wwPDB EM Validation Summary Report

Dec 1, 2025 – 06:50 PM JST

PDB ID	:	8ZOB / pdb_00008zob
EMDB ID	:	EMD-60287
Title	:	Structure of the wild-type PSI-5VCPI supercomplex in Nannochloropsis oceanica
Authors	:	Shen, L.L.; Li, Z.H.; Shen, J.R.; Wang, W.D.
Deposited on	:	2024-05-28
Resolution	:	2.88 Å(reported)

This is a wwPDB EM Validation Summary Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
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.

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

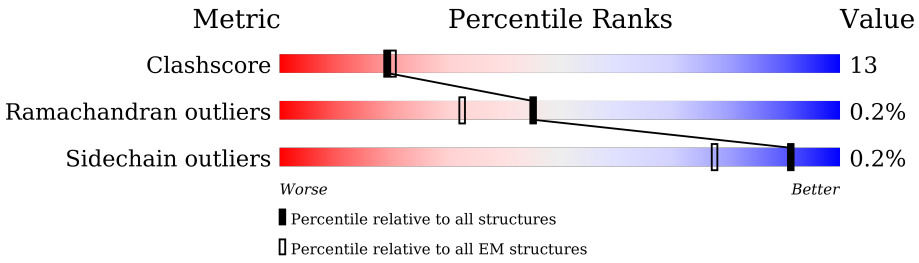
EMDB validation analysis	:	0.0.1.dev129
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4-5-2 with Phenix2.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.46

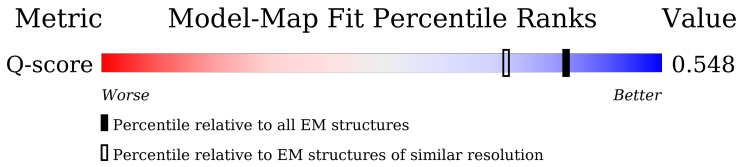
1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 2.88 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 (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
Q-score	-	25397	12111 (2.38 - 3.38)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=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 <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	5	244	19% 52% 18% 31%
2	4	202	18% 73% 10% 17%
3	3	220	23% 65% 15% 20%
4	2	223	66% 67% 15% 17%

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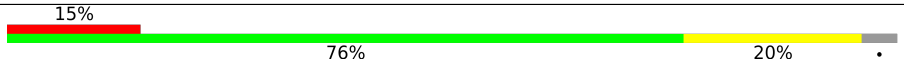
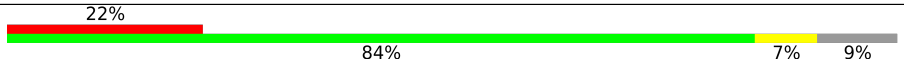
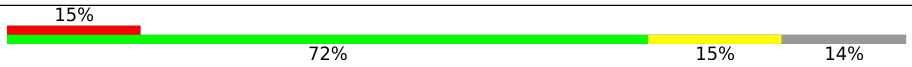
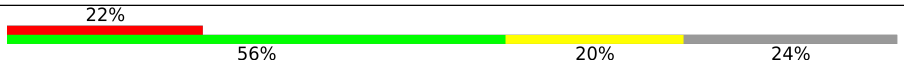
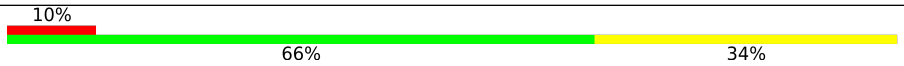
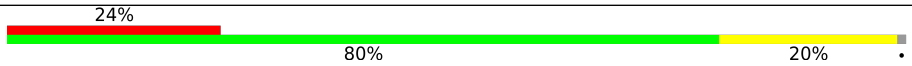
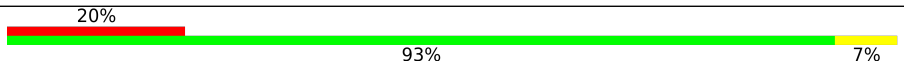
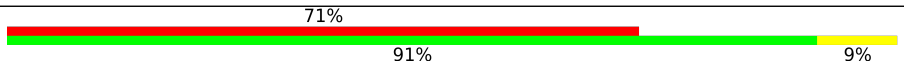
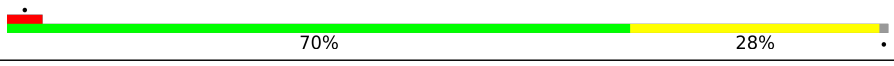
Mol	Chain	Length	Quality of chain
5	1	208	
6	a	745	
7	b	737	
8	d	136	
9	e	67	
10	f	185	
11	i	45	
12	j	41	
13	l	172	
14	m	30	
15	g	55	
16	c	81	

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
19	CLA	1	305	X	-	-	-
19	CLA	1	306	X	-	-	-
19	CLA	1	307	X	-	-	-
19	CLA	1	308	X	-	-	-
19	CLA	1	309	X	-	-	-
19	CLA	1	310	X	-	-	-
19	CLA	1	311	X	-	-	-
19	CLA	1	312	X	-	-	-
19	CLA	1	313	X	-	-	-
19	CLA	1	314	X	-	-	-
19	CLA	2	306	X	-	-	-
19	CLA	2	307	X	-	-	-
19	CLA	2	308	X	-	-	-
19	CLA	2	309	X	-	-	-
19	CLA	2	310	X	-	-	-
19	CLA	2	311	X	-	-	-
19	CLA	2	312	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
19	CLA	2	313	X	-	-	-
19	CLA	2	314	X	-	-	-
19	CLA	2	315	X	-	-	-
19	CLA	2	316	X	-	-	-
19	CLA	3	307	X	-	-	-
19	CLA	3	308	X	-	-	-
19	CLA	3	309	X	-	-	-
19	CLA	3	310	X	-	-	-
19	CLA	3	311	X	-	-	-
19	CLA	3	312	X	-	-	-
19	CLA	3	313	X	-	-	-
19	CLA	3	314	X	-	-	-
19	CLA	3	315	X	-	-	-
19	CLA	4	306	X	-	-	-
19	CLA	4	307	X	-	-	-
19	CLA	4	308	X	-	-	-
19	CLA	4	309	X	-	-	-
19	CLA	4	310	X	-	-	-
19	CLA	4	311	X	-	-	-
19	CLA	4	312	X	-	-	-
19	CLA	4	313	X	-	-	-
19	CLA	4	314	X	-	-	-
19	CLA	4	315	X	-	-	-
19	CLA	4	316	X	-	-	-
19	CLA	4	317	X	-	-	-
19	CLA	5	305	X	-	-	-
19	CLA	5	306	X	-	-	-
19	CLA	5	307	X	-	-	-
19	CLA	5	308	X	-	-	-
19	CLA	5	309	X	-	-	-
19	CLA	5	310	X	-	-	-
19	CLA	5	311	X	-	-	-
19	CLA	5	312	X	-	-	-
19	CLA	5	313	X	-	-	-
19	CLA	5	314	X	-	-	-
19	CLA	5	315	X	-	-	-
19	CLA	a	801	X	-	-	-
19	CLA	a	802	X	-	-	-
19	CLA	a	803	X	-	-	-
19	CLA	a	804	X	-	-	-
19	CLA	a	805	X	-	-	-
19	CLA	a	806	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
19	CLA	a	807	X	-	-	-
19	CLA	a	808	X	-	-	-
19	CLA	a	809	X	-	-	-
19	CLA	a	810	X	-	-	-
19	CLA	a	811	X	-	-	-
19	CLA	a	812	X	-	-	-
19	CLA	a	813	X	-	-	-
19	CLA	a	814	X	-	-	-
19	CLA	a	815	X	-	-	-
19	CLA	a	816	X	-	-	-
19	CLA	a	817	X	-	-	-
19	CLA	a	818	X	-	-	-
19	CLA	a	819	X	-	-	-
19	CLA	a	820	X	-	-	-
19	CLA	a	821	X	-	-	-
19	CLA	a	822	X	-	-	-
19	CLA	a	823	X	-	-	-
19	CLA	a	824	X	-	-	-
19	CLA	a	825	X	-	-	-
19	CLA	a	826	X	-	-	-
19	CLA	a	827	X	-	-	-
19	CLA	a	828	X	-	-	-
19	CLA	a	829	X	-	-	-
19	CLA	a	830	X	-	-	-
19	CLA	a	831	X	-	-	-
19	CLA	a	832	X	-	-	-
19	CLA	a	833	X	-	-	-
19	CLA	a	834	X	-	-	-
19	CLA	a	835	X	-	-	-
19	CLA	a	836	X	-	-	-
19	CLA	a	837	X	-	-	-
19	CLA	a	838	X	-	-	-
19	CLA	a	839	X	-	-	-
19	CLA	a	840	X	-	-	-
19	CLA	a	841	X	-	-	-
19	CLA	a	842	X	-	-	-
19	CLA	a	844	X	-	-	-
19	CLA	a	854	X	-	-	-
19	CLA	b	801	X	-	-	-
19	CLA	b	802	X	-	-	-
19	CLA	b	803	X	-	-	-
19	CLA	b	804	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
19	CLA	b	805	X	-	-	-
19	CLA	b	806	X	-	-	-
19	CLA	b	807	X	-	-	-
19	CLA	b	808	X	-	-	-
19	CLA	b	809	X	-	-	-
19	CLA	b	810	X	-	-	-
19	CLA	b	811	X	-	-	-
19	CLA	b	812	X	-	-	-
19	CLA	b	813	X	-	-	-
19	CLA	b	814	X	-	-	-
19	CLA	b	815	X	-	-	-
19	CLA	b	816	X	-	-	-
19	CLA	b	817	X	-	-	-
19	CLA	b	818	X	-	-	-
19	CLA	b	819	X	-	-	-
19	CLA	b	820	X	-	-	-
19	CLA	b	821	X	-	-	-
19	CLA	b	822	X	-	-	-
19	CLA	b	823	X	-	-	-
19	CLA	b	824	X	-	-	-
19	CLA	b	825	X	-	-	-
19	CLA	b	826	X	-	-	-
19	CLA	b	827	X	-	-	-
19	CLA	b	828	X	-	-	-
19	CLA	b	829	X	-	-	-
19	CLA	b	830	X	-	-	-
19	CLA	b	831	X	-	-	-
19	CLA	b	832	X	-	-	-
19	CLA	b	833	X	-	-	-
19	CLA	b	834	X	-	-	-
19	CLA	b	835	X	-	-	-
19	CLA	b	836	X	-	-	-
19	CLA	b	837	X	-	-	-
19	CLA	b	838	X	-	-	-
19	CLA	b	839	X	-	-	-
19	CLA	b	840	X	-	-	-
19	CLA	b	841	X	-	-	-
19	CLA	f	802	X	-	-	-
19	CLA	f	803	X	-	-	-
19	CLA	i	102	X	-	-	-
19	CLA	j	102	X	-	-	-
19	CLA	j	103	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
19	CLA	l	202	X	-	-	-
19	CLA	l	203	X	-	-	-
19	CLA	l	204	X	-	-	-
27	SF4	c	102	-	-	X	-

2 Entry composition (i)

There are 27 unique types of molecules in this entry. The entry contains 34630 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 VCPI-5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	5	169	1317	867	222	222	6	0	0

- Molecule 2 is a protein called VCPI-4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	4	168	1268	822	211	229	6	0	0

- Molecule 3 is a protein called VCPI-3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	3	177	1324	846	225	245	8	0	0

- Molecule 4 is a protein called VCPI-2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	2	185	1372	892	224	249	7	0	0

- Molecule 5 is a protein called VCPI-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	1	162	1262	816	209	234	3	0	0

- Molecule 6 is a protein called Photosystem I P700 chlorophyll a apoprotein A1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	a	739	5827	3828	982	1000	17	0	0

- Molecule 7 is a protein called Photosystem I P700 chlorophyll a apoprotein A2.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	b	735	Total	C	N	O	S	0	0
			5865	3874	985	989	17		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
8	d	130	Total	C	N	O	S	0	0
			1014	652	175	184	3		

- Molecule 9 is a protein called Photosystem I reaction center subunit IV.

Mol	Chain	Residues	Atoms				AltConf	Trace
9	e	61	Total	C	N	O	0	0
			494	314	86	94		

- Molecule 10 is a protein called Photosystem I reaction center subunit III.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	f	160	Total	C	N	O	S	0	0
			1266	815	213	235	3		

- Molecule 11 is a protein called Photosystem I reaction center subunit VIII.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	i	34	Total	C	N	O	S	0	0
			271	189	36	45	1		

- Molecule 12 is a protein called Photosystem I reaction center subunit IX.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	j	41	Total	C	N	O	S	0	0
			339	233	48	57	1		

- Molecule 13 is a protein called PSI subunit V.

Mol	Chain	Residues	Atoms				AltConf	Trace
13	l	171	Total	C	N	O	0	0
			1283	848	203	232		

- Molecule 14 is a protein called PsaM.

Mol	Chain	Residues	Atoms				AltConf	Trace
14	m	30	Total 210	C 137	N 35	O 38	0	0

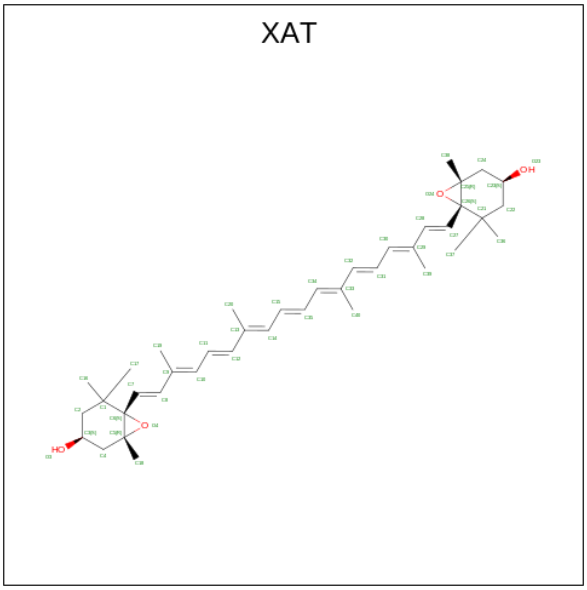
- Molecule 15 is a protein called PsaS.

Mol	Chain	Residues	Atoms				AltConf	Trace
15	g	55	Total 275	C 165	N 55	O 55	0	0

- Molecule 16 is a protein called Photosystem I iron-sulfur center.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	c	80	Total 596	C 366	N 103	O 117	S 10	0	0

- Molecule 17 is (3S,5R,6S,3'S,5'R,6'S)-5,6,5',6'-DIEPOXY-5,6,5',6'- TETRAHYDRO-BETA ,BETA-CAROTENE-3,3'-DIOL (CCD ID: XAT) (formula: $C_{40}H_{56}O_4$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
17	5	1	Total 44	C 40	O 4	0
17	5	1	Total 44	C 40	O 4	0
17	5	1	Total 44	C 40	O 4	0

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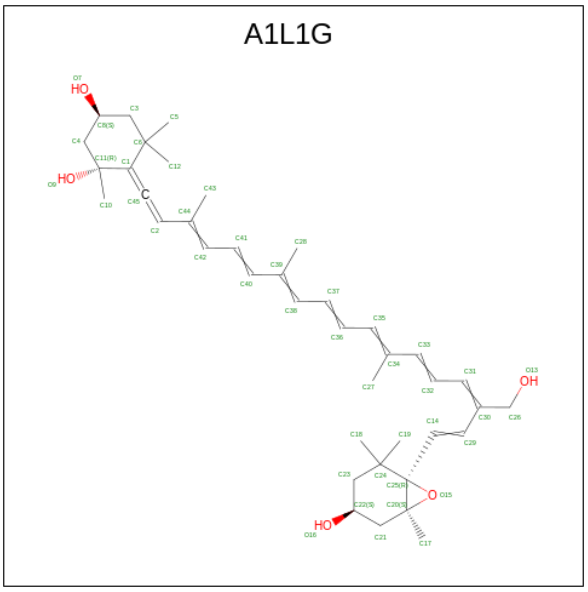
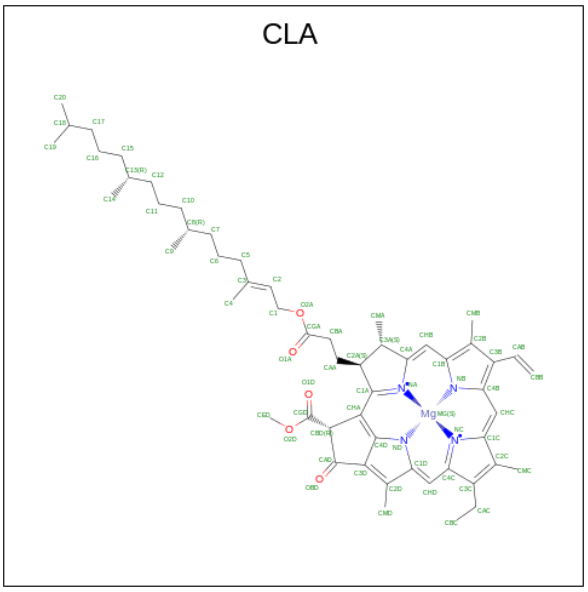
Mol	Chain	Residues	Atoms	AltConf
17	4	1	Total C O 44 40 4	0
17	4	1	Total C O 44 40 4	0
17	4	1	Total C O 44 40 4	0
17	4	1	Total C O 44 40 4	0
17	4	1	Total C O 44 40 4	0
17	3	1	Total C O 44 40 4	0
17	3	1	Total C O 44 40 4	0
17	3	1	Total C O 44 40 4	0
17	3	1	Total C O 44 40 4	0
17	2	1	Total C O 44 40 4	0
17	2	1	Total C O 44 40 4	0
17	2	1	Total C O 44 40 4	0
17	2	1	Total C O 44 40 4	0
17	2	1	Total C O 44 40 4	0
17	1	1	Total C O 44 40 4	0
17	1	1	Total C O 44 40 4	0
17	a	1	Total C O 44 40 4	0
17	j	1	Total C O 44 40 4	0

- Molecule 18 is (1 {R},3 {S})-6-[(3 {E},5 {E},7 {E},9 {E},11 {E},13 {E},15 {Z},17 {E})-16-(hydroxymethyl)-3,7,12-trimethyl-18-[(1 {S},4 {S},6 {R})-2,2,6-trimethyl-4-oxidanyl-7-oxabicyclo[4.1.0]heptan-1-yl]octadeca-1,3,5,7,9,11,13,15,17-nonaenylidene]-1,5,5-trimethyl-cyclohexane-1,3-diol (CCD ID: A1L1G) (formula: $C_{40}H_{56}O_5$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
18	5	1	Total C O 45 40 5	0
18	3	1	Total C O 45 40 5	0
18	3	1	Total C O 45 40 5	0
18	1	1	Total C O 45 40 5	0

- Molecule 19 is CHLOROPHYLL A (CCD ID: CLA) (formula: $C_{55}H_{72}MgN_4O_5$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
19	5	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
19	5	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
19	5	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
19	5	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
19	5	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	5	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
19	5	1	Total	C	Mg	N	O	0
			51	41	1	4	5	
19	5	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
19	5	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
19	5	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
19	5	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
19	4	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
19	4	1	Total	C	Mg	N	O	0
			56	46	1	4	5	
19	4	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	4	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
19	4	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	4	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
19	4	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
19	4	1	Total	C	Mg	N	O	0
			53	43	1	4	5	
19	4	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
19	4	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
19	4	1	Total	C	Mg	N	O	0
			46	36	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
19	4	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
19	3	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
19	3	1	Total	C	Mg	N	O	0
			47	37	1	4	5	
19	3	1	Total	C	Mg	N	O	0
			56	46	1	4	5	
19	3	1	Total	C	Mg	N	O	0
			56	46	1	4	5	
19	3	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
19	3	1	Total	C	Mg	N	O	0
			59	49	1	4	5	
19	3	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
19	3	1	Total	C	Mg	N	O	0
			47	37	1	4	5	
19	3	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
19	2	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
19	2	1	Total	C	Mg	N	O	0
			47	37	1	4	5	
19	2	1	Total	C	Mg	N	O	0
			54	44	1	4	5	
19	2	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
19	2	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	2	1	Total	C	Mg	N	O	0
			58	48	1	4	5	
19	2	1	Total	C	Mg	N	O	0
			47	37	1	4	5	
19	2	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
19	2	1	Total	C	Mg	N	O	0
			56	46	1	4	5	
19	2	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
19	2	1	Total	C	Mg	N	O	0
			46	36	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
19	1	1	Total	C	Mg	N	O	0
			61	51	1	4	5	
19	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	1	1	Total	C	Mg	N	O	0
			54	44	1	4	5	
19	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	1	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
19	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	1	1	Total	C	Mg	N	O	0
			53	43	1	4	5	
19	1	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
19	1	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
19	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			58	48	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			51	41	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			56	46	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
19	a	1	Total	C	Mg	N	O	0
			62	52	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			54	44	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			56	46	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			54	44	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			49	39	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			62	52	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	a	1	Total	C	Mg	N	O	0
			50	40	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
19	a	1	Total 55	C 45	Mg 1	N 4	O 5	0
19	a	1	Total 65	C 55	Mg 1	N 4	O 5	0
19	a	1	Total 65	C 55	Mg 1	N 4	O 5	0
19	a	1	Total 50	C 40	Mg 1	N 4	O 5	0
19	a	1	Total 45	C 35	Mg 1	N 4	O 5	0
19	a	1	Total 51	C 41	Mg 1	N 4	O 5	0
19	a	1	Total 65	C 55	Mg 1	N 4	O 5	0
19	a	1	Total 65	C 55	Mg 1	N 4	O 5	0
19	a	1	Total 65	C 55	Mg 1	N 4	O 5	0
19	a	1	Total 65	C 55	Mg 1	N 4	O 5	0
19	a	1	Total 65	C 55	Mg 1	N 4	O 5	0
19	a	1	Total 65	C 55	Mg 1	N 4	O 5	0
19	b	1	Total 65	C 55	Mg 1	N 4	O 5	0
19	b	1	Total 65	C 55	Mg 1	N 4	O 5	0
19	b	1	Total 65	C 55	Mg 1	N 4	O 5	0
19	b	1	Total 65	C 55	Mg 1	N 4	O 5	0
19	b	1	Total 65	C 55	Mg 1	N 4	O 5	0
19	b	1	Total 65	C 55	Mg 1	N 4	O 5	0
19	b	1	Total 65	C 55	Mg 1	N 4	O 5	0
19	b	1	Total 65	C 55	Mg 1	N 4	O 5	0
19	b	1	Total 65	C 55	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms					AltConf
19	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			54	44	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			53	43	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			59	49	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			51	41	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			53	43	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			64	54	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

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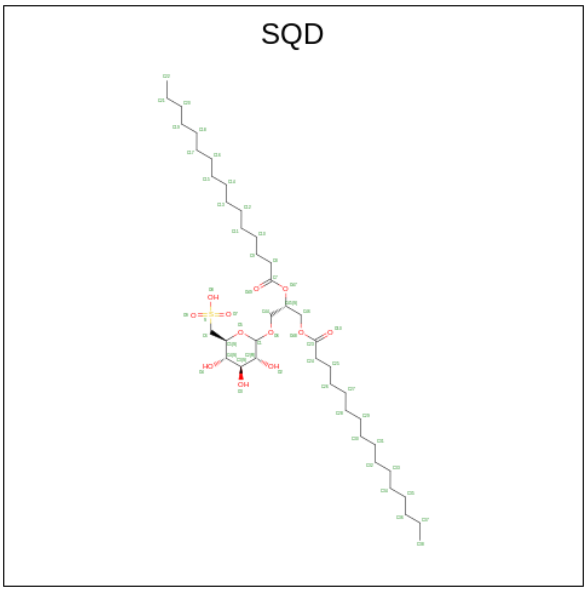
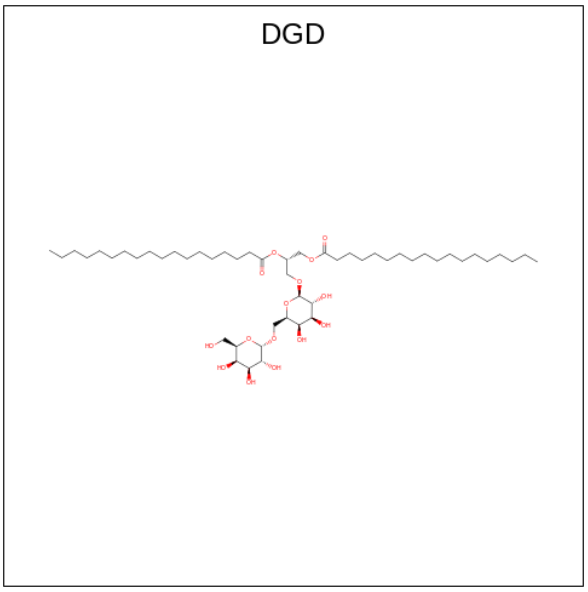
Mol	Chain	Residues	Atoms					AltConf
19	b	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
19	b	1	Total	C	Mg	N	O	0
			49	39	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			53	43	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			58	48	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	f	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
19	f	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
19	i	1	Total	C	Mg	N	O	0
			62	52	1	4	5	
19	j	1	Total	C	Mg	N	O	0
			58	48	1	4	5	
19	j	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
19	l	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
19	l	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
19	l	1	Total	C	Mg	N	O	0
			46	36	1	4	5	

- Molecule 20 is 1,2-DI-O-ACYL-3-O-[6-DEOXY-6-SULFO-ALPHA-D-GLUCOPYRANOSYL]-SN-GLYCEROL (CCD ID: SQD) (formula: $C_{41}H_{78}O_{12}S$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
20	5	1	Total	C	O	S	0
			35	22	12	1	
20	1	1	Total	C	O	S	0
			45	32	12	1	

- Molecule 21 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (CCD ID: DGD) (formula: $C_{51}H_{96}O_{15}$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
21	4	1	Total	C	O	0
			40	25	15	

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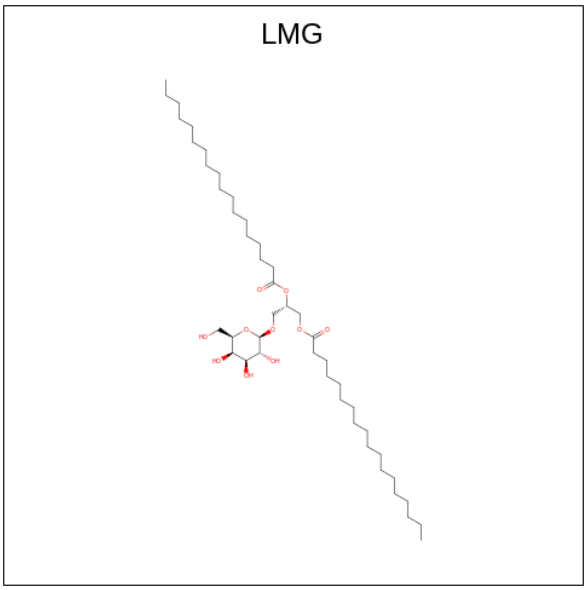
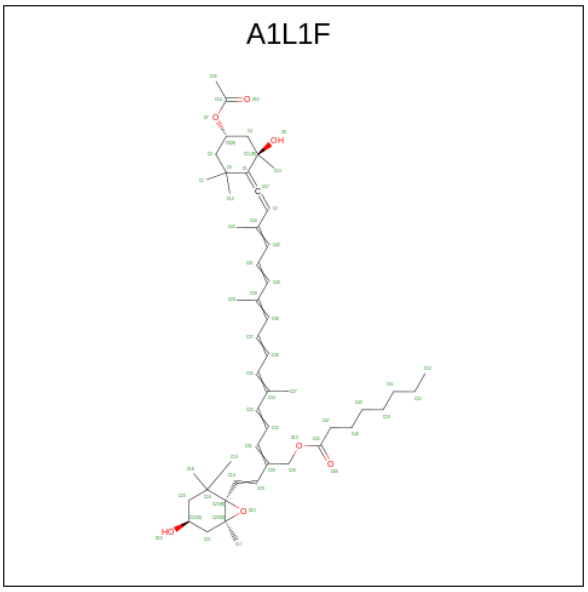
Mol	Chain	Residues	Atoms			AltConf
21	b	1	Total	C	O	0
			57	42	15	

- Molecule 22 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (CCD ID: LMG) (formula: $C_{45}H_{86}O_{10}$) (labeled as "Ligand of Interest" by depositor).



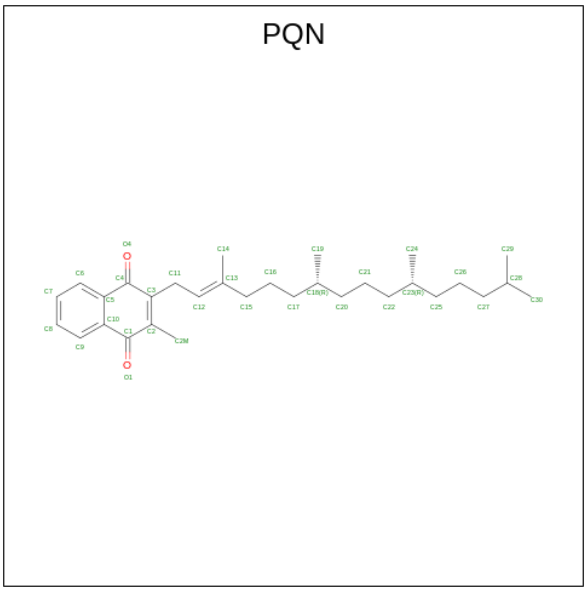
Mol	Chain	Residues	Atoms			AltConf
22	2	1	Total	C	O	0
			35	25	10	
22	a	1	Total	C	O	0
			34	24	10	
22	j	1	Total	C	O	0
			32	22	10	

- Molecule 23 is [(2 {Z},4 {E},6 {E},8 {E},10 {E},12 {E},14 {E})-17-[(4 {S},6 {R})-4-acetyloxy-2,2,6-trimethyl-6-oxidanyl-cyclohexylidene]-6,11,15-trimethyl-2-[({E})-2-[(1 {S},4 {S},6 {R})-2,2,6-trimethyl-4-oxidanyl-7-oxabicyclo[4.1.0]heptan-1-yl]ethenyl]heptadeca-2,4,6,8,10,12,14,16-octaenyl] octanoate (CCD ID: A1L1F) (formula: $C_{50}H_{72}O_7$) (labeled as "Ligand of Interest" by depositor).



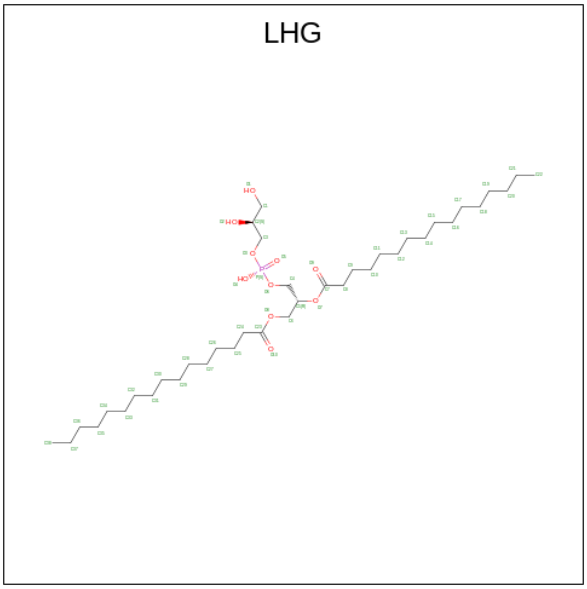
Mol	Chain	Residues	Atoms			AltConf
23	1	1	Total	C	O	0
			57	50	7	

- Molecule 24 is PHYLLOQUINONE (CCD ID: PQN) (formula: $C_{31}H_{46}O_2$) (labeled as "Ligand of Interest" by depositor).



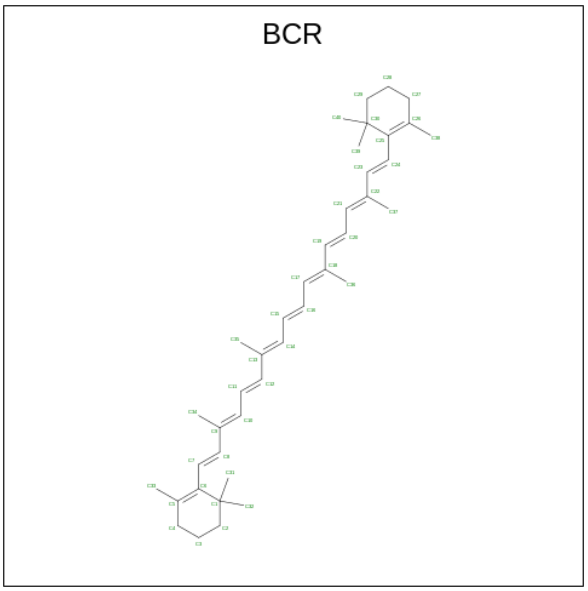
Mol	Chain	Residues	Atoms			AltConf
24	a	1	Total	C	O	0
			33	31	2	
24	b	1	Total	C	O	0
			33	31	2	

- Molecule 25 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (CCD ID: LHG) (formula: $C_{38}H_{75}O_{10}P$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
25	a	1	Total	C	O	P	0
			48	37	10	1	
25	a	1	Total	C	O	P	0
			27	16	10	1	
25	b	1	Total	C	O	P	0
			31	20	10	1	
25	m	1	Total	C	O	P	0
			46	35	10	1	

- Molecule 26 is BETA-CAROTENE (CCD ID: BCR) (formula: $C_{40}H_{56}$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
26	a	1	Total C 40 40	0
26	a	1	Total C 40 40	0
26	a	1	Total C 40 40	0
26	a	1	Total C 40 40	0
26	b	1	Total C 40 40	0
26	b	1	Total C 40 40	0
26	b	1	Total C 40 40	0
26	b	1	Total C 40 40	0
26	b	1	Total C 40 40	0
26	b	1	Total C 40 40	0
26	b	1	Total C 40 40	0
26	b	1	Total C 40 40	0
26	f	1	Total C 40 40	0
26	f	1	Total C 40 40	0

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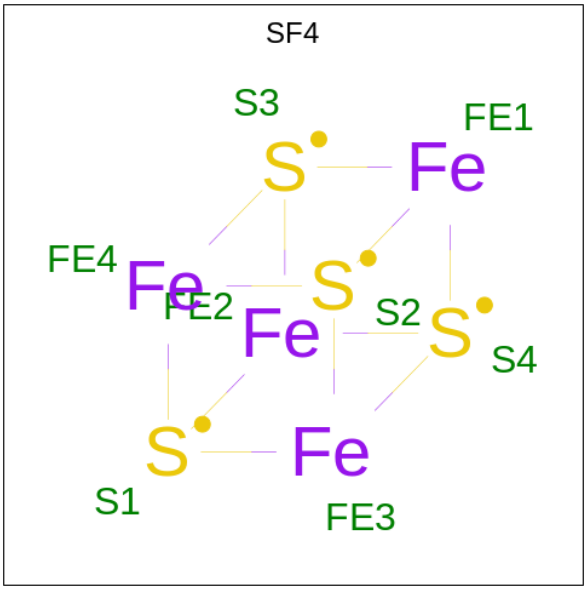
Mol	Chain	Residues	Atoms	AltConf
26	i	1	Total C 40 40	0
26	j	1	Total C 40 40	0
26	l	1	Total C 40 40	0
26	l	1	Total C 40 40	0
26	m	1	Total C 40 40	0

- Molecule 27 is IRON/SULFUR CLUSTER (CCD ID: SF4) (formula: Fe_4S_4) (labeled as "Ligand of Interest" by depositor).

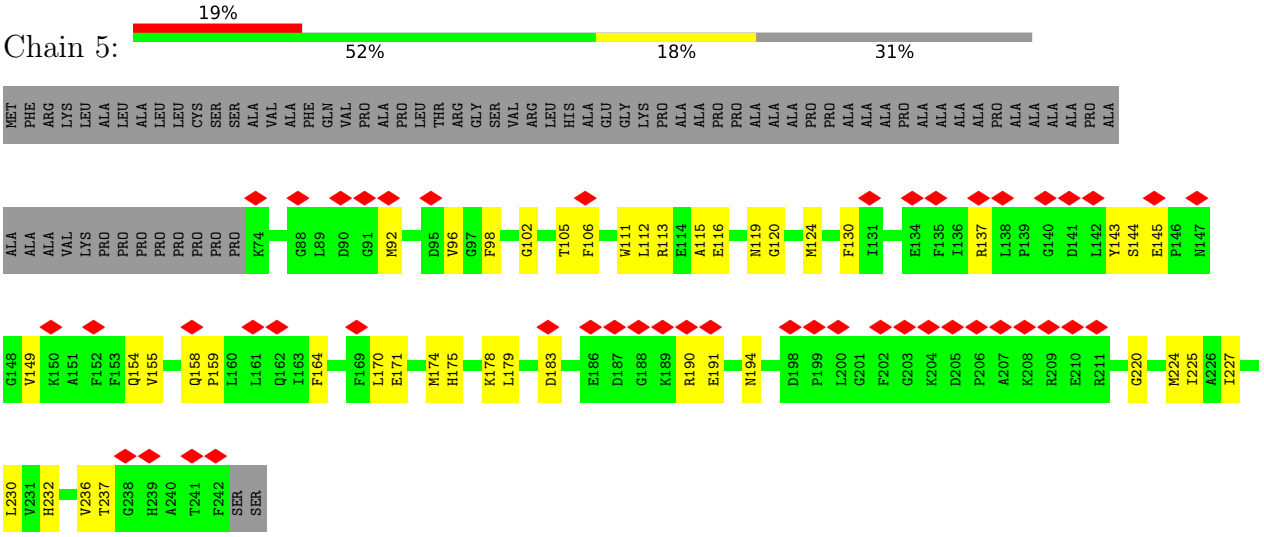


Mol	Chain	Residues	Atoms	AltConf
27	a	1	Total Fe S 8 4 4	0
27	c	1	Total Fe S 8 4 4	0
27	c	1	Total Fe S 8 4 4	0

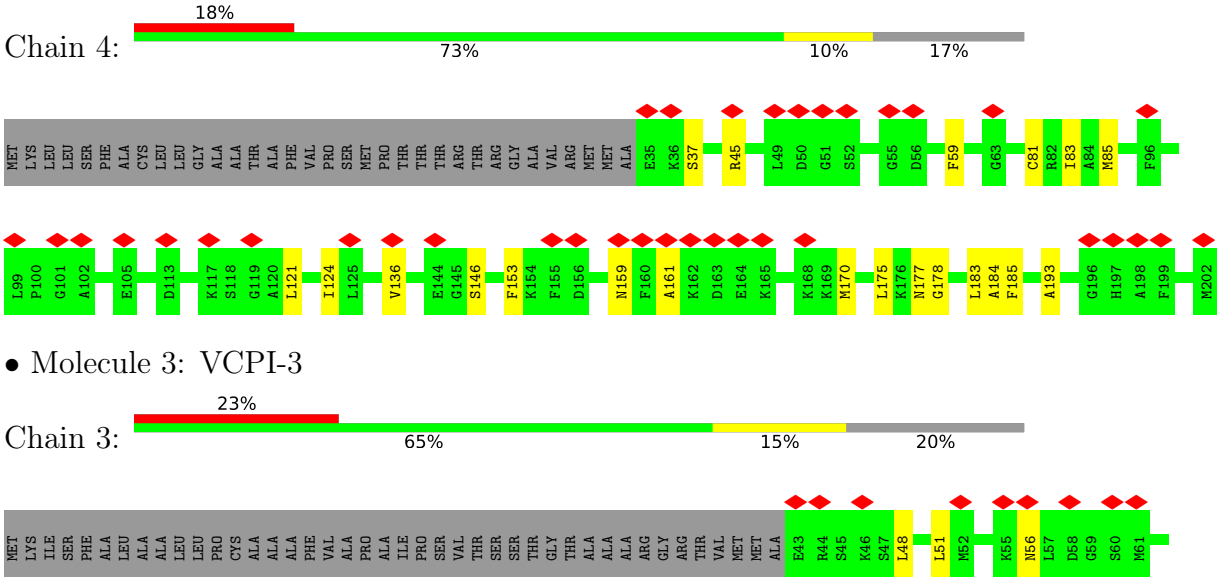
3 Residue-property plots (i)

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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.

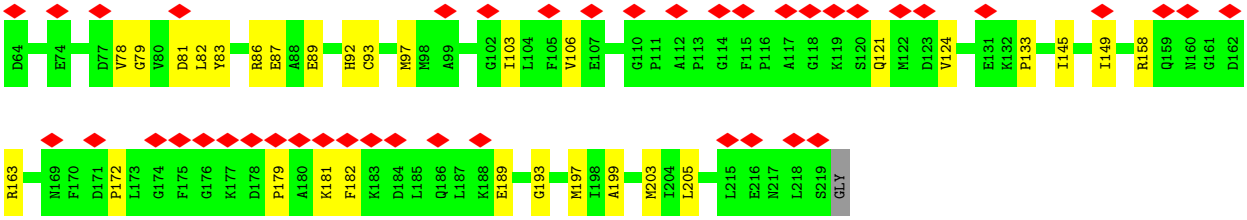
• Molecule 1: VCPI-5



• Molecule 2: VCPI-4

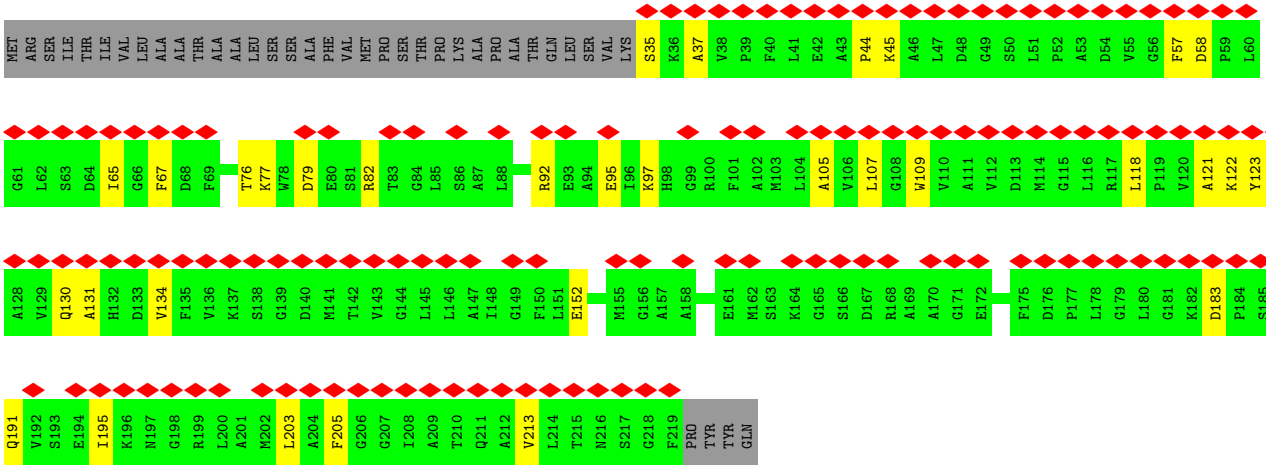


• Molecule 3: VCPI-3



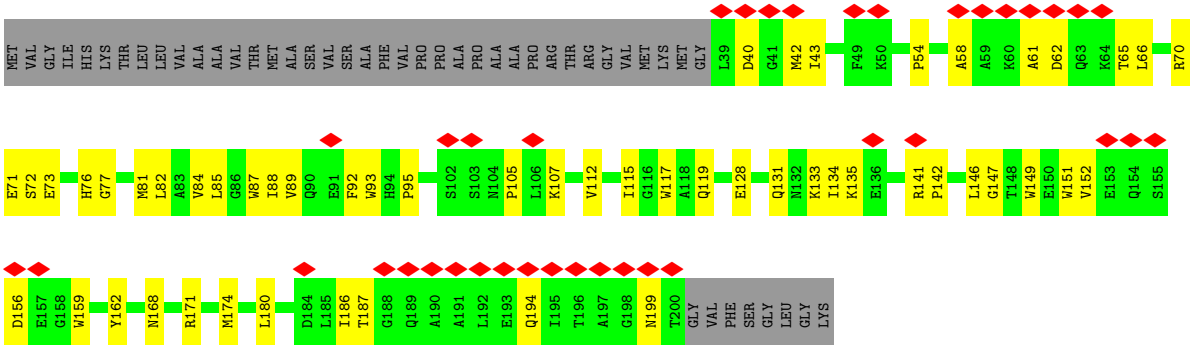
• Molecule 4: VCPI-2

Chain 2:



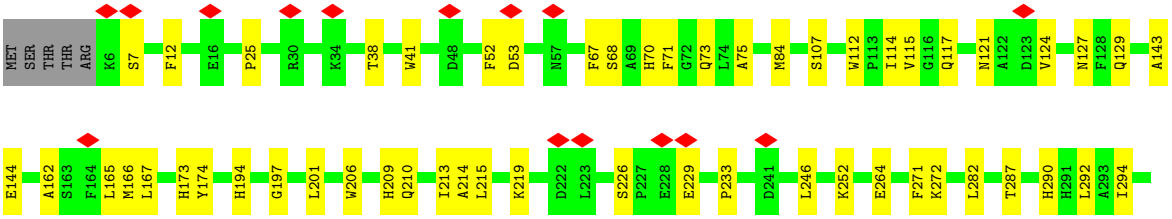
• Molecule 5: VCPI-1

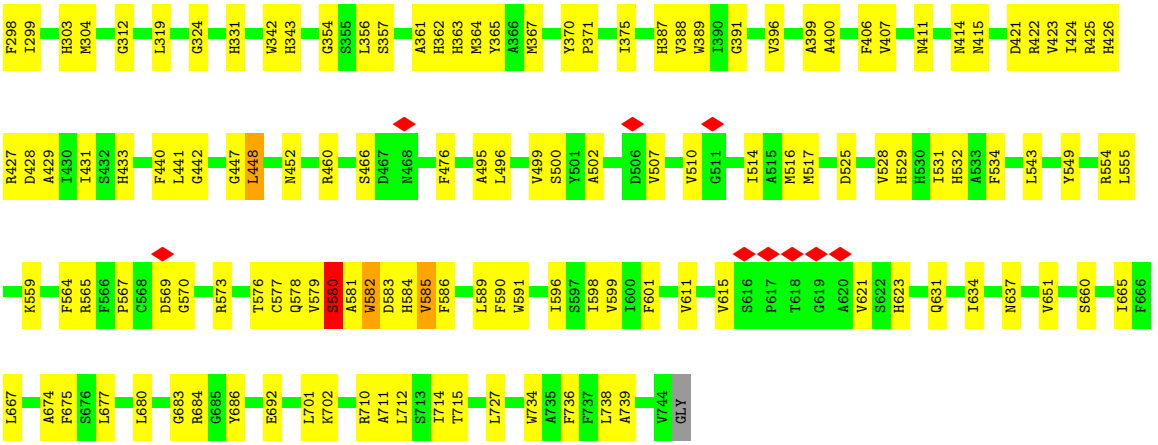
Chain 1:



• Molecule 6: Photosystem I P700 chlorophyll a apoprotein A1

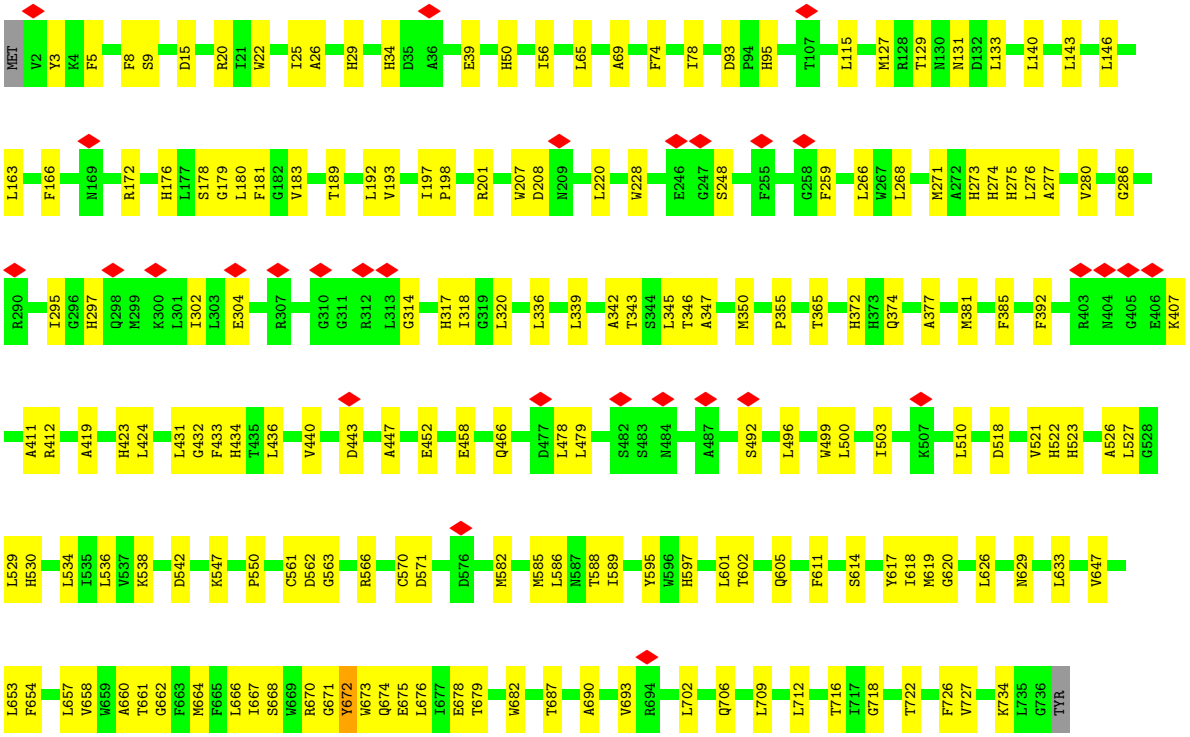
Chain a:





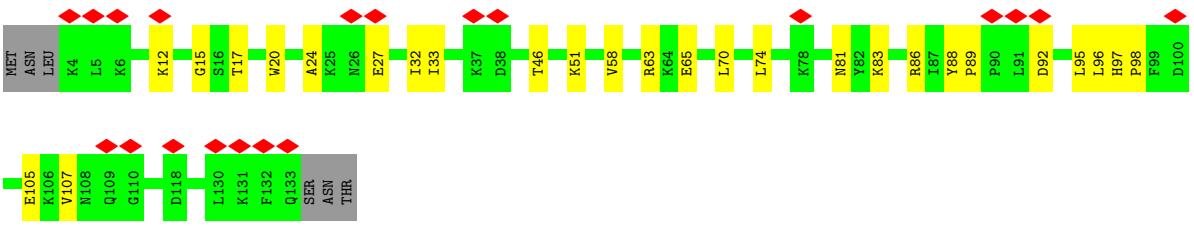
• Molecule 7: Photosystem I P700 chlorophyll a apoprotein A2

Chain b:



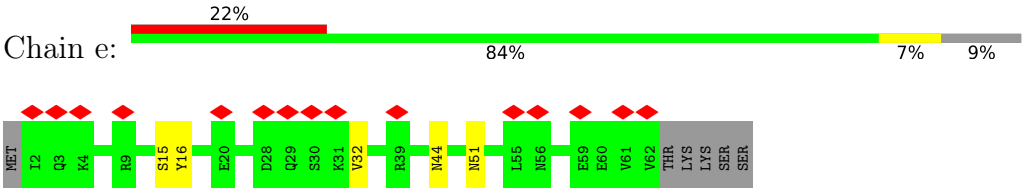
• Molecule 8: Photosystem I reaction center subunit II

Chain d:



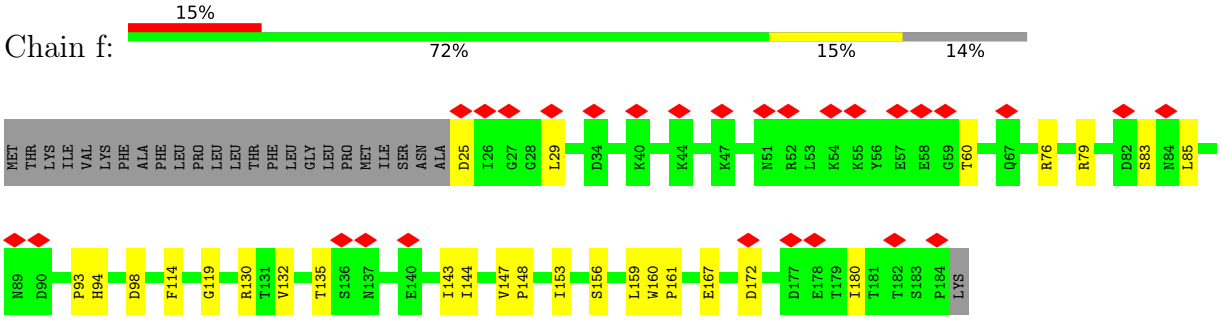
• Molecule 9: Photosystem I reaction center subunit IV

Chain e:



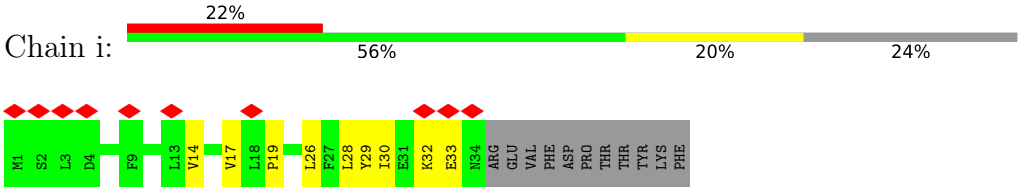
• Molecule 10: Photosystem I reaction center subunit III

Chain f:



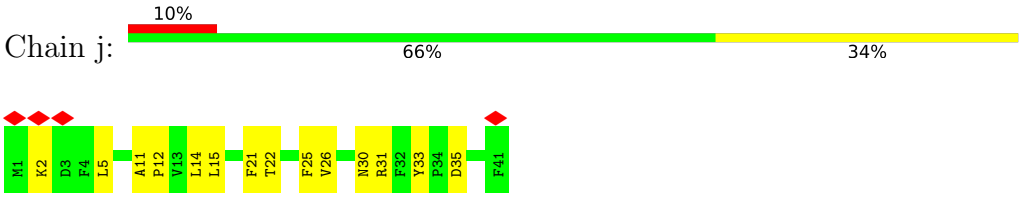
• Molecule 11: Photosystem I reaction center subunit VIII

Chain i:



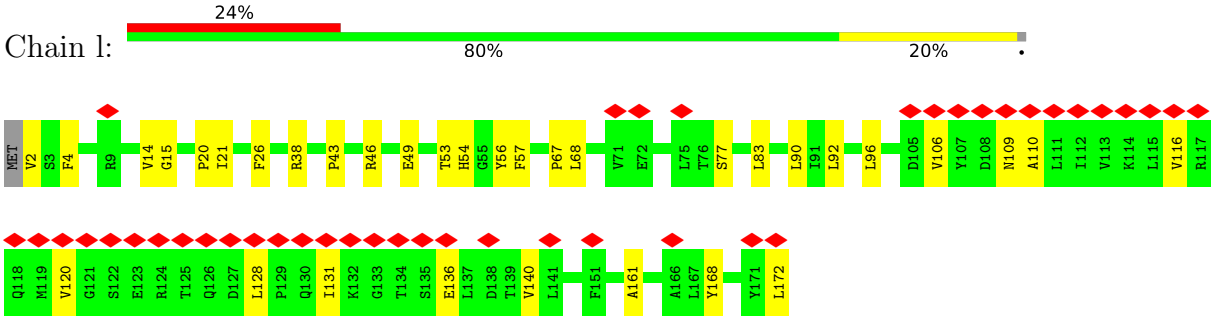
• Molecule 12: Photosystem I reaction center subunit IX

Chain j:



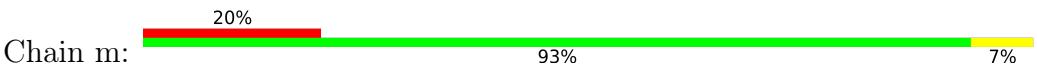
• Molecule 13: PSI subunit V

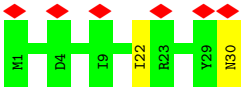
Chain l:



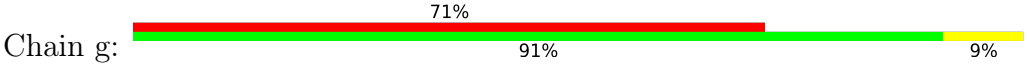
• Molecule 14: PsaM

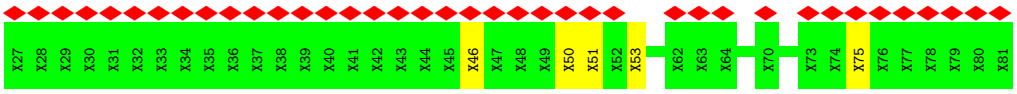
Chain m:



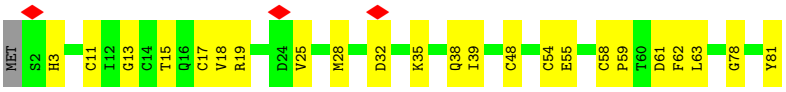


• Molecule 15: PsaS





• Molecule 16: Photosystem I iron-sulfur center



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	66059	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	60	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOCONTINUUM (6k x 4k)	Depositor
Maximum map value	1.601	Depositor
Minimum map value	-0.390	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.024	Depositor
Recommended contour level	0.367	Depositor
Map size (Å)	532.48, 532.48, 532.48	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.04, 1.04, 1.04	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: SF4, PQN, A1L1G, BCR, SQD, LHG, XAT, DGD, LMG, CLA, A1L1F

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	5	0.14	0/1353	0.29	0/1823
2	4	0.17	0/1298	0.31	0/1761
3	3	0.12	0/1350	0.27	0/1821
4	2	0.14	0/1405	0.36	0/1904
5	1	0.14	0/1293	0.33	0/1759
6	a	0.28	3/6024 (0.0%)	0.33	4/8219 (0.0%)
7	b	0.20	0/6080	0.32	1/8302 (0.0%)
8	d	0.12	0/1040	0.32	0/1402
9	e	0.09	0/502	0.20	0/681
10	f	0.14	0/1297	0.31	0/1762
11	i	0.15	0/278	0.33	0/378
12	j	0.15	0/351	0.36	0/478
13	l	0.14	0/1315	0.31	0/1796
14	m	0.09	0/210	0.28	0/288
16	c	0.13	0/606	0.34	0/822
All	All	0.20	3/24402 (0.0%)	0.32	5/33196 (0.0%)

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	a	580	SER	CA-C	-7.07	1.43	1.52
6	a	581	ALA	CA-C	-5.43	1.45	1.52
6	a	582	TRP	CA-C	-5.00	1.45	1.52

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	a	581	ALA	N-CA-C	-8.62	102.51	113.72
6	a	448	LEU	N-CA-C	-6.10	104.18	111.69
6	a	584	HIS	N-CA-C	-5.83	106.51	113.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	b	672	TYR	N-CA-C	-5.57	106.32	113.23
6	a	585	VAL	N-CA-C	-5.04	105.49	112.50

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	5	1317	0	1318	37	0
2	4	1268	0	1288	23	0
3	3	1324	0	1340	23	0
4	2	1372	0	1347	23	0
5	1	1262	0	1237	40	0
6	a	5827	0	5697	142	0
7	b	5865	0	5710	147	0
8	d	1014	0	1015	21	0
9	e	494	0	495	5	0
10	f	1266	0	1262	23	0
11	i	271	0	292	11	0
12	j	339	0	342	21	0
13	l	1283	0	1278	24	0
14	m	210	0	226	2	0
15	g	275	0	62	3	0
16	c	596	0	583	19	0
17	1	88	0	112	7	0
17	2	220	0	280	20	0
17	3	176	0	224	16	0
17	4	220	0	280	28	0
17	5	132	0	168	17	0
17	a	44	0	56	5	0
17	j	44	0	56	5	0
18	1	45	0	0	1	0
18	3	90	0	0	0	0
18	5	45	0	0	1	0
19	1	547	0	508	14	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	2	544	0	452	12	0
19	3	458	0	378	9	0
19	4	613	0	522	32	0
19	5	563	0	472	27	0
19	a	2579	0	2562	148	0
19	b	2475	0	2536	127	0
19	f	117	0	115	2	0
19	i	62	0	63	3	0
19	j	100	0	86	10	0
19	l	148	0	123	3	0
20	1	45	0	54	2	0
20	5	35	0	34	1	0
21	4	40	0	38	11	0
21	b	57	0	72	6	0
22	2	35	0	40	3	0
22	a	34	0	38	11	0
22	j	32	0	34	6	0
23	1	57	0	0	2	0
24	a	33	0	46	4	0
24	b	33	0	46	2	0
25	a	75	0	93	6	0
25	b	31	0	32	0	0
25	m	46	0	65	4	0
26	a	160	0	224	15	0
26	b	320	0	448	29	0
26	f	80	0	112	13	0
26	i	40	0	56	3	0
26	j	40	0	56	9	0
26	l	80	0	112	13	0
26	m	40	0	56	2	0
27	a	8	0	0	0	0
27	c	16	0	0	2	0
All	All	34630	0	34141	860	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 13.

The worst 5 of 860 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:4:193:ALA:HB1	21:4:318:DGD:C6E	1.85	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:4:193:ALA:HB1	21:4:318:DGD:HE62	1.13	1.07
17:2:303:XAT:H32	19:2:308:CLA:HAB	1.52	0.89
17:5:302:XAT:H12	19:5:307:CLA:HAB	1.53	0.89
21:4:318:DGD:O4E	21:4:318:DGD:O5E	1.61	0.88

There are no symmetry-related clashes.

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 PDB entries followed by that with respect to all EM entries.

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	5	167/244 (68%)	158 (95%)	9 (5%)	0	100 100
2	4	166/202 (82%)	149 (90%)	16 (10%)	1 (1%)	22 49
3	3	175/220 (80%)	166 (95%)	9 (5%)	0	100 100
4	2	183/223 (82%)	155 (85%)	25 (14%)	3 (2%)	8 25
5	1	160/208 (77%)	149 (93%)	11 (7%)	0	100 100
6	a	737/745 (99%)	713 (97%)	23 (3%)	1 (0%)	48 75
7	b	733/737 (100%)	702 (96%)	31 (4%)	0	100 100
8	d	128/136 (94%)	113 (88%)	15 (12%)	0	100 100
9	e	59/67 (88%)	54 (92%)	5 (8%)	0	100 100
10	f	158/185 (85%)	151 (96%)	7 (4%)	0	100 100
11	i	32/45 (71%)	30 (94%)	2 (6%)	0	100 100
12	j	39/41 (95%)	39 (100%)	0	0	100 100
13	l	169/172 (98%)	154 (91%)	13 (8%)	2 (1%)	11 32
14	m	28/30 (93%)	27 (96%)	1 (4%)	0	100 100
16	c	78/81 (96%)	74 (95%)	4 (5%)	0	100 100
All	All	3012/3336 (90%)	2834 (94%)	171 (6%)	7 (0%)	45 71

5 of 7 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	2	45	LYS
13	l	120	VAL
4	2	127	ASN
4	2	213	VAL
6	a	580	SER

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	5	133/182 (73%)	133 (100%)	0	100	100
2	4	133/159 (84%)	133 (100%)	0	100	100
3	3	136/164 (83%)	136 (100%)	0	100	100
4	2	134/172 (78%)	134 (100%)	0	100	100
5	1	128/165 (78%)	128 (100%)	0	100	100
6	a	607/613 (99%)	603 (99%)	4 (1%)	81	93
7	b	599/602 (100%)	599 (100%)	0	100	100
8	d	107/113 (95%)	107 (100%)	0	100	100
9	e	56/62 (90%)	56 (100%)	0	100	100
10	f	138/162 (85%)	138 (100%)	0	100	100
11	i	32/43 (74%)	32 (100%)	0	100	100
12	j	36/36 (100%)	36 (100%)	0	100	100
13	l	130/141 (92%)	130 (100%)	0	100	100
14	m	21/24 (88%)	21 (100%)	0	100	100
16	c	67/68 (98%)	67 (100%)	0	100	100
All	All	2457/2706 (91%)	2453 (100%)	4 (0%)	91	98

All (4) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
6	a	428	ASP
6	a	448	LEU
6	a	579	VAL
6	a	580	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 18 such sidechains are listed below:

Mol	Chain	Res	Type
7	b	605	GLN
10	f	166	GLN
8	d	7	GLN
6	a	127	ASN
7	b	326	ASN

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)

207 ligands are modelled in this entry.

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	$\#\|Z\| > 2$
17	XAT	4	305	-	39,47,47	0.91	1 (2%)	54,74,74	2.75	19 (35%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
19	CLA	b	801	-	65,73,73	1.50	6 (9%)	76,113,113	1.36	7 (9%)
19	CLA	l	203	-	60,68,73	1.55	5 (8%)	70,107,113	1.46	7 (10%)
26	BCR	a	848	-	41,41,41	0.74	0	56,56,56	1.94	18 (32%)
19	CLA	a	801	-	65,73,73	1.49	9 (13%)	76,113,113	1.39	7 (9%)
19	CLA	2	311	-	58,66,73	1.59	5 (8%)	67,104,113	1.42	8 (11%)
19	CLA	a	827	-	65,73,73	1.48	6 (9%)	76,113,113	1.45	9 (11%)
19	CLA	a	819	-	54,62,73	1.64	5 (9%)	62,99,113	1.46	7 (11%)
19	CLA	3	309	3	56,64,73	1.60	6 (10%)	65,102,113	1.46	7 (10%)
19	CLA	a	818	-	56,64,73	1.62	5 (8%)	65,102,113	1.43	8 (12%)
17	XAT	3	301	-	39,47,47	0.92	2 (5%)	54,74,74	2.54	18 (33%)
27	SF4	c	102	-	0,12,12	-	-	-		
26	BCR	a	850	-	41,41,41	0.74	0	56,56,56	2.16	15 (26%)
19	CLA	b	836	-	58,66,73	1.57	5 (8%)	67,104,113	1.53	8 (11%)
19	CLA	a	826	-	65,73,73	1.47	6 (9%)	76,113,113	1.45	6 (7%)
19	CLA	a	840	-	65,73,73	1.51	5 (7%)	76,113,113	1.37	7 (9%)
19	CLA	3	314	3	47,55,73	1.74	6 (12%)	54,91,113	1.55	6 (11%)
19	CLA	b	805	-	65,73,73	1.49	5 (7%)	76,113,113	1.39	8 (10%)
19	CLA	b	813	-	53,61,73	1.64	5 (9%)	61,98,113	1.51	8 (13%)
18	A1L1G	3	302	-	38,47,47	1.46	6 (15%)	49,71,71	1.38	7 (14%)
19	CLA	b	811	-	65,73,73	1.46	6 (9%)	76,113,113	1.44	8 (10%)
19	CLA	a	810	6	65,73,73	1.49	6 (9%)	76,113,113	1.40	8 (10%)
19	CLA	a	824	-	46,54,73	1.77	6 (13%)	53,90,113	1.50	7 (13%)
26	BCR	l	205	-	41,41,41	0.70	0	56,56,56	2.03	13 (23%)
26	BCR	l	201	-	41,41,41	0.71	0	56,56,56	1.97	18 (32%)
17	XAT	3	305	-	39,47,47	0.88	1 (2%)	54,74,74	2.57	16 (29%)
19	CLA	a	829	-	62,70,73	1.52	6 (9%)	72,109,113	1.40	8 (11%)
19	CLA	b	838	-	65,73,73	1.51	6 (9%)	76,113,113	1.33	8 (10%)
25	LHG	a	846	19	26,26,48	1.28	4 (15%)	29,32,54	1.20	2 (6%)
19	CLA	b	839	-	65,73,73	1.49	6 (9%)	76,113,113	1.38	8 (10%)
26	BCR	b	848	-	41,41,41	0.75	0	56,56,56	1.78	15 (26%)
17	XAT	5	301	-	39,47,47	0.94	1 (2%)	54,74,74	2.57	19 (35%)
26	BCR	b	852	-	41,41,41	0.73	0	56,56,56	2.06	15 (26%)
19	CLA	b	829	-	65,73,73	1.51	6 (9%)	76,113,113	1.33	7 (9%)
19	CLA	2	312	-	47,55,73	1.74	5 (10%)	54,91,113	1.57	7 (12%)
21	DGD	b	851	-	58,58,67	1.15	7 (12%)	72,72,81	1.53	10 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
19	CLA	b	827	-	65,73,73	1.49	5 (7%)	76,113,113	1.38	6 (7%)
19	CLA	b	809	-	65,73,73	1.48	7 (10%)	76,113,113	1.43	8 (10%)
27	SF4	a	851	-	0,12,12	-	-	-		
19	CLA	a	807	-	65,73,73	1.48	6 (9%)	76,113,113	1.38	7 (9%)
19	CLA	4	314	2	45,53,73	1.80	5 (11%)	52,89,113	1.57	7 (13%)
19	CLA	a	813	-	54,62,73	1.64	5 (9%)	62,99,113	1.45	7 (11%)
19	CLA	b	826	-	64,72,73	1.49	6 (9%)	74,111,113	1.45	7 (9%)
19	CLA	f	803	10	52,60,73	1.66	5 (9%)	60,97,113	1.49	8 (13%)
19	CLA	5	313	1	45,53,73	1.81	5 (11%)	52,89,113	1.56	6 (11%)
19	CLA	4	316	-	46,54,73	1.76	5 (10%)	53,90,113	1.57	6 (11%)
19	CLA	a	837	6	45,53,73	1.80	5 (11%)	52,89,113	1.59	7 (13%)
19	CLA	b	803	-	65,73,73	1.48	6 (9%)	76,113,113	1.35	7 (9%)
19	CLA	b	821	-	50,58,73	1.70	6 (12%)	58,95,113	1.60	10 (17%)
26	BCR	f	804	-	41,41,41	0.72	0	56,56,56	2.05	16 (28%)
19	CLA	4	306	2	45,53,73	1.81	5 (11%)	52,89,113	1.57	7 (13%)
17	XAT	5	302	-	39,47,47	0.92	2 (5%)	54,74,74	2.58	20 (37%)
19	CLA	b	837	-	65,73,73	1.48	5 (7%)	76,113,113	1.42	8 (10%)
25	LHG	b	849	19	30,30,48	1.33	6 (20%)	33,36,54	1.15	2 (6%)
19	CLA	a	815	-	45,53,73	1.78	5 (11%)	52,89,113	1.59	7 (13%)
19	CLA	a	835	-	65,73,73	1.47	5 (7%)	76,113,113	1.43	8 (10%)
17	XAT	2	303	-	39,47,47	0.98	1 (2%)	54,74,74	2.63	20 (37%)
19	CLA	2	316	4	46,54,73	1.75	6 (13%)	53,90,113	1.53	6 (11%)
19	CLA	2	313	4	41,49,73	1.84	5 (12%)	47,84,113	1.70	8 (17%)
17	XAT	4	304	-	39,47,47	0.90	2 (5%)	54,74,74	2.56	17 (31%)
17	XAT	j	101	-	39,47,47	0.88	0	54,74,74	2.72	18 (33%)
19	CLA	a	821	-	45,53,73	1.76	6 (13%)	52,89,113	1.64	7 (13%)
19	CLA	4	310	-	65,73,73	1.49	6 (9%)	76,113,113	1.42	8 (10%)
19	CLA	a	802	-	58,66,73	1.55	5 (8%)	67,104,113	1.50	7 (10%)
17	XAT	2	301	-	39,47,47	0.92	1 (2%)	54,74,74	2.71	18 (33%)
26	BCR	i	101	-	41,41,41	0.75	0	56,56,56	2.14	14 (25%)
18	A1L1G	5	303	-	38,47,47	1.42	6 (15%)	49,71,71	1.45	7 (14%)
19	CLA	5	310	-	46,54,73	1.78	6 (13%)	53,90,113	1.55	7 (13%)
19	CLA	l	204	-	46,54,73	1.75	6 (13%)	53,90,113	1.58	7 (13%)
19	CLA	b	817	-	55,63,73	1.62	5 (9%)	64,101,113	1.47	9 (14%)
19	CLA	5	314	-	52,60,73	1.66	6 (11%)	60,97,113	1.55	8 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
19	CLA	a	803	-	65,73,73	1.51	6 (9%)	76,113,113	1.38	8 (10%)
19	CLA	f	802	-	65,73,73	1.48	5 (7%)	76,113,113	1.40	8 (10%)
19	CLA	a	822	-	65,73,73	1.50	6 (9%)	76,113,113	1.38	8 (10%)
19	CLA	4	307	-	56,64,73	1.62	5 (8%)	65,102,113	1.44	9 (13%)
19	CLA	a	823	-	49,57,73	1.68	5 (10%)	55,93,113	1.61	7 (12%)
19	CLA	a	839	-	65,73,73	1.48	6 (9%)	76,113,113	1.42	8 (10%)
19	CLA	4	308	-	65,73,73	1.47	6 (9%)	76,113,113	1.37	9 (11%)
19	CLA	a	830	-	65,73,73	1.49	7 (10%)	76,113,113	1.40	7 (9%)
26	BCR	a	847	-	41,41,41	0.70	0	56,56,56	1.94	16 (28%)
23	A1L1F	1	304	-	50,59,59	1.30	5 (10%)	62,85,85	2.30	18 (29%)
19	CLA	4	312	-	46,54,73	1.78	5 (10%)	53,90,113	1.51	7 (13%)
19	CLA	a	844	25	65,73,73	1.46	5 (7%)	76,113,113	1.39	9 (11%)
19	CLA	b	835	-	53,61,73	1.67	6 (11%)	61,98,113	1.51	8 (13%)
19	CLA	a	816	-	50,58,73	1.68	7 (14%)	58,95,113	1.58	8 (13%)
19	CLA	1	305	-	61,69,73	1.54	5 (8%)	71,108,113	1.39	7 (9%)
19	CLA	2	310	-	65,73,73	1.50	6 (9%)	76,113,113	1.35	7 (9%)
19	CLA	4	309	-	50,58,73	1.68	5 (10%)	58,95,113	1.57	8 (13%)
19	CLA	1	312	5	52,60,73	1.71	5 (9%)	60,97,113	1.48	8 (13%)
17	XAT	3	304	-	39,47,47	0.90	1 (2%)	54,74,74	2.63	19 (35%)
24	PQN	b	842	-	34,34,34	1.56	2 (5%)	42,45,45	1.21	4 (9%)
17	XAT	1	303	-	39,47,47	0.90	1 (2%)	54,74,74	2.52	20 (37%)
19	CLA	b	818	-	59,67,73	1.56	6 (10%)	68,105,113	1.50	8 (11%)
17	XAT	2	302	-	39,47,47	0.92	1 (2%)	54,74,74	2.50	18 (33%)
19	CLA	3	310	-	56,64,73	1.60	5 (8%)	65,102,113	1.46	7 (10%)
26	BCR	b	844	-	41,41,41	0.72	0	56,56,56	1.92	16 (28%)
24	PQN	a	843	-	34,34,34	1.59	2 (5%)	42,45,45	1.10	3 (7%)
19	CLA	5	307	1	60,68,73	1.53	5 (8%)	70,107,113	1.42	8 (11%)
19	CLA	a	831	-	65,73,73	1.50	5 (7%)	76,113,113	1.48	8 (10%)
21	DGD	4	318	-	41,41,67	1.06	2 (4%)	55,55,81	1.82	6 (10%)
19	CLA	4	317	-	55,63,73	1.63	5 (9%)	64,101,113	1.46	7 (10%)
19	CLA	a	806	-	65,73,73	1.48	11 (16%)	76,113,113	1.67	13 (17%)
26	BCR	b	843	-	41,41,41	0.70	0	56,56,56	2.29	20 (35%)
26	BCR	m	102	-	41,41,41	1.18	2 (4%)	56,56,56	1.23	6 (10%)
19	CLA	b	841	25	65,73,73	1.52	5 (7%)	76,113,113	1.36	8 (10%)
19	CLA	l	202	-	42,50,73	1.82	6 (14%)	48,85,113	1.63	7 (14%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
26	BCR	f	801	-	41,41,41	0.69	0	56,56,56	2.14	16 (28%)
19	CLA	2	308	4	54,62,73	1.65	5 (9%)	62,99,113	1.46	8 (12%)
19	CLA	3	307	3	45,53,73	1.79	6 (13%)	52,89,113	1.56	6 (11%)
19	CLA	i	102	-	62,70,73	1.55	6 (9%)	72,109,113	1.38	8 (11%)
19	CLA	4	315	2	41,49,73	1.87	5 (12%)	47,84,113	1.64	7 (14%)
19	CLA	3	308	-	47,55,73	1.76	5 (10%)	54,91,113	1.56	8 (14%)
19	CLA	a	825	-	55,63,73	1.61	5 (9%)	64,101,113	1.46	8 (12%)
19	CLA	a	833	-	55,63,73	1.59	5 (9%)	64,101,113	1.53	7 (10%)
19	CLA	a	842	-	65,73,73	1.51	6 (9%)	76,113,113	1.37	7 (9%)
26	BCR	j	104	-	41,41,41	0.74	0	56,56,56	2.08	17 (30%)
19	CLA	3	312	3	59,67,73	1.57	5 (8%)	68,105,113	1.43	7 (10%)
19	CLA	b	810	-	65,73,73	1.48	5 (7%)	76,113,113	1.42	9 (11%)
19	CLA	a	817	-	45,53,73	1.81	5 (11%)	52,89,113	1.58	7 (13%)
19	CLA	4	313	-	53,61,73	1.65	5 (9%)	61,98,113	1.48	8 (13%)
19	CLA	b	825	-	65,73,73	1.48	5 (7%)	76,113,113	1.40	7 (9%)
19	CLA	5	305	1	46,54,73	1.76	6 (13%)	53,90,113	1.55	7 (13%)
19	CLA	b	814	-	65,73,73	1.48	7 (10%)	76,113,113	1.38	8 (10%)
19	CLA	5	315	-	46,54,73	1.76	5 (10%)	53,90,113	1.57	7 (13%)
19	CLA	1	313	-	41,49,73	1.85	6 (14%)	47,84,113	1.65	7 (14%)
19	CLA	5	311	-	51,59,73	1.66	5 (9%)	59,96,113	1.53	9 (15%)
19	CLA	a	841	-	65,73,73	1.48	5 (7%)	76,113,113	1.41	9 (11%)
19	CLA	a	838	-	51,59,73	1.66	5 (9%)	59,96,113	1.55	8 (13%)
26	BCR	b	846	-	41,41,41	0.70	0	56,56,56	1.97	21 (37%)
19	CLA	a	820	-	65,73,73	1.49	5 (7%)	76,113,113	1.44	9 (11%)
19	CLA	1	314	-	45,53,73	1.79	5 (11%)	52,89,113	1.55	6 (11%)
19	CLA	b	802	-	65,73,73	1.49	6 (9%)	76,113,113	1.34	7 (9%)
19	CLA	b	815	-	55,63,73	1.60	6 (10%)	64,101,113	1.55	8 (12%)
19	CLA	5	309	1	65,73,73	1.48	5 (7%)	76,113,113	1.37	7 (9%)
17	XAT	5	304	-	39,47,47	0.88	0	54,74,74	2.86	22 (40%)
19	CLA	b	807	-	65,73,73	1.46	5 (7%)	76,113,113	1.41	9 (11%)
19	CLA	a	812	19	62,70,73	1.51	6 (9%)	72,109,113	1.43	8 (11%)
17	XAT	2	305	-	39,47,47	0.90	0	54,74,74	2.43	18 (33%)
19	CLA	2	306	-	41,50,73	1.85	6 (14%)	46,85,113	1.56	6 (13%)
22	LMG	a	853	-	34,34,55	1.14	2 (5%)	42,42,63	1.16	3 (7%)
19	CLA	b	831	-	41,49,73	1.83	6 (14%)	47,84,113	1.65	9 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
19	CLA	a	814	-	65,73,73	1.47	6 (9%)	76,113,113	1.40	8 (10%)
19	CLA	j	102	-	58,66,73	1.58	5 (8%)	67,104,113	1.42	8 (11%)
19	CLA	3	315	3	46,54,73	1.79	6 (13%)	53,90,113	1.53	7 (13%)
22	LMG	j	105	-	32,32,55	1.12	2 (6%)	40,40,63	1.14	3 (7%)
26	BCR	a	849	-	41,41,41	0.72	0	56,56,56	2.17	20 (35%)
19	CLA	a	805	19	55,63,73	1.61	5 (9%)	64,101,113	1.51	8 (12%)
19	CLA	a	811	-	56,64,73	1.58	5 (8%)	65,102,113	1.47	8 (12%)
19	CLA	b	822	-	51,59,73	1.65	5 (9%)	59,96,113	1.58	9 (15%)
19	CLA	3	313	-	52,60,73	1.67	6 (11%)	60,97,113	1.52	9 (15%)
19	CLA	b	833	-	65,73,73	1.47	5 (7%)	76,113,113	1.39	7 (9%)
19	CLA	b	804	-	65,73,73	1.45	5 (7%)	76,113,113	1.55	12 (15%)
19	CLA	1	310	5	65,73,73	1.49	5 (7%)	76,113,113	1.34	8 (10%)
27	SF4	c	101	-	0,12,12	-	-	-		
19	CLA	5	308	-	55,63,73	1.63	6 (10%)	64,101,113	1.48	7 (10%)
19	CLA	a	804	-	55,63,73	1.62	6 (10%)	64,101,113	1.55	9 (14%)
19	CLA	a	834	-	65,73,73	1.49	5 (7%)	76,113,113	1.36	9 (11%)
19	CLA	j	103	12	42,50,73	1.81	5 (11%)	48,85,113	1.65	6 (12%)
22	LMG	2	317	-	35,35,55	1.09	2 (5%)	43,43,63	1.30	4 (9%)
19	CLA	5	312	-	52,60,73	1.65	5 (9%)	60,97,113	1.54	9 (15%)
18	A1L1G	3	306	-	38,47,47	1.43	6 (15%)	49,71,71	1.49	9 (18%)
19	CLA	4	311	-	46,54,73	1.78	6 (13%)	53,90,113	1.56	7 (13%)
20	SQD	5	316	19	34,35,54	1.46	4 (11%)	43,46,65	1.34	7 (16%)
19	CLA	2	307	-	47,55,73	1.74	6 (12%)	54,91,113	1.64	7 (12%)
19	CLA	b	820	-	55,63,73	1.63	6 (10%)	64,101,113	1.44	8 (12%)
19	CLA	a	809	6	65,73,73	1.44	5 (7%)	76,113,113	1.44	8 (10%)
19	CLA	2	315	-	42,50,73	1.86	6 (14%)	48,85,113	1.57	7 (14%)
19	CLA	b	812	-	54,62,73	1.67	7 (12%)	67,100,113	1.49	9 (13%)
18	A1L1G	1	301	-	38,47,47	1.44	6 (15%)	49,71,71	1.58	11 (22%)
17	XAT	3	303	-	39,47,47	0.90	0	54,74,74	2.59	20 (37%)
19	CLA	1	307	-	54,62,73	1.63	6 (11%)	62,99,113	1.52	8 (12%)
19	CLA	b	832	-	49,57,73	1.70	5 (10%)	55,93,113	1.56	8 (14%)
17	XAT	4	302	-	39,47,47	0.92	0	54,74,74	2.57	20 (37%)
19	CLA	b	828	-	65,73,73	1.48	5 (7%)	76,113,113	1.39	8 (10%)
19	CLA	1	308	5	65,73,73	1.48	6 (9%)	76,113,113	1.41	8 (10%)
19	CLA	2	309	-	46,54,73	1.76	6 (13%)	53,90,113	1.55	7 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
17	XAT	2	304	-	39,47,47	0.89	0	54,74,74	2.54	21 (38%)
19	CLA	b	823	-	60,68,73	1.55	6 (10%)	70,107,113	1.39	7 (10%)
19	CLA	b	830	-	65,73,73	1.52	6 (9%)	76,113,113	1.44	10 (13%)
26	BCR	b	847	-	41,41,41	0.76	0	56,56,56	2.19	21 (37%)
17	XAT	a	852	-	39,47,47	0.94	2 (5%)	54,74,74	2.69	20 (37%)
19	CLA	a	808	-	51,59,73	1.69	5 (9%)	59,96,113	1.50	8 (13%)
26	BCR	b	845	-	41,41,41	0.68	0	56,56,56	2.10	16 (28%)
19	CLA	5	306	20	45,53,73	1.80	5 (11%)	52,89,113	1.58	7 (13%)
20	SQD	1	315	-	44,45,54	1.29	4 (9%)	53,56,65	1.16	5 (9%)
25	LHG	m	101	-	45,45,48	1.14	6 (13%)	48,51,54	0.95	2 (4%)
19	CLA	b	816	-	45,53,73	1.77	6 (13%)	52,89,113	1.60	7 (13%)
26	BCR	b	850	-	41,41,41	0.73	0	56,56,56	1.88	17 (30%)
19	CLA	2	314	-	56,64,73	1.61	6 (10%)	65,102,113	1.45	7 (10%)
25	LHG	a	845	-	47,47,48	1.11	6 (12%)	50,53,54	0.97	2 (4%)
19	CLA	a	832	-	50,58,73	1.69	6 (12%)	58,95,113	1.53	9 (15%)
19	CLA	b	840	-	65,73,73	1.50	5 (7%)	76,113,113	1.42	8 (10%)
19	CLA	b	834	-	65,73,73	1.49	6 (9%)	76,113,113	1.37	7 (9%)
19	CLA	a	828	-	65,73,73	1.46	6 (9%)	76,113,113	1.39	7 (9%)
19	CLA	3	311	-	50,58,73	1.70	5 (10%)	58,95,113	1.55	9 (15%)
17	XAT	4	301	-	39,47,47	0.94	1 (2%)	54,74,74	2.63	19 (35%)
19	CLA	b	819	-	60,68,73	1.56	5 (8%)	70,107,113	1.42	7 (10%)
19	CLA	1	311	-	53,61,73	1.64	5 (9%)	61,98,113	1.51	9 (14%)
19	CLA	b	824	-	53,61,73	1.64	6 (11%)	61,98,113	1.47	8 (13%)
19	CLA	b	806	-	65,73,73	1.47	5 (7%)	76,113,113	1.42	7 (9%)
19	CLA	1	306	-	65,73,73	1.48	5 (7%)	76,113,113	1.42	10 (13%)
17	XAT	4	303	-	39,47,47	0.89	1 (2%)	54,74,74	2.57	18 (33%)
19	CLA	a	854	-	65,73,73	1.50	5 (7%)	76,113,113	1.34	8 (10%)
17	XAT	1	302	-	39,47,47	0.91	1 (2%)	54,74,74	2.59	17 (31%)
19	CLA	b	808	-	65,73,73	1.48	5 (7%)	76,113,113	1.36	9 (11%)
19	CLA	1	309	5	46,54,73	1.79	6 (13%)	53,90,113	1.51	7 (13%)
19	CLA	a	836	-	50,58,73	1.69	5 (10%)	58,95,113	1.51	9 (15%)

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
19	CLA	b	801	-	1/1/15/20	20/37/115/115	-
19	CLA	l	203	-	1/1/14/20	6/31/109/115	-
17	XAT	4	305	-	-	4/31/93/93	0/4/4/4
26	BCR	a	848	-	-	0/29/63/63	0/2/2/2
19	CLA	a	801	-	1/1/15/20	22/37/115/115	-
19	CLA	2	311	-	1/1/13/20	5/29/107/115	-
19	CLA	a	827	-	1/1/15/20	8/37/115/115	-
19	CLA	a	819	-	1/1/12/20	4/24/102/115	-
19	CLA	3	309	3	1/1/13/20	5/27/105/115	-
19	CLA	a	818	-	1/1/13/20	11/27/105/115	-
17	XAT	3	301	-	-	3/31/93/93	0/4/4/4
27	SF4	c	102	-	-	-	0/6/5/5
26	BCR	a	850	-	-	4/29/63/63	0/2/2/2
19	CLA	b	836	-	1/1/13/20	11/29/107/115	-
19	CLA	a	826	-	1/1/15/20	9/37/115/115	-
19	CLA	a	840	-	1/1/15/20	8/37/115/115	-
19	CLA	3	314	3	1/1/11/20	7/16/94/115	-
19	CLA	b	805	-	1/1/15/20	12/37/115/115	-
19	CLA	b	813	-	1/1/12/20	6/23/101/115	-
18	A1L1G	3	302	-	-	17/29/85/85	0/3/3/3
19	CLA	b	811	-	1/1/15/20	17/37/115/115	-
19	CLA	a	810	6	1/1/15/20	13/37/115/115	-
19	CLA	a	824	-	1/1/11/20	4/15/93/115	-
26	BCR	l	205	-	-	8/29/63/63	0/2/2/2
26	BCR	l	201	-	-	4/29/63/63	0/2/2/2
19	CLA	a	829	-	1/1/14/20	15/34/112/115	-
17	XAT	3	305	-	-	0/31/93/93	0/4/4/4
19	CLA	b	838	-	1/1/15/20	8/37/115/115	-
25	LHG	a	846	19	-	16/31/31/53	-
19	CLA	b	839	-	1/1/15/20	14/37/115/115	-
26	BCR	b	848	-	-	2/29/63/63	0/2/2/2
17	XAT	5	301	-	-	3/31/93/93	0/4/4/4
26	BCR	b	852	-	-	5/29/63/63	0/2/2/2
19	CLA	b	829	-	1/1/15/20	11/37/115/115	-
19	CLA	2	312	-	1/1/11/20	4/16/94/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	DGD	b	851	-	-	20/46/86/95	0/2/2/2
19	CLA	b	827	-	1/1/15/20	5/37/115/115	-
19	CLA	b	809	-	1/1/15/20	10/37/115/115	-
27	SF4	a	851	-	-	-	0/6/5/5
19	CLA	a	807	-	1/1/15/20	18/37/115/115	-
19	CLA	4	314	2	1/1/11/20	3/13/91/115	-
19	CLA	a	813	-	1/1/12/20	9/24/102/115	-
19	CLA	b	826	-	1/1/14/20	6/36/114/115	-
19	CLA	f	803	10	1/1/12/20	2/22/100/115	-
19	CLA	5	313	1	1/1/11/20	5/13/91/115	-
19	CLA	4	316	-	1/1/11/20	7/15/93/115	-
19	CLA	a	837	6	1/1/11/20	4/13/91/115	-
19	CLA	b	803	-	1/1/15/20	18/37/115/115	-
19	CLA	b	821	-	1/1/12/20	7/19/97/115	-
26	BCR	f	804	-	-	4/29/63/63	0/2/2/2
19	CLA	4	306	2	1/1/11/20	7/13/91/115	-
17	XAT	5	302	-	-	3/31/93/93	0/4/4/4
19	CLA	b	837	-	1/1/15/20	8/37/115/115	-
25	LHG	b	849	19	-	20/35/35/53	-
19	CLA	a	815	-	1/1/11/20	2/13/91/115	-
19	CLA	a	835	-	1/1/15/20	12/37/115/115	-
19	CLA	2	316	4	1/1/11/20	5/15/93/115	-
17	XAT	2	303	-	-	6/31/93/93	0/4/4/4
19	CLA	2	313	4	1/1/10/20	4/8/86/115	-
17	XAT	4	304	-	-	0/31/93/93	0/4/4/4
17	XAT	j	101	-	-	5/31/93/93	0/4/4/4
19	CLA	a	821	-	1/1/11/20	2/13/91/115	-
19	CLA	4	310	-	1/1/15/20	16/37/115/115	-
19	CLA	a	802	-	1/1/13/20	7/29/107/115	-
17	XAT	2	301	-	-	3/31/93/93	0/4/4/4
26	BCR	i	101	-	-	3/29/63/63	0/2/2/2
19	CLA	5	310	-	1/1/11/20	6/15/93/115	-
19	CLA	l	204	-	1/1/11/20	4/15/93/115	-
18	A1L1G	5	303	-	-	9/29/85/85	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
19	CLA	b	817	-	1/1/13/20	4/25/103/115	-
19	CLA	5	314	-	1/1/12/20	4/22/100/115	-
19	CLA	a	803	-	1/1/15/20	3/37/115/115	-
19	CLA	f	802	-	1/1/15/20	13/37/115/115	-
19	CLA	a	822	-	1/1/15/20	5/37/115/115	-
19	CLA	4	307	-	1/1/13/20	7/27/105/115	-
19	CLA	a	823	-	1/1/11/20	7/18/96/115	-
19	CLA	a	839	-	1/1/15/20	15/37/115/115	-
19	CLA	4	308	-	1/1/15/20	14/37/115/115	-
19	CLA	a	830	-	1/1/15/20	15/37/115/115	-
26	BCR	a	847	-	-	0/29/63/63	0/2/2/2
23	A1L1F	1	304	-	-	11/43/99/99	0/3/3/3
19	CLA	4	312	-	1/1/11/20	4/15/93/115	-
19	CLA	a	844	25	1/1/15/20	16/37/115/115	-
19	CLA	b	835	-	1/1/12/20	8/23/101/115	-
19	CLA	a	816	-	1/1/12/20	5/19/97/115	-
19	CLA	1	305	-	1/1/14/20	10/33/111/115	-
19	CLA	2	310	-	1/1/15/20	14/37/115/115	-
19	CLA	4	309	-	1/1/12/20	7/19/97/115	-
19	CLA	1	312	5	1/1/12/20	3/22/100/115	-
17	XAT	3	304	-	-	3/31/93/93	0/4/4/4
24	PQN	b	842	-	-	1/23/43/43	0/2/2/2
17	XAT	1	303	-	-	0/31/93/93	0/4/4/4
19	CLA	b	818	-	1/1/13/20	10/30/108/115	-
19	CLA	3	310	-	1/1/13/20	4/27/105/115	-
17	XAT	2	302	-	-	0/31/93/93	0/4/4/4
26	BCR	b	844	-	-	2/29/63/63	0/2/2/2
24	PQN	a	843	-	-	5/23/43/43	0/2/2/2
19	CLA	5	307	1	1/1/14/20	7/31/109/115	-
19	CLA	a	831	-	1/1/15/20	11/37/115/115	-
21	DGD	4	318	-	-	10/29/69/95	0/2/2/2
19	CLA	4	317	-	1/1/13/20	7/25/103/115	-
19	CLA	a	806	-	1/1/15/20	12/37/115/115	-
26	BCR	b	843	-	-	2/29/63/63	0/2/2/2
26	BCR	m	102	-	-	9/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
19	CLA	b	841	25	1/1/15/20	9/37/115/115	-
19	CLA	l	202	-	1/1/10/20	2/10/88/115	-
26	BCR	f	801	-	-	3/29/63/63	0/2/2/2
19	CLA	2	308	4	1/1/12/20	5/24/102/115	-
19	CLA	3	307	3	1/1/11/20	1/13/91/115	-
19	CLA	i	102	-	1/1/14/20	9/34/112/115	-
19	CLA	4	315	2	1/1/10/20	5/8/86/115	-
19	CLA	3	308	-	1/1/11/20	5/16/94/115	-
19	CLA	a	825	-	1/1/13/20	8/25/103/115	-
19	CLA	a	833	-	1/1/13/20	2/25/103/115	-
19	CLA	a	842	-	1/1/15/20	9/37/115/115	-
26	BCR	j	104	-	-	4/29/63/63	0/2/2/2
19	CLA	3	312	3	1/1/13/20	9/30/108/115	-
19	CLA	b	810	-	1/1/15/20	16/37/115/115	-
19	CLA	a	817	-	1/1/11/20	6/13/91/115	-
19	CLA	4	313	-	1/1/12/20	6/23/101/115	-
19	CLA	b	825	-	1/1/15/20	14/37/115/115	-
19	CLA	5	305	1	1/1/11/20	4/15/93/115	-
19	CLA	b	814	-	1/1/15/20	14/37/115/115	-
19	CLA	5	315	-	1/1/11/20	5/15/93/115	-
19	CLA	1	313	-	1/1/10/20	3/8/86/115	-
19	CLA	5	311	-	1/1/12/20	8/21/99/115	-
19	CLA	a	841	-	1/1/15/20	15/37/115/115	-
19	CLA	a	838	-	1/1/12/20	6/21/99/115	-
26	BCR	b	846	-	-	0/29/63/63	0/2/2/2
19	CLA	a	820	-	1/1/15/20	16/37/115/115	-
19	CLA	1	314	-	1/1/11/20	5/13/91/115	-
19	CLA	b	802	-	1/1/15/20	17/37/115/115	-
19	CLA	b	815	-	1/1/13/20	13/25/103/115	-
19	CLA	5	309	1	1/1/15/20	14/37/115/115	-
17	XAT	5	304	-	-	1/31/93/93	0/4/4/4
19	CLA	b	807	-	1/1/15/20	19/37/115/115	-
19	CLA	a	812	19	1/1/14/20	9/34/112/115	-
17	XAT	2	305	-	-	2/31/93/93	0/4/4/4
19	CLA	2	306	-	1/1/10/20	2/9/87/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	LMG	a	853	-	-	13/29/49/70	0/1/1/1
19	CLA	b	831	-	1/1/10/20	1/8/86/115	-
19	CLA	a	814	-	1/1/15/20	20/37/115/115	-
19	CLA	j	102	-	1/1/13/20	16/29/107/115	-
19	CLA	3	315	3	1/1/11/20	8/15/93/115	-
22	LMG	j	105	-	-	11/27/47/70	0/1/1/1
26	BCR	a	849	-	-	0/29/63/63	0/2/2/2
19	CLA	a	805	19	1/1/13/20	6/25/103/115	-
19	CLA	a	811	-	1/1/13/20	8/27/105/115	-
19	CLA	b	822	-	1/1/12/20	2/21/99/115	-
19	CLA	3	313	-	1/1/12/20	1/22/100/115	-
19	CLA	b	833	-	1/1/15/20	13/37/115/115	-
19	CLA	b	804	-	1/1/15/20	10/37/115/115	-
19	CLA	1	310	5	1/1/15/20	18/37/115/115	-
27	SF4	c	101	-	-	-	0/6/5/5
19	CLA	5	308	-	1/1/13/20	4/25/103/115	-
19	CLA	a	804	-	1/1/13/20	10/25/103/115	-
19	CLA	a	834	-	1/1/15/20	7/37/115/115	-
19	CLA	j	103	12	1/1/10/20	5/10/88/115	-
22	LMG	2	317	-	-	11/30/50/70	0/1/1/1
19	CLA	5	312	-	1/1/12/20	0/22/100/115	-
19	CLA	4	311	-	1/1/11/20	8/15/93/115	-
18	A1L1G	3	306	-	-	18/29/85/85	0/3/3/3
20	SQD	5	316	19	-	11/30/50/69	0/1/1/1
19	CLA	2	307	-	1/1/11/20	6/16/94/115	-
19	CLA	b	820	-	1/1/13/20	3/25/103/115	-
19	CLA	a	809	6	1/1/15/20	15/37/115/115	-
19	CLA	2	315	-	1/1/10/20	1/10/88/115	-
19	CLA	b	812	-	1/1/13/20	5/25/101/115	-
18	A1L1G	1	301	-	-	11/29/85/85	0/3/3/3
17	XAT	3	303	-	-	3/31/93/93	0/4/4/4
19	CLA	1	307	-	1/1/12/20	6/24/102/115	-
19	CLA	b	832	-	1/1/11/20	6/18/96/115	-
17	XAT	4	302	-	-	0/31/93/93	0/4/4/4
19	CLA	b	828	-	1/1/15/20	14/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
19	CLA	1	308	5	1/1/15/20	13/37/115/115	-
19	CLA	2	309	-	1/1/11/20	4/15/93/115	-
19	CLA	b	823	-	1/1/14/20	7/31/109/115	-
17	XAT	2	304	-	-	3/31/93/93	0/4/4/4
19	CLA	b	830	-	1/1/15/20	10/37/115/115	-
26	BCR	b	847	-	-	1/29/63/63	0/2/2/2
19	CLA	a	808	-	1/1/12/20	3/21/99/115	-
17	XAT	a	852	-	-	7/31/93/93	0/4/4/4
26	BCR	b	845	-	-	6/29/63/63	0/2/2/2
19	CLA	5	306	20	1/1/11/20	7/13/91/115	-
20	SQD	1	315	-	-	19/40/60/69	0/1/1/1
25	LHG	m	101	-	-	28/50/50/53	-
19	CLA	b	816	-	1/1/11/20	3/13/91/115	-
26	BCR	b	850	-	-	2/29/63/63	0/2/2/2
19	CLA	2	314	-	1/1/13/20	13/27/105/115	-
25	LHG	a	845	-	-	27/52/52/53	-
19	CLA	a	832	-	1/1/12/20	5/19/97/115	-
19	CLA	b	840	-	1/1/15/20	17/37/115/115	-
19	CLA	b	834	-	1/1/15/20	14/37/115/115	-
19	CLA	a	828	-	1/1/15/20	9/37/115/115	-
19	CLA	3	311	-	1/1/12/20	4/19/97/115	-
17	XAT	4	301	-	-	4/31/93/93	0/4/4/4
19	CLA	b	819	-	1/1/14/20	14/31/109/115	-
19	CLA	1	311	-	1/1/12/20	6/23/101/115	-
19	CLA	b	824	-	1/1/12/20	8/23/101/115	-
19	CLA	b	806	-	1/1/15/20	16/37/115/115	-
19	CLA	1	306	-	1/1/15/20	15/37/115/115	-
17	XAT	4	303	-	-	3/31/93/93	0/4/4/4
19	CLA	a	854	-	1/1/15/20	13/37/115/115	-
17	XAT	1	302	-	-	0/31/93/93	0/4/4/4
19	CLA	b	808	-	1/1/15/20	12/37/115/115	-
19	CLA	1	309	5	1/1/11/20	6/15/93/115	-
19	CLA	a	836	-	1/1/12/20	6/19/97/115	-

The worst 5 of 910 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	1	312	CLA	C4B-NB	7.89	1.42	1.35
19	3	315	CLA	C4B-NB	7.74	1.42	1.35
19	1	309	CLA	C4B-NB	7.74	1.42	1.35
19	a	842	CLA	C4B-NB	7.71	1.42	1.35
19	a	818	CLA	C4B-NB	7.71	1.42	1.35

The worst 5 of 1941 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	4	318	DGD	C6E-C5E-C4E	-9.38	91.03	113.00
23	1	304	A1L1F	C17-C20-C25	-8.09	108.70	122.26
19	b	840	CLA	C4A-NA-C1A	7.38	110.02	106.71
23	1	304	A1L1F	O15-C20-C21	7.26	118.83	113.38
17	4	305	XAT	C38-C25-C24	7.21	122.40	114.28

5 of 146 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
19	5	305	CLA	ND
19	5	306	CLA	ND
19	5	307	CLA	ND
19	5	308	CLA	ND
19	5	309	CLA	ND

5 of 1616 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
17	5	302	XAT	O4-C6-C7-C8
17	5	302	XAT	C7-C8-C9-C10
17	5	302	XAT	C7-C8-C9-C19
17	4	301	XAT	C27-C28-C29-C30
17	4	301	XAT	C27-C28-C29-C39

There are no ring outliers.

177 monomers are involved in 539 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
17	4	305	XAT	4	0
19	b	801	CLA	5	0
19	l	203	CLA	2	0
26	a	848	BCR	7	0
19	a	801	CLA	6	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
19	a	827	CLA	4	0
19	a	819	CLA	6	0
19	3	309	CLA	1	0
19	a	818	CLA	10	0
17	3	301	XAT	4	0
27	c	102	SF4	2	0
26	a	850	BCR	4	0
19	b	836	CLA	4	0
19	a	826	CLA	8	0
19	a	840	CLA	6	0
19	b	805	CLA	4	0
19	b	813	CLA	4	0
19	b	811	CLA	7	0
19	a	810	CLA	4	0
19	a	824	CLA	1	0
26	l	205	BCR	9	0
26	l	201	BCR	4	0
17	3	305	XAT	4	0
19	a	829	CLA	8	0
19	b	838	CLA	4	0
25	a	846	LHG	3	0
19	b	839	CLA	7	0
26	b	848	BCR	2	0
17	5	301	XAT	4	0
26	b	852	BCR	4	0
19	b	829	CLA	2	0
21	b	851	DGD	6	0
19	b	827	CLA	3	0
19	b	809	CLA	4	0
19	a	807	CLA	4	0
19	4	314	CLA	1	0
19	a	813	CLA	1	0
19	b	826	CLA	3	0
19	4	316	CLA	1	0
19	a	837	CLA	1	0
19	b	803	CLA	3	0
19	b	821	CLA	2	0
26	f	804	BCR	5	0
19	4	306	CLA	1	0
17	5	302	XAT	8	0
19	b	837	CLA	5	0
19	a	815	CLA	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
19	a	835	CLA	5	0
17	2	303	XAT	12	0
19	2	316	CLA	2	0
17	4	304	XAT	3	0
17	j	101	XAT	5	0
19	4	310	CLA	6	0
19	a	802	CLA	5	0
17	2	301	XAT	2	0
26	i	101	BCR	3	0
18	5	303	A1L1G	1	0
19	5	310	CLA	2	0
19	b	817	CLA	4	0
19	5	314	CLA	2	0
19	a	803	CLA	4	0
19	f	802	CLA	2	0
19	a	822	CLA	5	0
19	4	307	CLA	2	0
19	a	823	CLA	4	0
19	a	839	CLA	5	0
19	4	308	CLA	5	0
19	a	830	CLA	7	0
26	a	847	BCR	3	0
23	1	304	A1L1F	2	0
19	4	312	CLA	2	0
19	a	844	CLA	5	0
19	a	816	CLA	2	0
19	2	310	CLA	3	0
19	4	309	CLA	3	0
19	1	312	CLA	2	0
17	3	304	XAT	6	0
24	b	842	PQN	2	0
17	1	303	XAT	3	0
19	b	818	CLA	7	0
17	2	302	XAT	2	0
19	3	310	CLA	1	0
26	b	844	BCR	1	0
24	a	843	PQN	4	0
19	5	307	CLA	7	0
19	a	831	CLA	5	0
21	4	318	DGD	11	0
19	4	317	CLA	7	0
19	a	806	CLA	9	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
26	b	843	BCR	4	0
26	m	102	BCR	2	0
19	b	841	CLA	4	0
19	l	202	CLA	1	0
26	f	801	BCR	8	0
19	2	308	CLA	5	0
19	i	102	CLA	3	0
19	4	315	CLA	1	0
19	3	308	CLA	2	0
19	a	825	CLA	5	0
19	a	833	CLA	2	0
19	a	842	CLA	4	0
26	j	104	BCR	9	0
19	3	312	CLA	1	0
19	4	313	CLA	4	0
19	b	825	CLA	7	0
19	5	305	CLA	3	0
19	b	814	CLA	6	0
19	5	315	CLA	2	0
19	5	311	CLA	1	0
19	a	841	CLA	7	0
19	a	838	CLA	1	0
26	b	846	BCR	3	0
19	a	820	CLA	8	0
19	b	802	CLA	3	0
19	b	815	CLA	3	0
19	5	309	CLA	6	0
17	5	304	XAT	5	0
19	b	807	CLA	7	0
17	2	305	XAT	3	0
22	a	853	LMG	11	0
19	b	831	CLA	5	0
19	a	814	CLA	3	0
19	j	102	CLA	8	0
22	j	105	LMG	6	0
26	a	849	BCR	2	0
19	a	805	CLA	1	0
19	b	822	CLA	2	0
19	3	313	CLA	3	0
19	b	833	CLA	3	0
19	b	804	CLA	4	0
19	1	310	CLA	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
19	5	308	CLA	2	0
19	a	804	CLA	4	0
19	a	834	CLA	6	0
19	j	103	CLA	2	0
22	2	317	LMG	3	0
19	5	312	CLA	3	0
19	4	311	CLA	1	0
20	5	316	SQD	1	0
19	2	307	CLA	1	0
19	b	820	CLA	1	0
19	a	809	CLA	3	0
19	b	812	CLA	2	0
18	1	301	A1L1G	1	0
17	3	303	XAT	2	0
19	b	832	CLA	2	0
17	4	302	XAT	5	0
19	b	828	CLA	4	0
19	1	308	CLA	3	0
19	2	309	CLA	1	0
17	2	304	XAT	1	0
19	b	823	CLA	4	0
19	b	830	CLA	4	0
26	b	847	BCR	7	0
17	a	852	XAT	5	0
19	a	808	CLA	1	0
26	b	845	BCR	5	0
20	1	315	SQD	2	0
25	m	101	LHG	4	0
26	b	850	BCR	4	0
19	2	314	CLA	1	0
25	a	845	LHG	3	0
19	a	832	CLA	2	0
19	b	840	CLA	4	0
19	b	834	CLA	5	0
19	a	828	CLA	5	0
19	3	311	CLA	1	0
17	4	301	XAT	6	0
19	b	819	CLA	3	0
19	1	311	CLA	2	0
19	b	824	CLA	6	0
19	b	806	CLA	2	0
19	1	306	CLA	5	0

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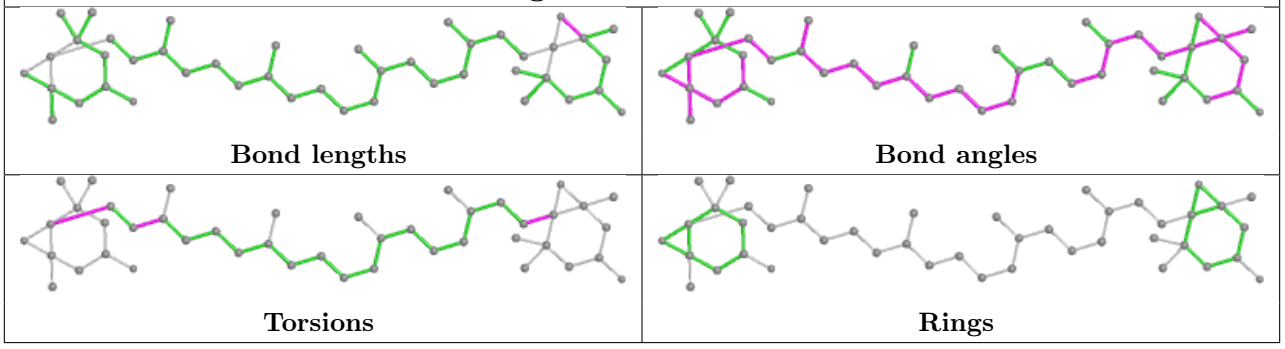
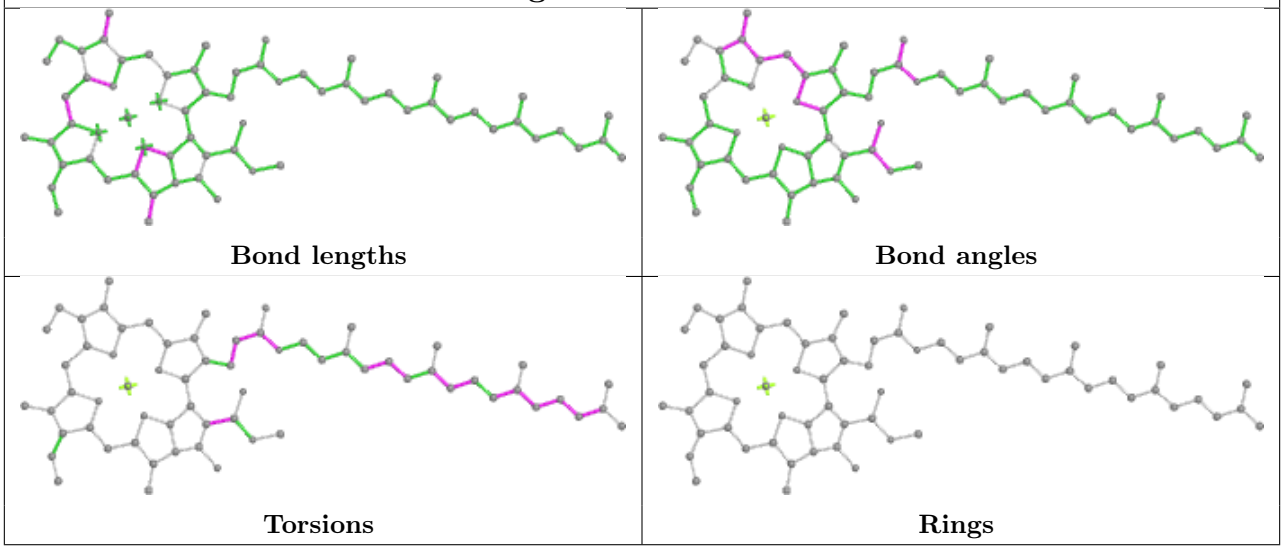
Mol	Chain	Res	Type	Clashes	Symm-Clashes
17	4	303	XAT	10	0
19	a	854	CLA	2	0
17	1	302	XAT	4	0
19	b	808	CLA	2	0

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 then 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.

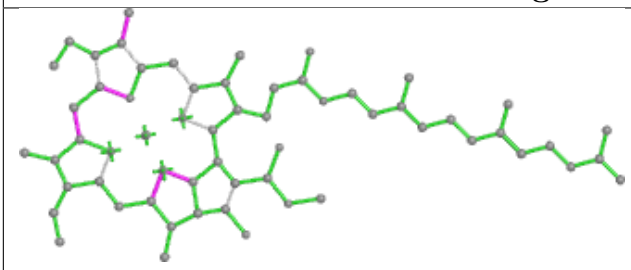
Ligand XAT 4 305



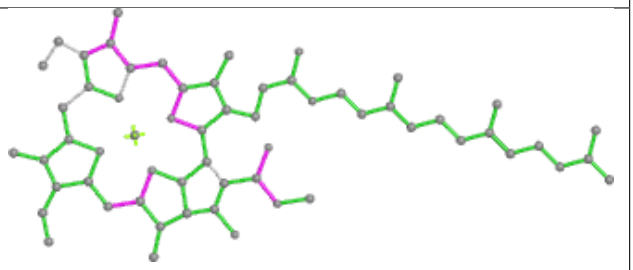
Ligand CLA b 801



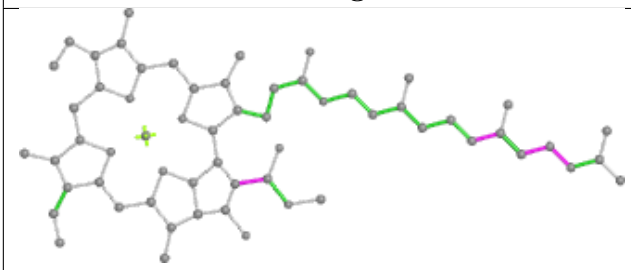
Ligand CLA l 203



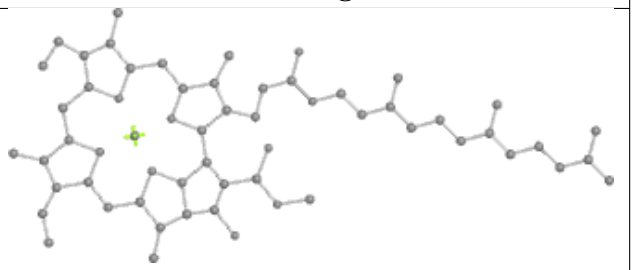
Bond lengths



Bond angles

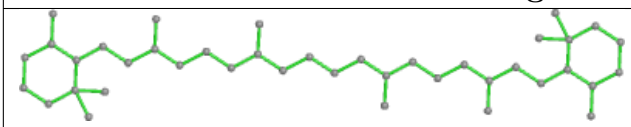


Torsions

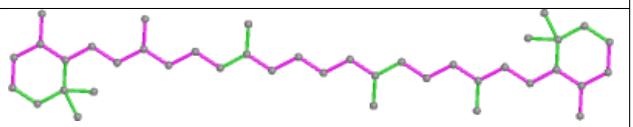


Rings

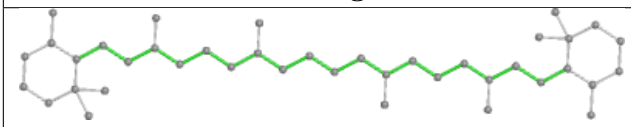
Ligand BCR a 848



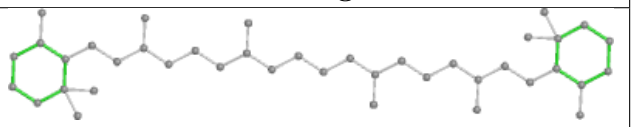
Bond lengths



Bond angles

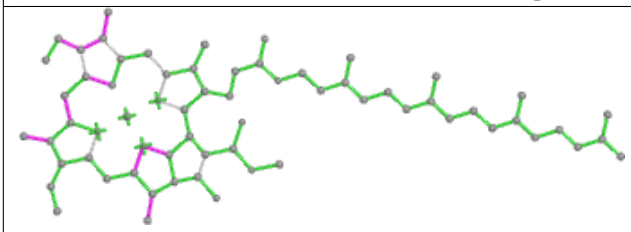


Torsions

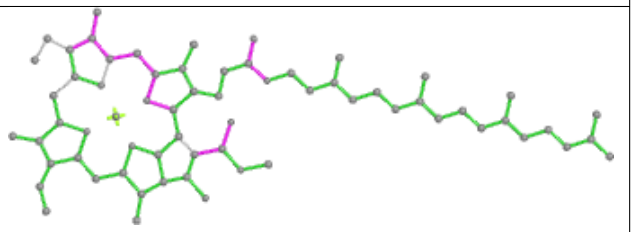


Rings

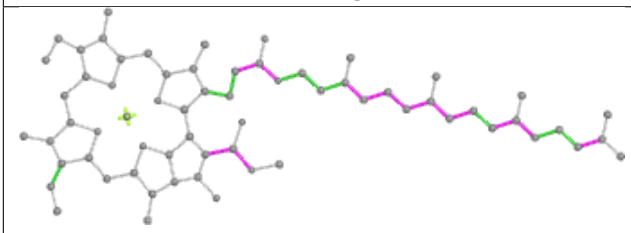
Ligand CLA a 801



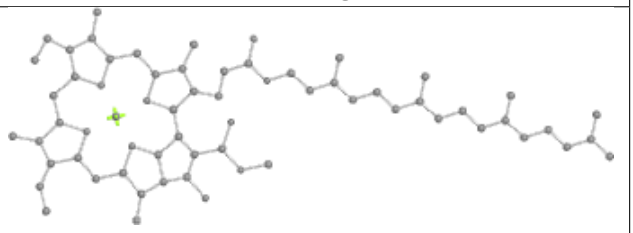
Bond lengths



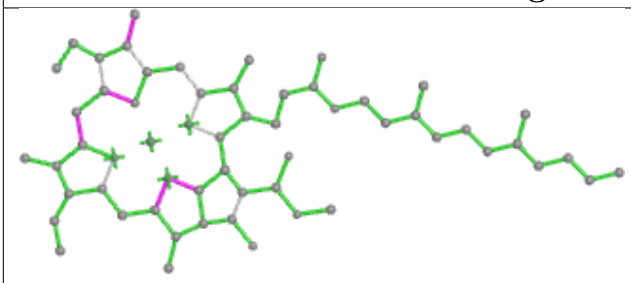
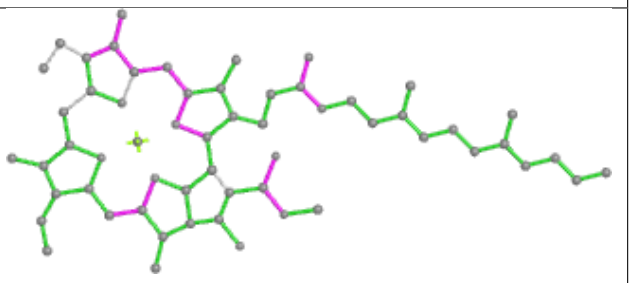
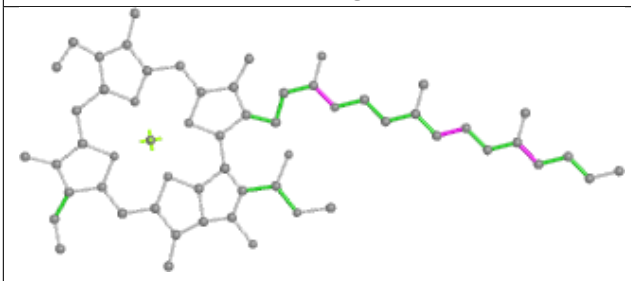
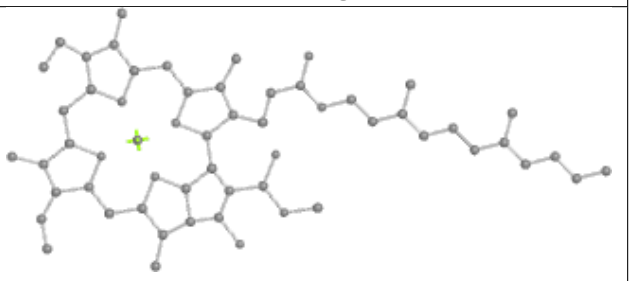
Bond angles

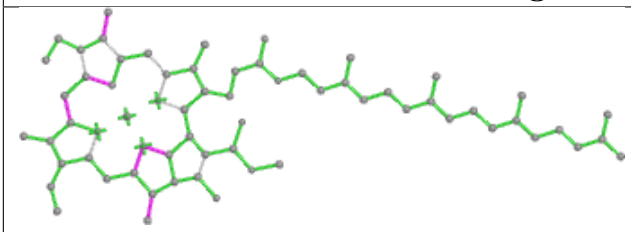
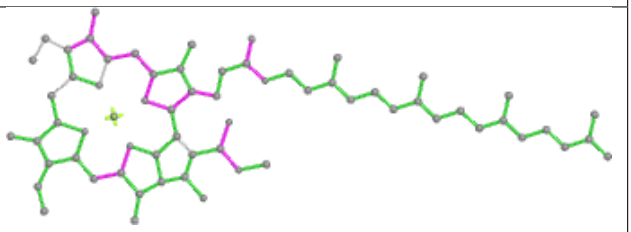
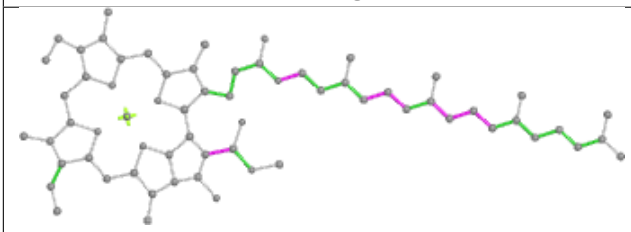
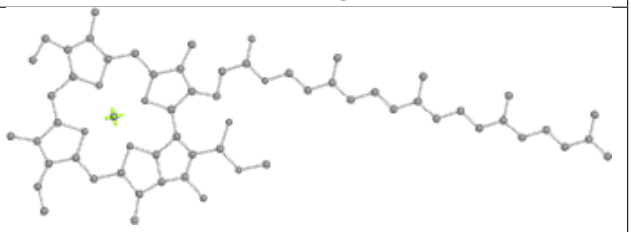


Torsions

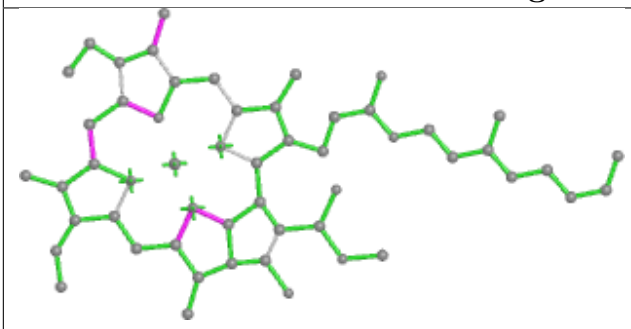


Rings

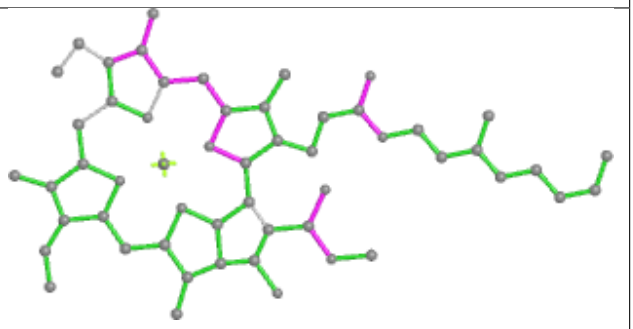
Ligand CLA 2 311	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand CLA a 827	
 Bond lengths	 Bond angles
 Torsions	 Rings

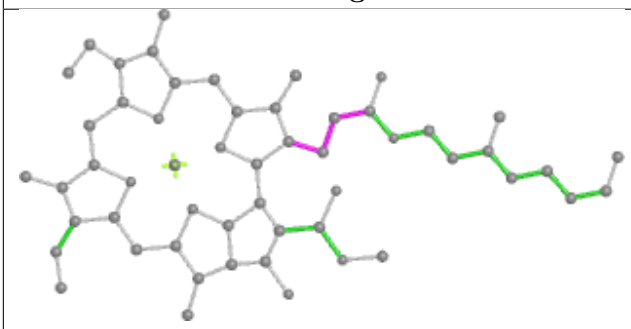
Ligand CLA a 819



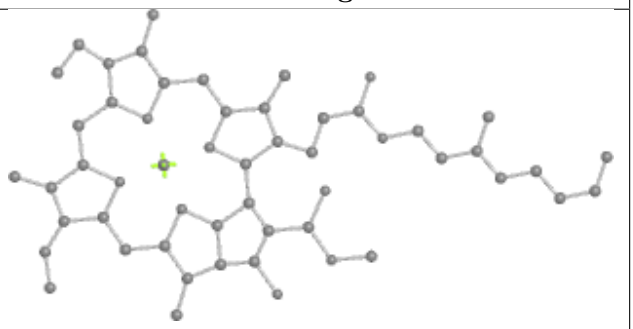
Bond lengths



Bond angles

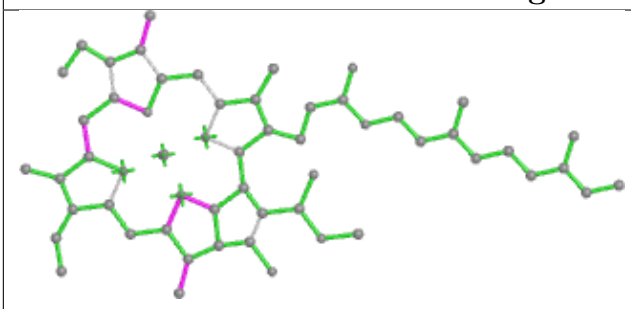


Torsions

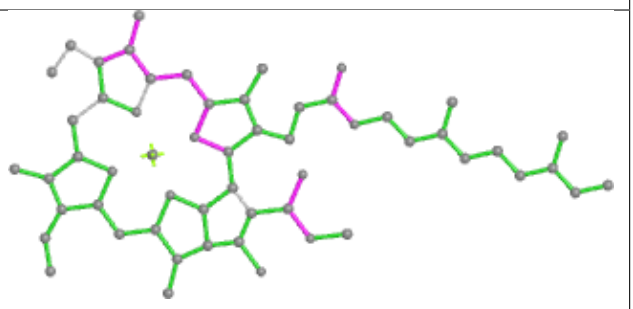


Rings

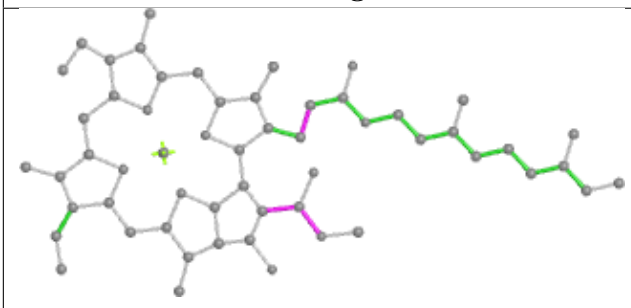
Ligand CLA 3 309



Bond lengths



Bond angles



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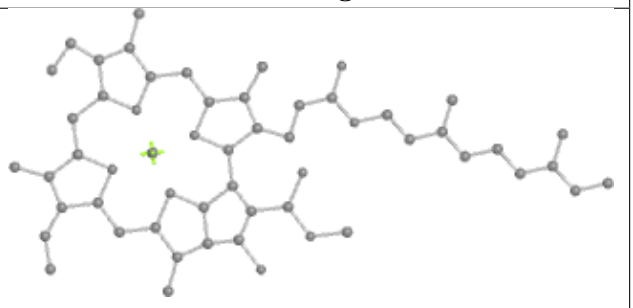
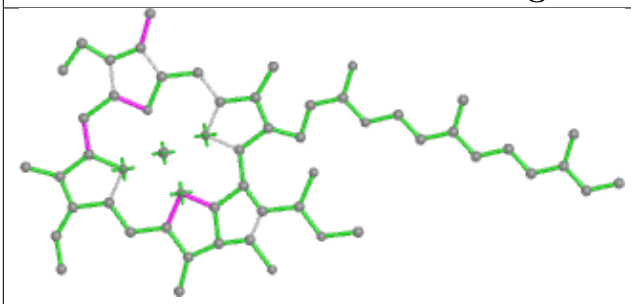


Rings

Ligand CLA a 818



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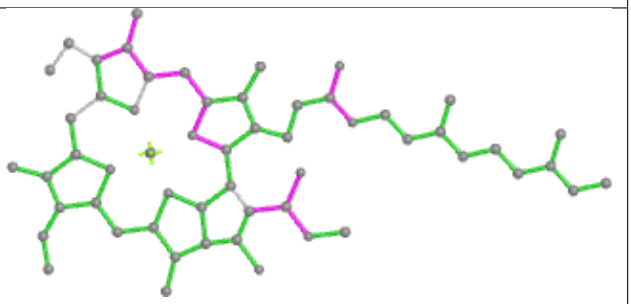
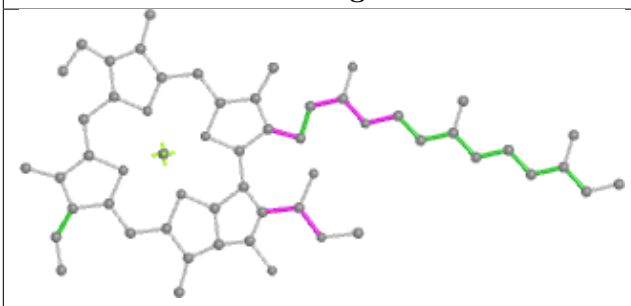


Bond angles



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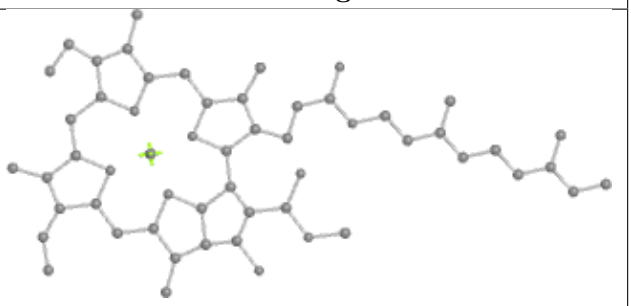
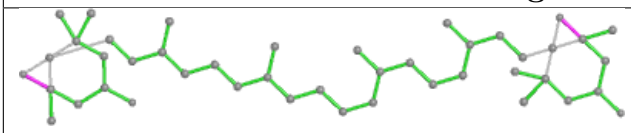
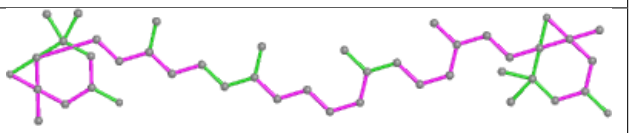


Rings

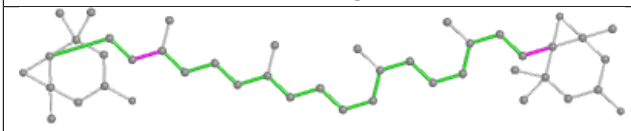
Ligand XAT 3 301



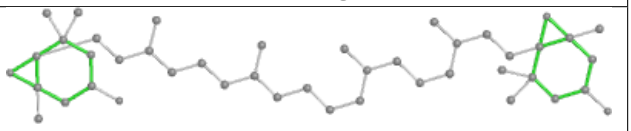
Bond lengths



Bond angles

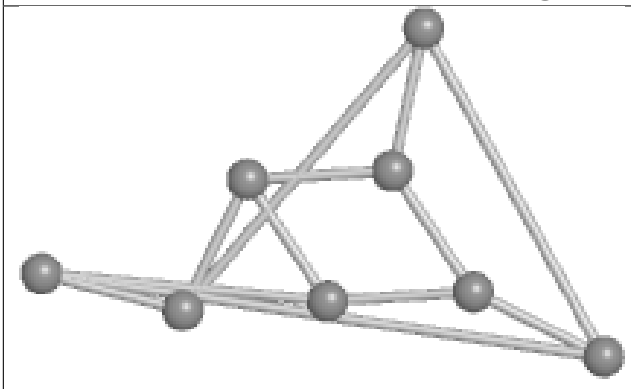


Torsions

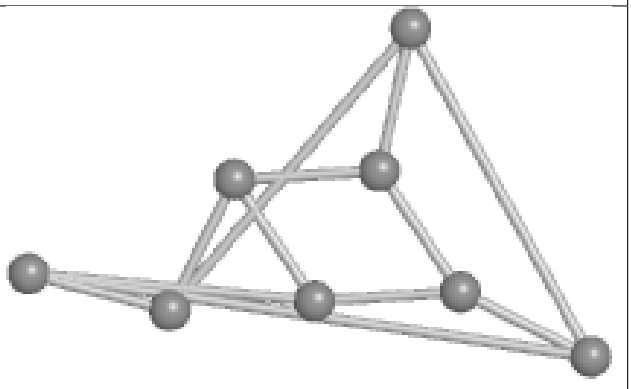


Rings

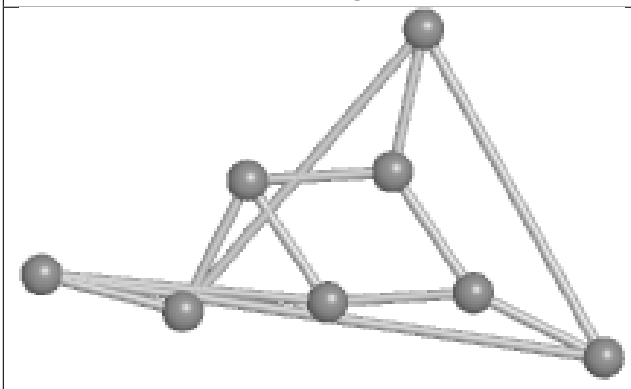
Ligand SF4 c 102



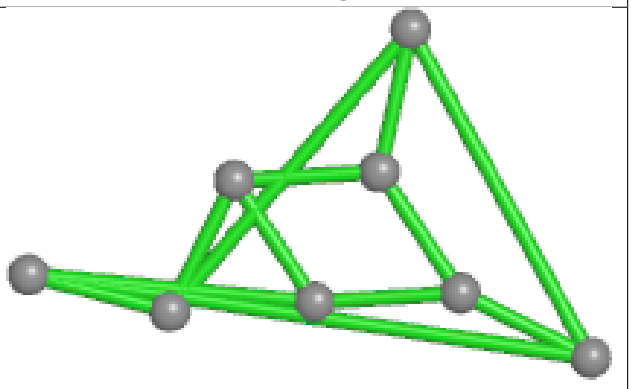
Bond lengths



Bond angles

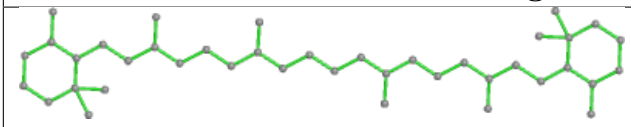


Torsions

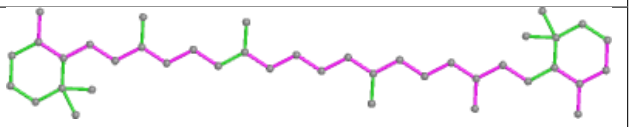


Rings

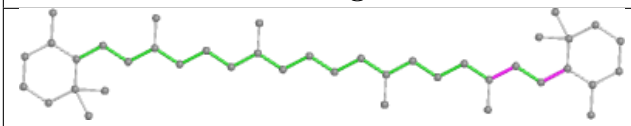
Ligand BCR a 850



Bond lengths

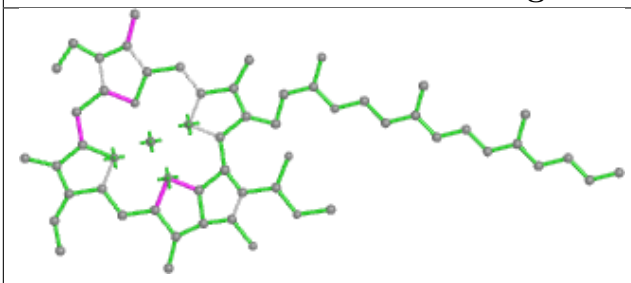
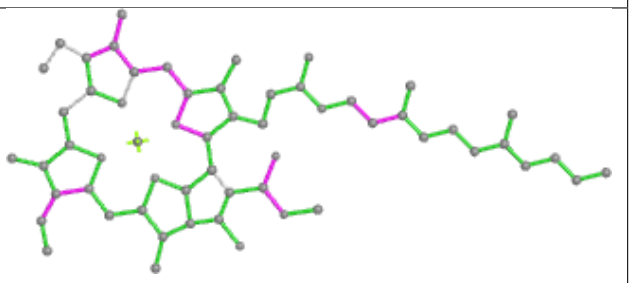
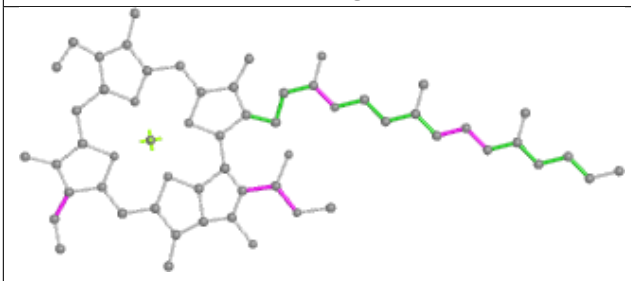
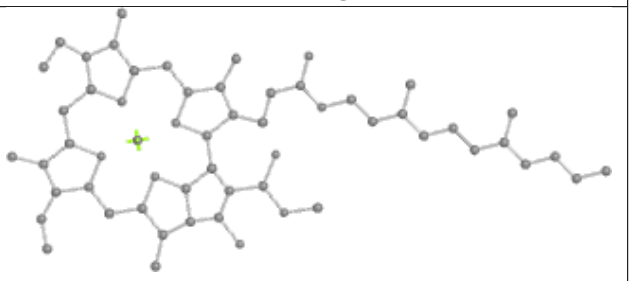


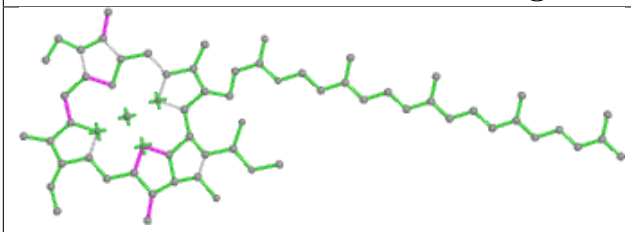
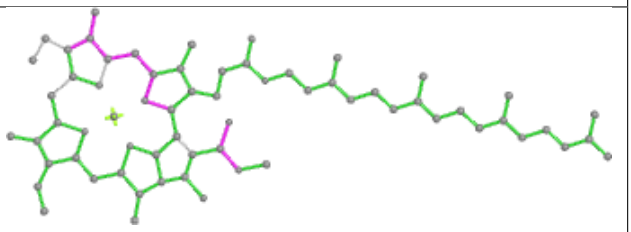
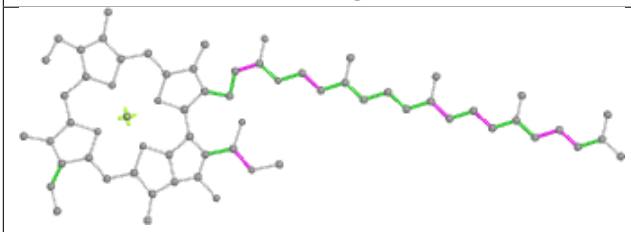
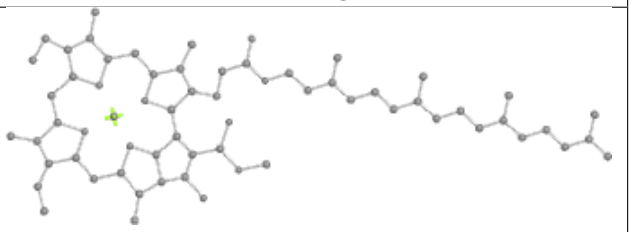
Bond angles



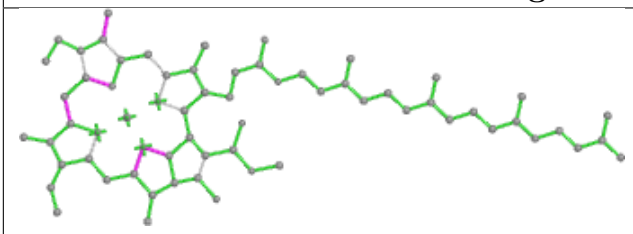
Torsions

Rings

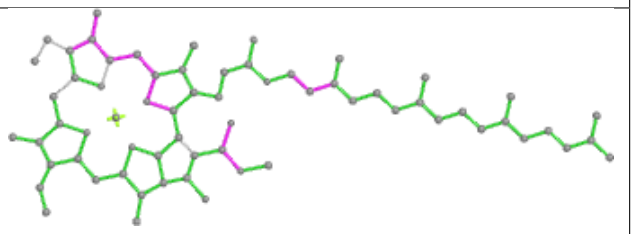
Ligand CLA b 836	
	
Bond lengths	**Bond angles**
	
Torsions	**Rings**

Ligand CLA a 826	
	
Bond lengths	**Bond angles**
	
Torsions	**Rings**

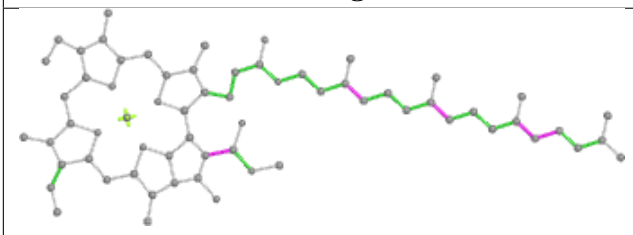
Ligand CLA a 840



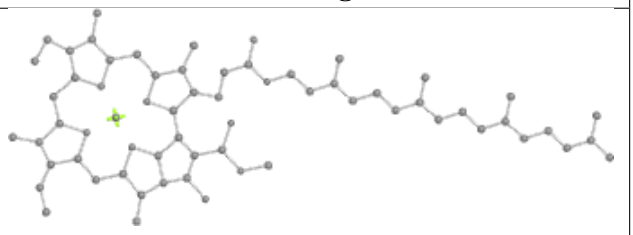
Bond lengths



Bond angles

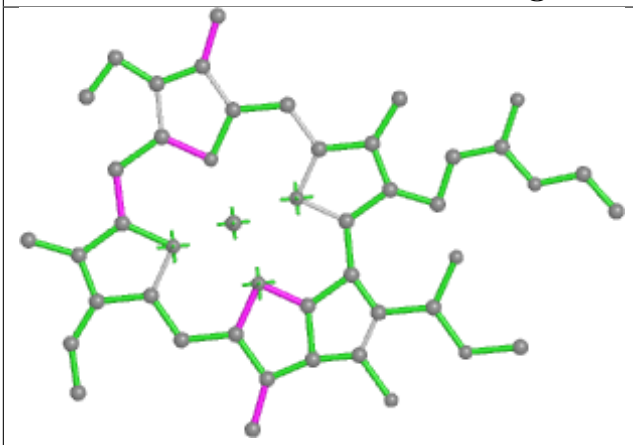


Torsions

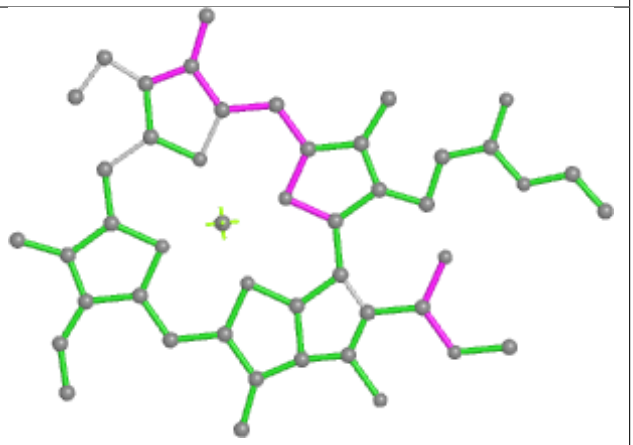


Rings

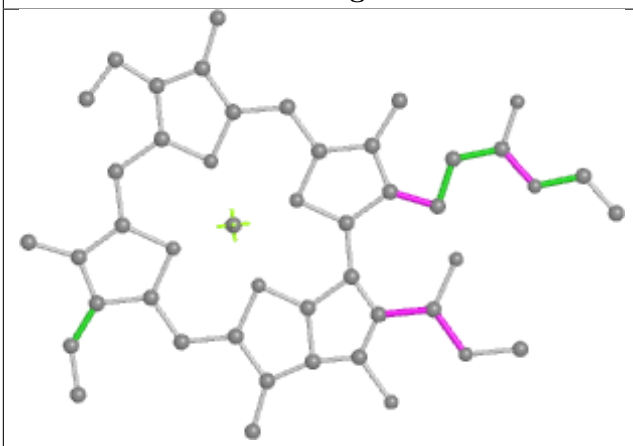
Ligand CLA 3 314



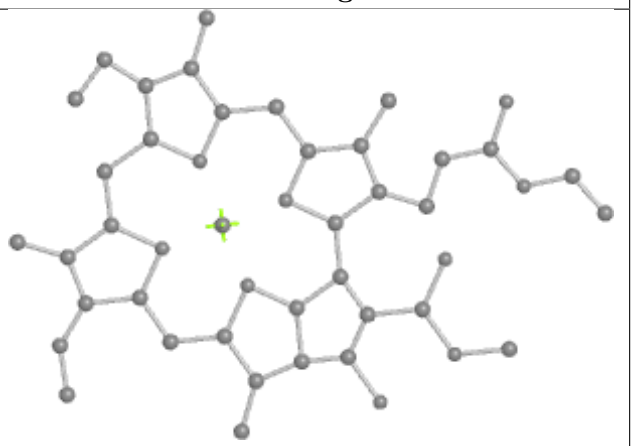
Bond lengths



Bond angles

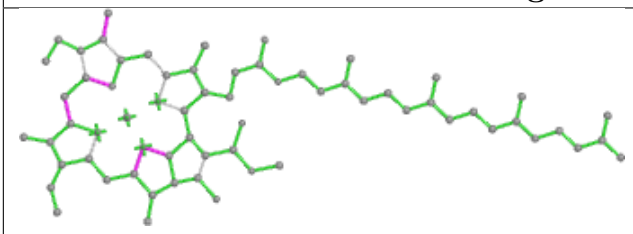


Torsions

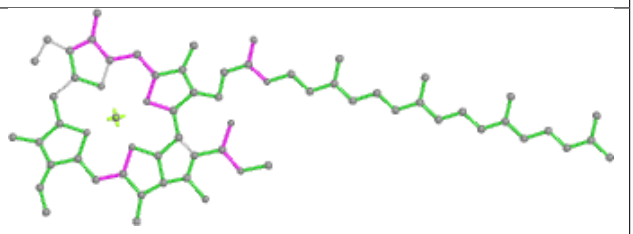


Rings

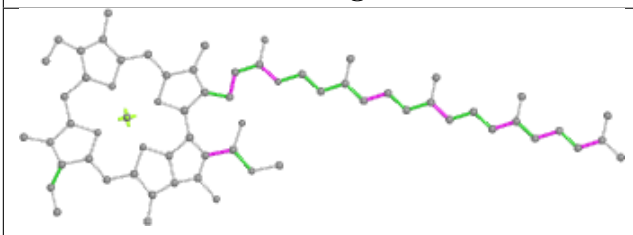
Ligand CLA b 805



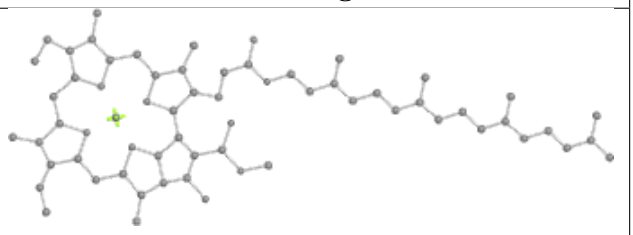
Bond lengths



Bond angles

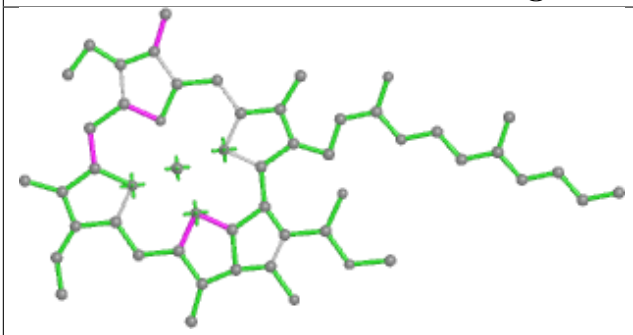


Torsions

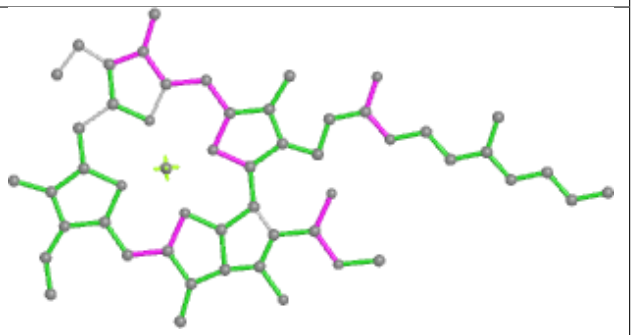


Rings

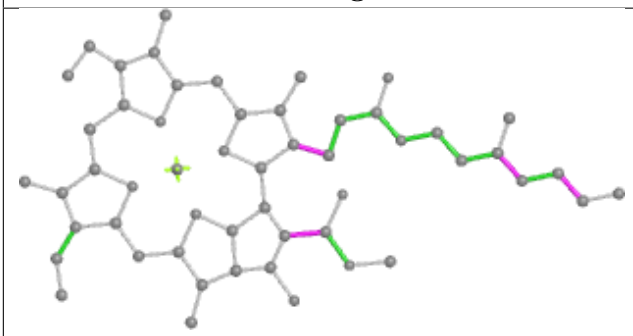
Ligand CLA b 813



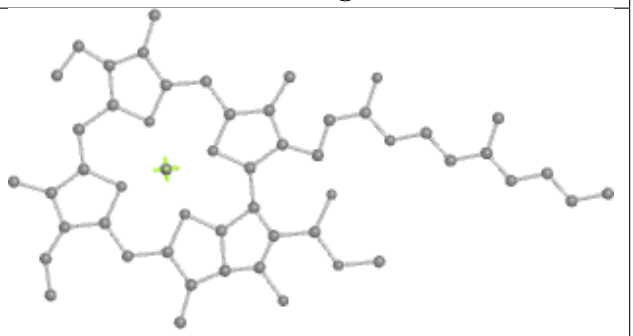
Bond lengths



Bond angles

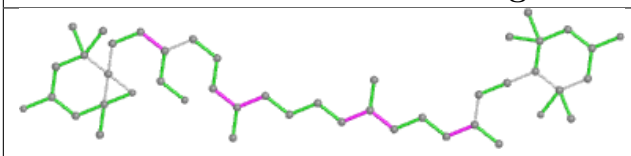


Torsions

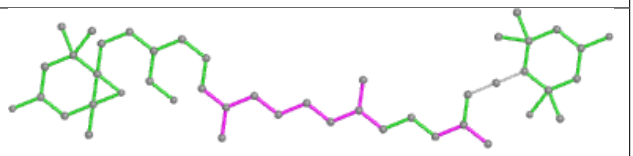


Rings

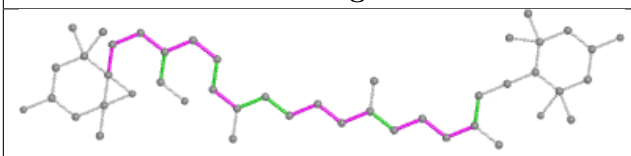
Ligand A1L1G 3 302



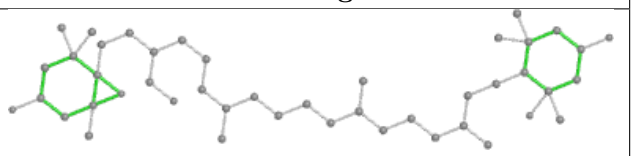
Bond lengths



Bond angles

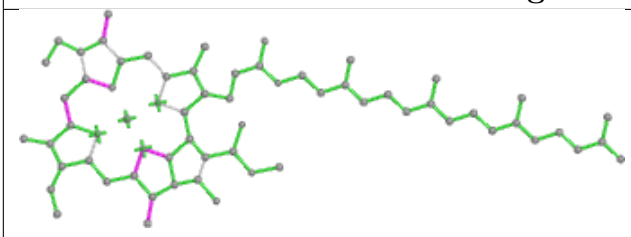


Torsions

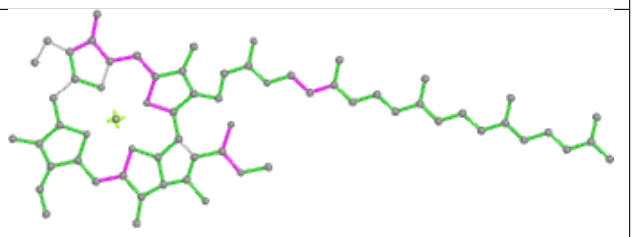


Rings

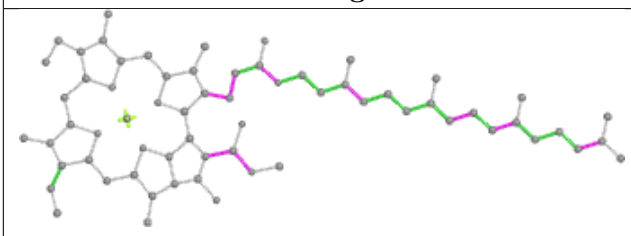
Ligand CLA b 811



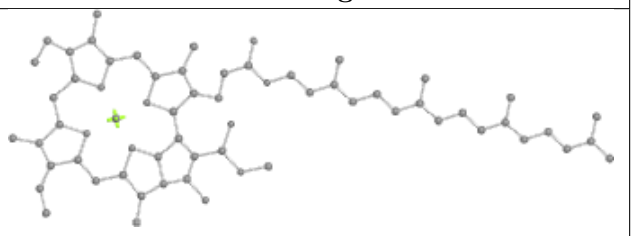
Bond lengths



Bond angles

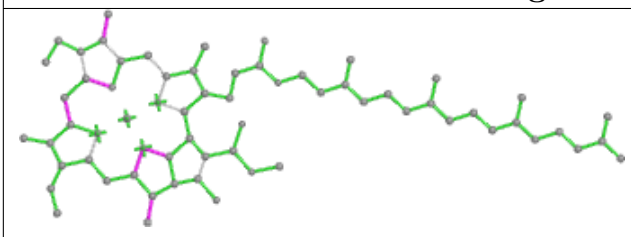


Torsions

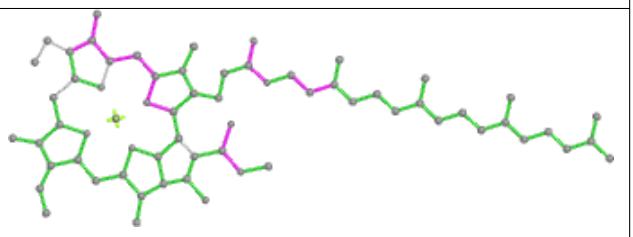


Rings

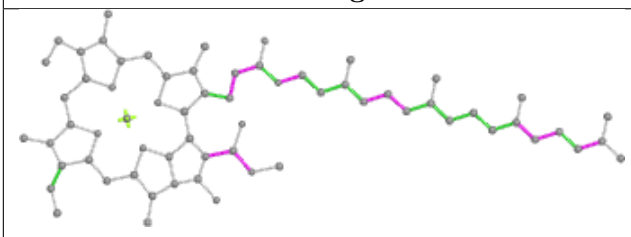
Ligand CLA a 810



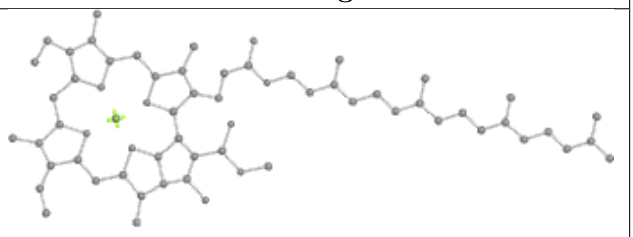
Bond lengths



Bond angles

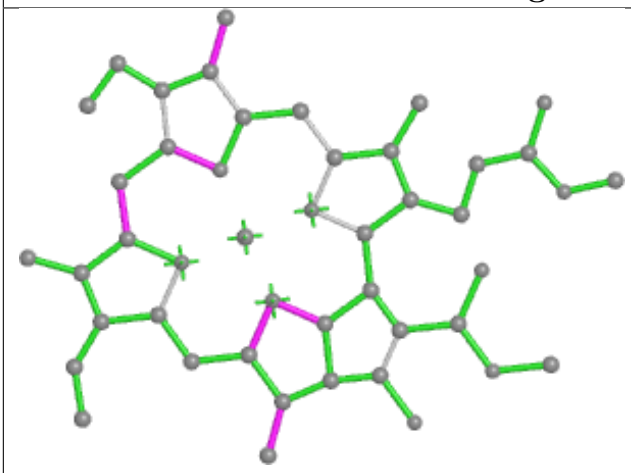


Torsions

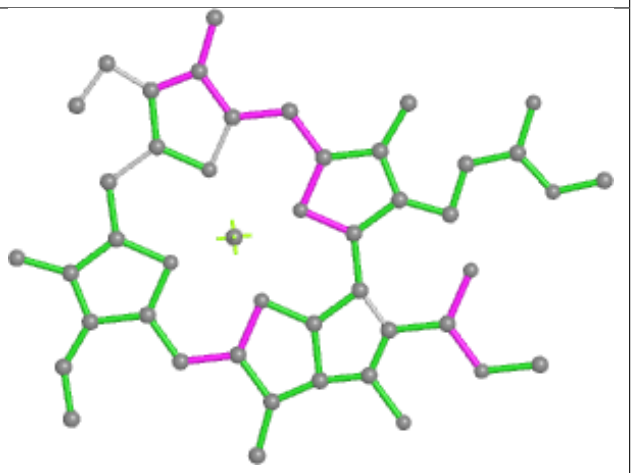


Rings

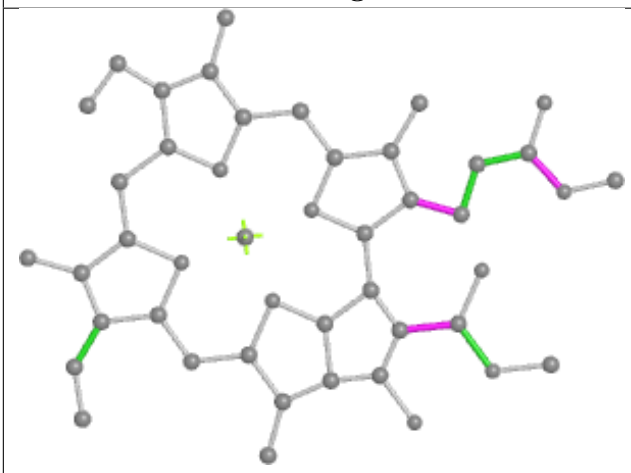
Ligand CLA a 824



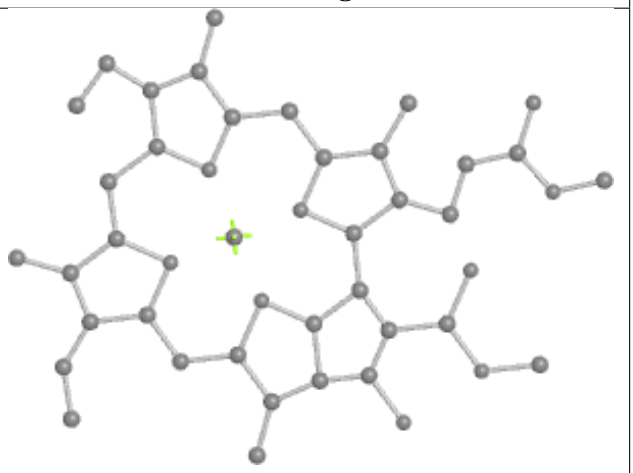
Bond lengths



Bond angles

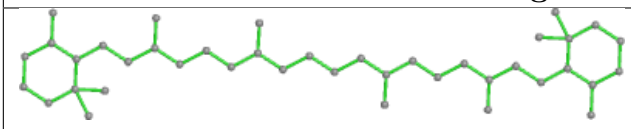


Torsions

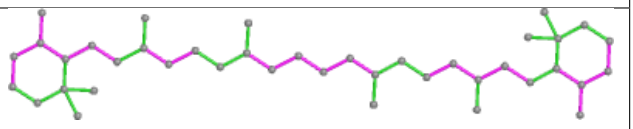


Rings

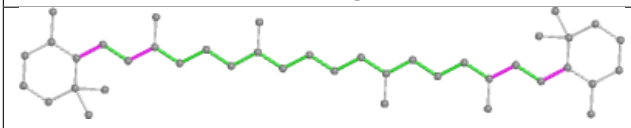
Ligand BCR l 205



Bond lengths



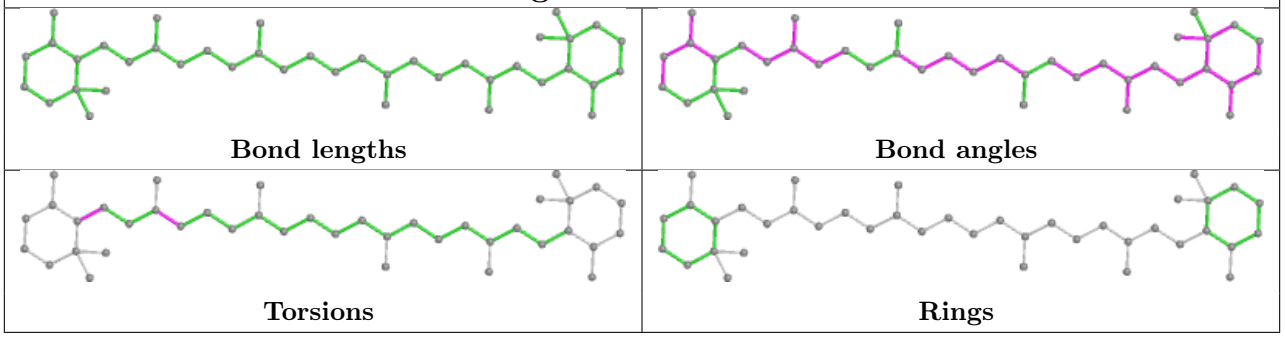
Bond angles



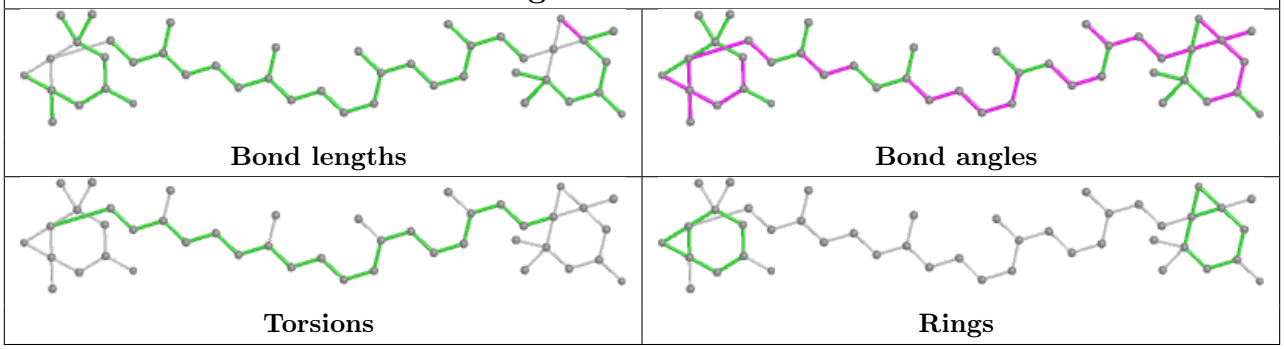
Torsions

Rings

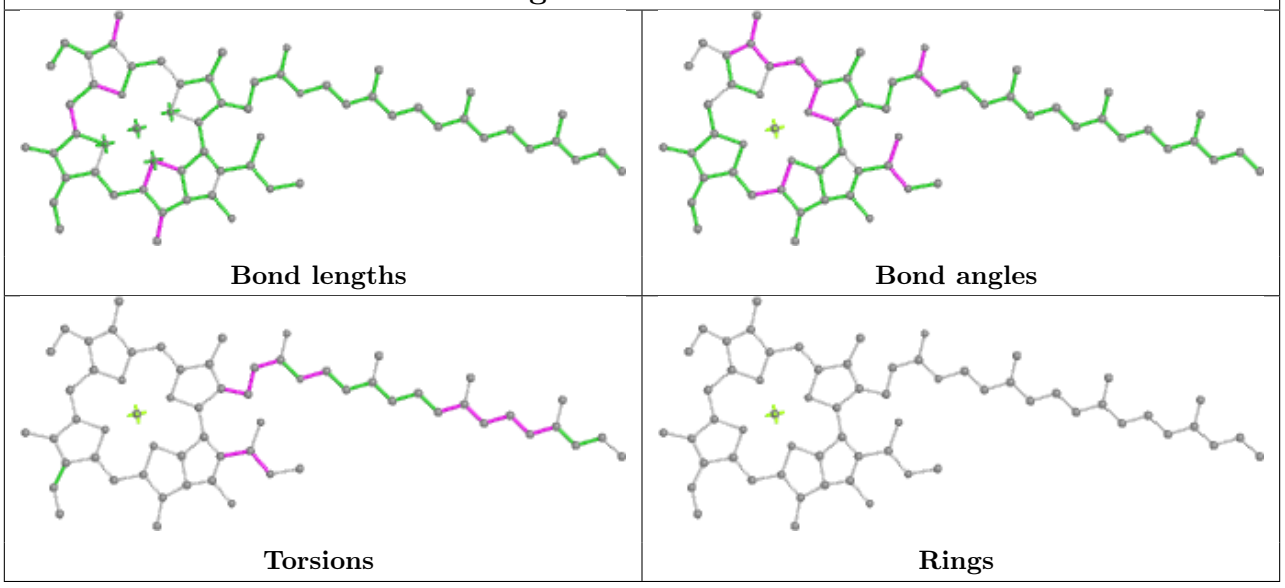
Ligand BCR l 201



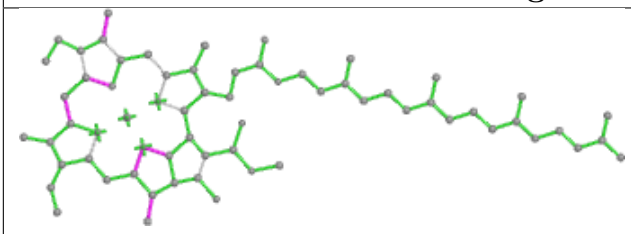
Ligand XAT 3 305



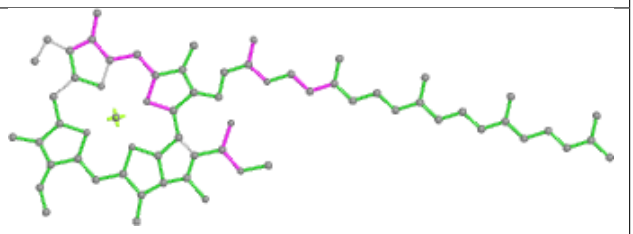
Ligand CLA a 829



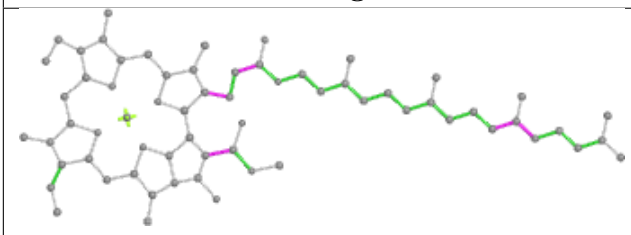
Ligand CLA b 838



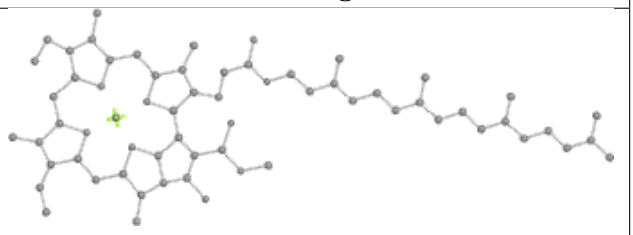
Bond lengths



Bond angles

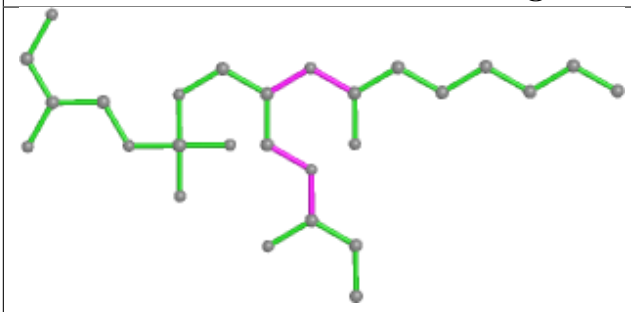


Torsions

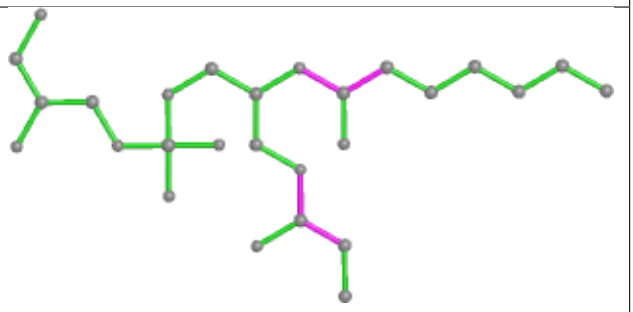


Rings

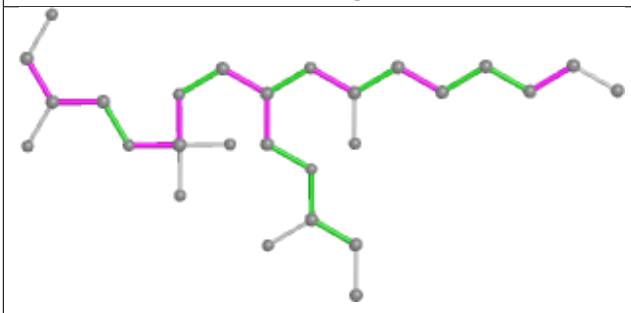
Ligand LHG a 846



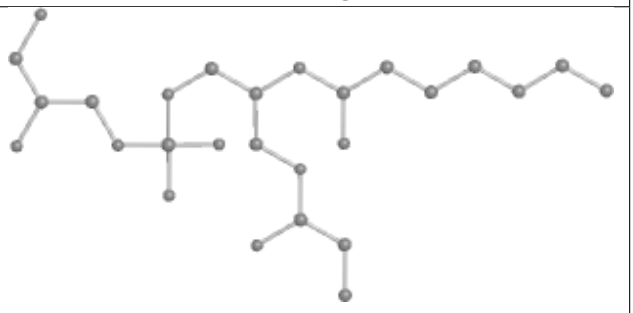
Bond lengths



Bond angles

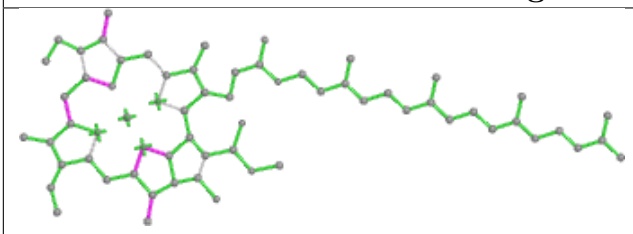


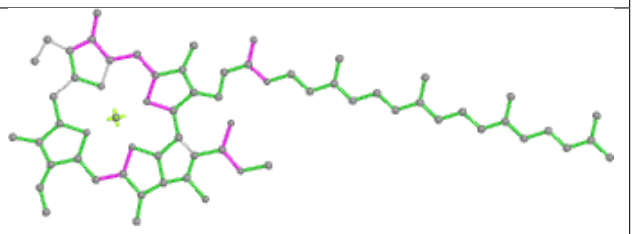
Torsions

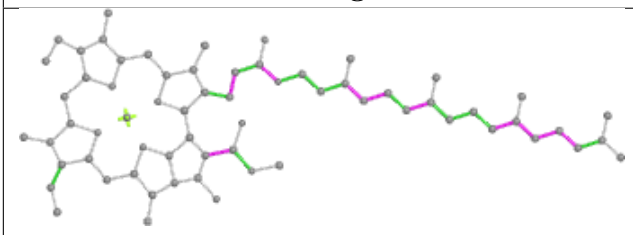


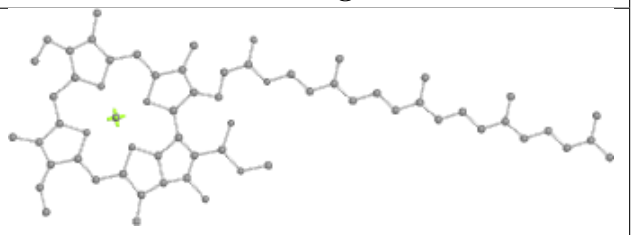
Rings

Ligand CLA b 839

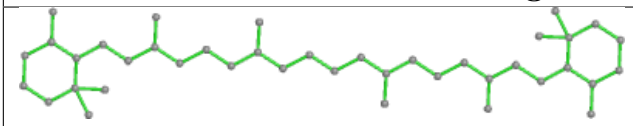

Bond lengths

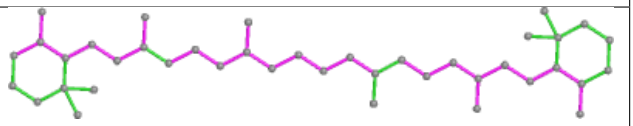

Bond angles

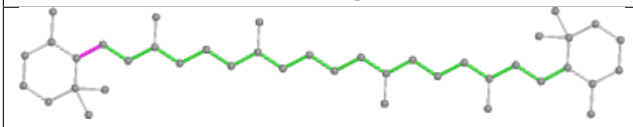

Torsions


Rings

Ligand BCR b 848

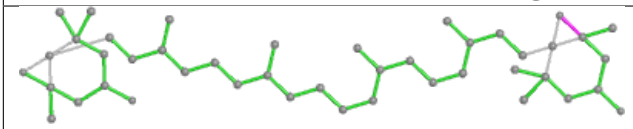

Bond lengths

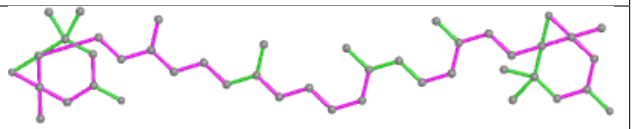

Bond angles

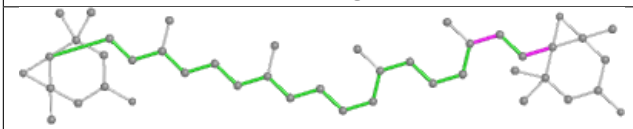

Torsions

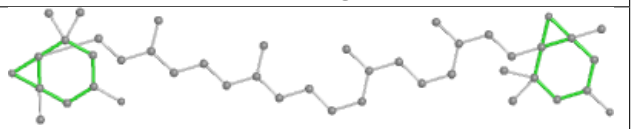

Rings

Ligand XAT 5 301

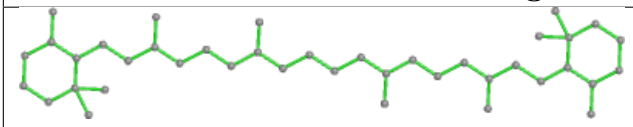

Bond lengths

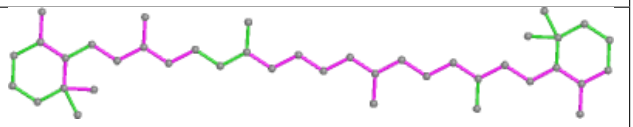

Bond angles

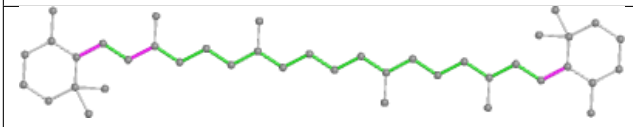

Torsions


Rings

Ligand BCR b 852

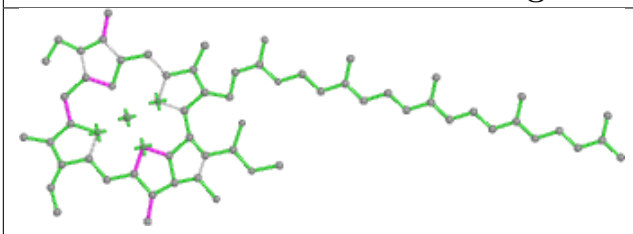

Bond lengths


Bond angles

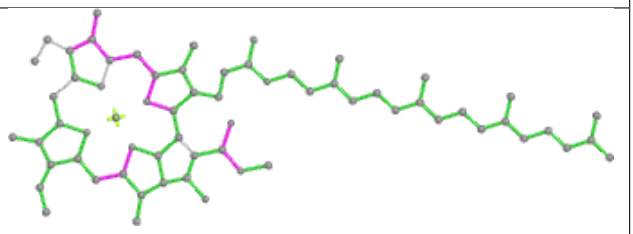

Torsions


Rings

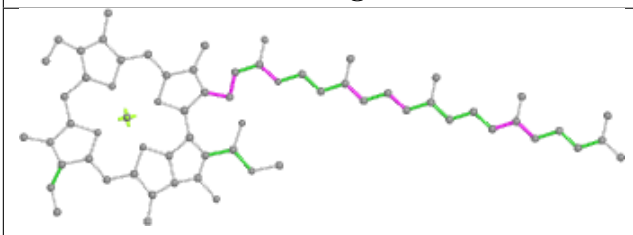
Ligand CLA b 829



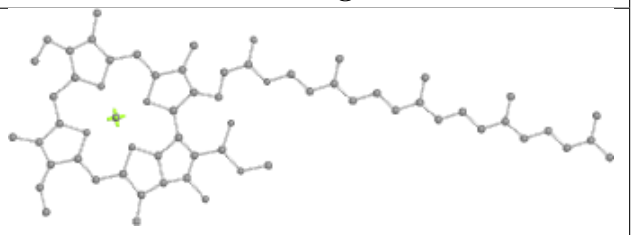
Bond lengths



Bond angles

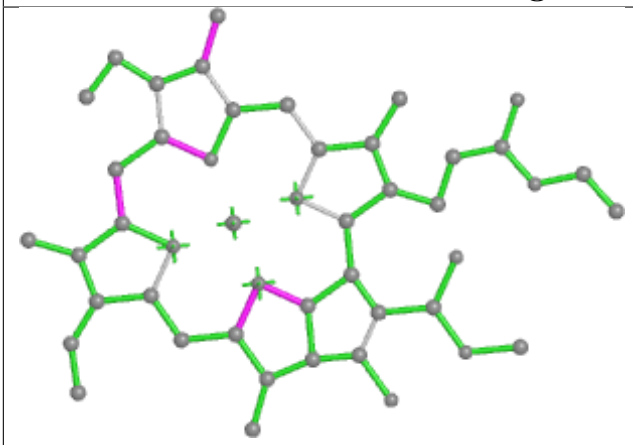


Torsions

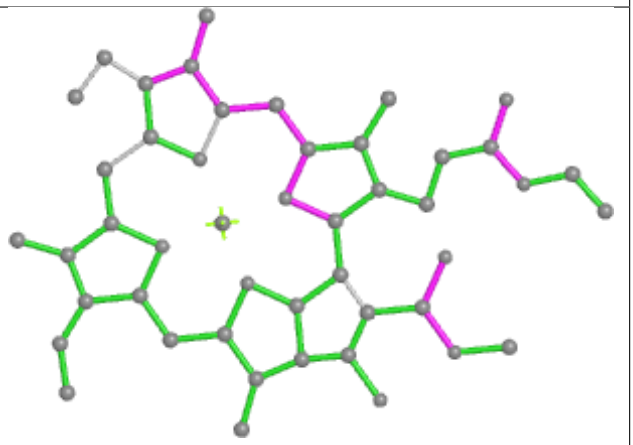


Rings

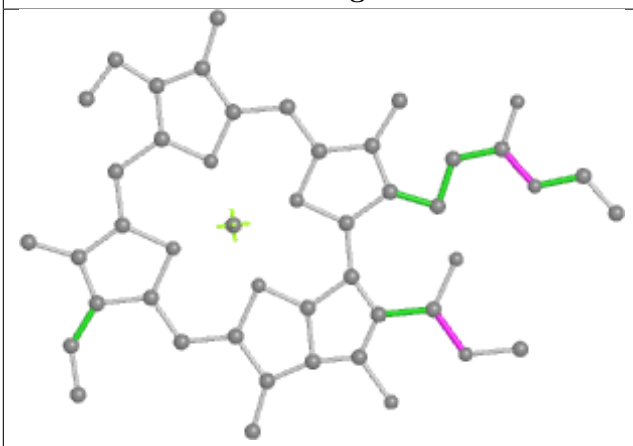
Ligand CLA 2 312



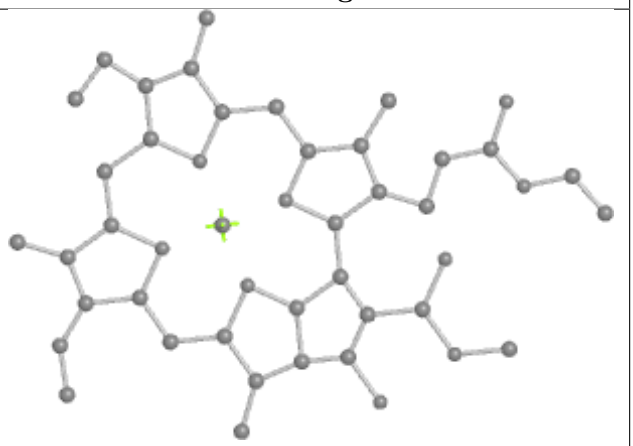
Bond lengths



Bond angles

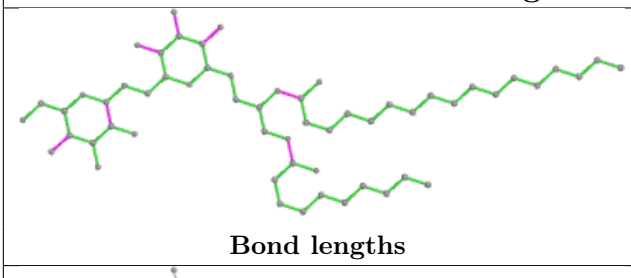


Torsions

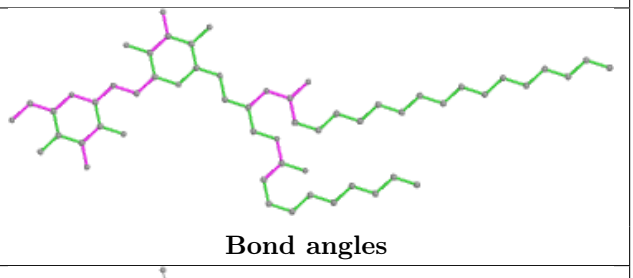


Rings

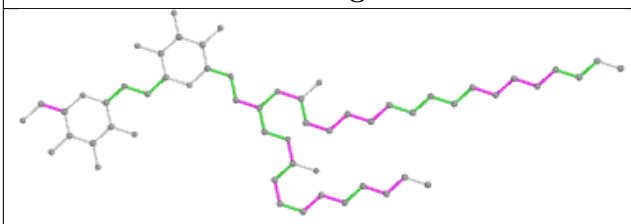
Ligand DGD b 851



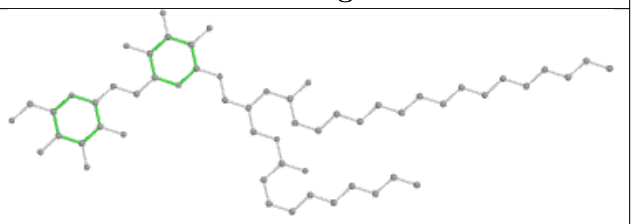
Bond lengths



Bond angles

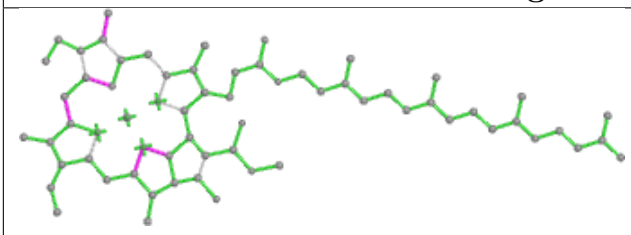


Torsions



Rings

Ligand CLA b 827



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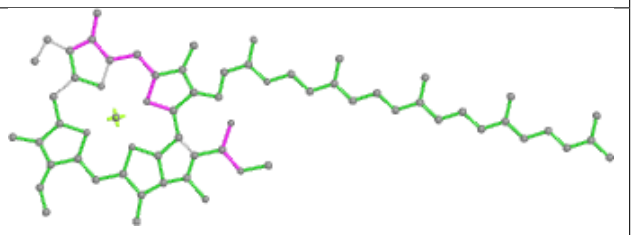
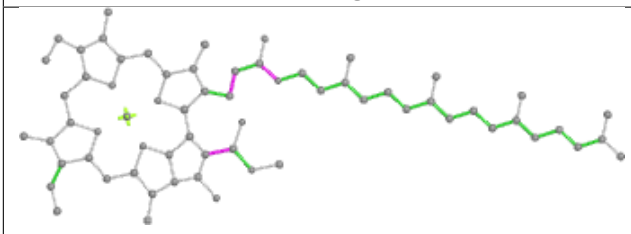
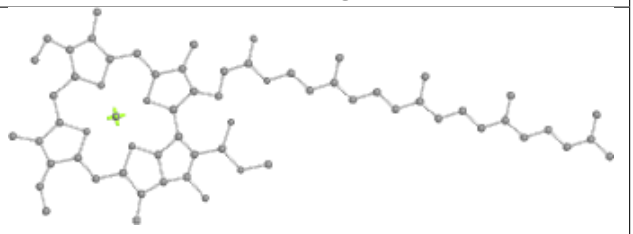


Bond angles

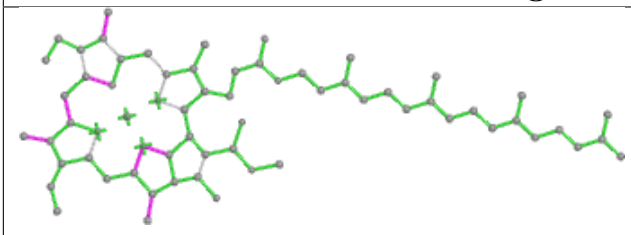


Torsions



Rings

Ligand CLA b 809



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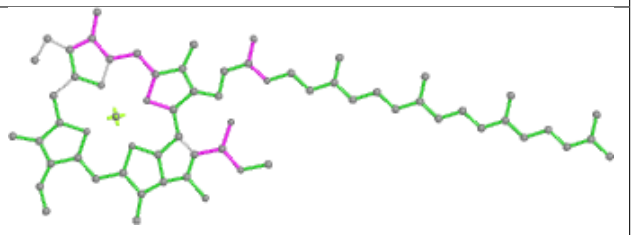
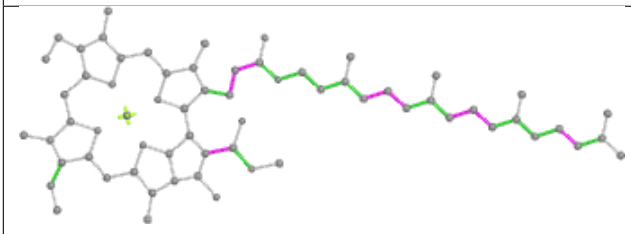


Bond angles



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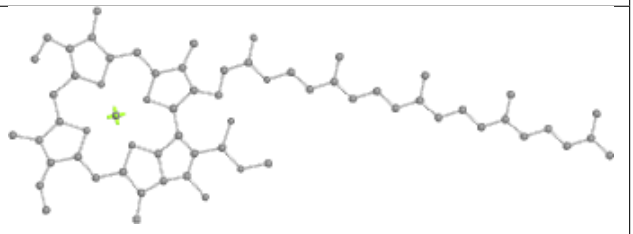
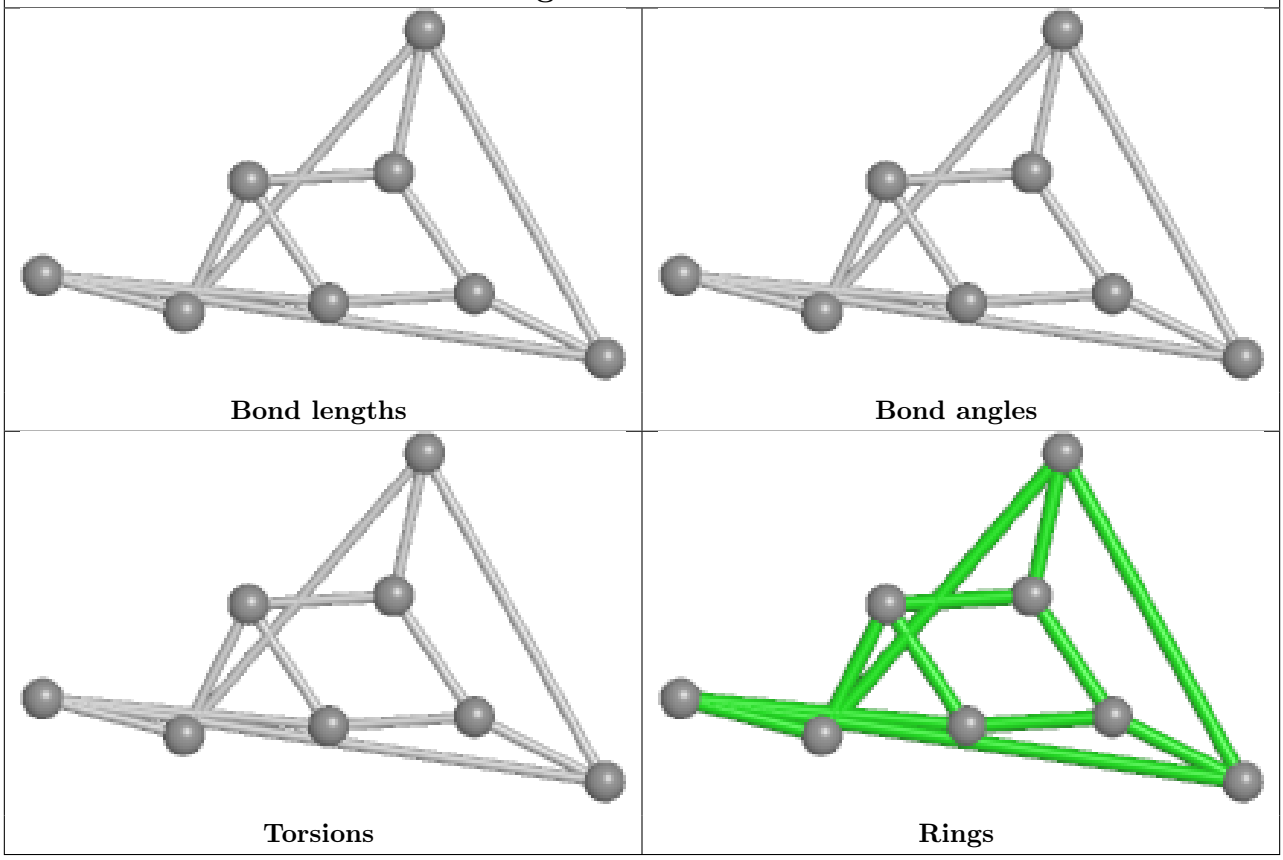
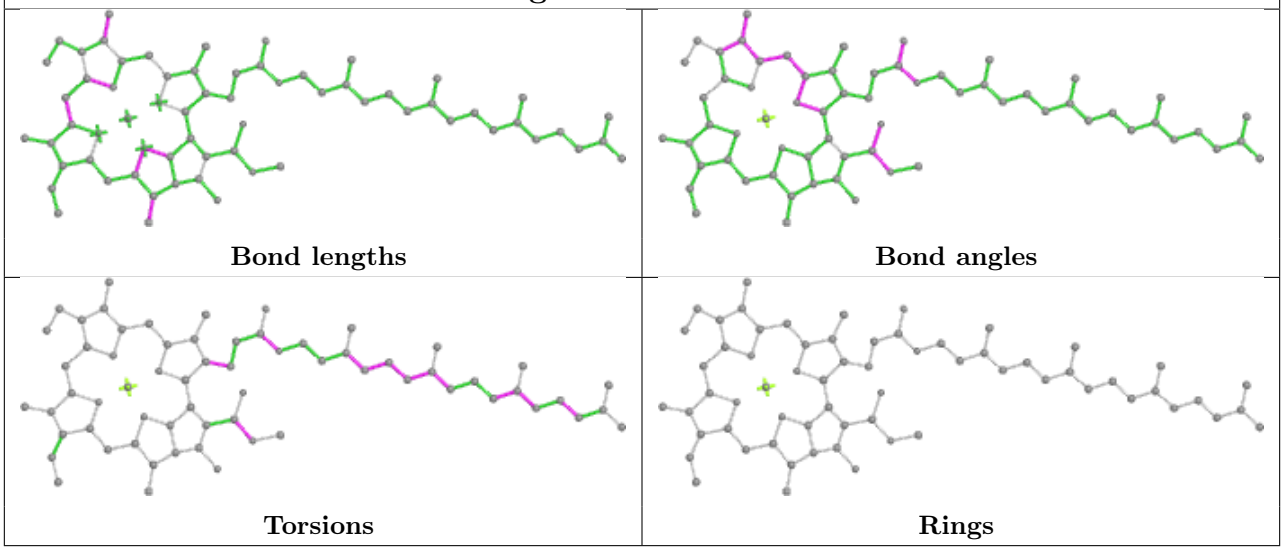


Rings

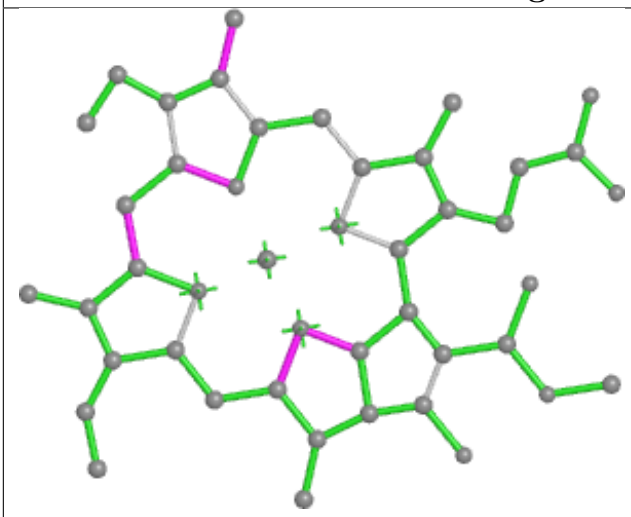
Ligand SF4 a 851



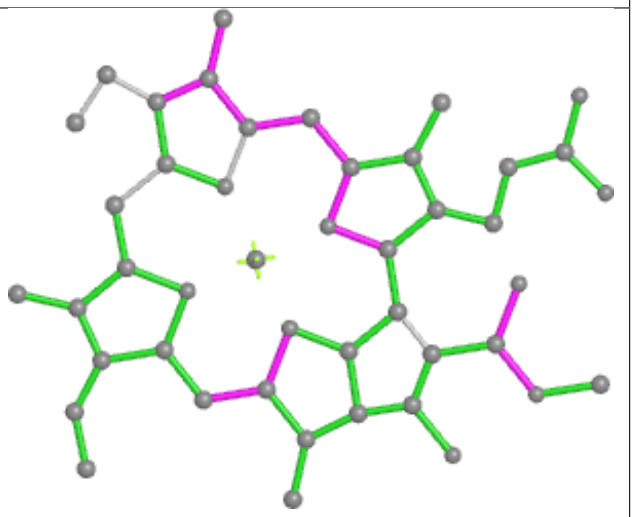
Ligand CLA a 807



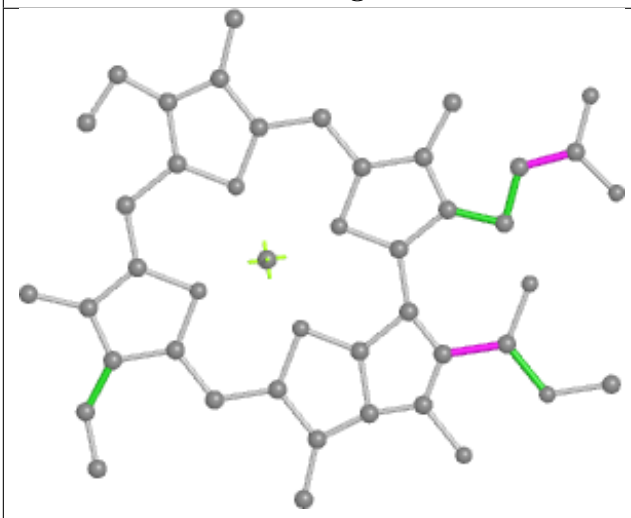
Ligand CLA 4 314



Bond lengths



Bond angles



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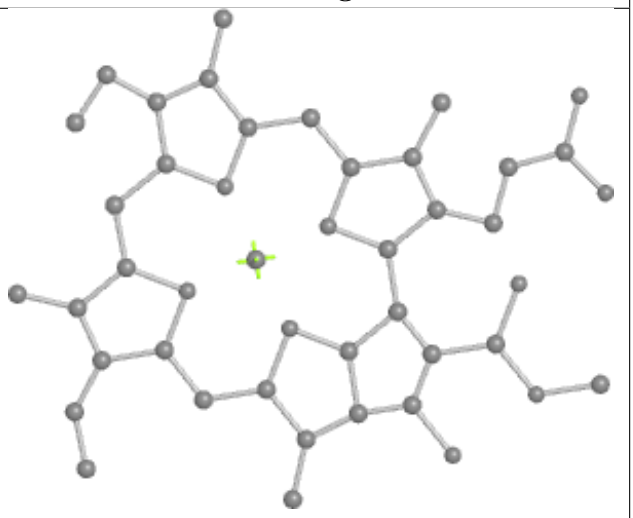
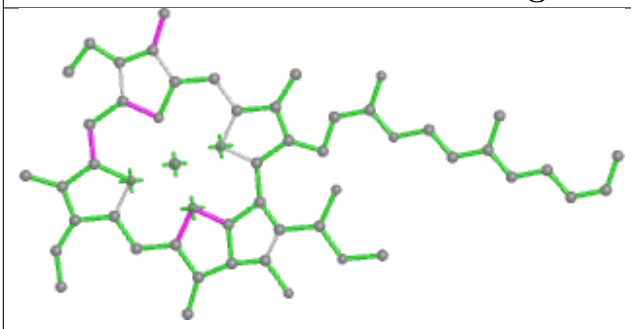
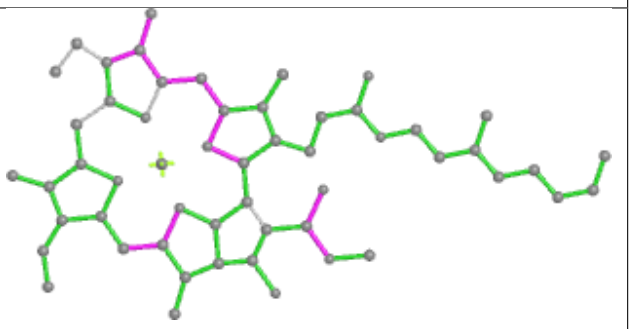
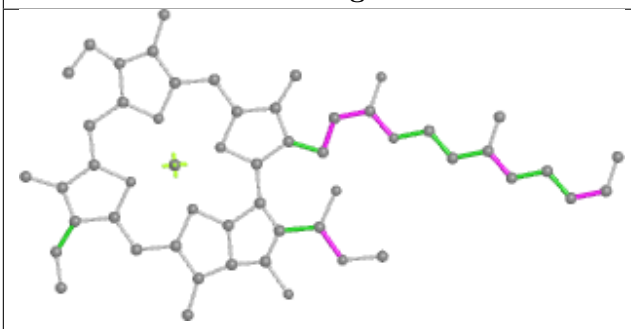
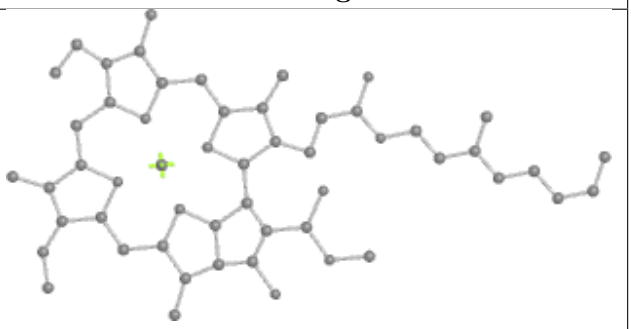
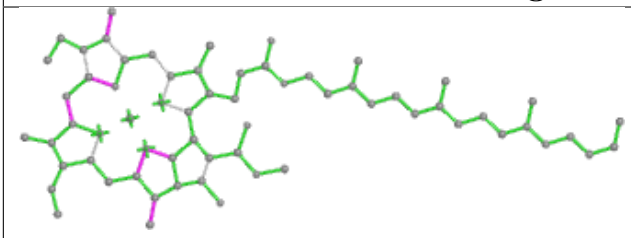
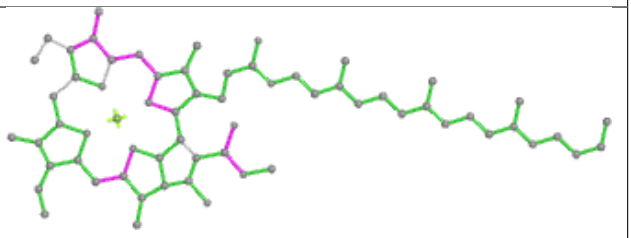
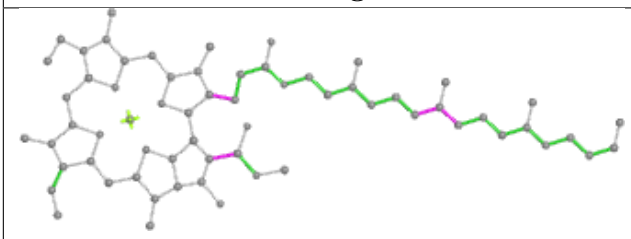
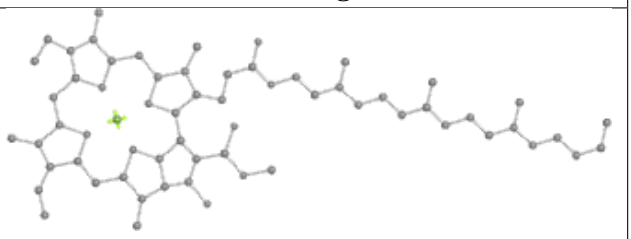
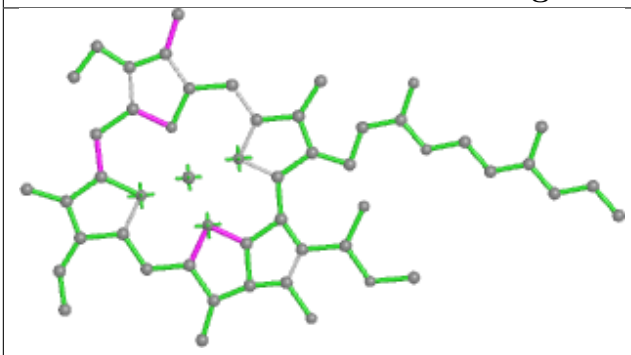


Rings

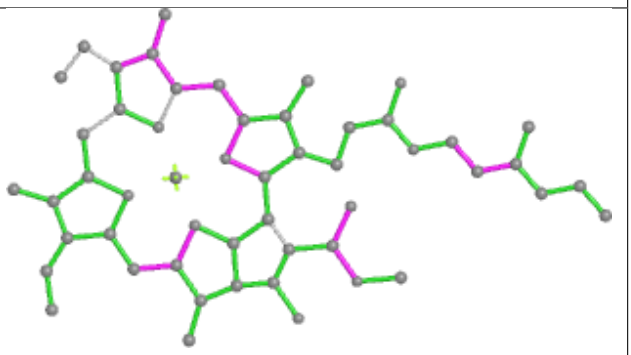
Ligand CLA a 813	
	
Bond lengths	Bond angles
	
Torsions	Rings

Ligand CLA b 826	
	
Bond lengths	Bond angles
	
Torsions	Rings

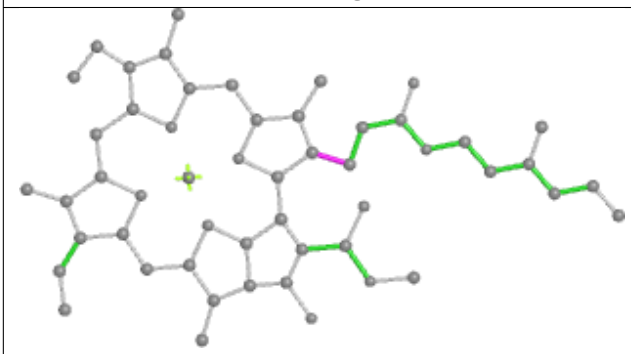
Ligand CLA f 803



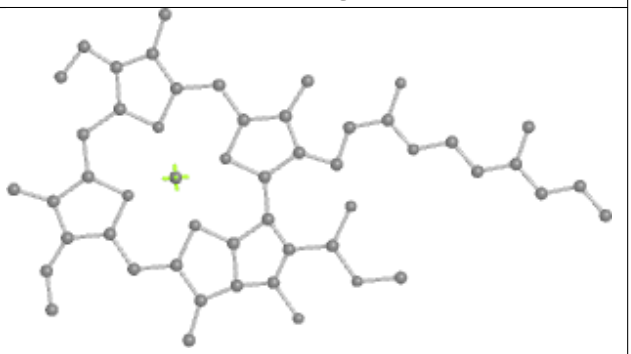
Bond lengths



Bond angles

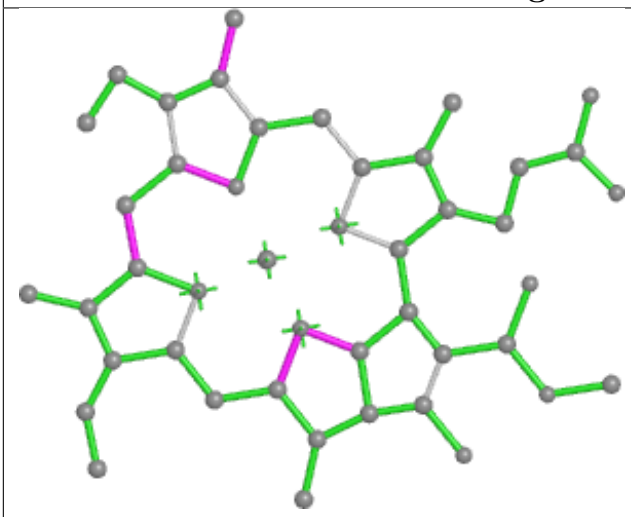


Torsions

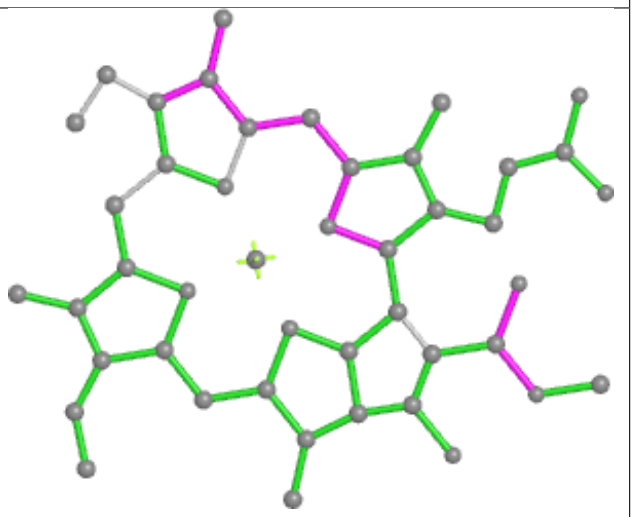


Rings

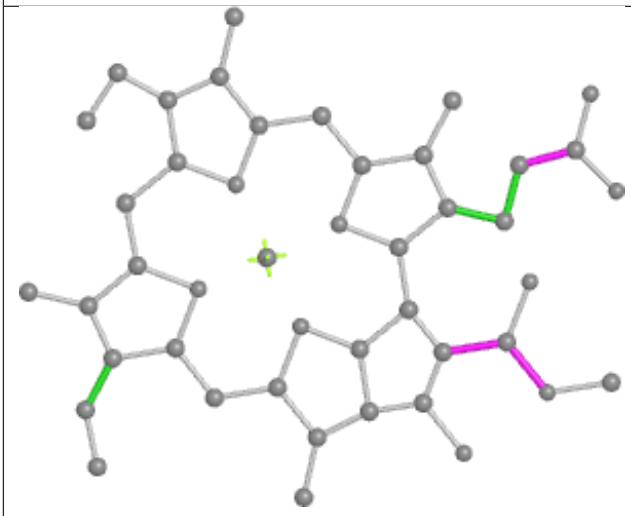
Ligand CLA 5 313



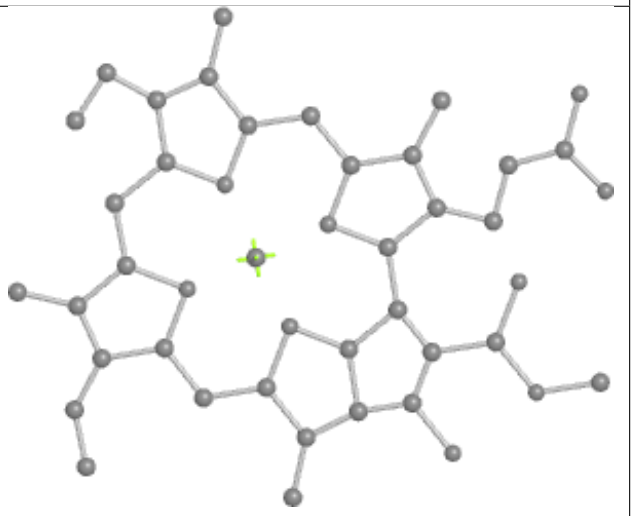
Bond lengths



Bond angles

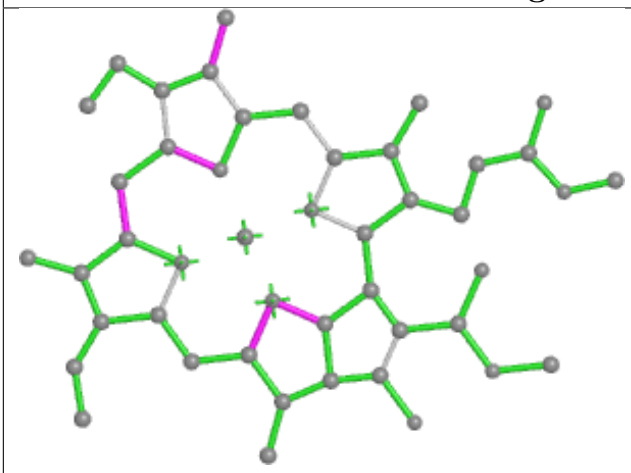


Torsions

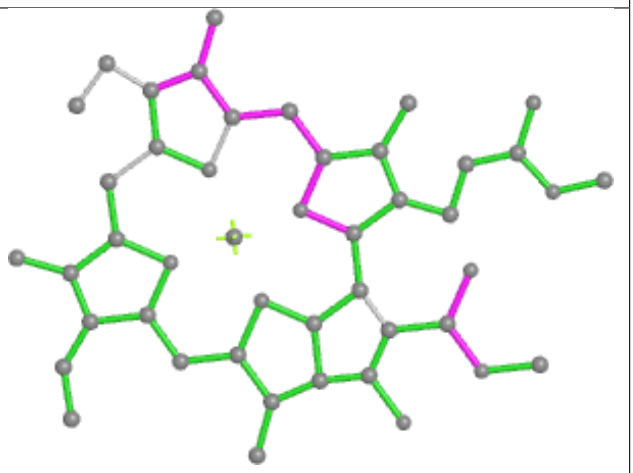


Rings

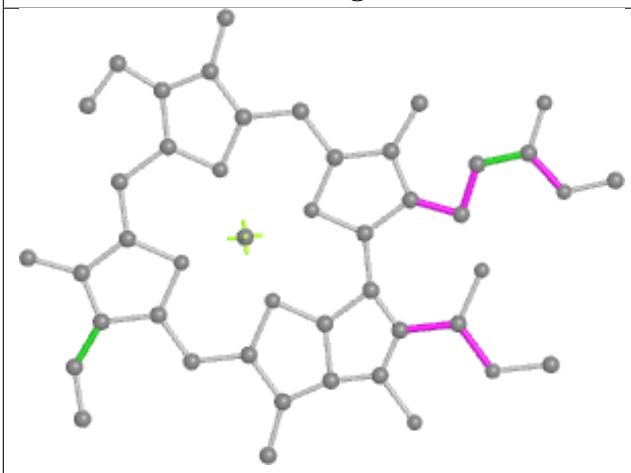
Ligand CLA 4 316



Bond lengths



Bond angles



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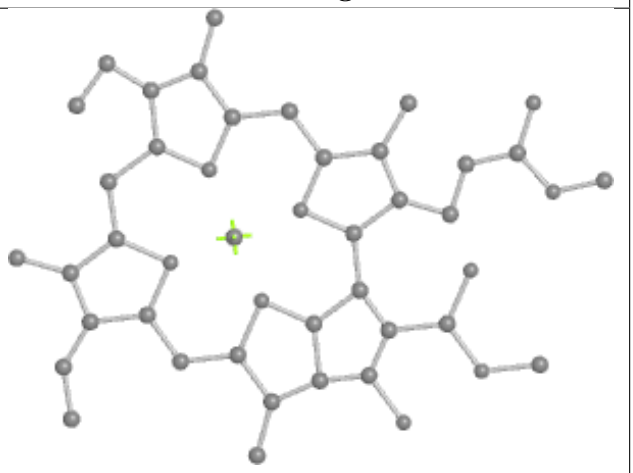
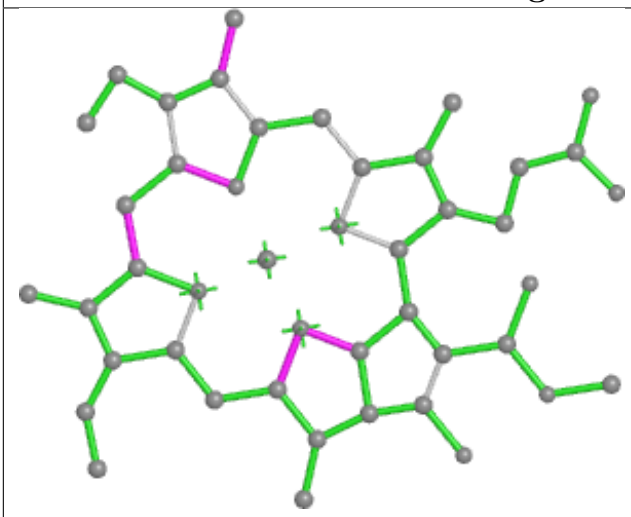
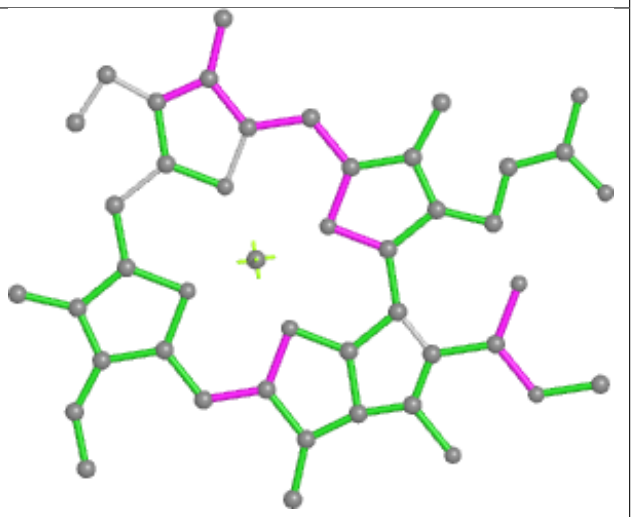


Rings

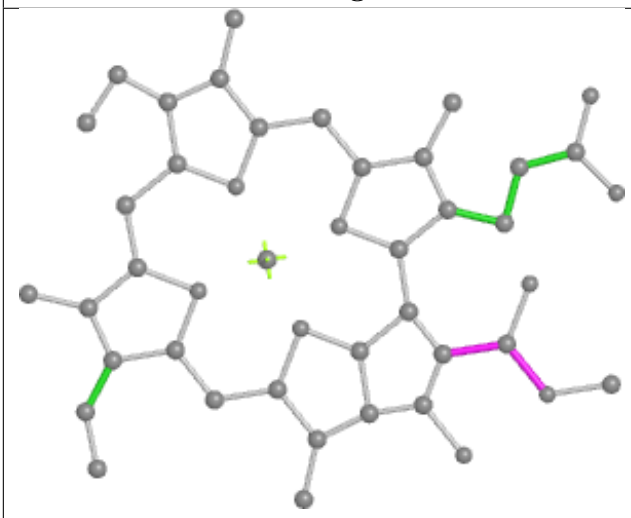
Ligand CLA a 837



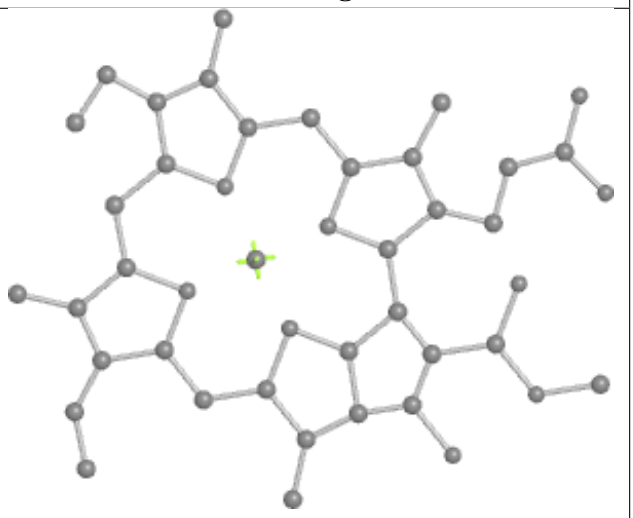
Bond lengths



Bond angles

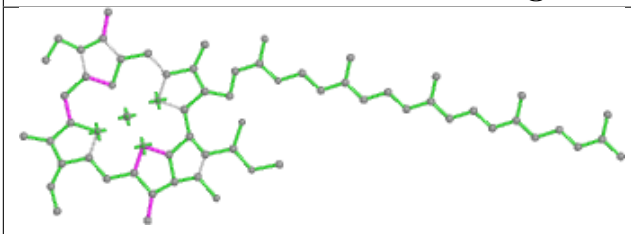


Torsions

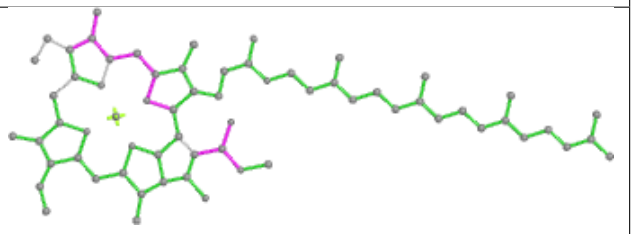


Rings

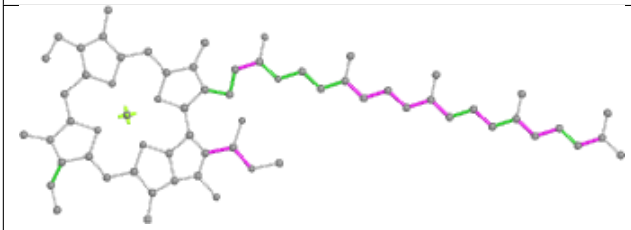
Ligand CLA b 803



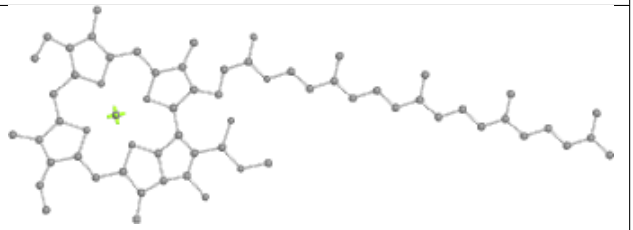
Bond lengths



Bond angles

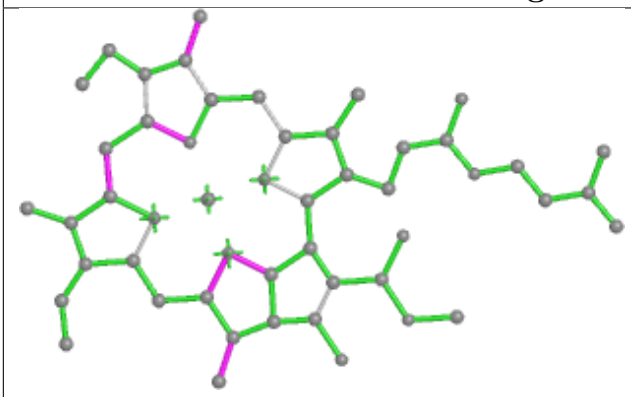


Torsions

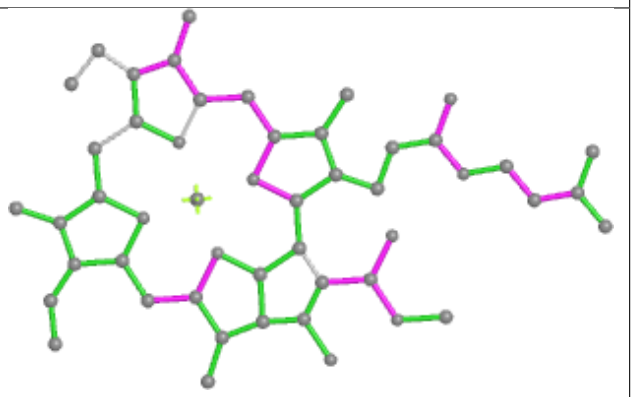


Rings

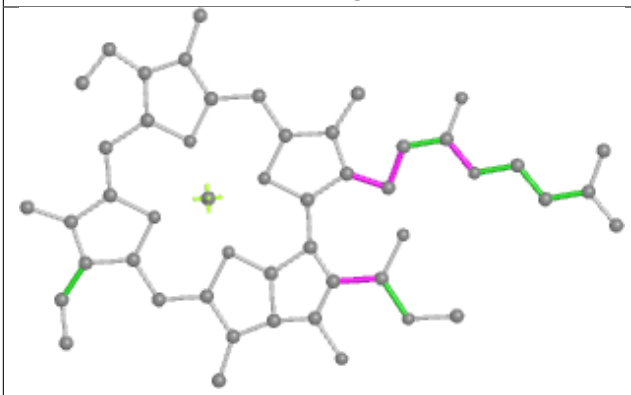
Ligand CLA b 821



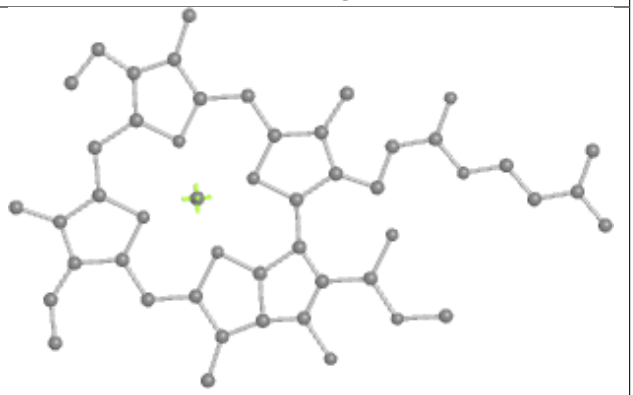
Bond lengths



Bond angles

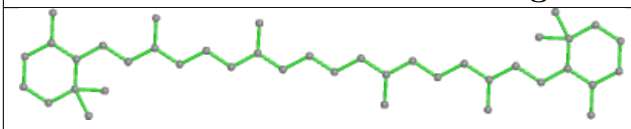


Torsions

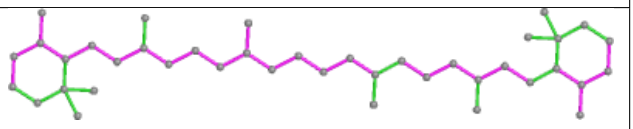


Rings

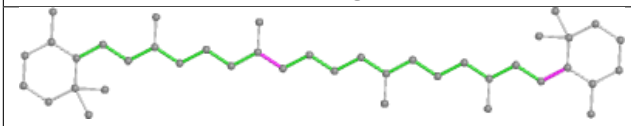
Ligand BCR f 804



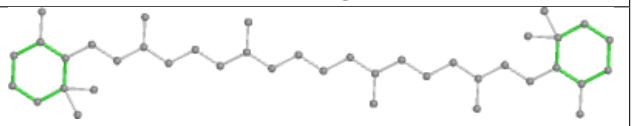
Bond lengths



Bond angles

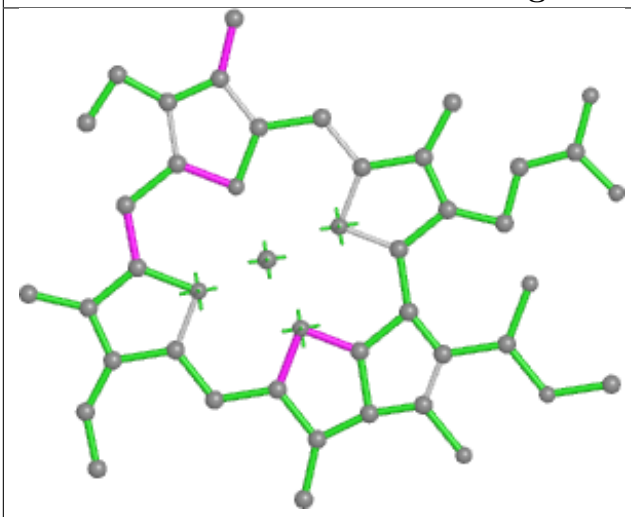


Torsions

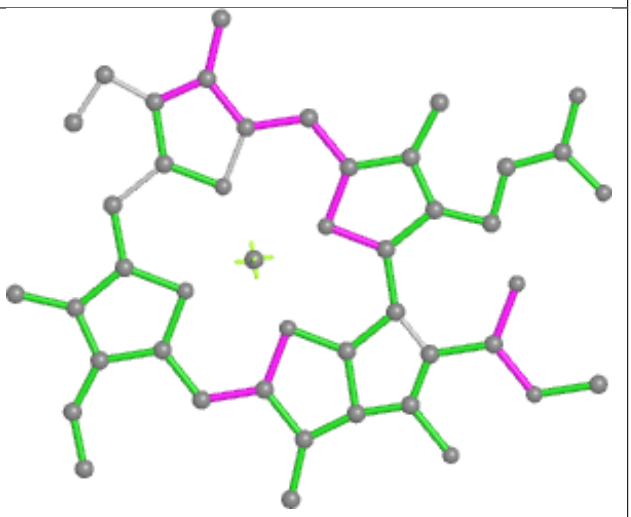


Rings

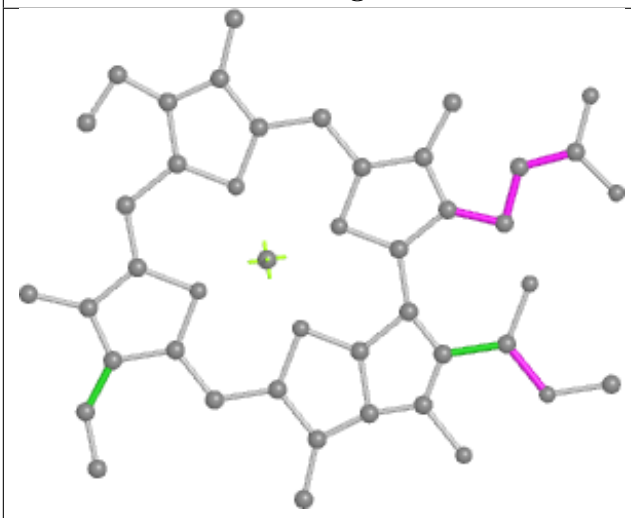
Ligand CLA 4 306



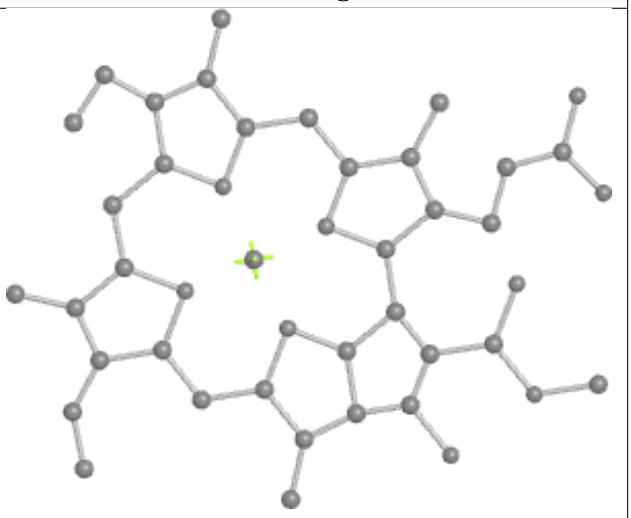
Bond lengths



Bond angles

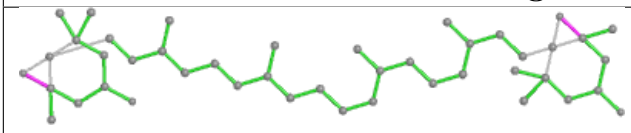


Torsions

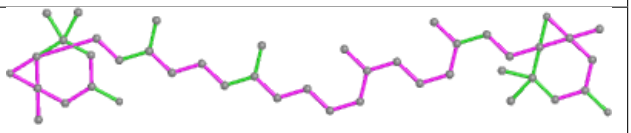


Rings

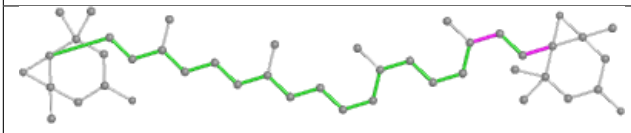
Ligand XAT 5 302



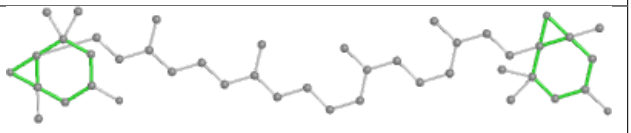
Bond lengths



Bond angles

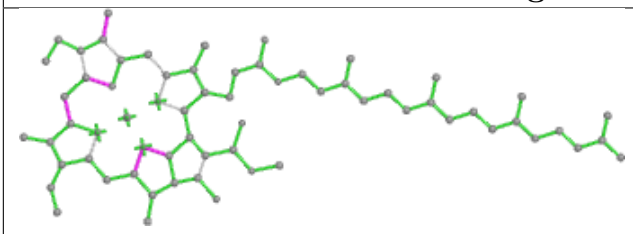


Torsions

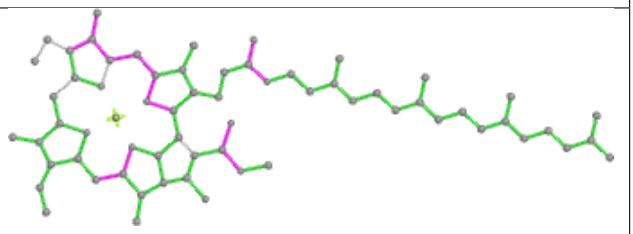


Rings

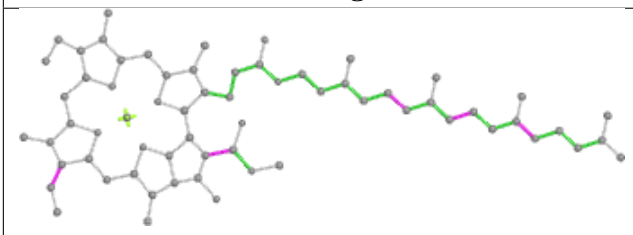
Ligand CLA b 837



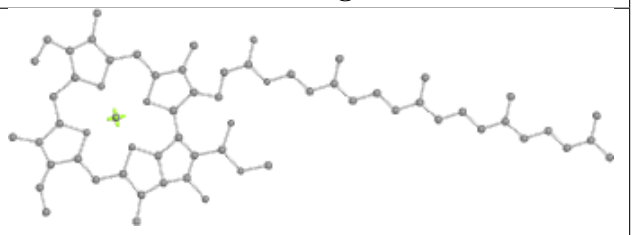
Bond lengths



Bond angles

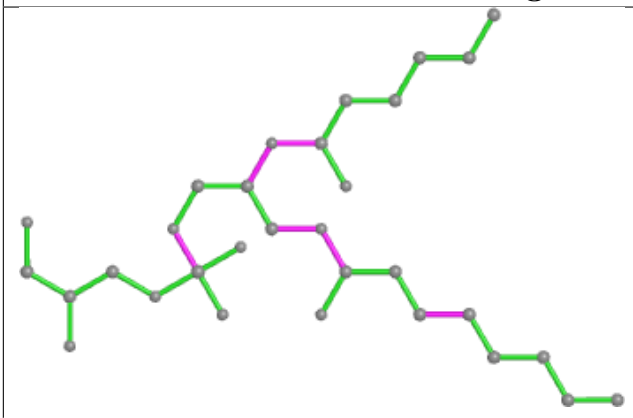


Torsions

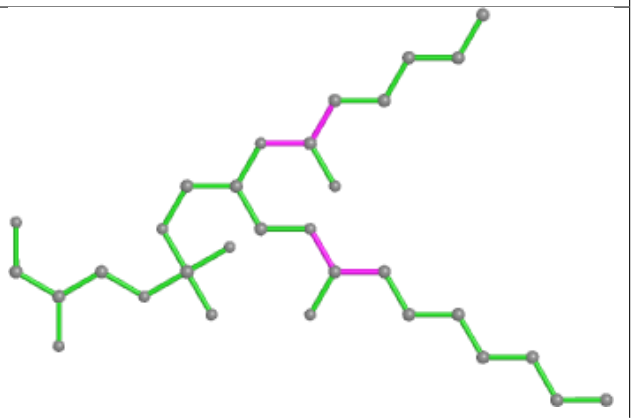


Rings

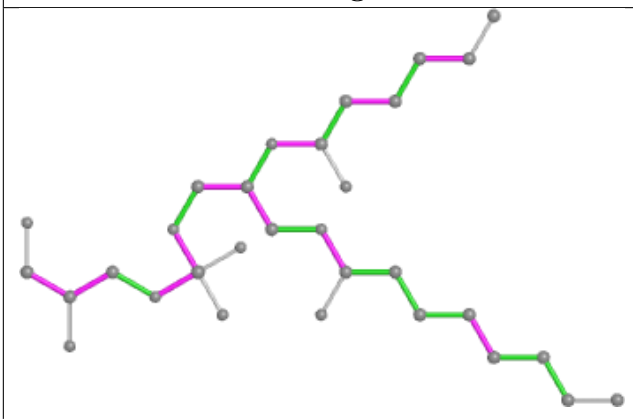
Ligand LHG b 849



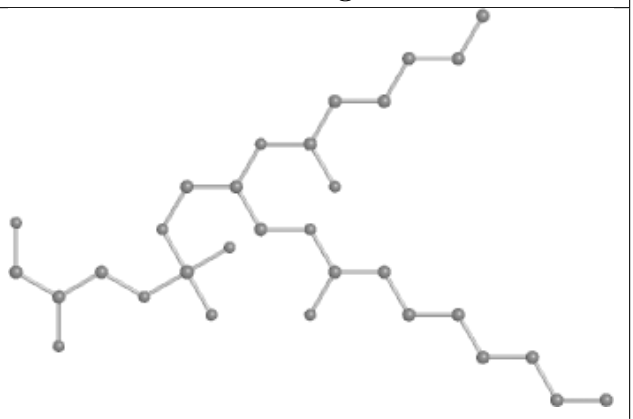
Bond lengths



Bond angles

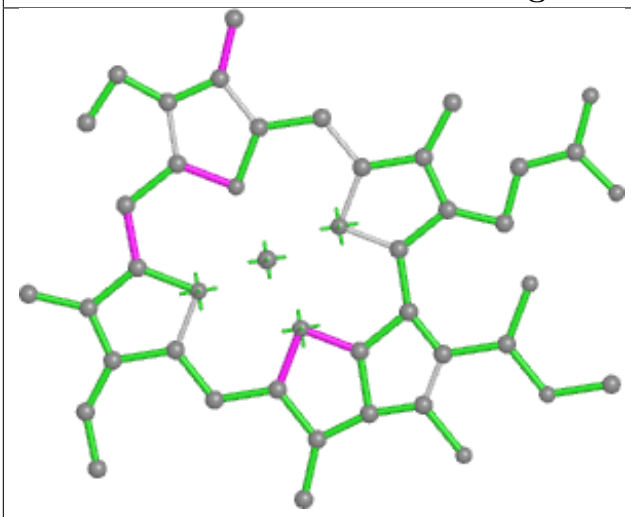


Torsions

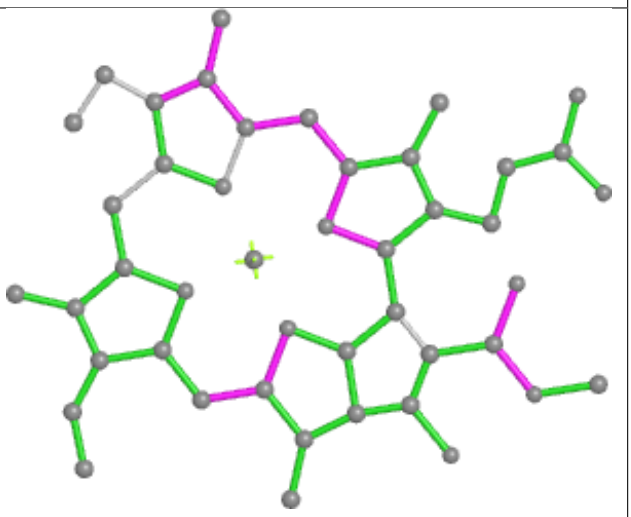


Rings

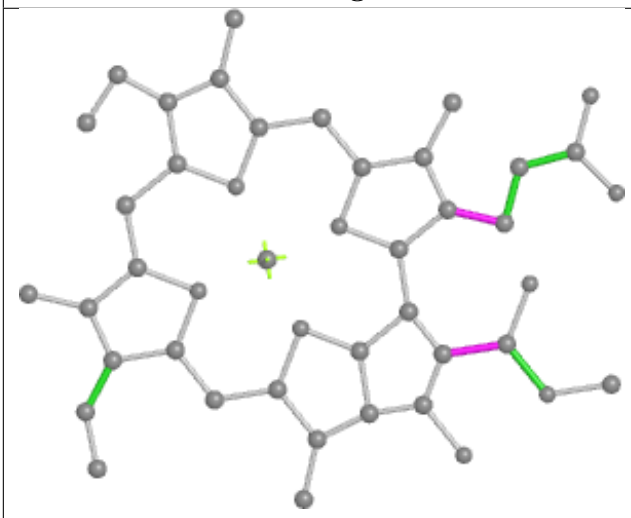
Ligand CLA a 815



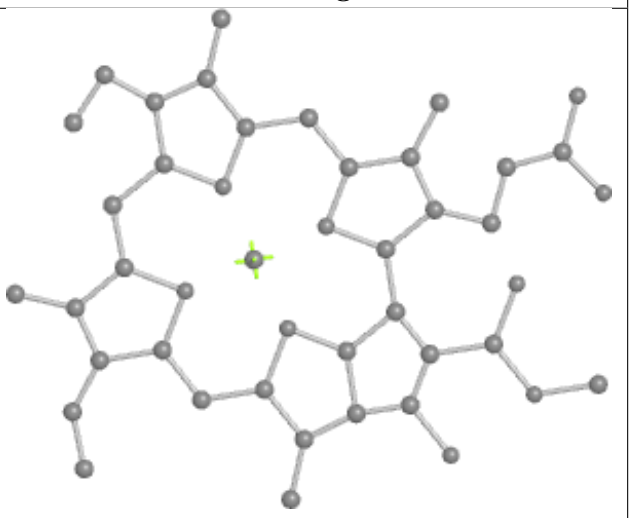
Bond lengths



Bond angles

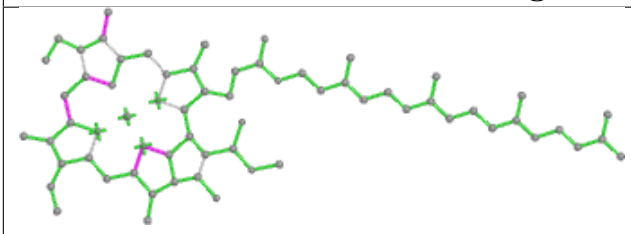


Torsions

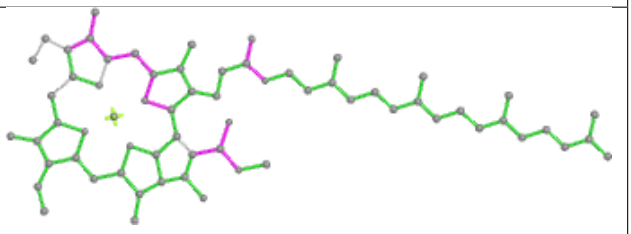


Rings

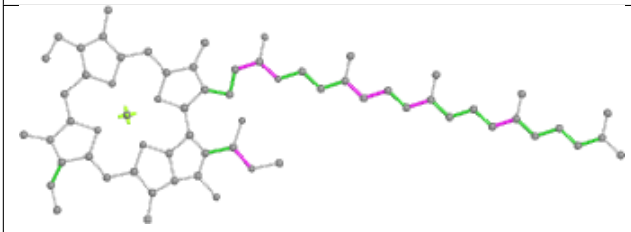
Ligand CLA a 835



Bond lengths



Bond angles



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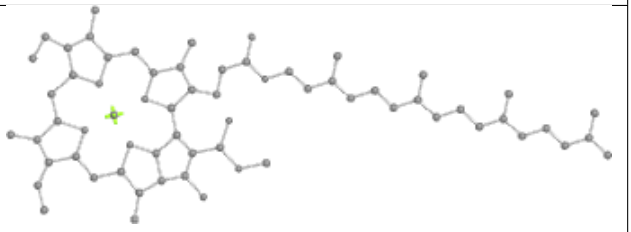
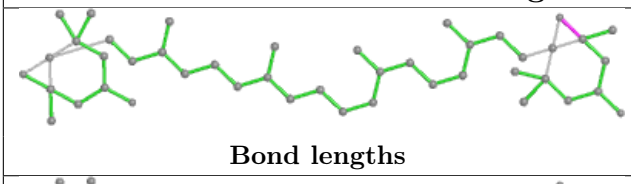


Rings

Ligand XAT 2 303



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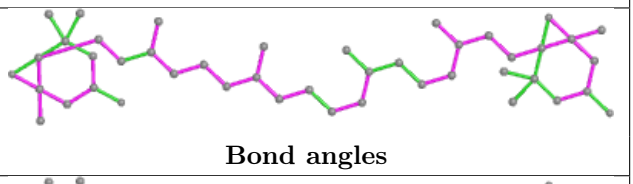
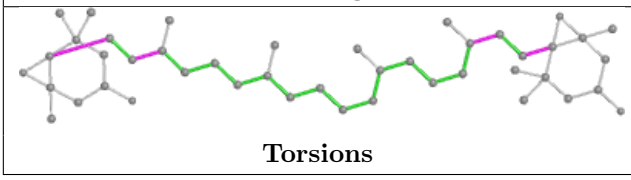
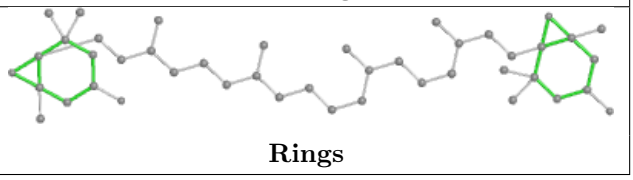


Bond angles

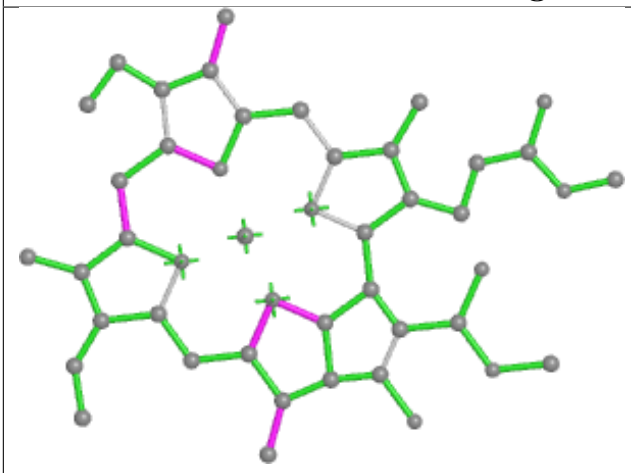


Torsions

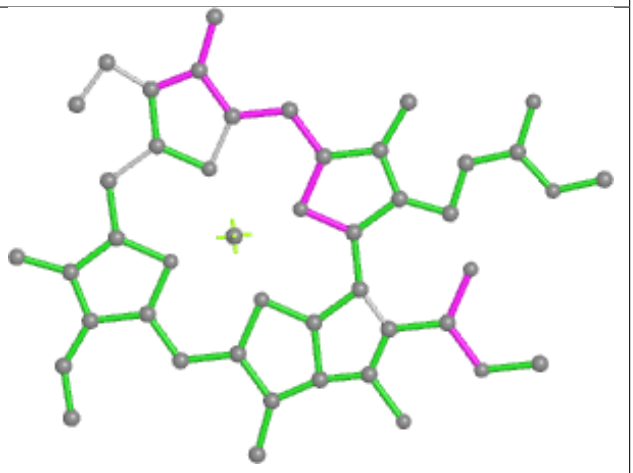


Rings

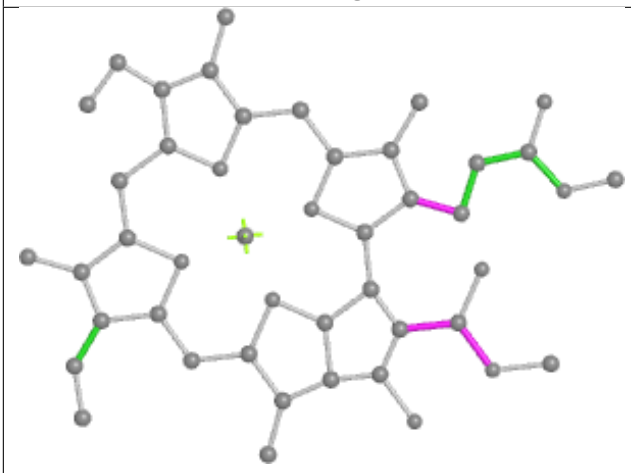
Ligand CLA 2 316



Bond lengths



Bond angles



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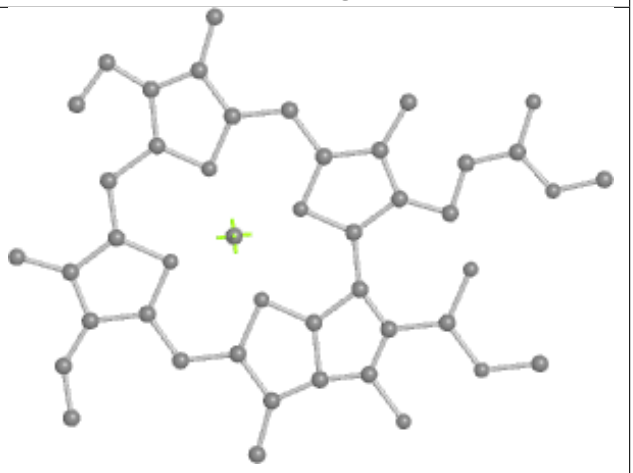
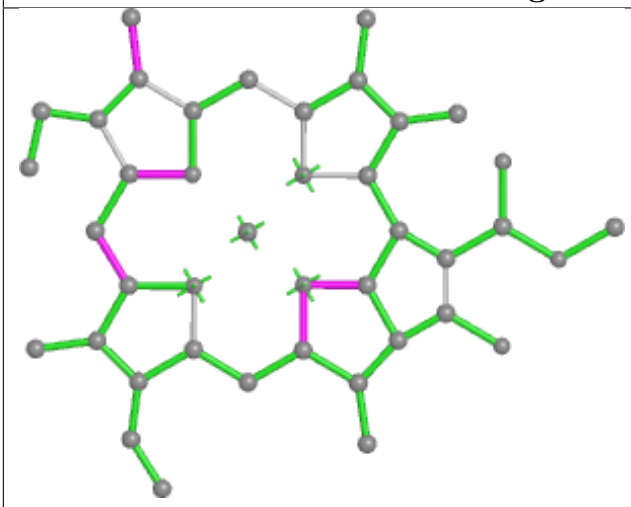
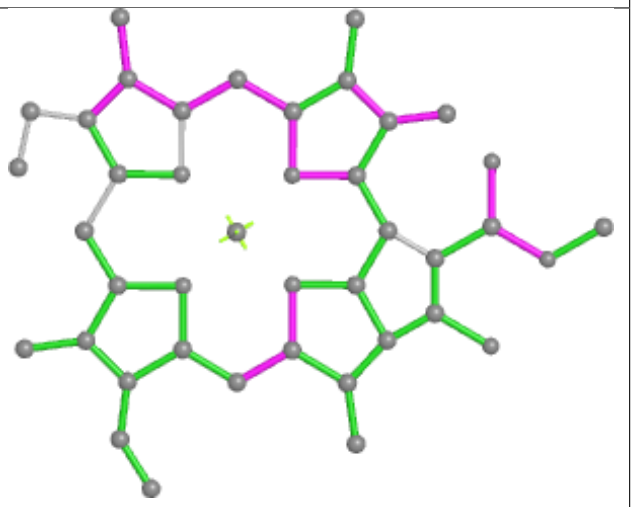


Rings

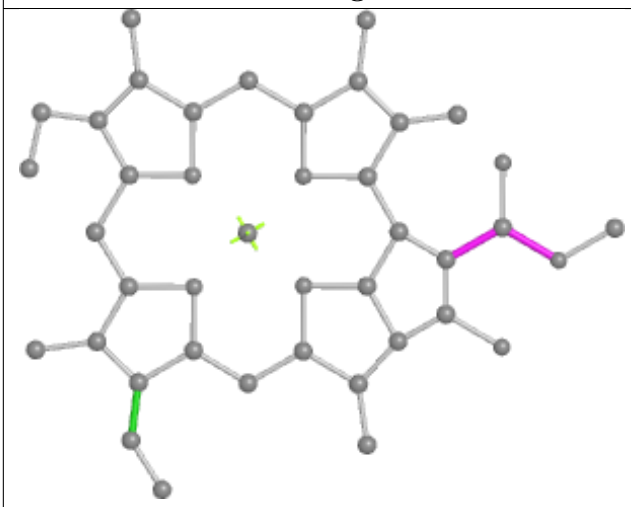
Ligand CLA 2 313



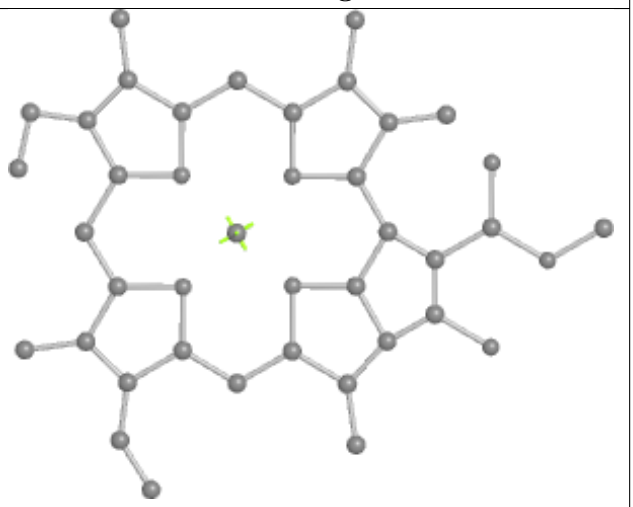
Bond lengths



Bond angles

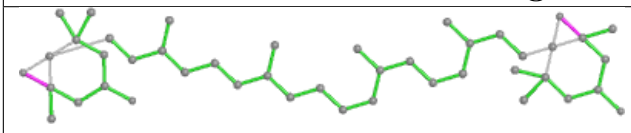


Torsions

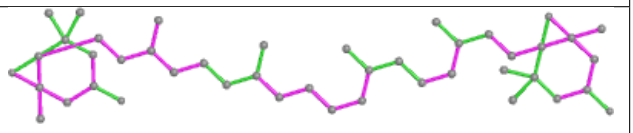


Rings

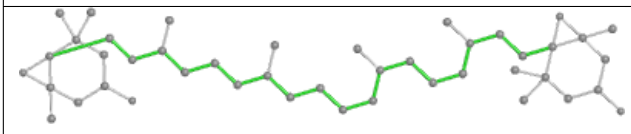
Ligand XAT 4 304



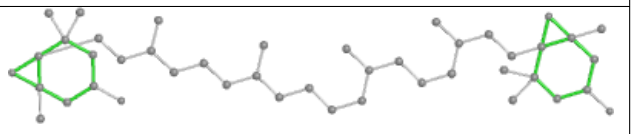
Bond lengths



Bond angles

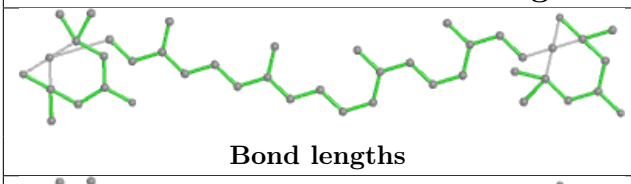


Torsions



Rings

Ligand XAT j 101



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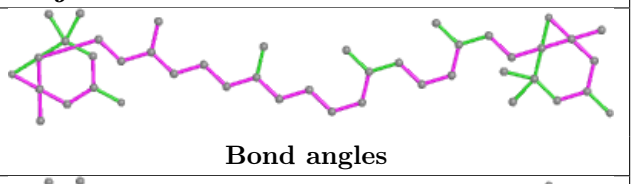
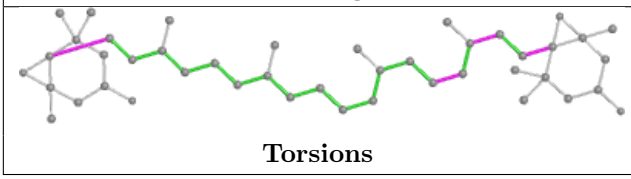
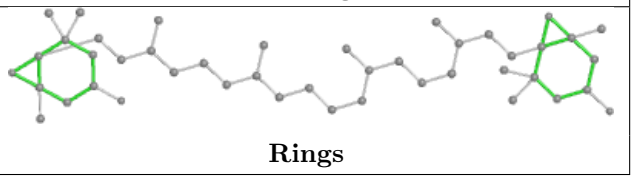


Bond angles

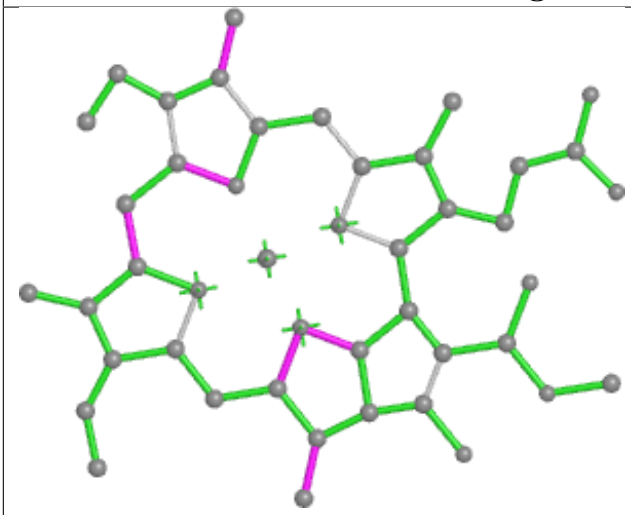


Torsions

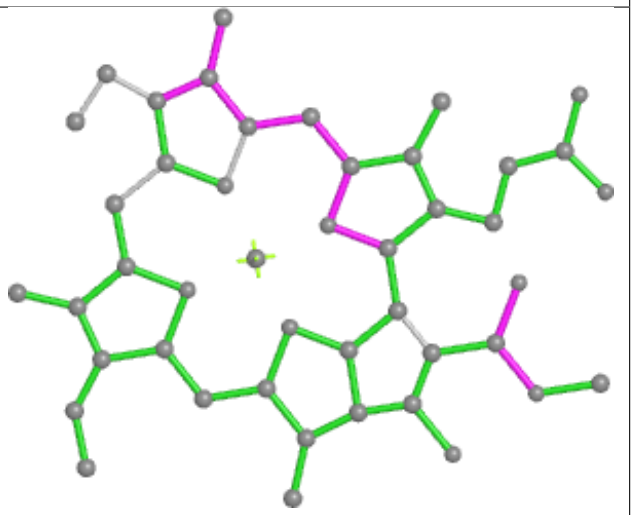


Rings

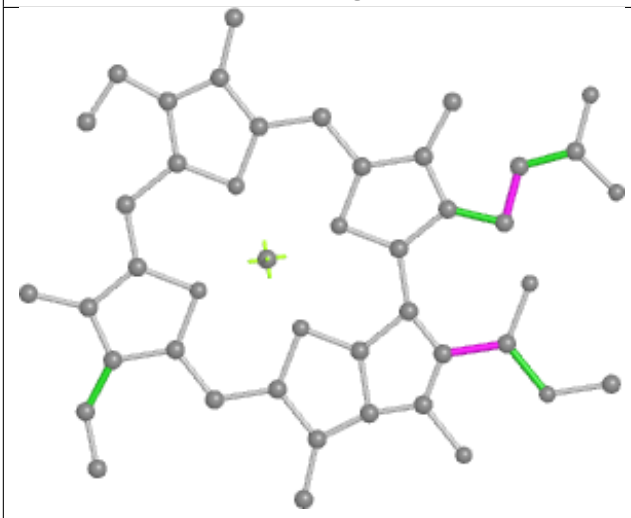
Ligand CLA a 821



Bond lengths



Bond angles



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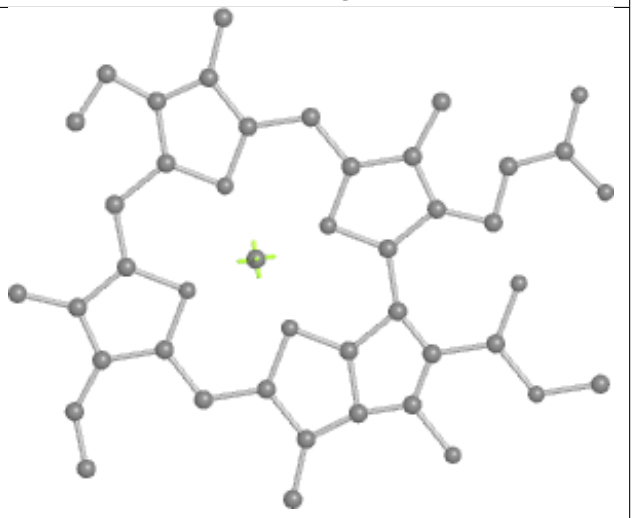
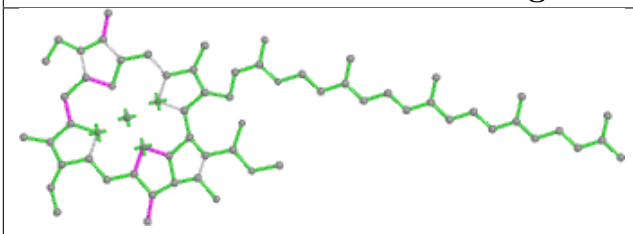
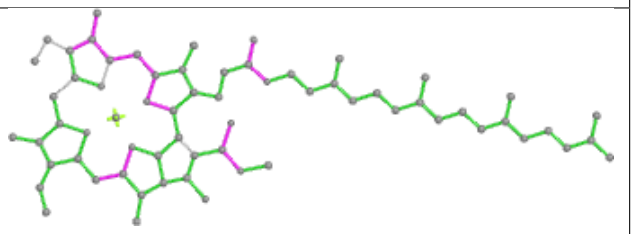


Rings

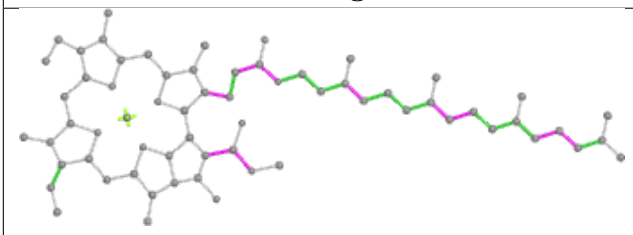
Ligand CLA 4 310



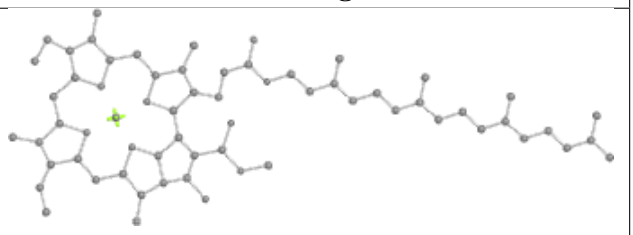
Bond lengths



Bond angles

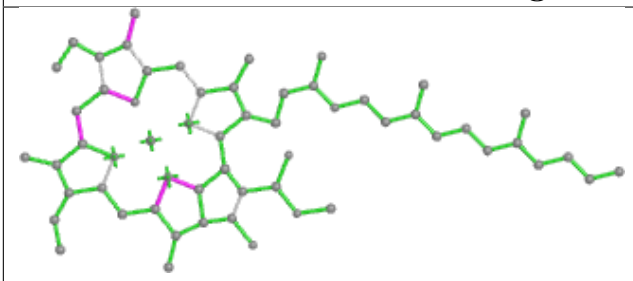


Torsions

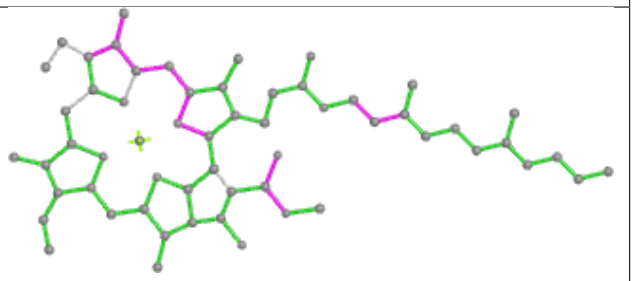


Rings

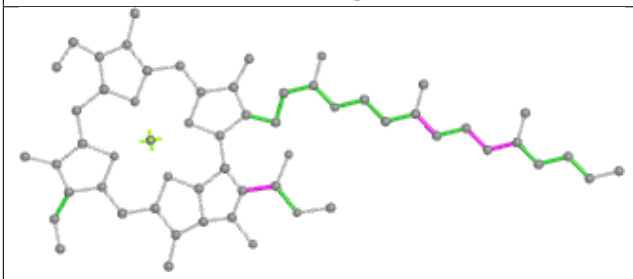
Ligand CLA a 802



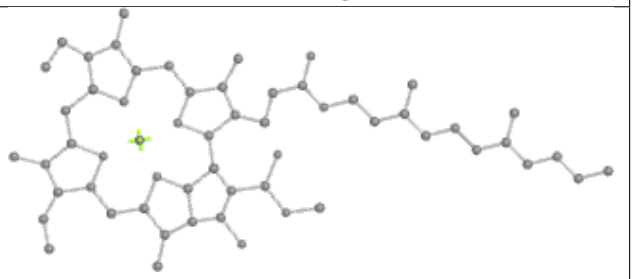
Bond lengths



Bond angles

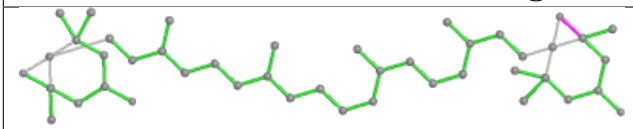


Torsions

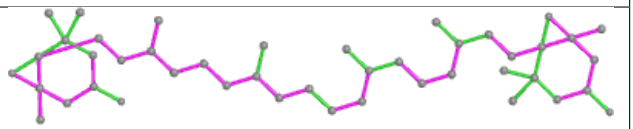


Rings

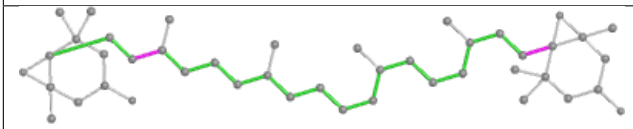
Ligand XAT 2 301



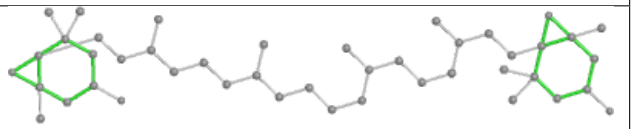
Bond lengths



Bond angles

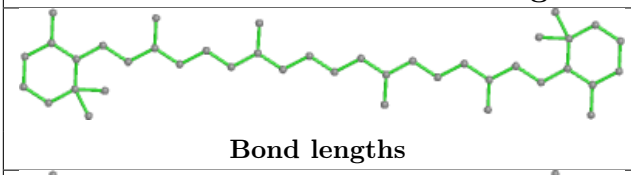


Torsions

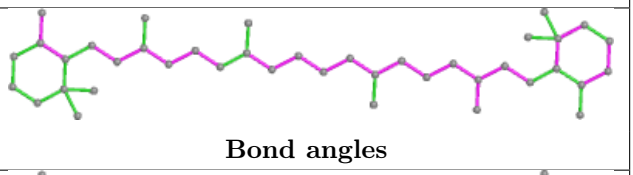


Rings

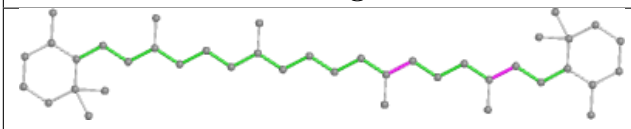
Ligand BCR i 101



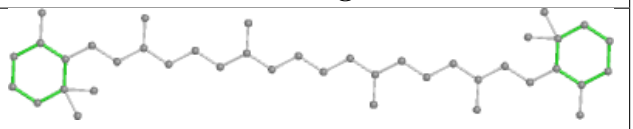
Bond lengths



Bond angles

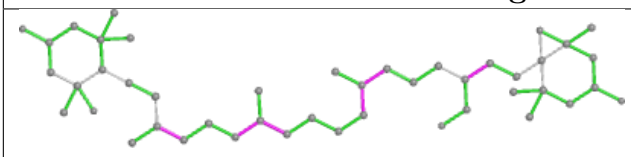


Torsions



Rings

Ligand A1L1G 5 303



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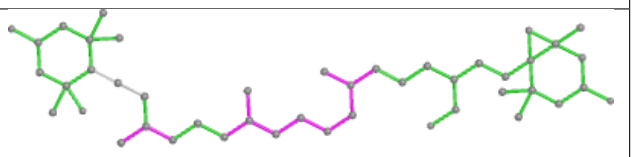

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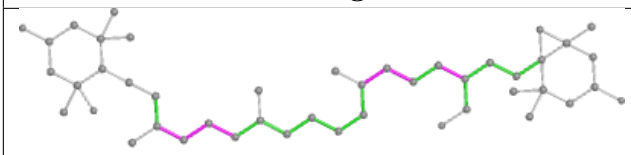

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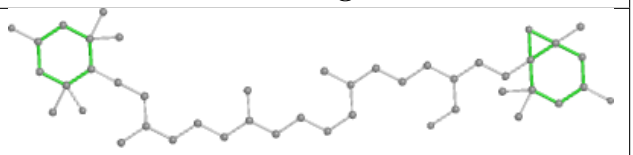
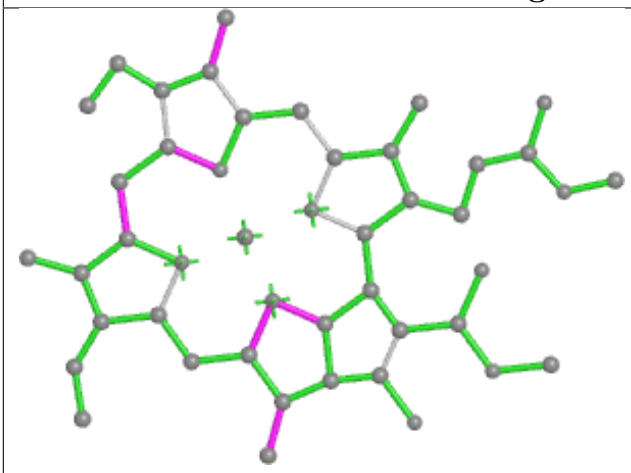


Rings

Ligand CLA 5 310



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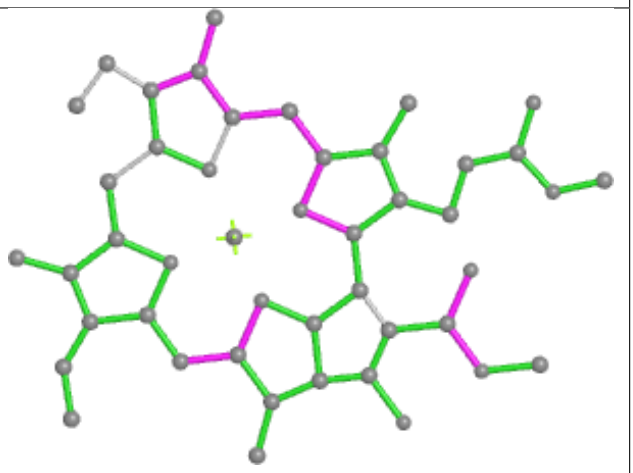

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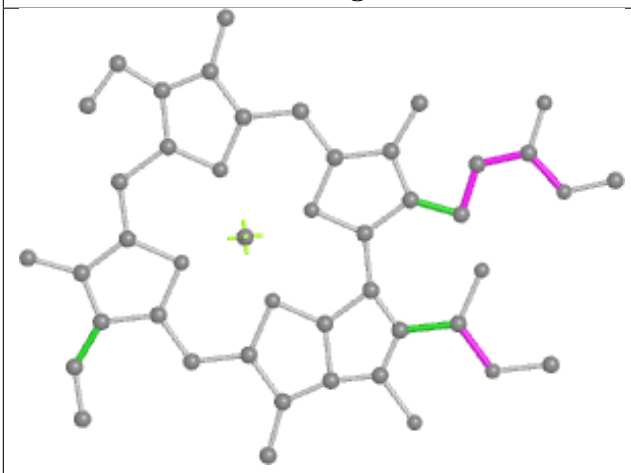

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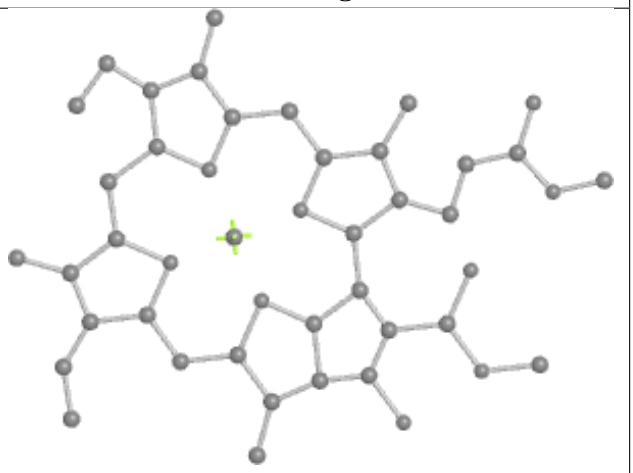
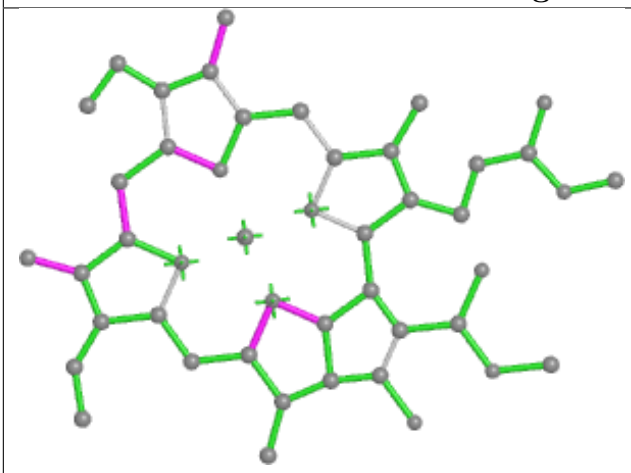


Rings

Ligand CLA l 204



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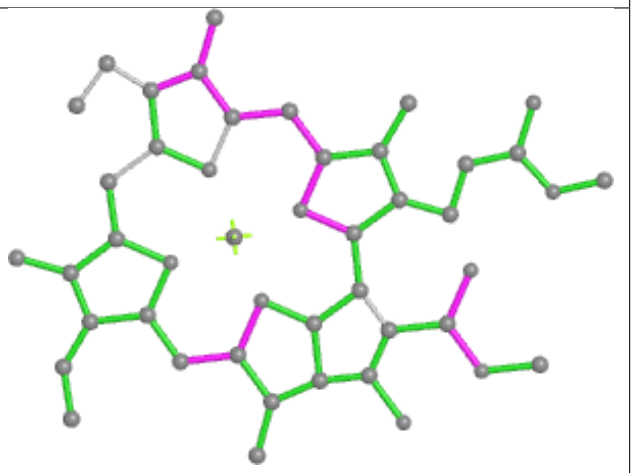
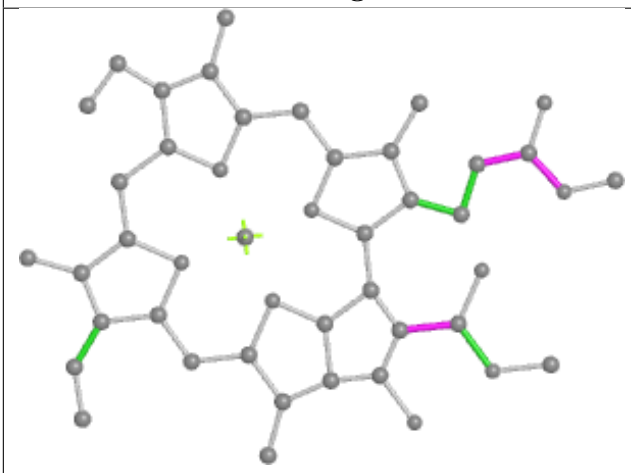


Bond angles



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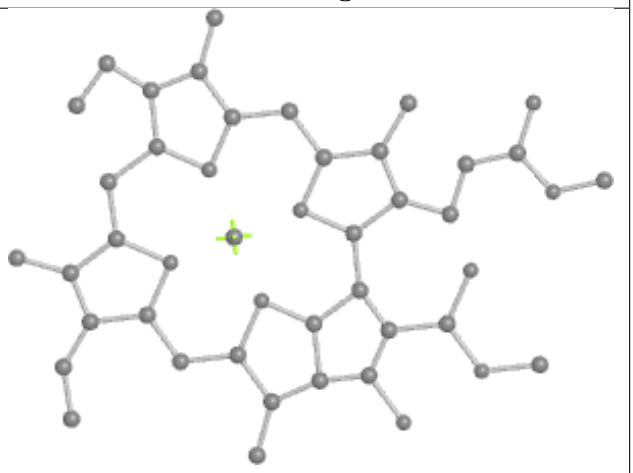
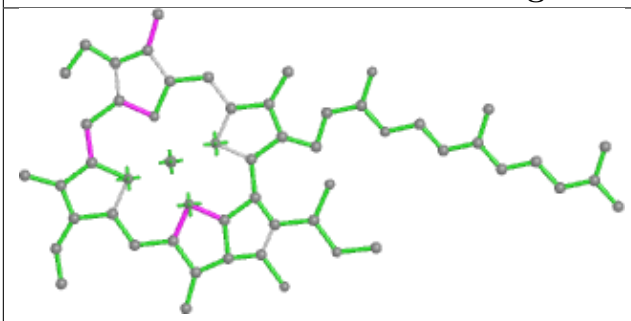


Rings

Ligand CLA b 817



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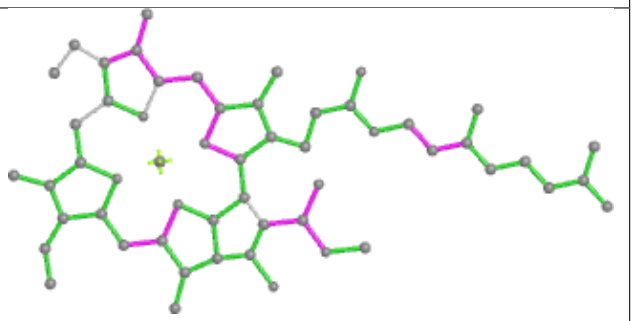

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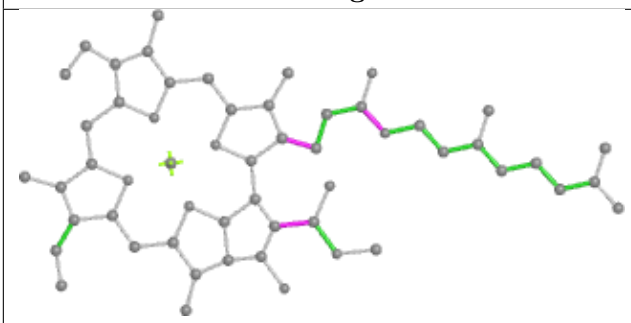

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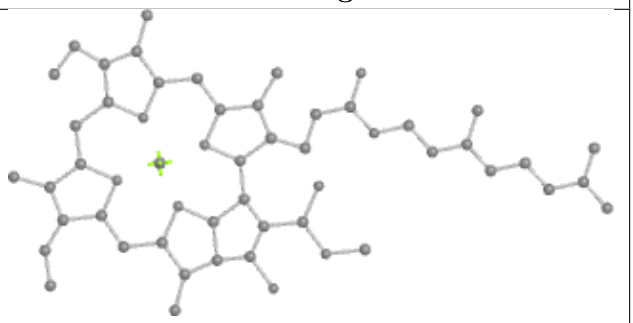
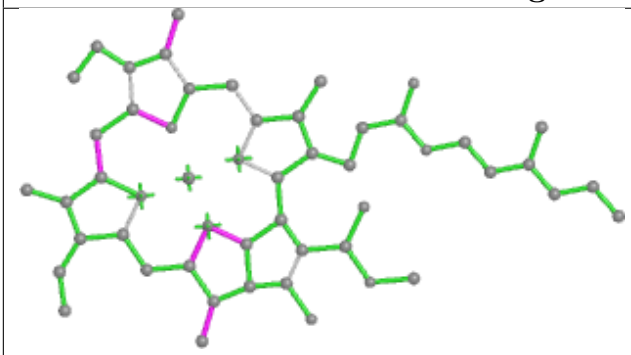


Rings

Ligand CLA 5 314



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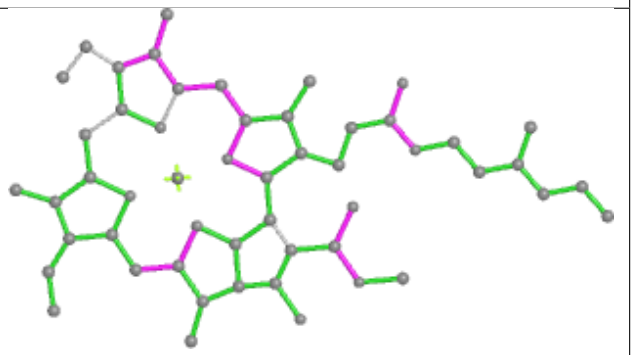
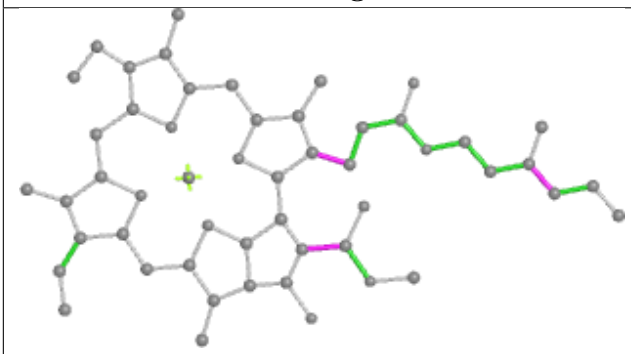


Bond angles



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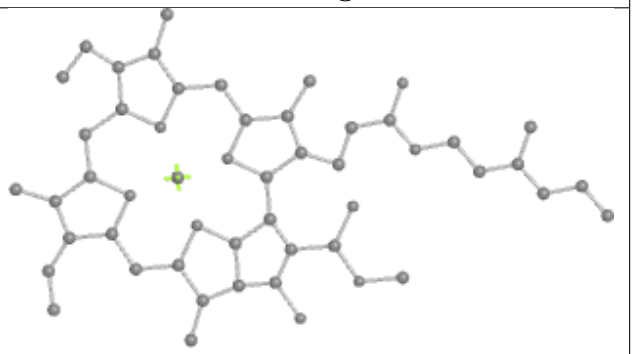

Rings

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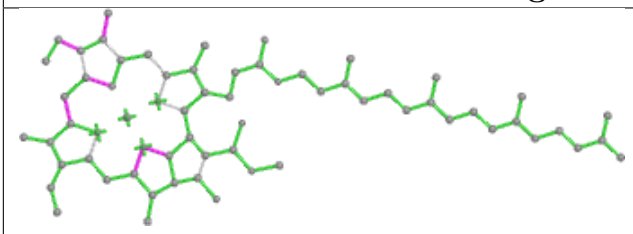

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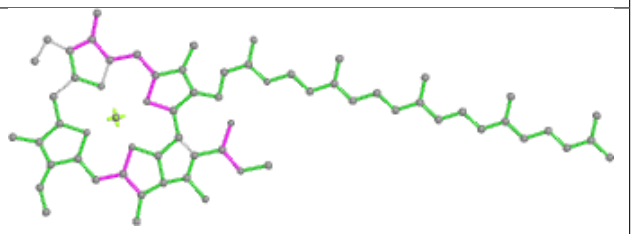

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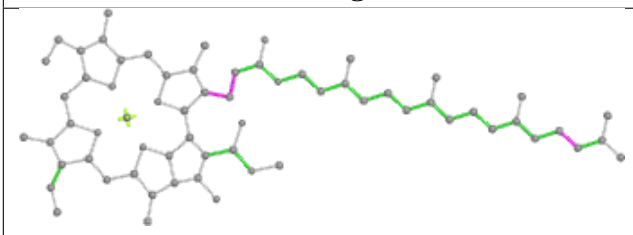

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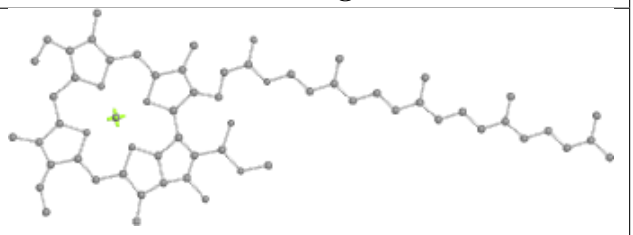
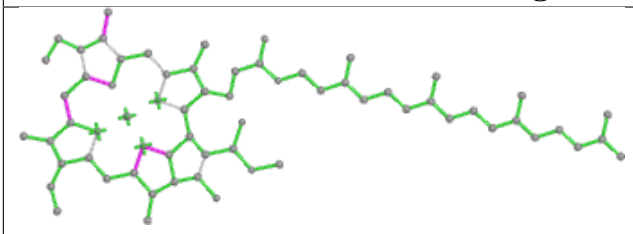


Rings

Ligand CLA f 802



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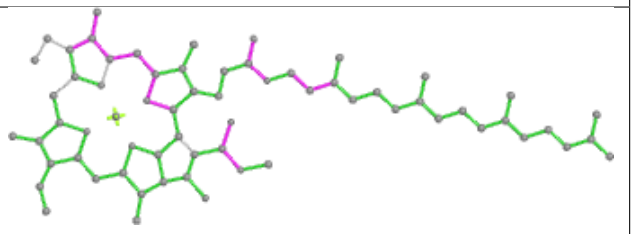
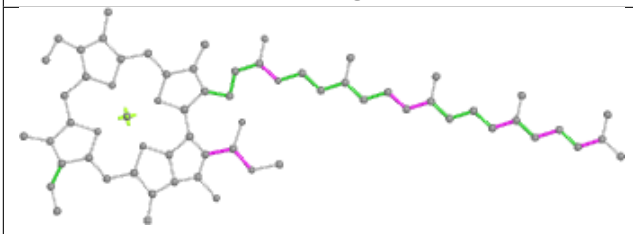


Bond angles



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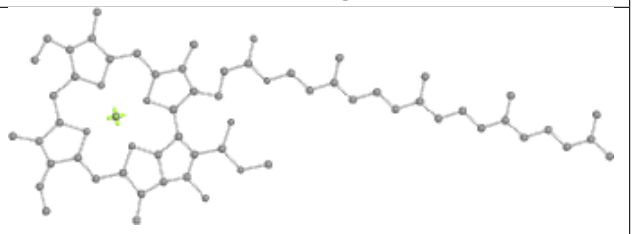
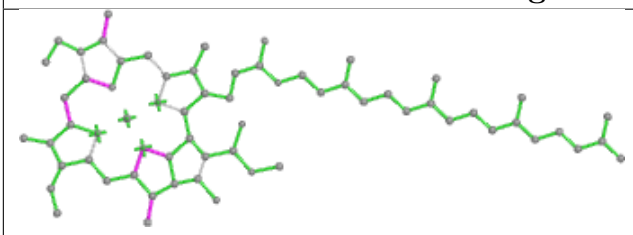
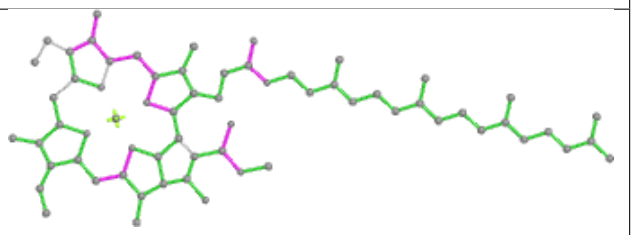


Rings

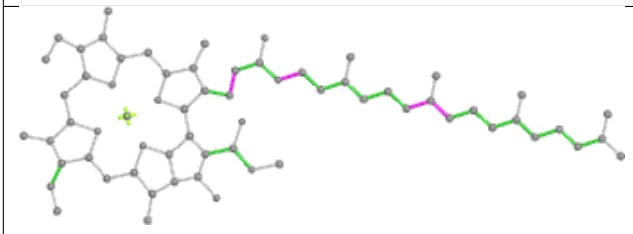
Ligand CLA a 822



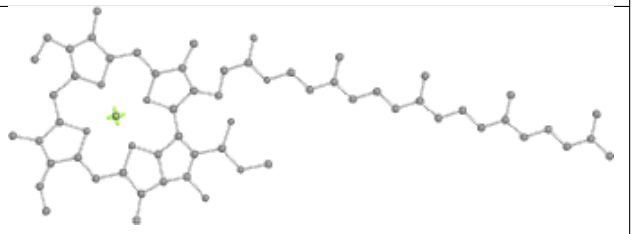
Bond lengths



Bond angles

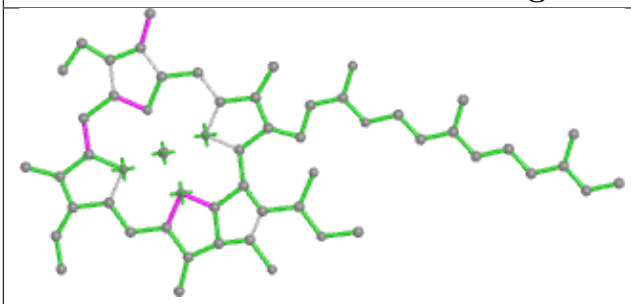


Torsions

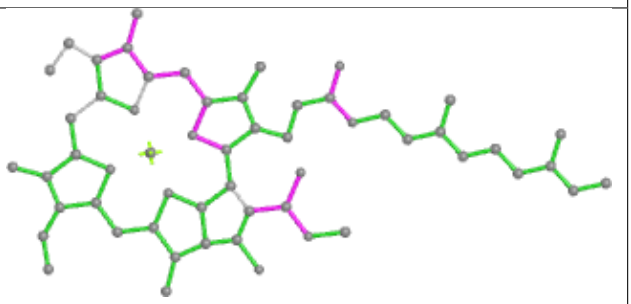


Rings

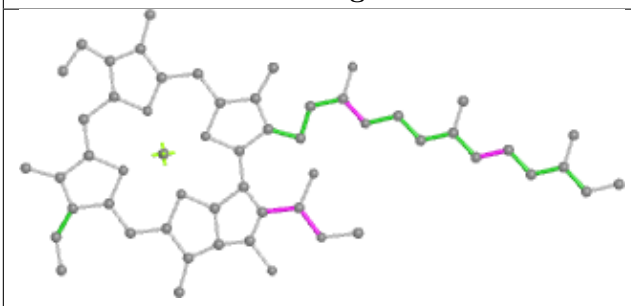
Ligand CLA 4 307



Bond lengths



Bond angles



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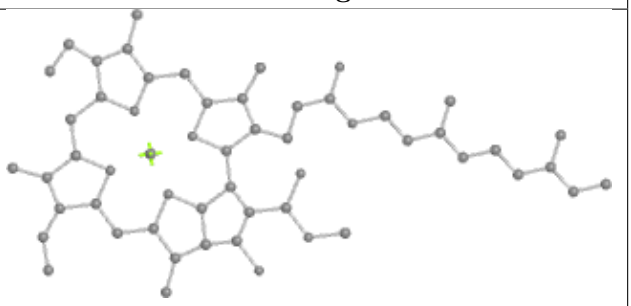

Rings

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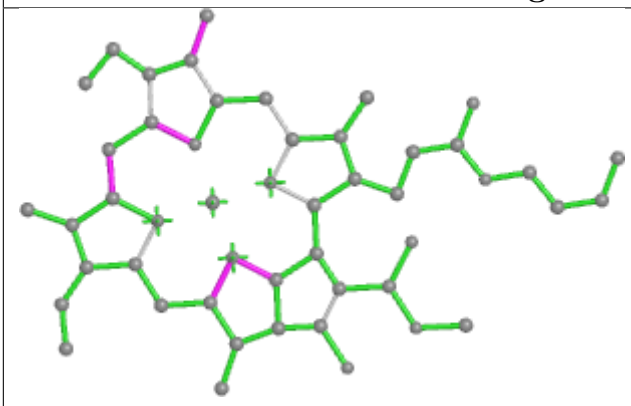

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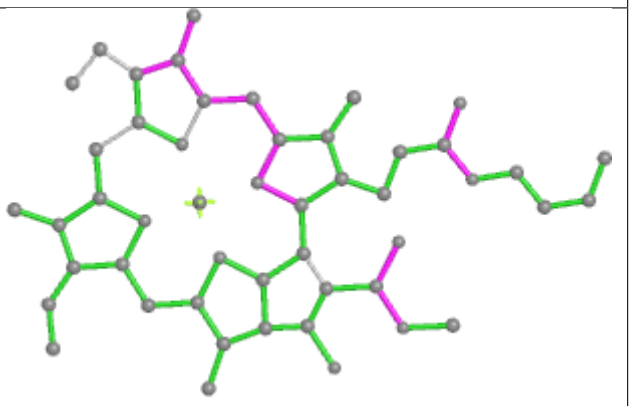
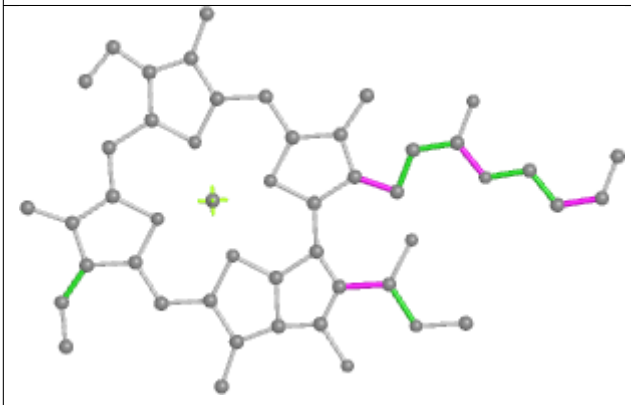
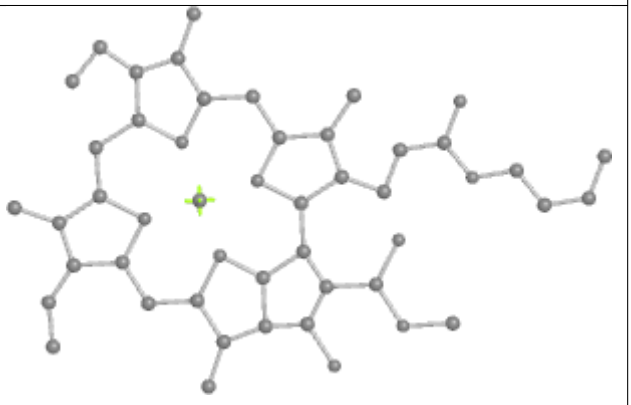


Bond angles

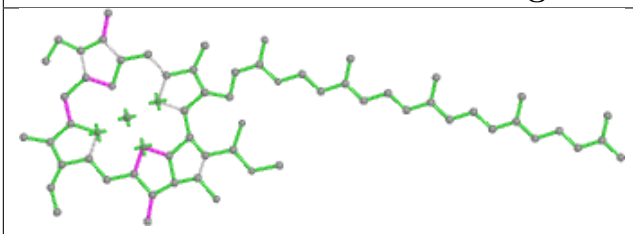


Torsions

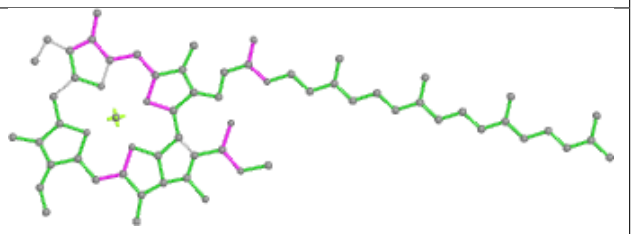


Rings

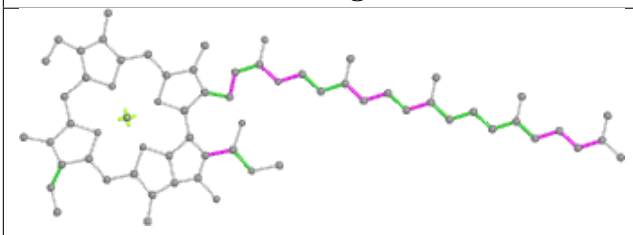
Ligand CLA a 839



Bond lengths



Bond angles



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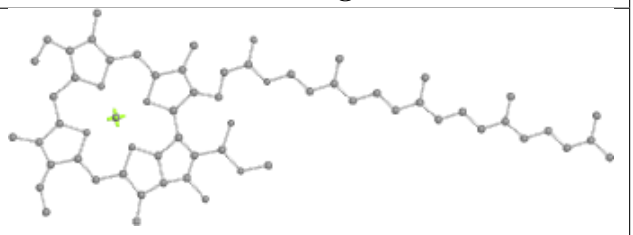
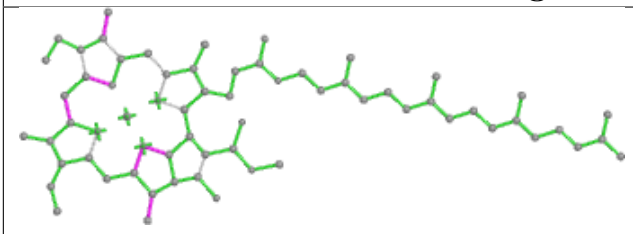


Rings

Ligand CLA 4 308



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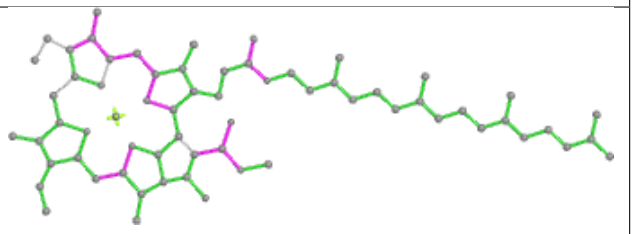
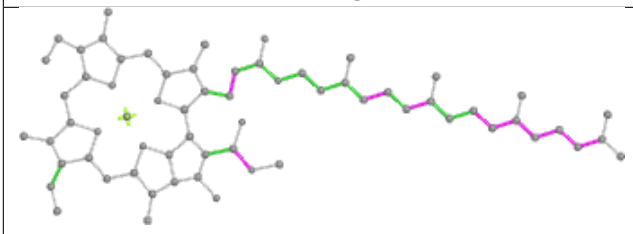
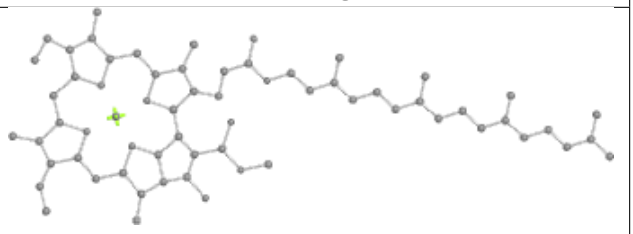


Bond angles

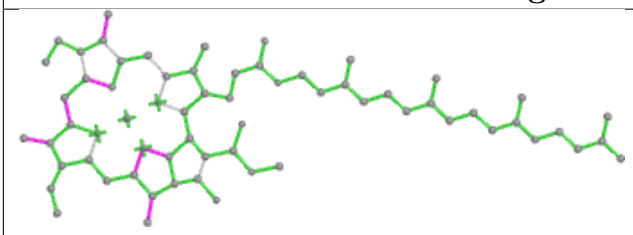


Torsions

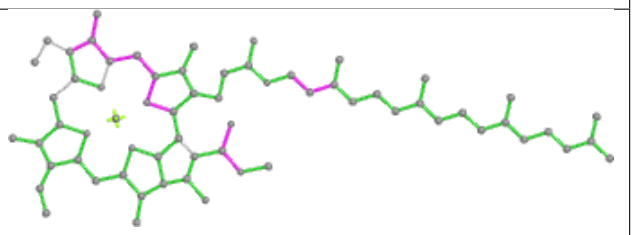


Rings

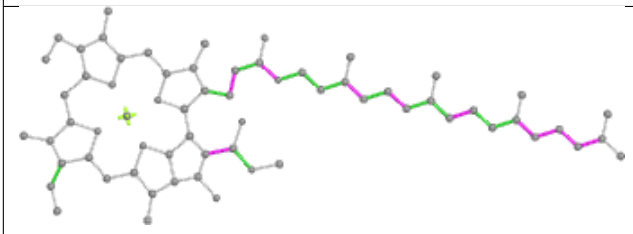
Ligand CLA a 830



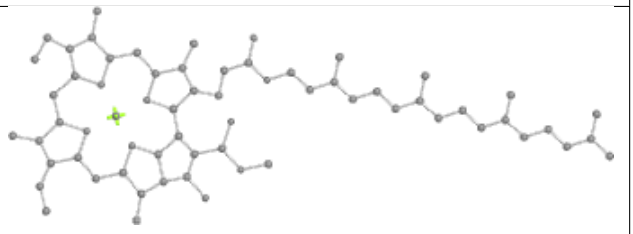
Bond lengths



Bond angles

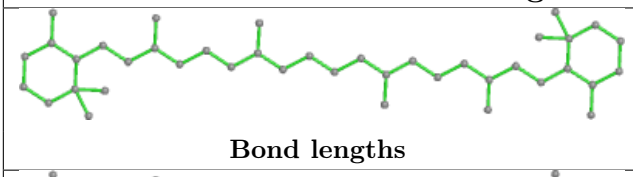


Torsions

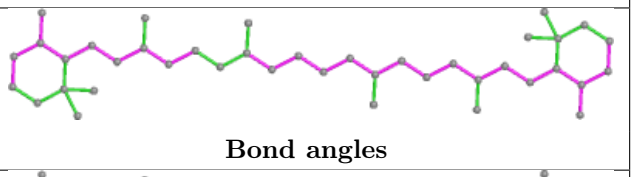


Rings

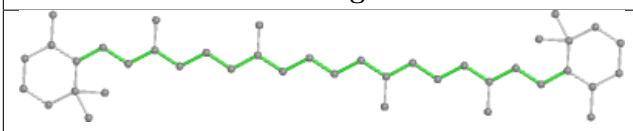
Ligand BCR a 847



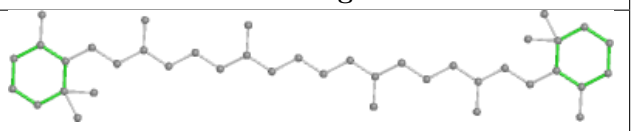
Bond lengths



Bond angles

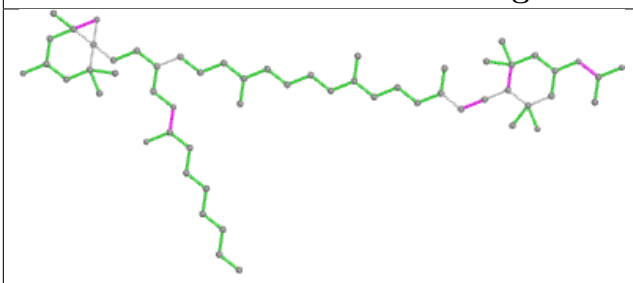


Torsions

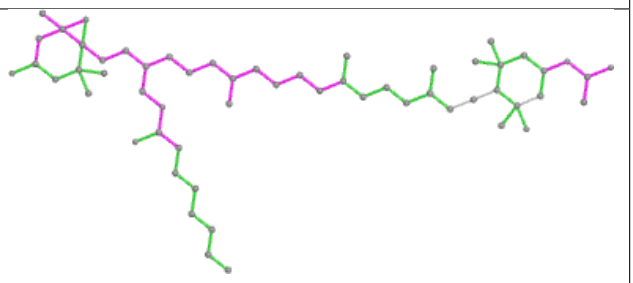


Rings

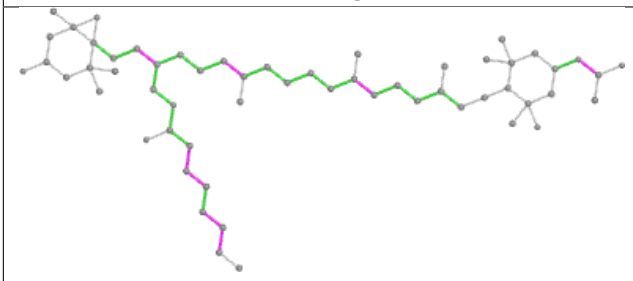
Ligand A1L1F 1 304



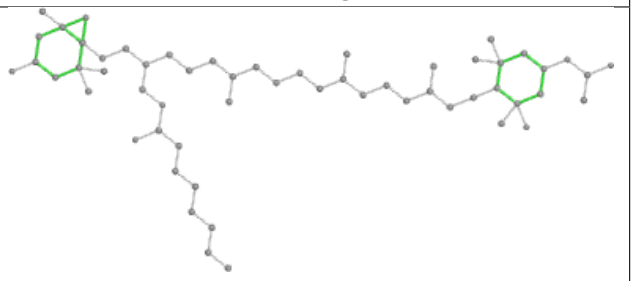
Bond lengths



Bond angles

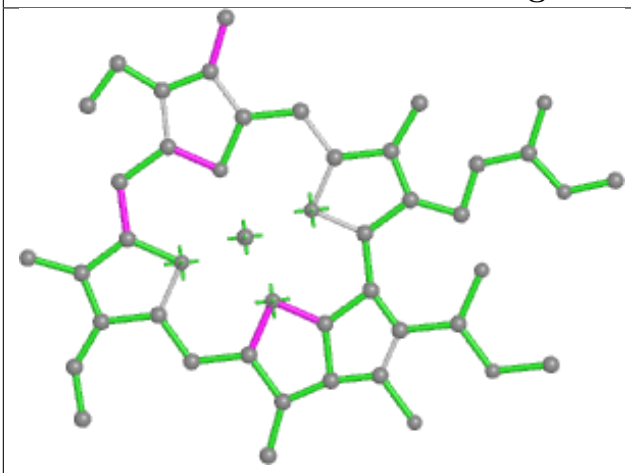


Torsions

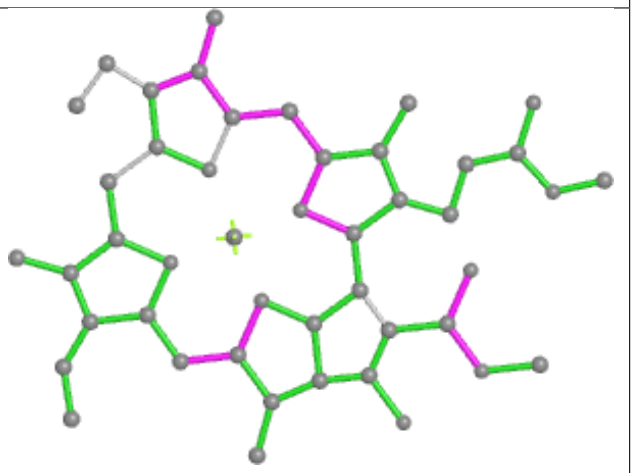


Rings

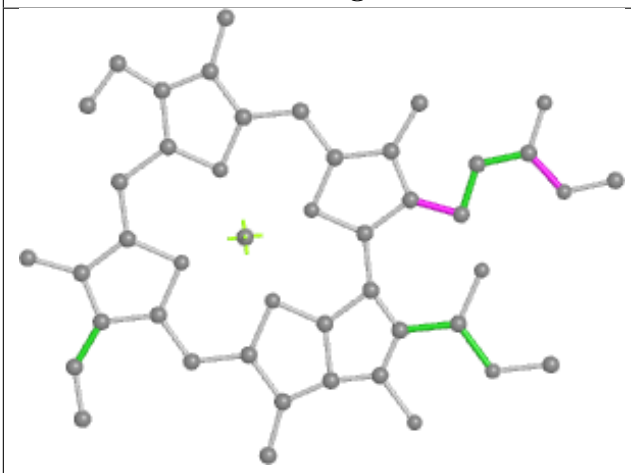
Ligand CLA 4 312



Bond lengths



Bond angles



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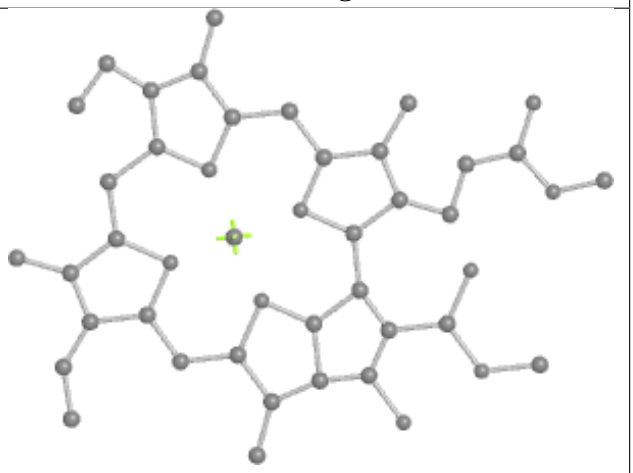
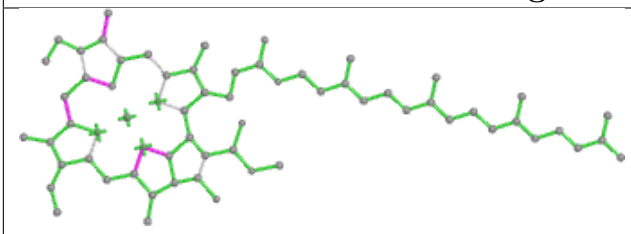


Rings

Ligand CLA a 844



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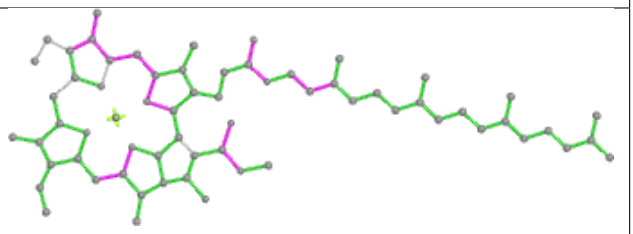
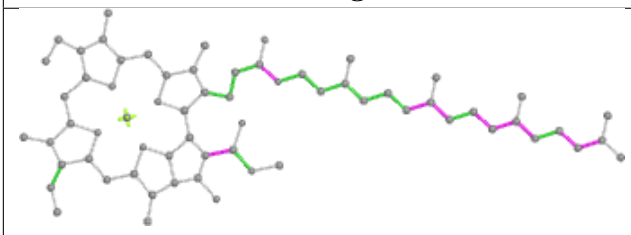


Bond angles



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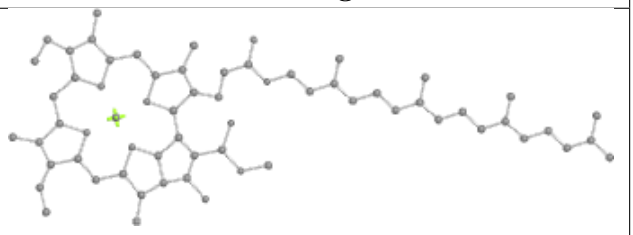
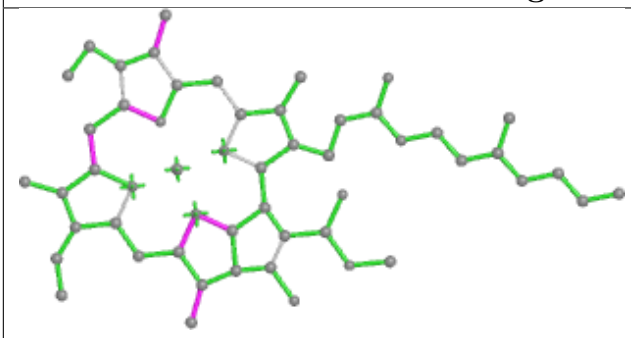
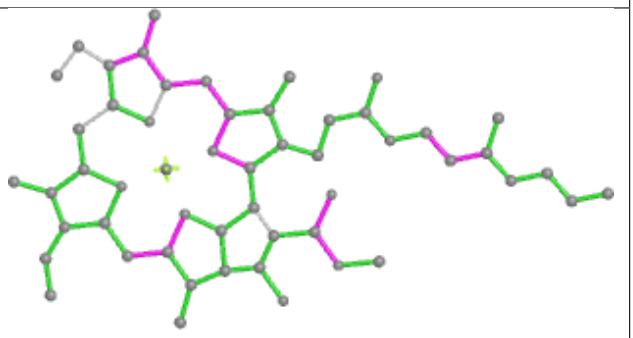


Rings

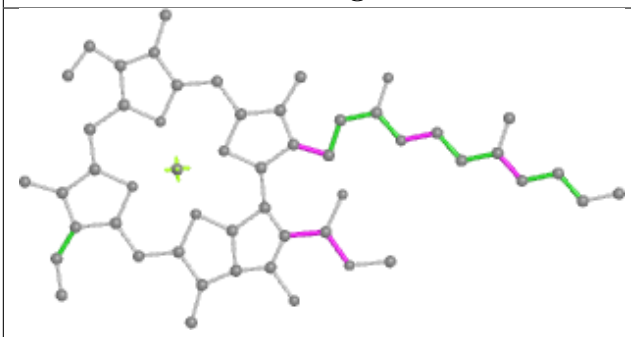
Ligand CLA b 835



Bond lengths



Bond angles



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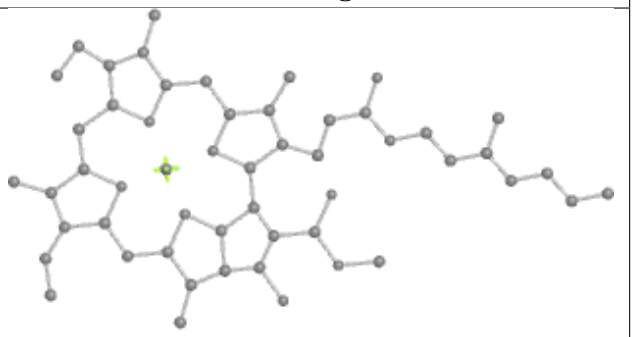
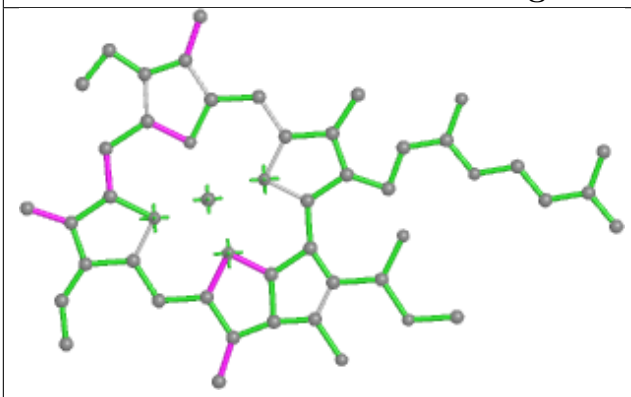
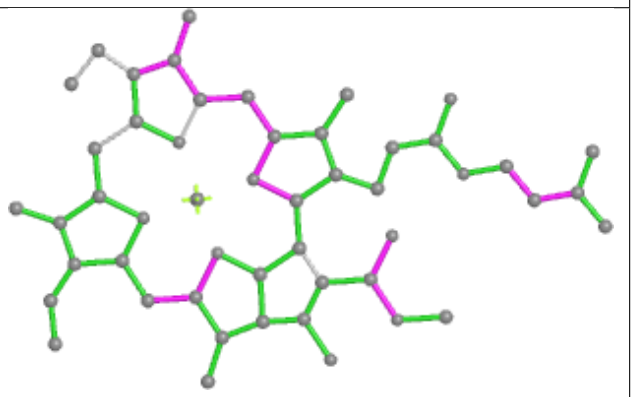


Rings

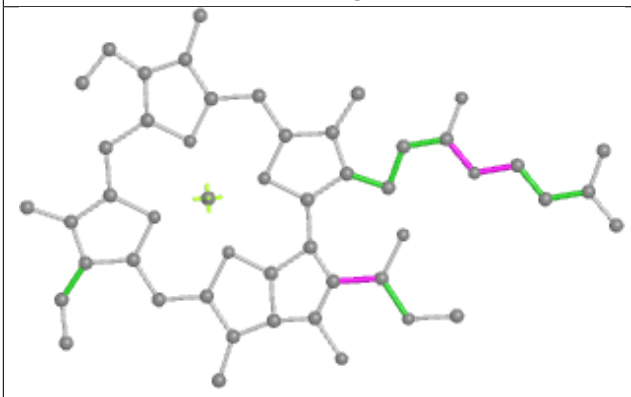
Ligand CLA a 816



Bond lengths



Bond angles



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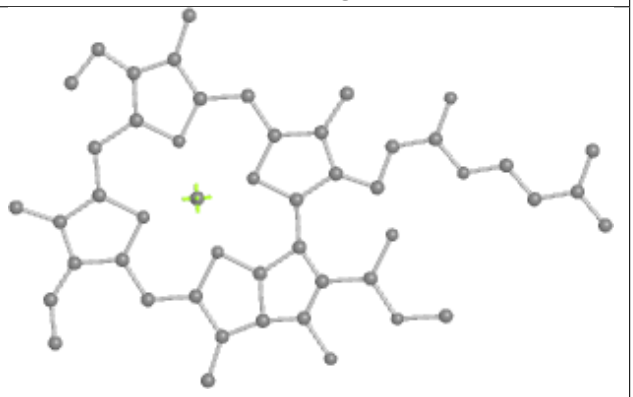
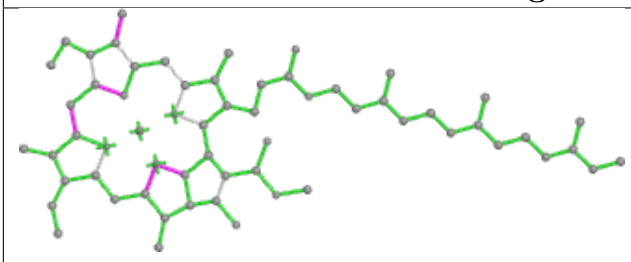
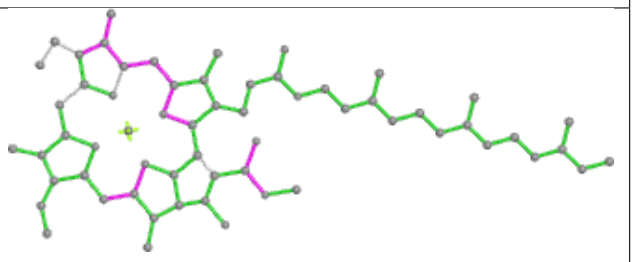
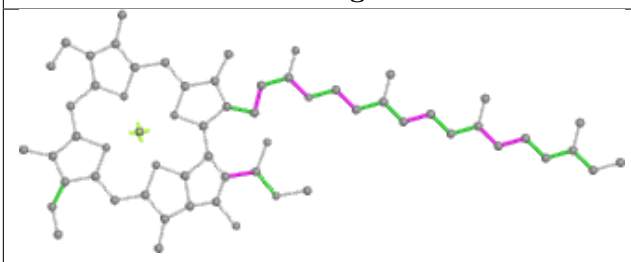
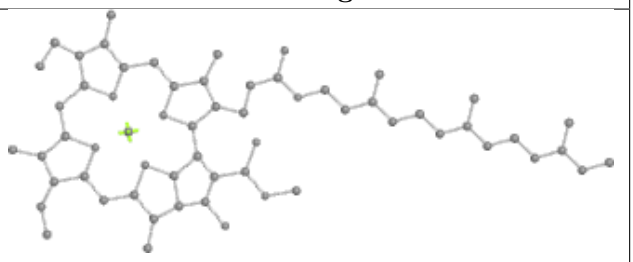
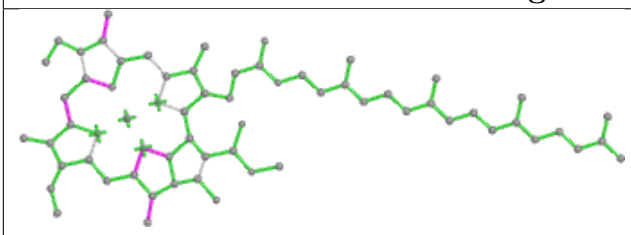
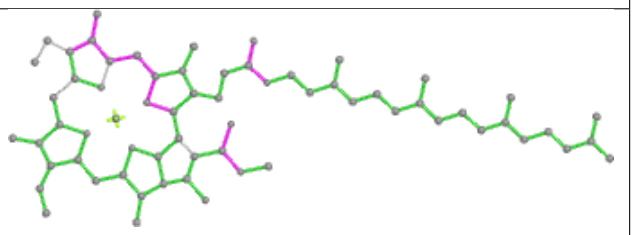
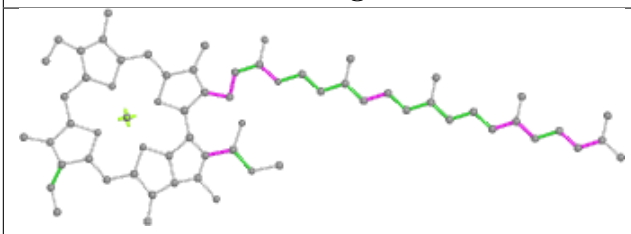
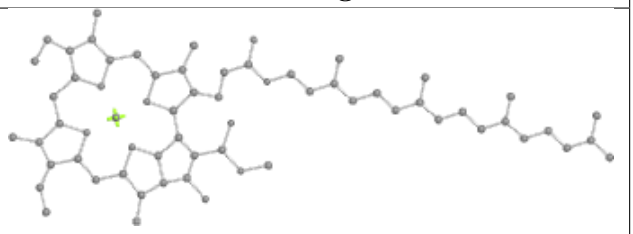
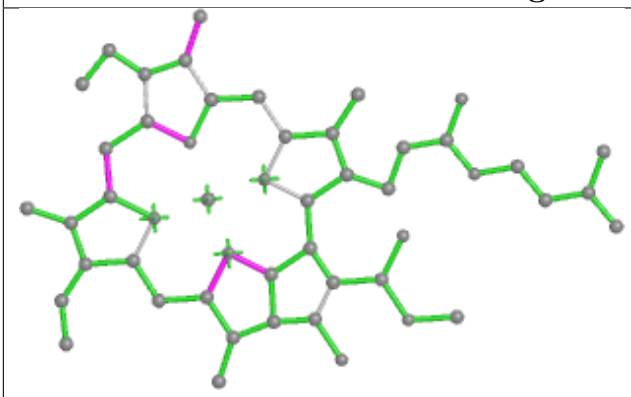


Rings

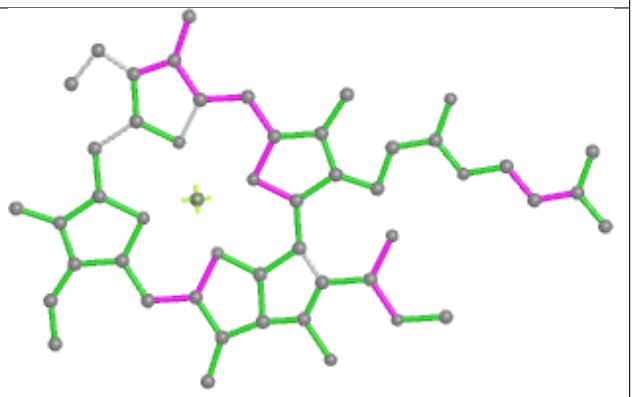
Ligand CLA 1 305	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand CLA 2 310	
 Bond lengths	 Bond angles
 Torsions	 Rings

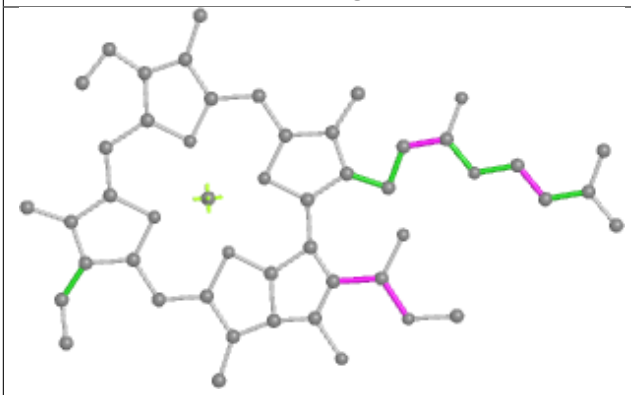
Ligand CLA 4 309



Bond lengths



Bond angles



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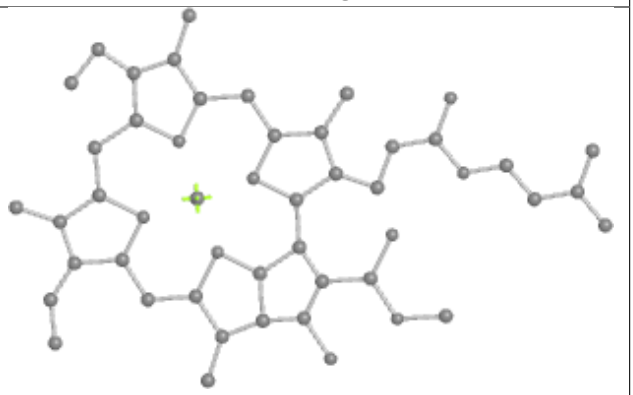
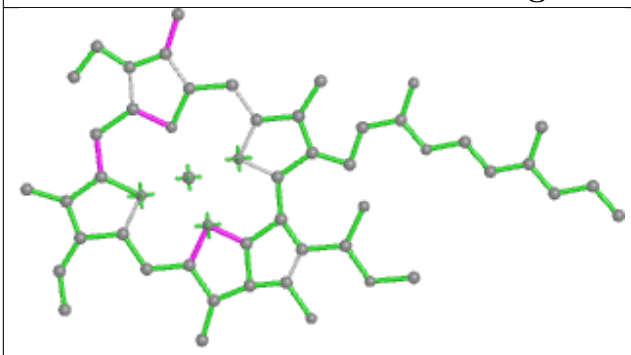
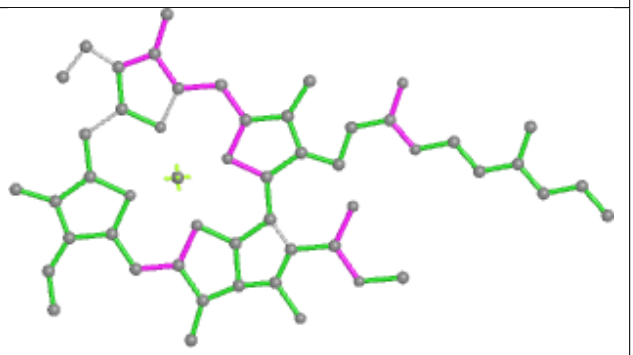


Rings

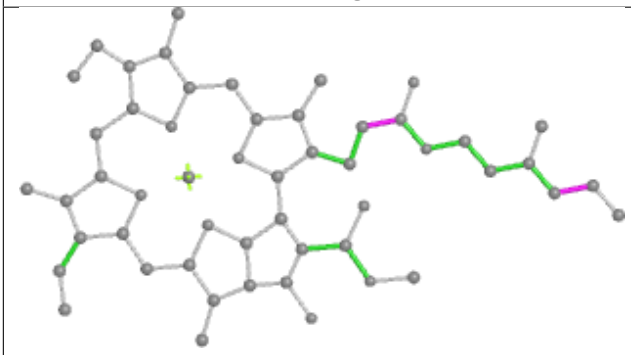
Ligand CLA 1 312



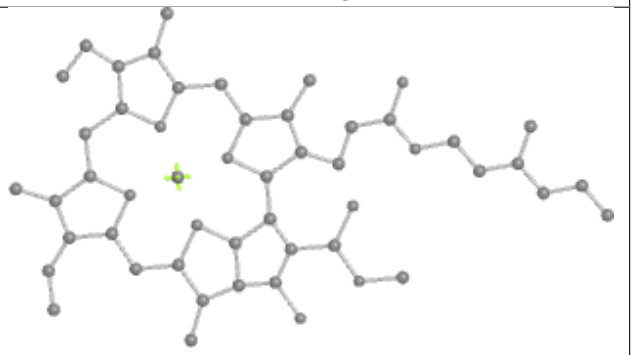
Bond lengths



Bond angles

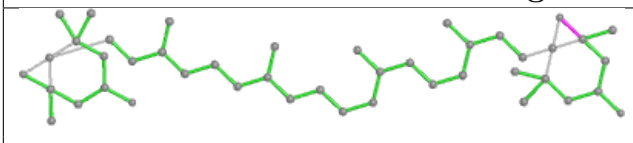


Torsions

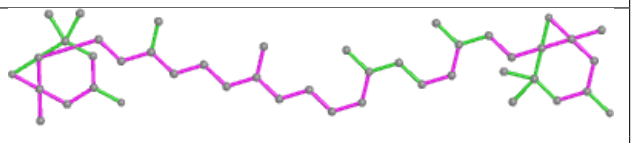


Rings

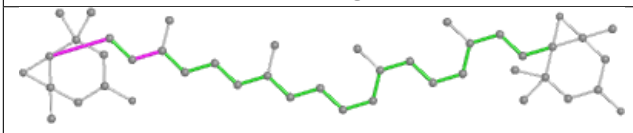
Ligand XAT 3 304



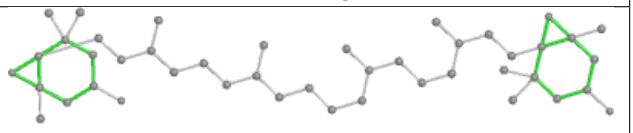
Bond lengths



Bond angles

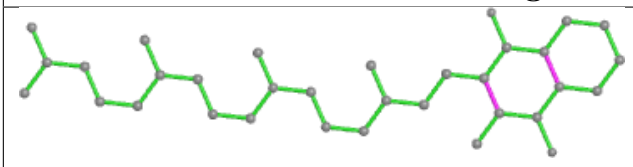


Torsions

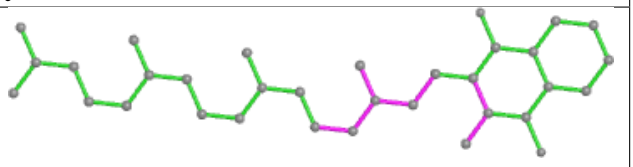


Rings

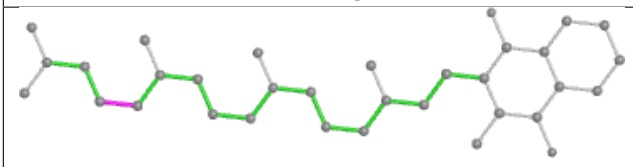
Ligand PQN b 842



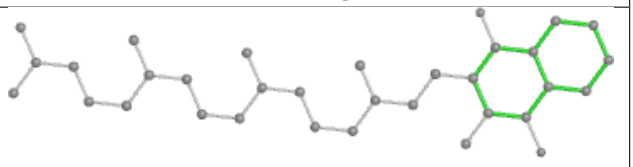
Bond lengths



Bond angles

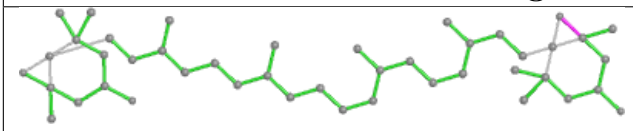


Torsions



Rings

Ligand XAT 1 303



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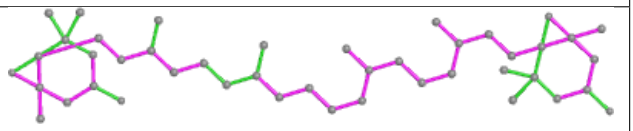
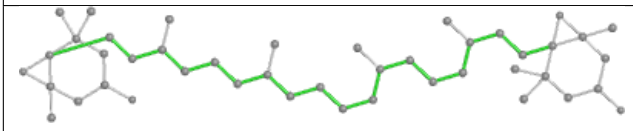
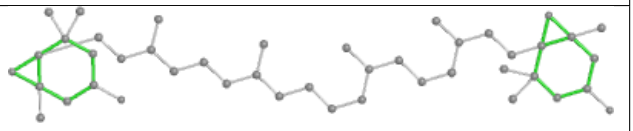


Bond angles

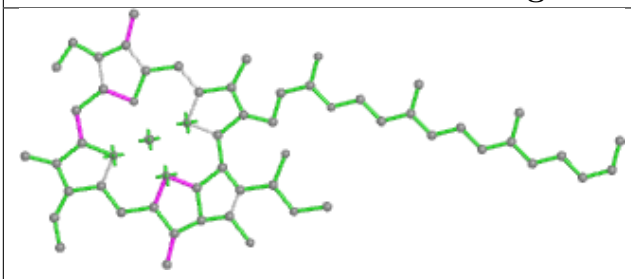


Torsions

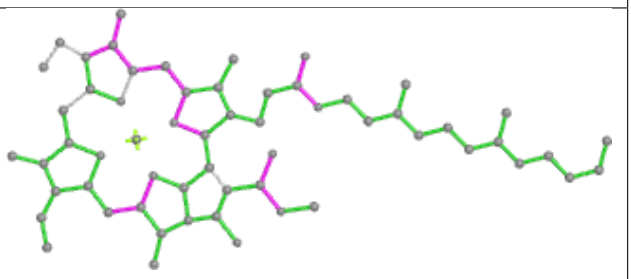


Rings

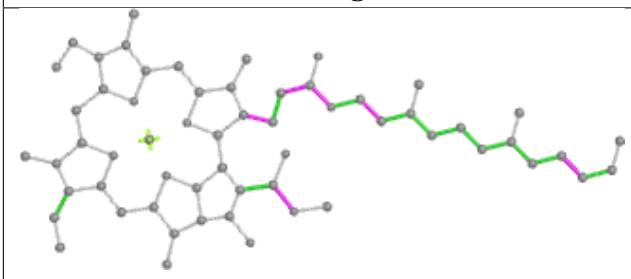
Ligand CLA b 818



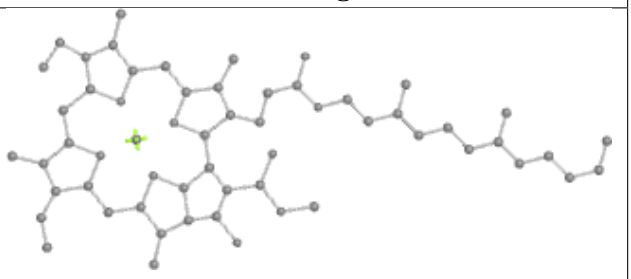
Bond lengths



Bond angles

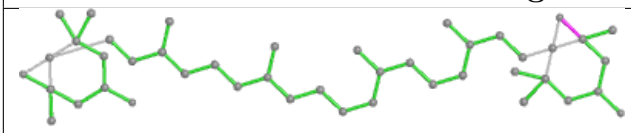


Torsions

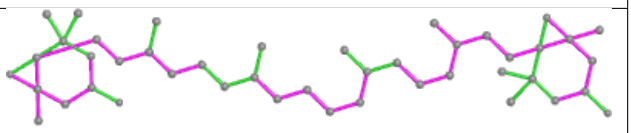


Rings

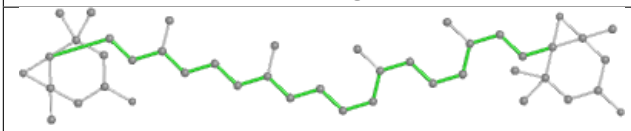
Ligand XAT 2 302



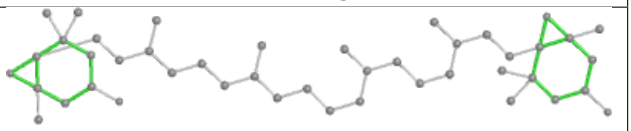
Bond lengths



Bond angles

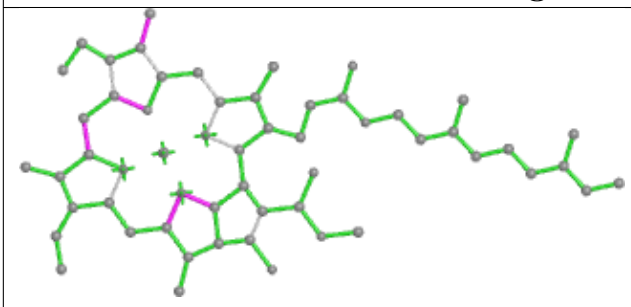


Torsions

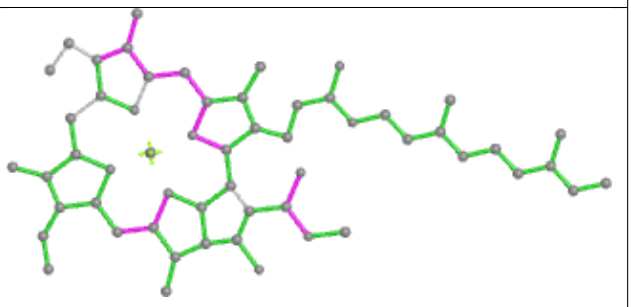


Rings

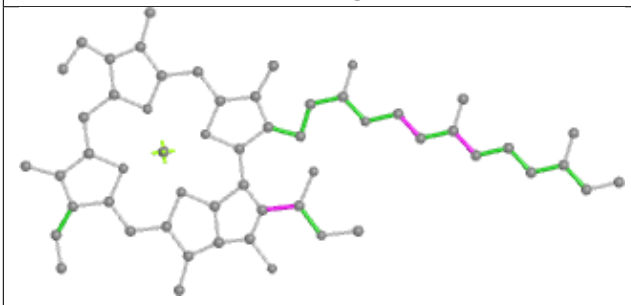
Ligand CLA 3 310



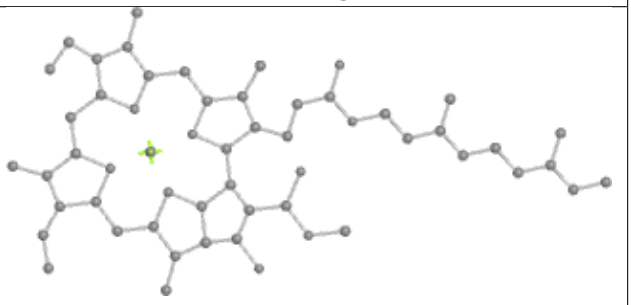
Bond lengths



Bond angles

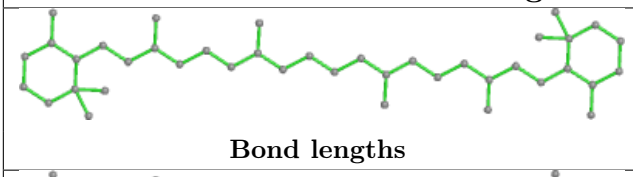


Torsions

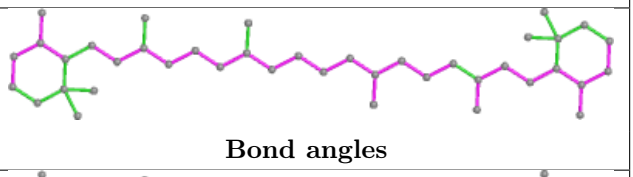


Rings

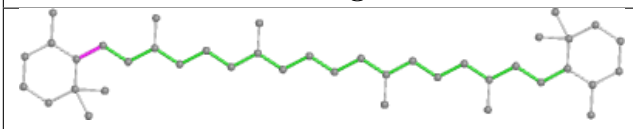
Ligand BCR b 844



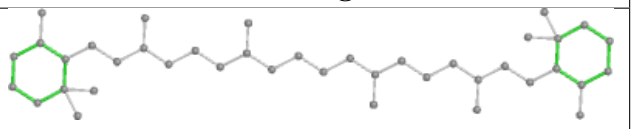
Bond lengths



Bond angles

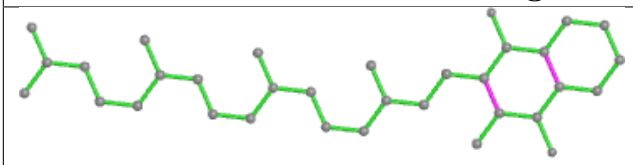


Torsions

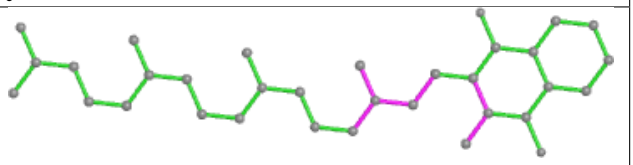


Rings

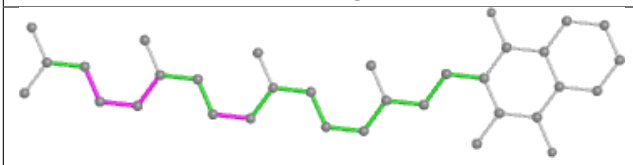
Ligand PQN a 843



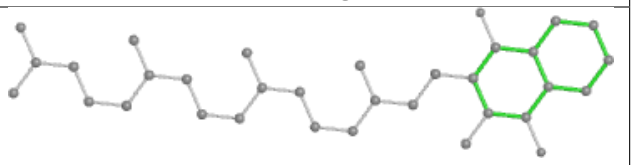
Bond lengths



Bond angles

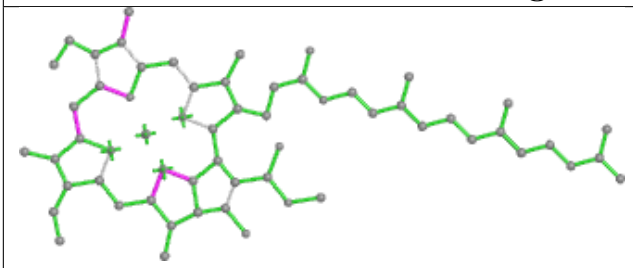


Torsions



Rings

Ligand CLA 5 307



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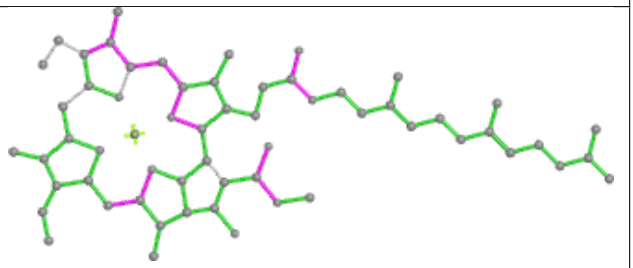
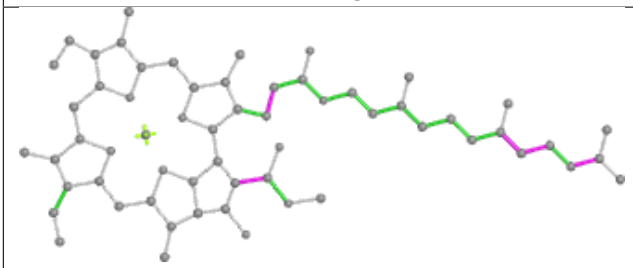
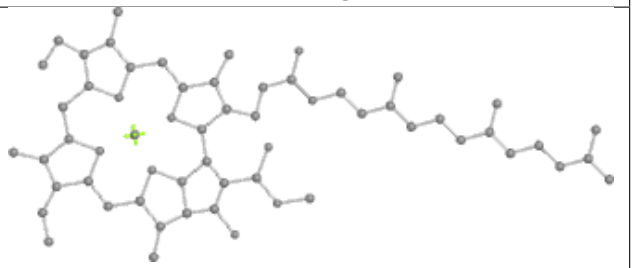


Bond angles

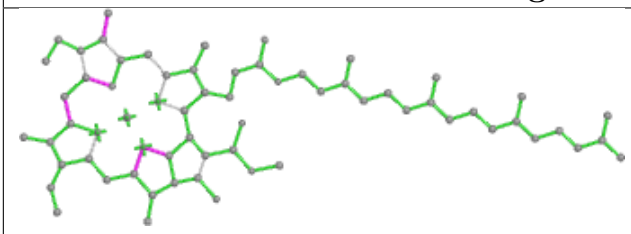


Torsions

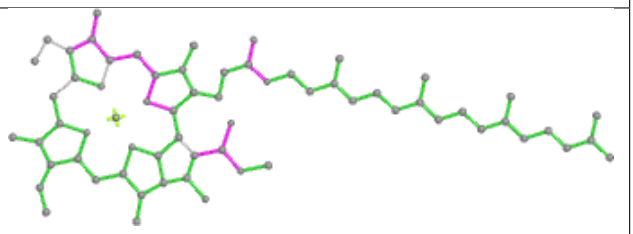


Rings

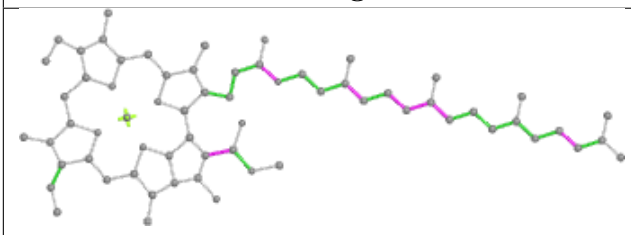
Ligand CLA a 831



Bond lengths



Bond angles



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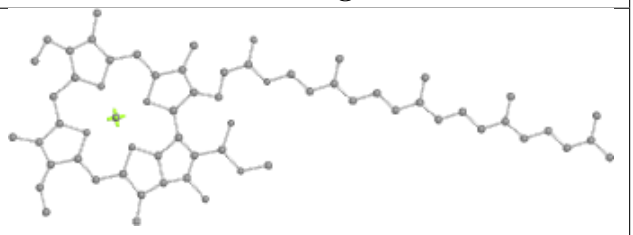
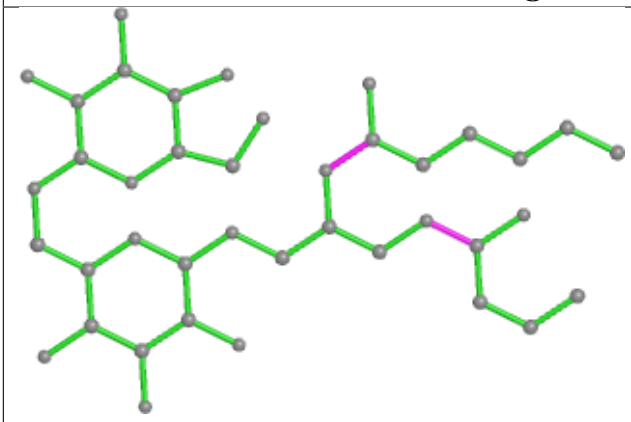
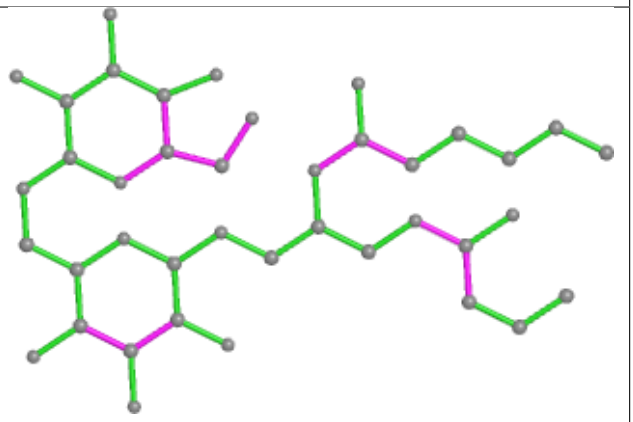


Rings

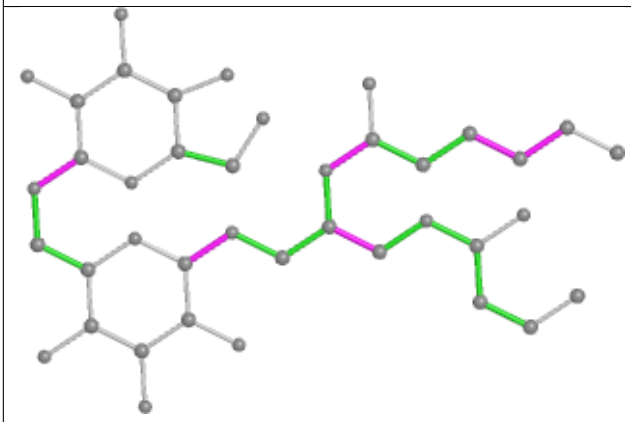
Ligand DGD 4 318



Bond lengths



Bond angles



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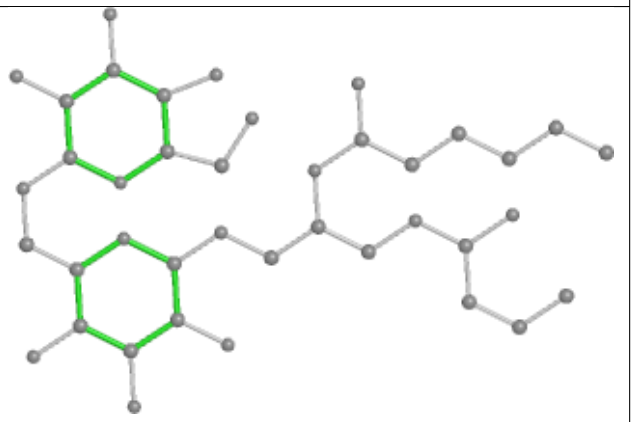
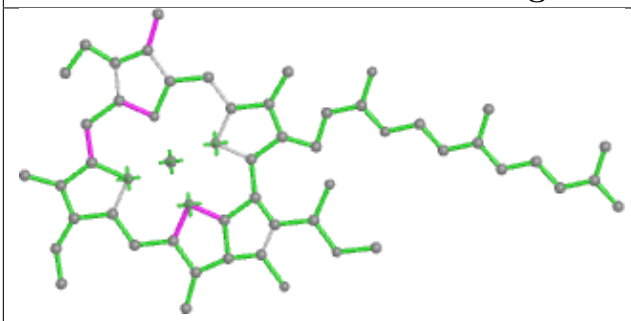


Rings

Ligand CLA 4 317



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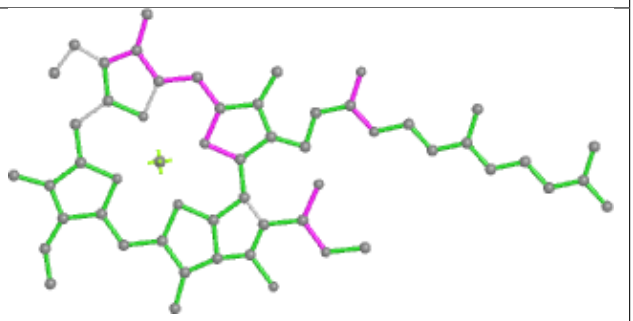
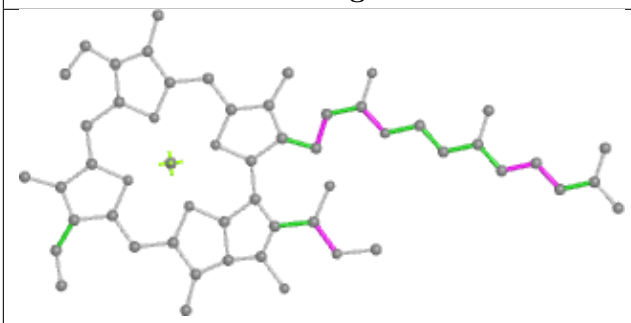


Bond angles



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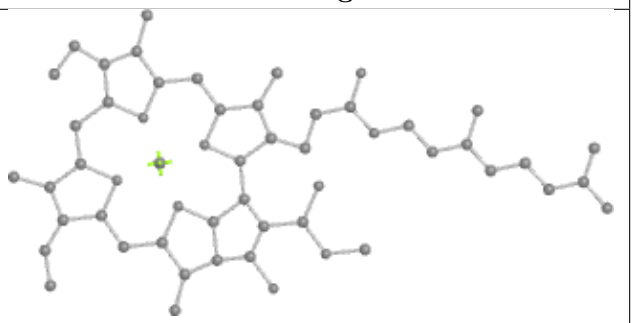
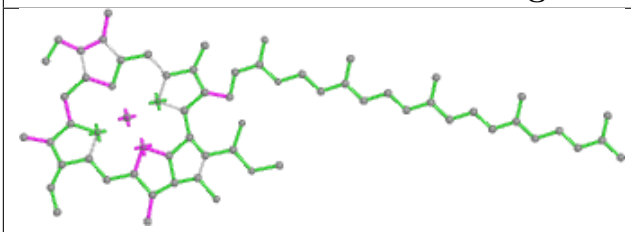
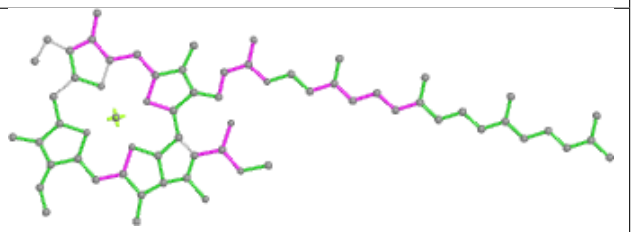


Rings

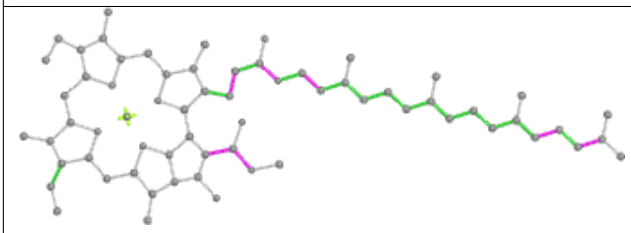
Ligand CLA a 806



Bond lengths



Bond angles



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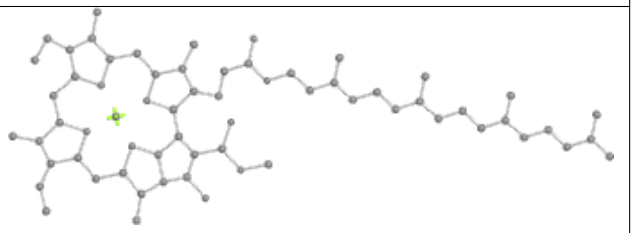
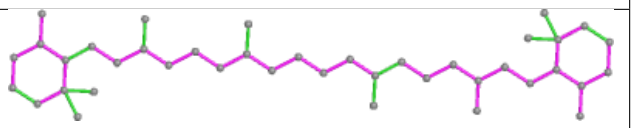


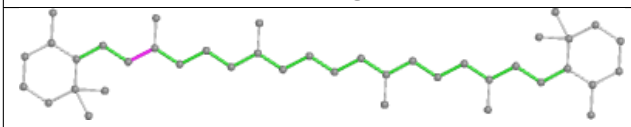
Rings

Ligand BCR b 843

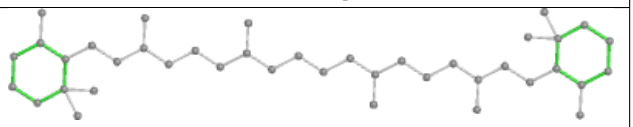
Bond lengths



Bond angles

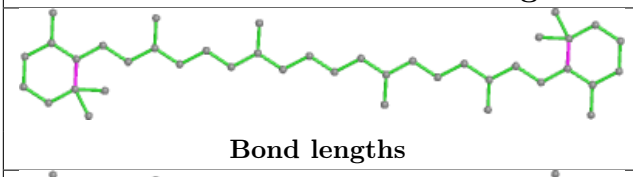


Torsions



Rings

Ligand BCR m 102



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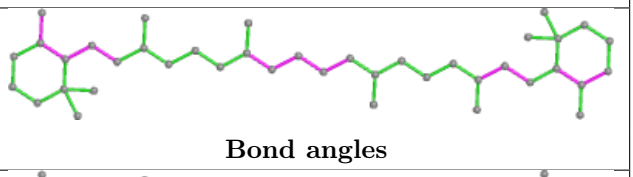
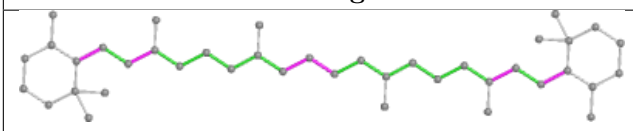
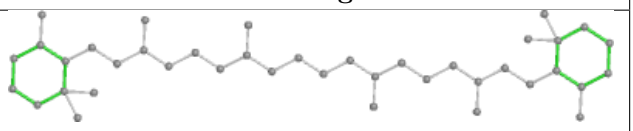


Bond angles

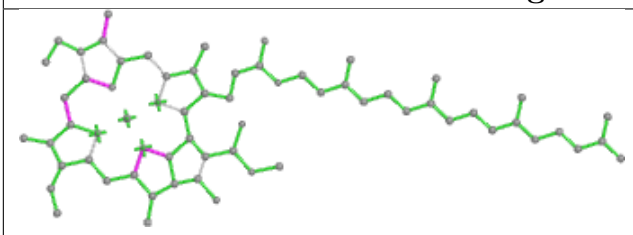


Torsions

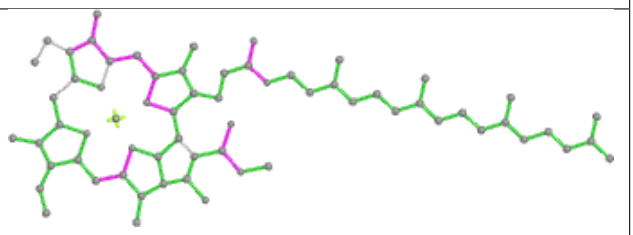


Rings

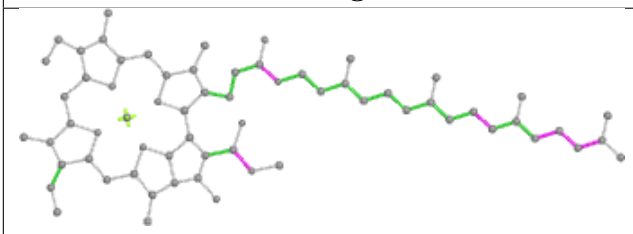
Ligand CLA b 841



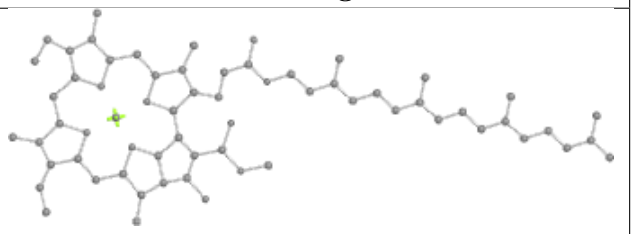
Bond lengths



Bond angles

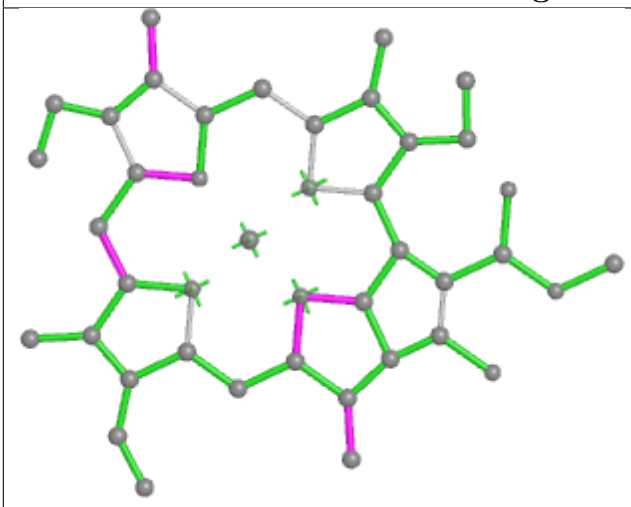


Torsions

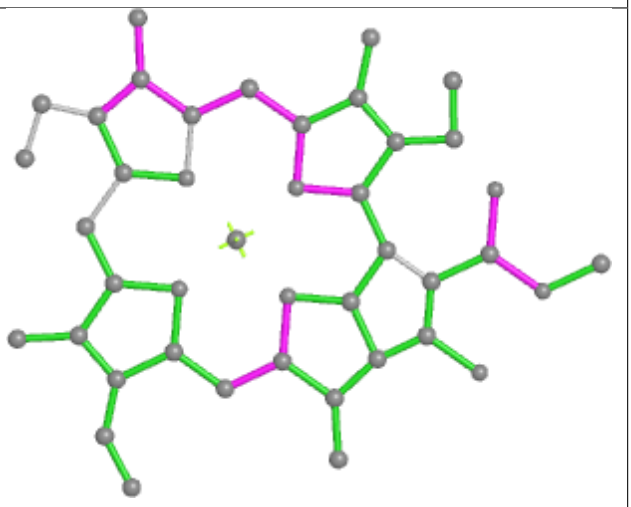


Rings

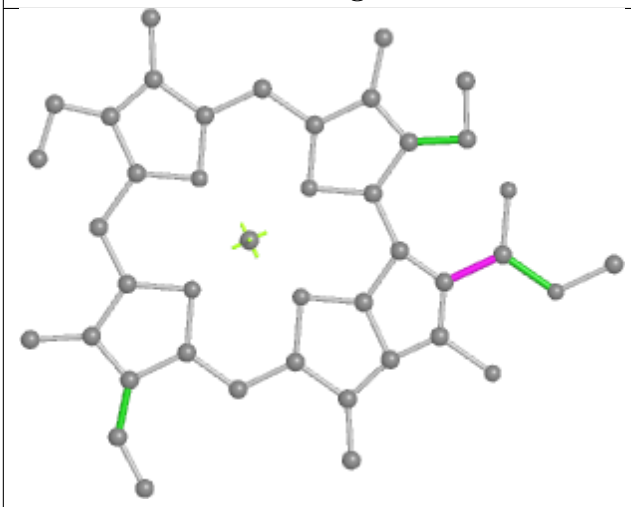
Ligand CLA l 202



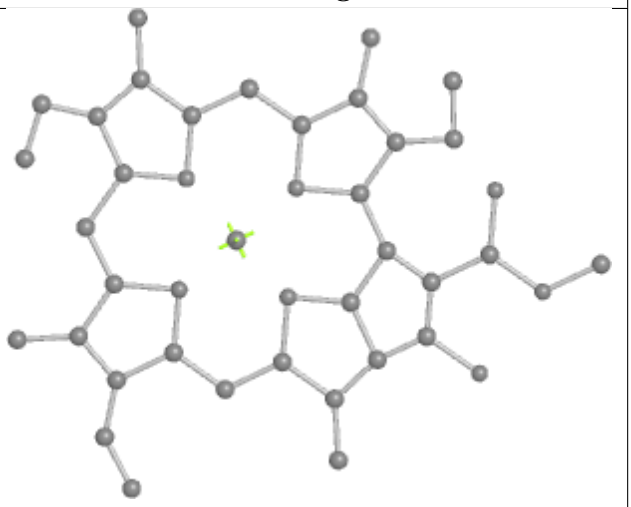
Bond lengths



Bond angles

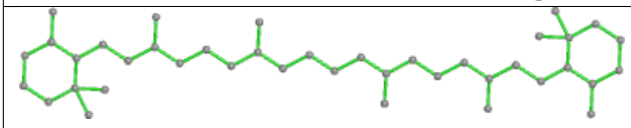


Torsions

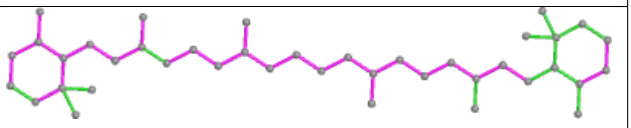


Rings

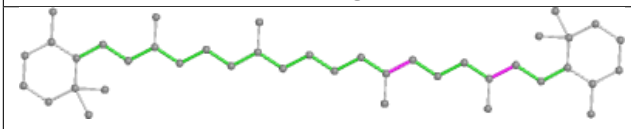
Ligand BCR f 801



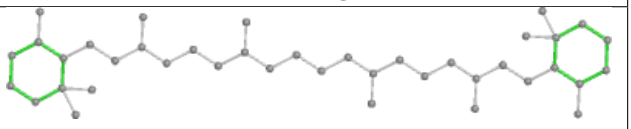
Bond lengths



Bond angles

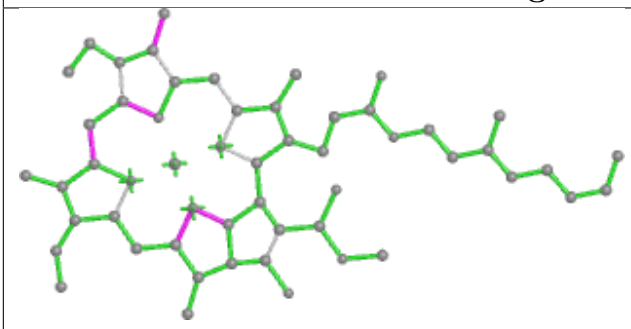


Torsions



Rings

Ligand CLA 2 308



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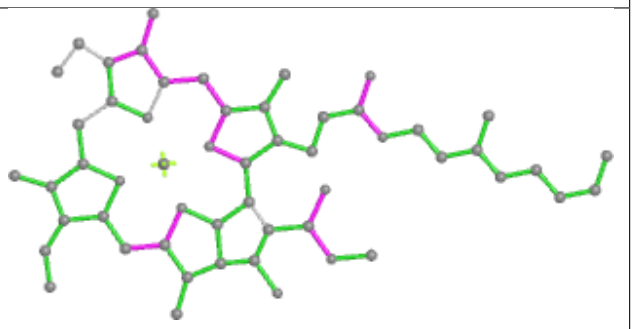
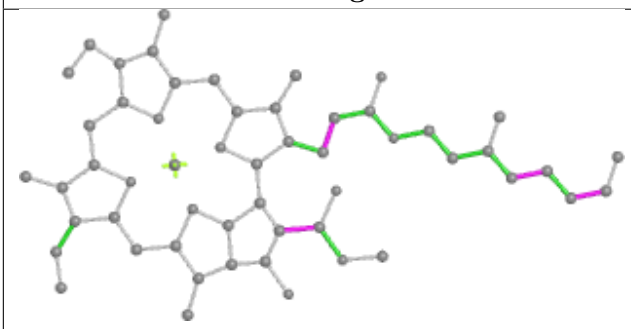
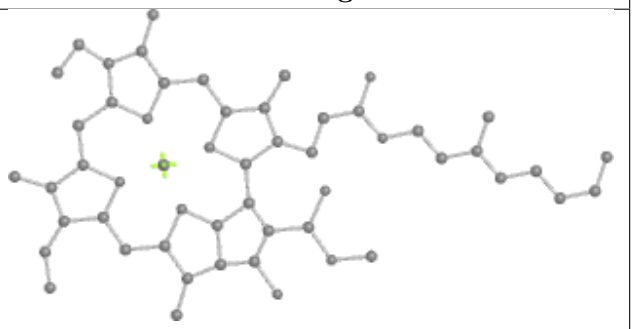


Bond angles

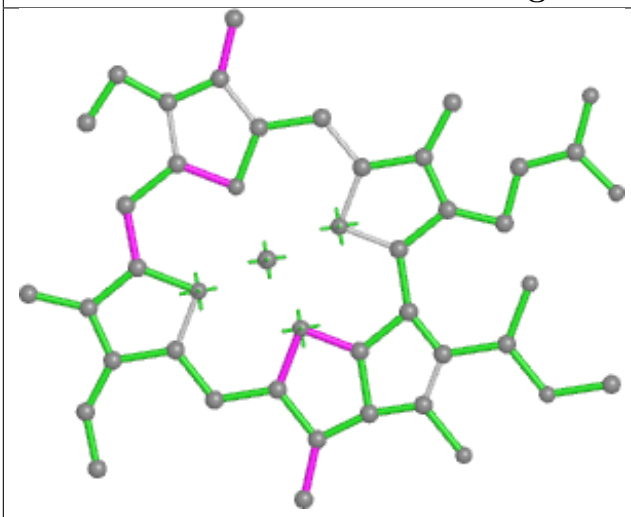


Torsions

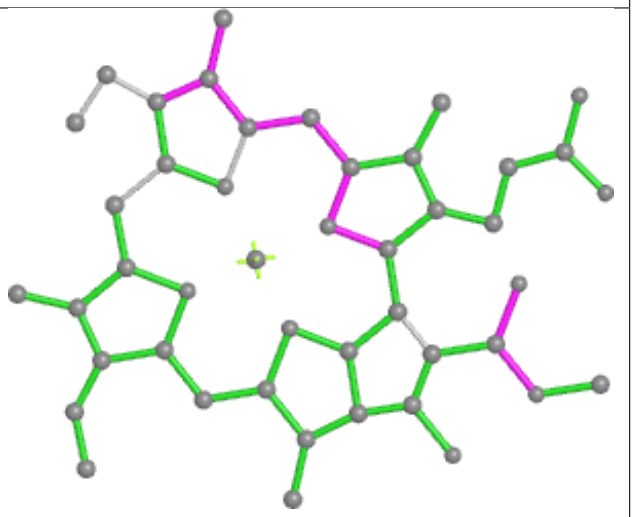


Rings

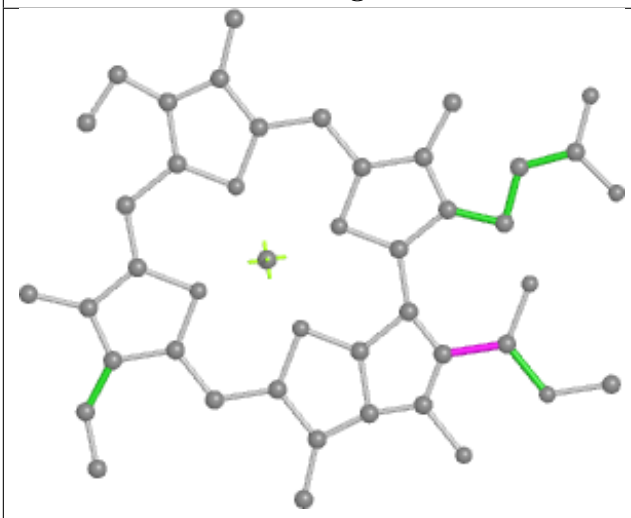
Ligand CLA 3 307



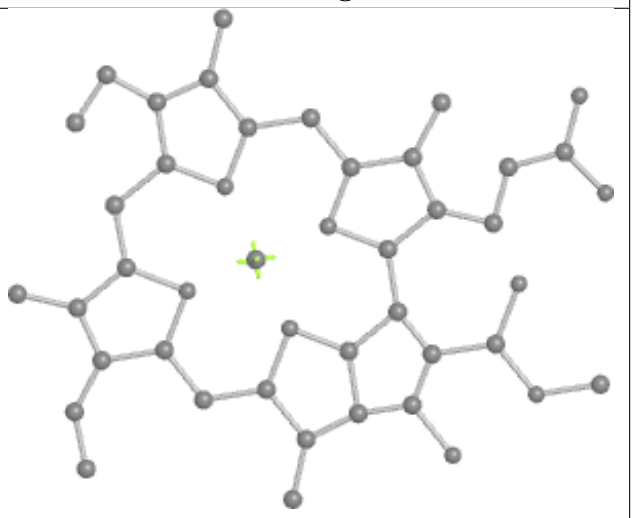
Bond lengths



Bond angles

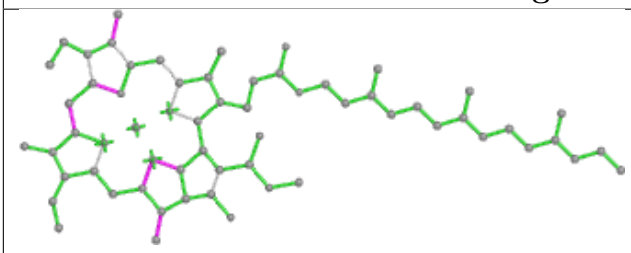


Torsions

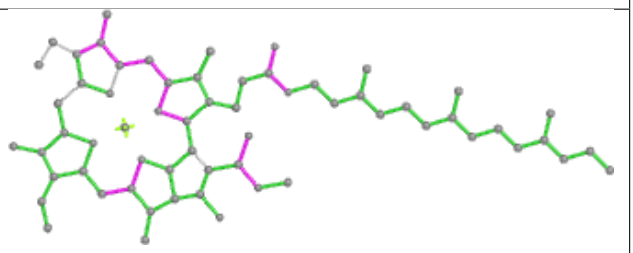


Rings

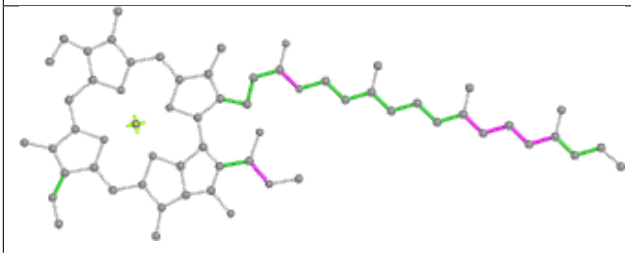
Ligand CLA i 102



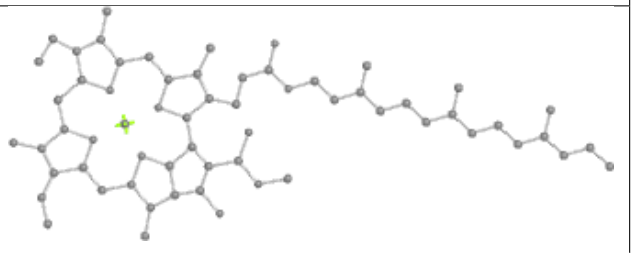
Bond lengths



Bond angles

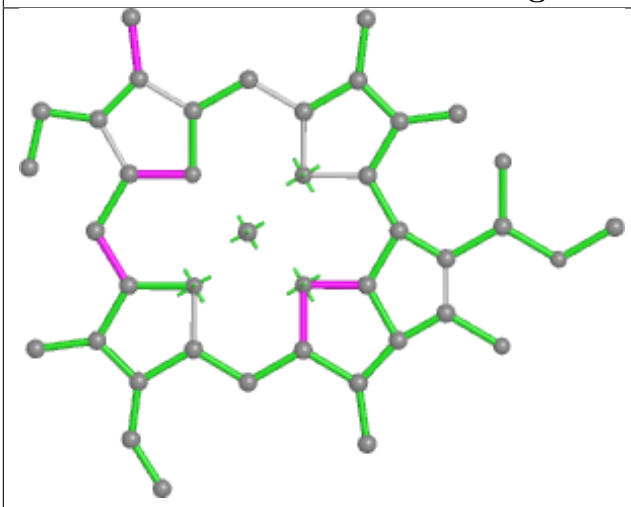


Torsions

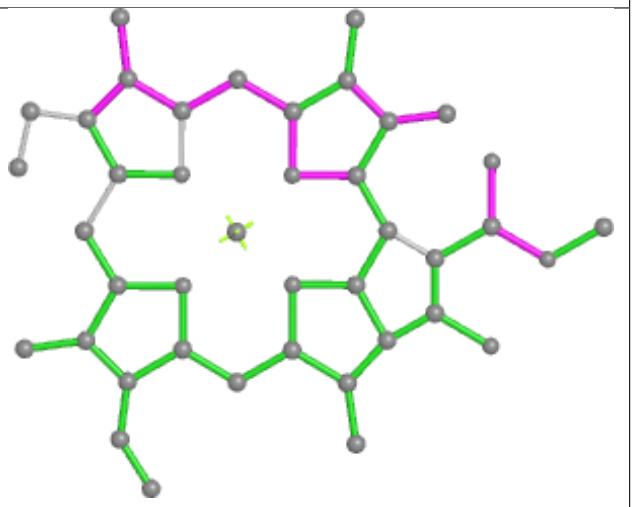


Rings

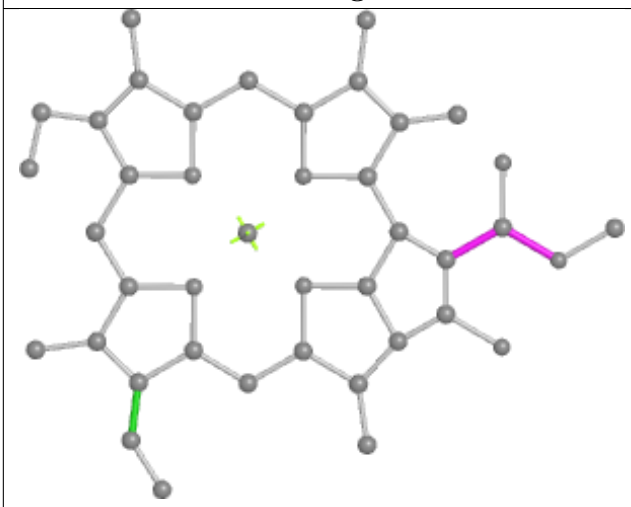
Ligand CLA 4 315



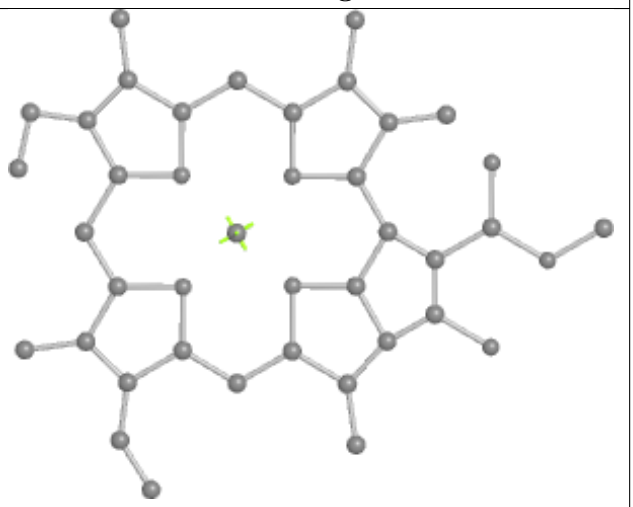
Bond lengths



Bond angles

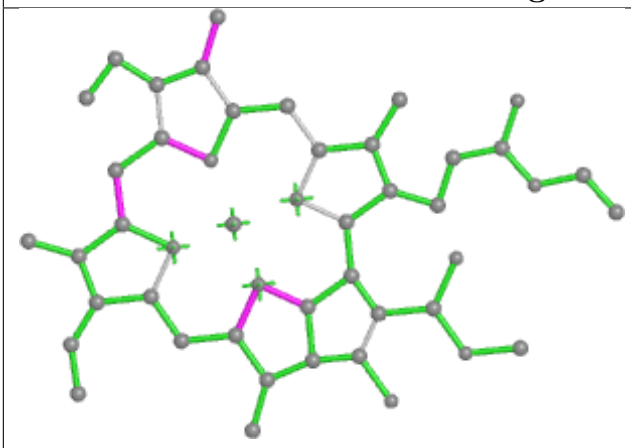


Torsions

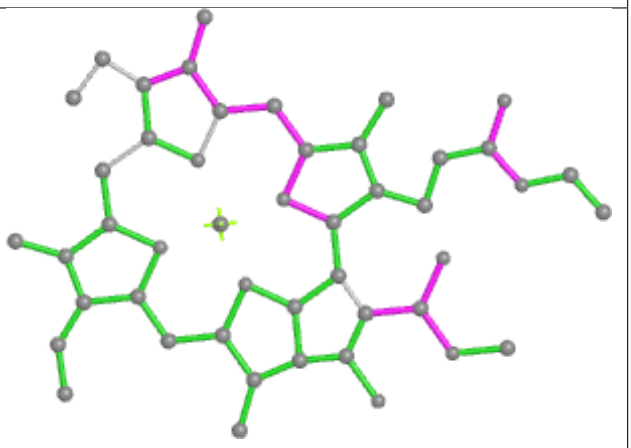


Rings

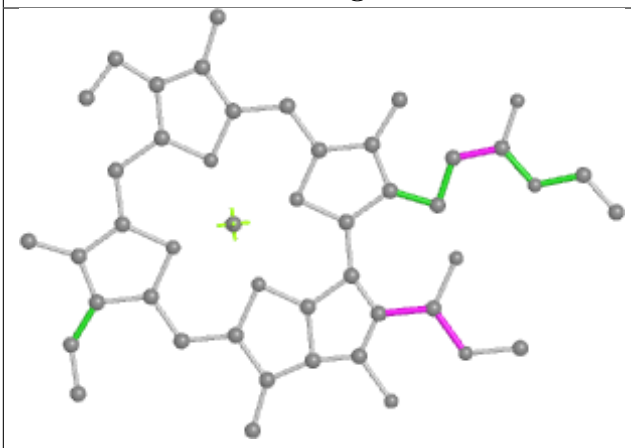
Ligand CLA 3 308



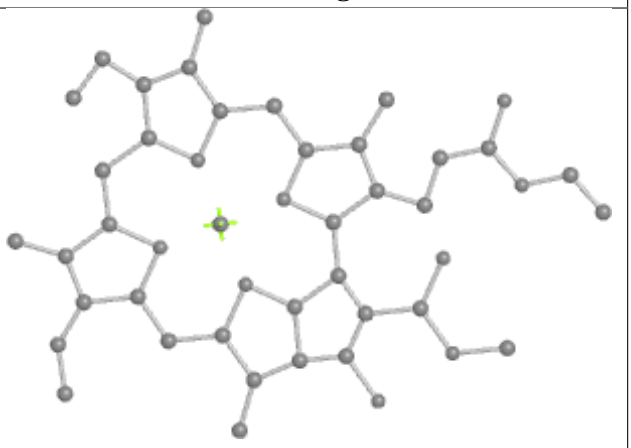
Bond lengths



Bond angles

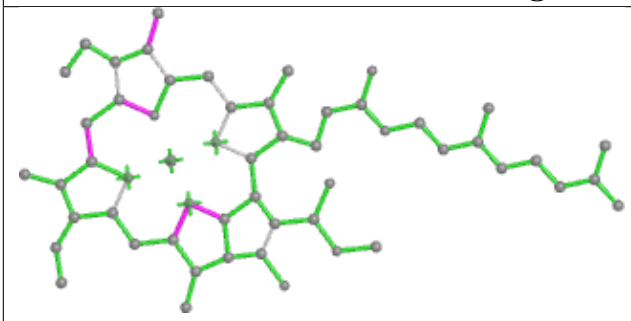


Torsions

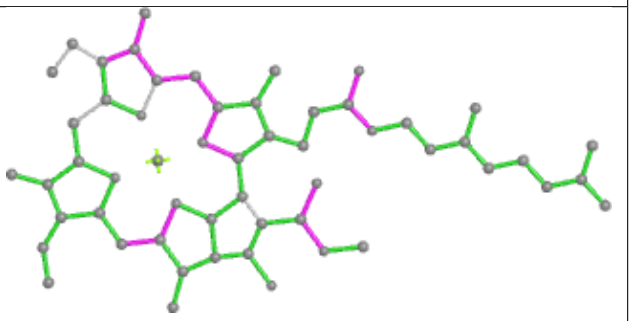


Rings

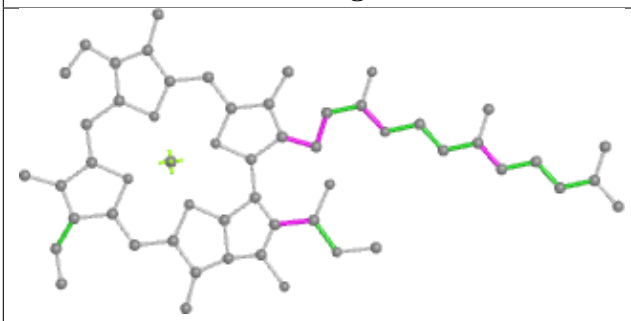
Ligand CLA a 825



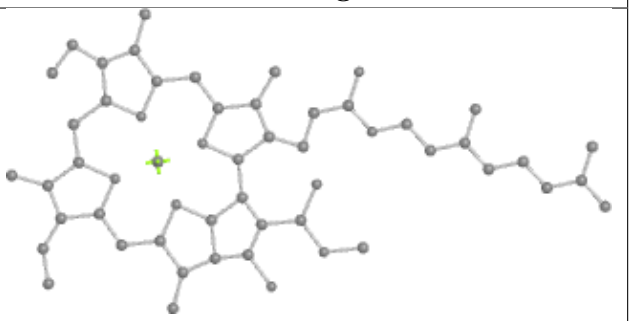
Bond lengths



Bond angles

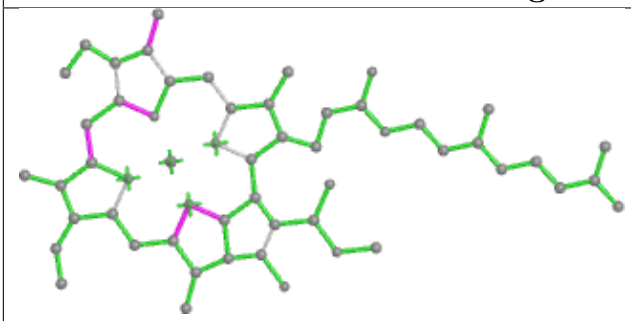


Torsions

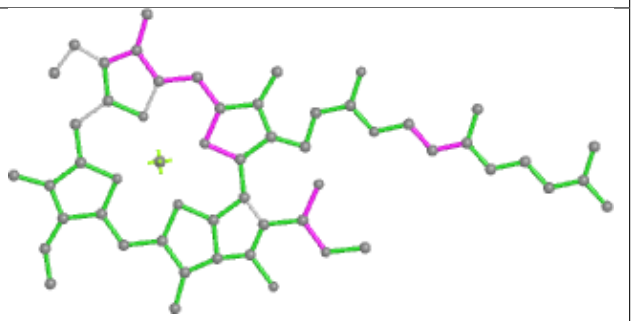


Rings

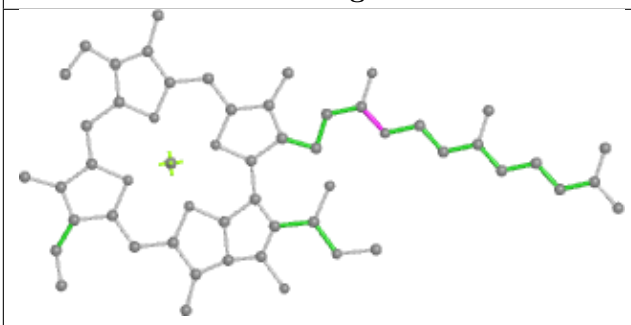
Ligand CLA a 833



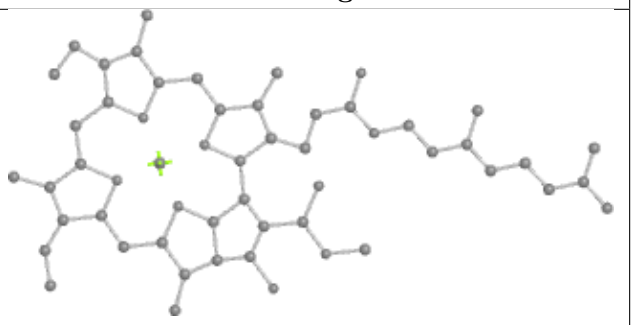
Bond lengths



Bond angles

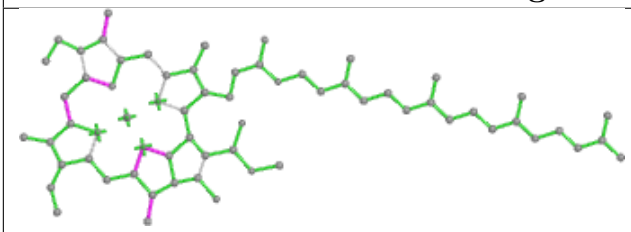


Torsions

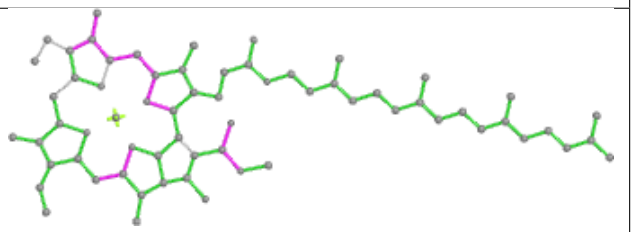


Rings

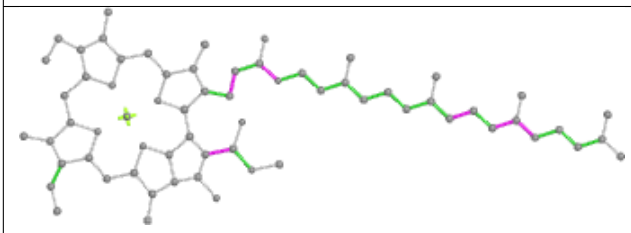
Ligand CLA a 842



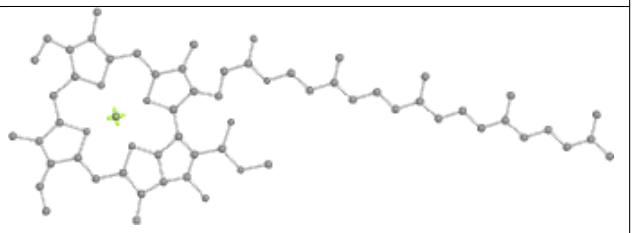
Bond lengths



Bond angles

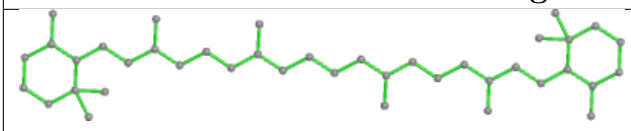


Torsions

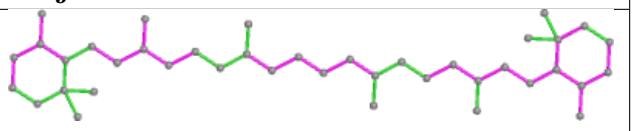


Rings

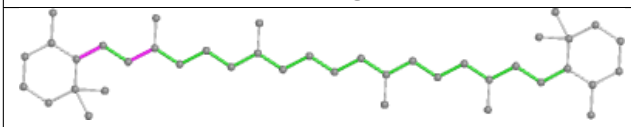
Ligand BCR j 104



Bond lengths



Bond angles



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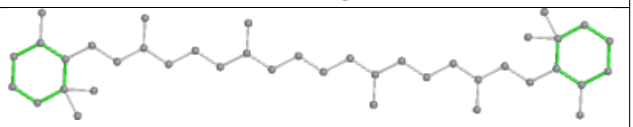
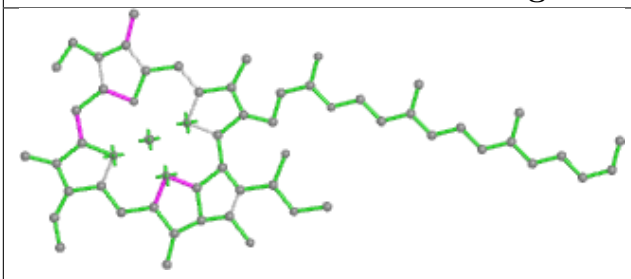
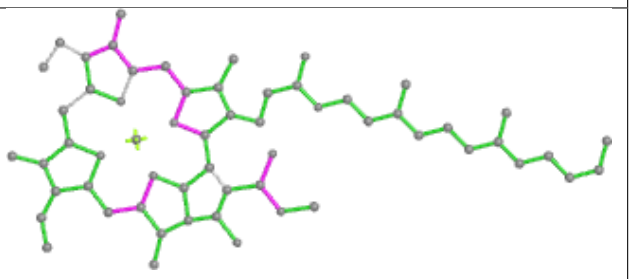
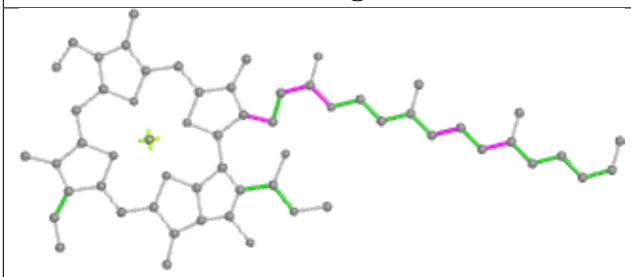
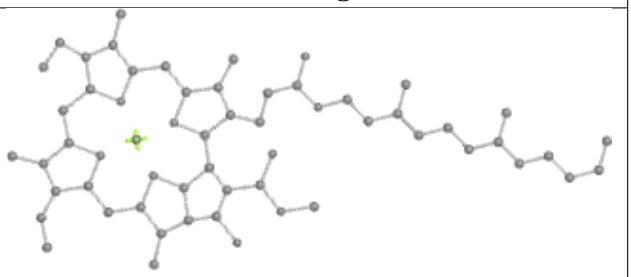
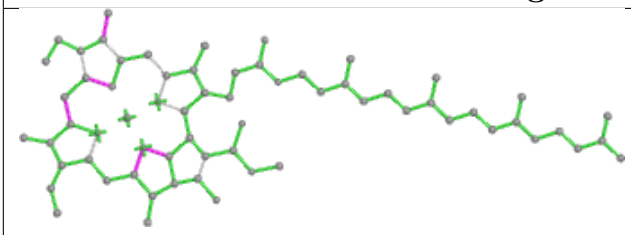
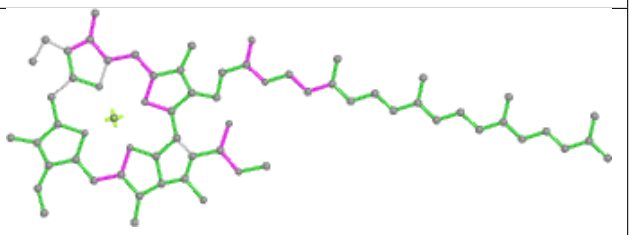
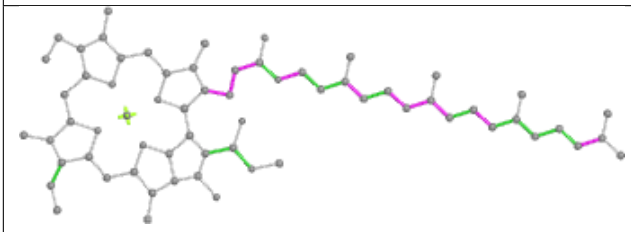
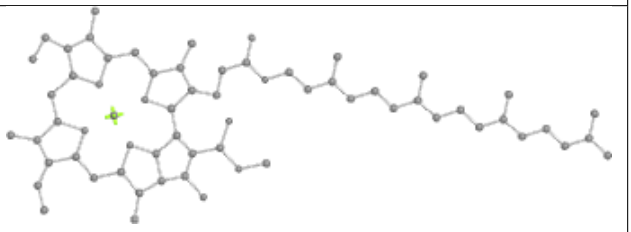
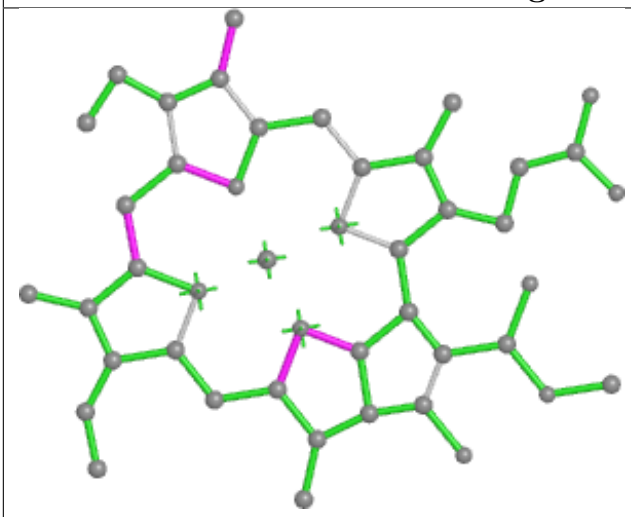


Rings

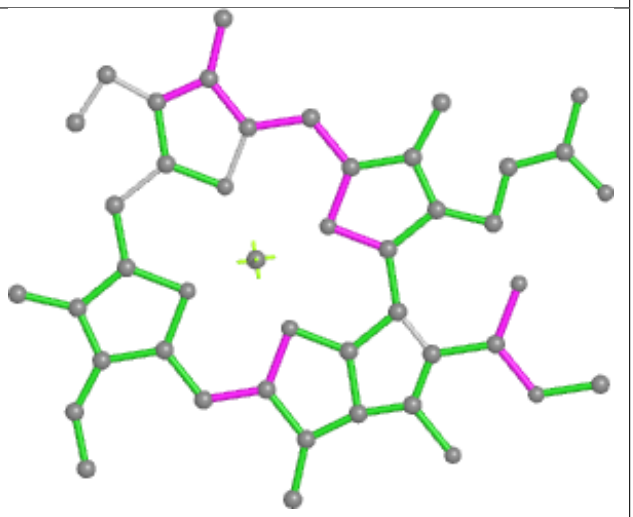
Ligand CLA 3 312	
	
Bond lengths	Bond angles
	
Torsions	Rings

Ligand CLA b 810	
	
Bond lengths	Bond angles
	
Torsions	Rings

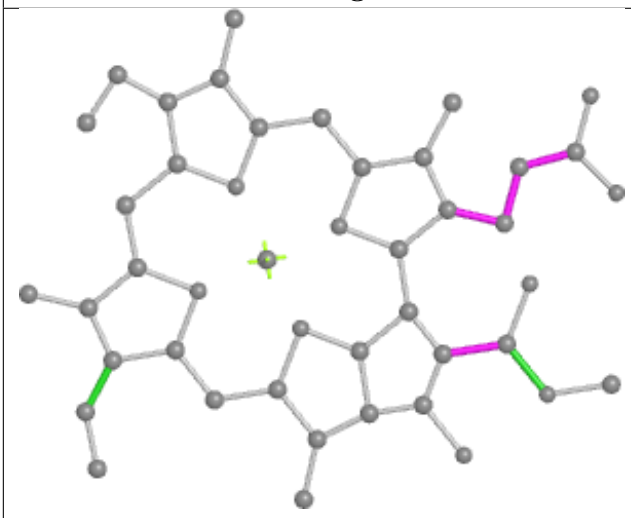
Ligand CLA a 817



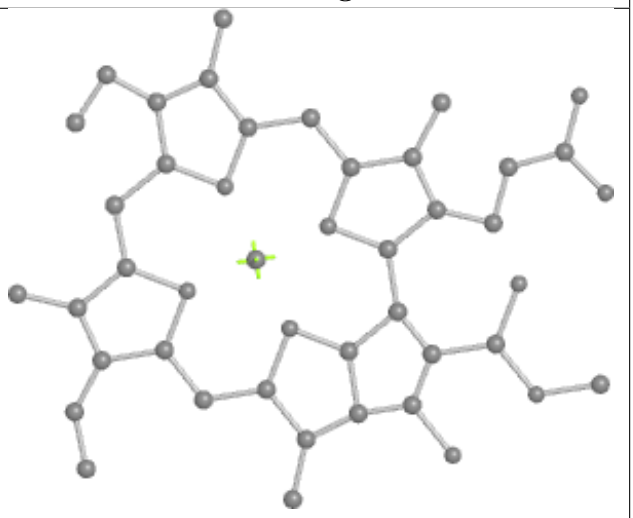
Bond lengths



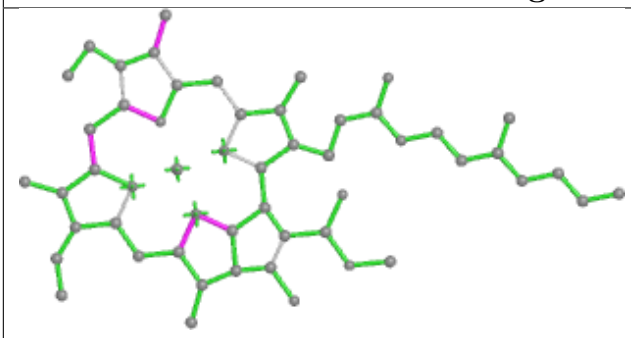
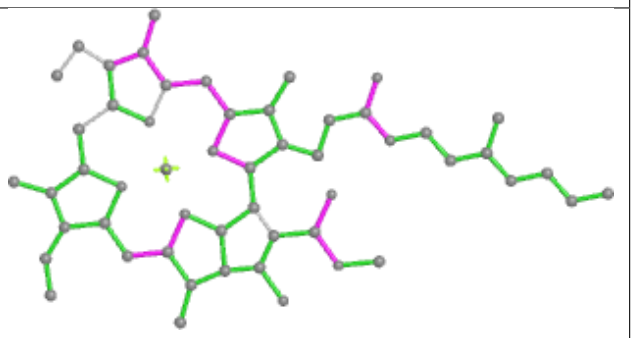
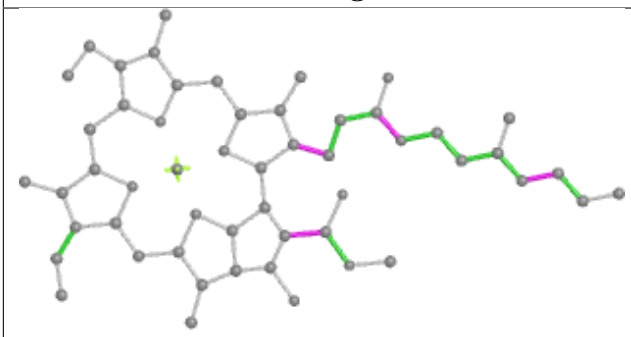
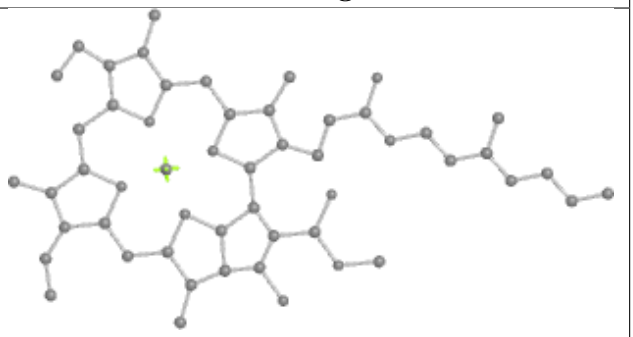
Bond angles

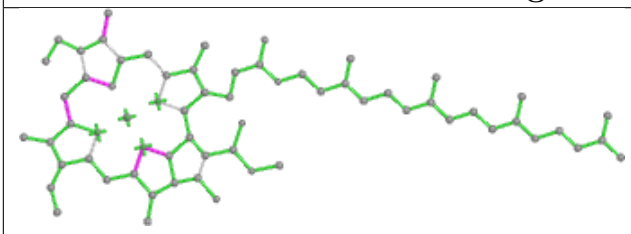
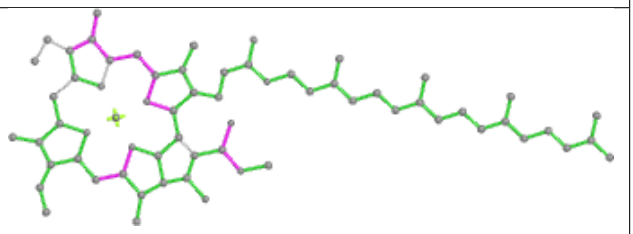
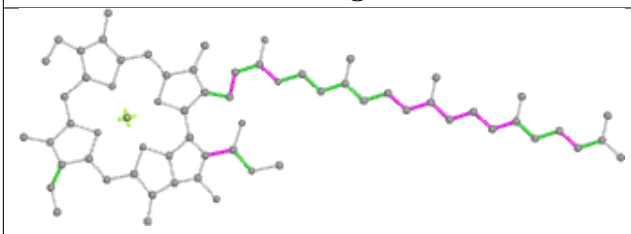
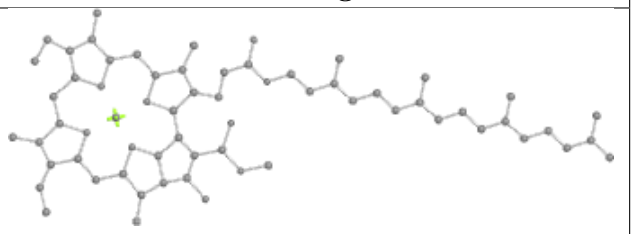


Torsions

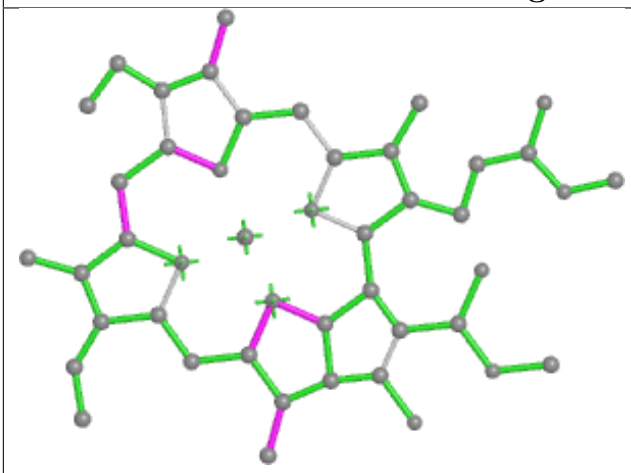


Rings

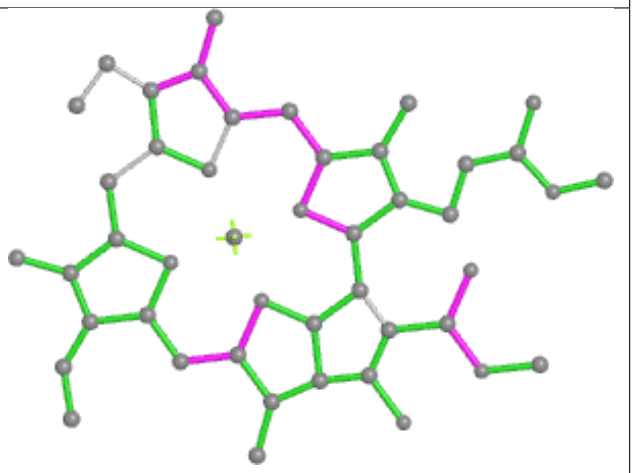
Ligand CLA 4 313	
	
Bond lengths	Bond angles
	
Torsions	Rings

Ligand CLA b 825	
	
Bond lengths	Bond angles
	
Torsions	Rings

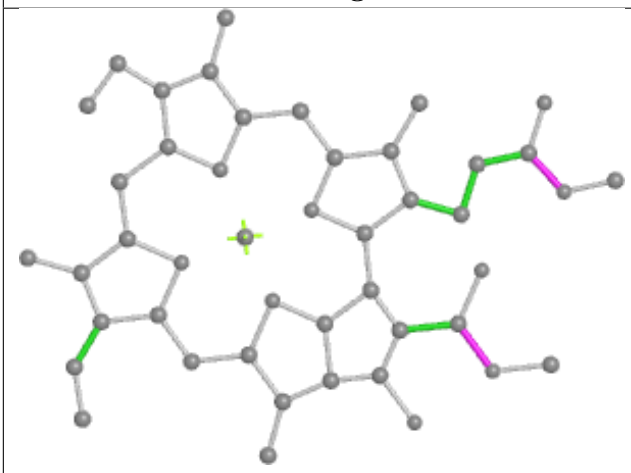
Ligand CLA 5 305



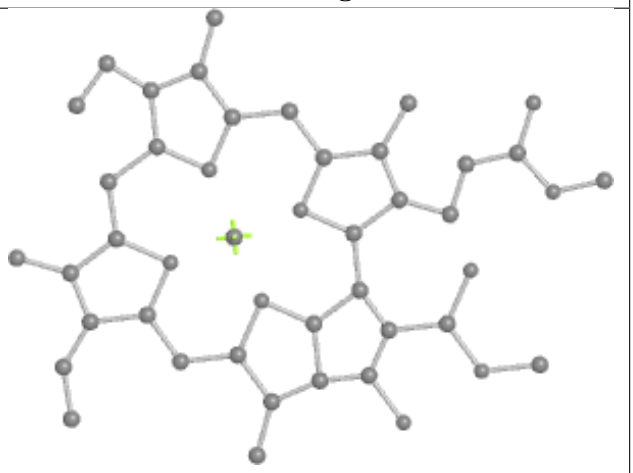
Bond lengths



Bond angles

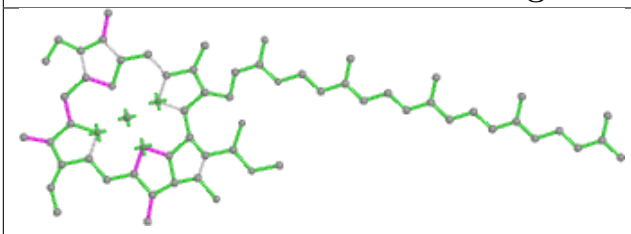


Torsions

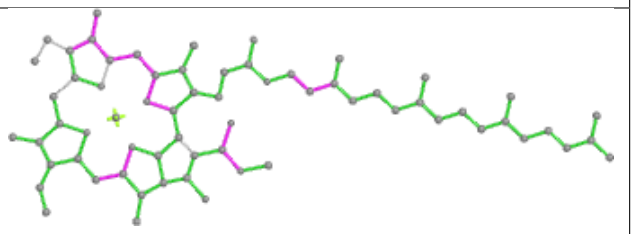


Rings

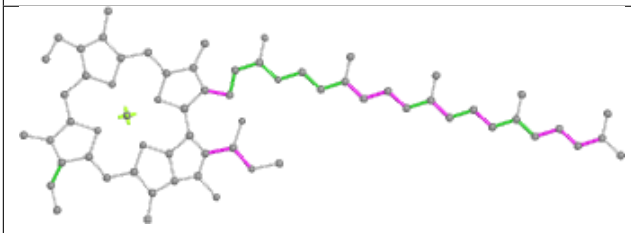
Ligand CLA b 814



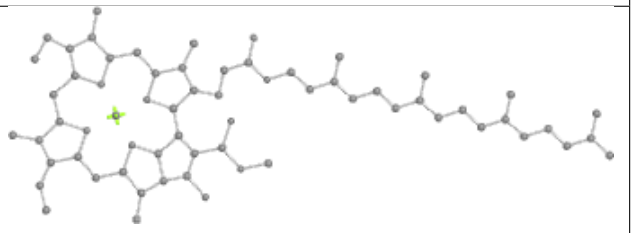
Bond lengths



Bond angles

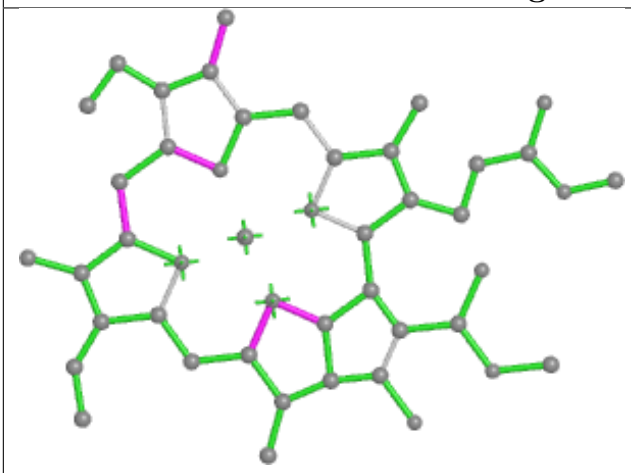


Torsions

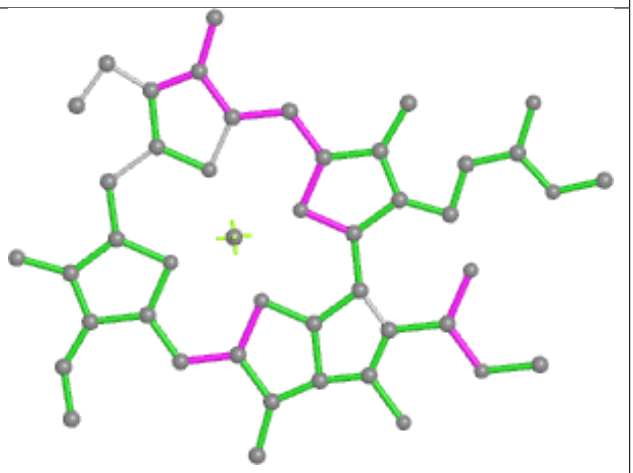


Rings

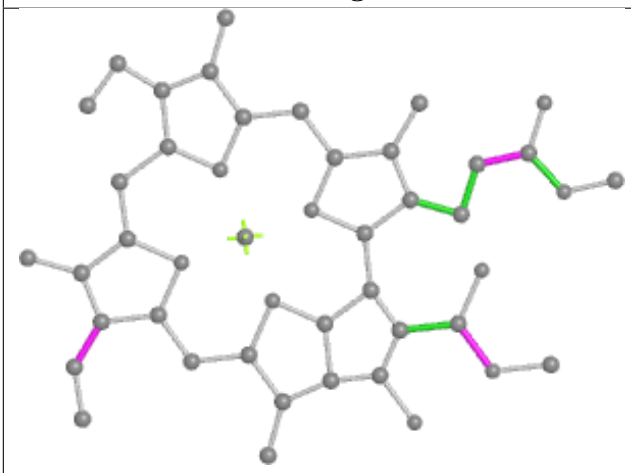
Ligand CLA 5 315



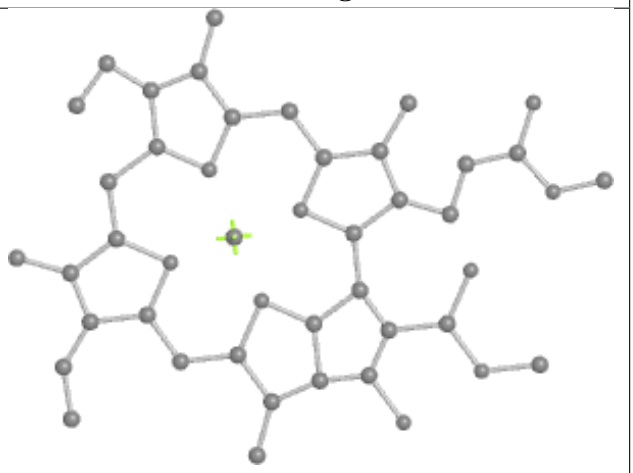
Bond lengths



Bond angles

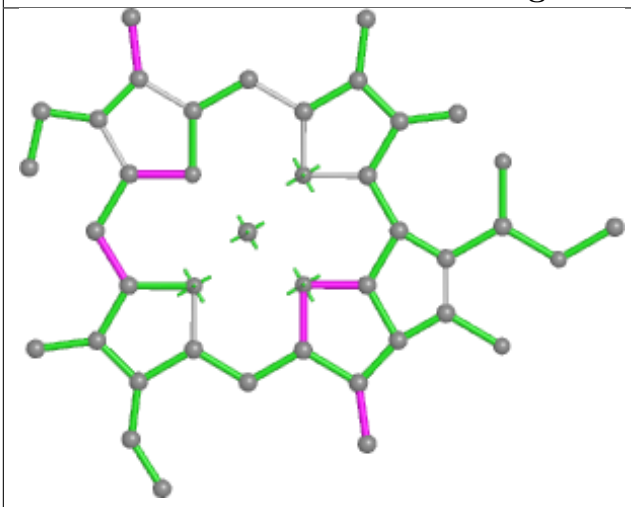


Torsions

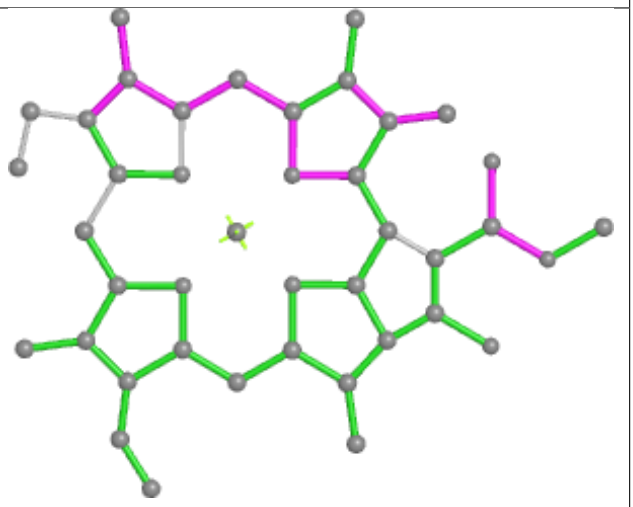


Rings

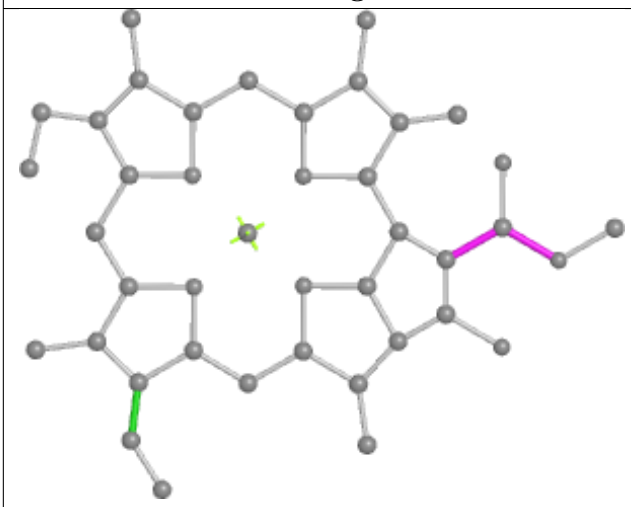
Ligand CLA 1 313



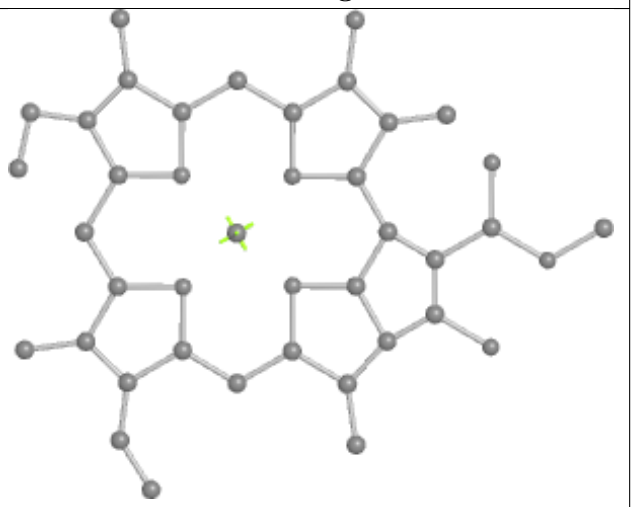
Bond lengths



Bond angles

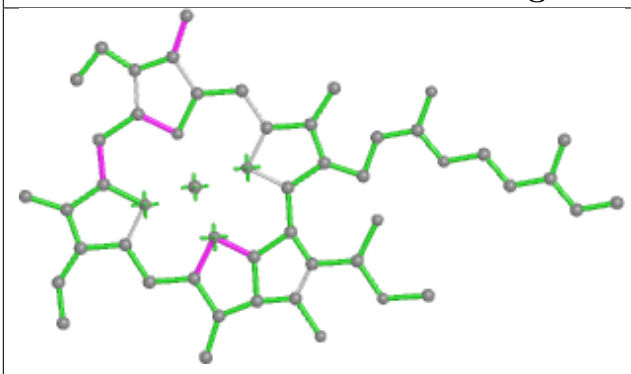


Torsions

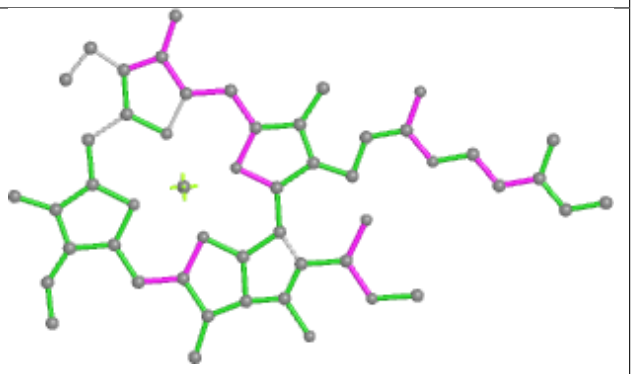


Rings

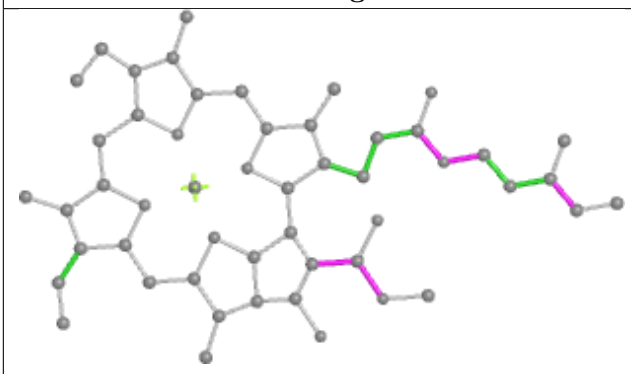
Ligand CLA 5 311



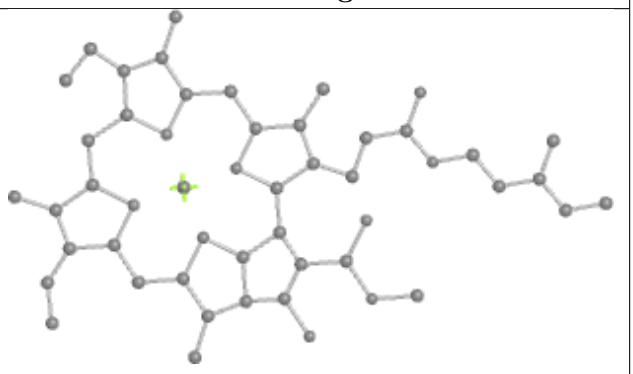
Bond lengths



Bond angles

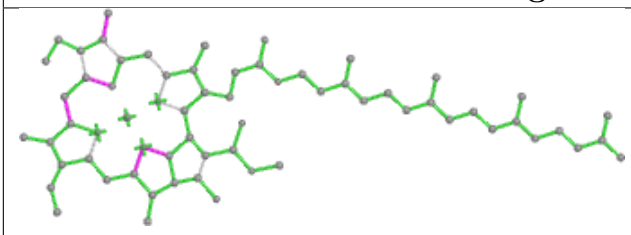


Torsions

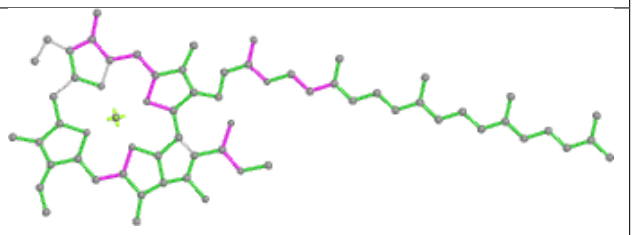


Rings

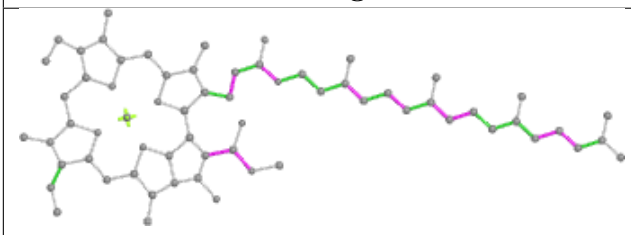
Ligand CLA a 841



Bond lengths



Bond angles



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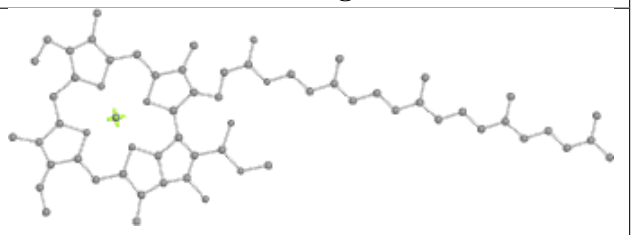
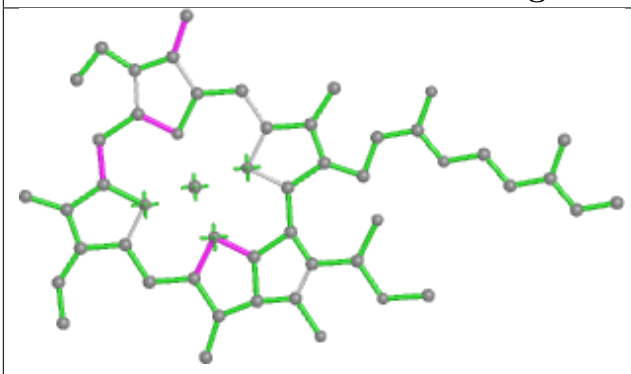


Rings

Ligand CLA a 838



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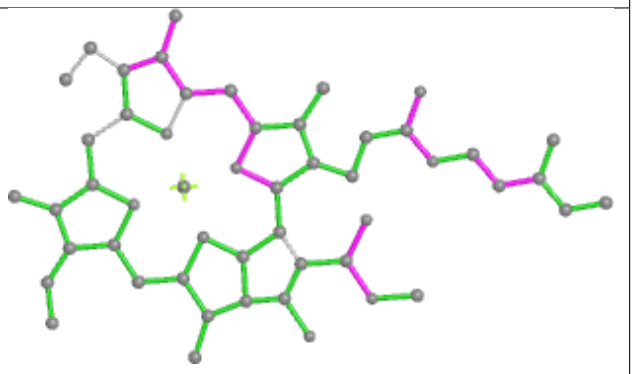
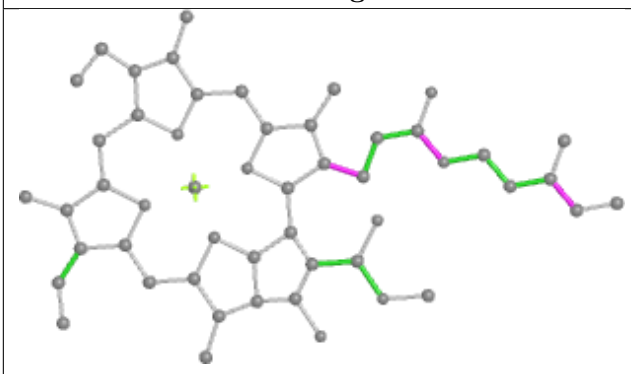
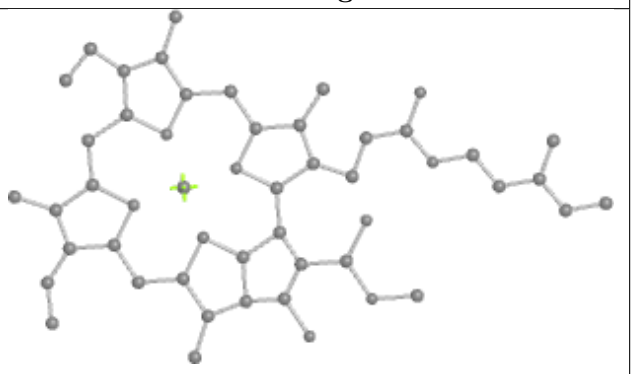


Bond angles

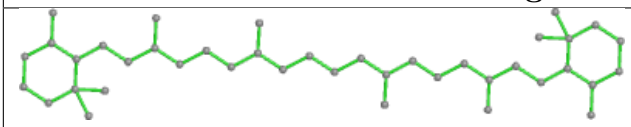


Torsions

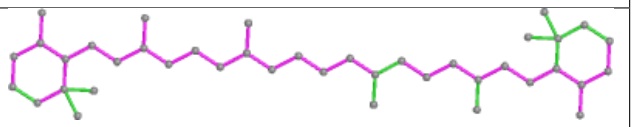


Rings

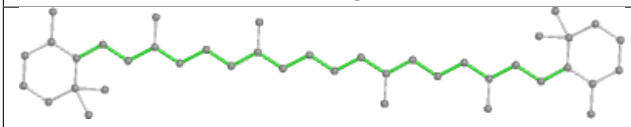
Ligand BCR b 846



Bond lengths



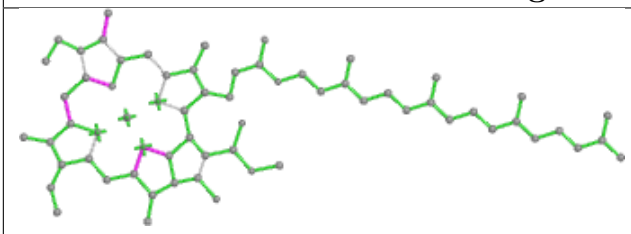
Bond angles



Torsions

Rings

Ligand CLA a 820



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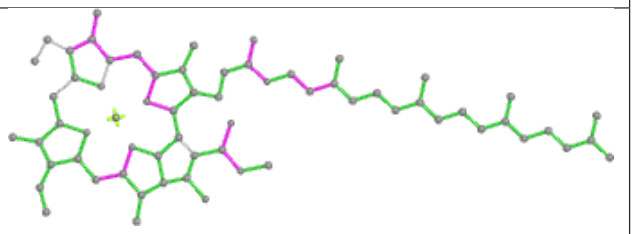
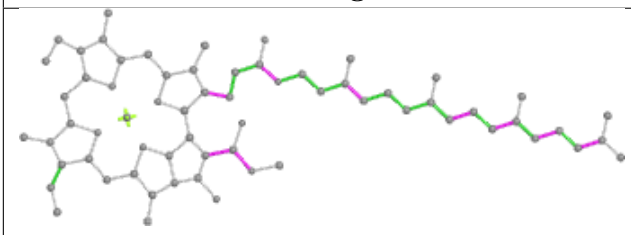


Bond angles



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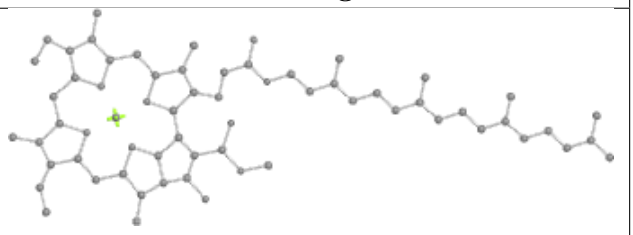
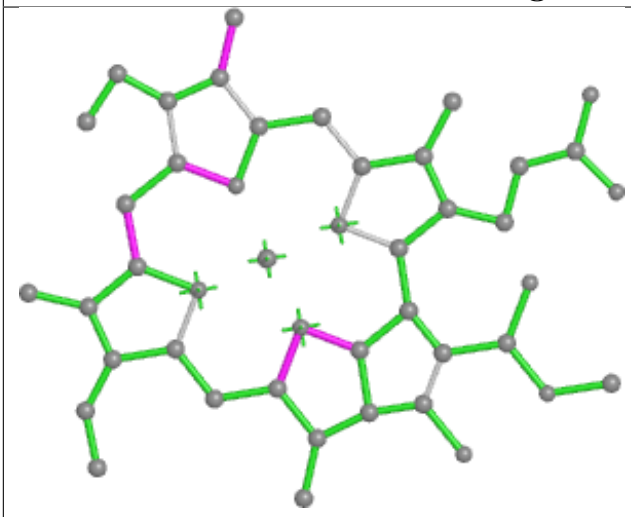


Rings

Ligand CLA 1 314



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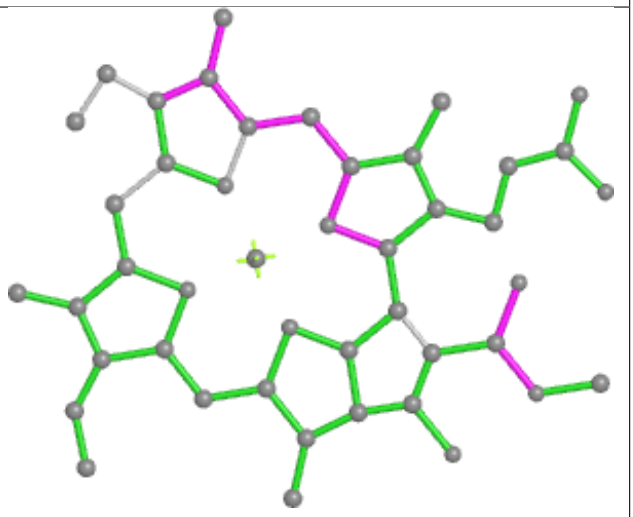
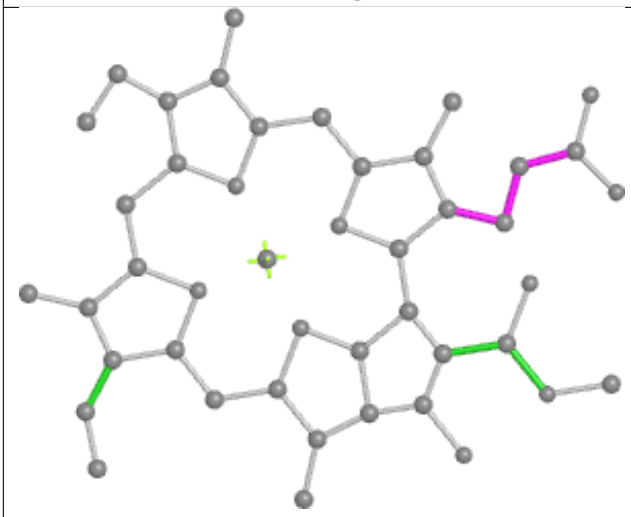


Bond angles



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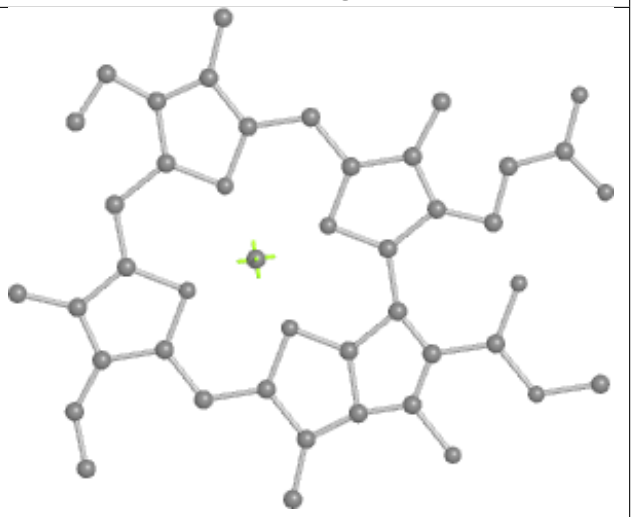
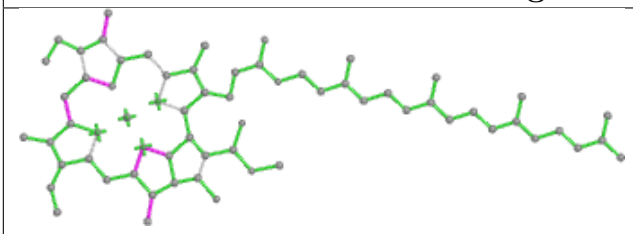
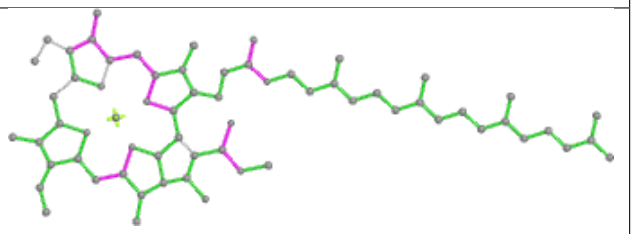


Rings

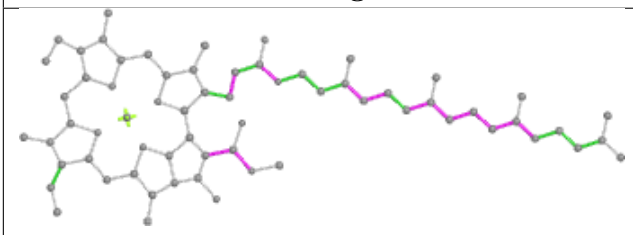
Ligand CLA b 802



Bond lengths



Bond angles



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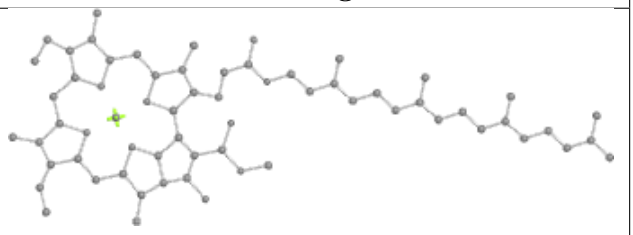
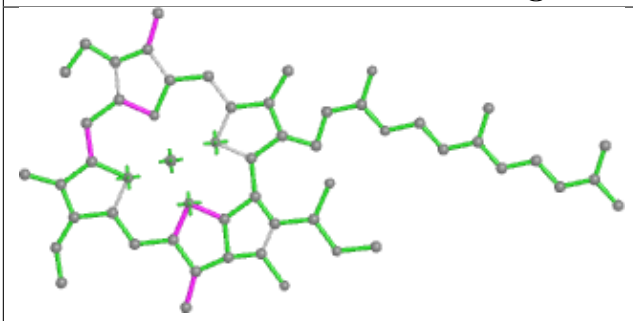


Rings

Ligand CLA b 815



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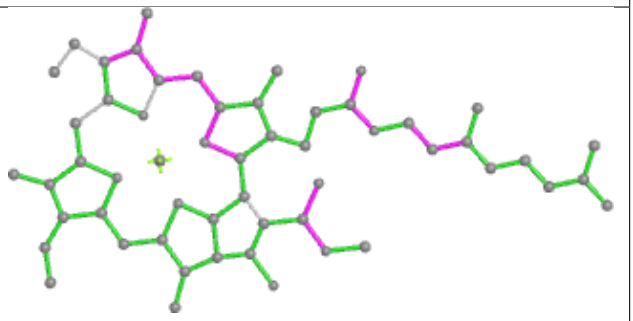
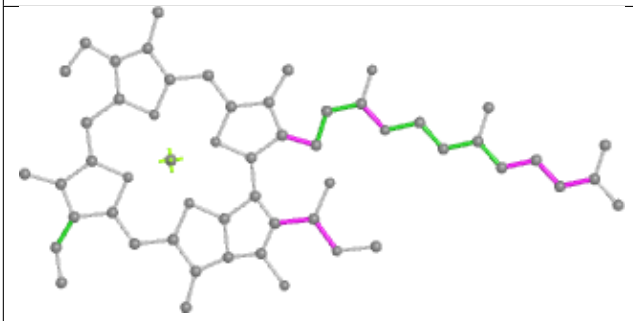


Bond angles



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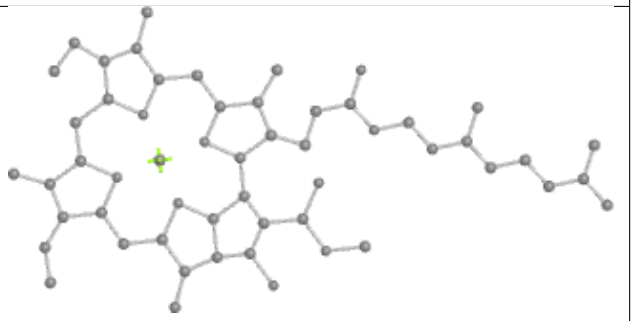
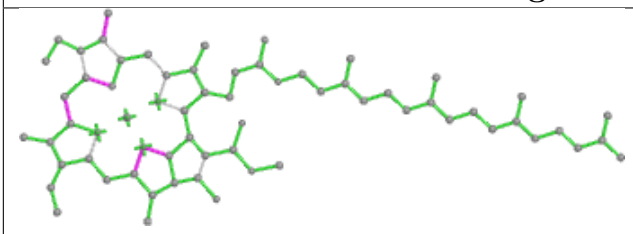


Rings

Ligand CLA 5 309



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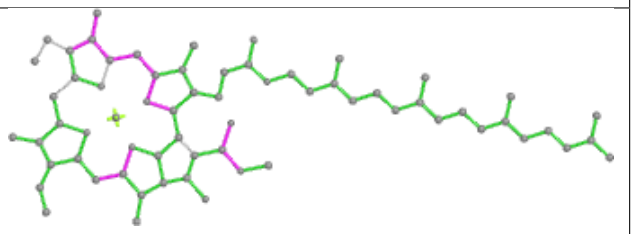
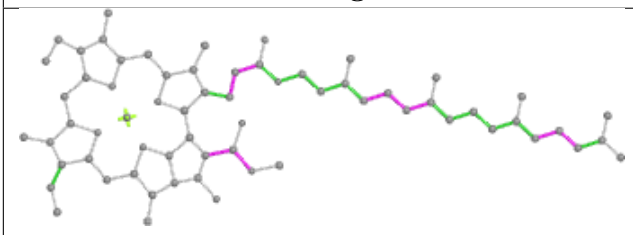
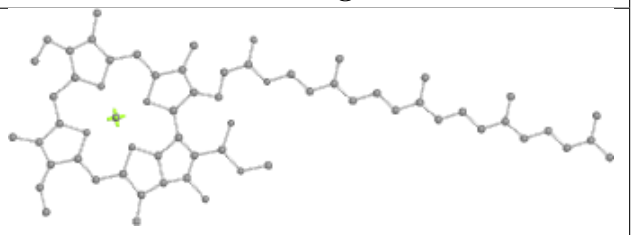


Bond angles

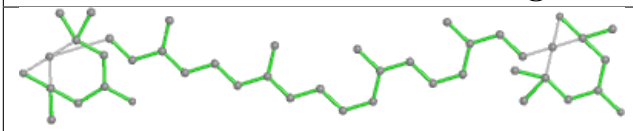


Torsions

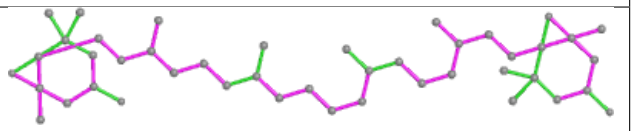


Rings

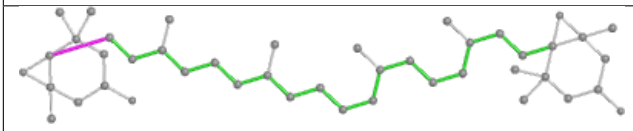
Ligand XAT 5 304



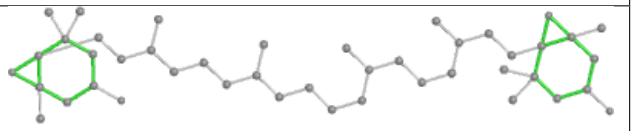
Bond lengths



Bond angles

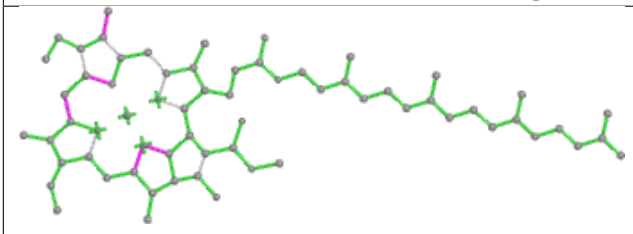


Torsions

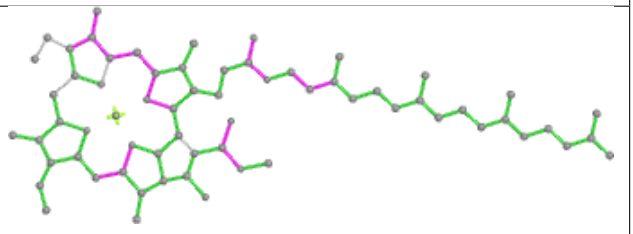


Rings

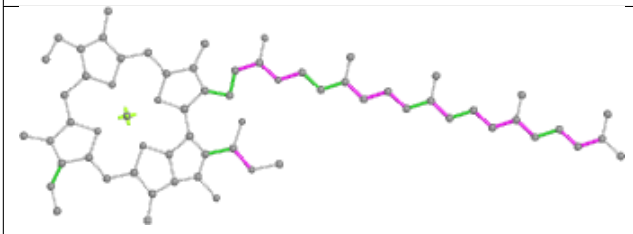
Ligand CLA b 807



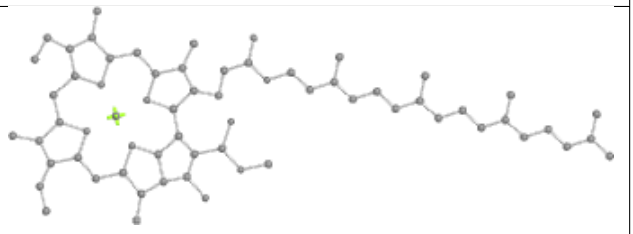
Bond lengths



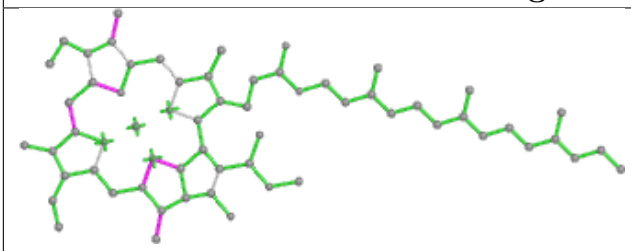
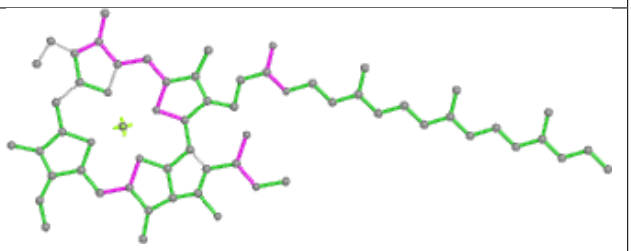
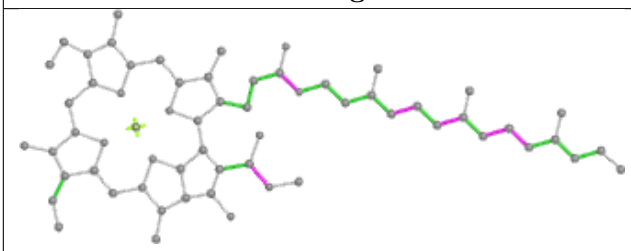
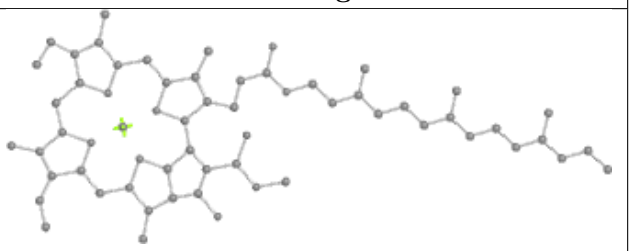
Bond angles

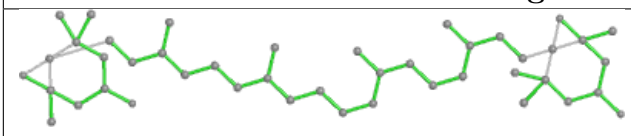
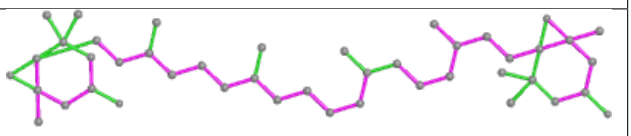
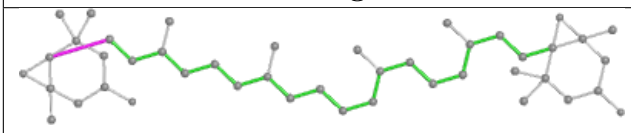
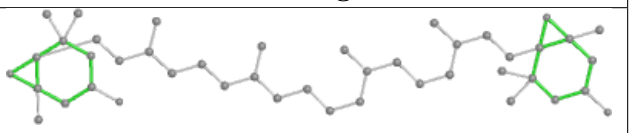


Torsions

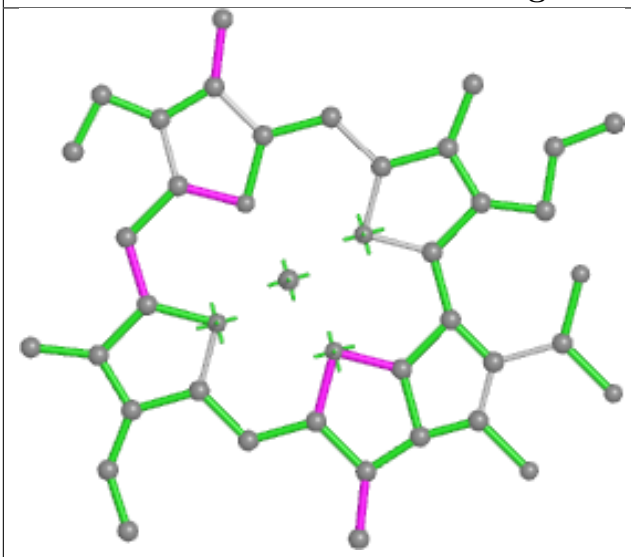


Rings

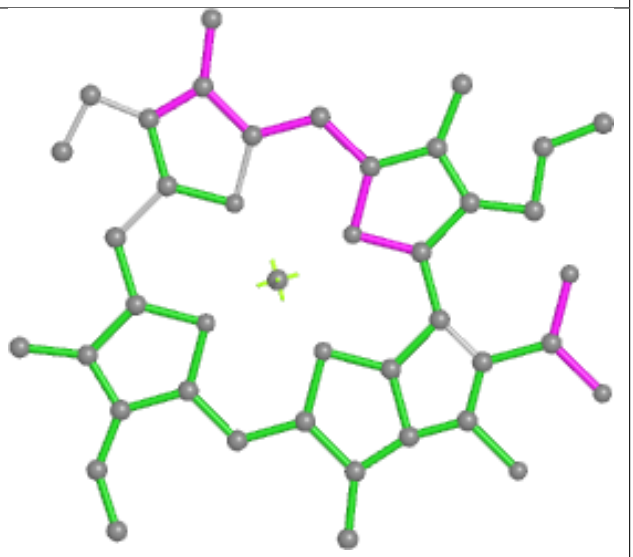
Ligand CLA a 812	
	
Bond lengths	Bond angles
	
Torsions	Rings

Ligand XAT 2 305	
	
Bond lengths	Bond angles
	
Torsions	Rings

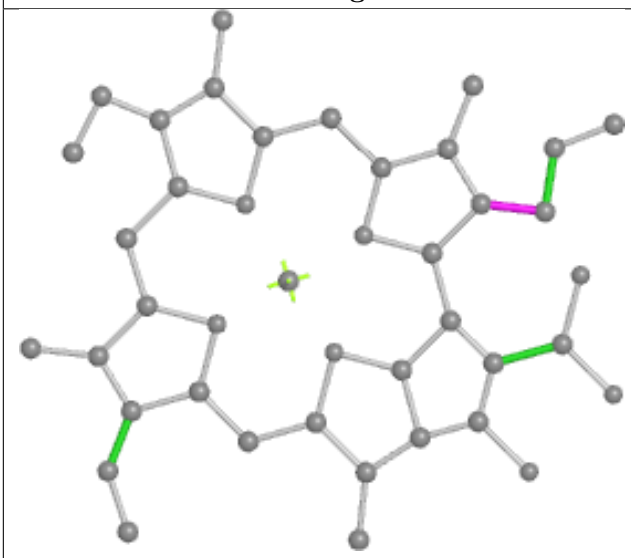
Ligand CLA 2 306



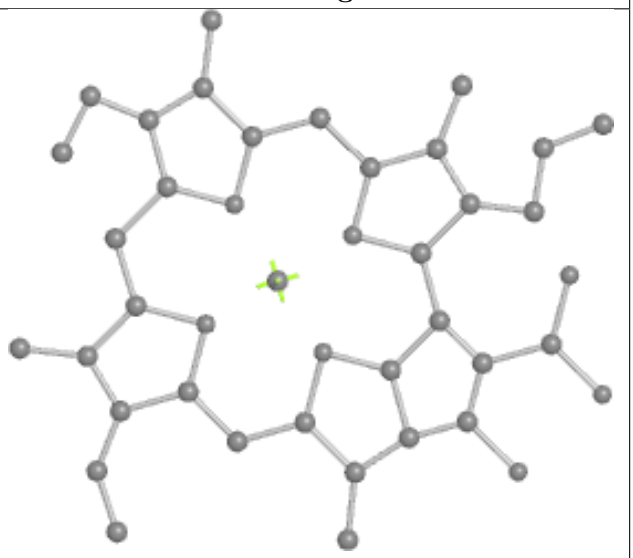
Bond lengths



Bond angles

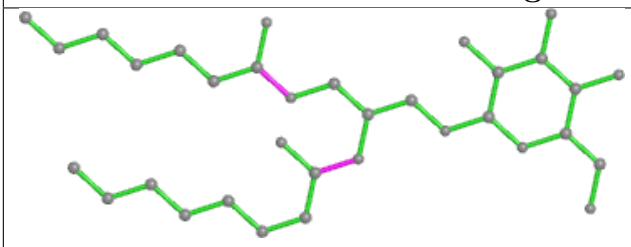


Torsions

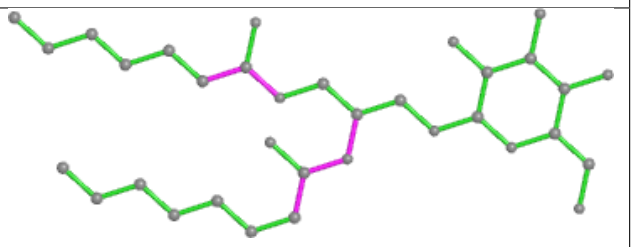


Rings

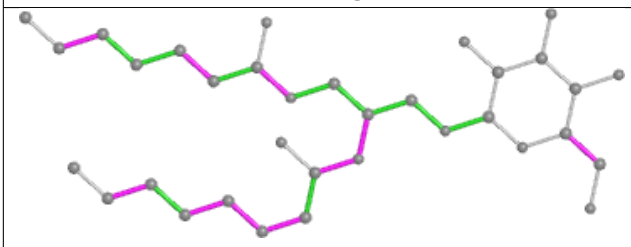
Ligand LMG a 853



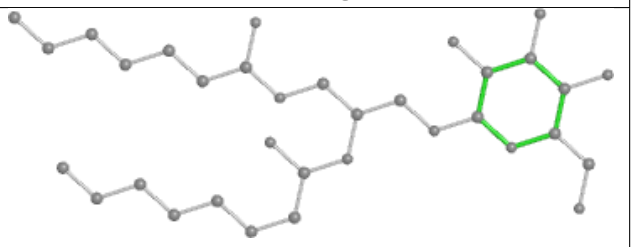
Bond lengths



Bond angles

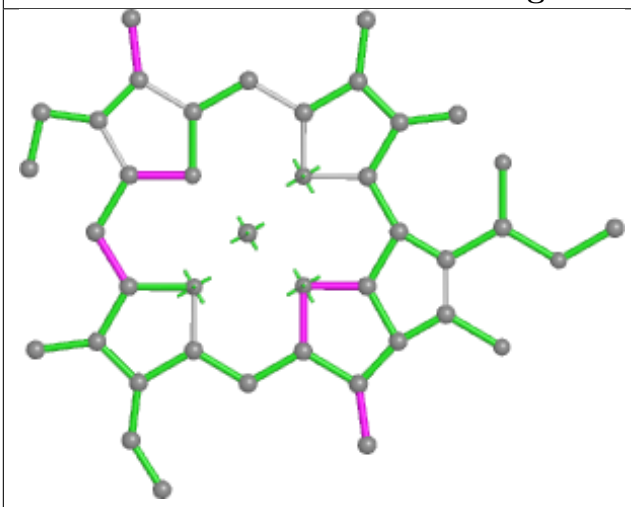


Torsions

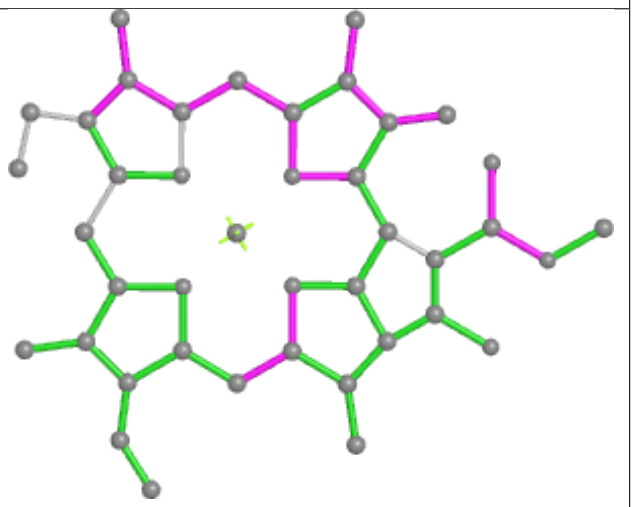


Rings

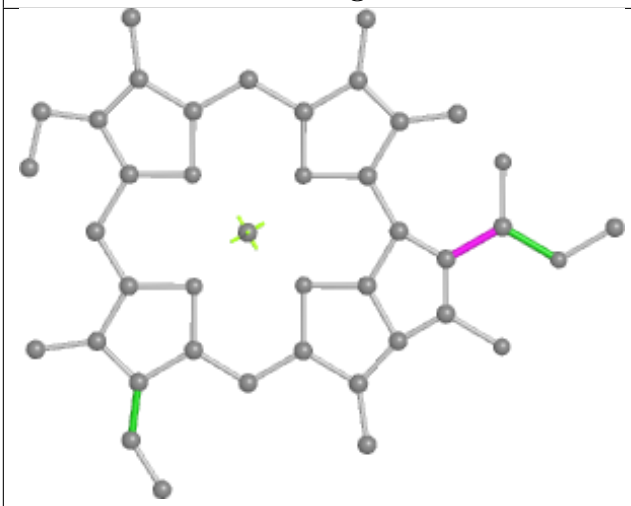
Ligand CLA b 831



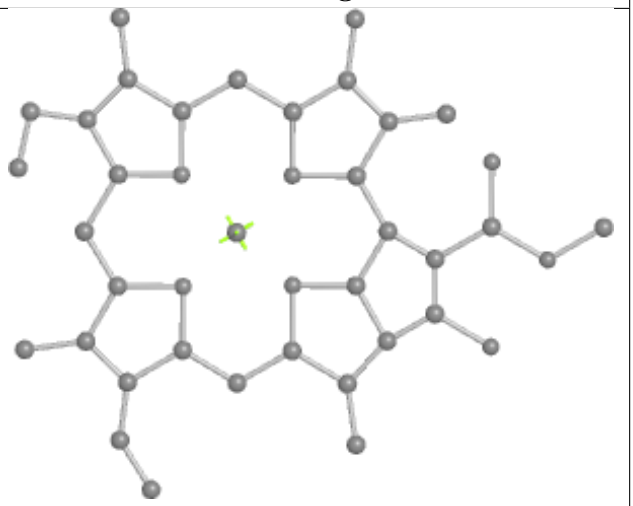
Bond lengths



Bond angles

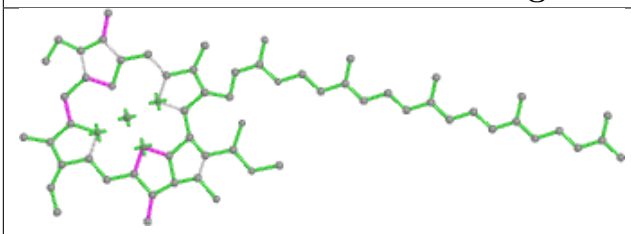


Torsions

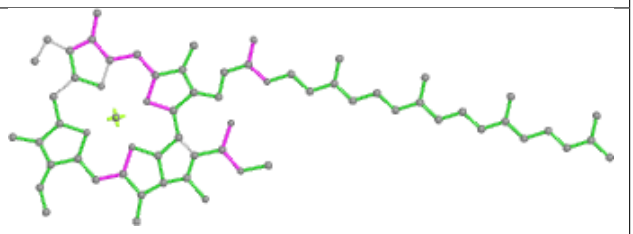


Rings

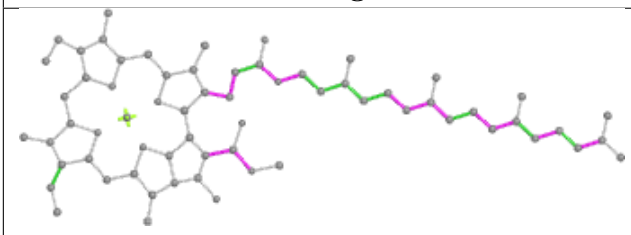
Ligand CLA a 814



Bond lengths



Bond angles



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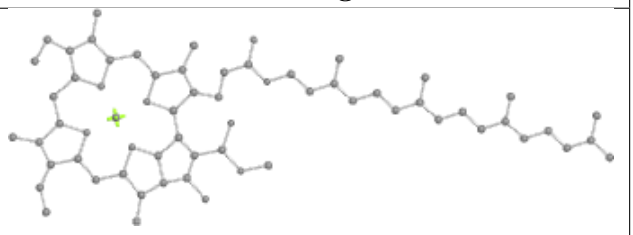
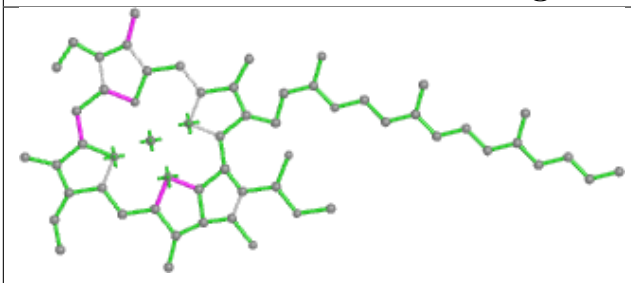
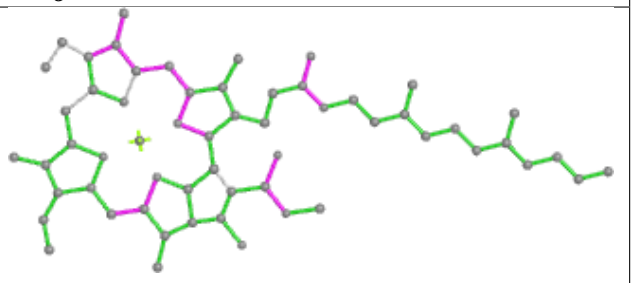


Rings

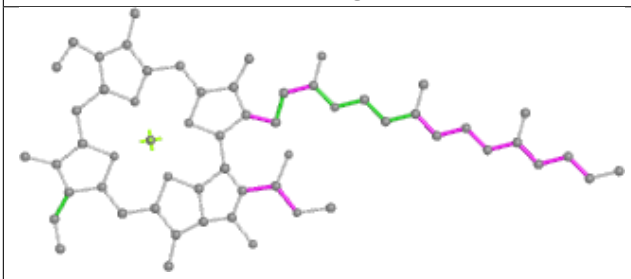
Ligand CLA j 102



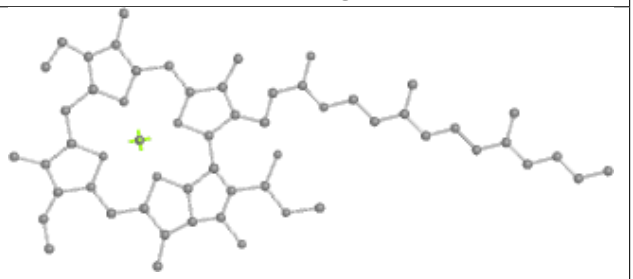
Bond lengths



Bond angles

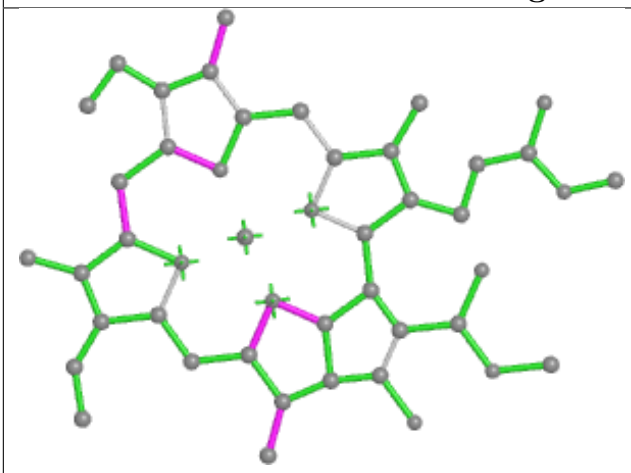


Torsions

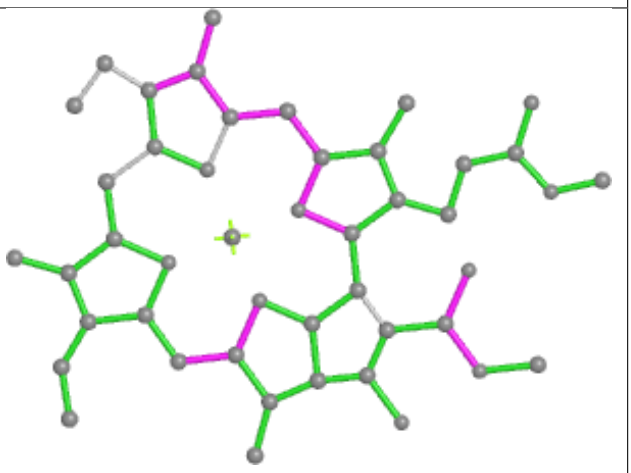


Rings

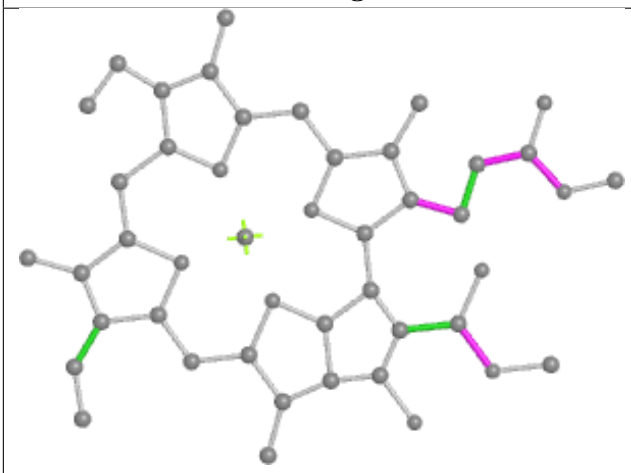
Ligand CLA 3 315



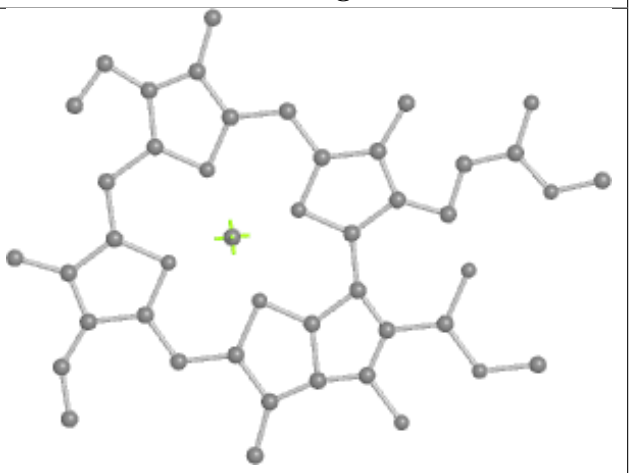
Bond lengths



Bond angles

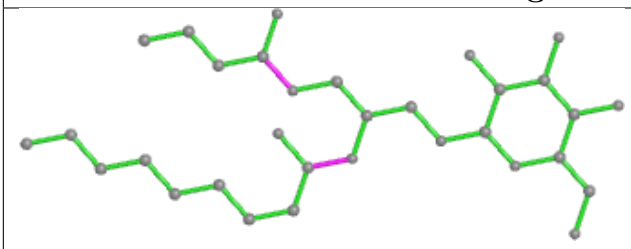


Torsions

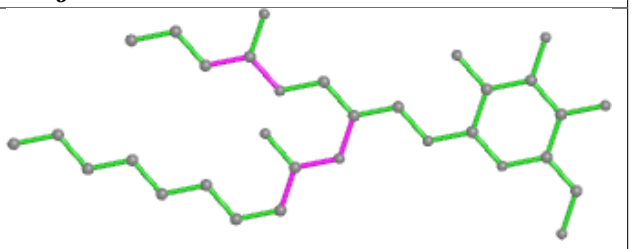


Rings

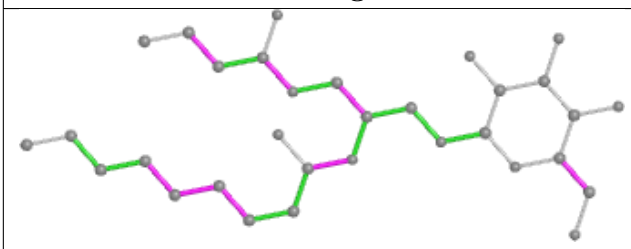
Ligand LMG j 105



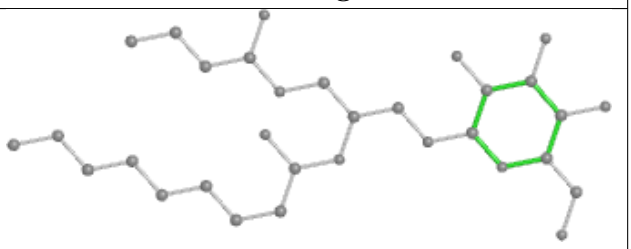
Bond lengths



Bond angles

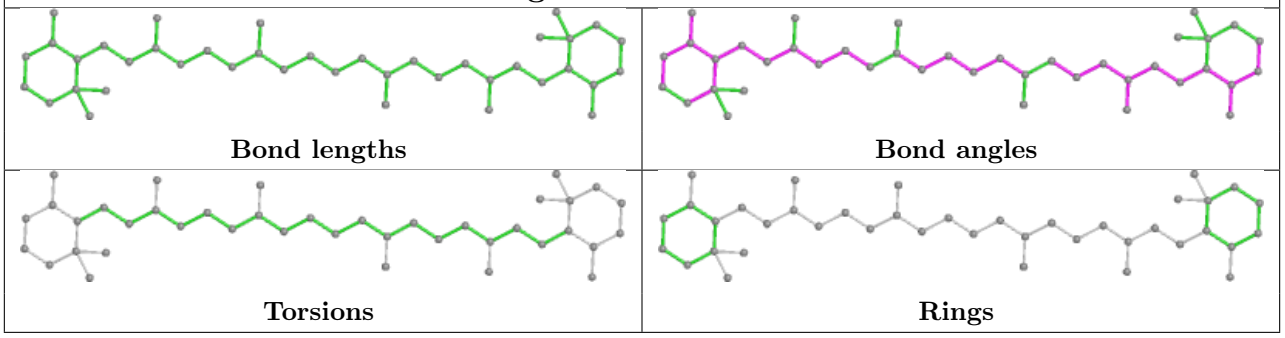


Torsions

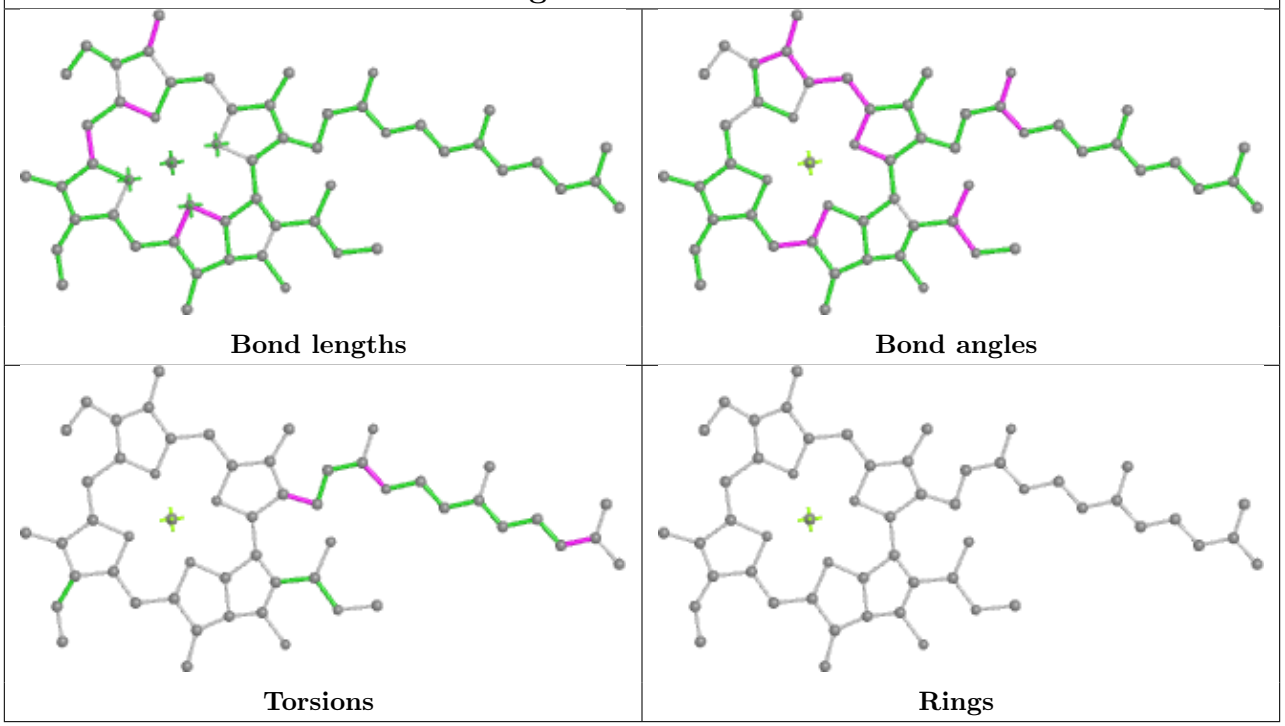


Rings

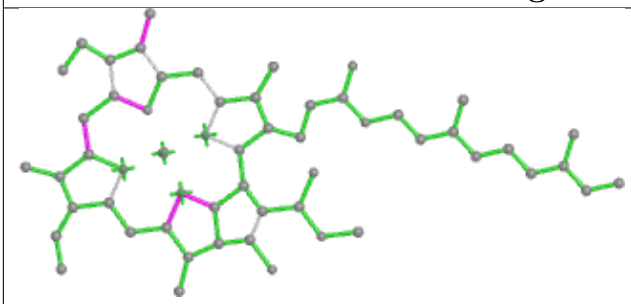
Ligand BCR a 849



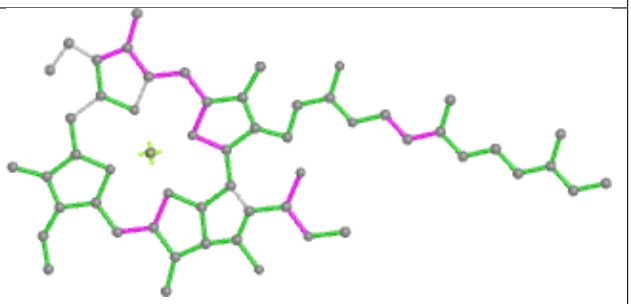
Ligand CLA a 805



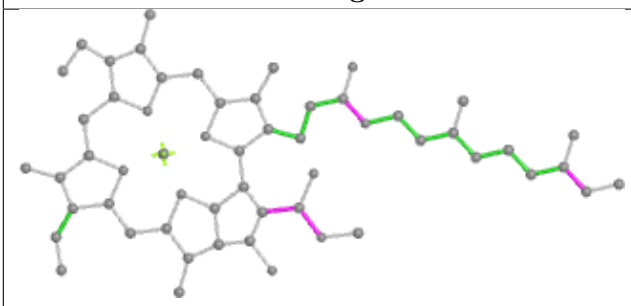
Ligand CLA a 811



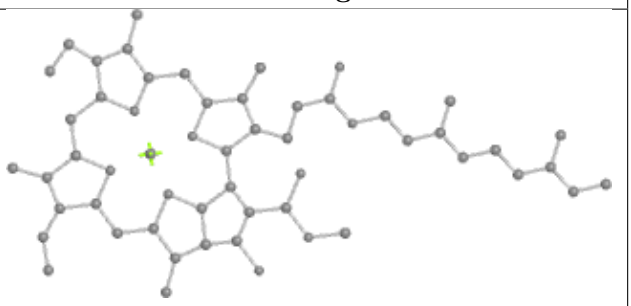
Bond lengths



Bond angles

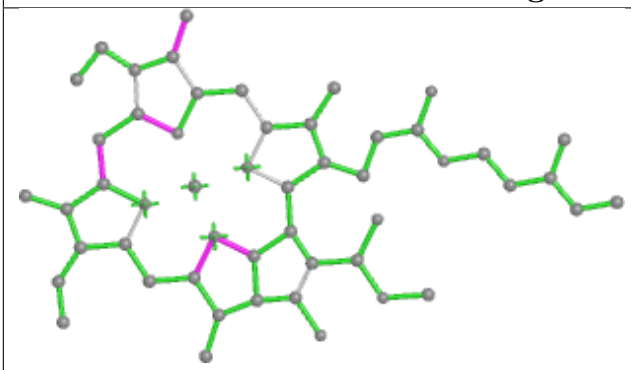


Torsions

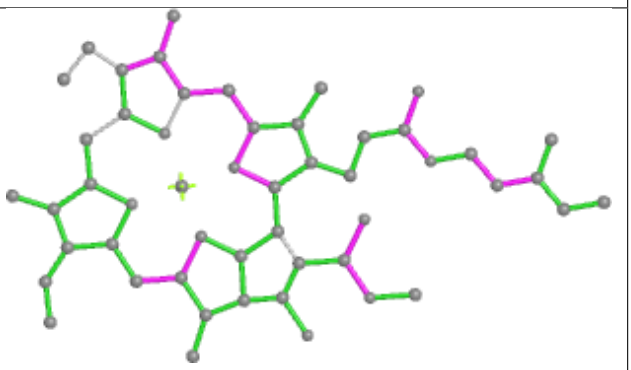


Rings

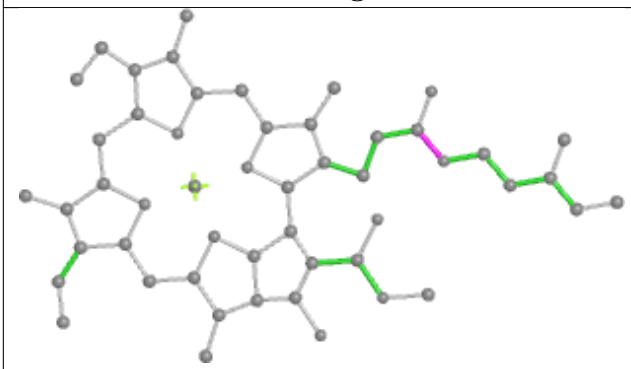
Ligand CLA b 822



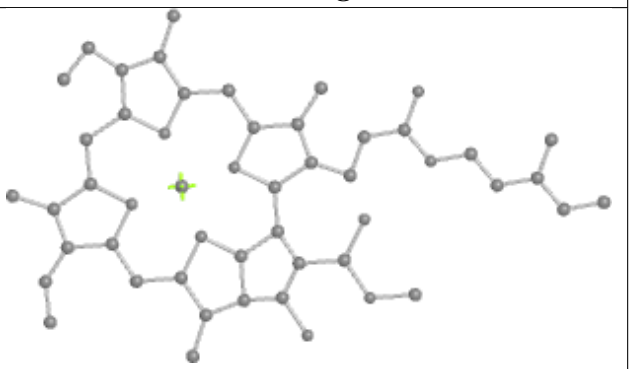
Bond lengths



Bond angles

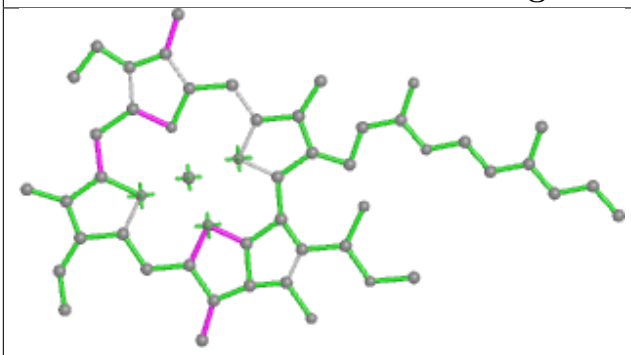


Torsions

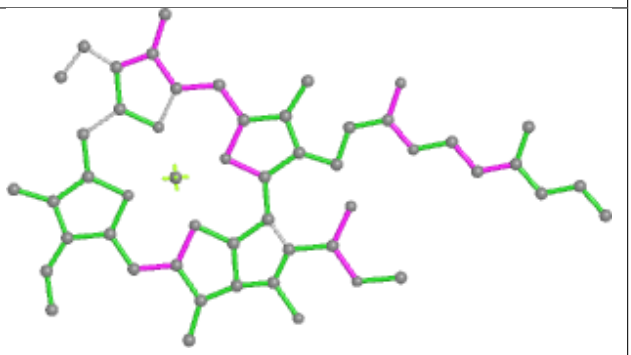


Rings

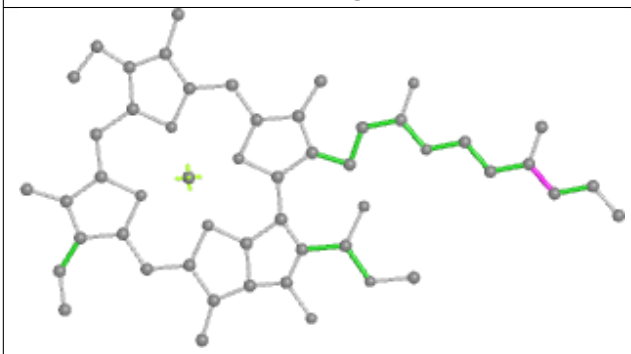
Ligand CLA 3 313



Bond lengths



Bond angles



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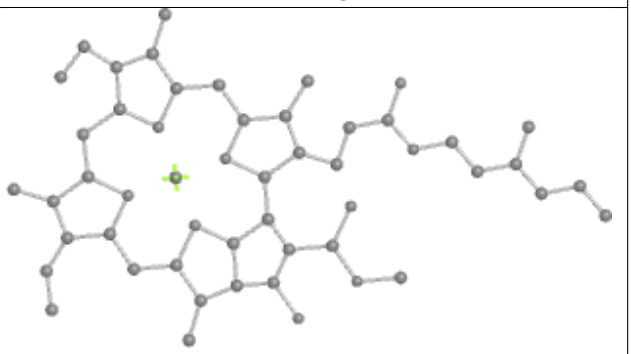
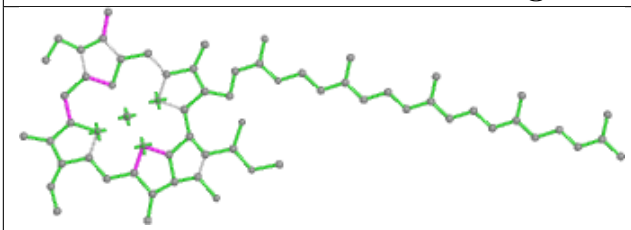
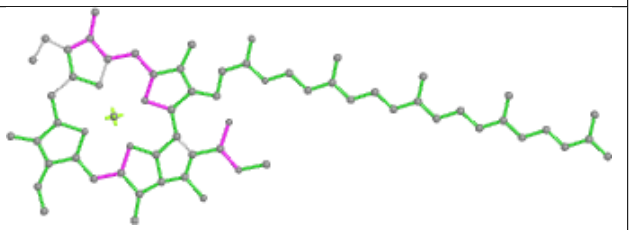


Rings

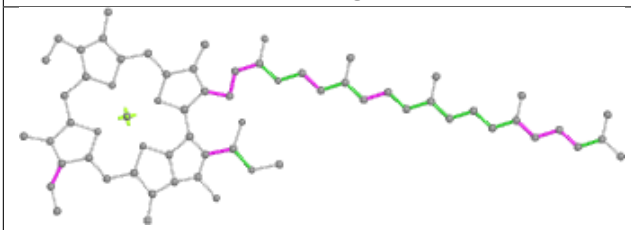
Ligand CLA b 833



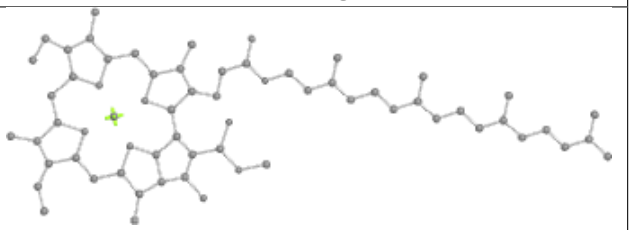
Bond lengths



Bond angles

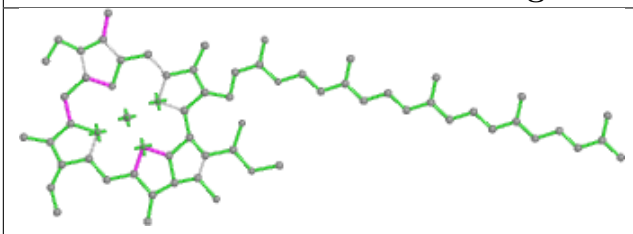


Torsions

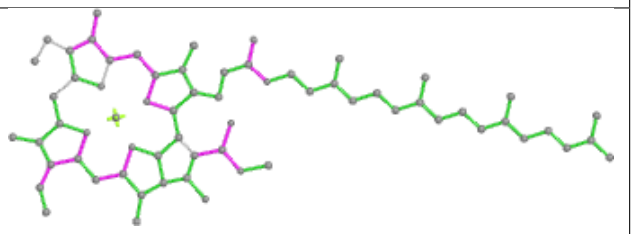


Rings

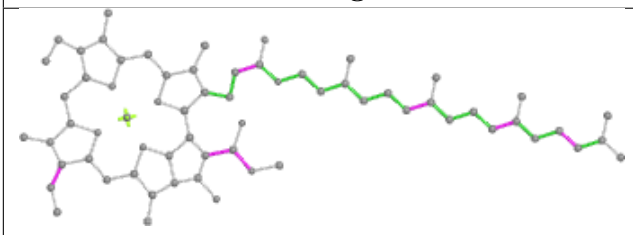
Ligand CLA b 804



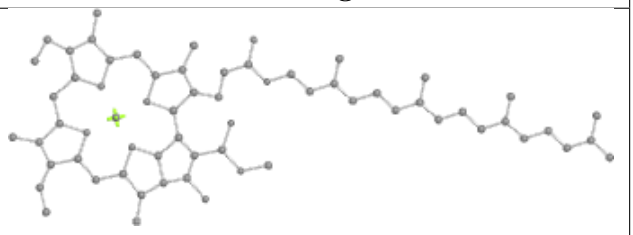
Bond lengths



Bond angles

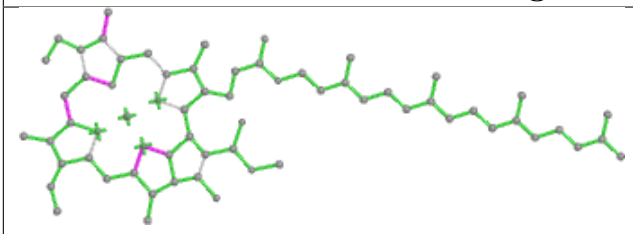


Torsions

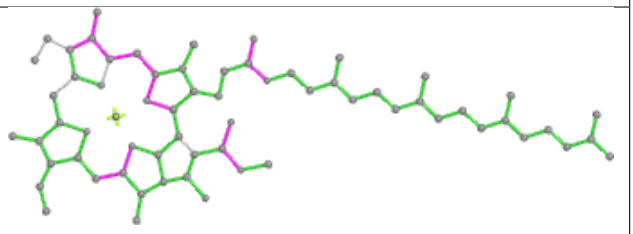


Rings

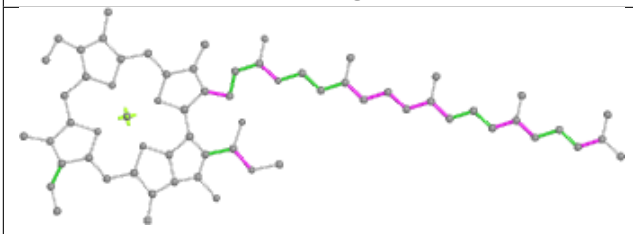
Ligand CLA 1 310



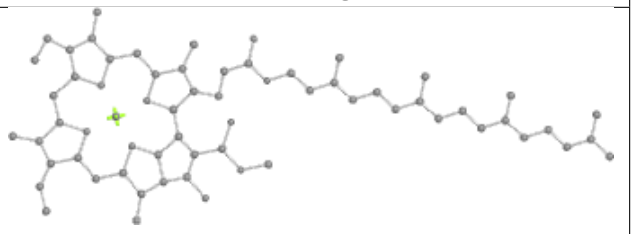
Bond lengths



Bond angles

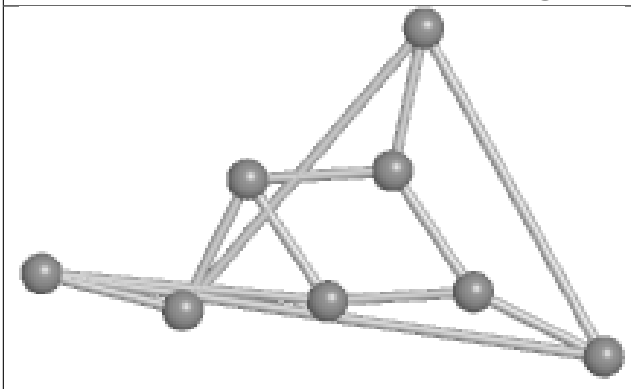


Torsions

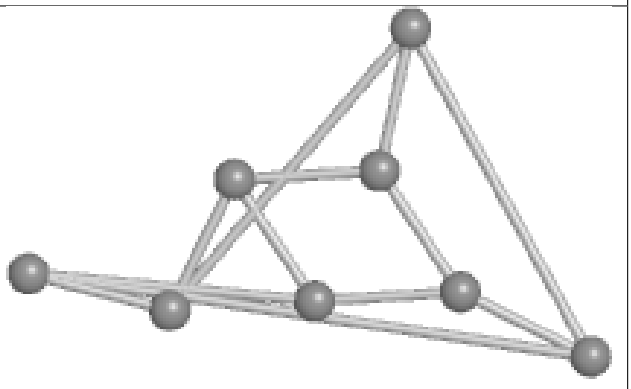


Rings

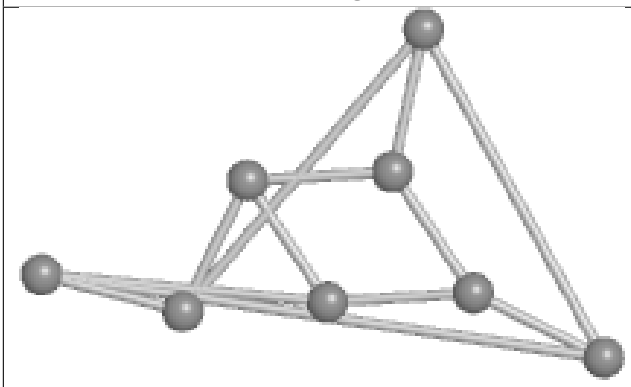
Ligand SF4 c 101



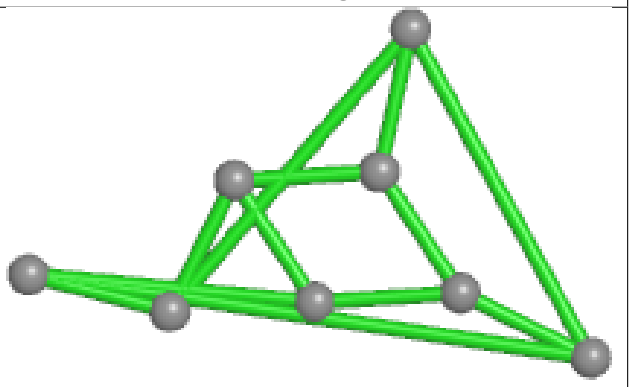
Bond lengths



Bond angles

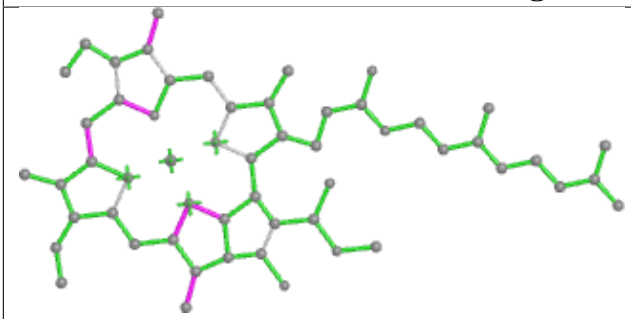


Torsions

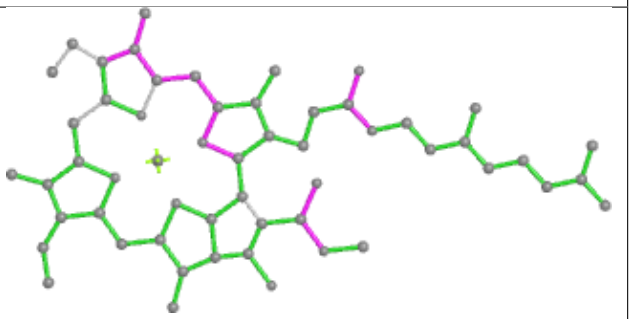


Rings

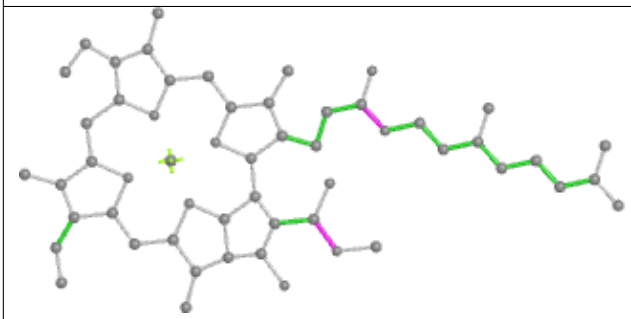
Ligand CLA 5 308



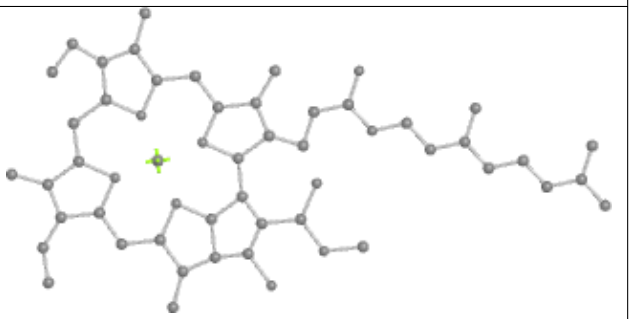
Bond lengths



Bond angles

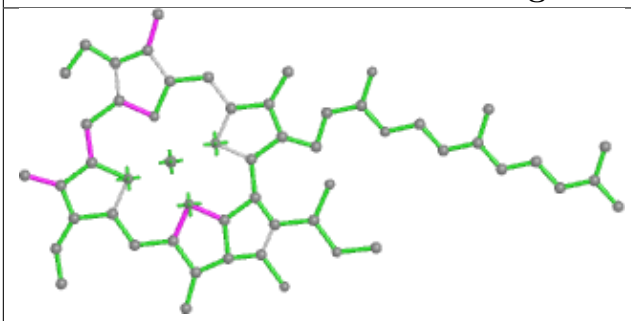


Torsions

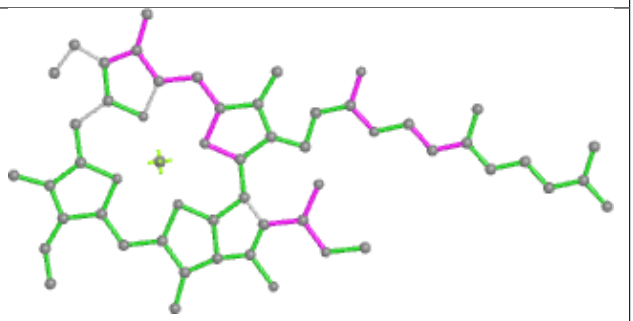


Rings

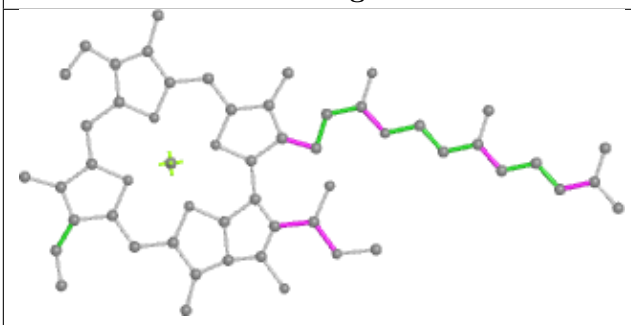
Ligand CLA a 804



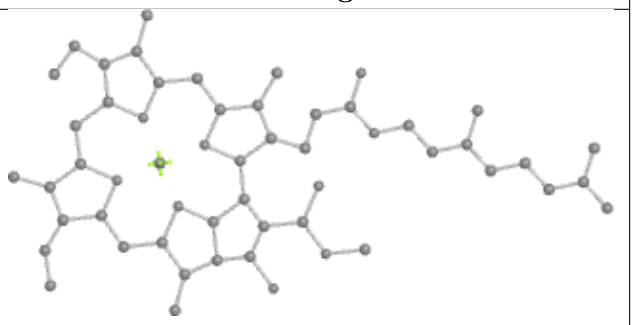
Bond lengths



Bond angles

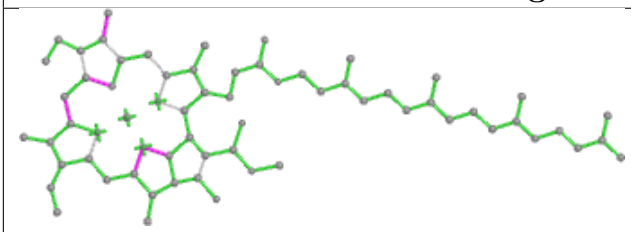


Torsions

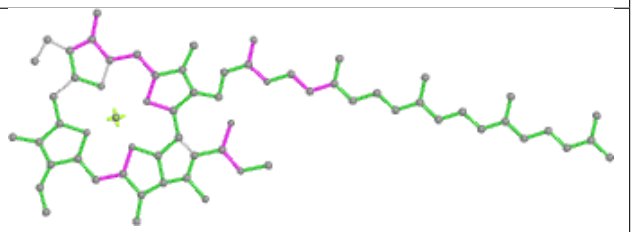


Rings

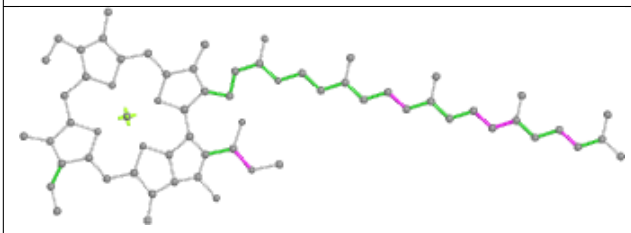
Ligand CLA a 834



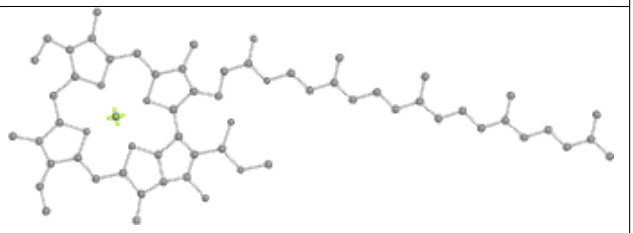
Bond lengths



Bond angles

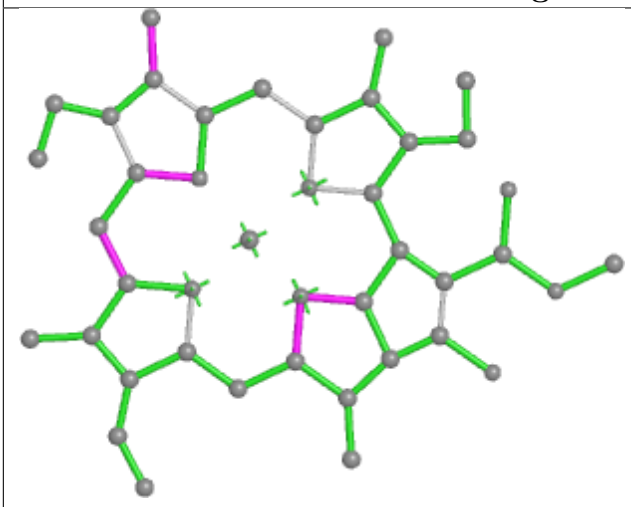


Torsions

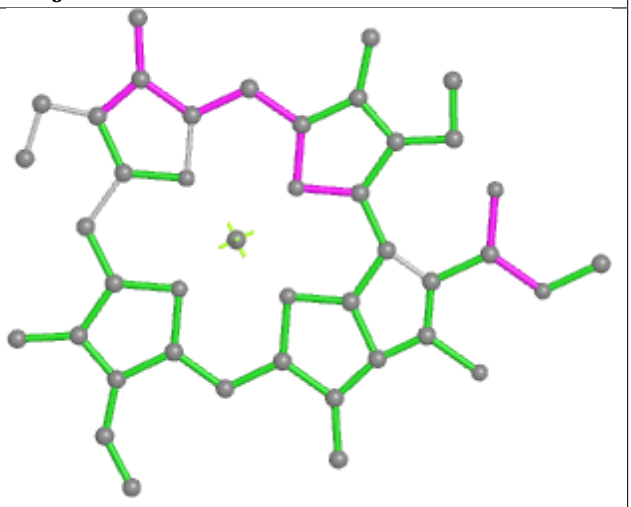


Rings

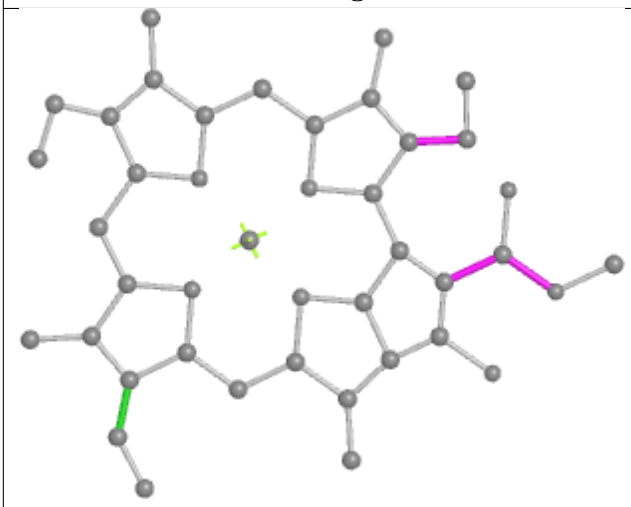
Ligand CLA j 103



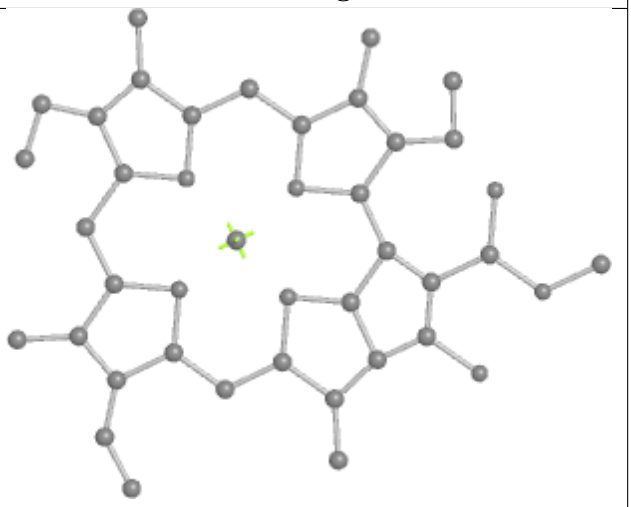
Bond lengths



Bond angles

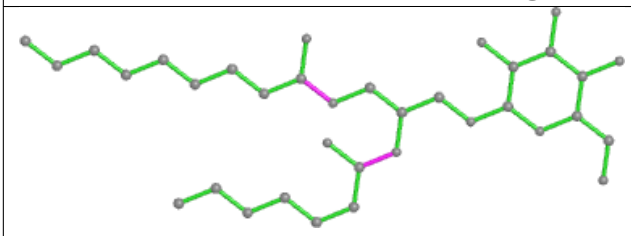


Torsions



Rings

Ligand LMG 2 317



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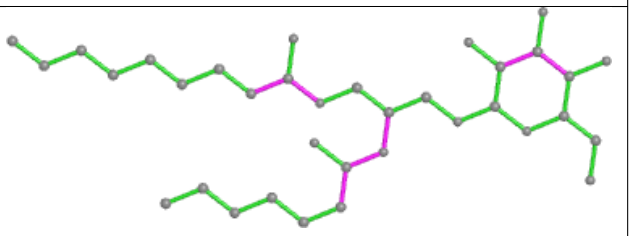
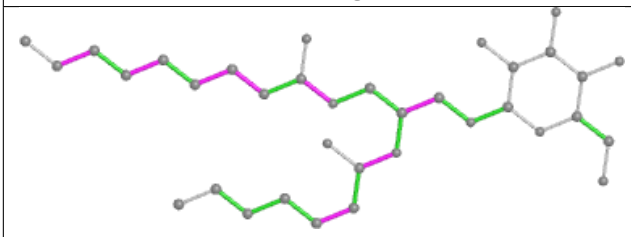
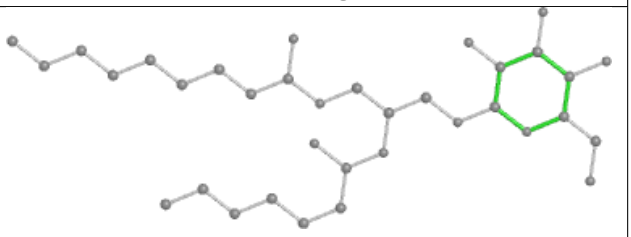


Bond angles

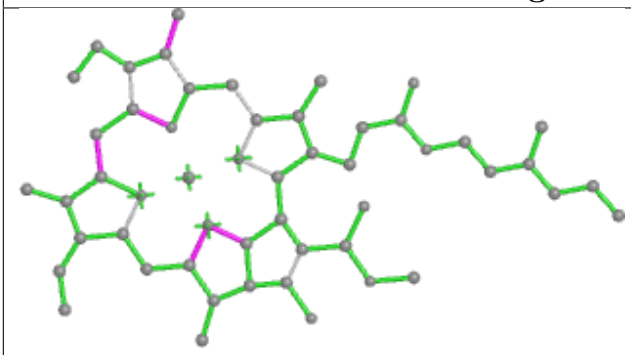


Torsions



Rings

Ligand CLA 5 312



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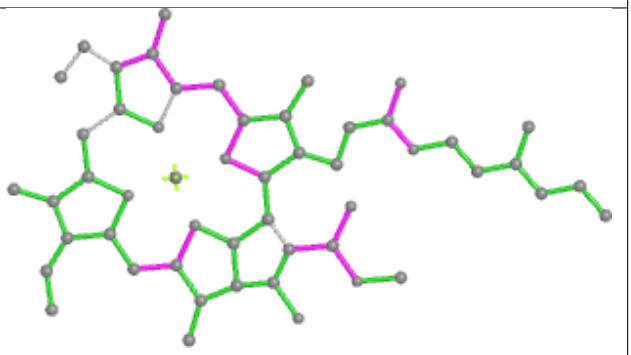
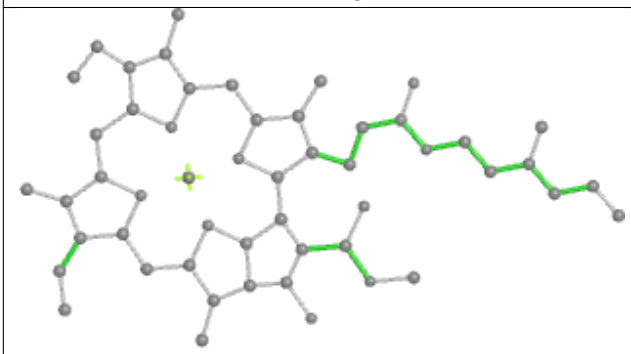
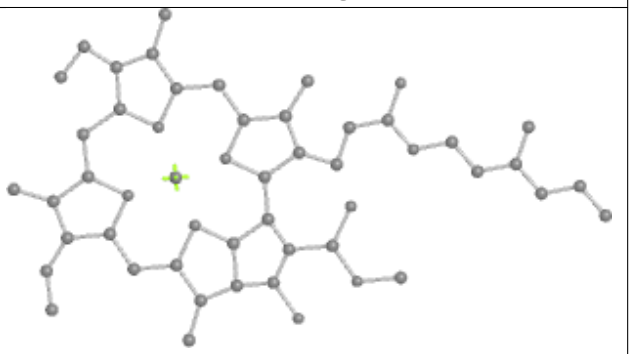


Bond angles

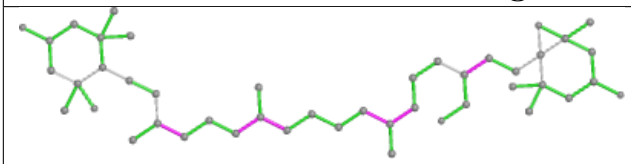


Torsions



Rings

Ligand A1L1G 3 306



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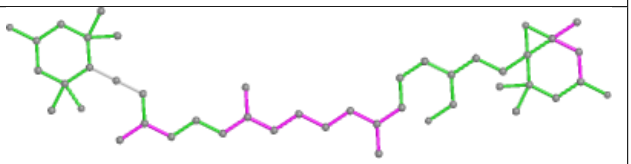
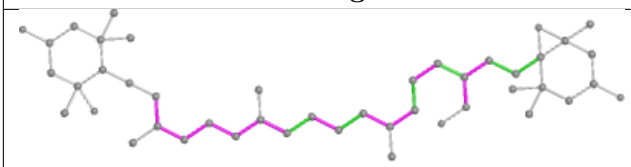


Bond angles



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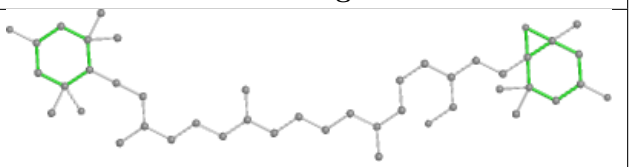
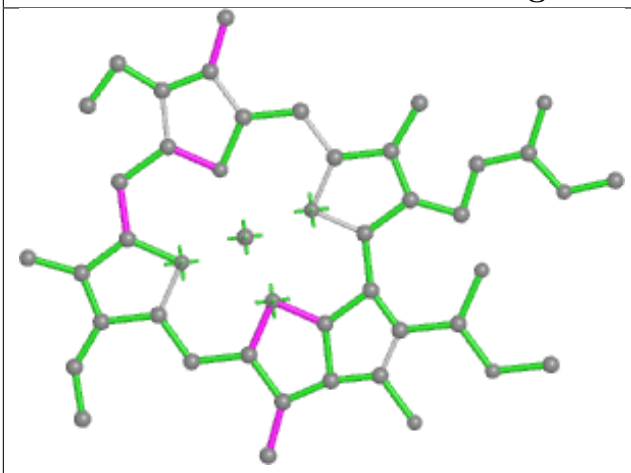


Rings

Ligand CLA 4 311



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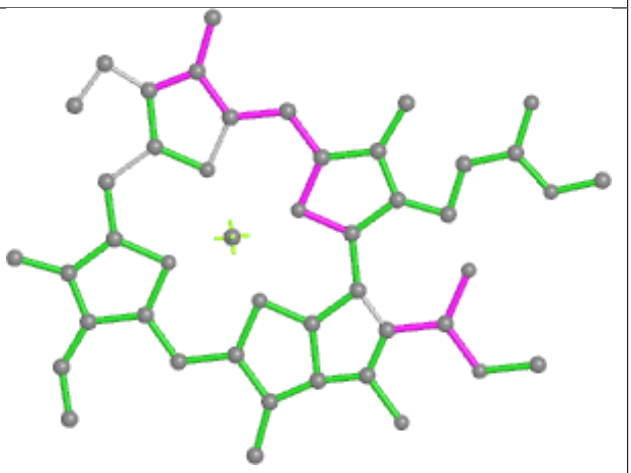
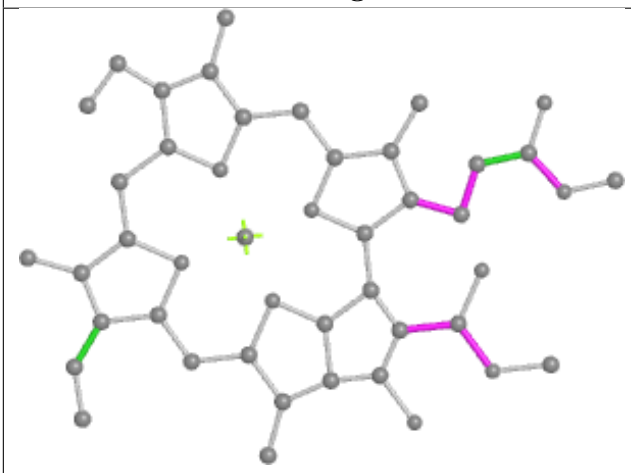


Bond angles



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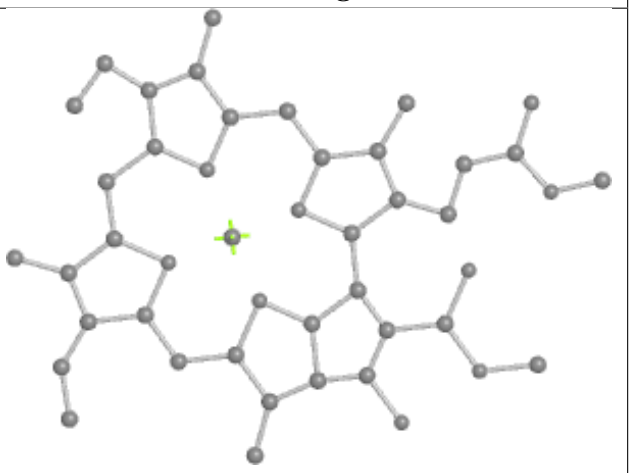
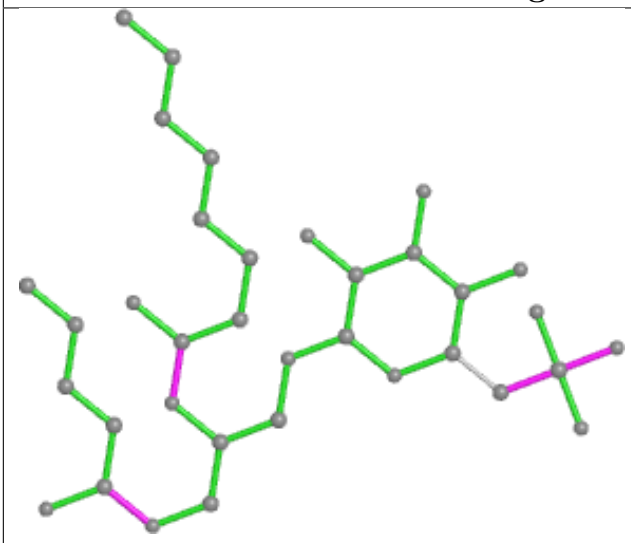
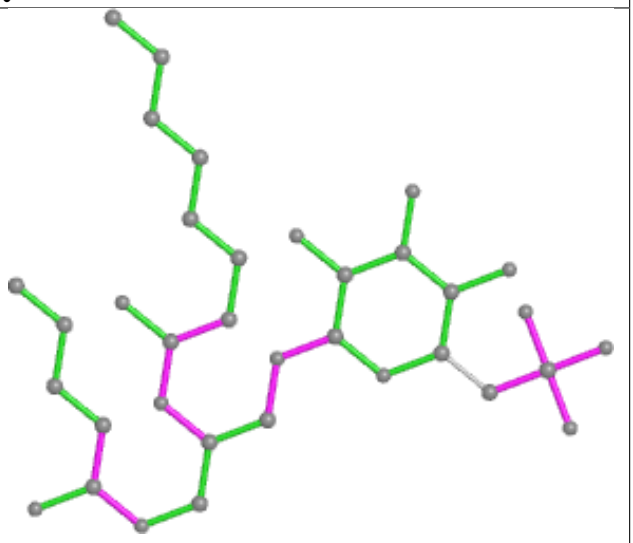


Rings

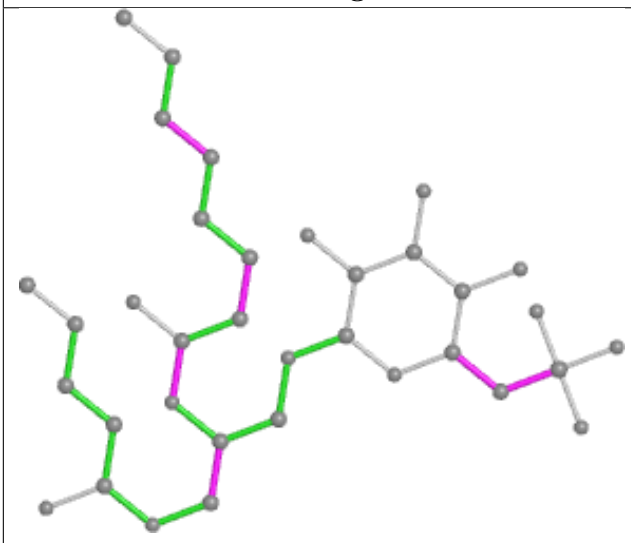
Ligand SQD 5 316



Bond lengths



Bond angles



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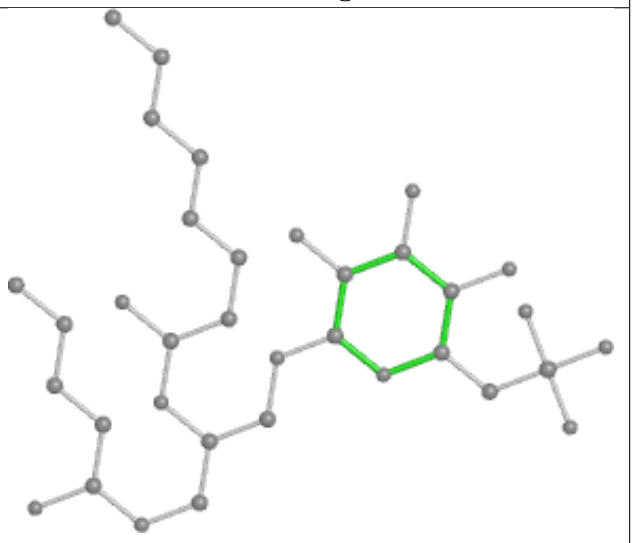
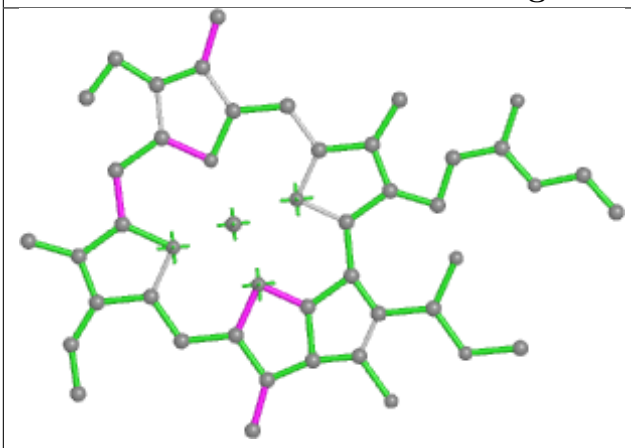


Rings

Ligand CLA 2 307



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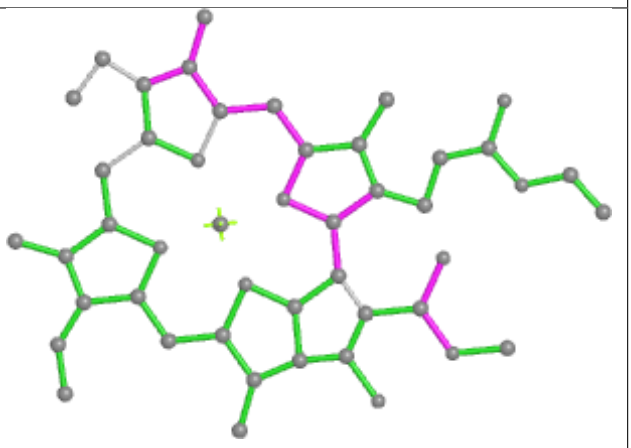
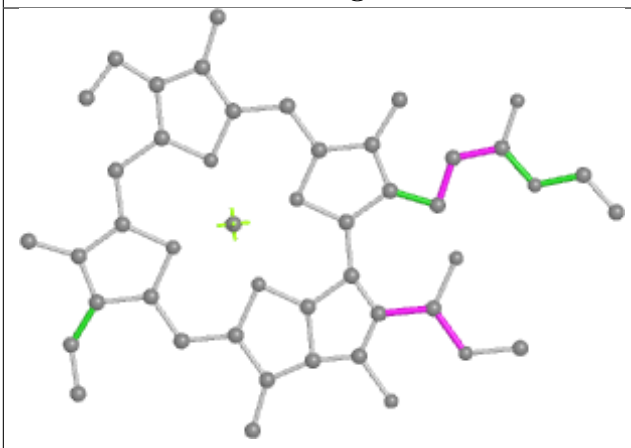


Bond angles



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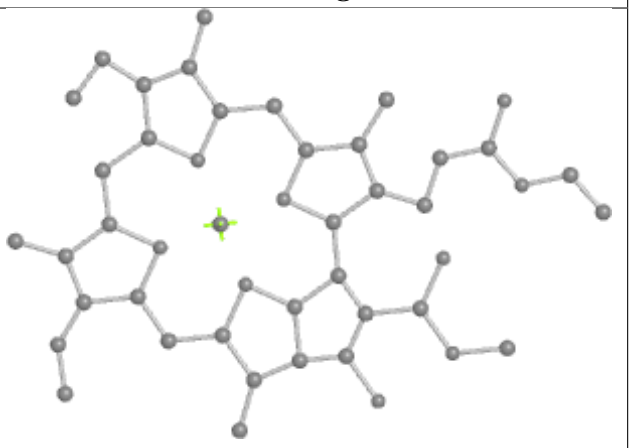
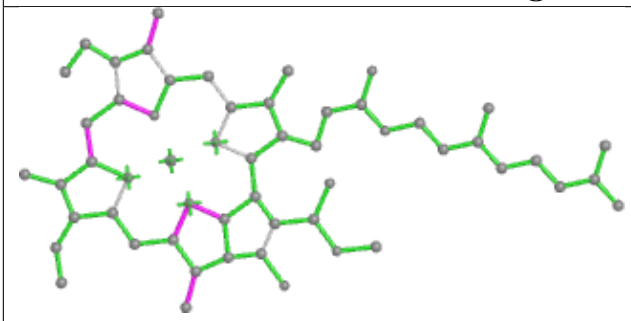


Rings

Ligand CLA b 820



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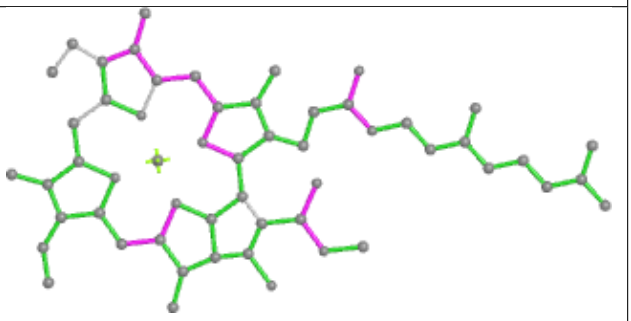
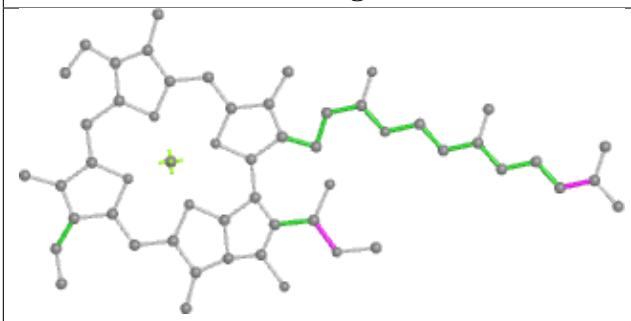


Bond angles



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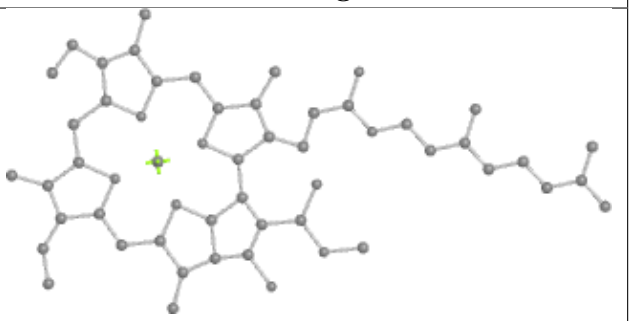
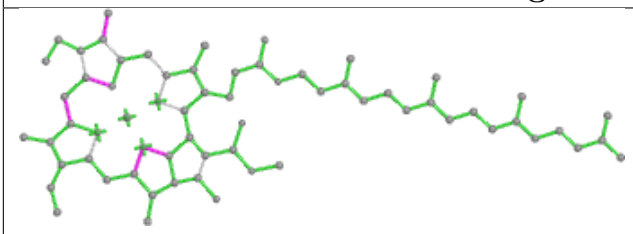


Rings

Ligand CLA a 809



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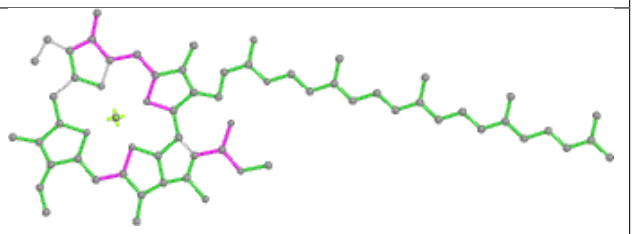
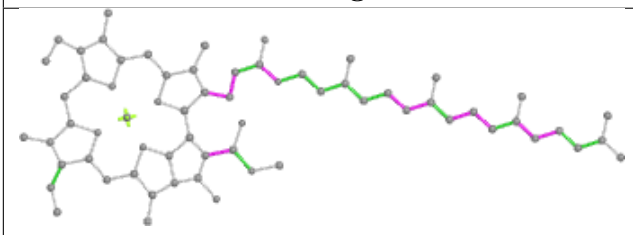
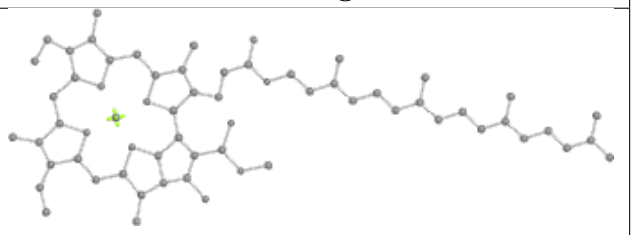


Bond angles

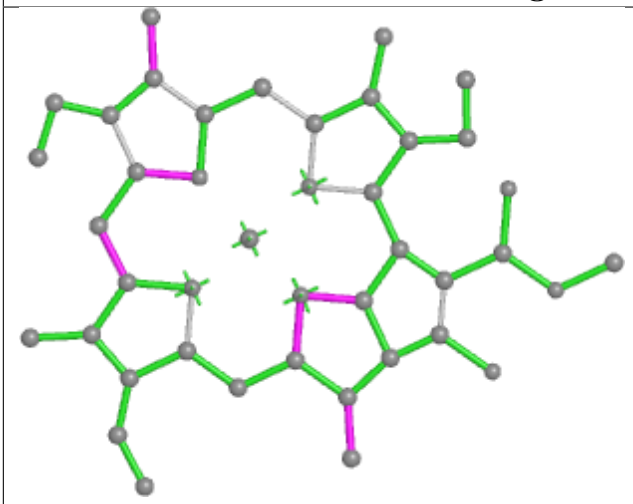


Torsions

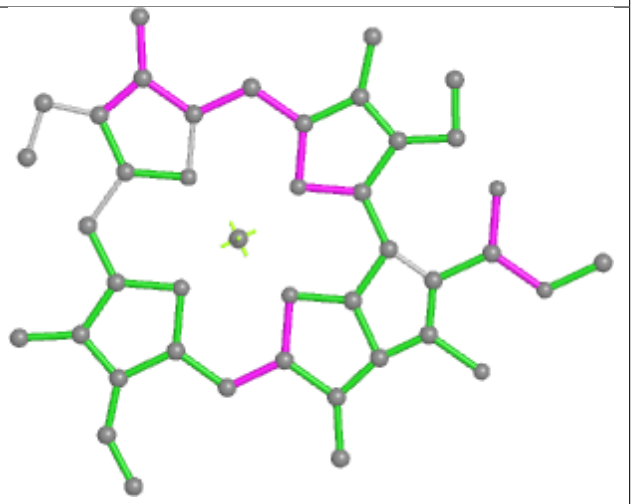


Rings

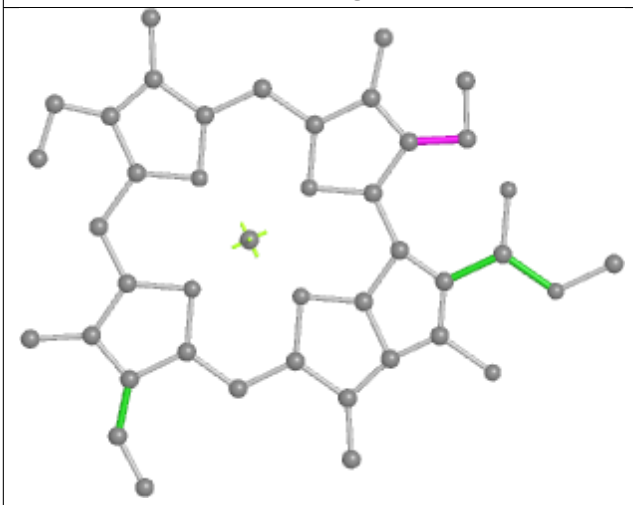
Ligand CLA 2 315



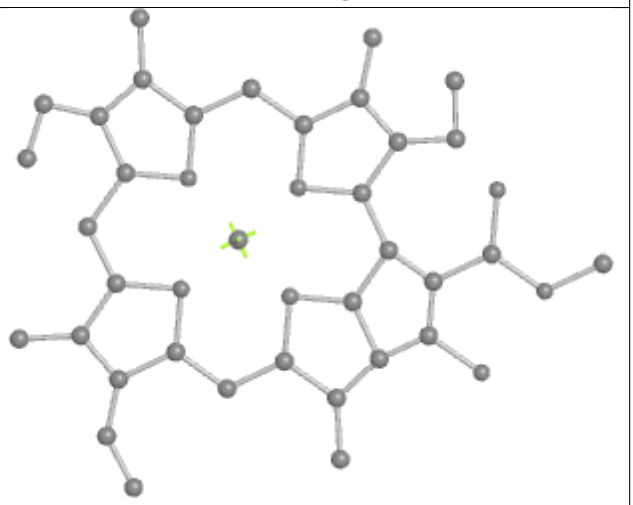
Bond lengths



Bond angles

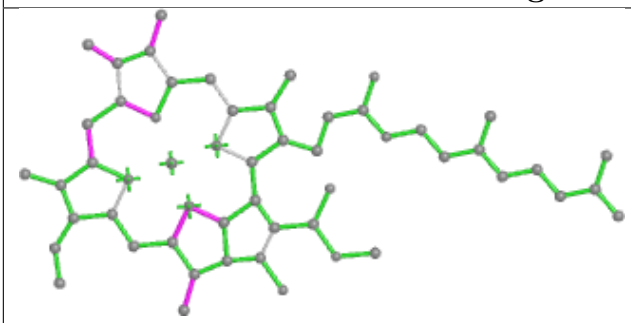


Torsions

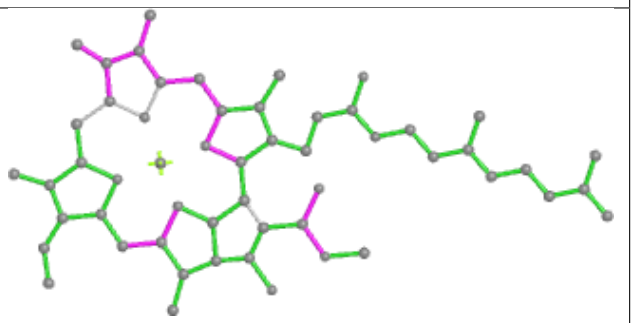


Rings

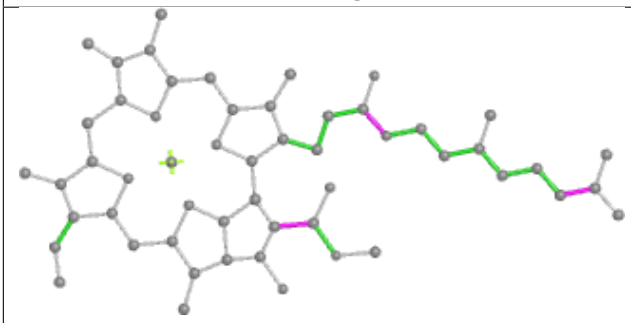
Ligand CLA b 812



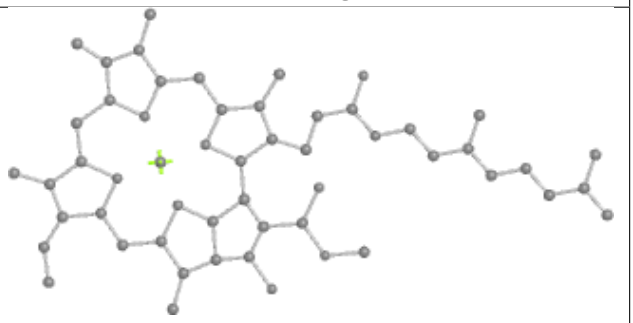
Bond lengths



Bond angles

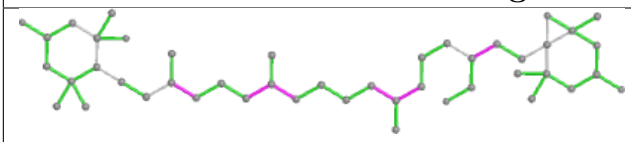


Torsions



Rings

Ligand A1L1G 1 301



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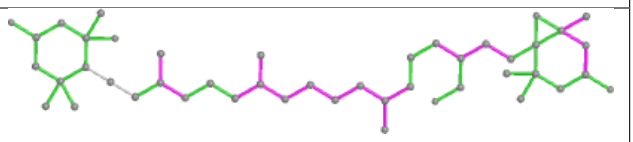
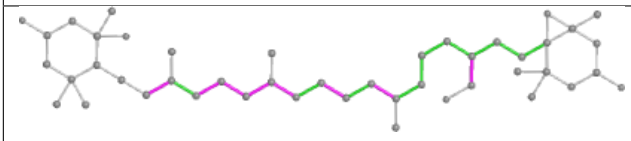
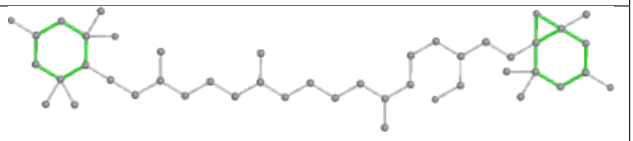


Bond angles

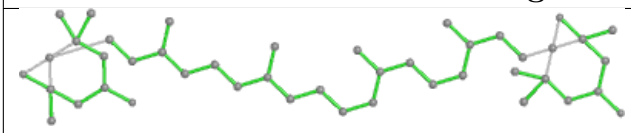


Torsions

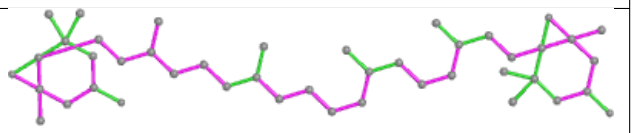


Rings

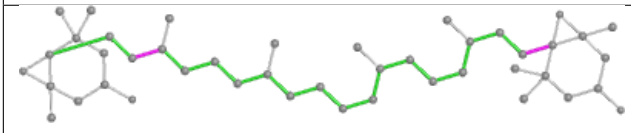
Ligand XAT 3 303



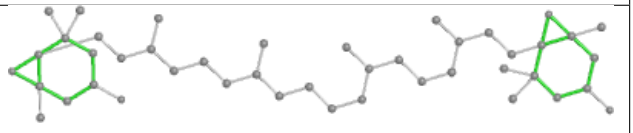
Bond lengths



Bond angles

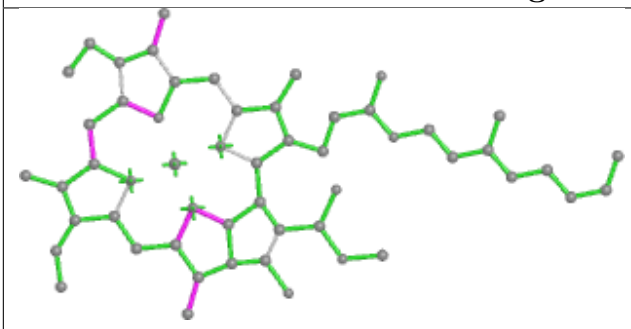


Torsions

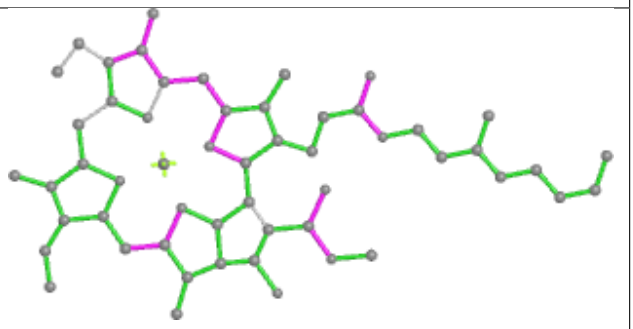


Rings

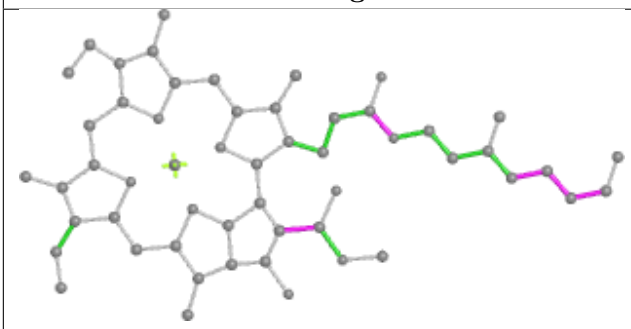
Ligand CLA 1 307



Bond lengths



Bond angles



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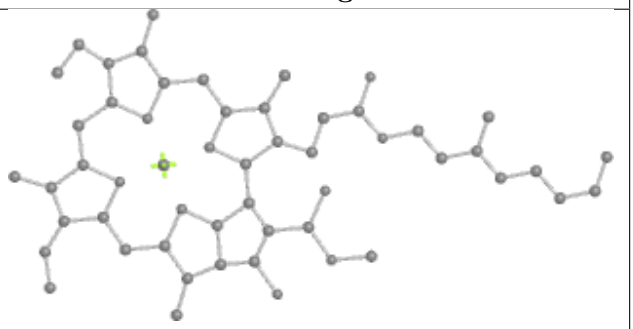
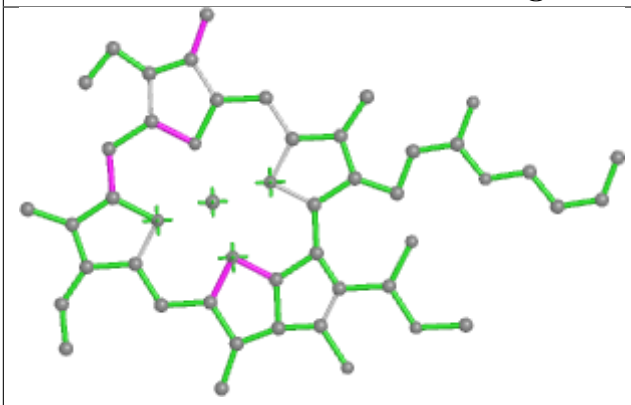
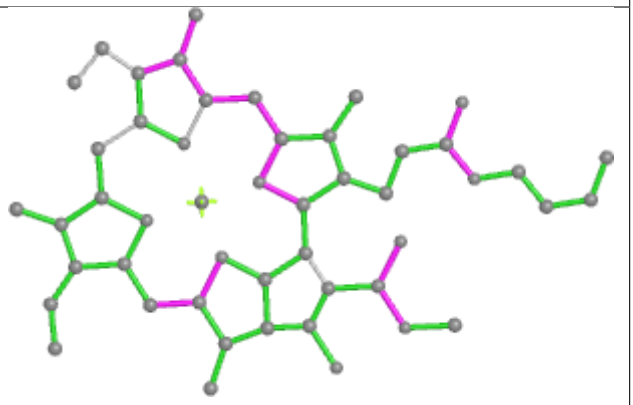


Rings

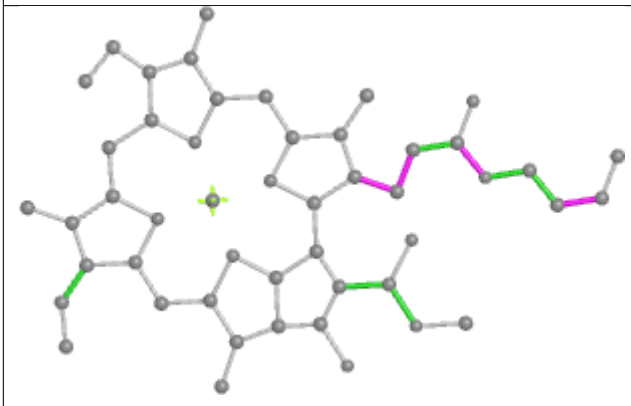
Ligand CLA b 832



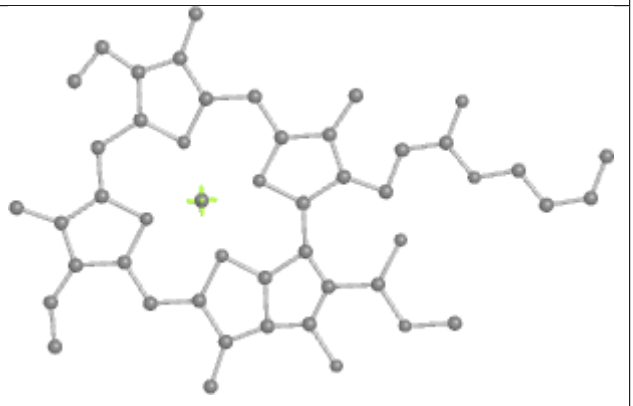
Bond lengths



Bond angles

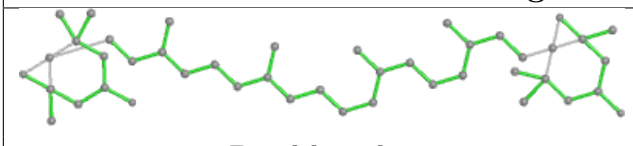


Torsions

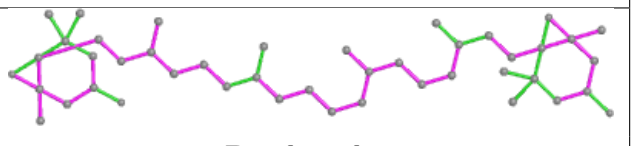


Rings

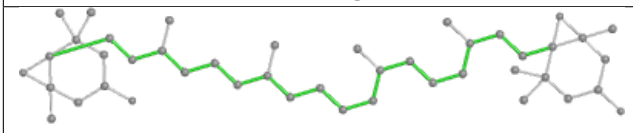
Ligand XAT 4 302



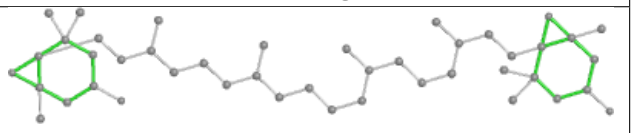
Bond lengths



Bond angles

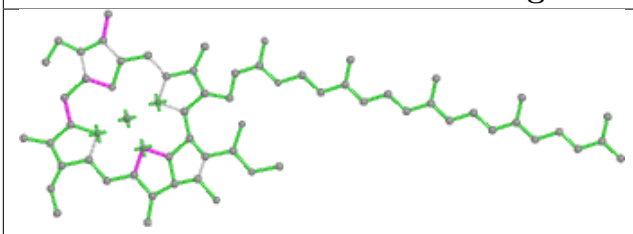


Torsions

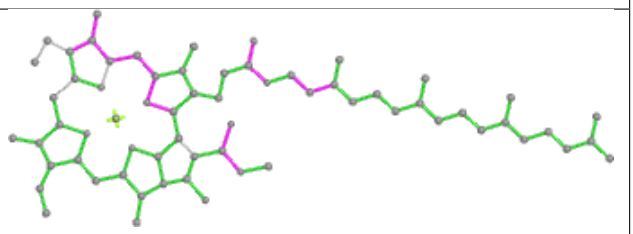


Rings

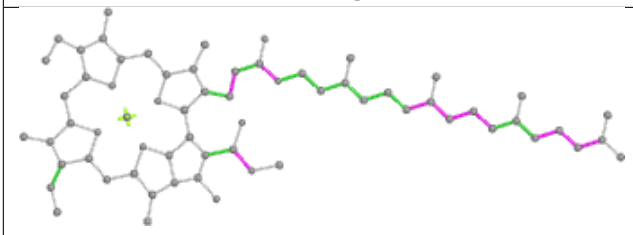
Ligand CLA b 828



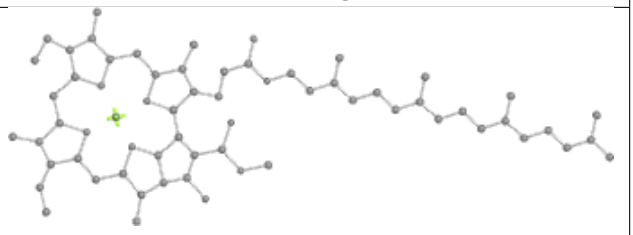
Bond lengths



Bond angles

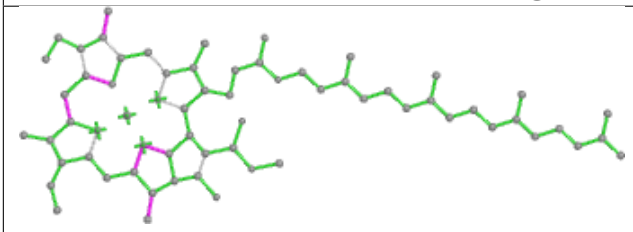


Torsions

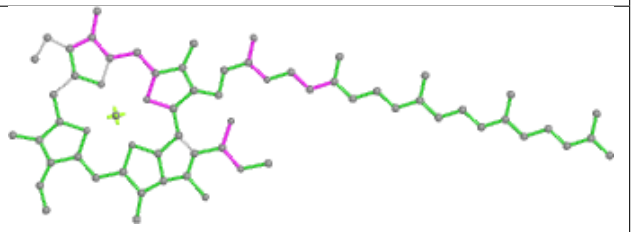


Rings

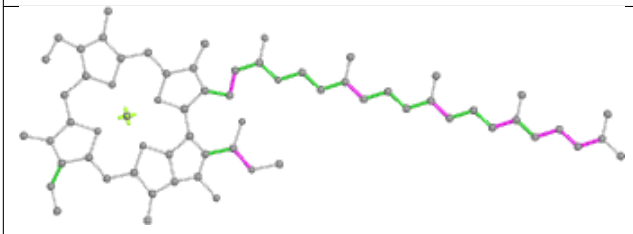
Ligand CLA 1 308



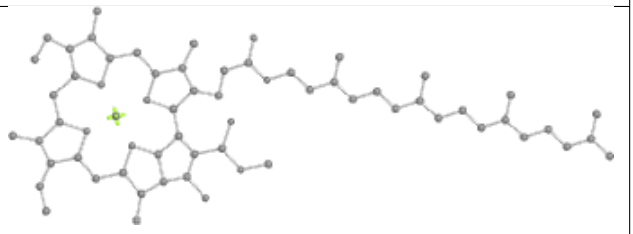
Bond lengths



Bond angles

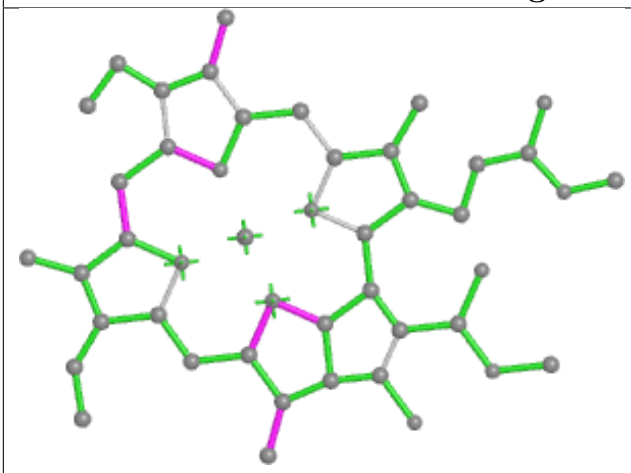


Torsions

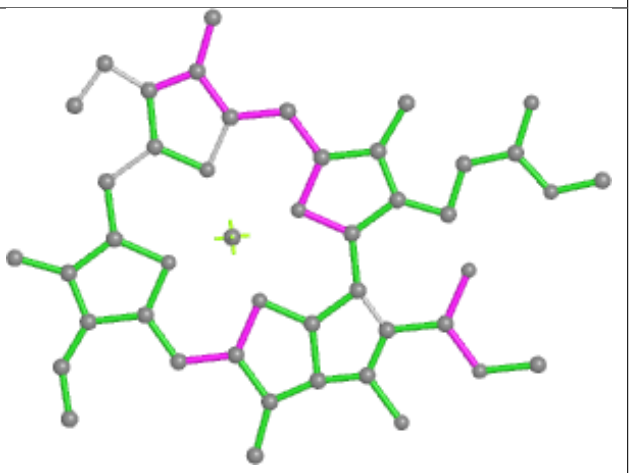


Rings

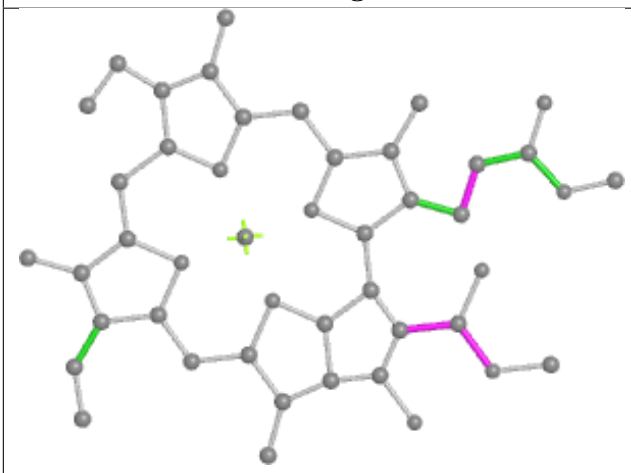
Ligand CLA 2 309



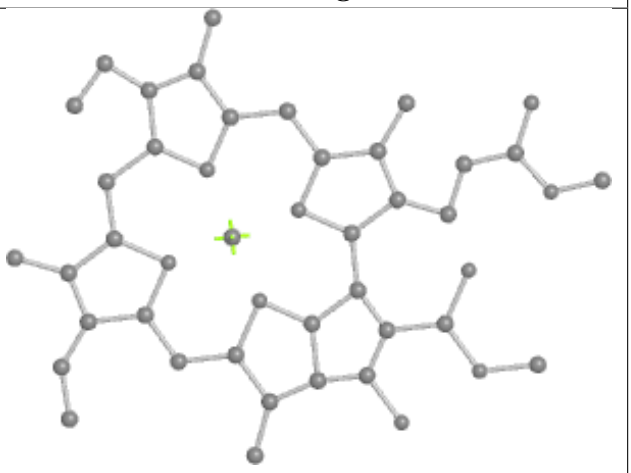
Bond lengths



Bond angles

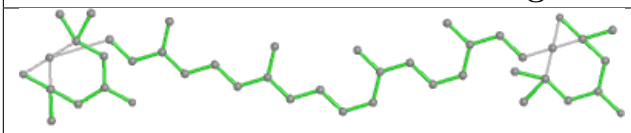


Torsions

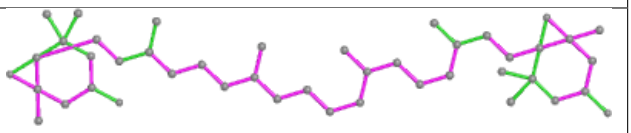


Rings

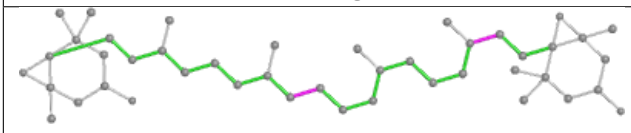
Ligand XAT 2 304



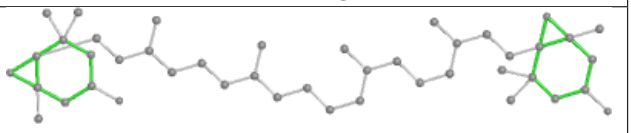
Bond lengths



Bond angles

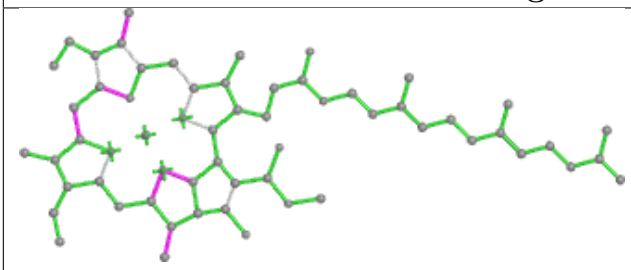


Torsions

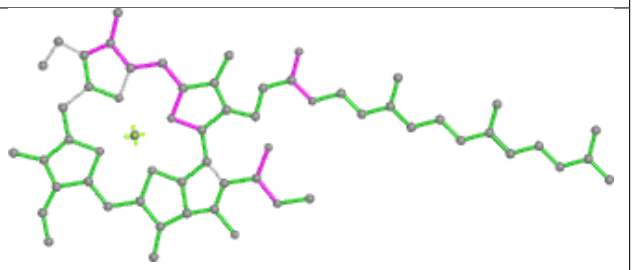


Rings

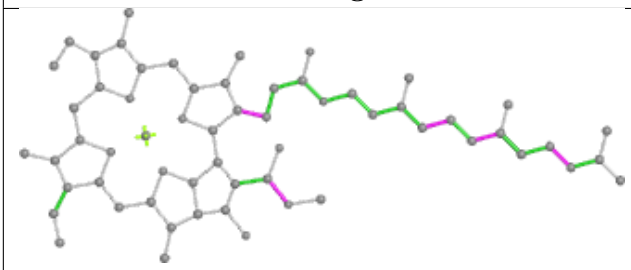
Ligand CLA b 823



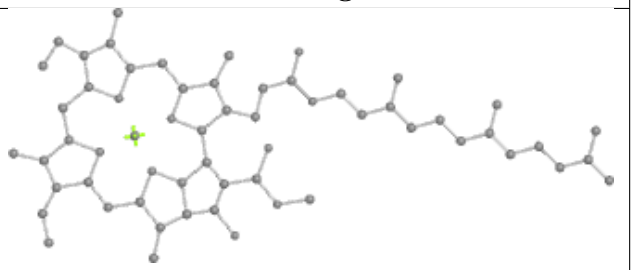
Bond lengths



Bond angles

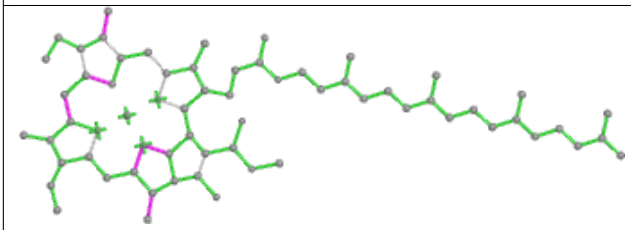


Torsions

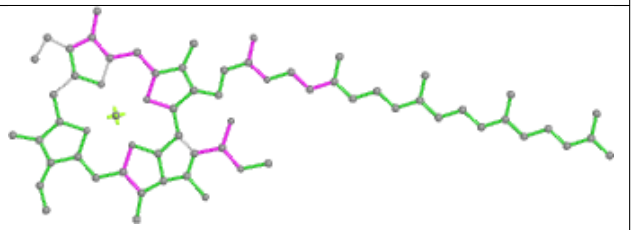


Rings

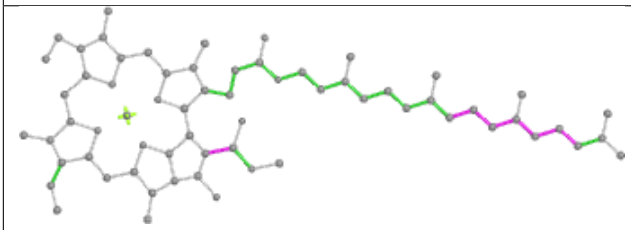
Ligand CLA b 830



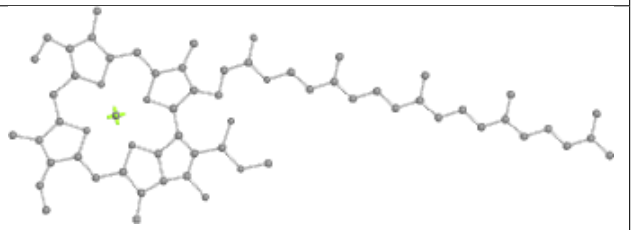
Bond lengths



Bond angles

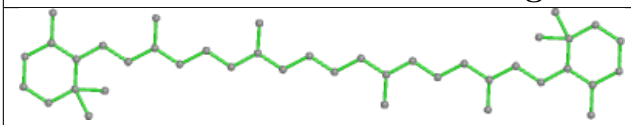


Torsions

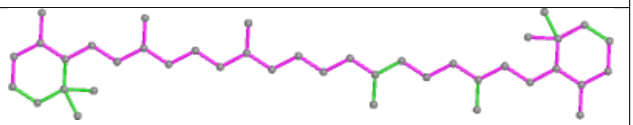


Rings

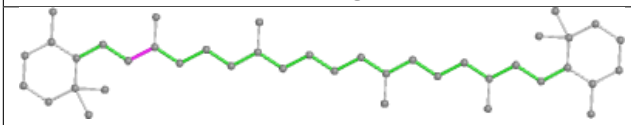
Ligand BCR b 847



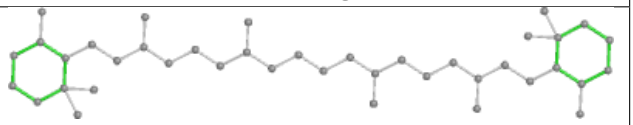
Bond lengths



Bond angles

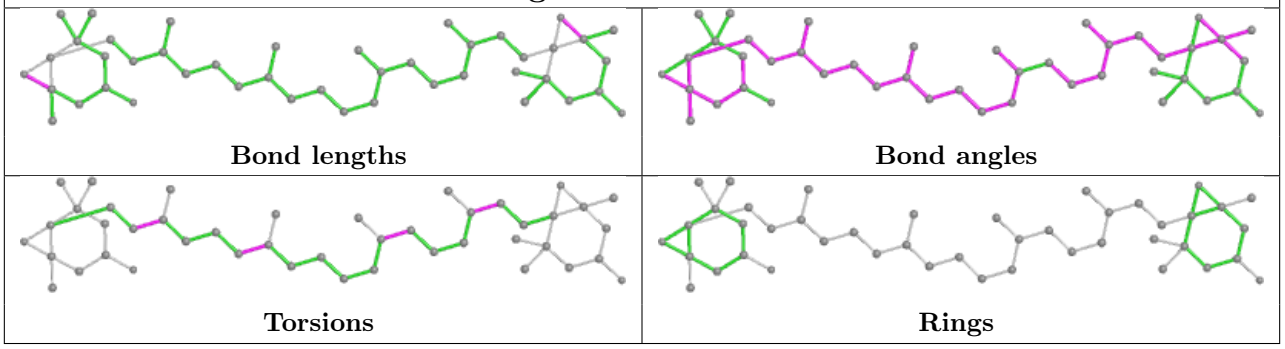


Torsions

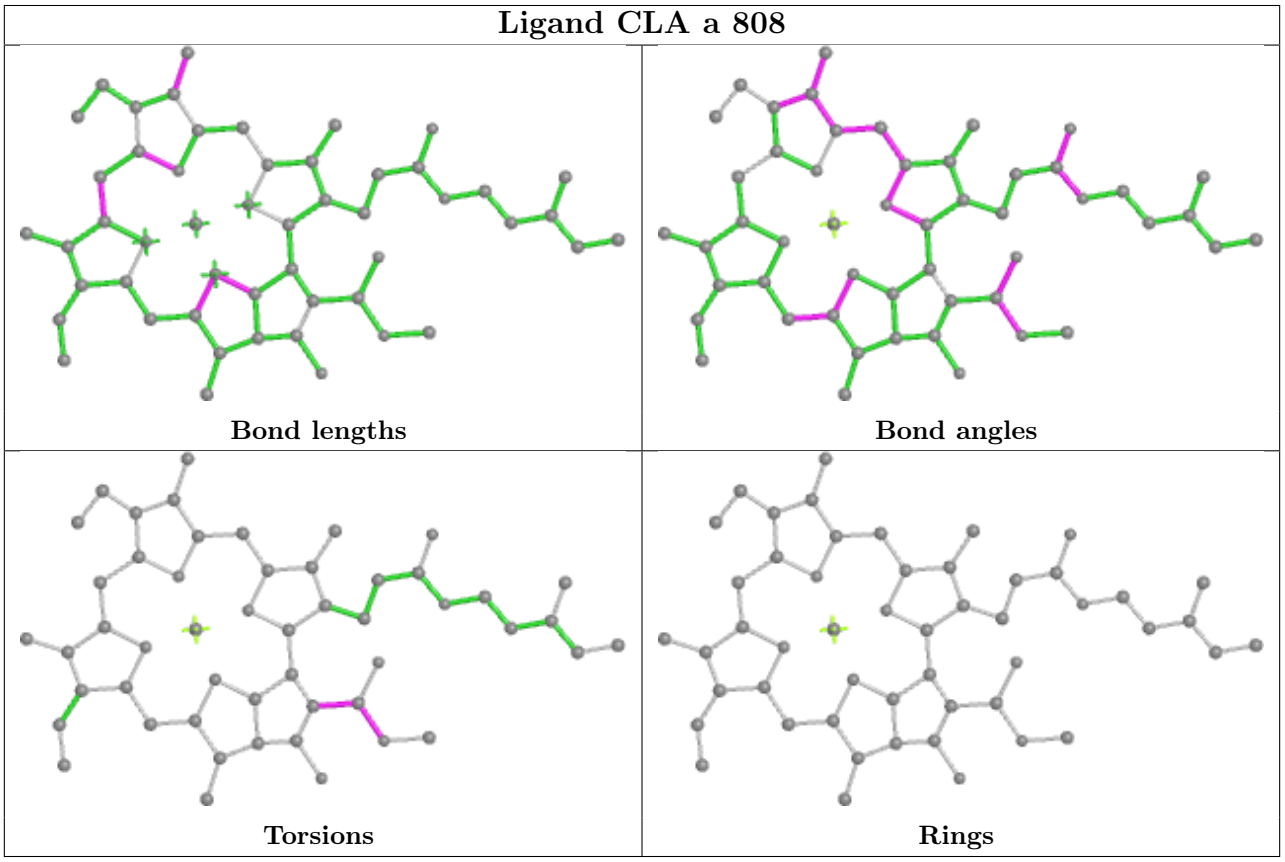


Rings

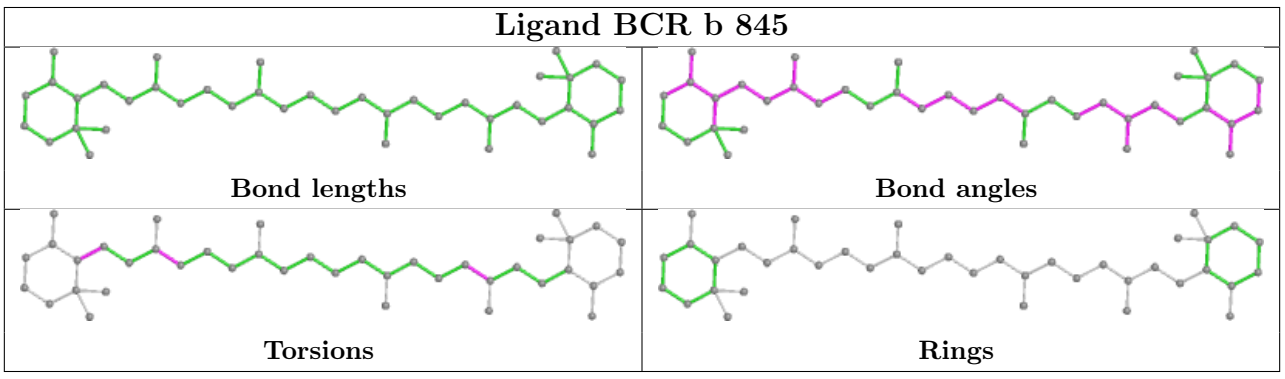
Ligand XAT a 852



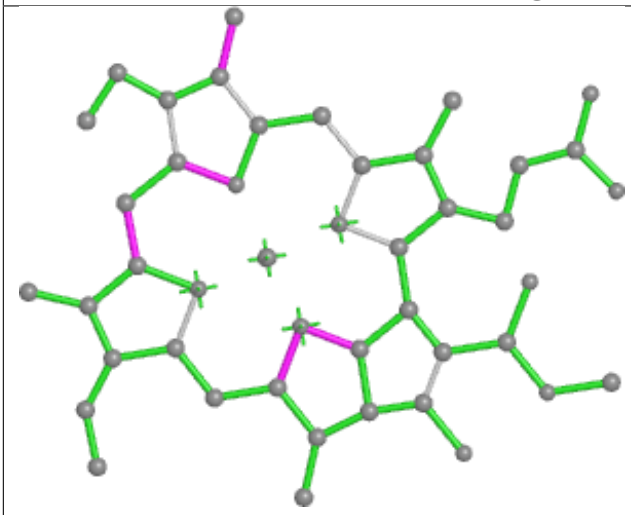
Ligand CLA a 808



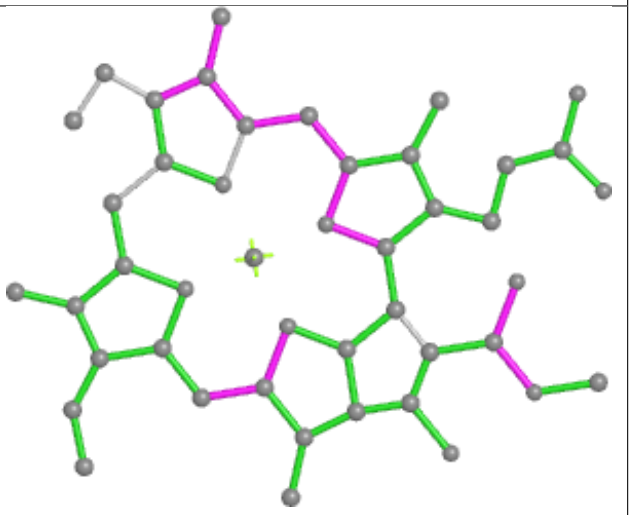
Ligand BCR b 845



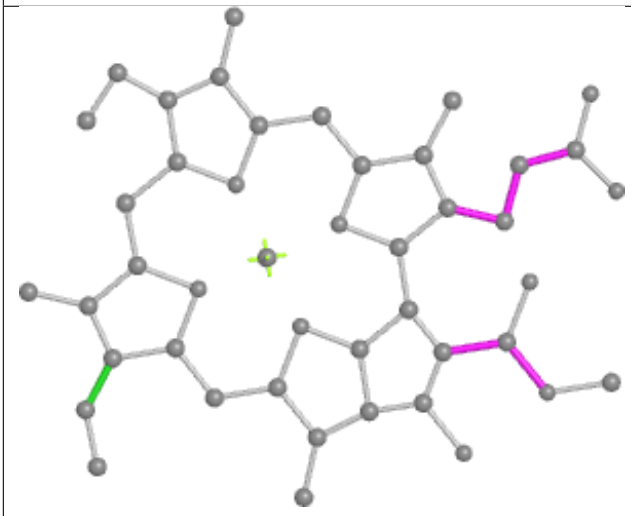
Ligand CLA 5 306



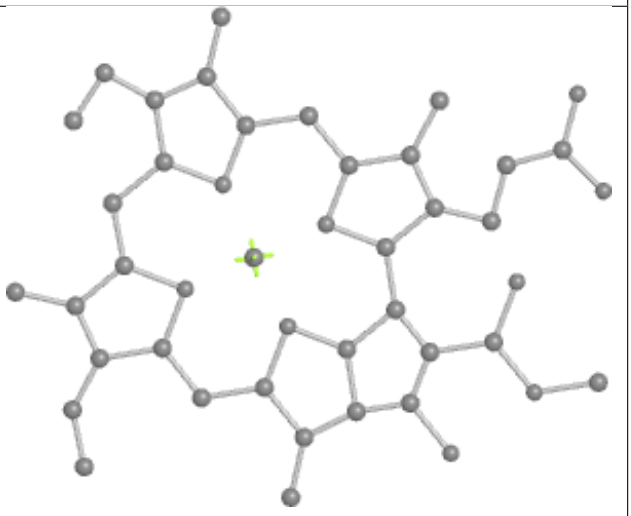
Bond lengths



Bond angles

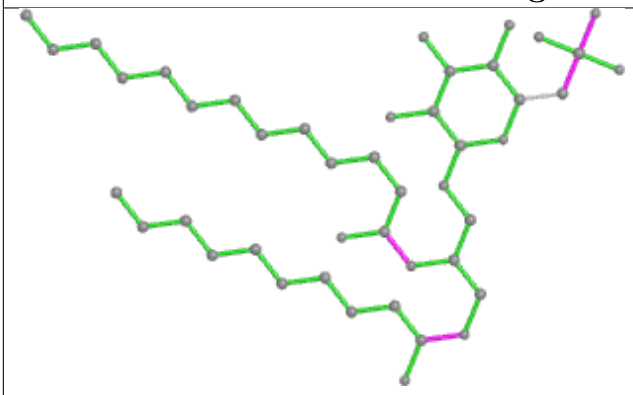


Torsions

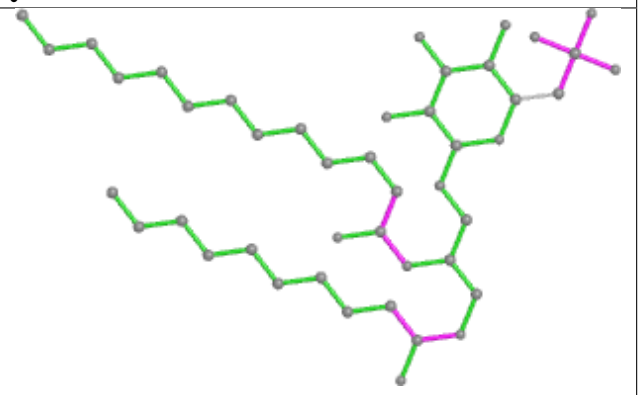


Rings

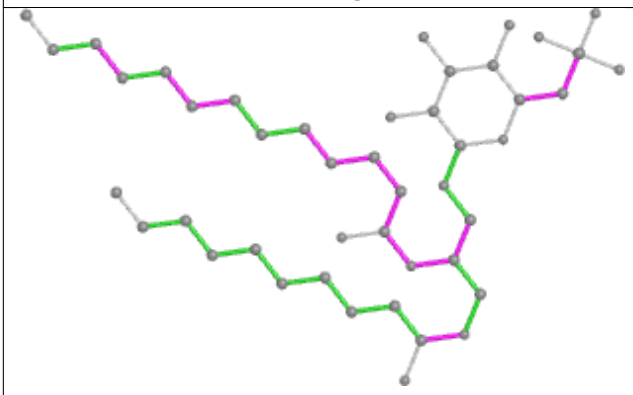
Ligand SQD 1 315



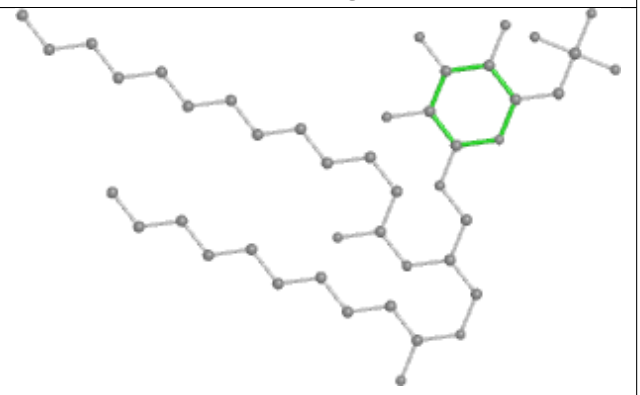
Bond lengths



Bond angles

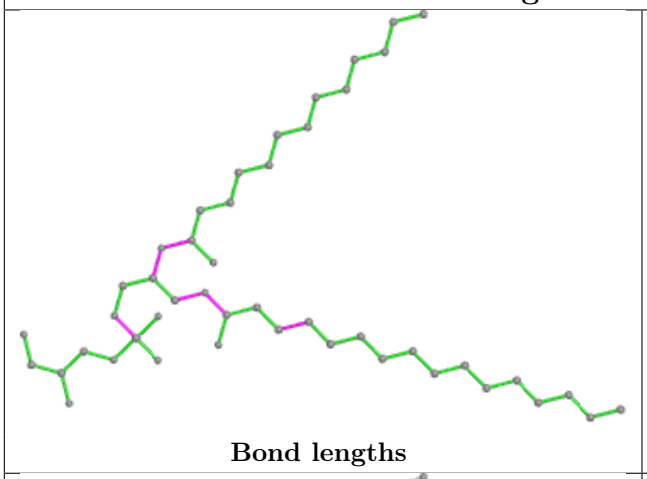


Torsions

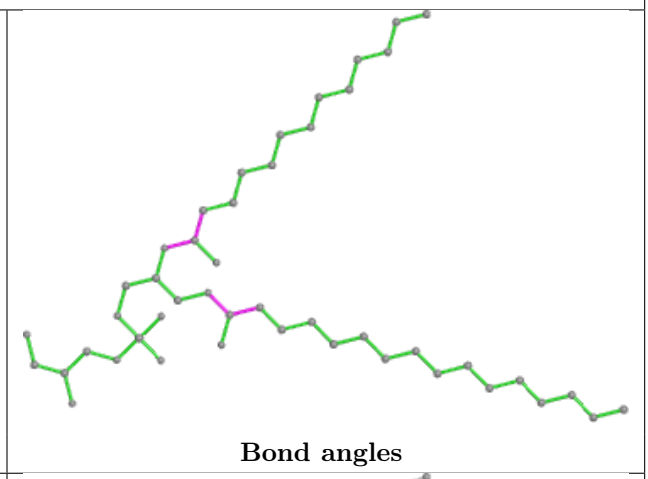


Rings

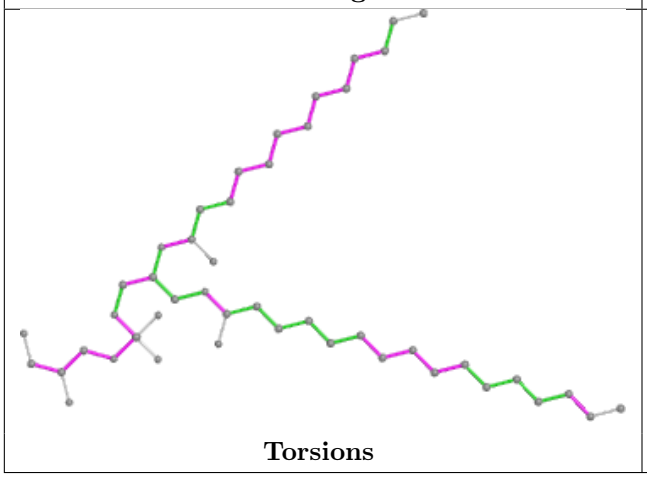
Ligand LHG m 101



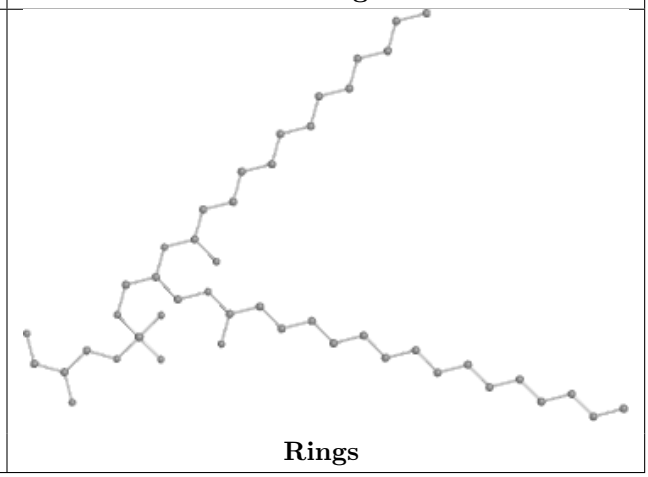
Bond lengths



Bond angles

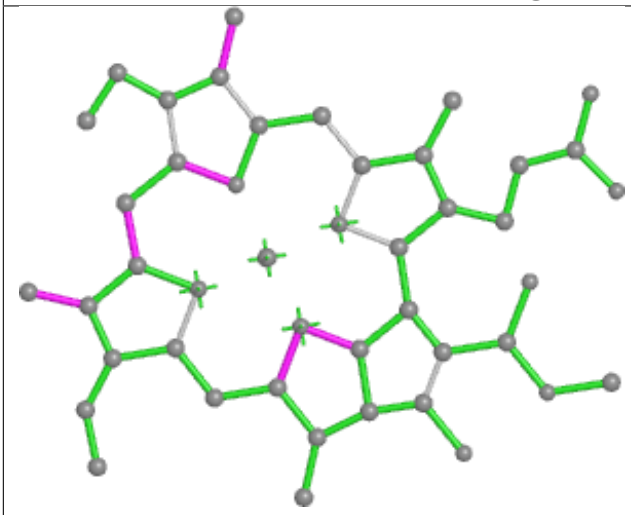


Torsions

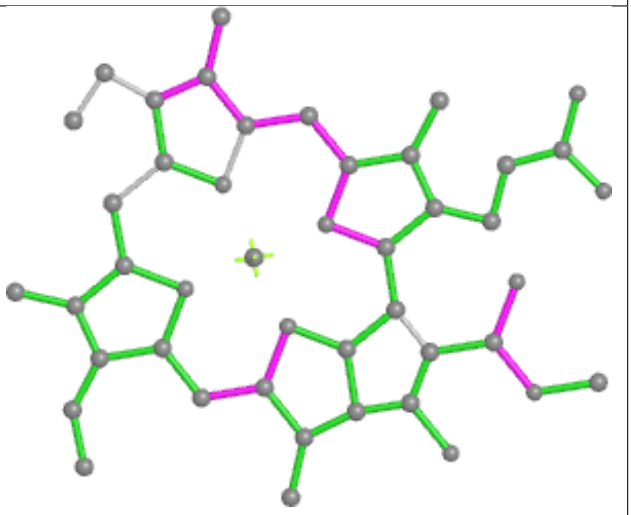


Rings

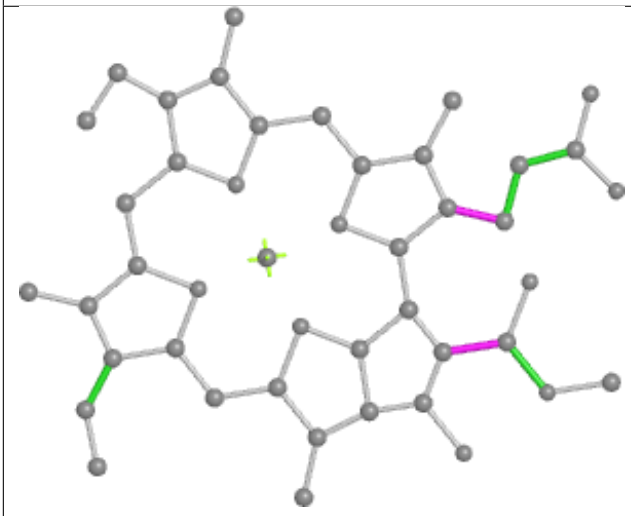
Ligand CLA b 816



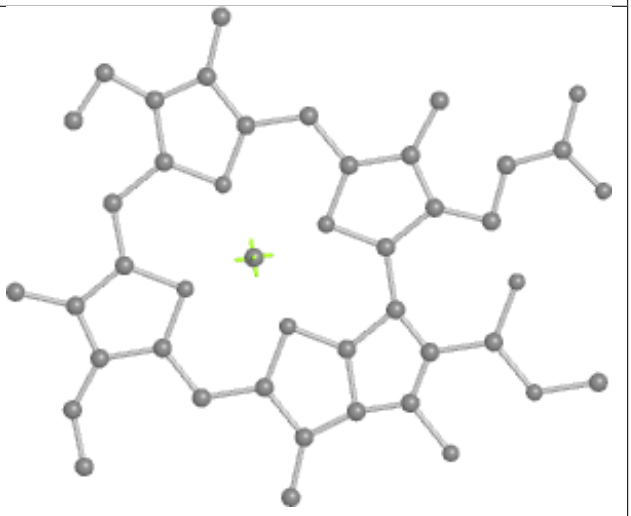
Bond lengths



Bond angles

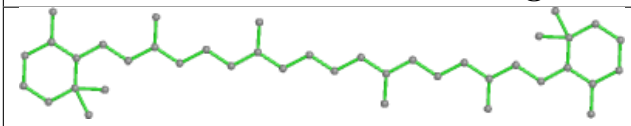


Torsions

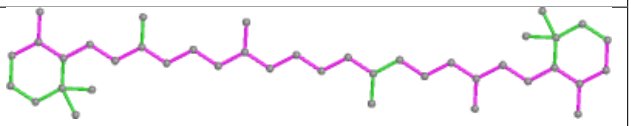


Rings

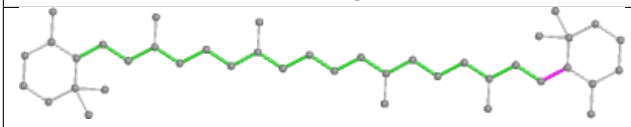
Ligand BCR b 850



Bond lengths



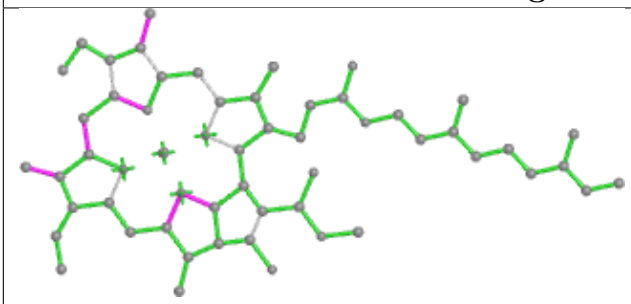
Bond angles



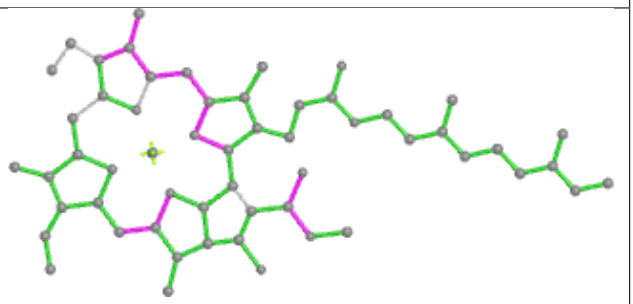
Torsions

Rings

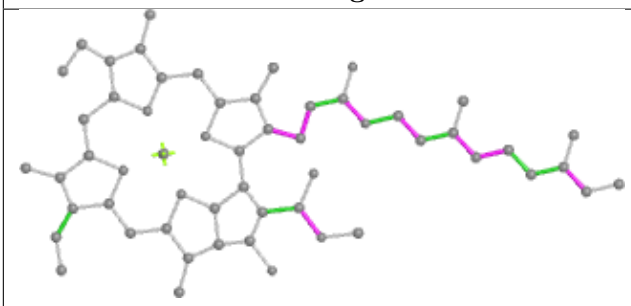
Ligand CLA 2 314



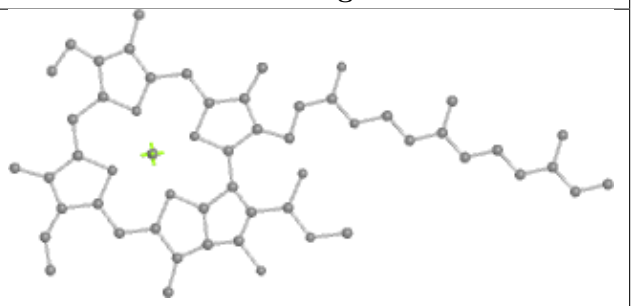
Bond lengths



Bond angles

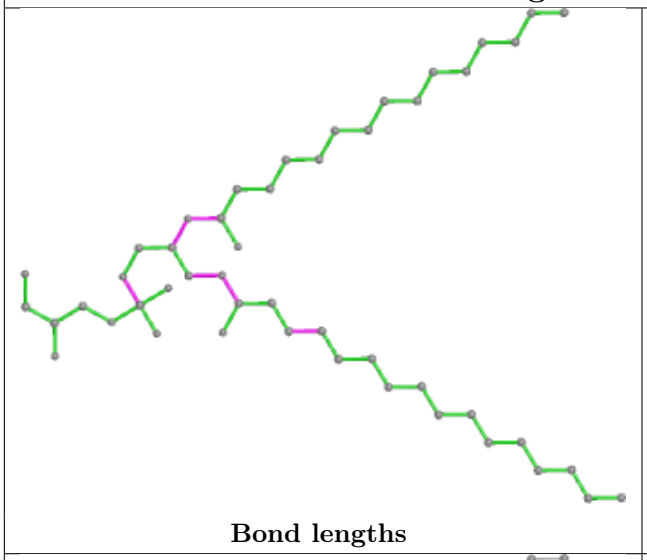


Torsions

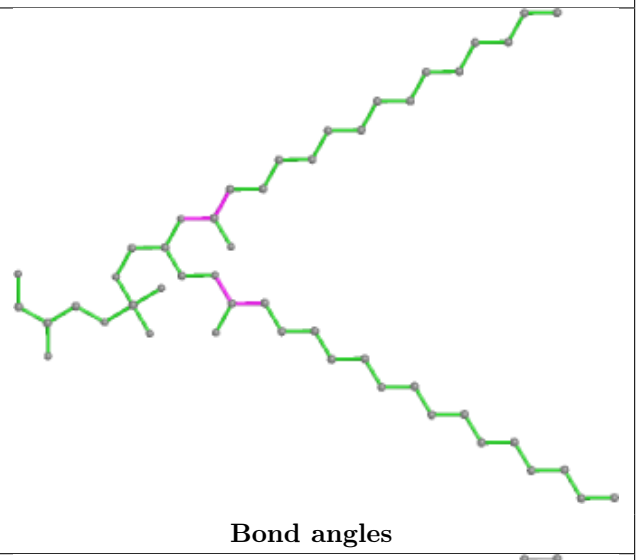


Rings

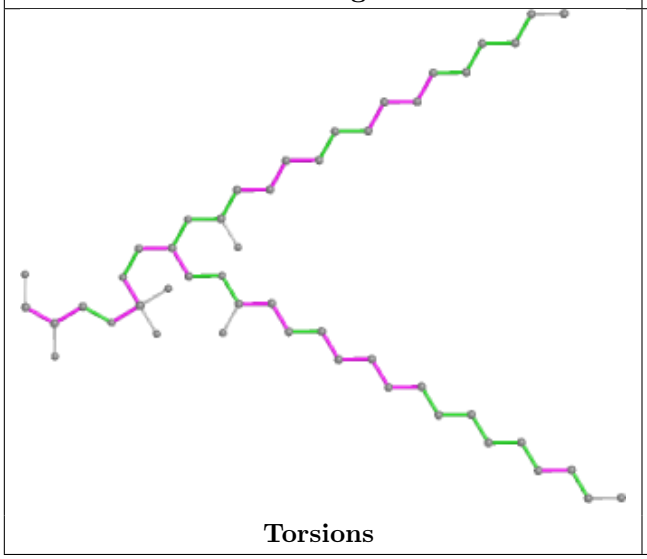
Ligand LHG a 845



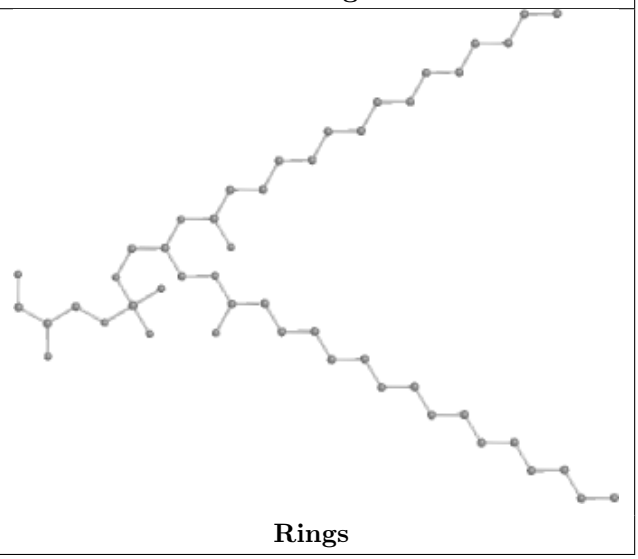
Bond lengths



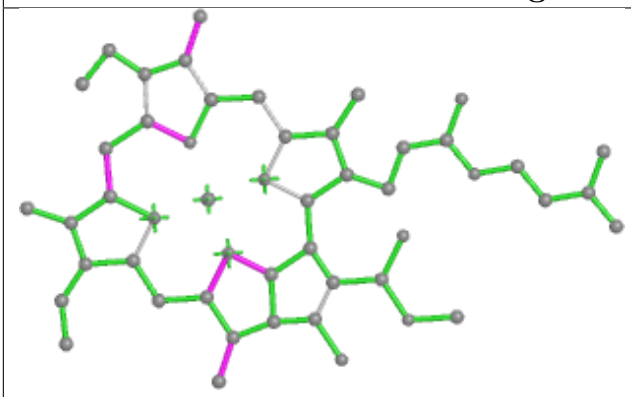
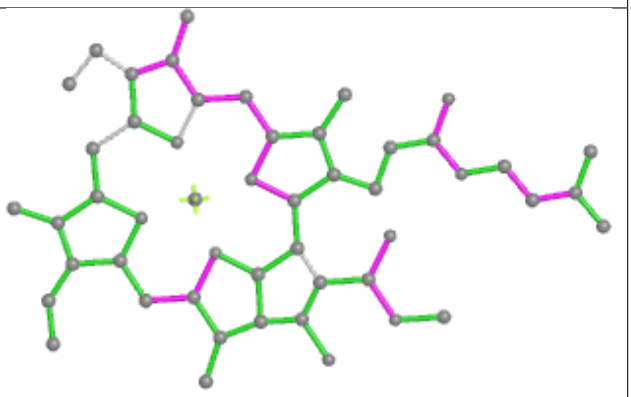
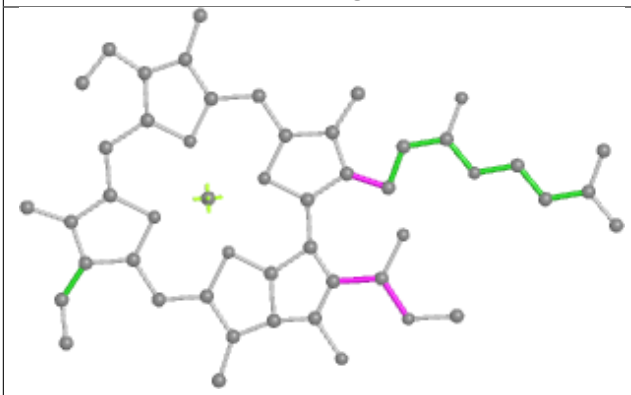
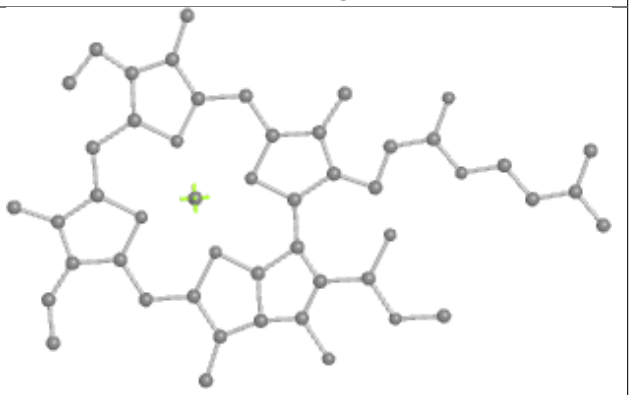
Bond angles

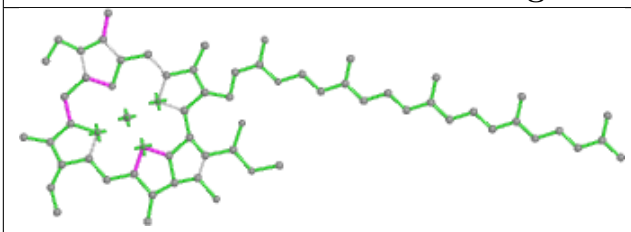
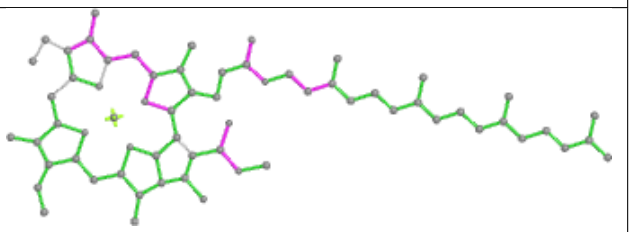
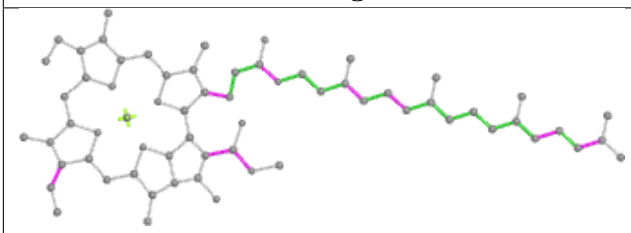
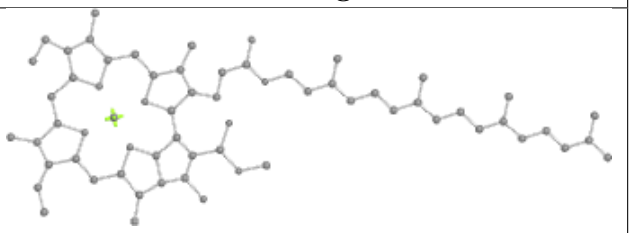


Torsions

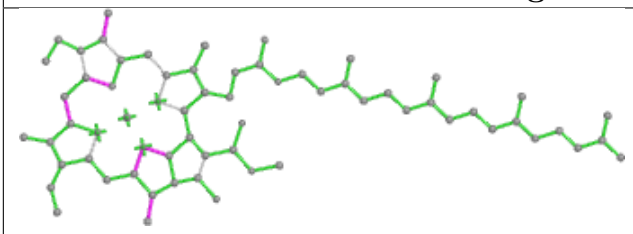


Rings

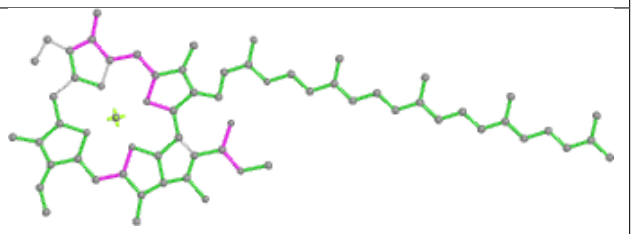
Ligand CLA a 832	
	
Bond lengths	Bond angles
	
Torsions	Rings

Ligand CLA b 840	
	
Bond lengths	Bond angles
	
Torsions	Rings

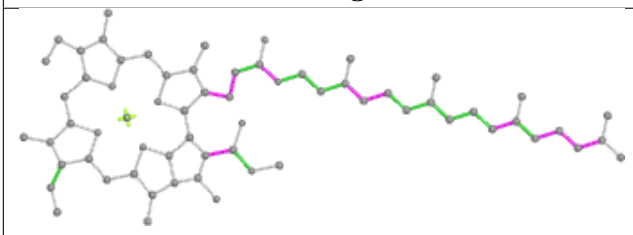
Ligand CLA b 834



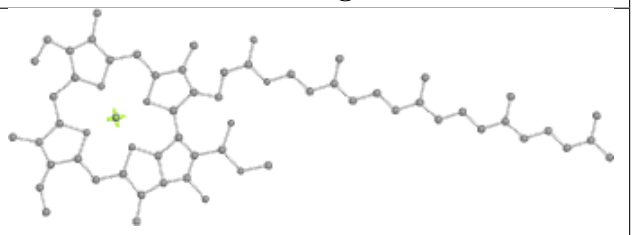
Bond lengths



Bond angles

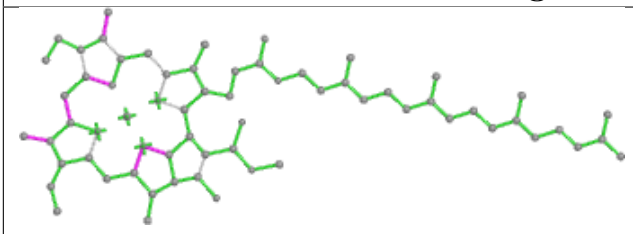


Torsions

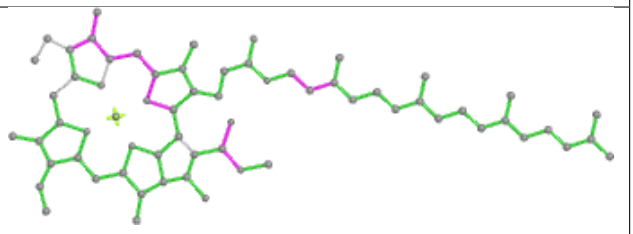


Rings

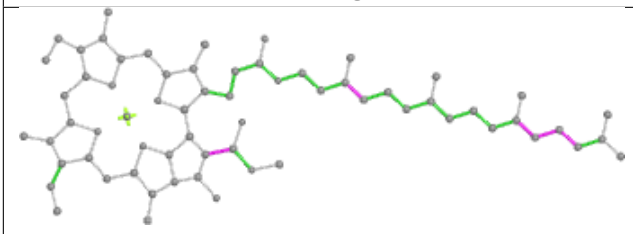
Ligand CLA a 828



Bond lengths



Bond angles



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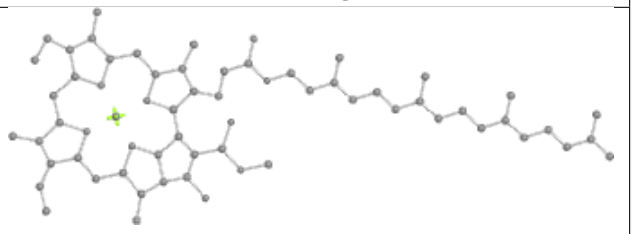
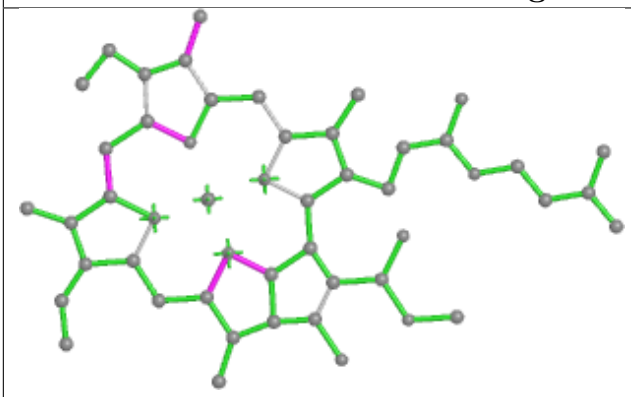
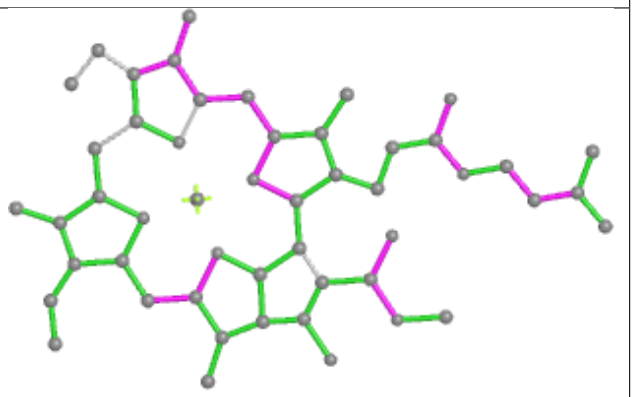


Rings

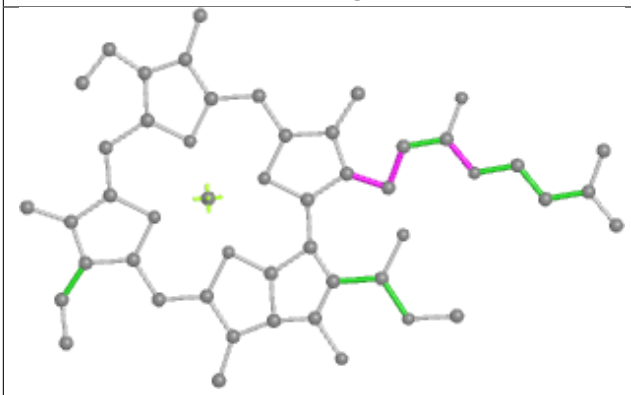
Ligand CLA 3 311



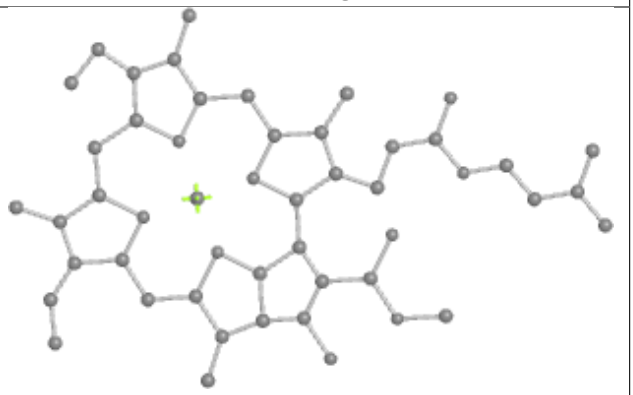
Bond lengths



Bond angles

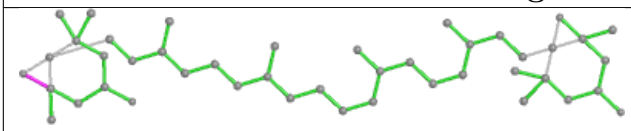


Torsions

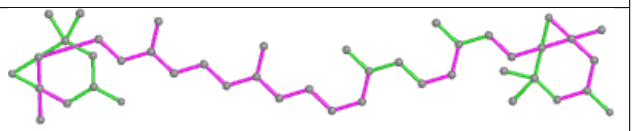


Rings

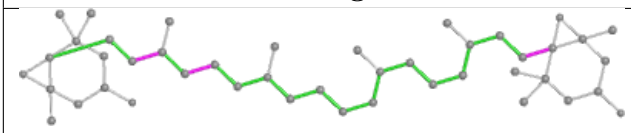
Ligand XAT 4 301



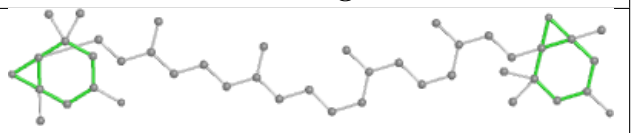
Bond lengths



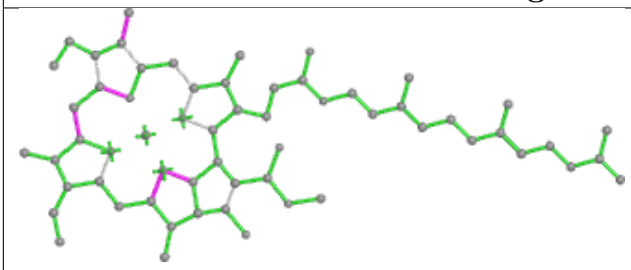
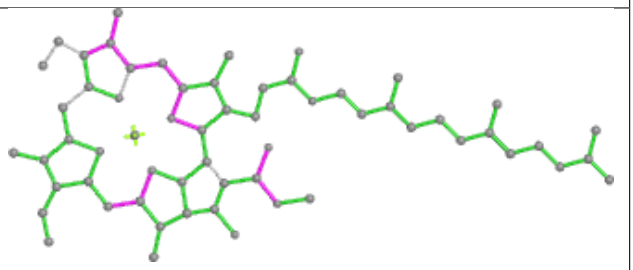
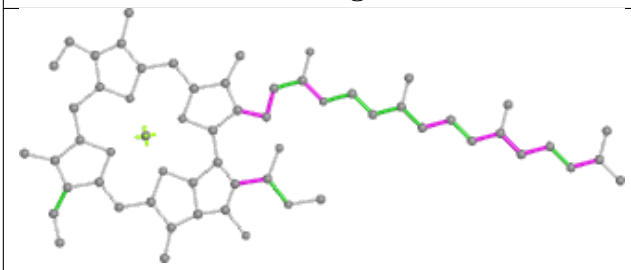
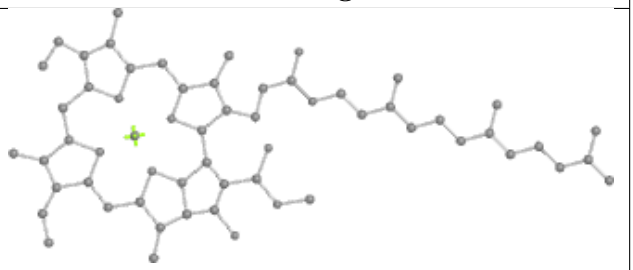
Bond angles

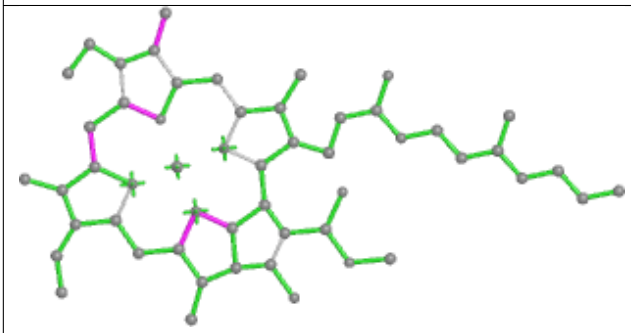
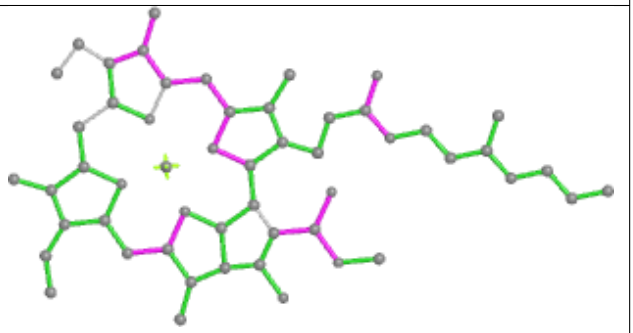
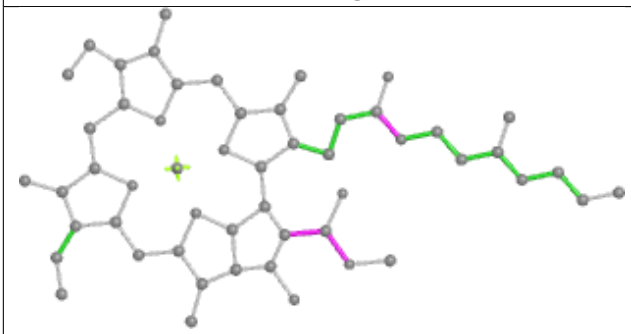
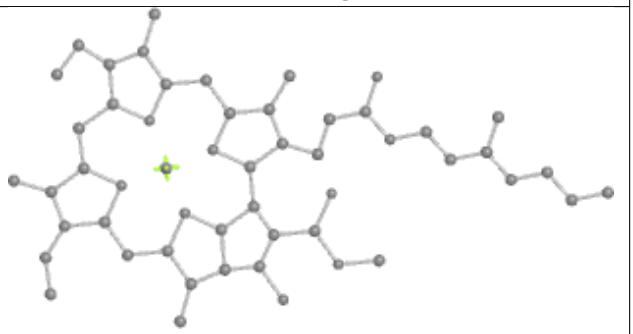


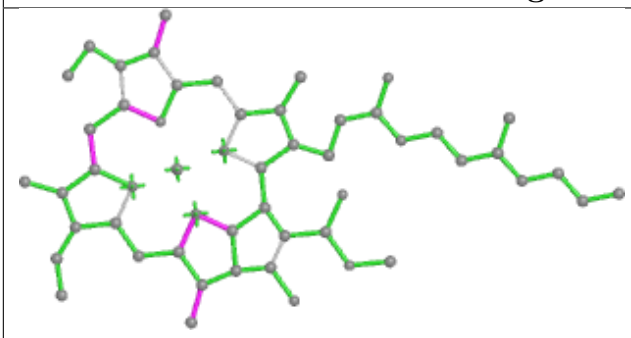
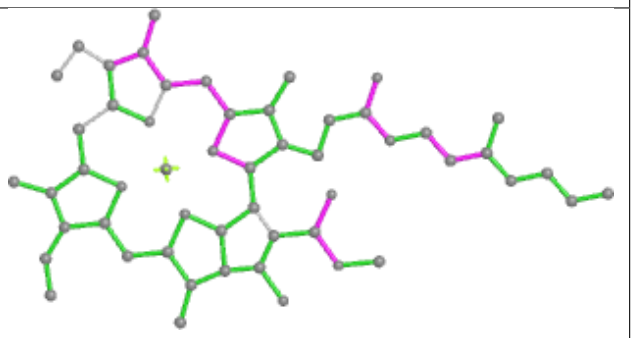
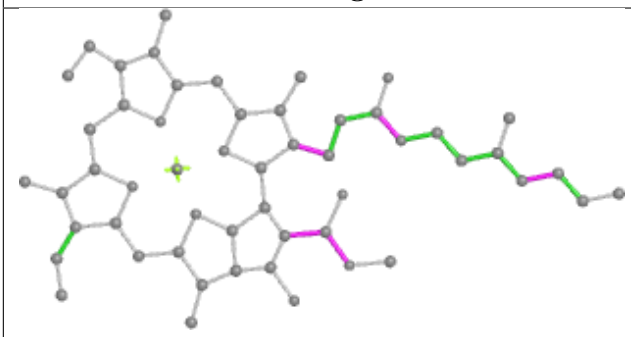
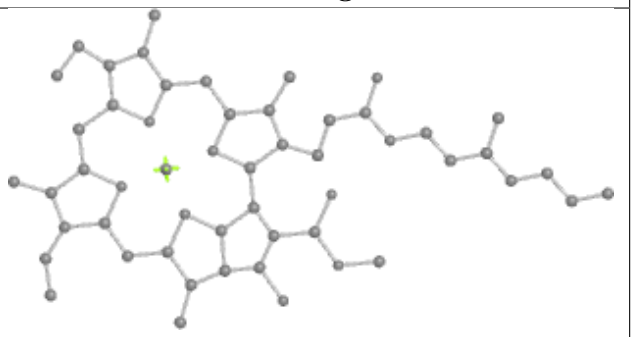
Torsions

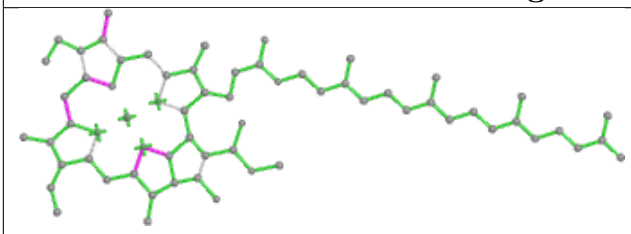
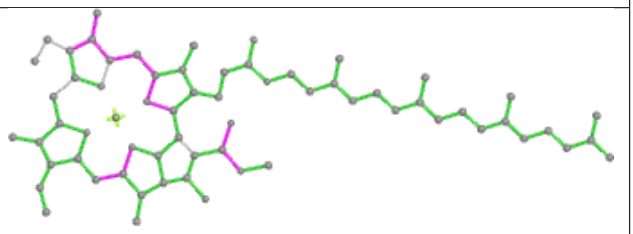
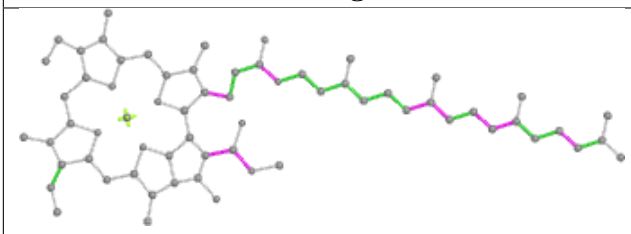
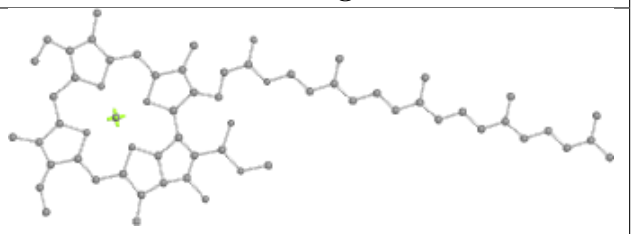


Rings

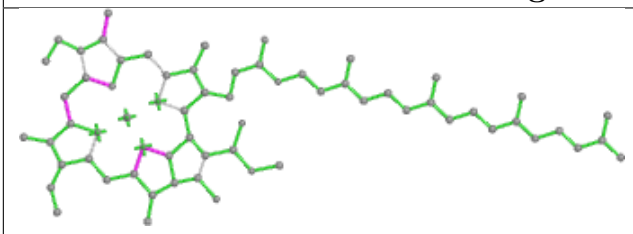
Ligand CLA b 819	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand CLA 1 311	
 Bond lengths	 Bond angles
 Torsions	 Rings

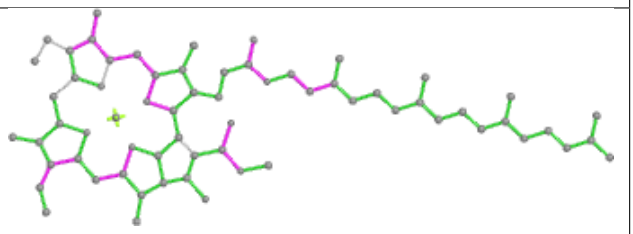
Ligand CLA b 824	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand CLA b 806	
 Bond lengths	 Bond angles
 Torsions	 Rings

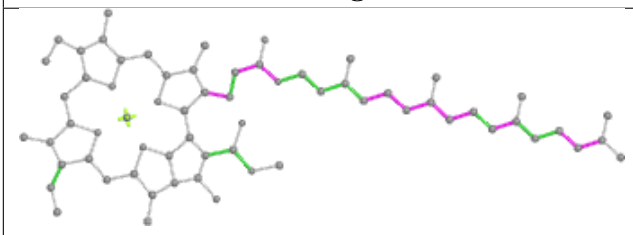
Ligand CLA 1 306



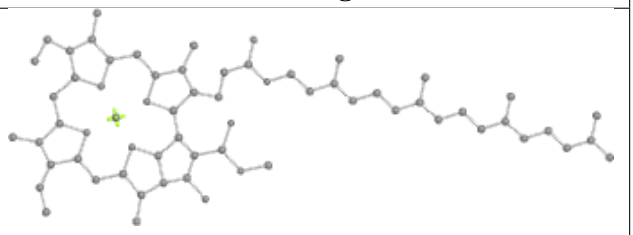
Bond lengths



Bond angles

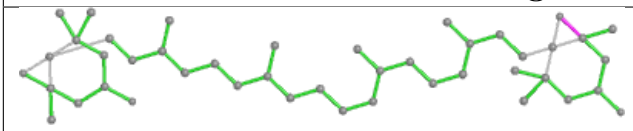


Torsions

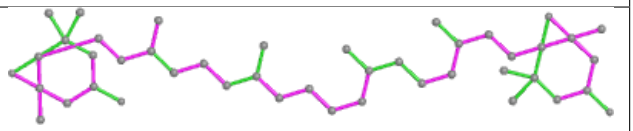


Rings

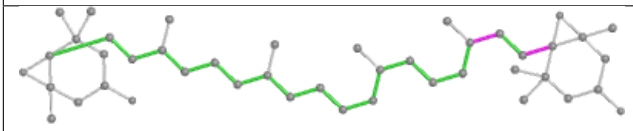
Ligand XAT 4 303



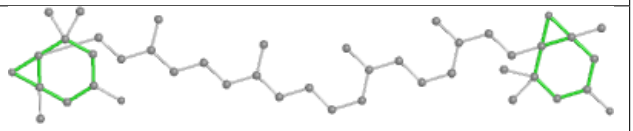
Bond lengths



Bond angles

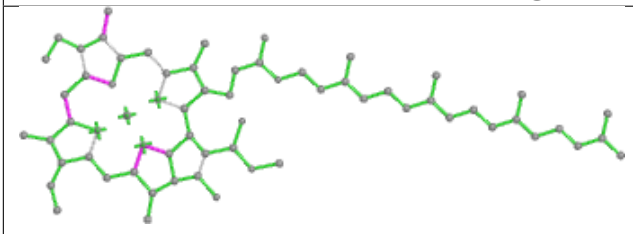


Torsions

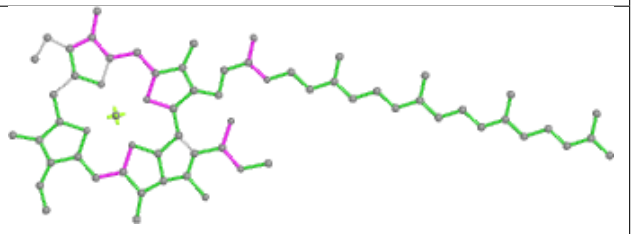


Rings

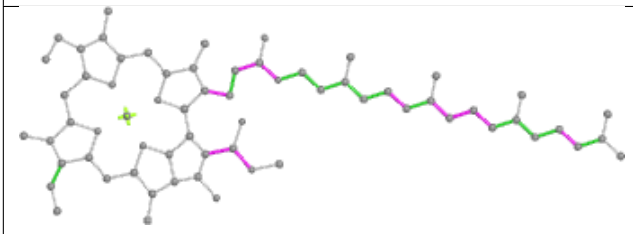
Ligand CLA a 854



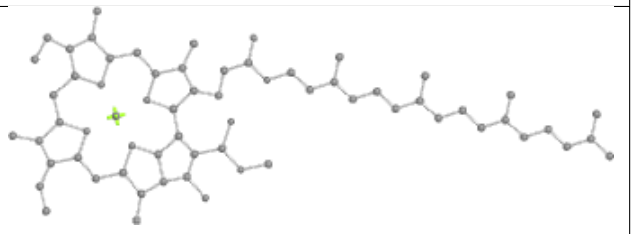
Bond lengths



Bond angles

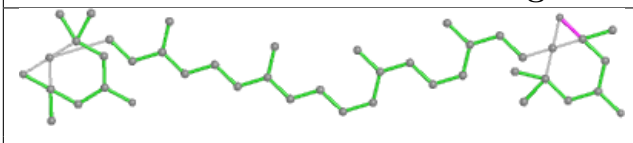


Torsions

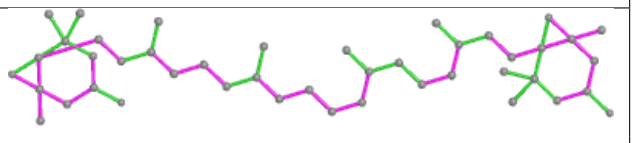


Rings

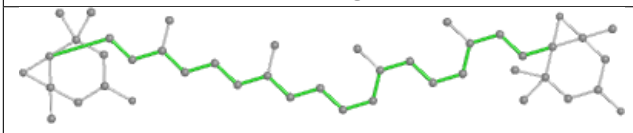
Ligand XAT 1 302



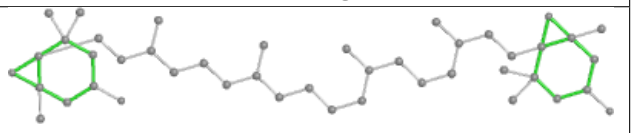
Bond lengths



Bond angles

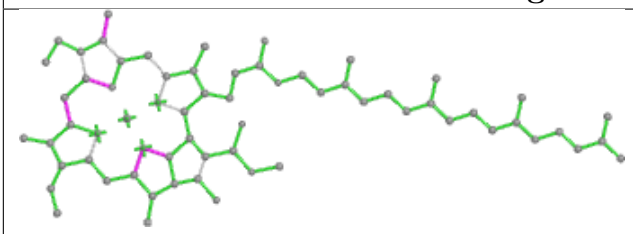


Torsions

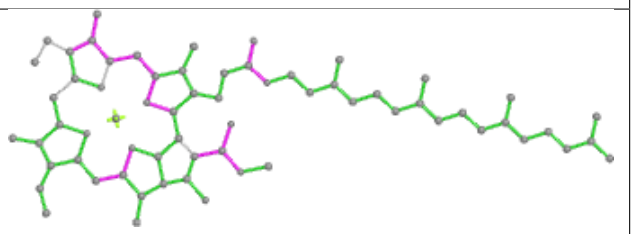


Rings

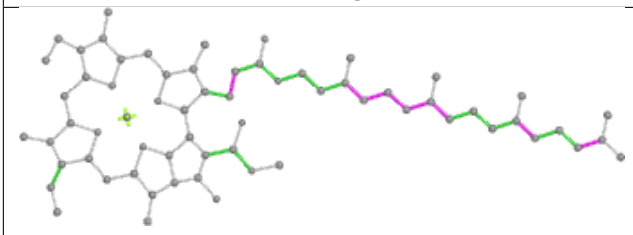
Ligand CLA b 808



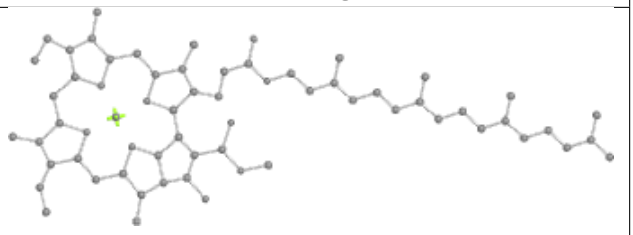
Bond lengths



Bond angles

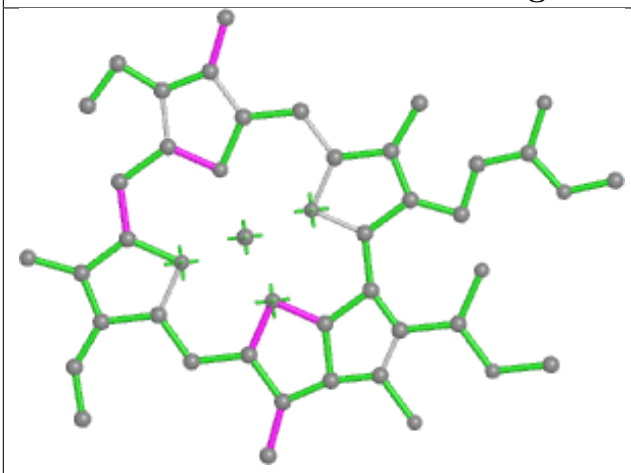


Torsions

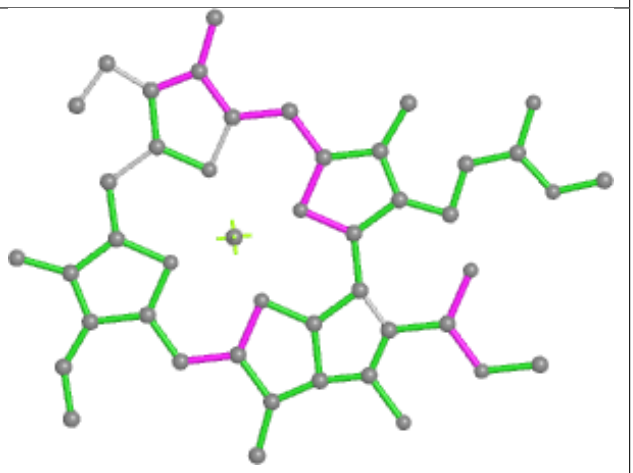


Rings

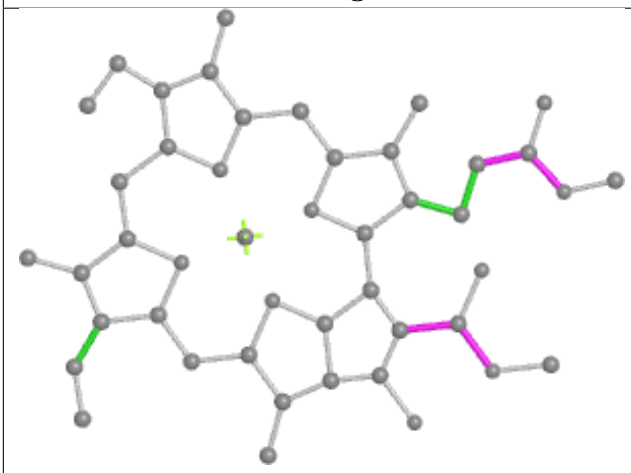
Ligand CLA 1 309



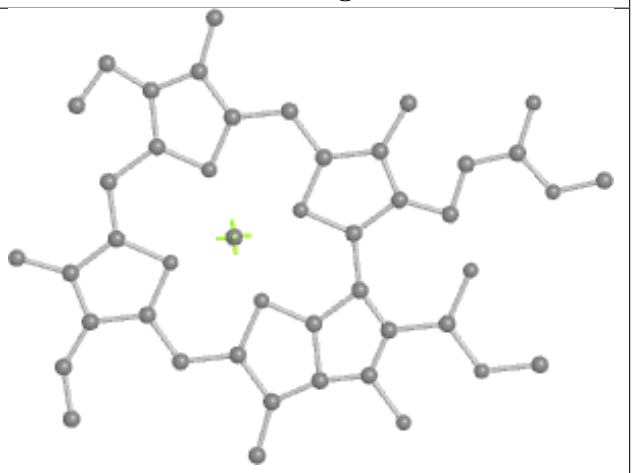
Bond lengths



Bond angles

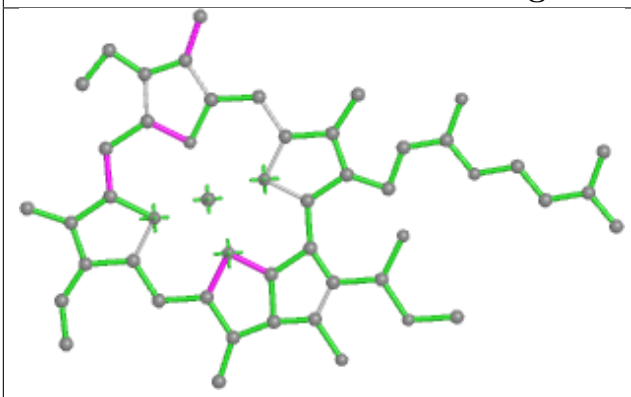


Torsions

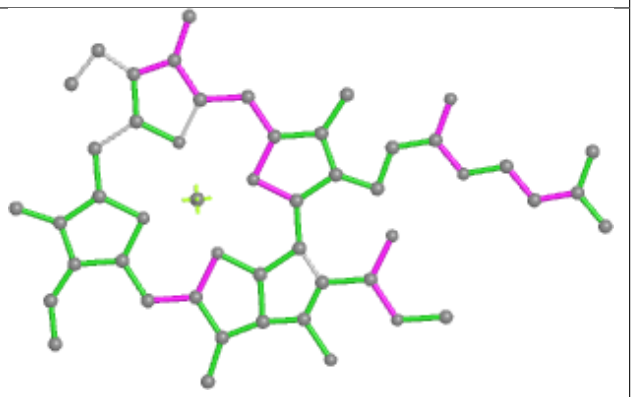


Rings

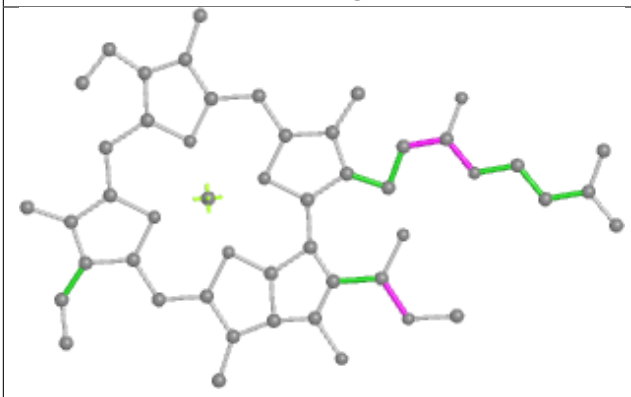
Ligand CLA a 836



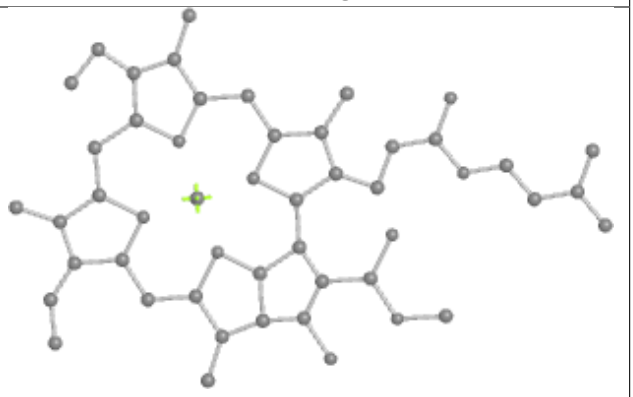
Bond lengths



Bond angles



Torsions



Rings

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.

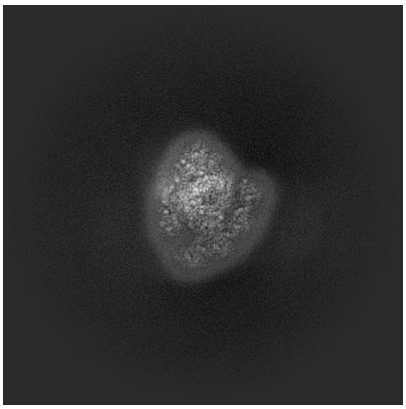
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-60287. These allow visual inspection of the internal detail of the map and identification of artifacts.

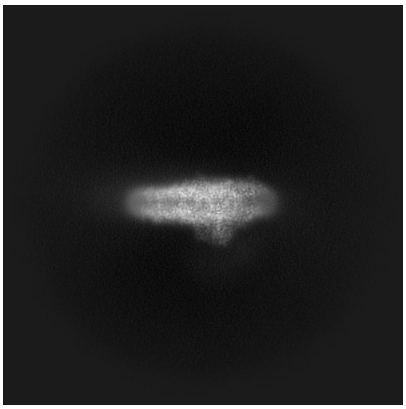
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

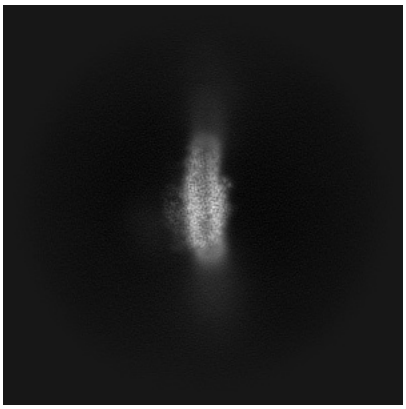
6.1.1 Primary map



X

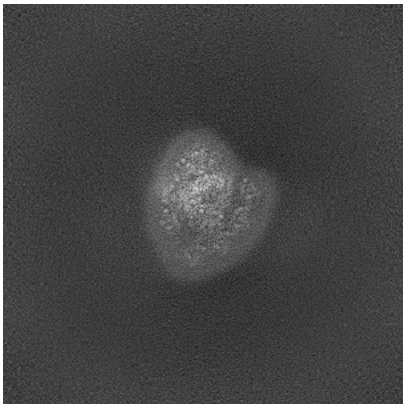


Y

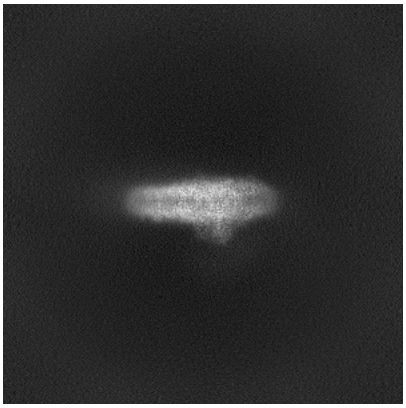


Z

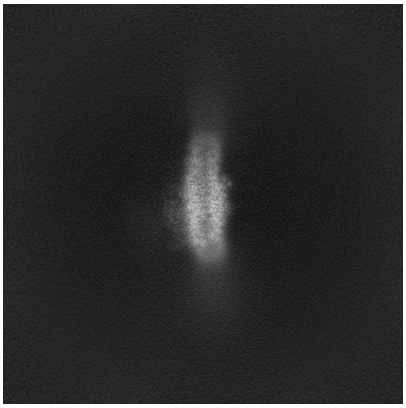
6.1.2 Raw map



X



Y

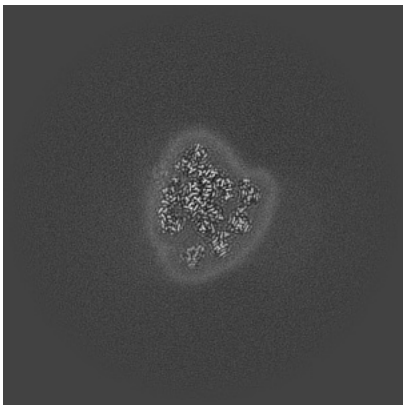


Z

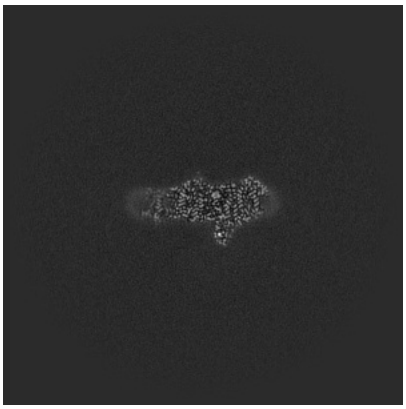
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

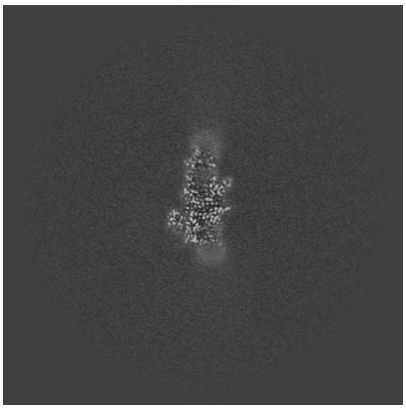
6.2.1 Primary map



X Index: 256

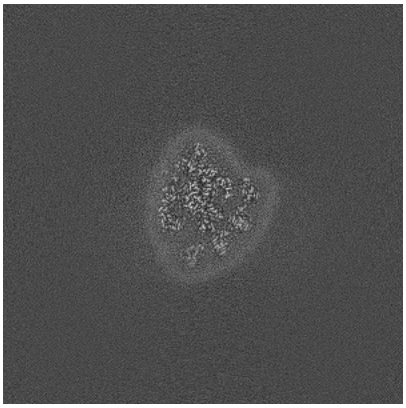


Y Index: 256

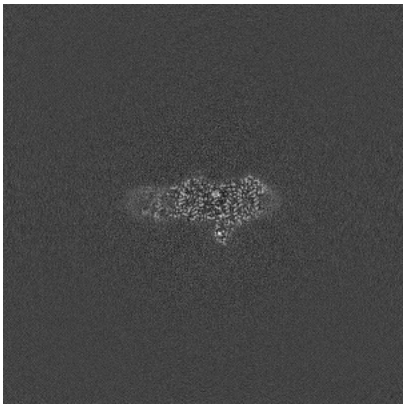


Z Index: 256

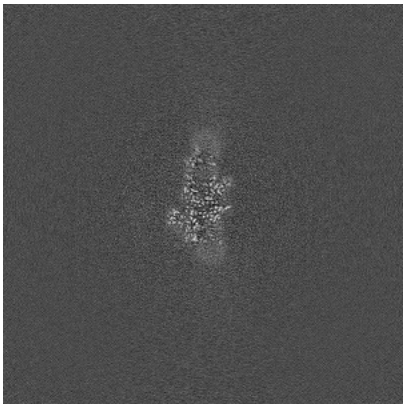
6.2.2 Raw map



X Index: 256



Y Index: 256

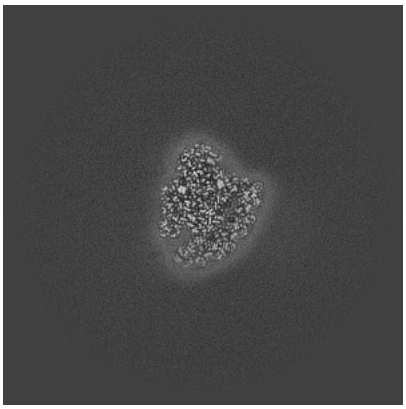


Z Index: 256

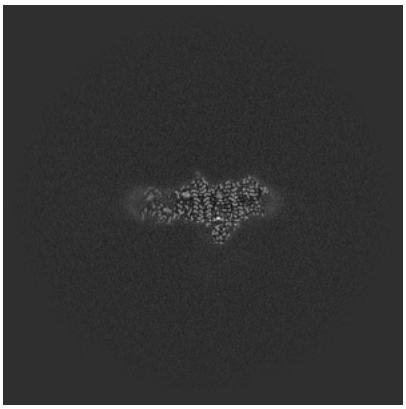
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

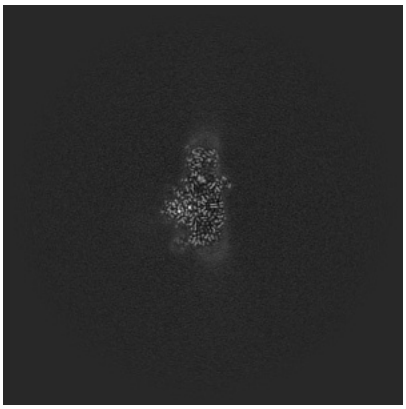
6.3.1 Primary map



X Index: 246

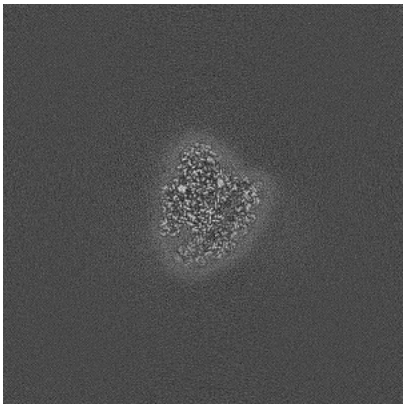


Y Index: 252

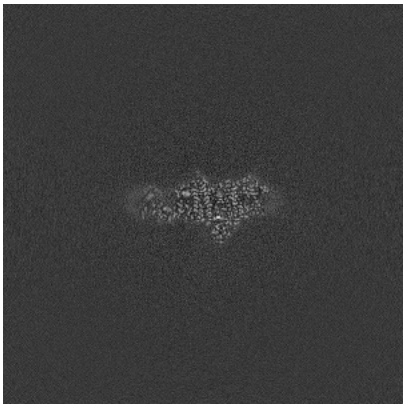


Z Index: 275

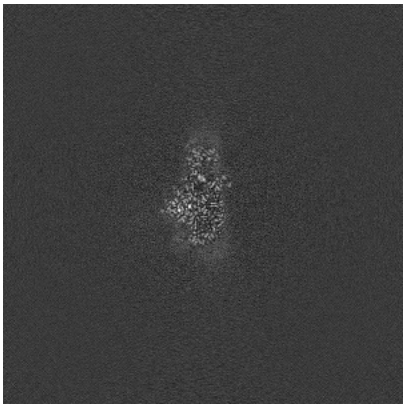
6.3.2 Raw map



X Index: 246



Y Index: 252

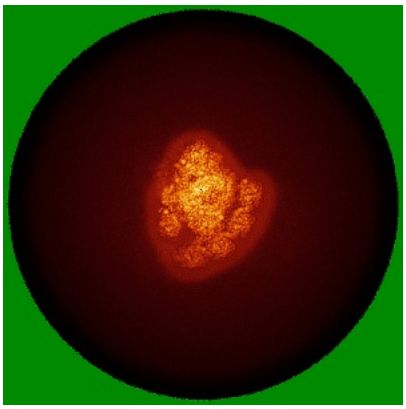


Z Index: 275

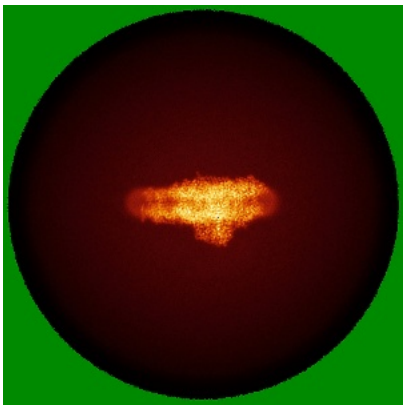
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

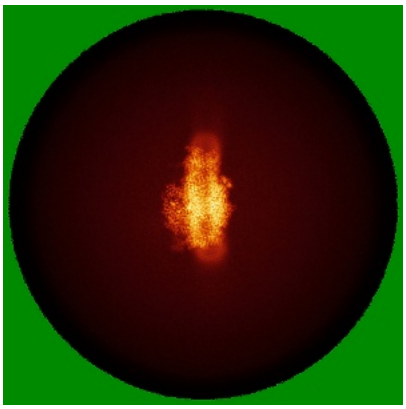
6.4.1 Primary map



X

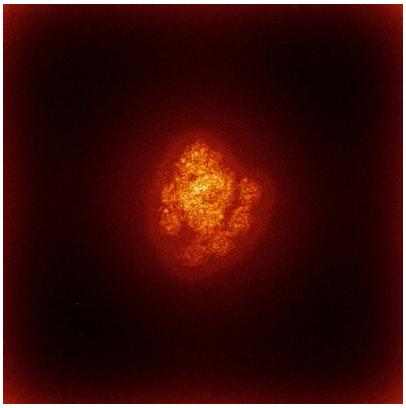


Y

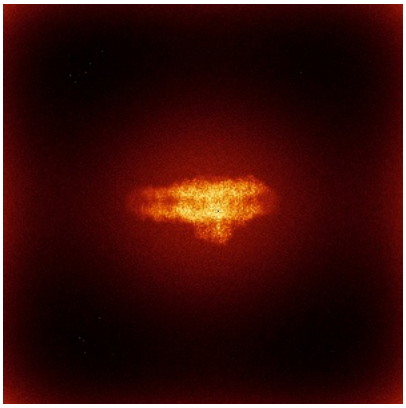


Z

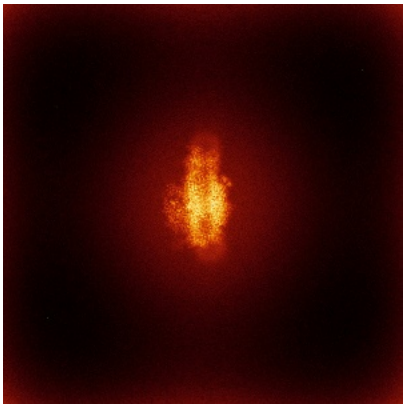
6.4.2 Raw map



X



Y



Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.367. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map

X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

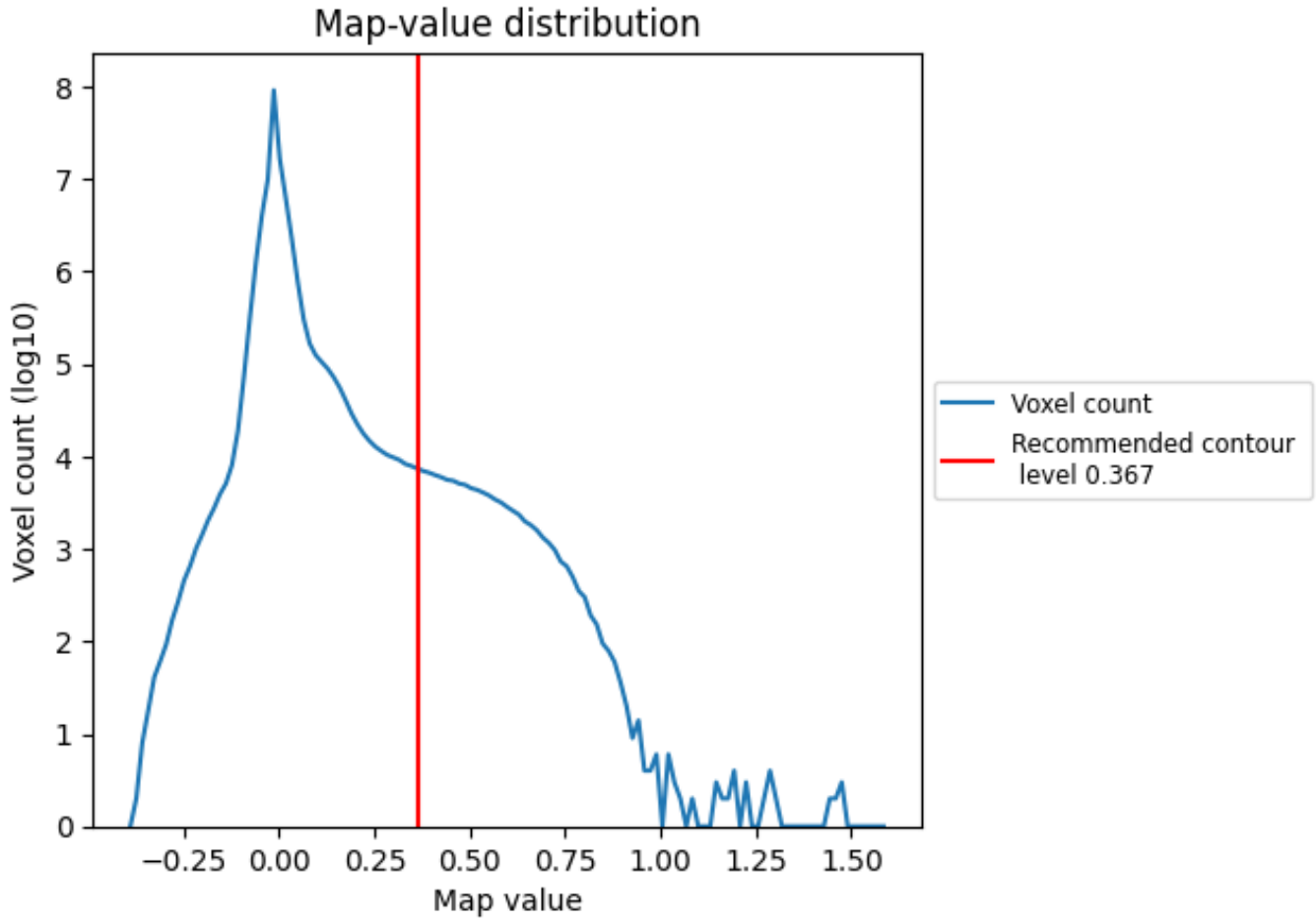
6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

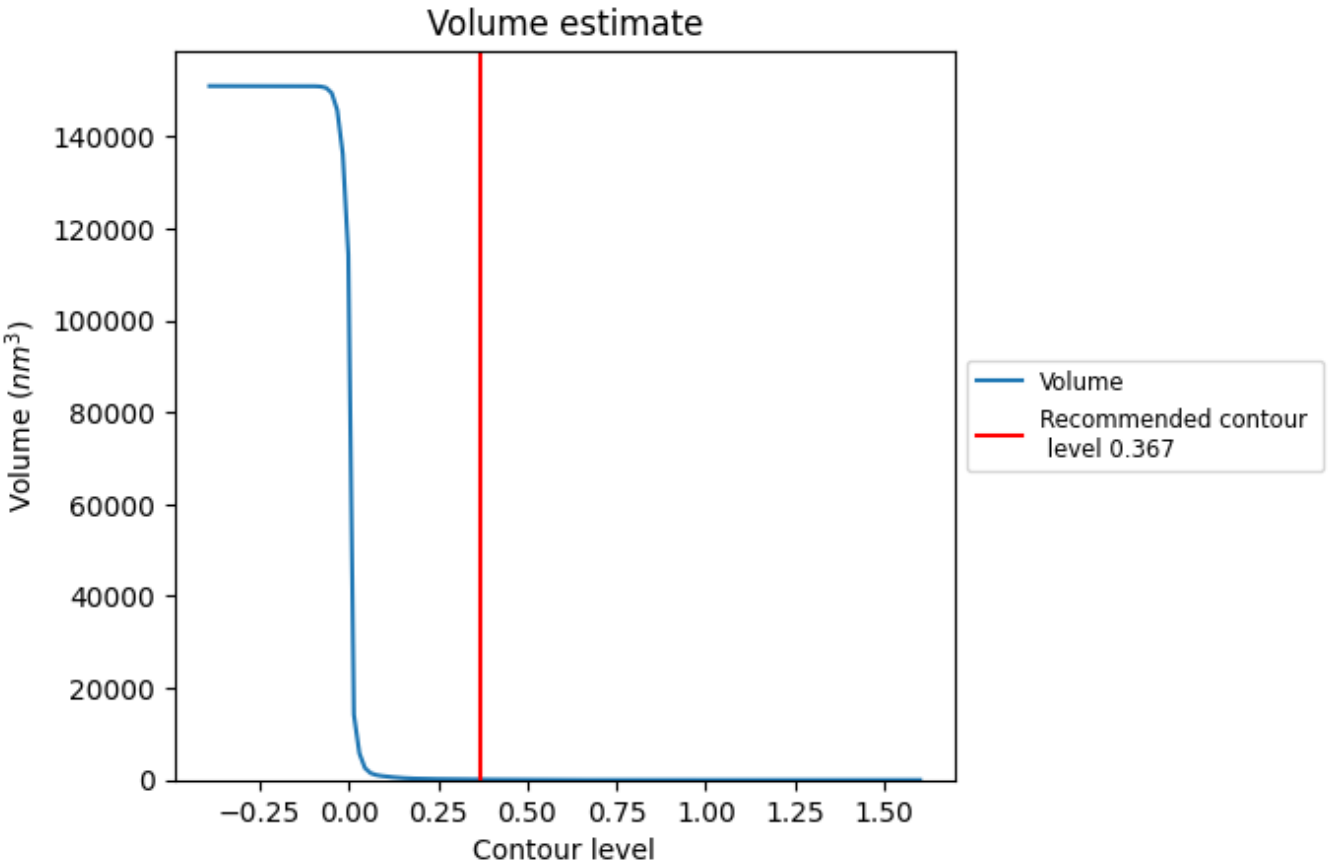
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

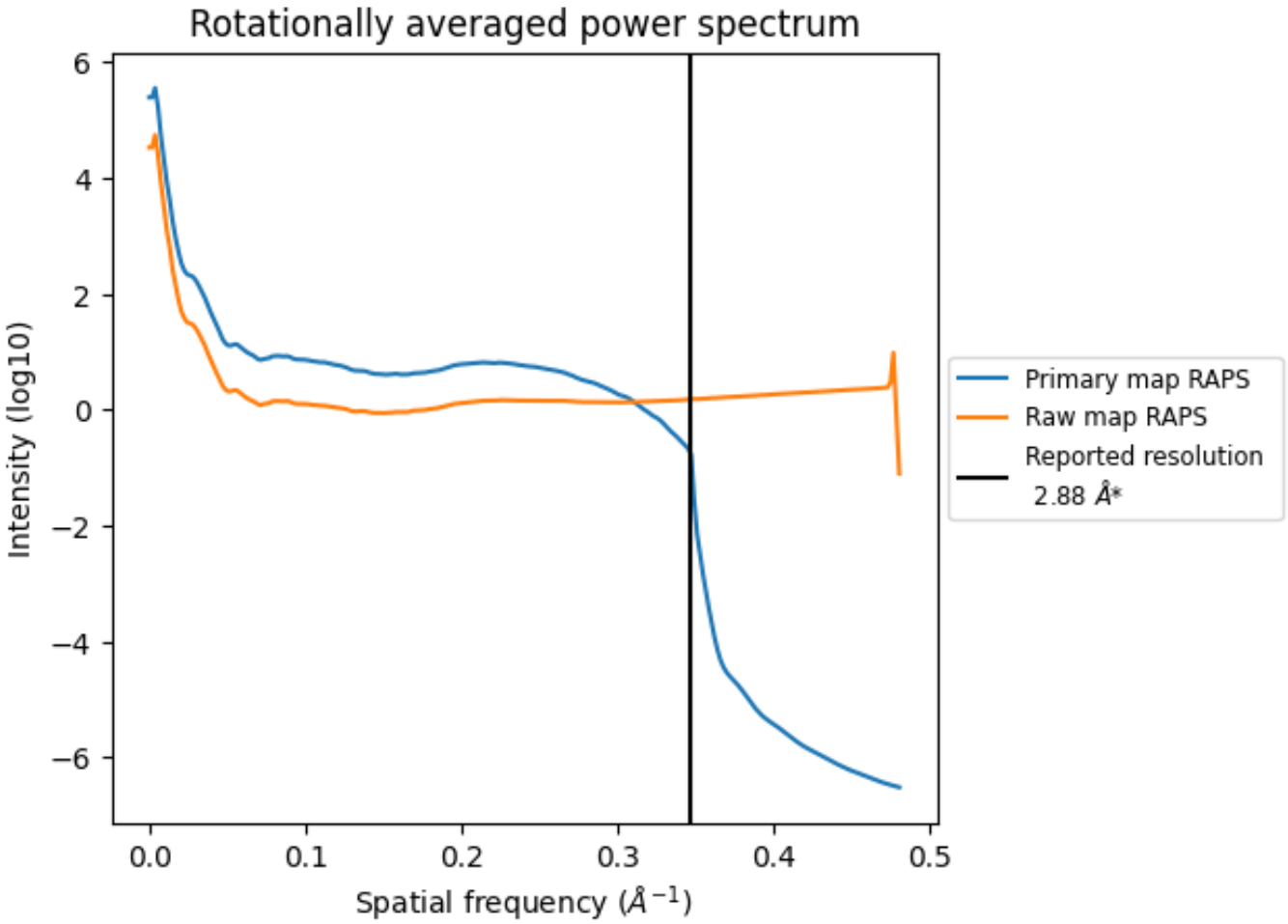
7.2 Volume estimate (i)



The volume at the recommended contour level is 107 nm^3; this corresponds to an approximate mass of 97 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)

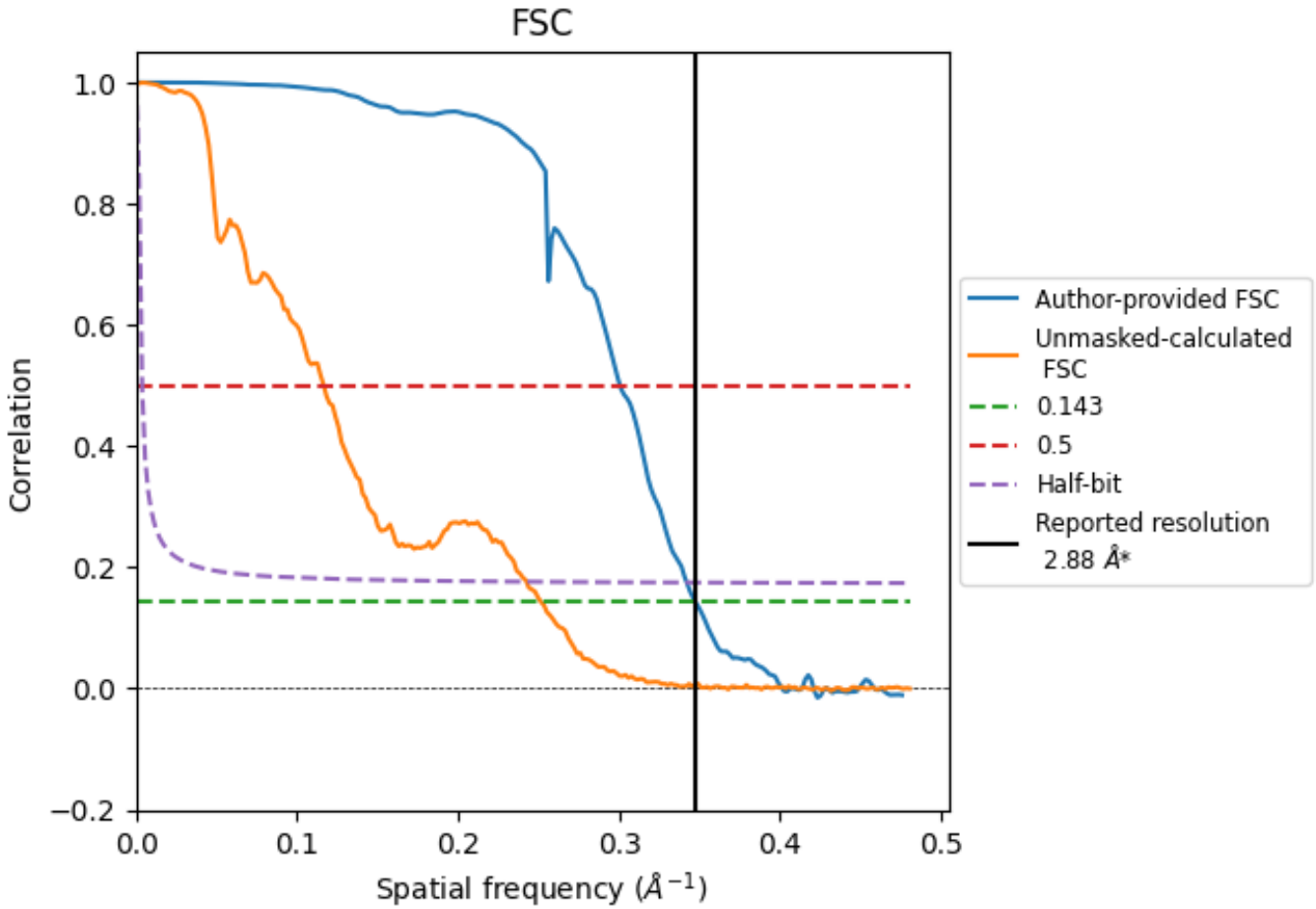


*Reported resolution corresponds to spatial frequency of 0.347 Å^{-1}

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.347 Å^{-1}

8.2 Resolution estimates (i)

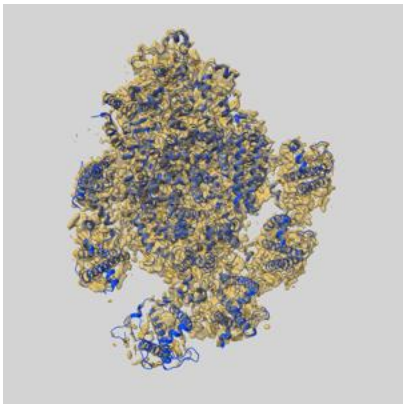
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.88	-	-
Author-provided FSC curve	2.88	3.32	2.92
Unmasked-calculated*	3.98	8.57	4.12

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.98 differs from the reported value 2.88 by more than 10 %

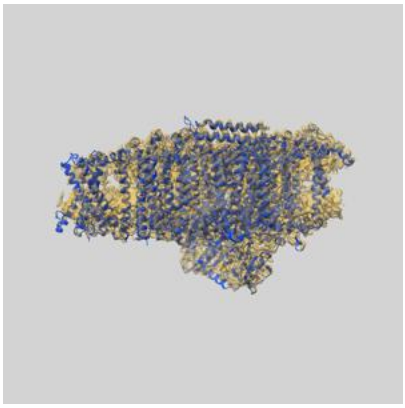
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-60287 and PDB model 8ZOB. Per-residue inclusion information can be found in section 3 on page 26.

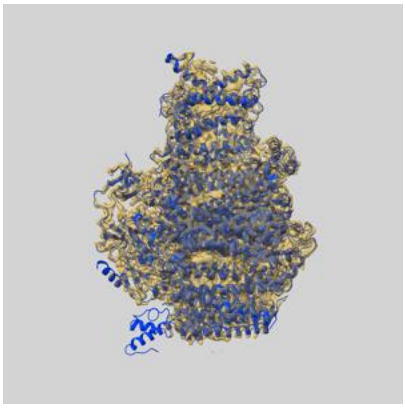
9.1 Map-model overlay



X



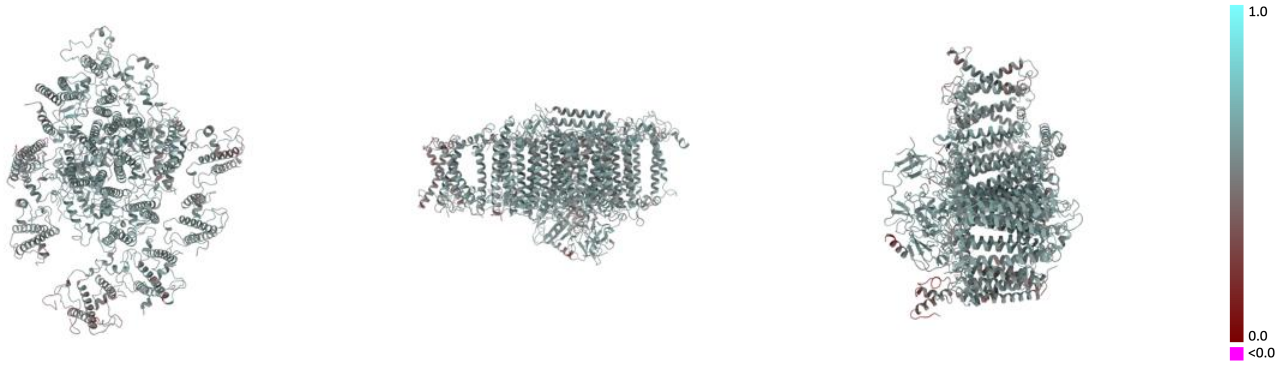
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.367 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

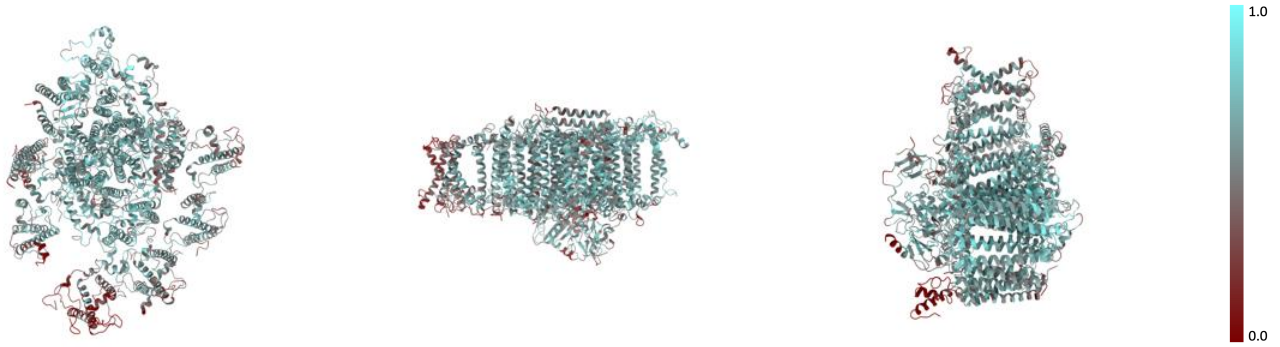
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

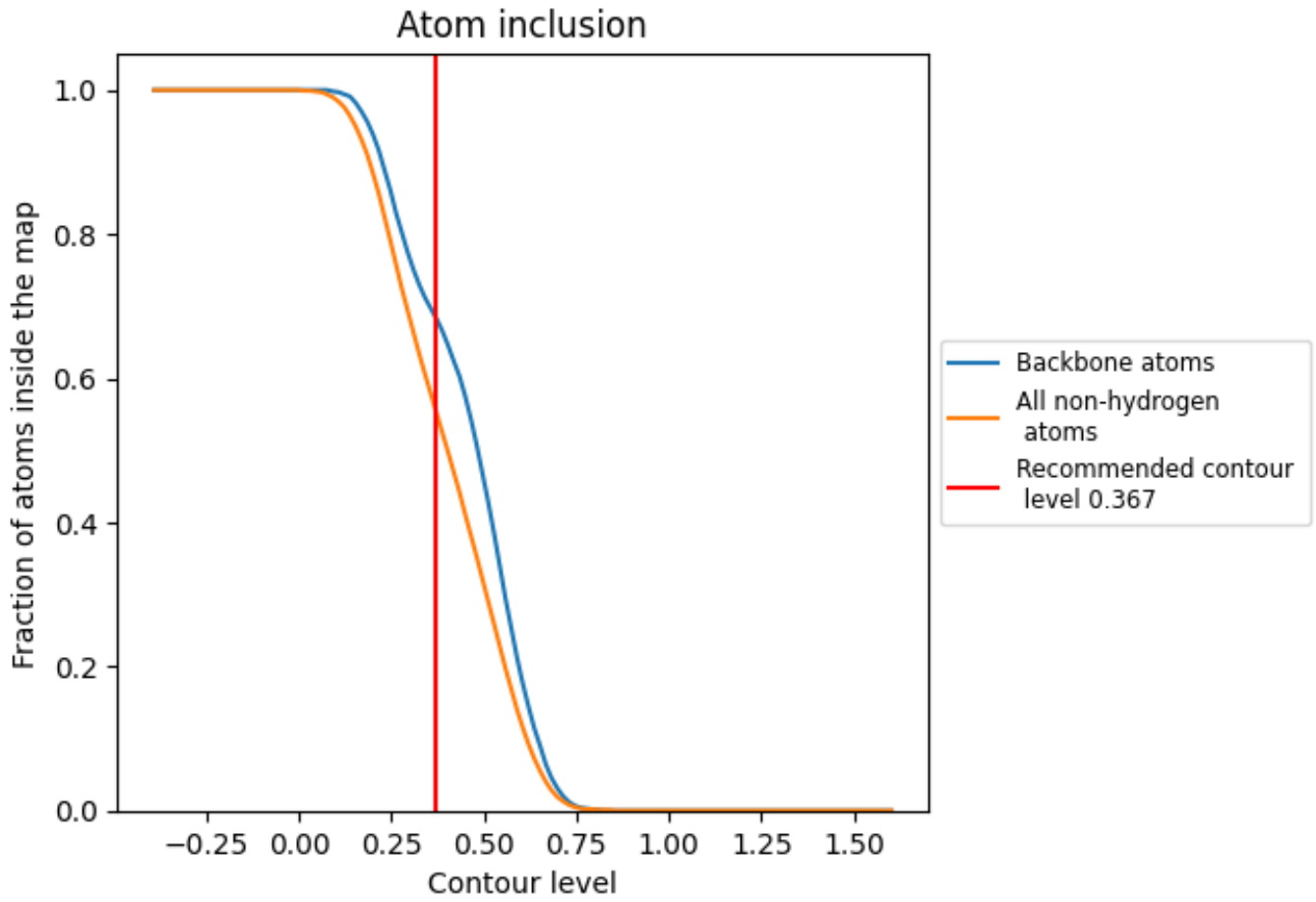
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.367).

9.4 Atom inclusion (i)



At the recommended contour level, 69% of all backbone atoms, 56% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.367) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5610	0.5480
1	0.5230	0.5330
2	0.2340	0.4590
3	0.5010	0.5440
4	0.5250	0.5390
5	0.4910	0.5200
a	0.6480	0.5800
b	0.6240	0.5620
c	0.6960	0.5620
d	0.5800	0.5580
e	0.5590	0.5580
f	0.5440	0.5390
g	0.2620	0.4280
i	0.4210	0.5210
j	0.5440	0.5650
l	0.5290	0.5250
m	0.4160	0.4900