density around CLA B2 614:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

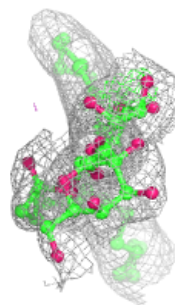
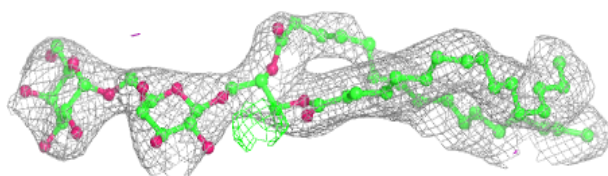
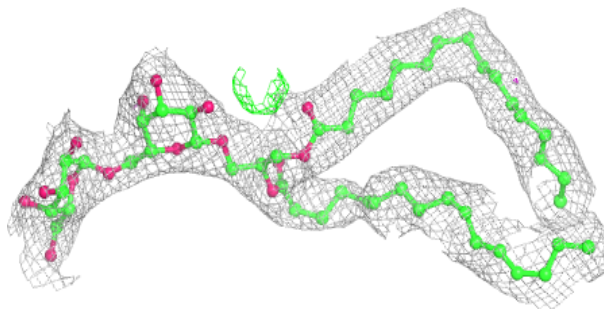
**Electron density around CLA B2 616:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



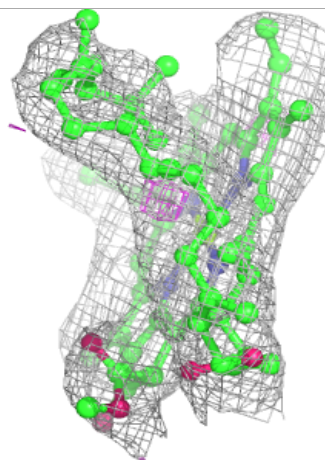
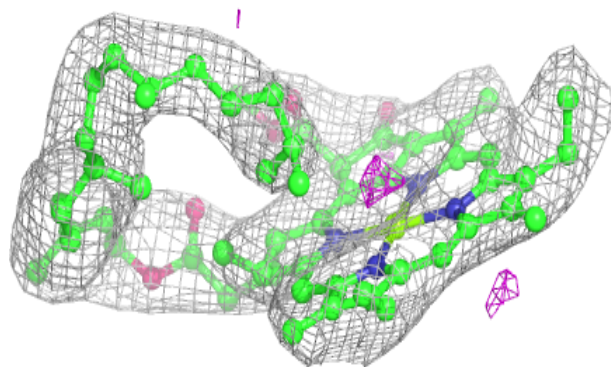
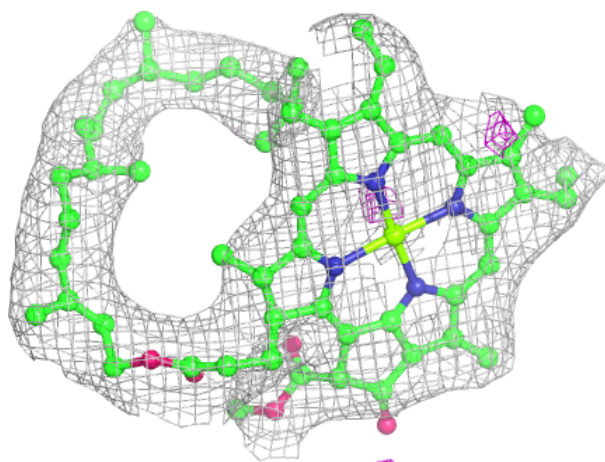
**Electron density around DGD c1 518:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around CLA B2 617:**

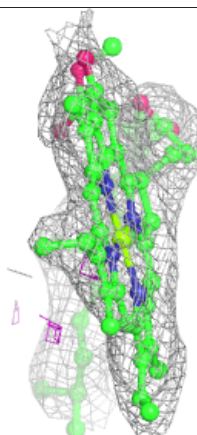
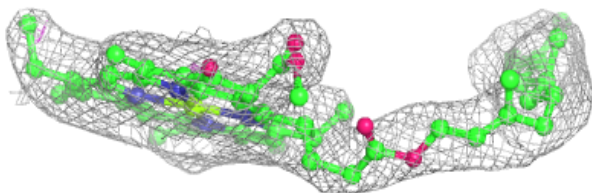
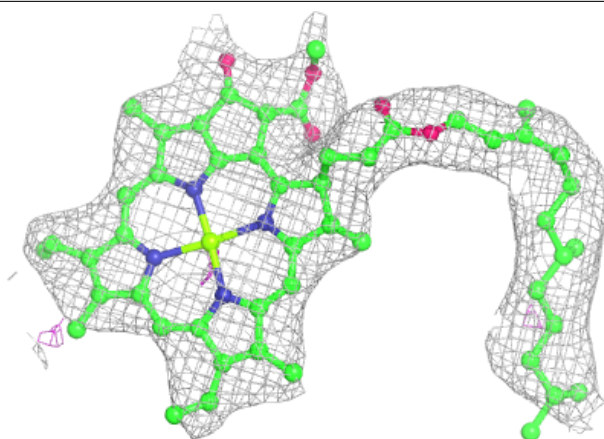
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



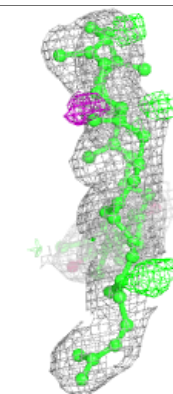
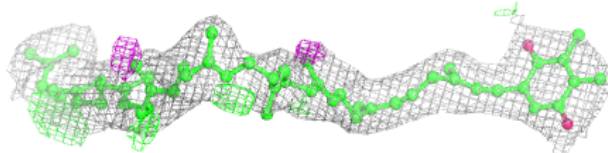
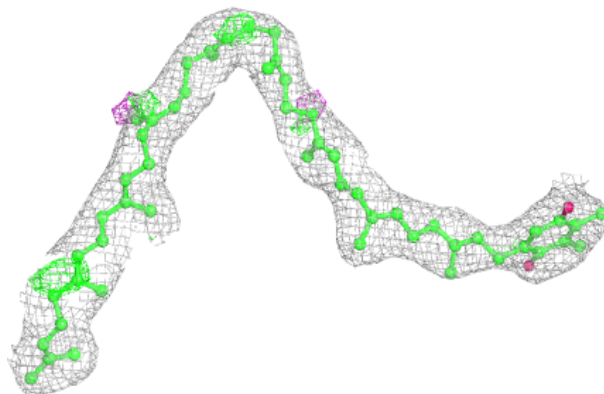


**Electron density around CLA B2 618:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

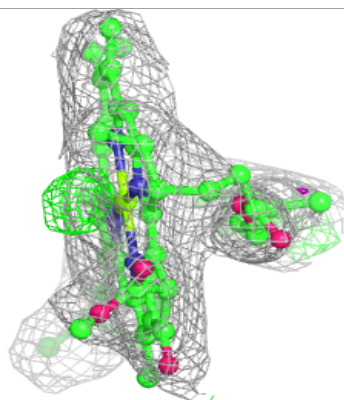
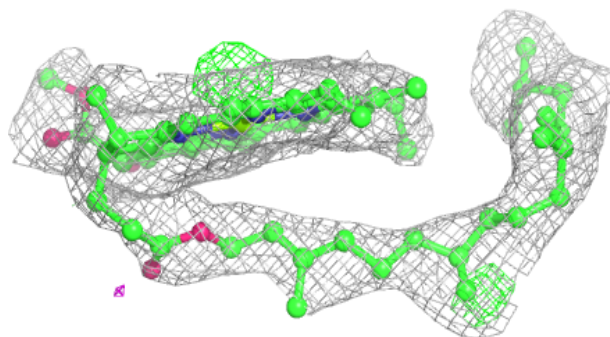
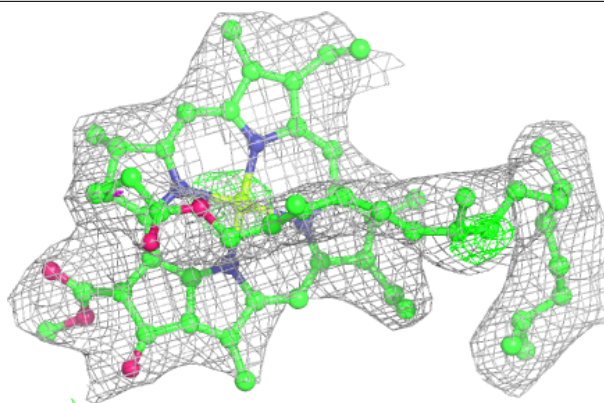
**Electron density around PL9 d1 409:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

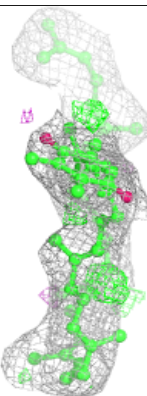
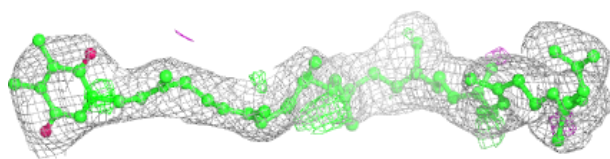
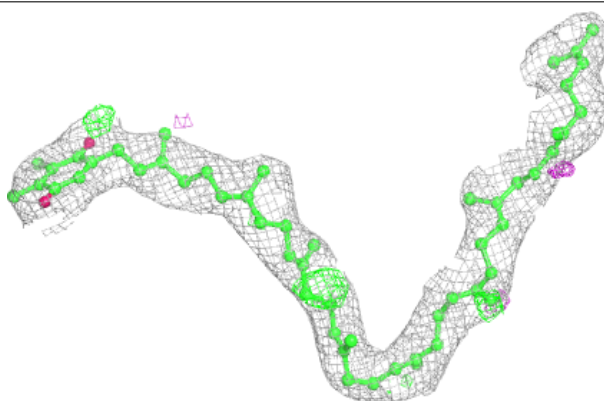


**Electron density around CLA b2 617:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

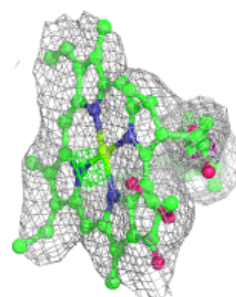
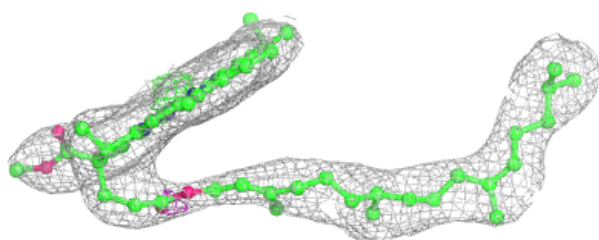
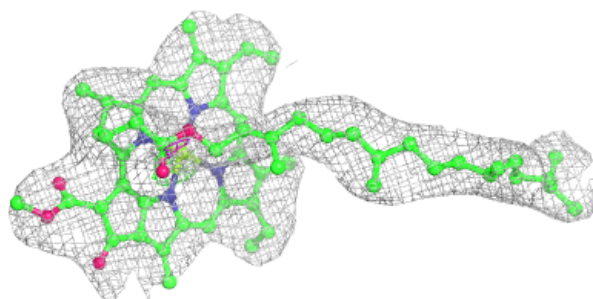
**Electron density around PL9 d2 409:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

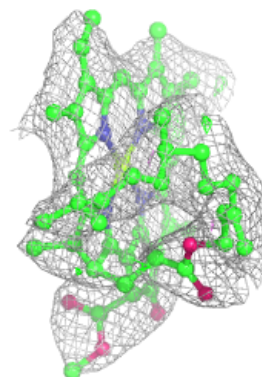
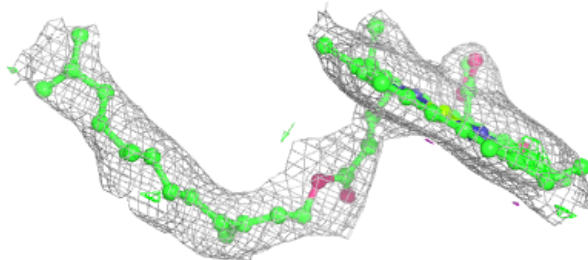
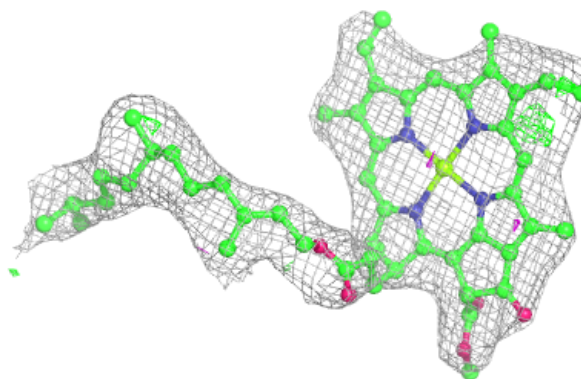


**Electron density around CLA B1 610:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

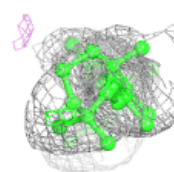
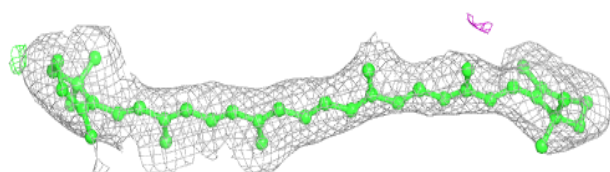
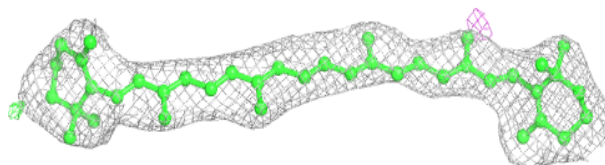
**Electron density around CLA a1 404:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

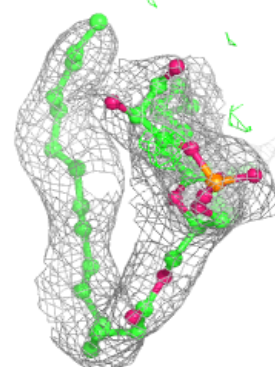
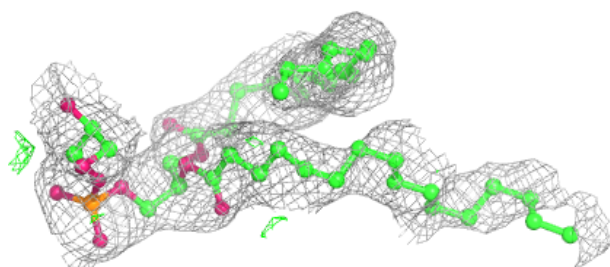
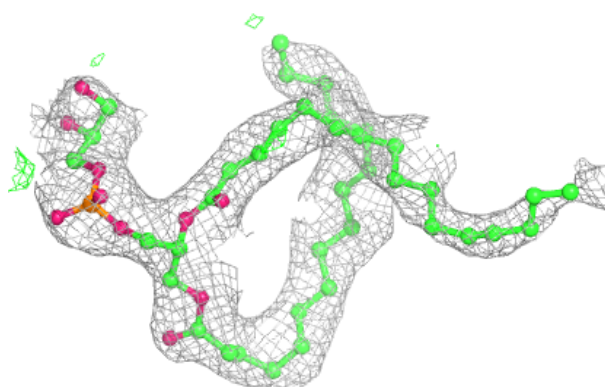


**Electron density around BCR B1 603:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around LHG D1 404:**

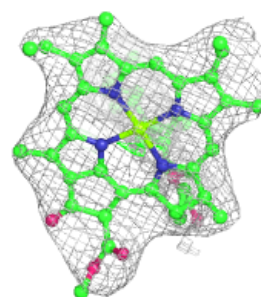
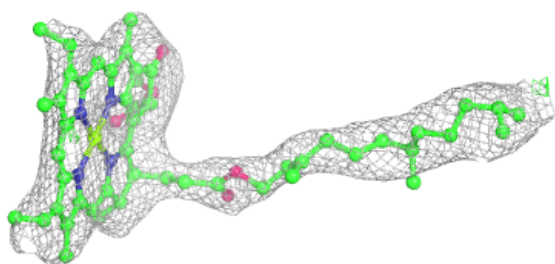
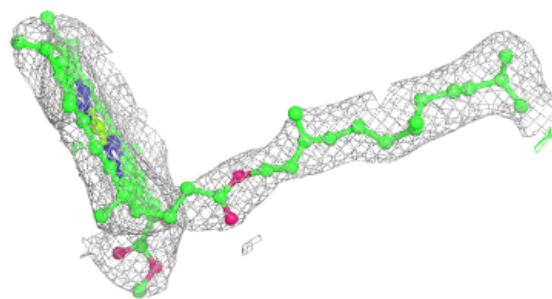
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



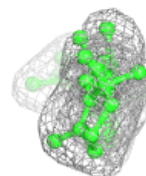
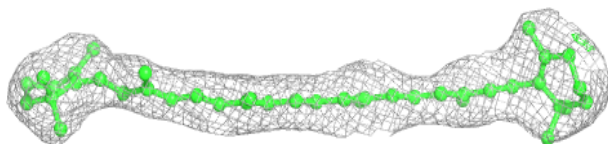
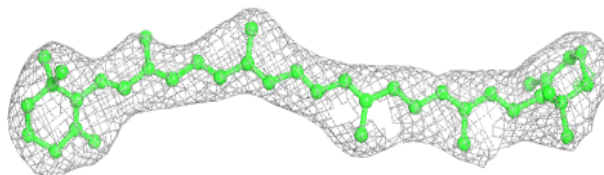


**Electron density around CLA B1 607:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

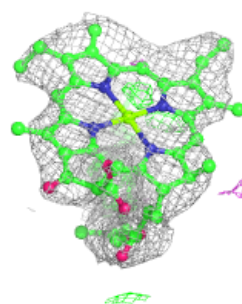
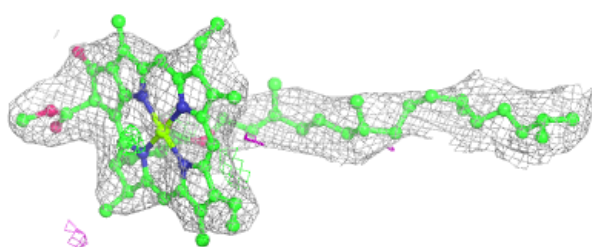
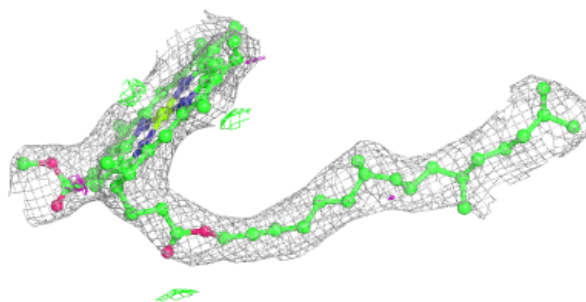
**Electron density around BCR B1 601:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

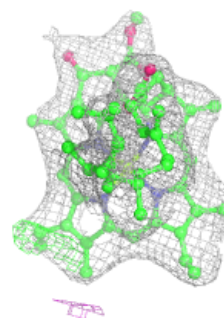
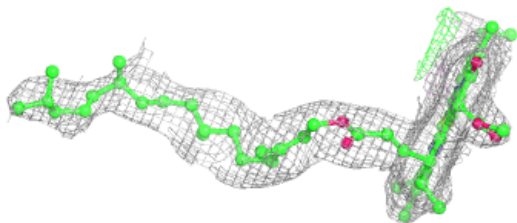
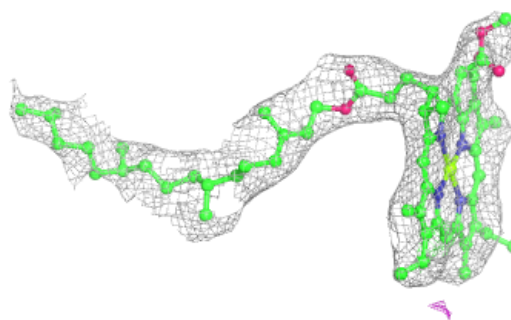


**Electron density around CLA c2 505:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

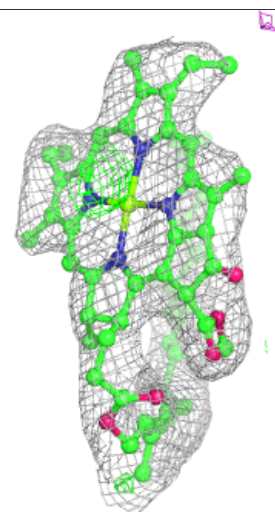
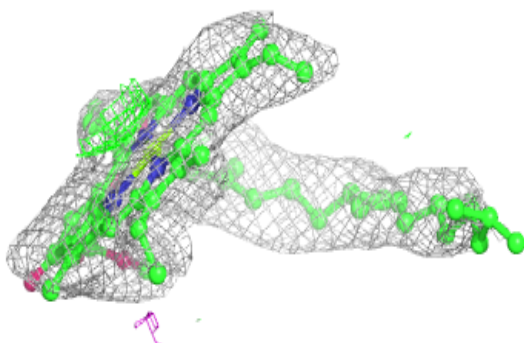
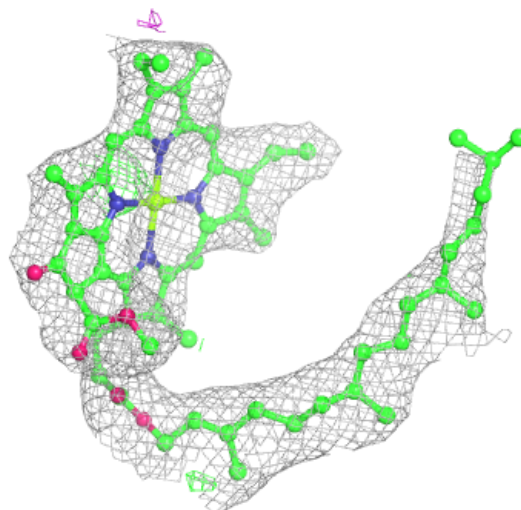
**Electron density around CLA d1 406:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



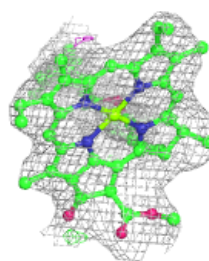
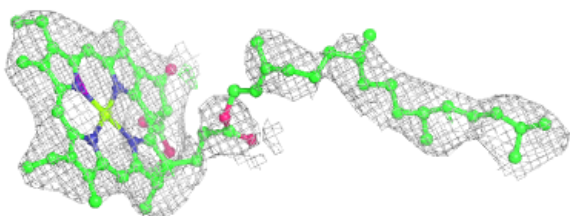
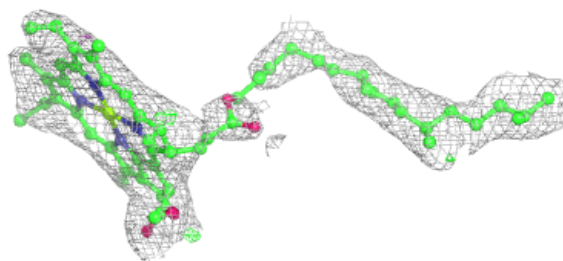
**Electron density around CLA C1 508:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

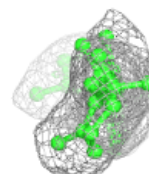
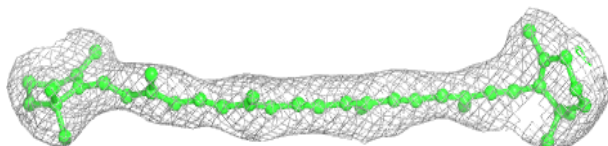
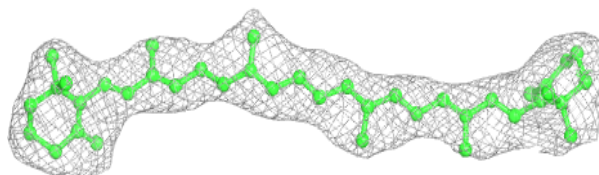


**Electron density around CLA c2 503:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

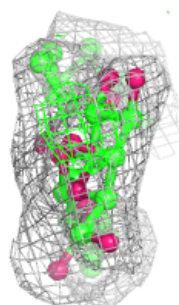
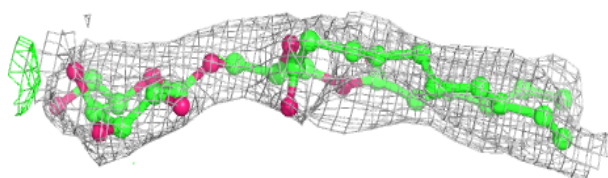
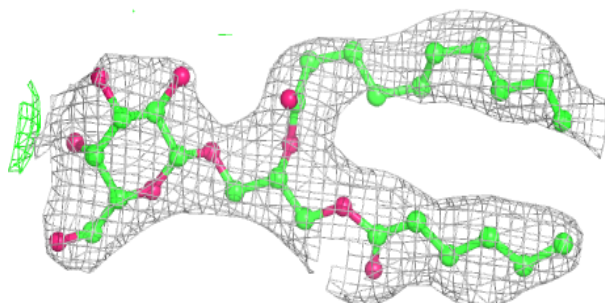
**Electron density around BCR B2 601:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

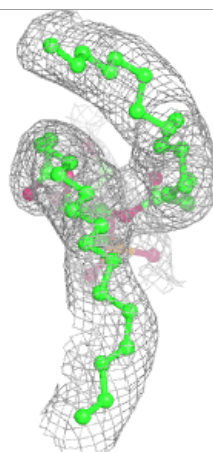
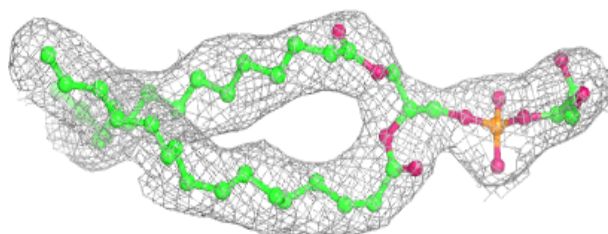
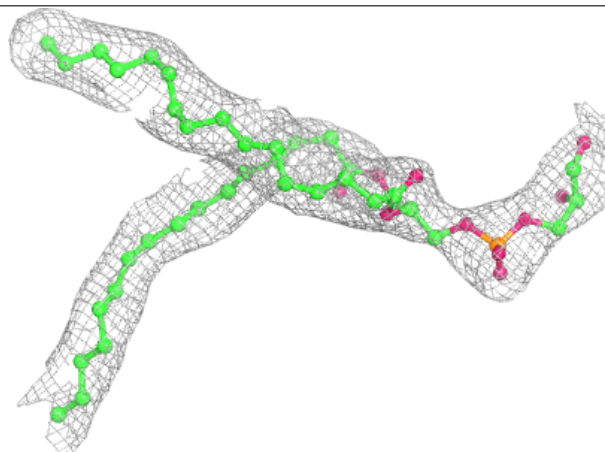


**Electron density around LMG D1 406:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

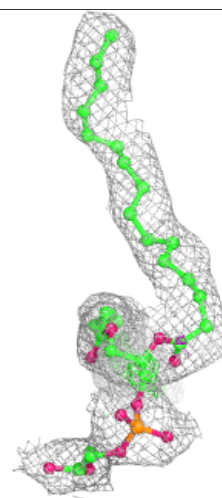
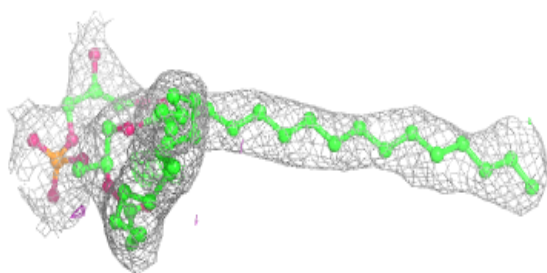
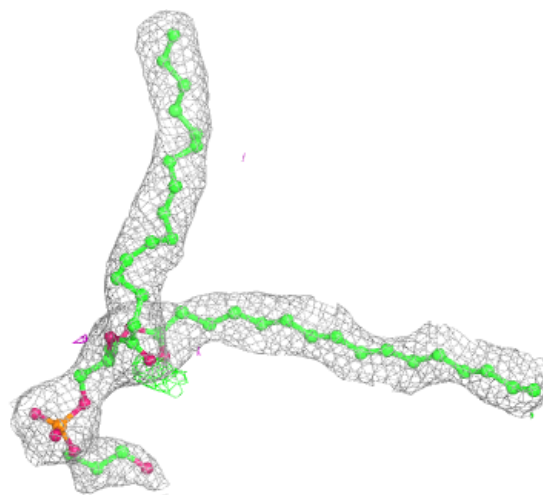
**Electron density around LHG D2 405:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around LHG L2 101:**

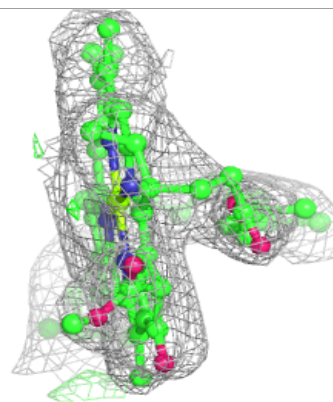
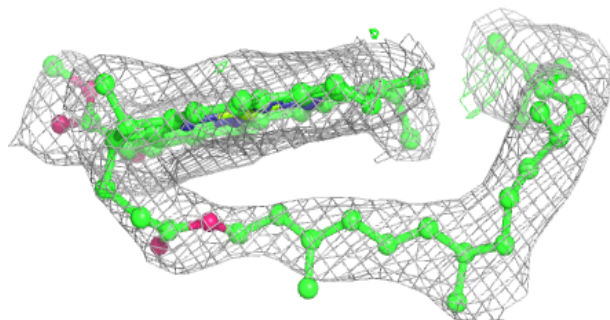
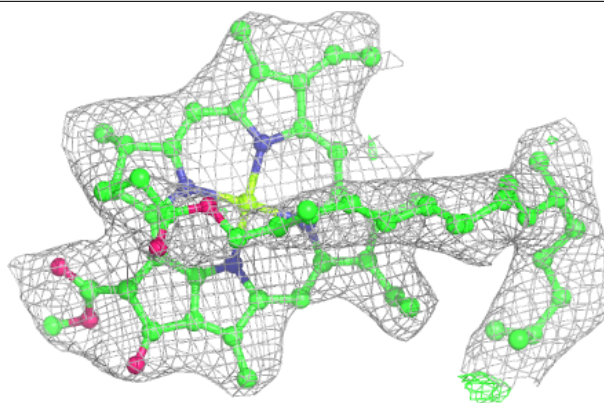
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



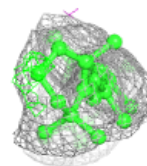
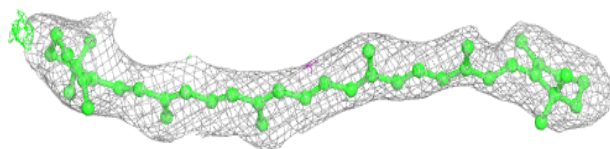
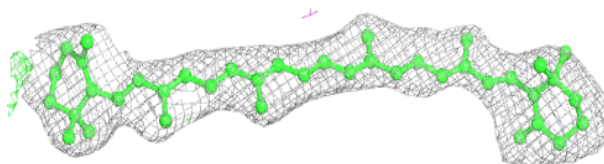


**Electron density around CLA B1 616:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

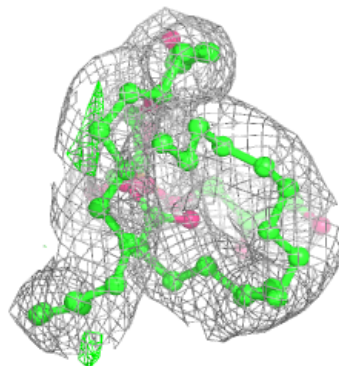
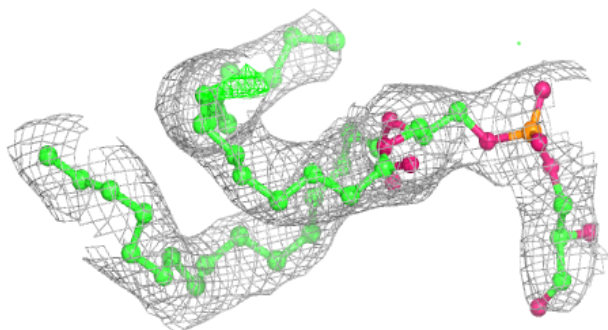
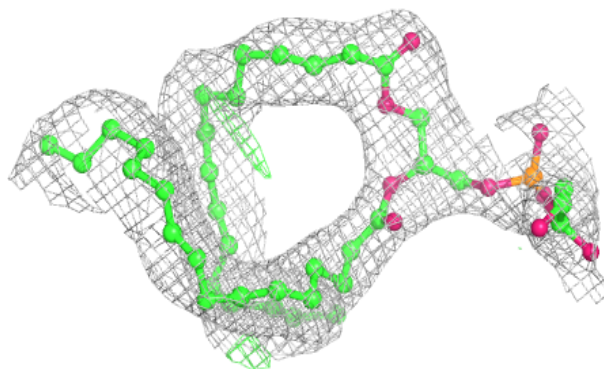
**Electron density around BCR b1 603:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

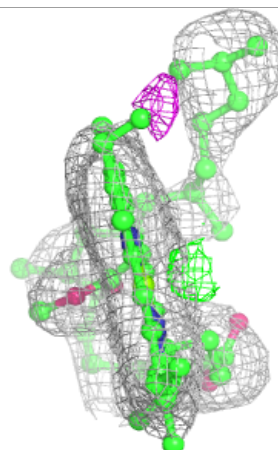
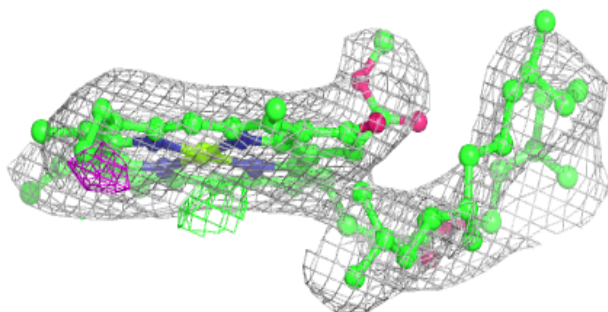
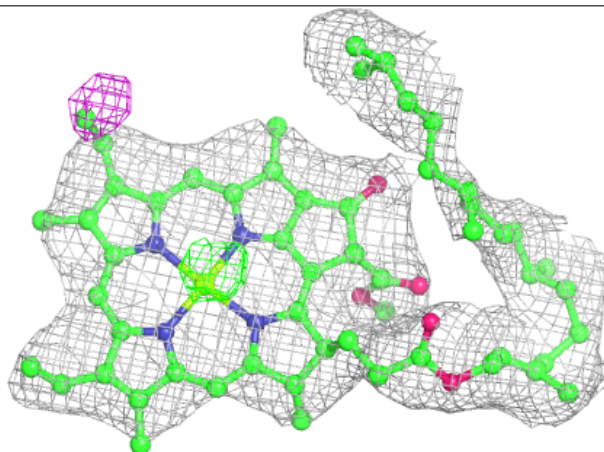


**Electron density around LHG d2 403:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around CLA b2 611:**

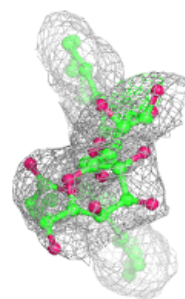
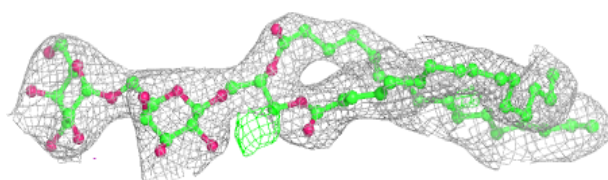
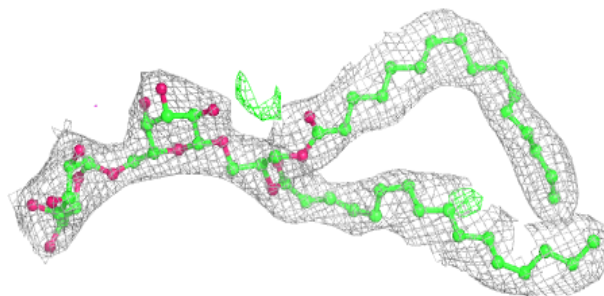
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



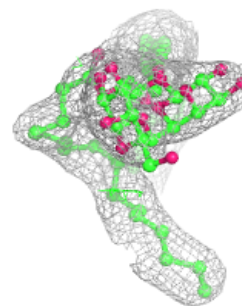
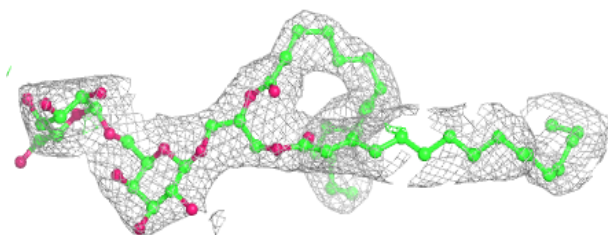
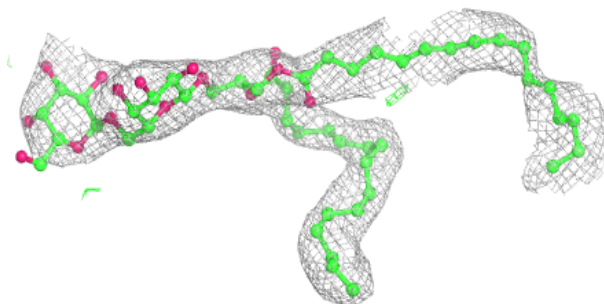


**Electron density around DGD C1 516:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

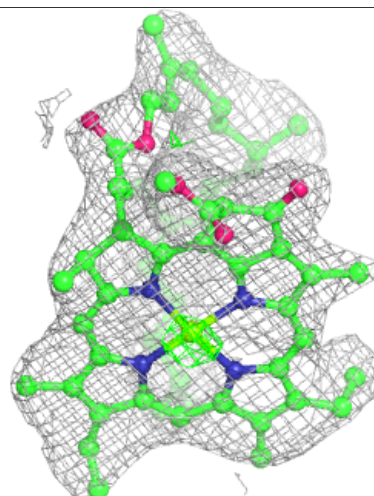
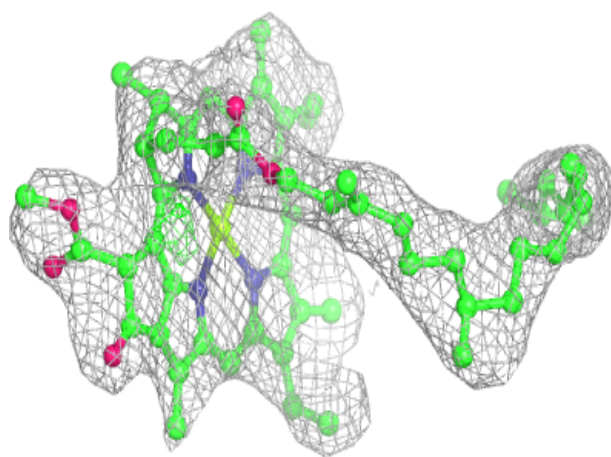
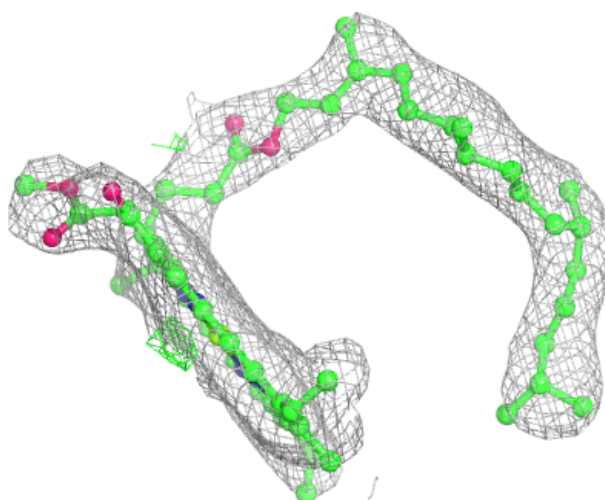
**Electron density around DGD H1 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



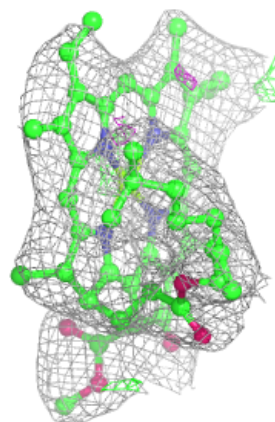
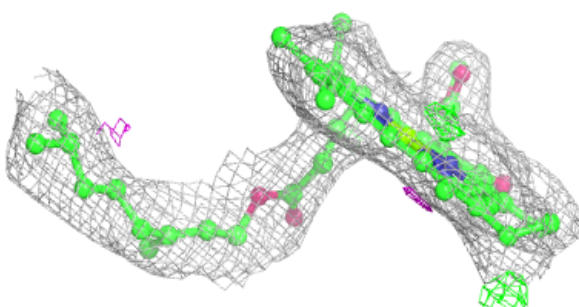
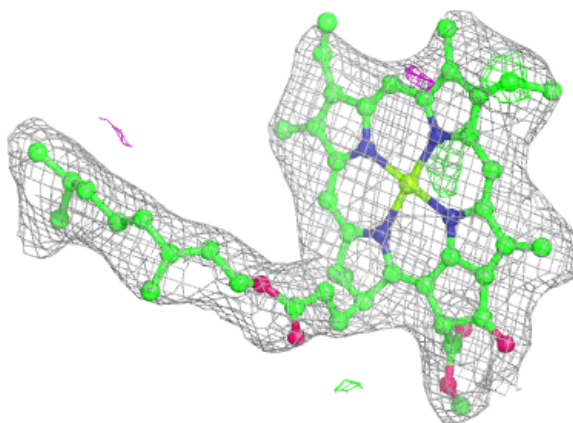
**Electron density around CLA b2 612:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

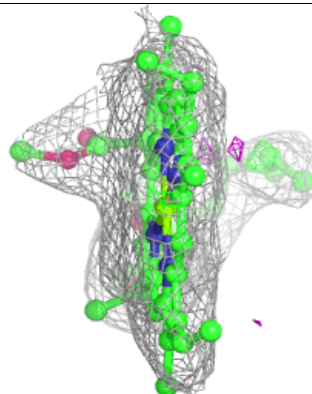
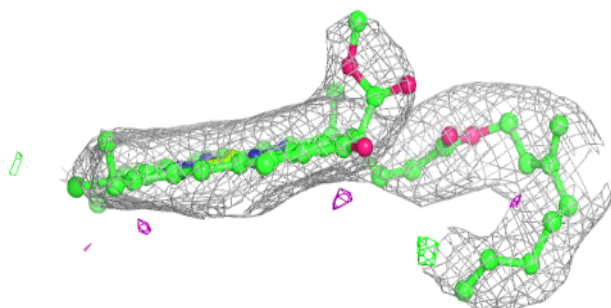
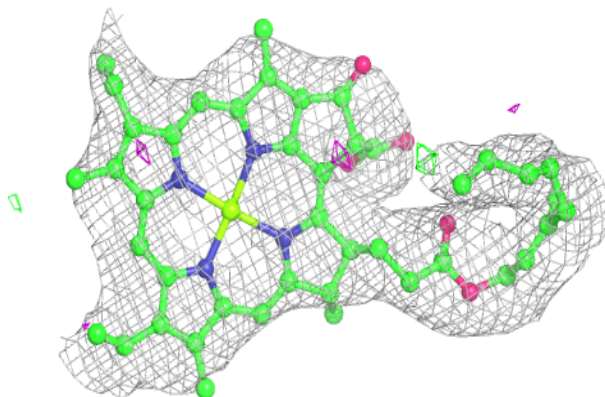


**Electron density around CLA A1 405:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

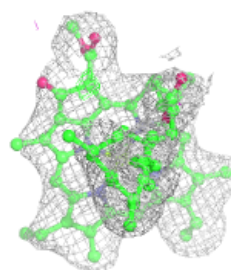
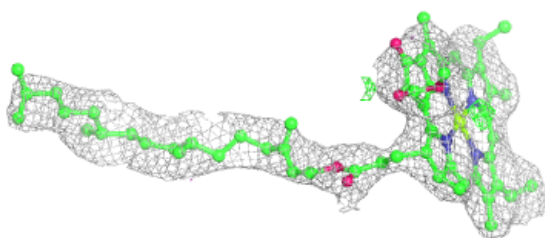
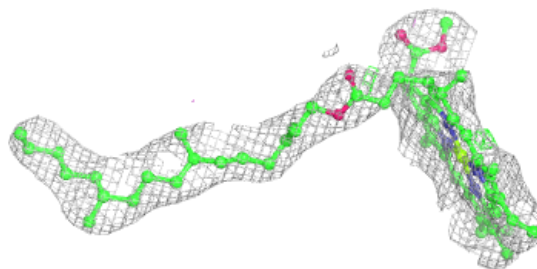
**Electron density around CLA c2 510:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

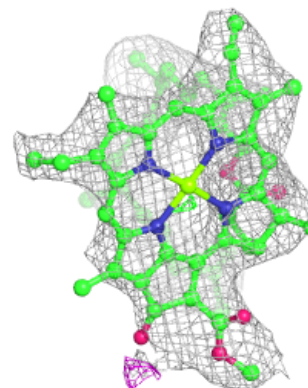
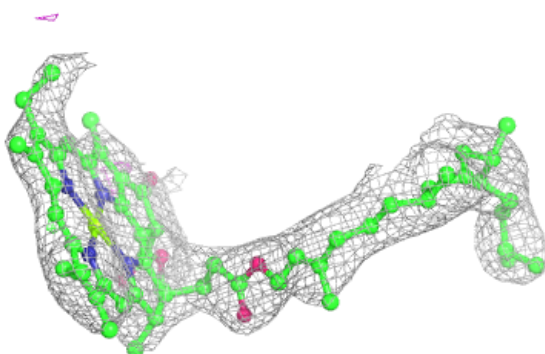
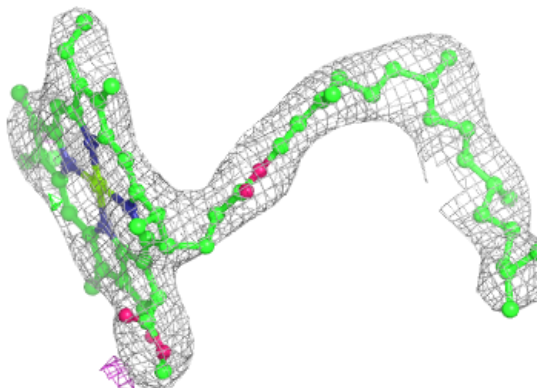


**Electron density around CLA B2 607:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around CLA B2 609:**

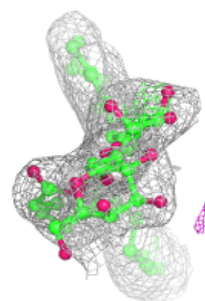
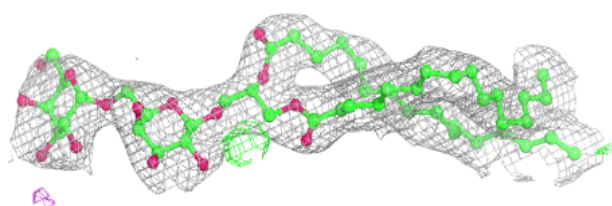
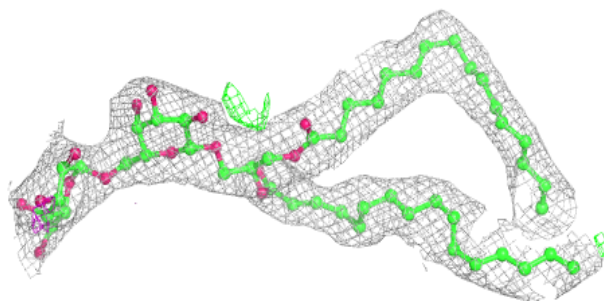
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



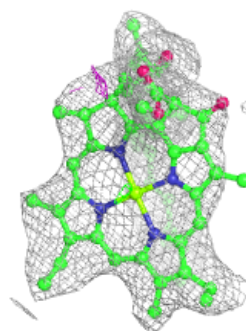
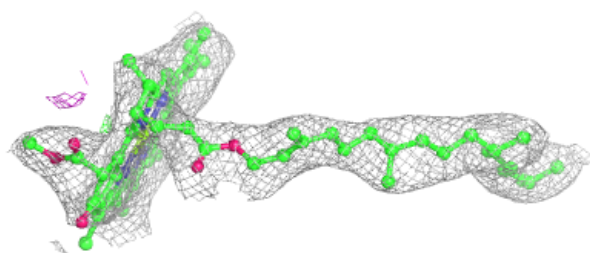
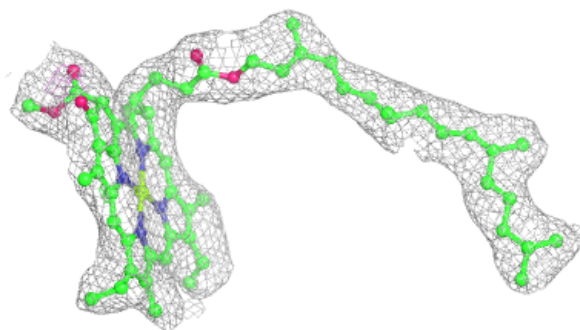


**Electron density around DGD c2 514:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

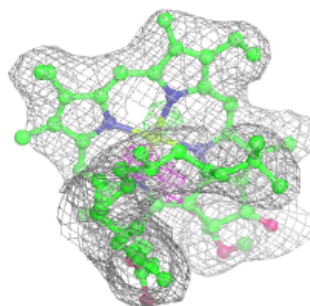
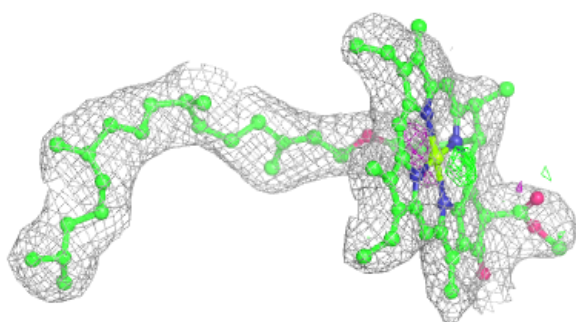
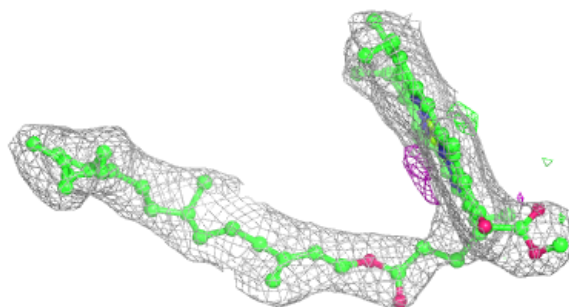
**Electron density around CLA b1 611:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

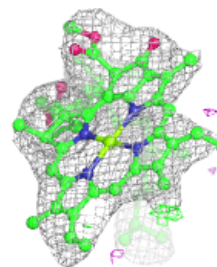
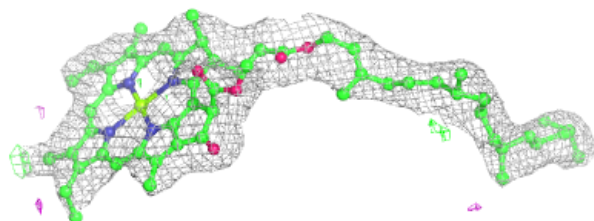
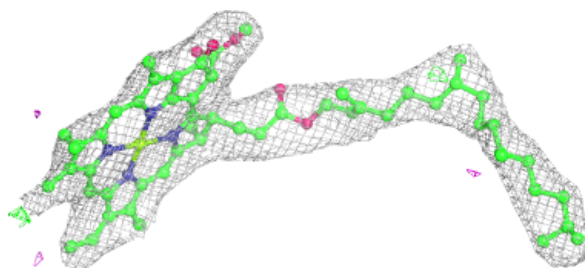


**Electron density around CLA B1 619:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

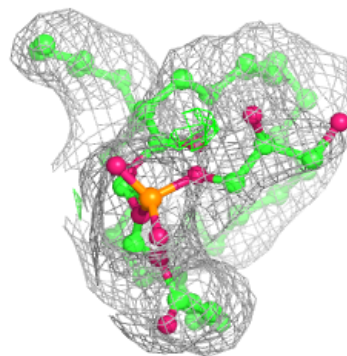
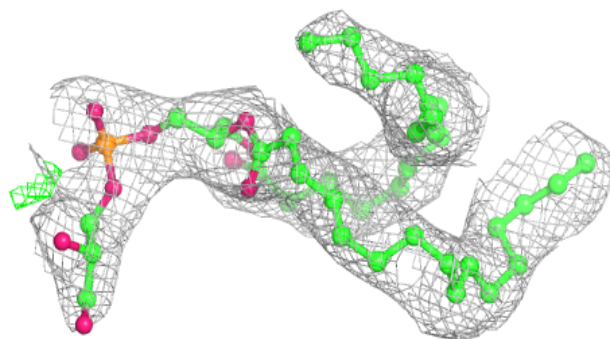
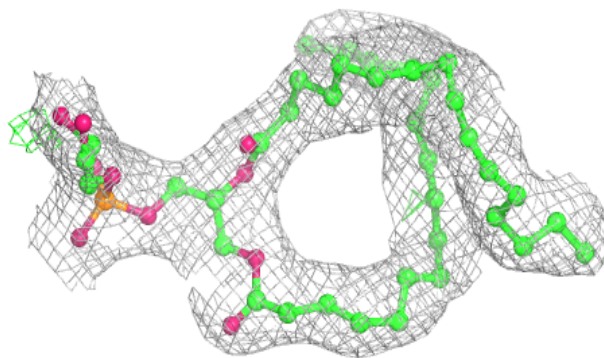
**Electron density around CLA A2 402:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



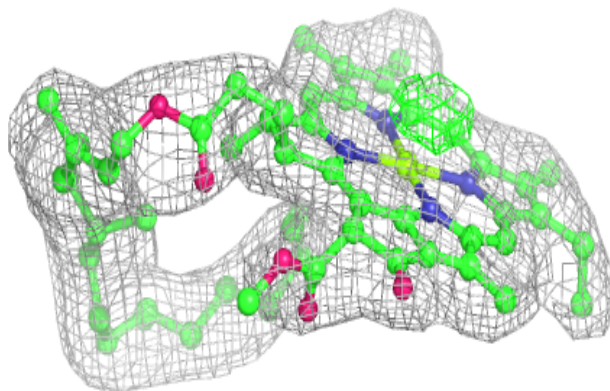
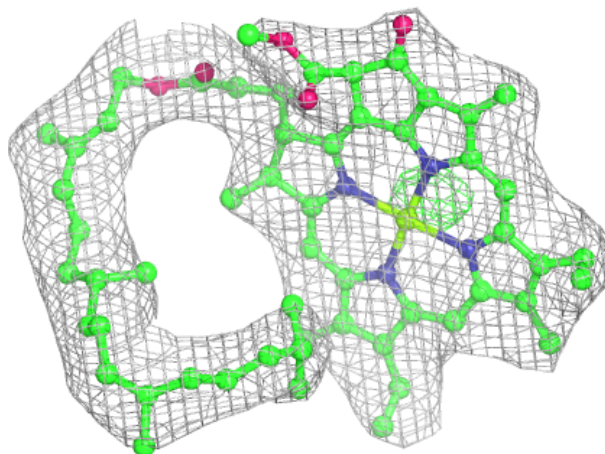
**Electron density around LHG B1 621:**

$2mF_o - DF_c$  (at 0.7 rmsd) in gray  
 $mF_o - DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around CLA b1 617:**

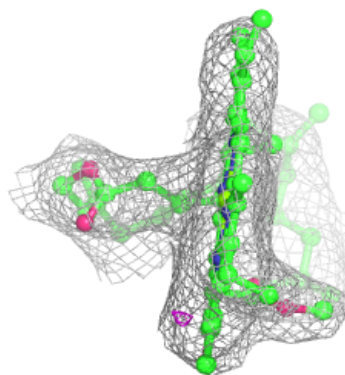
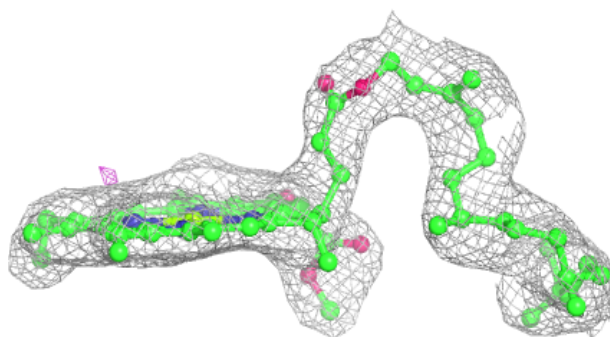
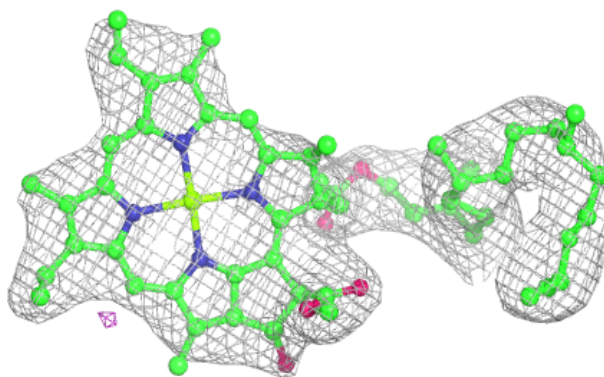
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



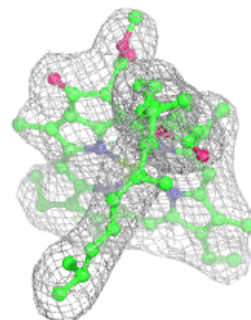
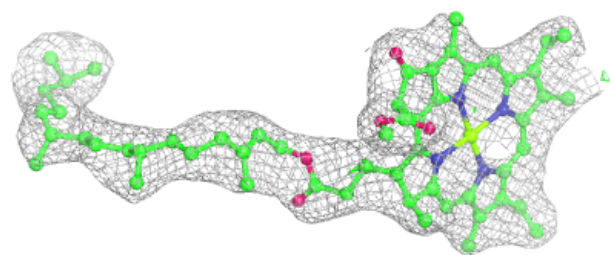
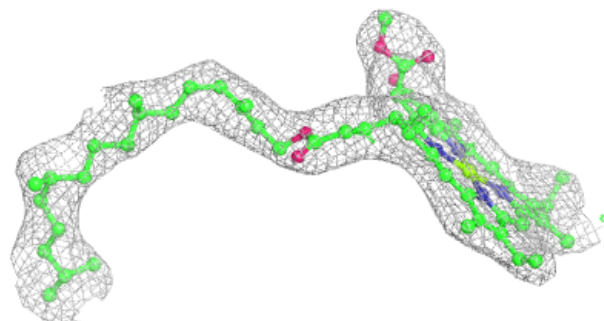


**Electron density around CLA b2 614:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

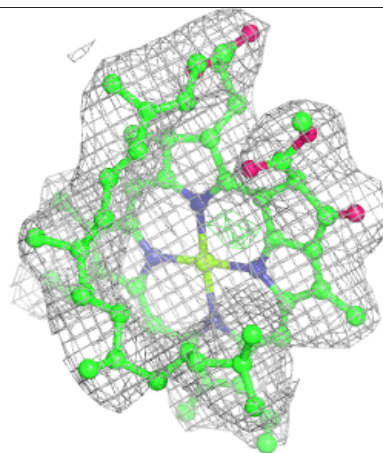
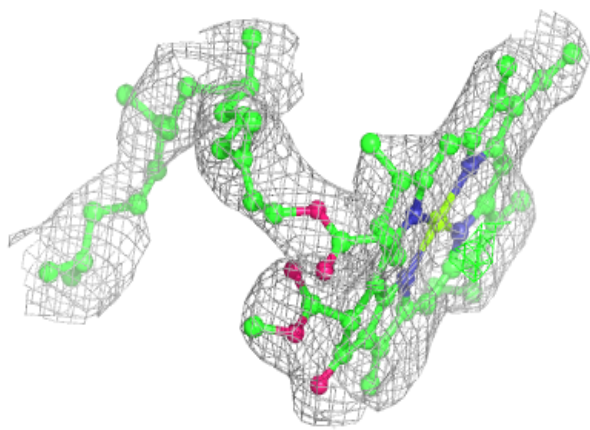
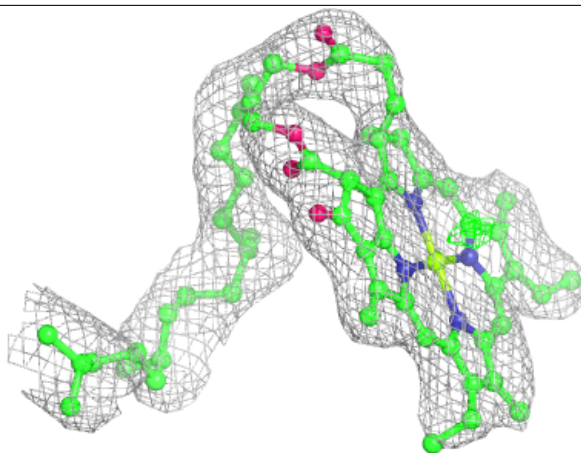
**Electron density around CLA d1 401:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



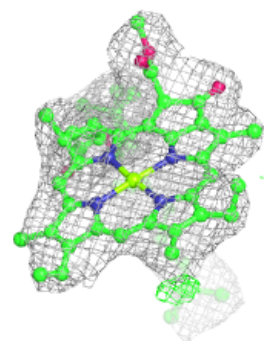
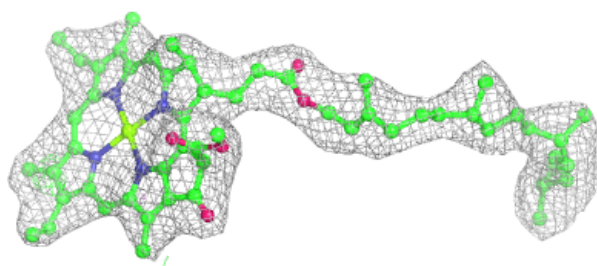
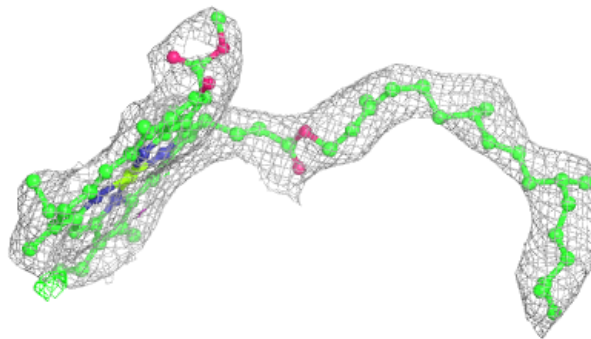
**Electron density around CLA B2 615:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



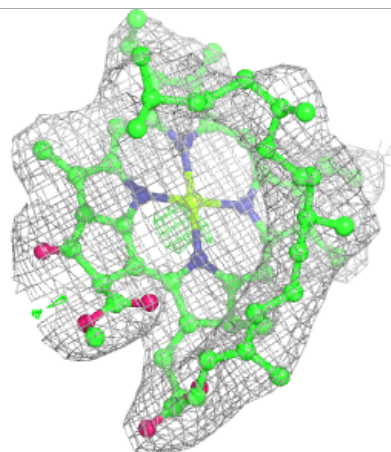
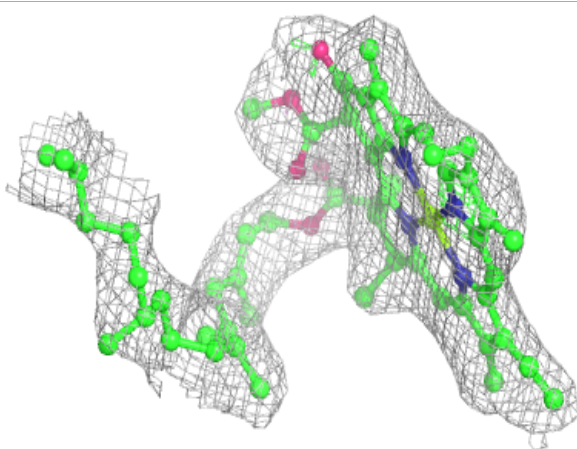
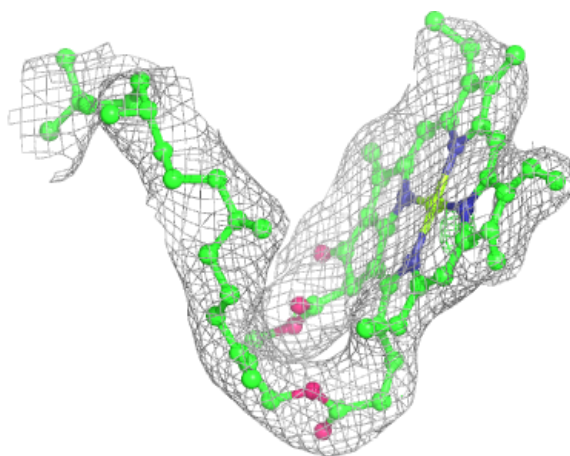
**Electron density around CLA d2 405:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



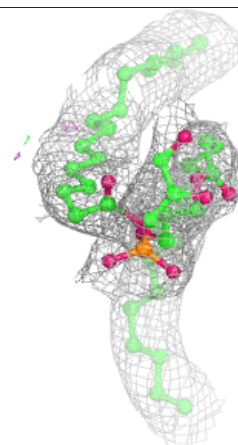
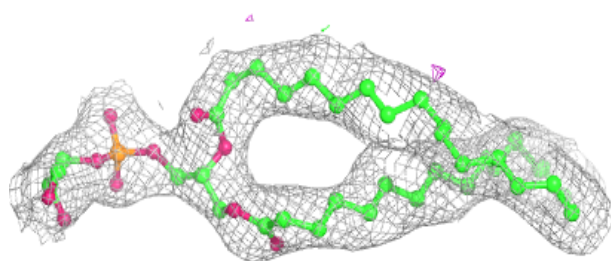
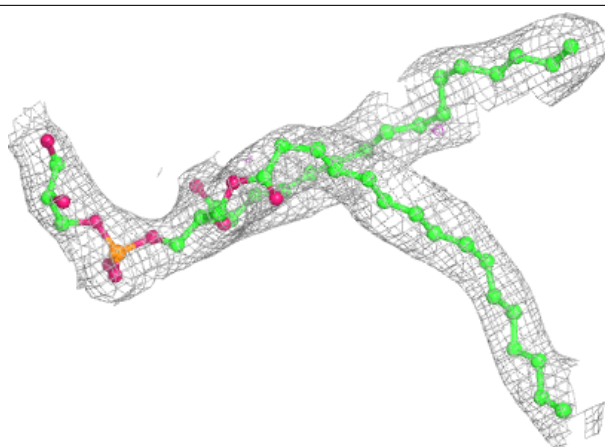
**Electron density around CLA B1 615:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around LHG d2 406:**

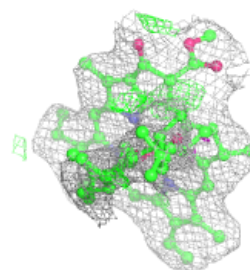
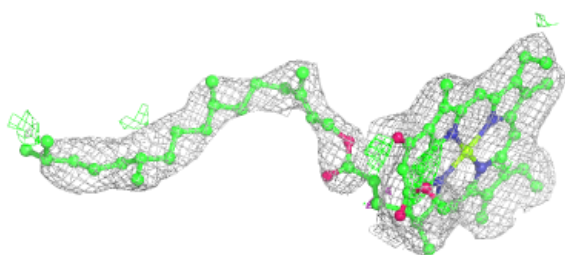
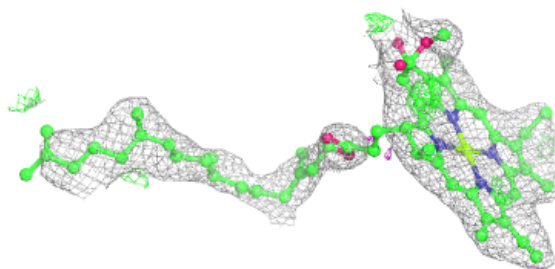
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



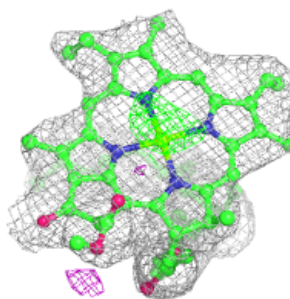
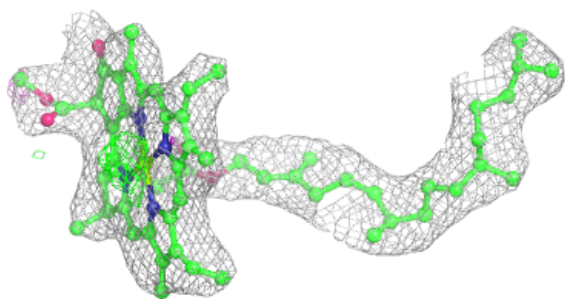
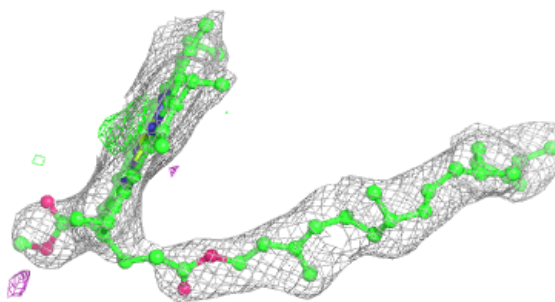


**Electron density around CLA c1 504:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

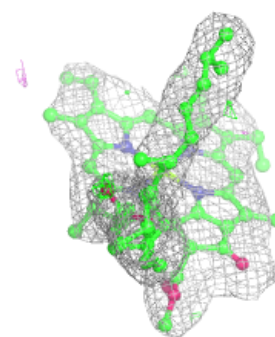
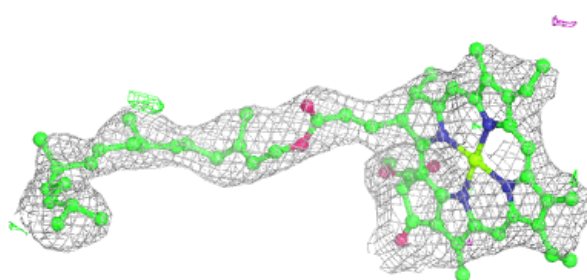
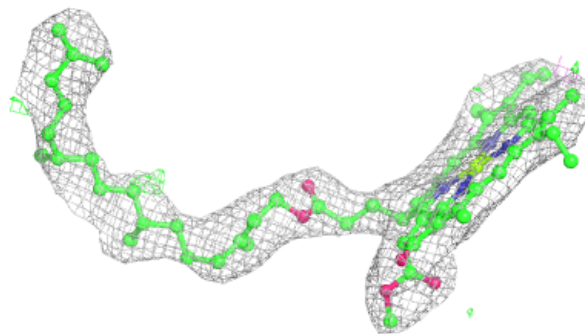
**Electron density around CLA b2 620:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

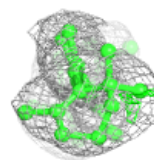
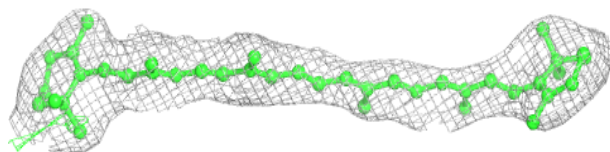
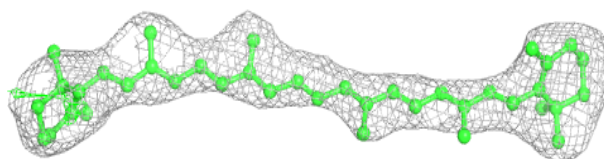


**Electron density around CLA D2 401:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

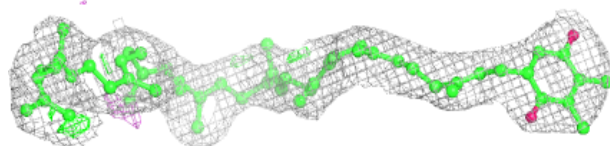
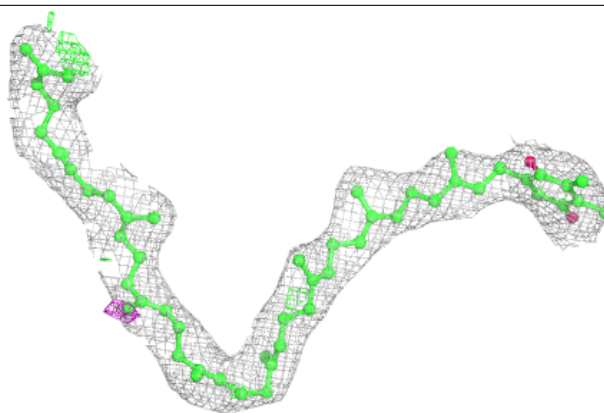
**Electron density around BCR a1 401:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

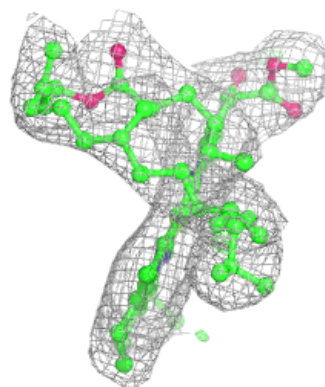
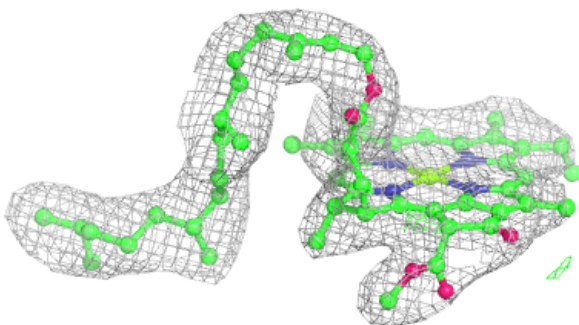
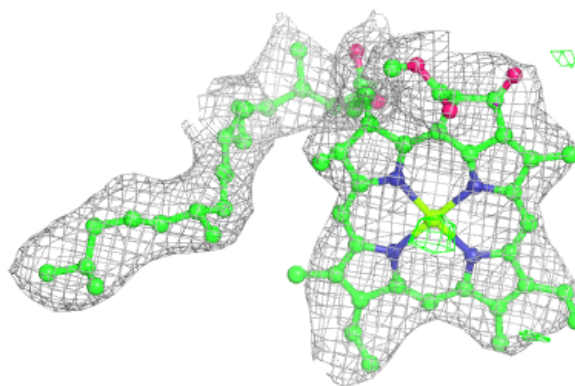


**Electron density around PL9 D1 408:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around CLA D2 406:**

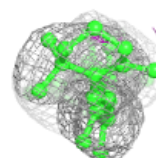
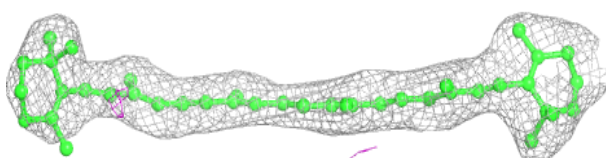
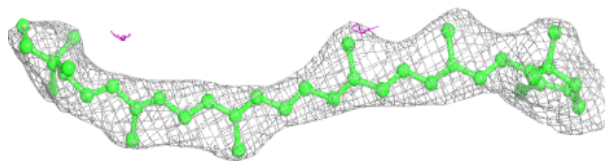
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



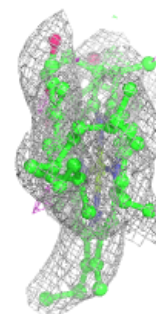
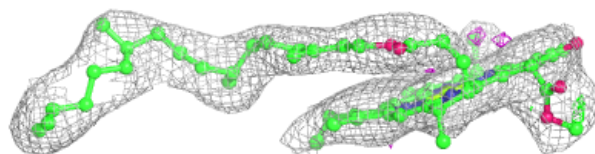
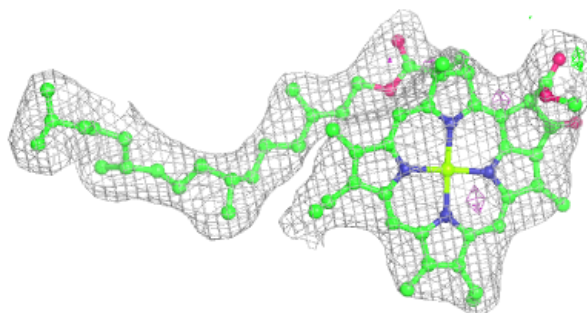


**Electron density around BCR h1 102:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

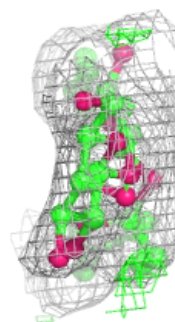
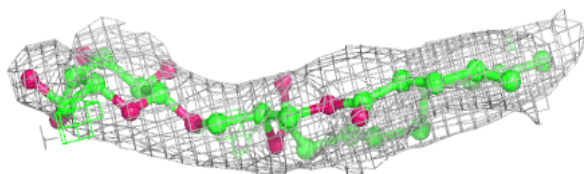
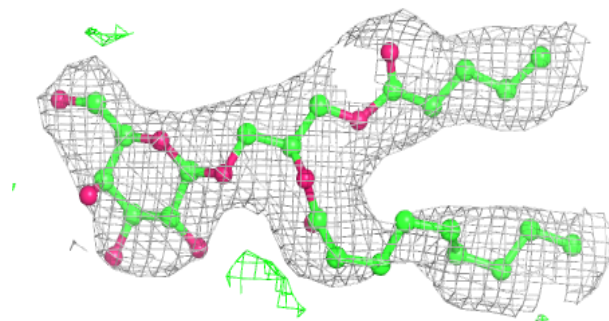
**Electron density around CLA b1 606:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



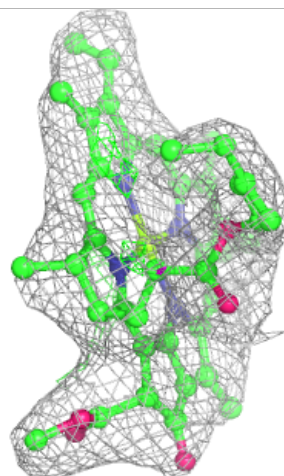
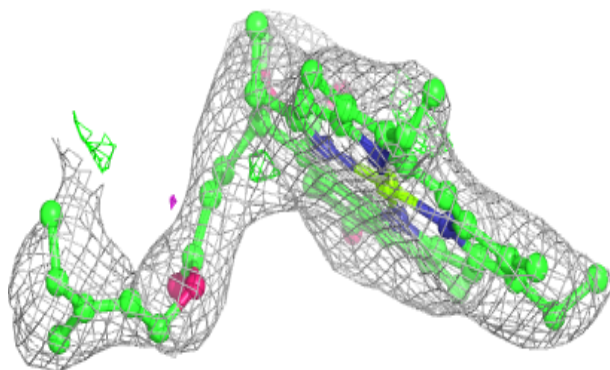
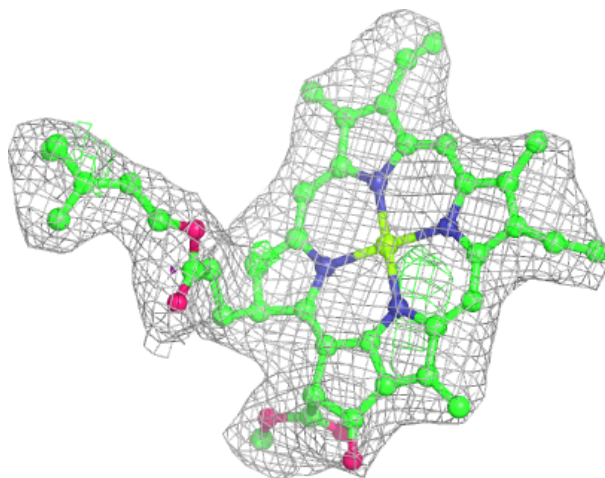
**Electron density around LMG d1 408:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



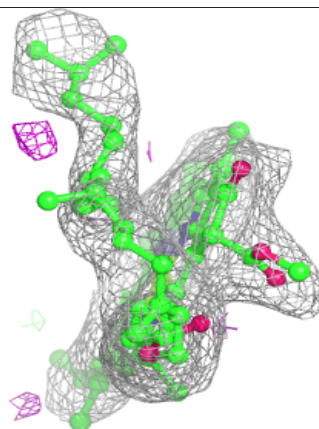
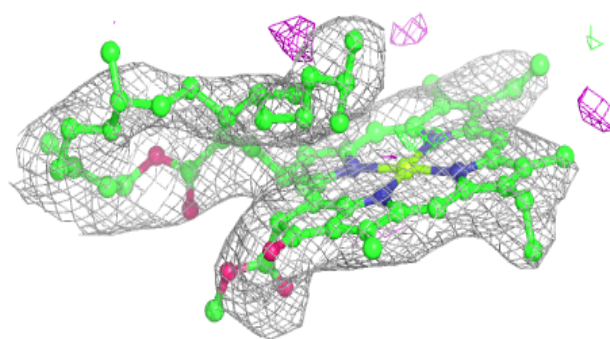
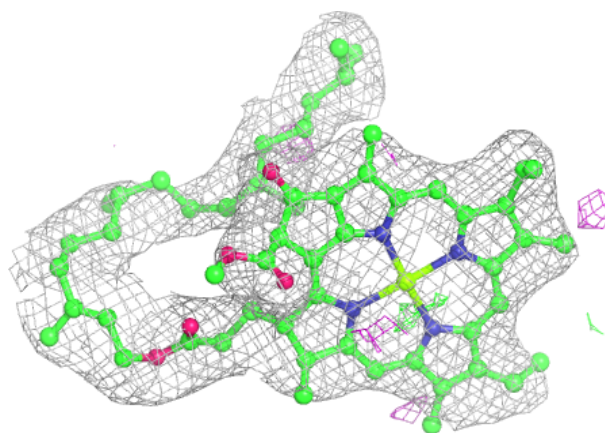
**Electron density around CLA A1 404:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



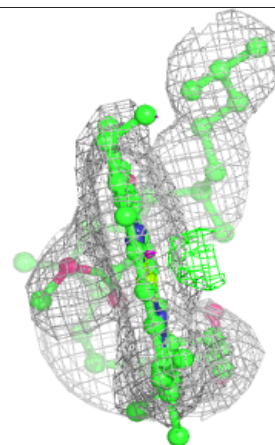
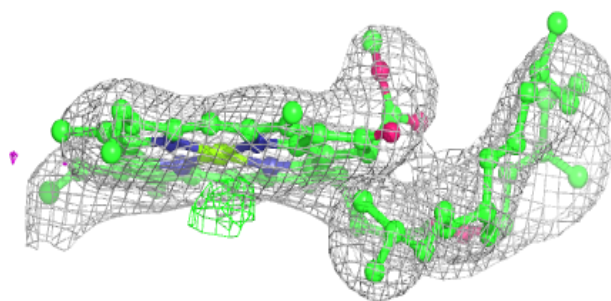
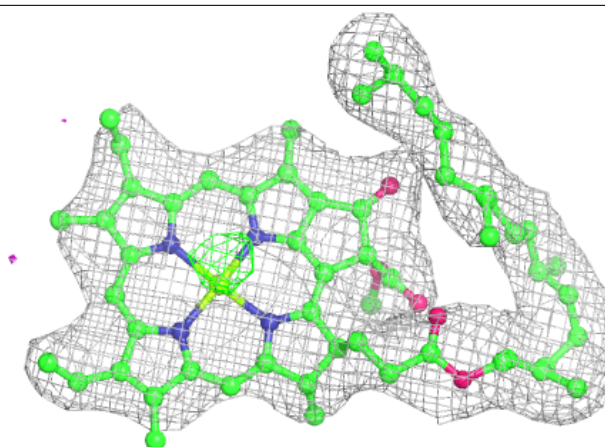
**Electron density around CLA C1 510:**

$2mF_o - DF_c$  (at 0.7 rmsd) in gray  
 $mF_o - DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



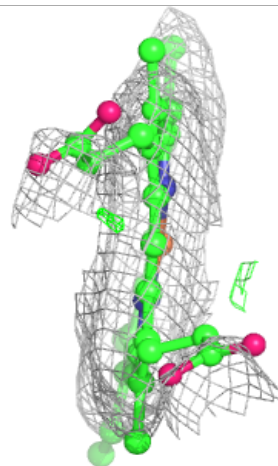
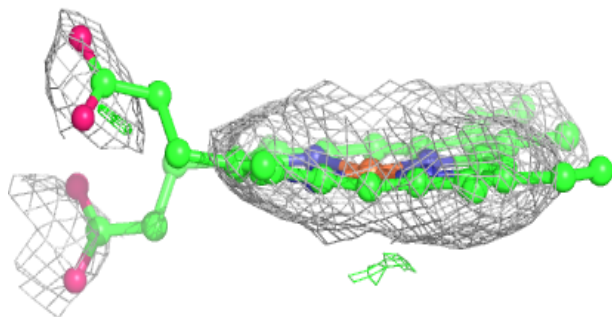
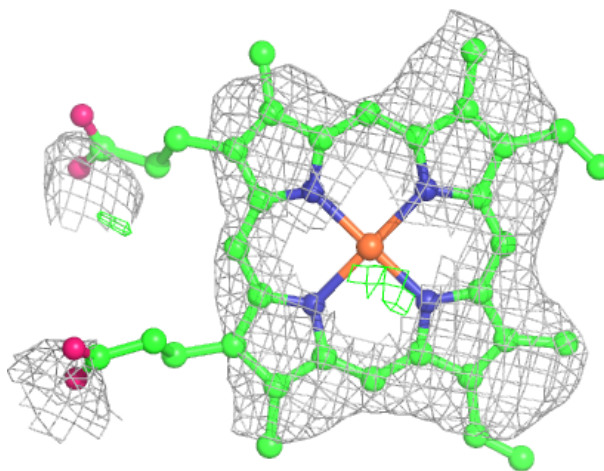
**Electron density around CLA B1 612:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around HEM f1 101:**

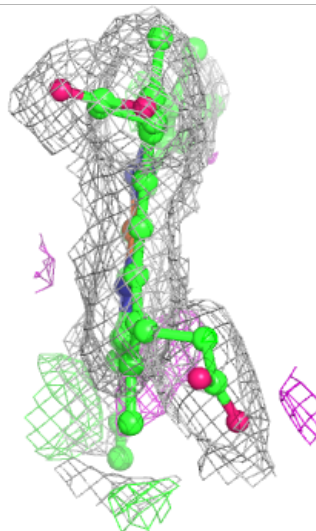
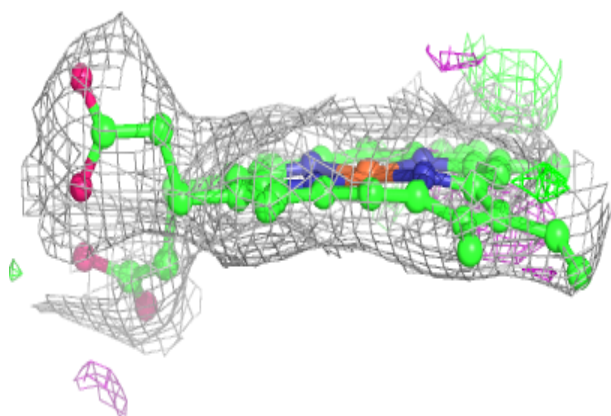
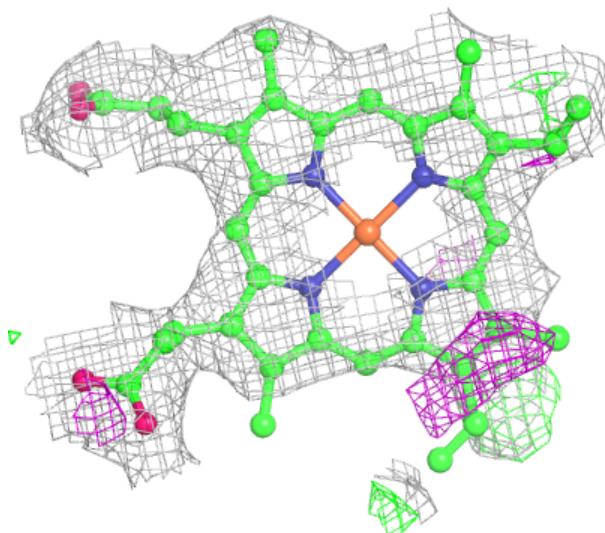
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





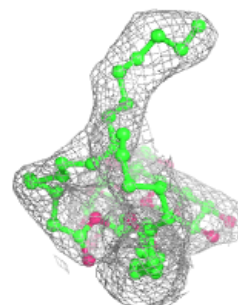
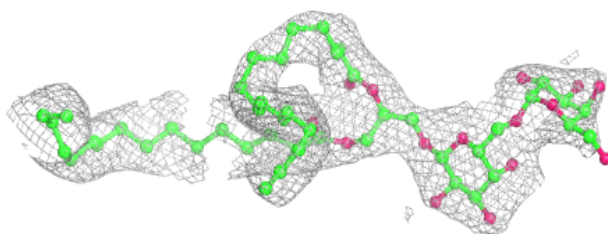
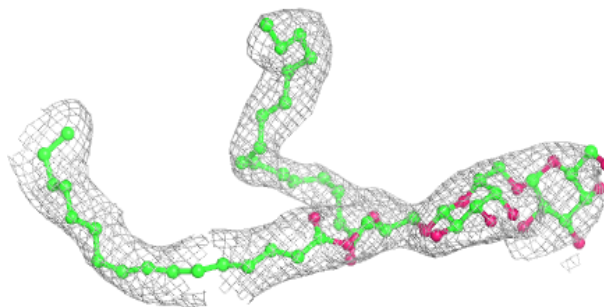
**Electron density around HEM v1 201:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

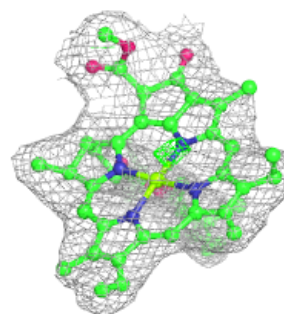
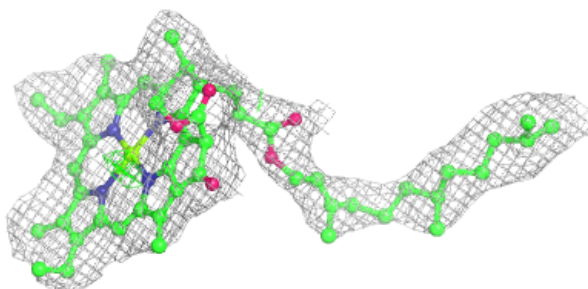
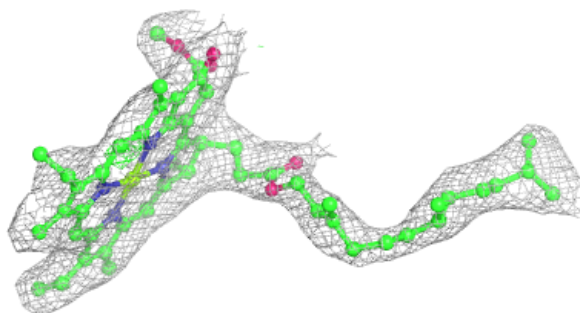


**Electron density around DGD h2 102:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around CLA C1 503:**

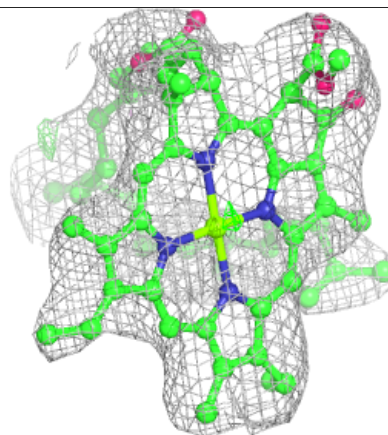
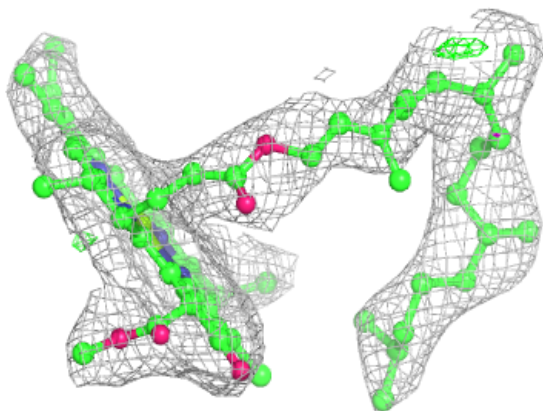
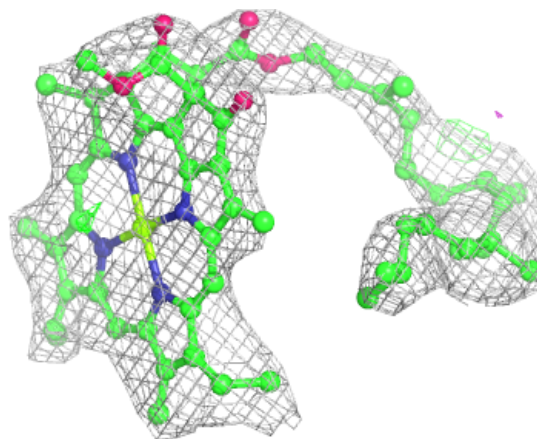
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



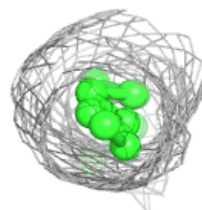
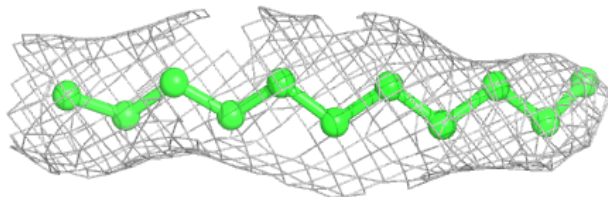
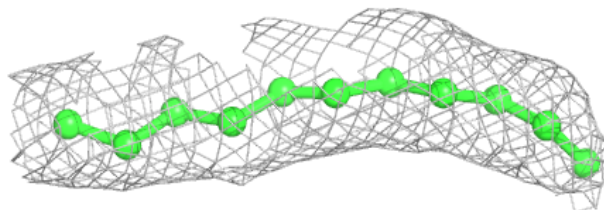


**Electron density around CLA C1 504:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

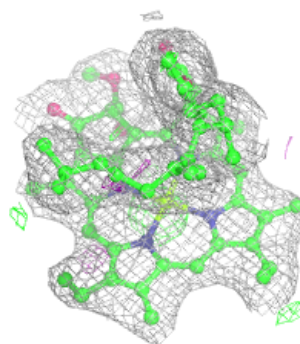
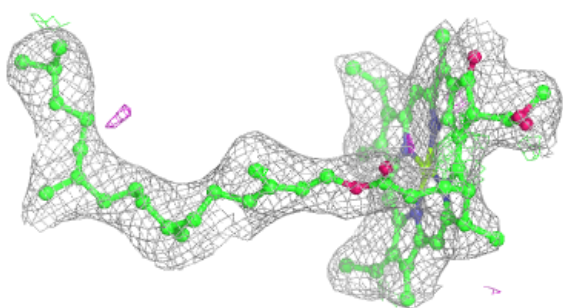
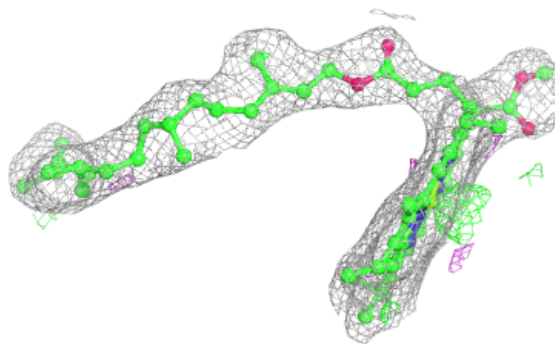
**Electron density around LMT M1 102:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

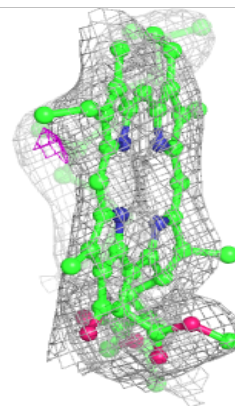
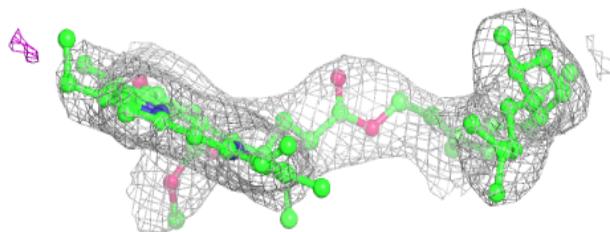
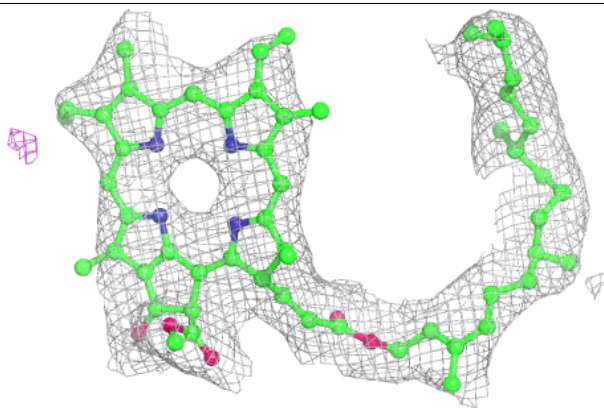


**Electron density around CLA b1 620:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

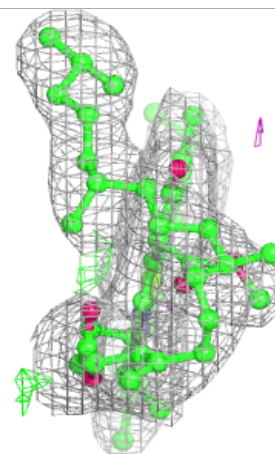
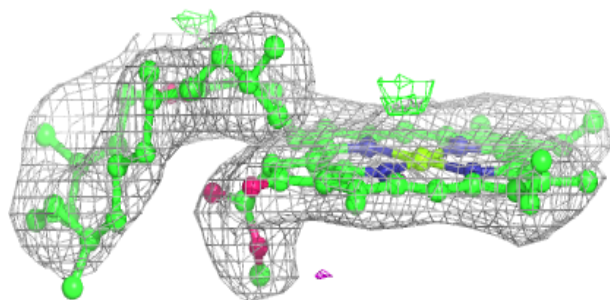
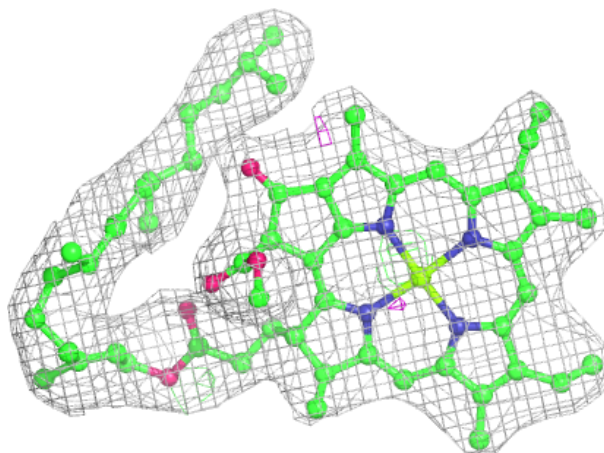
**Electron density around PHO A2 407:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



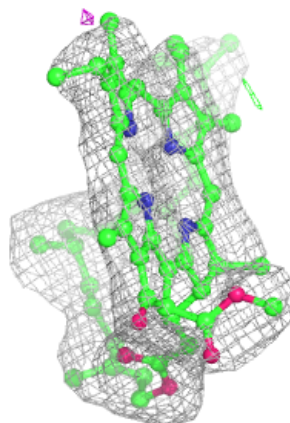
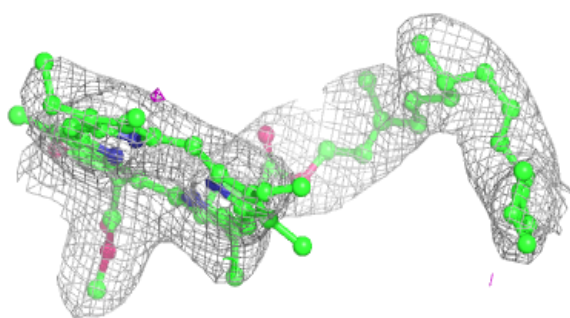
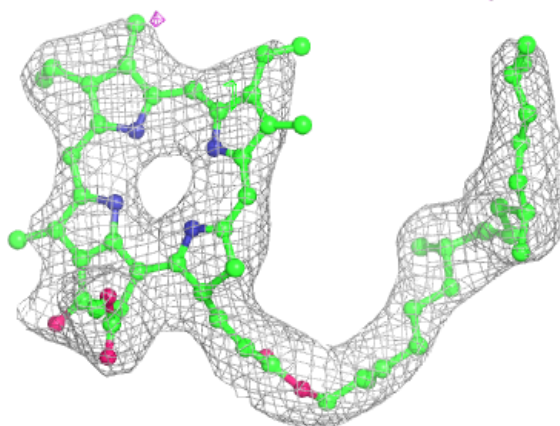
**Electron density around CLA b1 612:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

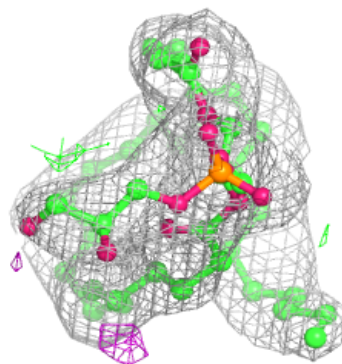
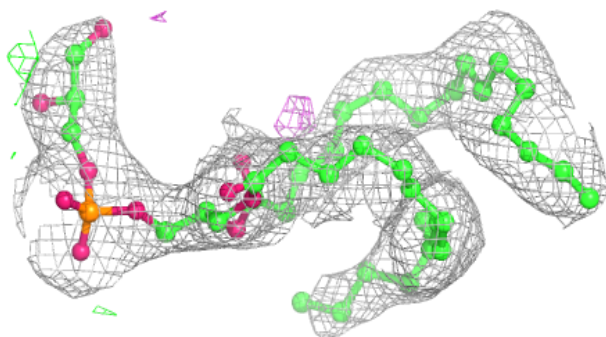
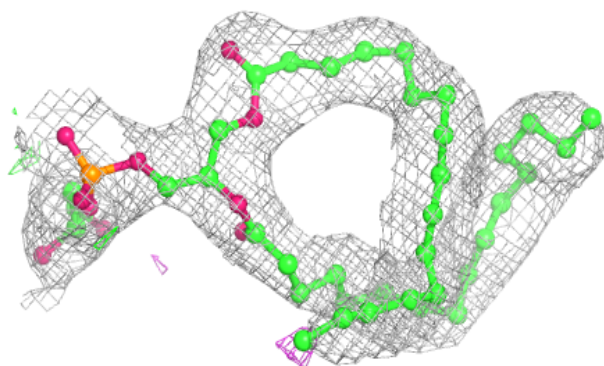


**Electron density around PHO d2 408:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around LHG D2 403:**

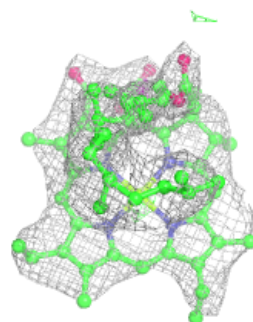
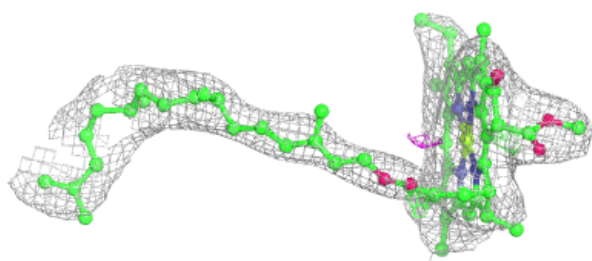
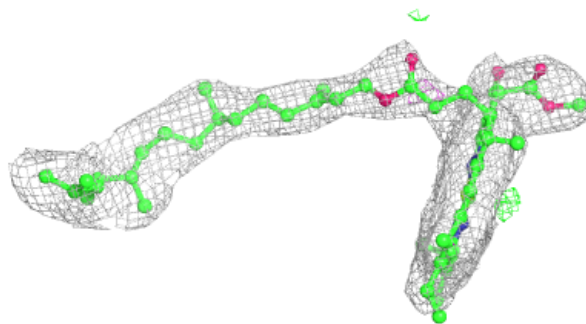
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





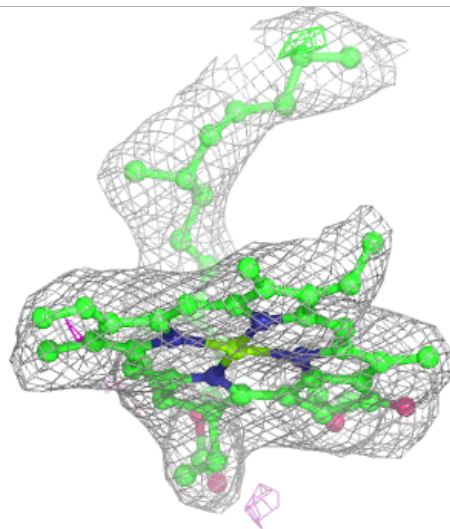
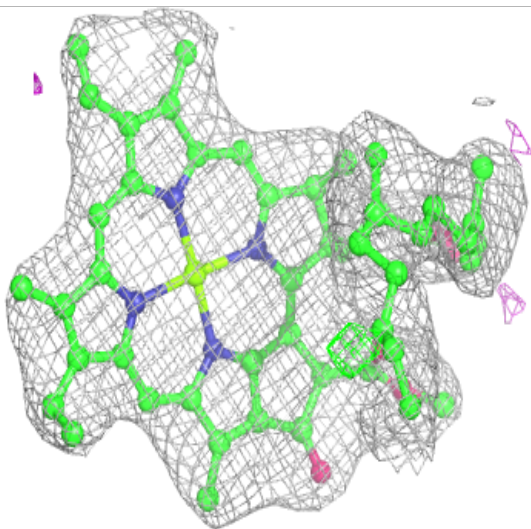
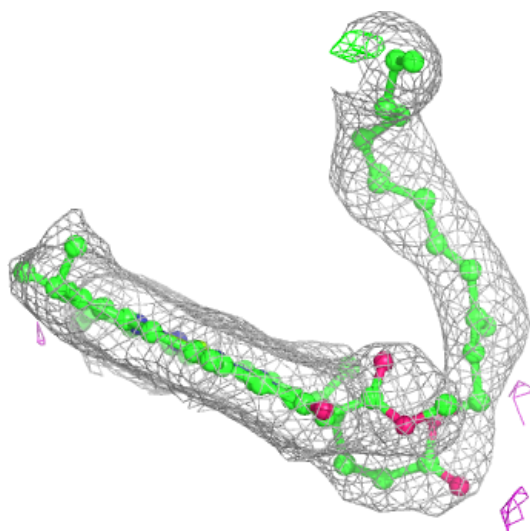
**Electron density around CLA b2 608:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



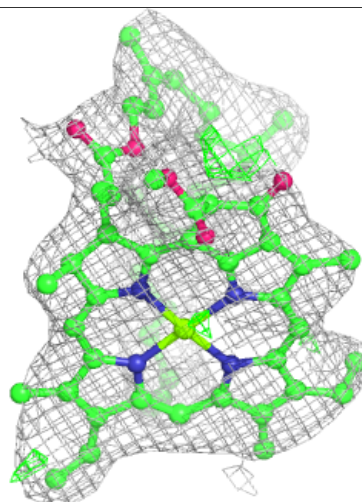
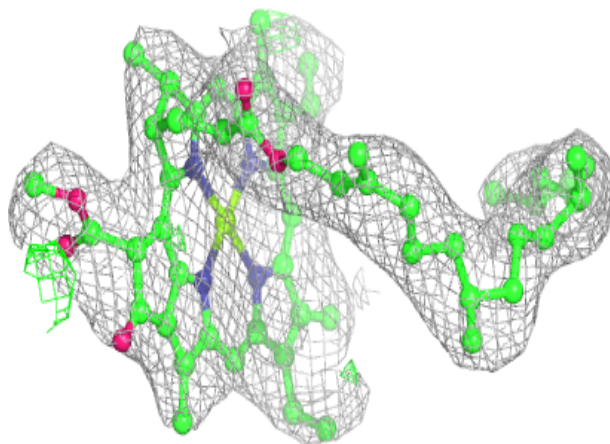
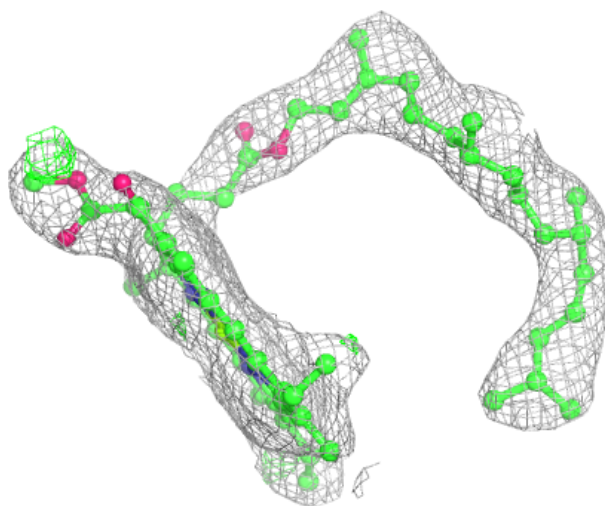
**Electron density around CLA b1 615:**

2mF<sub>o</sub>-DF<sub>c</sub> (at 0.7 rmsd) in gray  
mF<sub>o</sub>-DF<sub>c</sub> (at 3 rmsd) in purple (negative)  
and green (positive)



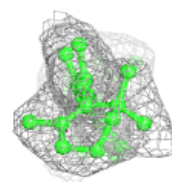
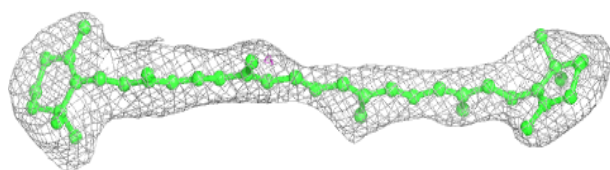
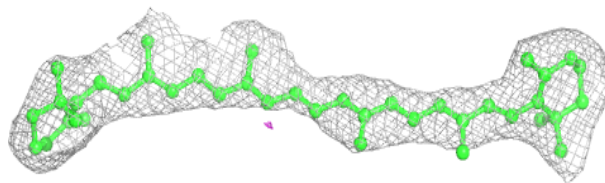
**Electron density around CLA B2 613:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

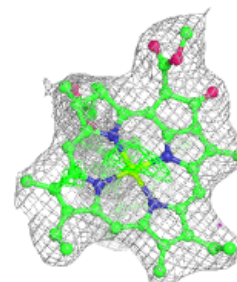
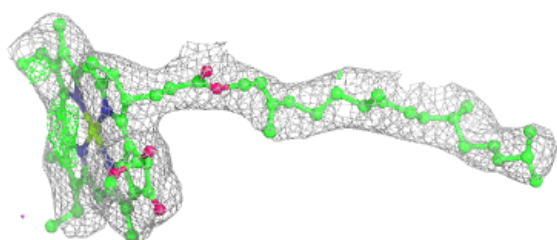
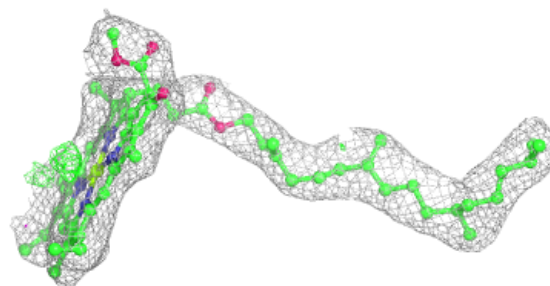


**Electron density around BCR a2 402:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around CLA b1 607:**

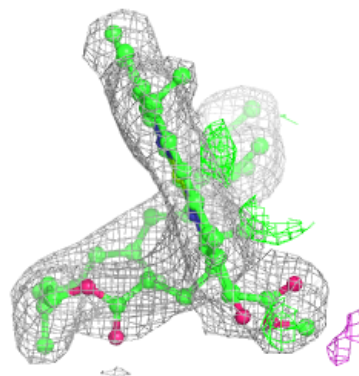
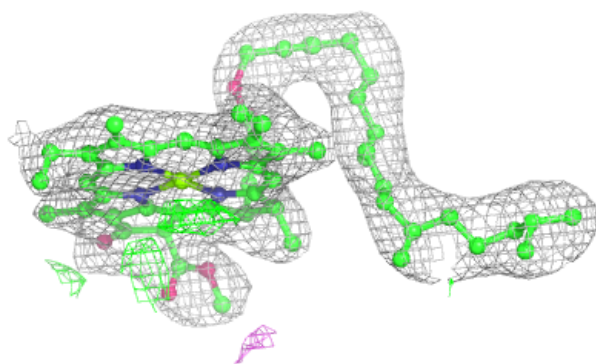
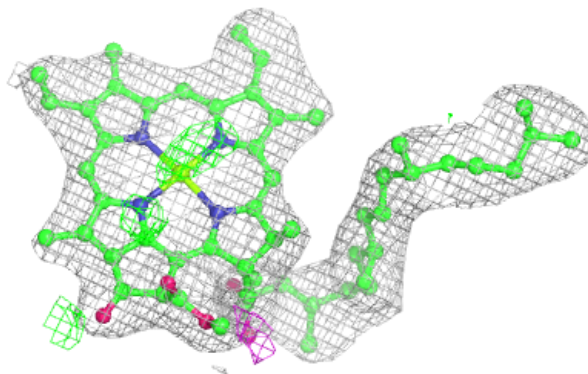
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



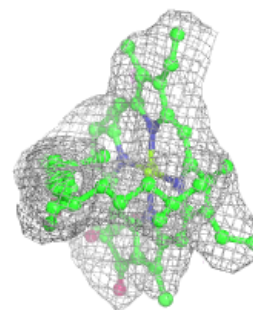
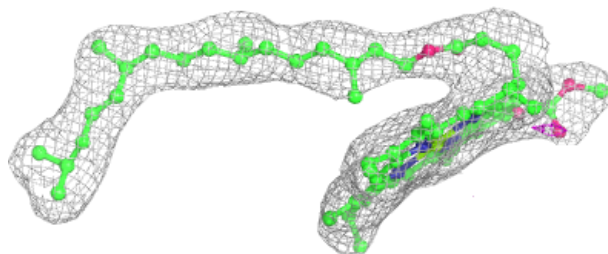
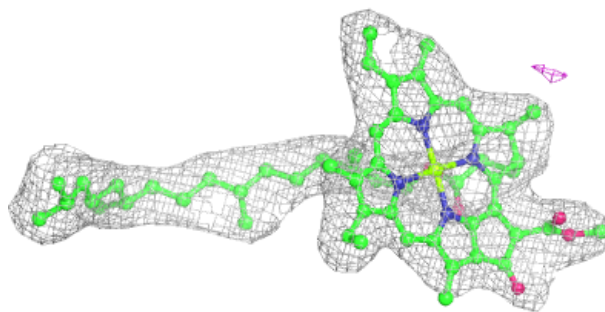


**Electron density around CLA d1 404:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

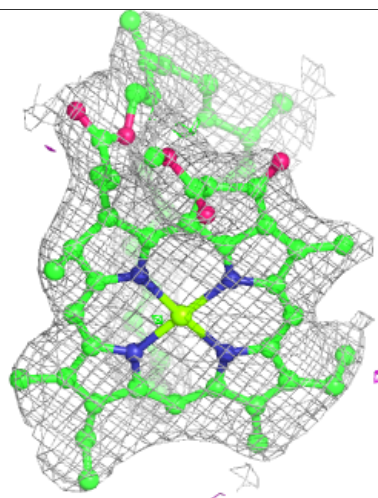
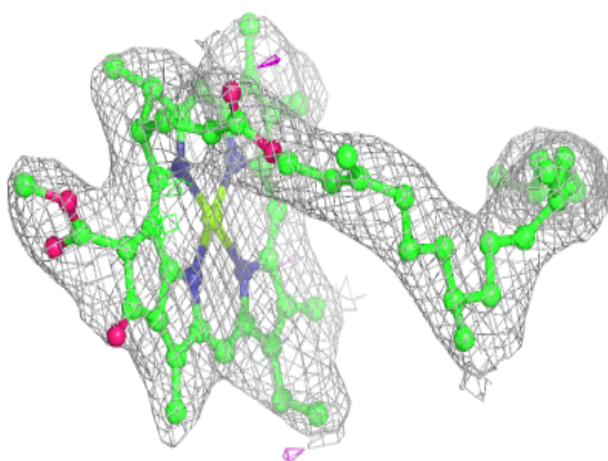
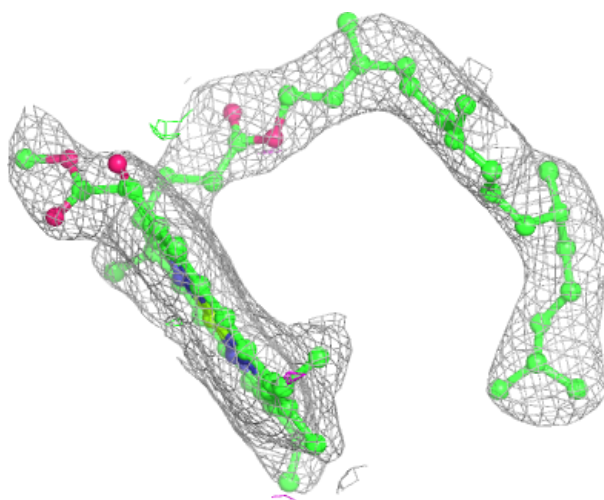
**Electron density around CLA b1 610:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



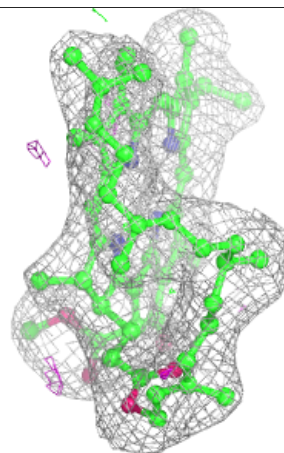
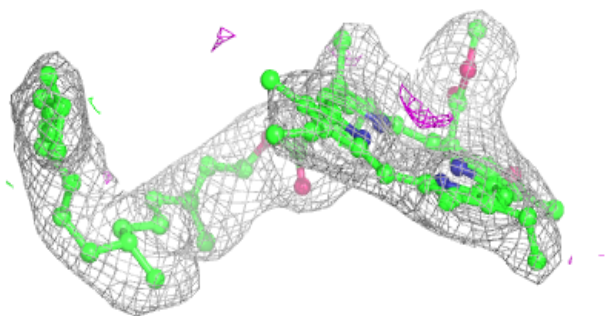
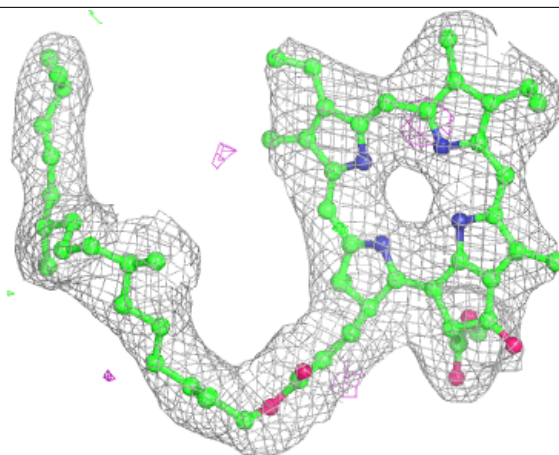
**Electron density around CLA B1 613:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

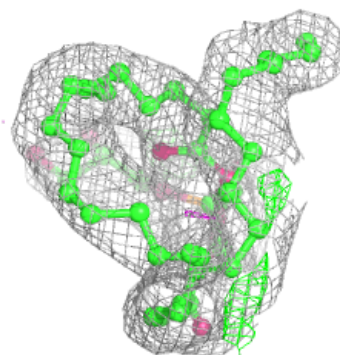
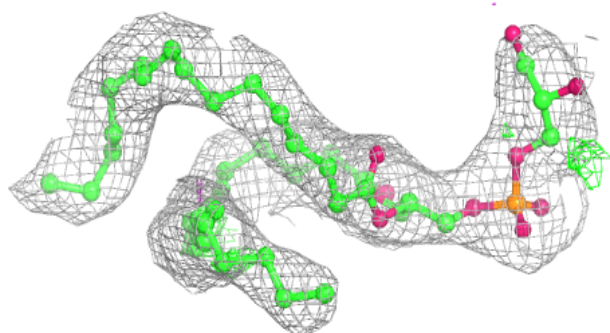
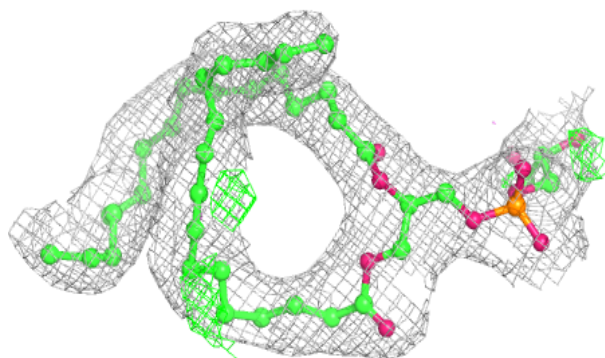


**Electron density around PHO d1 403:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

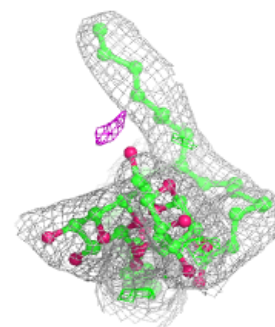
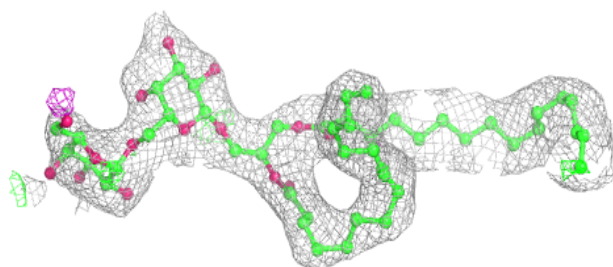
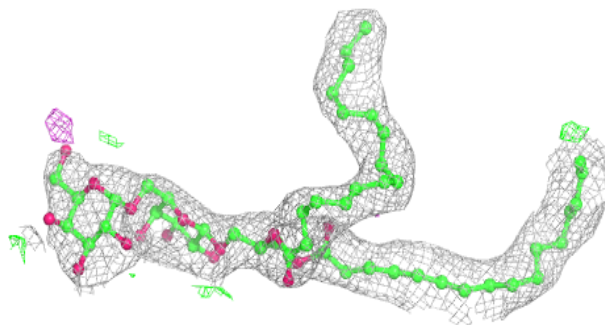
**Electron density around LHG b1 622:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

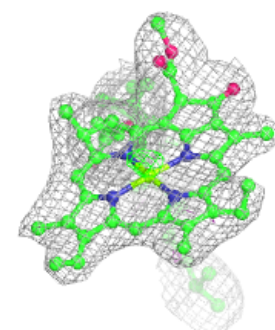
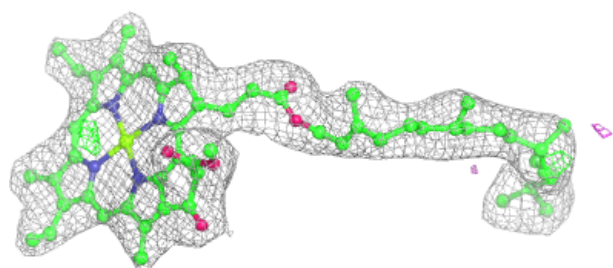
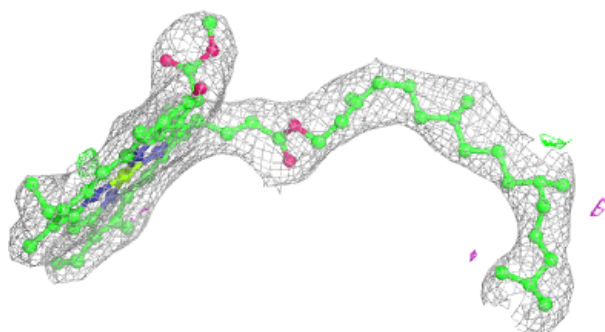


**Electron density around DGD h1 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around CLA D1 402:**

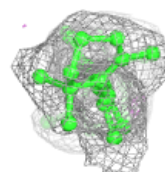
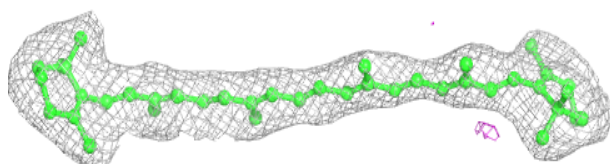
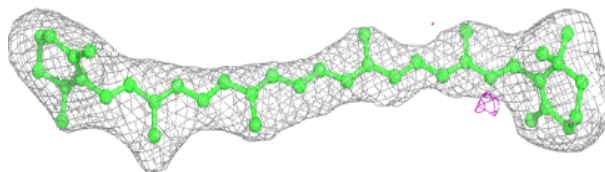
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



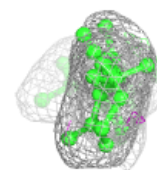
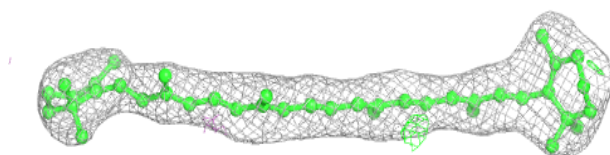
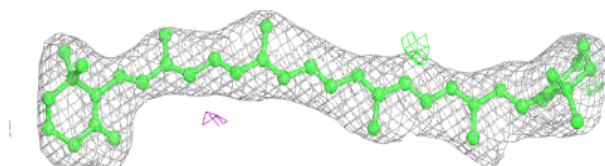


**Electron density around BCR A1 401:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

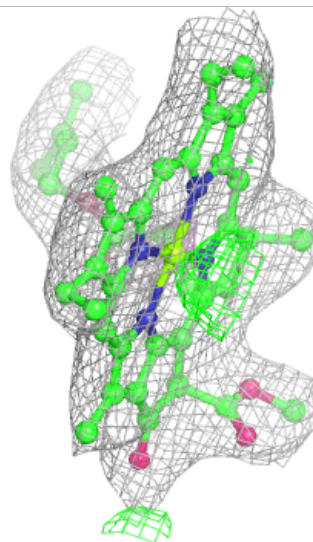
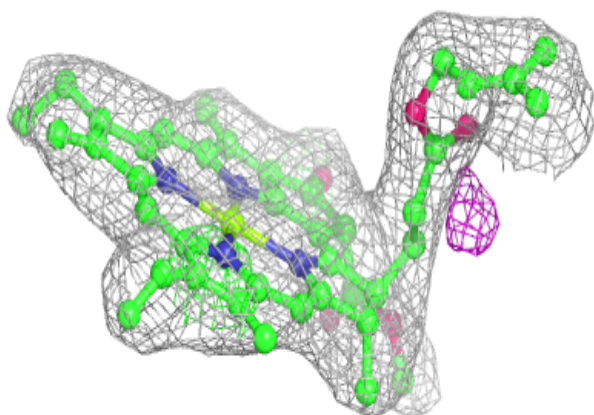
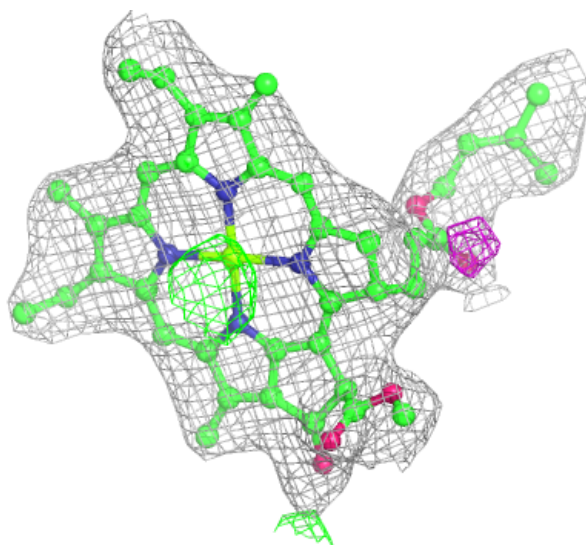
**Electron density around BCR b1 601:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



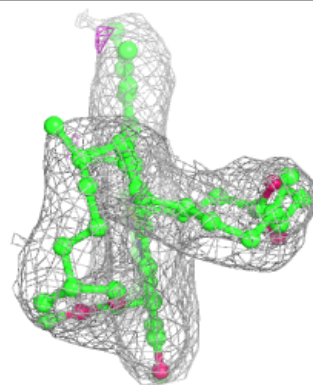
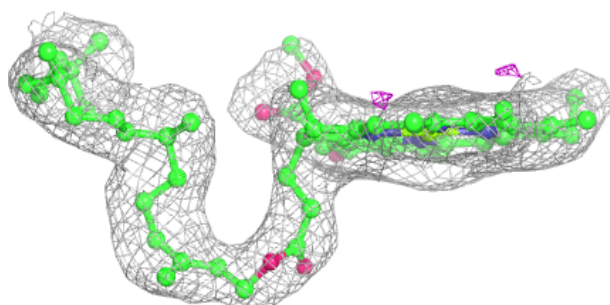
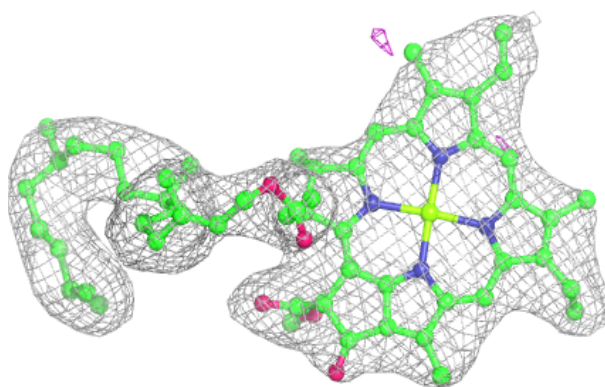
**Electron density around CLA a1 405:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

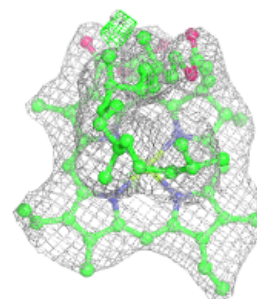
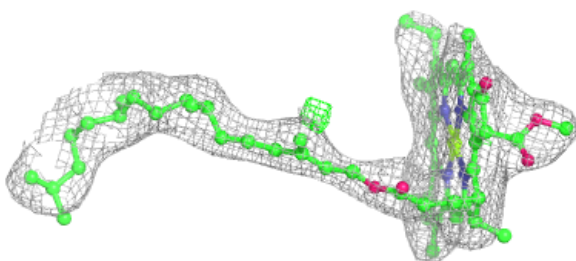
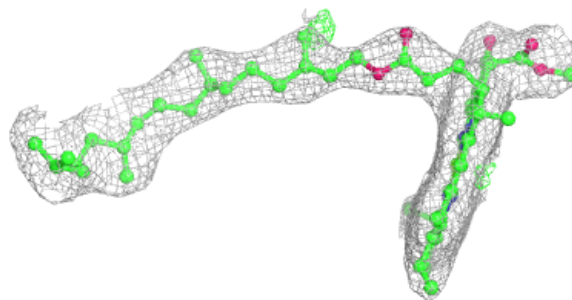


**Electron density around CLA B1 614:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around CLA B2 608:**

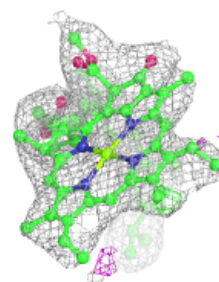
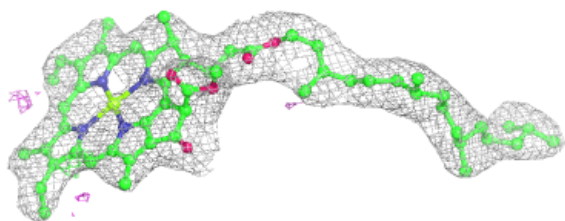
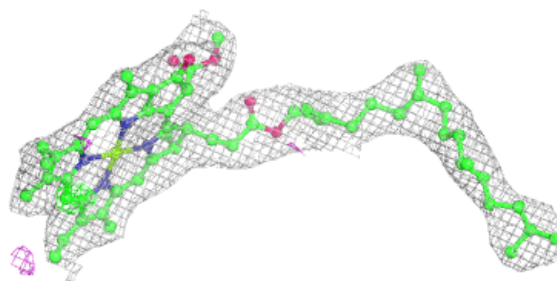
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



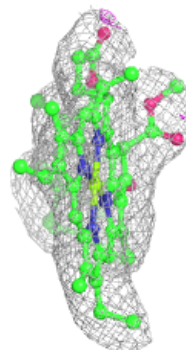
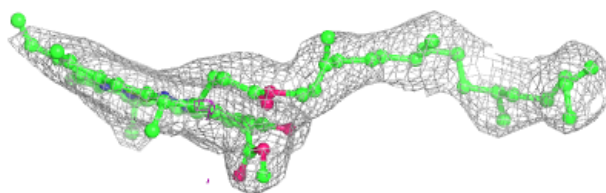
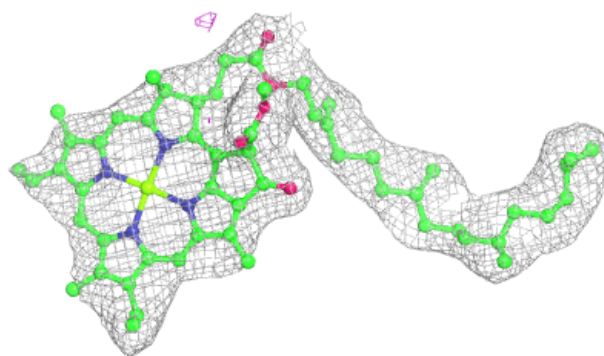


**Electron density around CLA a2 404:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

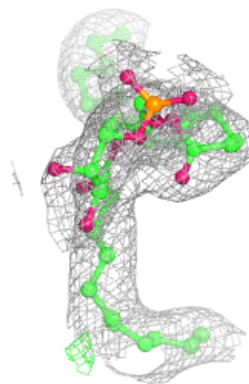
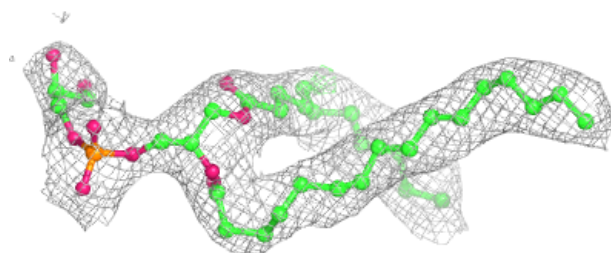
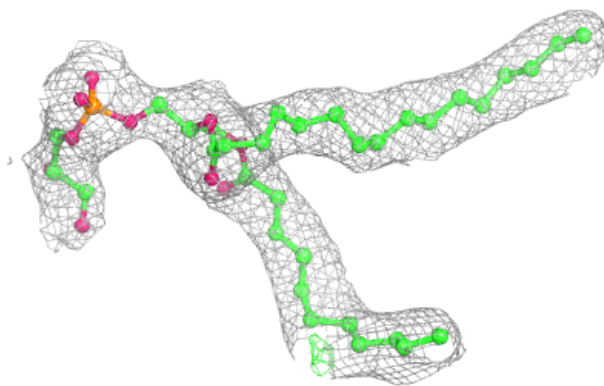
**Electron density around CLA b1 605:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



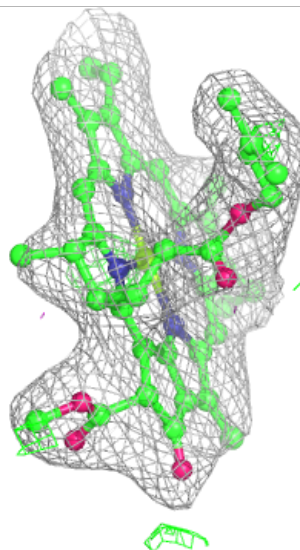
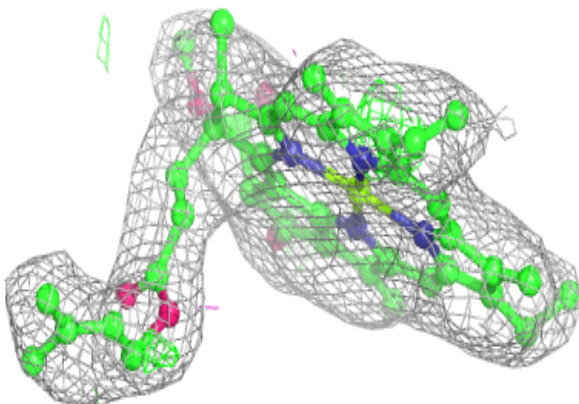
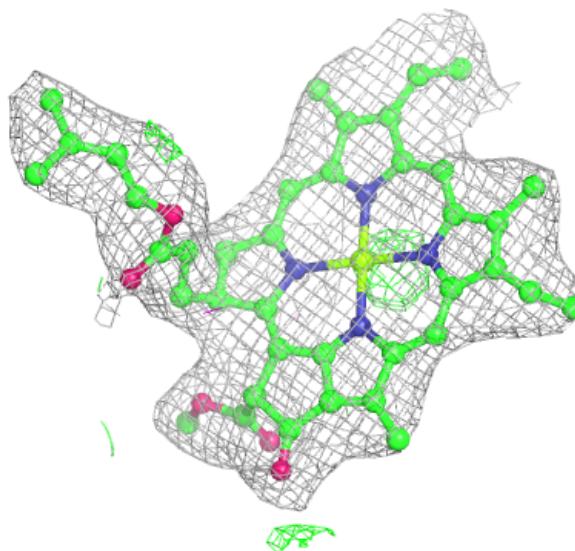
**Electron density around LHG 12 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



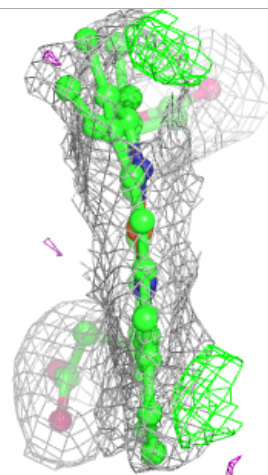
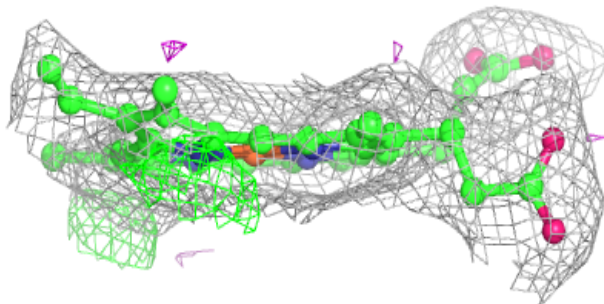
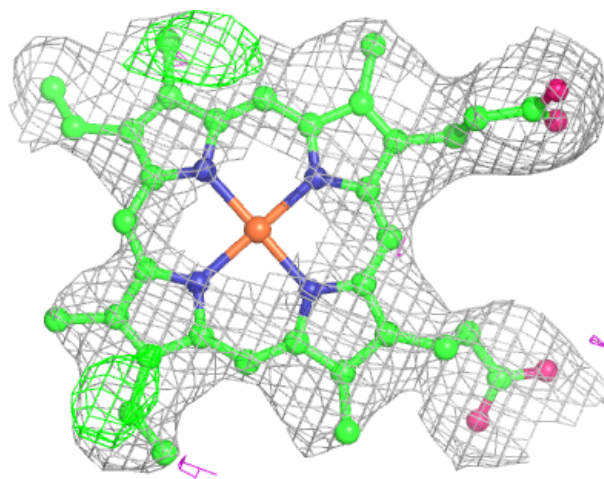
**Electron density around CLA a2 413:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



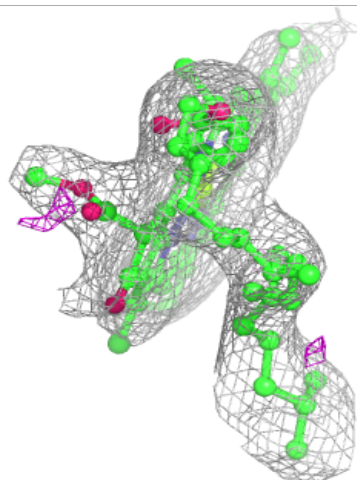
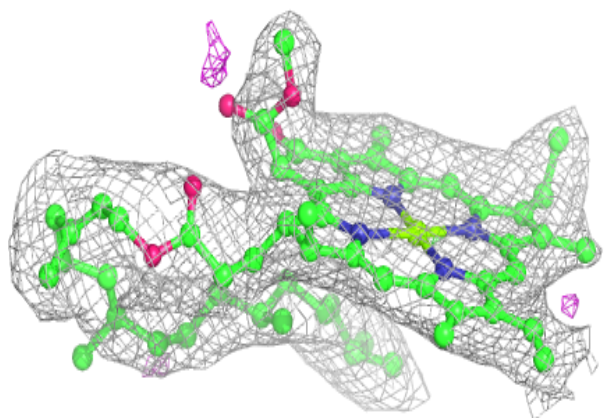
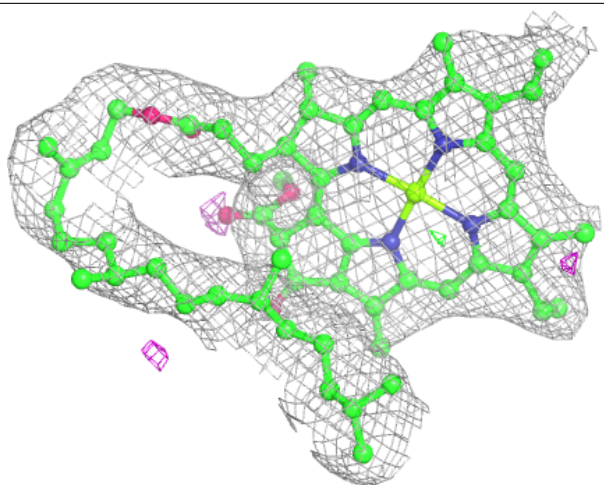
**Electron density around HEM V1 201:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around CLA c1 511:**

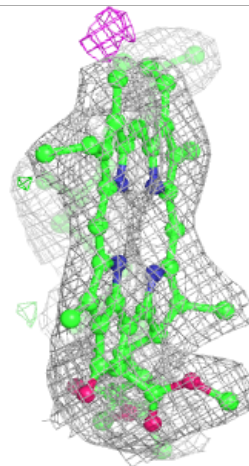
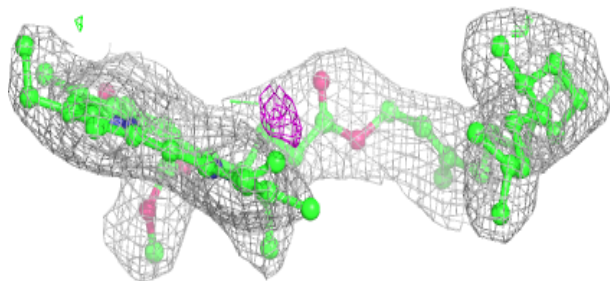
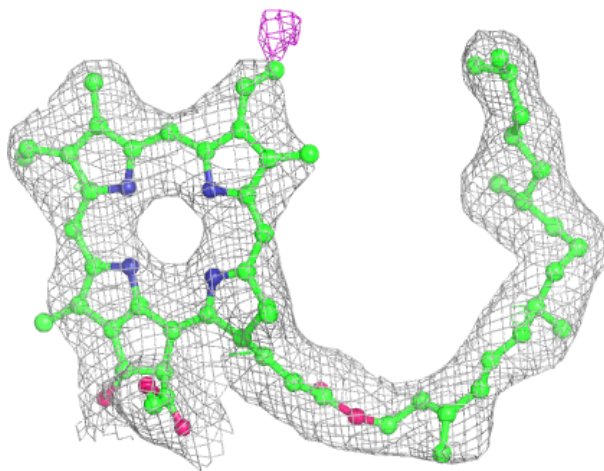
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





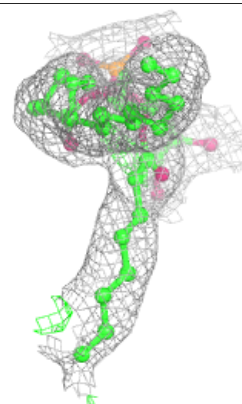
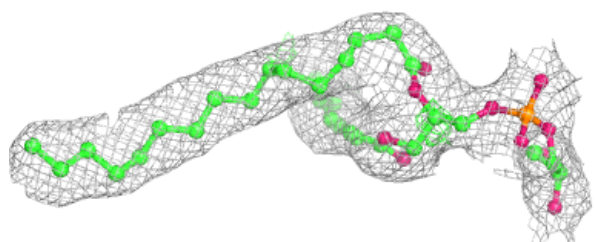
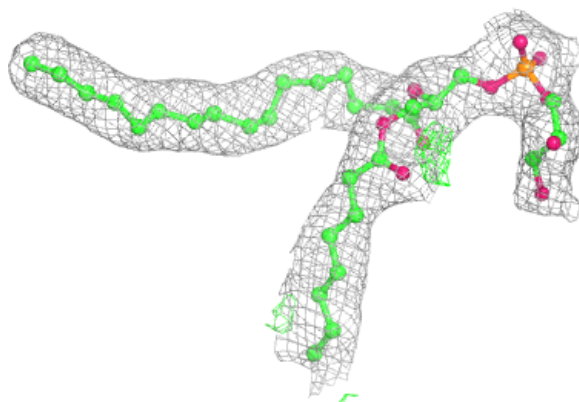
**Electron density around PHO a2 416:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around LHG L1 101:**

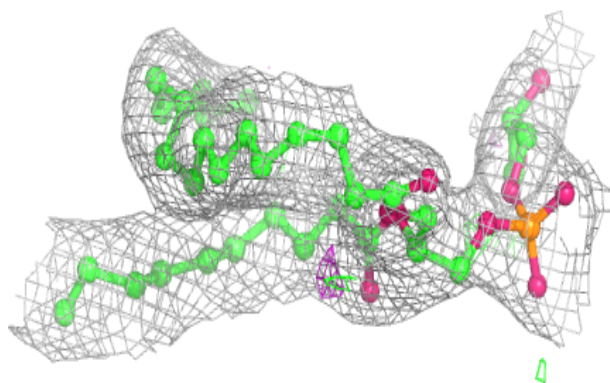
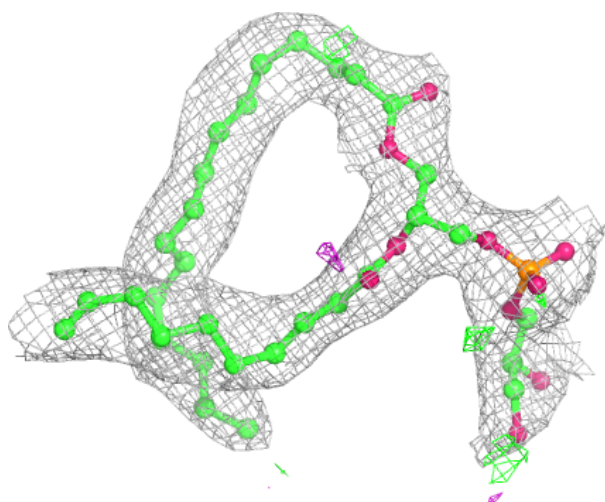
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





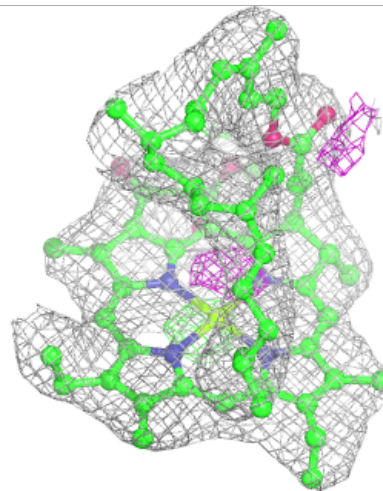
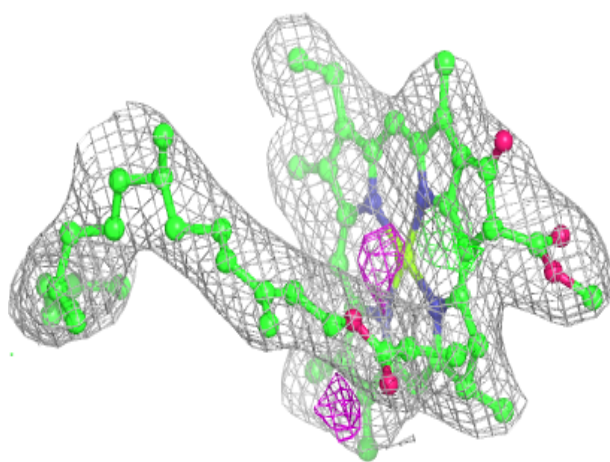
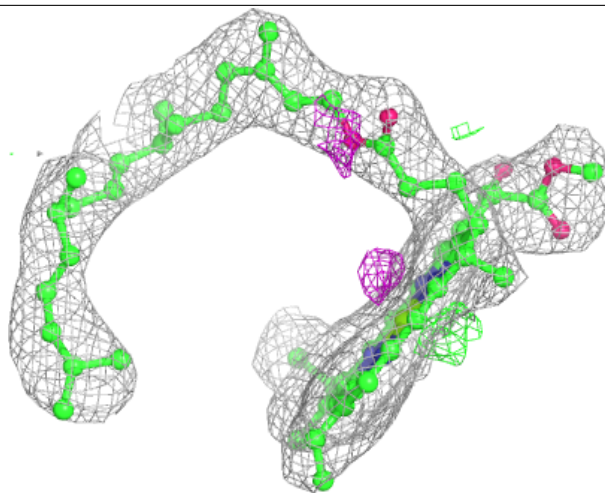
**Electron density around LHG a1 407:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



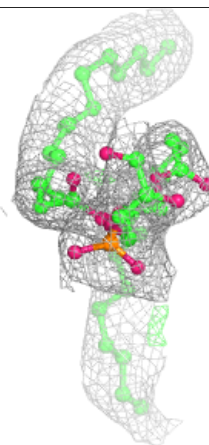
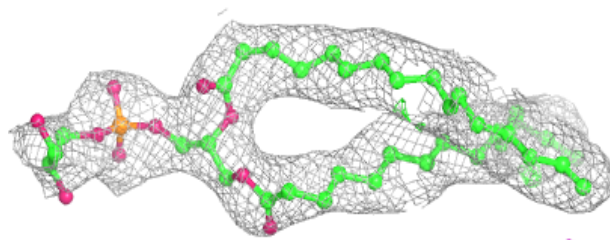
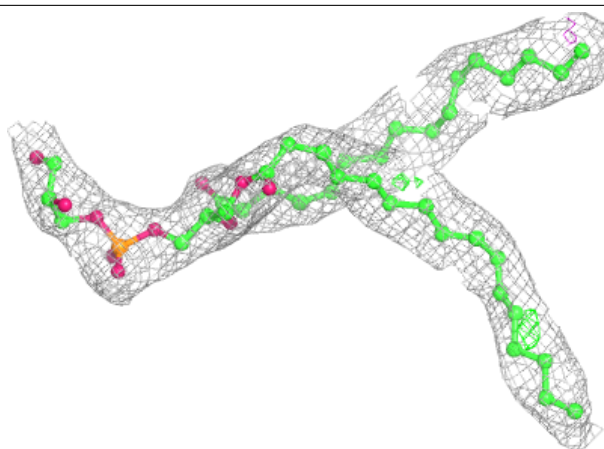
**Electron density around CLA b1 613:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



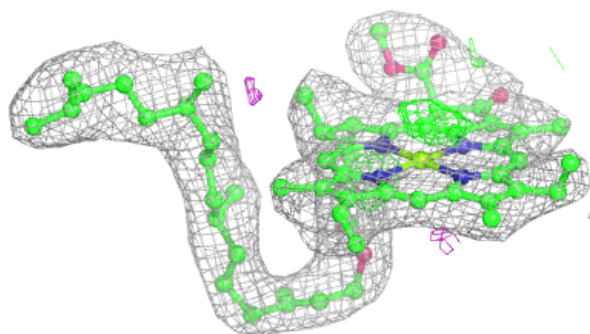
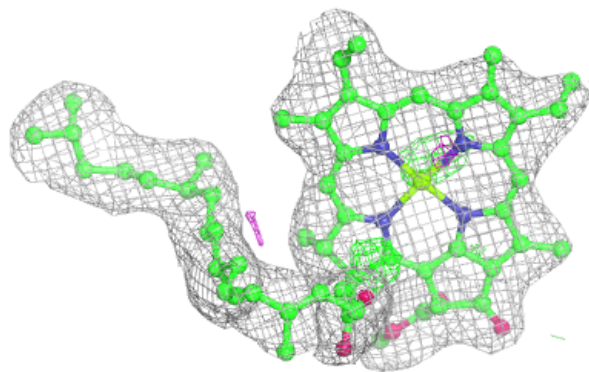
**Electron density around LHG d1 407:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



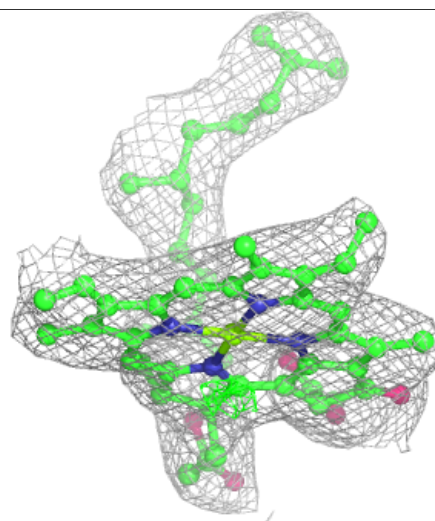
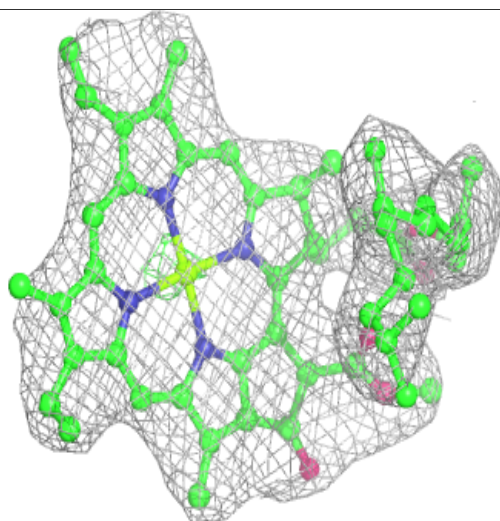
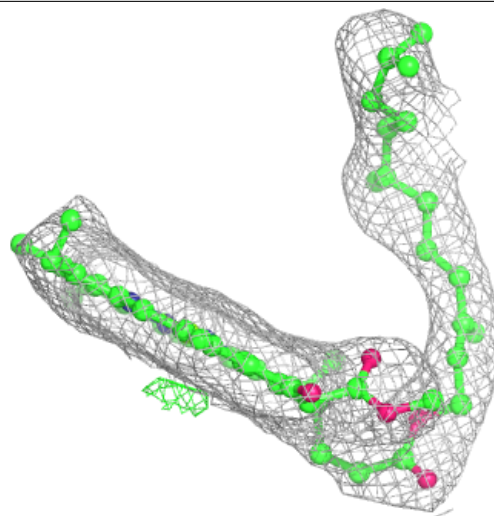
**Electron density around CLA d2 402:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around CLA b2 615:**

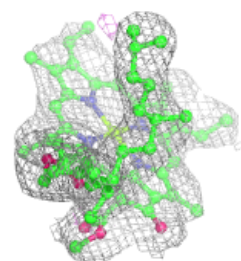
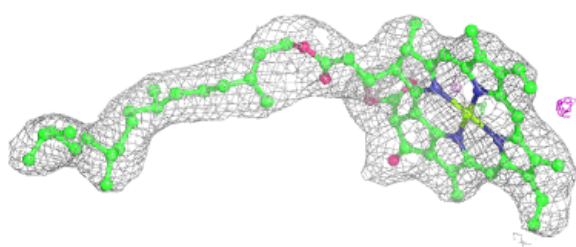
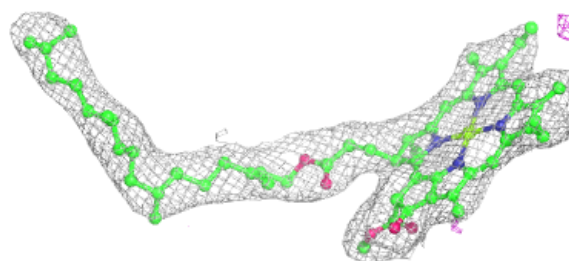
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



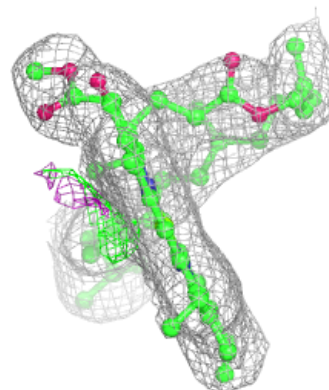
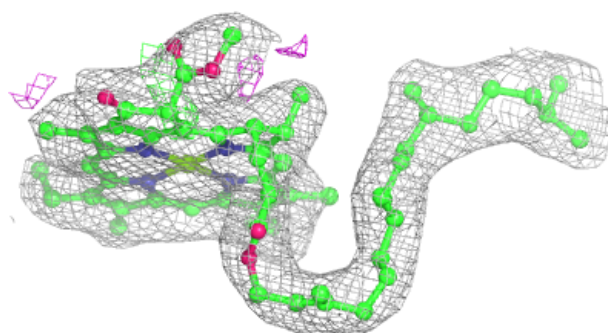
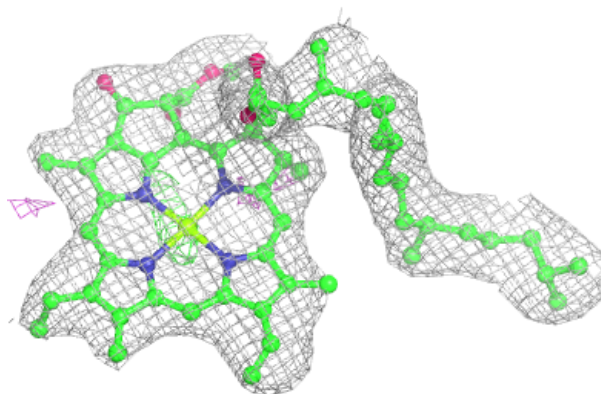


**Electron density around CLA a1 403:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

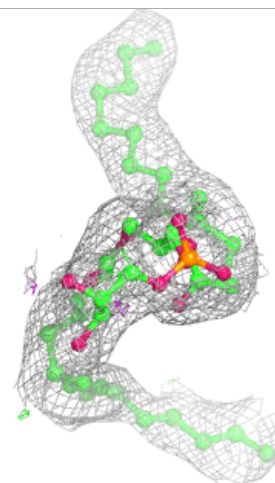
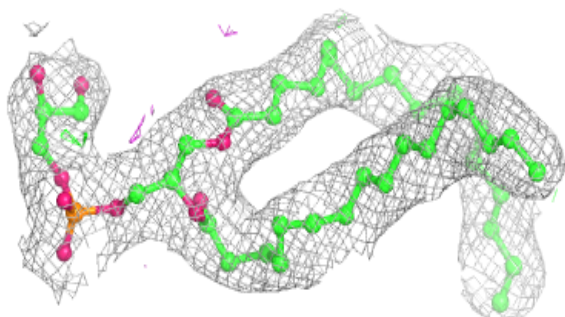
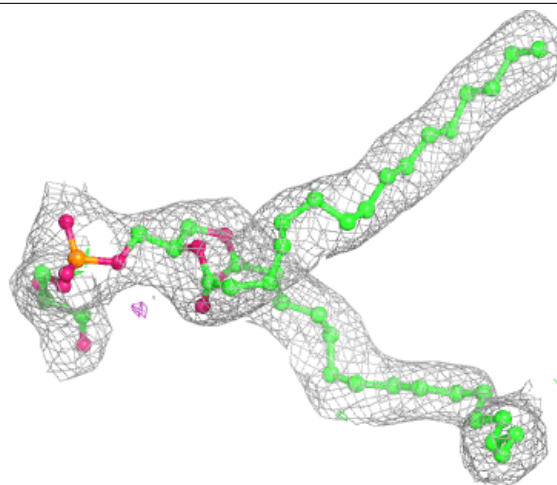
**Electron density around CLA A1 406:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around LHG l1 102:**

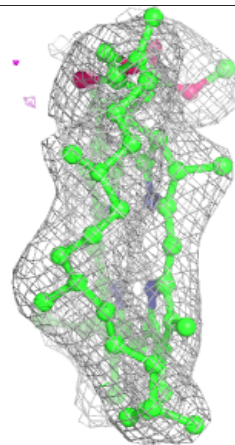
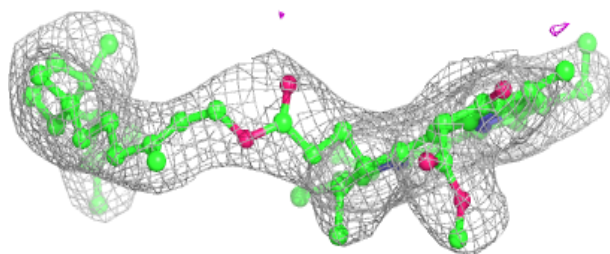
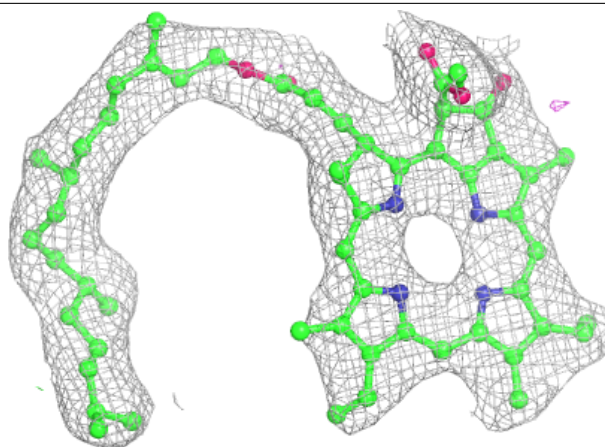
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





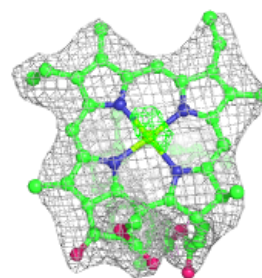
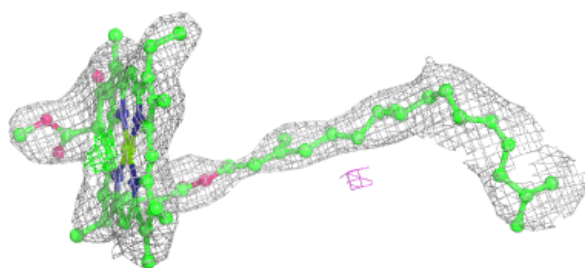
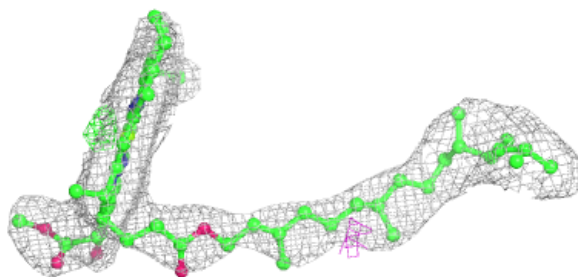
**Electron density around PHO A1 408:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



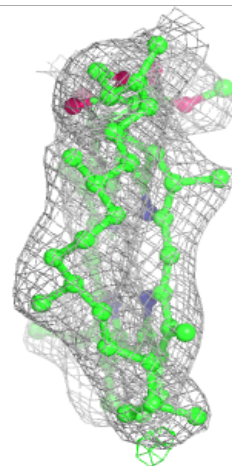
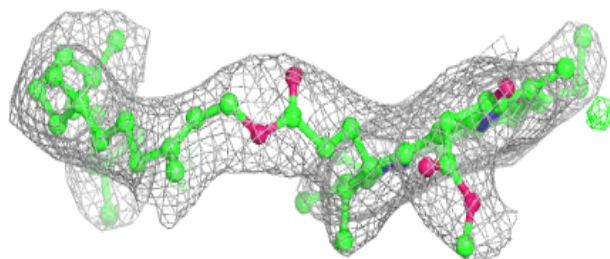
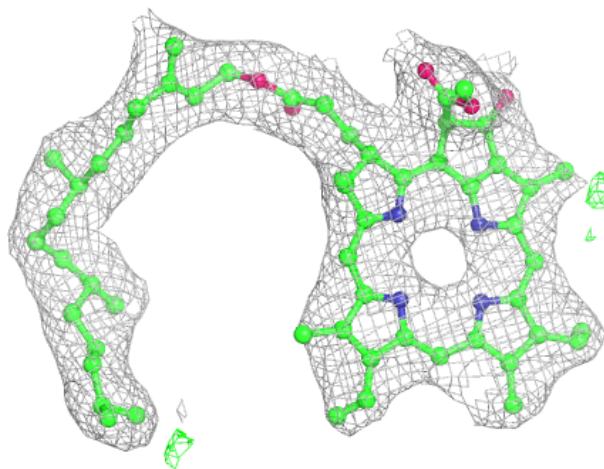
**Electron density around CLA B1 608:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



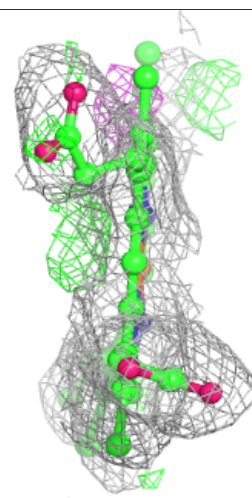
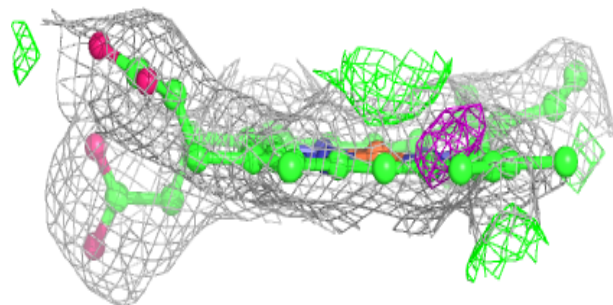
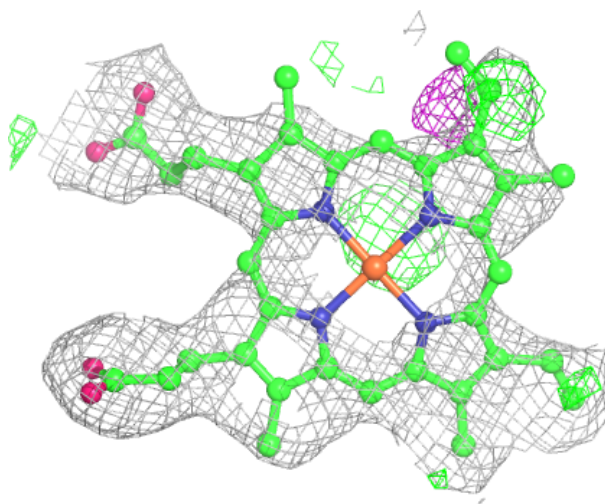
**Electron density around PHO a1 411:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



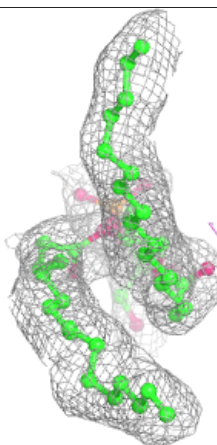
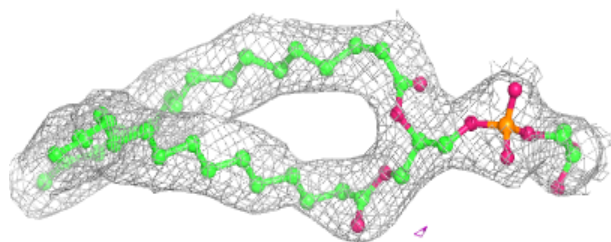
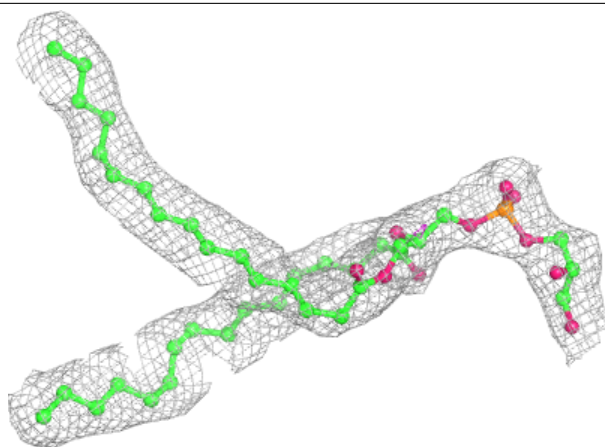
**Electron density around HEM v2 201:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

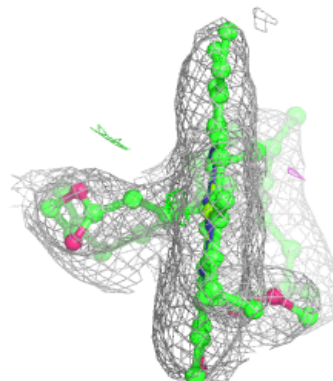
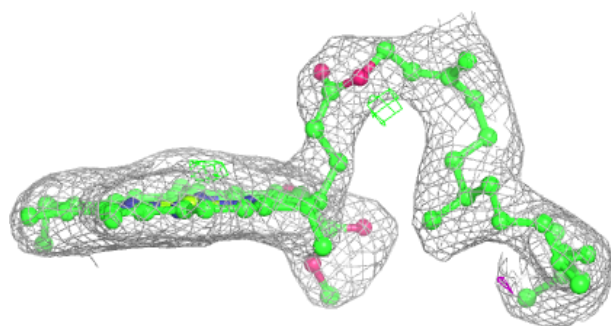
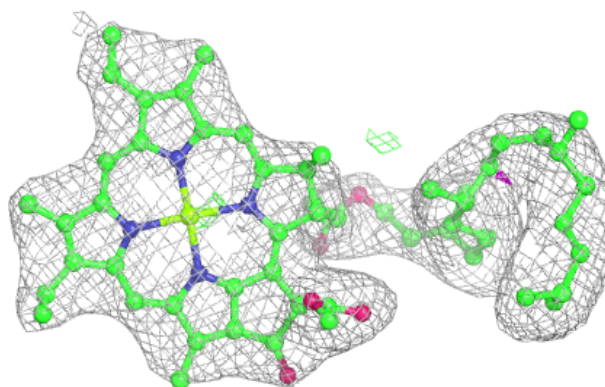


**Electron density around LHG D1 405:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around CLA b1 614:**

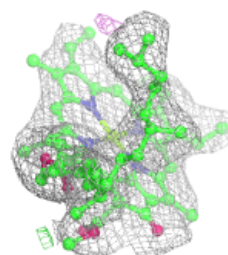
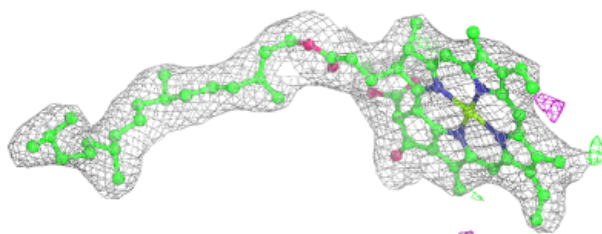
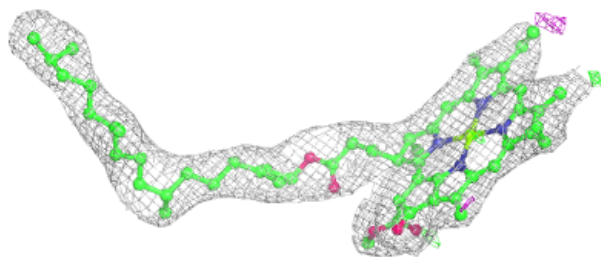
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



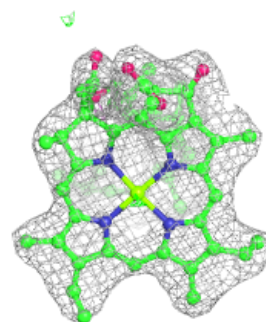
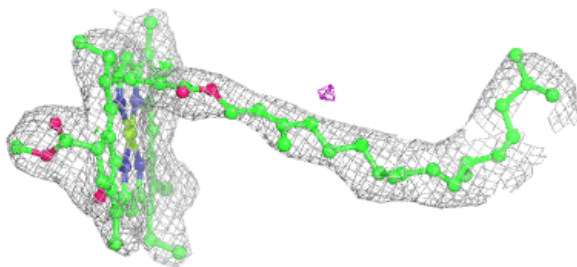
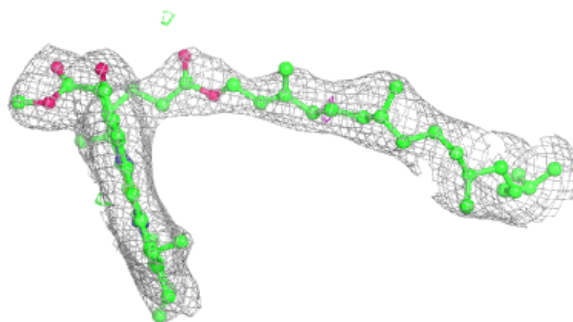


**Electron density around CLA A1 403:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around CLA b1 608:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



## 6.5 Other polymers [i](#)

There are no such residues in this entry.