



wwPDB EM Validation Summary Report ⓘ

Feb 16, 2026 – 05:28 AM JST

PDB ID : 9K7V / pdb_00009k7v
EMDB ID : EMD-62153
Title : Structural insights into photosystem II supercomplex of a siphonous green algae *Bryopsis corticulans* from intertidal zone
Authors : Liu, X.Y.; Wang, W.D.
Deposited on : 2024-10-24
Resolution : 3.07 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:

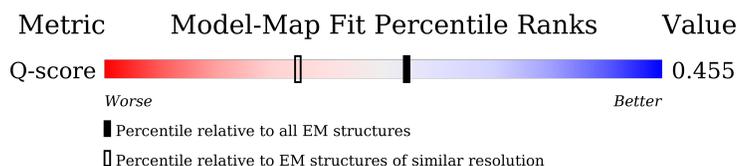
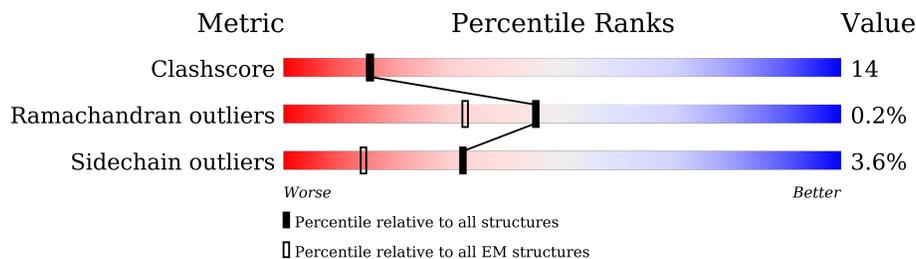
EMDB validation analysis : 0.0.1.dev131
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4-5-2 with Phenix2.0
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive 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) : 2.48

1 Overall quality at a glance

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

The reported resolution of this entry is 3.07 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	13977 (2.57 - 3.57)

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 $\leq 5\%$. 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	Z	62	
1	z	62	
2	E	82	
2	e	82	

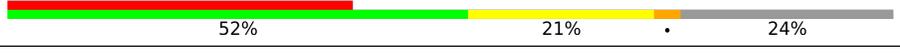
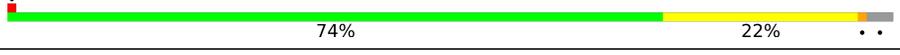
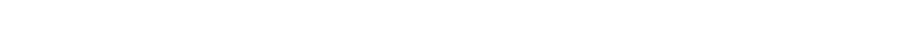
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Mol	Chain	Length	Quality of chain
3	H	75	64% 27% 9% 5%
3	h	75	63% 28% 9% 5%
4	I	36	83% 11% 6%
4	i	36	83% 11% 6%
5	K	43	60% 23% 14% .
5	k	43	72% 14% 14%
6	L	38	66% 26% 5% .
6	l	38	63% 32% . .
7	M	33	61% 30% 9% 9%
7	m	33	58% 30% . 9%
8	R	267	53% 29% . 16%
8	r	267	58% 24% . 16%
9	F	42	55% 17% . 26%
9	f	42	55% 17% . 26%
10	1	212	58% 30% .
10	4	212	73% 25% .
11	2	256	66% 20% 14%
11	5	256	65% 21% 14%
12	3	254	54% 23% . 17%
12	6	254	58% 26% . 14%
12	7	254	56% 27% . 14%
12	9	254	86% 31% . 14%
12	p	254	55% 27% . 14%
12	u	254	86% 32% . 14%
13	S	308	51% 27% . 19%

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Mol	Chain	Length	Quality of chain
13	s	308	
14	X	109	
14	x	109	
15	V	33	
15	v	33	
16	T	31	
16	t	31	
17	8	280	
17	G	280	
17	N	280	
17	Y	280	
17	g	280	
17	n	280	
17	q	280	
17	y	280	
18	B	508	
18	b	508	
19	A	327	
19	a	327	
20	C	461	
20	c	461	
21	D	352	
21	d	352	
22	W	118	
22	w	118	

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
24	CHL	1	304	X	-	-	-
24	CHL	1	305	X	-	-	-
24	CHL	1	308	X	-	-	-
24	CHL	1	309	X	-	-	-
24	CHL	1	310	X	-	-	-
24	CHL	1	311	X	-	-	-
24	CHL	1	312	X	-	-	-
24	CHL	1	317	X	-	-	-
24	CHL	2	305	X	-	-	-
24	CHL	2	306	X	-	-	-
24	CHL	2	309	X	-	-	-
24	CHL	2	310	X	-	-	-
24	CHL	2	311	X	-	-	-
24	CHL	2	312	X	-	-	-
24	CHL	2	313	X	-	-	-
24	CHL	2	318	X	-	-	-
24	CHL	3	304	X	-	-	-
24	CHL	3	305	X	-	-	-
24	CHL	3	308	X	-	-	-
24	CHL	3	309	X	-	-	-
24	CHL	3	310	X	-	-	-
24	CHL	3	311	X	-	-	-
24	CHL	3	312	X	-	-	-
24	CHL	3	317	X	-	-	-
24	CHL	4	304	X	-	-	-
24	CHL	4	305	X	-	-	-
24	CHL	4	308	X	-	-	-
24	CHL	4	309	X	-	-	-
24	CHL	4	310	X	-	-	-
24	CHL	4	311	X	-	-	-
24	CHL	4	312	X	-	-	-
24	CHL	4	317	X	-	-	-
24	CHL	5	305	X	-	-	-
24	CHL	5	306	X	-	-	-
24	CHL	5	309	X	-	-	-
24	CHL	5	310	X	-	-	-
24	CHL	5	311	X	-	-	-
24	CHL	5	312	X	-	-	-
24	CHL	5	313	X	-	-	-
24	CHL	5	318	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
24	CHL	6	304	X	-	-	-
24	CHL	6	305	X	-	-	-
24	CHL	6	308	X	-	-	-
24	CHL	6	309	X	-	-	-
24	CHL	6	310	X	-	-	-
24	CHL	6	311	X	-	-	-
24	CHL	6	312	X	-	-	-
24	CHL	6	317	X	-	-	-
24	CHL	7	305	X	-	-	-
24	CHL	7	306	X	-	-	-
24	CHL	7	309	X	-	-	-
24	CHL	7	310	X	-	-	-
24	CHL	7	311	X	-	-	-
24	CHL	7	312	X	-	-	-
24	CHL	7	313	X	-	-	-
24	CHL	7	318	X	-	-	-
24	CHL	8	303	X	-	-	-
24	CHL	8	304	X	-	-	-
24	CHL	8	307	X	-	-	-
24	CHL	8	308	X	-	-	-
24	CHL	8	309	X	-	-	-
24	CHL	8	310	X	-	-	-
24	CHL	8	315	X	-	-	-
24	CHL	9	304	X	-	-	-
24	CHL	9	305	X	-	-	-
24	CHL	9	308	X	-	-	-
24	CHL	9	309	X	-	-	-
24	CHL	9	310	X	-	-	-
24	CHL	9	311	X	-	-	-
24	CHL	9	312	X	-	-	-
24	CHL	9	317	X	-	-	-
24	CHL	G	305	X	-	-	-
24	CHL	G	306	X	-	-	-
24	CHL	G	309	X	-	-	-
24	CHL	G	310	X	-	-	-
24	CHL	G	311	X	-	-	-
24	CHL	G	312	X	-	-	-
24	CHL	G	313	X	-	-	-
24	CHL	G	318	X	-	-	-
24	CHL	N	304	X	-	-	-
24	CHL	N	305	X	-	-	-
24	CHL	N	308	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
24	CHL	N	309	X	-	-	-
24	CHL	N	310	X	-	-	-
24	CHL	N	311	X	-	-	-
24	CHL	N	312	X	-	-	-
24	CHL	N	317	X	-	-	-
24	CHL	R	601	X	-	-	-
24	CHL	R	602	X	-	-	-
24	CHL	R	605	X	-	-	-
24	CHL	R	606	X	-	-	-
24	CHL	R	607	X	-	-	-
24	CHL	R	608	X	-	-	-
24	CHL	S	601	X	-	-	-
24	CHL	S	602	X	-	-	-
24	CHL	S	605	X	-	-	-
24	CHL	S	606	X	-	-	-
24	CHL	S	607	X	-	-	-
24	CHL	S	608	X	-	-	-
24	CHL	S	613	X	-	-	-
24	CHL	Y	304	X	-	-	-
24	CHL	Y	305	X	-	-	-
24	CHL	Y	308	X	-	-	-
24	CHL	Y	309	X	-	-	-
24	CHL	Y	310	X	-	-	-
24	CHL	Y	311	X	-	-	-
24	CHL	Y	312	X	-	-	-
24	CHL	Y	317	X	-	-	-
24	CHL	Y	319	X	-	-	-
24	CHL	g	305	X	-	-	-
24	CHL	g	306	X	-	-	-
24	CHL	g	309	X	-	-	-
24	CHL	g	310	X	-	-	-
24	CHL	g	311	X	-	-	-
24	CHL	g	312	X	-	-	-
24	CHL	g	313	X	-	-	-
24	CHL	g	318	X	-	-	-
24	CHL	n	304	X	-	-	-
24	CHL	n	305	X	-	-	-
24	CHL	n	308	X	-	-	-
24	CHL	n	309	X	-	-	-
24	CHL	n	310	X	-	-	-
24	CHL	n	311	X	-	-	-
24	CHL	n	312	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
24	CHL	n	317	X	-	-	-
24	CHL	p	305	X	-	-	-
24	CHL	p	306	X	-	-	-
24	CHL	p	309	X	-	-	-
24	CHL	p	310	X	-	-	-
24	CHL	p	311	X	-	-	-
24	CHL	p	312	X	-	-	-
24	CHL	p	313	X	-	-	-
24	CHL	p	318	X	-	-	-
24	CHL	q	303	X	-	-	-
24	CHL	q	304	X	-	-	-
24	CHL	q	307	X	-	-	-
24	CHL	q	308	X	-	-	-
24	CHL	q	309	X	-	-	-
24	CHL	q	310	X	-	-	-
24	CHL	q	311	X	-	-	-
24	CHL	q	316	X	-	-	-
24	CHL	r	302	X	-	-	-
24	CHL	r	303	X	-	-	-
24	CHL	r	306	X	-	-	-
24	CHL	r	307	X	-	-	-
24	CHL	r	308	X	-	-	-
24	CHL	r	309	X	-	-	-
24	CHL	s	402	X	-	-	-
24	CHL	s	403	X	-	-	-
24	CHL	s	406	X	-	-	-
24	CHL	s	407	X	-	-	-
24	CHL	s	408	X	-	-	-
24	CHL	s	409	X	-	-	-
24	CHL	s	414	X	-	-	-
24	CHL	u	305	X	-	-	-
24	CHL	u	306	X	-	-	-
24	CHL	u	309	X	-	-	-
24	CHL	u	310	X	-	-	-
24	CHL	u	311	X	-	-	-
24	CHL	u	312	X	-	-	-
24	CHL	u	313	X	-	-	-
24	CHL	u	318	X	-	-	-
24	CHL	y	305	X	-	-	-
24	CHL	y	306	X	-	-	-
24	CHL	y	309	X	-	-	-
24	CHL	y	310	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
24	CHL	y	311	X	-	-	-
24	CHL	y	312	X	-	-	-
24	CHL	y	313	X	-	-	-
24	CHL	y	318	X	-	-	-
25	CLA	1	306	X	-	-	-
25	CLA	1	307	X	-	-	-
25	CLA	1	313	X	-	-	-
25	CLA	1	314	X	-	-	-
25	CLA	1	315	X	-	-	-
25	CLA	1	316	X	-	-	-
25	CLA	2	307	X	-	-	-
25	CLA	2	308	X	-	-	-
25	CLA	2	314	X	-	-	-
25	CLA	2	315	X	-	-	-
25	CLA	2	316	X	-	-	-
25	CLA	2	317	X	-	-	-
25	CLA	3	306	X	-	-	-
25	CLA	3	307	X	-	-	-
25	CLA	3	313	X	-	-	-
25	CLA	3	314	X	-	-	-
25	CLA	3	315	X	-	-	-
25	CLA	3	316	X	-	-	-
25	CLA	4	306	X	-	-	-
25	CLA	4	307	X	-	-	-
25	CLA	4	313	X	-	-	-
25	CLA	4	314	X	-	-	-
25	CLA	4	315	X	-	-	-
25	CLA	4	316	X	-	-	-
25	CLA	5	307	X	-	-	-
25	CLA	5	308	X	-	-	-
25	CLA	5	314	X	-	-	-
25	CLA	5	315	X	-	-	-
25	CLA	5	316	X	-	-	-
25	CLA	5	317	X	-	-	-
25	CLA	6	306	X	-	-	-
25	CLA	6	307	X	-	-	-
25	CLA	6	313	X	-	-	-
25	CLA	6	314	X	-	-	-
25	CLA	6	315	X	-	-	-
25	CLA	6	316	X	-	-	-
25	CLA	7	307	X	-	-	-
25	CLA	7	308	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
25	CLA	7	314	X	-	-	-
25	CLA	7	315	X	-	-	-
25	CLA	7	316	X	-	-	-
25	CLA	7	317	X	-	-	-
25	CLA	8	305	X	-	-	-
25	CLA	8	306	X	-	-	-
25	CLA	8	311	X	-	-	-
25	CLA	8	312	X	-	-	-
25	CLA	8	313	X	-	-	-
25	CLA	8	314	X	-	-	-
25	CLA	9	306	X	-	-	-
25	CLA	9	307	X	-	-	-
25	CLA	9	313	X	-	-	-
25	CLA	9	314	X	-	-	-
25	CLA	9	315	X	-	-	-
25	CLA	9	316	X	-	-	-
25	CLA	A	603	X	-	-	-
25	CLA	A	604	X	-	-	-
25	CLA	A	605	X	-	-	-
25	CLA	A	607	X	-	-	-
25	CLA	A	610	X	-	-	-
25	CLA	B	601	X	-	-	-
25	CLA	B	602	X	-	-	-
25	CLA	B	603	X	-	-	-
25	CLA	B	604	X	-	-	-
25	CLA	B	605	X	-	-	-
25	CLA	B	606	X	-	-	-
25	CLA	B	607	X	-	-	-
25	CLA	B	608	X	-	-	-
25	CLA	B	609	X	-	-	-
25	CLA	B	610	X	-	-	-
25	CLA	B	611	X	-	-	-
25	CLA	B	612	X	-	-	-
25	CLA	B	613	X	-	-	-
25	CLA	B	614	X	-	-	-
25	CLA	B	615	X	-	-	-
25	CLA	B	616	X	-	-	-
25	CLA	C	601	X	-	-	-
25	CLA	C	602	X	-	-	-
25	CLA	C	603	X	-	-	-
25	CLA	C	604	X	-	-	-
25	CLA	C	605	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
25	CLA	C	606	X	-	-	-
25	CLA	C	607	X	-	-	-
25	CLA	C	608	X	-	-	-
25	CLA	C	609	X	-	-	-
25	CLA	C	610	X	-	-	-
25	CLA	C	611	X	-	-	-
25	CLA	C	612	X	-	-	-
25	CLA	C	616	X	-	-	-
25	CLA	D	404	X	-	-	-
25	CLA	D	405	X	-	-	-
25	CLA	G	307	X	-	-	-
25	CLA	G	308	X	-	-	-
25	CLA	G	314	X	-	-	-
25	CLA	G	315	X	-	-	-
25	CLA	G	316	X	-	-	-
25	CLA	G	317	X	-	-	-
25	CLA	N	306	X	-	-	-
25	CLA	N	307	X	-	-	-
25	CLA	N	313	X	-	-	-
25	CLA	N	314	X	-	-	-
25	CLA	N	315	X	-	-	-
25	CLA	N	316	X	-	-	-
25	CLA	R	603	X	-	-	-
25	CLA	R	604	X	-	-	-
25	CLA	R	609	X	-	-	-
25	CLA	R	610	X	-	-	-
25	CLA	R	611	X	-	-	-
25	CLA	R	612	X	-	-	-
25	CLA	R	613	X	-	-	-
25	CLA	S	603	X	-	-	-
25	CLA	S	604	X	-	-	-
25	CLA	S	609	X	-	-	-
25	CLA	S	610	X	-	-	-
25	CLA	S	611	X	-	-	-
25	CLA	S	612	X	-	-	-
25	CLA	S	616	X	-	-	-
25	CLA	Y	306	X	-	-	-
25	CLA	Y	307	X	-	-	-
25	CLA	Y	313	X	-	-	-
25	CLA	Y	314	X	-	-	-
25	CLA	Y	315	X	-	-	-
25	CLA	Y	316	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
25	CLA	a	603	X	-	-	-
25	CLA	a	604	X	-	-	-
25	CLA	a	605	X	-	-	-
25	CLA	a	607	X	-	-	-
25	CLA	a	610	X	-	-	-
25	CLA	b	601	X	-	-	-
25	CLA	b	602	X	-	-	-
25	CLA	b	603	X	-	-	-
25	CLA	b	604	X	-	-	-
25	CLA	b	605	X	-	-	-
25	CLA	b	606	X	-	-	-
25	CLA	b	607	X	-	-	-
25	CLA	b	608	X	-	-	-
25	CLA	b	609	X	-	-	-
25	CLA	b	610	X	-	-	-
25	CLA	b	611	X	-	-	-
25	CLA	b	612	X	-	-	-
25	CLA	b	613	X	-	-	-
25	CLA	b	614	X	-	-	-
25	CLA	b	615	X	-	-	-
25	CLA	b	616	X	-	-	-
25	CLA	c	601	X	-	-	-
25	CLA	c	602	X	-	-	-
25	CLA	c	603	X	-	-	-
25	CLA	c	604	X	-	-	-
25	CLA	c	605	X	-	-	-
25	CLA	c	606	X	-	-	-
25	CLA	c	607	X	-	-	-
25	CLA	c	608	X	-	-	-
25	CLA	c	609	X	-	-	-
25	CLA	c	610	X	-	-	-
25	CLA	c	611	X	-	-	-
25	CLA	c	612	X	-	-	-
25	CLA	c	616	X	-	-	-
25	CLA	d	404	X	-	-	-
25	CLA	d	405	X	-	-	-
25	CLA	g	307	X	-	-	-
25	CLA	g	308	X	-	-	-
25	CLA	g	314	X	-	-	-
25	CLA	g	315	X	-	-	-
25	CLA	g	316	X	-	-	-
25	CLA	g	317	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
25	CLA	n	306	X	-	-	-
25	CLA	n	307	X	-	-	-
25	CLA	n	313	X	-	-	-
25	CLA	n	314	X	-	-	-
25	CLA	n	315	X	-	-	-
25	CLA	n	316	X	-	-	-
25	CLA	p	307	X	-	-	-
25	CLA	p	308	X	-	-	-
25	CLA	p	314	X	-	-	-
25	CLA	p	315	X	-	-	-
25	CLA	p	316	X	-	-	-
25	CLA	p	317	X	-	-	-
25	CLA	q	305	X	-	-	-
25	CLA	q	306	X	-	-	-
25	CLA	q	312	X	-	-	-
25	CLA	q	313	X	-	-	-
25	CLA	q	314	X	-	-	-
25	CLA	q	315	X	-	-	-
25	CLA	r	304	X	-	-	-
25	CLA	r	305	X	-	-	-
25	CLA	r	310	X	-	-	-
25	CLA	r	311	X	-	-	-
25	CLA	r	312	X	-	-	-
25	CLA	r	313	X	-	-	-
25	CLA	r	314	X	-	-	-
25	CLA	s	404	X	-	-	-
25	CLA	s	405	X	-	-	-
25	CLA	s	410	X	-	-	-
25	CLA	s	411	X	-	-	-
25	CLA	s	412	X	-	-	-
25	CLA	s	413	X	-	-	-
25	CLA	s	417	X	-	-	-
25	CLA	u	307	X	-	-	-
25	CLA	u	308	X	-	-	-
25	CLA	u	314	X	-	-	-
25	CLA	u	315	X	-	-	-
25	CLA	u	316	X	-	-	-
25	CLA	u	317	X	-	-	-
25	CLA	y	307	X	-	-	-
25	CLA	y	308	X	-	-	-
25	CLA	y	314	X	-	-	-
25	CLA	y	315	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
25	CLA	y	316	X	-	-	-
25	CLA	y	317	X	-	-	-
28	NEX	1	303	-	-	X	-
28	NEX	3	318	-	-	X	-
28	NEX	4	303	-	-	X	-
28	NEX	6	303	-	-	X	-
28	NEX	7	304	-	-	X	-
28	NEX	G	304	-	-	X	-
28	NEX	S	617	-	-	X	-
28	NEX	p	304	-	-	X	-
28	NEX	s	401	-	-	X	-

2 Entry composition [i](#)

There are 39 unique types of molecules in this entry. The entry contains 95298 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 Photosystem II reaction center protein Z.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	Z	61	472	329	68	74	1	0	0
1	z	61	472	329	68	74	1	0	0

- Molecule 2 is a protein called Cytochrome b559 subunit alpha.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
2	E	65	530	347	87	96	0	0
2	e	65	530	347	87	96	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	H	68	513	337	74	98	4	0	0
3	h	68	513	337	74	98	4	0	0

- Molecule 4 is a protein called Photosystem II reaction center protein I.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	I	34	275	189	40	45	1	0	0
4	i	34	275	189	40	45	1	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
I	26	ASP	ASN	conflict	UNP A0A2P0QH95

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Chain	Residue	Modelled	Actual	Comment	Reference
i	26	ASP	ASN	conflict	UNP A0A2P0QH95

- Molecule 5 is a protein called Photosystem II reaction center protein K.

Mol	Chain	Residues	Atoms				AltConf	Trace
5	K	37	Total	C	N	O	0	0
			299	208	43	48		
5	k	37	Total	C	N	O	0	0
			299	208	43	48		

- Molecule 6 is a protein called Photosystem II reaction center protein L.

Mol	Chain	Residues	Atoms				AltConf	Trace
6	L	37	Total	C	N	O	0	0
			304	204	48	52		
6	l	37	Total	C	N	O	0	0
			304	204	48	52		

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

Mol	Chain	Residues	Atoms				AltConf	Trace
7	M	30	Total	C	N	O	0	0
			231	159	33	39		
7	m	30	Total	C	N	O	0	0
			231	159	33	39		

- Molecule 8 is a protein called PsbR.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	R	225	Total	C	N	O	S	0	0
			1711	1092	284	326	9		
8	r	225	Total	C	N	O	S	0	0
			1707	1089	283	326	9		

- Molecule 9 is a protein called Cytochrome b559 subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	F	31	Total	C	N	O	S	0	0
			246	167	40	38	1		
9	f	31	Total	C	N	O	S	0	0
			251	170	42	38	1		

- Molecule 10 is a protein called Lhcb1.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	1	212	Total	C	N	O	S	0	0
			1609	1038	255	306	10		
10	4	212	Total	C	N	O	S	0	0
			1603	1035	252	306	10		

- Molecule 11 is a protein called Lhcb2.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	2	221	Total	C	N	O	S	0	0
			1710	1108	278	316	8		
11	5	221	Total	C	N	O	S	0	0
			1711	1109	279	315	8		

- Molecule 12 is a protein called Lhcb3.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	3	211	Total	C	N	O	S	0	0
			1606	1033	260	304	9		
12	9	219	Total	C	N	O	S	0	0
			1680	1081	271	319	9		
12	6	219	Total	C	N	O	S	0	0
			1670	1073	271	317	9		
12	u	219	Total	C	N	O	S	0	0
			1683	1084	271	319	9		
12	p	219	Total	C	N	O	S	0	0
			1680	1081	271	319	9		
12	7	219	Total	C	N	O	S	0	0
			1677	1080	271	317	9		

- Molecule 13 is a protein called LhcbS.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	S	249	Total	C	N	O	S	0	0
			1867	1203	309	349	6		
13	s	249	Total	C	N	O	S	0	0
			1867	1203	309	349	6		

- Molecule 14 is a protein called PsbX.

Mol	Chain	Residues	Atoms				AltConf	Trace
14	X	34	Total	C	N	O	0	0
			226	146	36	44		
14	x	34	Total	C	N	O	0	0
			226	146	36	44		

- Molecule 15 is a protein called Photosystem II reaction center protein Psb30.

Mol	Chain	Residues	Atoms				AltConf	Trace
15	V	25	Total	C	N	O	0	0
			179	118	30	31		
15	v	25	Total	C	N	O	0	0
			179	118	30	31		

- Molecule 16 is a protein called Photosystem II reaction center protein T.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	T	28	Total	C	N	O	S	0	0
			236	165	34	36	1		
16	t	28	Total	C	N	O	S	0	0
			236	165	34	36	1		

- Molecule 17 is a protein called LhcbG.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	G	223	Total	C	N	O	S	0	0
			1690	1097	268	315	10		
17	N	206	Total	C	N	O	S	0	0
			1551	1002	247	292	10		
17	Y	223	Total	C	N	O	S	0	0
			1690	1097	268	315	10		
17	8	206	Total	C	N	O	S	0	0
			1554	1005	247	292	10		
17	g	223	Total	C	N	O	S	0	0
			1690	1097	268	315	10		
17	n	206	Total	C	N	O	S	0	0
			1545	998	247	290	10		
17	y	223	Total	C	N	O	S	0	0
			1690	1097	268	315	10		
17	q	206	Total	C	N	O	S	0	0
			1554	1005	247	292	10		

- Molecule 18 is a protein called Photosystem II CP47 reaction center protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	B	478	Total	C	N	O	S	0	0
			3737	2447	625	652	13		
18	b	478	Total	C	N	O	S	0	0
			3737	2447	625	652	13		

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	281	ALA	SER	conflict	UNP A0A0D6E1D0
B	353	GLU	GLN	conflict	UNP A0A0D6E1D0
B	355	HIS	TYR	conflict	UNP A0A0D6E1D0
b	281	ALA	SER	conflict	UNP A0A0D6E1D0
b	353	GLU	GLN	conflict	UNP A0A0D6E1D0
b	355	HIS	TYR	conflict	UNP A0A0D6E1D0

- Molecule 19 is a protein called PsbA.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	A	327	Total	C	N	O	S	0	0
			2558	1669	422	453	14		
19	a	327	Total	C	N	O	S	0	0
			2558	1669	422	453	14		

- Molecule 20 is a protein called Photosystem II CP43 reaction center protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	C	448	Total	C	N	O	S	0	0
			3472	2281	581	599	11		
20	c	448	Total	C	N	O	S	0	0
			3472	2281	581	599	11		

There are 2 discrepancies between the modelled and reference sequences:

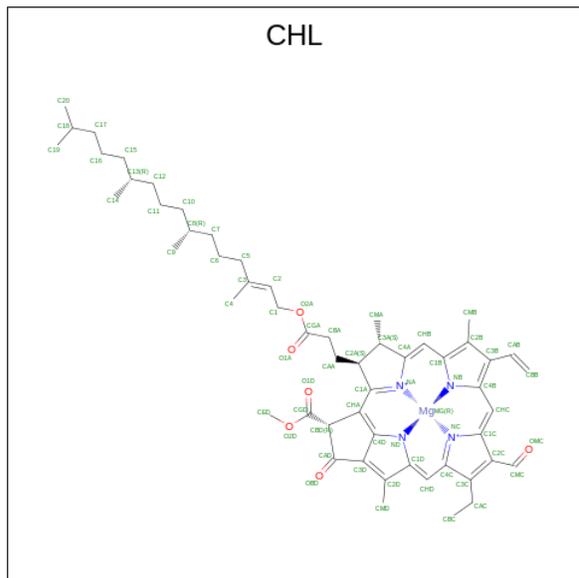
Chain	Residue	Modelled	Actual	Comment	Reference
C	1	VAL	MET	conflict	UNP D0EVT6
c	1	VAL	MET	conflict	UNP D0EVT6

- Molecule 21 is a protein called Photosystem II D2 protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	D	340	Total	C	N	O	S	0	0
			2719	1803	447	458	11		

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- Molecule 24 is CHLOROPHYLL B (CCD ID: CHL) (formula: $C_{55}H_{70}MgN_4O_6$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf	
			Total	C	Mg	N		O
24	R	1	46	35	1	4	6	0
24	R	1	47	36	1	4	6	0
24	R	1	42	33	1	4	4	0
24	R	1	48	37	1	4	6	0
24	R	1	48	37	1	4	6	0
24	R	1	46	35	1	4	6	0
24	1	1	42	33	1	4	4	0
24	1	1	46	35	1	4	6	0
24	1	1	43	34	1	4	4	0
24	1	1	43	34	1	4	4	0
24	1	1	43	34	1	4	4	0
24	1	1	44	35	1	4	4	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	1	1	46	35	1	4	6	0
24	1	1	42	33	1	4	4	0
24	2	1	44	35	1	4	4	0
24	2	1	47	36	1	4	6	0
24	2	1	43	34	1	4	4	0
24	2	1	42	33	1	4	4	0
24	2	1	47	36	1	4	6	0
24	2	1	46	35	1	4	6	0
24	2	1	42	33	1	4	4	0
24	2	1	42	33	1	4	4	0
24	3	1	48	37	1	4	6	0
24	3	1	48	37	1	4	6	0
24	3	1	43	34	1	4	4	0
24	3	1	51	40	1	4	6	0
24	3	1	46	35	1	4	6	0
24	3	1	44	35	1	4	4	0
24	3	1	43	34	1	4	4	0
24	3	1	42	33	1	4	4	0
24	S	1	46	35	1	4	6	0
24	S	1	58	47	1	4	6	0
24	S	1	46	35	1	4	6	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	S	1	46	35	1	4	6	0
24	S	1	46	35	1	4	6	0
24	S	1	47	36	1	4	6	0
24	S	1	42	33	1	4	4	0
24	G	1	66	55	1	4	6	0
24	G	1	64	53	1	4	6	0
24	G	1	43	34	1	4	4	0
24	G	1	47	36	1	4	6	0
24	G	1	54	43	1	4	6	0
24	G	1	51	40	1	4	6	0
24	G	1	66	55	1	4	6	0
24	G	1	42	33	1	4	4	0
24	9	1	66	55	1	4	6	0
24	9	1	64	53	1	4	6	0
24	9	1	43	34	1	4	4	0
24	9	1	46	35	1	4	6	0
24	9	1	47	36	1	4	6	0
24	9	1	43	34	1	4	4	0
24	9	1	42	33	1	4	4	0
24	N	1	54	43	1	4	6	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	N	1	60	49	1	4	6	0
24	N	1	43	34	1	4	4	0
24	N	1	46	35	1	4	6	0
24	N	1	53	42	1	4	6	0
24	N	1	50	39	1	4	6	0
24	N	1	56	45	1	4	6	0
24	N	1	42	33	1	4	4	0
24	Y	1	66	55	1	4	6	0
24	Y	1	64	53	1	4	6	0
24	Y	1	43	34	1	4	4	0
24	Y	1	47	36	1	4	6	0
24	Y	1	54	43	1	4	6	0
24	Y	1	51	40	1	4	6	0
24	Y	1	66	55	1	4	6	0
24	Y	1	42	33	1	4	4	0
24	Y	1	53	42	1	4	6	0
24	8	1	54	43	1	4	6	0
24	8	1	60	49	1	4	6	0
24	8	1	43	34	1	4	4	0
24	8	1	46	35	1	4	6	0
24	8	1	50	39	1	4	6	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	8	1	56	45	1	4	6	0
24	8	1	42	33	1	4	4	0
24	4	1	42	33	1	4	4	0
24	4	1	46	35	1	4	6	0
24	4	1	43	34	1	4	4	0
24	4	1	43	34	1	4	4	0
24	4	1	43	34	1	4	4	0
24	4	1	44	35	1	4	4	0
24	4	1	46	35	1	4	6	0
24	4	1	42	33	1	4	4	0
24	5	1	44	35	1	4	4	0
24	5	1	47	36	1	4	6	0
24	5	1	43	34	1	4	4	0
24	5	1	42	33	1	4	4	0
24	5	1	47	36	1	4	6	0
24	5	1	46	35	1	4	6	0
24	5	1	42	33	1	4	4	0
24	5	1	42	33	1	4	4	0
24	6	1	48	37	1	4	6	0
24	6	1	48	37	1	4	6	0
24	6	1	43	34	1	4	4	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	6	1	51	40	1	4	6	0
24	6	1	46	35	1	4	6	0
24	6	1	44	35	1	4	4	0
24	6	1	43	34	1	4	4	0
24	6	1	42	33	1	4	4	0
24	g	1	66	55	1	4	6	0
24	g	1	64	53	1	4	6	0
24	g	1	43	34	1	4	4	0
24	g	1	47	36	1	4	6	0
24	g	1	54	43	1	4	6	0
24	g	1	51	40	1	4	6	0
24	g	1	66	55	1	4	6	0
24	g	1	42	33	1	4	4	0
24	u	1	66	55	1	4	6	0
24	u	1	64	53	1	4	6	0
24	u	1	43	34	1	4	4	0
24	u	1	46	35	1	4	6	0
24	u	1	46	35	1	4	6	0
24	u	1	47	36	1	4	6	0
24	u	1	43	34	1	4	4	0
24	u	1	42	33	1	4	4	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	n	1	54	43	1	4	6	0
24	n	1	60	49	1	4	6	0
24	n	1	43	34	1	4	4	0
24	n	1	46	35	1	4	6	0
24	n	1	53	42	1	4	6	0
24	n	1	50	39	1	4	6	0
24	n	1	56	45	1	4	6	0
24	n	1	42	33	1	4	4	0
24	y	1	66	55	1	4	6	0
24	y	1	64	53	1	4	6	0
24	y	1	43	34	1	4	4	0
24	y	1	47	36	1	4	6	0
24	y	1	54	43	1	4	6	0
24	y	1	51	40	1	4	6	0
24	y	1	66	55	1	4	6	0
24	y	1	42	33	1	4	4	0
24	p	1	66	55	1	4	6	0
24	p	1	64	53	1	4	6	0
24	p	1	43	34	1	4	4	0
24	p	1	46	35	1	4	6	0
24	p	1	46	35	1	4	6	0

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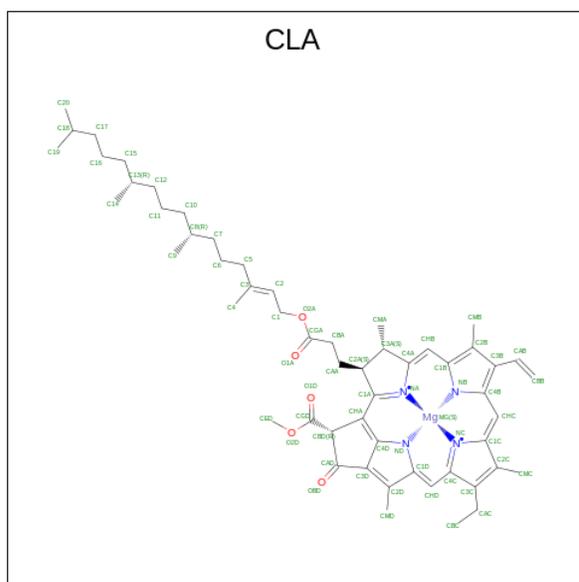
Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	p	1	47	36	1	4	6	0
24	p	1	43	34	1	4	4	0
24	p	1	42	33	1	4	4	0
24	q	1	54	43	1	4	6	0
24	q	1	60	49	1	4	6	0
24	q	1	43	34	1	4	4	0
24	q	1	46	35	1	4	6	0
24	q	1	53	42	1	4	6	0
24	q	1	50	39	1	4	6	0
24	q	1	56	45	1	4	6	0
24	q	1	42	33	1	4	4	0
24	s	1	46	35	1	4	6	0
24	s	1	58	47	1	4	6	0
24	s	1	46	35	1	4	6	0
24	s	1	46	35	1	4	6	0
24	s	1	46	35	1	4	6	0
24	s	1	47	36	1	4	6	0
24	s	1	42	33	1	4	4	0
24	r	1	46	35	1	4	6	0
24	r	1	47	36	1	4	6	0
24	r	1	42	33	1	4	4	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	r	1	Total 48	C 37	Mg 1	N 4	O 6	0
24	r	1	Total 48	C 37	Mg 1	N 4	O 6	0
24	r	1	Total 46	C 35	Mg 1	N 4	O 6	0
24	7	1	Total 66	C 55	Mg 1	N 4	O 6	0
24	7	1	Total 64	C 53	Mg 1	N 4	O 6	0
24	7	1	Total 43	C 34	Mg 1	N 4	O 4	0
24	7	1	Total 46	C 35	Mg 1	N 4	O 6	0
24	7	1	Total 46	C 35	Mg 1	N 4	O 6	0
24	7	1	Total 47	C 36	Mg 1	N 4	O 6	0
24	7	1	Total 43	C 34	Mg 1	N 4	O 4	0
24	7	1	Total 42	C 33	Mg 1	N 4	O 4	0

- Molecule 25 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
25	R	1	Total	C	Mg	N	O	0
			47	37	1	4	5	
25	R	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
25	R	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
25	R	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
25	R	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
25	R	1	Total	C	Mg	N	O	0
			47	37	1	4	5	
25	1	1	Total	C	Mg	N	O	0
			44	35	1	4	4	
25	1	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
25	1	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
25	1	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
25	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
25	1	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
25	2	1	Total	C	Mg	N	O	0
			43	35	1	4	3	
25	2	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
25	2	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
25	2	1	Total	C	Mg	N	O	0
			63	53	1	4	5	
25	2	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
25	2	1	Total	C	Mg	N	O	0
			49	39	1	4	5	
25	3	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
25	3	1	Total	C	Mg	N	O	0
			43	35	1	4	3	
25	3	1	Total	C	Mg	N	O	0
			41	33	1	4	3	

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	3	1	41	33	1	4	3	0
25	3	1	45	35	1	4	5	0
25	3	1	45	35	1	4	5	0
25	S	1	45	35	1	4	5	0
25	S	1	43	35	1	4	3	0
25	S	1	55	45	1	4	5	0
25	S	1	45	35	1	4	5	0
25	S	1	45	35	1	4	5	0
25	S	1	55	45	1	4	5	0
25	S	1	45	35	1	4	5	0
25	G	1	53	43	1	4	5	0
25	G	1	50	40	1	4	5	0
25	G	1	55	45	1	4	5	0
25	G	1	60	50	1	4	5	0
25	G	1	45	35	1	4	5	0
25	G	1	55	45	1	4	5	0
25	9	1	56	46	1	4	5	0
25	9	1	50	40	1	4	5	0
25	9	1	55	45	1	4	5	0
25	9	1	63	53	1	4	5	0
25	9	1	45	35	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	9	1	55	45	1	4	5	0
25	N	1	54	44	1	4	5	0
25	N	1	50	40	1	4	5	0
25	N	1	55	45	1	4	5	0
25	N	1	63	53	1	4	5	0
25	N	1	45	35	1	4	5	0
25	N	1	43	35	1	4	3	0
25	Y	1	53	43	1	4	5	0
25	Y	1	50	40	1	4	5	0
25	Y	1	55	45	1	4	5	0
25	Y	1	63	53	1	4	5	0
25	Y	1	45	35	1	4	5	0
25	Y	1	55	45	1	4	5	0
25	8	1	54	44	1	4	5	0
25	8	1	50	40	1	4	5	0
25	8	1	55	45	1	4	5	0
25	8	1	63	53	1	4	5	0
25	8	1	45	35	1	4	5	0
25	8	1	43	35	1	4	3	0
25	B	1	45	35	1	4	5	0
25	B	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	B	1	65	55	1	4	5	0
25	B	1	62	52	1	4	5	0
25	B	1	65	55	1	4	5	0
25	B	1	65	55	1	4	5	0
25	B	1	65	55	1	4	5	0
25	B	1	55	45	1	4	5	0
25	B	1	65	55	1	4	5	0
25	B	1	65	55	1	4	5	0
25	B	1	65	55	1	4	5	0
25	B	1	65	55	1	4	5	0
25	B	1	65	55	1	4	5	0
25	B	1	65	55	1	4	5	0
25	B	1	56	46	1	4	5	0
25	B	1	65	55	1	4	5	0
25	B	1	47	37	1	4	5	0
25	A	1	65	55	1	4	5	0
25	A	1	65	55	1	4	5	0
25	A	1	49	39	1	4	5	0
25	A	1	60	50	1	4	5	0
25	A	1	41	33	1	4	3	0
25	C	1	65	55	1	4	5	0
25	C	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	C	1	65	55	1	4	5	0
25	C	1	65	55	1	4	5	0
25	C	1	56	46	1	4	5	0
25	C	1	53	43	1	4	5	0
25	C	1	65	55	1	4	5	0
25	C	1	61	51	1	4	5	0
25	C	1	65	55	1	4	5	0
25	C	1	65	55	1	4	5	0
25	C	1	65	55	1	4	5	0
25	C	1	54	44	1	4	5	0
25	C	1	46	36	1	4	5	0
25	D	1	65	55	1	4	5	0
25	D	1	65	55	1	4	5	0
25	4	1	44	35	1	4	4	0
25	4	1	41	33	1	4	3	0
25	4	1	55	45	1	4	5	0
25	4	1	41	33	1	4	3	0
25	4	1	45	35	1	4	5	0
25	4	1	42	34	1	4	3	0
25	5	1	43	35	1	4	3	0
25	5	1	50	40	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	5	1	55	45	1	4	5	0
25	5	1	63	53	1	4	5	0
25	5	1	45	35	1	4	5	0
25	5	1	49	39	1	4	5	0
25	6	1	41	33	1	4	3	0
25	6	1	43	35	1	4	3	0
25	6	1	41	33	1	4	3	0
25	6	1	41	33	1	4	3	0
25	6	1	45	35	1	4	5	0
25	6	1	45	35	1	4	5	0
25	g	1	53	43	1	4	5	0
25	g	1	50	40	1	4	5	0
25	g	1	55	45	1	4	5	0
25	g	1	60	50	1	4	5	0
25	g	1	45	35	1	4	5	0
25	g	1	55	45	1	4	5	0
25	u	1	56	46	1	4	5	0
25	u	1	50	40	1	4	5	0
25	u	1	55	45	1	4	5	0
25	u	1	63	53	1	4	5	0
25	u	1	45	35	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	u	1	55	45	1	4	5	0
25	n	1	54	44	1	4	5	0
25	n	1	50	40	1	4	5	0
25	n	1	55	45	1	4	5	0
25	n	1	63	53	1	4	5	0
25	n	1	45	35	1	4	5	0
25	n	1	43	35	1	4	3	0
25	y	1	53	43	1	4	5	0
25	y	1	50	40	1	4	5	0
25	y	1	55	45	1	4	5	0
25	y	1	63	53	1	4	5	0
25	y	1	45	35	1	4	5	0
25	y	1	55	45	1	4	5	0
25	p	1	56	46	1	4	5	0
25	p	1	50	40	1	4	5	0
25	p	1	55	45	1	4	5	0
25	p	1	63	53	1	4	5	0
25	p	1	45	35	1	4	5	0
25	p	1	55	45	1	4	5	0
25	q	1	54	44	1	4	5	0
25	q	1	50	40	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	q	1	55	45	1	4	5	0
25	q	1	63	53	1	4	5	0
25	q	1	45	35	1	4	5	0
25	q	1	43	35	1	4	3	0
25	b	1	45	35	1	4	5	0
25	b	1	65	55	1	4	5	0
25	b	1	65	55	1	4	5	0
25	b	1	62	52	1	4	5	0
25	b	1	65	55	1	4	5	0
25	b	1	65	55	1	4	5	0
25	b	1	65	55	1	4	5	0
25	b	1	55	45	1	4	5	0
25	b	1	65	55	1	4	5	0
25	b	1	65	55	1	4	5	0
25	b	1	65	55	1	4	5	0
25	b	1	65	55	1	4	5	0
25	b	1	56	46	1	4	5	0
25	b	1	65	55	1	4	5	0
25	b	1	47	37	1	4	5	0
25	a	1	65	55	1	4	5	0

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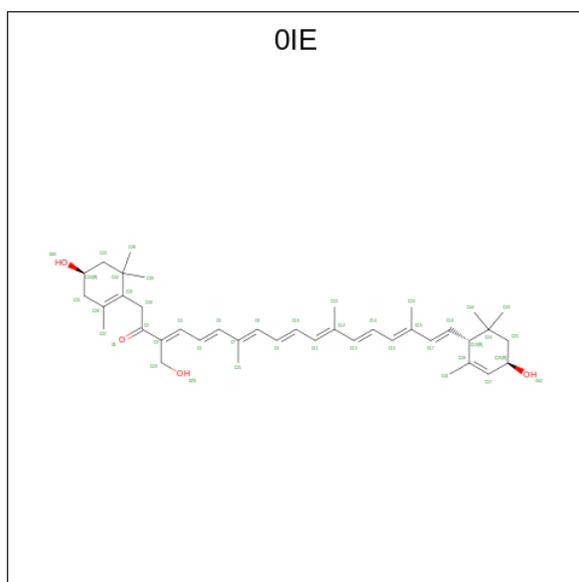
Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	a	1	65	55	1	4	5	0
25	a	1	49	39	1	4	5	0
25	a	1	60	50	1	4	5	0
25	a	1	41	33	1	4	3	0
25	c	1	65	55	1	4	5	0
25	c	1	65	55	1	4	5	0
25	c	1	65	55	1	4	5	0
25	c	1	65	55	1	4	5	0
25	c	1	56	46	1	4	5	0
25	c	1	53	43	1	4	5	0
25	c	1	65	55	1	4	5	0
25	c	1	61	51	1	4	5	0
25	c	1	65	55	1	4	5	0
25	c	1	65	55	1	4	5	0
25	c	1	65	55	1	4	5	0
25	c	1	65	55	1	4	5	0
25	c	1	54	44	1	4	5	0
25	c	1	46	36	1	4	5	0
25	d	1	65	55	1	4	5	0
25	d	1	65	55	1	4	5	0
25	s	1	45	35	1	4	5	0
25	s	1	43	35	1	4	3	0

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Mol	Chain	Residues	Atoms					AltConf
25	s	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
25	s	1	Total	C	Mg	N	O	0
			44	35	1	4	4	
25	s	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
25	s	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
25	s	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
25	r	1	Total	C	Mg	N	O	0
			47	37	1	4	5	
25	r	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
25	r	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
25	r	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
25	r	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
25	r	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
25	r	1	Total	C	Mg	N	O	0
			47	37	1	4	5	
25	7	1	Total	C	Mg	N	O	0
			56	46	1	4	5	
25	7	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
25	7	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
25	7	1	Total	C	Mg	N	O	0
			63	53	1	4	5	
25	7	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
25	7	1	Total	C	Mg	N	O	0
			52	42	1	4	5	

- Molecule 26 is Siphonaxanthin (CCD ID: 0IE) (formula: C₄₀H₅₆O₄) (labeled as "Ligand of Interest" by depositor).



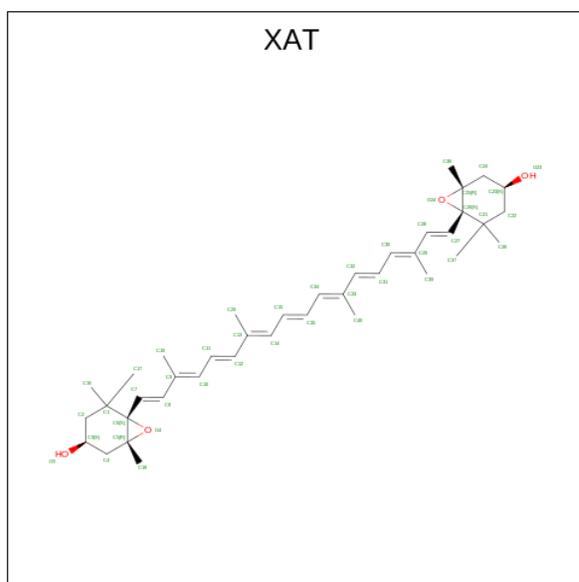
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
26	R	1	44	40	4	0
26	1	1	44	40	4	0
26	2	1	44	40	4	0
26	2	1	44	40	4	0
26	3	1	43	39	4	0
26	3	1	44	40	4	0
26	G	1	44	40	4	0
26	G	1	44	40	4	0
26	9	1	44	40	4	0
26	9	1	44	40	4	0
26	N	1	44	40	4	0
26	Y	1	44	40	4	0
26	Y	1	44	40	4	0
26	8	1	44	40	4	0

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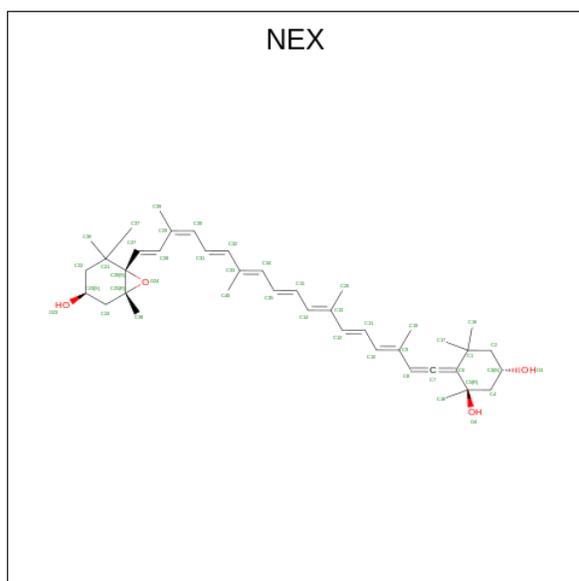
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
26	4	1	44	40	4	0
26	5	1	44	40	4	0
26	5	1	44	40	4	0
26	6	1	43	39	4	0
26	g	1	44	40	4	0
26	g	1	44	40	4	0
26	u	1	44	40	4	0
26	u	1	44	40	4	0
26	n	1	44	40	4	0
26	y	1	44	40	4	0
26	y	1	44	40	4	0
26	p	1	44	40	4	0
26	p	1	44	40	4	0
26	q	1	44	40	4	0
26	r	1	44	40	4	0
26	7	1	44	40	4	0
26	7	1	44	40	4	0

- Molecule 27 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: C₄₀H₅₆O₄) (labeled as "Ligand of Interest" by depositor).



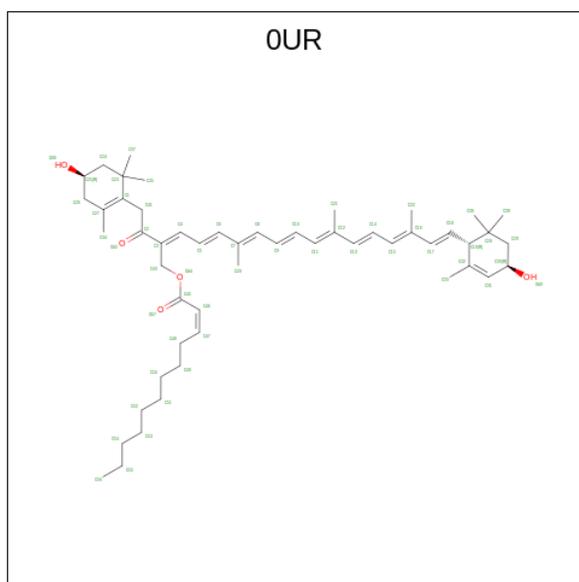
Mol	Chain	Residues	Atoms			AltConf
27	R	1	Total	C	O	0
			44	40	4	
27	r	1	Total	C	O	0
			44	40	4	

- Molecule 28 is (1R,3R)-6-[(3E,5E,7E,9E,11E,13E,15E,17E)-18-[(1S,4R,6R)-4-HYDROXY-2,2,6-TRIMETHYL-7-OXABICYCLO[4.1.0]HEPT-1-YL]-3,7,12,16-TETRAMETHYLOCTADEC-1,3,5,7,9,11,13,15,17-NONAENYLIDENE]-1,5,5-TRIMETHYLCYCLOHEXANE-1,3-DIOL (CCD ID: NEX) (formula: C₄₀H₅₆O₄) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
28	R	1	Total	C	O	0
			44	40	4	
28	1	1	Total	C	O	0
			44	40	4	
28	2	1	Total	C	O	0
			44	40	4	
28	3	1	Total	C	O	0
			44	40	4	
28	S	1	Total	C	O	0
			44	40	4	
28	G	1	Total	C	O	0
			44	40	4	
28	9	1	Total	C	O	0
			44	40	4	
28	N	1	Total	C	O	0
			44	40	4	
28	4	1	Total	C	O	0
			44	40	4	
28	5	1	Total	C	O	0
			44	40	4	
28	6	1	Total	C	O	0
			44	40	4	
28	g	1	Total	C	O	0
			44	40	4	
28	u	1	Total	C	O	0
			44	40	4	
28	n	1	Total	C	O	0
			44	40	4	
28	y	1	Total	C	O	0
			44	40	4	
28	p	1	Total	C	O	0
			44	40	4	
28	s	1	Total	C	O	0
			44	40	4	
28	r	1	Total	C	O	0
			44	40	4	
28	r	1	Total	C	O	0
			44	40	4	
28	7	1	Total	C	O	0
			44	40	4	

- Molecule 29 is Siphonein (CCD ID: 0UR) (formula: C₅₂H₇₆O₅) (labeled as "Ligand of Interest" by depositor).



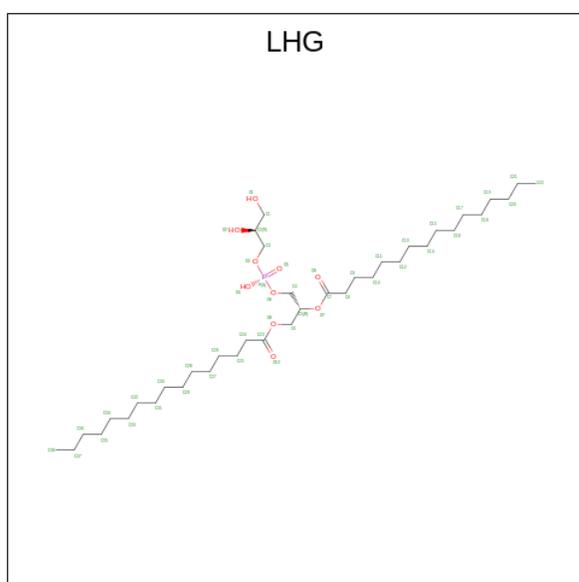
Mol	Chain	Residues	Atoms			AltConf
29	1	1	Total	C	O	0
			52	47	5	
29	2	1	Total	C	O	0
			52	47	5	
29	3	1	Total	C	O	0
			52	47	5	
29	G	1	Total	C	O	0
			52	47	5	
29	9	1	Total	C	O	0
			52	47	5	
29	N	1	Total	C	O	0
			52	47	5	
29	Y	1	Total	C	O	0
			52	47	5	
29	8	1	Total	C	O	0
			52	47	5	
29	4	1	Total	C	O	0
			52	47	5	
29	5	1	Total	C	O	0
			52	47	5	
29	6	1	Total	C	O	0
			52	47	5	
29	g	1	Total	C	O	0
			52	47	5	
29	u	1	Total	C	O	0
			52	47	5	
29	n	1	Total	C	O	0
			52	47	5	

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Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
29	y	1	52	47	5	0
29	p	1	52	47	5	0
29	q	1	52	47	5	0
29	7	1	52	47	5	0

- Molecule 30 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (CCD ID: LHG) (formula: $C_{38}H_{75}O_{10}P$) (labeled as "Ligand of Interest" by depositor).



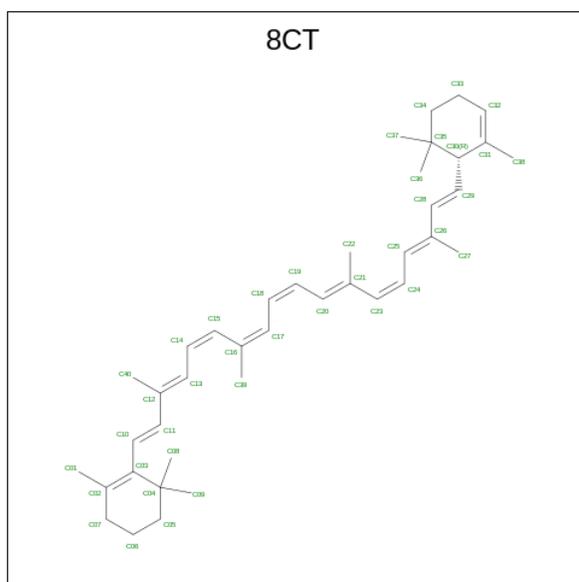
Mol	Chain	Residues	Atoms				AltConf
			Total	C	O	P	
30	1	1	42	31	10	1	0
30	2	1	40	29	10	1	0
30	G	1	43	32	10	1	0
30	9	1	43	32	10	1	0
30	N	1	43	32	10	1	0
30	Y	1	43	32	10	1	0
30	A	1	45	34	10	1	0

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Mol	Chain	Residues	Atoms				AltConf
			Total	C	O	P	
30	A	1	44	33	10	1	0
30	C	1	32	21	10	1	0
30	D	1	49	38	10	1	0
30	D	1	39	28	10	1	0
30	4	1	42	31	10	1	0
30	5	1	43	32	10	1	0
30	g	1	43	32	10	1	0
30	n	1	43	32	10	1	0
30	y	1	43	32	10	1	0
30	p	1	43	32	10	1	0
30	a	1	45	34	10	1	0
30	a	1	44	33	10	1	0
30	c	1	32	21	10	1	0
30	d	1	49	38	10	1	0
30	d	1	39	28	10	1	0
30	7	1	37	26	10	1	0

- Molecule 31 is (6'R,11cis,11'cis,13cis,15cis)-4',5'-didehydro-5',6'-dihydro-beta,beta-carotene (CCD ID: 8CT) (formula: C₄₀H₅₆) (labeled as "Ligand of Interest" by depositor).



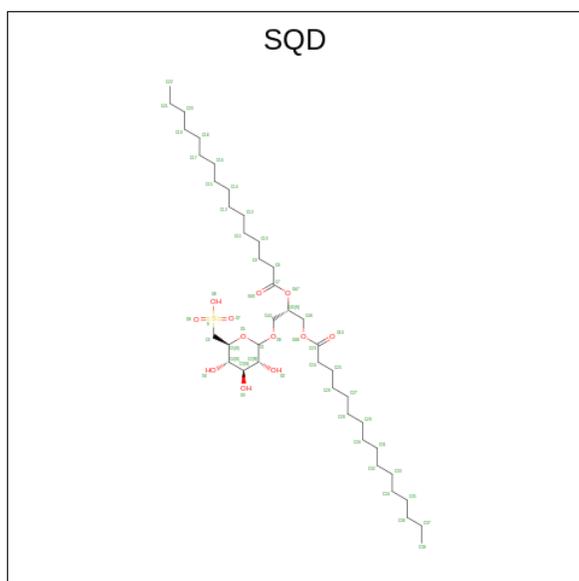
Mol	Chain	Residues	Atoms	AltConf
31	S	1	Total C 40 40	0
31	S	1	Total C 40 40	0
31	X	1	Total C 40 40	0
31	V	1	Total C 40 40	0
31	T	1	Total C 40 40	0
31	B	1	Total C 40 40	0
31	A	1	Total C 40 40	0
31	C	1	Total C 40 40	0
31	C	1	Total C 40 40	0
31	C	1	Total C 40 40	0
31	D	1	Total C 40 40	0
31	x	1	Total C 40 40	0
31	v	1	Total C 40 40	0
31	t	1	Total C 40 40	0

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Mol	Chain	Residues	Atoms	AltConf
31	b	1	Total C 40 40	0
31	a	1	Total C 40 40	0
31	c	1	Total C 40 40	0
31	c	1	Total C 40 40	0
31	c	1	Total C 40 40	0
31	d	1	Total C 40 40	0
31	s	1	Total C 40 40	0
31	s	1	Total C 40 40	0

- Molecule 32 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).



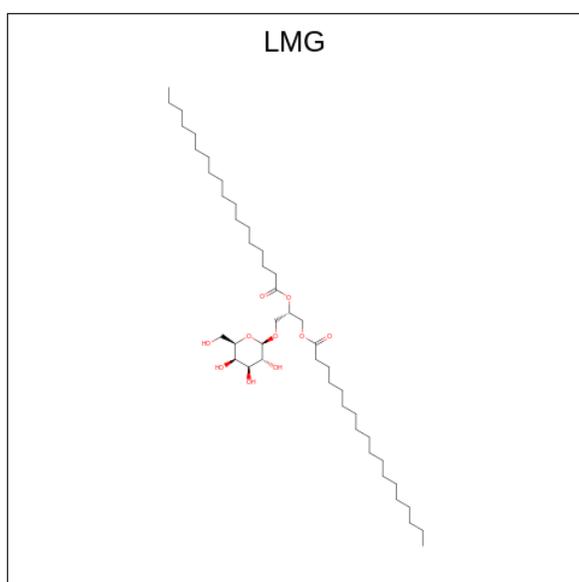
Mol	Chain	Residues	Atoms	AltConf
32	B	1	Total C O S 54 41 12 1	0
32	A	1	Total C O S 45 32 12 1	0

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Mol	Chain	Residues	Atoms				AltConf
			Total	C	O	S	
32	D	1	Total 44	C 31	O 12	S 1	0
32	b	1	Total 54	C 41	O 12	S 1	0
32	a	1	Total 45	C 32	O 12	S 1	0
32	d	1	Total 44	C 31	O 12	S 1	0

- Molecule 33 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (CCD ID: LMG) (formula: C₄₅H₈₆O₁₀) (labeled as "Ligand of Interest" by depositor).



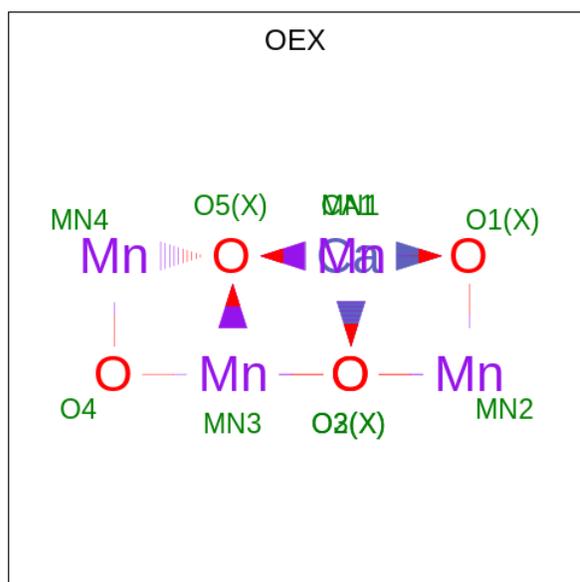
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
33	B	1	Total 41	C 31	O 10	0
33	C	1	Total 42	C 32	O 10	0
33	D	1	Total 48	C 38	O 10	0
33	D	1	Total 46	C 36	O 10	0
33	W	1	Total 30	C 20	O 10	0
33	i	1	Total 48	C 38	O 10	0
33	m	1	Total 41	C 31	O 10	0

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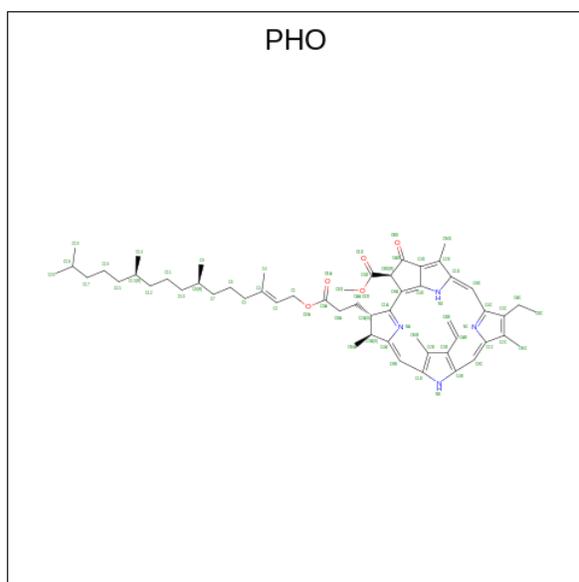
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
33	w	1	36	26	10	0
33	d	1	48	38	10	0
33	d	1	46	36	10	0

- Molecule 34 is CA-MN4-O5 CLUSTER (CCD ID: OEX) (formula: CaMn_4O_5) (labeled as "Ligand of Interest" by depositor).



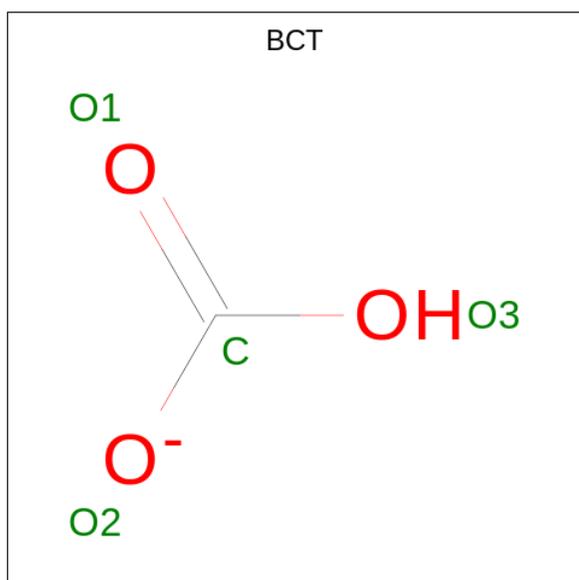
Mol	Chain	Residues	Atoms				AltConf
			Total	Ca	Mn	O	
34	A	1	10	1	4	5	0
34	a	1	10	1	4	5	0

- Molecule 35 is PHEOPHYTIN A (CCD ID: PHO) (formula: $\text{C}_{55}\text{H}_{74}\text{N}_4\text{O}_5$) (labeled as "Ligand of Interest" by depositor).



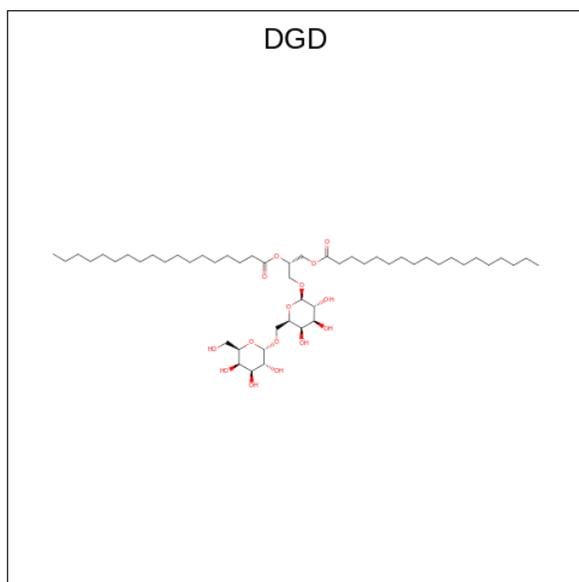
Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
35	A	1	Total 64	C 55	N 4	O 5	0
35	D	1	Total 64	C 55	N 4	O 5	0
35	a	1	Total 64	C 55	N 4	O 5	0
35	d	1	Total 64	C 55	N 4	O 5	0

- Molecule 36 is BICARBONATE ION (CCD ID: BCT) (formula: CHO_3^-) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
36	A	1	Total	C	O	0
			4	1	3	
36	a	1	Total	C	O	0
			4	1	3	

- Molecule 37 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (CCD ID: DGD) (formula: $C_{51}H_{96}O_{15}$) (labeled as "Ligand of Interest" by depositor).

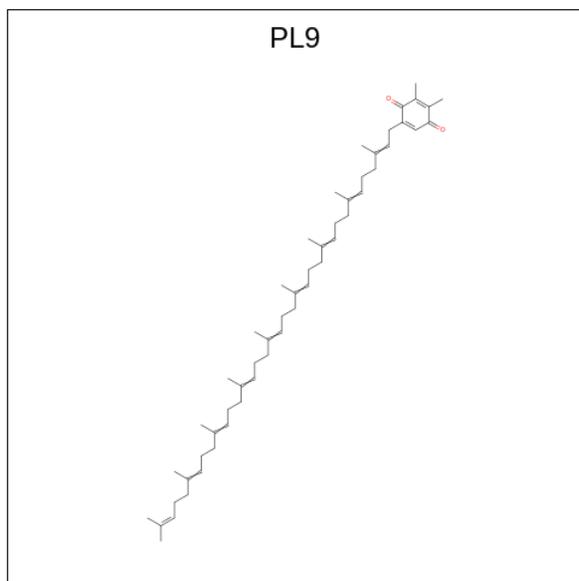


Mol	Chain	Residues	Atoms			AltConf
37	C	1	Total	C	O	0
			50	35	15	
37	C	1	Total	C	O	0
			55	40	15	
37	c	1	Total	C	O	0
			50	35	15	
37	c	1	Total	C	O	0
			55	40	15	

- Molecule 38 is FE (II) ION (CCD ID: FE2) (formula: Fe) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
38	D	1	Total	Fe	0
			1	1	
38	d	1	Total	Fe	0
			1	1	

- Molecule 39 is 2,3-DIMETHYL-5-(3,7,11,15,19,23,27,31,35-NONAMETHYL-2,6,10,14,18,22,26,30,34-HEXATRIACONTANONAENYL-2,5-CYCLOHEXADIENE-1,4-DIONE-2,3-DIMETHYL-5-SOLANESYL-1,4-BENZOQUINONE (CCD ID: PL9) (formula: C₅₃H₈₀O₂) (labeled as "Ligand of Interest" by depositor).



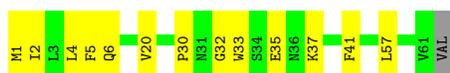
Mol	Chain	Residues	Atoms			AltConf
39	D	1	Total	C	O	0
			55	53	2	
39	d	1	Total	C	O	0
			55	53	2	

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: Photosystem II reaction center protein Z

Chain Z: 



- Molecule 1: Photosystem II reaction center protein Z

Chain z: 



- Molecule 2: Cytochrome b559 subunit alpha

Chain E: 



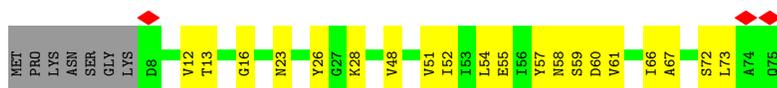
- Molecule 2: Cytochrome b559 subunit alpha

Chain e: 

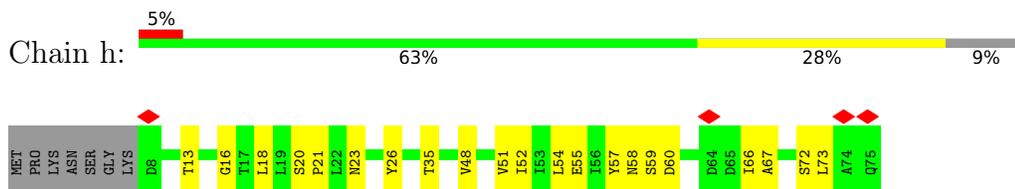


- Molecule 3: Photosystem II reaction center protein H

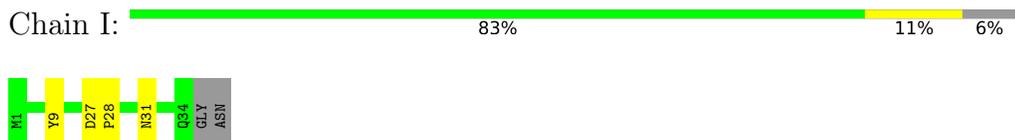
Chain H: 



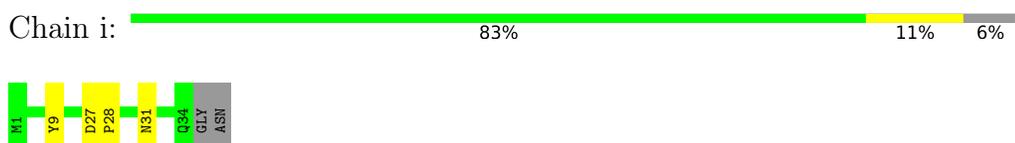
- Molecule 3: Photosystem II reaction center protein H



• Molecule 4: Photosystem II reaction center protein I



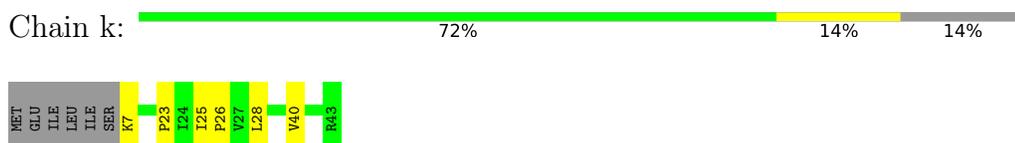
• Molecule 4: Photosystem II reaction center protein I



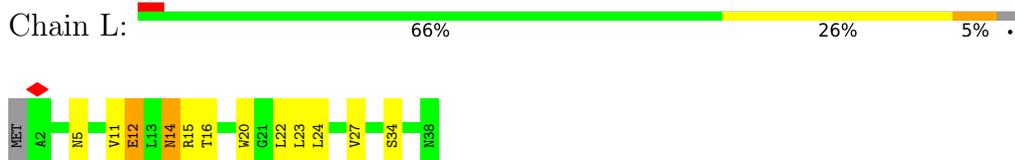
• Molecule 5: Photosystem II reaction center protein K



• Molecule 5: Photosystem II reaction center protein K



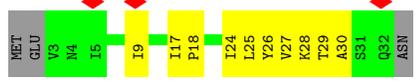
• Molecule 6: Photosystem II reaction center protein L



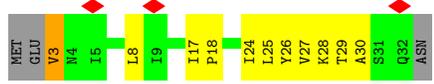
• Molecule 6: Photosystem II reaction center protein L



• Molecule 7: Photosystem II reaction center protein M



• Molecule 7: Photosystem II reaction center protein M



• Molecule 8: PsbR



• Molecule 8: PsbR



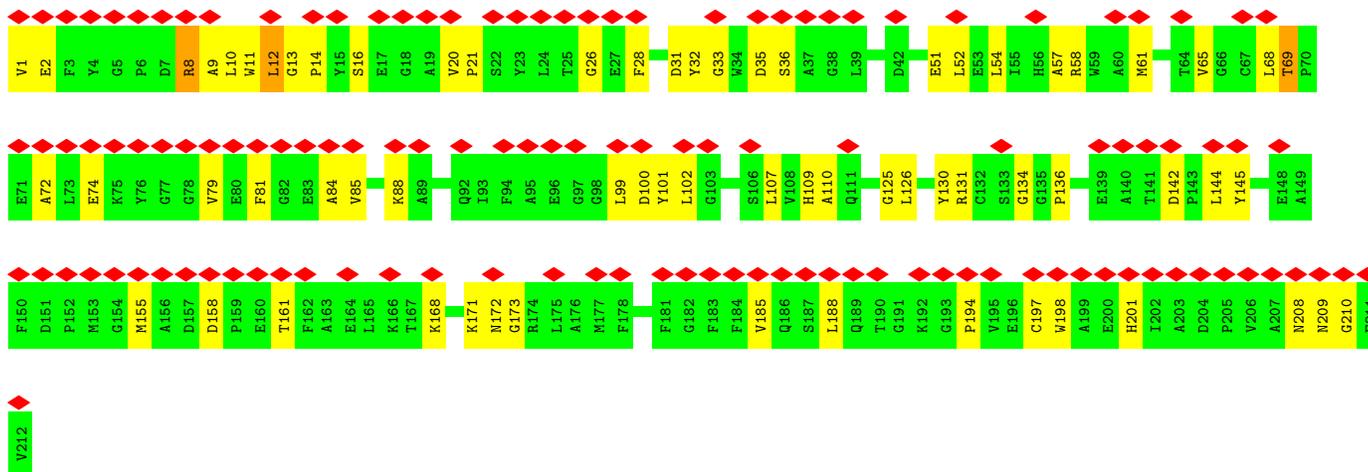
• Molecule 9: Cytochrome b559 subunit beta



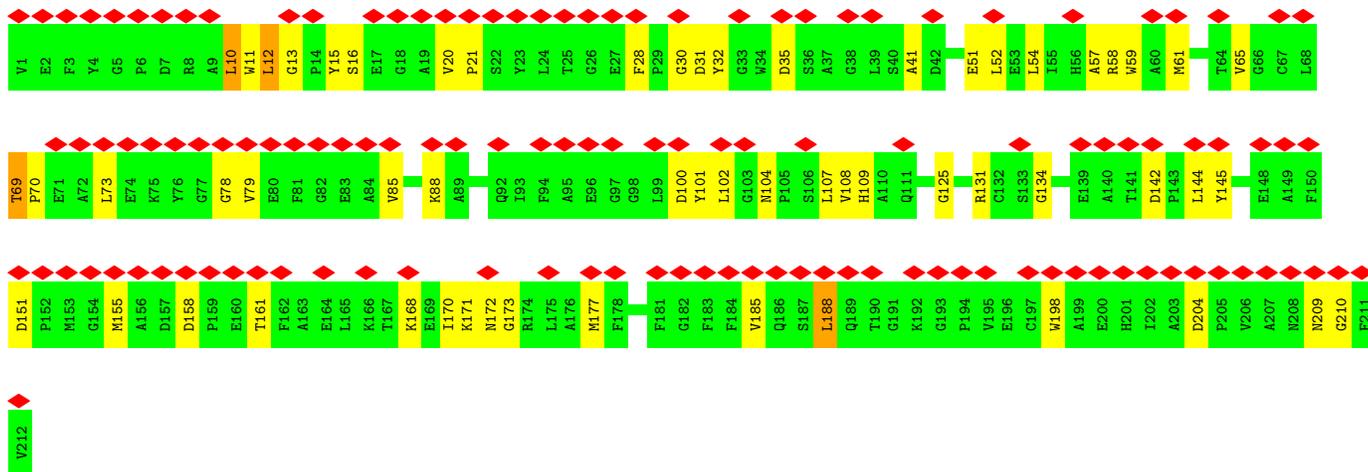
• Molecule 9: Cytochrome b559 subunit beta



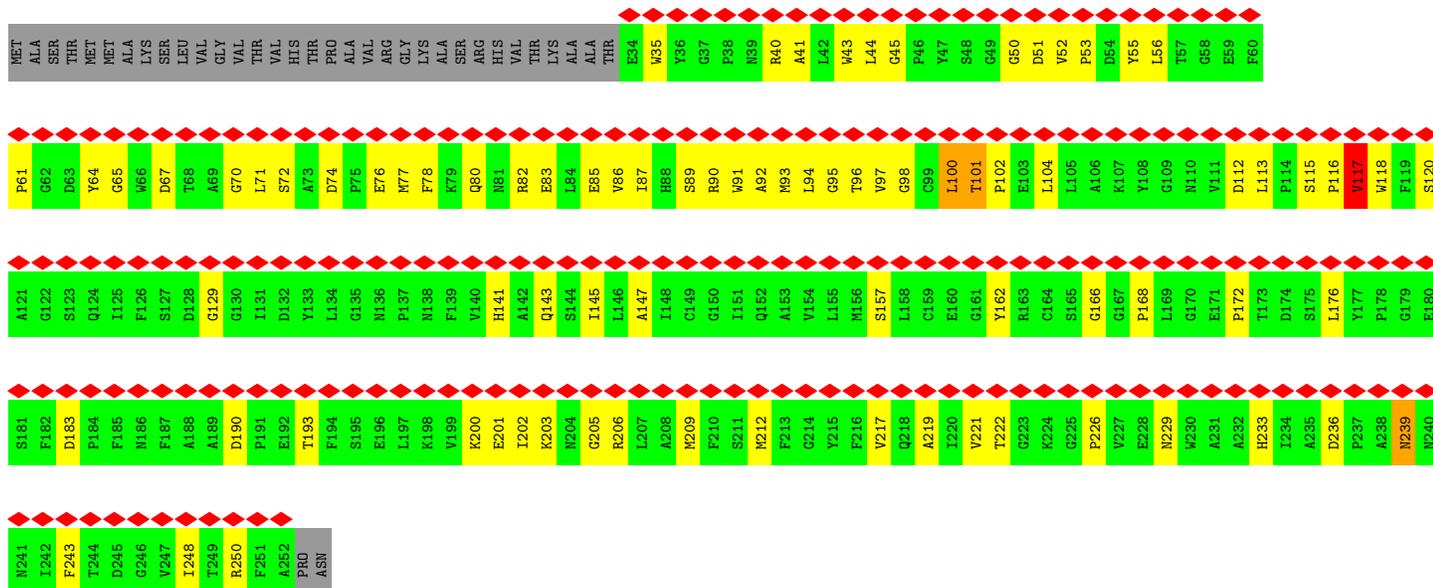
• Molecule 10: Lhcb1



• Molecule 10: Lhcb1

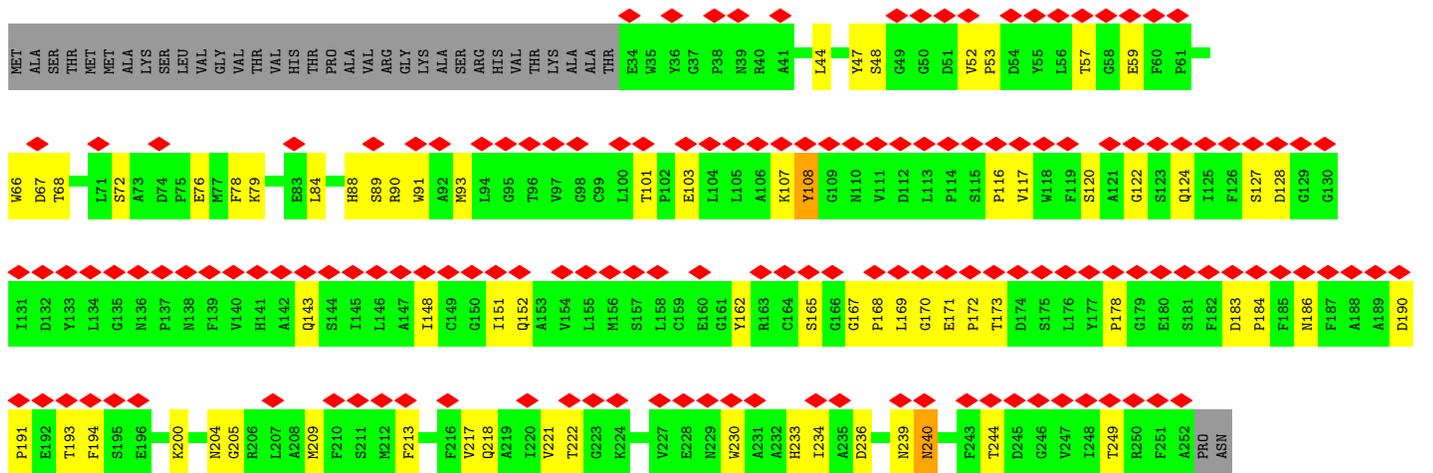


• Molecule 11: Lhcb2



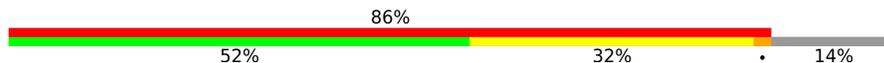
• Molecule 12: Lhcb3

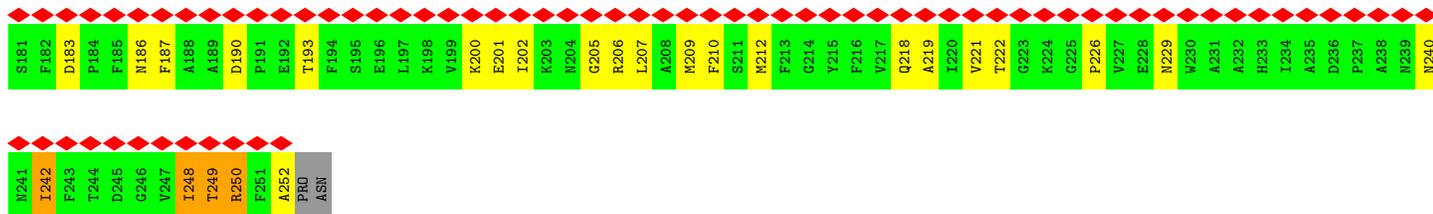
Chain 6:



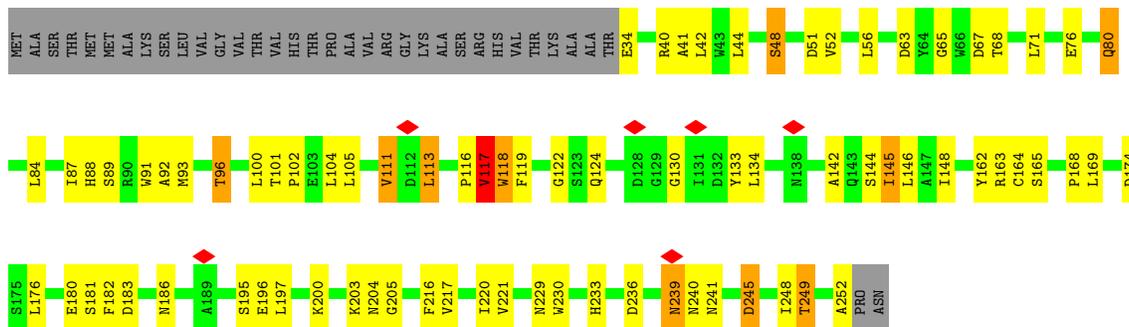
• Molecule 12: Lhcb3

Chain u:

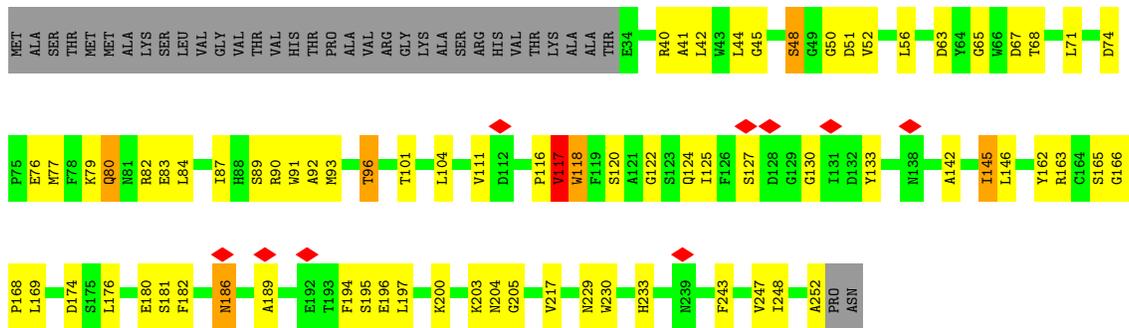




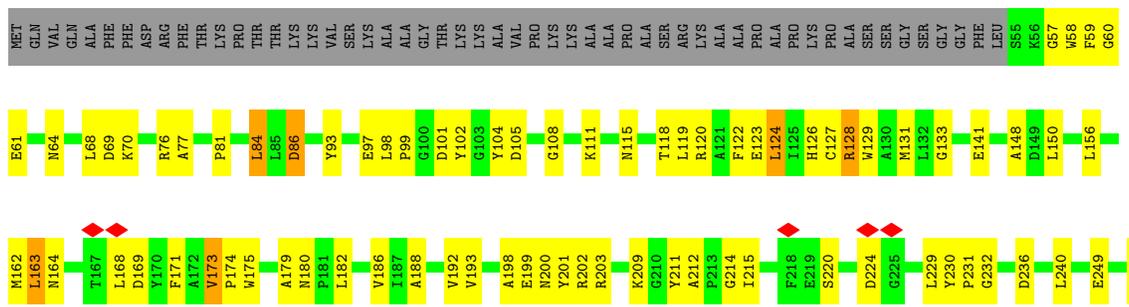
• Molecule 12: Lhcb3



• Molecule 12: Lhcb3



• Molecule 13: LhcbS





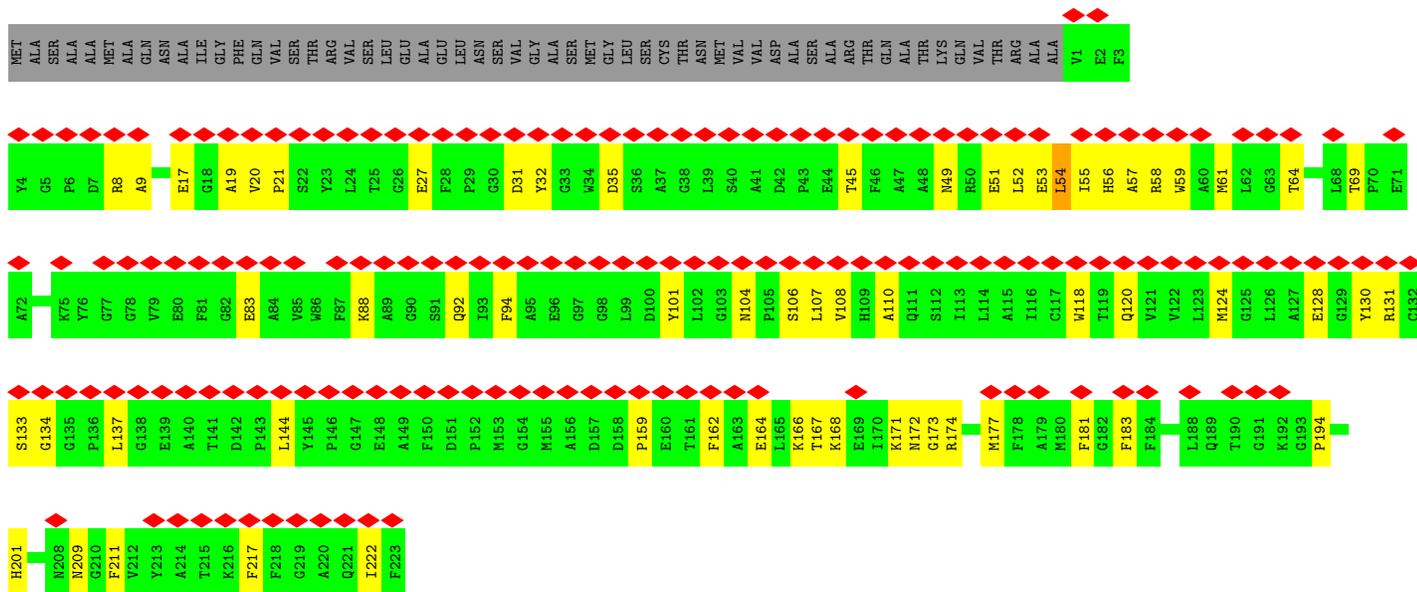
• Molecule 16: Photosystem II reaction center protein T



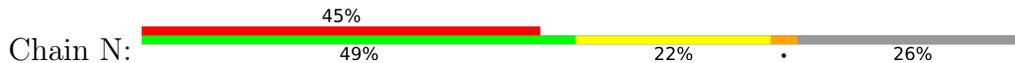
• Molecule 16: Photosystem II reaction center protein T

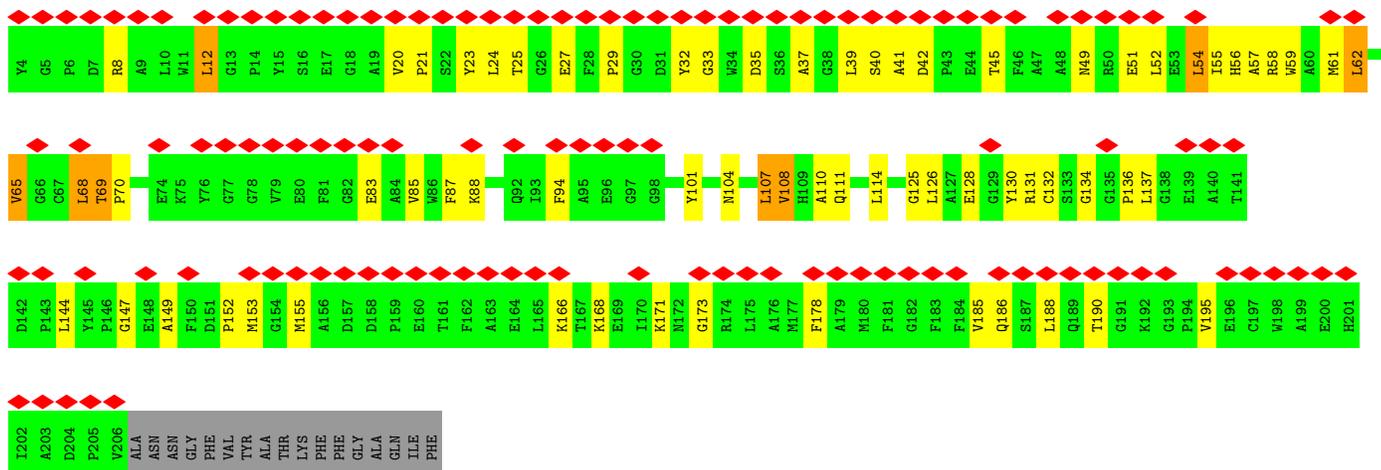


• Molecule 17: LhcbG

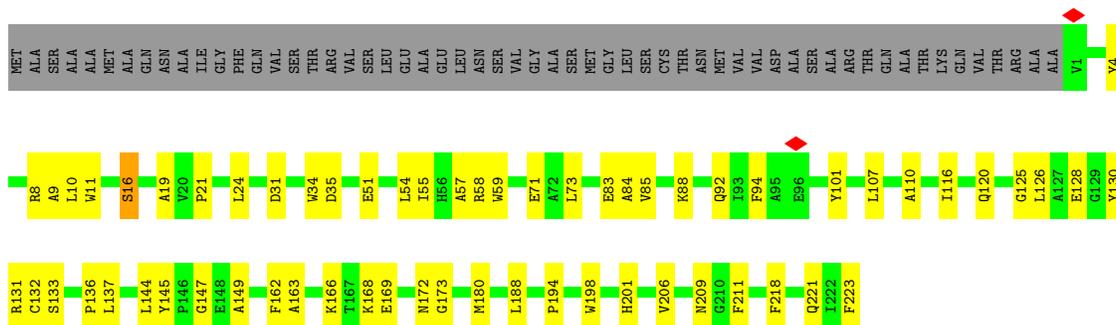


• Molecule 17: LhcbG

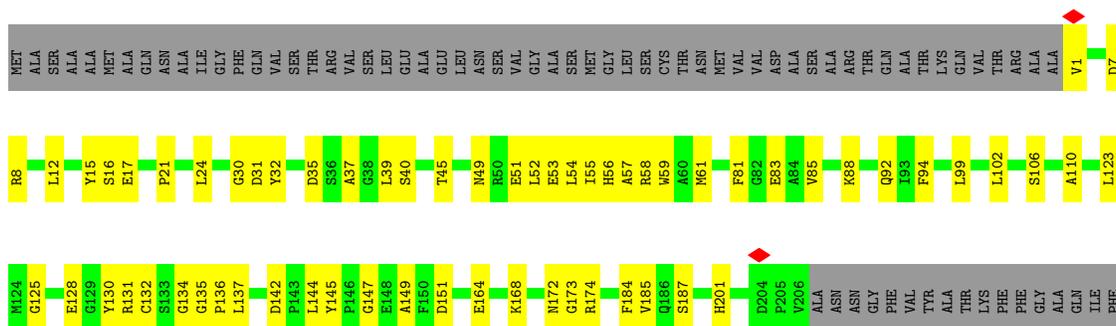




• Molecule 17: LhcbG

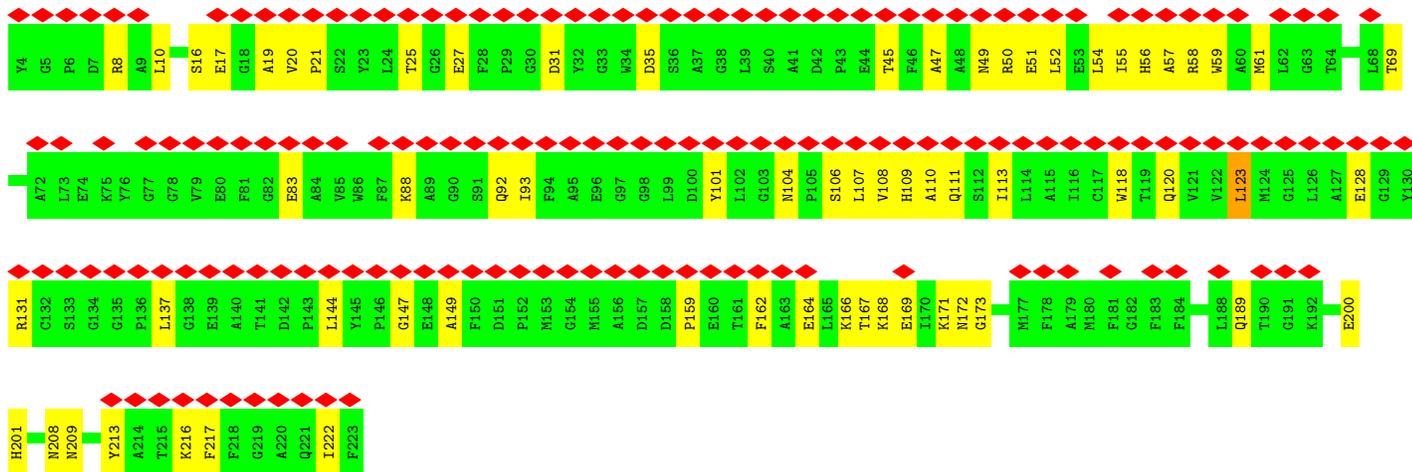


• Molecule 17: LhcbG

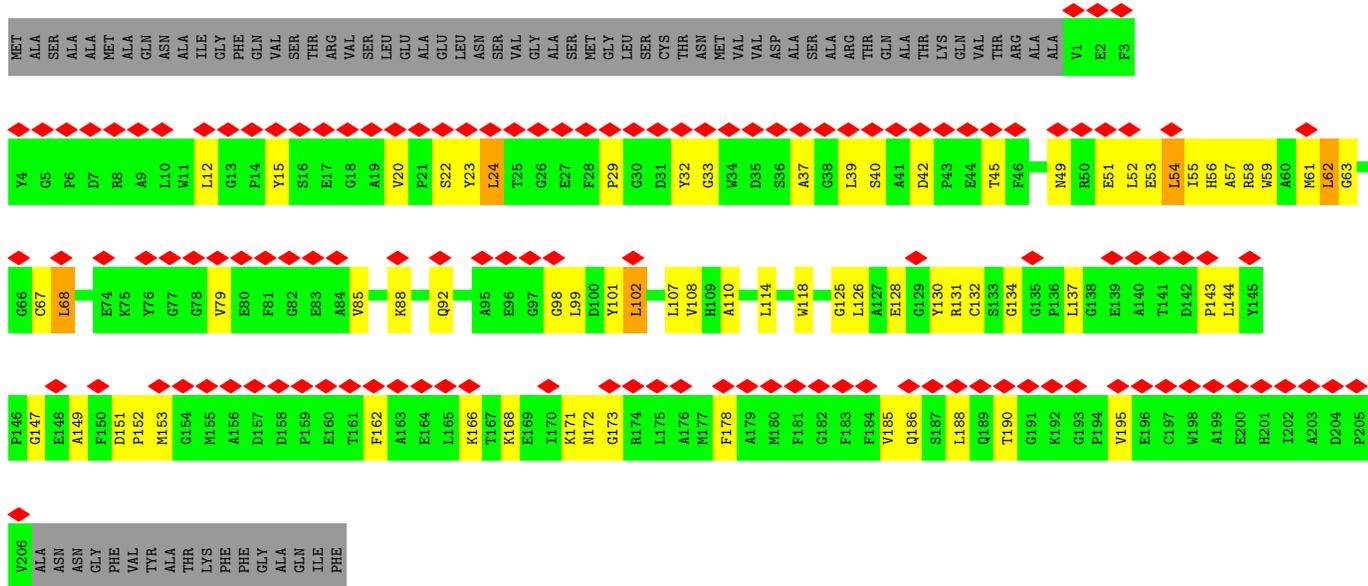


• Molecule 17: LhcbG

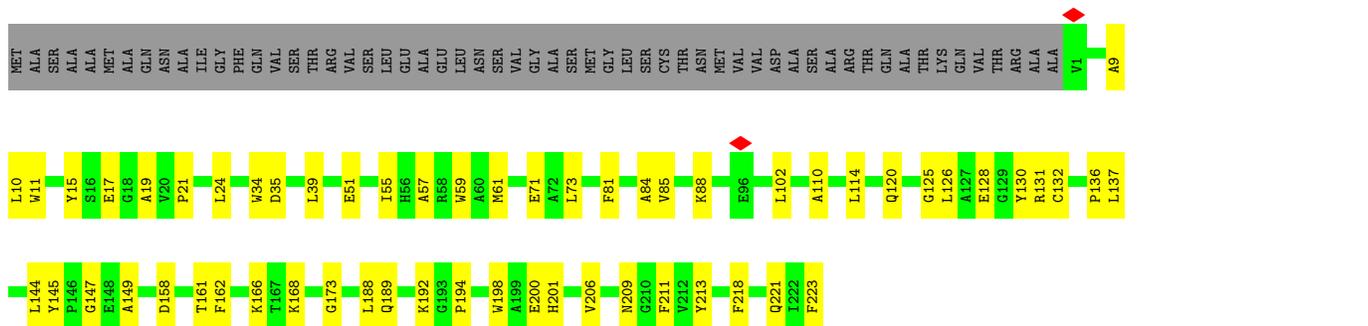


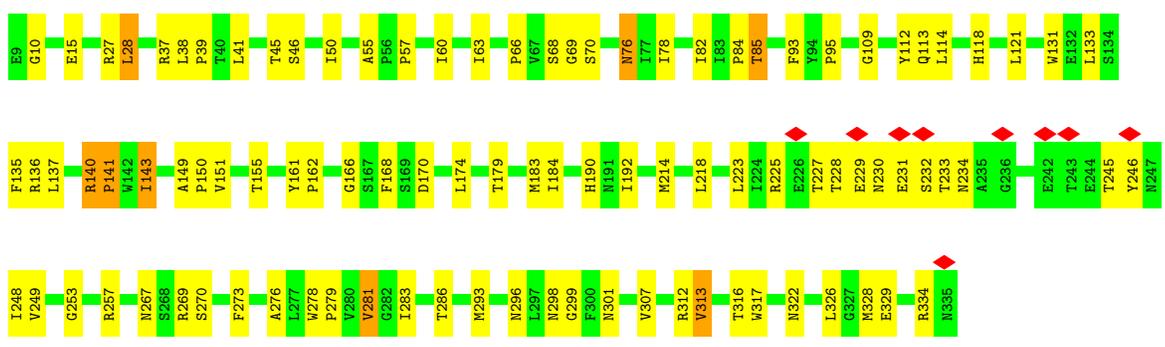


• Molecule 17: LhcbG

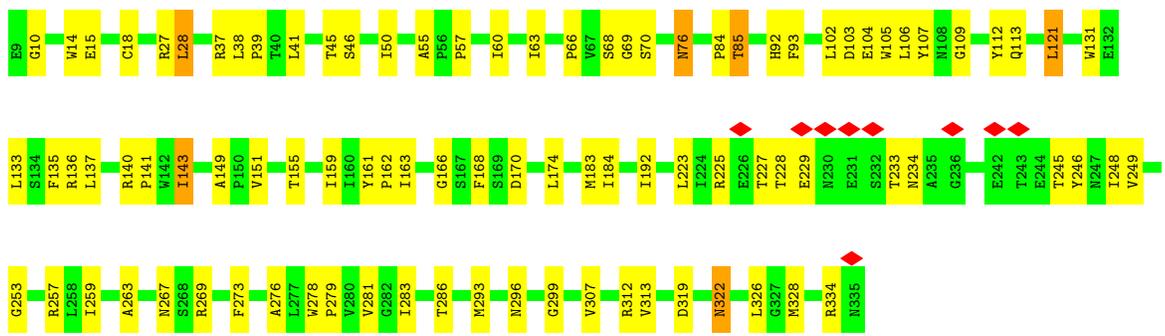


• Molecule 17: LhcbG

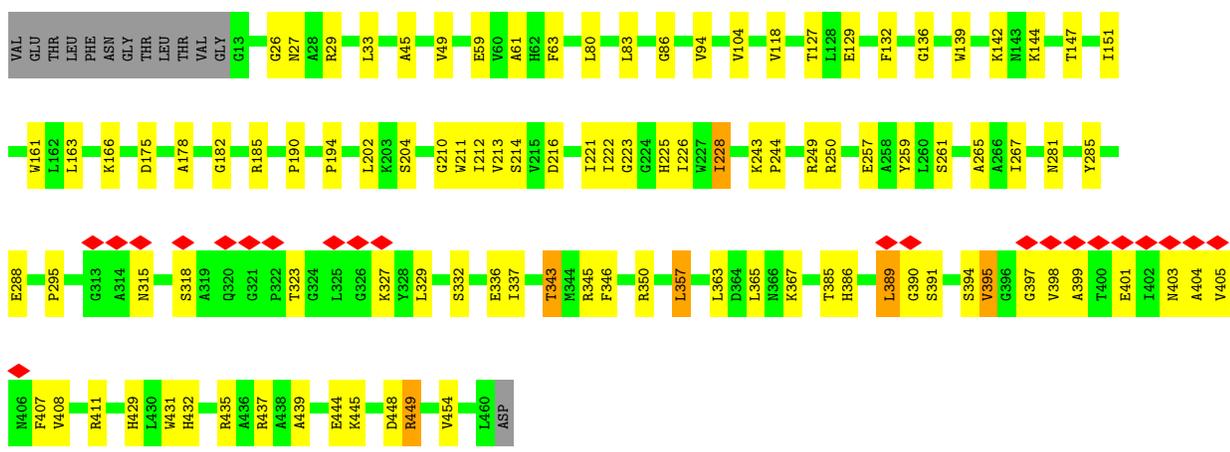
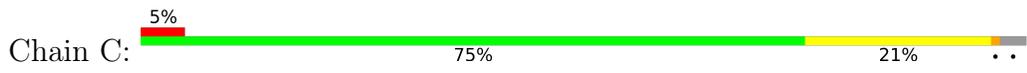




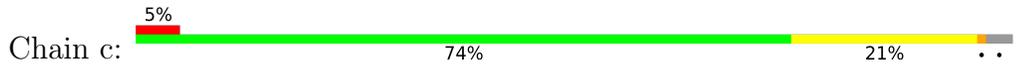
• Molecule 19: PsbA

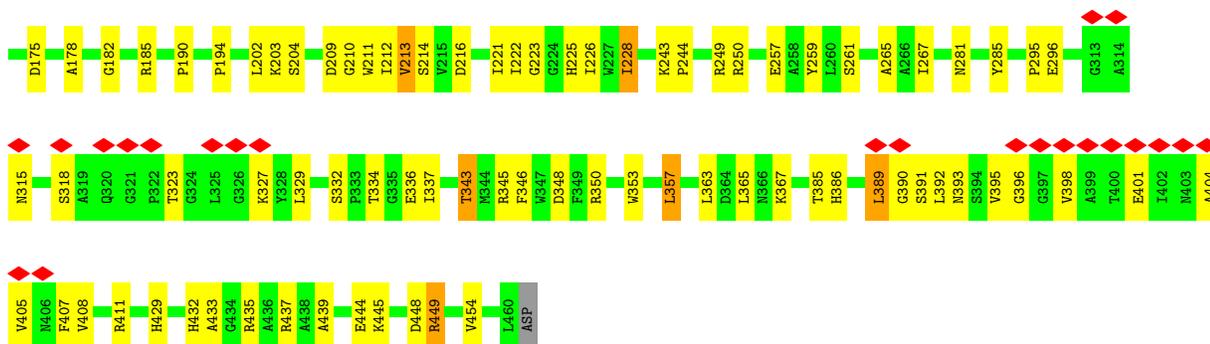


• Molecule 20: Photosystem II CP43 reaction center protein

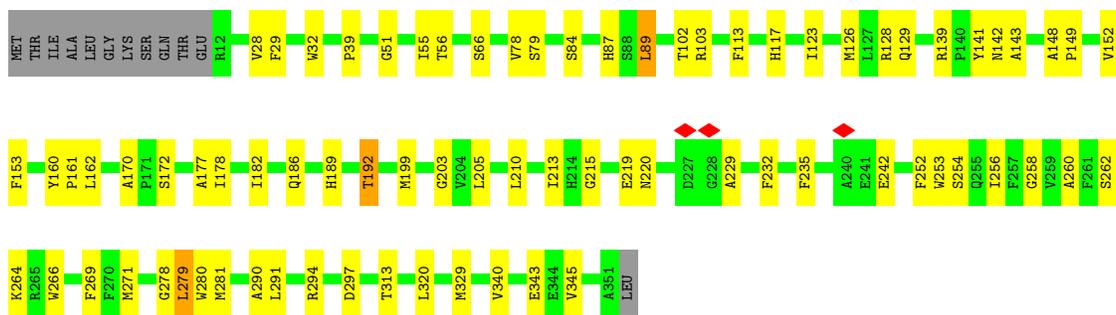


• Molecule 20: Photosystem II CP43 reaction center protein

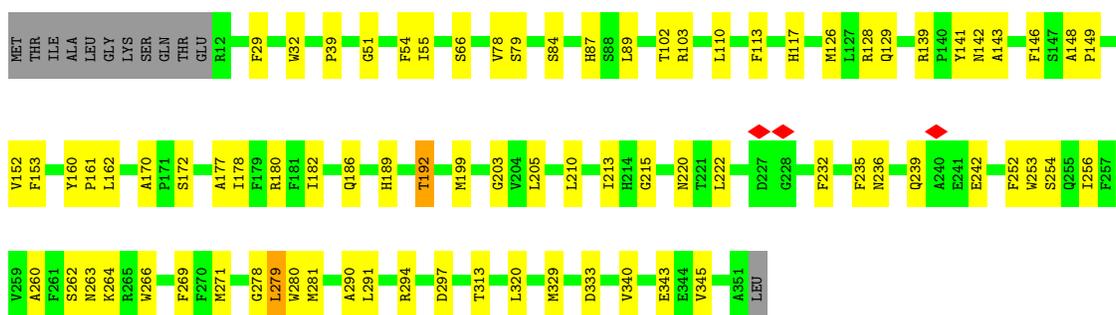




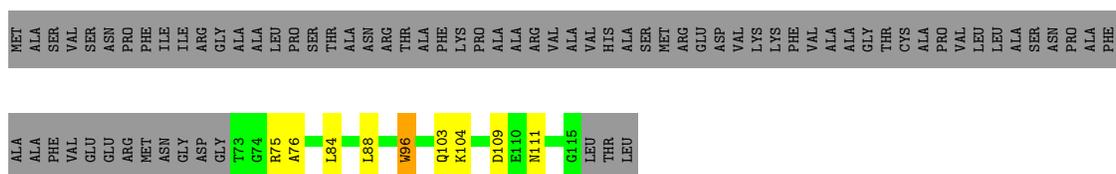
• Molecule 21: Photosystem II D2 protein



• Molecule 21: Photosystem II D2 protein



• Molecule 22: PsbW



• Molecule 22: PsbW



MET ALA ALA SER VAL SER ASN PRO PHE ILE ILE ARG GLY ALA ALA LEU PRO SER THR ALA ASN ARG THR ALA PHE LYS PRO ALA ALA ARG VAL ALA VAL HIS ALA SER MET ARG GLU ASP VAL LYS LYS PHE VAL ALA ALA GLY THR CYS ALA PRO VAL LEU LEU ALA SER ASN PRO ALA PHE

ALA ALA PHE VAL GLU ARG MET ASN GLY ASP GLY T73 G74 R75 A76 L88 S93 W96 Q103 D109 E110 G115 LEU THR LEU

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	140758	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TECNAI 10	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	60	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.922	Depositor
Minimum map value	-0.284	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.023	Depositor
Recommended contour level	0.204	Depositor
Map size (\AA)	624.0, 624.0, 624.0	wwPDB
Map dimensions	600, 600, 600	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	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: 0UR, LMG, XAT, DGD, NEX, OEX, CHL, PL9, PHO, 0IE, SQD, HEM, BCT, CLA, 8CT, FE2, LHG

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	Z	0.18	0/486	0.28	0/664
1	z	0.17	0/486	0.28	0/664
2	E	0.42	0/546	0.54	1/745 (0.1%)
2	e	0.23	0/546	0.35	0/745
3	H	0.22	0/523	0.29	0/713
3	h	0.23	0/523	0.32	0/713
4	I	0.33	0/283	0.28	0/383
4	i	0.34	0/283	0.38	0/383
5	K	0.26	0/310	0.52	0/426
5	k	0.25	0/310	0.35	0/426
6	L	0.27	0/312	0.30	0/424
6	l	0.27	0/312	0.29	0/424
7	M	0.16	0/234	0.31	0/320
7	m	0.15	0/234	0.30	0/320
8	R	0.18	0/1749	0.41	2/2373 (0.1%)
8	r	0.18	0/1745	0.42	2/2369 (0.1%)
9	F	0.21	0/252	0.41	0/341
9	f	0.21	0/258	0.38	0/349
10	1	0.11	0/1658	0.30	0/2257
10	4	0.11	0/1652	0.30	0/2250
11	2	0.15	0/1763	0.33	0/2394
11	5	0.14	0/1764	0.29	0/2395
12	3	0.14	0/1657	0.36	0/2261
12	6	0.14	0/1722	0.40	1/2349 (0.0%)
12	7	0.19	0/1730	0.43	0/2359
12	9	0.12	0/1733	0.37	0/2363
12	p	0.19	0/1733	0.45	0/2363
12	u	0.13	0/1736	0.38	0/2367
13	S	0.25	0/1920	0.43	1/2621 (0.0%)
13	s	0.28	0/1920	0.45	1/2621 (0.0%)
14	X	0.14	0/227	0.22	0/308

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
14	x	0.14	0/227	0.22	0/308
15	V	0.13	0/179	0.38	0/245
15	v	0.13	0/179	0.36	0/245
16	T	0.30	0/244	0.36	0/329
16	t	0.31	0/244	0.35	0/329
17	8	0.19	0/1602	0.29	0/2182
17	G	0.11	0/1743	0.27	0/2371
17	N	0.14	0/1599	0.30	0/2178
17	Y	0.24	0/1743	0.31	0/2371
17	g	0.11	0/1743	0.26	0/2371
17	n	0.13	0/1592	0.29	0/2168
17	q	0.19	0/1602	0.29	0/2182
17	y	0.23	0/1743	0.29	0/2371
18	B	0.33	0/3866	0.37	1/5266 (0.0%)
18	b	0.27	0/3866	0.34	0/5266
19	A	0.33	0/2637	0.36	0/3595
19	a	0.41	0/2637	0.39	0/3595
20	C	0.30	0/3591	0.38	0/4895
20	c	0.30	0/3591	0.39	0/4895
21	D	0.33	0/2813	0.37	0/3832
21	d	0.35	0/2813	0.37	0/3832
22	W	0.24	0/308	0.51	0/417
22	w	0.23	0/308	0.51	0/417
All	All	0.25	0/71477	0.36	9/97350 (0.0%)

There are no bond length outliers.

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

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	E	77	GLY	N-CA-C	7.09	123.47	114.25
8	r	68	ASP	CA-C-N	-6.62	113.97	120.52
8	r	68	ASP	C-N-CA	-6.62	113.97	120.52
8	R	68	ASP	CA-C-N	-6.58	114.00	120.52
8	R	68	ASP	C-N-CA	-6.58	114.00	120.52

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	Z	472	0	496	9	0
1	z	472	0	496	6	0
2	E	530	0	517	20	0
2	e	530	0	517	9	0
3	H	513	0	517	18	0
3	h	513	0	517	17	0
4	I	275	0	282	4	0
4	i	275	0	282	4	0
5	K	299	0	311	7	0
5	k	299	0	311	4	0
6	L	304	0	313	16	0
6	l	304	0	313	14	0
7	M	231	0	261	9	0
7	m	231	0	261	11	0
8	R	1711	0	1670	83	0
8	r	1707	0	1659	70	0
9	F	246	0	256	4	0
9	f	251	0	261	4	0
10	1	1609	0	1517	52	0
10	4	1603	0	1506	50	0
11	2	1710	0	1616	46	0
11	5	1711	0	1620	48	0
12	3	1606	0	1501	44	0
12	6	1670	0	1564	50	0
12	7	1677	0	1573	66	0
12	9	1680	0	1575	71	0
12	p	1680	0	1575	65	0
12	u	1683	0	1584	74	0
13	S	1867	0	1797	79	0
13	s	1867	0	1797	75	0
14	X	226	0	242	4	0
14	x	226	0	242	2	0
15	V	179	0	205	7	0
15	v	179	0	205	5	0
16	T	236	0	239	5	0
16	t	236	0	239	5	0
17	8	1554	0	1467	53	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
17	G	1690	0	1593	57	0
17	N	1551	0	1458	64	0
17	Y	1690	0	1593	44	0
17	g	1690	0	1593	57	0
17	n	1545	0	1455	59	0
17	q	1554	0	1467	52	0
17	y	1690	0	1593	43	0
18	B	3737	0	3605	100	0
18	b	3737	0	3605	92	0
19	A	2558	0	2469	75	0
19	a	2558	0	2469	70	0
20	C	3472	0	3381	85	0
20	c	3472	0	3381	83	0
21	D	2719	0	2631	69	0
21	d	2719	0	2631	66	0
22	W	304	0	276	8	0
22	w	304	0	276	11	0
23	E	43	0	30	2	0
23	f	43	0	30	3	0
24	1	349	0	234	24	0
24	2	353	0	234	11	0
24	3	365	0	250	31	0
24	4	349	0	234	22	0
24	5	353	0	234	15	0
24	6	365	0	250	37	0
24	7	397	0	311	35	0
24	8	351	0	270	24	0
24	9	397	0	311	25	0
24	G	433	0	370	40	0
24	N	404	0	311	20	0
24	R	277	0	186	17	0
24	S	331	0	233	14	0
24	Y	486	0	411	26	0
24	g	433	0	370	28	0
24	n	404	0	311	21	0
24	p	397	0	311	37	0
24	q	404	0	311	23	0
24	r	277	0	186	19	0
24	s	331	0	233	14	0
24	u	397	0	311	21	0
24	y	433	0	370	26	0
25	1	268	0	204	16	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
25	2	305	0	258	10	0
25	3	256	0	186	6	0
25	4	268	0	204	23	0
25	5	305	0	258	11	0
25	6	256	0	186	7	0
25	7	321	0	280	27	0
25	8	310	0	267	12	0
25	9	324	0	284	16	0
25	A	280	0	271	12	0
25	B	980	0	1023	63	0
25	C	790	0	814	30	0
25	D	130	0	144	10	0
25	G	318	0	272	27	0
25	N	310	0	267	13	0
25	R	325	0	247	17	0
25	S	333	0	261	10	0
25	Y	321	0	278	8	0
25	a	280	0	271	13	0
25	b	980	0	1023	61	0
25	c	790	0	814	33	0
25	d	130	0	144	10	0
25	g	318	0	272	15	0
25	n	310	0	267	12	0
25	p	324	0	284	24	0
25	q	310	0	267	12	0
25	r	325	0	247	18	0
25	s	332	0	261	13	0
25	u	324	0	284	16	0
25	y	321	0	278	12	0
26	1	44	0	0	0	0
26	2	88	0	0	1	0
26	3	87	0	0	2	0
26	4	44	0	0	0	0
26	5	88	0	0	0	0
26	6	43	0	0	2	0
26	7	88	0	0	2	0
26	8	44	0	0	0	0
26	9	88	0	0	3	0
26	G	88	0	0	0	0
26	N	44	0	0	0	0
26	R	44	0	0	1	0
26	Y	88	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
26	g	88	0	0	0	0
26	n	44	0	0	0	0
26	p	88	0	0	2	0
26	q	44	0	0	0	0
26	r	44	0	0	1	0
26	u	88	0	0	1	0
26	y	88	0	0	2	0
27	R	44	0	56	16	0
27	r	44	0	56	8	0
28	1	44	0	56	22	0
28	2	44	0	56	9	0
28	3	44	0	56	22	0
28	4	44	0	56	21	0
28	5	44	0	56	10	0
28	6	44	0	56	21	0
28	7	44	0	56	32	0
28	9	44	0	56	6	0
28	G	44	0	56	32	0
28	N	44	0	56	7	0
28	R	44	0	56	6	0
28	S	44	0	56	24	0
28	g	44	0	56	15	0
28	n	44	0	56	7	0
28	p	44	0	56	27	0
28	r	88	0	112	15	0
28	s	44	0	56	21	0
28	u	44	0	56	9	0
28	y	44	0	56	4	0
29	1	52	0	0	0	0
29	2	52	0	0	1	0
29	3	52	0	0	0	0
29	4	52	0	0	1	0
29	5	52	0	0	0	0
29	6	52	0	0	1	0
29	7	52	0	0	0	0
29	8	52	0	0	1	0
29	9	52	0	0	1	0
29	G	52	0	0	1	0
29	N	52	0	0	0	0
29	Y	52	0	0	1	0
29	g	52	0	0	0	0
29	n	52	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
29	p	52	0	0	1	0
29	q	52	0	0	1	0
29	u	52	0	0	1	0
29	y	52	0	0	1	0
30	1	42	0	54	3	0
30	2	40	0	50	2	0
30	4	42	0	54	3	0
30	5	43	0	56	2	0
30	7	37	0	44	3	0
30	9	43	0	56	6	0
30	A	89	0	124	8	0
30	C	32	0	34	0	0
30	D	88	0	122	13	0
30	G	43	0	56	1	0
30	N	43	0	56	4	0
30	Y	43	0	56	0	0
30	a	89	0	124	7	0
30	c	32	0	34	0	0
30	d	88	0	122	11	0
30	g	43	0	56	2	0
30	n	43	0	56	4	0
30	p	43	0	56	3	0
30	y	43	0	56	2	0
31	A	40	0	0	0	0
31	B	40	0	0	0	0
31	C	120	0	0	1	0
31	D	40	0	0	0	0
31	S	80	0	0	0	0
31	T	40	0	0	0	0
31	V	40	0	0	1	0
31	X	40	0	0	0	0
31	a	40	0	0	0	0
31	b	40	0	0	0	0
31	c	120	0	0	1	0
31	d	40	0	0	0	0
31	s	80	0	0	0	0
31	t	40	0	0	0	0
31	v	40	0	0	1	0
31	x	40	0	0	0	0
32	A	45	0	54	2	0
32	B	54	0	78	4	0
32	D	44	0	52	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	a	45	0	54	4	0
32	b	54	0	78	5	0
32	d	44	0	52	1	0
33	B	41	0	52	5	0
33	C	42	0	54	6	0
33	D	94	0	128	8	0
33	W	30	0	30	2	0
33	d	94	0	128	8	0
33	i	48	0	66	3	0
33	m	41	0	52	6	0
33	w	36	0	42	6	0
34	A	10	0	0	0	0
34	a	10	0	0	0	0
35	A	64	0	74	4	0
35	D	64	0	74	6	0
35	a	64	0	74	4	0
35	d	64	0	74	6	0
36	A	4	0	1	0	0
36	a	4	0	1	0	0
37	C	105	0	126	7	0
37	c	105	0	126	8	0
38	D	1	0	0	0	0
38	d	1	0	0	0	0
39	D	55	0	80	2	0
39	d	55	0	80	2	0
All	All	95298	0	87326	2639	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 14.

The worst 5 of 2639 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)
13:S:58:TRP:HZ2	28:S:617:NEX:H183	1.14	1.10
12:u:158:LEU:HD23	28:u:304:NEX:H203	1.35	1.07
13:S:58:TRP:CZ2	28:S:617:NEX:H183	1.89	1.06
28:p:304:NEX:H31	24:p:310:CHL:HBA1	1.38	1.04
13:S:58:TRP:HE1	28:S:617:NEX:H192	1.19	1.03

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	Z	59/62 (95%)	58 (98%)	1 (2%)	0	100	100
1	z	59/62 (95%)	58 (98%)	1 (2%)	0	100	100
2	E	63/82 (77%)	61 (97%)	2 (3%)	0	100	100
2	e	63/82 (77%)	63 (100%)	0	0	100	100
3	H	66/75 (88%)	63 (96%)	3 (4%)	0	100	100
3	h	66/75 (88%)	63 (96%)	3 (4%)	0	100	100
4	I	32/36 (89%)	32 (100%)	0	0	100	100
4	i	32/36 (89%)	30 (94%)	2 (6%)	0	100	100
5	K	35/43 (81%)	33 (94%)	2 (6%)	0	100	100
5	k	35/43 (81%)	34 (97%)	1 (3%)	0	100	100
6	L	35/38 (92%)	35 (100%)	0	0	100	100
6	l	35/38 (92%)	35 (100%)	0	0	100	100
7	M	28/33 (85%)	27 (96%)	1 (4%)	0	100	100
7	m	28/33 (85%)	27 (96%)	1 (4%)	0	100	100
8	R	223/267 (84%)	199 (89%)	23 (10%)	1 (0%)	30	60
8	r	223/267 (84%)	203 (91%)	20 (9%)	0	100	100
9	F	29/42 (69%)	27 (93%)	2 (7%)	0	100	100
9	f	29/42 (69%)	28 (97%)	1 (3%)	0	100	100
10	1	210/212 (99%)	197 (94%)	13 (6%)	0	100	100
10	4	210/212 (99%)	197 (94%)	13 (6%)	0	100	100
11	2	219/256 (86%)	205 (94%)	14 (6%)	0	100	100
11	5	219/256 (86%)	204 (93%)	15 (7%)	0	100	100
12	3	209/254 (82%)	189 (90%)	20 (10%)	0	100	100
12	6	217/254 (85%)	196 (90%)	21 (10%)	0	100	100
12	7	217/254 (85%)	188 (87%)	27 (12%)	2 (1%)	14	43

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
12	9	217/254 (85%)	185 (85%)	31 (14%)	1 (0%)	25	55
12	p	217/254 (85%)	188 (87%)	26 (12%)	3 (1%)	9	32
12	u	217/254 (85%)	187 (86%)	30 (14%)	0	100	100
13	S	247/308 (80%)	211 (85%)	34 (14%)	2 (1%)	16	45
13	s	247/308 (80%)	209 (85%)	35 (14%)	3 (1%)	11	35
14	X	32/109 (29%)	32 (100%)	0	0	100	100
14	x	32/109 (29%)	32 (100%)	0	0	100	100
15	V	23/33 (70%)	18 (78%)	5 (22%)	0	100	100
15	v	23/33 (70%)	19 (83%)	4 (17%)	0	100	100
16	T	26/31 (84%)	24 (92%)	2 (8%)	0	100	100
16	t	26/31 (84%)	24 (92%)	2 (8%)	0	100	100
17	8	204/280 (73%)	195 (96%)	9 (4%)	0	100	100
17	G	221/280 (79%)	215 (97%)	6 (3%)	0	100	100
17	N	204/280 (73%)	196 (96%)	8 (4%)	0	100	100
17	Y	221/280 (79%)	212 (96%)	9 (4%)	0	100	100
17	g	221/280 (79%)	214 (97%)	7 (3%)	0	100	100
17	n	204/280 (73%)	192 (94%)	11 (5%)	1 (0%)	25	55
17	q	204/280 (73%)	196 (96%)	8 (4%)	0	100	100
17	y	221/280 (79%)	212 (96%)	9 (4%)	0	100	100
18	B	476/508 (94%)	455 (96%)	19 (4%)	2 (0%)	30	60
18	b	476/508 (94%)	457 (96%)	17 (4%)	2 (0%)	30	60
19	A	325/327 (99%)	307 (94%)	17 (5%)	1 (0%)	37	66
19	a	325/327 (99%)	304 (94%)	20 (6%)	1 (0%)	37	66
20	C	446/461 (97%)	409 (92%)	36 (8%)	1 (0%)	44	72
20	c	446/461 (97%)	407 (91%)	38 (8%)	1 (0%)	44	72
21	D	338/352 (96%)	313 (93%)	25 (7%)	0	100	100
21	d	338/352 (96%)	318 (94%)	20 (6%)	0	100	100
22	W	41/118 (35%)	30 (73%)	11 (27%)	0	100	100
22	w	41/118 (35%)	30 (73%)	11 (27%)	0	100	100
All	All	8900/10550 (84%)	8243 (93%)	636 (7%)	21 (0%)	45	72

5 of 21 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
18	B	279	PHE
18	B	299	SER
17	n	23	TYR
12	p	117	VAL
12	p	118	TRP

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	Z	51/52 (98%)	51 (100%)	0	100	100
1	z	51/52 (98%)	51 (100%)	0	100	100
2	E	58/73 (80%)	57 (98%)	1 (2%)	56	75
2	e	58/73 (80%)	57 (98%)	1 (2%)	56	75
3	H	56/62 (90%)	55 (98%)	1 (2%)	54	74
3	h	56/62 (90%)	55 (98%)	1 (2%)	54	74
4	I	31/32 (97%)	31 (100%)	0	100	100
4	i	31/32 (97%)	31 (100%)	0	100	100
5	K	33/39 (85%)	31 (94%)	2 (6%)	15	41
5	k	33/39 (85%)	32 (97%)	1 (3%)	36	62
6	L	34/35 (97%)	31 (91%)	3 (9%)	8	29
6	l	34/35 (97%)	32 (94%)	2 (6%)	16	42
7	M	27/30 (90%)	27 (100%)	0	100	100
7	m	27/30 (90%)	26 (96%)	1 (4%)	29	57
8	R	181/214 (85%)	173 (96%)	8 (4%)	24	52
8	r	180/214 (84%)	170 (94%)	10 (6%)	17	44
9	F	25/36 (69%)	22 (88%)	3 (12%)	4	15
9	f	26/36 (72%)	23 (88%)	3 (12%)	4	17
10	1	160/160 (100%)	153 (96%)	7 (4%)	24	52
10	4	159/160 (99%)	153 (96%)	6 (4%)	28	56

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
11	2	168/199 (84%)	168 (100%)	0	100	100
11	5	168/199 (84%)	168 (100%)	0	100	100
12	3	165/202 (82%)	158 (96%)	7 (4%)	25	53
12	6	172/202 (85%)	166 (96%)	6 (4%)	31	58
12	7	173/202 (86%)	164 (95%)	9 (5%)	19	46
12	9	174/202 (86%)	167 (96%)	7 (4%)	27	55
12	p	174/202 (86%)	161 (92%)	13 (8%)	11	34
12	u	175/202 (87%)	166 (95%)	9 (5%)	20	47
13	S	184/232 (79%)	172 (94%)	12 (6%)	14	39
13	s	184/232 (79%)	174 (95%)	10 (5%)	18	45
14	X	24/80 (30%)	23 (96%)	1 (4%)	25	53
14	x	24/80 (30%)	22 (92%)	2 (8%)	9	31
15	V	20/28 (71%)	18 (90%)	2 (10%)	6	22
15	v	20/28 (71%)	19 (95%)	1 (5%)	20	48
16	T	25/28 (89%)	23 (92%)	2 (8%)	10	32
16	t	25/28 (89%)	23 (92%)	2 (8%)	10	32
17	8	153/210 (73%)	152 (99%)	1 (1%)	81	89
17	G	165/210 (79%)	161 (98%)	4 (2%)	44	67
17	N	152/210 (72%)	143 (94%)	9 (6%)	16	42
17	Y	165/210 (79%)	162 (98%)	3 (2%)	54	74
17	g	165/210 (79%)	159 (96%)	6 (4%)	30	58
17	n	151/210 (72%)	144 (95%)	7 (5%)	23	50
17	q	153/210 (73%)	153 (100%)	0	100	100
17	y	165/210 (79%)	163 (99%)	2 (1%)	67	82
18	B	384/410 (94%)	371 (97%)	13 (3%)	32	59
18	b	384/410 (94%)	372 (97%)	12 (3%)	35	61
19	A	266/266 (100%)	251 (94%)	15 (6%)	17	44
19	a	266/266 (100%)	252 (95%)	14 (5%)	19	46
20	C	347/359 (97%)	338 (97%)	9 (3%)	41	65
20	c	347/359 (97%)	337 (97%)	10 (3%)	37	62
21	D	275/285 (96%)	266 (97%)	9 (3%)	33	60

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	d	275/285 (96%)	267 (97%)	8 (3%)	37	62
22	W	29/88 (33%)	27 (93%)	2 (7%)	13	37
22	w	29/88 (33%)	29 (100%)	0	100	100
All	All	7057/8308 (85%)	6800 (96%)	257 (4%)	32	58

5 of 257 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
13	s	119	LEU
8	r	48	MET
19	A	281	VAL
19	A	232	SER
8	r	156	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 55 such sidechains are listed below:

Mol	Chain	Res	Type
20	C	451	ASN
11	5	215	GLN
12	7	81	ASN
19	a	315	ASN
21	D	197	HIS

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

Of 528 ligands modelled in this entry, 2 are monoatomic - leaving 526 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	CHL	9	311	-	47,55,74	2.27	17 (36%)	50,91,114	3.00	21 (42%)
24	CHL	n	311	-	50,58,74	2.16	17 (34%)	52,94,114	2.95	22 (42%)
31	8CT	S	615	-	40,41,41	4.73	25 (62%)	50,56,56	7.31	22 (44%)
25	CLA	B	614	18	56,64,73	1.55	8 (14%)	65,102,113	1.46	7 (10%)
26	OIE	Y	303	-	42,45,45	1.39	6 (14%)	49,63,63	1.50	8 (16%)
25	CLA	7	316	12	45,53,73	1.73	7 (15%)	52,89,113	1.59	6 (11%)
24	CHL	3	310	-	46,54,74	2.38	16 (34%)	49,90,114	3.01	21 (42%)
30	LHG	9	318	25	42,42,48	1.17	6 (14%)	45,48,54	0.98	2 (4%)
24	CHL	8	303	17	54,62,74	2.16	16 (29%)	58,99,114	2.87	23 (39%)
24	CHL	y	305	17	66,74,74	1.80	14 (21%)	73,114,114	2.63	26 (35%)
29	OUR	8	301	-	50,53,58	0.94	1 (2%)	58,72,77	1.78	14 (24%)
24	CHL	n	310	-	53,61,74	2.19	17 (32%)	57,98,114	2.90	24 (42%)
35	PHO	A	606	-	51,69,69	1.08	6 (11%)	47,99,99	1.18	5 (10%)
25	CLA	C	616	20	46,54,73	1.68	9 (19%)	53,90,113	1.63	7 (13%)
25	CLA	g	308	-	50,58,73	1.67	6 (12%)	58,95,113	1.54	9 (15%)
25	CLA	r	311	-	45,53,73	1.72	6 (13%)	52,89,113	1.64	6 (11%)
29	OUR	6	301	-	50,53,58	0.94	1 (2%)	58,72,77	1.81	14 (24%)
24	CHL	2	309	11	43,51,74	2.33	16 (37%)	45,86,114	3.15	20 (44%)
28	NEX	6	303	-	38,46,46	1.06	2 (5%)	50,70,70	2.82	17 (34%)
25	CLA	2	317	-	49,57,73	1.65	6 (12%)	55,93,113	1.57	7 (12%)
25	CLA	4	316	-	42,50,73	1.83	5 (11%)	48,85,113	1.62	7 (14%)
24	CHL	u	311	-	46,54,74	2.36	17 (36%)	49,90,114	3.01	20 (40%)
29	OUR	5	301	-	50,53,58	0.99	2 (4%)	58,72,77	1.84	15 (25%)
25	CLA	q	313	-	63,71,73	1.48	6 (9%)	73,110,113	1.40	7 (9%)
24	CHL	Y	311	-	51,59,74	2.09	14 (27%)	55,96,114	2.90	26 (47%)
24	CHL	G	305	17	66,74,74	1.92	16 (24%)	73,114,114	2.55	23 (31%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	CHL	9	312	-	43,51,74	2.38	15 (34%)	45,86,114	3.14	21 (46%)
25	CLA	2	316	-	45,53,73	1.75	7 (15%)	52,89,113	1.60	6 (11%)
24	CHL	N	304	17	54,62,74	2.18	16 (29%)	58,99,114	2.84	23 (39%)
35	PHO	d	403	-	51,69,69	1.04	4 (7%)	47,99,99	1.26	6 (12%)
25	CLA	p	317	12	55,63,73	1.60	7 (12%)	63,100,113	1.49	7 (11%)
24	CHL	y	318	17	42,50,74	2.29	14 (33%)	44,85,114	3.19	24 (54%)
25	CLA	6	307	-	43,51,73	1.79	6 (13%)	49,86,113	1.61	6 (12%)
23	HEM	f	201	9,2	41,50,50	1.47	4 (9%)	45,82,82	1.25	3 (6%)
24	CHL	3	317	12	42,50,74	2.43	17 (40%)	44,85,114	3.27	24 (54%)
25	CLA	y	315	30	63,71,73	1.47	7 (11%)	73,110,113	1.38	6 (8%)
24	CHL	1	312	10	46,54,74	2.33	16 (34%)	49,90,114	2.99	21 (42%)
25	CLA	p	316	-	45,53,73	1.73	7 (15%)	52,89,113	1.60	6 (11%)
24	CHL	n	305	-	60,68,74	1.99	17 (28%)	65,106,114	2.68	25 (38%)
26	OIE	G	303	-	42,45,45	1.40	6 (14%)	49,63,63	1.55	9 (18%)
28	NEX	g	304	-	38,46,46	0.97	2 (5%)	50,70,70	4.90	19 (38%)
24	CHL	g	311	-	54,62,74	2.17	16 (29%)	58,99,114	2.83	23 (39%)
25	CLA	N	313	-	55,63,73	1.58	6 (10%)	64,101,113	1.50	9 (14%)
25	CLA	S	610	-	45,53,73	1.74	7 (15%)	52,89,113	1.58	6 (11%)
24	CHL	G	309	-	43,51,74	2.41	16 (37%)	45,86,114	3.20	20 (44%)
25	CLA	N	316	-	43,51,73	1.80	6 (13%)	49,86,113	1.57	6 (12%)
37	DGD	C	619	-	51,51,67	0.93	2 (3%)	65,65,81	1.24	5 (7%)
24	CHL	8	310	-	56,64,74	2.03	15 (26%)	61,102,114	2.77	24 (39%)
25	CLA	u	308	-	50,58,73	1.68	6 (12%)	58,95,113	1.54	8 (13%)
25	CLA	c	610	-	65,73,73	1.43	10 (15%)	76,113,113	1.43	9 (11%)
25	CLA	Y	314	30	63,71,73	1.48	7 (11%)	73,110,113	1.38	6 (8%)
25	CLA	d	405	21	65,73,73	1.44	7 (10%)	76,113,113	1.42	6 (7%)
32	SQD	D	409	-	43,44,54	1.06	5 (11%)	52,55,65	1.57	9 (17%)
25	CLA	G	307	-	53,61,73	1.65	6 (11%)	61,98,113	1.46	7 (11%)
29	OUR	n	301	-	50,53,58	0.95	1 (2%)	58,72,77	1.81	12 (20%)
25	CLA	R	611	8	45,53,73	1.75	7 (15%)	52,89,113	1.57	6 (11%)
24	CHL	r	309	-	46,54,74	2.28	16 (34%)	49,90,114	2.99	24 (48%)
25	CLA	b	608	-	55,63,73	1.58	8 (14%)	64,101,113	1.50	7 (10%)
24	CHL	G	318	17	42,50,74	2.37	16 (38%)	44,85,114	3.20	22 (50%)
27	XAT	R	615	-	39,47,47	0.91	0	54,74,74	2.74	20 (37%)
25	CLA	5	307	11	43,51,73	1.78	6 (13%)	49,86,113	1.60	6 (12%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	y	308	-	50,58,73	1.63	7 (14%)	58,95,113	1.60	8 (13%)
25	CLA	5	316	-	45,53,73	1.75	7 (15%)	52,89,113	1.61	6 (11%)
25	CLA	b	616	18	47,55,73	1.70	9 (19%)	54,91,113	1.60	6 (11%)
33	LMG	d	401	-	48,48,55	0.91	2 (4%)	56,56,63	1.19	5 (8%)
28	NEX	s	401	25	38,46,46	1.06	2 (5%)	50,70,70	2.82	17 (34%)
25	CLA	7	315	30	63,71,73	1.48	7 (11%)	73,110,113	1.47	8 (10%)
25	CLA	g	314	-	55,63,73	1.59	7 (12%)	64,101,113	1.48	9 (14%)
25	CLA	Y	306	17	53,61,73	1.59	7 (13%)	61,98,113	1.51	8 (13%)
29	OUR	1	301	-	50,53,58	0.99	2 (4%)	58,72,77	1.96	17 (29%)
24	CHL	r	308	-	48,56,74	2.16	15 (31%)	51,92,114	3.05	24 (47%)
25	CLA	G	308	-	50,58,73	1.67	5 (10%)	58,95,113	1.54	9 (15%)
26	OIE	3	303	-	42,45,45	1.44	6 (14%)	49,63,63	1.70	9 (18%)
25	CLA	c	606	20	53,61,73	1.59	9 (16%)	61,98,113	1.56	6 (9%)
25	CLA	q	306	28	50,58,73	1.66	7 (14%)	58,95,113	1.55	8 (13%)
25	CLA	C	609	20	65,73,73	1.46	9 (13%)	76,113,113	1.43	9 (11%)
25	CLA	c	609	20	65,73,73	1.47	9 (13%)	76,113,113	1.44	10 (13%)
25	CLA	B	605	18	65,73,73	1.47	8 (12%)	76,113,113	1.34	8 (10%)
25	CLA	c	601	20	65,73,73	1.41	7 (10%)	76,113,113	1.52	9 (11%)
24	CHL	n	317	-	42,50,74	2.47	17 (40%)	44,85,114	3.29	22 (50%)
28	NEX	G	304	-	38,46,46	0.96	2 (5%)	50,70,70	4.91	19 (38%)
24	CHL	8	304	17	60,68,74	1.96	16 (26%)	65,106,114	2.70	25 (38%)
24	CHL	8	308	-	46,54,74	2.23	15 (32%)	49,90,114	3.09	24 (48%)
24	CHL	s	408	-	46,54,74	2.22	16 (34%)	49,90,114	3.07	21 (42%)
25	CLA	2	314	-	55,63,73	1.57	7 (12%)	64,101,113	1.46	8 (12%)
25	CLA	3	316	-	45,53,73	1.78	7 (15%)	52,89,113	1.59	8 (15%)
24	CHL	5	313	-	42,50,74	2.38	16 (38%)	44,85,114	3.17	21 (47%)
25	CLA	q	312	-	55,63,73	1.58	8 (14%)	64,101,113	1.50	8 (12%)
24	CHL	u	305	12	66,74,74	1.99	16 (24%)	73,114,114	2.60	23 (31%)
25	CLA	5	317	11	49,57,73	1.65	6 (12%)	55,93,113	1.59	7 (12%)
24	CHL	p	312	-	47,55,74	2.14	15 (31%)	50,91,114	3.06	24 (48%)
26	OIE	u	302	-	42,45,45	1.44	6 (14%)	49,63,63	1.53	11 (22%)
26	OIE	N	302	-	42,45,45	1.42	6 (14%)	49,63,63	1.58	11 (22%)
24	CHL	7	312	-	47,55,74	2.12	15 (31%)	50,91,114	3.09	24 (48%)
25	CLA	4	313	-	55,63,73	1.61	6 (10%)	64,101,113	1.48	9 (14%)
24	CHL	6	305	-	48,56,74	2.23	16 (33%)	51,92,114	2.94	23 (45%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	8	305	17	54,62,73	1.59	7 (12%)	62,99,113	1.47	7 (11%)
24	CHL	q	303	17	54,62,74	2.15	16 (29%)	58,99,114	2.87	23 (39%)
24	CHL	7	313	-	43,51,74	2.25	15 (34%)	45,86,114	3.08	20 (44%)
24	CHL	u	309	12	43,51,74	2.40	16 (37%)	45,86,114	3.18	20 (44%)
33	LMG	C	618	-	42,42,55	0.99	2 (4%)	50,50,63	1.23	4 (8%)
32	SQD	a	609	-	44,45,54	1.05	5 (11%)	53,56,65	1.67	10 (18%)
24	CHL	S	605	-	46,54,74	2.26	16 (34%)	49,90,114	3.00	20 (40%)
24	CHL	q	309	-	53,61,74	2.10	15 (28%)	57,98,114	2.90	26 (45%)
25	CLA	1	307	-	41,49,73	1.83	6 (14%)	47,84,113	1.64	8 (17%)
25	CLA	c	602	20	65,73,73	1.45	10 (15%)	76,113,113	1.41	7 (9%)
25	CLA	c	607	-	65,73,73	1.43	10 (15%)	76,113,113	1.43	6 (7%)
29	OUR	y	301	-	50,53,58	0.98	1 (2%)	58,72,77	1.63	14 (24%)
24	CHL	6	304	12	48,56,74	2.26	16 (33%)	51,92,114	2.95	21 (41%)
25	CLA	G	315	-	60,68,73	1.54	6 (10%)	70,107,113	1.42	7 (10%)
29	OUR	2	301	-	50,53,58	1.00	2 (4%)	58,72,77	1.84	15 (25%)
24	CHL	5	318	11	42,50,74	2.43	16 (38%)	44,85,114	3.25	21 (47%)
25	CLA	3	314	-	41,49,73	1.82	5 (12%)	47,84,113	1.67	7 (14%)
25	CLA	R	604	-	41,49,73	1.82	7 (17%)	47,84,113	1.70	9 (19%)
25	CLA	G	314	-	55,63,73	1.59	6 (10%)	64,101,113	1.48	9 (14%)
24	CHL	R	606	-	48,56,74	2.21	16 (33%)	51,92,114	2.97	22 (43%)
24	CHL	1	308	10	43,51,74	2.38	16 (37%)	45,86,114	3.20	20 (44%)
24	CHL	6	309	-	51,59,74	2.22	16 (31%)	55,96,114	2.91	25 (45%)
24	CHL	9	304	12	66,74,74	1.94	16 (24%)	73,114,114	2.57	23 (31%)
25	CLA	n	316	-	43,51,73	1.79	5 (11%)	49,86,113	1.58	6 (12%)
25	CLA	A	610	-	41,49,73	1.84	6 (14%)	47,84,113	1.71	8 (17%)
26	OIE	u	303	-	42,45,45	1.45	6 (14%)	49,63,63	1.67	10 (20%)
24	CHL	R	601	8	46,54,74	2.37	16 (34%)	49,90,114	3.03	21 (42%)
24	CHL	2	313	-	42,50,74	2.39	16 (38%)	44,85,114	3.16	21 (47%)
25	CLA	C	605	20	56,64,73	1.54	8 (14%)	65,102,113	1.52	7 (10%)
31	8CT	C	613	-	40,41,41	4.60	23 (57%)	50,56,56	2.72	20 (40%)
24	CHL	g	306	-	64,72,74	1.91	16 (25%)	70,111,114	2.65	27 (38%)
31	8CT	C	614	-	40,41,41	4.56	23 (57%)	50,56,56	2.68	21 (42%)
25	CLA	N	314	-	63,71,73	1.49	6 (9%)	73,110,113	1.41	7 (9%)
30	LHG	d	407	-	48,48,48	1.07	5 (10%)	51,54,54	0.96	2 (3%)
24	CHL	8	315	-	42,50,74	2.45	17 (40%)	44,85,114	3.25	21 (47%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	p	307	12	56,64,73	1.56	6 (10%)	65,102,113	1.51	7 (10%)
25	CLA	a	607	19	60,68,73	1.47	7 (11%)	70,107,113	1.54	9 (12%)
24	CHL	4	311	-	44,52,74	2.24	15 (34%)	46,87,114	3.06	20 (43%)
24	CHL	p	313	-	43,51,74	2.25	15 (34%)	45,86,114	3.07	20 (44%)
25	CLA	C	604	-	65,73,73	1.46	9 (13%)	76,113,113	1.43	8 (10%)
31	8CT	D	410	-	40,41,41	4.70	23 (57%)	50,56,56	2.47	18 (36%)
25	CLA	S	604	-	43,51,73	1.78	7 (16%)	49,86,113	1.59	6 (12%)
29	OUR	G	301	-	50,53,58	0.95	1 (2%)	58,72,77	1.75	15 (25%)
24	CHL	g	318	17	42,50,74	2.37	16 (38%)	44,85,114	3.20	23 (52%)
36	BCT	A	611	38	2,3,3	1.25	0	2,3,3	4.17	2 (100%)
24	CHL	5	305	11	44,52,74	2.25	15 (34%)	46,87,114	3.09	21 (45%)
26	OIE	p	303	-	42,45,45	1.40	6 (14%)	49,63,63	1.57	9 (18%)
25	CLA	5	308	-	50,58,73	1.65	6 (12%)	58,95,113	1.58	9 (15%)
25	CLA	3	315	12	45,53,73	1.78	7 (15%)	52,89,113	1.59	7 (13%)
32	SQD	A	609	-	44,45,54	1.06	5 (11%)	53,56,65	1.55	10 (18%)
24	CHL	Y	309	-	47,55,74	2.14	14 (29%)	50,91,114	3.07	24 (48%)
25	CLA	D	405	21	65,73,73	1.44	8 (12%)	76,113,113	1.42	7 (9%)
24	CHL	4	309	-	43,51,74	2.35	15 (34%)	45,86,114	3.10	21 (46%)
28	NEX	9	319	-	38,46,46	0.95	2 (5%)	50,70,70	4.90	19 (38%)
24	CHL	r	303	-	47,55,74	2.18	15 (31%)	50,91,114	3.01	22 (44%)
25	CLA	B	603	18	65,73,73	1.43	8 (12%)	76,113,113	1.42	7 (9%)
24	CHL	2	310	-	42,50,74	2.34	16 (38%)	44,85,114	3.17	21 (47%)
24	CHL	9	317	-	42,50,74	2.49	17 (40%)	44,85,114	3.31	22 (50%)
25	CLA	9	315	-	45,53,73	1.78	6 (13%)	52,89,113	1.58	6 (11%)
31	8CT	x	601	-	40,41,41	4.63	23 (57%)	50,56,56	2.59	19 (38%)
24	CHL	u	318	-	42,50,74	2.49	17 (40%)	44,85,114	3.30	22 (50%)
25	CLA	8	313	17	45,53,73	1.73	7 (15%)	52,89,113	1.62	6 (11%)
24	CHL	s	409	-	47,55,74	2.23	16 (34%)	50,91,114	2.98	22 (44%)
24	CHL	5	309	11	43,51,74	2.35	15 (34%)	45,86,114	3.17	20 (44%)
25	CLA	2	315	-	63,71,73	1.48	6 (9%)	73,110,113	1.40	6 (8%)
25	CLA	B	611	18	65,73,73	1.47	9 (13%)	76,113,113	1.47	8 (10%)
30	LHG	a	601	-	44,44,48	1.12	5 (11%)	47,50,54	0.98	3 (6%)
30	LHG	G	319	-	42,42,48	1.16	6 (14%)	45,48,54	0.99	2 (4%)
26	OIE	r	315	-	42,45,45	1.44	6 (14%)	49,63,63	1.54	10 (20%)
24	CHL	q	311	-	56,64,74	2.02	15 (26%)	61,102,114	2.77	25 (40%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
28	NEX	3	318	-	38,46,46	1.06	2 (5%)	50,70,70	2.82	17 (34%)
25	CLA	R	609	8	55,63,73	1.56	7 (12%)	64,101,113	1.49	8 (12%)
24	CHL	6	317	12	42,50,74	2.42	16 (38%)	44,85,114	3.26	24 (54%)
24	CHL	N	308	17	43,51,74	2.31	15 (34%)	45,86,114	3.08	20 (44%)
24	CHL	g	312	-	51,59,74	2.20	17 (33%)	55,96,114	2.87	25 (45%)
25	CLA	9	313	-	55,63,73	1.60	5 (9%)	64,101,113	1.49	9 (14%)
25	CLA	u	314	-	55,63,73	1.61	5 (9%)	64,101,113	1.49	9 (14%)
25	CLA	b	613	18	65,73,73	1.47	9 (13%)	76,113,113	1.36	8 (10%)
24	CHL	3	312	-	43,51,74	2.36	15 (34%)	45,86,114	3.10	21 (46%)
24	CHL	8	307	17	43,51,74	2.27	15 (34%)	45,86,114	3.13	22 (48%)
31	8CT	b	617	-	40,41,41	4.66	23 (57%)	50,56,56	2.84	18 (36%)
25	CLA	8	311	-	55,63,73	1.57	7 (12%)	64,101,113	1.50	8 (12%)
25	CLA	b	614	18	56,64,73	1.55	9 (16%)	65,102,113	1.47	6 (9%)
25	CLA	c	612	20	54,62,73	1.56	8 (14%)	62,99,113	1.55	6 (9%)
24	CHL	S	613	-	42,50,74	2.32	15 (35%)	44,85,114	3.20	24 (54%)
25	CLA	g	316	17	45,53,73	1.76	7 (15%)	52,89,113	1.61	6 (11%)
25	CLA	n	315	17	45,53,73	1.77	7 (15%)	52,89,113	1.58	6 (11%)
25	CLA	3	307	-	43,51,73	1.77	6 (13%)	49,86,113	1.61	6 (12%)
25	CLA	r	314	-	47,55,73	1.79	5 (10%)	54,91,113	1.50	7 (12%)
26	OIE	5	302	-	42,45,45	1.40	6 (14%)	49,63,63	1.53	9 (18%)
24	CHL	1	305	10	46,54,74	2.26	16 (34%)	49,90,114	3.04	24 (48%)
25	CLA	9	306	-	56,64,73	1.59	5 (8%)	65,102,113	1.44	6 (9%)
28	NEX	2	304	-	38,46,46	0.96	2 (5%)	50,70,70	4.90	19 (38%)
25	CLA	C	601	20	65,73,73	1.40	7 (10%)	76,113,113	1.49	8 (10%)
25	CLA	B	616	18	47,55,73	1.69	9 (19%)	54,91,113	1.60	6 (11%)
25	CLA	b	615	18	65,73,73	1.45	8 (12%)	76,113,113	1.35	6 (7%)
25	CLA	C	606	20	53,61,73	1.59	9 (16%)	61,98,113	1.56	6 (9%)
28	NEX	n	303	-	38,46,46	1.06	2 (5%)	50,70,70	2.82	18 (36%)
24	CHL	2	312	-	46,54,74	2.24	16 (34%)	49,90,114	3.01	22 (44%)
24	CHL	N	309	-	46,54,74	2.22	16 (34%)	49,90,114	3.10	24 (48%)
26	OIE	y	303	-	42,45,45	1.40	6 (14%)	49,63,63	1.50	9 (18%)
24	CHL	3	308	-	43,51,74	2.38	16 (37%)	45,86,114	3.17	20 (44%)
28	NEX	p	304	-	38,46,46	0.96	2 (5%)	50,70,70	4.91	19 (38%)
25	CLA	7	308	-	50,58,73	1.66	6 (12%)	58,95,113	1.54	7 (12%)
30	LHG	n	318	-	42,42,48	1.18	6 (14%)	45,48,54	0.97	2 (4%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	CHL	4	308	10	43,51,74	2.38	16 (37%)	45,86,114	3.21	20 (44%)
33	LMG	W	201	-	30,30,55	1.14	2 (6%)	38,38,63	1.37	6 (15%)
24	CHL	6	308	-	43,51,74	2.38	16 (37%)	45,86,114	3.17	20 (44%)
28	NEX	N	303	-	38,46,46	1.05	2 (5%)	50,70,70	2.82	17 (34%)
24	CHL	1	309	-	43,51,74	2.35	16 (37%)	45,86,114	3.11	20 (44%)
25	CLA	g	315	-	60,68,73	1.53	6 (10%)	70,107,113	1.41	7 (10%)
24	CHL	s	402	13	46,54,74	2.21	15 (32%)	49,90,114	3.11	21 (42%)
24	CHL	u	312	-	47,55,74	2.28	16 (34%)	50,91,114	2.99	20 (40%)
25	CLA	b	601	-	45,53,73	1.74	9 (20%)	52,89,113	1.59	7 (13%)
24	CHL	5	306	-	47,55,74	2.20	15 (31%)	50,91,114	2.96	21 (42%)
29	OUR	3	301	-	50,53,58	0.94	1 (2%)	58,72,77	1.71	12 (20%)
25	CLA	y	307	17	53,61,73	1.60	7 (13%)	61,98,113	1.51	8 (13%)
30	LHG	N	318	-	42,42,48	1.17	6 (14%)	45,48,54	0.97	2 (4%)
25	CLA	N	307	-	50,58,73	1.68	6 (12%)	58,95,113	1.56	9 (15%)
31	8CT	d	410	-	40,41,41	4.69	23 (57%)	50,56,56	2.50	17 (34%)
25	CLA	1	313	-	55,63,73	1.60	6 (10%)	64,101,113	1.49	9 (14%)
25	CLA	G	317	-	55,63,73	1.59	7 (12%)	63,100,113	1.50	7 (11%)
24	CHL	n	312	-	56,64,74	2.08	16 (28%)	61,102,114	2.77	25 (40%)
25	CLA	s	412	13	45,53,73	1.74	7 (15%)	52,89,113	1.61	7 (13%)
26	OIE	9	303	-	42,45,45	1.45	6 (14%)	49,63,63	1.74	11 (22%)
25	CLA	b	605	18	65,73,73	1.47	8 (12%)	76,113,113	1.36	8 (10%)
30	LHG	A	601	-	44,44,48	1.13	5 (11%)	47,50,54	0.98	2 (4%)
24	CHL	6	312	-	43,51,74	2.36	15 (34%)	45,86,114	3.09	20 (44%)
24	CHL	7	318	12	42,50,74	2.39	16 (38%)	44,85,114	3.17	23 (52%)
25	CLA	8	312	-	63,71,73	1.49	6 (9%)	73,110,113	1.41	8 (10%)
24	CHL	R	608	-	46,54,74	2.28	16 (34%)	49,90,114	2.99	24 (48%)
25	CLA	R	603	-	47,55,73	1.69	6 (12%)	54,91,113	1.59	6 (11%)
25	CLA	p	314	-	55,63,73	1.58	7 (12%)	64,101,113	1.48	8 (12%)
25	CLA	a	610	-	41,49,73	1.84	6 (14%)	47,84,113	1.70	8 (17%)
24	CHL	7	311	-	46,54,74	2.29	15 (32%)	49,90,114	3.01	22 (44%)
25	CLA	B	609	18	65,73,73	1.46	8 (12%)	76,113,113	1.42	9 (11%)
25	CLA	B	613	18	65,73,73	1.47	9 (13%)	76,113,113	1.35	8 (10%)
25	CLA	A	605	-	49,57,73	1.64	9 (18%)	55,93,113	1.57	8 (14%)
39	PL9	d	406	-	55,55,55	1.68	12 (21%)	68,69,69	1.57	12 (17%)
25	CLA	u	315	-	63,71,73	1.51	5 (7%)	73,110,113	1.41	7 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	B	601	-	45,53,73	1.73	9 (20%)	52,89,113	1.59	7 (13%)
25	CLA	7	314	-	55,63,73	1.57	7 (12%)	64,101,113	1.48	8 (12%)
37	DGD	c	618	-	51,51,67	0.93	2 (3%)	65,65,81	1.22	6 (9%)
29	OUR	u	301	-	50,53,58	0.94	1 (2%)	58,72,77	1.79	13 (22%)
34	OEX	A	602	19	0,15,15	-	-	-	-	-
25	CLA	a	603	19	65,73,73	1.43	8 (12%)	76,113,113	1.51	6 (7%)
24	CHL	p	305	12	66,74,74	1.82	15 (22%)	73,114,114	2.61	27 (36%)
28	NEX	S	617	-	38,46,46	0.95	2 (5%)	50,70,70	4.90	19 (38%)
33	LMG	m	101	-	41,41,55	0.98	2 (4%)	49,49,63	1.23	4 (8%)
24	CHL	Y	312	-	66,74,74	1.88	16 (24%)	73,114,114	2.57	24 (32%)
24	CHL	2	318	11	42,50,74	2.42	16 (38%)	44,85,114	3.25	21 (47%)
24	CHL	G	312	-	51,59,74	2.21	17 (33%)	55,96,114	2.86	23 (41%)
24	CHL	3	304	12	48,56,74	2.24	16 (33%)	51,92,114	2.93	21 (41%)
25	CLA	r	305	-	41,49,73	1.83	7 (17%)	47,84,113	1.71	8 (17%)
24	CHL	9	309	-	46,54,74	2.36	17 (36%)	49,90,114	3.04	21 (42%)
24	CHL	5	311	-	47,55,74	2.31	17 (36%)	50,91,114	2.94	21 (42%)
25	CLA	N	306	17	54,62,73	1.61	6 (11%)	62,99,113	1.49	7 (11%)
24	CHL	Y	304	17	66,74,74	1.80	14 (21%)	73,114,114	2.64	26 (35%)
24	CHL	N	305	-	60,68,74	2.00	17 (28%)	65,106,114	2.66	25 (38%)
25	CLA	C	611	20	65,73,73	1.43	7 (10%)	76,113,113	1.46	6 (7%)
25	CLA	6	315	12	45,53,73	1.78	7 (15%)	52,89,113	1.59	7 (13%)
33	LMG	i	101	-	48,48,55	0.92	2 (4%)	56,56,63	1.20	4 (7%)
25	CLA	C	610	-	65,73,73	1.43	9 (13%)	76,113,113	1.44	9 (11%)
25	CLA	c	605	20	56,64,73	1.54	7 (12%)	65,102,113	1.51	6 (9%)
28	NEX	5	304	-	38,46,46	0.96	2 (5%)	50,70,70	4.90	19 (38%)
25	CLA	b	604	18	62,70,73	1.48	9 (14%)	72,109,113	1.51	9 (12%)
28	NEX	4	303	25	38,46,46	0.96	2 (5%)	50,70,70	4.90	19 (38%)
24	CHL	p	309	12	43,51,74	2.40	16 (37%)	45,86,114	3.22	21 (46%)
26	OIE	y	302	-	42,45,45	1.41	6 (14%)	49,63,63	1.54	10 (20%)
31	8CT	S	614	-	40,41,41	4.72	24 (60%)	50,56,56	2.96	18 (36%)
31	8CT	a	608	-	40,41,41	4.63	23 (57%)	50,56,56	2.66	20 (40%)
24	CHL	s	403	13	58,66,74	1.98	15 (25%)	63,104,114	2.75	25 (39%)
25	CLA	A	607	19	60,68,73	1.47	7 (11%)	70,107,113	1.53	8 (11%)
24	CHL	Y	308	17	43,51,74	2.27	15 (34%)	45,86,114	3.15	20 (44%)
24	CHL	Y	319	-	53,61,74	2.10	15 (28%)	57,98,114	2.92	27 (47%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	CHL	S	606	-	46,54,74	2.28	16 (34%)	49,90,114	2.98	21 (42%)
24	CHL	7	309	12	43,51,74	2.41	16 (37%)	45,86,114	3.23	21 (46%)
25	CLA	9	314	30	63,71,73	1.51	5 (7%)	73,110,113	1.41	7 (9%)
26	OIE	1	302	-	42,45,45	1.44	6 (14%)	49,63,63	1.57	10 (20%)
30	LHG	4	318	-	41,41,48	1.19	6 (14%)	44,47,54	0.97	3 (6%)
30	LHG	c	617	-	31,31,48	1.31	5 (16%)	34,37,54	1.14	3 (8%)
25	CLA	b	609	18	65,73,73	1.46	8 (12%)	76,113,113	1.42	9 (11%)
25	CLA	b	611	18	65,73,73	1.46	9 (13%)	76,113,113	1.48	8 (10%)
25	CLA	s	413	-	55,63,73	1.57	7 (12%)	63,100,113	1.49	6 (9%)
25	CLA	a	605	-	49,57,73	1.63	9 (18%)	55,93,113	1.57	8 (14%)
24	CHL	q	307	17	43,51,74	2.27	15 (34%)	45,86,114	3.14	20 (44%)
25	CLA	B	612	18	65,73,73	1.42	9 (13%)	76,113,113	1.46	8 (10%)
24	CHL	u	310	-	46,54,74	2.38	17 (36%)	49,90,114	3.04	21 (42%)
25	CLA	Y	315	17	45,53,73	1.71	10 (22%)	52,89,113	1.67	6 (11%)
28	NEX	r	301	-	38,46,46	1.06	2 (5%)	50,70,70	2.82	17 (34%)
29	OUR	Y	301	-	50,53,58	0.99	1 (2%)	58,72,77	1.63	12 (20%)
25	CLA	q	314	17	45,53,73	1.74	7 (15%)	52,89,113	1.63	6 (11%)
24	CHL	q	310	-	50,58,74	2.09	15 (30%)	52,94,114	2.96	23 (44%)
24	CHL	6	311	-	44,52,74	2.23	16 (36%)	46,87,114	3.12	22 (47%)
25	CLA	c	603	20	65,73,73	1.43	7 (10%)	76,113,113	1.45	7 (9%)
24	CHL	n	304	17	54,62,74	2.19	16 (29%)	58,99,114	2.85	23 (39%)
30	LHG	D	408	-	38,38,48	1.21	5 (13%)	41,44,54	1.06	2 (4%)
24	CHL	6	310	-	46,54,74	2.38	16 (34%)	49,90,114	3.01	20 (40%)
25	CLA	C	607	-	65,73,73	1.42	10 (15%)	76,113,113	1.43	6 (7%)
26	OIE	7	302	-	42,45,45	1.45	6 (14%)	49,63,63	1.60	12 (24%)
29	OUR	g	301	-	50,53,58	0.95	1 (2%)	58,72,77	1.73	16 (27%)
33	LMG	w	201	-	36,36,55	1.05	2 (5%)	44,44,63	1.35	6 (13%)
25	CLA	n	314	-	63,71,73	1.51	6 (9%)	73,110,113	1.41	7 (9%)
30	LHG	p	319	25	42,42,48	1.17	5 (11%)	45,48,54	1.02	3 (6%)
25	CLA	r	313	-	45,53,73	1.78	6 (13%)	52,89,113	1.63	8 (15%)
24	CHL	3	311	-	44,52,74	2.24	16 (36%)	46,87,114	3.14	21 (45%)
24	CHL	y	313	-	66,74,74	1.89	16 (24%)	73,114,114	2.56	23 (31%)
25	CLA	R	613	-	47,55,73	1.79	6 (12%)	54,91,113	1.49	7 (12%)
24	CHL	R	605	-	42,50,74	2.30	16 (38%)	44,85,114	3.20	23 (52%)
25	CLA	c	611	20	65,73,73	1.42	7 (10%)	76,113,113	1.45	6 (7%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
29	OUR	7	301	-	50,53,58	0.94	1 (2%)	58,72,77	1.58	12 (20%)
24	CHL	G	311	-	54,62,74	2.15	16 (29%)	58,99,114	2.84	23 (39%)
25	CLA	u	317	12	55,63,73	1.62	7 (12%)	63,100,113	1.46	7 (11%)
24	CHL	4	305	-	46,54,74	2.27	16 (34%)	49,90,114	3.04	22 (44%)
26	OIE	4	302	-	42,45,45	1.45	6 (14%)	49,63,63	1.58	10 (20%)
24	CHL	p	311	-	46,54,74	2.30	17 (36%)	49,90,114	2.97	20 (40%)
25	CLA	b	607	18	65,73,73	1.46	9 (13%)	76,113,113	1.42	9 (11%)
25	CLA	S	611	13	45,53,73	1.73	7 (15%)	52,89,113	1.61	7 (13%)
29	OUR	q	301	-	50,53,58	0.94	1 (2%)	58,72,77	1.79	14 (24%)
24	CHL	q	316	-	42,50,74	2.45	17 (40%)	44,85,114	3.24	21 (47%)
25	CLA	u	316	-	45,53,73	1.78	6 (13%)	52,89,113	1.57	6 (11%)
24	CHL	y	309	17	43,51,74	2.26	15 (34%)	45,86,114	3.15	21 (46%)
31	8CT	v	401	-	40,41,41	4.67	23 (57%)	50,56,56	2.55	17 (34%)
25	CLA	S	609	-	55,63,73	1.55	7 (12%)	64,101,113	1.47	7 (10%)
31	8CT	C	615	-	40,41,41	4.62	23 (57%)	50,56,56	2.75	18 (36%)
26	OIE	G	302	-	42,45,45	1.42	6 (14%)	49,63,63	1.58	9 (18%)
24	CHL	4	304	-	42,50,74	2.46	17 (40%)	44,85,114	3.24	22 (50%)
26	OIE	g	303	-	42,45,45	1.41	6 (14%)	49,63,63	1.54	9 (18%)
24	CHL	4	310	-	43,51,74	2.28	16 (37%)	45,86,114	3.09	21 (46%)
25	CLA	q	305	17	54,62,73	1.59	7 (12%)	62,99,113	1.48	7 (11%)
25	CLA	C	602	20	65,73,73	1.44	9 (13%)	76,113,113	1.40	7 (9%)
24	CHL	s	407	-	46,54,74	2.28	16 (34%)	49,90,114	2.98	21 (42%)
37	DGD	C	620	-	56,56,67	0.95	2 (3%)	70,70,81	1.21	6 (8%)
25	CLA	B	615	18	65,73,73	1.45	8 (12%)	76,113,113	1.35	6 (7%)
26	OIE	p	302	-	42,45,45	1.45	6 (14%)	49,63,63	1.60	12 (24%)
33	LMG	D	401	-	48,48,55	0.91	2 (4%)	56,56,63	1.17	5 (8%)
25	CLA	s	411	-	44,52,73	1.78	9 (20%)	49,87,113	1.61	7 (14%)
31	8CT	c	614	-	40,41,41	4.56	23 (57%)	50,56,56	2.70	21 (42%)
29	OUR	N	301	-	50,53,58	0.94	1 (2%)	58,72,77	1.82	12 (20%)
24	CHL	1	311	-	44,52,74	2.23	15 (34%)	46,87,114	3.06	20 (43%)
25	CLA	6	316	-	45,53,73	1.78	6 (13%)	52,89,113	1.58	7 (13%)
24	CHL	5	310	-	42,50,74	2.33	16 (38%)	44,85,114	3.17	21 (47%)
31	8CT	X	601	-	40,41,41	4.63	23 (57%)	50,56,56	2.58	19 (38%)
31	8CT	V	401	-	40,41,41	4.66	23 (57%)	50,56,56	2.56	17 (34%)
24	CHL	R	602	-	47,55,74	2.18	16 (34%)	50,91,114	3.01	22 (44%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	g	307	-	53,61,73	1.64	6 (11%)	61,98,113	1.45	7 (11%)
24	CHL	g	309	-	43,51,74	2.41	16 (37%)	45,86,114	3.21	20 (44%)
29	OUR	9	301	-	50,53,58	0.93	1 (2%)	58,72,77	1.76	13 (22%)
25	CLA	1	315	10	45,53,73	1.80	6 (13%)	52,89,113	1.58	6 (11%)
24	CHL	2	306	-	47,55,74	2.20	16 (34%)	50,91,114	2.96	21 (42%)
25	CLA	1	306	-	44,52,73	1.75	6 (13%)	49,87,113	1.62	6 (12%)
25	CLA	b	612	18	65,73,73	1.42	9 (13%)	76,113,113	1.45	8 (10%)
25	CLA	R	612	-	45,53,73	1.79	6 (13%)	52,89,113	1.61	8 (15%)
28	NEX	u	304	-	38,46,46	0.96	2 (5%)	50,70,70	4.90	19 (38%)
25	CLA	s	417	-	45,53,73	1.76	6 (13%)	52,89,113	1.55	6 (11%)
24	CHL	p	306	-	64,72,74	1.84	14 (21%)	70,111,114	2.68	27 (38%)
24	CHL	3	309	-	51,59,74	2.23	16 (31%)	55,96,114	2.92	24 (43%)
25	CLA	2	308	-	50,58,73	1.66	6 (12%)	58,95,113	1.59	8 (13%)
24	CHL	S	601	13	46,54,74	2.20	15 (32%)	49,90,114	3.10	21 (42%)
25	CLA	b	610	-	65,73,73	1.45	9 (13%)	76,113,113	1.41	8 (10%)
37	DGD	c	619	-	56,56,67	0.95	3 (5%)	70,70,81	1.23	5 (7%)
30	LHG	y	319	25	42,42,48	1.15	5 (11%)	45,48,54	1.07	2 (4%)
25	CLA	S	616	-	45,53,73	1.75	6 (13%)	52,89,113	1.55	6 (11%)
31	8CT	B	617	-	40,41,41	4.65	24 (60%)	50,56,56	2.88	18 (36%)
26	OIE	2	303	-	42,45,45	1.42	6 (14%)	49,63,63	1.52	9 (18%)
24	CHL	N	317	-	42,50,74	2.47	17 (40%)	44,85,114	3.28	22 (50%)
25	CLA	p	308	-	50,58,73	1.66	6 (12%)	58,95,113	1.53	7 (12%)
28	NEX	R	616	-	38,46,46	0.96	2 (5%)	50,70,70	4.90	19 (38%)
25	CLA	C	612	20	54,62,73	1.56	8 (14%)	62,99,113	1.55	7 (11%)
25	CLA	Y	313	17	55,63,73	1.56	7 (12%)	64,101,113	1.53	7 (10%)
32	SQD	b	618	-	53,54,54	0.96	5 (9%)	62,65,65	1.55	11 (17%)
24	CHL	q	304	17	60,68,74	1.96	16 (26%)	65,106,114	2.71	26 (40%)
30	LHG	a	612	-	43,43,48	1.15	5 (11%)	46,49,54	1.02	3 (6%)
30	LHG	d	408	-	38,38,48	0.98	2 (5%)	41,44,54	1.24	4 (9%)
24	CHL	S	608	-	47,55,74	2.22	16 (34%)	50,91,114	2.99	24 (48%)
25	CLA	B	608	-	55,63,73	1.58	8 (14%)	64,101,113	1.49	7 (10%)
24	CHL	G	306	17	64,72,74	1.93	16 (25%)	70,111,114	2.63	26 (37%)
25	CLA	r	312	8	45,53,73	1.76	7 (15%)	52,89,113	1.58	6 (11%)
25	CLA	5	314	-	55,63,73	1.58	7 (12%)	64,101,113	1.47	7 (10%)
24	CHL	N	310	-	53,61,74	2.19	16 (30%)	57,98,114	2.91	24 (42%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	2	307	11	43,51,73	1.77	6 (13%)	49,86,113	1.59	6 (12%)
31	8CT	c	613	-	40,41,41	4.60	23 (57%)	50,56,56	2.70	21 (42%)
25	CLA	B	607	18	65,73,73	1.46	9 (13%)	76,113,113	1.42	8 (10%)
24	CHL	y	311	-	54,62,74	2.05	15 (27%)	58,99,114	2.91	27 (46%)
24	CHL	N	312	-	56,64,74	2.09	16 (28%)	61,102,114	2.77	25 (40%)
25	CLA	S	603	-	45,53,73	1.75	7 (15%)	52,89,113	1.59	6 (11%)
25	CLA	9	316	12	55,63,73	1.62	7 (12%)	63,100,113	1.43	7 (11%)
25	CLA	b	606	18	65,73,73	1.41	8 (12%)	76,113,113	1.47	8 (10%)
26	OIE	8	302	-	42,45,45	1.40	6 (14%)	49,63,63	1.52	10 (20%)
24	CHL	1	310	-	43,51,74	2.28	16 (37%)	45,86,114	3.10	21 (46%)
24	CHL	r	306	-	42,50,74	2.36	17 (40%)	44,85,114	3.16	21 (47%)
26	OIE	3	302	-	41,44,45	1.44	6 (14%)	46,60,63	1.65	11 (23%)
28	NEX	y	304	-	38,46,46	0.96	2 (5%)	50,70,70	4.90	19 (38%)
24	CHL	s	406	-	46,54,74	2.27	16 (34%)	49,90,114	3.00	20 (40%)
28	NEX	1	303	-	38,46,46	0.97	2 (5%)	50,70,70	4.90	19 (38%)
25	CLA	8	314	-	43,51,73	1.78	7 (16%)	49,86,113	1.62	6 (12%)
24	CHL	2	311	-	47,55,74	2.30	17 (36%)	50,91,114	2.95	21 (42%)
24	CHL	g	305	17	66,74,74	1.92	16 (24%)	73,114,114	2.55	23 (31%)
23	HEM	E	201	2	41,50,50	1.46	3 (7%)	45,82,82	1.28	3 (6%)
25	CLA	4	306	-	44,52,73	1.76	6 (13%)	49,87,113	1.63	6 (12%)
25	CLA	7	317	12	52,60,73	1.65	7 (13%)	60,97,113	1.52	7 (11%)
26	OIE	9	302	-	42,45,45	1.44	6 (14%)	49,63,63	1.58	10 (20%)
30	LHG	A	612	-	43,43,48	1.15	5 (11%)	46,49,54	1.02	3 (6%)
25	CLA	A	604	-	65,73,73	1.48	8 (12%)	76,113,113	1.39	8 (10%)
24	CHL	y	306	-	64,72,74	1.84	14 (21%)	70,111,114	2.64	27 (38%)
24	CHL	r	307	-	48,56,74	2.22	15 (31%)	51,92,114	2.95	22 (43%)
30	LHG	1	318	-	41,41,48	1.19	6 (14%)	44,47,54	0.97	3 (6%)
24	CHL	8	309	-	50,58,74	2.09	14 (28%)	52,94,114	2.96	23 (44%)
24	CHL	n	309	-	46,54,74	2.22	15 (32%)	49,90,114	3.10	25 (51%)
26	OIE	2	302	-	42,45,45	1.40	6 (14%)	49,63,63	1.52	9 (18%)
30	LHG	Y	318	25	42,42,48	1.16	5 (11%)	45,48,54	1.10	3 (6%)
26	OIE	g	302	-	42,45,45	1.42	6 (14%)	49,63,63	1.58	10 (20%)
25	CLA	p	315	30	63,71,73	1.47	7 (11%)	73,110,113	1.48	8 (10%)
28	NEX	r	317	-	38,46,46	0.96	2 (5%)	50,70,70	4.91	19 (38%)
24	CHL	G	313	-	66,74,74	1.99	16 (24%)	73,114,114	2.56	25 (34%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	4	307	28	41,49,73	1.83	6 (14%)	47,84,113	1.65	8 (17%)
29	OUR	p	301	-	50,53,58	0.93	1 (2%)	58,72,77	1.59	12 (20%)
25	CLA	C	603	20	65,73,73	1.43	7 (10%)	76,113,113	1.45	7 (9%)
24	CHL	7	310	-	46,54,74	2.35	17 (36%)	49,90,114	3.04	22 (44%)
33	LMG	D	411	-	46,46,55	0.95	2 (4%)	54,54,63	1.13	4 (7%)
36	BCT	a	611	38	2,3,3	1.25	0	2,3,3	4.16	2 (100%)
25	CLA	B	604	18	62,70,73	1.49	9 (14%)	72,109,113	1.53	9 (12%)
31	8CT	t	101	-	40,41,41	4.64	23 (57%)	50,56,56	3.04	18 (36%)
25	CLA	6	313	-	41,49,73	1.82	5 (12%)	47,84,113	1.69	9 (19%)
24	CHL	g	310	-	47,55,74	2.33	17 (36%)	50,91,114	3.00	21 (42%)
24	CHL	9	305	-	64,72,74	1.95	16 (25%)	70,111,114	2.60	24 (34%)
28	NEX	7	304	-	38,46,46	0.96	2 (5%)	50,70,70	4.90	19 (38%)
25	CLA	R	610	-	45,53,73	1.72	7 (15%)	52,89,113	1.63	6 (11%)
30	LHG	D	407	-	48,48,48	1.08	5 (10%)	51,54,54	0.96	2 (3%)
26	OIE	q	302	-	42,45,45	1.40	6 (14%)	49,63,63	1.52	10 (20%)
32	SQD	B	618	-	53,54,54	0.95	5 (9%)	62,65,65	1.55	11 (17%)
31	8CT	c	615	-	40,41,41	4.62	23 (57%)	50,56,56	2.73	17 (34%)
25	CLA	b	602	18	65,73,73	1.43	7 (10%)	76,113,113	1.43	7 (9%)
24	CHL	y	312	-	51,59,74	2.09	14 (27%)	55,96,114	2.91	26 (47%)
25	CLA	b	603	18	65,73,73	1.43	8 (12%)	76,113,113	1.43	7 (9%)
24	CHL	u	313	-	43,51,74	2.37	15 (34%)	45,86,114	3.14	21 (46%)
26	OIE	n	302	-	42,45,45	1.44	6 (14%)	49,63,63	1.58	11 (22%)
25	CLA	6	306	-	41,49,73	1.81	6 (14%)	47,84,113	1.65	7 (14%)
24	CHL	9	310	-	46,54,74	2.37	17 (36%)	49,90,114	3.02	20 (40%)
25	CLA	q	315	17	43,51,73	1.77	7 (16%)	49,86,113	1.61	6 (12%)
25	CLA	s	405	-	43,51,73	1.77	7 (16%)	49,86,113	1.59	7 (14%)
26	OIE	5	303	-	42,45,45	1.43	6 (14%)	49,63,63	1.52	9 (18%)
35	PHO	a	606	-	51,69,69	1.08	5 (9%)	47,99,99	1.17	5 (10%)
25	CLA	7	307	12	56,64,73	1.57	6 (10%)	65,102,113	1.50	7 (10%)
24	CHL	4	312	-	46,54,74	2.33	16 (34%)	49,90,114	2.98	22 (44%)
24	CHL	7	305	12	66,74,74	1.81	14 (21%)	73,114,114	2.61	27 (36%)
39	PL9	D	406	-	55,55,55	1.67	12 (21%)	68,69,69	1.57	12 (17%)
25	CLA	Y	316	17	55,63,73	1.56	7 (12%)	63,100,113	1.53	6 (9%)
24	CHL	N	311	-	50,58,74	2.17	16 (32%)	52,94,114	2.95	22 (42%)
24	CHL	p	310	-	46,54,74	2.34	16 (34%)	49,90,114	3.03	22 (44%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	G	316	17	45,53,73	1.77	7 (15%)	52,89,113	1.59	6 (11%)
33	LMG	d	411	-	46,46,55	0.95	2 (4%)	54,54,63	1.14	5 (9%)
25	CLA	r	304	-	47,55,73	1.69	7 (14%)	54,91,113	1.61	6 (11%)
25	CLA	r	310	8	55,63,73	1.57	7 (12%)	64,101,113	1.49	7 (10%)
24	CHL	g	313	-	66,74,74	2.00	16 (24%)	73,114,114	2.57	25 (34%)
25	CLA	3	313	-	41,49,73	1.83	6 (14%)	47,84,113	1.68	9 (19%)
30	LHG	5	319	-	42,42,48	1.16	5 (11%)	45,48,54	1.04	4 (8%)
25	CLA	c	608	20	61,69,73	1.48	9 (14%)	71,108,113	1.49	8 (11%)
24	CHL	1	304	-	42,50,74	2.46	16 (38%)	44,85,114	3.25	22 (50%)
25	CLA	1	314	-	41,49,73	1.85	6 (14%)	47,84,113	1.65	7 (14%)
25	CLA	N	315	17	45,53,73	1.77	7 (15%)	52,89,113	1.57	7 (13%)
25	CLA	B	606	18	65,73,73	1.42	7 (10%)	76,113,113	1.47	8 (10%)
25	CLA	8	306	-	50,58,73	1.66	6 (12%)	58,95,113	1.55	8 (13%)
30	LHG	g	319	-	42,42,48	1.16	5 (11%)	45,48,54	0.99	2 (4%)
25	CLA	s	410	-	55,63,73	1.55	7 (12%)	64,101,113	1.48	7 (10%)
24	CHL	1	317	-	42,50,74	2.47	17 (40%)	44,85,114	3.24	21 (47%)
25	CLA	C	608	20	61,69,73	1.49	10 (16%)	71,108,113	1.49	8 (11%)
31	8CT	T	101	-	40,41,41	4.64	23 (57%)	50,56,56	3.04	18 (36%)
24	CHL	2	305	11	44,52,74	2.25	15 (34%)	46,87,114	3.09	20 (43%)
25	CLA	D	404	21	65,73,73	1.44	10 (15%)	76,113,113	1.44	10 (13%)
24	CHL	S	607	-	46,54,74	2.23	15 (32%)	49,90,114	3.03	21 (42%)
25	CLA	c	616	20	46,54,73	1.68	9 (19%)	53,90,113	1.62	7 (13%)
25	CLA	A	603	19	65,73,73	1.43	7 (10%)	76,113,113	1.51	6 (7%)
33	LMG	B	619	-	41,41,55	0.97	2 (4%)	49,49,63	1.30	4 (8%)
34	OEX	a	602	19	0,15,15	-	-	-	-	-
30	LHG	7	319	25	36,36,48	1.25	5 (13%)	39,42,54	1.08	2 (5%)
26	OIE	6	302	-	41,44,45	1.45	6 (14%)	46,60,63	1.67	11 (23%)
25	CLA	4	315	10	45,53,73	1.79	6 (13%)	52,89,113	1.59	6 (11%)
29	OUR	4	301	-	50,53,58	0.99	2 (4%)	58,72,77	1.96	17 (29%)
25	CLA	s	404	-	45,53,73	1.74	6 (13%)	52,89,113	1.59	6 (11%)
25	CLA	4	314	-	41,49,73	1.85	6 (14%)	47,84,113	1.65	7 (14%)
24	CHL	r	302	8	46,54,74	2.35	16 (34%)	49,90,114	3.03	21 (42%)
24	CHL	u	306	-	64,72,74	1.95	16 (25%)	70,111,114	2.58	24 (34%)
26	OIE	7	303	-	42,45,45	1.40	6 (14%)	49,63,63	1.54	9 (18%)
26	OIE	R	614	-	42,45,45	1.44	6 (14%)	49,63,63	1.54	10 (20%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
27	XAT	r	316	-	39,47,47	0.92	0	54,74,74	2.72	19 (35%)
32	SQD	d	409	-	43,44,54	1.06	5 (11%)	52,55,65	1.57	8 (15%)
30	LHG	C	617	-	31,31,48	1.31	5 (16%)	34,37,54	1.14	3 (8%)
25	CLA	5	315	-	63,71,73	1.48	7 (11%)	73,110,113	1.40	6 (8%)
24	CHL	R	607	-	48,56,74	2.15	15 (31%)	51,92,114	3.06	24 (47%)
24	CHL	Y	310	-	54,62,74	2.04	15 (27%)	58,99,114	2.93	25 (43%)
25	CLA	c	604	-	65,73,73	1.45	8 (12%)	76,113,113	1.44	8 (10%)
25	CLA	9	307	-	50,58,73	1.68	6 (12%)	58,95,113	1.54	7 (12%)
25	CLA	6	314	-	41,49,73	1.81	5 (12%)	47,84,113	1.66	7 (14%)
35	PHO	D	403	-	51,69,69	1.04	4 (7%)	47,99,99	1.25	5 (10%)
25	CLA	n	313	-	55,63,73	1.59	6 (10%)	64,101,113	1.49	9 (14%)
31	8CT	A	608	-	40,41,41	4.63	23 (57%)	50,56,56	2.65	20 (40%)
24	CHL	Y	317	17	42,50,74	2.29	14 (33%)	44,85,114	3.20	24 (54%)
25	CLA	y	317	17	55,63,73	1.56	7 (12%)	63,100,113	1.53	7 (11%)
30	LHG	2	319	-	39,39,48	1.20	5 (12%)	42,45,54	1.06	3 (7%)
24	CHL	S	602	13	58,66,74	1.98	15 (25%)	63,104,114	2.76	25 (39%)
25	CLA	B	610	-	65,73,73	1.46	9 (13%)	76,113,113	1.42	8 (10%)
24	CHL	9	308	12	43,51,74	2.41	16 (37%)	45,86,114	3.20	21 (46%)
31	8CT	s	415	-	40,41,41	4.72	24 (60%)	50,56,56	2.97	18 (36%)
25	CLA	3	306	-	41,49,73	1.82	6 (14%)	47,84,113	1.65	7 (14%)
25	CLA	y	314	17	55,63,73	1.56	7 (12%)	64,101,113	1.52	7 (10%)
24	CHL	y	310	-	47,55,74	2.15	15 (31%)	50,91,114	3.07	24 (48%)
25	CLA	y	316	17	45,53,73	1.72	10 (22%)	52,89,113	1.66	6 (11%)
25	CLA	S	612	-	55,63,73	1.58	7 (12%)	63,100,113	1.48	6 (9%)
24	CHL	4	317	-	42,50,74	2.47	17 (40%)	44,85,114	3.24	21 (47%)
25	CLA	n	306	17	54,62,73	1.63	6 (11%)	62,99,113	1.49	7 (11%)
24	CHL	p	318	12	42,50,74	2.39	16 (38%)	44,85,114	3.17	23 (52%)
24	CHL	s	414	-	42,50,74	2.32	15 (35%)	44,85,114	3.21	24 (54%)
25	CLA	1	316	10	42,50,73	1.83	5 (11%)	48,85,113	1.63	6 (12%)
25	CLA	u	307	-	56,64,73	1.60	5 (8%)	65,102,113	1.44	6 (9%)
24	CHL	7	306	-	64,72,74	1.84	14 (21%)	70,111,114	2.68	27 (38%)
25	CLA	a	604	-	65,73,73	1.49	8 (12%)	76,113,113	1.38	8 (10%)
25	CLA	Y	307	-	50,58,73	1.64	7 (14%)	58,95,113	1.60	8 (13%)
24	CHL	Y	305	-	64,72,74	1.83	14 (21%)	70,111,114	2.64	27 (38%)
24	CHL	q	308	-	46,54,74	2.23	14 (30%)	49,90,114	3.11	25 (51%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	g	317	17	55,63,73	1.59	7 (12%)	63,100,113	1.50	7 (11%)
25	CLA	d	404	21	65,73,73	1.45	9 (13%)	76,113,113	1.45	9 (11%)
24	CHL	5	312	-	46,54,74	2.24	16 (34%)	49,90,114	3.01	21 (42%)
25	CLA	n	307	-	50,58,73	1.67	6 (12%)	58,95,113	1.56	9 (15%)
26	OIE	Y	302	-	42,45,45	1.41	6 (14%)	49,63,63	1.55	10 (20%)
24	CHL	3	305	-	48,56,74	2.24	16 (33%)	51,92,114	2.93	22 (43%)
25	CLA	B	602	18	65,73,73	1.44	7 (10%)	76,113,113	1.43	7 (9%)
31	8CT	s	416	-	40,41,41	4.74	25 (62%)	50,56,56	7.31	22 (44%)
24	CHL	G	310	-	47,55,74	2.33	17 (36%)	50,91,114	2.99	21 (42%)
24	CHL	n	308	17	43,51,74	2.34	16 (37%)	45,86,114	3.13	20 (44%)

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
24	CHL	9	311	-	3/3/16/26	7/17/115/137	-
24	CHL	n	311	-	3/3/16/26	7/20/118/137	-
31	8CT	S	615	-	-	12/29/63/63	0/2/2/2
25	CLA	B	614	18	1/1/13/20	13/27/105/115	-
26	OIE	Y	303	-	-	0/33/72/72	0/2/2/2
25	CLA	7	316	12	1/1/11/20	4/13/91/115	-
24	CHL	3	310	-	3/3/16/26	7/15/113/137	-
30	LHG	9	318	25	-	25/47/47/53	-
24	CHL	8	303	17	3/3/17/26	8/25/123/137	-
24	CHL	y	305	17	3/3/20/26	11/39/137/137	-
29	OUR	8	301	-	-	10/42/81/86	0/2/2/2
24	CHL	n	310	-	3/3/17/26	9/24/122/137	-
35	PHO	A	606	-	-	9/37/103/103	0/5/6/6
25	CLA	C	616	20	1/1/11/20	4/15/93/115	-
25	CLA	g	308	-	1/1/12/20	8/19/97/115	-
25	CLA	r	311	-	1/1/11/20	6/13/91/115	-
29	OUR	6	301	-	-	9/42/81/86	0/2/2/2
24	CHL	2	309	11	3/3/15/26	3/12/110/137	-
28	NEX	6	303	-	-	4/27/83/83	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	2	317	-	1/1/11/20	9/18/96/115	-
25	CLA	4	316	-	1/1/10/20	0/10/88/115	-
24	CHL	u	311	-	3/3/16/26	4/15/113/137	-
29	OUR	5	301	-	-	14/42/81/86	0/2/2/2
25	CLA	q	313	-	1/1/14/20	8/35/113/115	-
24	CHL	Y	311	-	3/3/17/26	5/21/119/137	-
24	CHL	G	305	17	3/3/20/26	21/39/137/137	-
24	CHL	9	312	-	3/3/15/26	4/12/110/137	-
25	CLA	2	316	-	1/1/11/20	4/13/91/115	-
24	CHL	N	304	17	3/3/17/26	8/25/123/137	-
35	PHO	d	403	-	-	10/37/103/103	0/5/6/6
25	CLA	p	317	12	1/1/12/20	7/25/103/115	-
24	CHL	y	318	17	3/3/15/26	5/10/108/137	-
25	CLA	6	307	-	1/1/10/20	6/11/89/115	-
23	HEM	f	201	9,2	-	1/12/54/54	-
24	CHL	3	317	12	3/3/15/26	2/10/108/137	-
25	CLA	y	315	30	1/1/14/20	12/35/113/115	-
24	CHL	1	312	10	3/3/16/26	6/15/113/137	-
25	CLA	p	316	-	1/1/11/20	4/13/91/115	-
24	CHL	n	305	-	3/3/18/26	18/32/130/137	-
26	OIE	G	303	-	-	0/33/72/72	0/2/2/2
28	NEX	g	304	-	-	5/27/83/83	0/3/3/3
24	CHL	g	311	-	3/3/17/26	8/25/123/137	-
25	CLA	N	313	-	1/1/13/20	5/25/103/115	-
25	CLA	S	610	-	1/1/11/20	2/13/91/115	-
24	CHL	G	309	-	3/3/15/26	2/12/110/137	-
25	CLA	N	316	-	1/1/10/20	2/11/89/115	-
37	DGD	C	619	-	-	27/39/79/95	0/2/2/2
24	CHL	8	310	-	3/3/18/26	11/27/125/137	-
25	CLA	u	308	-	1/1/12/20	7/19/97/115	-
25	CLA	c	610	-	1/1/15/20	9/37/115/115	-
25	CLA	Y	314	30	1/1/14/20	13/35/113/115	-
25	CLA	d	405	21	1/1/15/20	12/37/115/115	-
32	SQD	D	409	-	-	13/39/59/69	0/1/1/1
25	CLA	G	307	-	1/1/12/20	6/23/101/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	OUR	n	301	-	-	9/42/81/86	0/2/2/2
25	CLA	R	611	8	1/1/11/20	6/13/91/115	-
24	CHL	r	309	-	3/3/16/26	6/15/113/137	-
25	CLA	b	608	-	1/1/13/20	10/25/103/115	-
24	CHL	G	318	17	3/3/15/26	8/10/108/137	-
27	XAT	R	615	-	-	0/31/93/93	0/4/4/4
25	CLA	5	307	11	1/1/10/20	5/11/89/115	-
25	CLA	y	308	-	1/1/12/20	9/19/97/115	-
25	CLA	5	316	-	1/1/11/20	4/13/91/115	-
25	CLA	b	616	18	1/1/11/20	4/16/94/115	-
33	LMG	d	401	-	-	12/43/63/70	0/1/1/1
28	NEX	s	401	25	-	4/27/83/83	0/3/3/3
25	CLA	7	315	30	1/1/14/20	13/35/113/115	-
25	CLA	g	314	-	1/1/13/20	4/25/103/115	-
25	CLA	Y	306	17	1/1/12/20	3/23/101/115	-
29	OUR	1	301	-	-	13/42/81/86	0/2/2/2
24	CHL	r	308	-	3/3/16/26	11/18/116/137	-
25	CLA	G	308	-	1/1/12/20	10/19/97/115	-
26	OIE	3	303	-	-	1/33/72/72	0/2/2/2
25	CLA	c	606	20	1/1/12/20	9/23/101/115	-
25	CLA	q	306	28	1/1/12/20	5/19/97/115	-
25	CLA	C	609	20	1/1/15/20	6/37/115/115	-
25	CLA	c	609	20	1/1/15/20	6/37/115/115	-
25	CLA	B	605	18	1/1/15/20	14/37/115/115	-
25	CLA	c	601	20	1/1/15/20	14/37/115/115	-
24	CHL	n	317	-	3/3/15/26	4/10/108/137	-
28	NEX	G	304	-	-	5/27/83/83	0/3/3/3
24	CHL	8	304	17	3/3/18/26	15/32/130/137	-
24	CHL	8	308	-	3/3/16/26	5/15/113/137	-
24	CHL	s	408	-	3/3/16/26	6/15/113/137	-
25	CLA	2	314	-	1/1/13/20	5/25/103/115	-
25	CLA	3	316	-	1/1/11/20	7/13/91/115	-
24	CHL	5	313	-	3/3/15/26	3/10/108/137	-
25	CLA	q	312	-	1/1/13/20	3/25/103/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	CHL	u	305	12	3/3/20/26	15/39/137/137	-
25	CLA	5	317	11	1/1/11/20	9/18/96/115	-
24	CHL	p	312	-	3/3/16/26	7/17/115/137	-
26	OIE	u	302	-	-	4/33/72/72	0/2/2/2
26	OIE	N	302	-	-	2/33/72/72	0/2/2/2
24	CHL	7	312	-	3/3/16/26	7/17/115/137	-
25	CLA	4	313	-	1/1/13/20	6/25/103/115	-
24	CHL	6	305	-	3/3/16/26	10/18/116/137	-
25	CLA	8	305	17	1/1/12/20	9/24/102/115	-
24	CHL	q	303	17	3/3/17/26	8/25/123/137	-
24	CHL	7	313	-	3/3/15/26	5/12/110/137	-
24	CHL	u	309	12	3/3/15/26	2/12/110/137	-
33	LMG	C	618	-	-	17/37/57/70	0/1/1/1
32	SQD	a	609	-	-	19/40/60/69	0/1/1/1
24	CHL	S	605	-	3/3/16/26	5/15/113/137	-
24	CHL	q	309	-	3/3/17/26	10/24/122/137	-
25	CLA	1	307	-	1/1/10/20	4/8/86/115	-
25	CLA	c	602	20	1/1/15/20	15/37/115/115	-
25	CLA	c	607	-	1/1/15/20	11/37/115/115	-
29	OUR	y	301	-	-	12/42/81/86	0/2/2/2
24	CHL	6	304	12	3/3/16/26	8/18/116/137	-
25	CLA	G	315	-	1/1/14/20	7/31/109/115	-
29	OUR	2	301	-	-	14/42/81/86	0/2/2/2
24	CHL	5	318	11	3/3/15/26	6/10/108/137	-
25	CLA	3	314	-	1/1/10/20	4/8/86/115	-
25	CLA	R	604	-	1/1/10/20	3/8/86/115	-
25	CLA	G	314	-	1/1/13/20	4/25/103/115	-
24	CHL	R	606	-	3/3/16/26	8/18/116/137	-
24	CHL	1	308	10	3/3/15/26	2/12/110/137	-
24	CHL	6	309	-	3/3/17/26	7/21/119/137	-
24	CHL	9	304	12	3/3/20/26	15/39/137/137	-
25	CLA	n	316	-	1/1/10/20	3/11/89/115	-
25	CLA	A	610	-	1/1/10/20	4/8/86/115	-
26	OIE	u	303	-	-	2/33/72/72	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	CHL	R	601	8	3/3/16/26	5/15/113/137	-
24	CHL	2	313	-	3/3/15/26	4/10/108/137	-
25	CLA	C	605	20	1/1/13/20	9/27/105/115	-
31	8CT	C	613	-	-	8/29/63/63	0/2/2/2
24	CHL	g	306	-	3/3/19/26	26/37/135/137	-
31	8CT	C	614	-	-	14/29/63/63	0/2/2/2
25	CLA	N	314	-	1/1/14/20	7/35/113/115	-
30	LHG	d	407	-	-	27/53/53/53	-
24	CHL	8	315	-	3/3/15/26	0/10/108/137	-
25	CLA	p	307	12	1/1/13/20	8/27/105/115	-
25	CLA	a	607	19	1/1/14/20	4/31/109/115	-
24	CHL	4	311	-	3/3/15/26	3/13/111/137	-
24	CHL	p	313	-	3/3/15/26	4/12/110/137	-
25	CLA	C	604	-	1/1/15/20	17/37/115/115	-
31	8CT	D	410	-	-	10/29/63/63	0/2/2/2
25	CLA	S	604	-	1/1/10/20	2/11/89/115	-
29	OUR	G	301	-	-	10/42/81/86	0/2/2/2
24	CHL	g	318	17	3/3/15/26	8/10/108/137	-
24	CHL	5	305	11	3/3/15/26	7/13/111/137	-
26	OIE	p	303	-	-	2/33/72/72	0/2/2/2
25	CLA	5	308	-	1/1/12/20	4/19/97/115	-
25	CLA	3	315	12	1/1/11/20	4/13/91/115	-
32	SQD	A	609	-	-	16/40/60/69	0/1/1/1
24	CHL	Y	309	-	3/3/16/26	5/17/115/137	-
25	CLA	D	405	21	1/1/15/20	12/37/115/115	-
24	CHL	4	309	-	3/3/15/26	4/12/110/137	-
28	NEX	9	319	-	-	5/27/83/83	0/3/3/3
24	CHL	r	303	-	3/3/16/26	5/17/115/137	-
25	CLA	B	603	18	1/1/15/20	12/37/115/115	-
24	CHL	2	310	-	3/3/15/26	2/10/108/137	-
24	CHL	9	317	-	3/3/15/26	6/10/108/137	-
25	CLA	9	315	-	1/1/11/20	4/13/91/115	-
31	8CT	x	601	-	-	10/29/63/63	0/2/2/2
24	CHL	u	318	-	3/3/15/26	6/10/108/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	8	313	17	1/1/11/20	4/13/91/115	-
24	CHL	s	409	-	3/3/16/26	7/17/115/137	-
24	CHL	5	309	11	3/3/15/26	3/12/110/137	-
25	CLA	2	315	-	1/1/14/20	8/35/113/115	-
25	CLA	B	611	18	1/1/15/20	6/37/115/115	-
30	LHG	a	601	-	-	25/49/49/53	-
30	LHG	G	319	-	-	23/47/47/53	-
26	OIE	r	315	-	-	1/33/72/72	0/2/2/2
24	CHL	q	311	-	3/3/18/26	11/27/125/137	-
28	NEX	3	318	-	-	4/27/83/83	0/3/3/3
25	CLA	R	609	8	1/1/13/20	3/25/103/115	-
24	CHL	6	317	12	3/3/15/26	0/10/108/137	-
24	CHL	N	308	17	3/3/15/26	4/12/110/137	-
24	CHL	g	312	-	3/3/17/26	5/21/119/137	-
25	CLA	9	313	-	1/1/13/20	3/25/103/115	-
25	CLA	u	314	-	1/1/13/20	3/25/103/115	-
25	CLA	b	613	18	1/1/15/20	10/37/115/115	-
24	CHL	3	312	-	3/3/15/26	5/12/110/137	-
24	CHL	8	307	17	3/3/15/26	2/12/110/137	-
31	8CT	b	617	-	-	14/29/63/63	0/2/2/2
25	CLA	8	311	-	1/1/13/20	3/25/103/115	-
25	CLA	b	614	18	1/1/13/20	13/27/105/115	-
25	CLA	c	612	20	1/1/12/20	10/24/102/115	-
24	CHL	S	613	-	3/3/15/26	2/10/108/137	-
25	CLA	g	316	17	1/1/11/20	4/13/91/115	-
25	CLA	n	315	17	1/1/11/20	4/13/91/115	-
25	CLA	3	307	-	1/1/10/20	6/11/89/115	-
25	CLA	r	314	-	1/1/11/20	8/16/94/115	-
26	OIE	5	302	-	-	2/33/72/72	0/2/2/2
24	CHL	1	305	10	3/3/16/26	8/15/113/137	-
25	CLA	9	306	-	1/1/13/20	4/27/105/115	-
28	NEX	2	304	-	-	5/27/83/83	0/3/3/3
25	CLA	C	601	20	1/1/15/20	14/37/115/115	-
25	CLA	B	616	18	1/1/11/20	4/16/94/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	b	615	18	1/1/15/20	4/37/115/115	-
25	CLA	C	606	20	1/1/12/20	9/23/101/115	-
28	NEX	n	303	-	-	4/27/83/83	0/3/3/3
24	CHL	2	312	-	3/3/16/26	7/15/113/137	-
24	CHL	N	309	-	3/3/16/26	7/15/113/137	-
26	OIE	y	303	-	-	0/33/72/72	0/2/2/2
24	CHL	3	308	-	3/3/15/26	2/12/110/137	-
28	NEX	p	304	-	-	5/27/83/83	0/3/3/3
25	CLA	7	308	-	1/1/12/20	6/19/97/115	-
30	LHG	n	318	-	-	20/47/47/53	-
24	CHL	4	308	10	3/3/15/26	2/12/110/137	-
33	LMG	W	201	-	-	11/25/45/70	0/1/1/1
24	CHL	6	308	-	3/3/15/26	2/12/110/137	-
28	NEX	N	303	-	-	4/27/83/83	0/3/3/3
24	CHL	1	309	-	3/3/15/26	3/12/110/137	-
25	CLA	g	315	-	1/1/14/20	6/31/109/115	-
24	CHL	s	402	13	3/3/16/26	10/15/113/137	-
24	CHL	u	312	-	3/3/16/26	7/17/115/137	-
25	CLA	b	601	-	1/1/11/20	9/13/91/115	-
24	CHL	5	306	-	3/3/16/26	9/17/115/137	-
29	OUR	3	301	-	-	9/42/81/86	0/2/2/2
25	CLA	y	307	17	1/1/12/20	3/23/101/115	-
30	LHG	N	318	-	-	18/47/47/53	-
25	CLA	N	307	-	1/1/12/20	6/19/97/115	-
31	8CT	d	410	-	-	9/29/63/63	0/2/2/2
25	CLA	1	313	-	1/1/13/20	5/25/103/115	-
25	CLA	G	317	-	1/1/12/20	6/25/103/115	-
24	CHL	n	312	-	3/3/18/26	12/27/125/137	-
25	CLA	s	412	13	1/1/11/20	6/13/91/115	-
26	OIE	9	303	-	-	5/33/72/72	0/2/2/2
25	CLA	b	605	18	1/1/15/20	14/37/115/115	-
30	LHG	A	601	-	-	24/49/49/53	-
24	CHL	6	312	-	3/3/15/26	3/12/110/137	-
24	CHL	7	318	12	3/3/15/26	5/10/108/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	8	312	-	1/1/14/20	10/35/113/115	-
24	CHL	R	608	-	3/3/16/26	6/15/113/137	-
25	CLA	R	603	-	1/1/11/20	6/16/94/115	-
25	CLA	p	314	-	1/1/13/20	5/25/103/115	-
25	CLA	a	610	-	1/1/10/20	4/8/86/115	-
24	CHL	7	311	-	3/3/16/26	2/15/113/137	-
25	CLA	B	609	18	1/1/15/20	16/37/115/115	-
25	CLA	B	613	18	1/1/15/20	10/37/115/115	-
25	CLA	A	605	-	1/1/11/20	6/18/96/115	-
39	PL9	d	406	-	-	11/53/73/73	0/1/1/1
25	CLA	u	315	-	1/1/14/20	11/35/113/115	-
25	CLA	B	601	-	1/1/11/20	9/13/91/115	-
25	CLA	7	314	-	1/1/13/20	7/25/103/115	-
37	DGD	c	618	-	-	27/39/79/95	0/2/2/2
29	OUR	u	301	-	-	10/42/81/86	0/2/2/2
25	CLA	a	603	19	1/1/15/20	12/37/115/115	-
24	CHL	p	305	12	3/3/20/26	15/39/137/137	-
28	NEX	S	617	-	-	5/27/83/83	0/3/3/3
33	LMG	m	101	-	-	19/36/56/70	0/1/1/1
24	CHL	Y	312	-	3/3/20/26	19/39/137/137	-
24	CHL	2	318	11	3/3/15/26	6/10/108/137	-
24	CHL	G	312	-	3/3/17/26	5/21/119/137	-
24	CHL	3	304	12	3/3/16/26	8/18/116/137	-
25	CLA	r	305	-	1/1/10/20	1/8/86/115	-
24	CHL	9	309	-	3/3/16/26	9/15/113/137	-
24	CHL	5	311	-	3/3/16/26	7/17/115/137	-
25	CLA	N	306	17	1/1/12/20	8/24/102/115	-
24	CHL	Y	304	17	3/3/20/26	15/39/137/137	-
24	CHL	N	305	-	3/3/18/26	14/32/130/137	-
25	CLA	C	611	20	1/1/15/20	13/37/115/115	-
25	CLA	6	315	12	1/1/11/20	5/13/91/115	-
33	LMG	i	101	-	-	14/43/63/70	0/1/1/1
25	CLA	C	610	-	1/1/15/20	10/37/115/115	-
25	CLA	c	605	20	1/1/13/20	9/27/105/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
28	NEX	5	304	-	-	5/27/83/83	0/3/3/3
25	CLA	b	604	18	1/1/14/20	16/34/112/115	-
28	NEX	4	303	25	-	5/27/83/83	0/3/3/3
24	CHL	p	309	12	3/3/15/26	0/12/110/137	-
26	OIE	y	302	-	-	2/33/72/72	0/2/2/2
31	8CT	S	614	-	-	6/29/63/63	0/2/2/2
31	8CT	a	608	-	-	8/29/63/63	0/2/2/2
24	CHL	s	403	13	3/3/18/26	17/30/128/137	-
25	CLA	A	607	19	1/1/14/20	4/31/109/115	-
24	CHL	Y	308	17	3/3/15/26	5/12/110/137	-
24	CHL	Y	319	-	3/3/17/26	8/24/122/137	-
24	CHL	S	606	-	3/3/16/26	6/15/113/137	-
24	CHL	7	309	12	3/3/15/26	0/12/110/137	-
25	CLA	9	314	30	1/1/14/20	12/35/113/115	-
26	OIE	1	302	-	-	2/33/72/72	0/2/2/2
30	LHG	4	318	-	-	21/46/46/53	-
30	LHG	c	617	-	-	17/36/36/53	-
25	CLA	b	609	18	1/1/15/20	19/37/115/115	-
25	CLA	b	611	18	1/1/15/20	6/37/115/115	-
25	CLA	s	413	-	1/1/12/20	9/25/103/115	-
25	CLA	a	605	-	1/1/11/20	6/18/96/115	-
24	CHL	q	307	17	3/3/15/26	2/12/110/137	-
25	CLA	B	612	18	1/1/15/20	12/37/115/115	-
24	CHL	u	310	-	3/3/16/26	9/15/113/137	-
25	CLA	Y	315	17	1/1/11/20	4/13/91/115	-
28	NEX	r	301	-	-	4/27/83/83	0/3/3/3
29	OUR	Y	301	-	-	12/42/81/86	0/2/2/2
25	CLA	q	314	17	1/1/11/20	4/13/91/115	-
24	CHL	q	310	-	3/3/16/26	5/20/118/137	-
24	CHL	6	311	-	3/3/15/26	4/13/111/137	-
25	CLA	c	603	20	1/1/15/20	13/37/115/115	-
24	CHL	n	304	17	3/3/17/26	8/25/123/137	-
30	LHG	D	408	-	-	21/43/43/53	-
24	CHL	6	310	-	3/3/16/26	7/15/113/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	C	607	-	1/1/15/20	11/37/115/115	-
26	OIE	7	302	-	-	4/33/72/72	0/2/2/2
29	OUR	g	301	-	-	10/42/81/86	0/2/2/2
33	LMG	w	201	-	-	17/31/51/70	0/1/1/1
25	CLA	n	314	-	1/1/14/20	6/35/113/115	-
30	LHG	p	319	25	-	26/47/47/53	-
25	CLA	r	313	-	1/1/11/20	5/13/91/115	-
24	CHL	3	311	-	3/3/15/26	5/13/111/137	-
24	CHL	y	313	-	3/3/20/26	19/39/137/137	-
25	CLA	R	613	-	1/1/11/20	8/16/94/115	-
24	CHL	R	605	-	3/3/15/26	2/10/108/137	-
25	CLA	c	611	20	1/1/15/20	13/37/115/115	-
29	OUR	7	301	-	-	8/42/81/86	0/2/2/2
24	CHL	G	311	-	3/3/17/26	10/25/123/137	-
25	CLA	u	317	12	1/1/12/20	8/25/103/115	-
24	CHL	4	305	-	3/3/16/26	8/15/113/137	-
26	OIE	4	302	-	-	2/33/72/72	0/2/2/2
24	CHL	p	311	-	3/3/16/26	3/15/113/137	-
25	CLA	b	607	18	1/1/15/20	12/37/115/115	-
25	CLA	S	611	13	1/1/11/20	6/13/91/115	-
29	OUR	q	301	-	-	10/42/81/86	0/2/2/2
24	CHL	q	316	-	3/3/15/26	1/10/108/137	-
25	CLA	u	316	-	1/1/11/20	4/13/91/115	-
24	CHL	y	309	17	3/3/15/26	5/12/110/137	-
31	8CT	v	401	-	-	11/29/63/63	0/2/2/2
25	CLA	S	609	-	1/1/13/20	5/25/103/115	-
31	8CT	C	615	-	-	13/29/63/63	0/2/2/2
26	OIE	G	302	-	-	2/33/72/72	0/2/2/2
24	CHL	4	304	-	3/3/15/26	2/10/108/137	-
26	OIE	g	303	-	-	0/33/72/72	0/2/2/2
24	CHL	4	310	-	3/3/15/26	2/12/110/137	-
25	CLA	q	305	17	1/1/12/20	8/24/102/115	-
25	CLA	C	602	20	1/1/15/20	18/37/115/115	-
24	CHL	s	407	-	3/3/16/26	6/15/113/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
37	DGD	C	620	-	-	25/44/84/95	0/2/2/2
25	CLA	B	615	18	1/1/15/20	4/37/115/115	-
26	0IE	p	302	-	-	4/33/72/72	0/2/2/2
33	LMG	D	401	-	-	10/43/63/70	0/1/1/1
25	CLA	s	411	-	1/1/10/20	2/11/90/115	-
31	8CT	c	614	-	-	14/29/63/63	0/2/2/2
29	0UR	N	301	-	-	10/42/81/86	0/2/2/2
24	CHL	1	311	-	3/3/15/26	3/13/111/137	-
25	CLA	6	316	-	1/1/11/20	9/13/91/115	-
24	CHL	5	310	-	3/3/15/26	2/10/108/137	-
31	8CT	X	601	-	-	10/29/63/63	0/2/2/2
31	8CT	V	401	-	-	11/29/63/63	0/2/2/2
24	CHL	R	602	-	3/3/16/26	5/17/115/137	-
25	CLA	g	307	-	1/1/12/20	6/23/101/115	-
24	CHL	g	309	-	3/3/15/26	2/12/110/137	-
29	0UR	9	301	-	-	10/42/81/86	0/2/2/2
25	CLA	1	315	10	1/1/11/20	6/13/91/115	-
24	CHL	2	306	-	3/3/16/26	9/17/115/137	-
25	CLA	1	306	-	1/1/10/20	6/11/90/115	-
25	CLA	b	612	18	1/1/15/20	11/37/115/115	-
25	CLA	R	612	-	1/1/11/20	5/13/91/115	-
28	NEX	u	304	-	-	5/27/83/83	0/3/3/3
25	CLA	s	417	-	1/1/11/20	6/13/91/115	-
24	CHL	p	306	-	3/3/19/26	24/37/135/137	-
24	CHL	3	309	-	3/3/17/26	7/21/119/137	-
25	CLA	2	308	-	1/1/12/20	4/19/97/115	-
24	CHL	S	601	13	3/3/16/26	10/15/113/137	-
25	CLA	b	610	-	1/1/15/20	4/37/115/115	-
37	DGD	c	619	-	-	17/44/84/95	0/2/2/2
30	LHG	y	319	25	-	25/47/47/53	-
25	CLA	S	616	-	1/1/11/20	6/13/91/115	-
31	8CT	B	617	-	-	13/29/63/63	0/2/2/2
26	0IE	2	303	-	-	0/33/72/72	0/2/2/2
24	CHL	N	317	-	3/3/15/26	4/10/108/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	p	308	-	1/1/12/20	7/19/97/115	-
28	NEX	R	616	-	-	5/27/83/83	0/3/3/3
25	CLA	C	612	20	1/1/12/20	10/24/102/115	-
25	CLA	Y	313	17	1/1/13/20	5/25/103/115	-
32	SQD	b	618	-	-	15/49/69/69	0/1/1/1
24	CHL	q	304	17	3/3/18/26	17/32/130/137	-
30	LHG	a	612	-	-	15/48/48/53	-
30	LHG	d	408	-	-	25/43/43/53	-
24	CHL	S	608	-	3/3/16/26	7/17/115/137	-
25	CLA	B	608	-	1/1/13/20	12/25/103/115	-
24	CHL	G	306	17	3/3/19/26	26/37/135/137	-
25	CLA	r	312	8	1/1/11/20	6/13/91/115	-
25	CLA	5	314	-	1/1/13/20	5/25/103/115	-
24	CHL	N	310	-	3/3/17/26	9/24/122/137	-
25	CLA	2	307	11	1/1/10/20	4/11/89/115	-
31	8CT	c	613	-	-	8/29/63/63	0/2/2/2
25	CLA	B	607	18	1/1/15/20	13/37/115/115	-
24	CHL	y	311	-	3/3/17/26	10/25/123/137	-
24	CHL	N	312	-	3/3/18/26	11/27/125/137	-
25	CLA	S	603	-	1/1/11/20	5/13/91/115	-
25	CLA	9	316	12	1/1/12/20	9/25/103/115	-
25	CLA	b	606	18	1/1/15/20	18/37/115/115	-
26	OIE	8	302	-	-	2/33/72/72	0/2/2/2
24	CHL	1	310	-	3/3/15/26	2/12/110/137	-
24	CHL	r	306	-	3/3/15/26	4/10/108/137	-
26	OIE	3	302	-	-	4/33/69/72	0/2/2/2
28	NEX	y	304	-	-	5/27/83/83	0/3/3/3
24	CHL	s	406	-	3/3/16/26	5/15/113/137	-
28	NEX	1	303	-	-	5/27/83/83	0/3/3/3
25	CLA	8	314	-	1/1/10/20	5/11/89/115	-
24	CHL	2	311	-	3/3/16/26	7/17/115/137	-
24	CHL	g	305	17	3/3/20/26	21/39/137/137	-
23	HEM	E	201	2	-	0/12/54/54	-
25	CLA	4	306	-	1/1/10/20	6/11/90/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	7	317	12	1/1/12/20	7/22/100/115	-
26	OIE	9	302	-	-	4/33/72/72	0/2/2/2
30	LHG	A	612	-	-	15/48/48/53	-
25	CLA	A	604	-	1/1/15/20	9/37/115/115	-
24	CHL	y	306	-	3/3/19/26	22/37/135/137	-
24	CHL	r	307	-	3/3/16/26	7/18/116/137	-
30	LHG	1	318	-	-	23/46/46/53	-
24	CHL	8	309	-	3/3/16/26	5/20/118/137	-
24	CHL	n	309	-	3/3/16/26	7/15/113/137	-
26	OIE	2	302	-	-	2/33/72/72	0/2/2/2
30	LHG	Y	318	25	-	23/47/47/53	-
26	OIE	g	302	-	-	2/33/72/72	0/2/2/2
25	CLA	p	315	30	1/1/14/20	13/35/113/115	-
28	NEX	r	317	-	-	5/27/83/83	0/3/3/3
24	CHL	G	313	-	3/3/20/26	23/39/137/137	-
25	CLA	4	307	28	1/1/10/20	4/8/86/115	-
29	OUR	p	301	-	-	8/42/81/86	0/2/2/2
25	CLA	C	603	20	1/1/15/20	13/37/115/115	-
24	CHL	7	310	-	3/3/16/26	7/15/113/137	-
33	LMG	D	411	-	-	26/41/61/70	0/1/1/1
25	CLA	B	604	18	1/1/14/20	16/34/112/115	-
31	8CT	t	101	-	-	12/29/63/63	0/2/2/2
25	CLA	6	313	-	1/1/10/20	2/8/86/115	-
24	CHL	g	310	-	3/3/16/26	7/17/115/137	-
24	CHL	9	305	-	3/3/19/26	15/37/135/137	-
28	NEX	7	304	-	-	5/27/83/83	0/3/3/3
25	CLA	R	610	-	1/1/11/20	4/13/91/115	-
30	LHG	D	407	-	-	29/53/53/53	-
26	OIE	q	302	-	-	2/33/72/72	0/2/2/2
32	SQD	B	618	-	-	16/49/69/69	0/1/1/1
31	8CT	c	615	-	-	12/29/63/63	0/2/2/2
25	CLA	b	602	18	1/1/15/20	13/37/115/115	-
24	CHL	y	312	-	3/3/17/26	5/21/119/137	-
25	CLA	b	603	18	1/1/15/20	12/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	CHL	u	313	-	3/3/15/26	5/12/110/137	-
26	OIE	n	302	-	-	2/33/72/72	0/2/2/2
25	CLA	6	306	-	1/1/10/20	3/8/86/115	-
24	CHL	9	310	-	3/3/16/26	4/15/113/137	-
25	CLA	q	315	17	1/1/10/20	5/11/89/115	-
25	CLA	s	405	-	1/1/10/20	2/11/89/115	-
26	OIE	5	303	-	-	0/33/72/72	0/2/2/2
35	PHO	a	606	-	-	7/37/103/103	0/5/6/6
25	CLA	7	307	12	1/1/13/20	7/27/105/115	-
24	CHL	4	312	-	3/3/16/26	6/15/113/137	-
24	CHL	7	305	12	3/3/20/26	15/39/137/137	-
39	PL9	D	406	-	-	13/53/73/73	0/1/1/1
25	CLA	Y	316	17	1/1/12/20	11/25/103/115	-
24	CHL	N	311	-	3/3/16/26	7/20/118/137	-
24	CHL	p	310	-	3/3/16/26	7/15/113/137	-
25	CLA	G	316	17	1/1/11/20	4/13/91/115	-
33	LMG	d	411	-	-	21/41/61/70	0/1/1/1
25	CLA	r	304	-	1/1/11/20	6/16/94/115	-
25	CLA	r	310	8	1/1/13/20	4/25/103/115	-
24	CHL	g	313	-	3/3/20/26	21/39/137/137	-
25	CLA	3	313	-	1/1/10/20	2/8/86/115	-
30	LHG	5	319	-	-	20/47/47/53	-
25	CLA	c	608	20	1/1/14/20	10/33/111/115	-
24	CHL	1	304	-	3/3/15/26	2/10/108/137	-
25	CLA	1	314	-	1/1/10/20	4/8/86/115	-
25	CLA	N	315	17	1/1/11/20	5/13/91/115	-
25	CLA	B	606	18	1/1/15/20	18/37/115/115	-
25	CLA	8	306	-	1/1/12/20	6/19/97/115	-
30	LHG	g	319	-	-	23/47/47/53	-
25	CLA	s	410	-	1/1/13/20	5/25/103/115	-
24	CHL	1	317	-	3/3/15/26	7/10/108/137	-
25	CLA	C	608	20	1/1/14/20	10/33/111/115	-
31	8CT	T	101	-	-	12/29/63/63	0/2/2/2
24	CHL	2	305	11	3/3/15/26	6/13/111/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	D	404	21	1/1/15/20	9/37/115/115	-
24	CHL	S	607	-	3/3/16/26	5/15/113/137	-
25	CLA	c	616	20	1/1/11/20	4/15/93/115	-
25	CLA	A	603	19	1/1/15/20	12/37/115/115	-
33	LMG	B	619	-	-	20/36/56/70	0/1/1/1
30	LHG	7	319	25	-	24/41/41/53	-
26	OIE	6	302	-	-	4/33/69/72	0/2/2/2
25	CLA	4	315	10	1/1/11/20	6/13/91/115	-
29	OUR	4	301	-	-	13/42/81/86	0/2/2/2
25	CLA	s	404	-	1/1/11/20	5/13/91/115	-
25	CLA	4	314	-	1/1/10/20	4/8/86/115	-
24	CHL	r	302	8	3/3/16/26	5/15/113/137	-
24	CHL	u	306	-	3/3/19/26	15/37/135/137	-
26	OIE	7	303	-	-	2/33/72/72	0/2/2/2
26	OIE	R	614	-	-	1/33/72/72	0/2/2/2
27	XAT	r	316	-	-	0/31/93/93	0/4/4/4
32	SQD	d	409	-	-	13/39/59/69	0/1/1/1
30	LHG	C	617	-	-	17/36/36/53	-
25	CLA	5	315	-	1/1/14/20	8/35/113/115	-
24	CHL	R	607	-	3/3/16/26	11/18/116/137	-
24	CHL	Y	310	-	3/3/17/26	10/25/123/137	-
25	CLA	c	604	-	1/1/15/20	18/37/115/115	-
25	CLA	9	307	-	1/1/12/20	9/19/97/115	-
25	CLA	6	314	-	1/1/10/20	4/8/86/115	-
35	PHO	D	403	-	-	11/37/103/103	0/5/6/6
25	CLA	n	313	-	1/1/13/20	6/25/103/115	-
31	8CT	A	608	-	-	8/29/63/63	0/2/2/2
24	CHL	Y	317	17	3/3/15/26	5/10/108/137	-
25	CLA	y	317	17	1/1/12/20	11/25/103/115	-
30	LHG	2	319	-	-	20/44/44/53	-
24	CHL	S	602	13	3/3/18/26	16/30/128/137	-
25	CLA	B	610	-	1/1/15/20	4/37/115/115	-
24	CHL	9	308	12	3/3/15/26	2/12/110/137	-
31	8CT	s	415	-	-	6/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	3	306	-	1/1/10/20	3/8/86/115	-
25	CLA	y	314	17	1/1/13/20	5/25/103/115	-
24	CHL	y	310	-	3/3/16/26	5/17/115/137	-
25	CLA	y	316	17	1/1/11/20	4/13/91/115	-
25	CLA	S	612	-	1/1/12/20	9/25/103/115	-
24	CHL	4	317	-	3/3/15/26	8/10/108/137	-
25	CLA	n	306	17	1/1/12/20	7/24/102/115	-
24	CHL	p	318	12	3/3/15/26	5/10/108/137	-
24	CHL	s	414	-	3/3/15/26	2/10/108/137	-
25	CLA	1	316	10	1/1/10/20	1/10/88/115	-
25	CLA	u	307	-	1/1/13/20	4/27/105/115	-
24	CHL	7	306	-	3/3/19/26	25/37/135/137	-
25	CLA	a	604	-	1/1/15/20	10/37/115/115	-
25	CLA	Y	307	-	1/1/12/20	9/19/97/115	-
24	CHL	Y	305	-	3/3/19/26	22/37/135/137	-
24	CHL	q	308	-	3/3/16/26	6/15/113/137	-
25	CLA	g	317	17	1/1/12/20	6/25/103/115	-
25	CLA	d	404	21	1/1/15/20	11/37/115/115	-
24	CHL	5	312	-	3/3/16/26	7/15/113/137	-
25	CLA	n	307	-	1/1/12/20	5/19/97/115	-
26	OIE	Y	302	-	-	2/33/72/72	0/2/2/2
24	CHL	3	305	-	3/3/16/26	8/18/116/137	-
25	CLA	B	602	18	1/1/15/20	13/37/115/115	-
31	8CT	s	416	-	-	12/29/63/63	0/2/2/2
24	CHL	G	310	-	3/3/16/26	9/17/115/137	-
24	CHL	n	308	17	3/3/15/26	4/12/110/137	-

The worst 5 of 5141 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	D	410	8CT	C02-C03	14.71	1.59	1.34
31	d	410	8CT	C02-C03	14.58	1.59	1.34
31	S	614	8CT	C02-C03	14.32	1.59	1.34
31	s	415	8CT	C02-C03	14.31	1.59	1.34
31	A	608	8CT	C02-C03	14.29	1.59	1.34

The worst 5 of 6953 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	s	416	8CT	C22-C21-C20	-31.40	78.94	122.92
31	S	615	8CT	C22-C21-C20	-31.38	78.96	122.92
31	S	615	8CT	C22-C21-C23	-25.32	78.18	118.08
31	s	416	8CT	C22-C21-C23	-25.31	78.20	118.08
31	S	615	8CT	C23-C21-C20	24.86	157.09	118.94

5 of 718 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
24	R	601	CHL	ND
24	R	601	CHL	NA
24	R	601	CHL	NC
24	R	602	CHL	ND
24	R	602	CHL	NA

5 of 4324 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
24	R	601	CHL	C3C-C2C-CMC-OMC
24	R	607	CHL	C3C-C2C-CMC-OMC
24	1	305	CHL	CHA-CBD-CGD-O1D
24	1	305	CHL	CHA-CBD-CGD-O2D
24	1	317	CHL	CHA-CBD-CGD-O1D

There are no ring outliers.

435 monomers are involved in 1342 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	9	311	CHL	4	0
24	n	311	CHL	4	0
25	B	614	CLA	3	0
25	7	316	CLA	3	0
24	3	310	CHL	1	0
30	9	318	LHG	6	0
24	8	303	CHL	3	0
24	y	305	CHL	8	0
29	8	301	OUR	1	0
24	n	310	CHL	2	0
35	A	606	PHO	4	0
25	C	616	CLA	2	0
25	g	308	CLA	6	0
25	r	311	CLA	1	0
29	6	301	OUR	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	2	309	CHL	1	0
28	6	303	NEX	21	0
25	2	317	CLA	2	0
25	4	316	CLA	2	0
24	u	311	CHL	1	0
25	q	313	CLA	1	0
24	Y	311	CHL	4	0
24	G	305	CHL	4	0
24	9	312	CHL	3	0
25	2	316	CLA	1	0
24	N	304	CHL	5	0
35	d	403	PHO	6	0
25	p	317	CLA	5	0
24	y	318	CHL	2	0
25	6	307	CLA	2	0
23	f	201	HEM	3	0
24	3	317	CHL	2	0
25	y	315	CLA	3	0
24	1	312	CHL	4	0
25	p	316	CLA	2	0
24	n	305	CHL	5	0
28	g	304	NEX	15	0
24	g	311	CHL	3	0
25	N	313	CLA	1	0
24	G	309	CHL	2	0
25	N	316	CLA	4	0
37	C	619	DGD	5	0
24	8	310	CHL	6	0
25	u	308	CLA	1	0
25	c	610	CLA	4	0
25	Y	314	CLA	1	0
25	d	405	CLA	6	0
32	D	409	SQD	1	0
25	G	307	CLA	2	0
29	n	301	OUR	1	0
24	r	309	CHL	2	0
25	b	608	CLA	5	0
24	G	318	CHL	1	0
27	R	615	XAT	16	0
25	y	308	CLA	1	0
25	5	316	CLA	2	0
25	b	616	CLA	3	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
33	d	401	LMG	3	0
28	s	401	NEX	21	0
25	7	315	CLA	2	0
25	g	314	CLA	2	0
25	Y	306	CLA	2	0
24	r	308	CHL	3	0
25	G	308	CLA	16	0
25	q	306	CLA	5	0
25	C	609	CLA	2	0
25	c	609	CLA	3	0
25	B	605	CLA	6	0
25	c	601	CLA	3	0
28	G	304	NEX	32	0
24	8	304	CHL	6	0
24	8	308	CHL	3	0
24	s	408	CHL	1	0
25	2	314	CLA	1	0
25	3	316	CLA	2	0
24	5	313	CHL	4	0
25	q	312	CLA	2	0
24	u	305	CHL	5	0
25	5	317	CLA	2	0
24	p	312	CHL	5	0
26	u	302	OIE	1	0
24	7	312	CHL	6	0
25	4	313	CLA	2	0
24	6	305	CHL	1	0
25	8	305	CLA	2	0
24	q	303	CHL	3	0
24	7	313	CHL	3	0
24	u	309	CHL	2	0
33	C	618	LMG	6	0
32	a	609	SQD	4	0
24	S	605	CHL	2	0
25	1	307	CLA	9	0
25	c	602	CLA	2	0
25	c	607	CLA	3	0
29	y	301	OUR	1	0
24	6	304	CHL	3	0
25	G	315	CLA	3	0
29	2	301	OUR	1	0
25	R	604	CLA	7	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
25	G	314	CLA	2	0
24	R	606	CHL	2	0
24	6	309	CHL	20	0
24	9	304	CHL	6	0
25	n	316	CLA	4	0
24	R	601	CHL	3	0
24	2	313	CHL	3	0
25	C	605	CLA	1	0
31	C	613	8CT	1	0
24	g	306	CHL	3	0
30	d	407	LHG	7	0
25	p	307	CLA	2	0
25	a	607	CLA	2	0
24	4	311	CHL	5	0
24	p	313	CHL	3	0
25	C	604	CLA	4	0
29	G	301	0UR	1	0
24	g	318	CHL	2	0
24	5	305	CHL	6	0
25	5	308	CLA	5	0
25	3	315	CLA	1	0
32	A	609	SQD	2	0
24	Y	309	CHL	2	0
25	D	405	CLA	5	0
24	4	309	CHL	7	0
28	9	319	NEX	6	0
24	r	303	CHL	5	0
25	B	603	CLA	3	0
24	9	317	CHL	1	0
25	9	315	CLA	4	0
24	u	318	CHL	1	0
25	8	313	CLA	1	0
24	s	409	CHL	2	0
24	5	309	CHL	1	0
25	2	315	CLA	1	0
25	B	611	CLA	5	0
30	a	601	LHG	5	0
30	G	319	LHG	1	0
26	r	315	0IE	1	0
24	q	311	CHL	6	0
28	3	318	NEX	22	0
25	R	609	CLA	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	6	317	CHL	2	0
24	N	308	CHL	3	0
24	g	312	CHL	3	0
25	9	313	CLA	2	0
25	u	314	CLA	2	0
25	b	613	CLA	5	0
24	8	307	CHL	1	0
25	8	311	CLA	2	0
25	b	614	CLA	3	0
25	c	612	CLA	4	0
24	S	613	CHL	2	0
25	g	316	CLA	2	0
25	n	315	CLA	2	0
25	3	307	CLA	2	0
25	r	314	CLA	1	0
24	1	305	CHL	2	0
25	9	306	CLA	1	0
28	2	304	NEX	9	0
25	C	601	CLA	4	0
25	B	616	CLA	3	0
25	b	615	CLA	7	0
28	n	303	NEX	7	0
24	2	312	CHL	2	0
24	N	309	CHL	1	0
26	y	303	OIE	1	0
24	3	308	CHL	2	0
28	p	304	NEX	27	0
25	7	308	CLA	15	0
30	n	318	LHG	4	0
24	4	308	CHL	1	0
33	W	201	LMG	2	0
24	6	308	CHL	1	0
28	N	303	NEX	7	0
24	1	309	CHL	5	0
25	g	315	CLA	3	0
24	s	402	CHL	3	0
24	u	312	CHL	4	0
25	b	601	CLA	1	0
25	y	307	CLA	2	0
30	N	318	LHG	4	0
25	N	307	CLA	4	0
25	1	313	CLA	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
25	G	317	CLA	2	0
24	n	312	CHL	2	0
25	s	412	CLA	3	0
26	9	303	OIE	1	0
25	b	605	CLA	4	0
30	A	601	LHG	6	0
24	7	318	CHL	2	0
25	8	312	CLA	1	0
24	R	608	CHL	2	0
25	R	603	CLA	1	0
25	p	314	CLA	2	0
24	7	311	CHL	2	0
25	B	609	CLA	3	0
25	B	613	CLA	5	0
25	A	605	CLA	1	0
39	d	406	PL9	2	0
25	u	315	CLA	4	0
25	B	601	CLA	1	0
25	7	314	CLA	2	0
37	c	618	DGD	4	0
29	u	301	OUR	1	0
25	a	603	CLA	5	0
24	p	305	CHL	7	0
28	S	617	NEX	24	0
33	m	101	LMG	6	0
24	Y	312	CHL	7	0
24	G	312	CHL	12	0
24	3	304	CHL	1	0
25	r	305	CLA	9	0
24	9	309	CHL	3	0
24	5	311	CHL	1	0
25	N	306	CLA	1	0
24	Y	304	CHL	5	0
24	N	305	CHL	2	0
25	C	611	CLA	5	0
25	6	315	CLA	1	0
33	i	101	LMG	3	0
25	C	610	CLA	4	0
25	c	605	CLA	2	0
28	5	304	NEX	10	0
25	b	604	CLA	10	0
28	4	303	NEX	21	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	p	309	CHL	3	0
26	y	302	OIE	1	0
24	s	403	CHL	3	0
25	A	607	CLA	2	0
24	Y	308	CHL	3	0
24	S	606	CHL	2	0
25	9	314	CLA	3	0
30	4	318	LHG	3	0
25	b	609	CLA	4	0
25	b	611	CLA	3	0
25	s	413	CLA	1	0
25	a	605	CLA	1	0
24	q	307	CHL	1	0
25	B	612	CLA	8	0
24	u	310	CHL	4	0
25	Y	315	CLA	1	0
28	r	301	NEX	6	0
29	Y	301	OUR	1	0
25	q	314	CLA	1	0
24	q	310	CHL	6	0
24	6	311	CHL	9	0
25	c	603	CLA	3	0
24	n	304	CHL	4	0
30	D	408	LHG	6	0
24	6	310	CHL	2	0
25	C	607	CLA	2	0
26	7	302	OIE	2	0
33	w	201	LMG	6	0
30	p	319	LHG	3	0
25	r	313	CLA	5	0
24	3	311	CHL	6	0
24	y	313	CHL	6	0
24	R	605	CHL	3	0
25	c	611	CLA	3	0
24	G	311	CHL	4	0
25	u	317	CLA	5	0
24	4	305	CHL	1	0
24	p	311	CHL	2	0
25	b	607	CLA	3	0
25	S	611	CLA	1	0
29	q	301	OUR	1	0
25	u	316	CLA	4	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	y	309	CHL	2	0
31	v	401	8CT	1	0
25	S	609	CLA	4	0
24	4	304	CHL	2	0
24	4	310	CHL	3	0
25	q	305	CLA	2	0
25	C	602	CLA	2	0
24	s	407	CHL	2	0
37	C	620	DGD	2	0
25	B	615	CLA	8	0
26	p	302	OIE	2	0
33	D	401	LMG	3	0
25	s	411	CLA	3	0
24	1	311	CHL	7	0
25	6	316	CLA	3	0
31	V	401	8CT	1	0
24	R	602	CHL	4	0
25	g	307	CLA	2	0
24	g	309	CHL	2	0
29	9	301	OUR	1	0
25	1	315	CLA	2	0
25	b	612	CLA	8	0
25	R	612	CLA	7	0
28	u	304	NEX	9	0
25	s	417	CLA	4	0
24	p	306	CHL	4	0
24	3	309	CHL	19	0
25	2	308	CLA	5	0
24	S	601	CHL	1	0
25	b	610	CLA	3	0
37	c	619	DGD	4	0
30	y	319	LHG	2	0
25	S	616	CLA	4	0
26	2	303	OIE	1	0
25	p	308	CLA	12	0
28	R	616	NEX	6	0
25	C	612	CLA	2	0
25	Y	313	CLA	2	0
32	b	618	SQD	5	0
24	q	304	CHL	4	0
30	a	612	LHG	2	0
30	d	408	LHG	4	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	S	608	CHL	1	0
25	B	608	CLA	6	0
24	G	306	CHL	6	0
25	5	314	CLA	2	0
24	N	310	CHL	2	0
31	c	613	8CT	1	0
25	B	607	CLA	4	0
24	y	311	CHL	1	0
24	N	312	CHL	4	0
25	9	316	CLA	4	0
25	b	606	CLA	9	0
24	1	310	CHL	3	0
24	r	306	CHL	3	0
26	3	302	0IE	2	0
28	y	304	NEX	4	0
24	s	406	CHL	2	0
28	1	303	NEX	22	0
25	8	314	CLA	2	0
24	g	305	CHL	4	0
23	E	201	HEM	2	0
25	7	317	CLA	4	0
26	9	302	0IE	2	0
30	A	612	LHG	2	0
25	A	604	CLA	5	0
24	y	306	CHL	2	0
24	r	307	CHL	4	0
30	1	318	LHG	3	0
24	8	309	CHL	5	0
24	n	309	CHL	1	0
25	p	315	CLA	2	0
28	r	317	NEX	9	0
24	G	313	CHL	10	0
25	4	307	CLA	16	0
29	p	301	0UR	1	0
25	C	603	CLA	5	0
24	7	310	CHL	14	0
33	D	411	LMG	5	0
25	B	604	CLA	12	0
24	g	310	CHL	6	0
24	9	305	CHL	6	0
28	7	304	NEX	32	0
25	R	610	CLA	1	0

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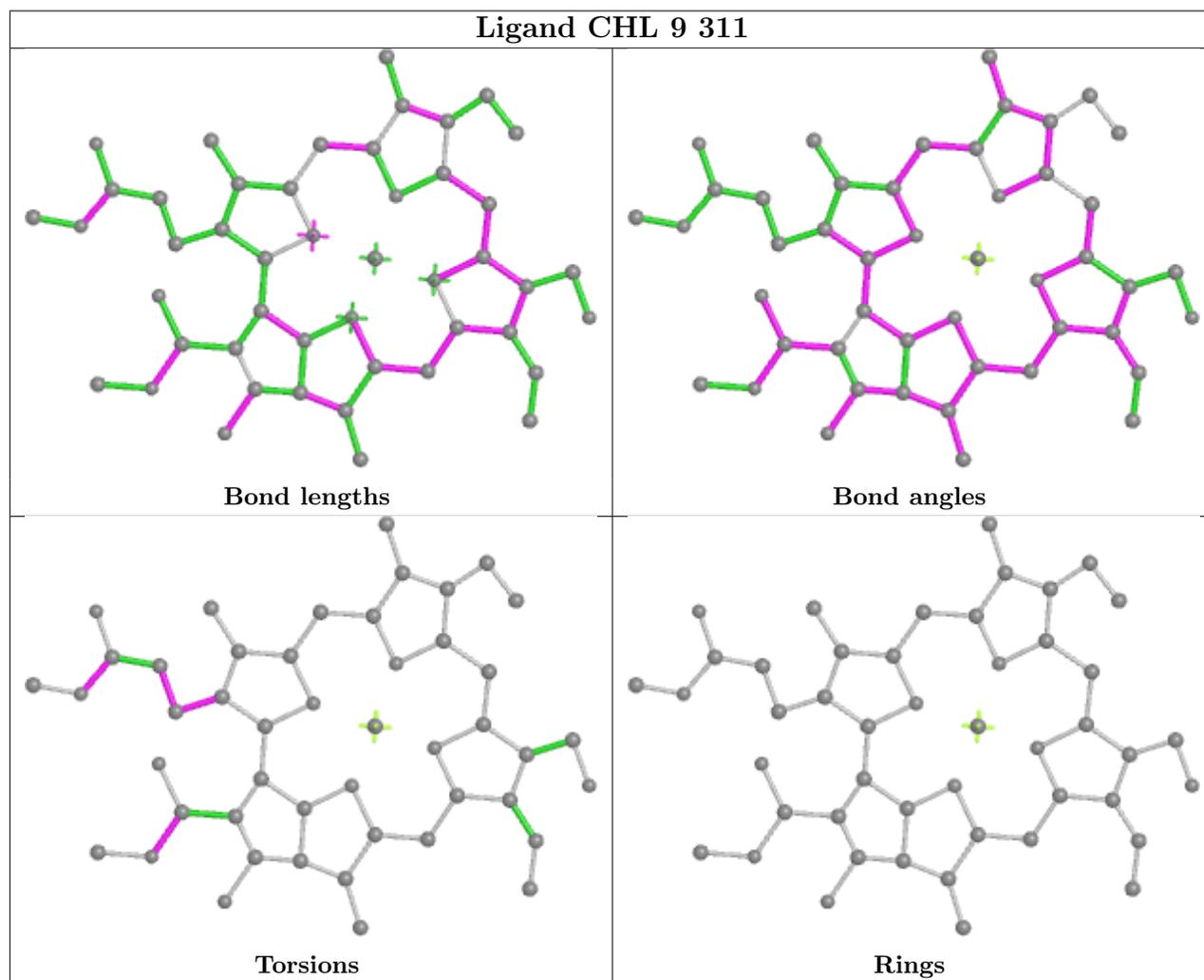
Mol	Chain	Res	Type	Clashes	Symm-Clashes
30	D	407	LHG	7	0
32	B	618	SQD	4	0
25	b	602	CLA	8	0
24	y	312	CHL	4	0
25	b	603	CLA	4	0
24	u	313	CHL	1	0
25	6	306	CLA	1	0
24	9	310	CHL	2	0
25	q	315	CLA	1	0
35	a	606	PHO	4	0
25	7	307	CLA	2	0
24	4	312	CHL	3	0
24	7	305	CHL	6	0
39	D	406	PL9	2	0
25	Y	316	CLA	2	0
24	N	311	CHL	4	0
24	p	310	CHL	12	0
25	G	316	CLA	3	0
33	d	411	LMG	5	0
25	r	304	CLA	1	0
25	r	310	CLA	1	0
24	g	313	CHL	6	0
30	5	319	LHG	2	0
25	c	608	CLA	3	0
24	1	304	CHL	3	0
25	1	314	CLA	1	0
25	N	315	CLA	3	0
25	B	606	CLA	8	0
25	8	306	CLA	4	0
30	g	319	LHG	2	0
25	s	410	CLA	4	0
24	1	317	CHL	2	0
24	2	305	CHL	5	0
25	D	404	CLA	5	0
24	S	607	CHL	2	0
25	c	616	CLA	2	0
25	A	603	CLA	5	0
33	B	619	LMG	5	0
30	7	319	LHG	3	0
26	6	302	OIE	2	0
25	4	315	CLA	2	0
29	4	301	OUR	1	0

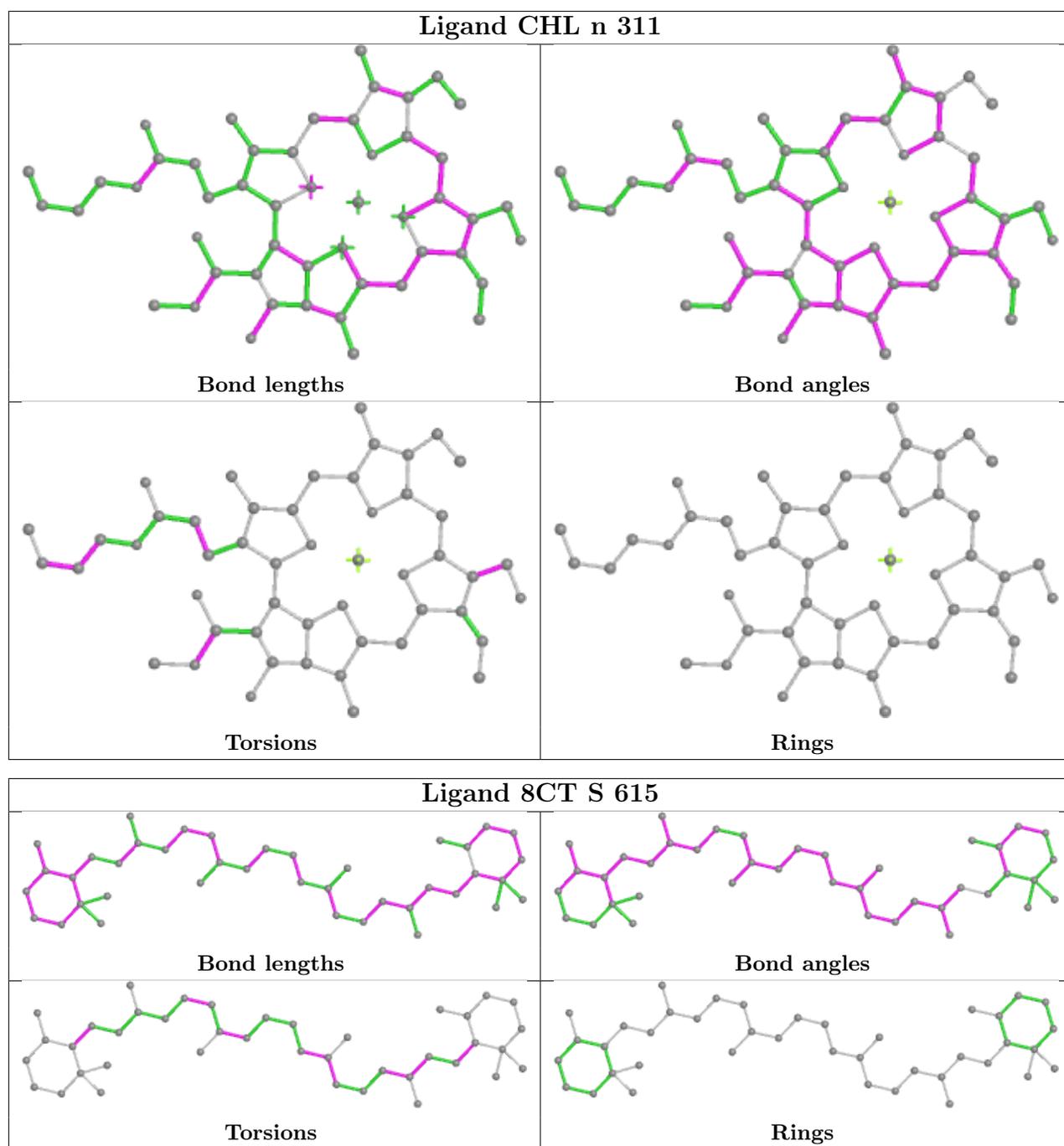
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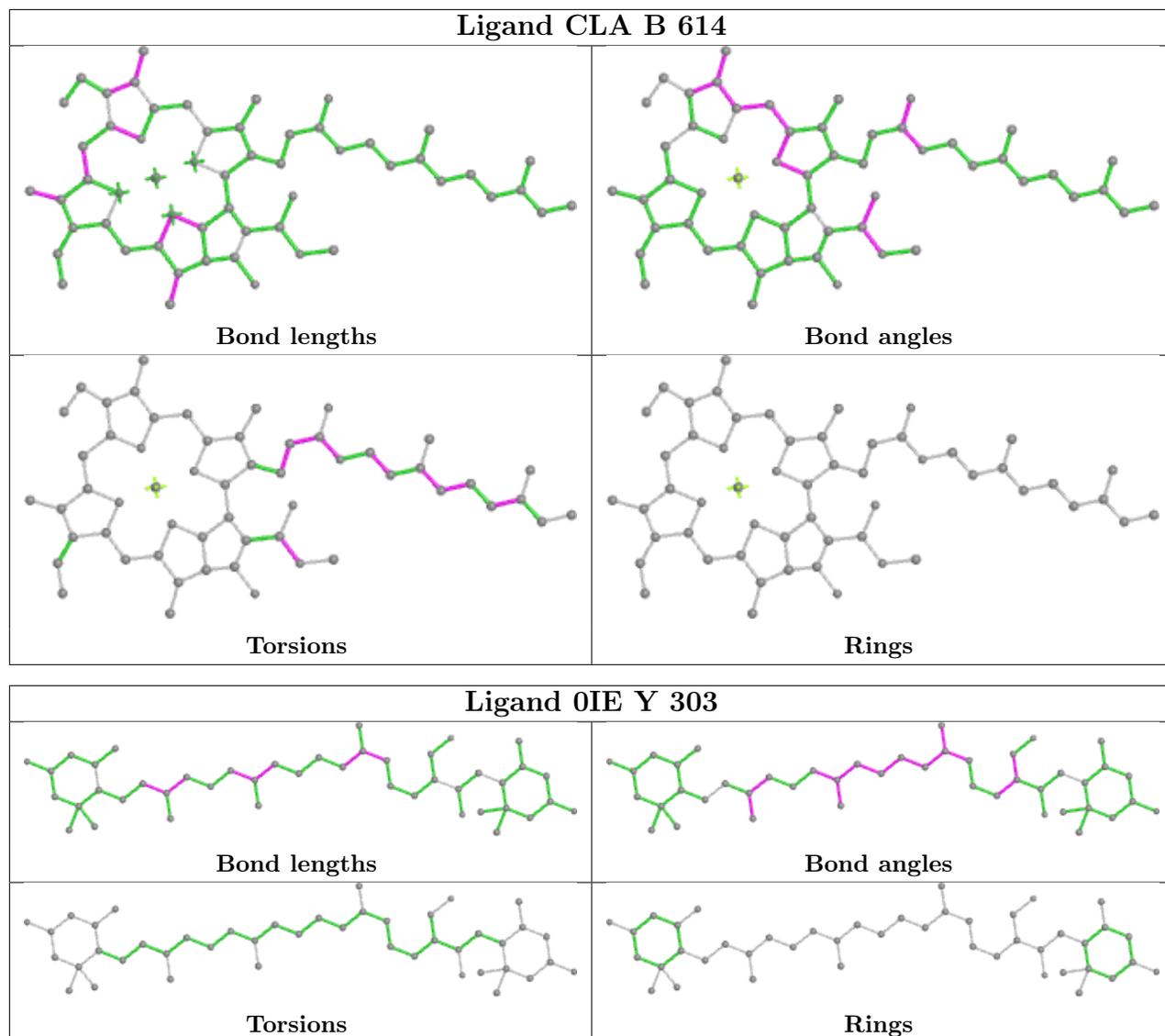
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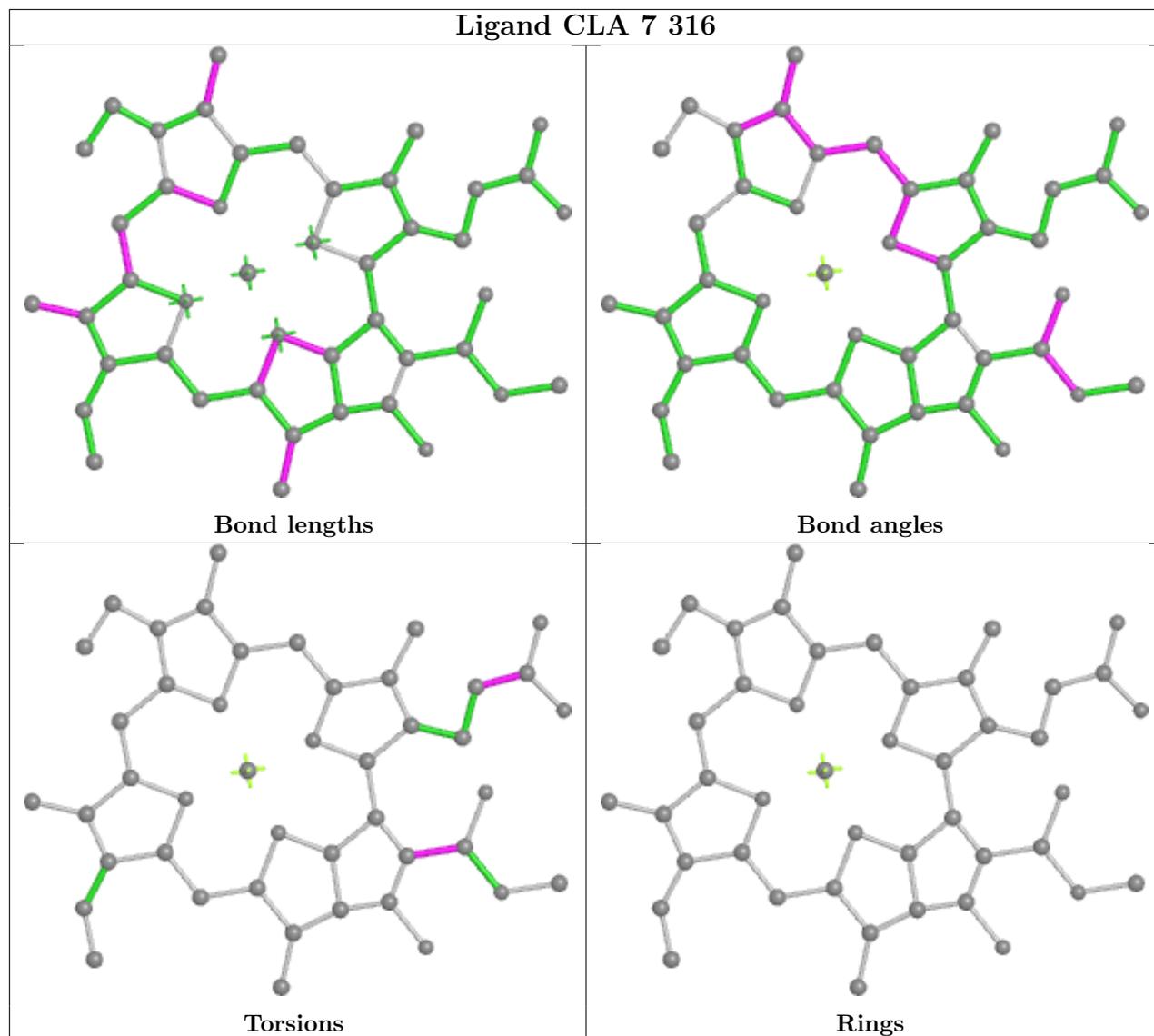
Mol	Chain	Res	Type	Clashes	Symm-Clashes
25	4	314	CLA	1	0
24	r	302	CHL	3	0
24	u	306	CHL	4	0
26	R	614	OIE	1	0
27	r	316	XAT	8	0
32	d	409	SQD	1	0
25	5	315	CLA	1	0
24	R	607	CHL	3	0
24	Y	310	CHL	1	0
25	c	604	CLA	3	0
25	9	307	CLA	4	0
35	D	403	PHO	6	0
24	Y	317	CHL	2	0
25	y	317	CLA	2	0
30	2	319	LHG	2	0
24	S	602	CHL	5	0
25	B	610	CLA	2	0
24	9	308	CHL	1	0
25	3	306	CLA	1	0
25	y	314	CLA	2	0
24	y	310	CHL	1	0
25	y	316	CLA	3	0
25	S	612	CLA	1	0
24	4	317	CHL	2	0
25	n	306	CLA	2	0
24	p	318	CHL	3	0
24	s	414	CHL	2	0
25	1	316	CLA	2	0
25	u	307	CLA	2	0
24	7	306	CHL	4	0
25	a	604	CLA	6	0
24	Y	305	CHL	2	0
24	q	308	CHL	3	0
25	g	317	CLA	1	0
25	d	404	CLA	4	0
24	5	312	CHL	3	0
25	n	307	CLA	4	0
26	Y	302	OIE	1	0
24	3	305	CHL	1	0
25	B	602	CLA	7	0
24	G	310	CHL	3	0
24	n	308	CHL	3	0

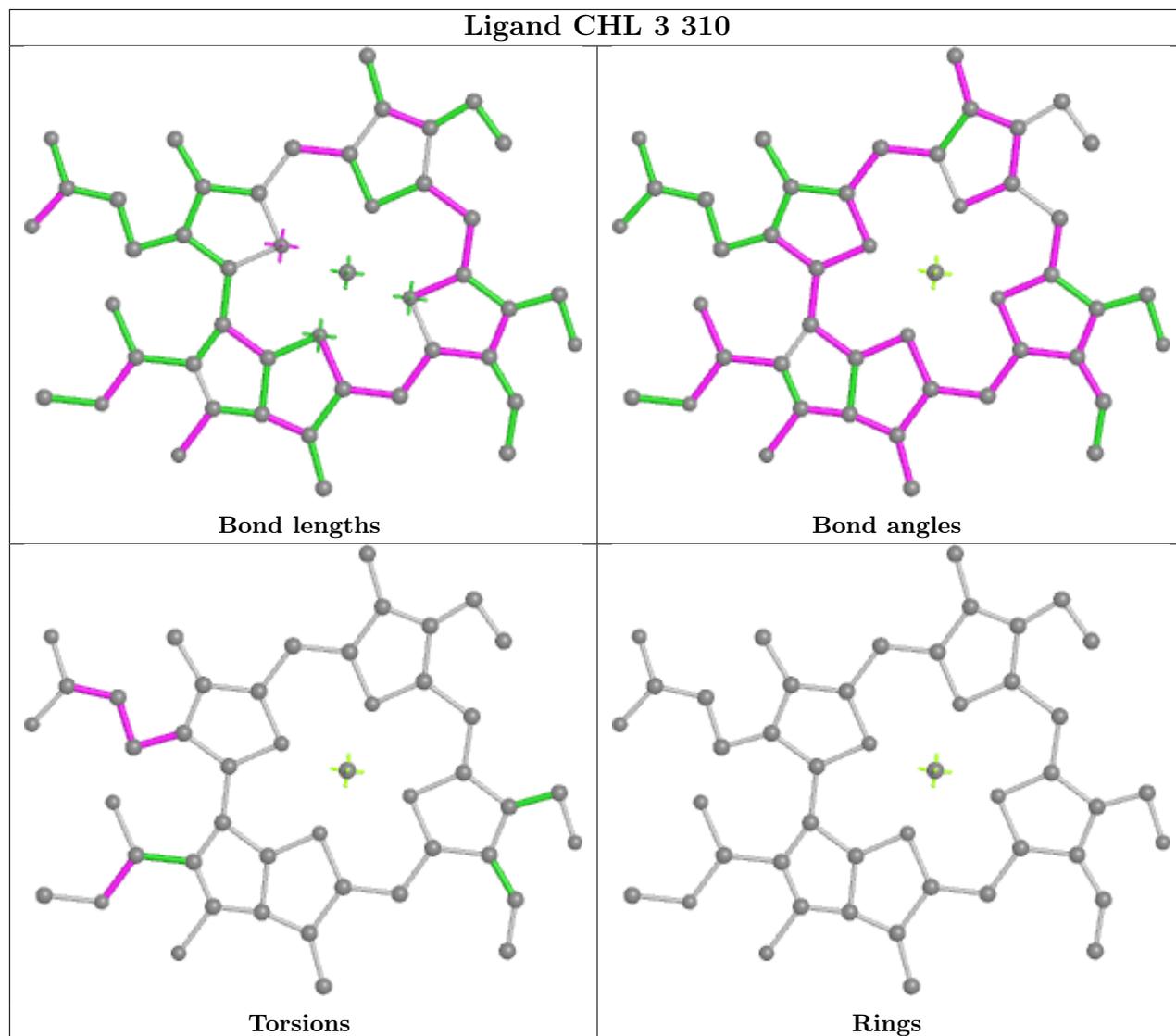
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

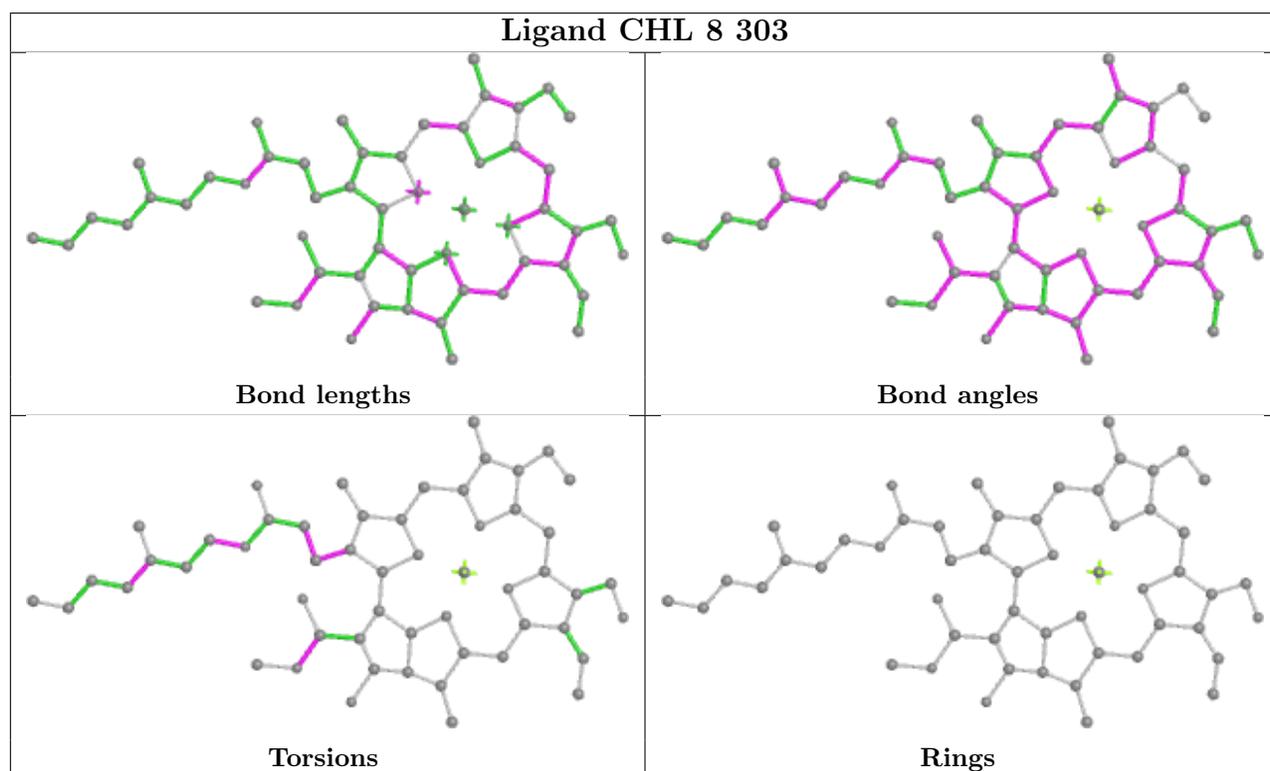
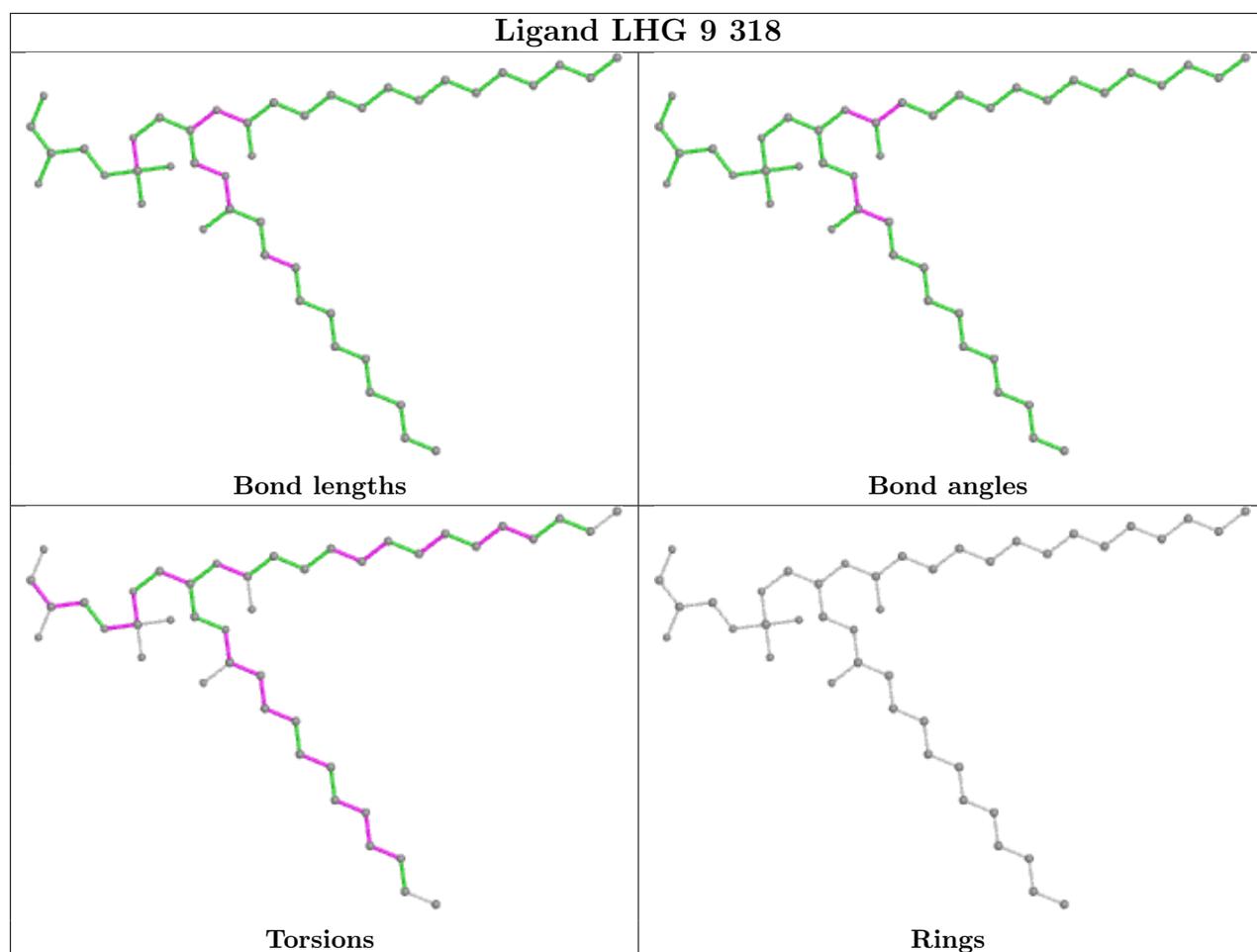


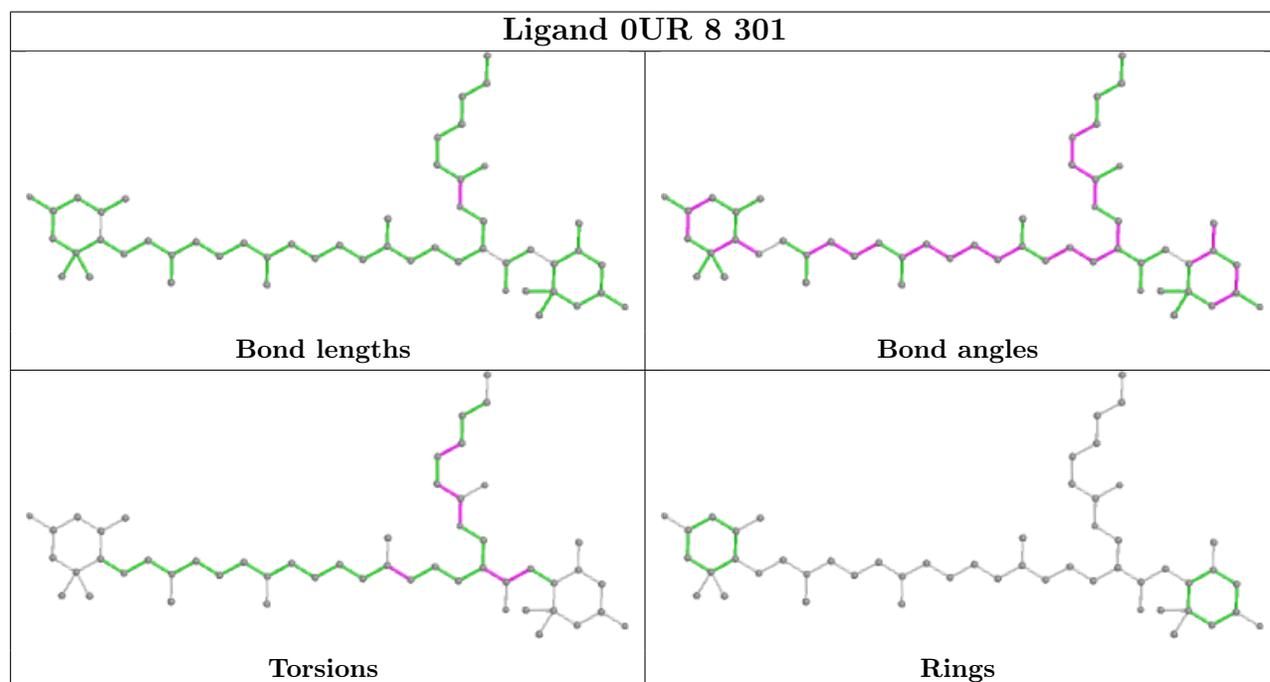
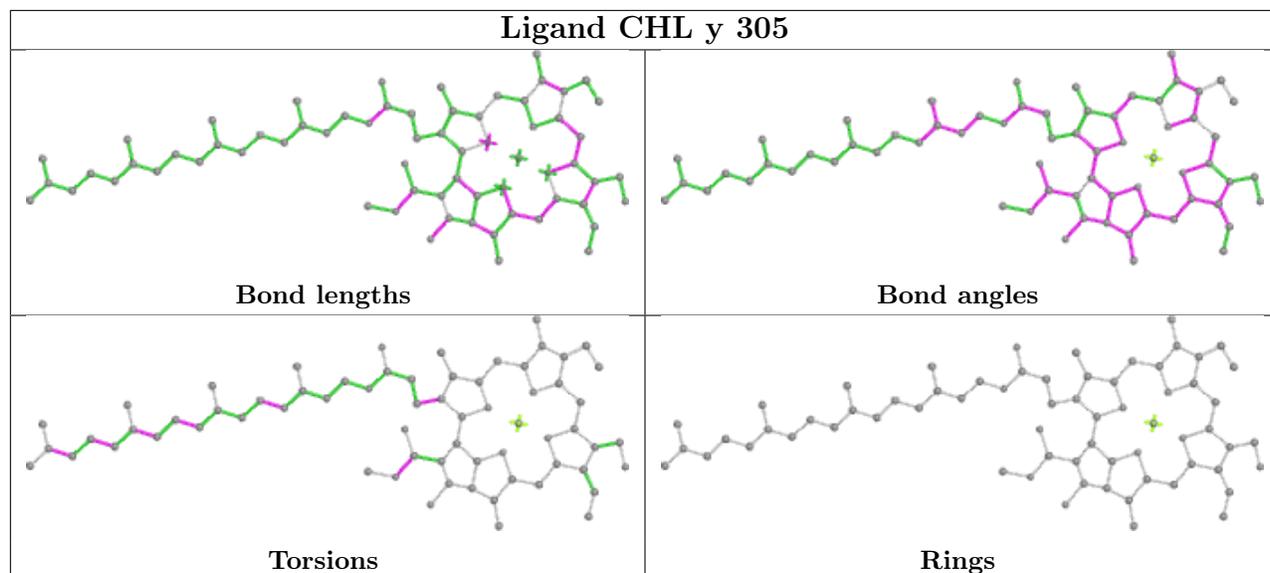


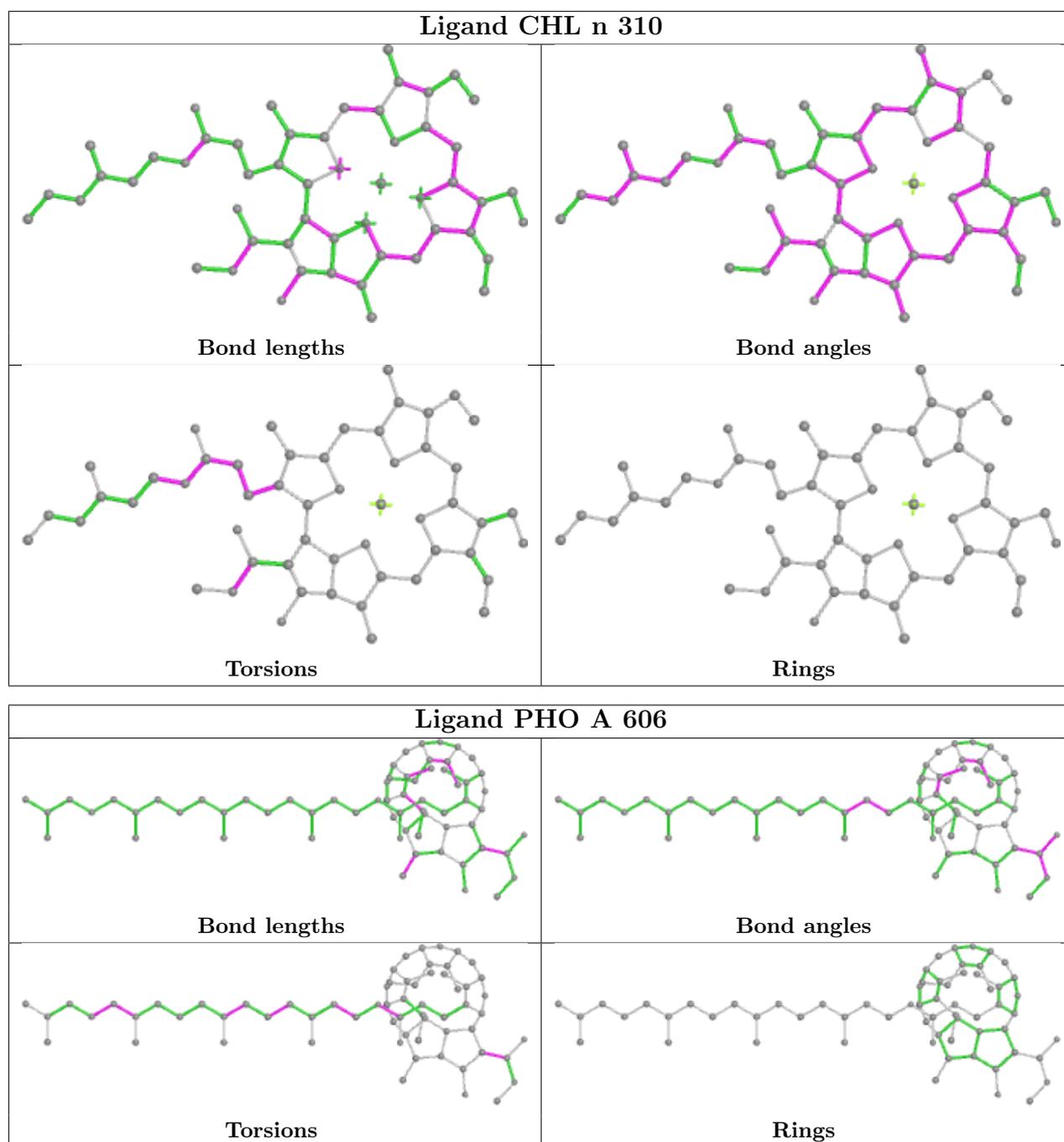


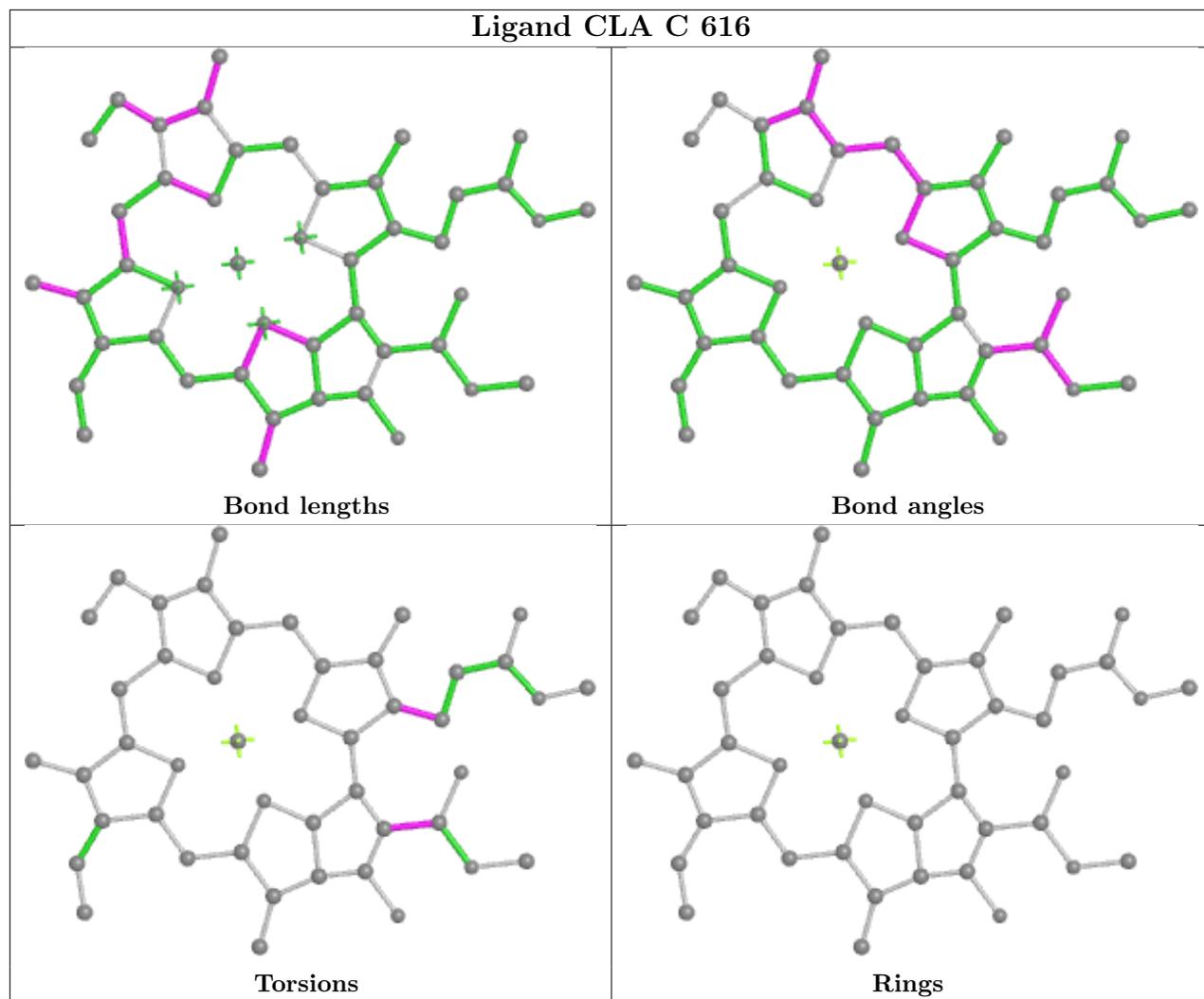


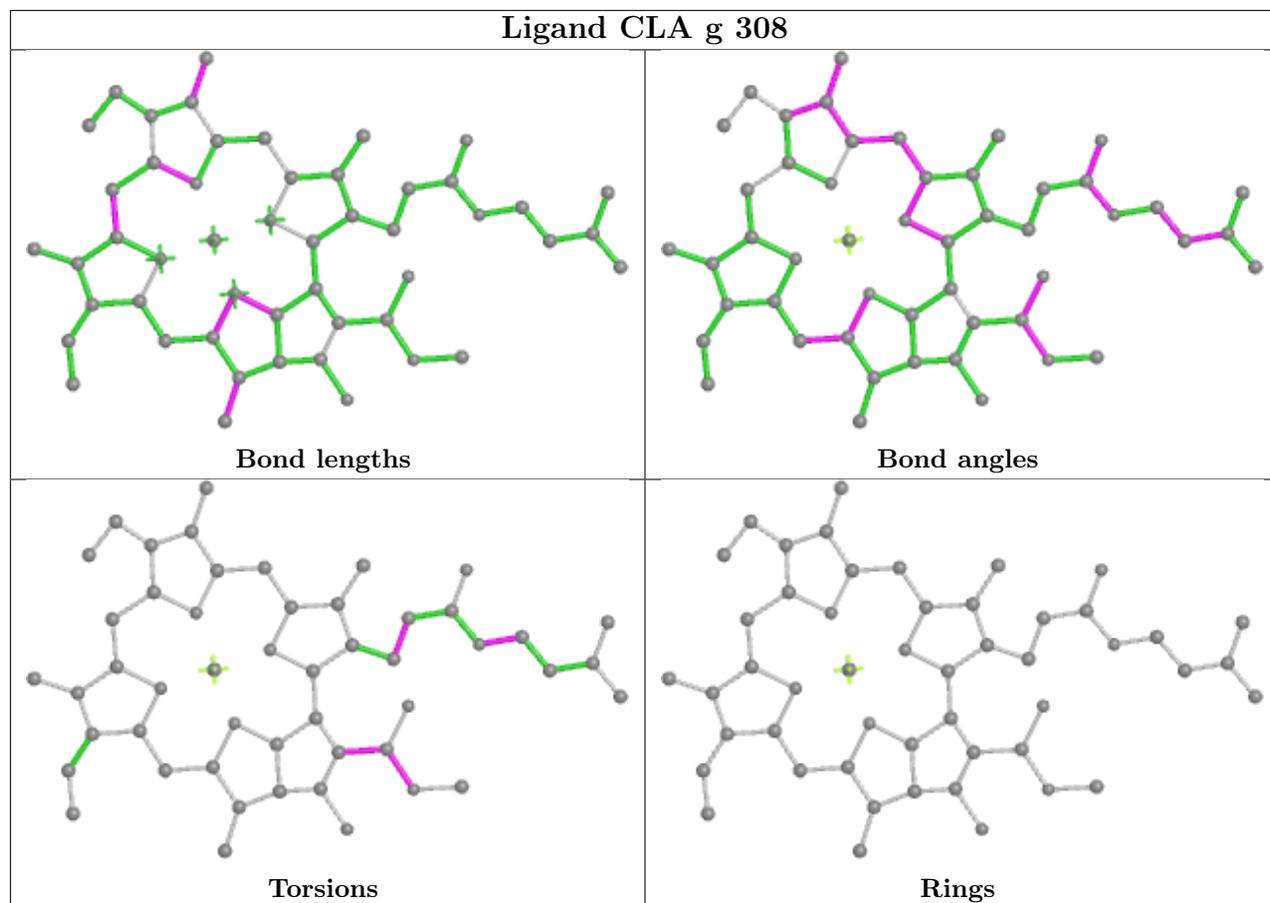


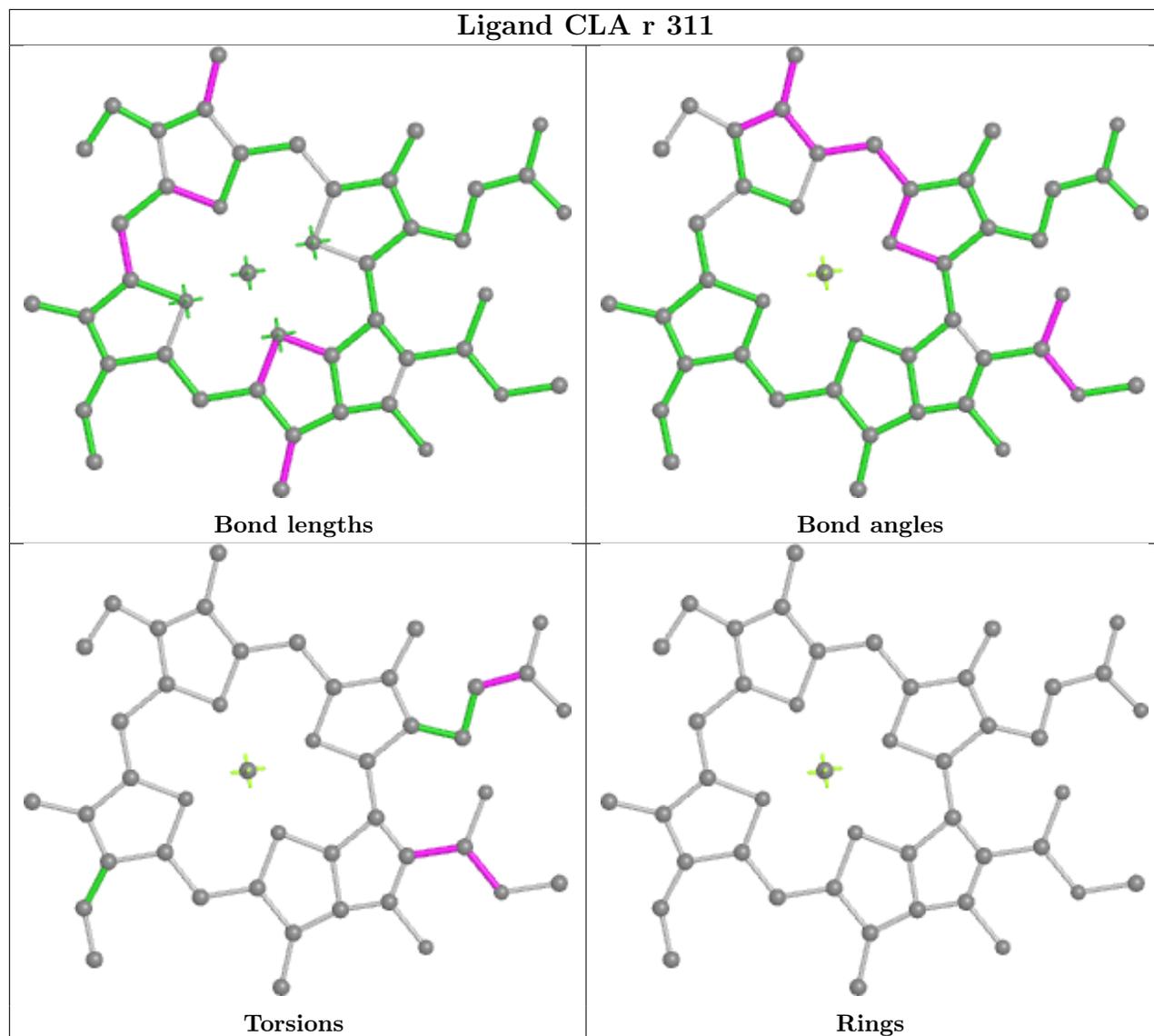


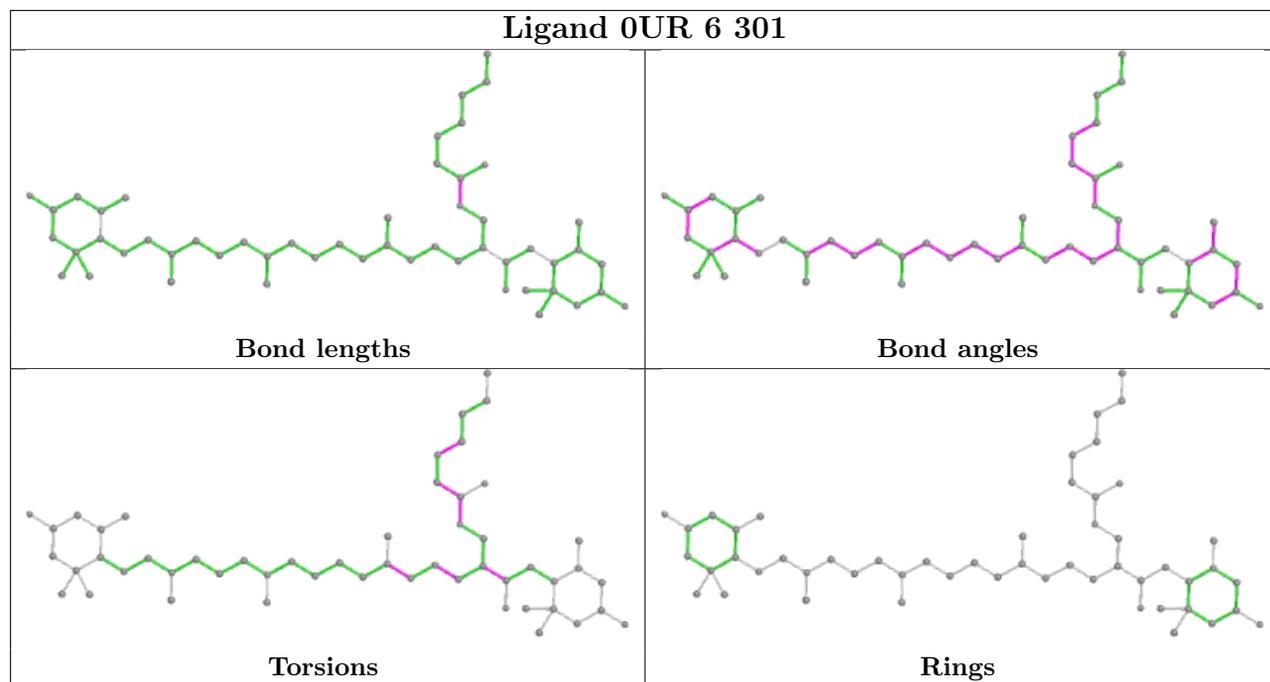


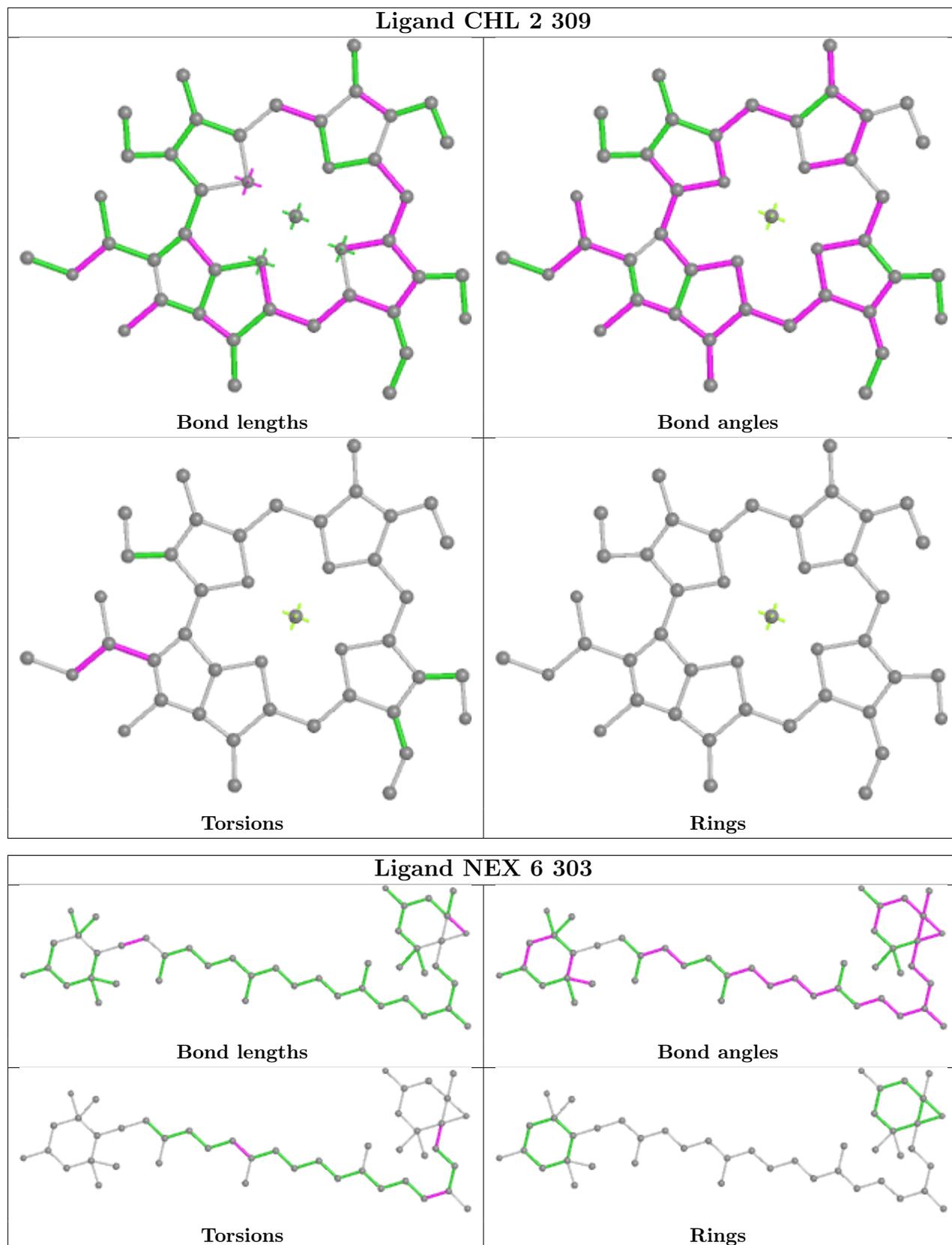


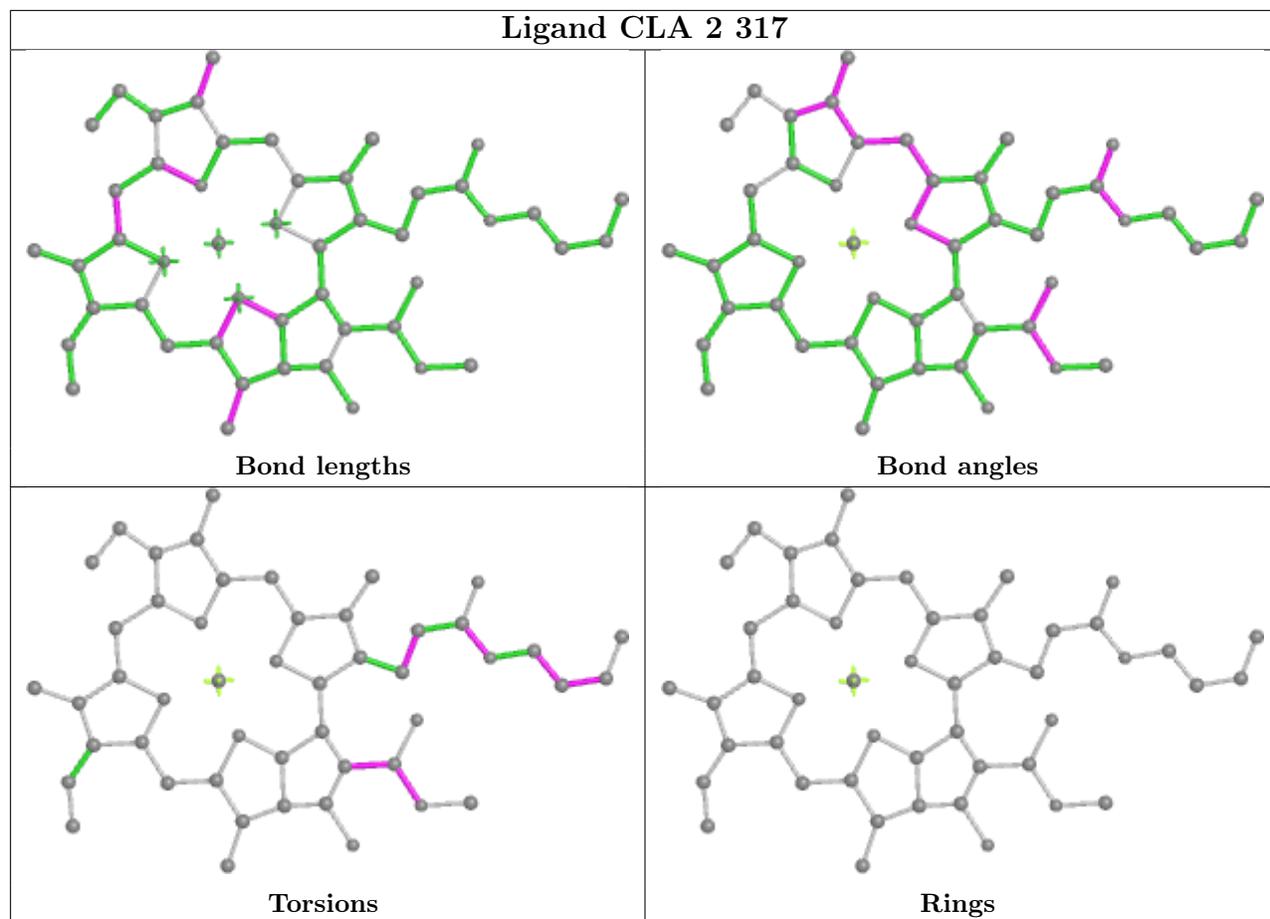




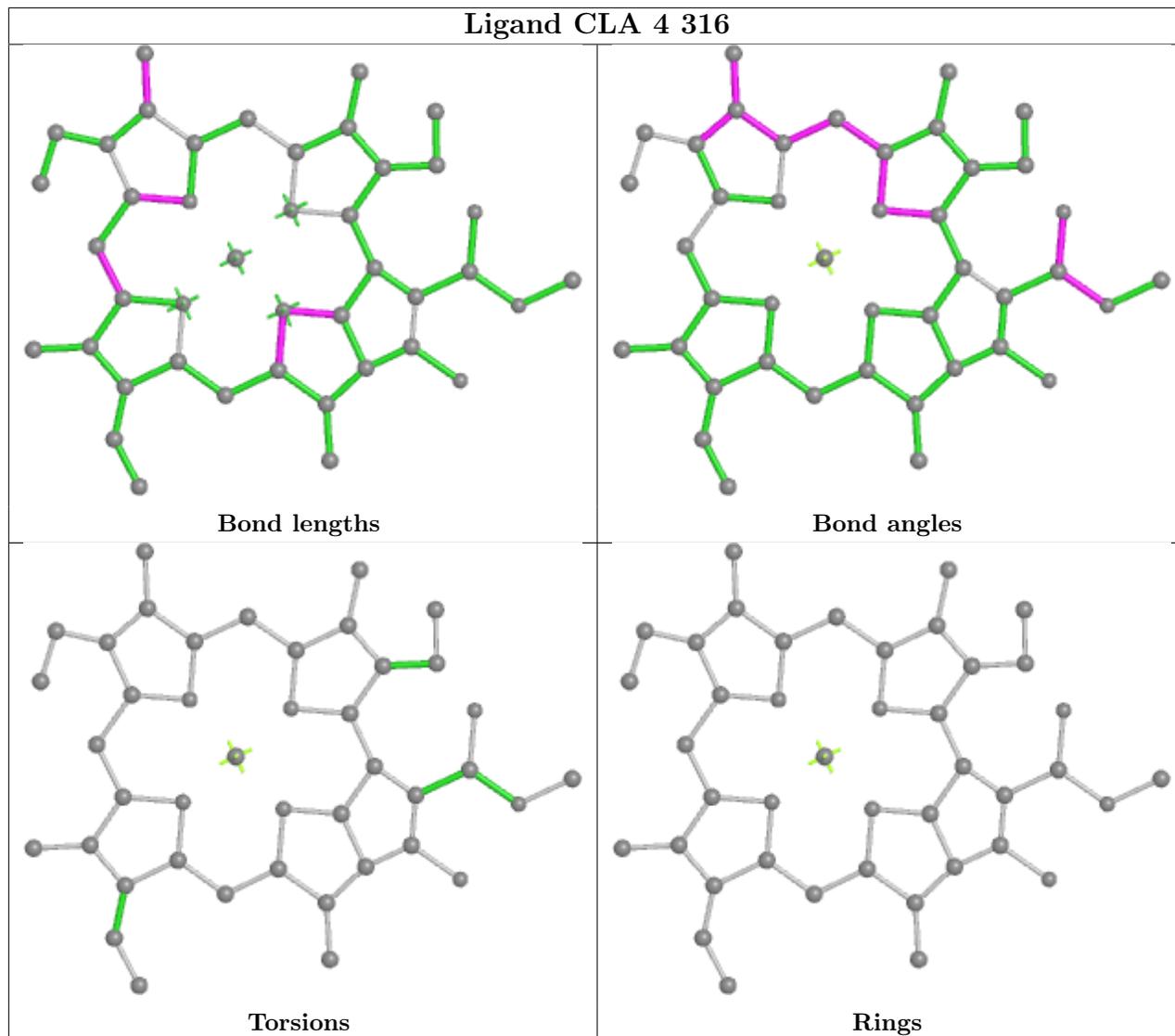


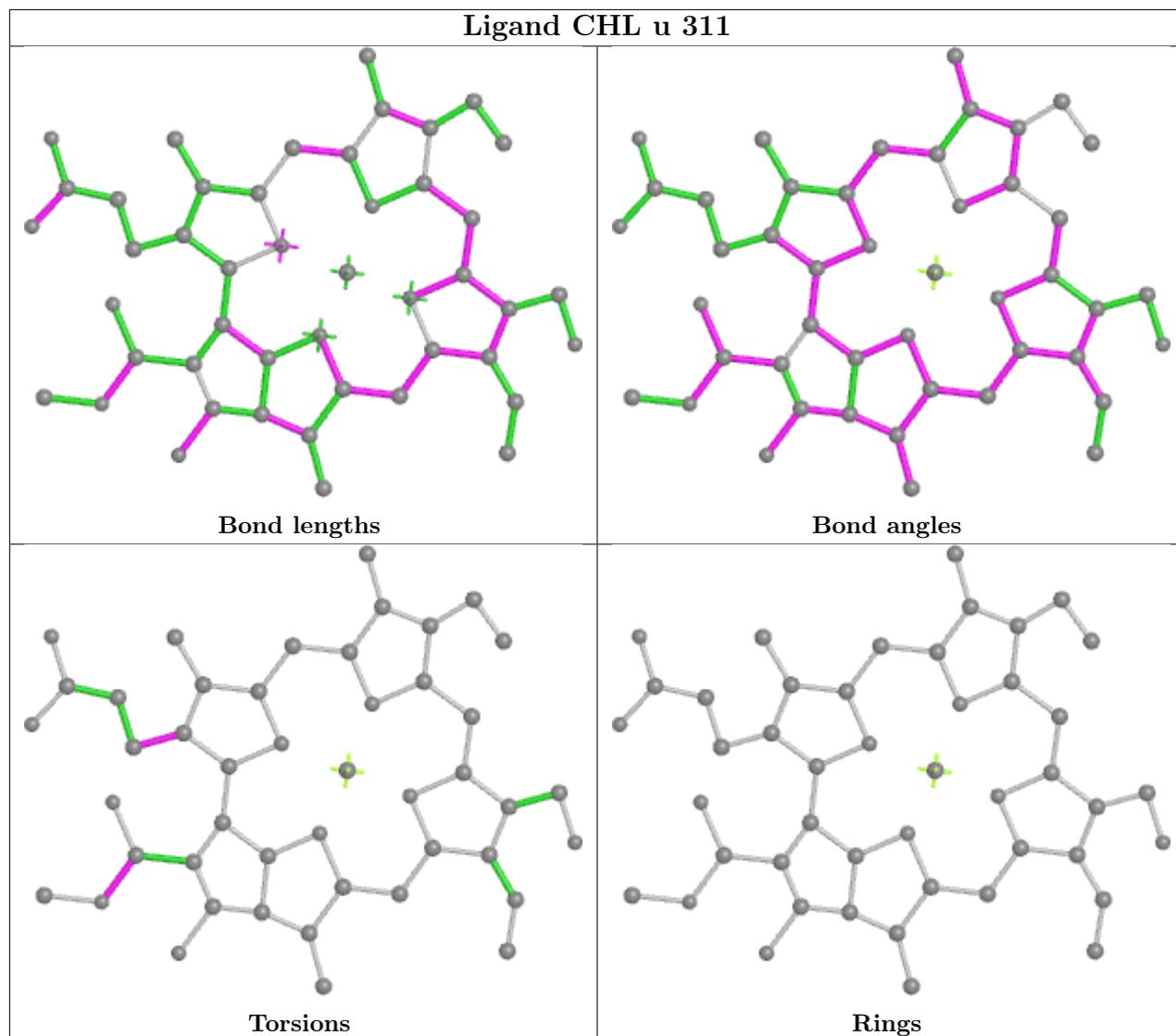


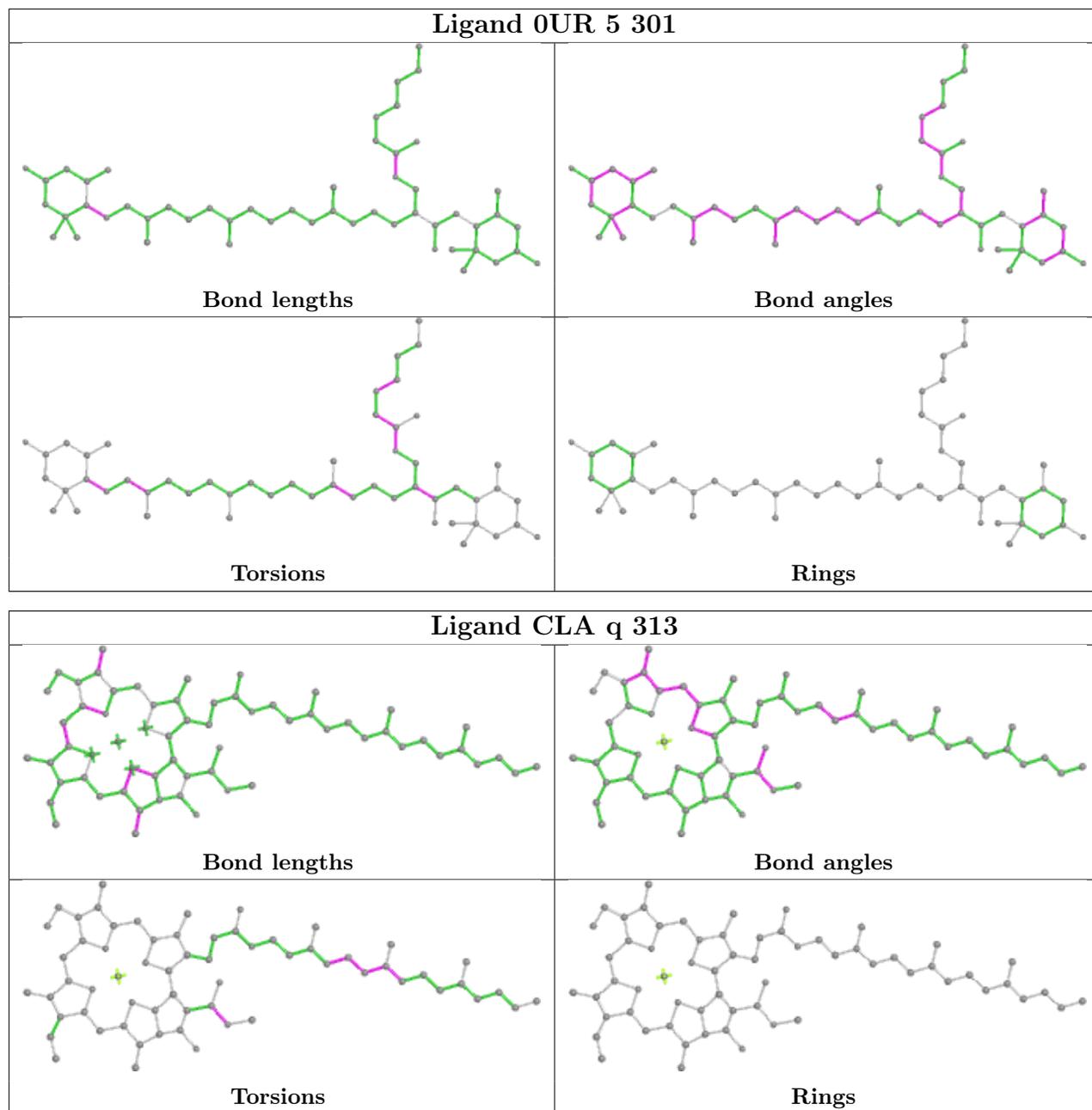


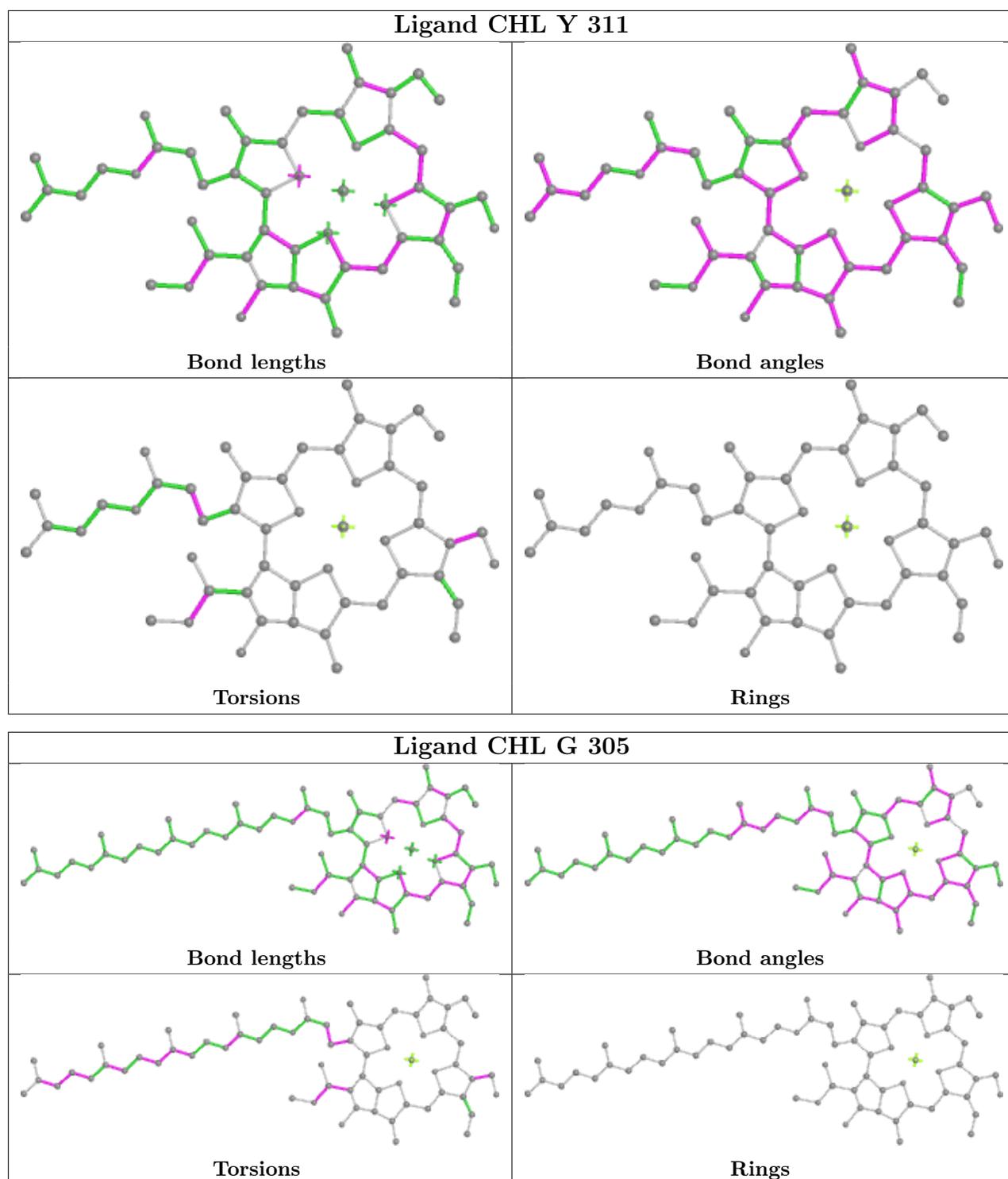


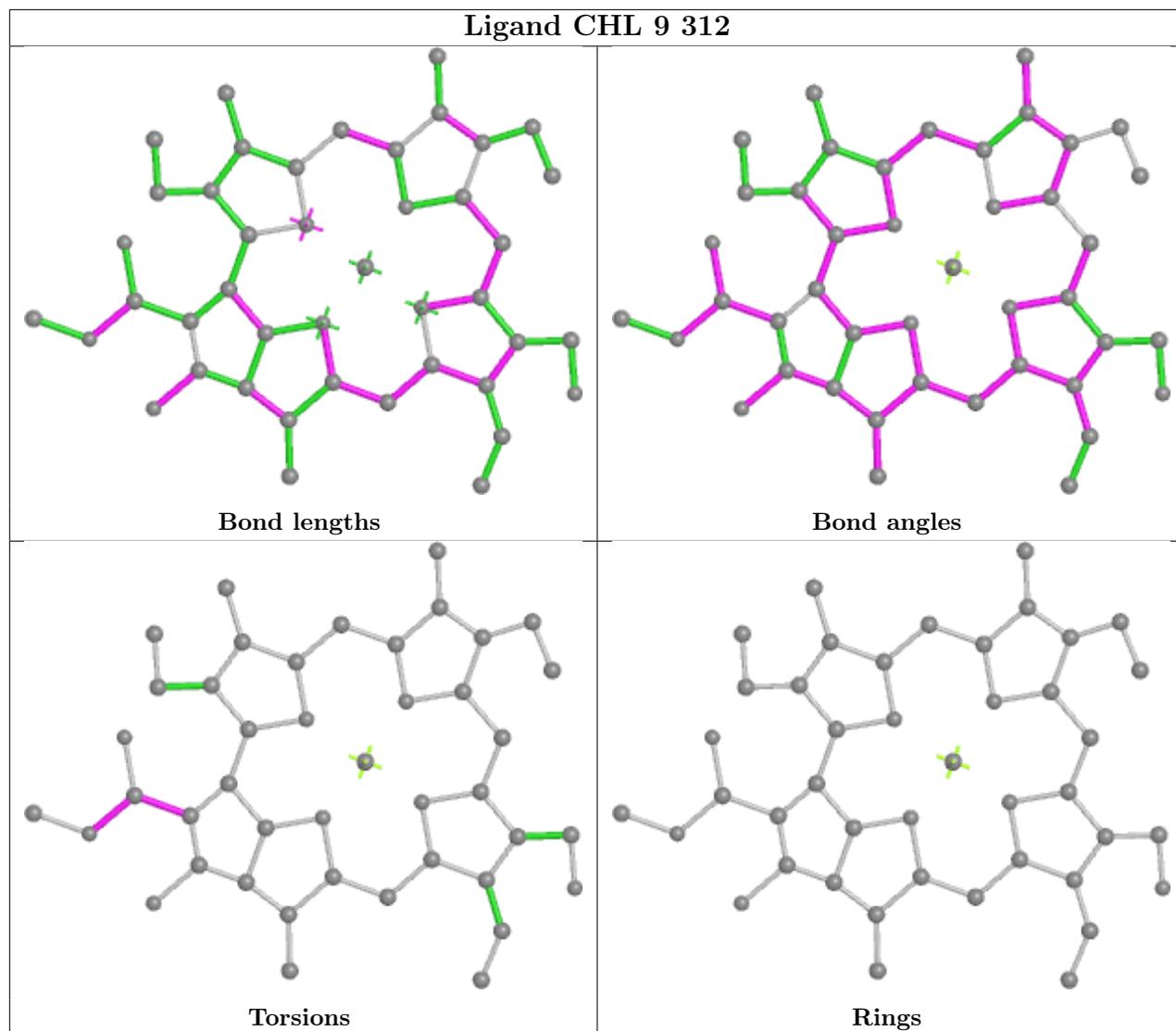
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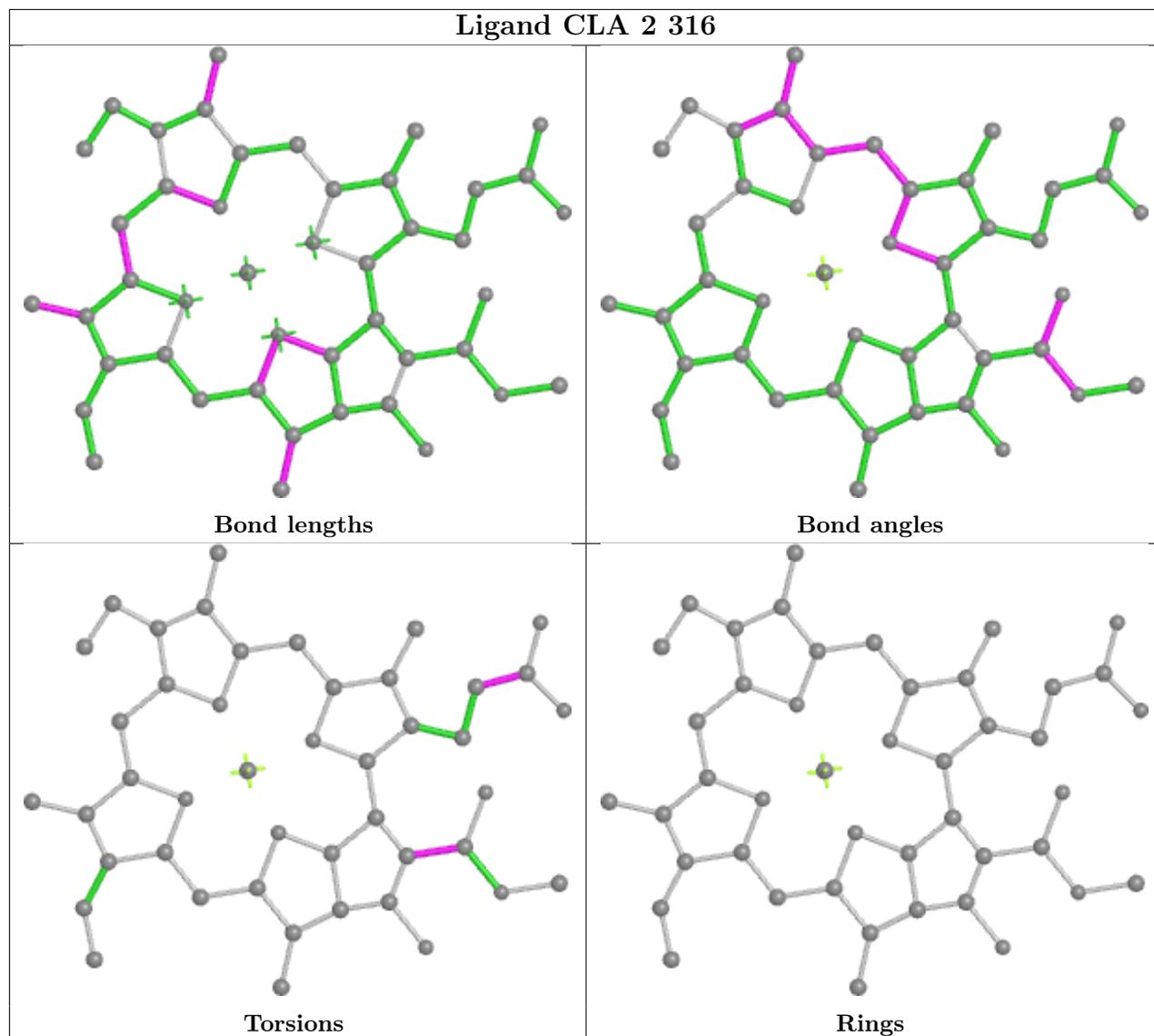


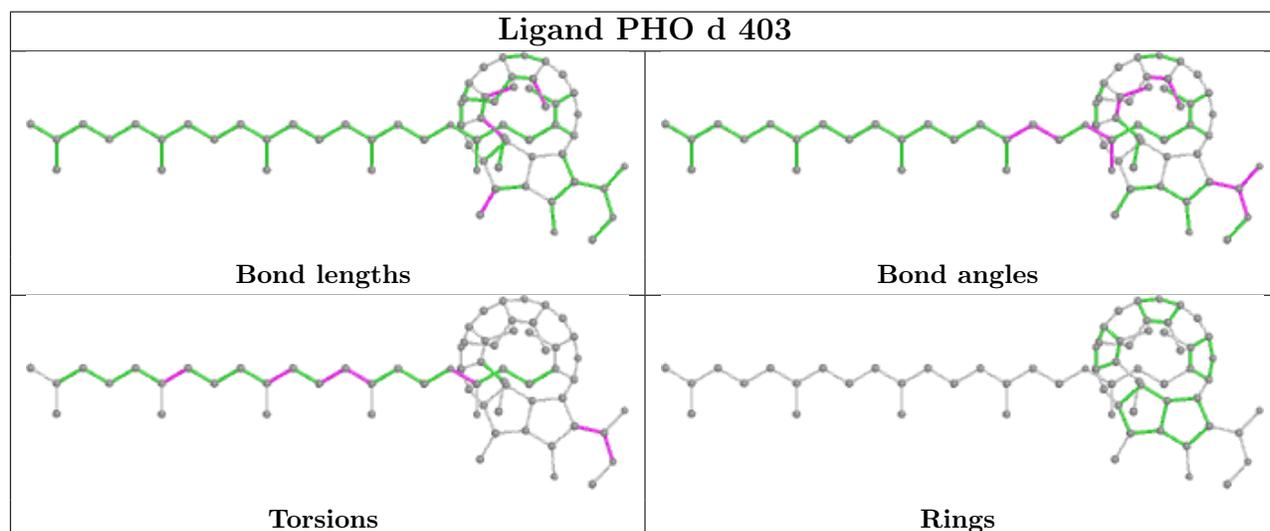
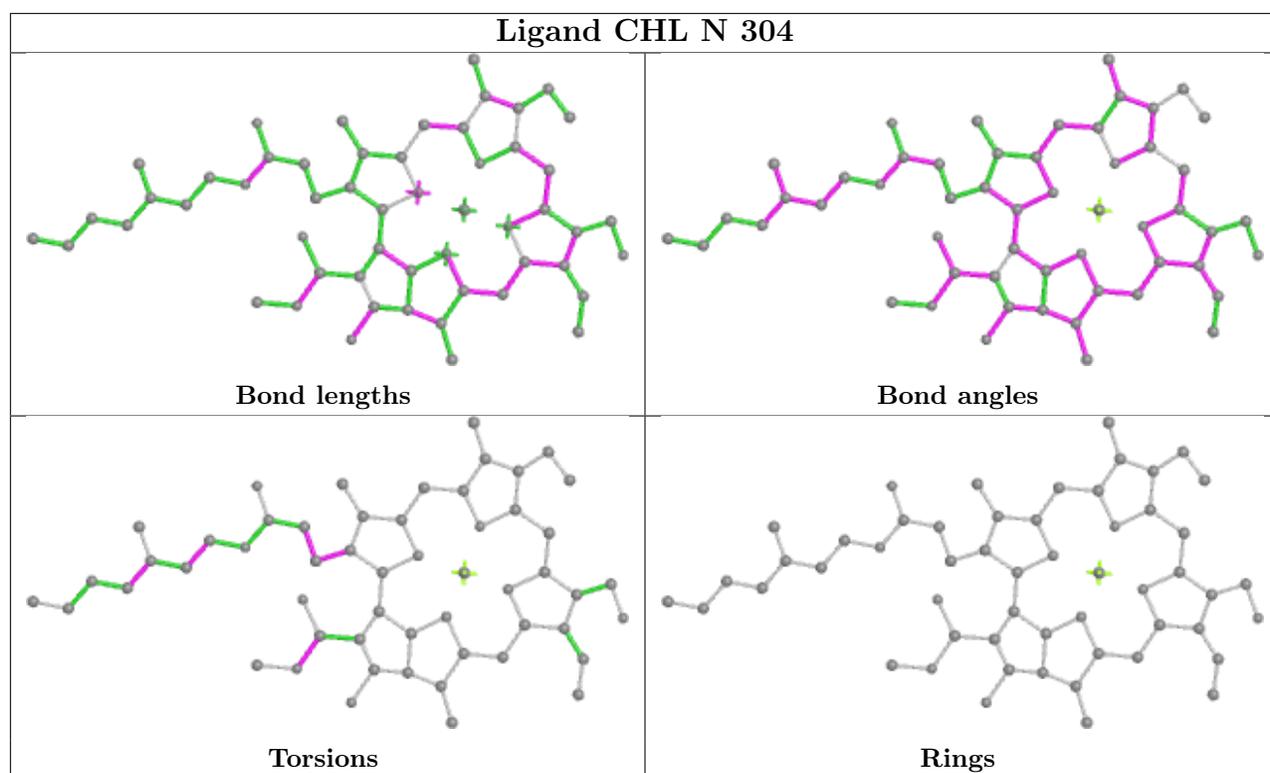


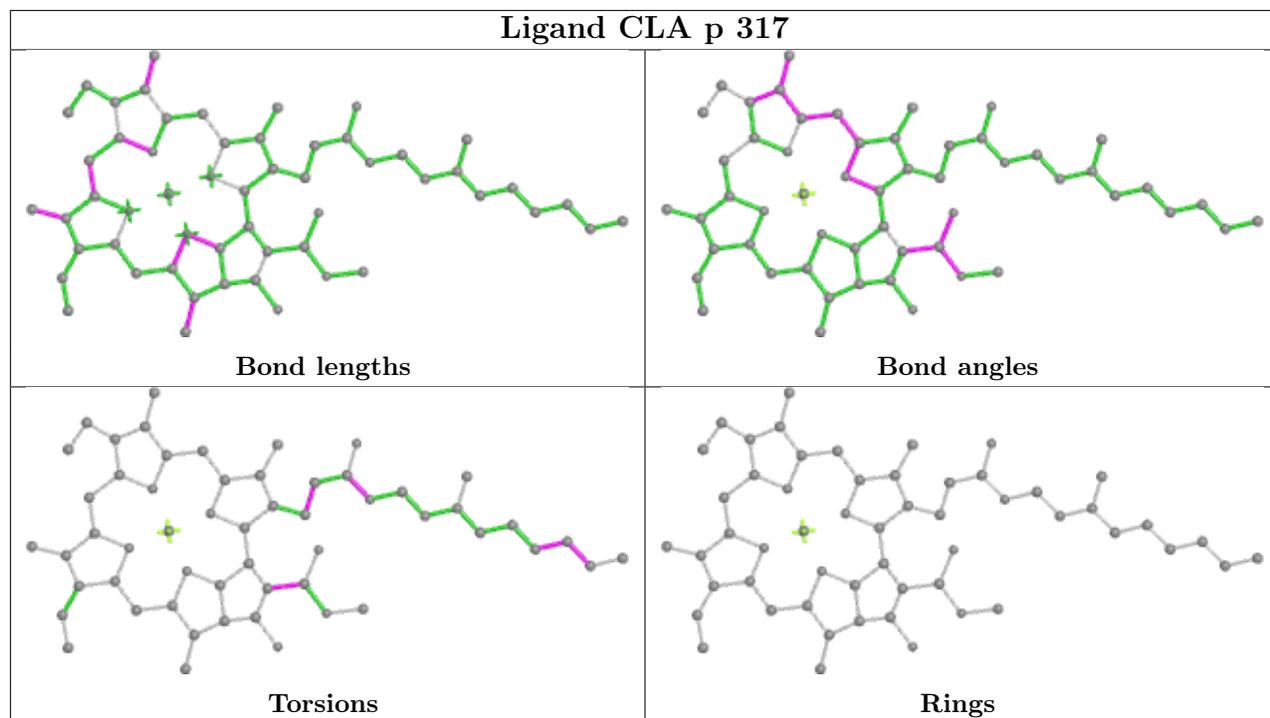


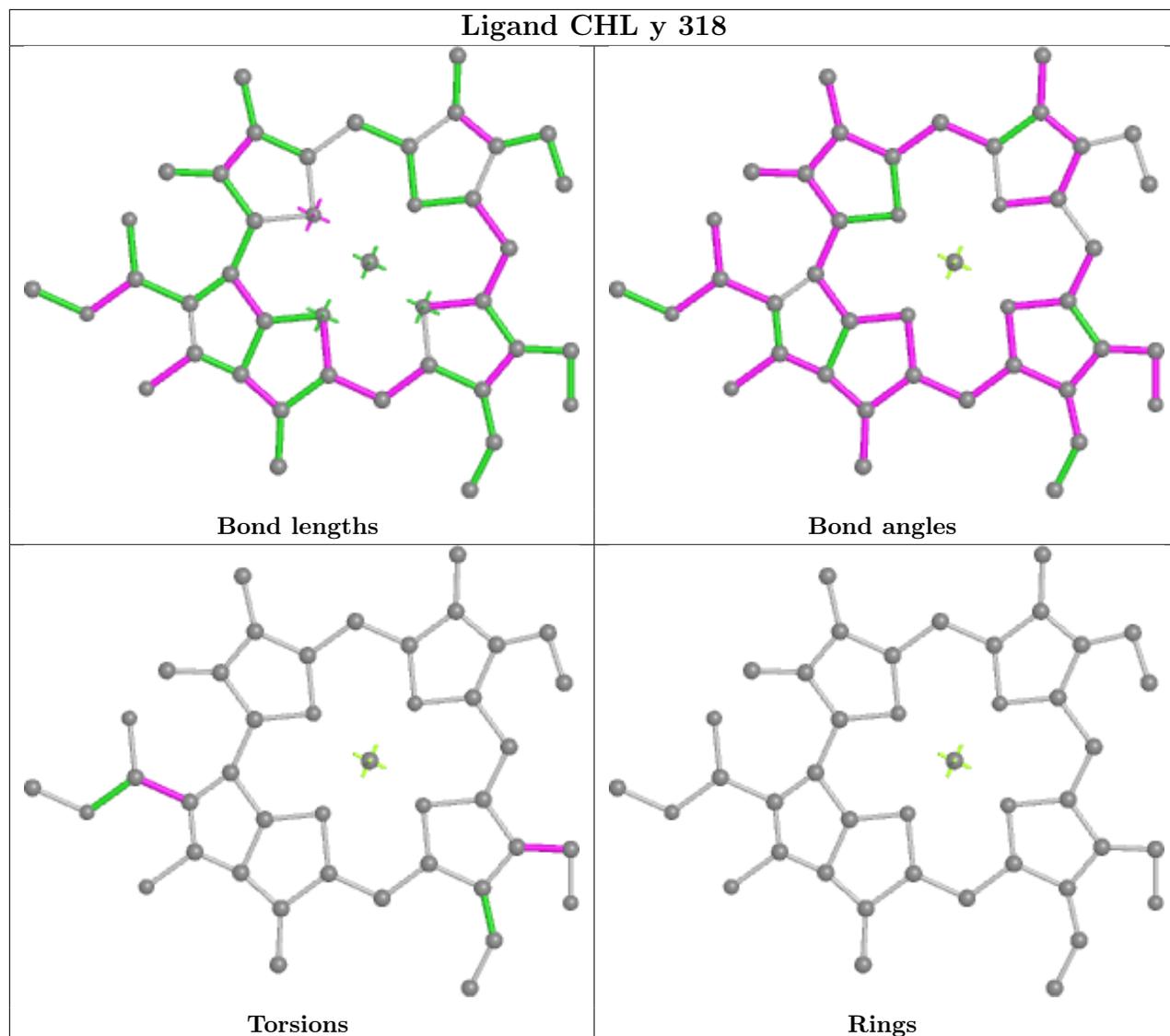


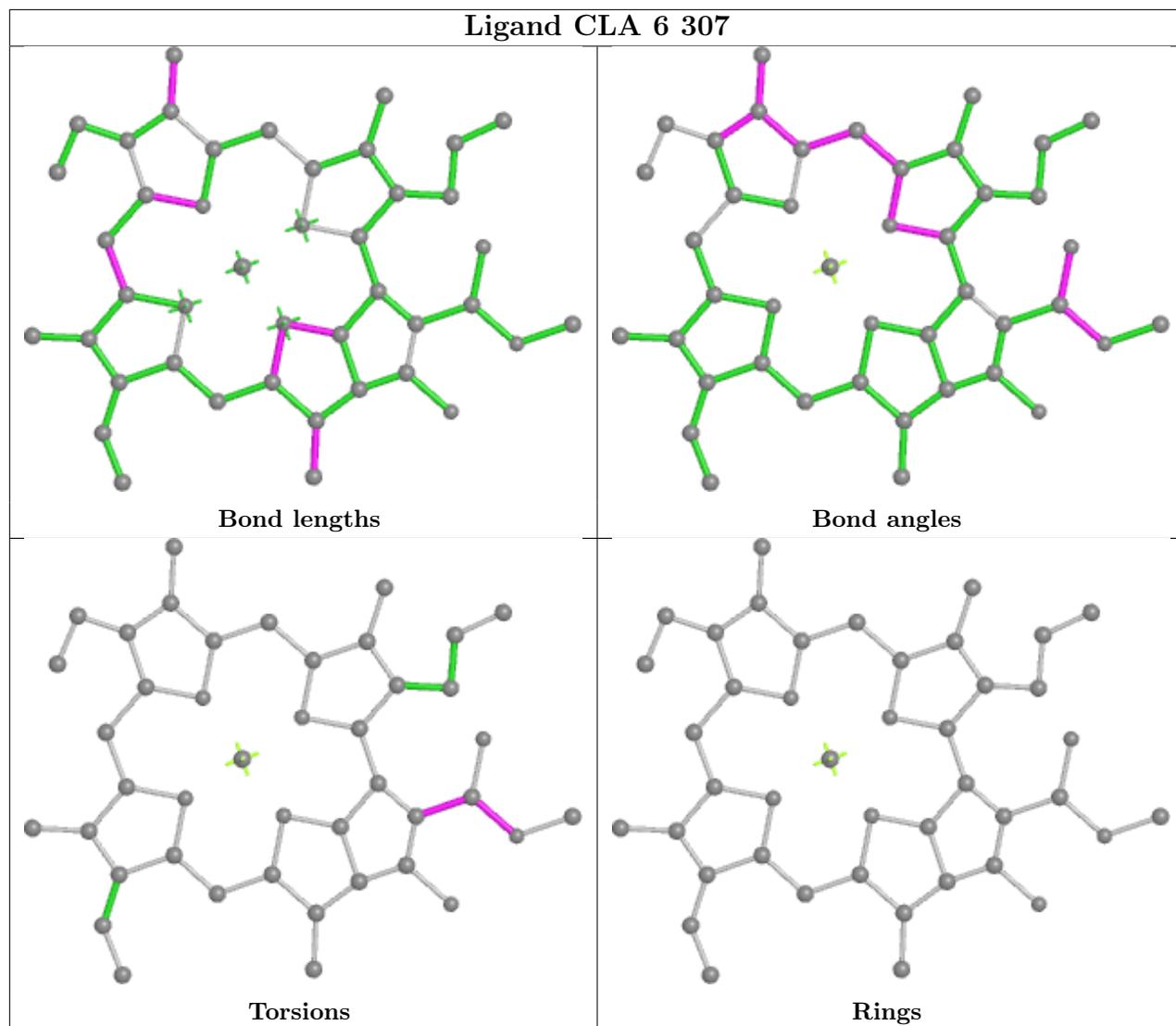


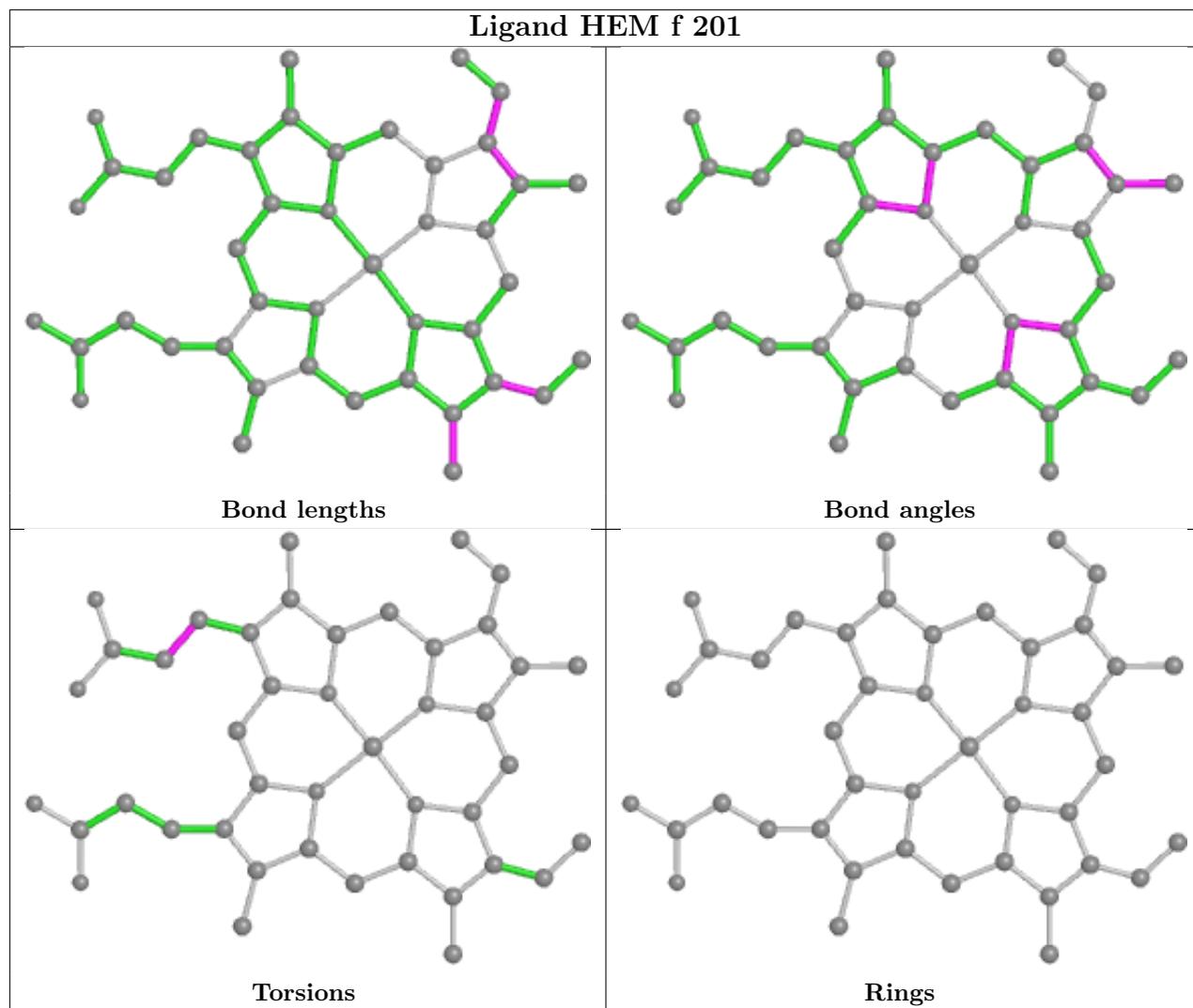


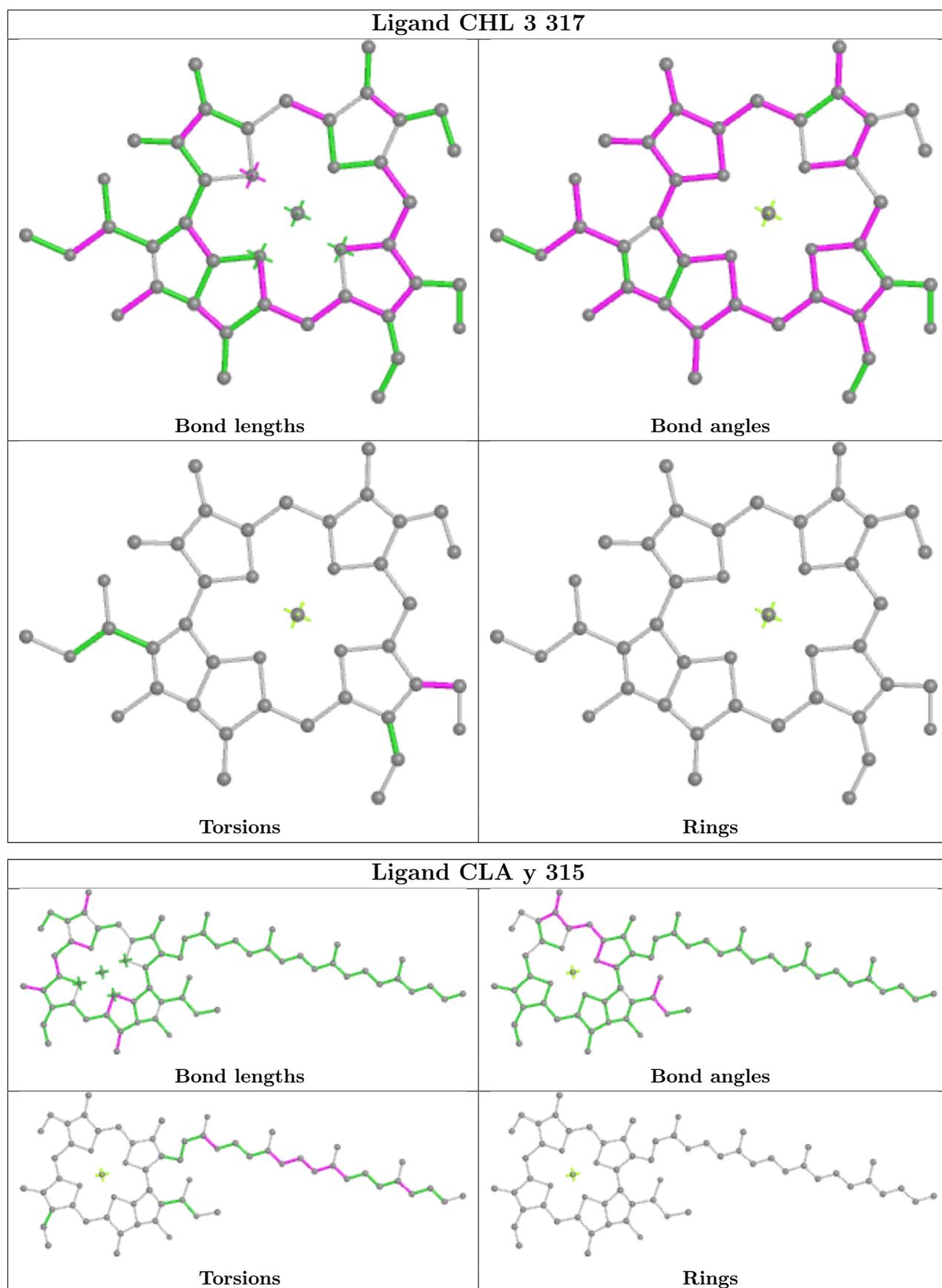


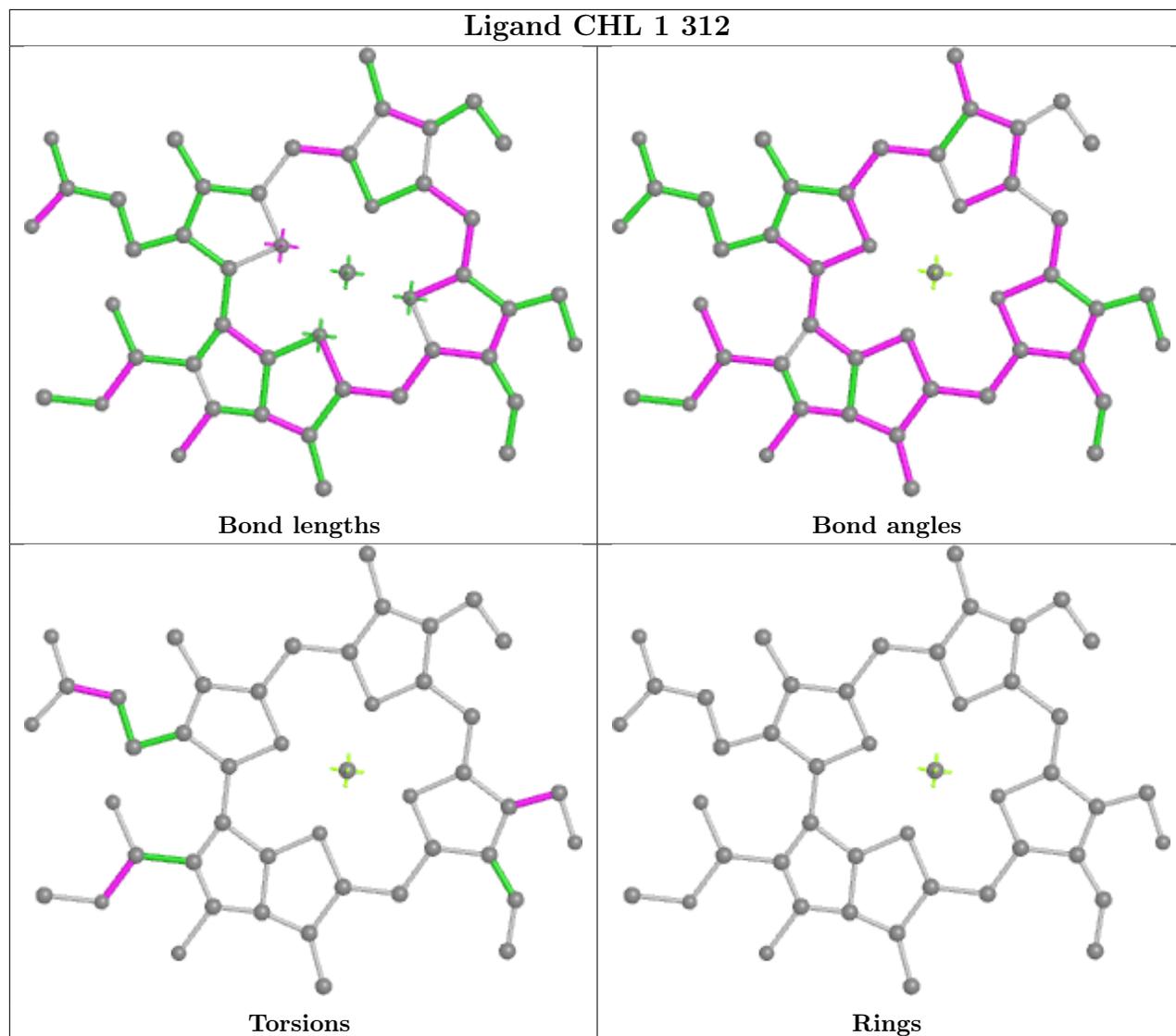


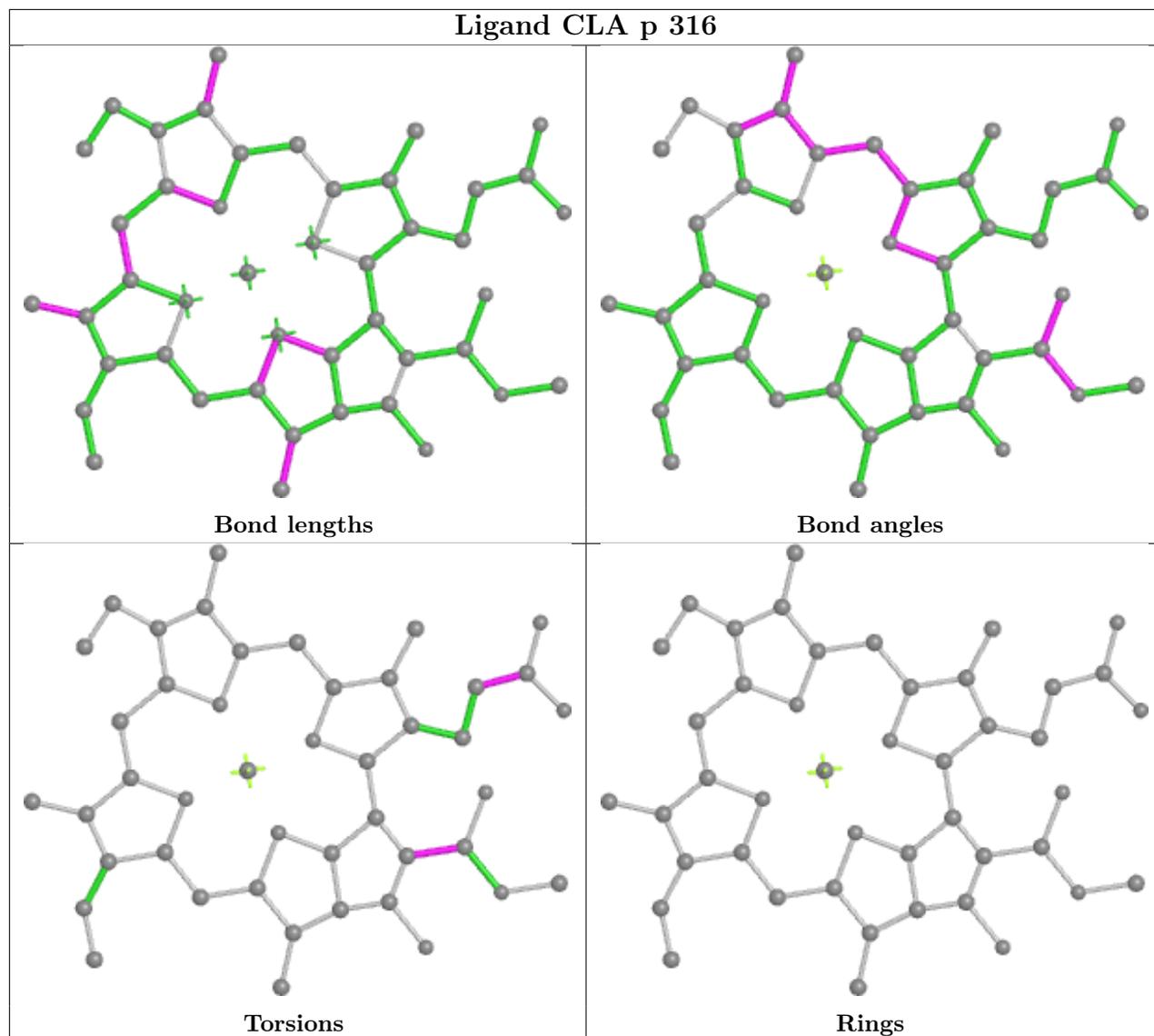


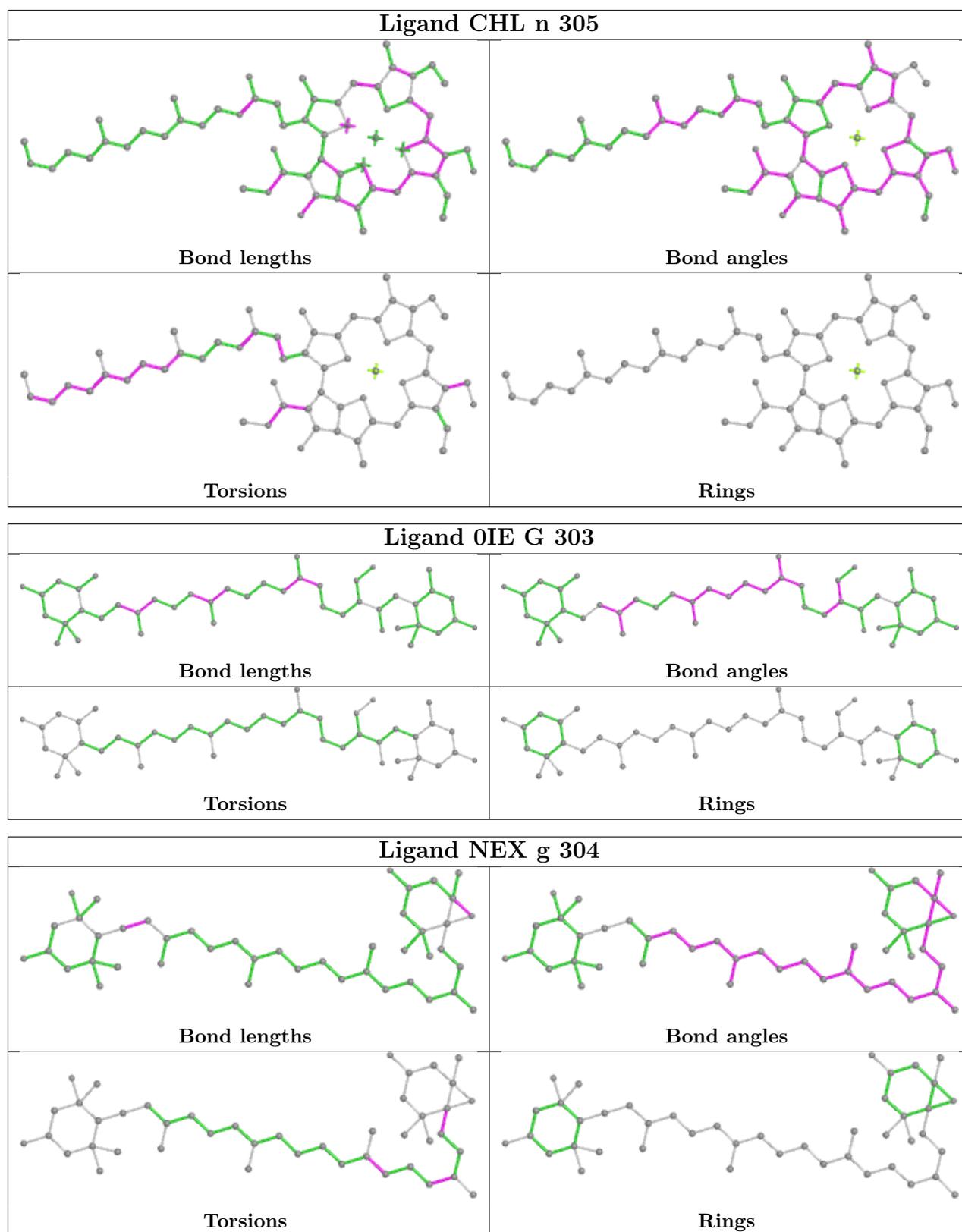


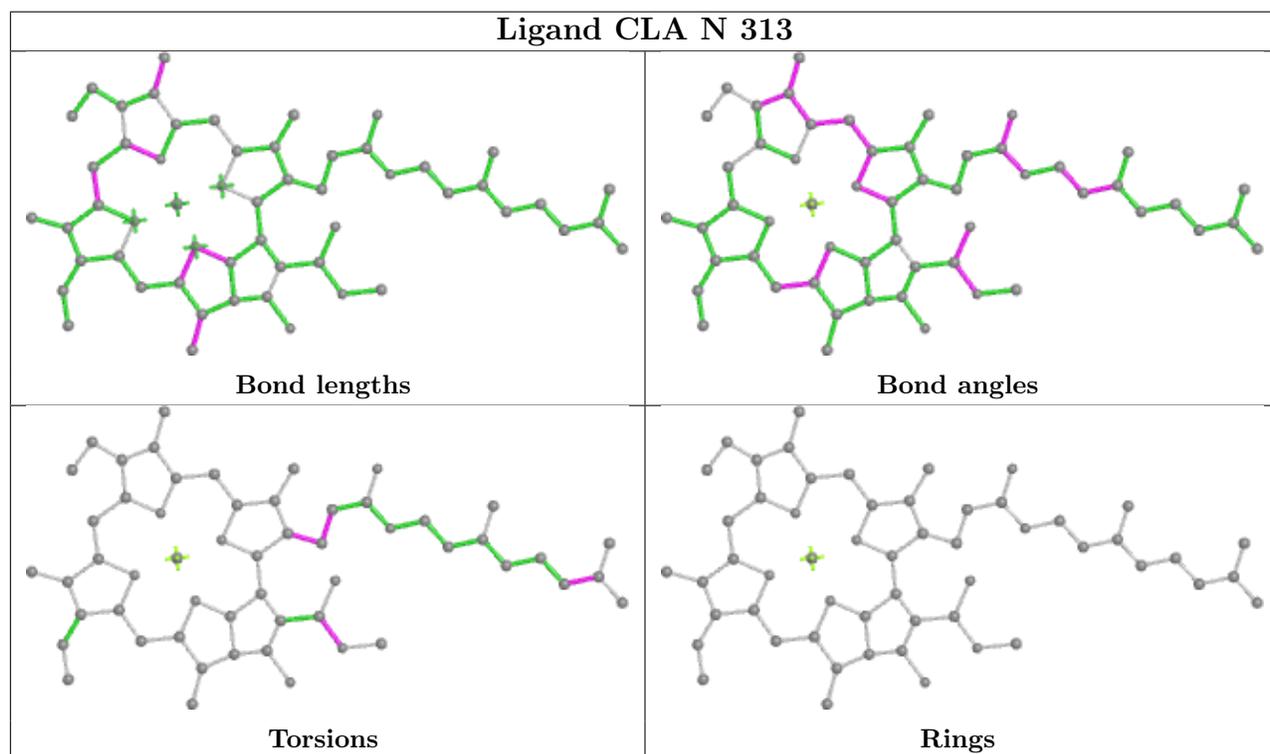
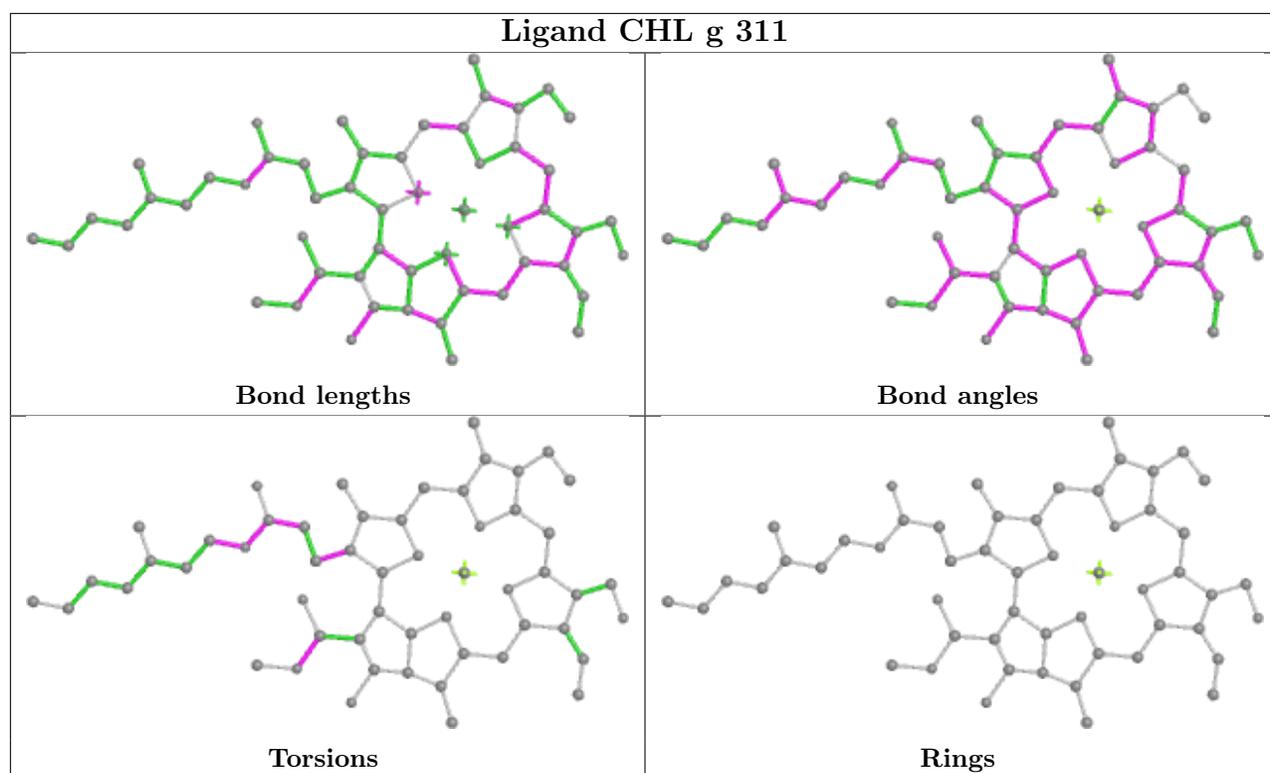


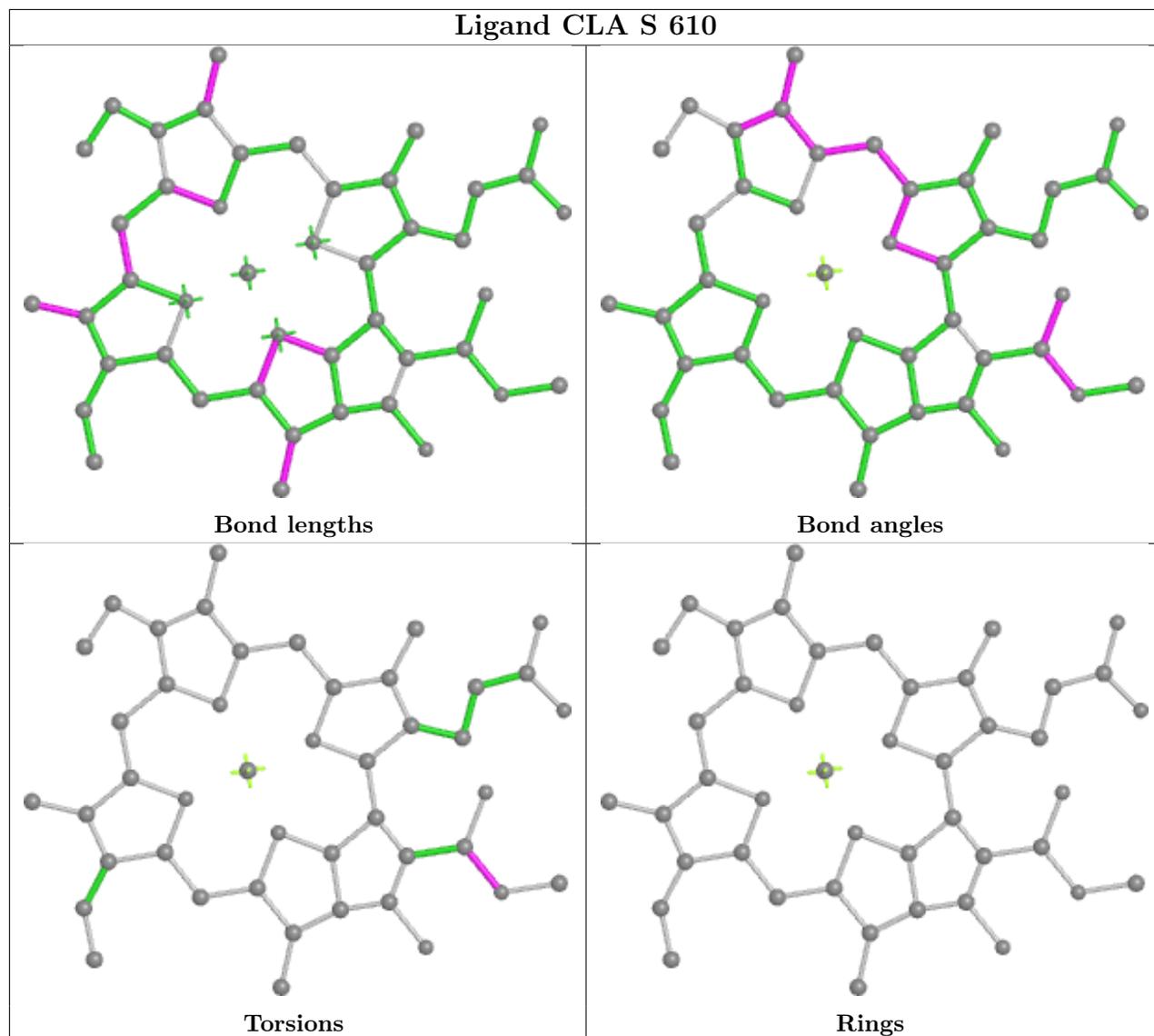


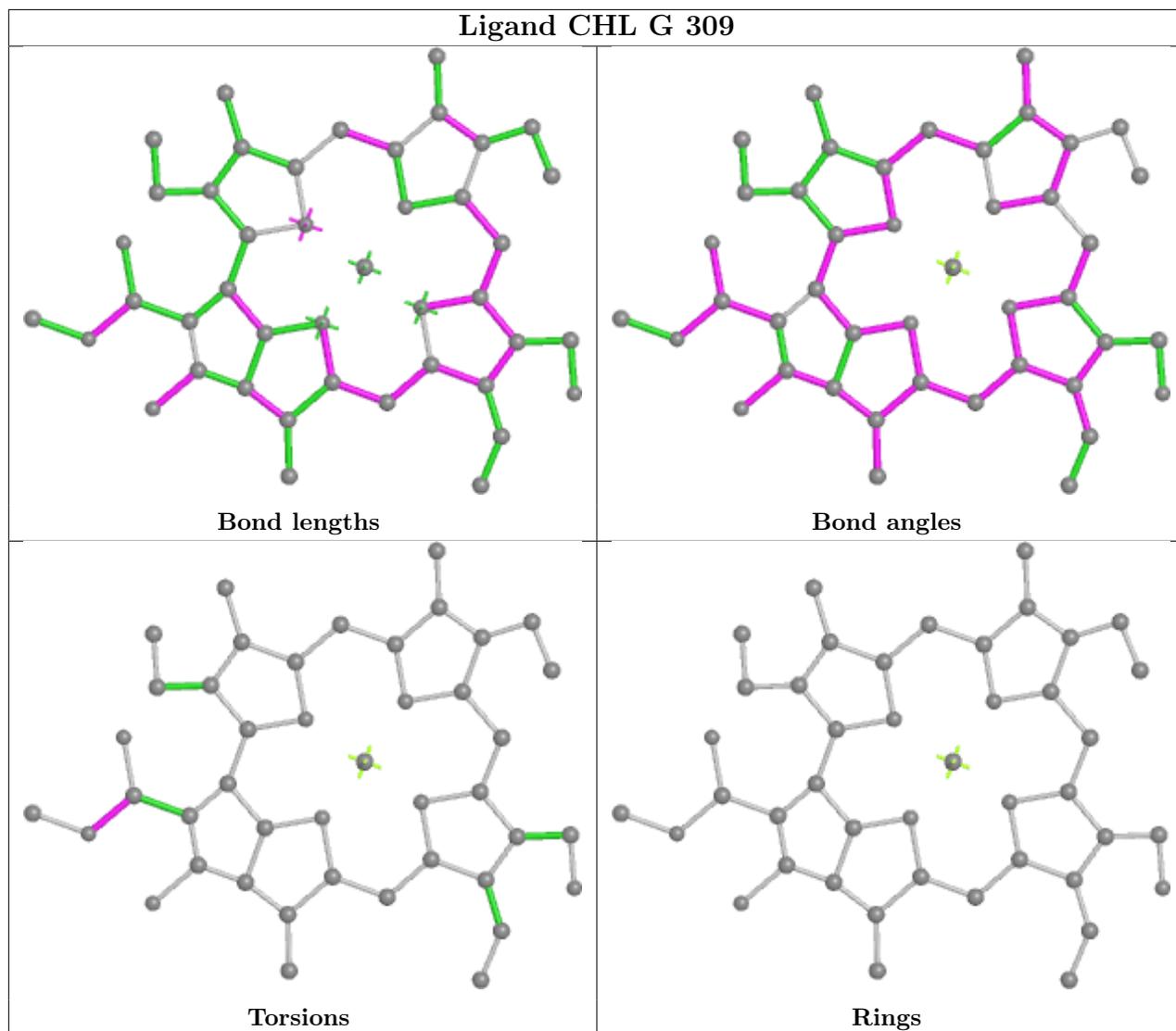


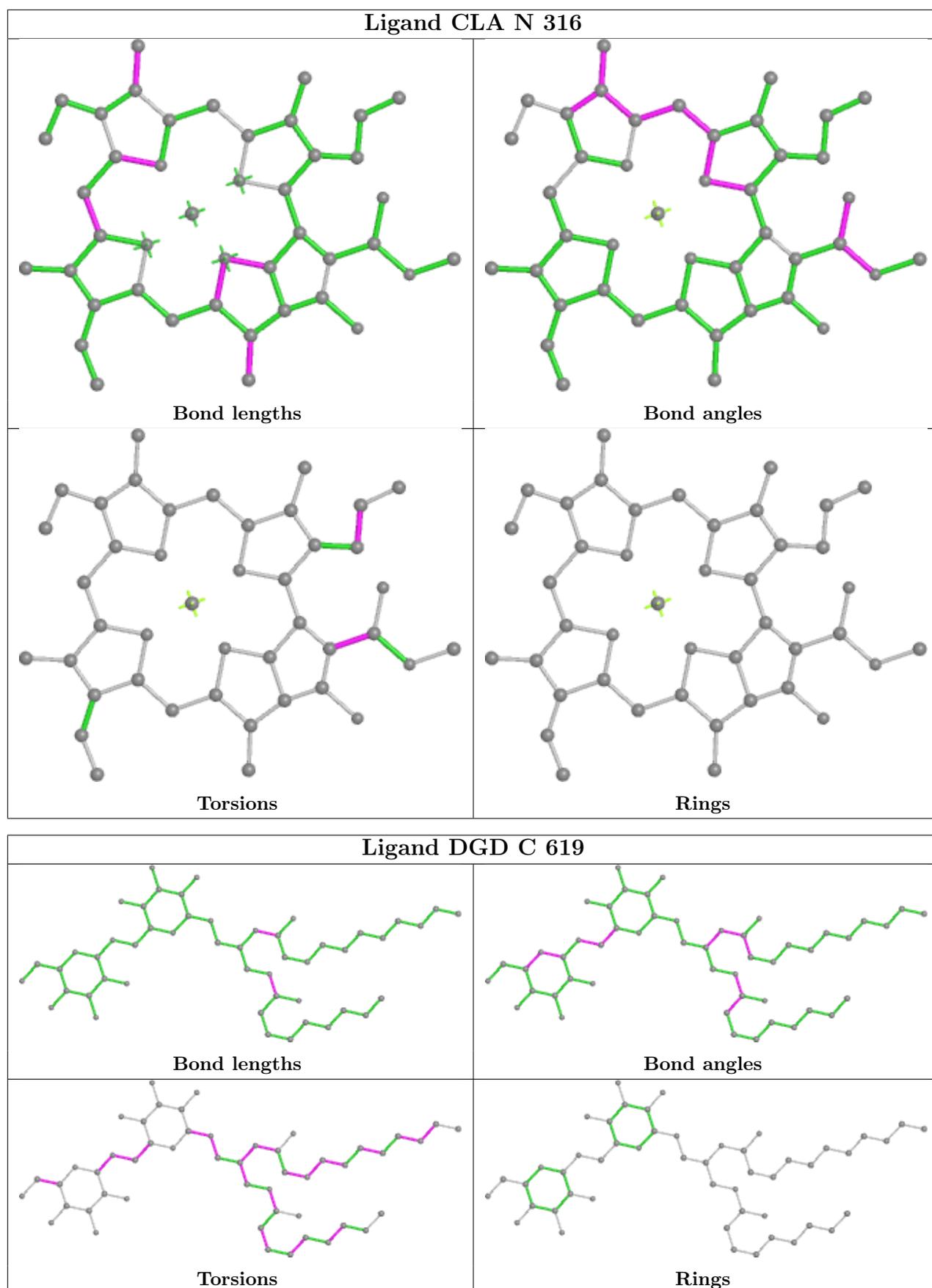


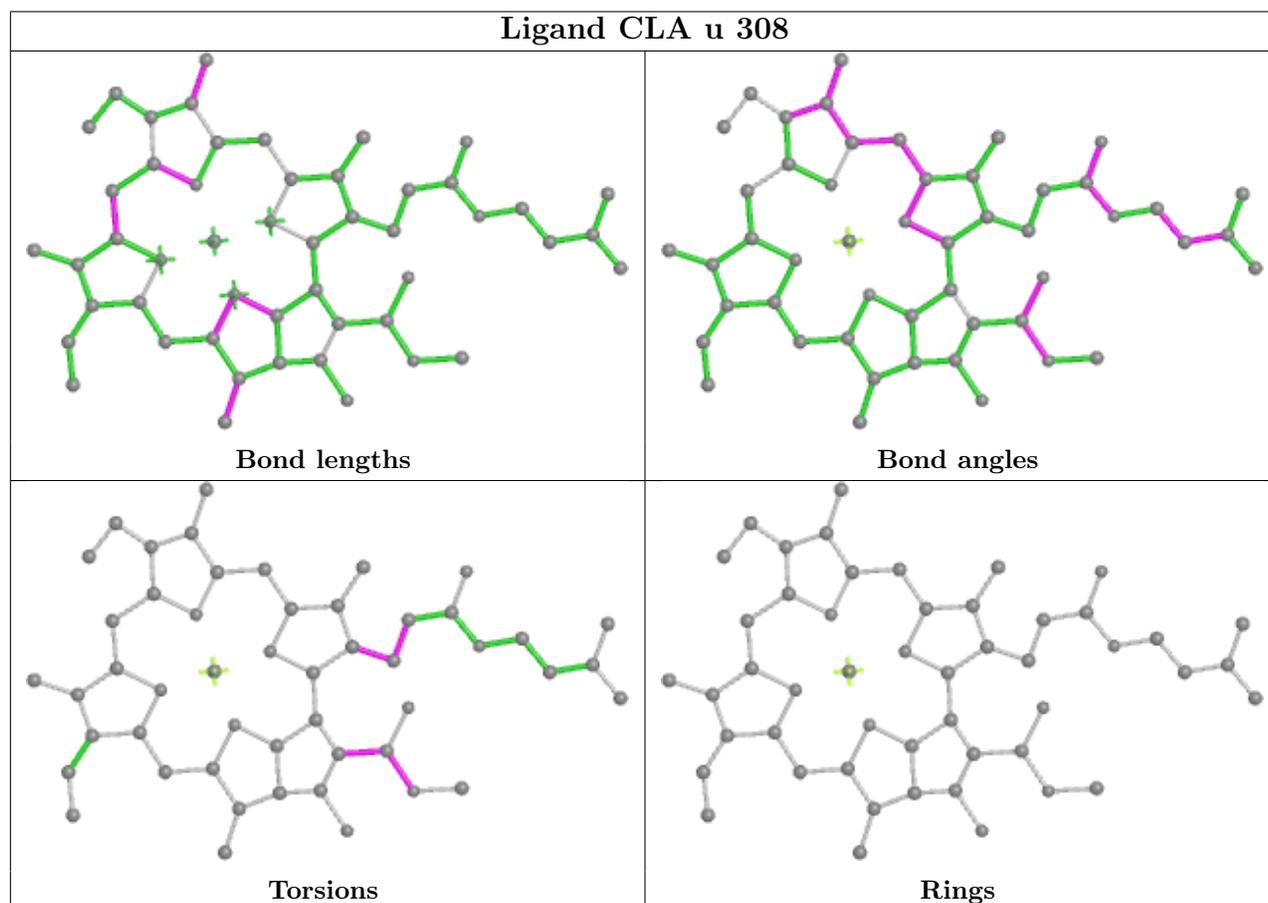
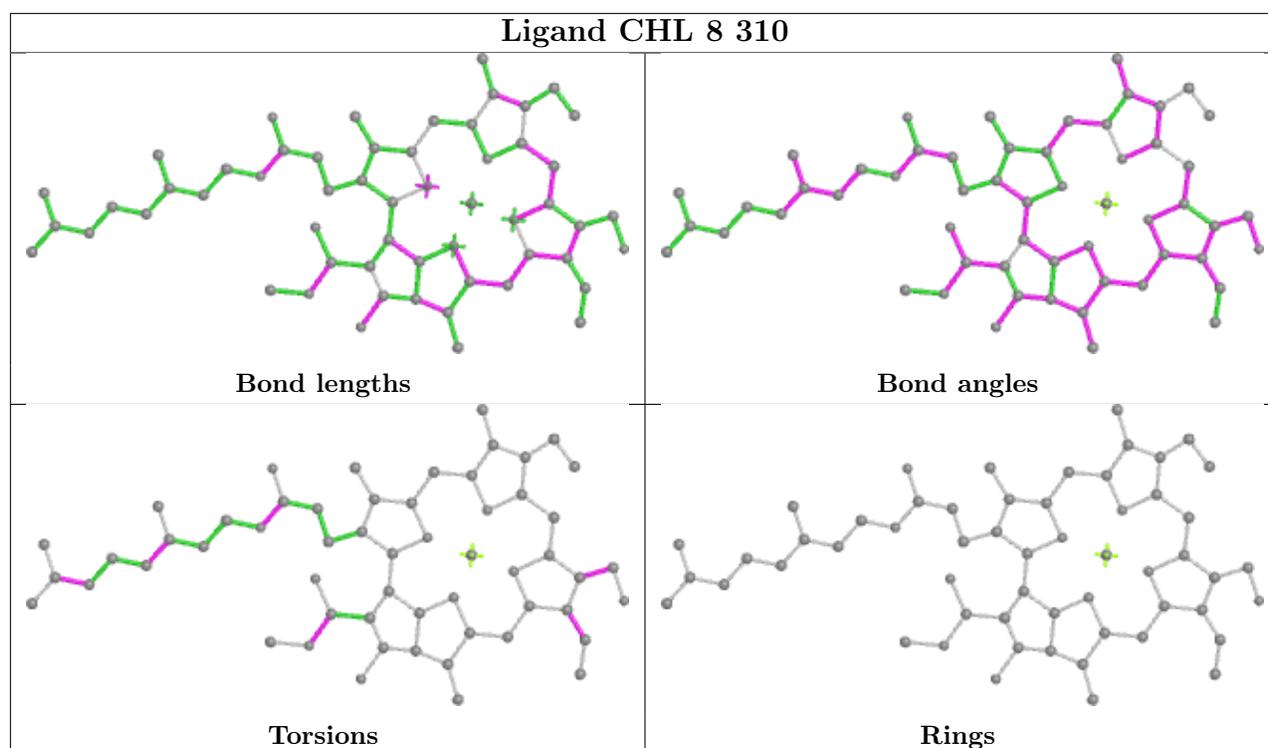


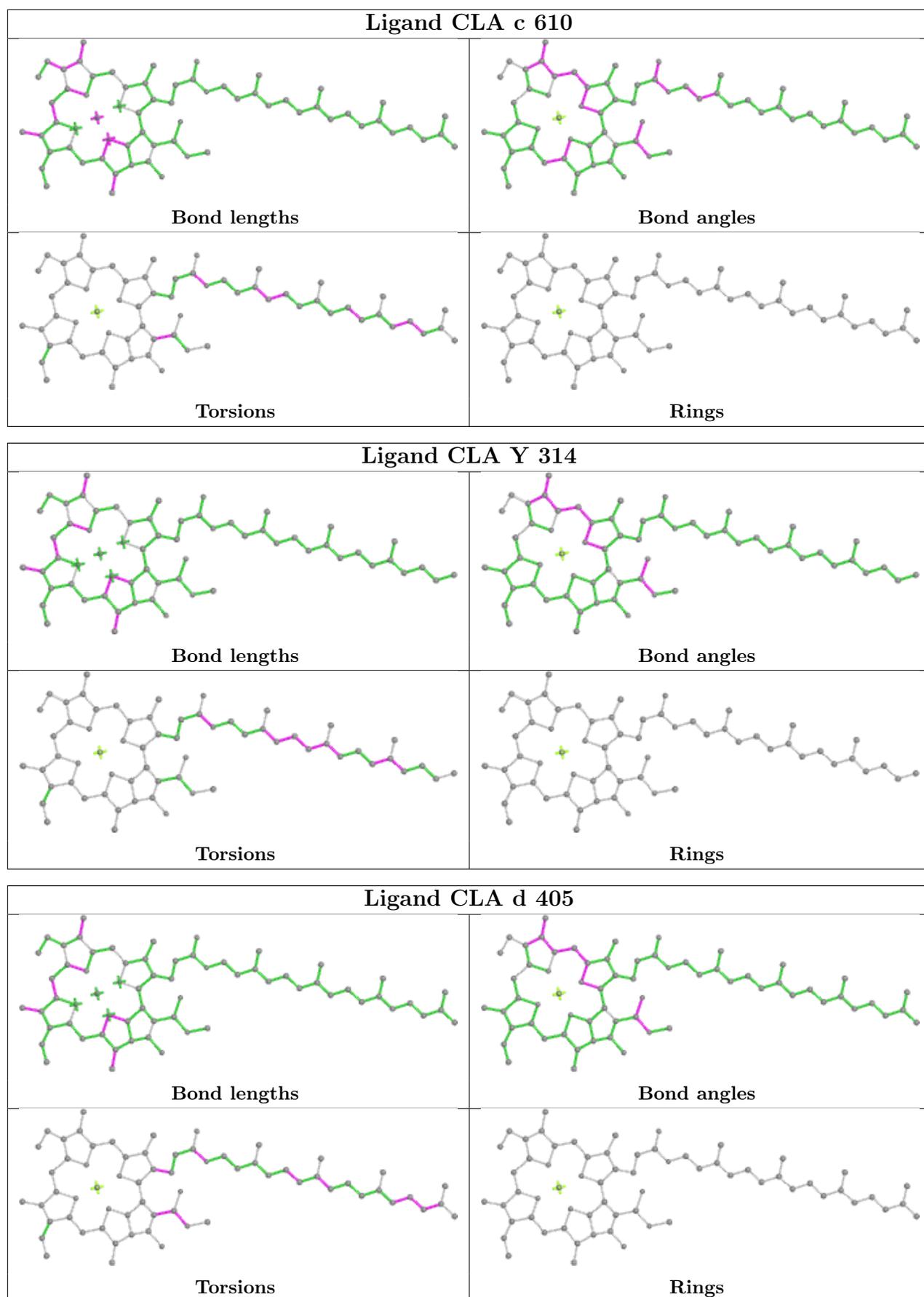


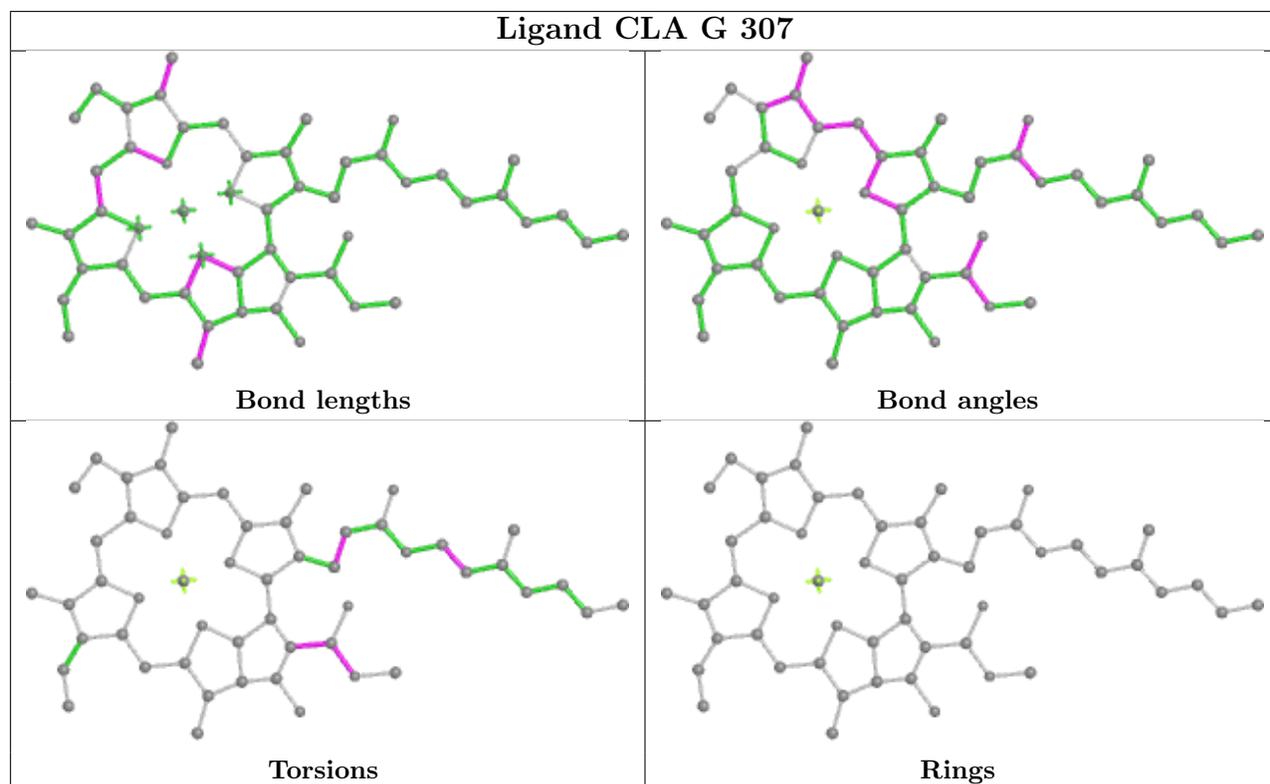
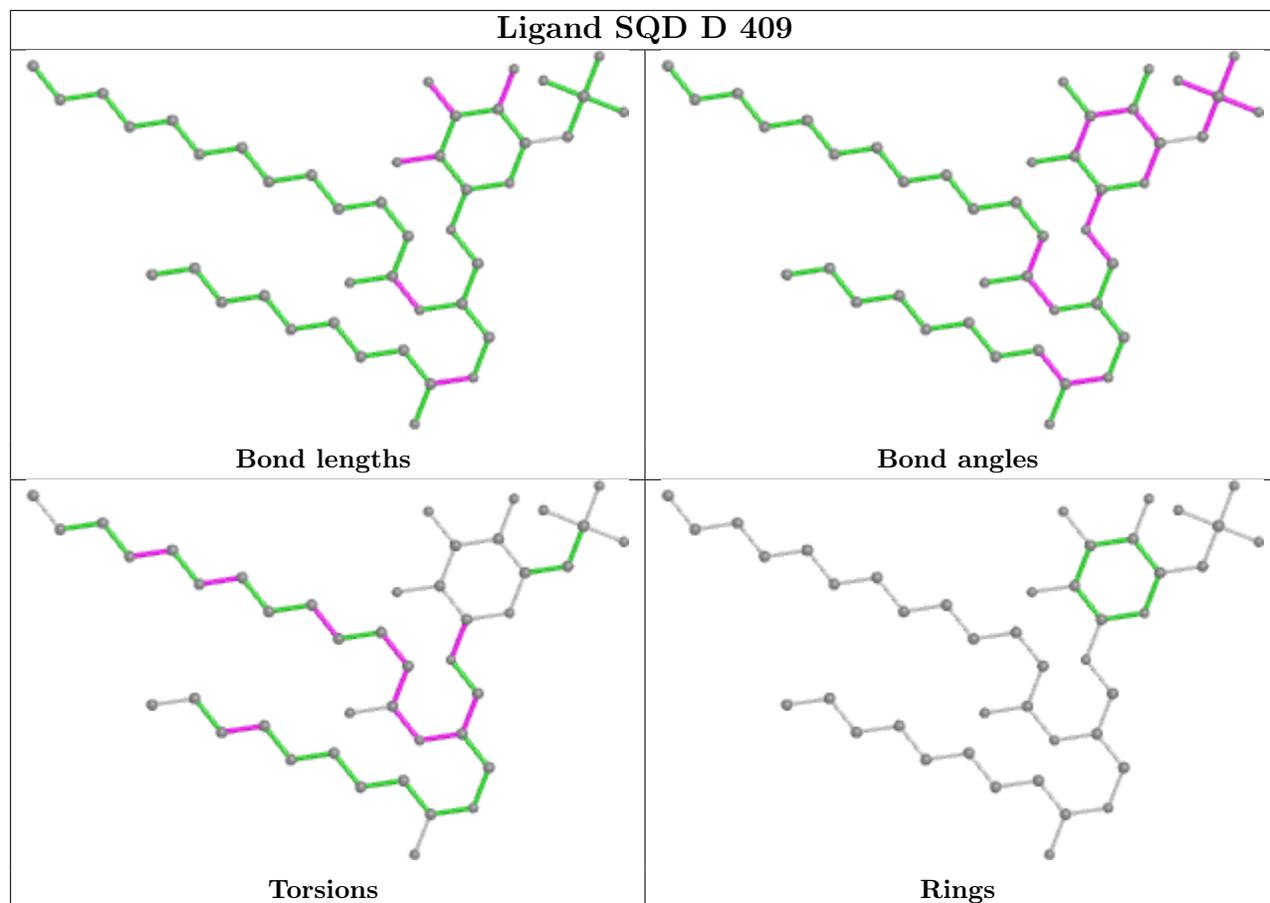


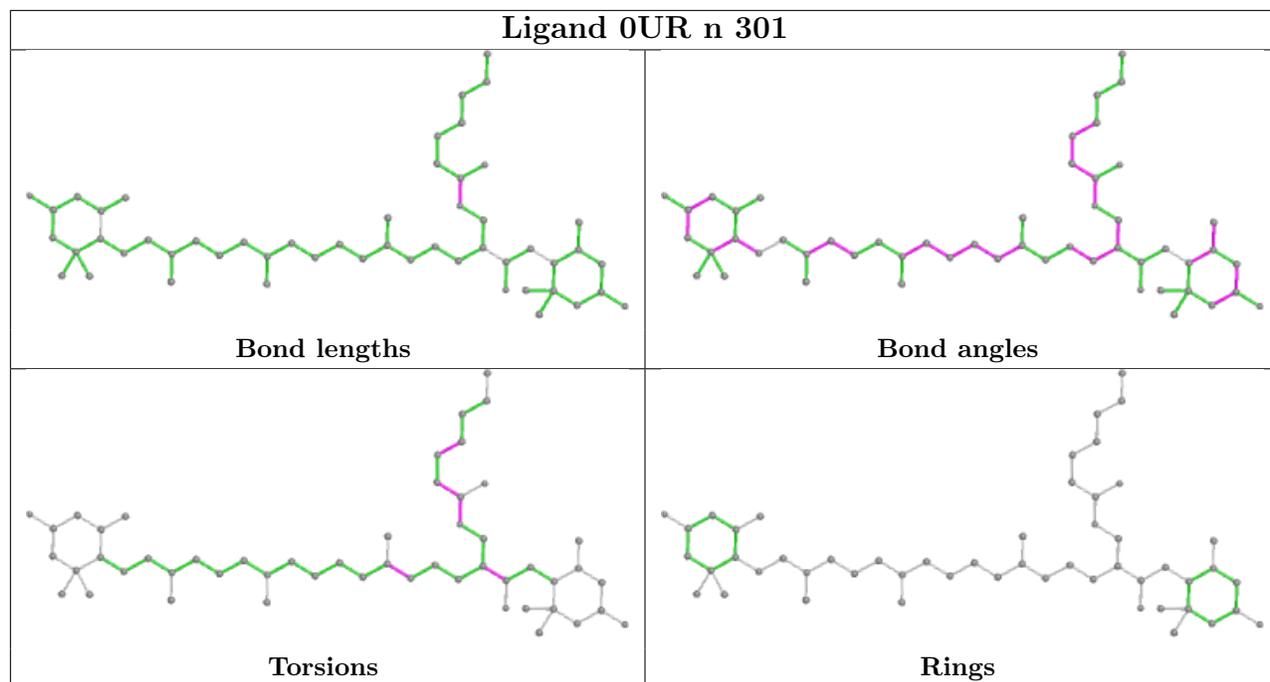


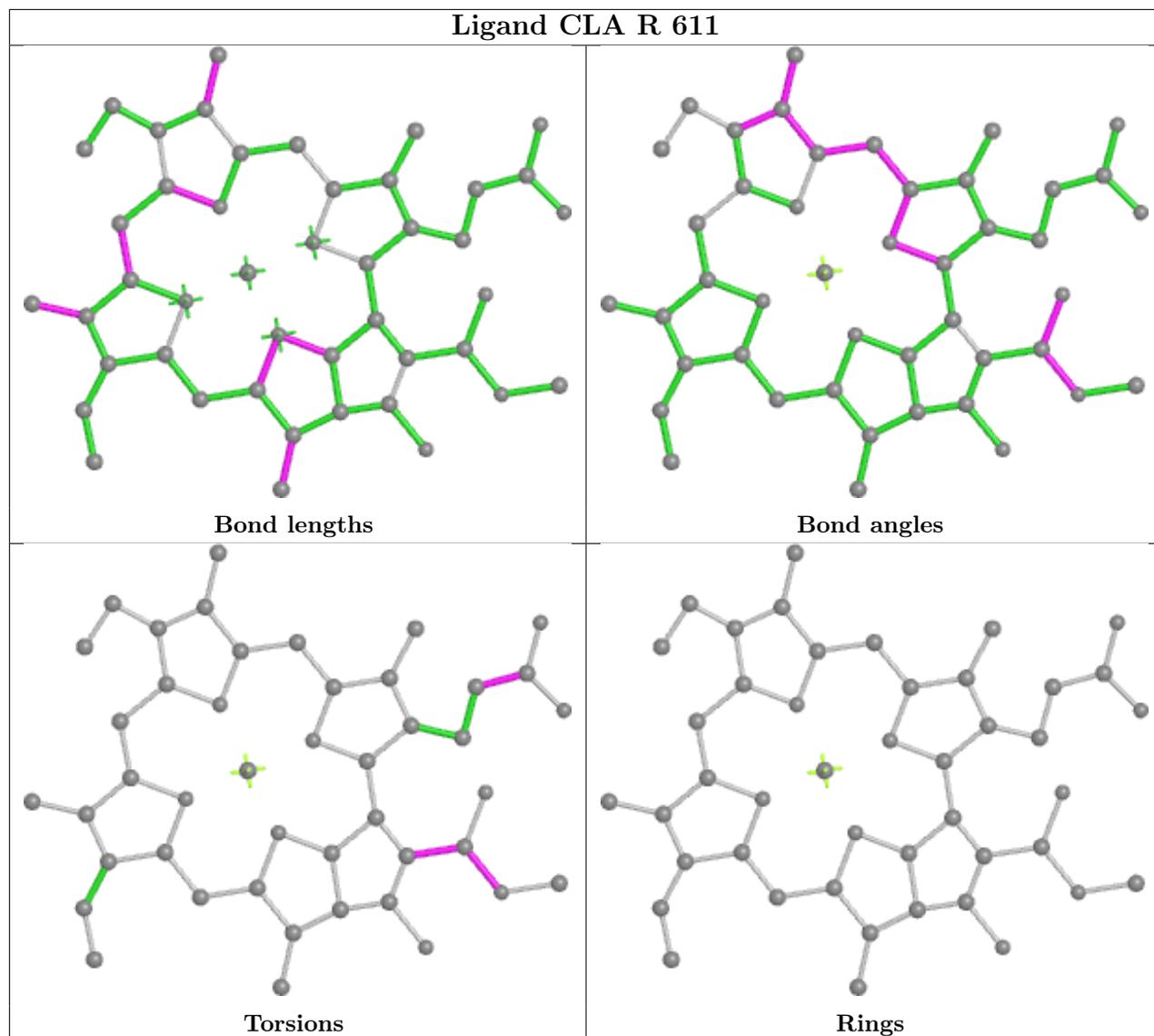


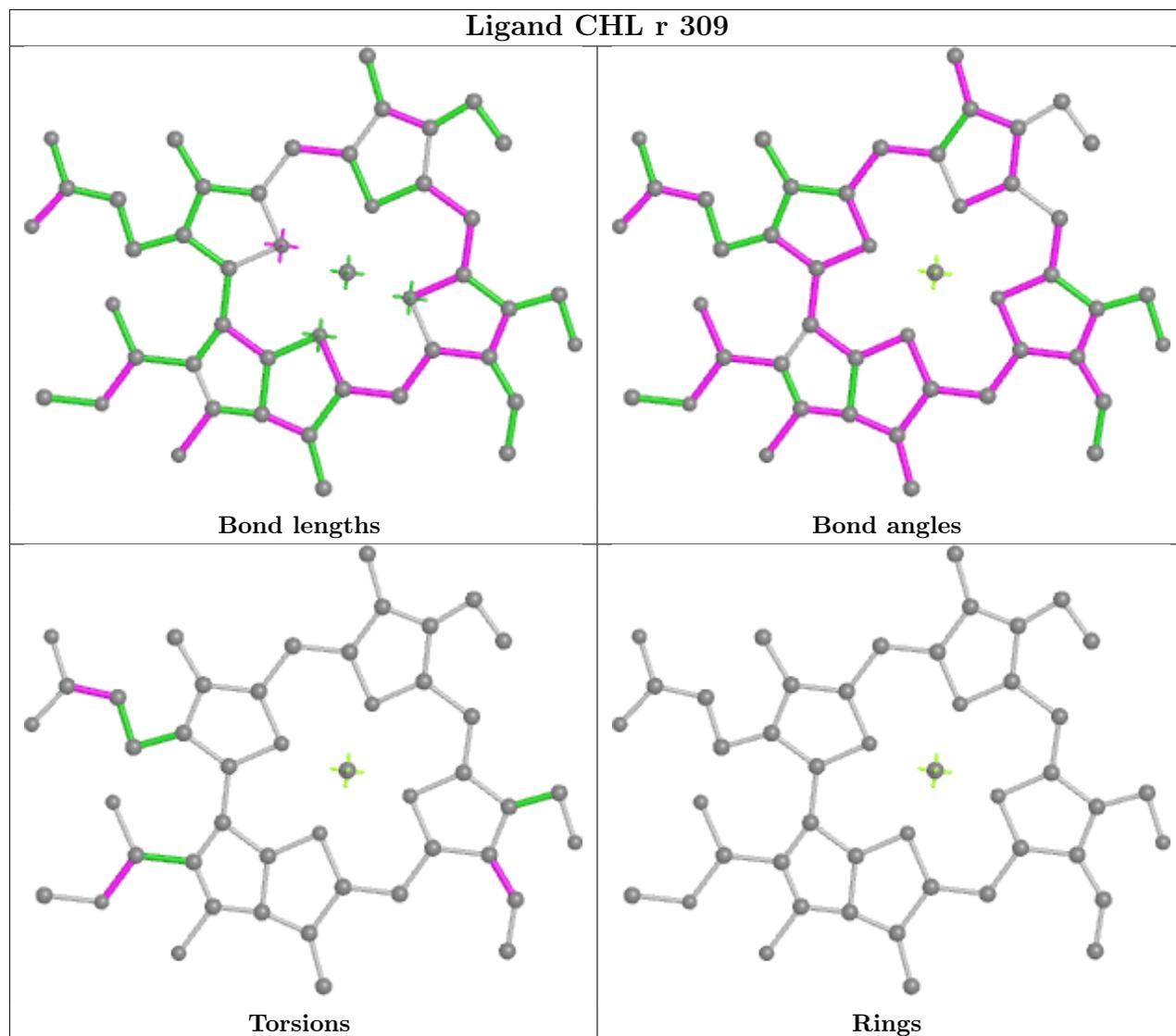


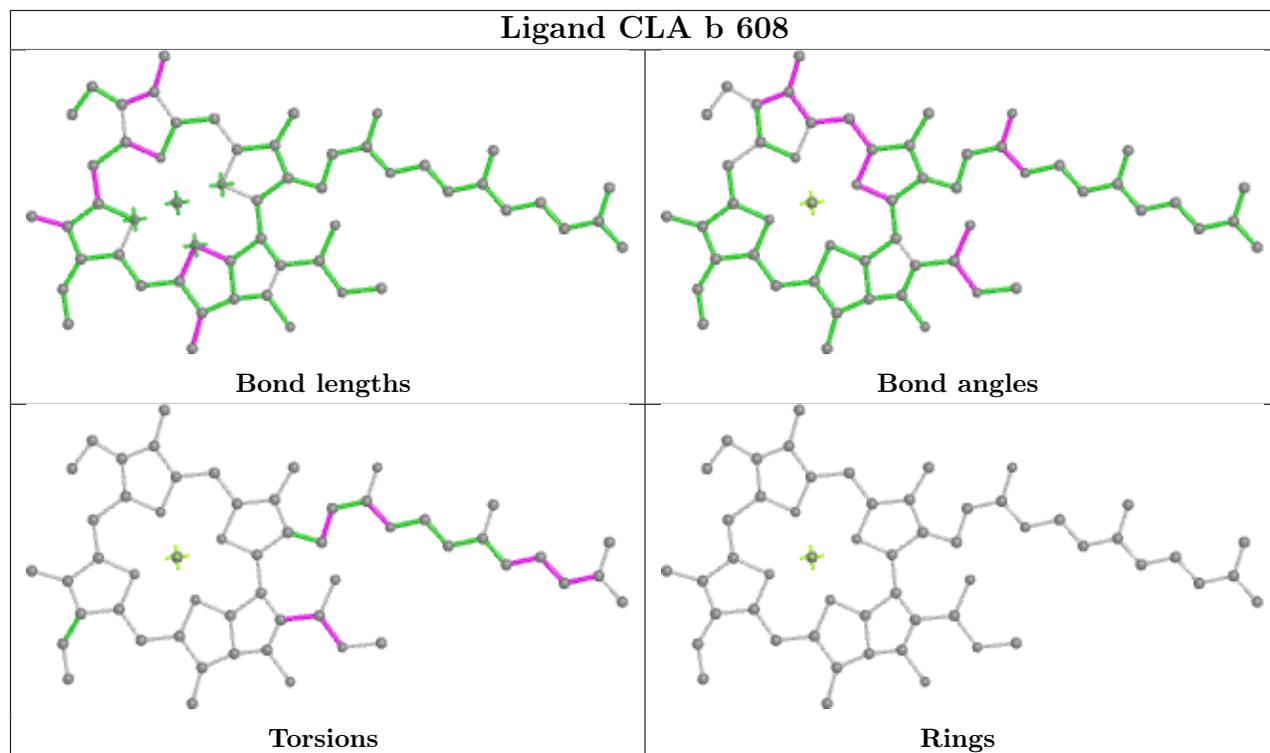


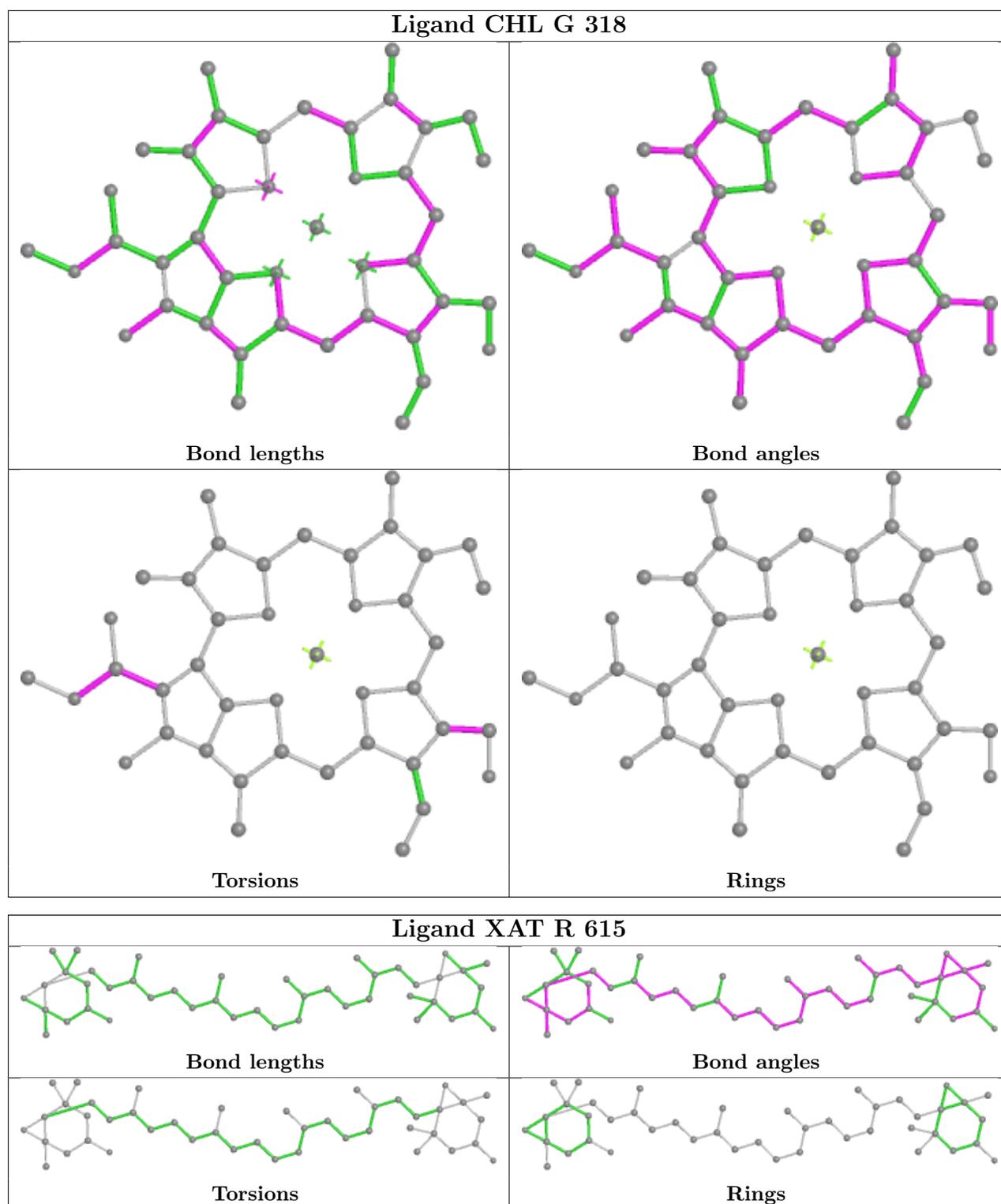


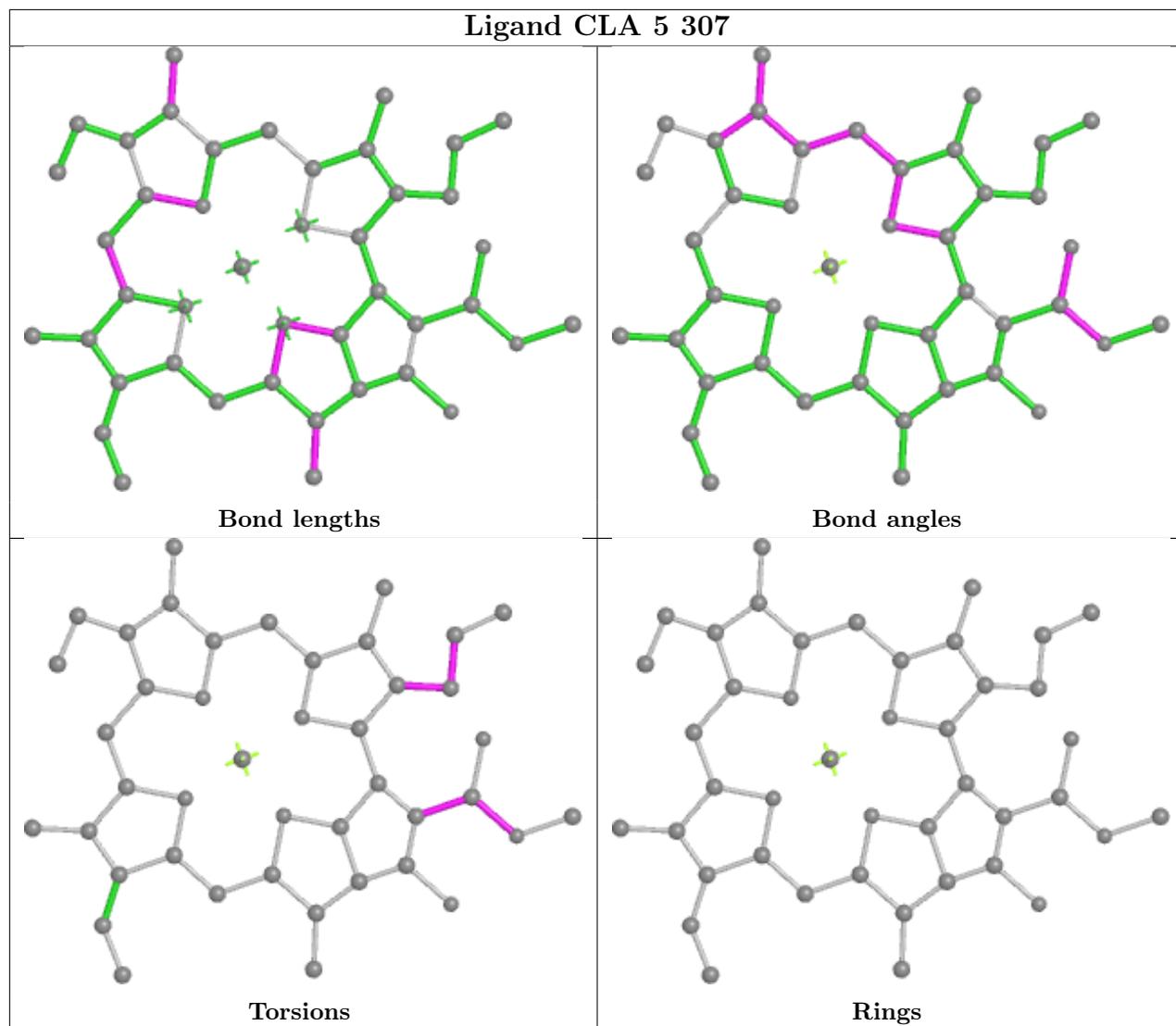


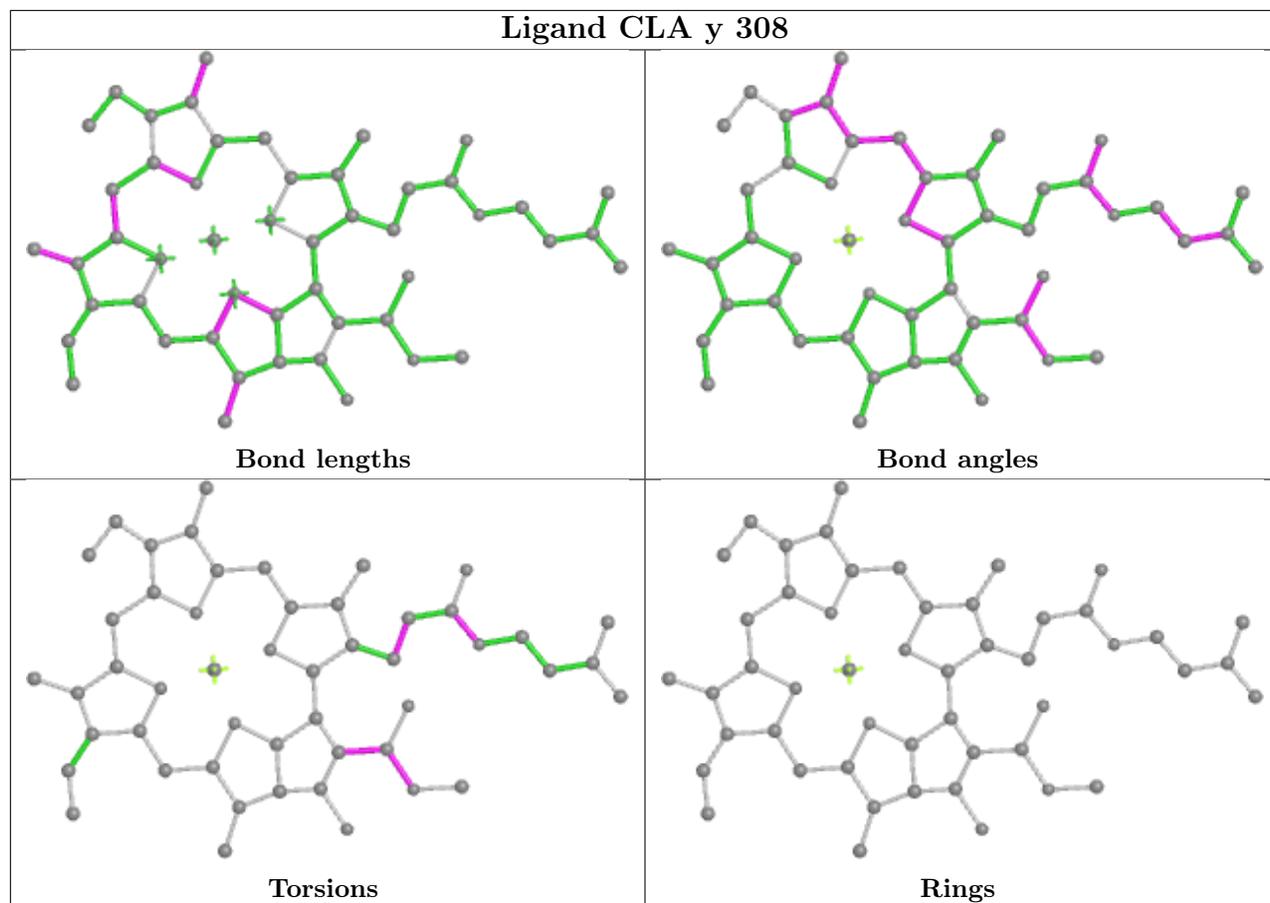


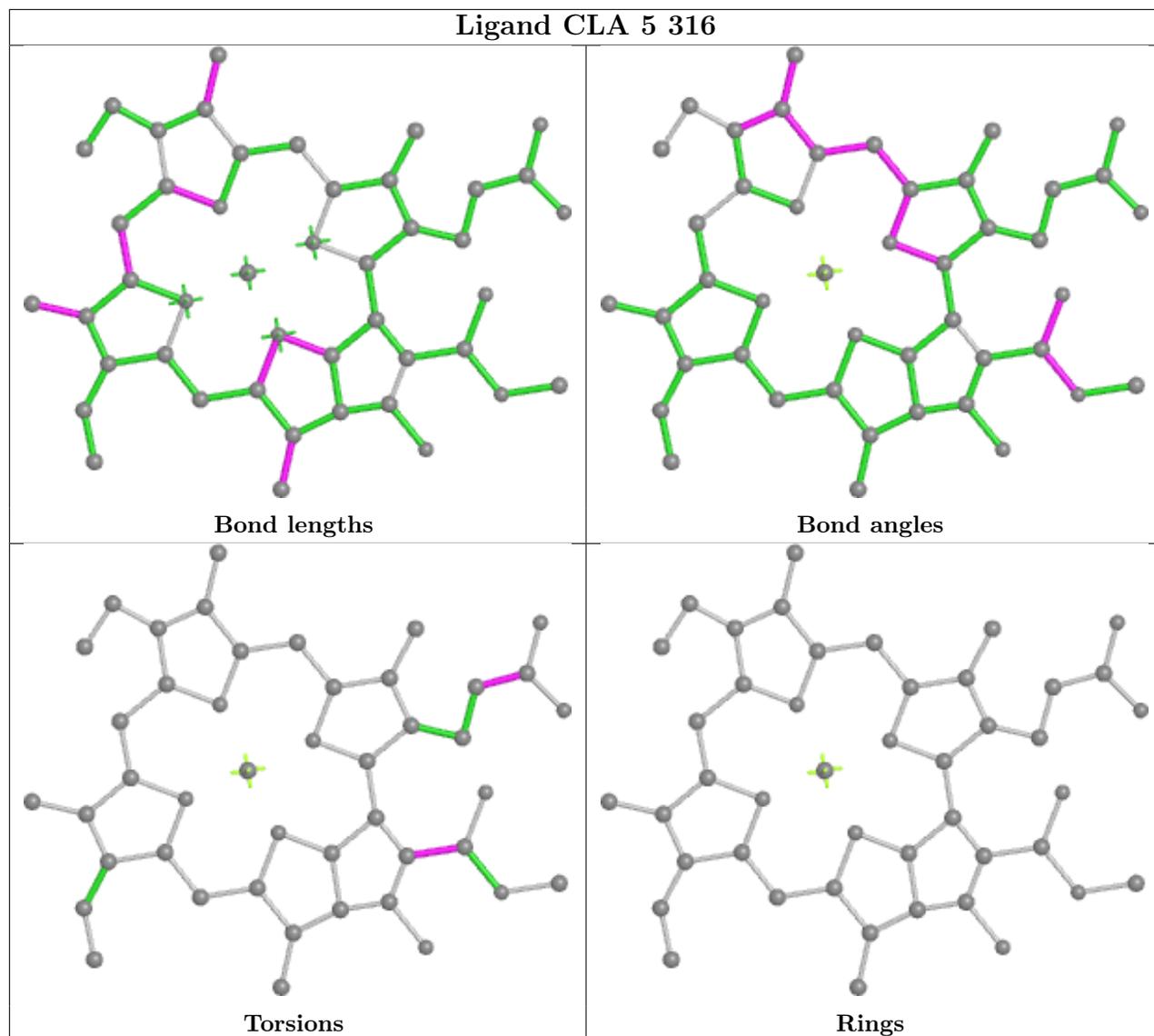


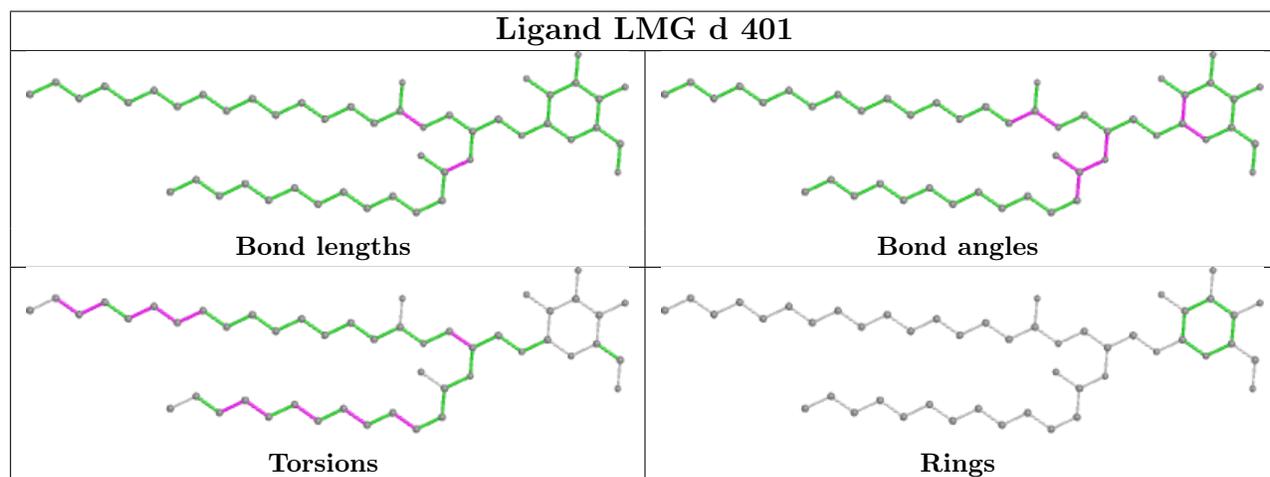
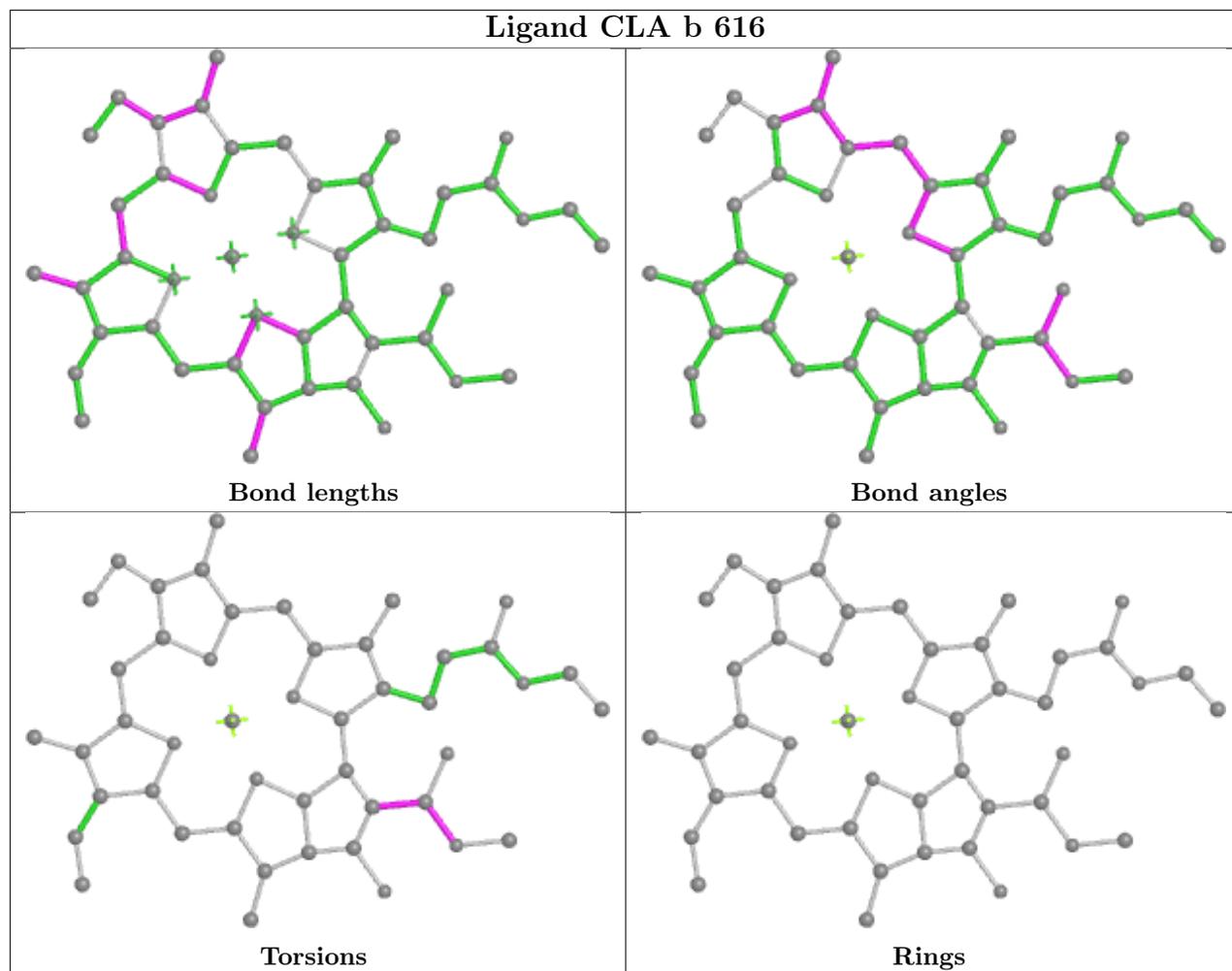


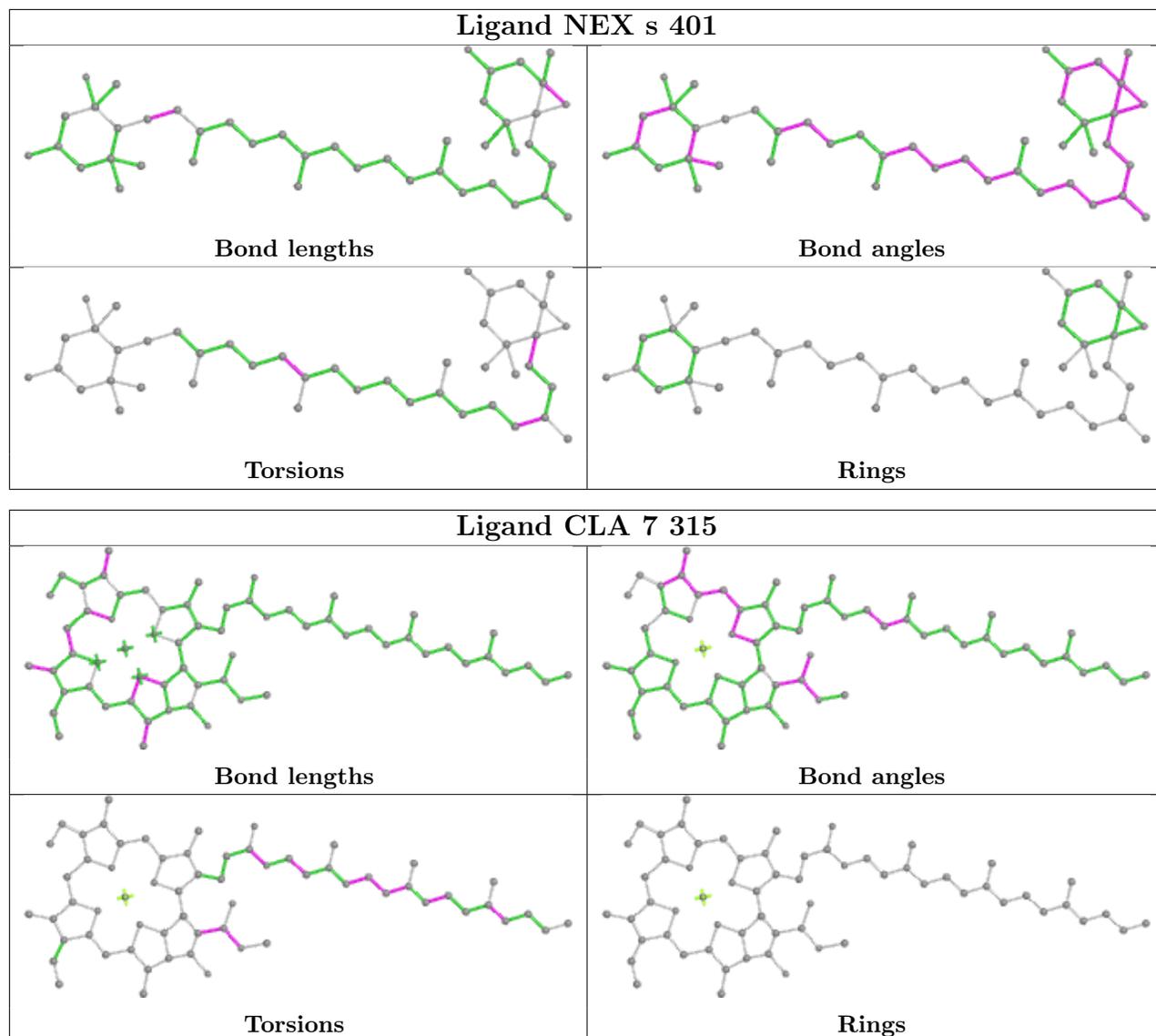


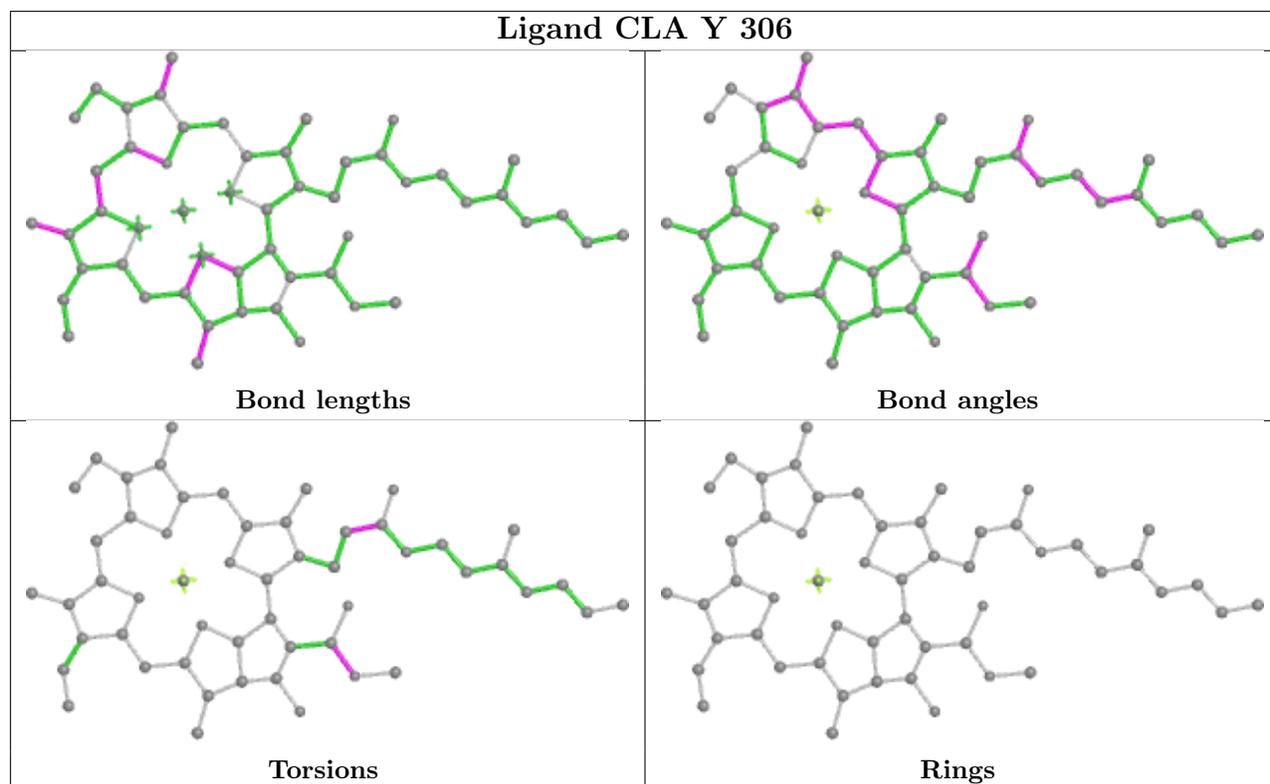
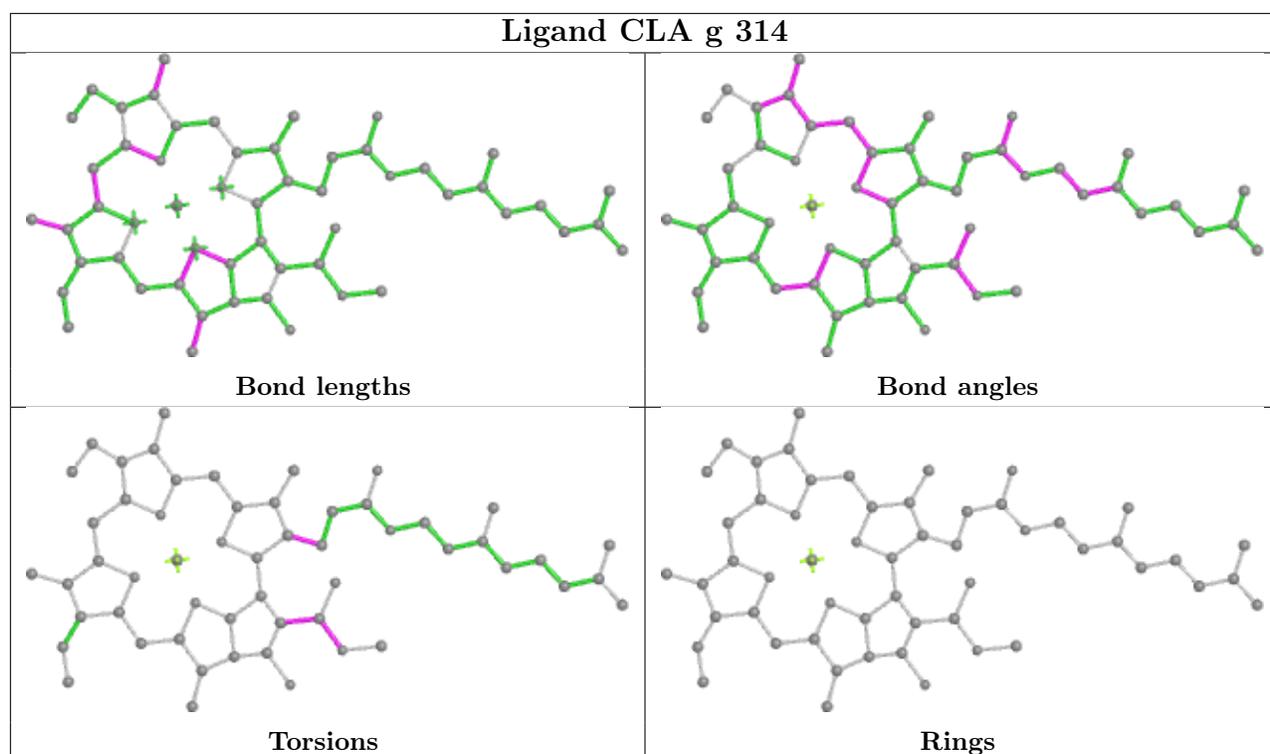


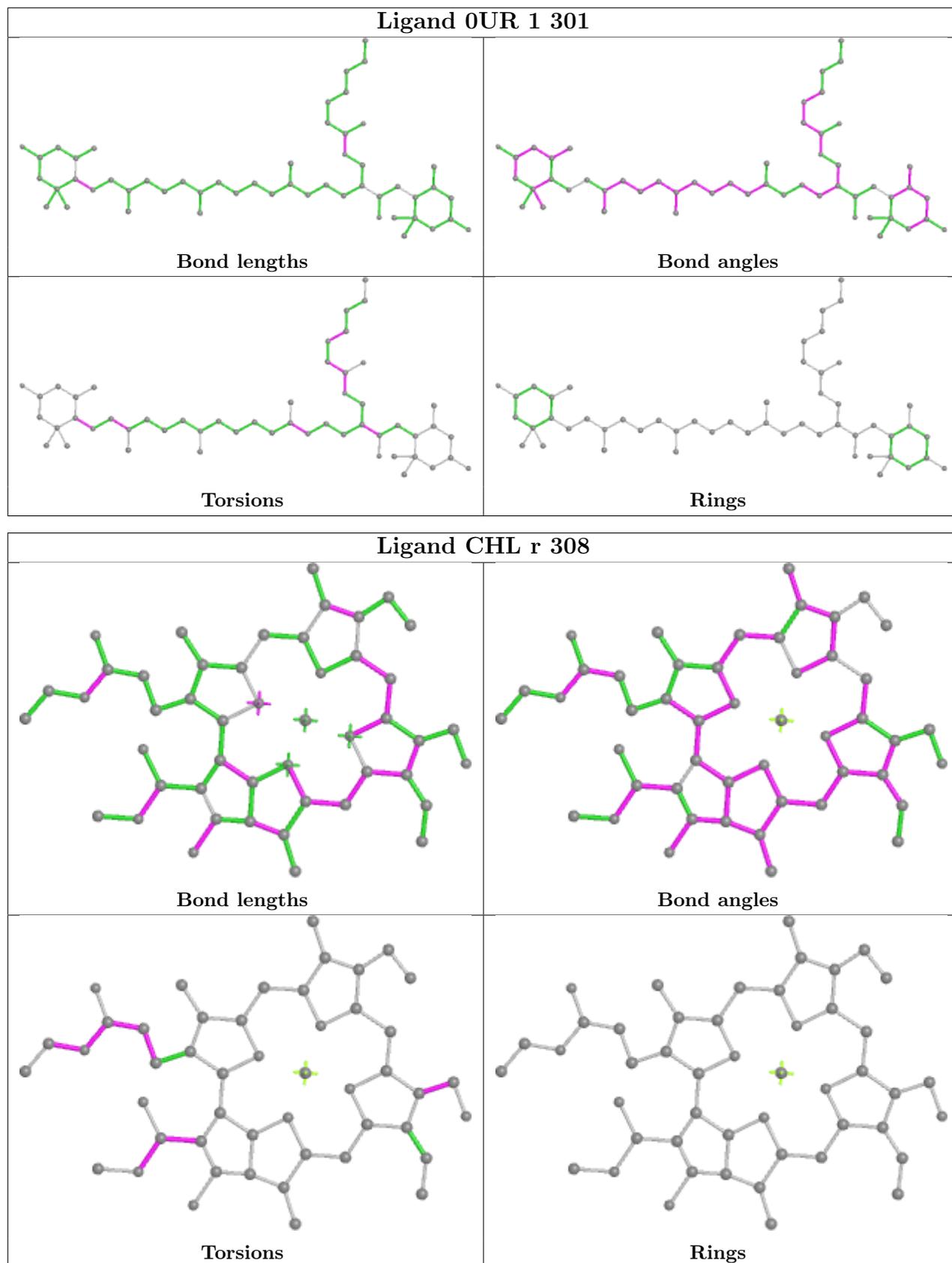


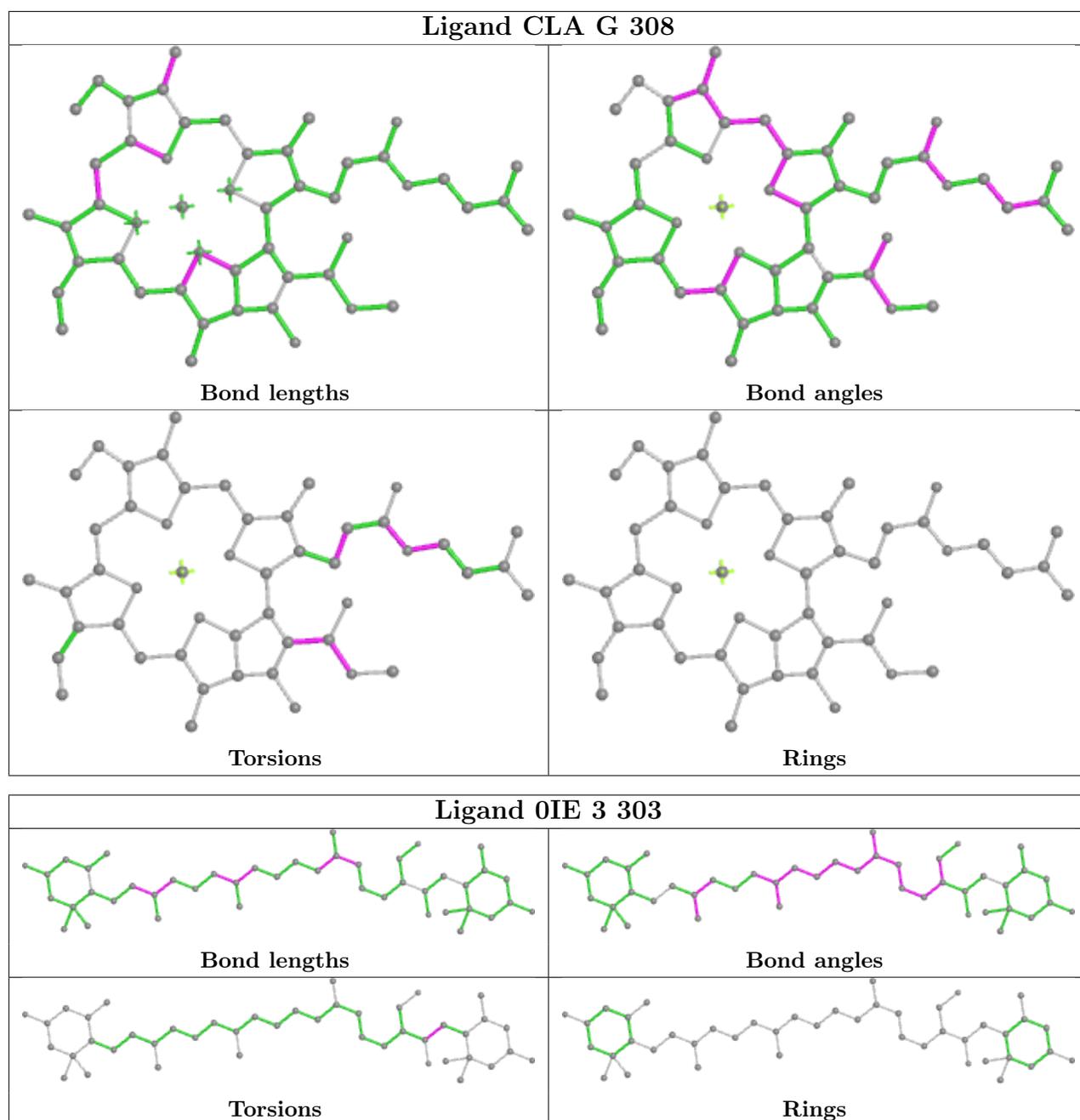


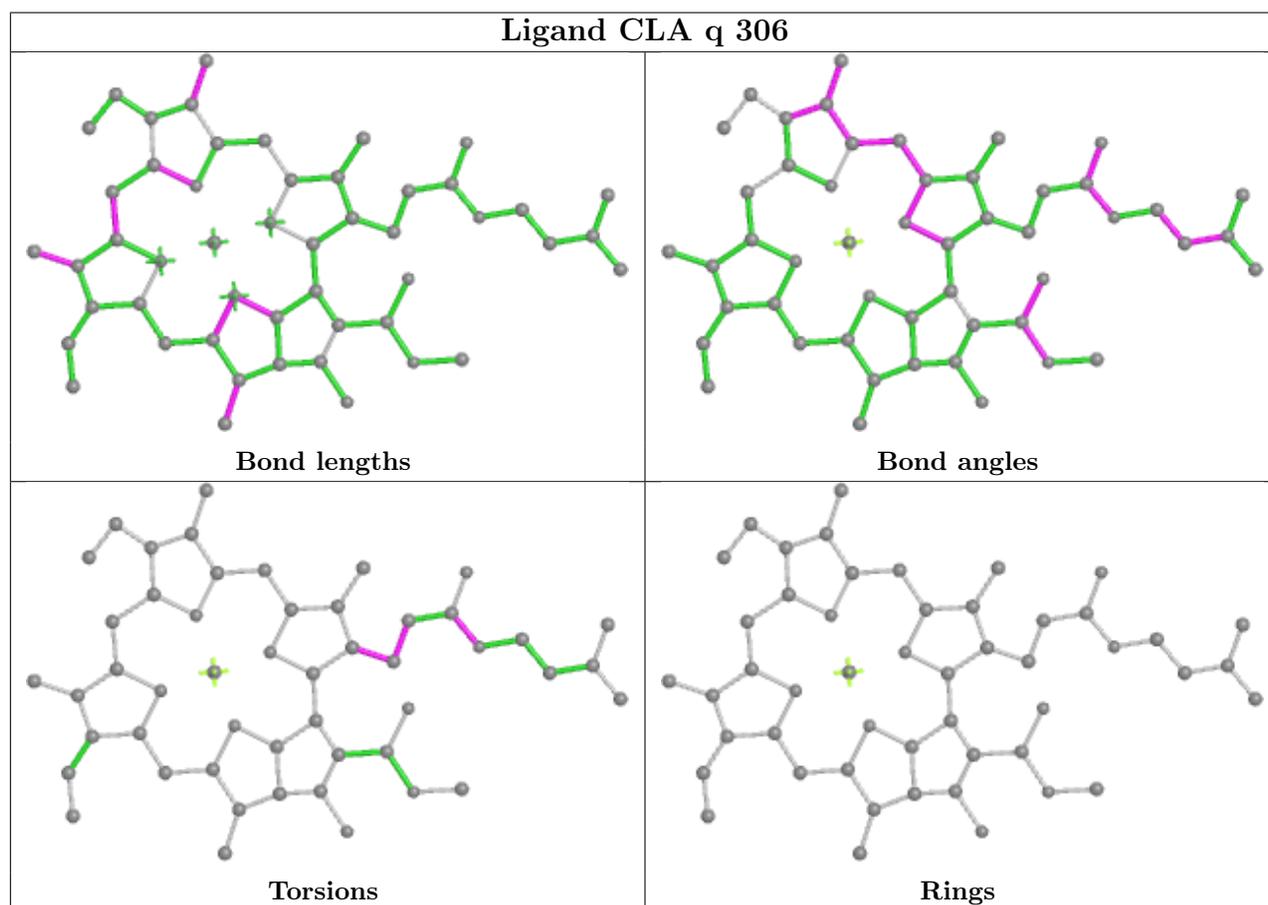
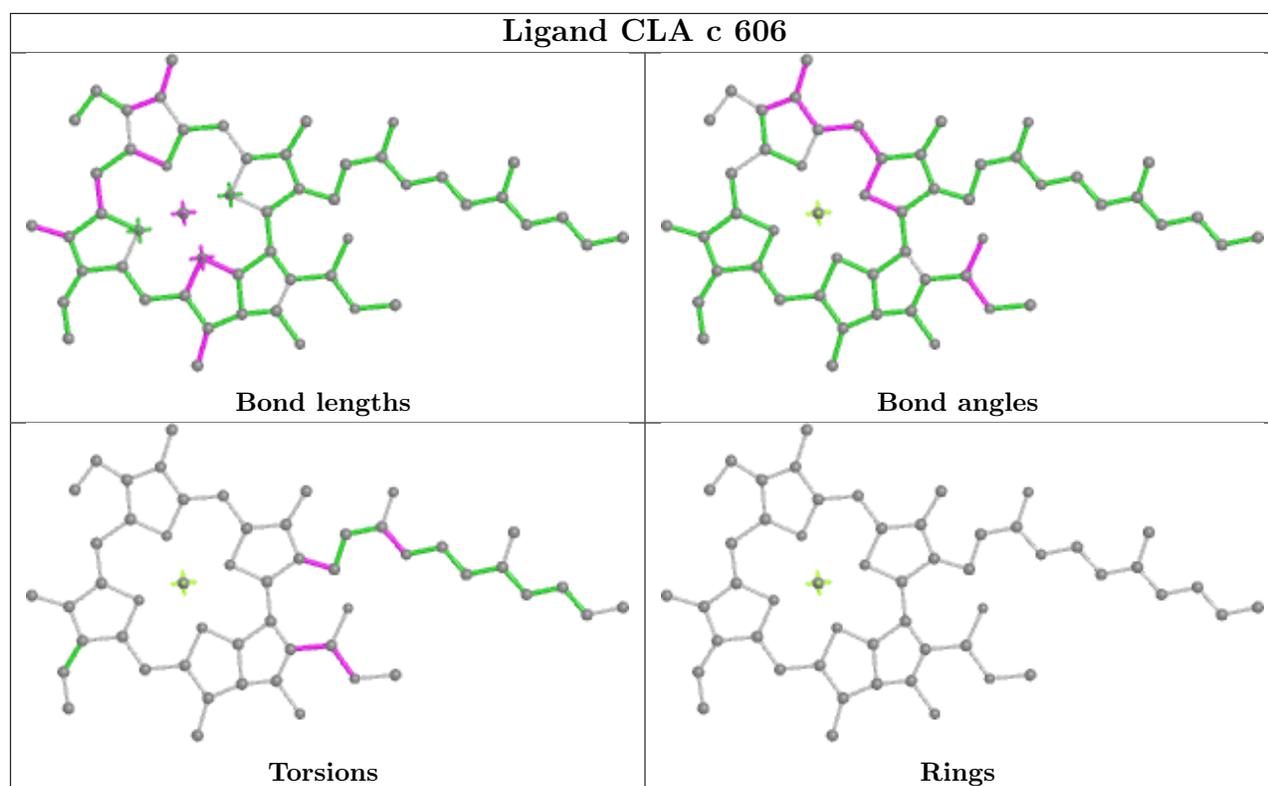


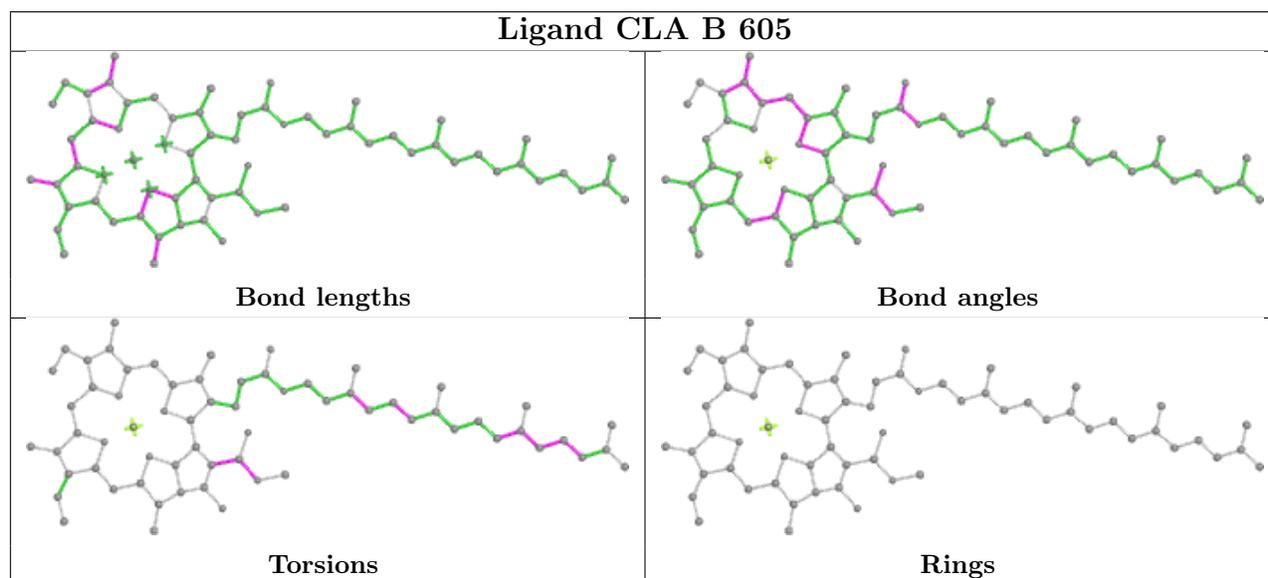
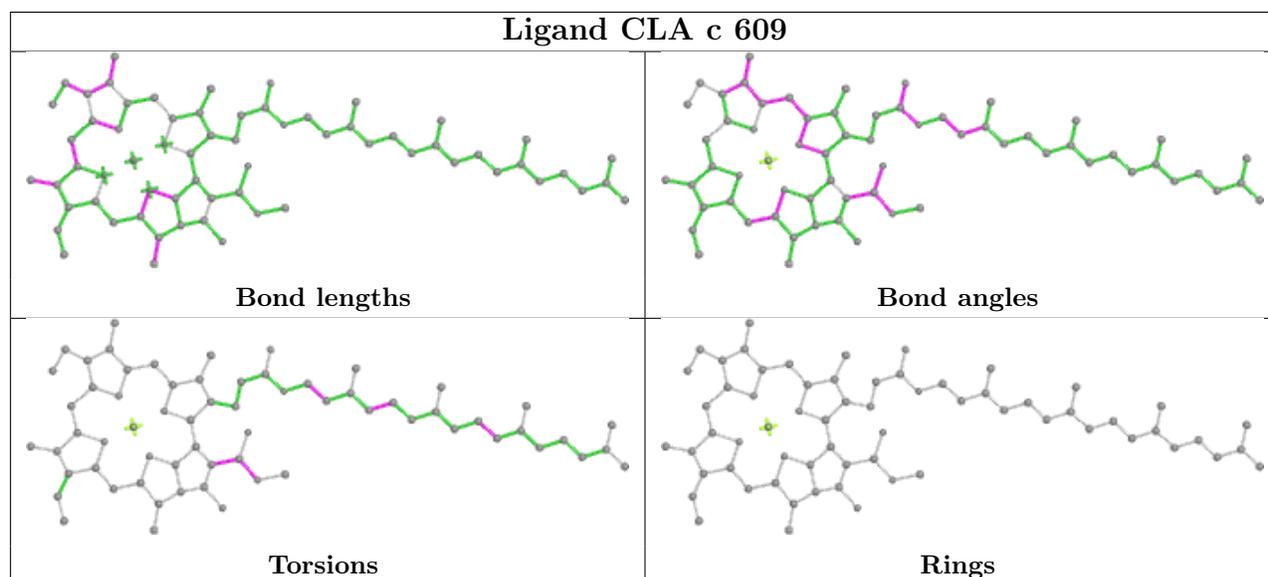
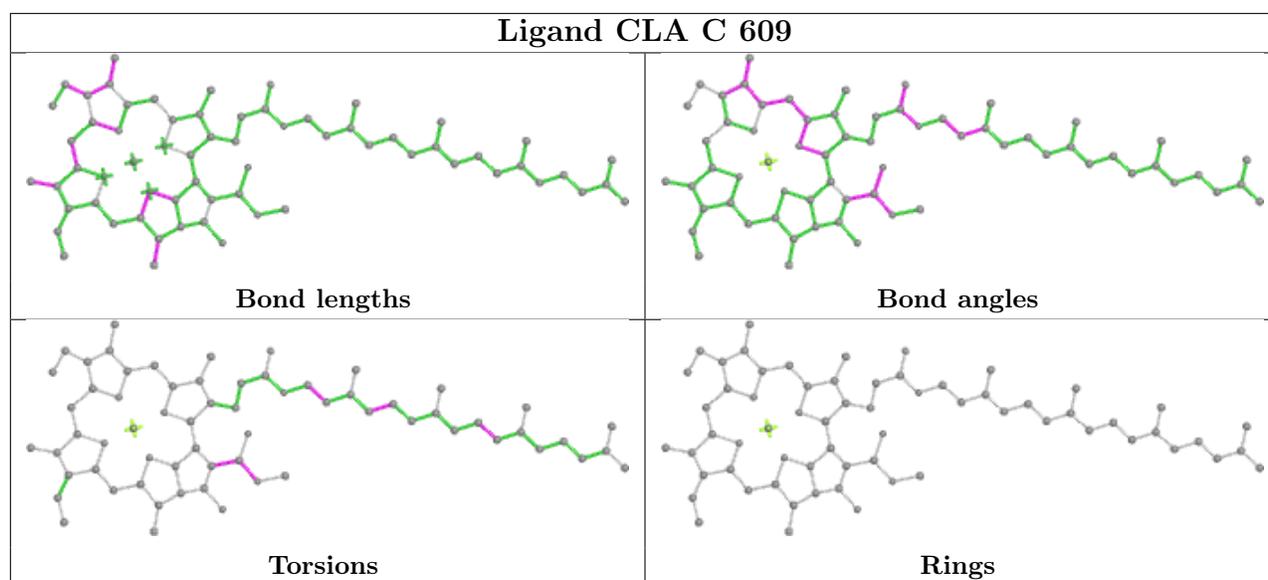


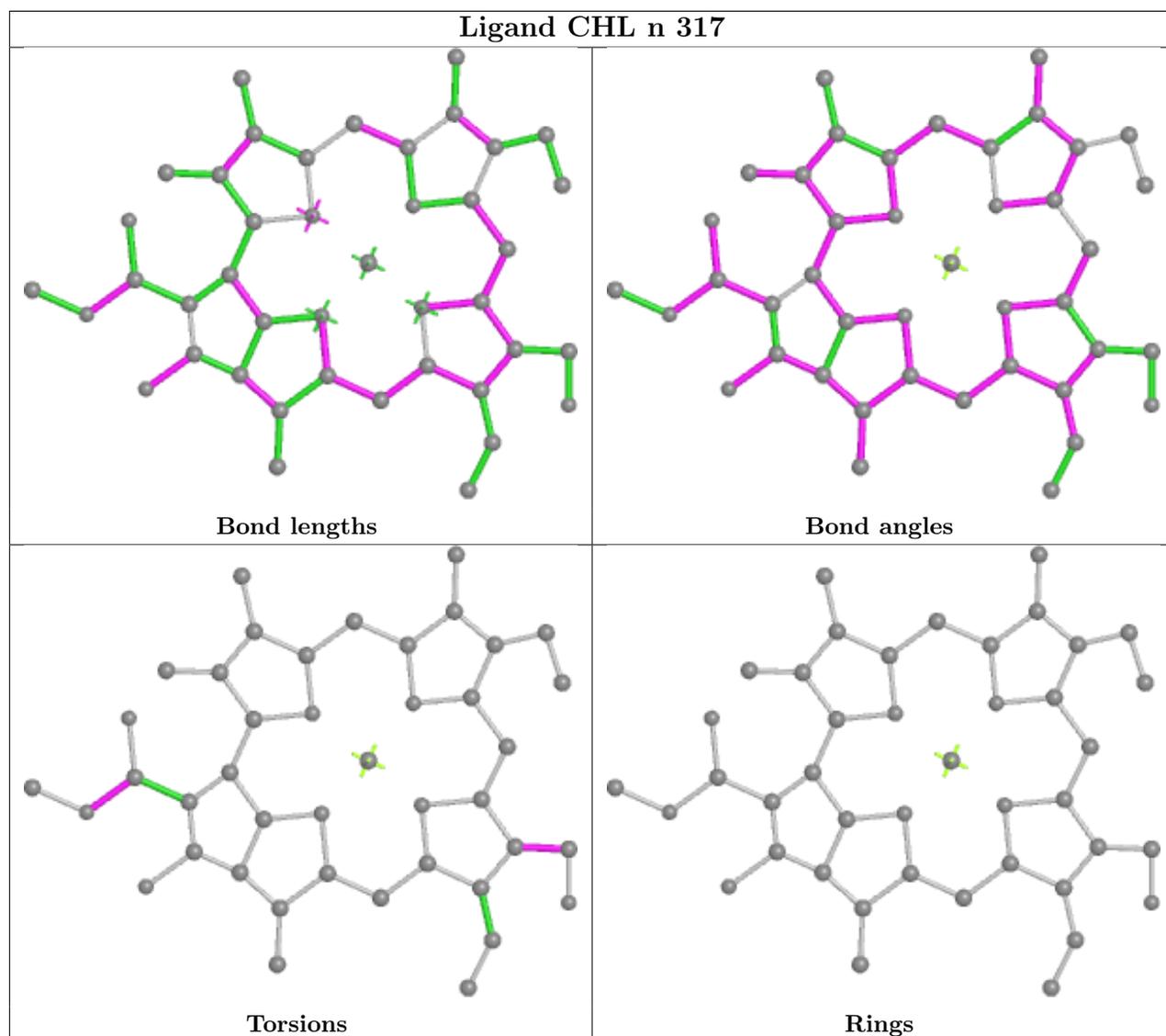
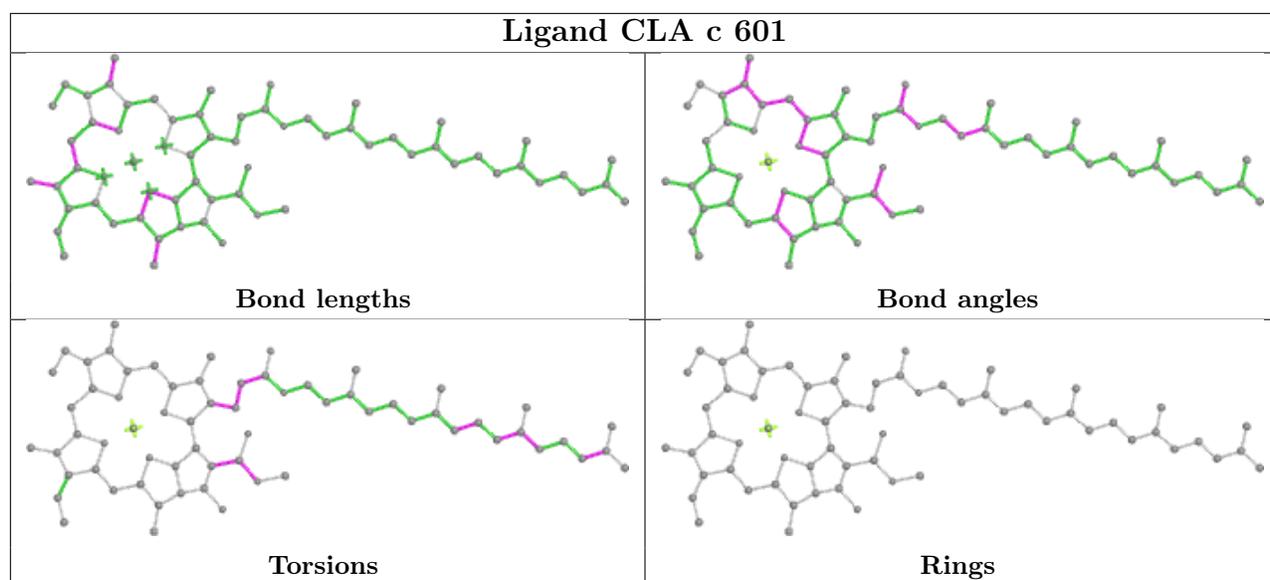


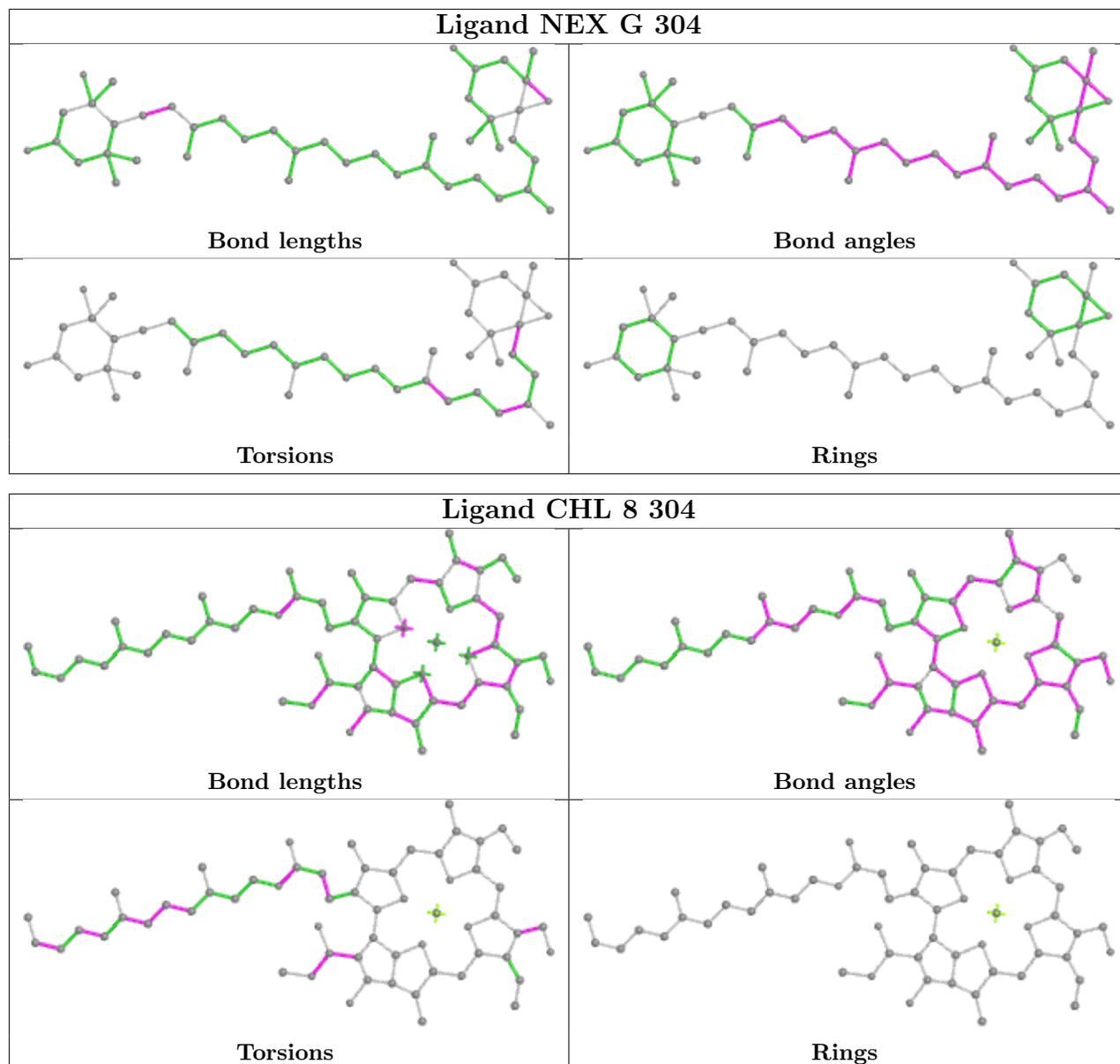


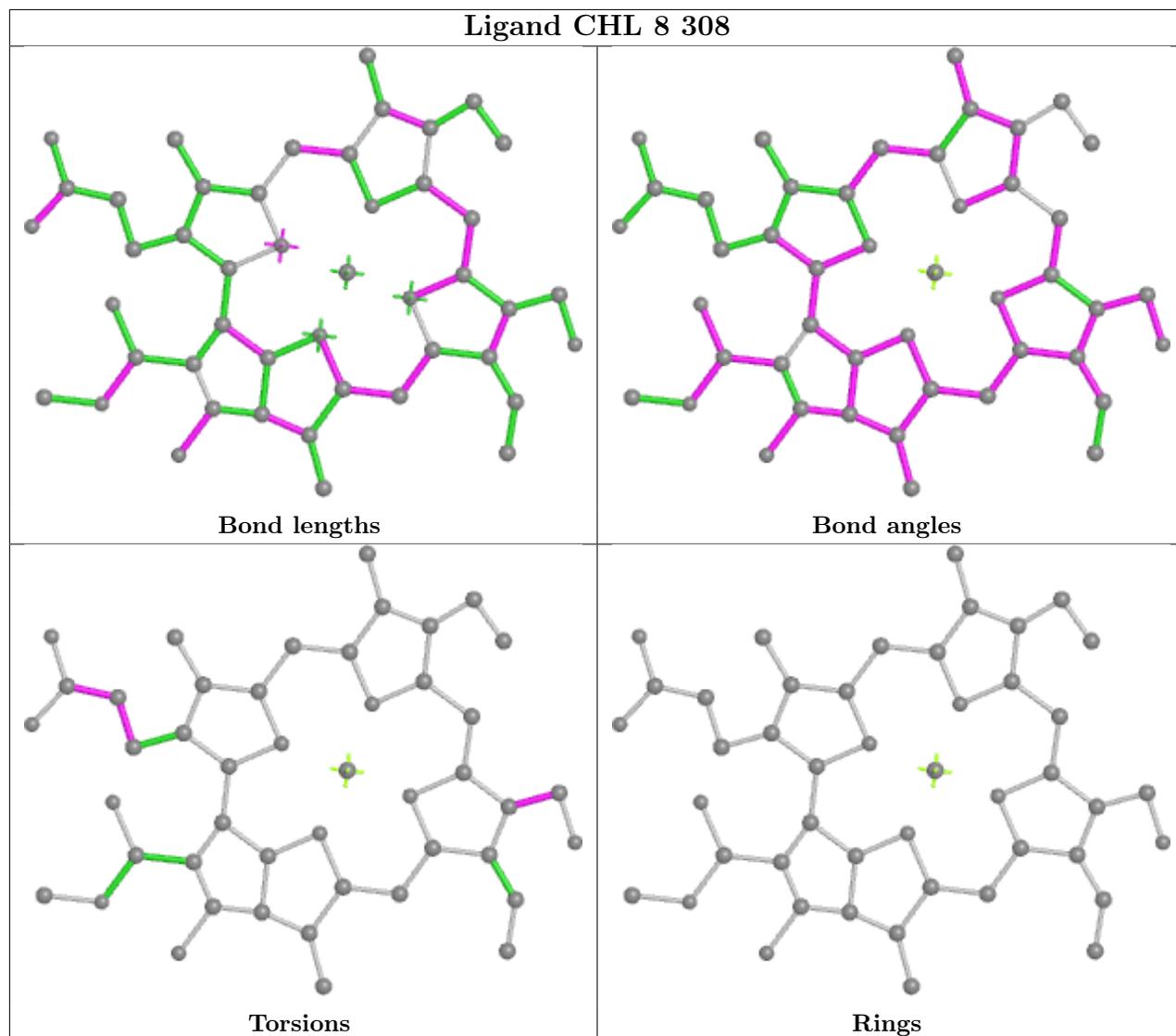


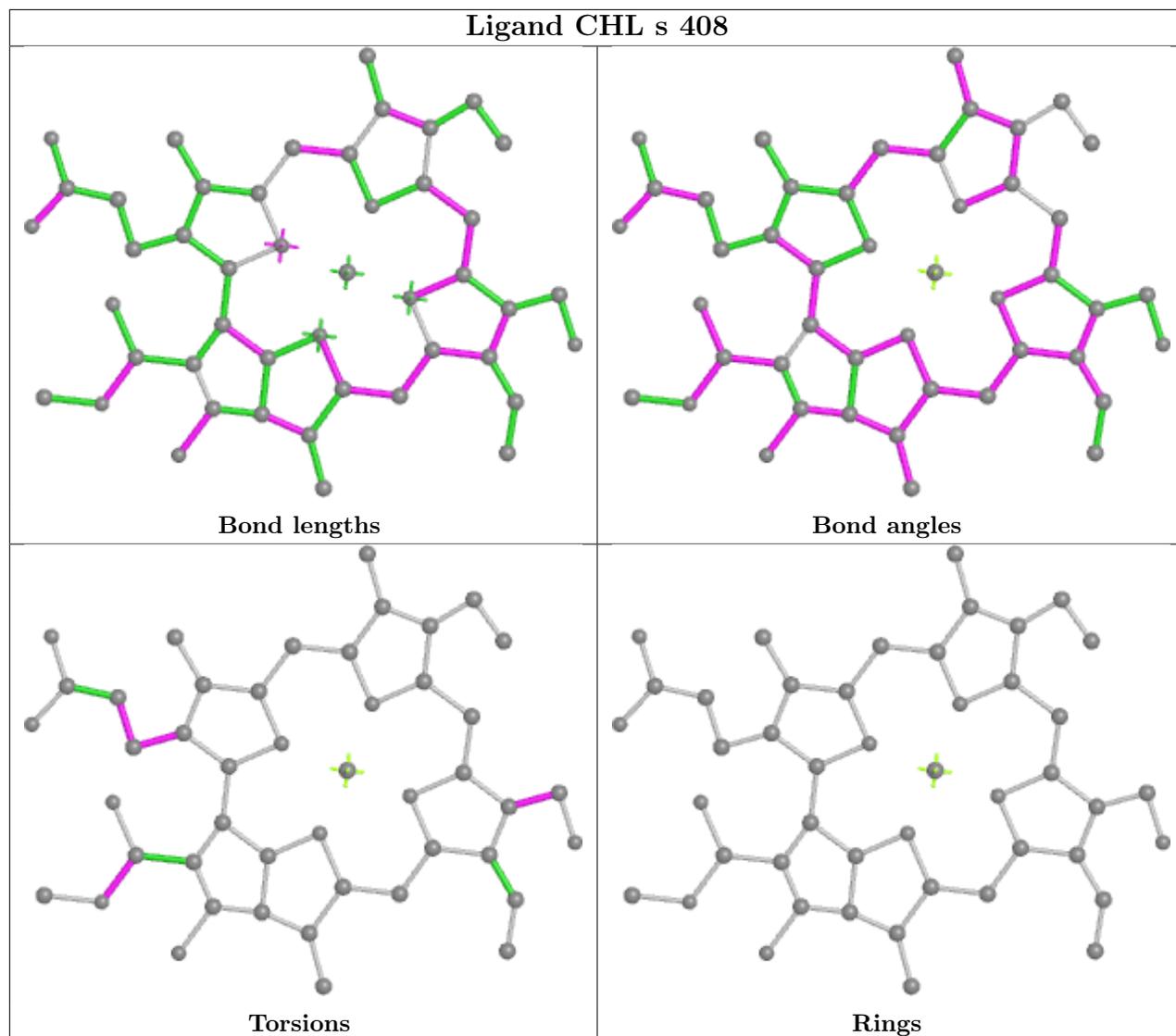


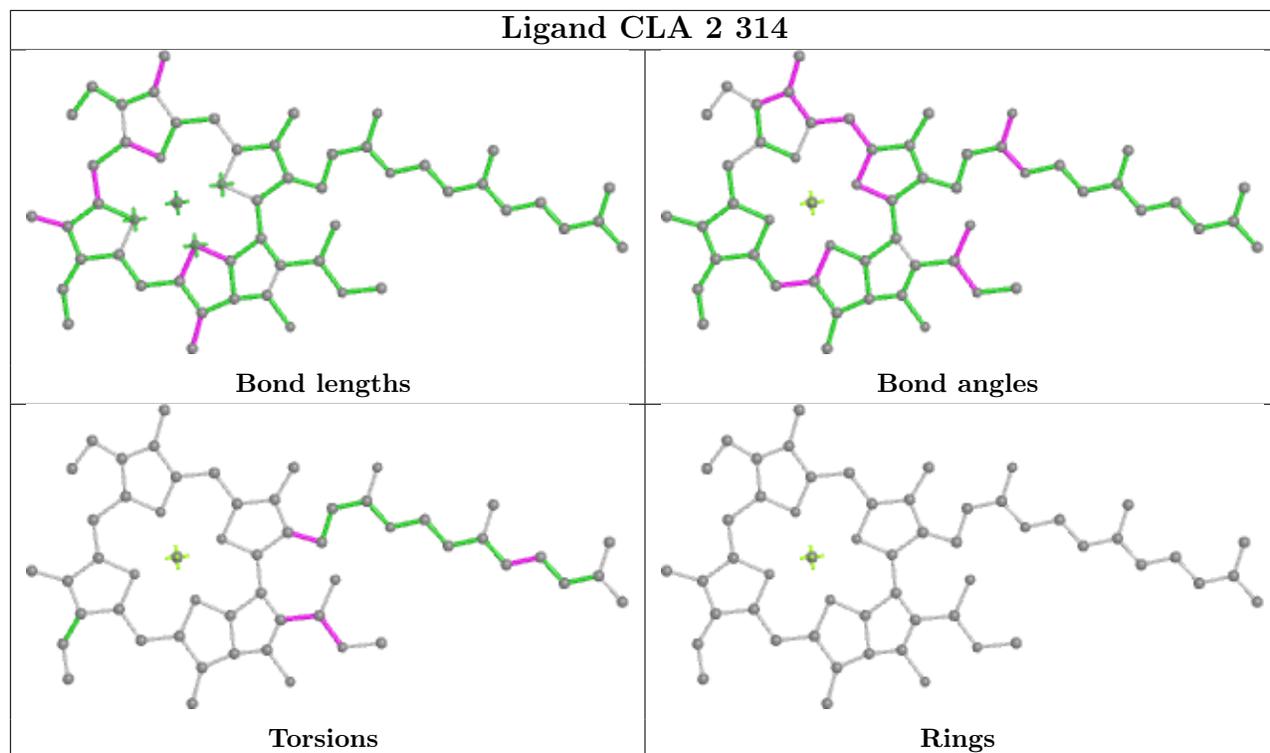


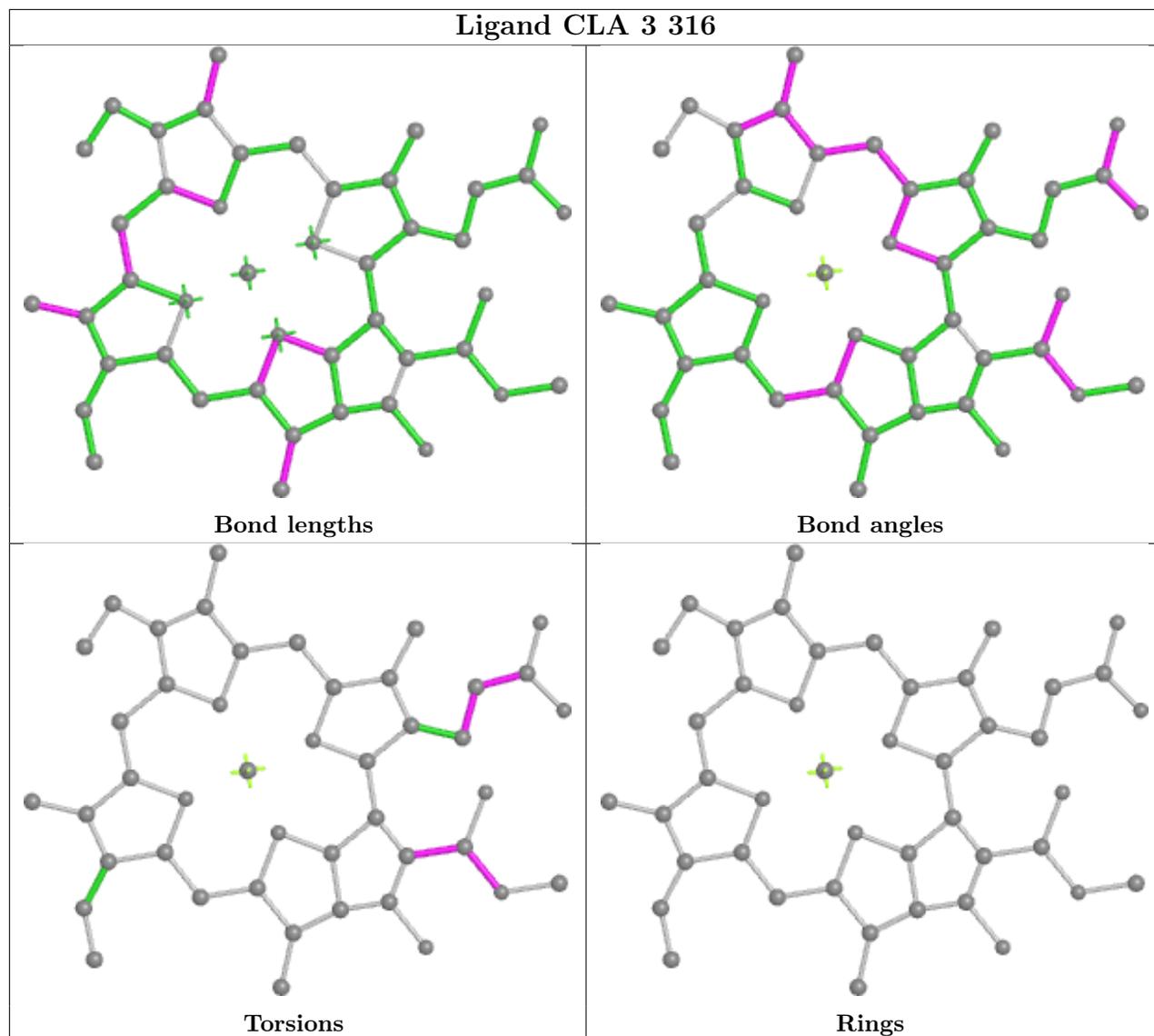


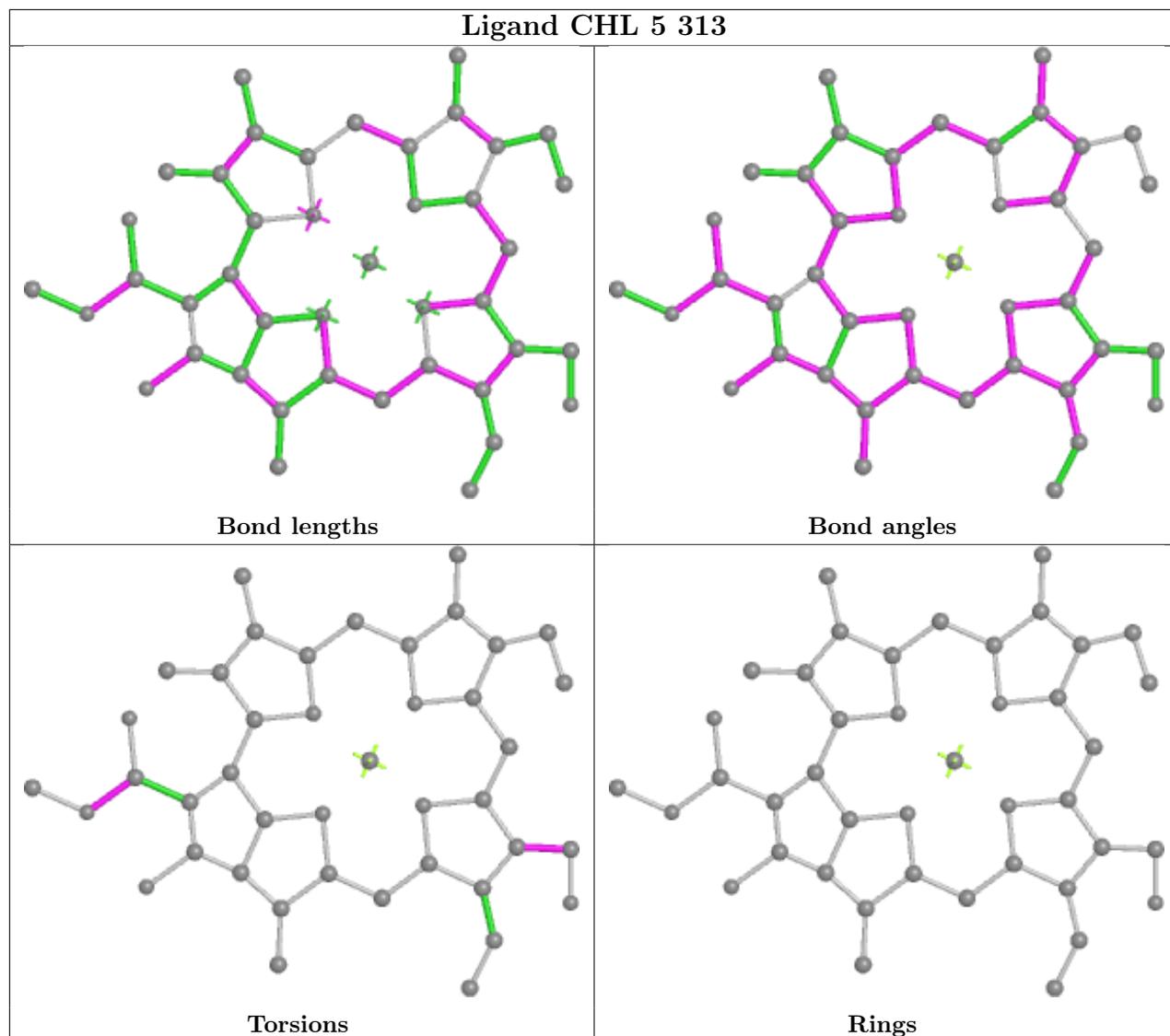


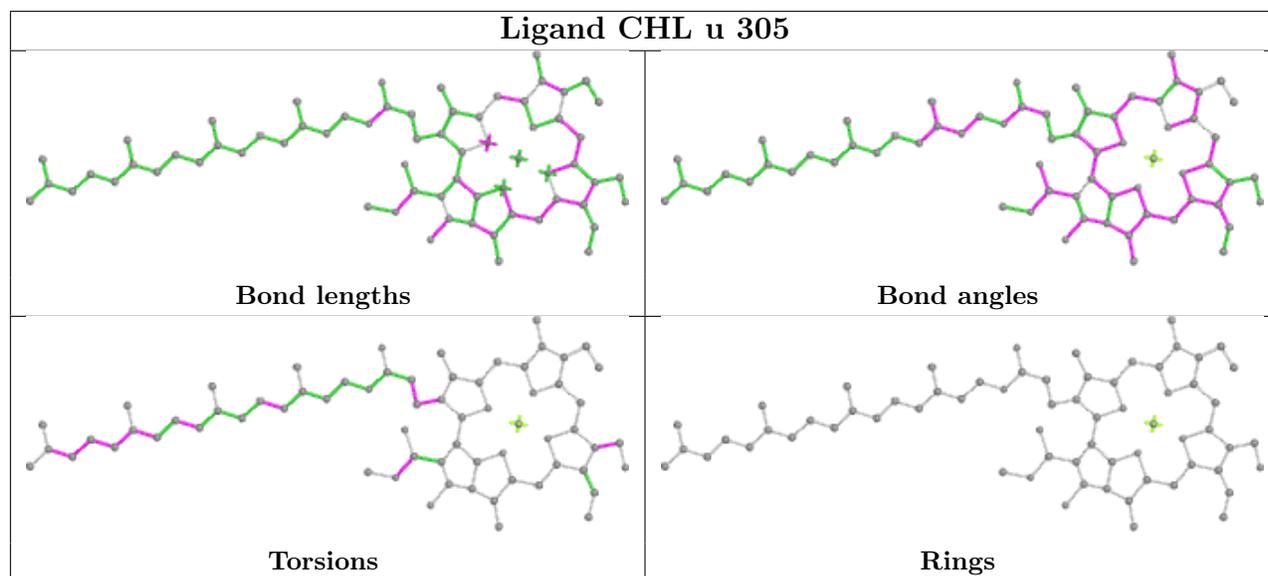
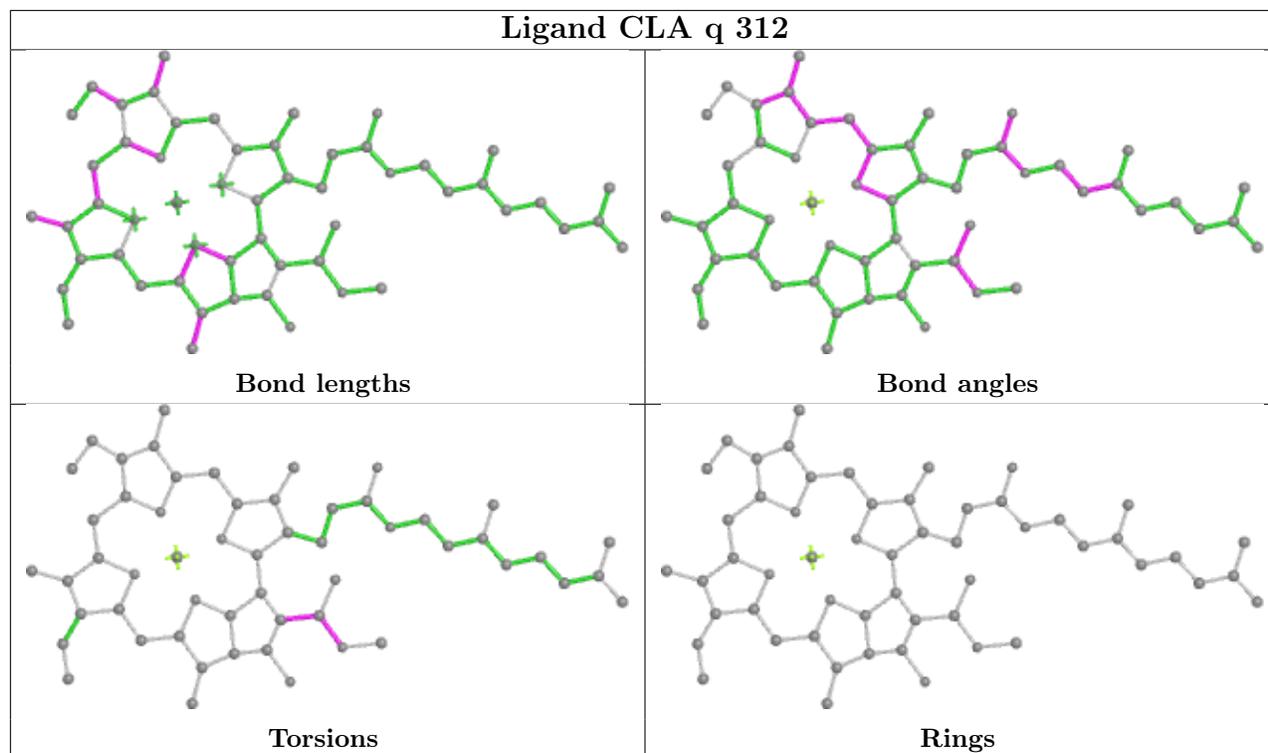


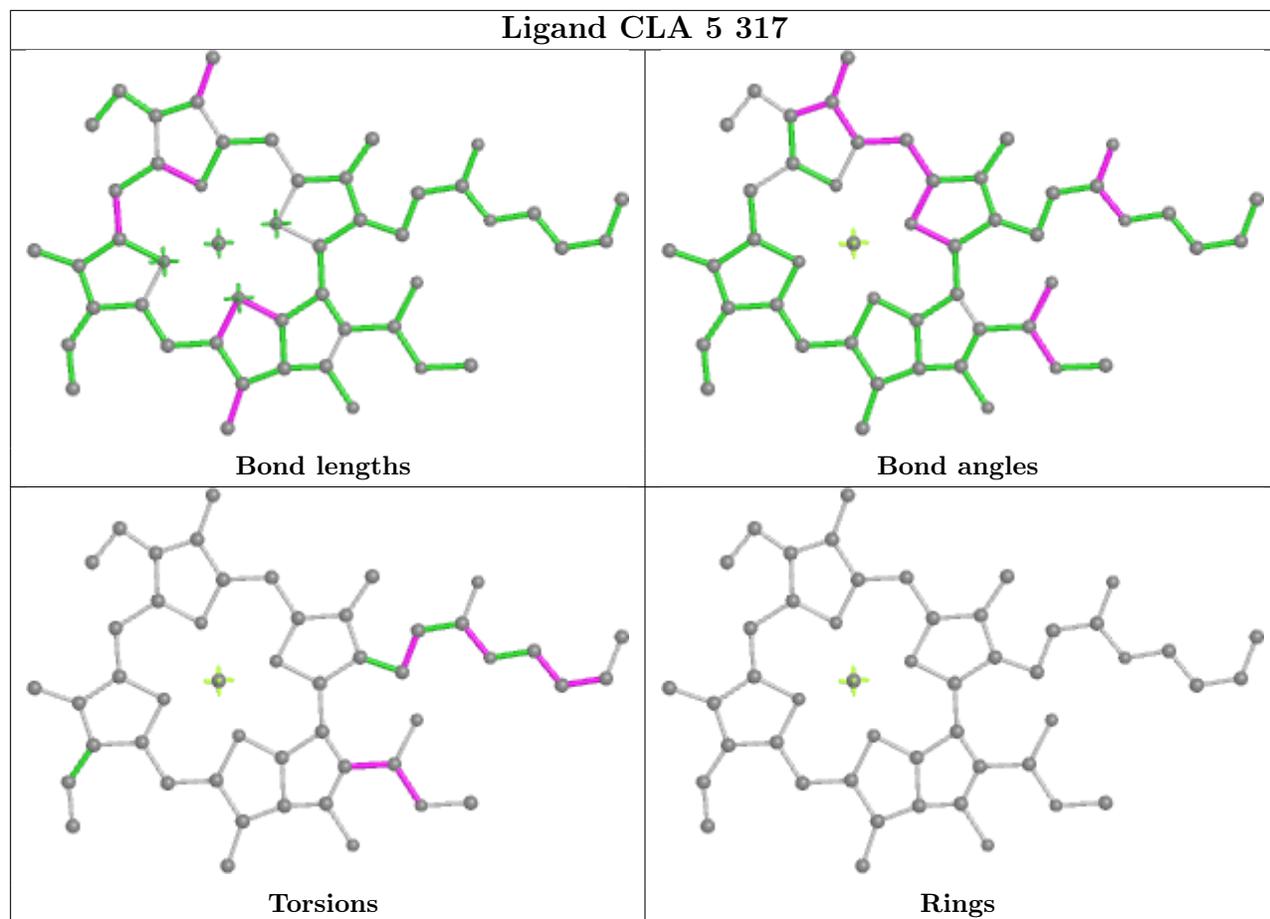


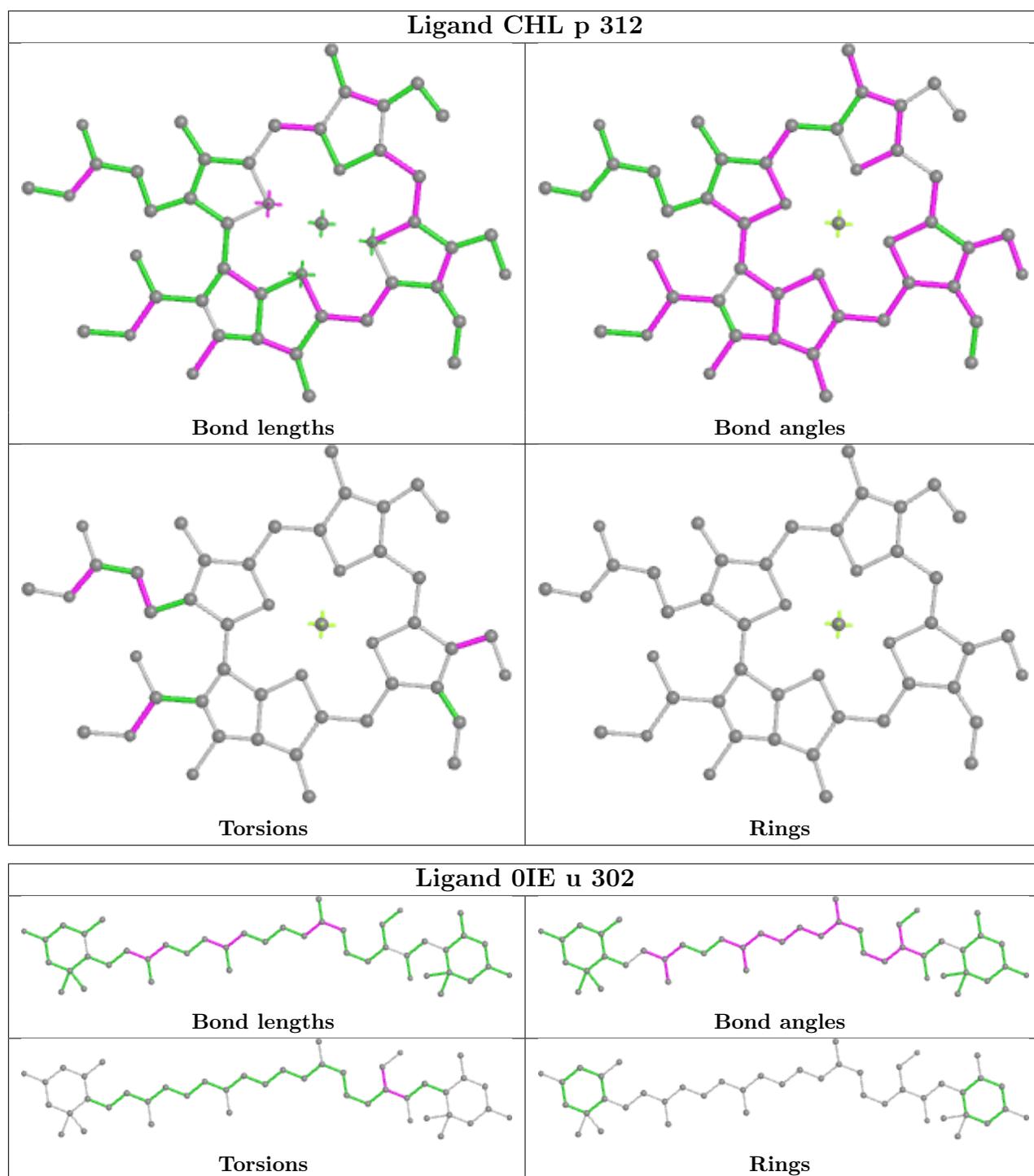


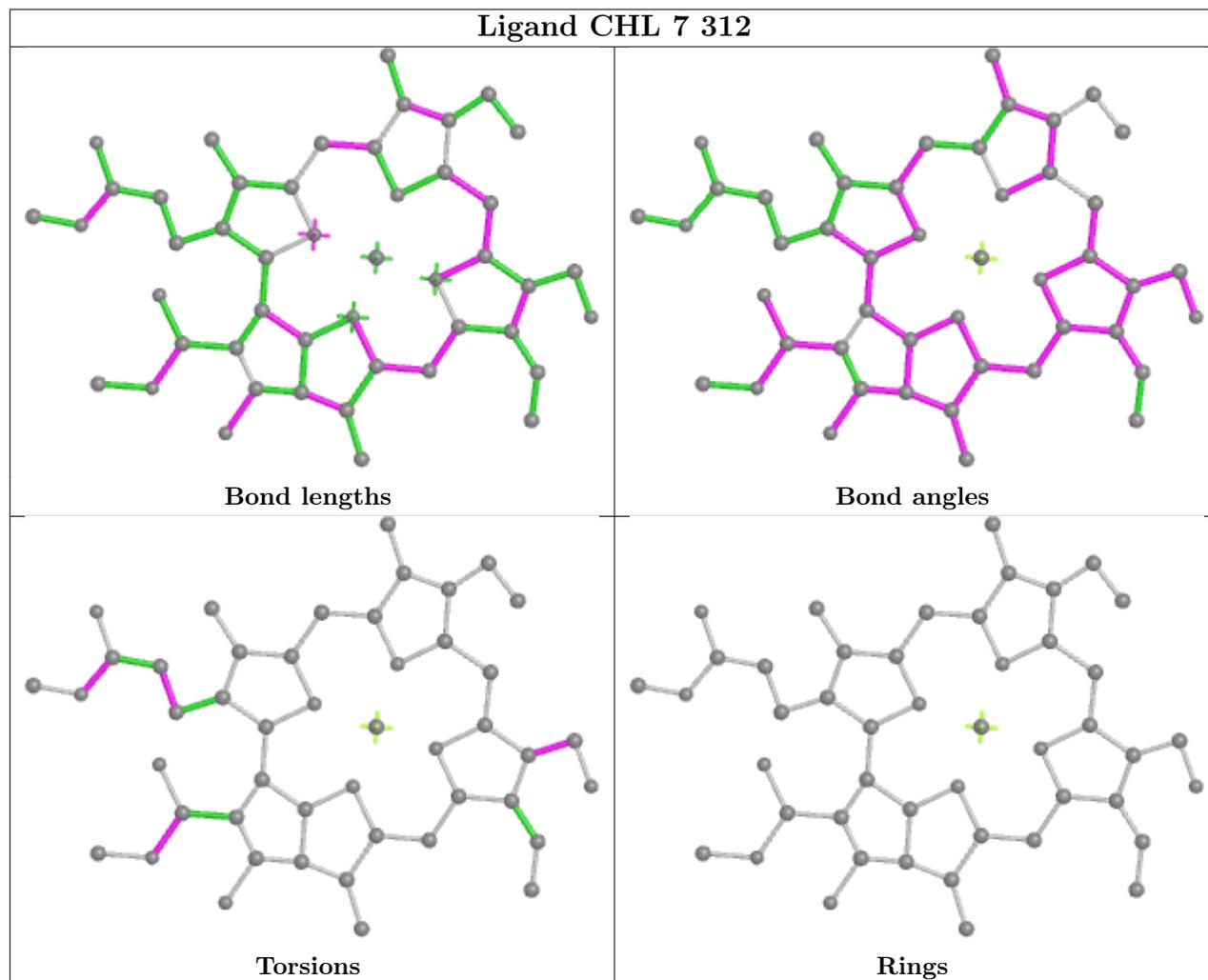
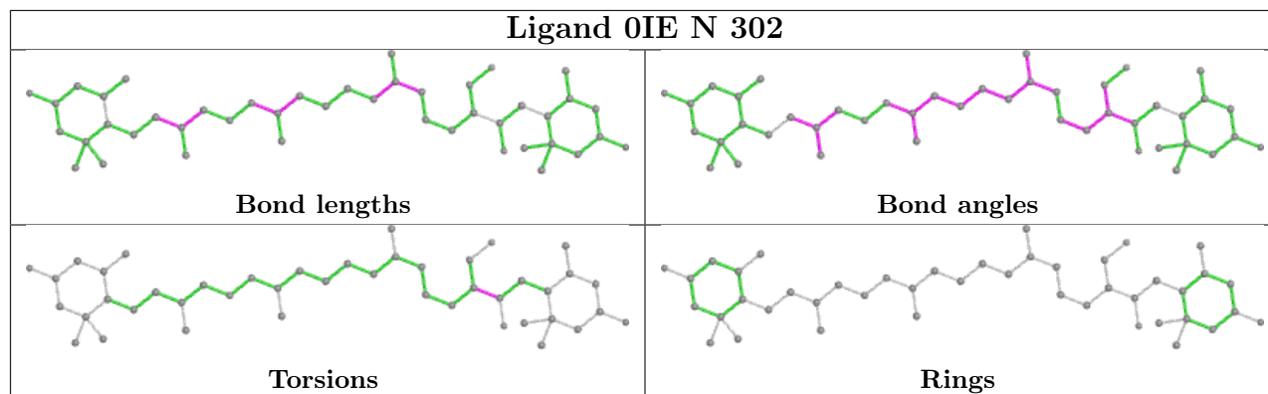


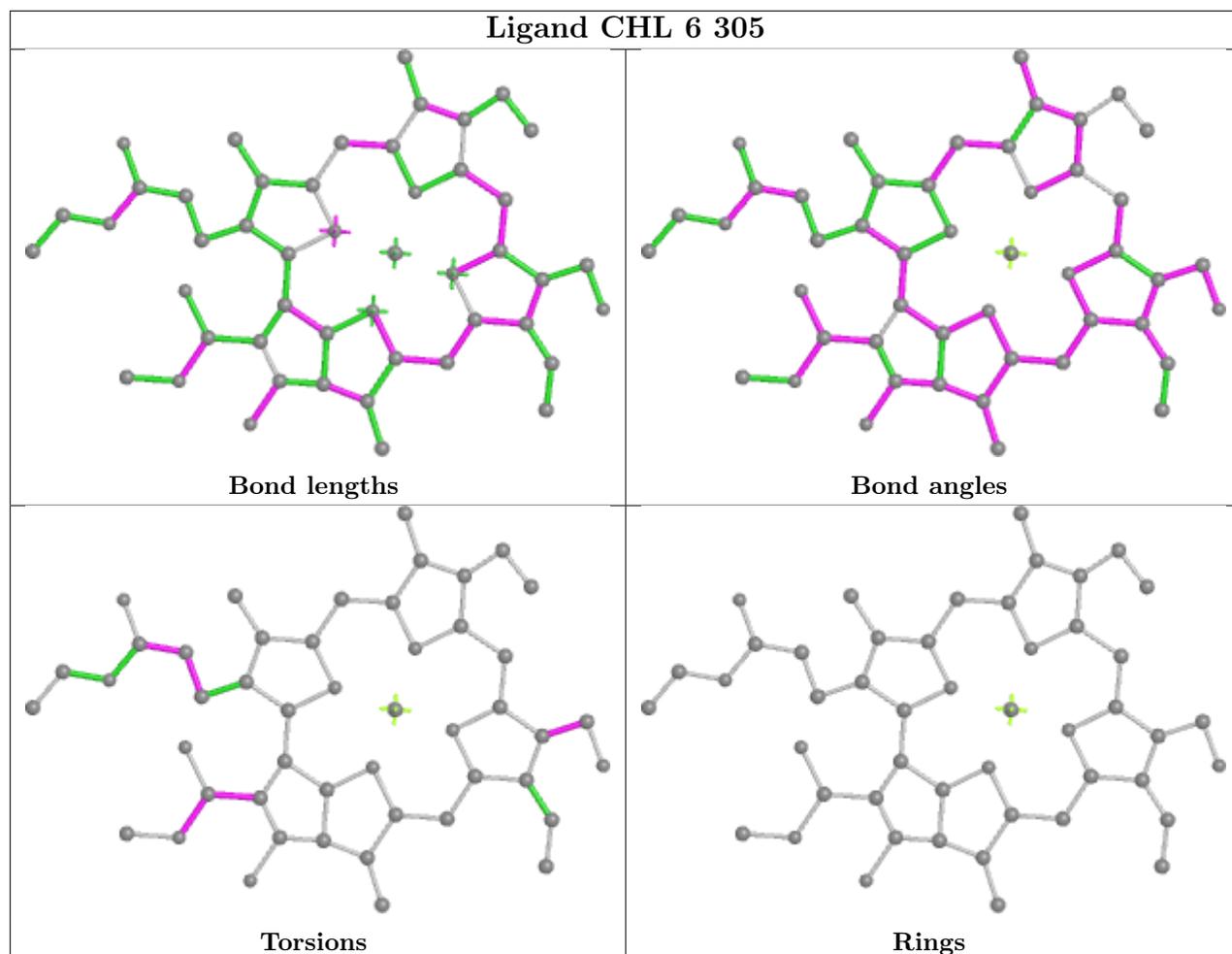
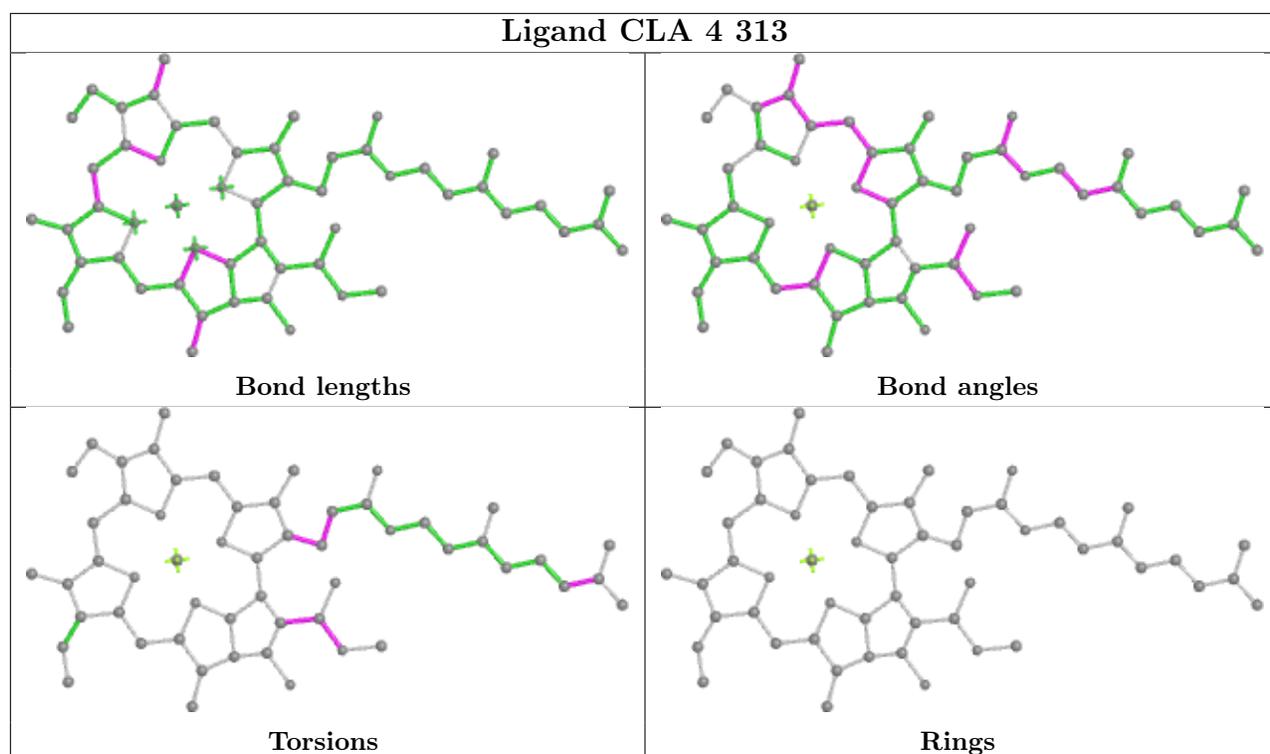


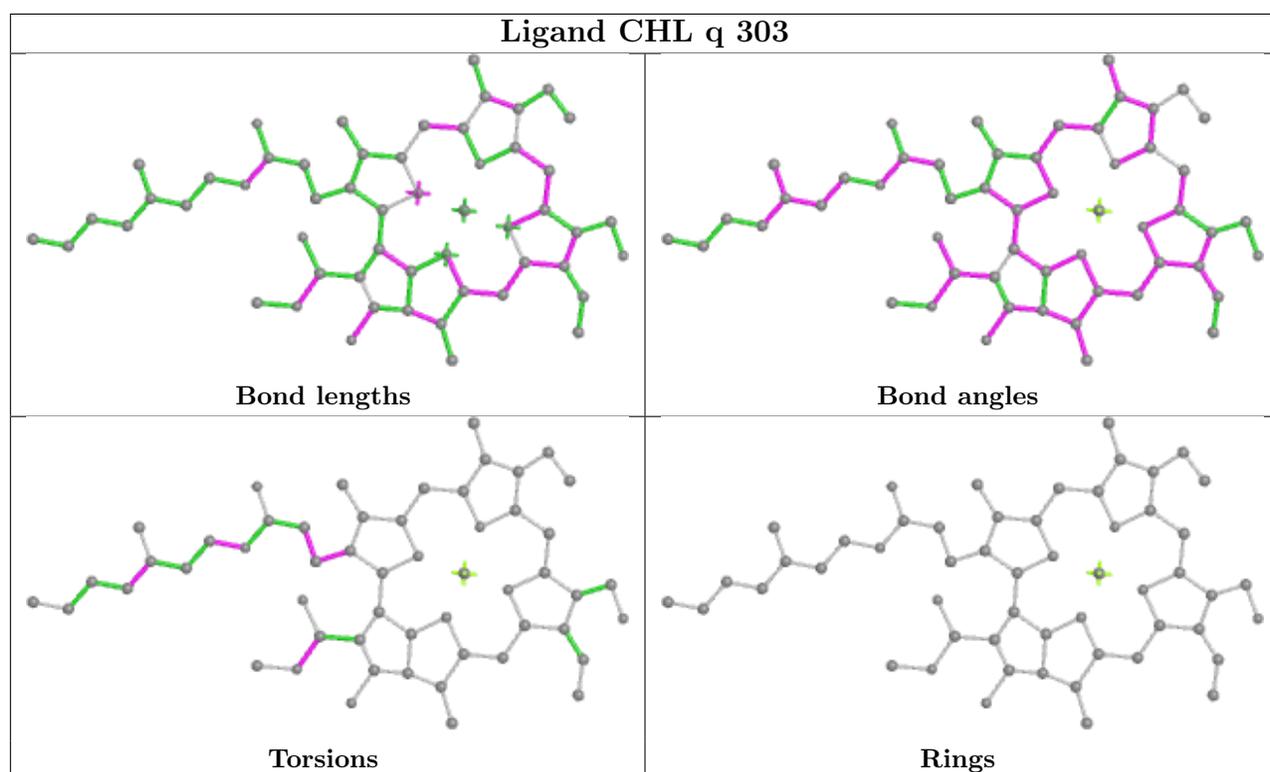
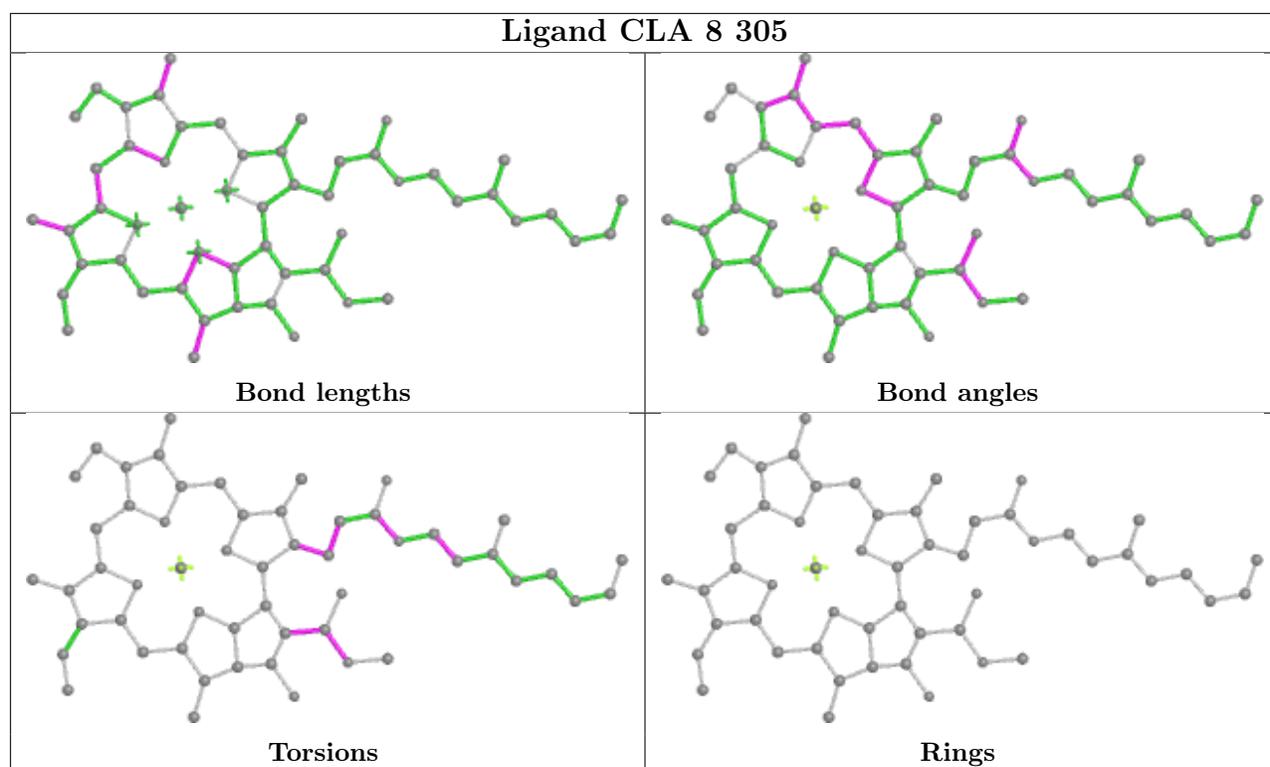


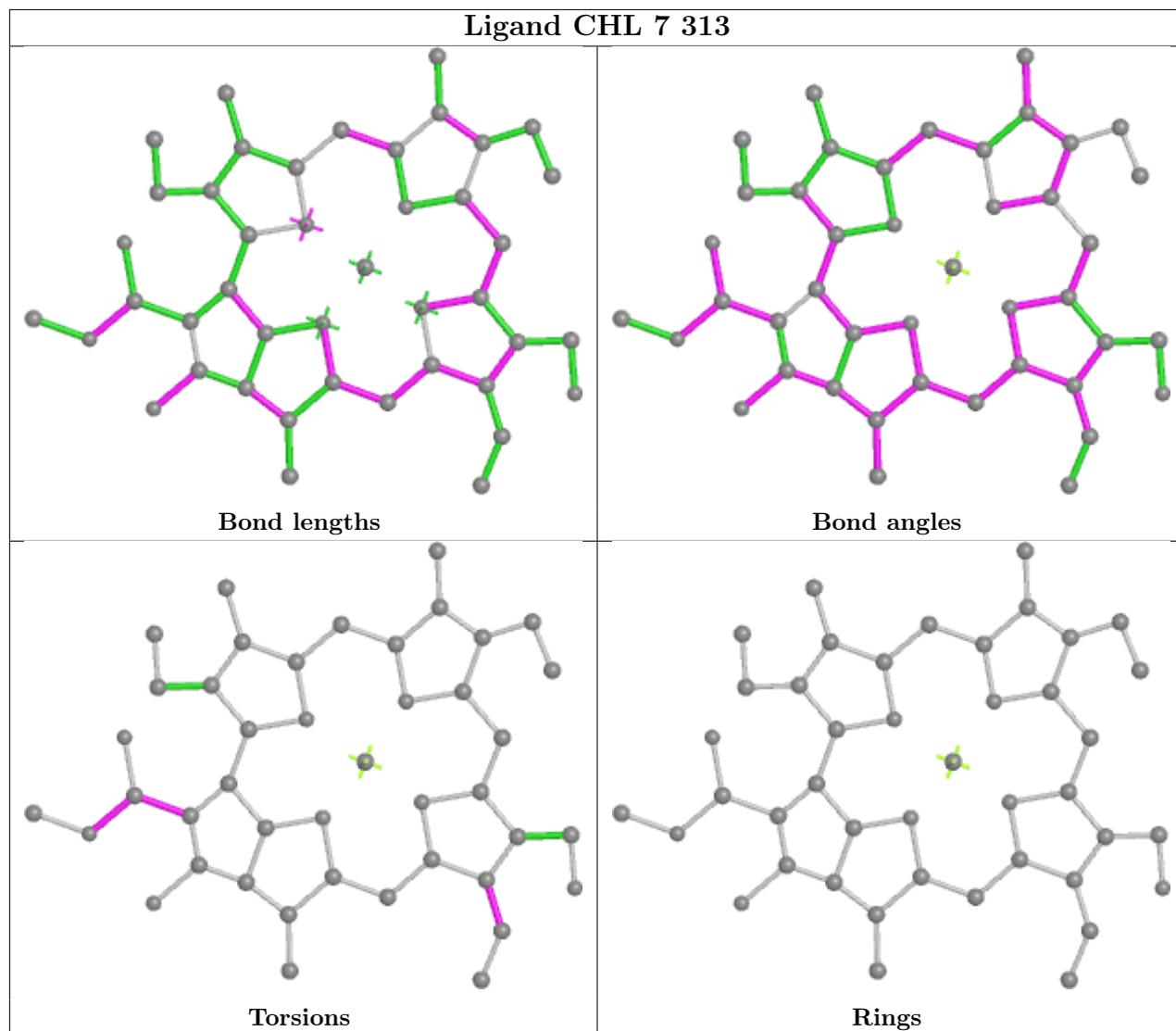


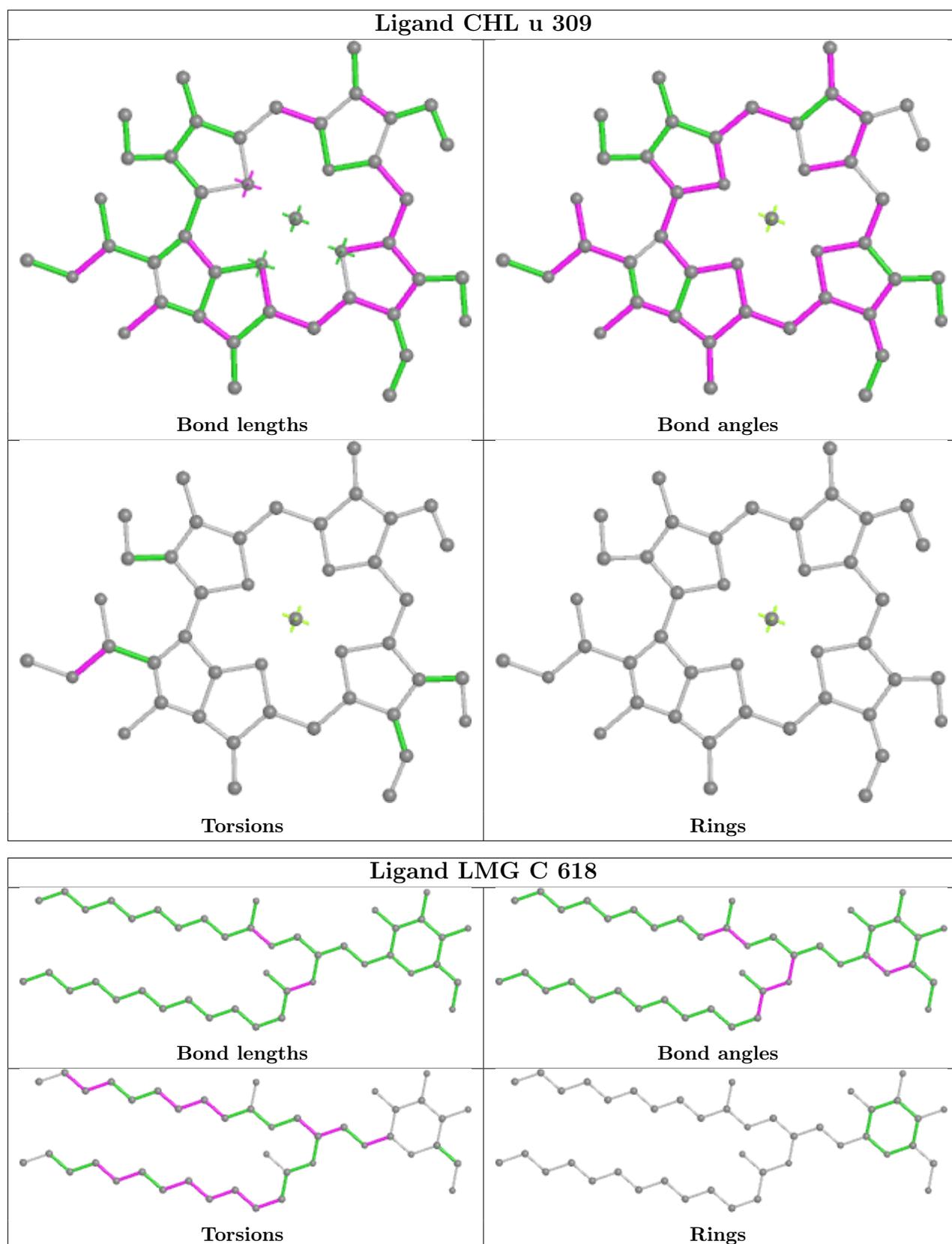


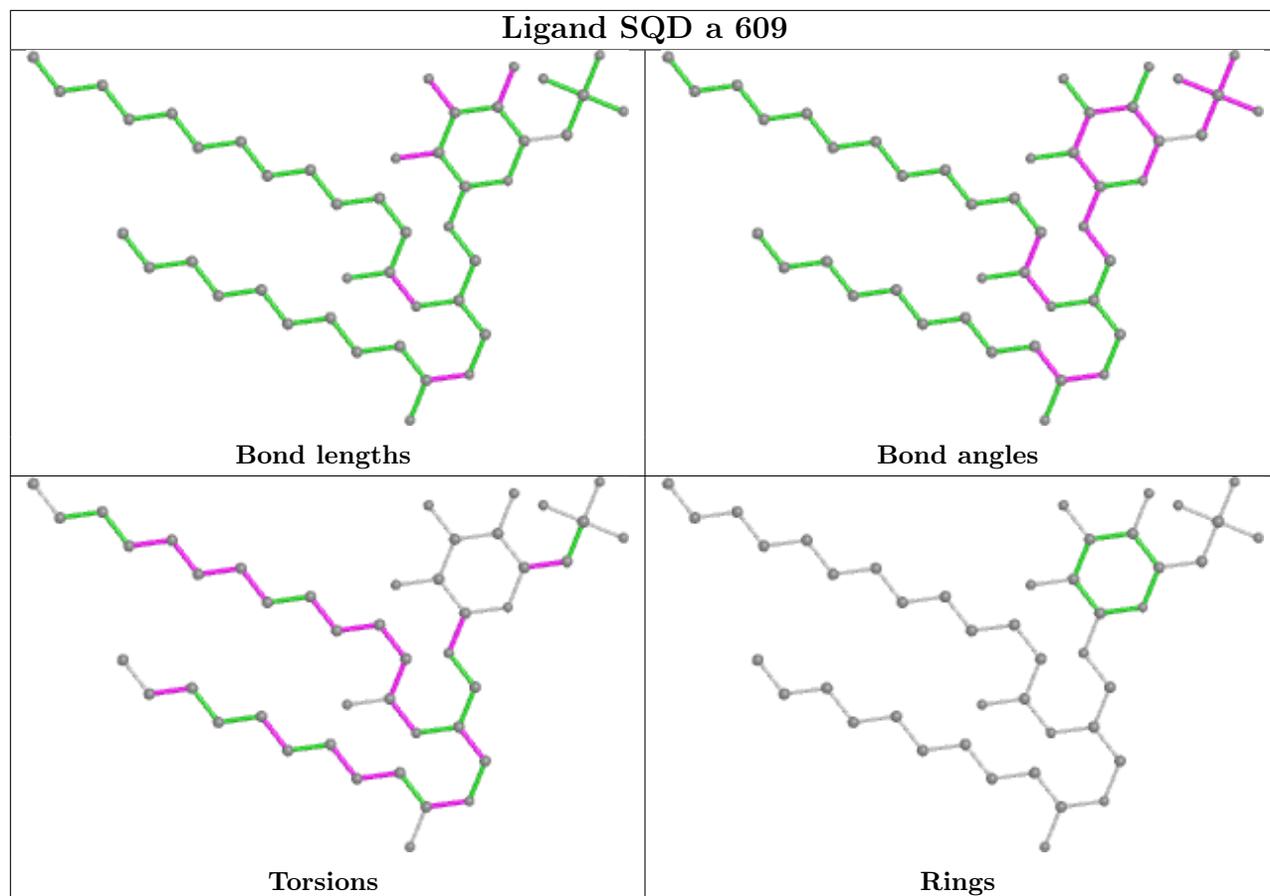


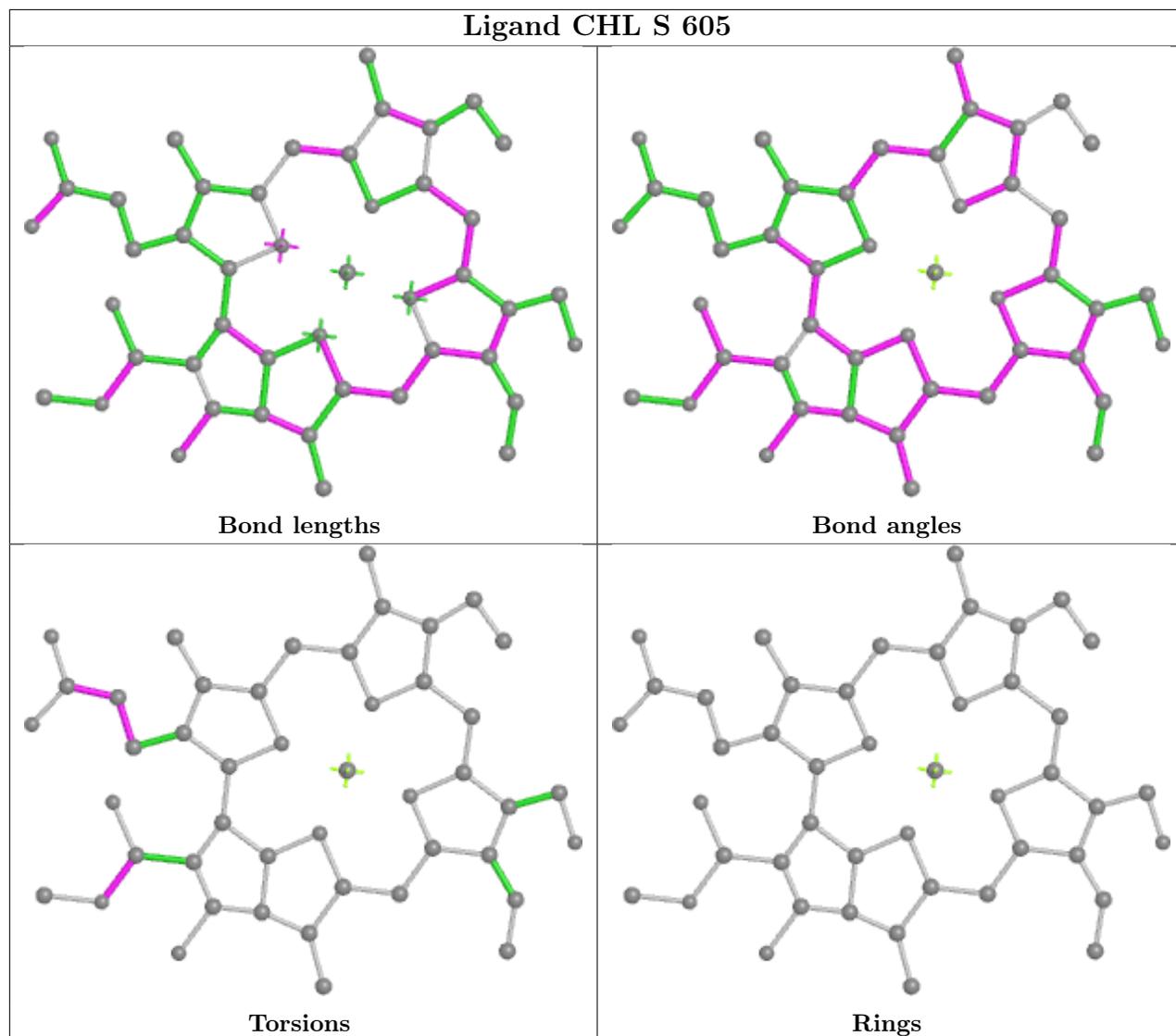


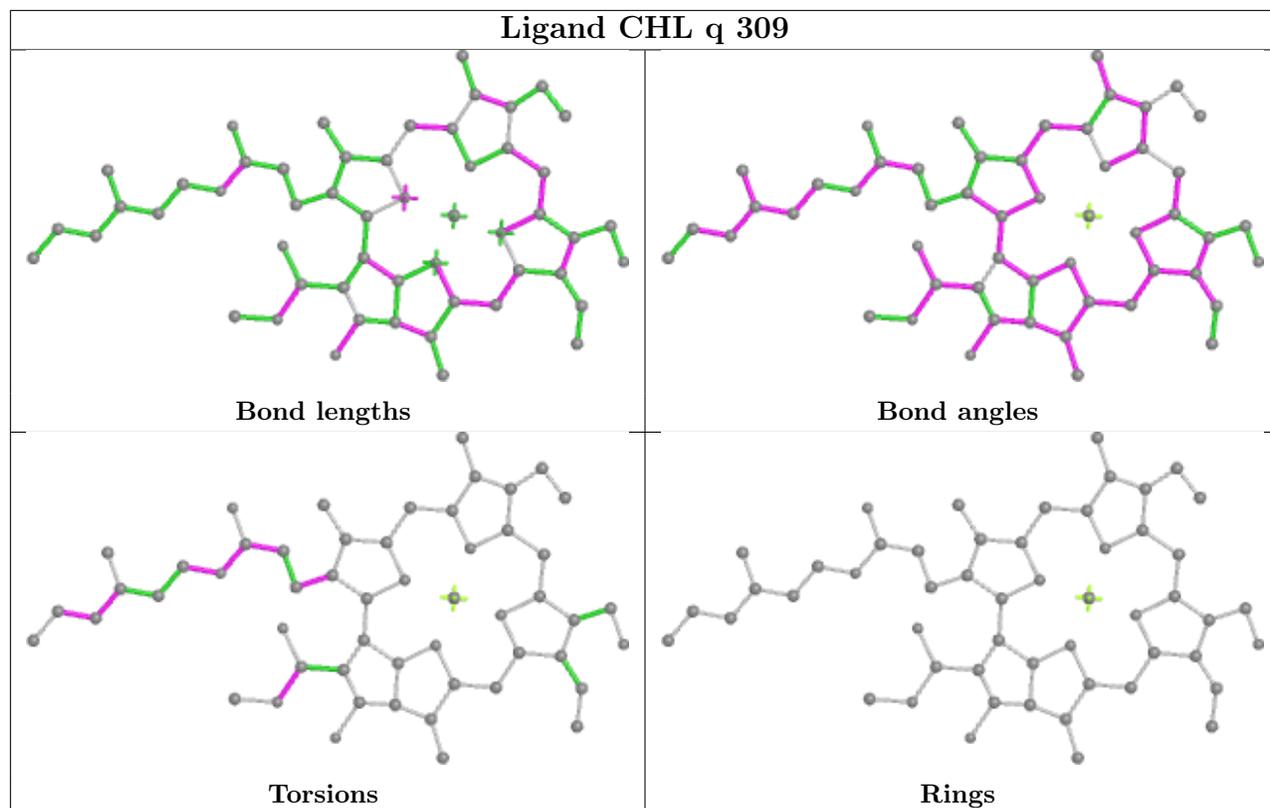


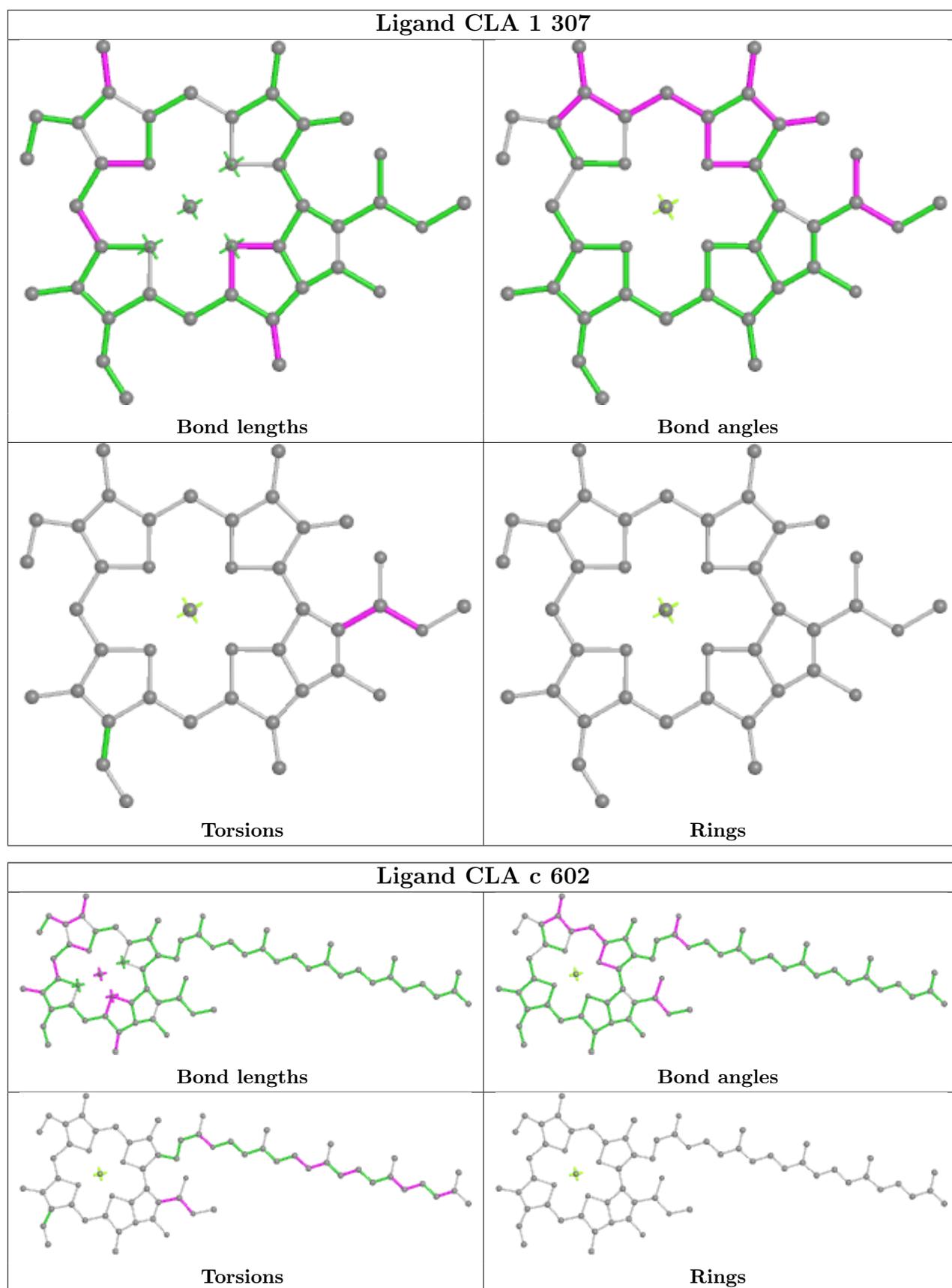


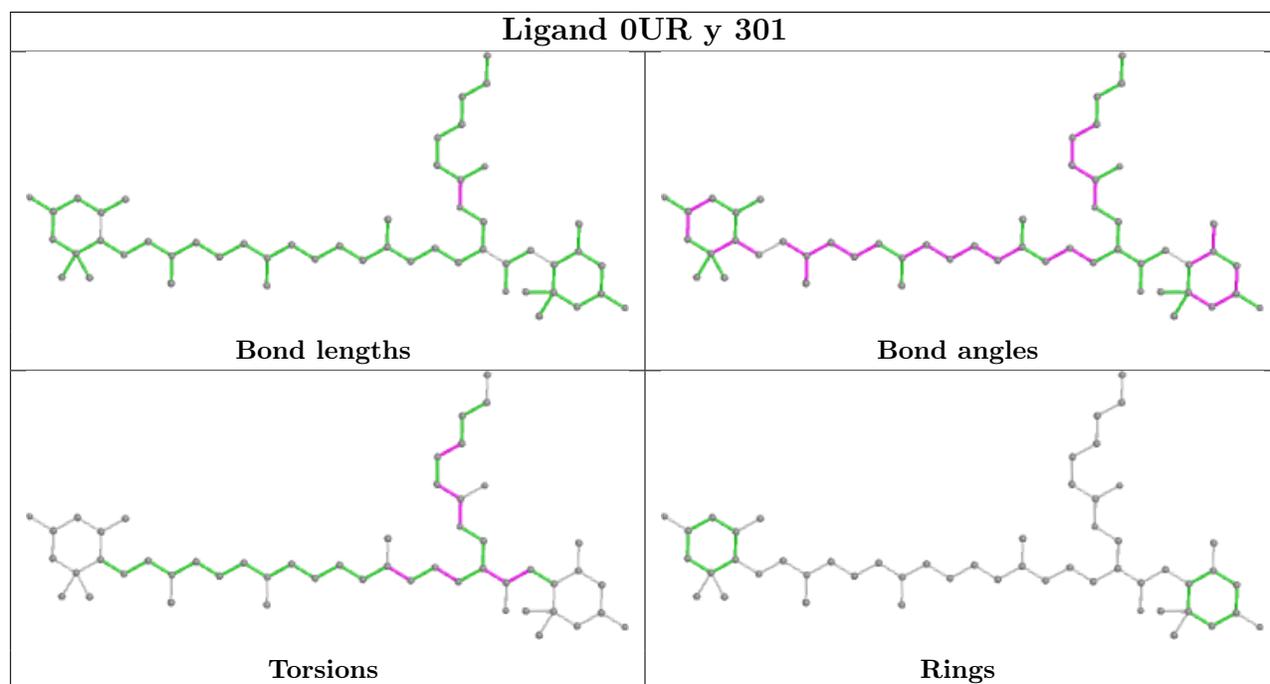
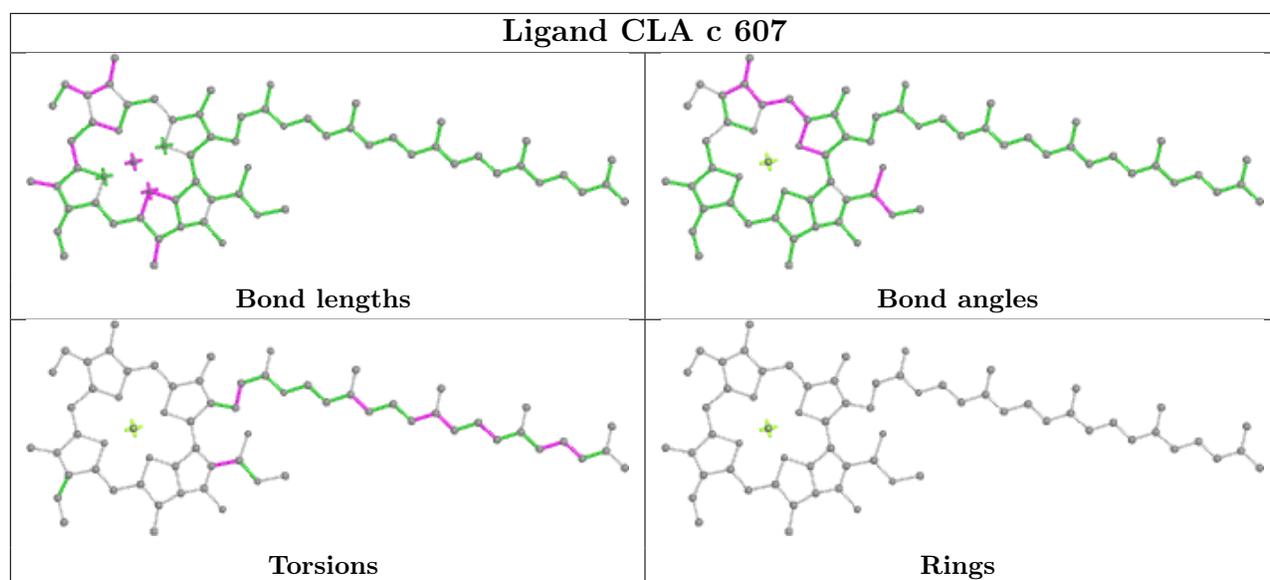


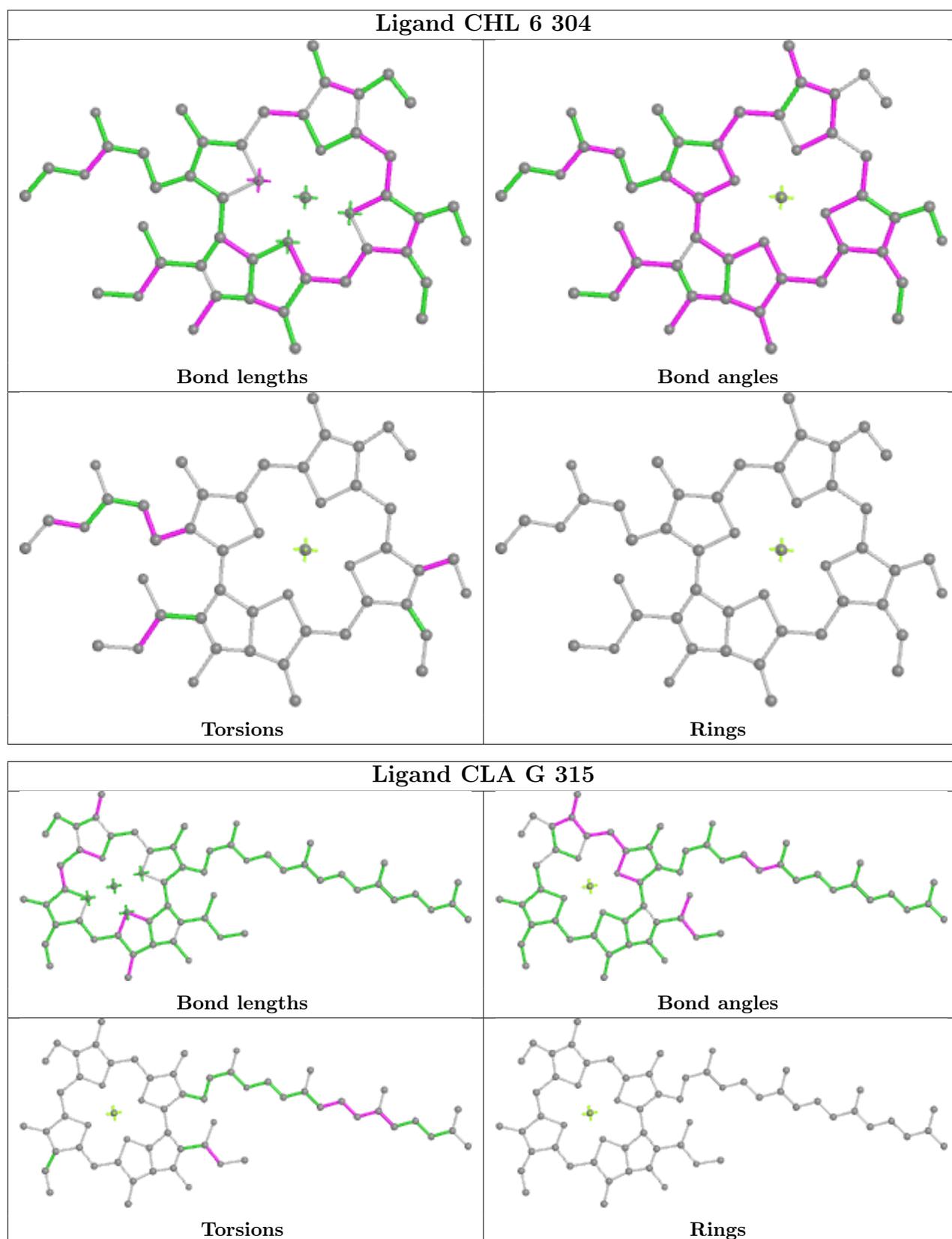


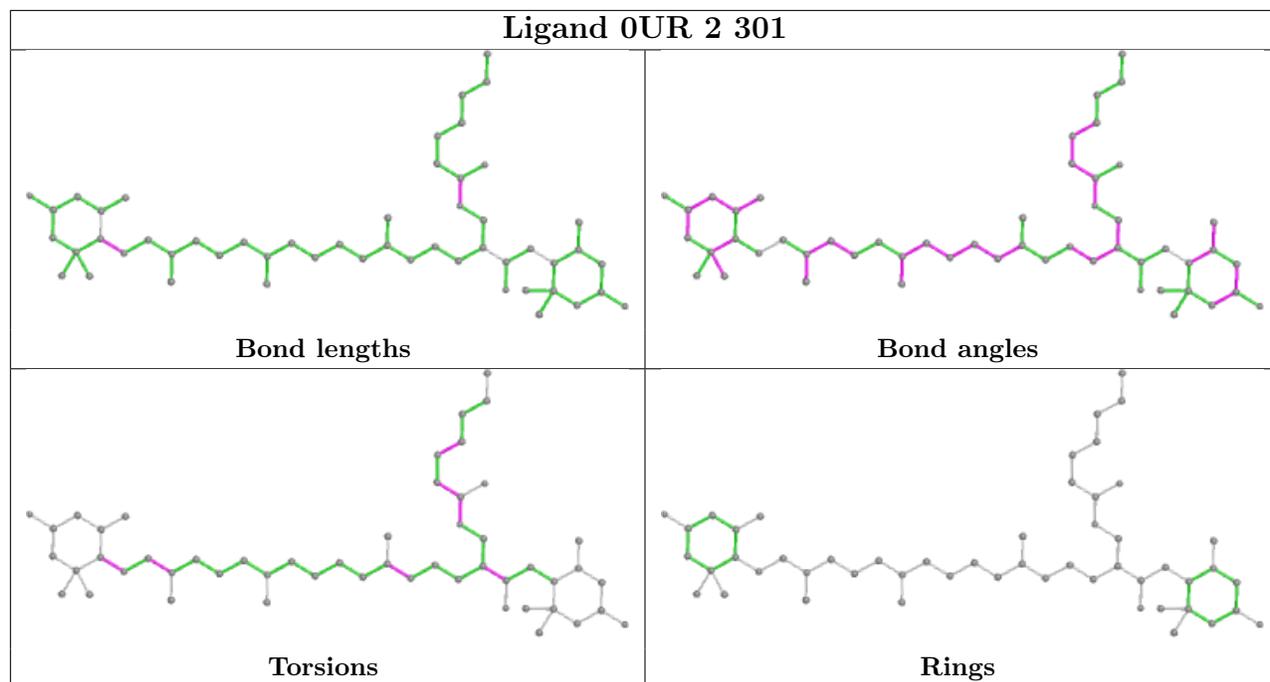


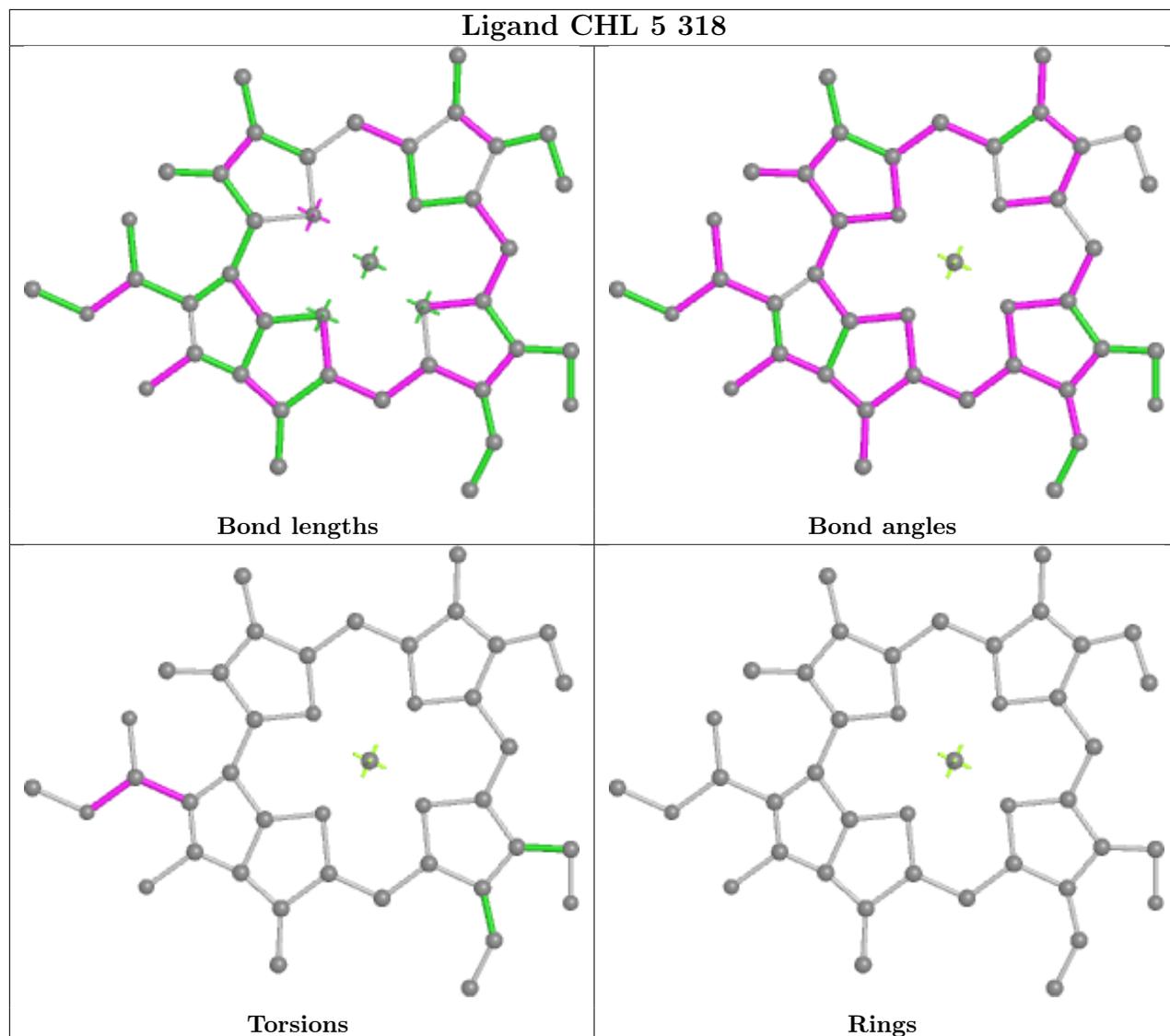


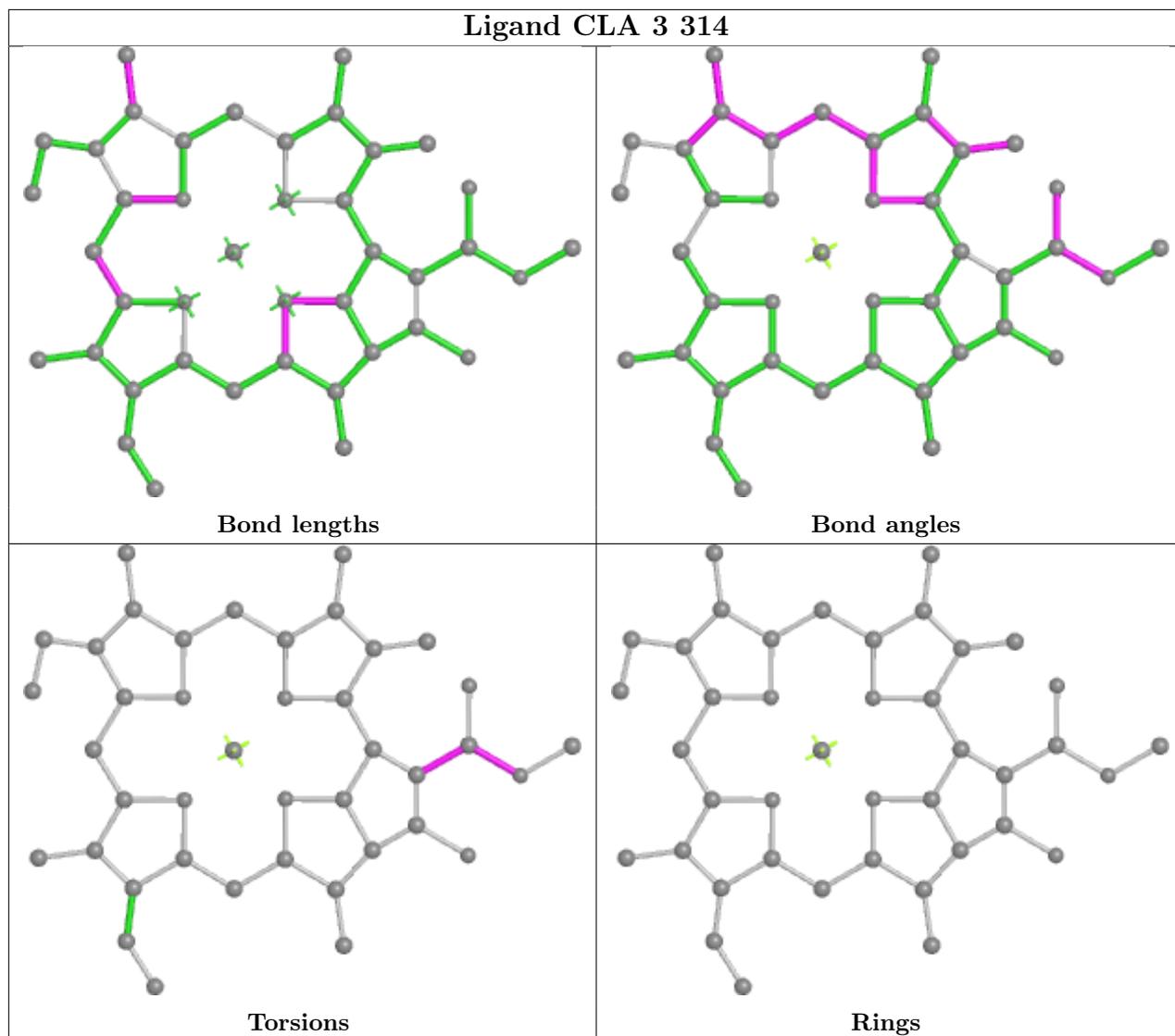


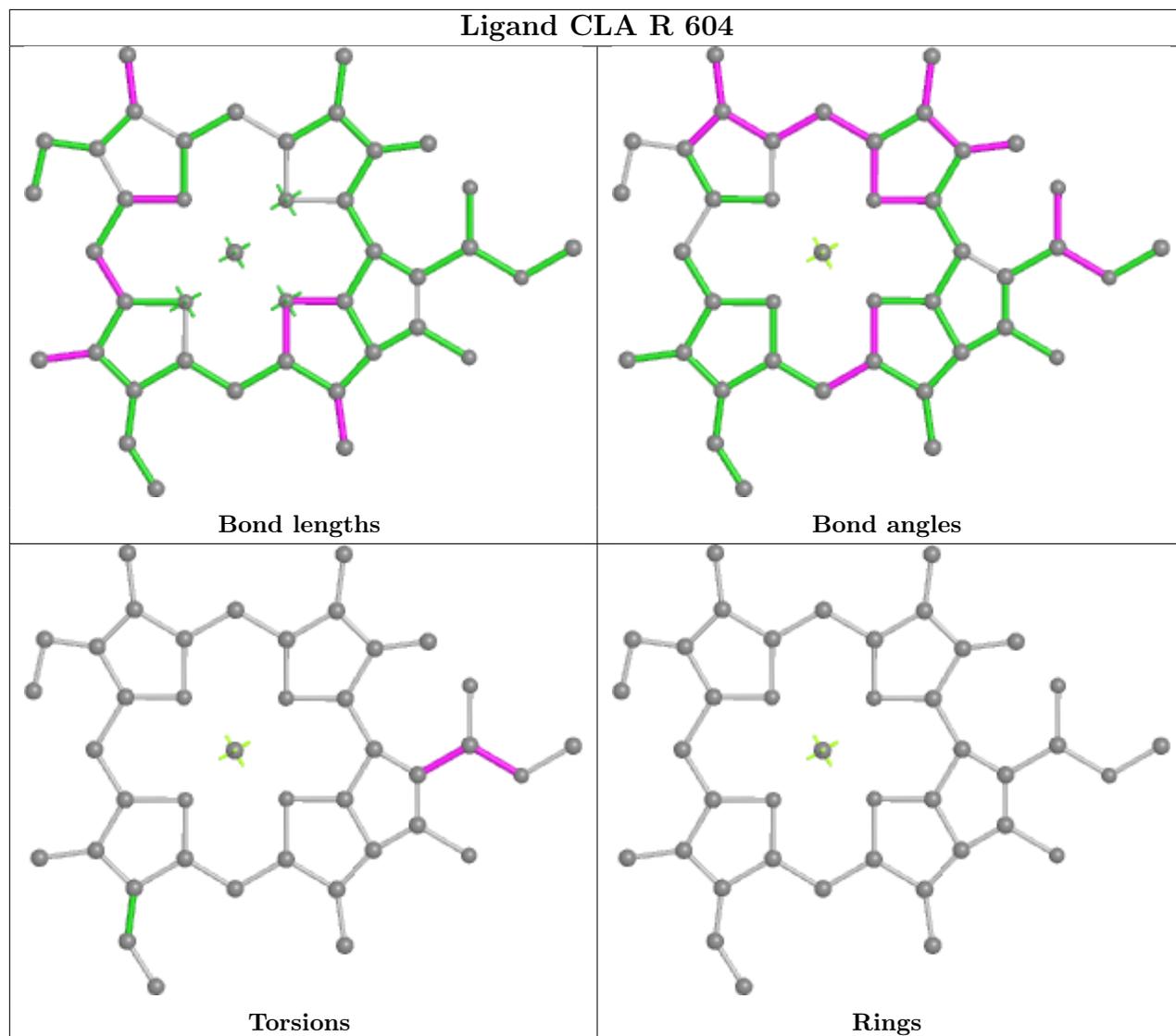


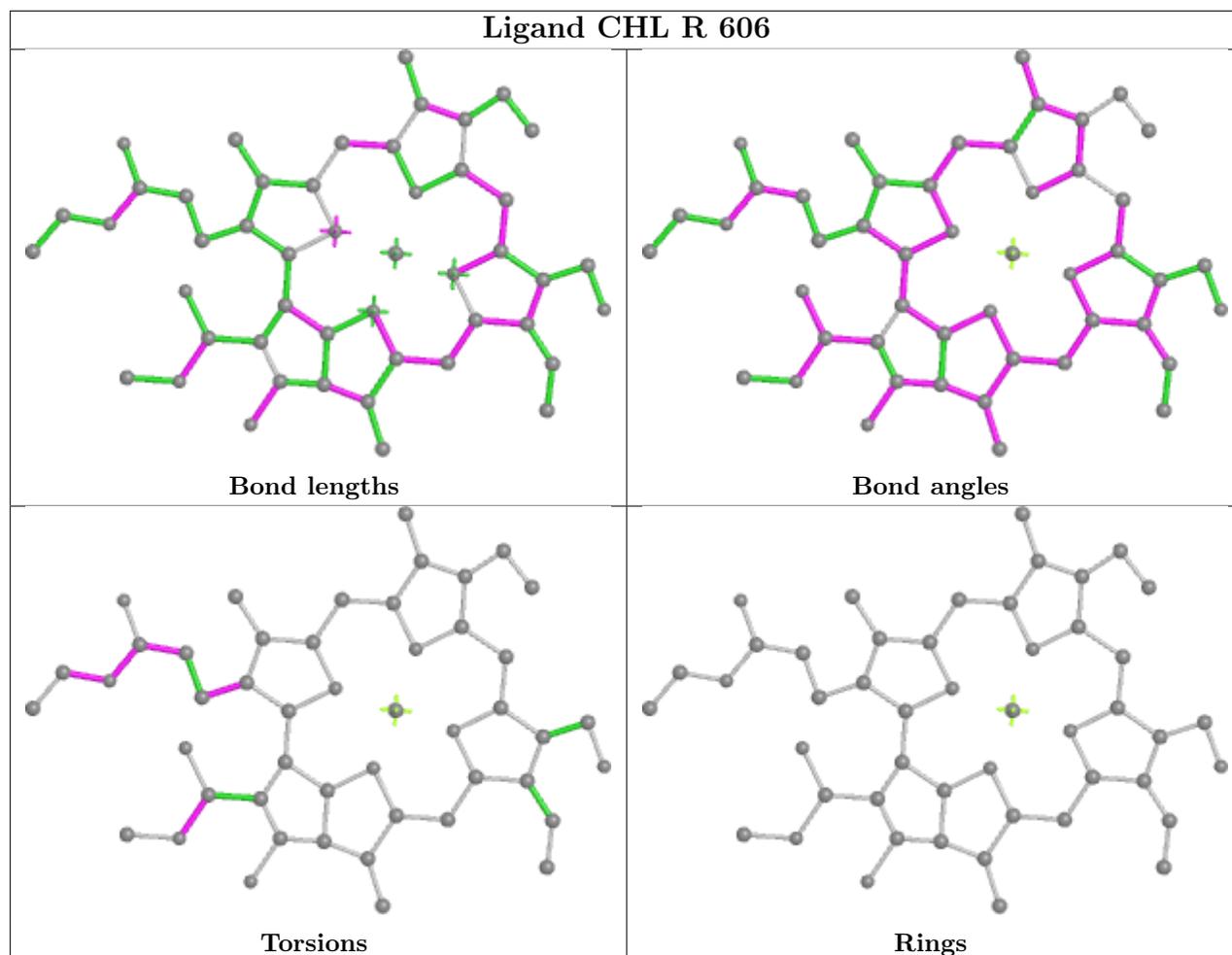
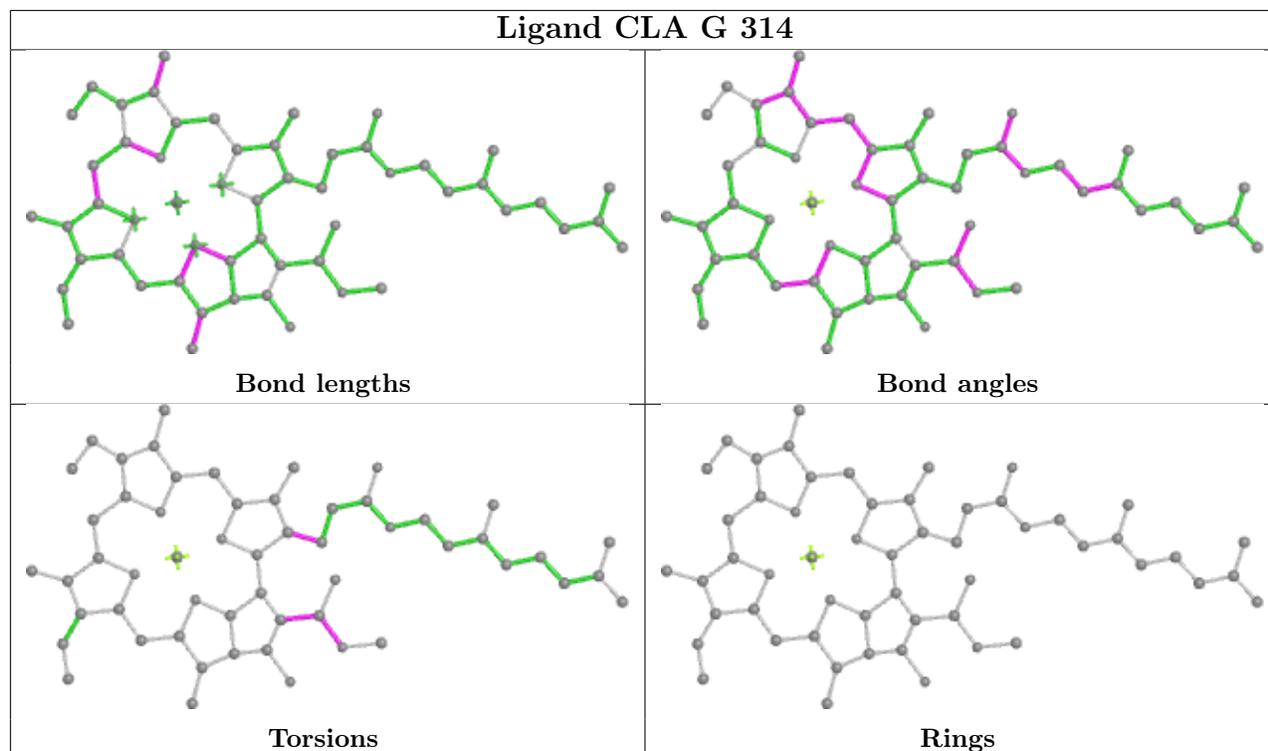


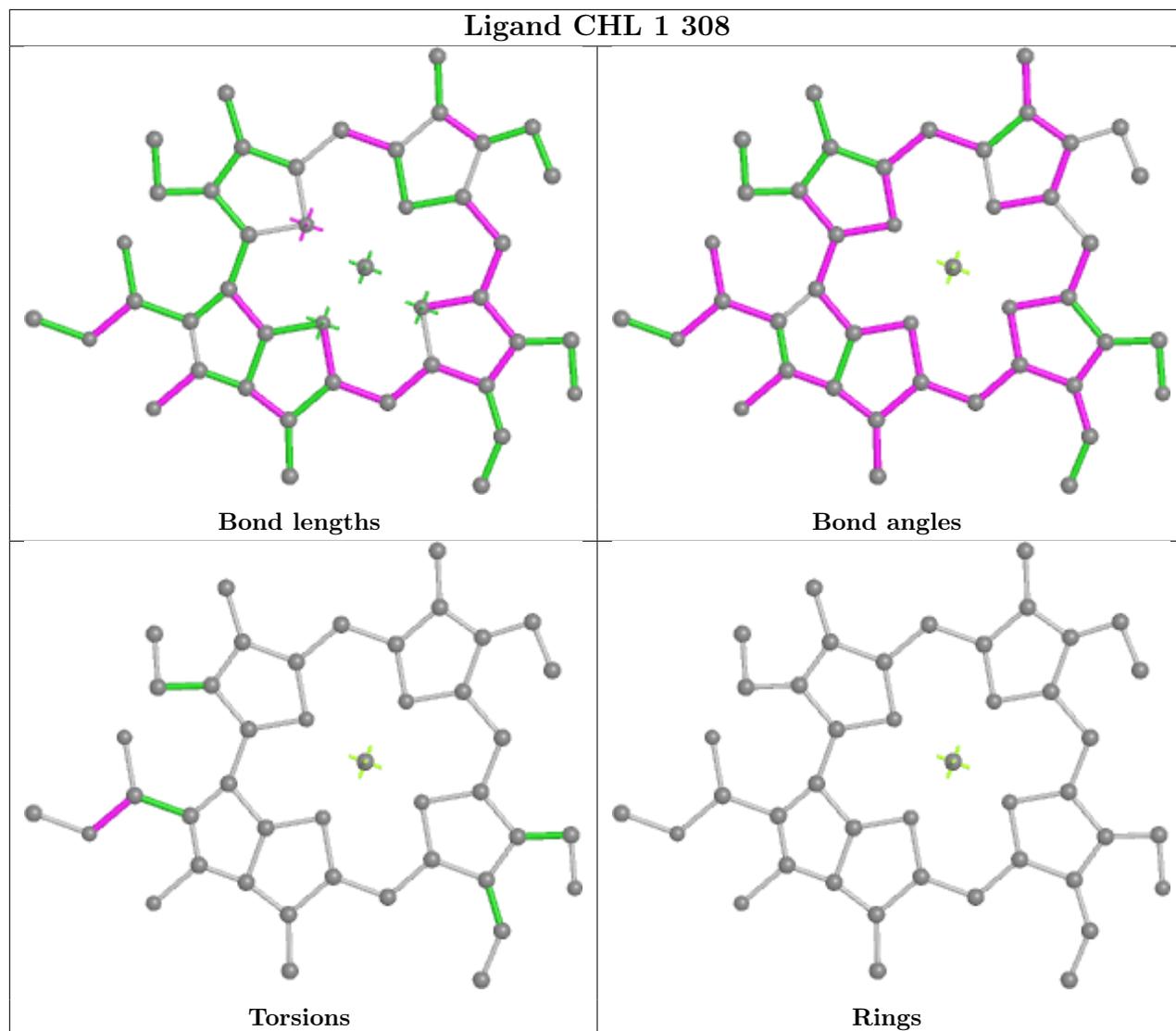


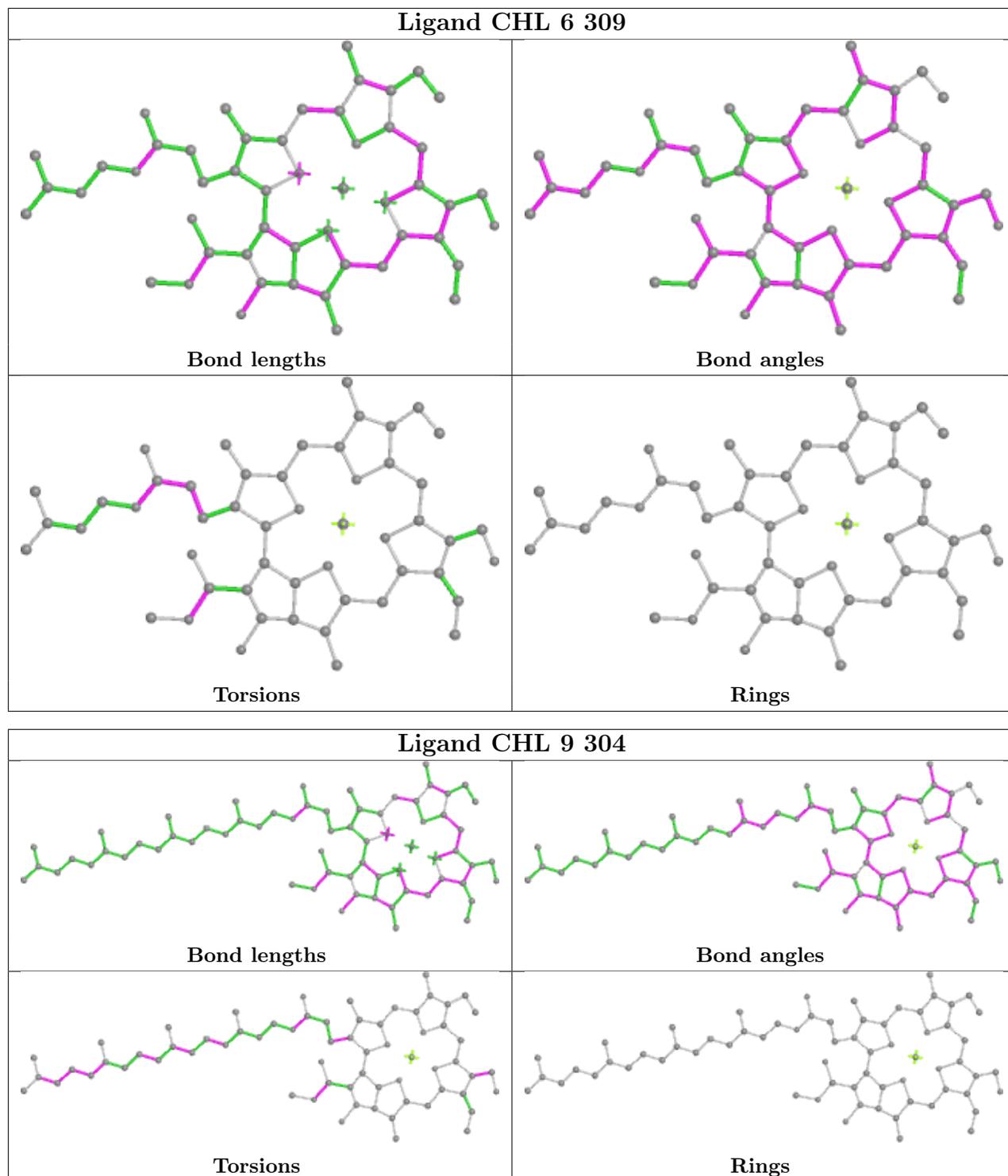


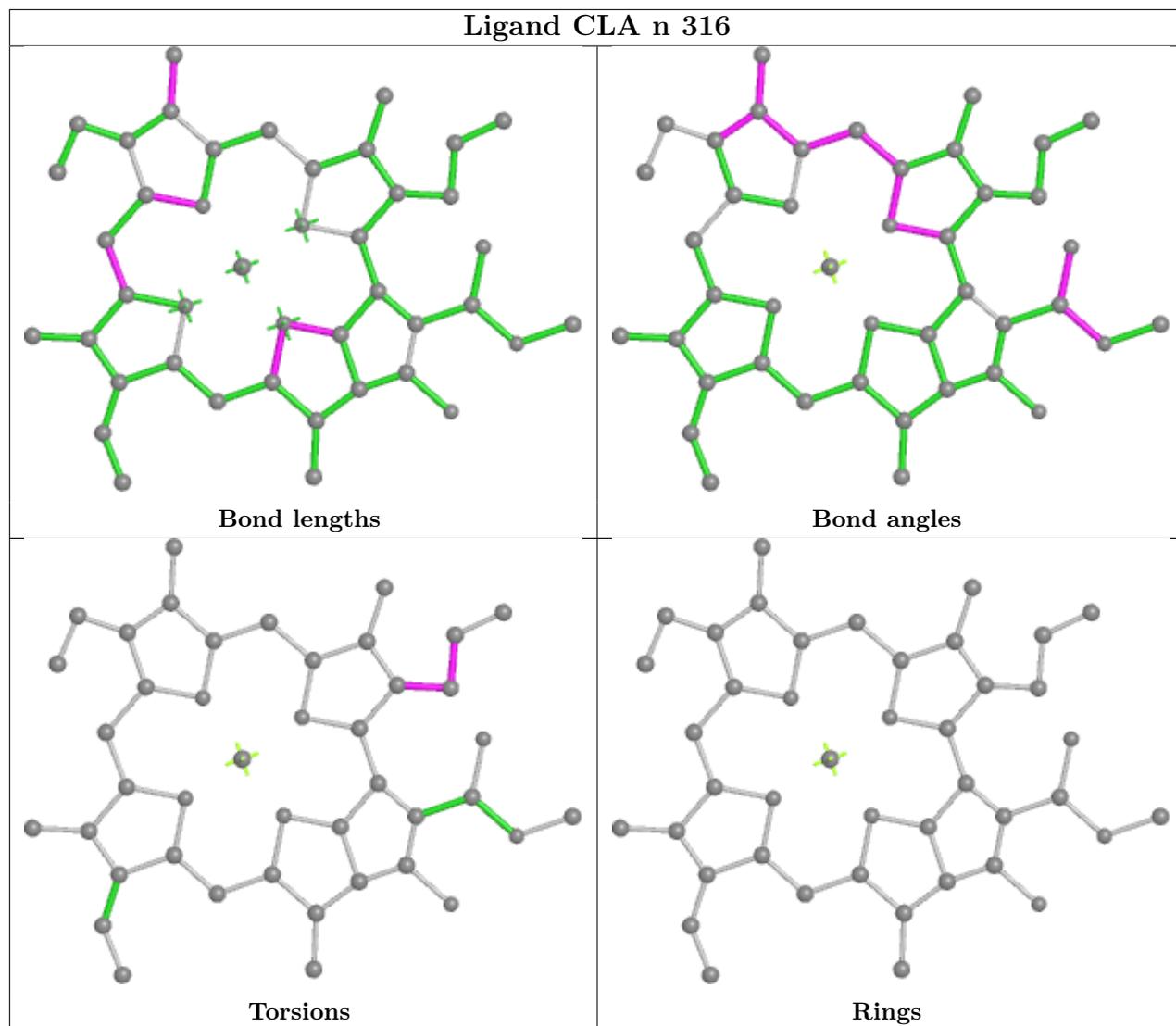


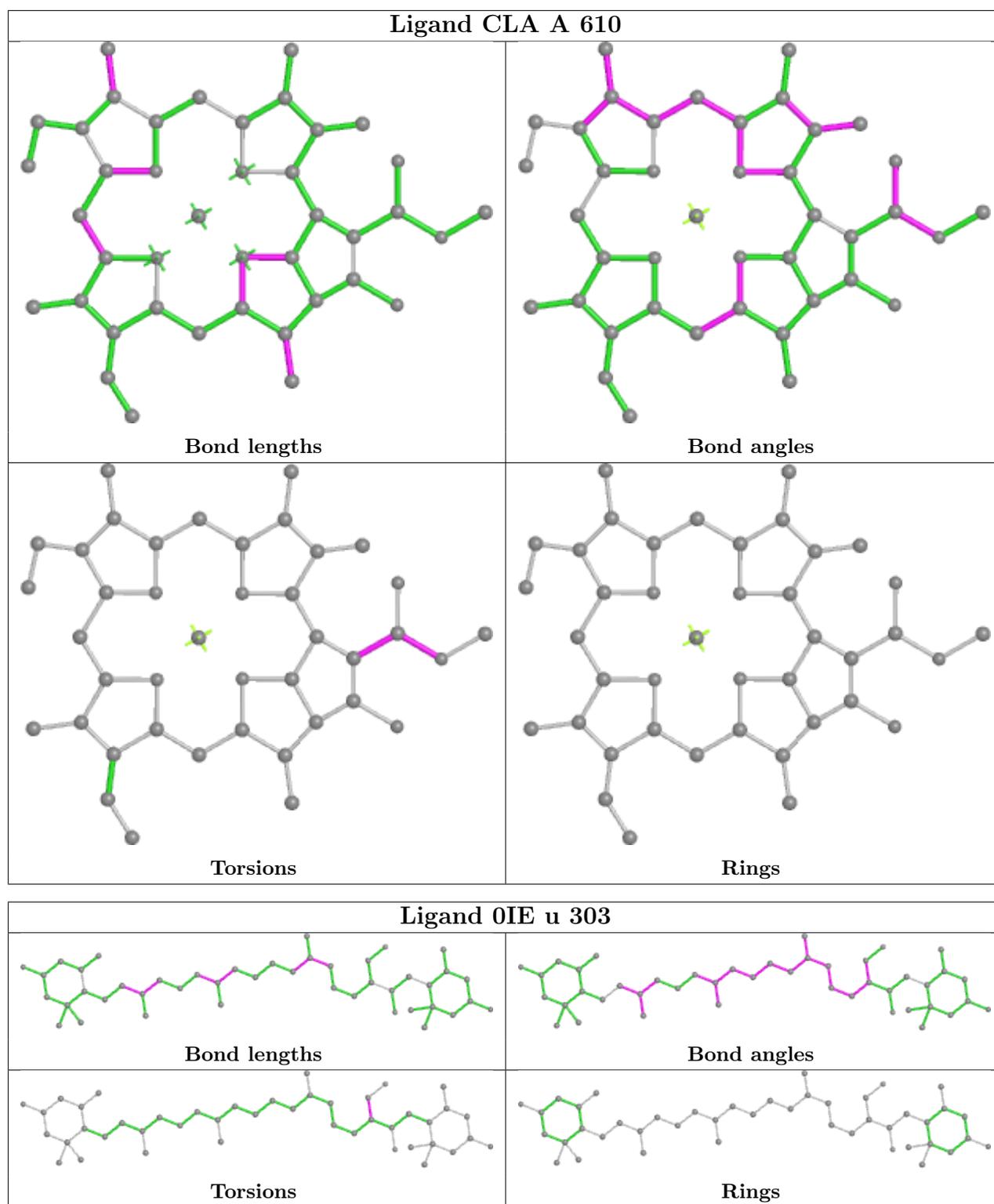


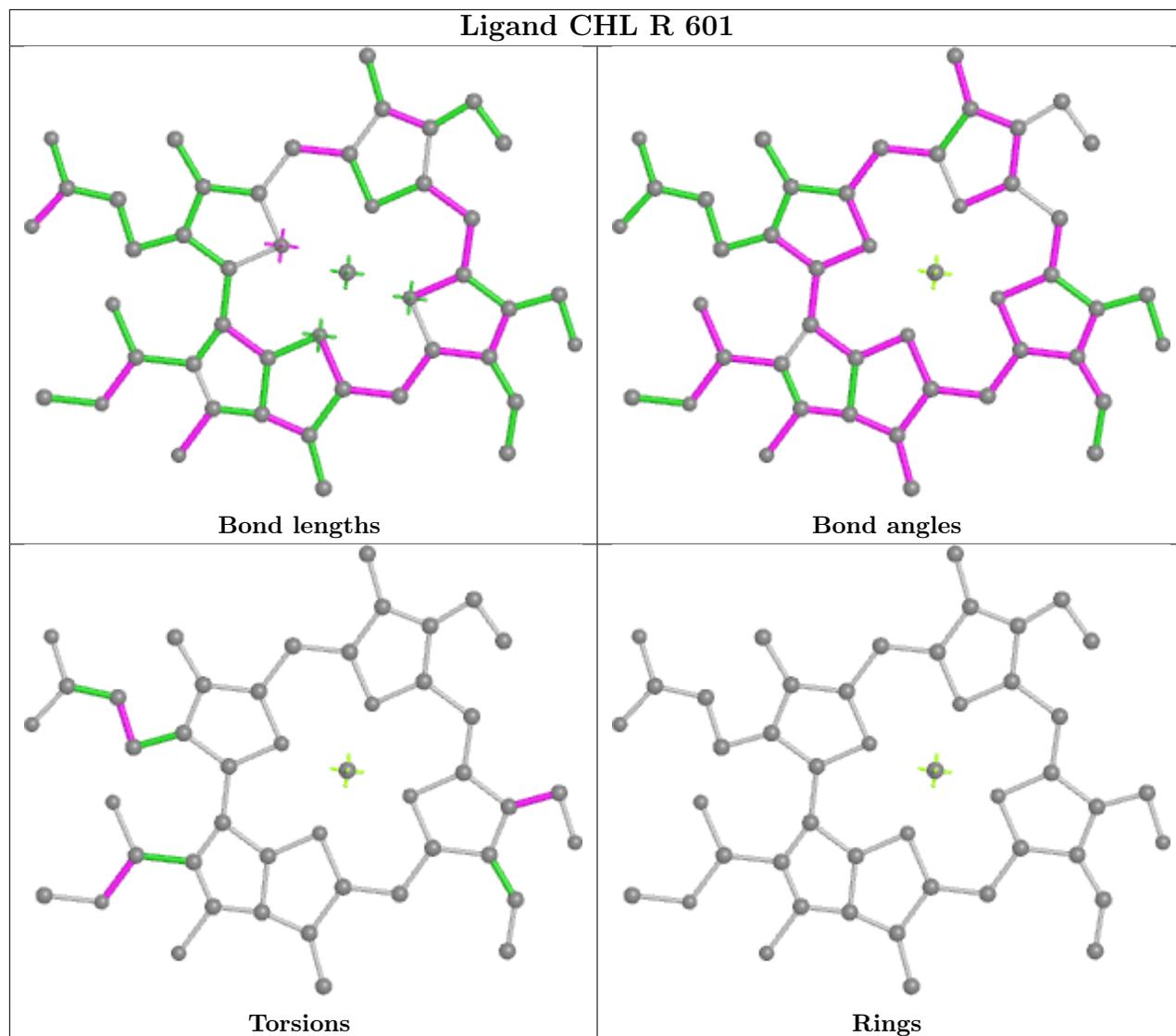


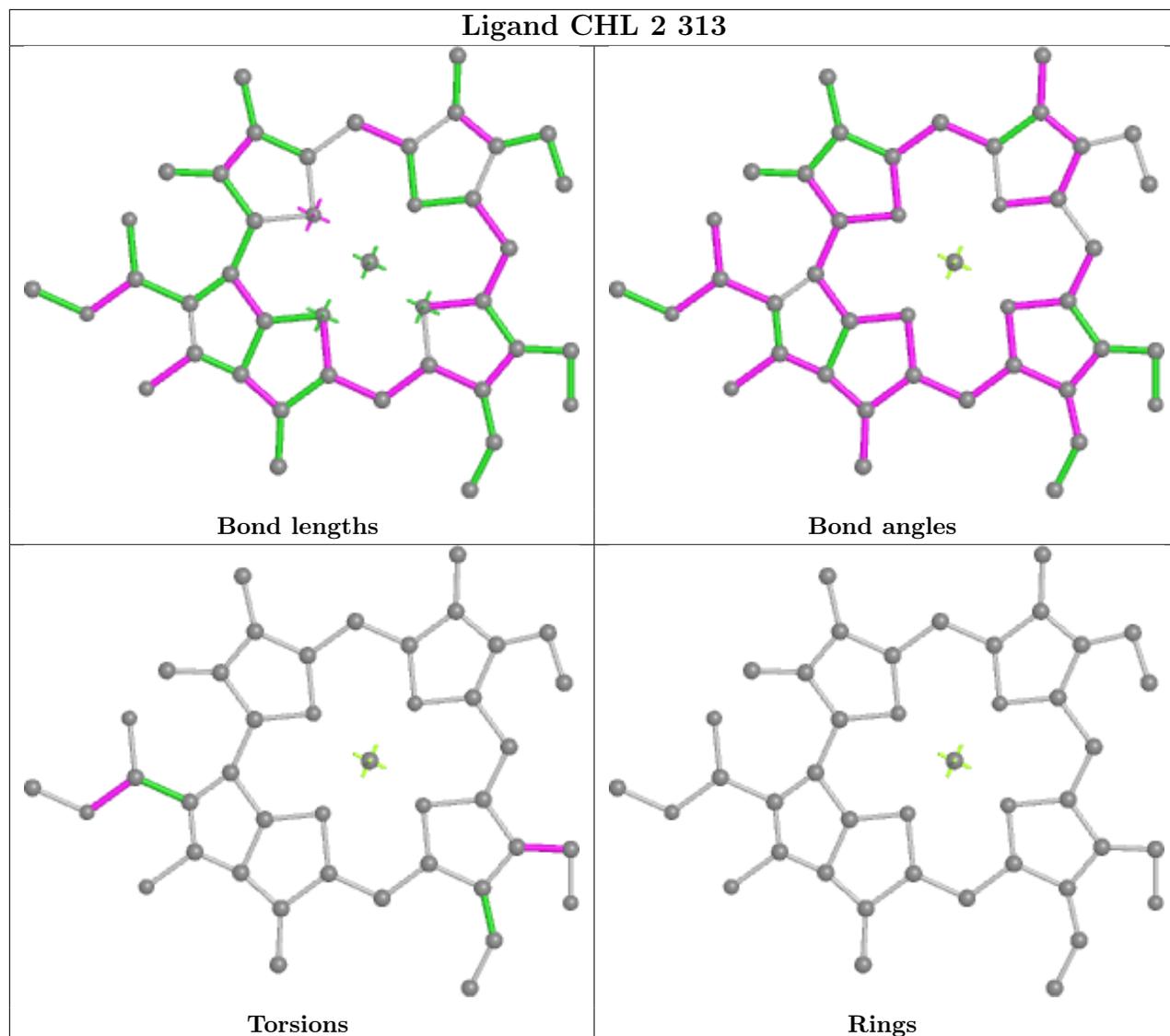


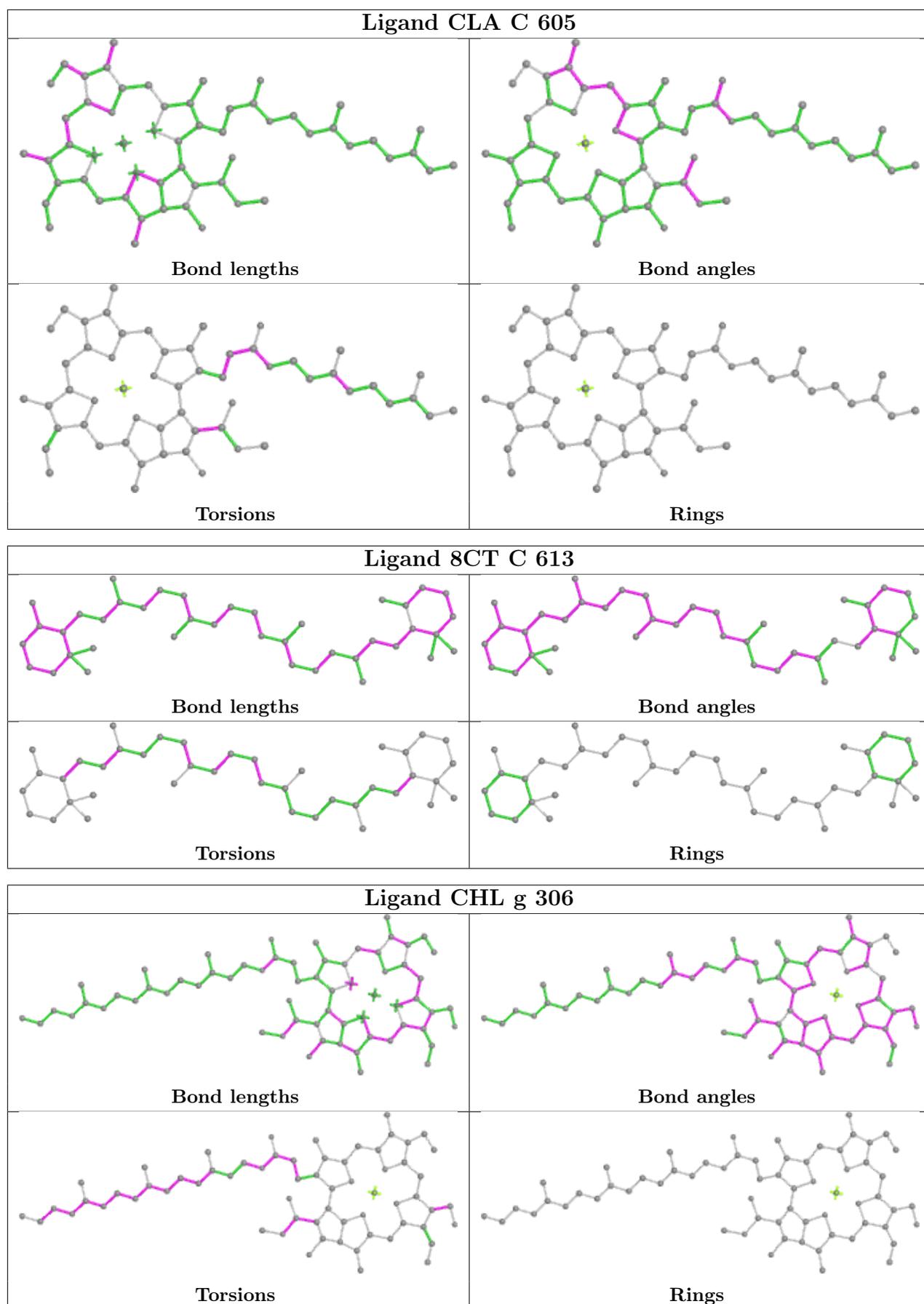


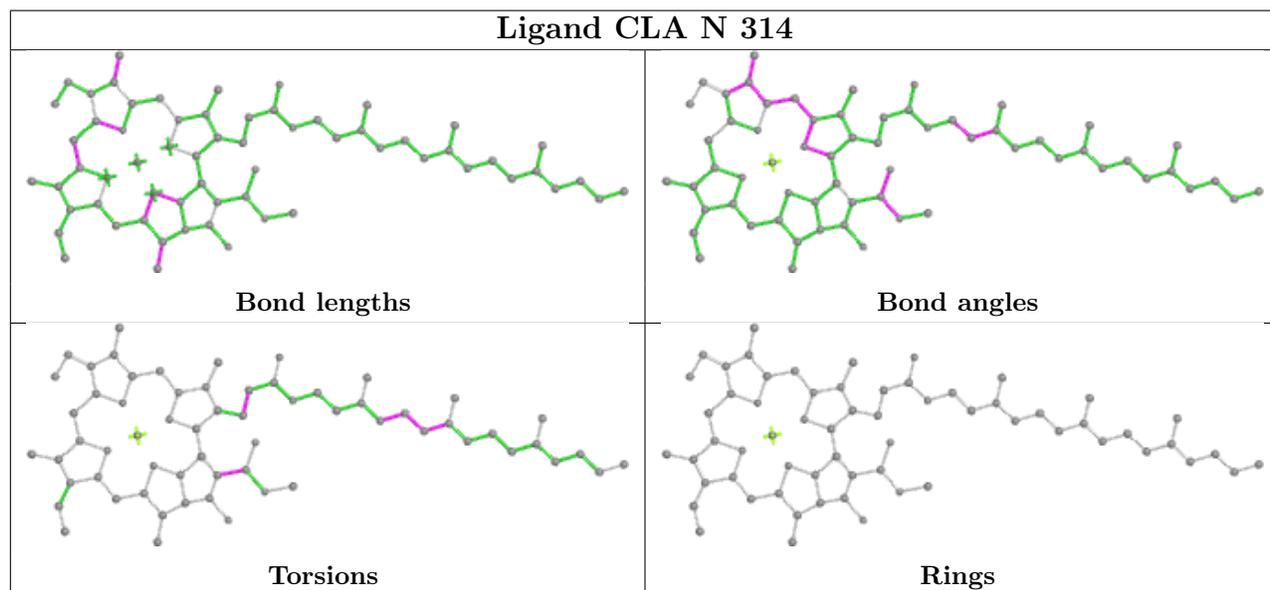
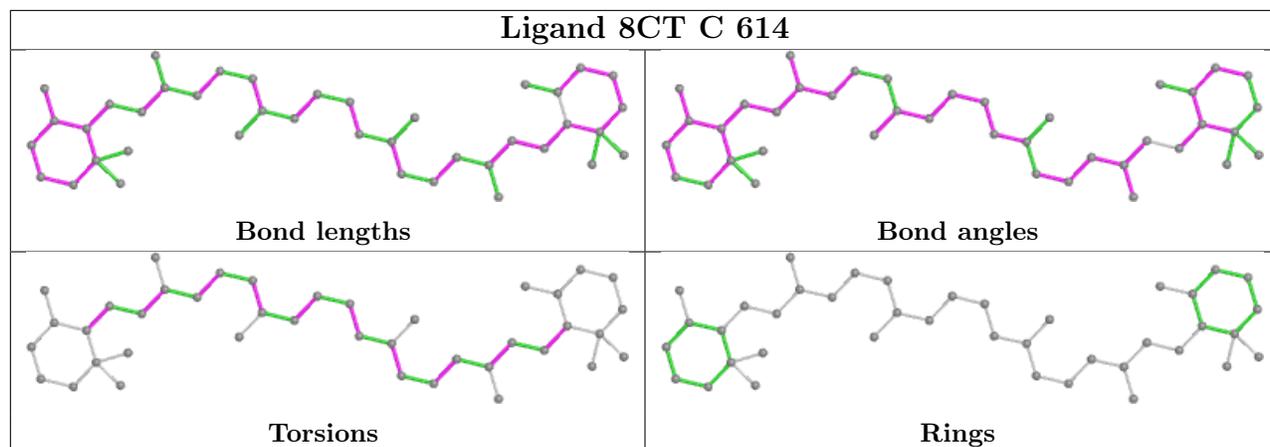


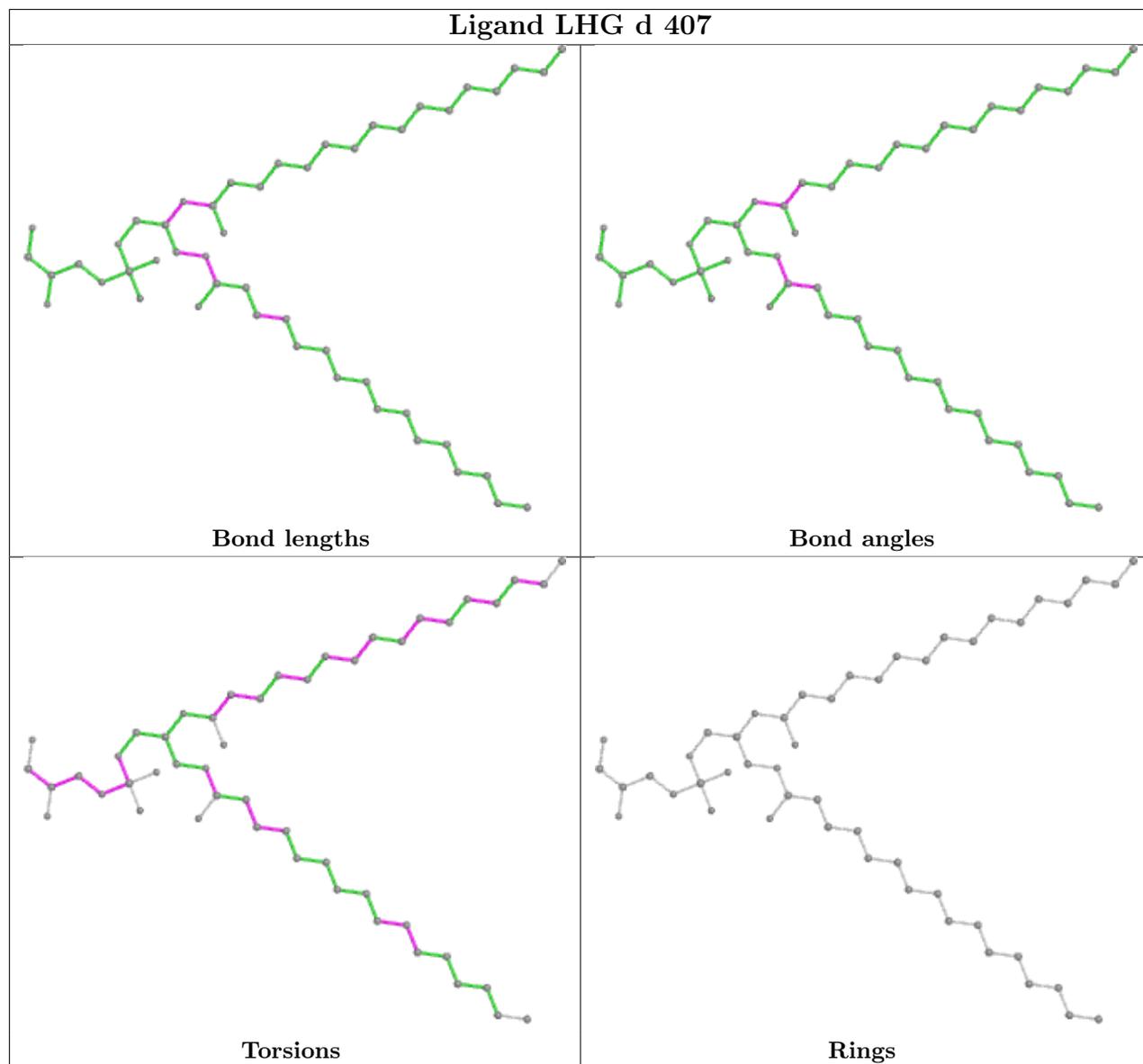


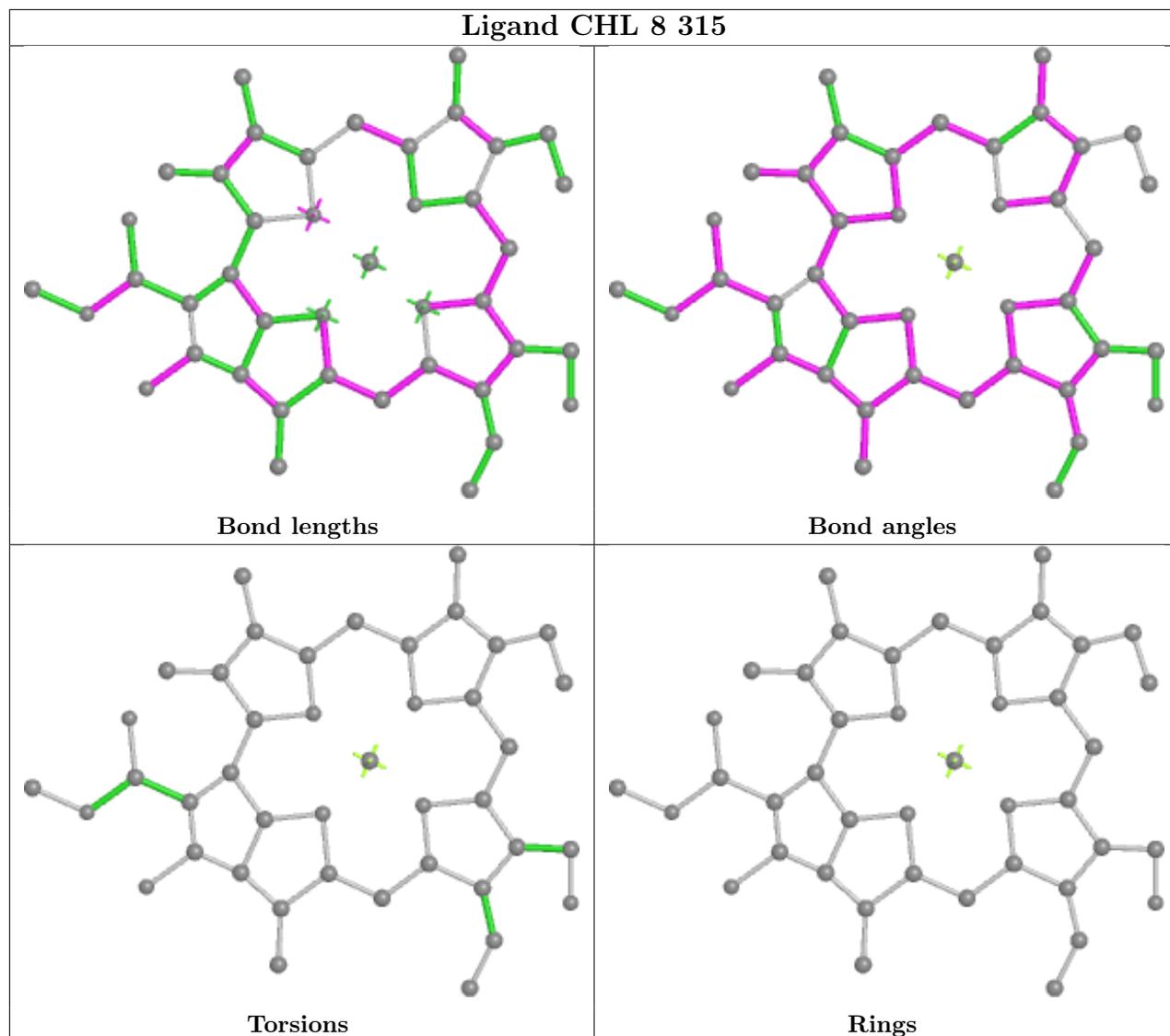


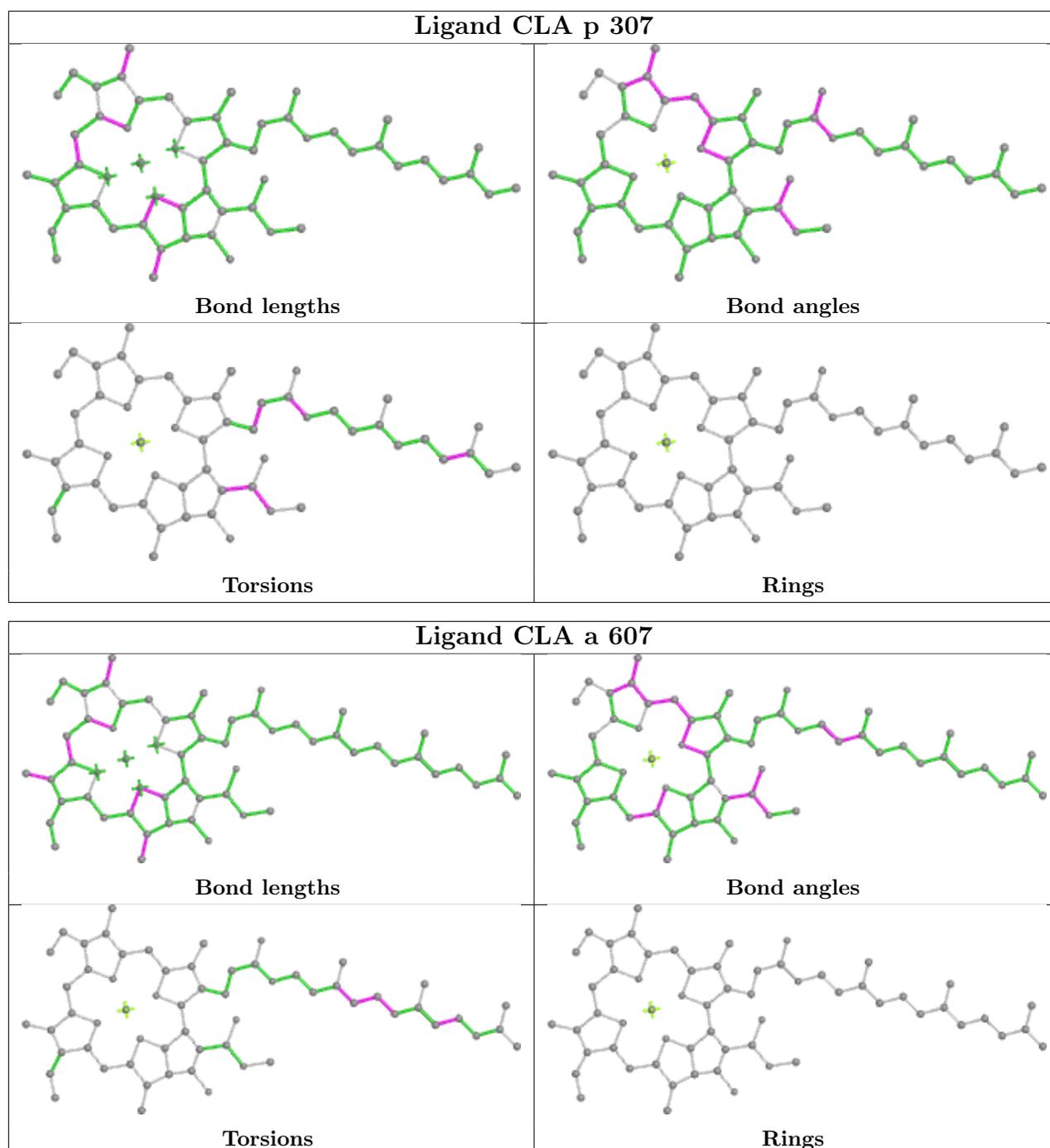


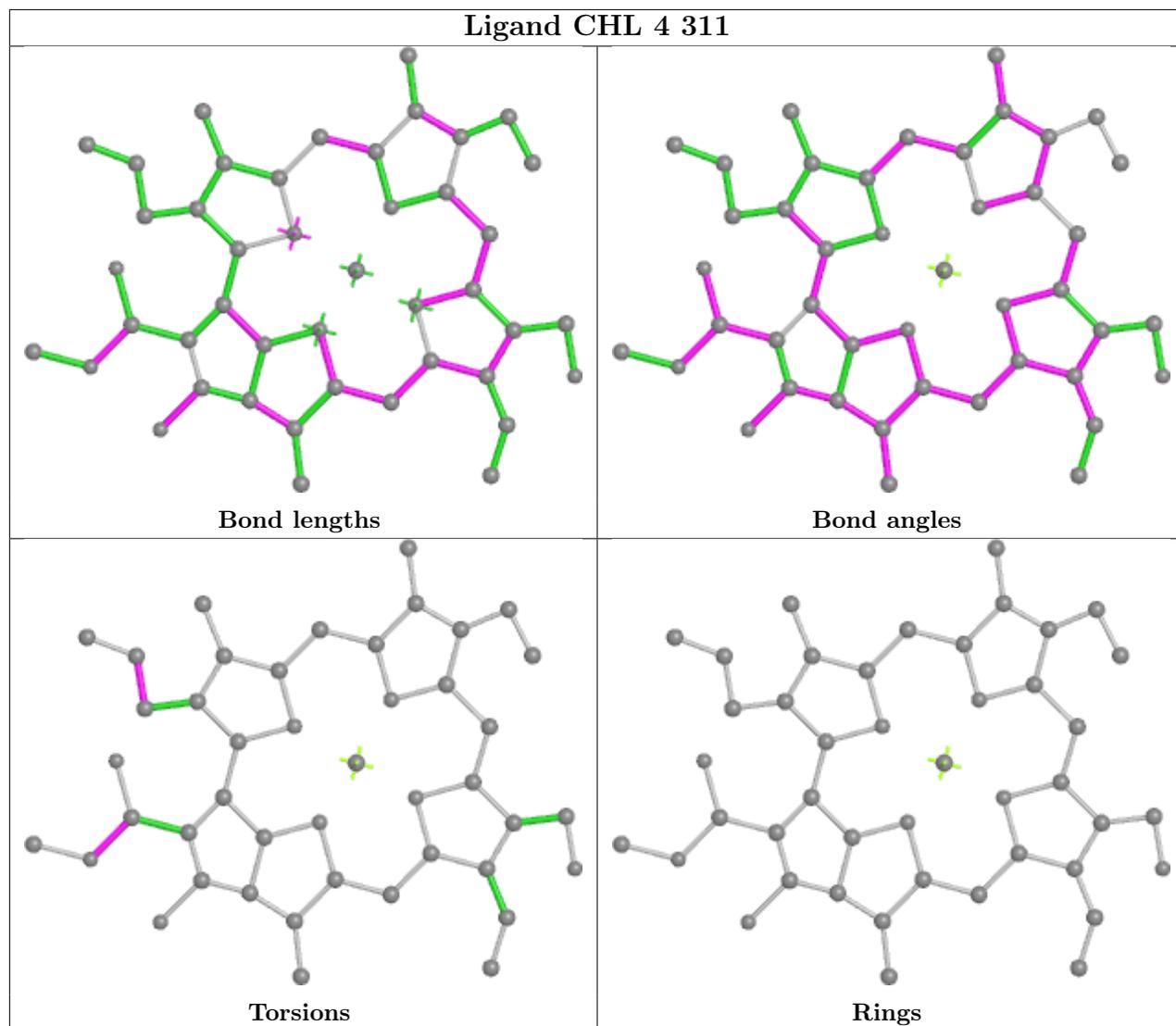


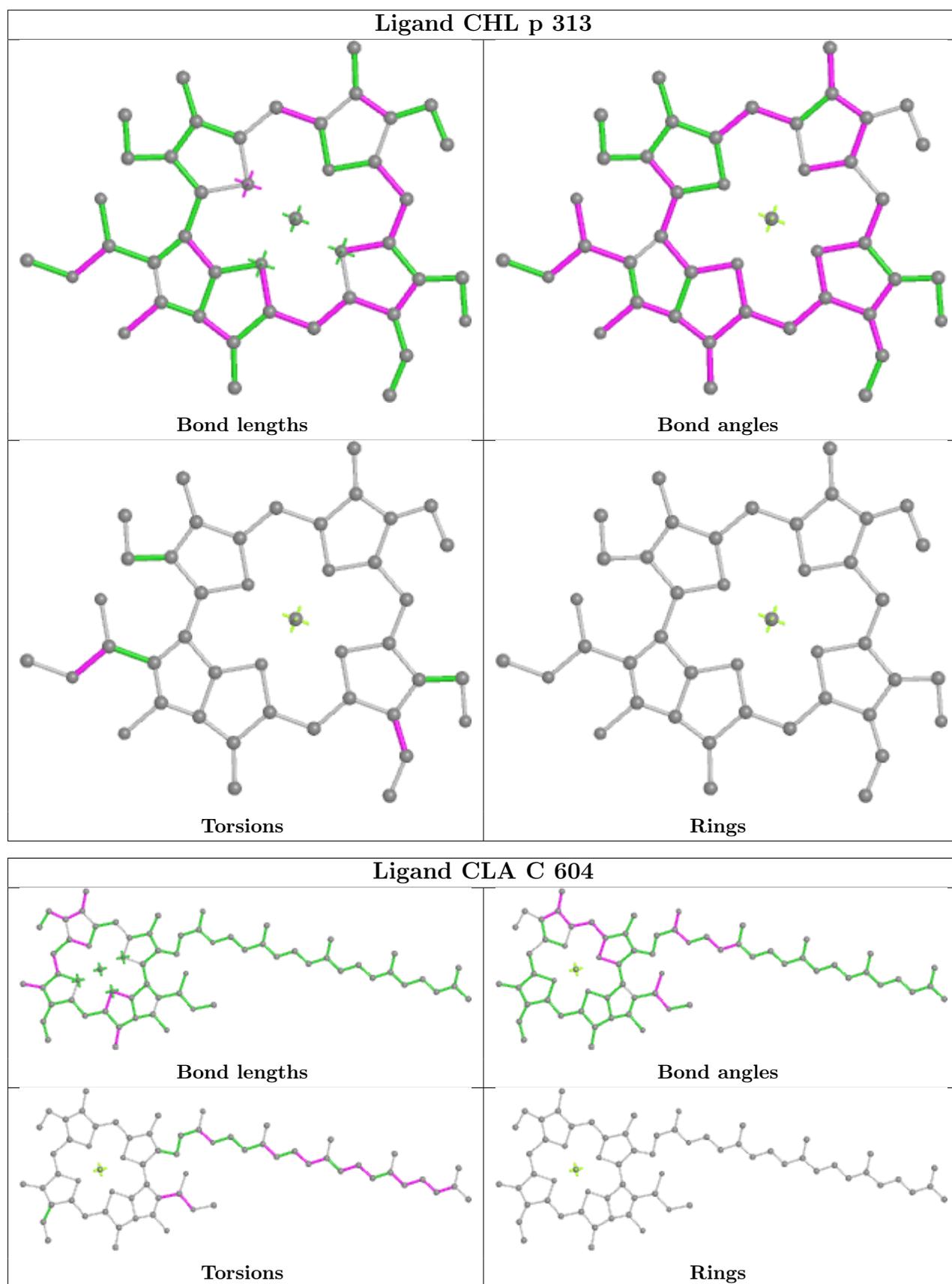


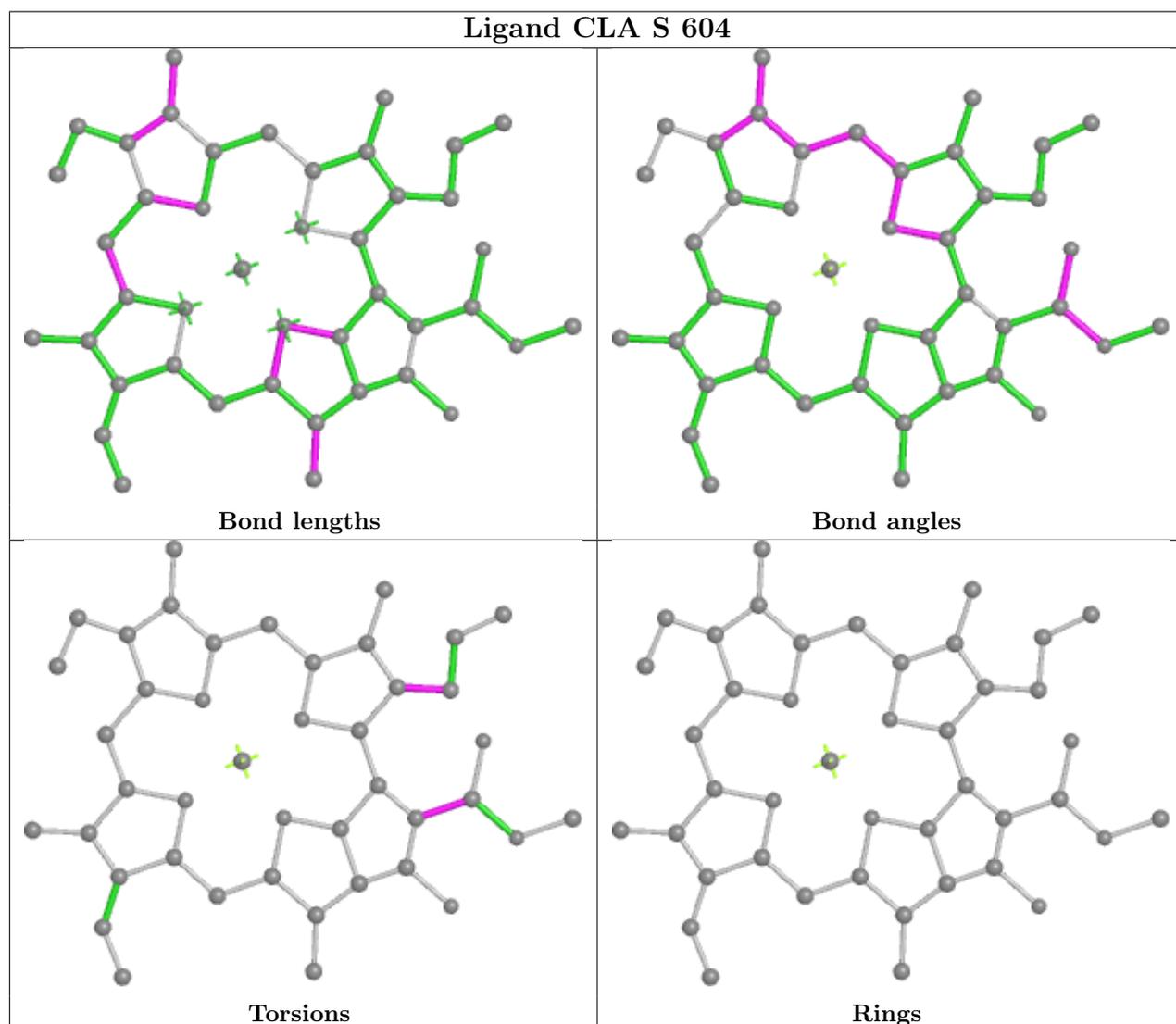
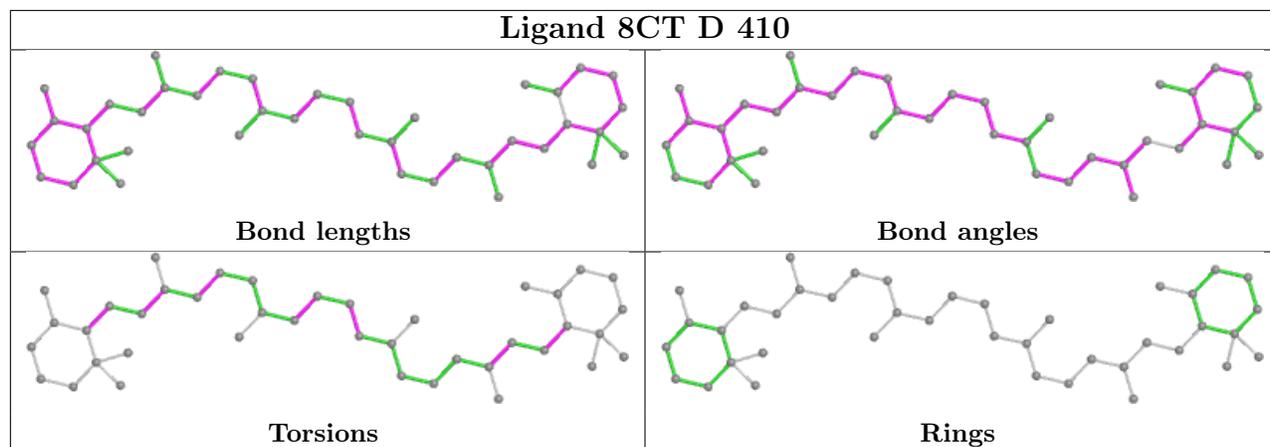


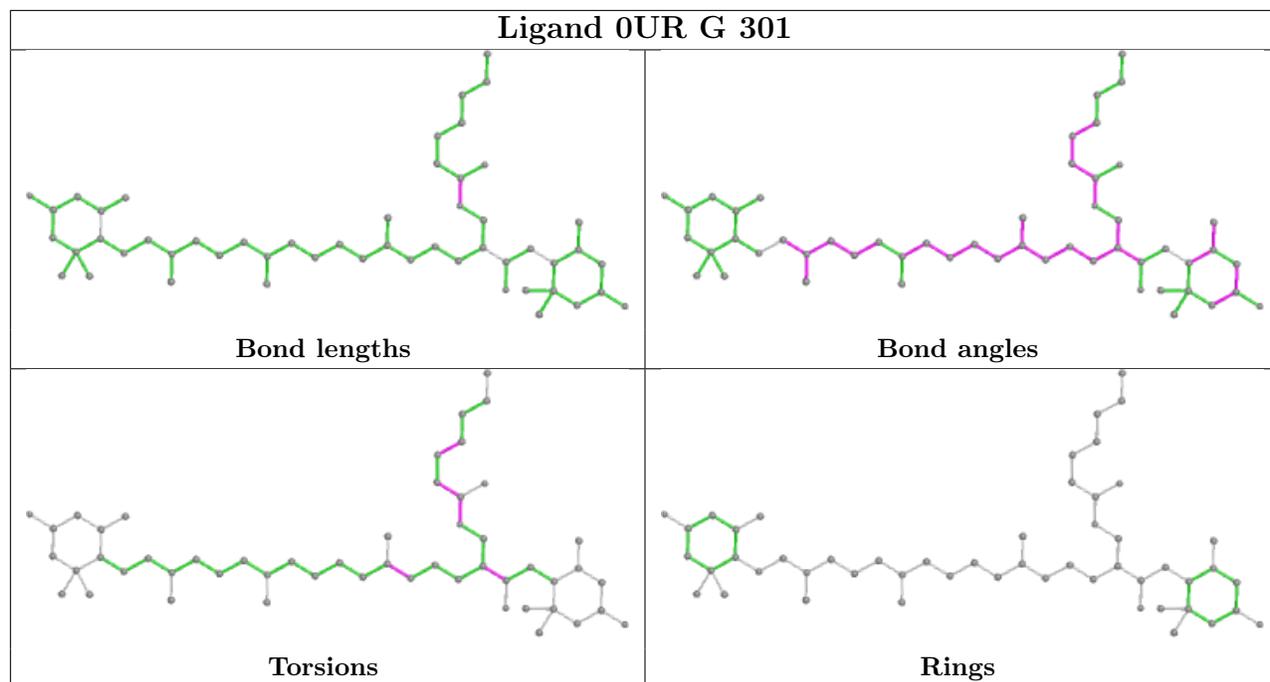


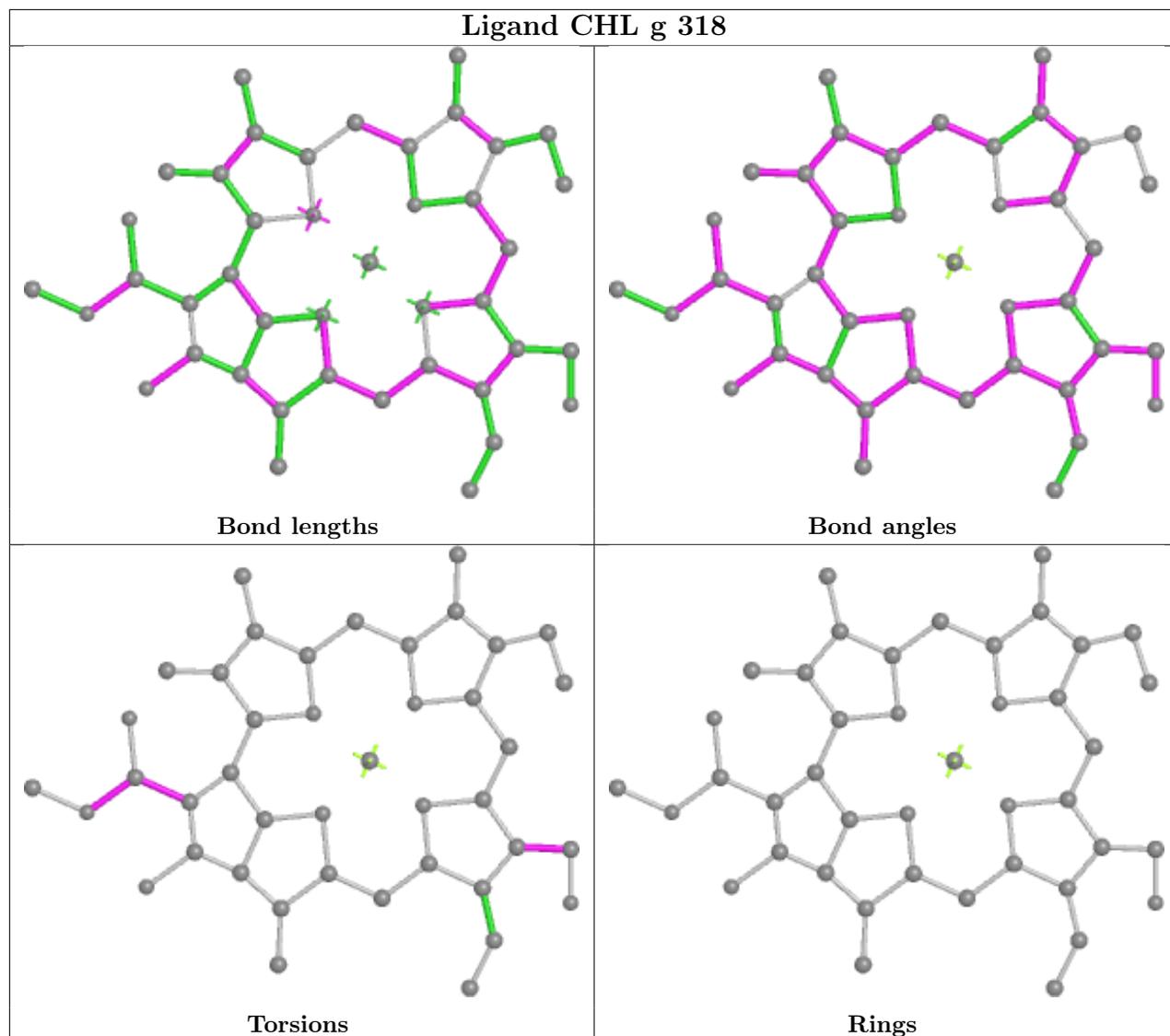


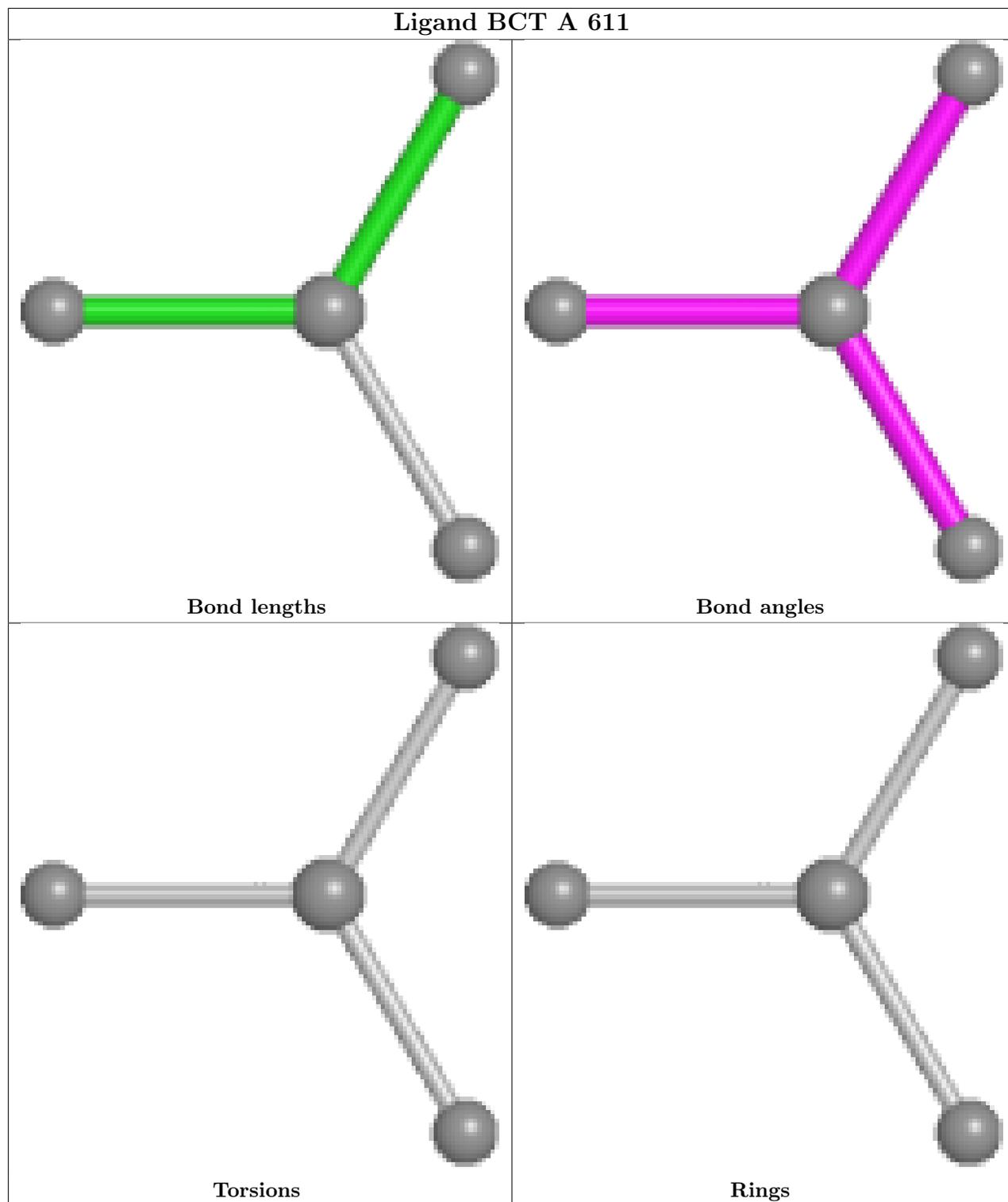


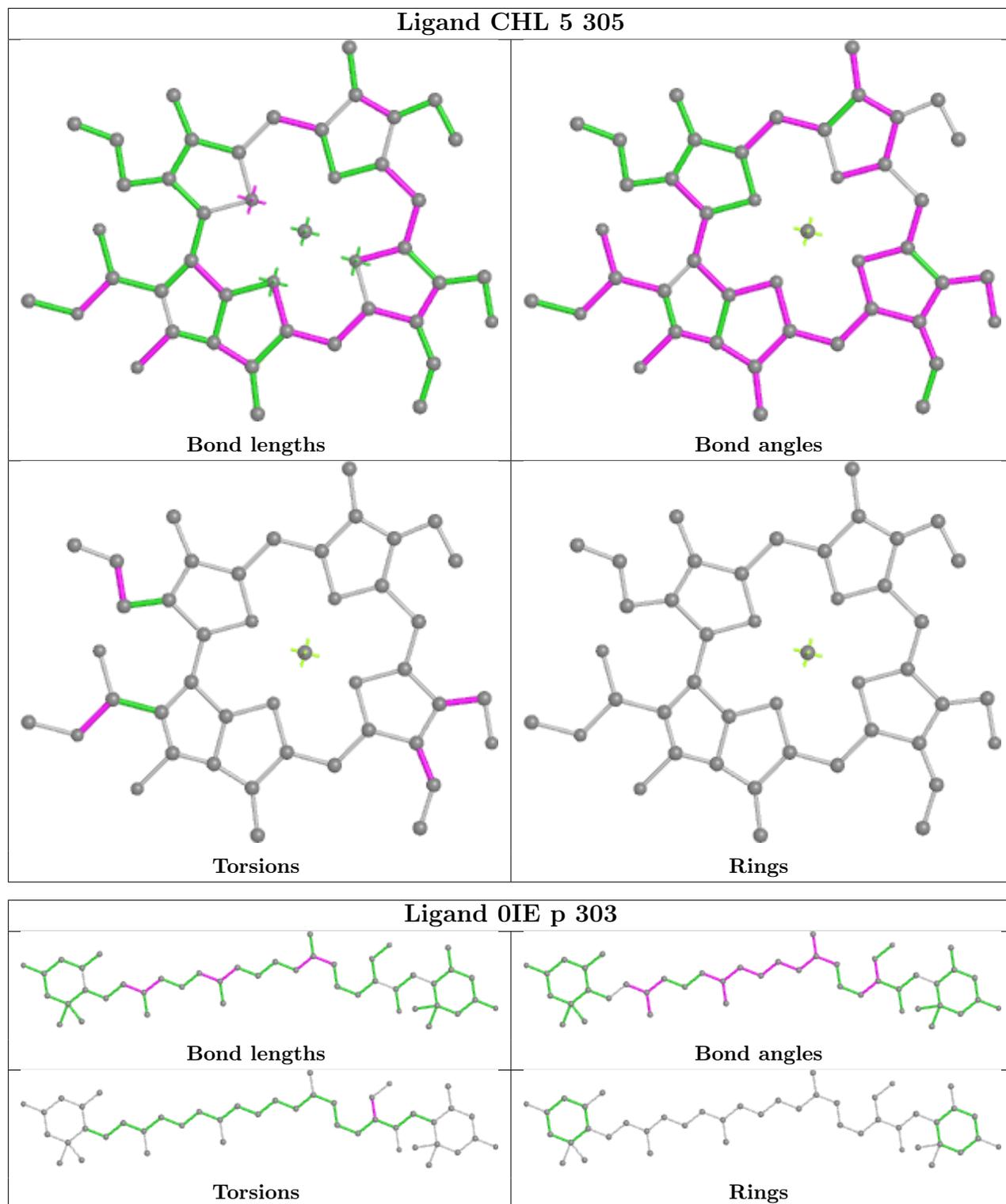


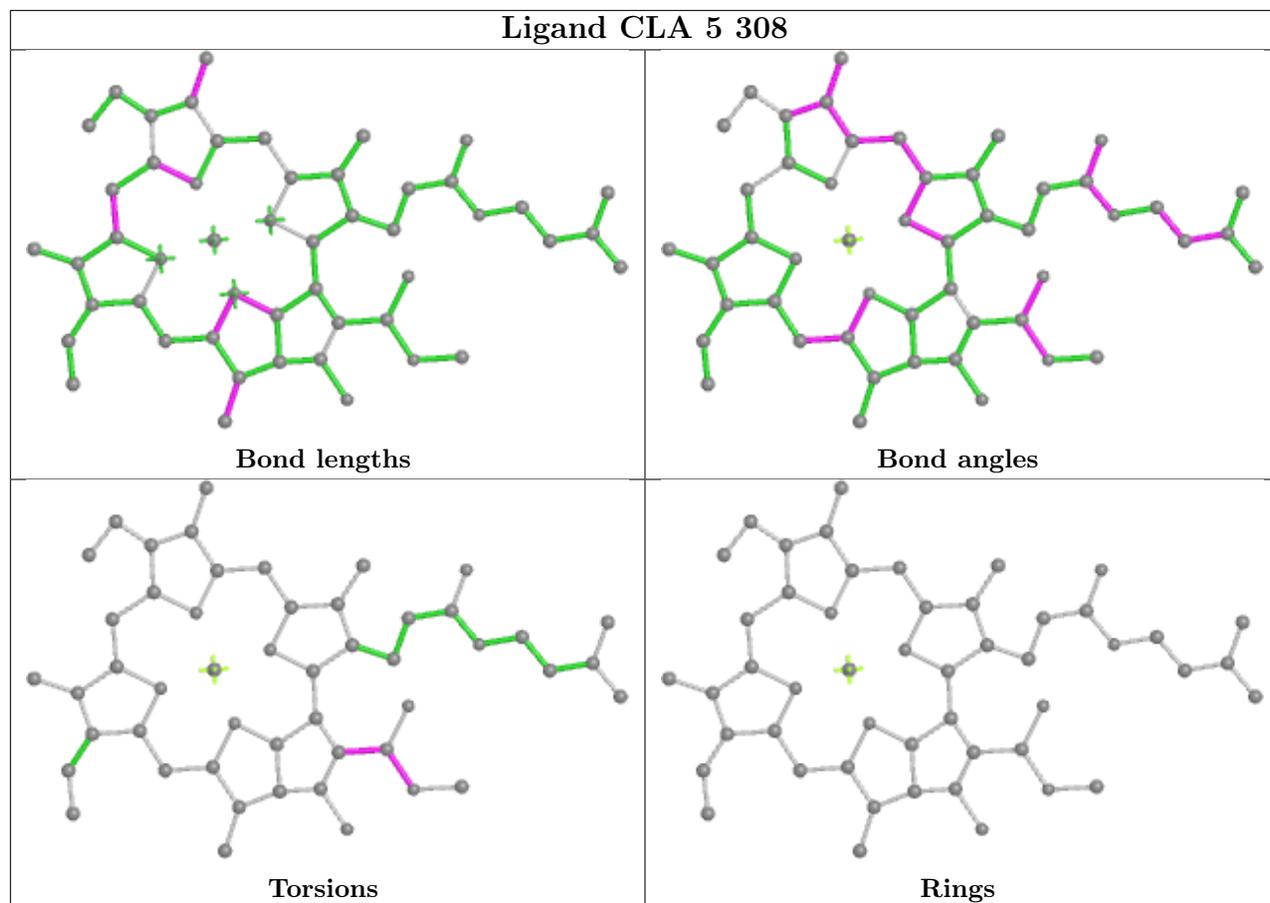


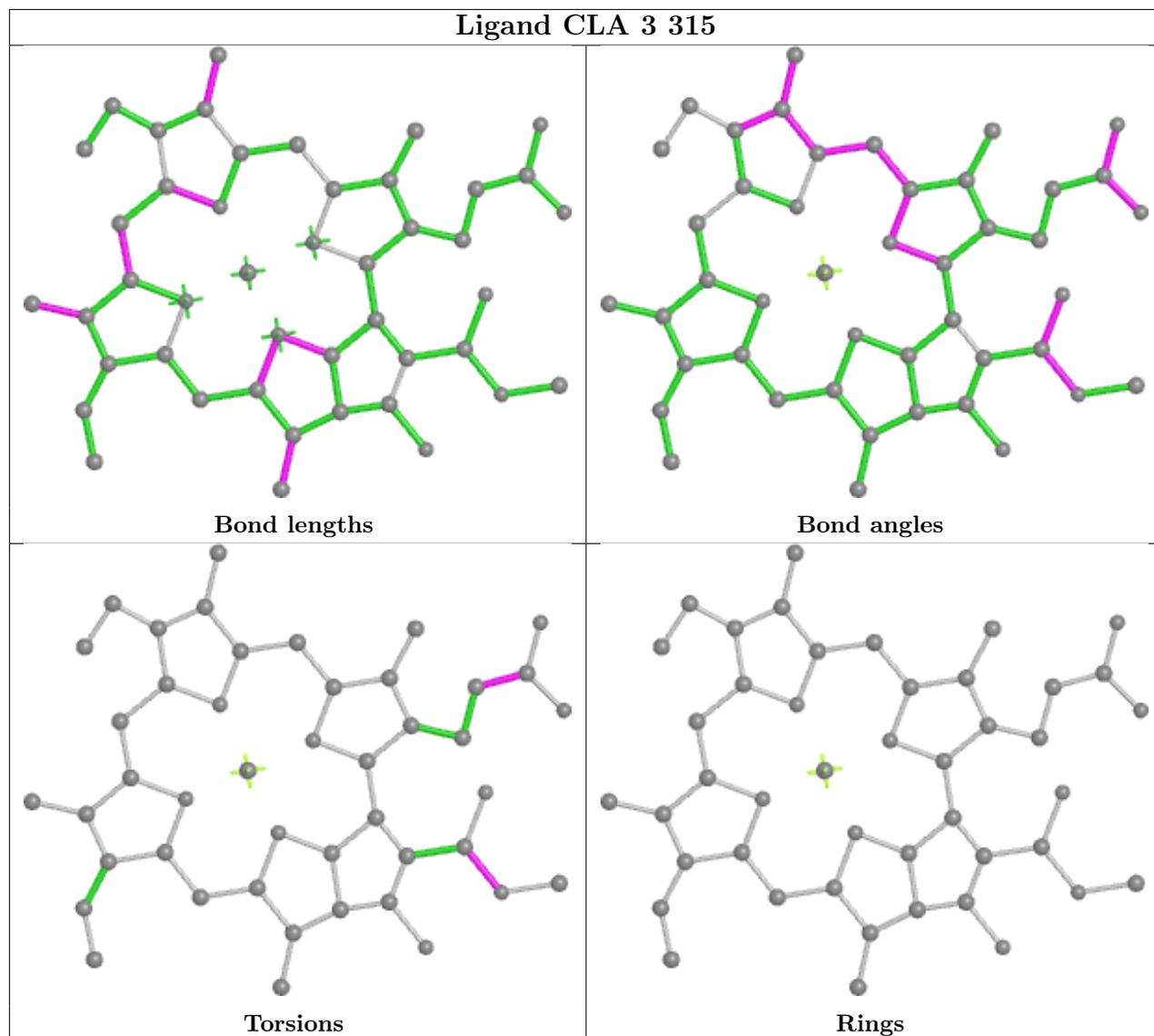


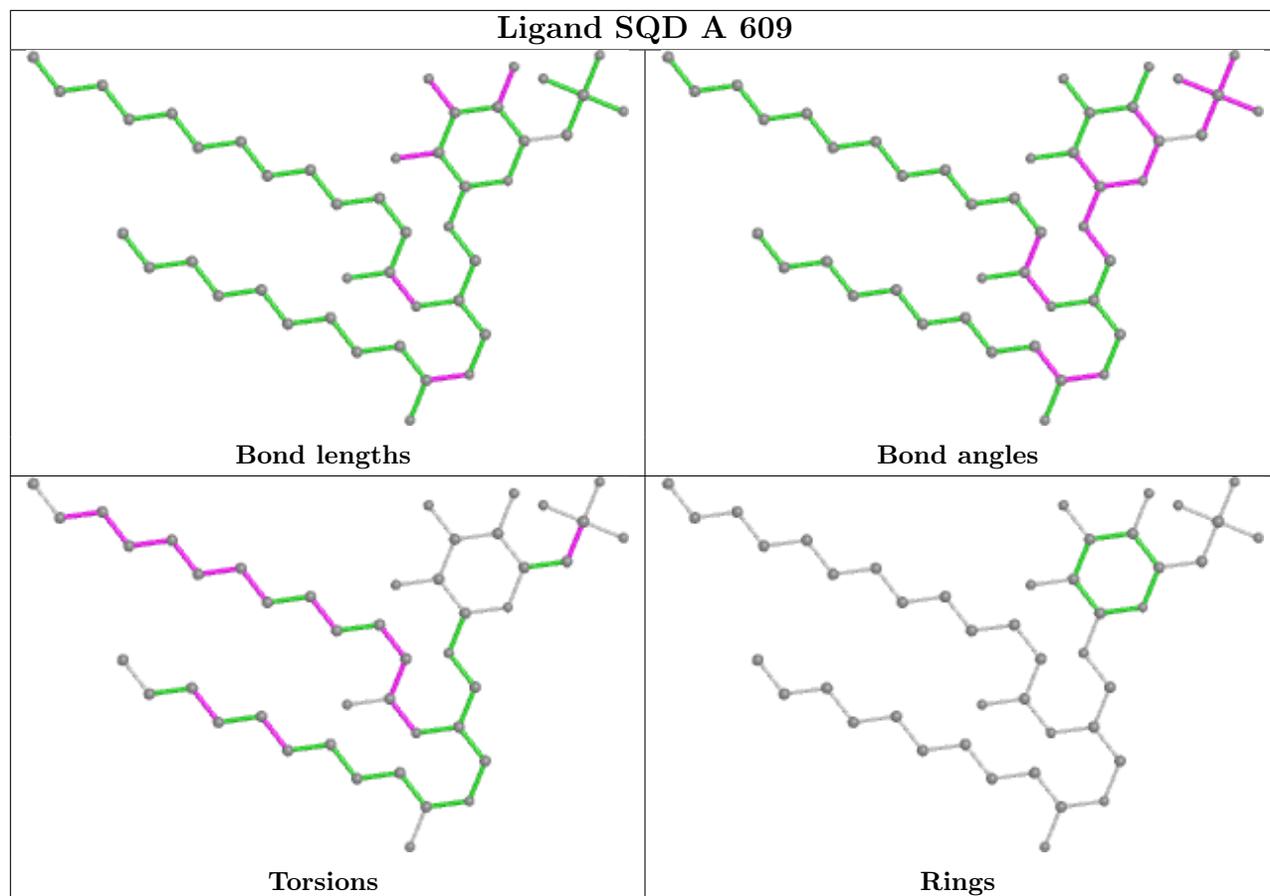


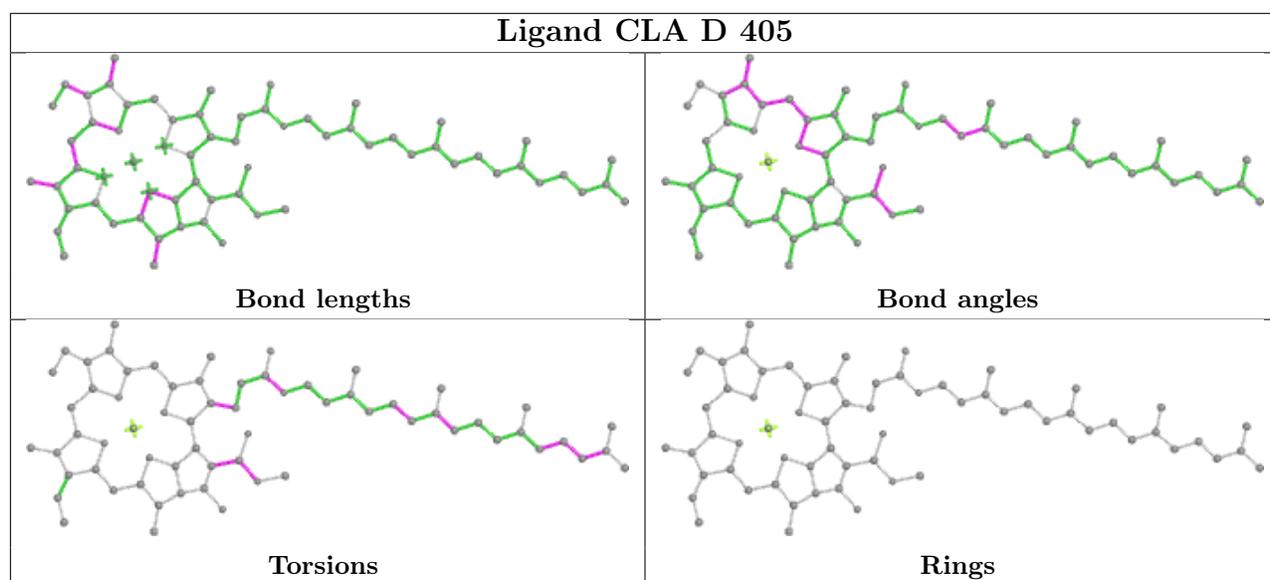
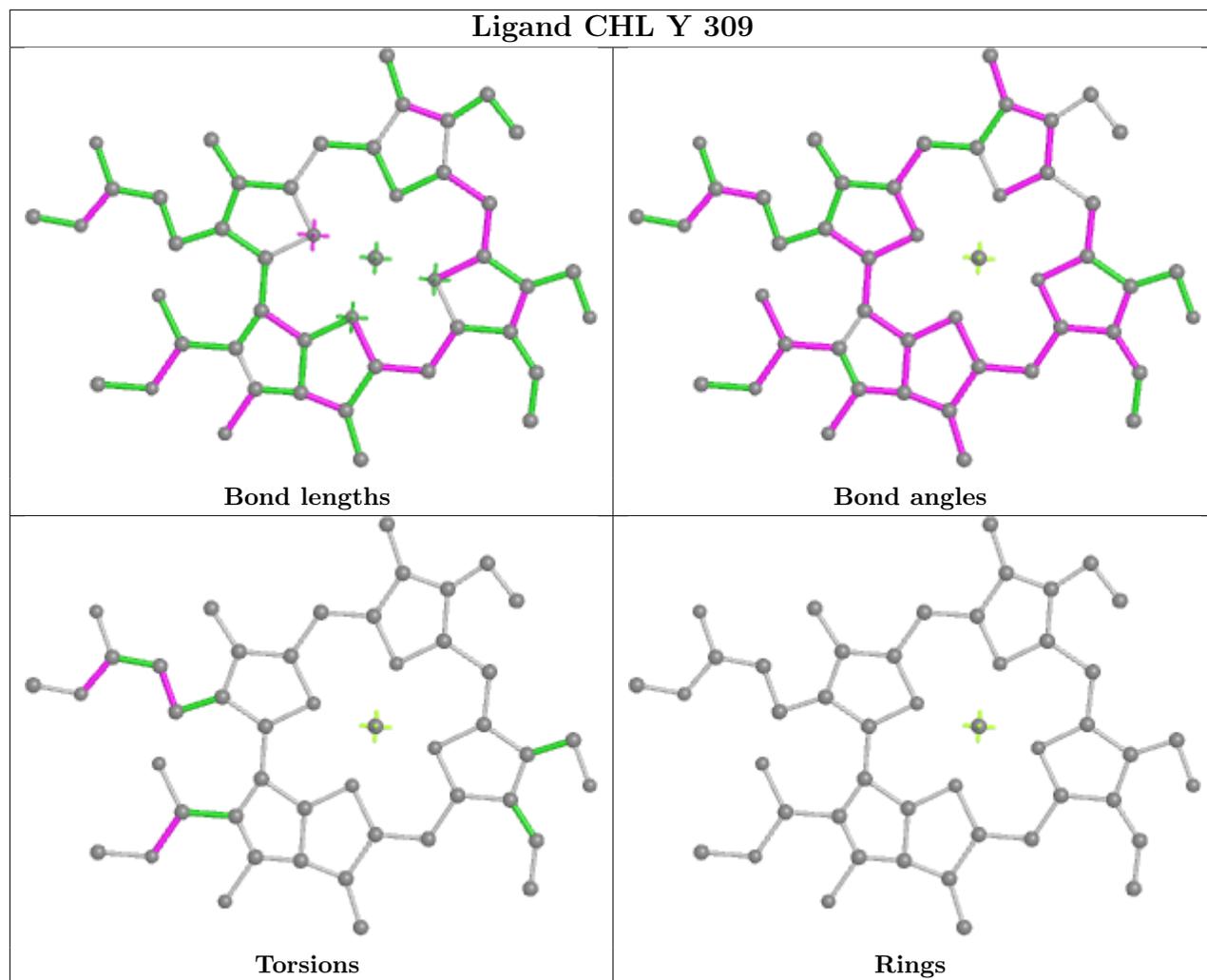


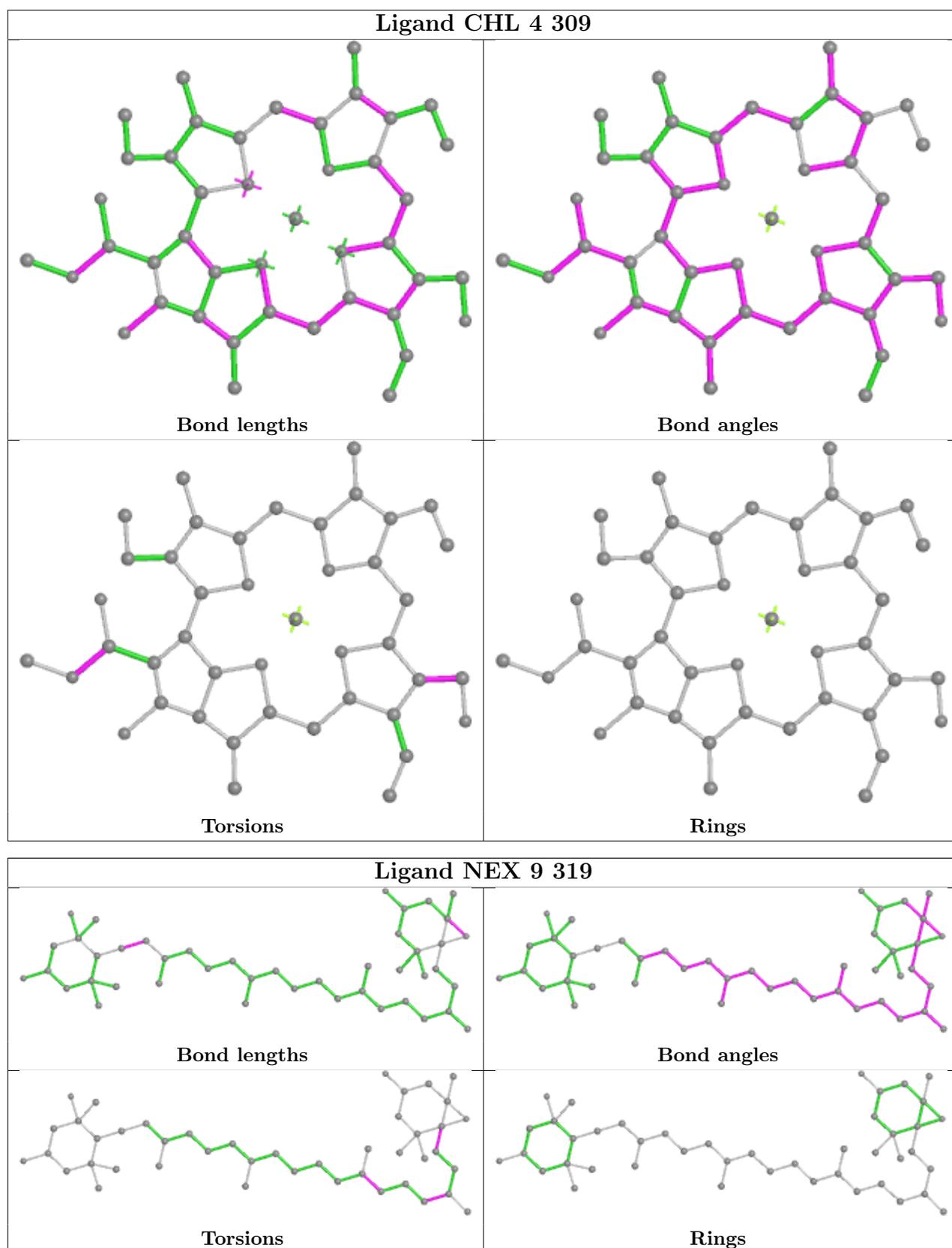


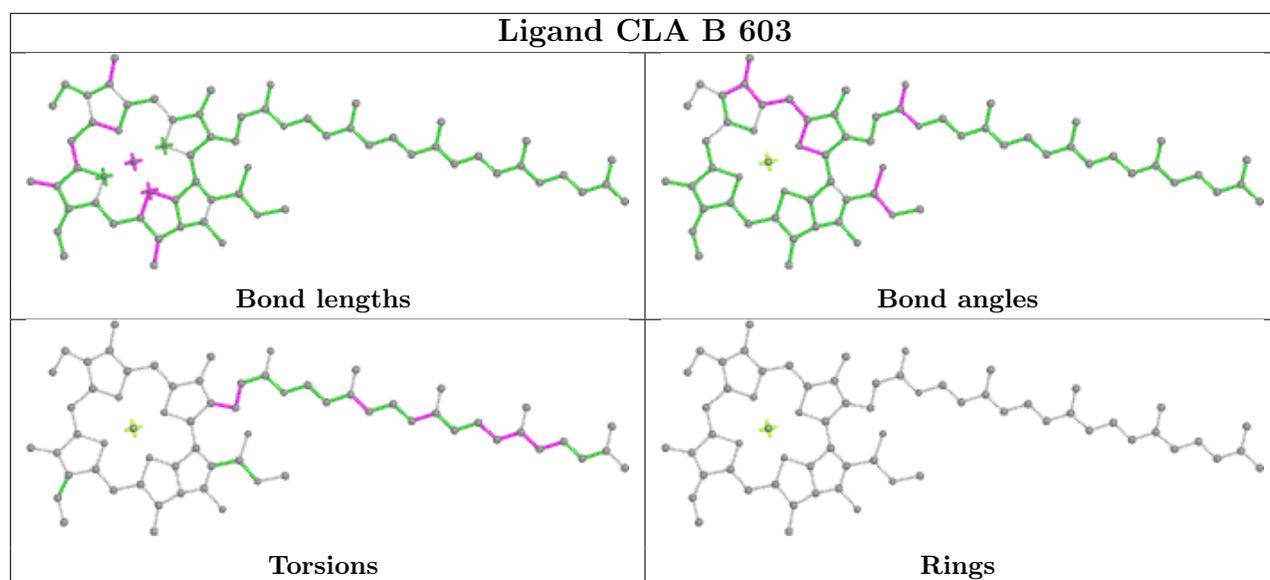
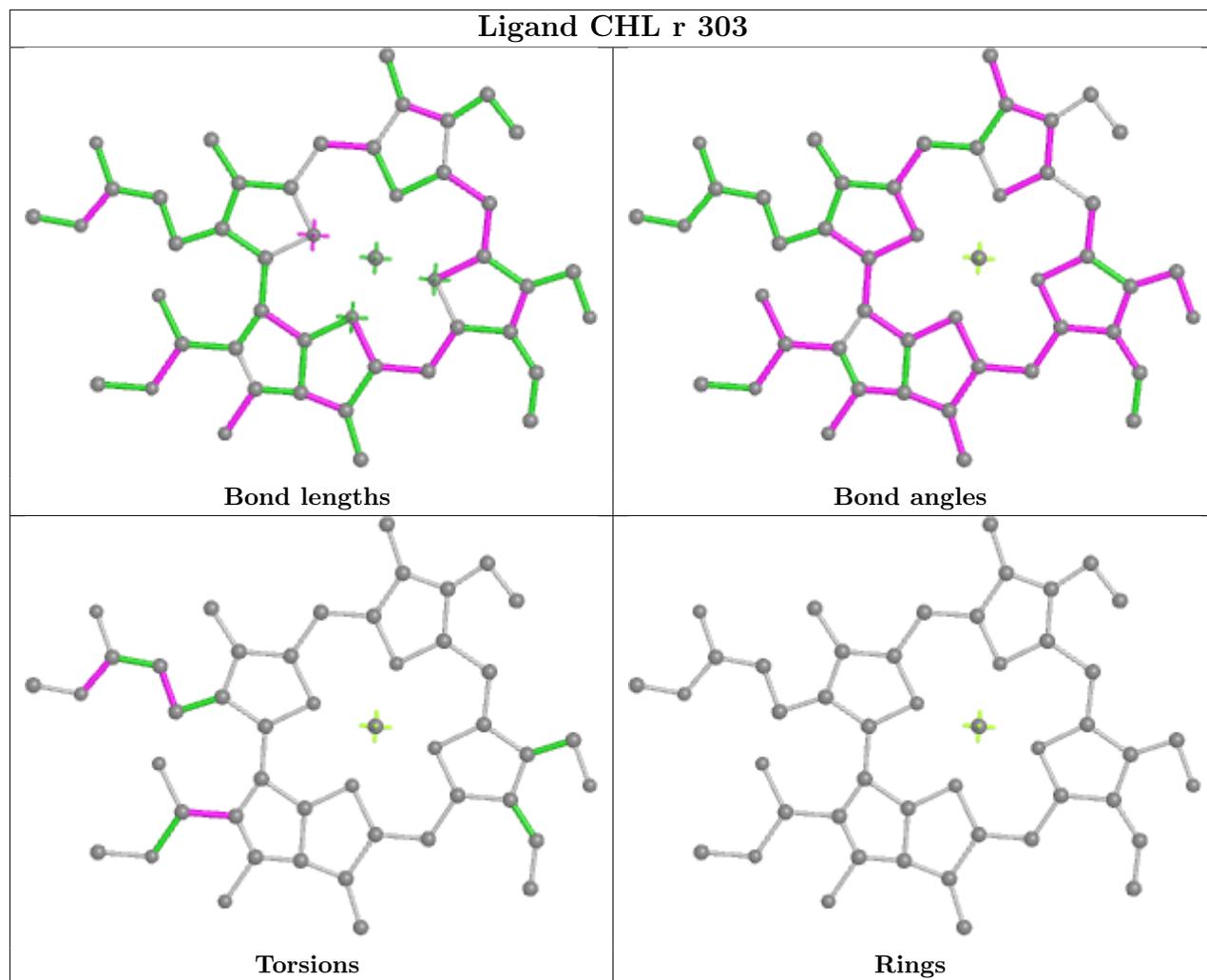


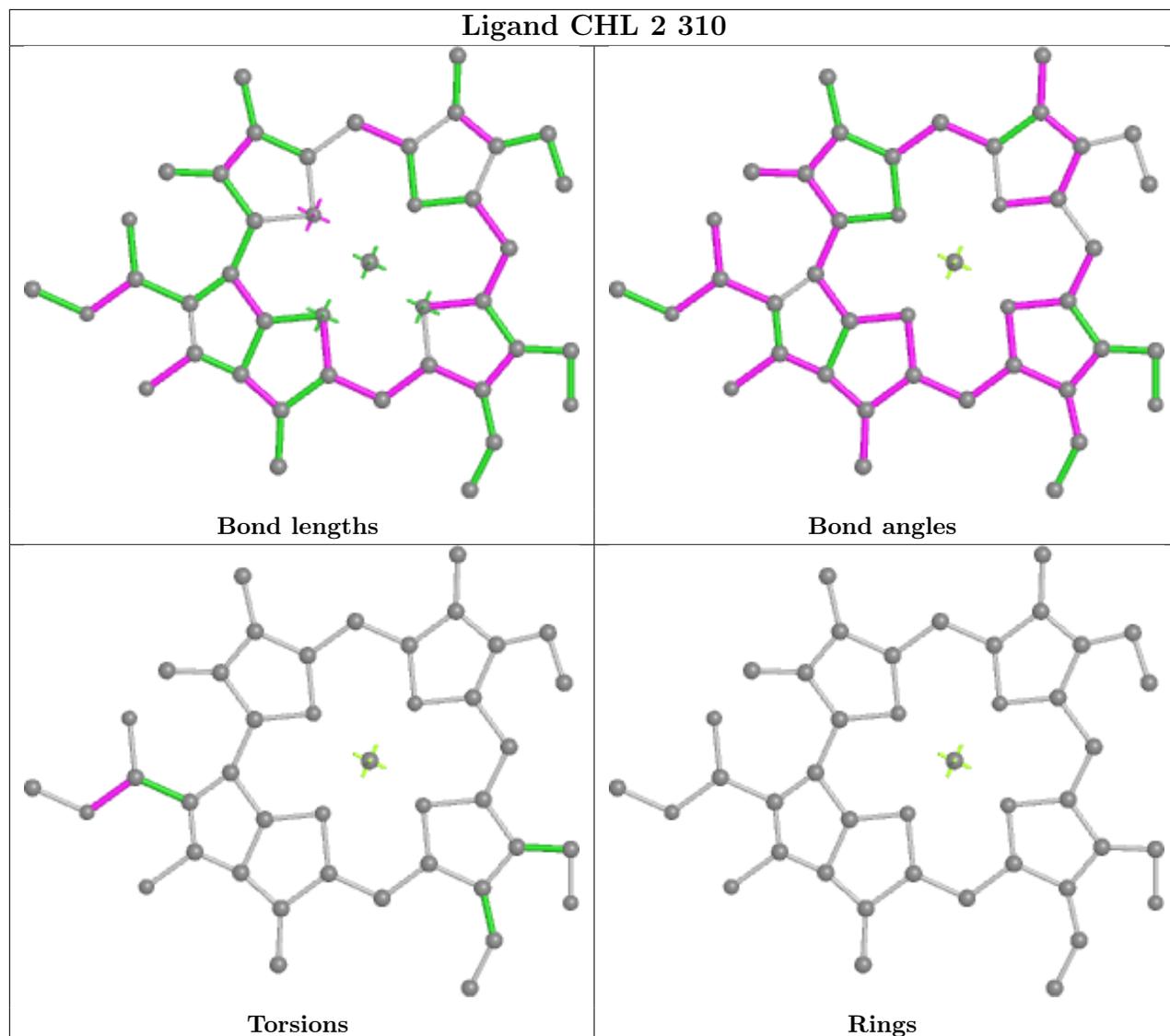


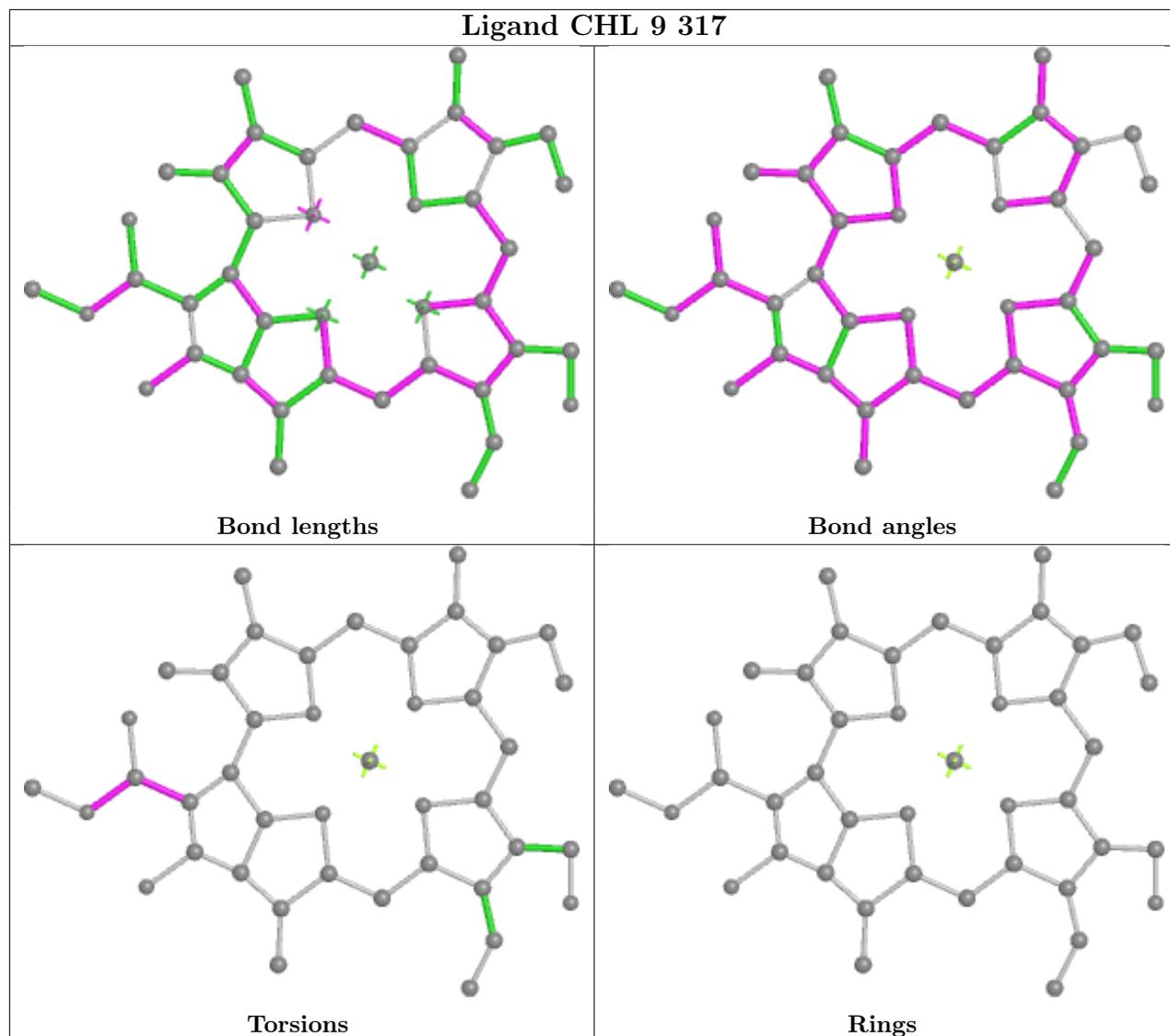


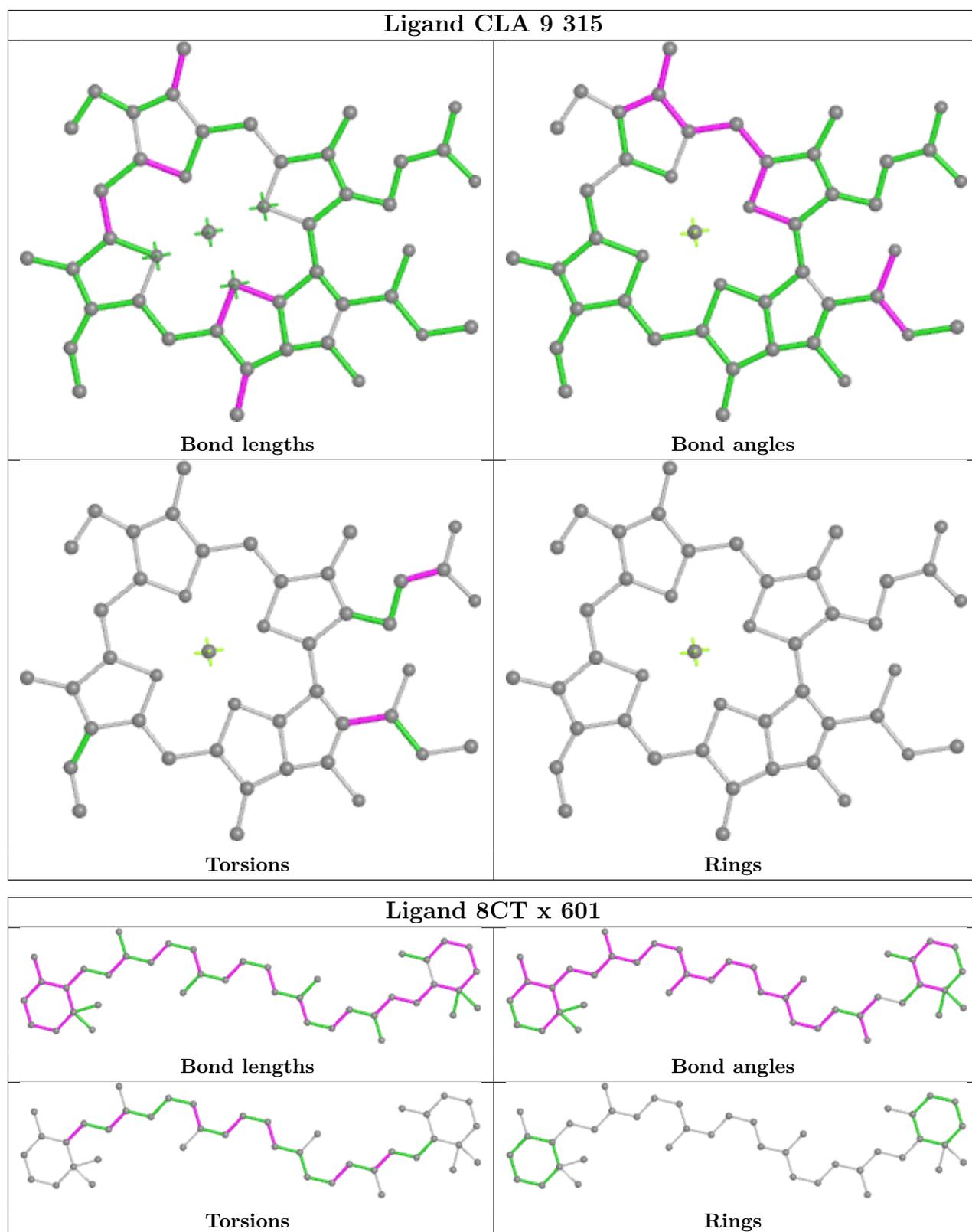


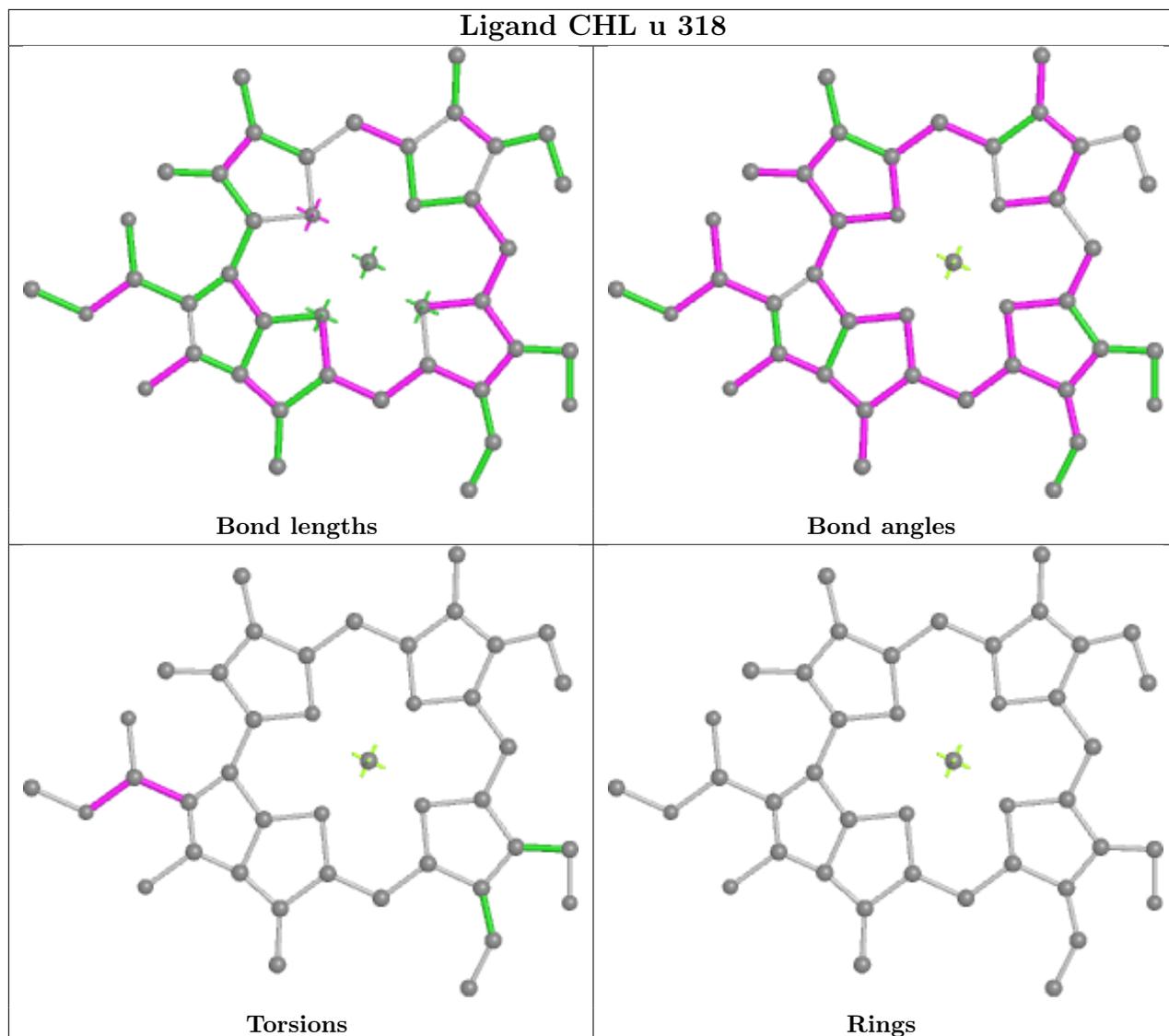


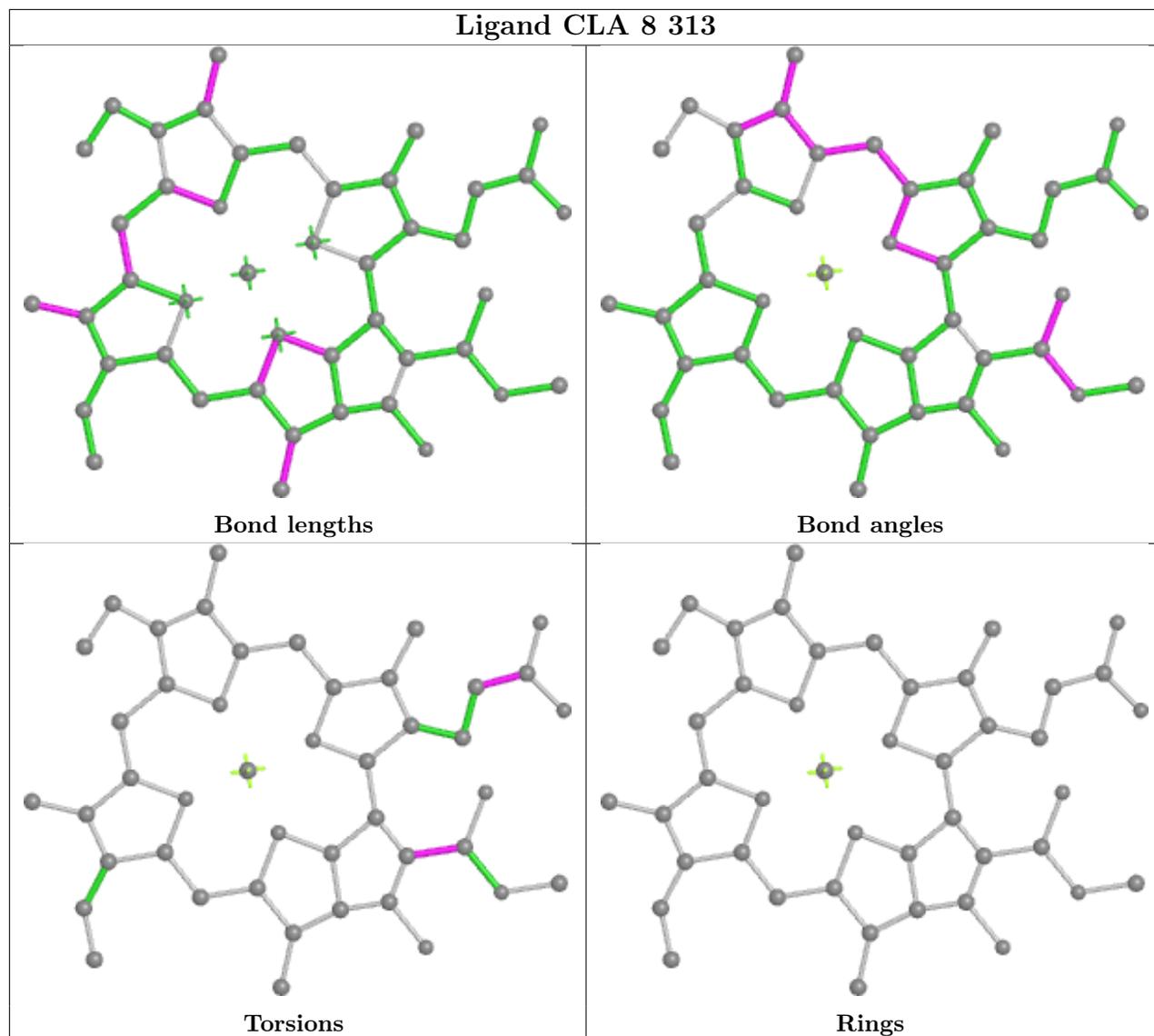


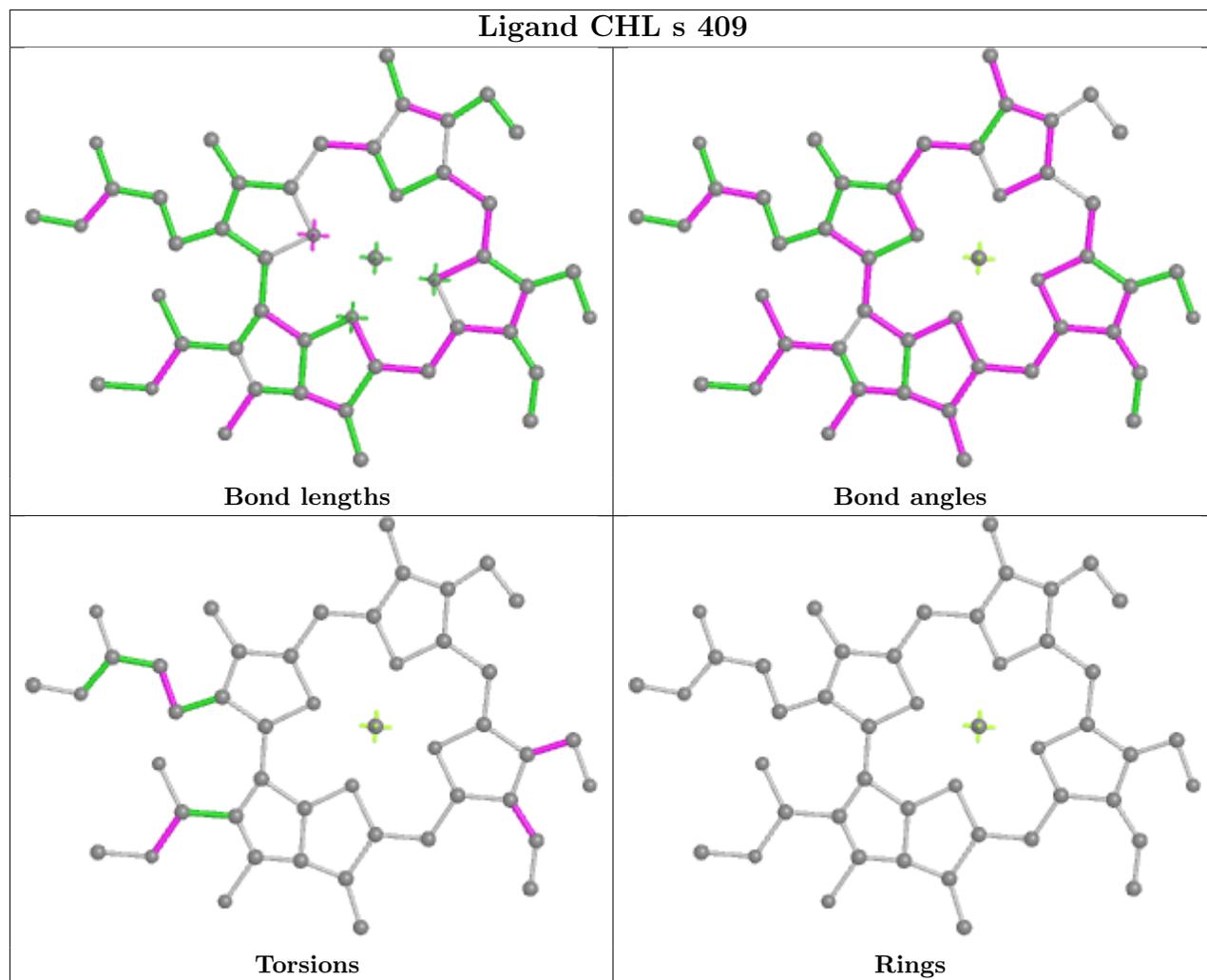


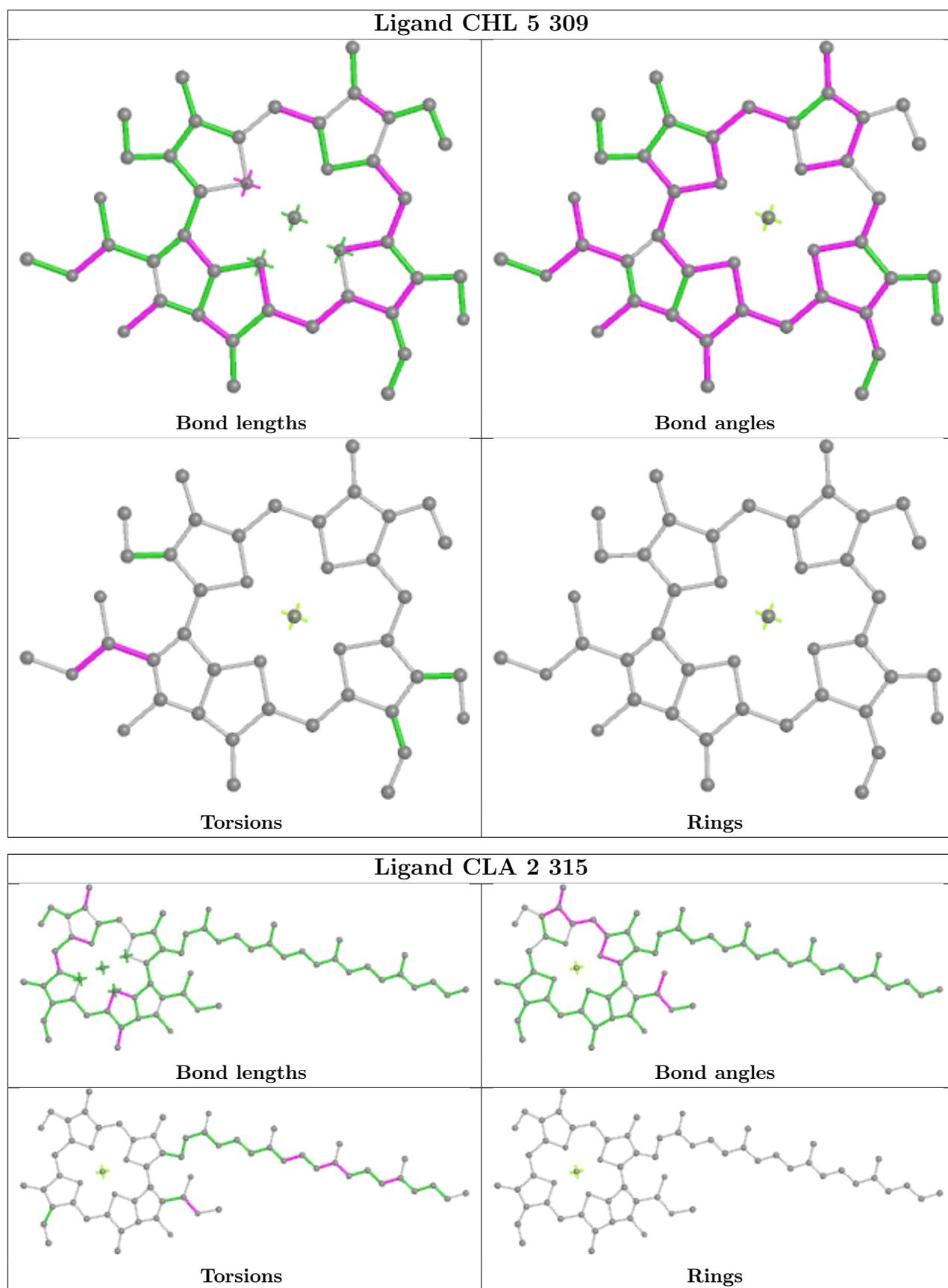


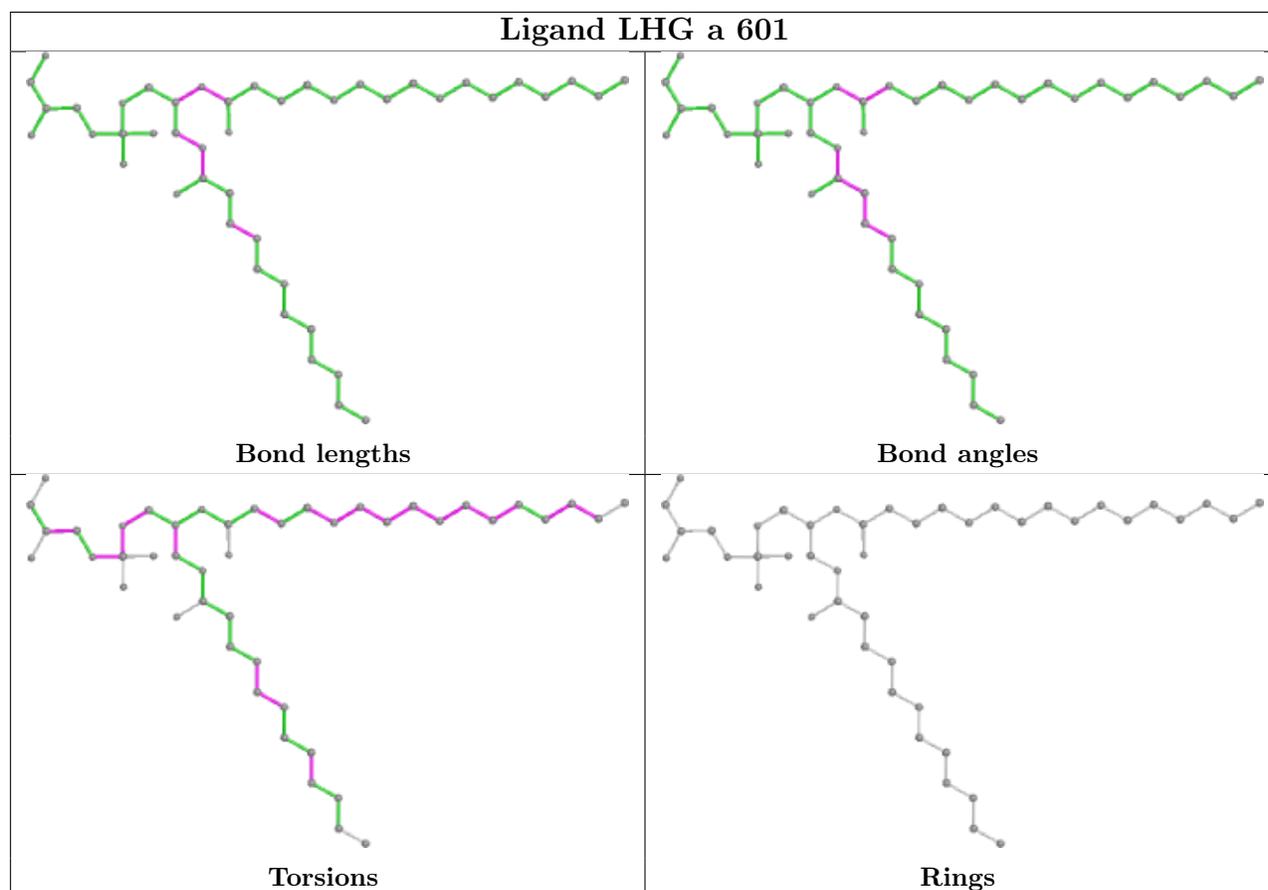
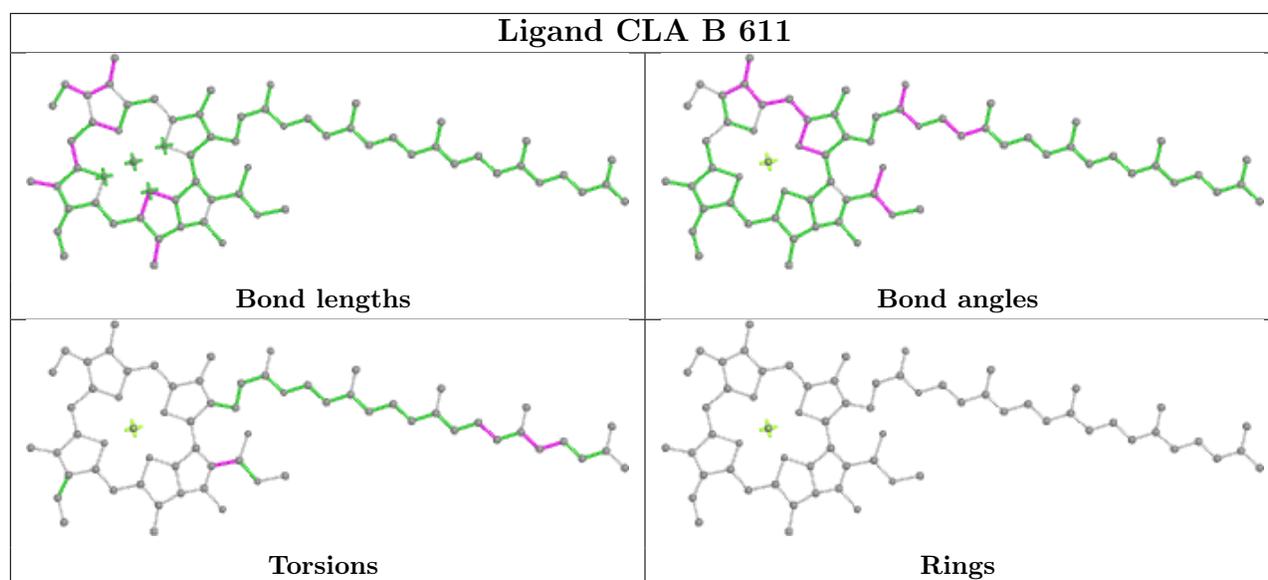


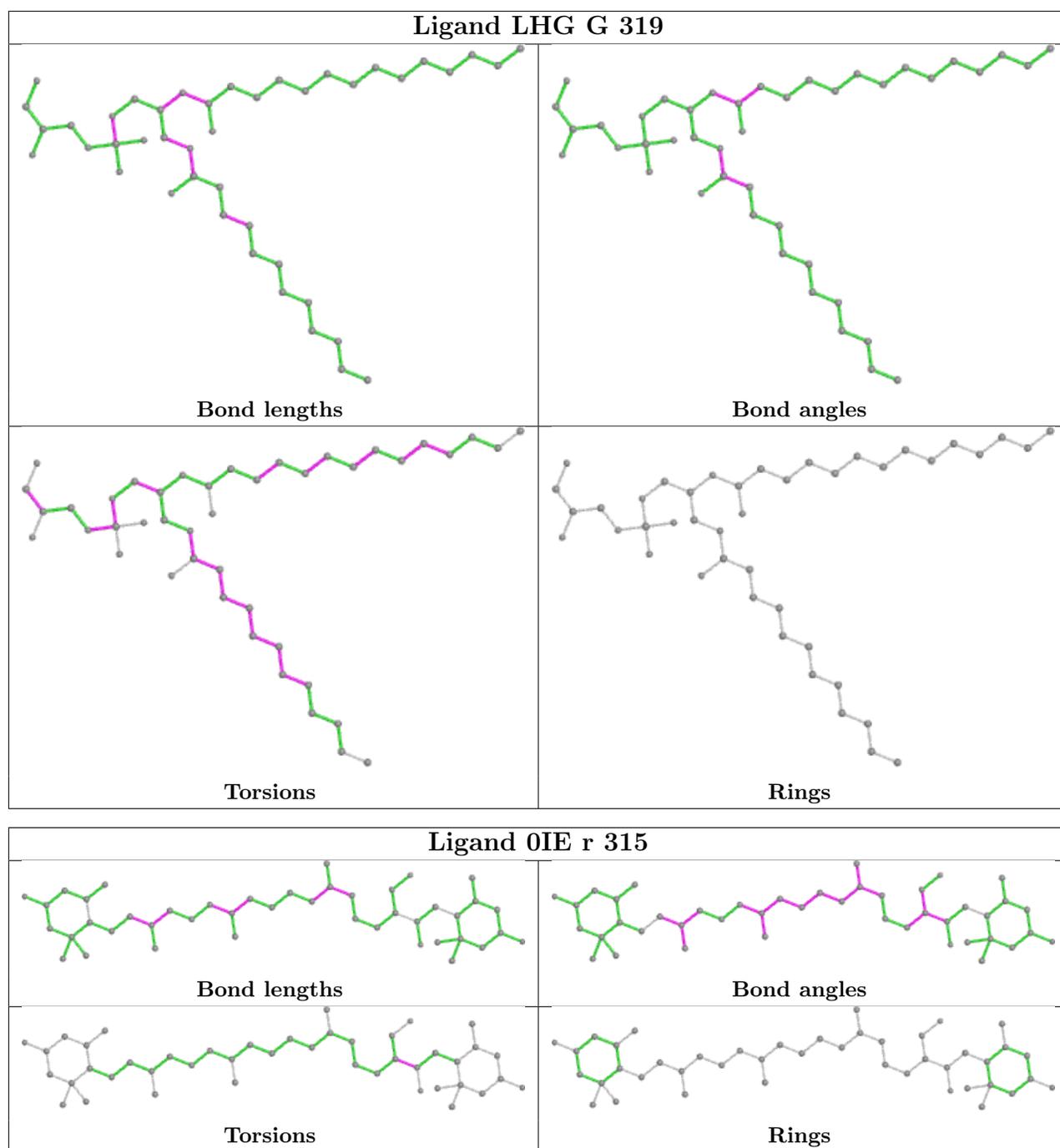


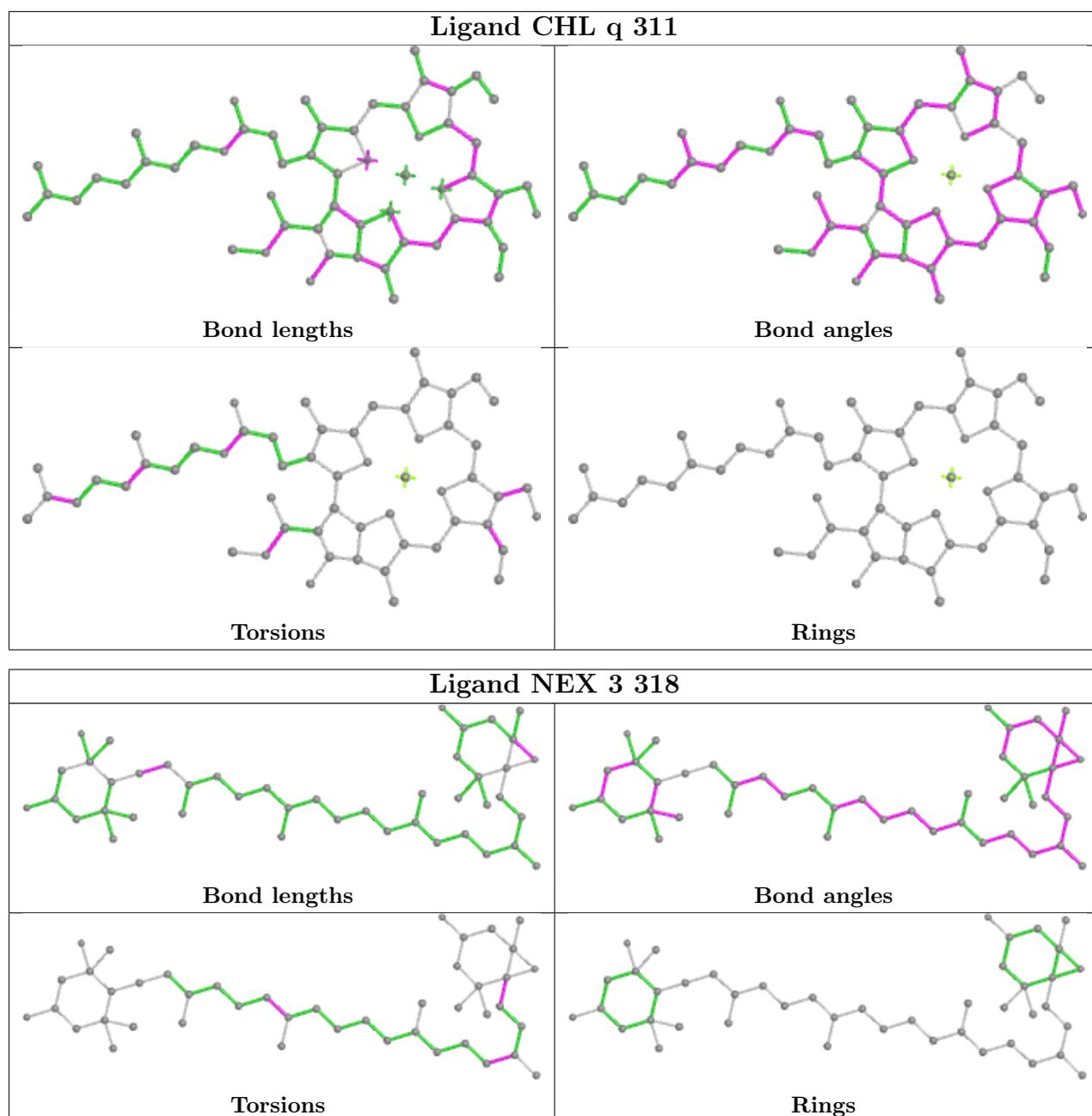


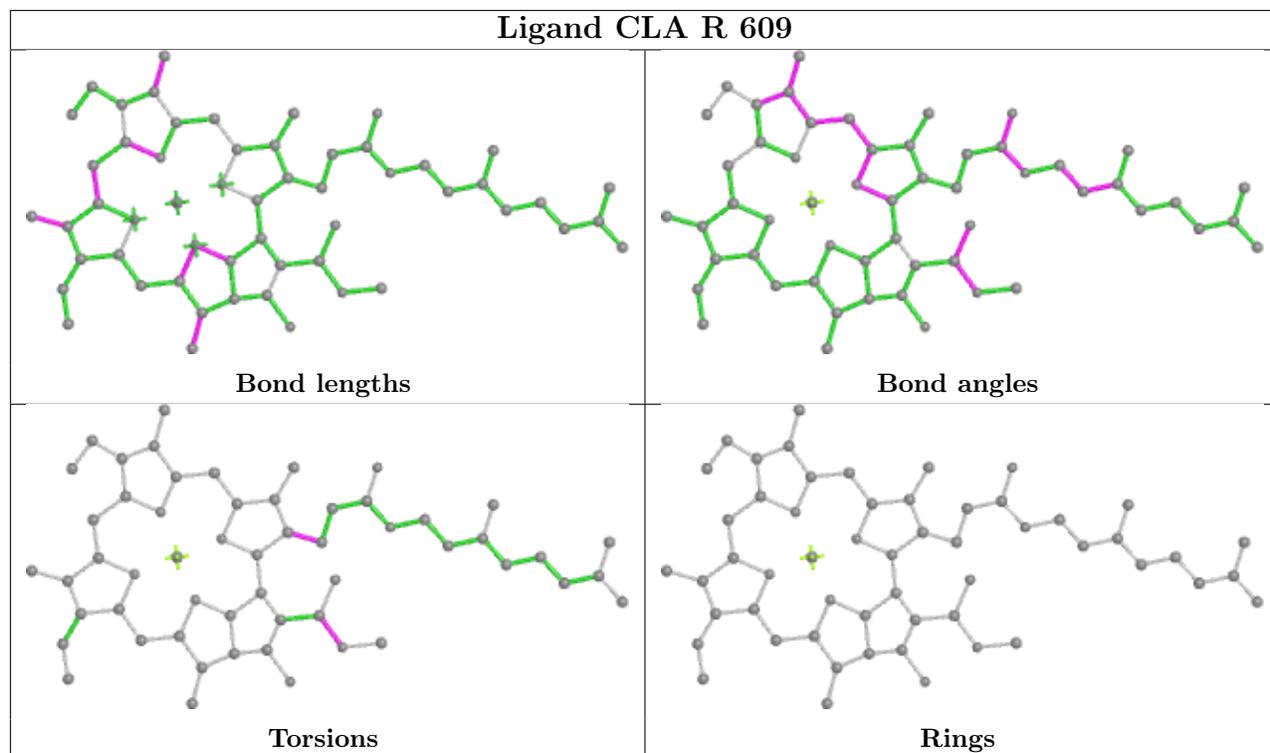


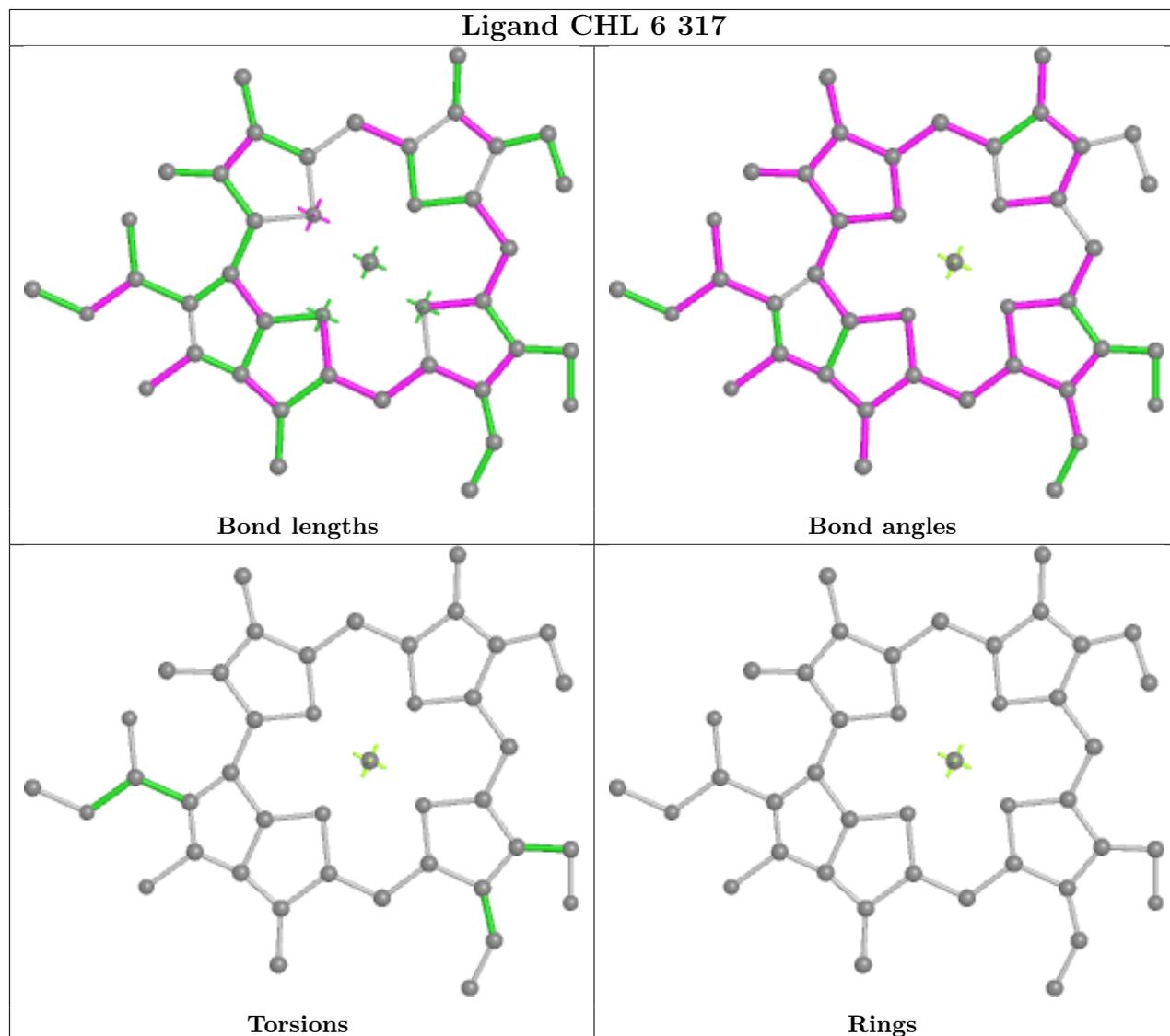


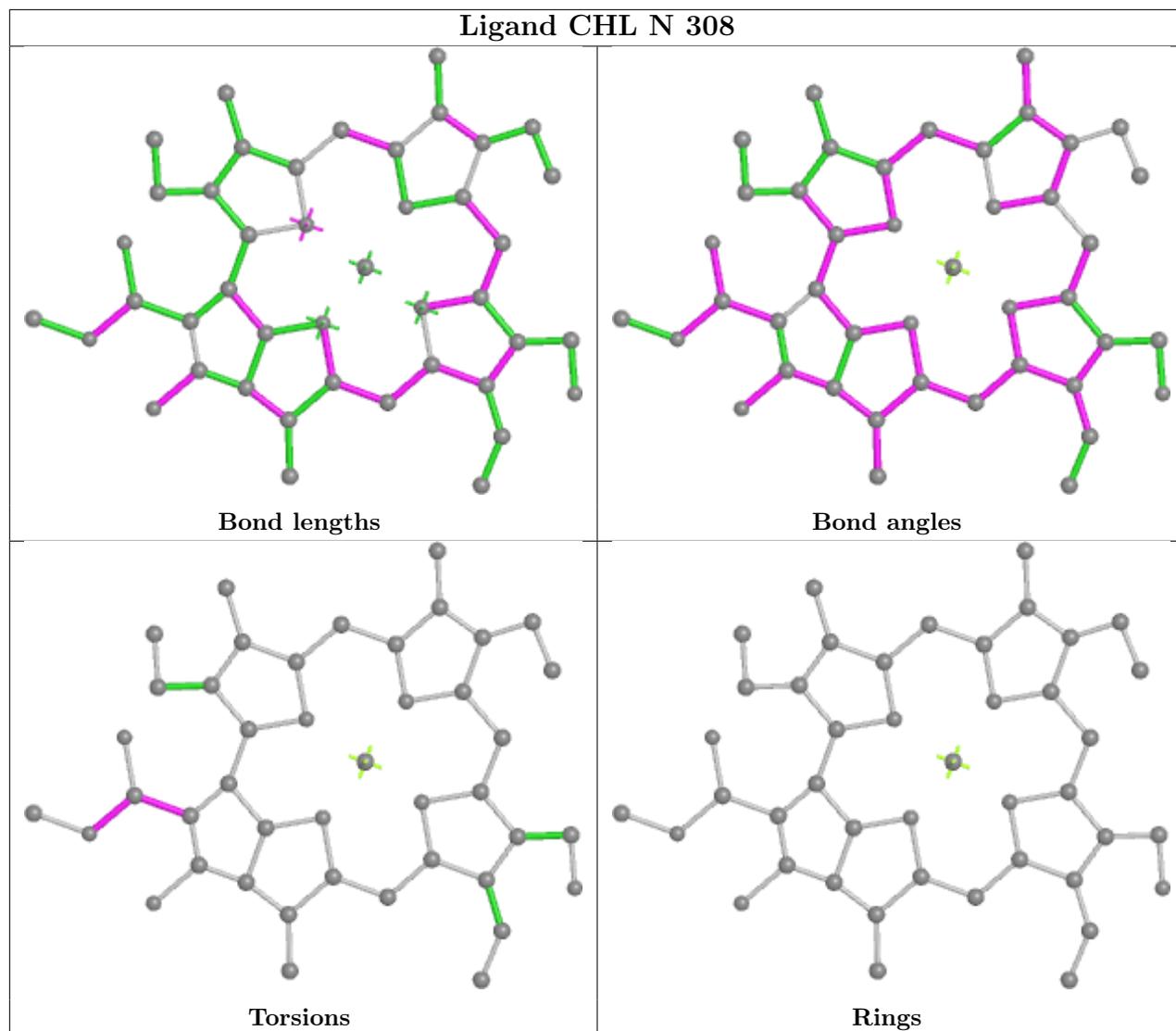


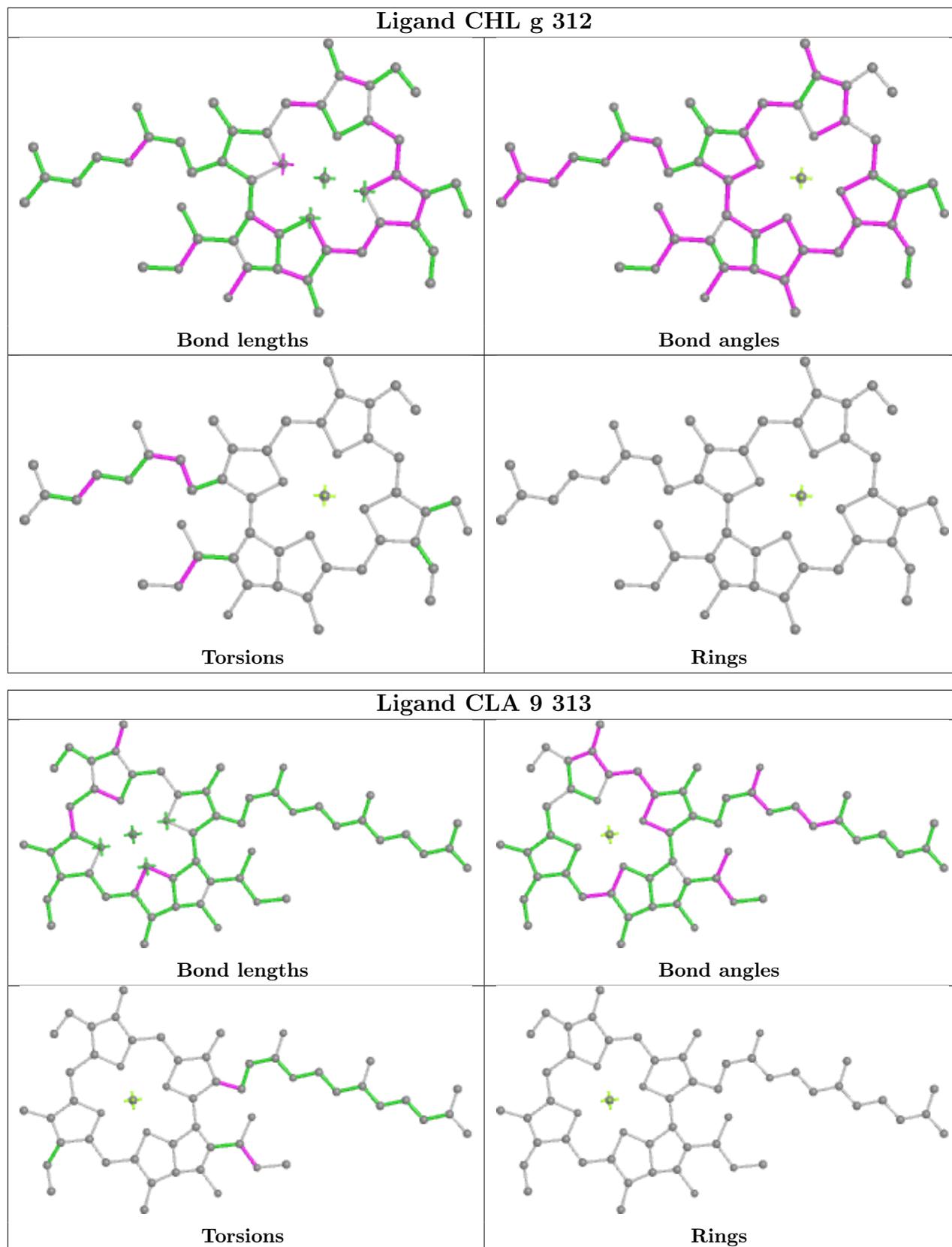


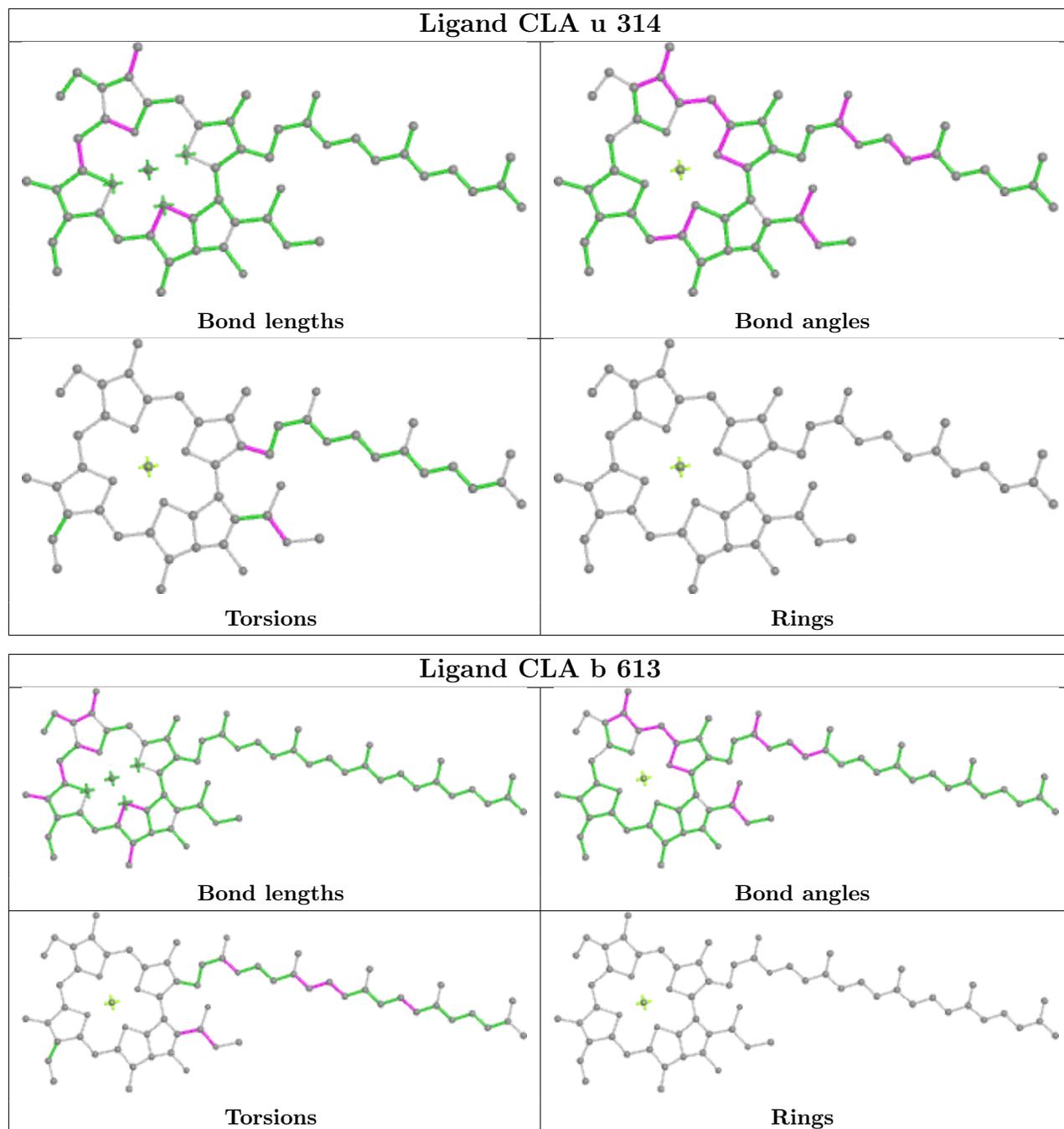


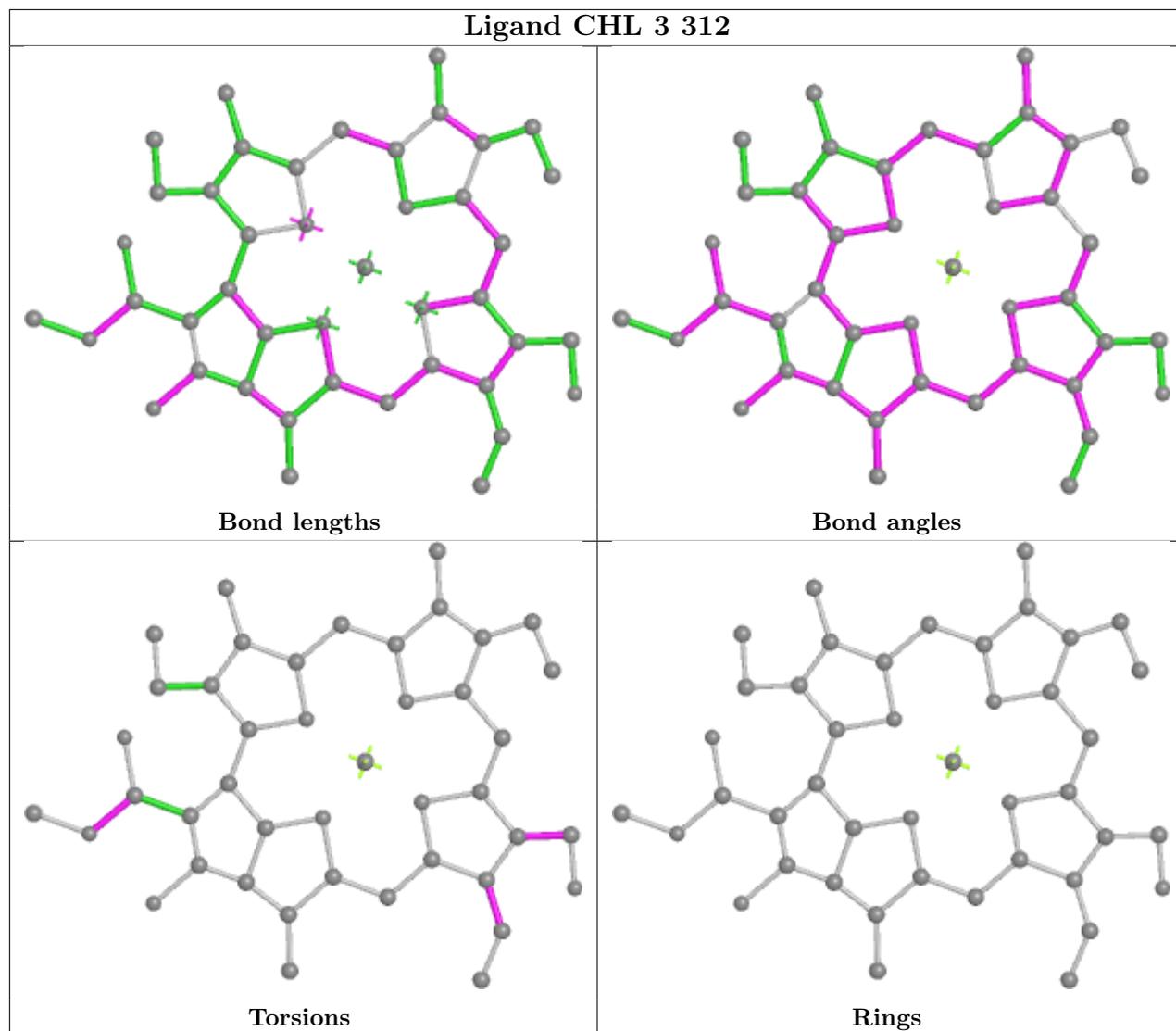


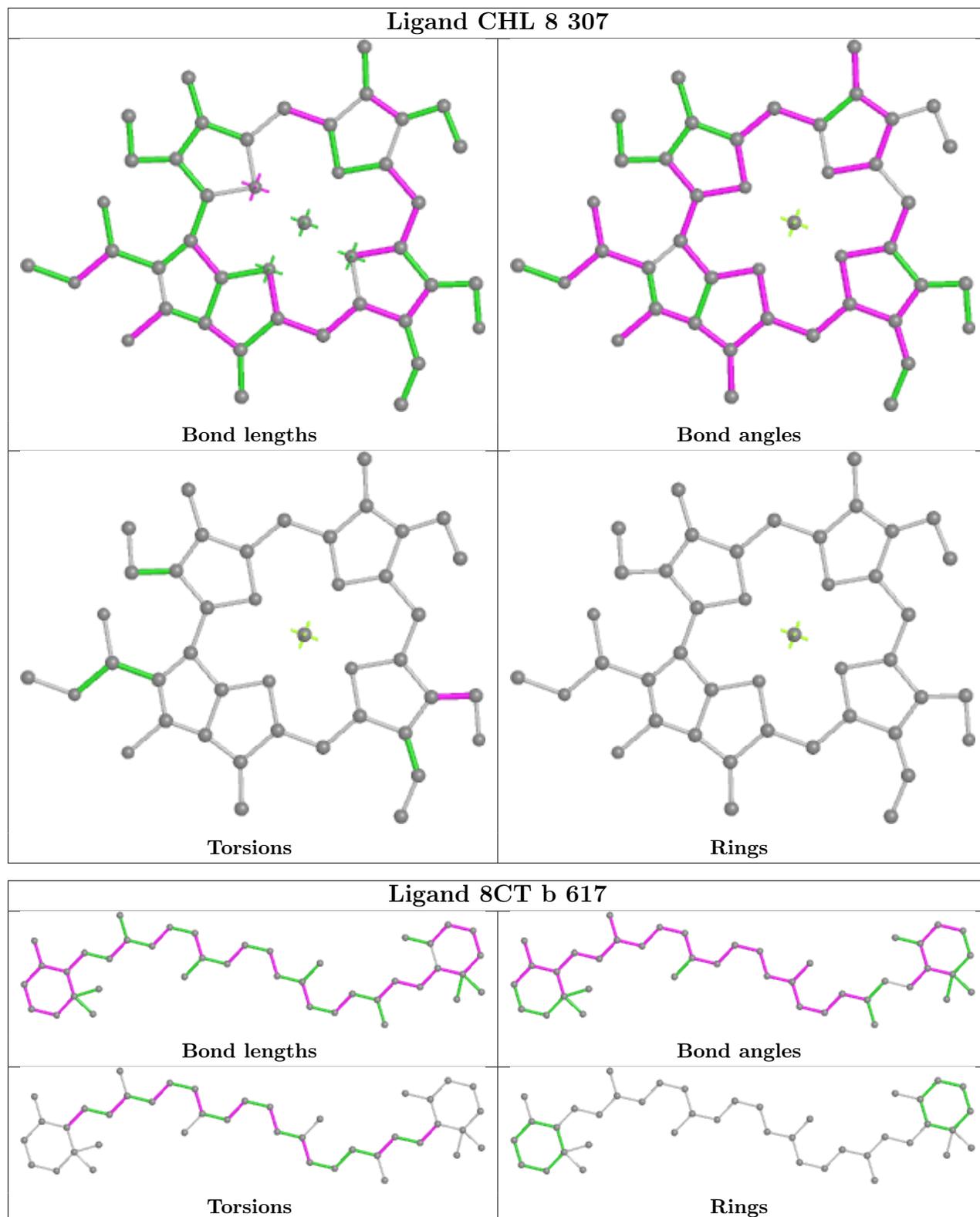


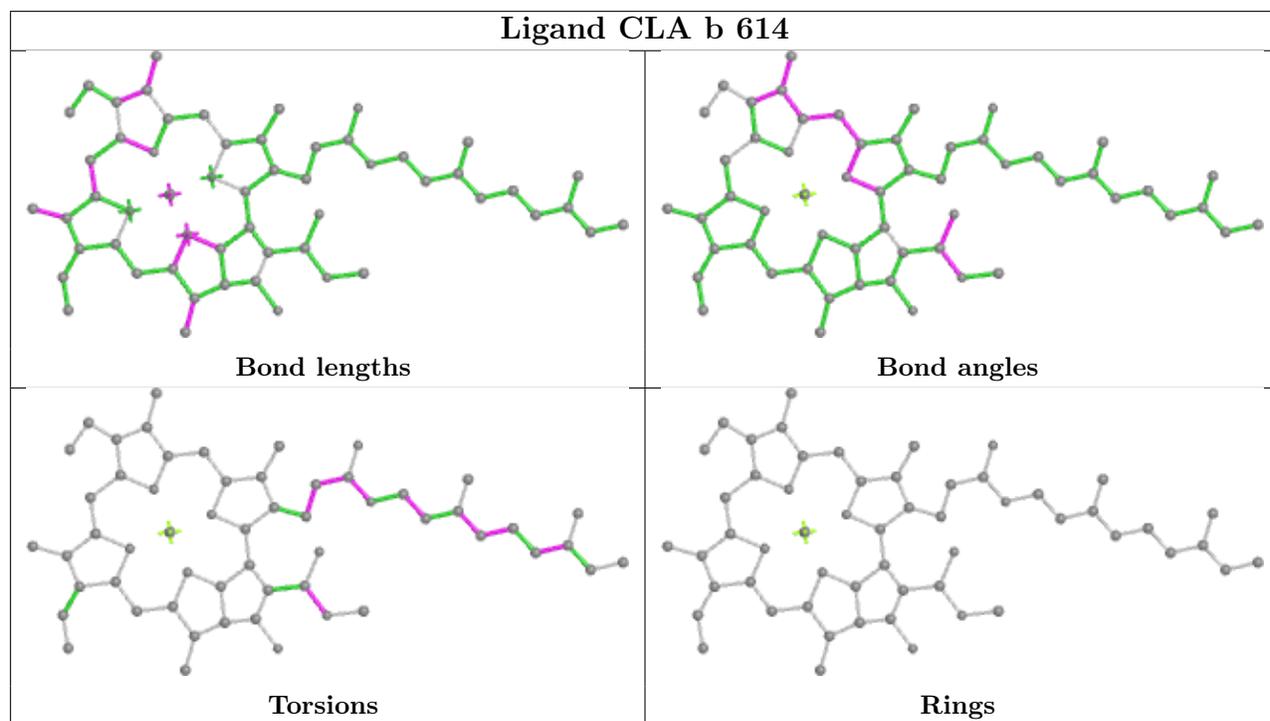
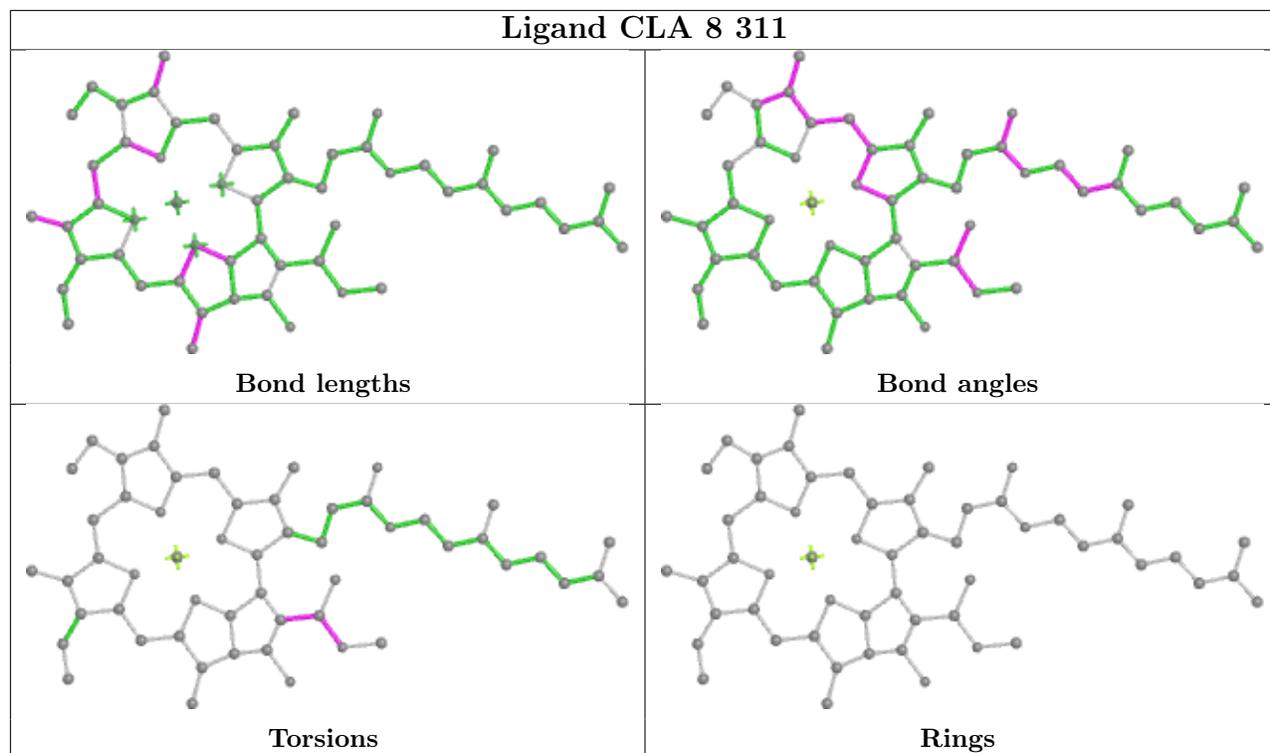


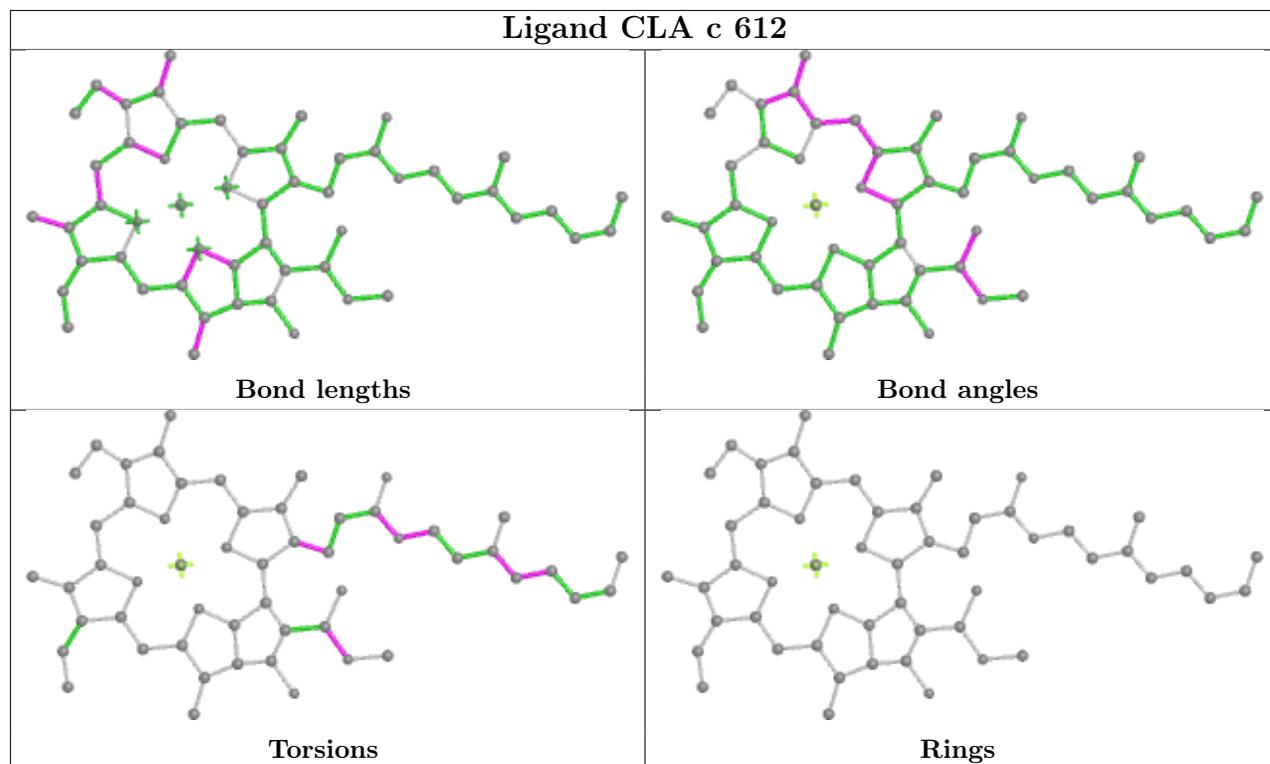


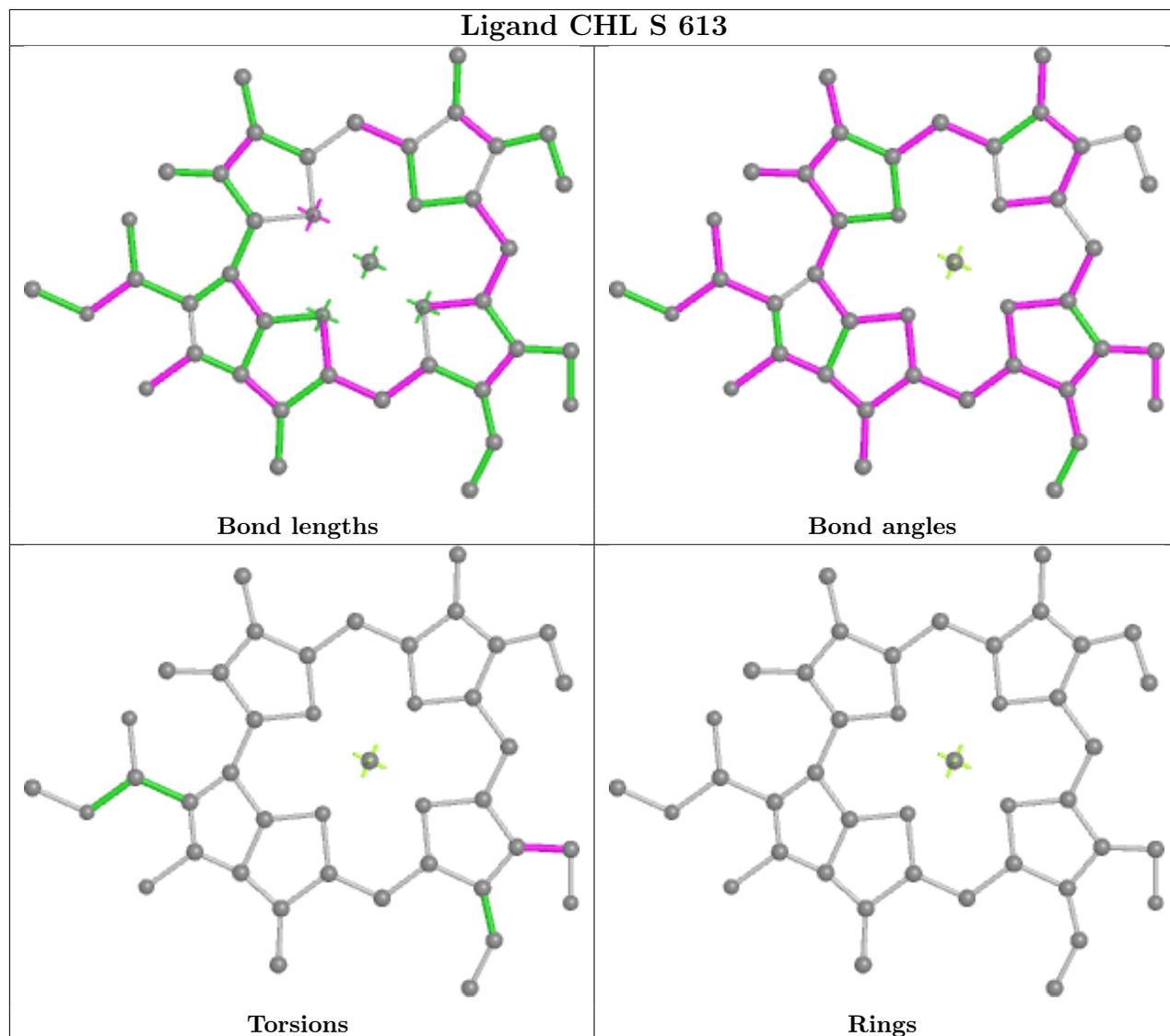


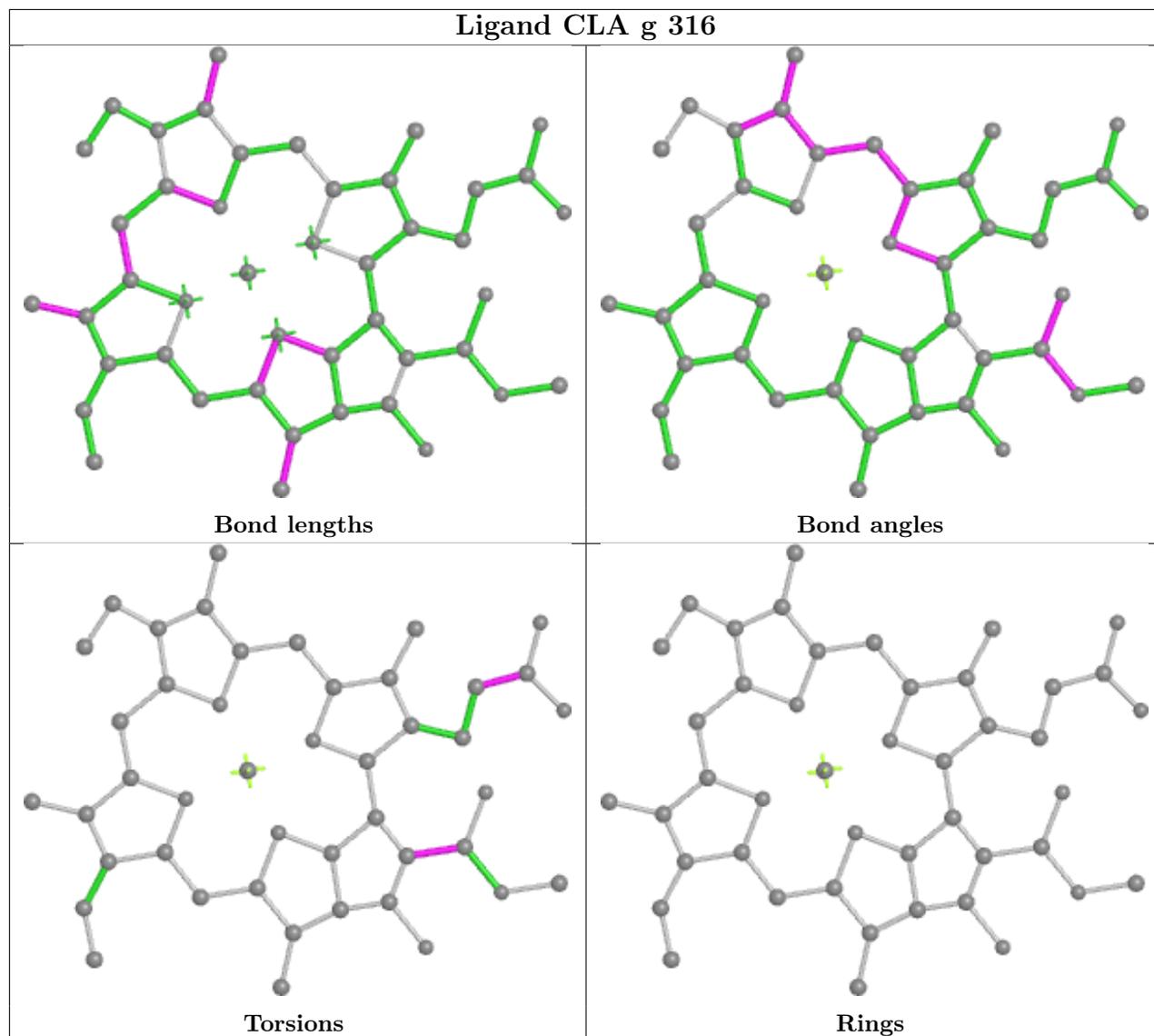


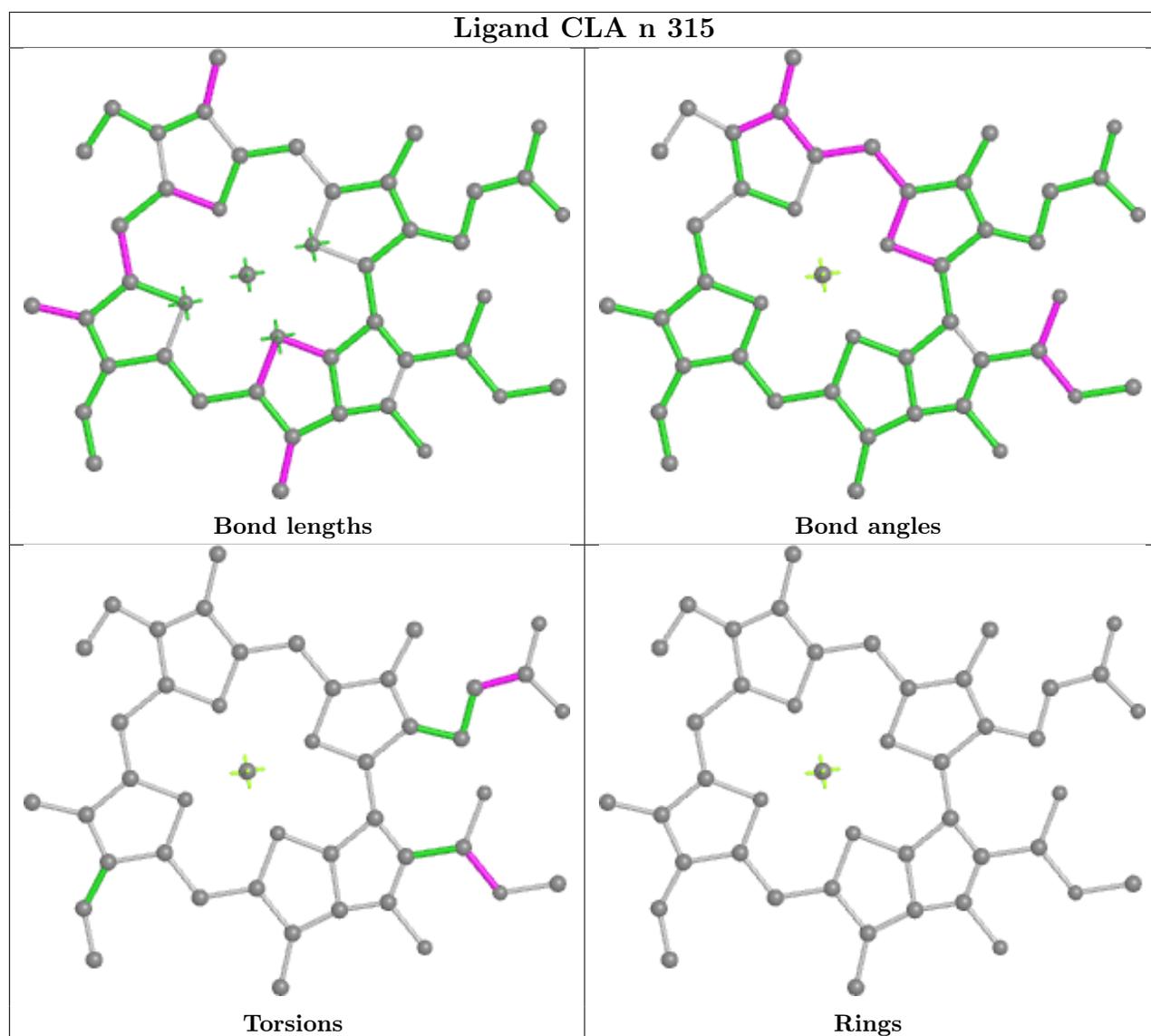


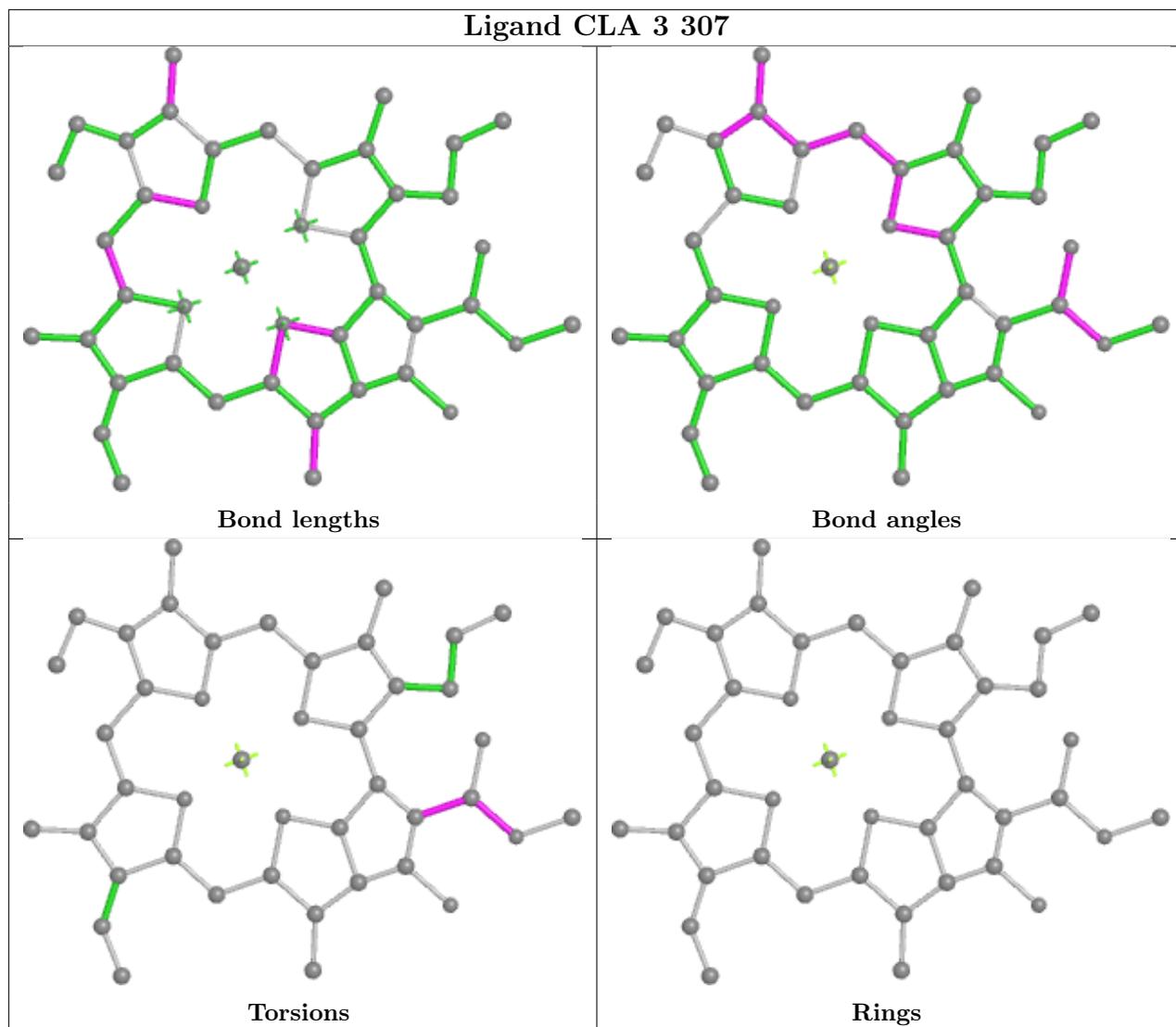


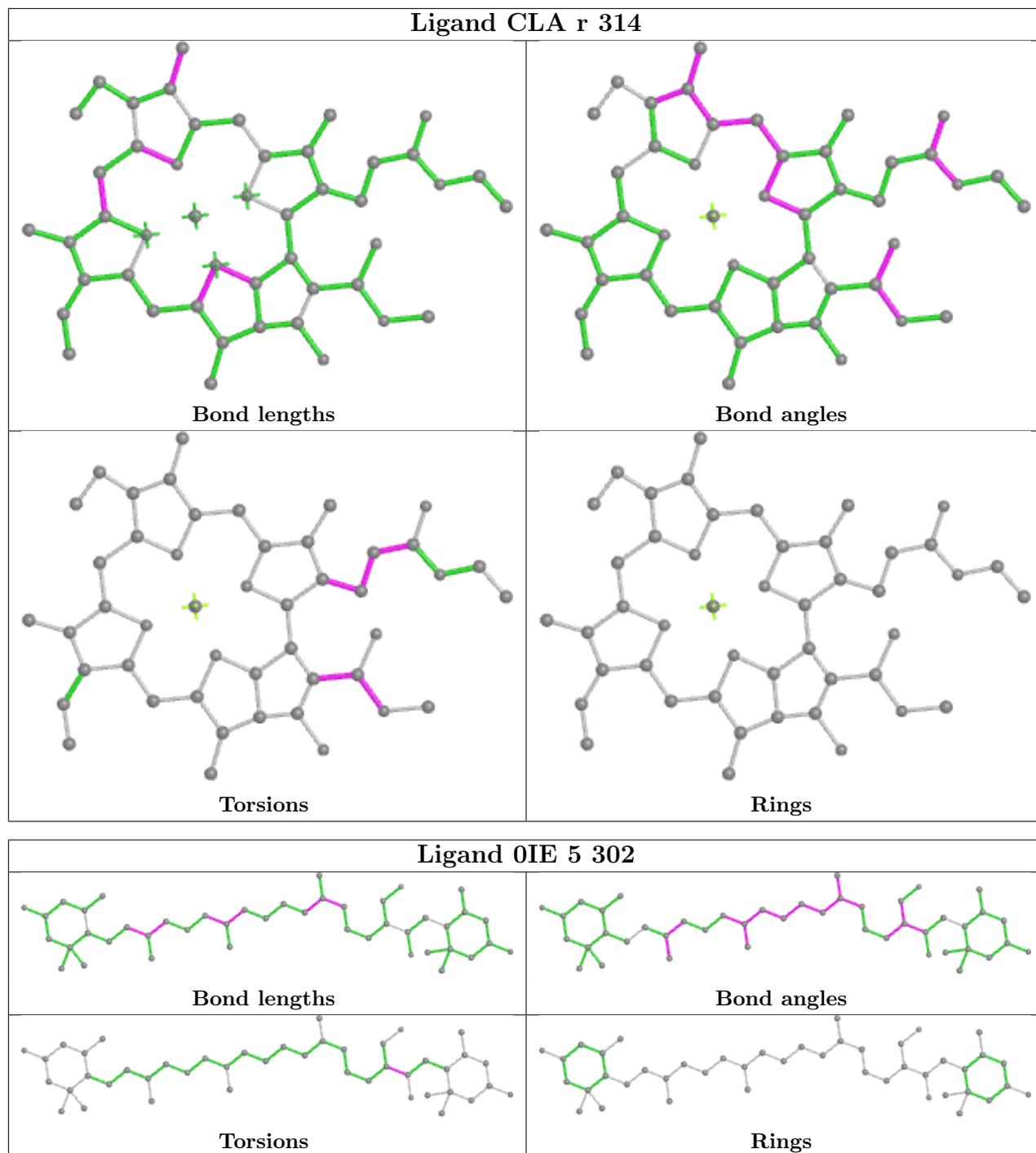


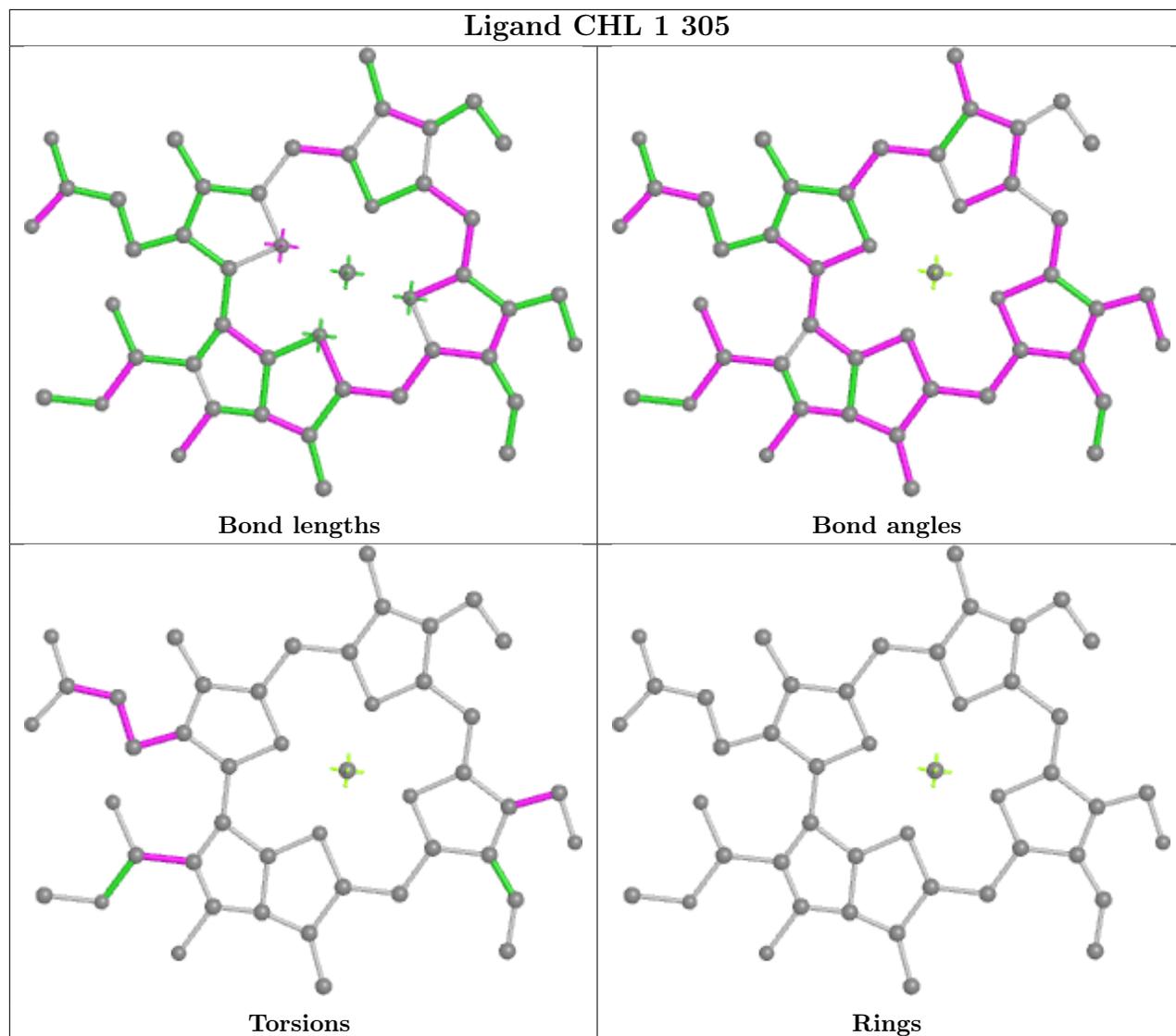


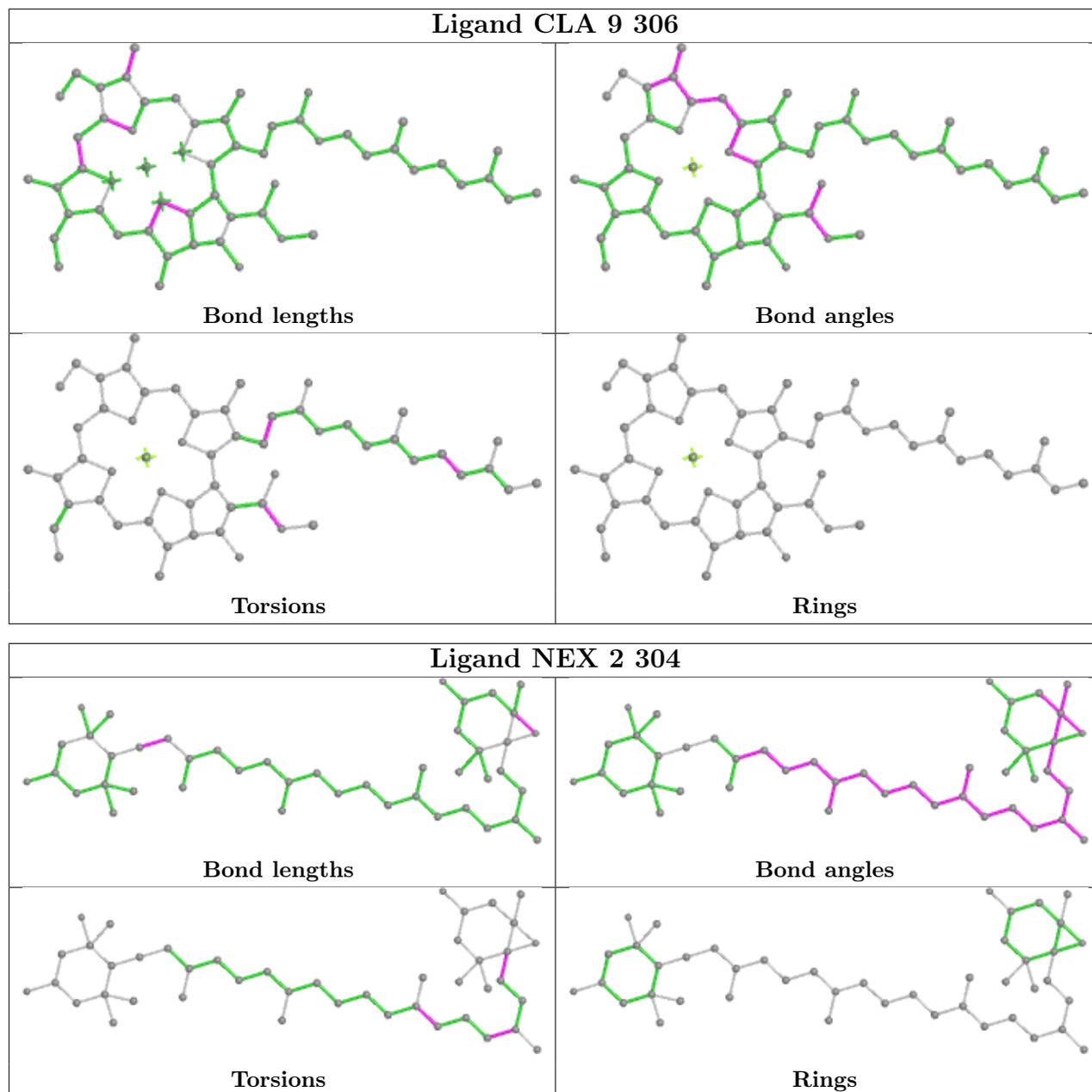


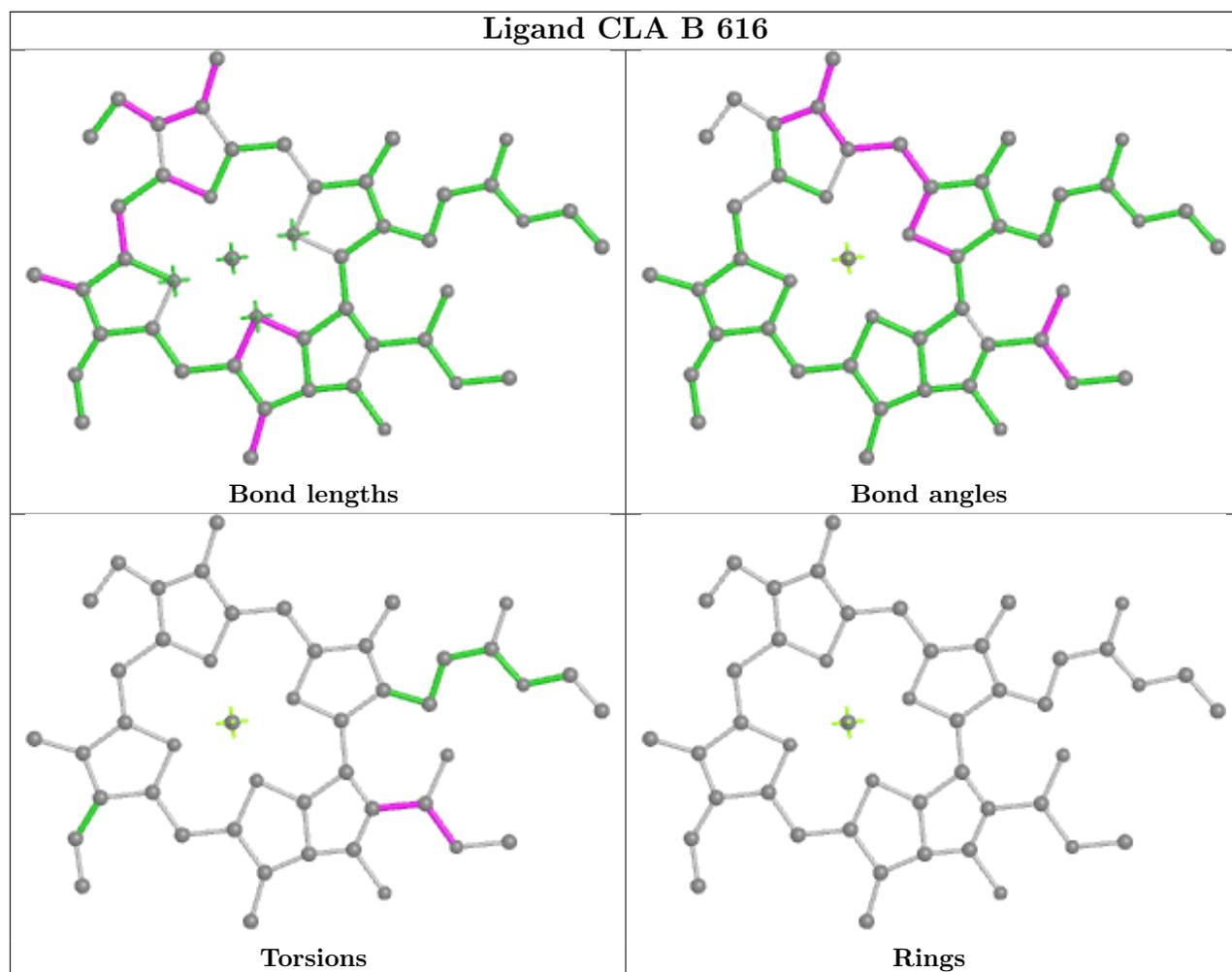
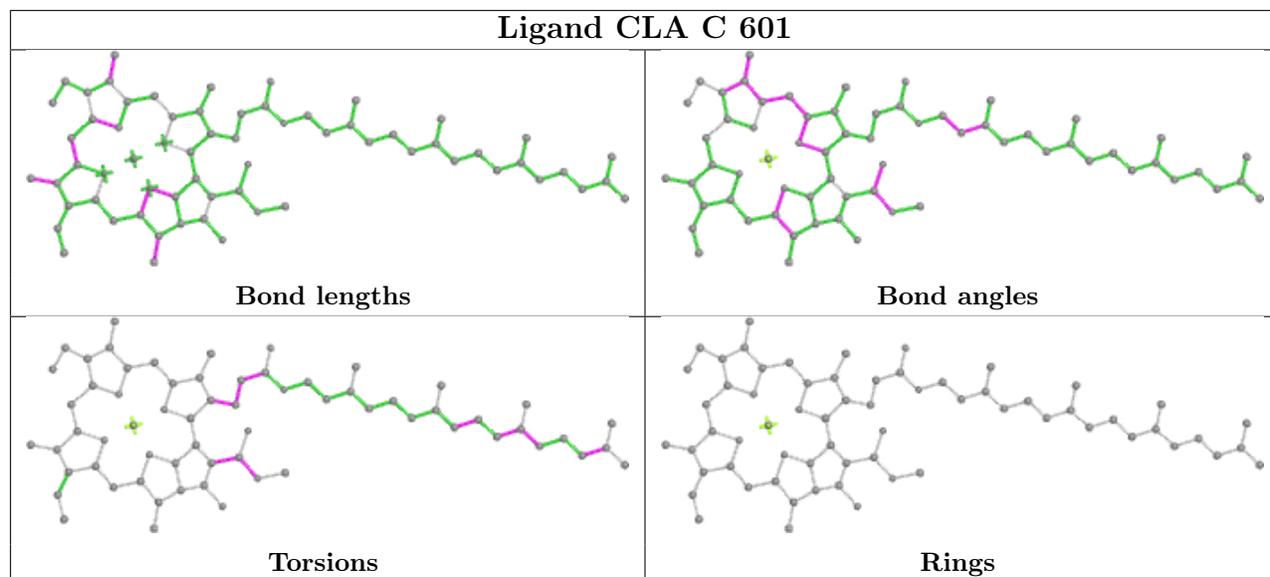


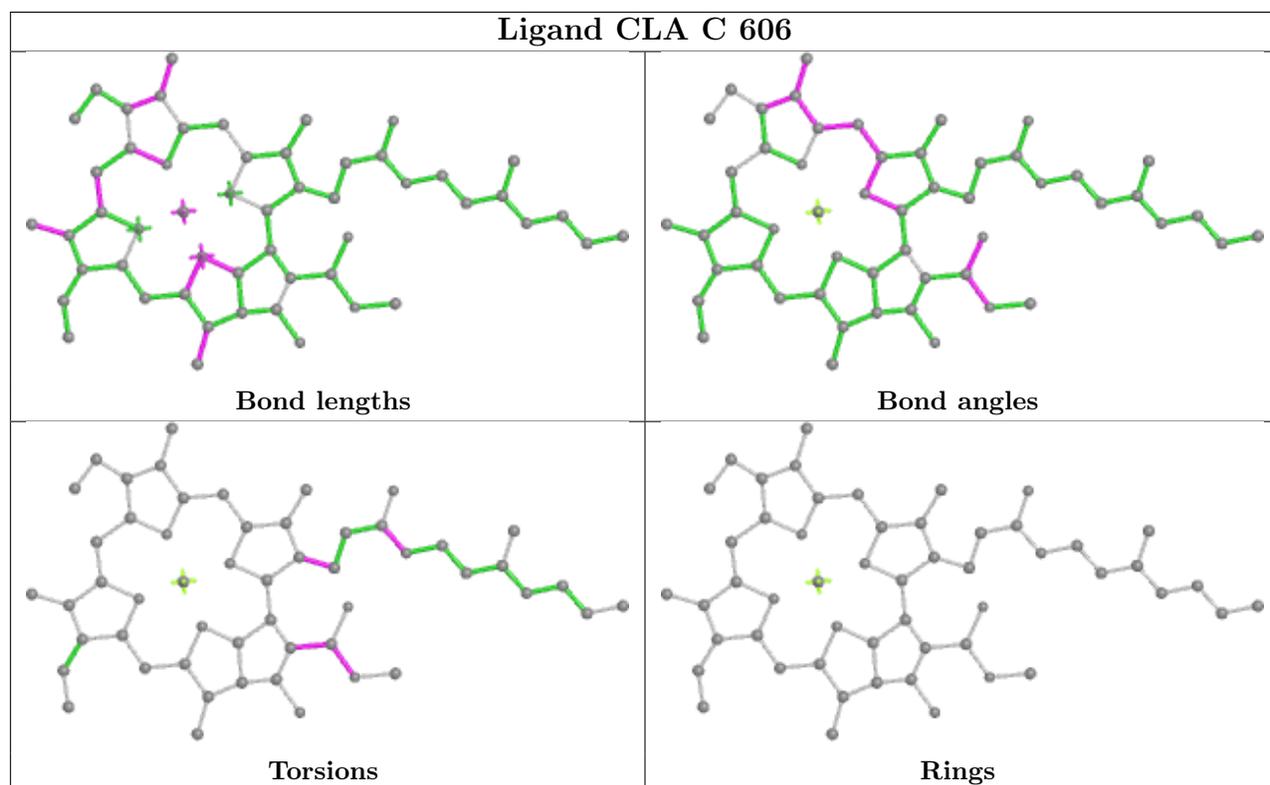
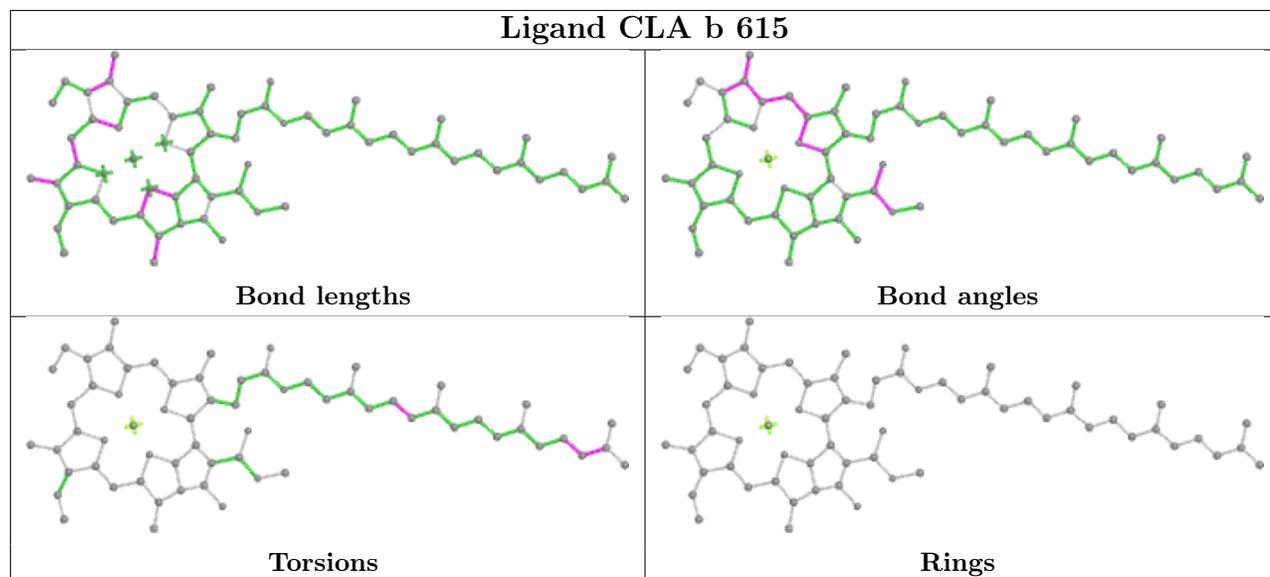


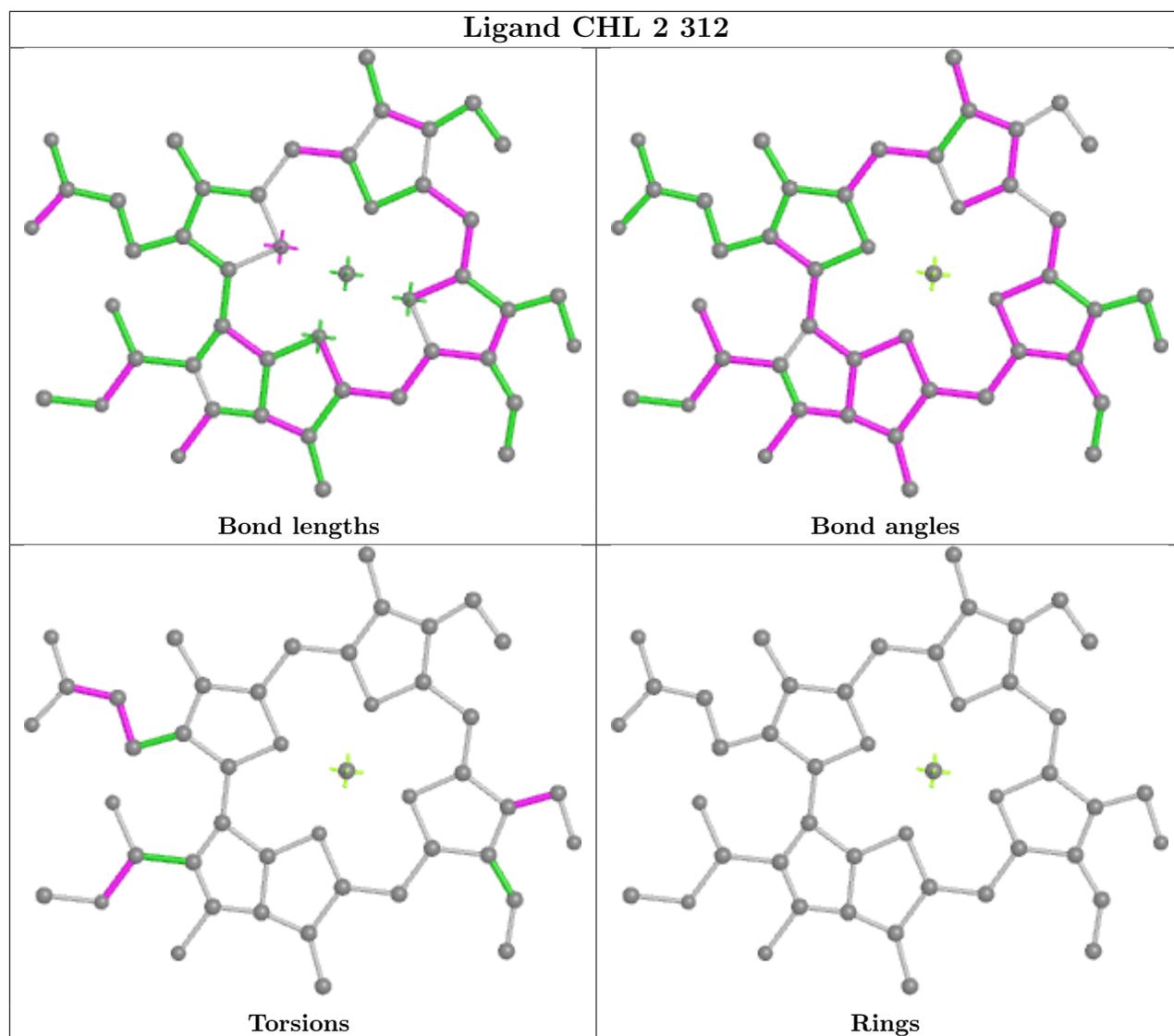
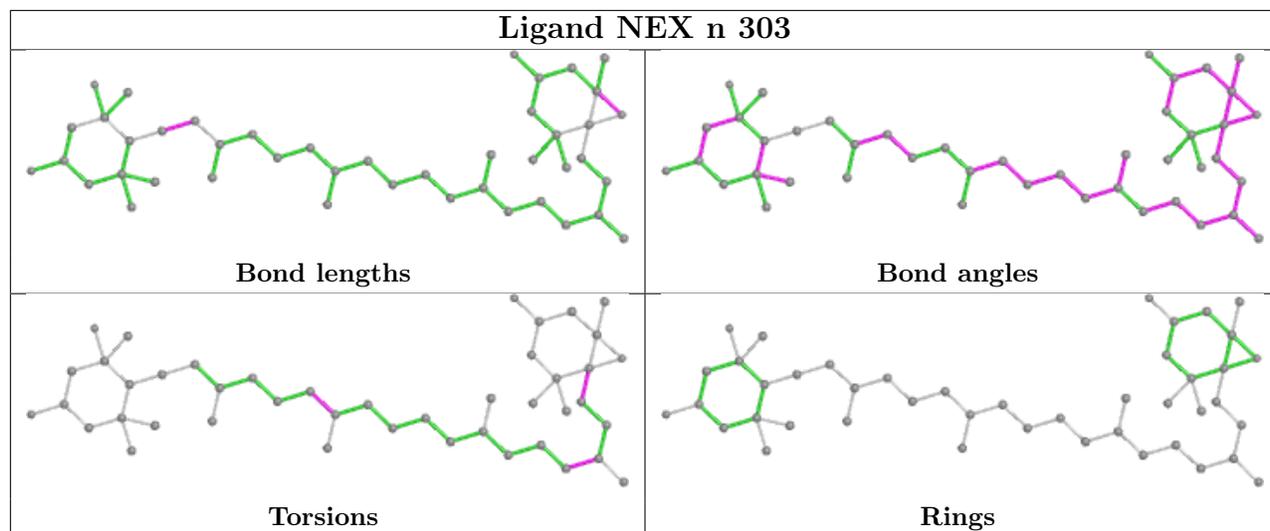


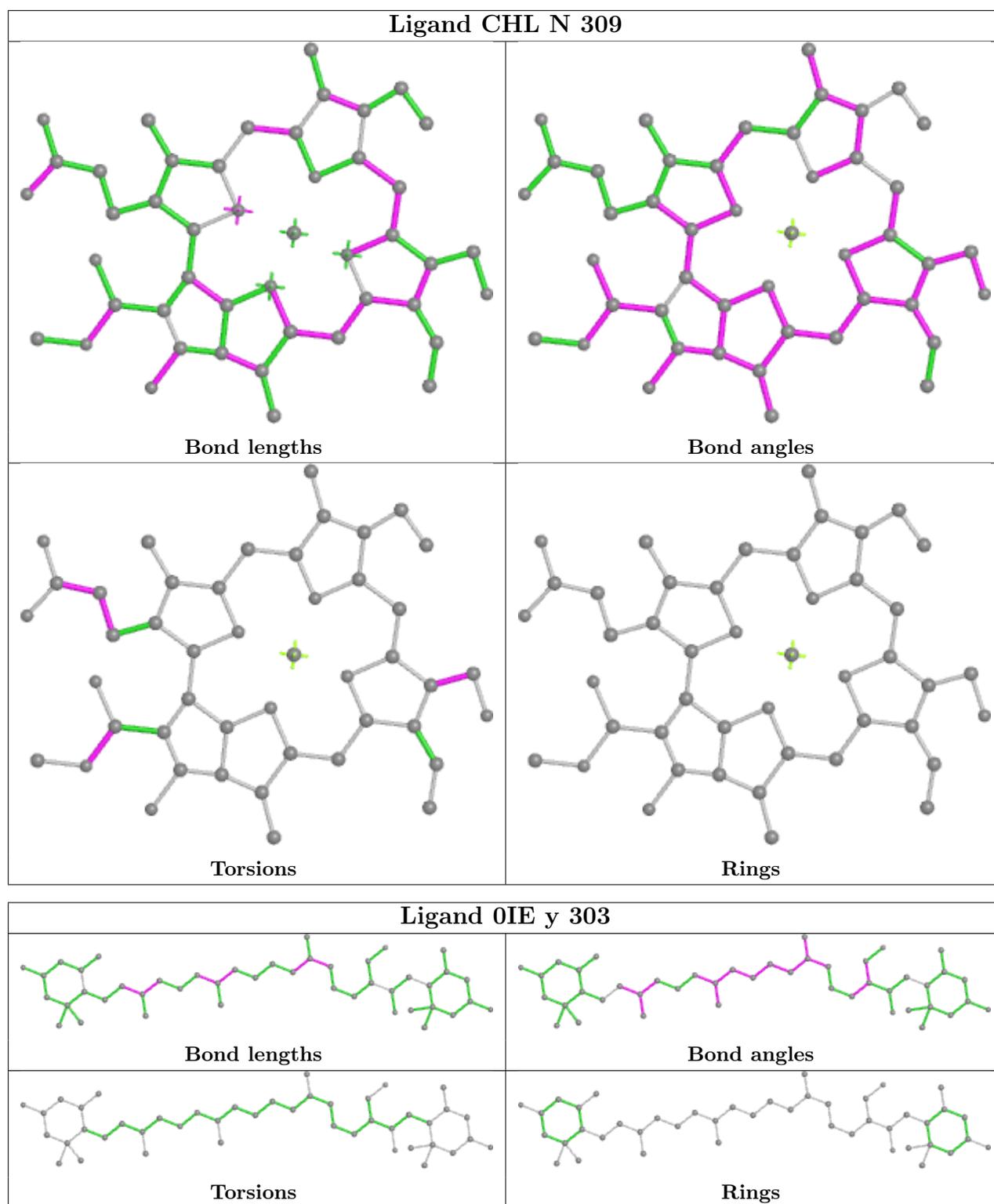


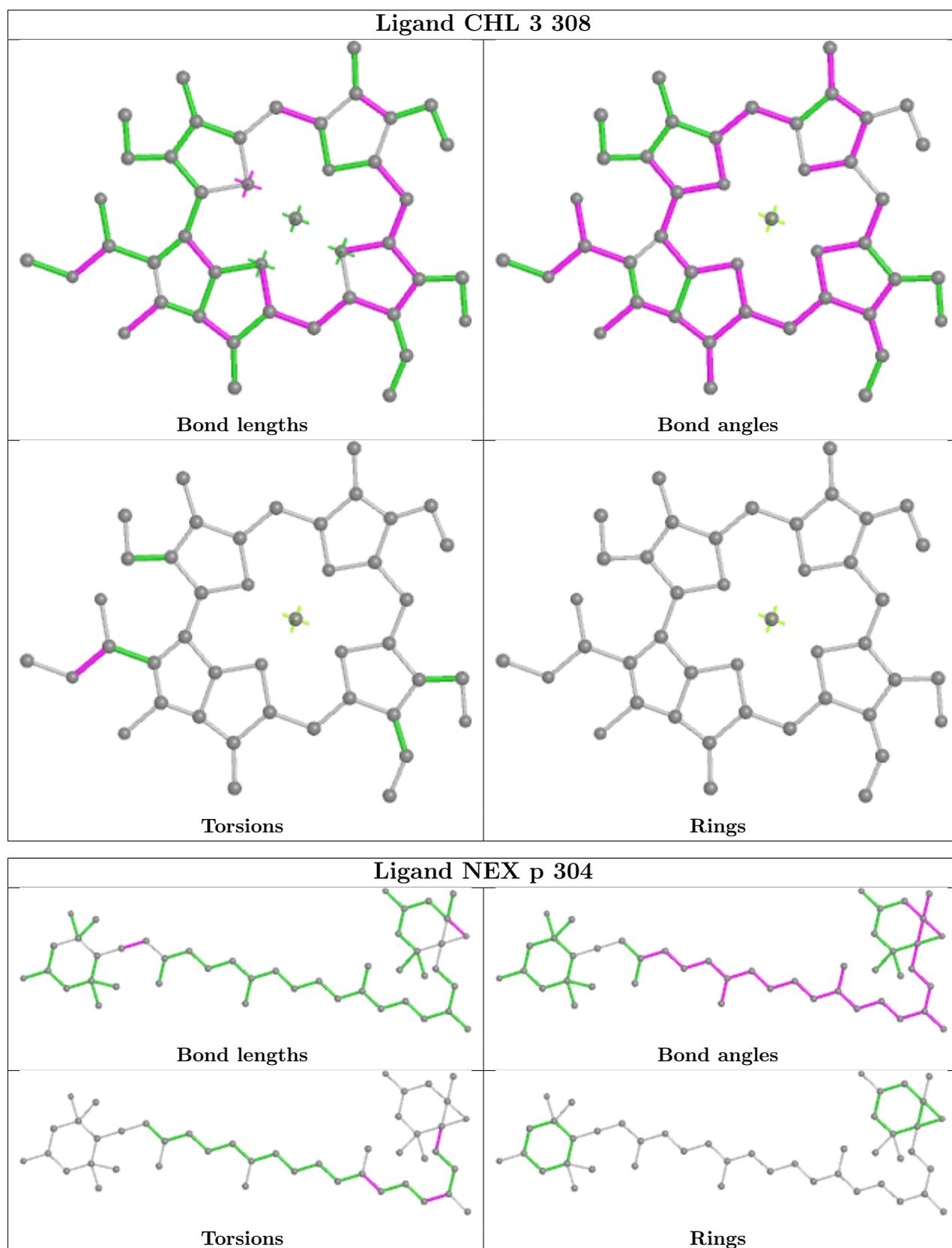


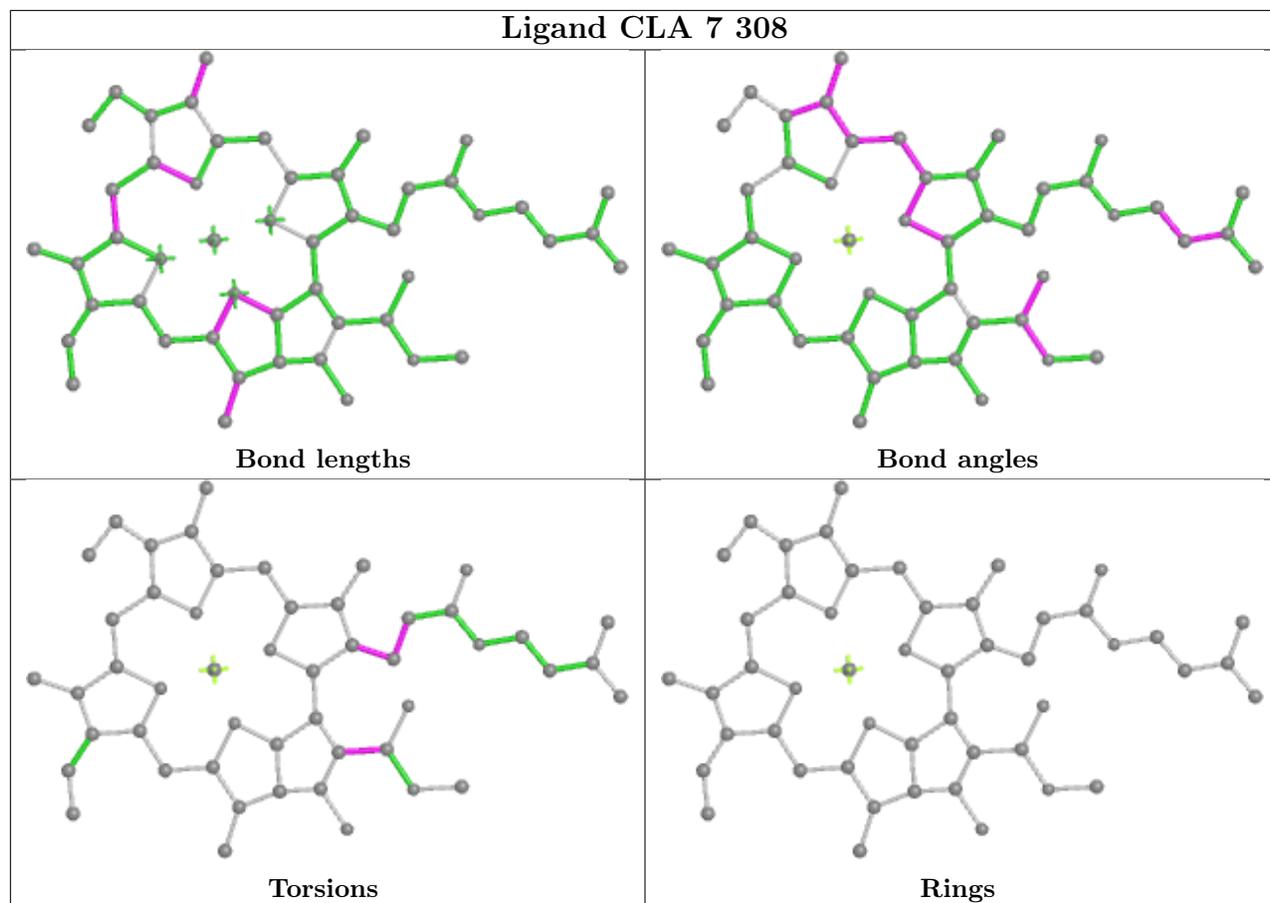


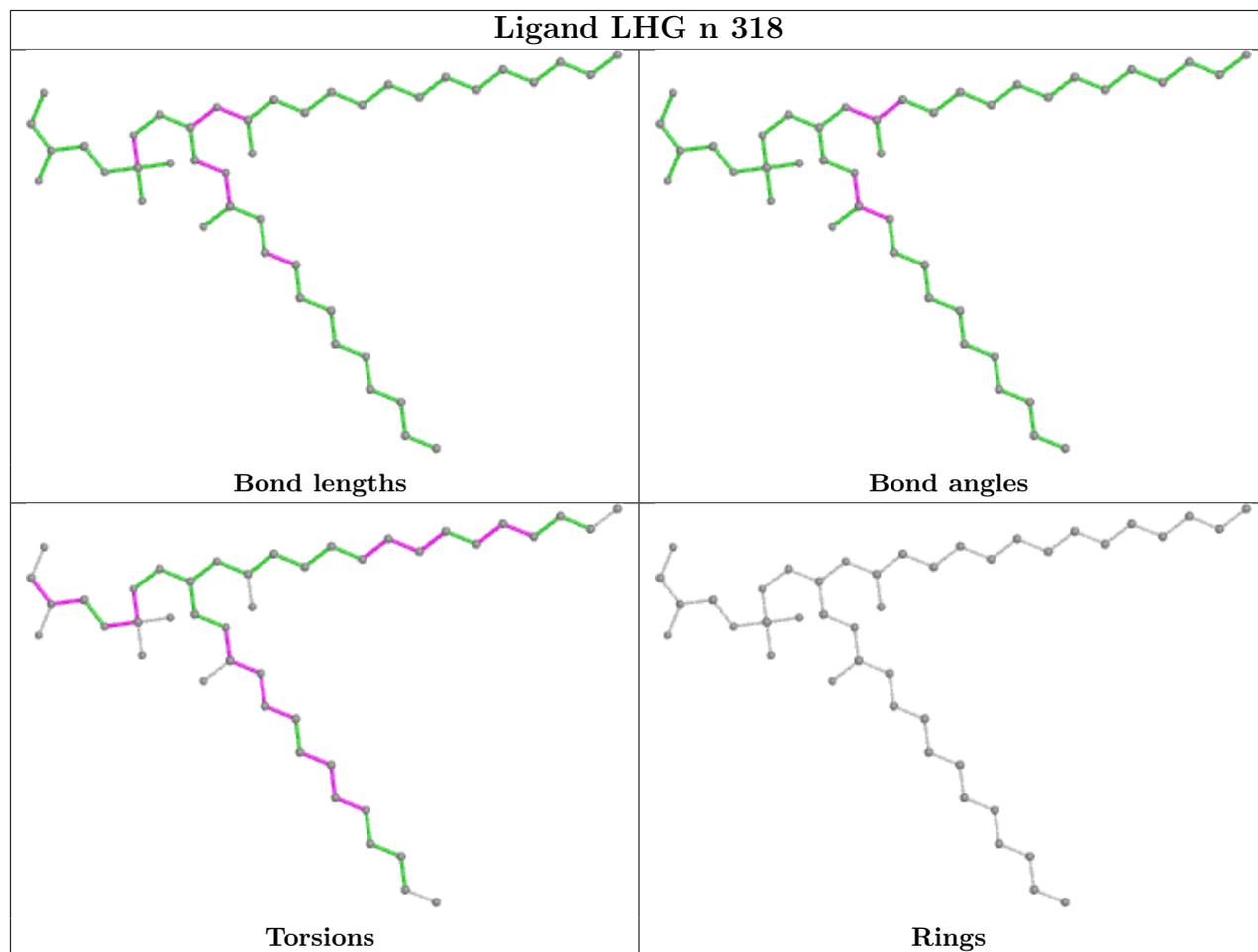


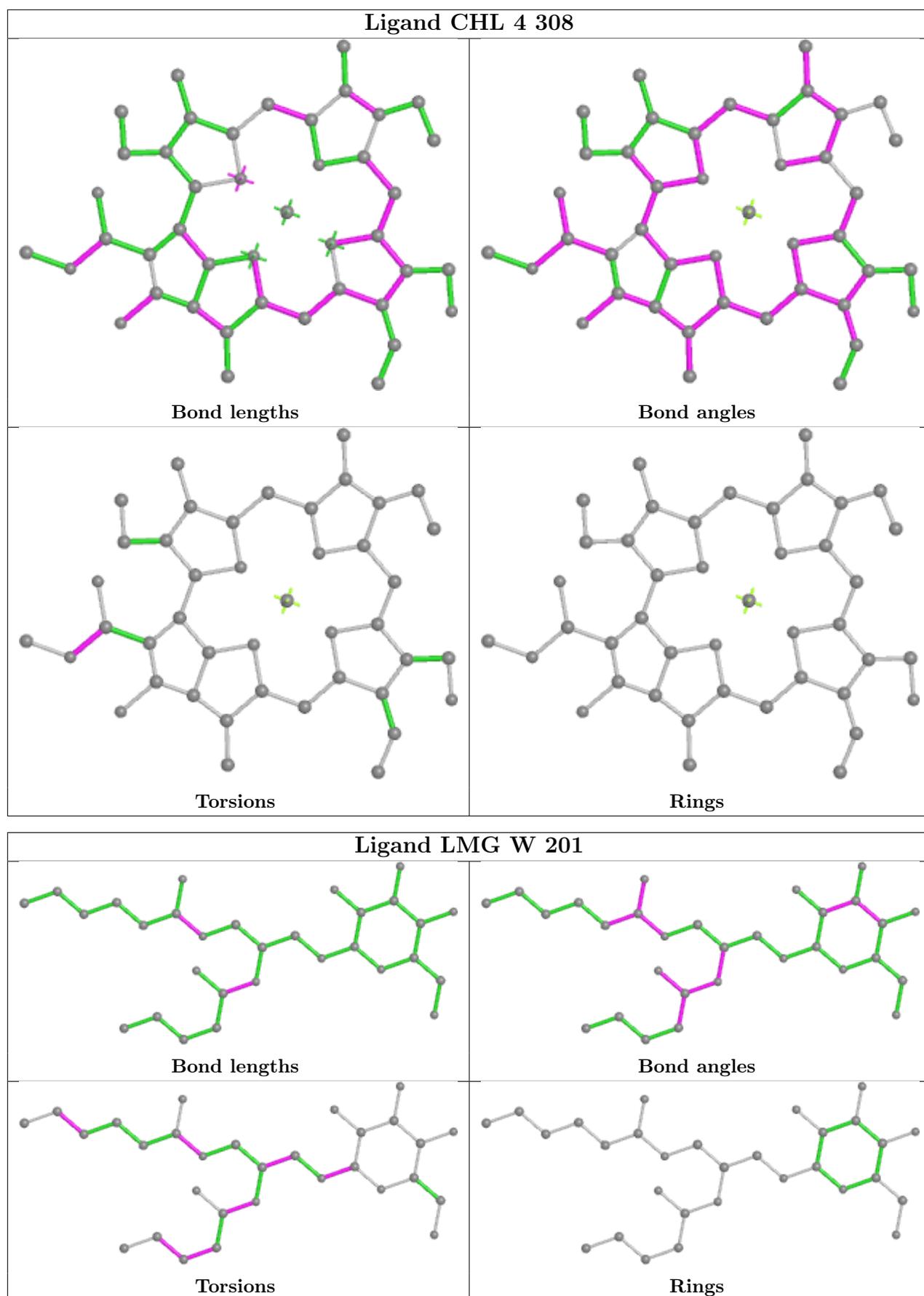


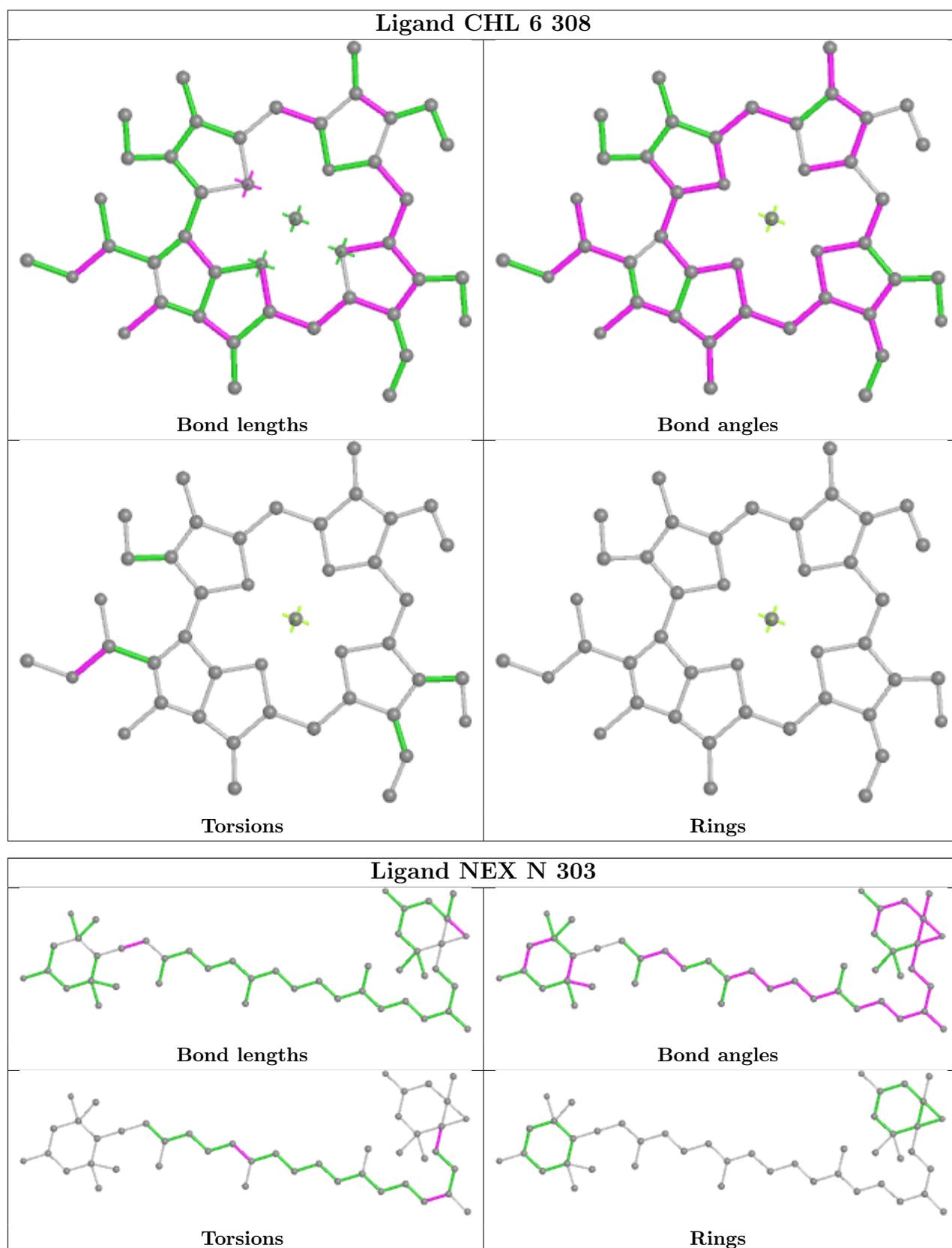


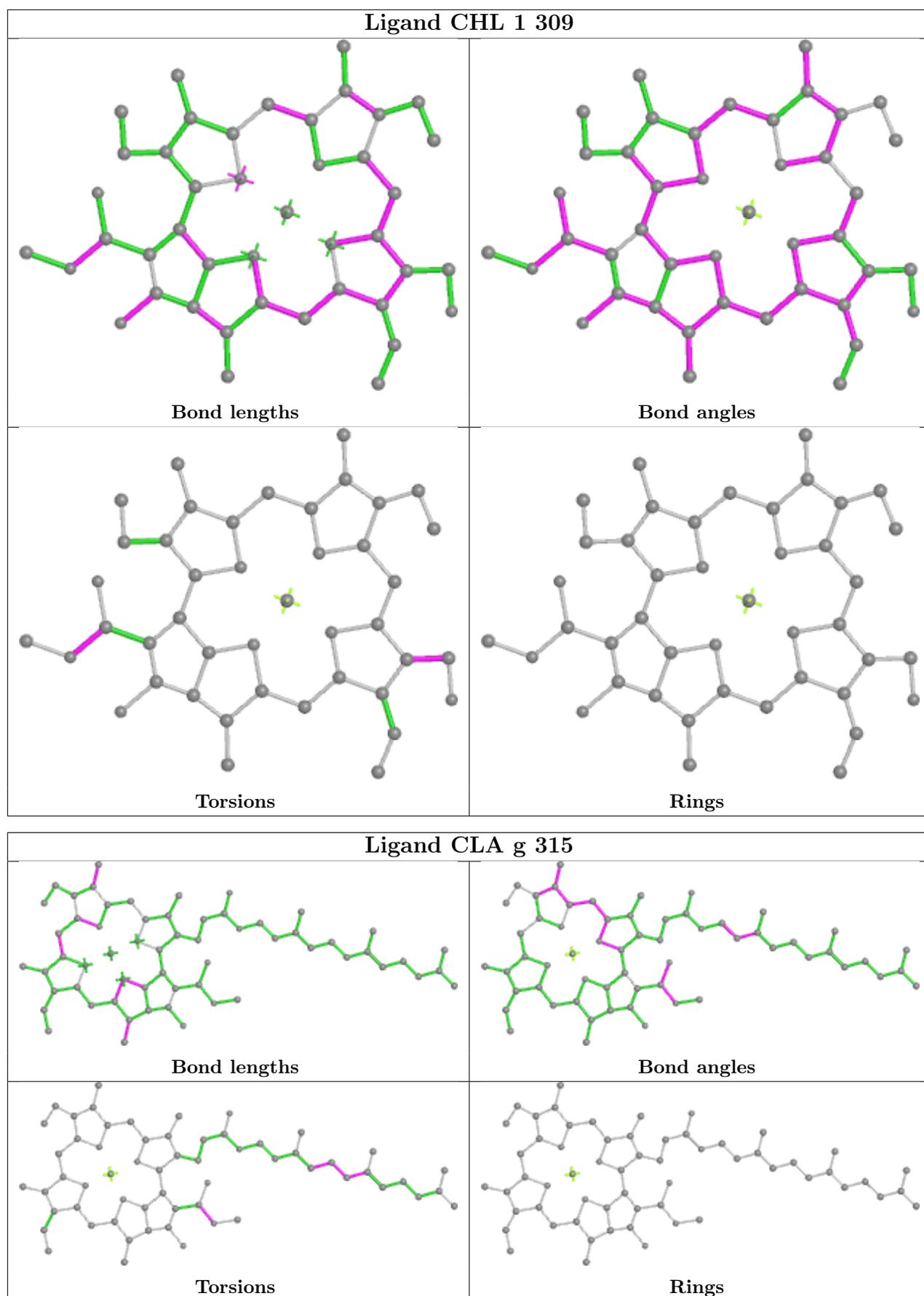


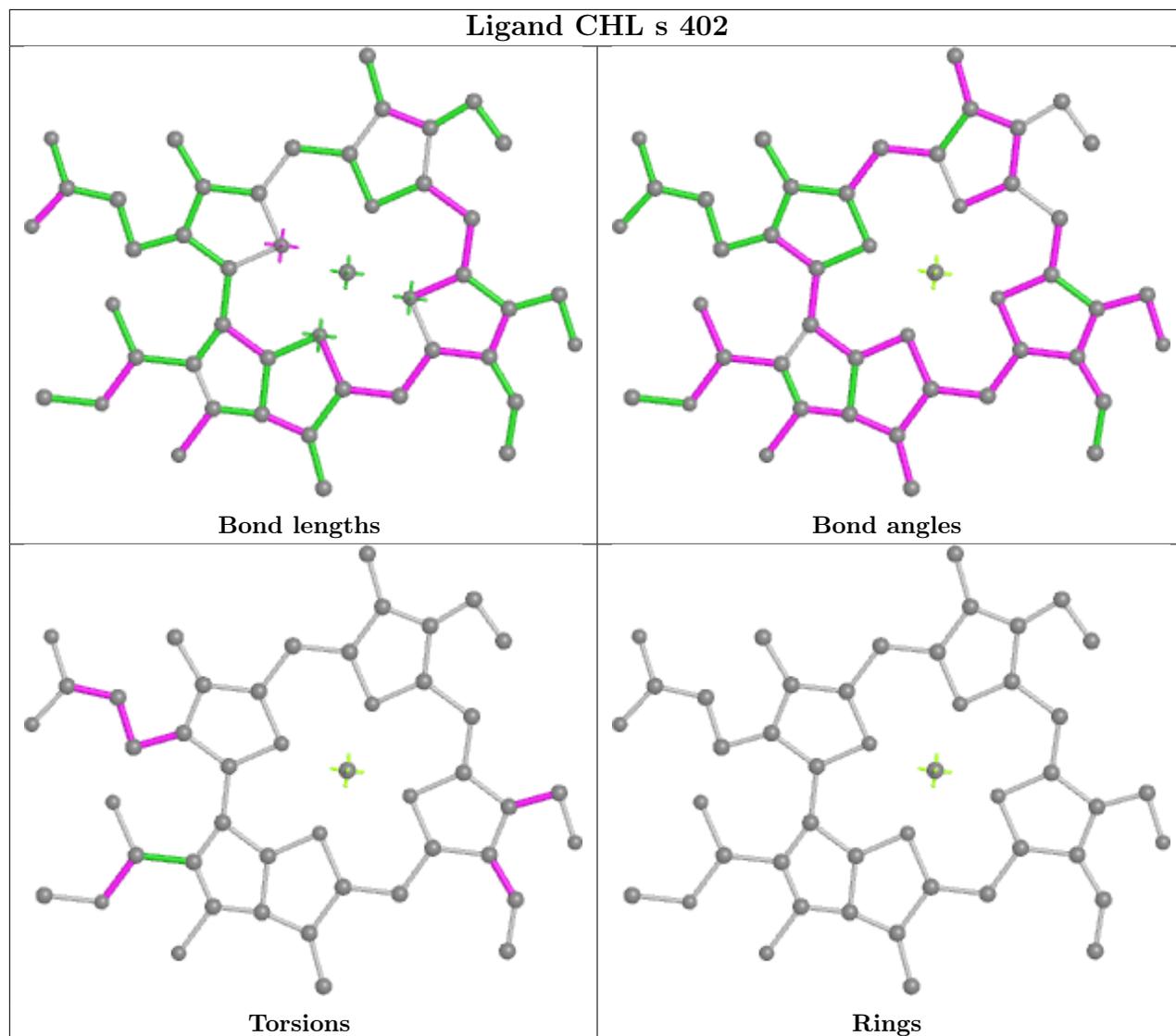


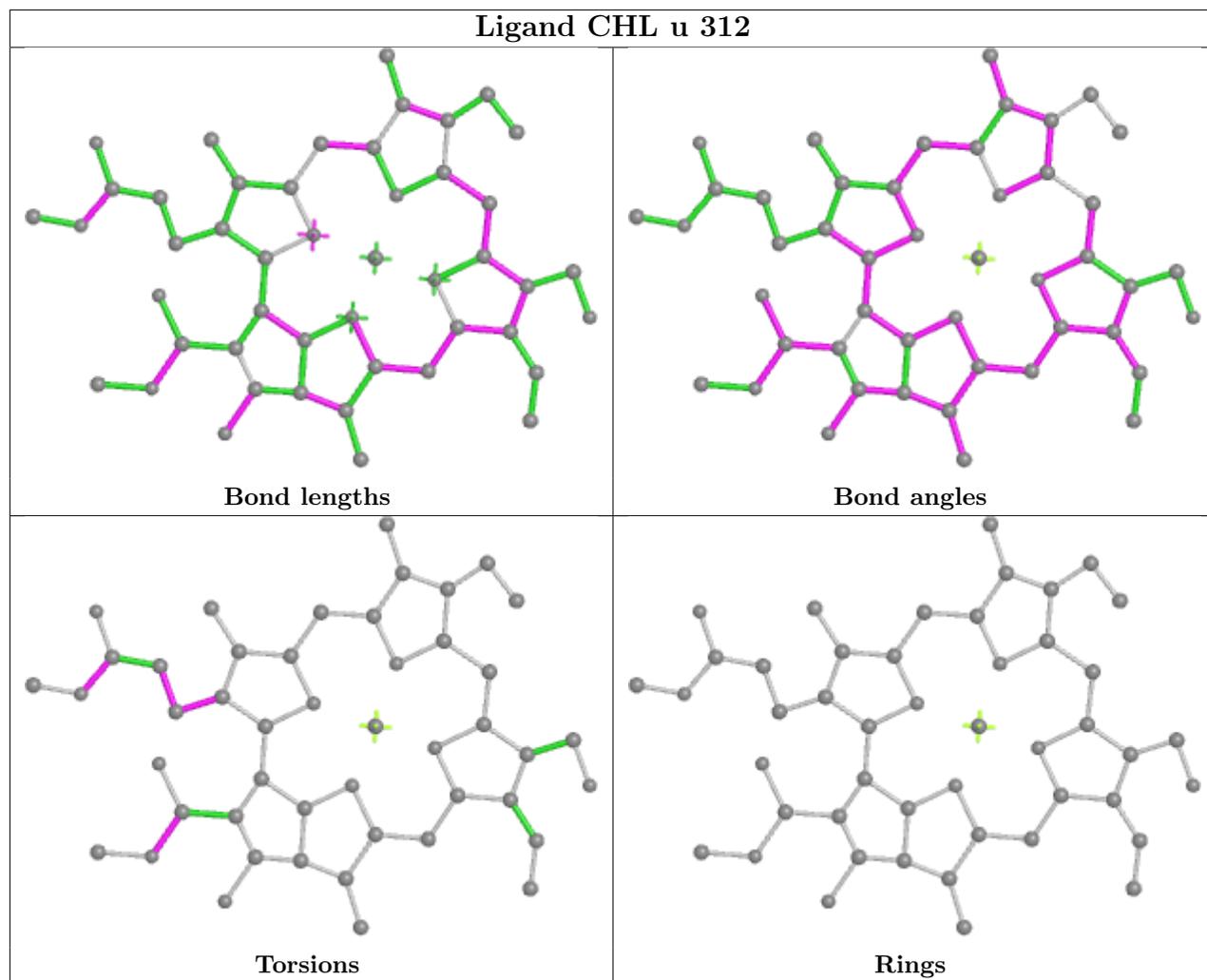


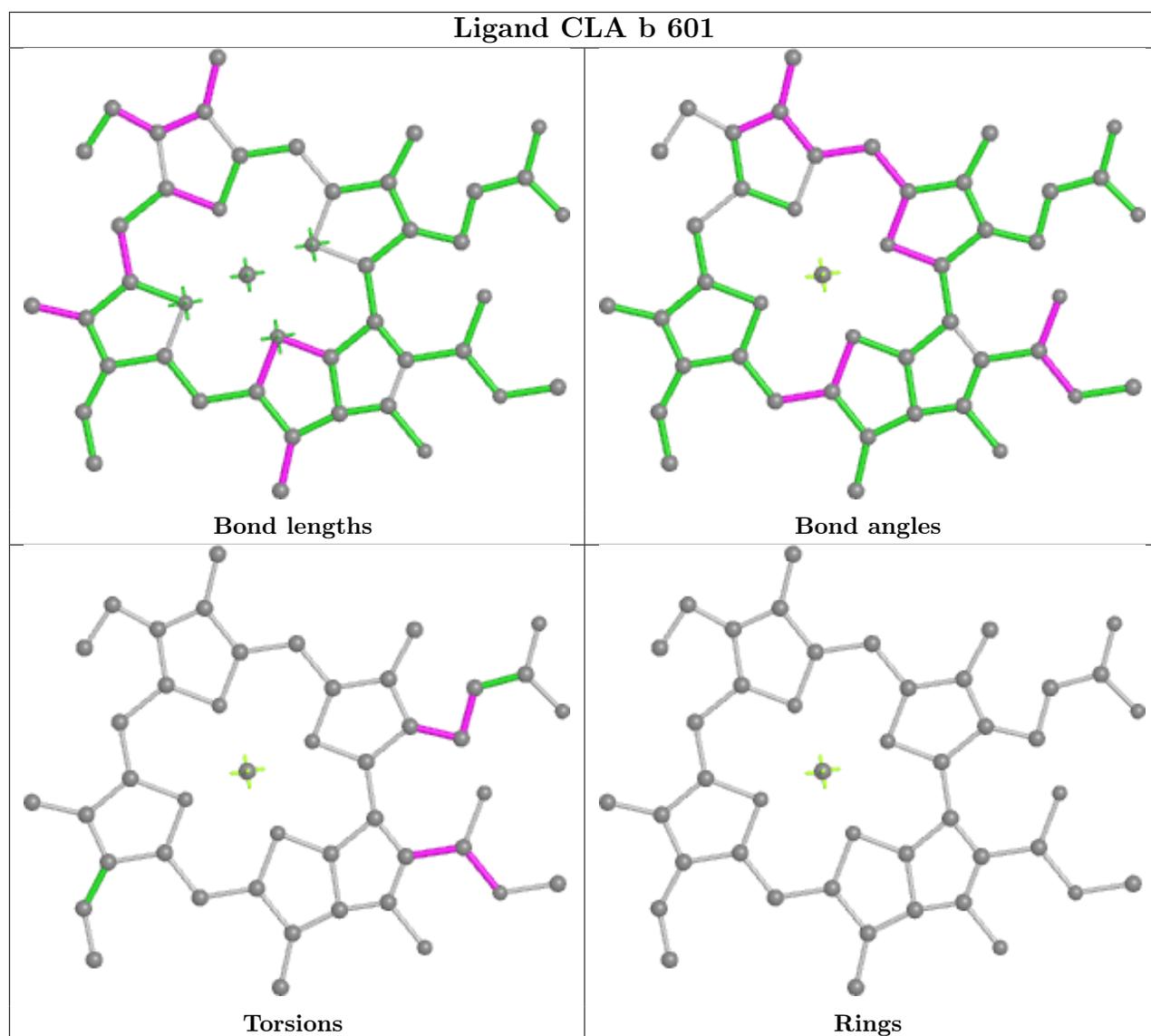


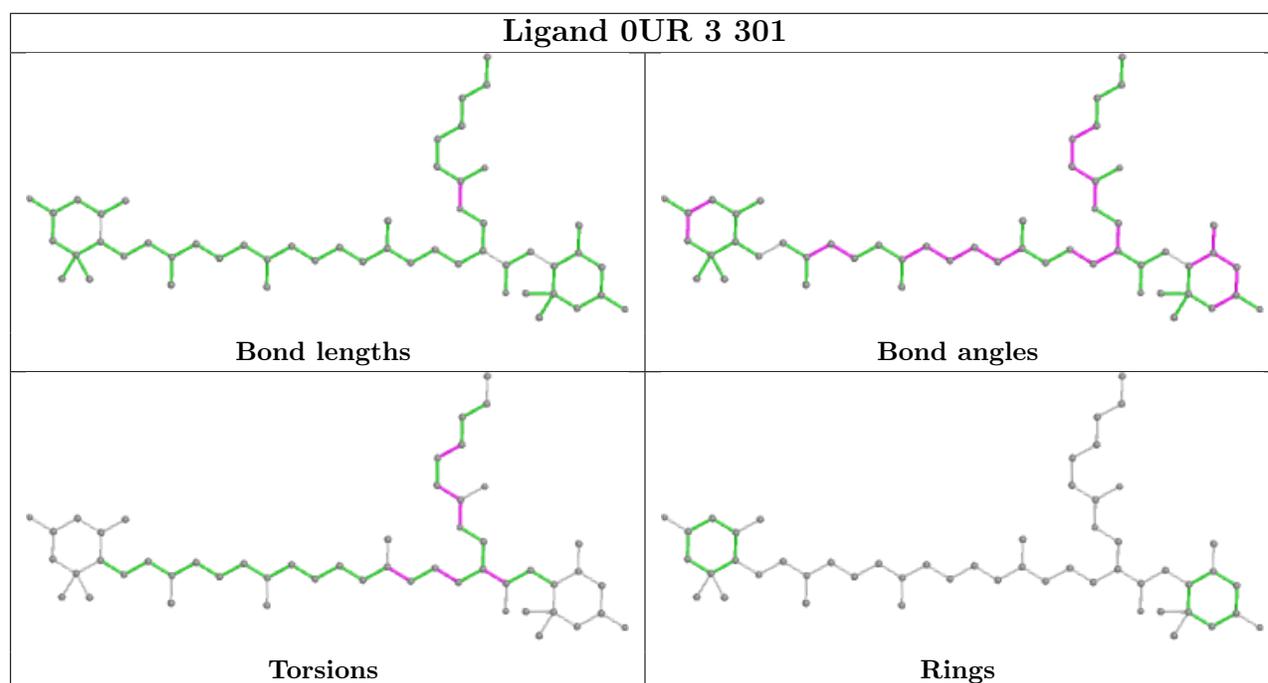
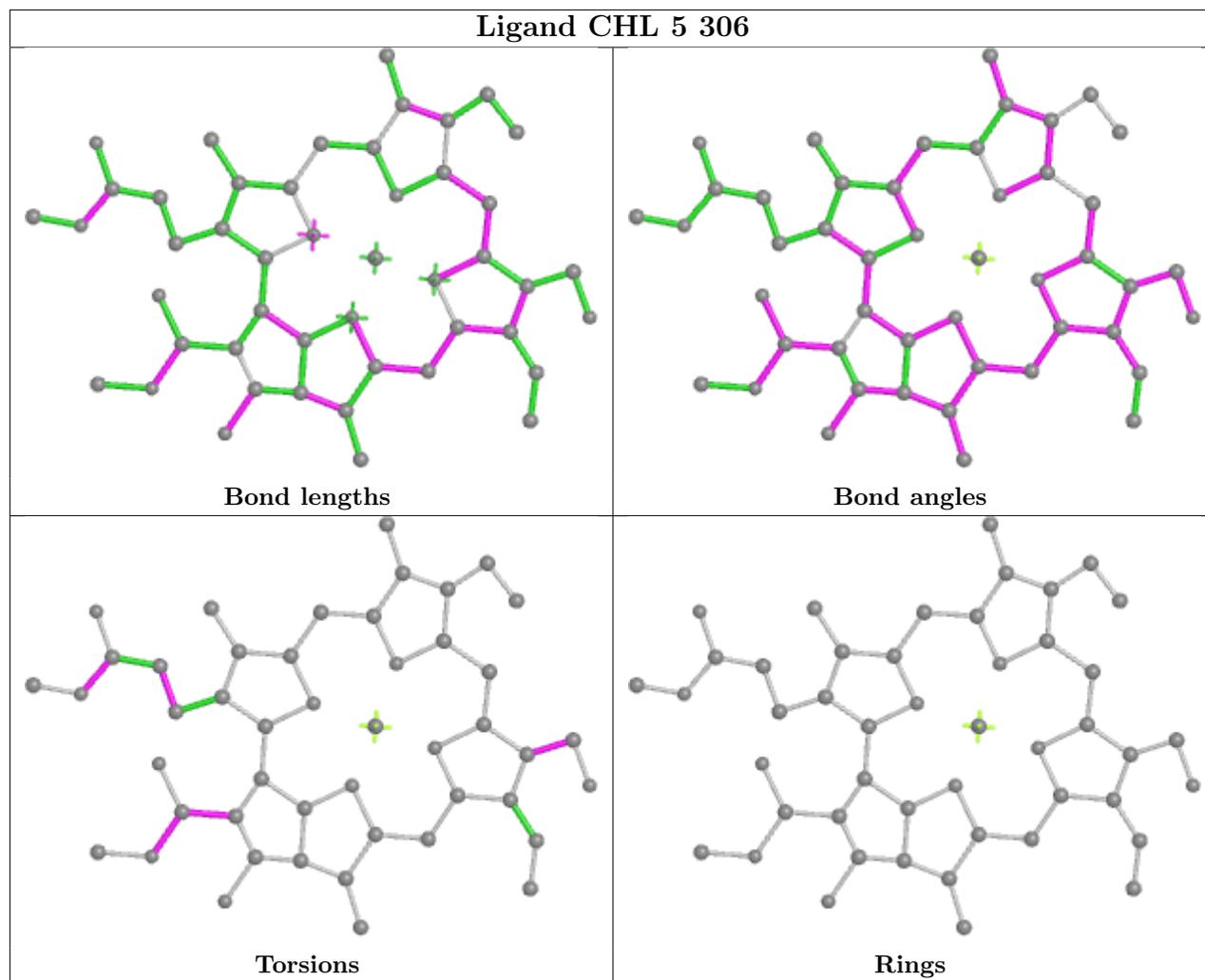


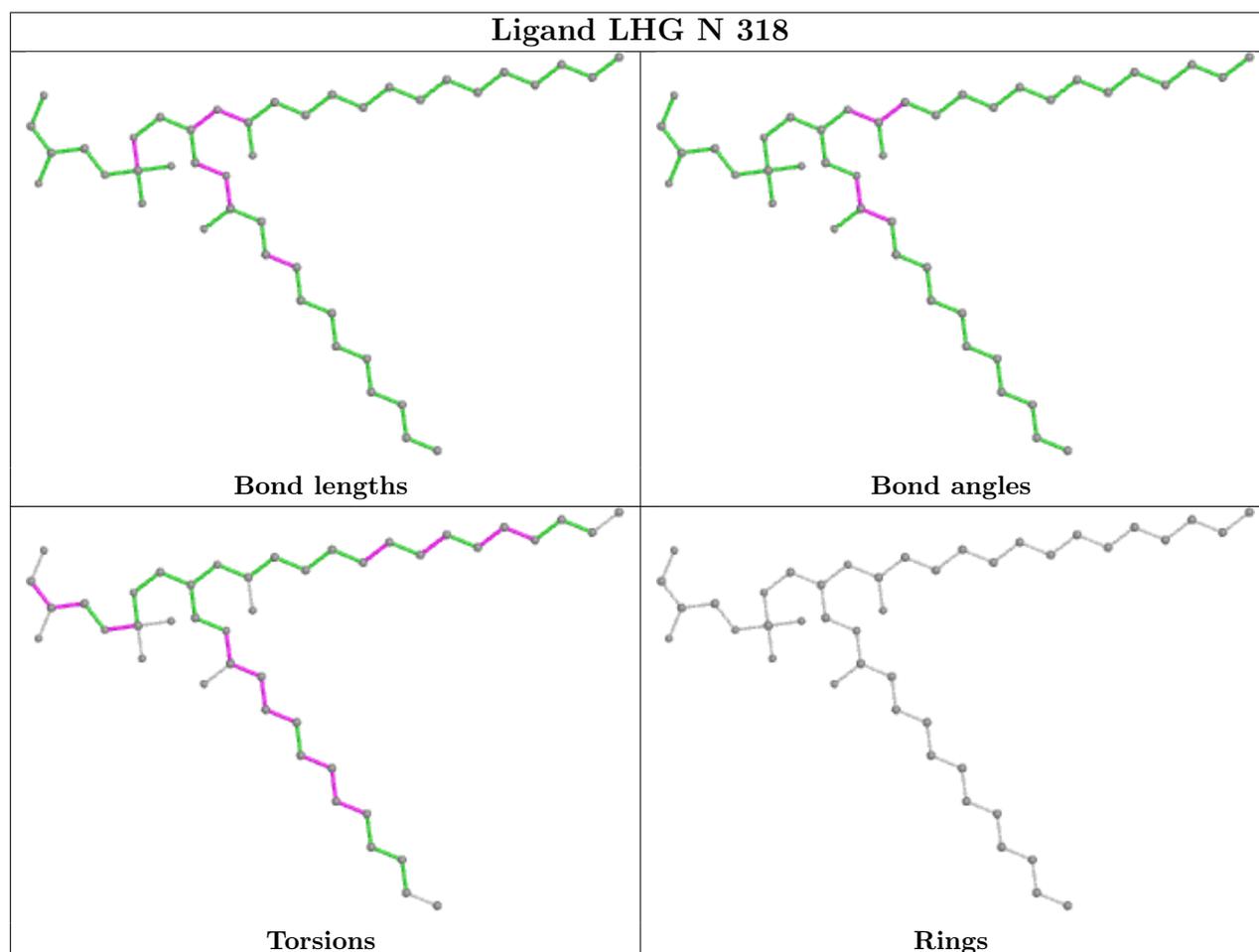
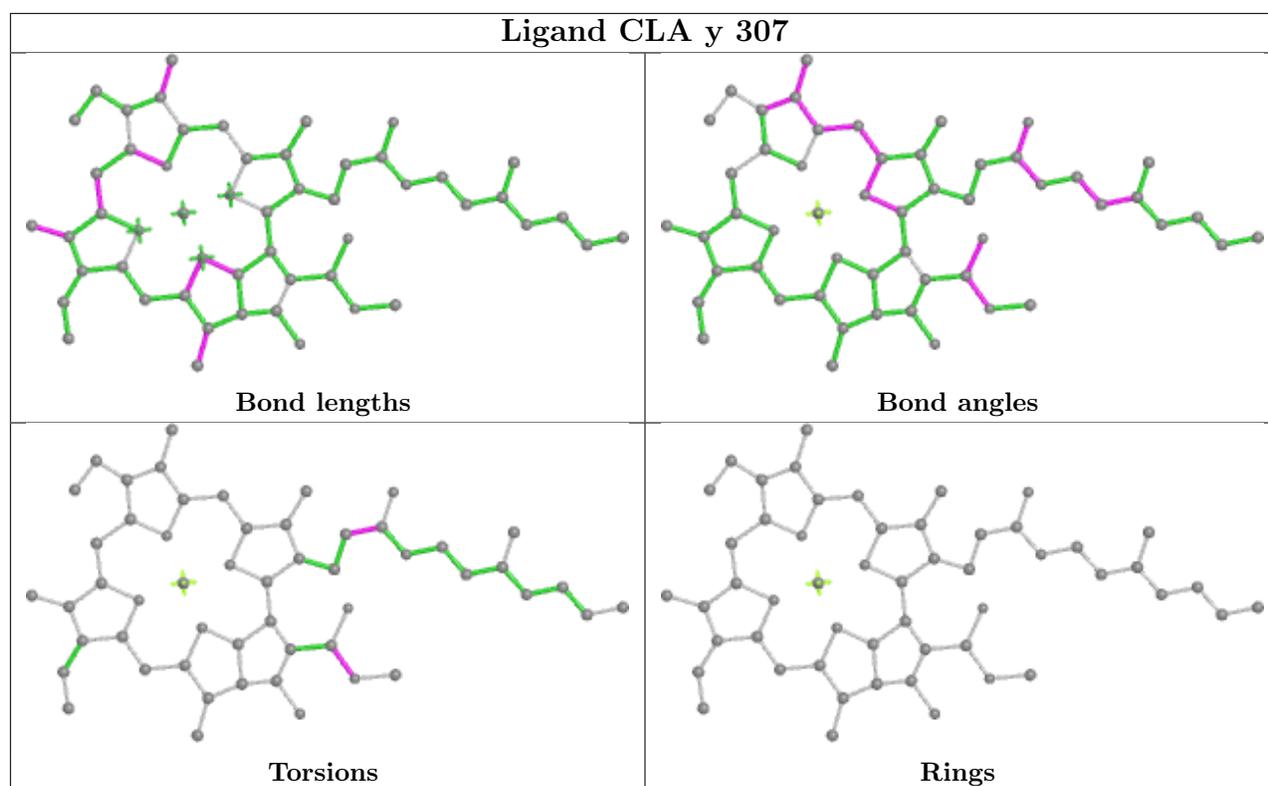


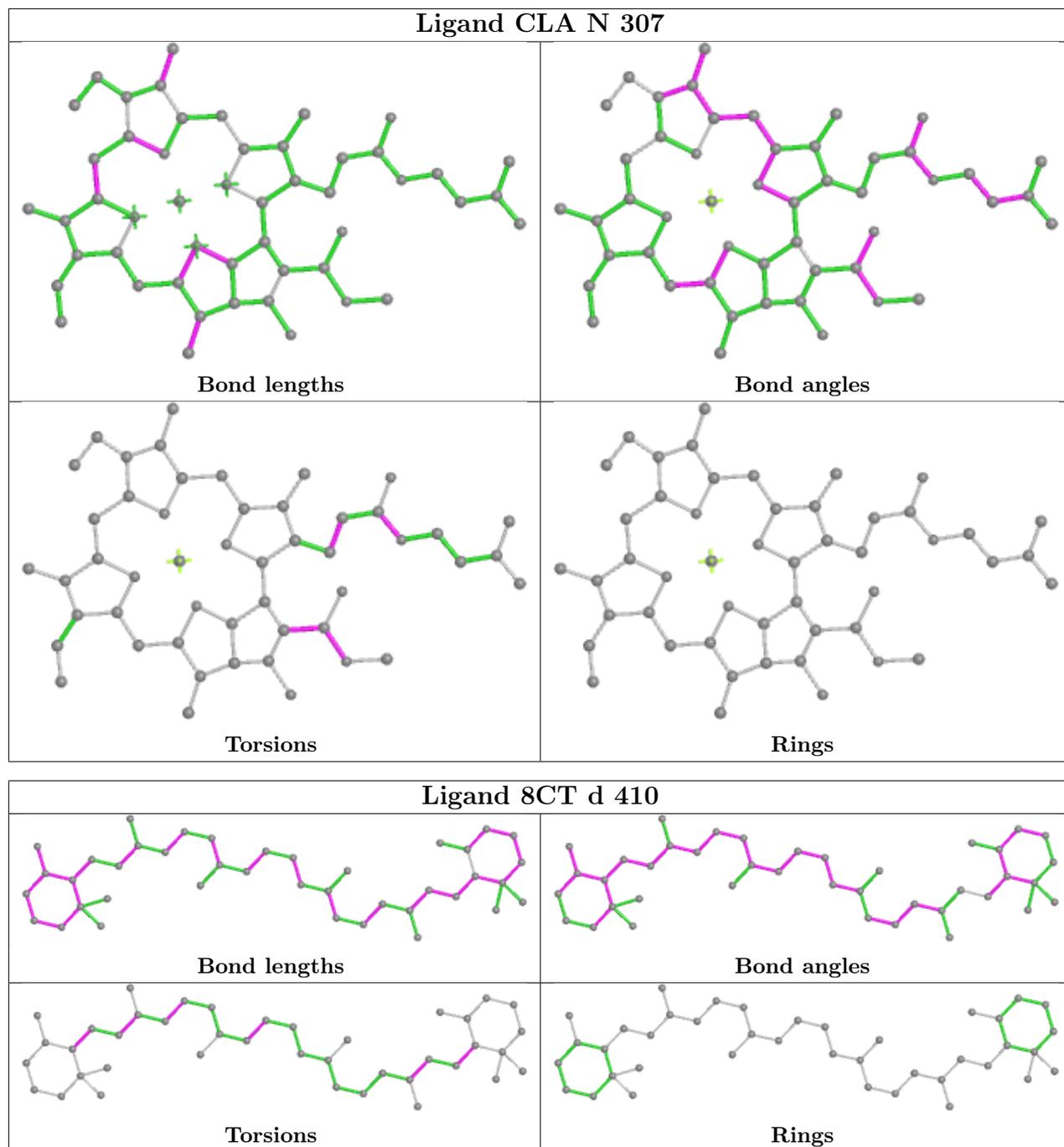


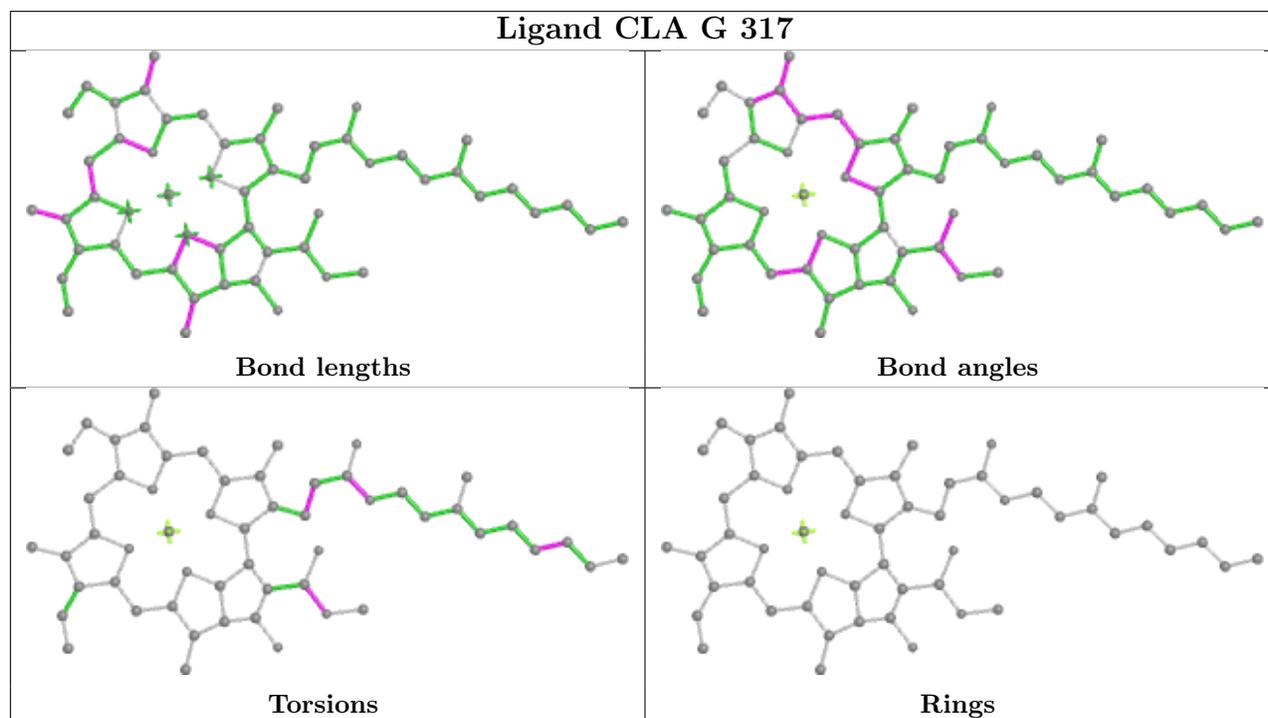
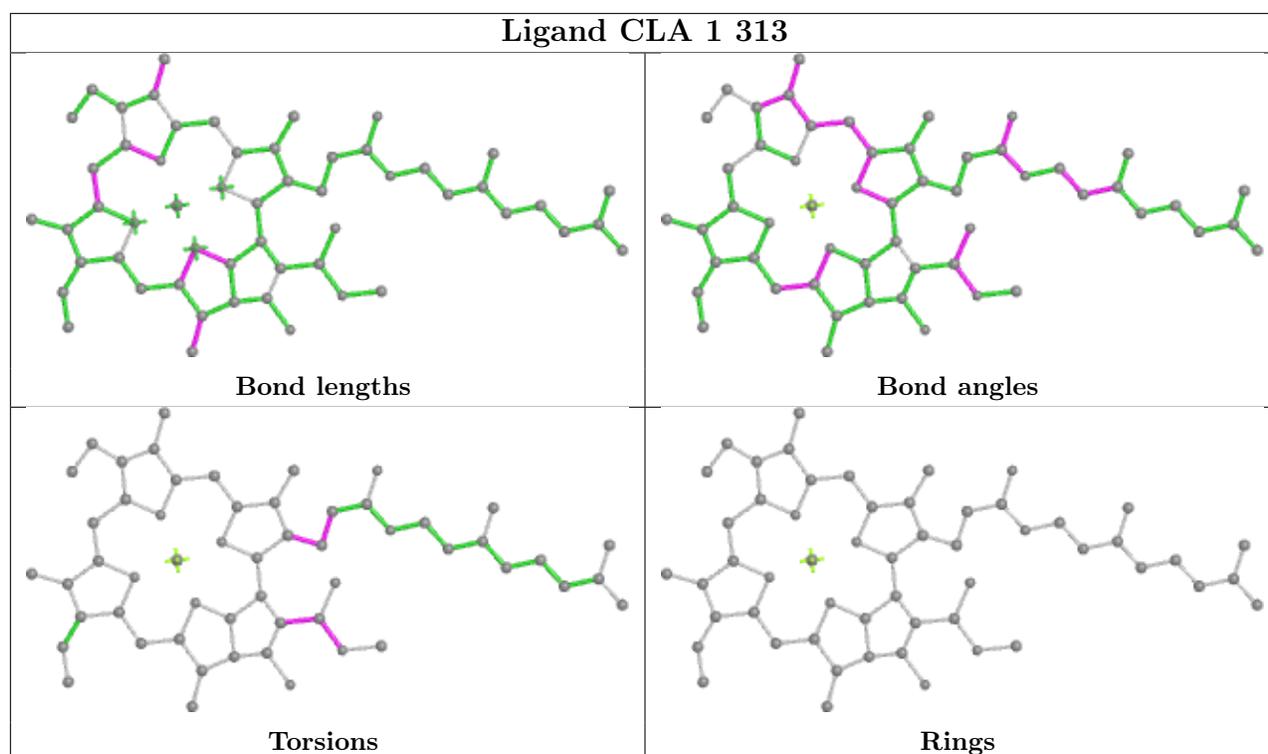


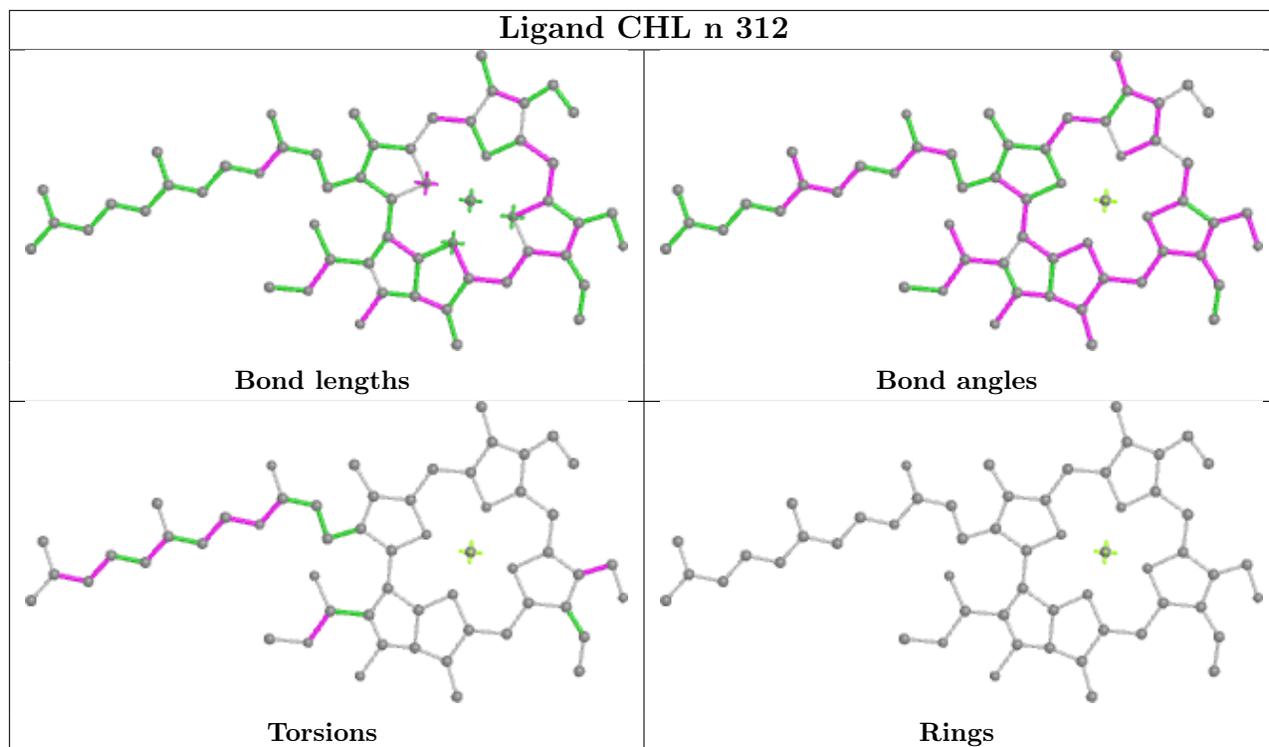


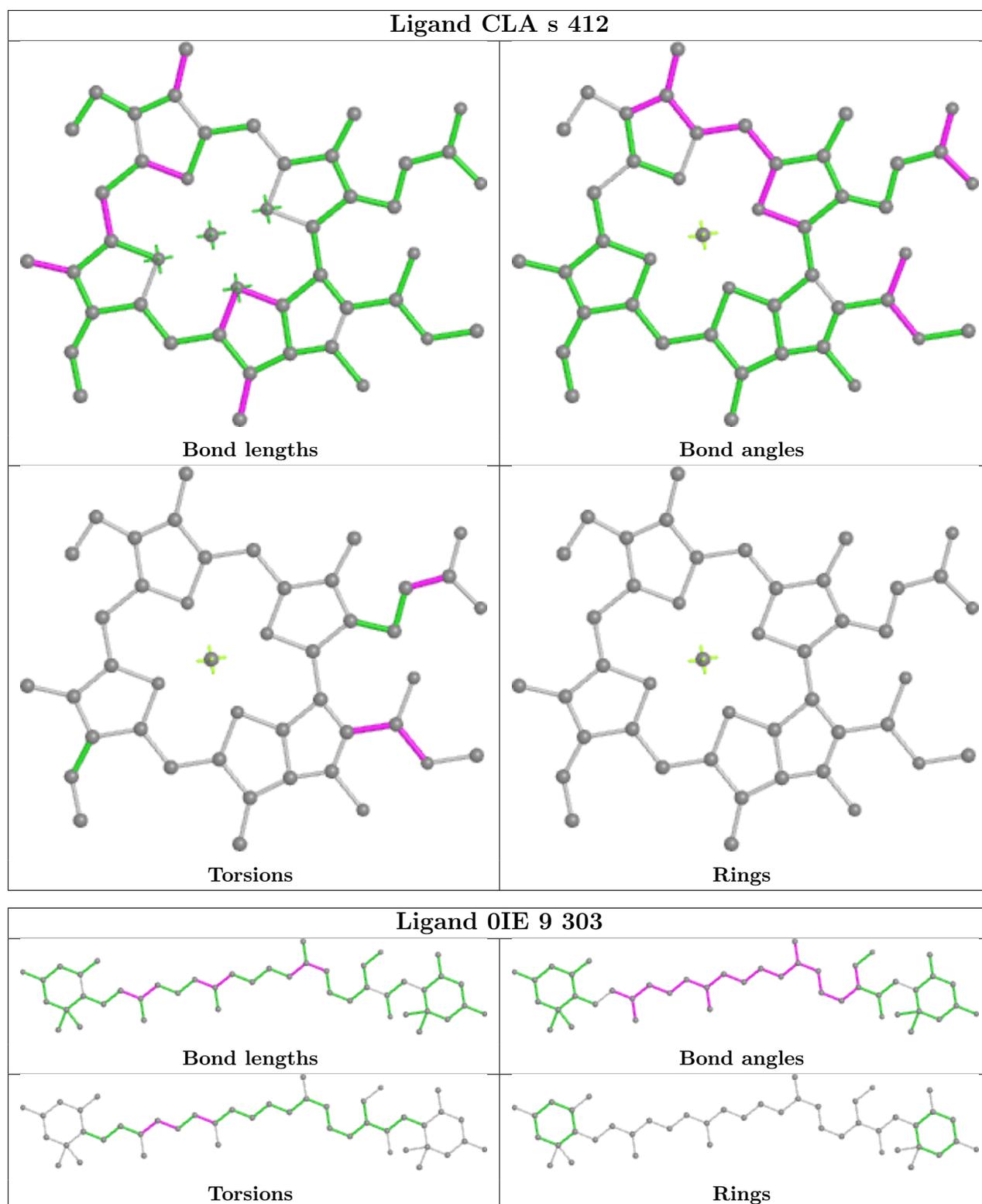


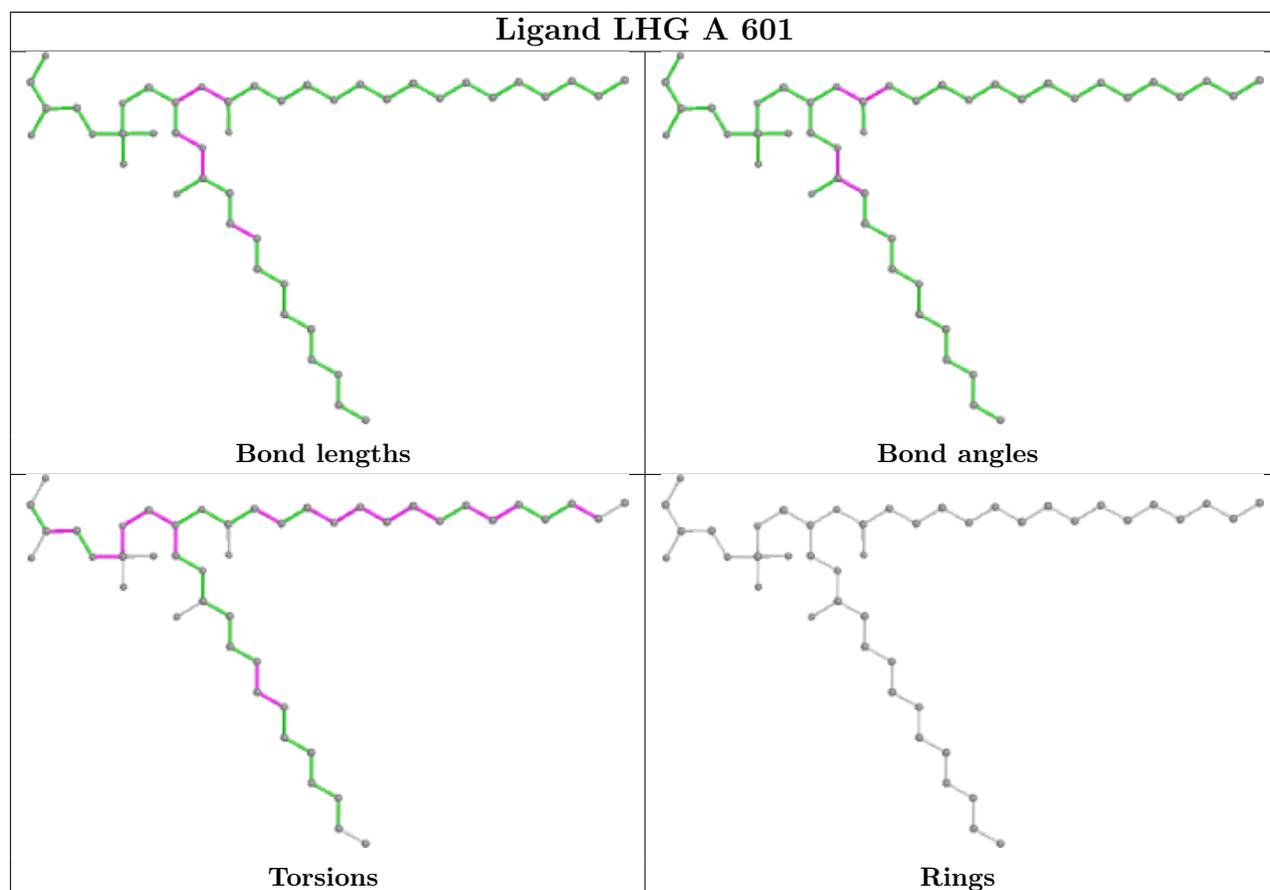
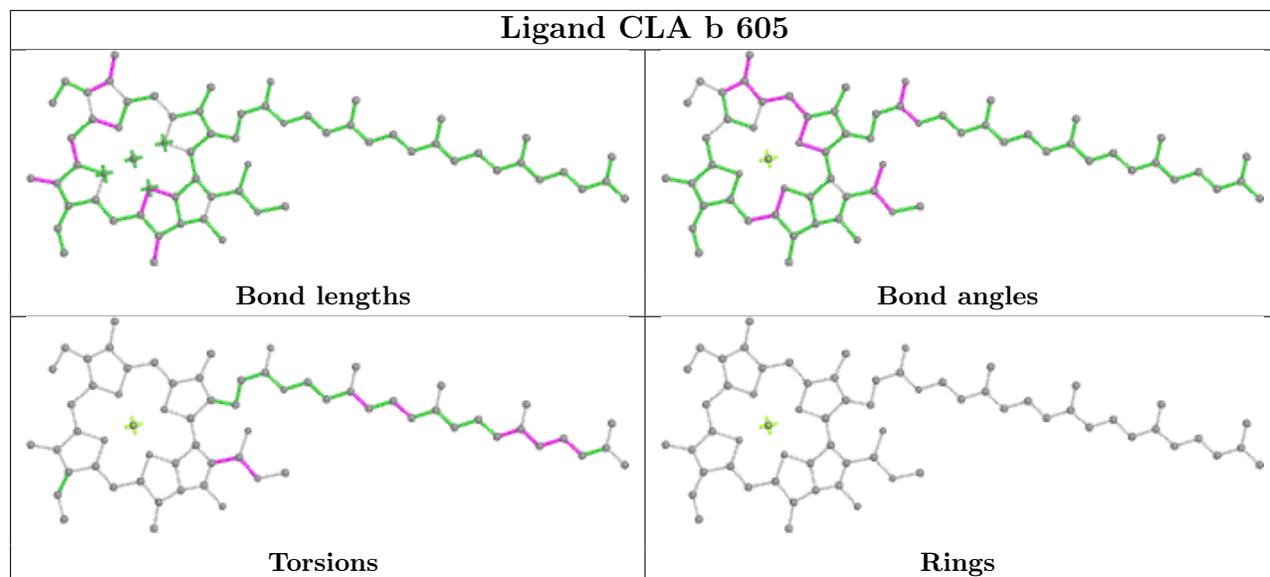


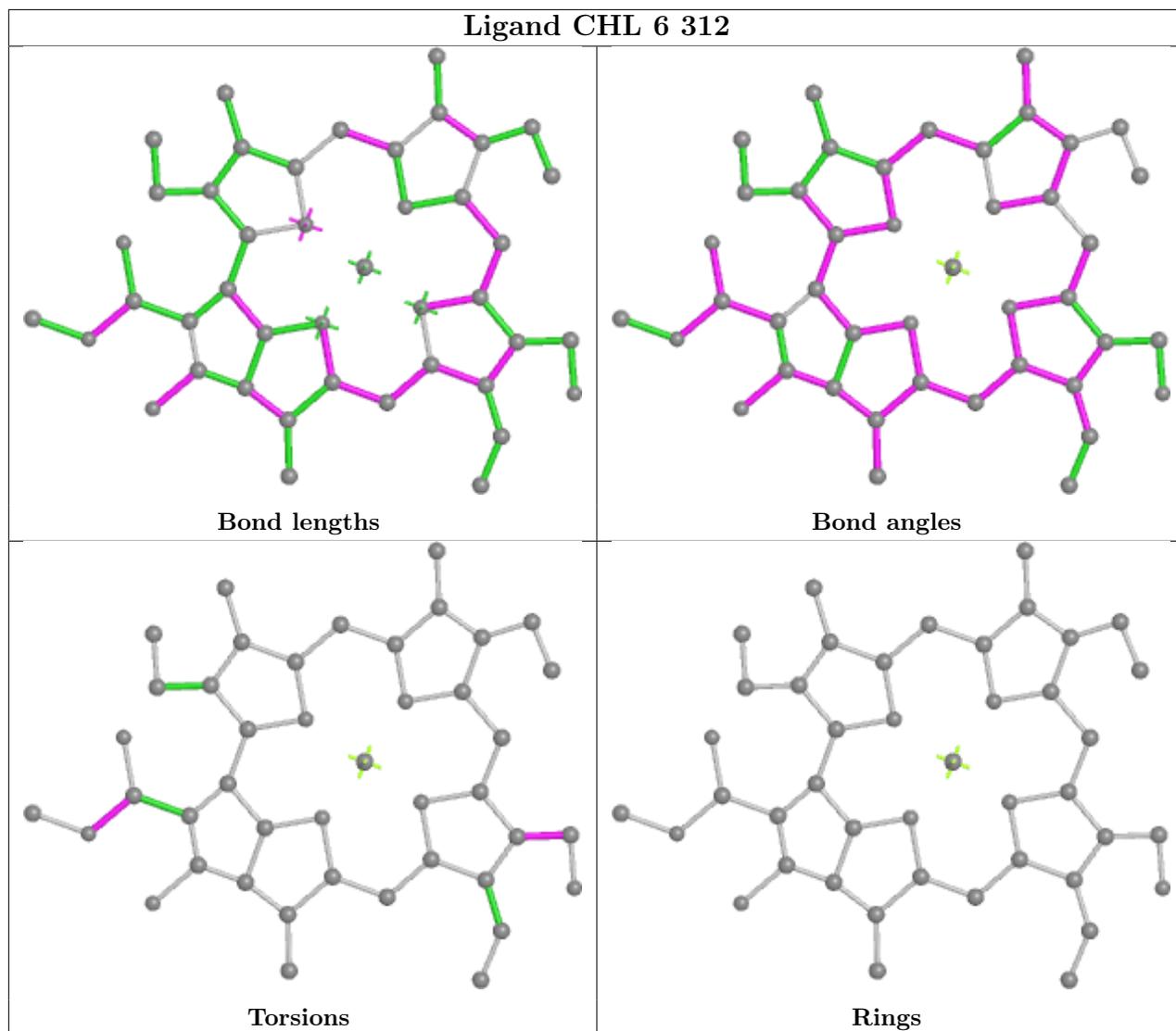


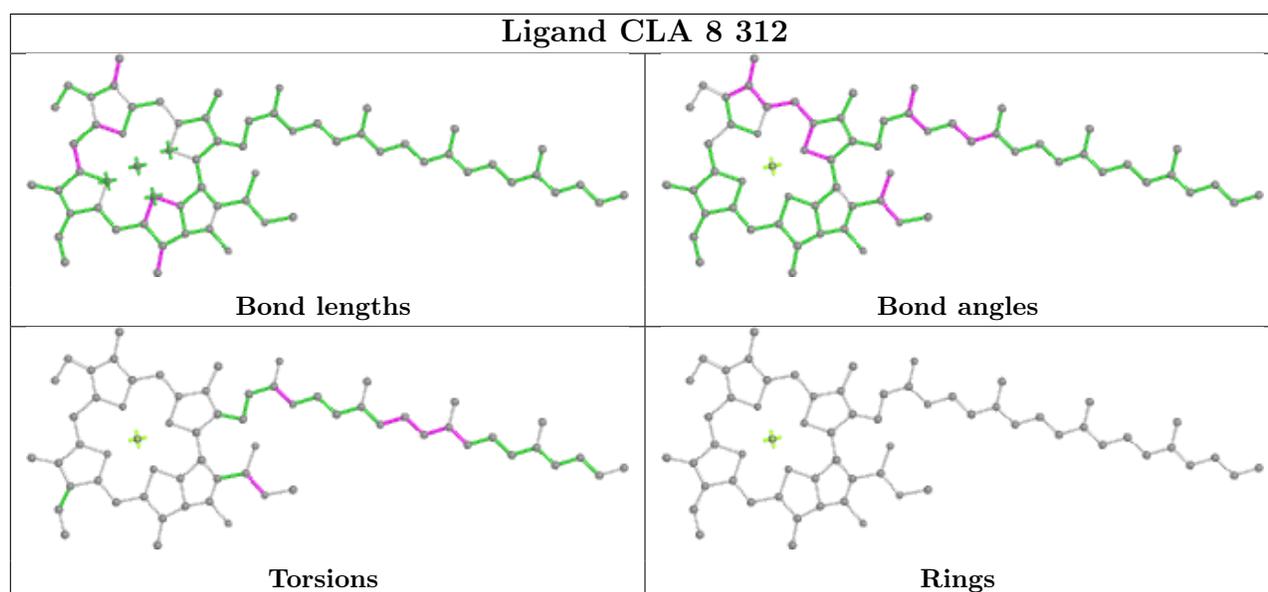
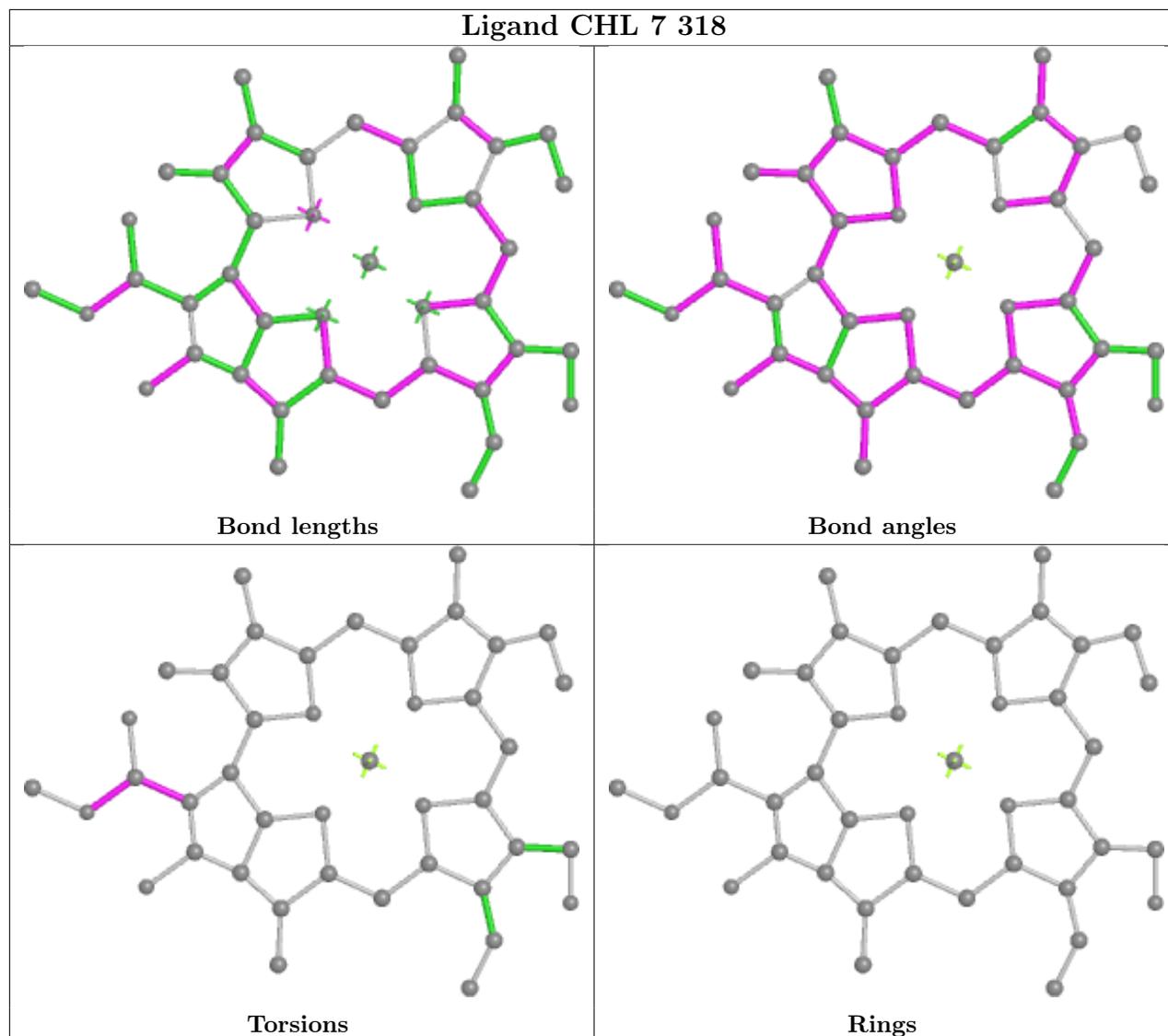


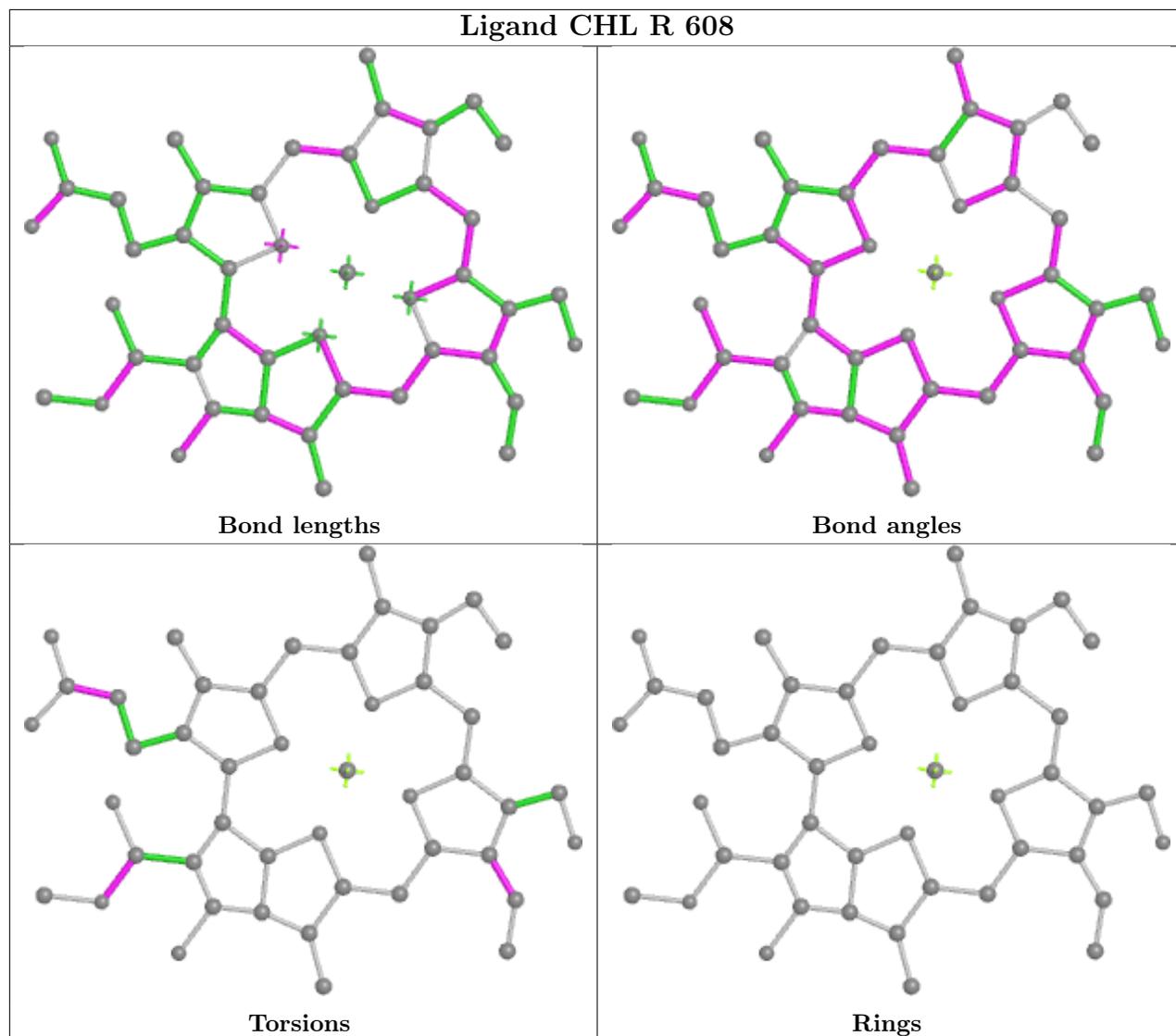


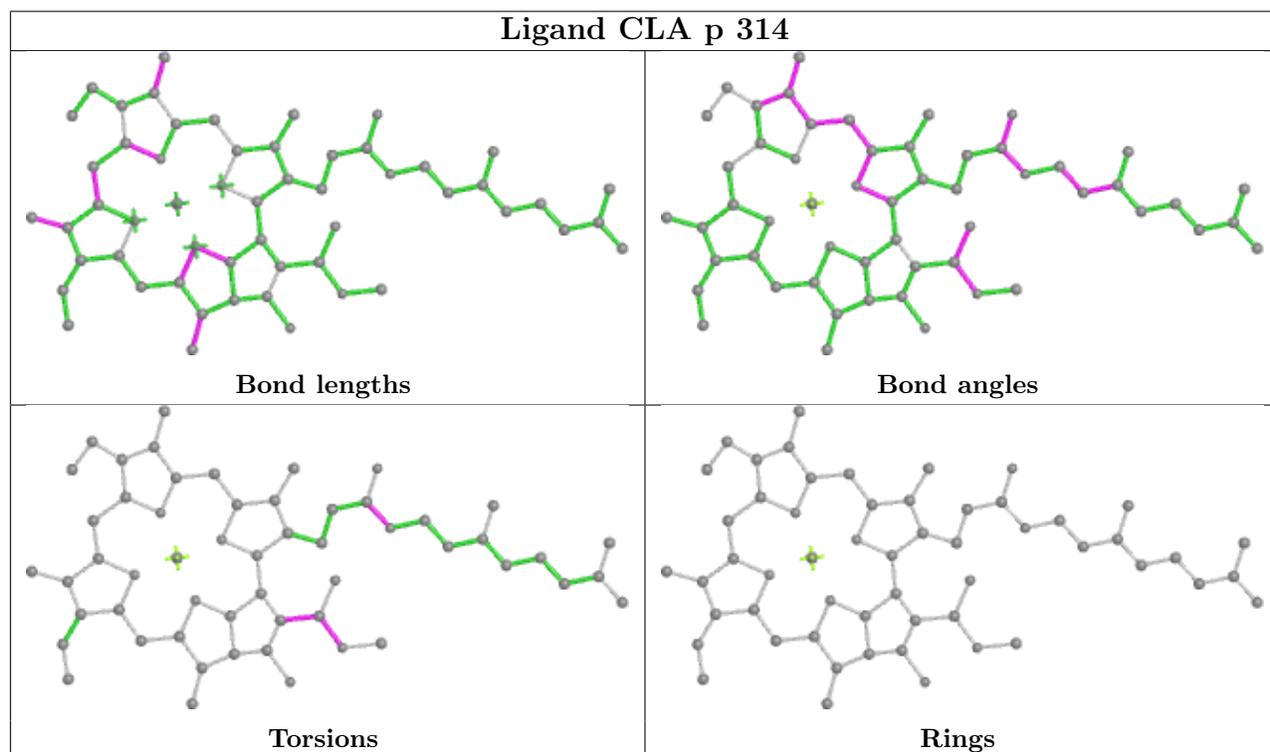
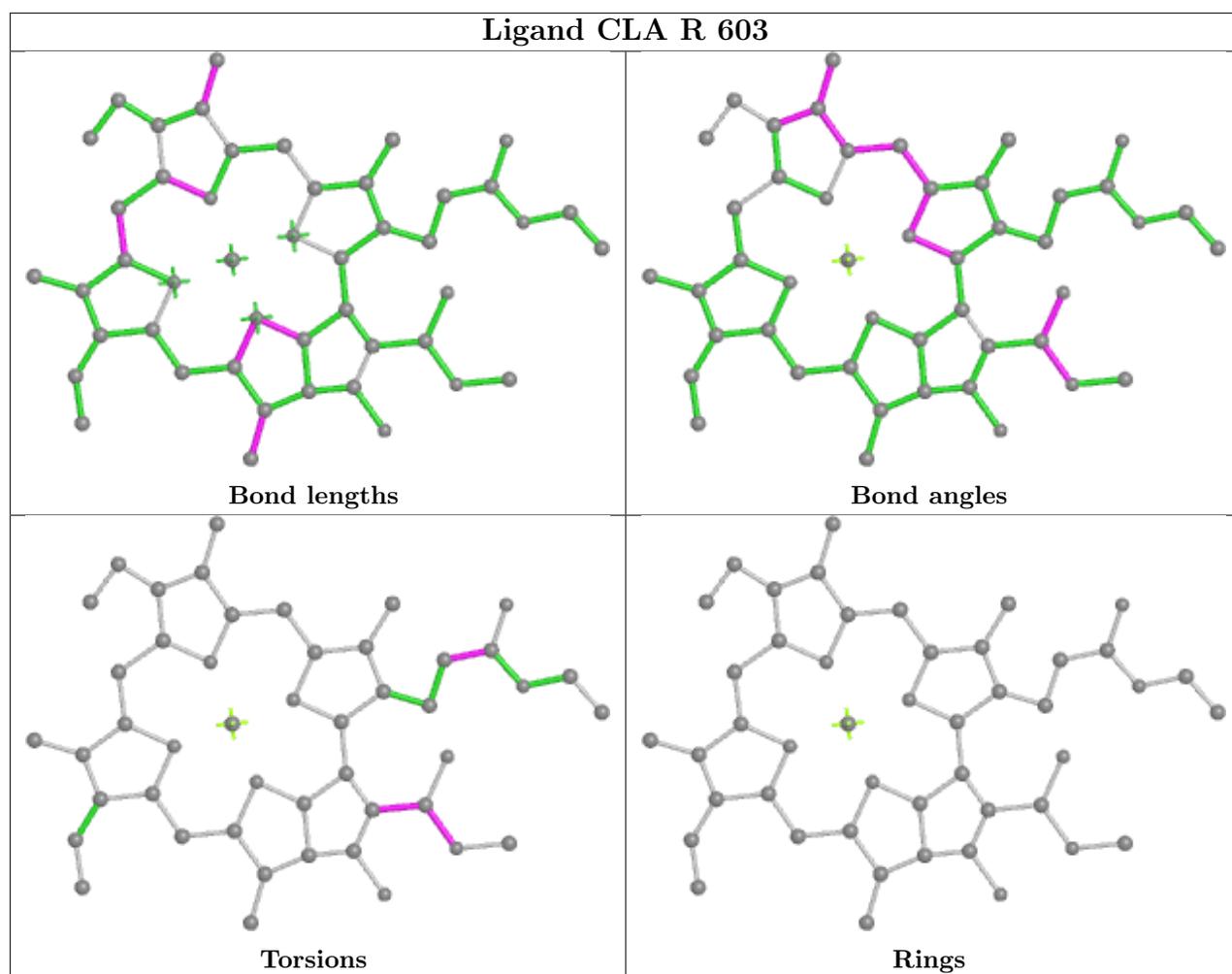


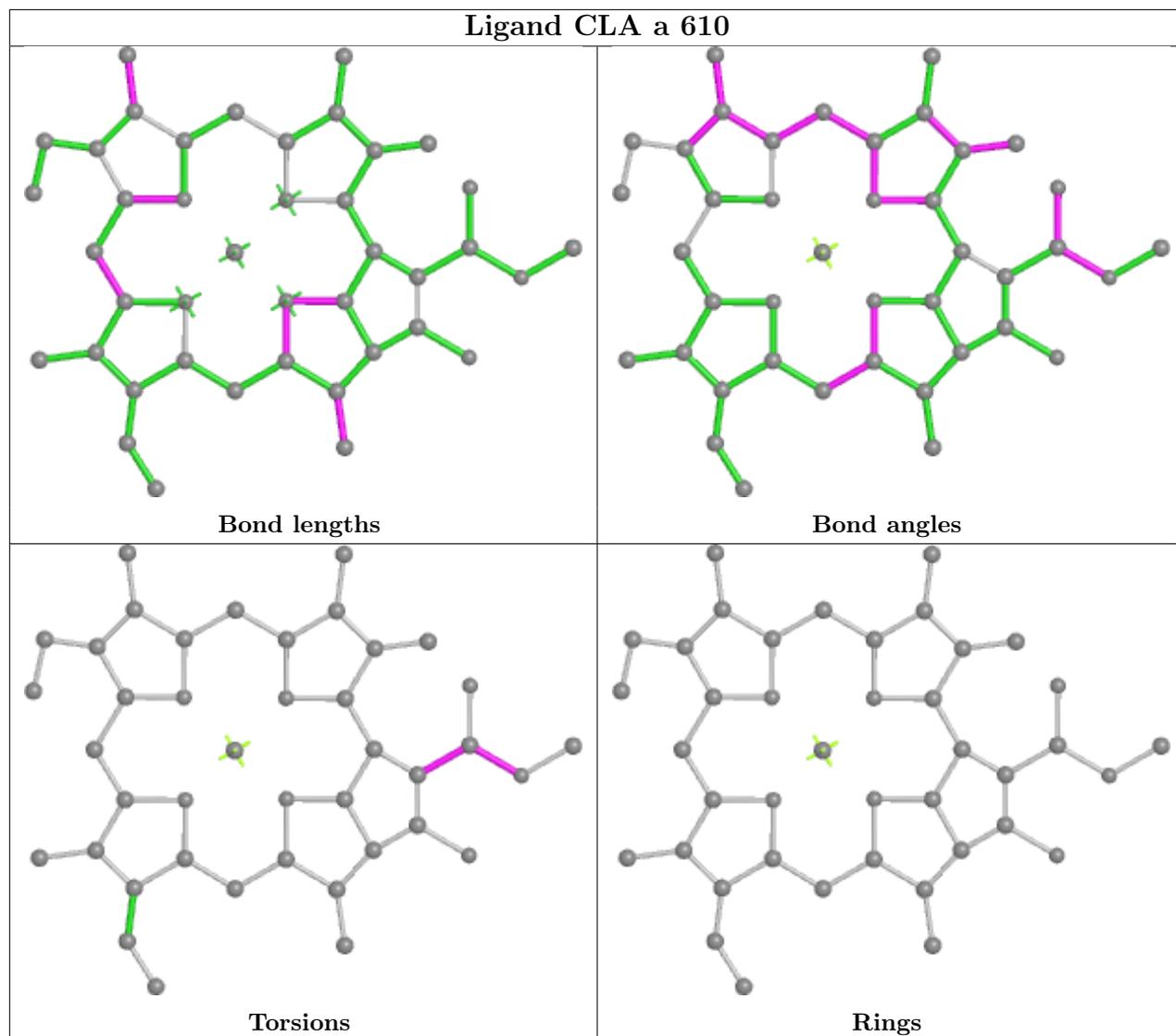


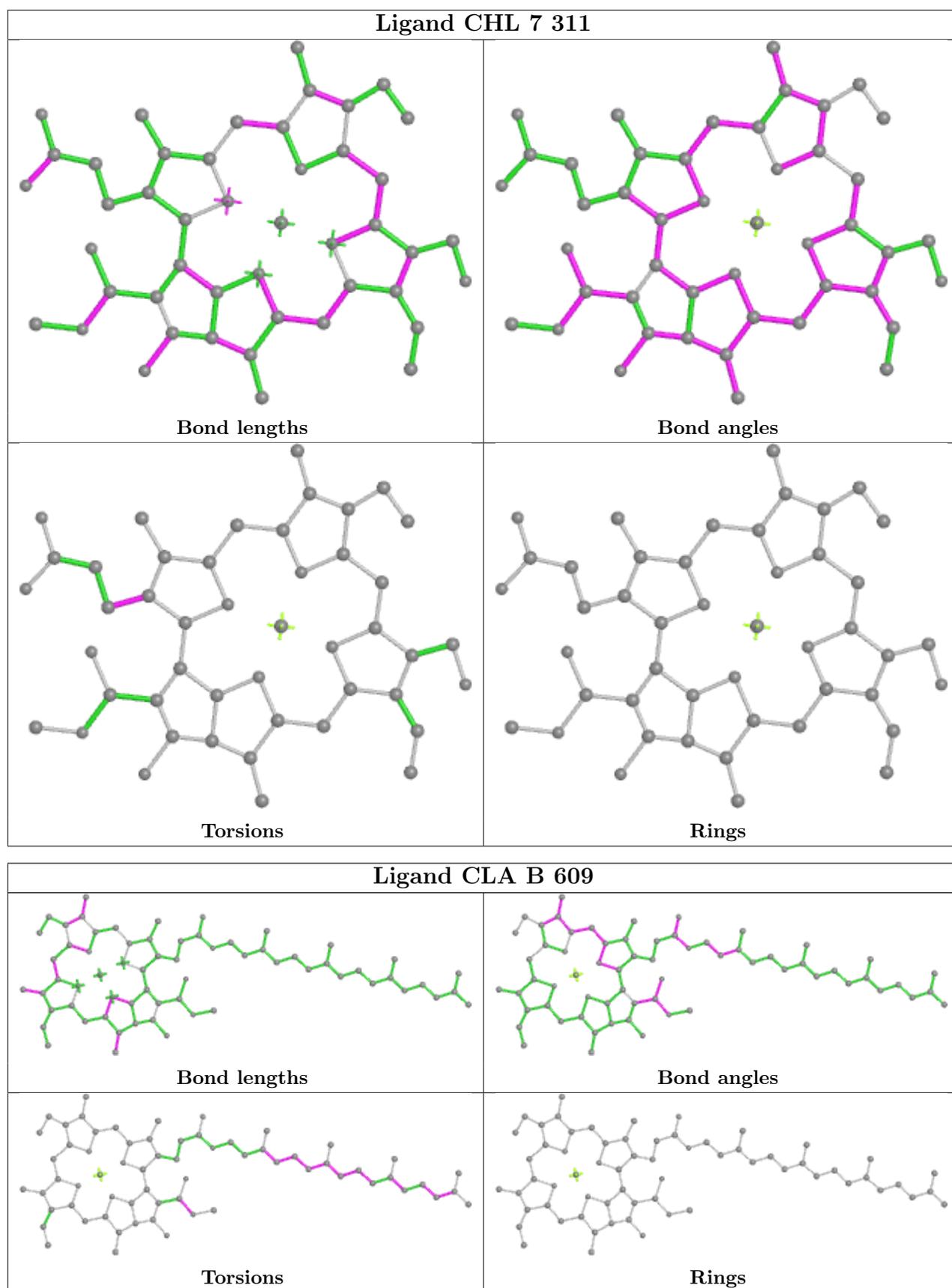


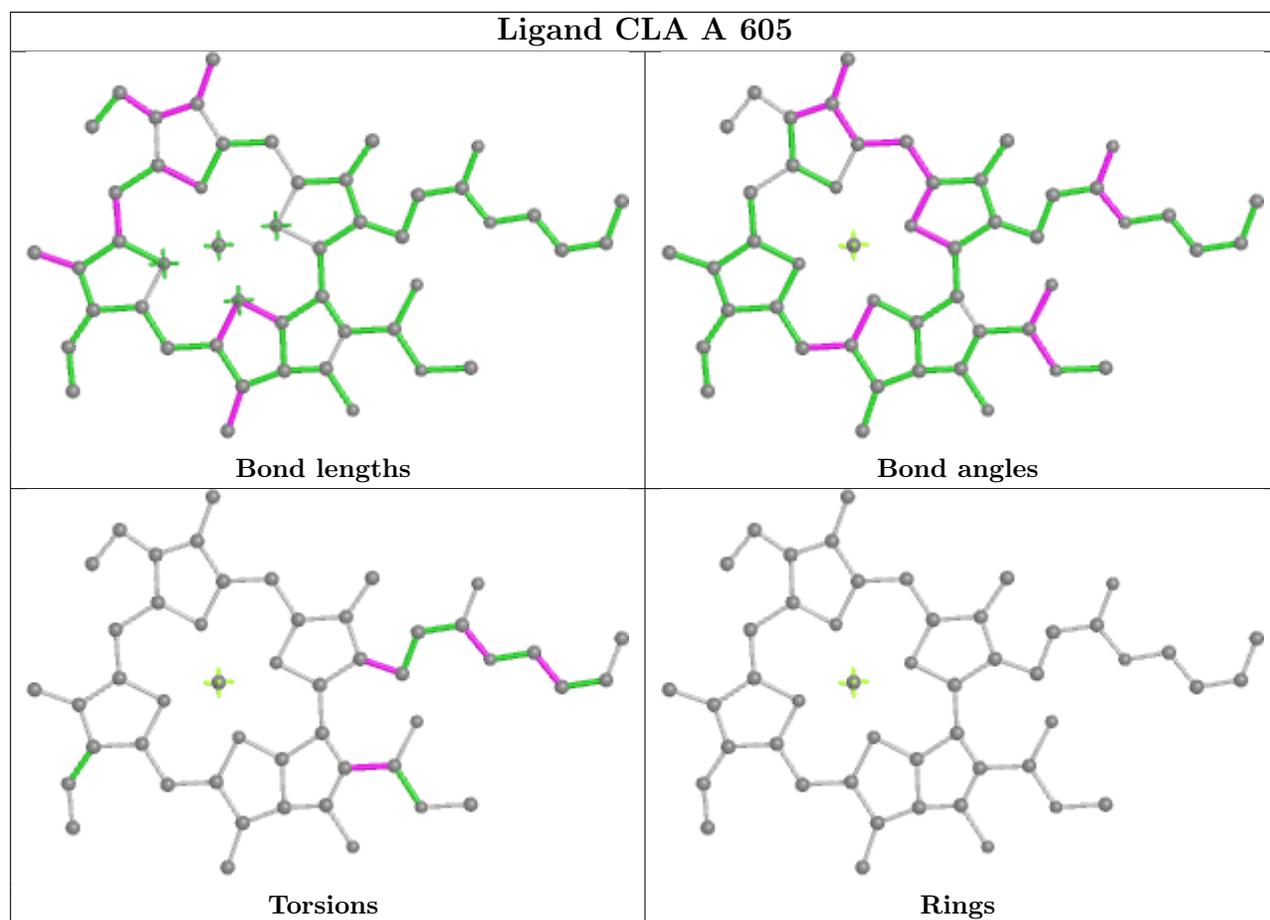
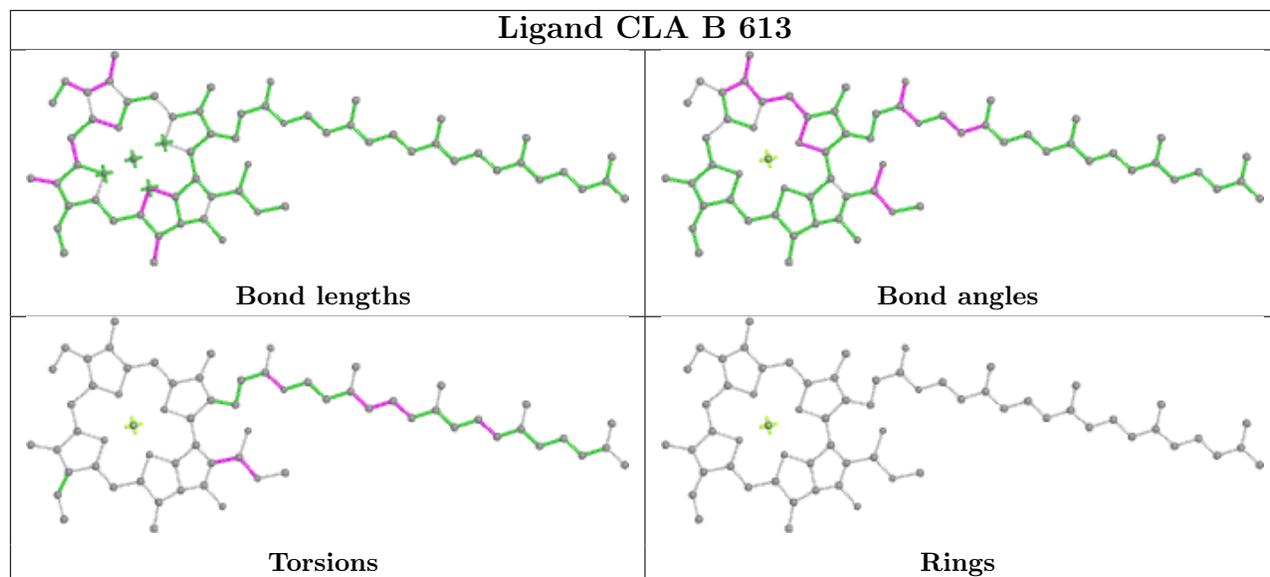


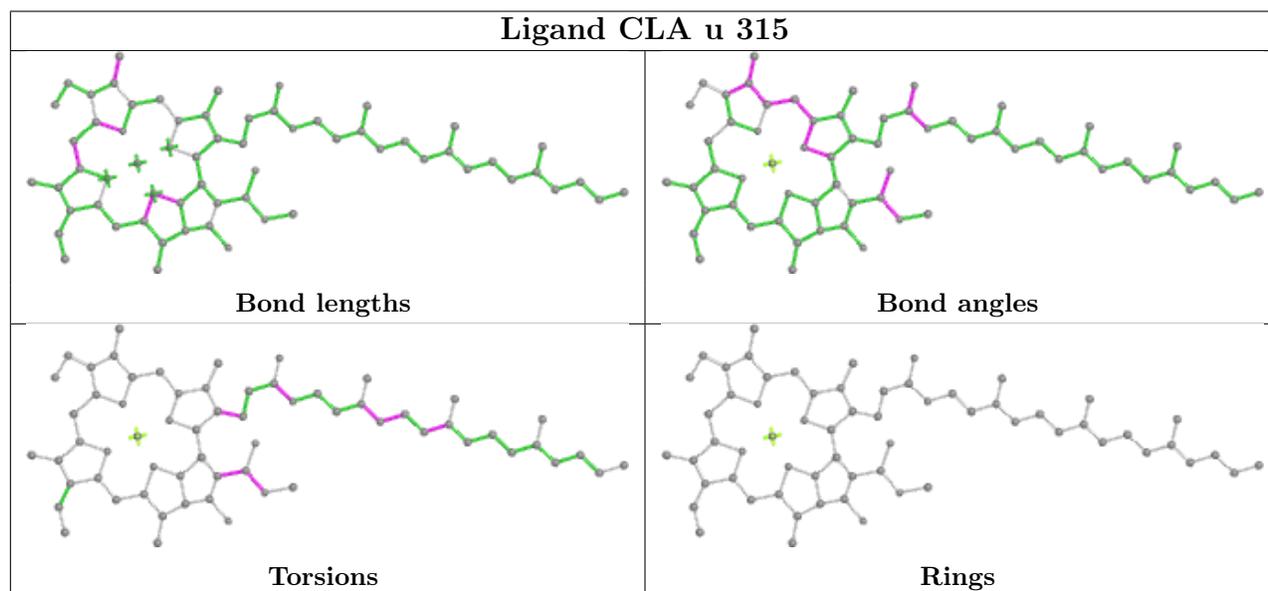
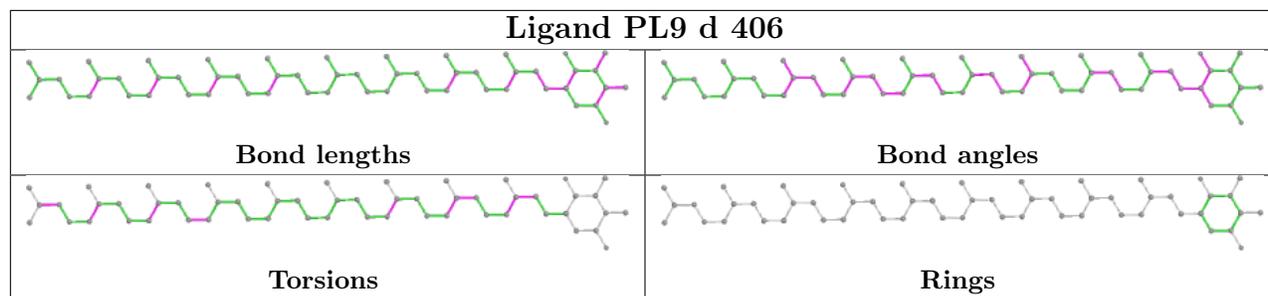


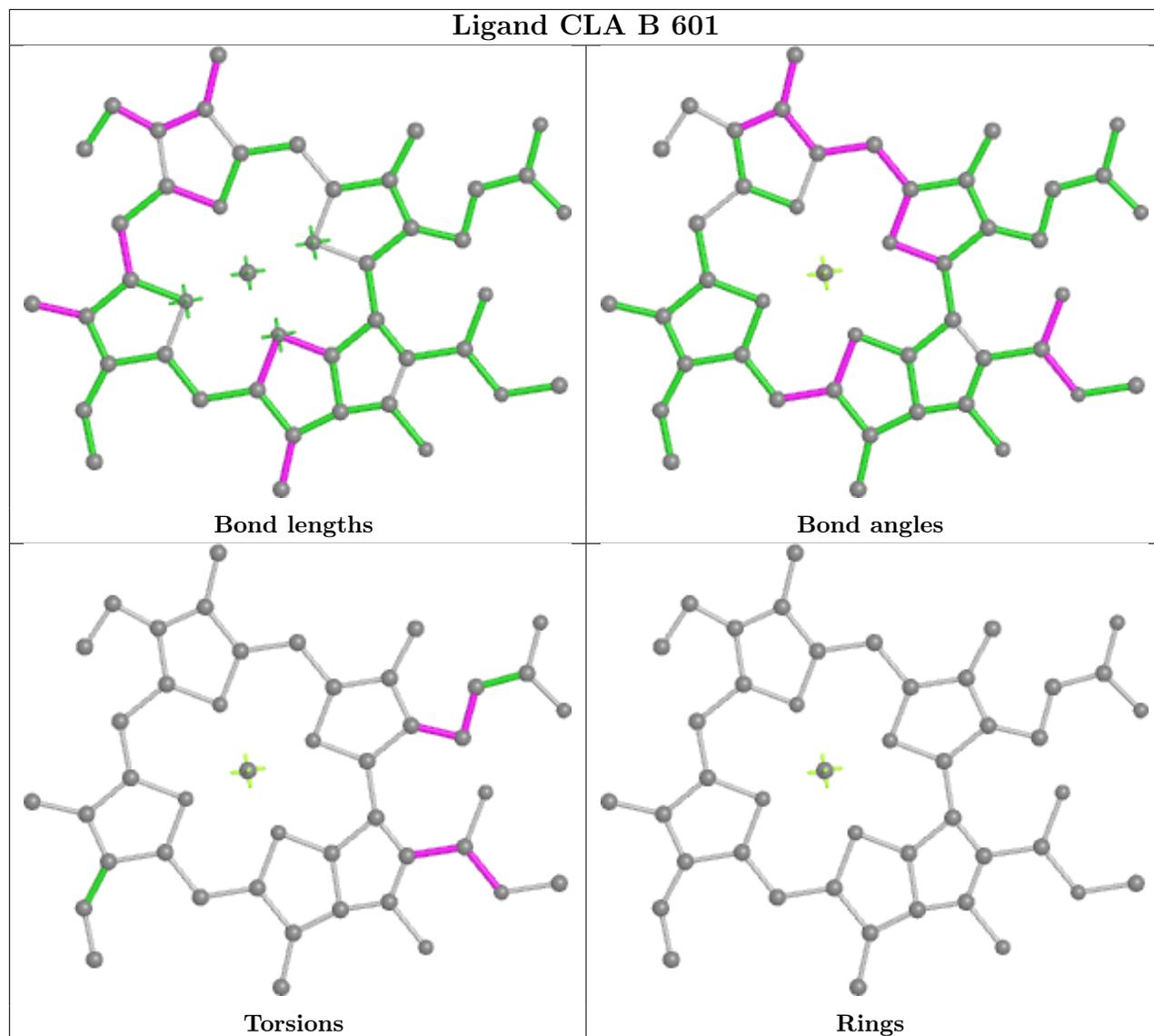


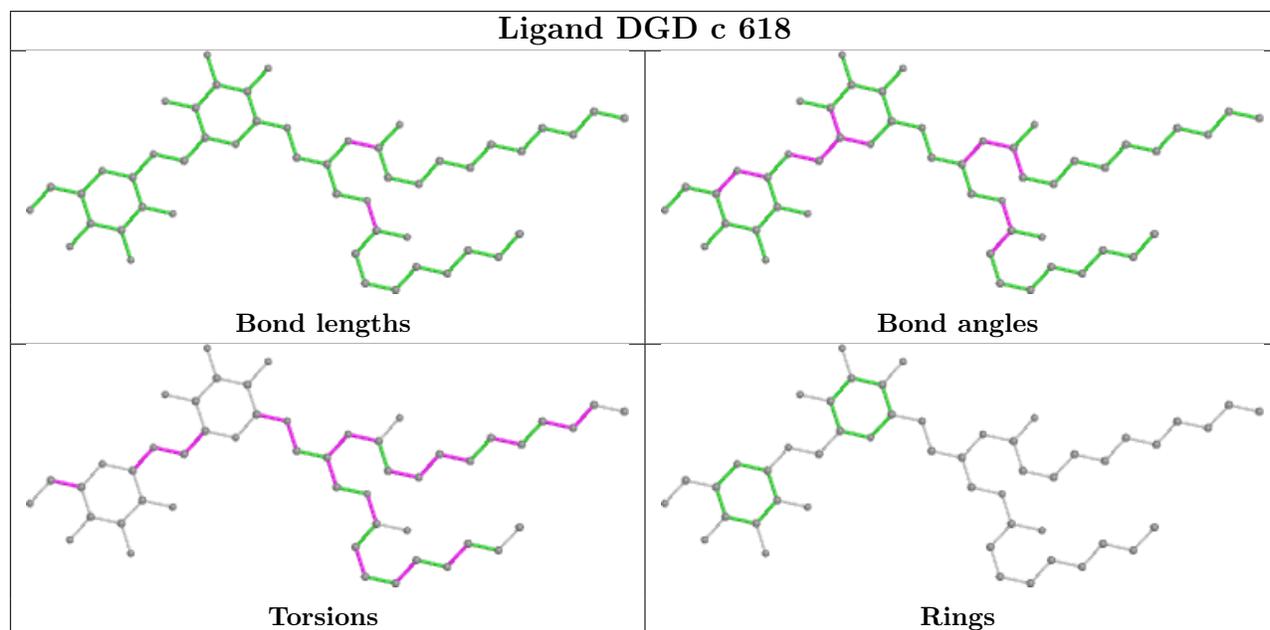
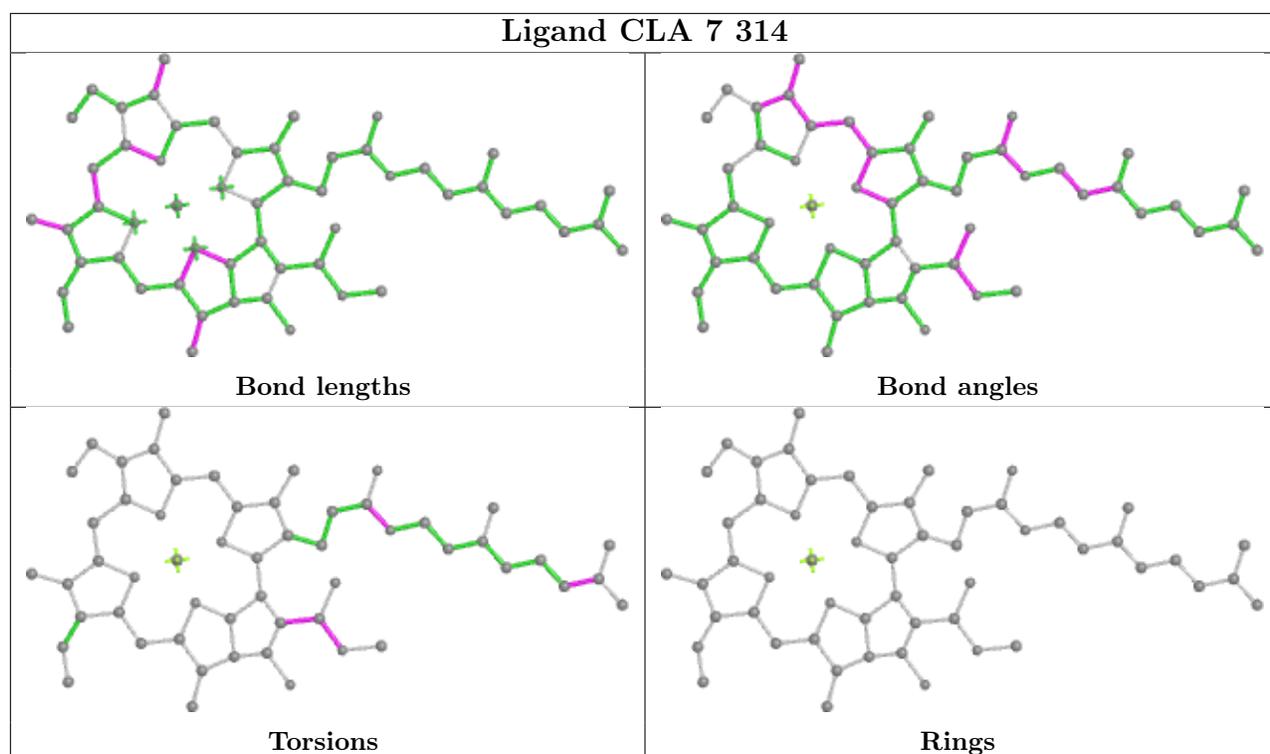


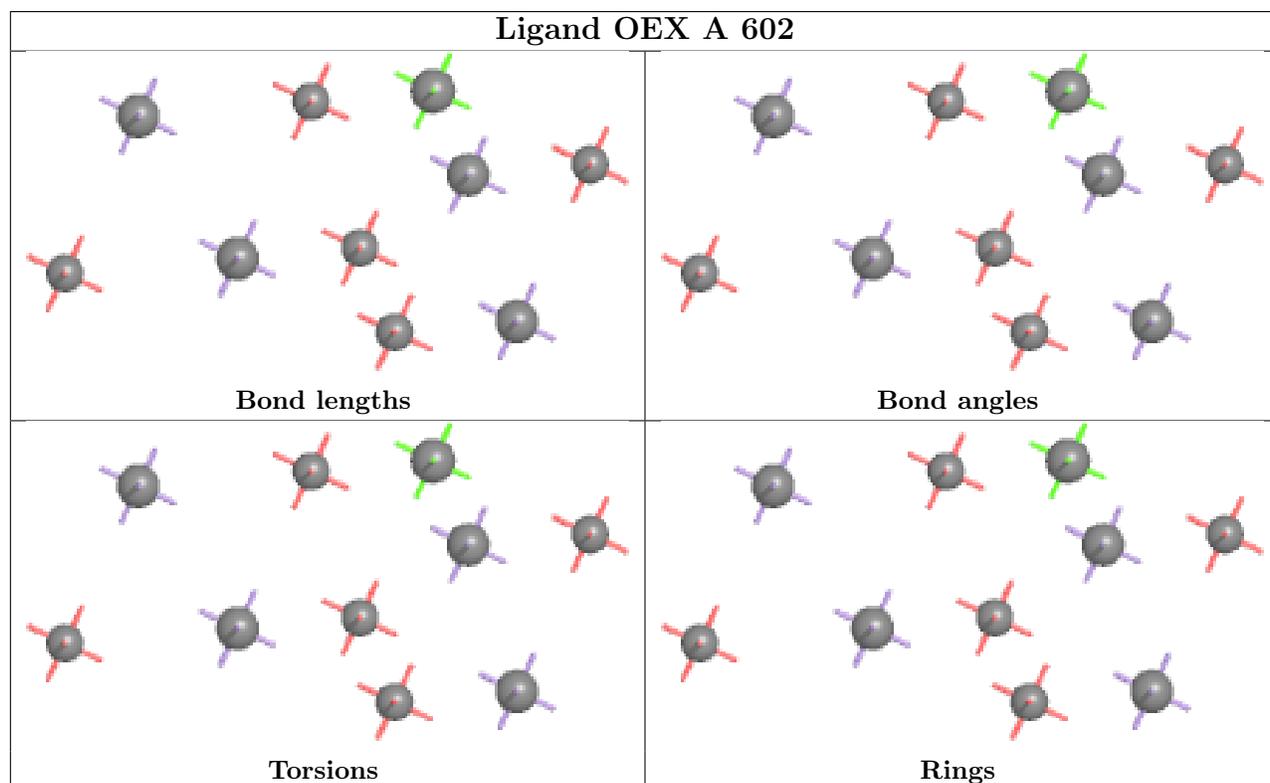
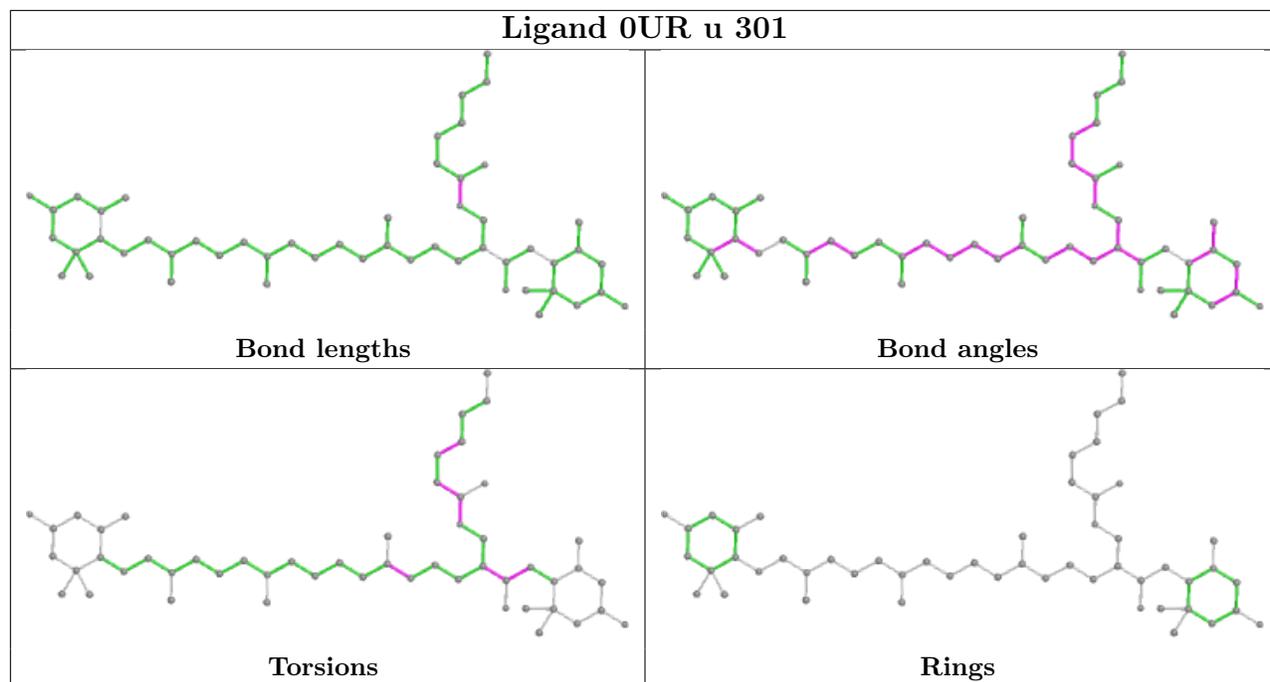


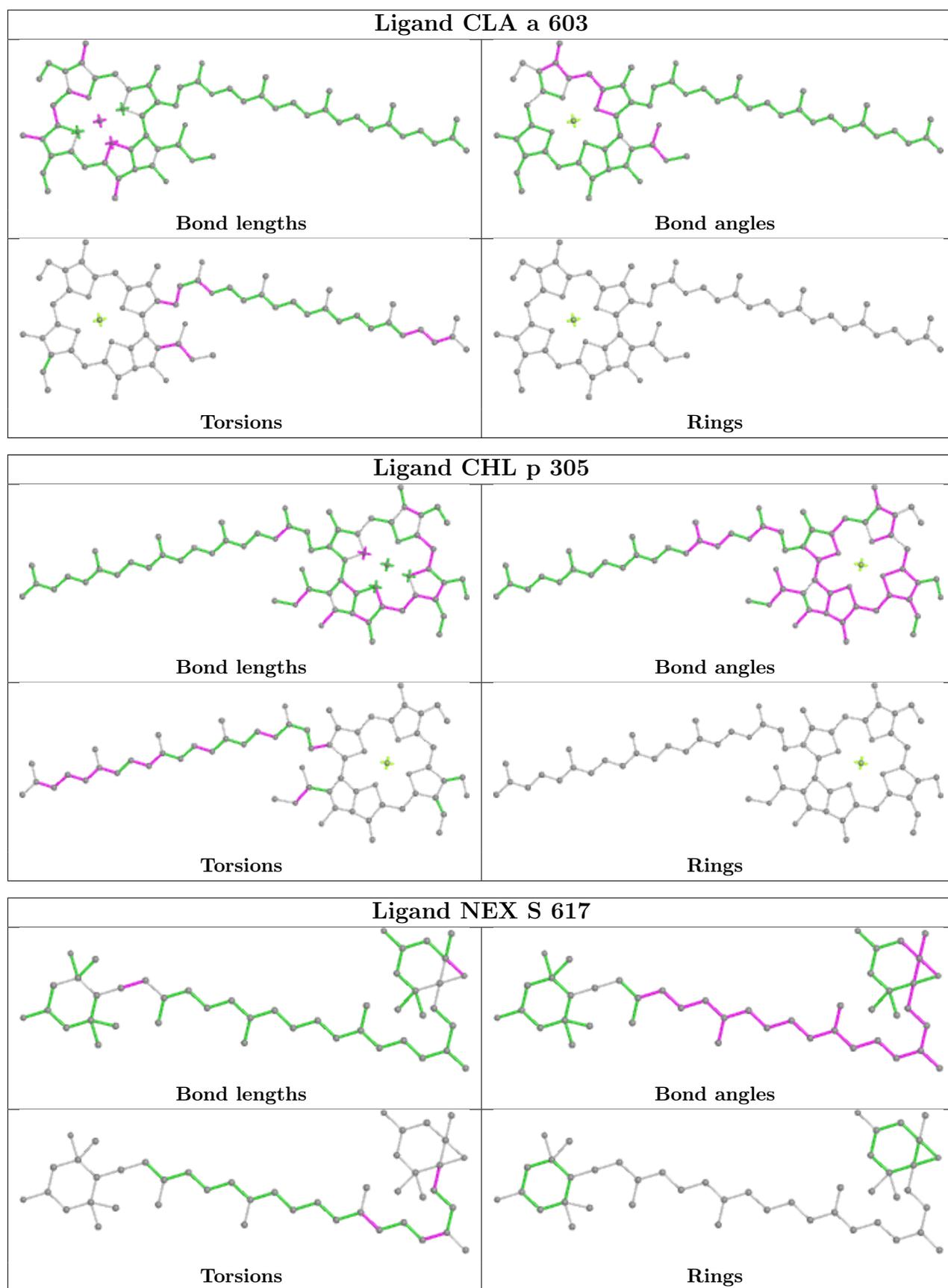


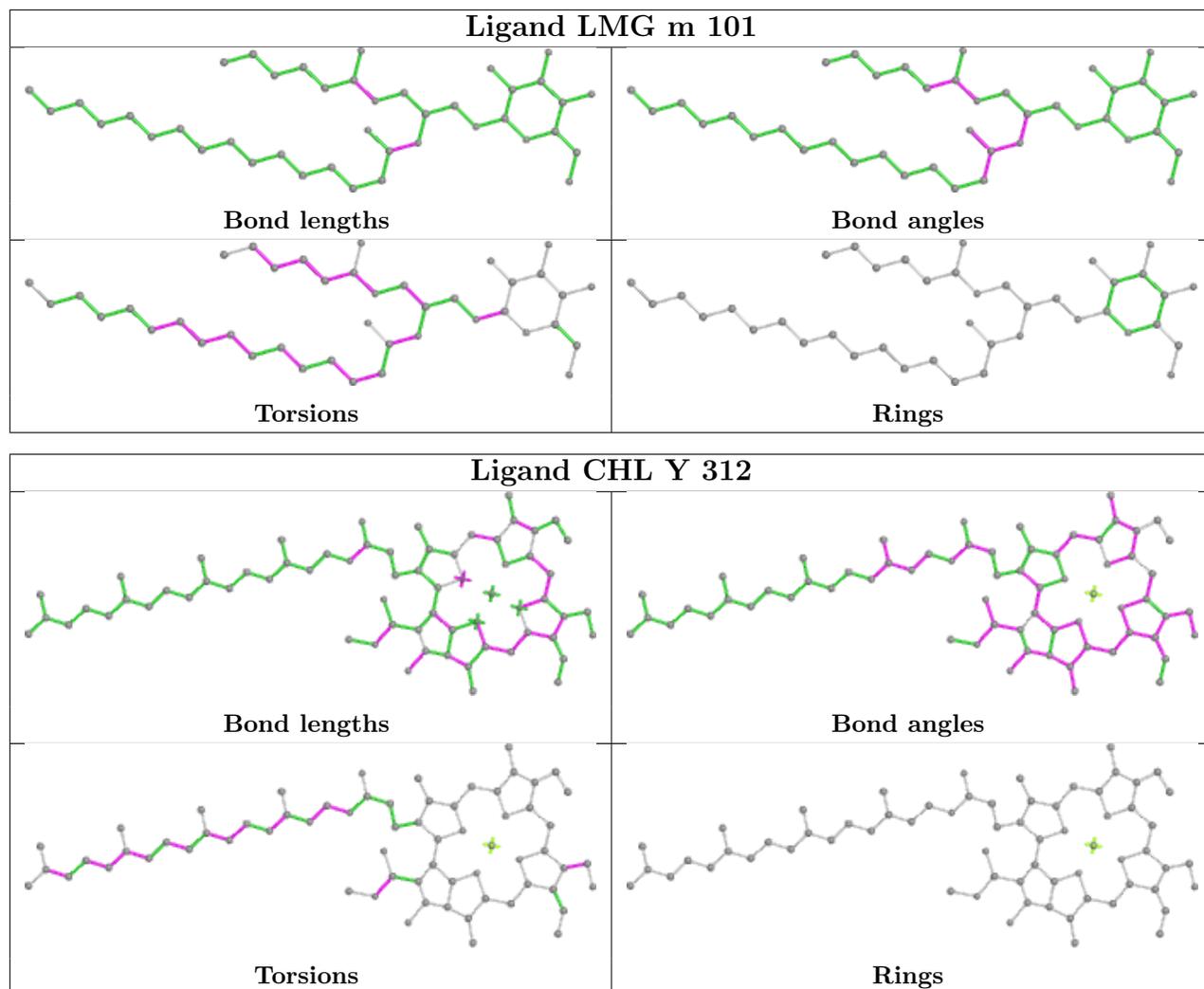


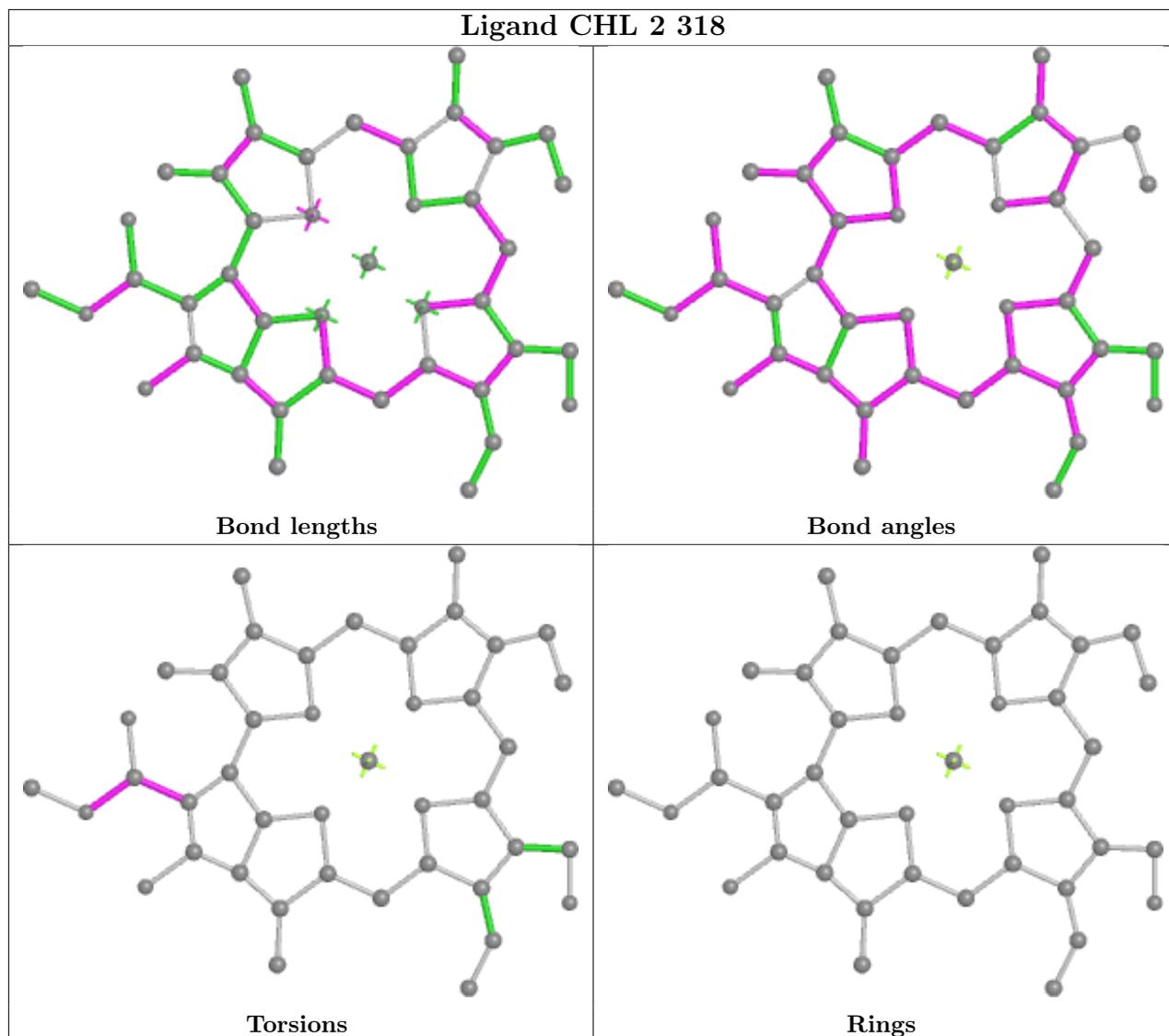


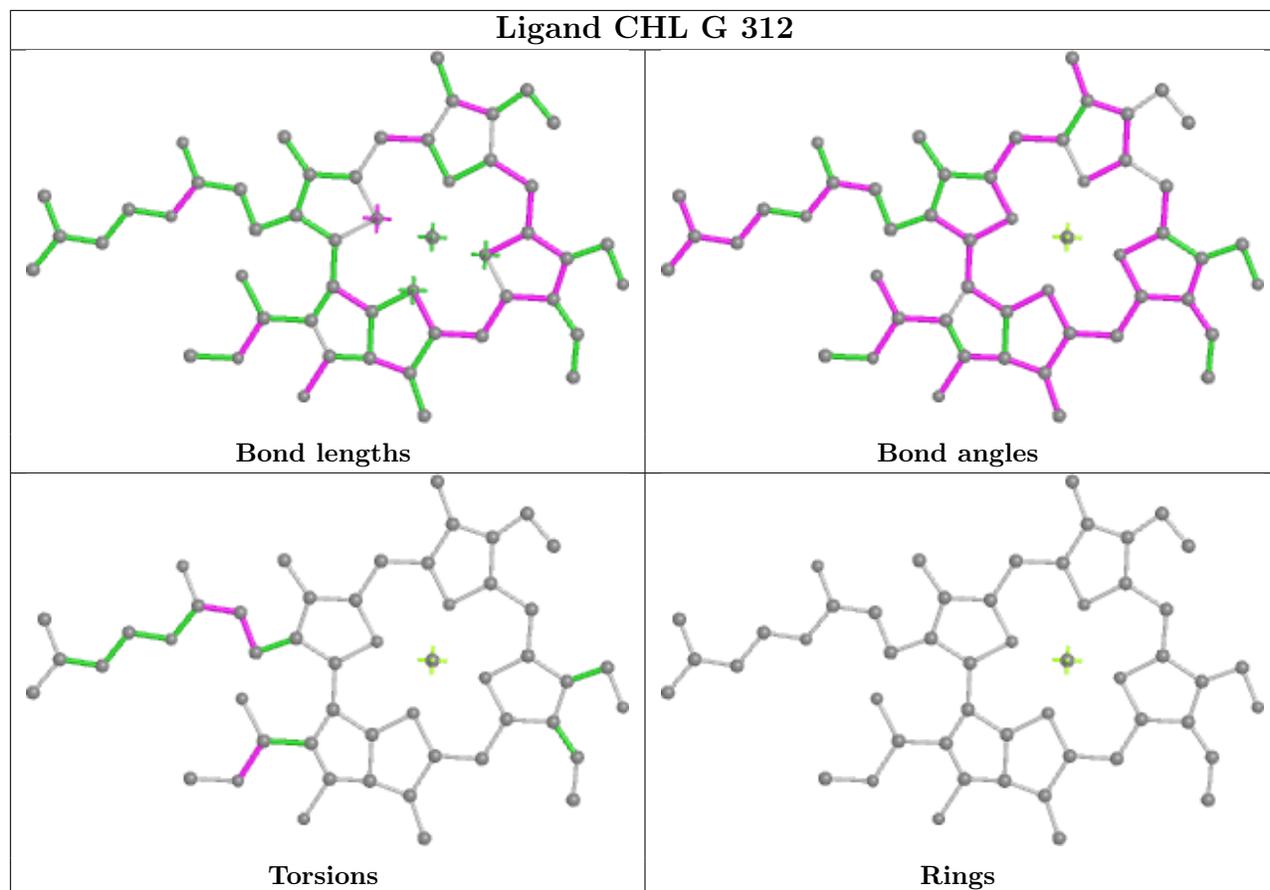


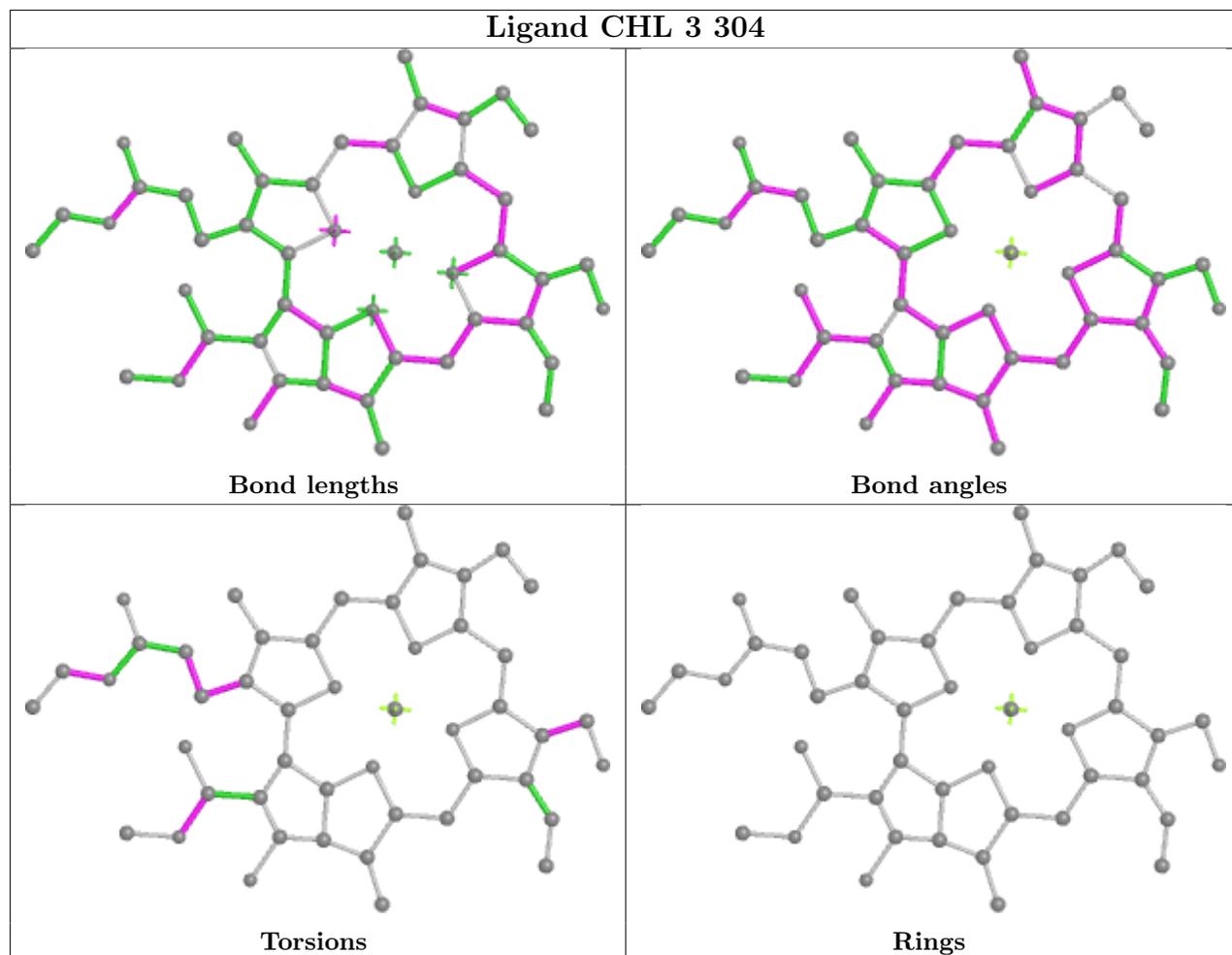


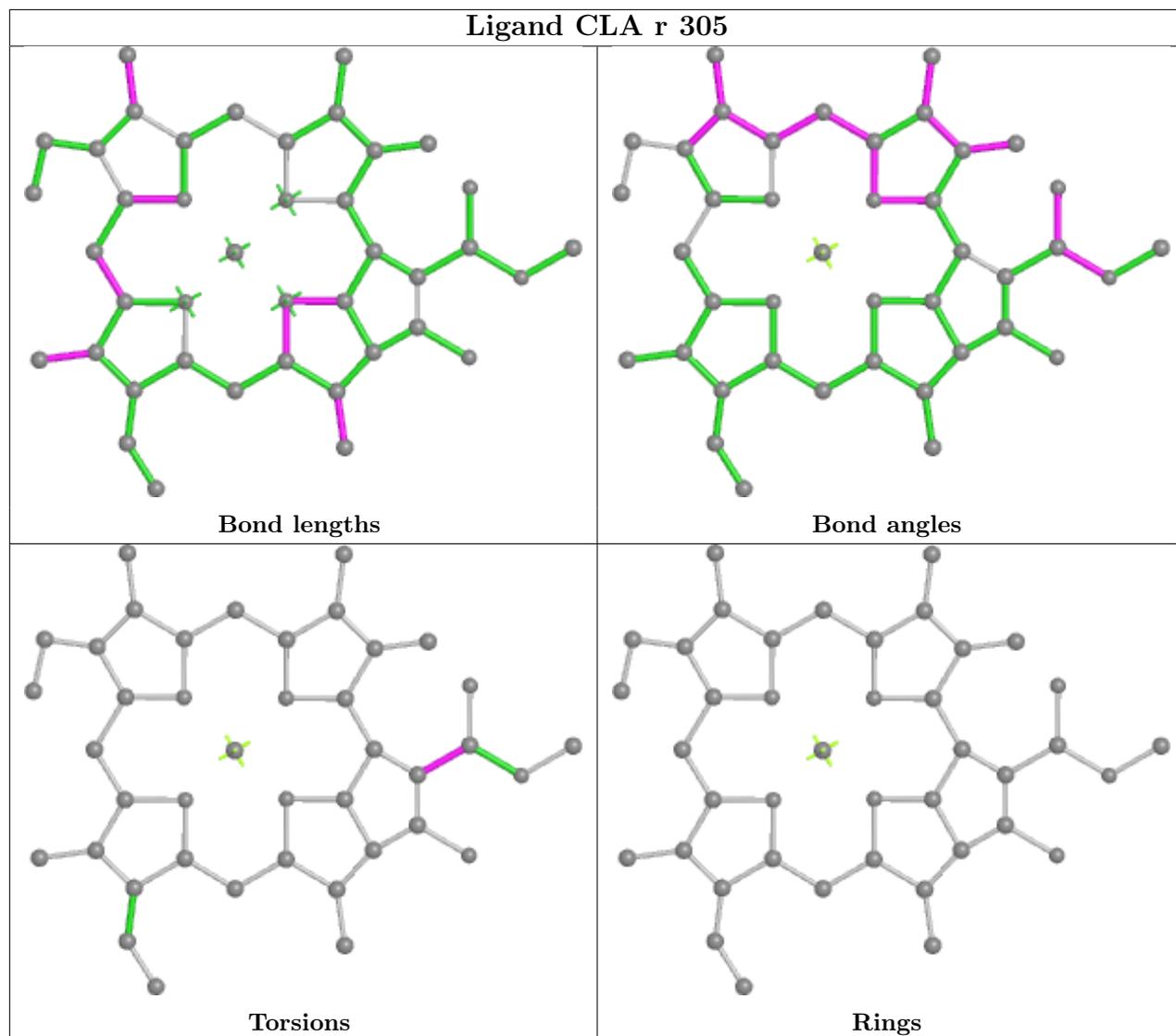


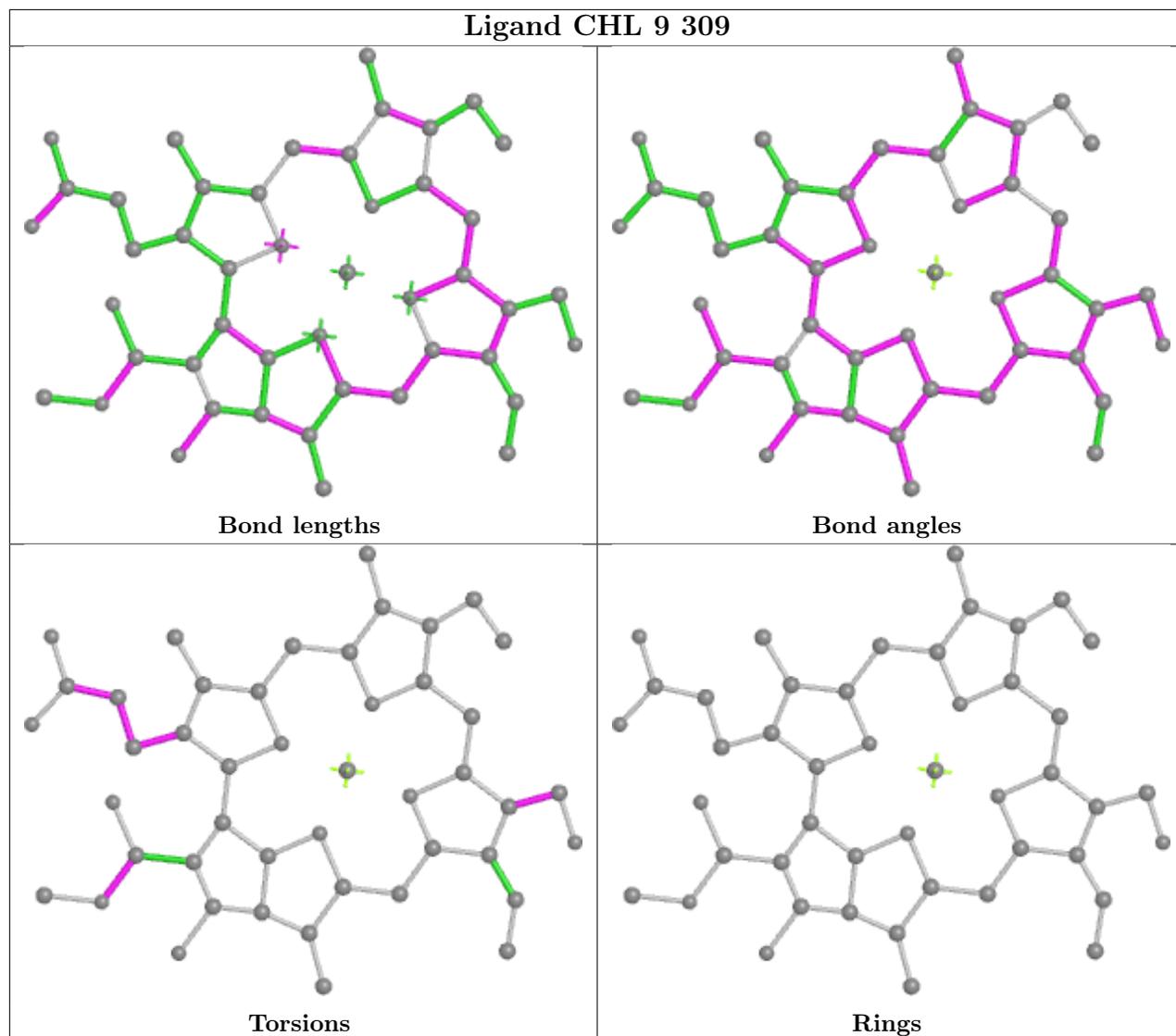


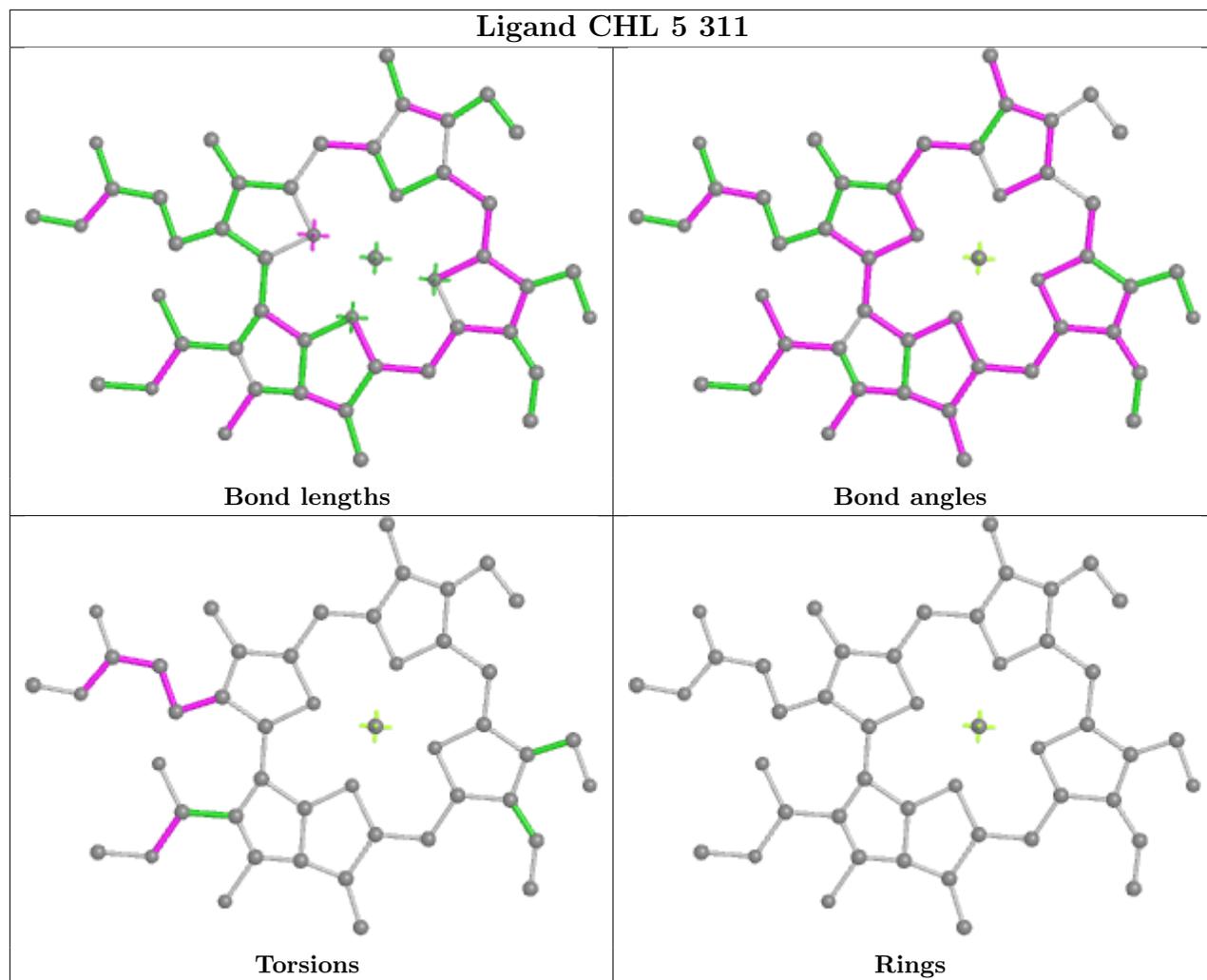


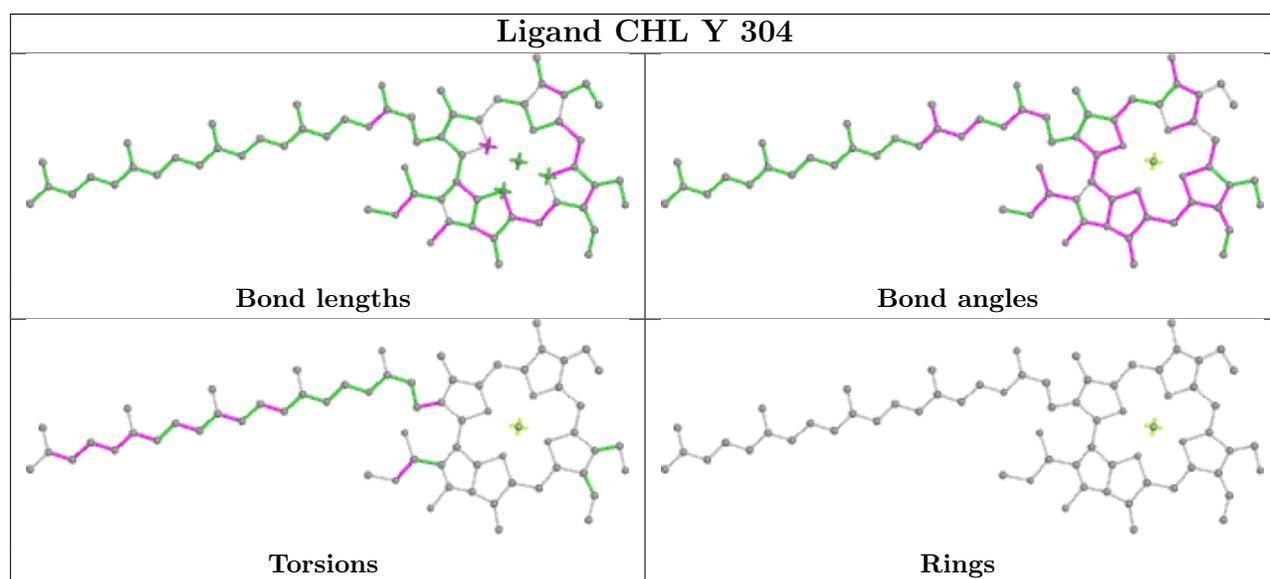
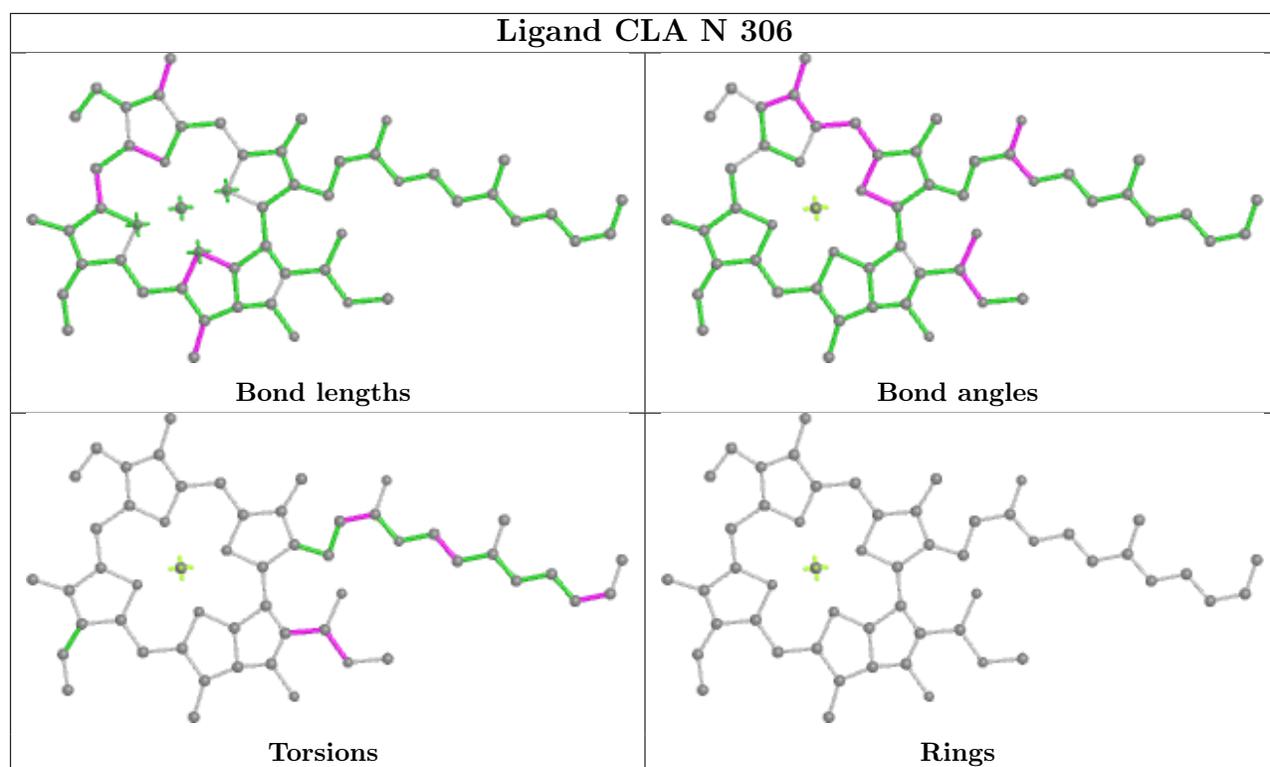


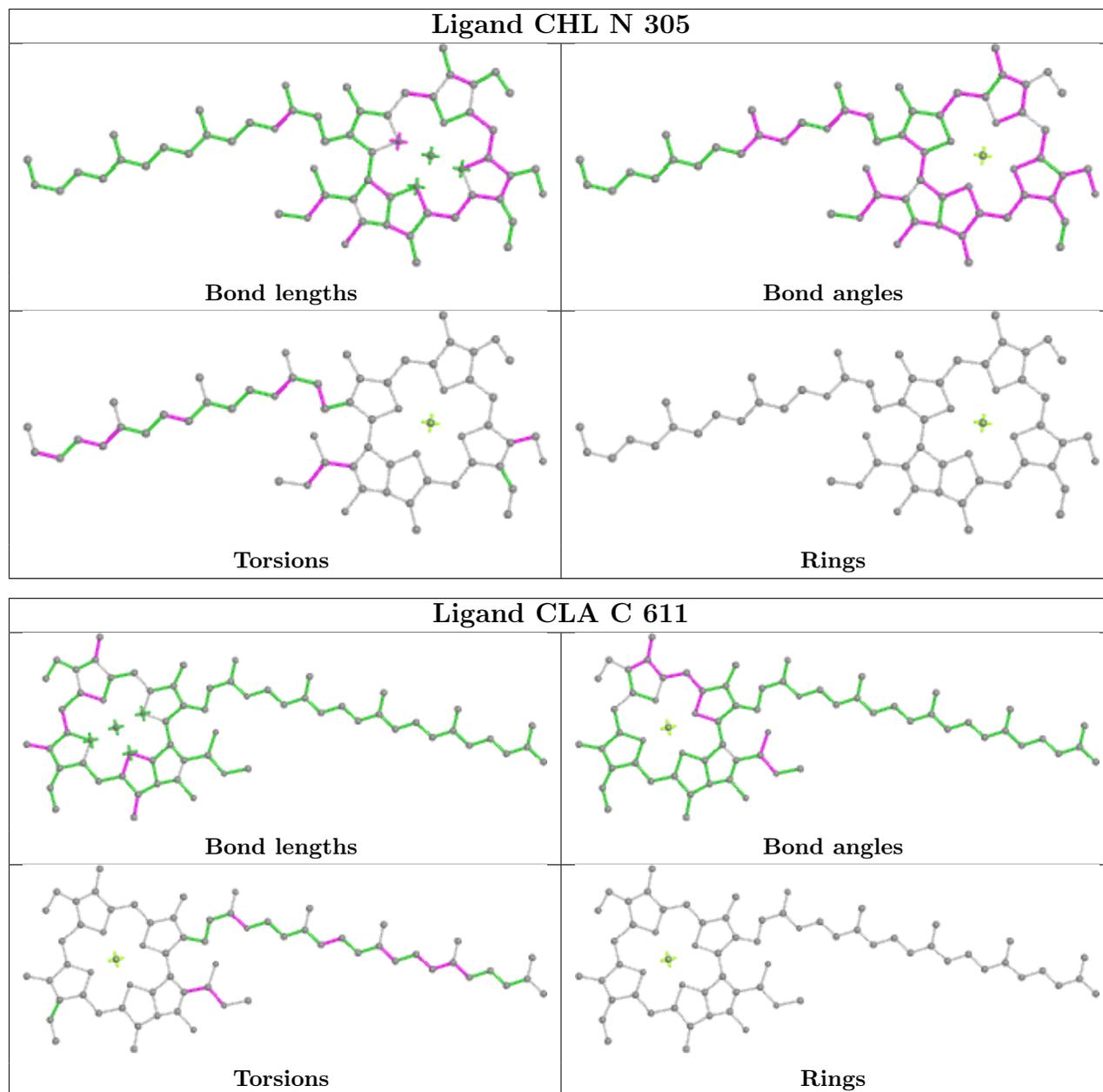


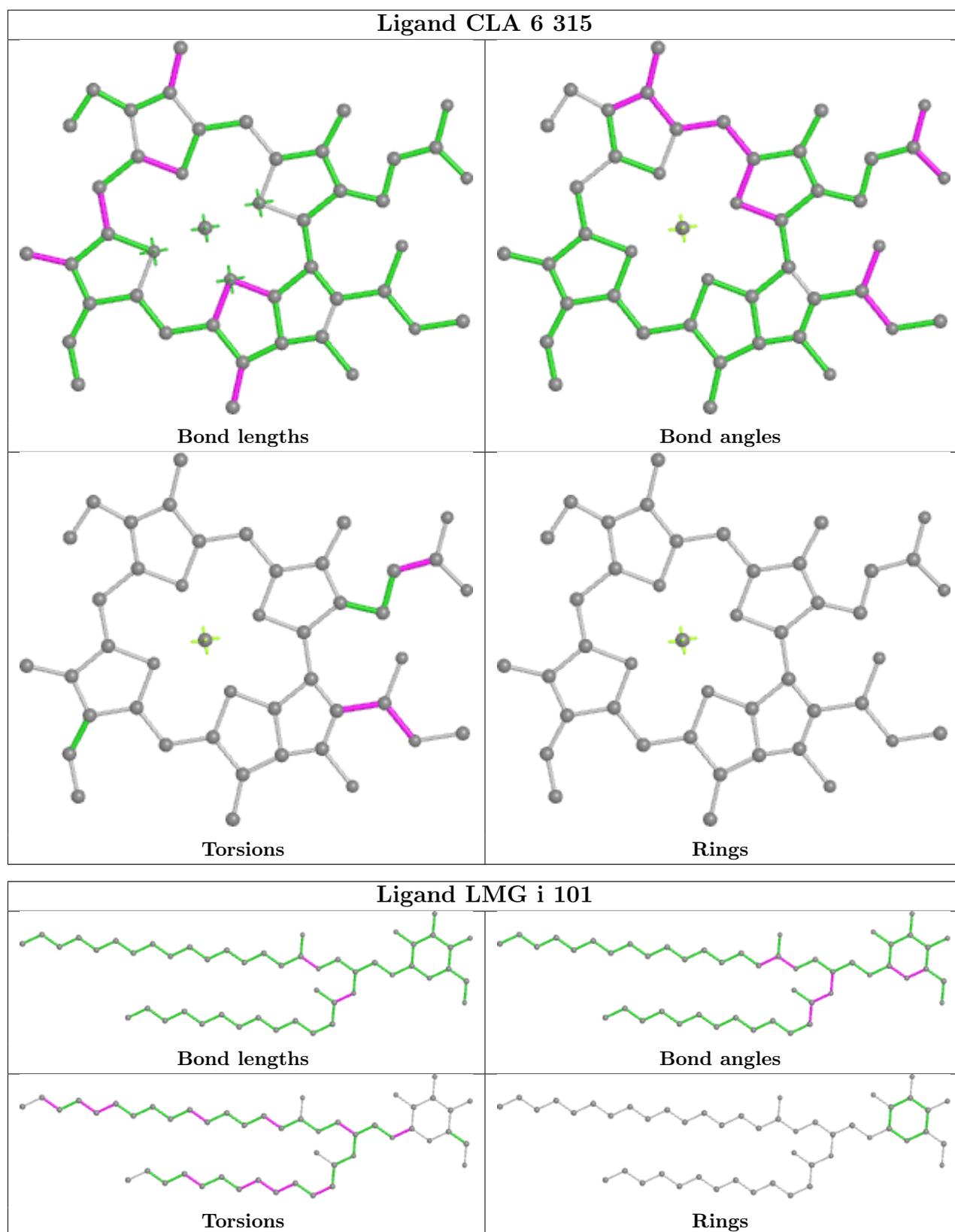


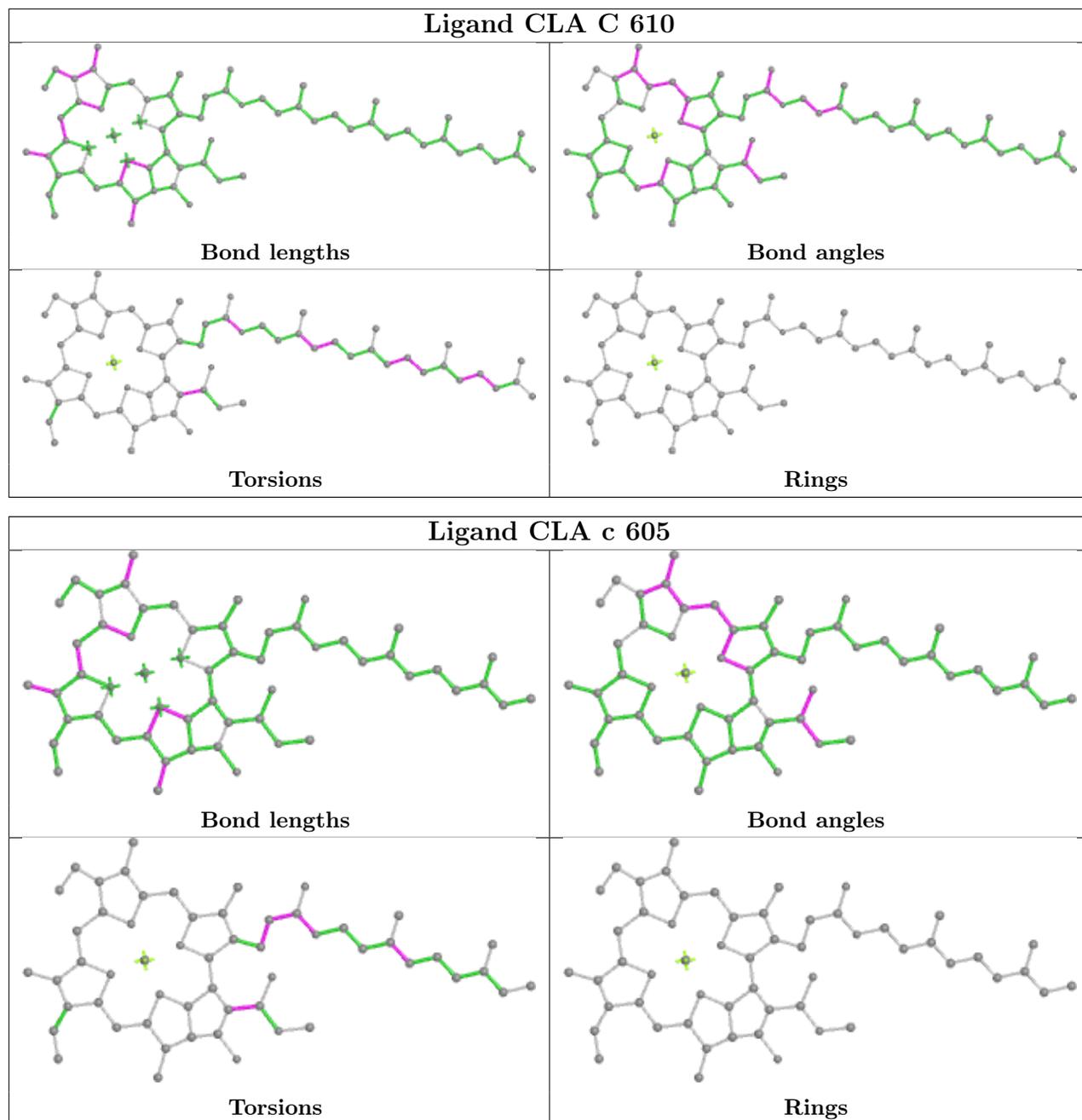


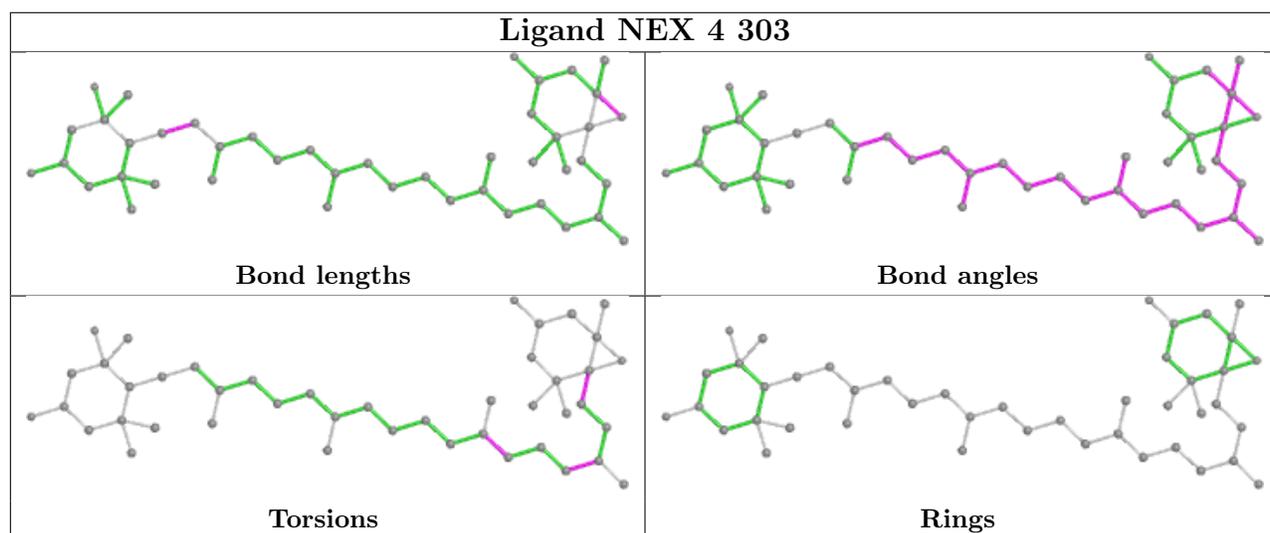
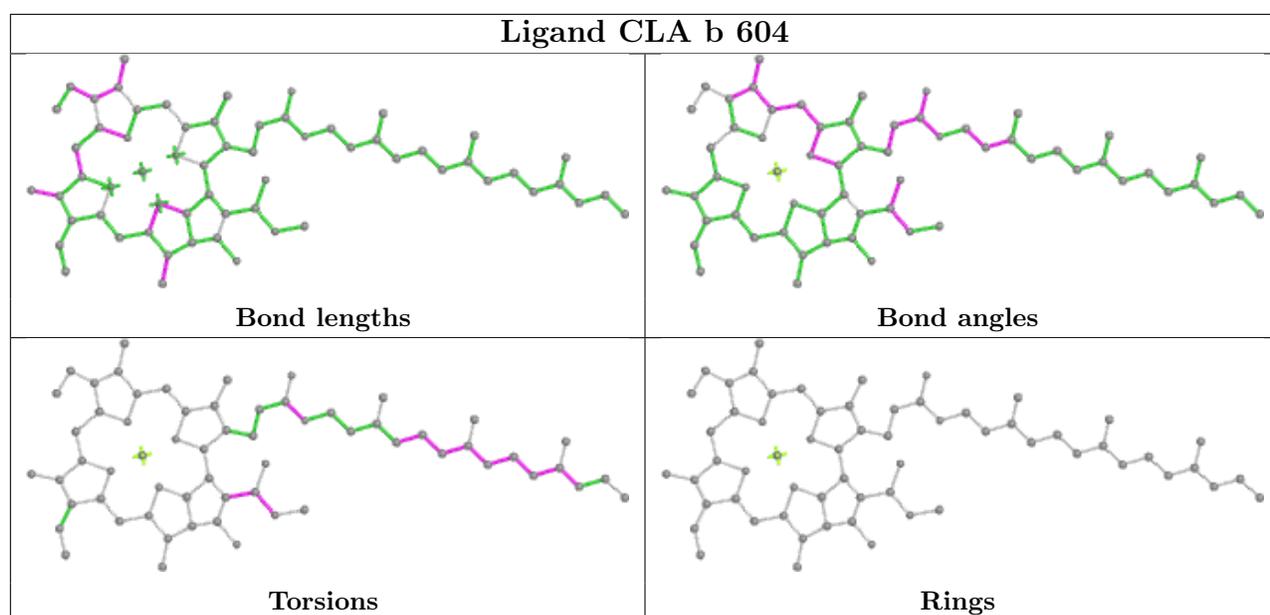
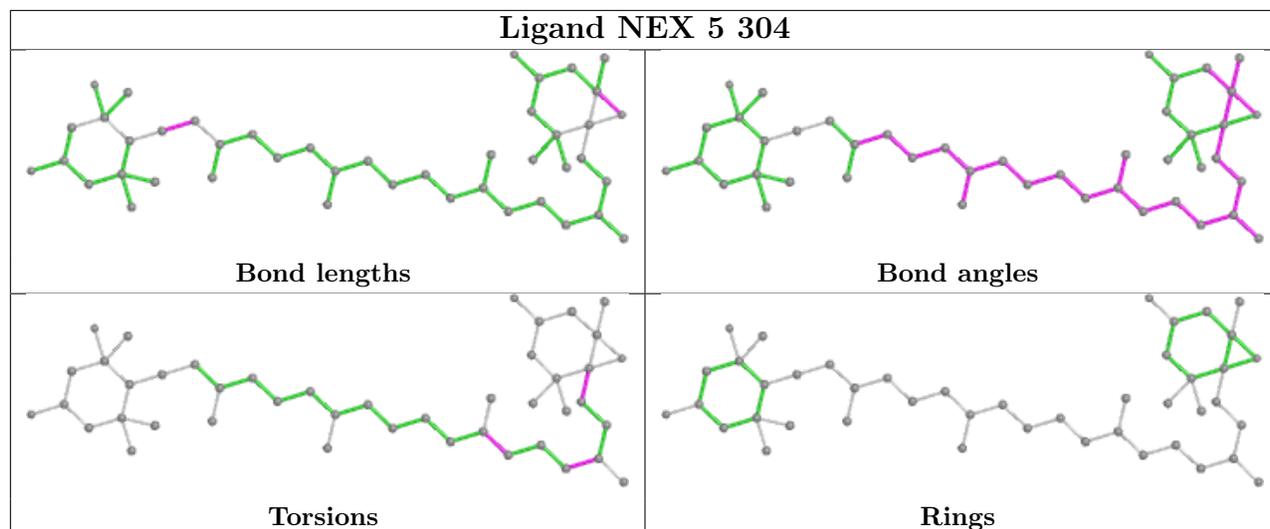


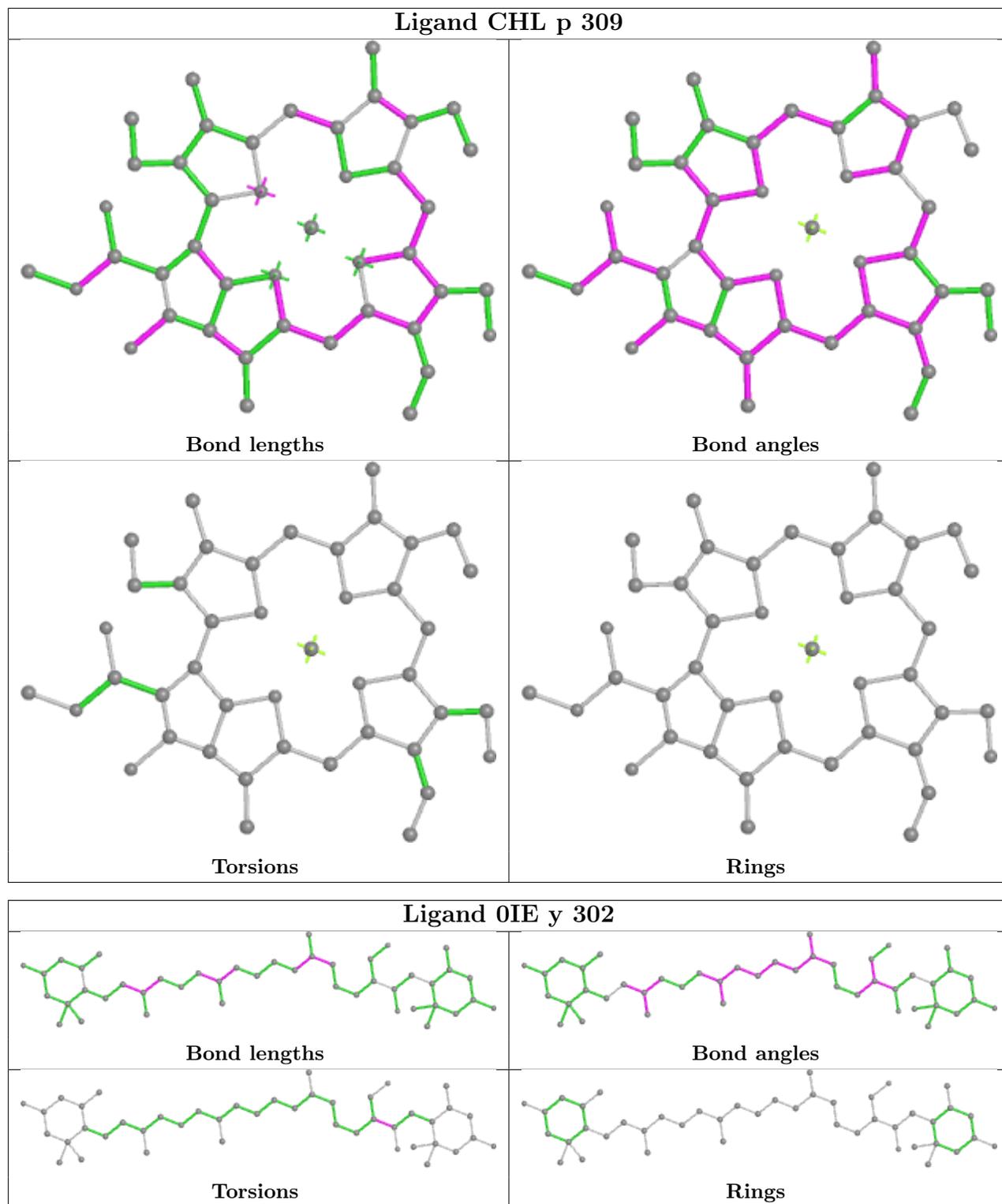


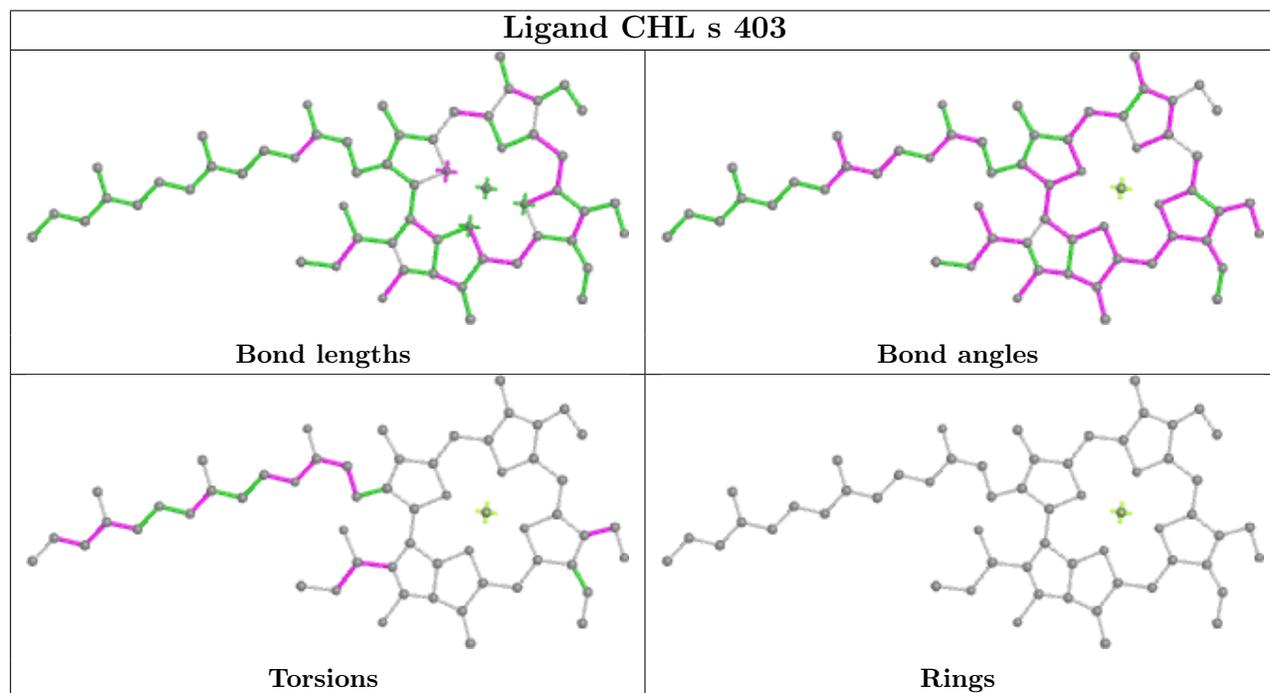
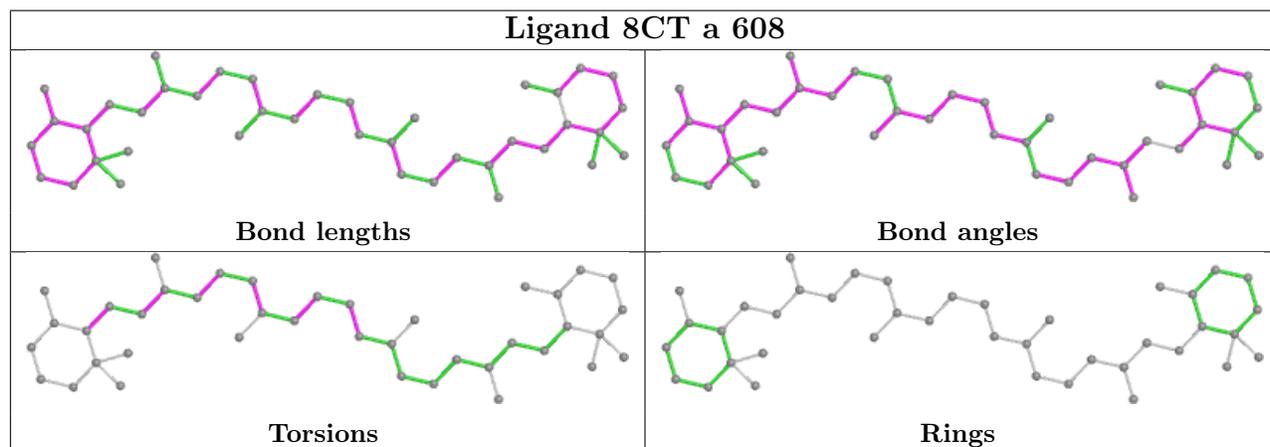
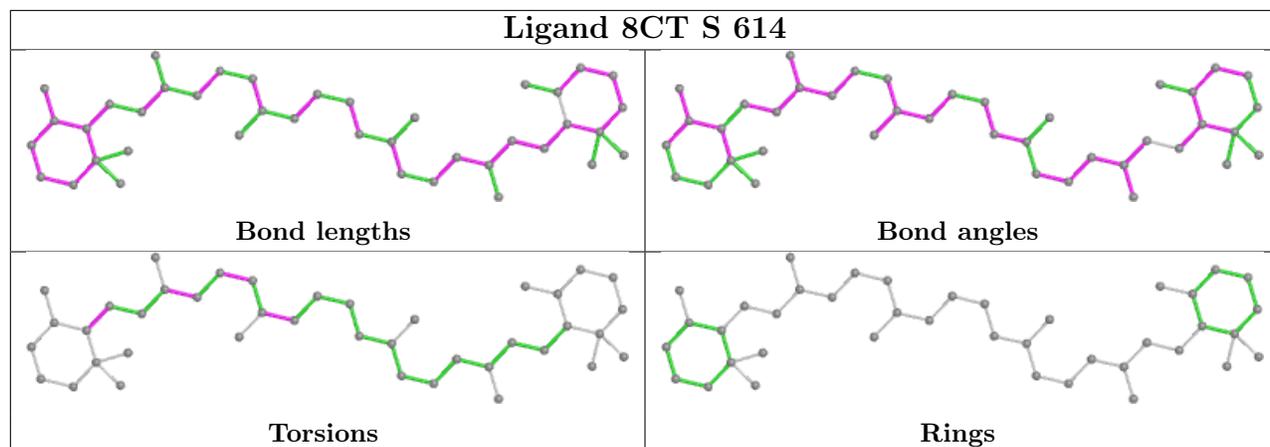


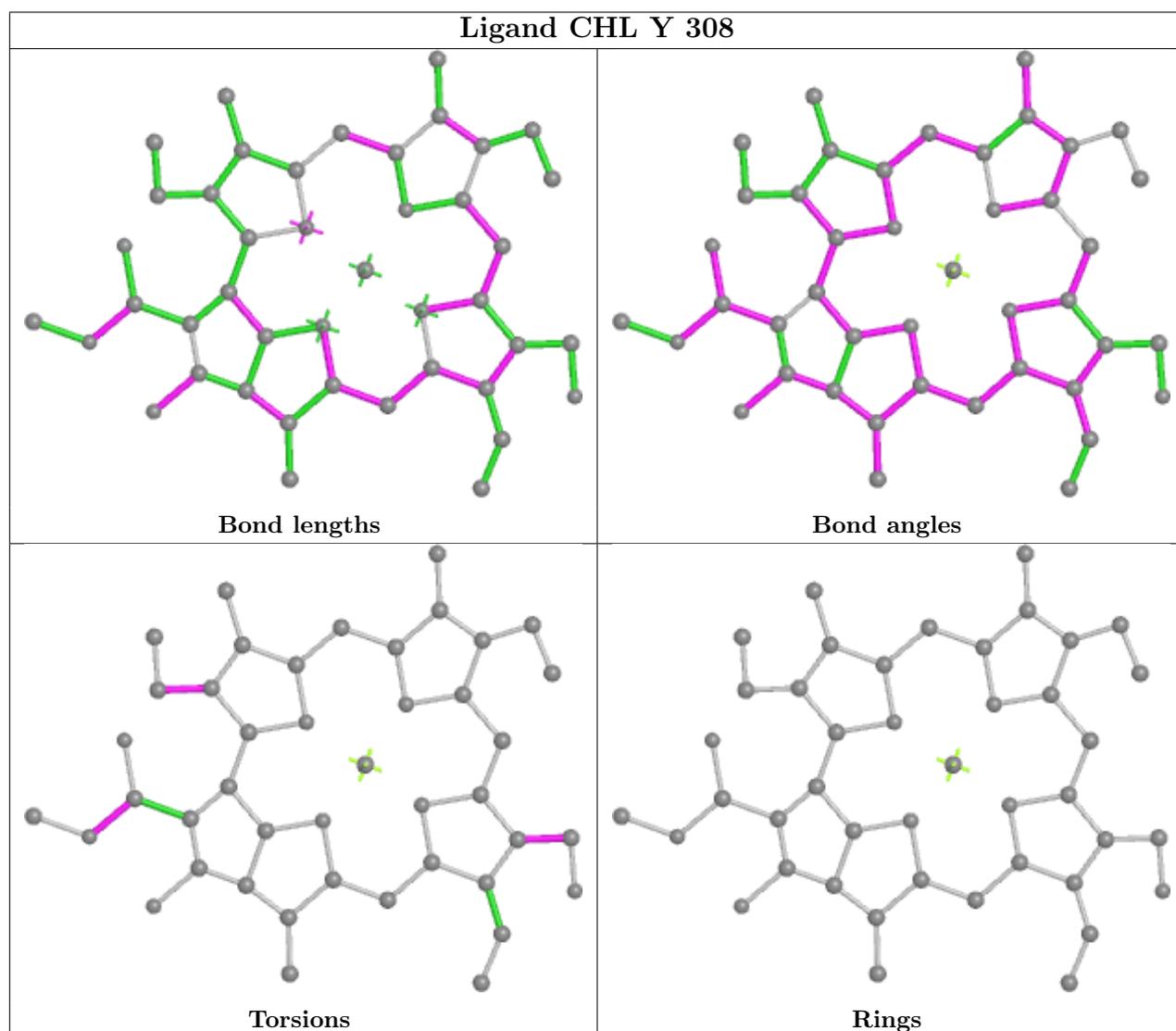
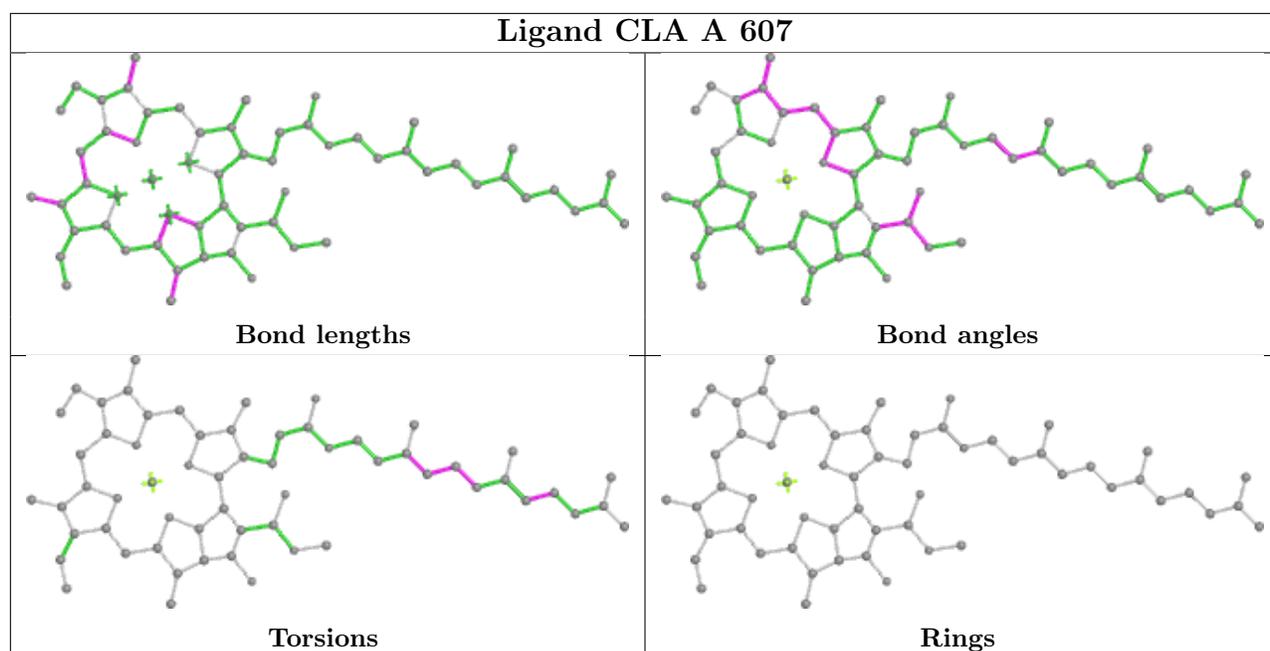


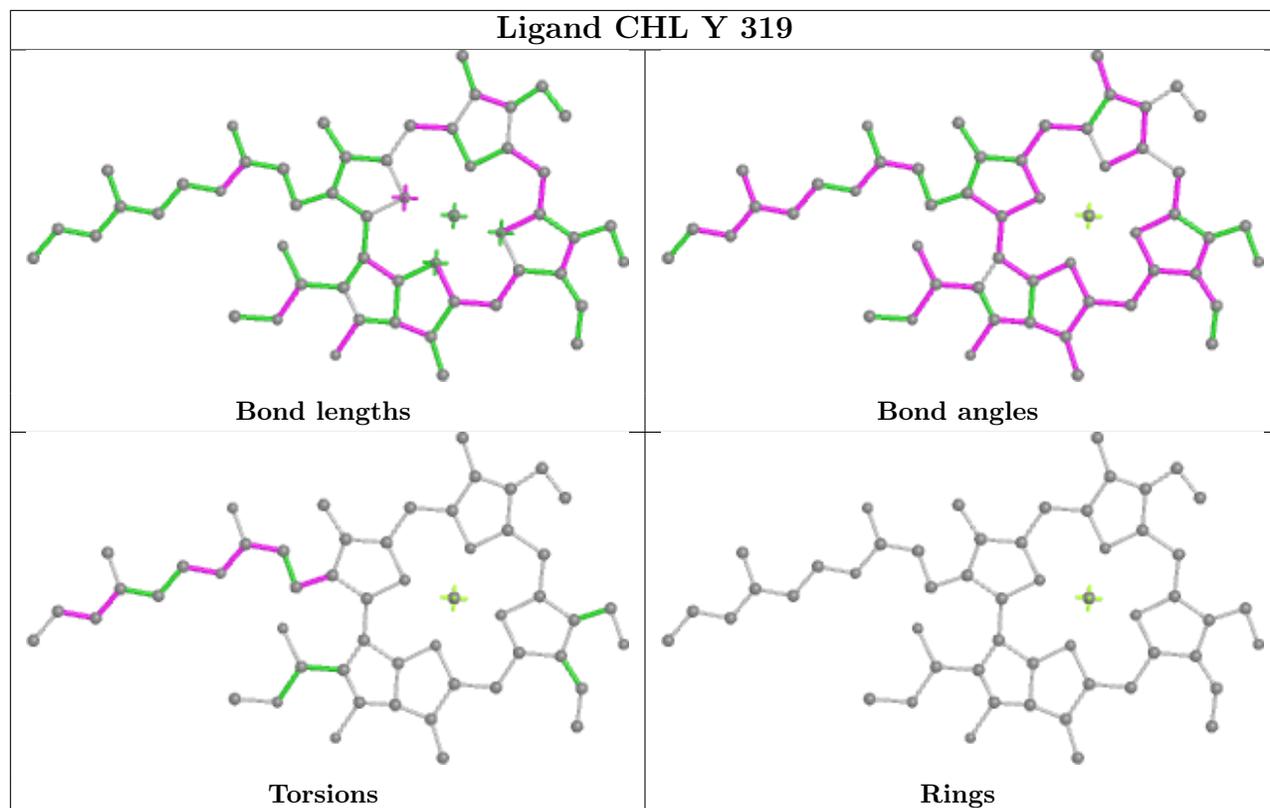


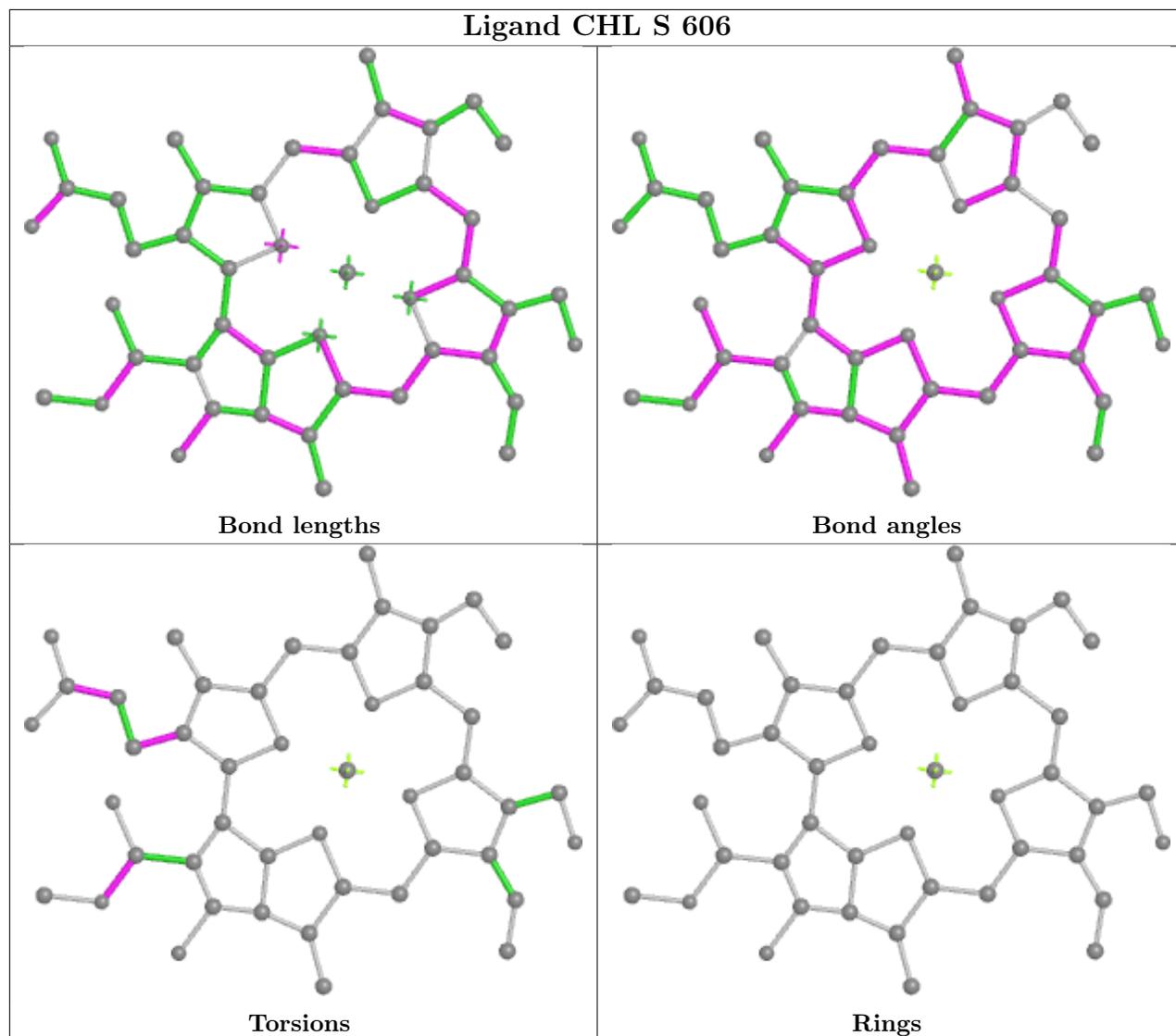


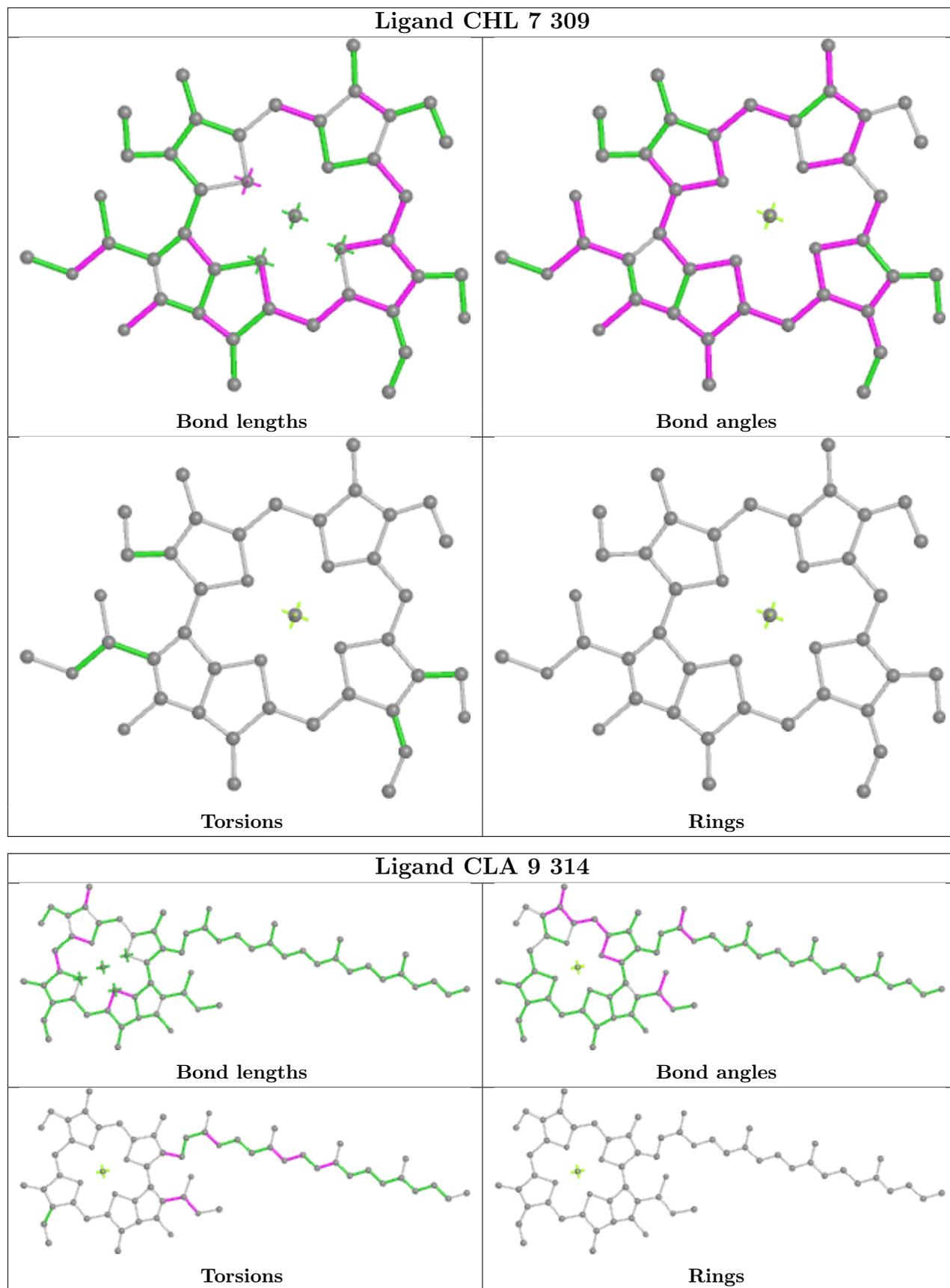


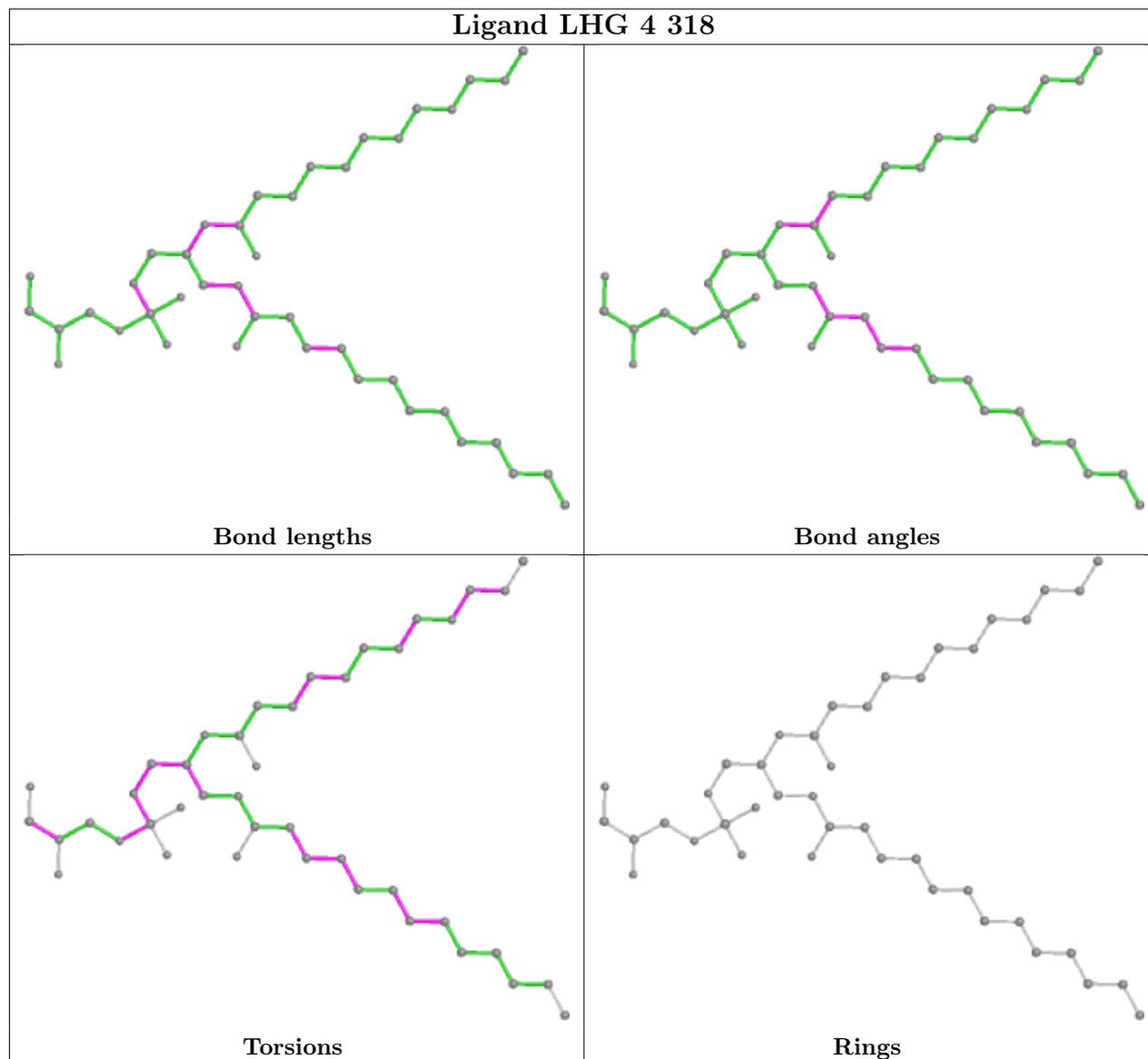
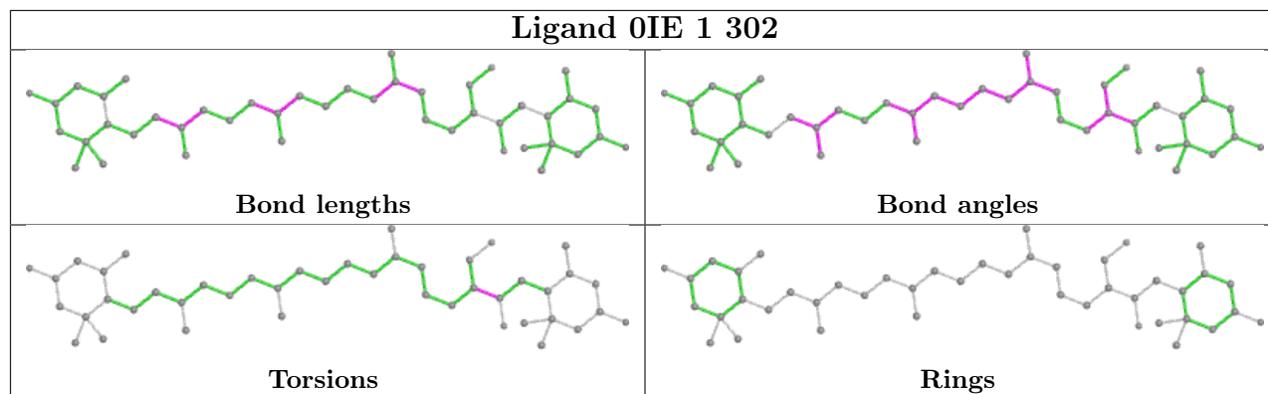


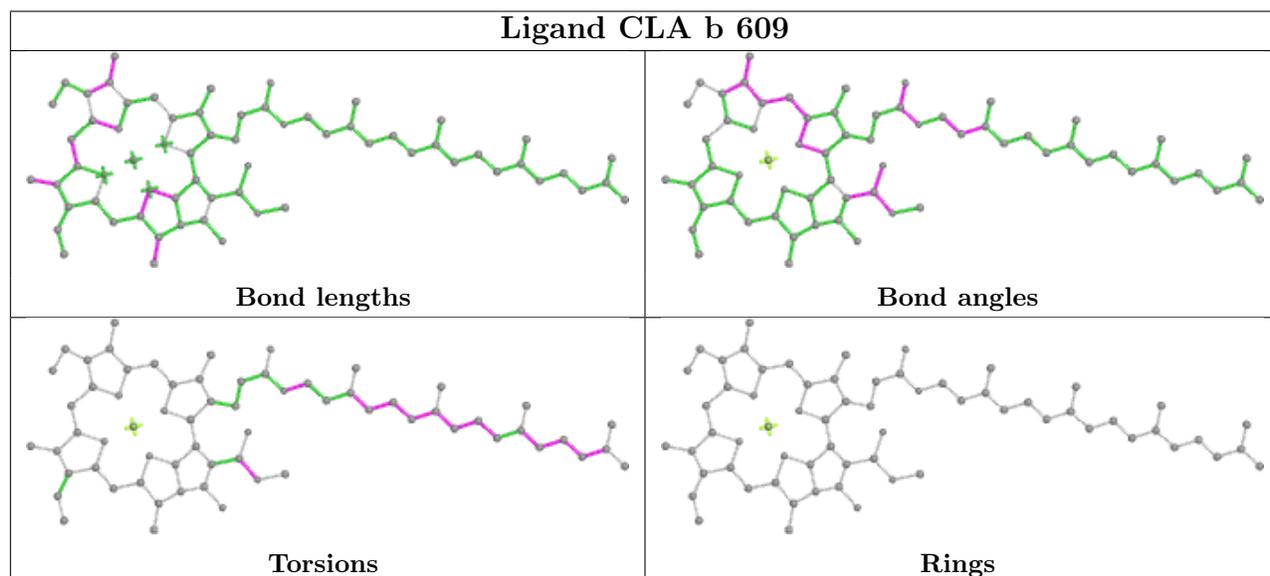
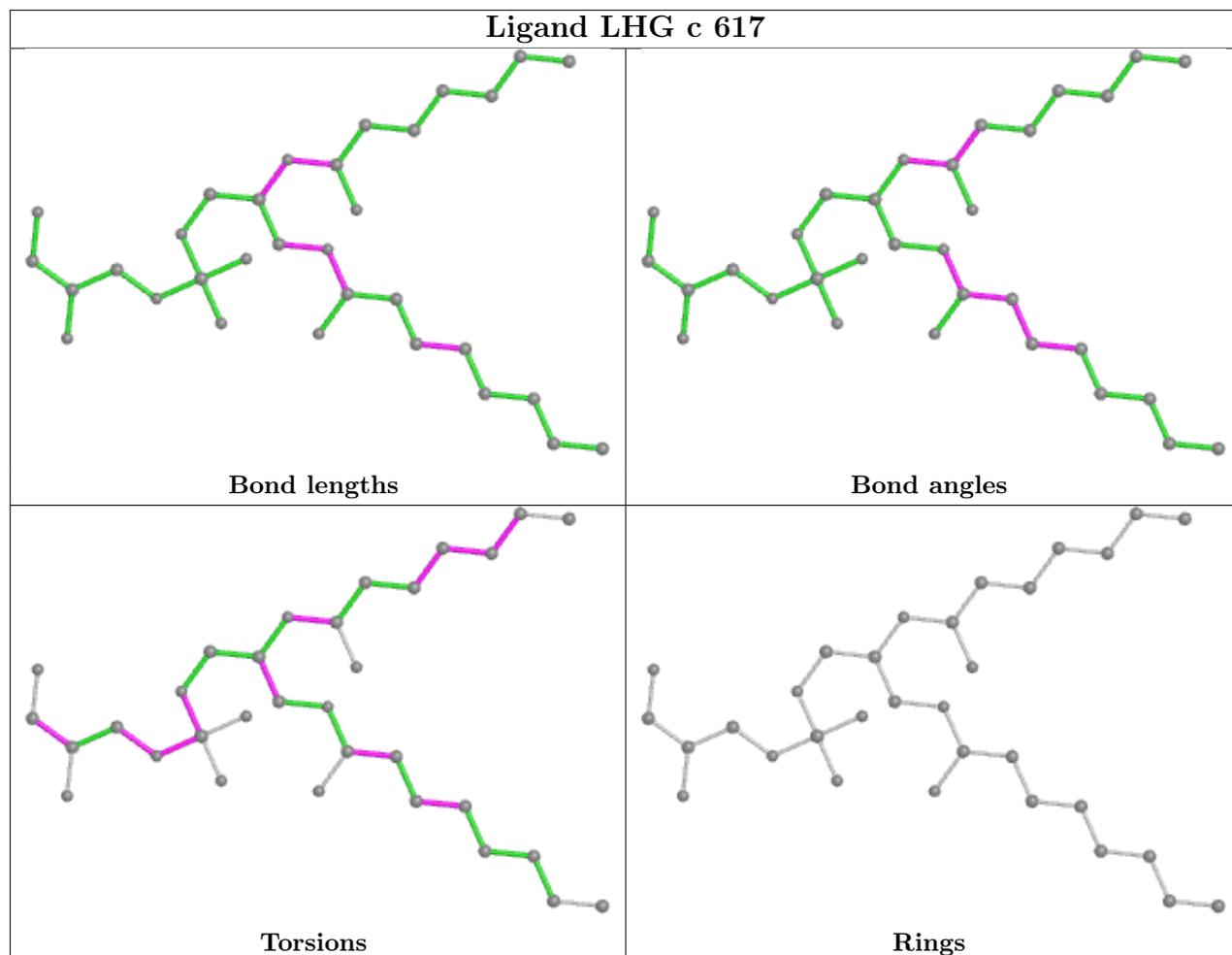


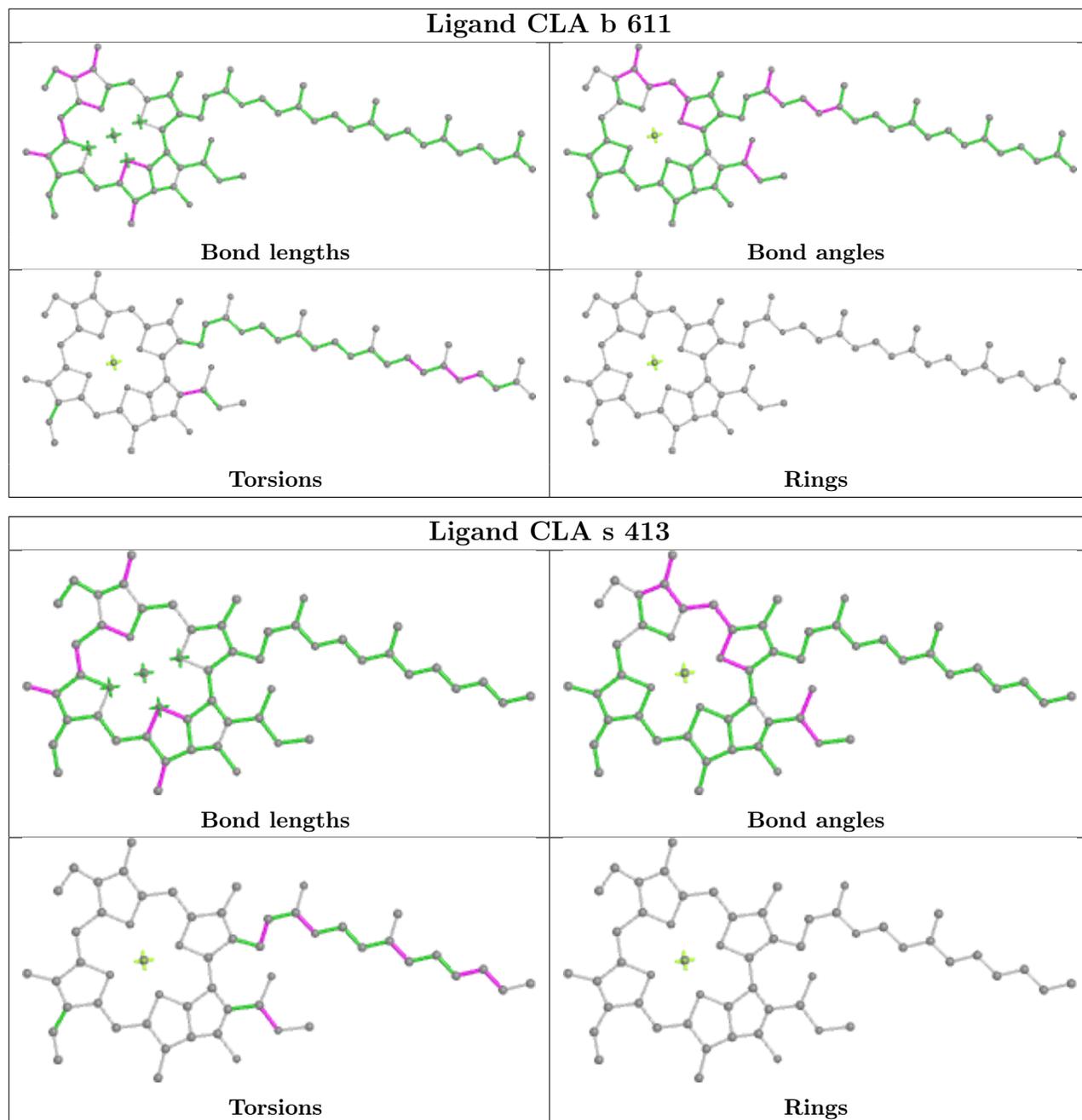


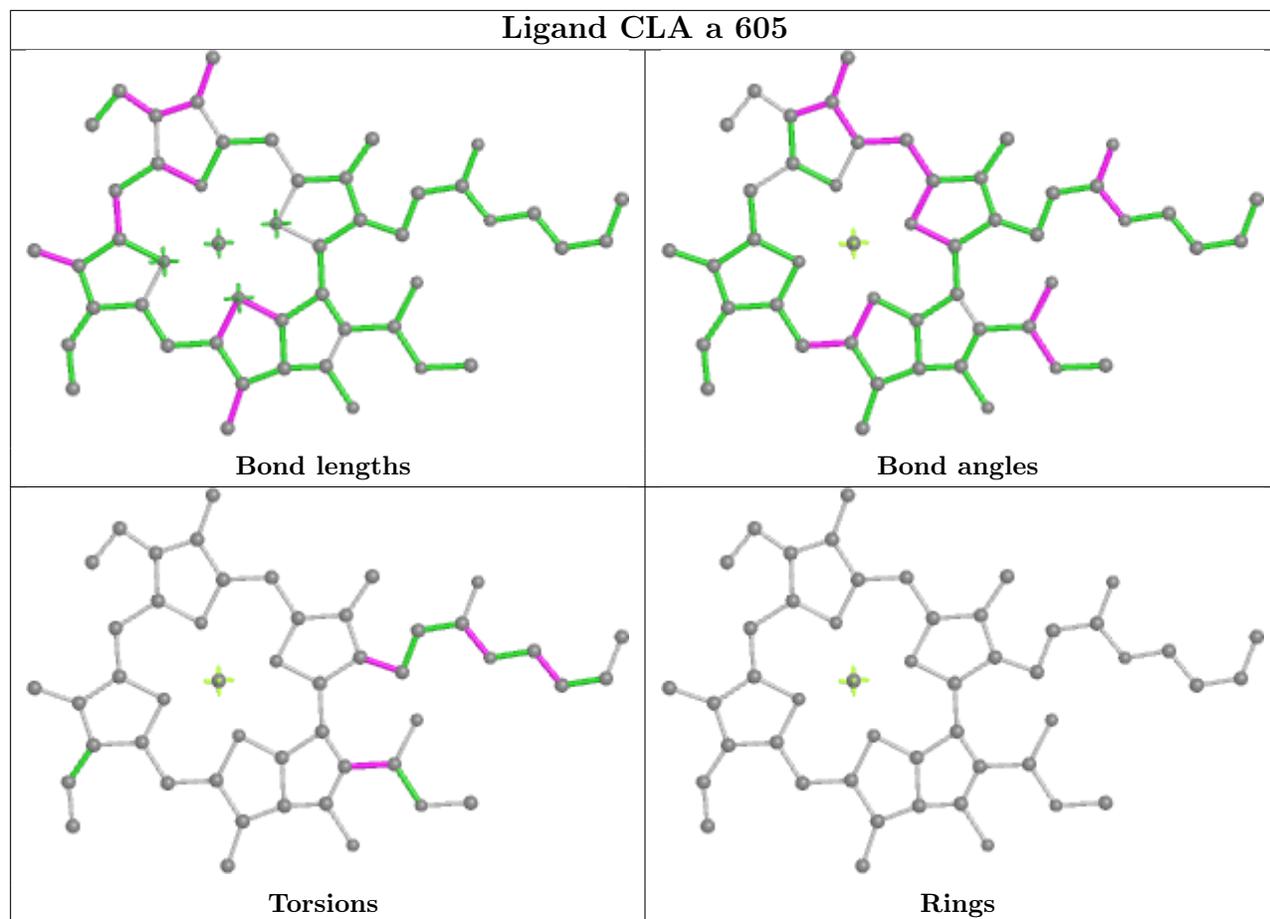


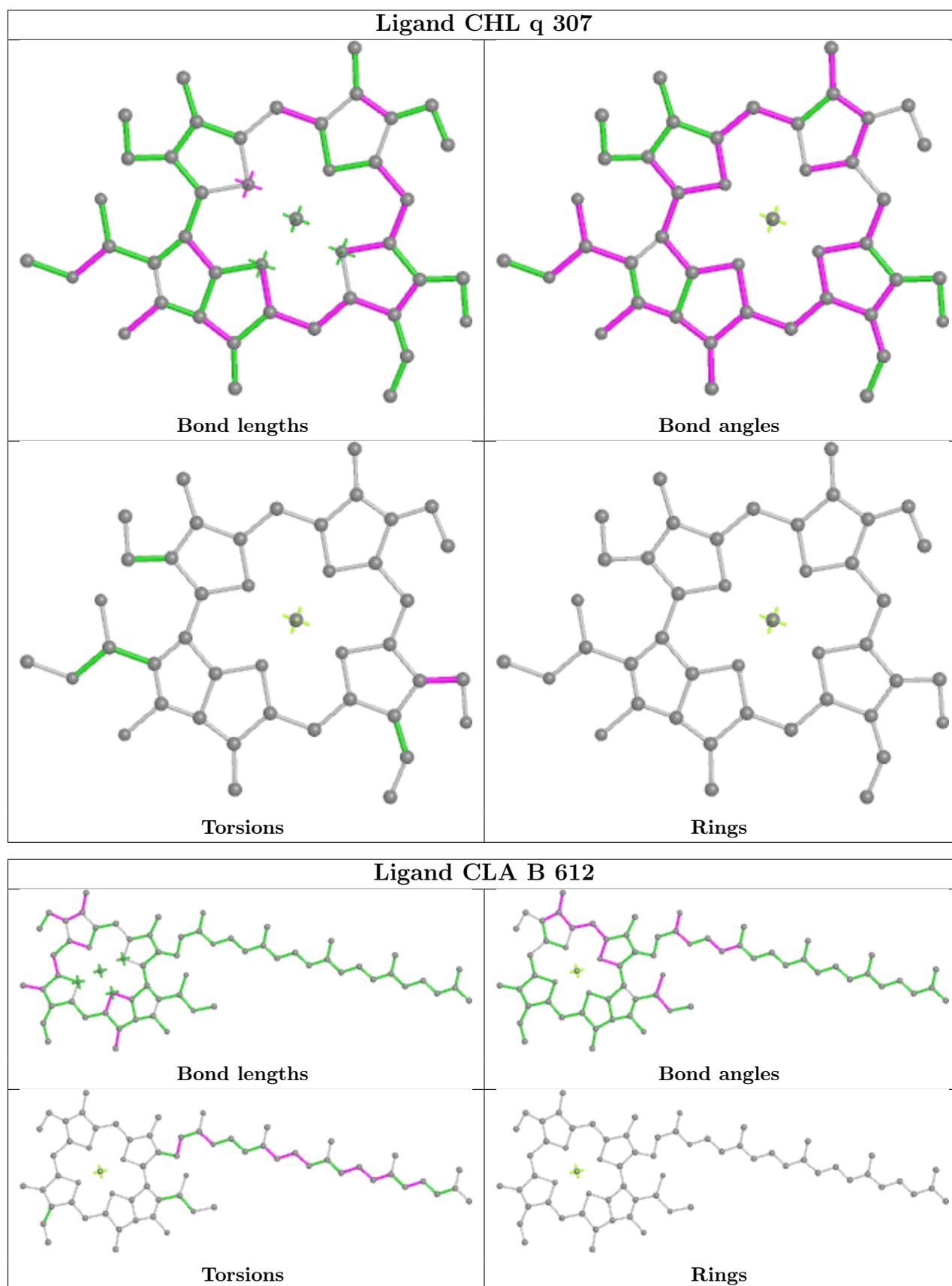


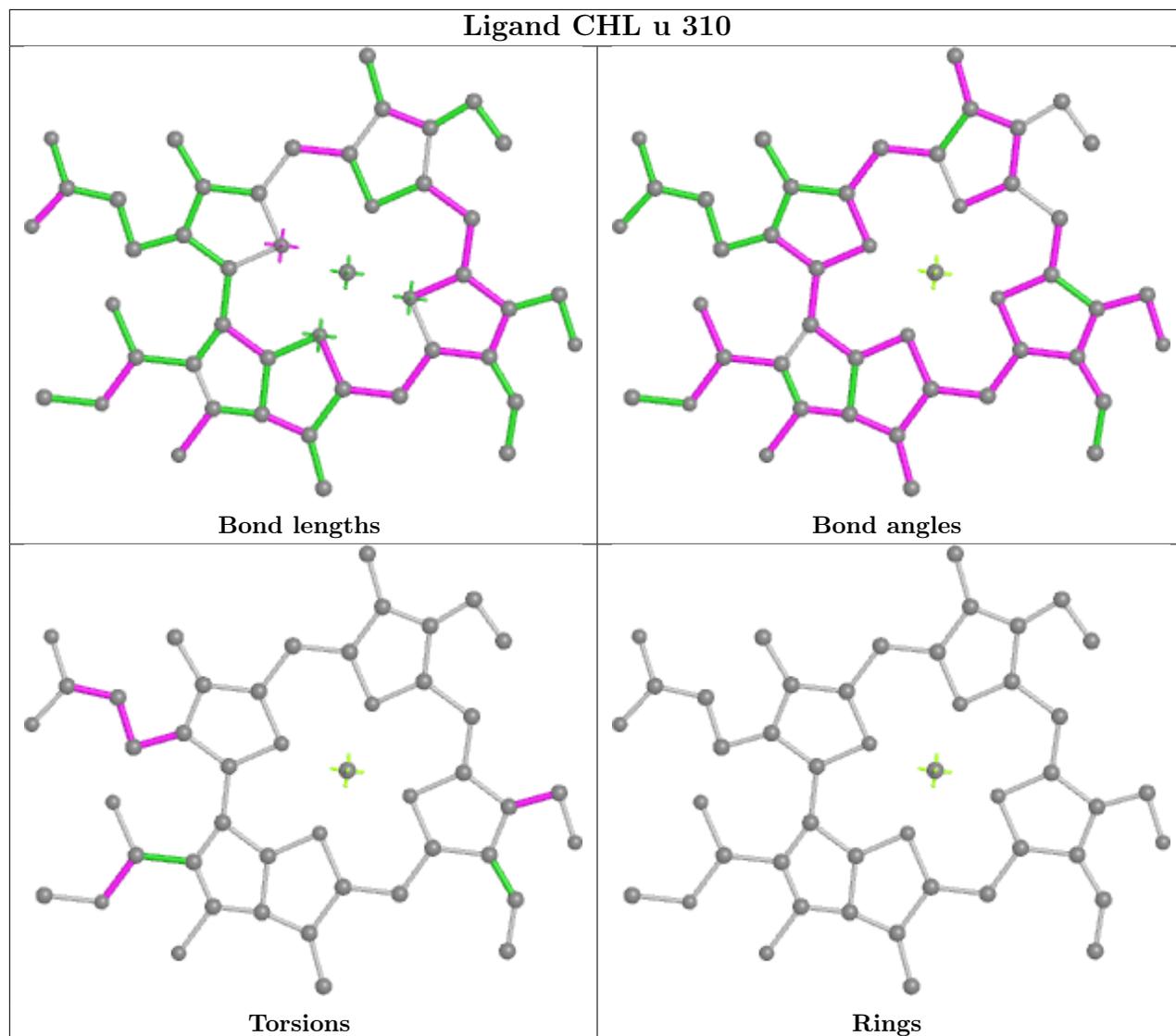


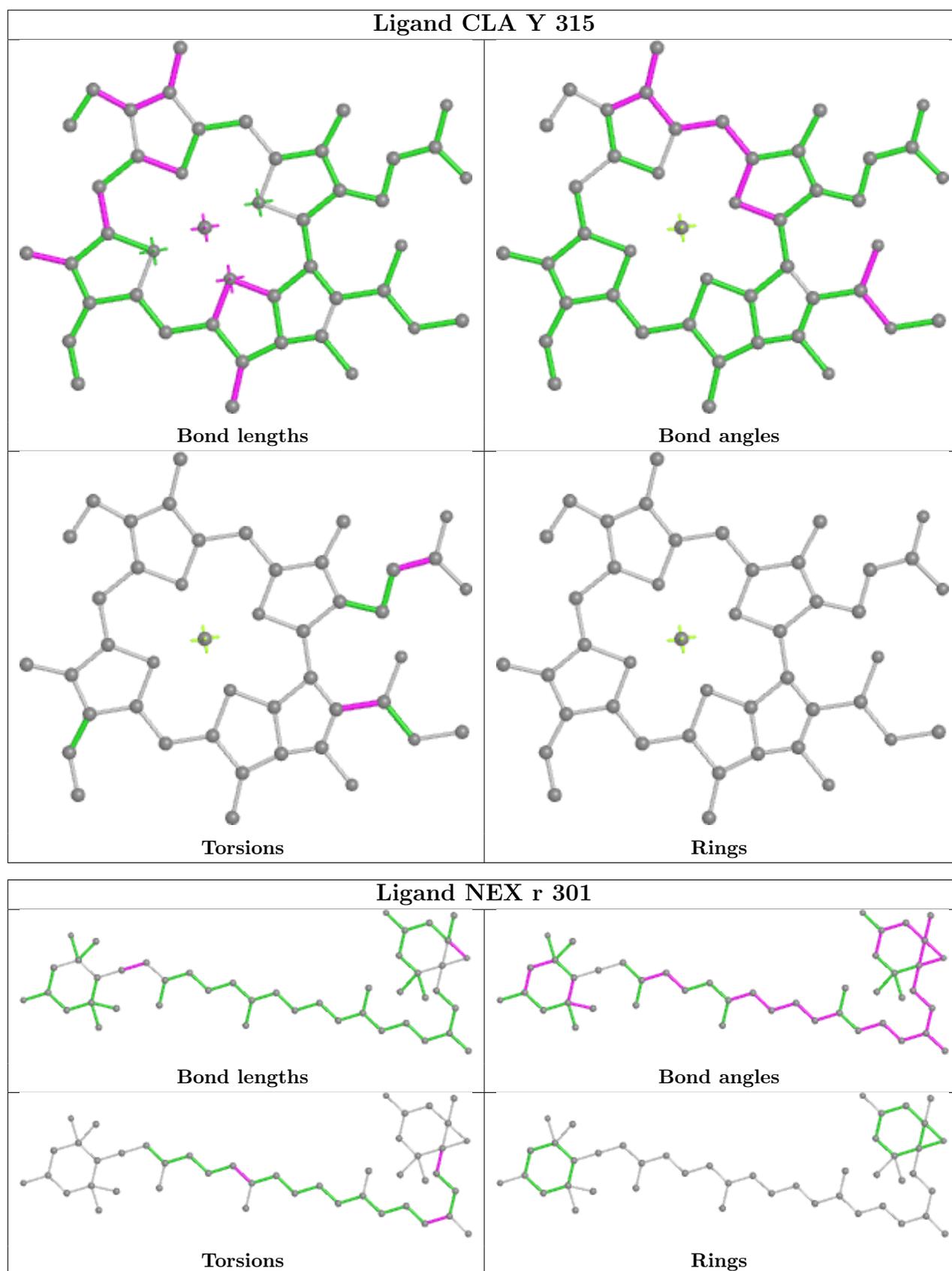


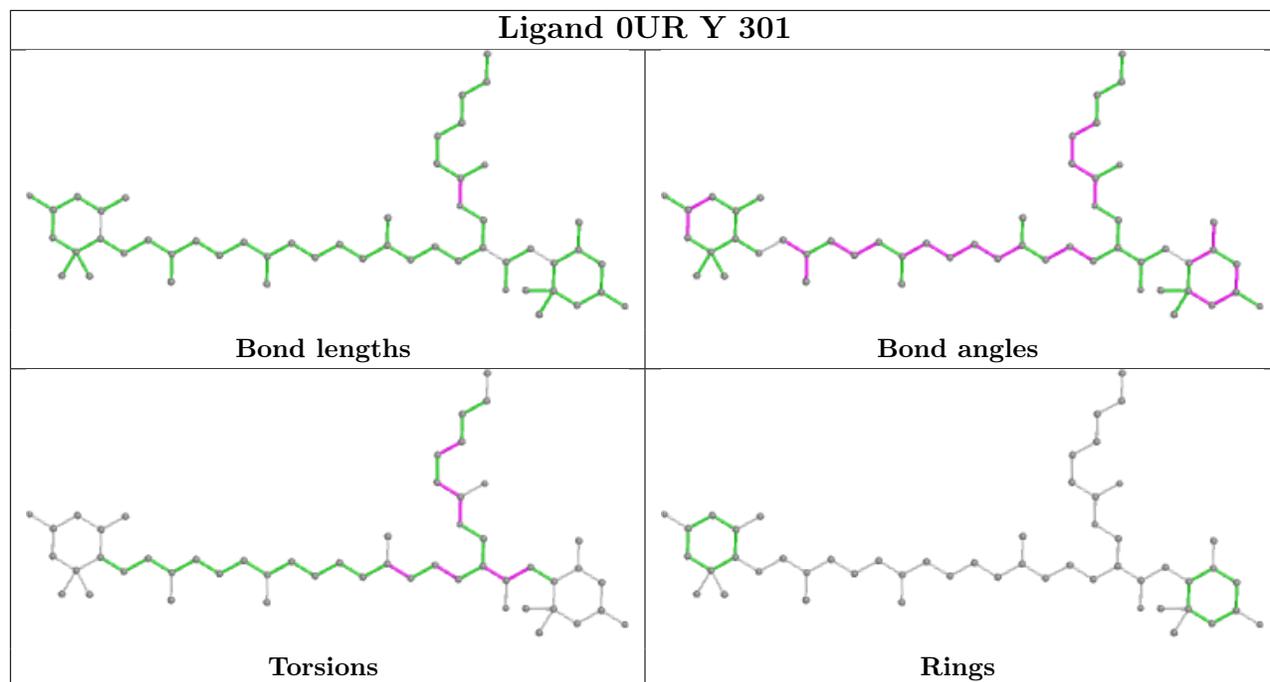


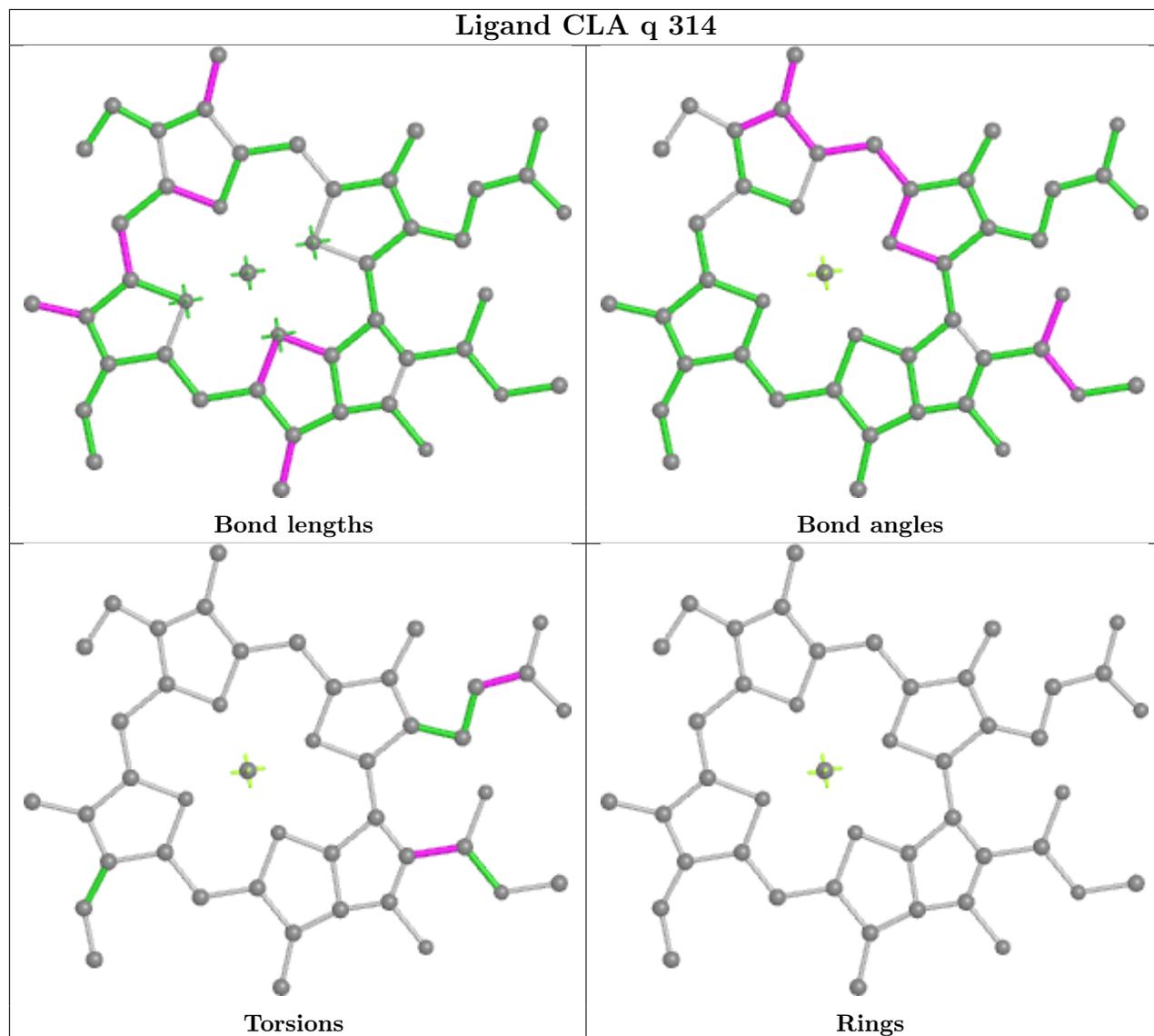


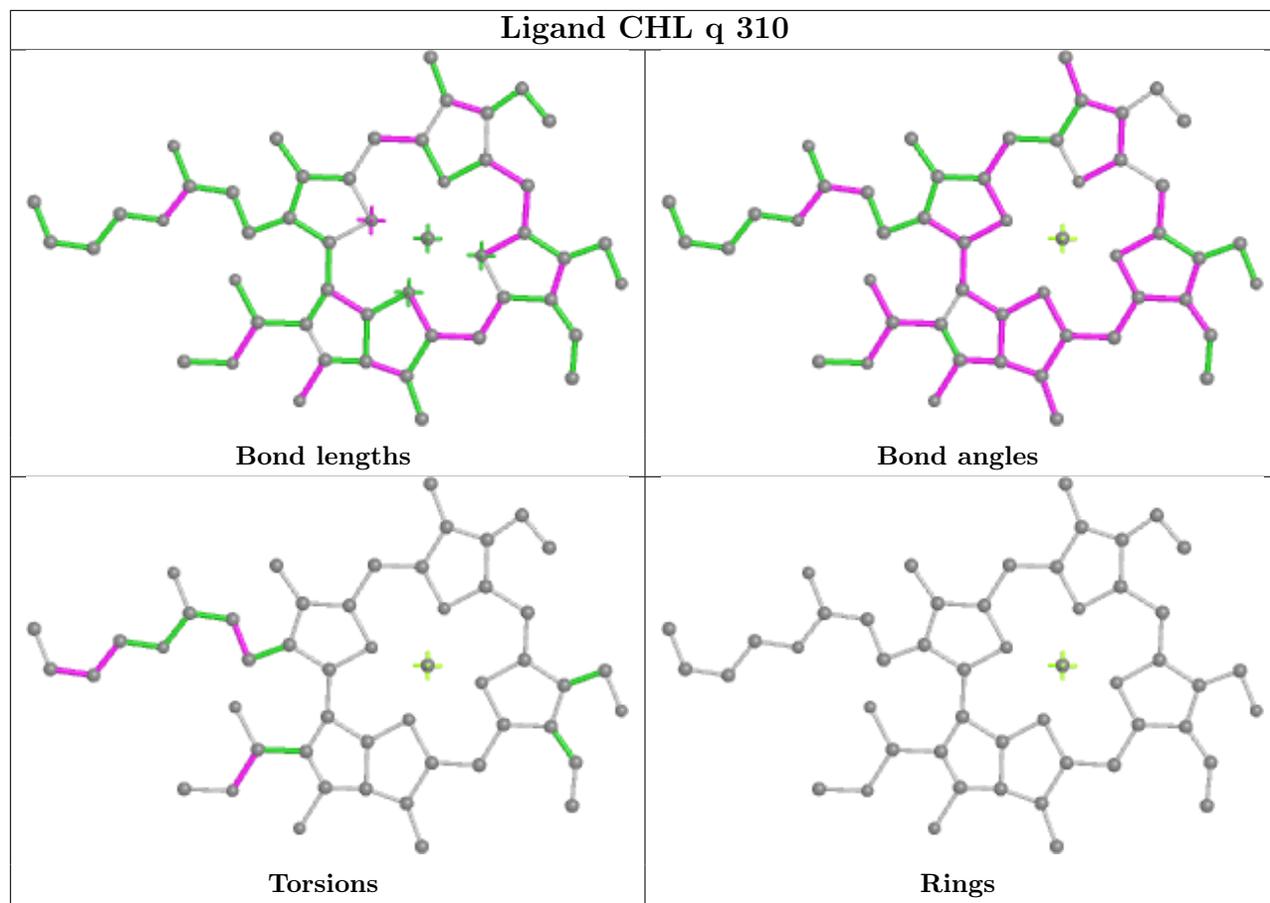


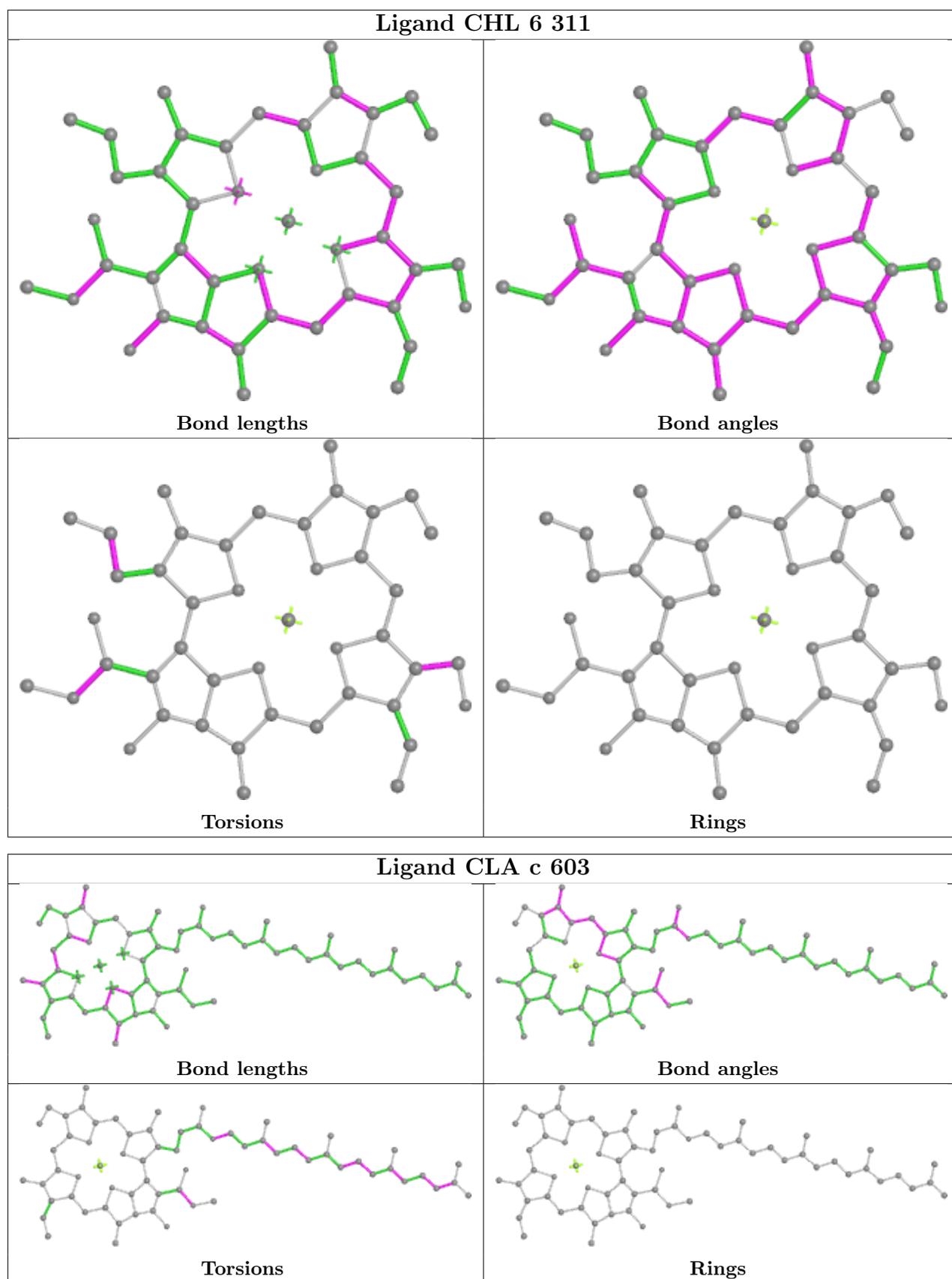


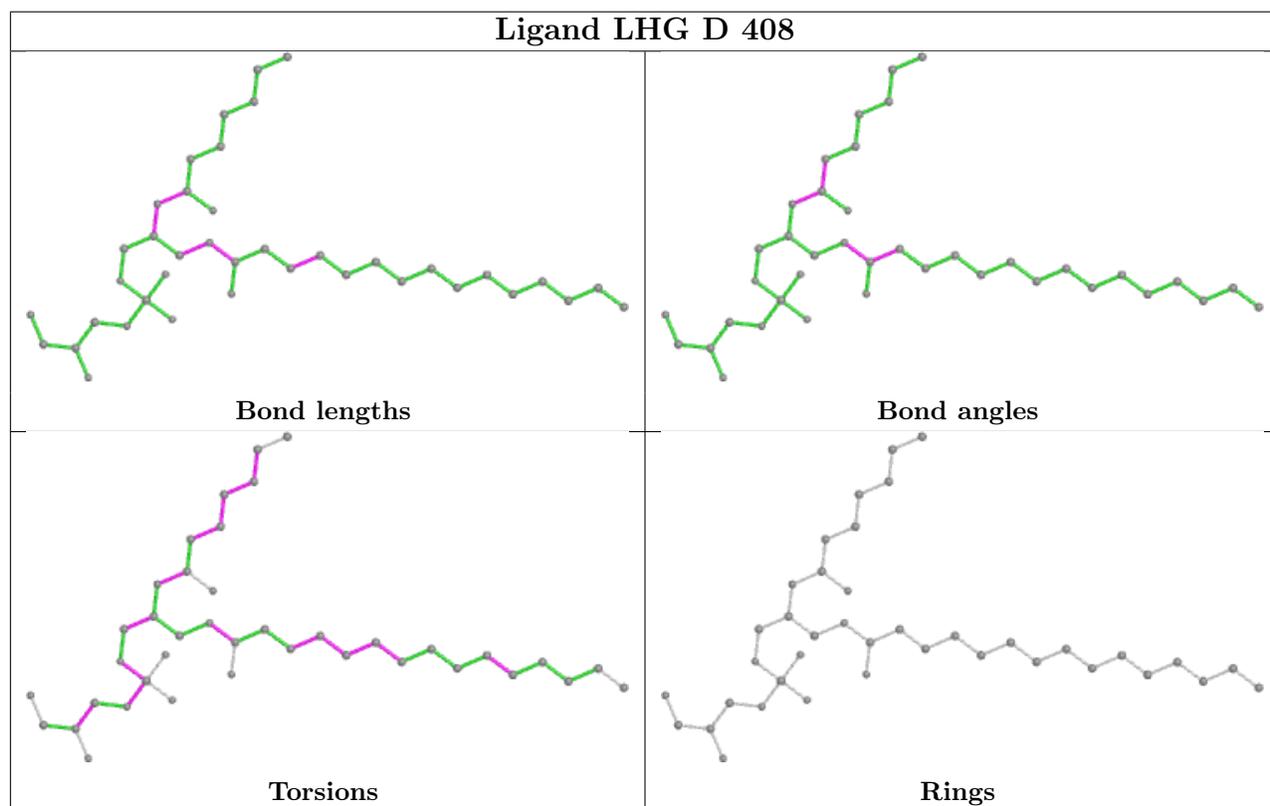
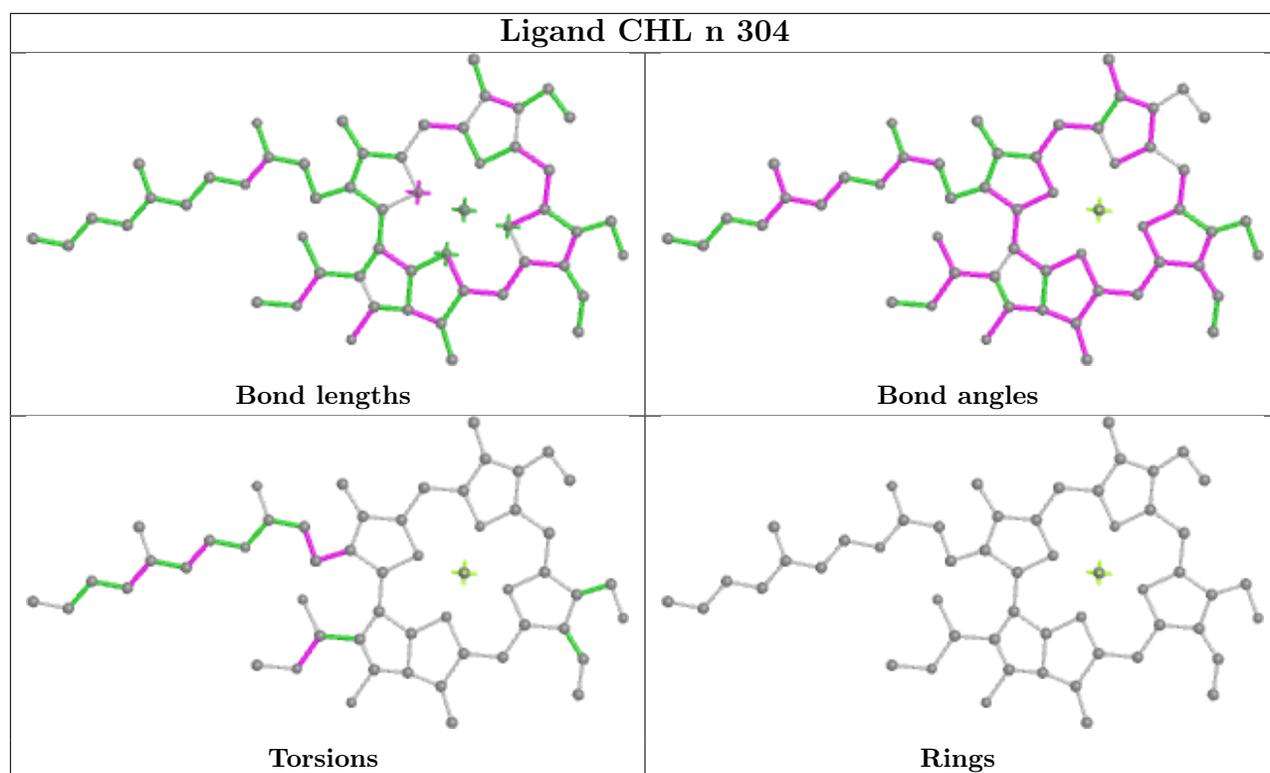


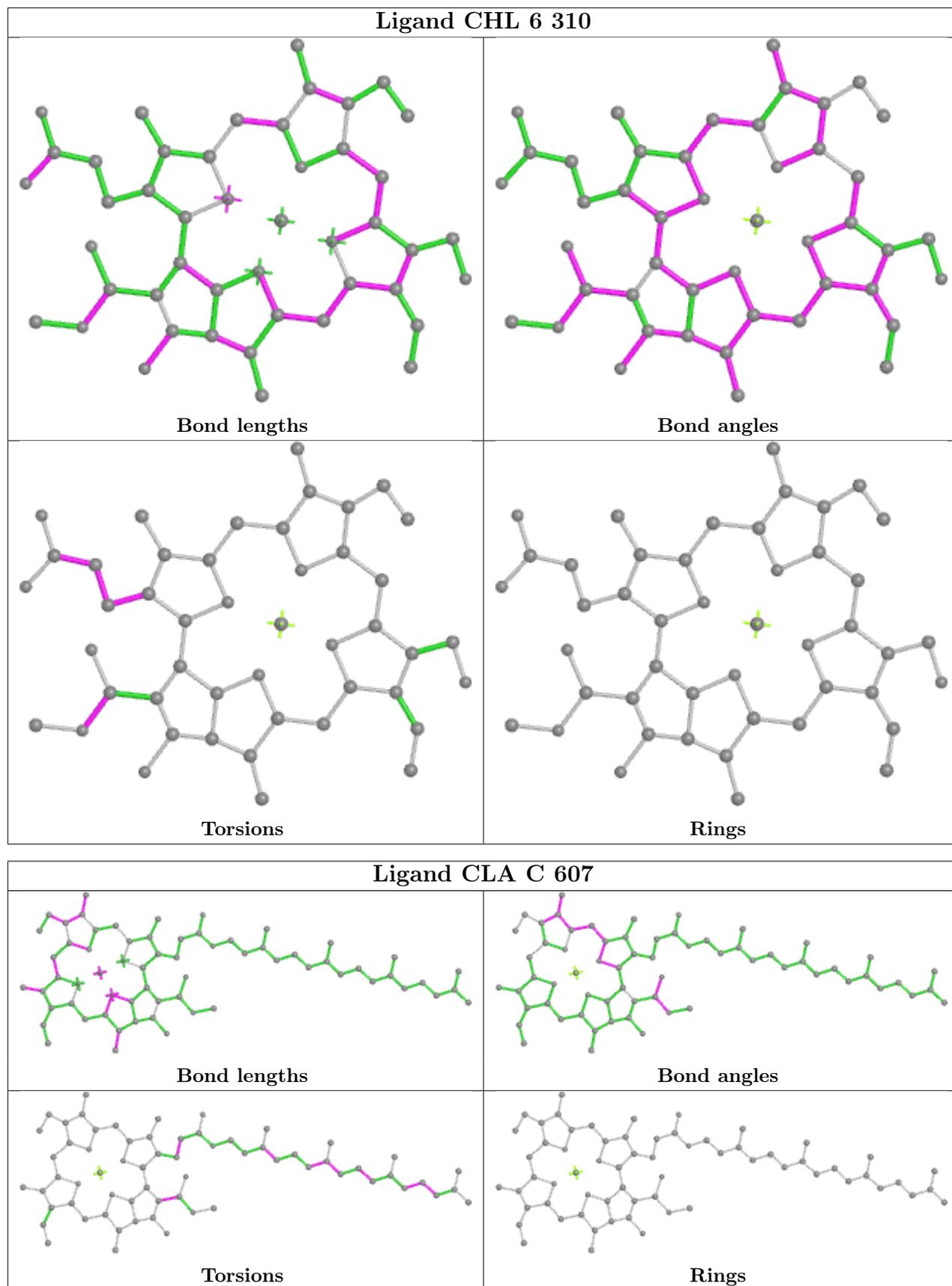


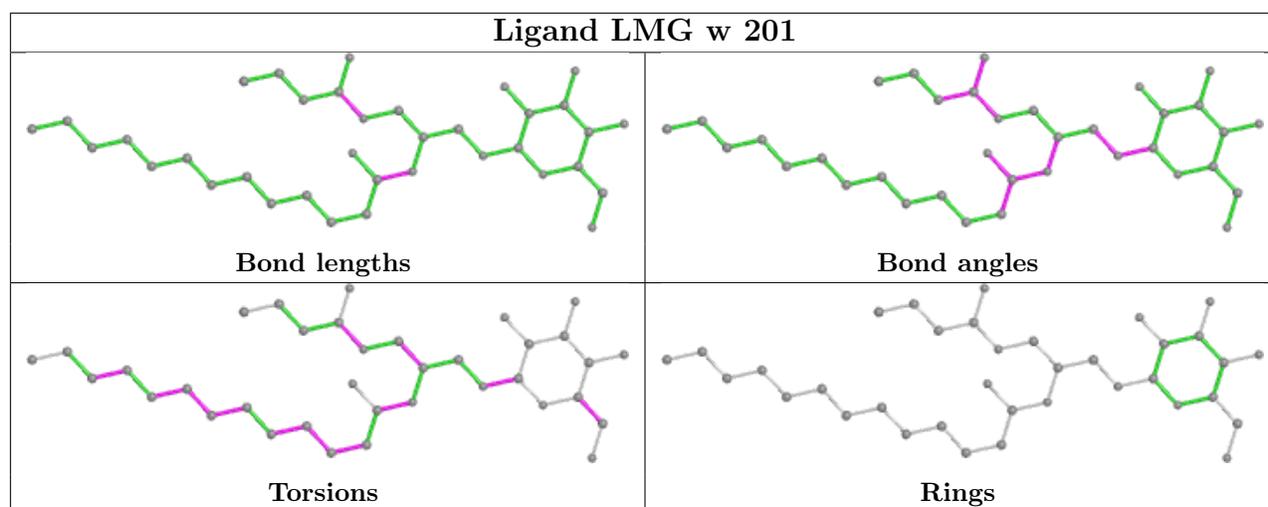
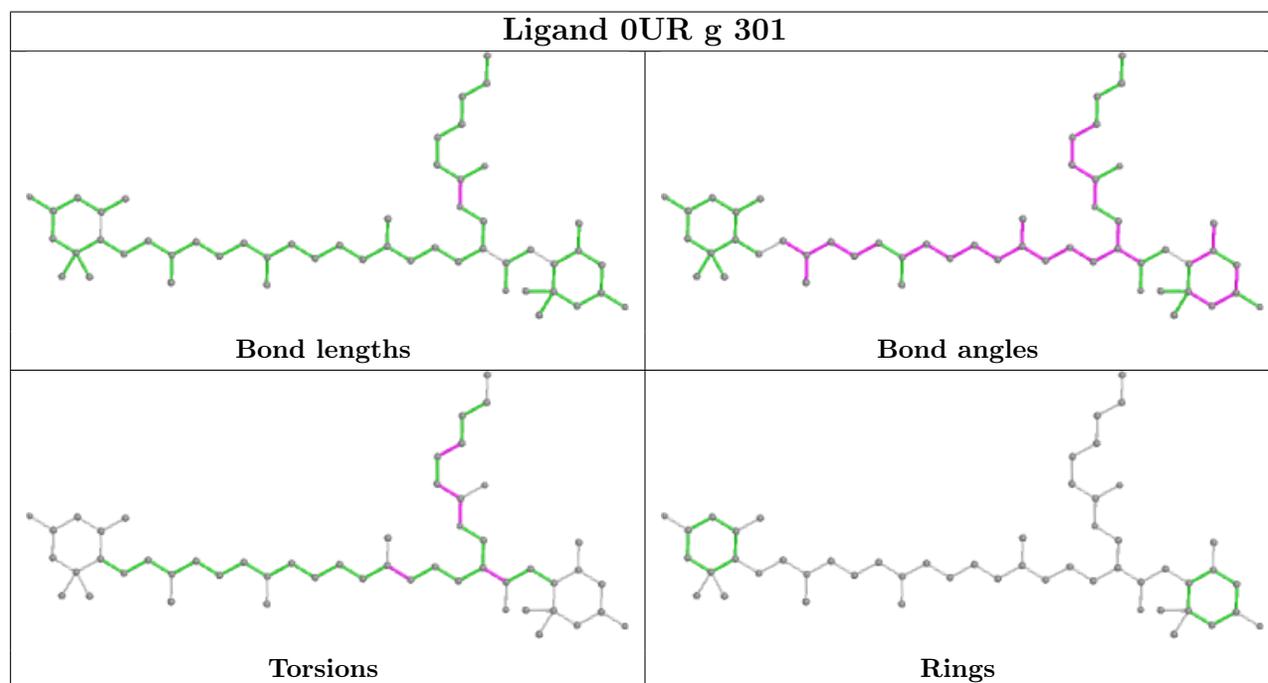
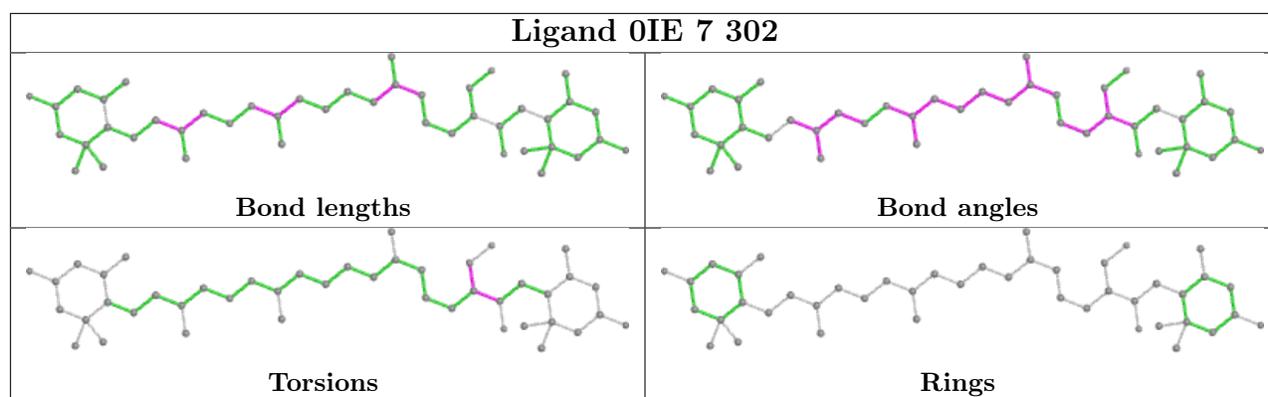


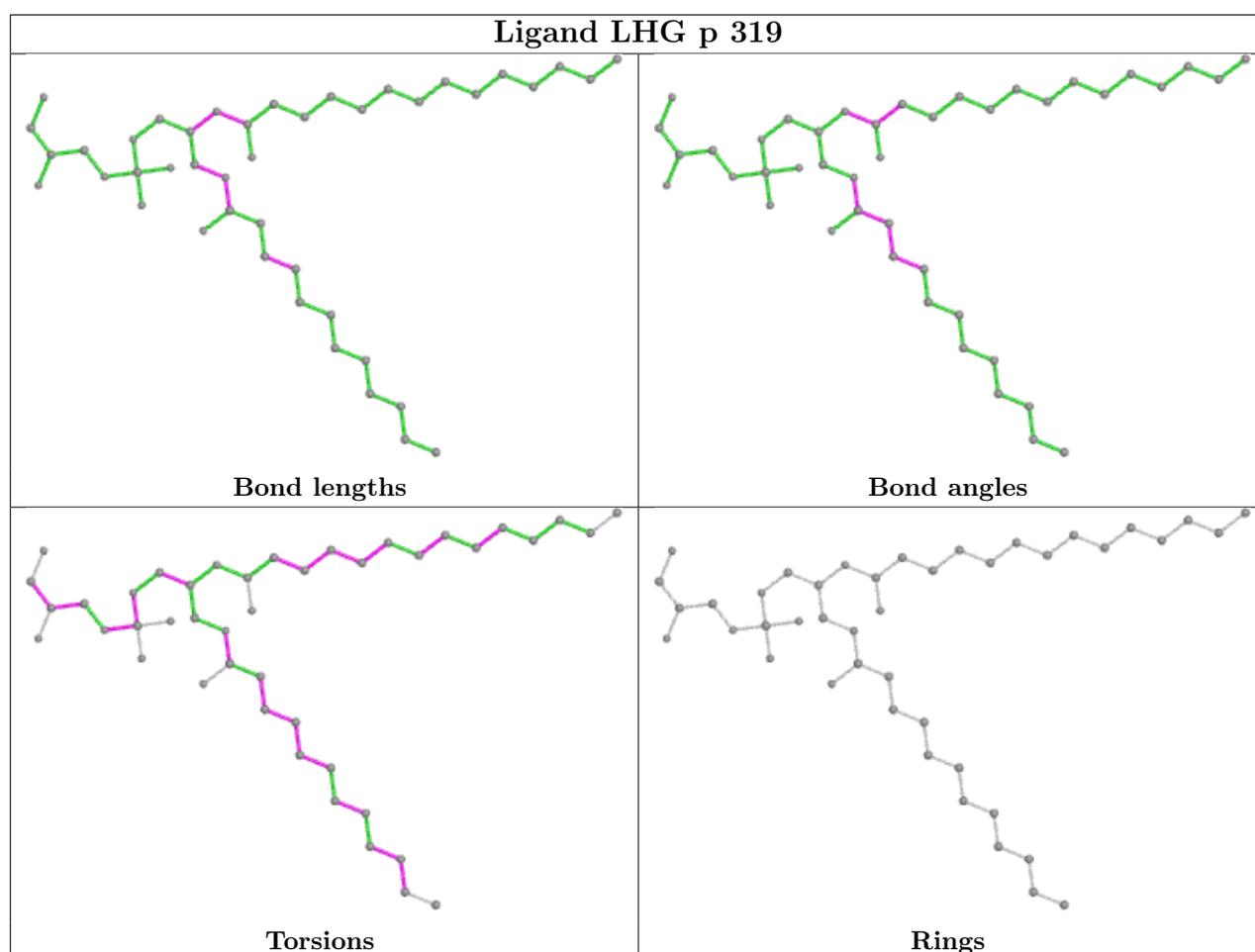
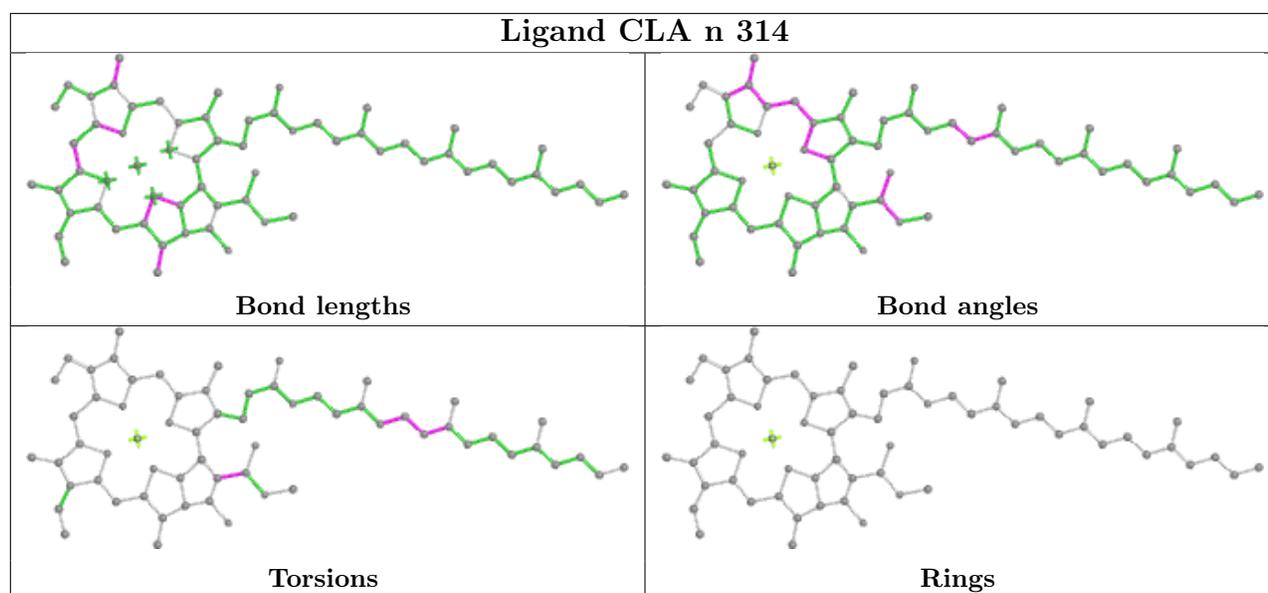


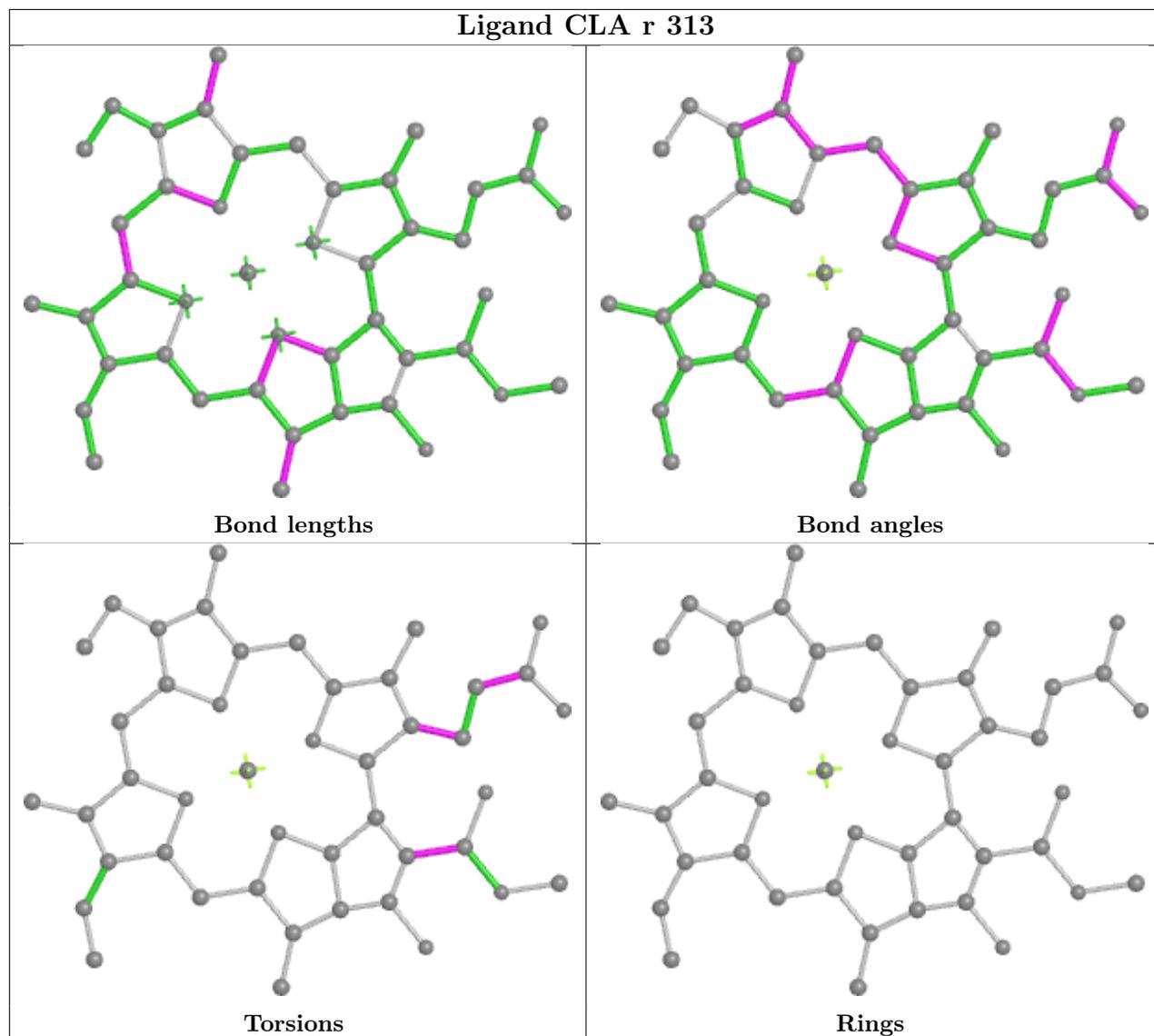


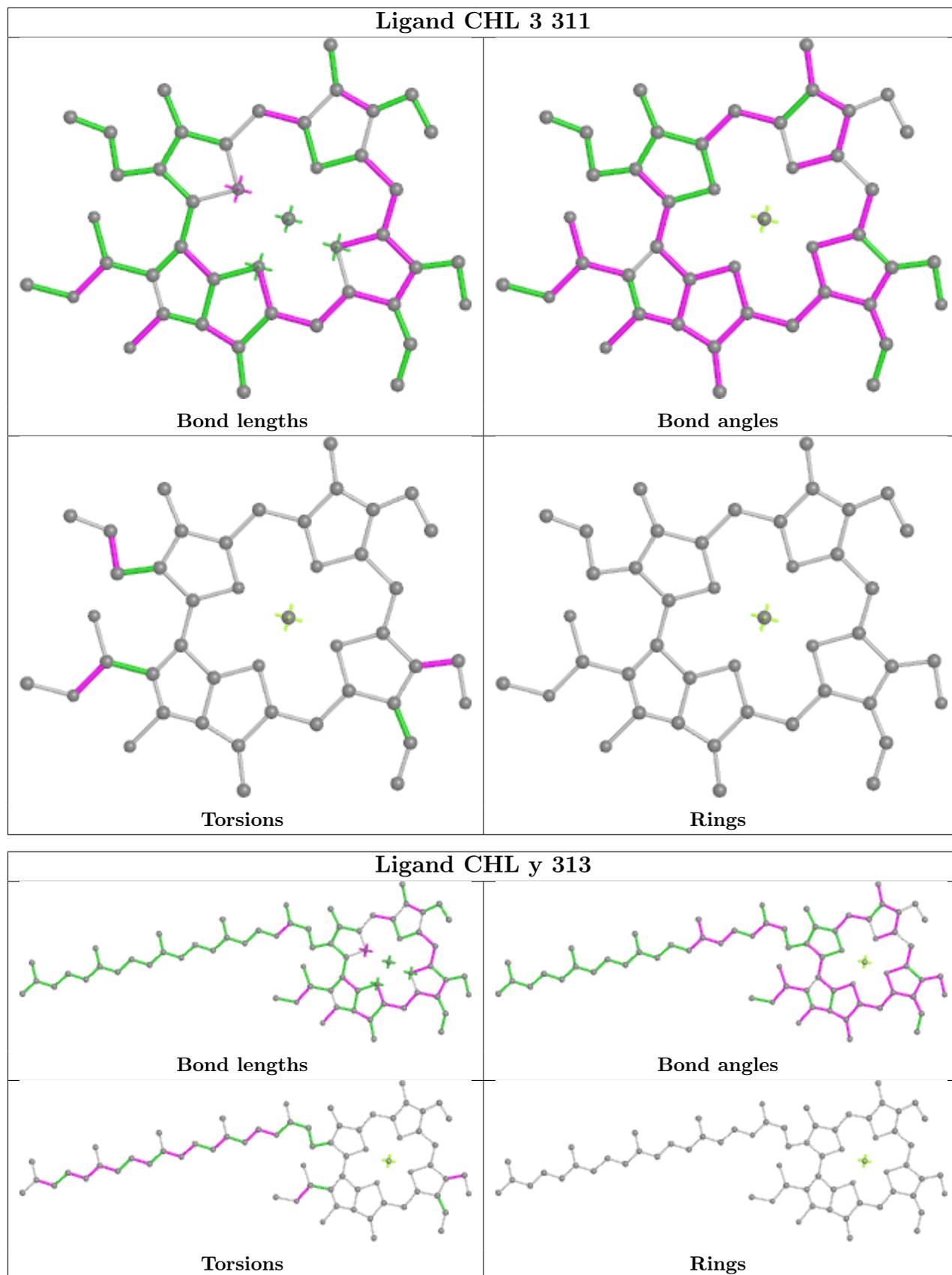


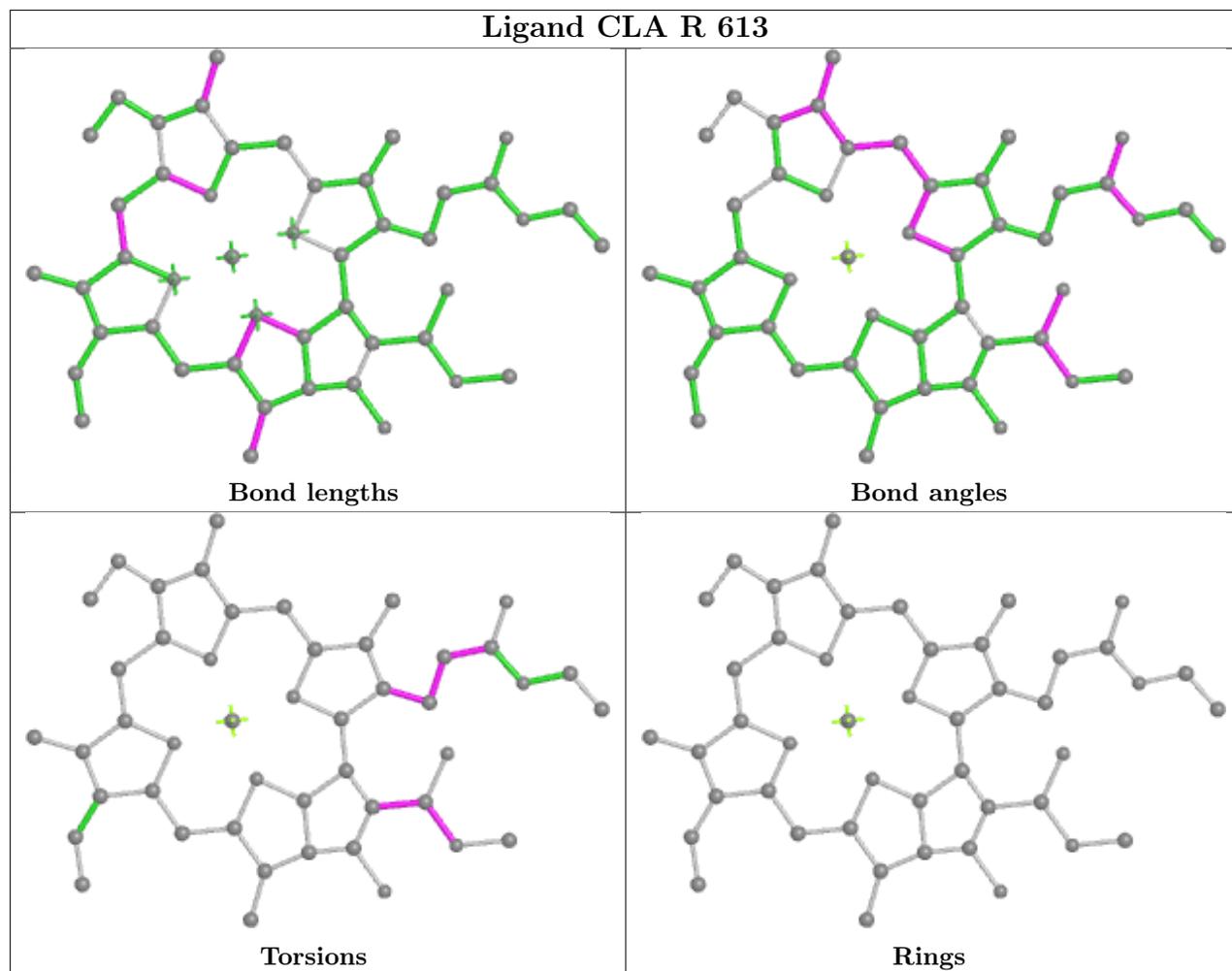


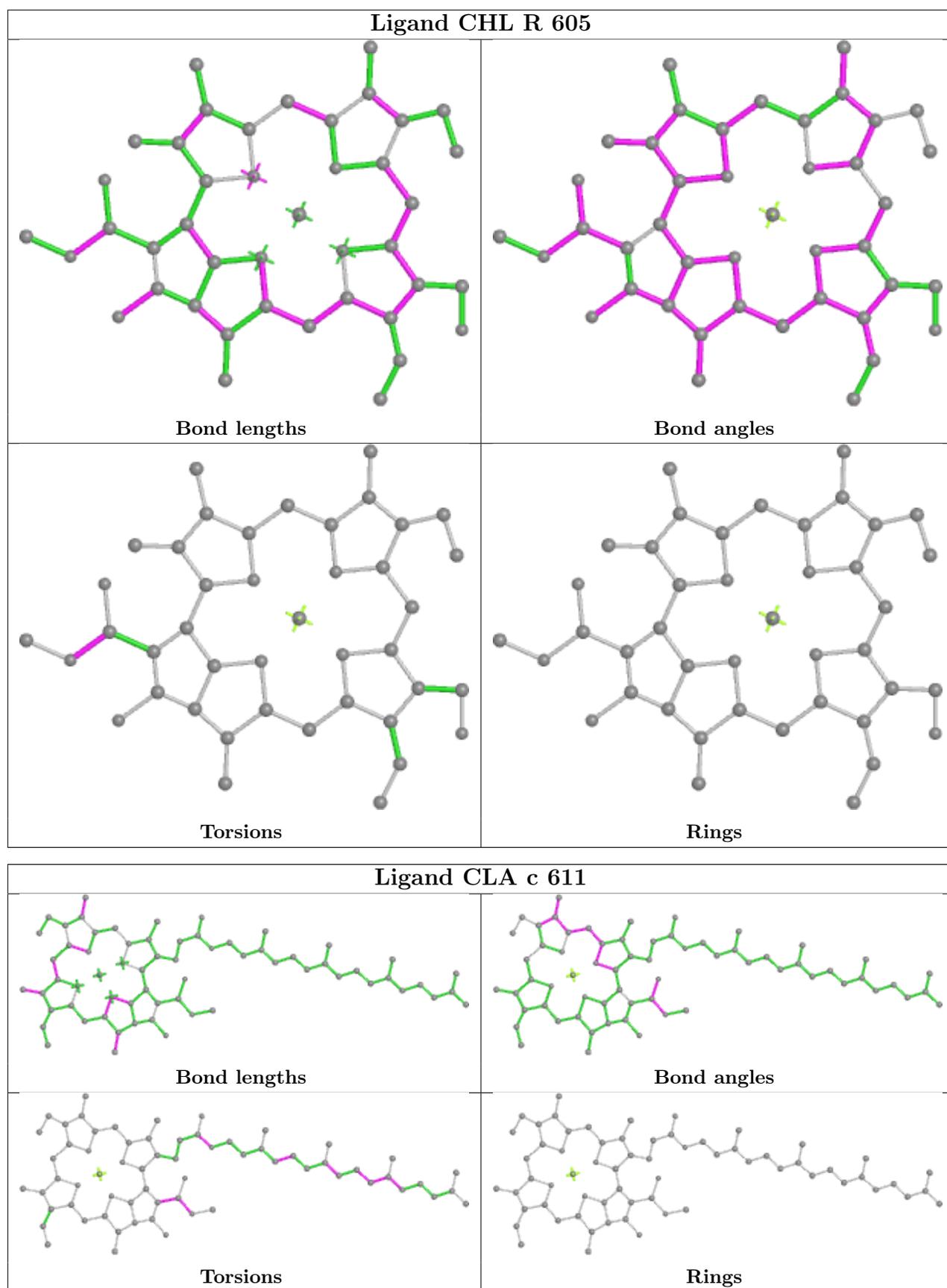


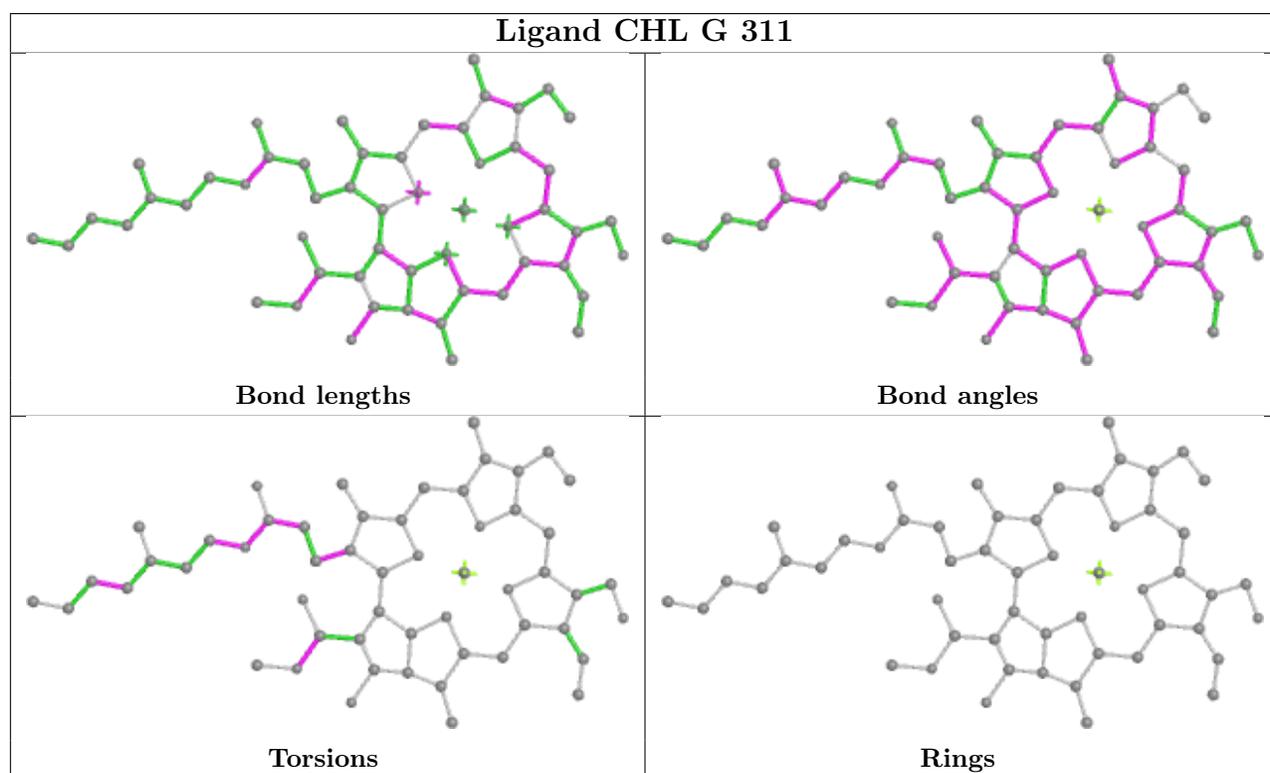
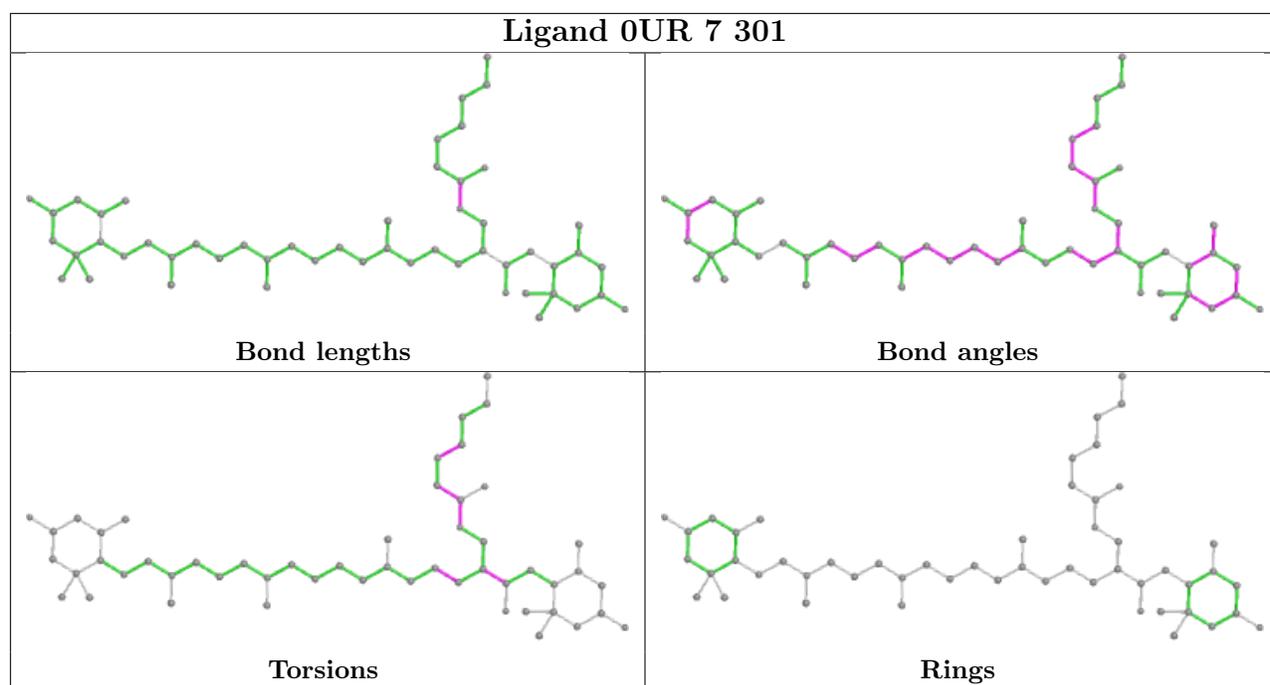


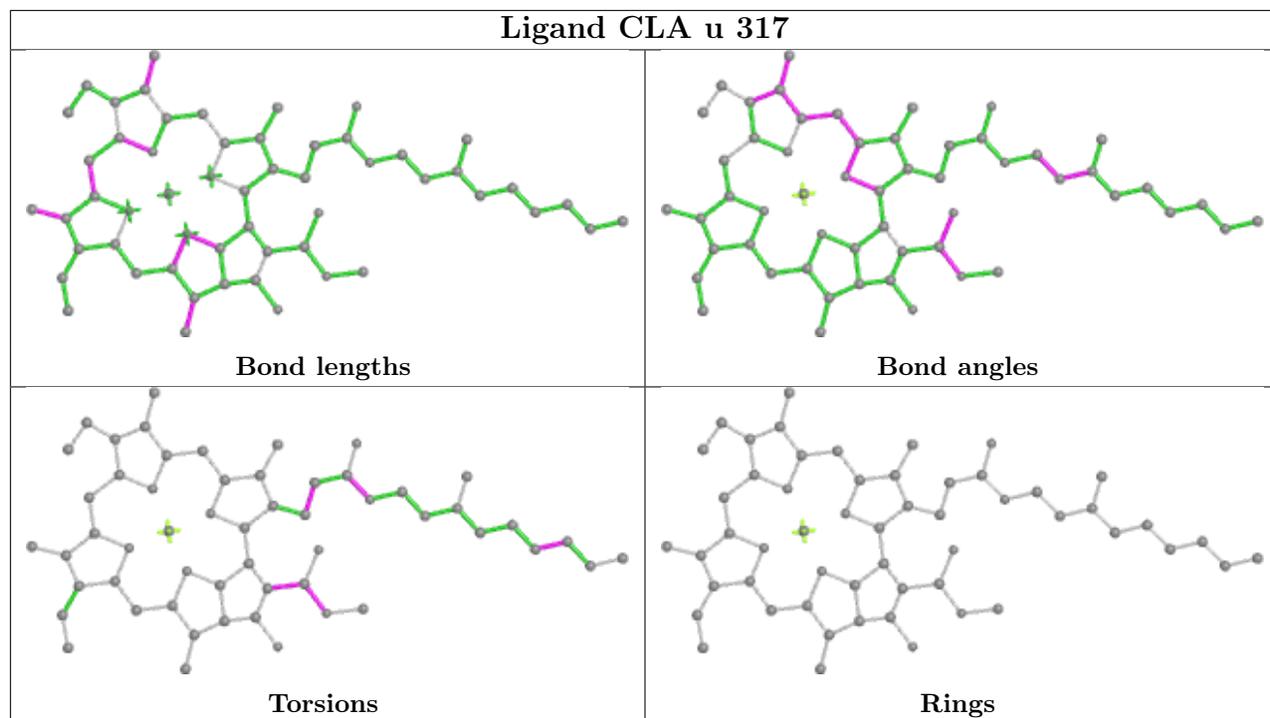


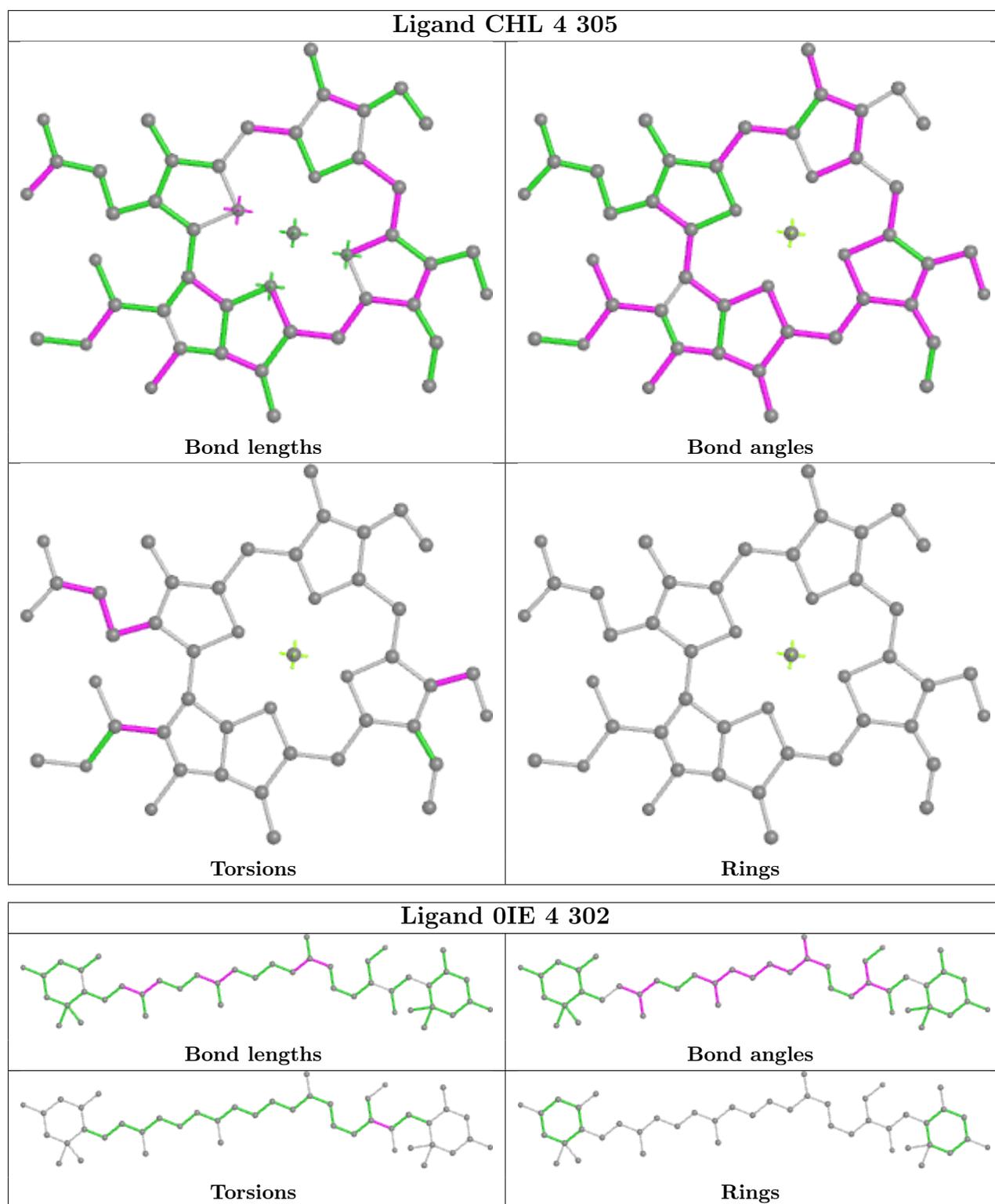


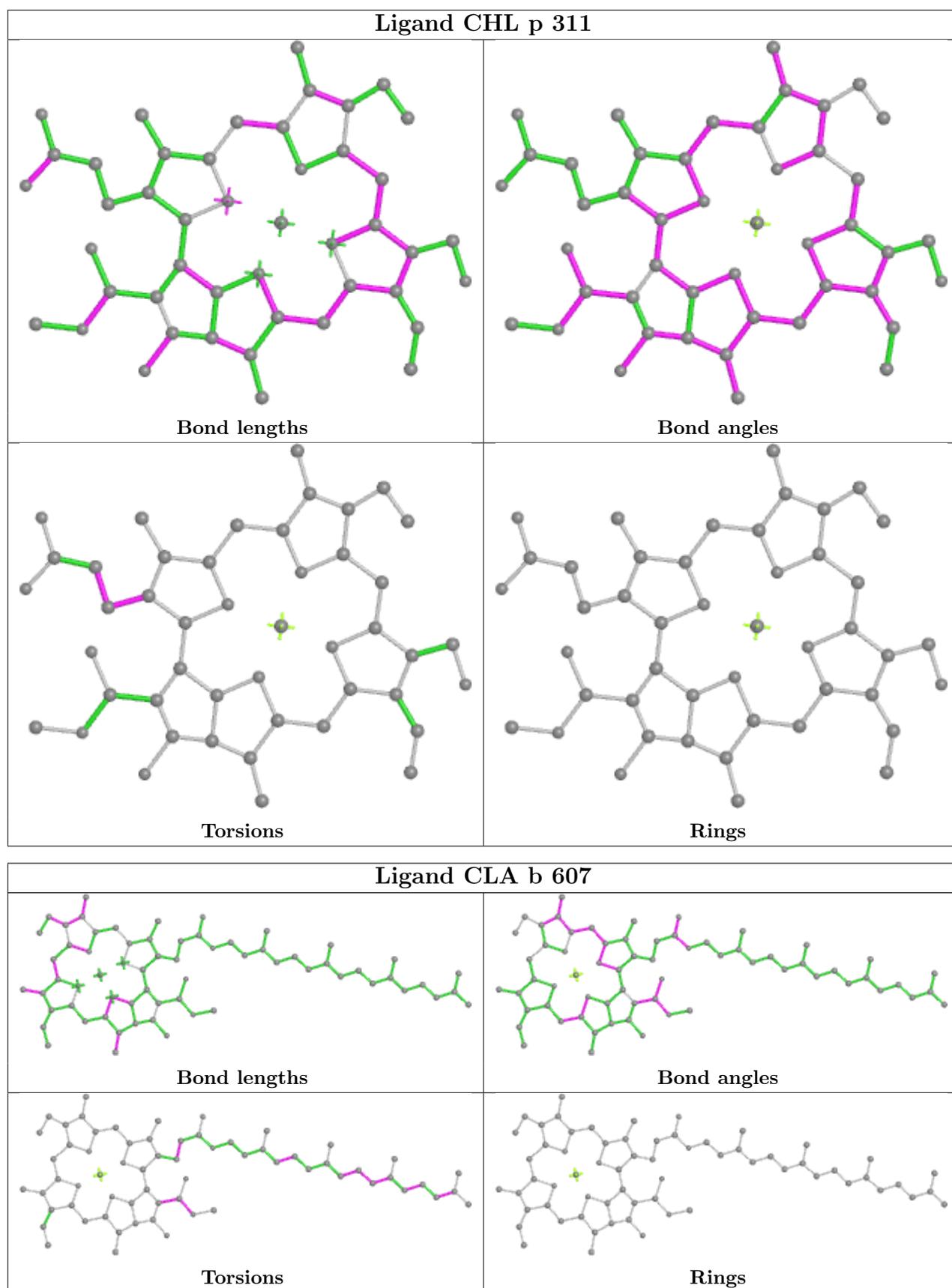


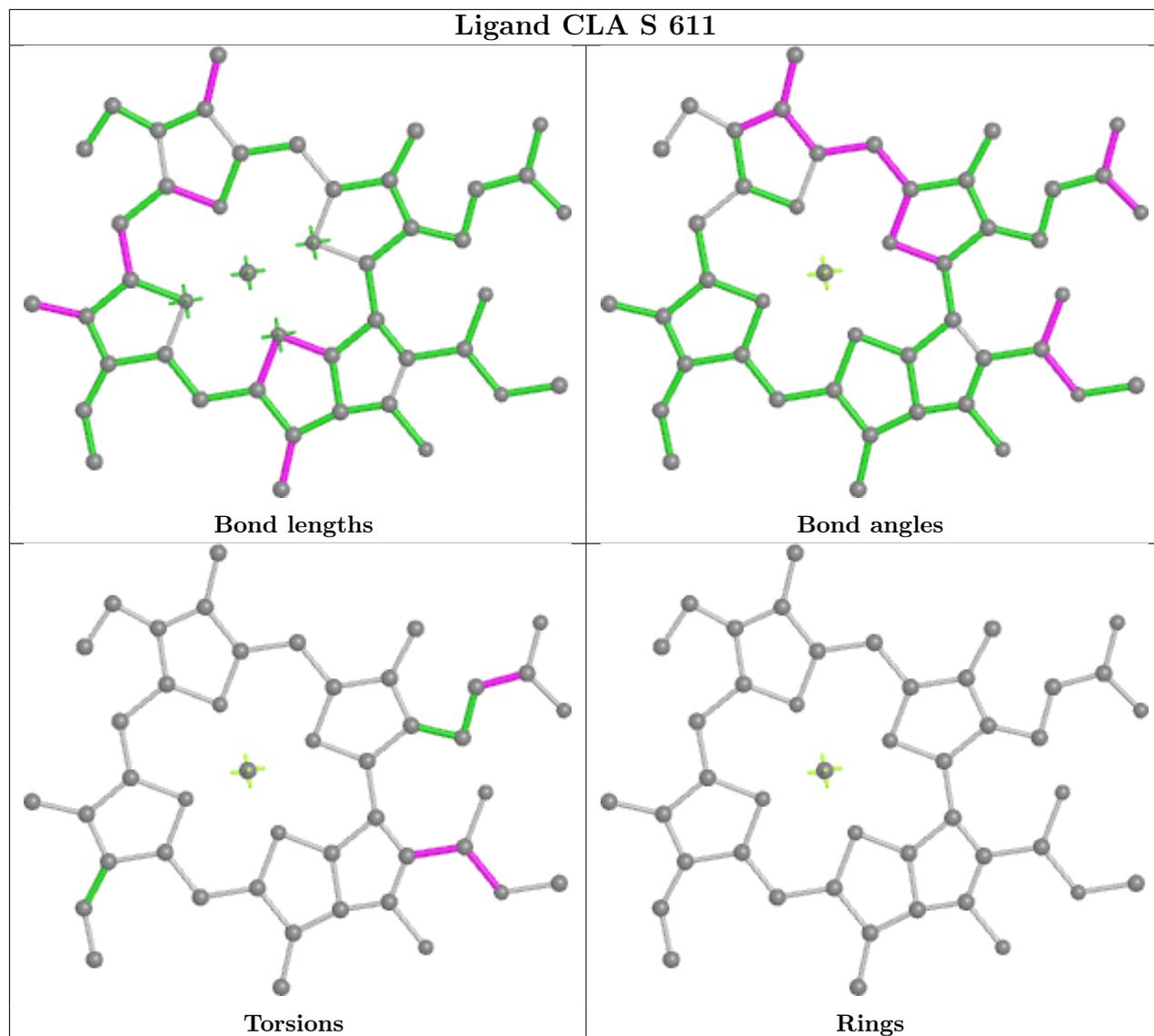


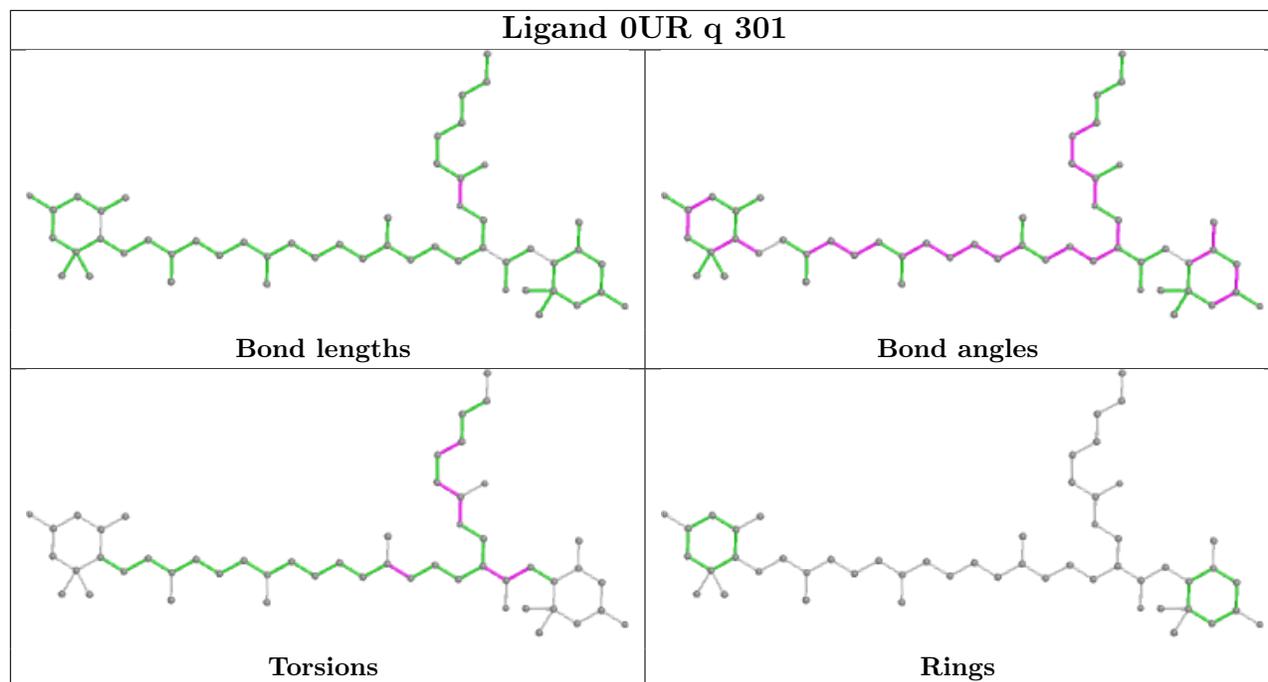


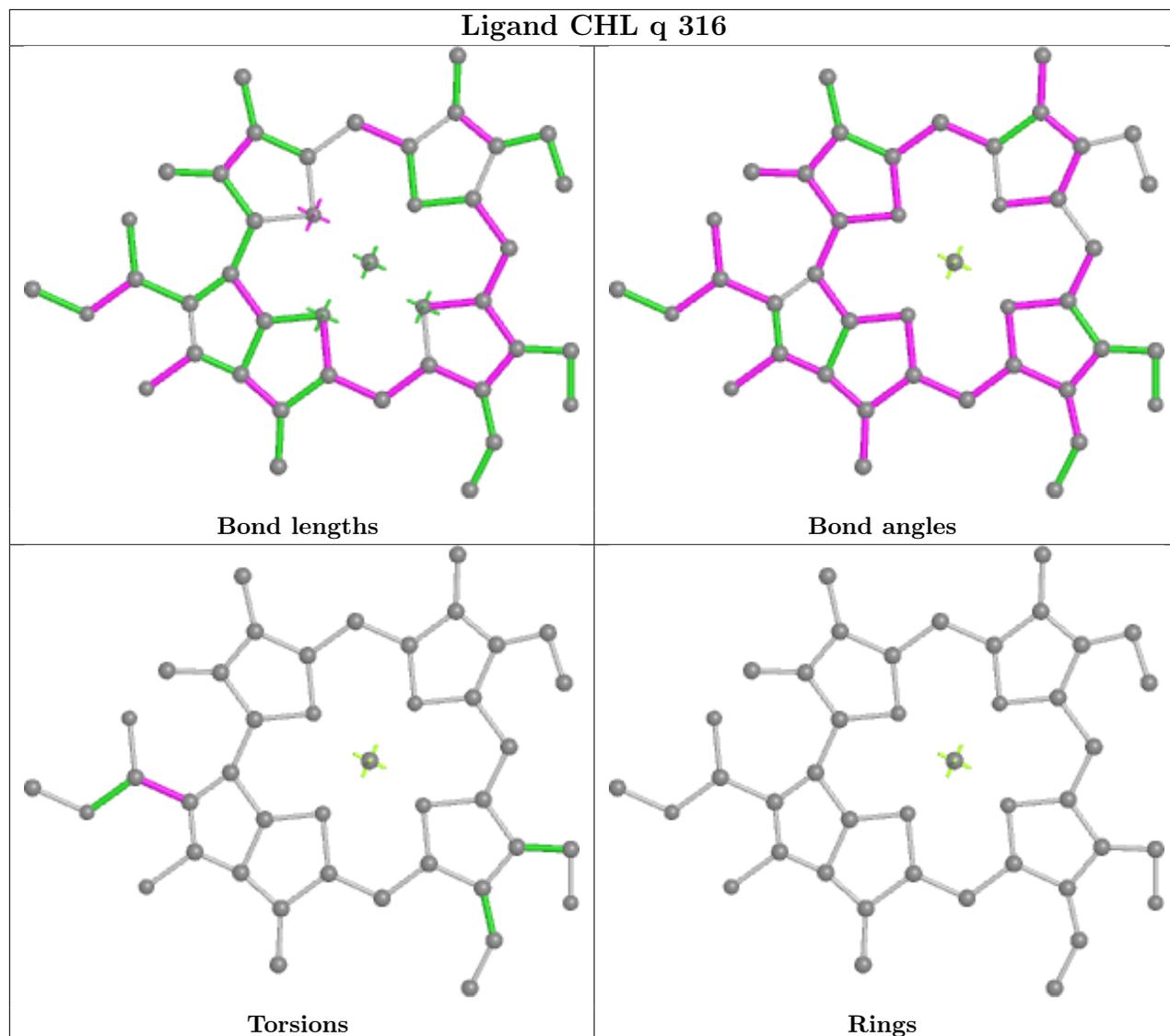


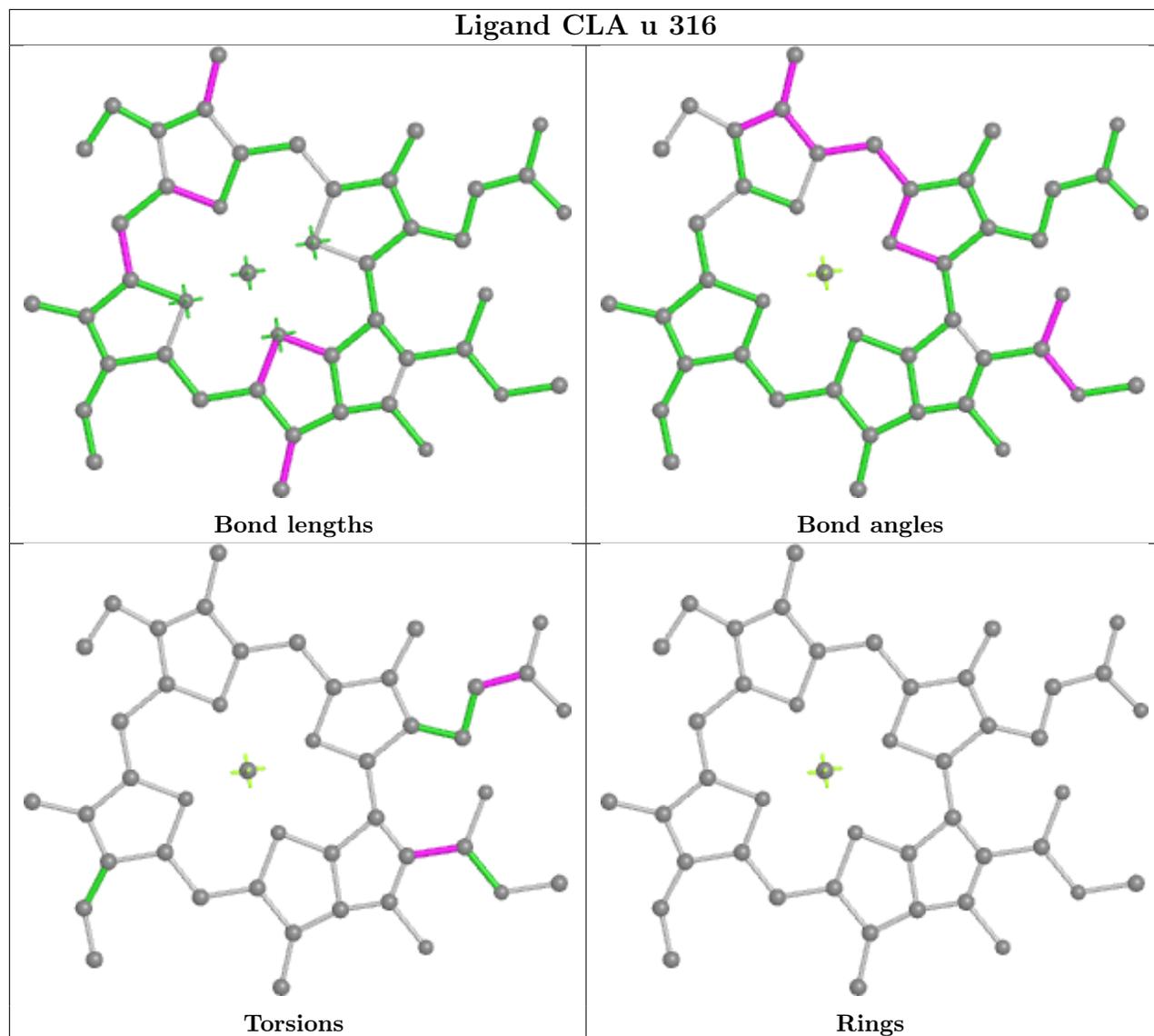


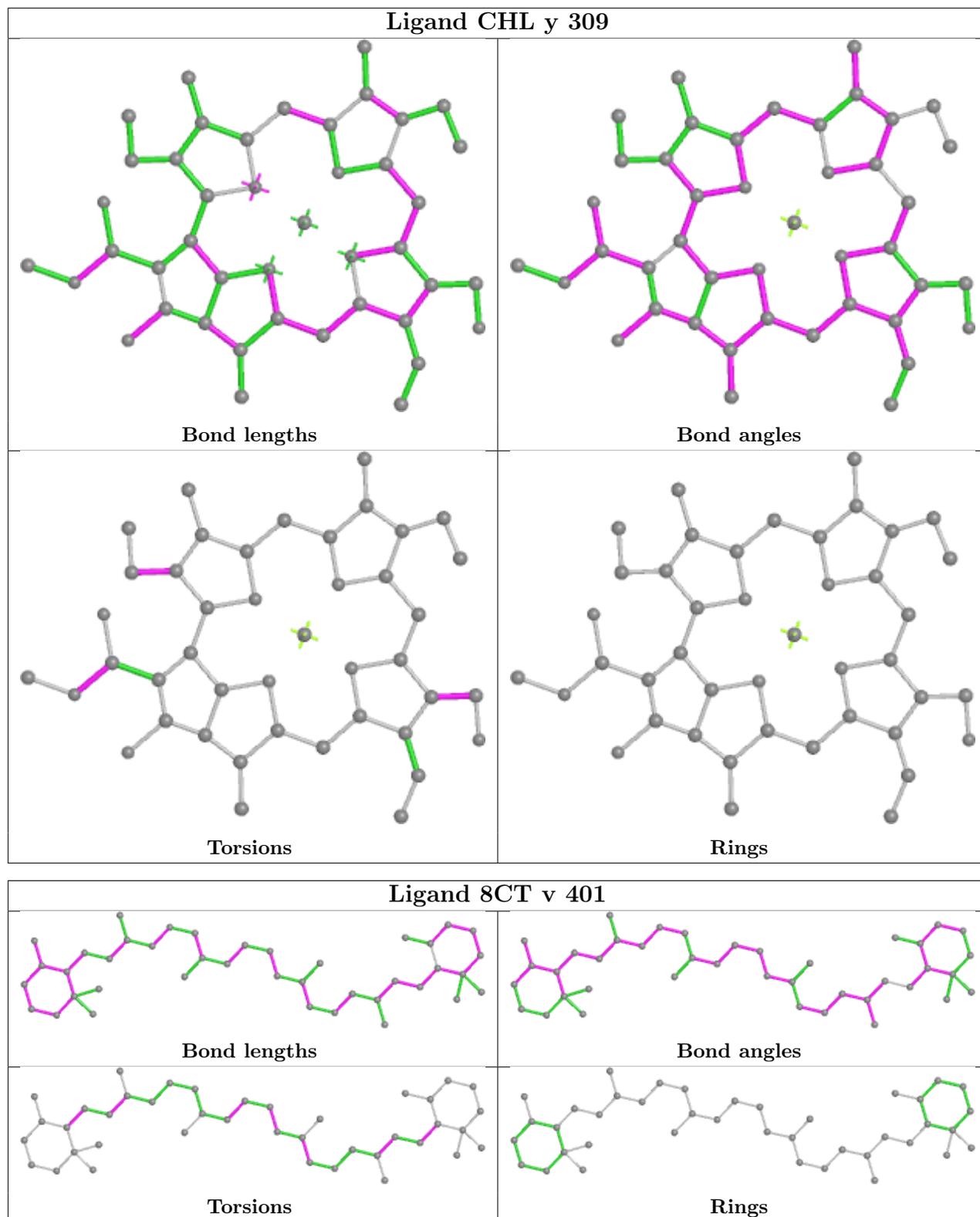


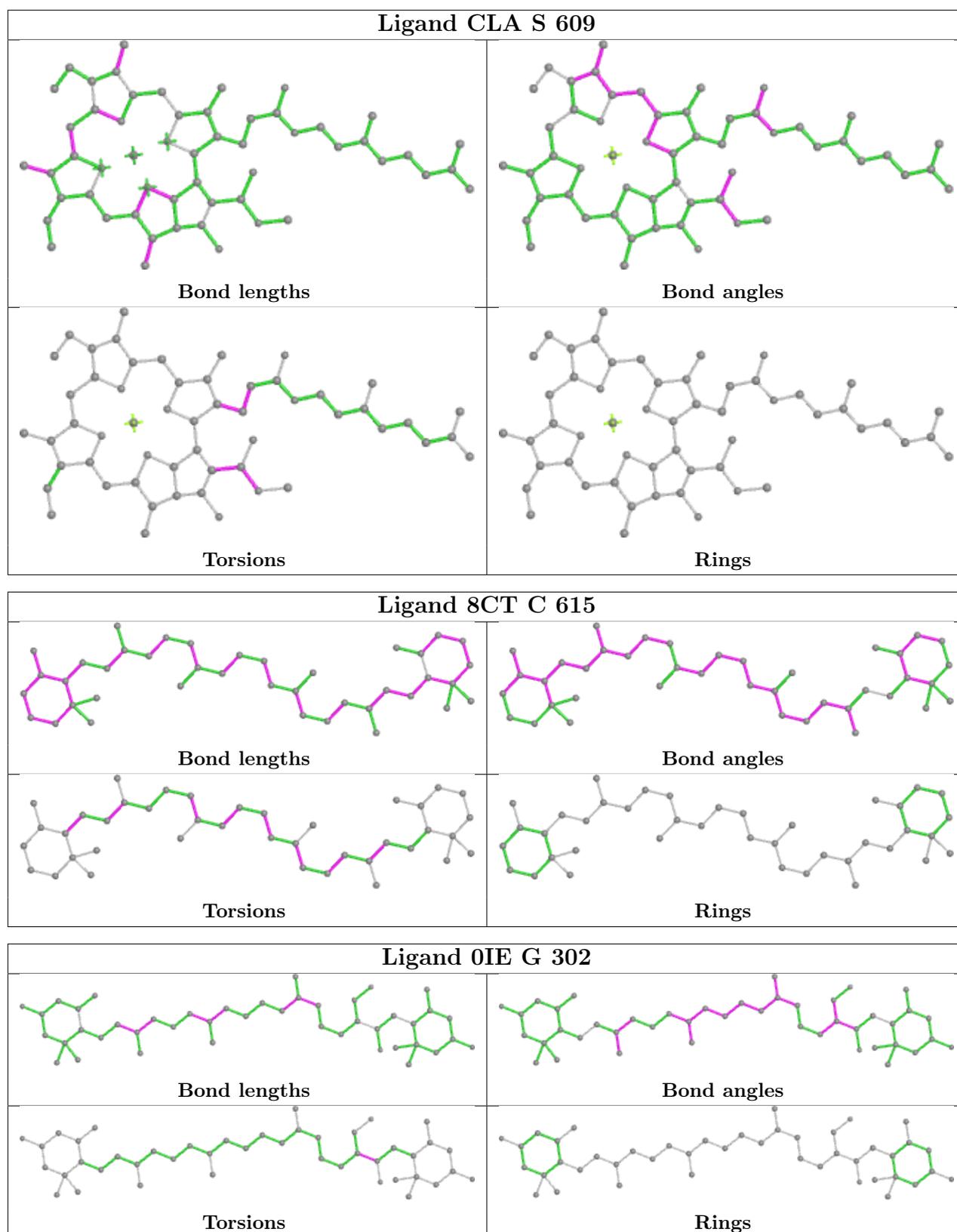


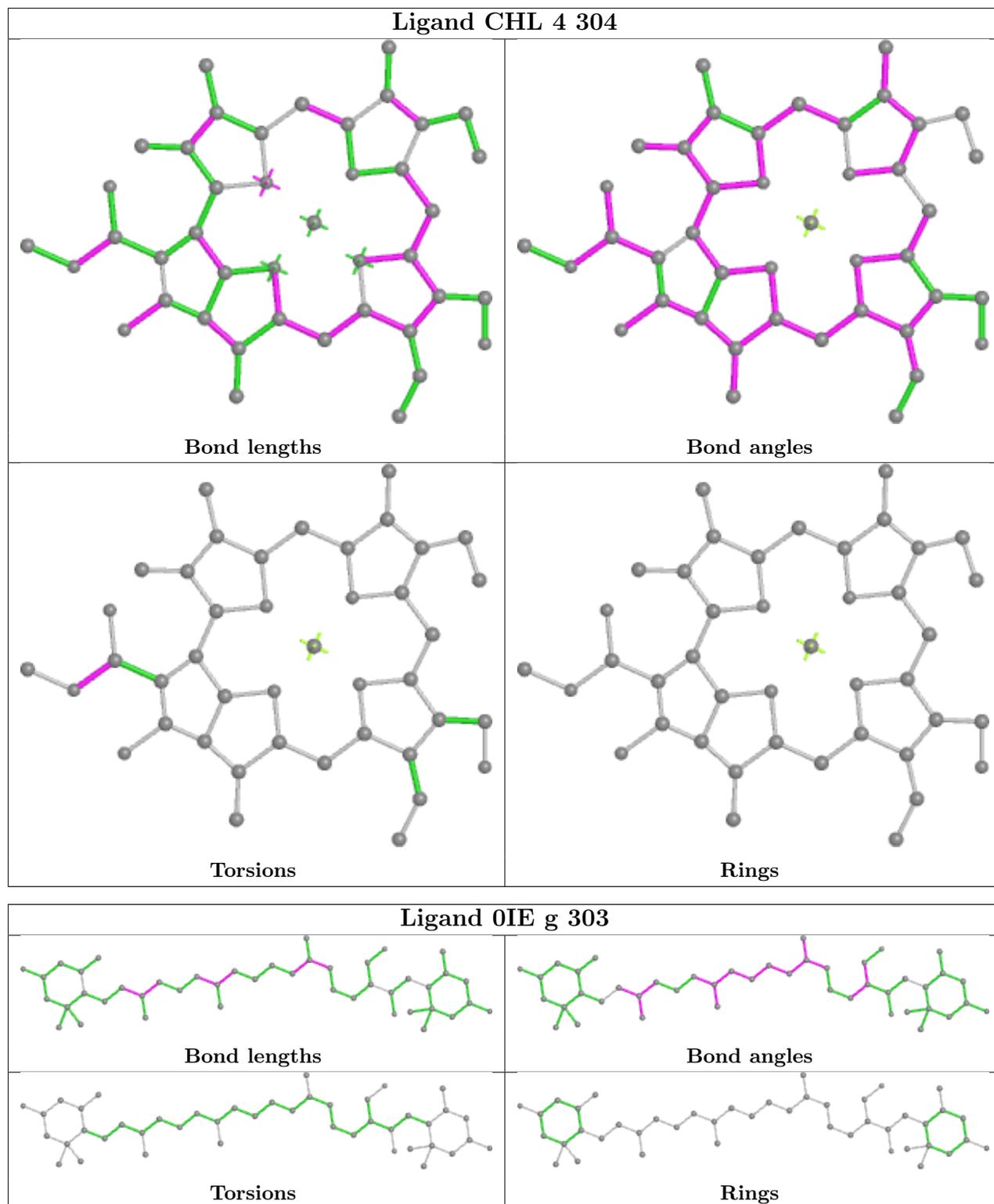


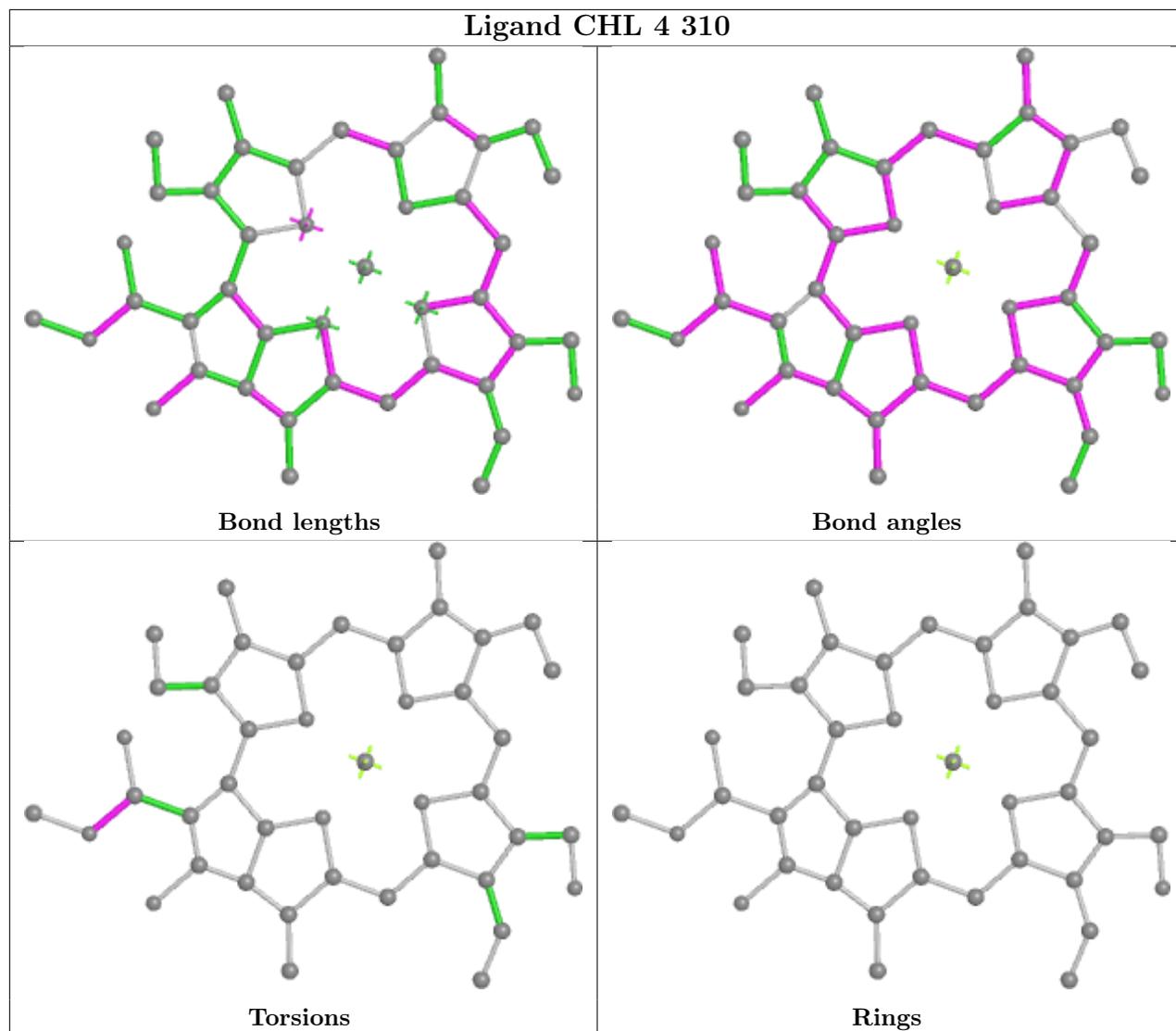


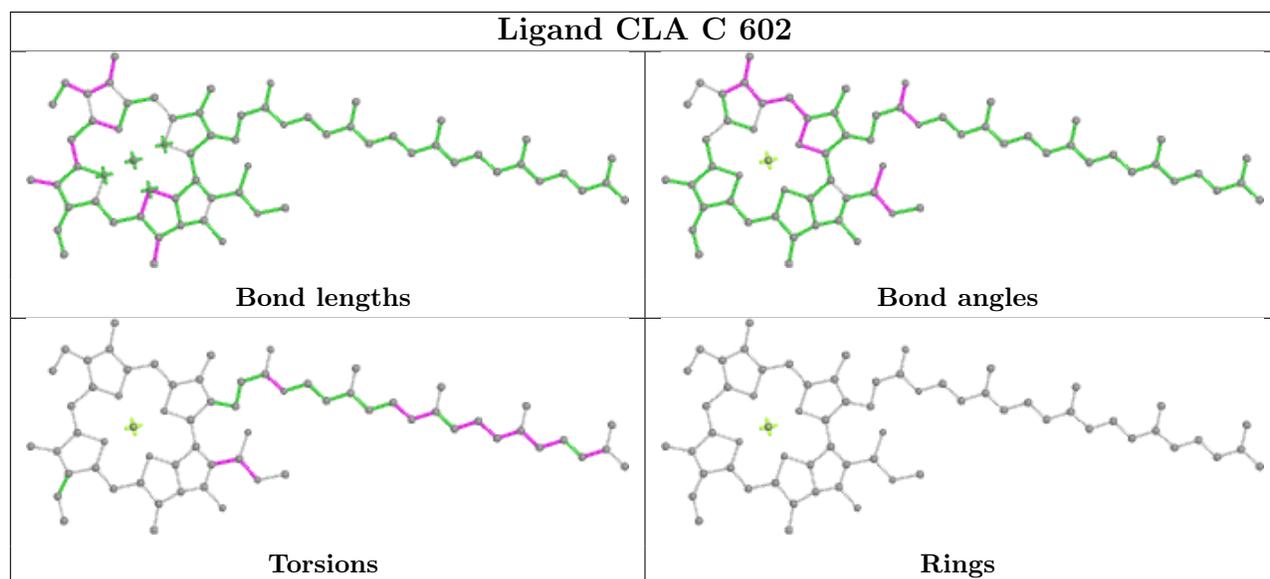
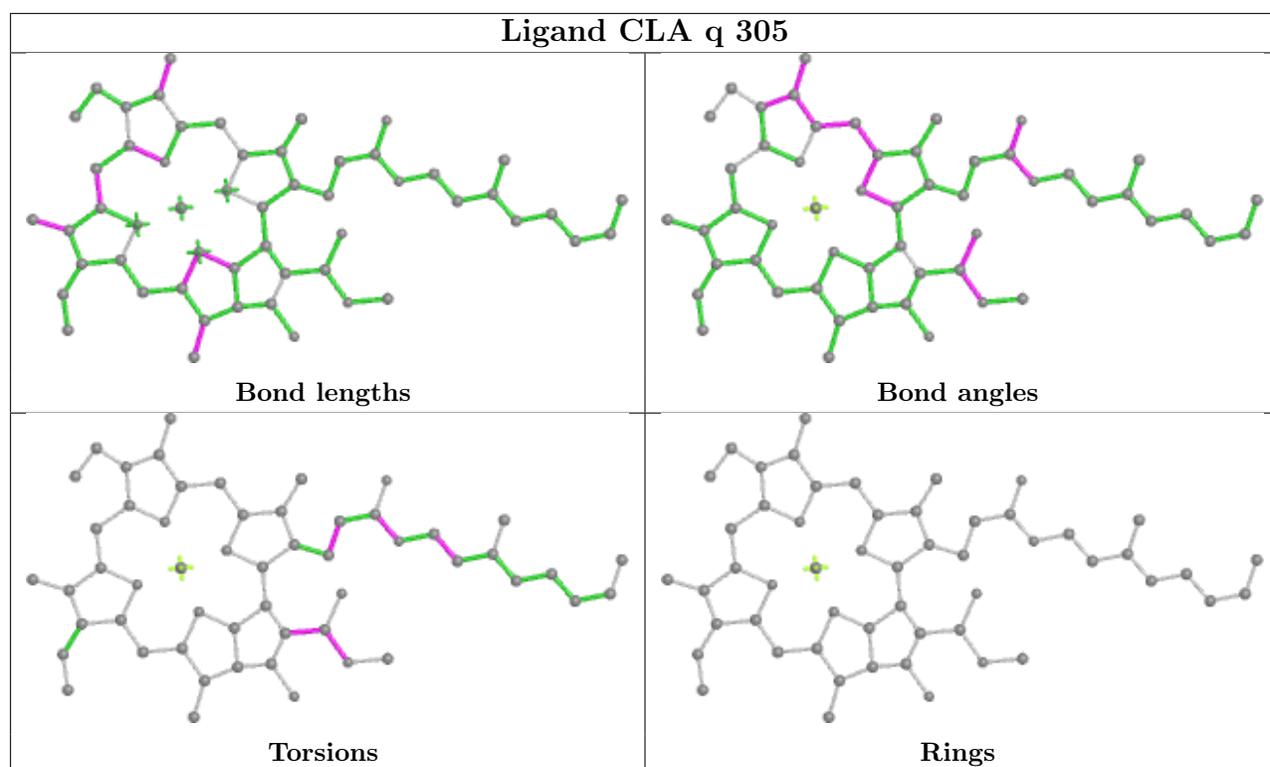


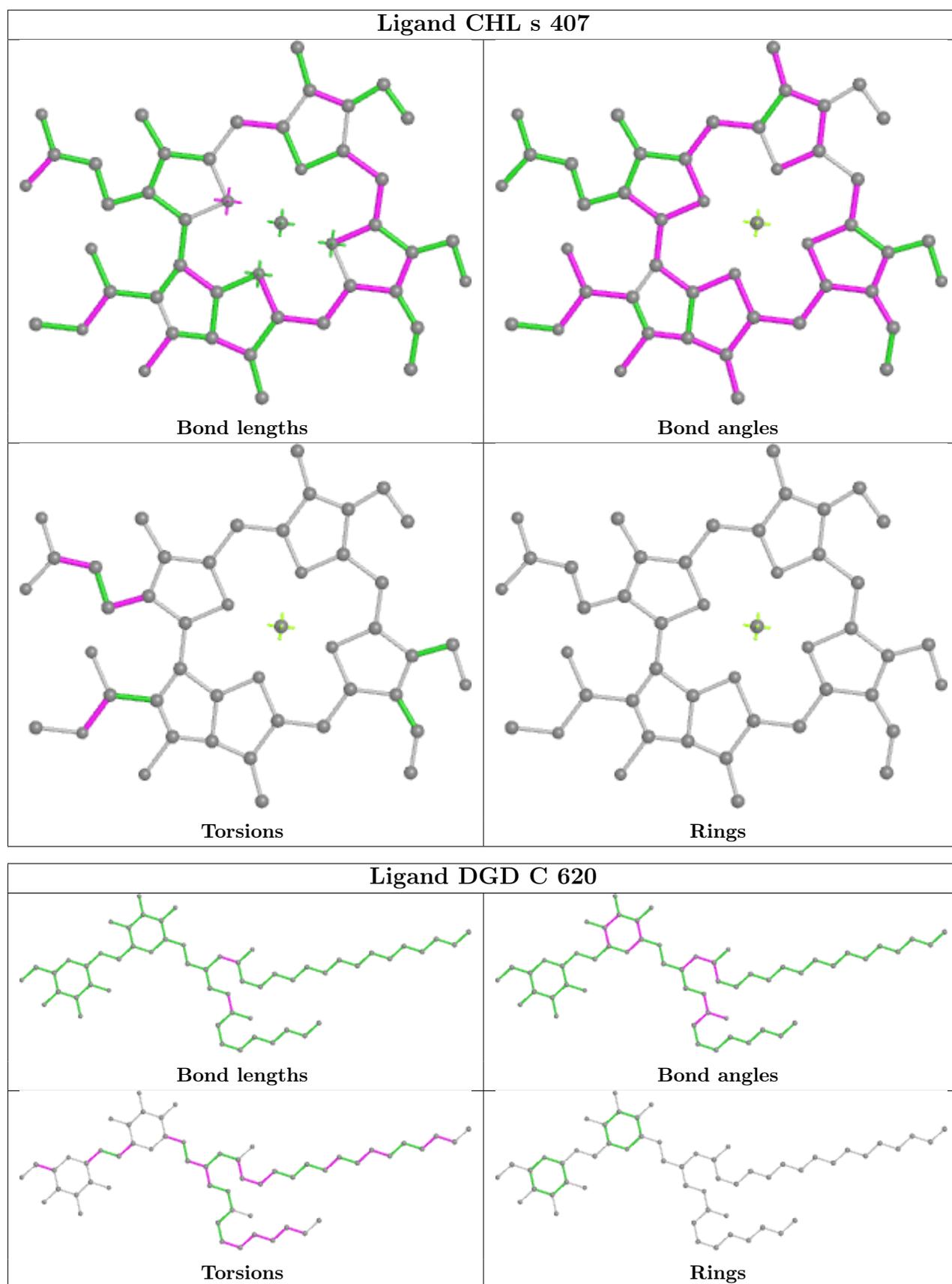


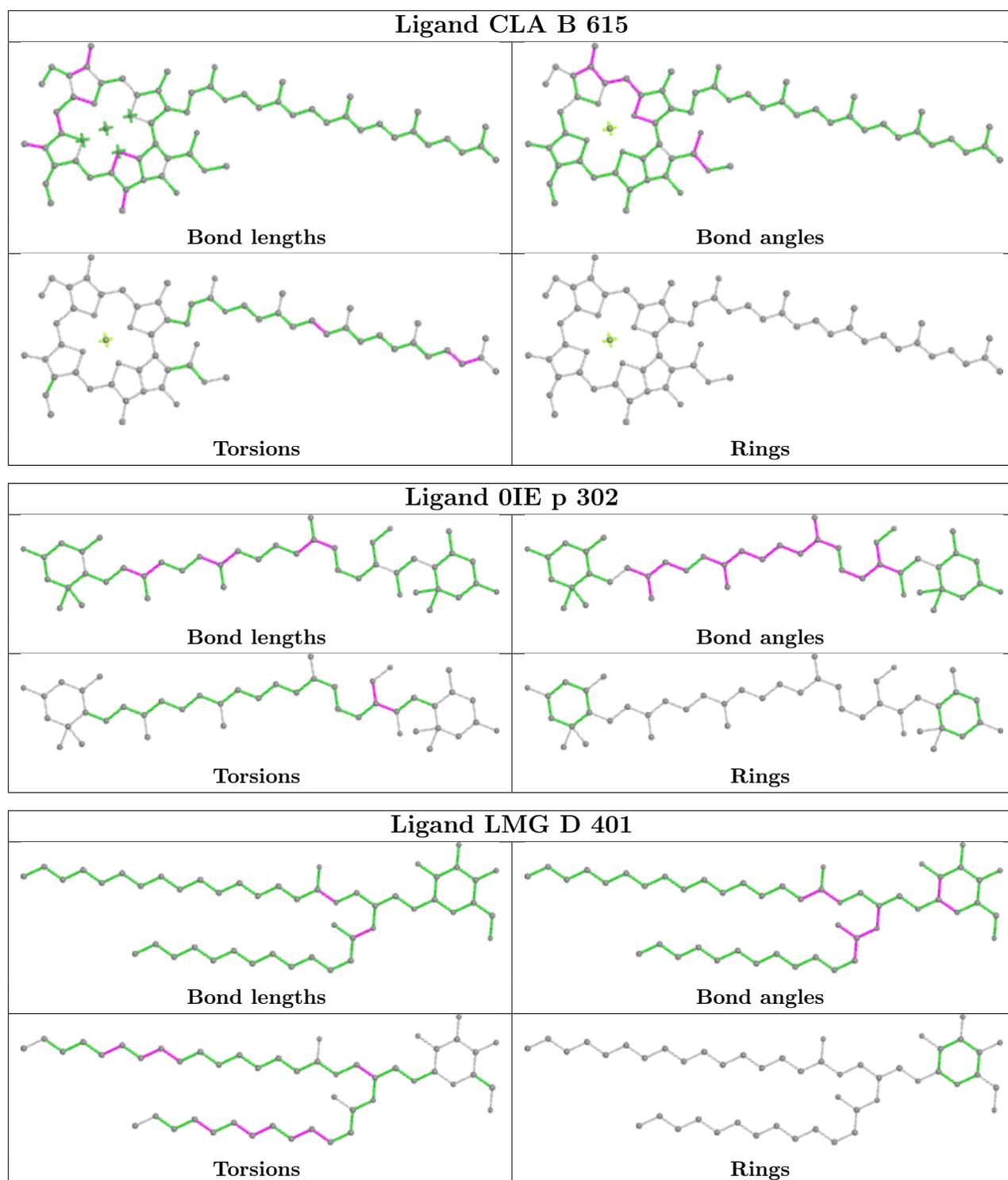


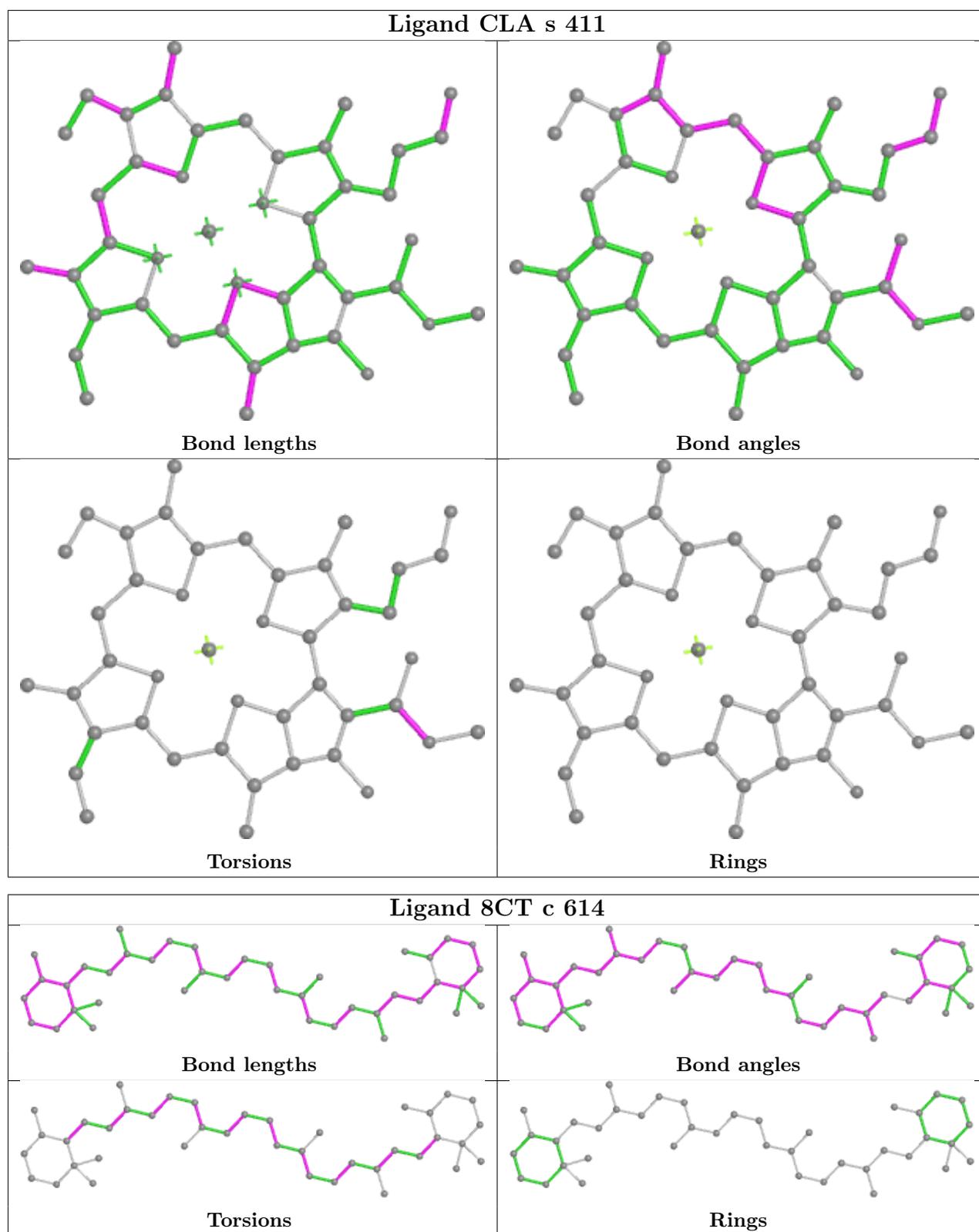


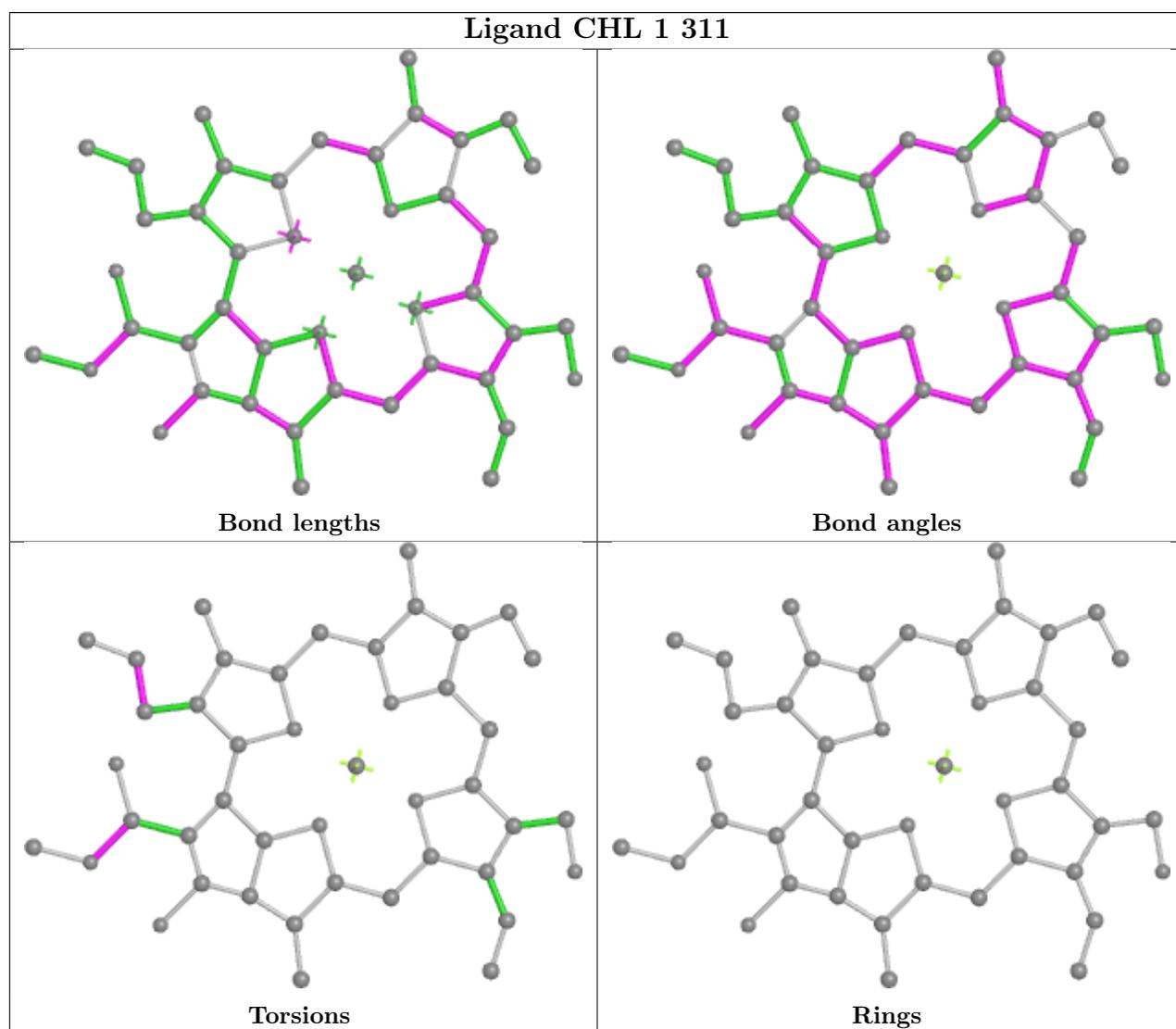
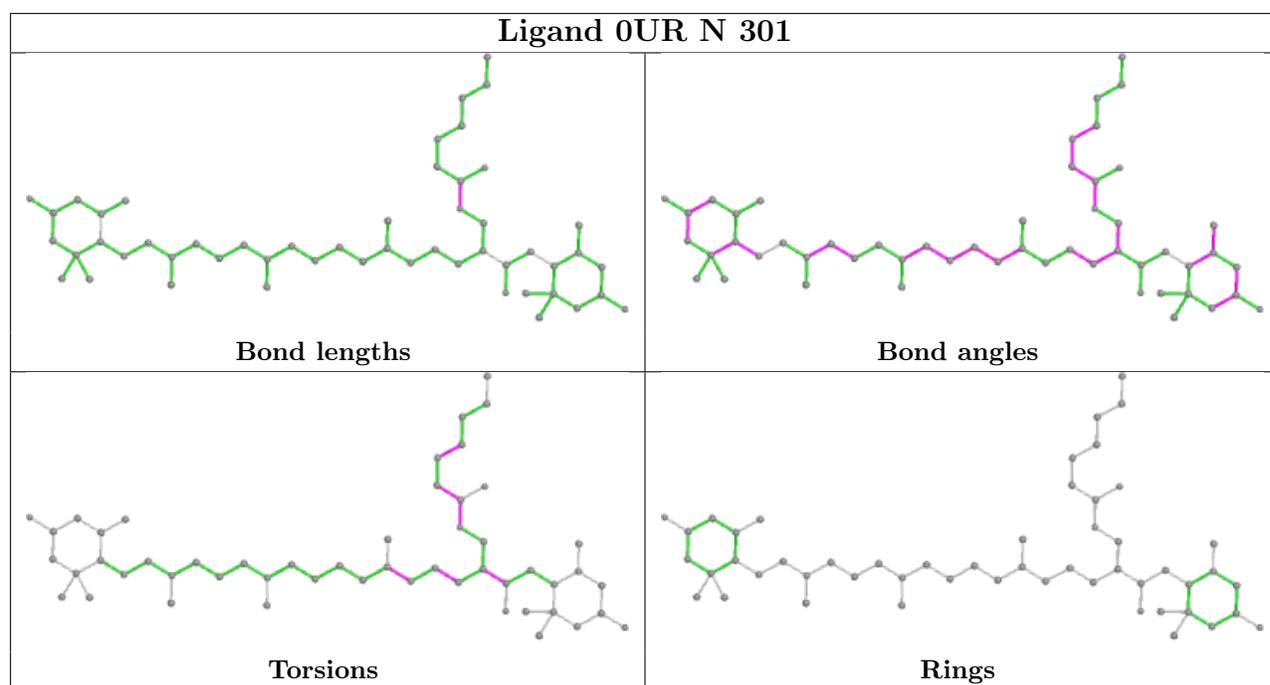


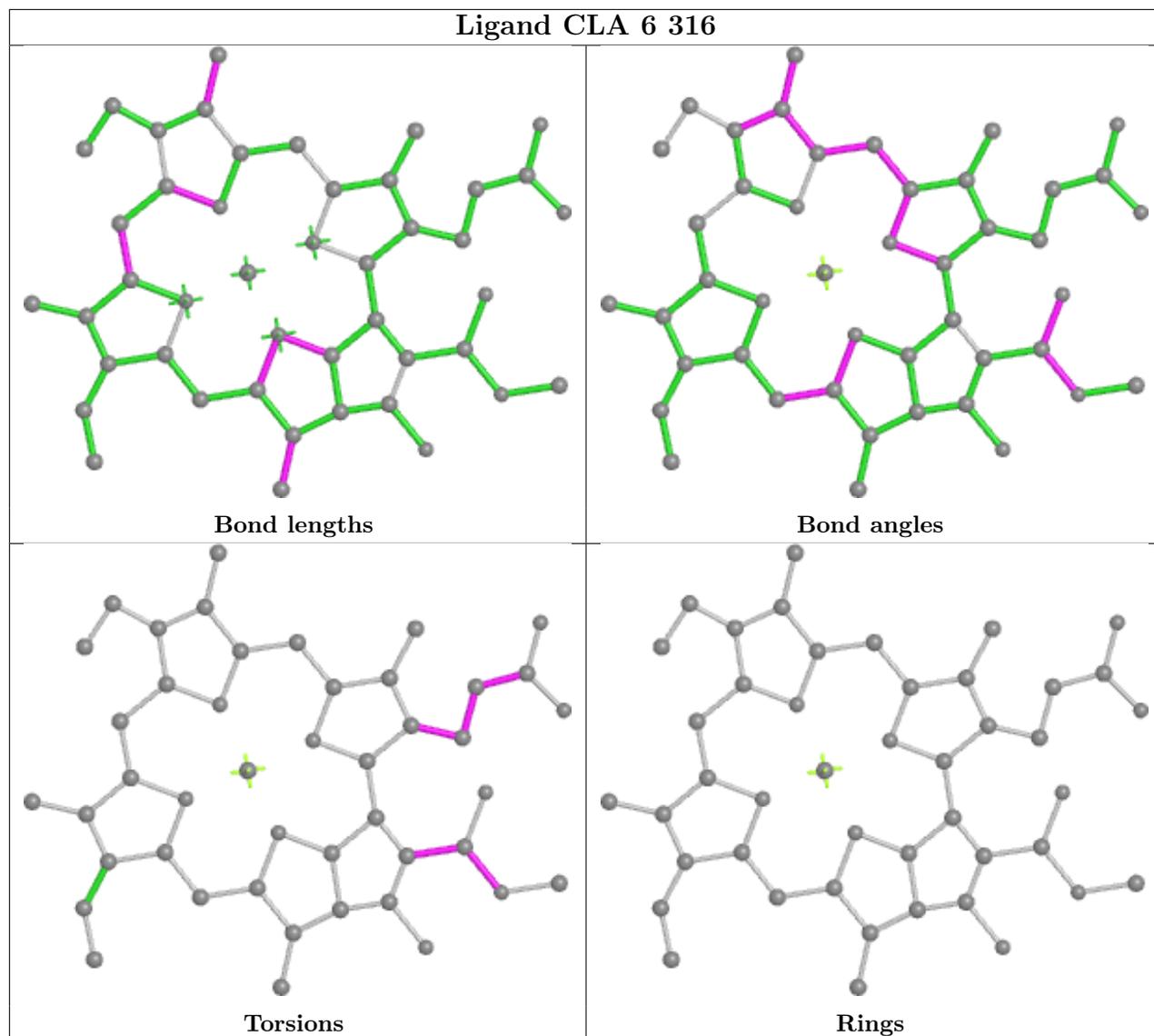


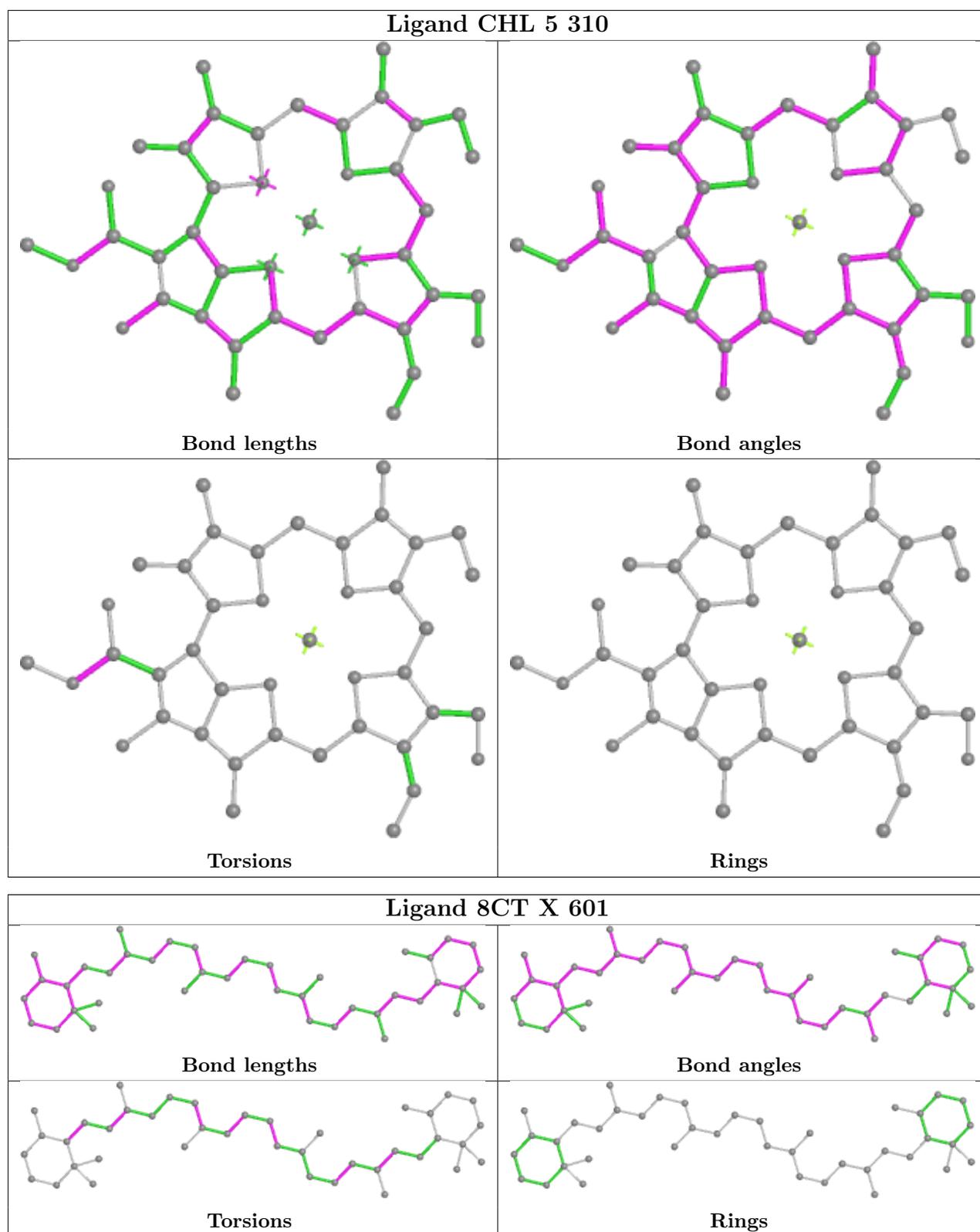


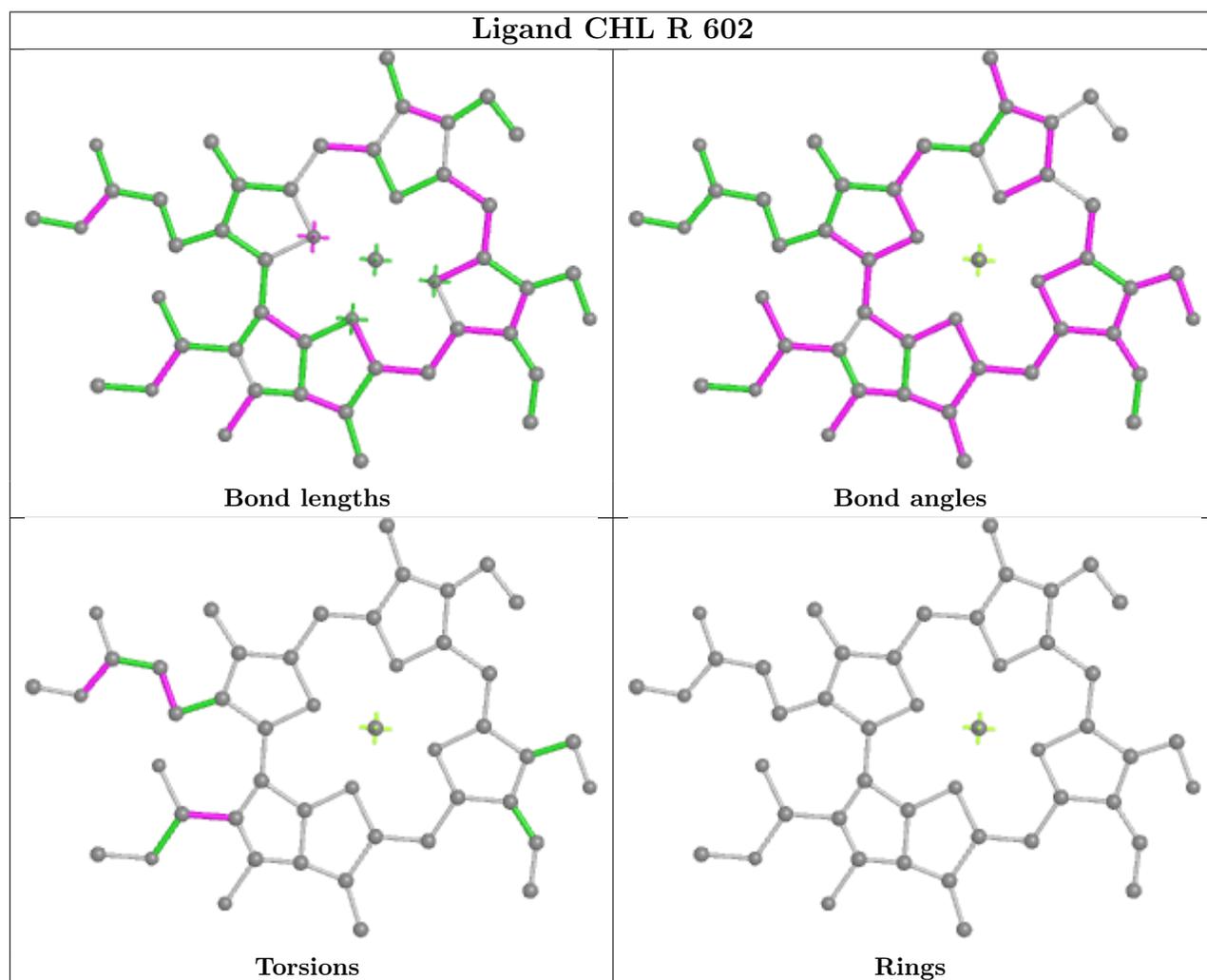
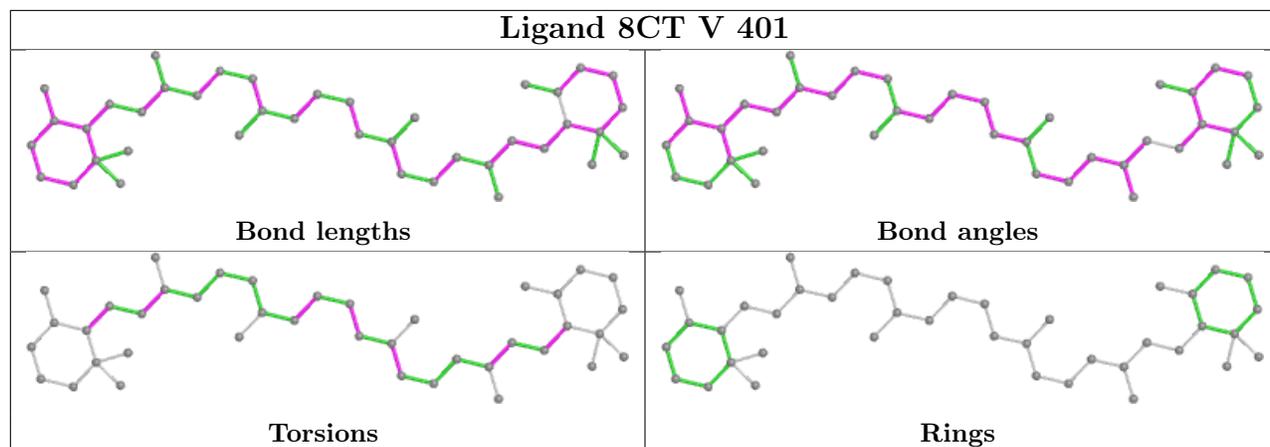


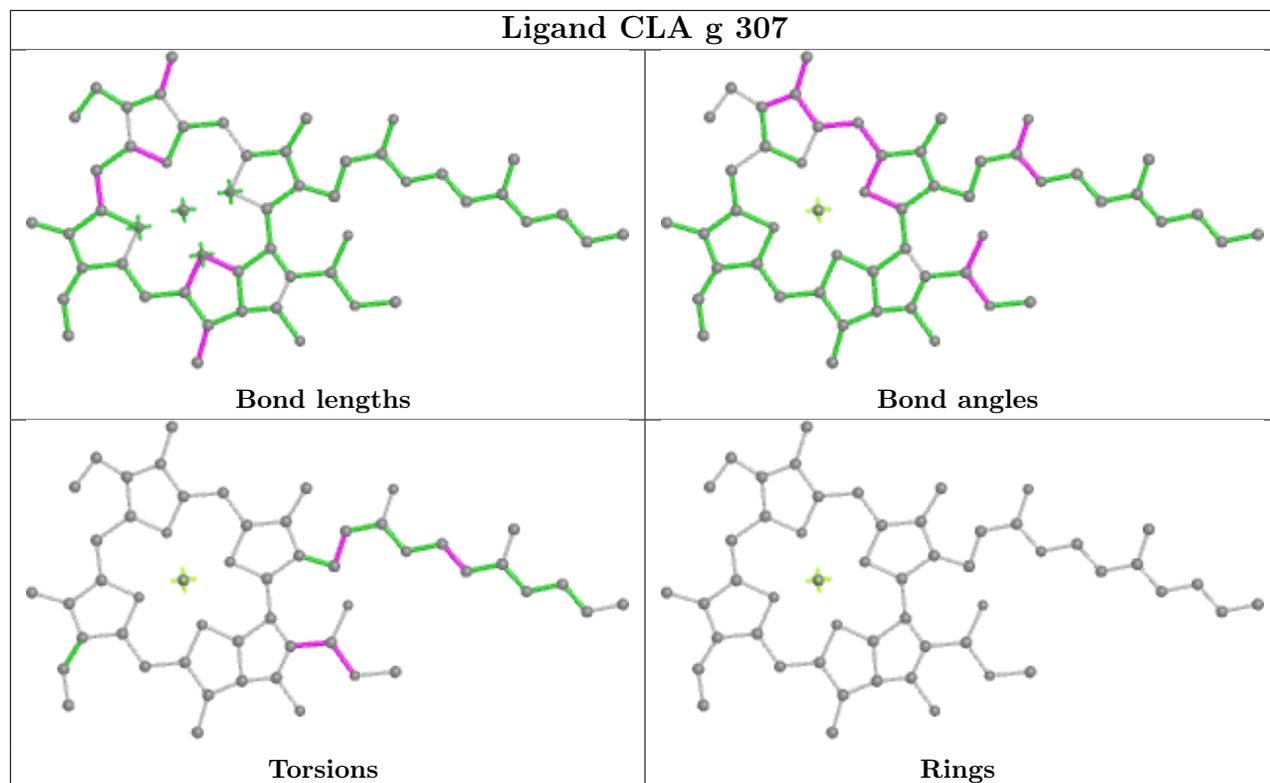


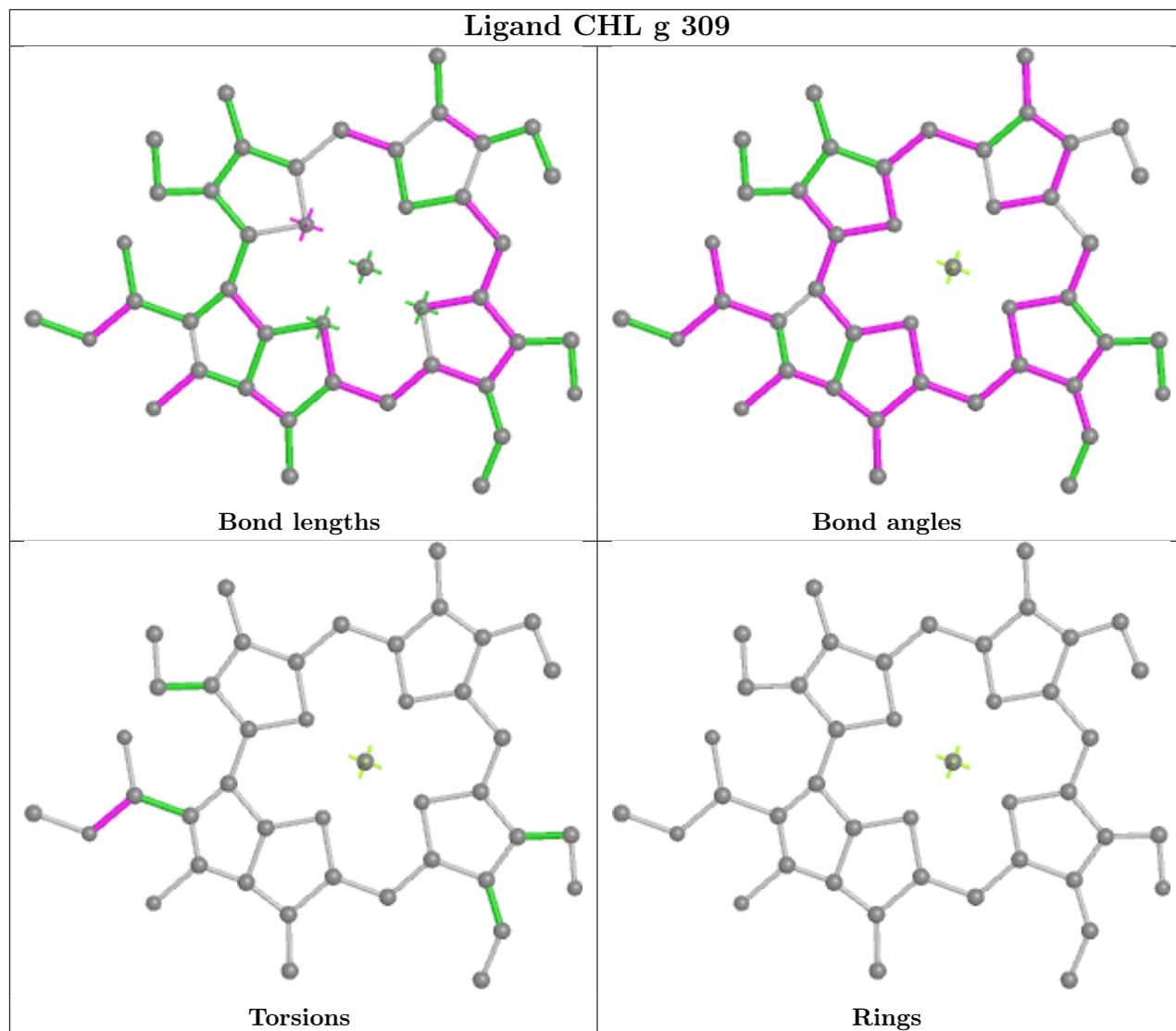


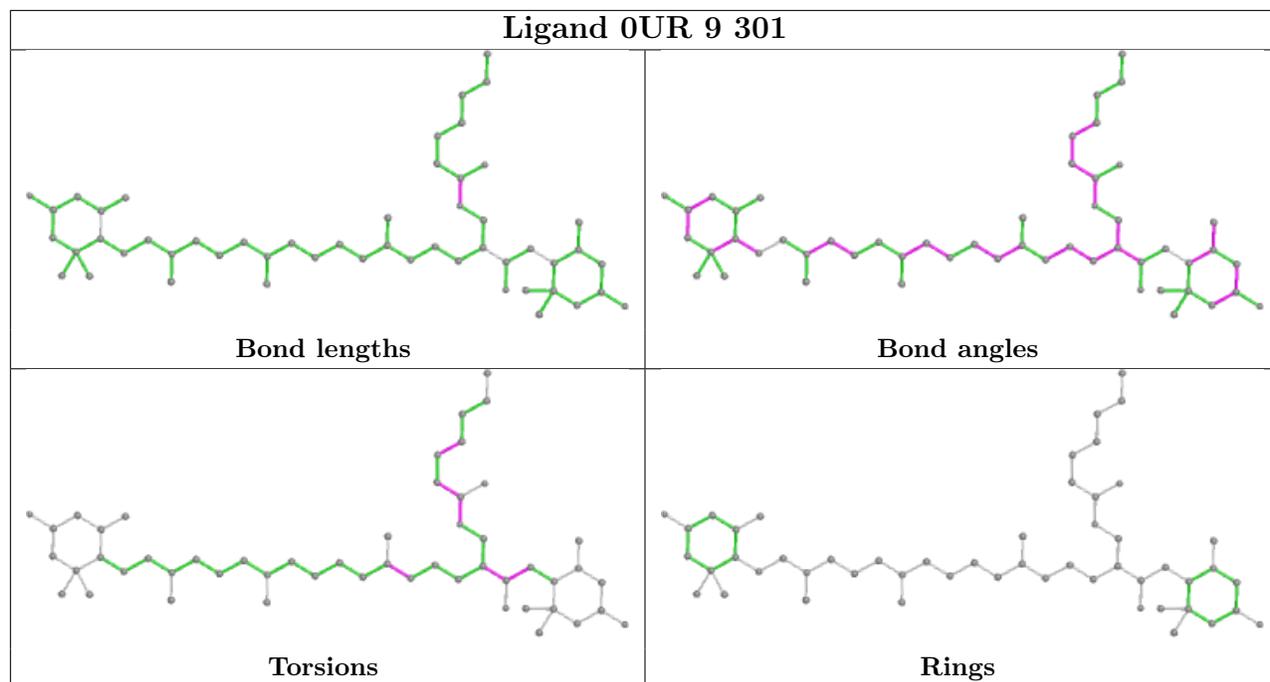


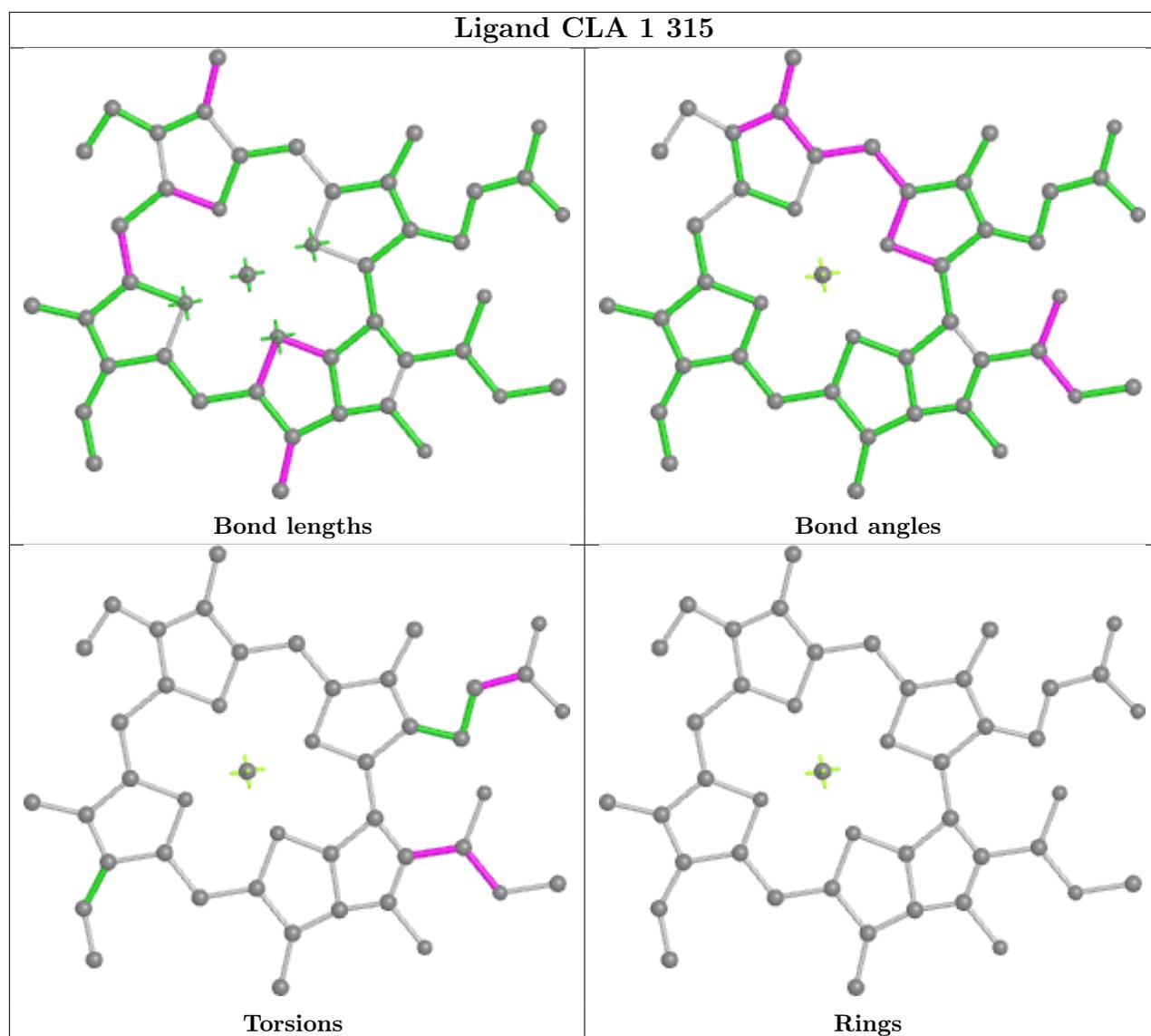


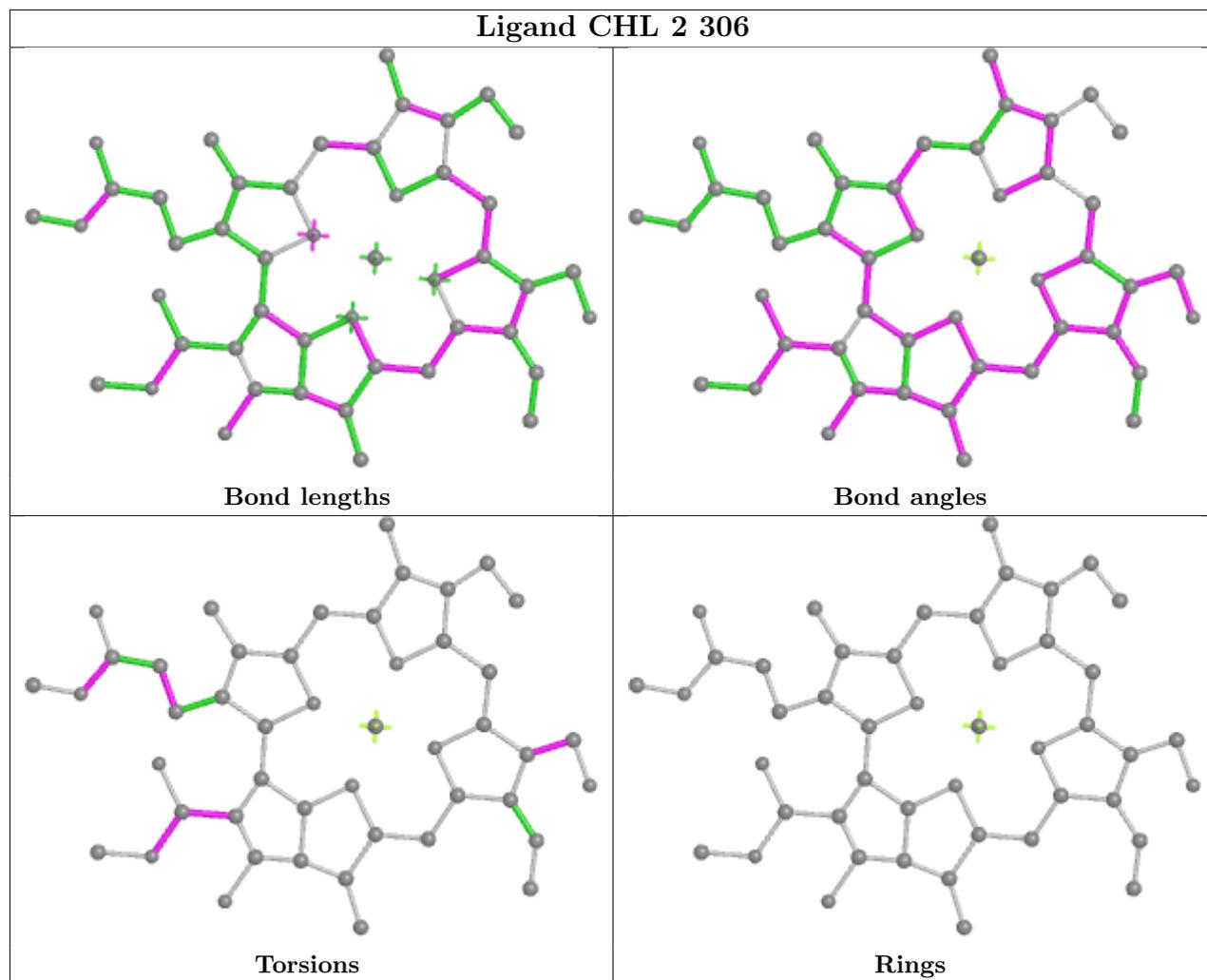


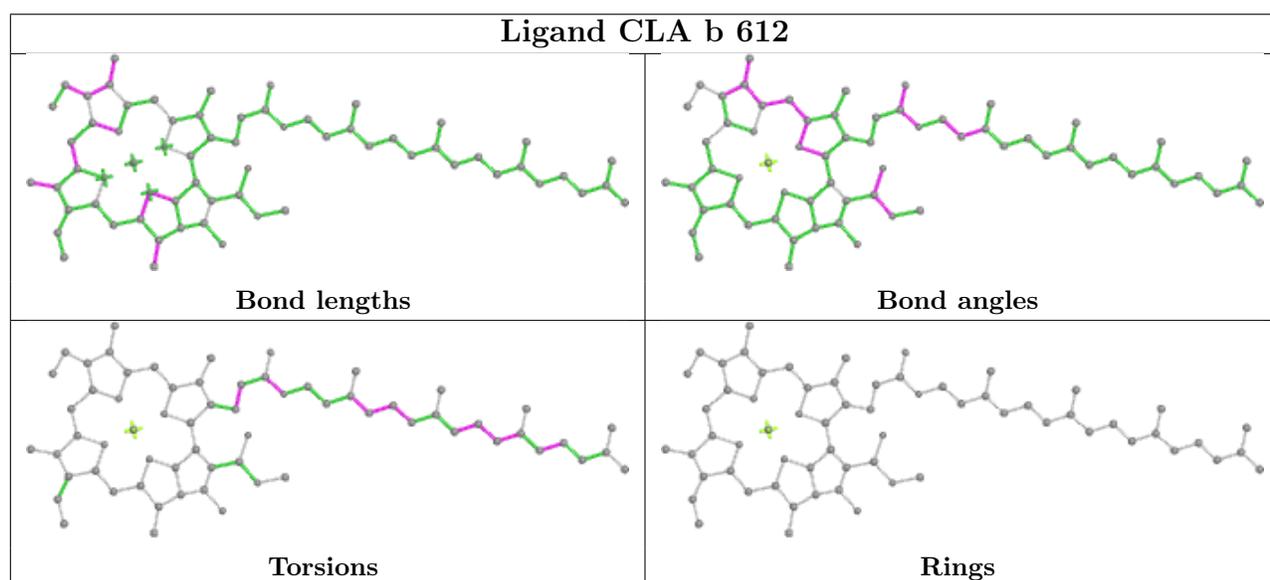
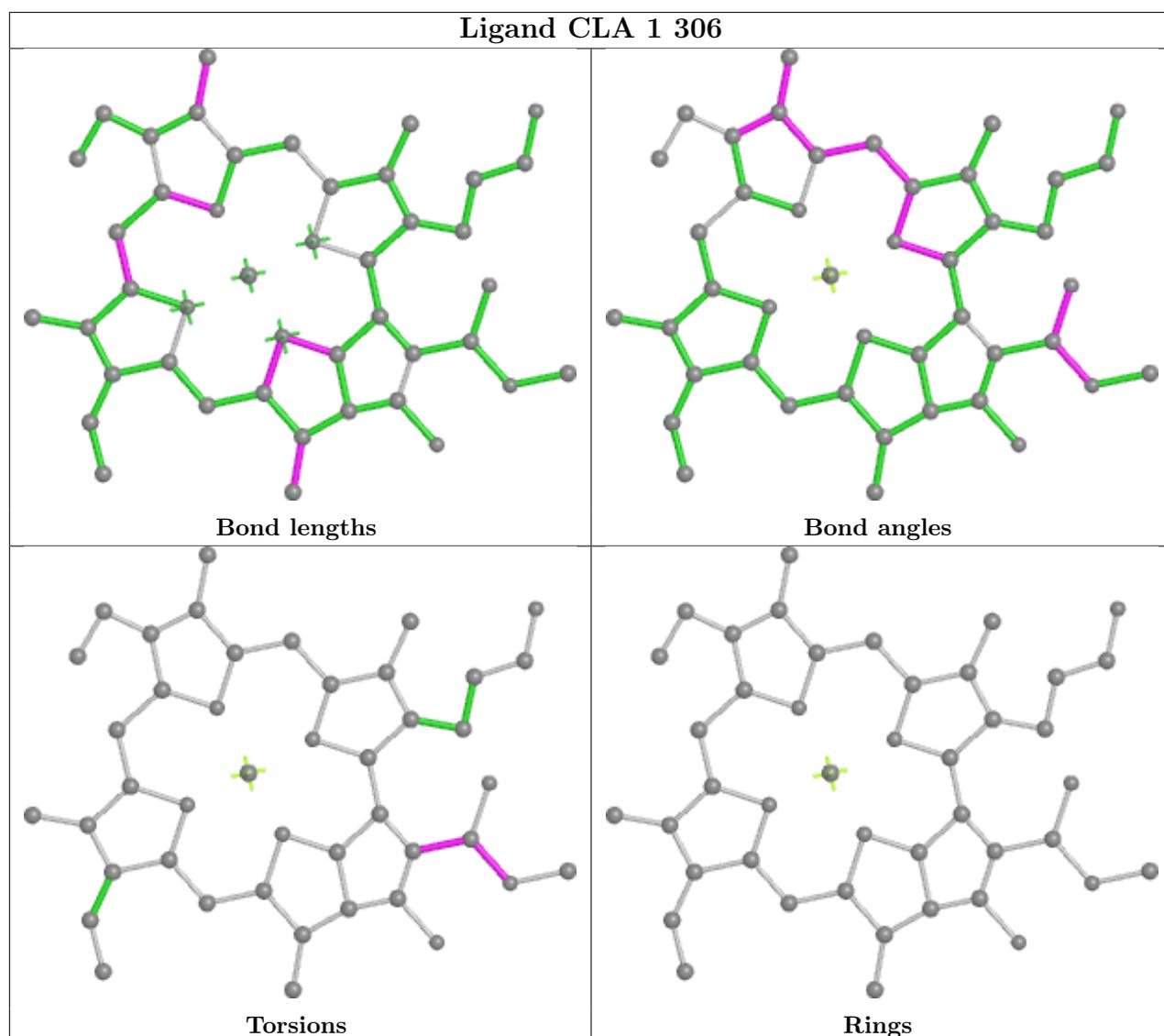


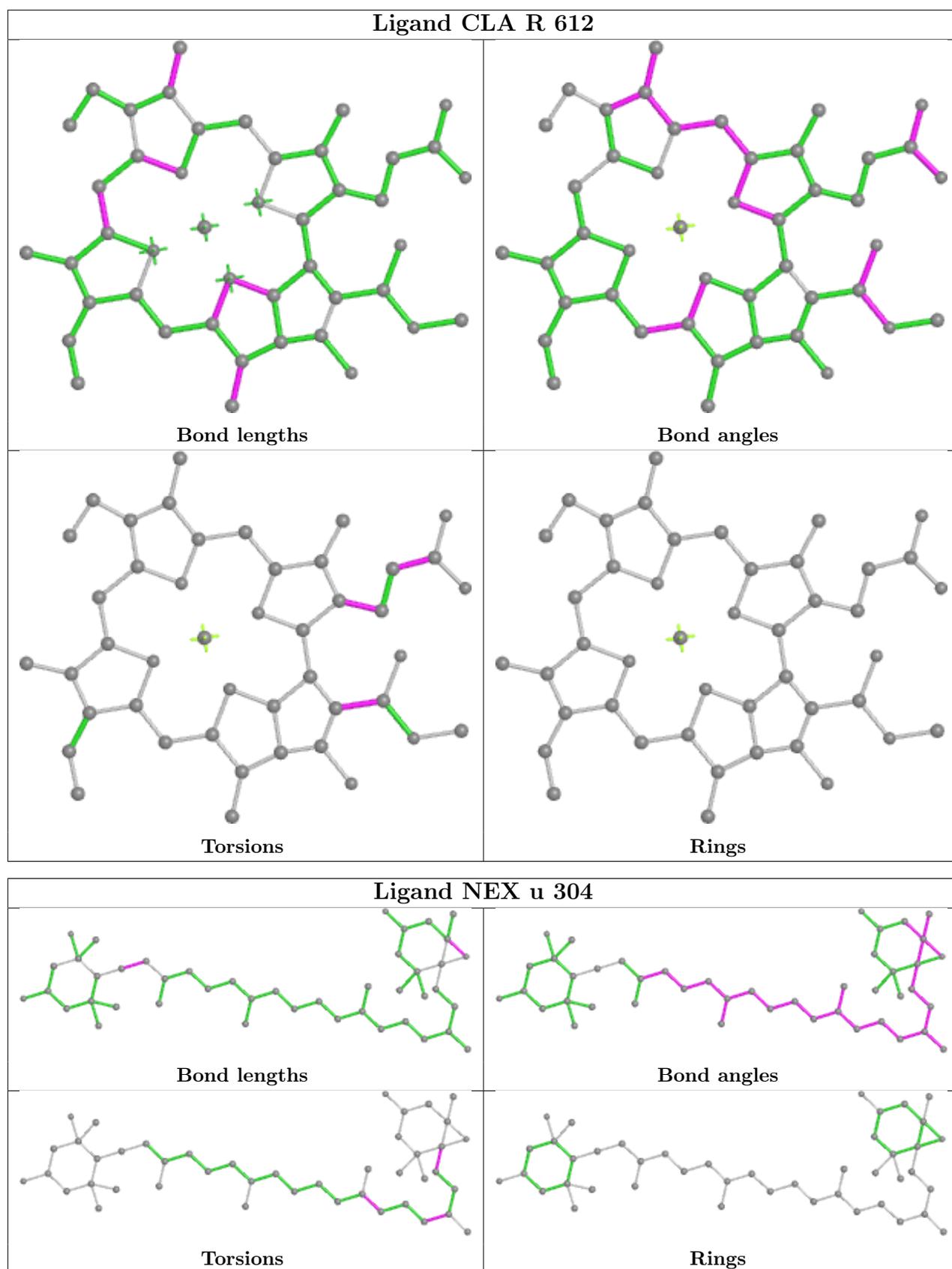


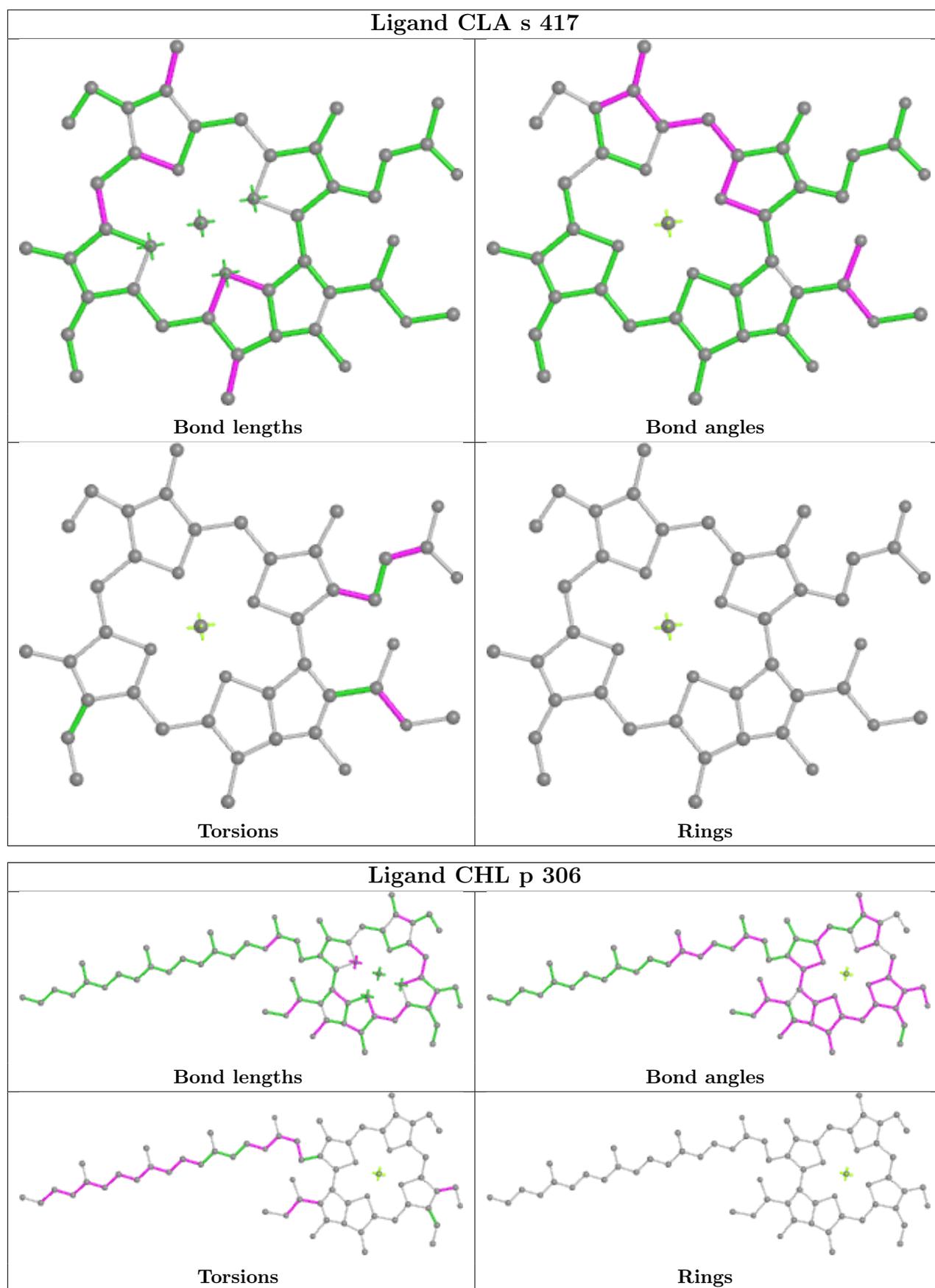


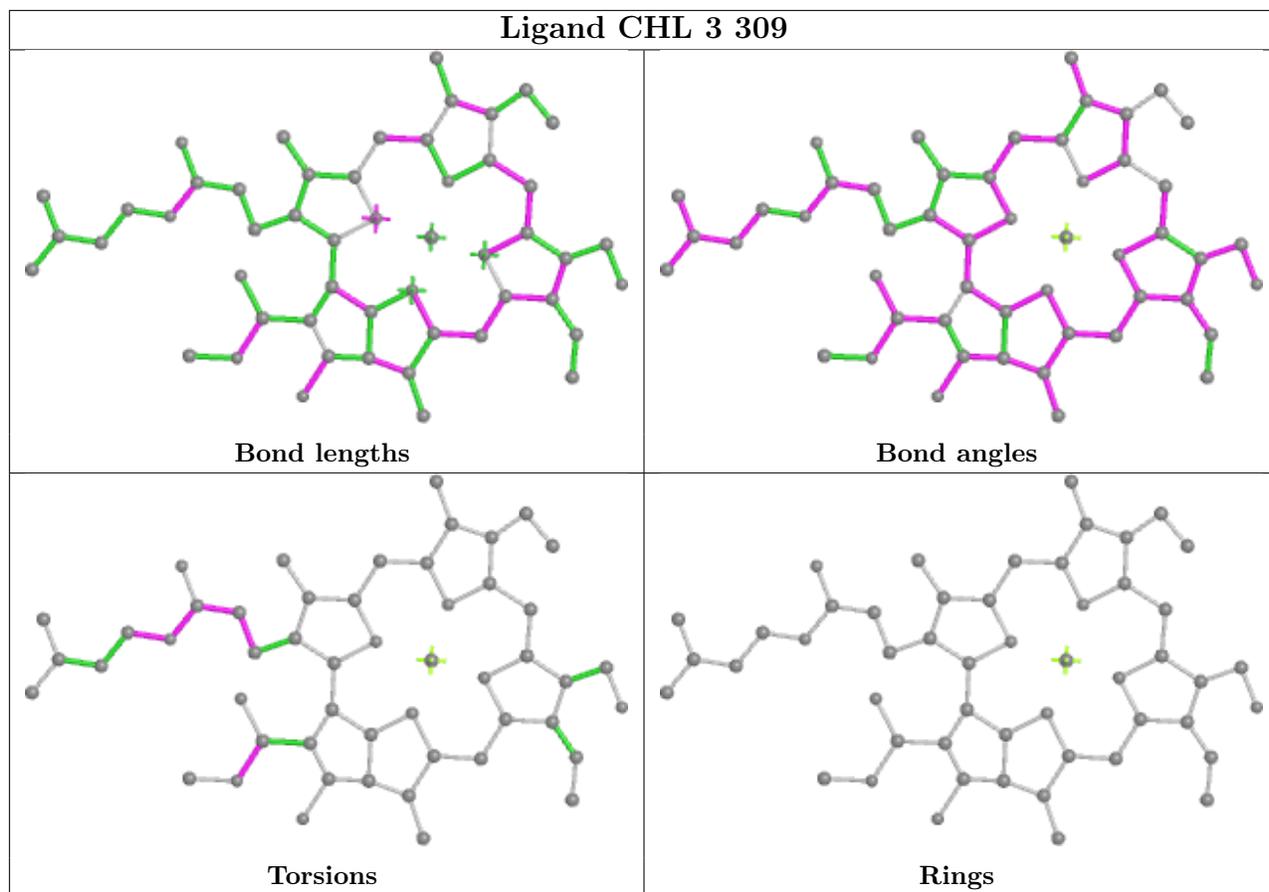


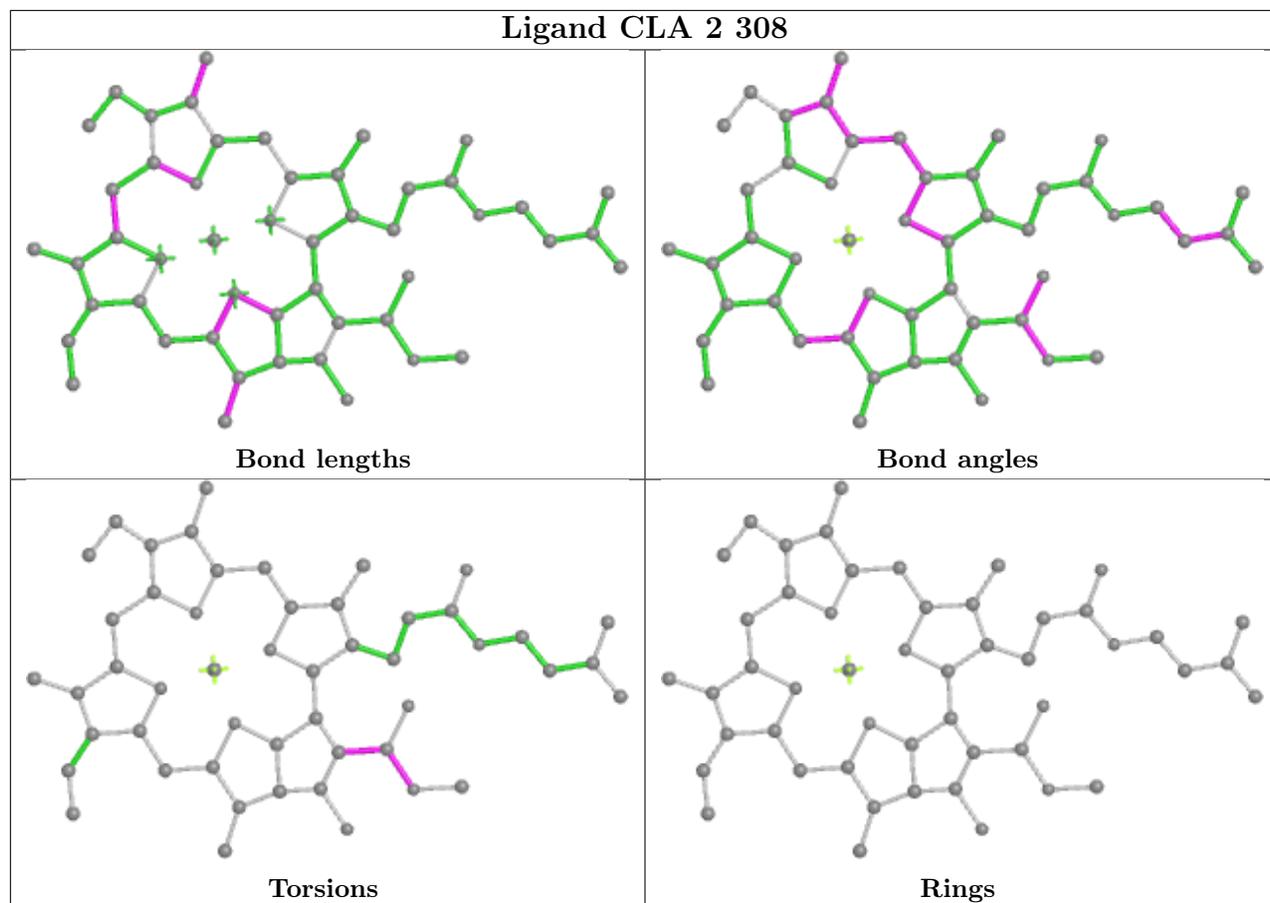


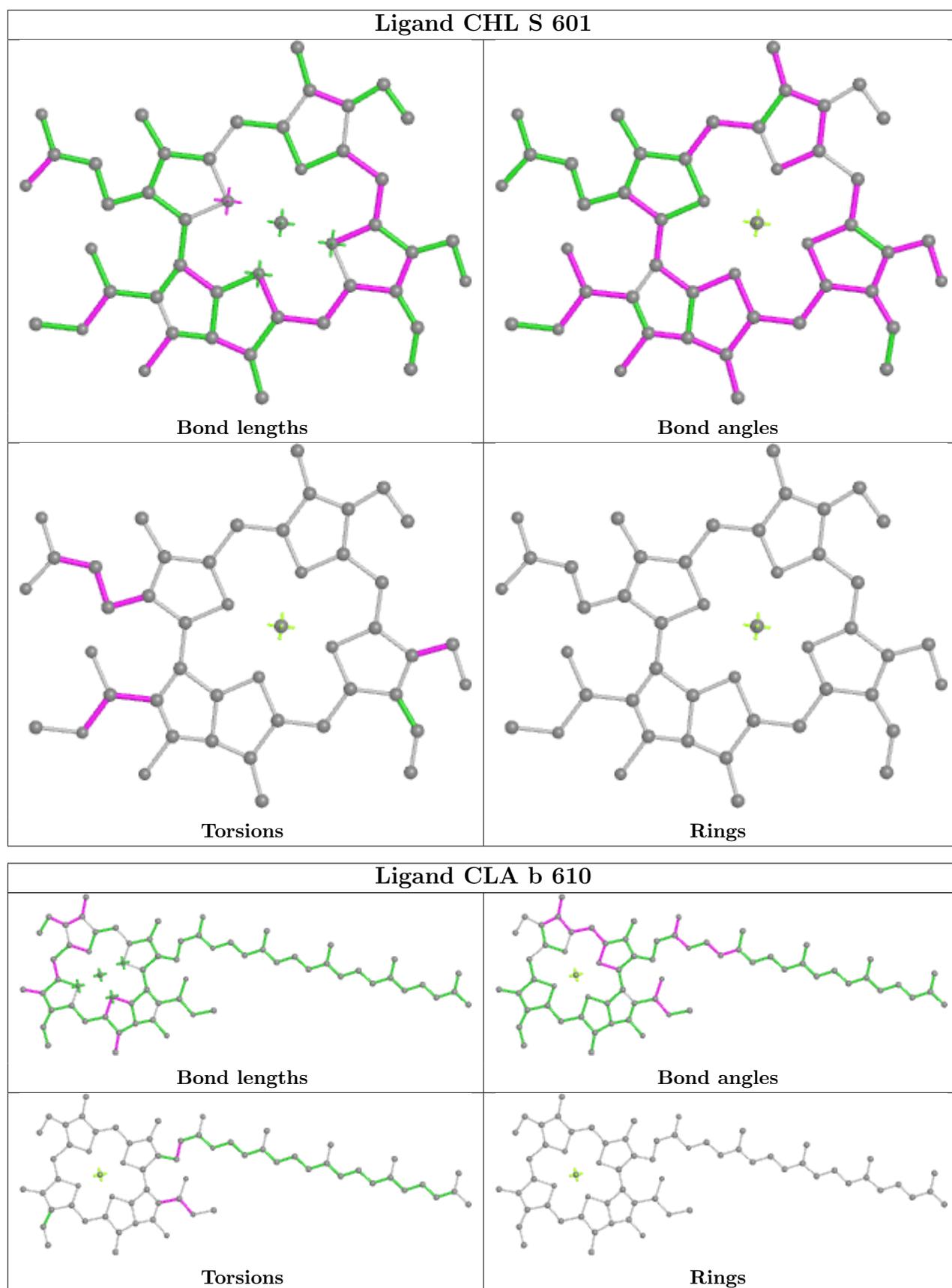


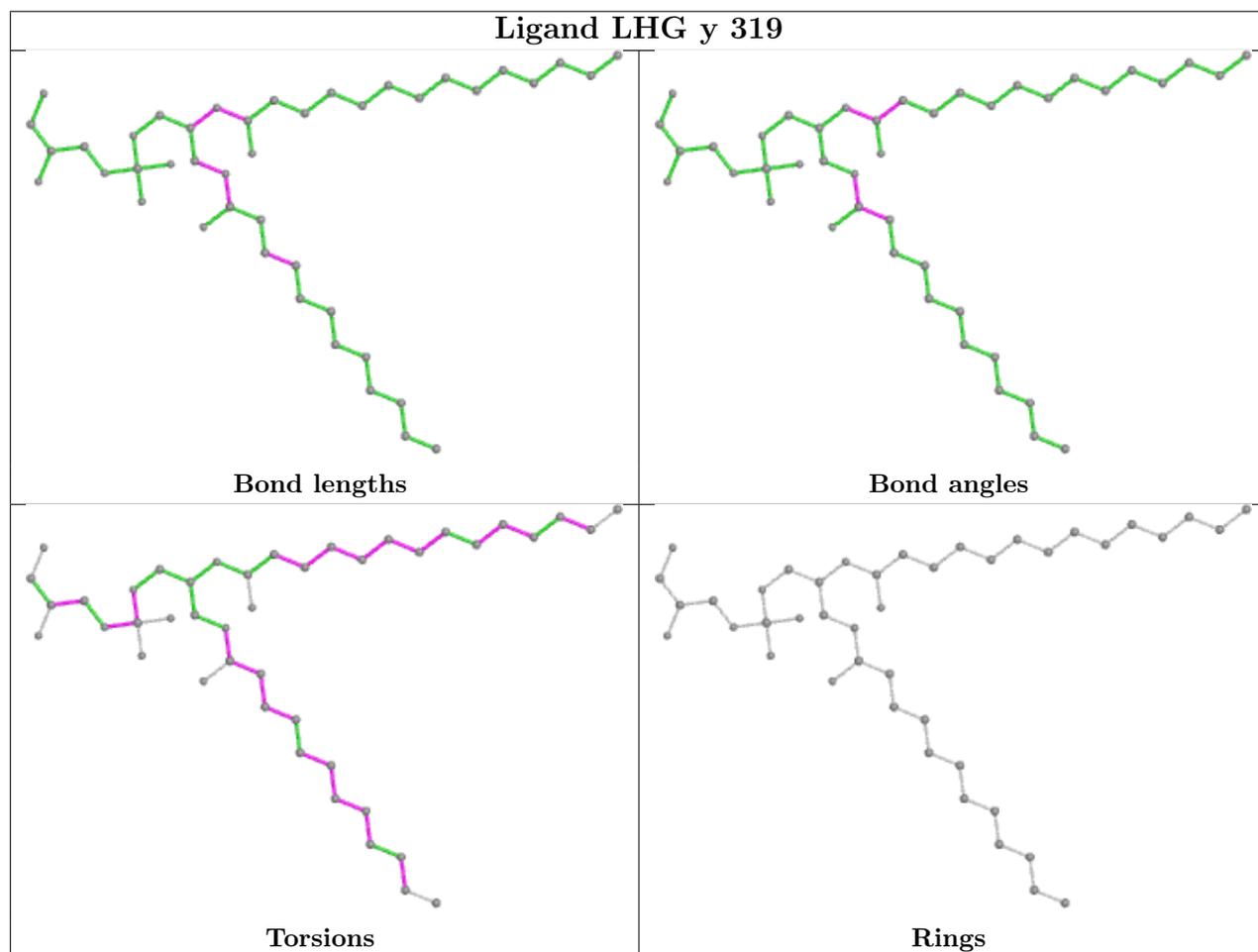
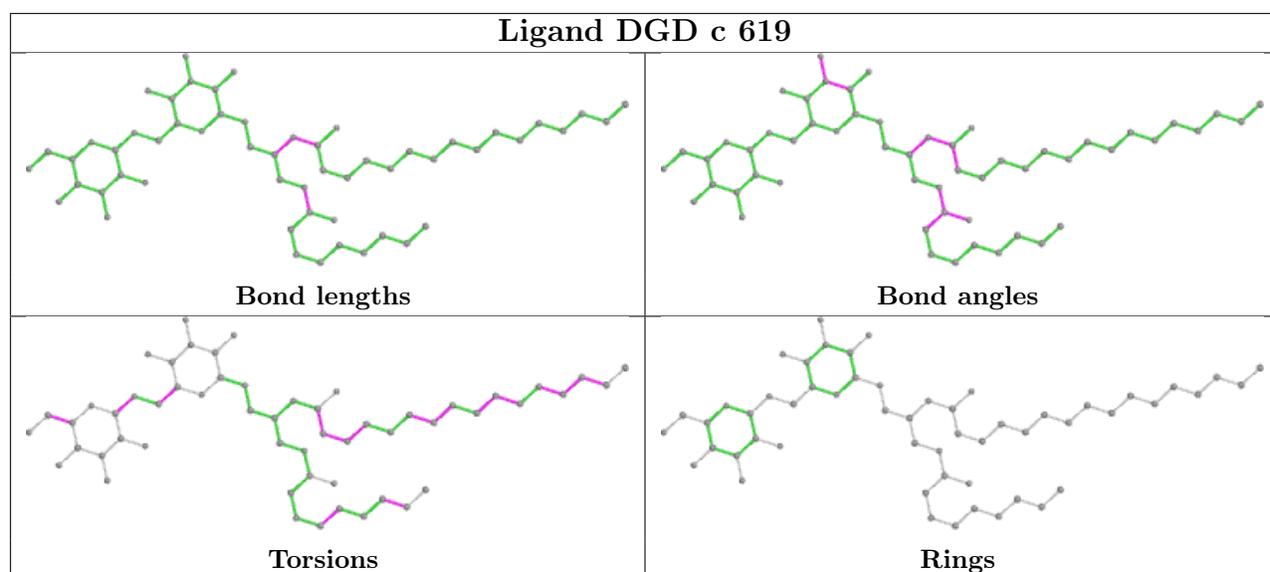


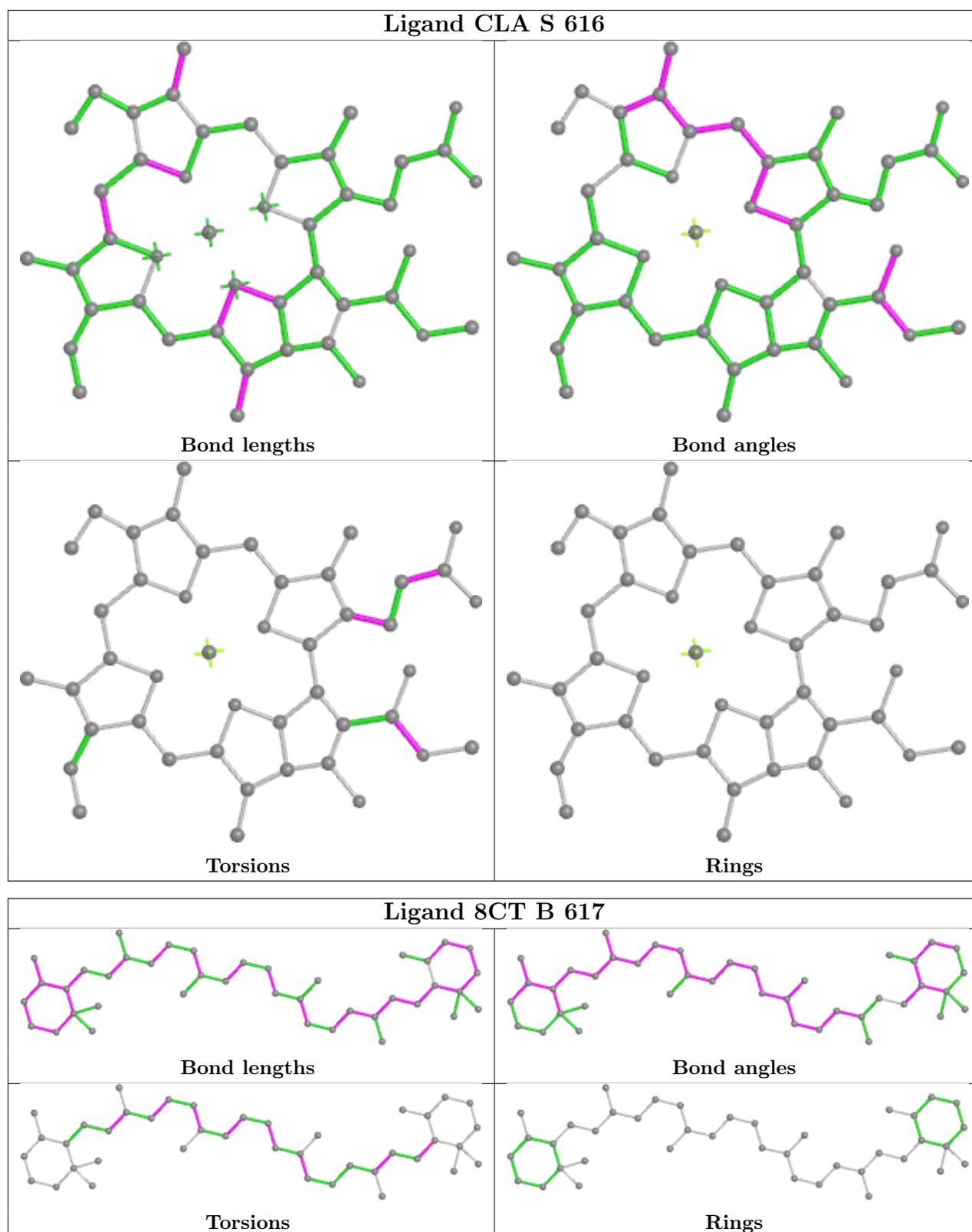


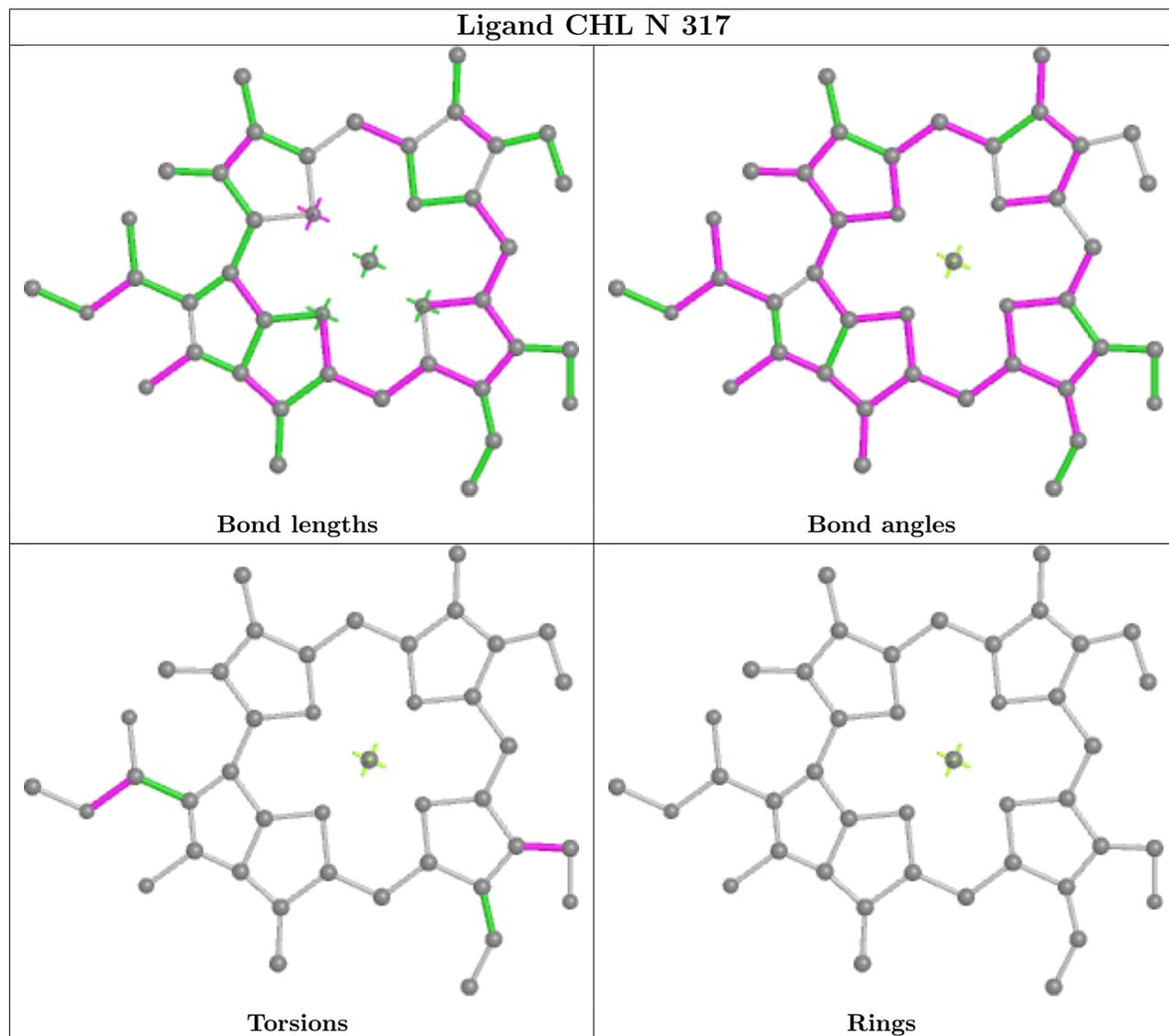
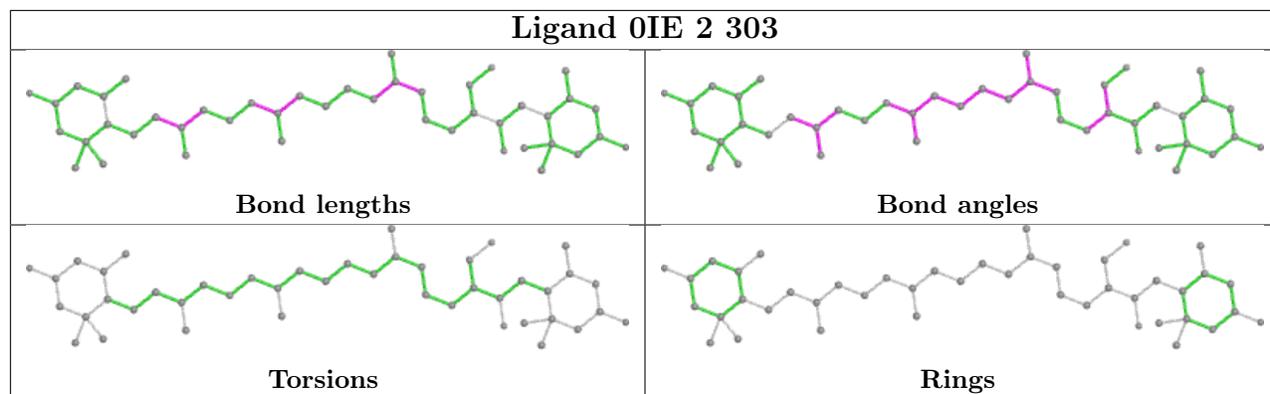


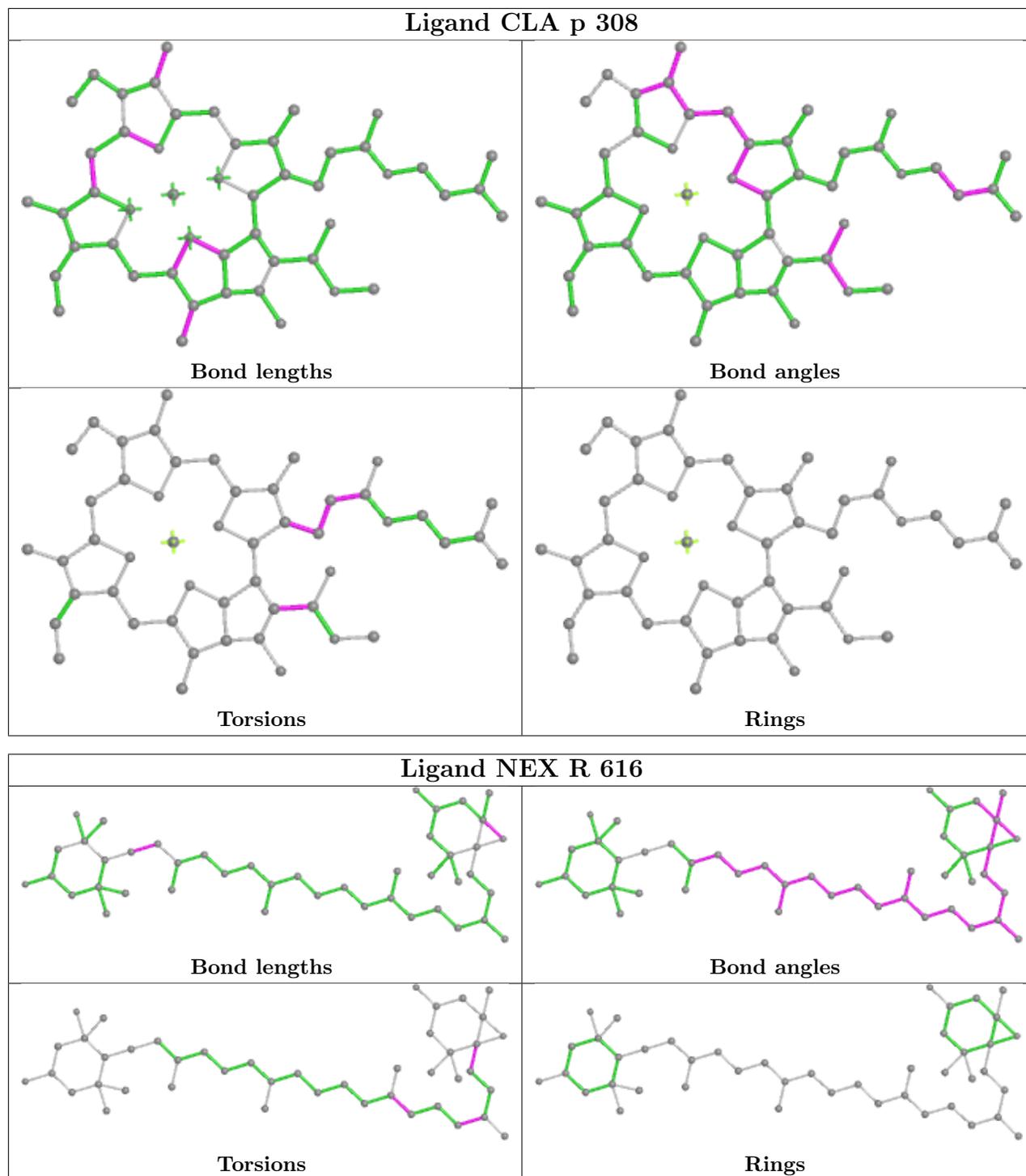


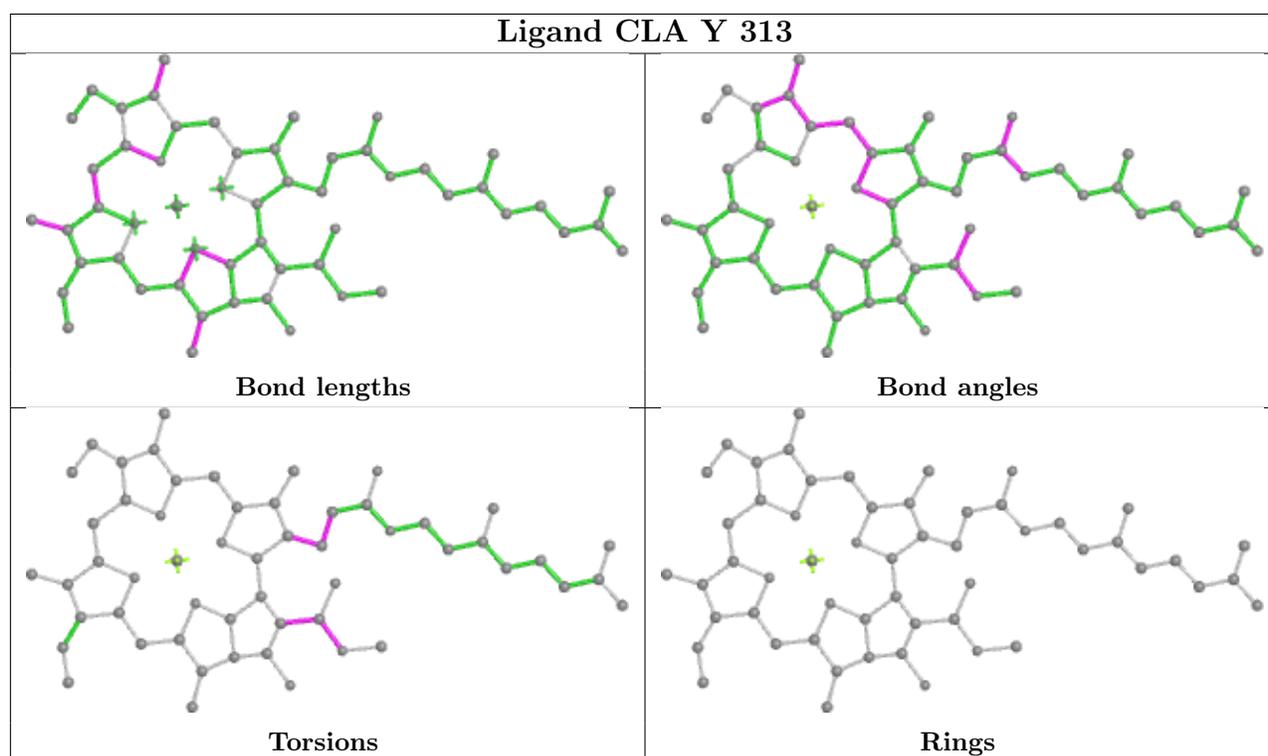
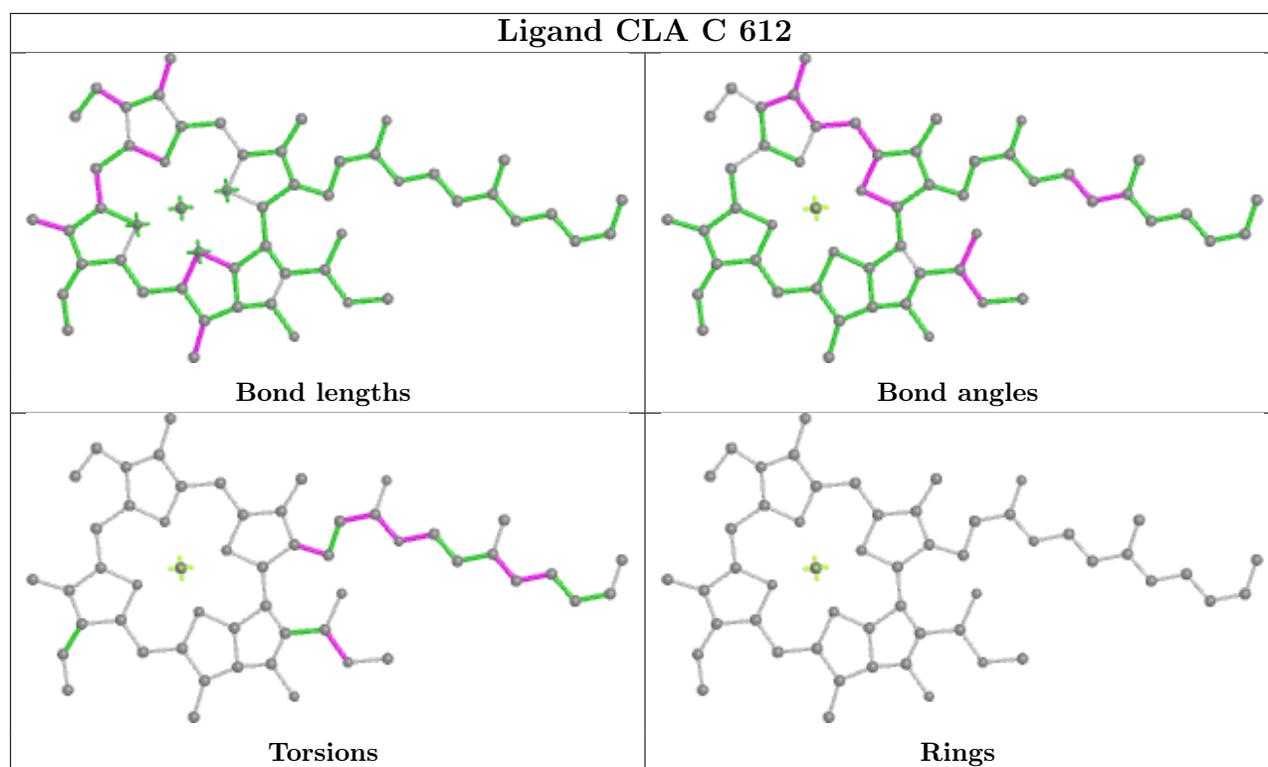


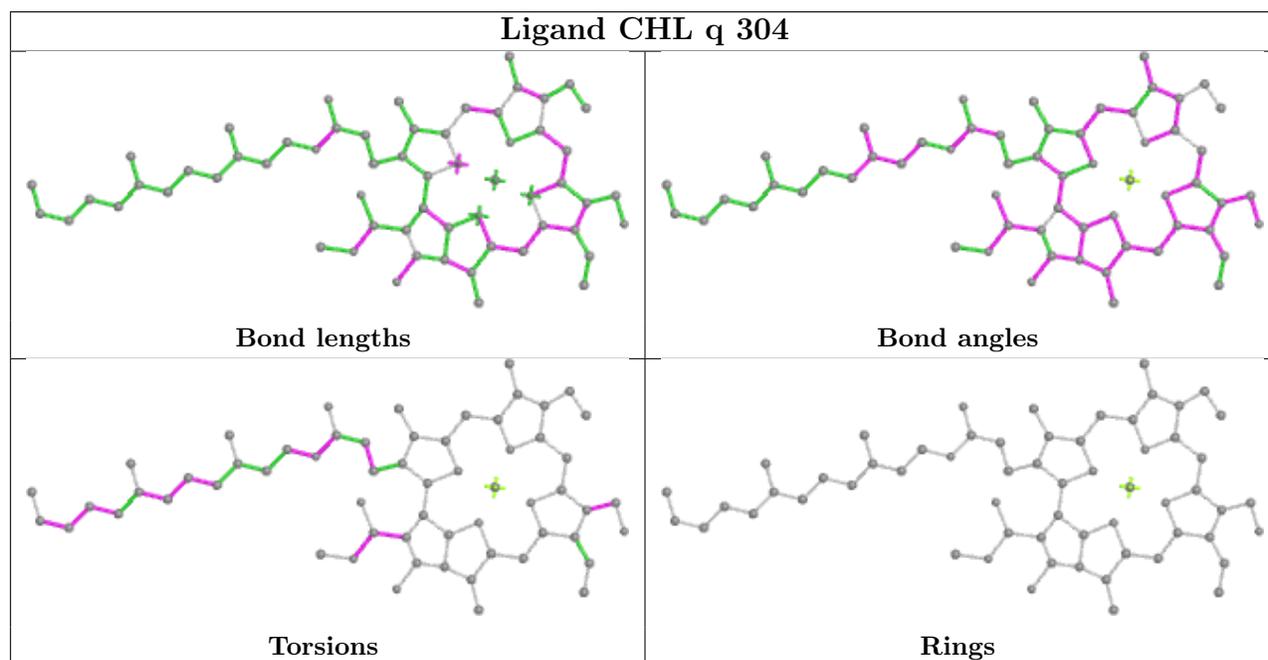
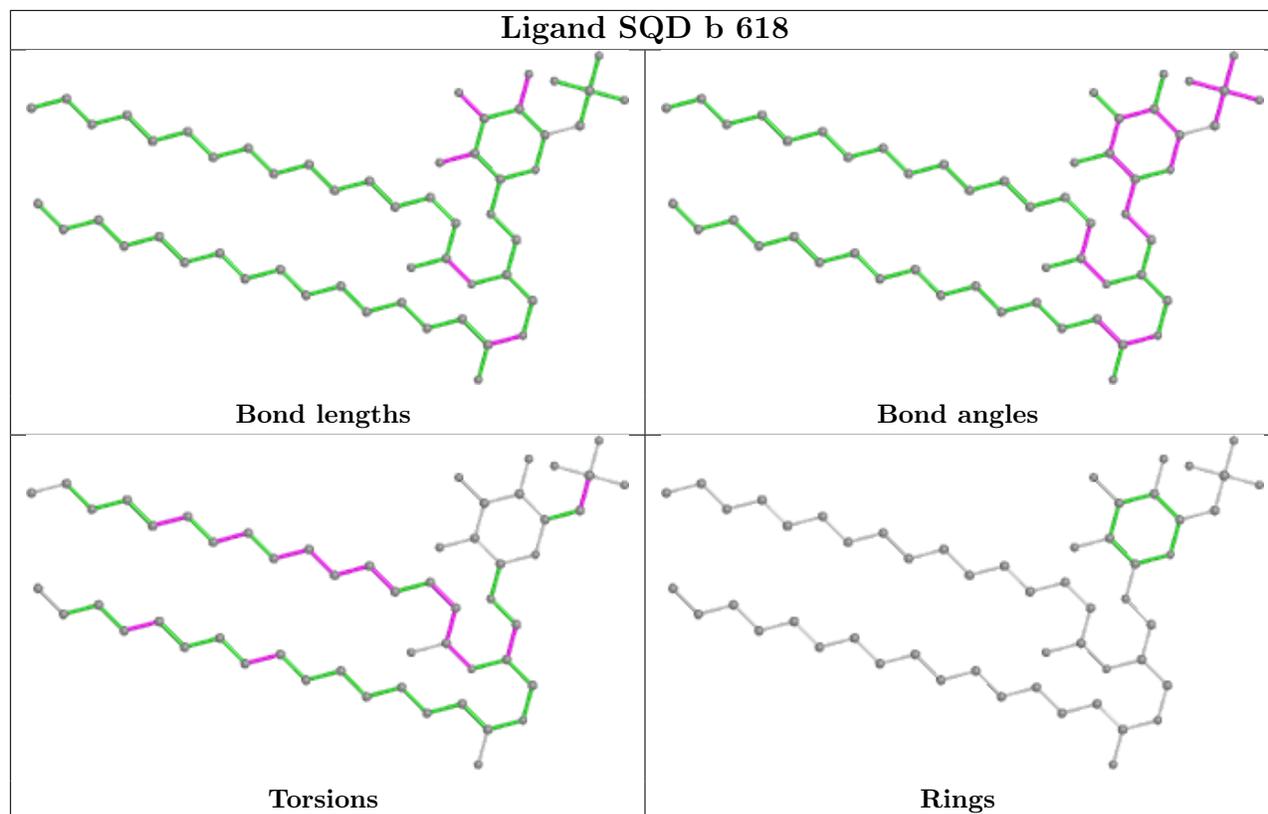


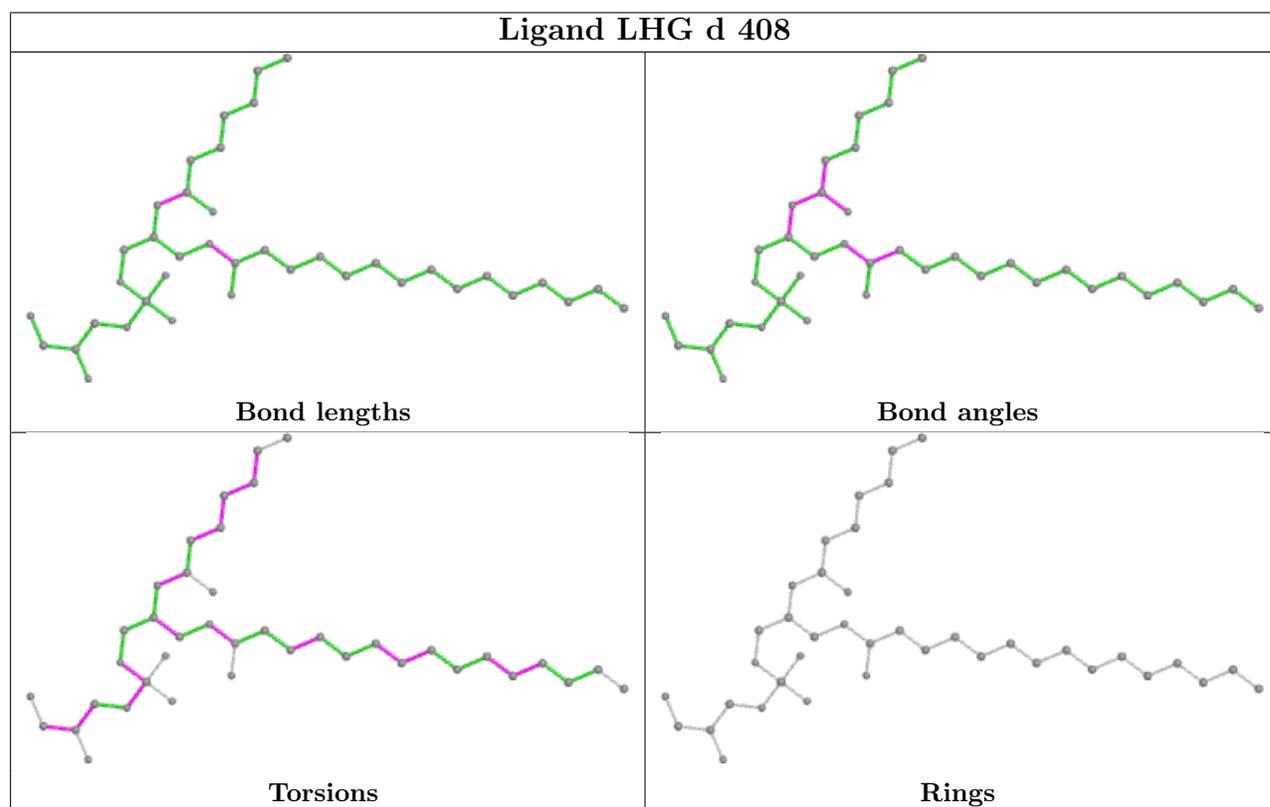
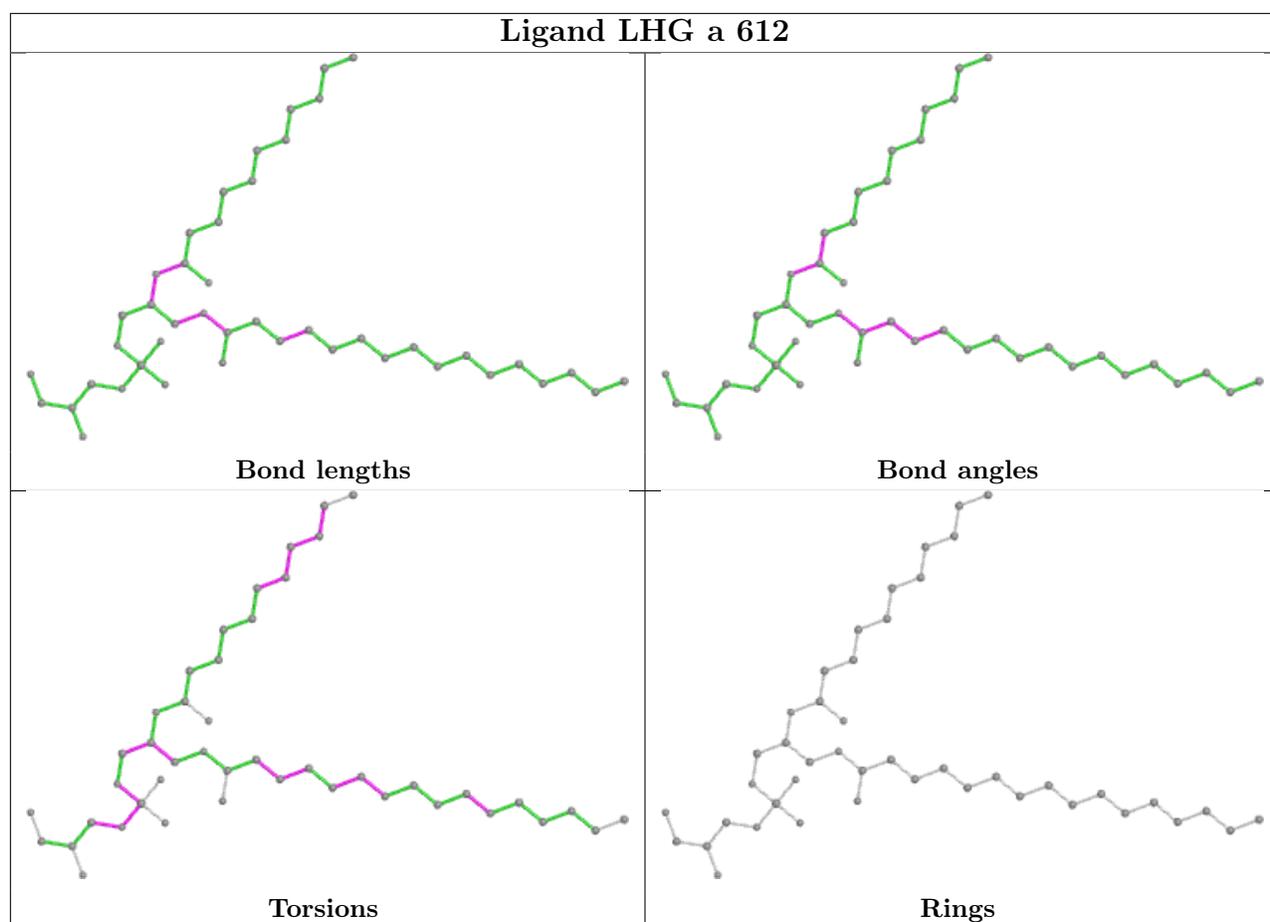


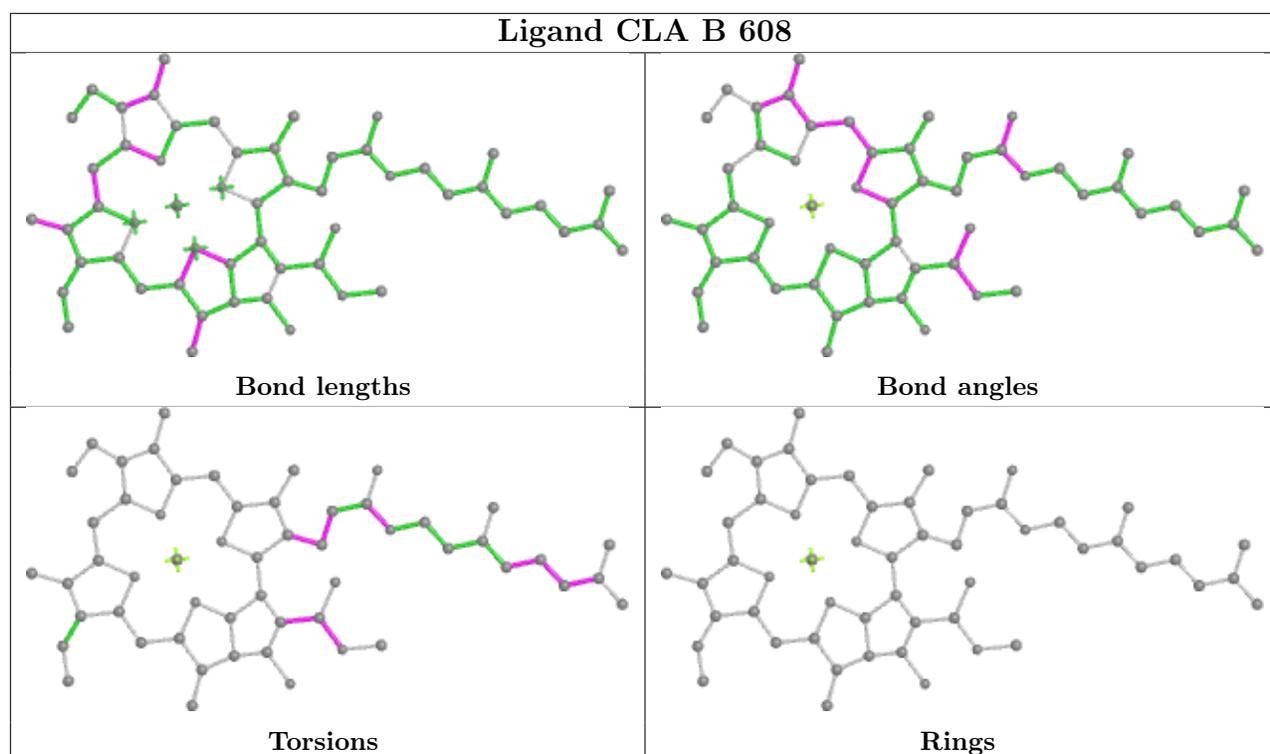
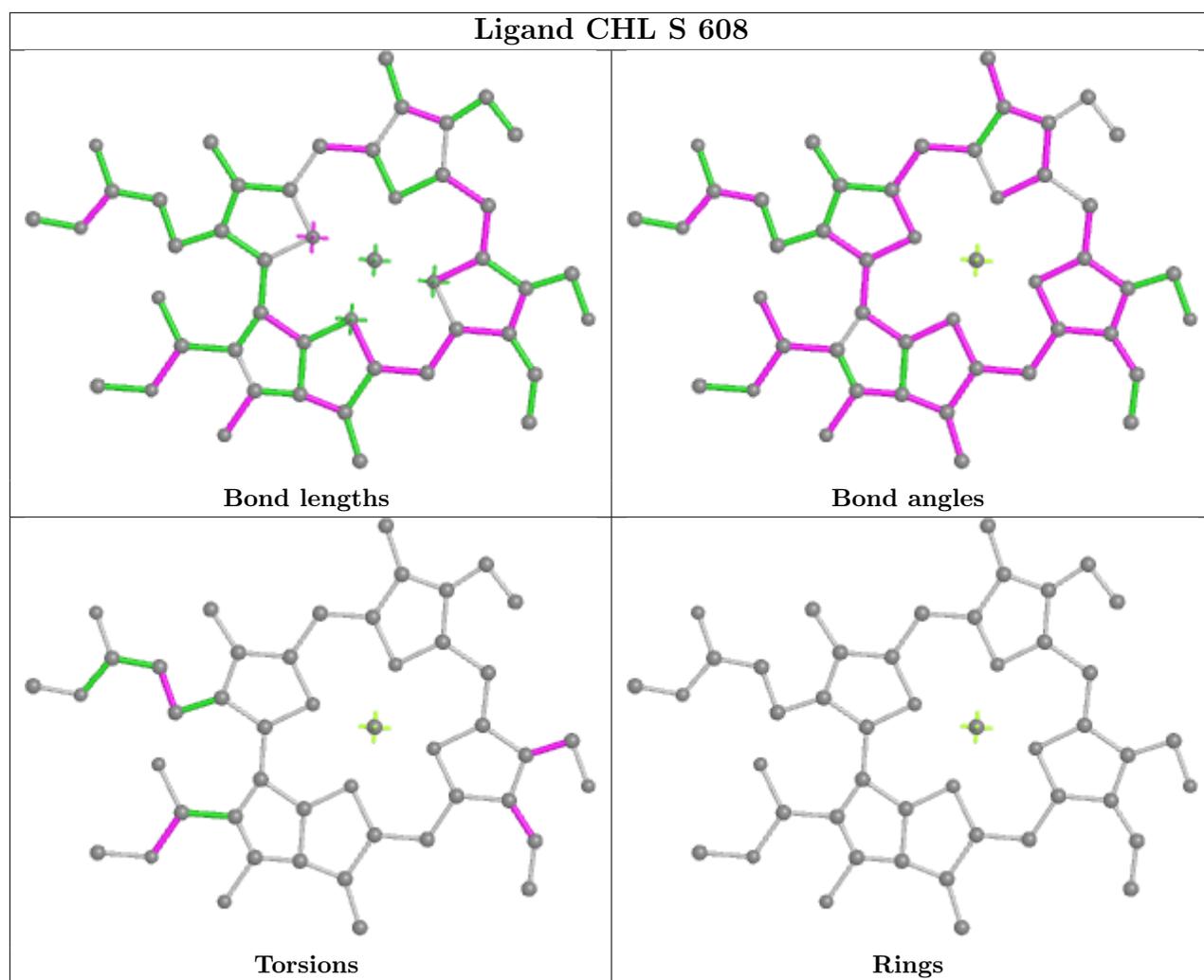


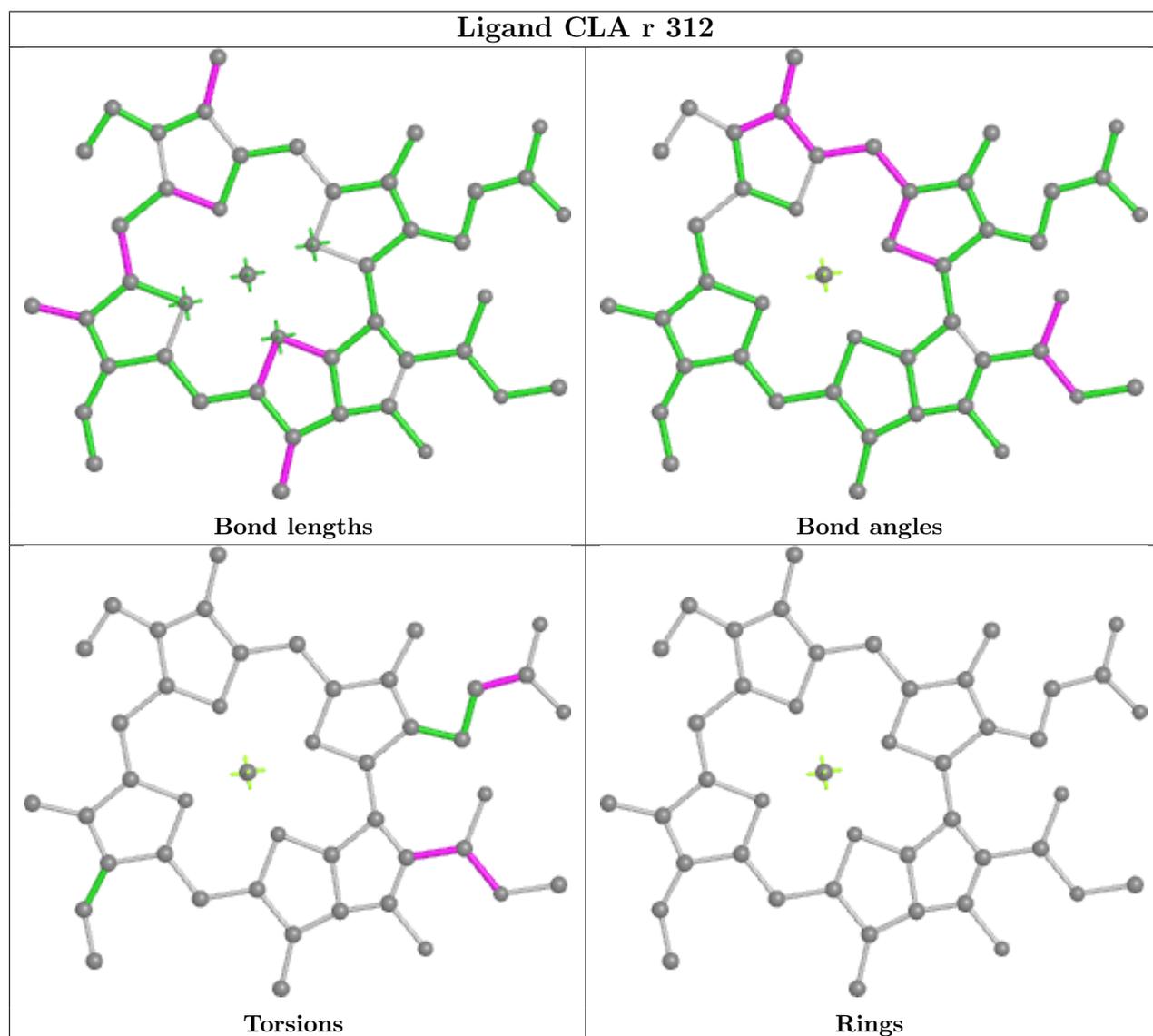
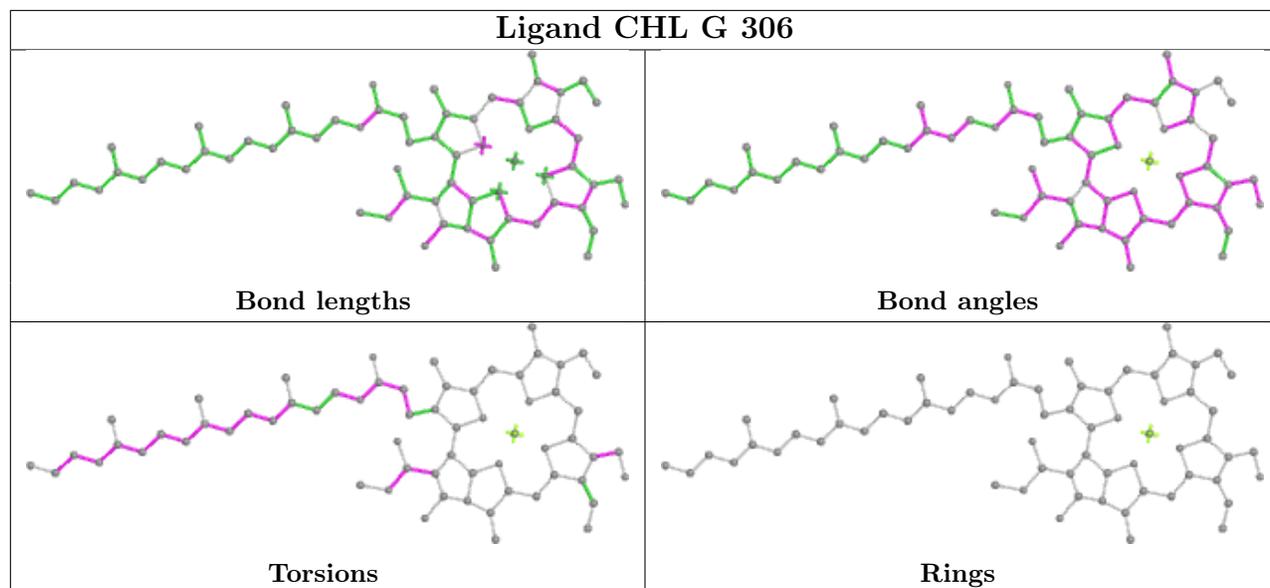


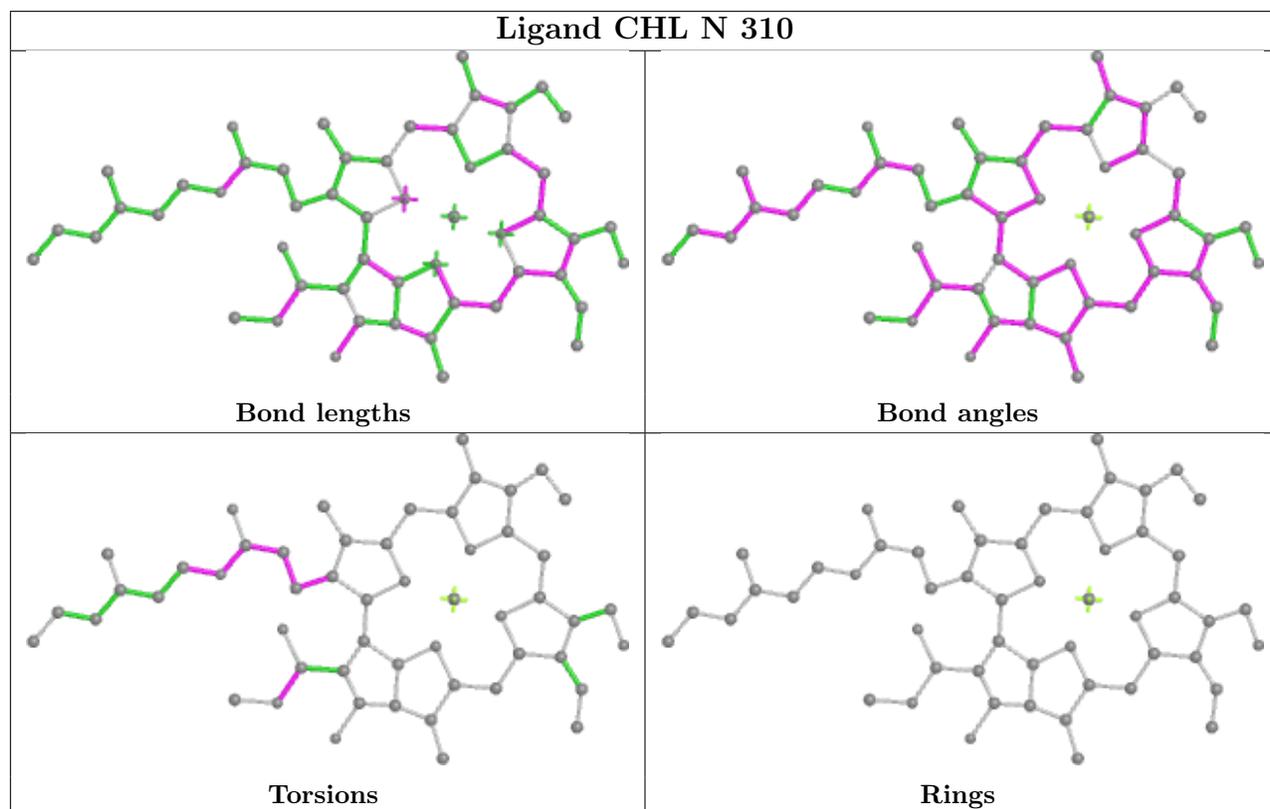
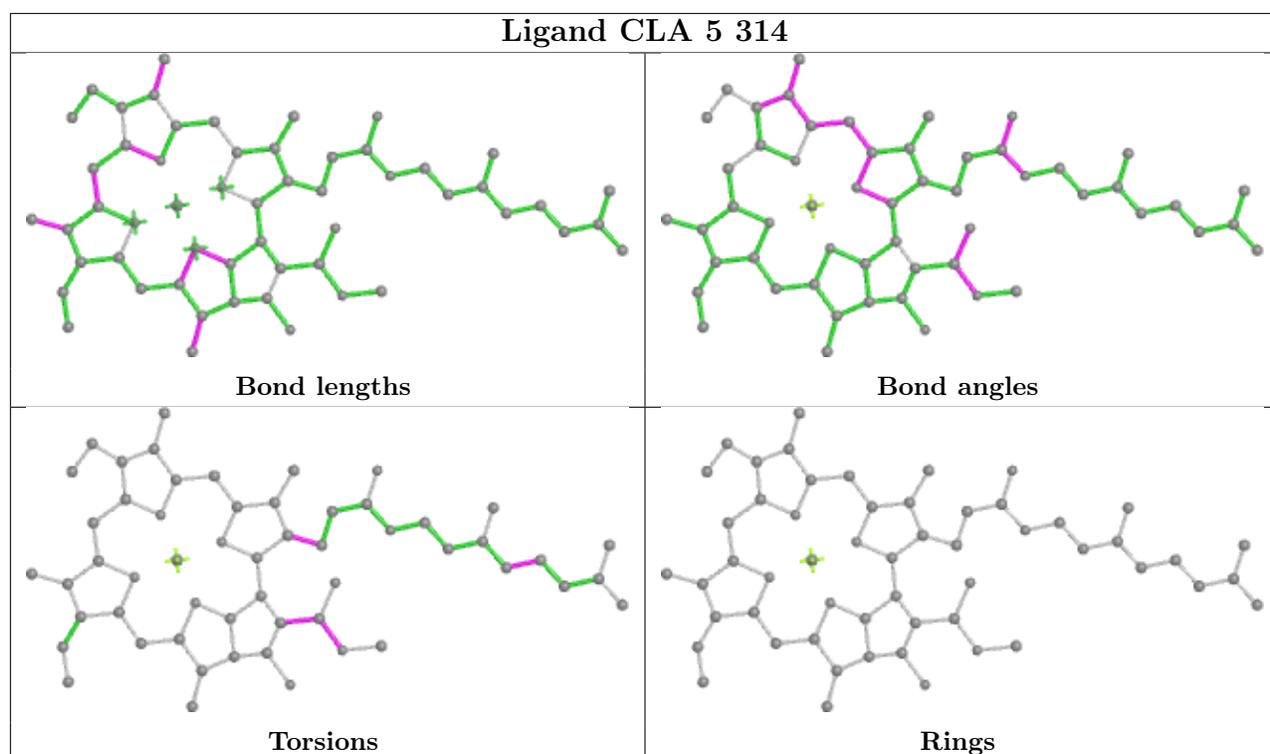


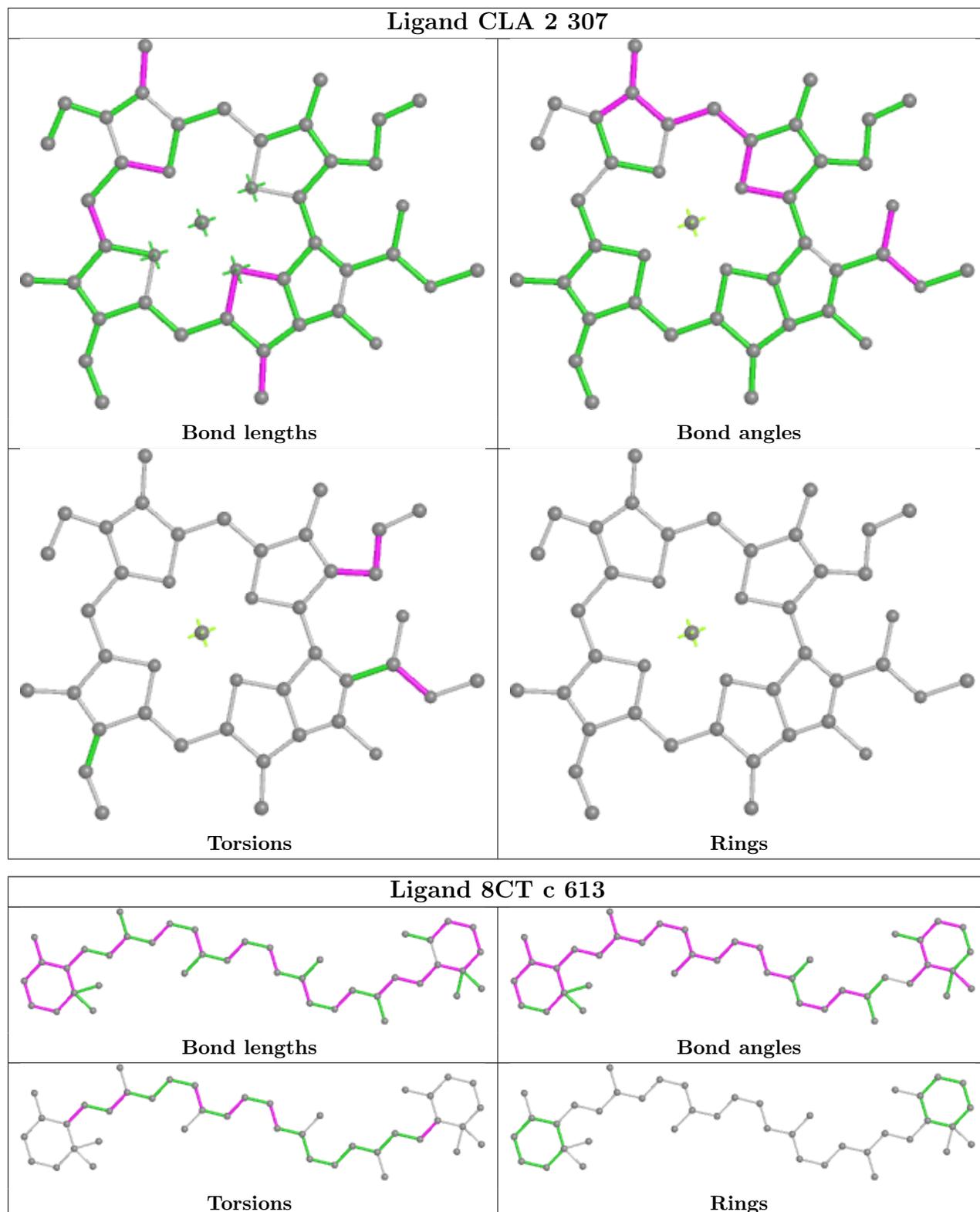


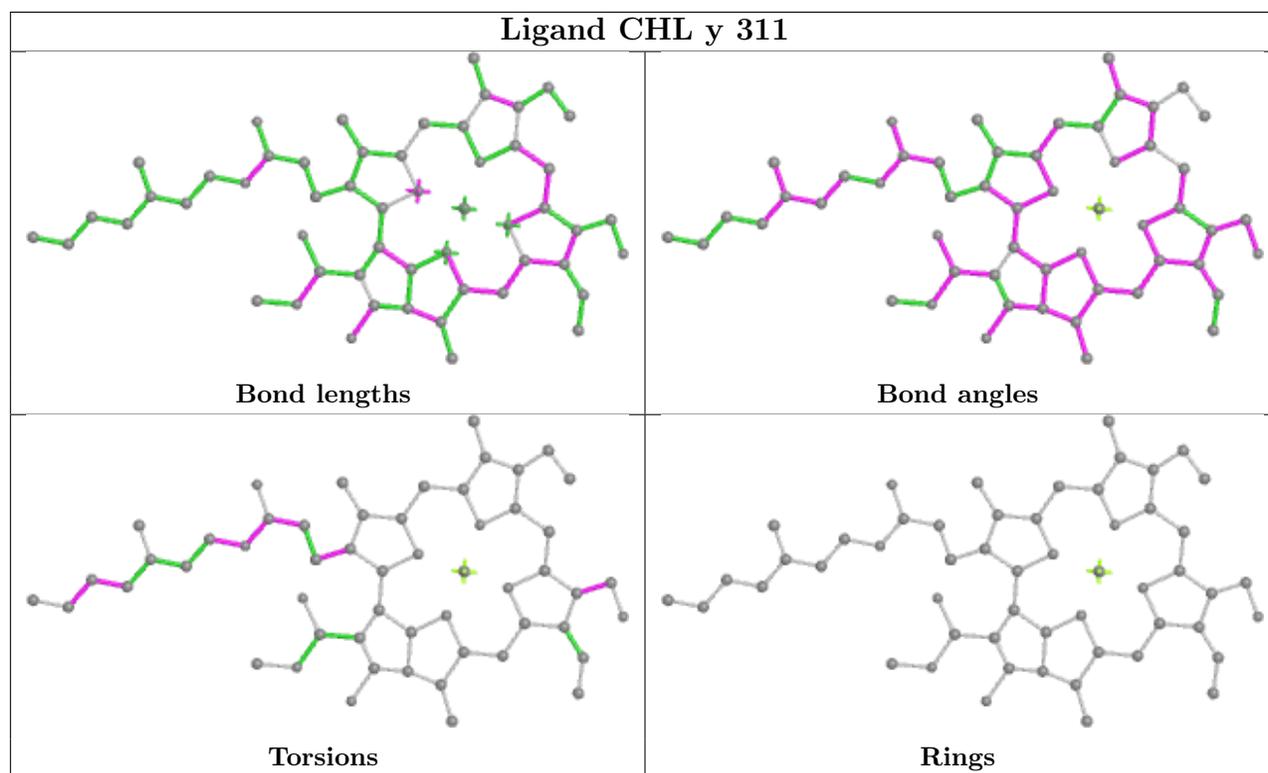
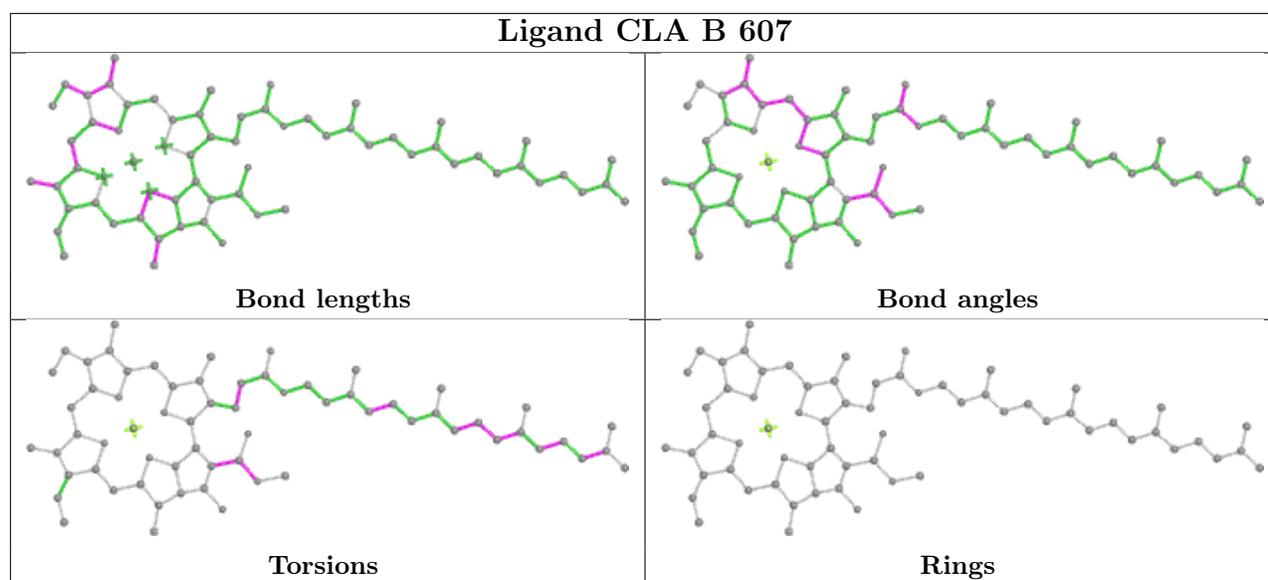


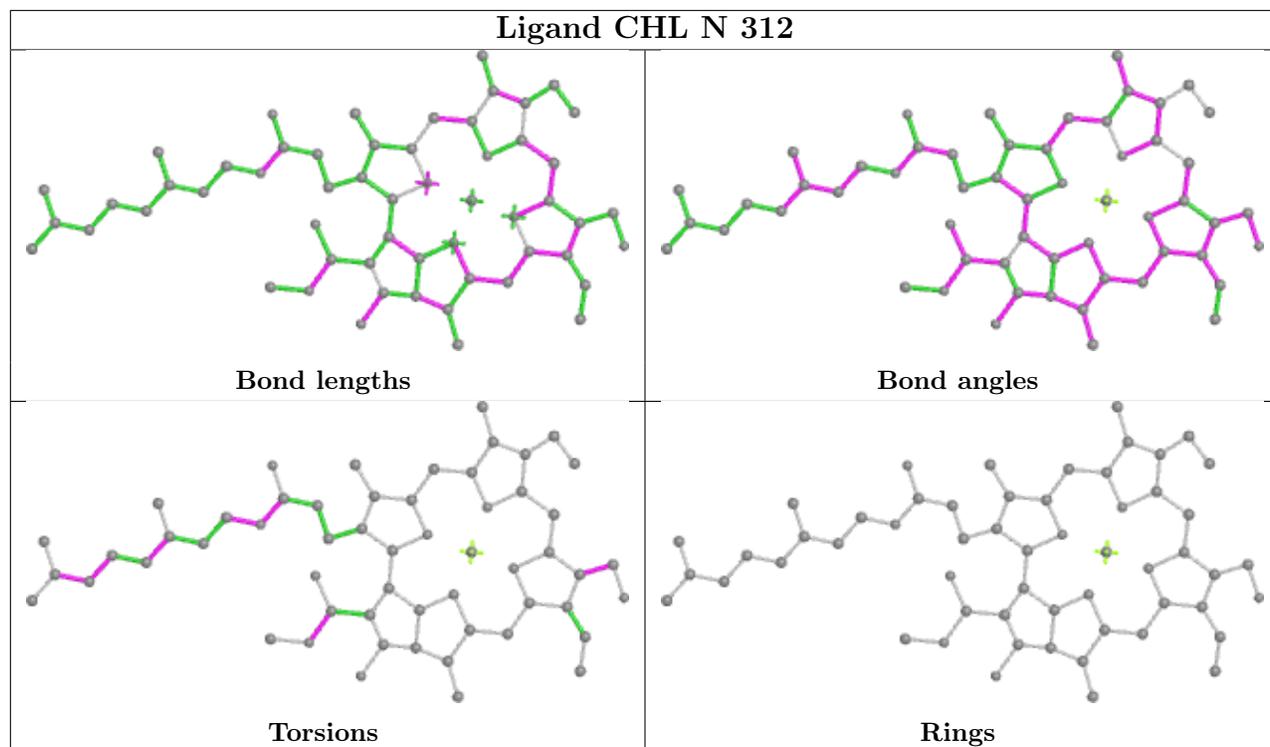


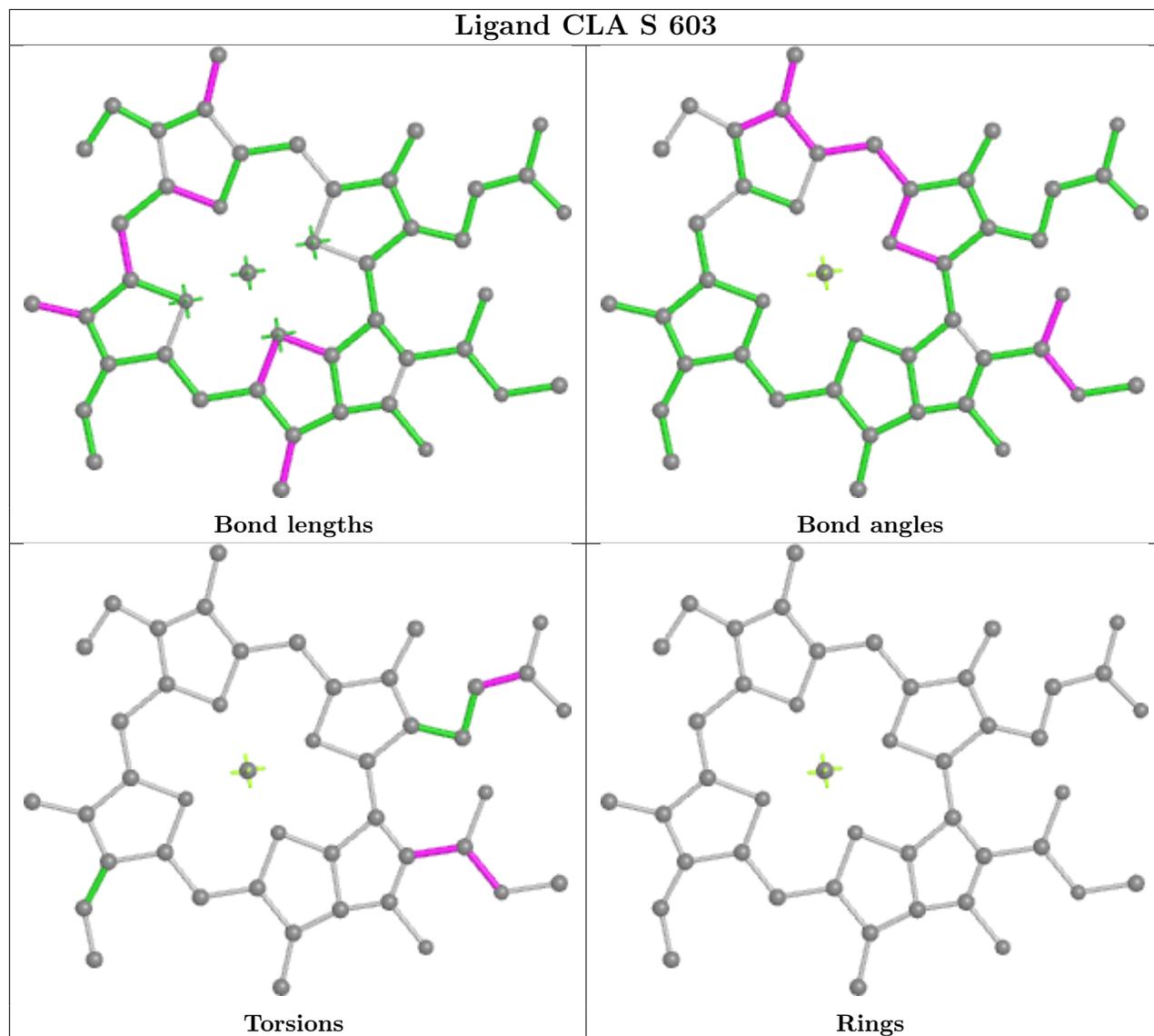


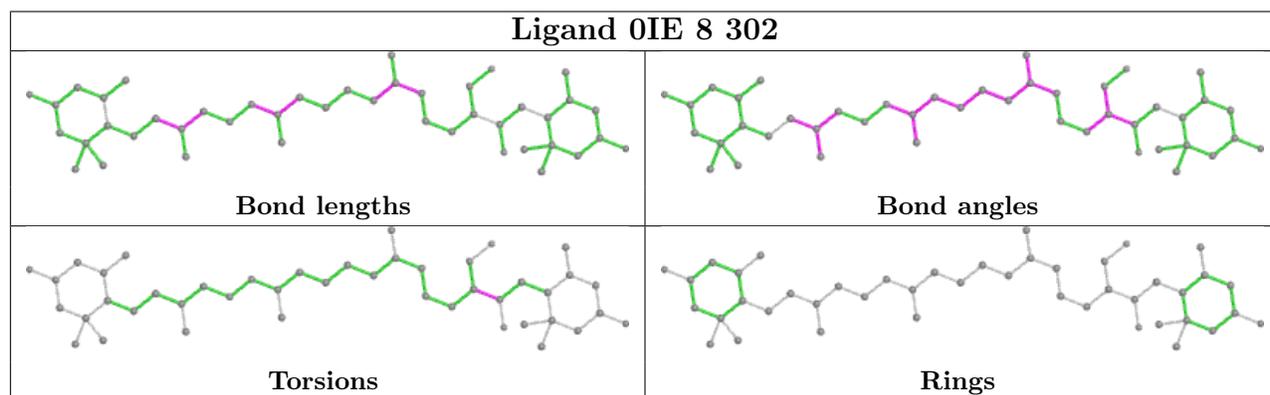
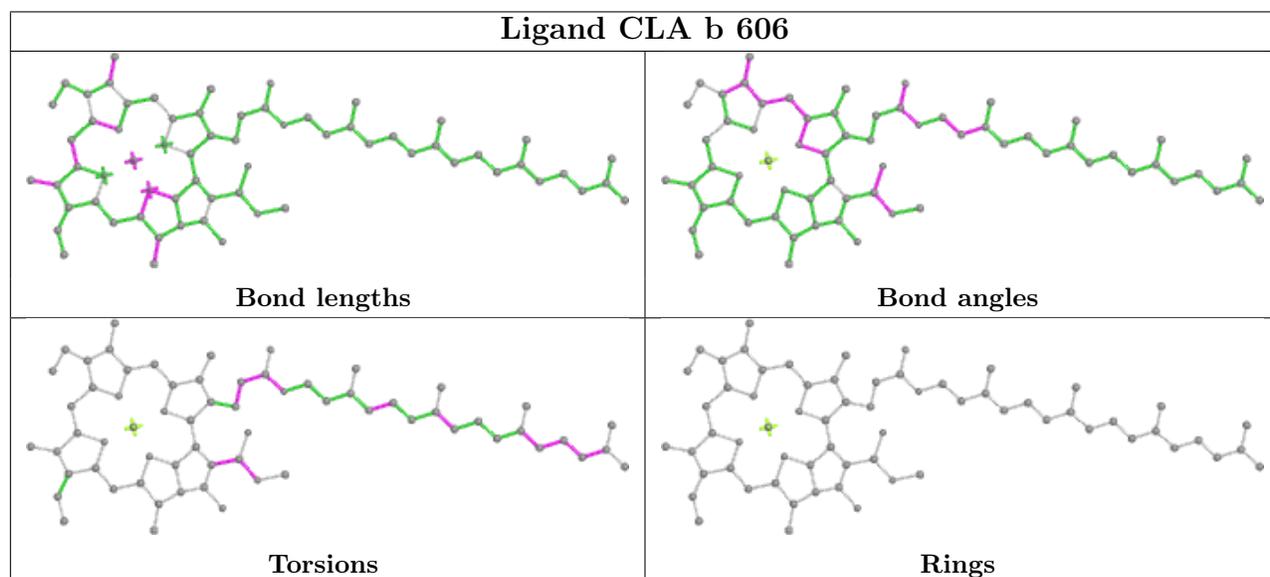
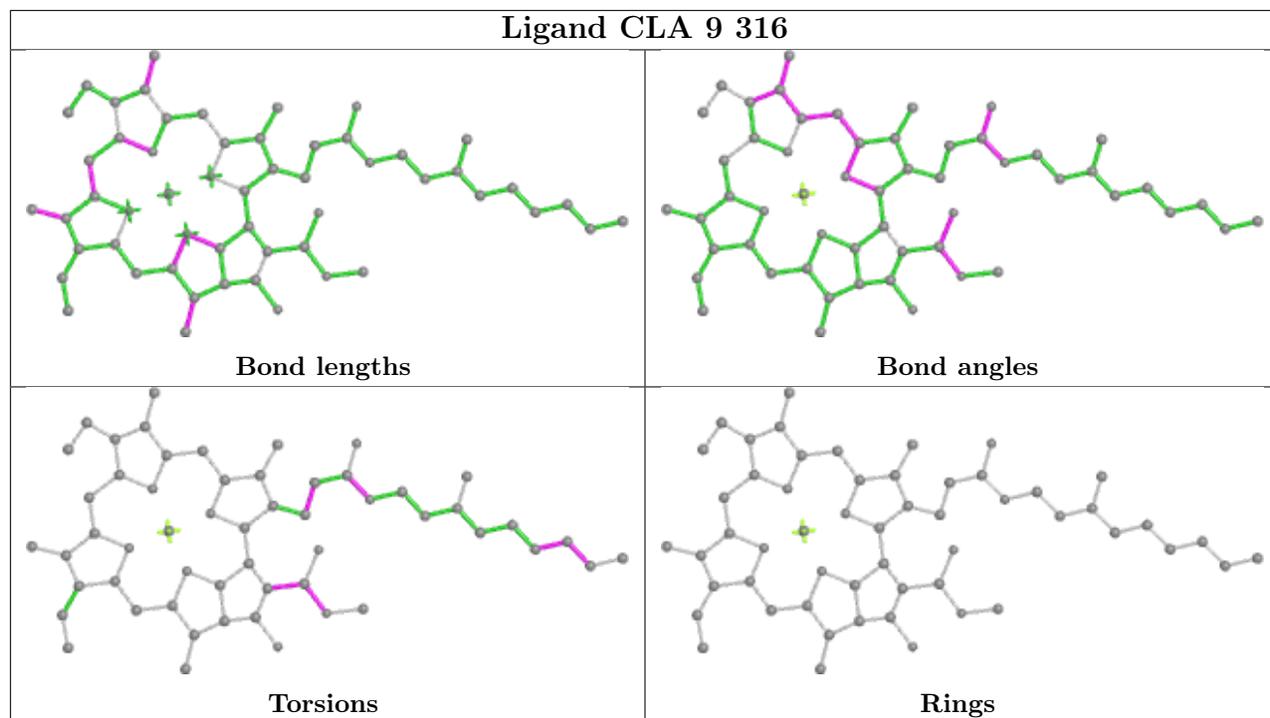


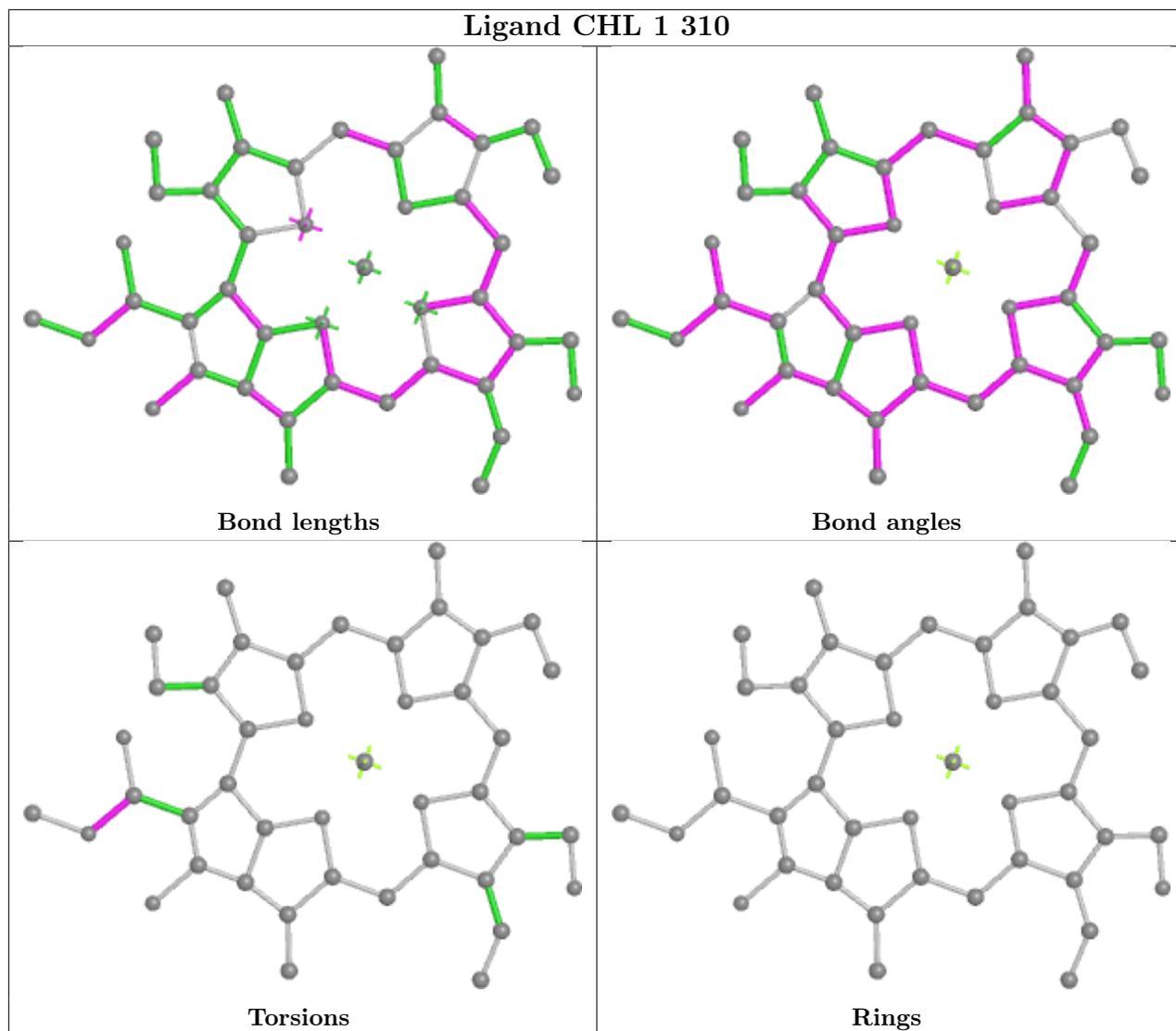


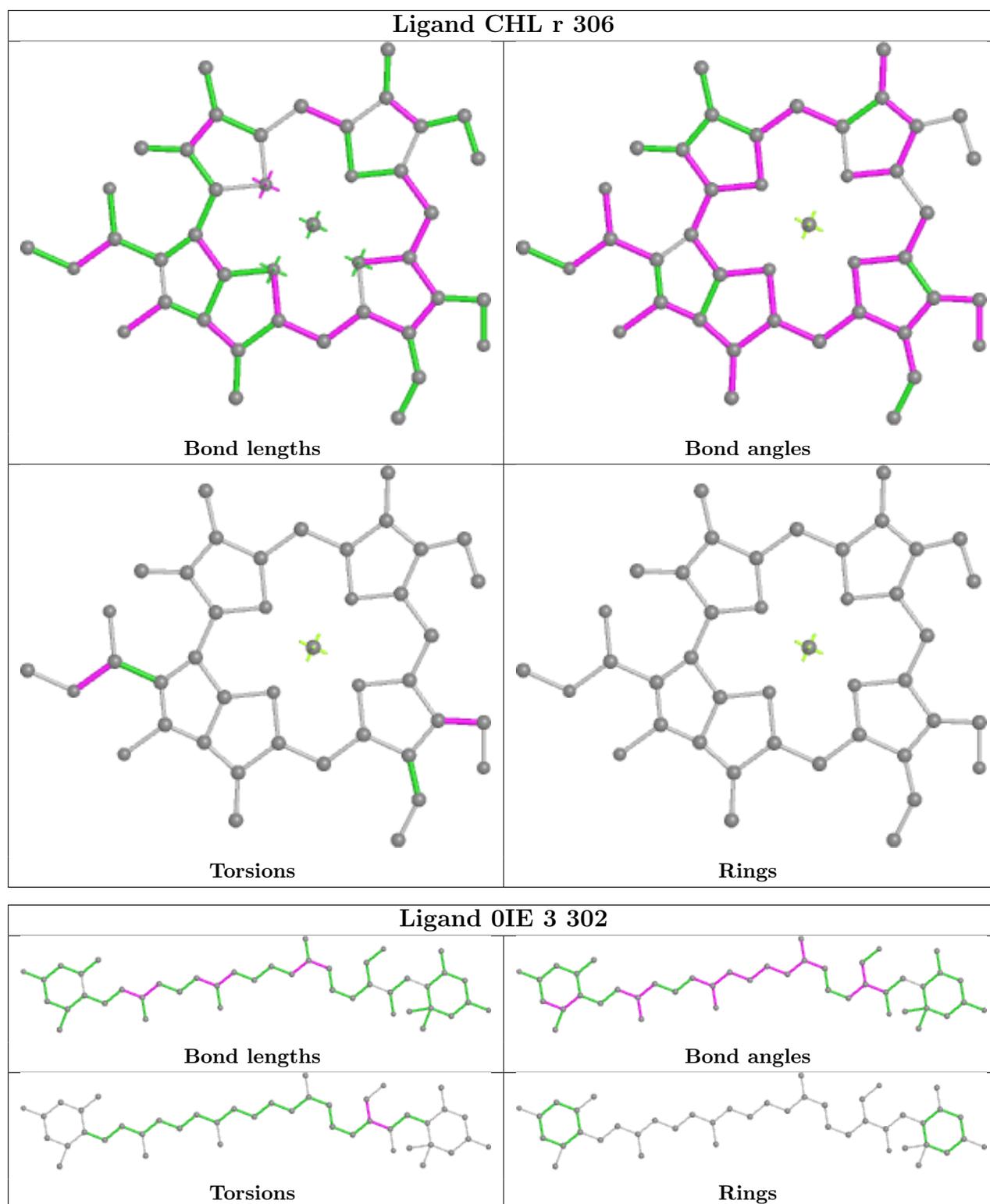


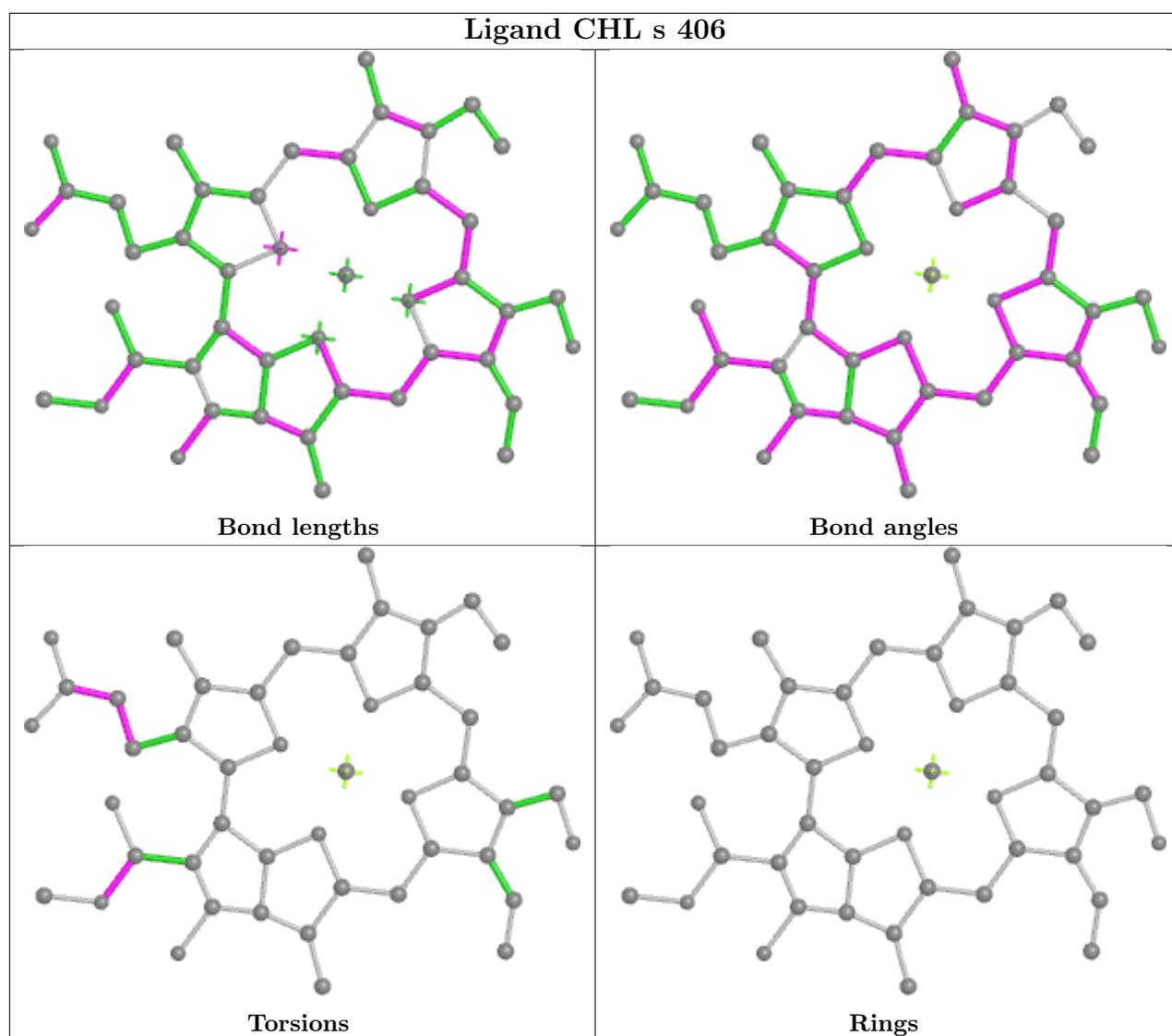
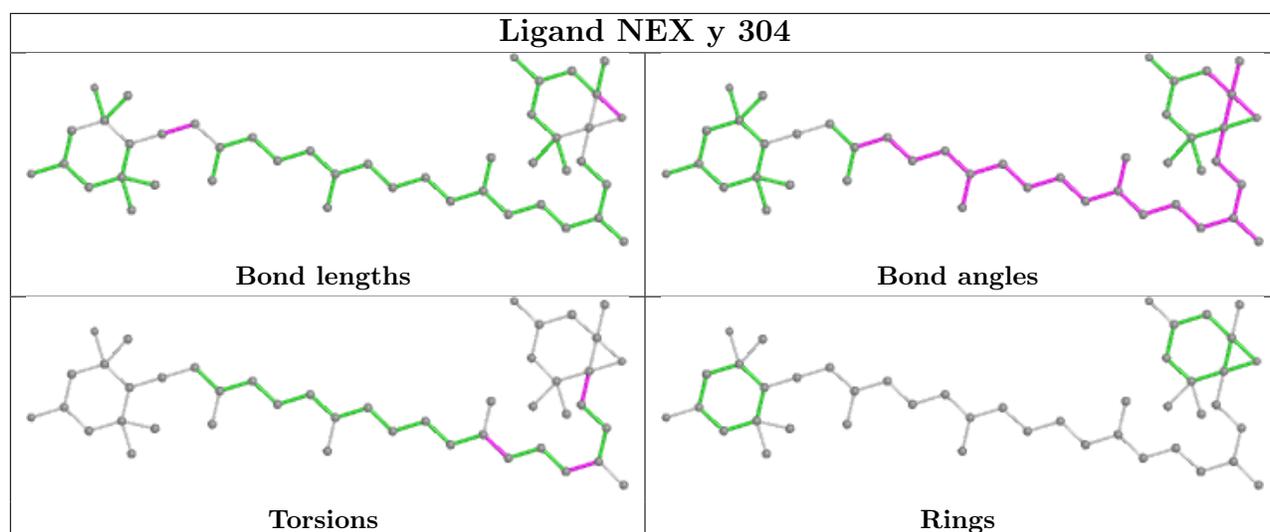


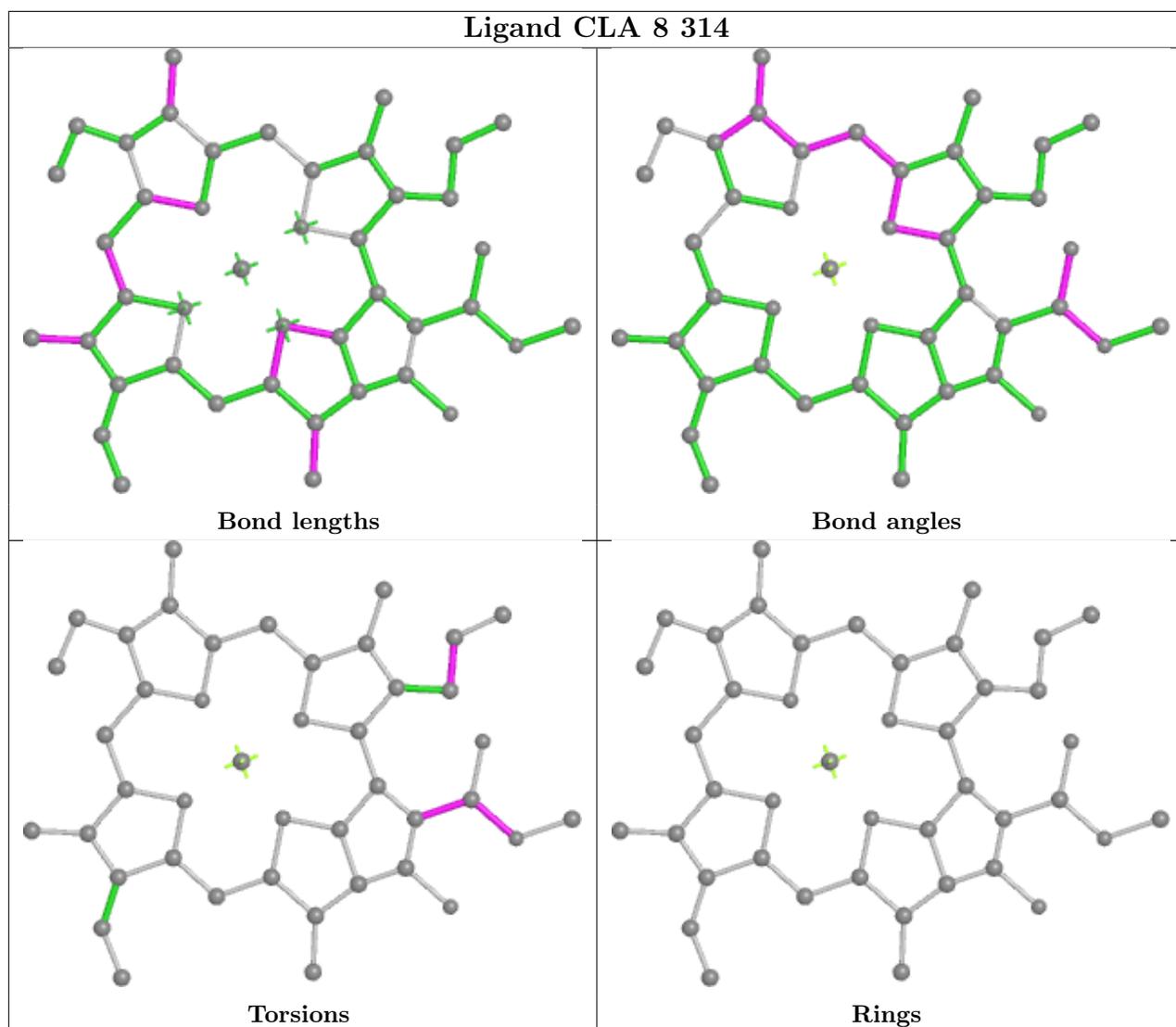
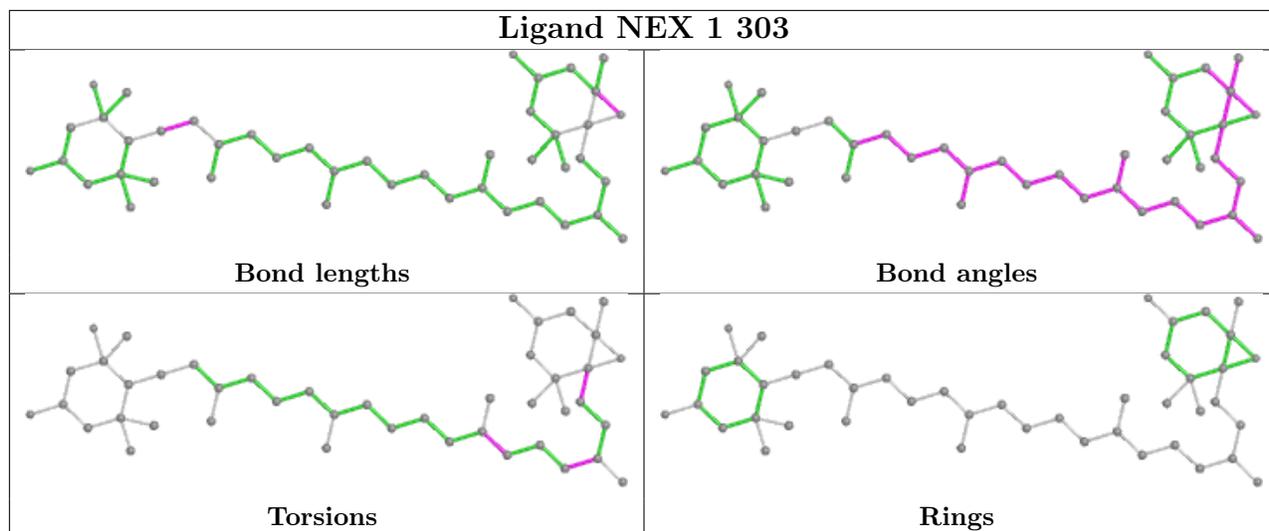


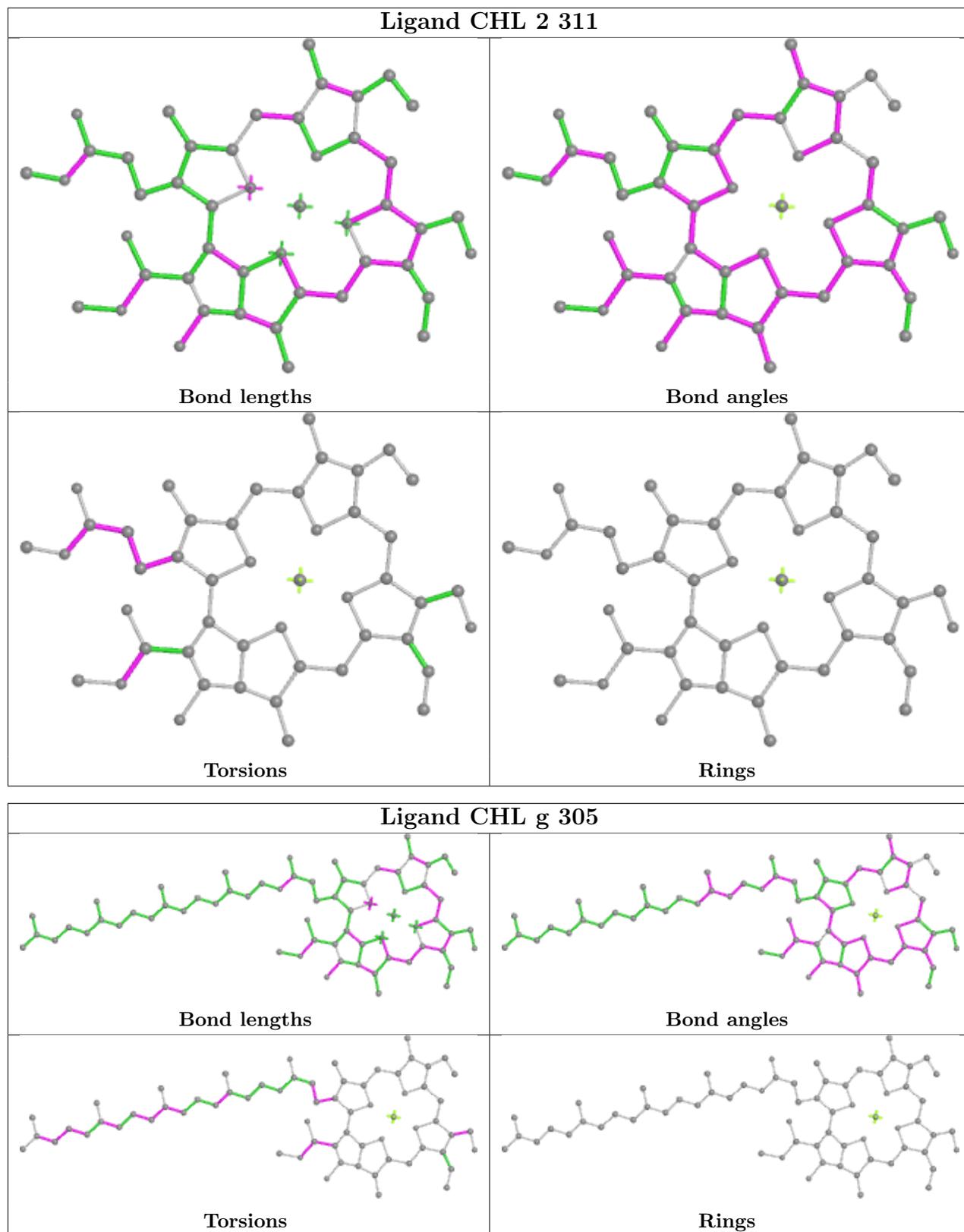


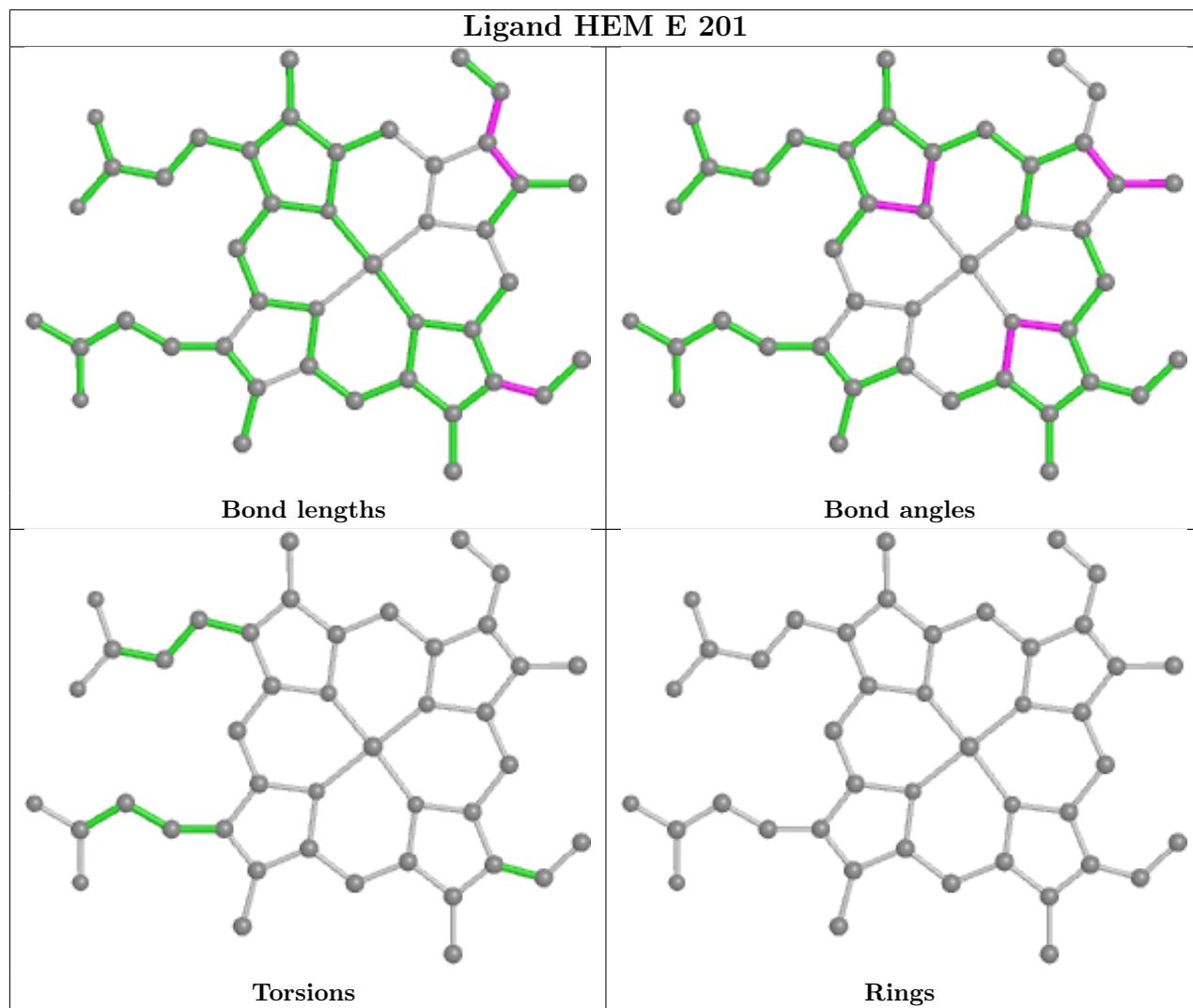


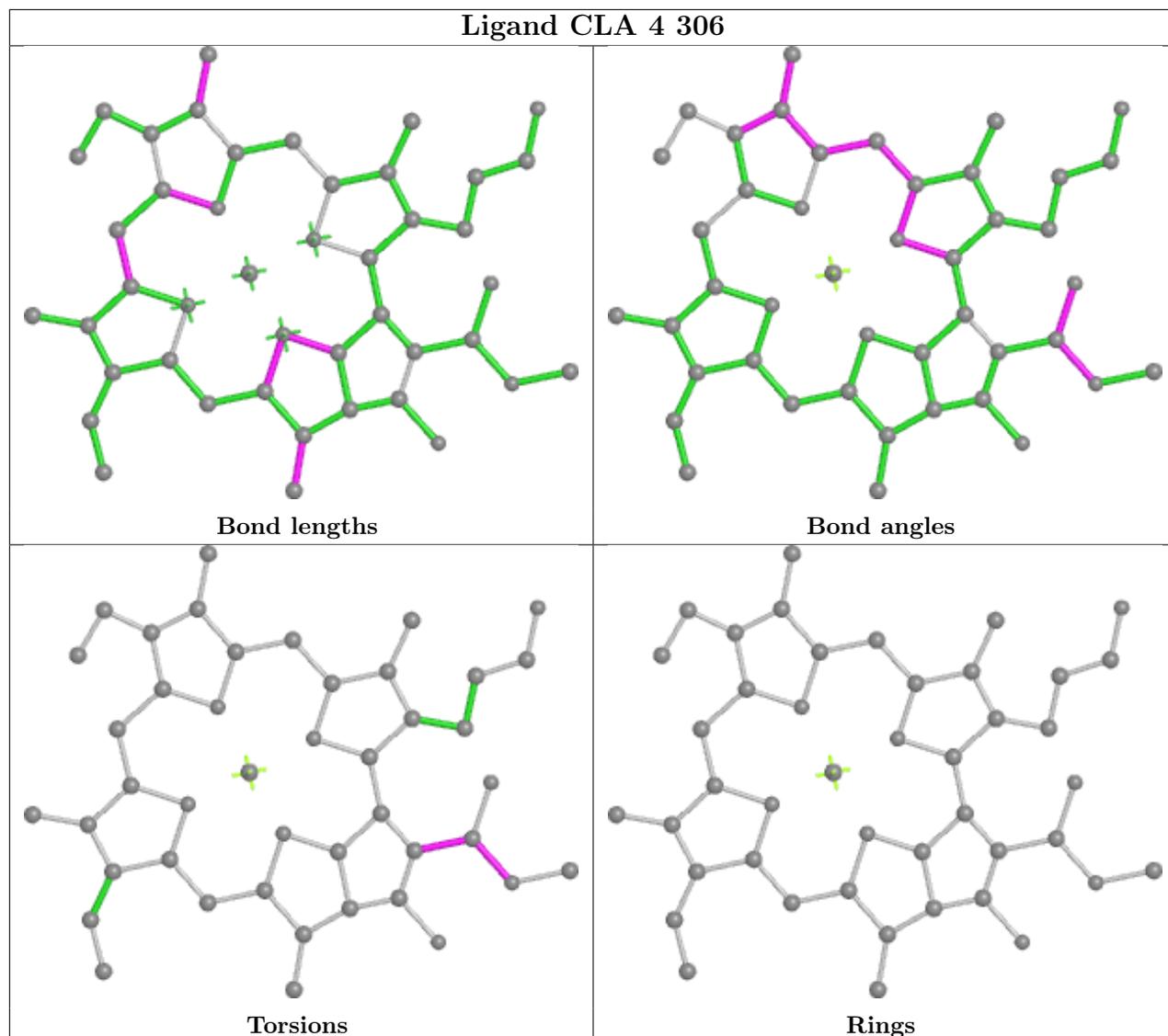


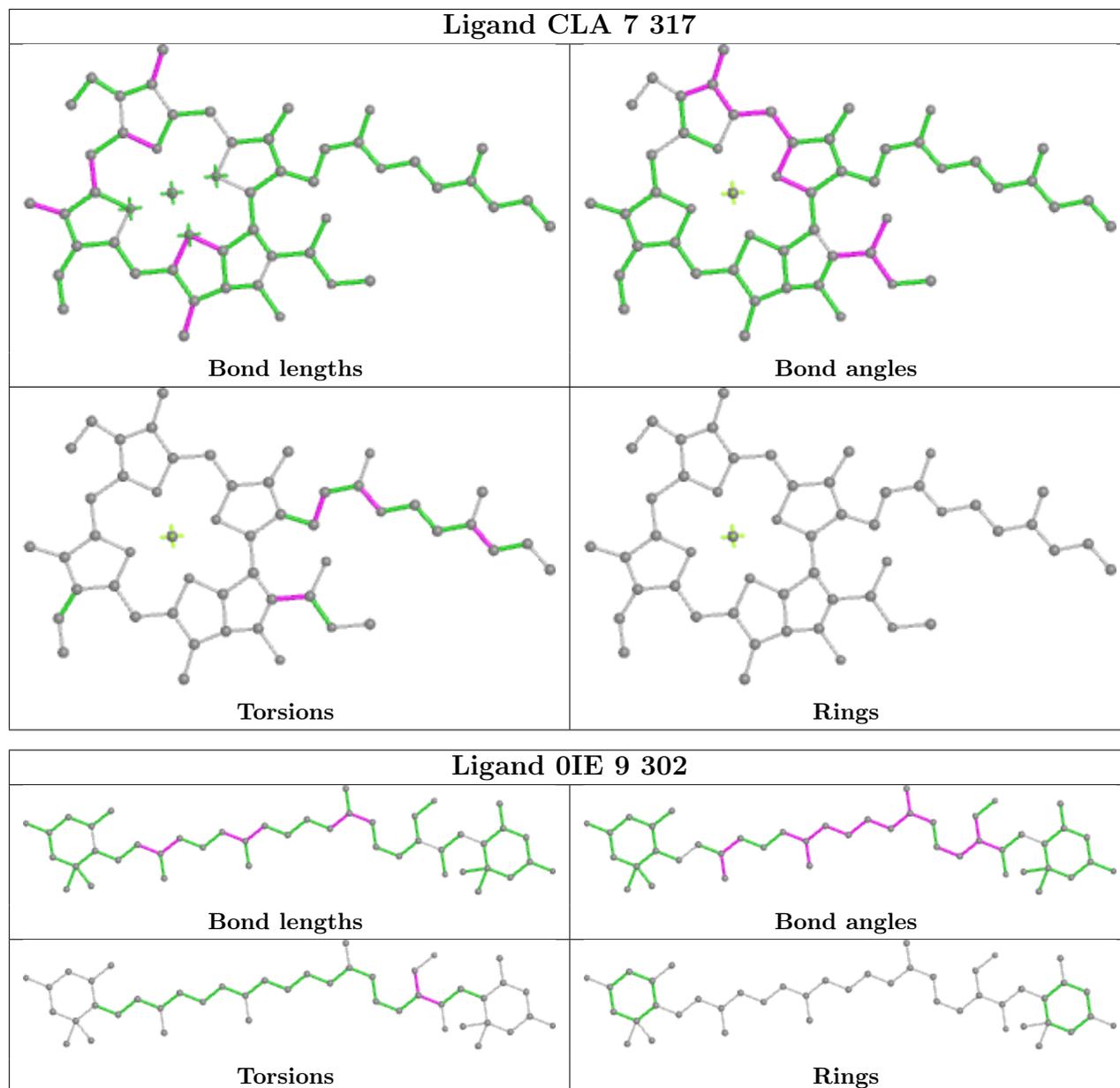


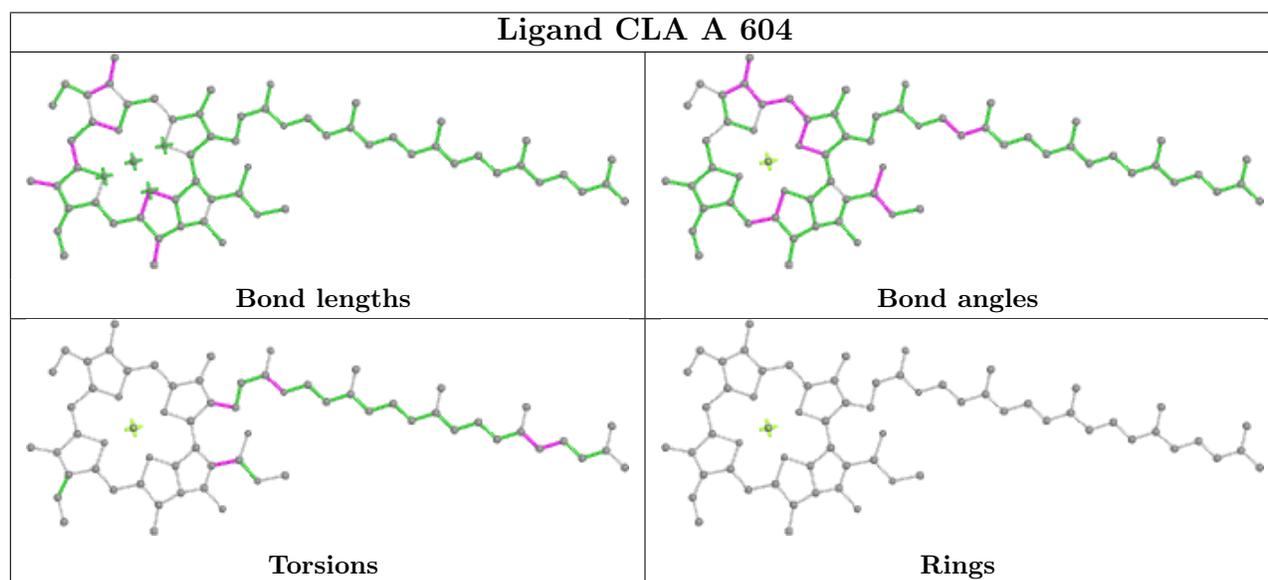
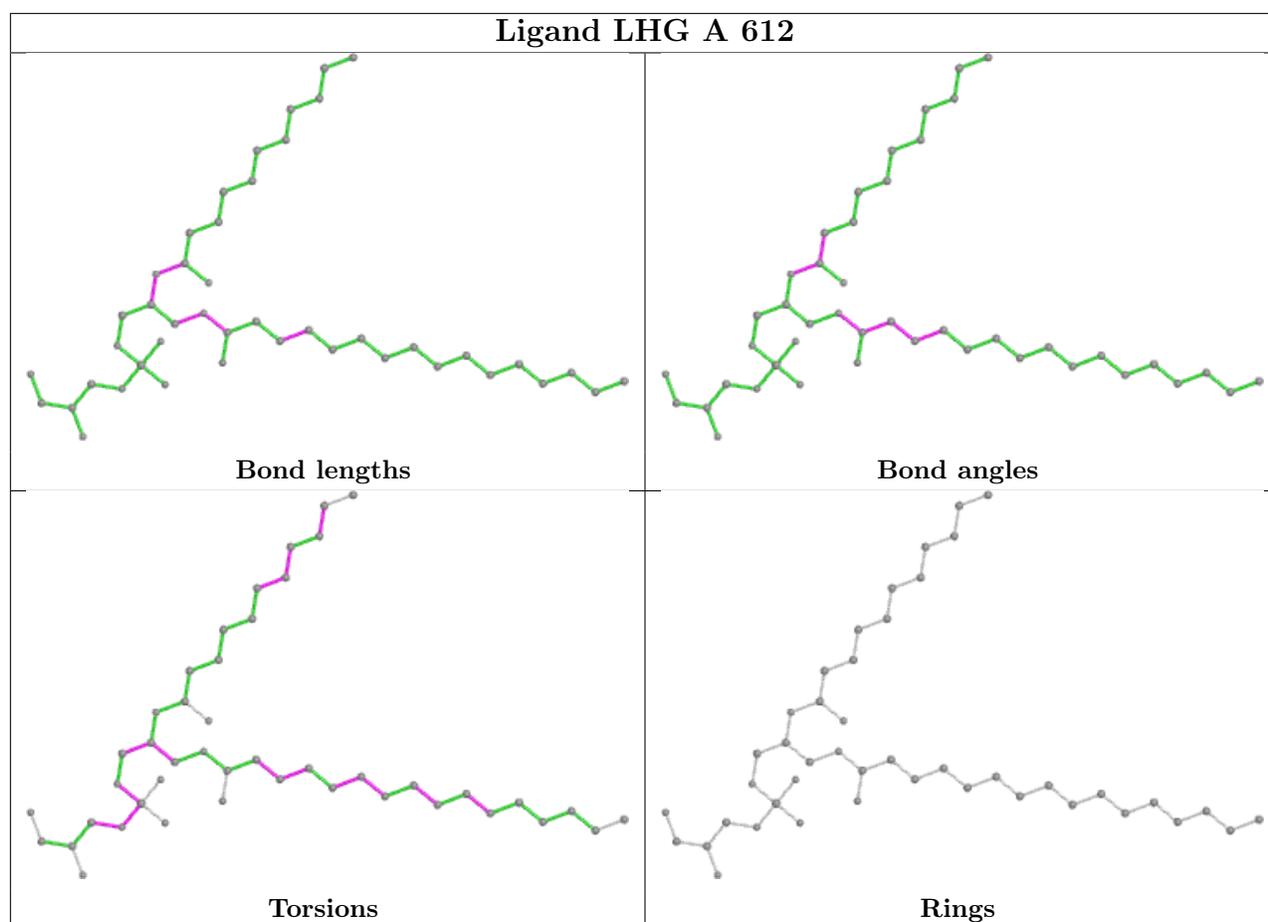


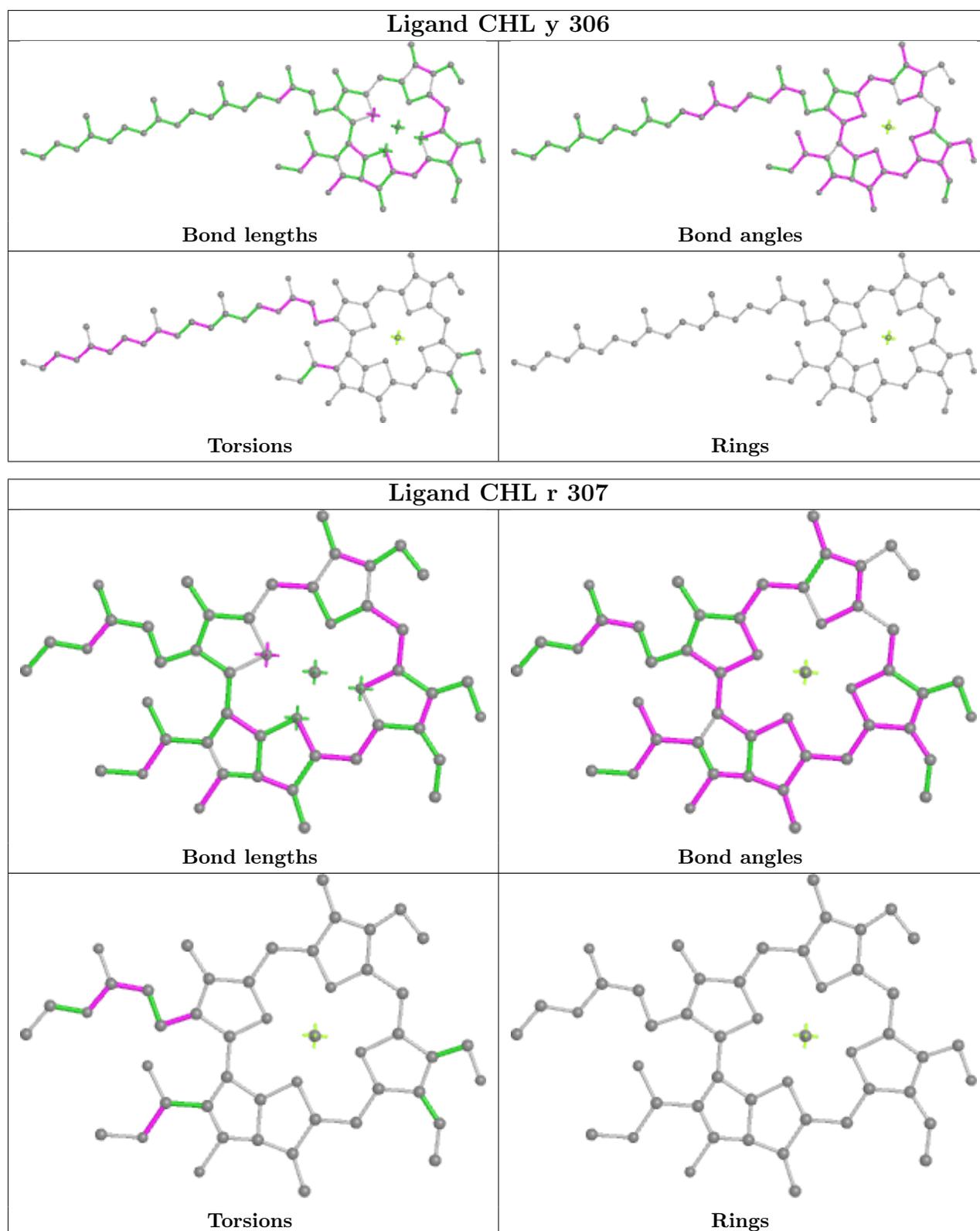


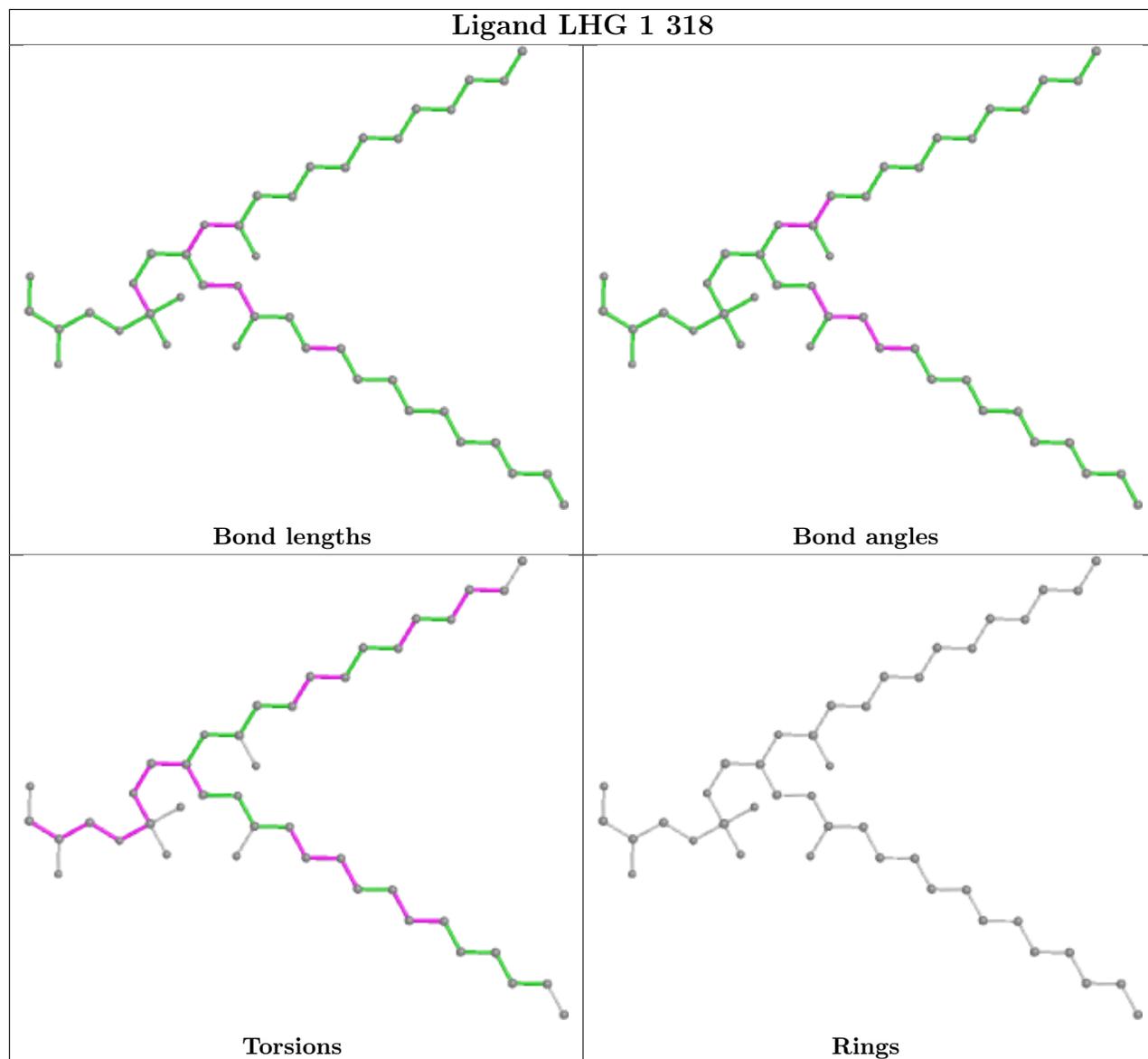


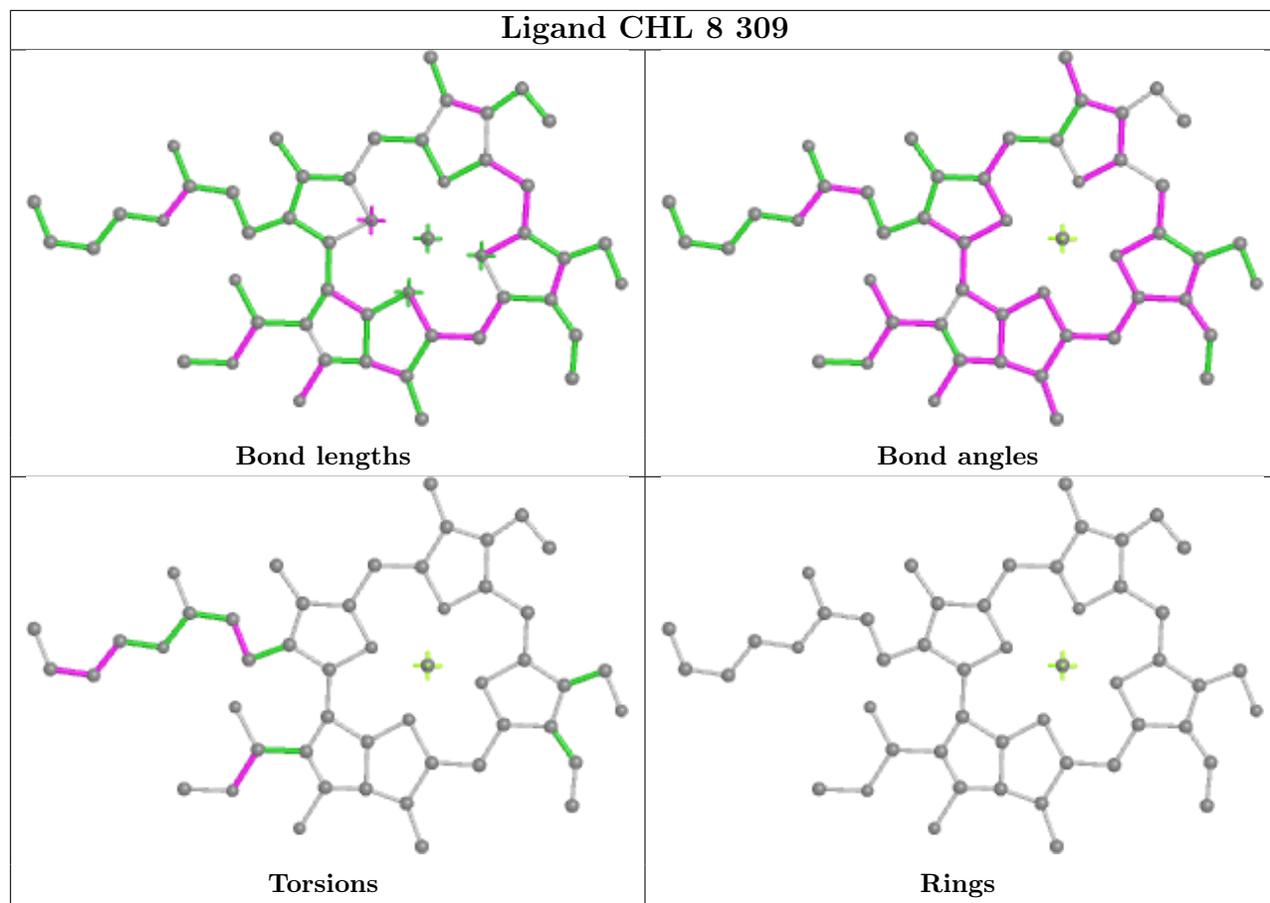


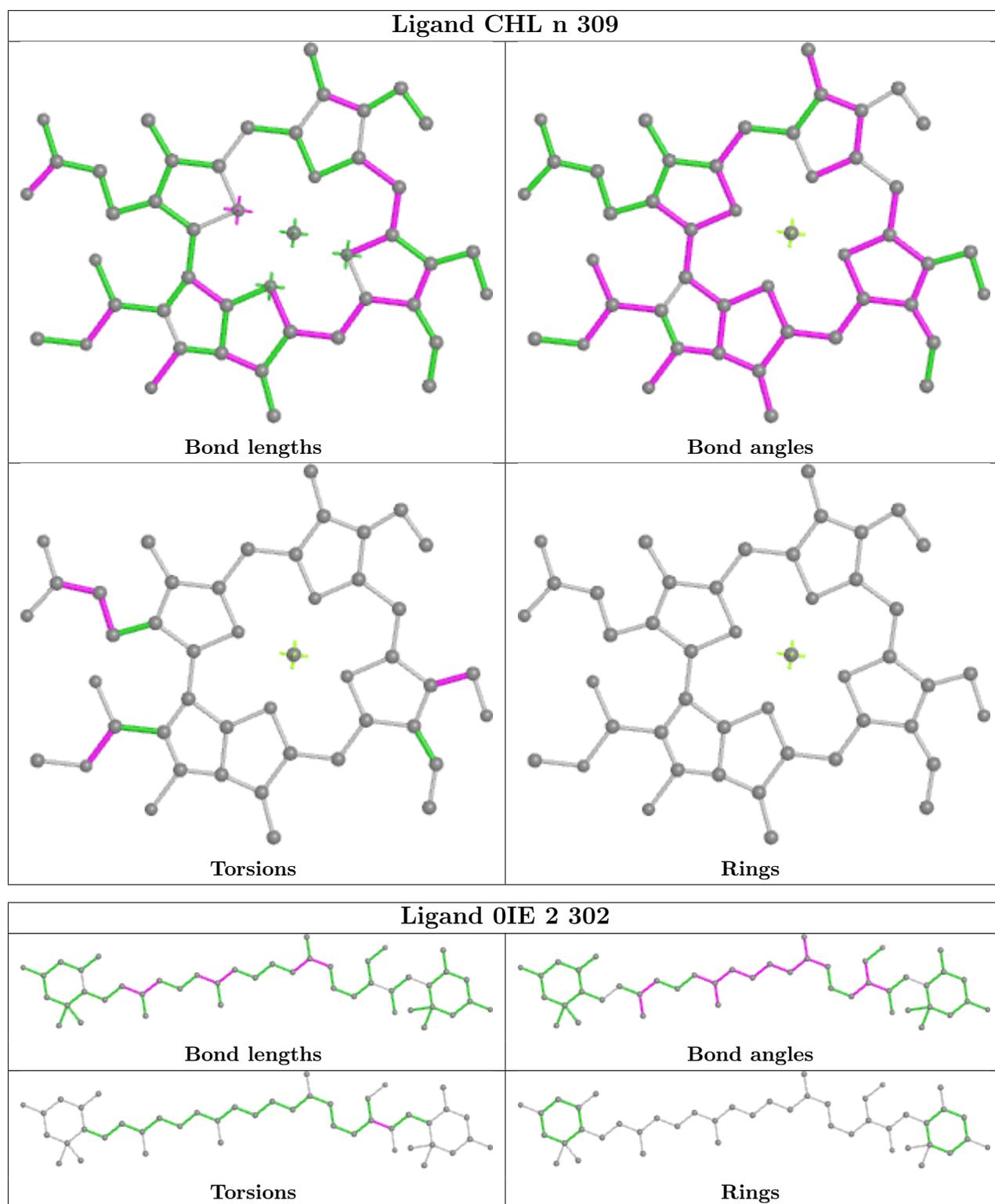


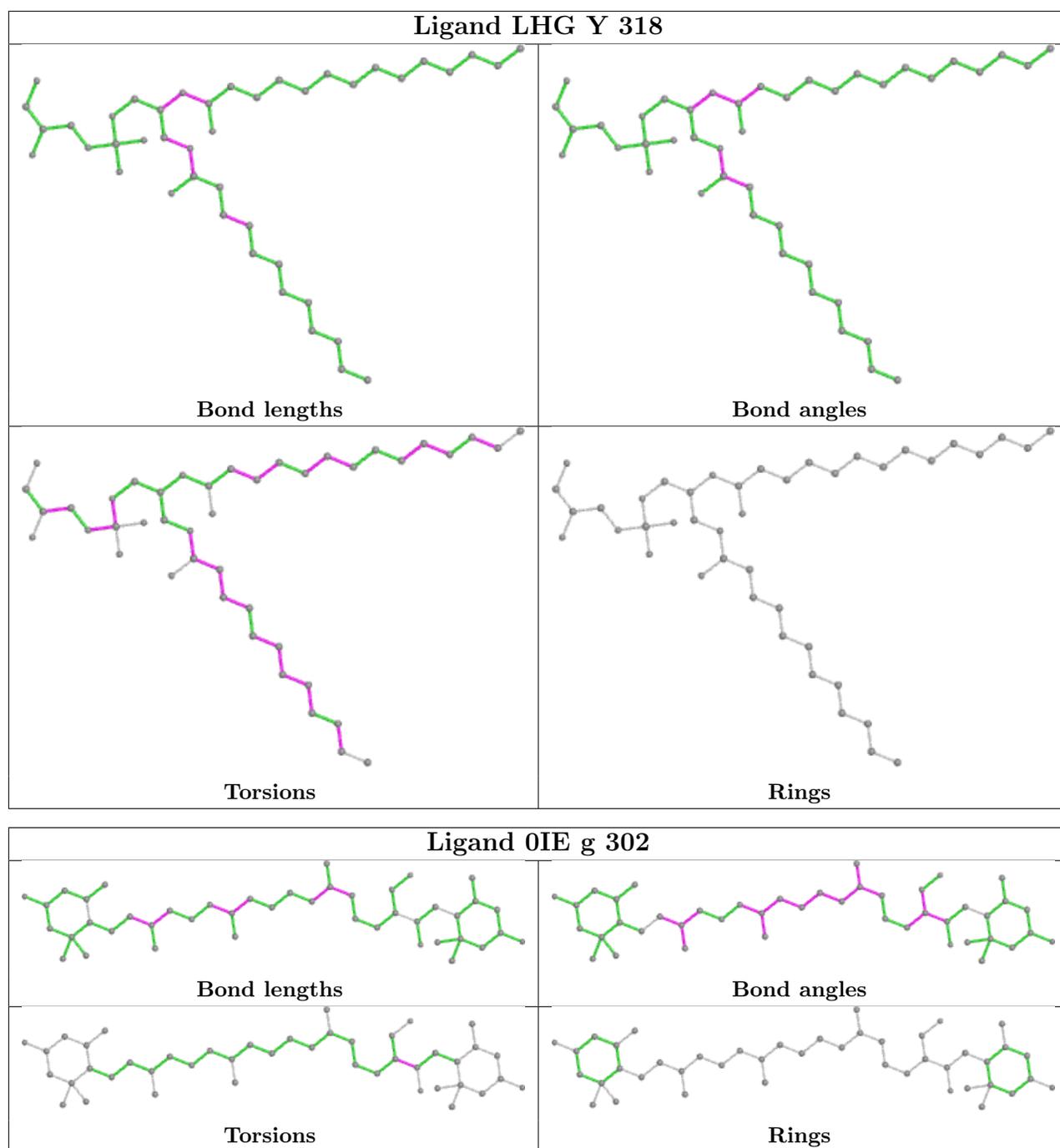


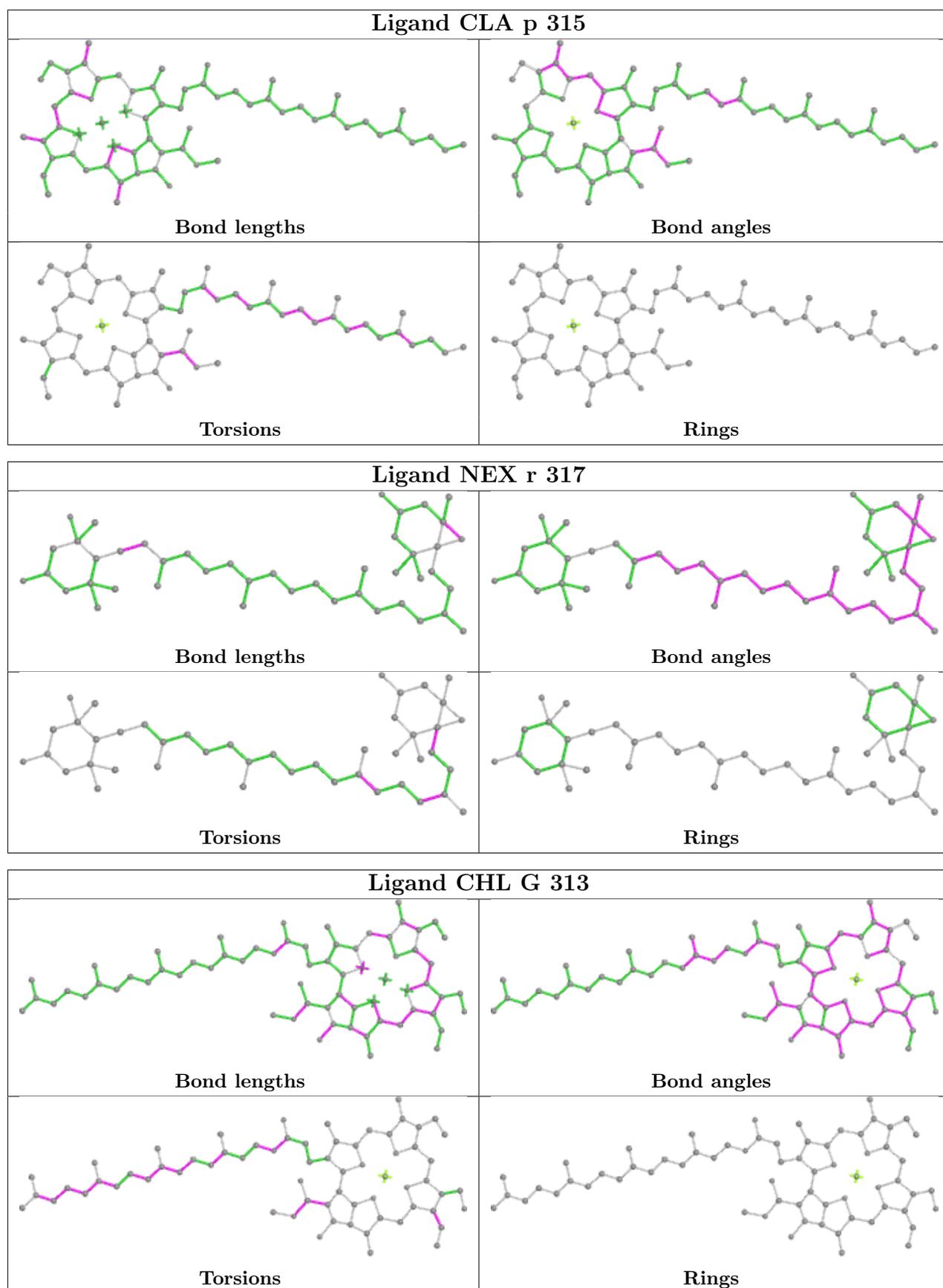


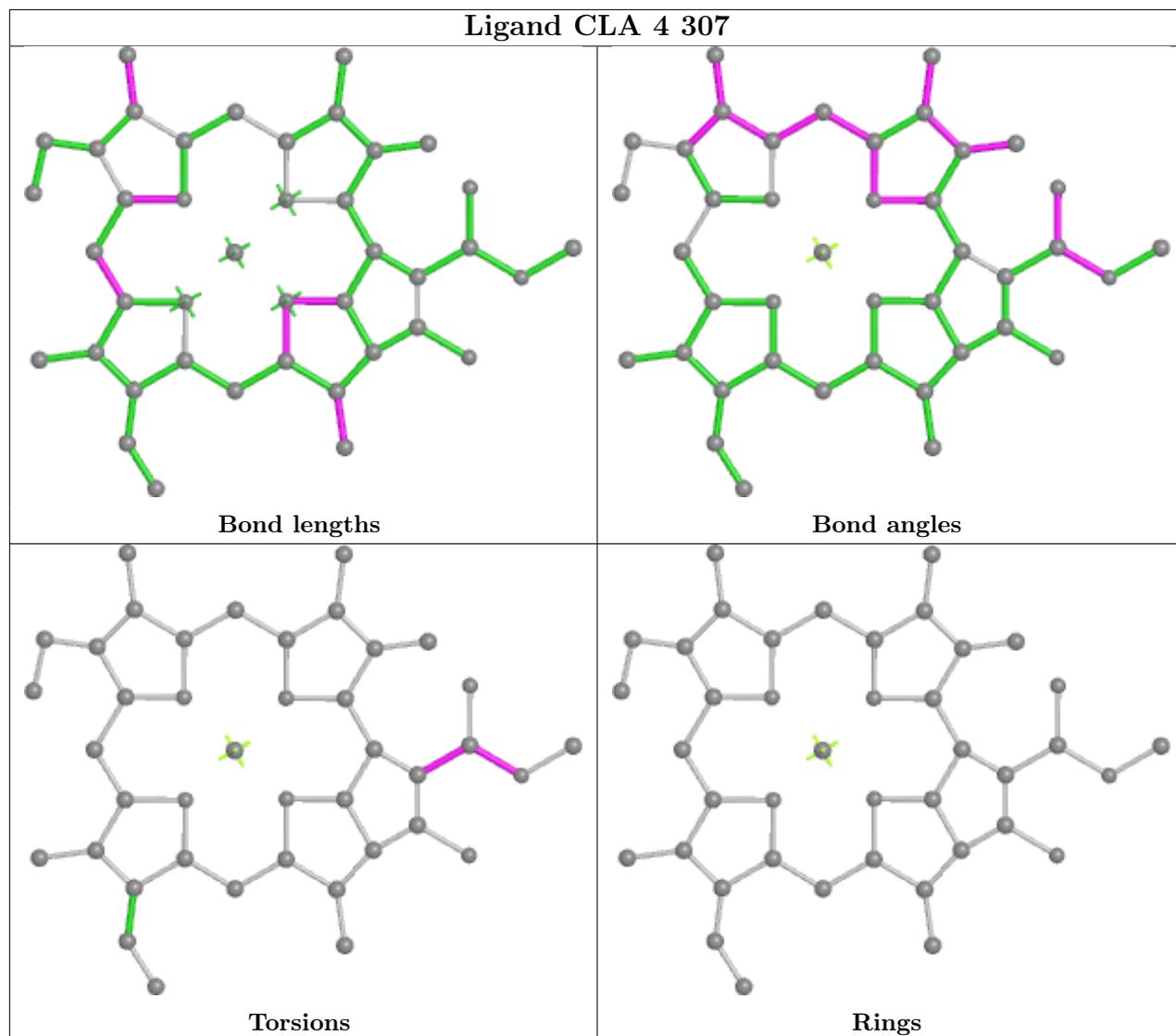


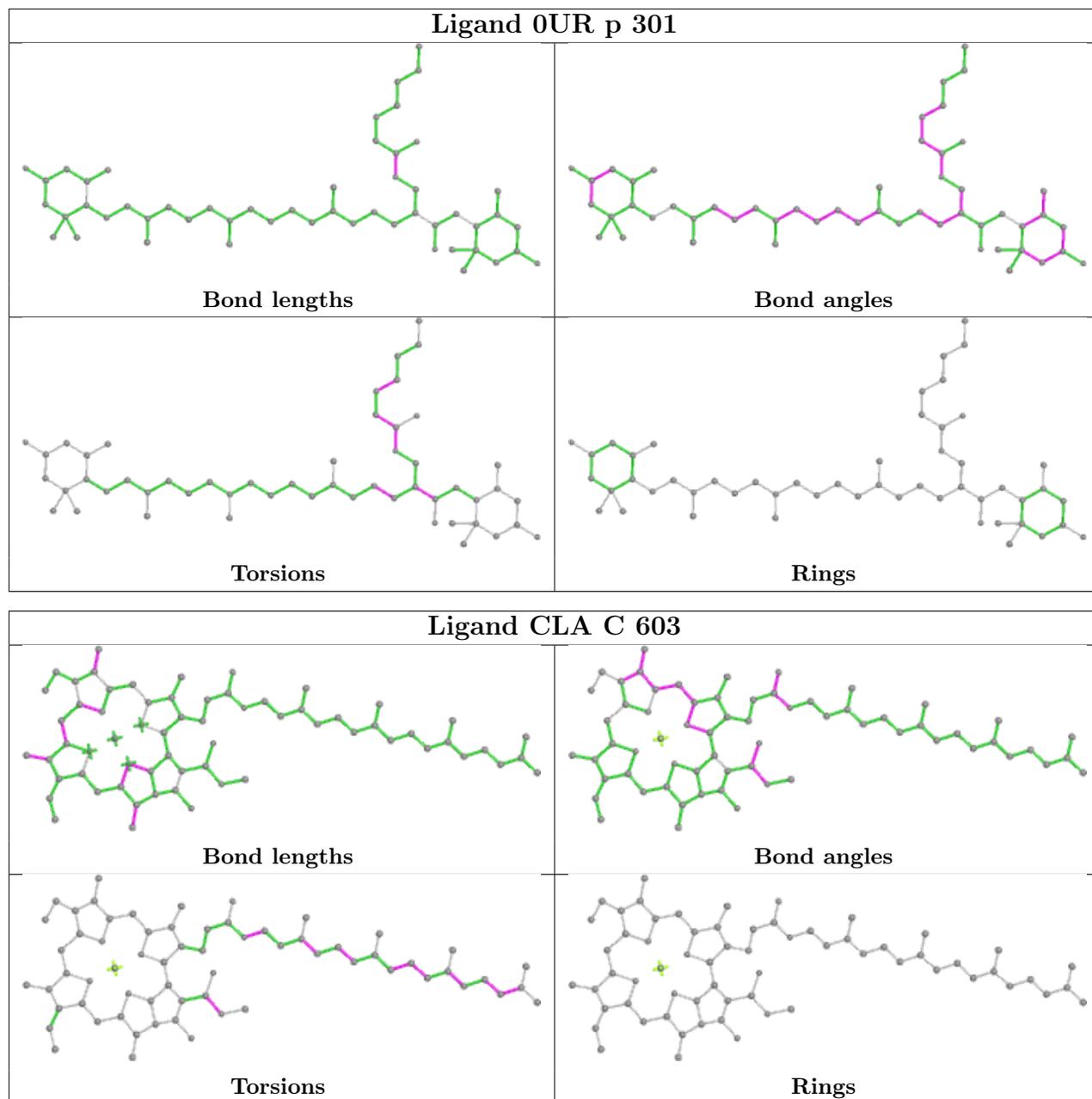


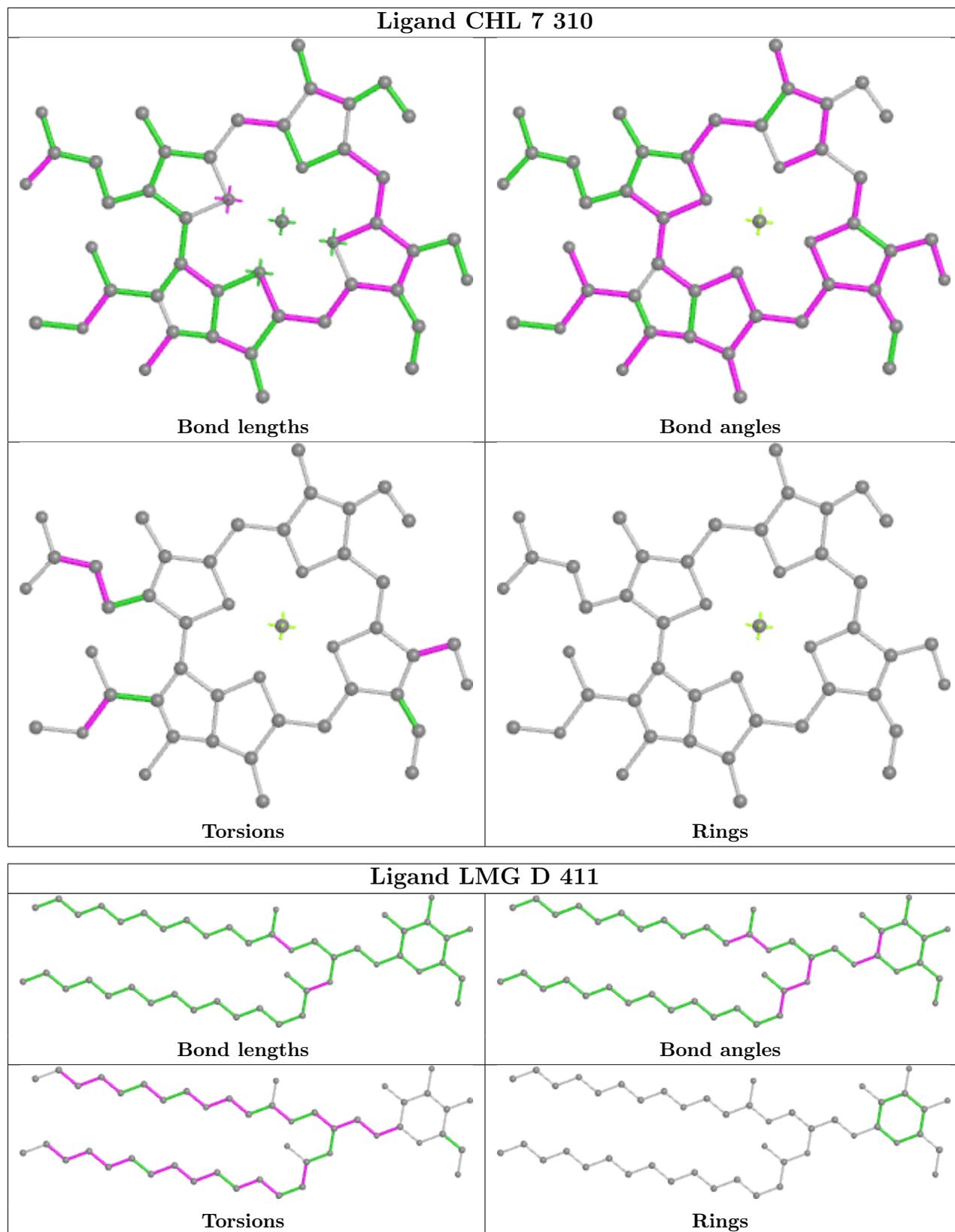


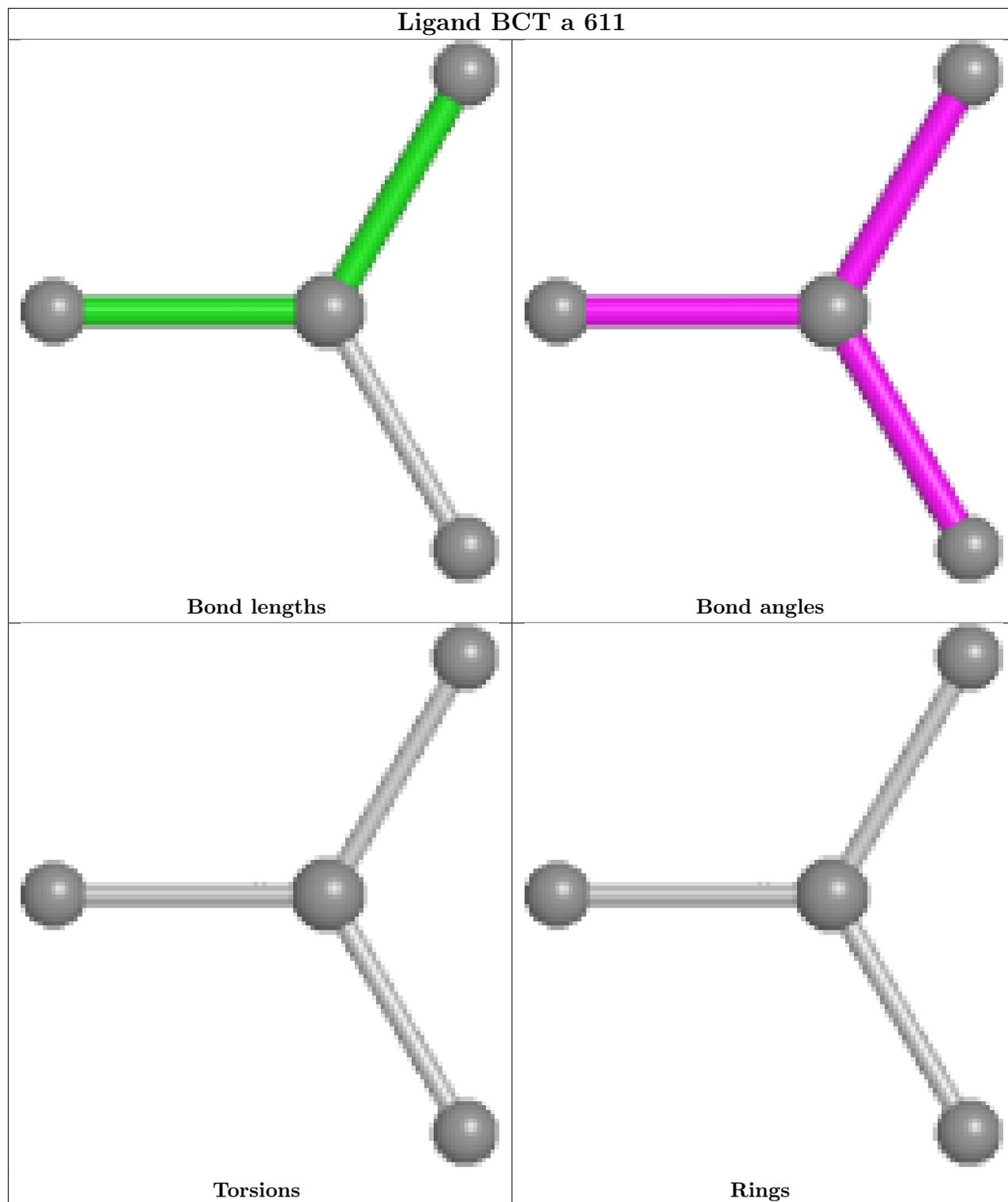


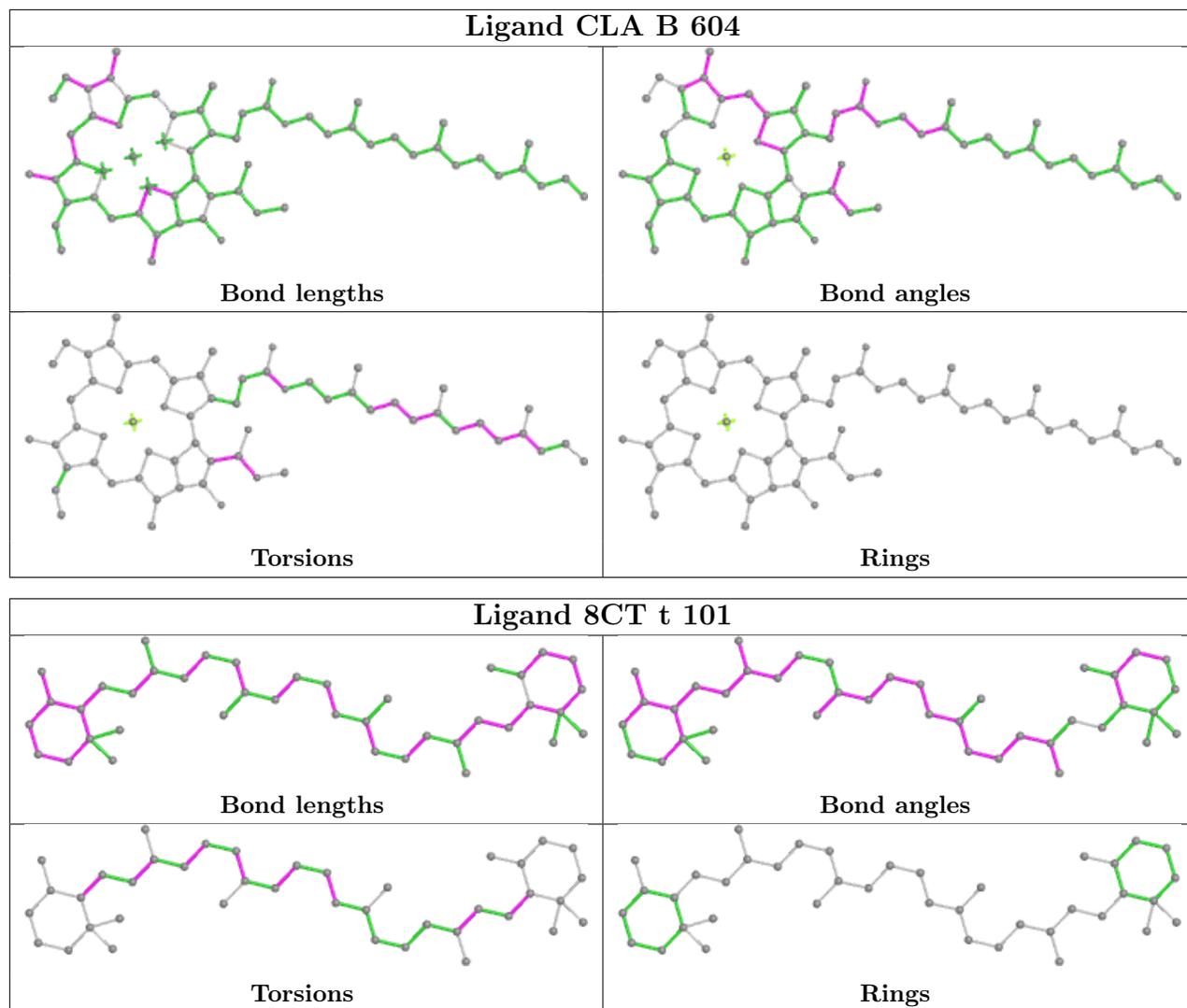


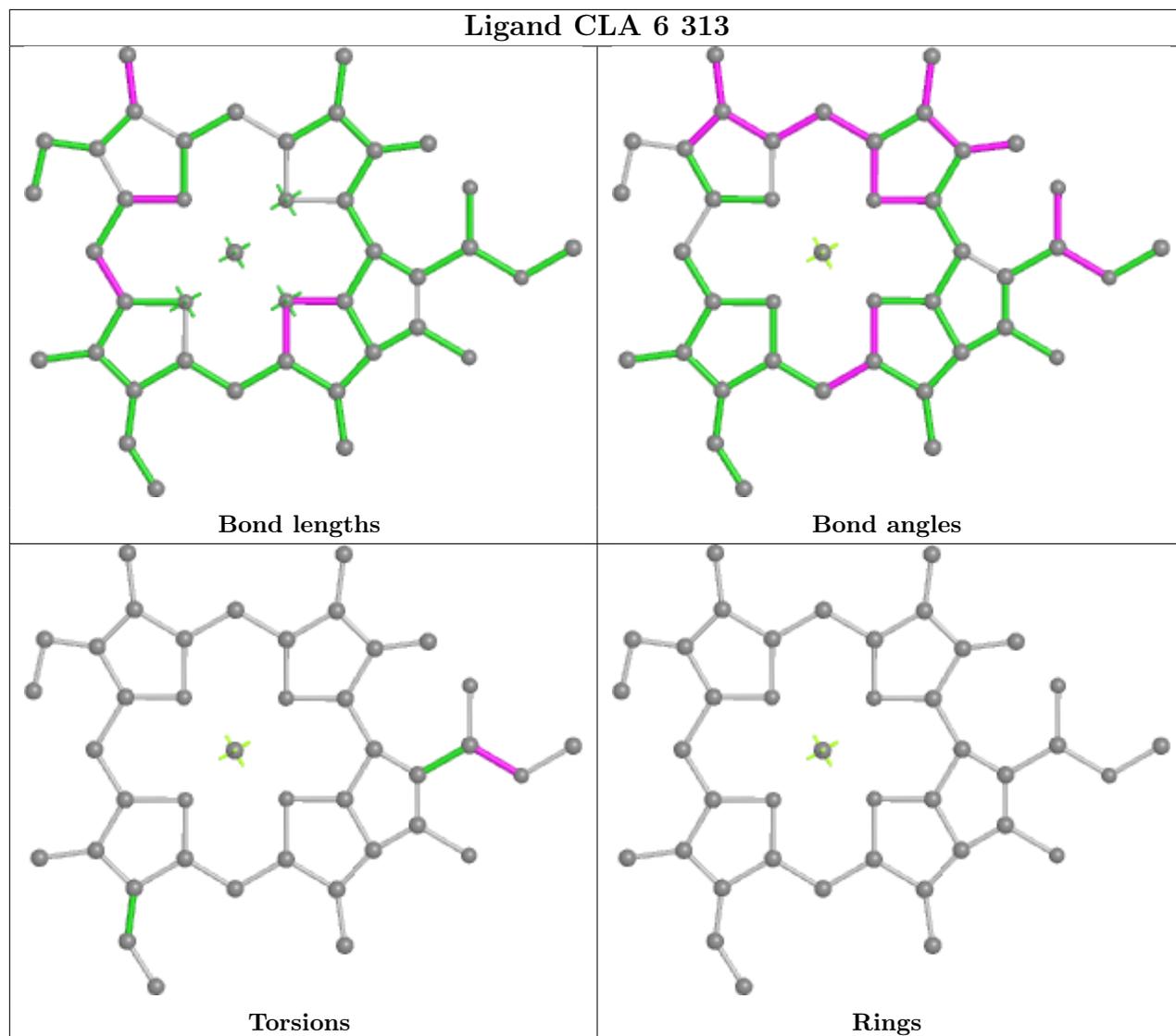


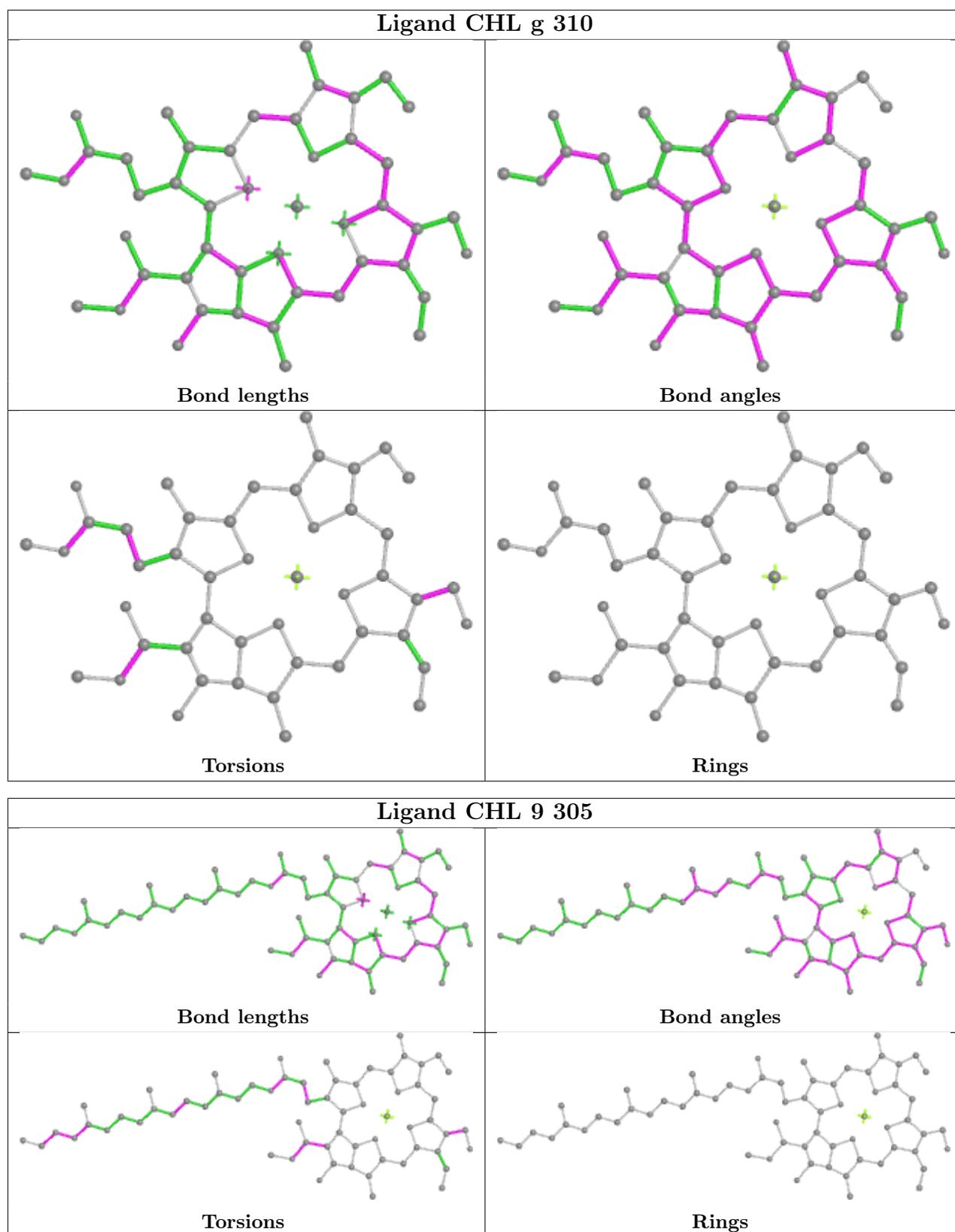


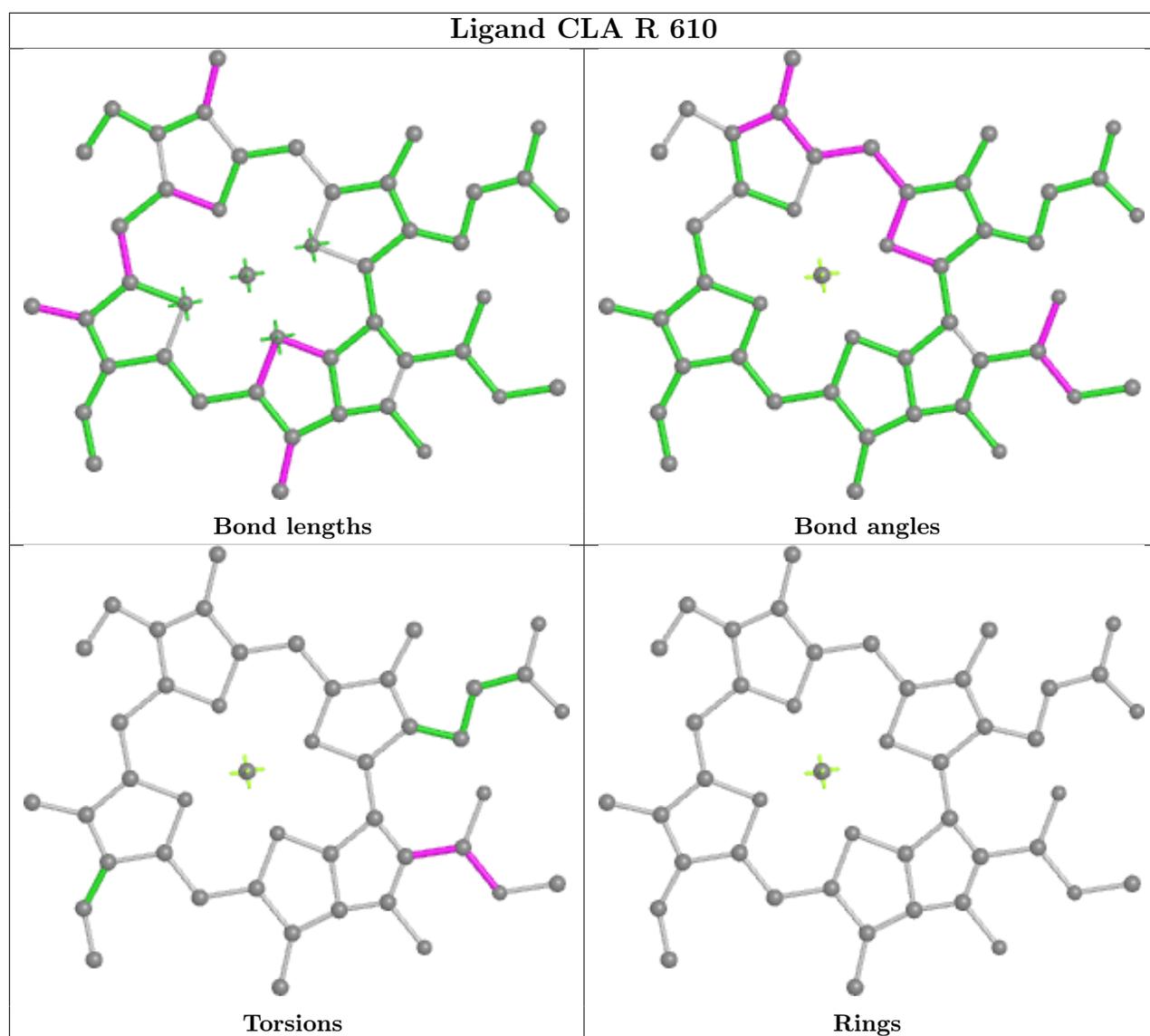
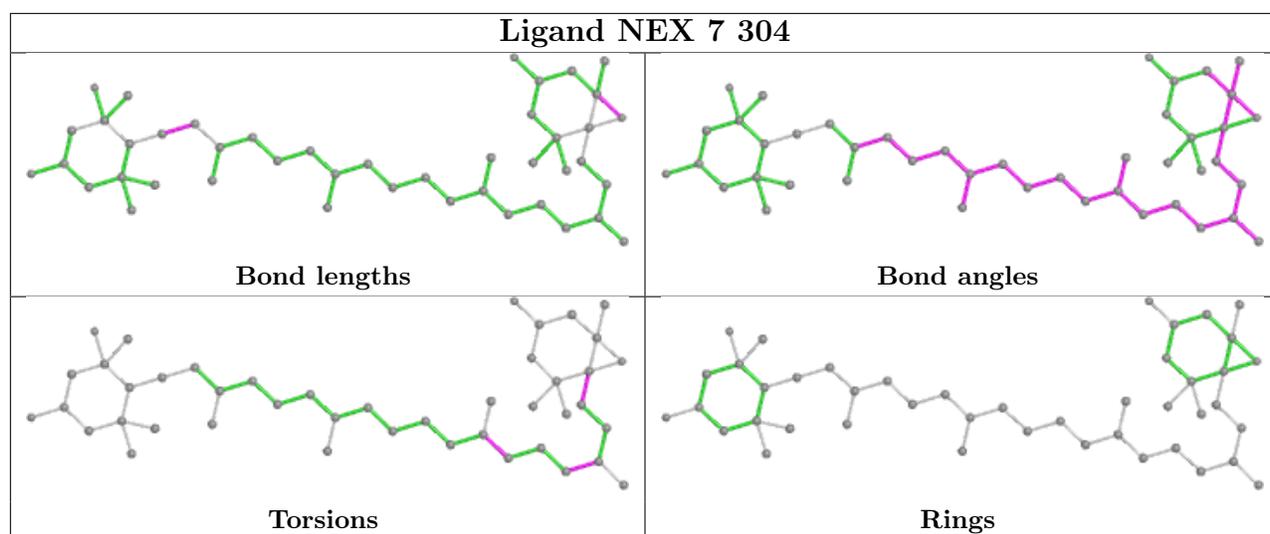


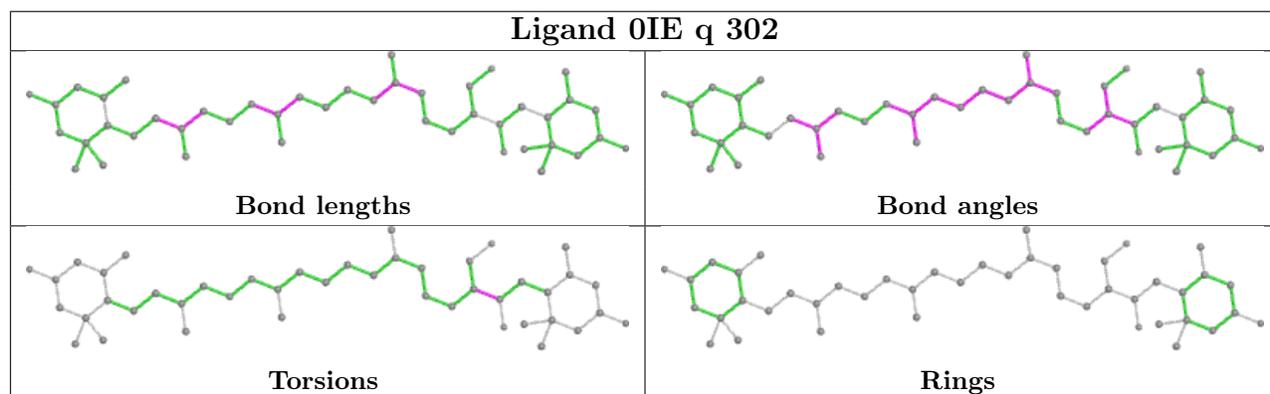
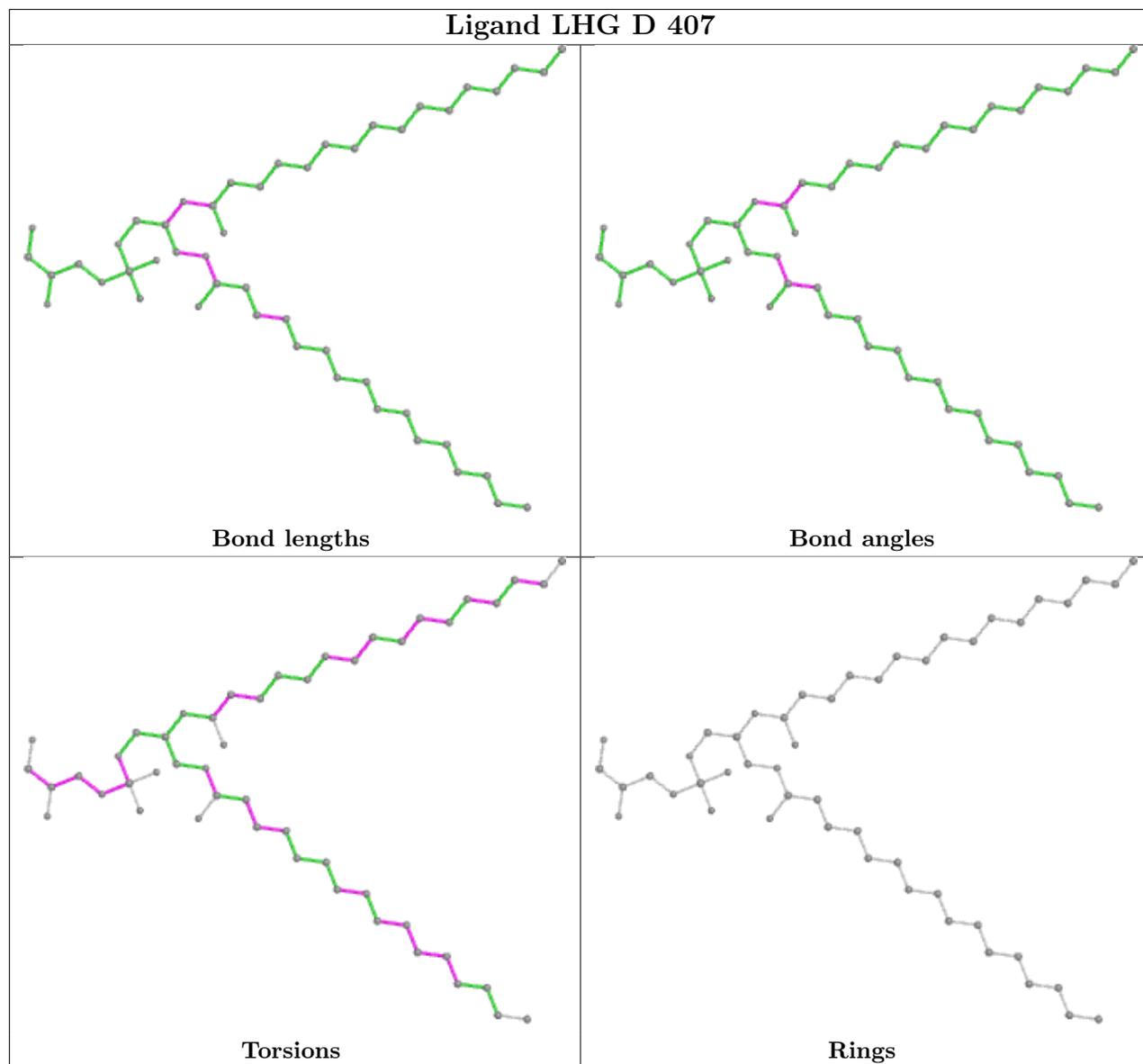


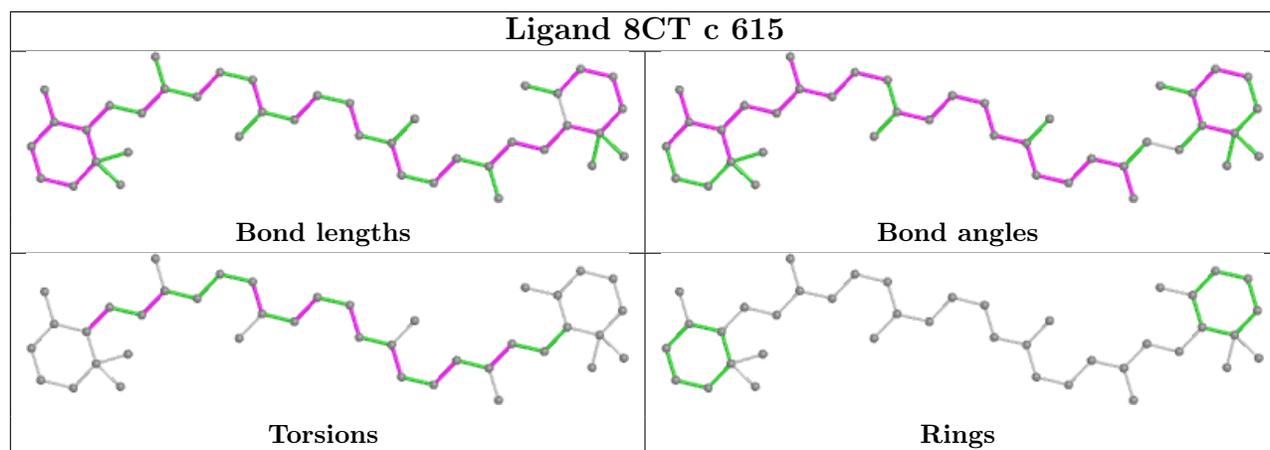
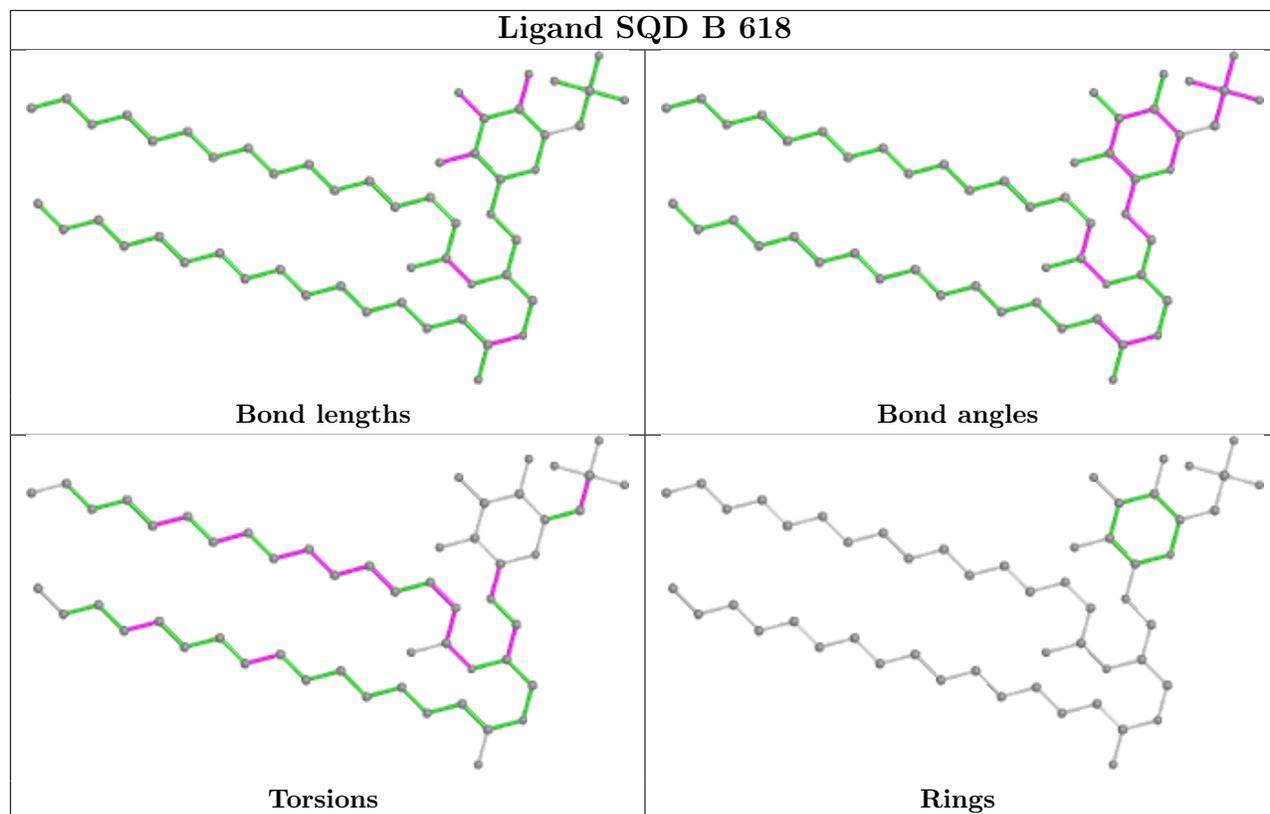


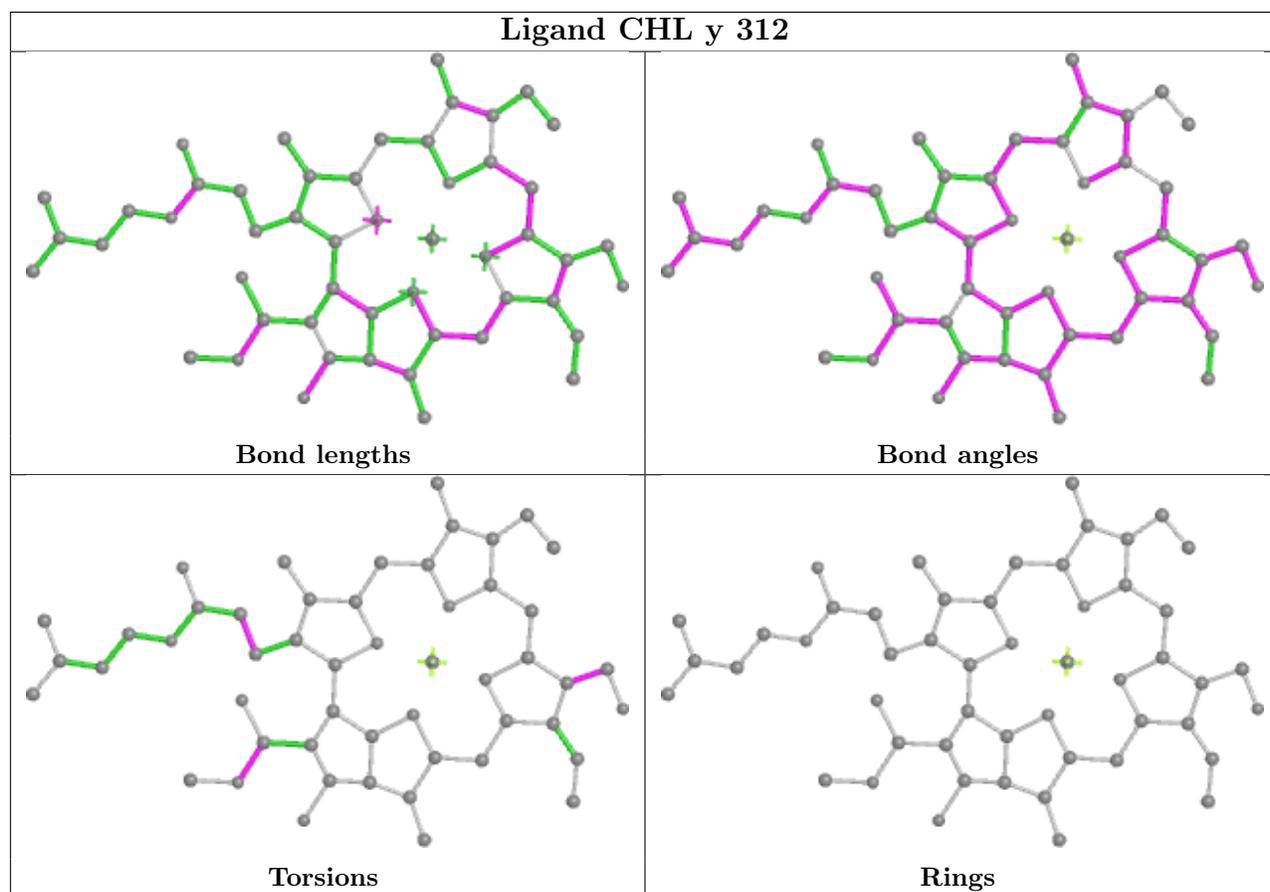
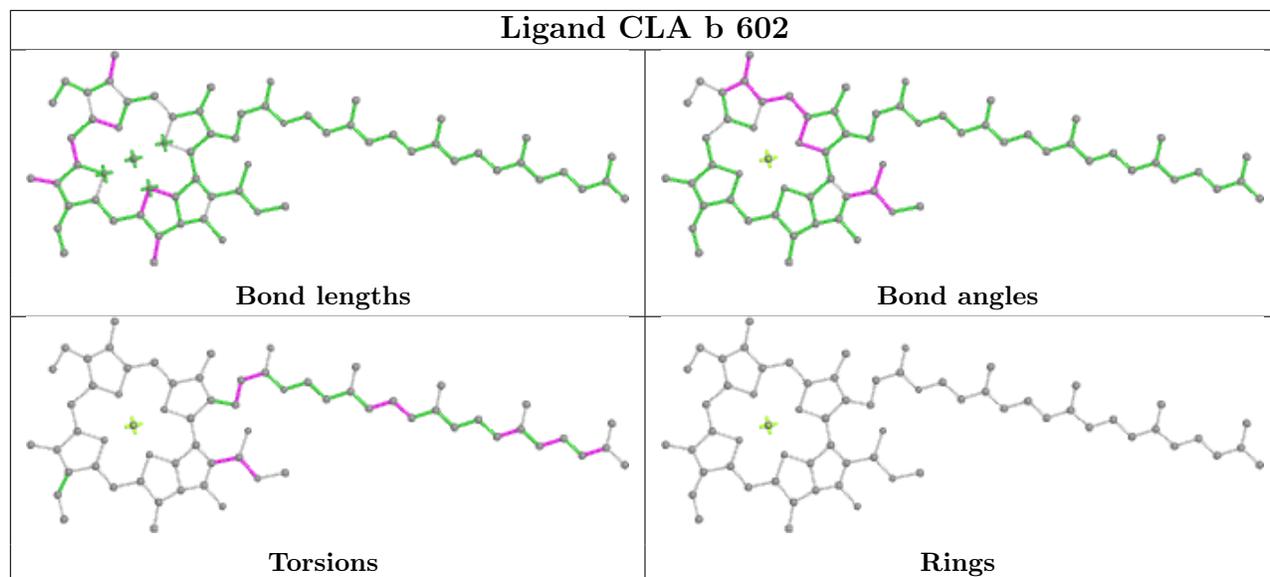


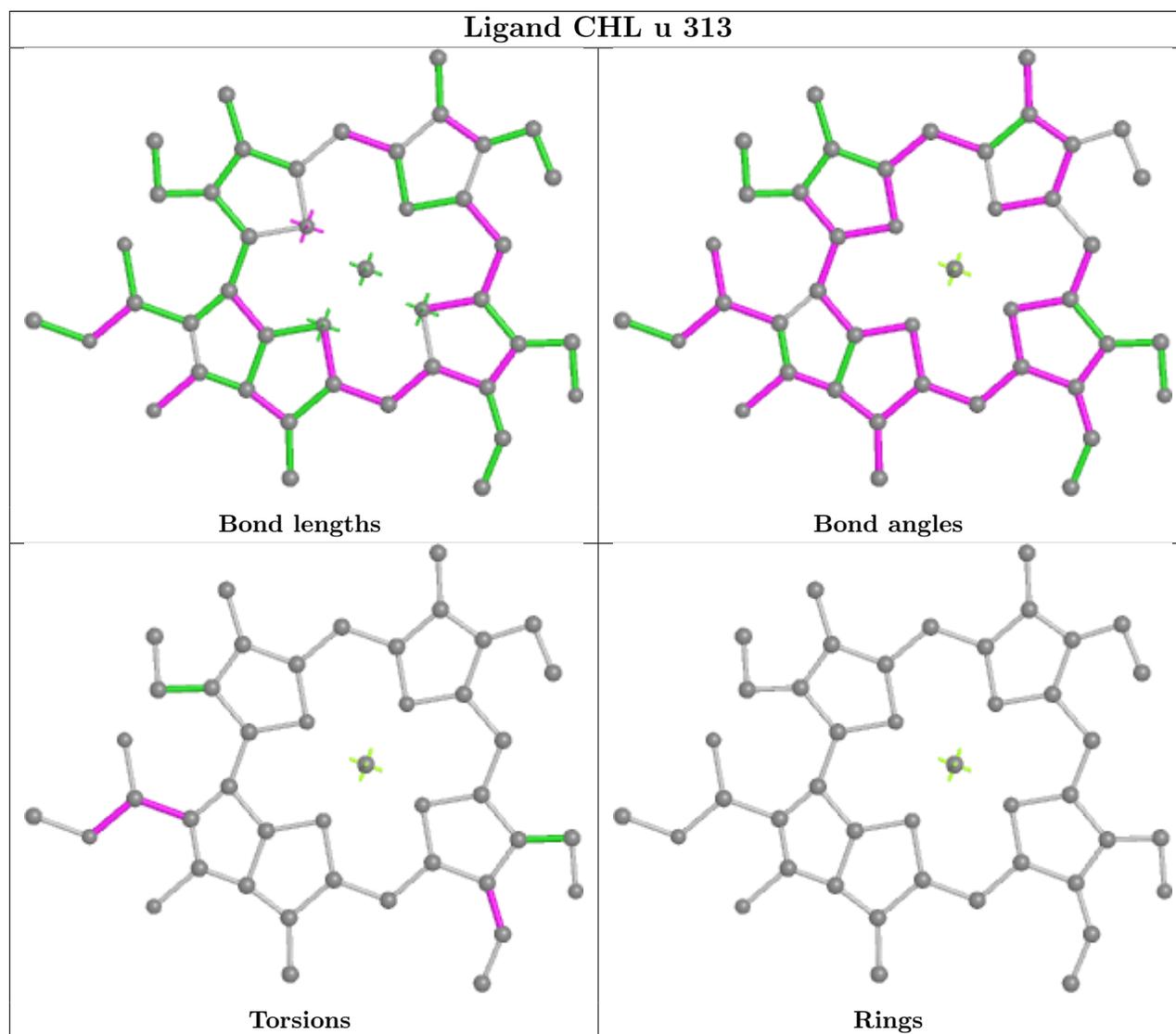
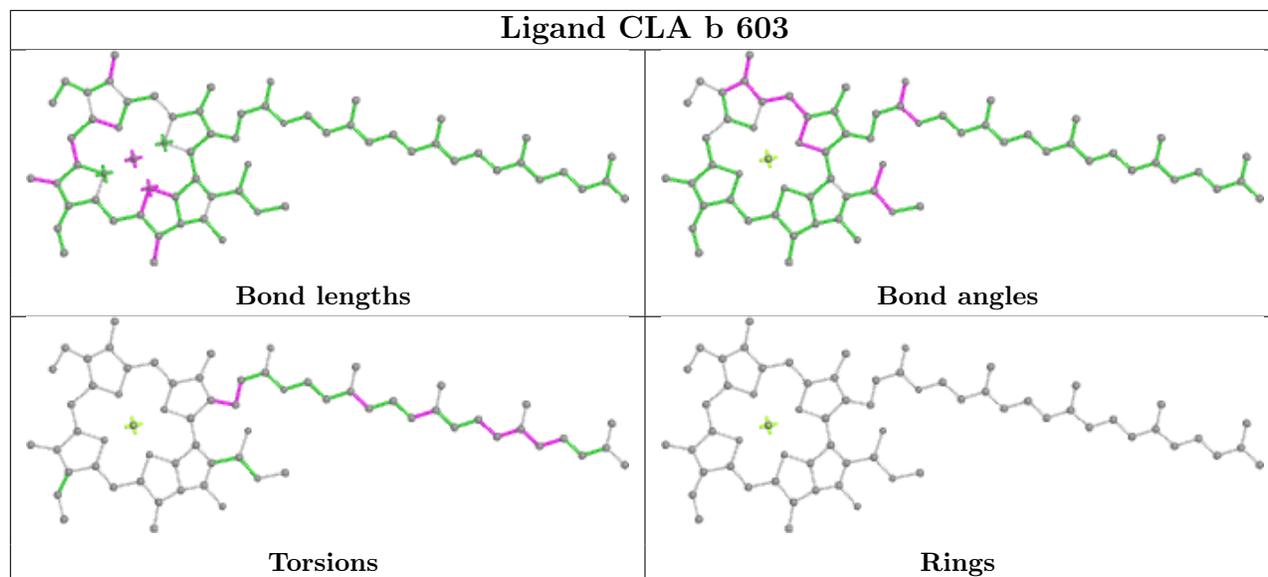


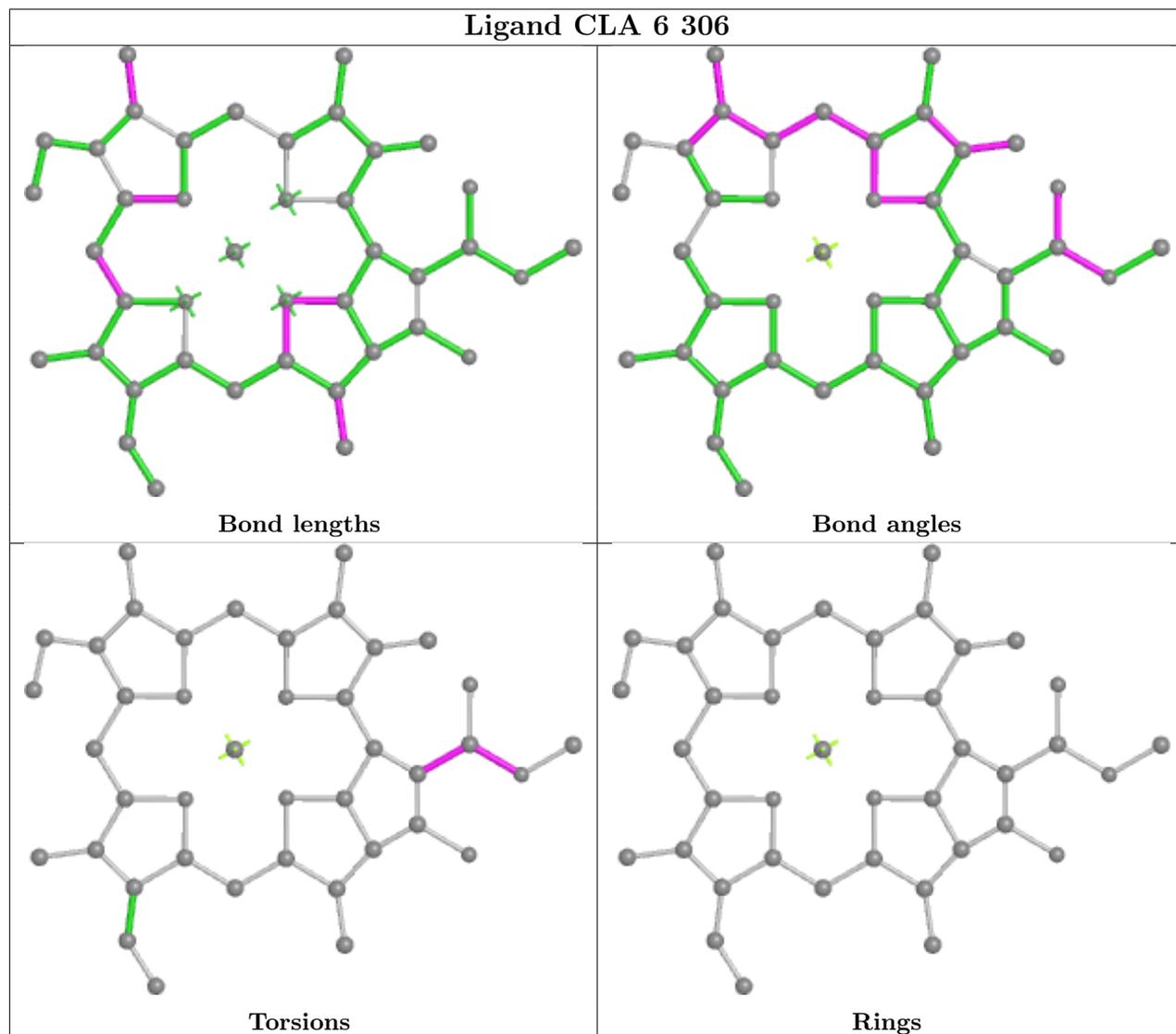
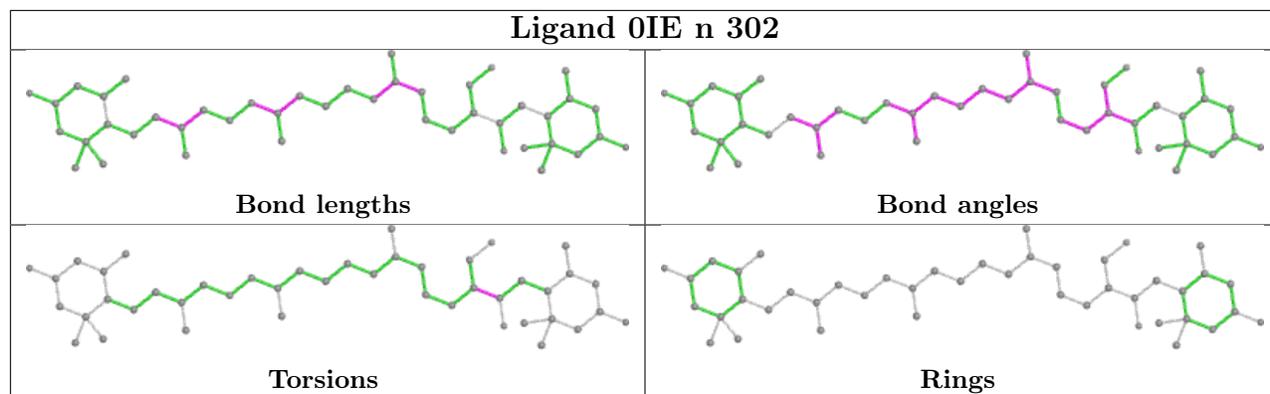


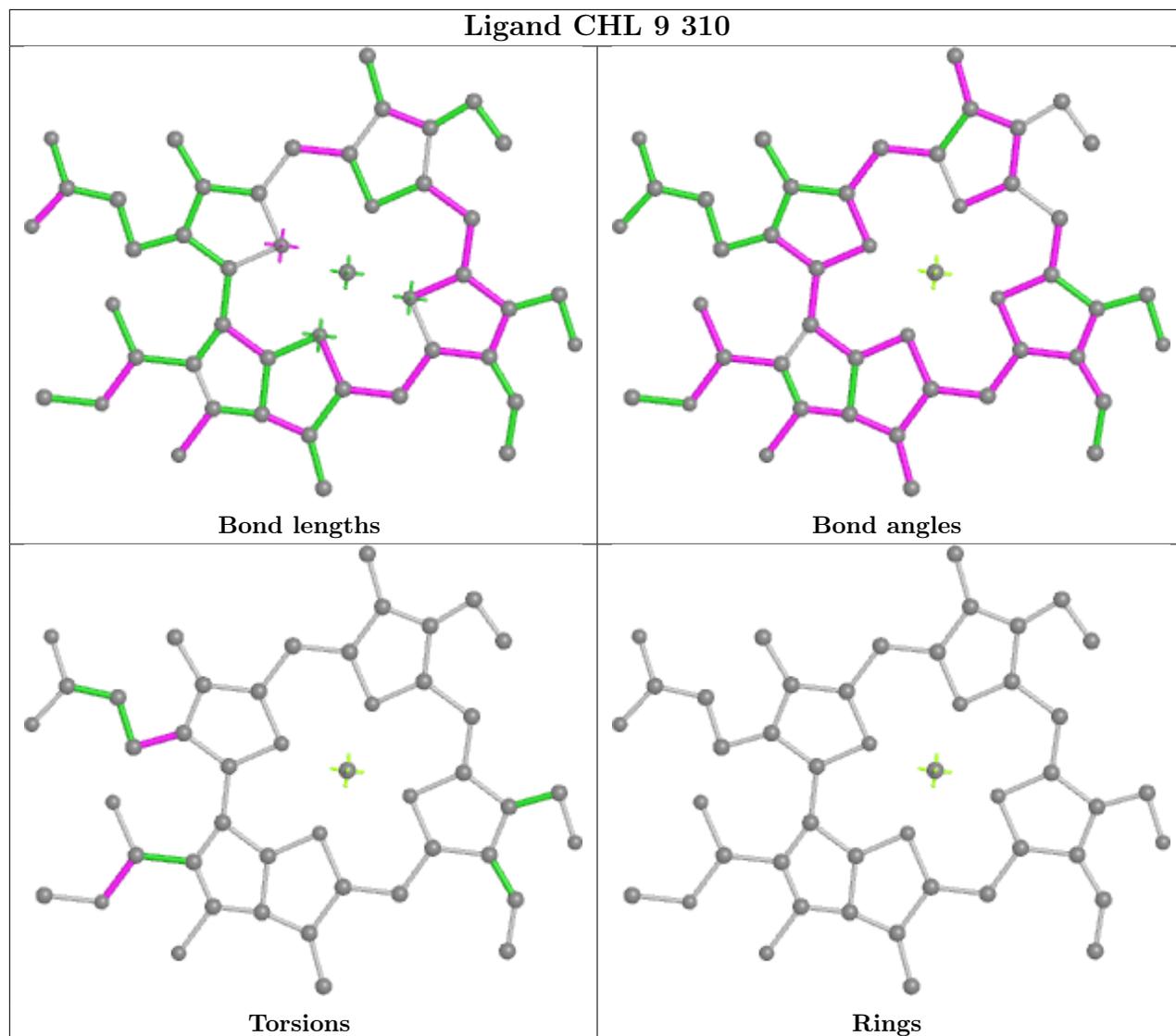


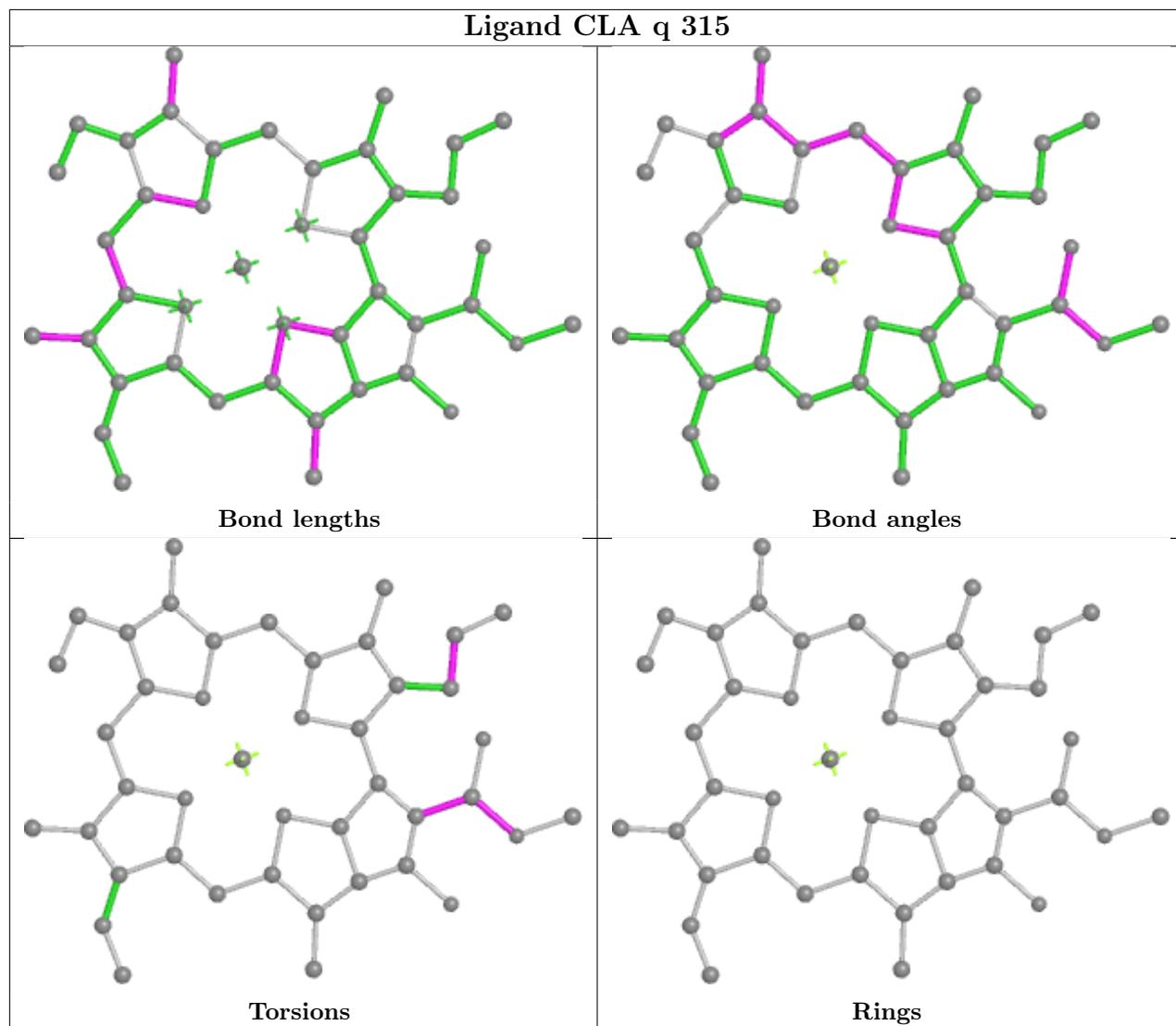


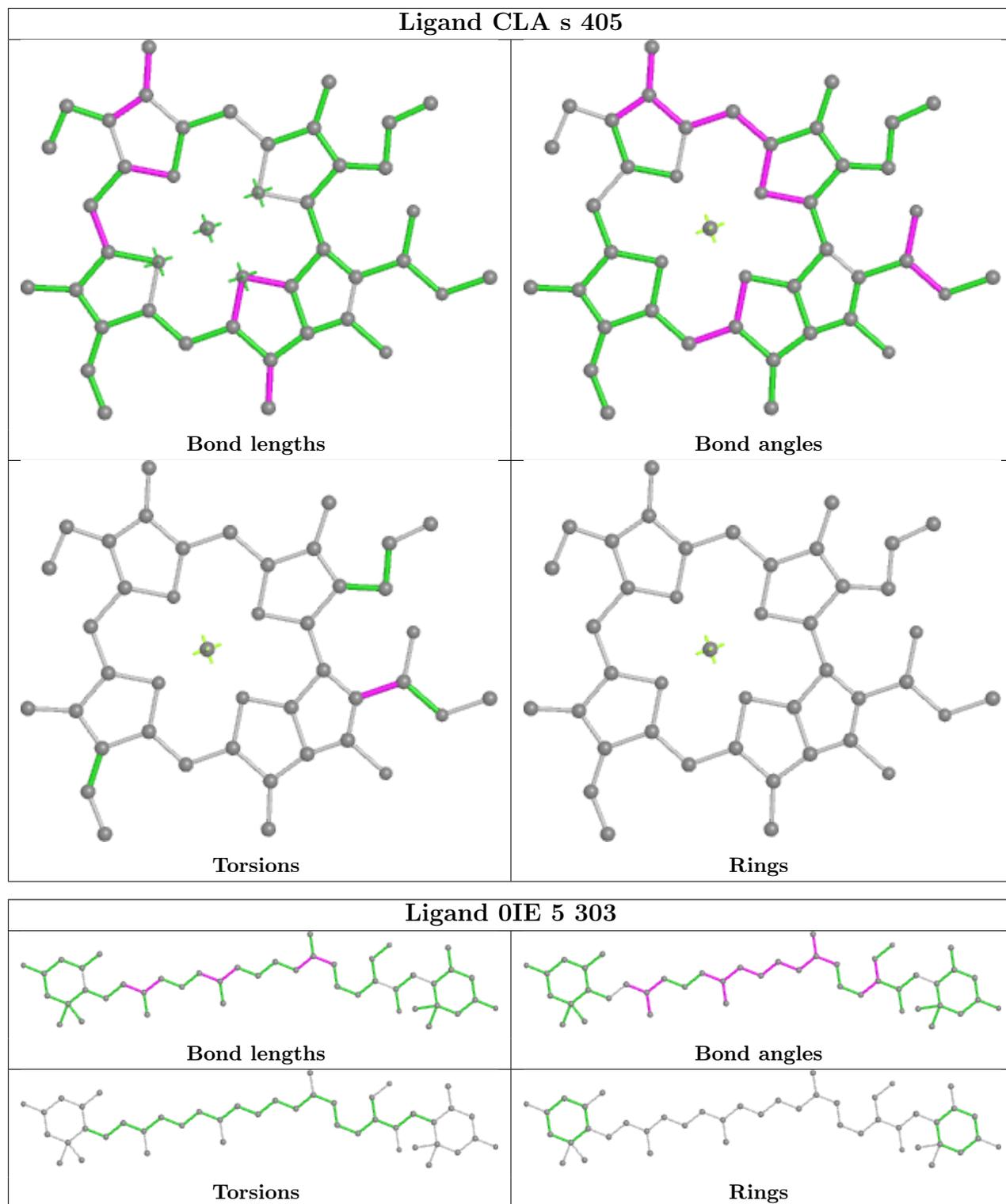


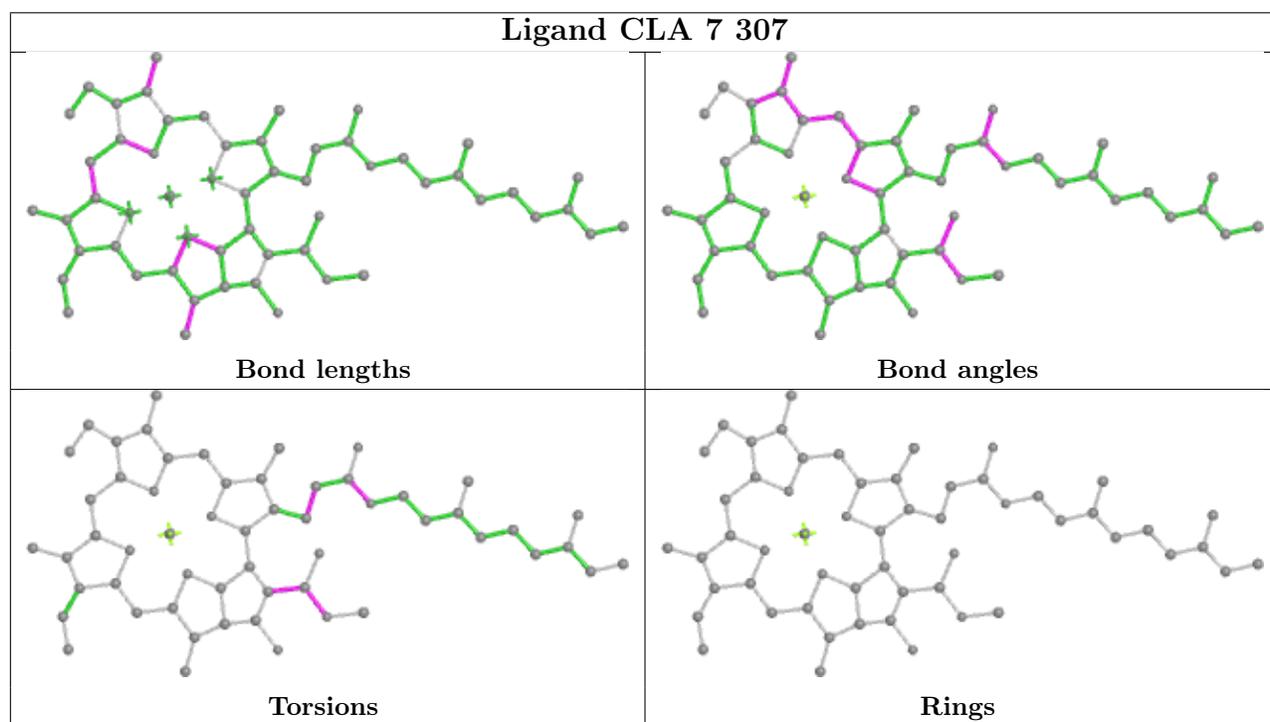
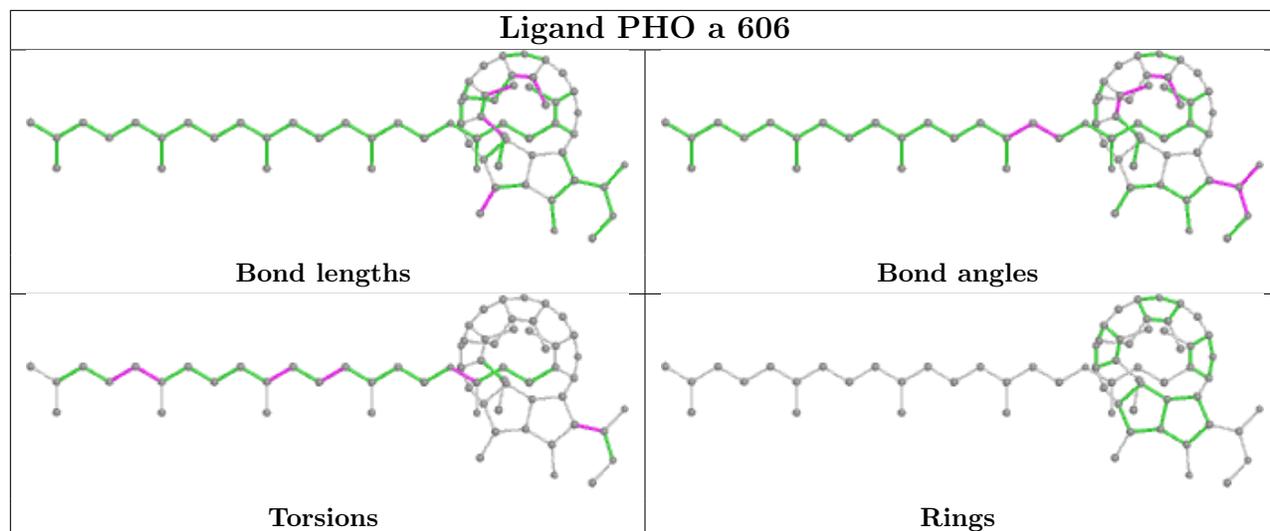


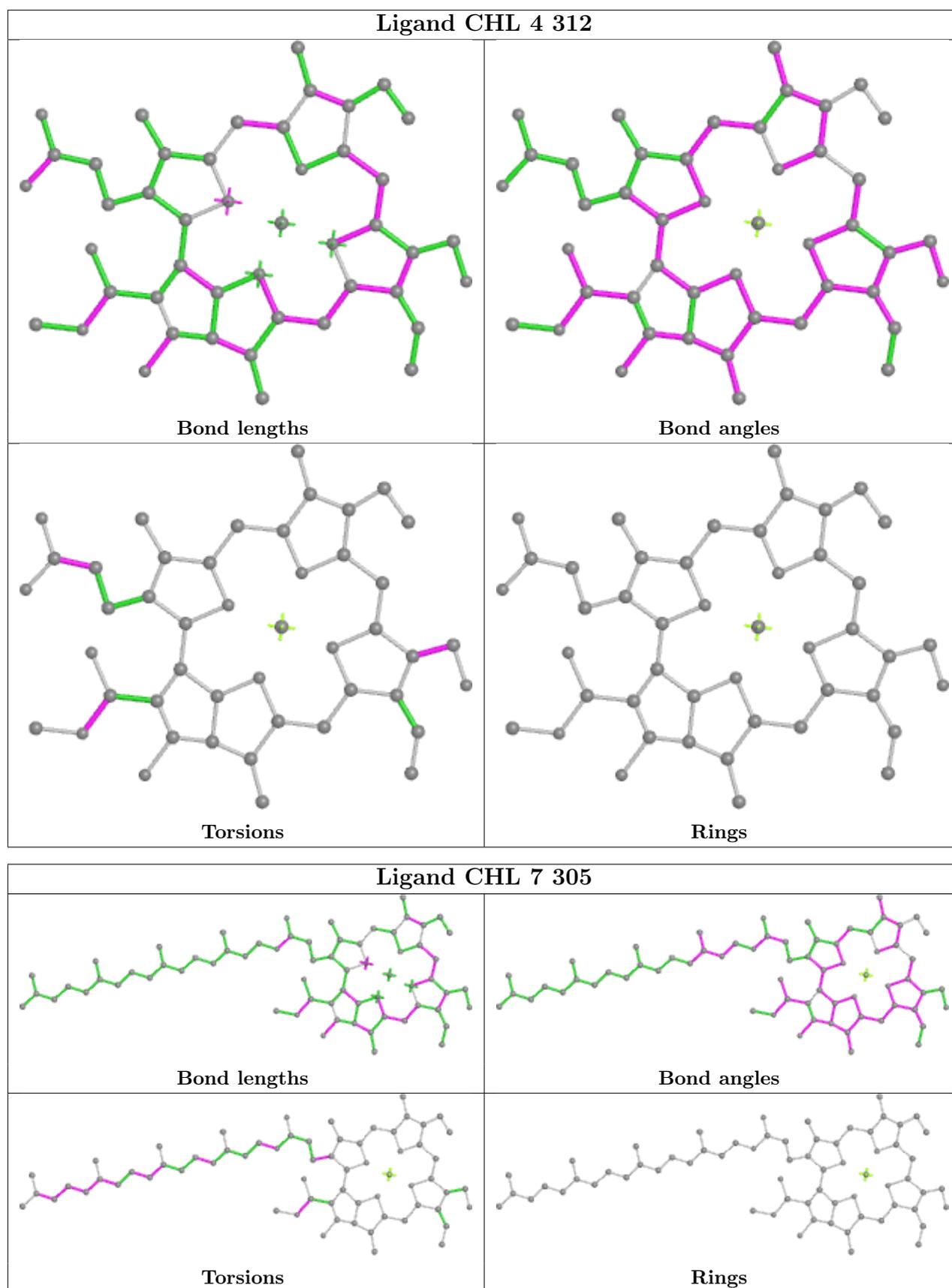


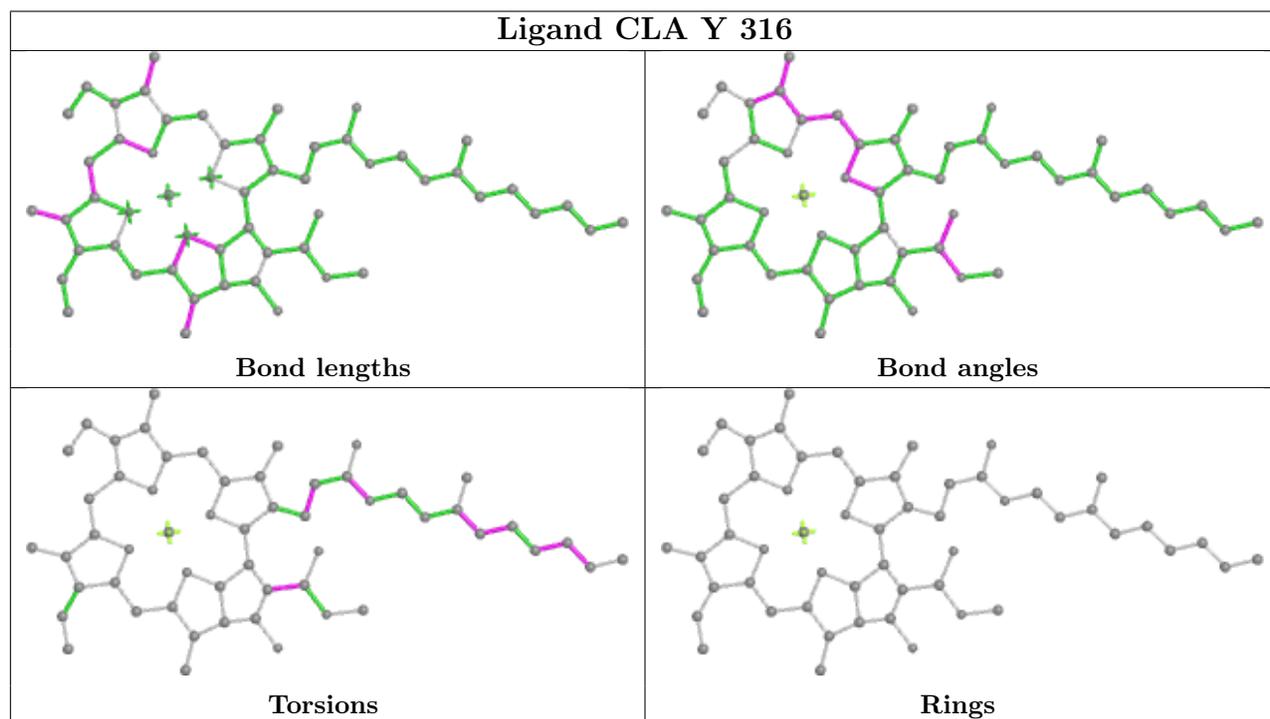
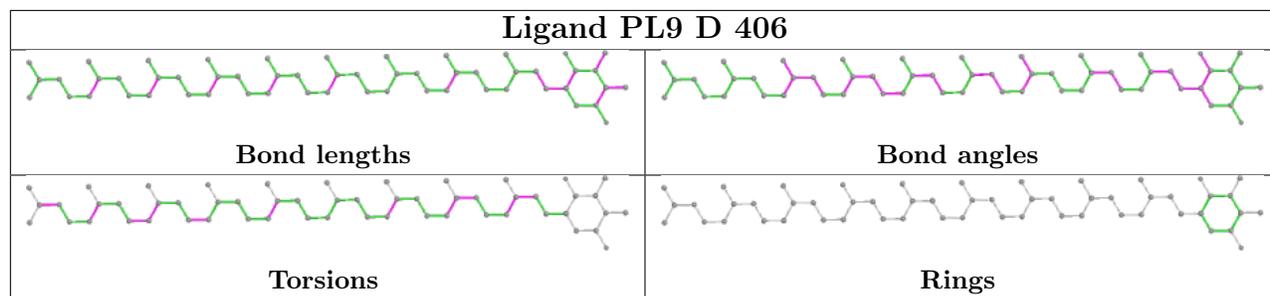


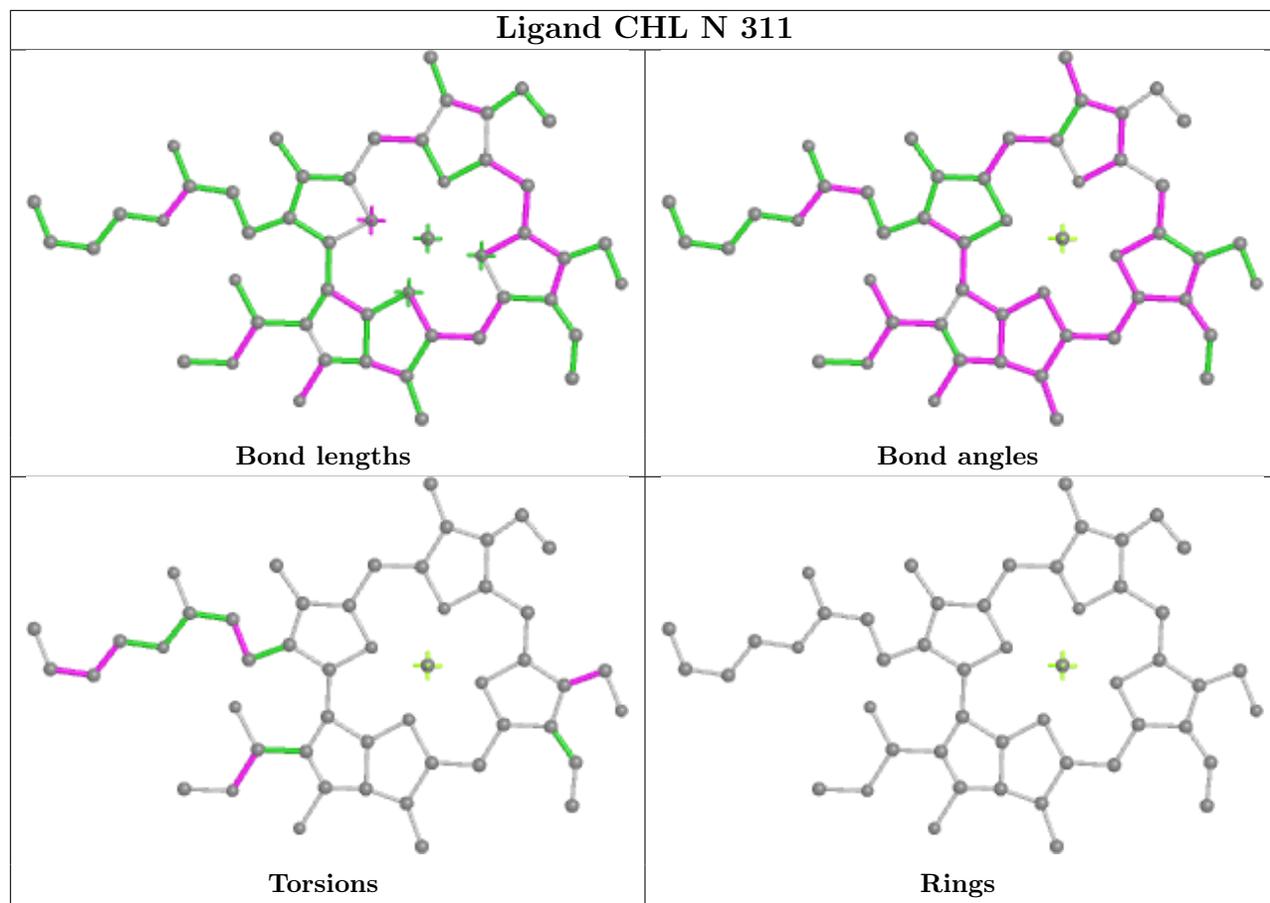


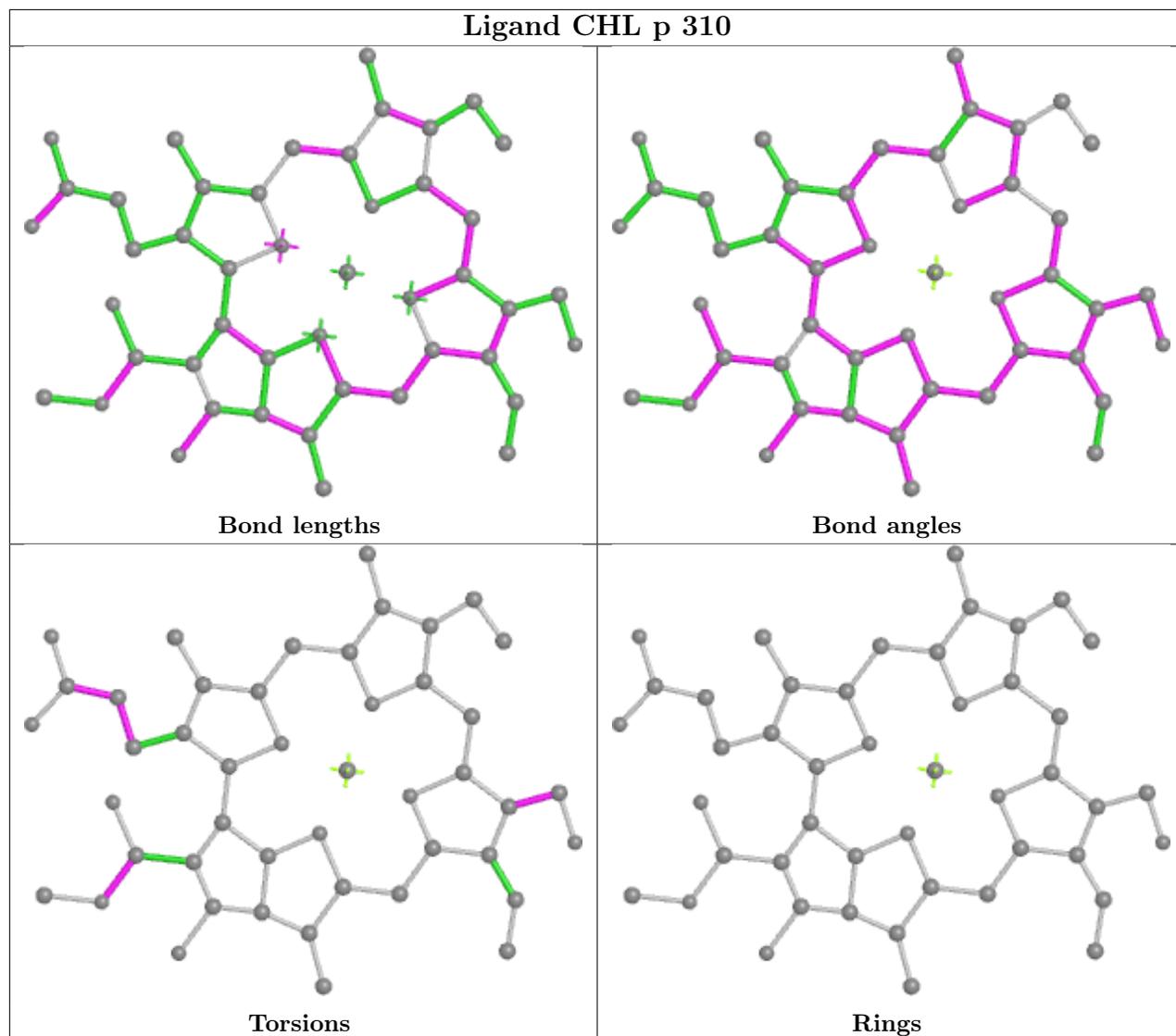


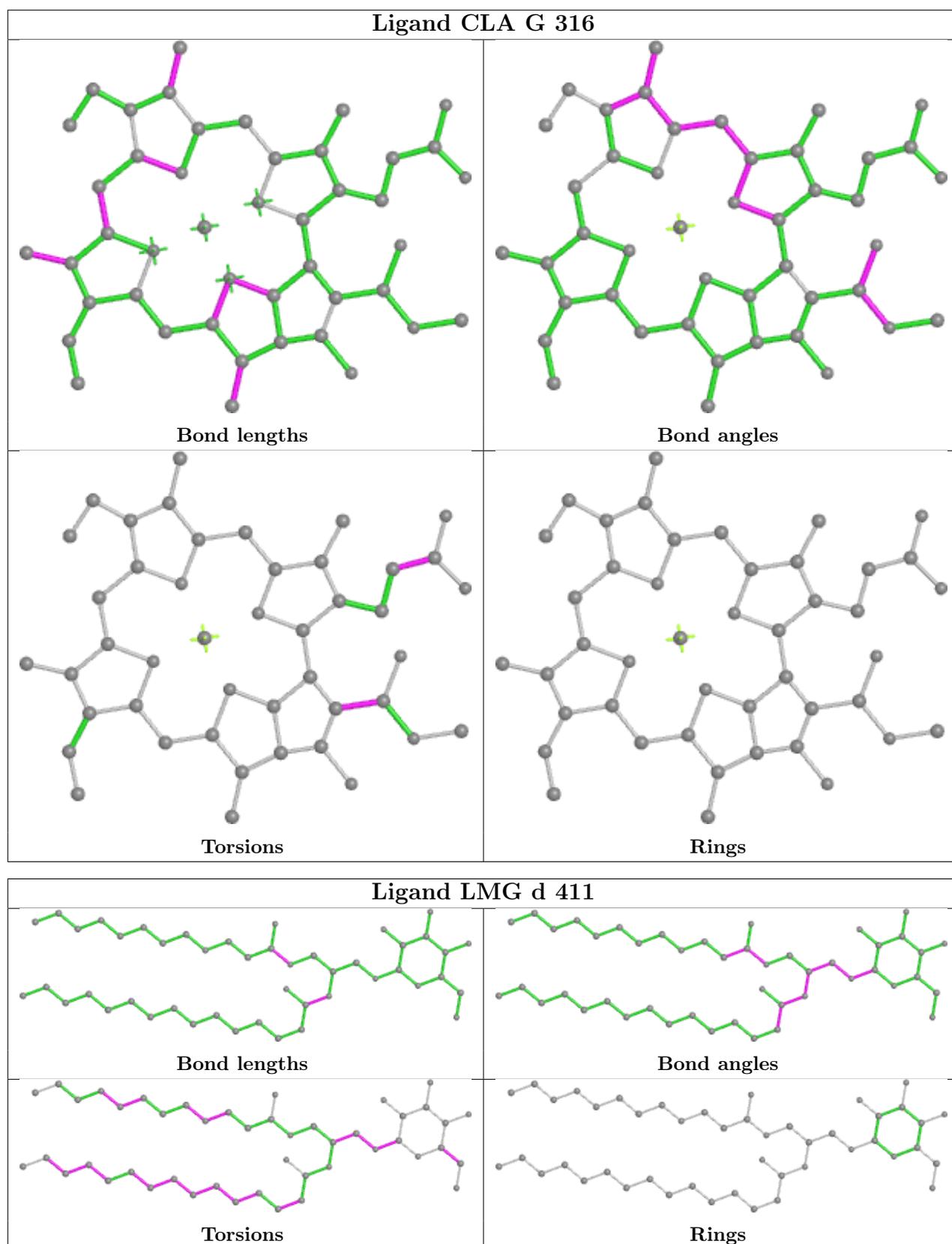


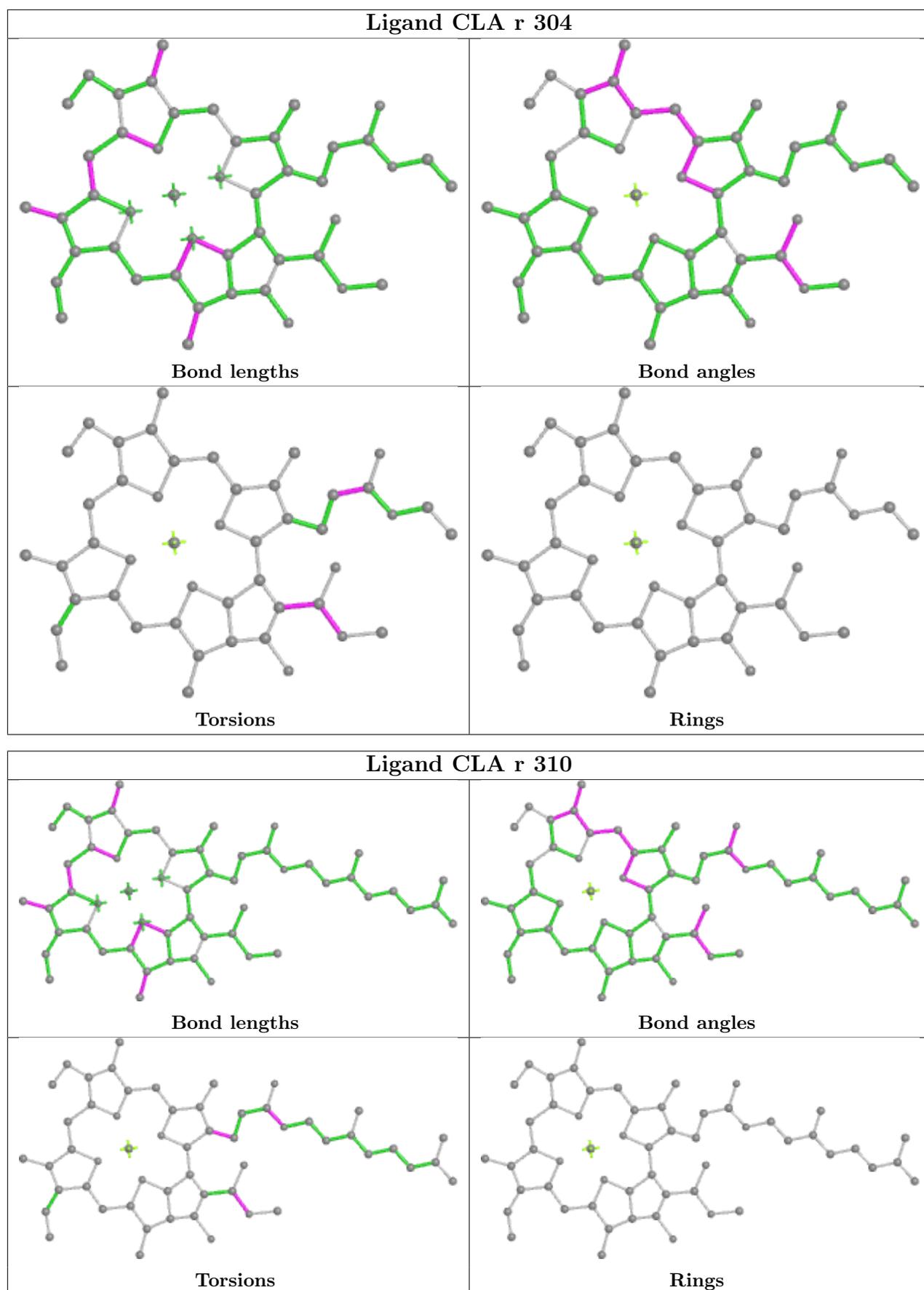


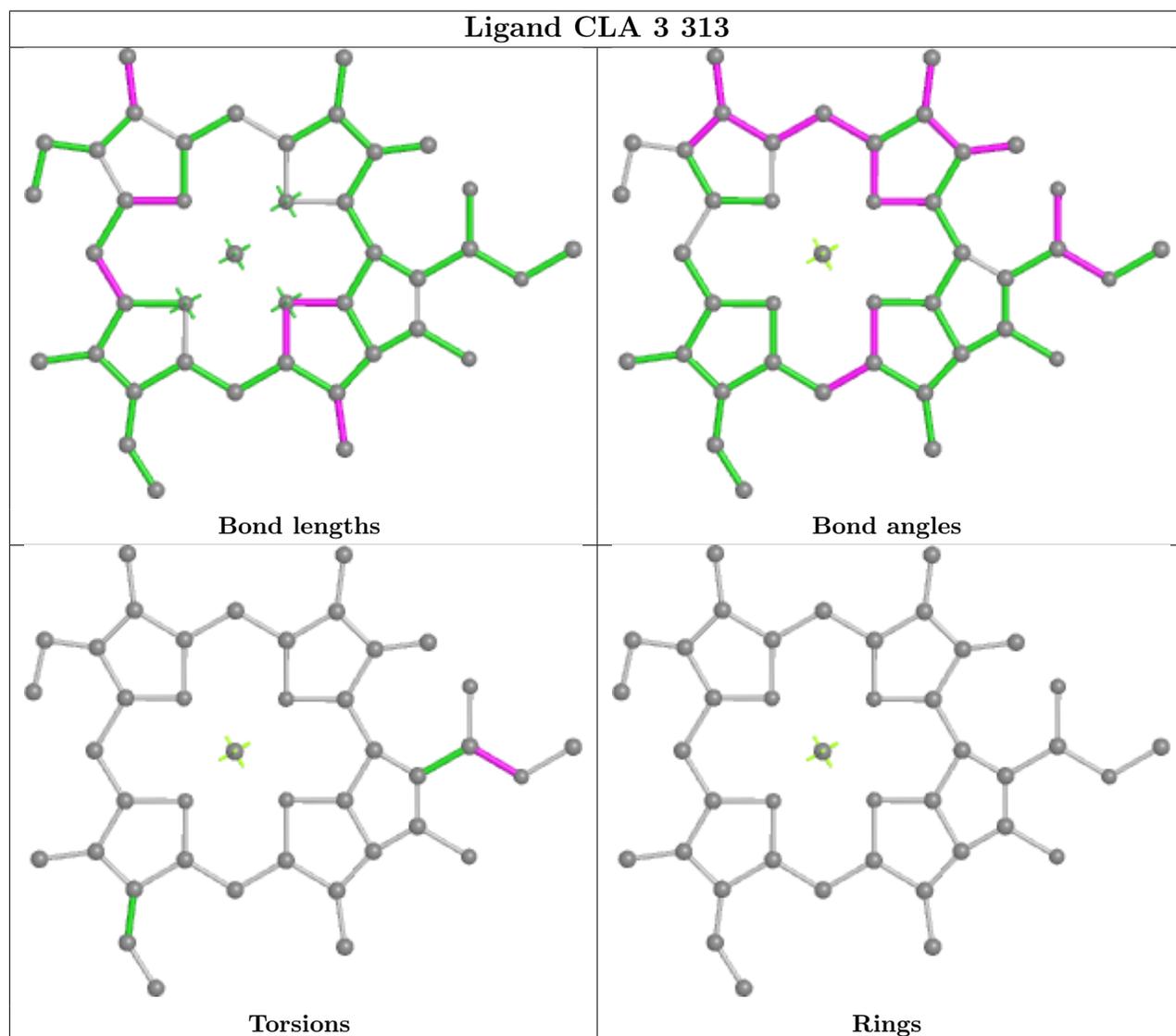
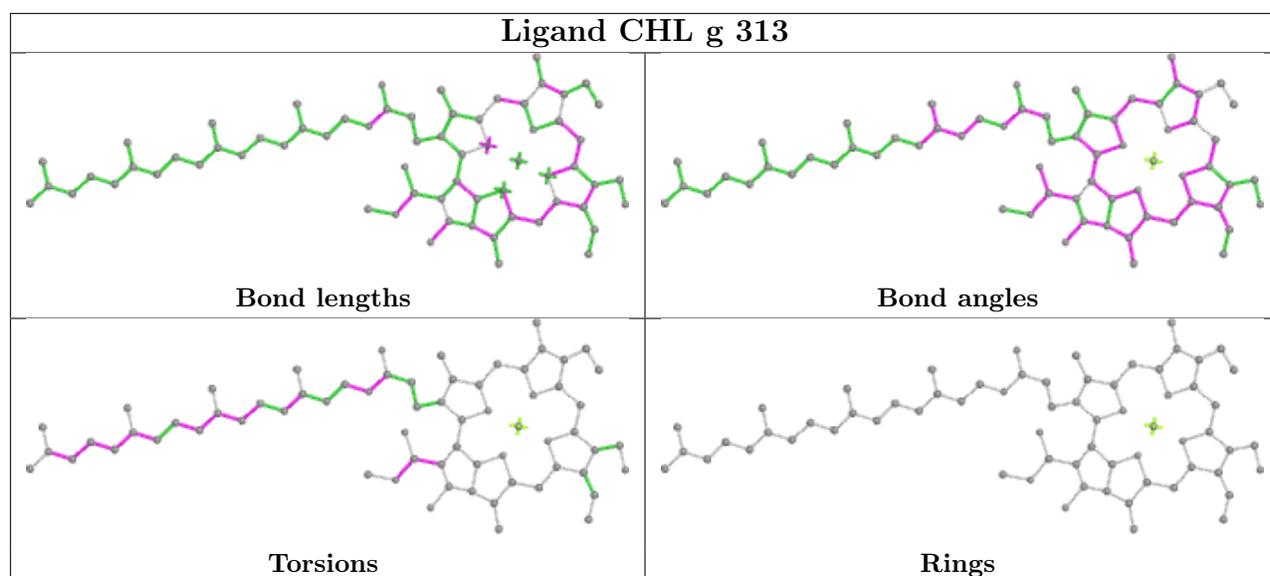


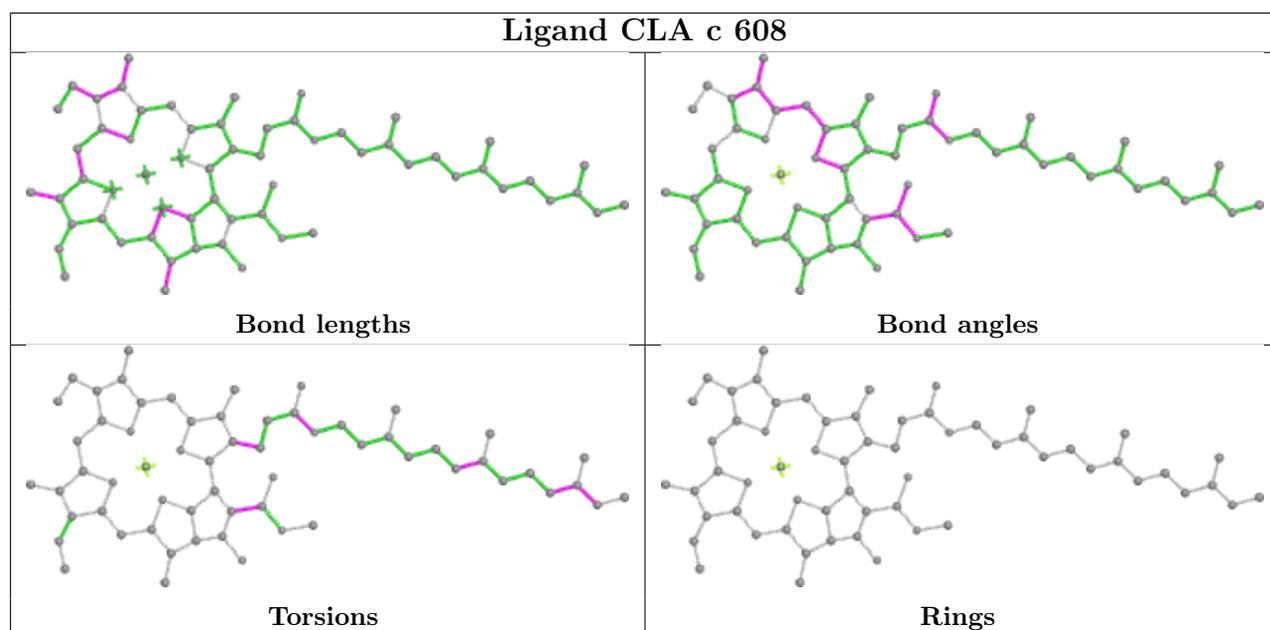
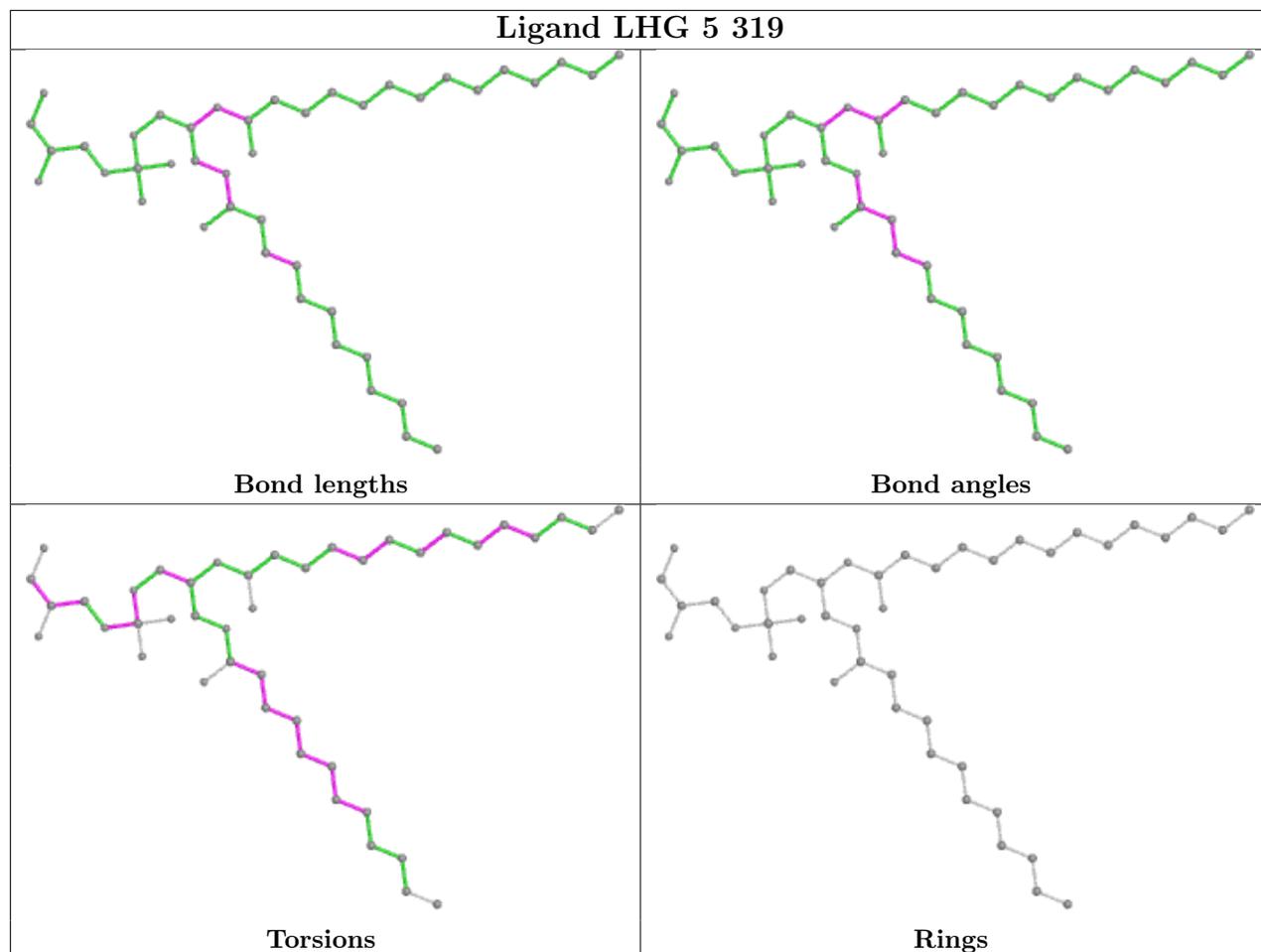


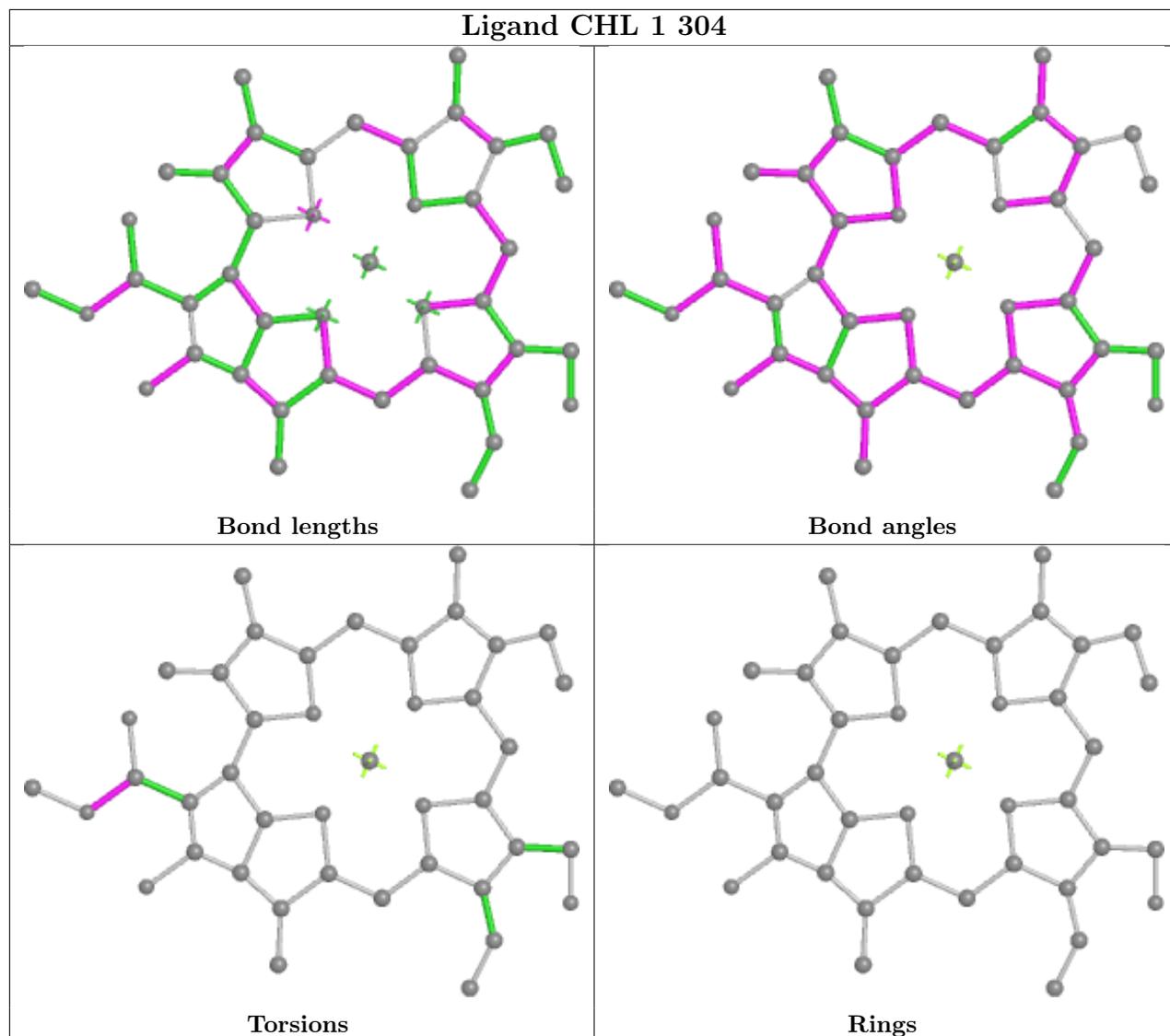


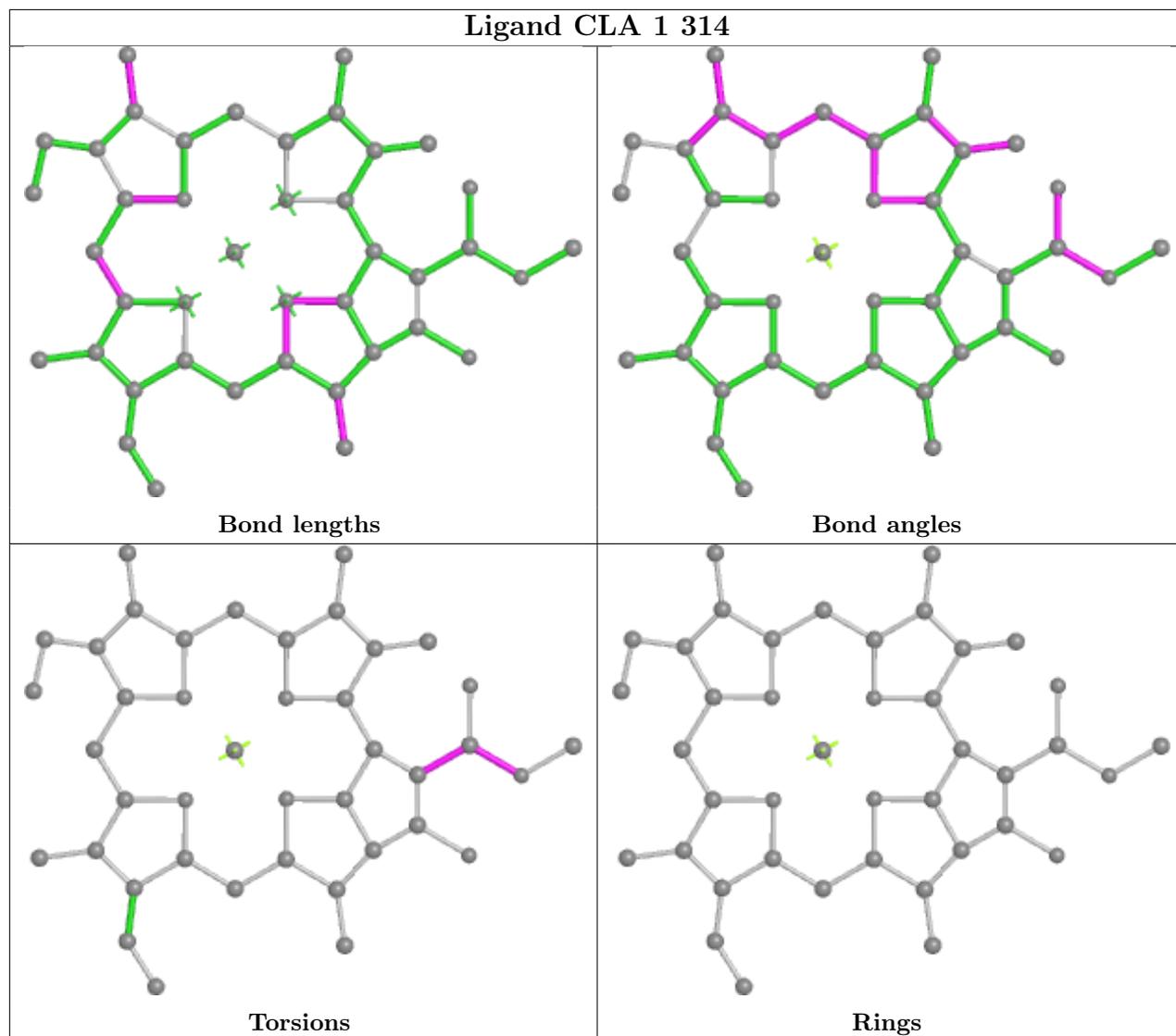


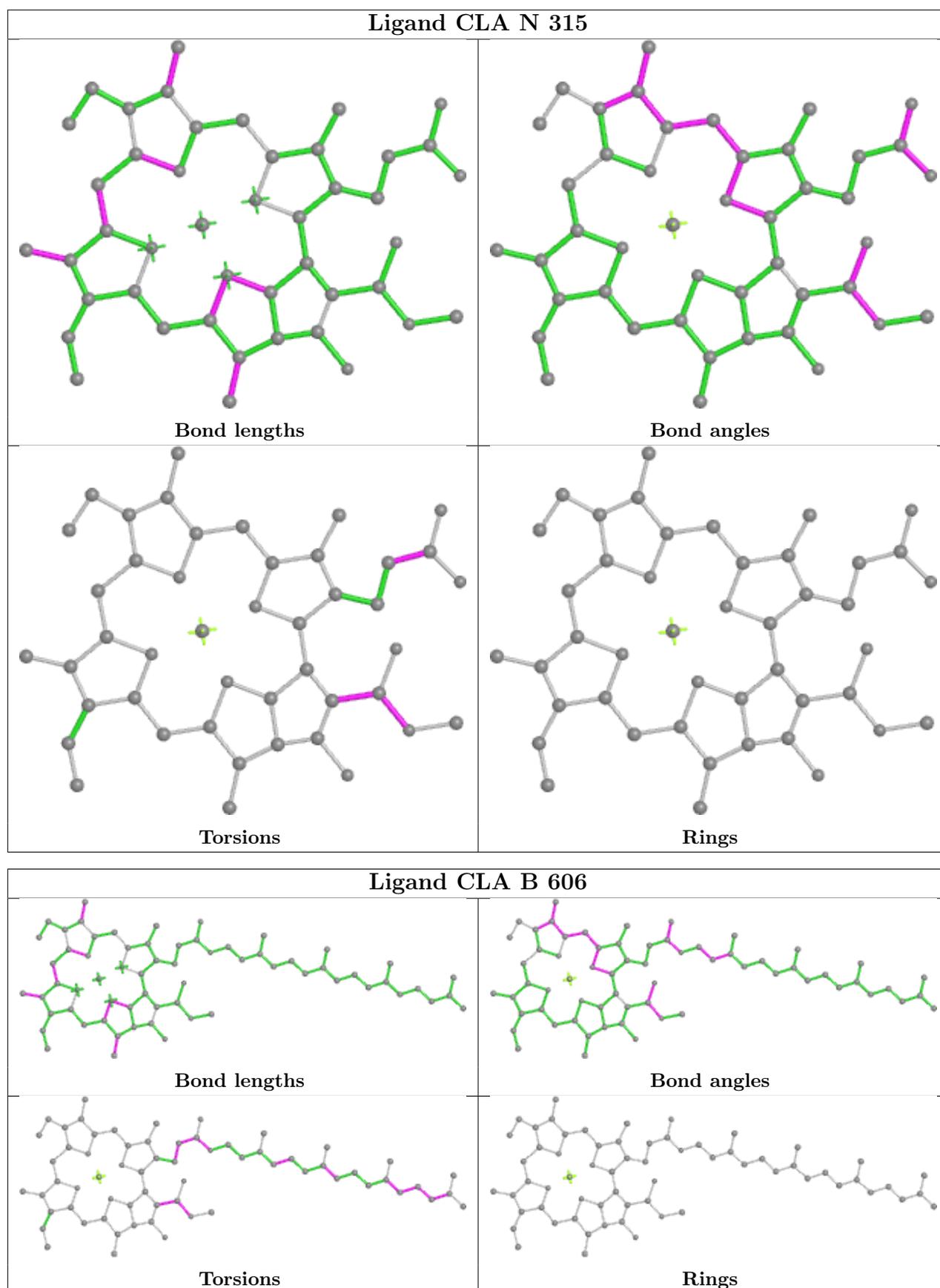


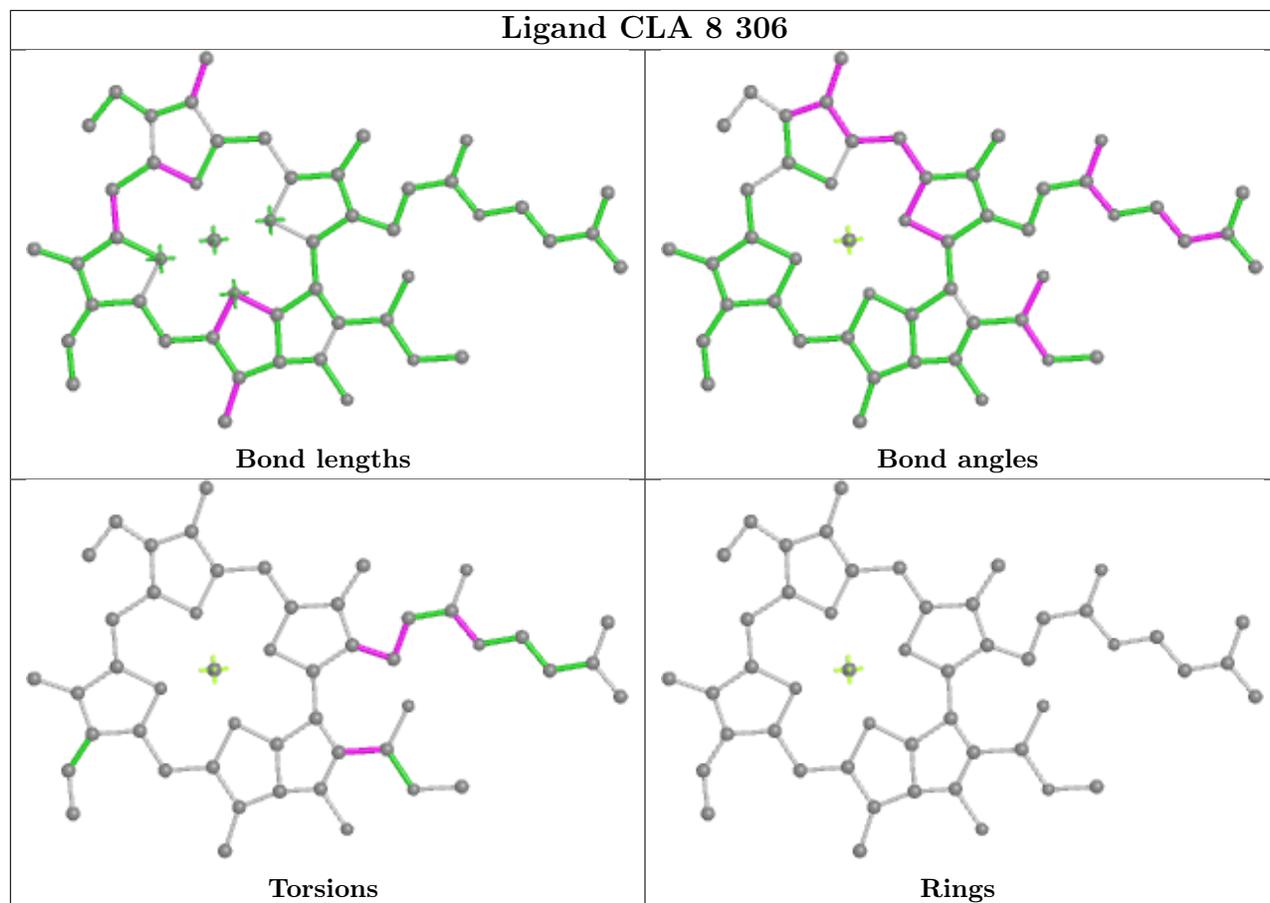


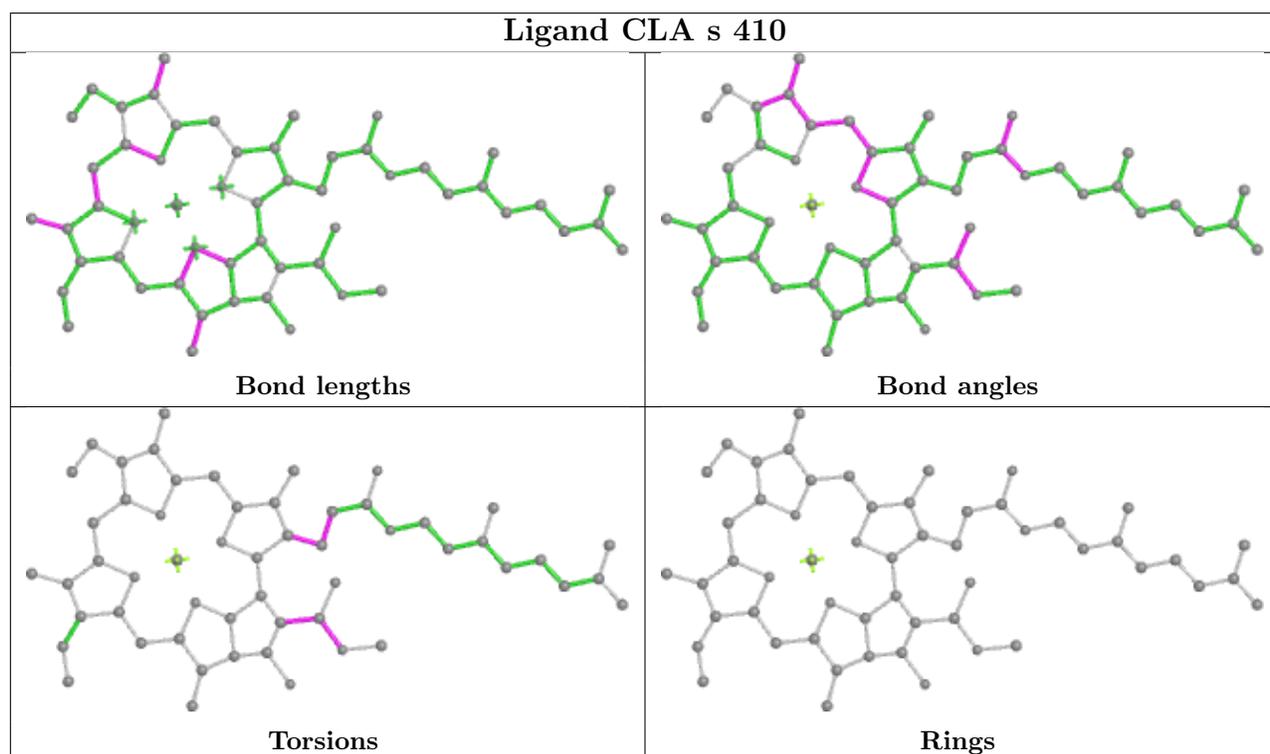
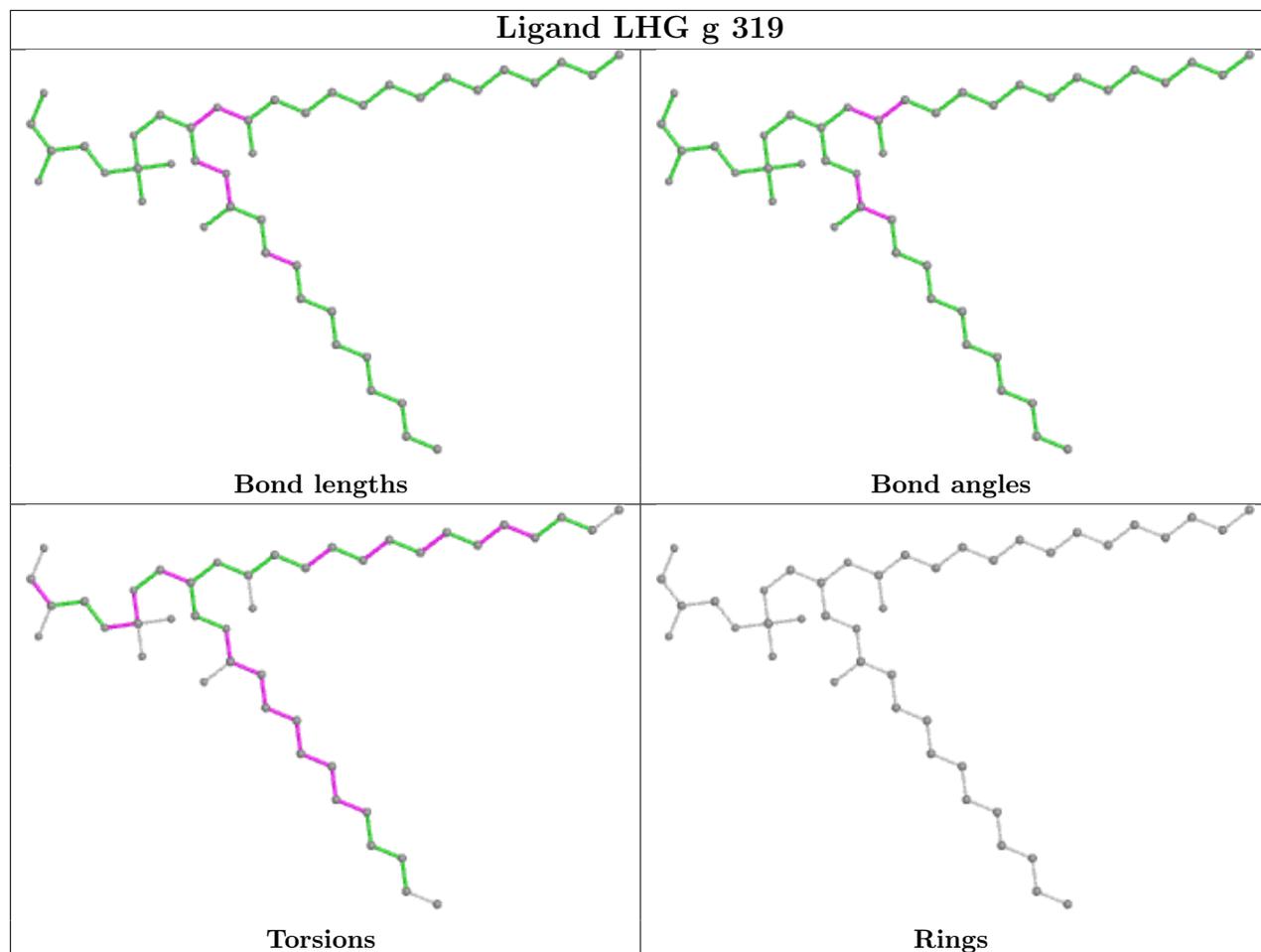


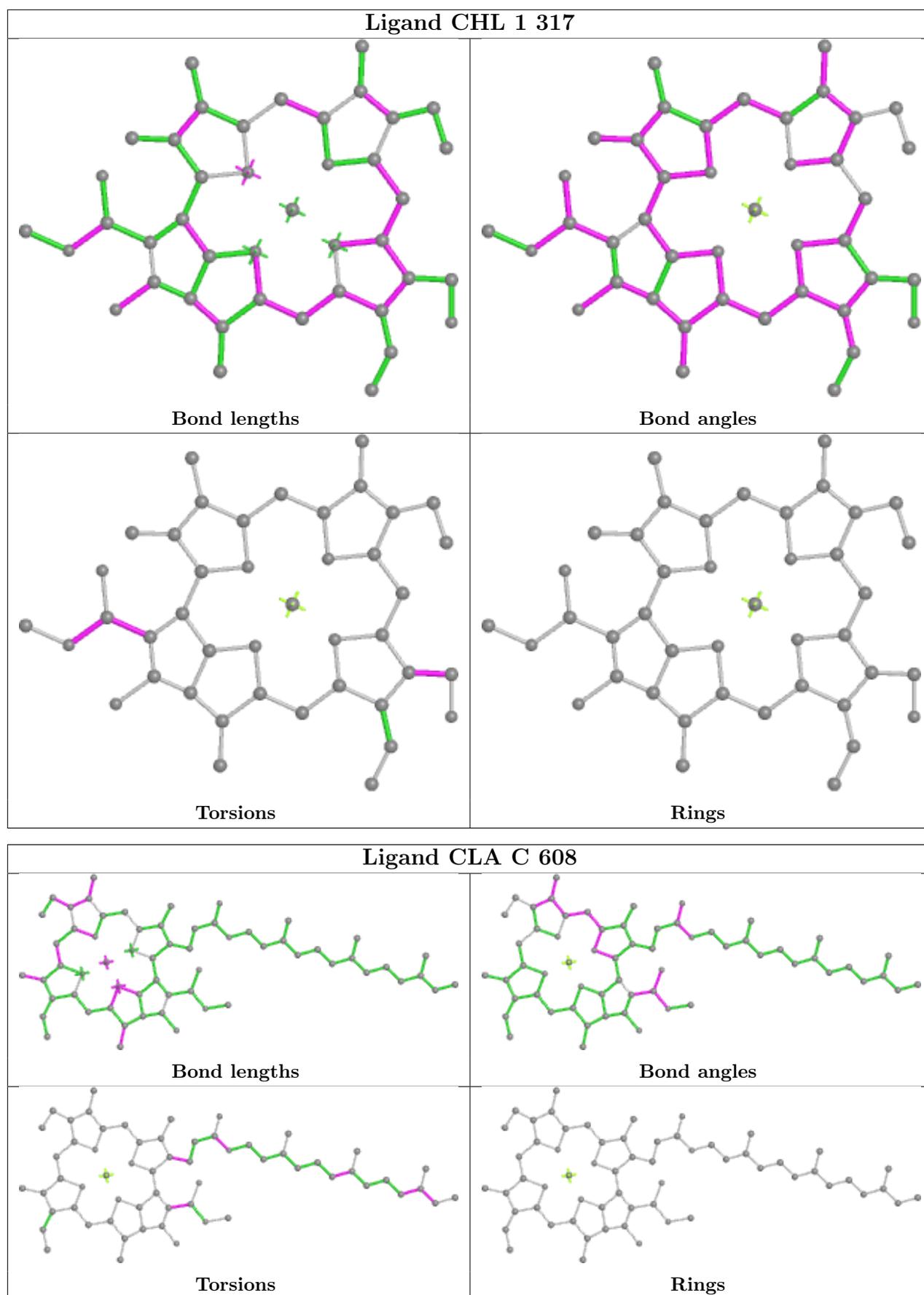


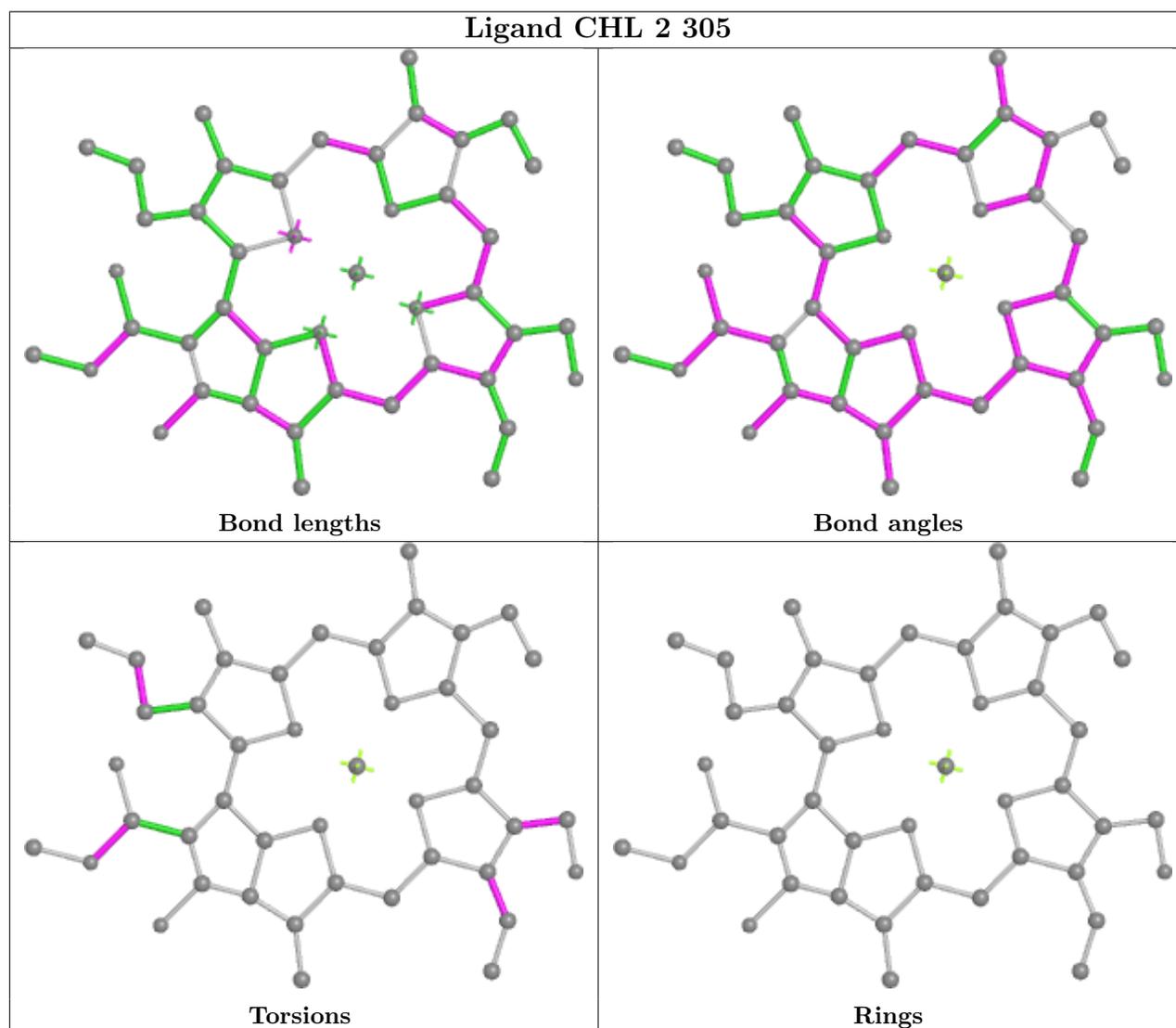
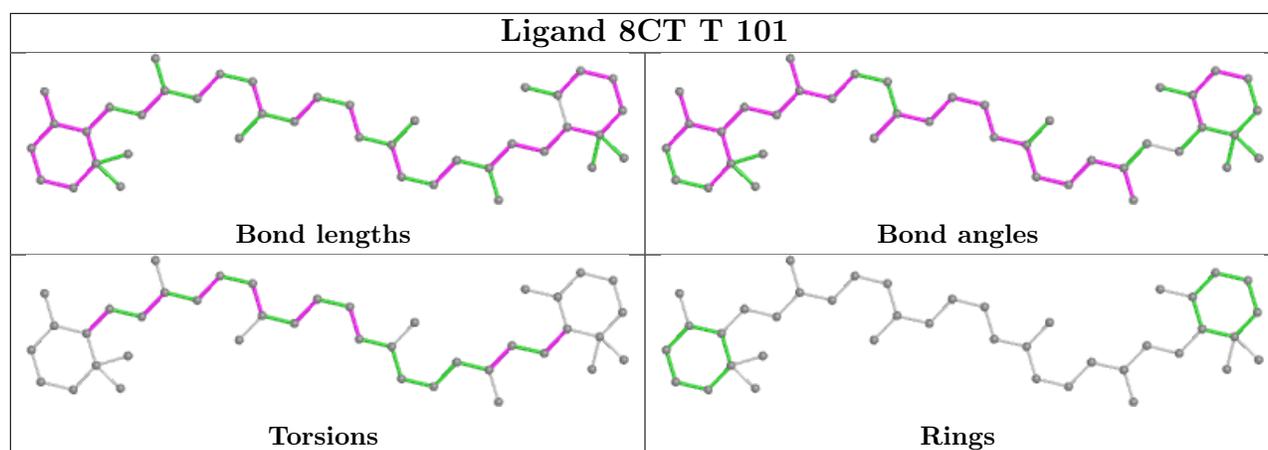


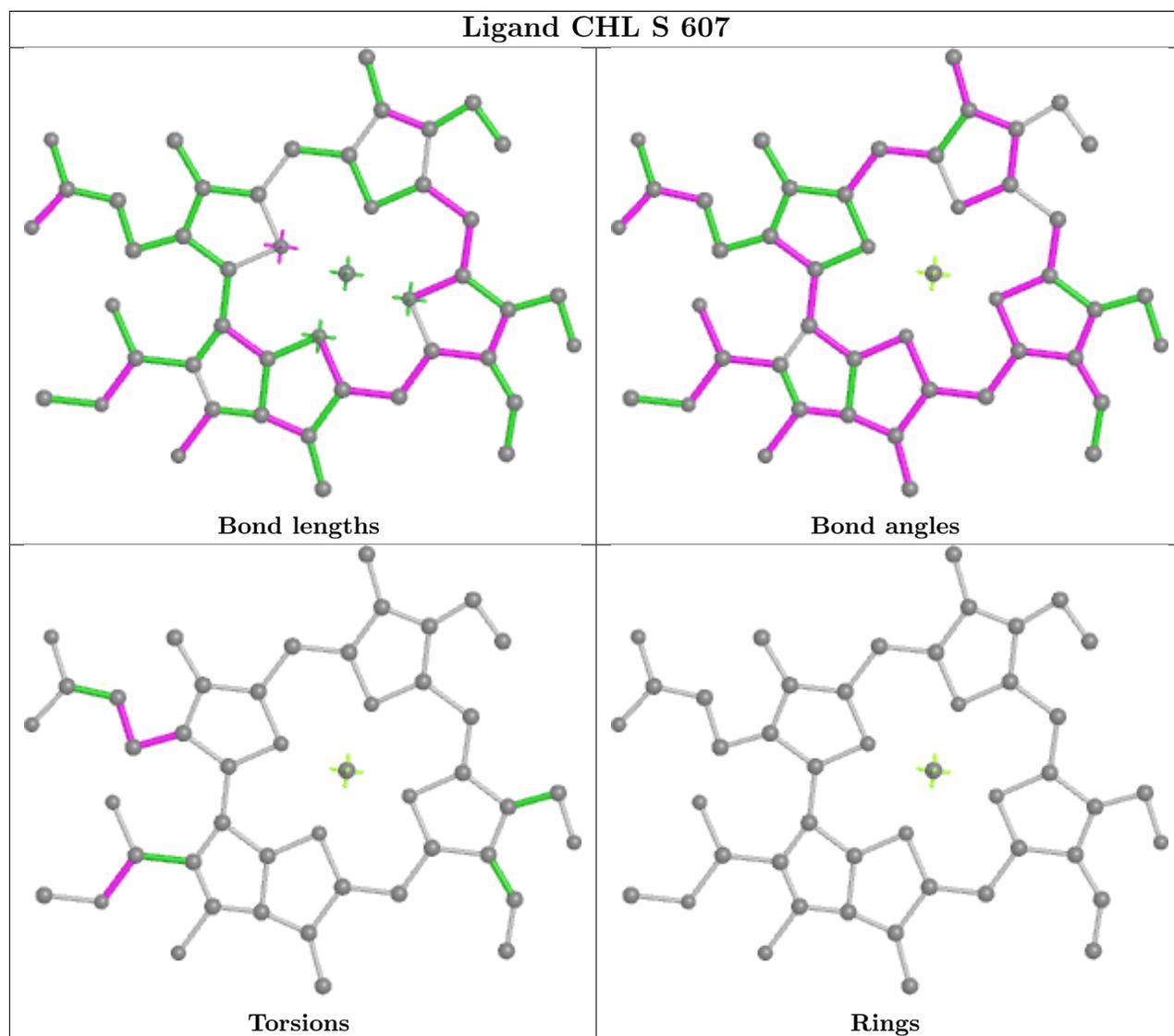
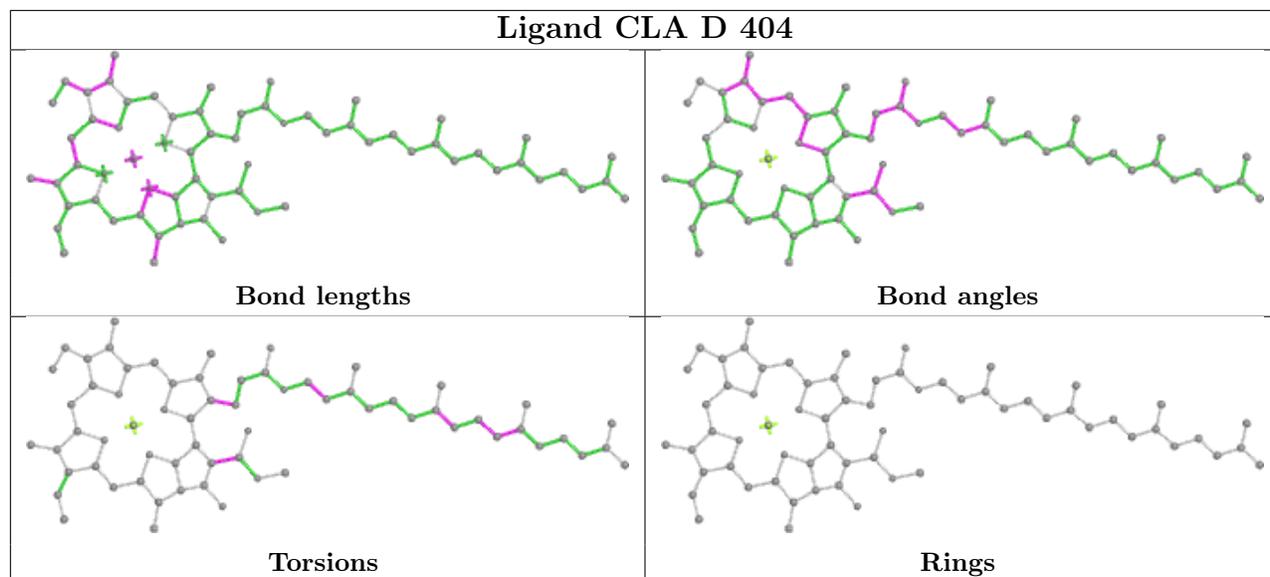


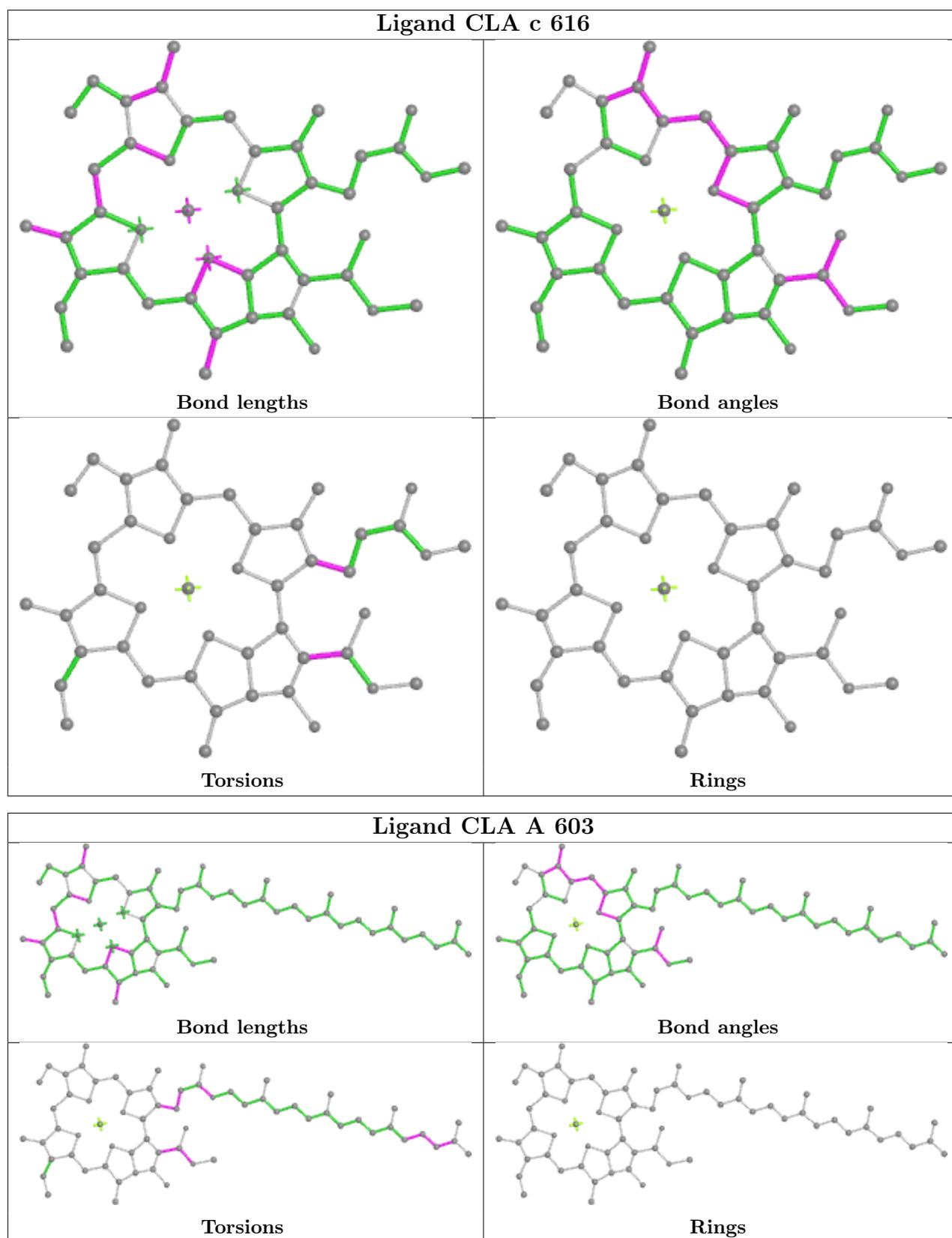


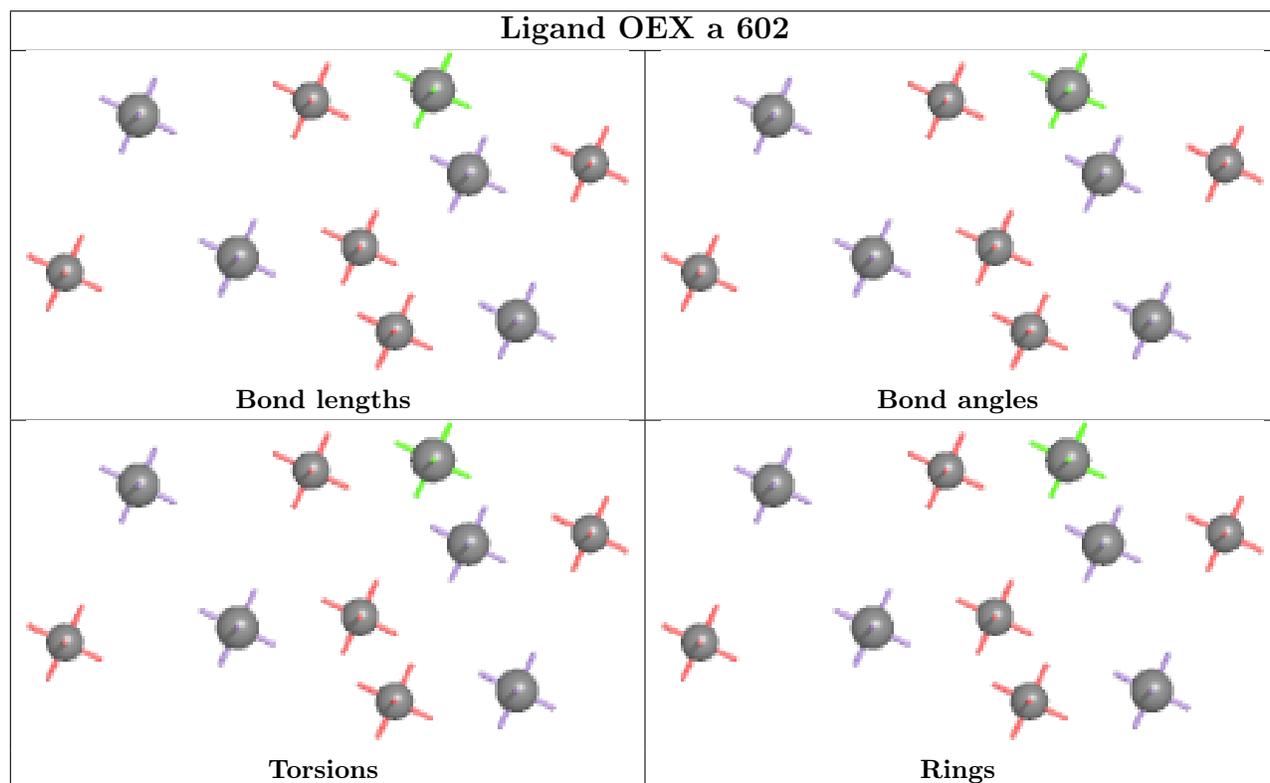
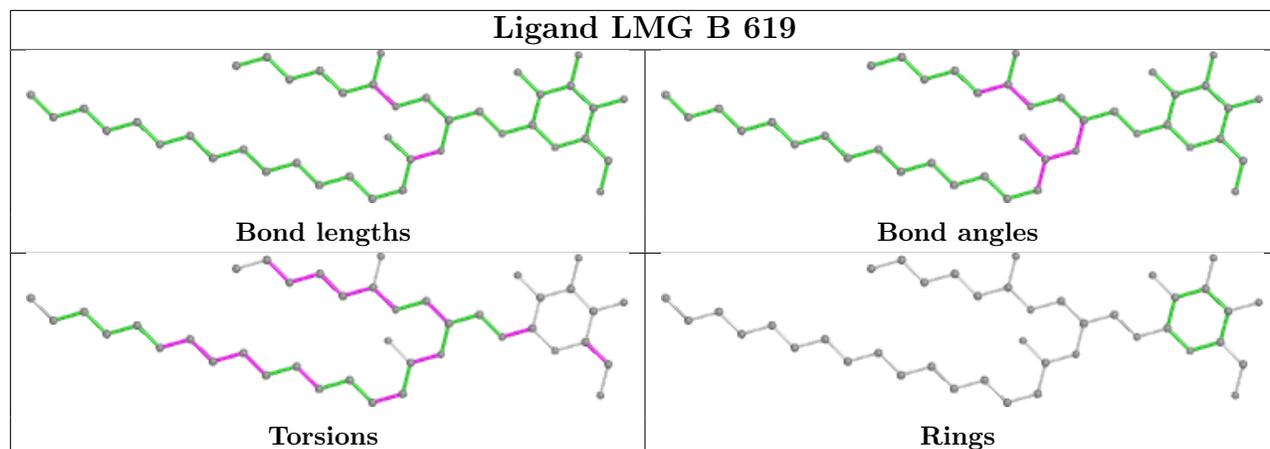


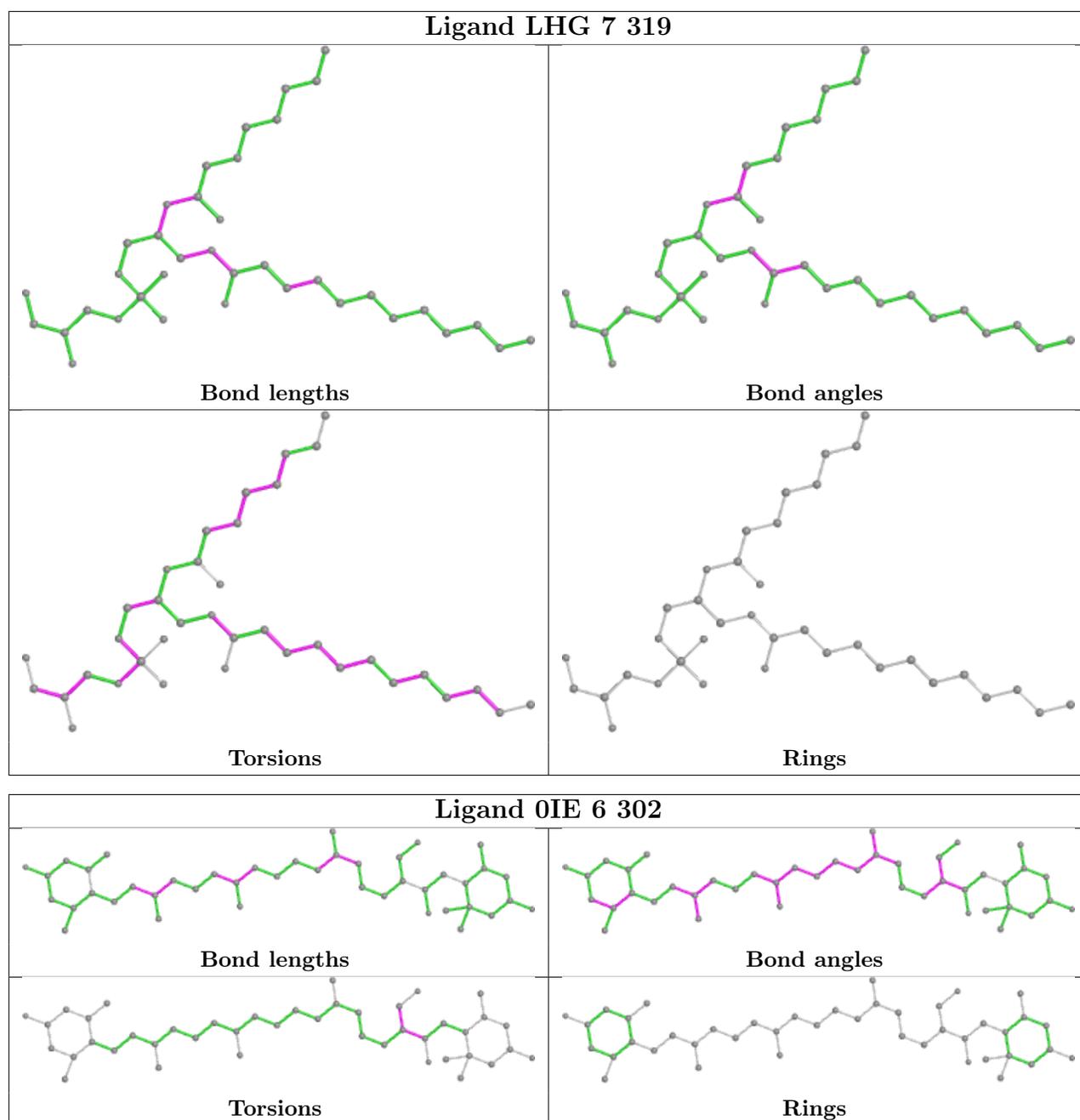


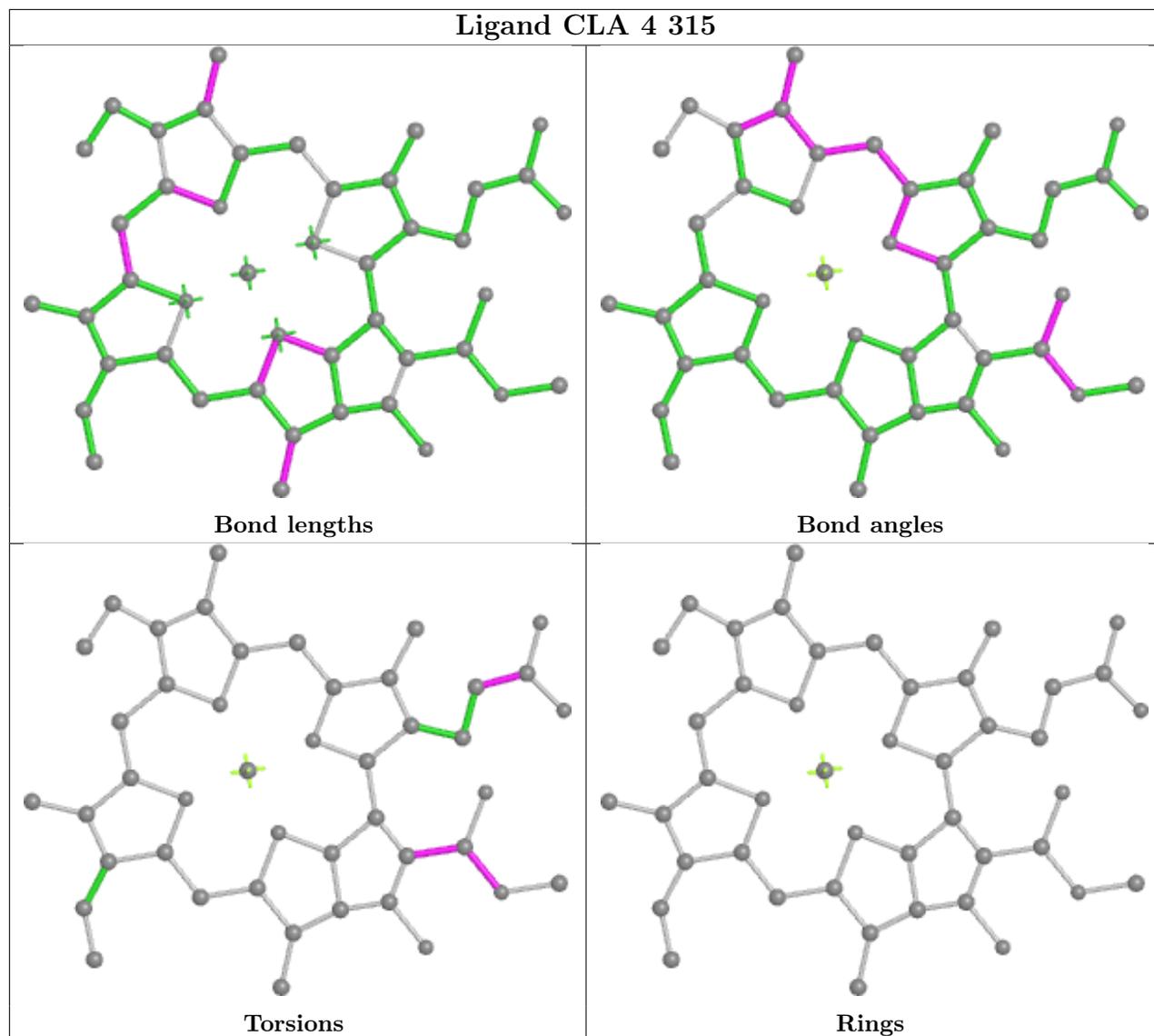


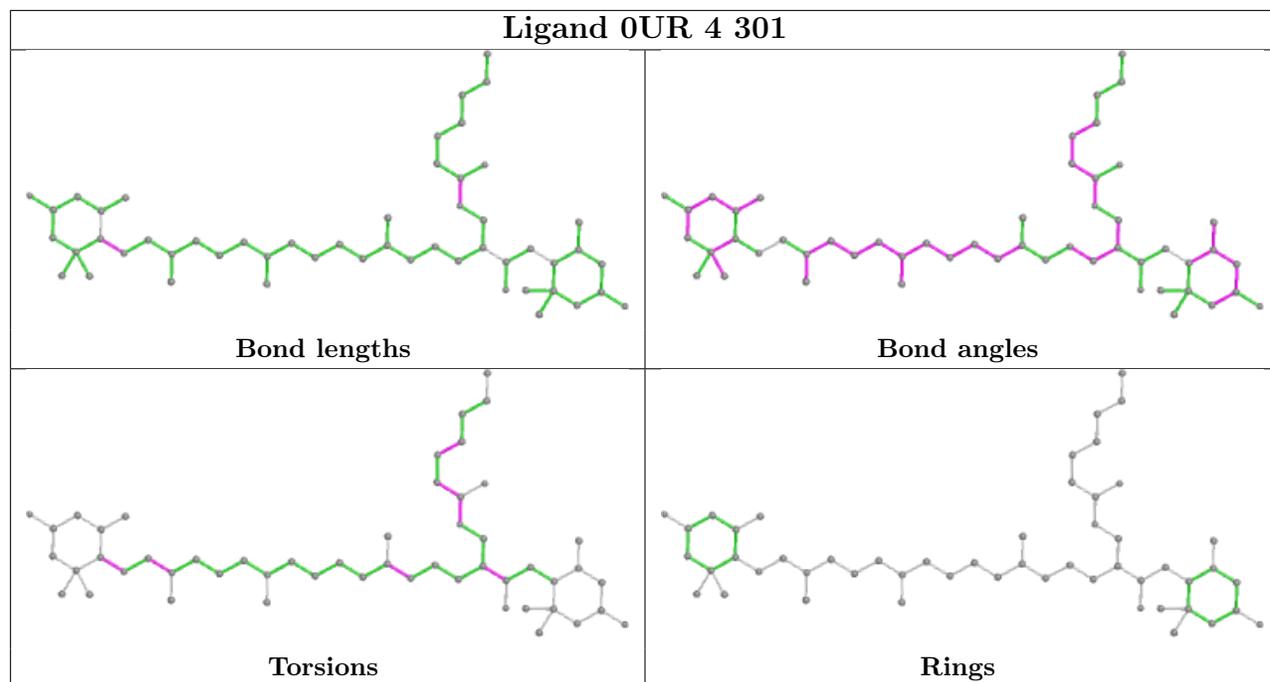


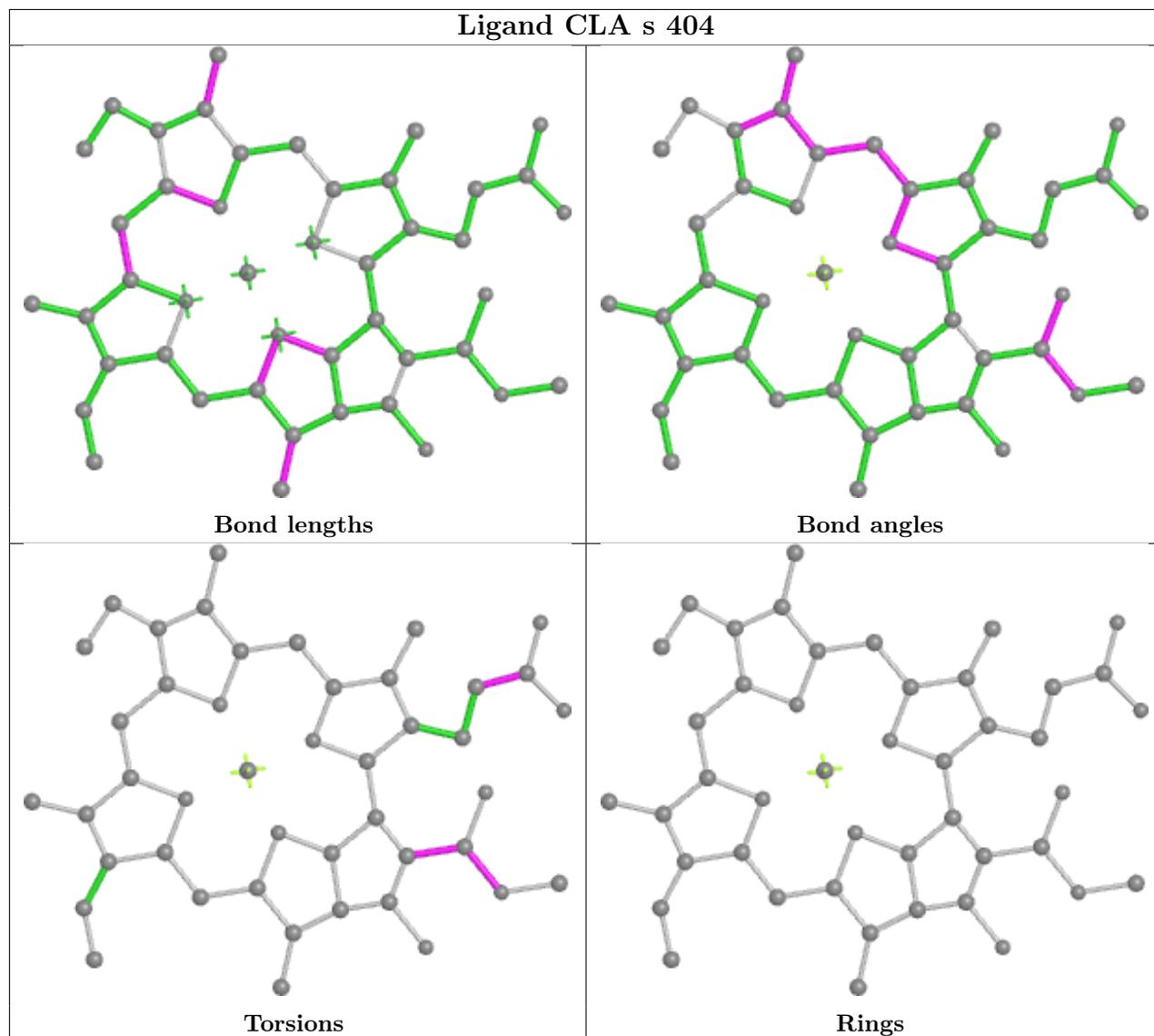


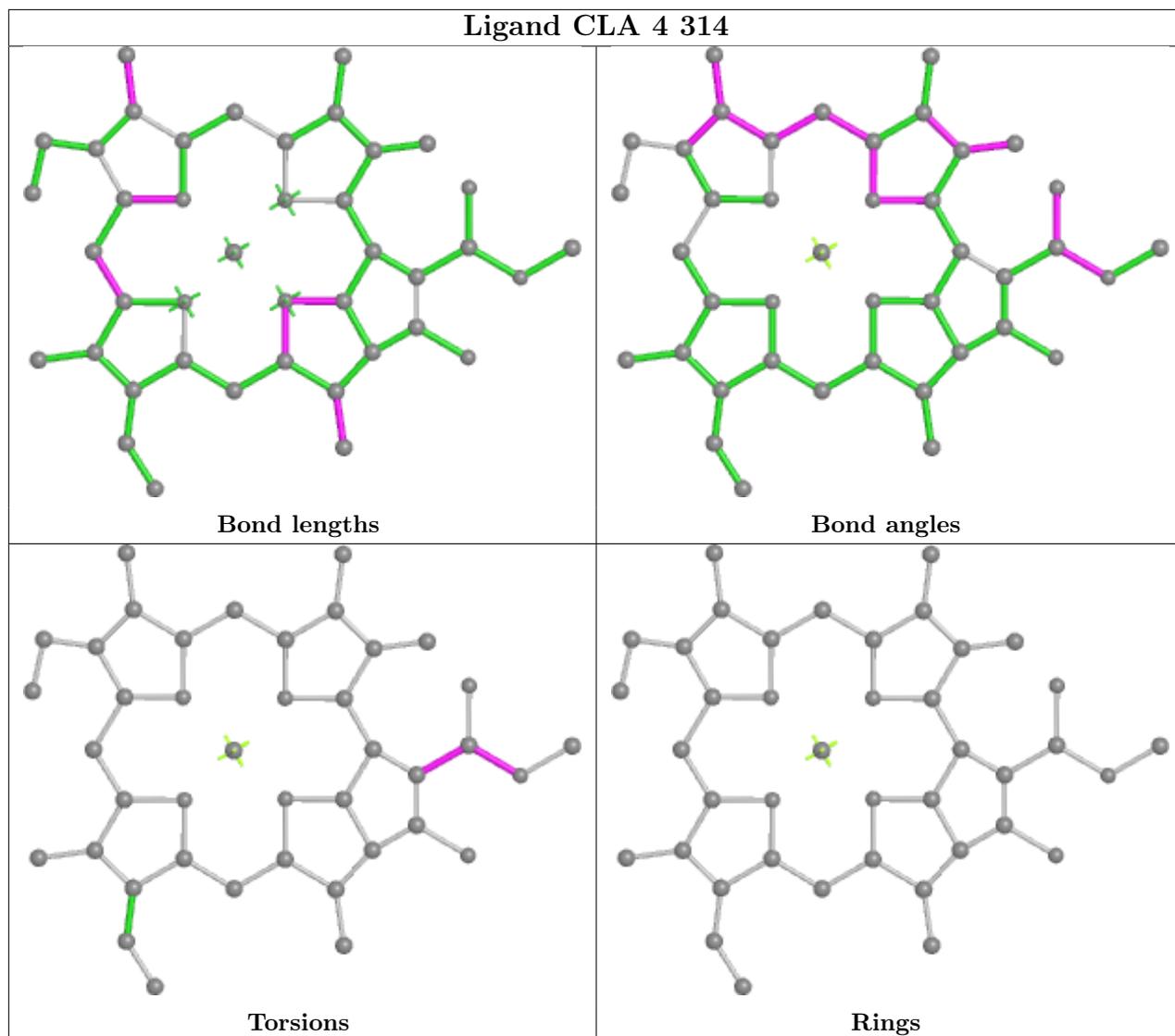


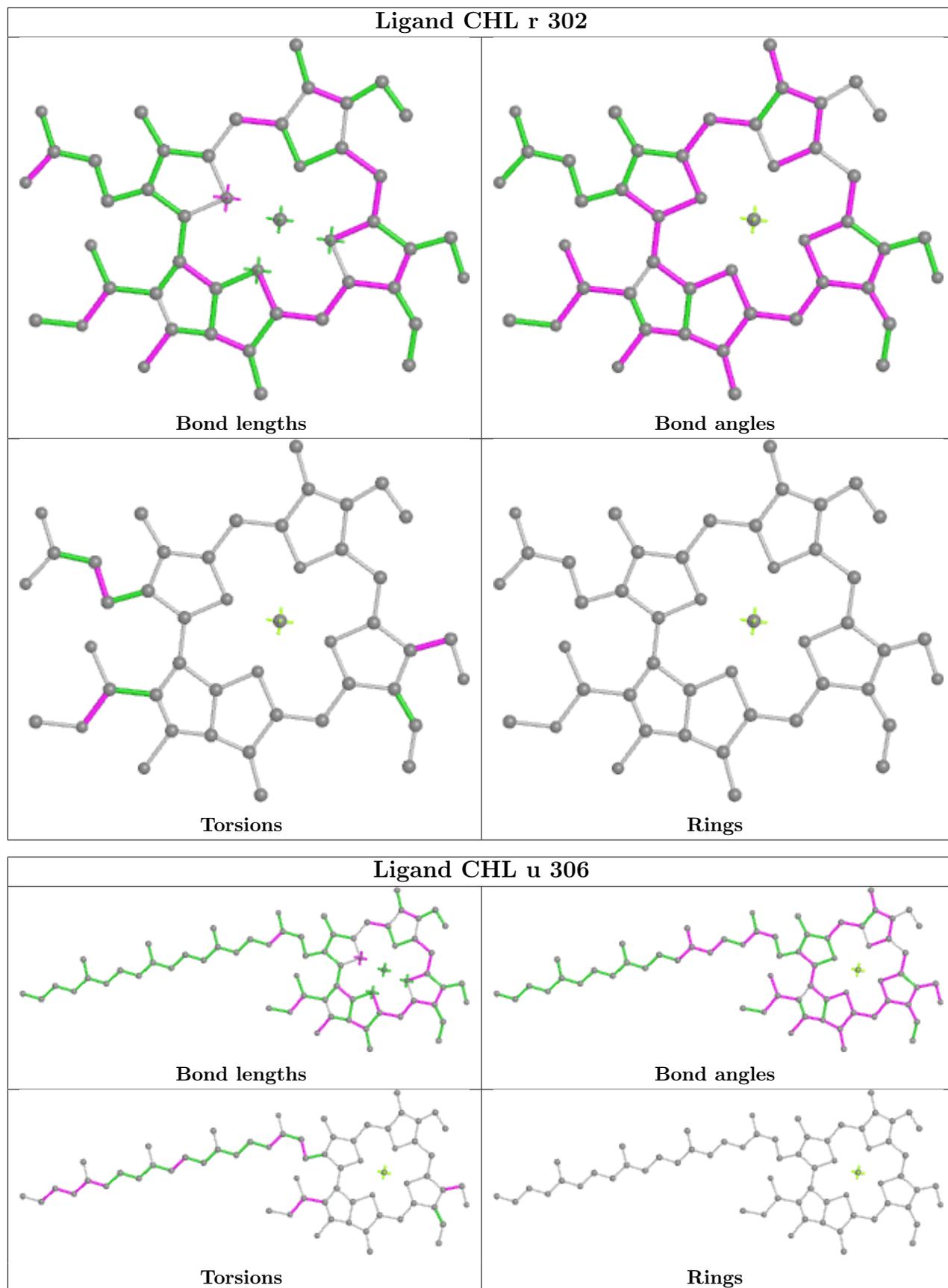


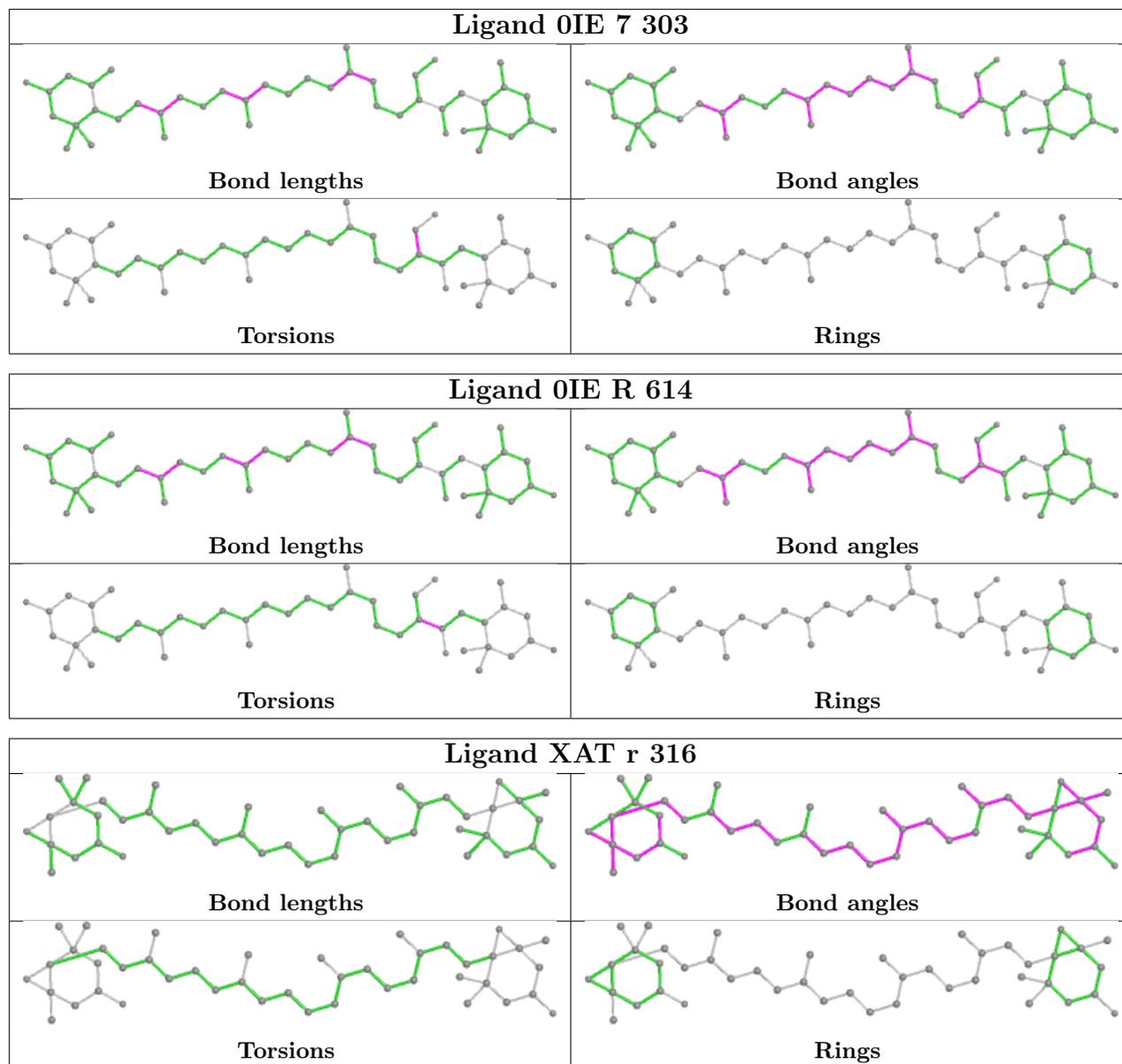


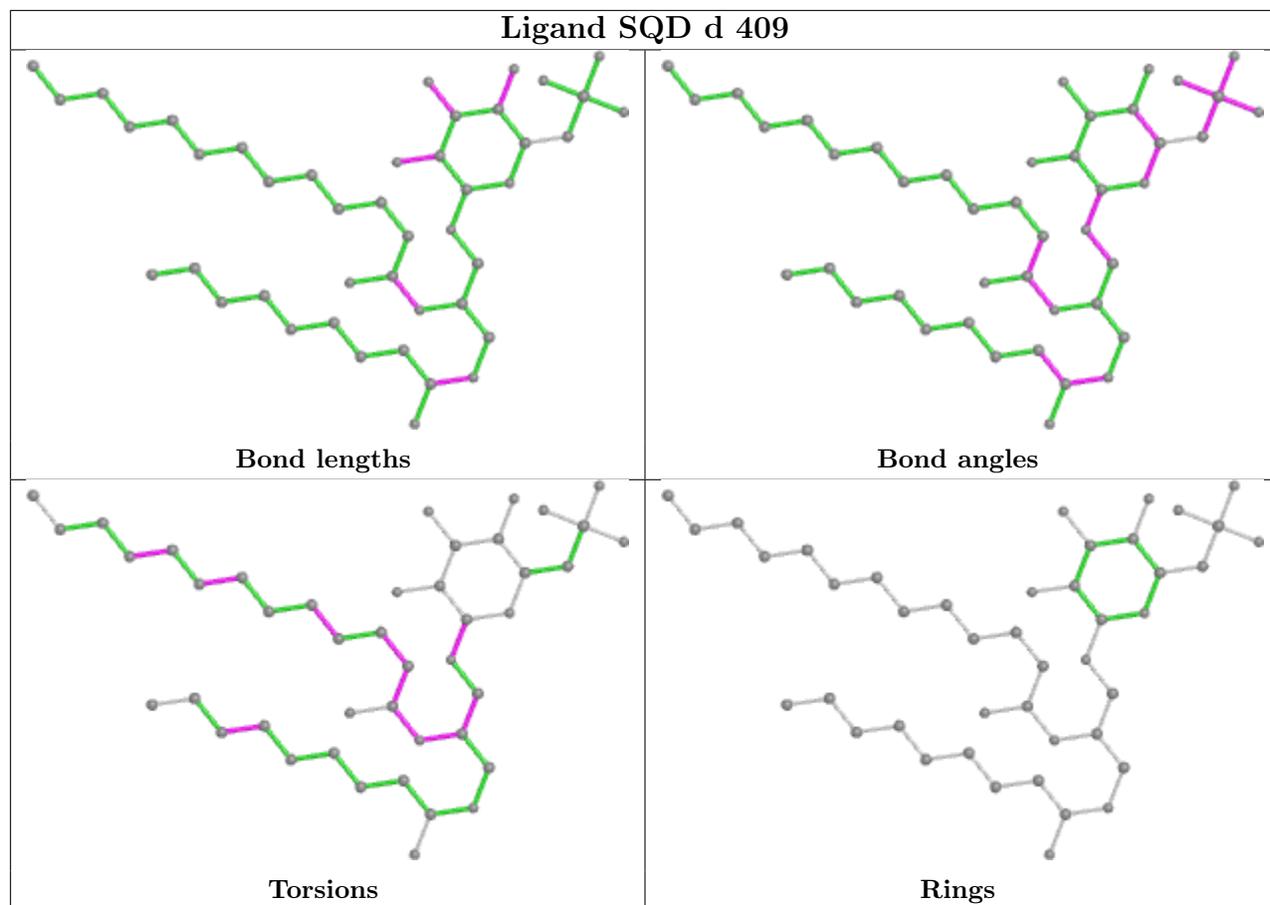


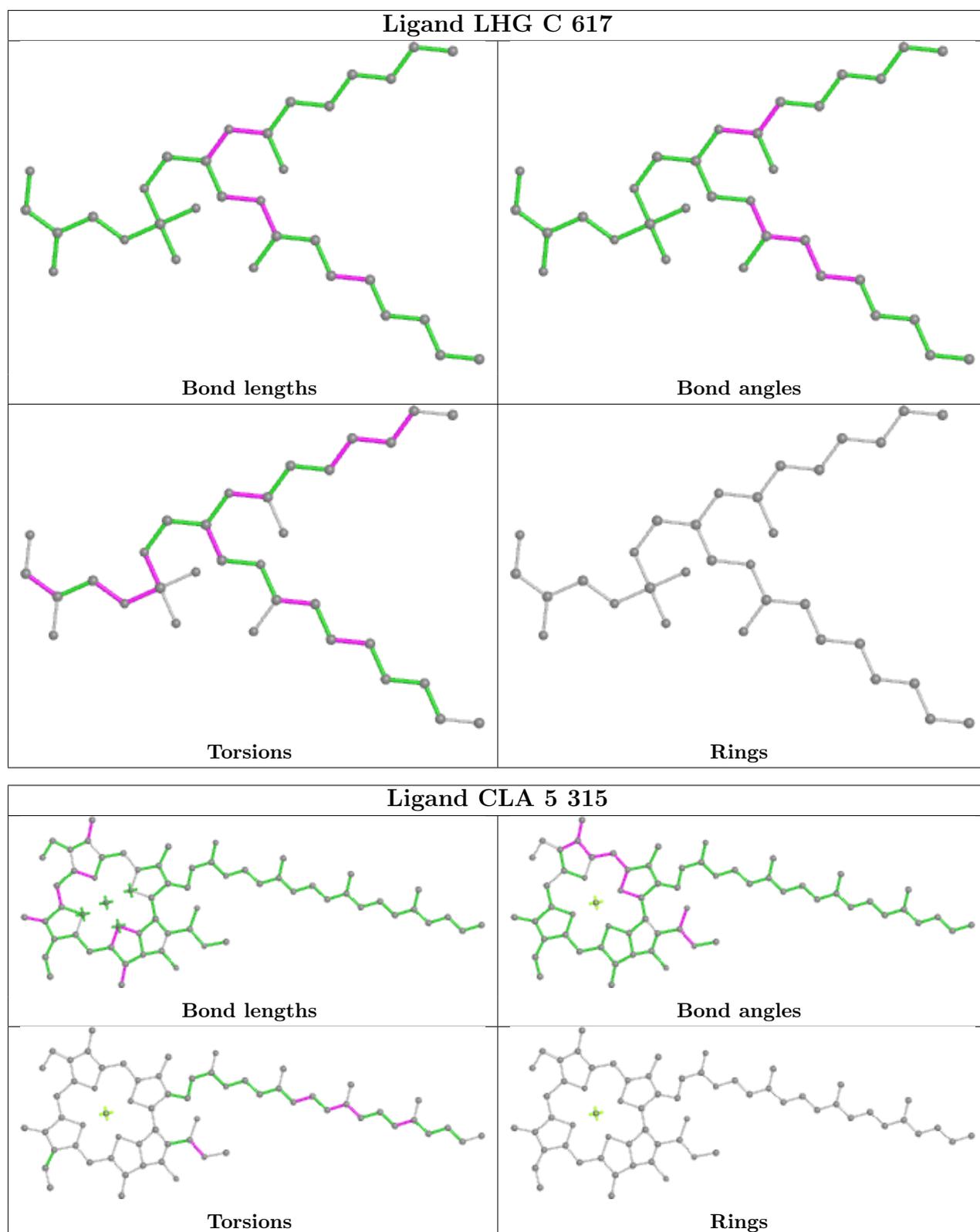


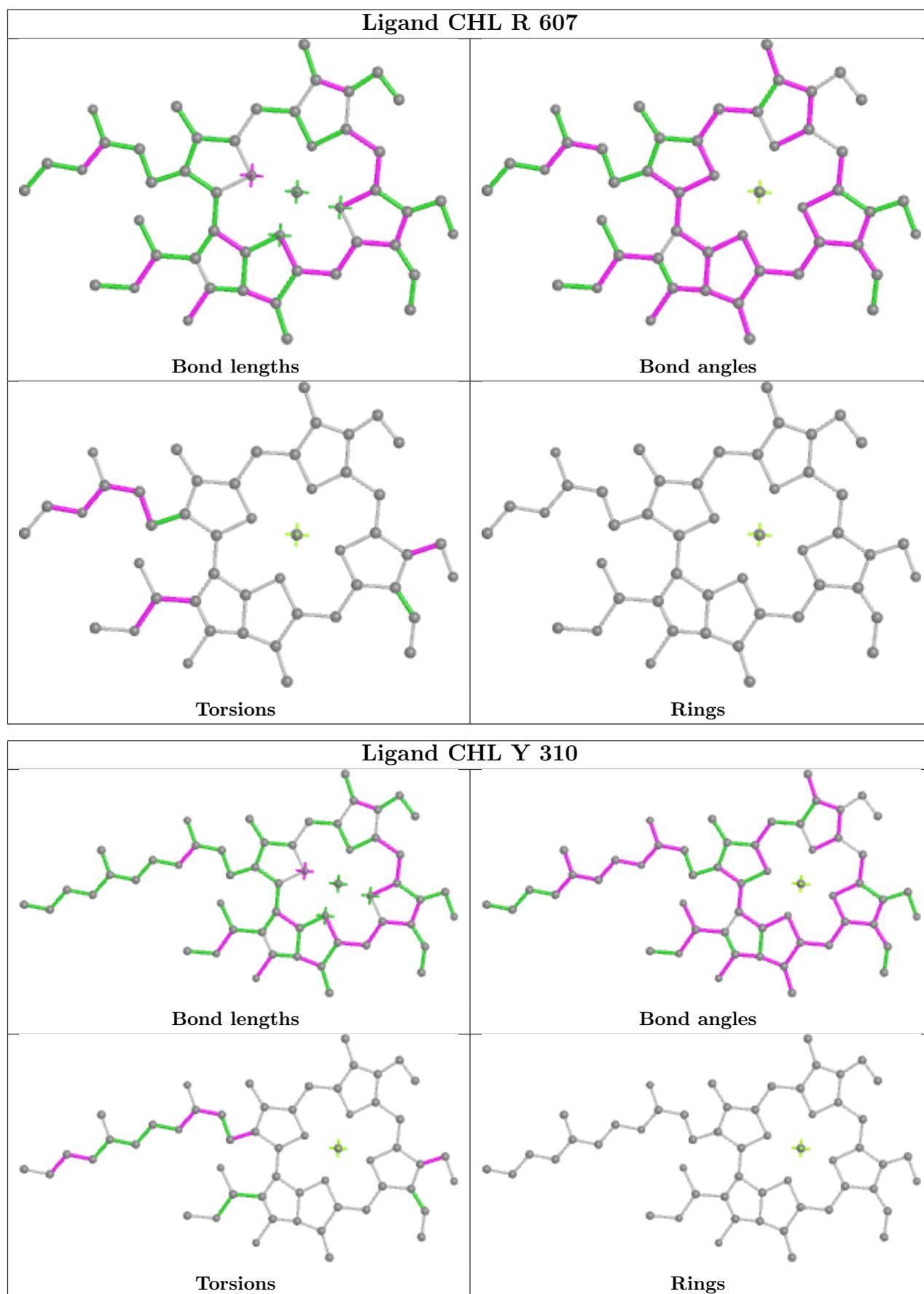


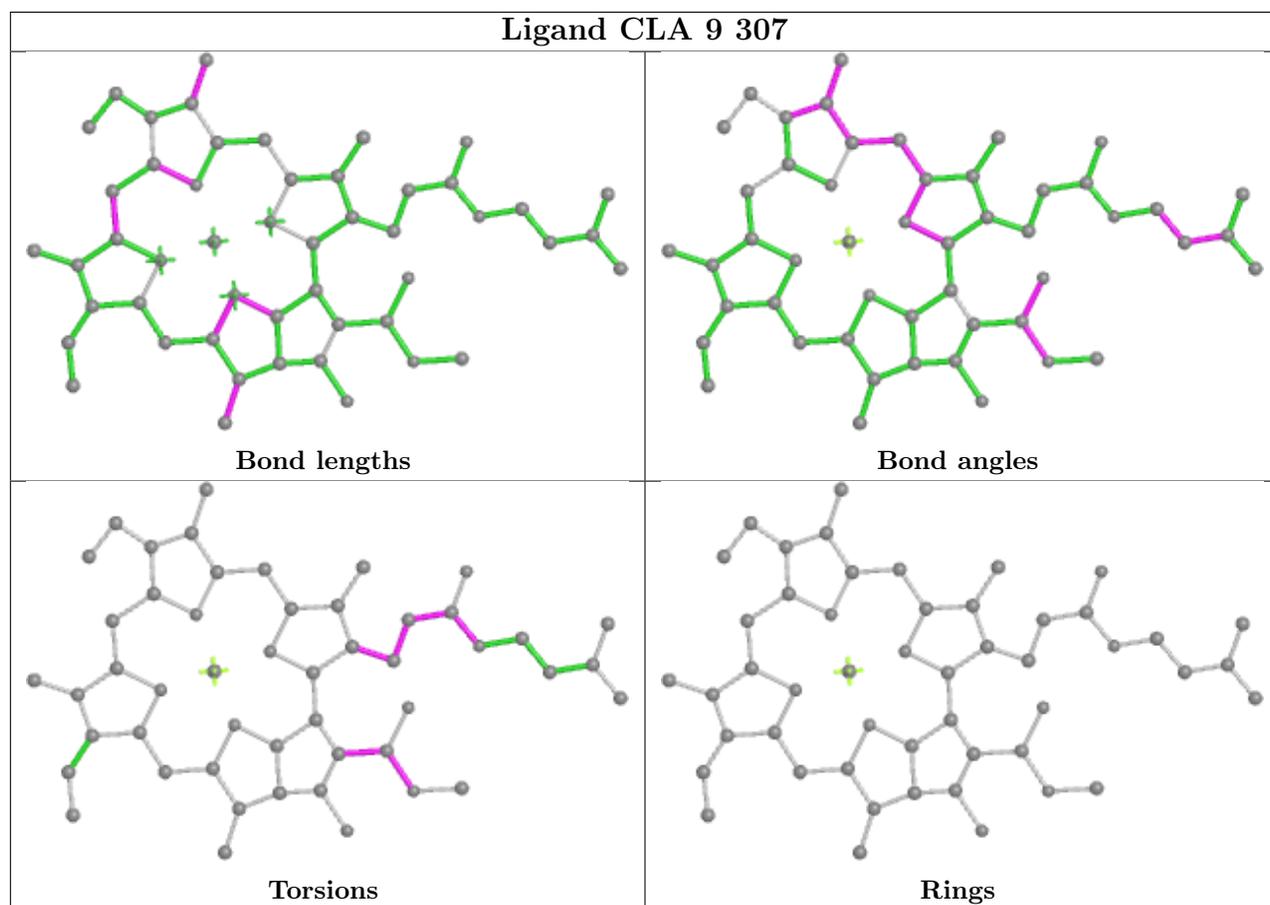
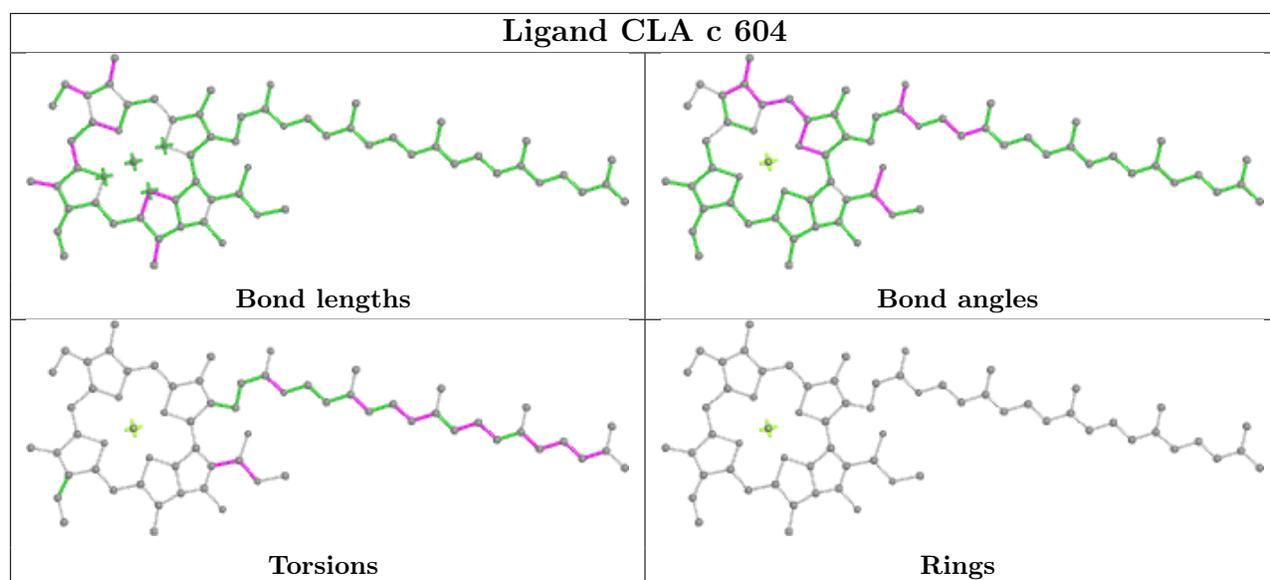


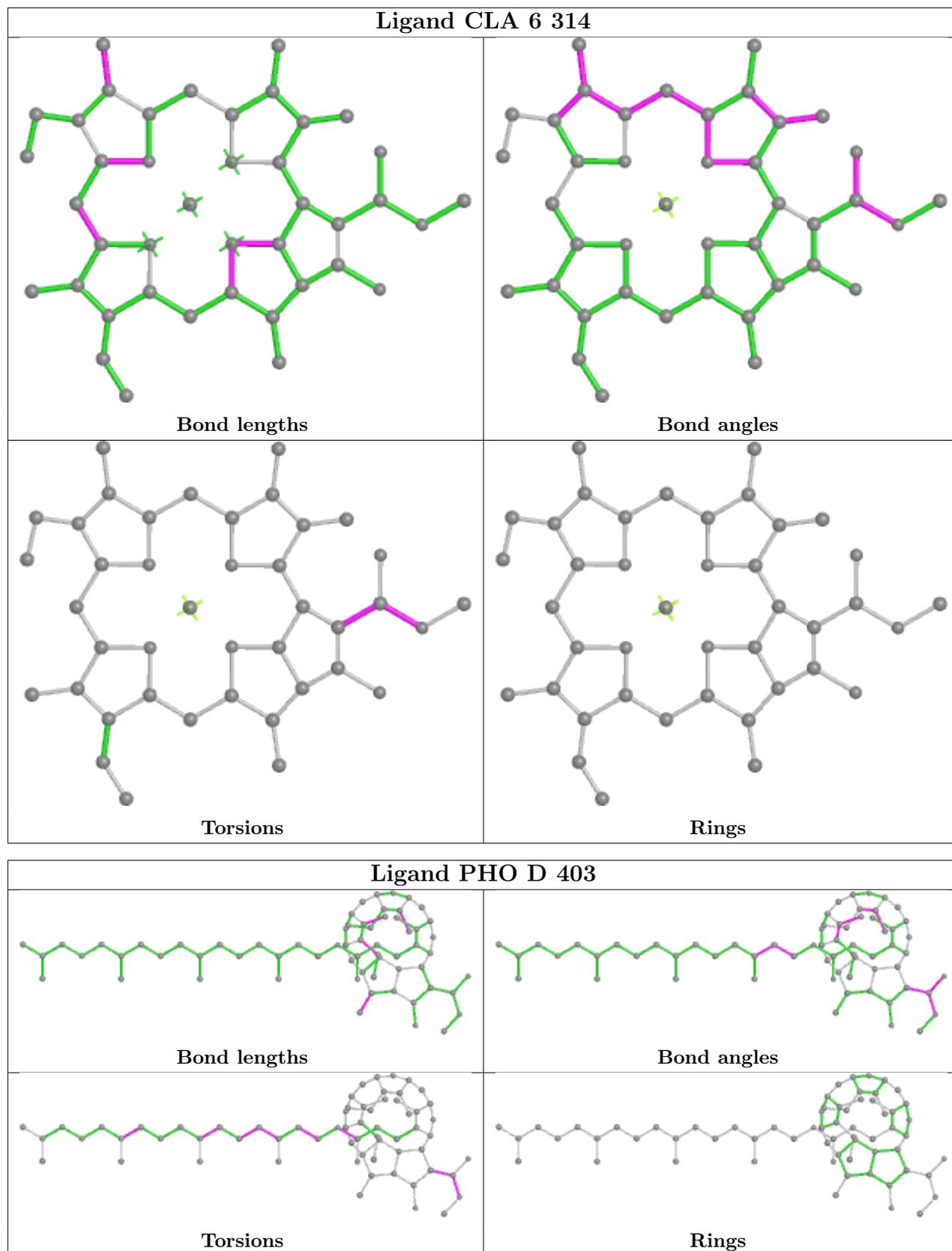


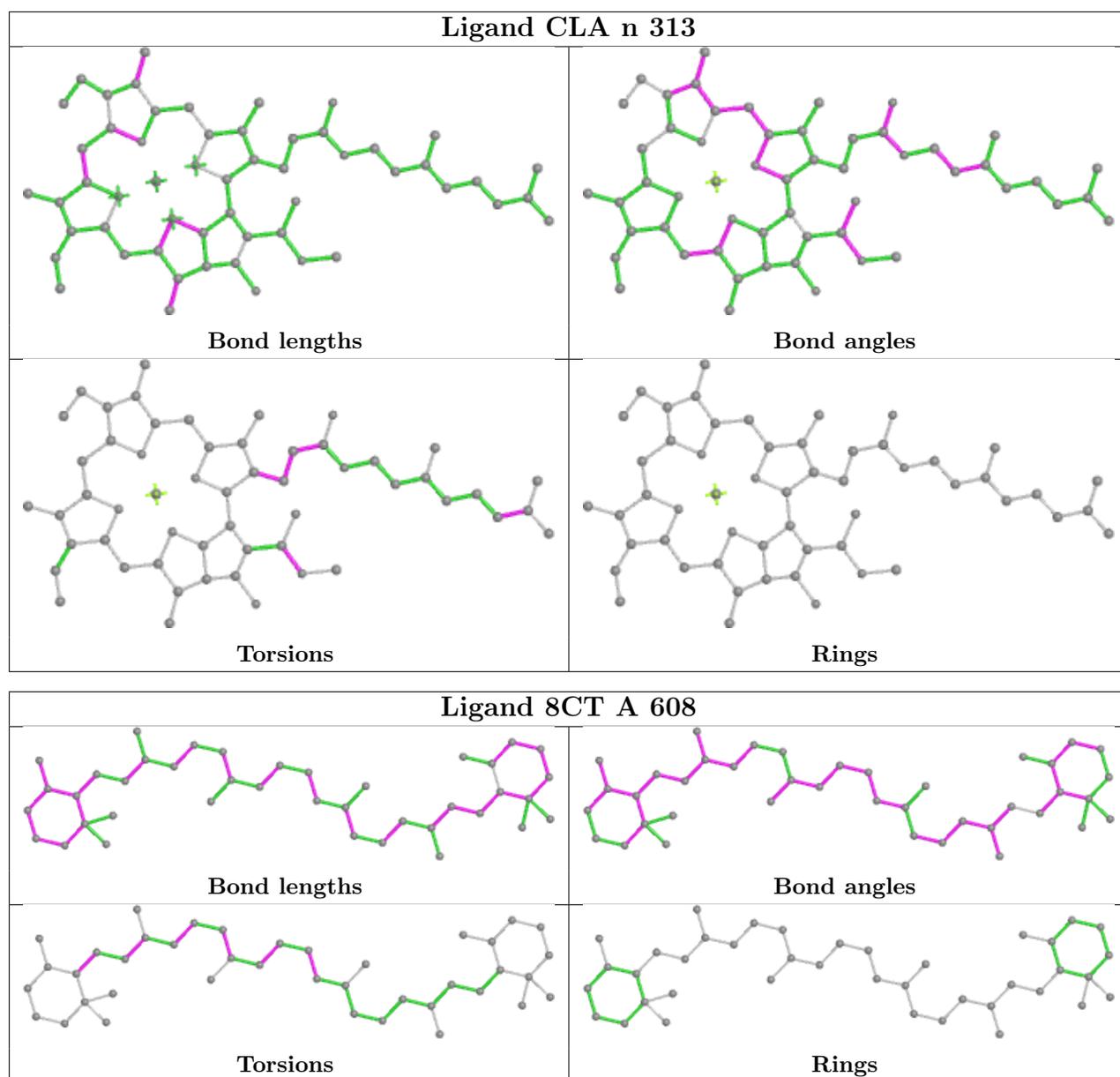


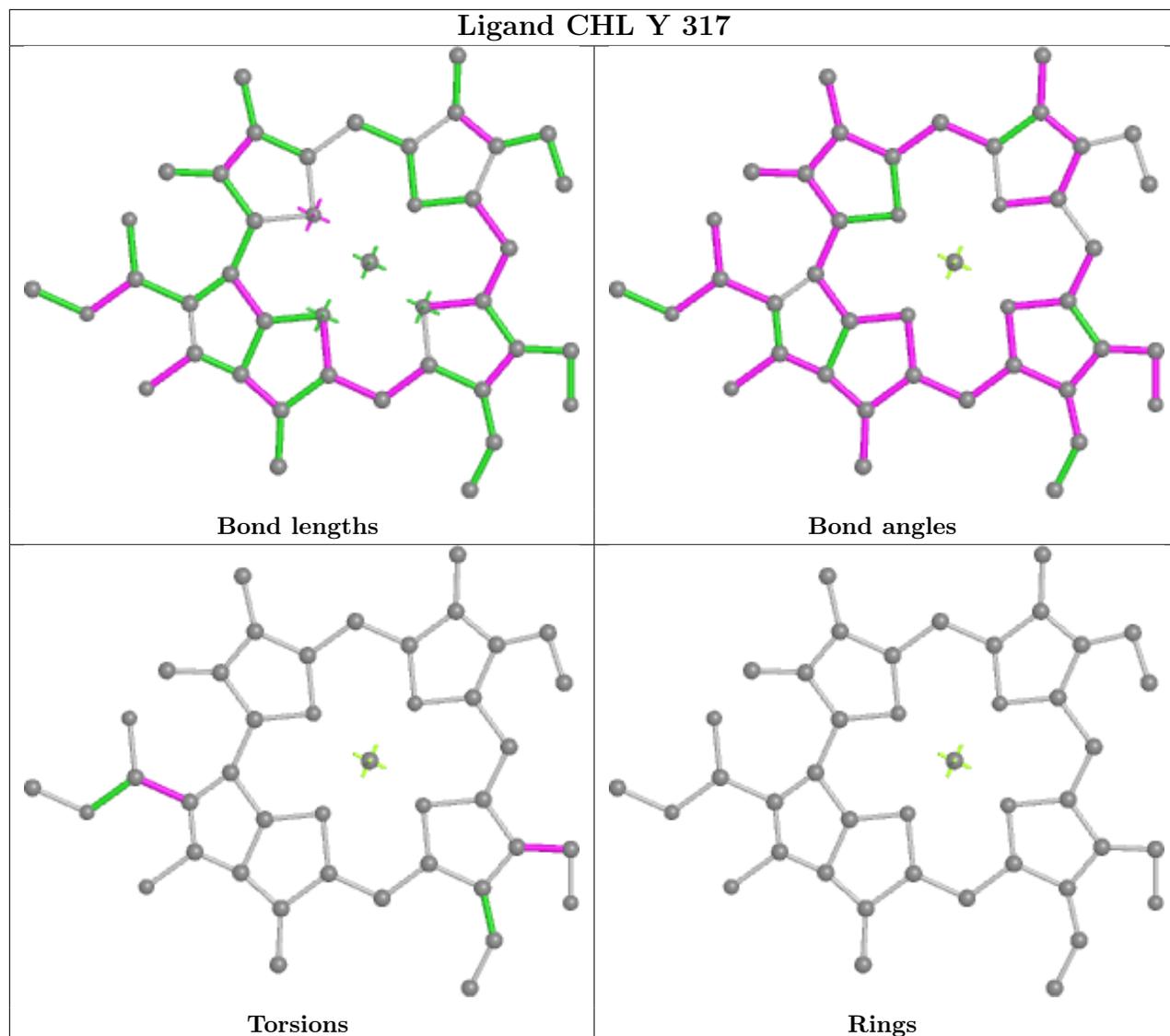


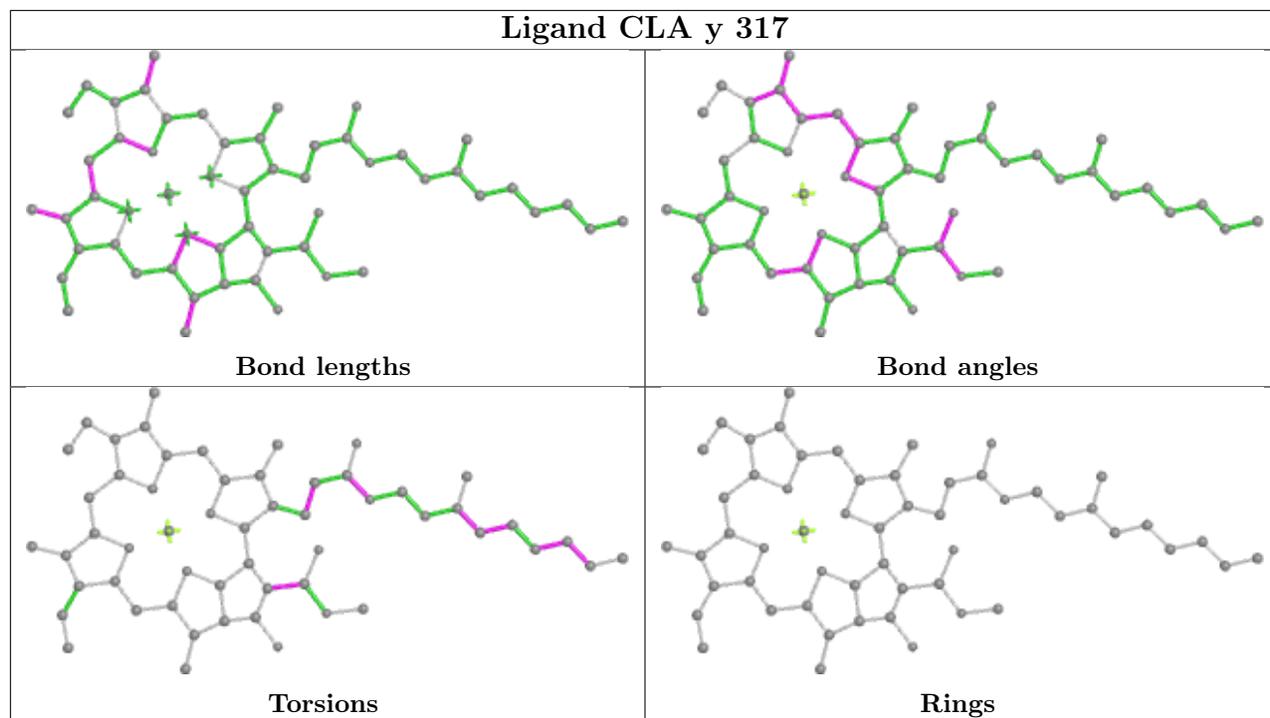


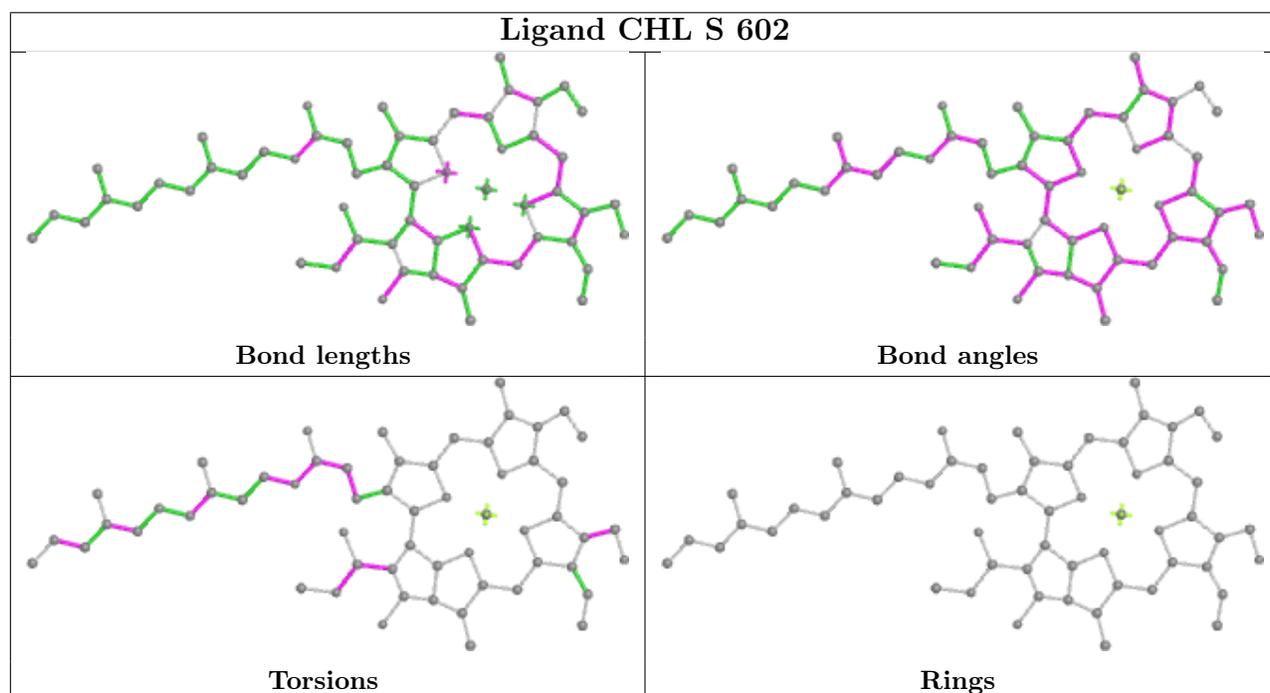
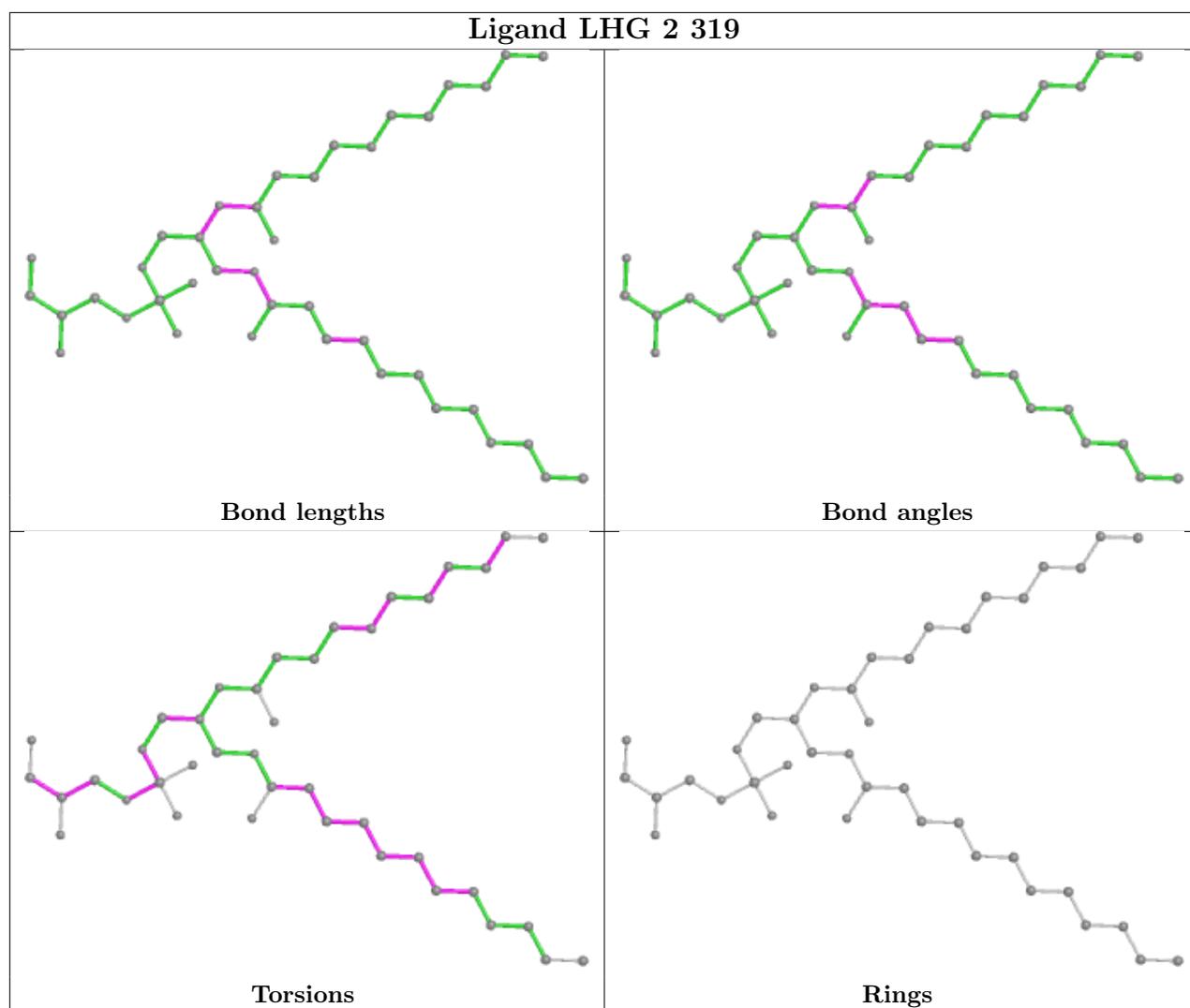


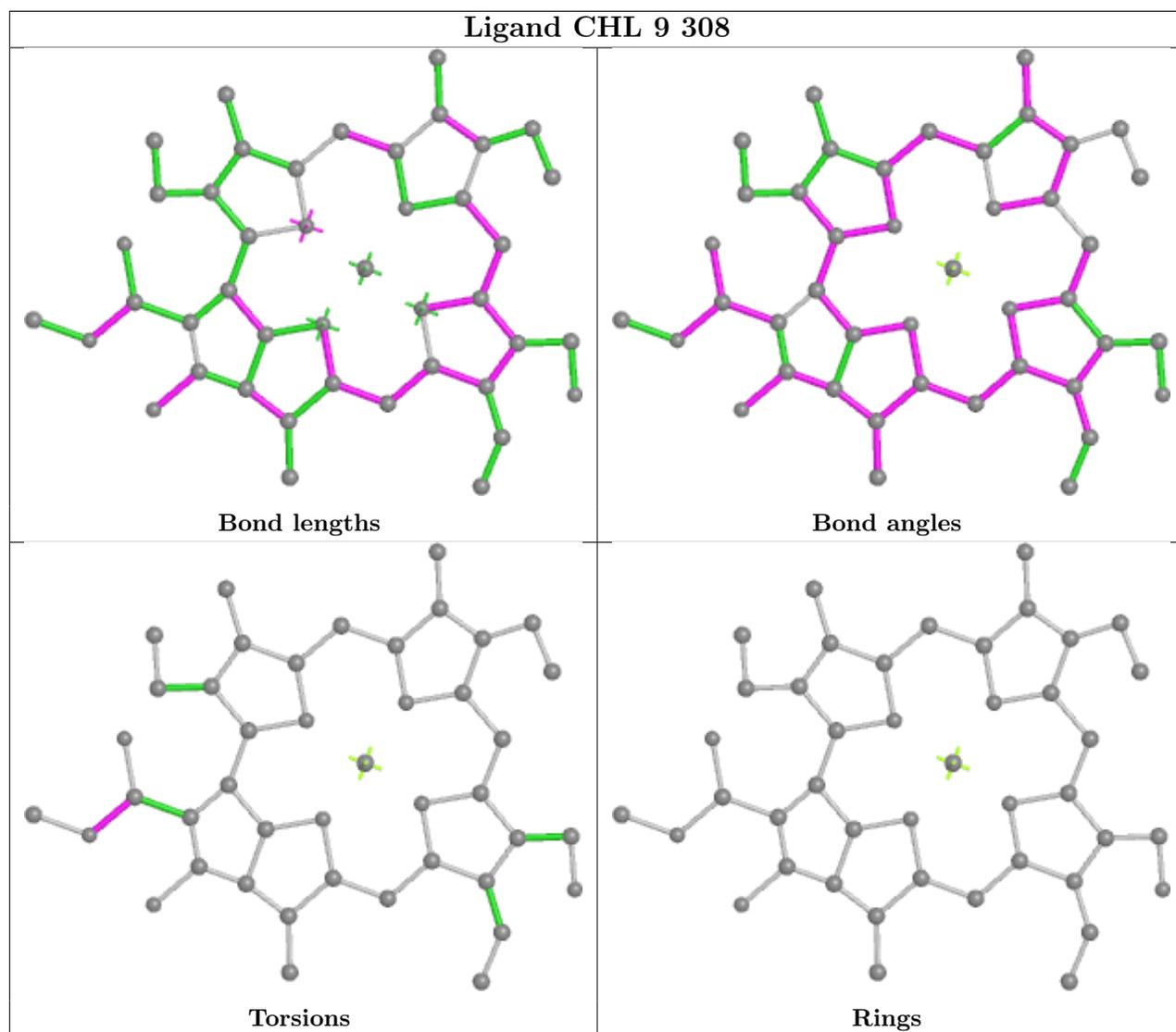
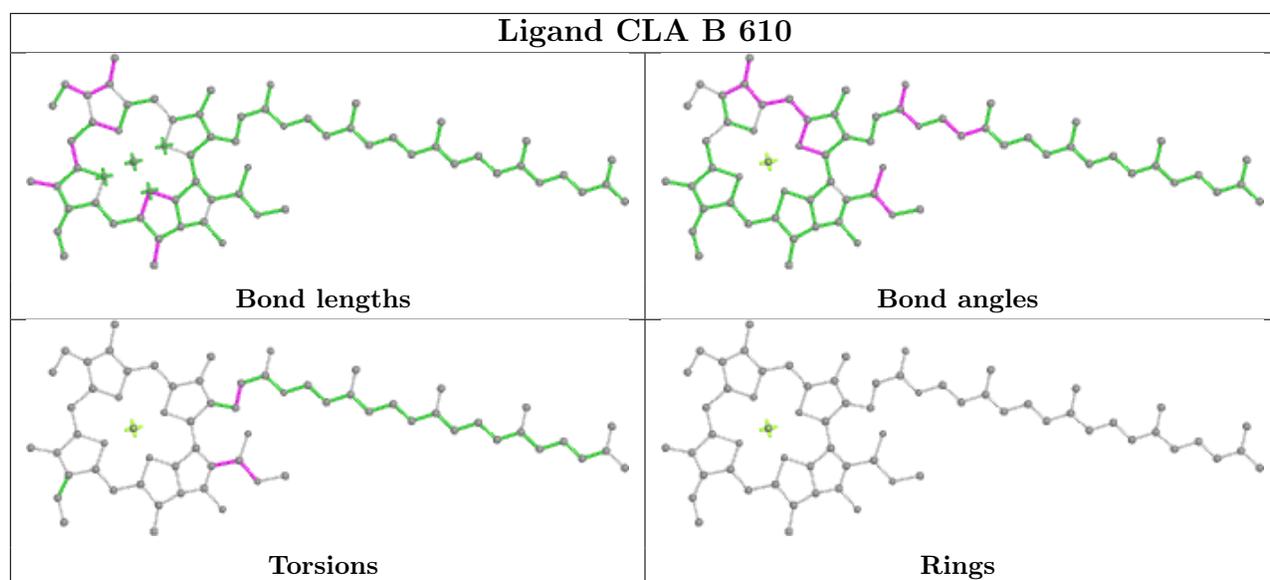


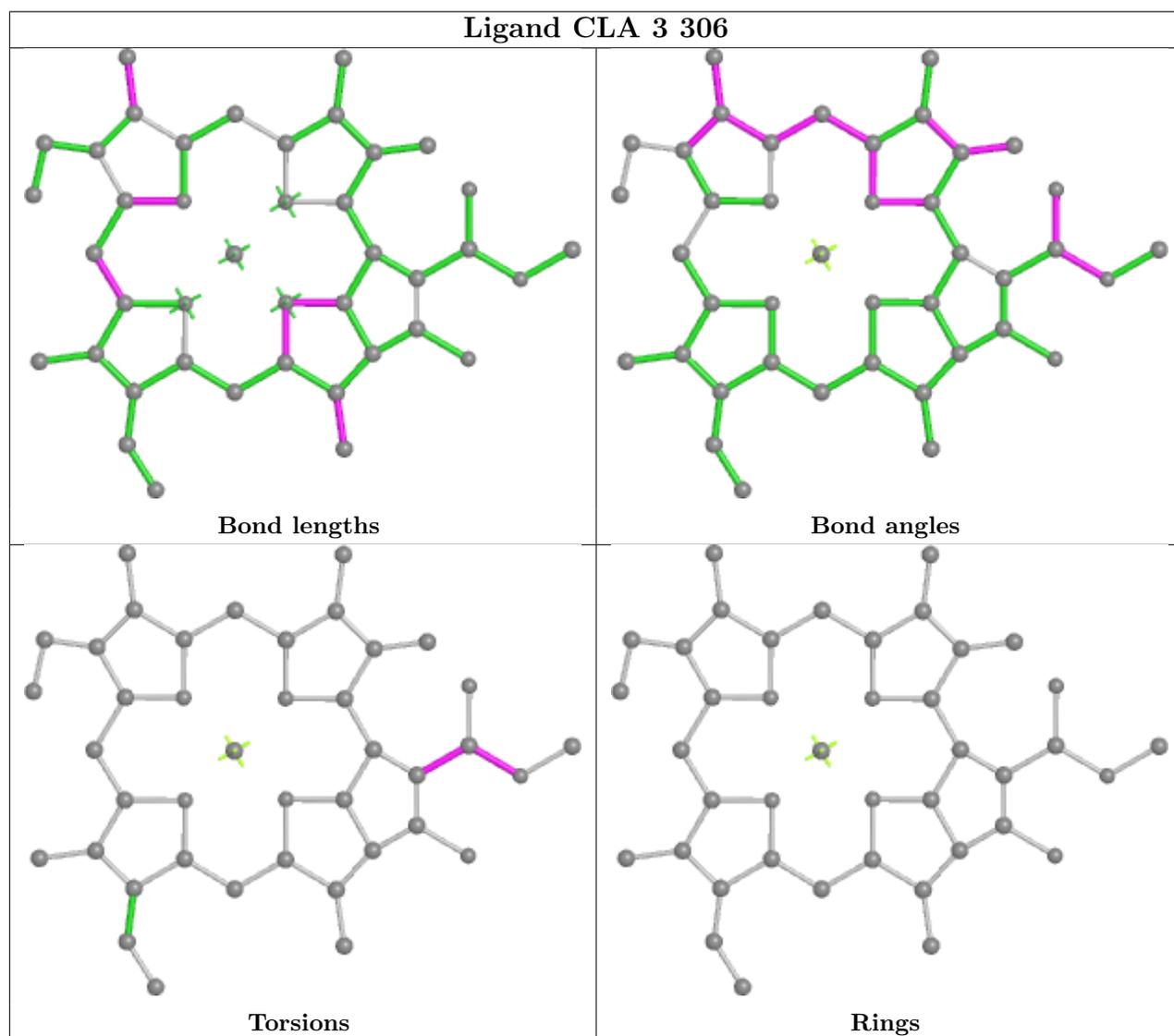
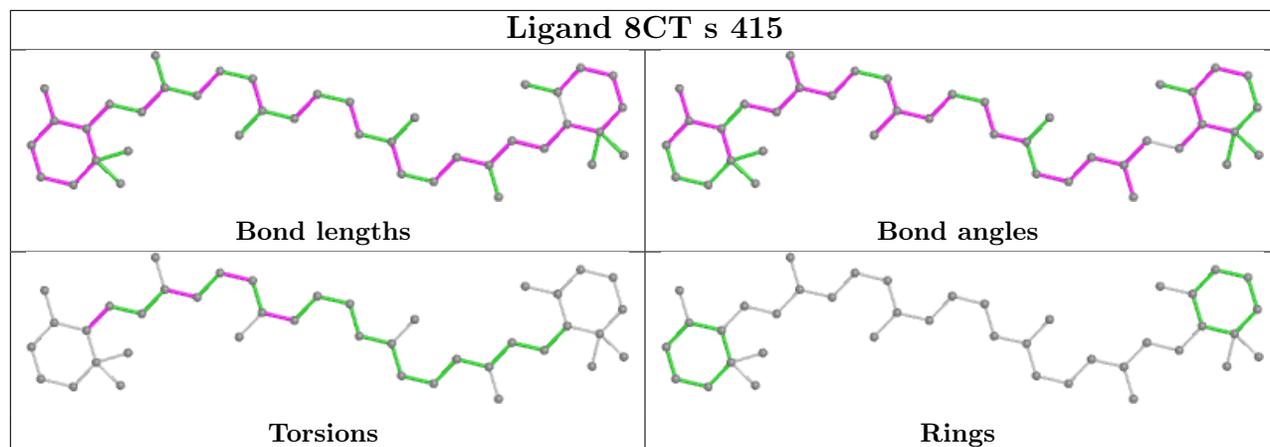


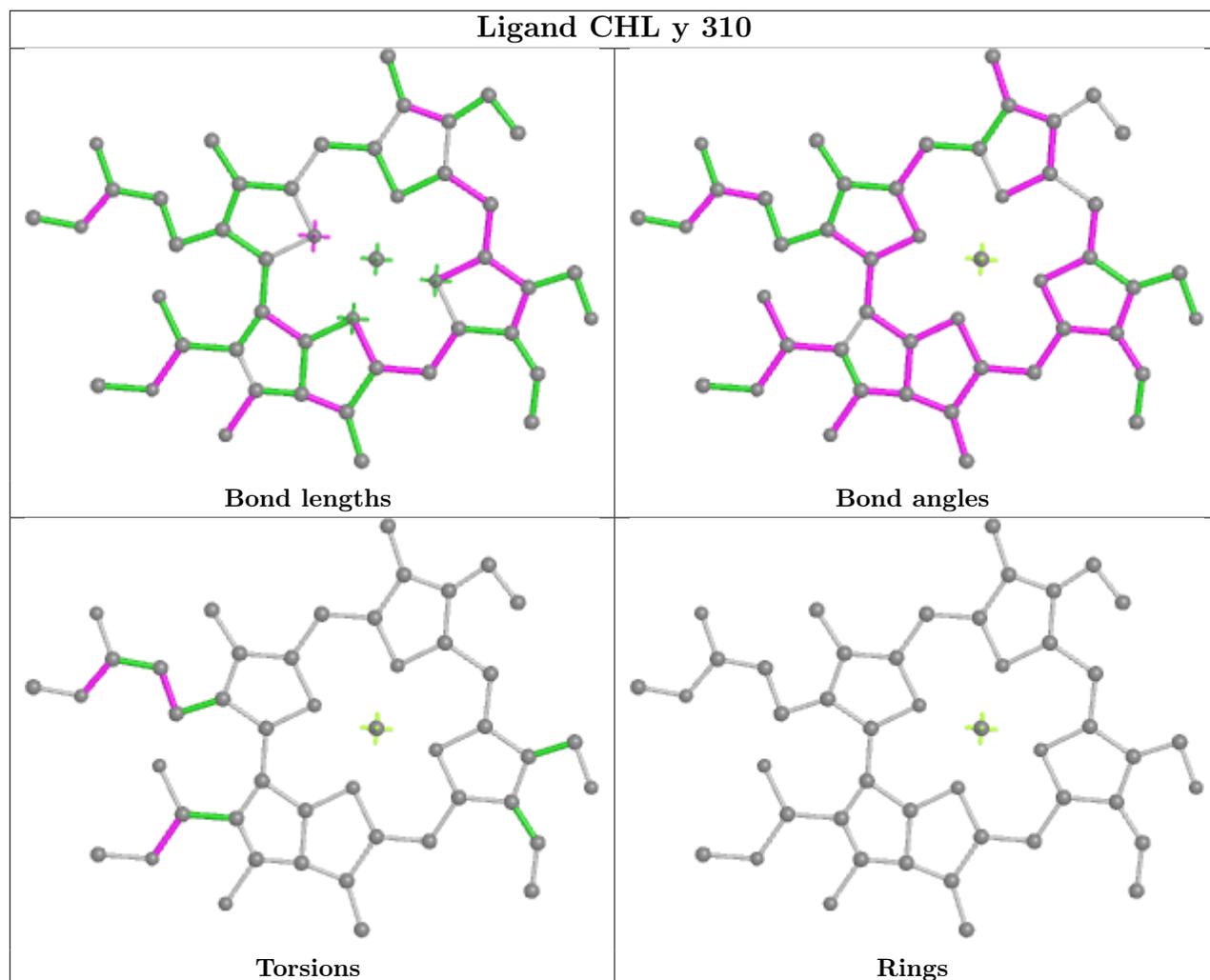
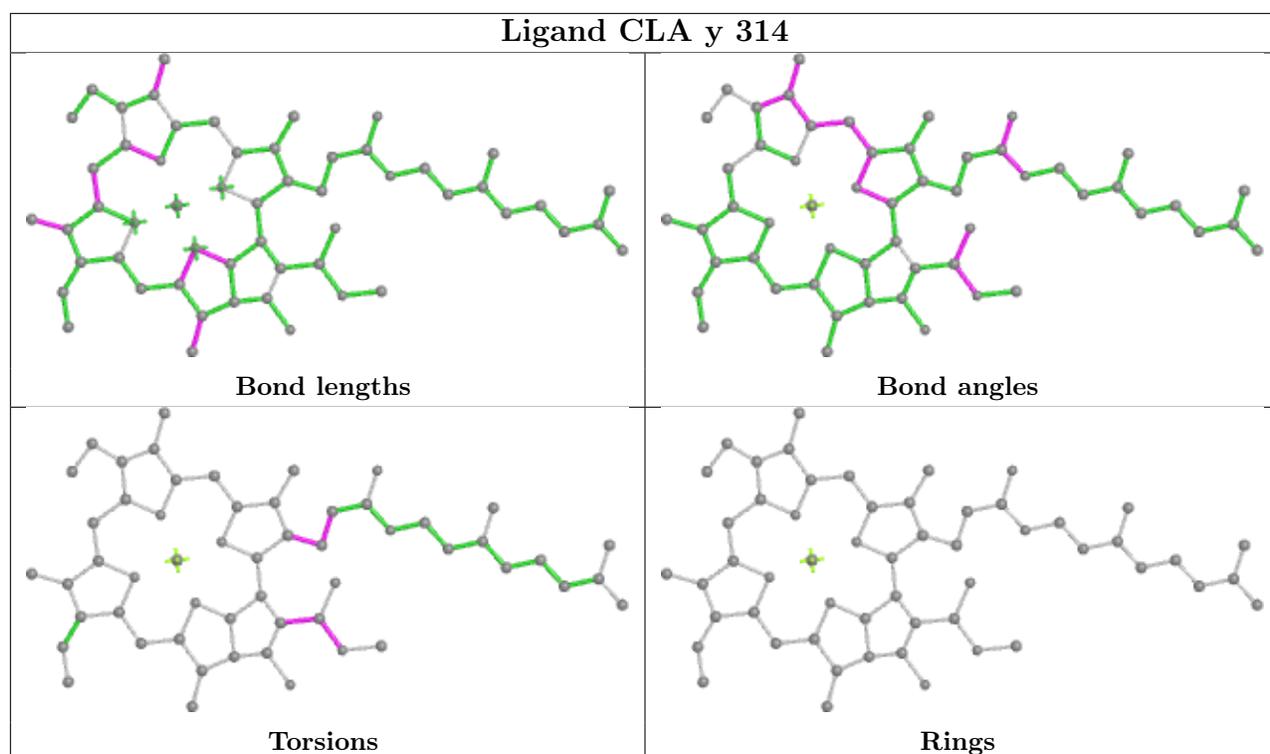


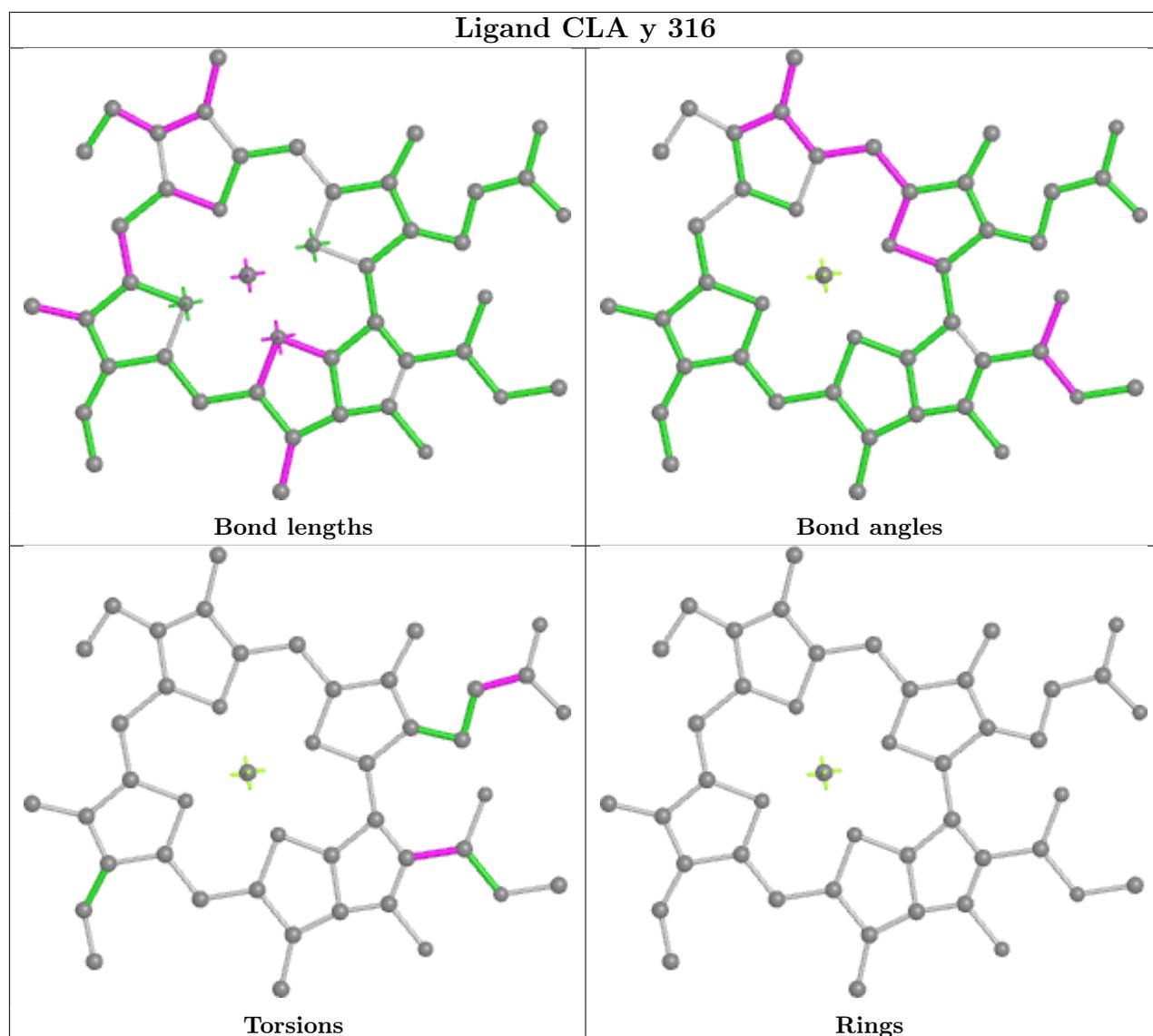


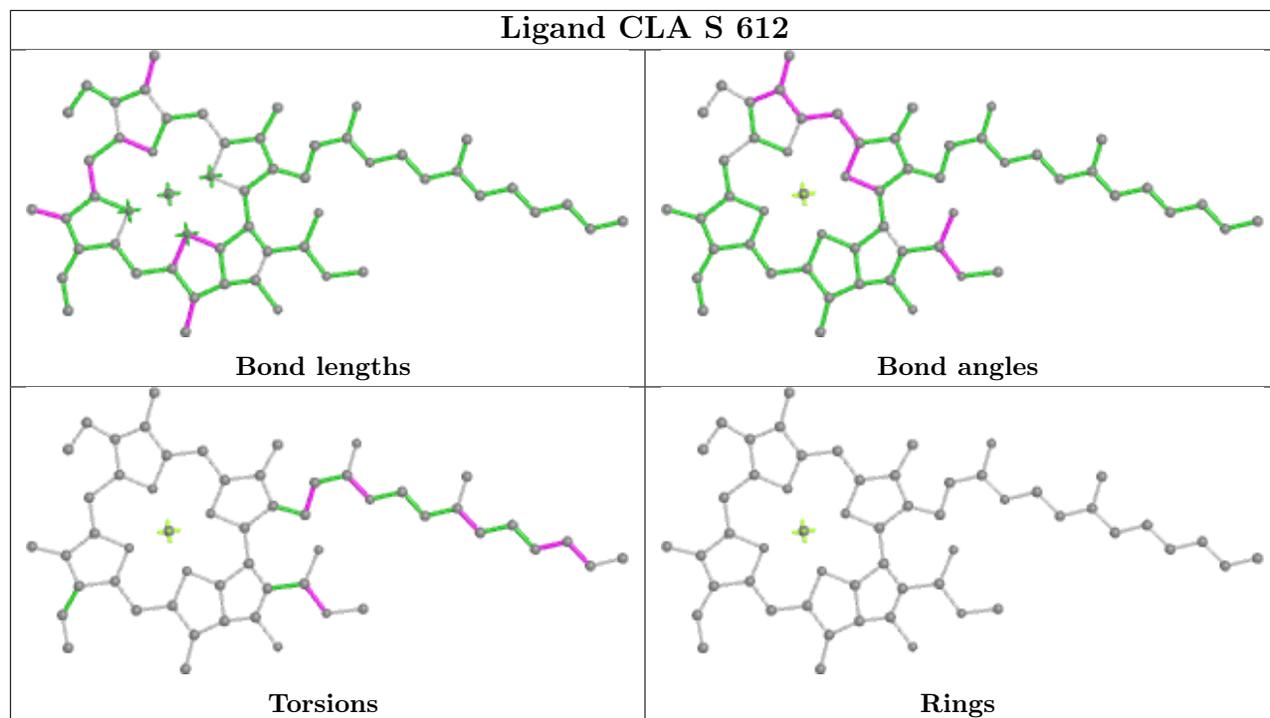


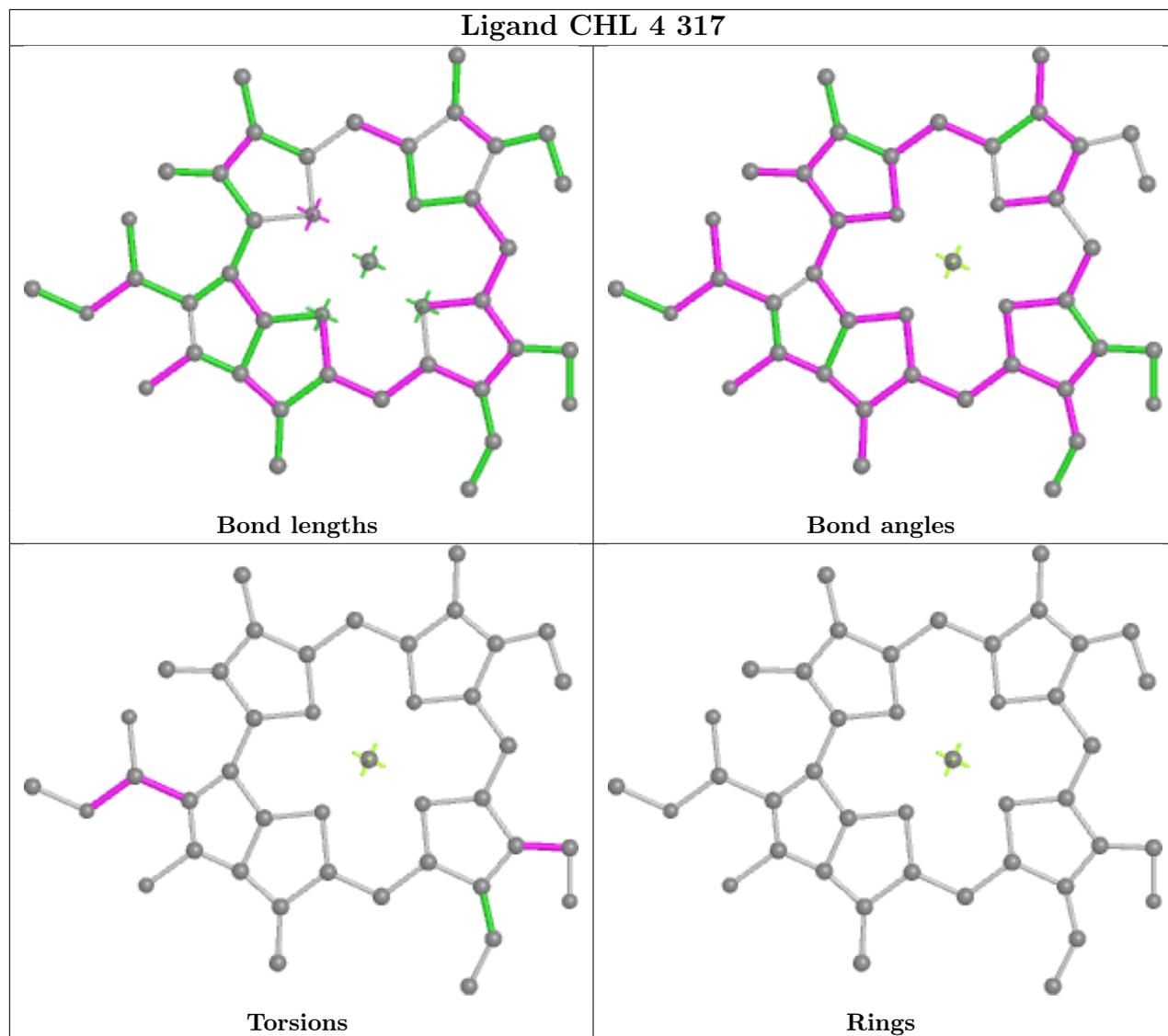


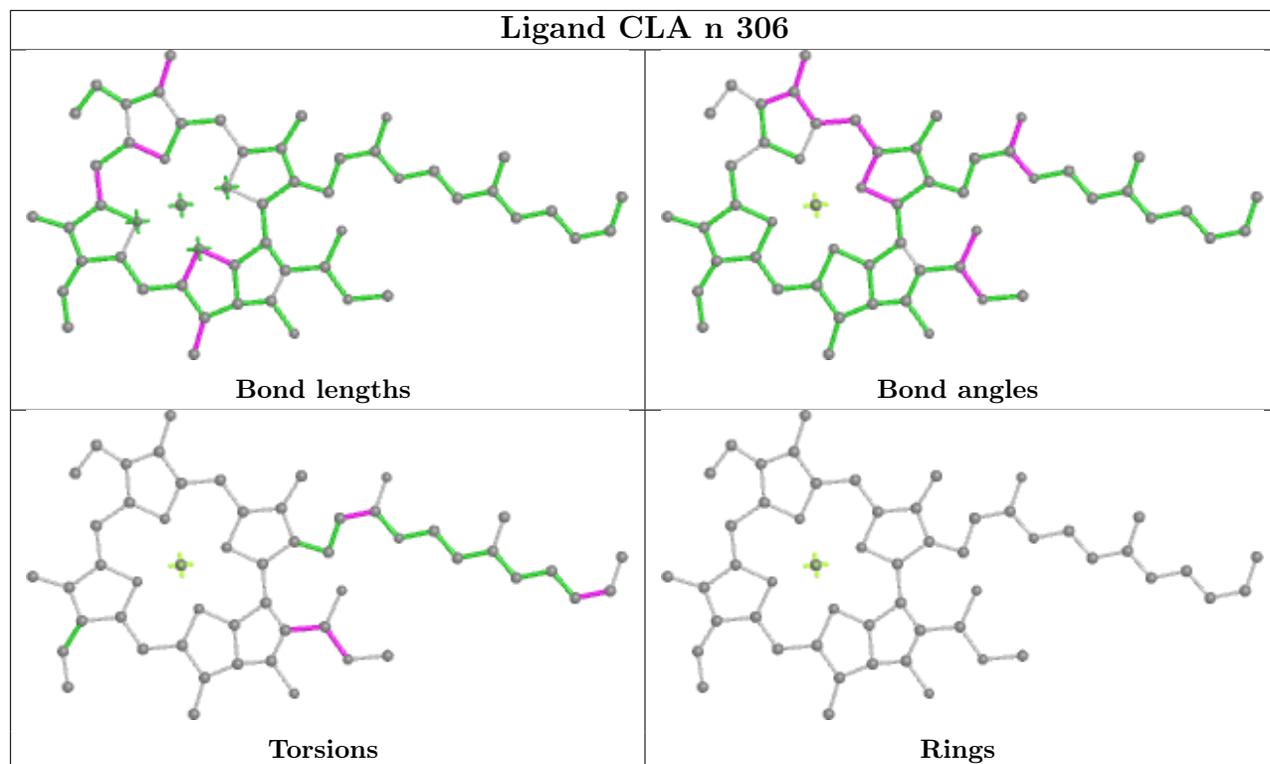


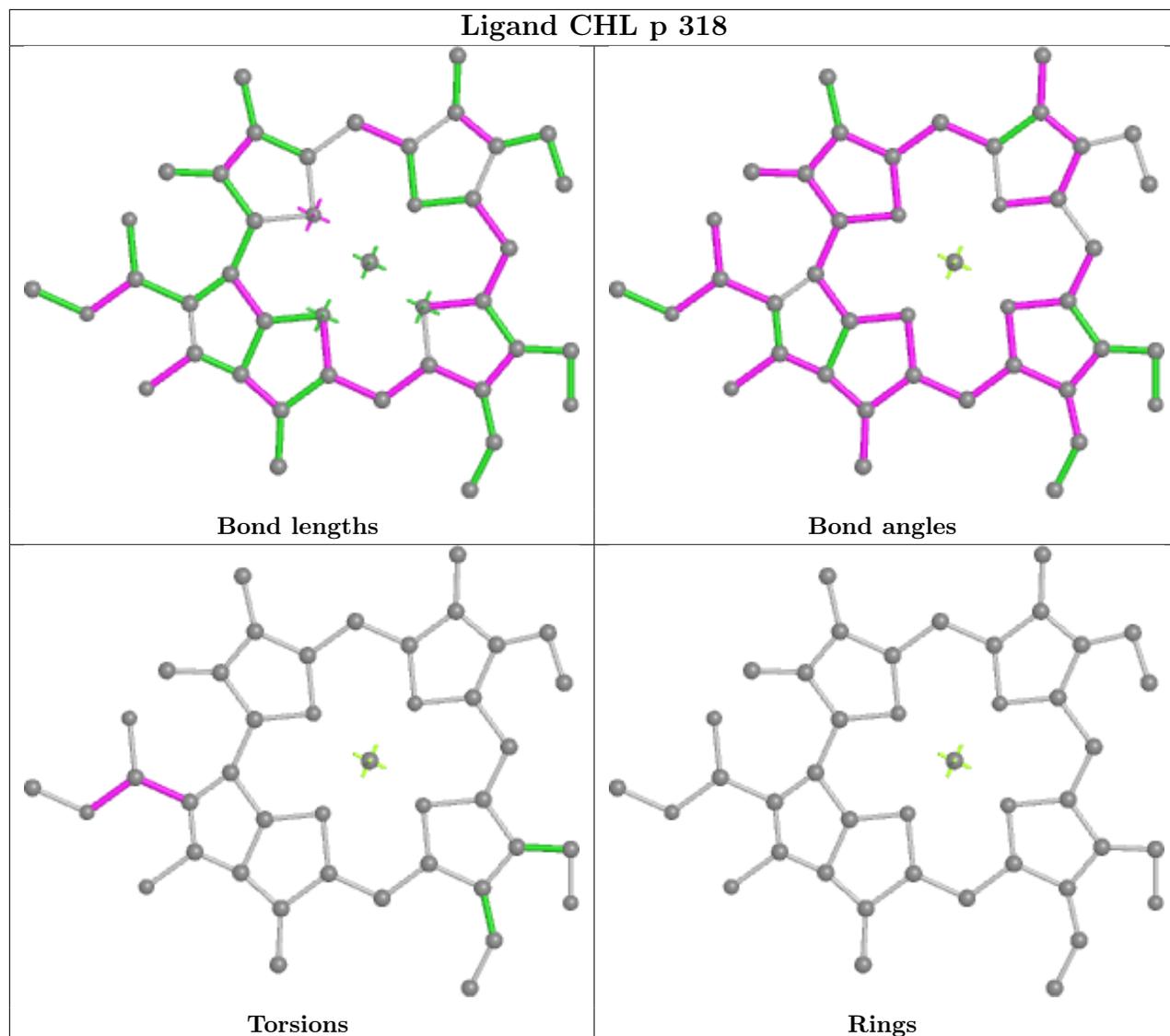


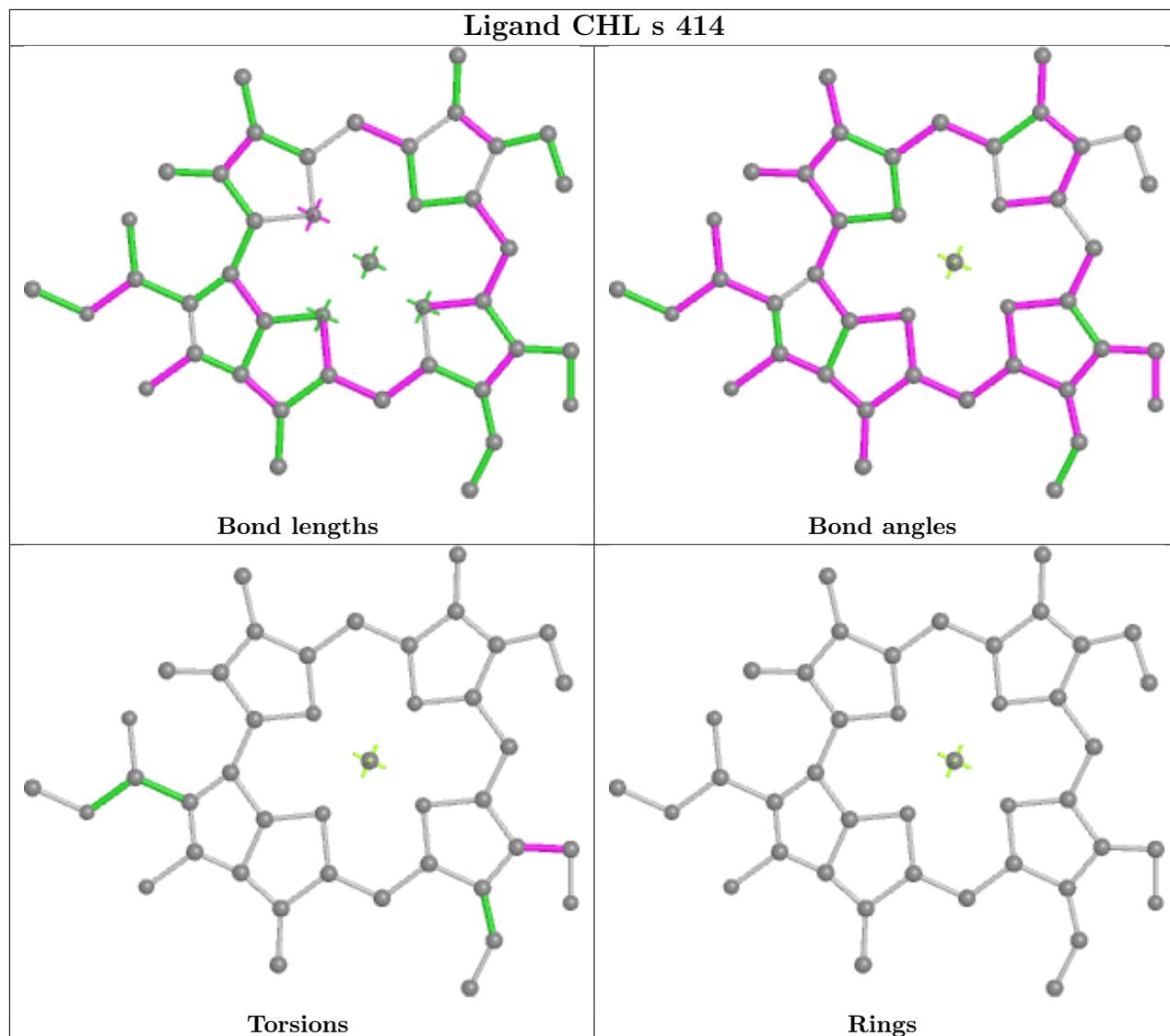


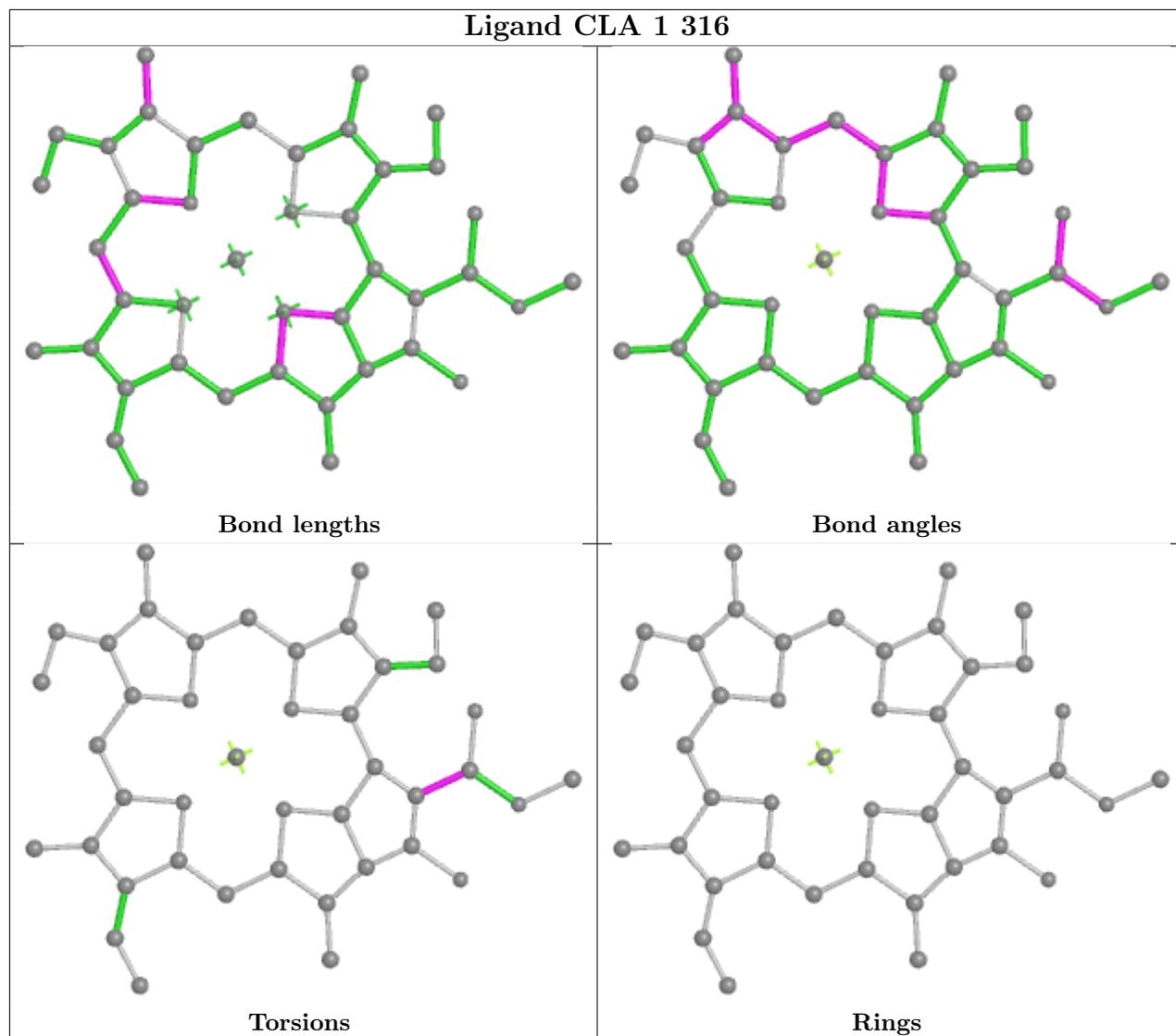


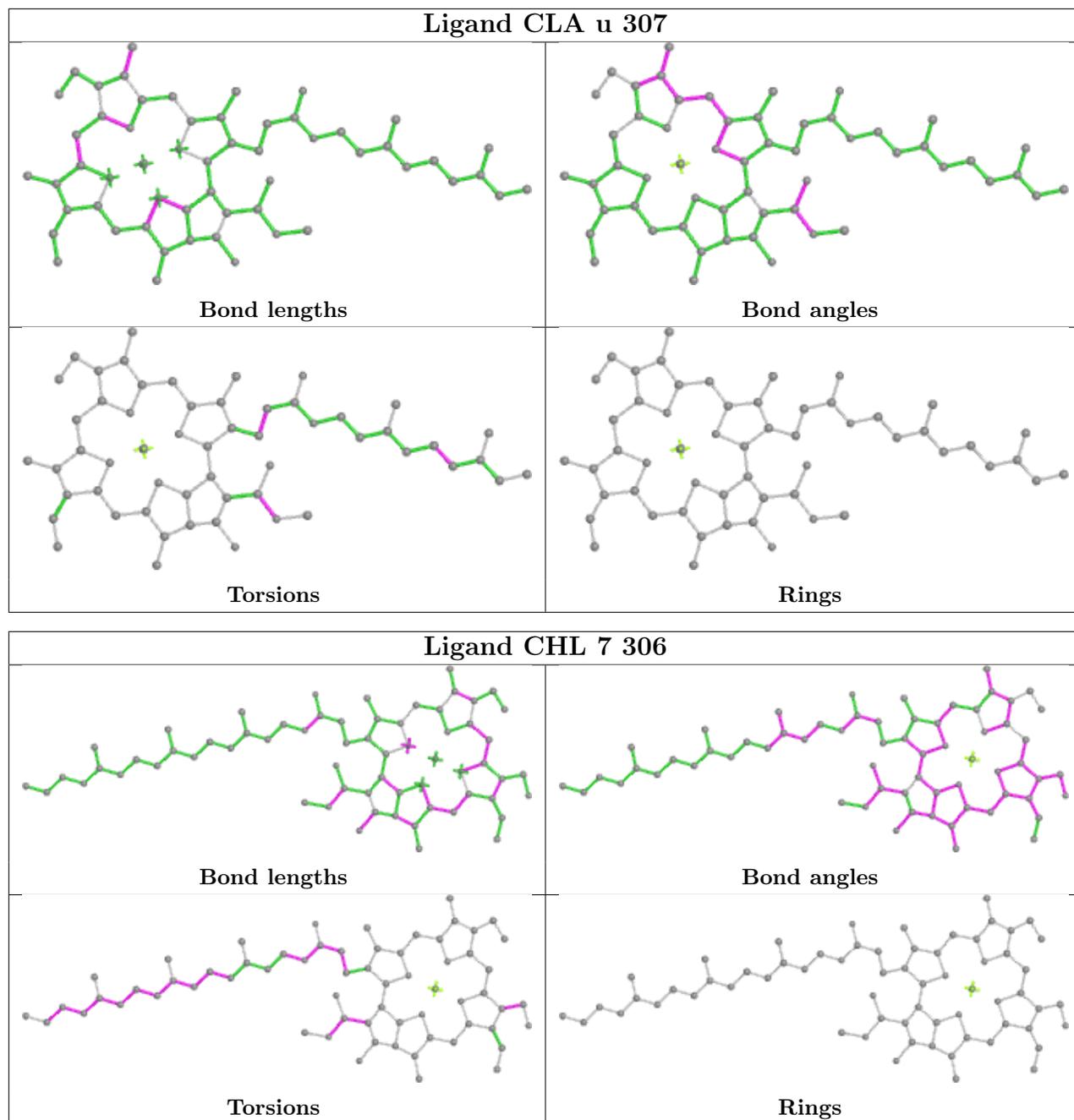


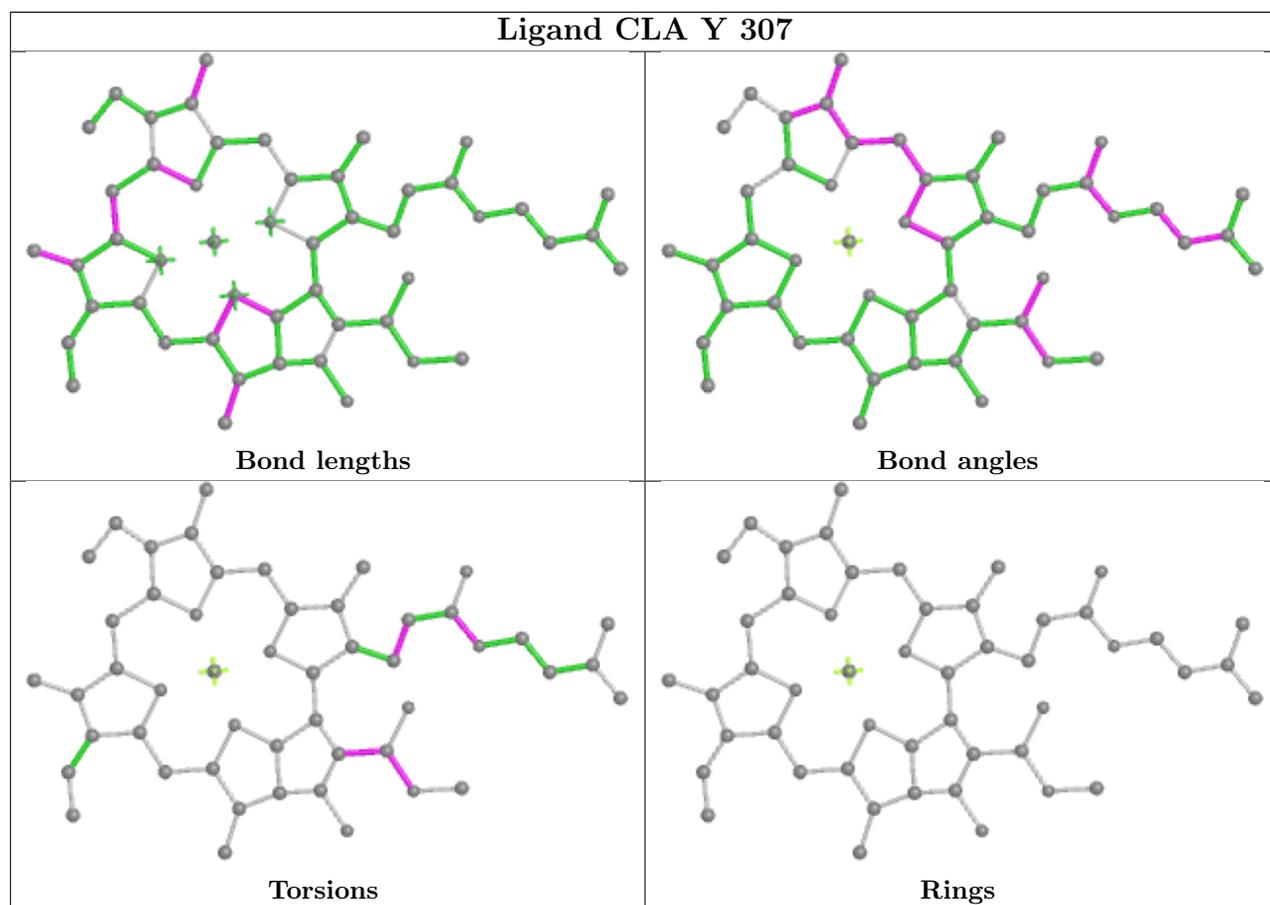
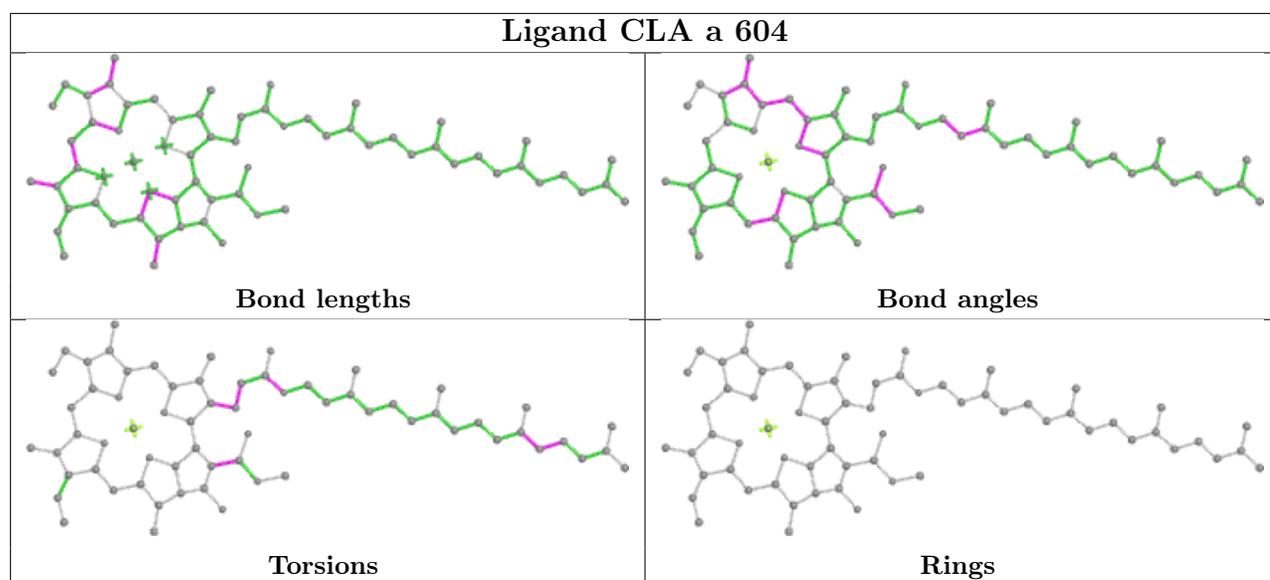


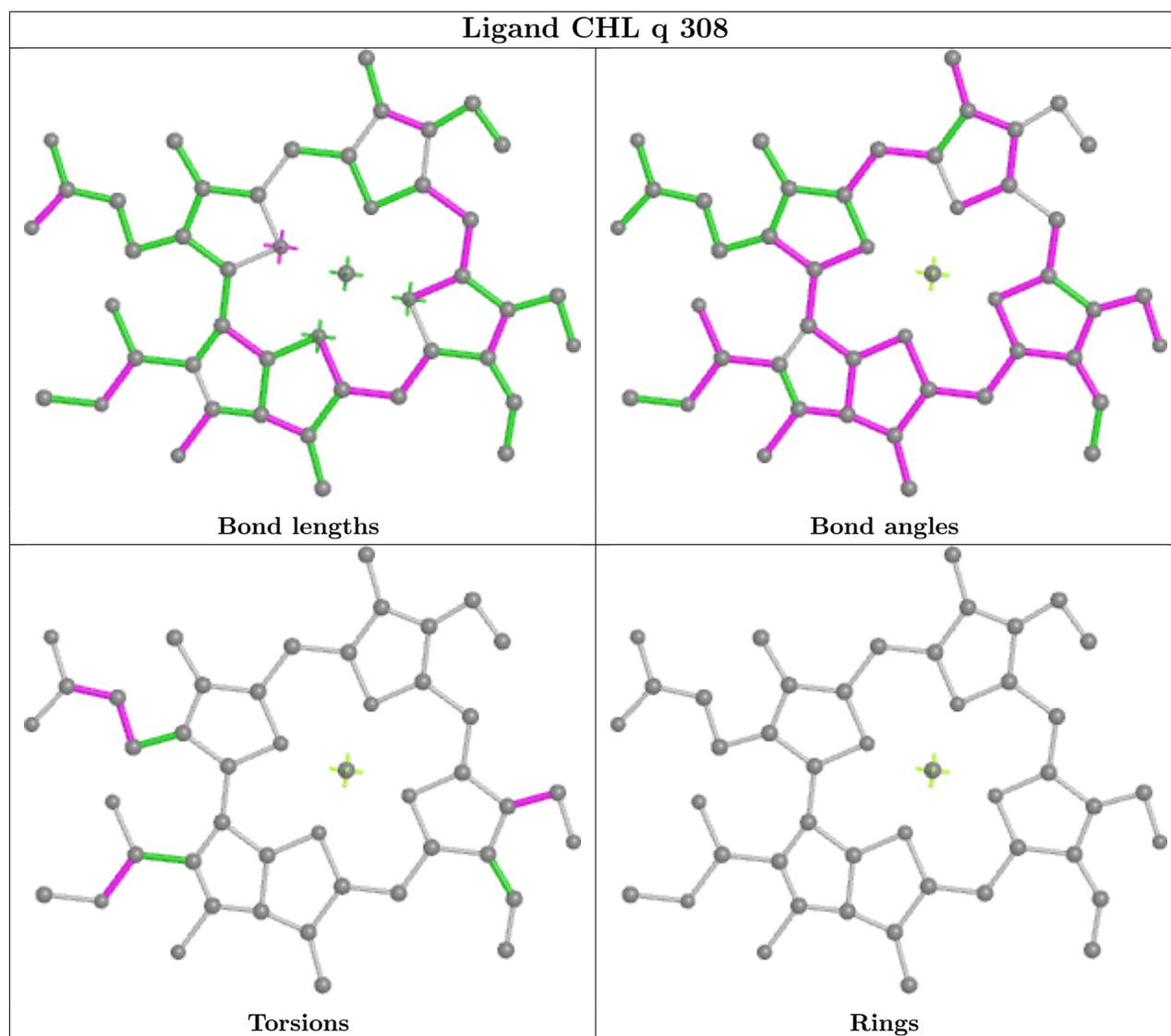
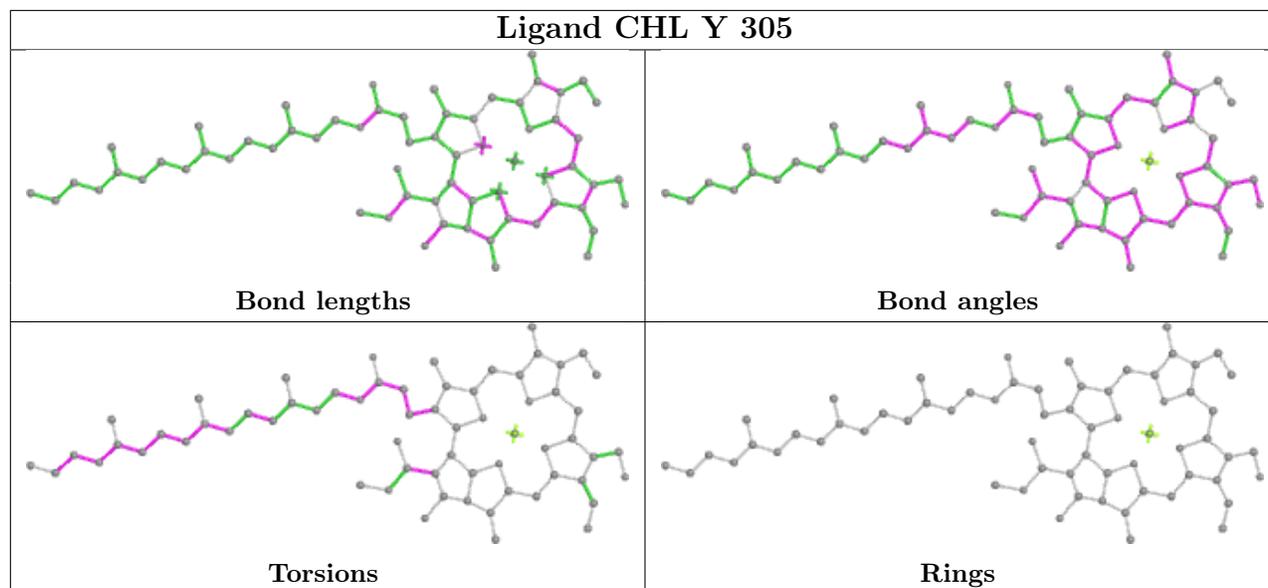


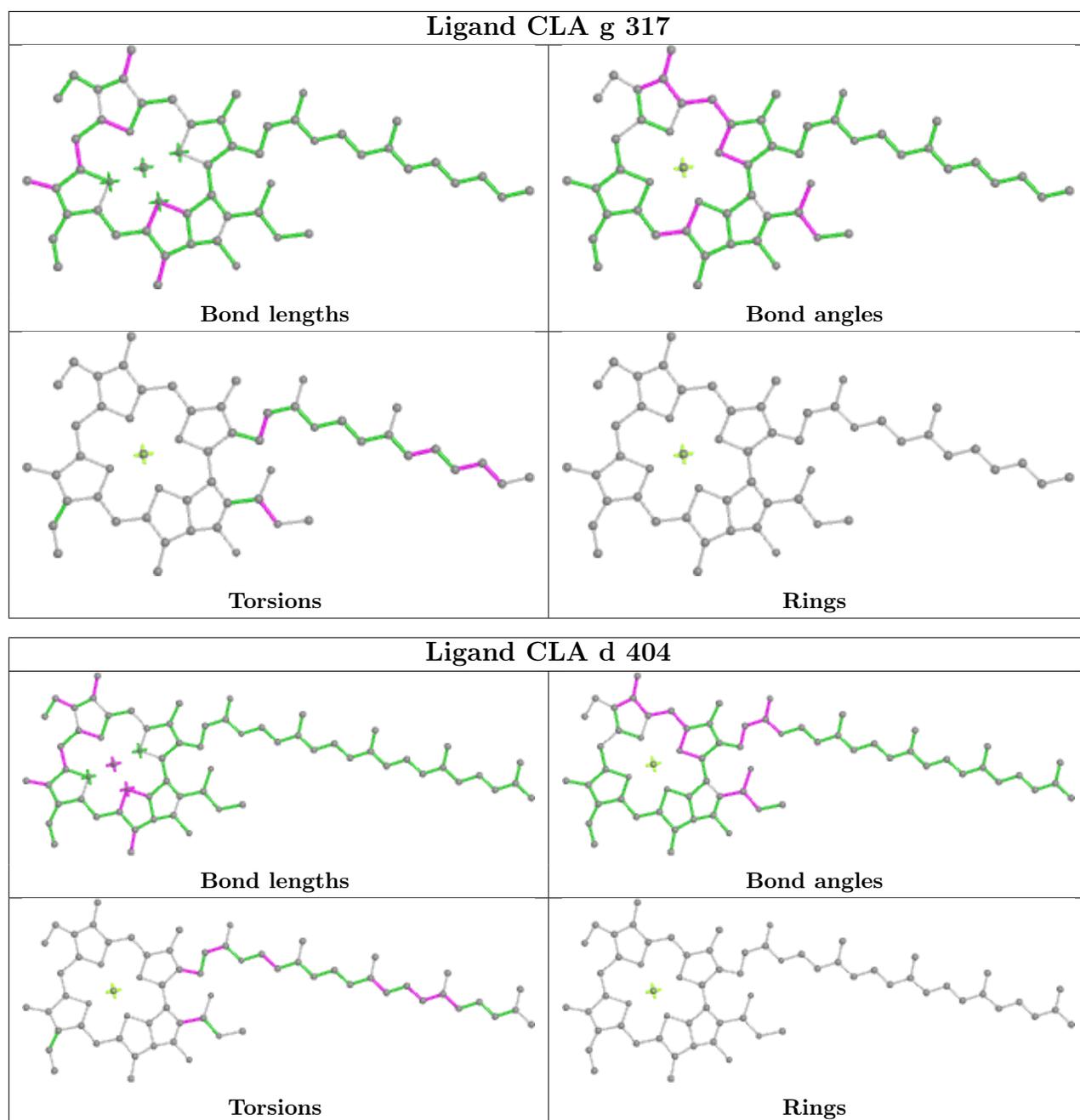


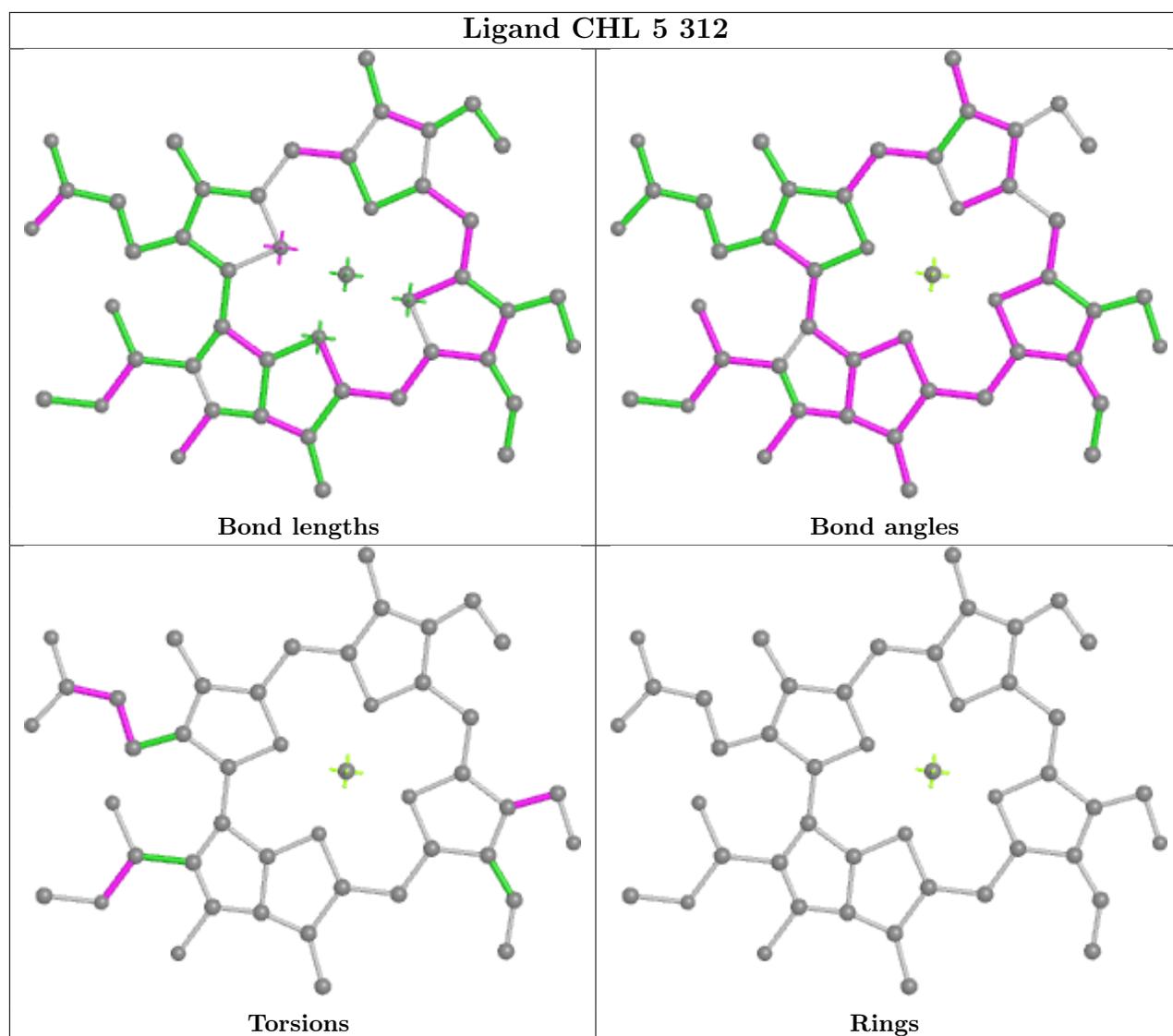


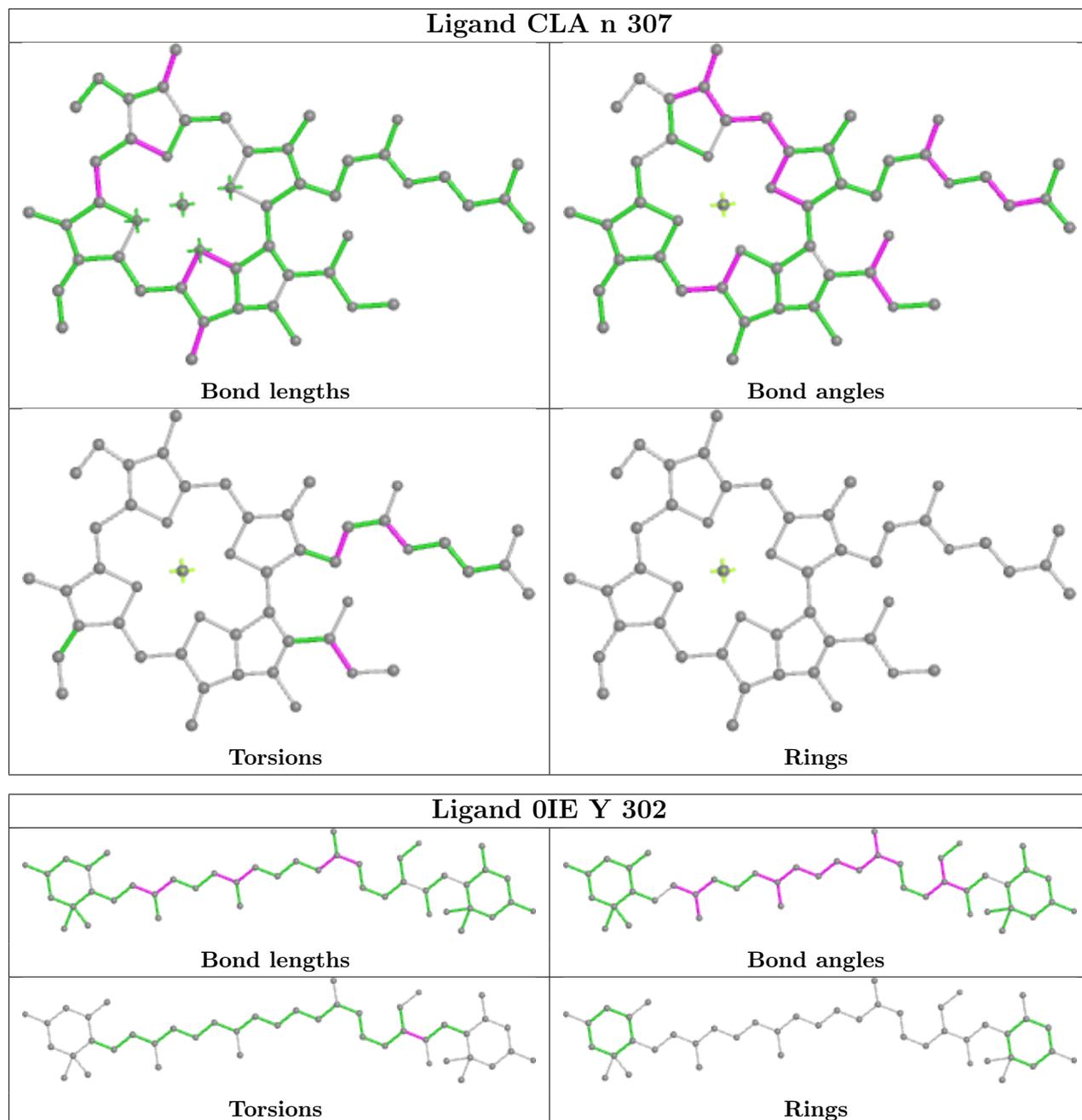


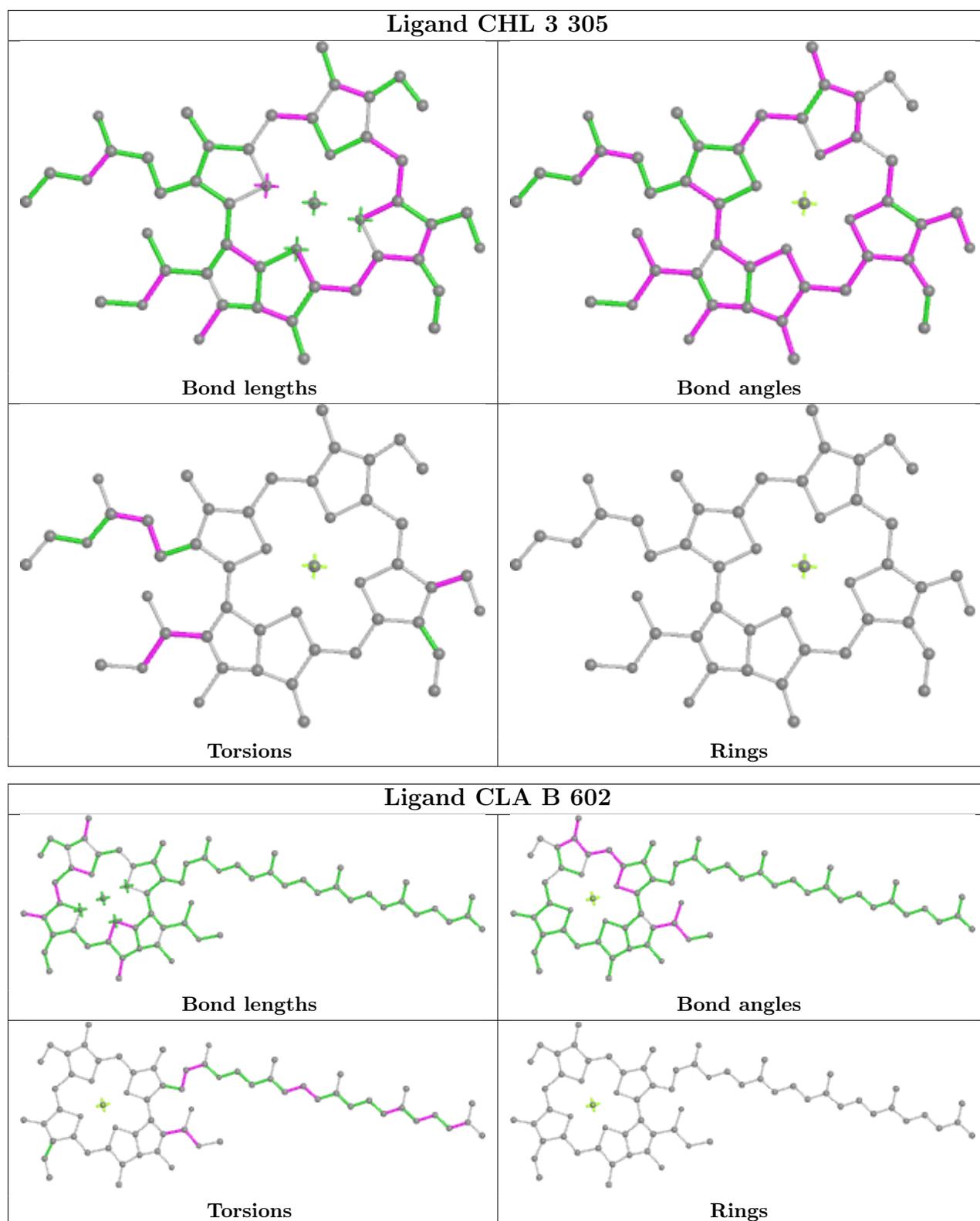


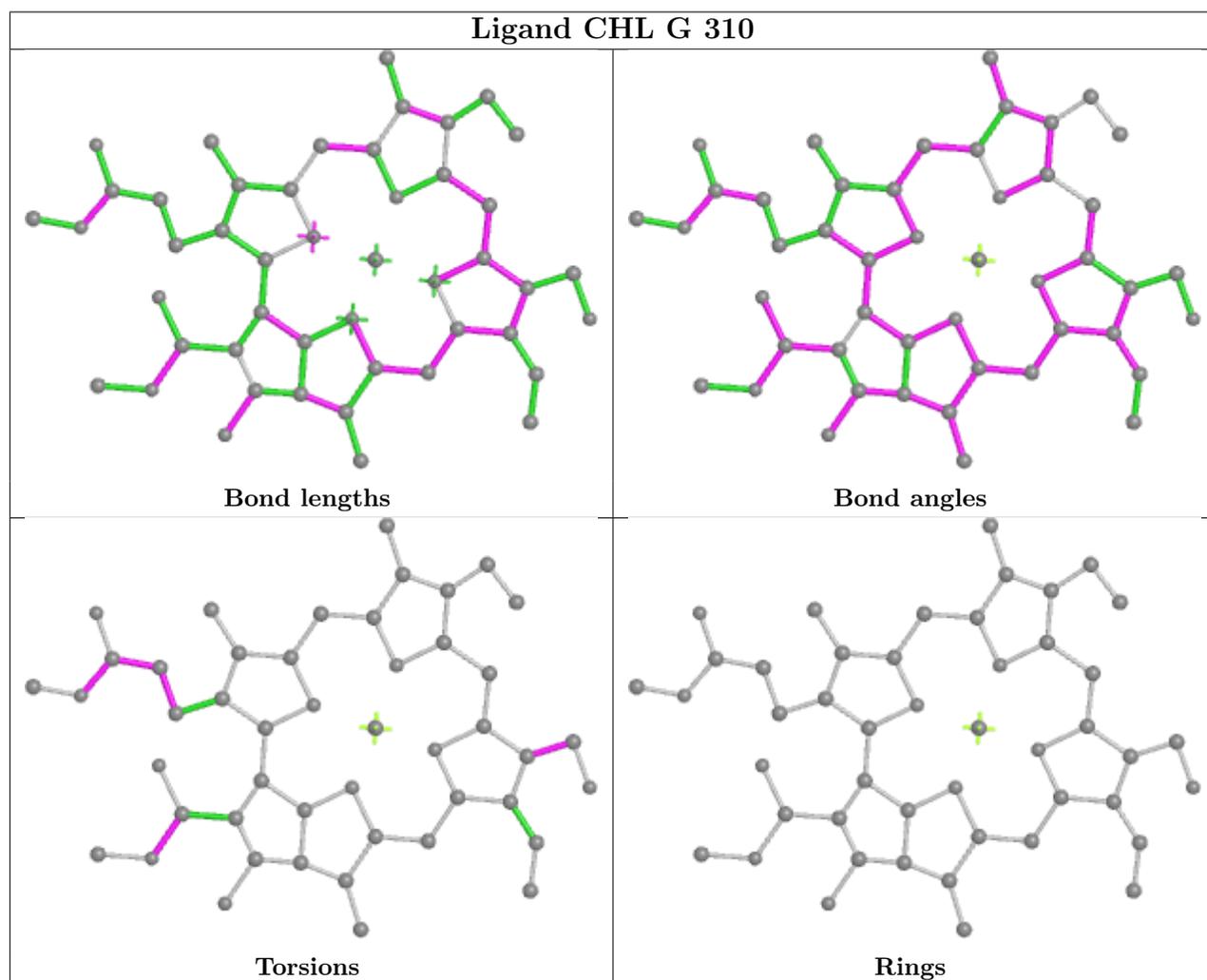
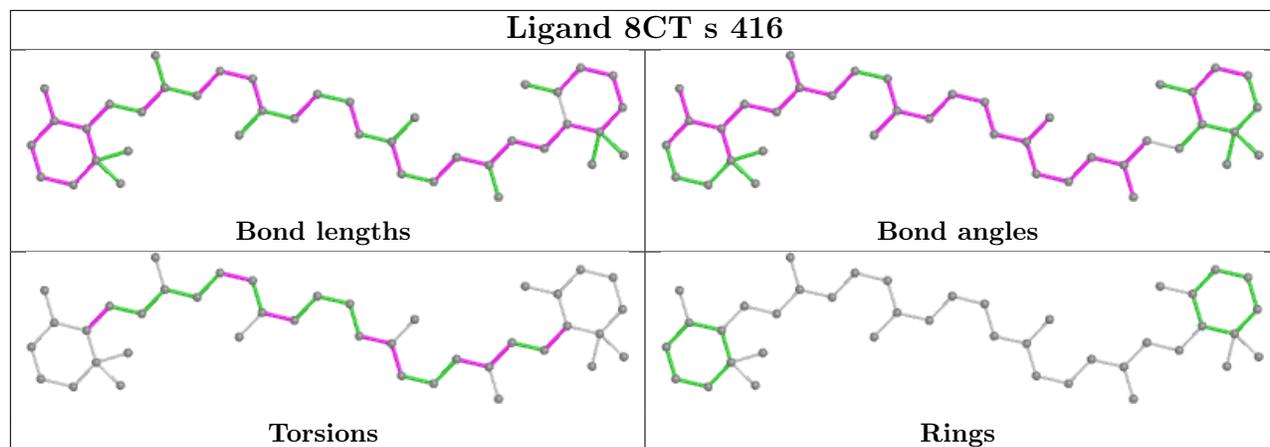


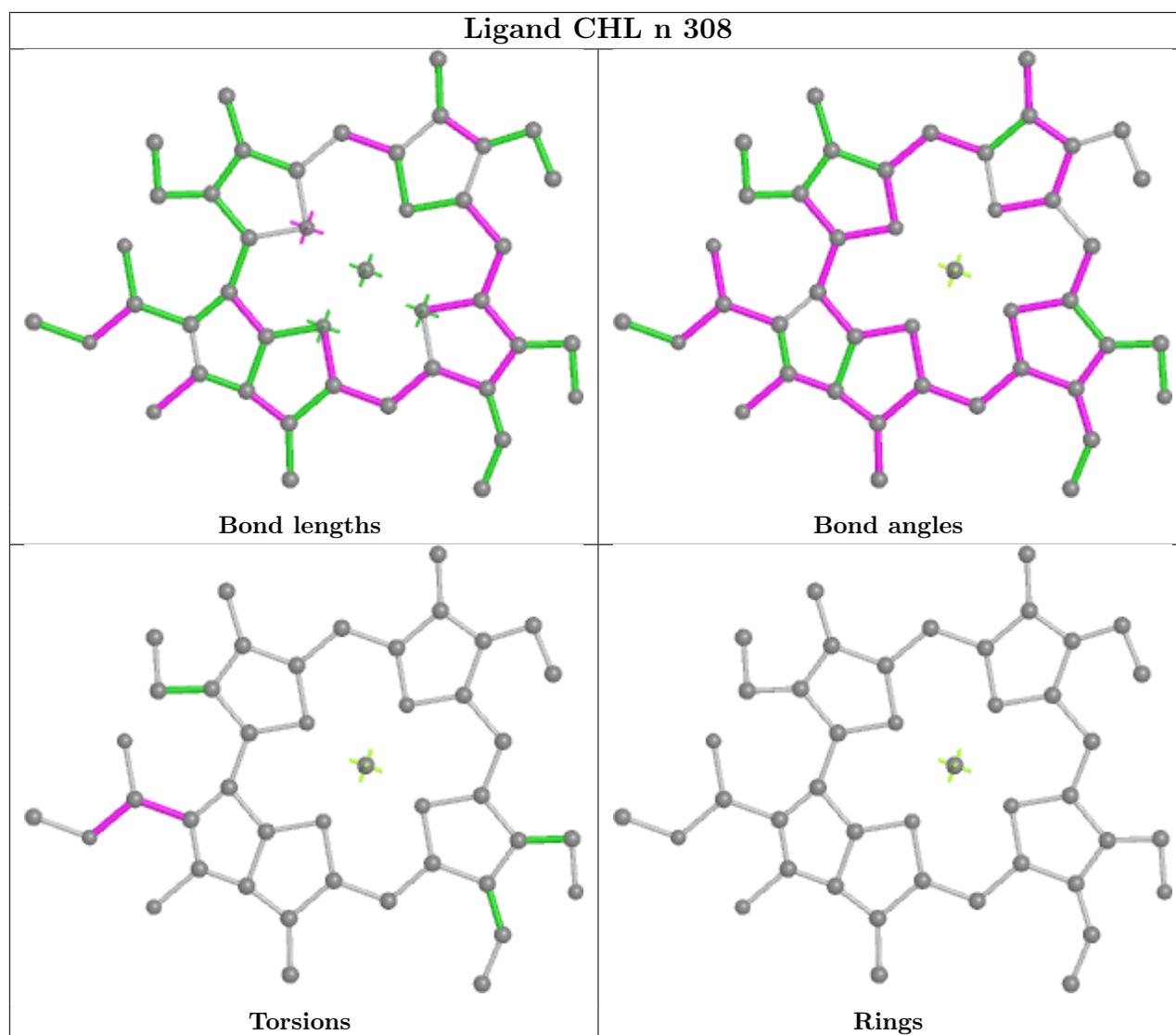












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

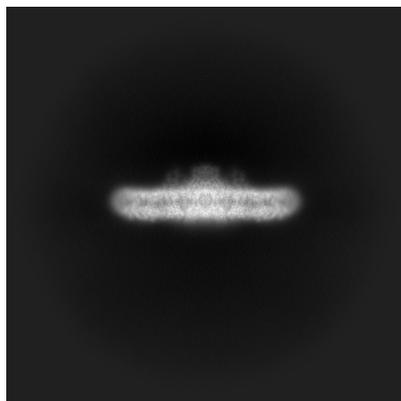
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-62153. These allow visual inspection of the internal detail of the map and identification of artifacts.

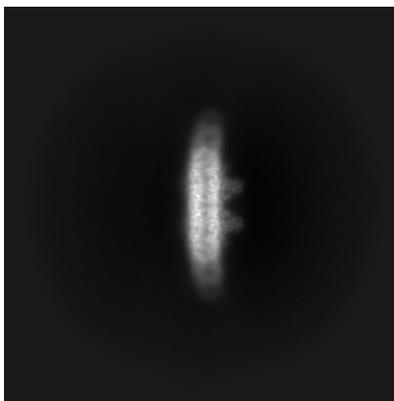
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

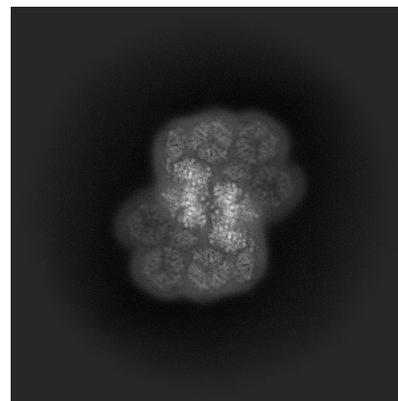
6.1.1 Primary map



X

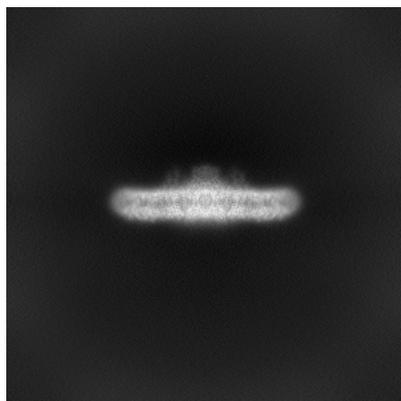


Y

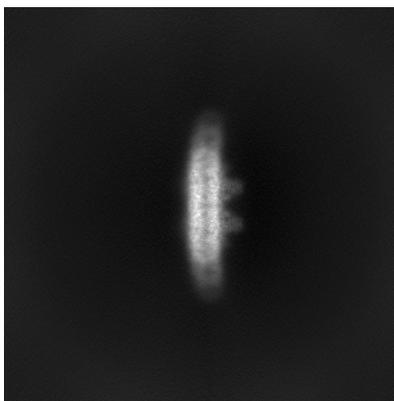


Z

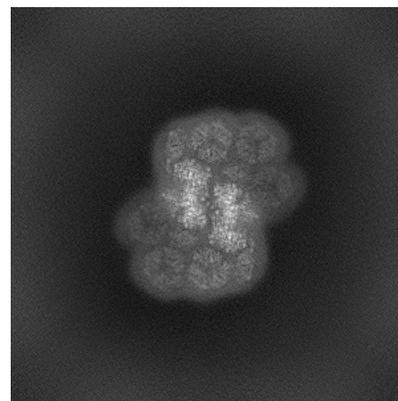
6.1.2 Raw map



X



Y

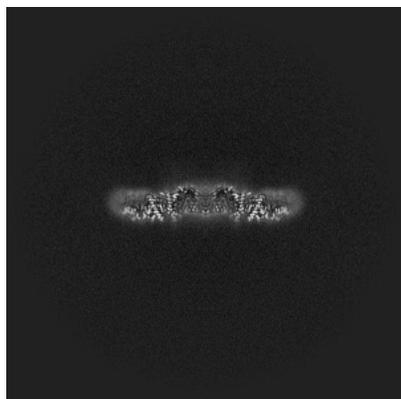


Z

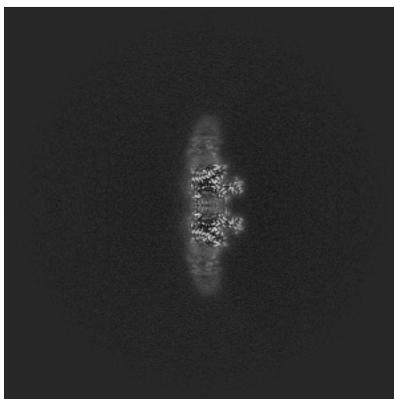
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

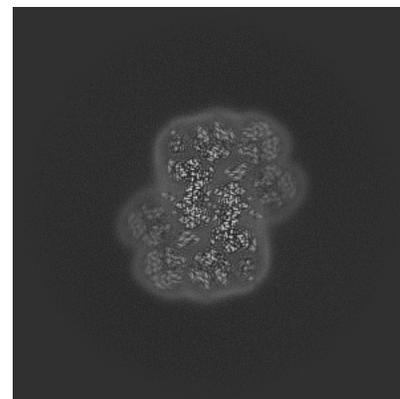
6.2.1 Primary map



X Index: 300

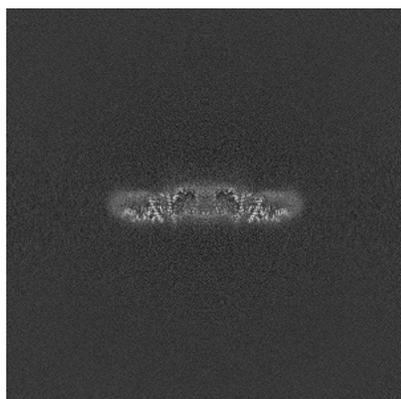


Y Index: 300

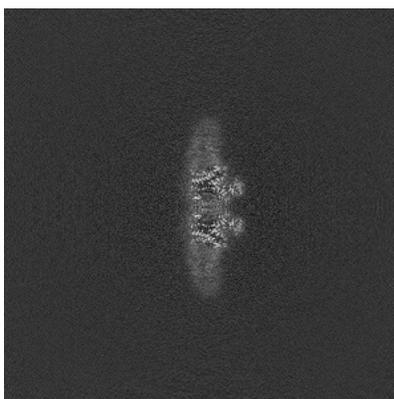


Z Index: 300

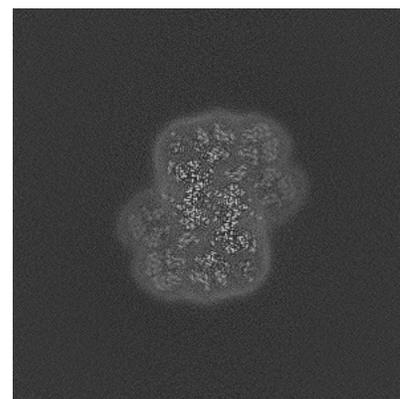
6.2.2 Raw map



X Index: 300



Y Index: 300

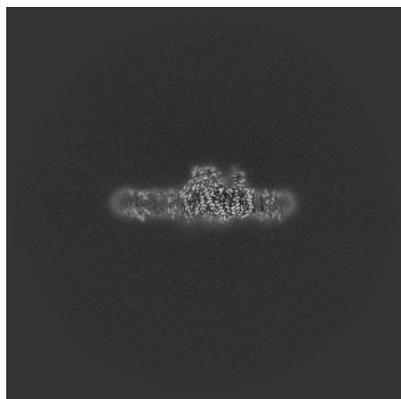


Z Index: 300

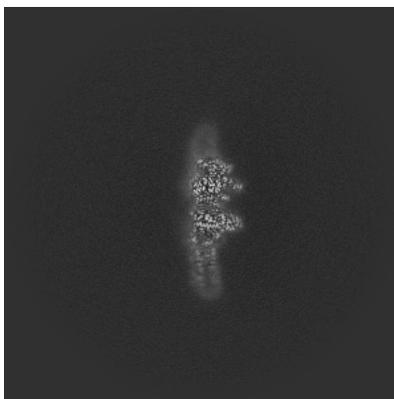
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

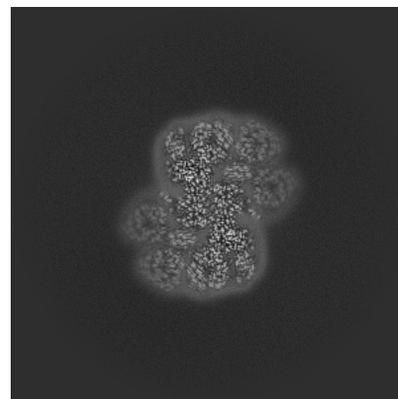
6.3.1 Primary map



X Index: 273

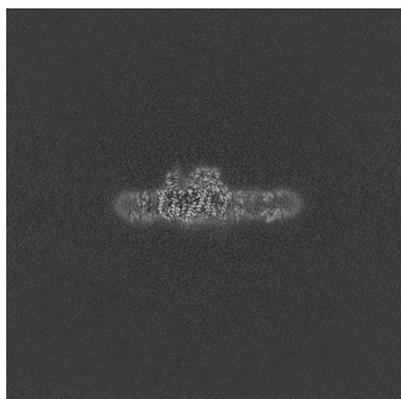


Y Index: 288

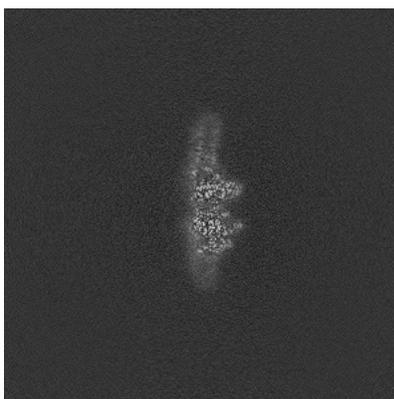


Z Index: 293

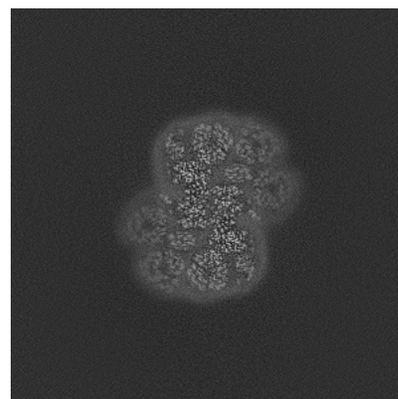
6.3.2 Raw map



X Index: 327



Y Index: 312

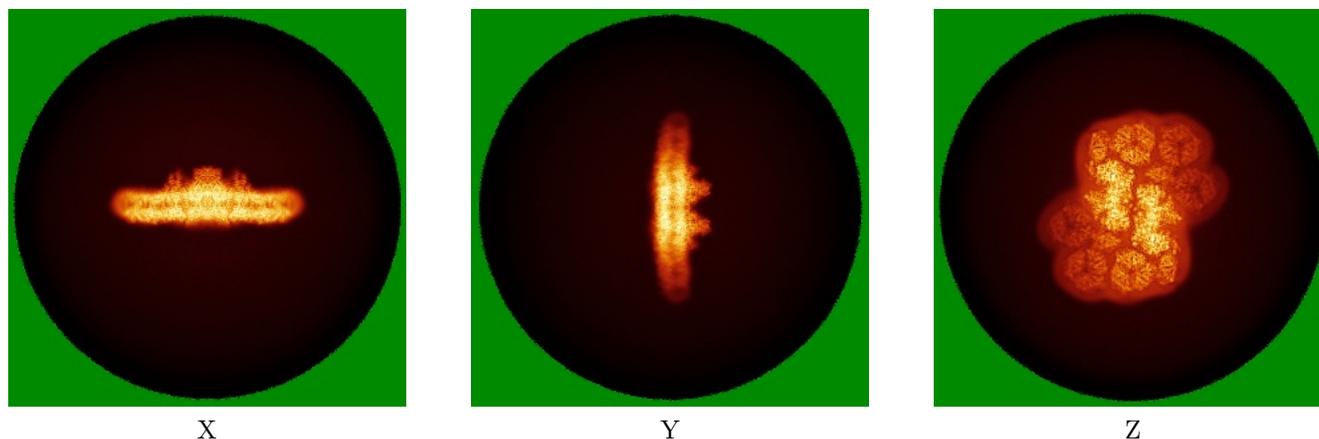


Z Index: 294

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

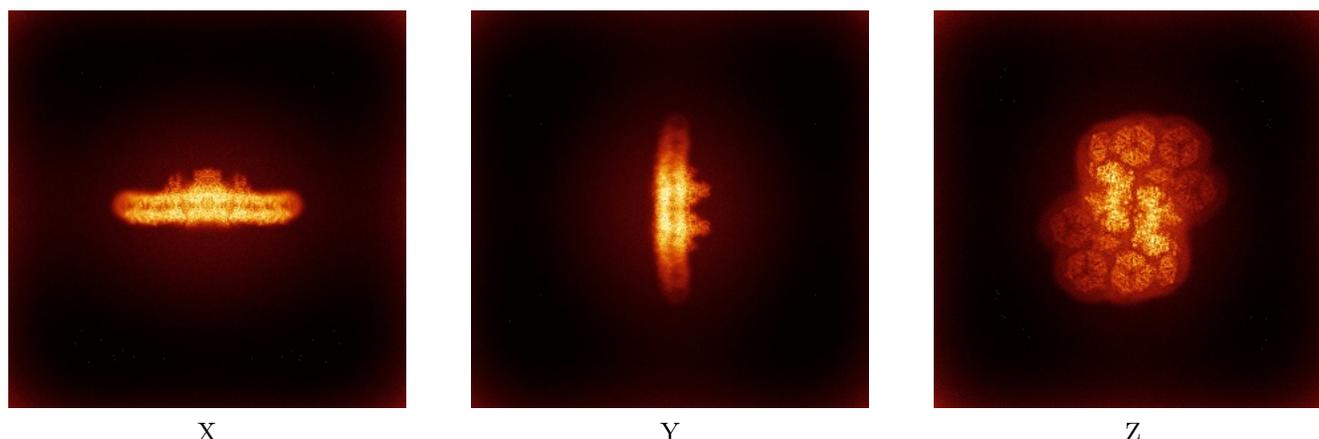


X

Y

Z

6.4.2 Raw map



X

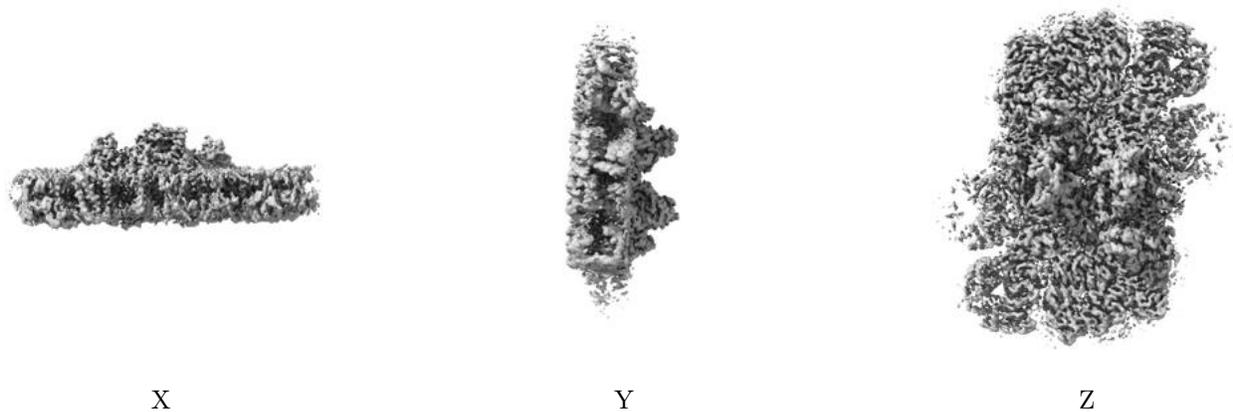
Y

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



The images above show the 3D surface view of the map at the recommended contour level 0.204. 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



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.

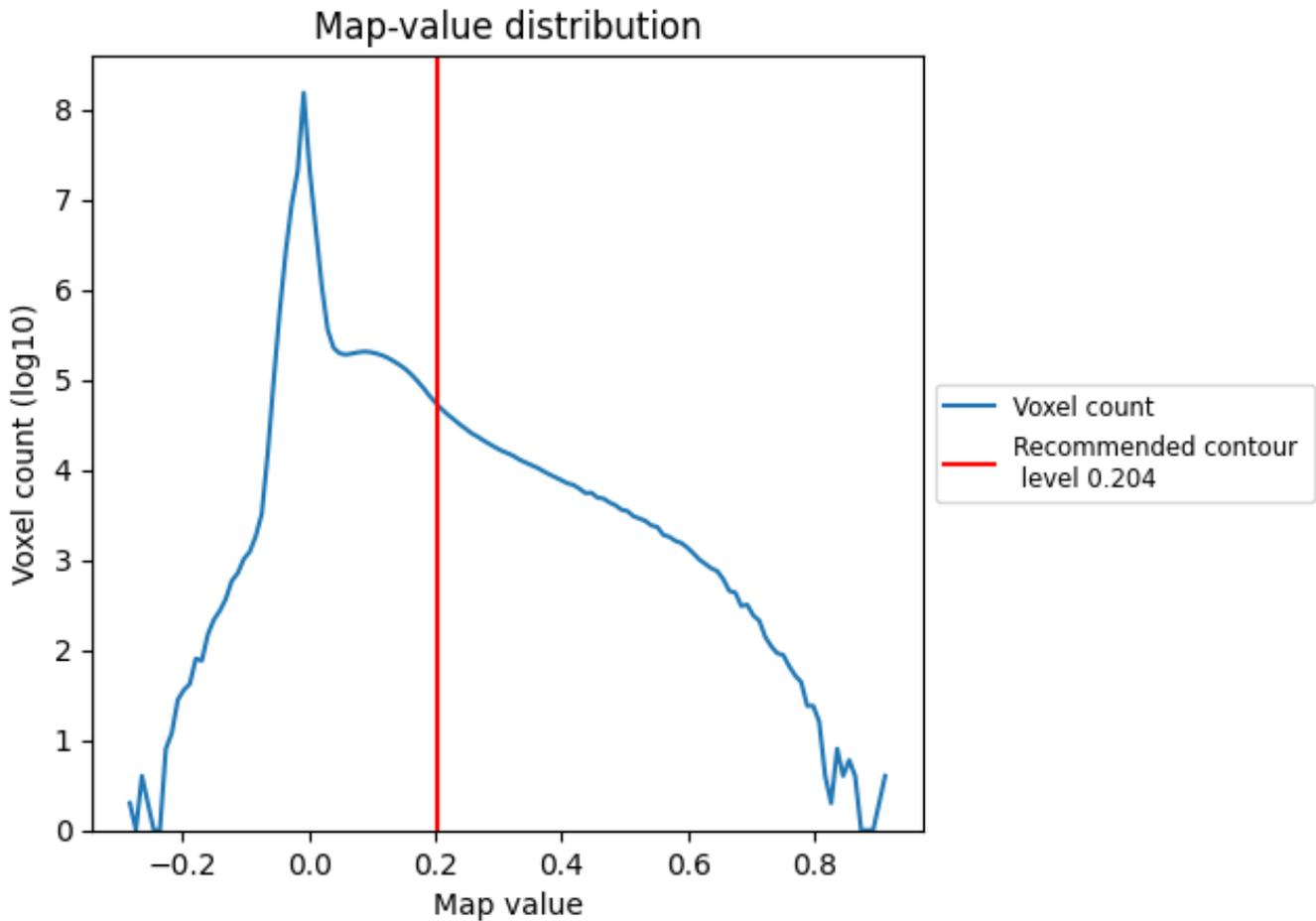
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

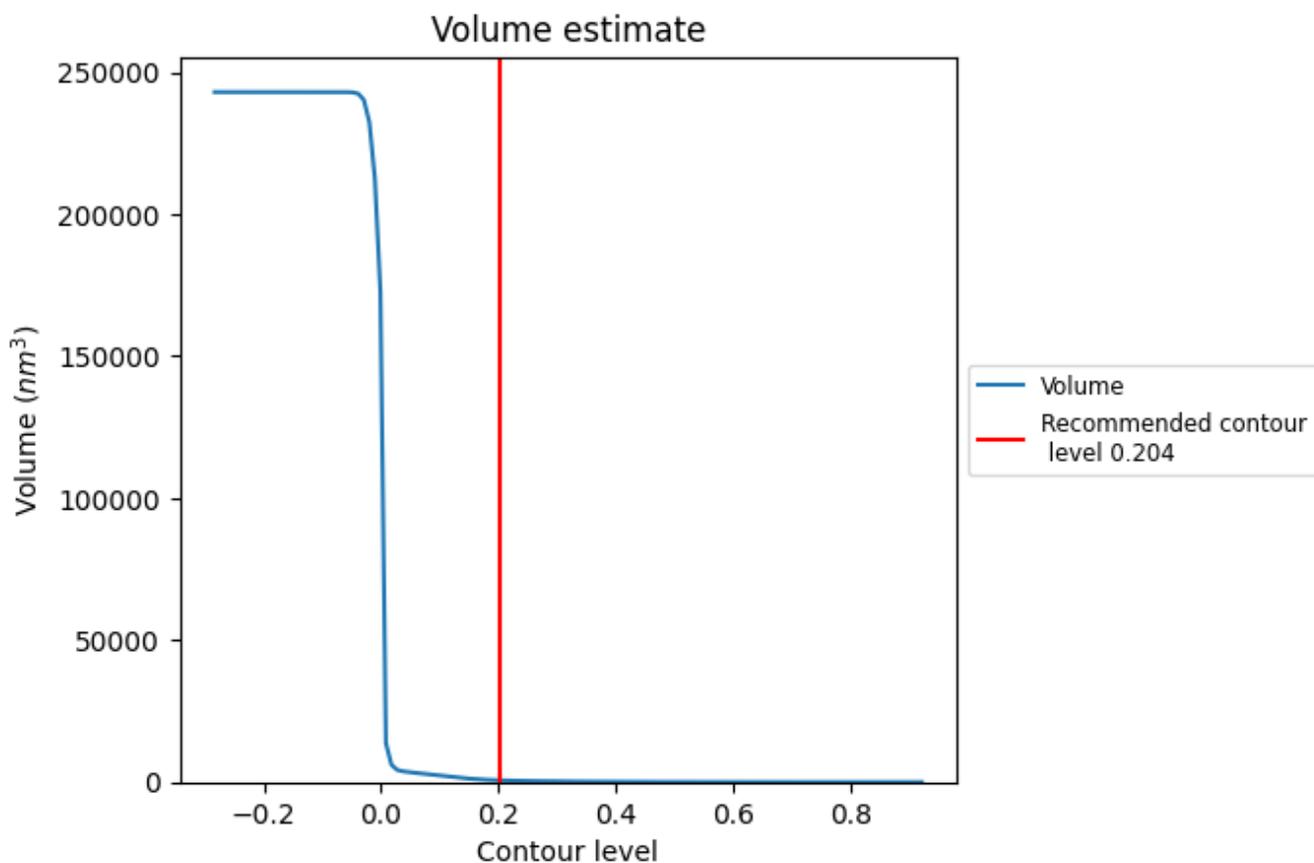
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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.

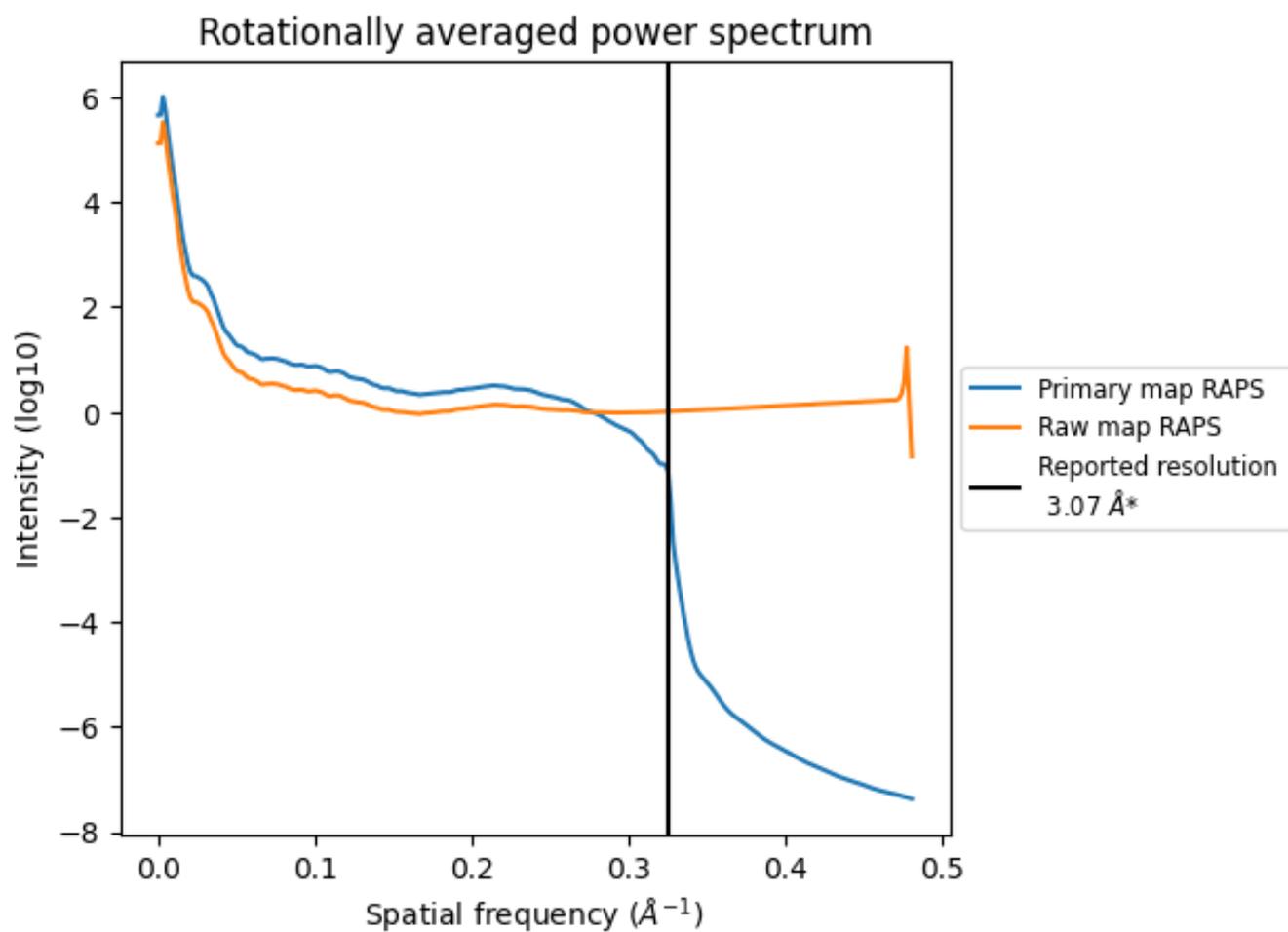
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 606 nm³; this corresponds to an approximate mass of 548 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](#)

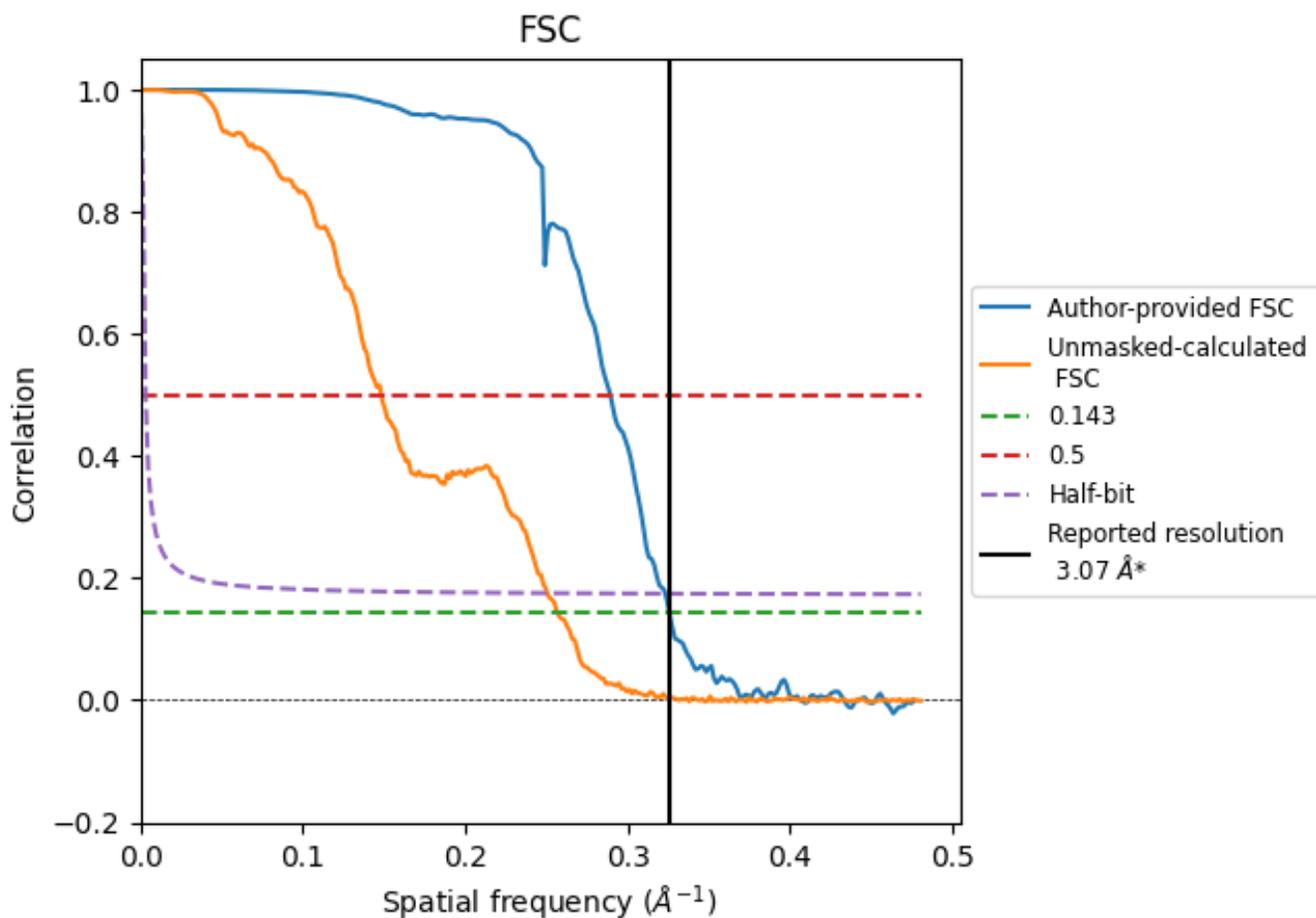


*Reported resolution corresponds to spatial frequency of 0.326 Å⁻¹

8 Fourier-Shell correlation [i](#)

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 [i](#)



*Reported resolution corresponds to spatial frequency of 0.326 Å⁻¹

8.2 Resolution estimates [i](#)

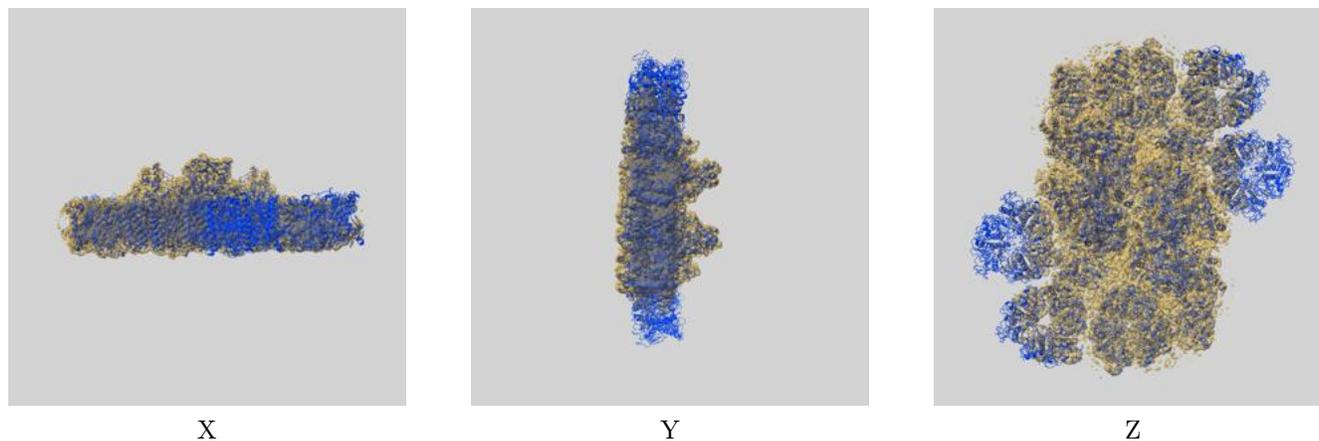
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.07	-	-
Author-provided FSC curve	3.07	3.45	3.09
Unmasked-calculated*	3.89	6.74	3.99

*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 3.89 differs from the reported value 3.07 by more than 10 %

9 Map-model fit [i](#)

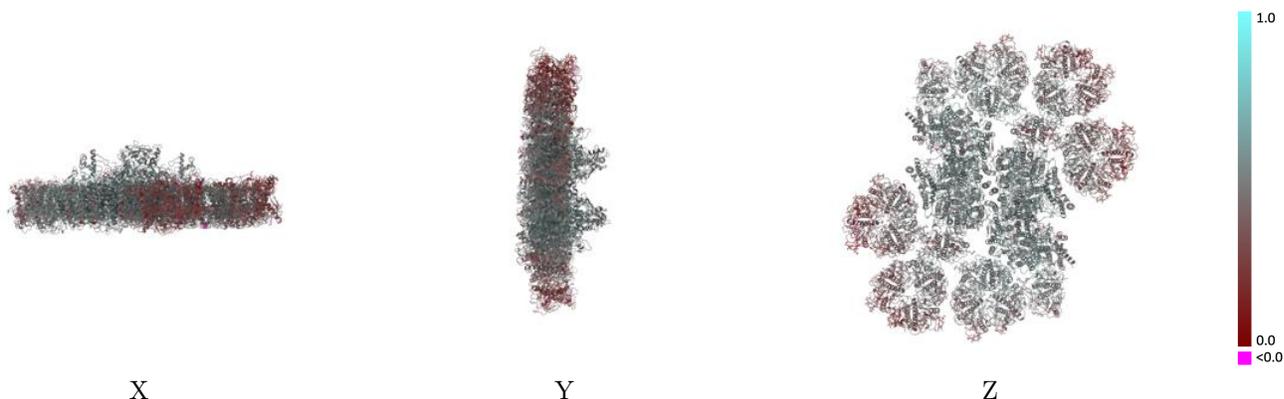
This section contains information regarding the fit between EMDB map EMD-62153 and PDB model 9K7V. Per-residue inclusion information can be found in section 3 on page 54.

9.1 Map-model overlay [i](#)



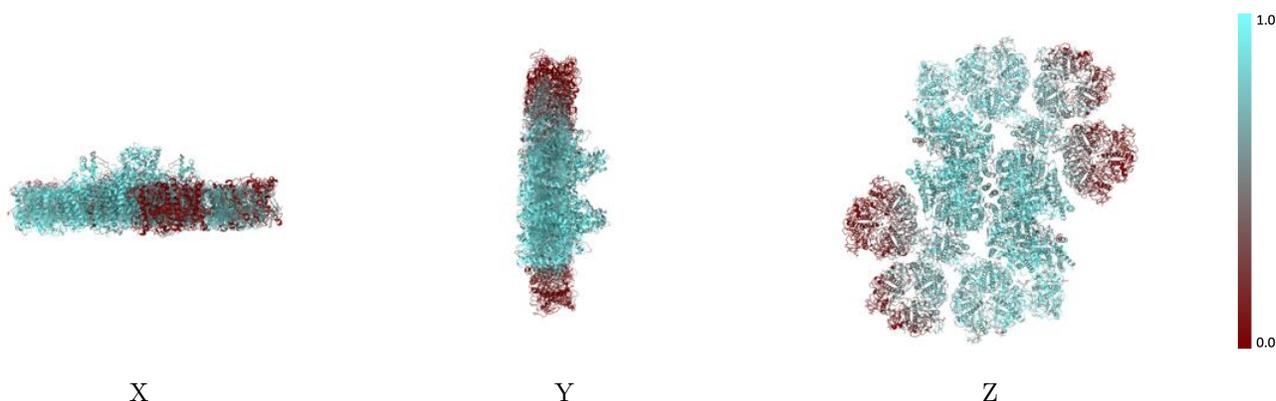
The images above show the 3D surface view of the map at the recommended contour level 0.204 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [\(i\)](#)



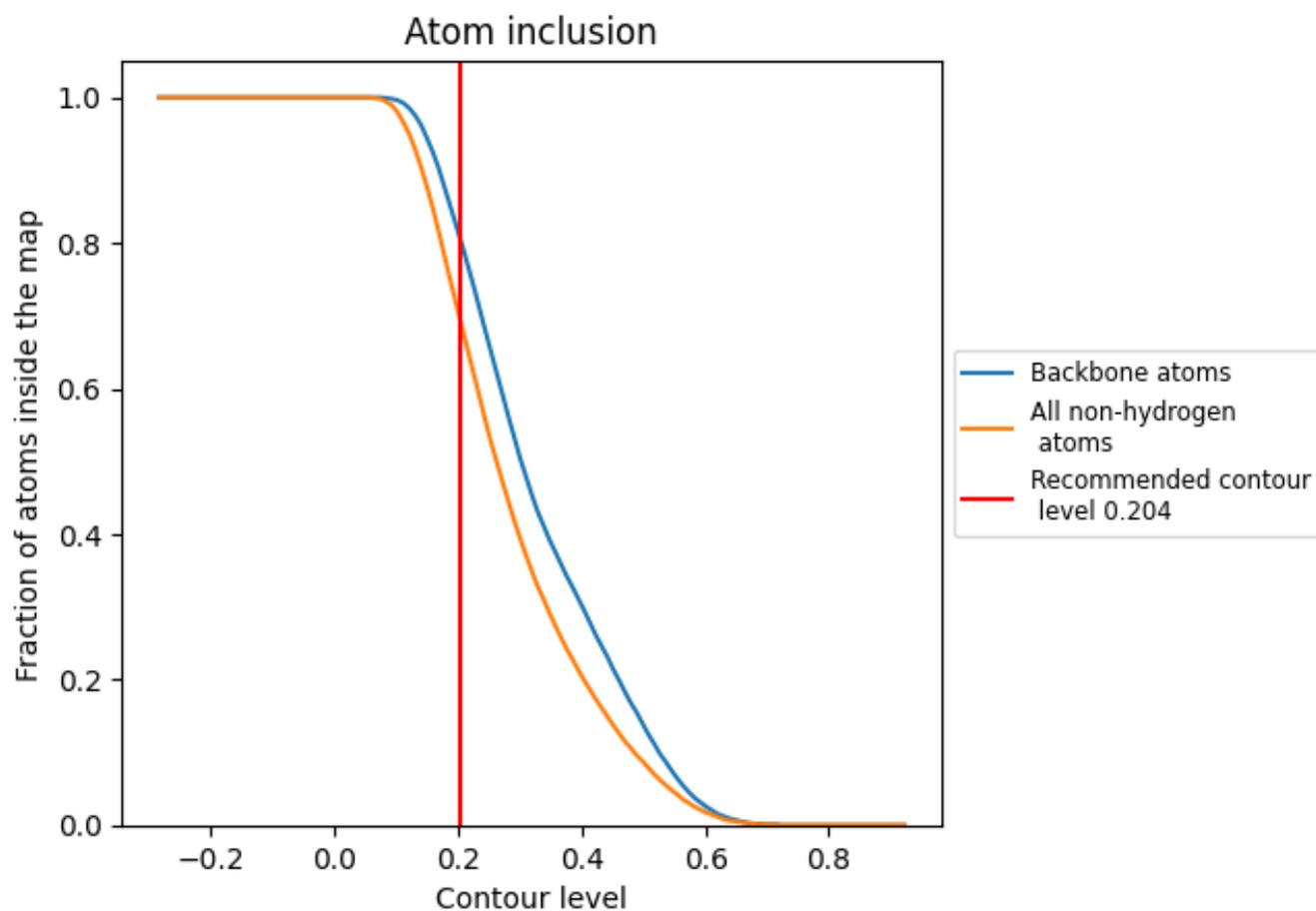
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 [\(i\)](#)



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 (0.204).

9.4 Atom inclusion [i](#)

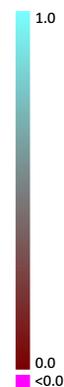


At the recommended contour level, 80% of all backbone atoms, 69% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.204) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6920	 0.4550
1	 0.3620	 0.3400
2	 0.6680	 0.4570
3	 0.3050	 0.3320
4	 0.3660	 0.3380
5	 0.6660	 0.4580
6	 0.3020	 0.3250
7	 0.7880	 0.4340
8	 0.8580	 0.4730
9	 0.0130	 0.2470
A	 0.9160	 0.5370
B	 0.9140	 0.5310
C	 0.9100	 0.5370
D	 0.9260	 0.5490
E	 0.8090	 0.4670
F	 0.8670	 0.4710
G	 0.2460	 0.3830
H	 0.8510	 0.5070
I	 0.9600	 0.5430
K	 0.9220	 0.5170
L	 0.9060	 0.5290
M	 0.7130	 0.4500
N	 0.3140	 0.3920
R	 0.7010	 0.4140
S	 0.8320	 0.4570
T	 0.8600	 0.5220
V	 0.4290	 0.3920
W	 0.9000	 0.5010
X	 0.8040	 0.4860
Y	 0.9010	 0.5210
Z	 0.8080	 0.4380
a	 0.9160	 0.5370
b	 0.9140	 0.5320
c	 0.9080	 0.5350
d	 0.9240	 0.5490



Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
e	 0.8140	 0.4640
f	 0.8530	 0.4640
g	 0.2490	 0.3850
h	 0.8430	 0.5070
i	 0.9500	 0.5570
k	 0.9290	 0.5150
l	 0.9100	 0.5340
m	 0.7310	 0.4650
n	 0.3180	 0.3910
p	 0.7870	 0.4340
q	 0.8550	 0.4720
r	 0.7020	 0.4130
s	 0.8340	 0.4560
t	 0.8640	 0.5190
u	 0.0150	 0.2460
v	 0.4470	 0.3850
w	 0.8840	 0.4930
x	 0.7970	 0.4900
y	 0.8990	 0.5210
z	 0.8080	 0.4370