



wwPDB EM Validation Summary Report ⓘ

Oct 14, 2024 – 02:43 PM JST

PDB ID : 7D0J
EMDB ID : EMD-30536
Title : Photosystem I-LHCI-LHCII of Chlamydomonas reinhardtii
Authors : Wang, W.D.; Shen, L.L.; Huang, Z.H.; Han, G.Y.; Zhang, X.; Shen, J.R.
Deposited on : 2020-09-10
Resolution : 3.42 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:

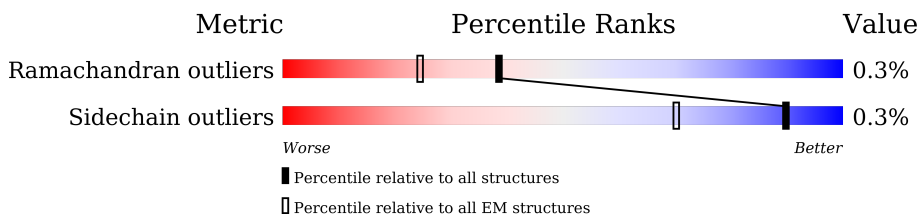
EMDB validation analysis : 0.0.1.dev113
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.39

1 Overall quality at a glance

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

The reported resolution of this entry is 3.42 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)
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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	A	740	20% 100%
2	B	734	18% 100%
3	C	80	21% 98% .
4	D	144	56% 99% ..
5	E	63	54% 100%
6	F	165	77% 100%
7	G	91	91% 98% .
8	H	100	70% 97% .
9	I	37	16% 100%

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Mol	Chain	Length	Quality of chain
10	J	41	51% 98%
11	K	85	95% 98%
12	L	159	36% 99%
13	O	93	70% 99%
14	P	219	100%
14	Q	219	99%
14	R	219	100%
14	T	219	99%
14	U	219	100%
15	S	234	100%
16	1	194	97%
16	a	194	69% 100%
17	2	201	98% 99%
18	3	203	80% 97%
19	4	205	41% 100%
20	5	225	95% 99%
21	6	230	56% 100%
22	7	213	76% 98%
23	8	217	44% 99%
24	9	182	62% 100%
			87% 99%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
25	CLA	1	602	X	-	-	-
25	CLA	1	603	X	-	-	-
25	CLA	1	604	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
25	CLA	1	605	X	-	-	-
25	CLA	1	607	X	-	-	-
25	CLA	1	608	X	-	-	-
25	CLA	1	609	X	-	-	-
25	CLA	1	610	X	-	-	-
25	CLA	1	611	X	-	-	-
25	CLA	1	612	X	-	-	-
25	CLA	1	613	X	-	-	-
25	CLA	1	614	X	-	-	-
25	CLA	2	302	X	-	-	-
25	CLA	2	303	X	-	-	-
25	CLA	2	304	X	-	-	-
25	CLA	2	305	X	-	-	-
25	CLA	2	306	X	-	-	-
25	CLA	2	307	X	-	-	-
25	CLA	2	308	X	-	-	-
25	CLA	2	309	X	-	-	-
25	CLA	2	310	X	-	-	-
25	CLA	2	311	X	-	-	-
25	CLA	2	312	X	-	-	-
25	CLA	2	313	X	-	-	-
25	CLA	2	314	X	-	-	-
25	CLA	3	301	X	-	-	-
25	CLA	3	302	X	-	-	-
25	CLA	3	303	X	-	-	-
25	CLA	3	304	X	-	-	-
25	CLA	3	305	X	-	-	-
25	CLA	3	307	X	-	-	-
25	CLA	3	308	X	-	-	-
25	CLA	3	309	X	-	-	-
25	CLA	3	310	X	-	-	-
25	CLA	3	311	X	-	-	-
25	CLA	3	312	X	-	-	-
25	CLA	3	313	X	-	-	-
25	CLA	3	314	X	-	-	-
25	CLA	3	320	X	-	-	-
25	CLA	4	301	X	-	-	-
25	CLA	4	302	X	-	-	-
25	CLA	4	303	X	-	-	-
25	CLA	4	307	X	-	-	-
25	CLA	4	308	X	-	-	-
25	CLA	4	309	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
25	CLA	4	310	X	-	-	-
25	CLA	4	311	X	-	-	-
25	CLA	4	312	X	-	-	-
25	CLA	4	313	X	-	-	-
25	CLA	5	302	X	-	-	-
25	CLA	5	304	X	-	-	-
25	CLA	5	305	X	-	-	-
25	CLA	5	306	X	-	-	-
25	CLA	5	309	X	-	-	-
25	CLA	5	310	X	-	-	-
25	CLA	5	311	X	-	-	-
25	CLA	5	312	X	-	-	-
25	CLA	5	313	X	-	-	-
25	CLA	5	314	X	-	-	-
25	CLA	5	315	X	-	-	-
25	CLA	5	316	X	-	-	-
25	CLA	5	324	X	-	-	-
25	CLA	6	601	X	-	-	-
25	CLA	6	603	X	-	-	-
25	CLA	6	604	X	-	-	-
25	CLA	6	605	X	-	-	-
25	CLA	6	609	X	-	-	-
25	CLA	6	610	X	-	-	-
25	CLA	6	611	X	-	-	-
25	CLA	6	612	X	-	-	-
25	CLA	6	613	X	-	-	-
25	CLA	6	614	X	-	-	-
25	CLA	6	615	X	-	-	-
25	CLA	6	616	X	-	-	-
25	CLA	6	620	X	-	-	-
25	CLA	6	623	X	-	-	-
25	CLA	7	301	X	-	-	-
25	CLA	7	302	X	-	-	-
25	CLA	7	303	X	-	-	-
25	CLA	7	304	X	-	-	-
25	CLA	7	306	X	-	-	-
25	CLA	7	307	X	-	-	-
25	CLA	7	308	X	-	-	-
25	CLA	7	309	X	-	-	-
25	CLA	7	310	X	-	-	-
25	CLA	7	311	X	-	-	-
25	CLA	7	312	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
25	CLA	7	313	X	-	-	-
25	CLA	8	302	X	-	-	-
25	CLA	8	303	X	-	-	-
25	CLA	8	304	X	-	-	-
25	CLA	8	305	X	-	-	-
25	CLA	8	306	X	-	-	-
25	CLA	8	308	X	-	-	-
25	CLA	8	309	X	-	-	-
25	CLA	8	310	X	-	-	-
25	CLA	8	311	X	-	-	-
25	CLA	8	312	X	-	-	-
25	CLA	8	313	X	-	-	-
25	CLA	8	314	X	-	-	-
25	CLA	8	315	X	-	-	-
25	CLA	9	301	X	-	-	-
25	CLA	9	302	X	-	-	-
25	CLA	9	303	X	-	-	-
25	CLA	9	304	X	-	-	-
25	CLA	9	305	X	-	-	-
25	CLA	9	308	X	-	-	-
25	CLA	9	309	X	-	-	-
25	CLA	9	310	X	-	-	-
25	CLA	9	311	X	-	-	-
25	CLA	A	801	X	-	-	-
25	CLA	A	802	X	-	-	-
25	CLA	A	803	X	-	-	-
25	CLA	A	804	X	-	-	-
25	CLA	A	805	X	-	-	-
25	CLA	A	806	X	-	-	-
25	CLA	A	807	X	-	-	-
25	CLA	A	808	X	-	-	-
25	CLA	A	809	X	-	-	-
25	CLA	A	810	X	-	-	-
25	CLA	A	811	X	-	-	-
25	CLA	A	812	X	-	-	-
25	CLA	A	813	X	-	-	-
25	CLA	A	814	X	-	-	-
25	CLA	A	815	X	-	-	-
25	CLA	A	816	X	-	-	-
25	CLA	A	817	X	-	-	-
25	CLA	A	818	X	-	-	-
25	CLA	A	819	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
25	CLA	A	820	X	-	-	-
25	CLA	A	821	X	-	-	-
25	CLA	A	822	X	-	-	-
25	CLA	A	823	X	-	-	-
25	CLA	A	824	X	-	-	-
25	CLA	A	825	X	-	-	-
25	CLA	A	826	X	-	-	-
25	CLA	A	827	X	-	-	-
25	CLA	A	828	X	-	-	-
25	CLA	A	829	X	-	-	-
25	CLA	A	830	X	-	-	-
25	CLA	A	831	X	-	-	-
25	CLA	A	832	X	-	-	-
25	CLA	A	833	X	-	-	-
25	CLA	A	834	X	-	-	-
25	CLA	A	835	X	-	-	-
25	CLA	A	836	X	-	-	-
25	CLA	A	837	X	-	-	-
25	CLA	A	838	X	-	-	-
25	CLA	A	839	X	-	-	-
25	CLA	A	840	X	-	-	-
25	CLA	A	842	X	-	-	-
25	CLA	A	851	X	-	-	-
25	CLA	A	853	X	-	-	-
25	CLA	B	801	X	-	-	-
25	CLA	B	802	X	-	-	-
25	CLA	B	803	X	-	-	-
25	CLA	B	804	X	-	-	-
25	CLA	B	805	X	-	-	-
25	CLA	B	806	X	-	-	-
25	CLA	B	807	X	-	-	-
25	CLA	B	808	X	-	-	-
25	CLA	B	809	X	-	-	-
25	CLA	B	810	X	-	-	-
25	CLA	B	811	X	-	-	-
25	CLA	B	812	X	-	-	-
25	CLA	B	813	X	-	-	-
25	CLA	B	814	X	-	-	-
25	CLA	B	815	X	-	-	-
25	CLA	B	816	X	-	-	-
25	CLA	B	817	X	-	-	-
25	CLA	B	818	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
25	CLA	B	819	X	-	-	-
25	CLA	B	820	X	-	-	-
25	CLA	B	821	X	-	-	-
25	CLA	B	822	X	-	-	-
25	CLA	B	823	X	-	-	-
25	CLA	B	824	X	-	-	-
25	CLA	B	825	X	-	-	-
25	CLA	B	826	X	-	-	-
25	CLA	B	827	X	-	-	-
25	CLA	B	828	X	-	-	-
25	CLA	B	829	X	-	-	-
25	CLA	B	830	X	-	-	-
25	CLA	B	831	X	-	-	-
25	CLA	B	832	X	-	-	-
25	CLA	B	833	X	-	-	-
25	CLA	B	834	X	-	-	-
25	CLA	B	835	X	-	-	-
25	CLA	B	836	X	-	-	-
25	CLA	B	837	X	-	-	-
25	CLA	B	838	X	-	-	-
25	CLA	B	849	X	-	-	-
25	CLA	F	802	X	-	-	-
25	CLA	G	201	X	-	-	-
25	CLA	G	202	X	-	-	-
25	CLA	H	201	X	-	-	-
25	CLA	H	202	X	-	-	-
25	CLA	H	203	X	-	-	-
25	CLA	H	205	X	-	-	-
25	CLA	J	103	X	-	-	-
25	CLA	J	105	X	-	-	-
25	CLA	K	201	X	-	-	-
25	CLA	K	202	X	-	-	-
25	CLA	K	203	X	-	-	-
25	CLA	K	204	X	-	-	-
25	CLA	K	205	X	-	-	-
25	CLA	L	201	X	-	-	-
25	CLA	L	202	X	-	-	-
25	CLA	L	205	X	-	-	-
25	CLA	L	206	X	-	-	-
25	CLA	L	209	X	-	-	-
25	CLA	O	201	X	-	-	-
25	CLA	O	202	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
25	CLA	O	203	X	-	-	-
25	CLA	P	602	X	-	-	-
25	CLA	P	603	X	-	-	-
25	CLA	P	604	X	-	-	-
25	CLA	P	610	X	-	-	-
25	CLA	P	611	X	-	-	-
25	CLA	P	612	X	-	-	-
25	CLA	P	613	X	-	-	-
25	CLA	Q	602	X	-	-	-
25	CLA	Q	603	X	-	-	-
25	CLA	Q	604	X	-	-	-
25	CLA	Q	609	X	-	-	-
25	CLA	Q	610	X	-	-	-
25	CLA	Q	611	X	-	-	-
25	CLA	Q	612	X	-	-	-
25	CLA	Q	613	X	-	-	-
25	CLA	R	602	X	-	-	-
25	CLA	R	603	X	-	-	-
25	CLA	R	604	X	-	-	-
25	CLA	R	610	X	-	-	-
25	CLA	R	611	X	-	-	-
25	CLA	R	612	X	-	-	-
25	CLA	R	613	X	-	-	-
25	CLA	R	614	X	-	-	-
25	CLA	S	301	X	-	-	-
25	CLA	S	303	X	-	-	-
25	CLA	S	304	X	-	-	-
25	CLA	S	305	X	-	-	-
25	CLA	S	311	X	-	-	-
25	CLA	S	312	X	-	-	-
25	CLA	S	313	X	-	-	-
25	CLA	S	315	X	-	-	-
25	CLA	S	320	X	-	-	-
25	CLA	T	602	X	-	-	-
25	CLA	T	603	X	-	-	-
25	CLA	T	608	X	-	-	-
25	CLA	T	610	X	-	-	-
25	CLA	T	611	X	-	-	-
25	CLA	T	612	X	-	-	-
25	CLA	U	302	X	-	-	-
25	CLA	U	303	X	-	-	-
25	CLA	U	304	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
25	CLA	U	310	X	-	-	-
25	CLA	U	311	X	-	-	-
25	CLA	U	312	X	-	-	-
25	CLA	U	313	X	-	-	-
25	CLA	a	301	X	-	-	-
25	CLA	a	302	X	-	-	-
25	CLA	a	303	X	-	-	-
25	CLA	a	304	X	-	-	-
25	CLA	a	306	X	-	-	-
25	CLA	a	307	X	-	-	-
25	CLA	a	308	X	-	-	-
25	CLA	a	309	X	-	-	-
25	CLA	a	310	X	-	-	-
25	CLA	a	311	X	-	-	-
25	CLA	a	312	X	-	-	-
25	CLA	a	313	X	-	-	-
33	CHL	1	601	X	-	-	-
33	CHL	1	606	X	-	-	-
33	CHL	3	306	X	-	-	-
33	CHL	4	304	X	-	-	-
33	CHL	4	305	X	-	-	-
33	CHL	4	306	X	-	-	-
33	CHL	4	314	X	-	-	-
33	CHL	4	322	X	-	-	-
33	CHL	5	307	X	-	-	-
33	CHL	5	308	X	-	-	-
33	CHL	5	317	X	-	-	-
33	CHL	6	606	X	-	-	-
33	CHL	6	607	X	-	-	-
33	CHL	6	608	X	-	-	-
33	CHL	6	617	X	-	-	-
33	CHL	7	305	X	-	-	-
33	CHL	8	307	X	-	-	-
33	CHL	9	306	X	-	-	-
33	CHL	9	307	X	-	-	-
33	CHL	P	601	X	-	-	-
33	CHL	P	605	X	-	-	-
33	CHL	P	606	X	-	-	-
33	CHL	P	607	X	-	-	-
33	CHL	P	608	X	-	-	-
33	CHL	P	609	X	-	-	-
33	CHL	P	619	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
33	CHL	P	622	X	-	-	-
33	CHL	Q	601	X	-	-	-
33	CHL	Q	605	X	-	-	-
33	CHL	Q	606	X	-	-	-
33	CHL	Q	607	X	-	-	-
33	CHL	Q	608	X	-	-	-
33	CHL	R	601	X	-	-	-
33	CHL	R	605	X	-	-	-
33	CHL	R	606	X	-	-	-
33	CHL	R	607	X	-	-	-
33	CHL	R	608	X	-	-	-
33	CHL	R	609	X	-	-	-
33	CHL	S	302	X	-	-	-
33	CHL	S	306	X	-	-	-
33	CHL	S	307	X	-	-	-
33	CHL	S	308	X	-	-	-
33	CHL	S	309	X	-	-	-
33	CHL	S	310	X	-	-	-
33	CHL	S	321	X	-	-	-
33	CHL	T	601	X	-	-	-
33	CHL	T	604	X	-	-	-
33	CHL	T	605	X	-	-	-
33	CHL	T	606	X	-	-	-
33	CHL	T	607	X	-	-	-
33	CHL	U	305	X	-	-	-
33	CHL	U	306	X	-	-	-
33	CHL	U	307	X	-	-	-
33	CHL	U	308	X	-	-	-
33	CHL	U	309	X	-	-	-
33	CHL	a	305	X	-	-	-

2 Entry composition [i](#)

There are 36 unique types of molecules in this entry. The entry contains 68860 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 I P700 chlorophyll a apoprotein A1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	740	5811	3799	991	999	22	0	0

- Molecule 2 is a protein called Photosystem I P700 chlorophyll a apoprotein A2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	734	5828	3827	978	1005	18	0	0

- Molecule 3 is a protein called Photosystem I iron-sulfur center.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	80	600	369	103	116	12	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	D	144	1132	725	200	200	7	0	0

- Molecule 5 is a protein called Photosystem I reaction center subunit IV, chloroplastic.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
5	E	63	496	316	87	93	0	0

- Molecule 6 is a protein called Photosystem I reaction center subunit F, Photosystem I reaction center subunit III, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	F	165	1265	817	213	232	3	0	0

- Molecule 7 is a protein called Photosystem I reaction center subunit V, chloroplastic.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
7	G	91	678	436	114	128	0	0

- Molecule 8 is a protein called Photosystem I reaction center subunit VI, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	H	100	773	479	138	154	2	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	I	37	281	195	39	46	1	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	J	41	337	231	47	58	1	0	0

- Molecule 11 is a protein called Photosystem I reaction center subunit psaK, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	K	85	578	368	99	109	2	0	0

- Molecule 12 is a protein called PSI subunit V.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	L	159	1161	757	189	212	3	0	0

- Molecule 13 is a protein called Photosystem I subunit O.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
13	O	93	720	477	118	125	0	0

- Molecule 14 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	P	219	Total	C	N	O	S	0	0
			1669	1080	272	314	3		
14	Q	219	Total	C	N	O	S	0	0
			1669	1080	272	314	3		
14	R	219	Total	C	N	O	S	0	0
			1669	1080	272	314	3		
14	T	219	Total	C	N	O	S	0	0
			1669	1080	272	314	3		
14	U	219	Total	C	N	O	S	0	0
			1669	1080	272	314	3		

- Molecule 15 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace	
15	S	233	Total	C	N	O	P	S	0	0
			1717	1098	285	328	1	5		

- Molecule 16 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	1	194	Total	C	N	O	S	0	0
			1444	941	240	260	3		
16	a	194	Total	C	N	O	S	0	0
			1444	941	240	260	3		

- Molecule 17 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	2	201	Total	C	N	O	S	0	0
			1545	1002	253	280	10		

- Molecule 18 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	3	203	Total	C	N	O	S	0	0
			1560	1021	253	278	8		

- Molecule 19 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	4	205	Total	C	N	O	S	0	0
			1590	1046	254	285	5		

- Molecule 20 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
20	5	225	1757	1145	294	310	8	0	0

- Molecule 21 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	6	230	1771	1167	293	305	6	0	0

- Molecule 22 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
22	7	212	1644	1067	274	297	6	0	0

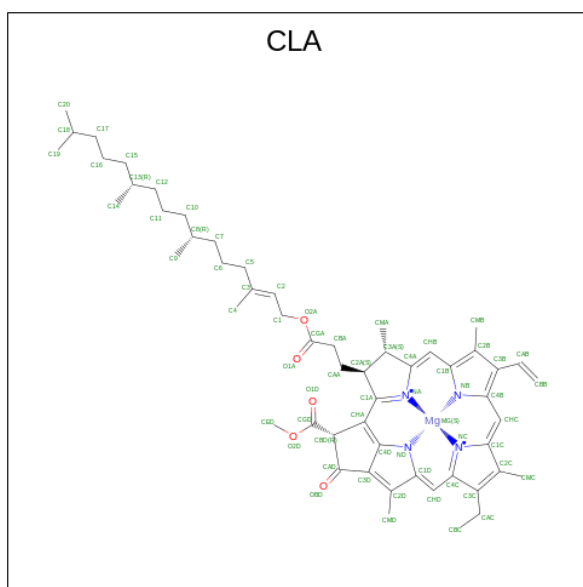
- Molecule 23 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	8	217	1649	1073	280	292	4	0	0

- Molecule 24 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
24	9	182	1392	903	231	251	7	0	0

- Molecule 25 is CHLOROPHYLL A (three-letter code: CLA) (formula: $C_{55}H_{72}MgN_4O_5$).



Mol	Chain	Residues	Atoms				AltConf	
			Total	C	Mg	N		O
25	A	1	65	55	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	65	55	1	4	5	0
25	A	1	55	45	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	65	55	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	65	55	1	4	5	0
25	A	1	65	55	1	4	5	0
25	A	1	54	44	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	60	50	1	4	5	0
25	A	1	65	55	1	4	5	0
25	A	1	57	47	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	65	55	1	4	5	0
25	A	1	45	35	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	55	45	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	65	55	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	50	40	1	4	5	0
25	A	1	65	55	1	4	5	0
25	A	1	50	40	1	4	5	0
25	A	1	45	35	1	4	5	0
25	A	1	51	41	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	65	55	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	65	55	1	4	5	0
25	A	1	52	42	1	4	5	0
25	A	1	65	55	1	4	5	0
25	A	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	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	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	60	50	1	4	5	0
25	B	1	57	47	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	B	1	55	45	1	4	5	0
25	B	1	59	49	1	4	5	0
25	B	1	60	50	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	46	36	1	4	5	0
25	B	1	59	49	1	4	5	0
25	B	1	60	50	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	50	40	1	4	5	0
25	B	1	49	39	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	45	35	1	4	5	0
25	B	1	60	50	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	47	37	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	F	1	45	35	1	4	5	0
25	G	1	50	40	1	4	5	0
25	G	1	46	36	1	4	5	0
25	H	1	46	36	1	4	5	0
25	H	1	41	33	1	4	3	0
25	H	1	46	36	1	4	5	0
25	H	1	42	34	1	4	3	0
25	J	1	58	48	1	4	5	0
25	J	1	42	34	1	4	3	0
25	K	1	51	41	1	4	5	0
25	K	1	45	35	1	4	5	0
25	K	1	46	36	1	4	5	0
25	K	1	45	35	1	4	5	0
25	K	1	45	35	1	4	5	0
25	L	1	65	55	1	4	5	0
25	L	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	L	1	Total 65	C 55	Mg 1	N 4	O 5	0
25	L	1	Total 42	C 34	Mg 1	N 4	O 3	0
25	L	1	Total 41	C 33	Mg 1	N 4	O 3	0
25	O	1	Total 41	C 33	Mg 1	N 4	O 3	0
25	O	1	Total 38	C 30	Mg 1	N 4	O 3	0
25	O	1	Total 38	C 30	Mg 1	N 4	O 3	0
25	P	1	Total 65	C 55	Mg 1	N 4	O 5	0
25	P	1	Total 65	C 55	Mg 1	N 4	O 5	0
25	P	1	Total 50	C 40	Mg 1	N 4	O 5	0
25	P	1	Total 60	C 50	Mg 1	N 4	O 5	0
25	P	1	Total 41	C 33	Mg 1	N 4	O 3	0
25	P	1	Total 60	C 50	Mg 1	N 4	O 5	0
25	P	1	Total 58	C 48	Mg 1	N 4	O 5	0
25	Q	1	Total 65	C 55	Mg 1	N 4	O 5	0
25	Q	1	Total 65	C 55	Mg 1	N 4	O 5	0
25	Q	1	Total 50	C 40	Mg 1	N 4	O 5	0
25	Q	1	Total 65	C 55	Mg 1	N 4	O 5	0
25	Q	1	Total 40	C 32	Mg 1	N 4	O 3	0
25	Q	1	Total 60	C 50	Mg 1	N 4	O 5	0
25	Q	1	Total 60	C 50	Mg 1	N 4	O 5	0
25	Q	1	Total 48	C 38	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	Q	1	40	32	1	4	3	0
25	R	1	65	55	1	4	5	0
25	R	1	65	55	1	4	5	0
25	R	1	50	40	1	4	5	0
25	R	1	64	54	1	4	5	0
25	R	1	60	50	1	4	5	0
25	R	1	60	50	1	4	5	0
25	R	1	65	55	1	4	5	0
25	R	1	48	38	1	4	5	0
25	S	1	47	37	1	4	5	0
25	S	1	65	55	1	4	5	0
25	S	1	65	55	1	4	5	0
25	S	1	50	40	1	4	5	0
25	S	1	60	50	1	4	5	0
25	S	1	60	50	1	4	5	0
25	S	1	60	50	1	4	5	0
25	S	1	65	55	1	4	5	0
25	S	1	48	38	1	4	5	0
25	S	1	65	55	1	4	5	0
25	T	1	65	55	1	4	5	0
25	T	1	50	40	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	T	1	65	55	1	4	5	0
25	T	1	60	50	1	4	5	0
25	T	1	60	50	1	4	5	0
25	T	1	60	50	1	4	5	0
25	T	1	48	38	1	4	5	0
25	U	1	65	55	1	4	5	0
25	U	1	65	55	1	4	5	0
25	U	1	50	40	1	4	5	0
25	U	1	64	54	1	4	5	0
25	U	1	54	47	1	4	2	0
25	U	1	65	55	1	4	5	0
25	U	1	45	35	1	4	5	0
25	1	1	65	55	1	4	5	0
25	1	1	65	55	1	4	5	0
25	1	1	57	47	1	4	5	0
25	1	1	52	42	1	4	5	0
25	1	1	65	55	1	4	5	0
25	1	1	65	55	1	4	5	0
25	1	1	60	50	1	4	5	0
25	1	1	65	55	1	4	5	0
25	1	1	52	42	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	1	1	Total 65	C 55	Mg 1	N 4	O 5	0
25	1	1	Total 65	C 55	Mg 1	N 4	O 5	0
25	1	1	Total 46	C 36	Mg 1	N 4	O 5	0
25	2	1	Total 46	C 36	Mg 1	N 4	O 5	0
25	2	1	Total 65	C 55	Mg 1	N 4	O 5	0
25	2	1	Total 65	C 55	Mg 1	N 4	O 5	0
25	2	1	Total 52	C 42	Mg 1	N 4	O 5	0
25	2	1	Total 41	C 33	Mg 1	N 4	O 3	0
25	2	1	Total 50	C 40	Mg 1	N 4	O 5	0
25	2	1	Total 43	C 35	Mg 1	N 4	O 3	0
25	2	1	Total 60	C 50	Mg 1	N 4	O 5	0
25	2	1	Total 41	C 33	Mg 1	N 4	O 3	0
25	2	1	Total 52	C 42	Mg 1	N 4	O 5	0
25	2	1	Total 65	C 55	Mg 1	N 4	O 5	0
25	2	1	Total 55	C 45	Mg 1	N 4	O 5	0
25	2	1	Total 46	C 36	Mg 1	N 4	O 5	0
25	3	1	Total 60	C 50	Mg 1	N 4	O 5	0
25	3	1	Total 65	C 55	Mg 1	N 4	O 5	0
25	3	1	Total 65	C 55	Mg 1	N 4	O 5	0
25	3	1	Total 42	C 34	Mg 1	N 4	O 3	0
25	3	1	Total 60	C 50	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	3	1	50	40	1	4	5	0
25	3	1	65	55	1	4	5	0
25	3	1	41	33	1	4	3	0
25	3	1	46	36	1	4	5	0
25	3	1	55	45	1	4	5	0
25	3	1	45	35	1	4	5	0
25	3	1	46	36	1	4	5	0
25	3	1	56	46	1	4	5	0
25	3	1	65	55	1	4	5	0
25	4	1	60	50	1	4	5	0
25	4	1	46	36	1	4	5	0
25	4	1	50	40	1	4	5	0
25	4	1	50	40	1	4	5	0
25	4	1	60	50	1	4	5	0
25	4	1	55	45	1	4	5	0
25	4	1	52	42	1	4	5	0
25	4	1	56	46	1	4	5	0
25	4	1	45	35	1	4	5	0
25	4	1	41	33	1	4	3	0
25	5	1	65	55	1	4	5	0
25	5	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	5	1	46	36	1	4	5	0
25	5	1	50	40	1	4	5	0
25	5	1	55	45	1	4	5	0
25	5	1	50	40	1	4	5	0
25	5	1	60	50	1	4	5	0
25	5	1	55	45	1	4	5	0
25	5	1	52	42	1	4	5	0
25	5	1	56	46	1	4	5	0
25	5	1	45	35	1	4	5	0
25	5	1	46	36	1	4	5	0
25	5	1	43	35	1	4	3	0
25	5	1	46	36	1	4	5	0
25	5	1	65	55	1	4	5	0
25	6	1	61	51	1	4	5	0
25	6	1	65	55	1	4	5	0
25	6	1	46	36	1	4	5	0
25	6	1	65	55	1	4	5	0
25	6	1	50	40	1	4	5	0
25	6	1	60	50	1	4	5	0
25	6	1	55	45	1	4	5	0
25	6	1	52	42	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	6	1	Total 56	C 46	Mg 1	N 4	O 5	0
25	6	1	Total 45	C 35	Mg 1	N 4	O 5	0
25	6	1	Total 46	C 36	Mg 1	N 4	O 5	0
25	6	1	Total 46	C 36	Mg 1	N 4	O 5	0
25	6	1	Total 45	C 35	Mg 1	N 4	O 5	0
25	6	1	Total 60	C 50	Mg 1	N 4	O 5	0
25	7	1	Total 65	C 55	Mg 1	N 4	O 5	0
25	7	1	Total 46	C 36	Mg 1	N 4	O 5	0
25	7	1	Total 56	C 46	Mg 1	N 4	O 5	0
25	7	1	Total 42	C 34	Mg 1	N 4	O 3	0
25	7	1	Total 50	C 40	Mg 1	N 4	O 5	0
25	7	1	Total 50	C 40	Mg 1	N 4	O 5	0
25	7	1	Total 60	C 50	Mg 1	N 4	O 5	0
25	7	1	Total 41	C 33	Mg 1	N 4	O 3	0
25	7	1	Total 52	C 42	Mg 1	N 4	O 5	0
25	7	1	Total 65	C 55	Mg 1	N 4	O 5	0
25	7	1	Total 43	C 35	Mg 1	N 4	O 3	0
25	7	1	Total 46	C 36	Mg 1	N 4	O 5	0
25	8	1	Total 65	C 55	Mg 1	N 4	O 5	0
25	8	1	Total 62	C 52	Mg 1	N 4	O 5	0
25	8	1	Total 45	C 35	Mg 1	N 4	O 5	0

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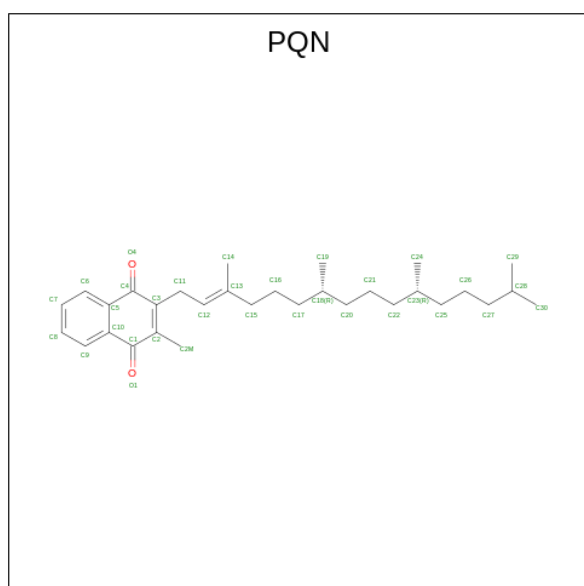
Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
25	8	1	46	36	1	4	5	0
25	8	1	42	34	1	4	3	0
25	8	1	50	40	1	4	5	0
25	8	1	46	36	1	4	5	0
25	8	1	60	50	1	4	5	0
25	8	1	46	36	1	4	5	0
25	8	1	52	42	1	4	5	0
25	8	1	65	55	1	4	5	0
25	8	1	55	45	1	4	5	0
25	8	1	46	36	1	4	5	0
25	9	1	54	44	1	4	5	0
25	9	1	46	36	1	4	5	0
25	9	1	60	50	1	4	5	0
25	9	1	46	36	1	4	5	0
25	9	1	50	40	1	4	5	0
25	9	1	50	40	1	4	5	0
25	9	1	60	50	1	4	5	0
25	9	1	50	40	1	4	5	0
25	9	1	45	35	1	4	5	0
25	a	1	65	55	1	4	5	0
25	a	1	57	47	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
25	a	1	Total	C	Mg	N	O	0
			57	47	1	4	5	
25	a	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
25	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
25	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
25	a	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
25	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
25	a	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
25	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
25	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
25	a	1	Total	C	Mg	N	O	0
			46	36	1	4	5	

- Molecule 26 is PHYLLOQUINONE (three-letter code: PQN) (formula: C₃₁H₄₆O₂).



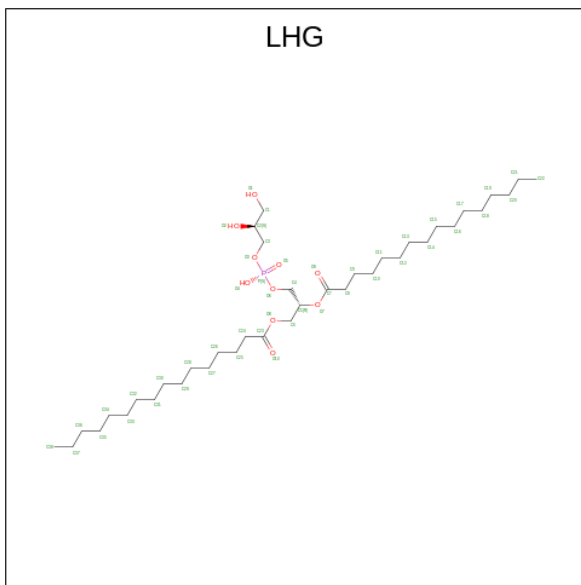
Mol	Chain	Residues	Atoms			AltConf
26	A	1	Total	C	O	0
			33	31	2	

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Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
26	B	1	33	31	2	0

- Molecule 27 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula: $C_{38}H_{75}O_{10}P$).



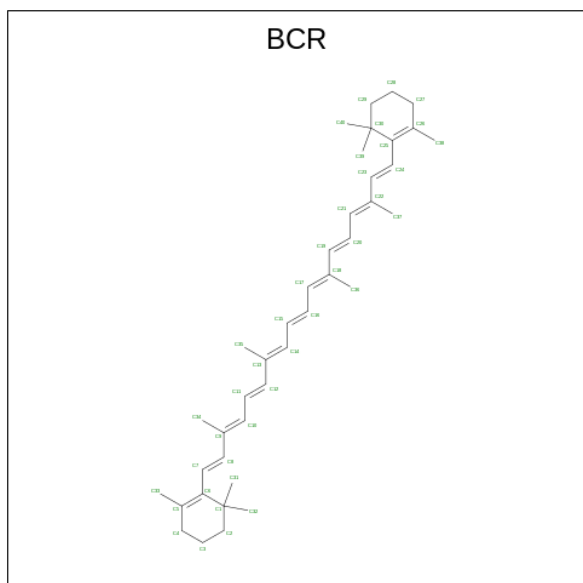
Mol	Chain	Residues	Atoms				AltConf
			Total	C	O	P	
27	A	1	49	38	10	1	0
27	A	1	38	27	10	1	0
27	A	1	48	37	10	1	0
27	B	1	38	27	10	1	0
27	P	1	49	38	10	1	0
27	P	1	49	38	10	1	0
27	Q	1	49	38	10	1	0
27	R	1	49	38	10	1	0
27	S	1	49	38	10	1	0
27	T	1	49	38	10	1	0

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Mol	Chain	Residues	Atoms				AltConf
			Total	C	O	P	
27	1	1	Total 43	C 32	O 10	P 1	0
27	2	1	Total 49	C 38	O 10	P 1	0
27	4	1	Total 49	C 38	O 10	P 1	0
27	4	1	Total 32	C 21	O 10	P 1	0
27	5	1	Total 45	C 34	O 10	P 1	0
27	5	1	Total 37	C 26	O 10	P 1	0
27	6	1	Total 49	C 38	O 10	P 1	0
27	7	1	Total 37	C 26	O 10	P 1	0
27	8	1	Total 49	C 38	O 10	P 1	0
27	a	1	Total 43	C 32	O 10	P 1	0

- Molecule 28 is BETA-CAROTENE (three-letter code: BCR) (formula: $C_{40}H_{56}$).



Mol	Chain	Residues	Atoms		AltConf
28	A	1	Total 40	C 40	0

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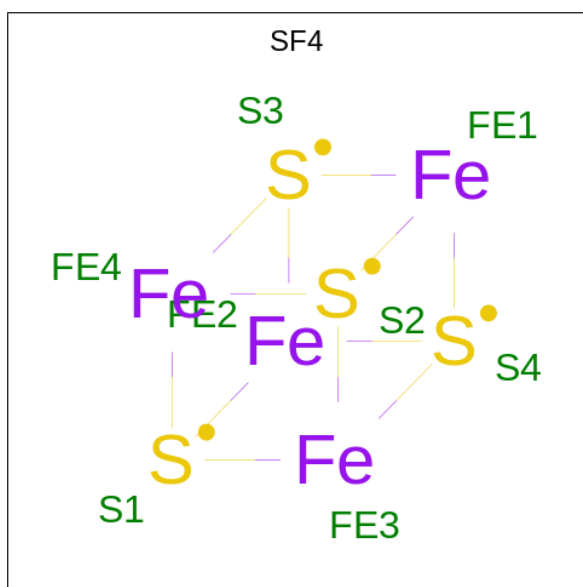
Mol	Chain	Residues	Atoms	AltConf
28	A	1	Total C 40 40	0
28	A	1	Total C 40 40	0
28	A	1	Total C 40 40	0
28	A	1	Total C 40 40	0
28	A	1	Total C 40 40	0
28	B	1	Total C 40 40	0
28	B	1	Total C 40 40	0
28	B	1	Total C 40 40	0
28	B	1	Total C 40 40	0
28	B	1	Total C 40 40	0
28	B	1	Total C 40 40	0
28	B	1	Total C 40 40	0
28	B	1	Total C 40 40	0
28	B	1	Total C 40 40	0
28	F	1	Total C 40 40	0
28	F	1	Total C 40 40	0
28	G	1	Total C 40 40	0
28	I	1	Total C 40 40	0
28	J	1	Total C 40 40	0
28	J	1	Total C 40 40	0
28	K	1	Total C 40 40	0
28	L	1	Total C 40 40	0
28	L	1	Total C 40 40	0

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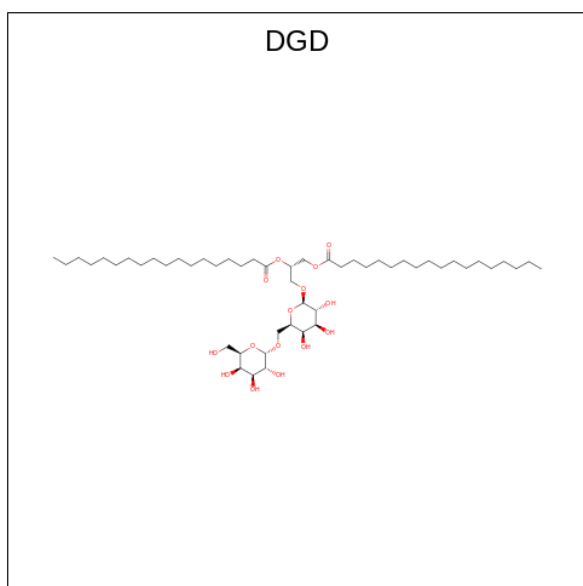
Mol	Chain	Residues	Atoms	AltConf
28	L	1	Total C 40 40	0
28	L	1	Total C 40 40	0
28	O	1	Total C 40 40	0
28	O	1	Total C 40 40	0
28	3	1	Total C 40 40	0
28	3	1	Total C 40 40	0
28	3	1	Total C 40 40	0
28	4	1	Total C 40 40	0
28	4	1	Total C 40 40	0
28	5	1	Total C 40 40	0
28	5	1	Total C 40 40	0
28	6	1	Total C 40 40	0
28	7	1	Total C 40 40	0
28	8	1	Total C 40 40	0
28	8	1	Total C 40 40	0

- Molecule 29 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe₄S₄).



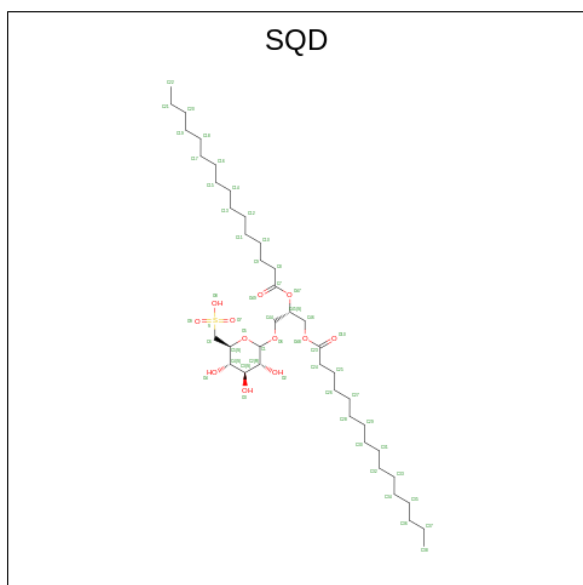
Mol	Chain	Residues	Atoms	AltConf
29	A	1	Total Fe S 8 4 4	0
29	C	1	Total Fe S 8 4 4	0
29	C	1	Total Fe S 8 4 4	0

- Molecule 30 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (three-letter code: DGD) (formula: $C_{51}H_{96}O_{15}$).



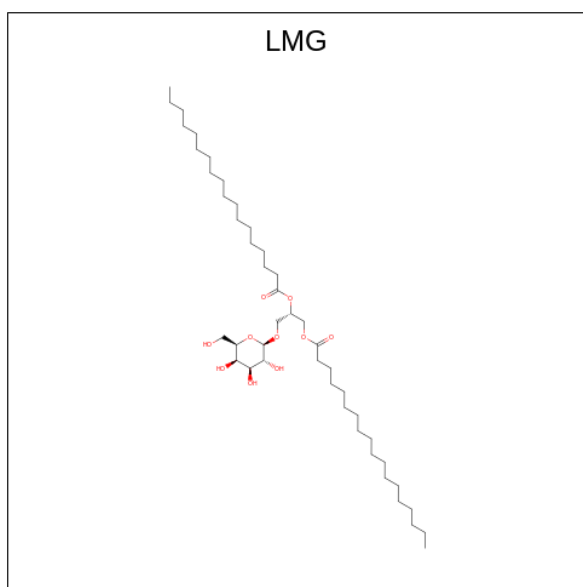
Mol	Chain	Residues	Atoms			AltConf
30	B	1	Total	C	O	0
			66	51	15	
30	B	1	Total	C	O	0
			57	42	15	

- Molecule 31 is 1,2-DI-O-ACYL-3-O-[6-DEOXY-6-SULFO-ALPHA-D-GLUCOPYRANOSYL]-SN-GLYCEROL (three-letter code: SQD) (formula: $C_{41}H_{78}O_{12}S$).



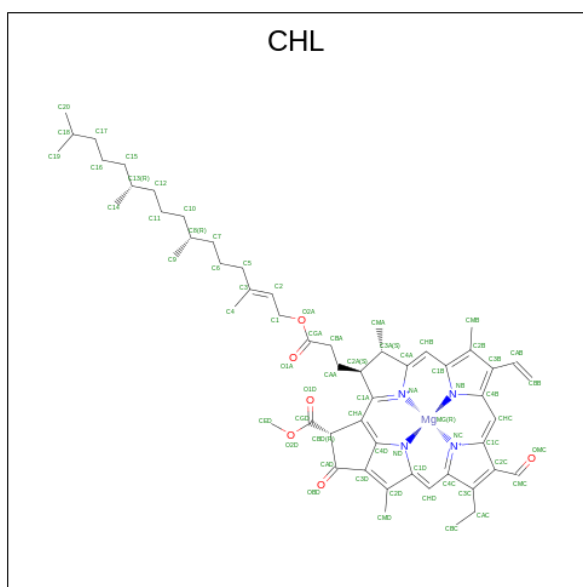
Mol	Chain	Residues	Atoms				AltConf
31	B	1	Total	C	O	S	0
			51	38	12	1	

- Molecule 32 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula: $C_{45}H_{86}O_{10}$).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
32	H	1	47	37	10	0
32	J	1	40	30	10	0
32	J	1	35	25	10	0
32	J	1	55	45	10	0
32	1	1	46	36	10	0
32	2	1	41	31	10	0
32	4	1	40	30	10	0
32	6	1	40	30	10	0
32	7	1	35	25	10	0
32	7	1	36	26	10	0

- Molecule 33 is CHLOROPHYLL B (three-letter code: CHL) (formula: $C_{55}H_{70}MgN_4O_6$).



Mol	Chain	Residues	Atoms				AltConf	
			Total	C	Mg	N		O
33	P	1	51	40	1	4	6	0
33	P	1	48	37	1	4	6	0
33	P	1	50	39	1	4	6	0
33	P	1	52	41	1	4	6	0
33	P	1	44	35	1	4	4	0
33	P	1	66	55	1	4	6	0
33	P	1	52	41	1	4	6	0
33	P	1	53	42	1	4	6	0
33	Q	1	51	40	1	4	6	0
33	Q	1	42	33	1	4	4	0
33	Q	1	50	39	1	4	6	0
33	Q	1	44	35	1	4	4	0
33	Q	1	66	55	1	4	6	0
33	R	1	51	40	1	4	6	0

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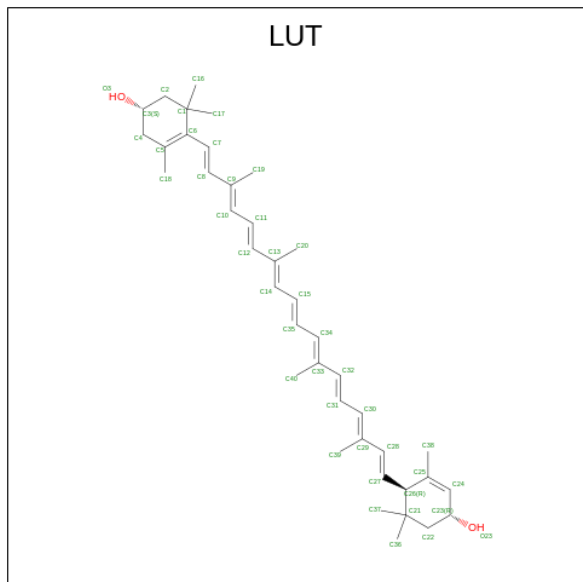
Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
33	R	1	46	35	1	4	6	0
33	R	1	50	39	1	4	6	0
33	R	1	52	41	1	4	6	0
33	R	1	44	35	1	4	4	0
33	R	1	66	55	1	4	6	0
33	S	1	53	42	1	4	6	0
33	S	1	48	37	1	4	6	0
33	S	1	50	39	1	4	6	0
33	S	1	52	41	1	4	6	0
33	S	1	52	41	1	4	6	0
33	S	1	52	41	1	4	6	0
33	S	1	51	40	1	4	6	0
33	T	1	50	39	1	4	6	0
33	T	1	48	37	1	4	6	0
33	T	1	50	39	1	4	6	0
33	T	1	44	35	1	4	4	0
33	T	1	52	41	1	4	6	0
33	U	1	46	35	1	4	6	0
33	U	1	50	39	1	4	6	0
33	U	1	53	42	1	4	6	0
33	U	1	44	35	1	4	4	0

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Mol	Chain	Residues	Atoms					AltConf
33	U	1	Total	C	Mg	N	O	0
			48	37	1	4	6	
33	1	1	Total	C	Mg	N	O	0
			53	42	1	4	6	
33	1	1	Total	C	Mg	N	O	0
			48	37	1	4	6	
33	3	1	Total	C	Mg	N	O	0
			53	42	1	4	6	
33	4	1	Total	C	Mg	N	O	0
			42	33	1	4	4	
33	4	1	Total	C	Mg	N	O	0
			51	40	1	4	6	
33	4	1	Total	C	Mg	N	O	0
			51	40	1	4	6	
33	4	1	Total	C	Mg	N	O	0
			43	34	1	4	4	
33	4	1	Total	C	Mg	N	O	0
			53	42	1	4	6	
33	5	1	Total	C	Mg	N	O	0
			51	40	1	4	6	
33	5	1	Total	C	Mg	N	O	0
			51	40	1	4	6	
33	5	1	Total	C	Mg	N	O	0
			43	34	1	4	4	
33	6	1	Total	C	Mg	N	O	0
			53	42	1	4	6	
33	6	1	Total	C	Mg	N	O	0
			53	42	1	4	6	
33	6	1	Total	C	Mg	N	O	0
			51	40	1	4	6	
33	6	1	Total	C	Mg	N	O	0
			43	34	1	4	4	
33	7	1	Total	C	Mg	N	O	0
			54	43	1	4	6	
33	8	1	Total	C	Mg	N	O	0
			53	42	1	4	6	
33	9	1	Total	C	Mg	N	O	0
			42	33	1	4	4	
33	9	1	Total	C	Mg	N	O	0
			51	40	1	4	6	
33	a	1	Total	C	Mg	N	O	0
			48	37	1	4	6	

- Molecule 34 is (3R,3'R,6S)-4,5-DIDEHYDRO-5,6-DIHYDRO-BETA,BETA-CAROTENE-3,3'-DIOL (three-letter code: LUT) (formula: C₄₀H₅₆O₂).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
34	P	1	42	40	2	0
34	P	1	42	40	2	0
34	Q	1	42	40	2	0
34	Q	1	42	40	2	0
34	R	1	42	40	2	0
34	R	1	42	40	2	0
34	S	1	42	40	2	0
34	S	1	42	40	2	0
34	T	1	42	40	2	0
34	T	1	42	40	2	0
34	U	1	42	40	2	0
34	U	1	42	40	2	0

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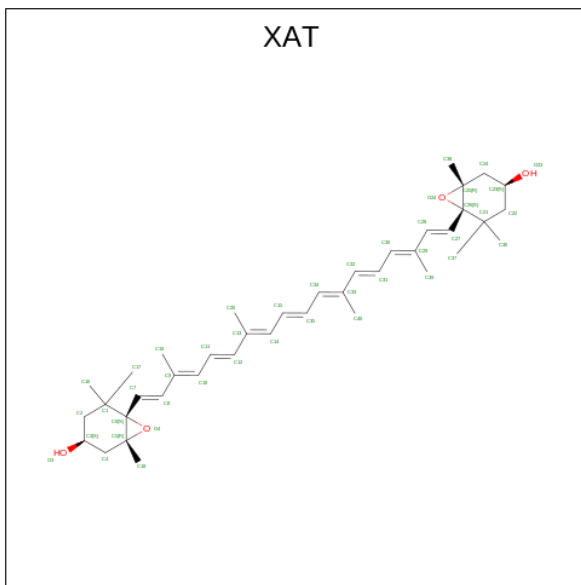
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
34	1	1	42	40	2	0
34	1	1	42	40	2	0
34	1	1	42	40	2	0
34	2	1	42	40	2	0
34	2	1	42	40	2	0
34	3	1	42	40	2	0
34	3	1	42	40	2	0
34	4	1	42	40	2	0
34	4	1	42	40	2	0
34	5	1	42	40	2	0
34	5	1	42	40	2	0
34	6	1	42	40	2	0
34	6	1	42	40	2	0
34	7	1	42	40	2	0
34	7	1	42	40	2	0
34	8	1	42	40	2	0
34	8	1	42	40	2	0
34	9	1	42	40	2	0
34	9	1	42	40	2	0
34	a	1	42	40	2	0
34	a	1	42	40	2	0

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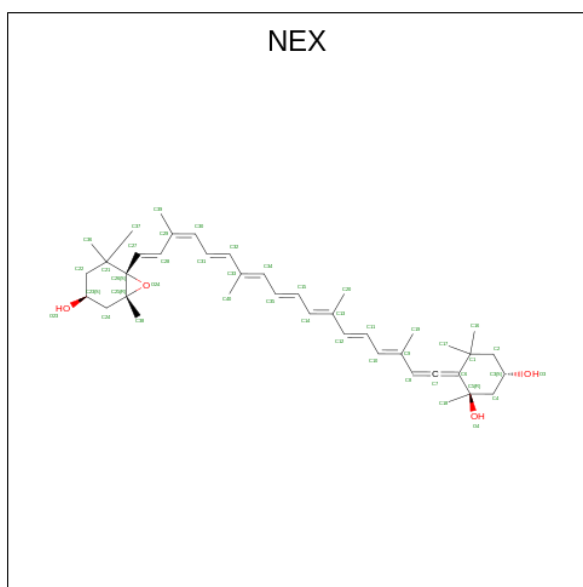
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
34	a	1	42	40	2	0

- Molecule 35 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 (three-letter code: XAT) (formula: C₄₀H₅₆O₄).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
35	P	1	44	40	4	0
35	P	1	44	40	4	0
35	P	1	43	39	4	0
35	Q	1	44	40	4	0
35	S	1	44	40	4	0
35	T	1	44	40	4	0

- Molecule 36 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-TETRAMETHYLOCTA DECA-1,3,5,7,9,11,13,15,17-NONAENYLIDENE]-1,5,5-TRIMETHYLCYCLOHEXANE-1,3-DIOL (three-letter code: NEX) (formula: C₄₀H₅₆O₄).

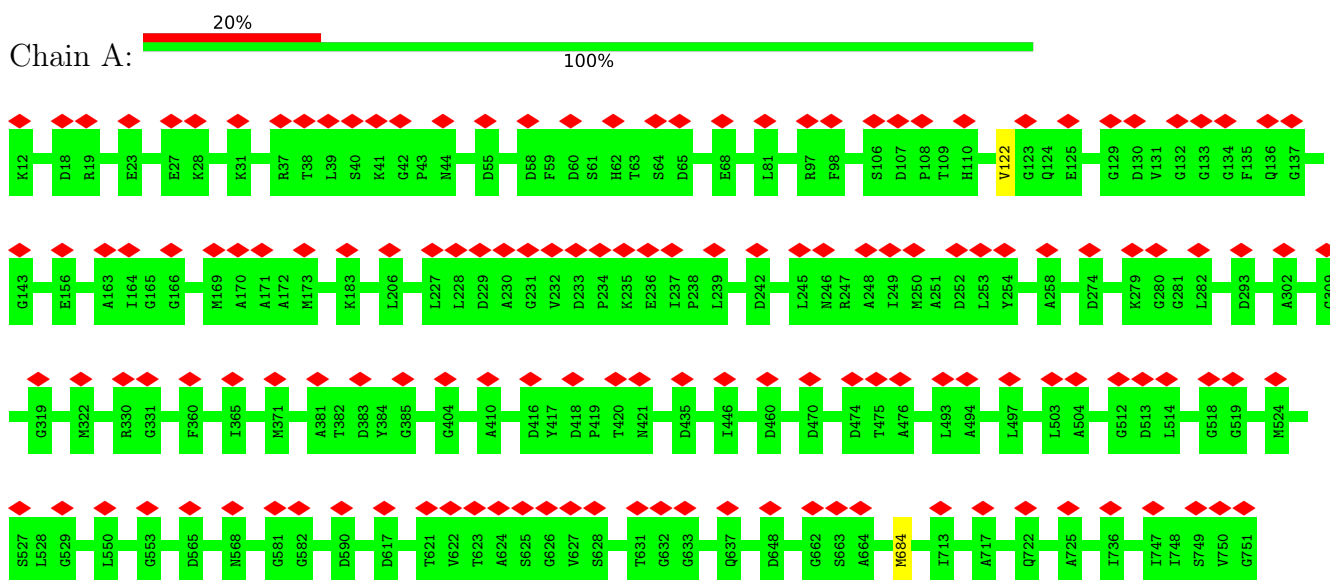


Mol	Chain	Residues	Atoms			AltConf
36	P	1	Total	C	O	0
			44	40	4	
36	P	1	Total	C	O	0
			44	40	4	
36	R	1	Total	C	O	0
			44	40	4	
36	T	1	Total	C	O	0
			44	40	4	
36	U	1	Total	C	O	0
			44	40	4	
36	U	1	Total	C	O	0
			44	40	4	

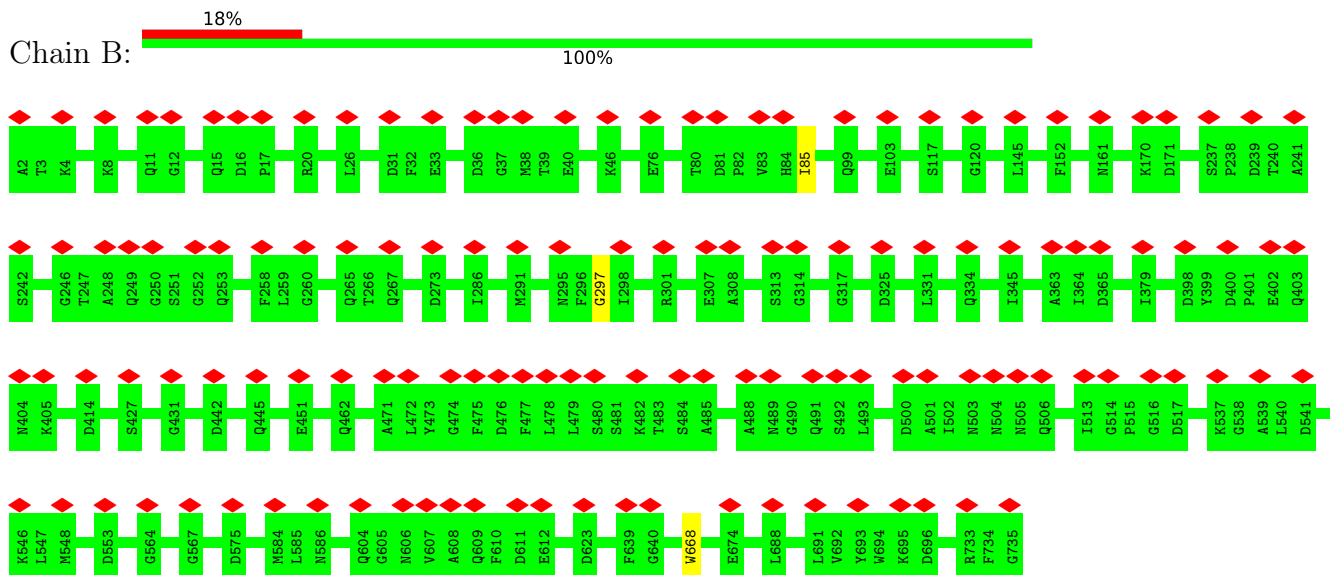
3 Residue-property plots

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.

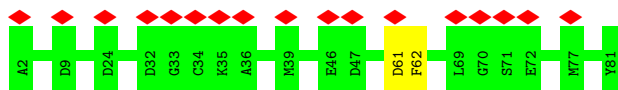
- Molecule 1: Photosystem I P700 chlorophyll a apoprotein A1



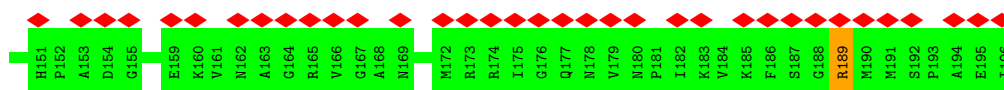
- Molecule 2: Photosystem I P700 chlorophyll a apoprotein A2



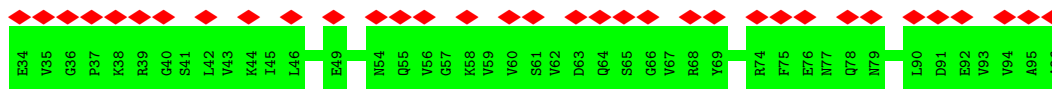
- Molecule 3: Photosystem I iron-sulfur center



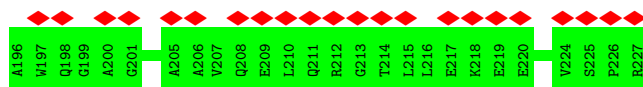
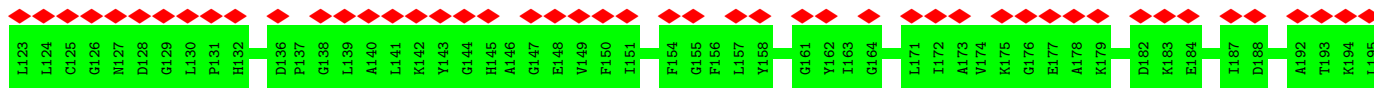
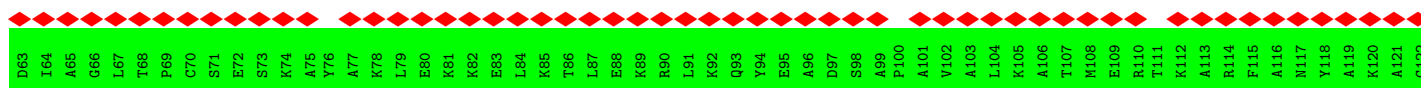
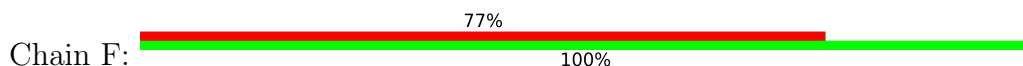
- Molecule 4: Photosystem I reaction center subunit II, chloroplastic



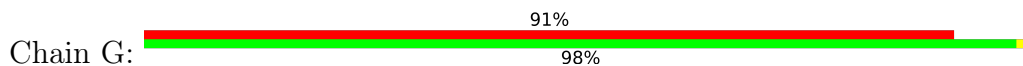
- Molecule 5: Photosystem I reaction center subunit IV, chloroplastic



- Molecule 6: Photosystem I reaction center subunit F, Photosystem I reaction center subunit III, chloroplastic

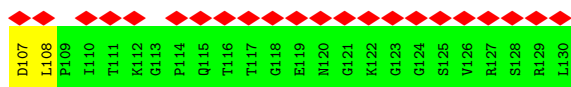
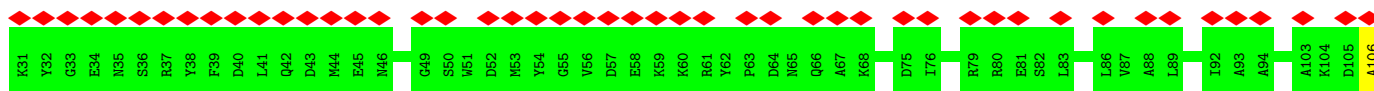


- Molecule 7: Photosystem I reaction center subunit V, chloroplastic

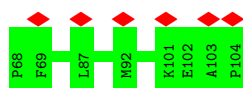




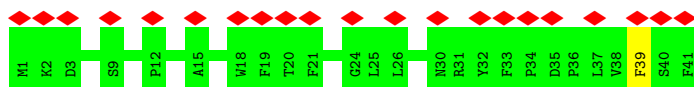
- Molecule 8: Photosystem I reaction center subunit VI, chloroplastic



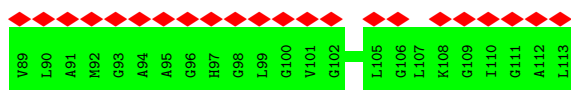
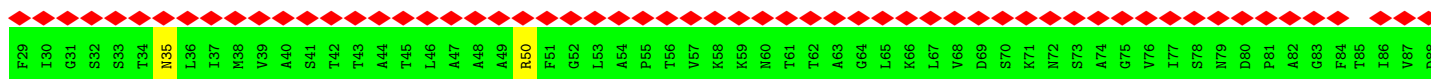
- Molecule 9: Photosystem I reaction center subunit VIII



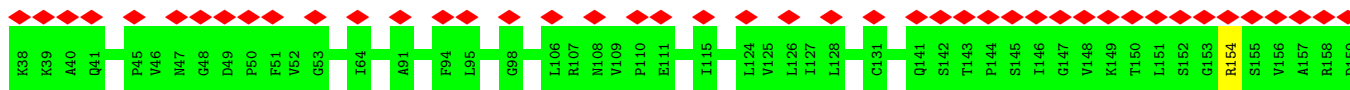
- Molecule 10: Photosystem I reaction center subunit IX

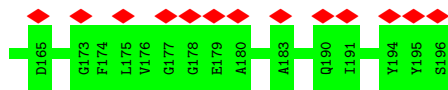


- Molecule 11: Photosystem I reaction center subunit psaK, chloroplastic

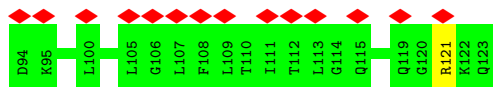
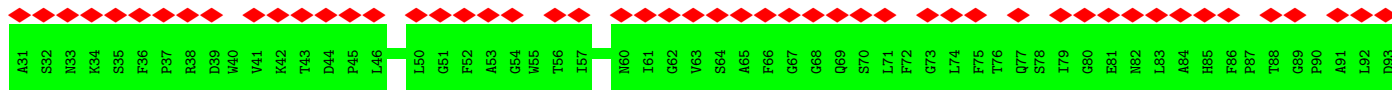


- Molecule 12: PSI subunit V

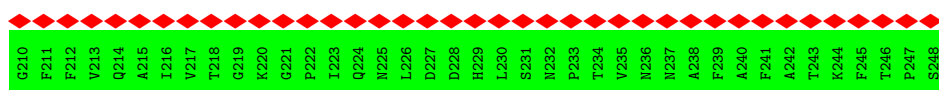
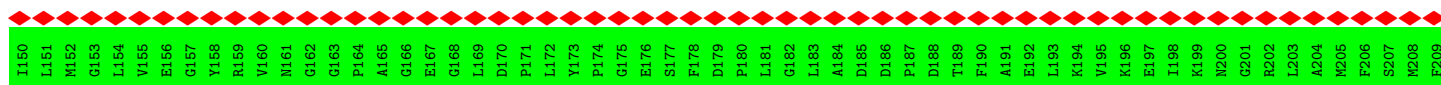
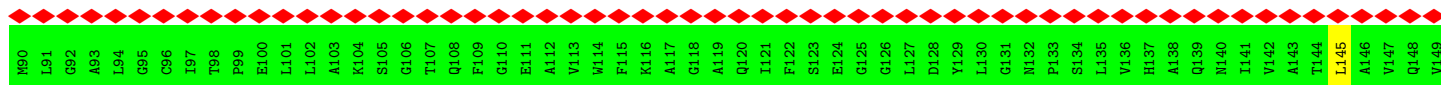
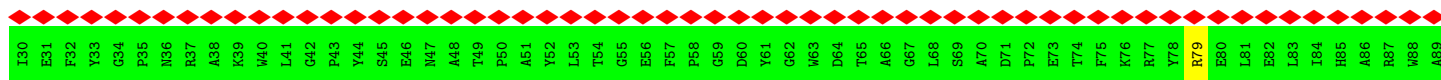




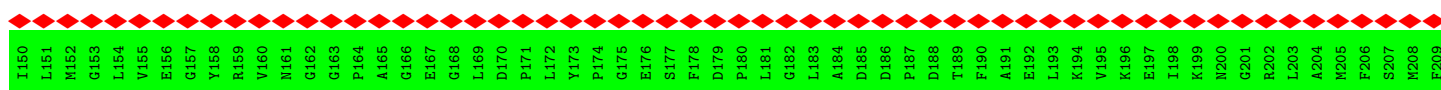
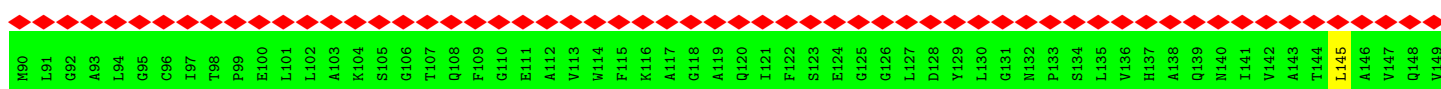
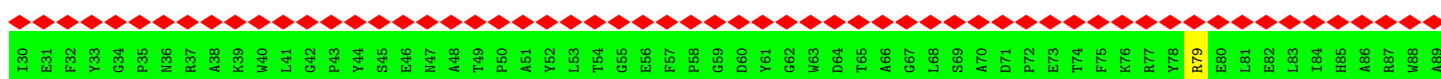
• Molecule 13: Photosystem I subunit O

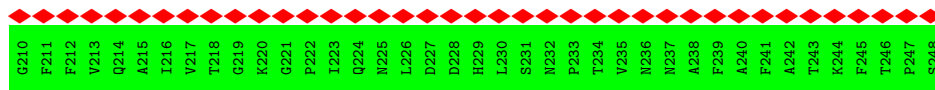


• Molecule 14: Chlorophyll a-b binding protein, chloroplastic

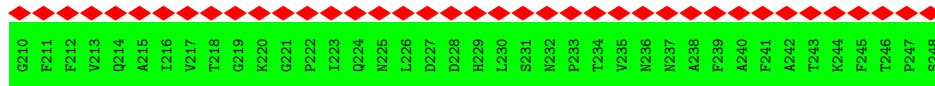
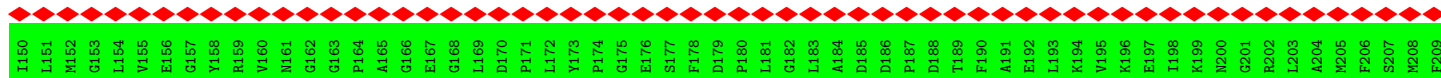
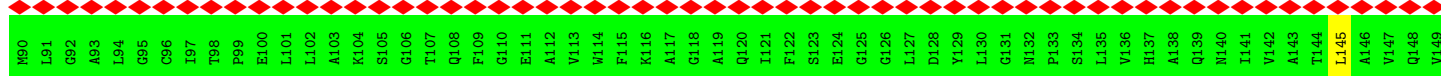
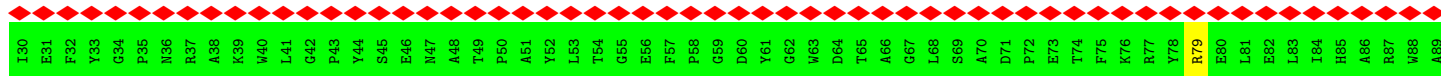


• Molecule 14: Chlorophyll a-b binding protein, chloroplastic

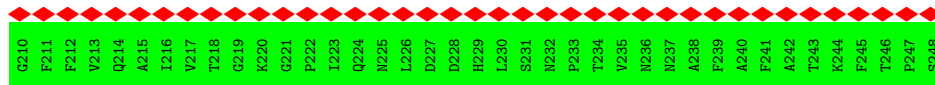
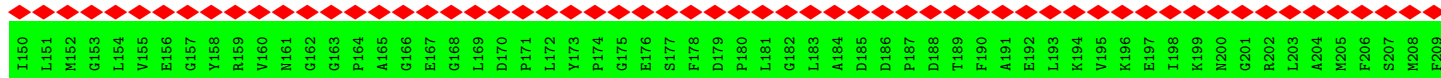
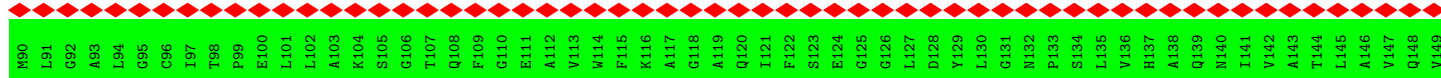
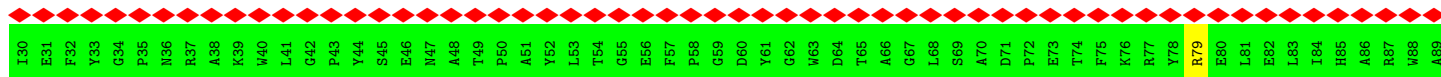




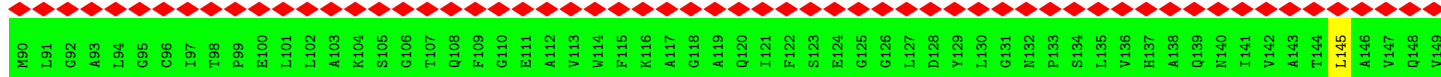
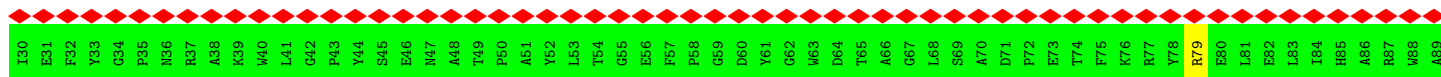
• Molecule 14: Chlorophyll a-b binding protein, chloroplastic

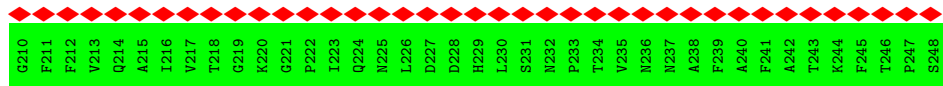
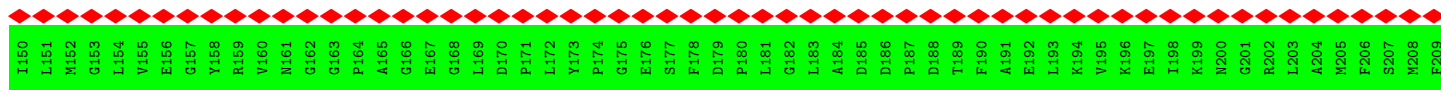


• Molecule 14: Chlorophyll a-b binding protein, chloroplastic

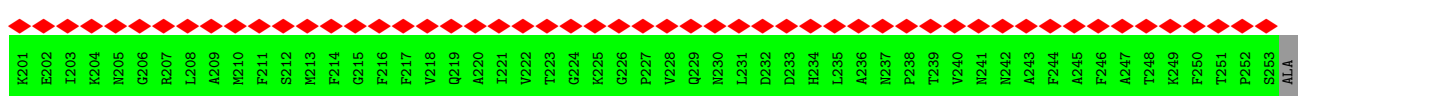
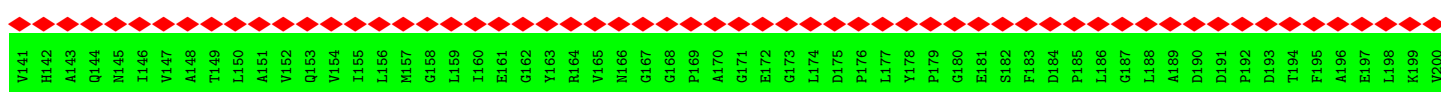
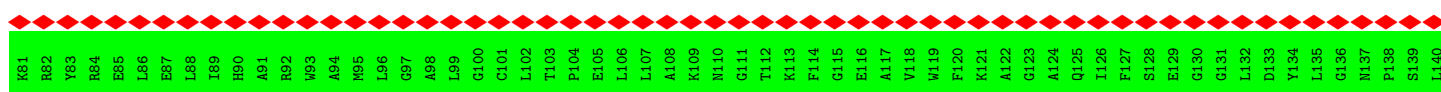
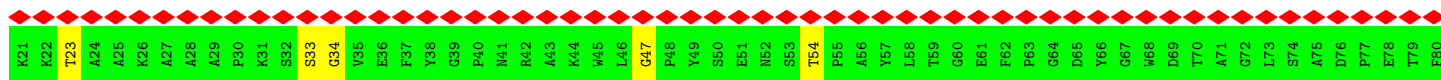


• Molecule 14: Chlorophyll a-b binding protein, chloroplastic

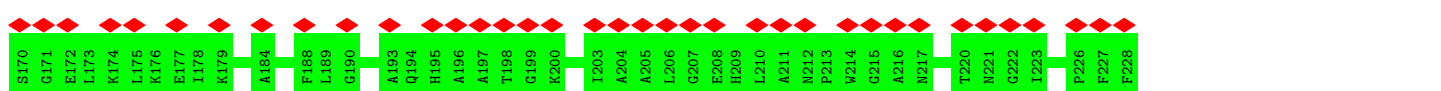
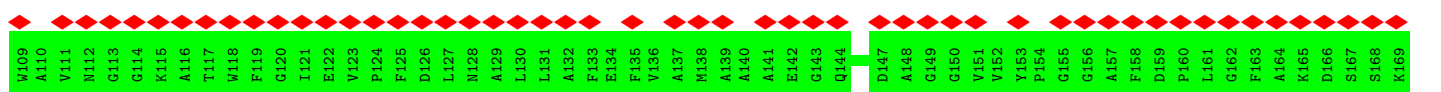
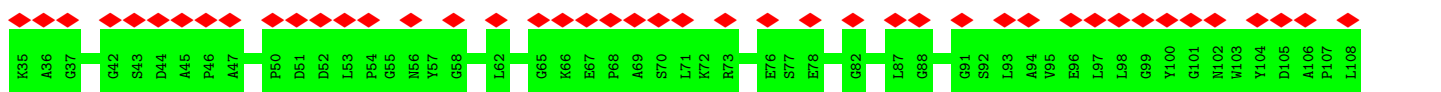




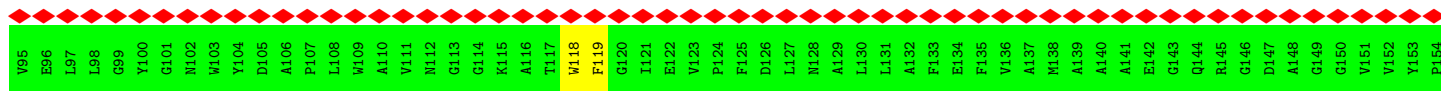
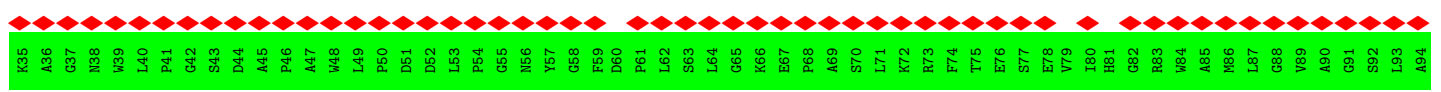
• Molecule 15: Chlorophyll a-b binding protein, chloroplastic

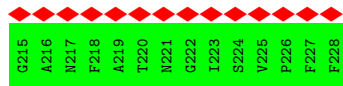
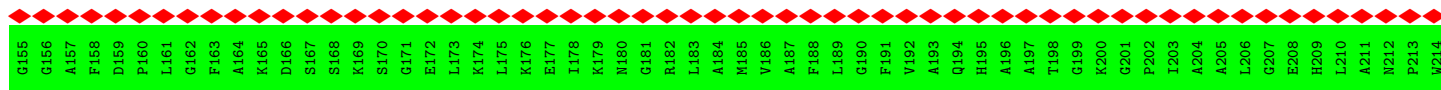


• Molecule 16: Chlorophyll a-b binding protein, chloroplastic

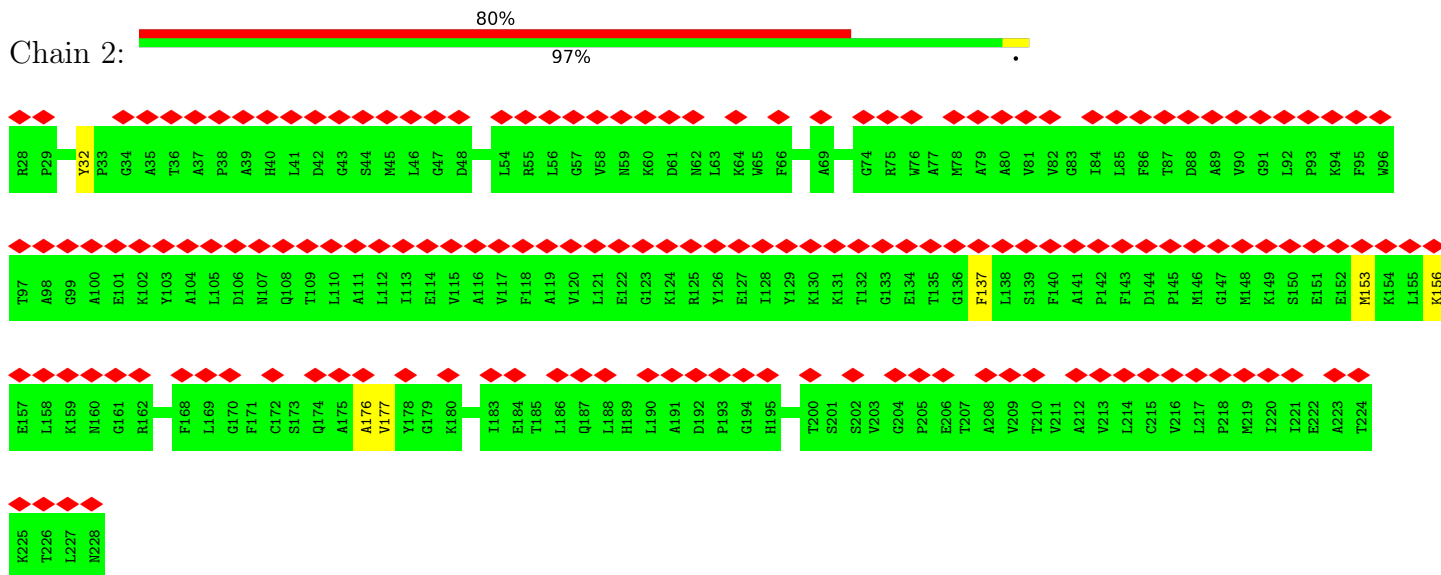


• Molecule 16: Chlorophyll a-b binding protein, chloroplastic

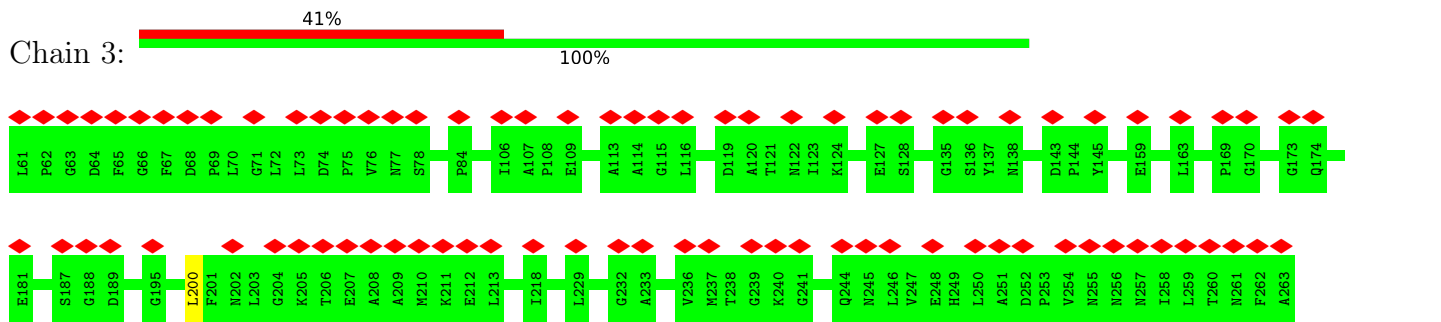




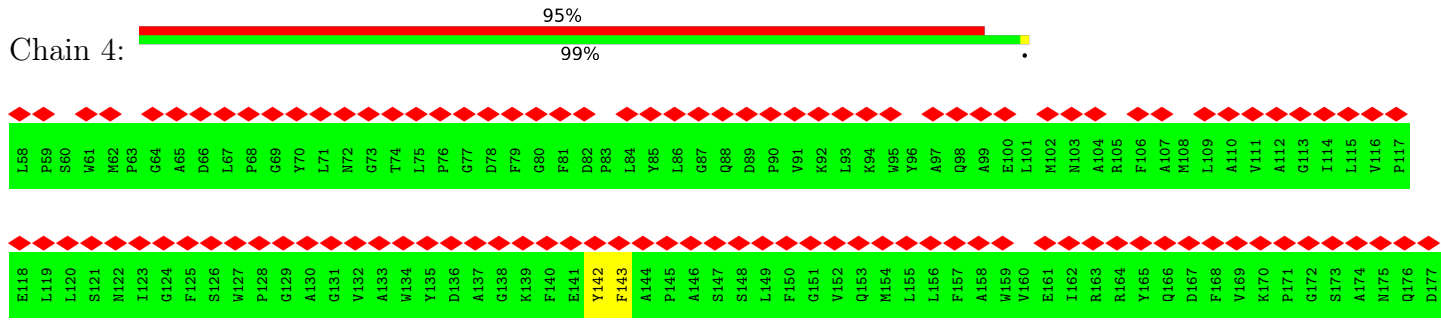
• Molecule 17: Chlorophyll a-b binding protein, chloroplastic

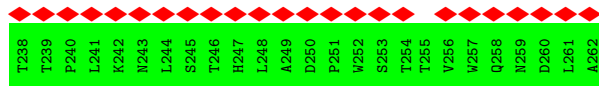
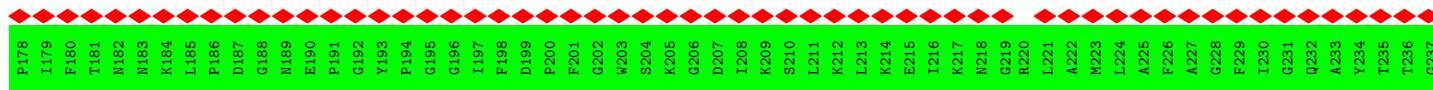


• Molecule 18: Chlorophyll a-b binding protein, chloroplastic

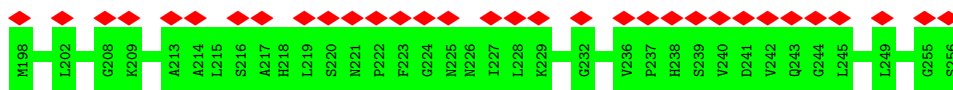
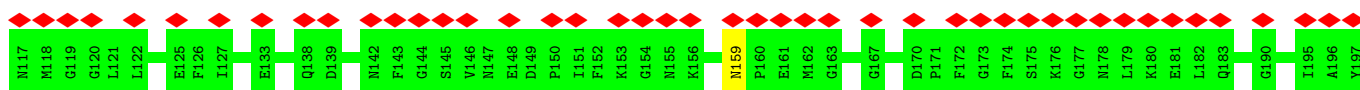
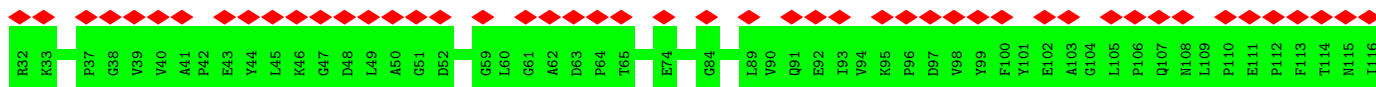


• Molecule 19: Chlorophyll a-b binding protein, chloroplastic

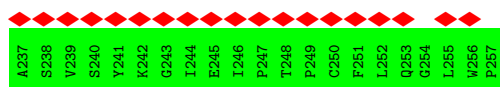
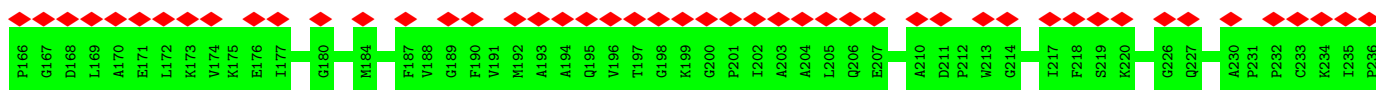
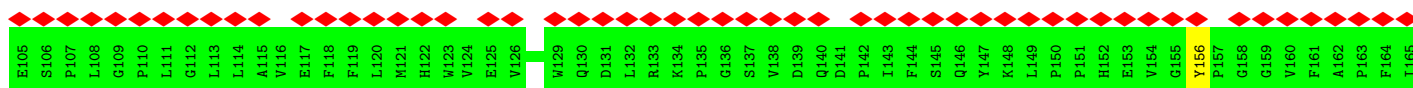
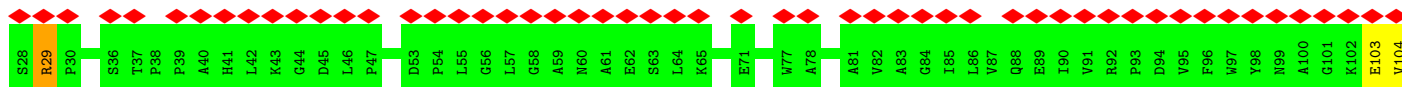
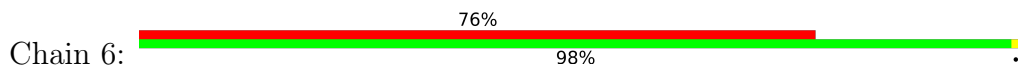




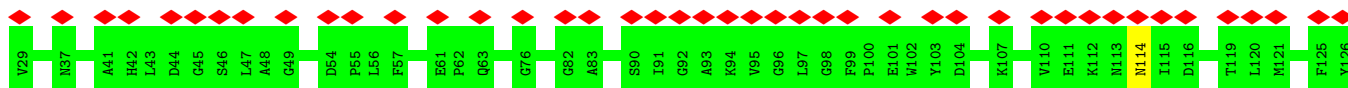
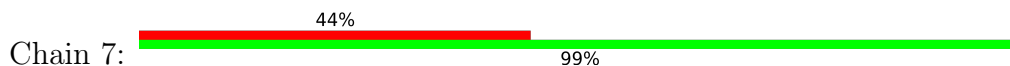
- Molecule 20: Chlorophyll a-b binding protein, chloroplastic

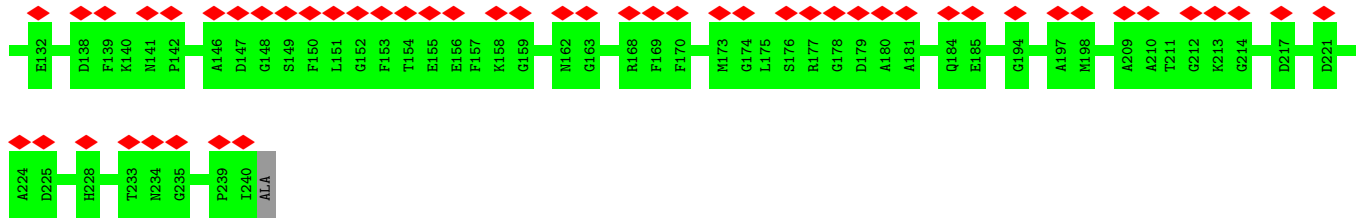


- Molecule 21: Chlorophyll a-b binding protein, chloroplastic

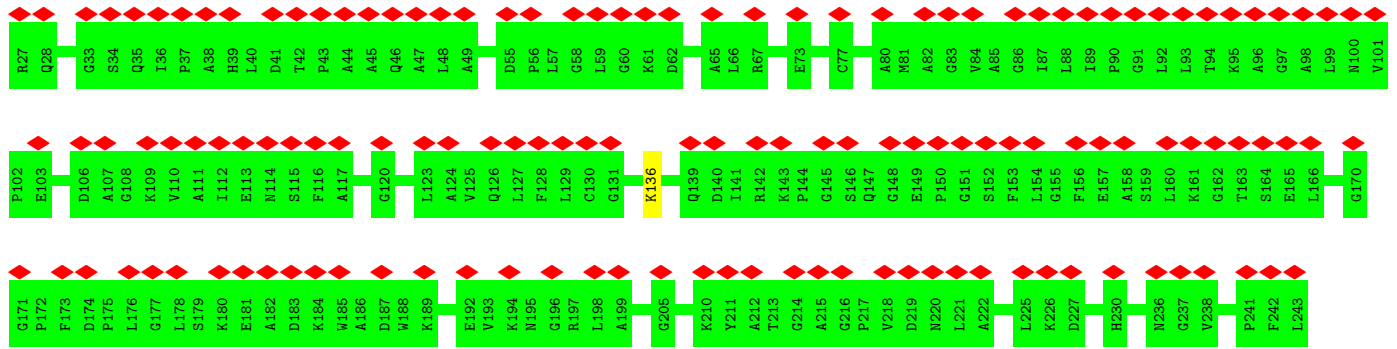


- Molecule 22: Chlorophyll a-b binding protein, chloroplastic

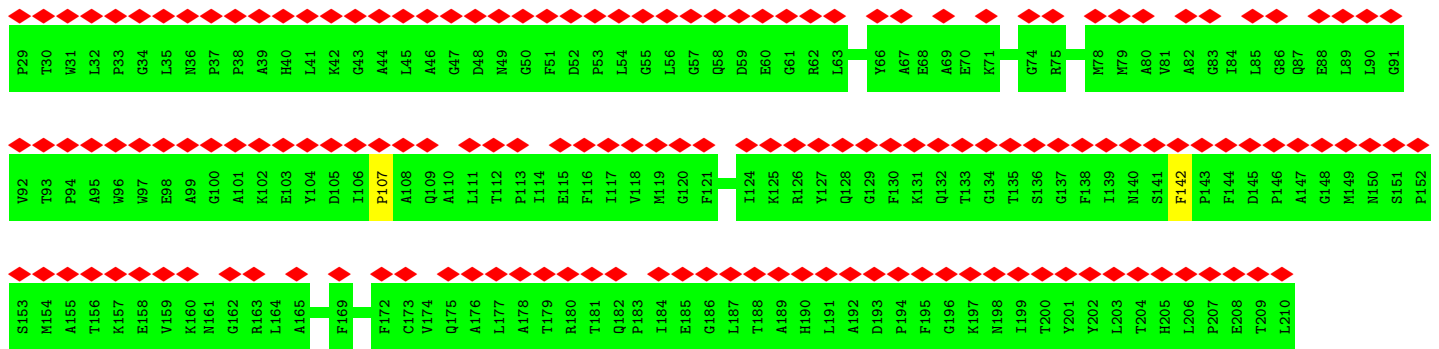




• Molecule 23: Chlorophyll a-b binding protein, chloroplastic



• Molecule 24: Chlorophyll a-b binding protein, chloroplastic



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	283763	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	5.004	Depositor
Minimum map value	-1.725	Depositor
Average map value	-0.002	Depositor
Map value standard deviation	0.085	Depositor
Recommended contour level	1	Depositor
Map size (Å)	470.52002, 470.52002, 470.52002	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.307, 1.307, 1.307	Depositor

5 Model quality

5.1 Standard geometry

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

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	A	0.57	0/6007	0.57	1/8190 (0.0%)
2	B	0.59	0/6040	0.57	0/8247
3	C	0.62	0/610	0.60	0/826
4	D	0.51	0/1160	0.60	2/1567 (0.1%)
5	E	0.52	0/506	0.48	0/689
6	F	0.46	0/1291	0.55	0/1747
7	G	0.43	0/693	0.58	1/943 (0.1%)
8	H	0.47	0/785	0.63	0/1055
9	I	0.58	0/293	0.56	0/406
10	J	0.48	0/349	0.53	0/478
11	K	0.38	0/583	0.60	0/790
12	L	0.53	0/1190	0.61	0/1628
13	O	0.49	0/743	0.65	0/1013
14	P	0.33	0/1717	0.54	1/2339 (0.0%)
14	Q	0.32	0/1717	0.52	1/2339 (0.0%)
14	R	0.31	0/1717	0.52	1/2339 (0.0%)
14	T	0.28	0/1717	0.50	0/2339
14	U	0.30	0/1717	0.51	1/2339 (0.0%)
15	S	0.40	0/1748	0.63	1/2376 (0.0%)
16	1	0.43	0/1490	0.51	0/2028
16	a	0.68	6/1490 (0.4%)	0.63	5/2028 (0.2%)
17	2	0.49	0/1583	0.72	2/2148 (0.1%)
18	3	0.52	0/1606	0.59	1/2180 (0.0%)
19	4	0.41	0/1645	0.54	0/2246
20	5	0.51	0/1812	0.56	0/2469
21	6	0.50	1/1833 (0.1%)	0.56	0/2505
22	7	0.52	0/1696	0.54	0/2303
23	8	0.51	0/1700	0.57	1/2315 (0.0%)
24	9	0.41	0/1433	0.56	0/1949
All	All	0.49	7/46871 (0.0%)	0.57	18/63821 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	B	0	2
3	C	0	2
10	J	0	1
15	S	0	1
17	2	0	2
19	4	0	2
21	6	0	1
22	7	0	1
24	9	0	1
All	All	0	13

The worst 5 of 7 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	a	118	TRP	CB-CG	-11.53	1.29	1.50
16	a	118	TRP	CE2-CZ2	-9.35	1.23	1.39
16	a	118	TRP	NE1-CE2	8.79	1.49	1.37
16	a	118	TRP	CE3-CZ3	-8.03	1.24	1.38
16	a	118	TRP	CG-CD2	-6.54	1.32	1.43

The worst 5 of 18 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	2	153	MET	CG-SD-CE	-10.21	83.86	100.20
23	8	136	LYS	CD-CE-NZ	-9.85	89.04	111.70
16	a	118	TRP	CD1-NE1-CE2	-9.59	100.37	109.00
1	A	684	MET	CG-SD-CE	-9.56	84.90	100.20
4	D	76	ARG	NE-CZ-NH1	-7.66	116.47	120.30

There are no chirality outliers.

5 of 13 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	B	297	GLY	Peptide
2	B	668	TRP	Peptide
3	C	61	ASP	Peptide
3	C	62	PHE	Peptide
10	J	39	PHE	Peptide

5.2 Too-close contacts [i](#)

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

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	A	738/740 (100%)	698 (95%)	39 (5%)	1 (0%)	48	78
2	B	732/734 (100%)	675 (92%)	56 (8%)	1 (0%)	48	78
3	C	78/80 (98%)	73 (94%)	5 (6%)	0	100	100
4	D	142/144 (99%)	127 (89%)	15 (11%)	0	100	100
5	E	61/63 (97%)	56 (92%)	5 (8%)	0	100	100
6	F	163/165 (99%)	152 (93%)	11 (7%)	0	100	100
7	G	89/91 (98%)	83 (93%)	6 (7%)	0	100	100
8	H	98/100 (98%)	77 (79%)	18 (18%)	3 (3%)	3	19
9	I	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
10	J	39/41 (95%)	37 (95%)	2 (5%)	0	100	100
11	K	83/85 (98%)	77 (93%)	6 (7%)	0	100	100
12	L	157/159 (99%)	145 (92%)	12 (8%)	0	100	100
13	O	91/93 (98%)	76 (84%)	15 (16%)	0	100	100
14	P	217/219 (99%)	189 (87%)	28 (13%)	0	100	100
14	Q	217/219 (99%)	189 (87%)	28 (13%)	0	100	100
14	R	217/219 (99%)	189 (87%)	28 (13%)	0	100	100
14	T	217/219 (99%)	190 (88%)	27 (12%)	0	100	100
14	U	217/219 (99%)	190 (88%)	27 (12%)	0	100	100
15	S	230/234 (98%)	192 (84%)	36 (16%)	2 (1%)	14	43
16	1	192/194 (99%)	176 (92%)	16 (8%)	0	100	100
16	a	192/194 (99%)	175 (91%)	16 (8%)	1 (0%)	25	55

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	2	199/201 (99%)	169 (85%)	28 (14%)	2 (1%)	13	40
18	3	201/203 (99%)	181 (90%)	20 (10%)	0	100	100
19	4	203/205 (99%)	186 (92%)	16 (8%)	1 (0%)	25	55
20	5	223/225 (99%)	200 (90%)	23 (10%)	0	100	100
21	6	228/230 (99%)	209 (92%)	16 (7%)	3 (1%)	10	34
22	7	210/213 (99%)	195 (93%)	15 (7%)	0	100	100
23	8	215/217 (99%)	204 (95%)	11 (5%)	0	100	100
24	9	180/182 (99%)	154 (86%)	25 (14%)	1 (1%)	22	51
All	All	5864/5925 (99%)	5297 (90%)	552 (9%)	15 (0%)	38	67

5 of 15 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	122	VAL
21	6	104	VAL
8	H	106	ALA
19	4	143	PHE
15	S	54	THR

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	A	600/600 (100%)	600 (100%)	0	100	100
2	B	596/596 (100%)	596 (100%)	0	100	100
3	C	69/69 (100%)	69 (100%)	0	100	100
4	D	121/121 (100%)	120 (99%)	1 (1%)	79	87
5	E	54/54 (100%)	54 (100%)	0	100	100
6	F	127/127 (100%)	127 (100%)	0	100	100
7	G	68/68 (100%)	67 (98%)	1 (2%)	60	76
8	H	80/81 (99%)	80 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
9	I	31/31 (100%)	31 (100%)	0	100	100
10	J	37/37 (100%)	37 (100%)	0	100	100
11	K	59/59 (100%)	57 (97%)	2 (3%)	32	57
12	L	121/121 (100%)	120 (99%)	1 (1%)	79	87
13	O	75/75 (100%)	74 (99%)	1 (1%)	65	78
14	P	168/170 (99%)	167 (99%)	1 (1%)	84	90
14	Q	168/170 (99%)	167 (99%)	1 (1%)	84	90
14	R	168/170 (99%)	167 (99%)	1 (1%)	84	90
14	T	168/170 (99%)	167 (99%)	1 (1%)	84	90
14	U	168/170 (99%)	167 (99%)	1 (1%)	84	90
15	S	164/177 (93%)	164 (100%)	0	100	100
16	1	137/137 (100%)	137 (100%)	0	100	100
16	a	137/137 (100%)	137 (100%)	0	100	100
17	2	159/159 (100%)	159 (100%)	0	100	100
18	3	155/155 (100%)	155 (100%)	0	100	100
19	4	161/162 (99%)	161 (100%)	0	100	100
20	5	182/182 (100%)	181 (100%)	1 (0%)	86	92
21	6	184/184 (100%)	184 (100%)	0	100	100
22	7	164/164 (100%)	164 (100%)	0	100	100
23	8	163/163 (100%)	163 (100%)	0	100	100
24	9	139/140 (99%)	139 (100%)	0	100	100
All	All	4623/4649 (99%)	4611 (100%)	12 (0%)	90	95

5 of 12 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
14	Q	79	ARG
14	R	79	ARG
20	5	159	ASN
14	T	79	ARG
11	K	50	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 12 such sidechains are listed below:

Mol	Chain	Res	Type
15	S	153	GLN
17	2	62	ASN
24	9	128	GLN
20	5	117	ASN
4	D	170	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

1 non-standard protein/DNA/RNA residue is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
15	TPO	S	23	15	8,10,11	0.88	0	10,14,16	1.70	1 (10%)

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
15	TPO	S	23	15	-	3/9/11/13	-

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	S	23	TPO	P-OG1-CB	-4.90	108.41	123.21

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
15	S	23	TPO	N-CA-CB-OG1
15	S	23	TPO	C-CA-CB-CG2
15	S	23	TPO	CB-OG1-P-O1P

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

453 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	L	206	-	42,50,73	1.78	10 (23%)	48,85,113	1.64	6 (12%)
25	CLA	4	303	-	50,58,73	1.62	10 (20%)	58,95,113	1.57	8 (13%)
25	CLA	B	816	-	60,68,73	1.53	11 (18%)	70,107,113	1.55	9 (12%)
25	CLA	Q	611	-	60,68,73	1.60	7 (11%)	70,107,113	1.43	11 (15%)
25	CLA	3	301	-	60,68,73	1.53	10 (16%)	70,107,113	1.47	8 (11%)
25	CLA	5	312	-	52,60,73	1.68	9 (17%)	60,97,113	1.52	8 (13%)
25	CLA	U	310	-	64,72,73	1.51	5 (7%)	74,111,113	1.40	8 (10%)
25	CLA	2	306	17	41,49,73	1.85	9 (21%)	47,84,113	1.78	10 (21%)
25	CLA	H	205	12	42,50,73	1.75	9 (21%)	48,85,113	1.99	9 (18%)
34	LUT	2	316	-	42,43,43	0.86	1 (2%)	51,60,60	1.66	13 (25%)
25	CLA	A	836	-	65,73,73	1.51	10 (15%)	76,113,113	1.44	7 (9%)
25	CLA	A	803	-	65,73,73	1.46	10 (15%)	76,113,113	1.37	7 (9%)
32	LMG	J	102	-	40,40,55	0.99	2 (5%)	48,48,63	1.11	5 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
33	CHL	S	307	-	50,58,74	2.24	16 (32%)	52,94,114	2.84	22 (42%)
25	CLA	A	811	-	65,73,73	1.48	10 (15%)	76,113,113	1.49	8 (10%)
25	CLA	B	807	-	65,73,73	1.46	10 (15%)	76,113,113	1.59	10 (13%)
34	LUT	U	315	-	42,43,43	0.78	0	51,60,60	1.81	17 (33%)
25	CLA	K	203	-	46,54,73	1.73	10 (21%)	53,90,113	1.57	7 (13%)
25	CLA	T	612	-	48,56,73	1.73	5 (10%)	55,92,113	1.59	7 (12%)
25	CLA	A	825	-	65,73,73	1.50	10 (15%)	76,113,113	1.47	12 (15%)
25	CLA	1	610	27	65,73,73	1.48	10 (15%)	76,113,113	1.31	8 (10%)
33	CHL	a	305	-	48,56,74	2.23	17 (35%)	51,92,114	2.76	21 (41%)
34	LUT	1	616	-	42,43,43	0.95	2 (4%)	51,60,60	1.84	18 (35%)
25	CLA	6	604	-	46,54,73	1.74	9 (19%)	53,90,113	1.55	7 (13%)
25	CLA	A	851	-	65,73,73	1.46	10 (15%)	76,113,113	1.37	8 (10%)
25	CLA	O	203	-	37,46,73	1.94	8 (21%)	46,81,113	1.79	9 (19%)
25	CLA	Q	603	-	65,73,73	1.51	6 (9%)	76,113,113	1.48	8 (10%)
25	CLA	2	310	-	41,49,73	1.83	9 (21%)	47,84,113	1.60	7 (14%)
25	CLA	S	312	-	60,68,73	1.52	6 (10%)	70,107,113	1.41	7 (10%)
34	LUT	a	315	-	42,43,43	0.87	0	51,60,60	1.83	15 (29%)
25	CLA	L	201	-	65,73,73	1.45	10 (15%)	76,113,113	1.40	6 (7%)
35	XAT	P	616	-	39,47,47	0.93	0	54,74,74	3.03	20 (37%)
25	CLA	T	603	-	50,58,73	1.69	5 (10%)	58,95,113	1.60	8 (13%)
25	CLA	A	819	-	65,73,73	1.50	10 (15%)	76,113,113	1.49	8 (10%)
25	CLA	8	303	-	62,70,73	1.53	11 (17%)	72,109,113	1.44	6 (8%)
33	CHL	R	607	-	52,60,74	2.13	17 (32%)	56,97,114	2.83	27 (48%)
28	BCR	6	621	-	41,41,41	0.83	1 (2%)	56,56,56	2.23	18 (32%)
25	CLA	6	615	21	46,54,73	1.70	9 (19%)	53,90,113	1.67	9 (16%)
25	CLA	B	815	-	59,67,73	1.59	11 (18%)	68,105,113	1.60	11 (16%)
33	CHL	R	606	-	50,58,74	2.16	17 (34%)	52,94,114	2.82	24 (46%)
25	CLA	9	308	-	50,58,73	1.68	9 (18%)	58,95,113	1.59	10 (17%)
25	CLA	a	307	-	65,73,73	1.48	8 (12%)	76,113,113	1.33	7 (9%)
33	CHL	S	321	-	51,59,74	2.16	17 (33%)	55,96,114	2.86	25 (45%)
25	CLA	A	808	-	65,73,73	1.49	9 (13%)	76,113,113	1.40	9 (11%)
33	CHL	P	608	-	44,52,74	2.20	16 (36%)	46,87,114	2.91	22 (47%)
33	CHL	6	607	-	53,61,74	2.02	15 (28%)	57,98,114	2.80	25 (43%)
25	CLA	1	611	-	52,60,73	1.66	10 (19%)	60,97,113	1.49	8 (13%)
25	CLA	7	312	-	43,51,73	1.78	10 (23%)	49,86,113	1.64	7 (14%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	G	201	-	50,58,73	1.67	9 (18%)	58,95,113	1.54	9 (15%)
33	CHL	R	601	-	51,59,74	2.29	17 (33%)	55,96,114	2.78	24 (43%)
36	NEX	T	616	-	38,46,46	0.98	1 (2%)	50,70,70	2.76	16 (32%)
25	CLA	B	824	-	65,73,73	1.46	10 (15%)	76,113,113	1.45	11 (14%)
25	CLA	4	309	27	55,63,73	1.56	7 (12%)	64,101,113	1.41	8 (12%)
26	PQN	B	839	-	34,34,34	1.35	2 (5%)	42,45,45	1.33	4 (9%)
30	DGD	B	846	-	67,67,67	0.80	3 (4%)	81,81,81	1.18	5 (6%)
25	CLA	A	823	-	49,57,73	1.66	10 (20%)	55,93,113	1.67	9 (16%)
32	LMG	J	104	-	35,35,55	1.06	2 (5%)	43,43,63	1.25	5 (11%)
27	LHG	5	301	-	44,44,48	0.96	2 (4%)	47,50,54	1.05	3 (6%)
25	CLA	9	303	-	60,68,73	1.51	10 (16%)	70,107,113	1.42	7 (10%)
25	CLA	A	806	-	65,73,73	1.47	10 (15%)	76,113,113	1.51	9 (11%)
28	BCR	I	201	-	41,41,41	0.93	2 (4%)	56,56,56	2.42	22 (39%)
25	CLA	T	610	-	60,68,73	1.60	6 (10%)	70,107,113	1.48	8 (11%)
25	CLA	1	609	16	60,68,73	1.42	11 (18%)	70,107,113	1.75	12 (17%)
34	LUT	a	316	-	42,43,43	0.74	0	51,60,60	2.13	15 (29%)
34	LUT	P	614	-	42,43,43	0.74	0	51,60,60	1.92	15 (29%)
25	CLA	6	616	-	46,54,73	1.74	9 (19%)	53,90,113	1.59	8 (15%)
34	LUT	Q	615	-	42,43,43	0.83	1 (2%)	51,60,60	1.85	16 (31%)
25	CLA	B	827	-	65,73,73	1.51	10 (15%)	76,113,113	1.39	9 (11%)
25	CLA	U	313	-	45,53,73	1.71	7 (15%)	52,89,113	1.68	7 (13%)
25	CLA	1	607	-	65,73,73	1.47	9 (13%)	76,113,113	1.41	9 (11%)
33	CHL	S	309	-	52,60,74	2.10	16 (30%)	56,97,114	2.83	25 (44%)
25	CLA	3	305	18	60,68,73	1.51	10 (16%)	70,107,113	1.46	8 (11%)
28	BCR	J	106	-	41,41,41	0.86	2 (4%)	56,56,56	2.25	18 (32%)
25	CLA	a	312	-	65,73,73	1.48	7 (10%)	76,113,113	1.38	9 (11%)
28	BCR	5	323	-	41,41,41	0.96	2 (4%)	56,56,56	3.15	22 (39%)
25	CLA	8	305	-	46,54,73	1.73	10 (21%)	53,90,113	1.54	7 (13%)
35	XAT	P	623	-	38,46,47	0.97	1 (2%)	52,72,74	3.12	22 (42%)
25	CLA	B	810	-	65,73,73	1.49	10 (15%)	76,113,113	1.41	8 (10%)
25	CLA	7	302	-	46,54,73	1.71	10 (21%)	53,90,113	1.60	8 (15%)
25	CLA	4	301	-	60,68,73	1.51	10 (16%)	70,107,113	1.44	7 (10%)
25	CLA	5	306	-	55,63,73	1.59	10 (18%)	64,101,113	1.43	6 (9%)
27	LHG	4	318	25	48,48,48	0.92	2 (4%)	51,54,54	1.09	3 (5%)
25	CLA	2	308	-	43,51,73	1.77	10 (23%)	49,86,113	1.60	9 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	4	311	-	56,64,73	1.56	9 (16%)	65,102,113	1.52	8 (12%)
34	LUT	4	315	-	42,43,43	0.89	1 (2%)	51,60,60	1.94	17 (33%)
25	CLA	T	609	-	60,68,73	1.55	7 (11%)	70,107,113	1.52	11 (15%)
25	CLA	S	315	-	48,56,73	1.67	9 (18%)	55,92,113	1.52	8 (14%)
34	LUT	U	314	-	42,43,43	0.73	0	51,60,60	1.91	14 (27%)
25	CLA	B	803	-	45,53,73	1.75	10 (22%)	52,89,113	1.75	7 (13%)
27	LHG	P	618	-	48,48,48	0.93	2 (4%)	51,54,54	0.96	2 (3%)
25	CLA	7	301	-	65,73,73	1.49	10 (15%)	76,113,113	1.37	8 (10%)
25	CLA	B	801	-	65,73,73	1.47	10 (15%)	76,113,113	1.42	8 (10%)
25	CLA	7	313	22	46,54,73	1.70	10 (21%)	53,90,113	1.54	6 (11%)
25	CLA	a	304	-	52,60,73	1.66	7 (13%)	60,97,113	1.39	6 (10%)
36	NEX	P	621	-	38,46,46	0.86	0	50,70,70	3.27	27 (54%)
25	CLA	A	805	-	55,63,73	1.62	10 (18%)	64,101,113	1.50	6 (9%)
25	CLA	4	302	-	46,54,73	1.78	8 (17%)	53,90,113	1.54	6 (11%)
25	CLA	6	613	-	56,64,73	1.62	8 (14%)	65,102,113	1.58	9 (13%)
25	CLA	Q	604	-	50,58,73	1.71	6 (12%)	58,95,113	1.64	9 (15%)
36	NEX	U	301	-	38,46,46	1.08	2 (5%)	50,70,70	2.95	18 (36%)
25	CLA	B	831	-	65,73,73	1.48	10 (15%)	76,113,113	1.43	8 (10%)
25	CLA	K	202	-	45,53,73	1.73	10 (22%)	52,89,113	1.61	7 (13%)
25	CLA	1	605	-	52,60,73	1.69	8 (15%)	60,97,113	1.46	8 (13%)
25	CLA	R	610	-	64,72,73	1.55	6 (9%)	74,111,113	1.42	10 (13%)
25	CLA	J	105	-	42,50,73	1.75	10 (23%)	48,85,113	1.61	7 (14%)
25	CLA	6	623	-	60,68,73	1.50	9 (15%)	70,107,113	1.58	9 (12%)
33	CHL	R	605	14	46,54,74	2.33	16 (34%)	49,90,114	2.95	24 (48%)
29	SF4	A	850	2,1	0,12,12	-	-	-	-	-
25	CLA	4	313	19	41,49,73	1.82	8 (19%)	47,84,113	1.71	9 (19%)
28	BCR	4	321	-	41,41,41	0.94	2 (4%)	56,56,56	2.73	24 (42%)
25	CLA	O	202	-	36,46,73	1.96	10 (27%)	41,80,113	1.72	8 (19%)
25	CLA	9	311	-	45,53,73	1.84	9 (20%)	52,89,113	1.52	9 (17%)
25	CLA	A	842	27	52,60,73	1.65	10 (19%)	60,97,113	1.79	14 (23%)
25	CLA	6	620	-	45,53,73	1.73	10 (22%)	52,89,113	1.58	7 (13%)
28	BCR	B	845	-	41,41,41	1.03	3 (7%)	56,56,56	2.16	18 (32%)
35	XAT	P	620	-	39,47,47	0.89	0	54,74,74	2.97	23 (42%)
25	CLA	B	806	-	65,73,73	1.49	10 (15%)	76,113,113	1.40	8 (10%)
25	CLA	B	830	-	65,73,73	1.52	10 (15%)	76,113,113	1.42	10 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	Q	618	-	39,48,73	1.93	8 (20%)	45,82,113	1.89	11 (24%)
33	CHL	P	606	-	50,58,74	2.17	16 (32%)	52,94,114	2.84	23 (44%)
27	LHG	7	317	25	36,36,48	1.00	2 (5%)	39,42,54	1.31	4 (10%)
33	CHL	1	606	-	48,56,74	2.20	17 (35%)	51,92,114	2.77	21 (41%)
25	CLA	5	303	-	65,73,73	1.46	11 (16%)	76,113,113	1.51	8 (10%)
28	BCR	3	317	-	41,41,41	0.94	2 (4%)	56,56,56	2.33	17 (30%)
25	CLA	B	829	-	49,57,73	1.64	10 (20%)	55,93,113	1.57	7 (12%)
25	CLA	4	310	-	52,60,73	1.73	10 (19%)	60,97,113	1.76	10 (16%)
25	CLA	B	809	-	65,73,73	1.47	10 (15%)	76,113,113	1.41	7 (9%)
34	LUT	7	315	-	42,43,43	0.93	2 (4%)	51,60,60	1.56	12 (23%)
29	SF4	C	102	3	0,12,12	-	-	-	-	-
25	CLA	A	810	1	65,73,73	1.47	10 (15%)	76,113,113	1.41	9 (11%)
25	CLA	A	840	-	65,73,73	1.50	10 (15%)	76,113,113	1.45	10 (13%)
25	CLA	5	319	-	46,54,73	1.77	9 (19%)	53,90,113	1.60	8 (15%)
25	CLA	8	315	23	46,54,73	1.71	10 (21%)	53,90,113	1.56	6 (11%)
25	CLA	P	610	-	60,68,73	1.54	6 (10%)	70,107,113	1.39	8 (11%)
28	BCR	8	318	-	41,41,41	0.82	1 (2%)	56,56,56	2.16	20 (35%)
36	NEX	P	617	-	38,46,46	1.01	1 (2%)	50,70,70	2.80	18 (36%)
33	CHL	S	306	-	48,56,74	2.20	15 (31%)	51,92,114	2.80	25 (49%)
25	CLA	5	313	-	56,64,73	1.60	11 (19%)	65,102,113	1.79	14 (21%)
25	CLA	B	802	-	65,73,73	1.46	10 (15%)	76,113,113	1.52	9 (11%)
25	CLA	4	312	-	45,53,73	1.76	8 (17%)	52,89,113	1.52	8 (15%)
27	LHG	6	618	25	48,48,48	0.87	2 (4%)	51,54,54	1.22	4 (7%)
33	CHL	P	607	-	52,60,74	2.14	17 (32%)	56,97,114	2.83	27 (48%)
34	LUT	3	315	-	42,43,43	0.92	2 (4%)	51,60,60	1.65	13 (25%)
33	CHL	4	322	16	53,61,74	2.03	15 (28%)	57,98,114	2.95	26 (45%)
30	DGD	B	848	-	58,58,67	0.96	4 (6%)	72,72,81	1.37	11 (15%)
25	CLA	L	205	-	65,73,73	1.42	11 (16%)	76,113,113	1.47	9 (11%)
25	CLA	A	837	-	65,73,73	1.46	10 (15%)	76,113,113	1.45	9 (11%)
25	CLA	2	302	17	46,54,73	1.78	10 (21%)	53,90,113	1.63	8 (15%)
33	CHL	1	601	16	53,61,74	1.98	14 (26%)	57,98,114	2.80	25 (43%)
25	CLA	L	202	-	65,73,73	1.44	10 (15%)	76,113,113	1.37	7 (9%)
28	BCR	4	317	-	41,41,41	0.88	0	56,56,56	2.30	19 (33%)
25	CLA	H	203	-	46,54,73	1.71	10 (21%)	53,90,113	1.60	7 (13%)
28	BCR	A	849	-	41,41,41	0.91	2 (4%)	56,56,56	2.08	17 (30%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
28	BCR	B	851	-	41,41,41	0.83	2 (4%)	56,56,56	2.12	19 (33%)
25	CLA	A	818	-	65,73,73	1.45	9 (13%)	76,113,113	1.38	8 (10%)
25	CLA	2	303	17	65,73,73	1.47	10 (15%)	76,113,113	1.38	8 (10%)
33	CHL	T	605	-	50,58,74	2.18	17 (34%)	52,94,114	2.85	22 (42%)
27	LHG	A	852	-	46,46,48	0.95	2 (4%)	48,51,54	1.20	5 (10%)
25	CLA	S	320	-	65,73,73	1.48	6 (9%)	76,113,113	1.43	8 (10%)
33	CHL	3	306	-	53,61,74	1.93	15 (28%)	57,98,114	2.84	25 (43%)
25	CLA	3	314	-	56,64,73	1.58	10 (17%)	65,102,113	1.49	6 (9%)
25	CLA	S	314	-	65,73,73	1.49	6 (9%)	76,113,113	1.40	8 (10%)
25	CLA	B	805	-	65,73,73	1.47	11 (16%)	76,113,113	1.47	7 (9%)
28	BCR	7	316	-	41,41,41	0.89	1 (2%)	56,56,56	2.00	16 (28%)
33	CHL	P	619	-	52,60,74	2.14	17 (32%)	56,97,114	2.84	27 (48%)
25	CLA	S	305	-	50,58,73	1.67	6 (12%)	58,95,113	1.56	8 (13%)
33	CHL	P	605	14	48,56,74	2.25	17 (35%)	51,92,114	2.97	24 (47%)
25	CLA	A	839	-	65,73,73	1.47	10 (15%)	76,113,113	1.50	8 (10%)
25	CLA	8	306	-	42,50,73	1.80	9 (21%)	48,85,113	1.59	8 (16%)
33	CHL	P	601	-	51,59,74	2.30	17 (33%)	55,96,114	2.78	24 (43%)
34	LUT	a	314	-	42,43,43	0.88	2 (4%)	51,60,60	1.87	16 (31%)
25	CLA	R	612	-	60,68,73	1.39	9 (15%)	70,107,113	1.62	9 (12%)
25	CLA	F	802	-	45,53,73	1.77	10 (22%)	52,89,113	1.55	7 (13%)
25	CLA	U	304	-	50,58,73	1.67	6 (12%)	58,95,113	1.61	10 (17%)
25	CLA	B	833	-	60,68,73	1.49	10 (16%)	70,107,113	1.42	8 (11%)
25	CLA	8	314	-	55,63,73	1.59	10 (18%)	64,101,113	1.47	11 (17%)
29	SF4	C	101	3	0,12,12	-	-	-	-	-
25	CLA	B	820	-	59,67,73	1.51	10 (16%)	68,105,113	1.52	8 (11%)
25	CLA	7	310	-	52,60,73	1.64	10 (19%)	60,97,113	1.52	7 (11%)
25	CLA	3	307	-	50,58,73	1.65	10 (20%)	58,95,113	1.49	8 (13%)
25	CLA	8	309	-	46,54,73	1.72	9 (19%)	53,90,113	1.59	6 (11%)
35	XAT	S	318	-	39,47,47	0.98	1 (2%)	54,74,74	2.87	22 (40%)
25	CLA	3	308	-	65,73,73	1.43	10 (15%)	76,113,113	1.40	7 (9%)
25	CLA	2	309	-	60,68,73	1.52	9 (15%)	70,107,113	1.45	6 (8%)
34	LUT	6	622	-	42,43,43	0.88	1 (2%)	51,60,60	1.50	11 (21%)
25	CLA	B	849	-	65,73,73	1.46	10 (15%)	76,113,113	1.40	8 (10%)
25	CLA	A	812	-	65,73,73	1.49	10 (15%)	76,113,113	1.44	9 (11%)
25	CLA	R	602	-	65,73,73	1.52	5 (7%)	76,113,113	1.40	9 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	B	817	-	65,73,73	1.47	10 (15%)	76,113,113	1.40	8 (10%)
25	CLA	H	201	-	46,54,73	1.71	10 (21%)	53,90,113	1.55	6 (11%)
33	CHL	5	307	-	51,59,74	2.09	16 (31%)	55,96,114	2.94	26 (47%)
28	BCR	L	207	-	41,41,41	0.93	2 (4%)	56,56,56	2.00	13 (23%)
28	BCR	B	843	-	41,41,41	0.86	2 (4%)	56,56,56	1.86	18 (32%)
28	BCR	A	848	-	41,41,41	0.91	1 (2%)	56,56,56	1.97	16 (28%)
25	CLA	3	320	22	65,73,73	1.43	11 (16%)	76,113,113	1.44	8 (10%)
34	LUT	P	615	-	42,43,43	0.81	0	51,60,60	1.78	18 (35%)
28	BCR	L	203	-	41,41,41	0.90	1 (2%)	56,56,56	2.03	15 (26%)
33	CHL	6	617	21	43,51,74	2.18	14 (32%)	45,86,114	3.01	22 (48%)
33	CHL	U	306	-	50,58,74	2.18	16 (32%)	52,94,114	2.82	23 (44%)
25	CLA	3	303	-	65,73,73	1.44	10 (15%)	76,113,113	1.47	8 (10%)
25	CLA	2	312	-	65,73,73	1.48	9 (13%)	76,113,113	1.50	10 (13%)
27	LHG	2	317	-	48,48,48	0.90	2 (4%)	51,54,54	0.99	2 (3%)
25	CLA	Q	602	-	65,73,73	1.51	6 (9%)	76,113,113	1.39	7 (9%)
25	CLA	B	838	-	65,73,73	1.48	10 (15%)	76,113,113	1.39	6 (7%)
27	LHG	R	618	-	48,48,48	0.93	2 (4%)	51,54,54	0.96	2 (3%)
25	CLA	7	309	27	41,49,73	1.82	10 (24%)	47,84,113	1.65	9 (19%)
28	BCR	L	208	-	41,41,41	0.87	2 (4%)	56,56,56	1.98	18 (32%)
25	CLA	A	853	-	65,73,73	1.48	10 (15%)	76,113,113	1.41	8 (10%)
25	CLA	1	602	-	65,73,73	1.48	10 (15%)	76,113,113	1.32	8 (10%)
34	LUT	2	315	-	42,43,43	0.83	1 (2%)	51,60,60	1.84	13 (25%)
25	CLA	Q	613	-	48,56,73	1.81	7 (14%)	55,92,113	1.57	8 (14%)
25	CLA	2	313	-	55,63,73	1.61	8 (14%)	64,101,113	1.56	12 (18%)
32	LMG	4	320	-	40,40,55	1.06	3 (7%)	48,48,63	1.30	6 (12%)
25	CLA	a	311	-	65,73,73	1.46	9 (13%)	76,113,113	1.60	9 (11%)
35	XAT	T	615	-	39,47,47	0.92	0	54,74,74	3.00	21 (38%)
25	CLA	T	608	-	65,73,73	1.46	6 (9%)	76,113,113	1.38	8 (10%)
25	CLA	5	316	-	43,51,73	1.76	10 (23%)	49,86,113	1.68	7 (14%)
34	LUT	6	619	-	42,43,43	0.89	1 (2%)	51,60,60	1.82	14 (27%)
25	CLA	1	613	-	65,73,73	1.48	10 (15%)	76,113,113	1.39	9 (11%)
25	CLA	B	836	-	65,73,73	1.46	10 (15%)	76,113,113	1.40	8 (10%)
25	CLA	A	827	-	65,73,73	1.50	10 (15%)	76,113,113	1.42	10 (13%)
33	CHL	4	304	-	42,50,74	2.25	15 (35%)	44,85,114	2.98	21 (47%)
25	CLA	6	601	19	61,69,73	1.48	9 (14%)	71,108,113	1.44	7 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	2	304	-	65,73,73	1.49	10 (15%)	76,113,113	1.42	7 (9%)
33	CHL	7	305	-	54,62,74	1.99	17 (31%)	58,99,114	2.78	22 (37%)
28	BCR	O	204	-	41,41,41	0.86	2 (4%)	56,56,56	2.34	21 (37%)
34	LUT	1	617	-	42,43,43	0.79	0	51,60,60	2.17	18 (35%)
25	CLA	B	823	-	65,73,73	1.45	10 (15%)	76,113,113	1.36	7 (9%)
31	SQD	B	850	-	50,51,54	1.21	4 (8%)	59,62,65	1.21	7 (11%)
34	LUT	1	615	-	42,43,43	0.96	2 (4%)	51,60,60	1.87	16 (31%)
25	CLA	P	603	-	65,73,73	1.49	6 (9%)	76,113,113	1.47	9 (11%)
25	CLA	P	612	-	60,68,73	1.39	9 (15%)	70,107,113	1.64	9 (12%)
33	CHL	U	307	-	53,61,74	2.13	16 (30%)	57,98,114	2.79	25 (43%)
34	LUT	T	613	-	42,43,43	0.72	0	51,60,60	1.91	13 (25%)
25	CLA	A	814	-	65,73,73	1.51	11 (16%)	76,113,113	1.52	10 (13%)
25	CLA	R	604	-	50,58,73	1.69	6 (12%)	58,95,113	1.70	10 (17%)
25	CLA	2	311	-	52,60,73	1.63	10 (19%)	60,97,113	1.50	8 (13%)
34	LUT	R	615	-	42,43,43	0.76	0	51,60,60	1.93	14 (27%)
25	CLA	B	814	-	55,63,73	1.57	10 (18%)	64,101,113	1.52	8 (12%)
25	CLA	A	804	-	65,73,73	1.45	10 (15%)	76,113,113	1.47	9 (11%)
27	LHG	A	843	-	48,48,48	0.90	2 (4%)	51,54,54	1.13	3 (5%)
25	CLA	A	809	1	65,73,73	1.46	10 (15%)	76,113,113	1.42	8 (10%)
28	BCR	J	101	-	41,41,41	0.90	1 (2%)	56,56,56	2.08	19 (33%)
25	CLA	A	801	-	65,73,73	1.44	10 (15%)	76,113,113	1.38	7 (9%)
25	CLA	3	311	-	55,63,73	1.57	9 (16%)	64,101,113	1.55	8 (12%)
25	CLA	B	834	-	65,73,73	1.47	10 (15%)	76,113,113	1.44	8 (10%)
25	CLA	8	308	-	50,58,73	1.63	12 (24%)	58,95,113	1.68	8 (13%)
25	CLA	1	614	-	46,54,73	1.73	10 (21%)	53,90,113	1.58	6 (11%)
25	CLA	A	831	-	50,58,73	1.66	10 (20%)	58,95,113	1.61	9 (15%)
25	CLA	5	304	-	46,54,73	1.69	8 (17%)	53,90,113	1.68	6 (11%)
25	CLA	A	826	-	65,73,73	1.44	10 (15%)	76,113,113	1.34	8 (10%)
25	CLA	4	307	-	50,58,73	1.71	9 (18%)	58,95,113	1.42	7 (12%)
34	LUT	3	316	-	42,43,43	0.97	2 (4%)	51,60,60	1.65	15 (29%)
28	BCR	A	847	-	41,41,41	0.92	2 (4%)	56,56,56	2.00	18 (32%)
25	CLA	A	813	-	54,62,73	1.63	10 (18%)	62,99,113	1.54	8 (12%)
25	CLA	A	822	-	65,73,73	1.45	10 (15%)	76,113,113	1.48	8 (10%)
25	CLA	8	311	27	46,54,73	1.72	10 (21%)	53,90,113	1.51	7 (13%)
28	BCR	A	845	-	41,41,41	0.83	1 (2%)	56,56,56	2.08	21 (37%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	H	202	-	41,49,73	1.83	9 (21%)	47,84,113	1.78	8 (17%)
25	CLA	1	604	-	57,65,73	1.59	10 (17%)	66,103,113	1.43	8 (12%)
33	CHL	R	609	-	66,74,74	1.50	11 (16%)	73,114,114	1.84	11 (15%)
28	BCR	G	203	-	41,41,41	0.84	1 (2%)	56,56,56	2.09	16 (28%)
33	CHL	P	622	-	53,61,74	2.20	16 (30%)	57,98,114	3.02	29 (50%)
27	LHG	B	847	-	37,37,48	1.03	2 (5%)	40,43,54	1.20	5 (12%)
35	XAT	Q	616	-	39,47,47	0.96	1 (2%)	54,74,74	3.04	24 (44%)
25	CLA	B	822	-	65,73,73	1.46	10 (15%)	76,113,113	1.43	10 (13%)
36	NEX	R	617	-	38,46,46	0.98	1 (2%)	50,70,70	2.79	19 (38%)
25	CLA	a	302	-	57,65,73	1.60	9 (15%)	66,103,113	1.44	6 (9%)
28	BCR	K	206	-	41,41,41	0.81	0	56,56,56	2.35	20 (35%)
27	LHG	4	319	-	31,31,48	1.13	2 (6%)	34,37,54	1.23	4 (11%)
25	CLA	7	308	-	60,68,73	1.56	10 (16%)	70,107,113	1.44	9 (12%)
33	CHL	4	305	-	51,59,74	2.22	17 (33%)	55,96,114	2.77	23 (41%)
25	CLA	A	830	-	65,73,73	1.48	10 (15%)	76,113,113	1.52	10 (13%)
25	CLA	a	303	-	57,65,73	1.88	15 (26%)	66,103,113	3.65	19 (28%)
33	CHL	Q	607	-	44,52,74	2.20	15 (34%)	46,87,114	2.91	22 (47%)
34	LUT	7	314	-	42,43,43	0.96	2 (4%)	51,60,60	1.74	14 (27%)
25	CLA	B	825	-	65,73,73	1.46	11 (16%)	76,113,113	1.49	9 (11%)
25	CLA	U	302	-	65,73,73	1.51	6 (9%)	76,113,113	1.41	9 (11%)
25	CLA	A	821	-	45,53,73	1.75	10 (22%)	52,89,113	1.76	10 (19%)
25	CLA	a	301	-	65,73,73	1.53	9 (13%)	76,113,113	1.36	8 (10%)
33	CHL	Q	606	-	50,58,74	2.19	16 (32%)	52,94,114	2.85	20 (38%)
28	BCR	B	842	-	41,41,41	1.02	2 (4%)	56,56,56	2.27	20 (35%)
25	CLA	P	611	-	41,49,73	1.73	8 (19%)	47,84,113	2.11	18 (38%)
25	CLA	U	303	-	65,73,73	1.48	6 (9%)	76,113,113	1.44	7 (9%)
27	LHG	P	624	-	48,48,48	0.94	2 (4%)	51,54,54	0.96	2 (3%)
33	CHL	S	302	-	53,61,74	2.04	17 (32%)	57,98,114	2.87	27 (47%)
25	CLA	B	821	-	60,68,73	1.52	10 (16%)	70,107,113	1.42	8 (11%)
28	BCR	A	846	-	41,41,41	1.00	2 (4%)	56,56,56	2.10	20 (35%)
25	CLA	B	828	-	50,58,73	1.66	10 (20%)	58,95,113	1.56	6 (10%)
34	LUT	S	317	-	42,43,43	0.77	0	51,60,60	1.65	9 (17%)
25	CLA	O	201	-	41,49,73	1.78	9 (21%)	47,84,113	1.71	8 (17%)
28	BCR	8	301	-	41,41,41	0.78	0	56,56,56	1.88	15 (26%)
34	LUT	9	312	-	42,43,43	0.84	2 (4%)	51,60,60	1.60	13 (25%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
34	LUT	8	317	-	42,43,43	0.92	2 (4%)	51,60,60	1.56	12 (23%)
25	CLA	A	820	-	65,73,73	1.45	12 (18%)	76,113,113	1.45	9 (11%)
25	CLA	K	201	-	51,59,73	1.63	10 (19%)	59,96,113	1.63	10 (16%)
25	CLA	S	313	-	60,68,73	1.57	6 (10%)	70,107,113	1.41	7 (10%)
25	CLA	G	202	-	46,54,73	1.74	9 (19%)	53,90,113	1.69	9 (16%)
32	LMG	1	619	-	46,46,55	0.98	2 (4%)	54,54,63	1.17	3 (5%)
25	CLA	A	817	-	57,65,73	1.59	9 (15%)	66,103,113	1.39	4 (6%)
25	CLA	9	302	-	46,54,73	1.74	7 (15%)	53,90,113	1.53	5 (9%)
32	LMG	J	107	-	55,55,55	0.90	2 (3%)	63,63,63	1.23	8 (12%)
25	CLA	7	307	-	50,58,73	1.64	10 (20%)	58,95,113	1.53	6 (10%)
25	CLA	A	834	1	45,53,73	1.76	10 (22%)	52,89,113	1.67	5 (9%)
25	CLA	7	303	-	56,64,73	1.60	10 (17%)	65,102,113	1.47	7 (10%)
27	LHG	1	618	25	42,42,48	0.96	2 (4%)	45,48,54	1.22	4 (8%)
25	CLA	S	311	-	60,68,73	1.53	6 (10%)	70,107,113	1.37	8 (11%)
25	CLA	a	313	-	46,54,73	1.72	7 (15%)	53,90,113	1.54	6 (11%)
32	LMG	7	319	-	36,36,55	1.12	3 (8%)	44,44,63	1.25	5 (11%)
33	CHL	T	601	-	50,58,74	2.33	17 (34%)	52,94,114	2.79	22 (42%)
25	CLA	R	613	-	65,73,73	1.46	5 (7%)	76,113,113	1.42	9 (11%)
25	CLA	A	802	-	65,73,73	1.47	10 (15%)	76,113,113	1.51	11 (14%)
25	CLA	B	837	-	65,73,73	1.48	10 (15%)	76,113,113	1.54	7 (9%)
28	BCR	B	844	-	41,41,41	0.96	2 (4%)	56,56,56	2.11	16 (28%)
33	CHL	5	317	-	43,51,74	2.12	14 (32%)	45,86,114	3.06	21 (46%)
28	BCR	3	318	-	41,41,41	0.84	1 (2%)	56,56,56	2.79	24 (42%)
25	CLA	5	324	-	65,73,73	1.48	9 (13%)	76,113,113	1.33	6 (7%)
25	CLA	3	313	-	46,54,73	1.68	10 (21%)	53,90,113	1.58	6 (11%)
25	CLA	Q	609	-	65,73,73	1.50	5 (7%)	76,113,113	1.38	8 (10%)
25	CLA	a	306	-	65,73,73	1.45	7 (10%)	76,113,113	1.43	10 (13%)
25	CLA	8	312	-	52,60,73	1.61	9 (17%)	60,97,113	1.49	6 (10%)
33	CHL	P	609	-	66,74,74	1.50	11 (16%)	73,114,114	1.84	12 (16%)
34	LUT	T	614	-	42,43,43	0.76	0	51,60,60	1.73	14 (27%)
28	BCR	B	840	-	41,41,41	0.93	1 (2%)	56,56,56	2.11	15 (26%)
34	LUT	R	616	-	42,43,43	0.78	0	51,60,60	1.83	18 (35%)
34	LUT	5	322	-	42,43,43	1.01	2 (4%)	51,60,60	1.64	13 (25%)
25	CLA	A	807	-	65,73,73	1.50	11 (16%)	76,113,113	1.48	8 (10%)
27	LHG	8	319	25	48,48,48	0.92	2 (4%)	51,54,54	1.07	4 (7%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
26	PQN	A	841	-	34,34,34	1.37	2 (5%)	42,45,45	1.33	6 (14%)
25	CLA	R	603	-	65,73,73	1.53	5 (7%)	76,113,113	1.39	8 (10%)
25	CLA	A	824	-	55,63,73	1.59	10 (18%)	64,101,113	1.53	8 (12%)
27	LHG	a	317	25	42,42,48	0.95	2 (4%)	45,48,54	1.21	4 (8%)
25	CLA	6	610	-	60,68,73	1.57	9 (15%)	70,107,113	1.41	7 (10%)
34	LUT	Q	614	-	42,43,43	0.73	0	51,60,60	1.84	12 (23%)
25	CLA	8	313	-	65,73,73	1.48	10 (15%)	76,113,113	1.41	7 (9%)
34	LUT	8	316	-	42,43,43	0.90	1 (2%)	51,60,60	1.78	14 (27%)
33	CHL	8	307	-	53,61,74	2.06	16 (30%)	57,98,114	3.17	28 (49%)
33	CHL	9	306	-	42,50,74	2.24	17 (40%)	44,85,114	3.18	21 (47%)
25	CLA	Q	610	-	39,48,73	1.84	7 (17%)	45,82,113	1.86	10 (22%)
25	CLA	3	304	-	42,50,73	1.84	10 (23%)	48,85,113	1.57	7 (14%)
33	CHL	U	305	14	46,54,74	2.29	15 (32%)	49,90,114	2.88	25 (51%)
27	LHG	A	844	25	37,37,48	1.05	3 (8%)	40,43,54	1.20	3 (7%)
25	CLA	9	301	-	54,62,73	1.64	9 (16%)	67,100,113	1.55	11 (16%)
28	BCR	O	205	-	41,41,41	0.82	1 (2%)	56,56,56	2.18	16 (28%)
25	CLA	A	816	-	65,73,73	1.48	9 (13%)	76,113,113	1.45	8 (10%)
25	CLA	B	812	-	60,68,73	1.52	10 (16%)	70,107,113	1.42	7 (10%)
25	CLA	2	314	-	46,54,73	1.76	10 (21%)	53,90,113	1.54	7 (13%)
25	CLA	5	315	20	46,54,73	1.70	9 (19%)	53,90,113	1.58	6 (11%)
25	CLA	1	603	-	65,73,73	1.45	10 (15%)	76,113,113	1.34	8 (10%)
25	CLA	K	205	-	45,53,73	1.76	7 (15%)	52,89,113	1.64	6 (11%)
25	CLA	8	304	-	45,53,73	1.75	10 (22%)	52,89,113	1.61	7 (13%)
25	CLA	S	303	15	65,73,73	1.53	7 (10%)	76,113,113	1.48	10 (13%)
25	CLA	B	811	-	65,73,73	1.51	11 (16%)	76,113,113	1.50	9 (11%)
25	CLA	L	209	-	41,49,73	1.79	8 (19%)	47,84,113	1.81	9 (19%)
25	CLA	B	818	-	56,64,73	1.58	10 (17%)	65,102,113	1.58	8 (12%)
33	CHL	9	307	-	51,59,74	2.11	16 (31%)	55,96,114	2.81	24 (43%)
32	LMG	H	204	-	47,47,55	0.95	2 (4%)	55,55,63	1.16	5 (9%)
25	CLA	T	602	-	65,73,73	1.48	6 (9%)	76,113,113	1.38	9 (11%)
25	CLA	4	308	19	60,68,73	1.46	10 (16%)	70,107,113	1.47	8 (11%)
33	CHL	U	308	-	44,52,74	2.22	15 (34%)	46,87,114	2.90	21 (45%)
28	BCR	B	841	-	41,41,41	0.95	2 (4%)	56,56,56	2.24	18 (32%)
33	CHL	4	306	-	51,59,74	2.04	15 (29%)	55,96,114	2.75	24 (43%)
34	LUT	4	316	-	42,43,43	0.88	2 (4%)	51,60,60	1.53	11 (21%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	A	835	-	51,59,73	1.66	10 (19%)	59,96,113	1.58	9 (15%)
25	CLA	U	311	-	54,62,73	1.66	8 (14%)	57,97,113	1.40	7 (12%)
25	CLA	7	304	-	42,50,73	1.82	10 (23%)	48,85,113	1.46	6 (12%)
33	CHL	T	606	-	44,52,74	2.23	14 (31%)	46,87,114	2.93	23 (50%)
33	CHL	6	606	-	53,61,74	1.98	15 (28%)	57,98,114	2.78	24 (42%)
25	CLA	B	819	-	46,54,73	1.70	10 (21%)	53,90,113	1.64	9 (16%)
25	CLA	5	309	-	50,58,73	1.68	10 (20%)	58,95,113	1.49	9 (15%)
25	CLA	6	609	-	50,58,73	1.64	9 (18%)	58,95,113	1.56	7 (12%)
25	CLA	A	829	-	65,73,73	1.49	11 (16%)	76,113,113	1.47	9 (11%)
25	CLA	J	103	-	58,66,73	1.56	10 (17%)	67,104,113	1.51	8 (11%)
34	LUT	9	313	-	42,43,43	0.90	1 (2%)	51,60,60	1.61	14 (27%)
25	CLA	a	309	27	65,73,73	1.48	7 (10%)	76,113,113	1.32	8 (10%)
25	CLA	P	613	-	58,66,73	1.58	5 (8%)	67,104,113	1.44	8 (11%)
25	CLA	B	835	-	47,55,73	1.78	10 (21%)	54,91,113	1.50	7 (12%)
25	CLA	2	307	-	50,58,73	1.64	9 (18%)	58,95,113	1.49	8 (13%)
33	CHL	R	608	-	44,52,74	2.21	14 (31%)	46,87,114	2.91	22 (47%)
25	CLA	K	204	-	45,53,73	1.81	7 (15%)	52,89,113	1.72	9 (17%)
28	BCR	3	319	-	41,41,41	0.80	1 (2%)	56,56,56	2.42	16 (28%)
32	LMG	7	318	-	35,35,55	1.10	2 (5%)	43,43,63	1.11	2 (4%)
33	CHL	5	308	-	51,59,74	2.00	16 (31%)	55,96,114	2.96	27 (49%)
34	LUT	5	318	-	42,43,43	0.92	2 (4%)	51,60,60	1.68	13 (25%)
25	CLA	A	833	-	50,58,73	1.66	10 (20%)	58,95,113	1.64	8 (13%)
25	CLA	a	310	-	52,60,73	1.68	8 (15%)	60,97,113	1.51	6 (10%)
34	LUT	S	316	-	42,43,43	0.79	0	51,60,60	1.82	16 (31%)
25	CLA	5	314	-	45,53,73	1.78	9 (20%)	52,89,113	1.58	8 (15%)
33	CHL	6	608	-	51,59,74	2.03	16 (31%)	55,96,114	3.09	30 (54%)
33	CHL	S	310	15	52,60,74	2.16	16 (30%)	56,97,114	2.76	24 (42%)
27	LHG	Q	617	-	48,48,48	0.93	2 (4%)	51,54,54	0.99	2 (3%)
25	CLA	2	305	-	52,60,73	1.65	8 (15%)	60,97,113	1.51	7 (11%)
25	CLA	6	605	-	65,73,73	1.42	8 (12%)	76,113,113	1.41	7 (9%)
25	CLA	P	602	-	65,73,73	1.47	5 (7%)	76,113,113	1.39	8 (10%)
25	CLA	9	304	-	46,54,73	1.75	10 (21%)	53,90,113	1.55	6 (11%)
28	BCR	A	854	-	41,41,41	0.88	1 (2%)	56,56,56	1.96	16 (28%)
25	CLA	6	603	-	65,73,73	1.48	10 (15%)	76,113,113	1.39	7 (9%)
33	CHL	Q	608	-	66,74,74	1.51	12 (18%)	73,114,114	1.84	11 (15%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
33	CHL	4	314	19	43,51,74	2.18	14 (32%)	45,86,114	2.99	21 (46%)
27	LHG	5	321	-	36,36,48	1.03	2 (5%)	39,42,54	1.29	5 (12%)
25	CLA	3	310	-	46,54,73	1.74	10 (21%)	53,90,113	1.57	7 (13%)
25	CLA	B	808	2	65,73,73	1.47	10 (15%)	76,113,113	1.41	9 (11%)
25	CLA	S	304	-	65,73,73	1.49	6 (9%)	76,113,113	1.37	7 (9%)
25	CLA	6	612	-	52,60,73	1.73	8 (15%)	60,97,113	1.46	6 (10%)
25	CLA	A	828	-	65,73,73	1.45	10 (15%)	76,113,113	1.49	8 (10%)
25	CLA	6	614	-	45,53,73	1.73	10 (22%)	52,89,113	1.64	9 (17%)
36	NEX	U	316	-	38,46,46	0.99	1 (2%)	50,70,70	2.72	18 (36%)
28	BCR	5	320	-	41,41,41	0.82	1 (2%)	56,56,56	1.92	16 (28%)
25	CLA	8	310	-	60,68,73	1.50	10 (16%)	70,107,113	1.40	8 (11%)
25	CLA	Q	612	-	60,68,73	1.58	6 (10%)	70,107,113	1.46	10 (14%)
25	CLA	R	611	-	60,68,73	1.53	5 (8%)	70,107,113	1.68	11 (15%)
25	CLA	B	804	-	65,73,73	1.50	10 (15%)	76,113,113	1.45	9 (11%)
25	CLA	7	306	-	50,58,73	1.69	10 (20%)	58,95,113	1.56	9 (15%)
32	LMG	2	301	-	41,41,55	1.03	2 (4%)	49,49,63	1.19	4 (8%)
28	BCR	F	801	-	41,41,41	0.90	2 (4%)	56,56,56	2.10	17 (30%)
25	CLA	B	813	-	57,65,73	1.56	10 (17%)	66,103,113	1.46	8 (12%)
25	CLA	9	305	-	50,58,73	1.70	9 (18%)	58,95,113	1.57	8 (13%)
25	CLA	3	309	-	41,49,73	1.80	10 (24%)	47,84,113	1.67	9 (19%)
25	CLA	B	826	-	65,73,73	1.51	10 (15%)	76,113,113	1.44	10 (13%)
25	CLA	9	310	24	50,58,73	1.68	9 (18%)	58,95,113	1.61	7 (12%)
25	CLA	7	311	-	65,73,73	1.46	10 (15%)	76,113,113	1.43	8 (10%)
25	CLA	S	301	-	47,55,73	1.77	9 (19%)	54,91,113	1.68	10 (18%)
25	CLA	P	604	-	50,58,73	1.69	7 (14%)	58,95,113	1.62	9 (15%)
32	LMG	6	602	-	40,40,55	1.03	2 (5%)	48,48,63	1.41	6 (12%)
25	CLA	5	305	-	50,58,73	1.66	11 (22%)	58,95,113	1.56	8 (13%)
25	CLA	1	608	-	65,73,73	1.44	8 (12%)	76,113,113	1.30	7 (9%)
25	CLA	3	312	-	45,53,73	1.77	9 (20%)	52,89,113	1.59	8 (15%)
25	CLA	8	302	23	65,73,73	1.46	10 (15%)	76,113,113	1.33	9 (11%)
25	CLA	A	815	-	60,68,73	1.51	10 (16%)	70,107,113	1.45	8 (11%)
25	CLA	U	312	-	65,73,73	1.49	6 (9%)	76,113,113	1.37	7 (9%)
25	CLA	a	308	16	60,68,73	1.41	8 (13%)	70,107,113	1.79	14 (20%)
25	CLA	5	302	20	65,73,73	1.49	10 (15%)	76,113,113	1.39	8 (10%)
25	CLA	A	832	-	65,73,73	1.45	10 (15%)	76,113,113	1.43	7 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
25	CLA	1	612	-	65,73,73	1.51	11 (16%)	76,113,113	2.07	15 (19%)
25	CLA	9	309	-	60,68,73	1.53	9 (15%)	70,107,113	1.47	9 (12%)
25	CLA	5	310	-	60,68,73	1.44	9 (15%)	70,107,113	1.45	8 (11%)
25	CLA	T	611	-	60,68,73	1.55	5 (8%)	70,107,113	1.41	7 (10%)
28	BCR	F	803	-	41,41,41	0.91	2 (4%)	56,56,56	2.20	20 (35%)
27	LHG	S	319	-	48,48,48	0.93	2 (4%)	51,54,54	1.02	3 (5%)
27	LHG	T	617	-	48,48,48	0.94	2 (4%)	51,54,54	0.93	2 (3%)
25	CLA	R	614	-	48,56,73	1.73	5 (10%)	55,92,113	1.64	8 (14%)
33	CHL	S	308	-	52,60,74	2.11	16 (30%)	56,97,114	2.79	25 (44%)
25	CLA	B	832	-	45,53,73	1.78	10 (22%)	52,89,113	1.58	6 (11%)
33	CHL	T	607	-	52,60,74	2.22	17 (32%)	56,97,114	2.82	26 (46%)
28	BCR	L	204	-	41,41,41	1.01	2 (4%)	56,56,56	2.21	23 (41%)
25	CLA	5	311	-	55,63,73	1.58	10 (18%)	64,101,113	1.41	7 (10%)
33	CHL	T	604	14	48,56,74	2.23	16 (33%)	51,92,114	2.91	25 (49%)
25	CLA	3	302	-	65,73,73	1.51	9 (13%)	76,113,113	1.42	9 (11%)
33	CHL	Q	605	14	42,50,74	2.39	16 (38%)	44,85,114	3.11	22 (50%)
33	CHL	Q	601	-	51,59,74	2.29	17 (33%)	55,96,114	2.77	24 (43%)
25	CLA	6	611	27	55,63,73	1.56	9 (16%)	64,101,113	1.41	7 (10%)
33	CHL	U	309	-	48,56,74	2.34	17 (35%)	51,92,114	2.92	22 (43%)
25	CLA	A	838	-	65,73,73	1.47	10 (15%)	76,113,113	1.49	9 (11%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	L	206	-	1/1/10/20	4/10/88/115	-
25	CLA	4	303	-	1/1/12/20	7/19/97/115	-
25	CLA	B	816	-	1/1/14/20	11/31/109/115	-
25	CLA	Q	611	-	1/1/14/20	7/31/109/115	-
25	CLA	3	301	-	1/1/14/20	3/31/109/115	-
25	CLA	5	312	-	1/1/12/20	5/22/100/115	-
25	CLA	U	310	-	1/1/14/20	10/36/114/115	-
25	CLA	2	306	17	1/1/10/20	2/8/86/115	-
25	CLA	H	205	12	1/1/10/20	2/10/88/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
34	LUT	2	316	-	-	0/29/67/67	0/2/2/2
25	CLA	A	836	-	1/1/15/20	14/37/115/115	-
25	CLA	A	803	-	1/1/15/20	5/37/115/115	-
32	LMG	J	102	-	-	8/35/55/70	0/1/1/1
33	CHL	S	307	-	3/3/16/26	4/20/118/137	-
25	CLA	A	811	-	1/1/15/20	6/37/115/115	-
25	CLA	B	807	-	1/1/15/20	11/37/115/115	-
34	LUT	U	315	-	-	2/29/67/67	0/2/2/2
25	CLA	K	203	-	1/1/11/20	6/15/93/115	-
25	CLA	T	612	-	1/1/11/20	9/17/95/115	-
25	CLA	A	825	-	1/1/15/20	20/37/115/115	-
25	CLA	1	610	27	1/1/15/20	10/37/115/115	-
33	CHL	a	305	-	3/3/16/26	6/18/116/137	-
34	LUT	1	616	-	-	4/29/67/67	0/2/2/2
25	CLA	6	604	-	1/1/11/20	3/15/93/115	-
25	CLA	A	851	-	1/1/15/20	14/37/115/115	-
25	CLA	O	203	-	1/1/10/20	0/4/80/115	-
25	CLA	Q	603	-	1/1/15/20	11/37/115/115	-
25	CLA	2	310	-	1/1/10/20	2/8/86/115	-
25	CLA	S	312	-	1/1/14/20	9/31/109/115	-
34	LUT	a	315	-	-	4/29/67/67	0/2/2/2
25	CLA	L	201	-	1/1/15/20	10/37/115/115	-
35	XAT	P	616	-	-	4/31/93/93	0/4/4/4
25	CLA	T	603	-	1/1/12/20	6/19/97/115	-
25	CLA	A	819	-	1/1/15/20	12/37/115/115	-
25	CLA	8	303	-	1/1/14/20	8/34/112/115	-
33	CHL	R	607	-	3/3/17/26	10/23/121/137	-
28	BCR	6	621	-	-	8/29/63/63	0/2/2/2
25	CLA	6	615	21	1/1/11/20	4/15/93/115	-
25	CLA	B	815	-	1/1/13/20	15/30/108/115	-
33	CHL	R	606	-	3/3/16/26	8/20/118/137	-
25	CLA	9	308	-	1/1/12/20	4/19/97/115	-
25	CLA	a	307	-	1/1/15/20	10/37/115/115	-
33	CHL	S	321	-	3/3/17/26	9/21/119/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	A	808	-	1/1/15/20	11/37/115/115	-
33	CHL	P	608	-	3/3/15/26	5/13/111/137	-
33	CHL	6	607	-	3/3/17/26	9/24/122/137	-
25	CLA	1	611	-	1/1/12/20	8/22/100/115	-
25	CLA	7	312	-	1/1/10/20	1/11/89/115	-
25	CLA	G	201	-	1/1/12/20	3/19/97/115	-
33	CHL	R	601	-	3/3/17/26	8/21/119/137	-
36	NEX	T	616	-	-	7/27/83/83	0/3/3/3
25	CLA	B	824	-	1/1/15/20	17/37/115/115	-
25	CLA	4	309	27	1/1/13/20	8/25/103/115	-
26	PQN	B	839	-	-	3/23/43/43	0/2/2/2
30	DGD	B	846	-	-	15/55/95/95	0/2/2/2
25	CLA	A	823	-	1/1/11/20	10/18/96/115	-
32	LMG	J	104	-	-	13/30/50/70	0/1/1/1
27	LHG	5	301	-	-	19/49/49/53	-
25	CLA	9	303	-	1/1/14/20	12/31/109/115	-
25	CLA	A	806	-	1/1/15/20	17/37/115/115	-
28	BCR	I	201	-	-	7/29/63/63	0/2/2/2
25	CLA	T	610	-	1/1/14/20	10/31/109/115	-
25	CLA	1	609	16	1/1/14/20	7/31/109/115	-
34	LUT	a	316	-	-	6/29/67/67	0/2/2/2
34	LUT	P	614	-	-	0/29/67/67	0/2/2/2
25	CLA	6	616	-	1/1/11/20	4/15/93/115	-
34	LUT	Q	615	-	-	2/29/67/67	0/2/2/2
25	CLA	B	827	-	1/1/15/20	7/37/115/115	-
25	CLA	U	313	-	1/1/11/20	7/13/91/115	-
25	CLA	1	607	-	1/1/15/20	6/37/115/115	-
33	CHL	S	309	-	3/3/17/26	6/23/121/137	-
25	CLA	3	305	18	1/1/14/20	12/31/109/115	-
28	BCR	J	106	-	-	6/29/63/63	0/2/2/2
25	CLA	a	312	-	1/1/15/20	9/37/115/115	-
28	BCR	5	323	-	-	8/29/63/63	0/2/2/2
25	CLA	8	305	-	1/1/11/20	4/15/93/115	-
35	XAT	P	623	-	-	3/29/91/93	0/4/4/4

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	B	810	-	1/1/15/20	12/37/115/115	-
25	CLA	7	302	-	1/1/11/20	3/15/93/115	-
25	CLA	4	301	-	1/1/14/20	11/31/109/115	-
25	CLA	5	306	-	1/1/13/20	2/25/103/115	-
27	LHG	4	318	25	-	20/53/53/53	-
25	CLA	2	308	-	1/1/10/20	4/11/89/115	-
25	CLA	4	311	-	1/1/13/20	14/27/105/115	-
34	LUT	4	315	-	-	1/29/67/67	0/2/2/2
25	CLA	T	609	-	-	12/31/109/115	-
25	CLA	S	315	-	1/1/11/20	6/17/95/115	-
34	LUT	U	314	-	-	0/29/67/67	0/2/2/2
25	CLA	B	803	-	1/1/11/20	5/13/91/115	-
27	LHG	P	618	-	-	12/53/53/53	-
25	CLA	7	301	-	1/1/15/20	14/37/115/115	-
25	CLA	B	801	-	1/1/15/20	12/37/115/115	-
25	CLA	7	313	22	1/1/11/20	8/15/93/115	-
25	CLA	a	304	-	1/1/12/20	2/22/100/115	-
36	NEX	P	621	-	-	10/27/83/83	0/3/3/3
25	CLA	A	805	-	1/1/13/20	8/25/103/115	-
25	CLA	4	302	-	1/1/11/20	3/15/93/115	-
25	CLA	6	613	-	1/1/13/20	9/27/105/115	-
25	CLA	Q	604	-	1/1/12/20	6/19/97/115	-
36	NEX	U	301	-	-	6/27/83/83	0/3/3/3
25	CLA	B	831	-	1/1/15/20	10/37/115/115	-
25	CLA	K	202	-	1/1/11/20	4/13/91/115	-
25	CLA	1	605	-	1/1/12/20	2/22/100/115	-
25	CLA	R	610	-	1/1/14/20	12/36/114/115	-
25	CLA	J	105	-	1/1/10/20	6/10/88/115	-
25	CLA	6	623	-	1/1/14/20	13/31/109/115	-
33	CHL	R	605	14	3/3/16/26	4/15/113/137	-
29	SF4	A	850	2,1	-	-	0/6/5/5
25	CLA	4	313	19	1/1/10/20	0/8/86/115	-
28	BCR	4	321	-	-	7/29/63/63	0/2/2/2
25	CLA	O	202	-	1/1/9/20	0/4/78/115	-
25	CLA	9	311	-	1/1/11/20	0/13/91/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	A	842	27	1/1/12/20	11/22/100/115	-
25	CLA	6	620	-	1/1/11/20	6/13/91/115	-
28	BCR	B	845	-	-	4/29/63/63	0/2/2/2
35	XAT	P	620	-	-	4/31/93/93	0/4/4/4
25	CLA	B	806	-	1/1/15/20	10/37/115/115	-
25	CLA	B	830	-	1/1/15/20	16/37/115/115	-
25	CLA	Q	618	-	-	0/8/82/115	-
33	CHL	P	606	-	3/3/16/26	7/20/118/137	-
27	LHG	7	317	25	-	14/41/41/53	-
33	CHL	1	606	-	3/3/16/26	6/18/116/137	-
25	CLA	5	303	-	-	13/37/115/115	-
28	BCR	3	317	-	-	6/29/63/63	0/2/2/2
25	CLA	B	829	-	1/1/11/20	5/18/96/115	-
25	CLA	4	310	-	1/1/12/20	8/22/100/115	-
25	CLA	B	809	-	1/1/15/20	14/37/115/115	-
34	LUT	7	315	-	-	2/29/67/67	0/2/2/2
29	SF4	C	102	3	-	-	0/6/5/5
25	CLA	A	810	1	1/1/15/20	11/37/115/115	-
25	CLA	A	840	-	1/1/15/20	15/37/115/115	-
25	CLA	5	319	-	-	8/15/93/115	-
25	CLA	8	315	23	1/1/11/20	5/15/93/115	-
25	CLA	P	610	-	1/1/14/20	9/31/109/115	-
28	BCR	8	318	-	-	5/29/63/63	0/2/2/2
36	NEX	P	617	-	-	7/27/83/83	0/3/3/3
33	CHL	S	306	-	3/3/16/26	9/18/116/137	-
25	CLA	5	313	-	1/1/13/20	6/27/105/115	-
25	CLA	B	802	-	1/1/15/20	13/37/115/115	-
25	CLA	4	312	-	1/1/11/20	2/13/91/115	-
27	LHG	6	618	25	-	23/53/53/53	-
33	CHL	P	607	-	3/3/17/26	10/23/121/137	-
34	LUT	3	315	-	-	0/29/67/67	0/2/2/2
33	CHL	4	322	16	3/3/17/26	5/24/122/137	-
30	DGD	B	848	-	-	16/46/86/95	0/2/2/2
25	CLA	L	205	-	1/1/15/20	11/37/115/115	-
25	CLA	A	837	-	1/1/15/20	10/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	2	302	17	1/1/11/20	11/15/93/115	-
33	CHL	1	601	16	3/3/17/26	5/24/122/137	-
25	CLA	L	202	-	1/1/15/20	12/37/115/115	-
28	BCR	4	317	-	-	8/29/63/63	0/2/2/2
25	CLA	H	203	-	1/1/11/20	8/15/93/115	-
28	BCR	A	849	-	-	6/29/63/63	0/2/2/2
28	BCR	B	851	-	-	3/29/63/63	0/2/2/2
25	CLA	A	818	-	1/1/15/20	15/37/115/115	-
25	CLA	2	303	17	1/1/15/20	13/37/115/115	-
33	CHL	T	605	-	3/3/16/26	7/20/118/137	-
27	LHG	A	852	-	-	24/49/49/53	-
25	CLA	S	320	-	1/1/15/20	11/37/115/115	-
33	CHL	3	306	-	3/3/17/26	9/24/122/137	-
25	CLA	3	314	-	1/1/13/20	13/27/105/115	-
25	CLA	S	314	-	-	20/37/115/115	-
25	CLA	B	805	-	1/1/15/20	16/37/115/115	-
28	BCR	7	316	-	-	2/29/63/63	0/2/2/2
33	CHL	P	619	-	3/3/17/26	10/23/121/137	-
25	CLA	S	305	-	1/1/12/20	6/19/97/115	-
33	CHL	P	605	14	3/3/16/26	6/18/116/137	-
25	CLA	A	839	-	1/1/15/20	11/37/115/115	-
25	CLA	8	306	-	1/1/10/20	3/10/88/115	-
33	CHL	P	601	-	3/3/17/26	8/21/119/137	-
34	LUT	a	314	-	-	2/29/67/67	0/2/2/2
25	CLA	R	612	-	1/1/14/20	13/31/109/115	-
25	CLA	F	802	-	1/1/11/20	3/13/91/115	-
25	CLA	U	304	-	1/1/12/20	6/19/97/115	-
25	CLA	B	833	-	1/1/14/20	5/31/109/115	-
25	CLA	8	314	-	1/1/13/20	7/25/103/115	-
29	SF4	C	101	3	-	-	0/6/5/5
25	CLA	B	820	-	1/1/13/20	4/30/108/115	-
25	CLA	7	310	-	1/1/12/20	7/22/100/115	-
25	CLA	3	307	-	1/1/12/20	7/19/97/115	-
25	CLA	8	309	-	1/1/11/20	6/15/93/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
35	XAT	S	318	-	-	4/31/93/93	0/4/4/4
25	CLA	3	308	-	1/1/15/20	12/37/115/115	-
25	CLA	2	309	-	1/1/14/20	13/31/109/115	-
34	LUT	6	622	-	-	1/29/67/67	0/2/2/2
25	CLA	B	849	-	1/1/15/20	13/37/115/115	-
25	CLA	A	812	-	1/1/15/20	14/37/115/115	-
25	CLA	R	602	-	1/1/15/20	8/37/115/115	-
25	CLA	B	817	-	1/1/15/20	5/37/115/115	-
25	CLA	H	201	-	1/1/11/20	8/15/93/115	-
33	CHL	5	307	-	3/3/17/26	9/21/119/137	-
28	BCR	L	207	-	-	8/29/63/63	0/2/2/2
28	BCR	B	843	-	-	5/29/63/63	0/2/2/2
28	BCR	A	848	-	-	6/29/63/63	0/2/2/2
25	CLA	3	320	22	1/1/15/20	16/37/115/115	-
34	LUT	P	615	-	-	2/29/67/67	0/2/2/2
28	BCR	L	203	-	-	4/29/63/63	0/2/2/2
33	CHL	6	617	21	3/3/15/26	4/12/110/137	-
33	CHL	U	306	-	3/3/16/26	7/20/118/137	-
25	CLA	3	303	-	1/1/15/20	10/37/115/115	-
25	CLA	2	312	-	1/1/15/20	12/37/115/115	-
27	LHG	2	317	-	-	24/53/53/53	-
25	CLA	Q	602	-	1/1/15/20	7/37/115/115	-
25	CLA	B	838	-	1/1/15/20	9/37/115/115	-
27	LHG	R	618	-	-	13/53/53/53	-
25	CLA	7	309	27	1/1/10/20	2/8/86/115	-
28	BCR	L	208	-	-	2/29/63/63	0/2/2/2
25	CLA	A	853	-	1/1/15/20	15/37/115/115	-
25	CLA	1	602	-	1/1/15/20	9/37/115/115	-
34	LUT	2	315	-	-	6/29/67/67	0/2/2/2
25	CLA	Q	613	-	1/1/11/20	9/17/95/115	-
25	CLA	2	313	-	1/1/13/20	5/25/103/115	-
32	LMG	4	320	-	-	6/35/55/70	0/1/1/1
25	CLA	a	311	-	1/1/15/20	13/37/115/115	-
35	XAT	T	615	-	-	4/31/93/93	0/4/4/4

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	T	608	-	1/1/15/20	12/37/115/115	-
25	CLA	5	316	-	1/1/10/20	2/11/89/115	-
34	LUT	6	619	-	-	1/29/67/67	0/2/2/2
25	CLA	1	613	-	1/1/15/20	9/37/115/115	-
25	CLA	B	836	-	1/1/15/20	15/37/115/115	-
25	CLA	A	827	-	1/1/15/20	7/37/115/115	-
33	CHL	4	304	-	3/3/15/26	3/10/108/137	-
25	CLA	6	601	19	1/1/14/20	13/33/111/115	-
25	CLA	2	304	-	1/1/15/20	16/37/115/115	-
33	CHL	7	305	-	3/3/17/26	10/25/123/137	-
28	BCR	O	204	-	-	5/29/63/63	0/2/2/2
34	LUT	1	617	-	-	6/29/67/67	0/2/2/2
25	CLA	B	823	-	1/1/15/20	5/37/115/115	-
31	SQD	B	850	-	-	16/46/66/69	0/1/1/1
34	LUT	1	615	-	-	2/29/67/67	0/2/2/2
25	CLA	P	603	-	1/1/15/20	11/37/115/115	-
25	CLA	P	612	-	1/1/14/20	13/31/109/115	-
33	CHL	U	307	-	3/3/17/26	11/24/122/137	-
34	LUT	T	613	-	-	0/29/67/67	0/2/2/2
25	CLA	A	814	-	1/1/15/20	19/37/115/115	-
25	CLA	R	604	-	1/1/12/20	6/19/97/115	-
25	CLA	2	311	-	1/1/12/20	8/22/100/115	-
34	LUT	R	615	-	-	2/29/67/67	0/2/2/2
25	CLA	B	814	-	1/1/13/20	7/25/103/115	-
25	CLA	A	804	-	1/1/15/20	9/37/115/115	-
27	LHG	A	843	-	-	18/53/53/53	-
25	CLA	A	809	1	1/1/15/20	13/37/115/115	-
28	BCR	J	101	-	-	6/29/63/63	0/2/2/2
25	CLA	A	801	-	1/1/15/20	11/37/115/115	-
25	CLA	3	311	-	1/1/13/20	9/25/103/115	-
25	CLA	B	834	-	1/1/15/20	20/37/115/115	-
25	CLA	8	308	-	1/1/12/20	4/19/97/115	-
25	CLA	1	614	-	1/1/11/20	4/15/93/115	-
25	CLA	A	831	-	1/1/12/20	8/19/97/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	5	304	-	1/1/11/20	5/15/93/115	-
25	CLA	A	826	-	1/1/15/20	6/37/115/115	-
25	CLA	4	307	-	1/1/12/20	7/19/97/115	-
34	LUT	3	316	-	-	0/29/67/67	0/2/2/2
28	BCR	A	847	-	-	2/29/63/63	0/2/2/2
25	CLA	A	813	-	1/1/12/20	2/24/102/115	-
25	CLA	A	822	-	1/1/15/20	14/37/115/115	-
25	CLA	8	311	27	1/1/11/20	5/15/93/115	-
28	BCR	A	845	-	-	3/29/63/63	0/2/2/2
25	CLA	H	202	-	1/1/10/20	2/8/86/115	-
25	CLA	1	604	-	1/1/13/20	8/28/106/115	-
33	CHL	R	609	-	3/3/20/26	16/39/137/137	-
28	BCR	G	203	-	-	1/29/63/63	0/2/2/2
33	CHL	P	622	-	3/3/17/26	9/24/122/137	-
27	LHG	B	847	-	-	17/42/42/53	-
35	XAT	Q	616	-	-	4/31/93/93	0/4/4/4
25	CLA	B	822	-	1/1/15/20	14/37/115/115	-
36	NEX	R	617	-	-	6/27/83/83	0/3/3/3
25	CLA	a	302	-	1/1/13/20	8/28/106/115	-
33	CHL	4	305	-	3/3/17/26	5/21/119/137	-
27	LHG	4	319	-	-	7/36/36/53	-
25	CLA	7	308	-	1/1/14/20	10/31/109/115	-
28	BCR	K	206	-	-	10/29/63/63	0/2/2/2
25	CLA	A	830	-	1/1/15/20	14/37/115/115	-
25	CLA	a	303	-	1/1/13/20	10/28/106/115	-
33	CHL	Q	607	-	3/3/15/26	5/13/111/137	-
34	LUT	7	314	-	-	2/29/67/67	0/2/2/2
25	CLA	B	825	-	1/1/15/20	13/37/115/115	-
25	CLA	U	302	-	1/1/15/20	8/37/115/115	-
25	CLA	A	821	-	1/1/11/20	1/13/91/115	-
25	CLA	a	301	-	1/1/15/20	10/37/115/115	-
33	CHL	Q	606	-	3/3/16/26	7/20/118/137	-
28	BCR	B	842	-	-	6/29/63/63	0/2/2/2
25	CLA	P	611	-	1/1/10/20	4/8/86/115	-
25	CLA	U	303	-	1/1/15/20	11/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	LHG	P	624	-	-	12/53/53/53	-
33	CHL	S	302	-	3/3/17/26	13/24/122/137	-
25	CLA	B	821	-	1/1/14/20	6/31/109/115	-
28	BCR	A	846	-	-	2/29/63/63	0/2/2/2
25	CLA	B	828	-	1/1/12/20	3/19/97/115	-
34	LUT	S	317	-	-	6/29/67/67	0/2/2/2
25	CLA	O	201	-	1/1/10/20	6/8/86/115	-
28	BCR	8	301	-	-	3/29/63/63	0/2/2/2
34	LUT	9	312	-	-	2/29/67/67	0/2/2/2
34	LUT	8	317	-	-	1/29/67/67	0/2/2/2
25	CLA	A	820	-	1/1/15/20	12/37/115/115	-
25	CLA	K	201	-	1/1/12/20	8/21/99/115	-
25	CLA	S	313	-	1/1/14/20	13/31/109/115	-
25	CLA	G	202	-	1/1/11/20	3/15/93/115	-
32	LMG	1	619	-	-	15/41/61/70	0/1/1/1
25	CLA	A	817	-	1/1/13/20	3/28/106/115	-
25	CLA	9	302	-	1/1/11/20	9/15/93/115	-
32	LMG	J	107	-	-	18/50/70/70	0/1/1/1
25	CLA	7	307	-	1/1/12/20	4/19/97/115	-
25	CLA	A	834	1	1/1/11/20	9/13/91/115	-
25	CLA	7	303	-	1/1/13/20	9/27/105/115	-
27	LHG	1	618	25	-	15/47/47/53	-
25	CLA	S	311	-	1/1/14/20	7/31/109/115	-
25	CLA	a	313	-	1/1/11/20	4/15/93/115	-
32	LMG	7	319	-	-	13/31/51/70	0/1/1/1
33	CHL	T	601	-	3/3/16/26	9/20/118/137	-
25	CLA	R	613	-	1/1/15/20	15/37/115/115	-
25	CLA	A	802	-	1/1/15/20	8/37/115/115	-
25	CLA	B	837	-	1/1/15/20	15/37/115/115	-
28	BCR	B	844	-	-	2/29/63/63	0/2/2/2
33	CHL	5	317	-	3/3/15/26	2/12/110/137	-
28	BCR	3	318	-	-	8/29/63/63	0/2/2/2
25	CLA	5	324	-	1/1/15/20	17/37/115/115	-
25	CLA	3	313	-	1/1/11/20	4/15/93/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	Q	609	-	1/1/15/20	11/37/115/115	-
25	CLA	a	306	-	1/1/15/20	6/37/115/115	-
25	CLA	8	312	-	1/1/12/20	7/22/100/115	-
33	CHL	P	609	-	3/3/20/26	16/39/137/137	-
34	LUT	T	614	-	-	2/29/67/67	0/2/2/2
28	BCR	B	840	-	-	7/29/63/63	0/2/2/2
34	LUT	R	616	-	-	2/29/67/67	0/2/2/2
34	LUT	5	322	-	-	0/29/67/67	0/2/2/2
25	CLA	A	807	-	1/1/15/20	21/37/115/115	-
27	LHG	8	319	25	-	17/53/53/53	-
26	PQN	A	841	-	-	6/23/43/43	0/2/2/2
25	CLA	R	603	-	1/1/15/20	11/37/115/115	-
25	CLA	A	824	-	1/1/13/20	8/25/103/115	-
27	LHG	a	317	25	-	17/47/47/53	-
25	CLA	6	610	-	1/1/14/20	8/31/109/115	-
34	LUT	Q	614	-	-	0/29/67/67	0/2/2/2
25	CLA	8	313	-	1/1/15/20	11/37/115/115	-
34	LUT	8	316	-	-	1/29/67/67	0/2/2/2
33	CHL	8	307	-	3/3/17/26	11/24/122/137	-
33	CHL	9	306	-	3/3/15/26	5/10/108/137	-
25	CLA	Q	610	-	1/1/9/20	0/8/82/115	-
25	CLA	3	304	-	1/1/10/20	0/10/88/115	-
33	CHL	U	305	14	3/3/16/26	7/15/113/137	-
27	LHG	A	844	25	-	14/42/42/53	-
25	CLA	9	301	-	1/1/13/20	5/25/101/115	-
28	BCR	O	205	-	-	4/29/63/63	0/2/2/2
25	CLA	A	816	-	1/1/15/20	12/37/115/115	-
25	CLA	B	812	-	1/1/14/20	10/31/109/115	-
25	CLA	2	314	-	1/1/11/20	5/15/93/115	-
25	CLA	5	315	20	1/1/11/20	6/15/93/115	-
25	CLA	1	603	-	1/1/15/20	10/37/115/115	-
25	CLA	K	205	-	1/1/11/20	6/13/91/115	-
25	CLA	8	304	-	1/1/11/20	8/13/91/115	-
25	CLA	S	303	15	1/1/15/20	11/37/115/115	-
25	CLA	B	811	-	1/1/15/20	15/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	L	209	-	1/1/10/20	4/8/86/115	-
25	CLA	B	818	-	1/1/13/20	9/27/105/115	-
33	CHL	9	307	-	3/3/17/26	6/21/119/137	-
32	LMG	H	204	-	-	14/42/62/70	0/1/1/1
33	CHL	U	308	-	3/3/15/26	5/13/111/137	-
25	CLA	4	308	19	1/1/14/20	12/31/109/115	-
25	CLA	T	602	-	1/1/15/20	7/37/115/115	-
33	CHL	4	306	-	3/3/17/26	4/21/119/137	-
28	BCR	B	841	-	-	4/29/63/63	0/2/2/2
34	LUT	4	316	-	-	4/29/67/67	0/2/2/2
25	CLA	A	835	-	1/1/12/20	6/21/99/115	-
25	CLA	U	311	-	1/1/11/20	7/25/96/115	-
25	CLA	7	304	-	1/1/10/20	8/10/88/115	-
33	CHL	T	606	-	3/3/15/26	5/13/111/137	-
33	CHL	6	606	-	3/3/17/26	7/24/122/137	-
25	CLA	B	819	-	1/1/11/20	6/15/93/115	-
25	CLA	5	309	-	1/1/12/20	10/19/97/115	-
25	CLA	6	609	-	1/1/12/20	8/19/97/115	-
25	CLA	A	829	-	1/1/15/20	10/37/115/115	-
25	CLA	J	103	-	1/1/13/20	11/29/107/115	-
34	LUT	9	313	-	-	2/29/67/67	0/2/2/2
25	CLA	a	309	27	1/1/15/20	10/37/115/115	-
25	CLA	P	613	-	1/1/13/20	9/29/107/115	-
25	CLA	B	835	-	1/1/11/20	4/16/94/115	-
25	CLA	2	307	-	1/1/12/20	6/19/97/115	-
33	CHL	R	608	-	3/3/15/26	5/13/111/137	-
25	CLA	K	204	-	1/1/11/20	7/13/91/115	-
28	BCR	3	319	-	-	6/29/63/63	0/2/2/2
32	LMG	7	318	-	-	11/30/50/70	0/1/1/1
33	CHL	5	308	-	3/3/17/26	6/21/119/137	-
34	LUT	5	318	-	-	0/29/67/67	0/2/2/2
25	CLA	A	833	-	1/1/12/20	0/19/97/115	-
25	CLA	a	310	-	1/1/12/20	8/22/100/115	-
34	LUT	S	316	-	-	5/29/67/67	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	5	314	-	1/1/11/20	5/13/91/115	-
33	CHL	6	608	-	3/3/17/26	10/21/119/137	-
33	CHL	S	310	15	3/3/17/26	7/23/121/137	-
27	LHG	Q	617	-	-	13/53/53/53	-
25	CLA	2	305	-	1/1/12/20	7/22/100/115	-
25	CLA	6	605	-	1/1/15/20	11/37/115/115	-
25	CLA	P	602	-	1/1/15/20	7/37/115/115	-
25	CLA	9	304	-	1/1/11/20	6/15/93/115	-
28	BCR	A	854	-	-	2/29/63/63	0/2/2/2
25	CLA	6	603	-	1/1/15/20	11/37/115/115	-
33	CHL	Q	608	-	3/3/20/26	16/39/137/137	-
33	CHL	4	314	19	3/3/15/26	4/12/110/137	-
27	LHG	5	321	-	-	13/41/41/53	-
25	CLA	3	310	-	1/1/11/20	5/15/93/115	-
25	CLA	B	808	2	1/1/15/20	8/37/115/115	-
25	CLA	S	304	-	1/1/15/20	12/37/115/115	-
25	CLA	6	612	-	1/1/12/20	3/22/100/115	-
25	CLA	A	828	-	1/1/15/20	15/37/115/115	-
25	CLA	6	614	-	1/1/11/20	3/13/91/115	-
36	NEX	U	316	-	-	7/27/83/83	0/3/3/3
28	BCR	5	320	-	-	9/29/63/63	0/2/2/2
25	CLA	8	310	-	1/1/14/20	8/31/109/115	-
25	CLA	Q	612	-	1/1/14/20	11/31/109/115	-
25	CLA	R	611	-	1/1/14/20	9/31/109/115	-
25	CLA	B	804	-	1/1/15/20	13/37/115/115	-
25	CLA	7	306	-	1/1/12/20	2/19/97/115	-
32	LMG	2	301	-	-	12/36/56/70	0/1/1/1
28	BCR	F	801	-	-	4/29/63/63	0/2/2/2
25	CLA	B	813	-	1/1/13/20	8/28/106/115	-
25	CLA	9	305	-	1/1/12/20	7/19/97/115	-
25	CLA	3	309	-	1/1/10/20	4/8/86/115	-
25	CLA	B	826	-	1/1/15/20	17/37/115/115	-
25	CLA	9	310	24	1/1/12/20	10/19/97/115	-
25	CLA	7	311	-	1/1/15/20	13/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CLA	S	301	-	1/1/11/20	7/16/94/115	-
25	CLA	P	604	-	1/1/12/20	6/19/97/115	-
32	LMG	6	602	-	-	12/35/55/70	0/1/1/1
25	CLA	5	305	-	1/1/12/20	2/19/97/115	-
25	CLA	1	608	-	1/1/15/20	11/37/115/115	-
25	CLA	3	312	-	1/1/11/20	4/13/91/115	-
25	CLA	8	302	23	1/1/15/20	13/37/115/115	-
25	CLA	A	815	-	1/1/14/20	15/31/109/115	-
25	CLA	U	312	-	1/1/15/20	15/37/115/115	-
25	CLA	a	308	16	1/1/14/20	7/31/109/115	-
25	CLA	5	302	20	1/1/15/20	10/37/115/115	-
25	CLA	A	832	-	1/1/15/20	13/37/115/115	-
25	CLA	1	612	-	1/1/15/20	14/37/115/115	-
25	CLA	9	309	-	1/1/14/20	10/31/109/115	-
25	CLA	5	310	-	1/1/14/20	5/31/109/115	-
25	CLA	T	611	-	1/1/14/20	11/31/109/115	-
28	BCR	F	803	-	-	2/29/63/63	0/2/2/2
27	LHG	S	319	-	-	10/53/53/53	-
27	LHG	T	617	-	-	12/53/53/53	-
25	CLA	R	614	-	1/1/11/20	9/17/95/115	-
33	CHL	S	308	-	3/3/17/26	6/23/121/137	-
25	CLA	B	832	-	1/1/11/20	5/13/91/115	-
33	CHL	T	607	-	3/3/17/26	6/23/121/137	-
28	BCR	L	204	-	-	7/29/63/63	0/2/2/2
25	CLA	5	311	-	1/1/13/20	8/25/103/115	-
33	CHL	T	604	14	3/3/16/26	3/18/116/137	-
25	CLA	3	302	-	1/1/15/20	8/37/115/115	-
33	CHL	Q	605	14	3/3/15/26	1/10/108/137	-
33	CHL	Q	601	-	3/3/17/26	8/21/119/137	-
25	CLA	6	611	27	1/1/13/20	6/25/103/115	-
33	CHL	U	309	-	3/3/16/26	3/18/116/137	-
25	CLA	A	838	-	1/1/15/20	12/37/115/115	-

The worst 5 of 3554 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	S	303	CLA	C4B-NB	7.98	1.42	1.35
25	Q	613	CLA	C4B-NB	7.93	1.42	1.35
25	R	610	CLA	C4B-NB	7.83	1.42	1.35
25	R	603	CLA	C4B-NB	7.79	1.42	1.35
25	Q	612	CLA	C4B-NB	7.77	1.42	1.35

The worst 5 of 5126 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	a	303	CLA	C1-C2-C3	16.98	155.41	126.04
25	1	612	CLA	C4A-NA-C1A	13.26	112.67	106.71
36	P	621	NEX	C16-C1-C6	12.24	121.42	110.47
25	a	303	CLA	C4-C3-C5	-10.98	96.79	115.27
33	R	609	CHL	C4A-NA-C1A	10.42	111.39	106.71

5 of 439 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
25	A	801	CLA	ND
25	A	802	CLA	ND
25	A	803	CLA	ND
25	A	804	CLA	ND
25	A	805	CLA	ND

5 of 3566 torsion outliers are listed below:

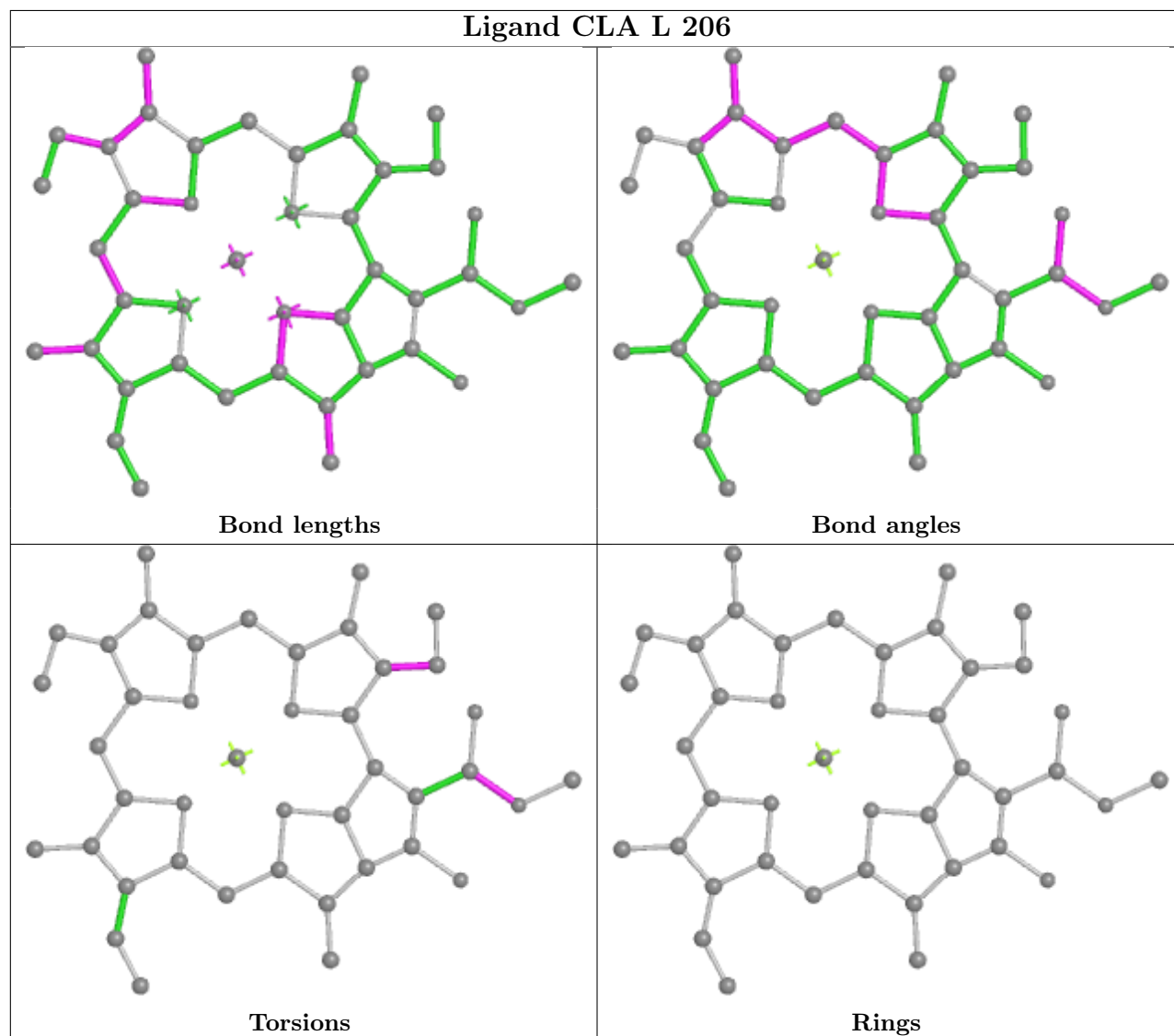
Mol	Chain	Res	Type	Atoms
25	A	801	CLA	CBD-CGD-O2D-CED
25	A	804	CLA	CAD-CBD-CGD-O1D
25	A	804	CLA	CAD-CBD-CGD-O2D
25	A	806	CLA	CHA-CBD-CGD-O1D
25	A	806	CLA	CHA-CBD-CGD-O2D

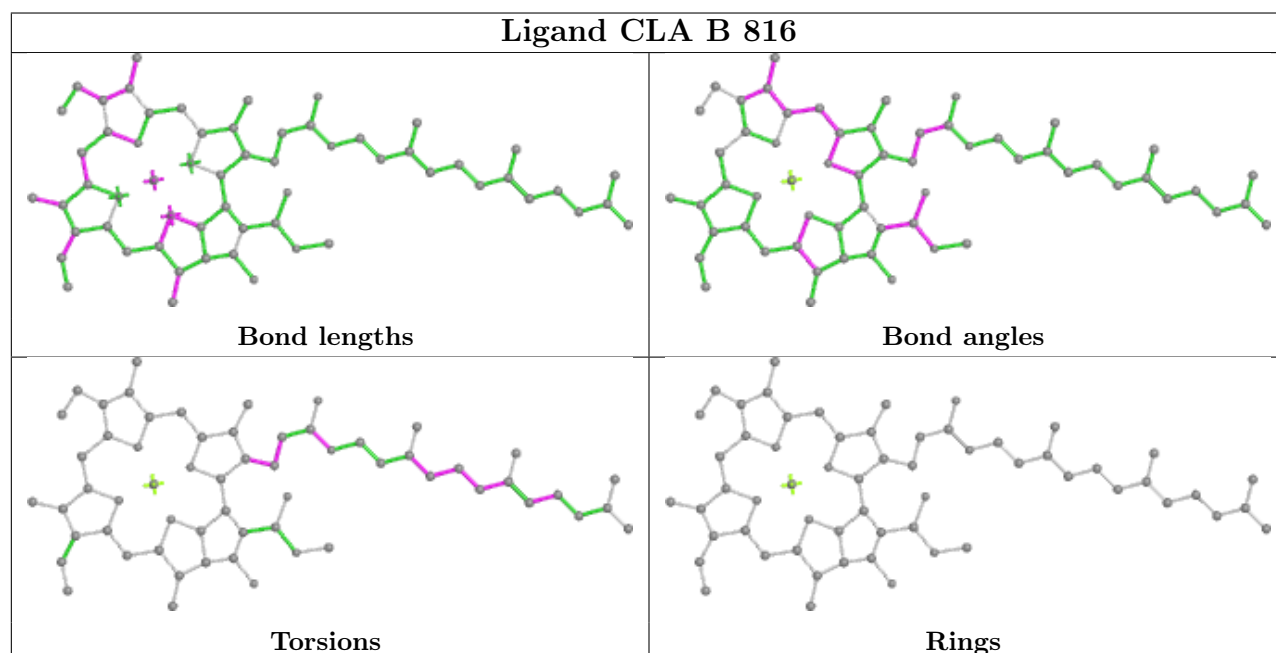
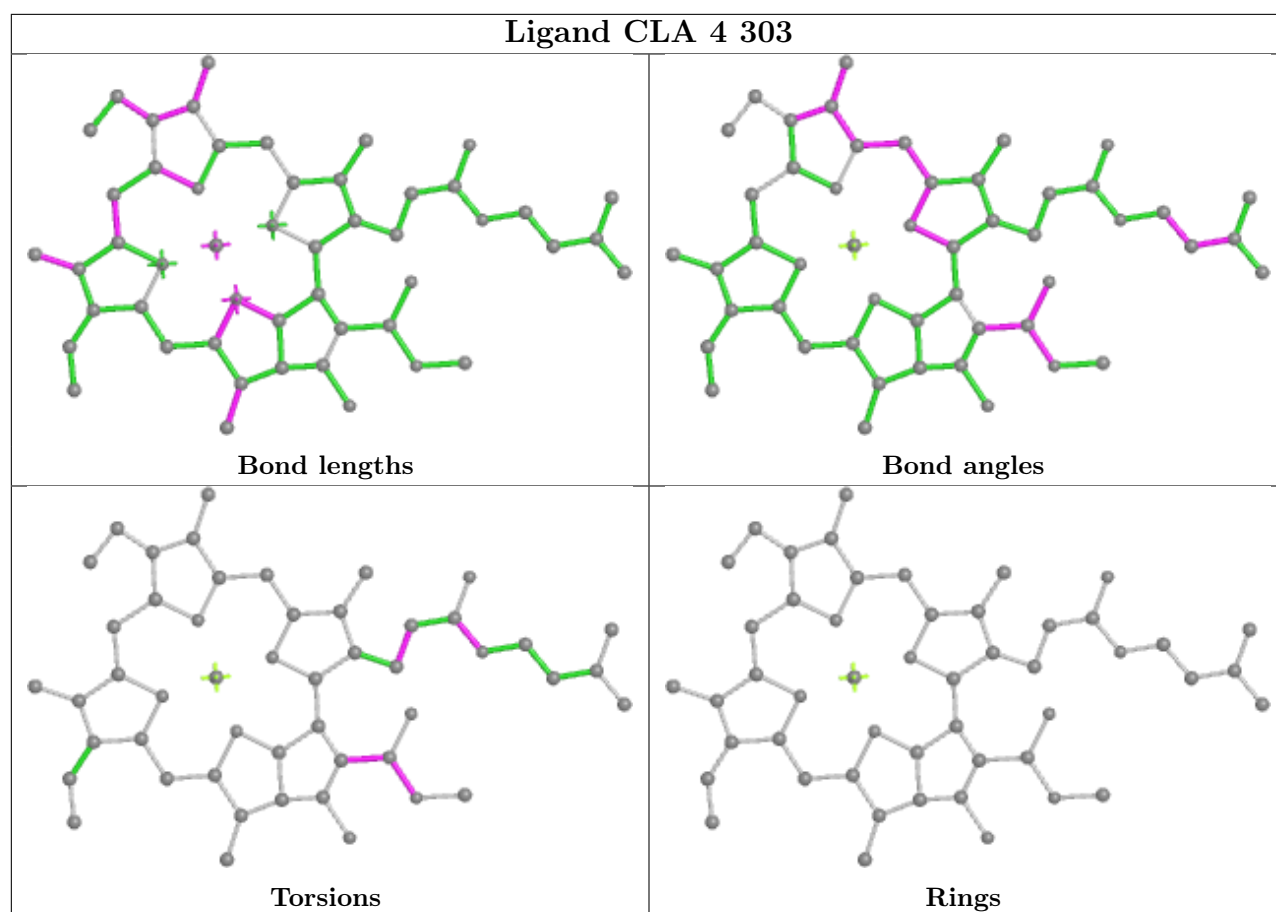
There are no ring outliers.

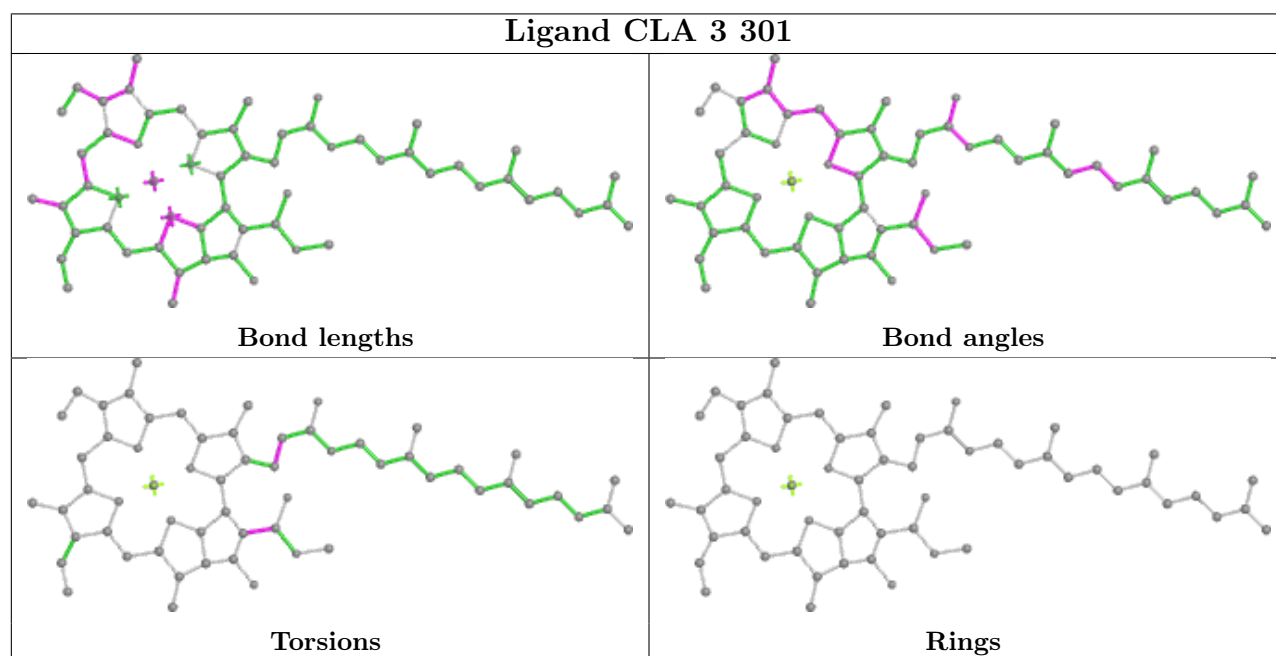
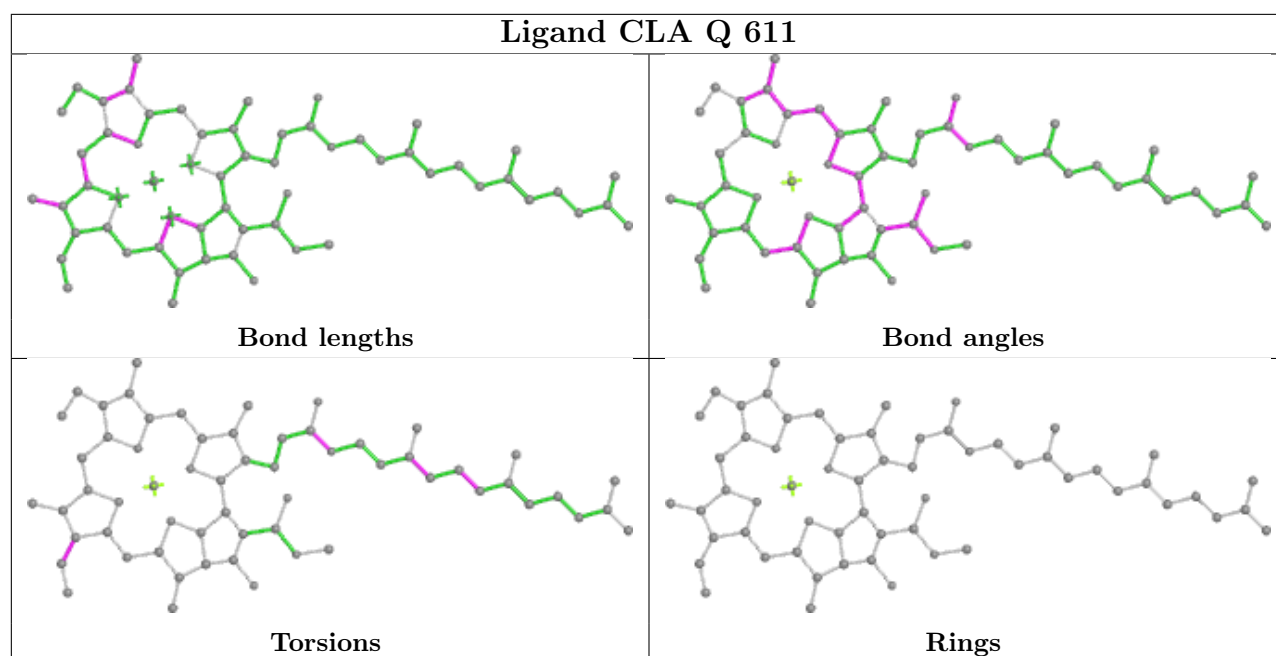
No monomer is involved in short contacts.

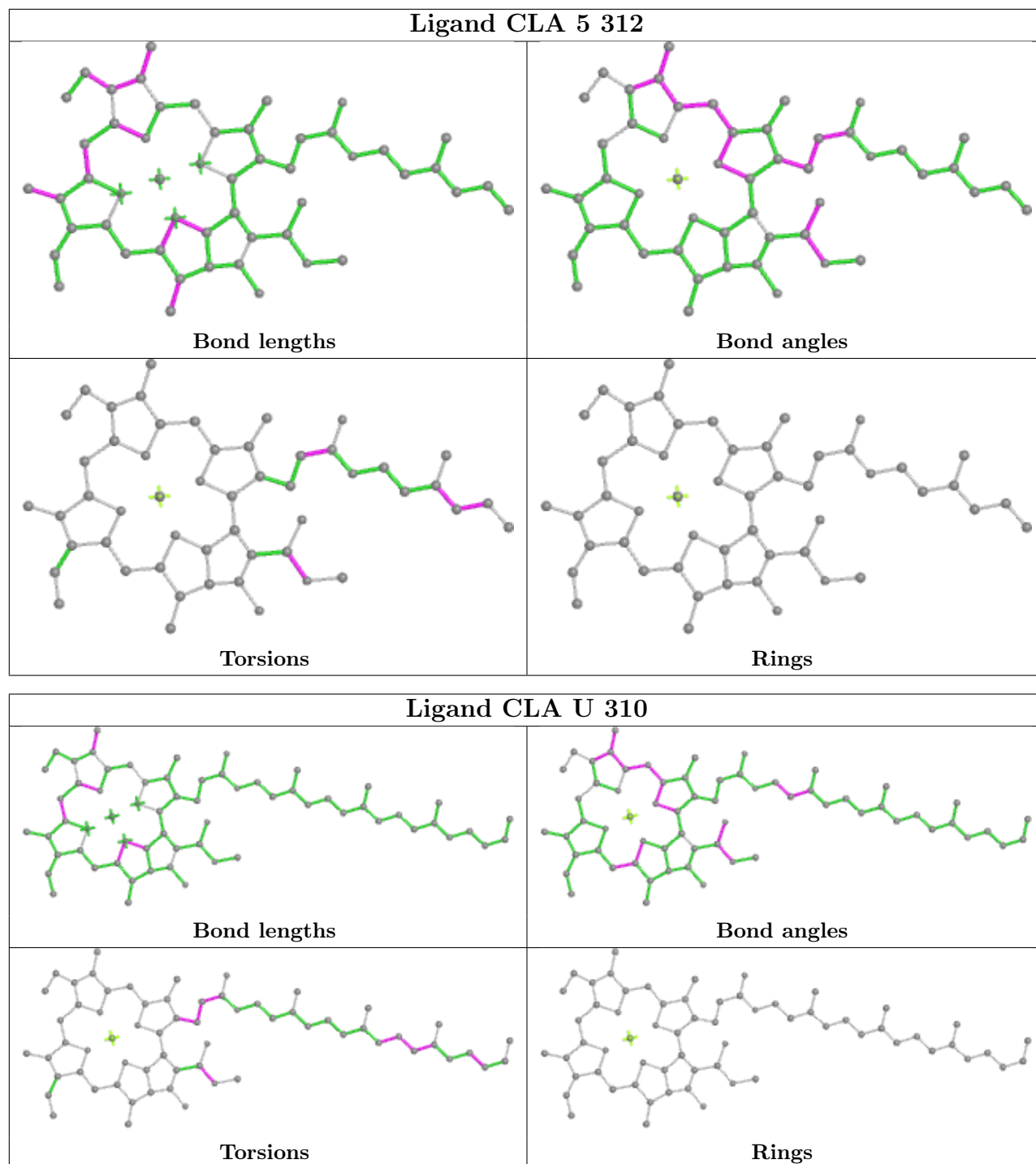
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring

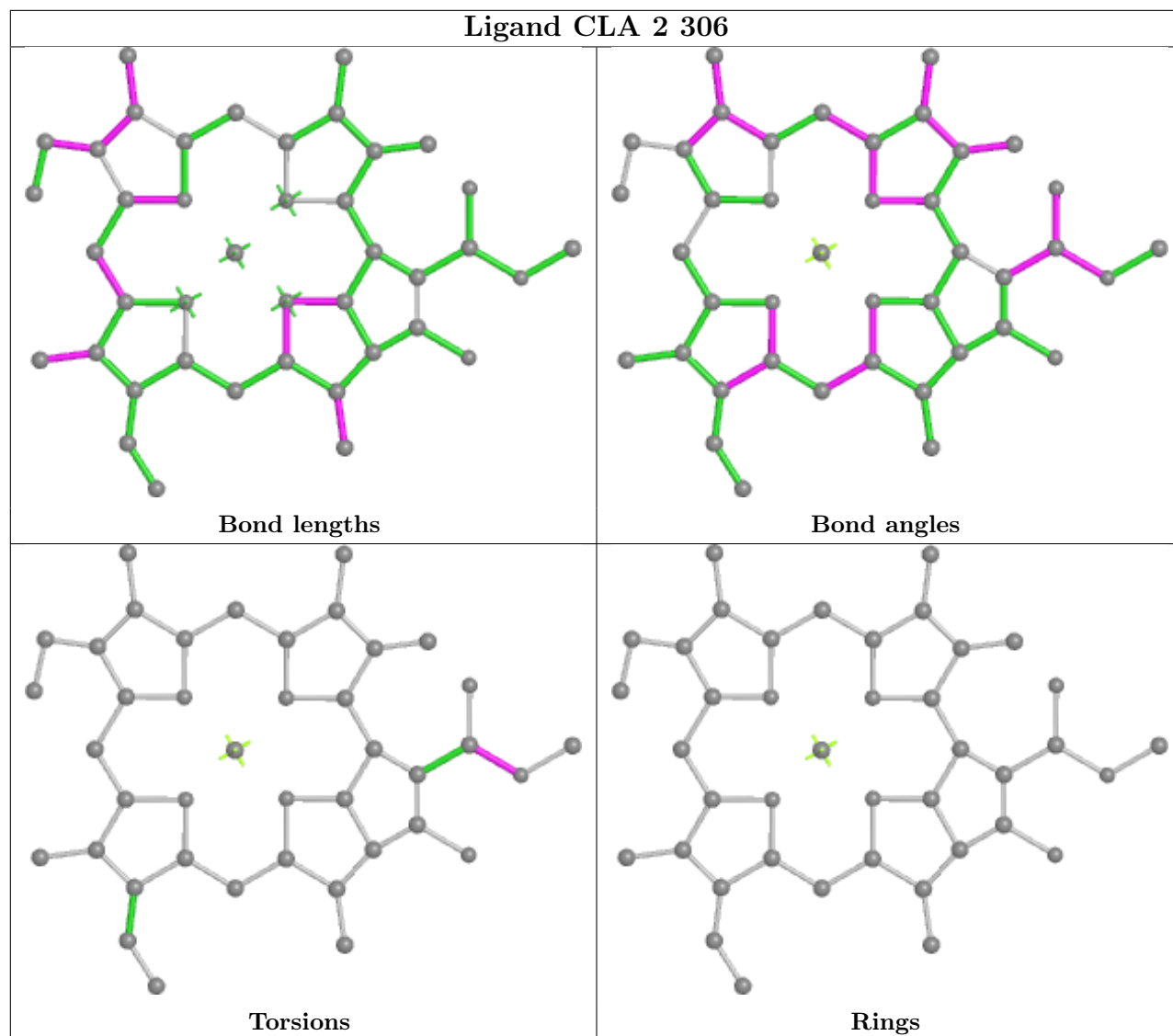
in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

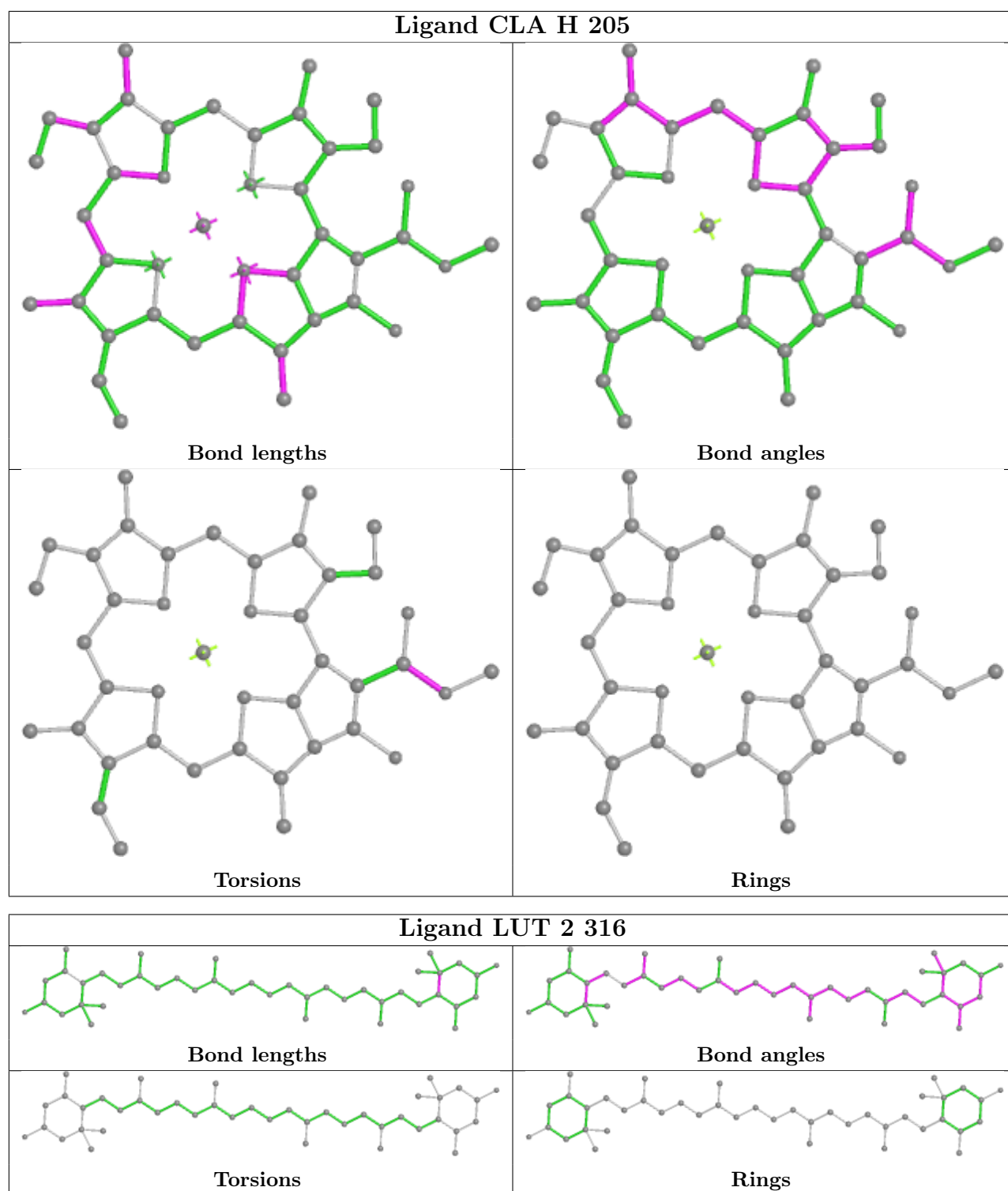


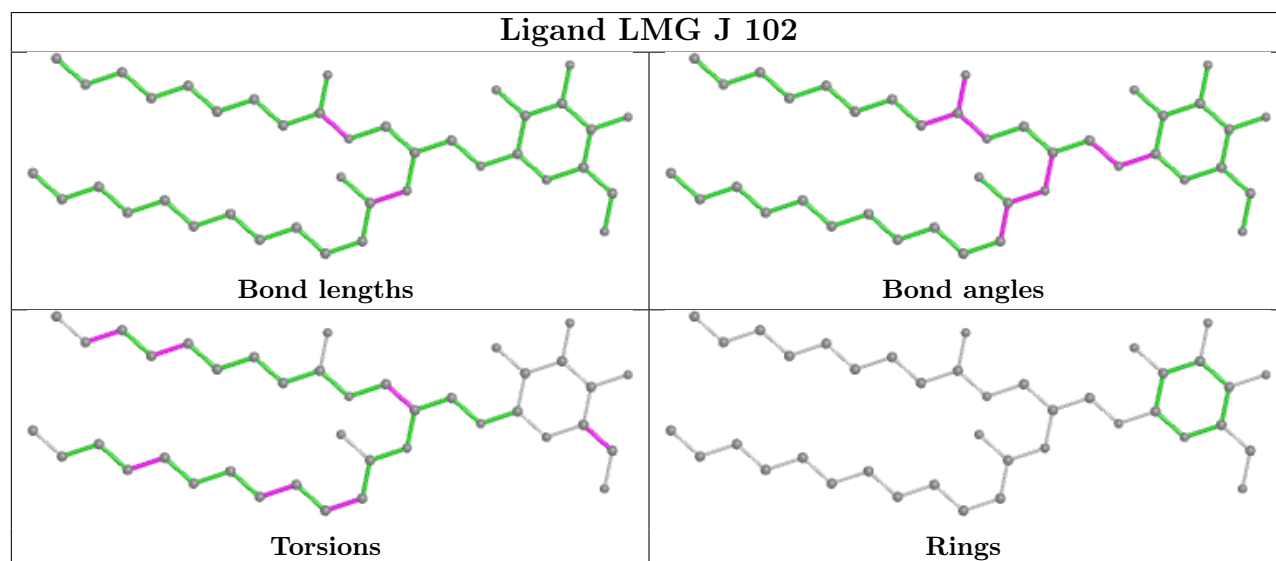
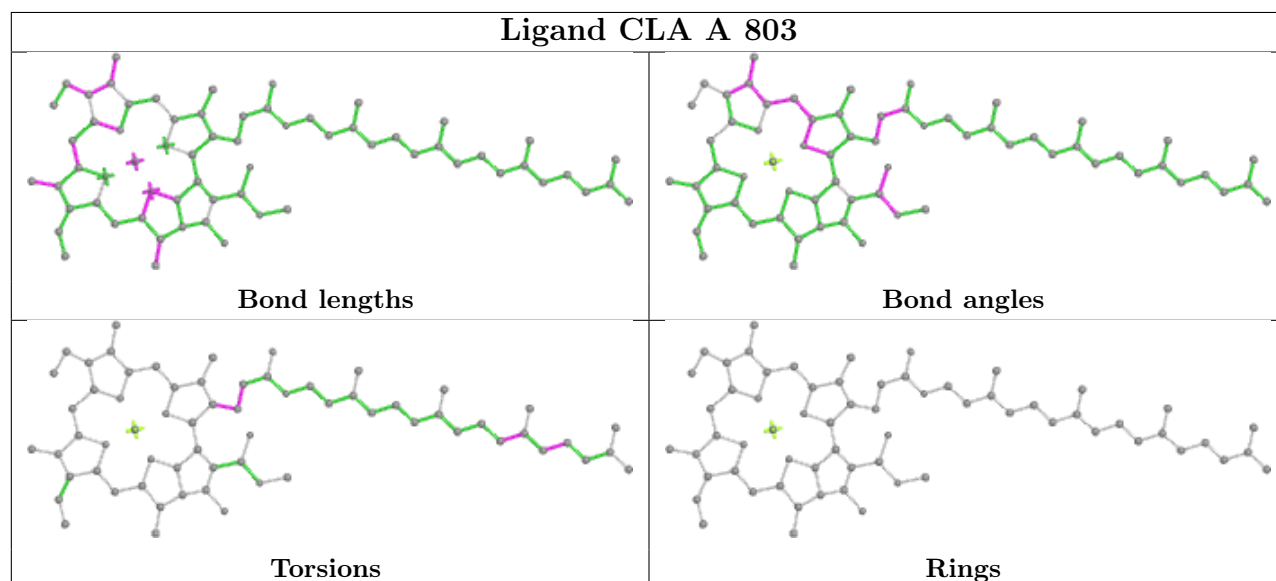
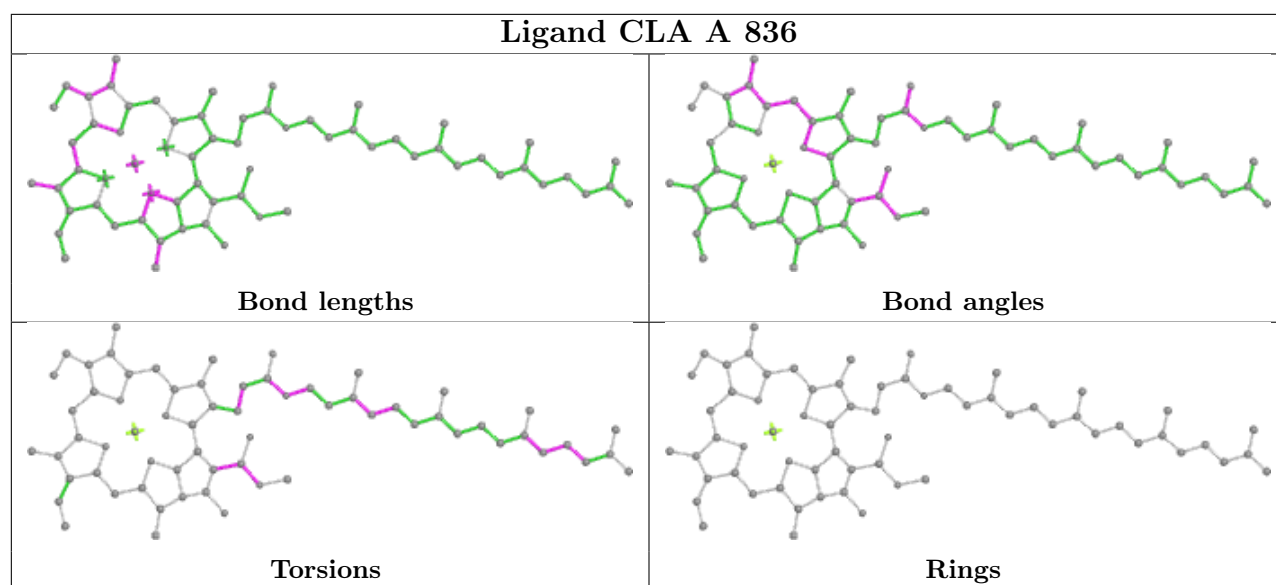


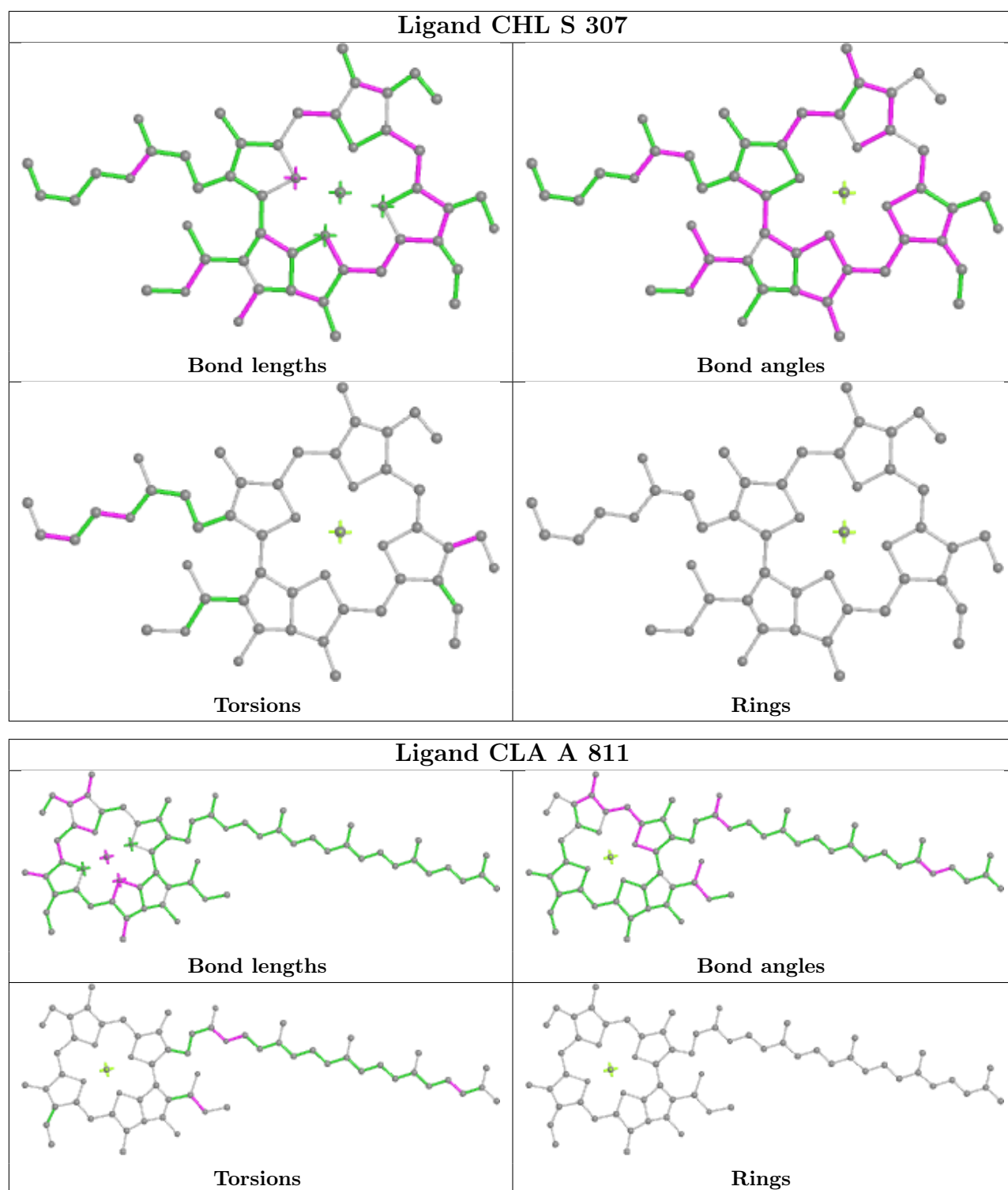


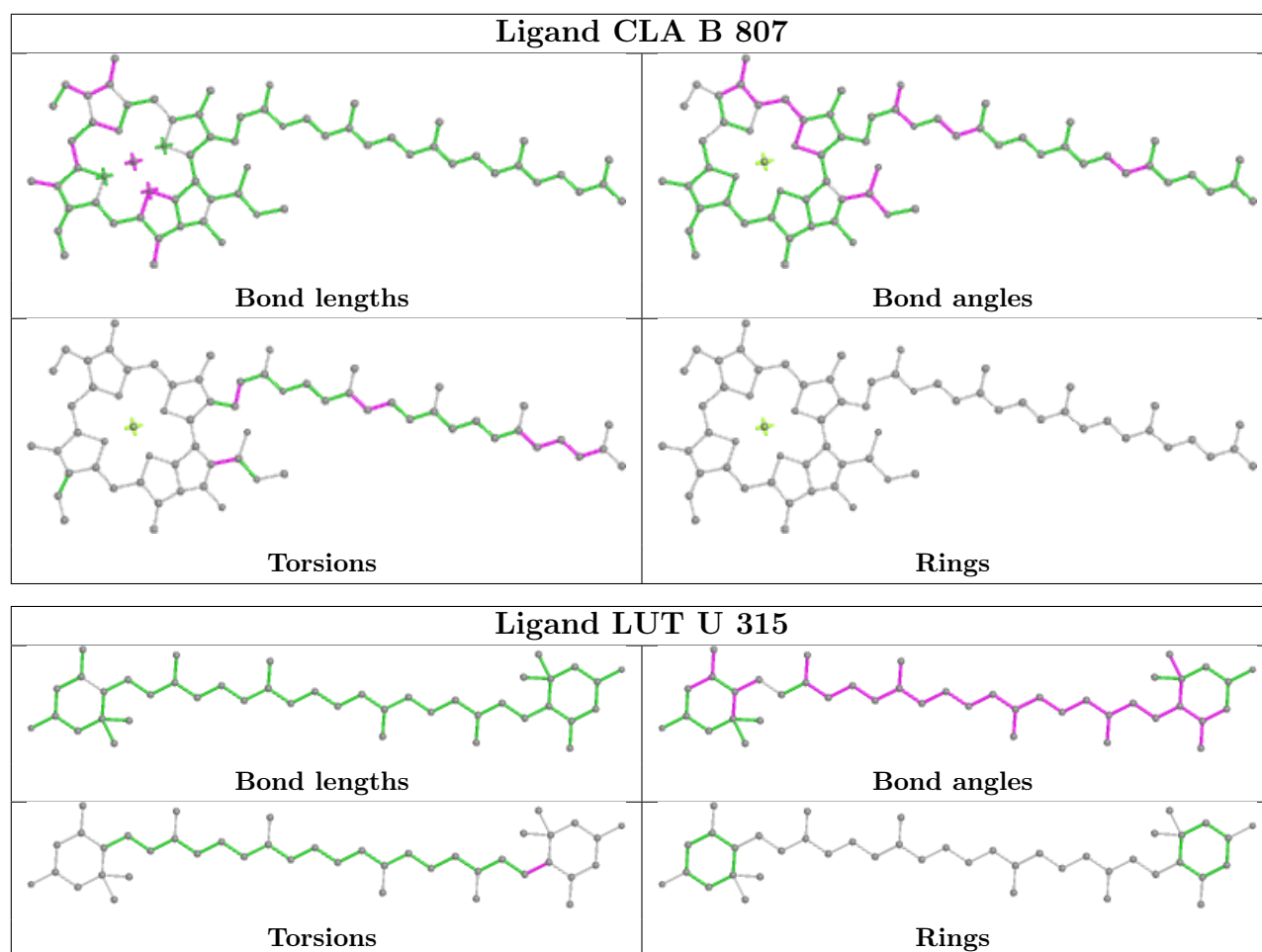


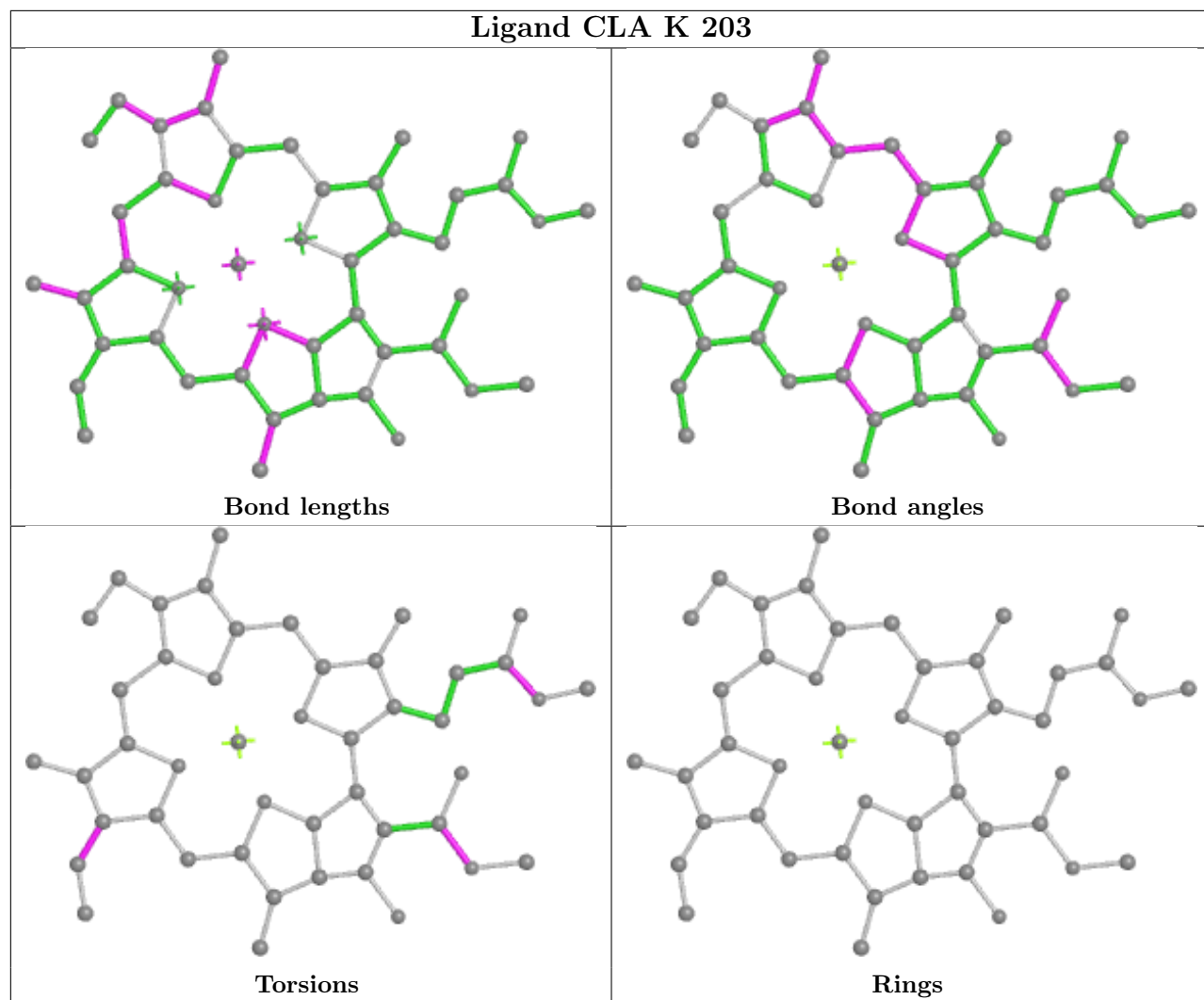


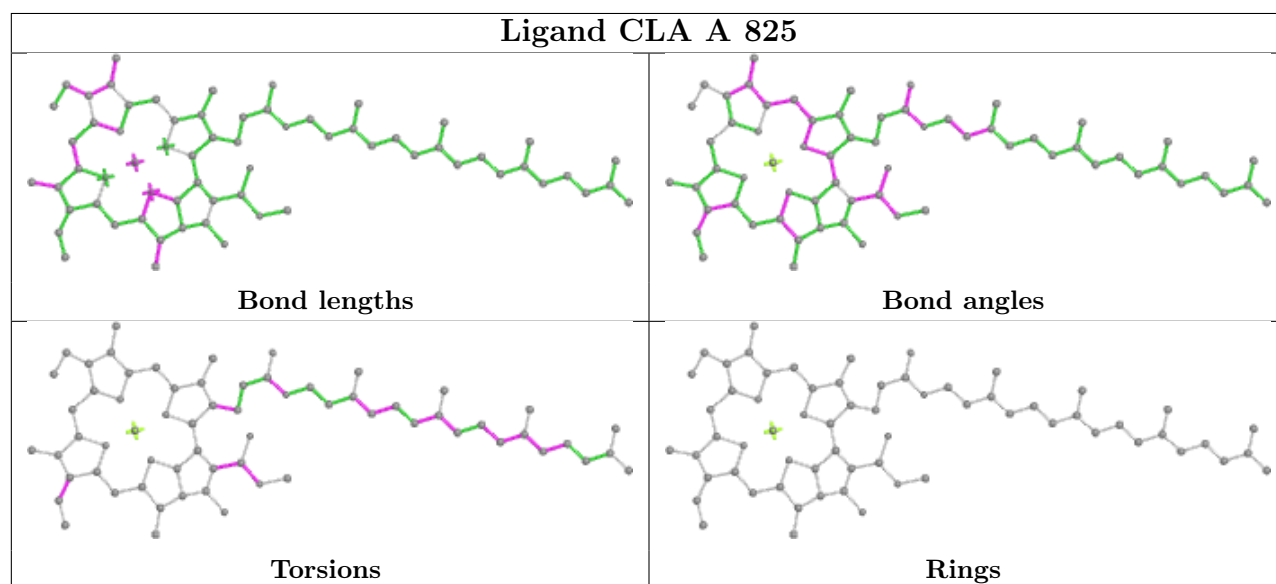
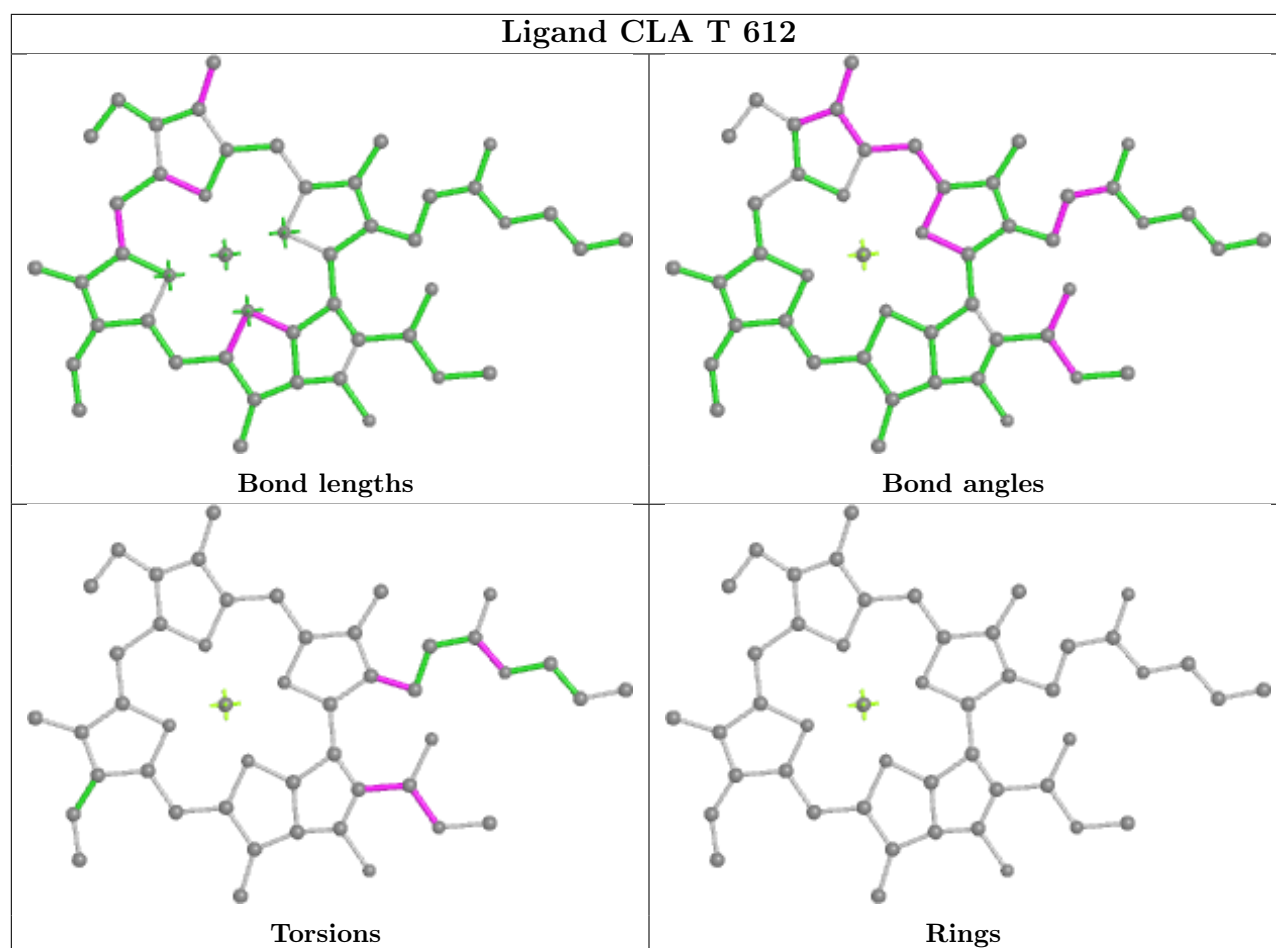


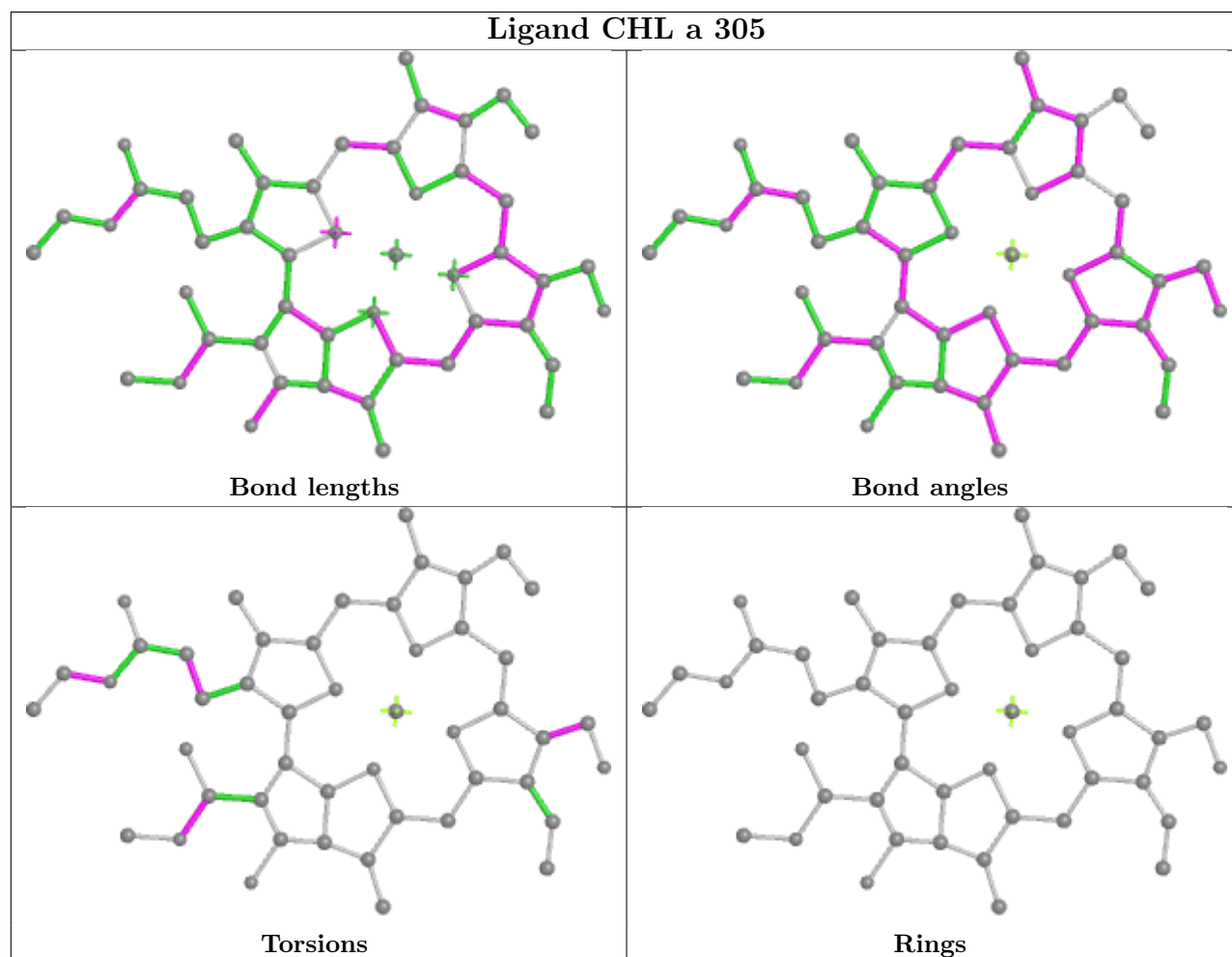
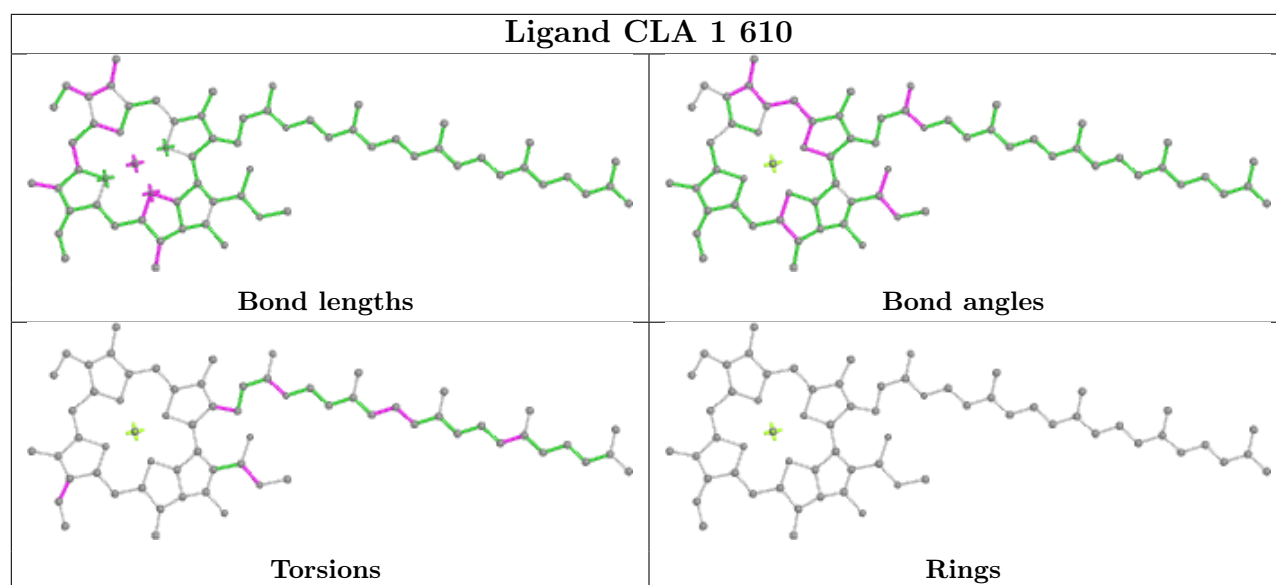


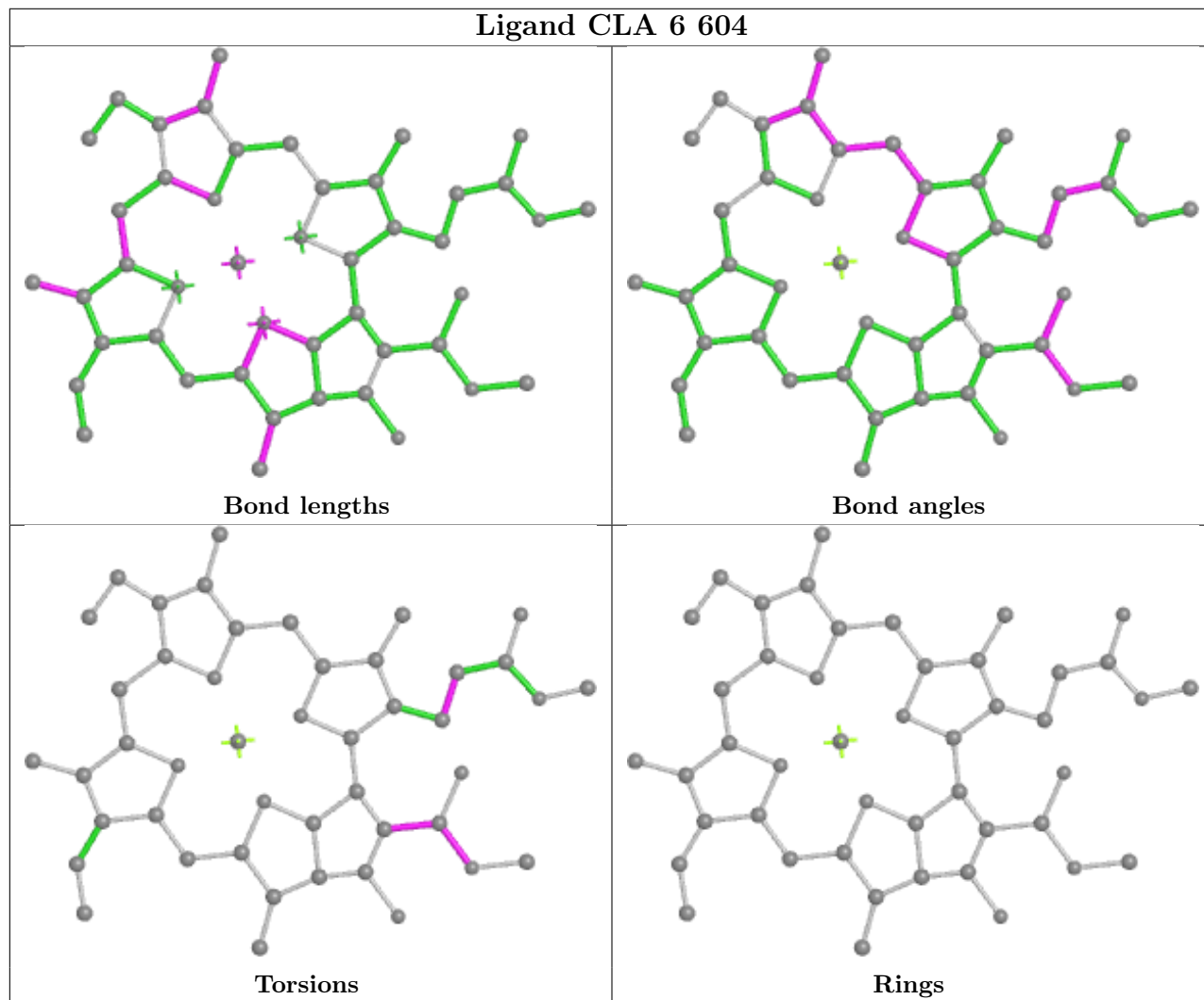
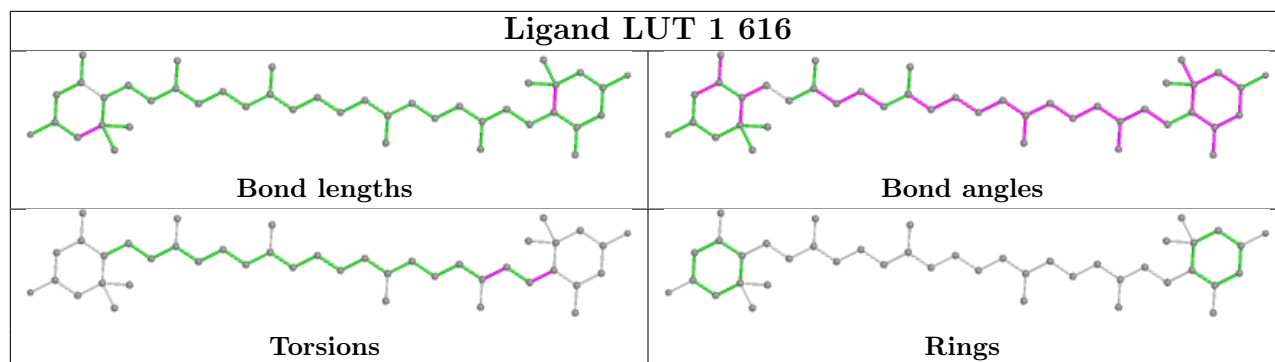


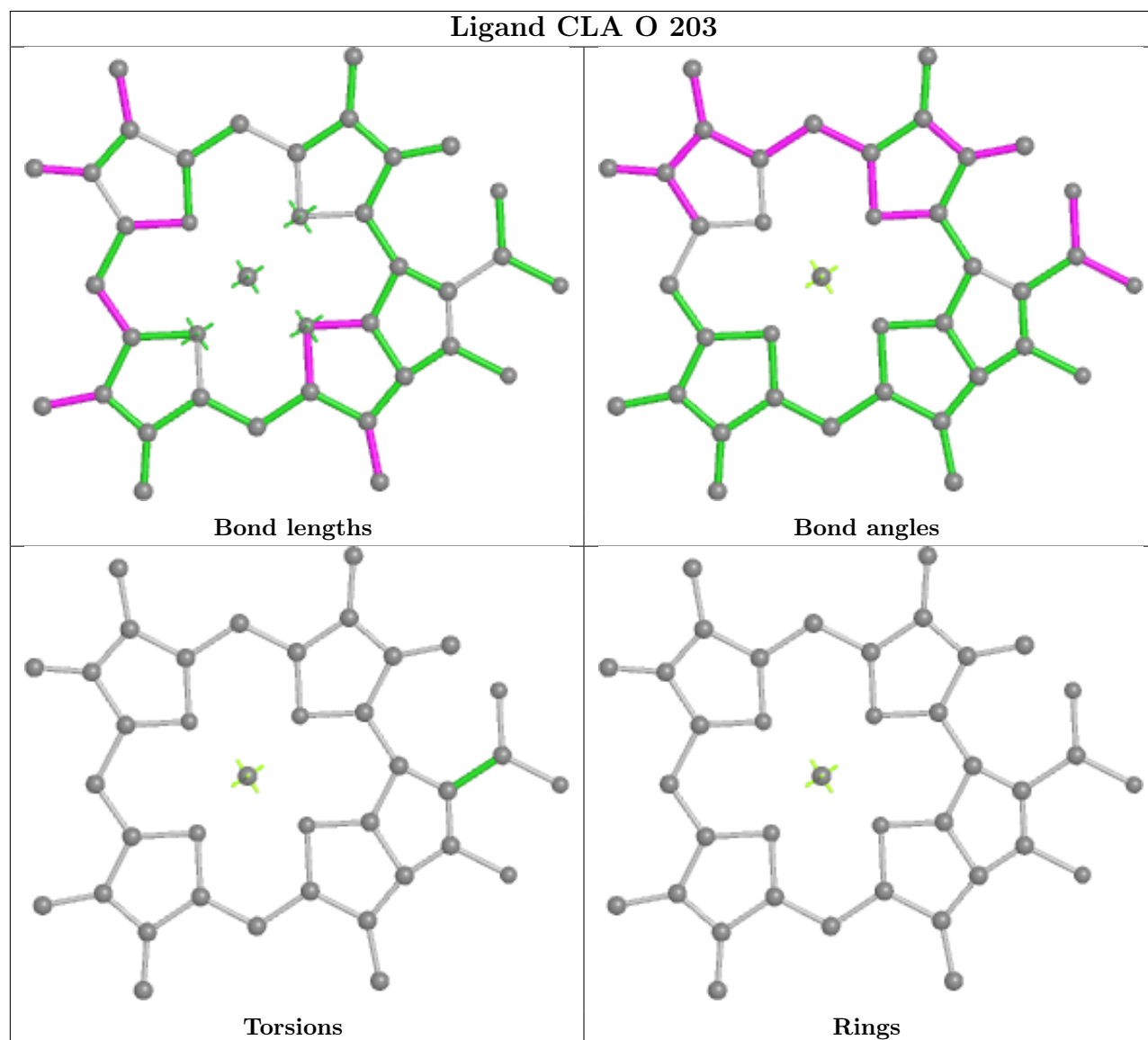
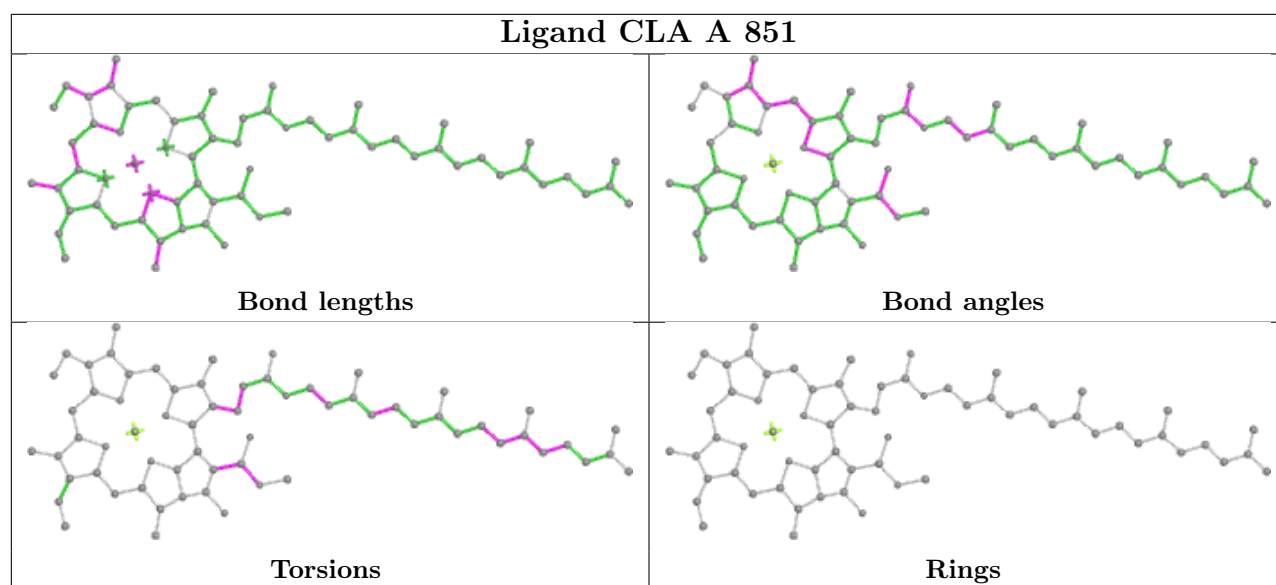


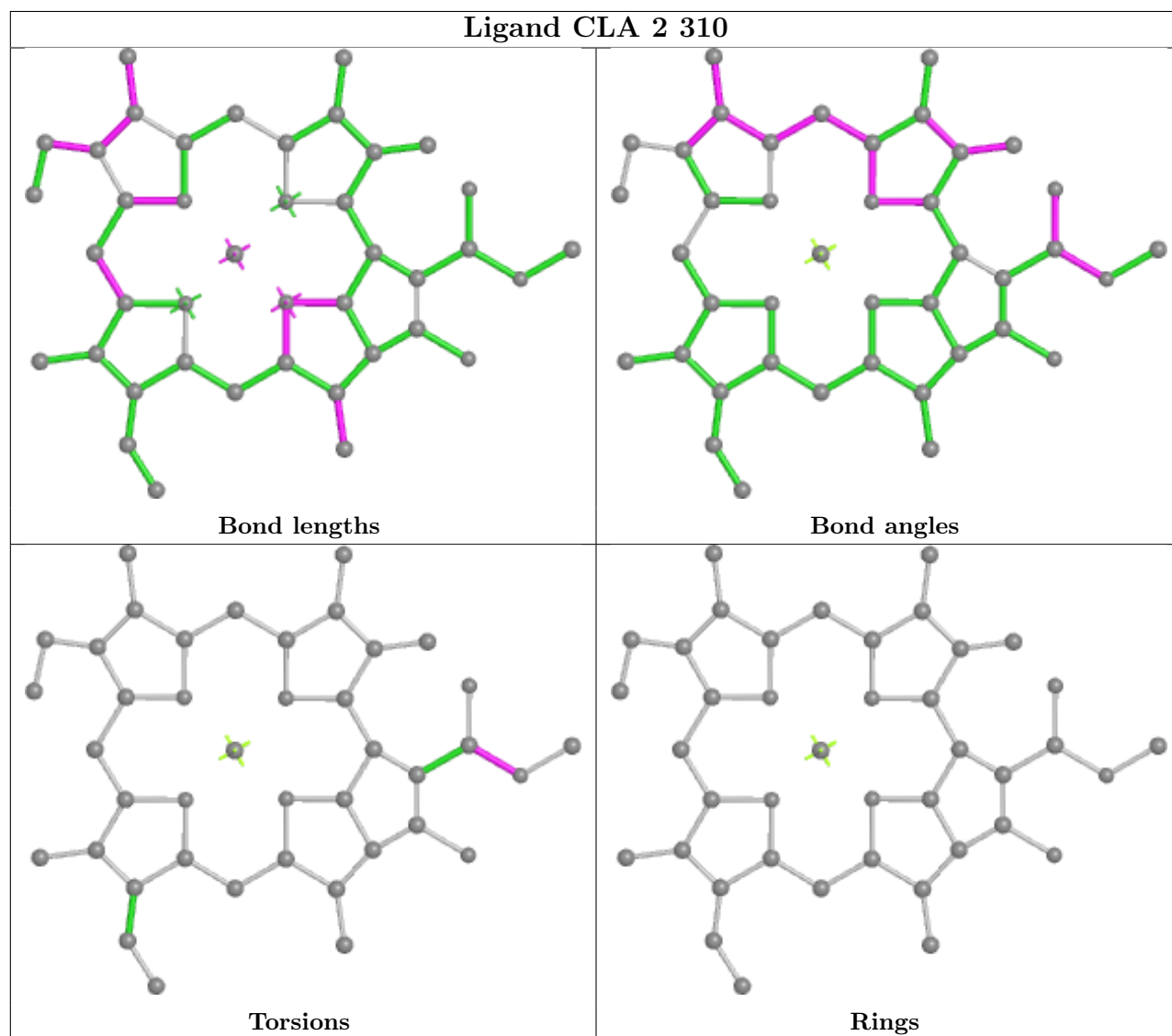
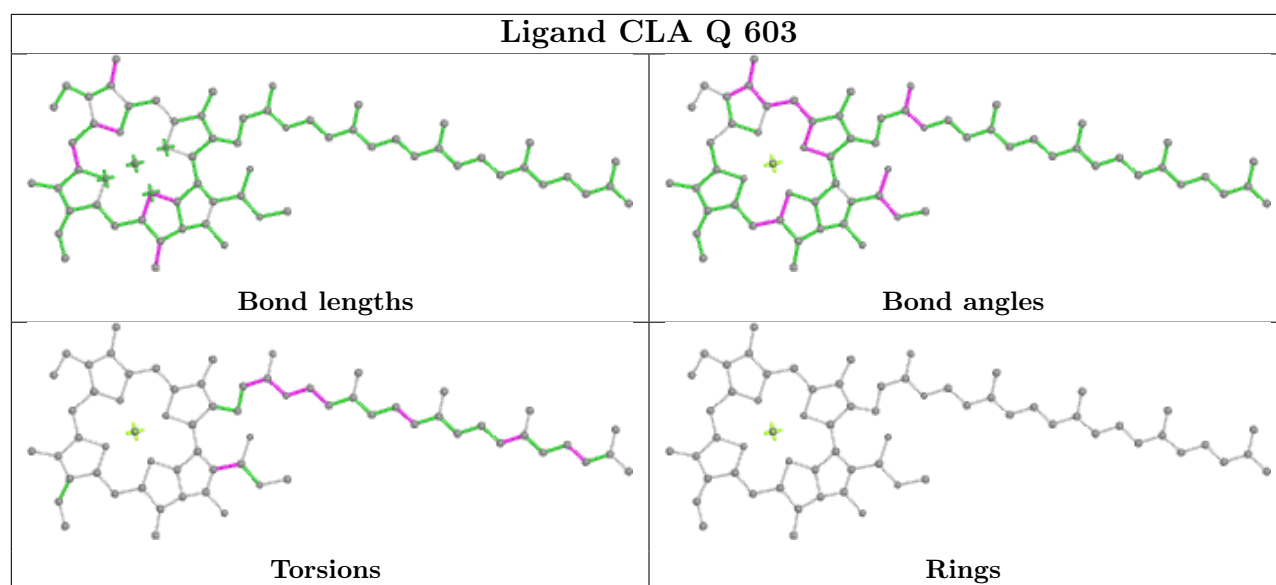


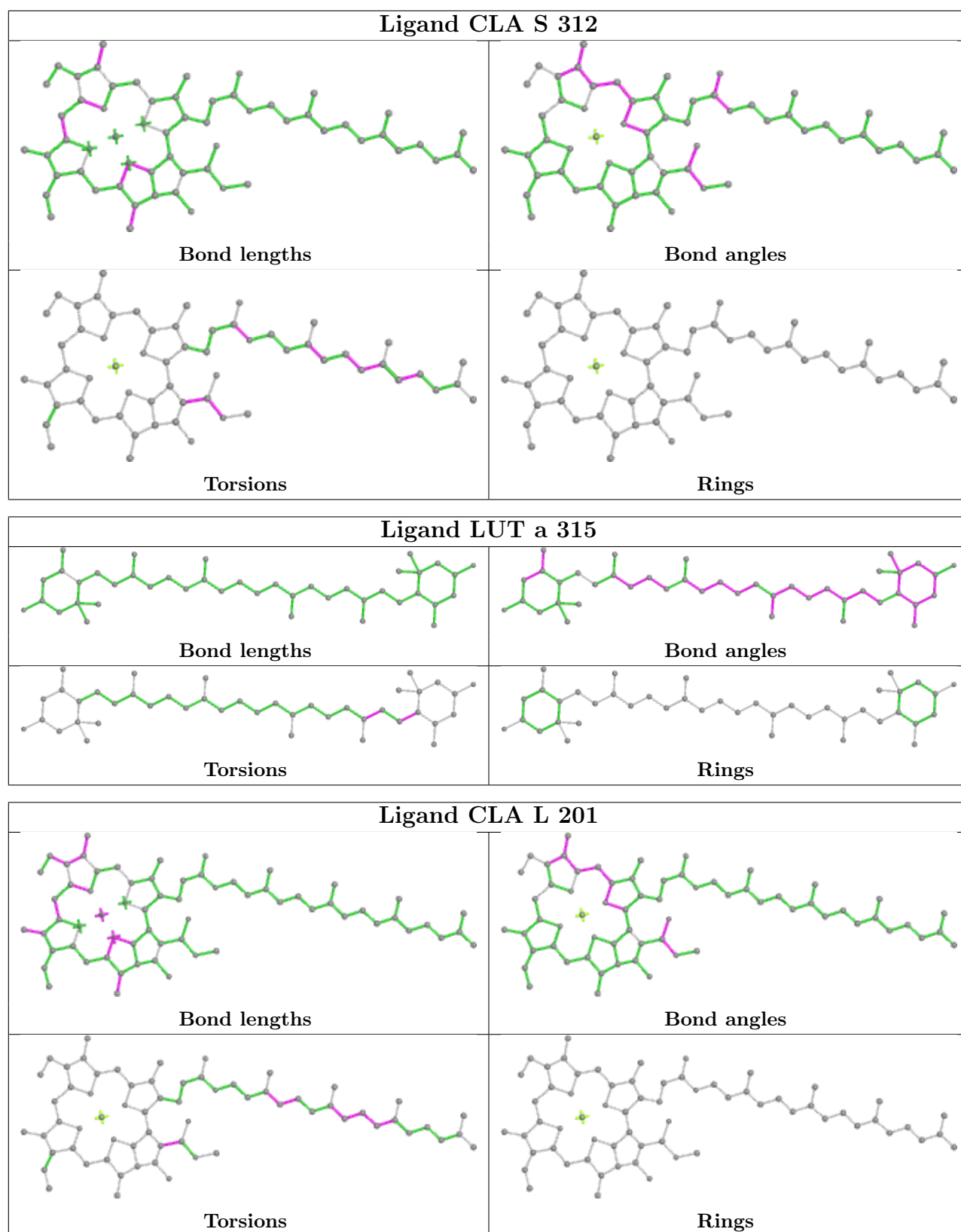


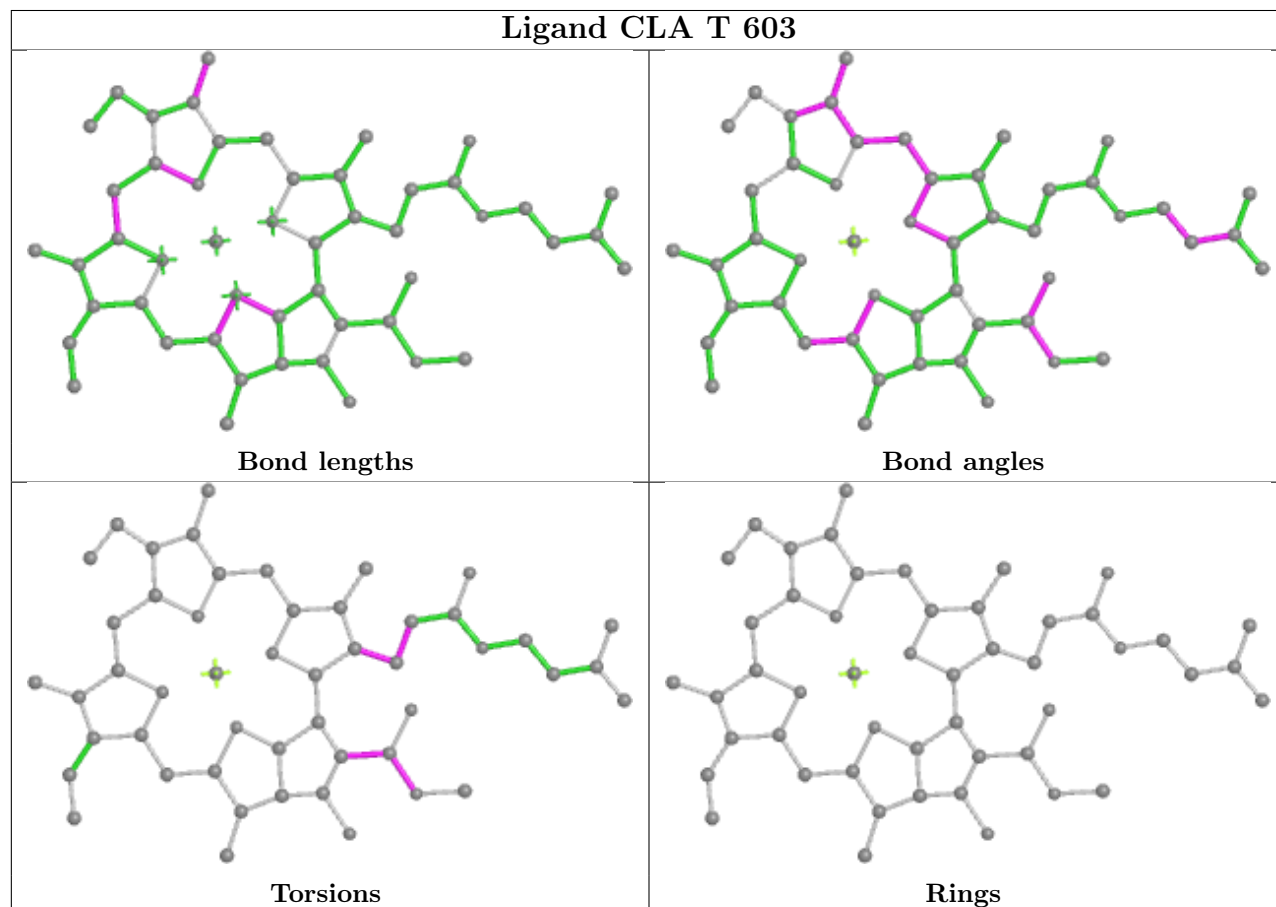
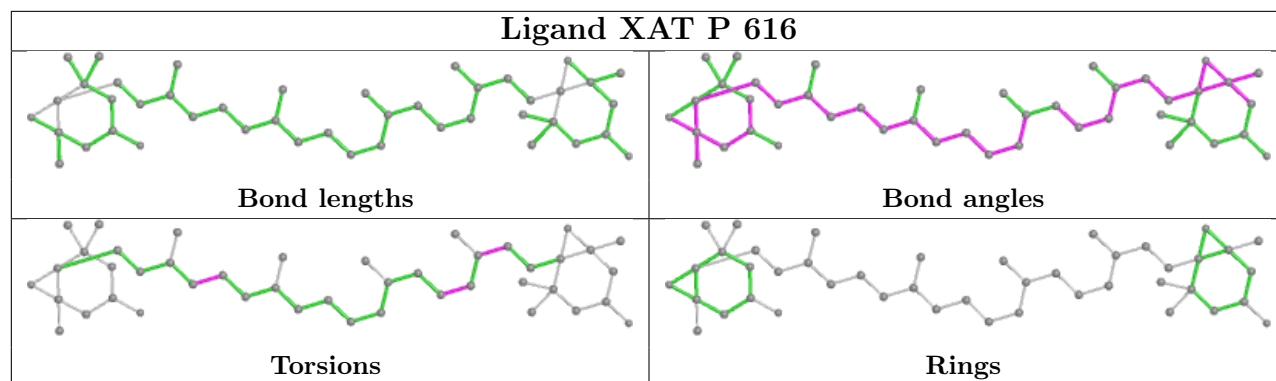


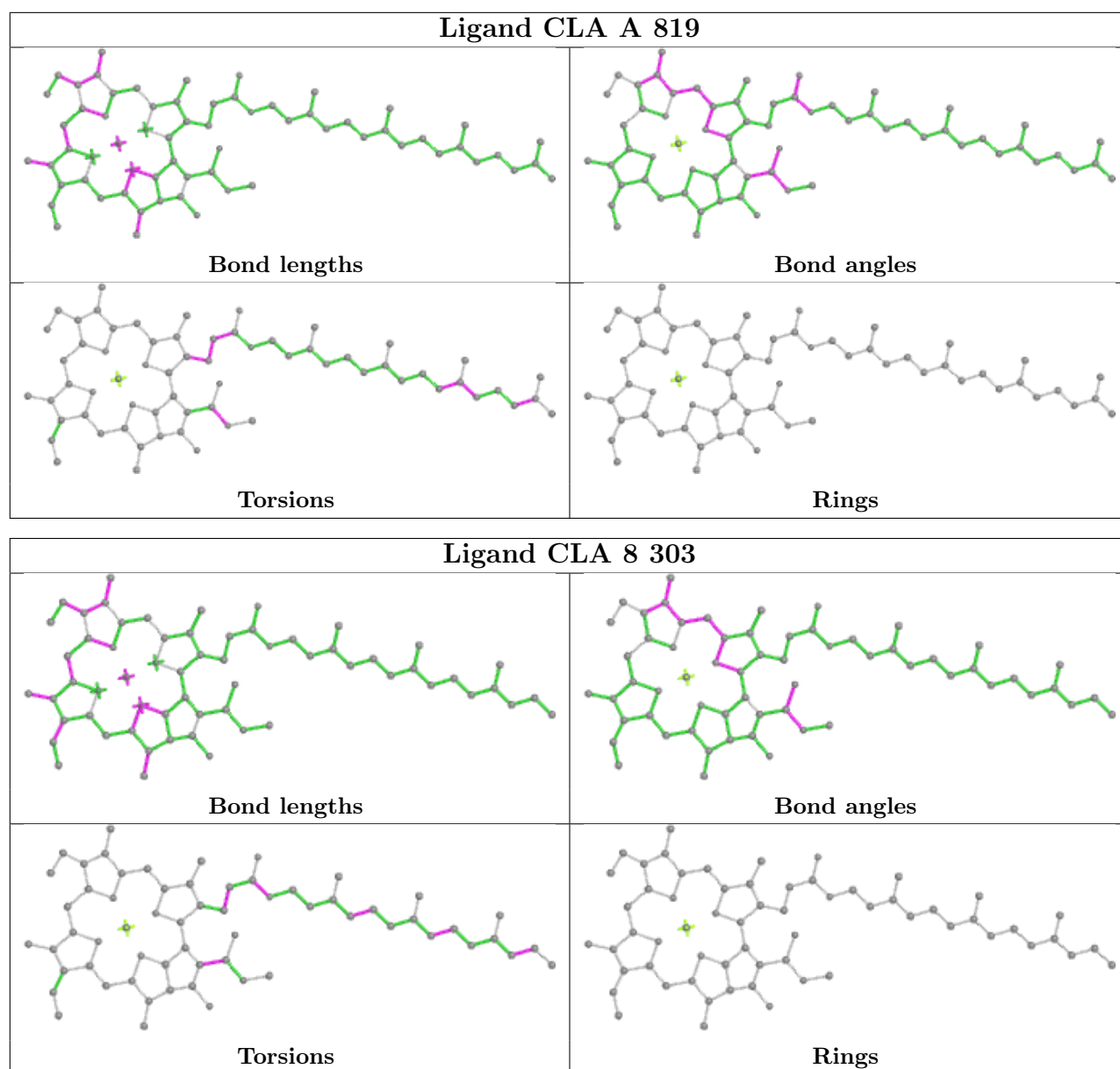


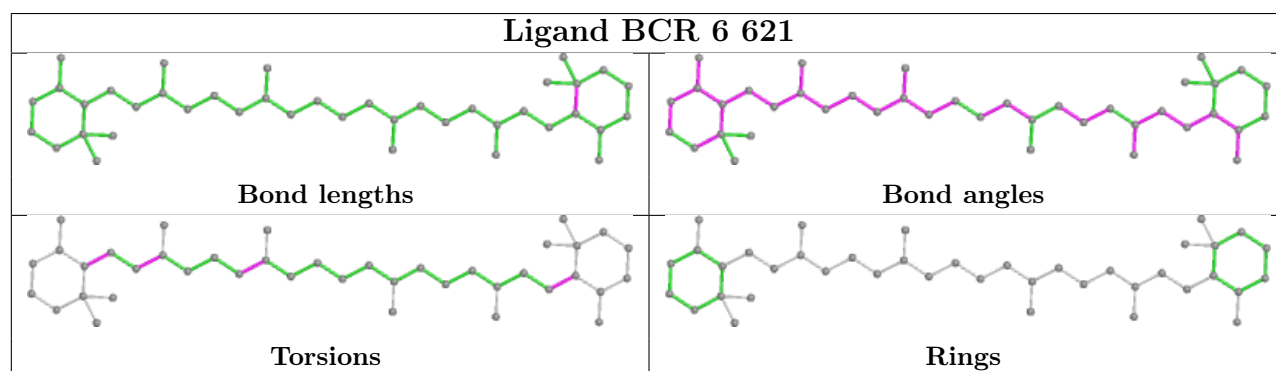
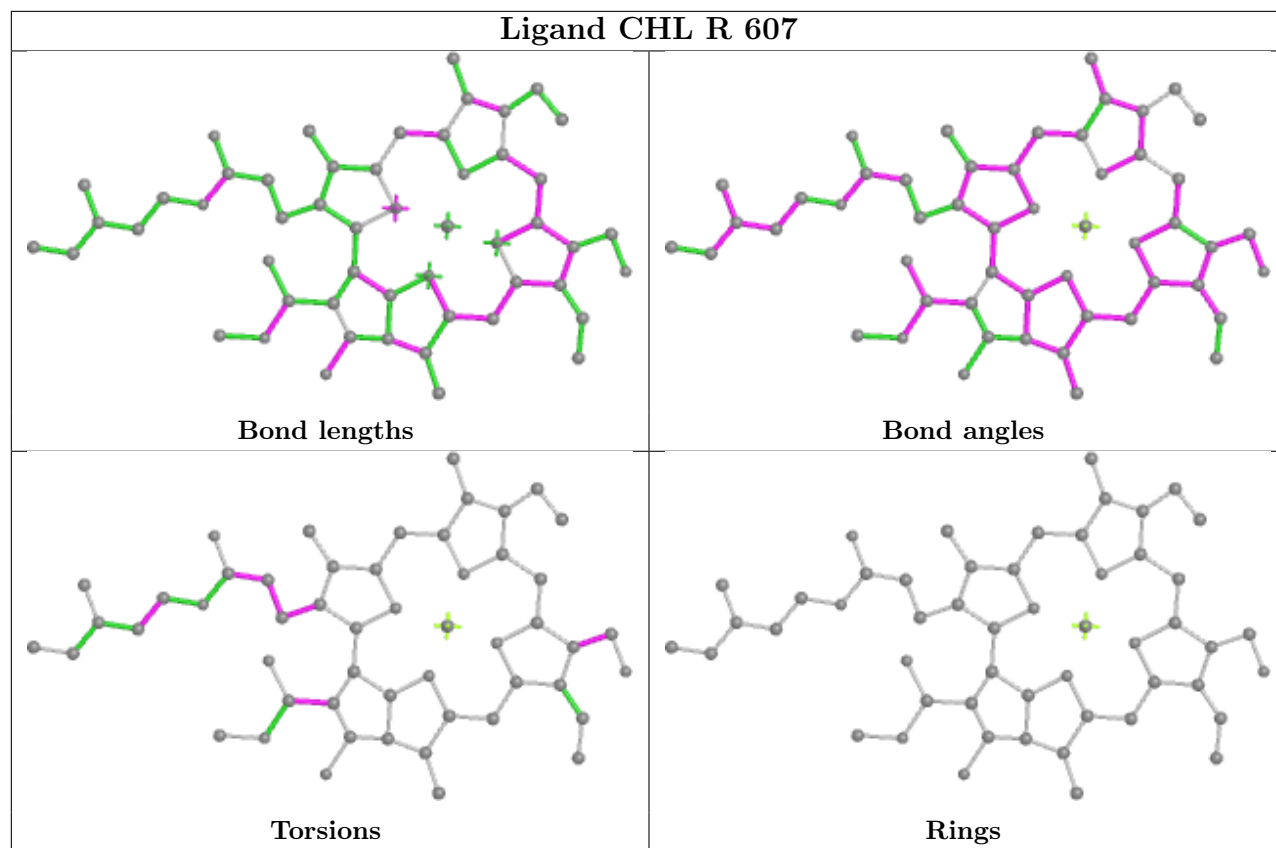


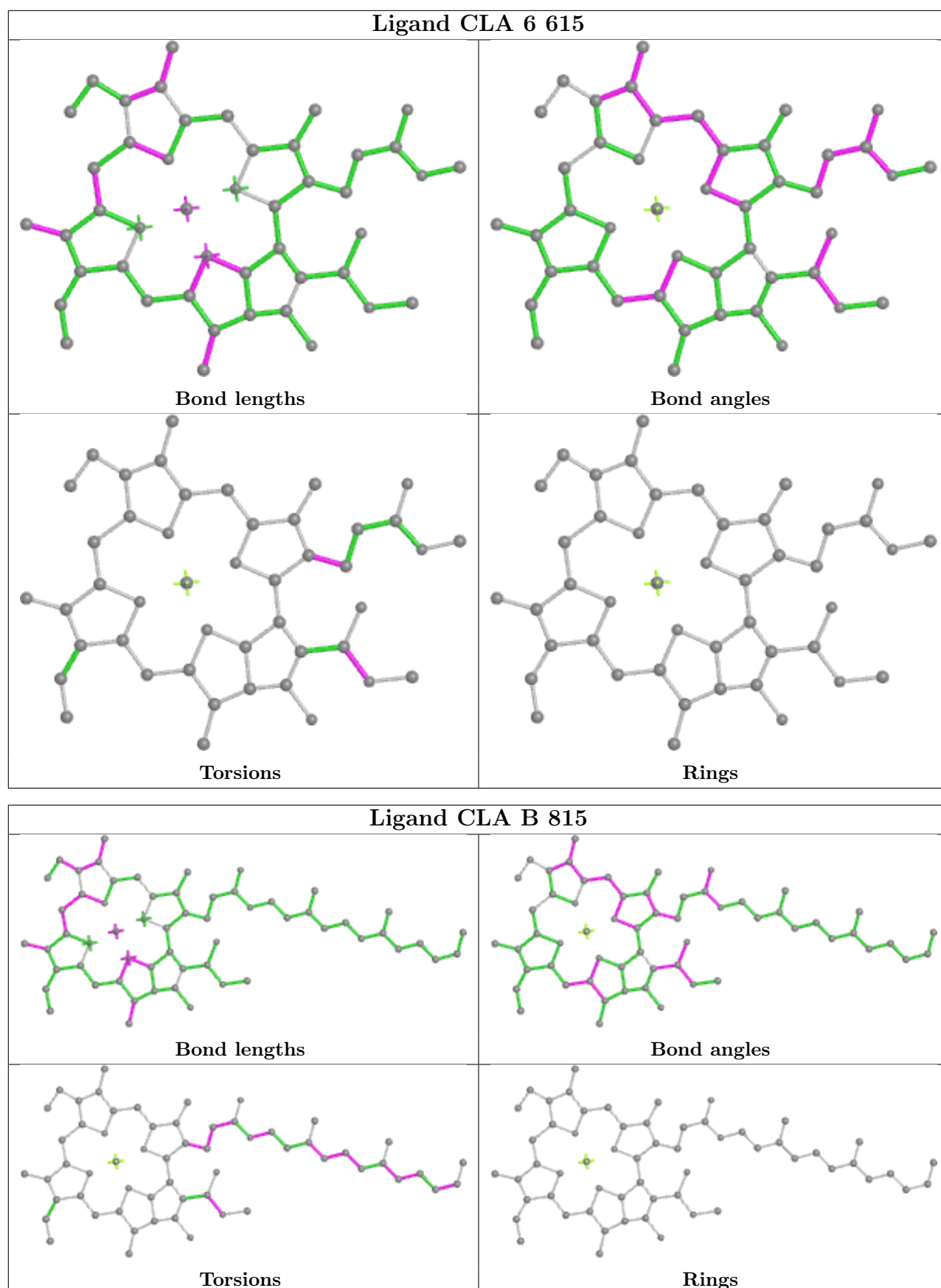


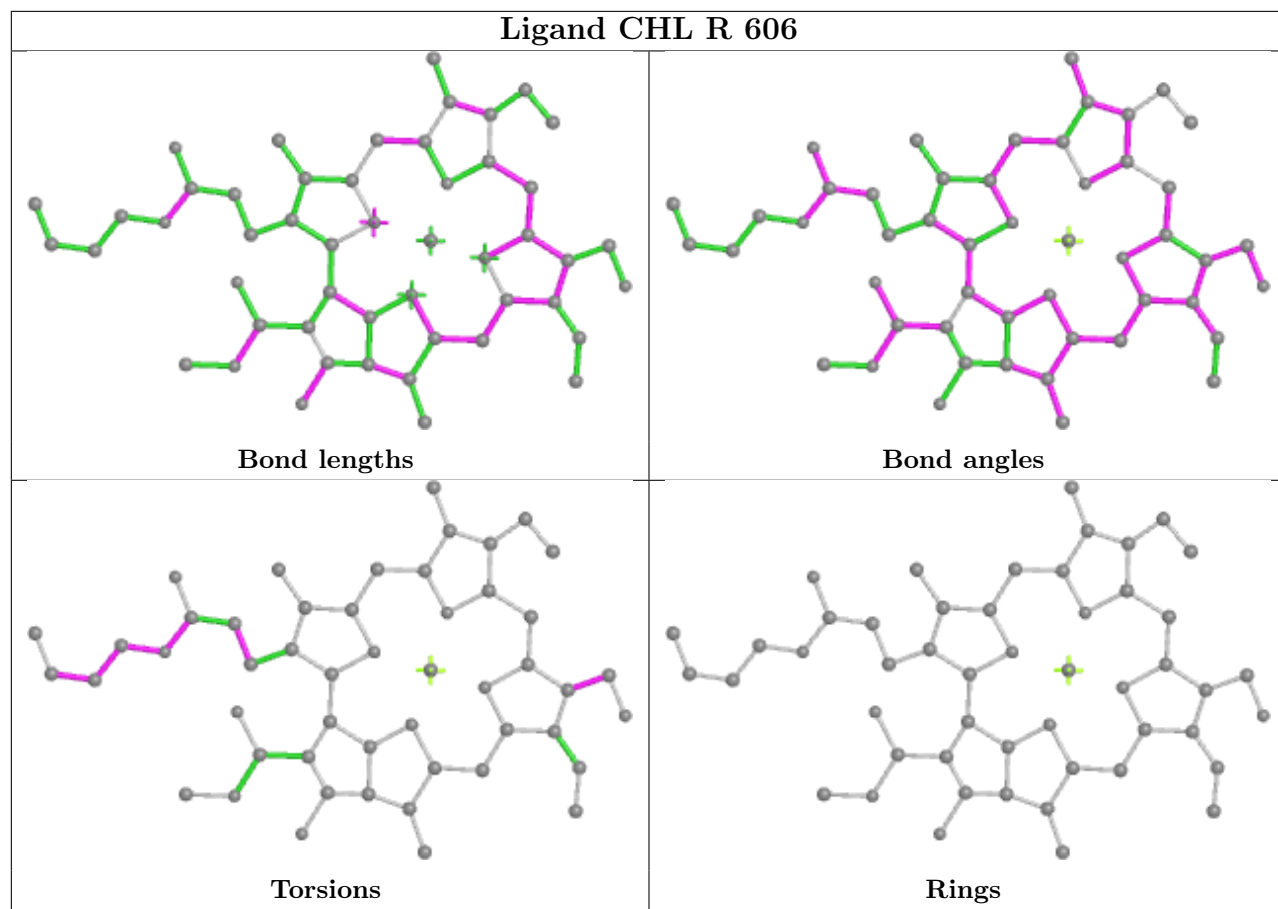


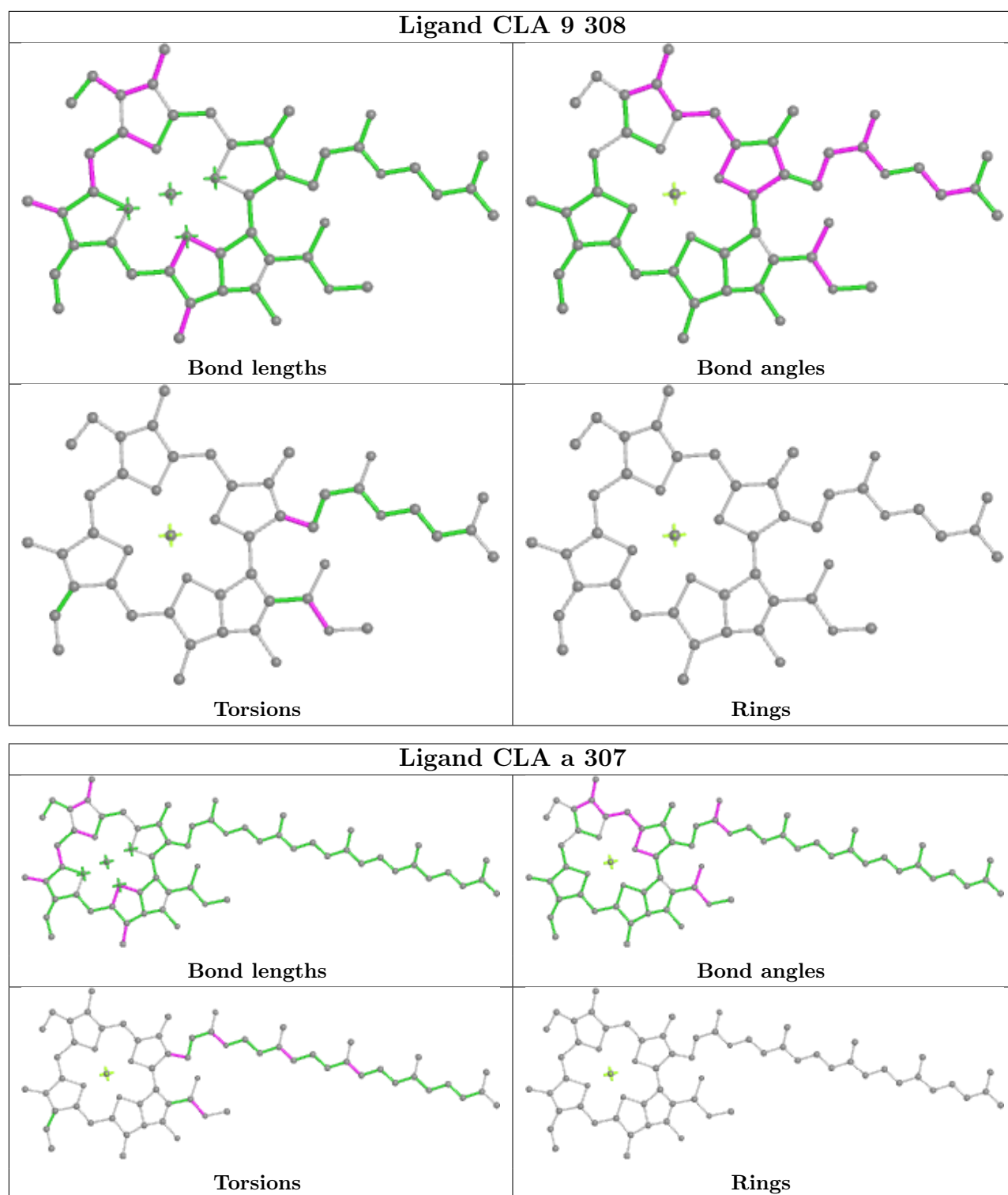


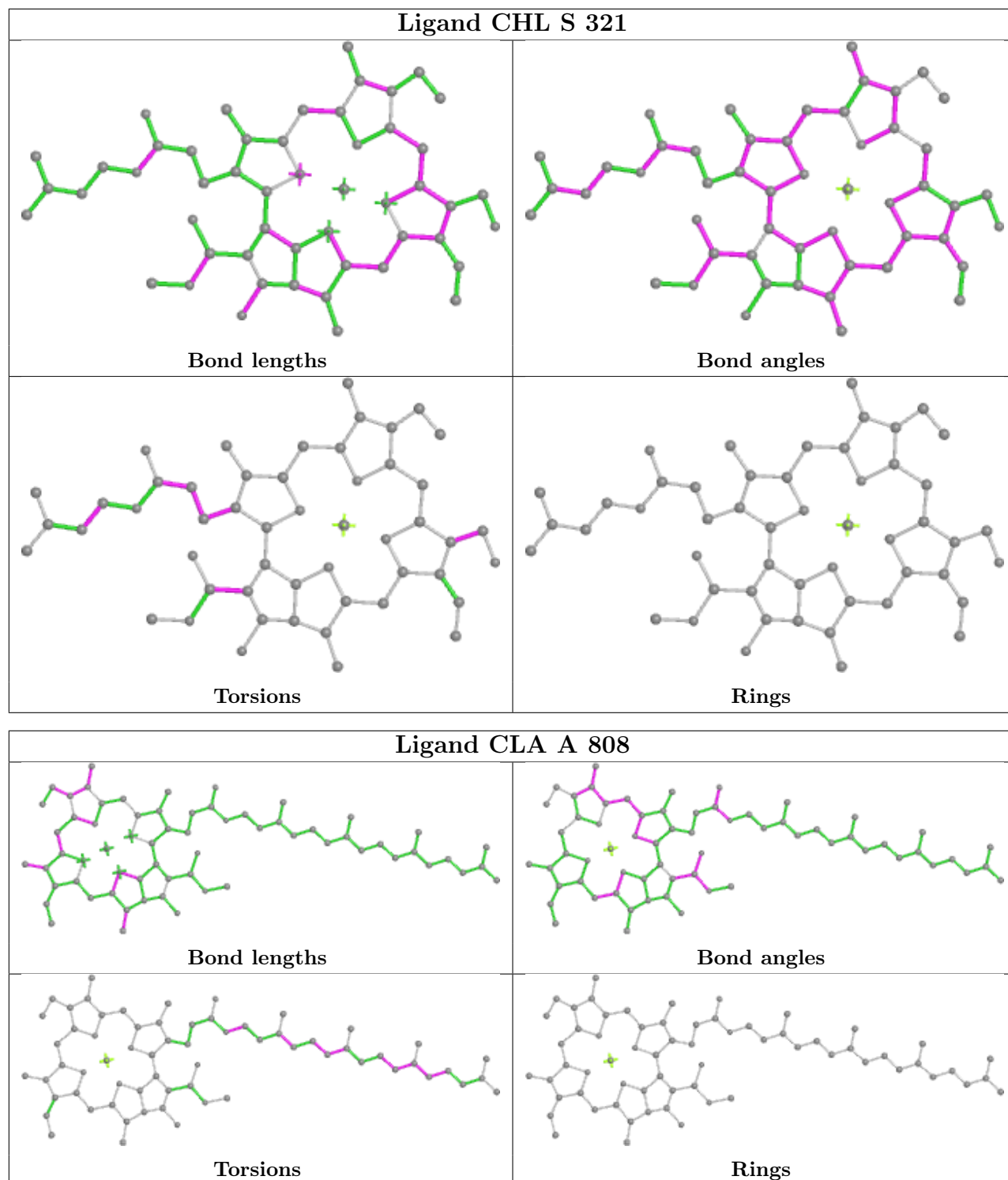


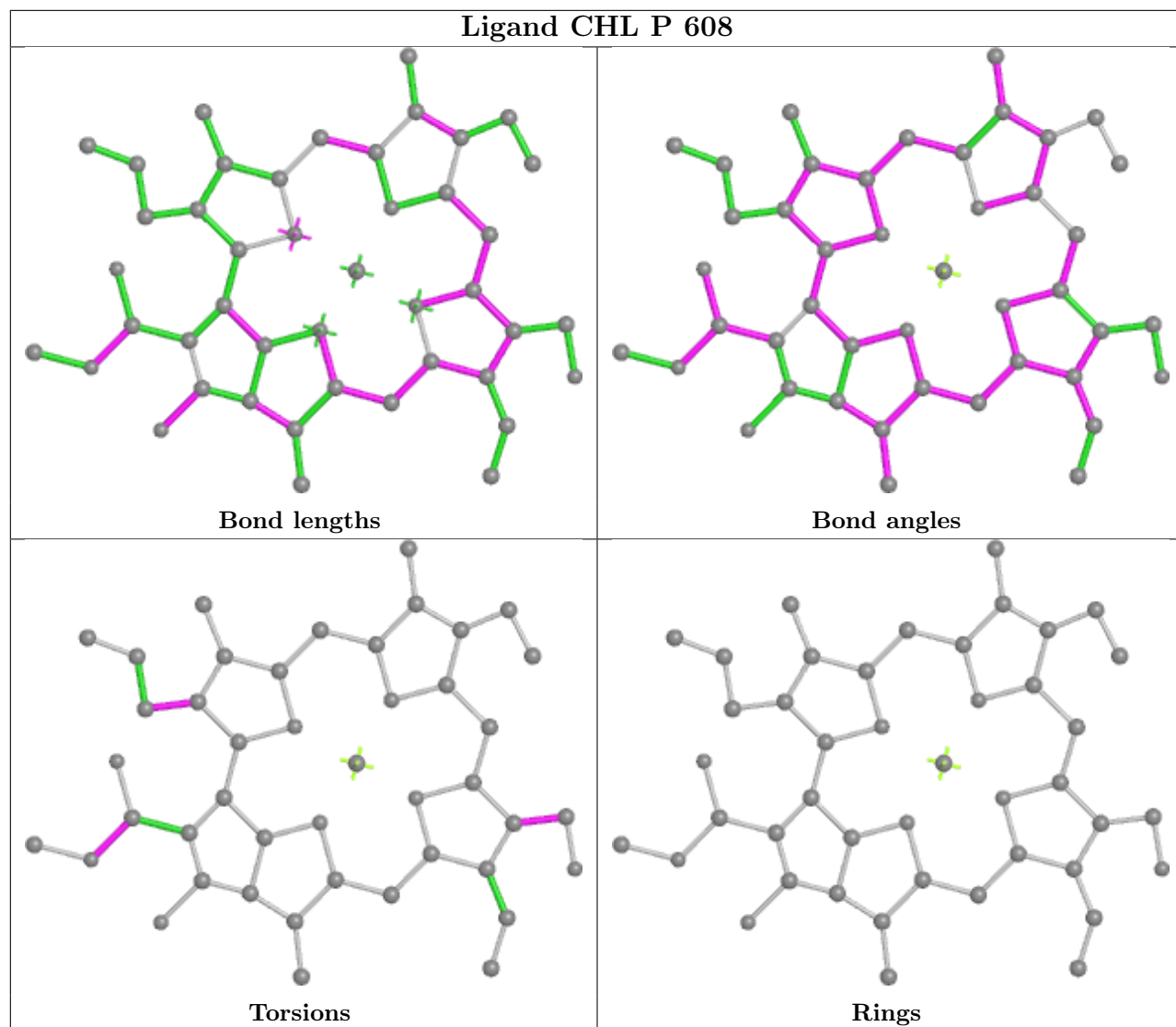


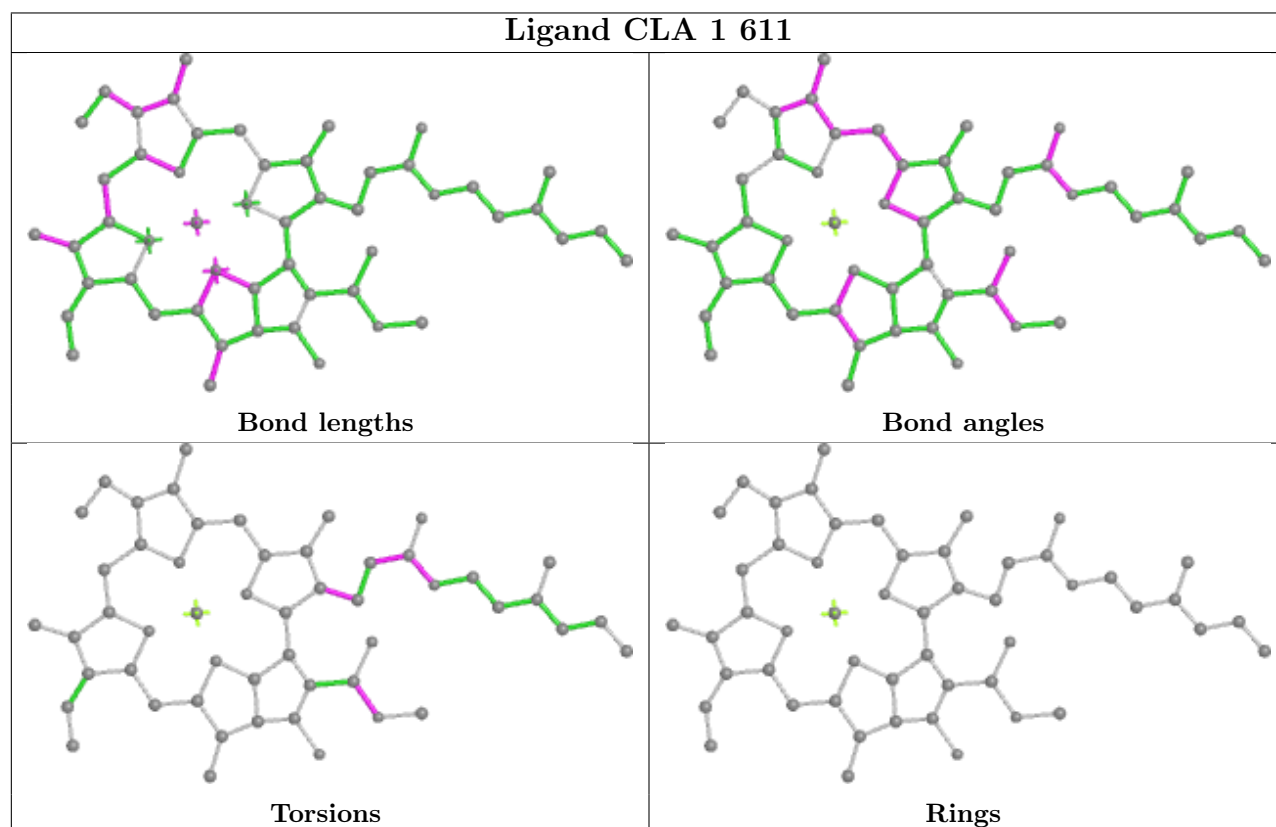
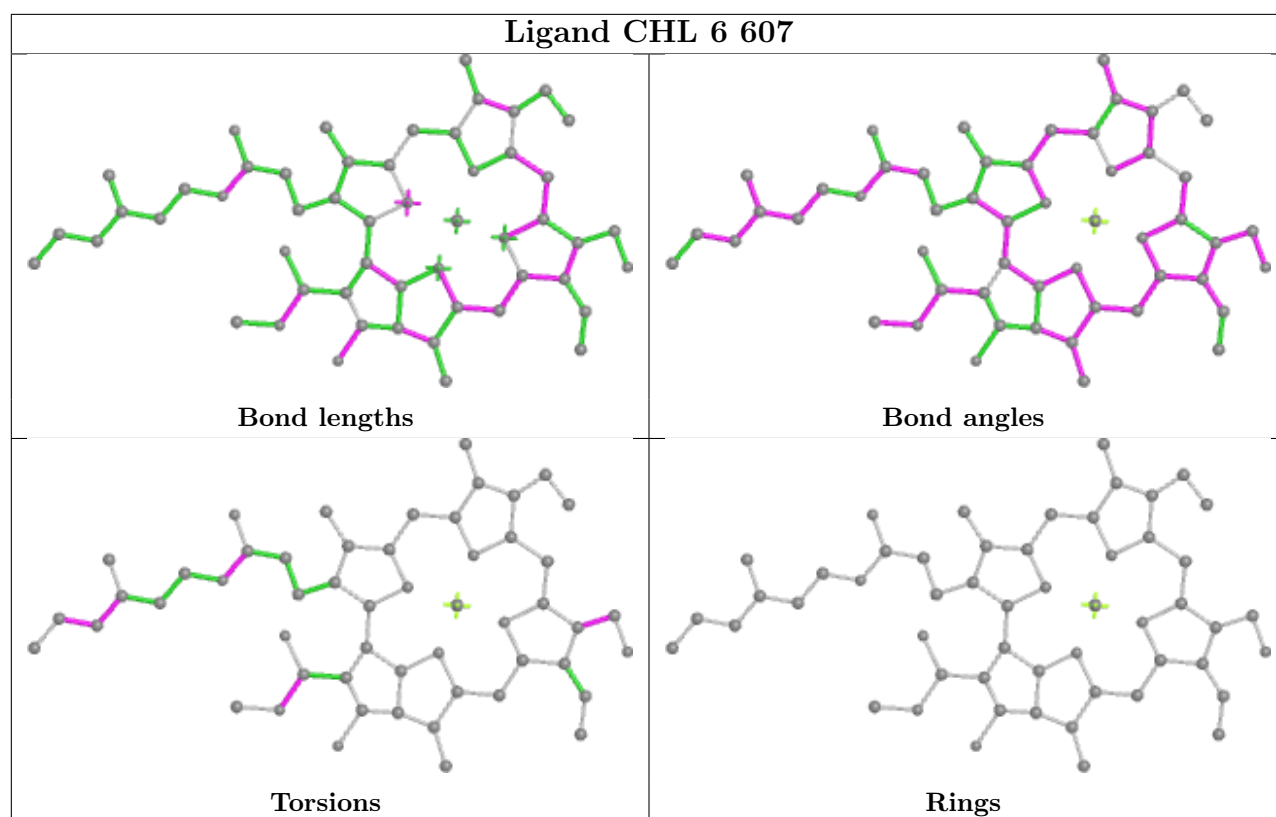


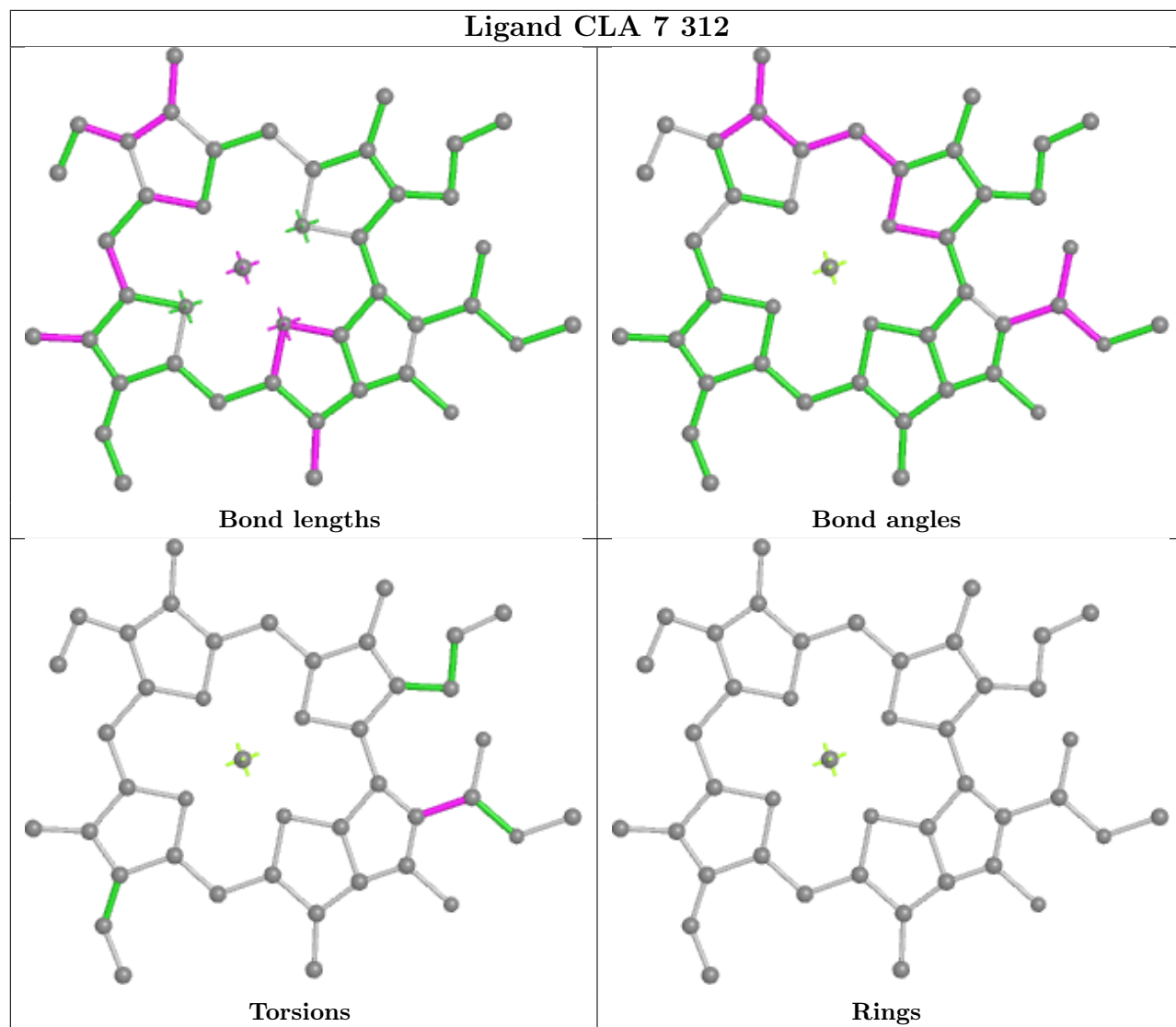


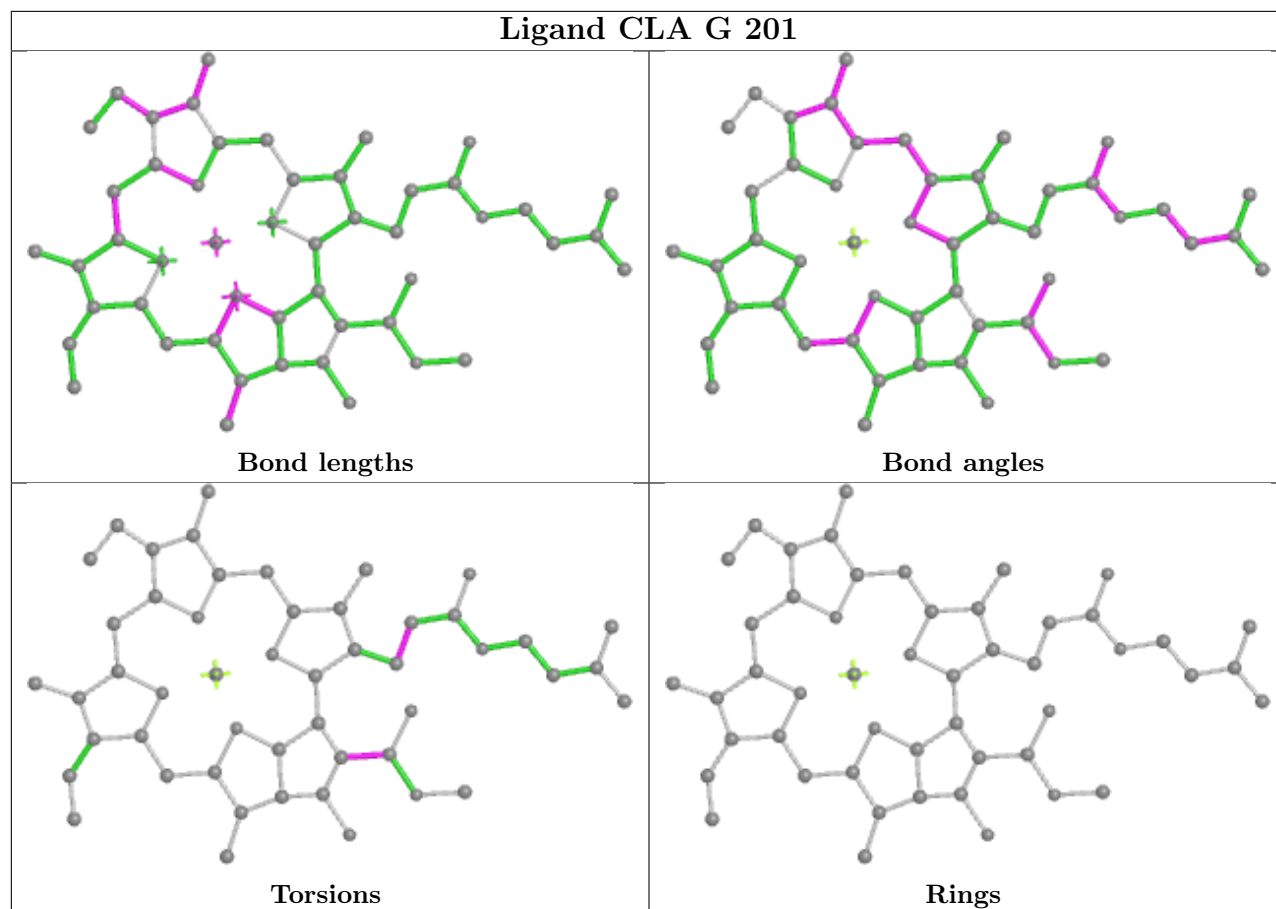


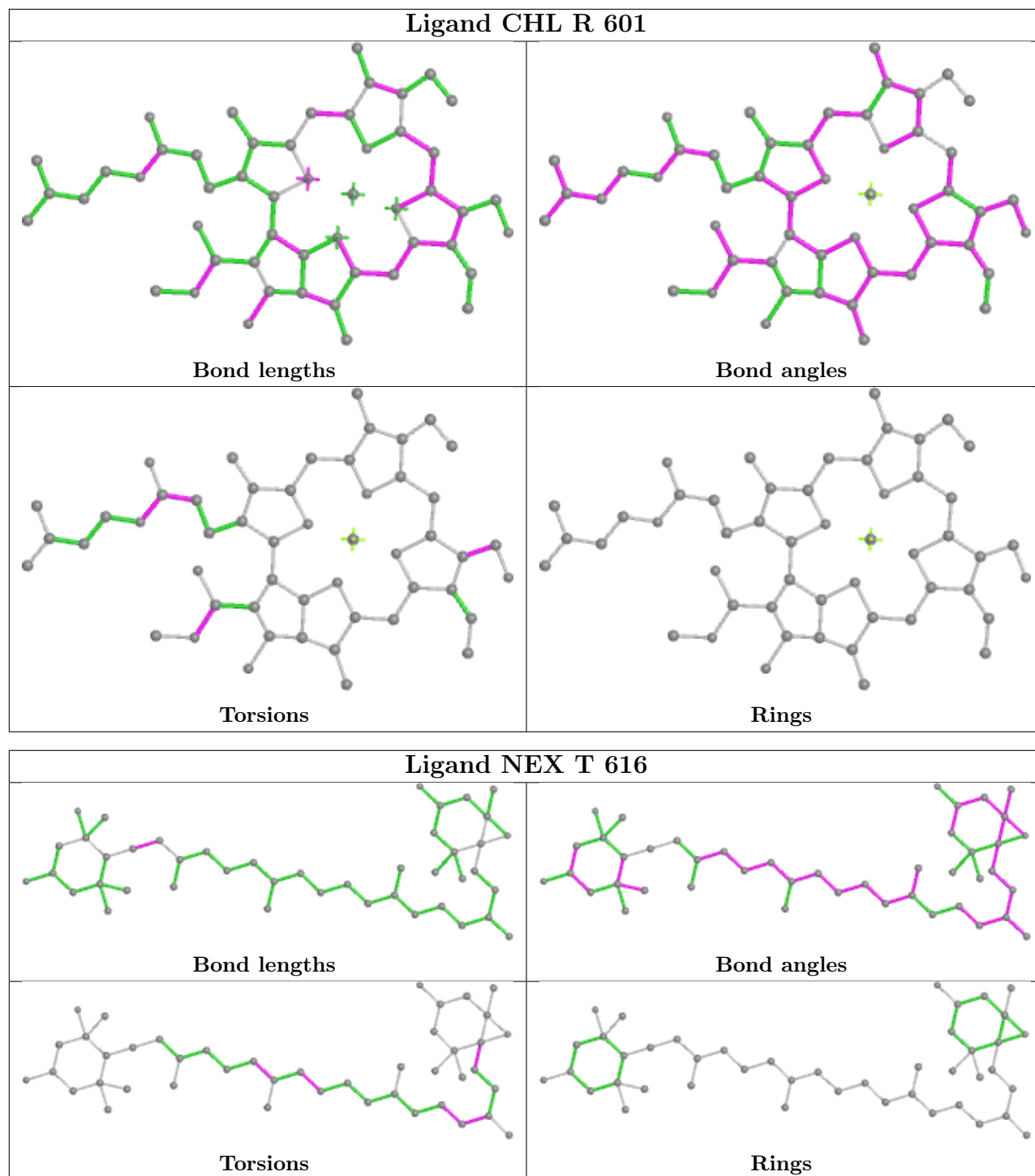


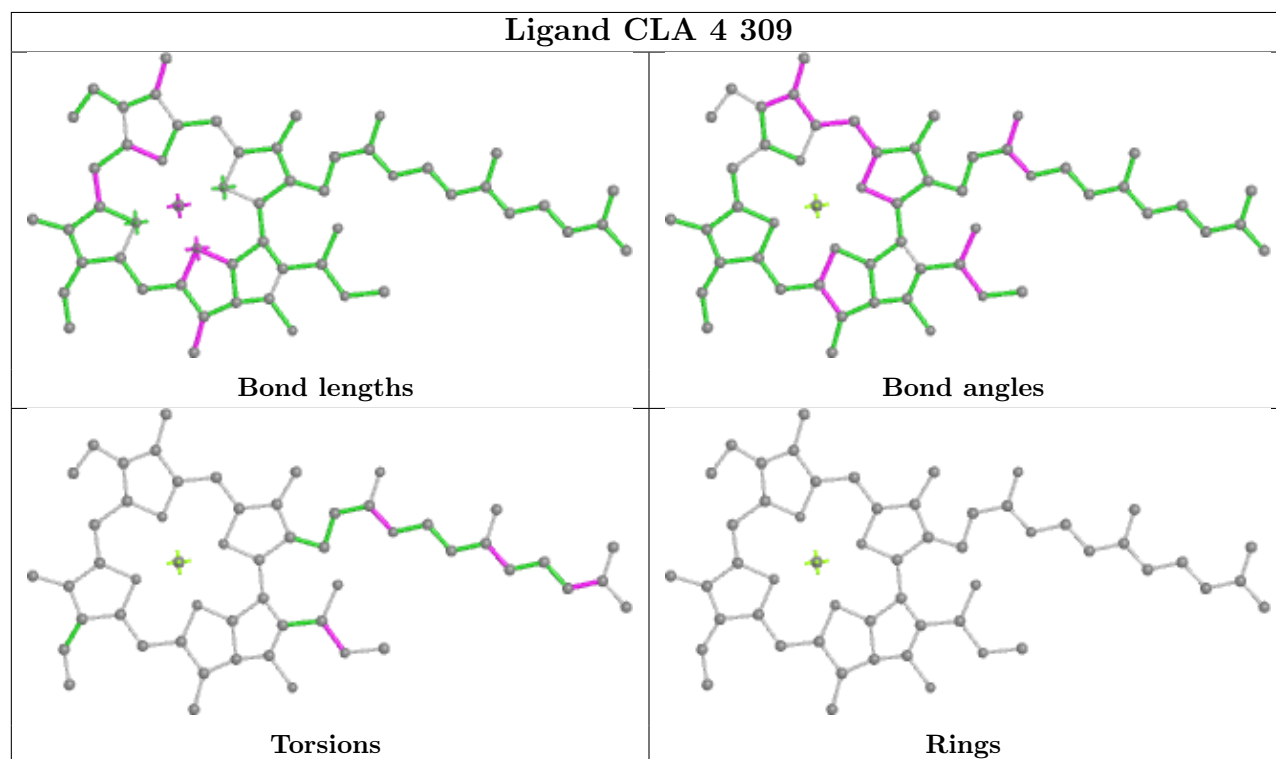
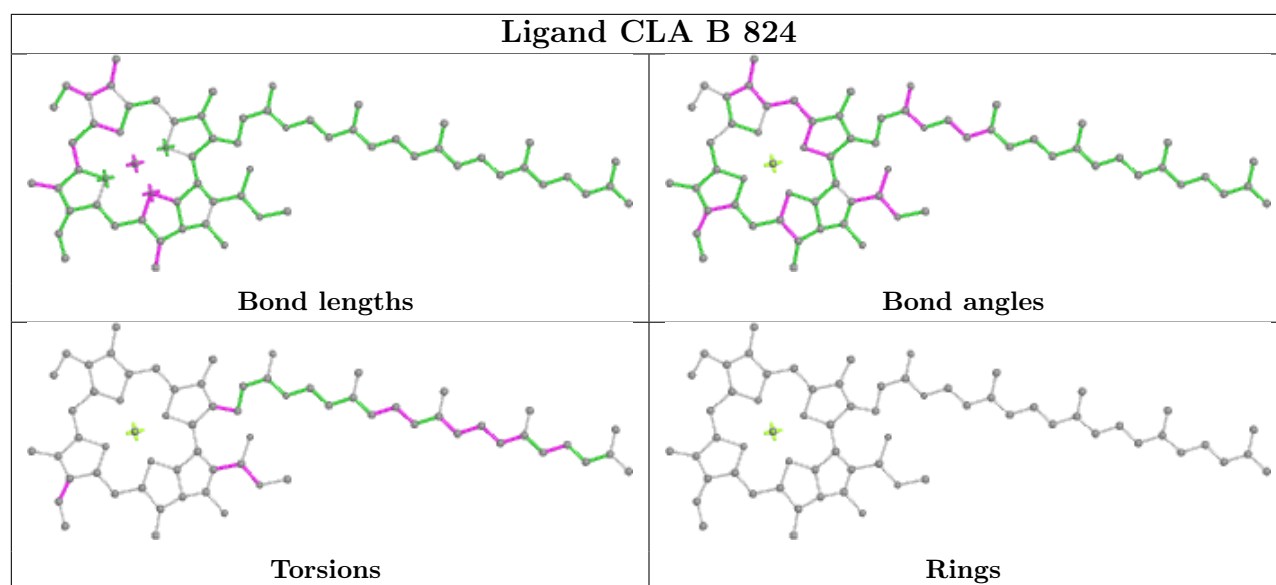


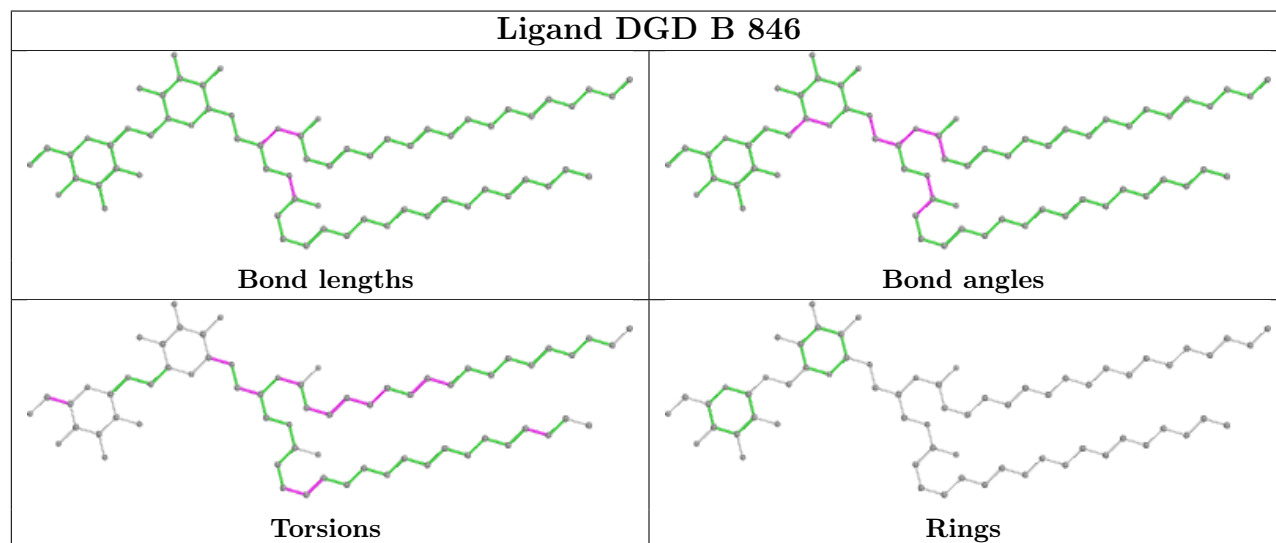
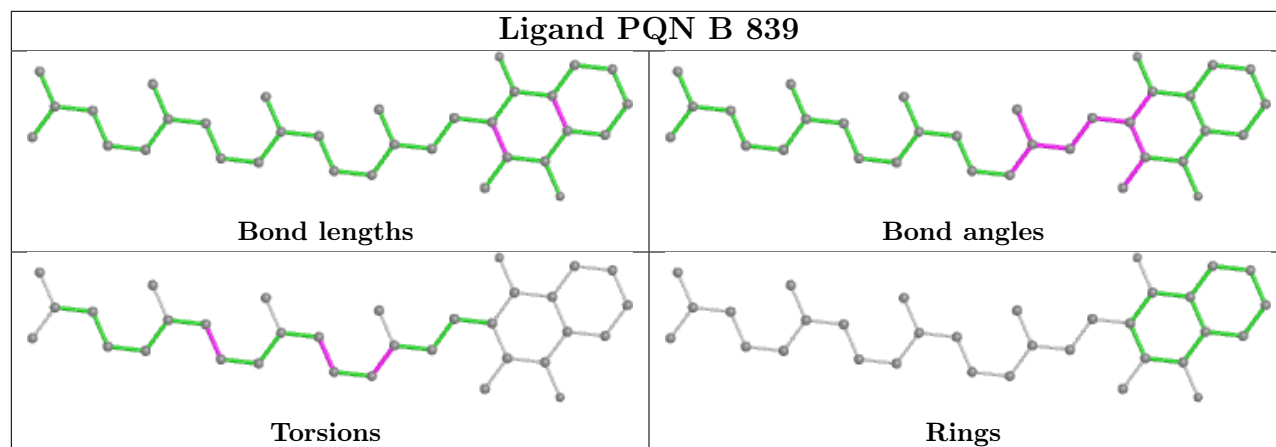


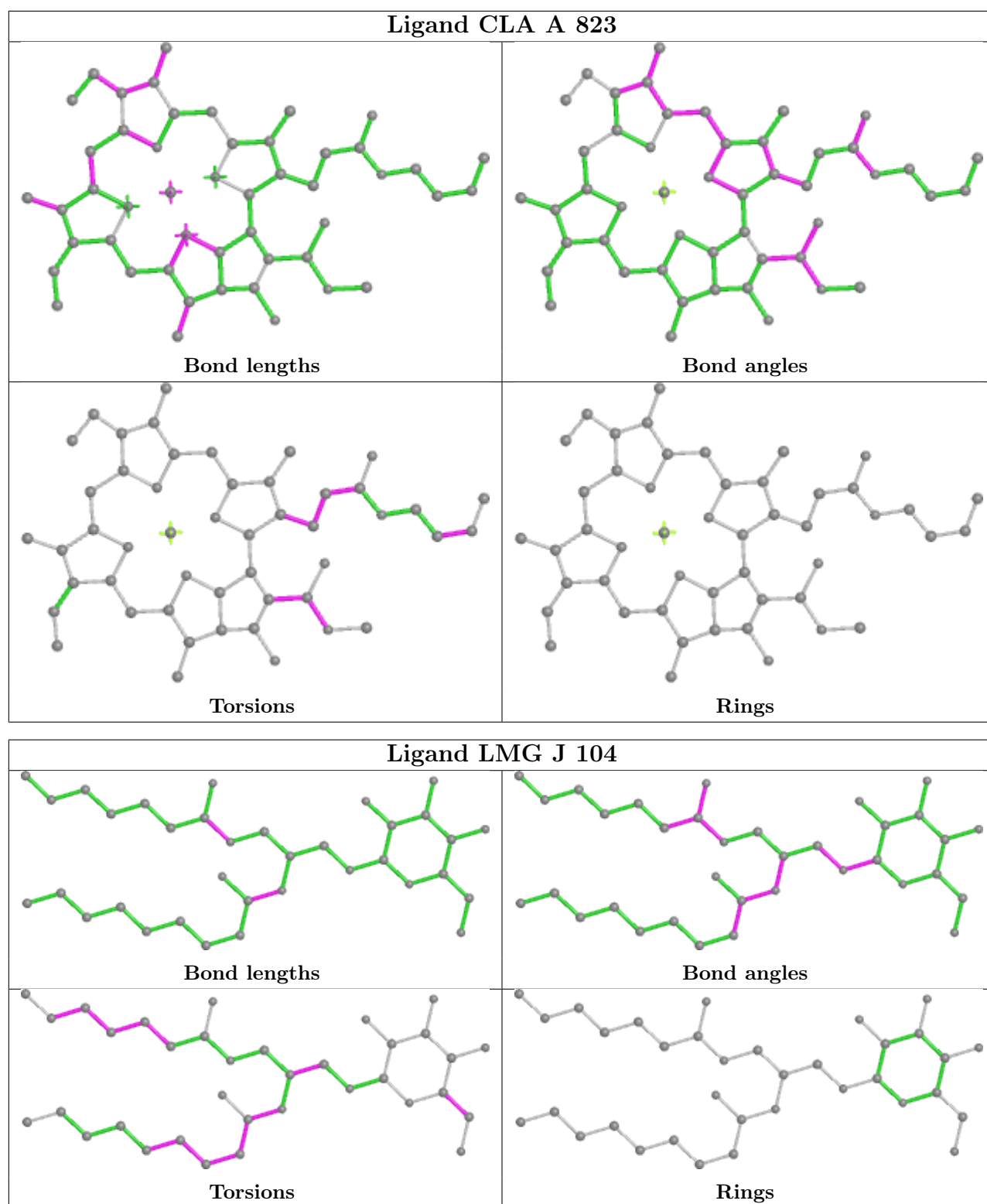


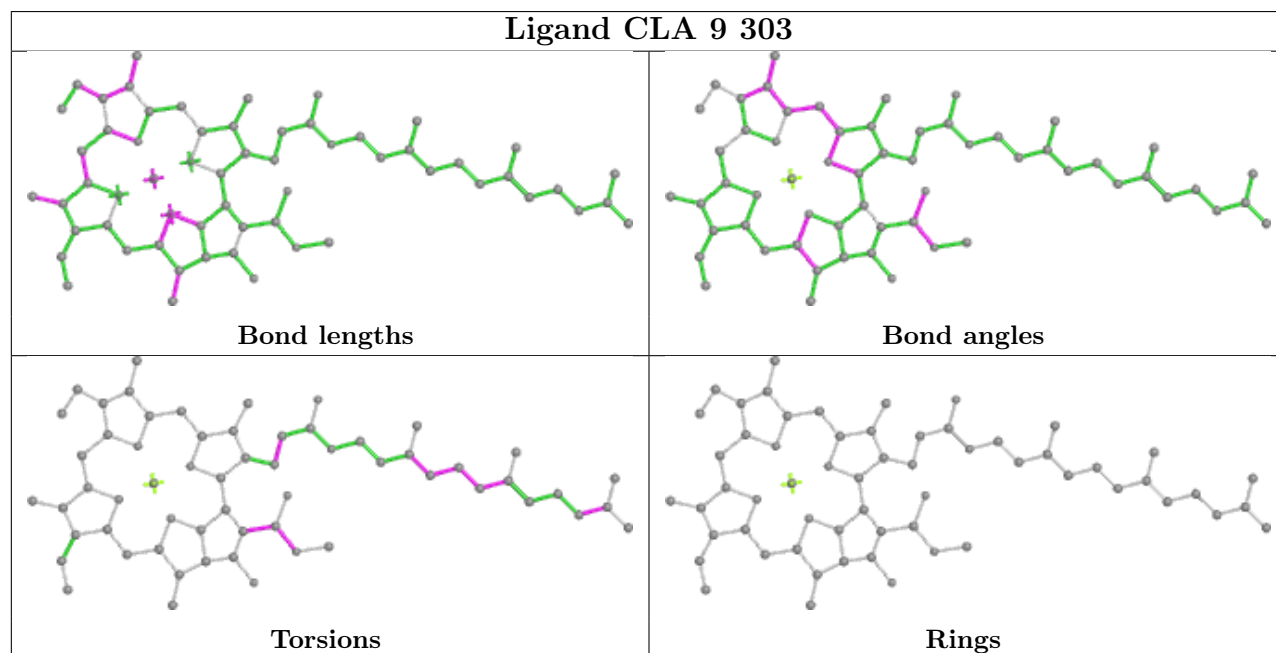
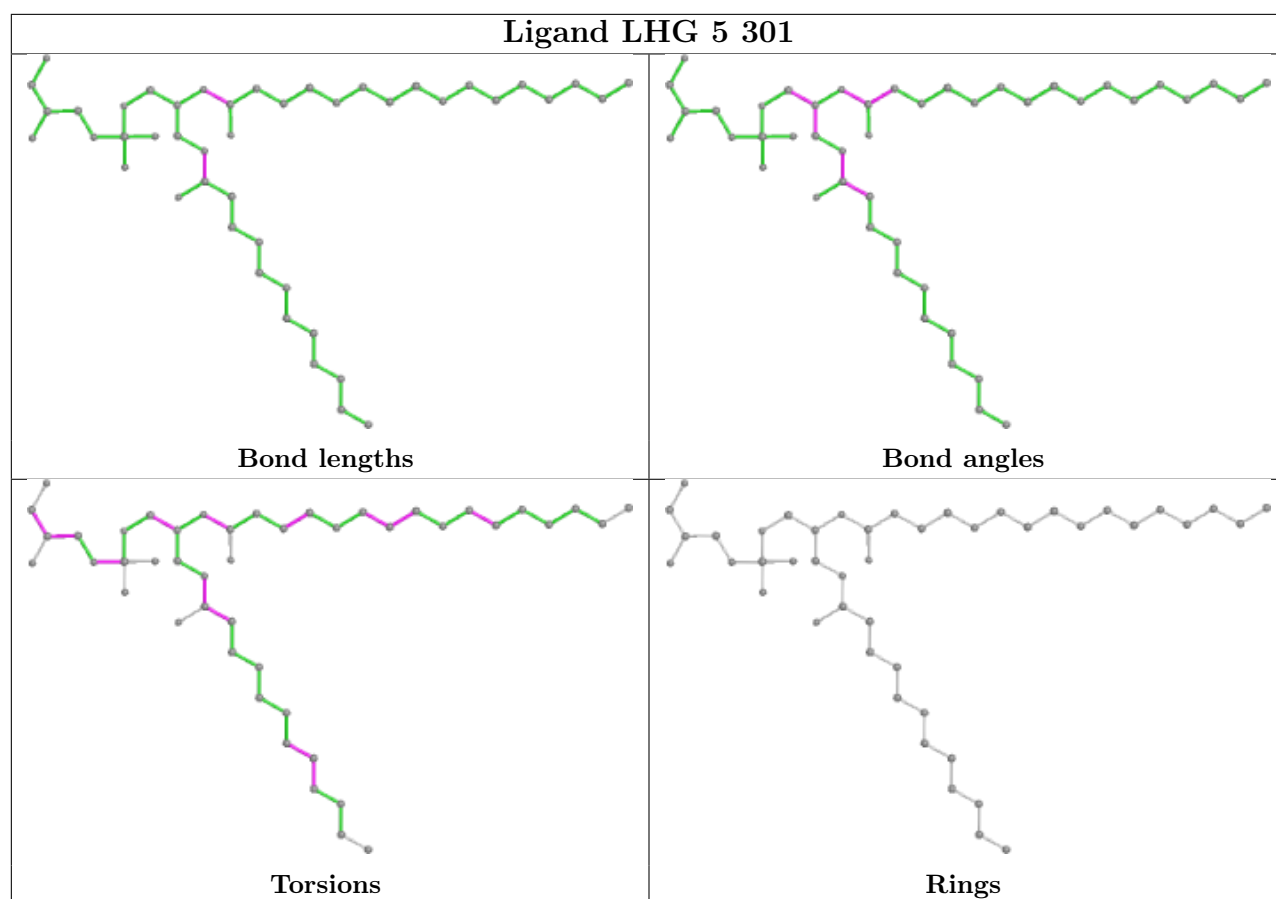


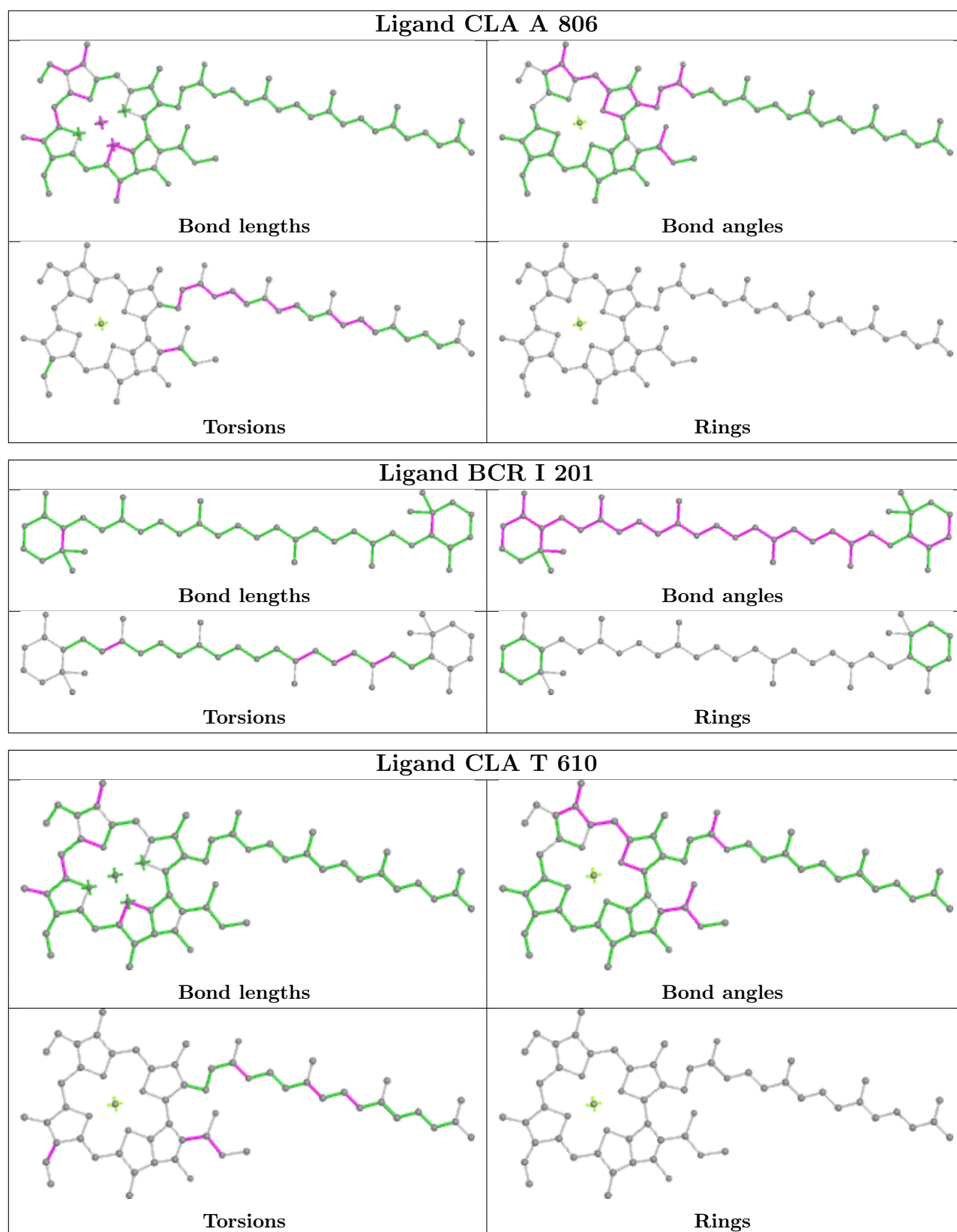


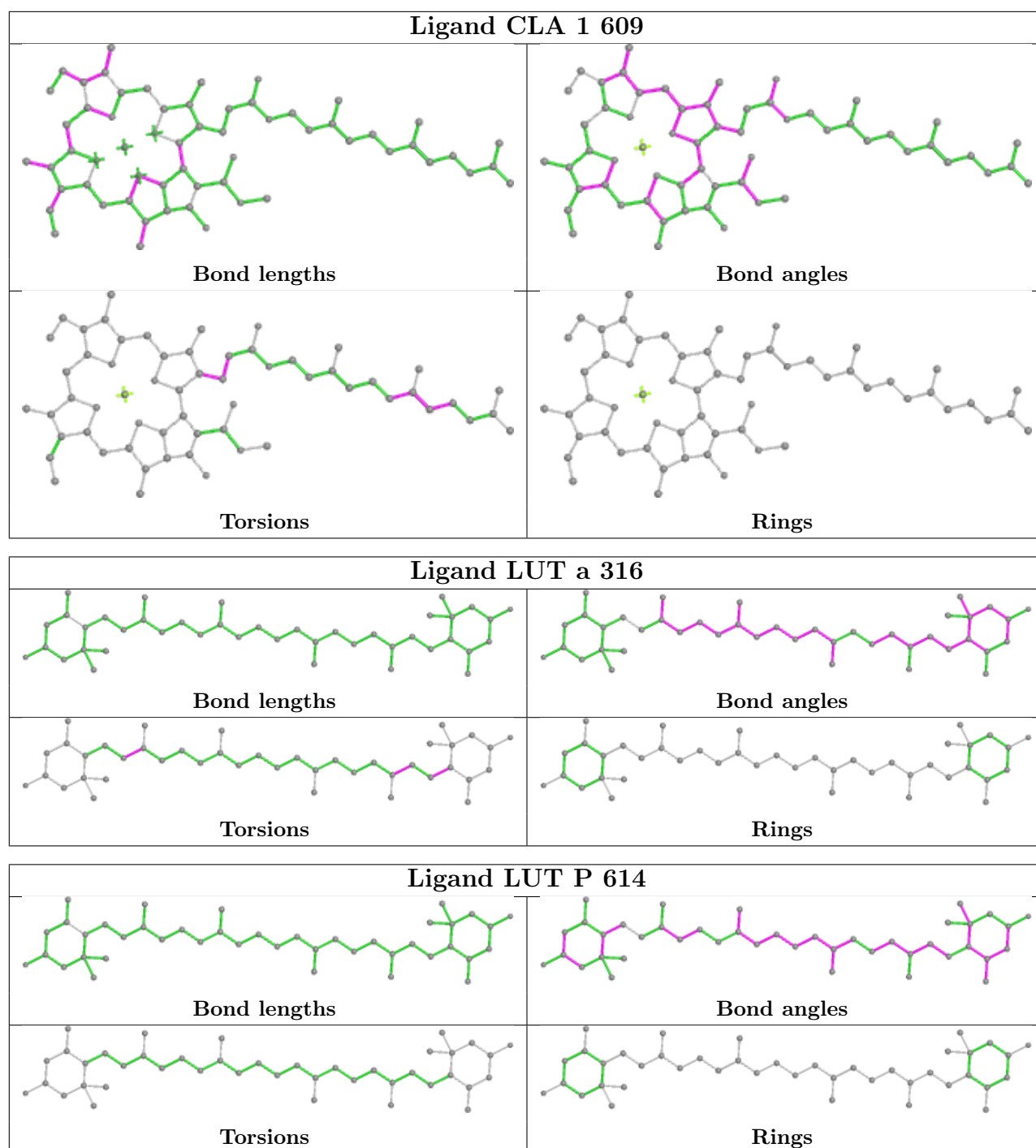


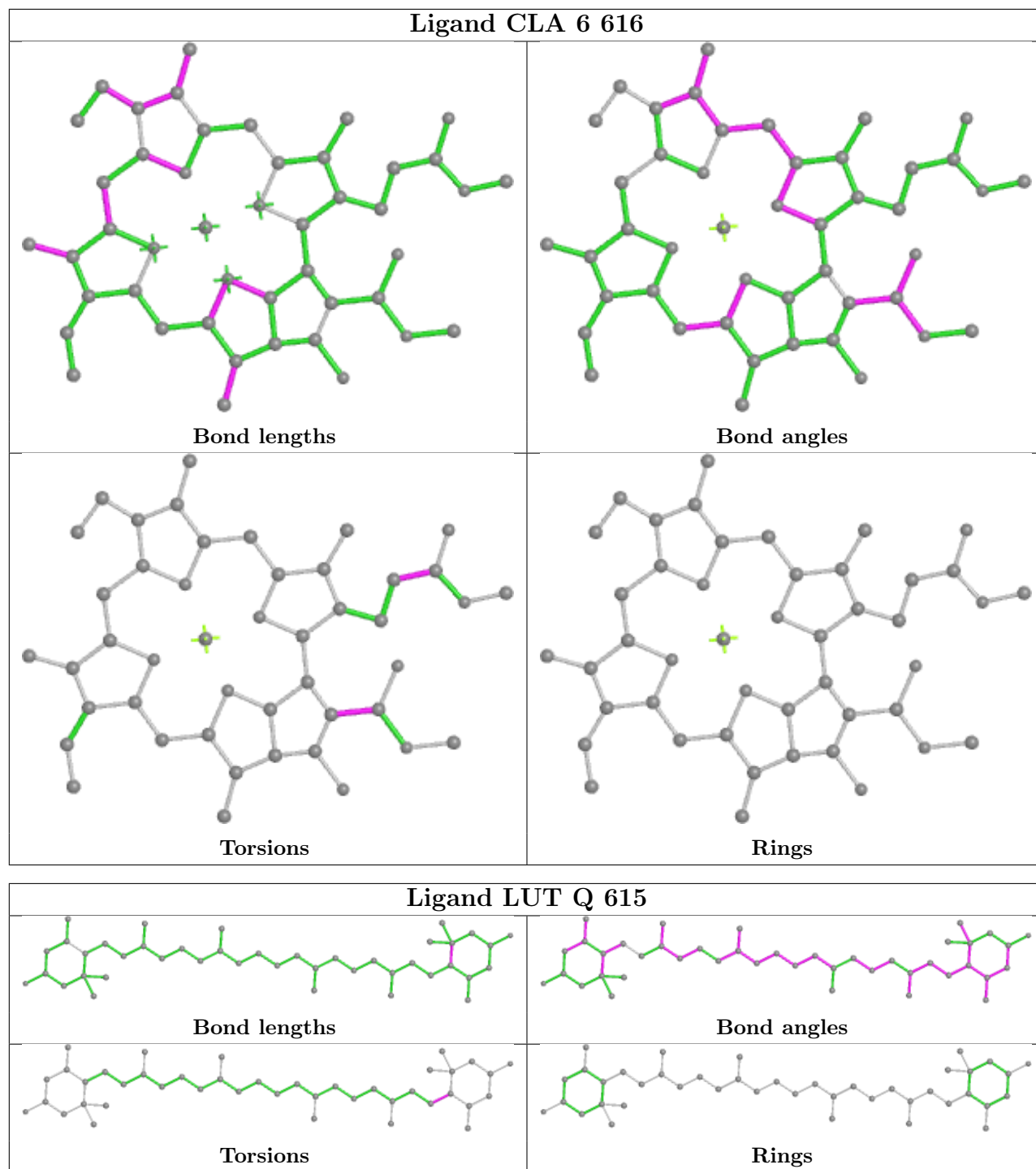


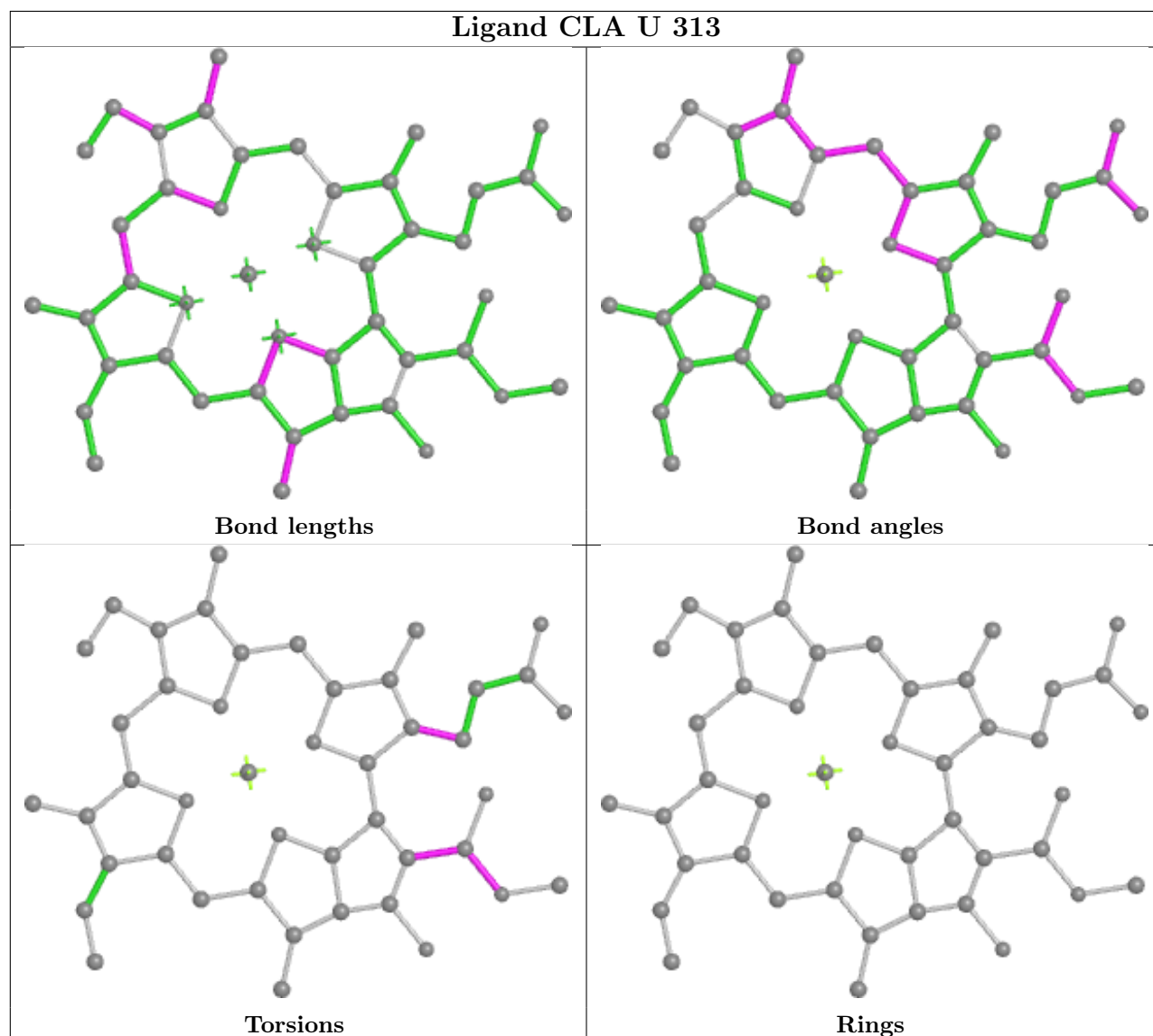
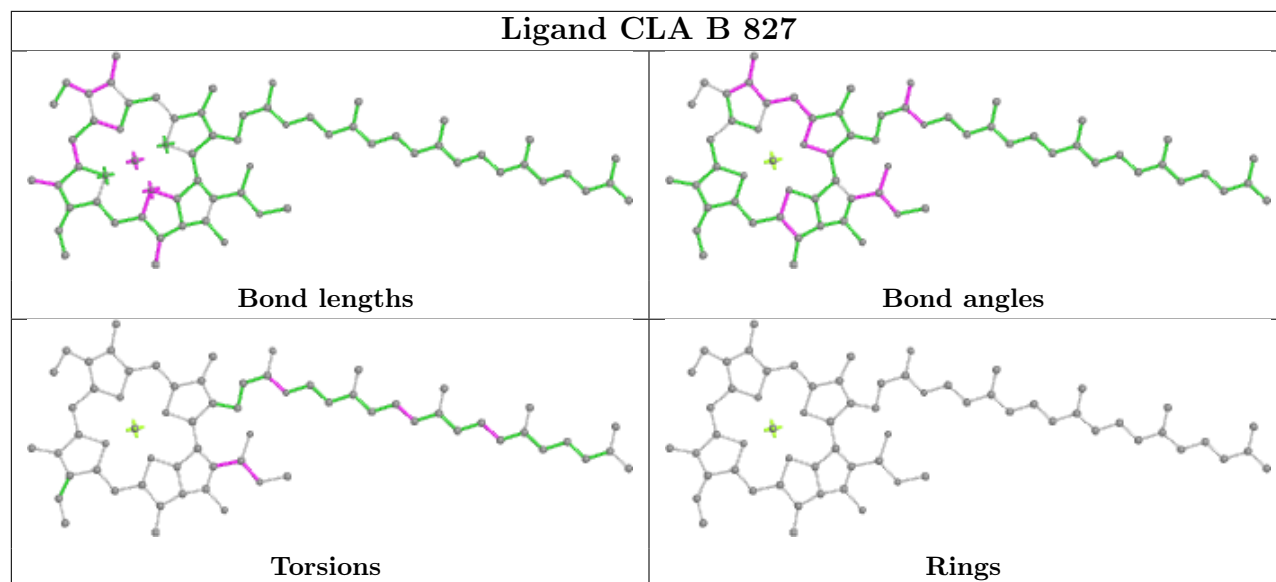


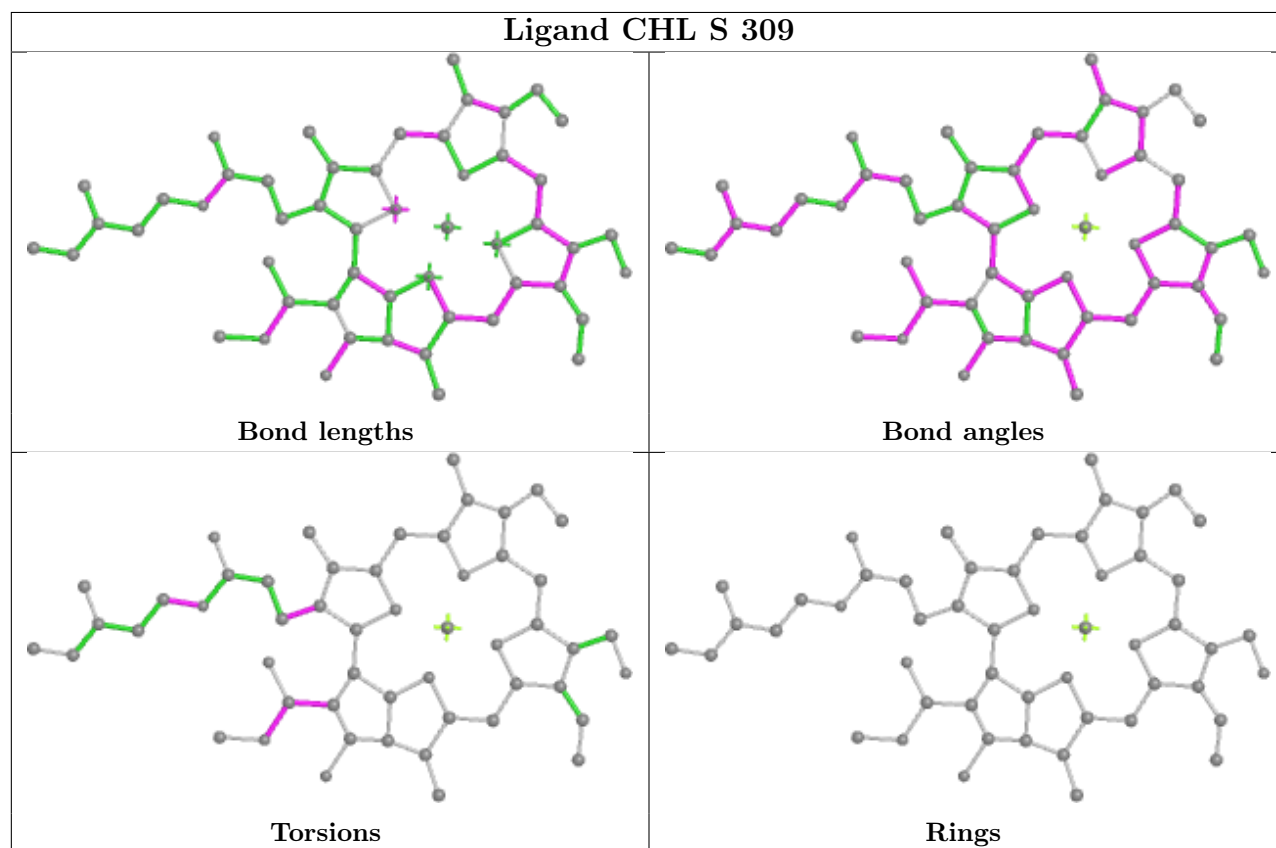
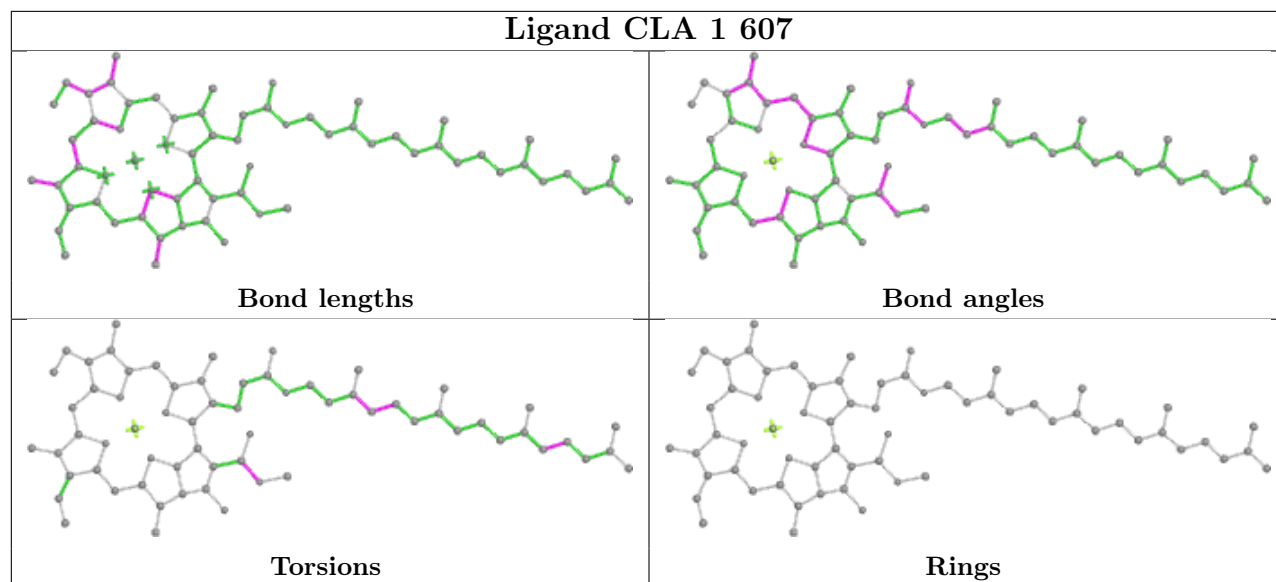


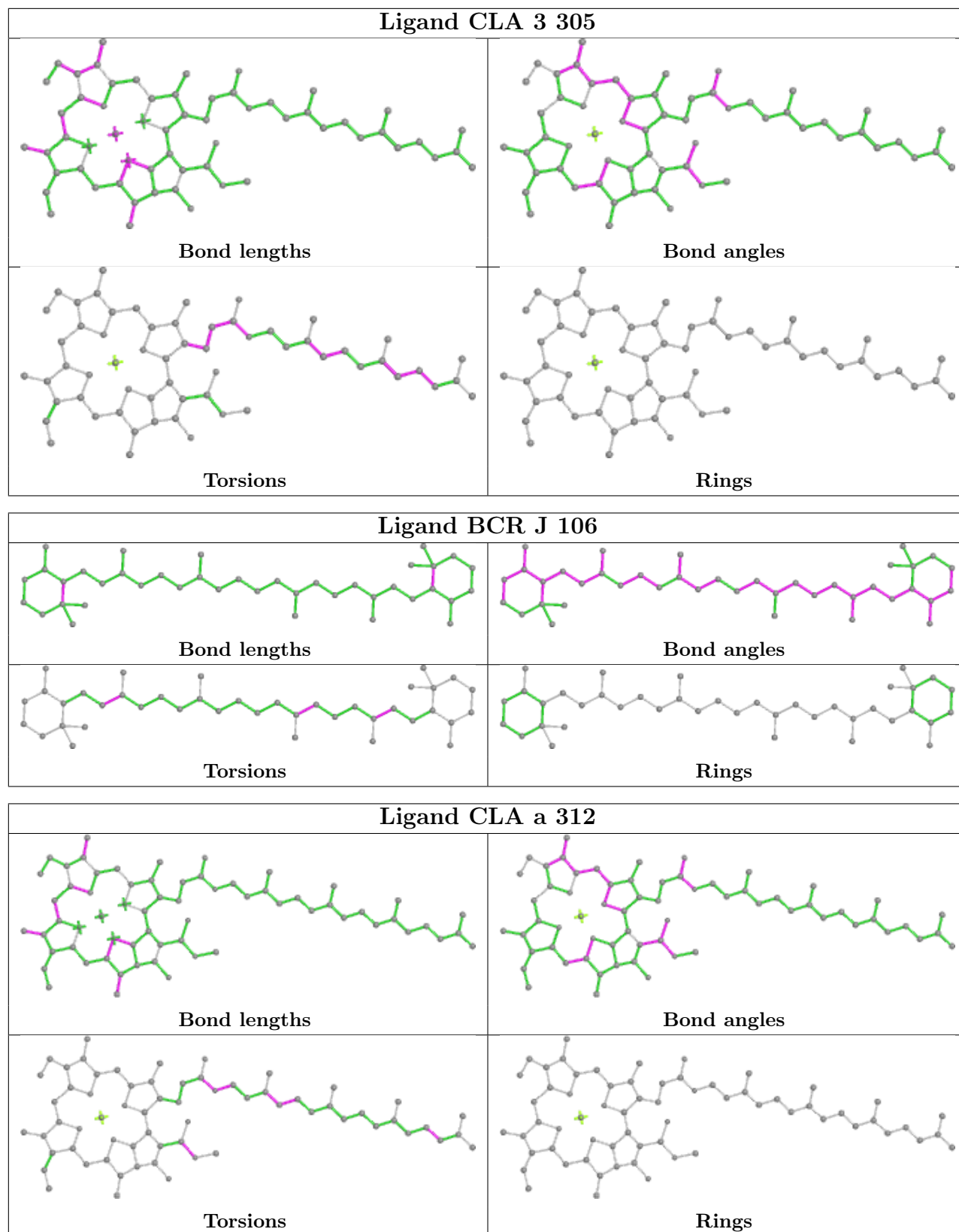


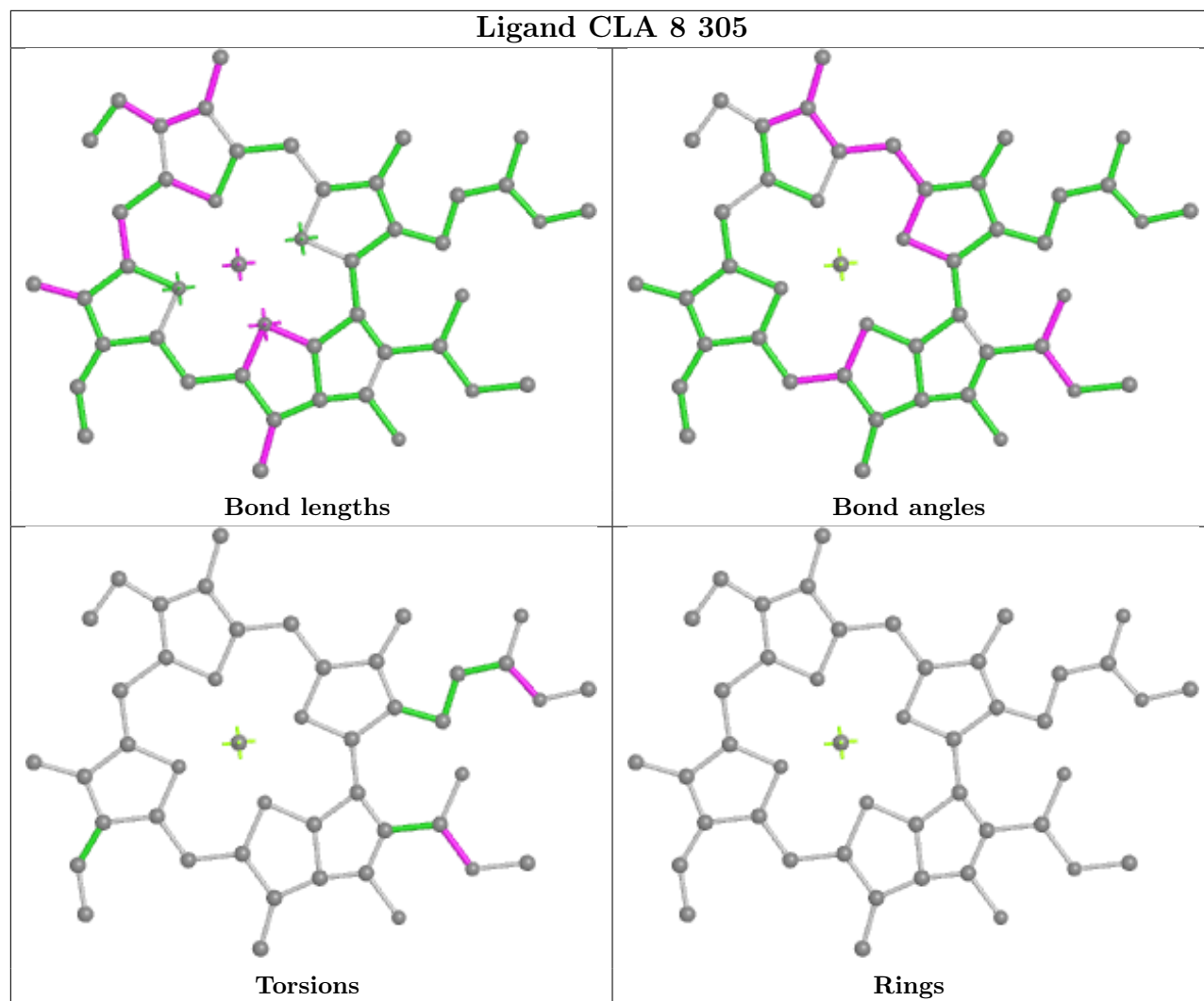
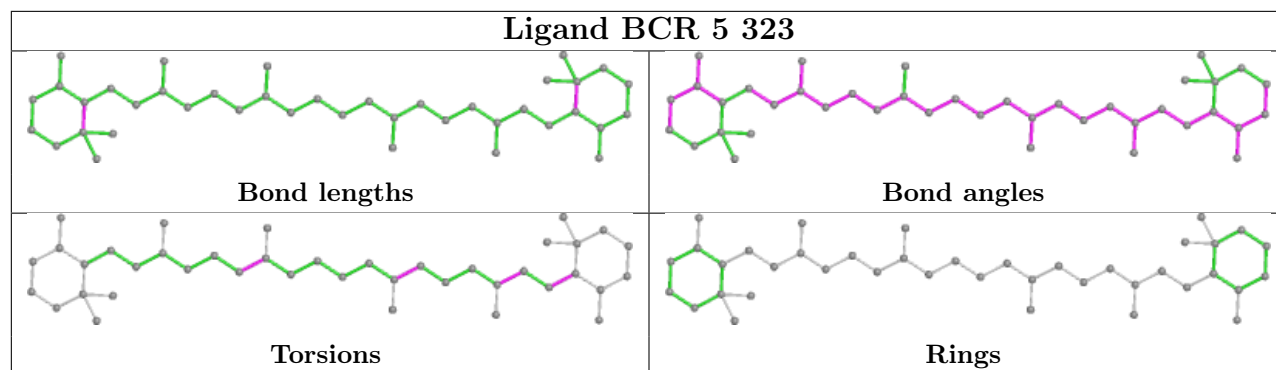


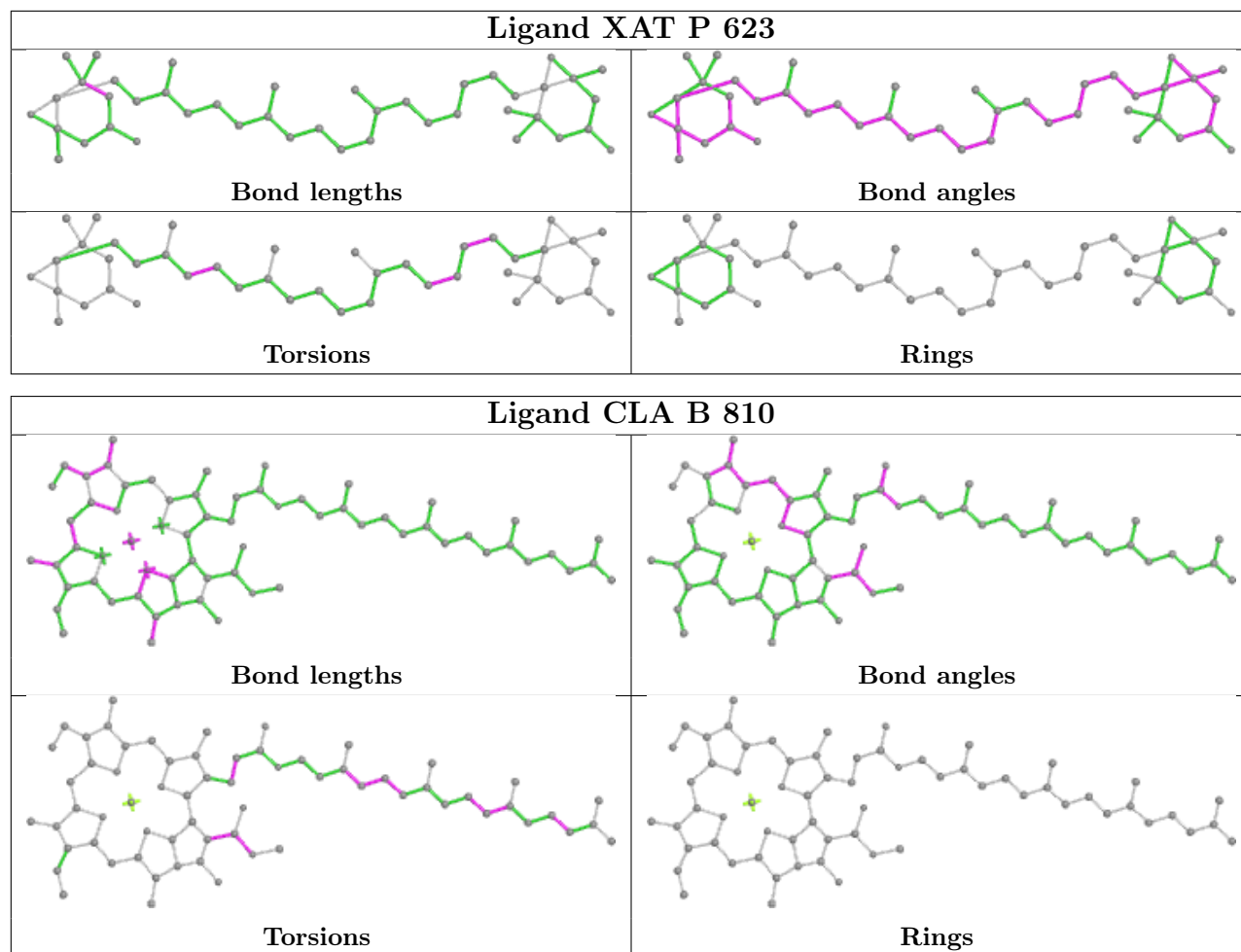


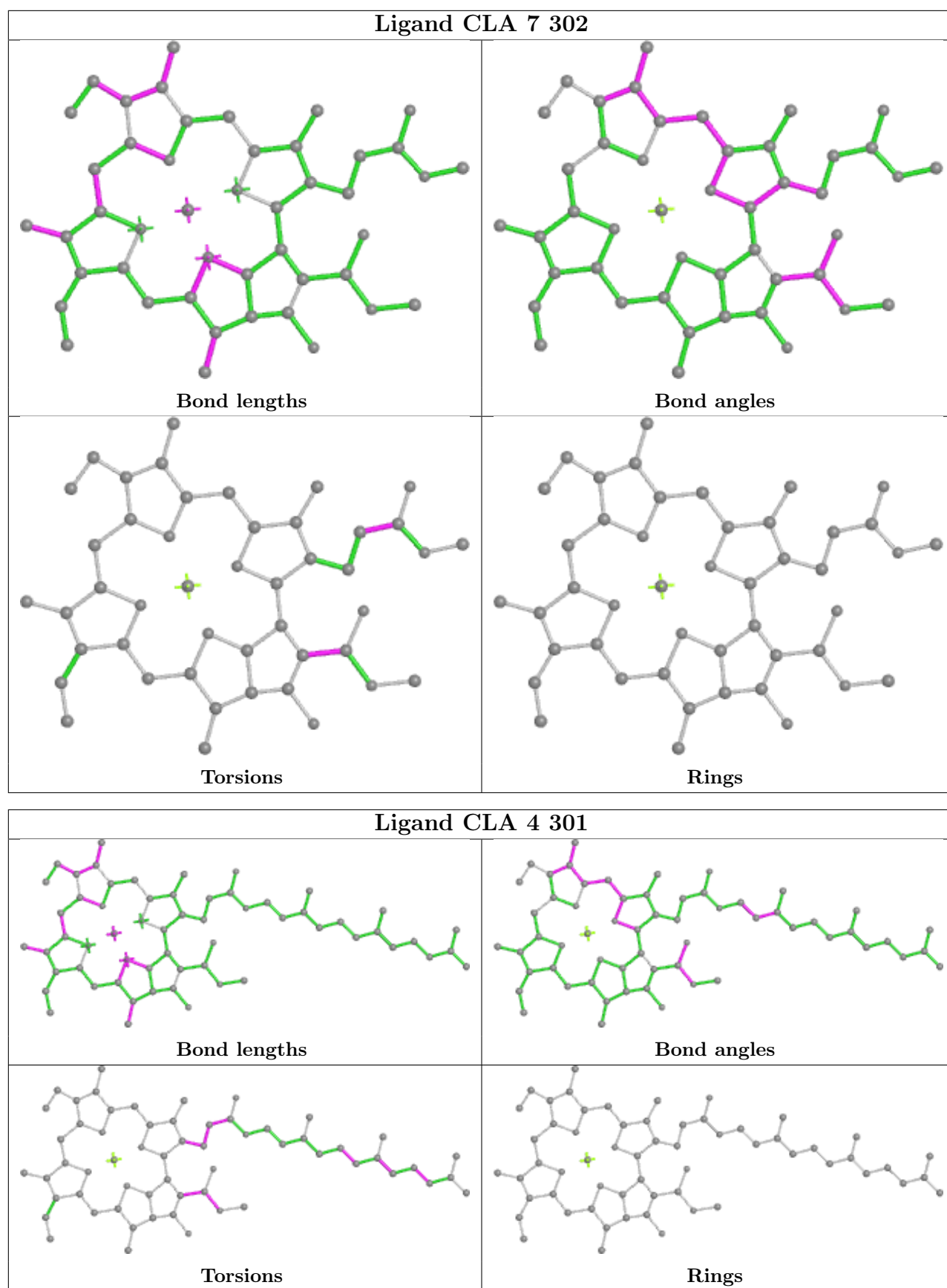


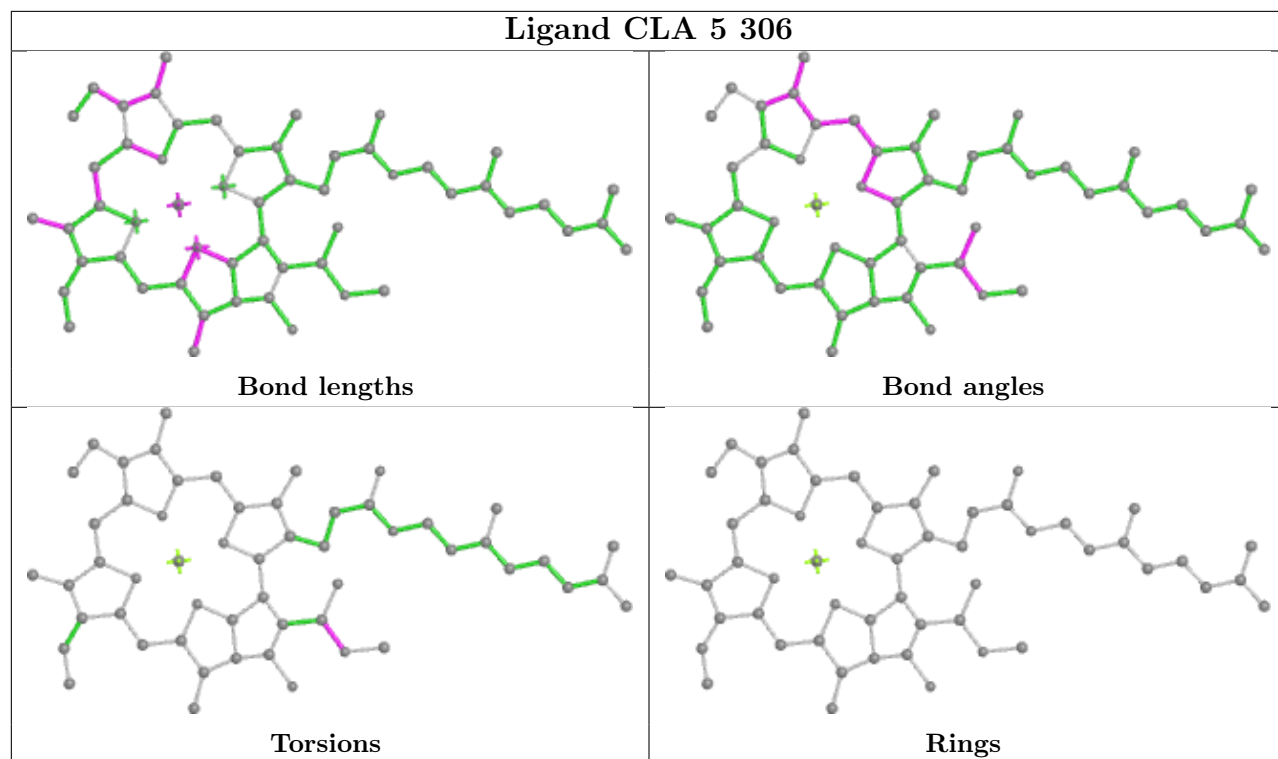


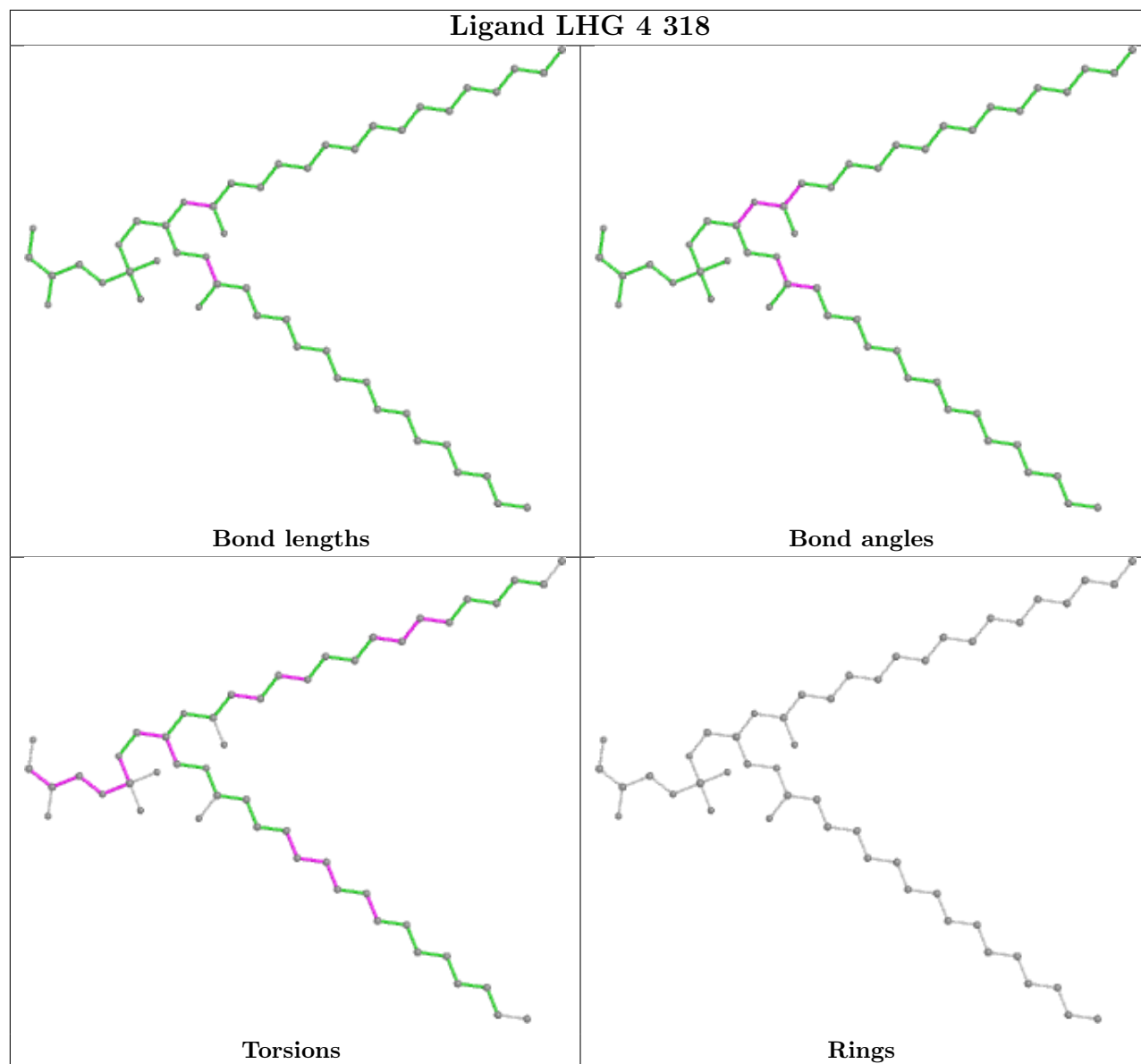


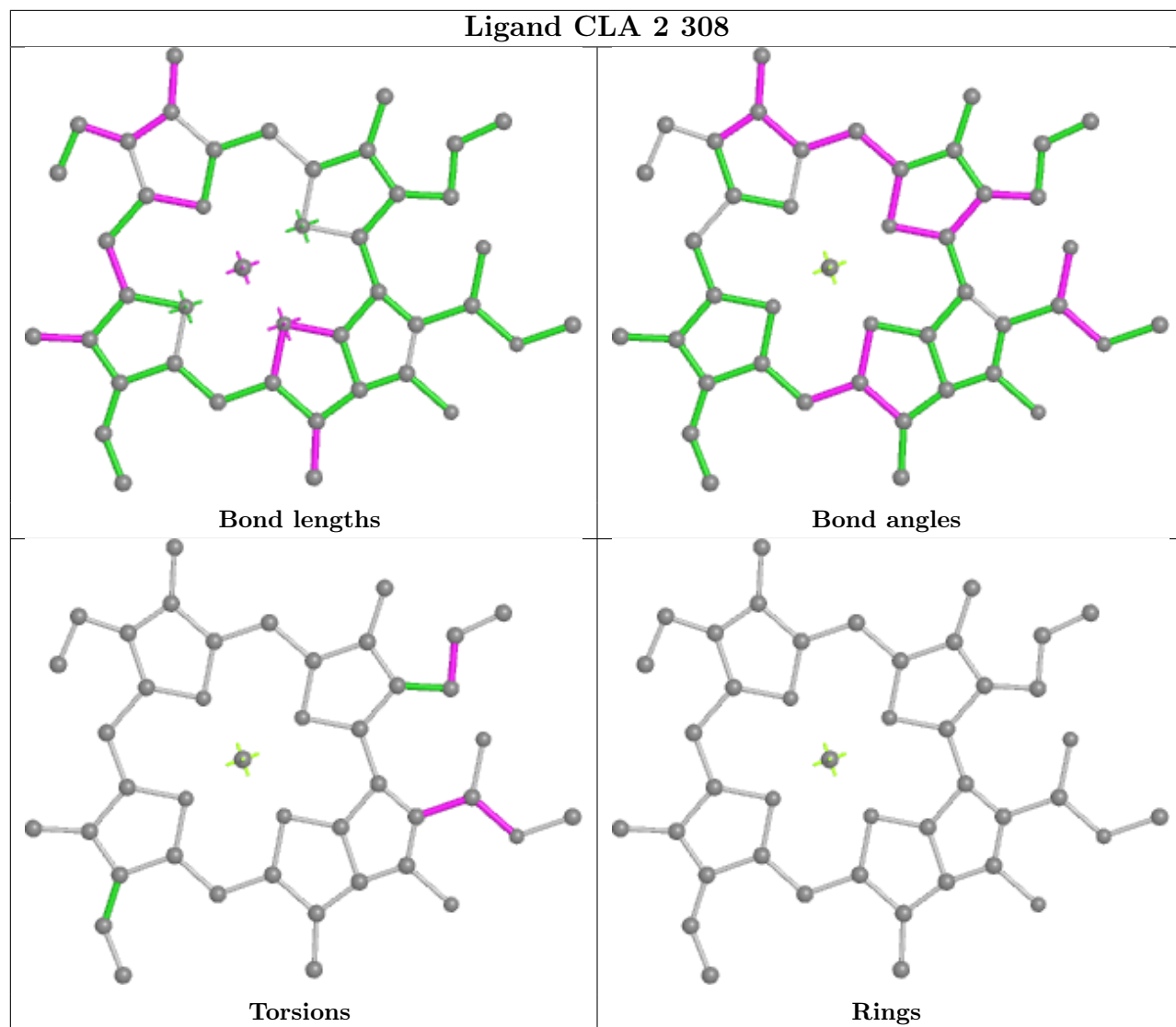


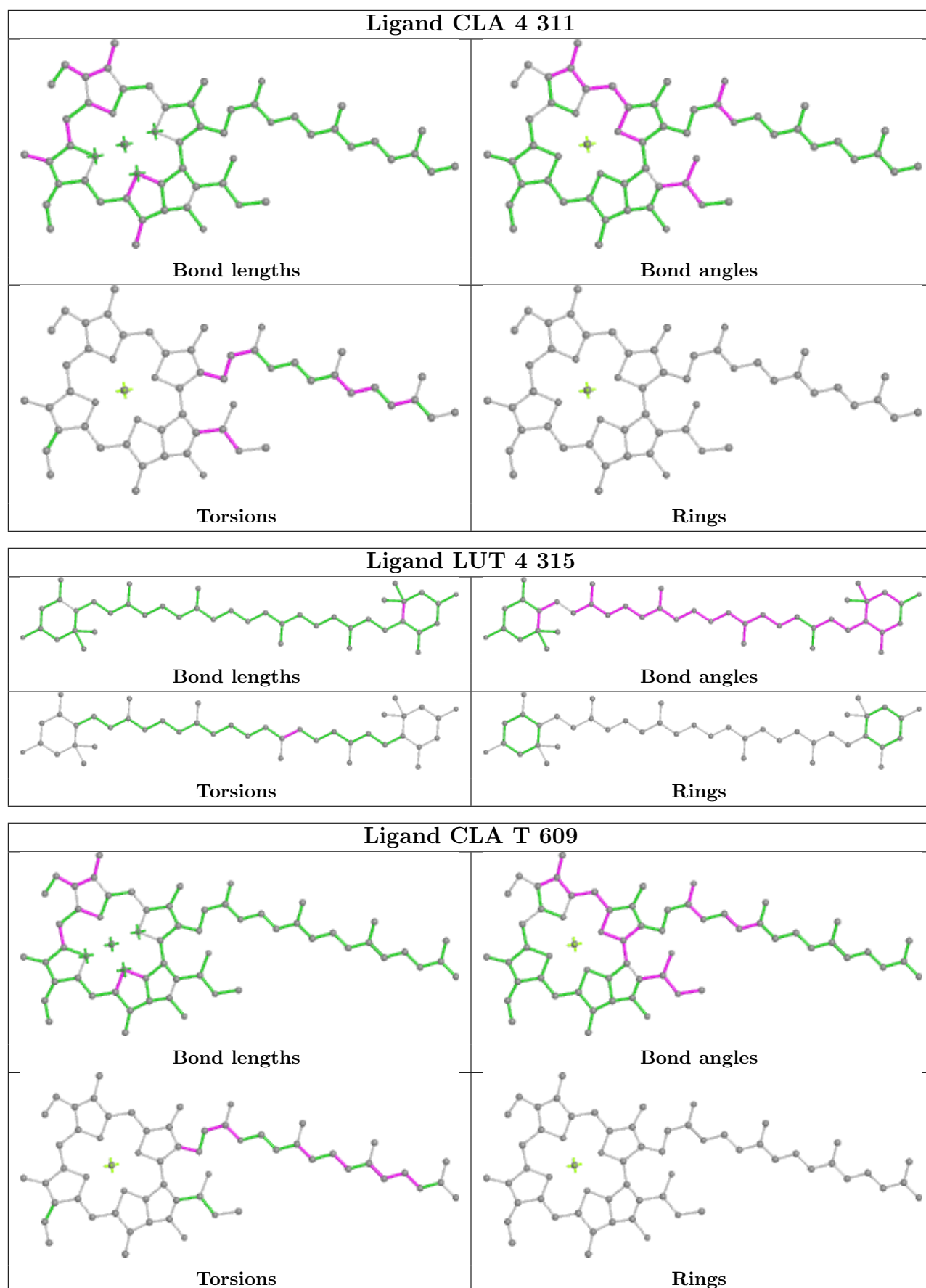


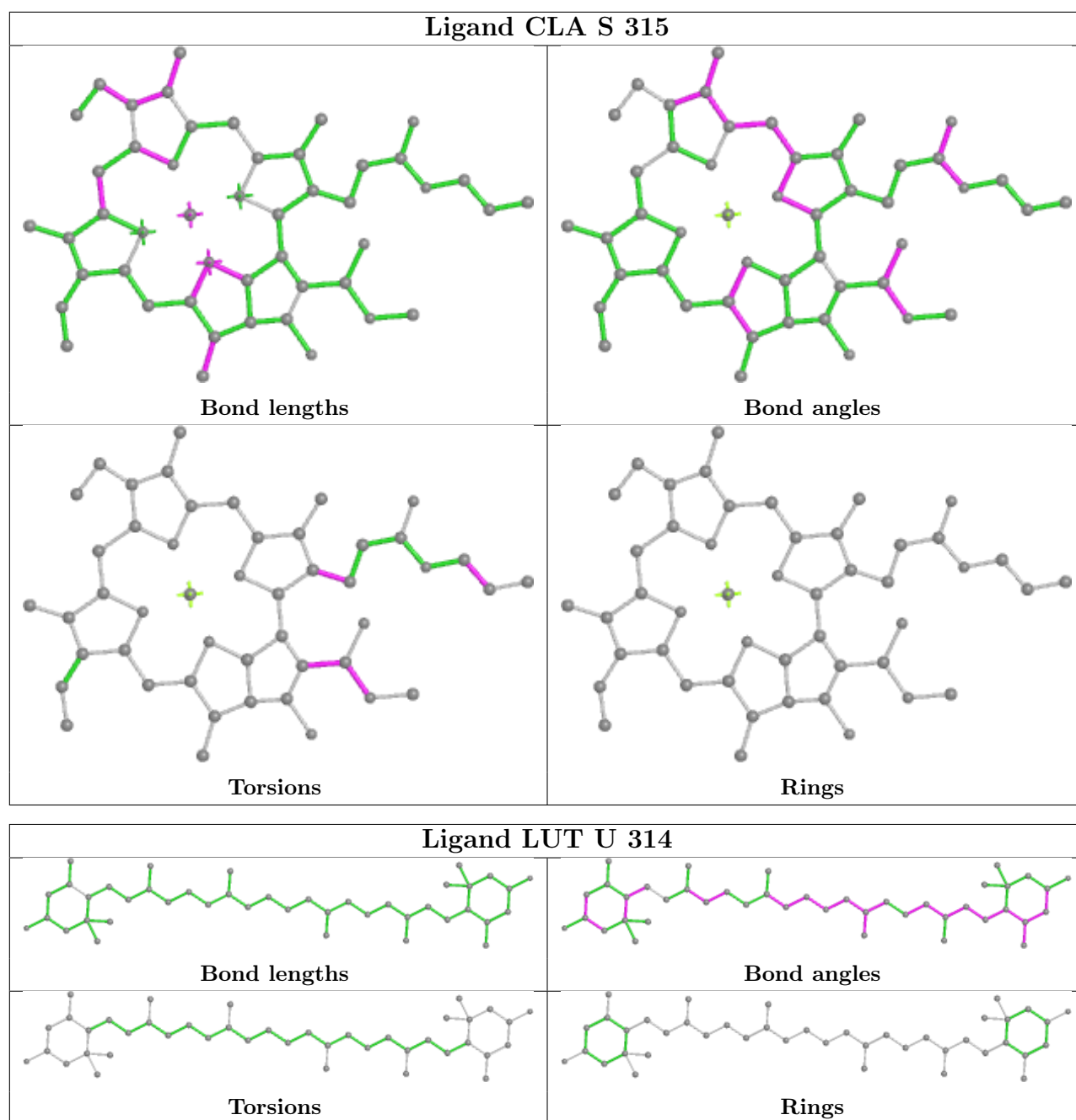


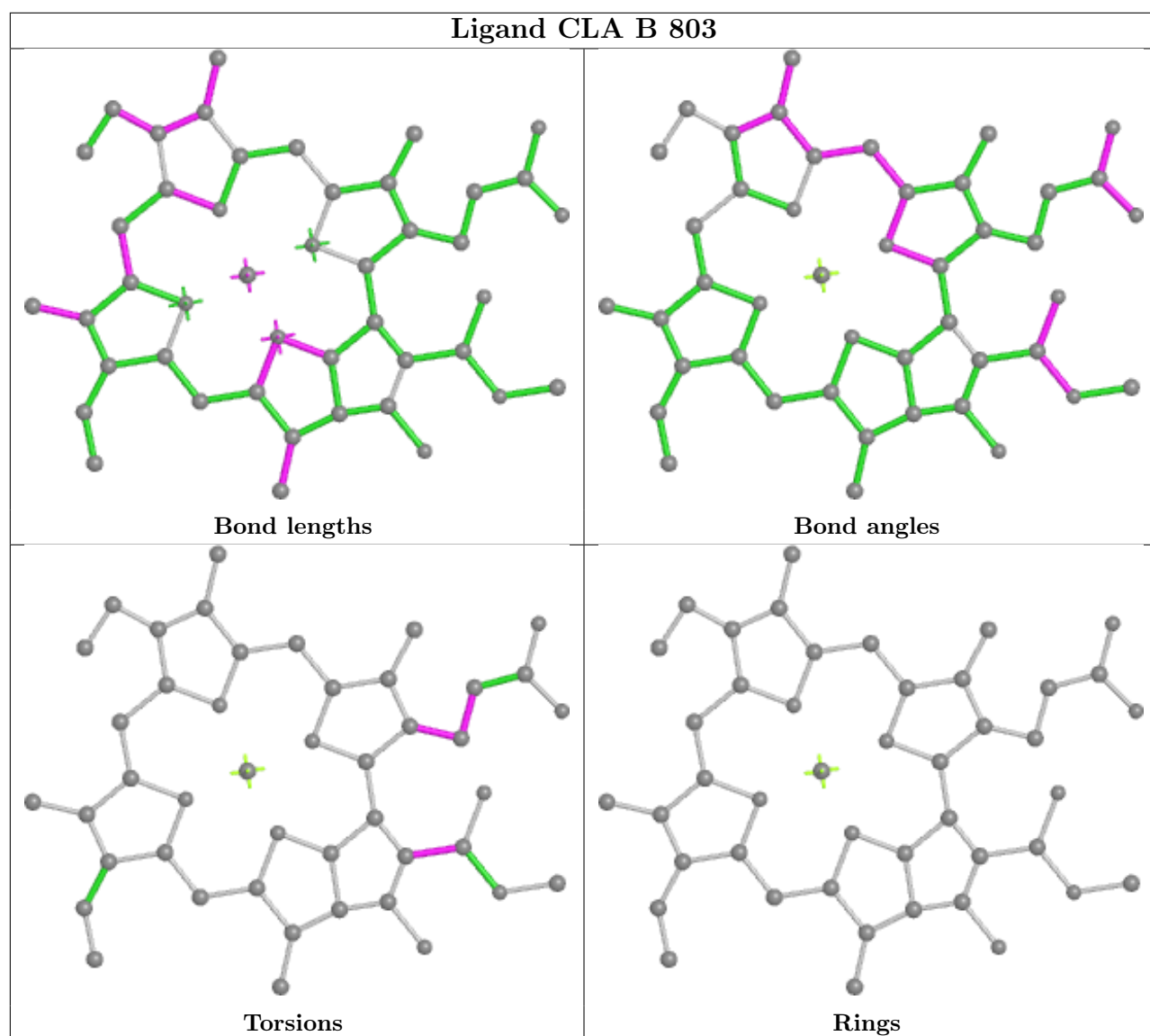


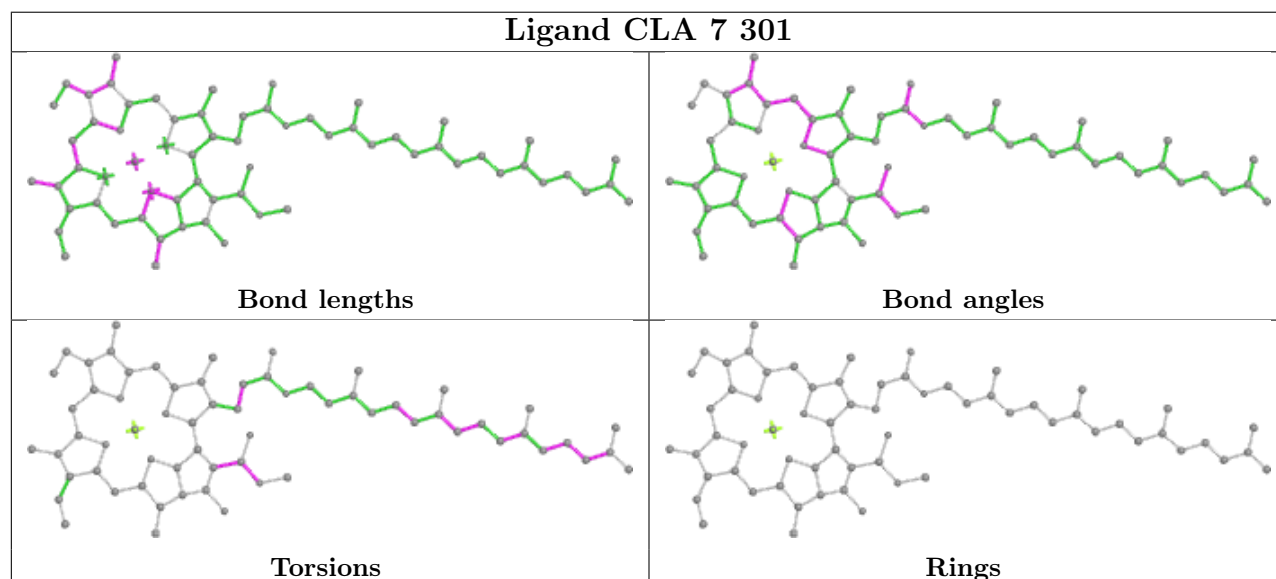
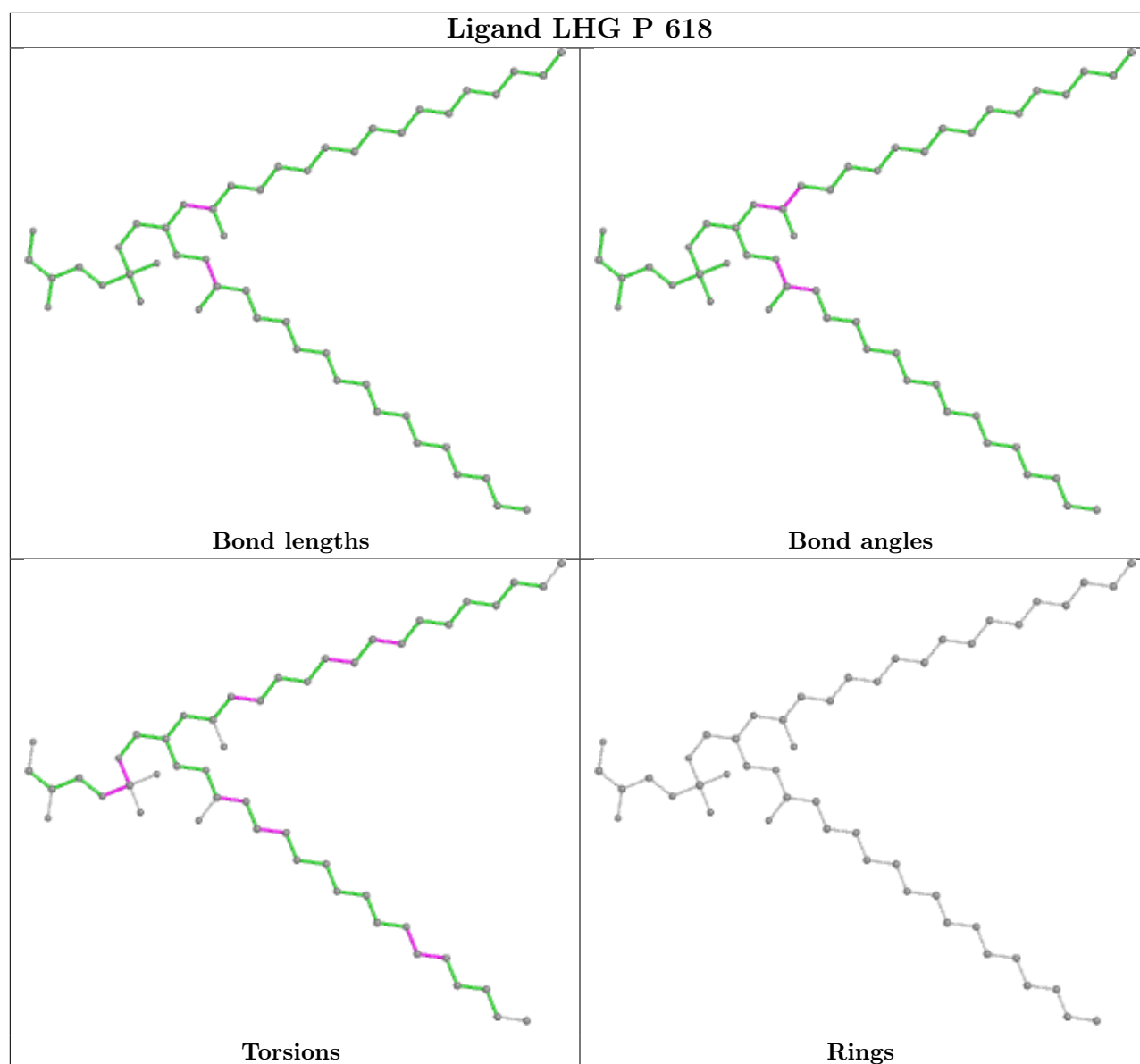


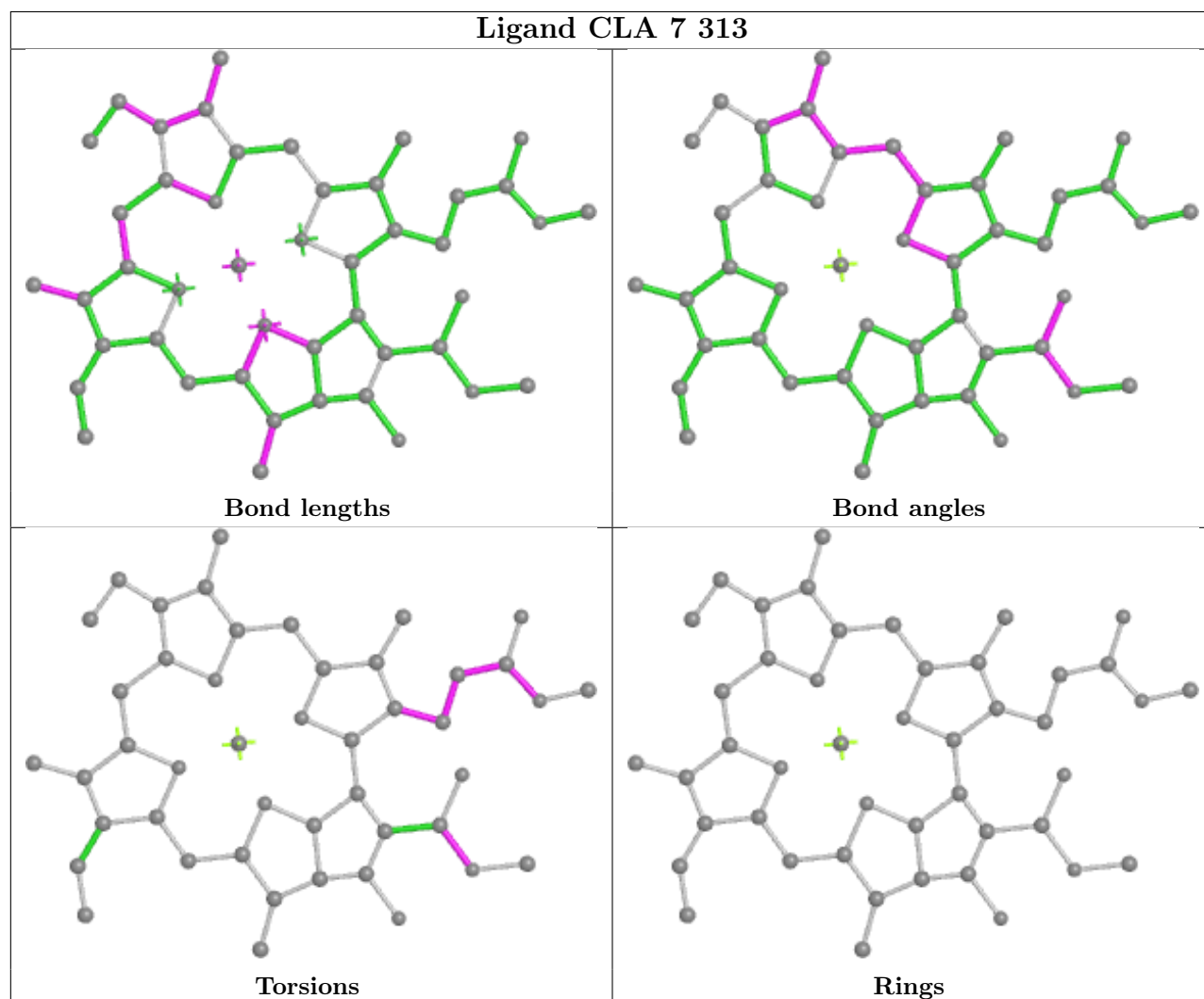
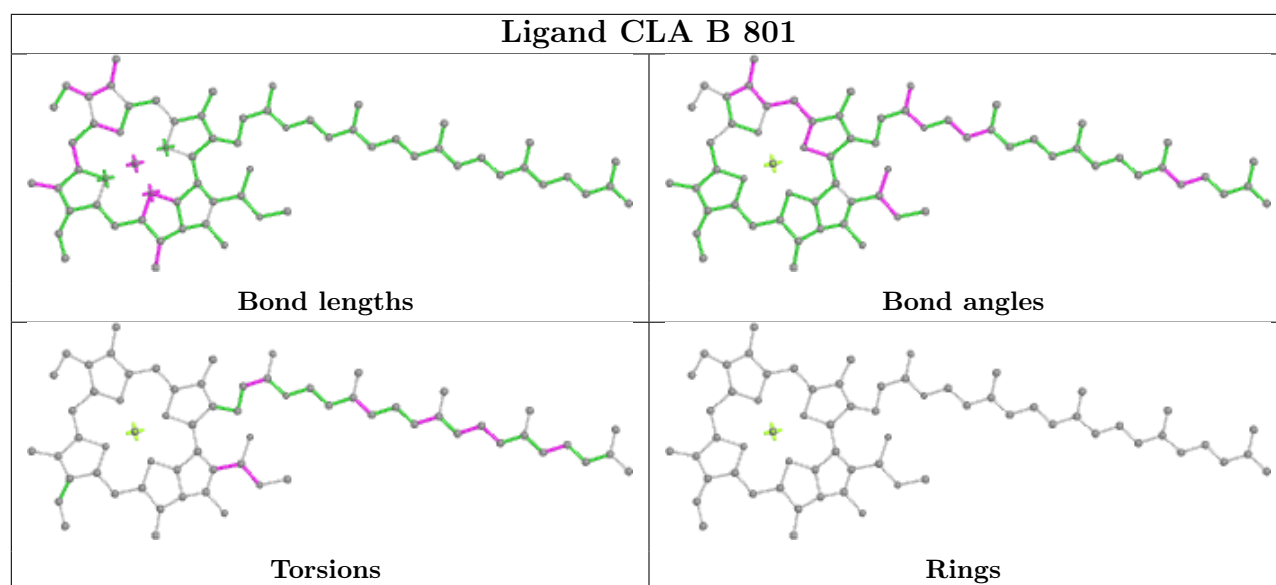


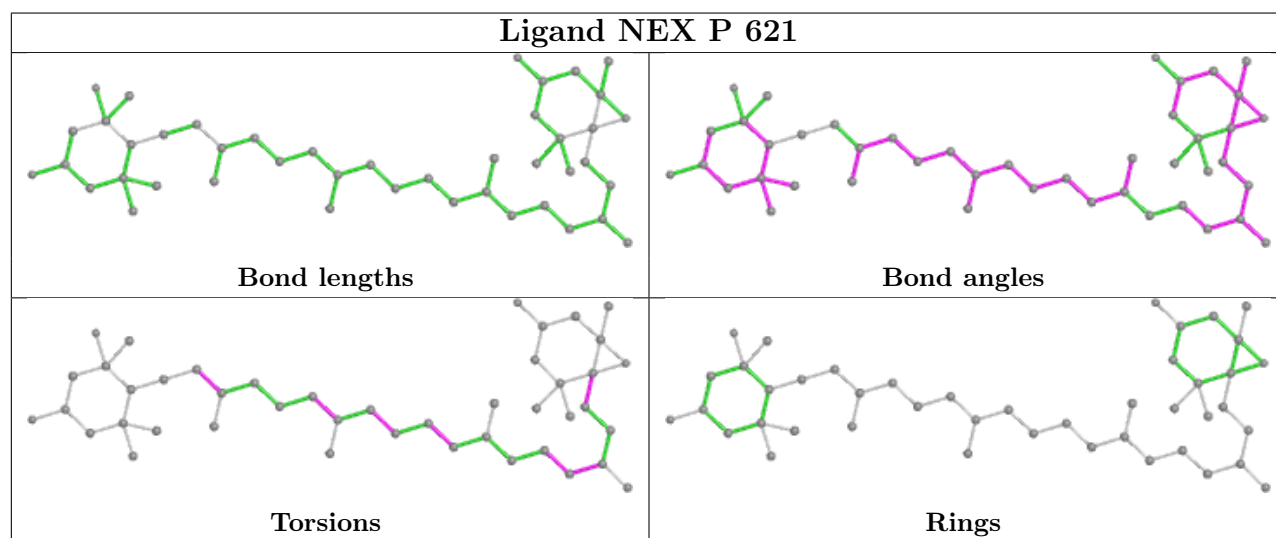
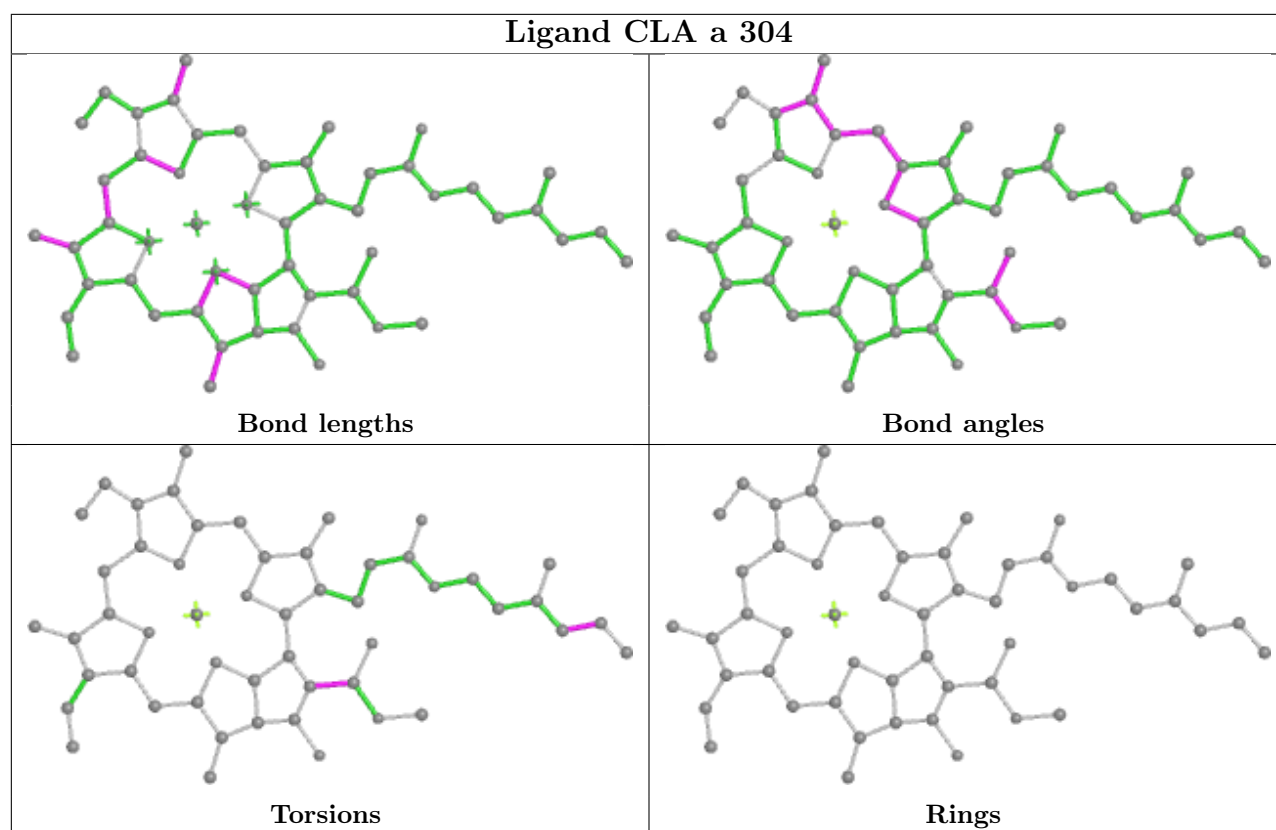


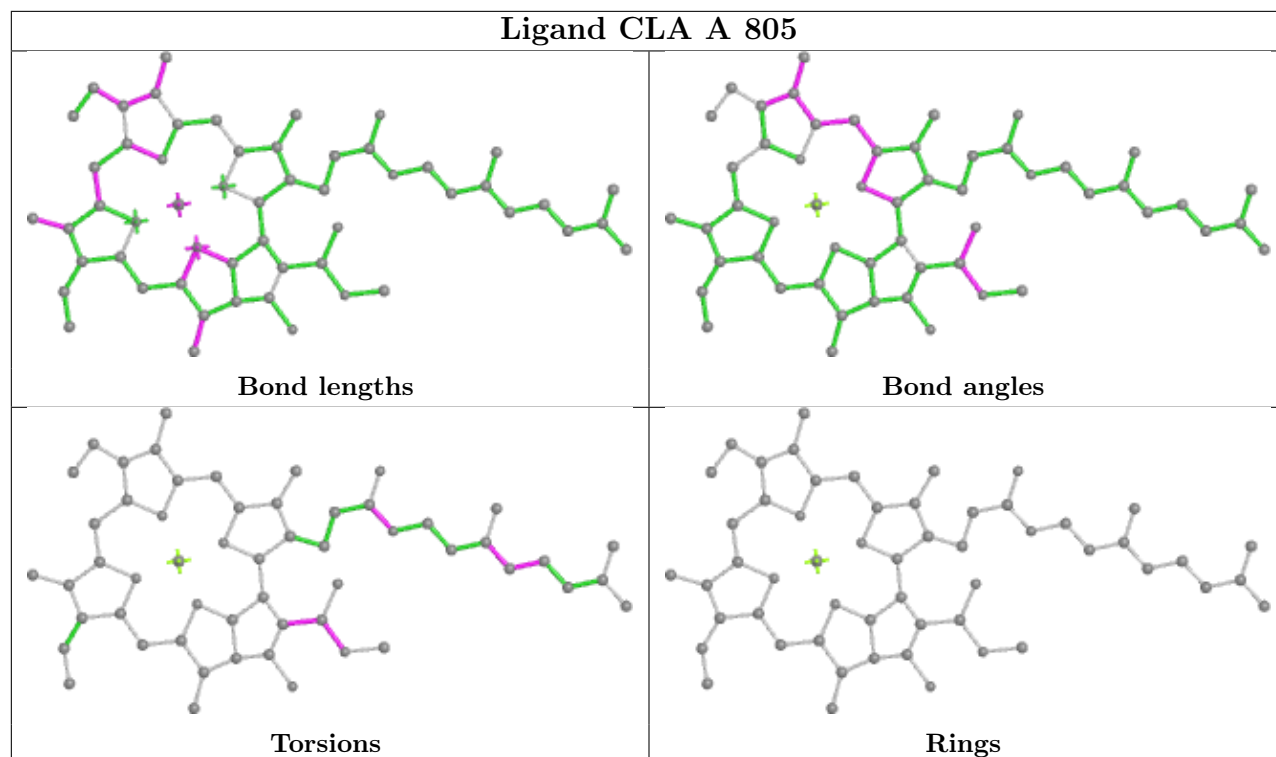


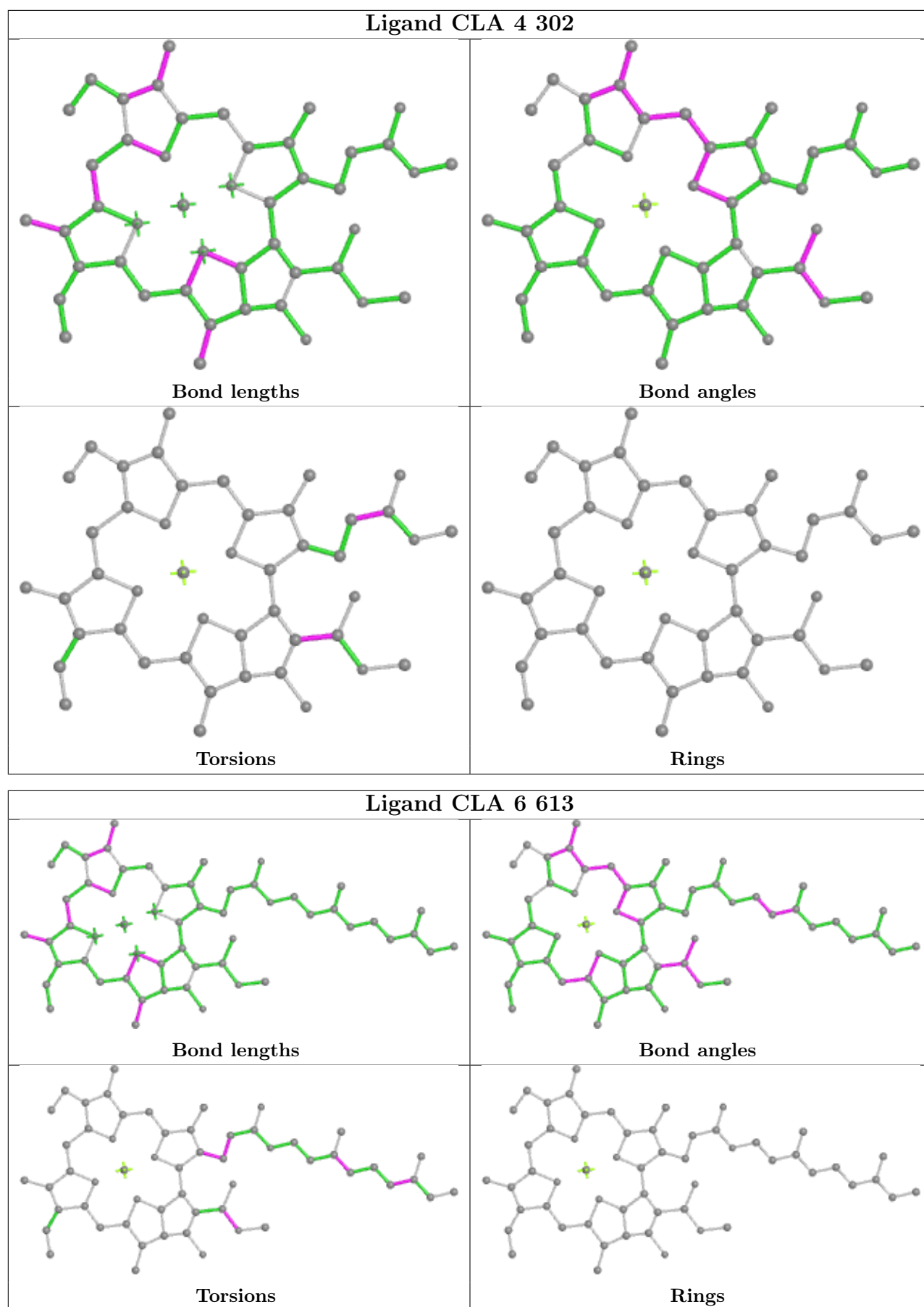


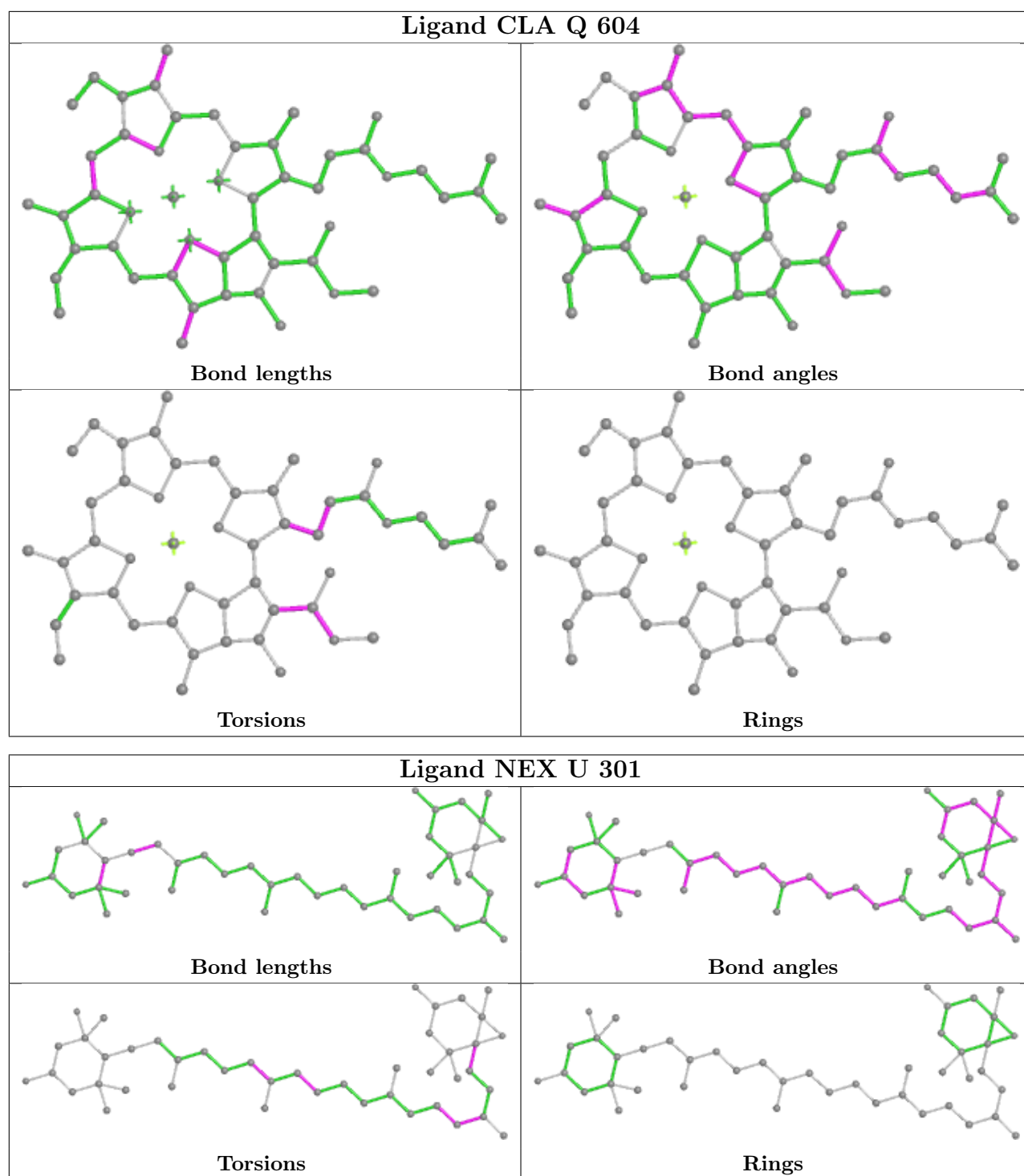


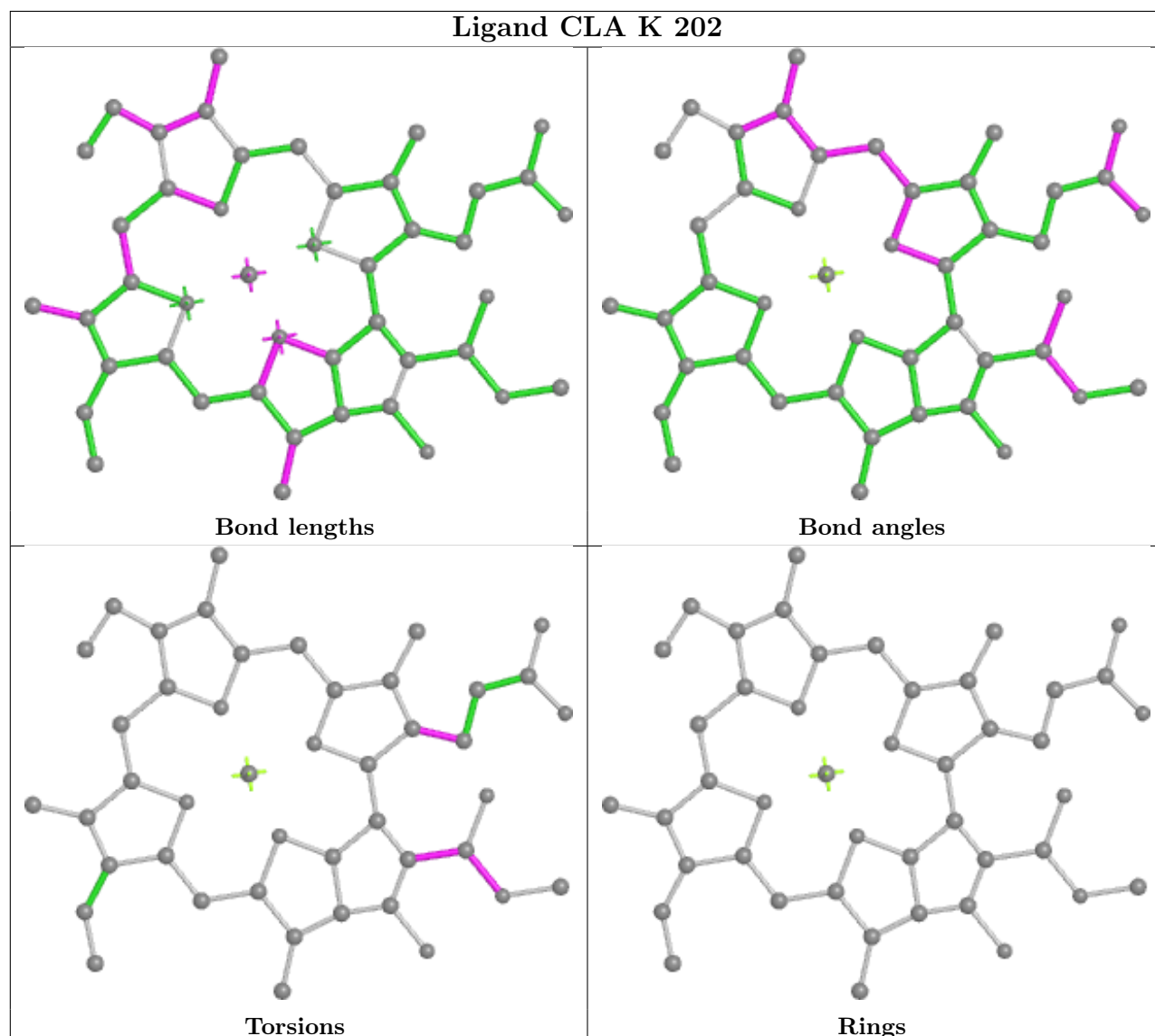
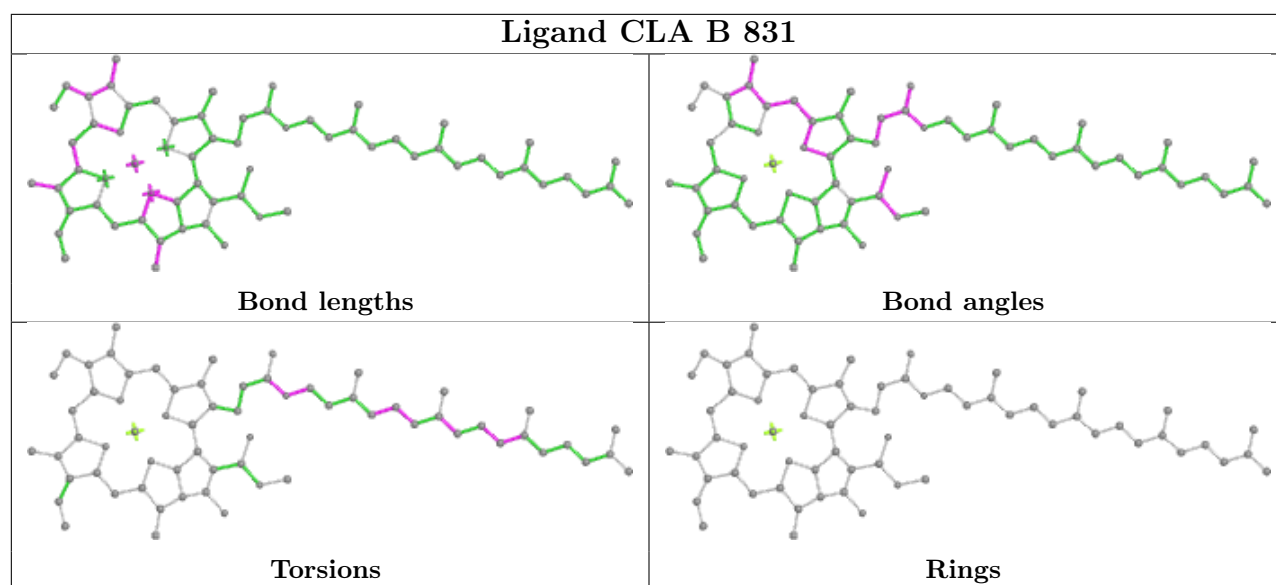


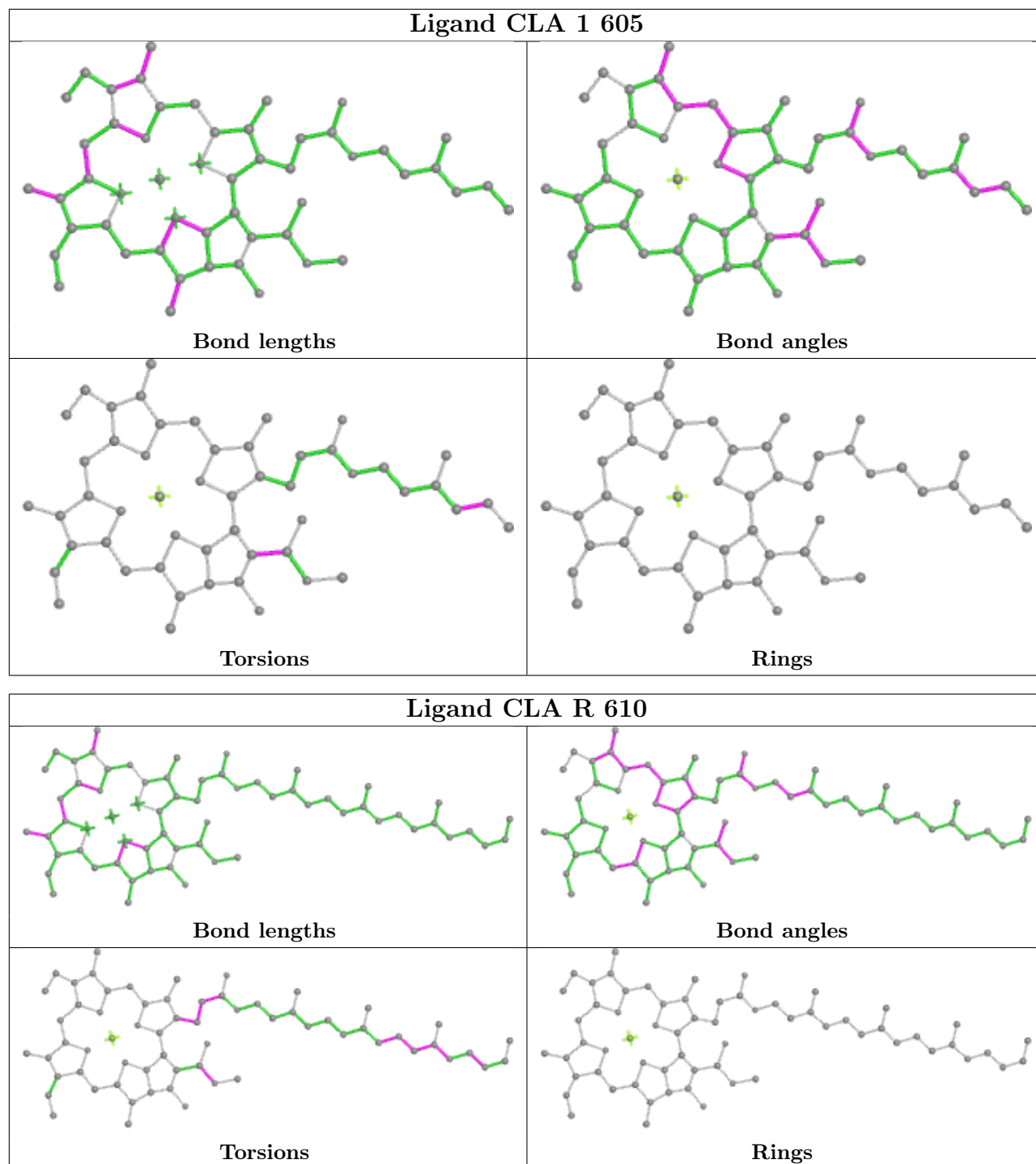


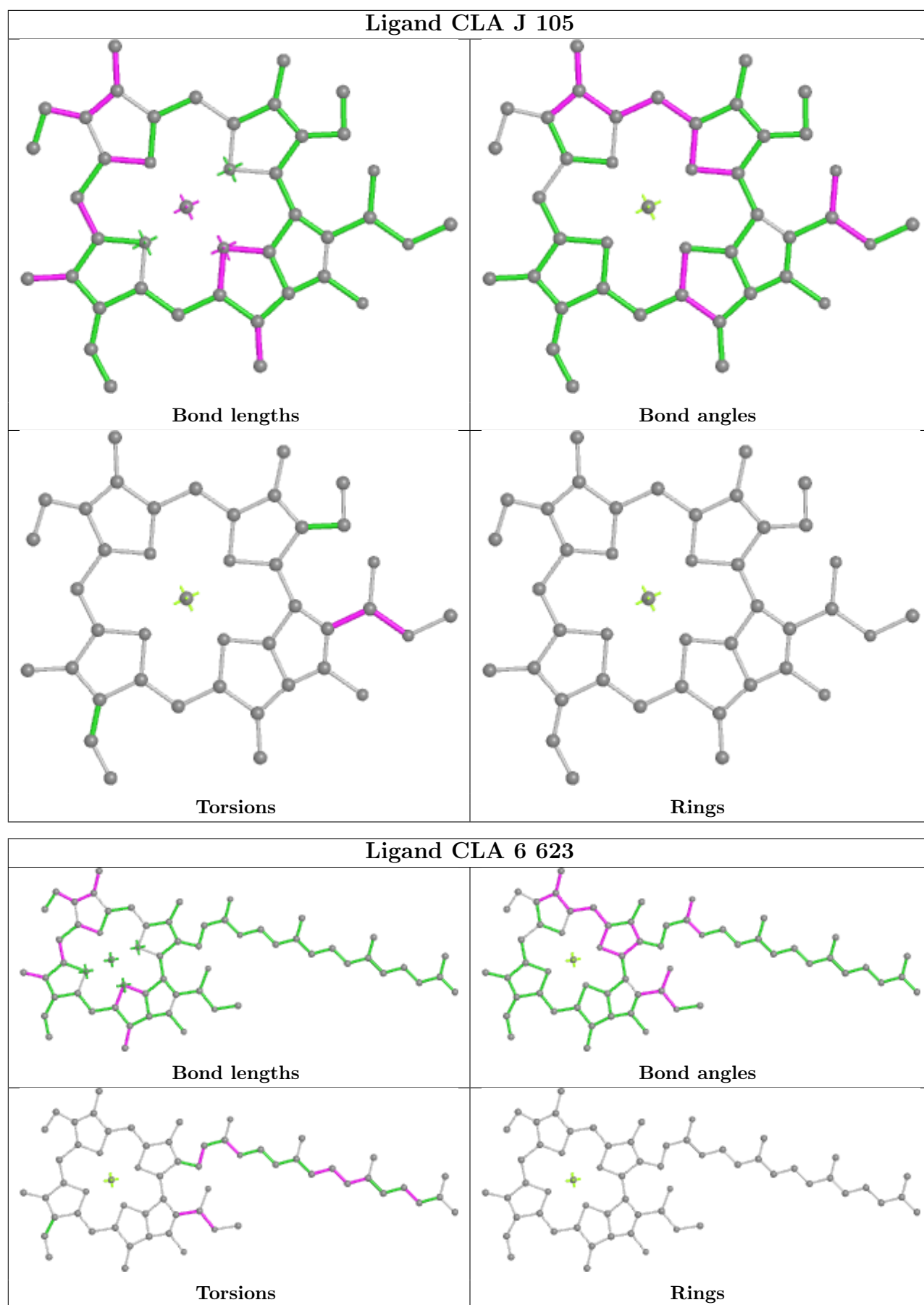


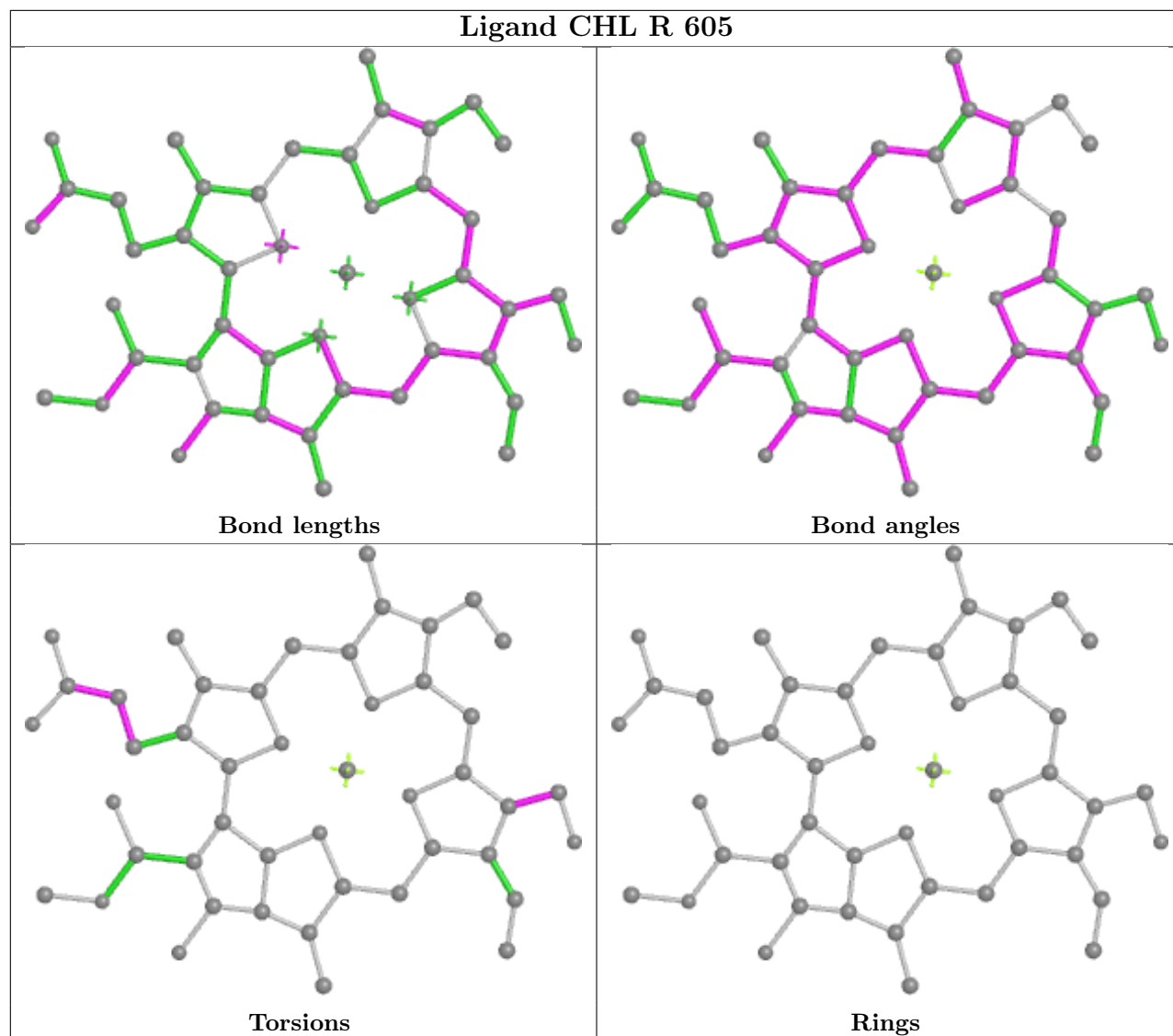


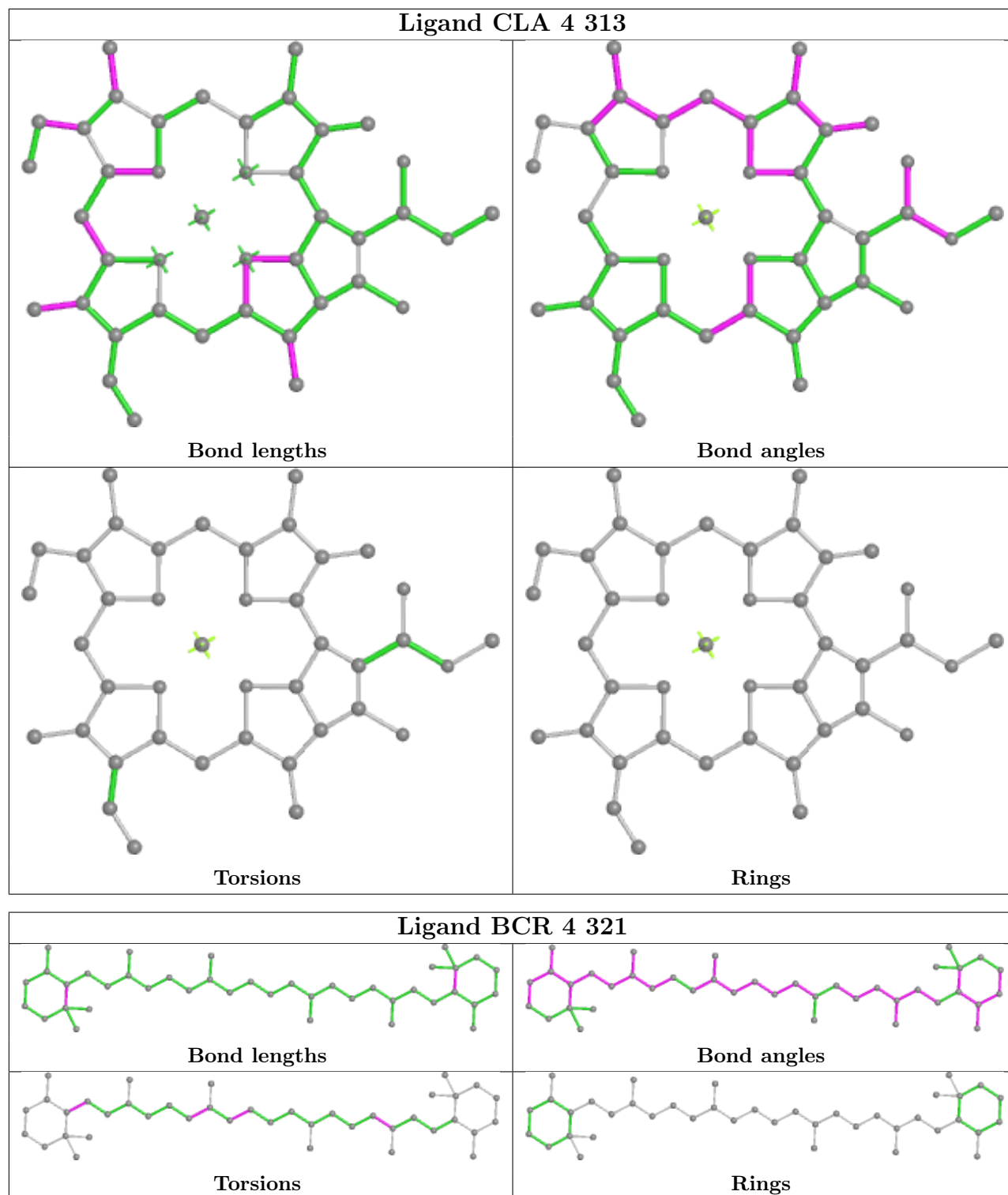


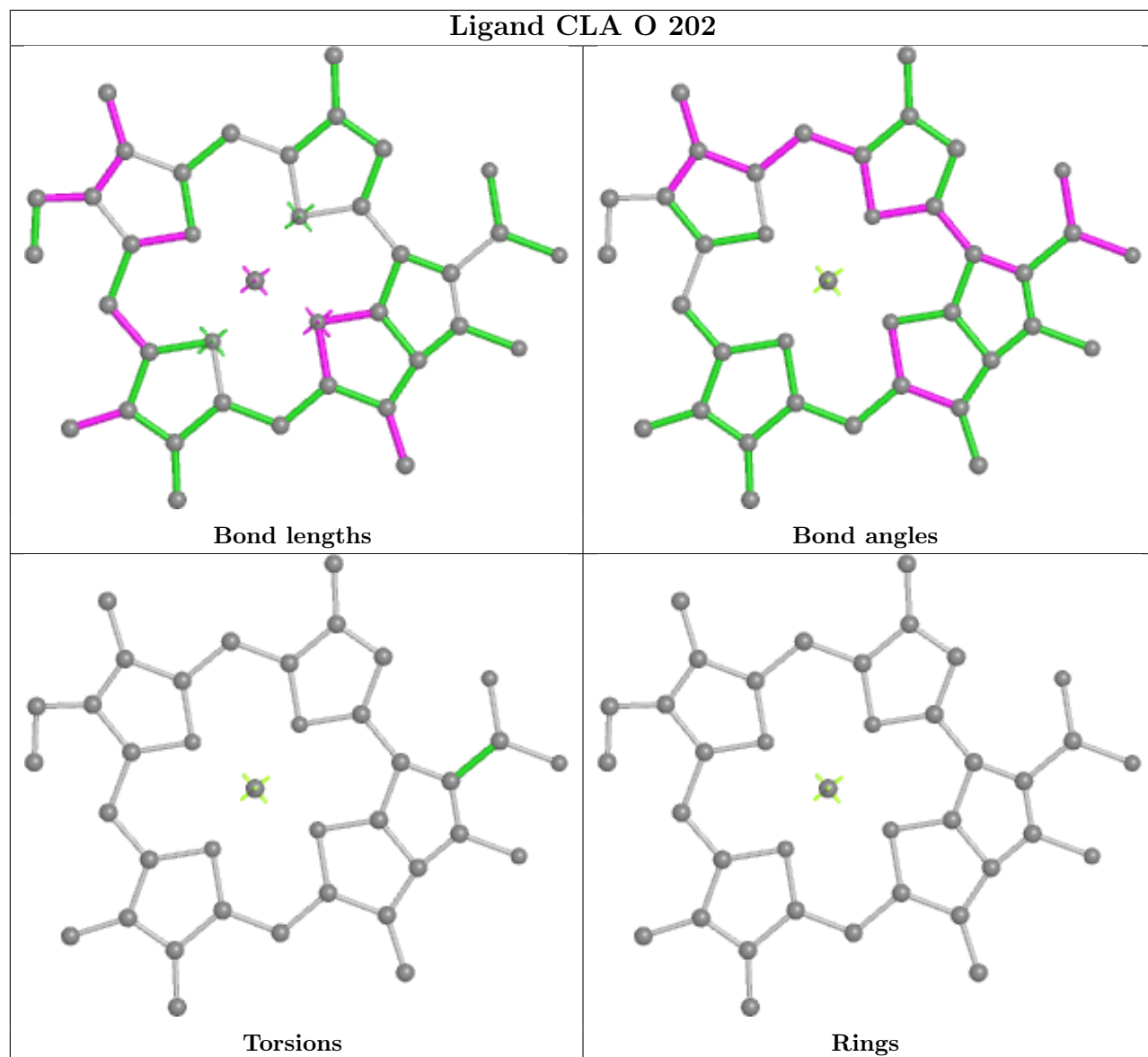


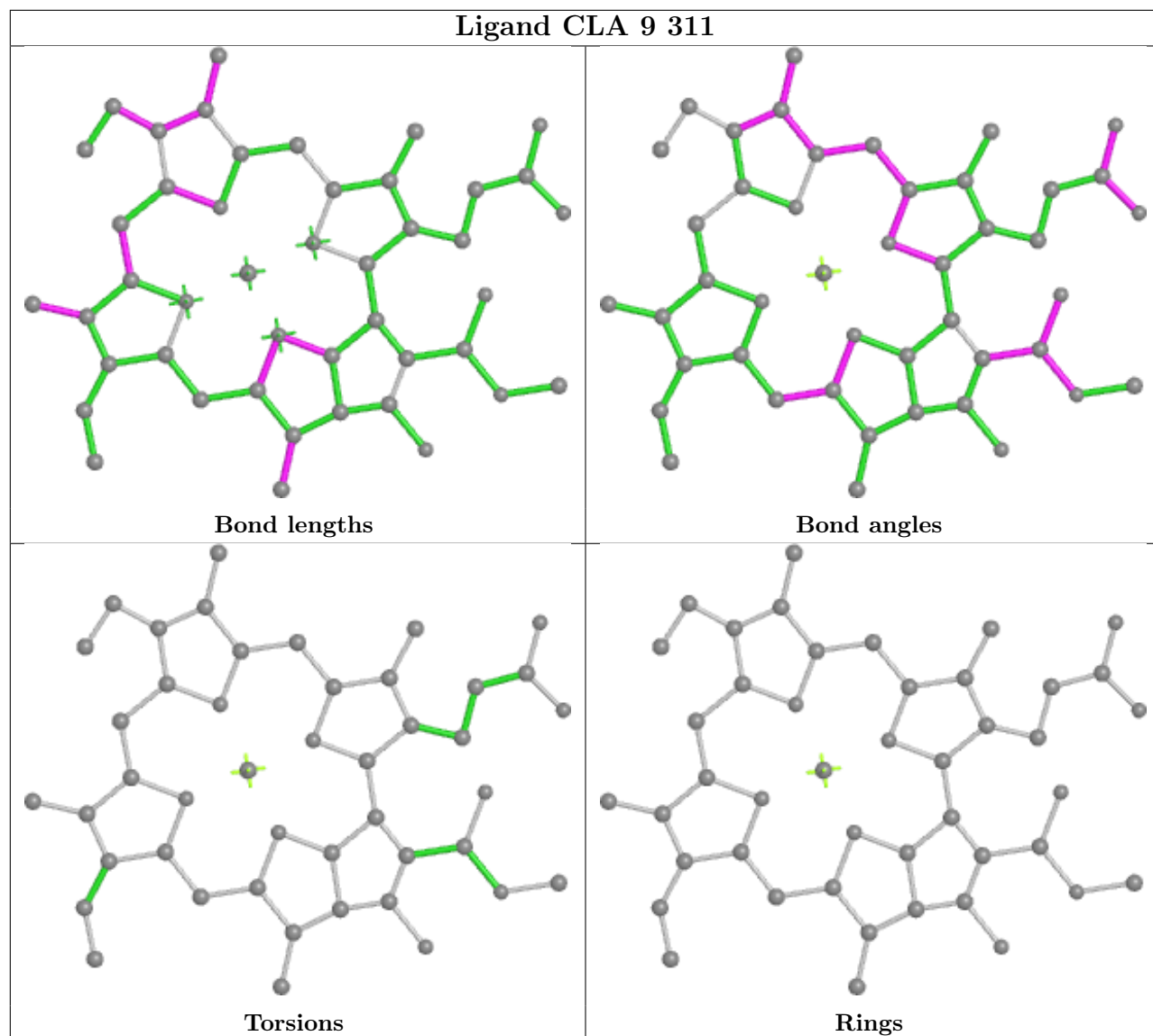


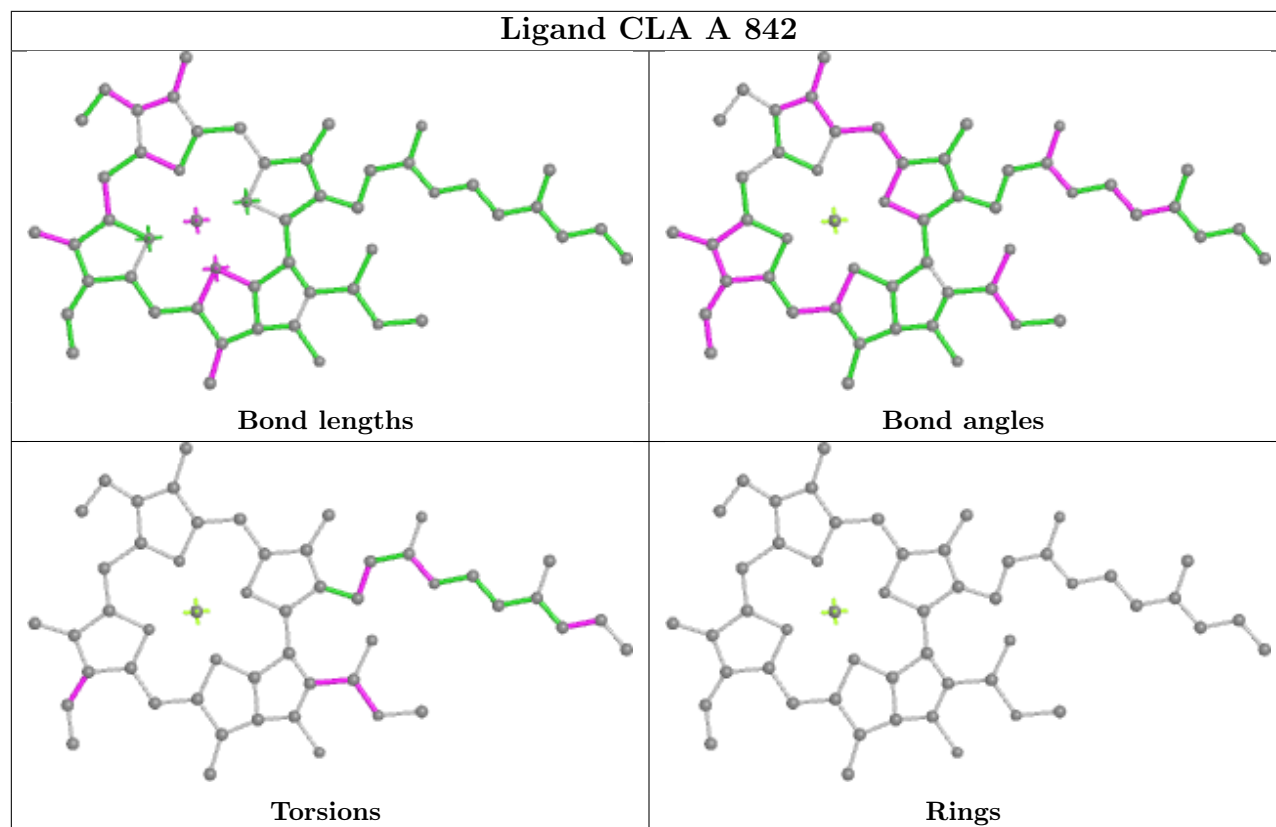


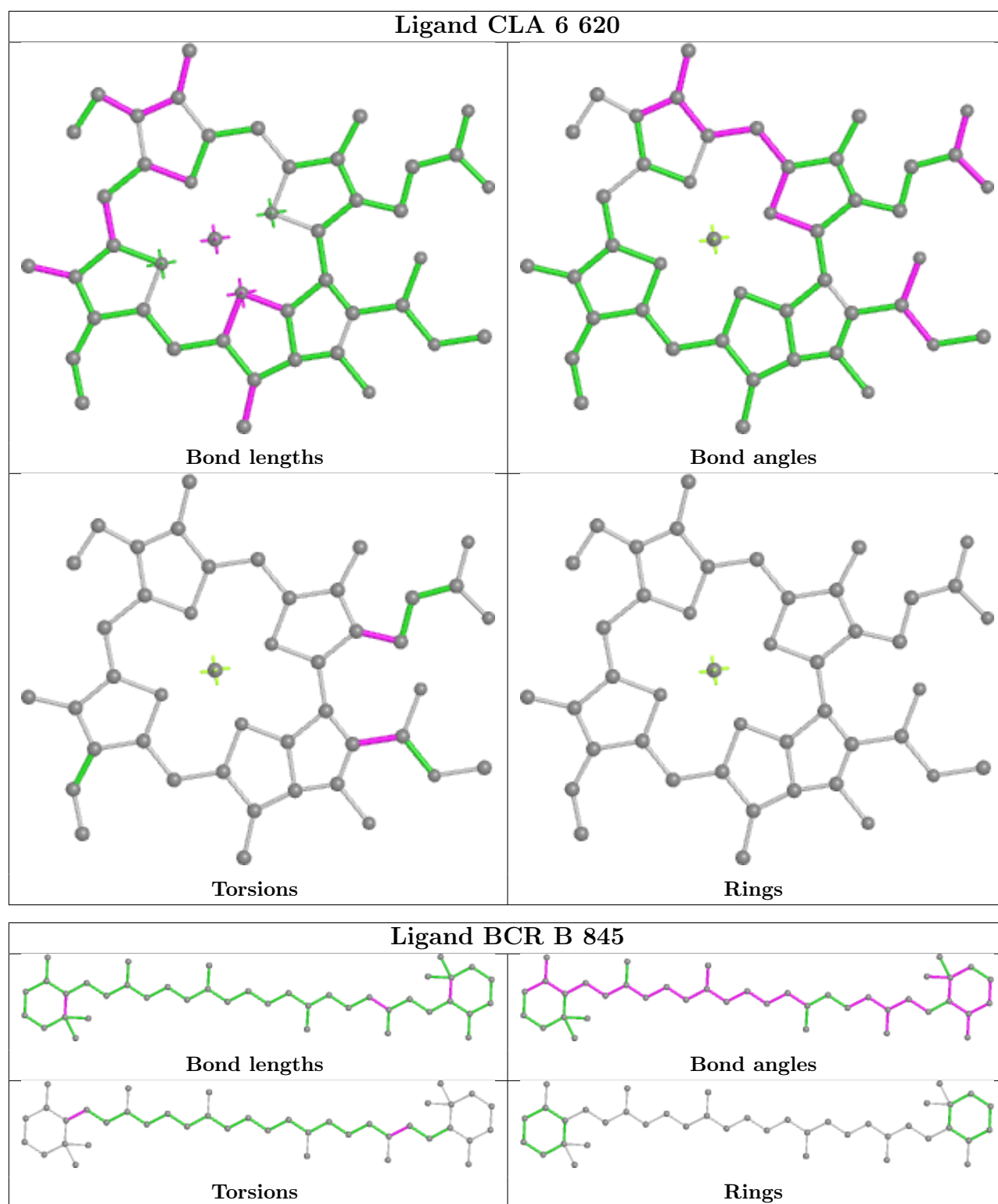


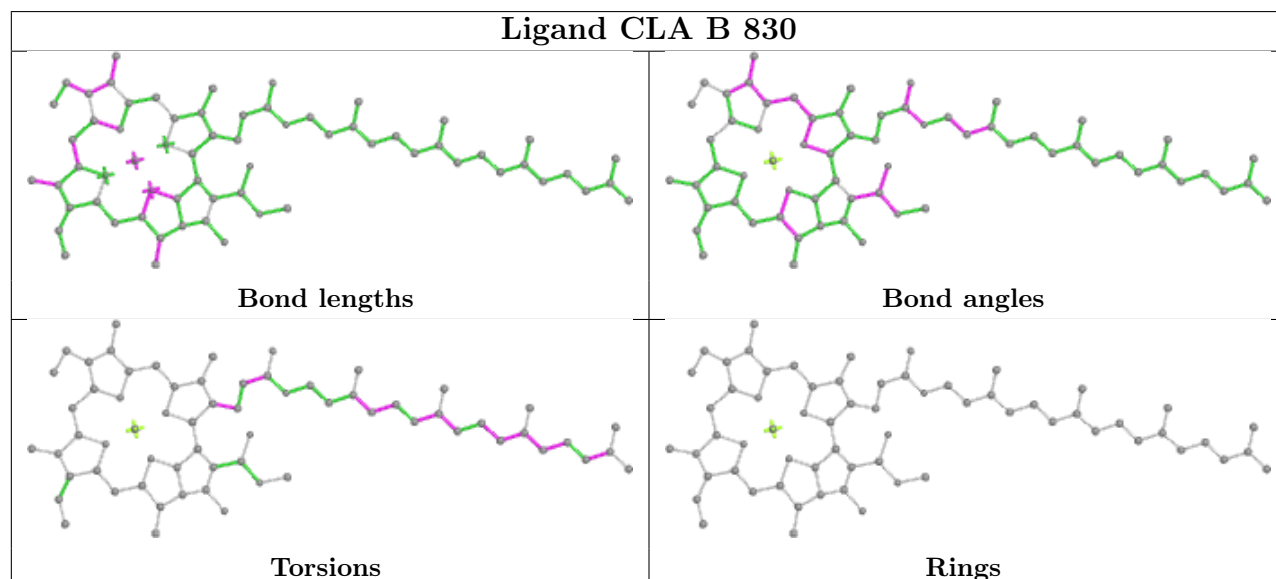
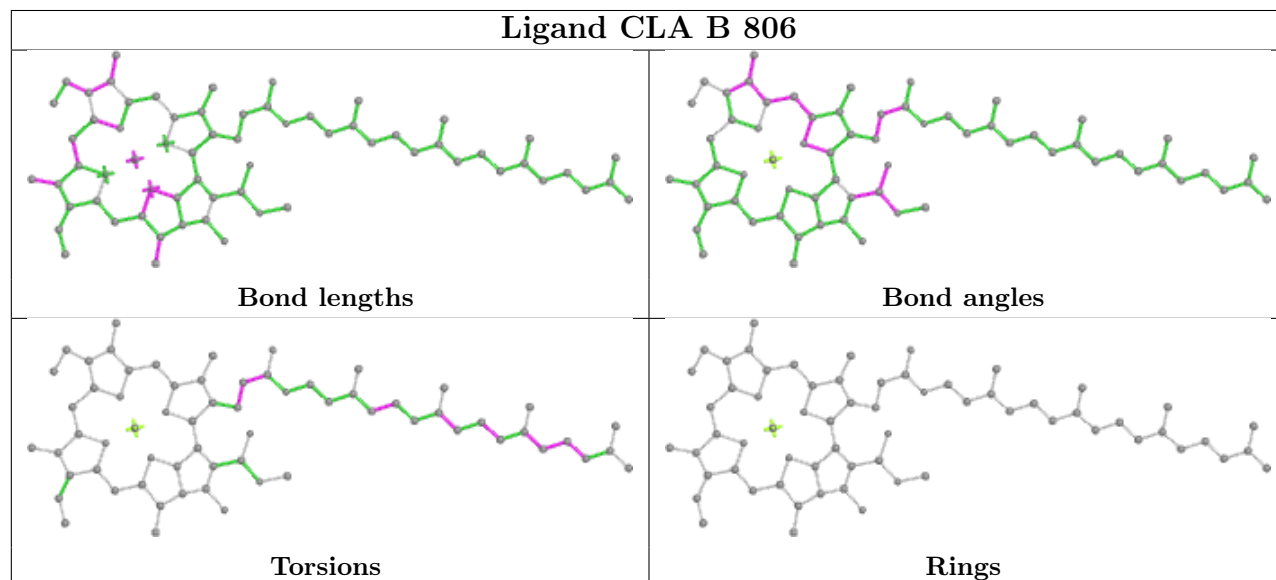
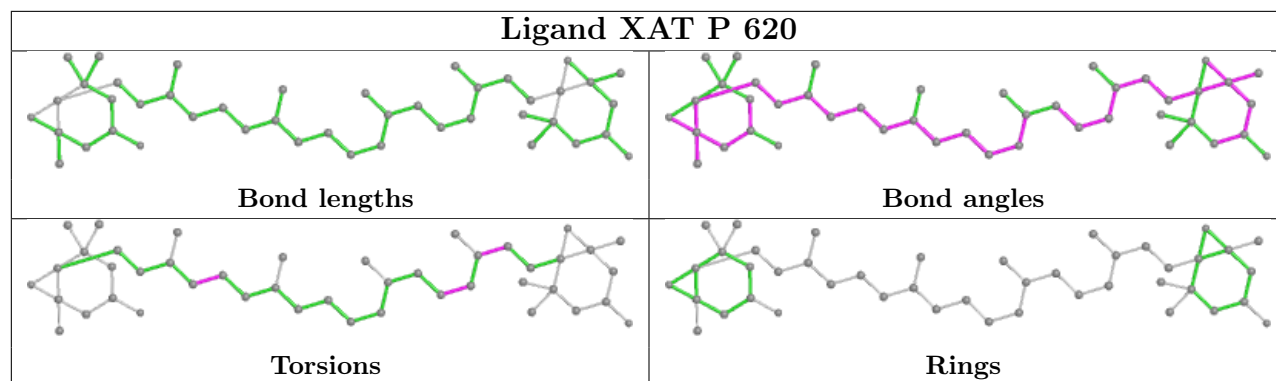


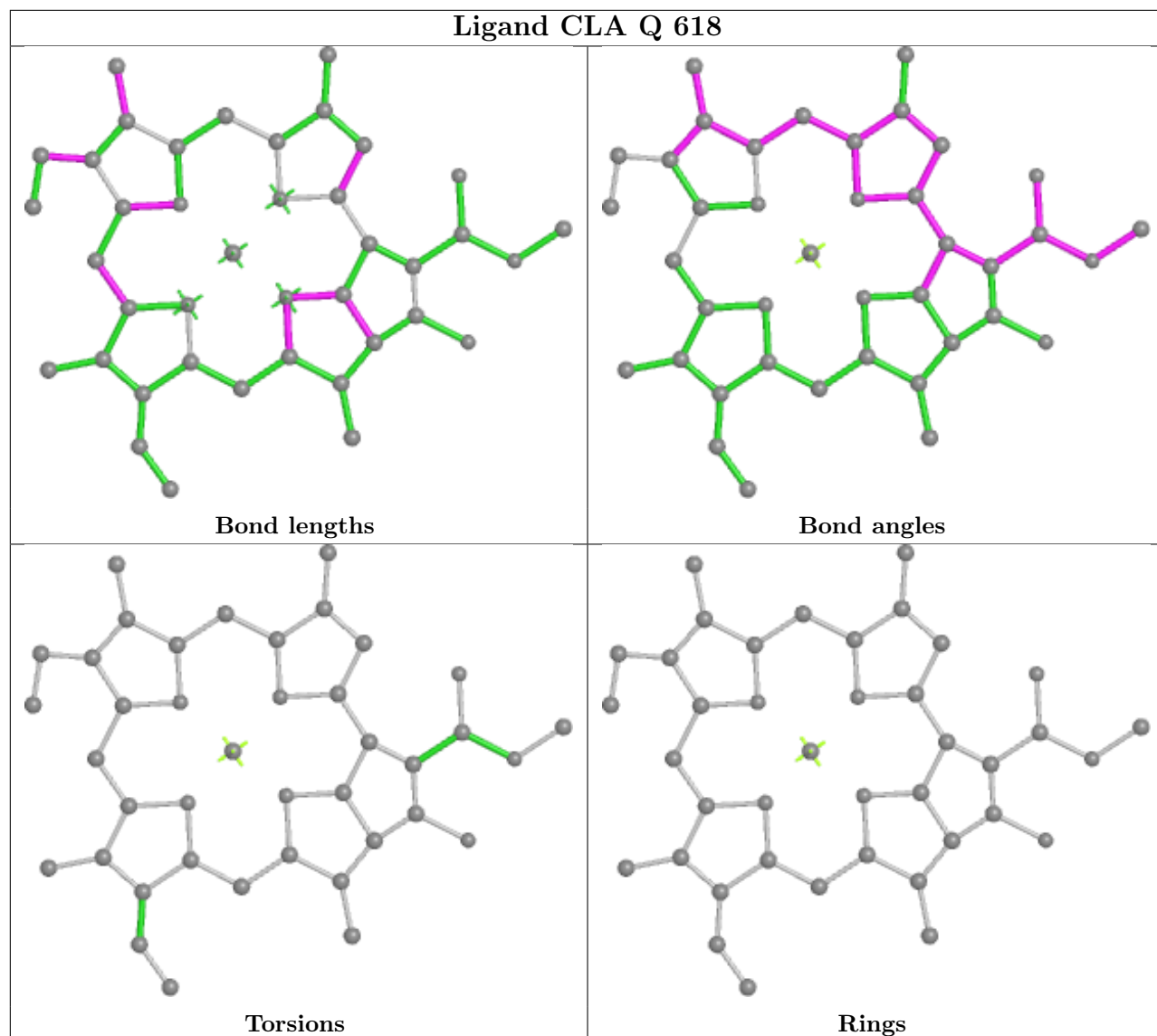


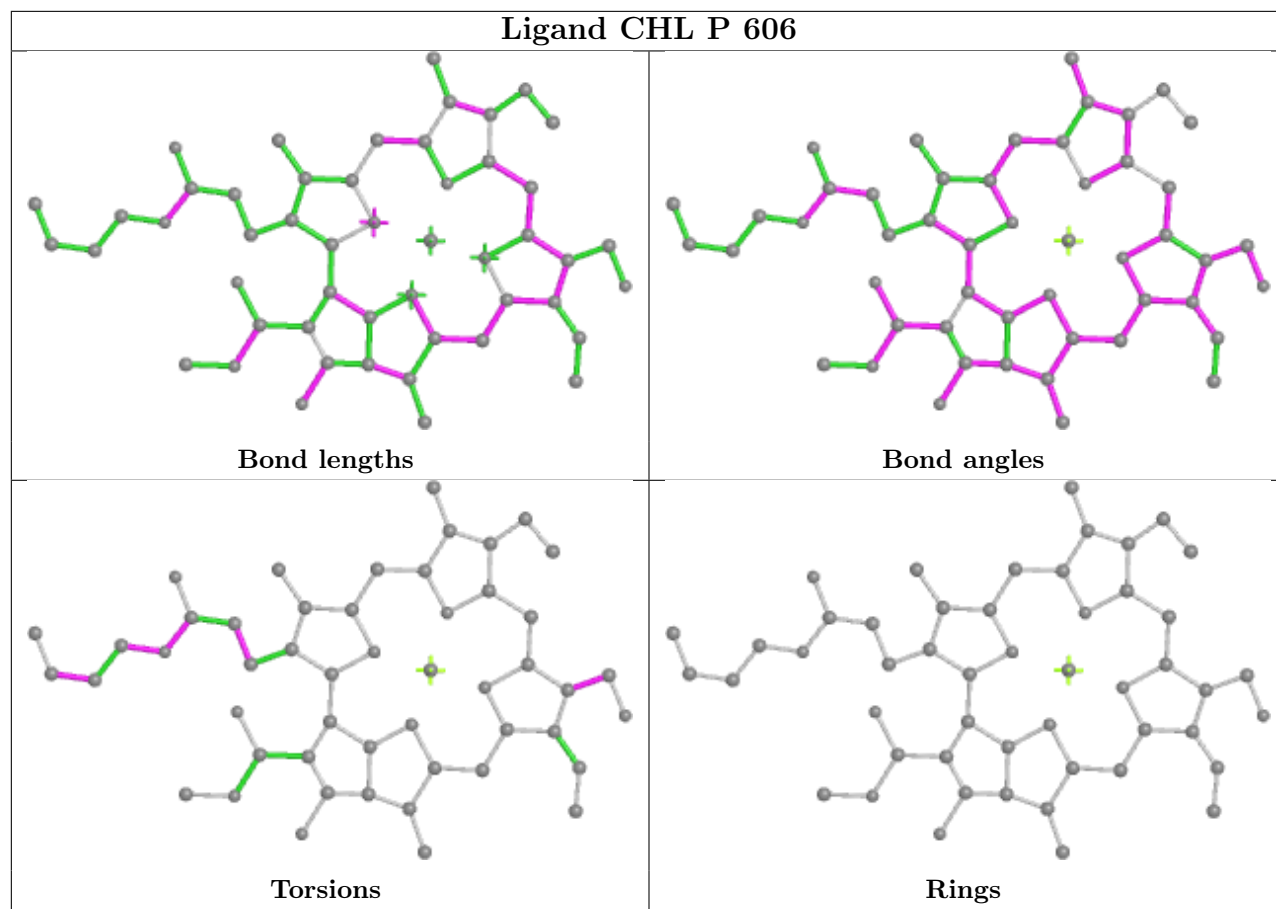


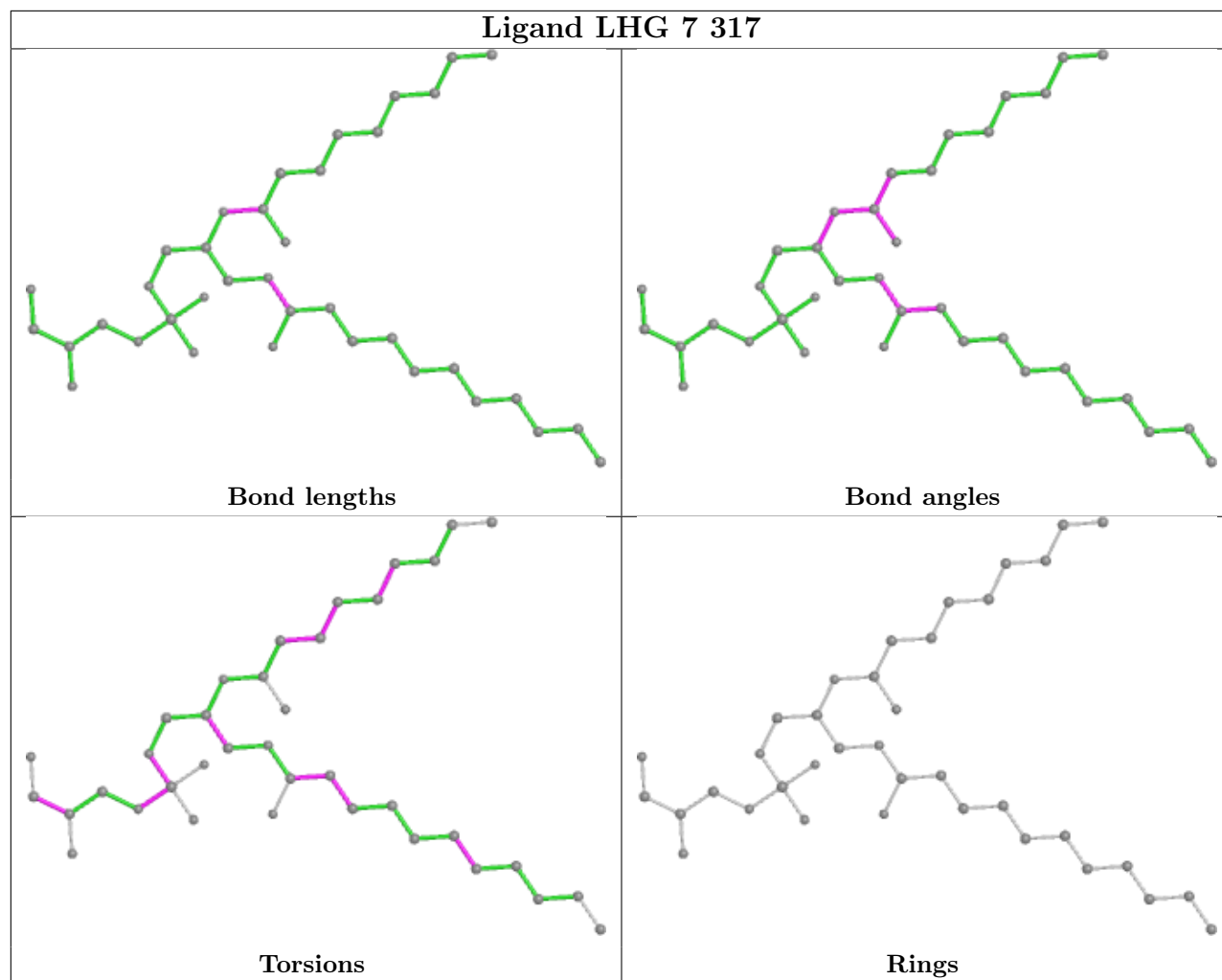


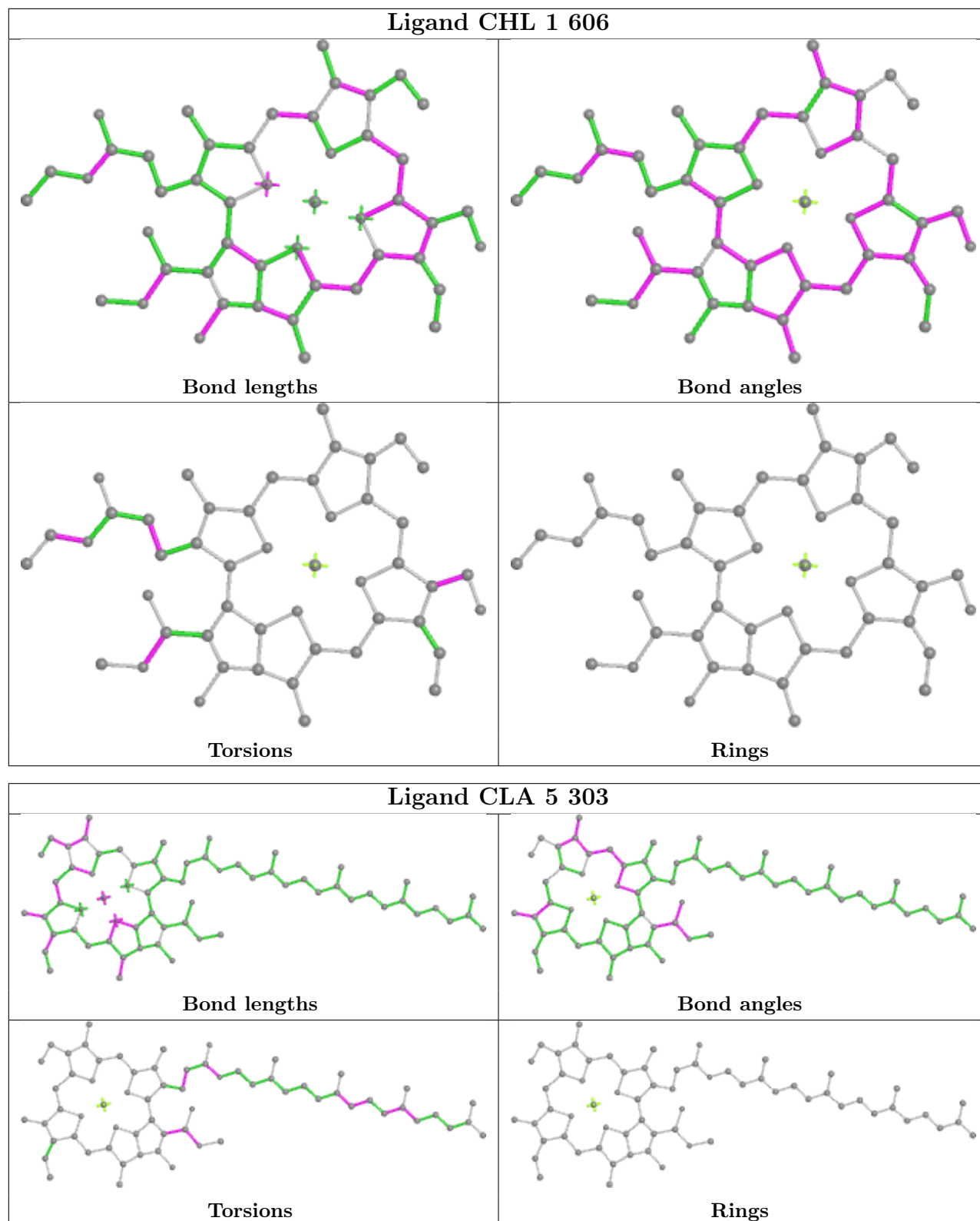


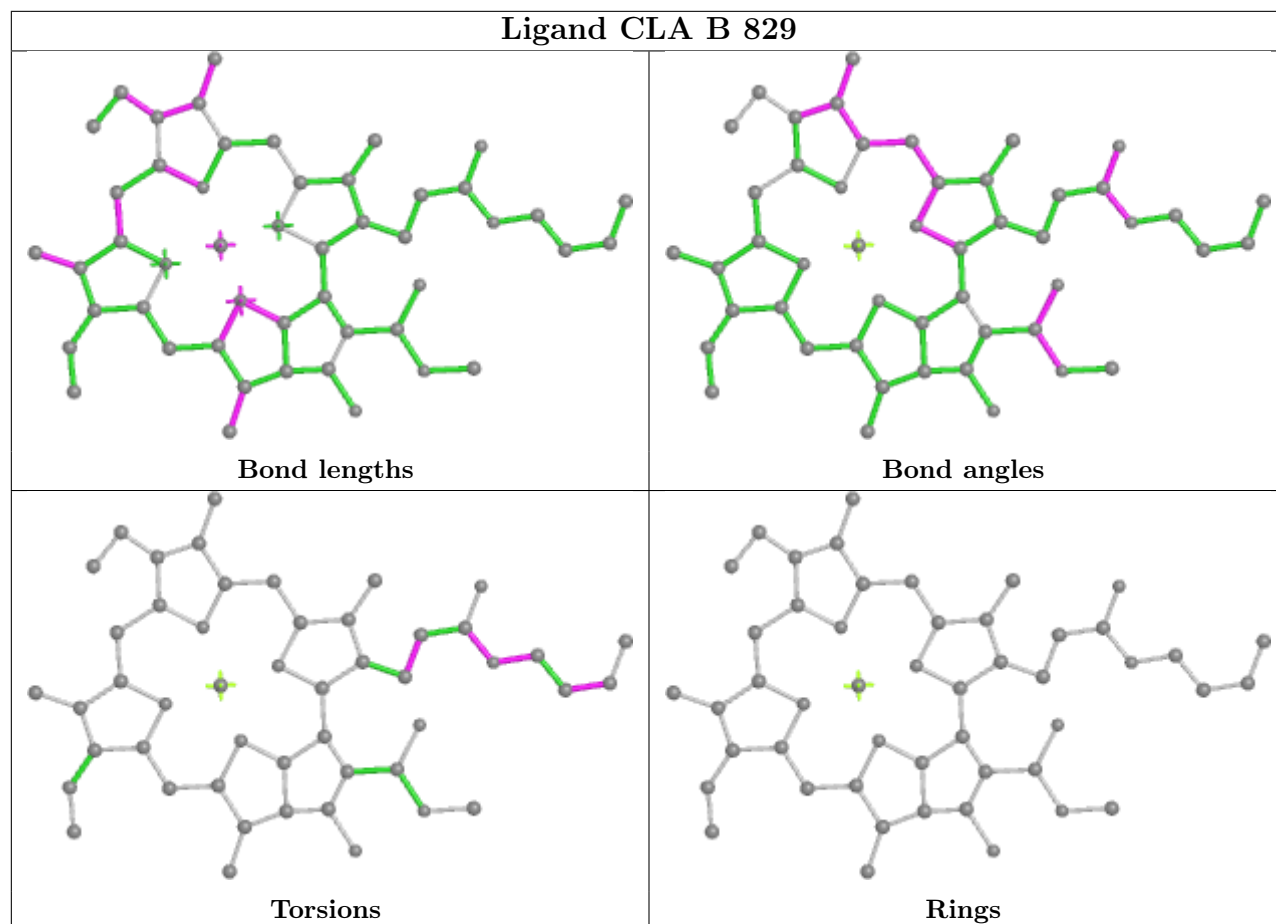
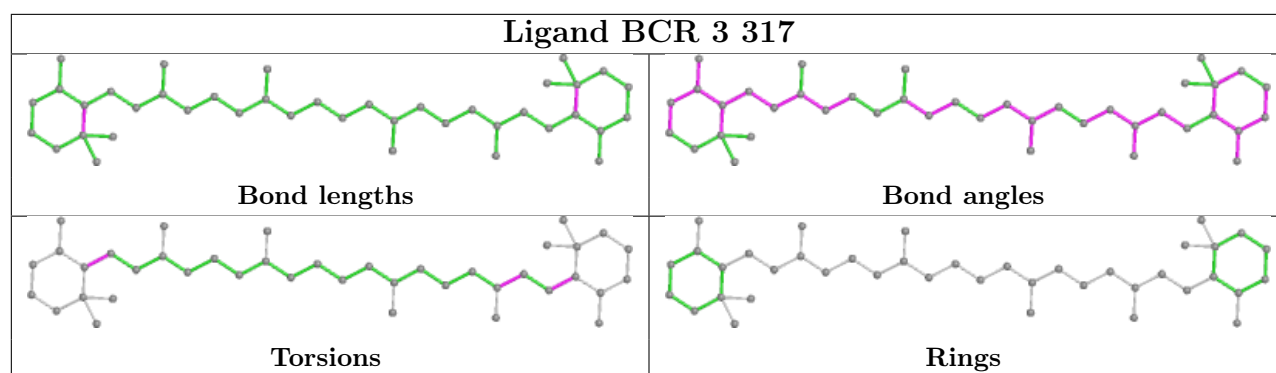


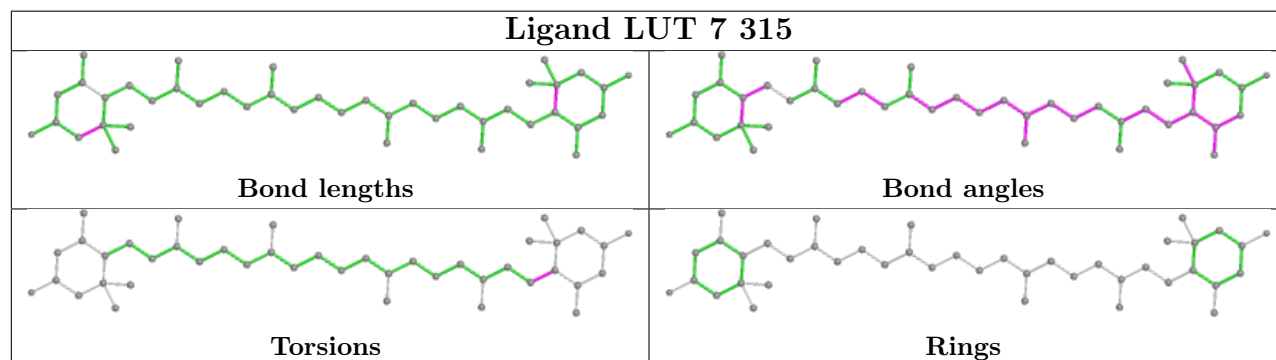
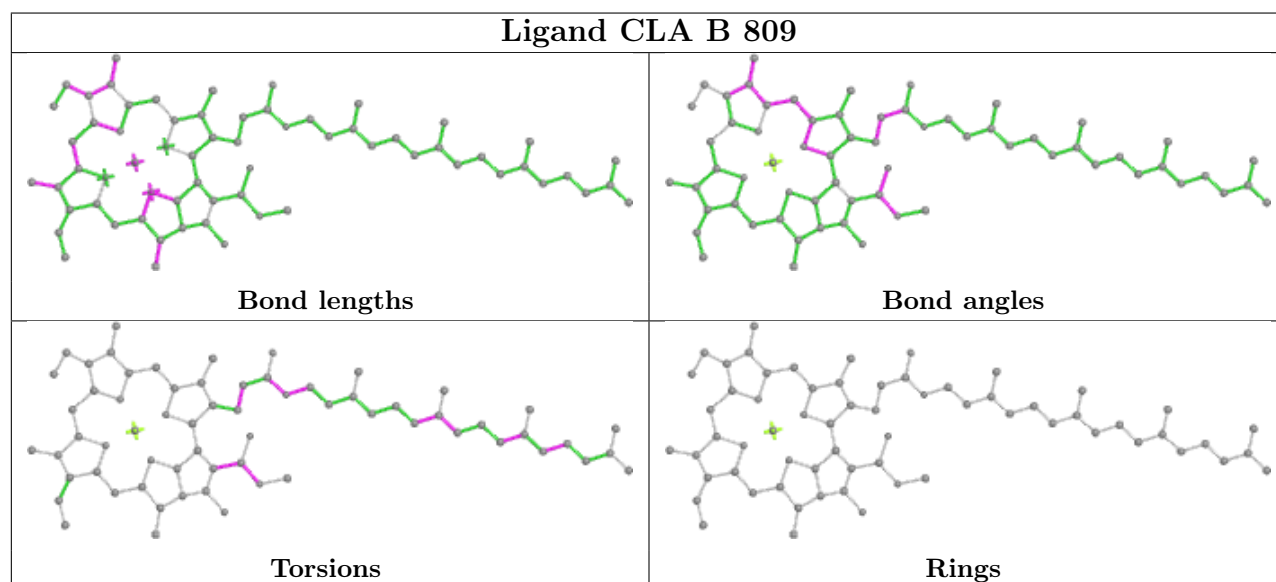
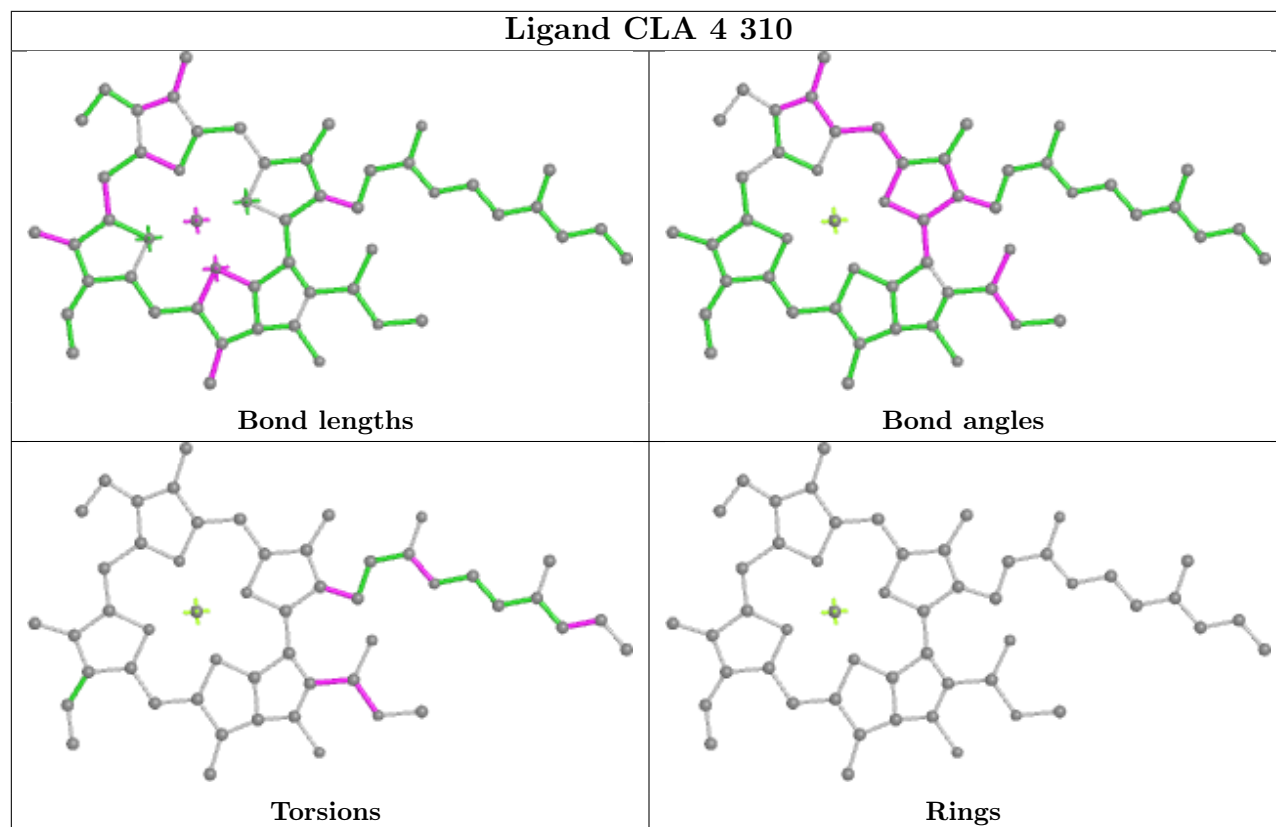


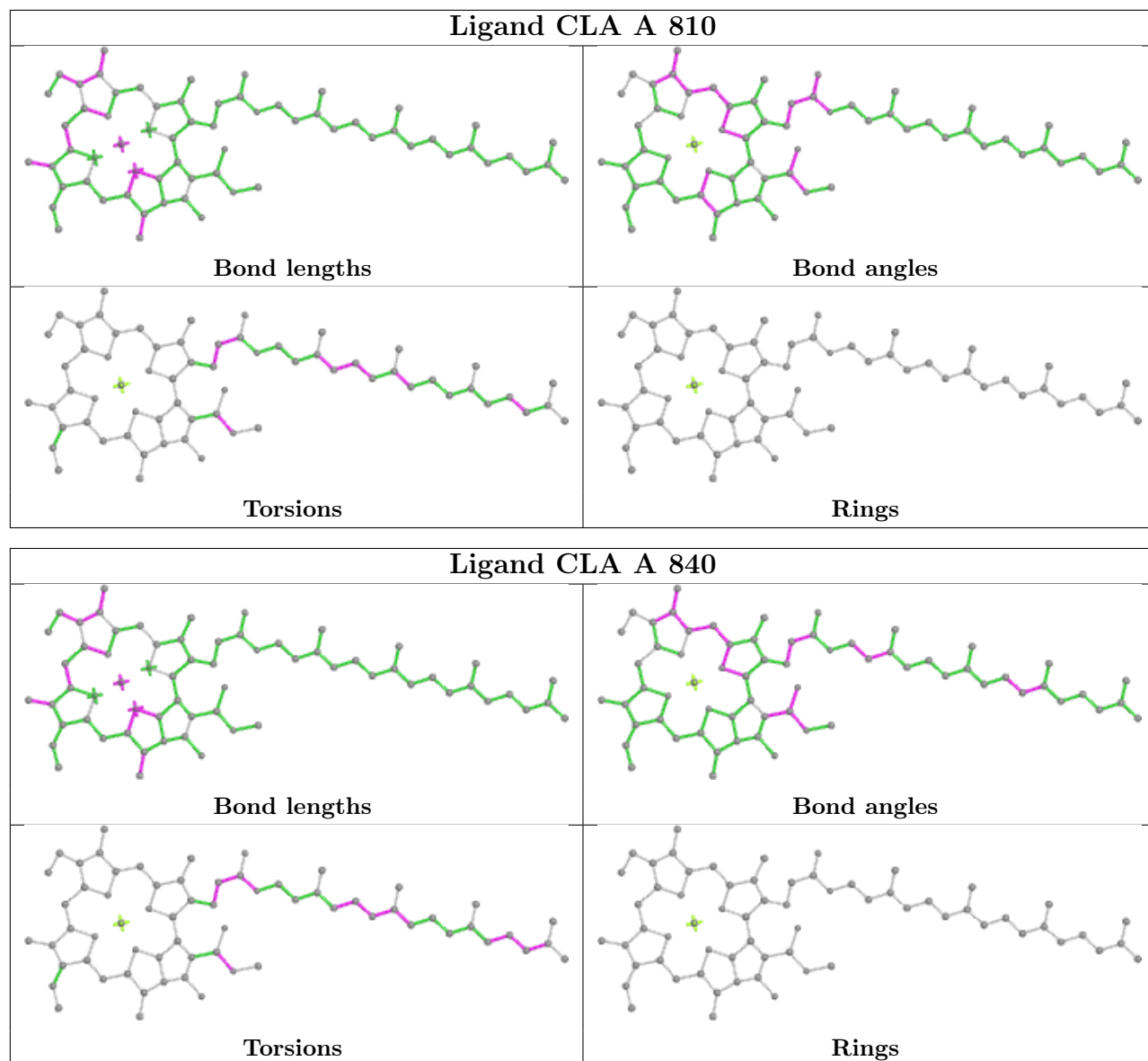


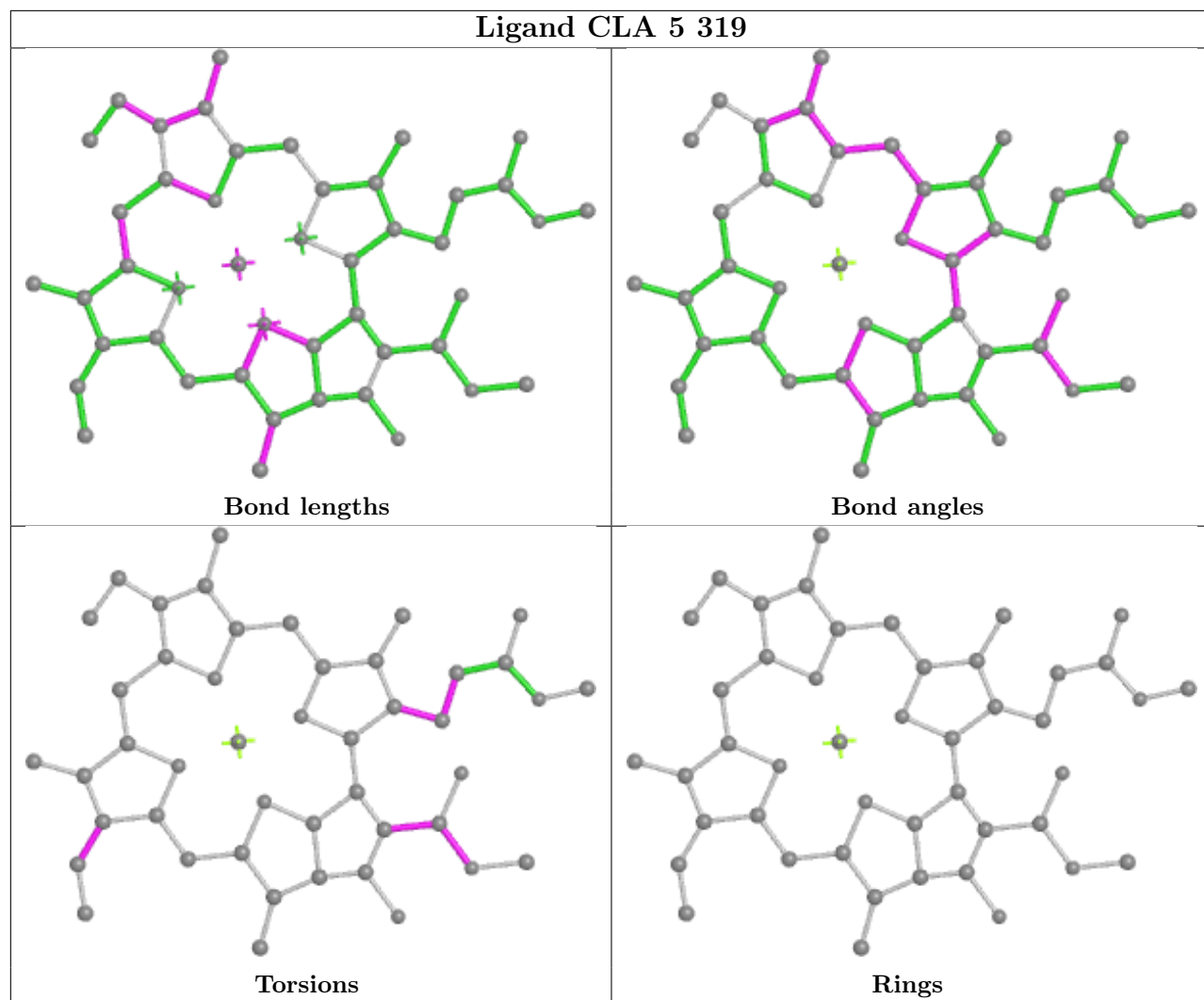


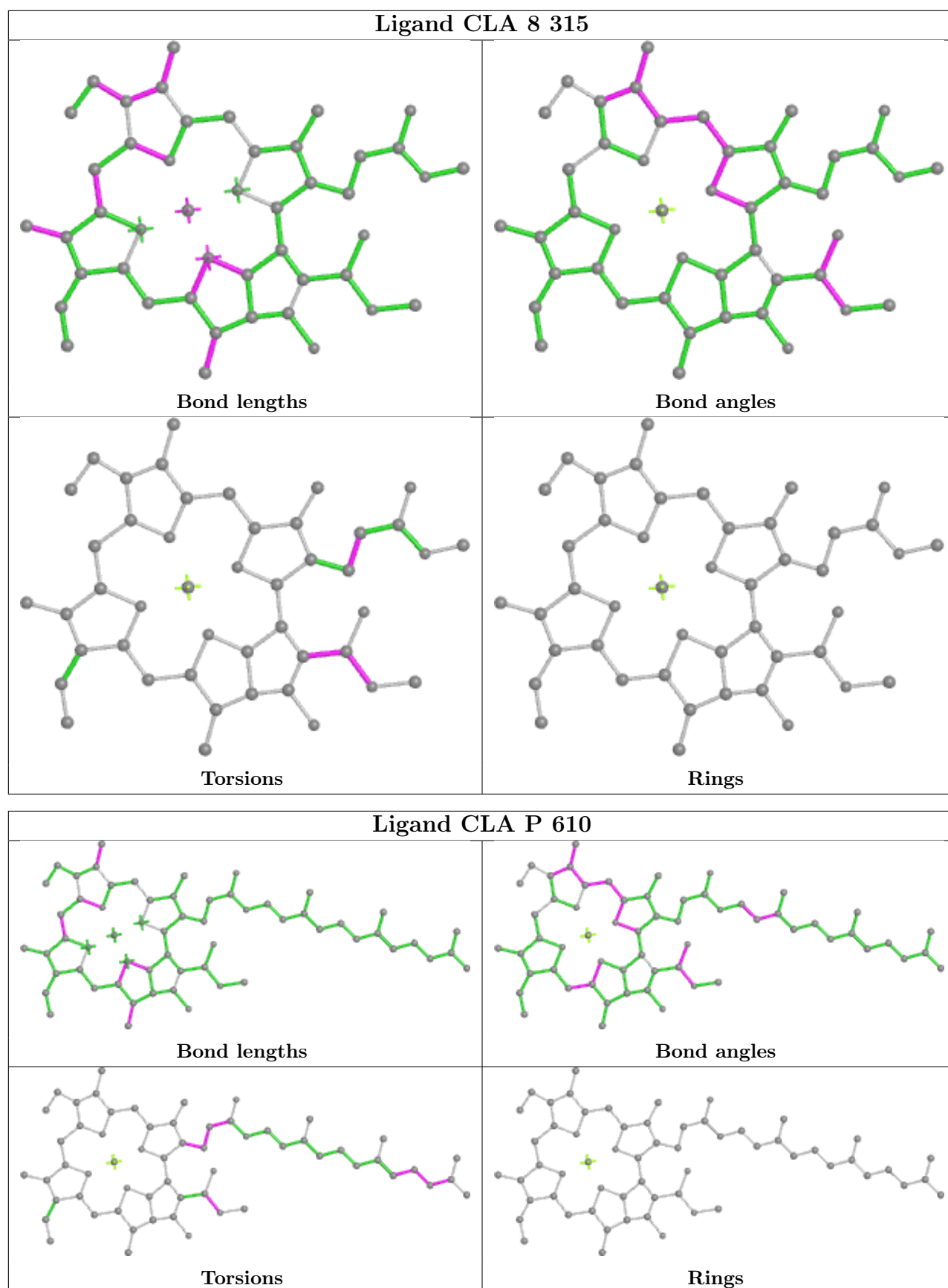


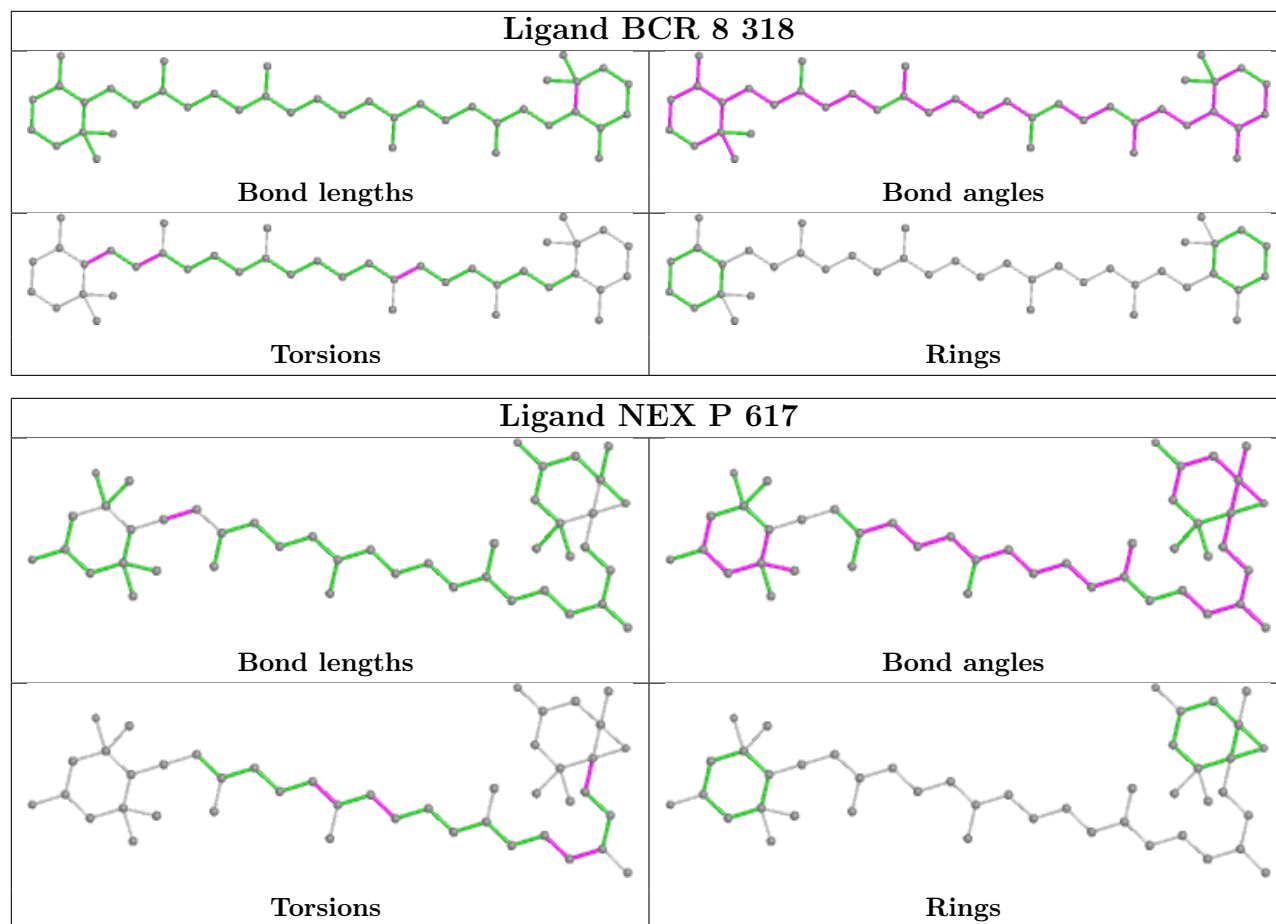


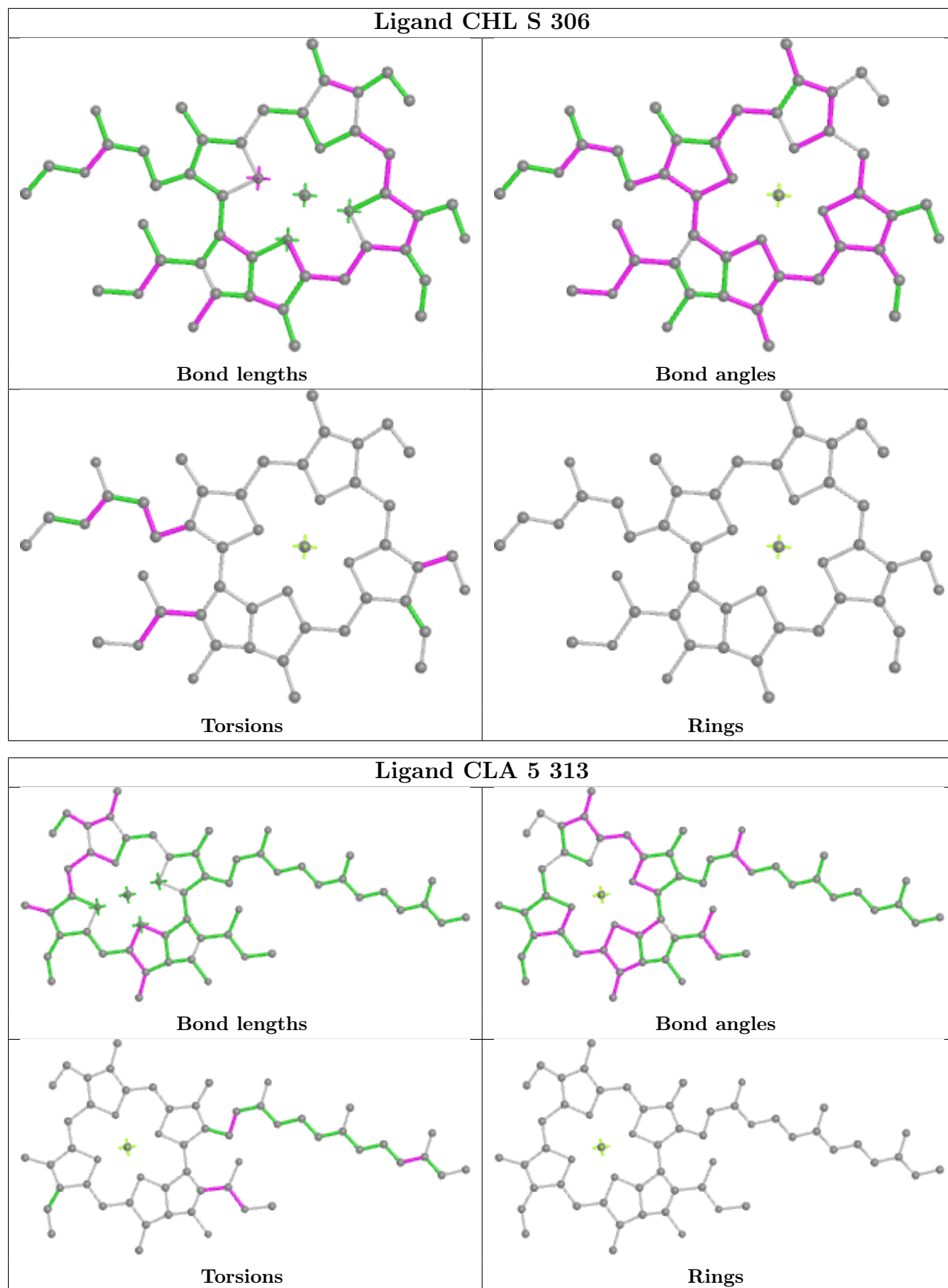


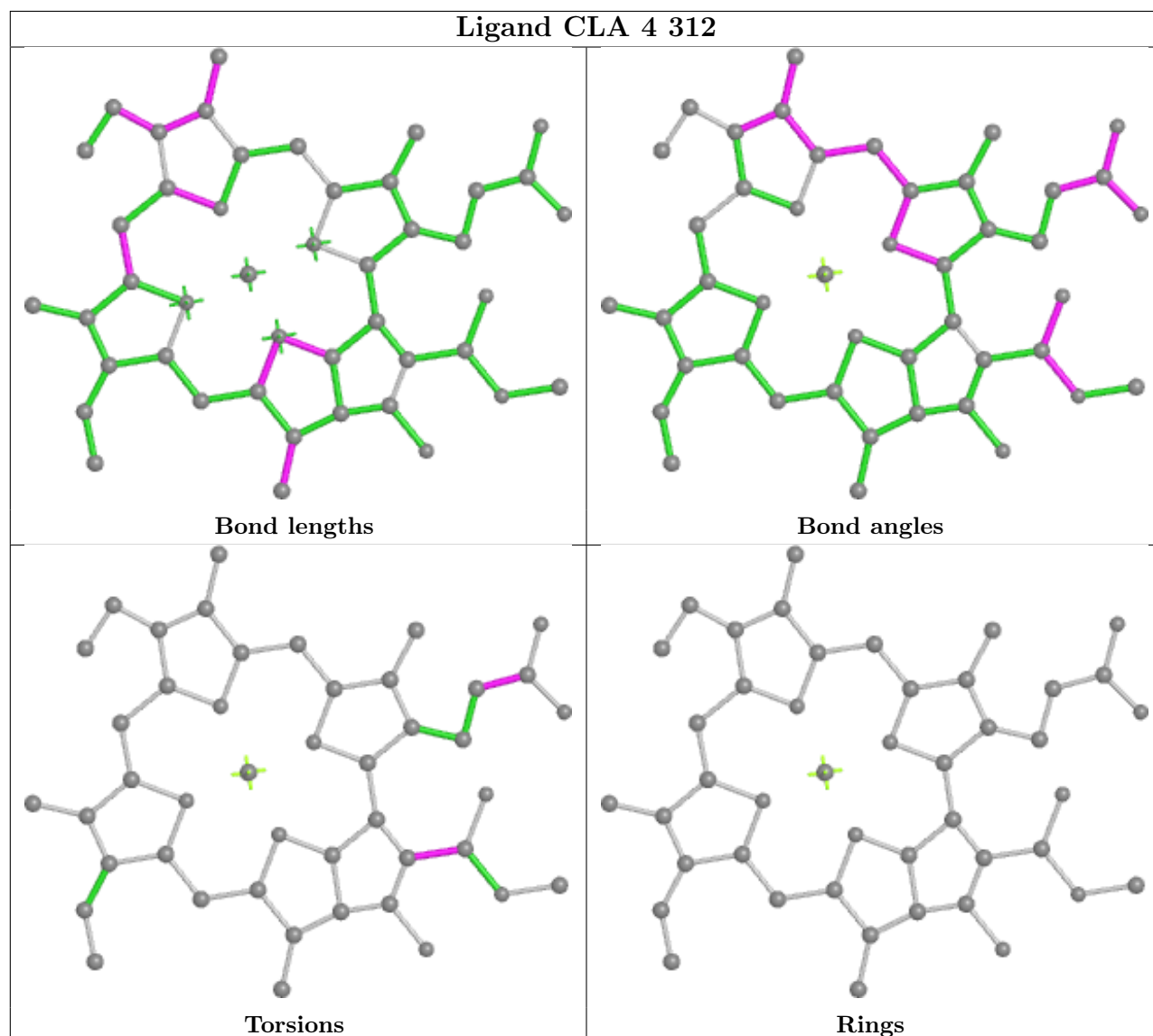
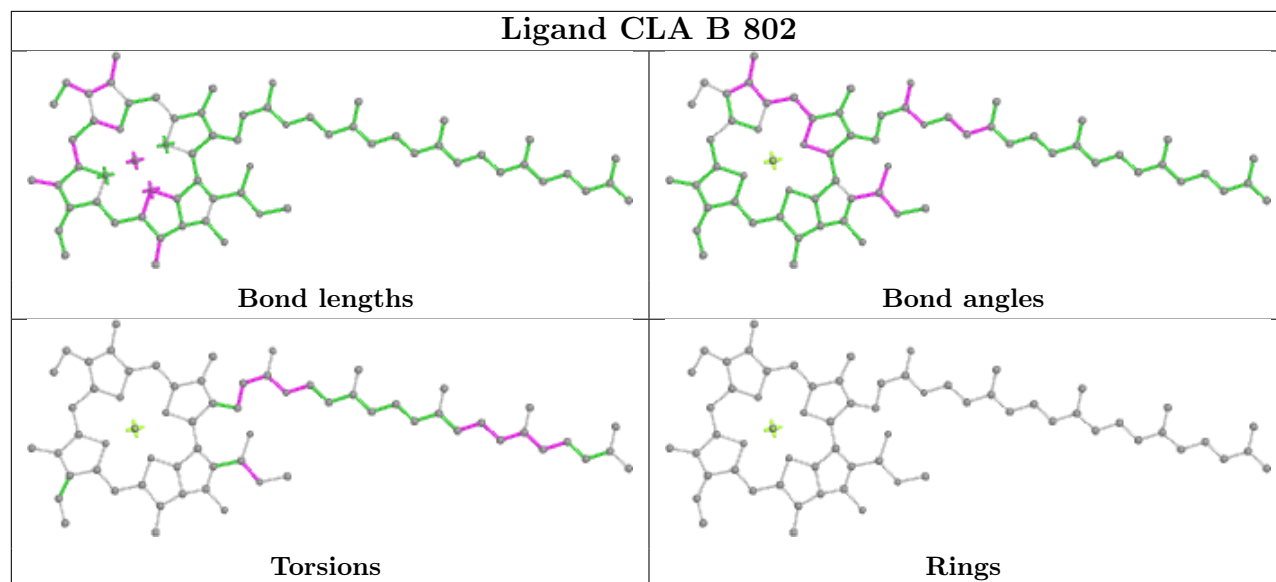


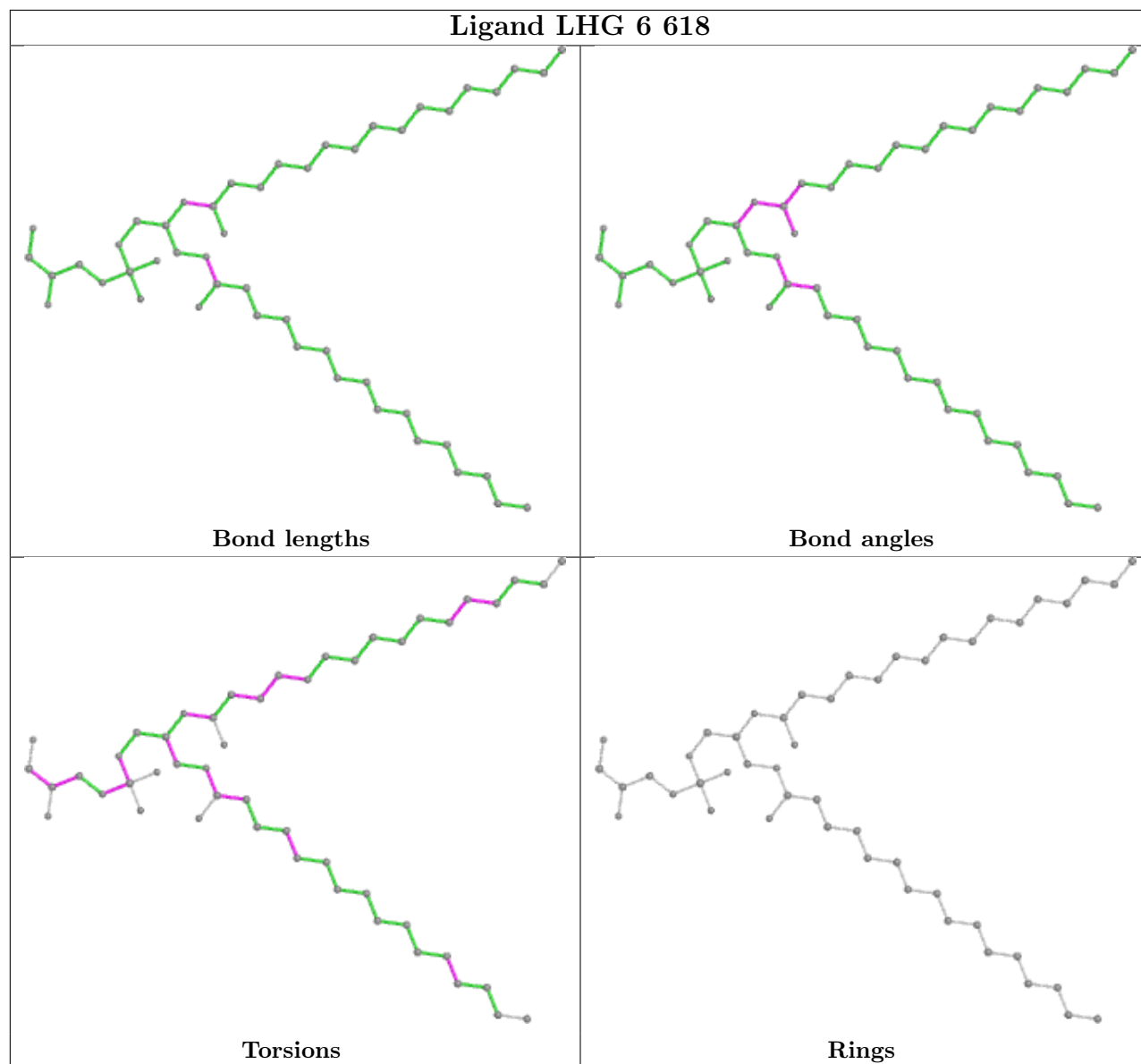


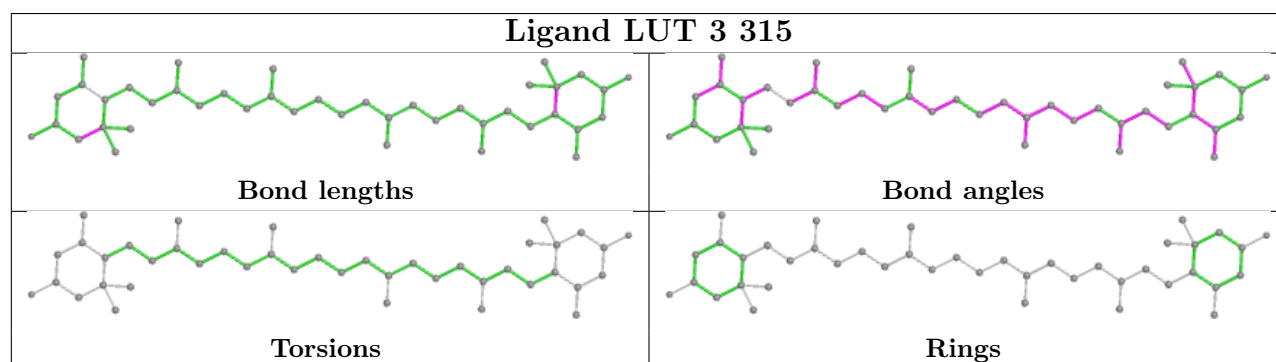
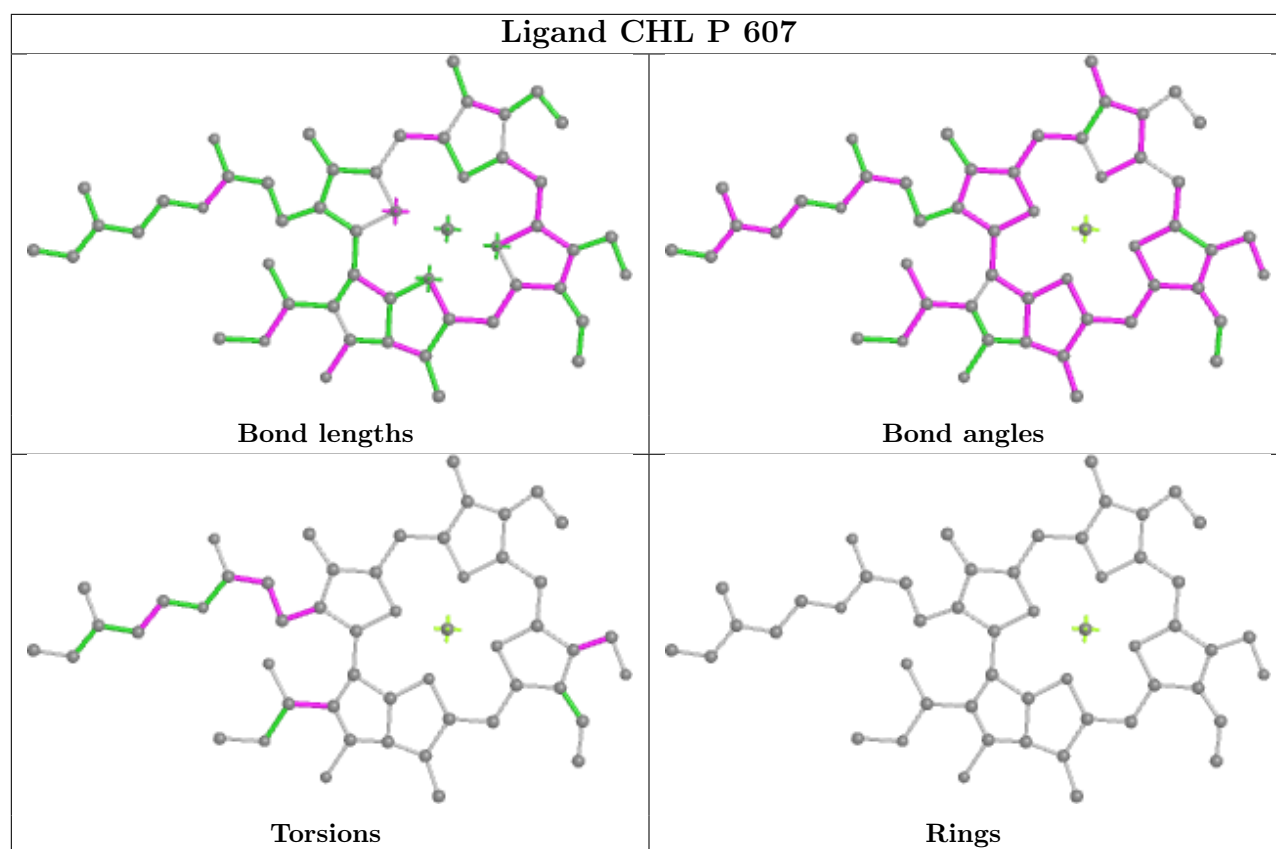


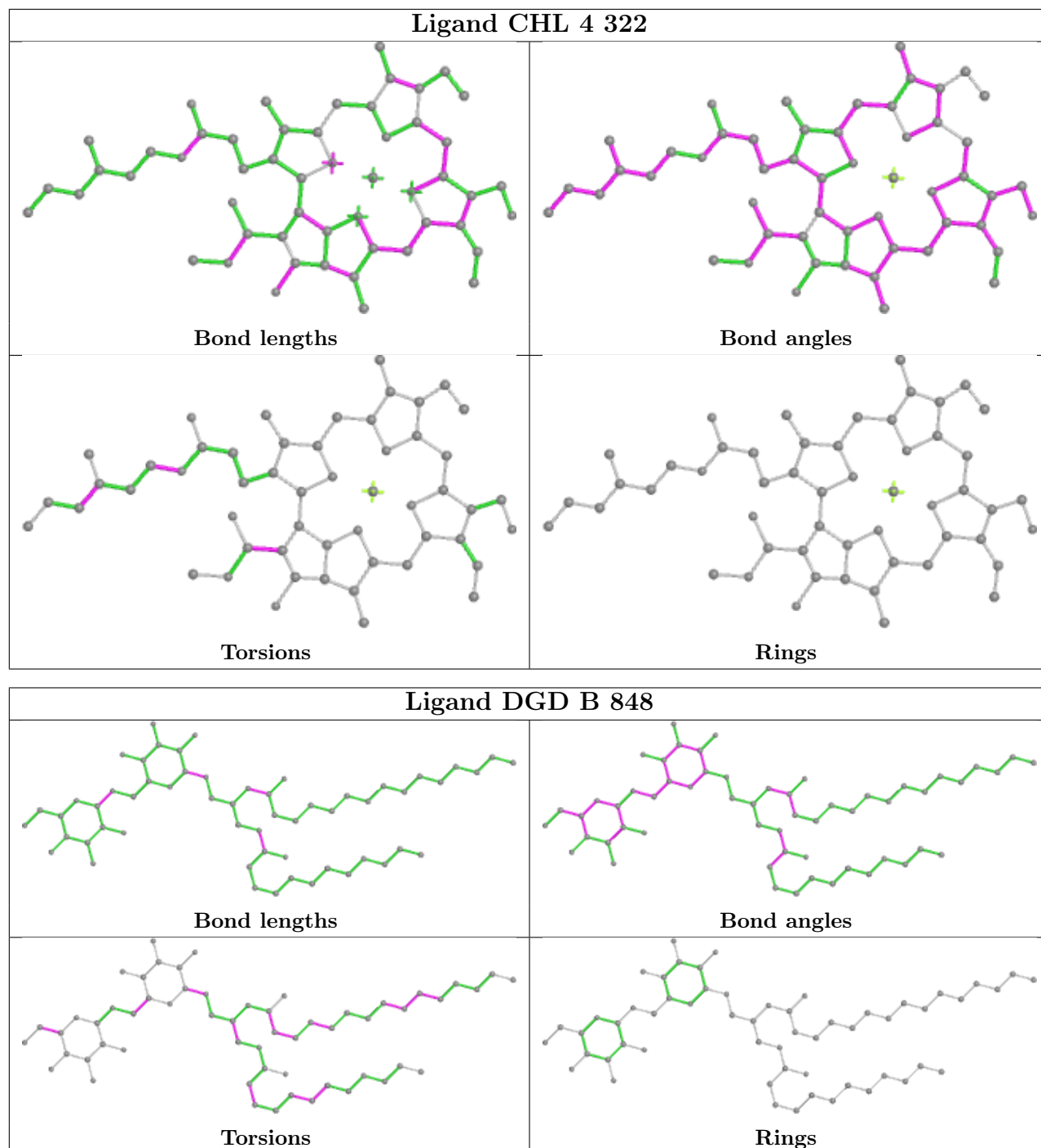


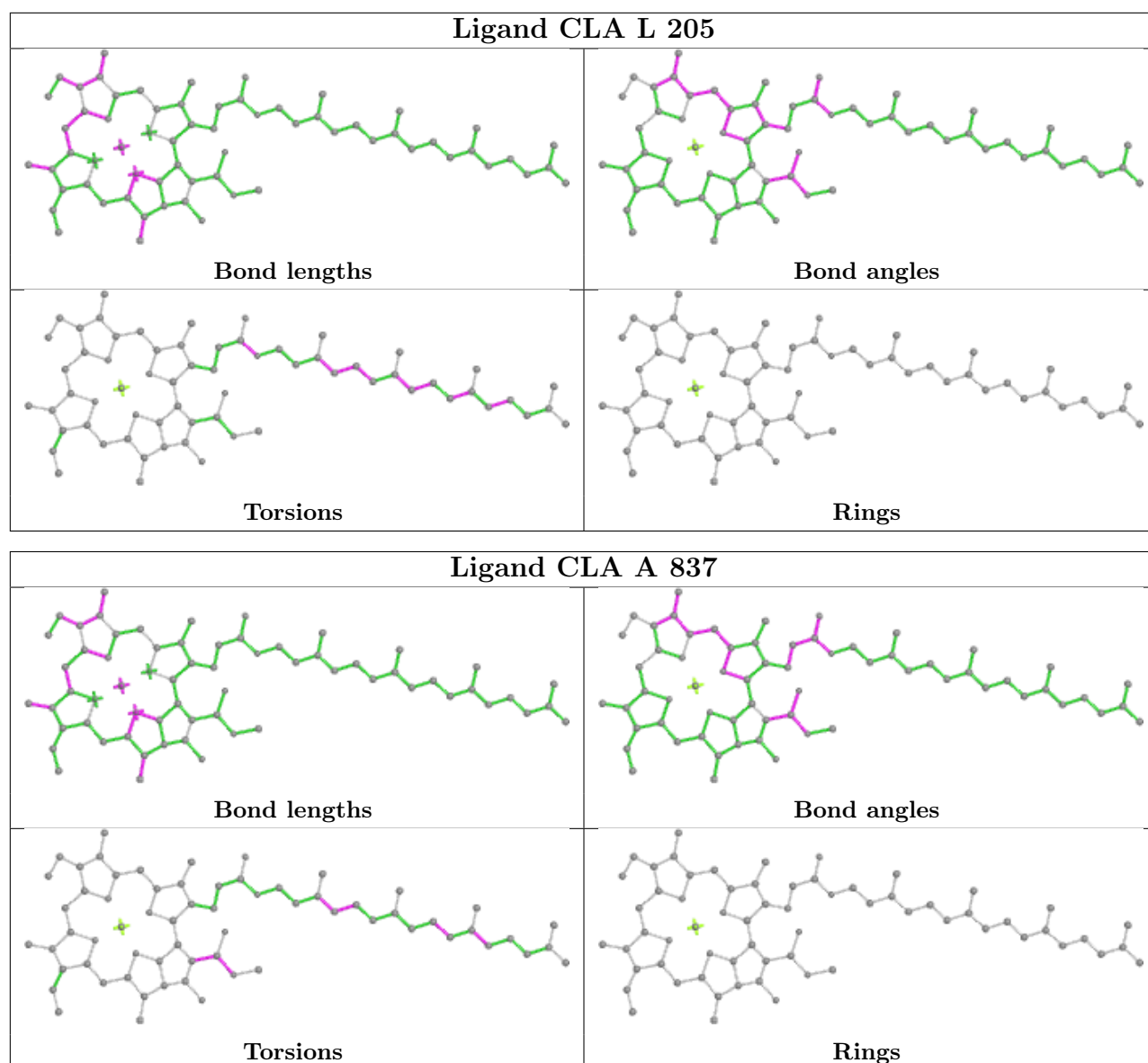


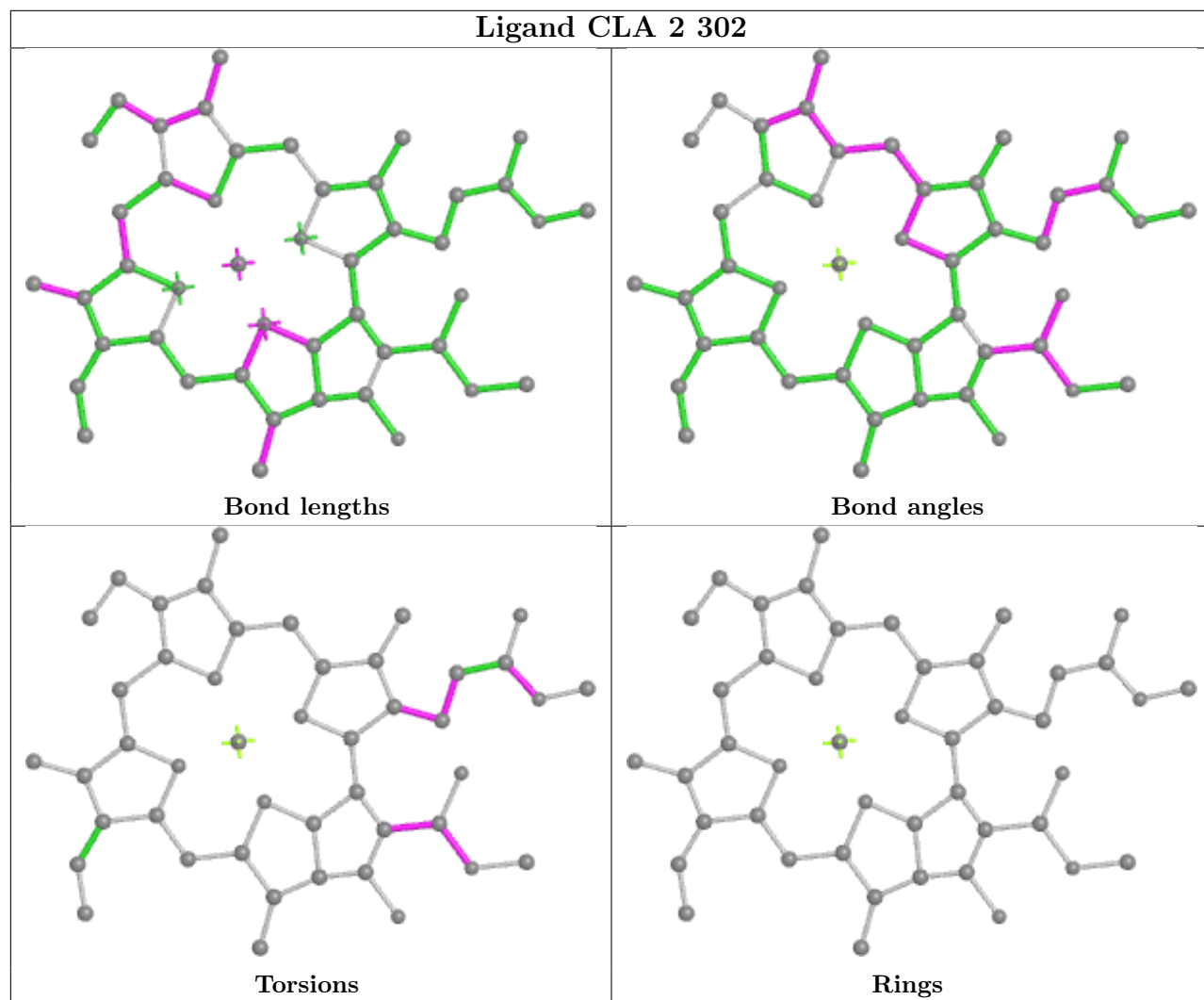


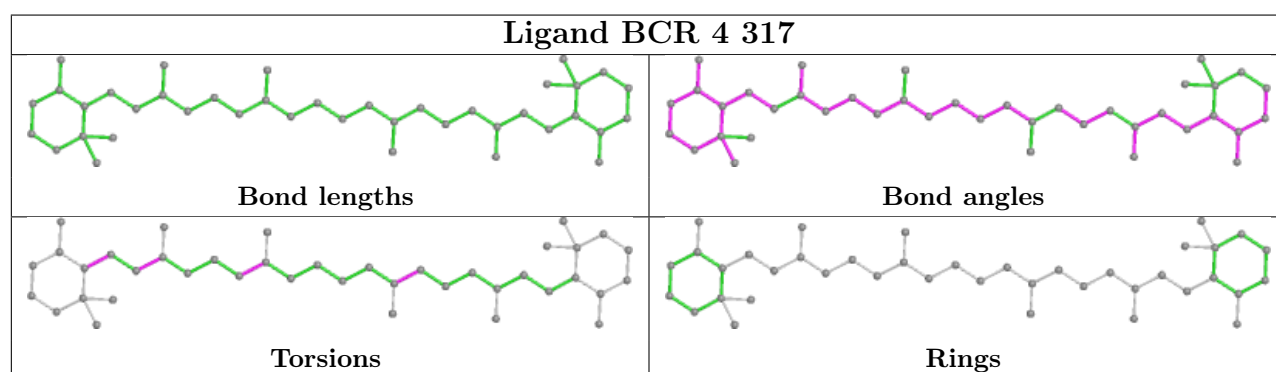
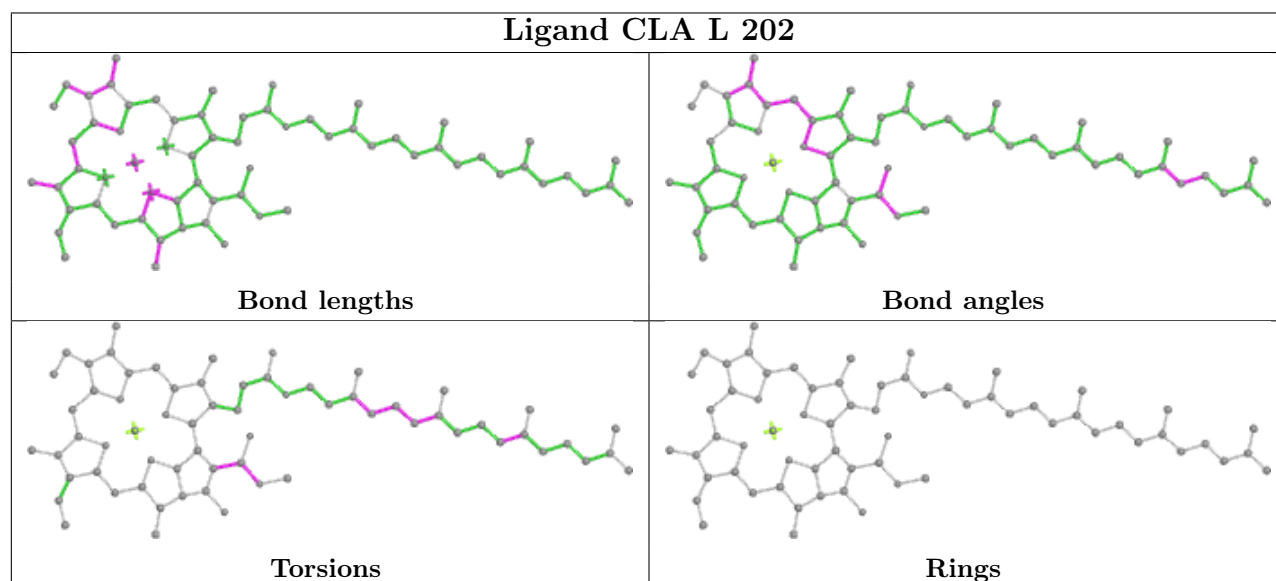
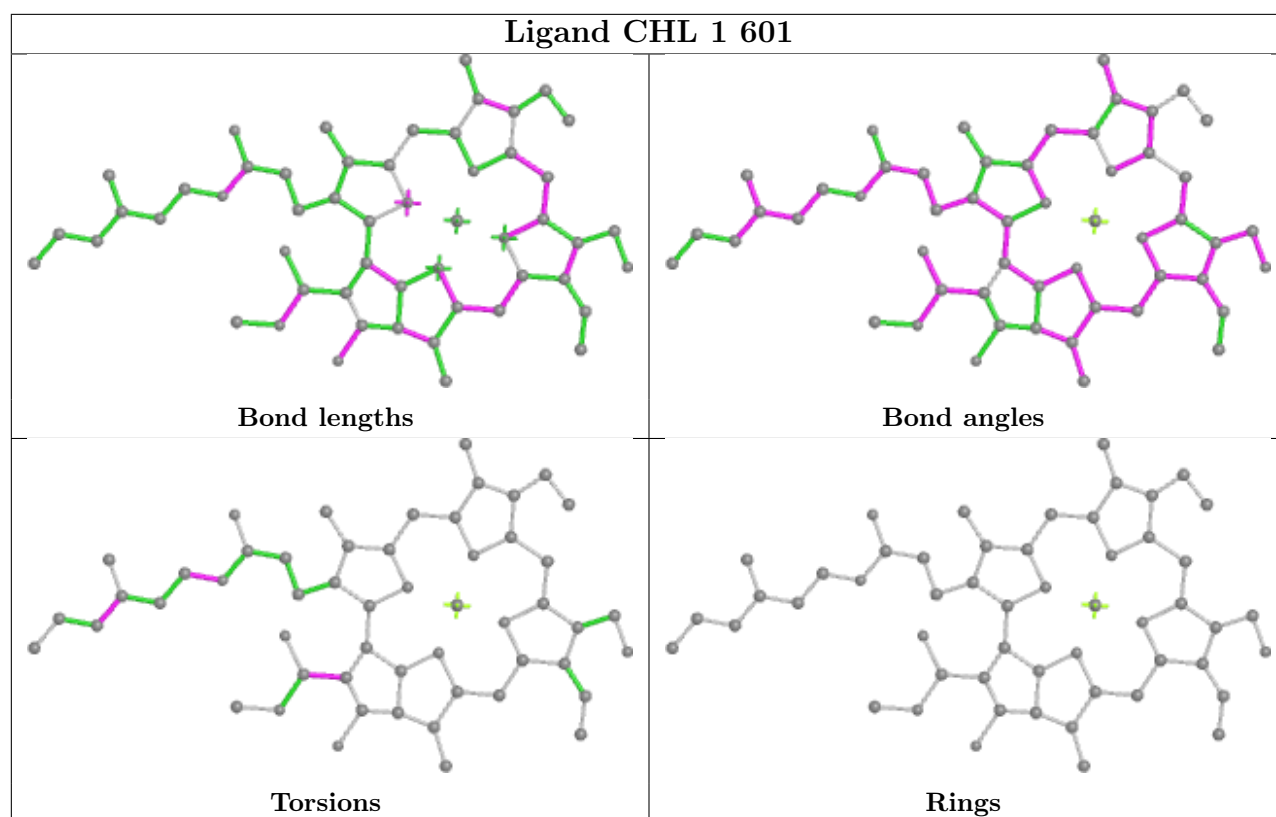


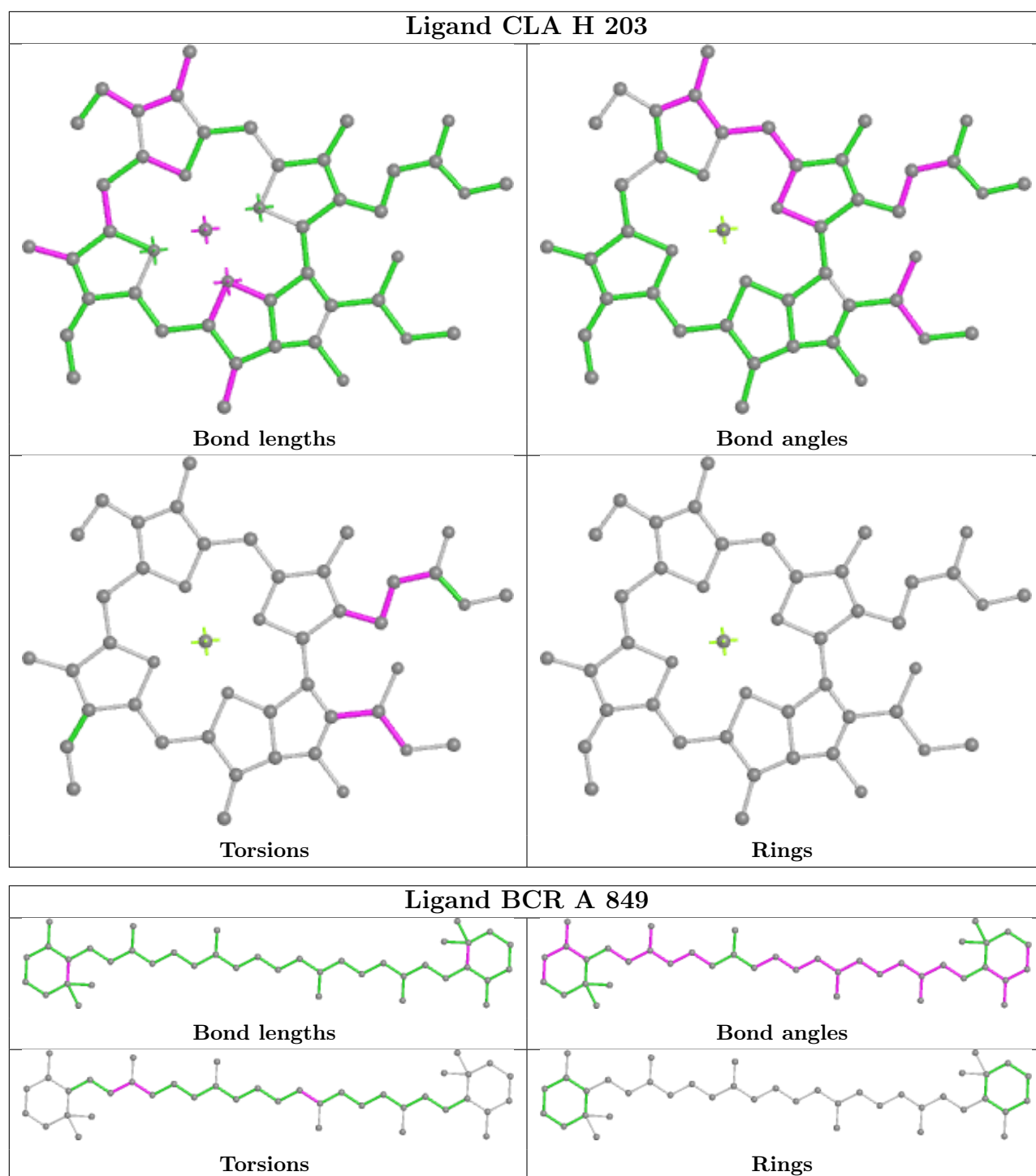


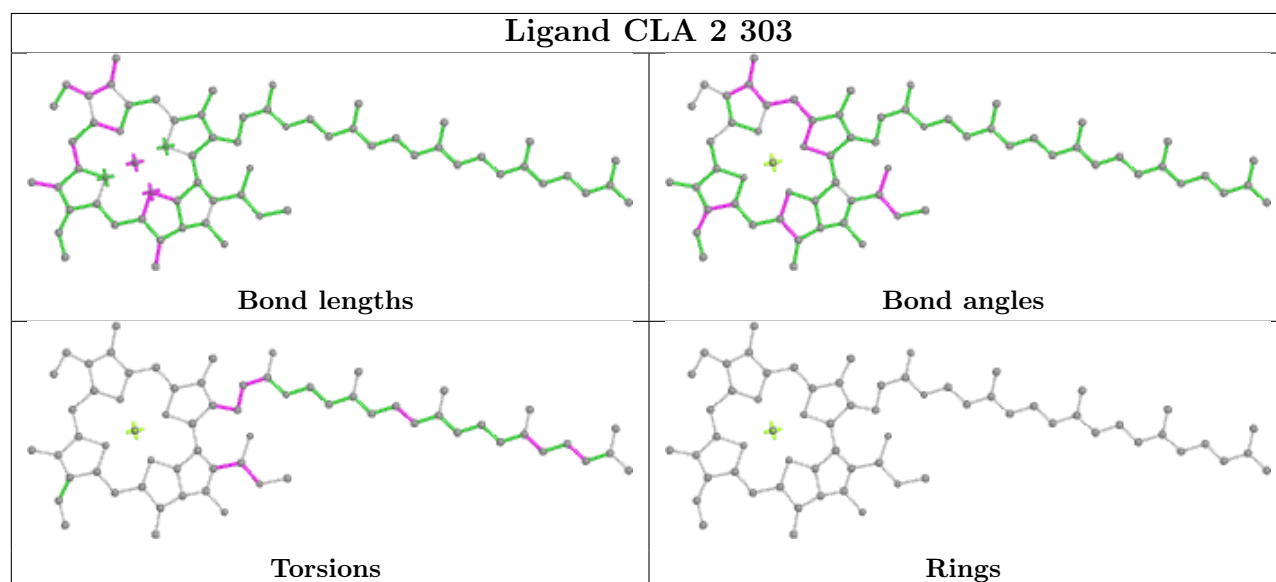
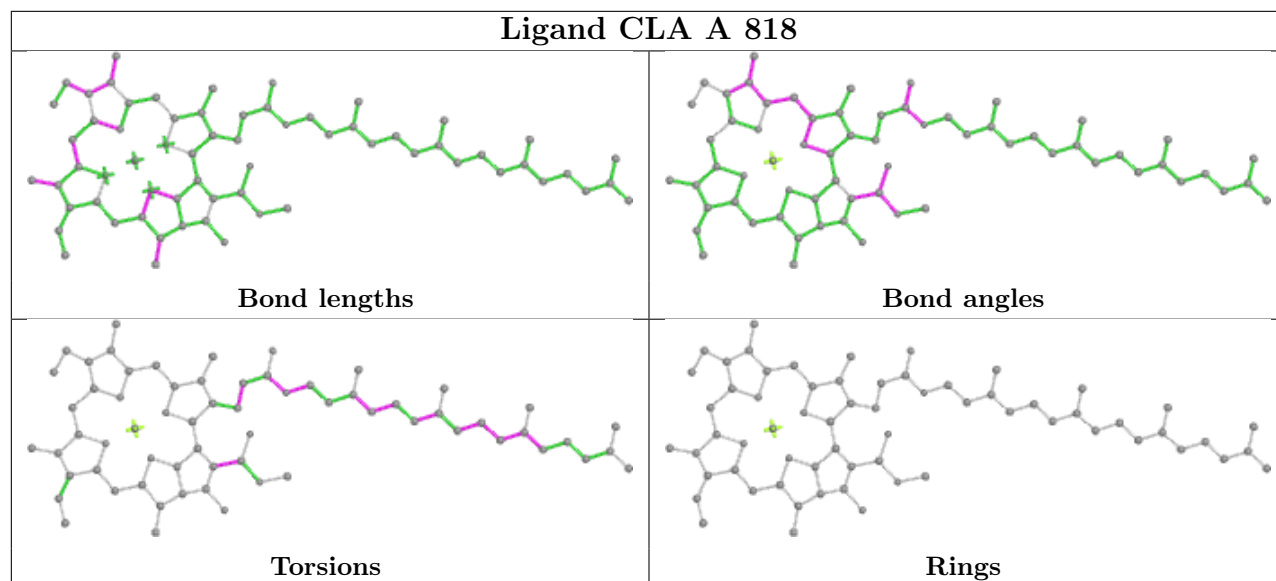
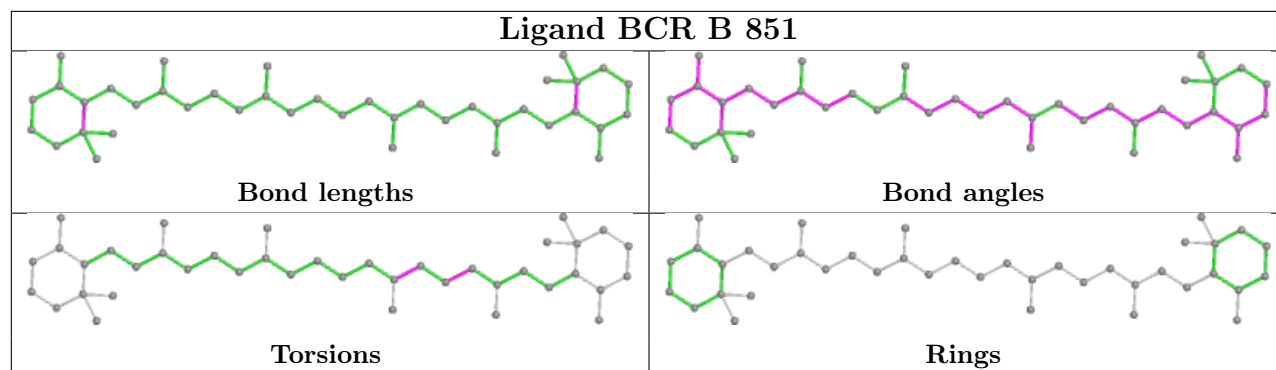


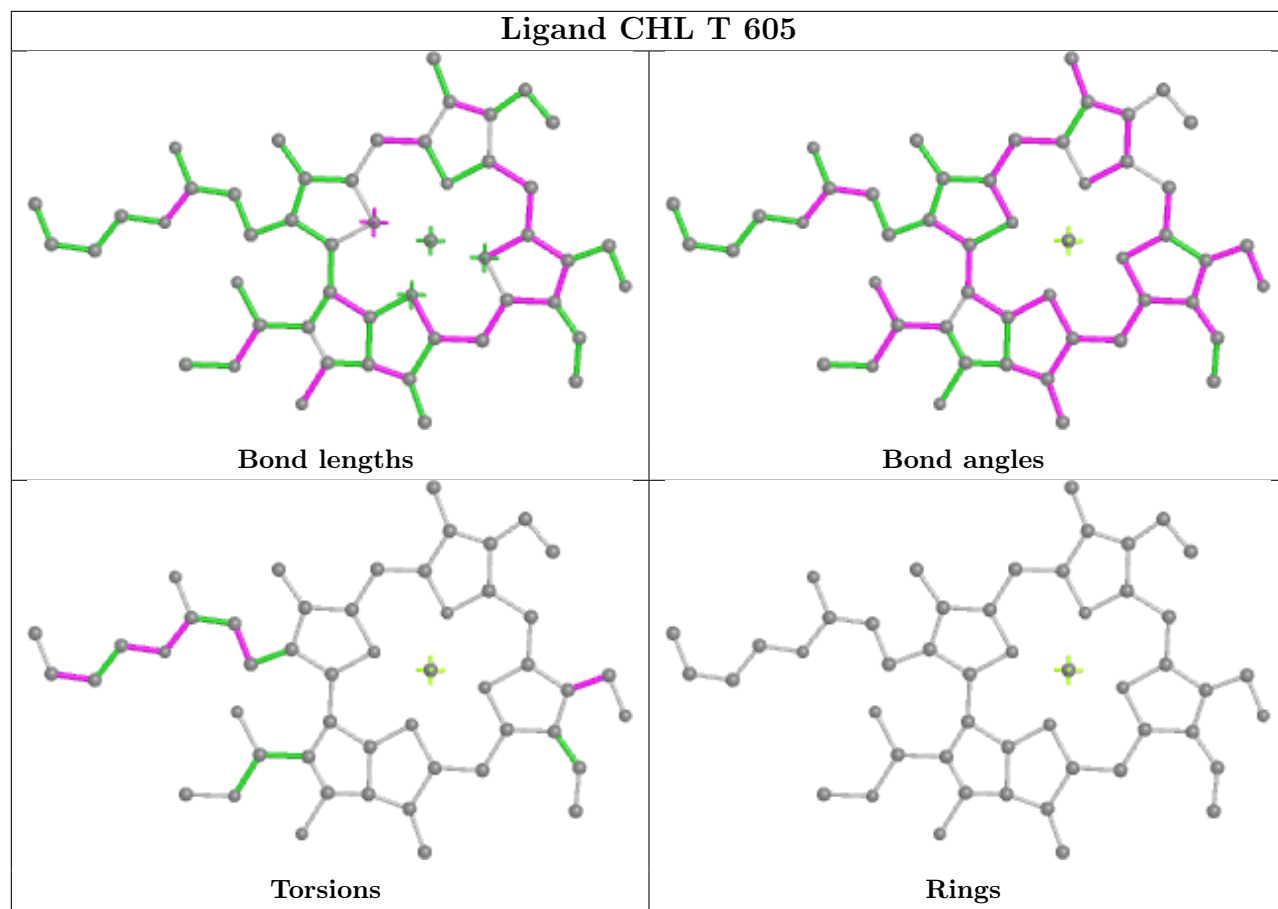


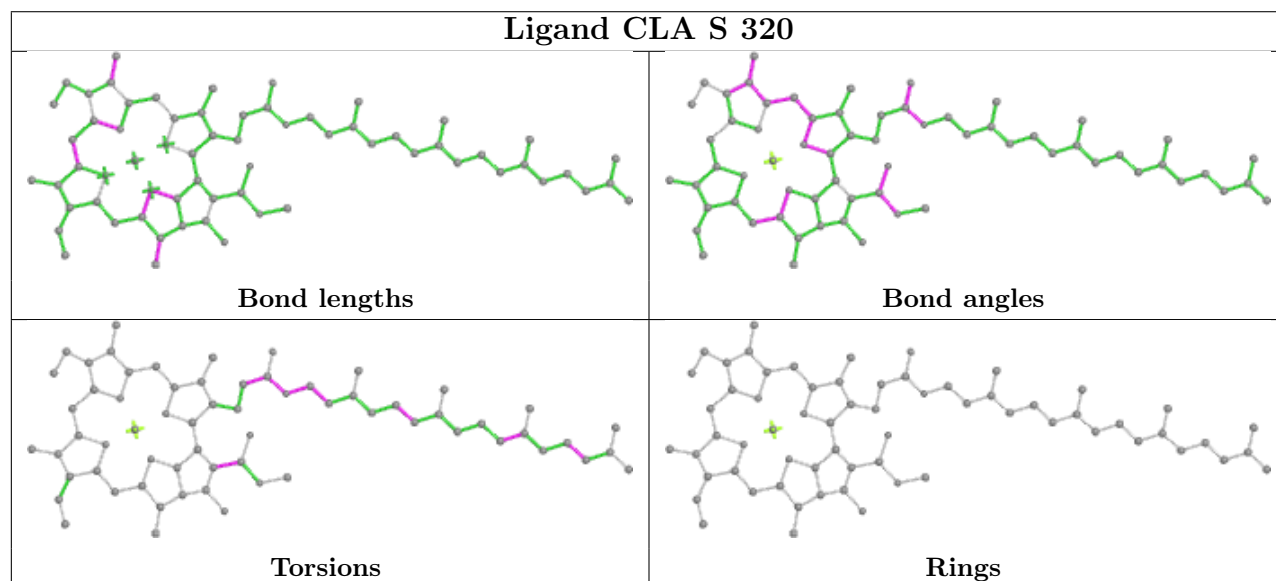
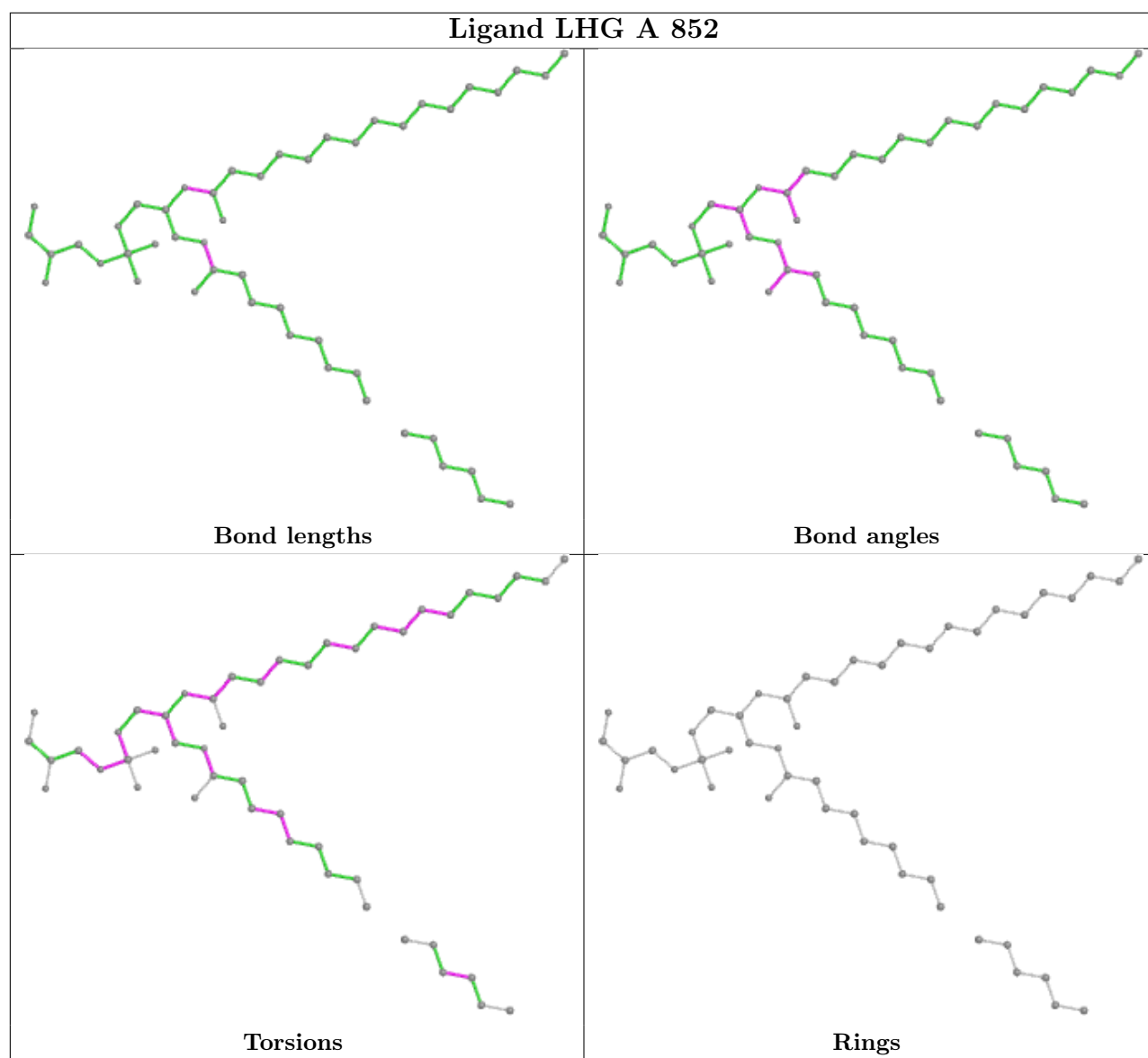


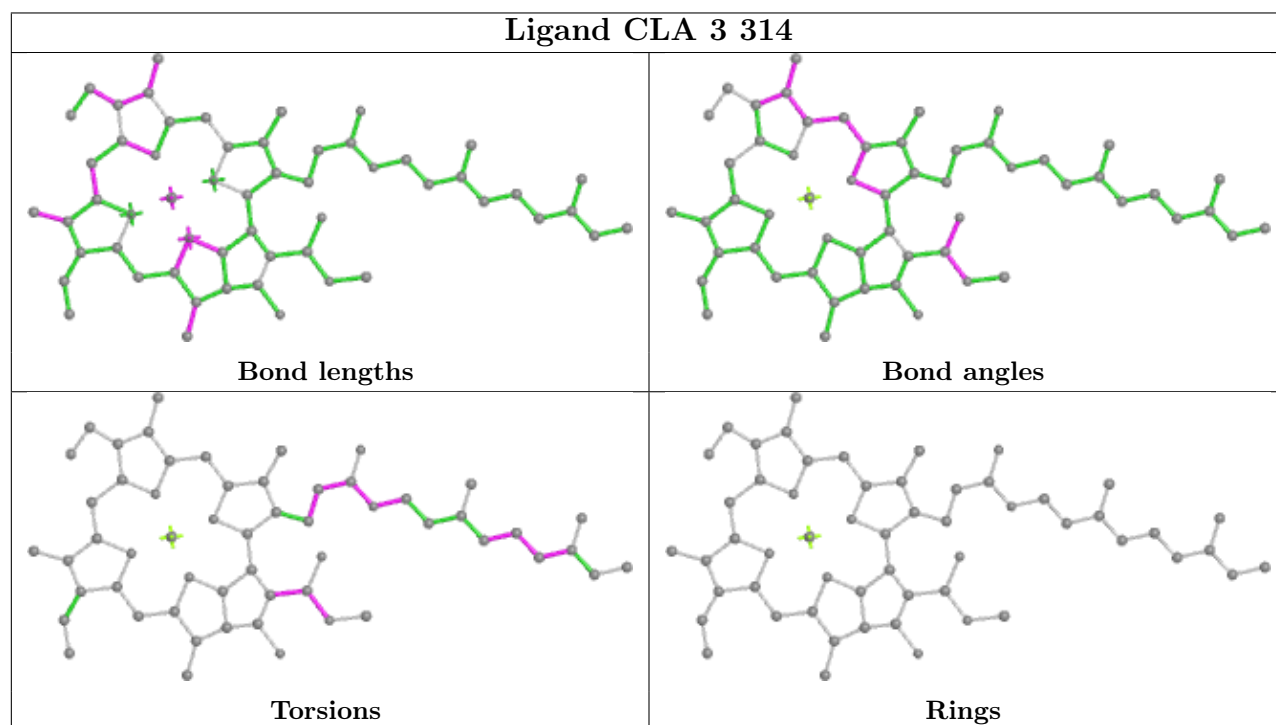
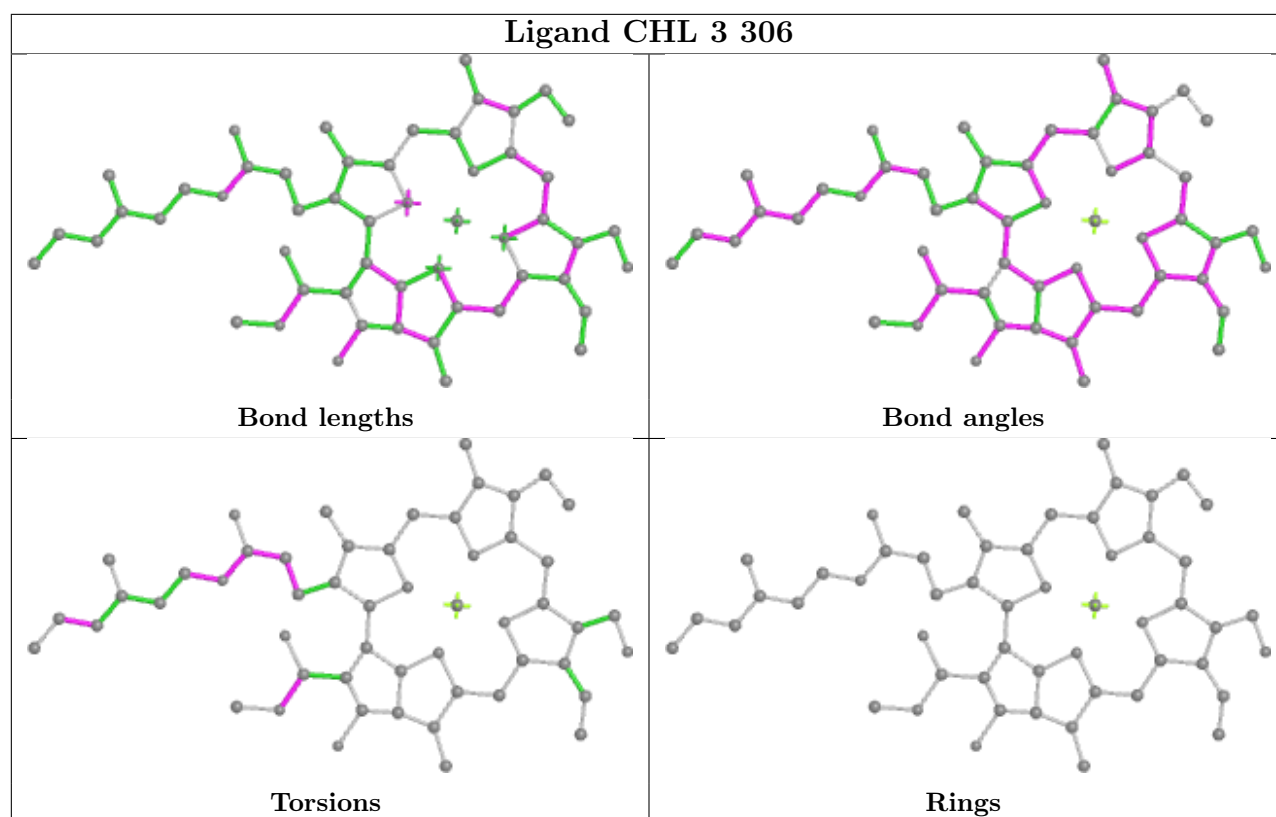


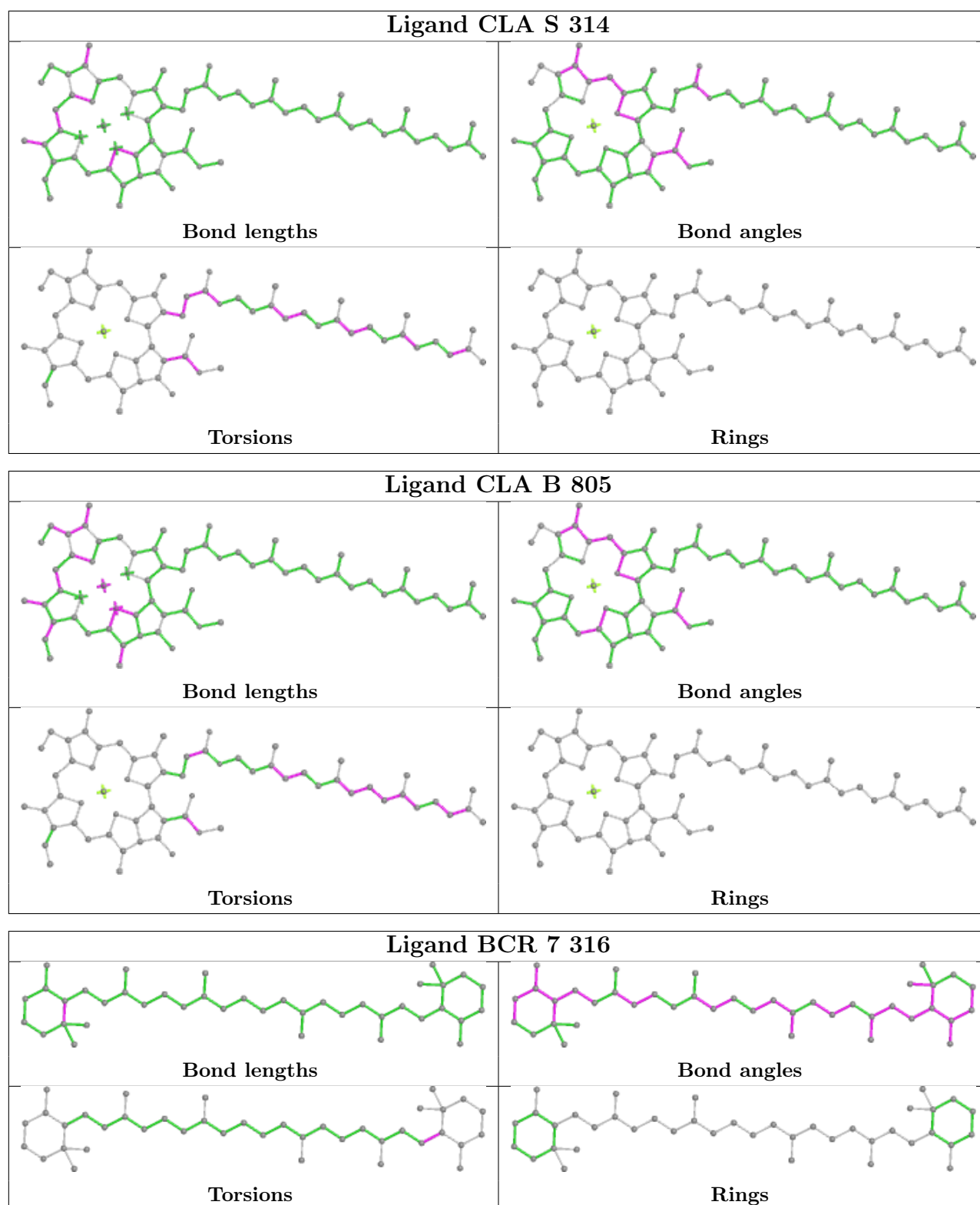


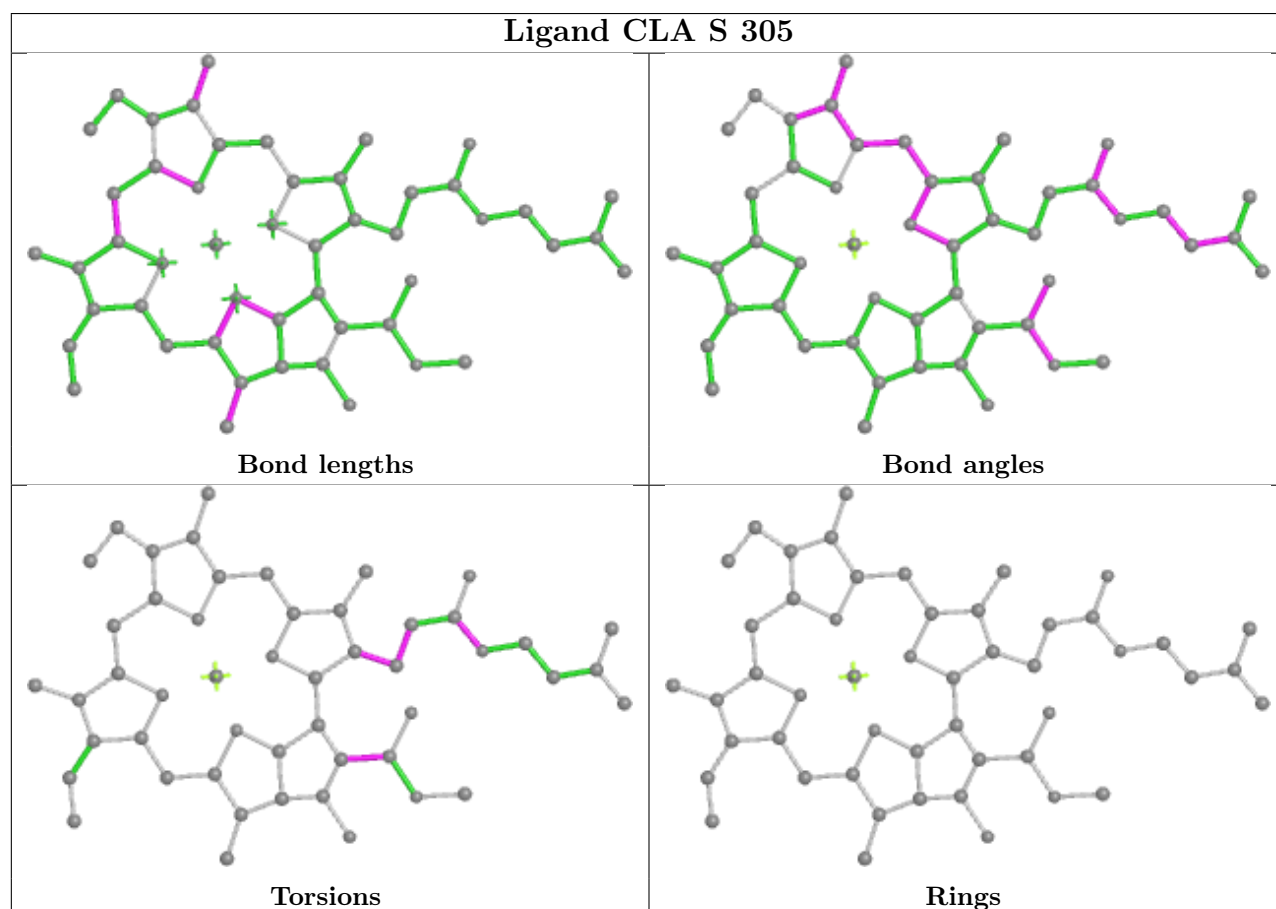
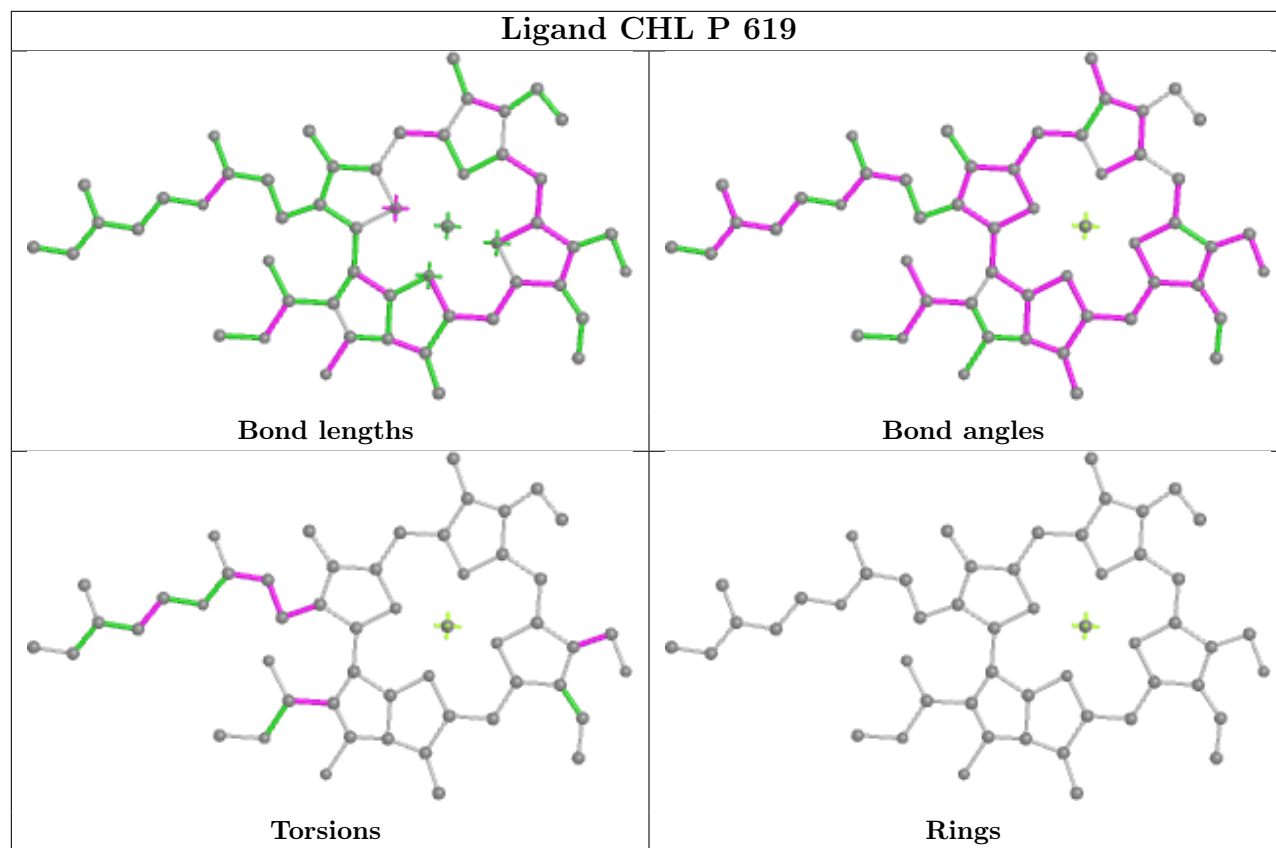


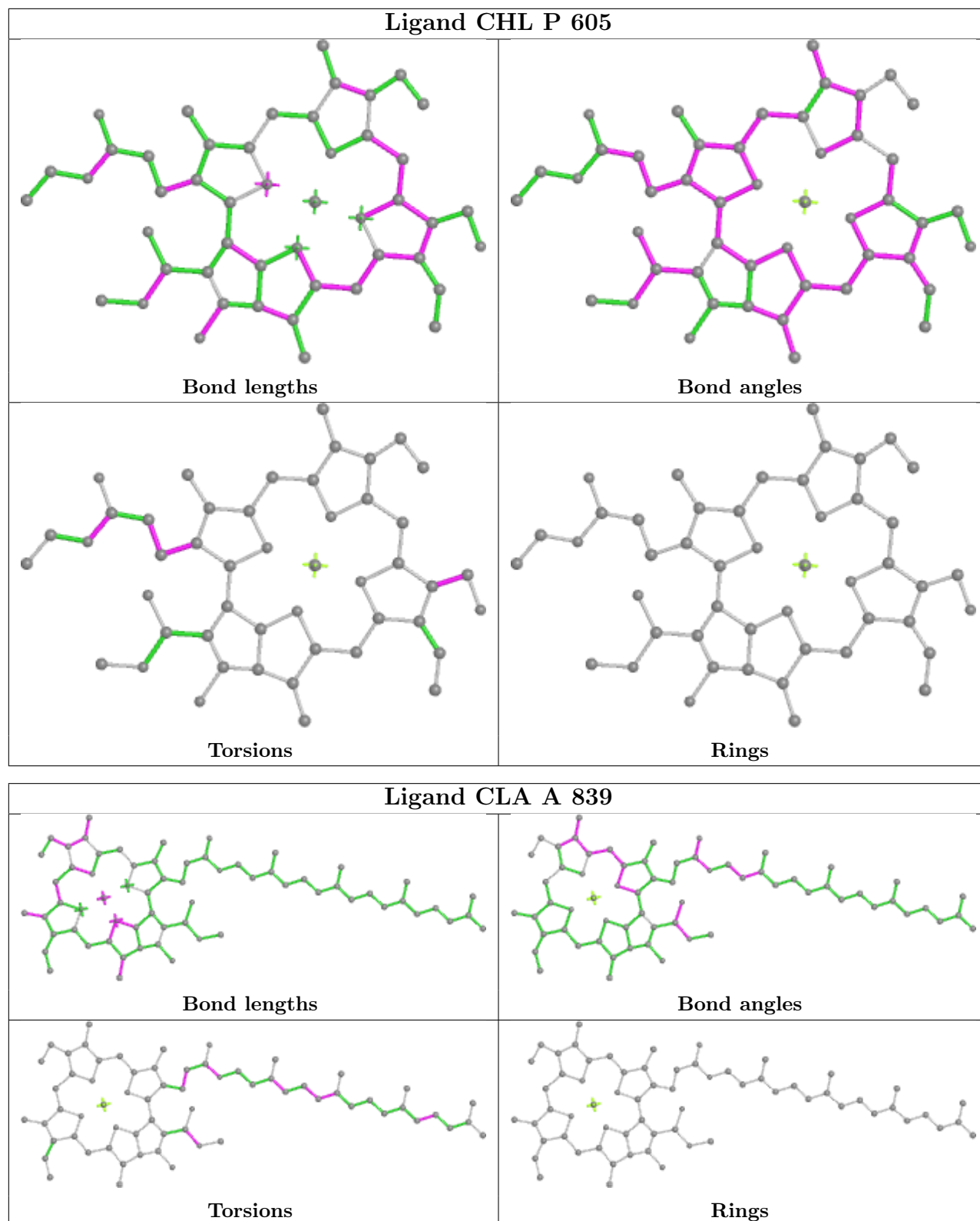


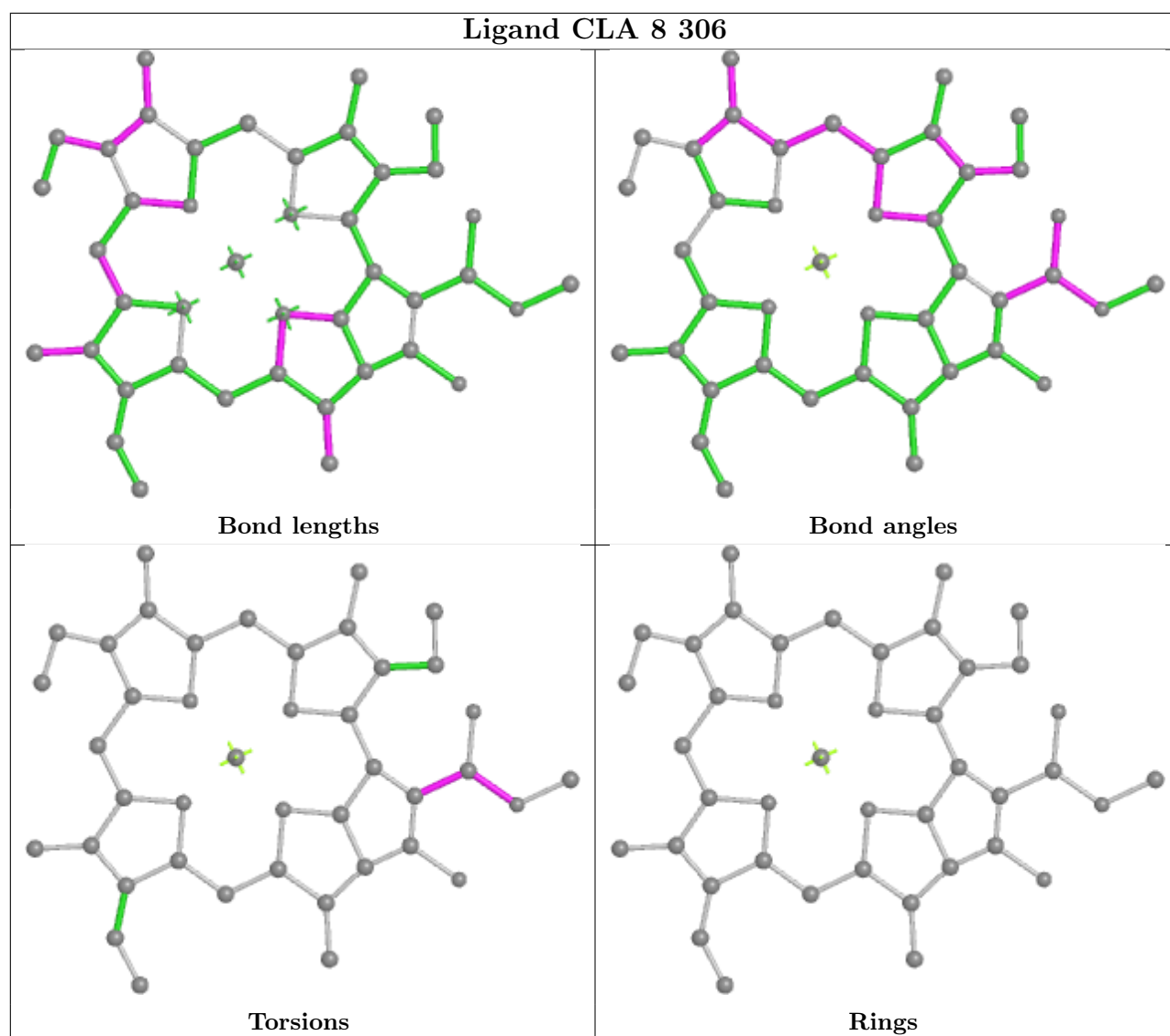


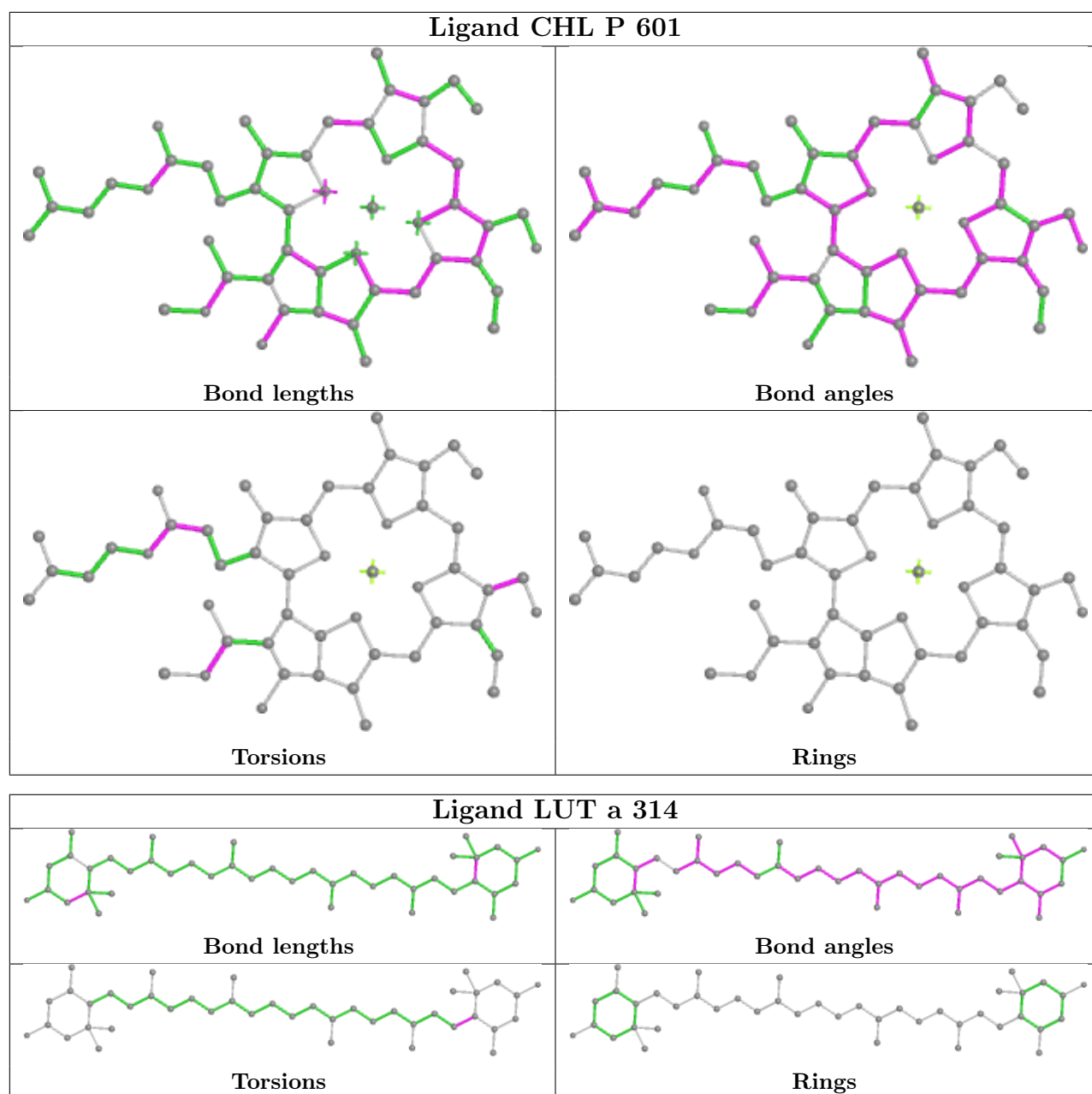


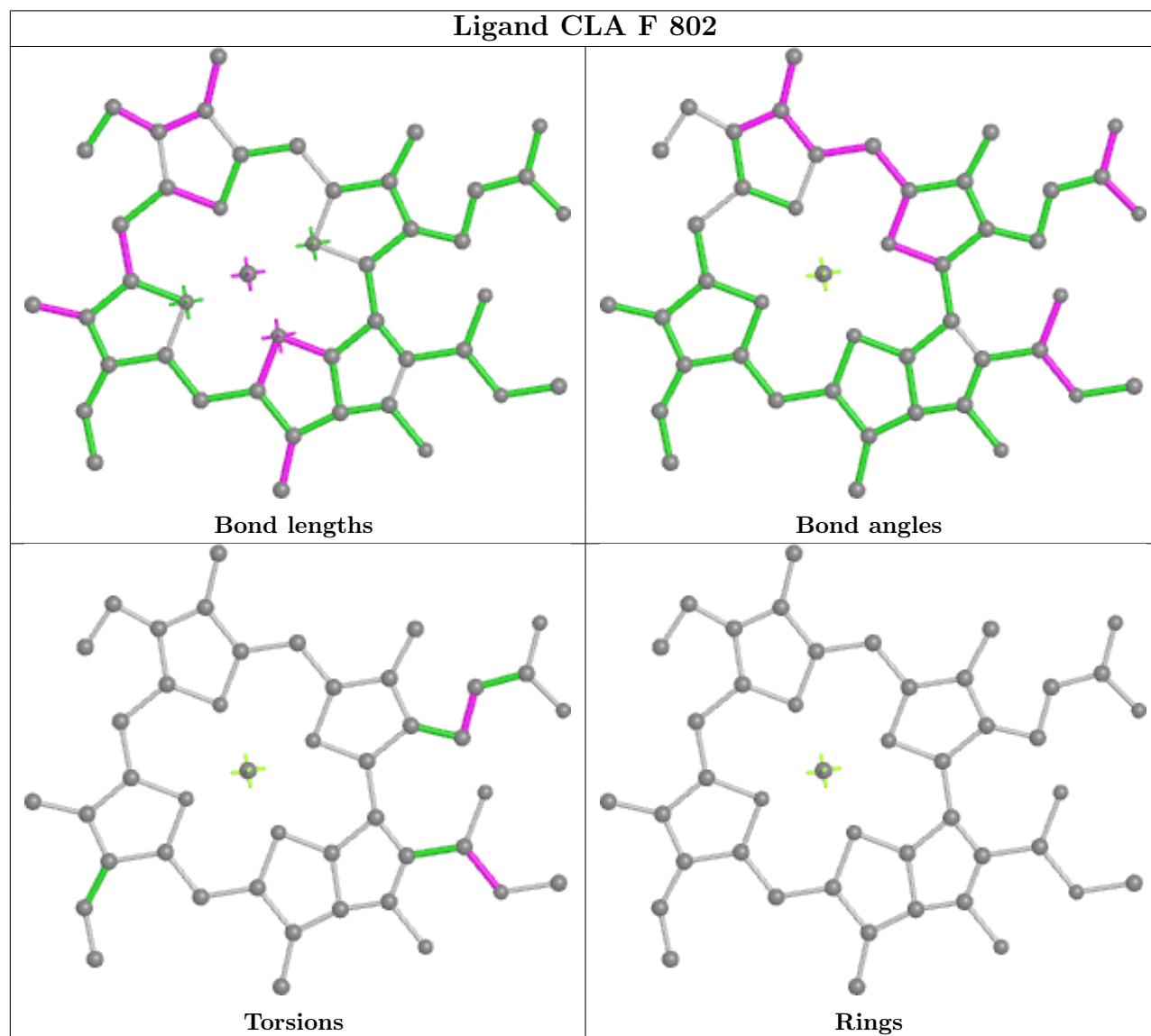
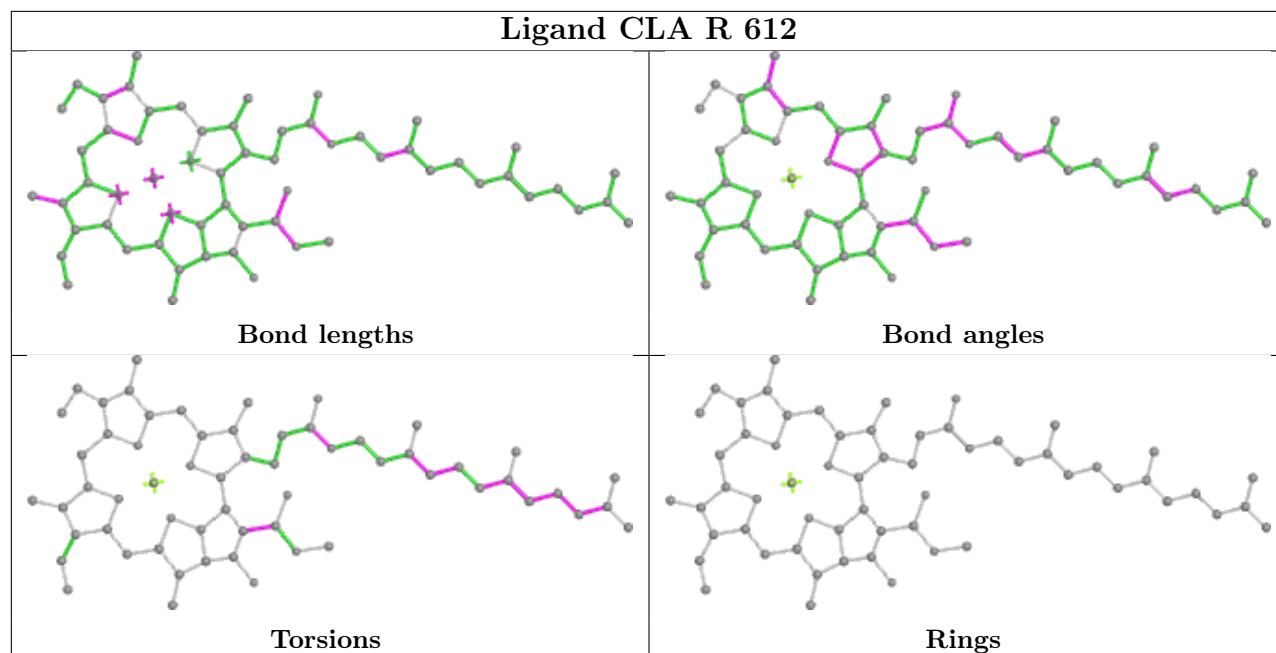


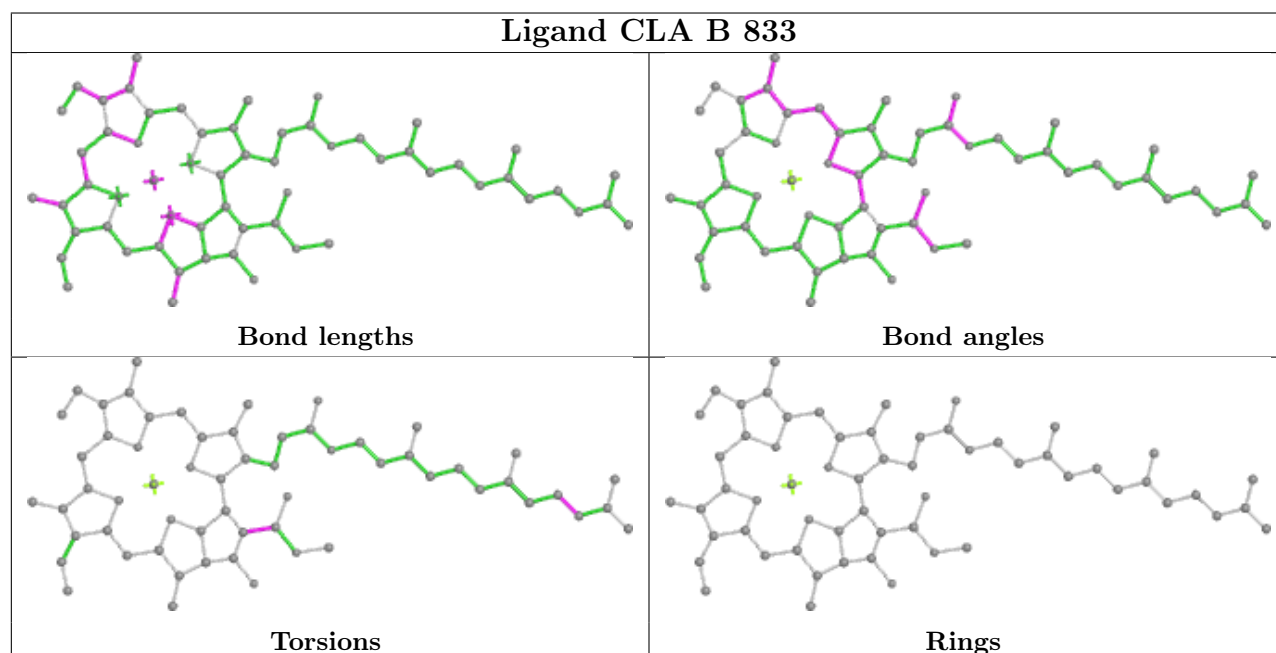
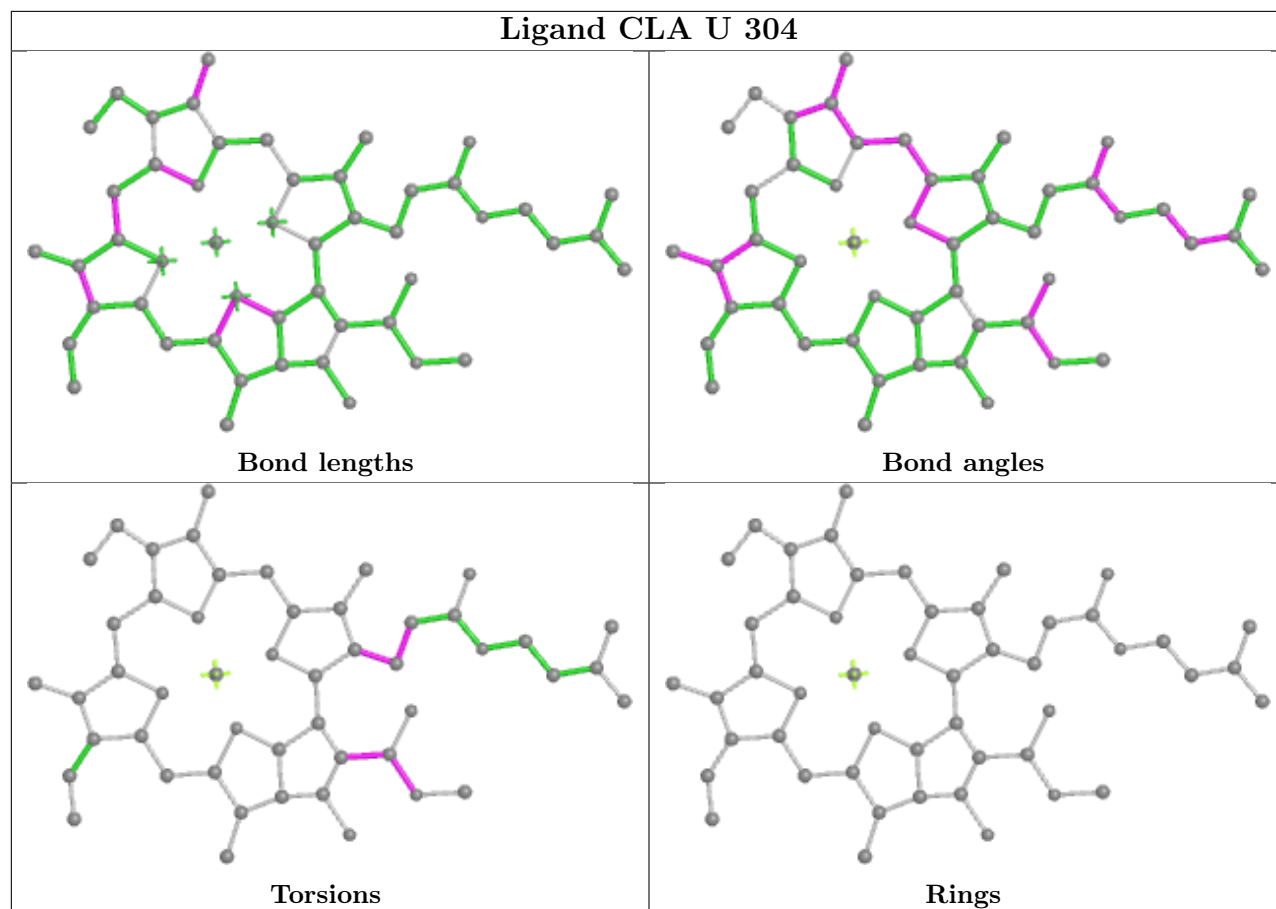


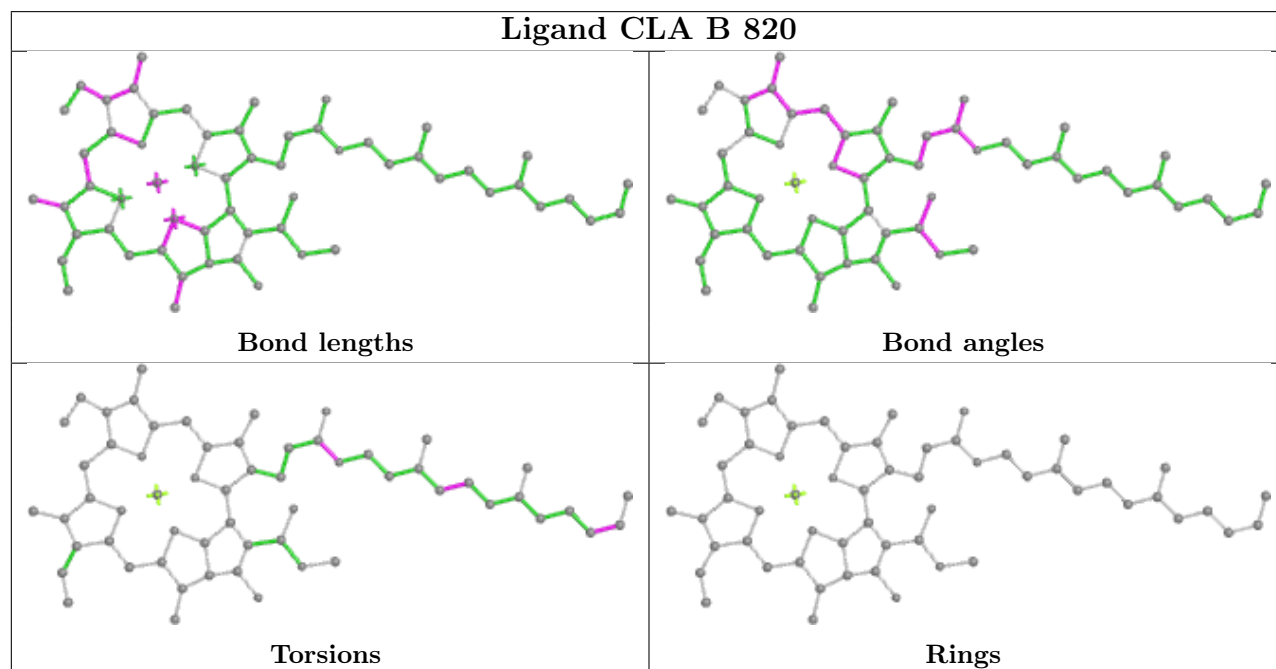
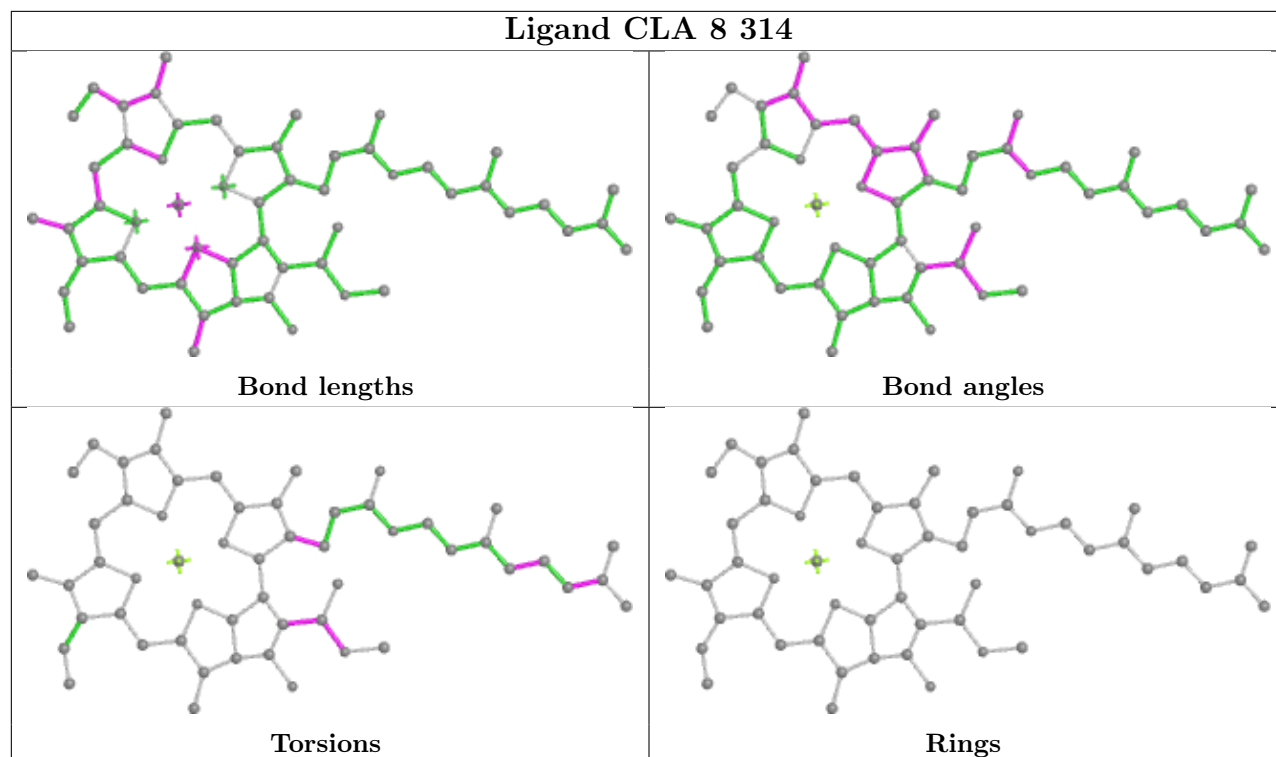


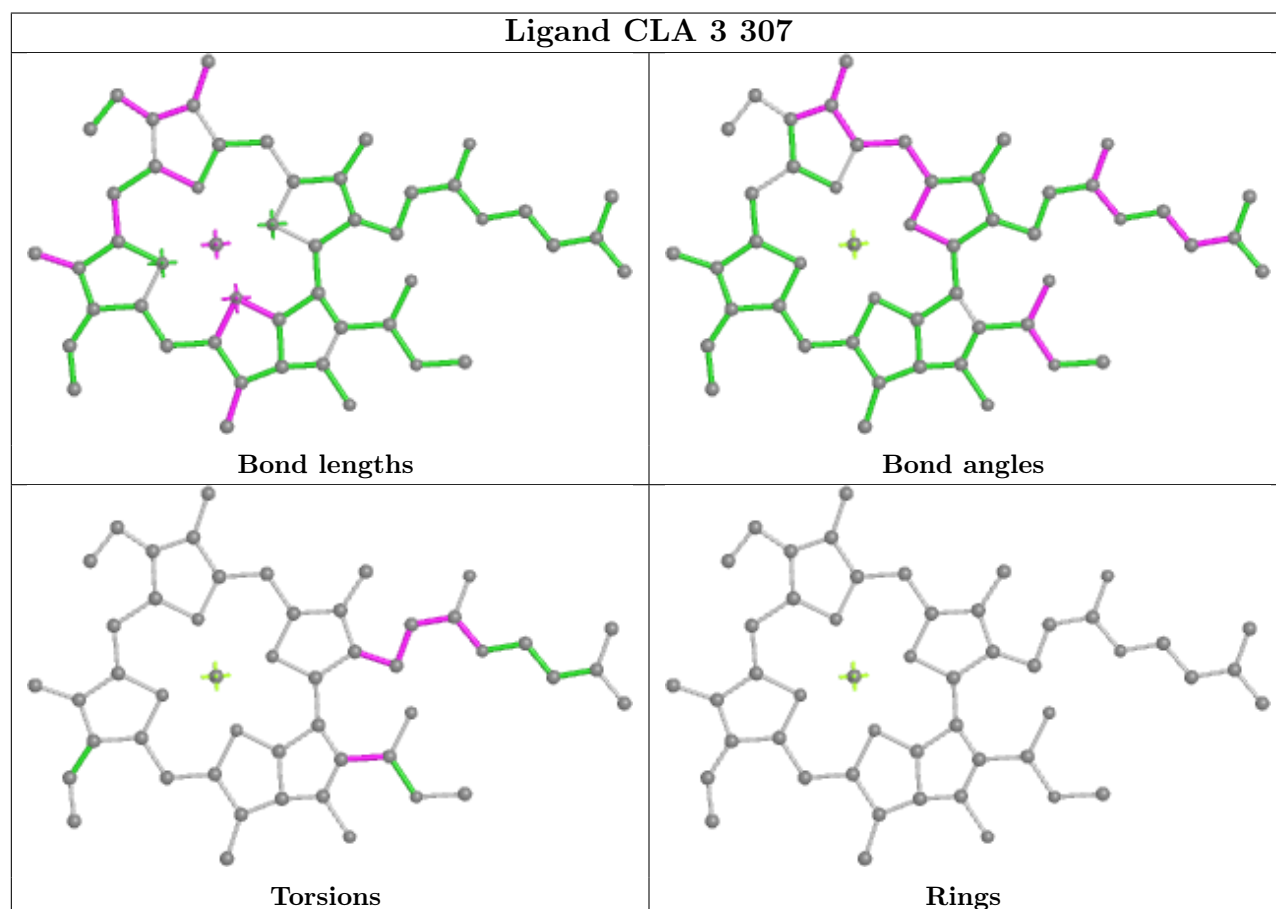
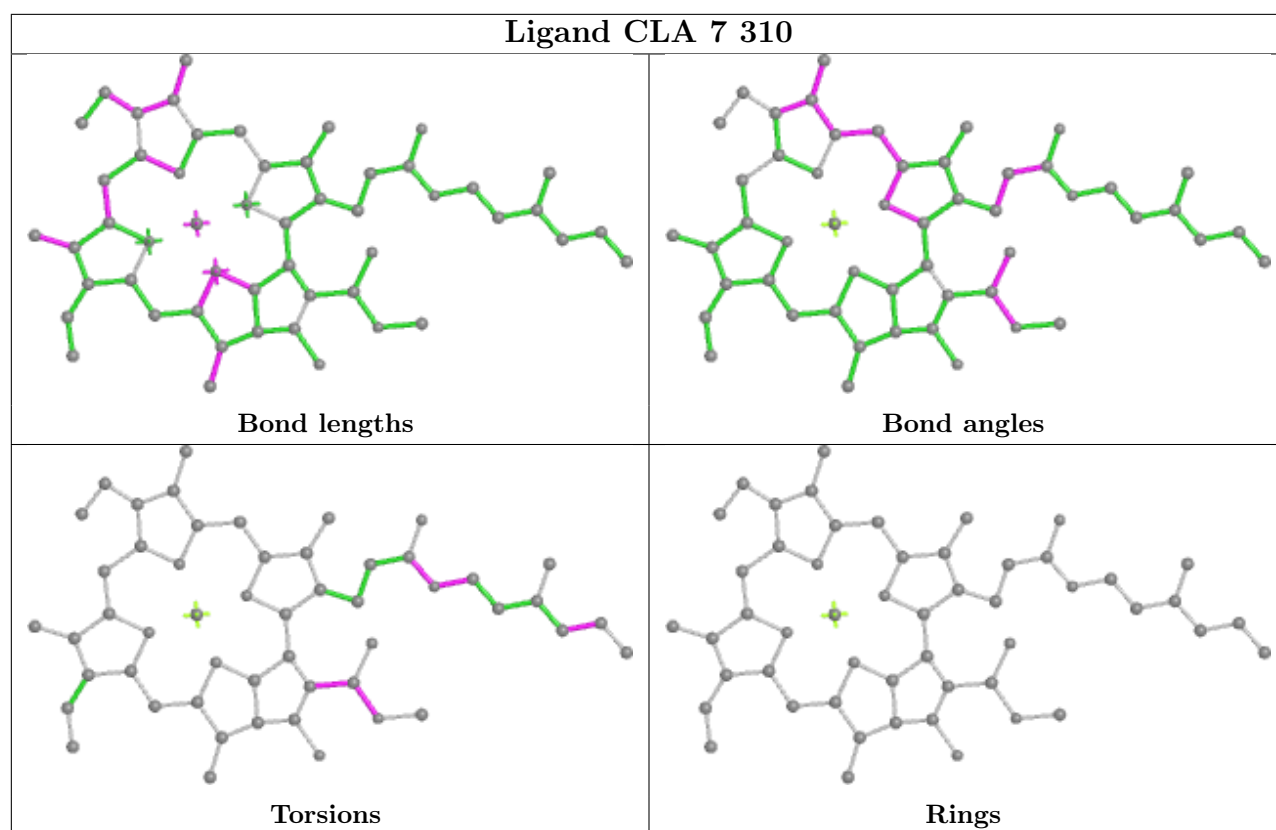


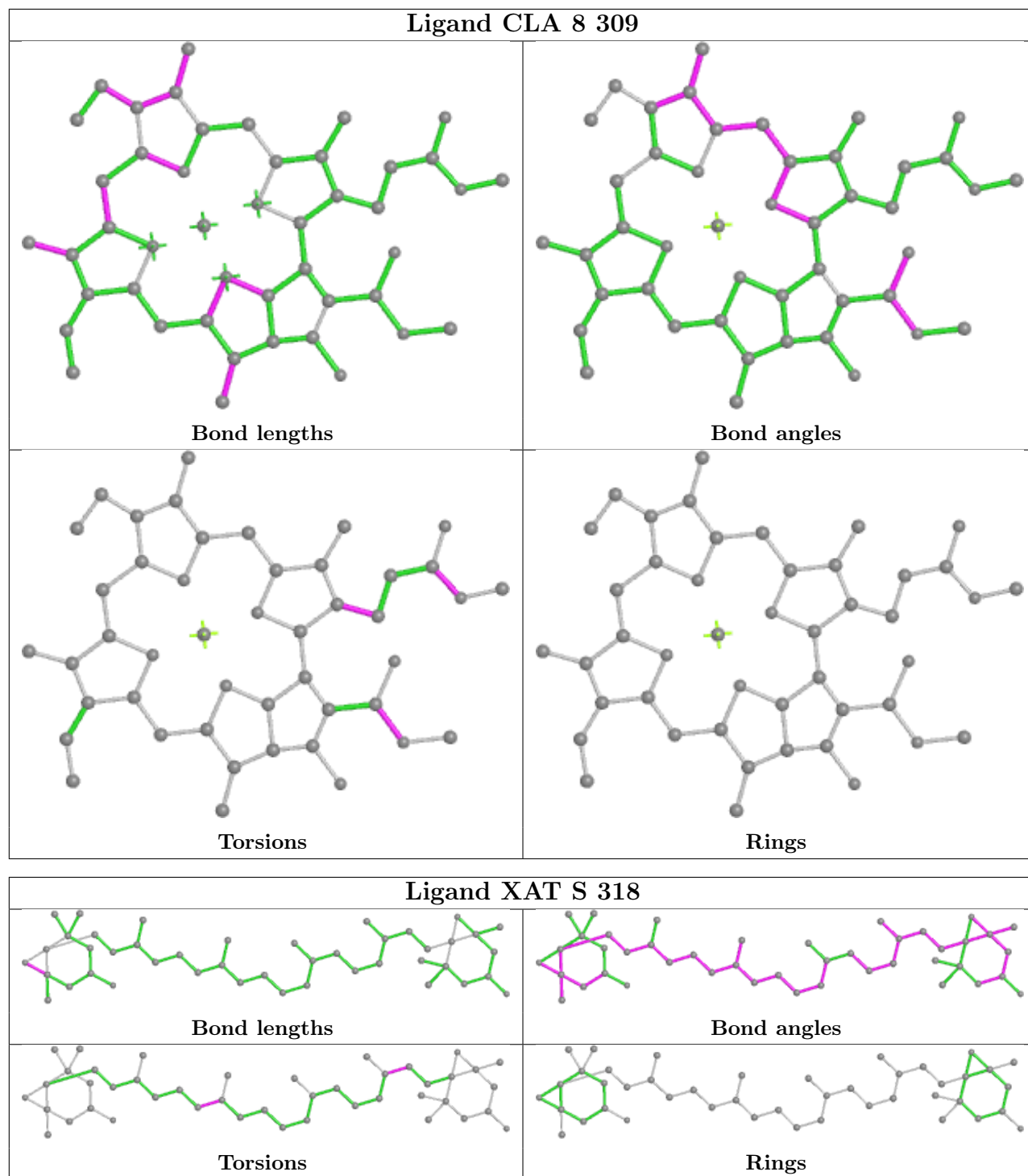


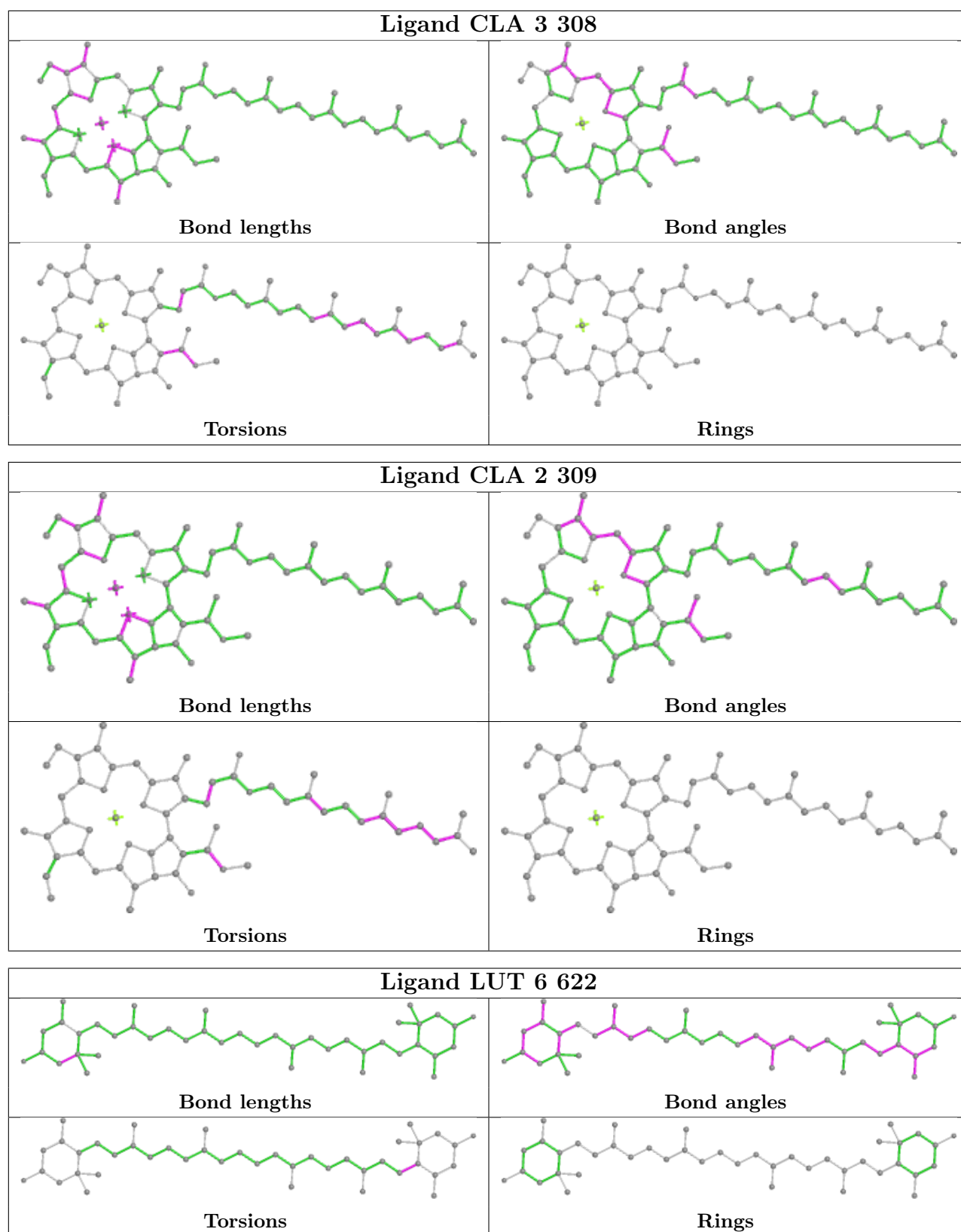


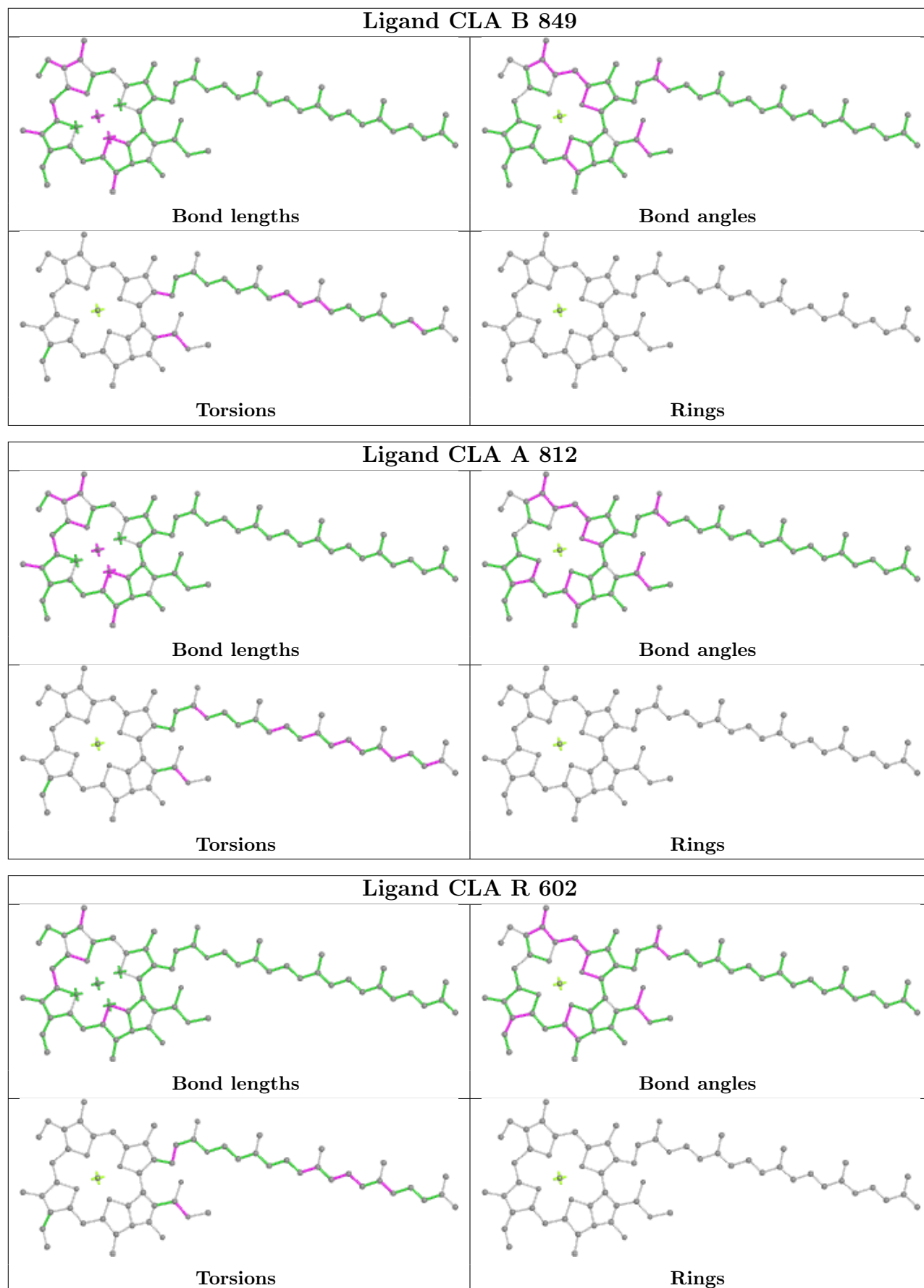


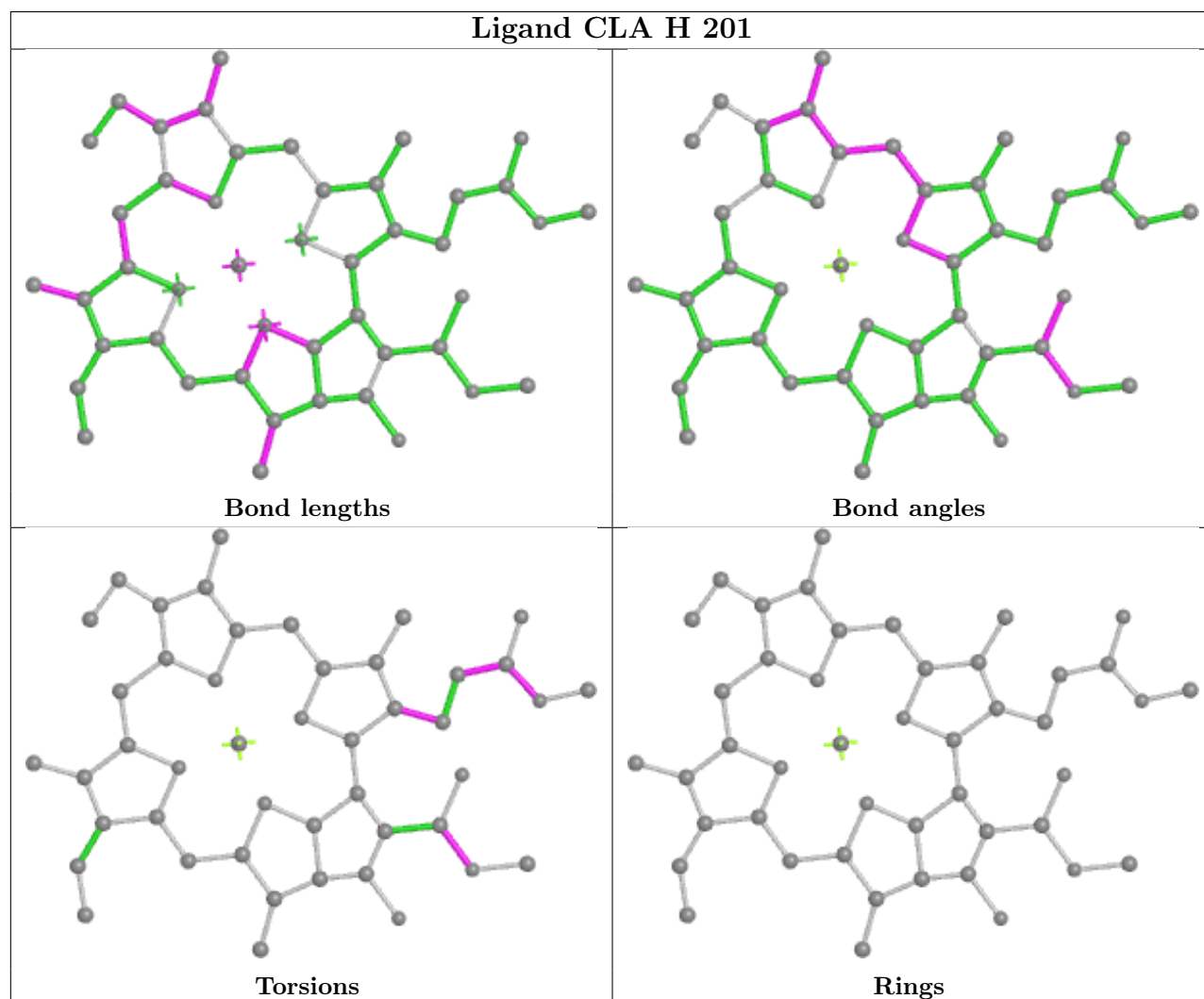
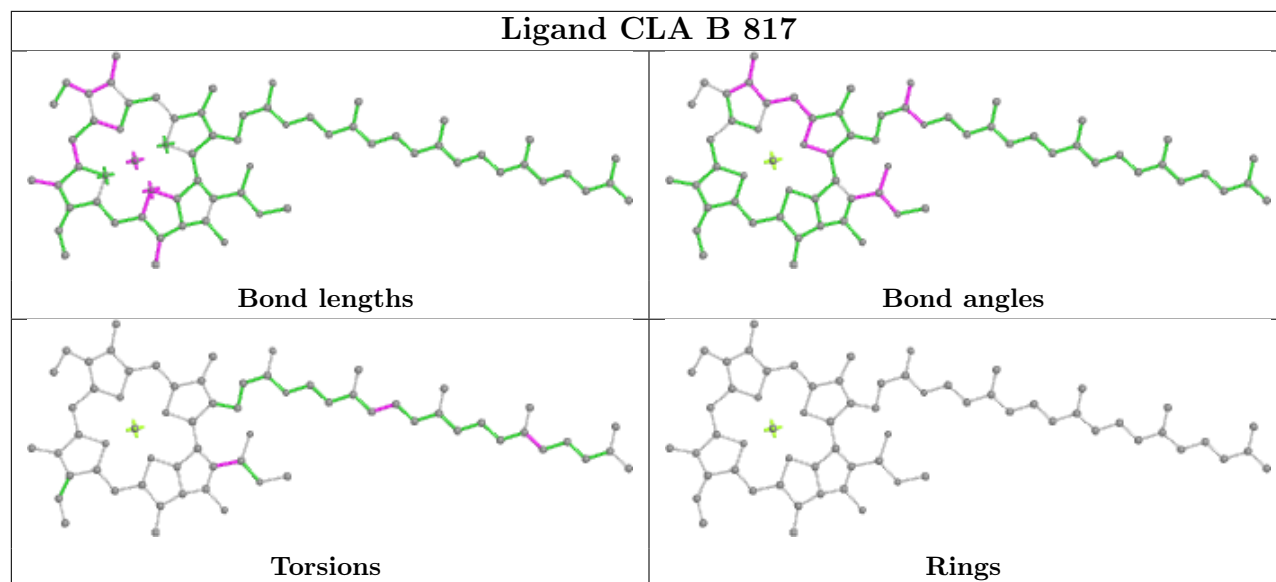


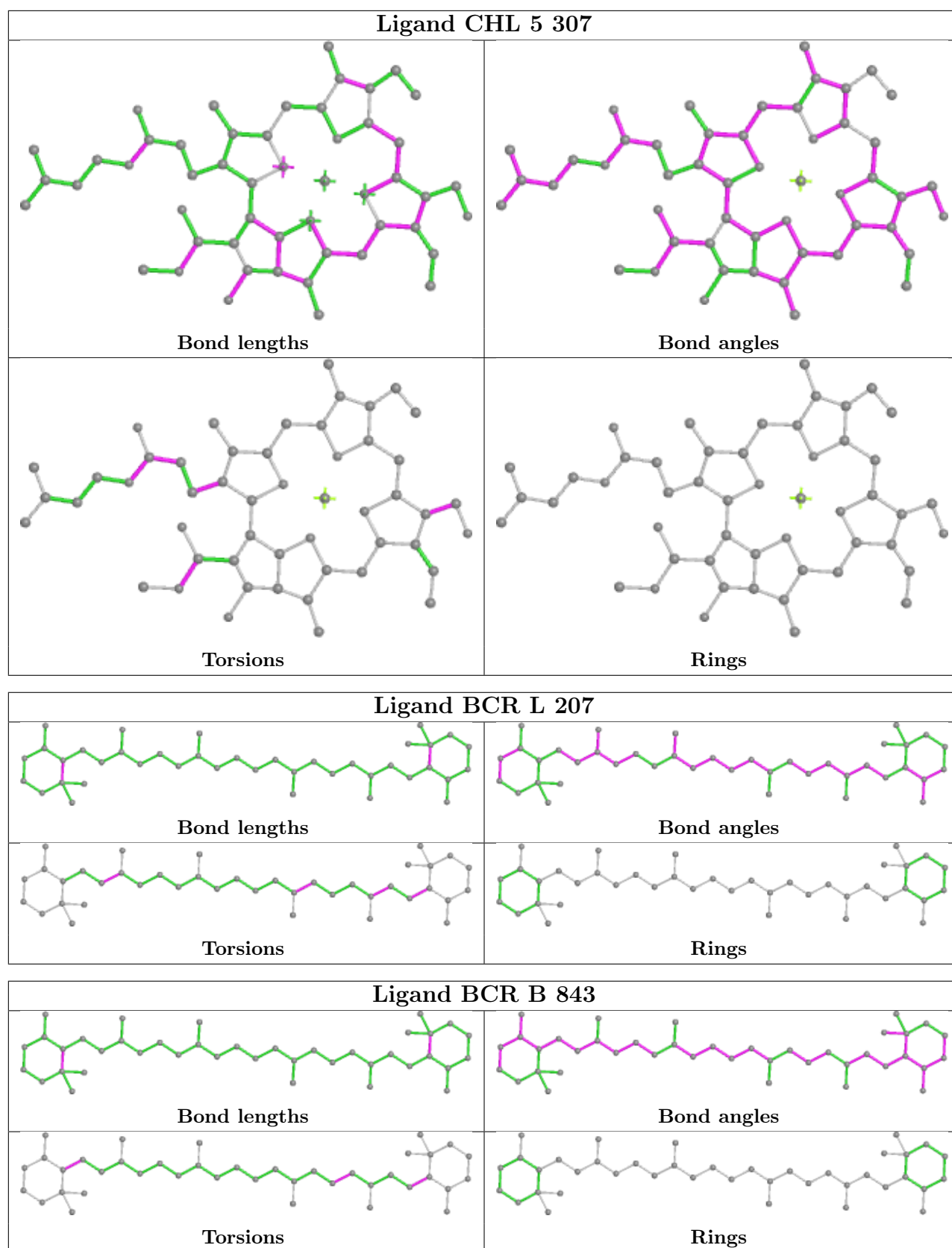


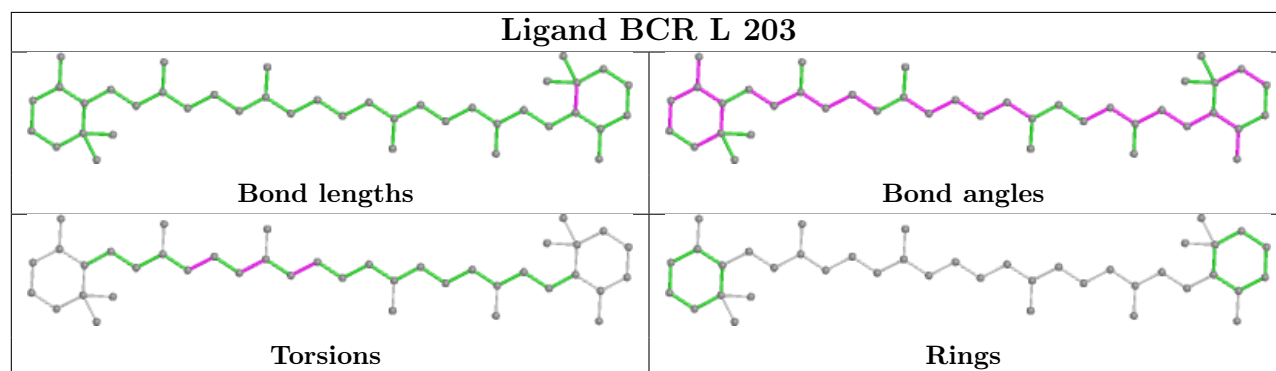
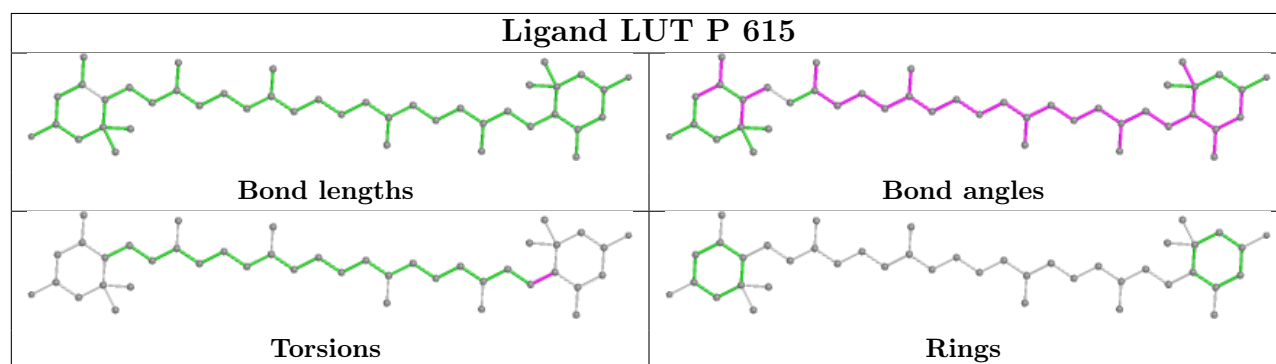
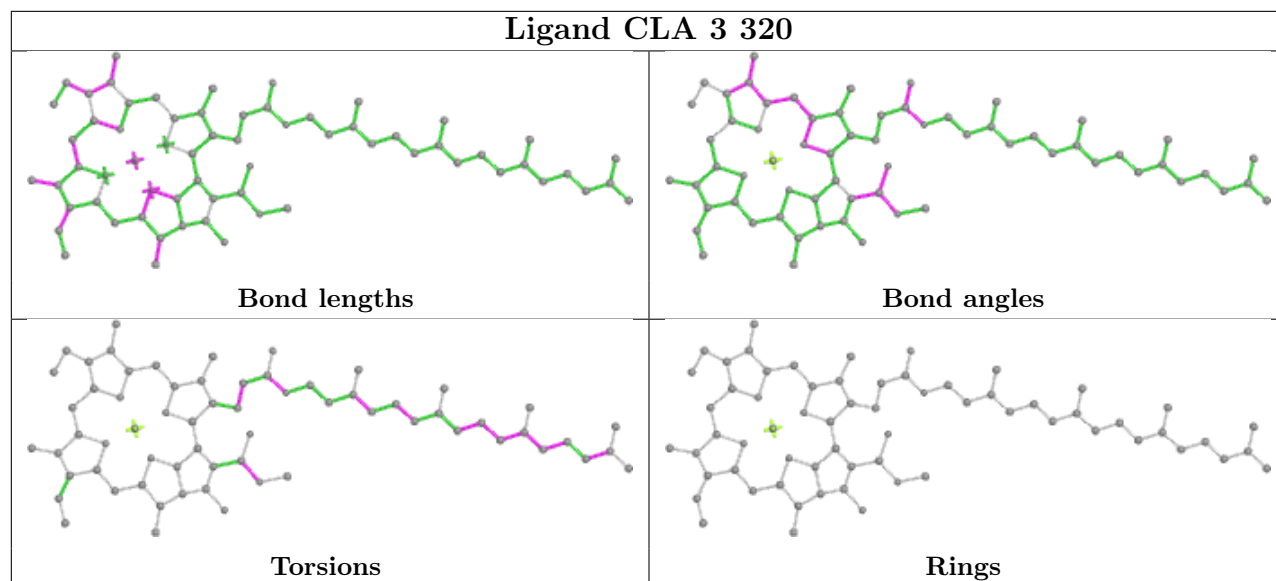
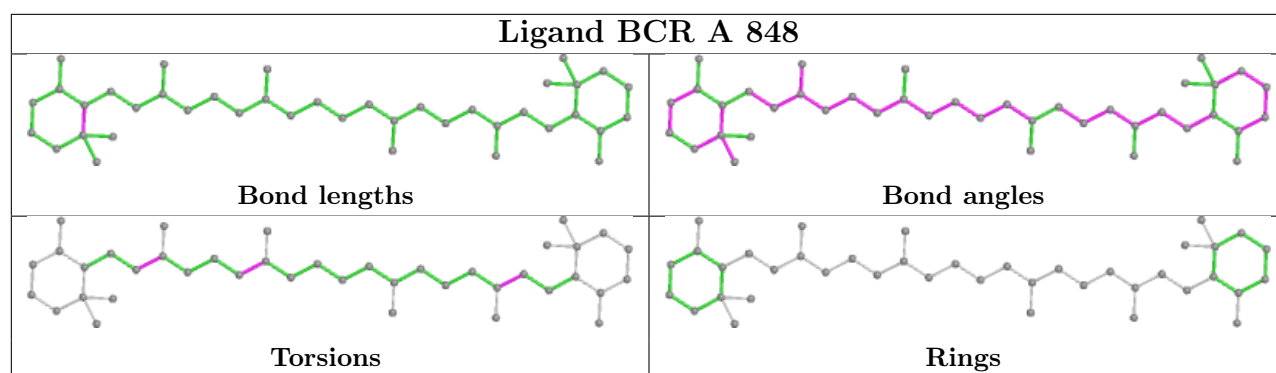


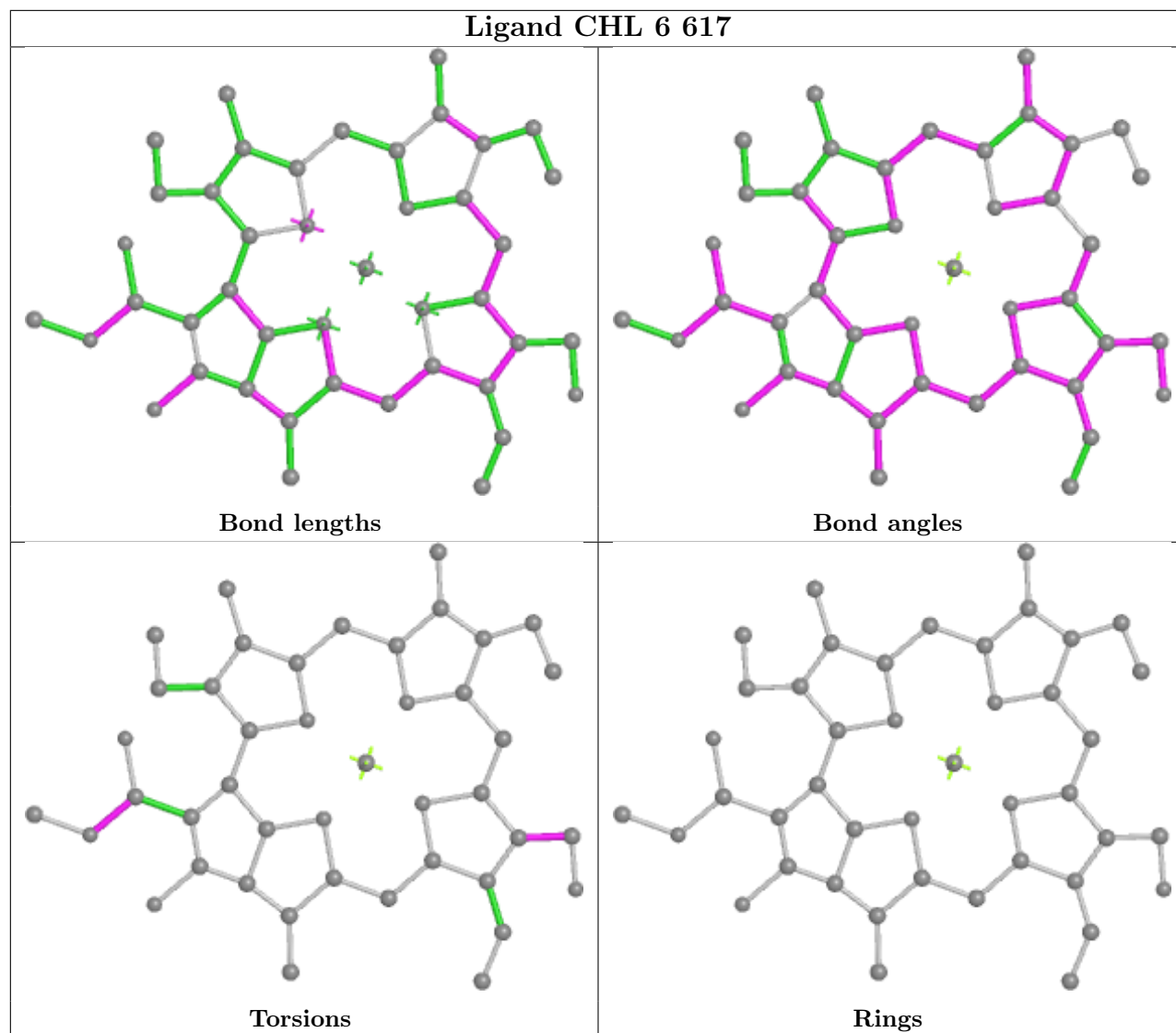


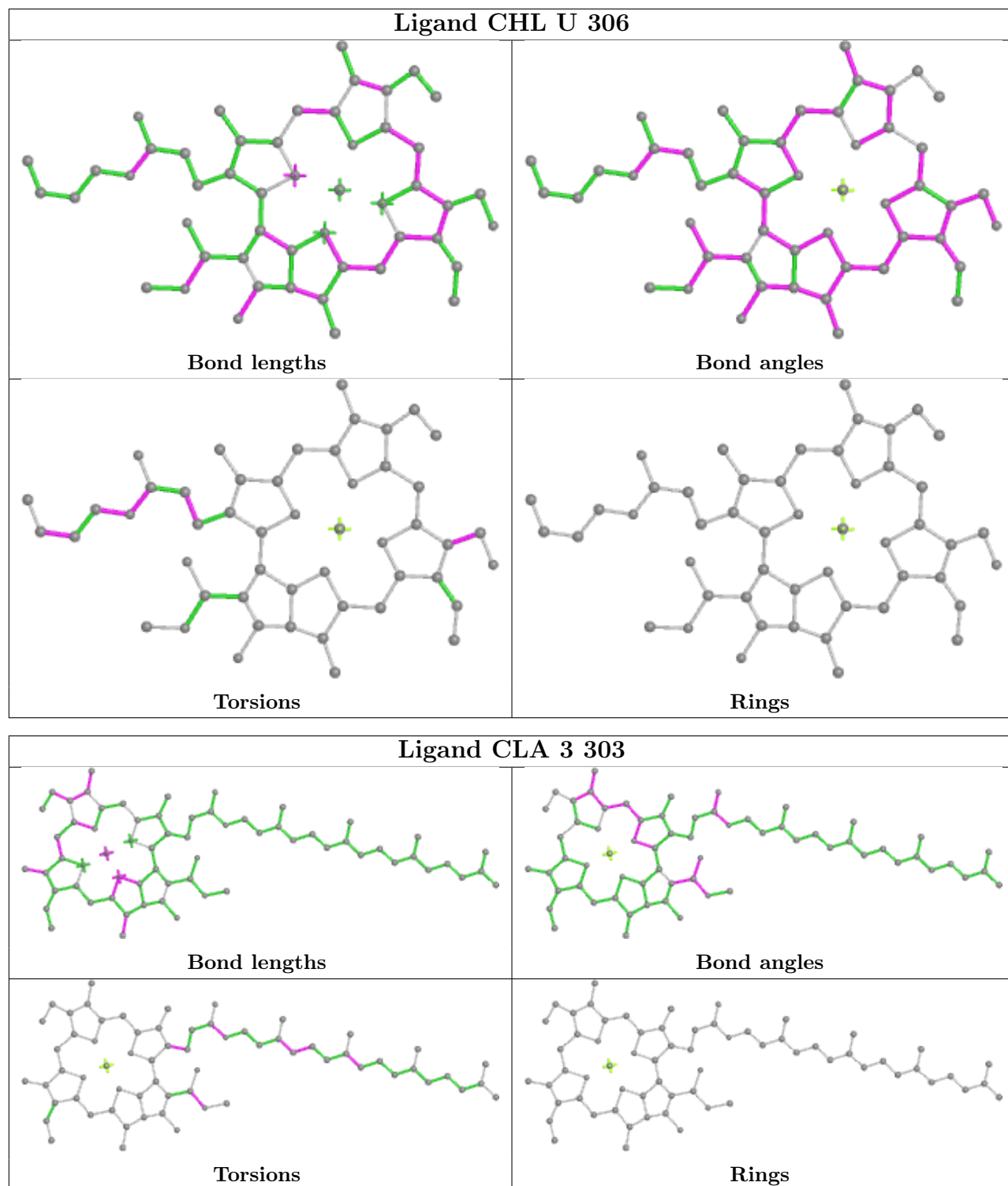


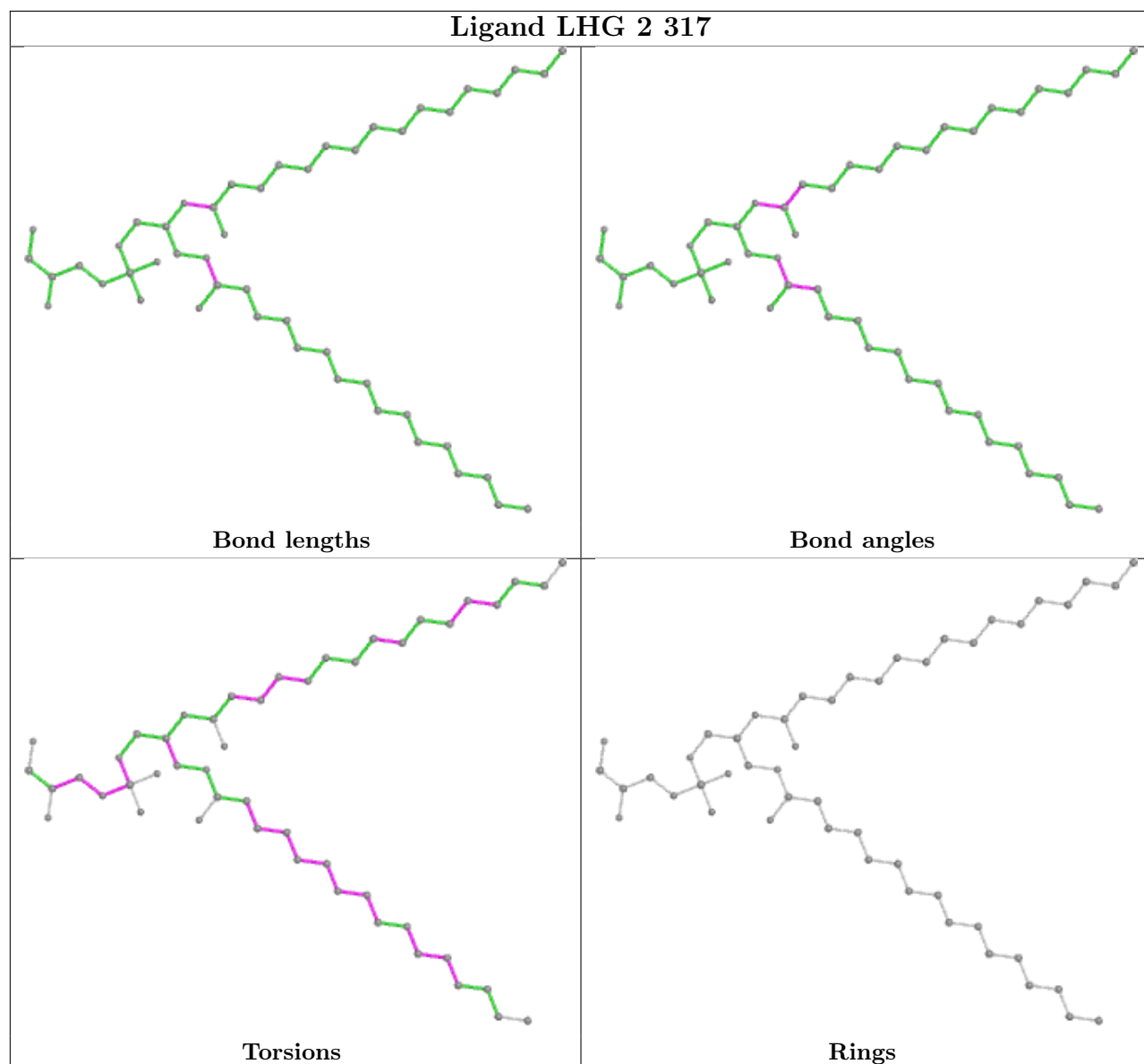
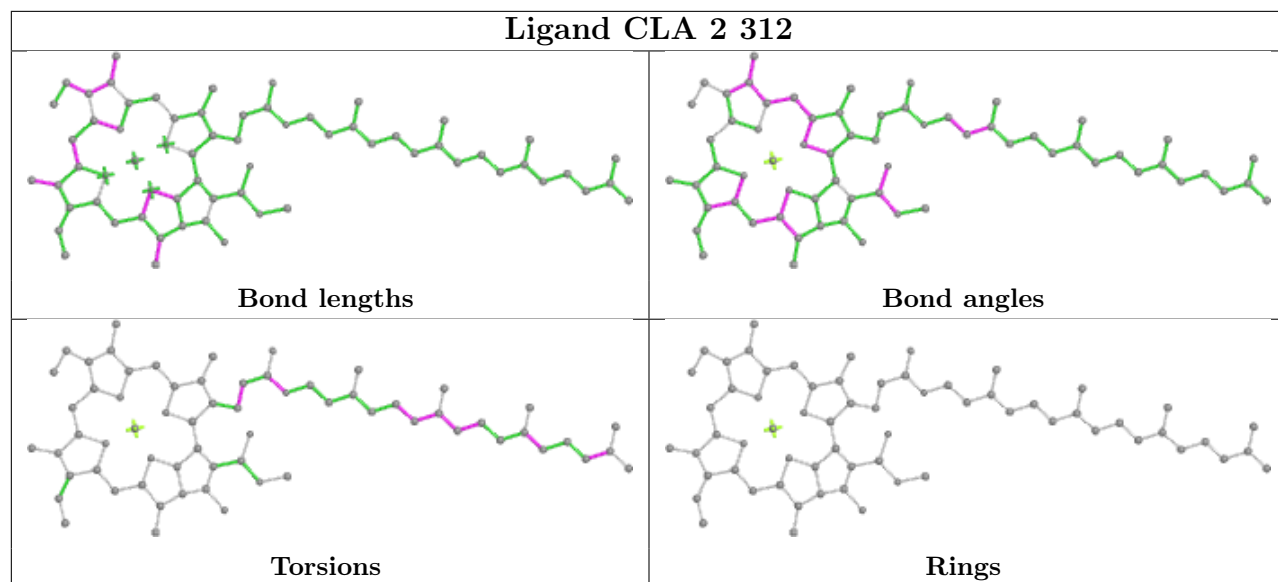


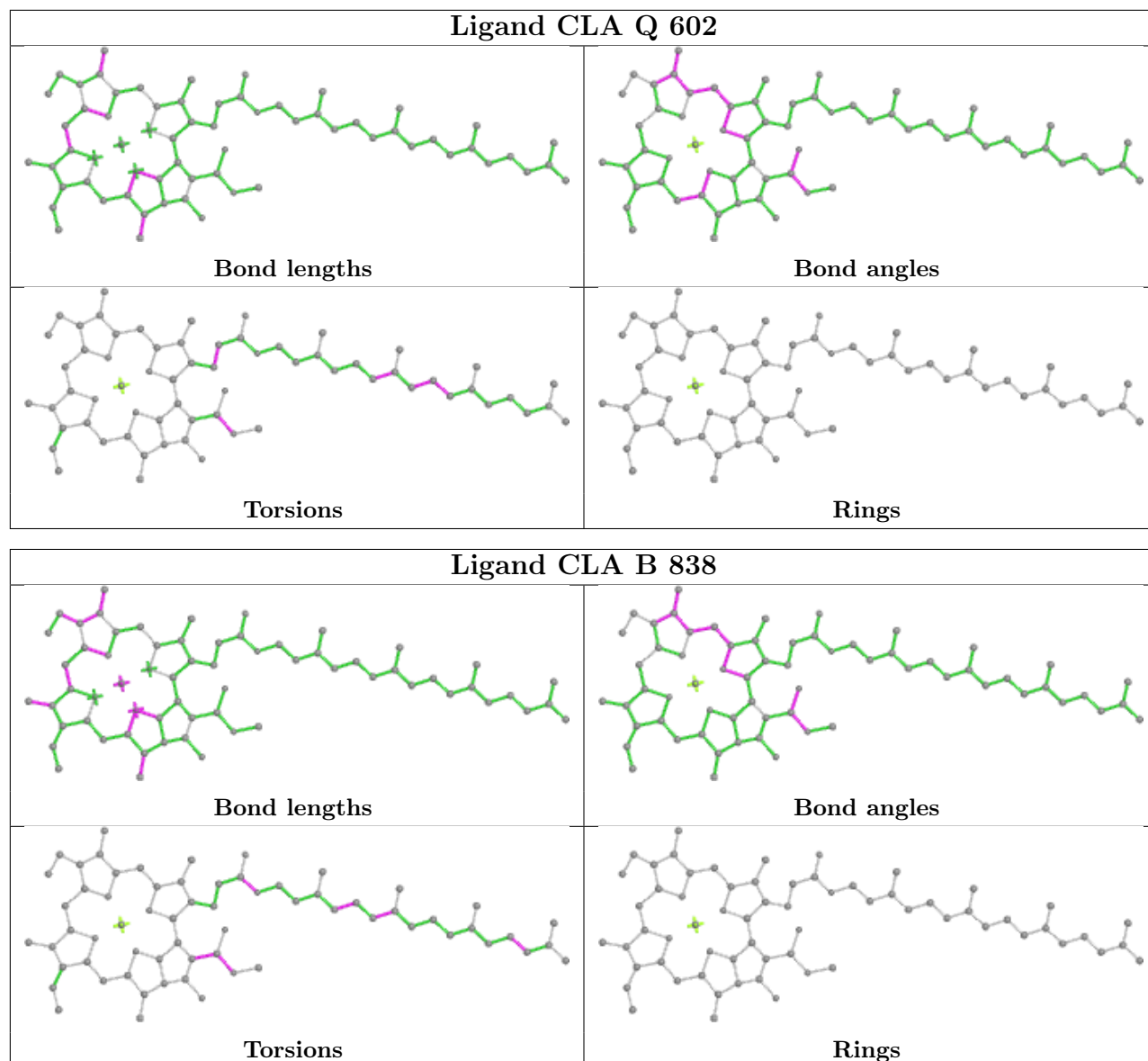


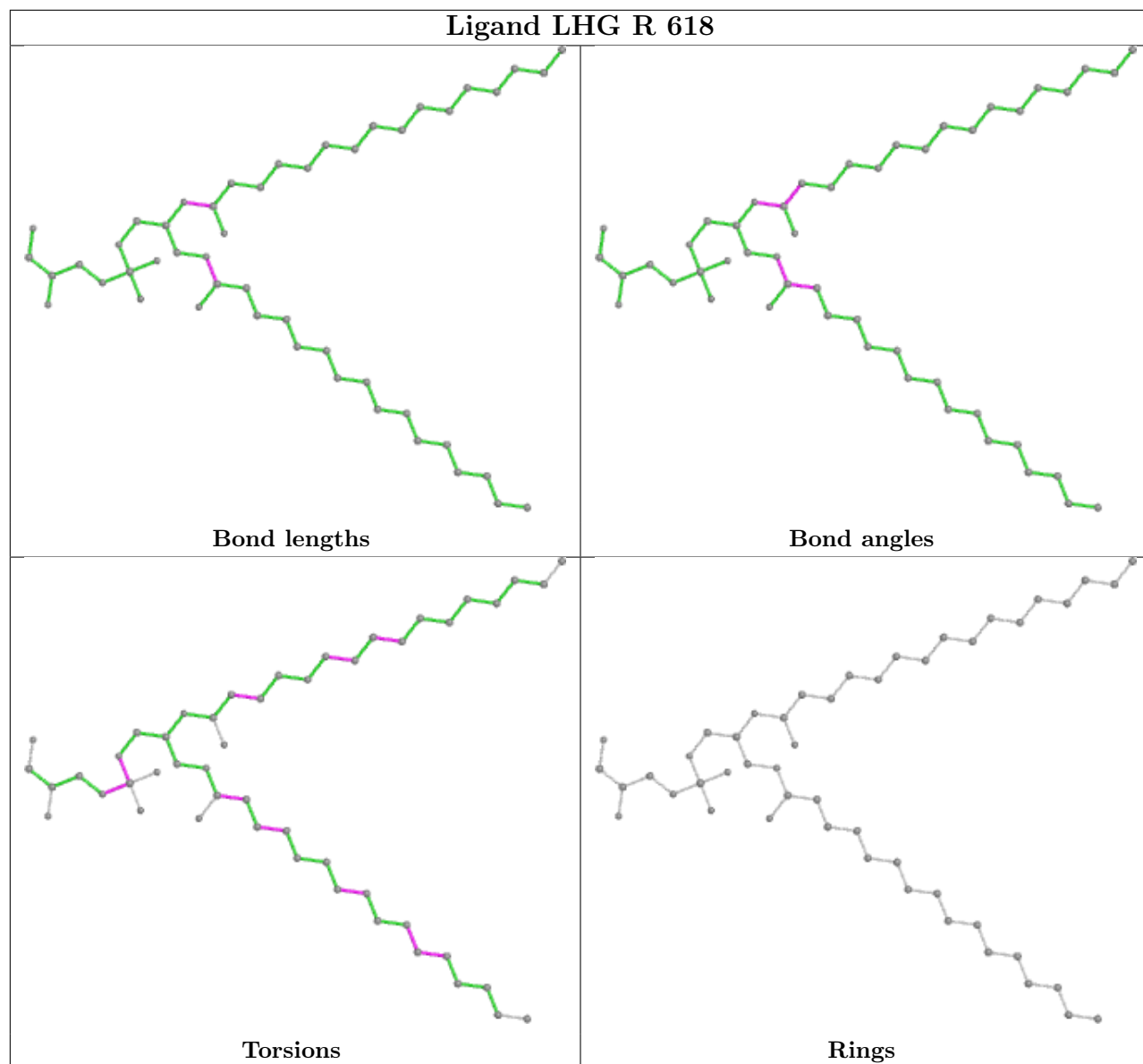


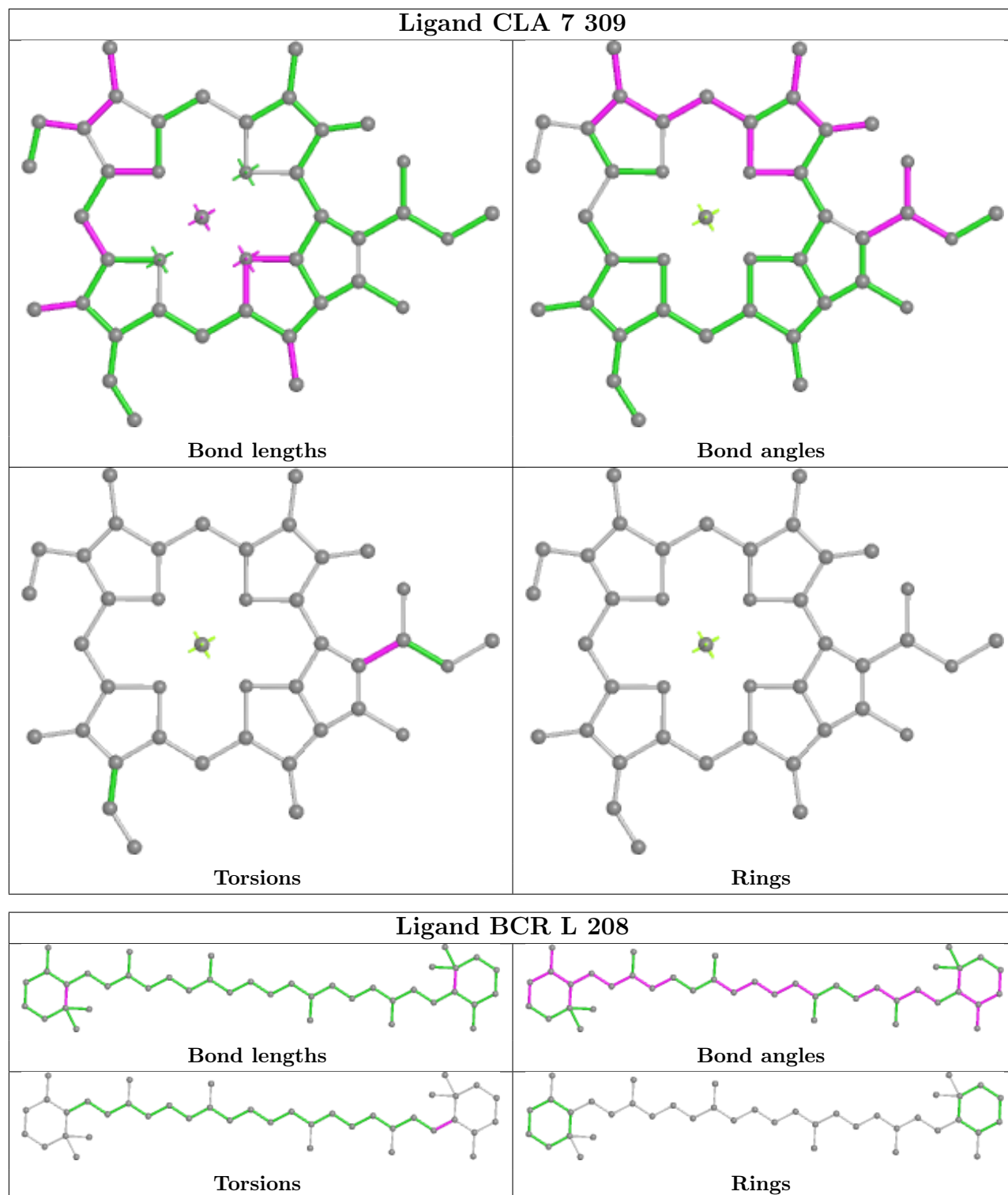


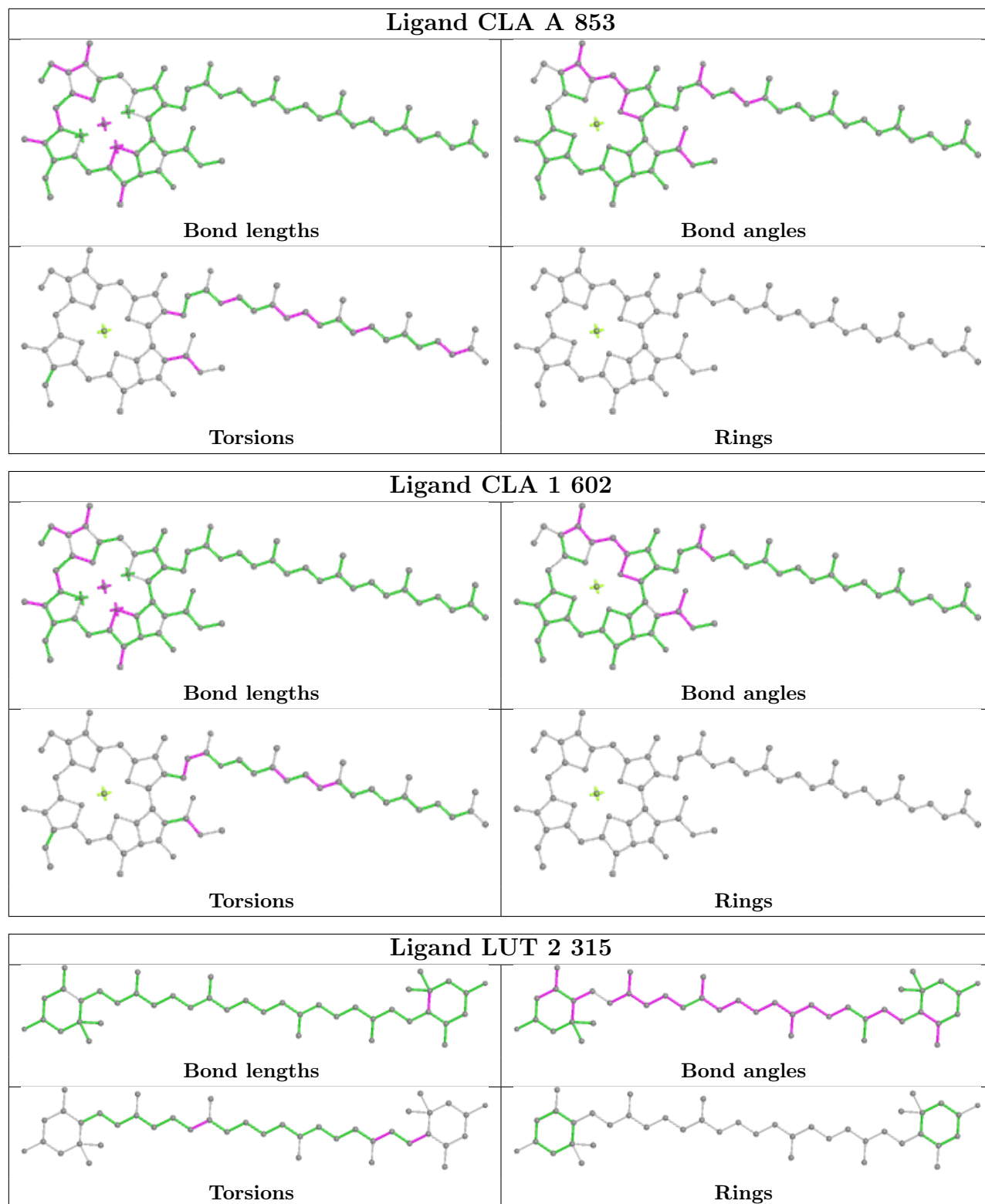


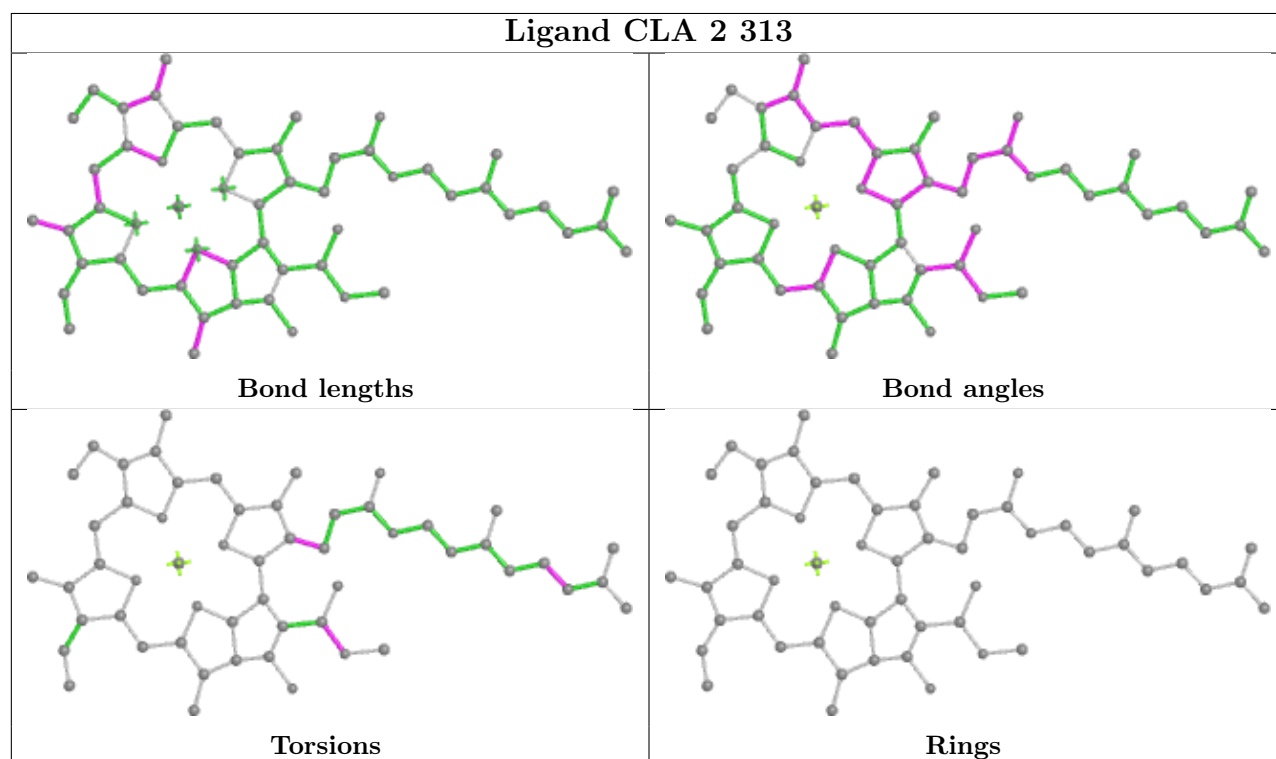
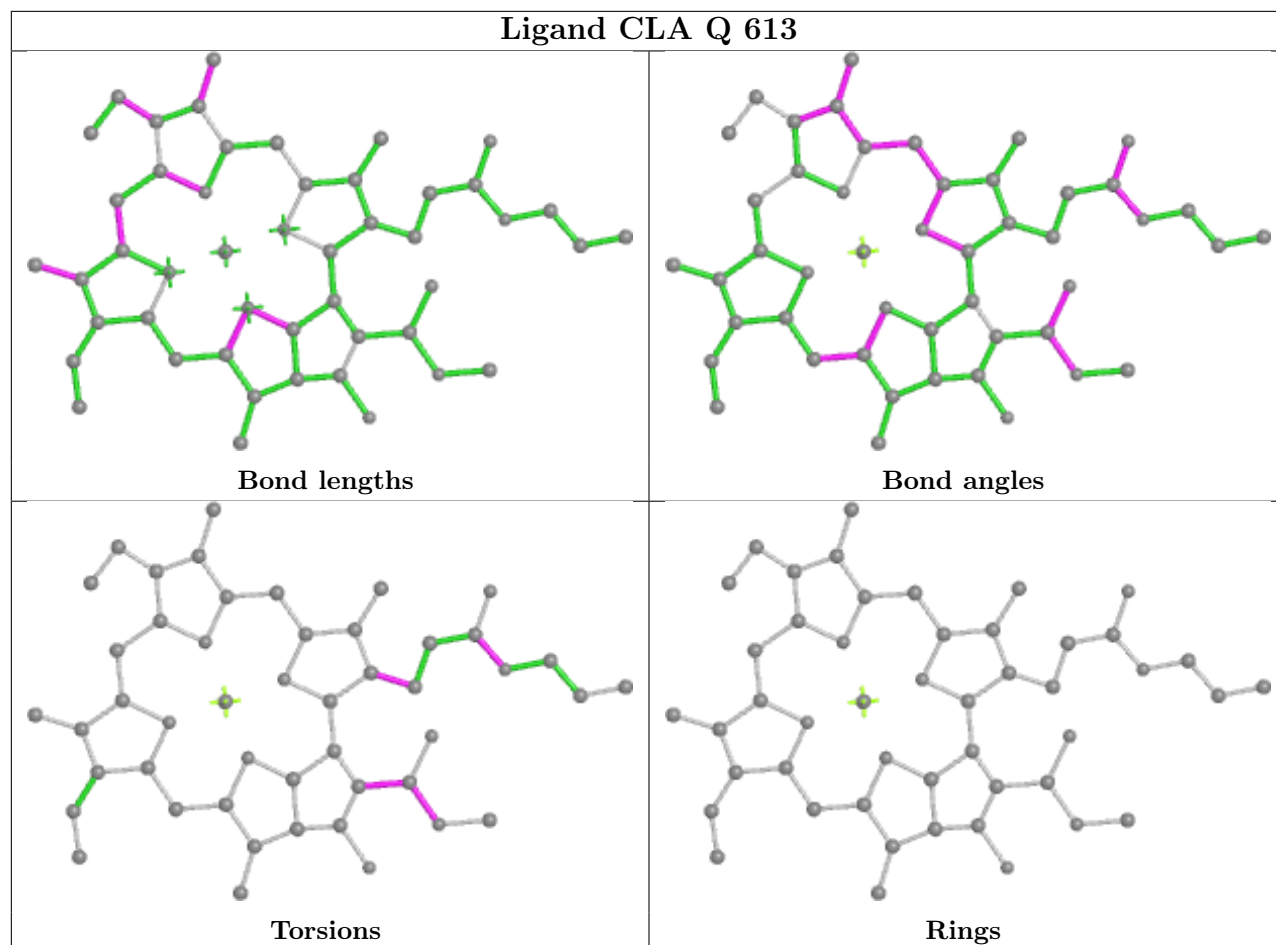


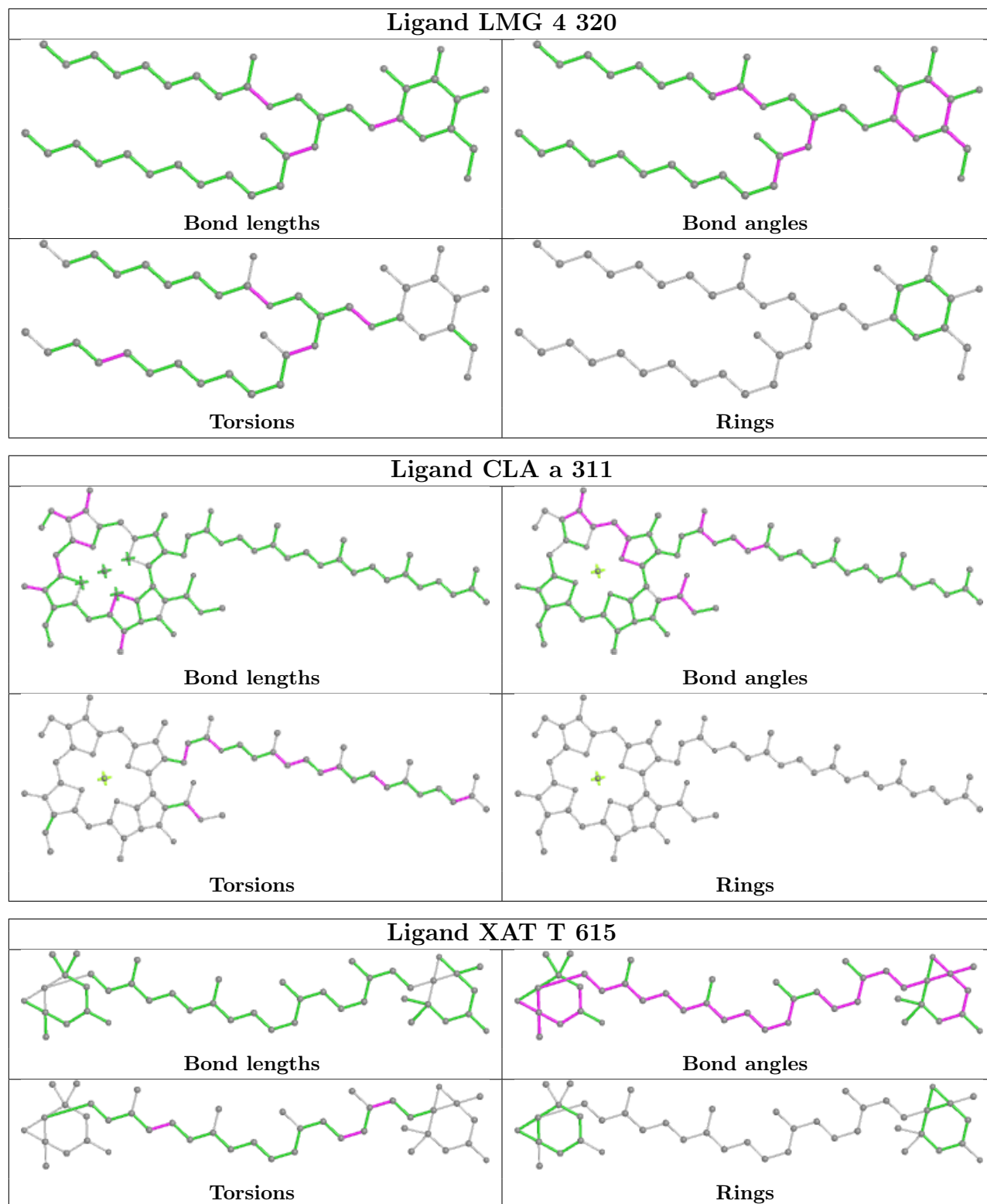


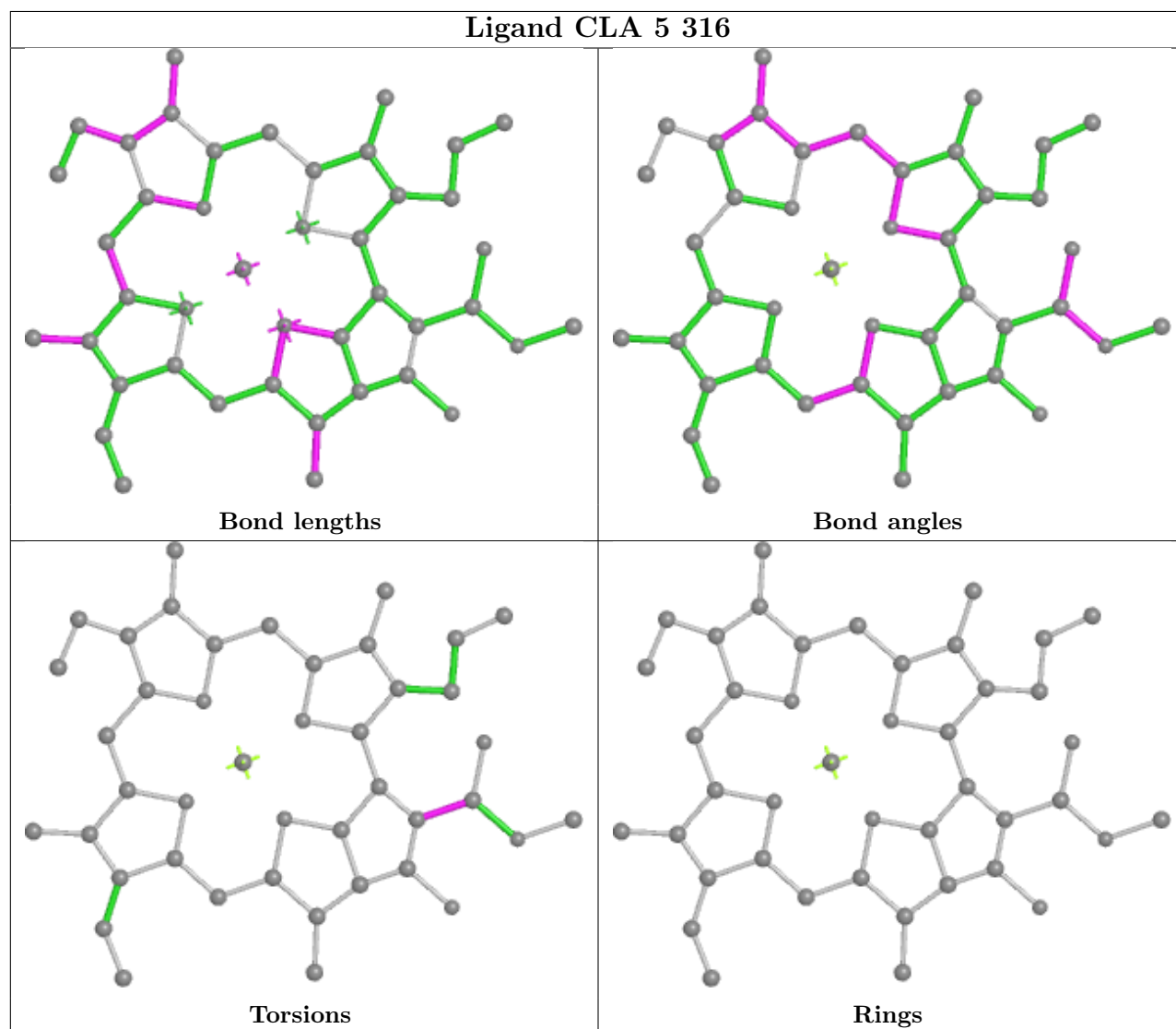
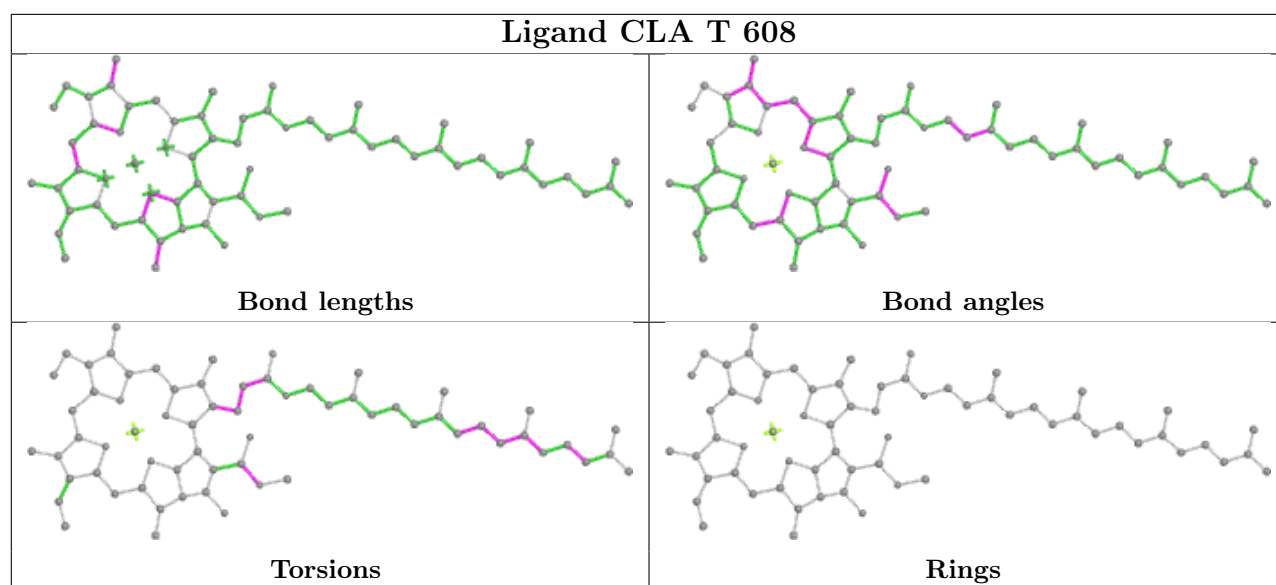


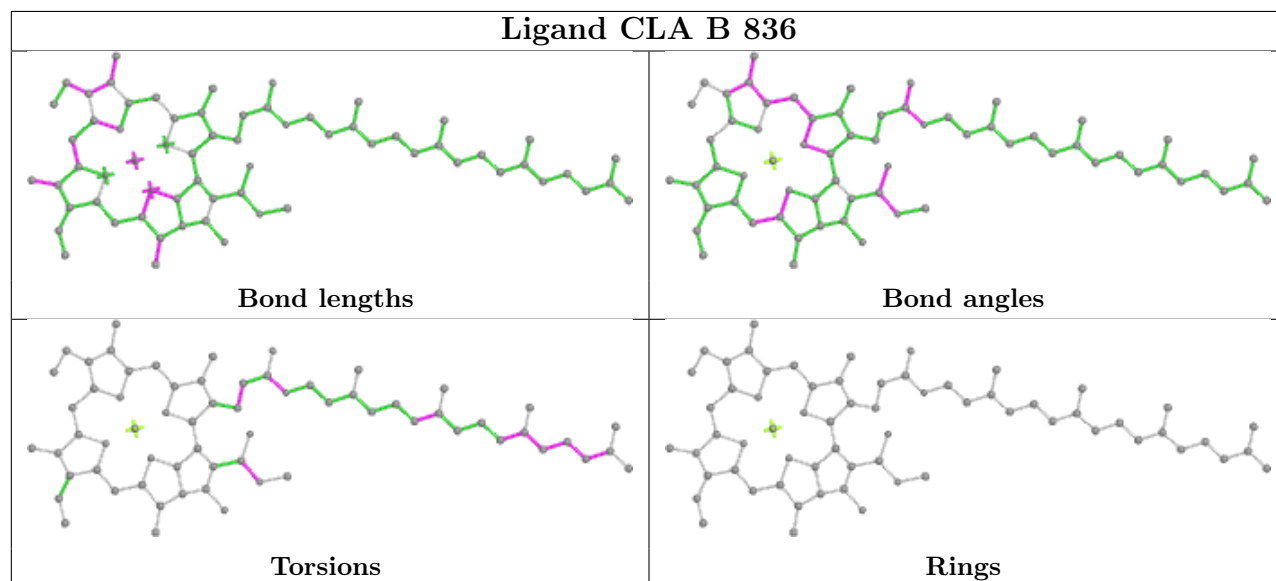
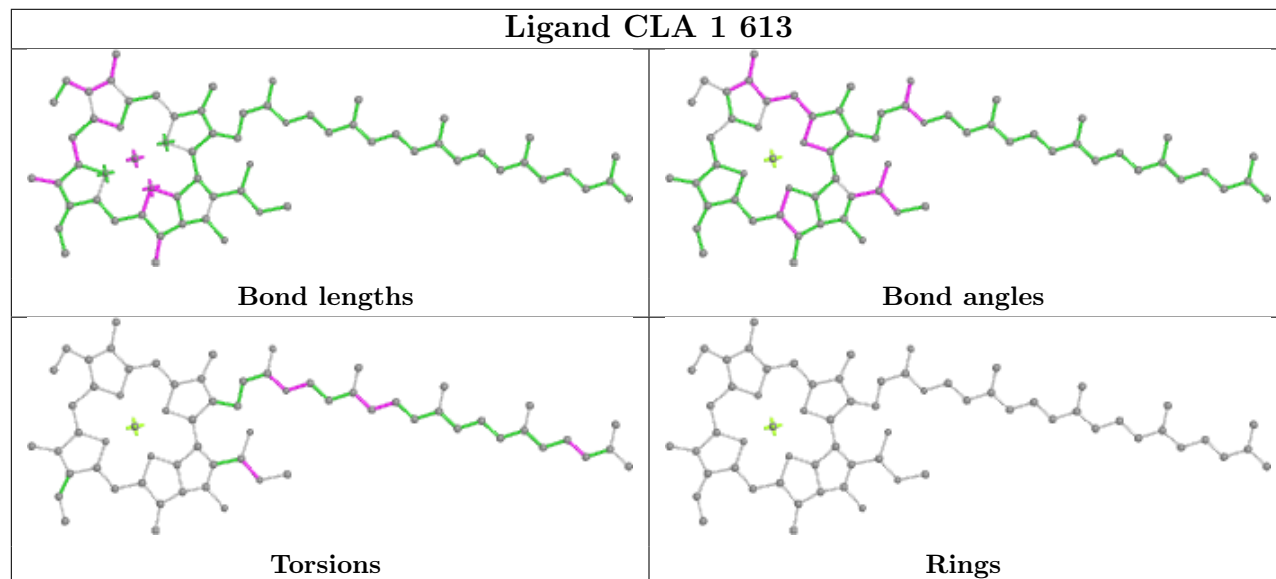
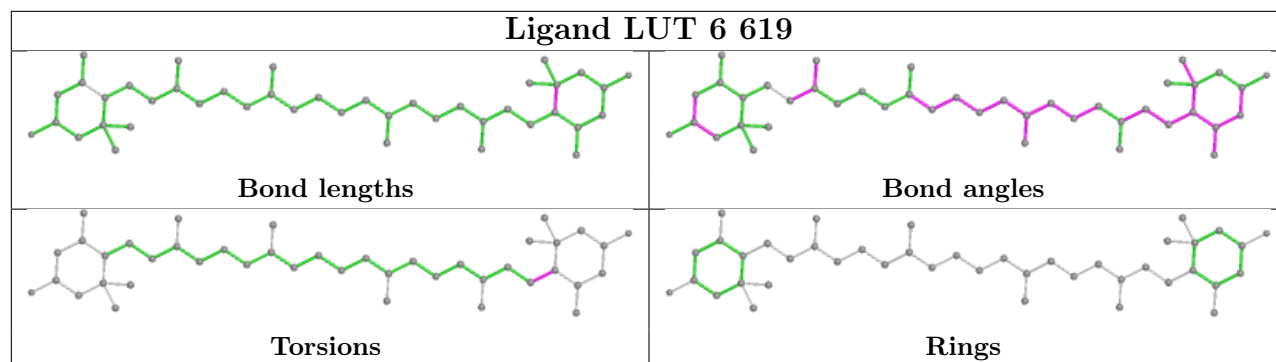


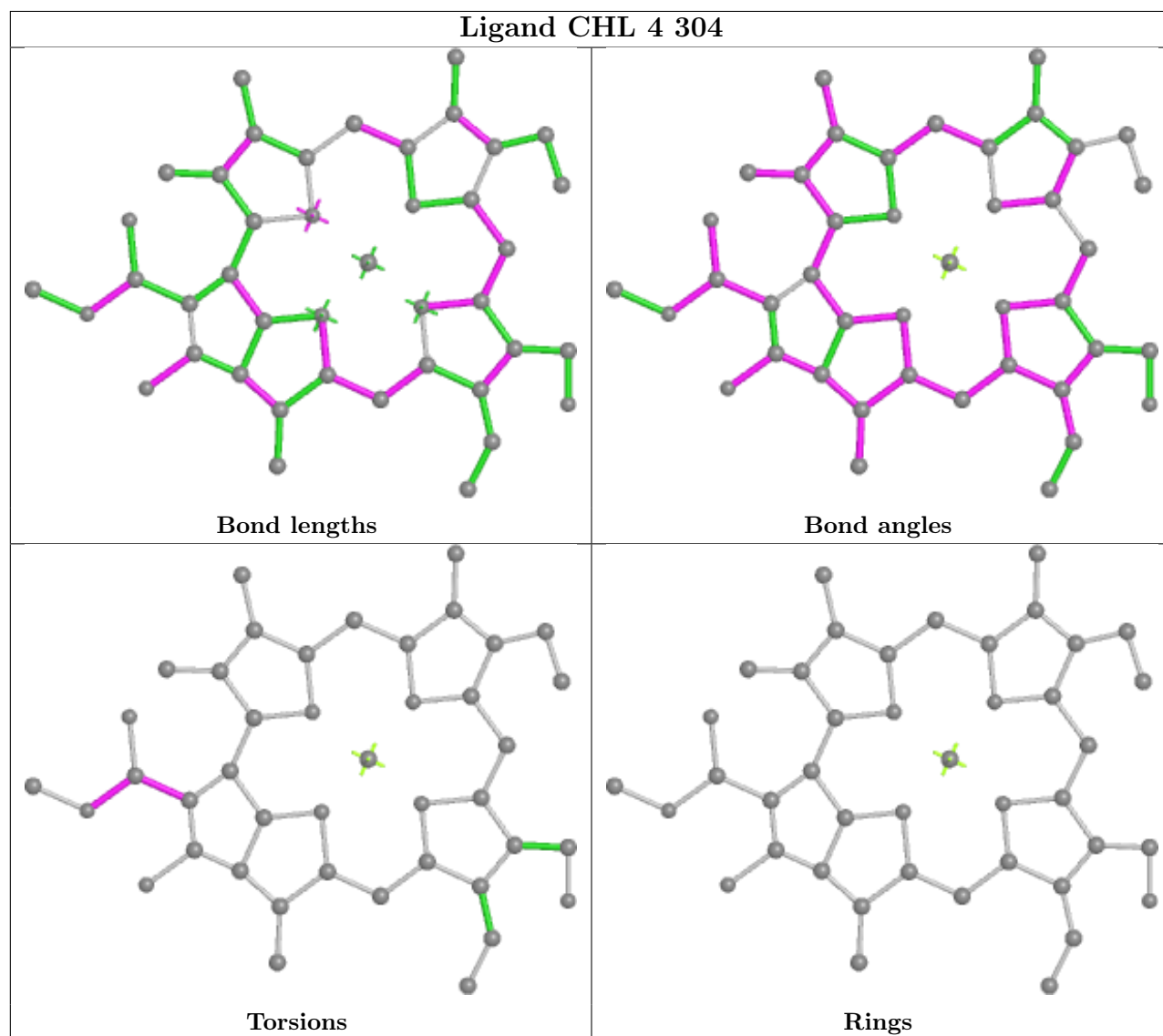
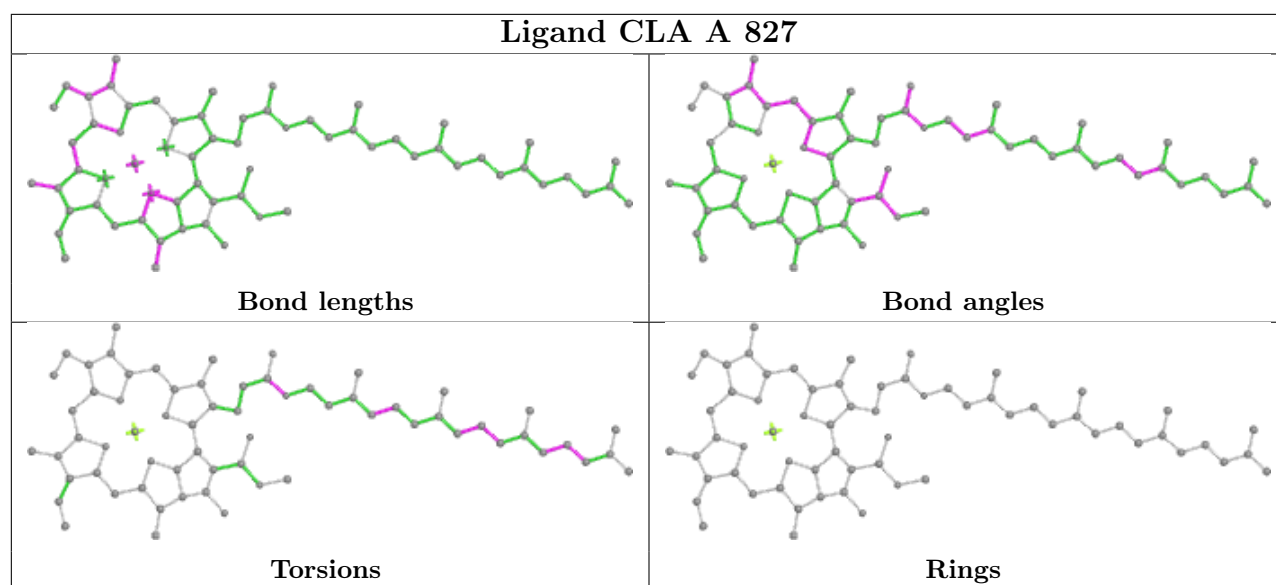


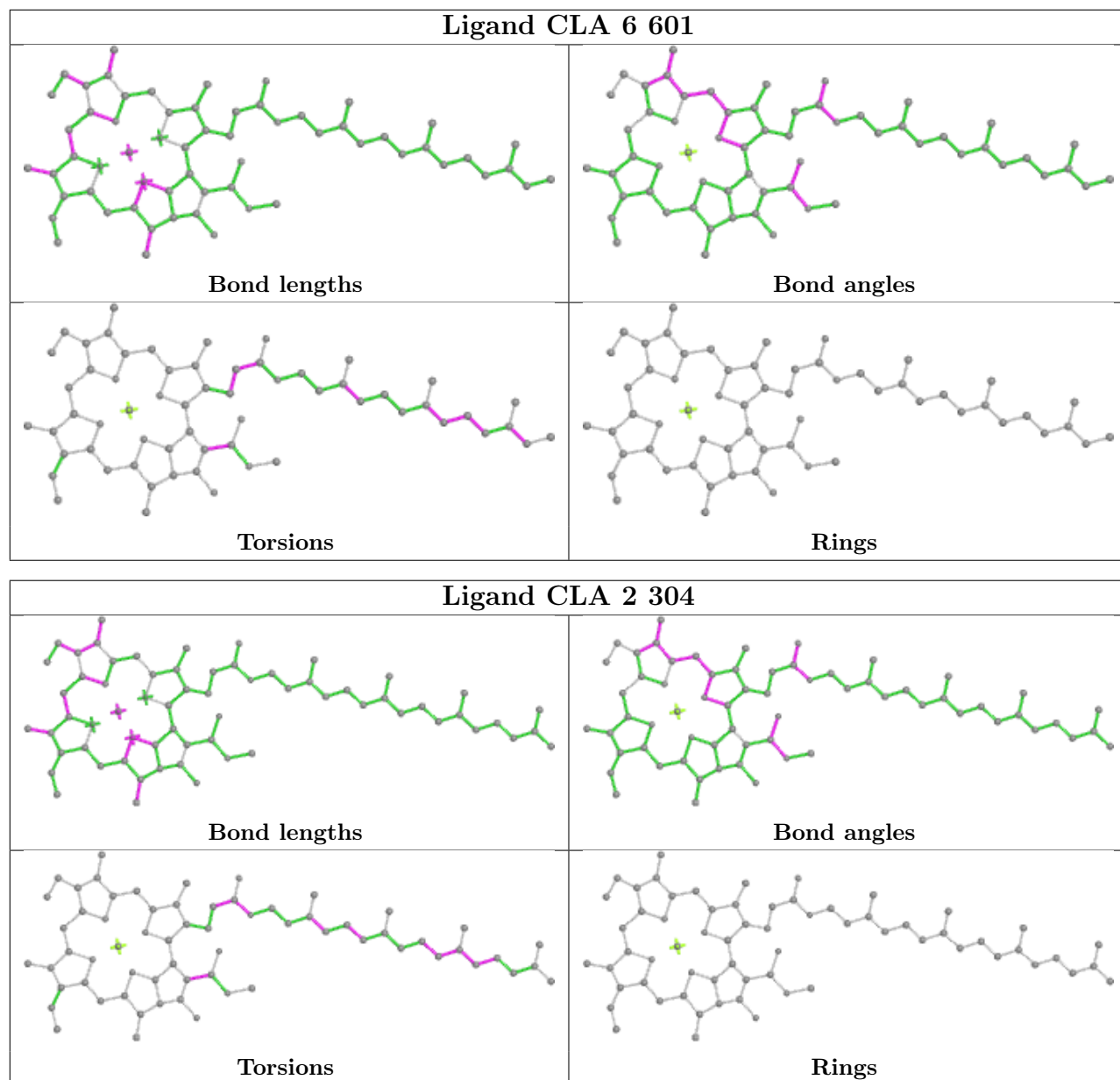


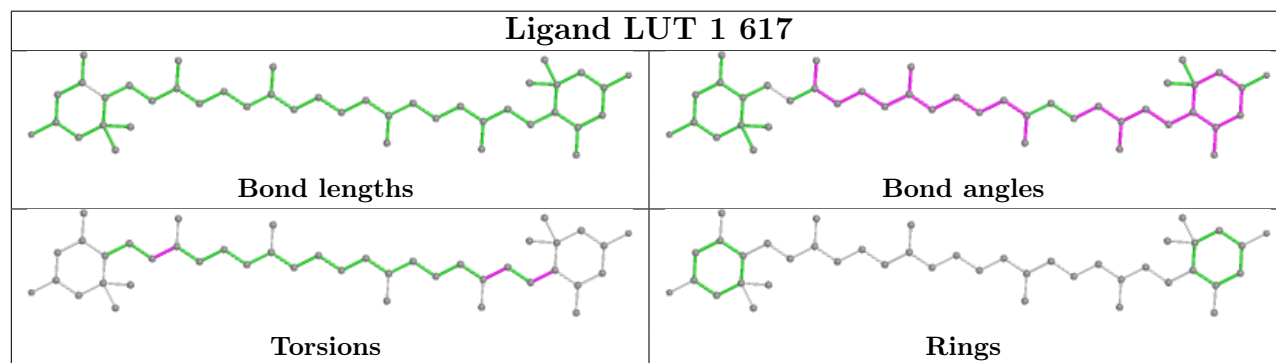
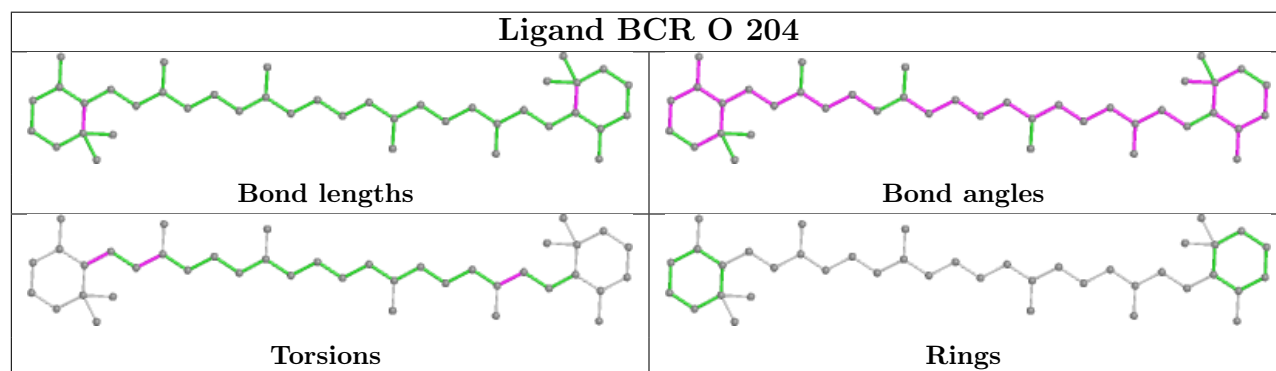
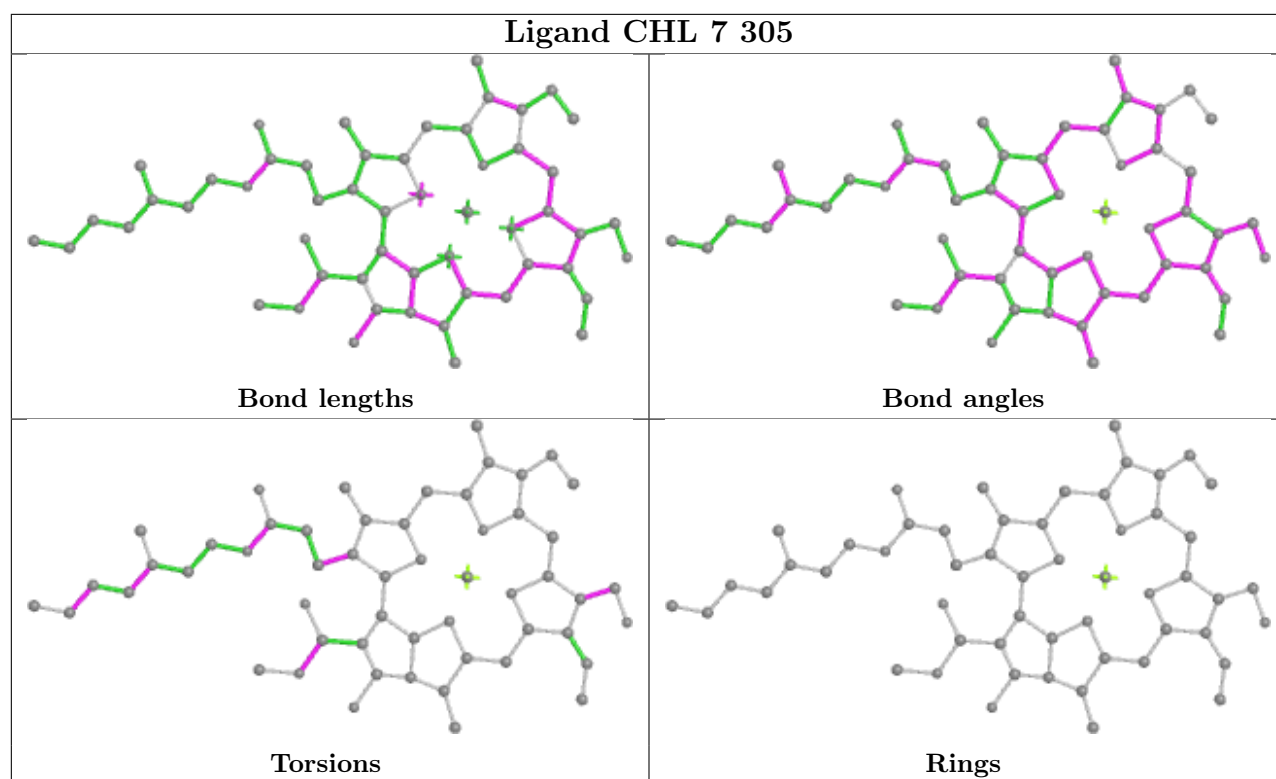


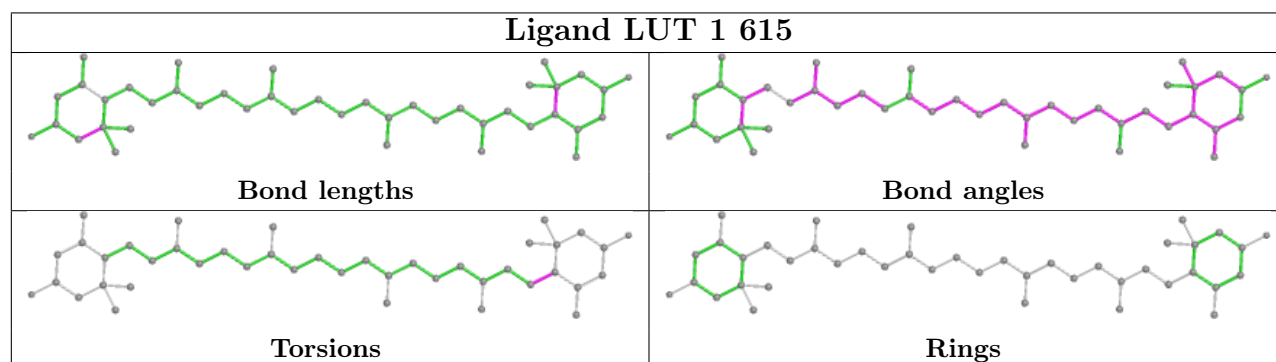
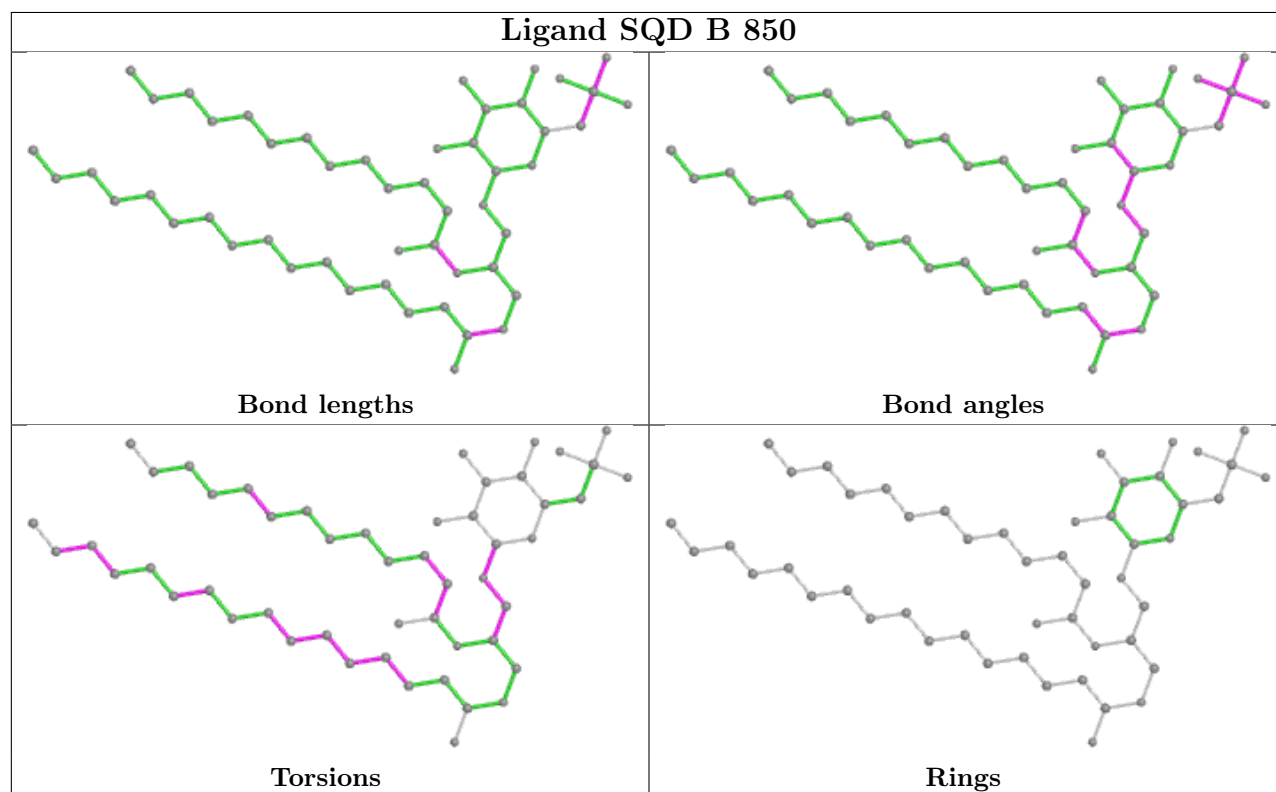
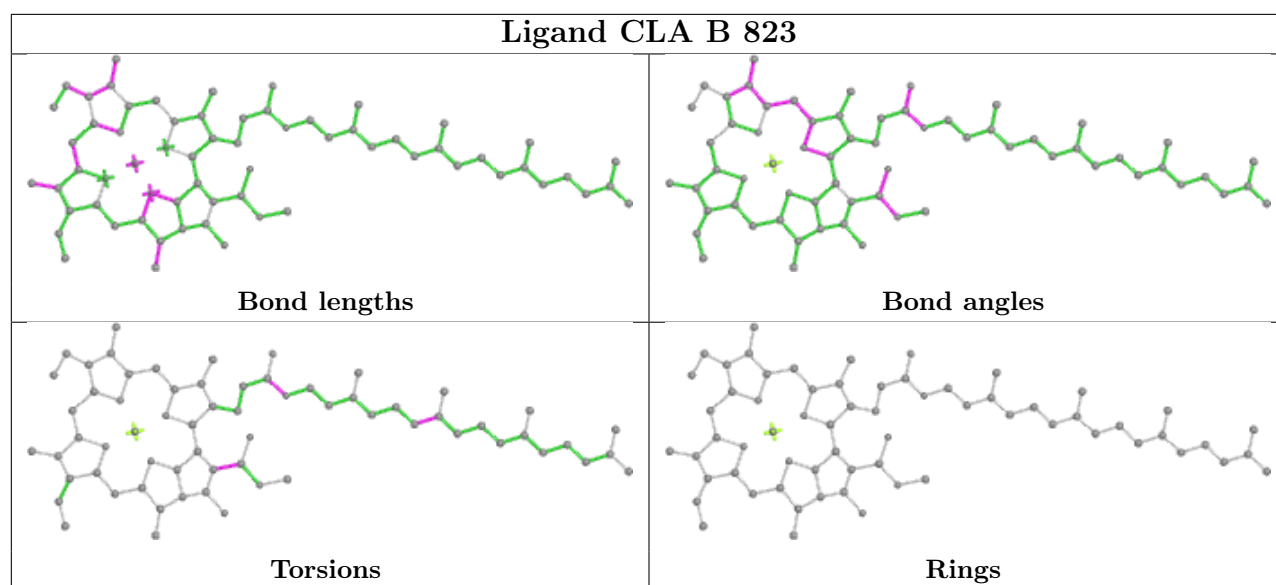


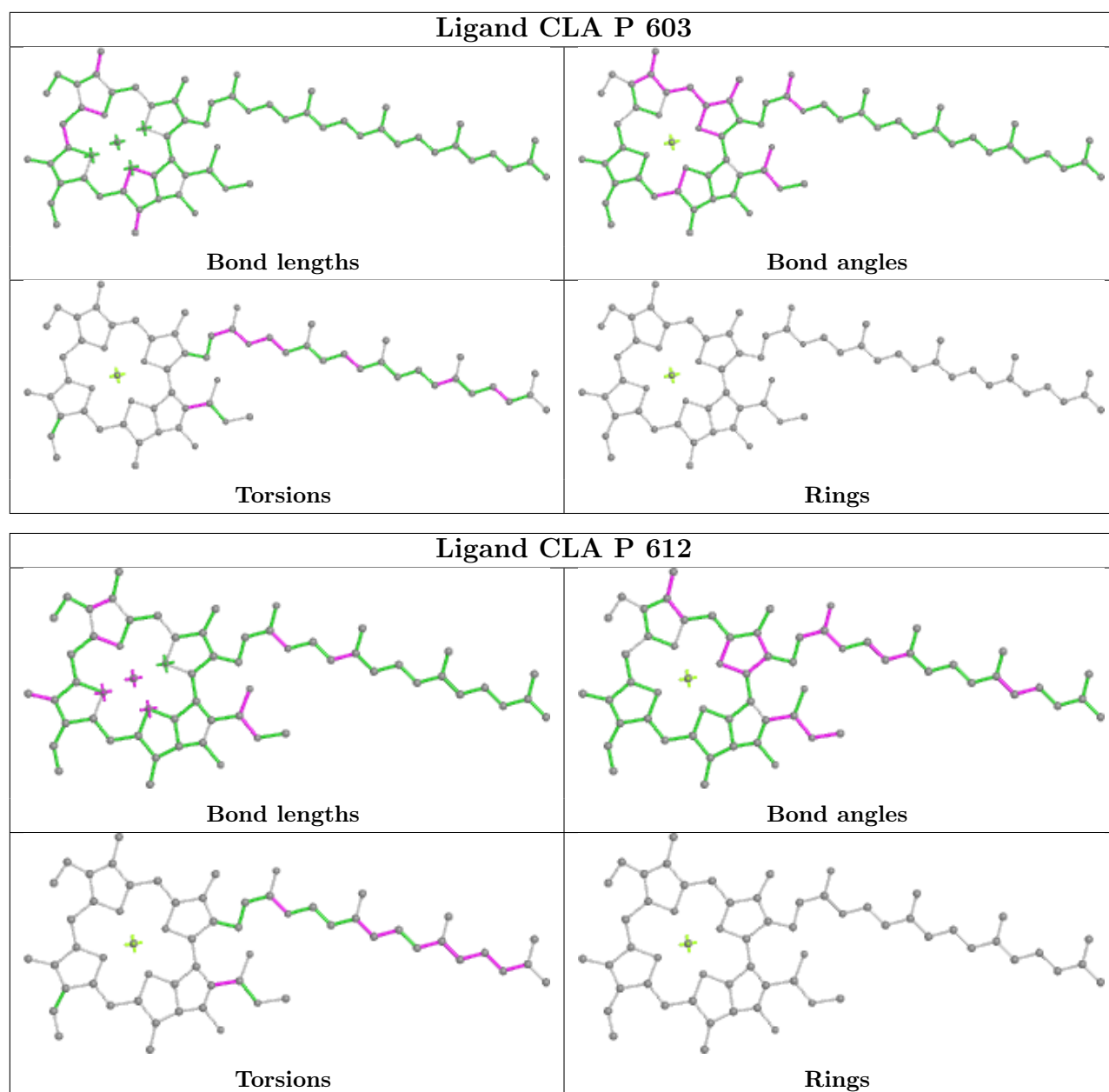


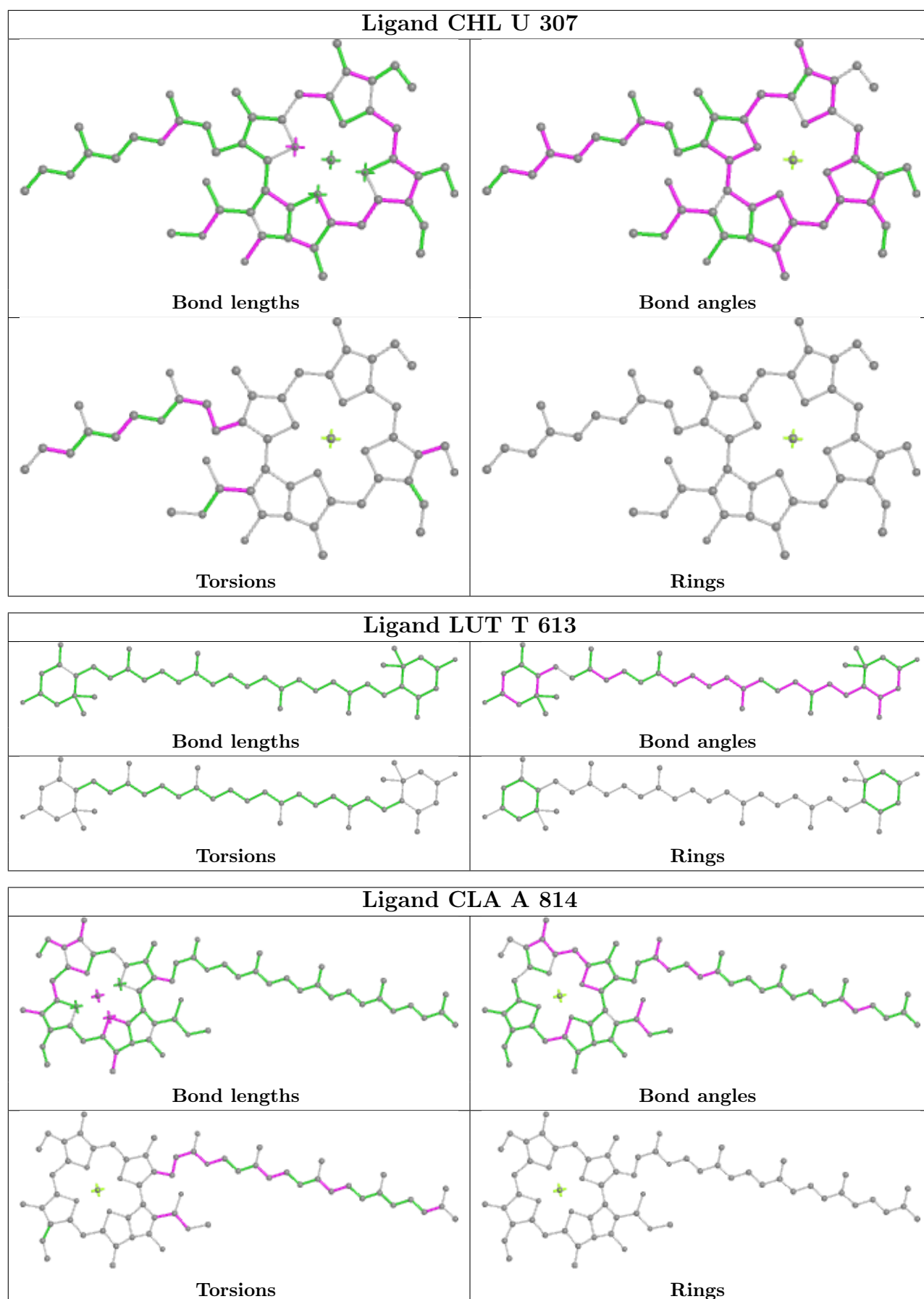


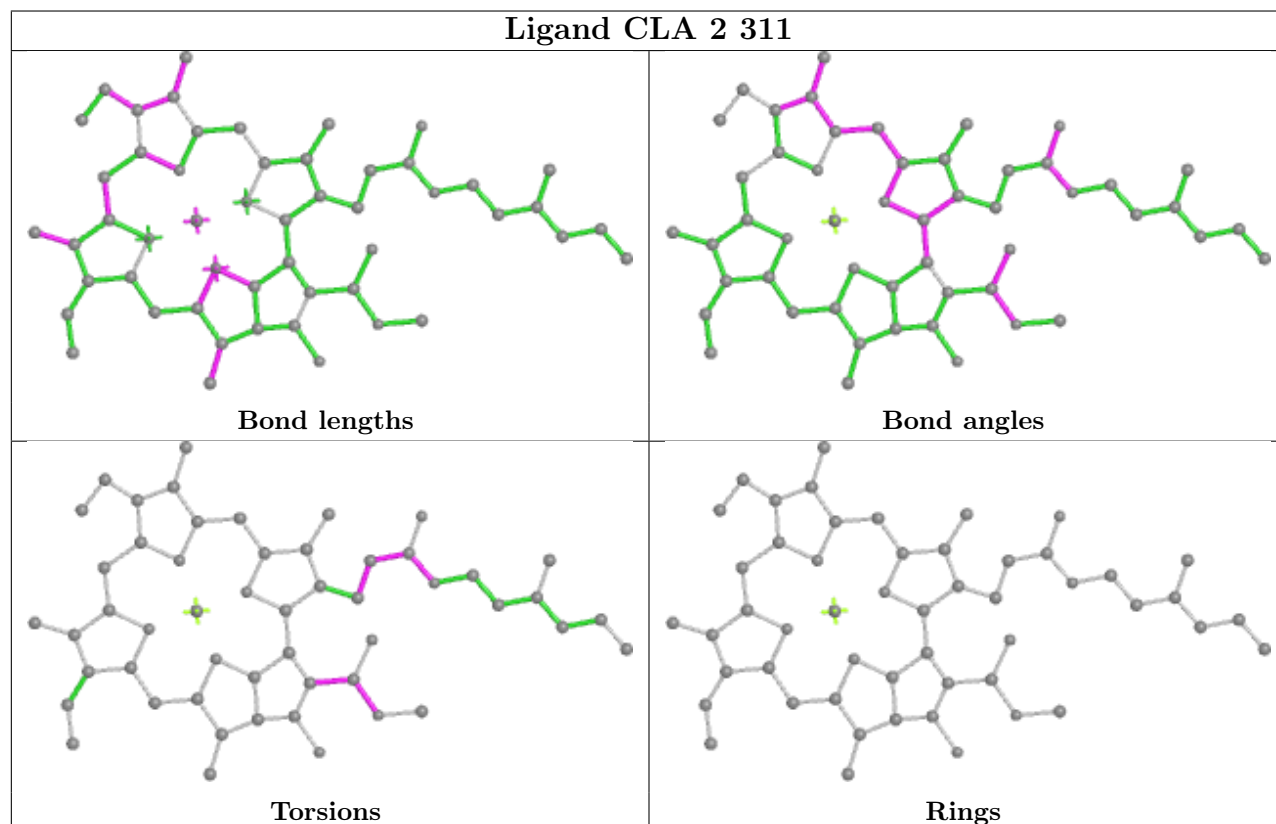
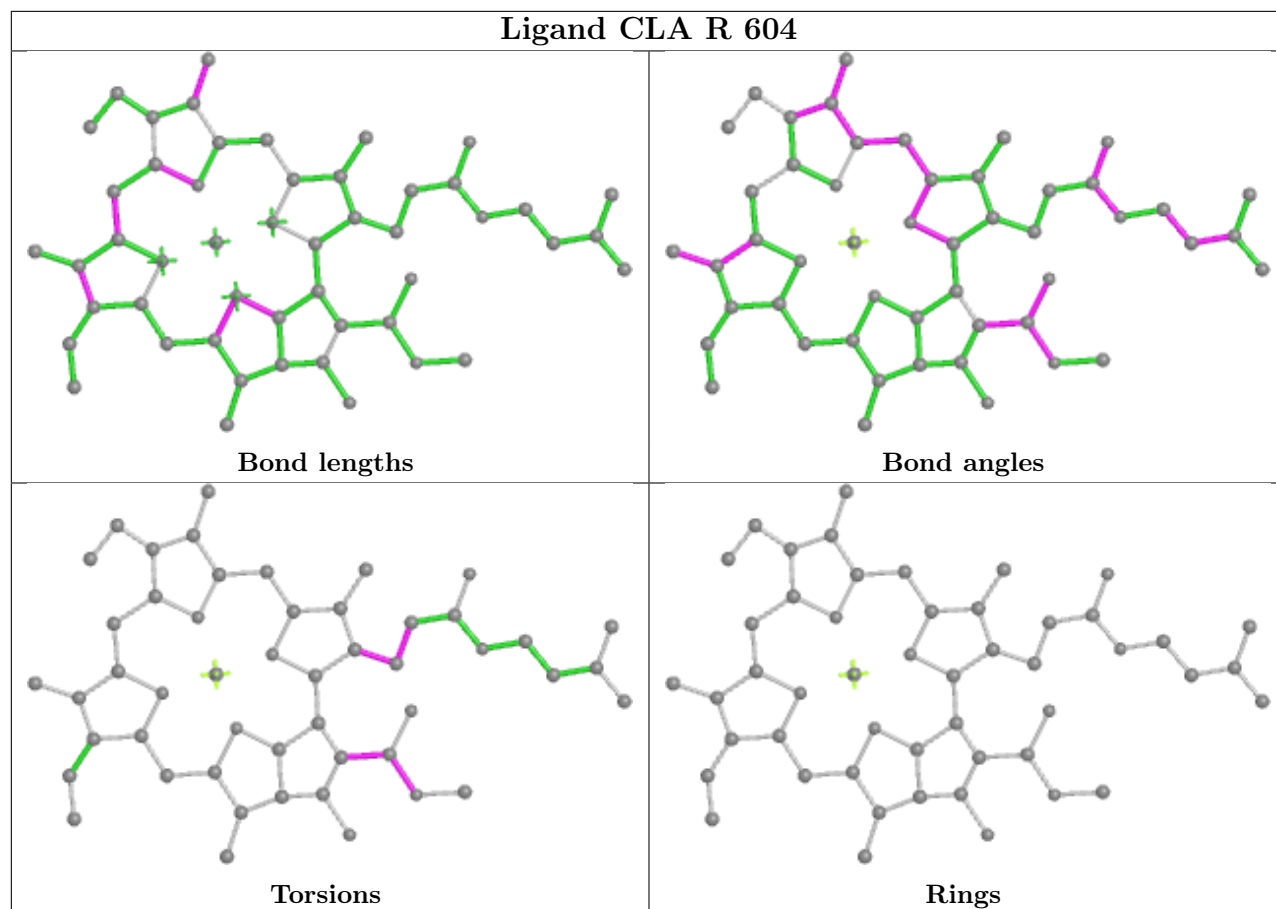


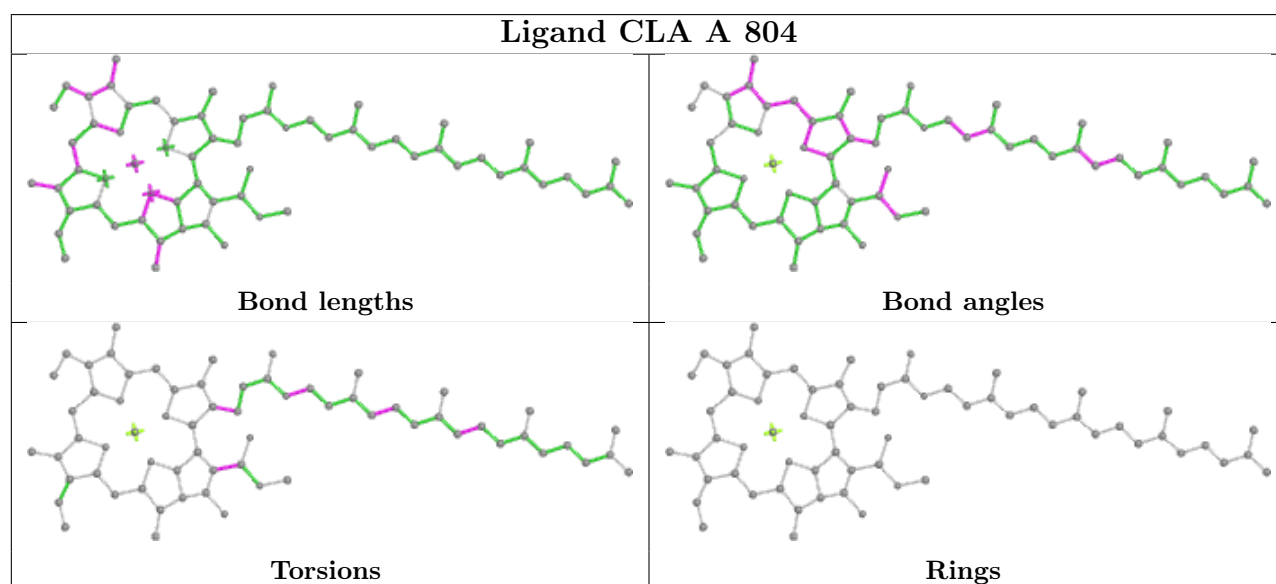
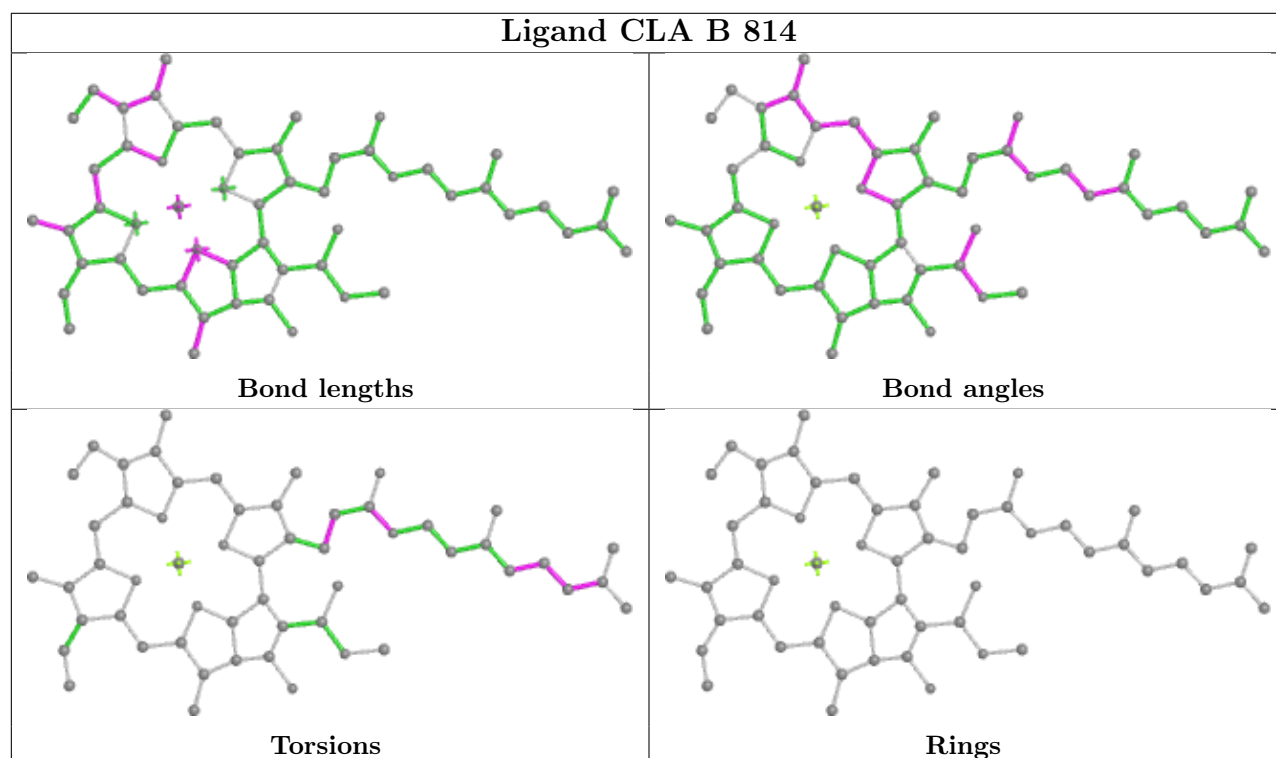
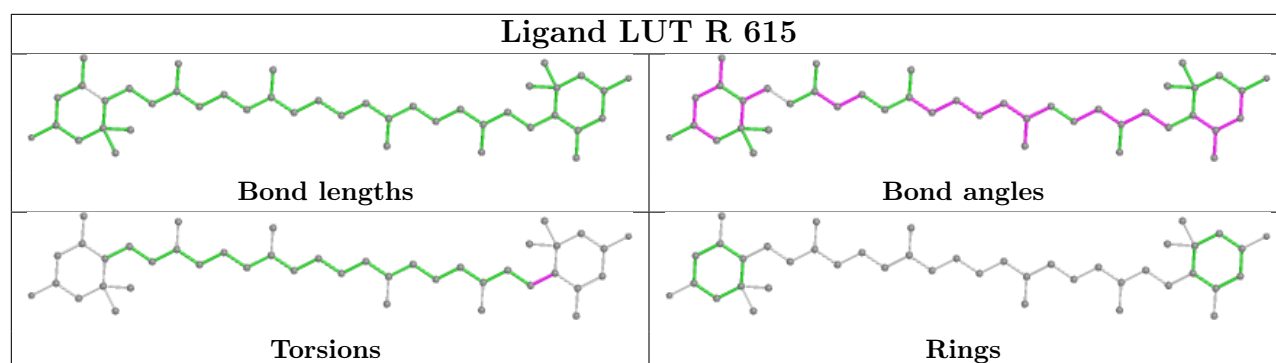


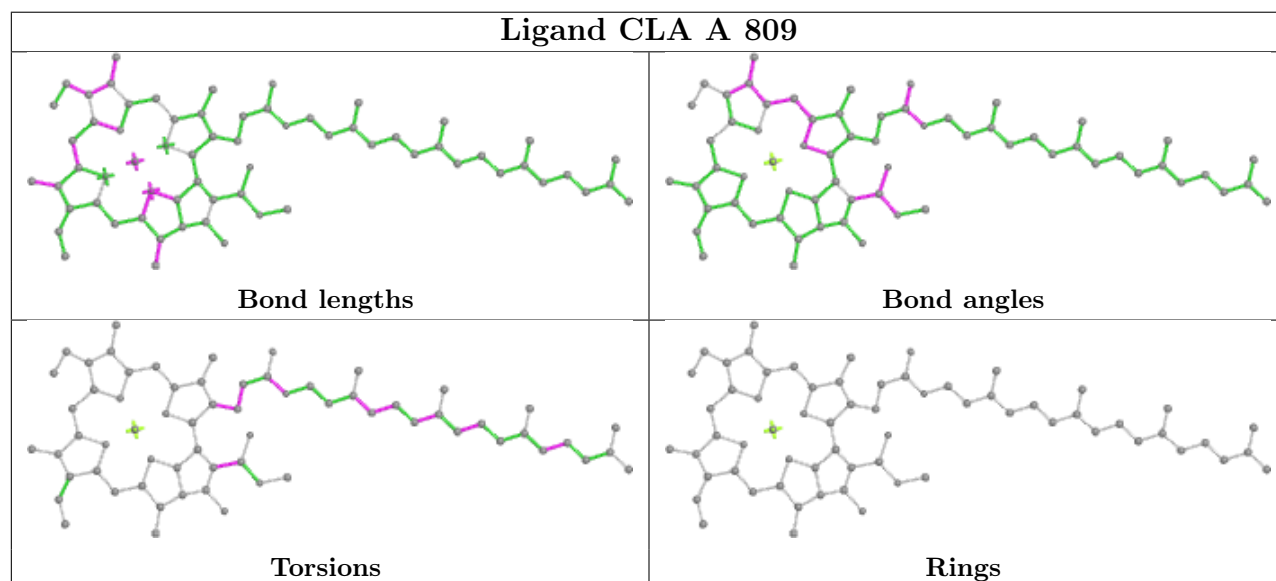
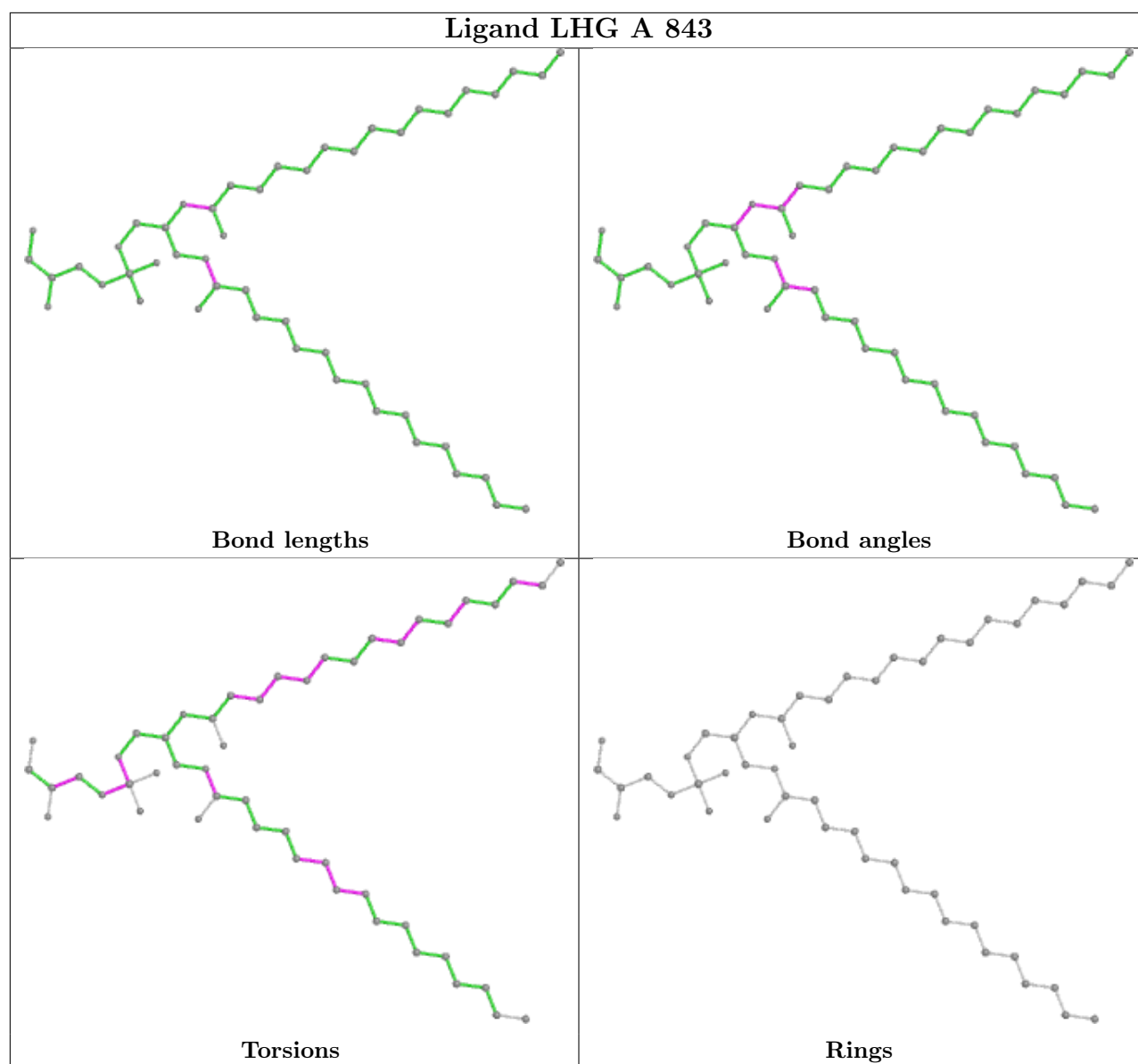


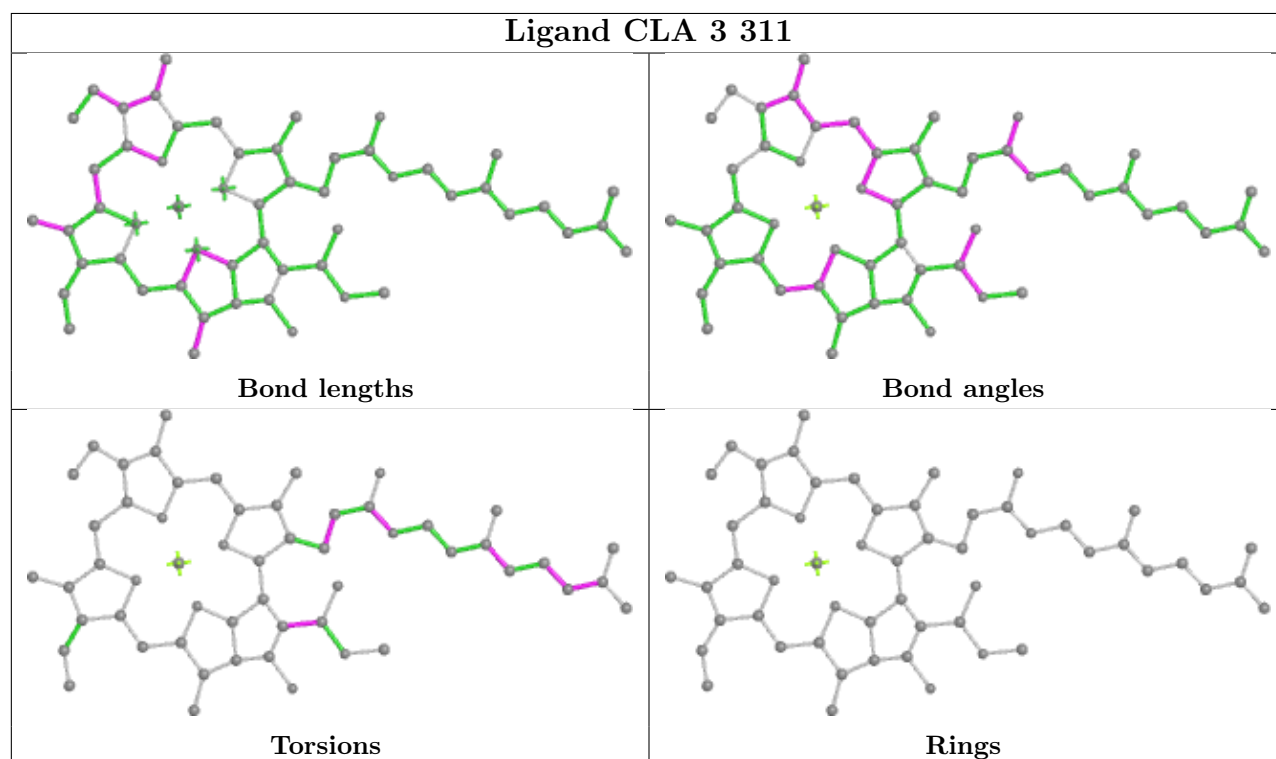
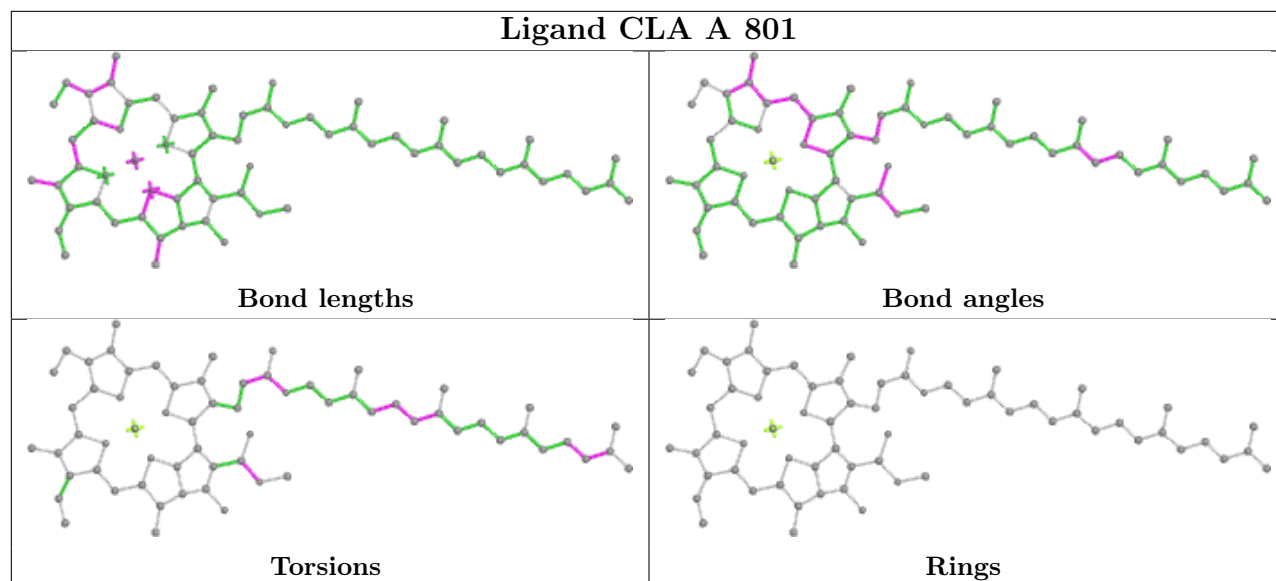
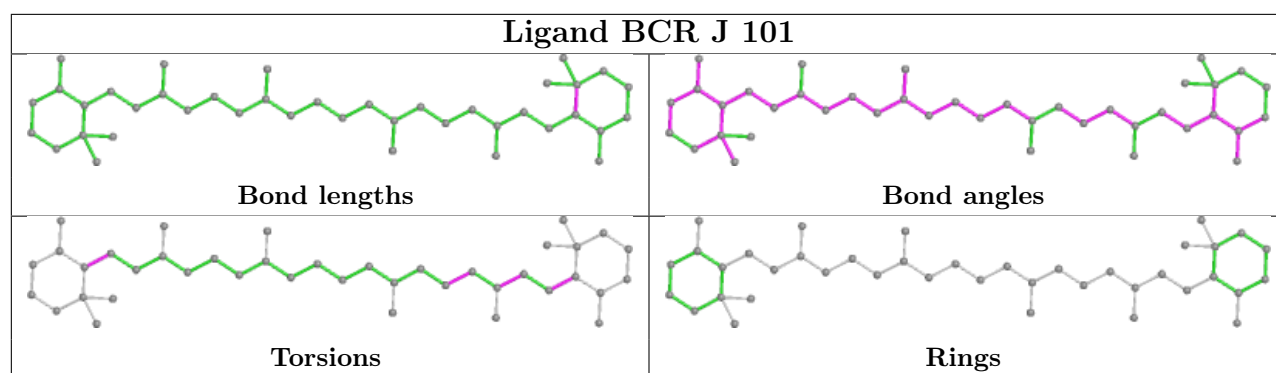


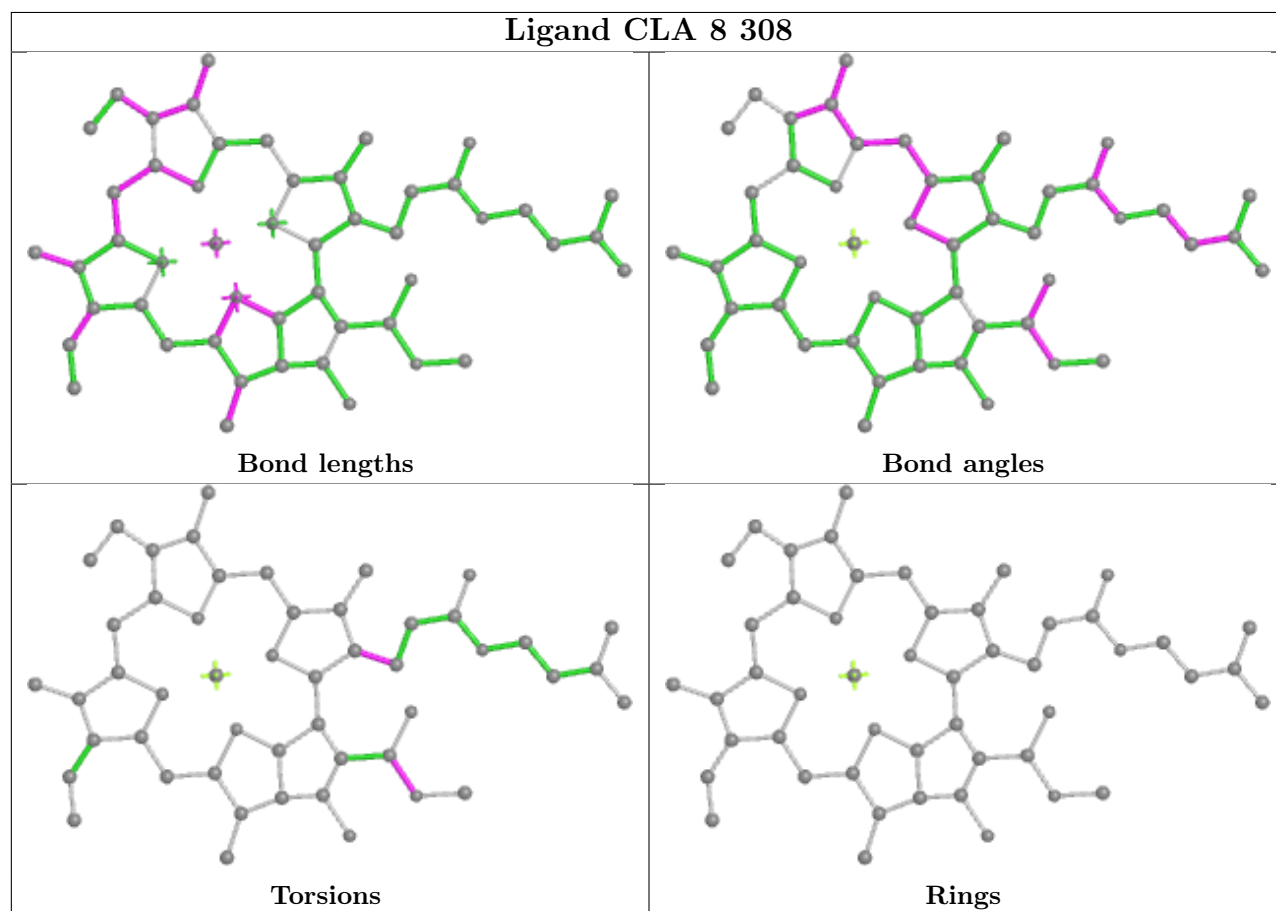
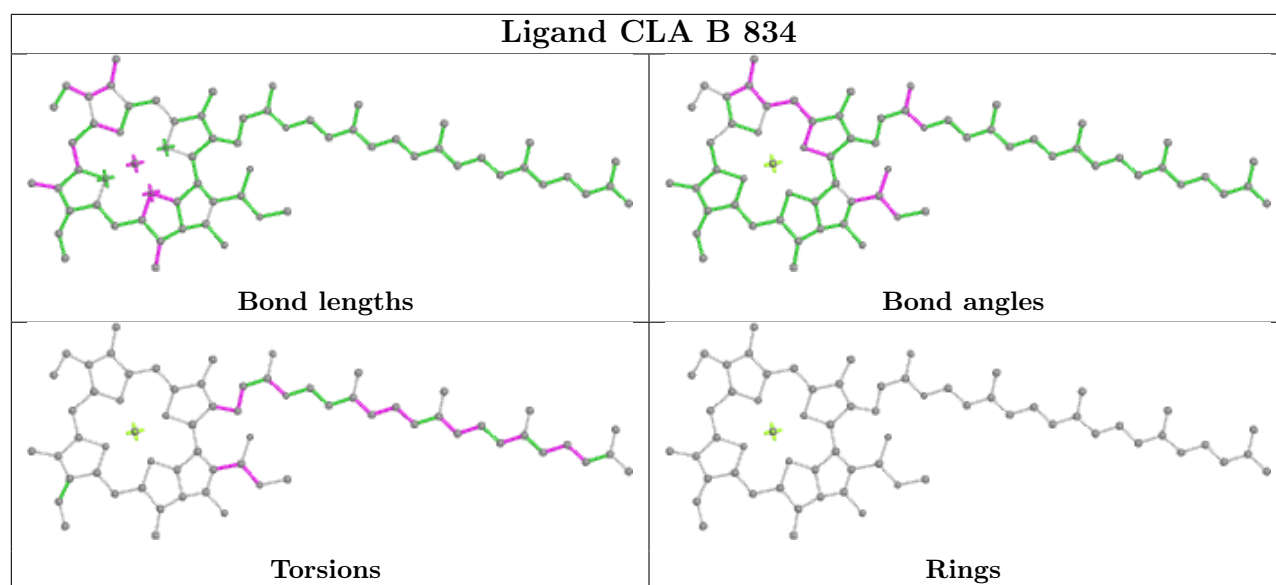


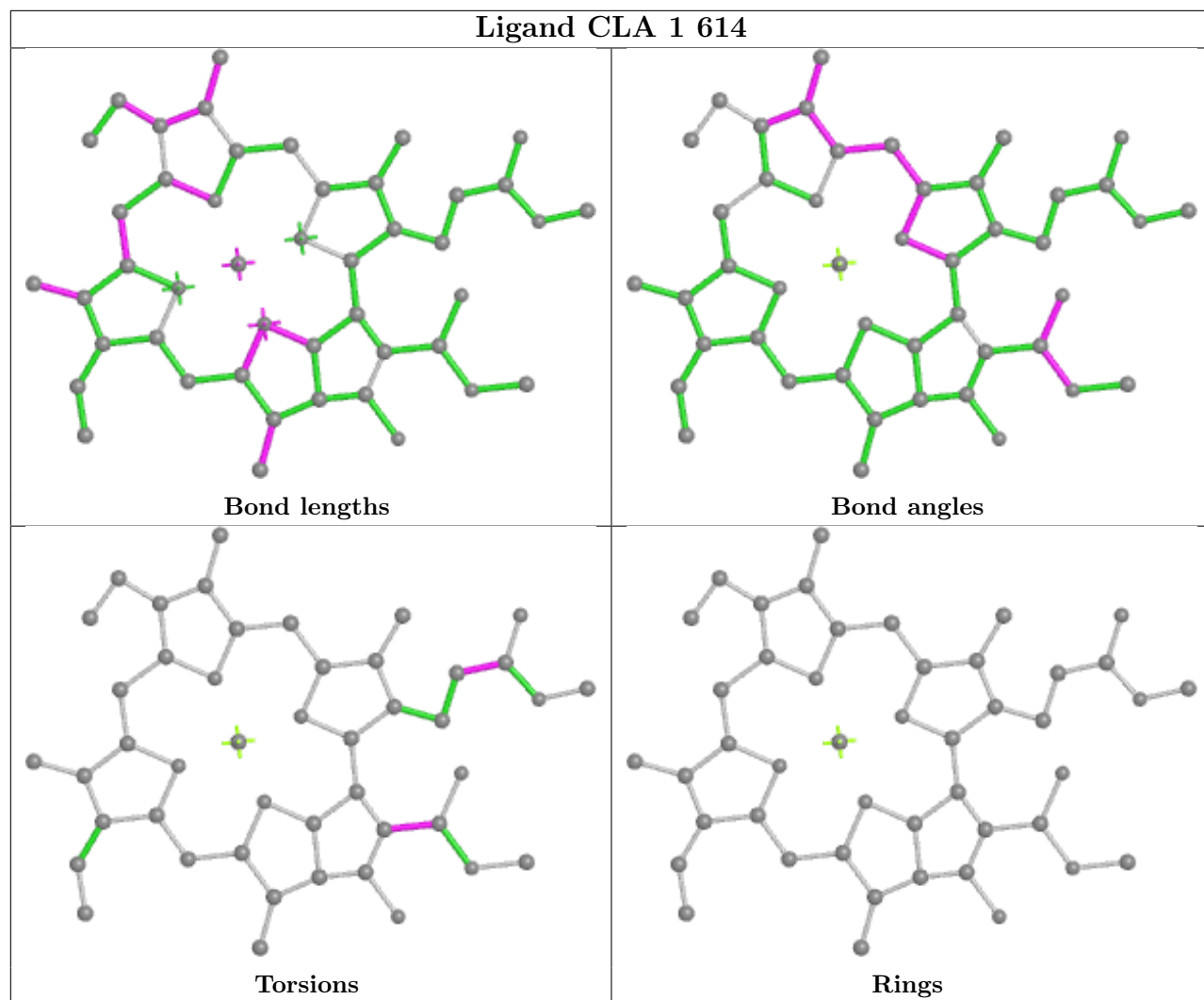


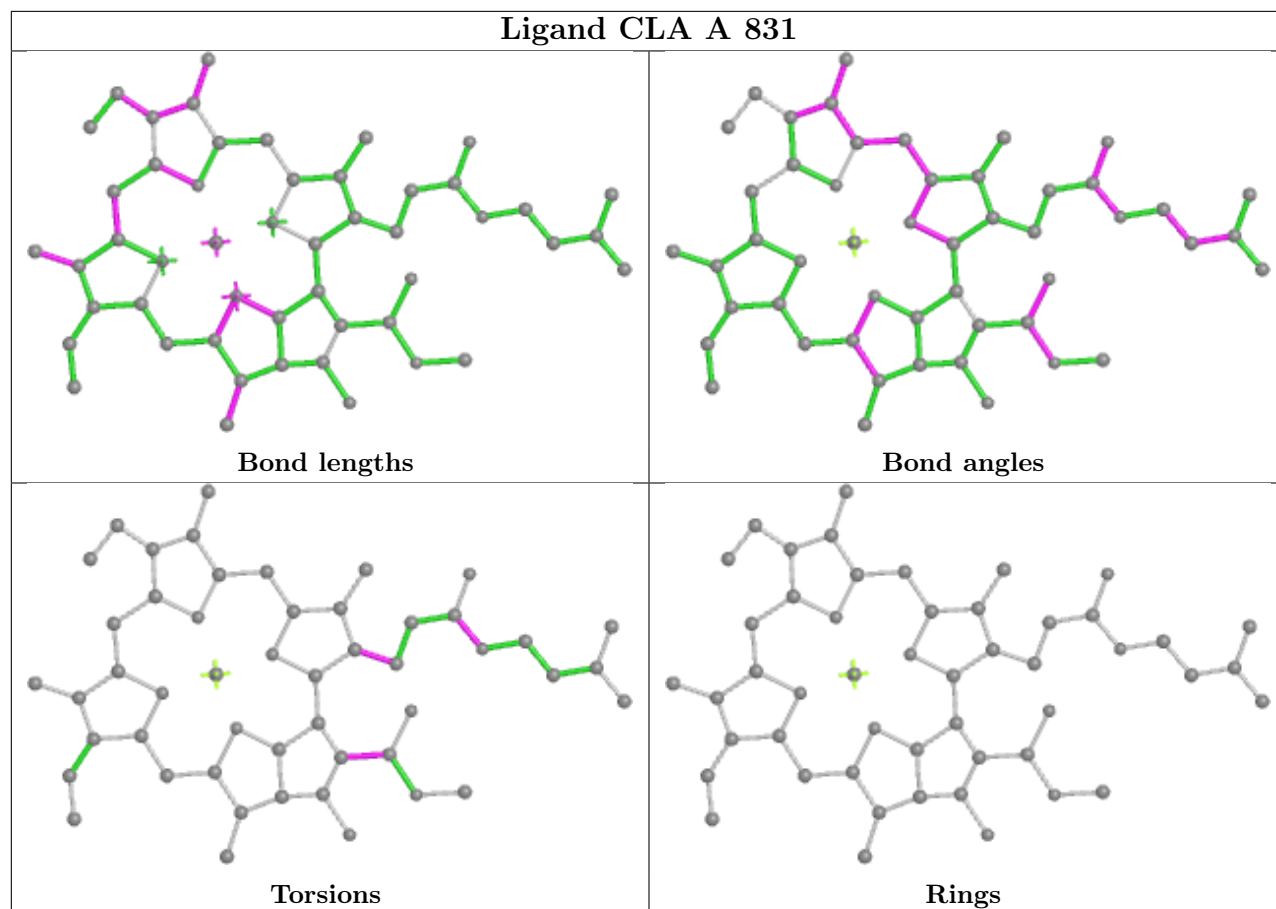


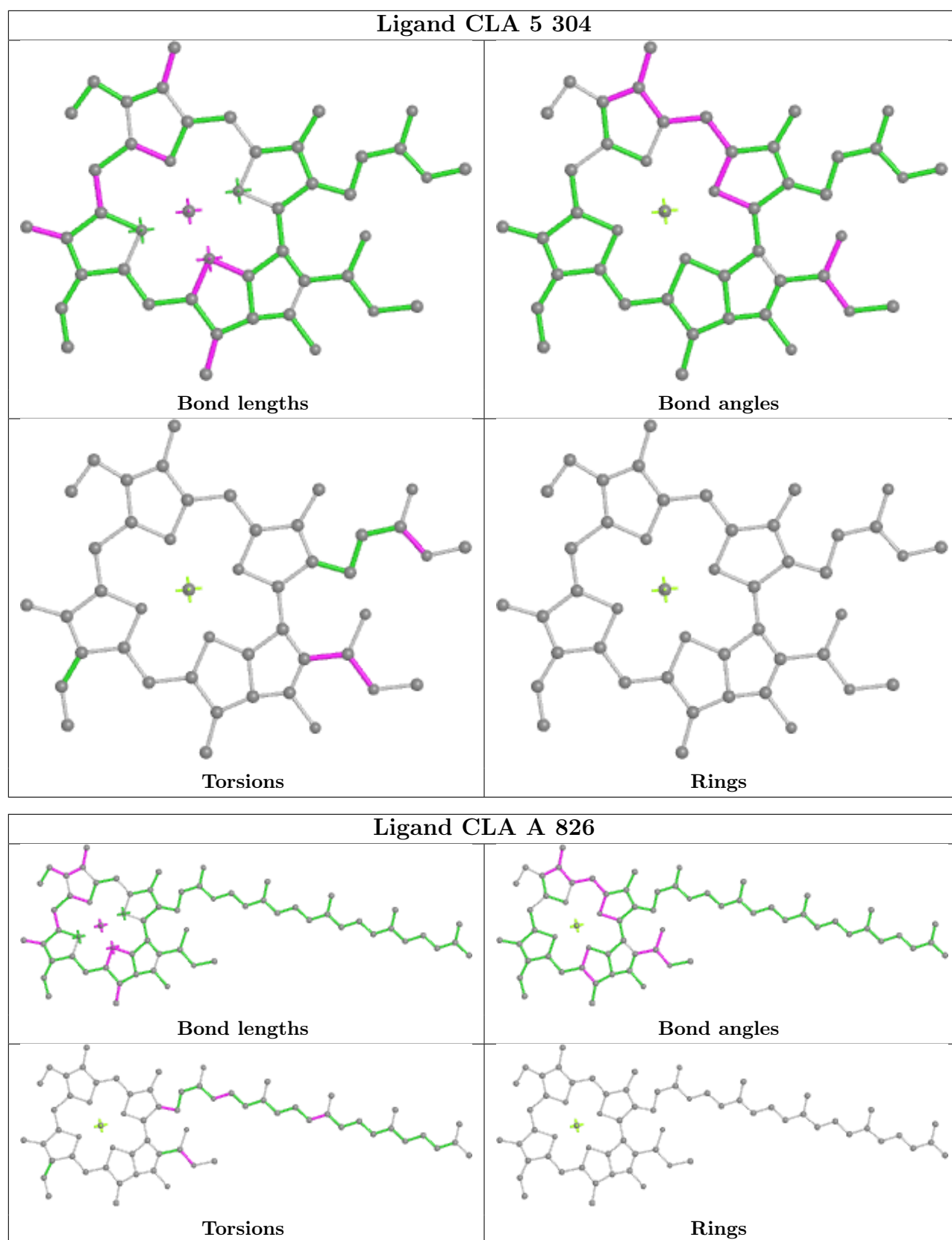


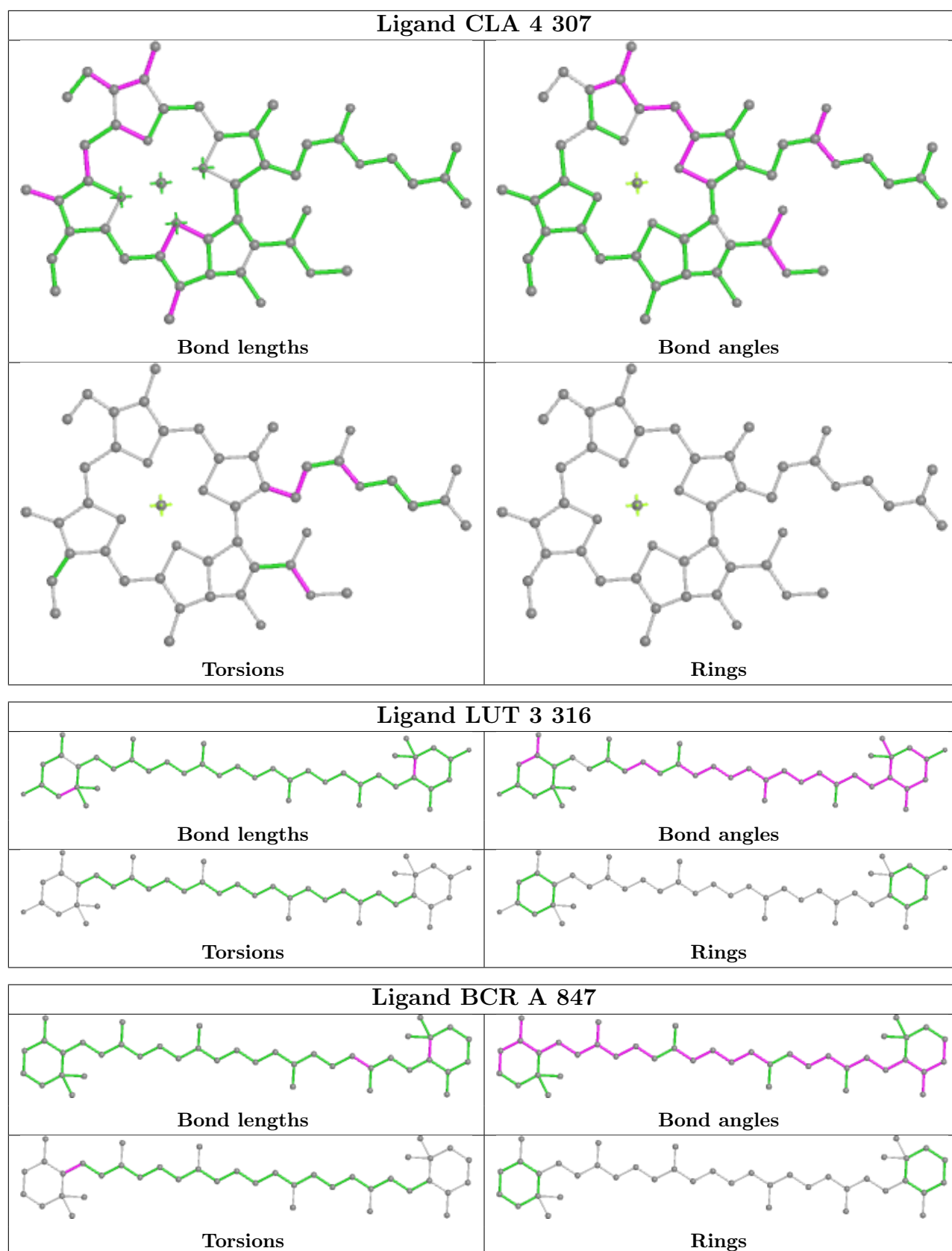


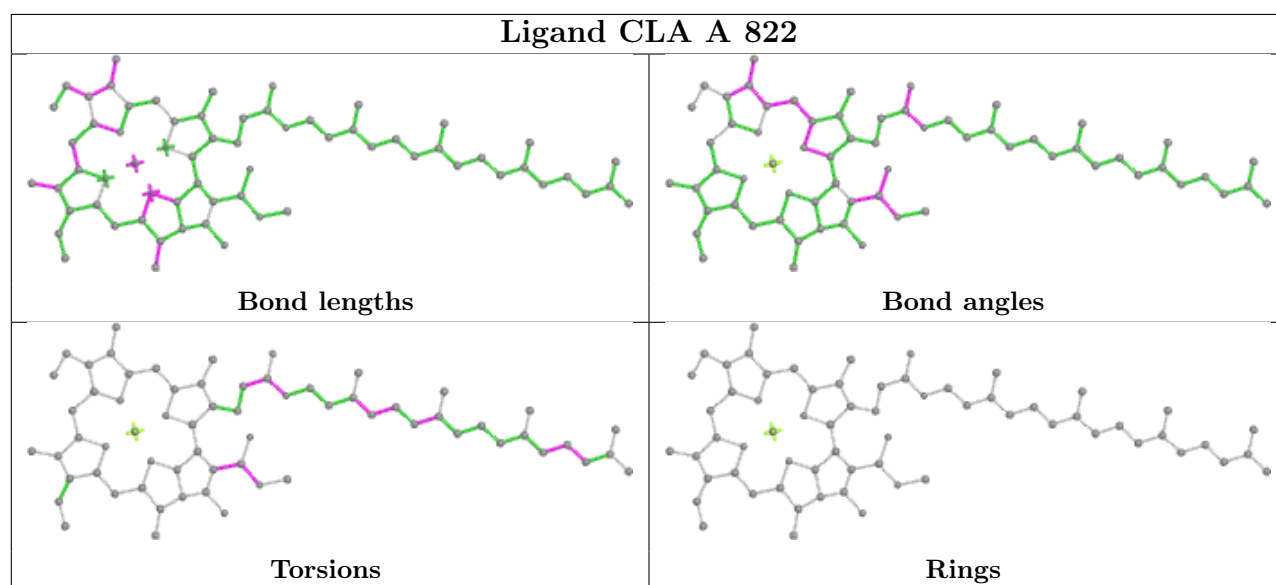
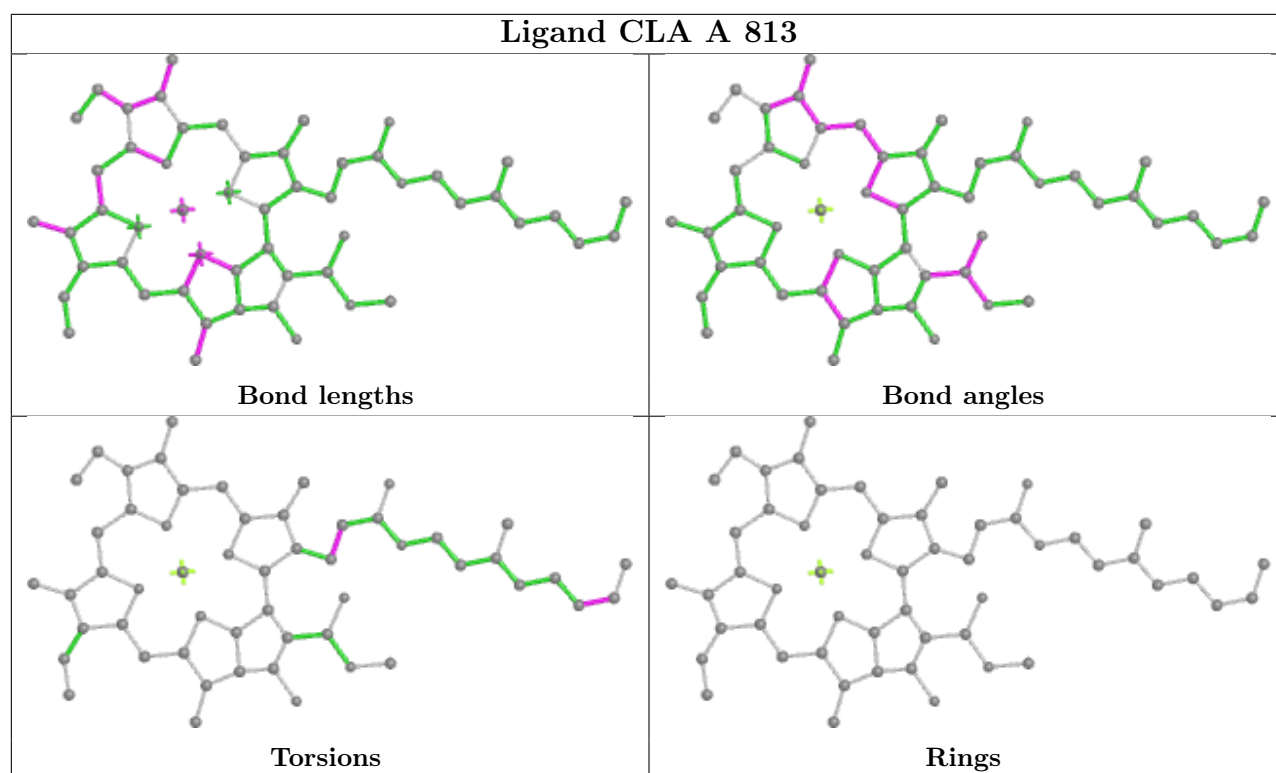


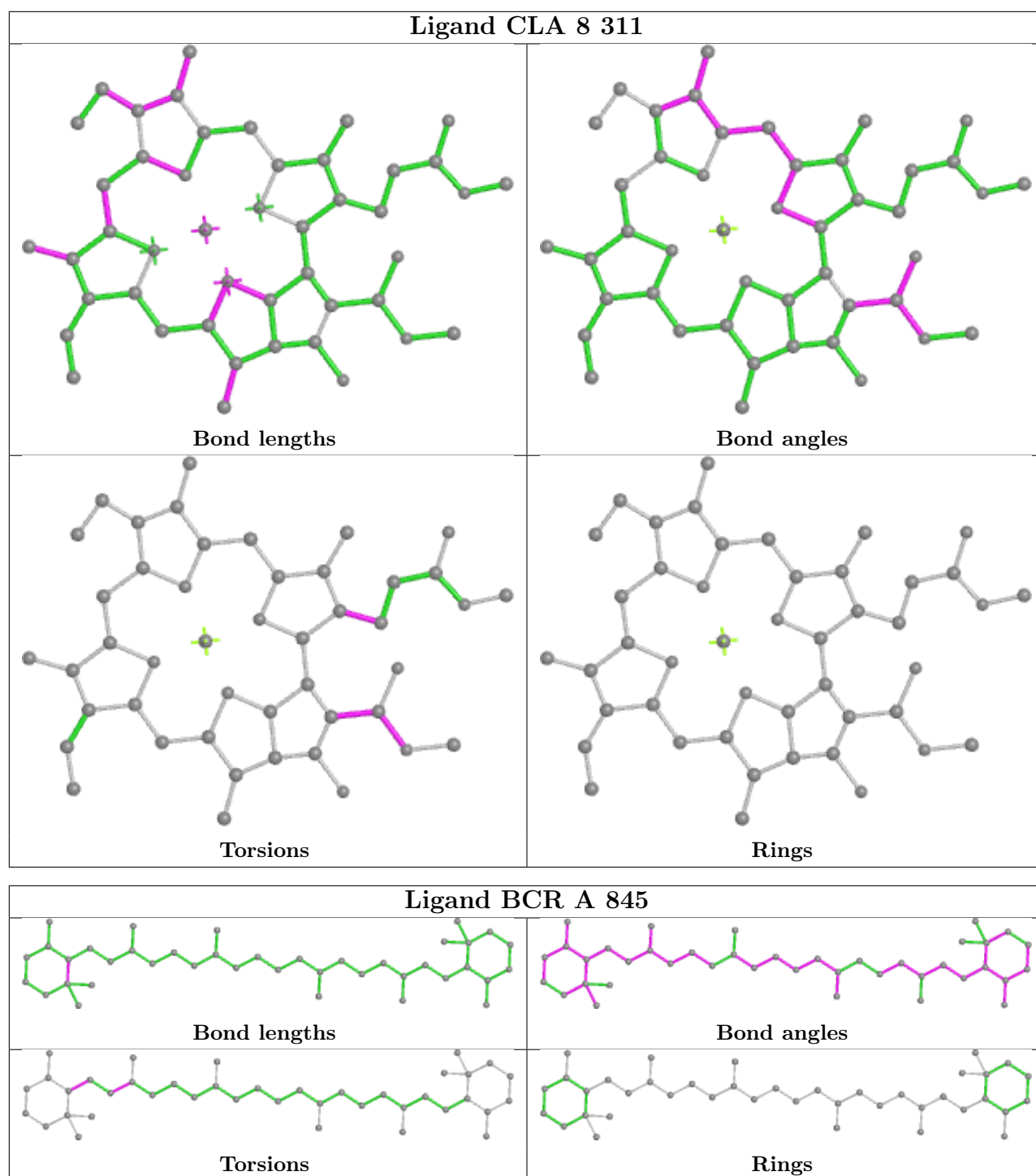


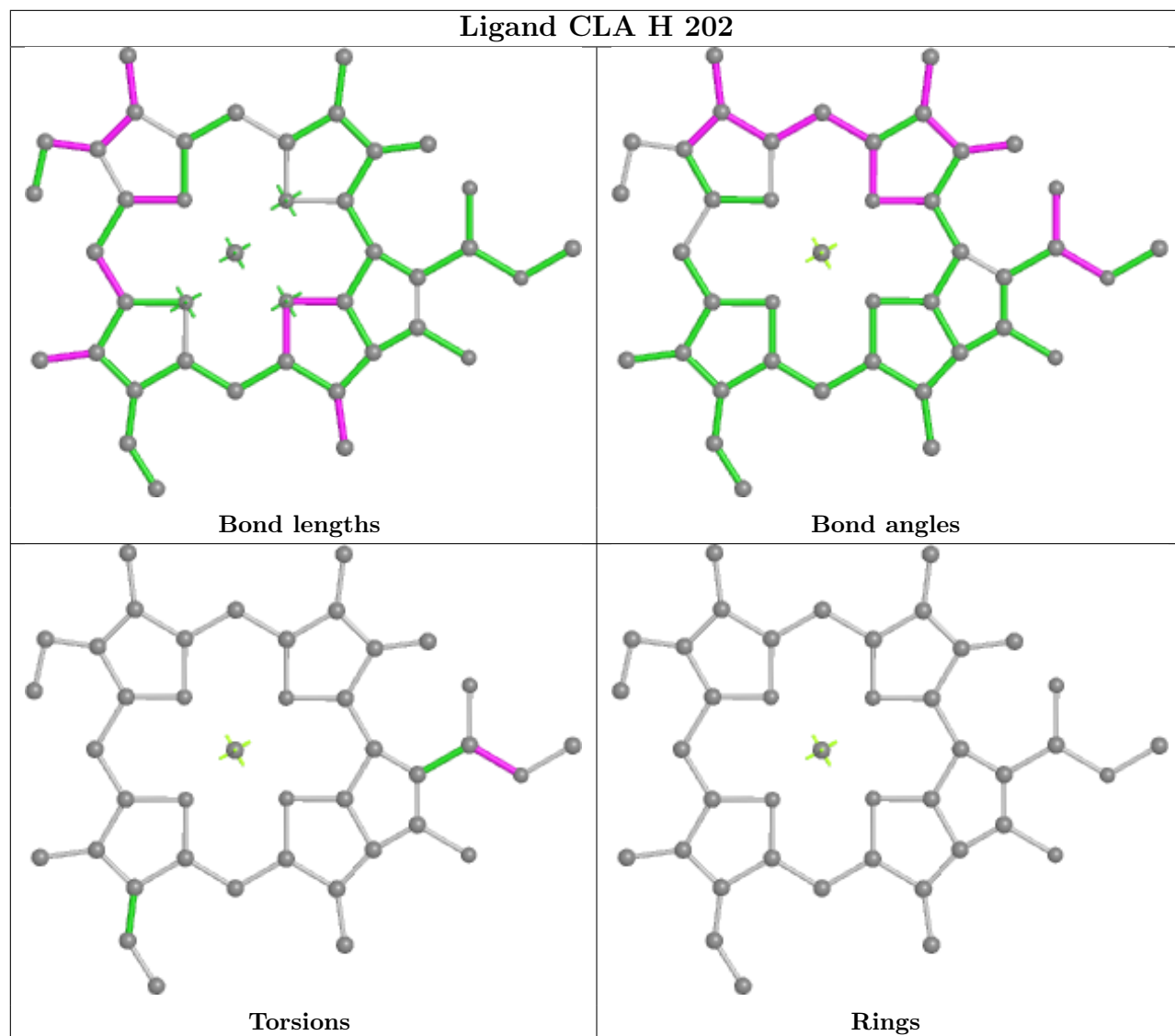


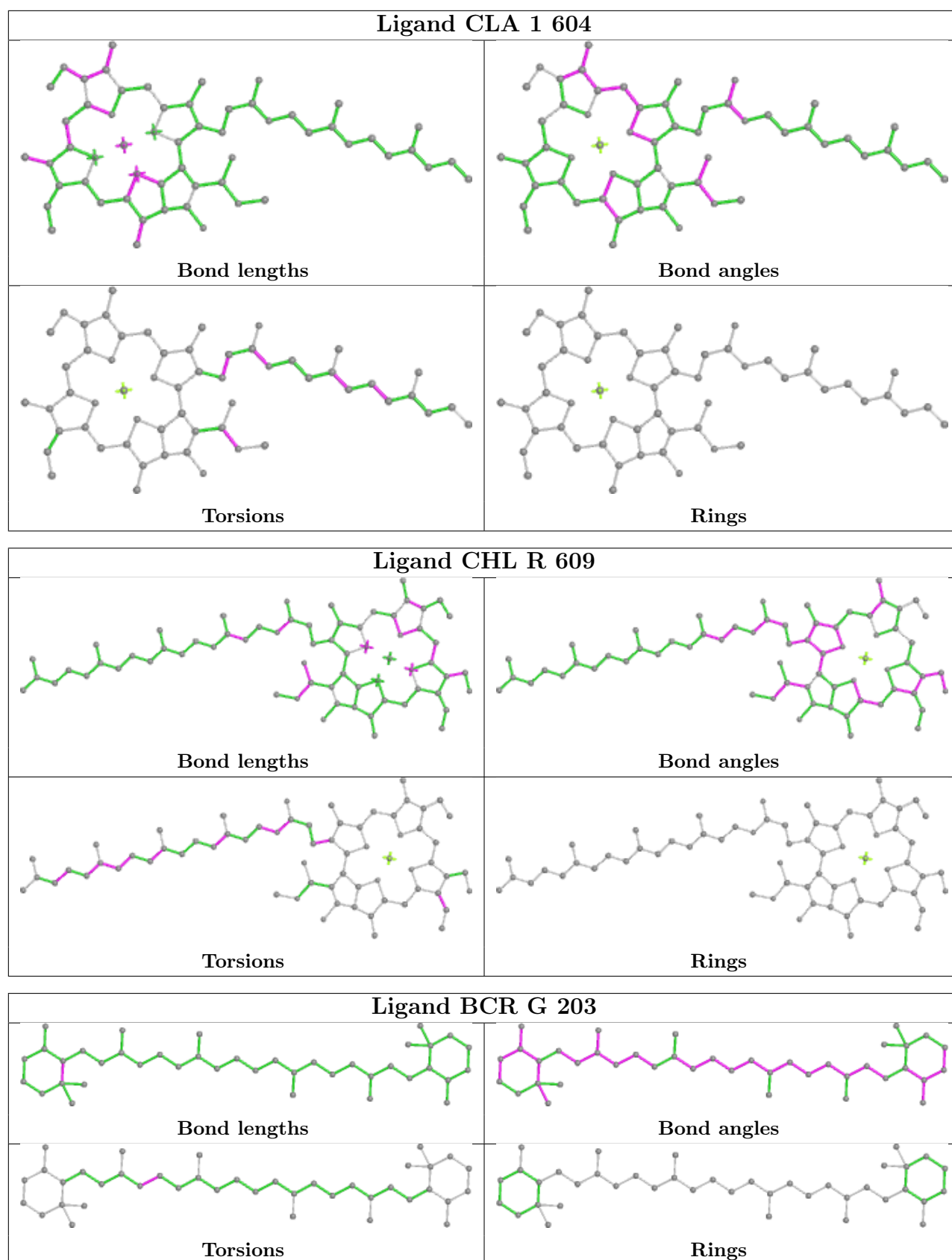


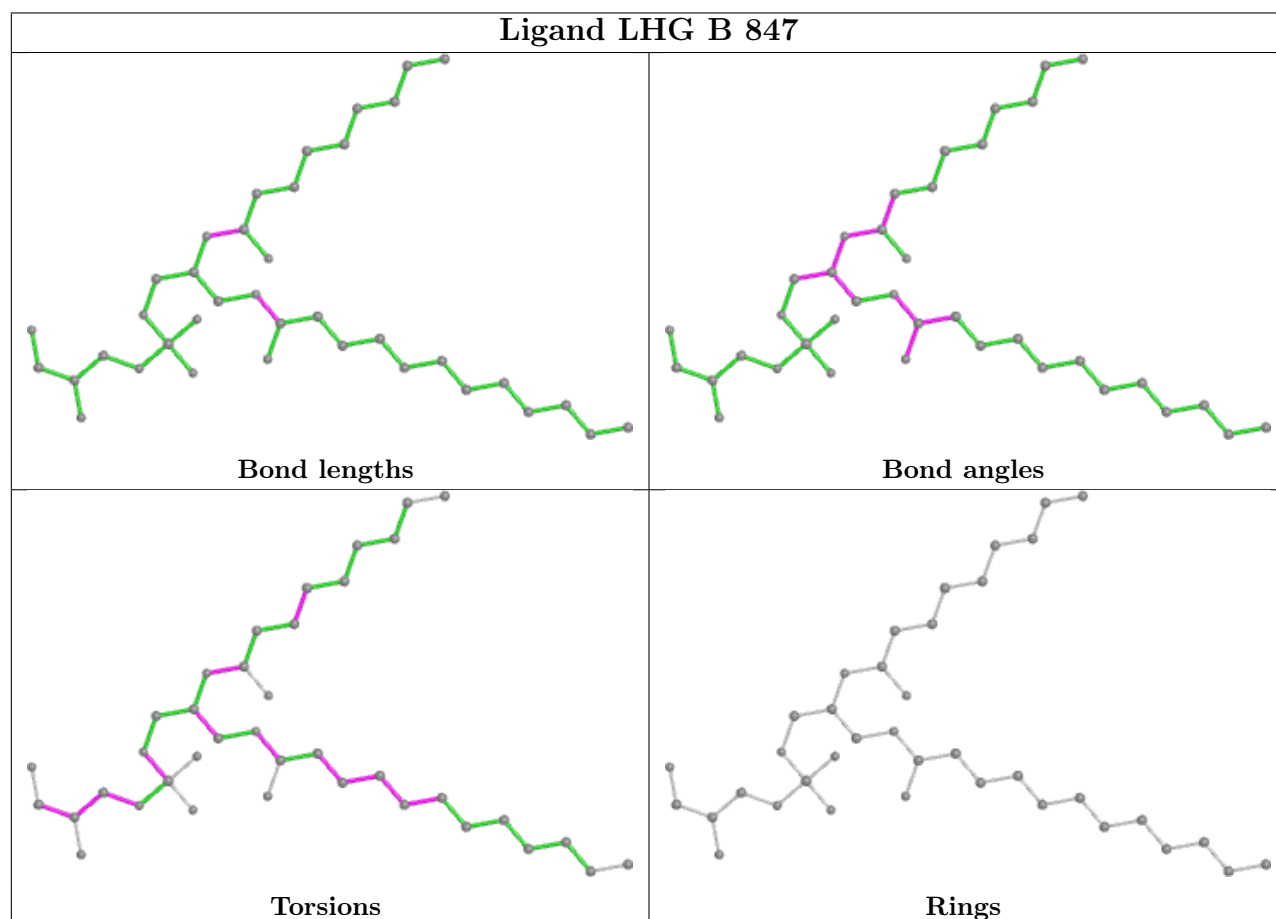
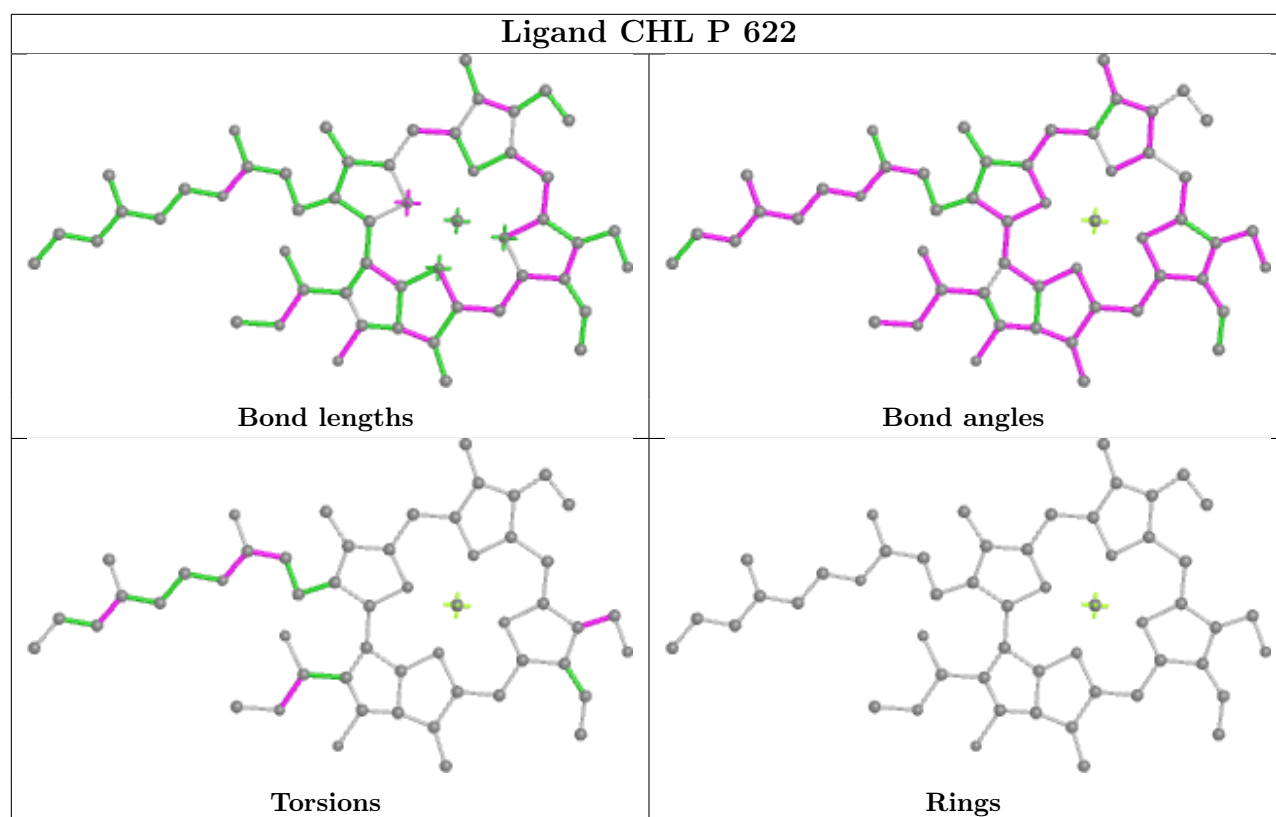


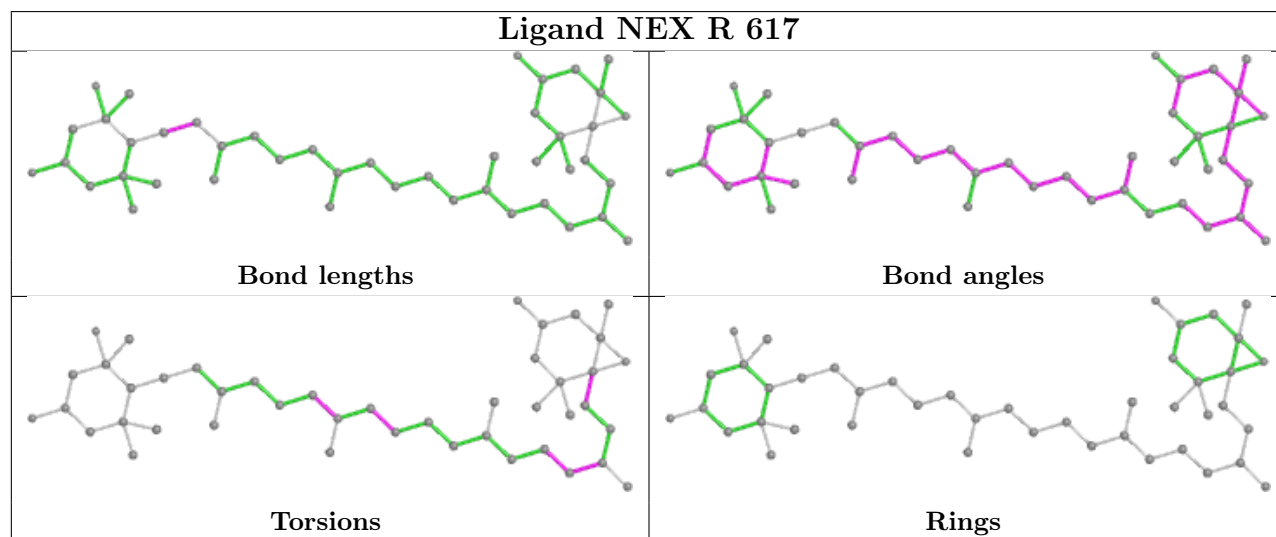
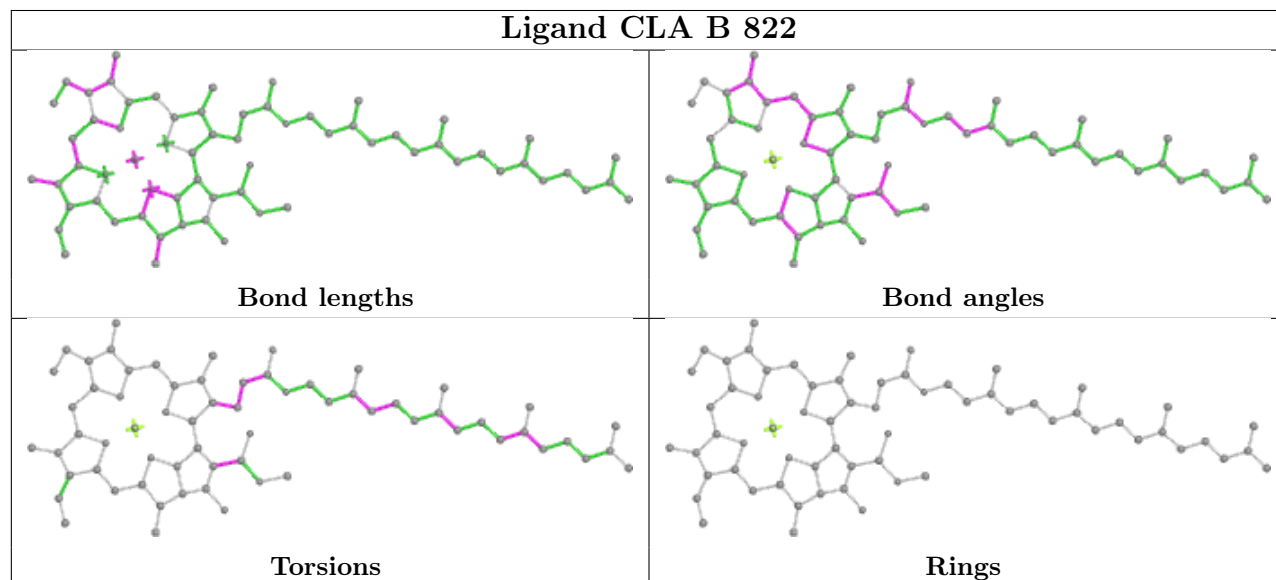
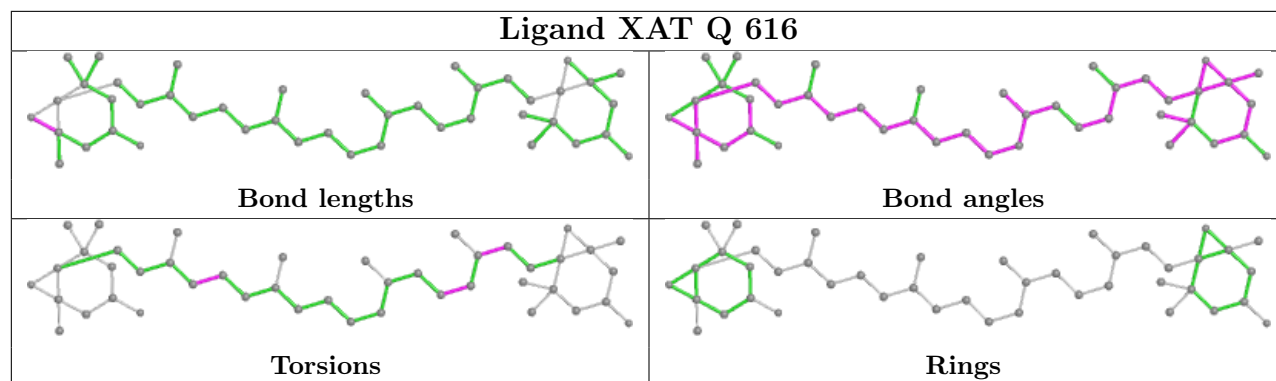


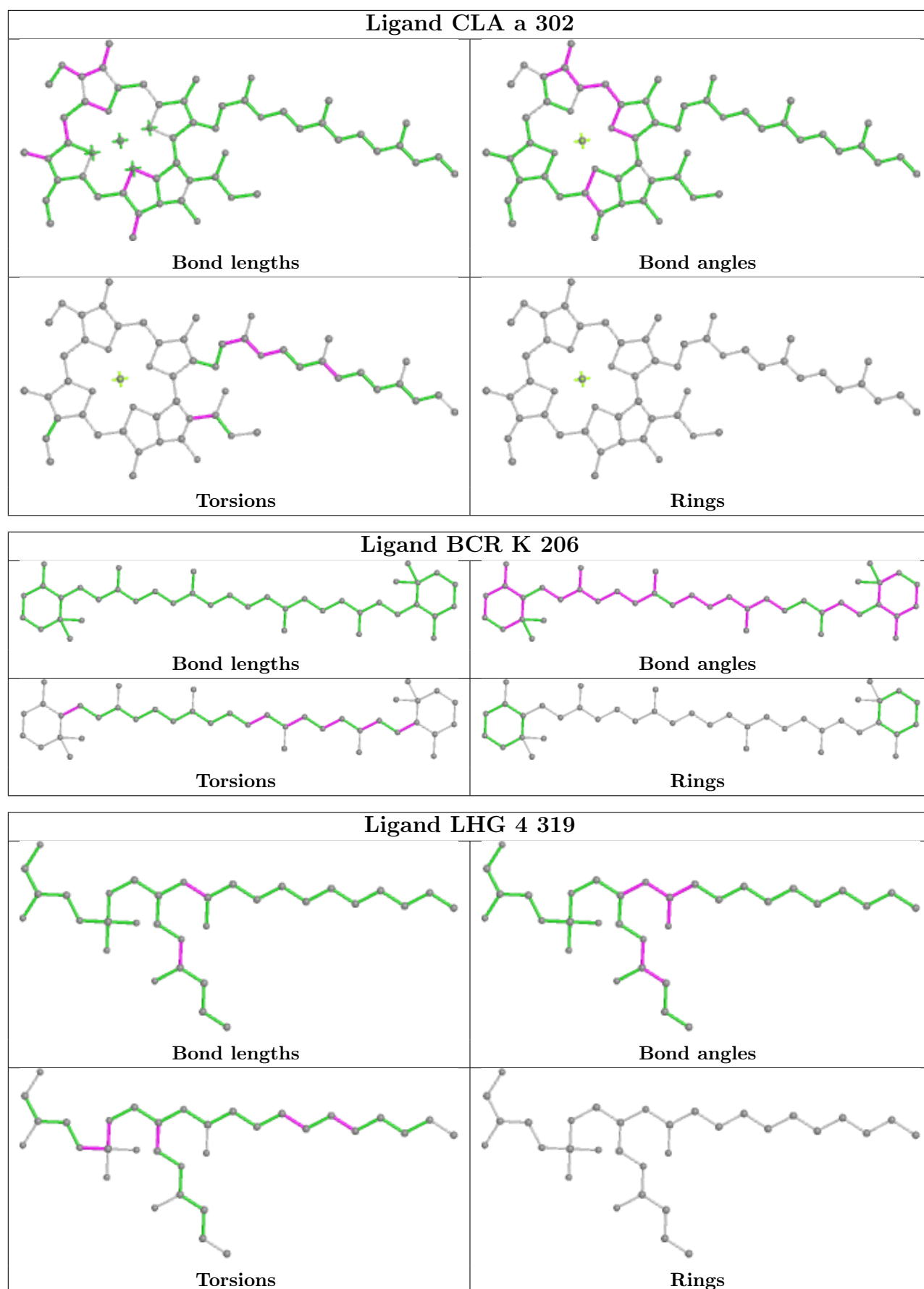


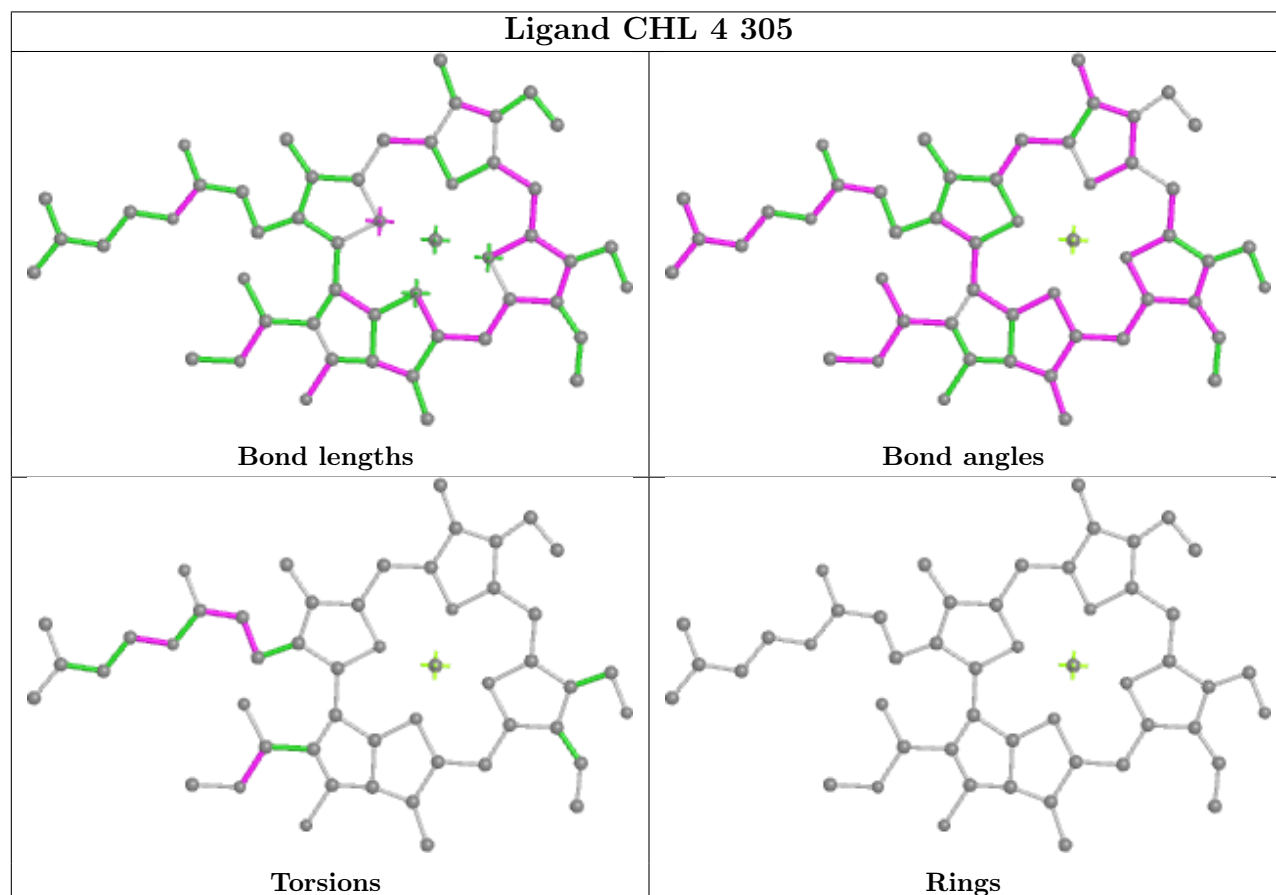
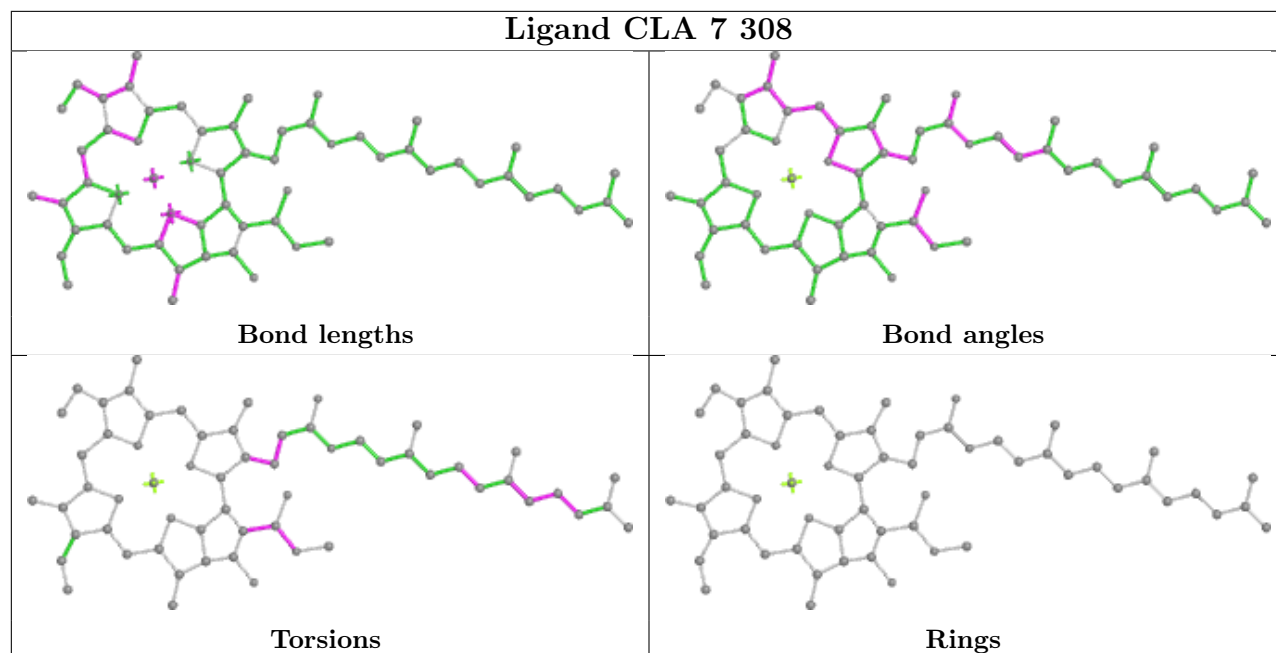


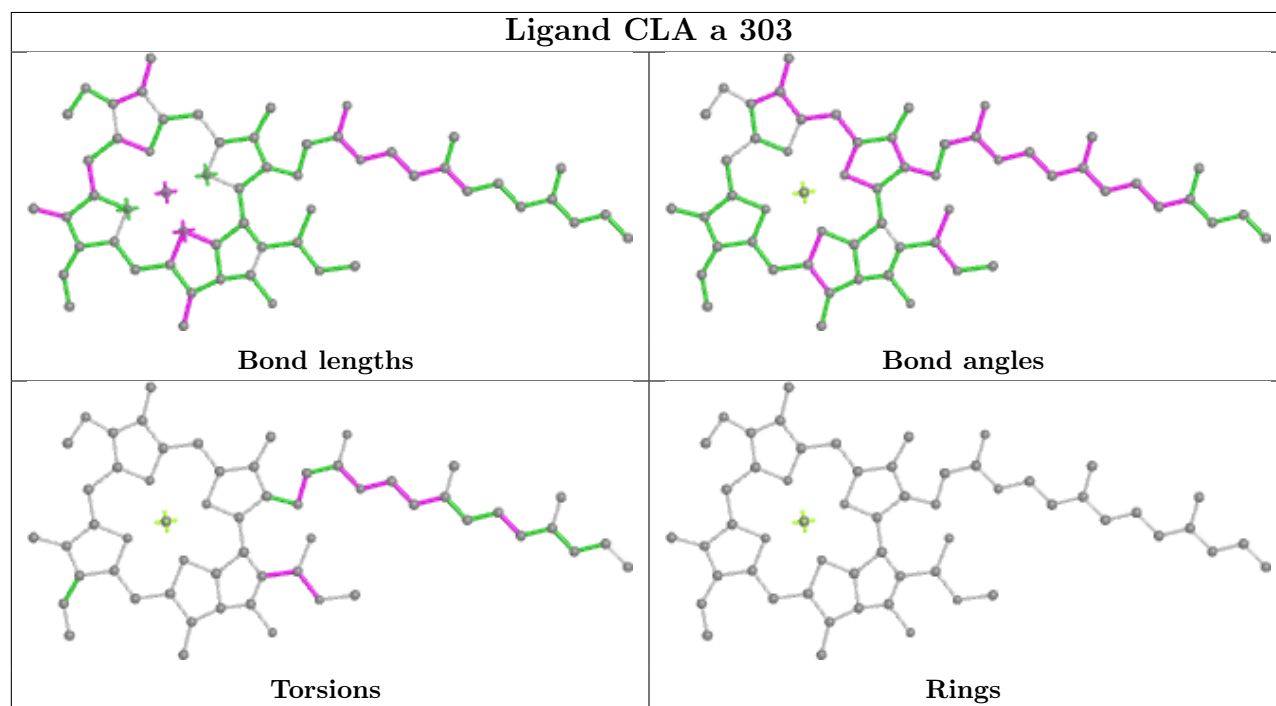
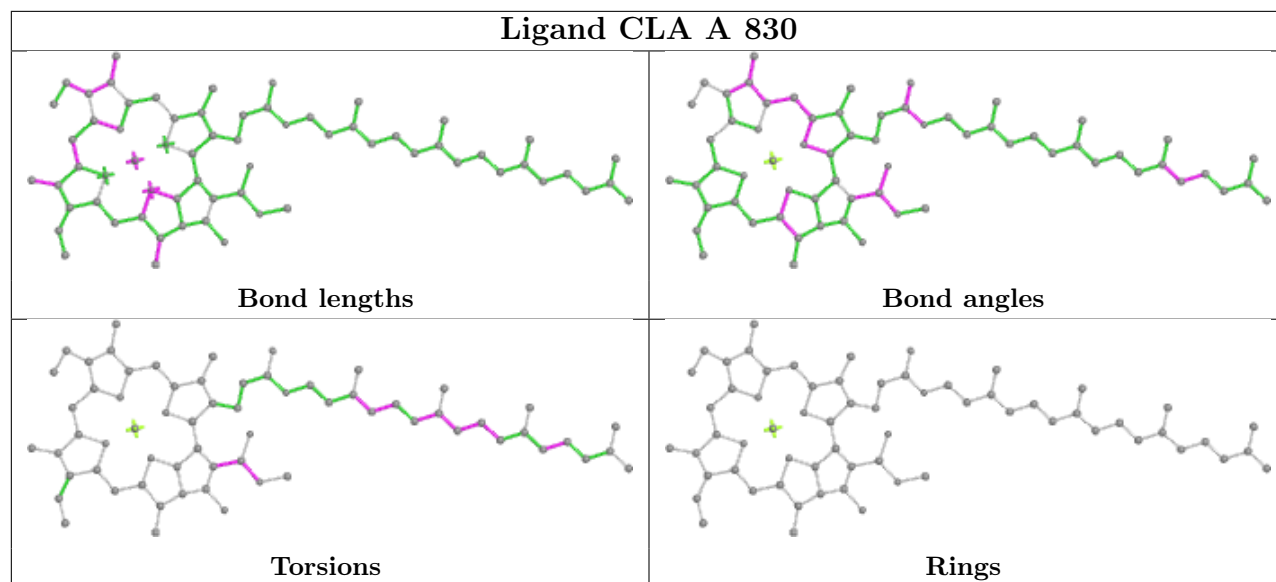


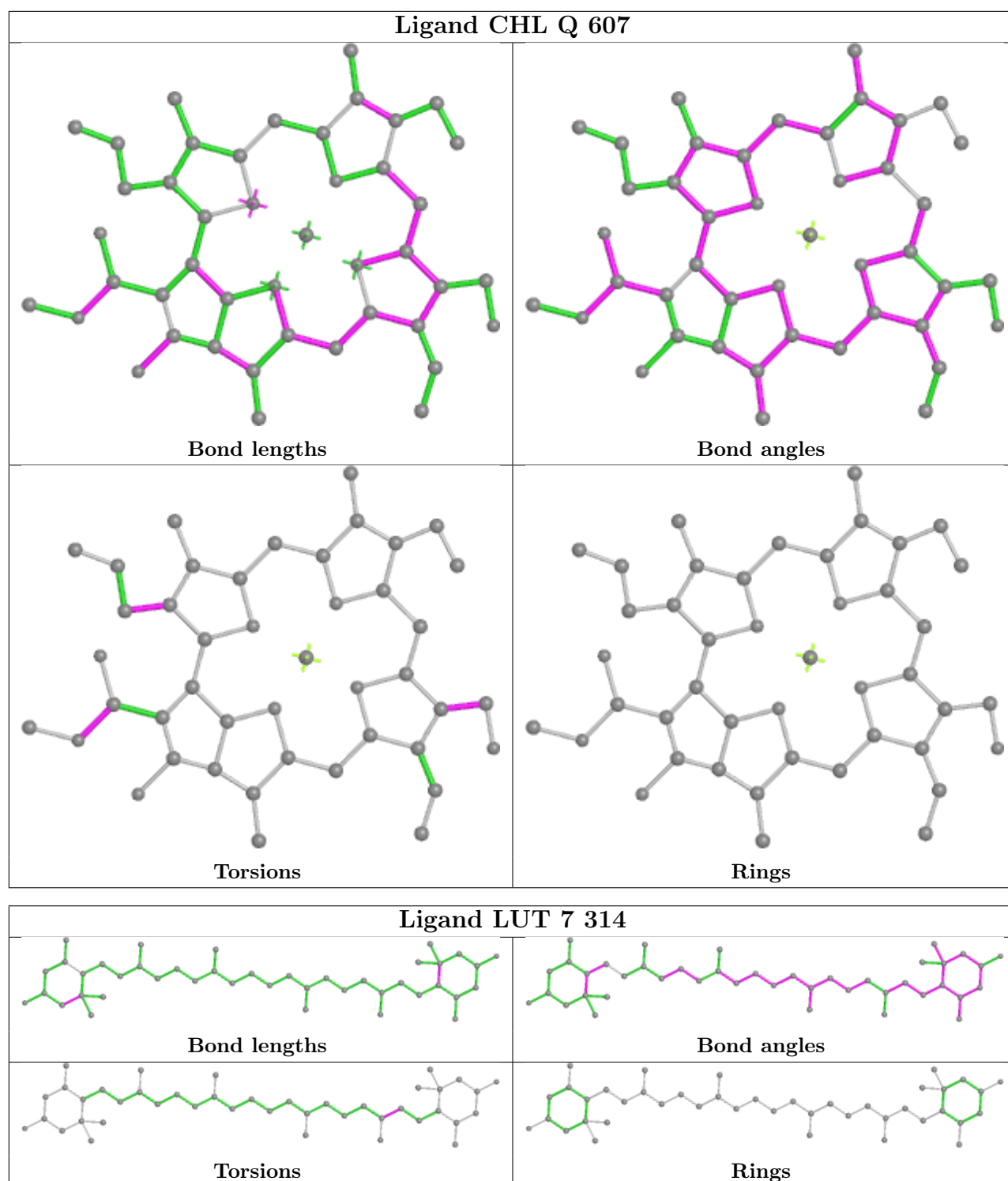


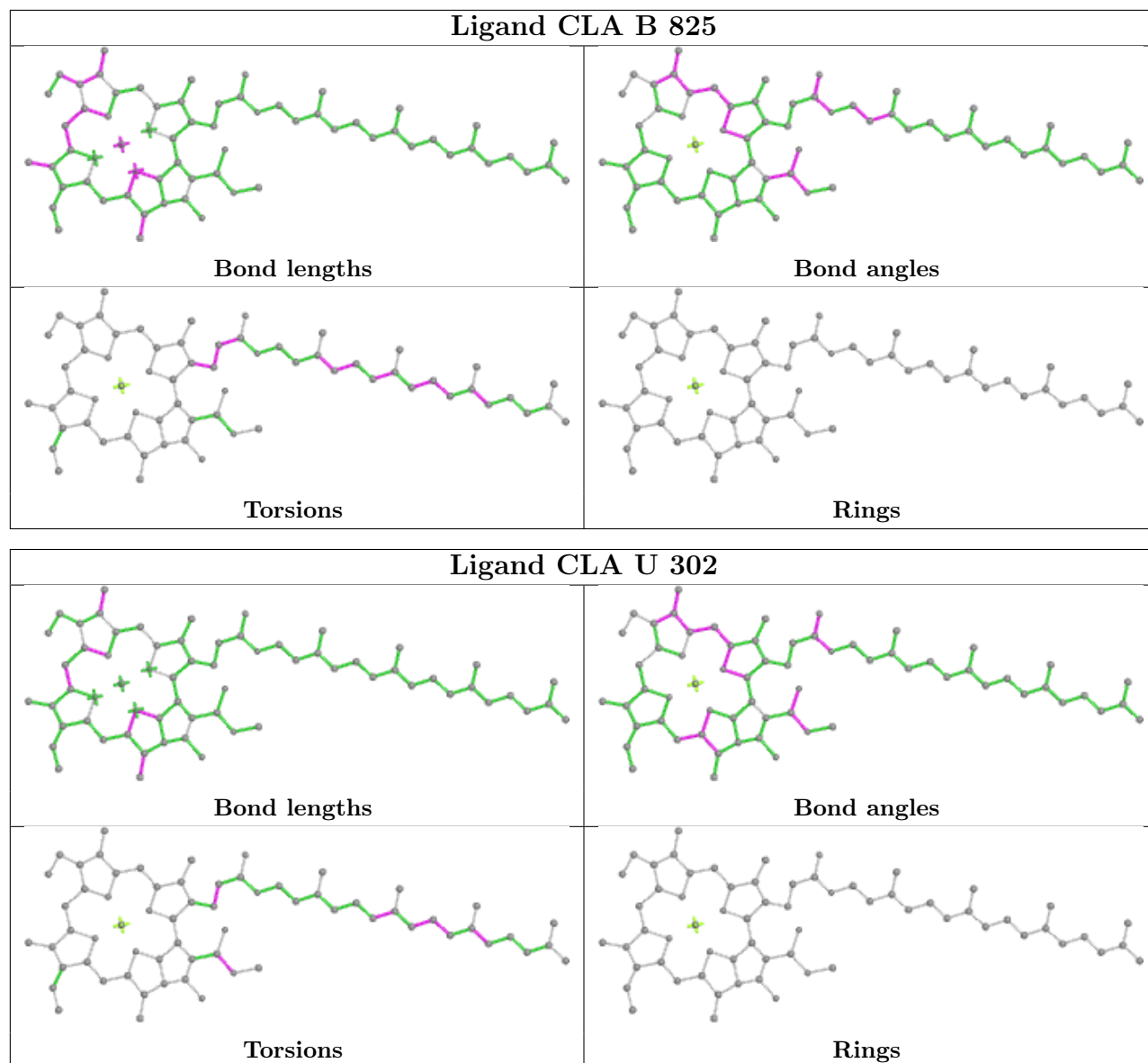


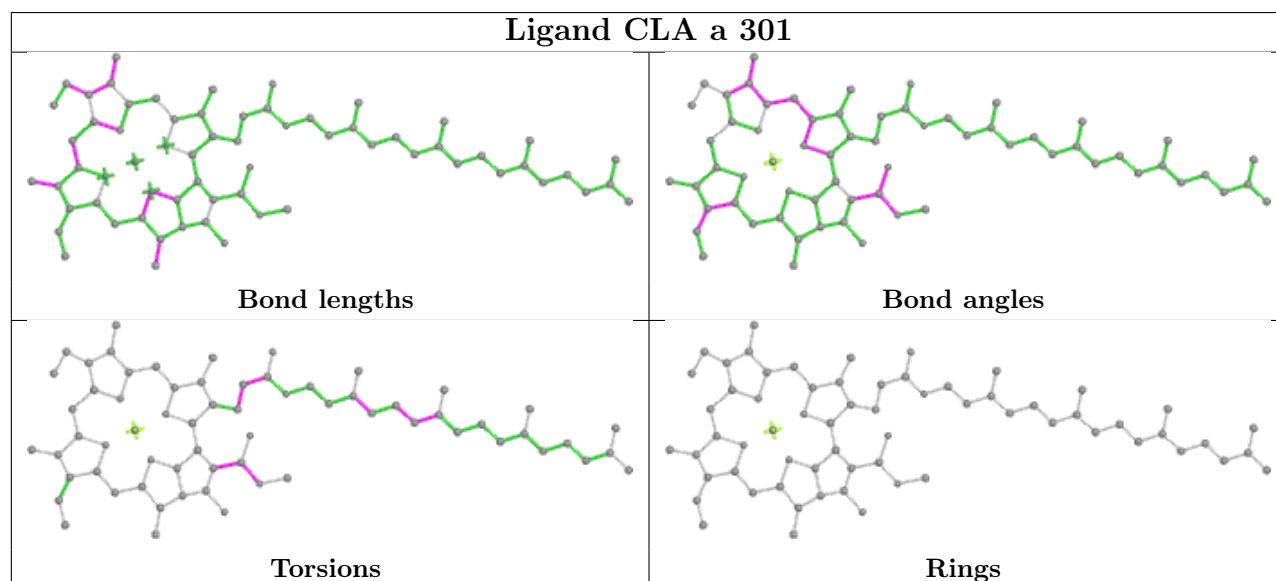
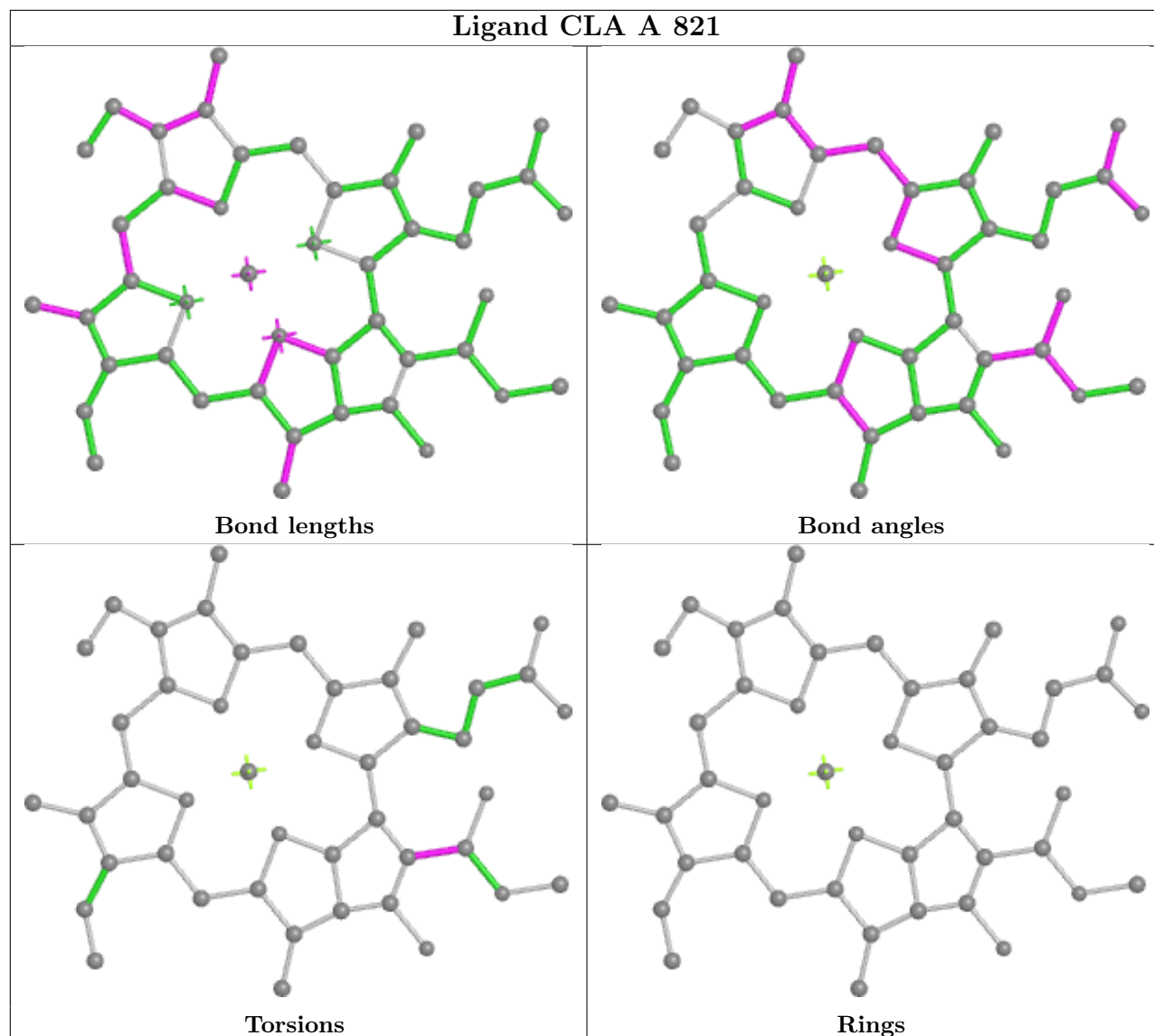


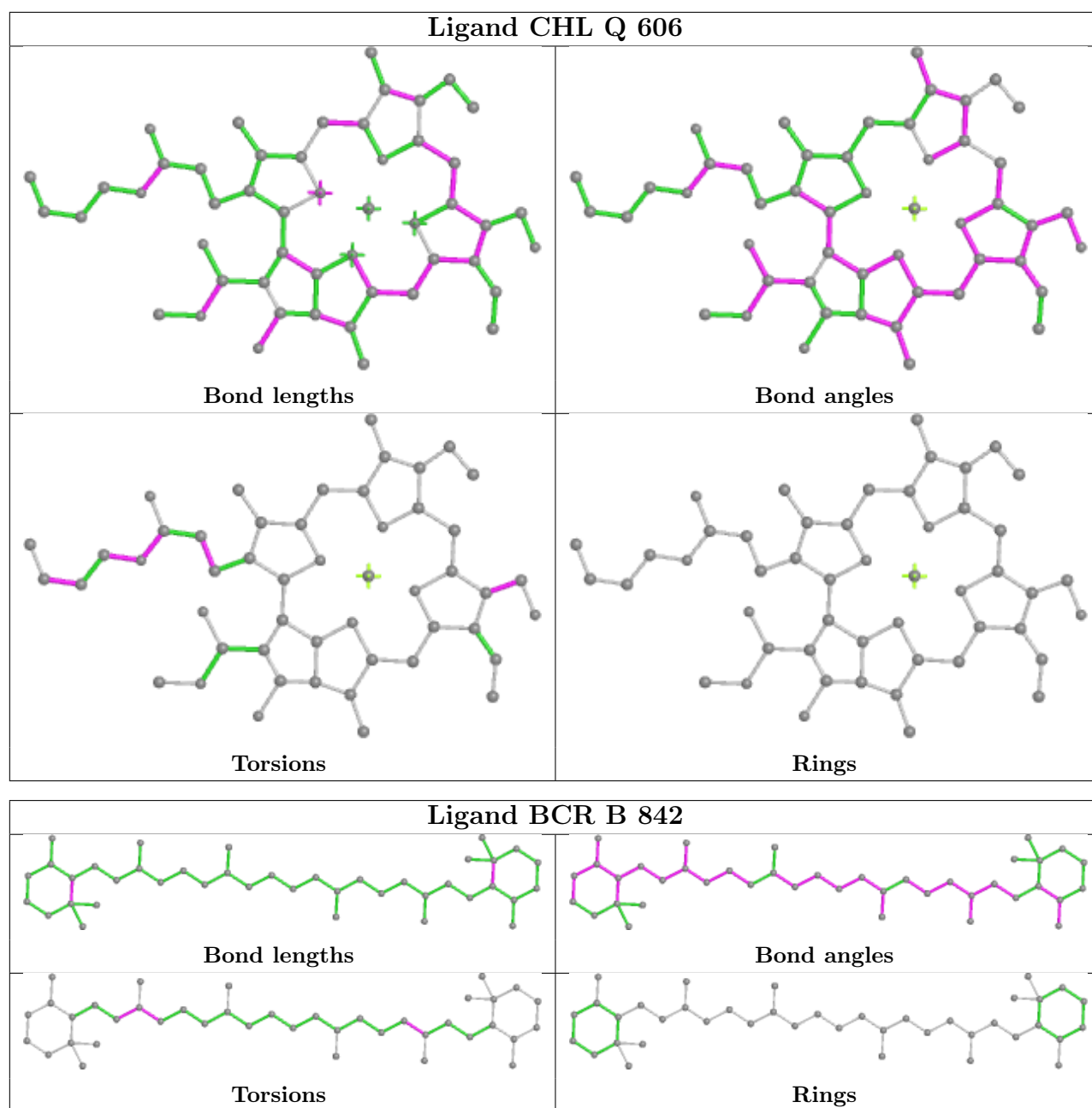


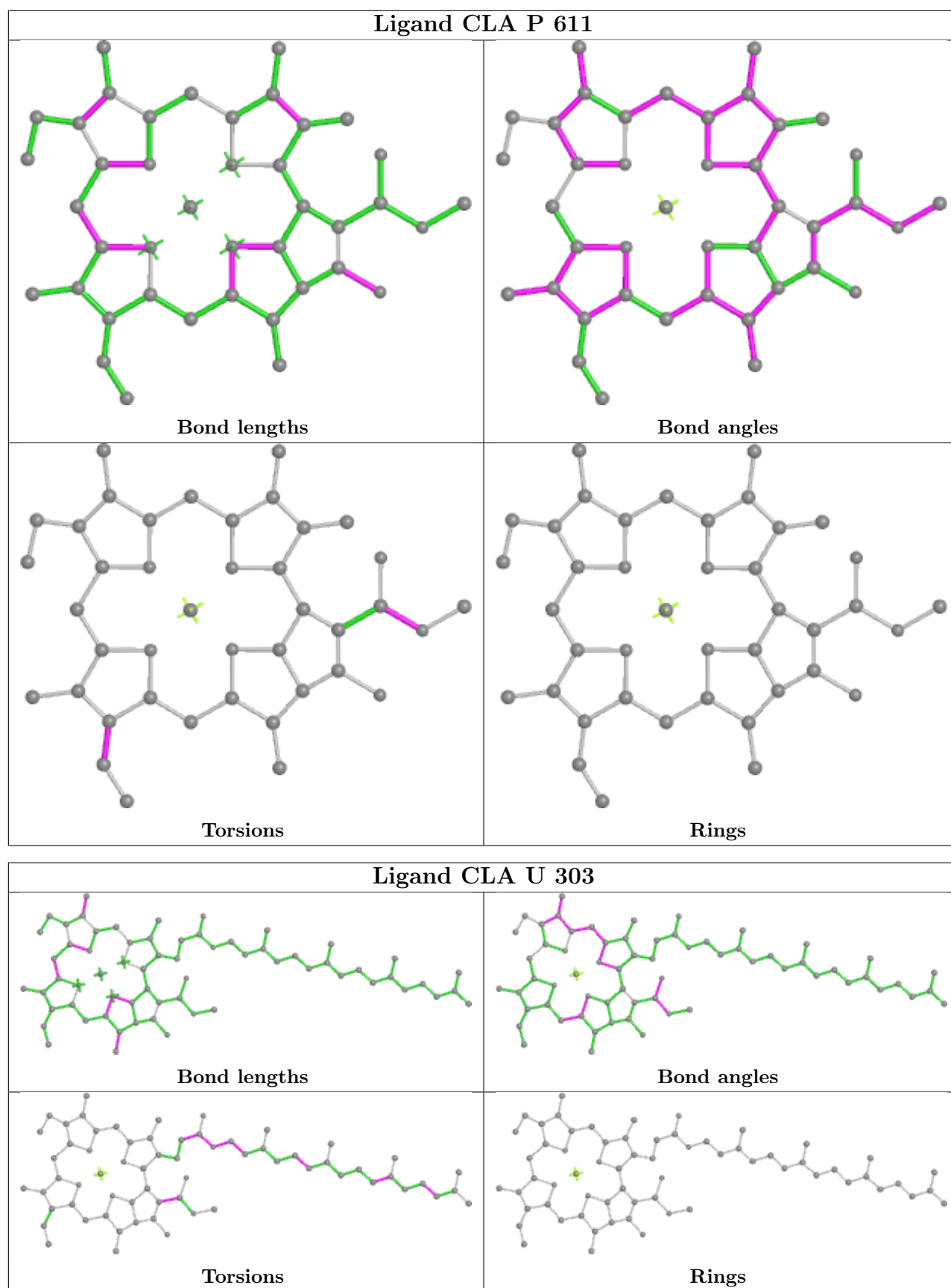


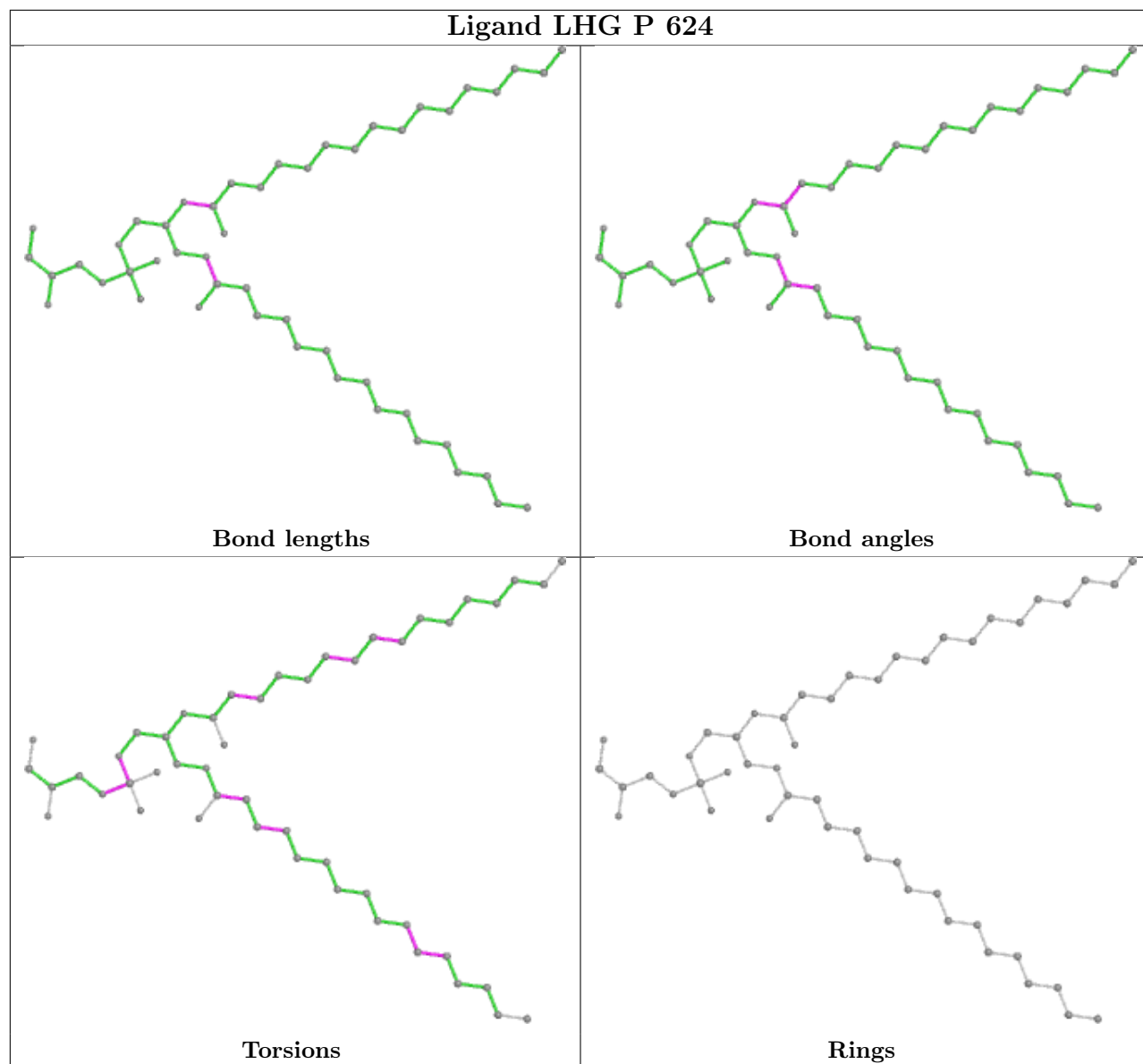


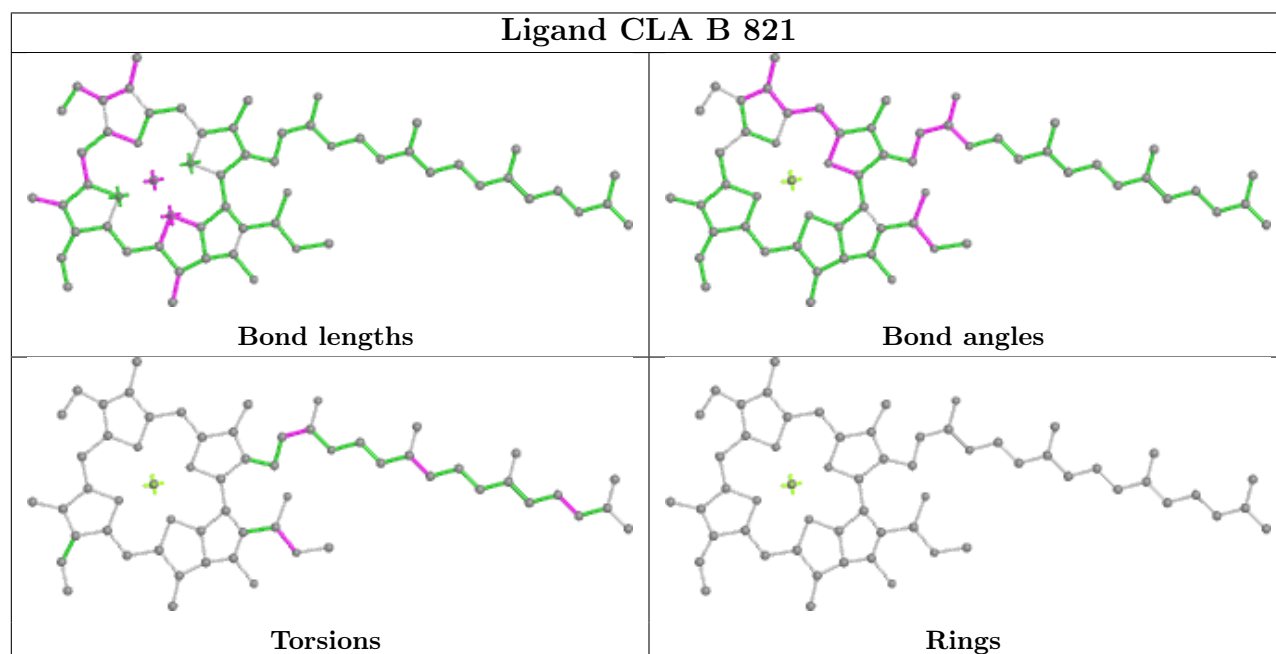
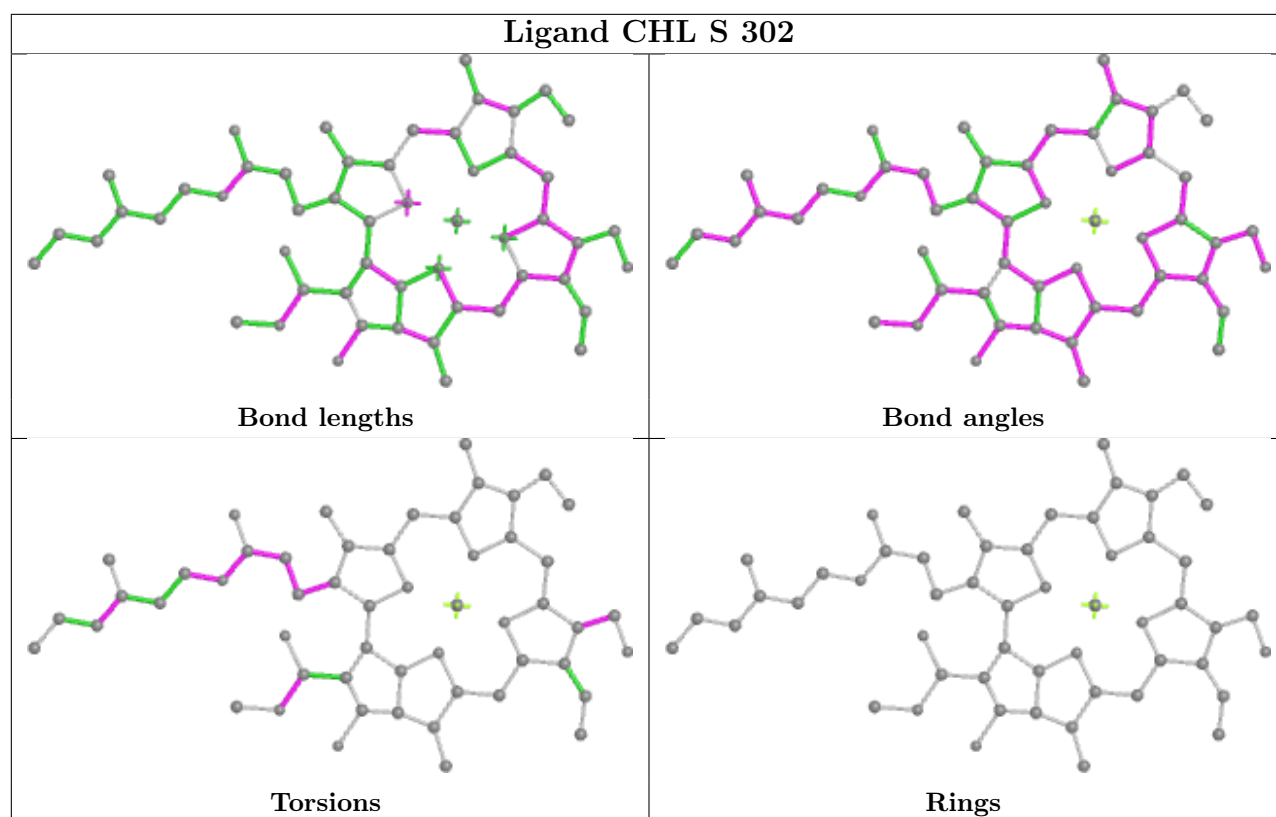


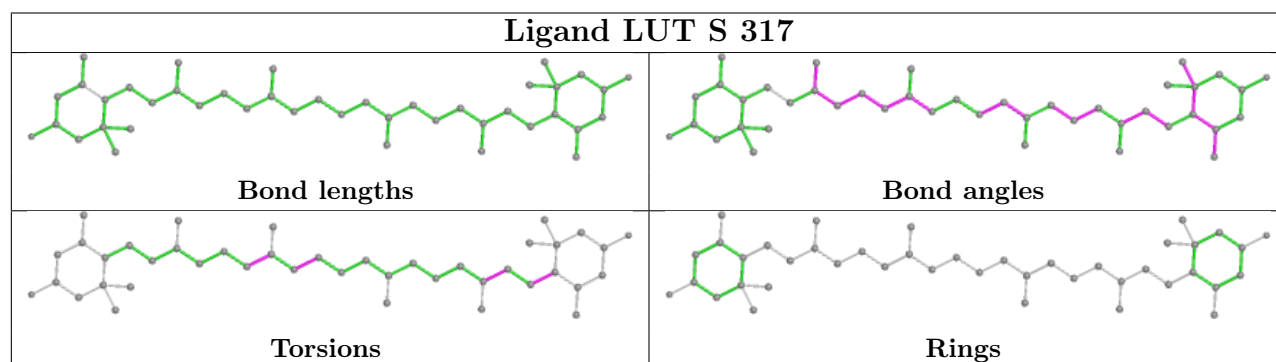
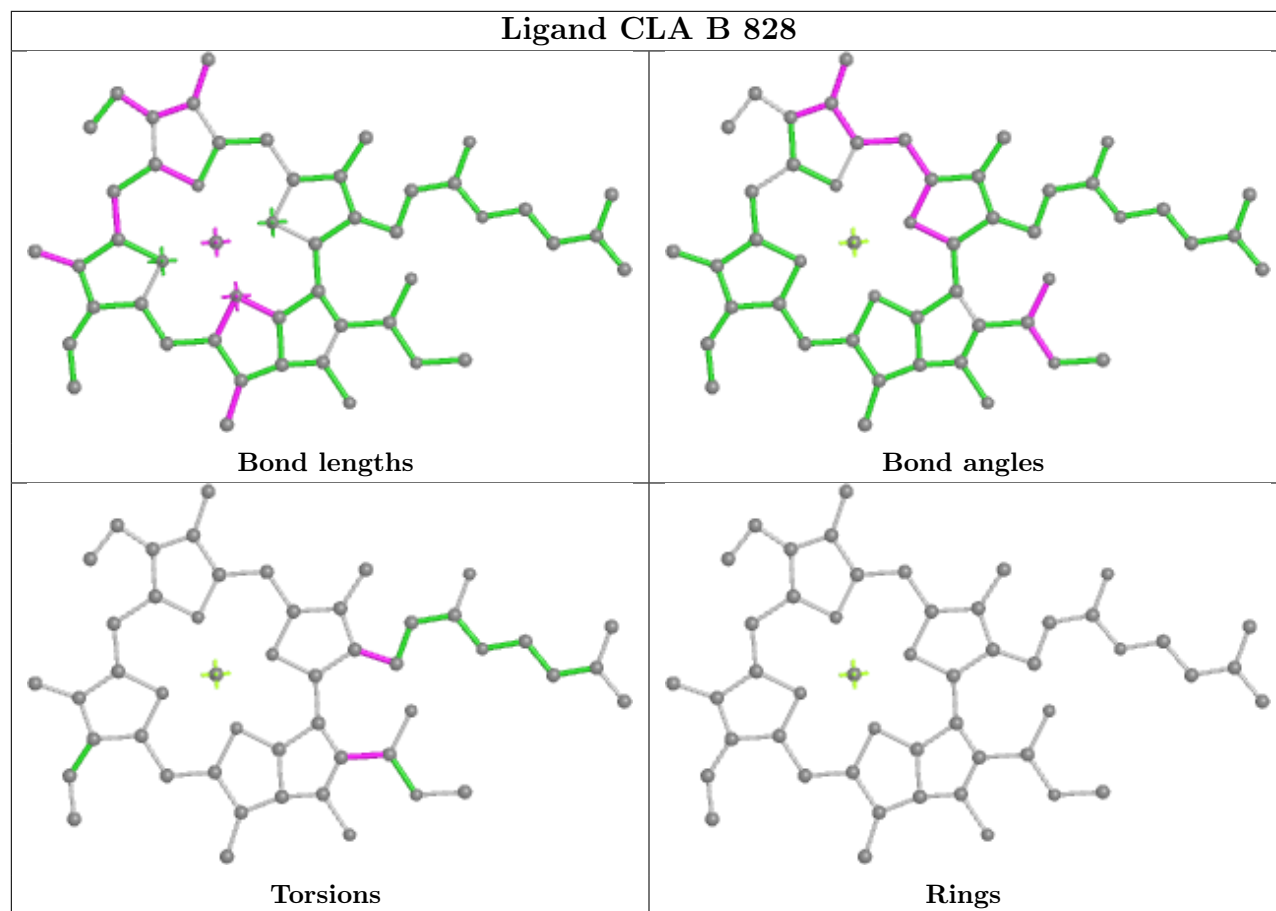
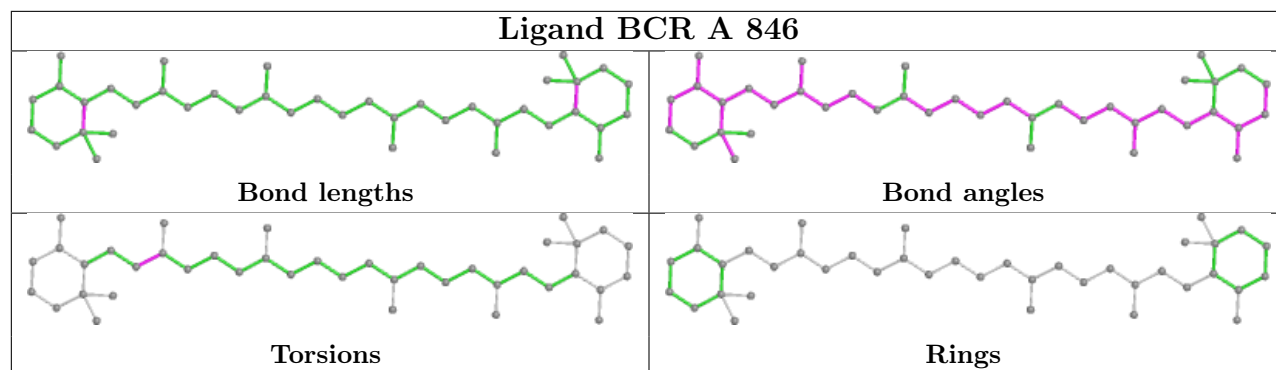


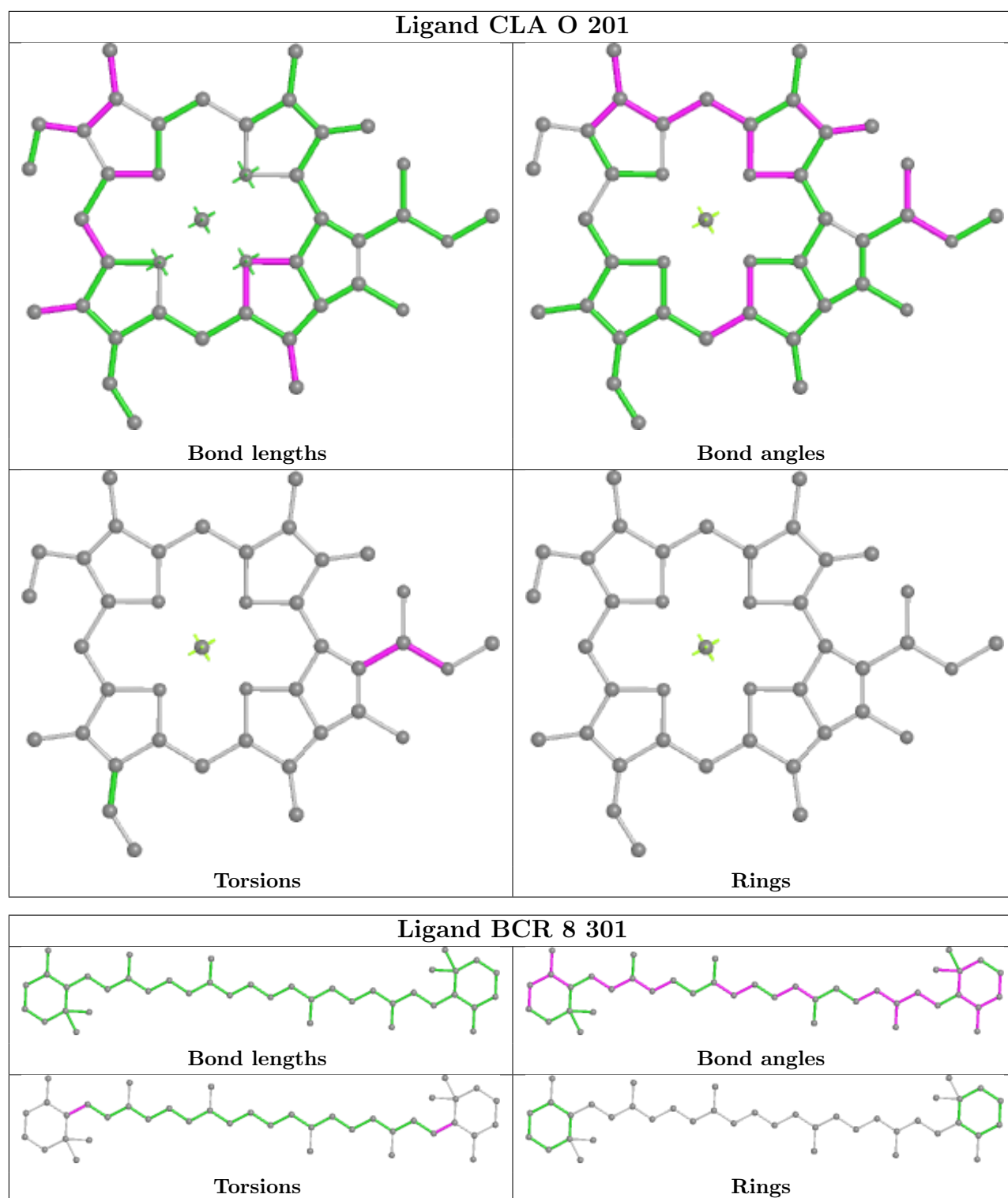


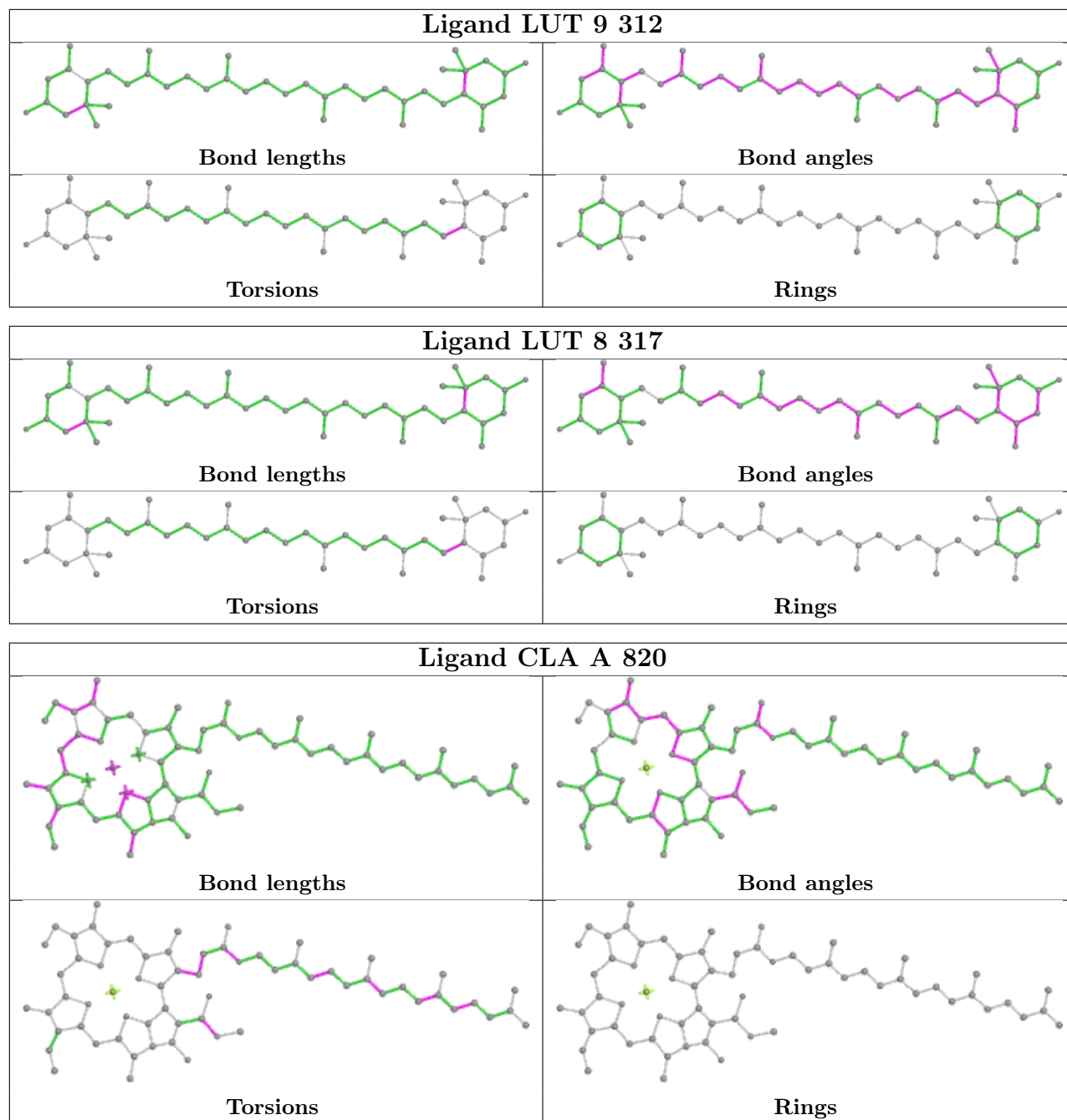


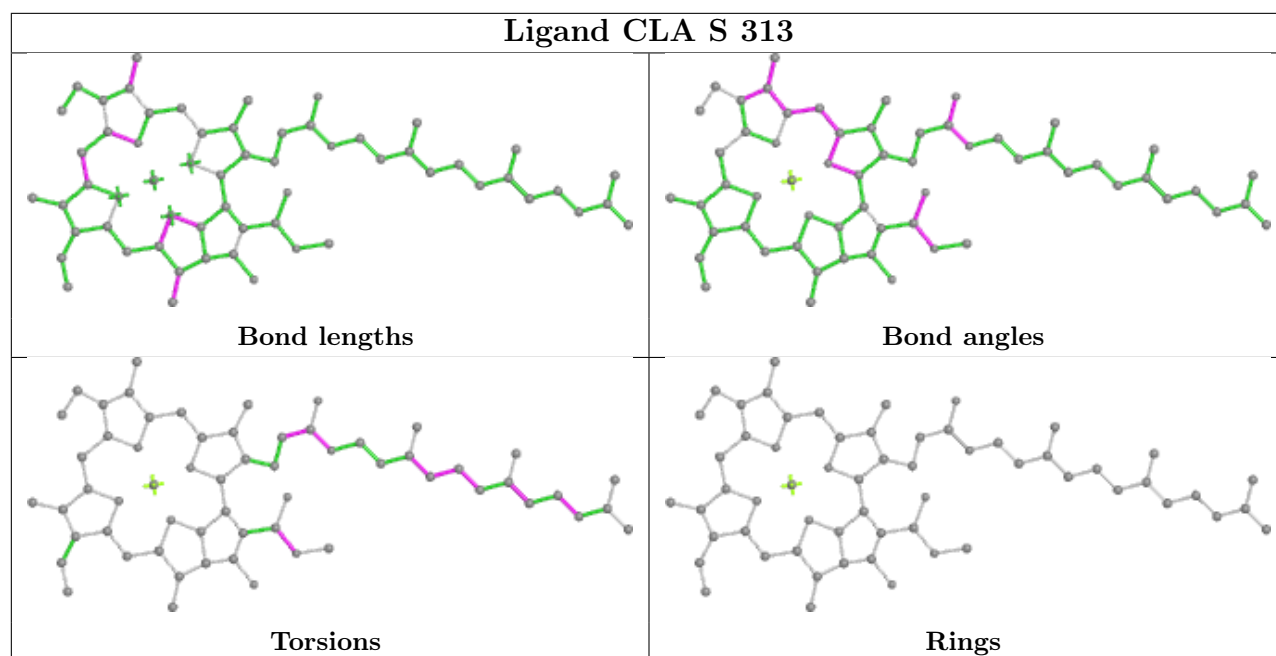
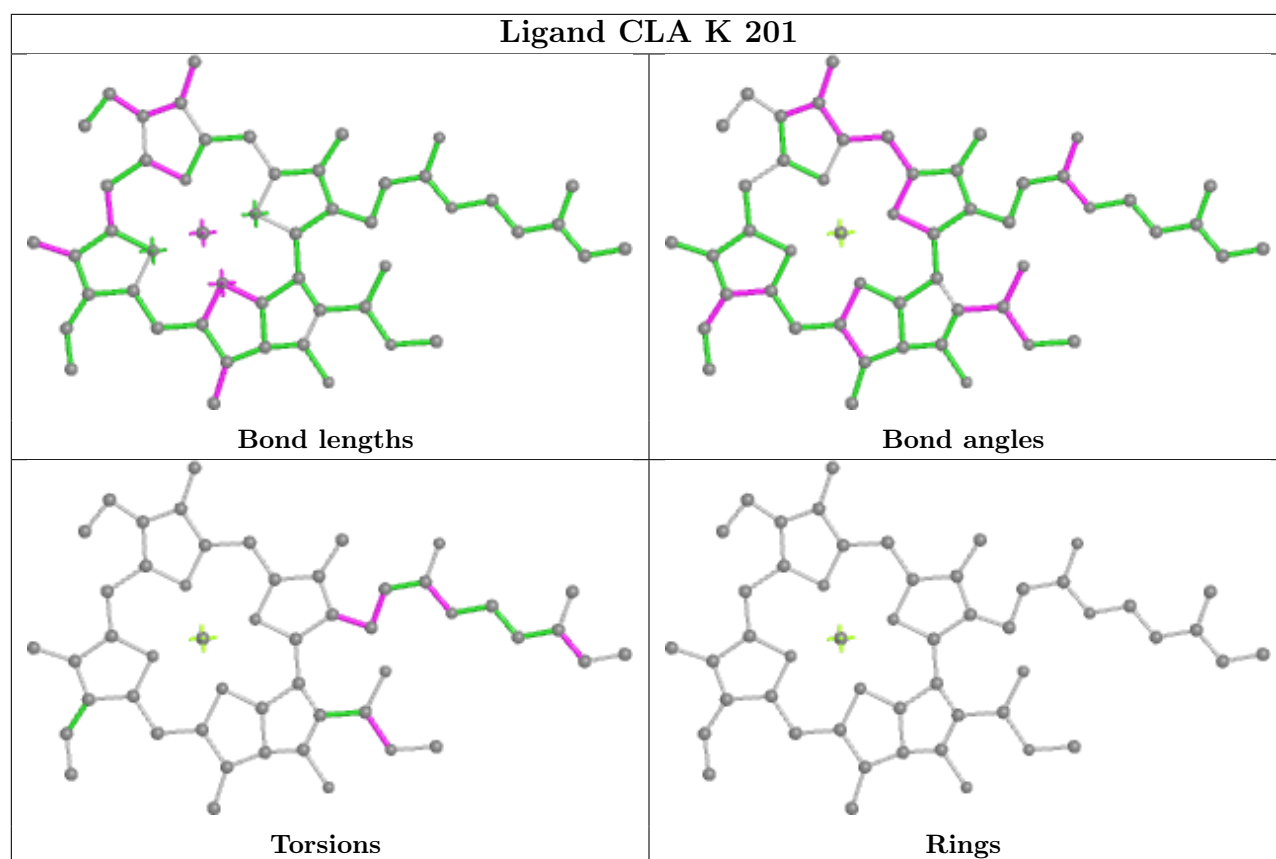


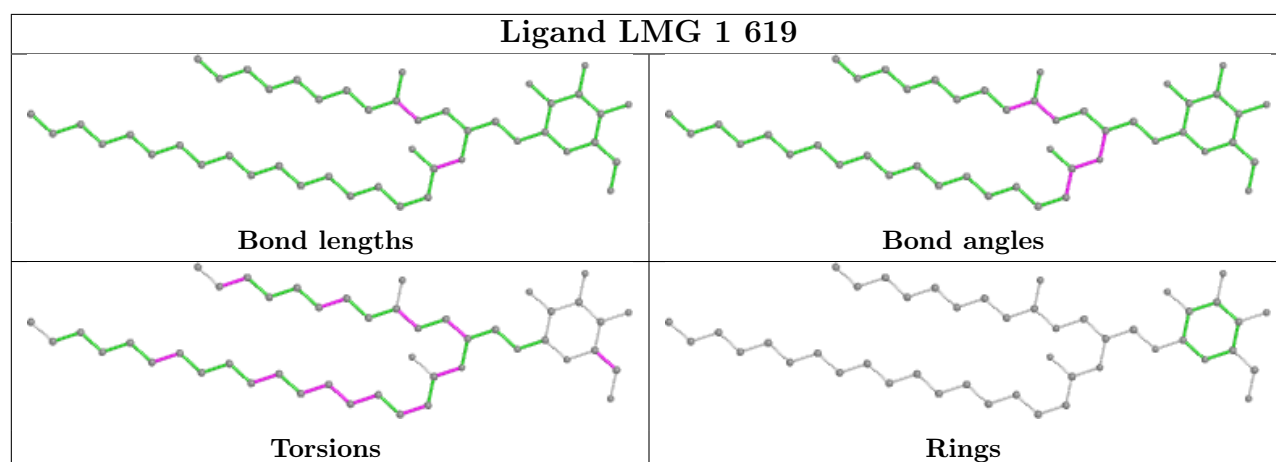
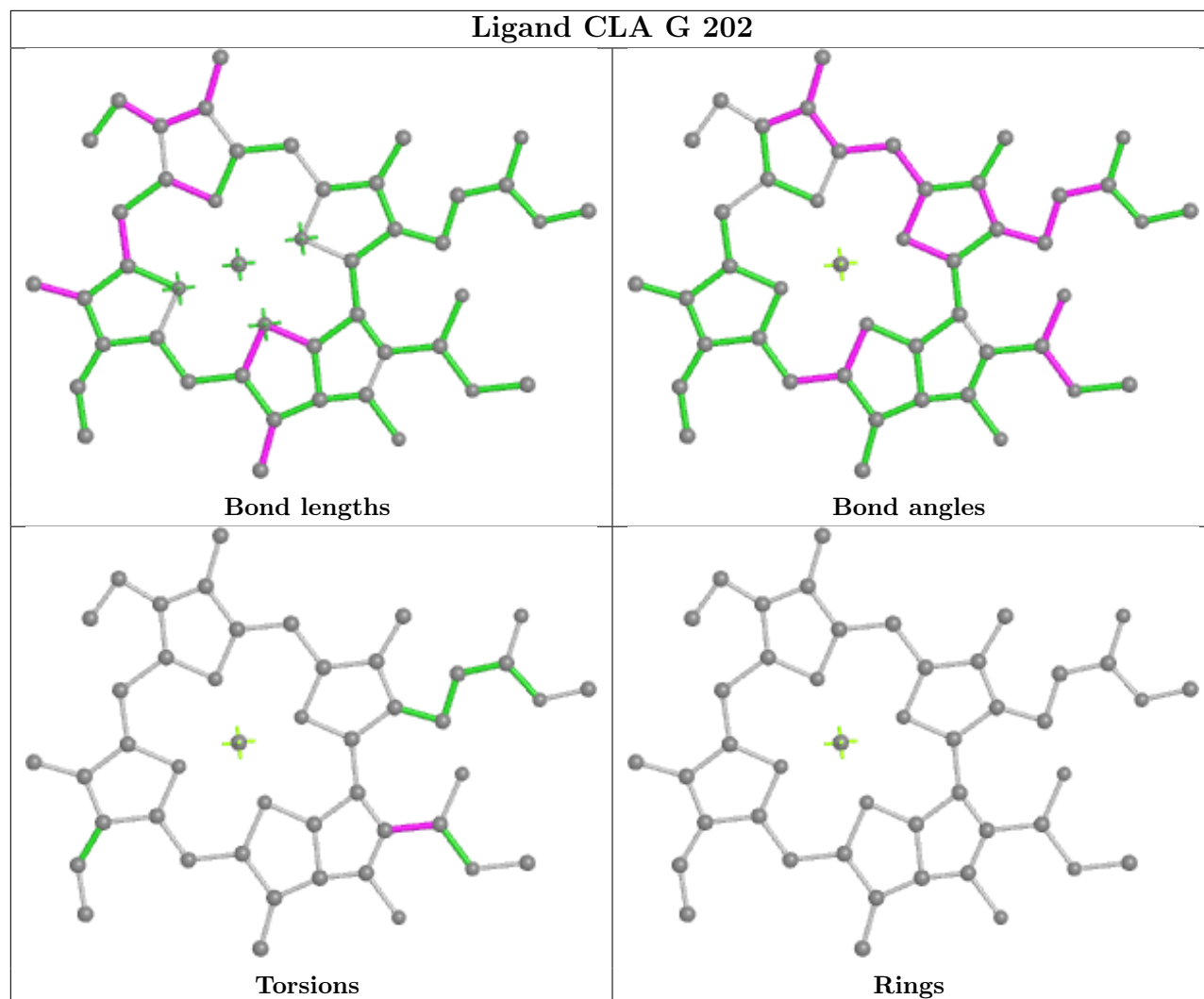


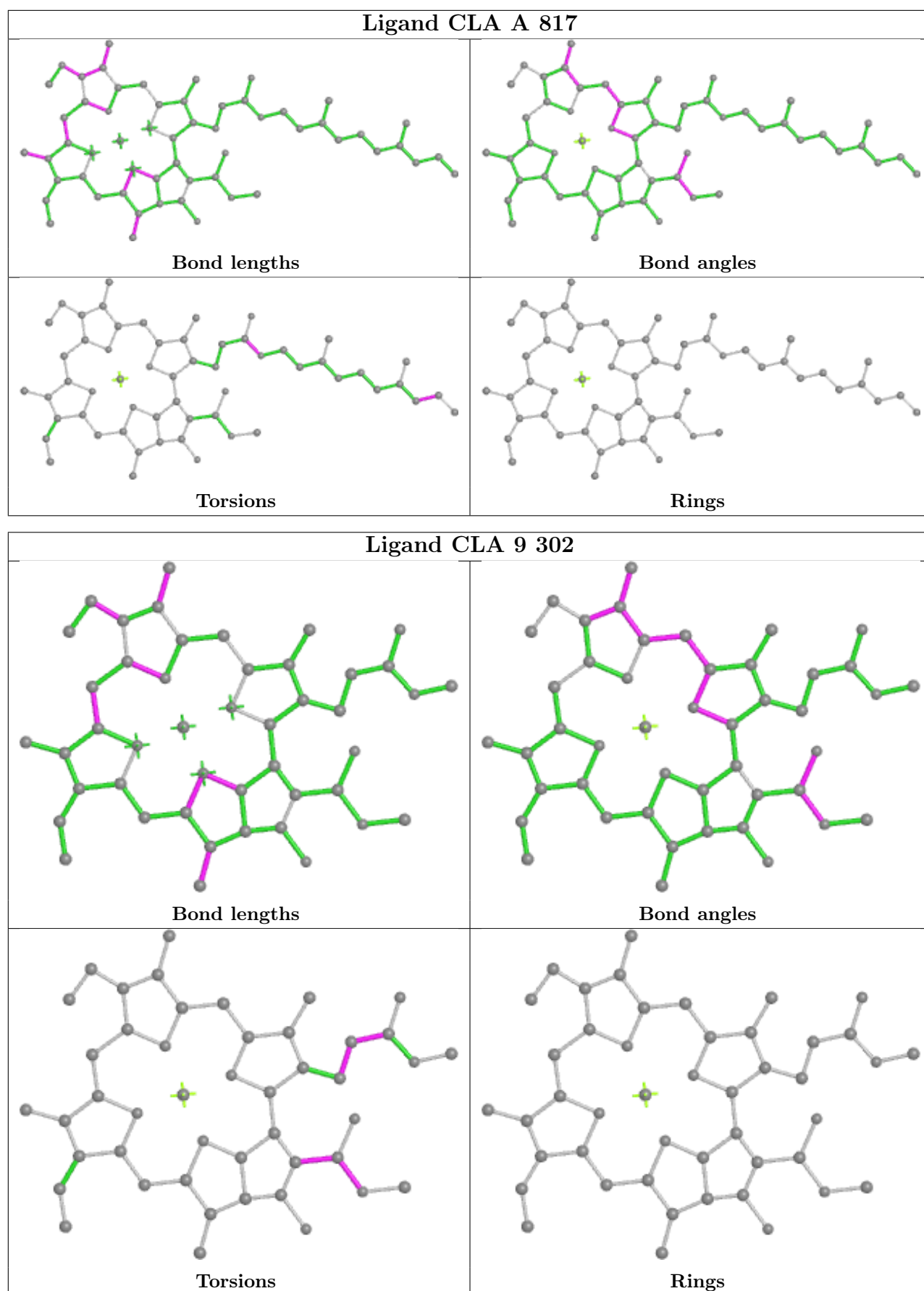


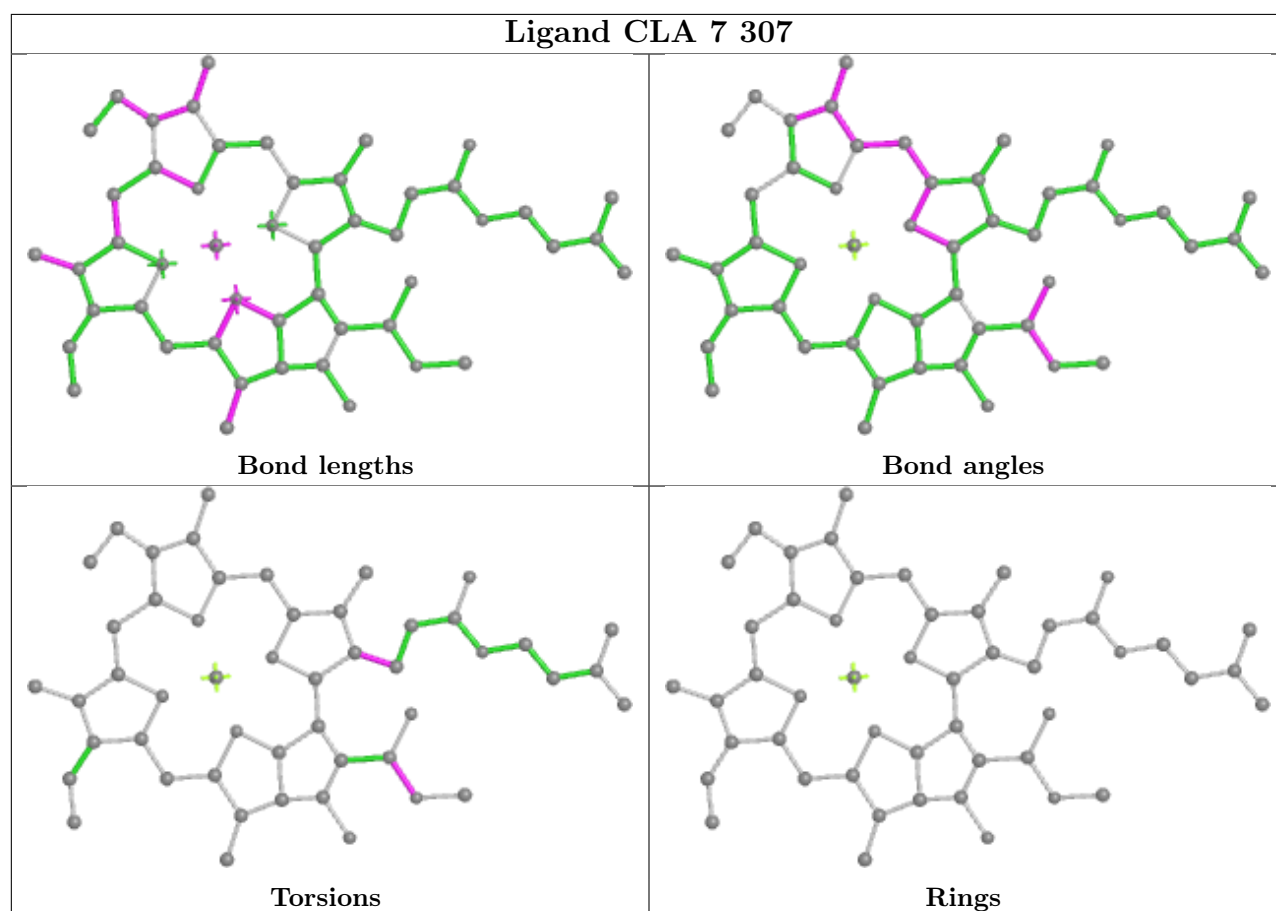
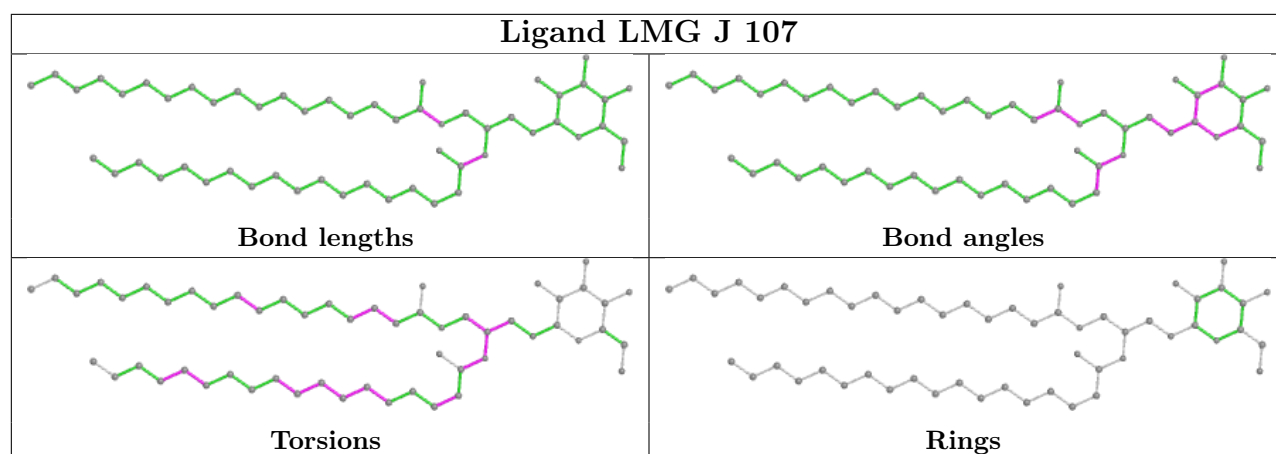


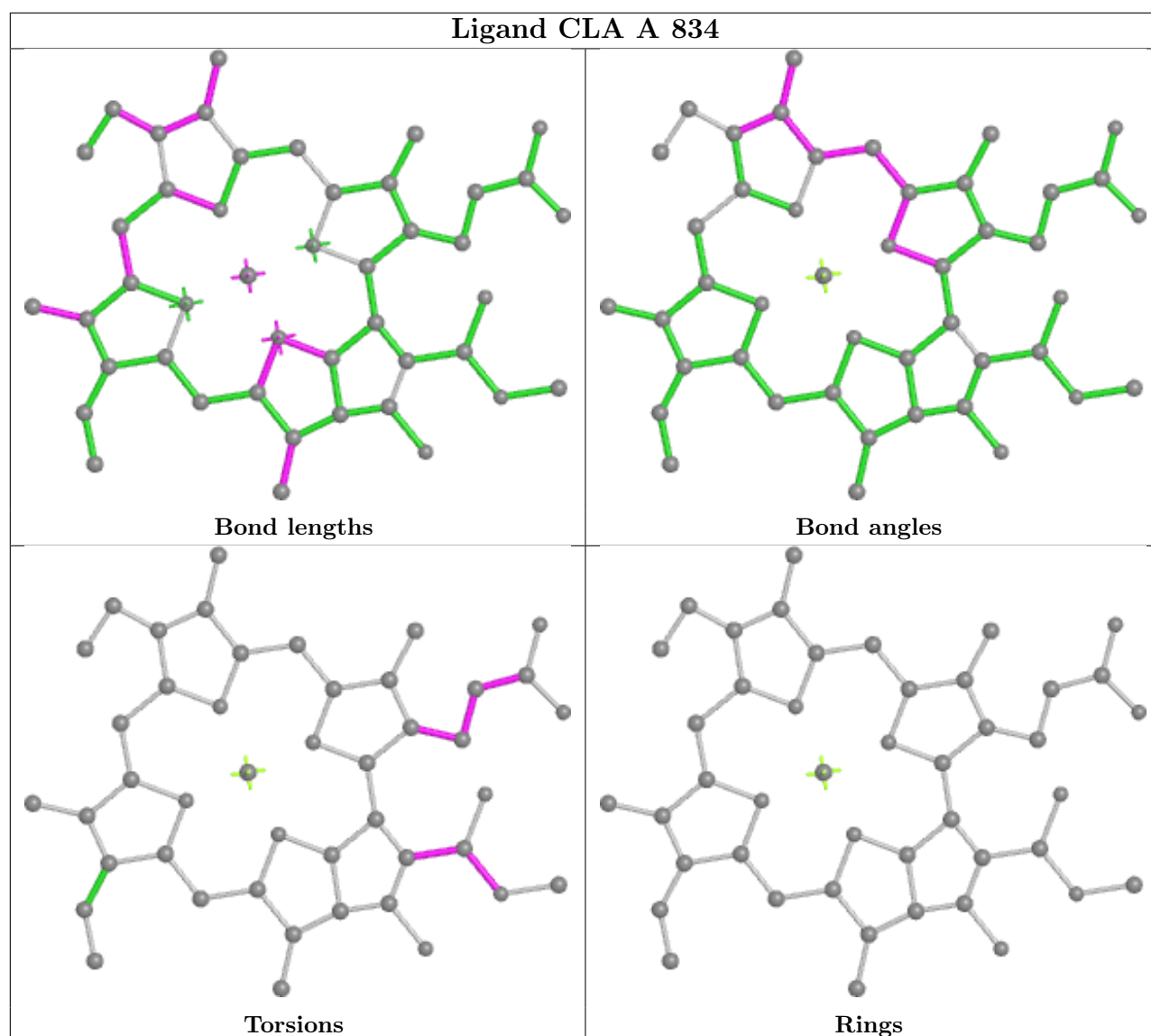


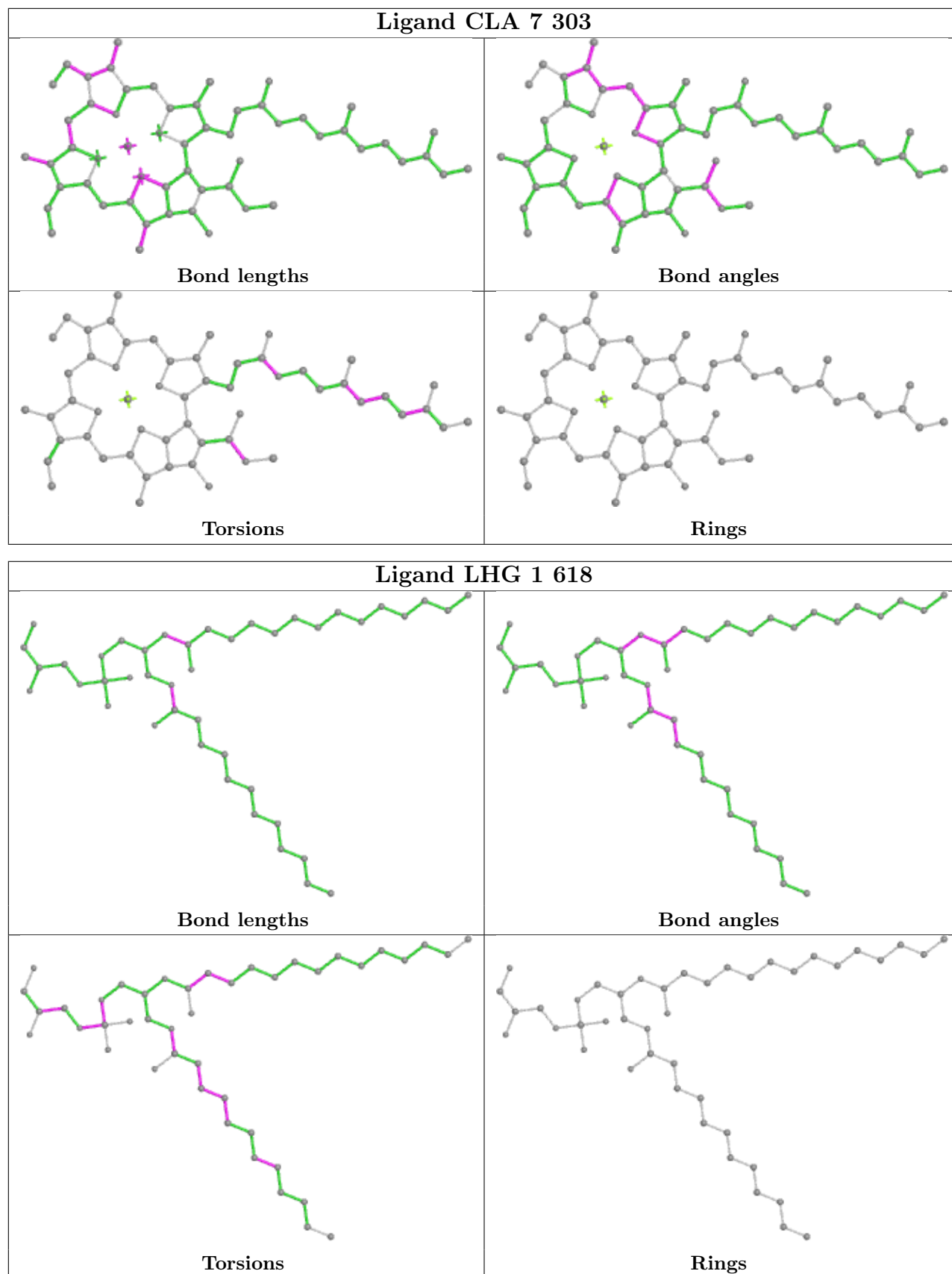


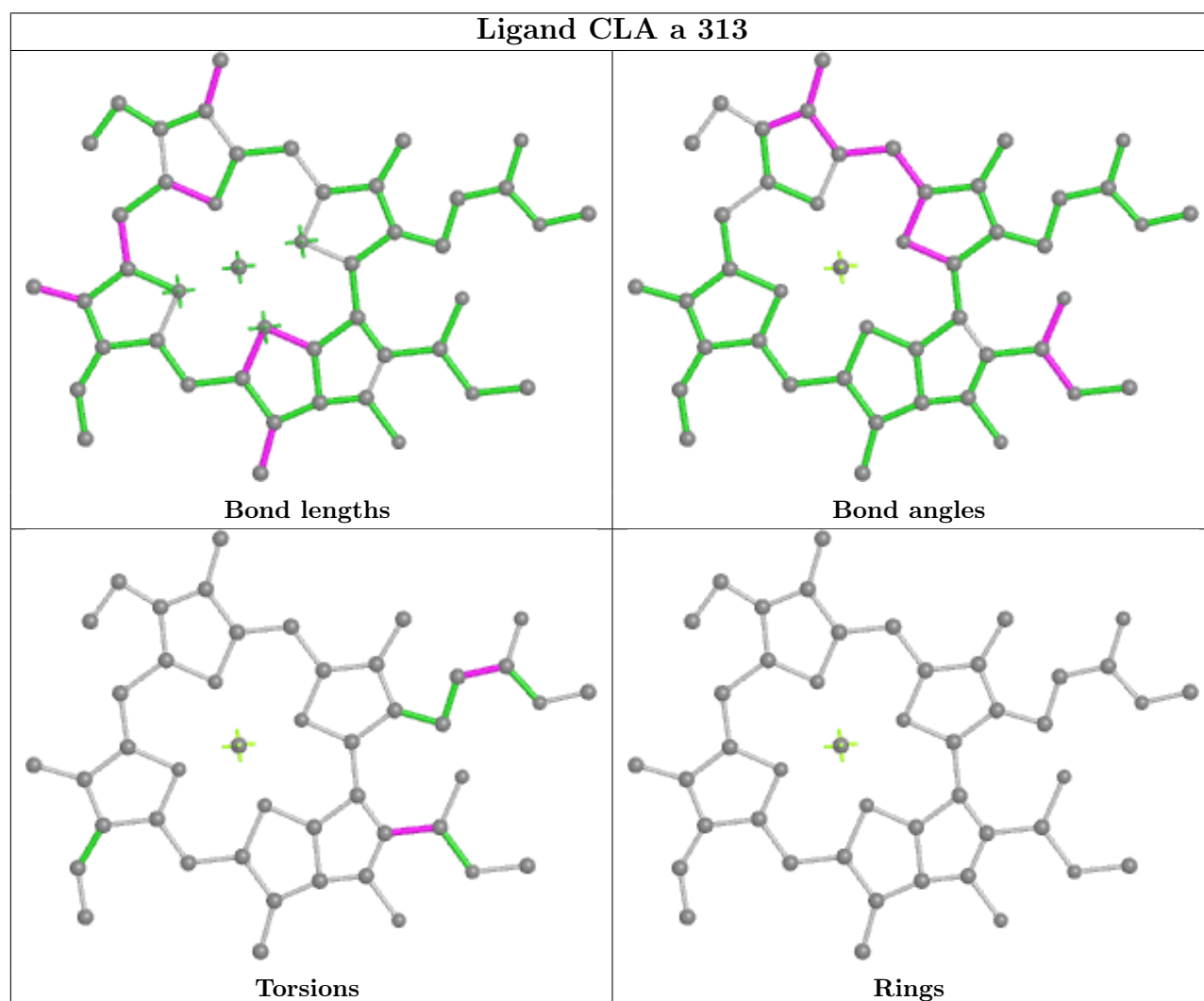
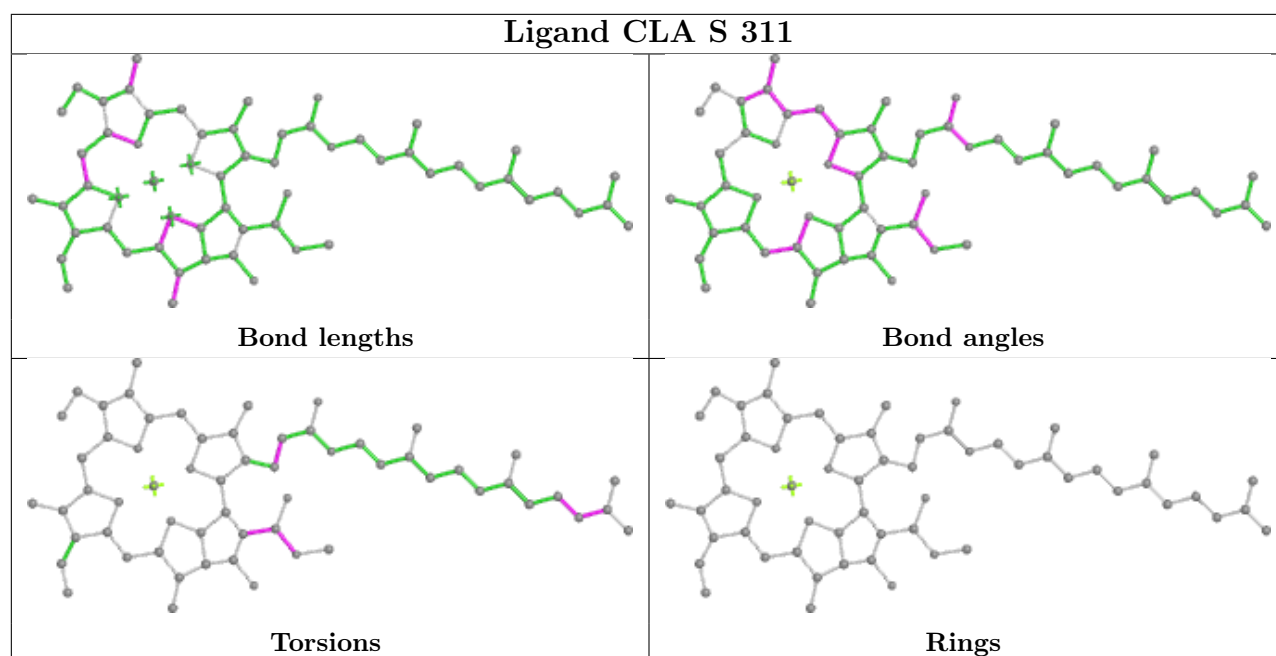


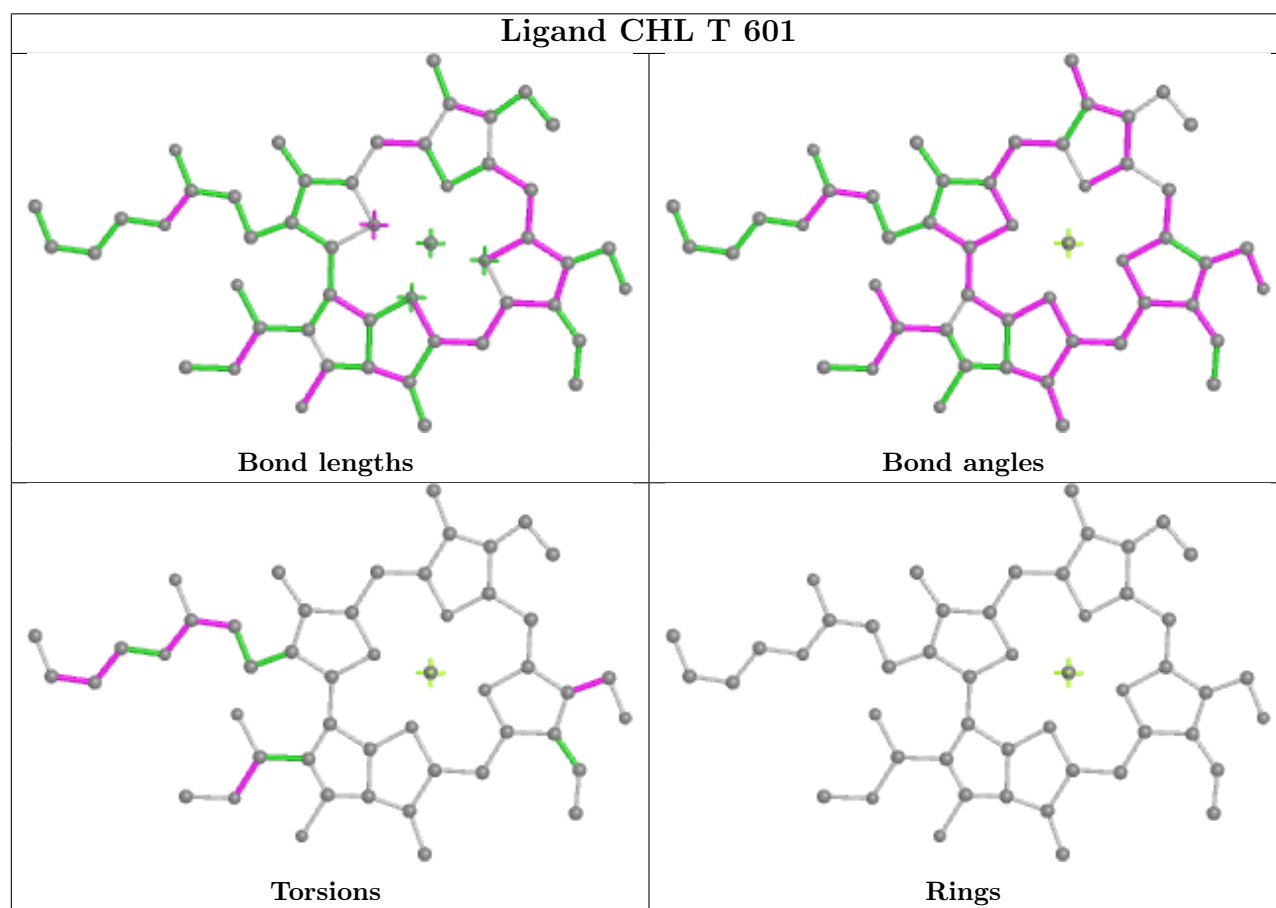
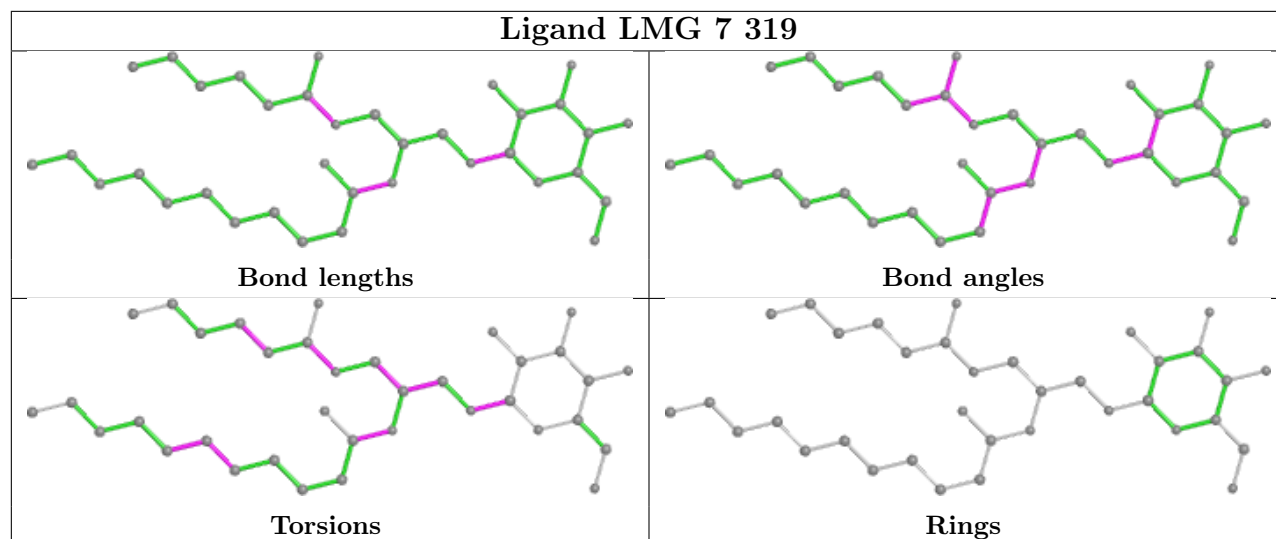


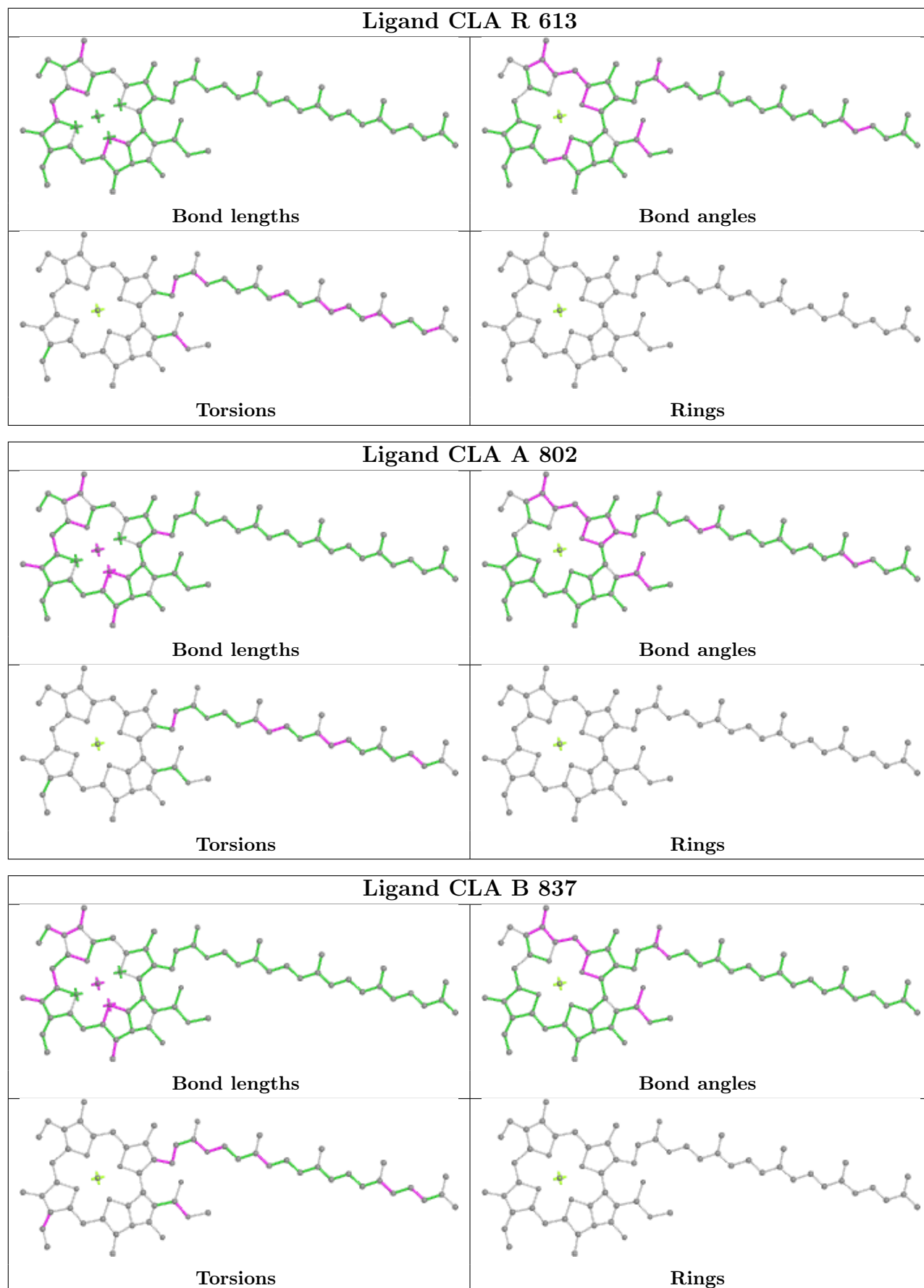


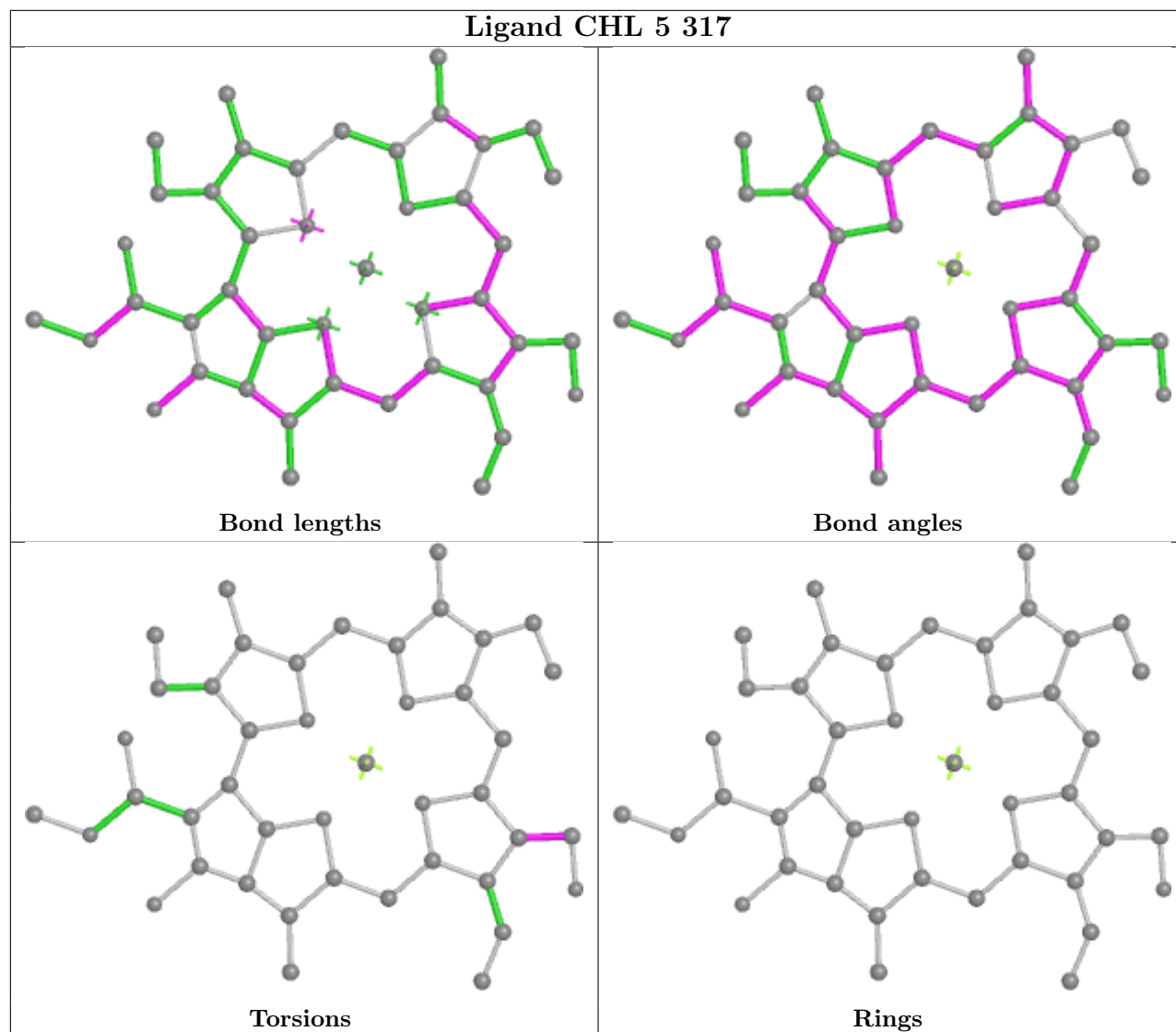
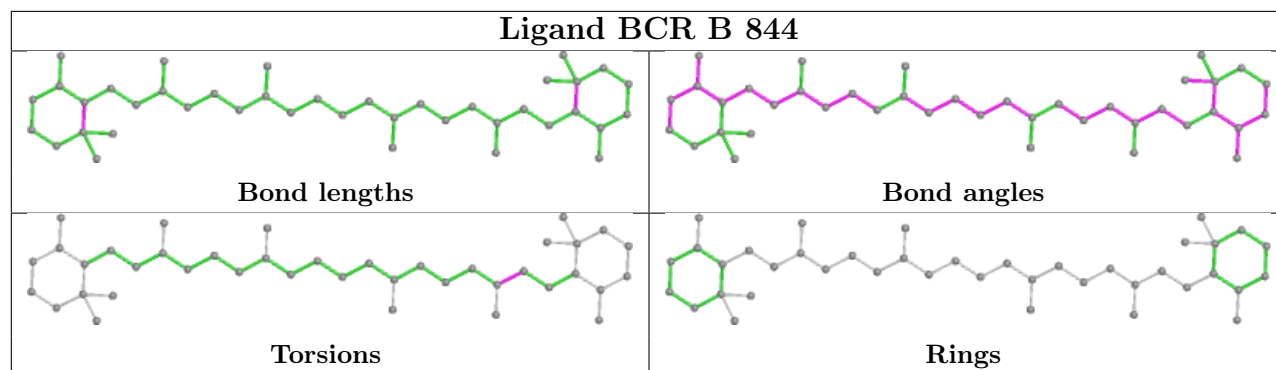


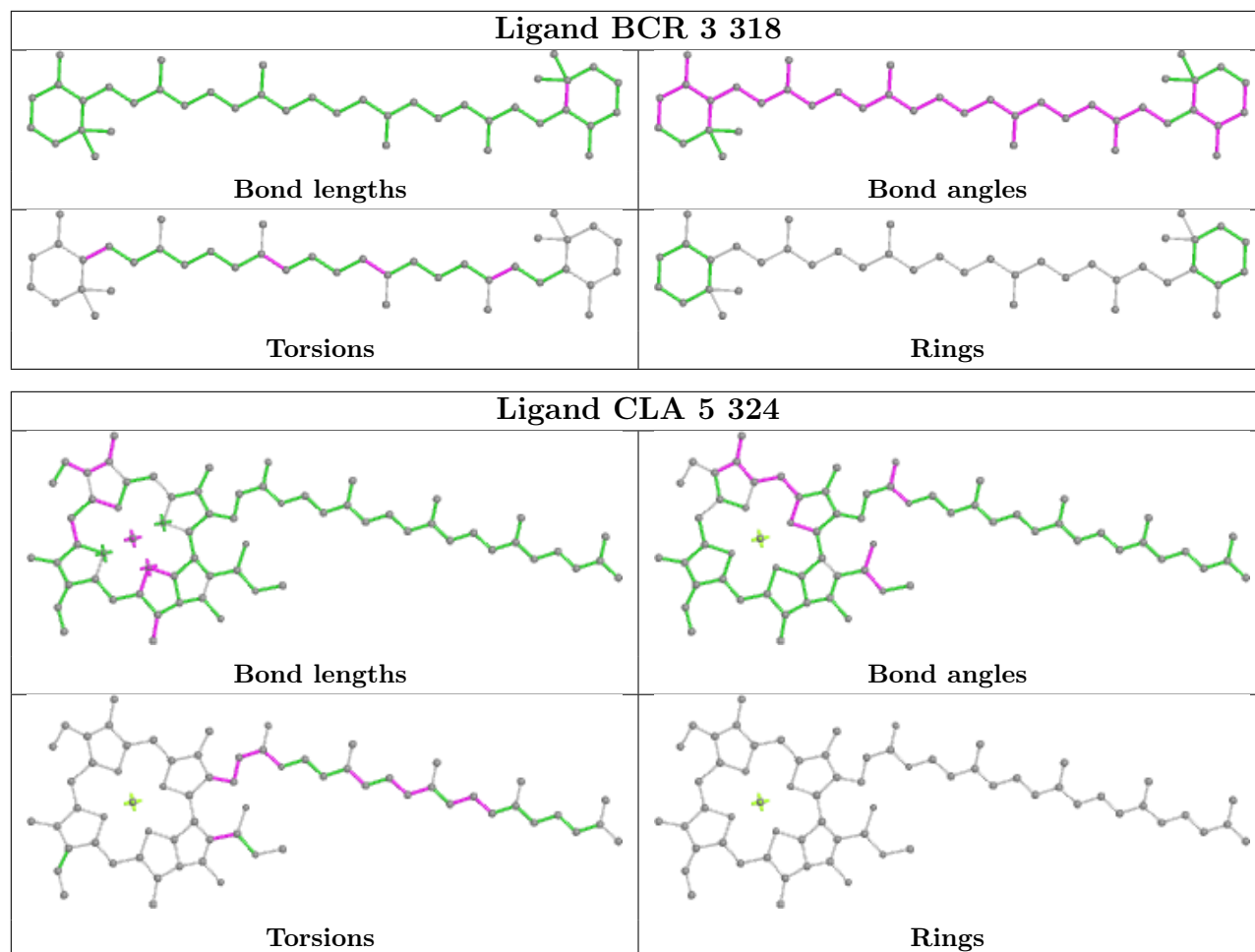




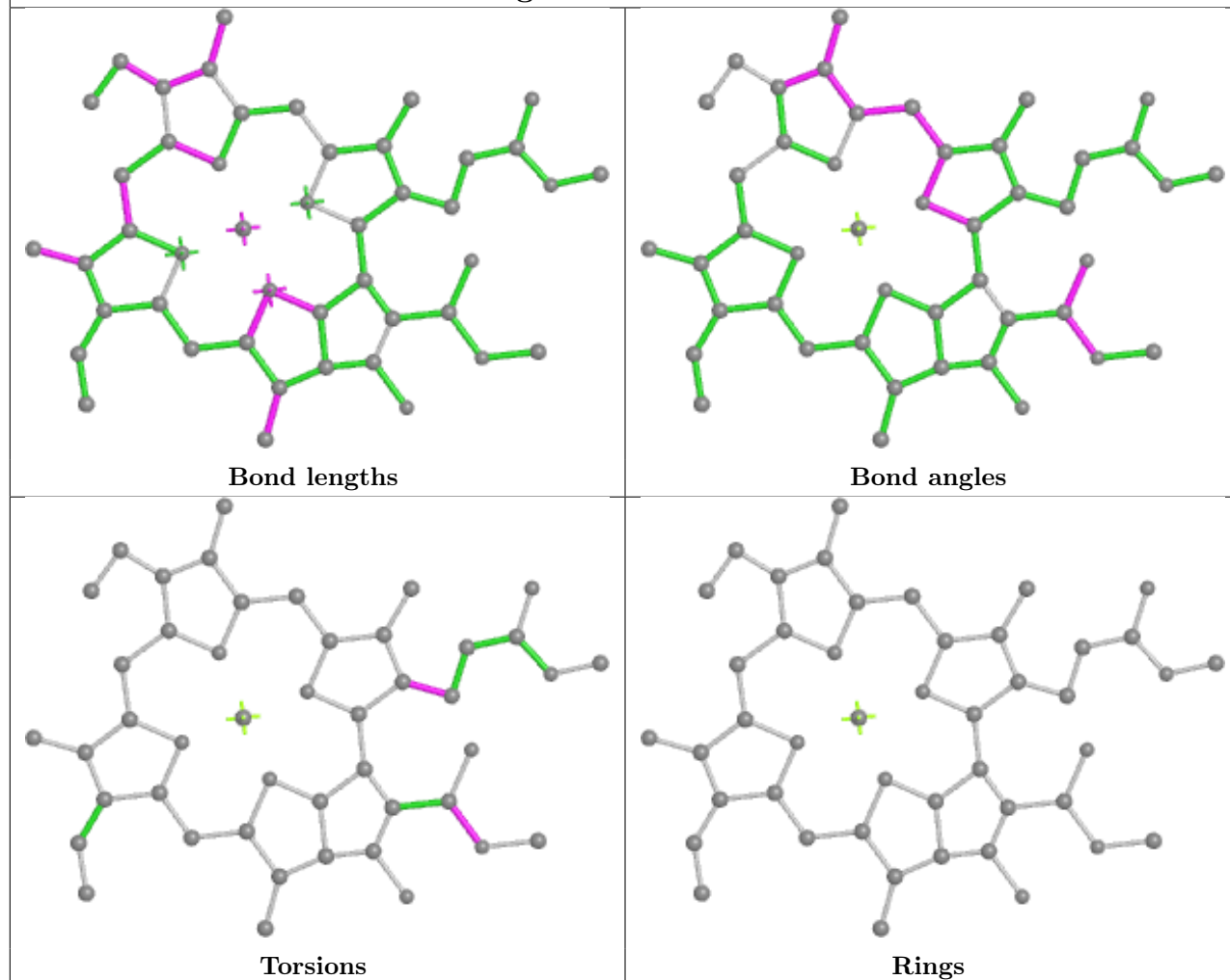




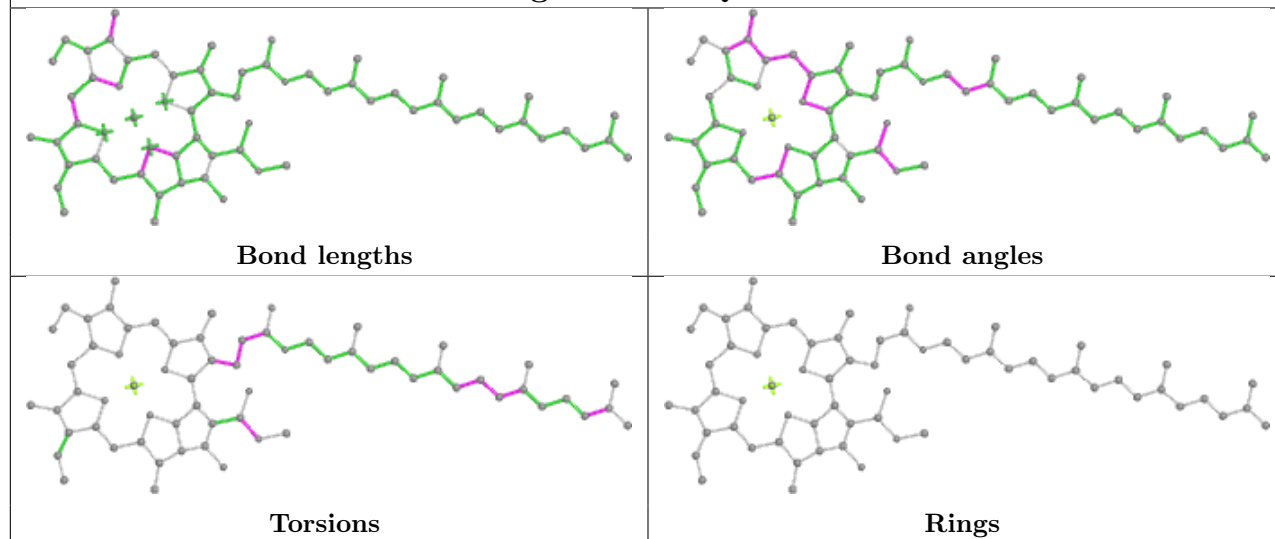


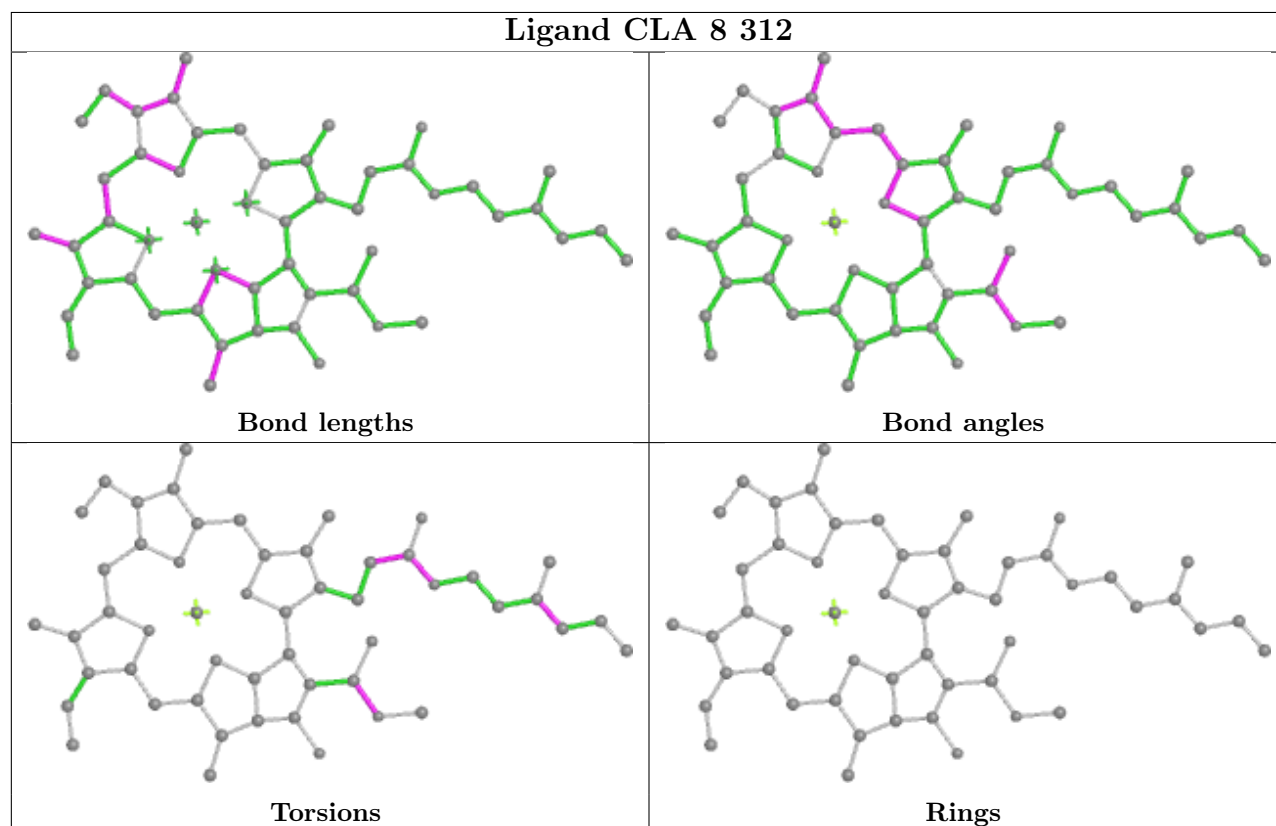
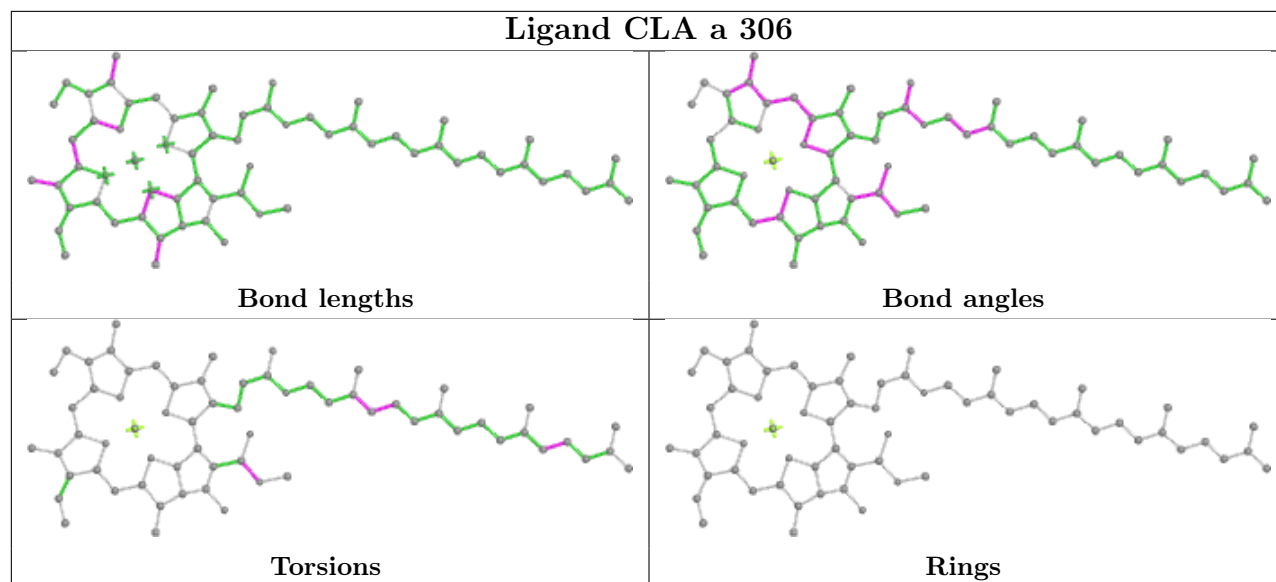


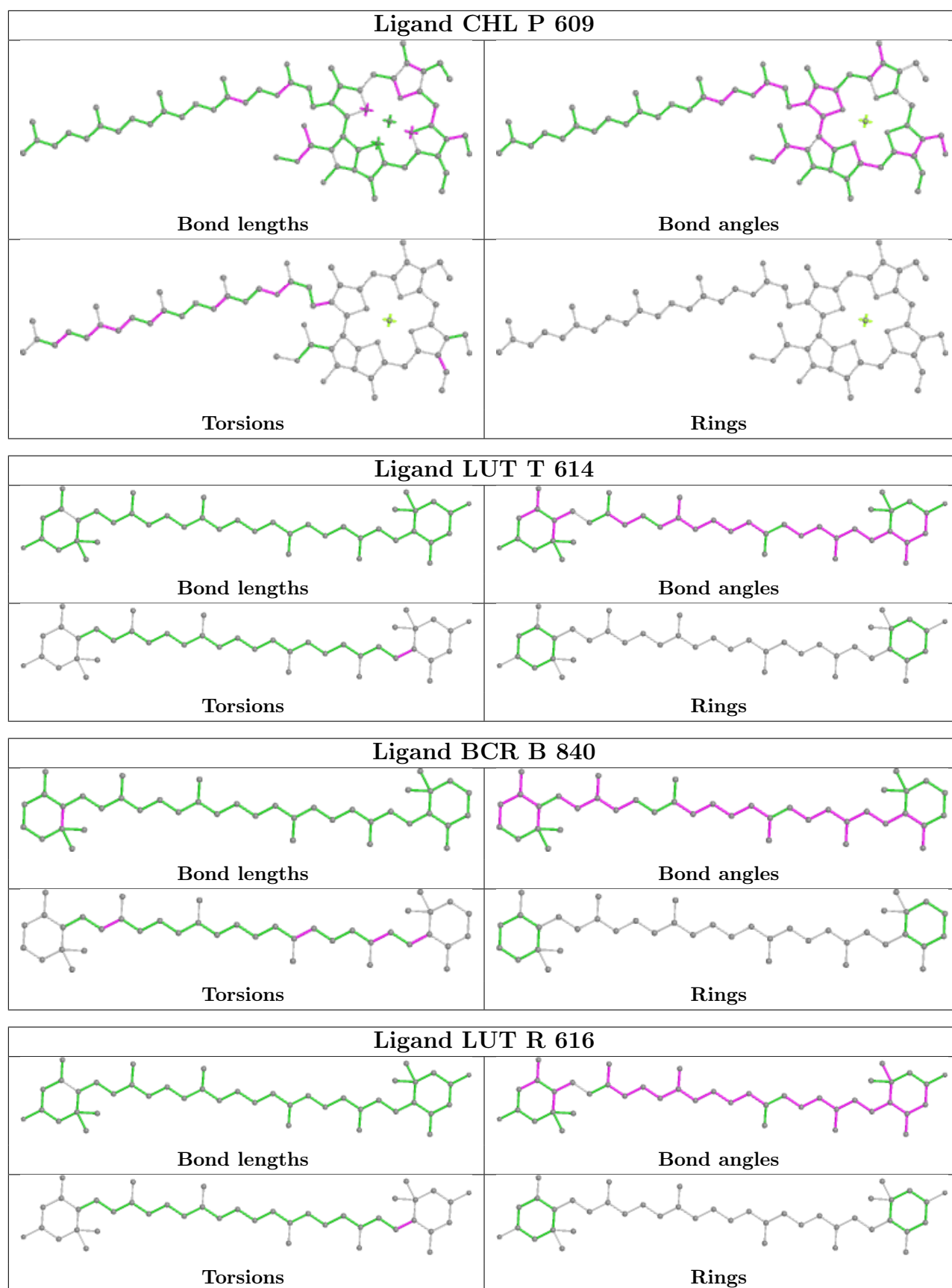
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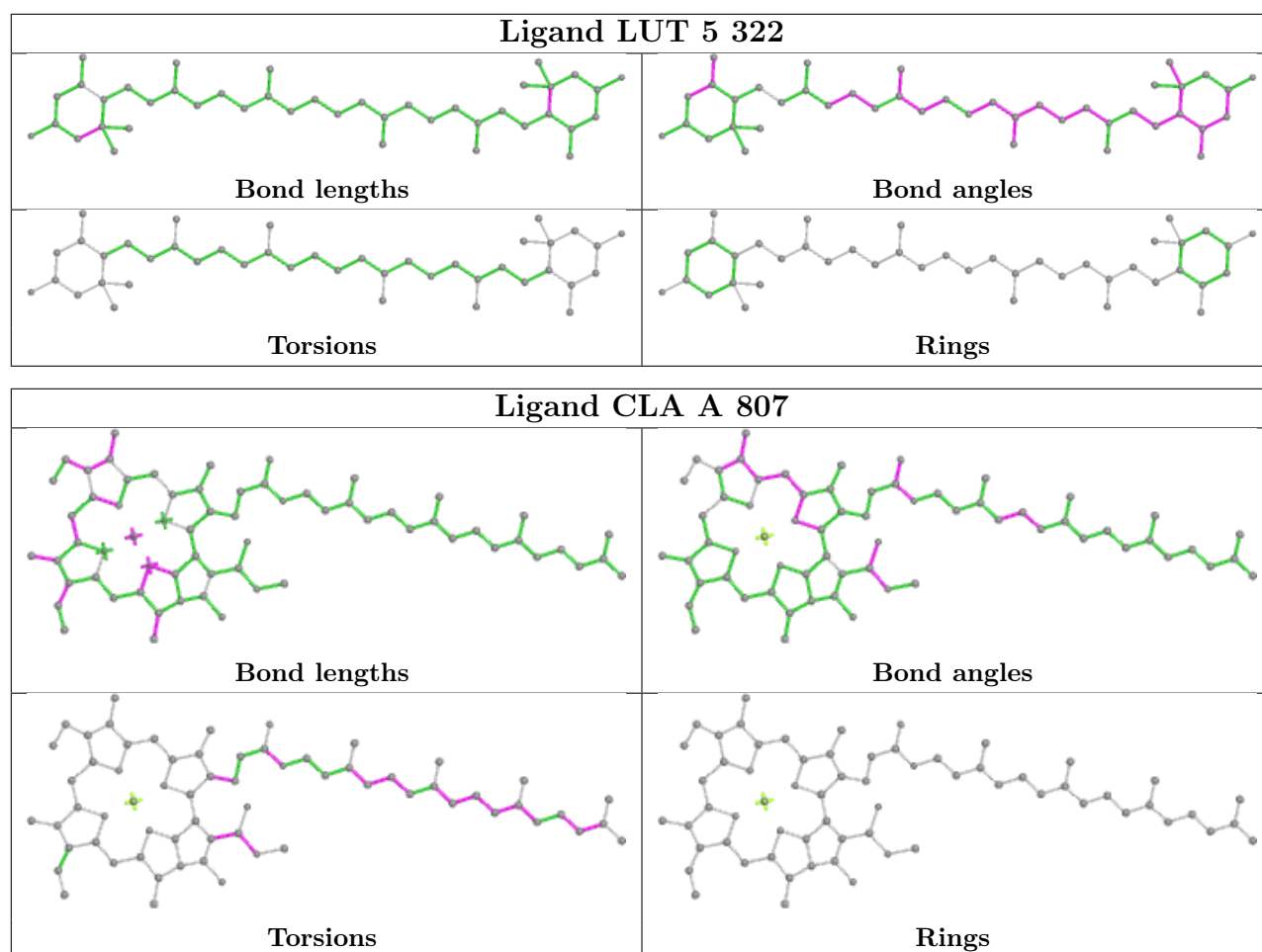


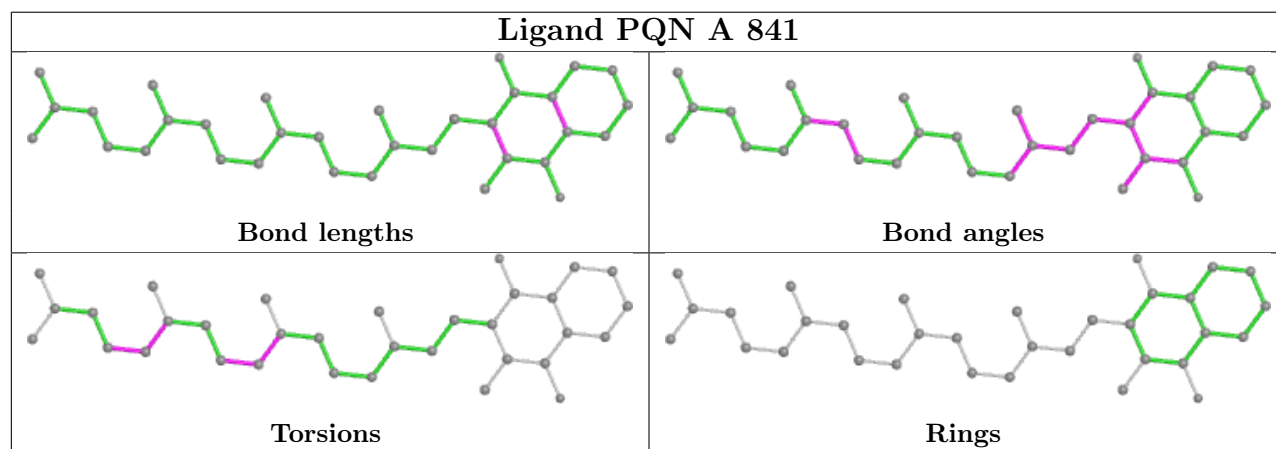
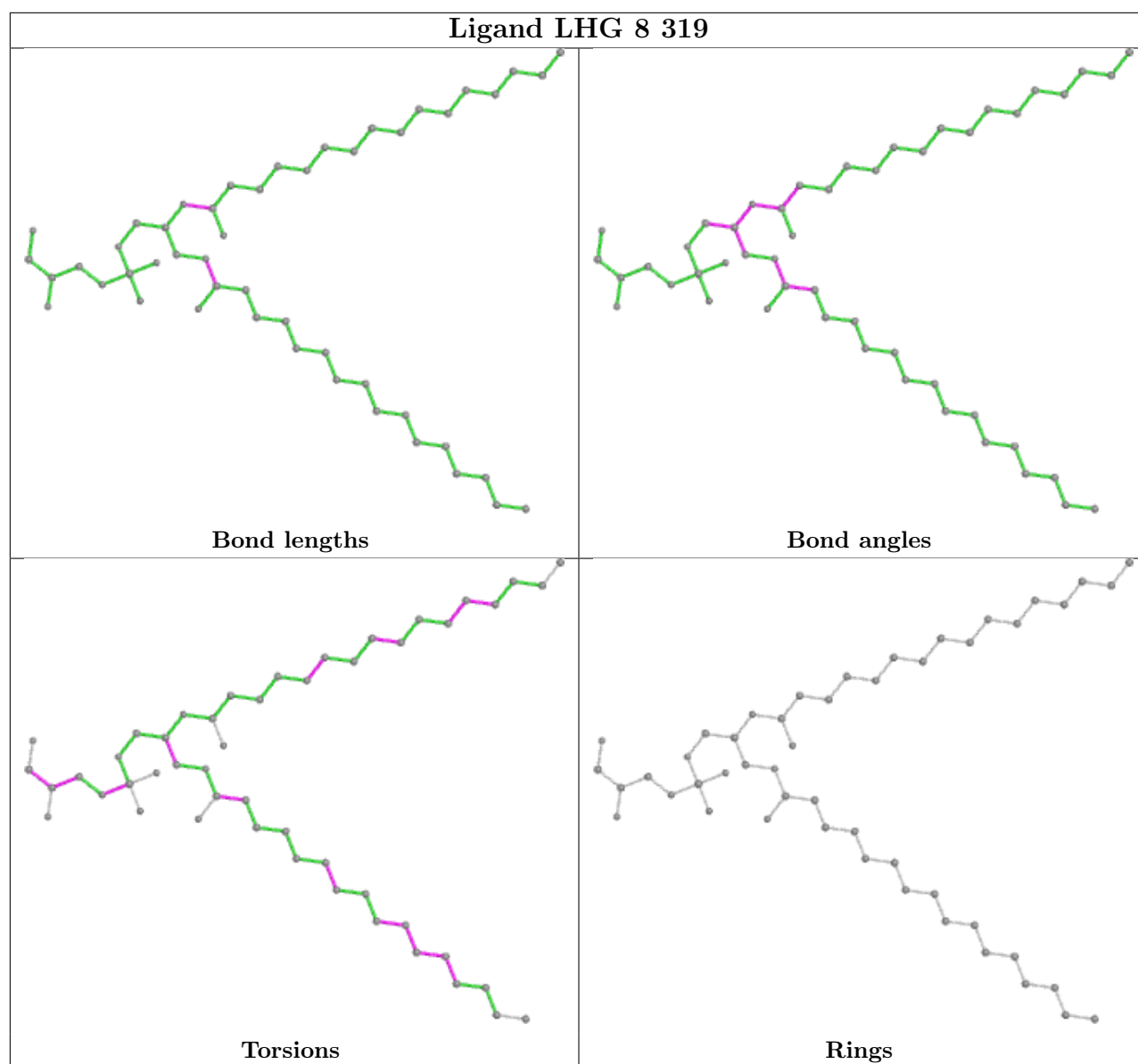
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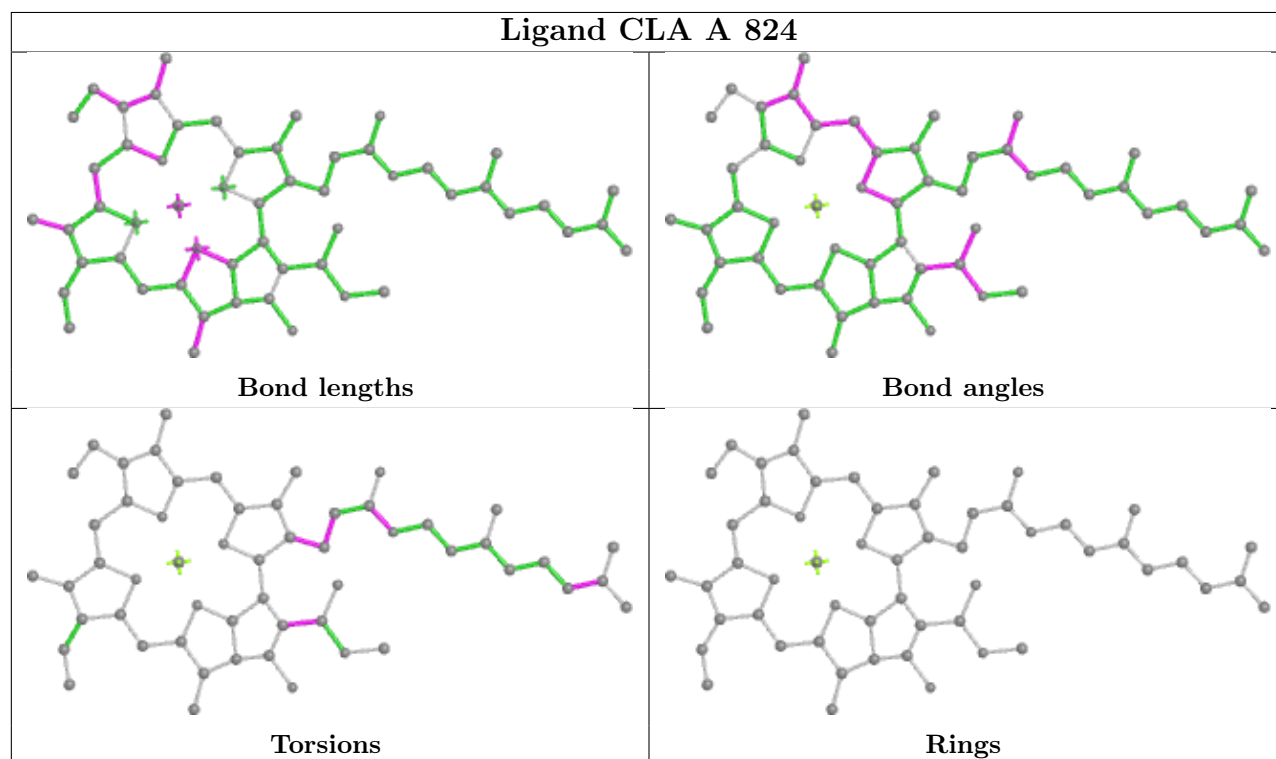
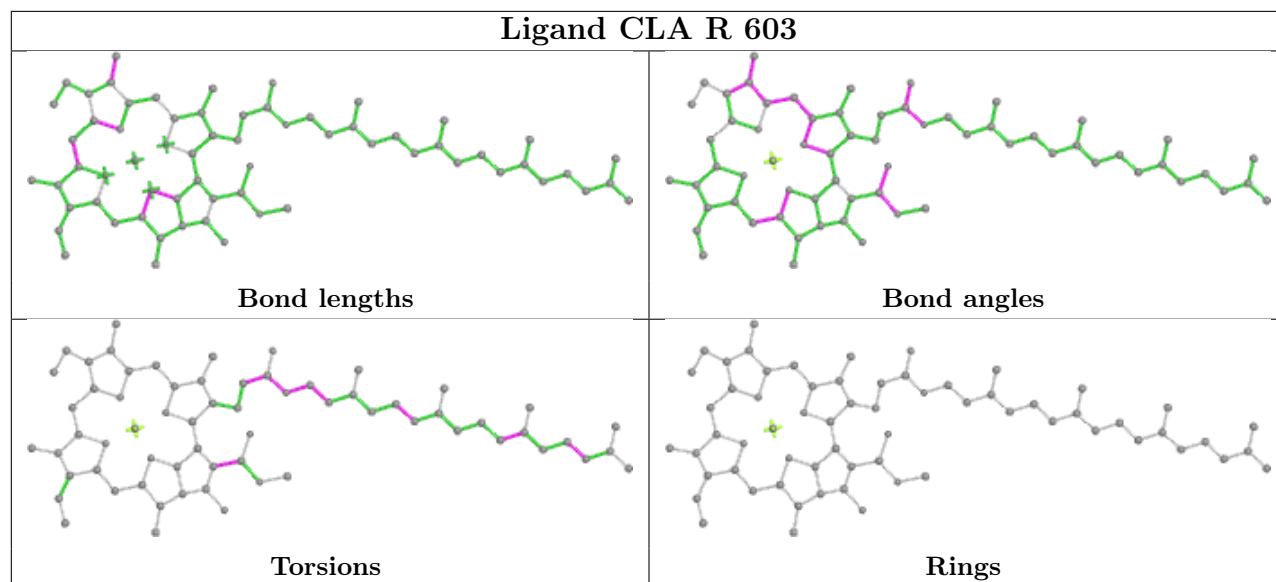


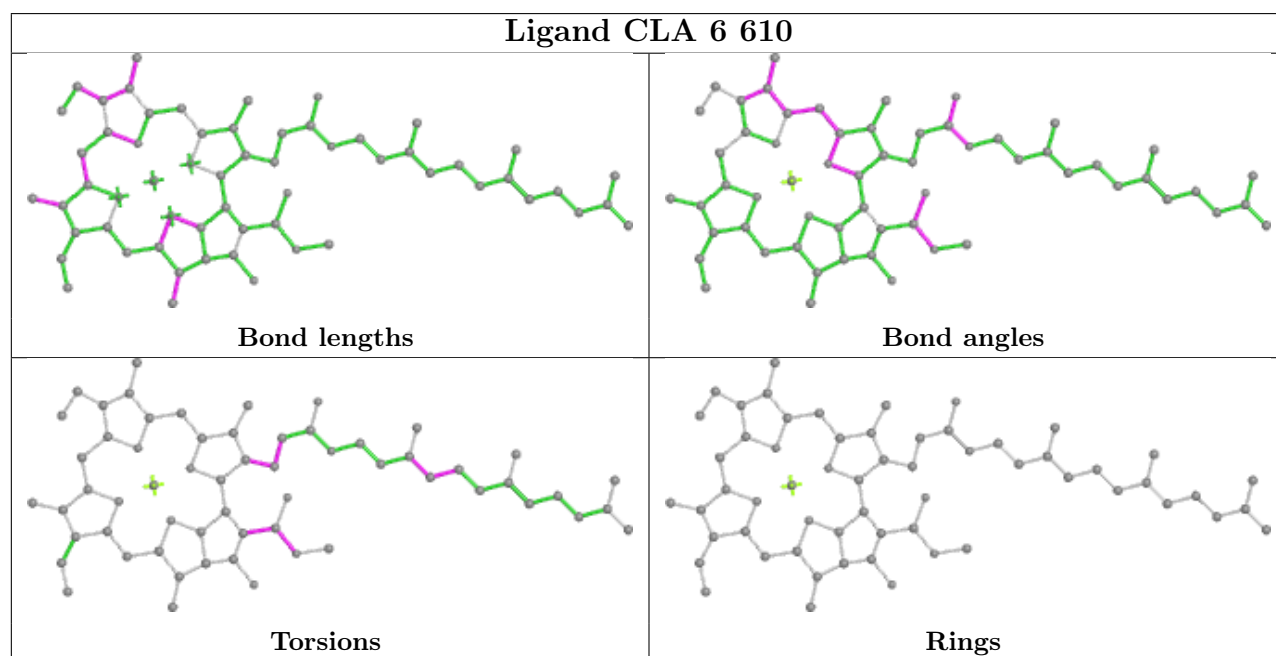
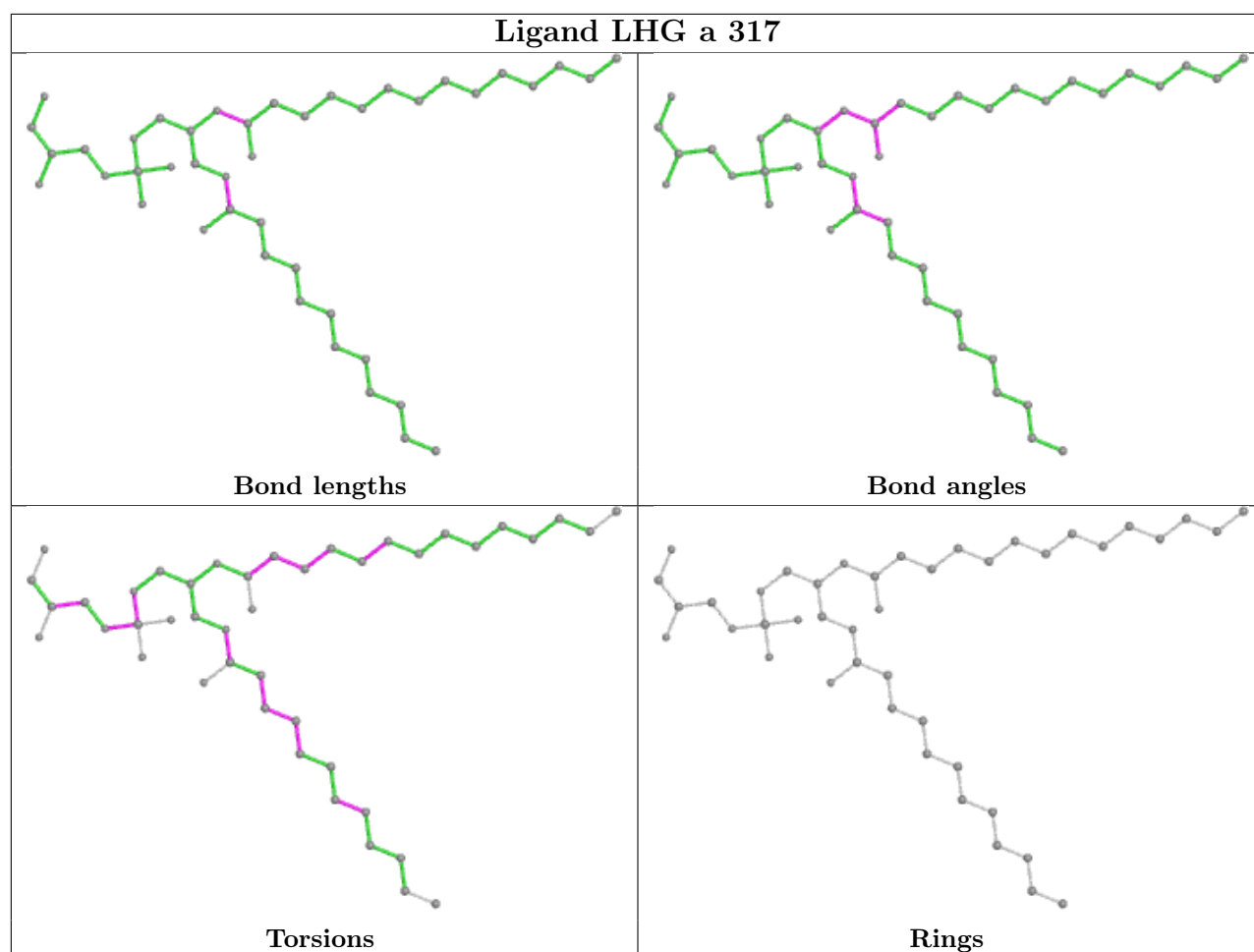


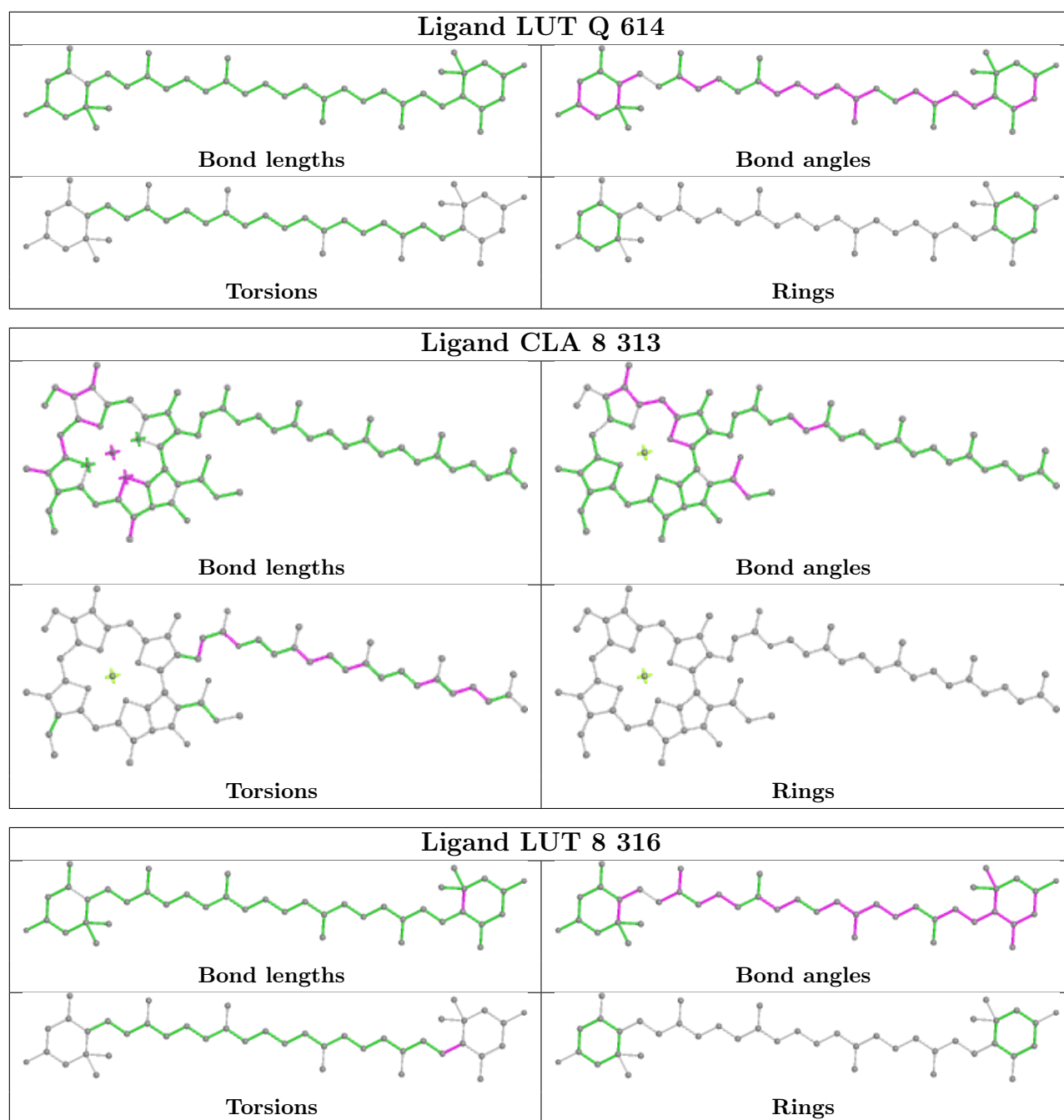


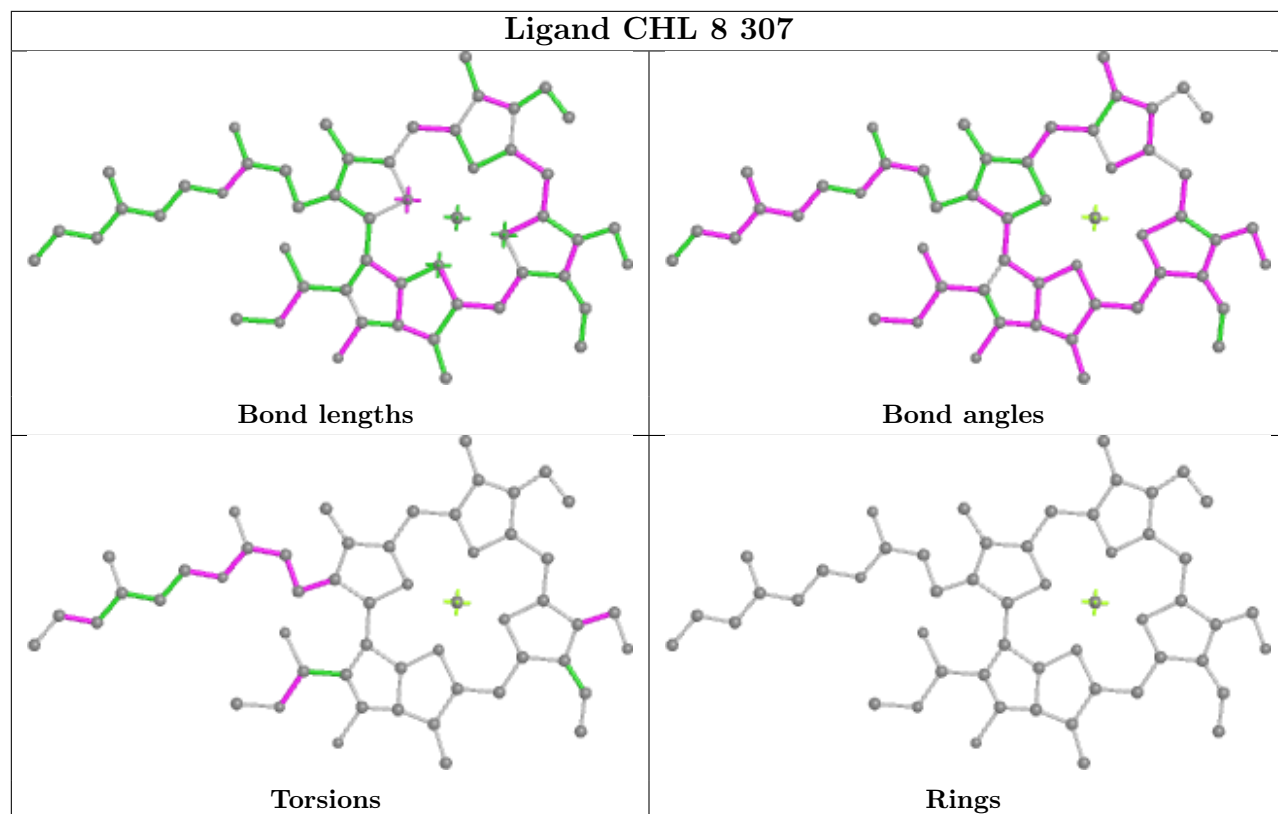


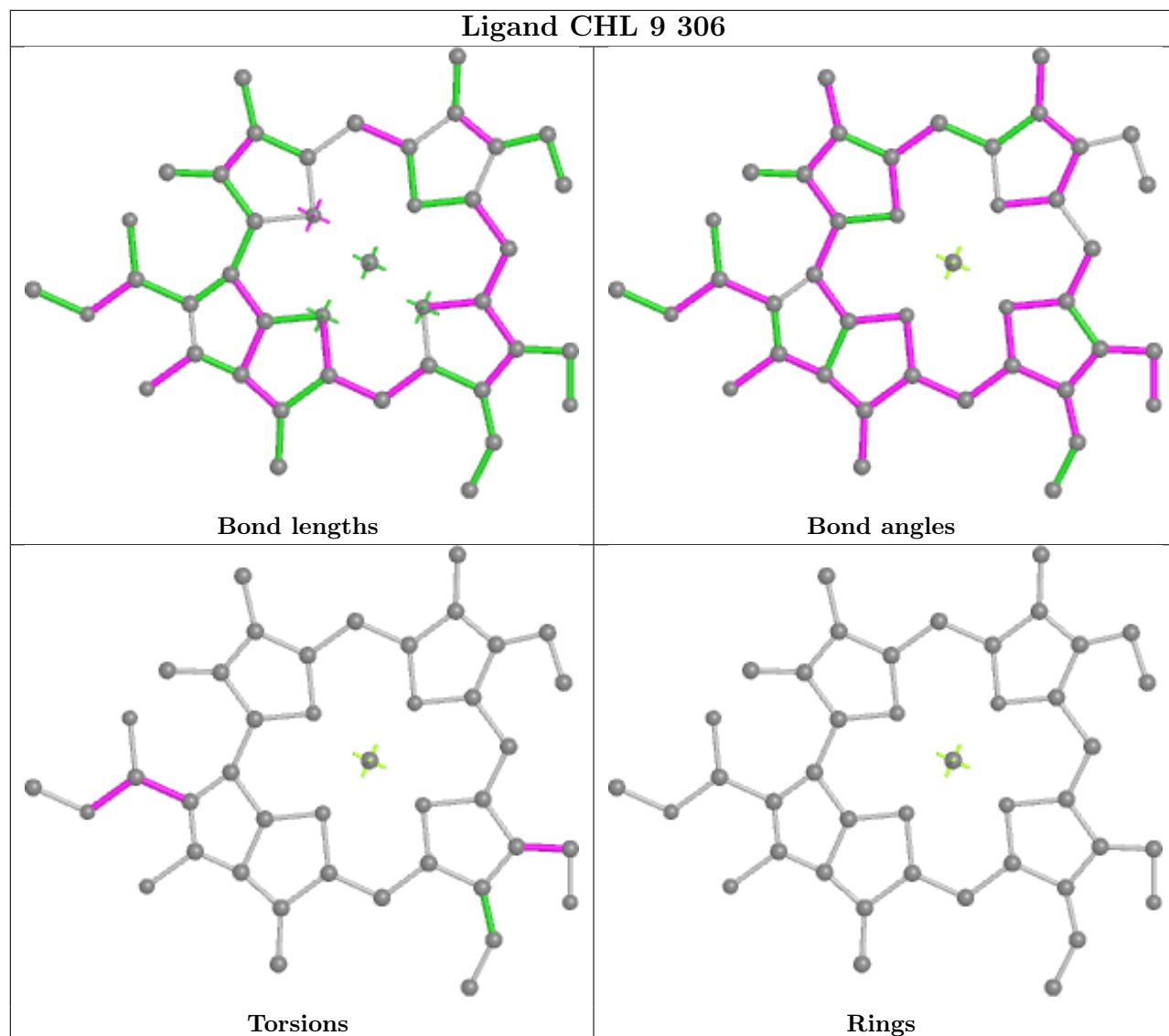


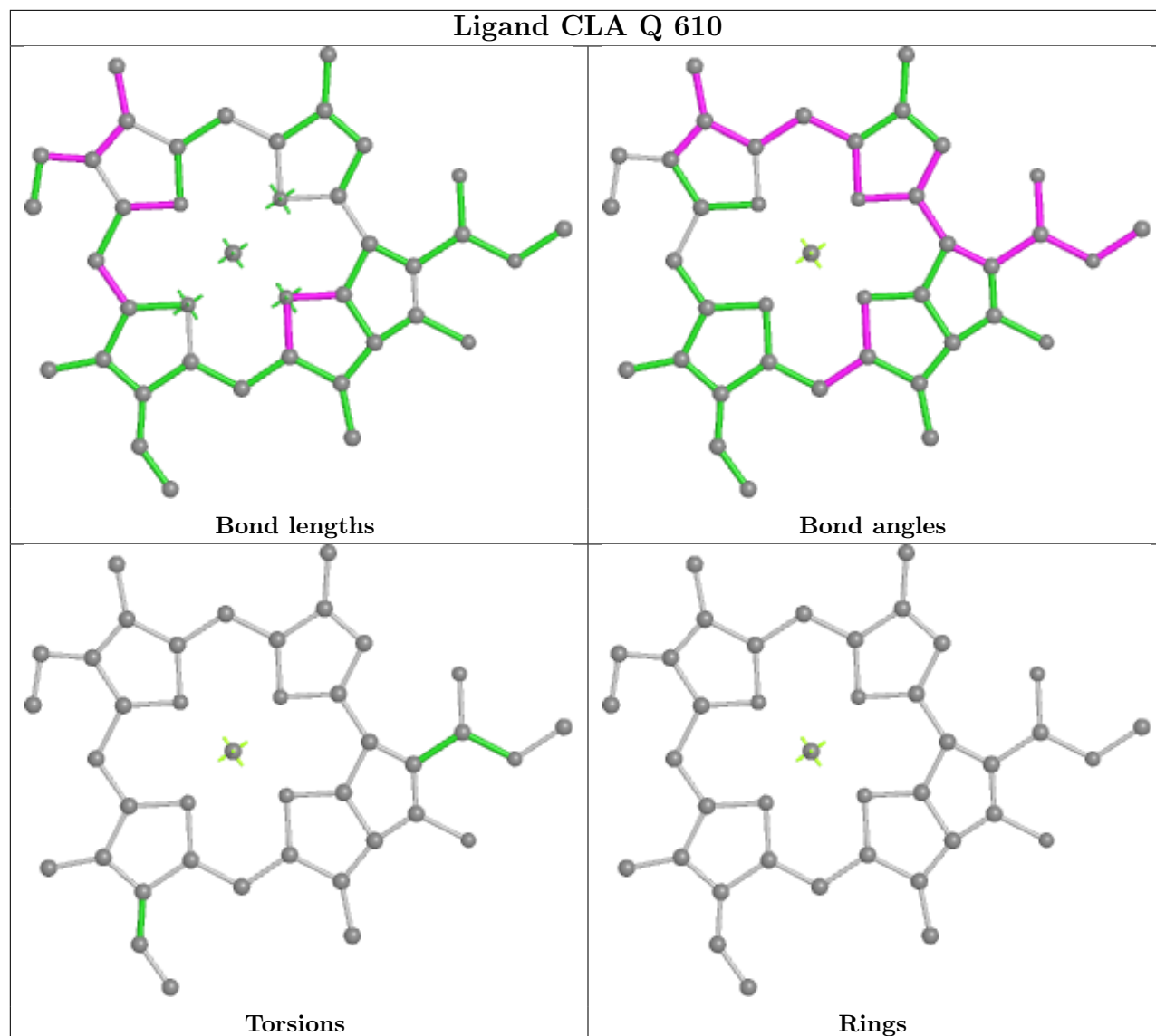


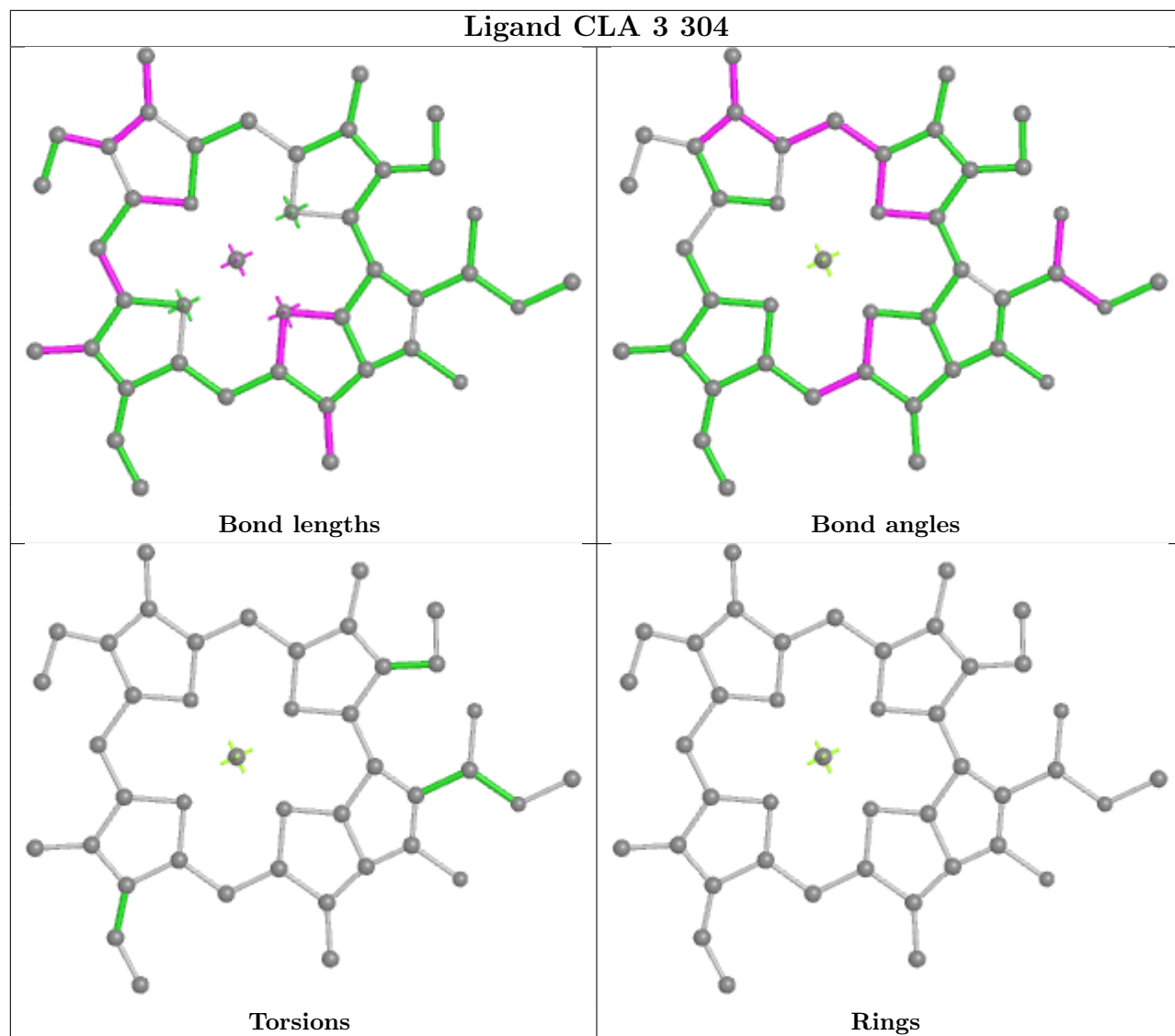


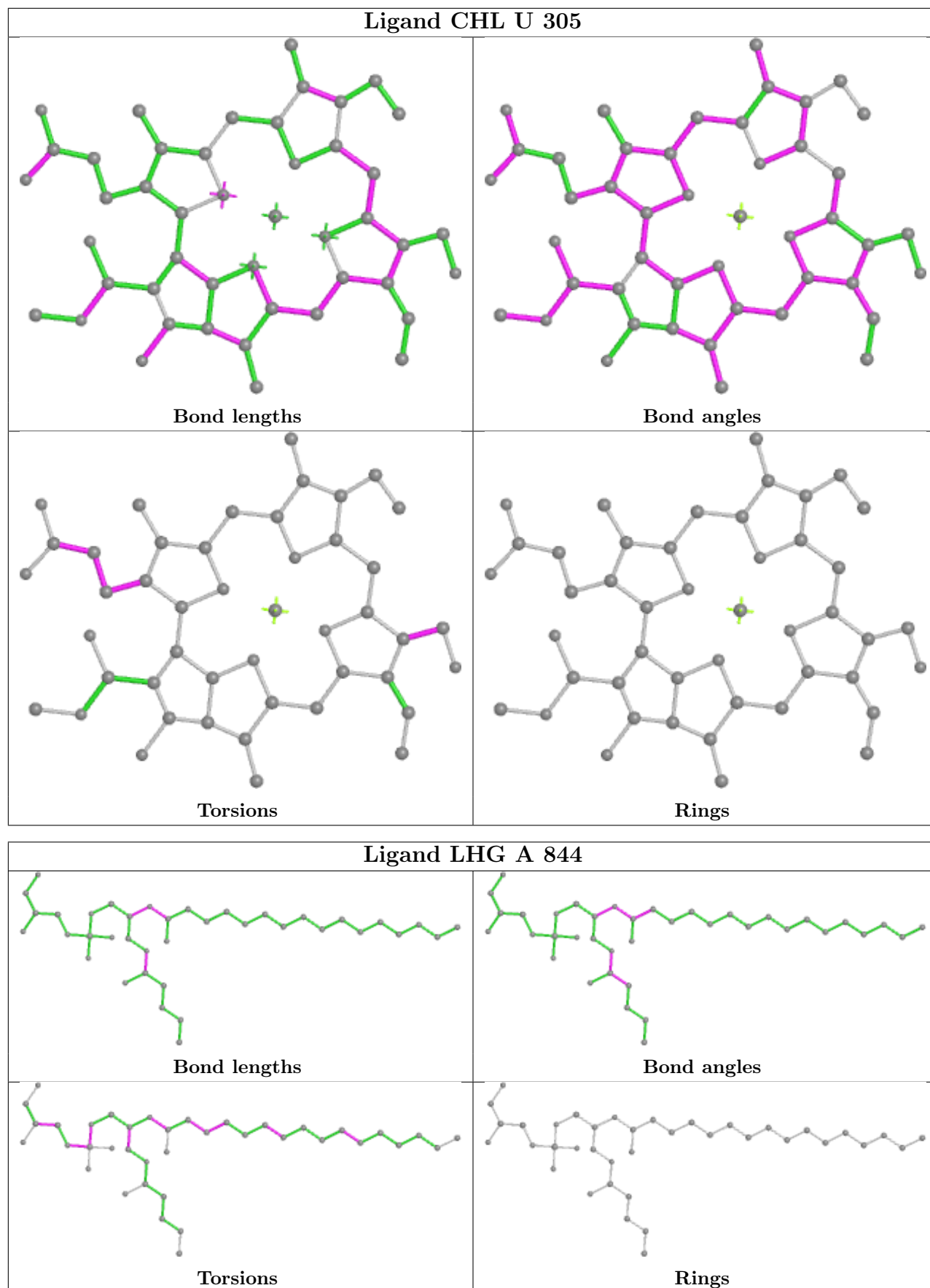


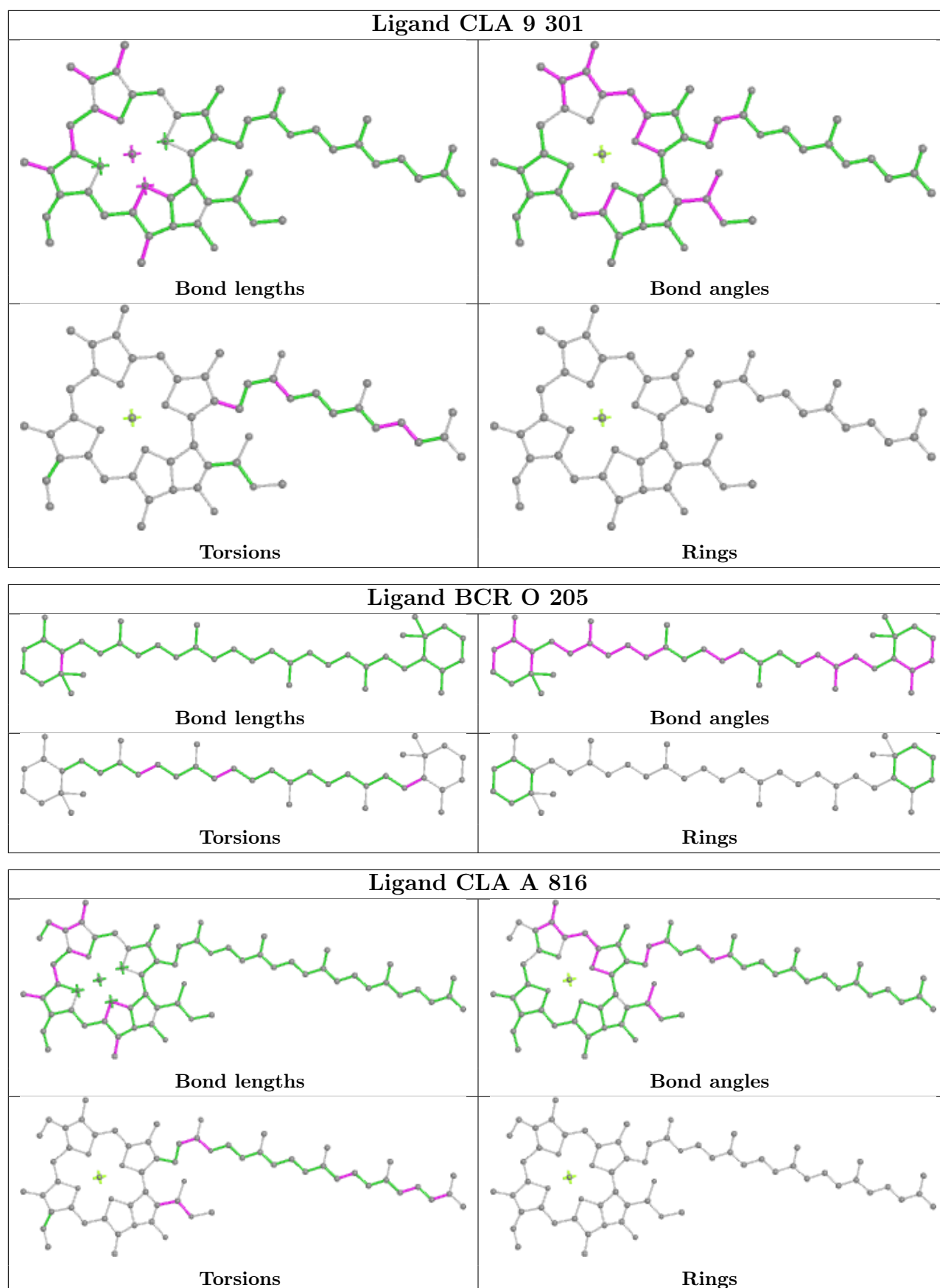


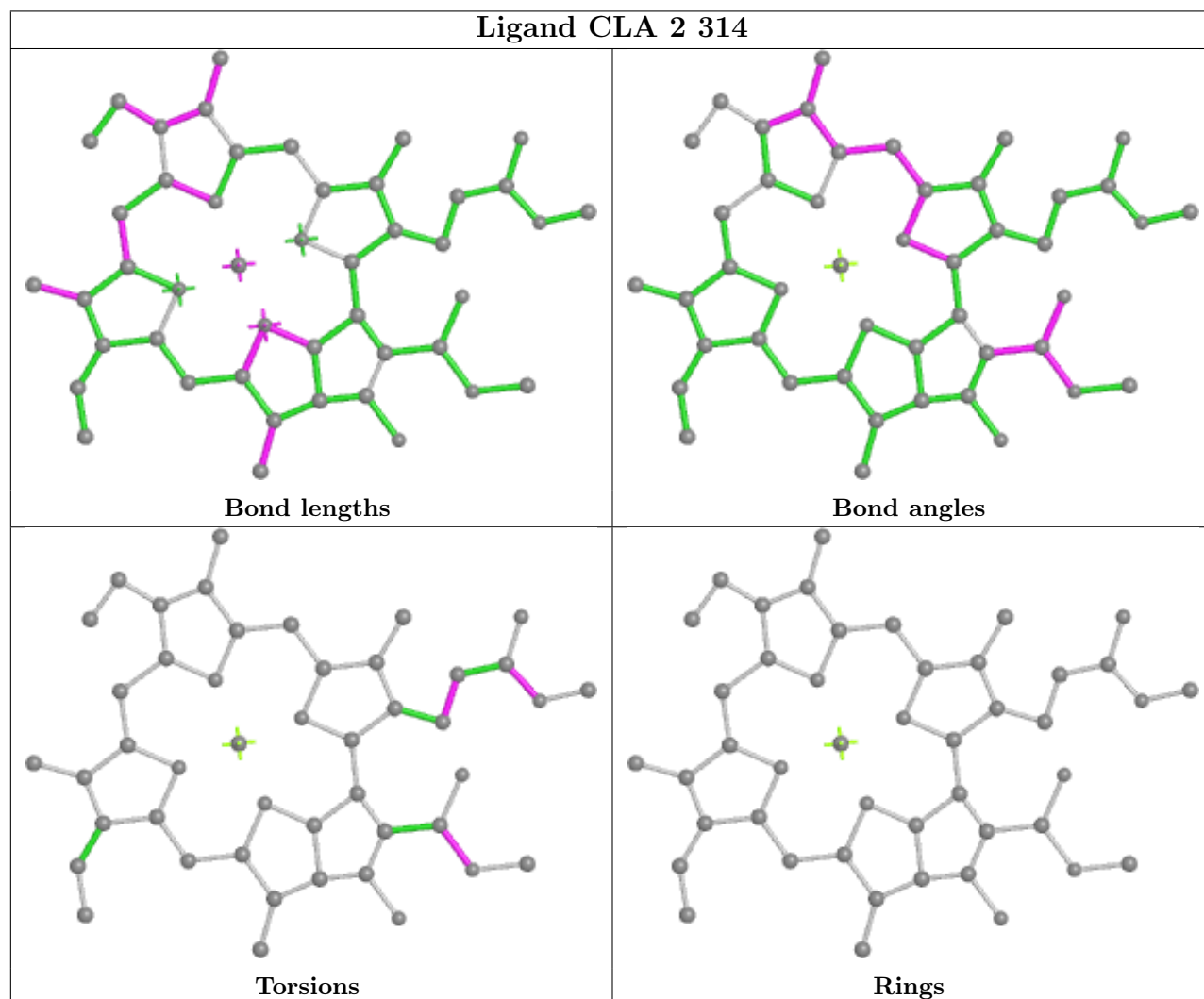
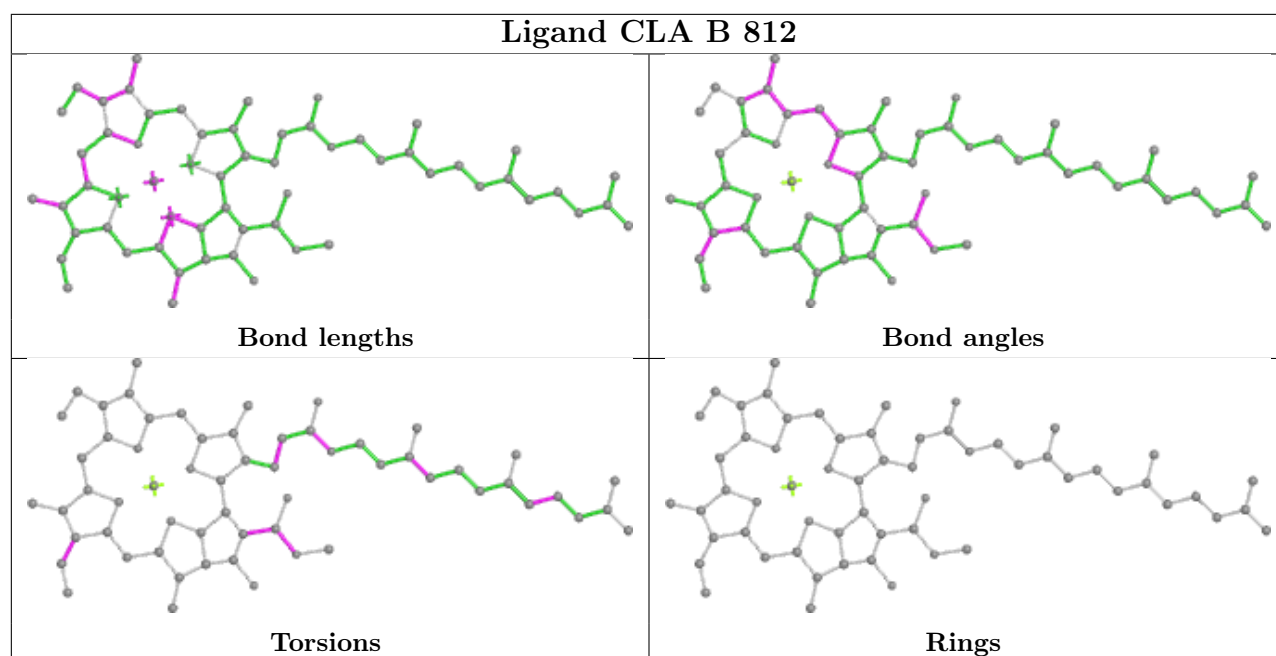


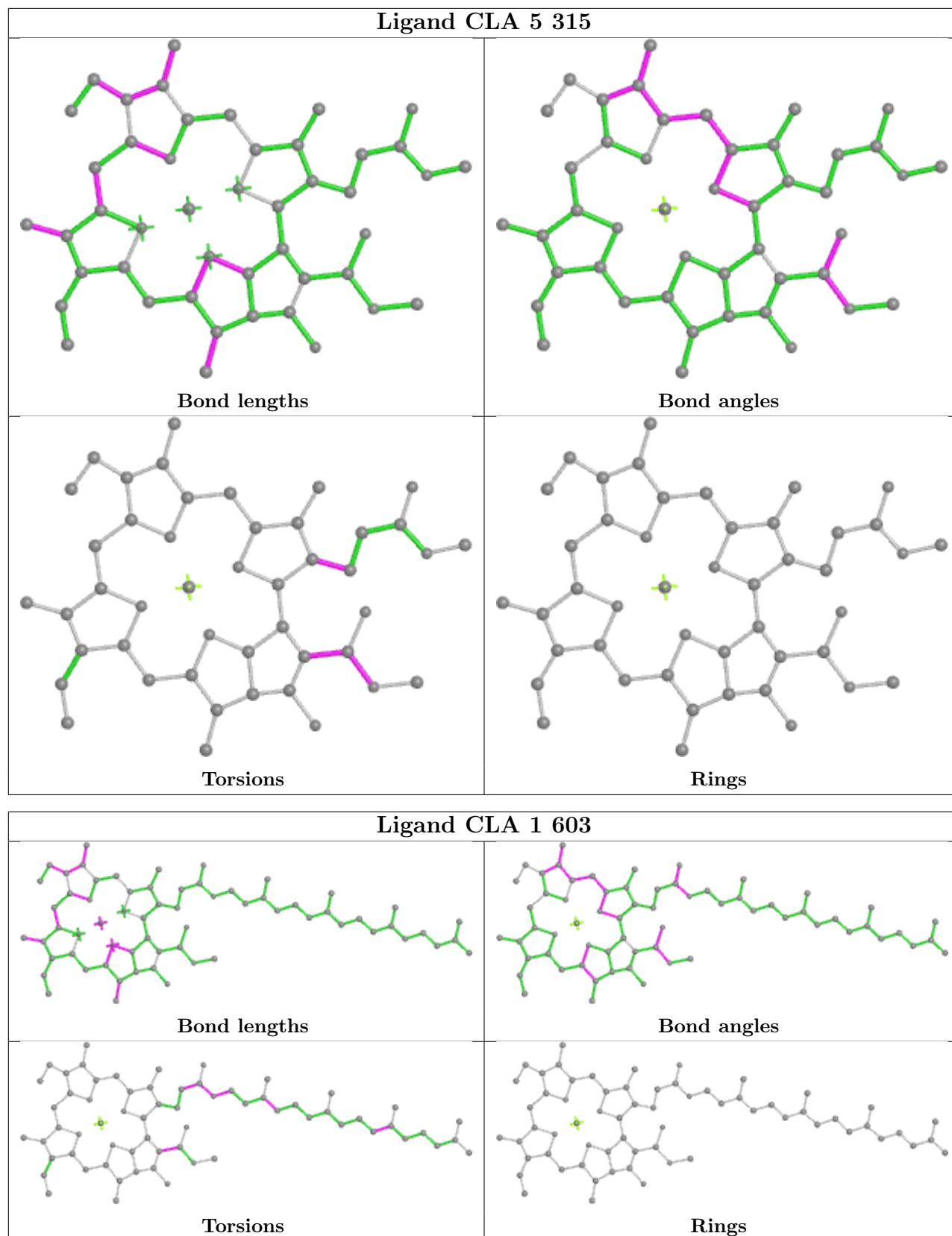


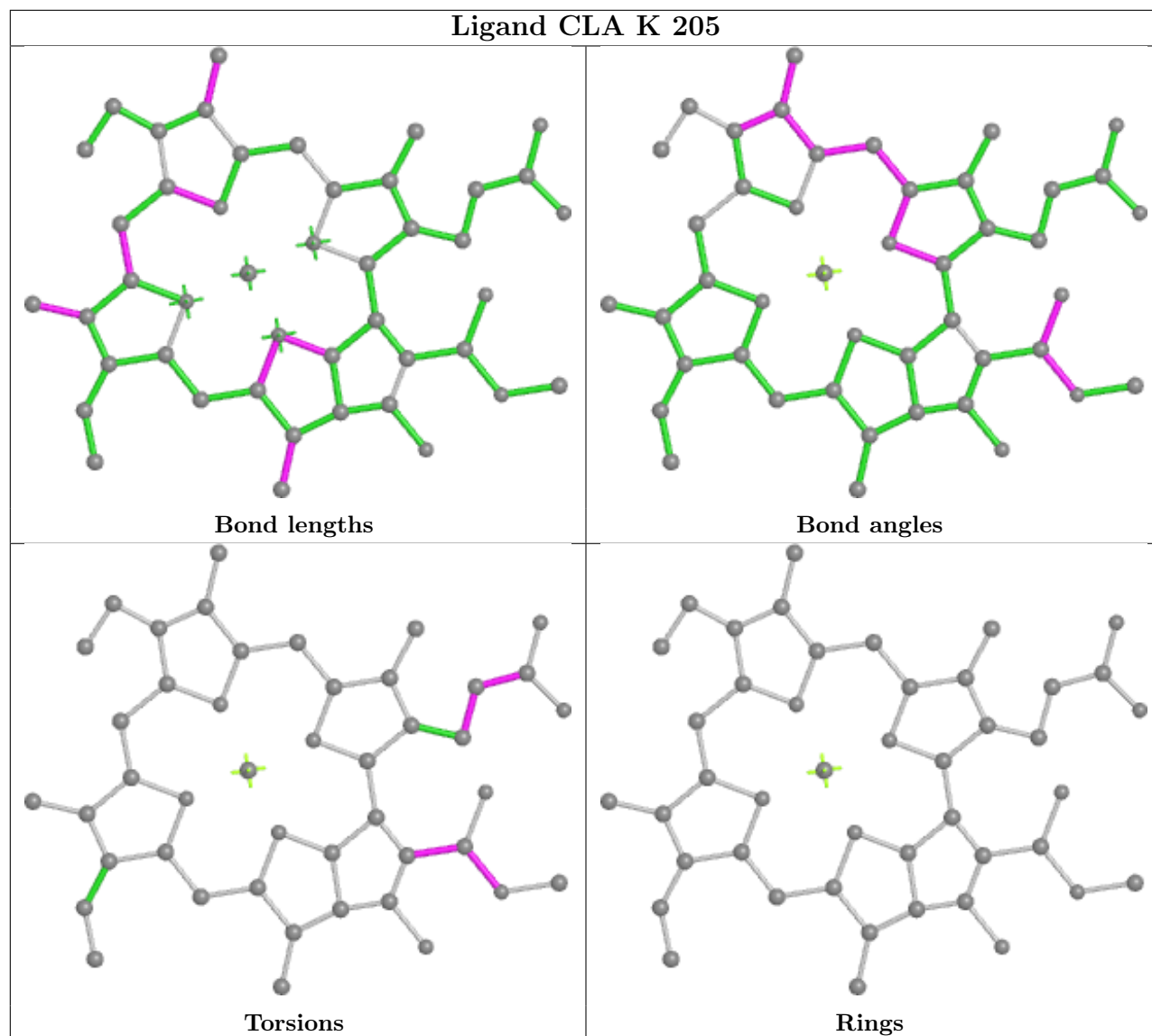


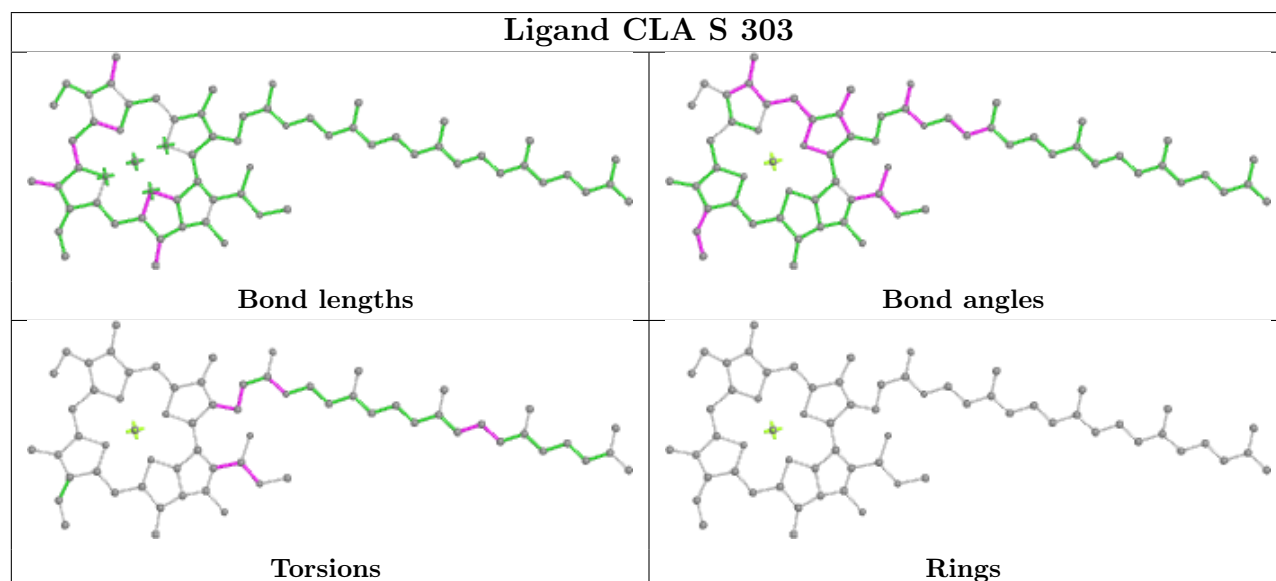
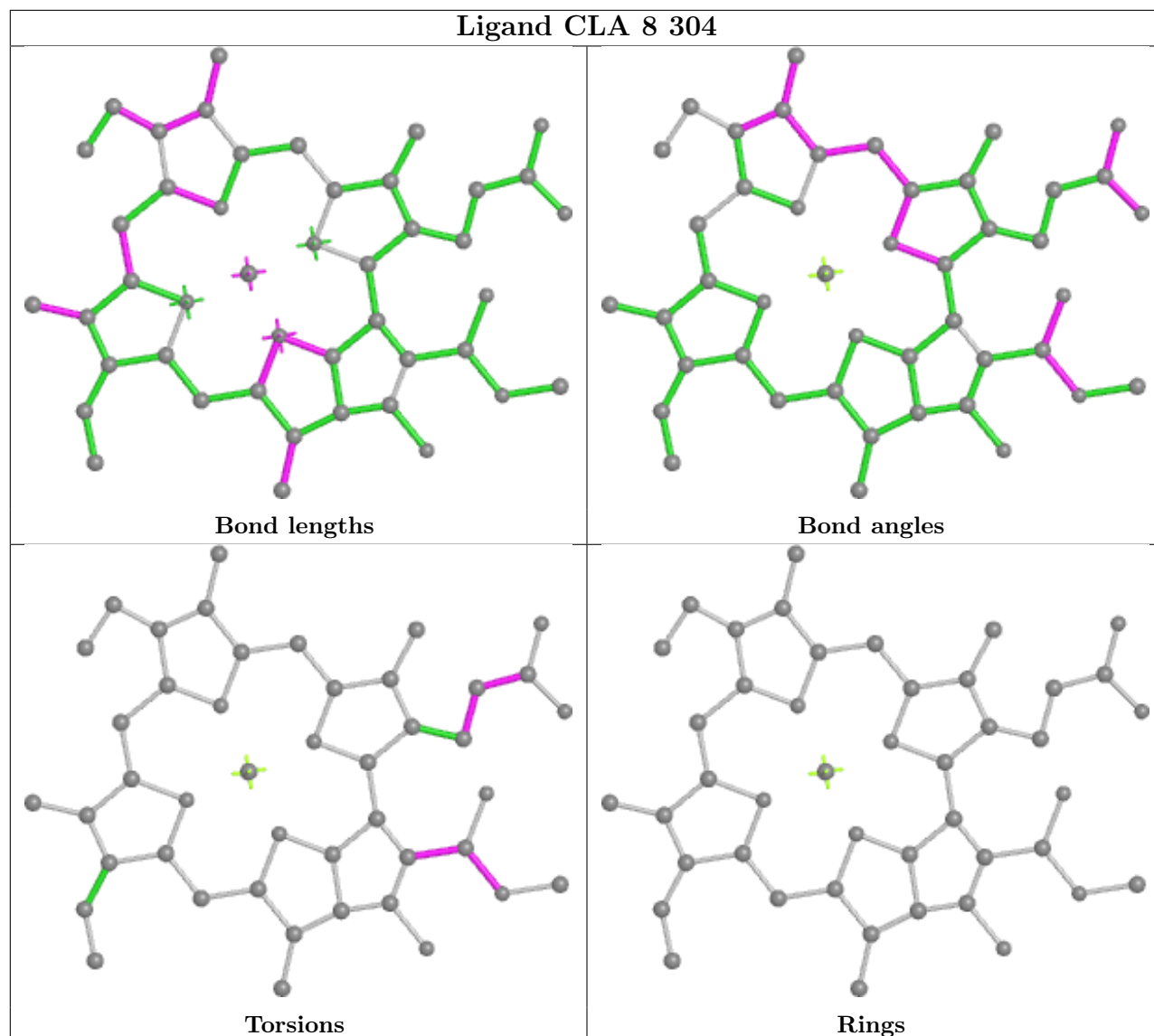


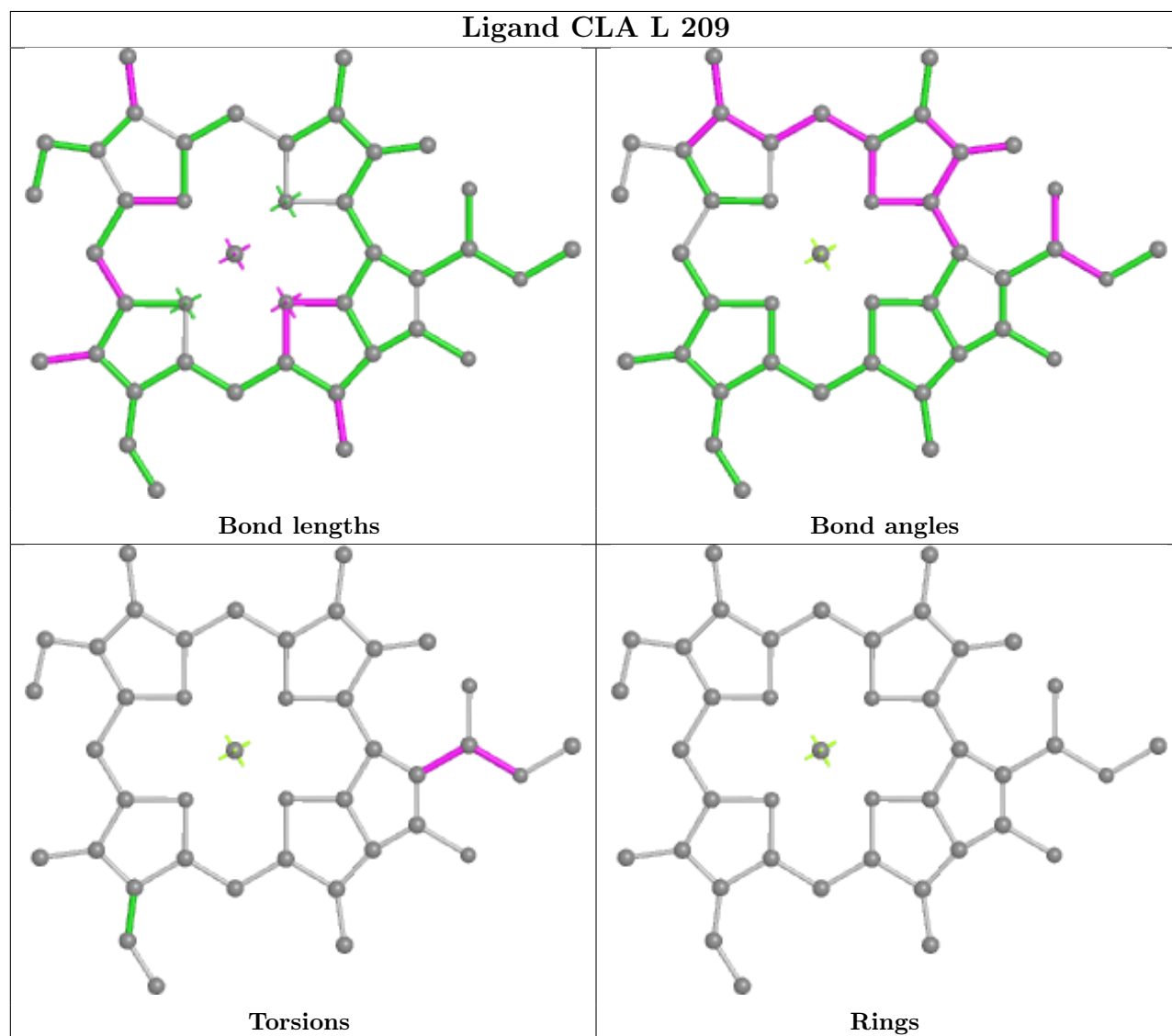
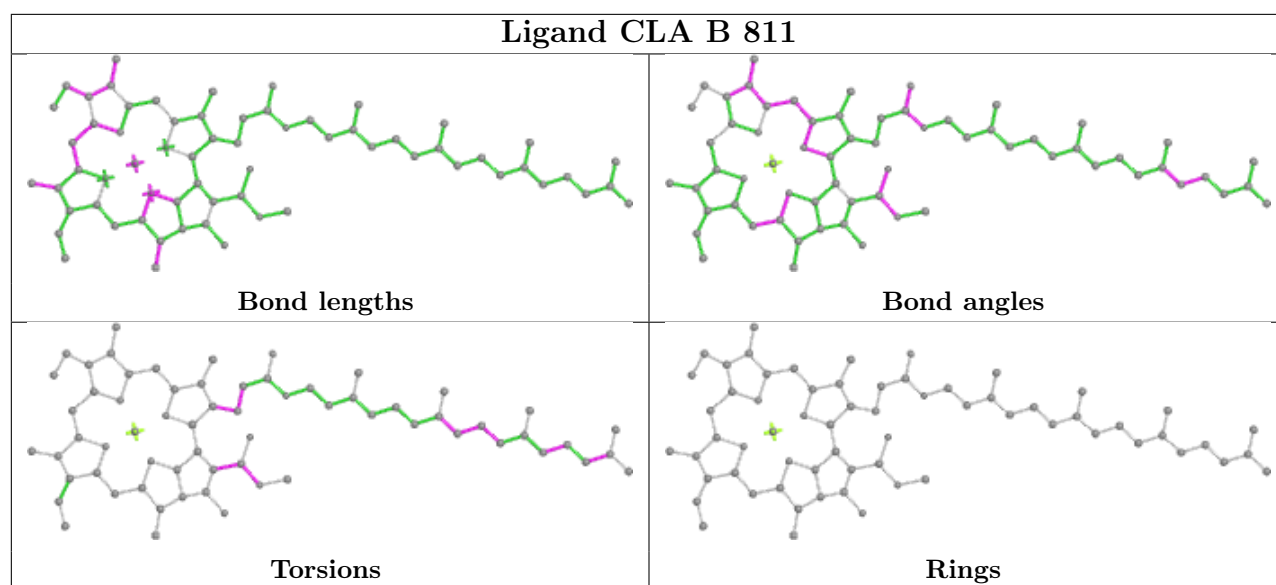


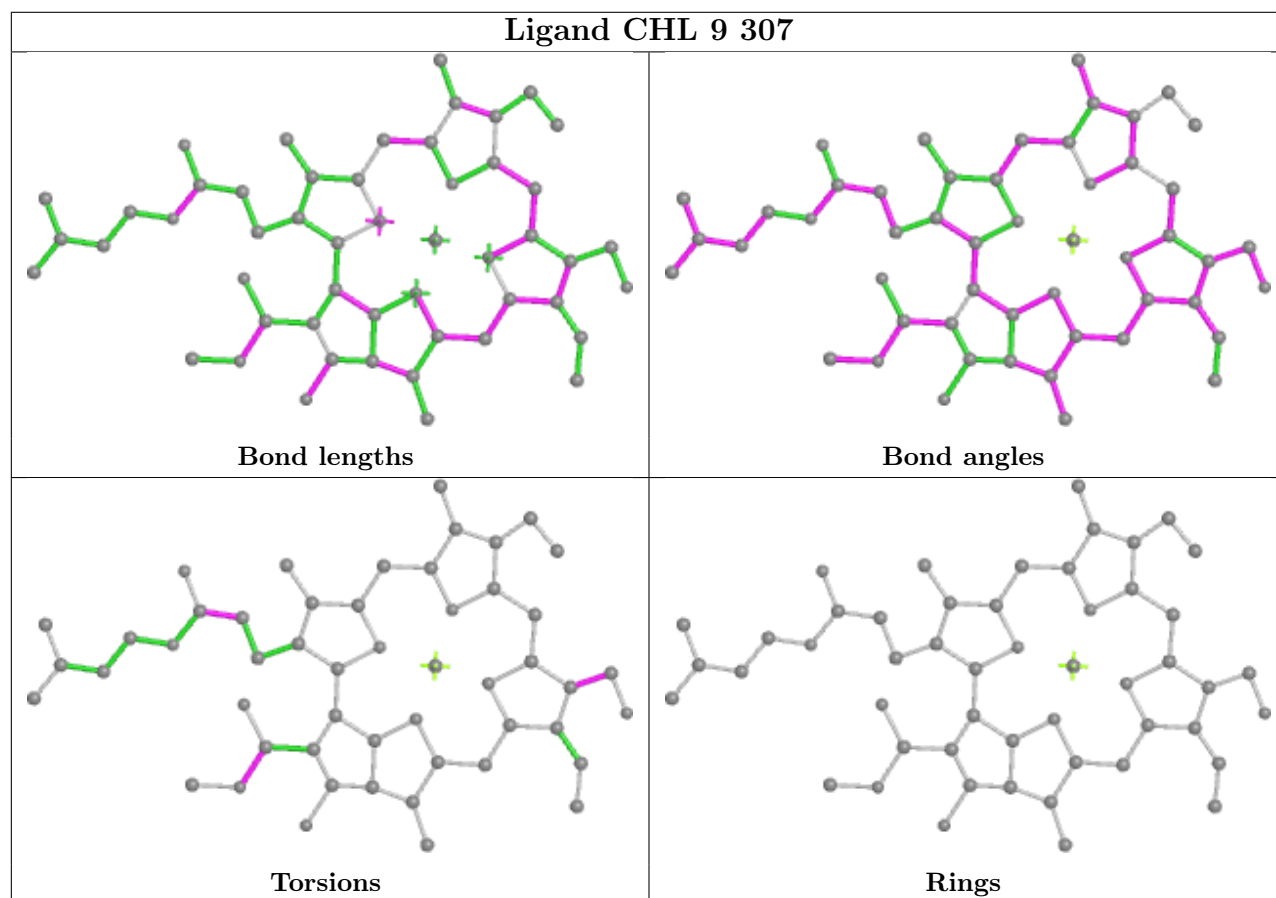
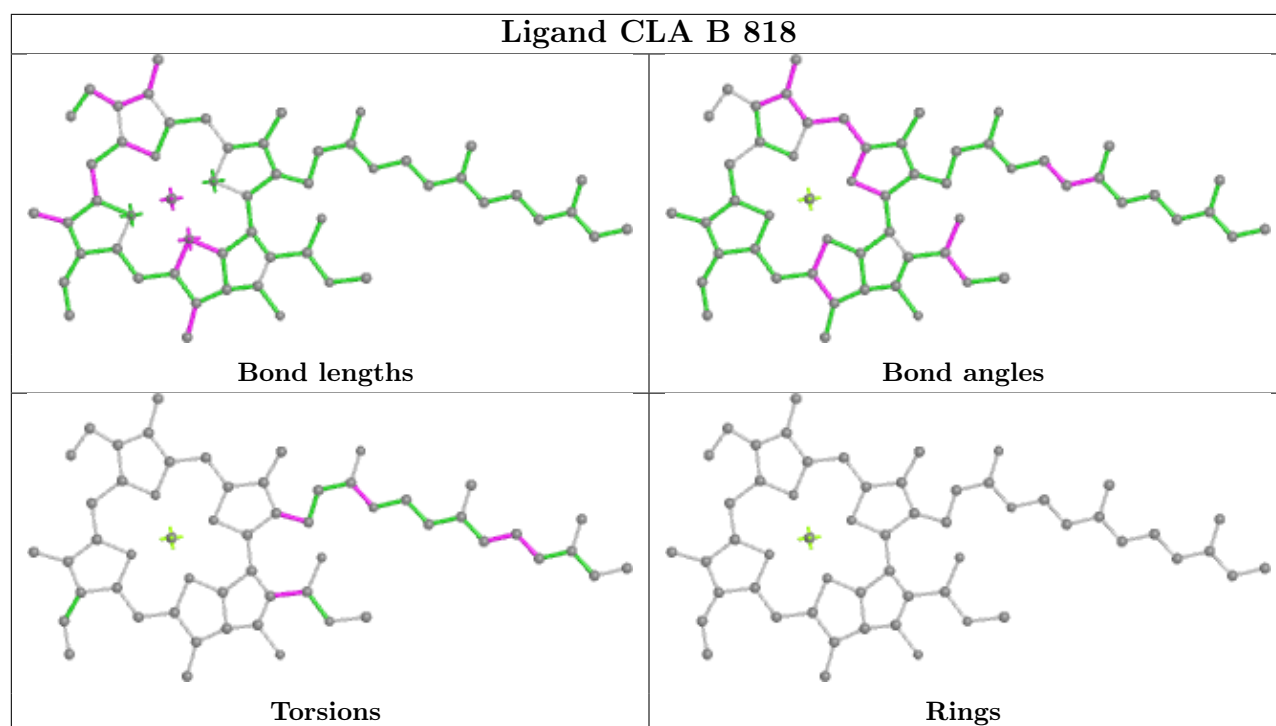


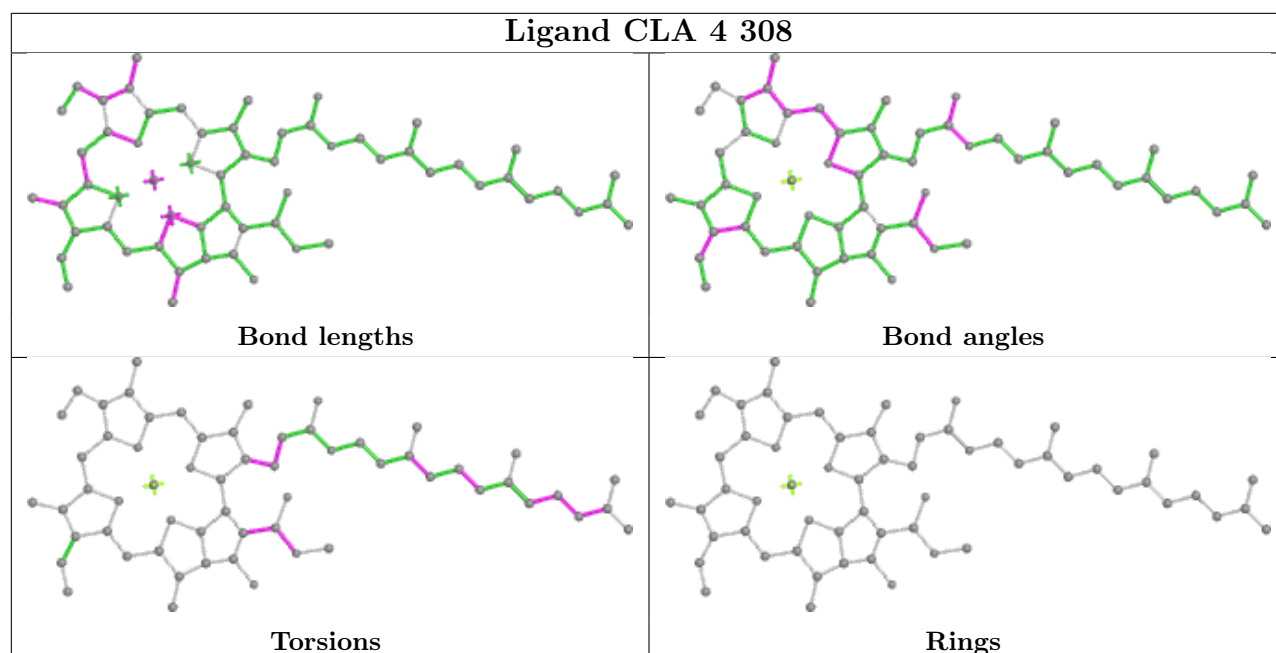
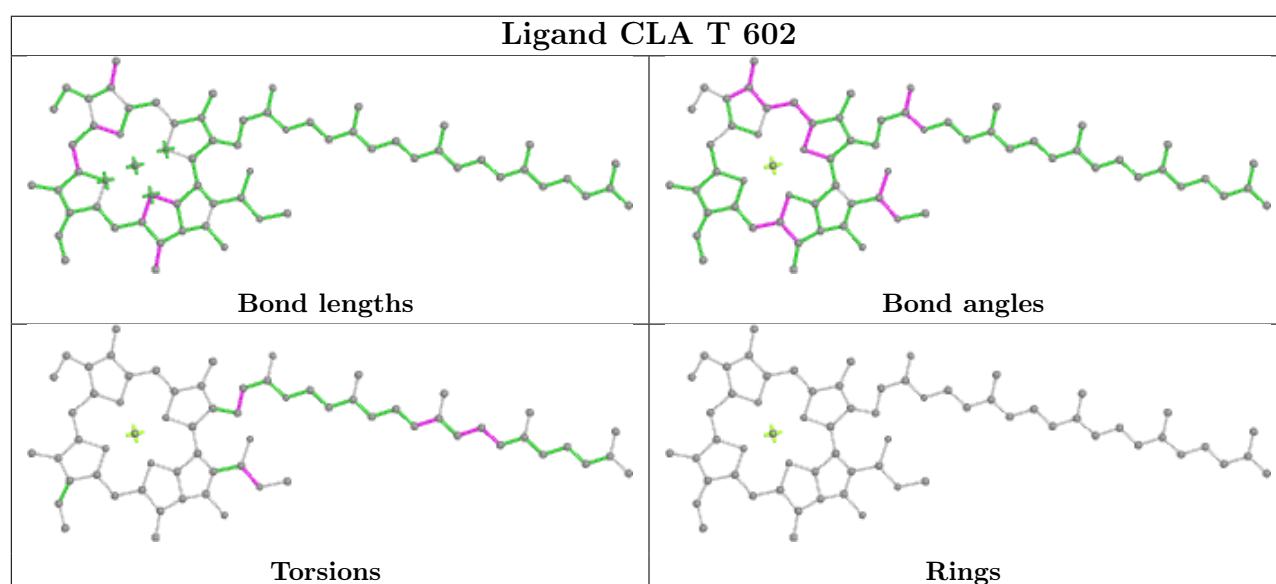
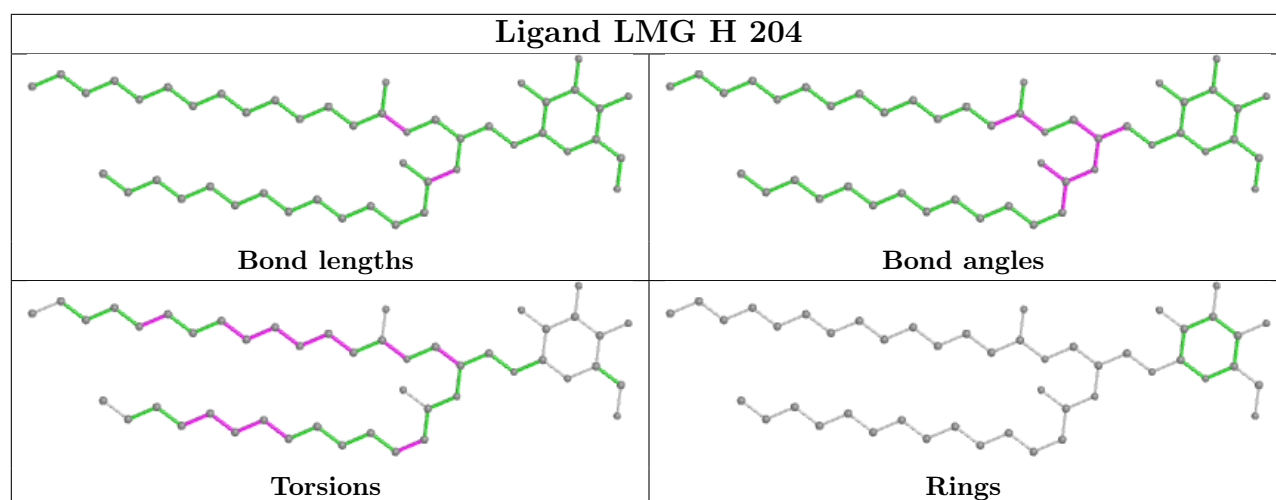


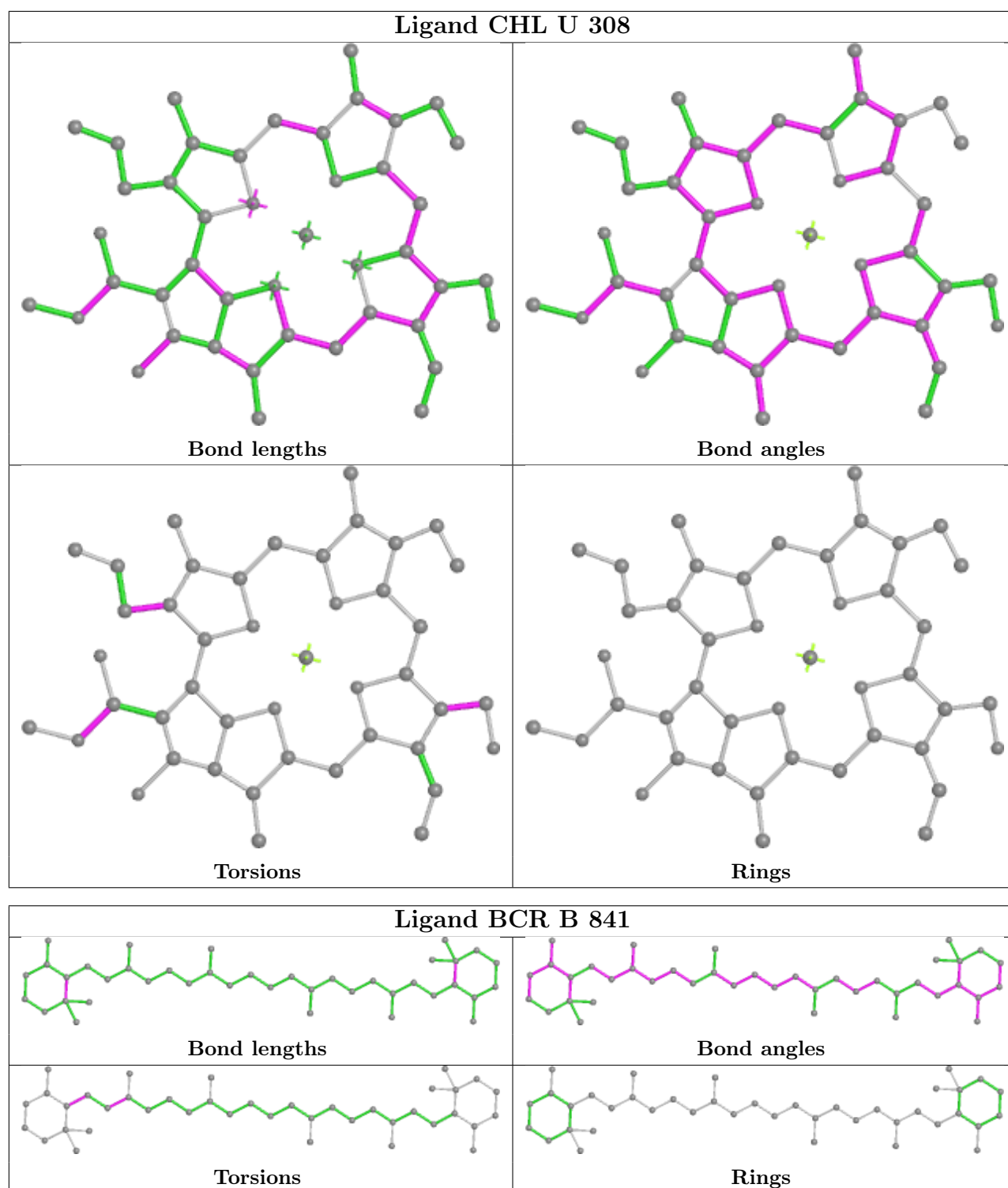


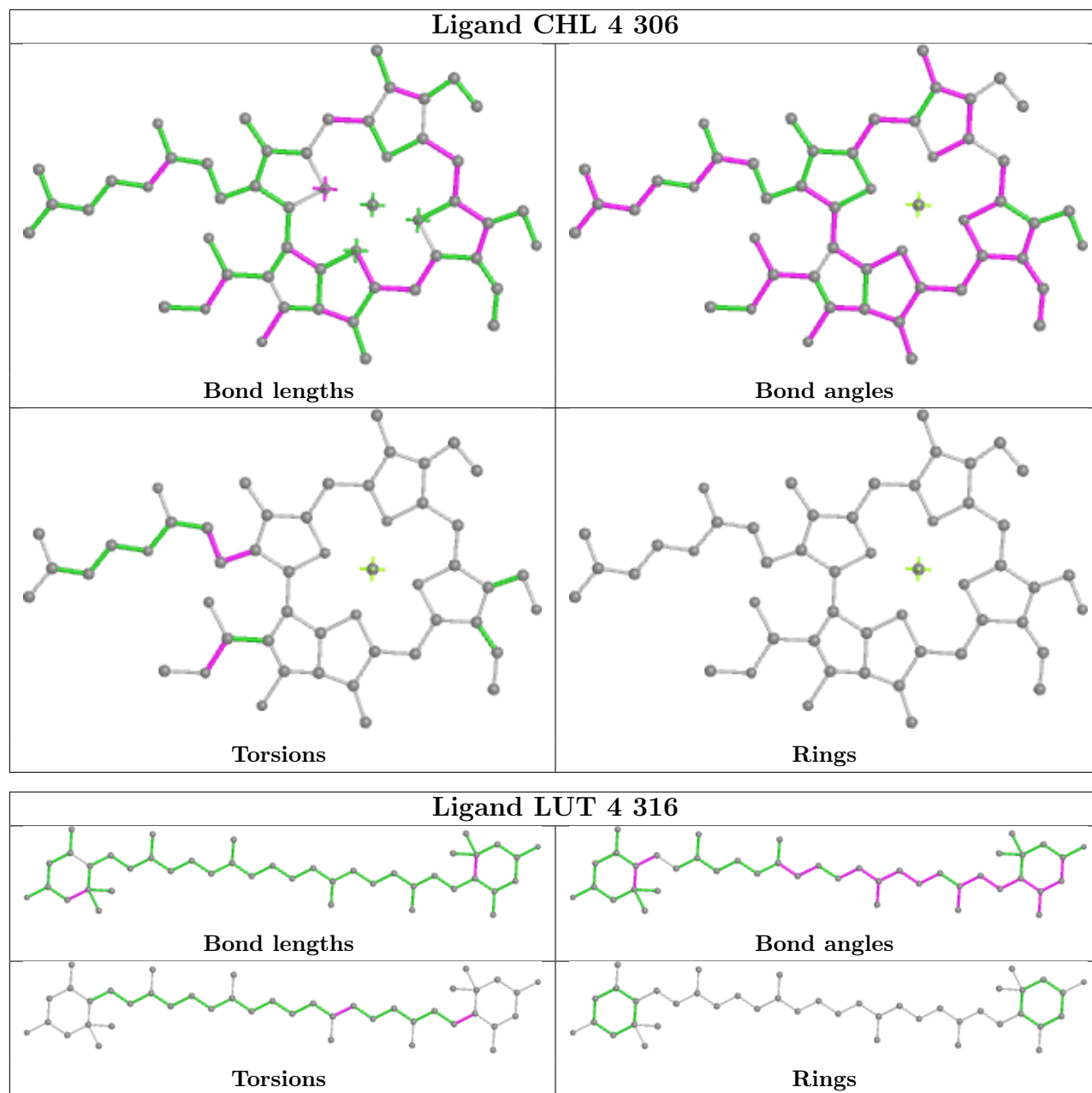


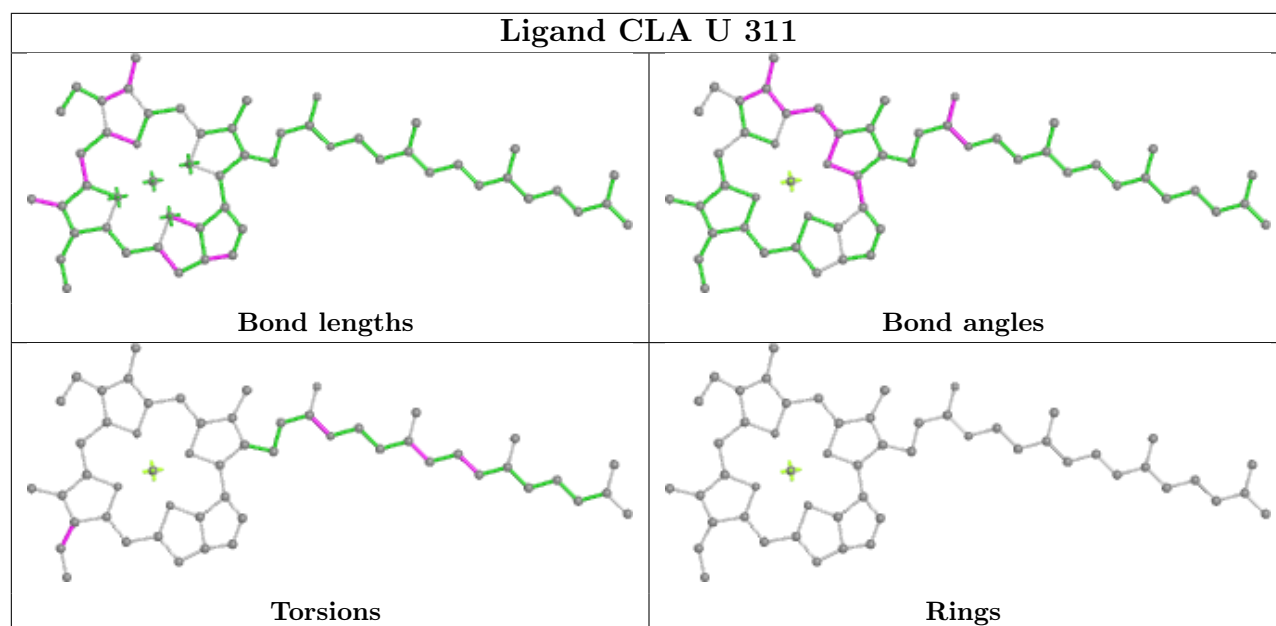
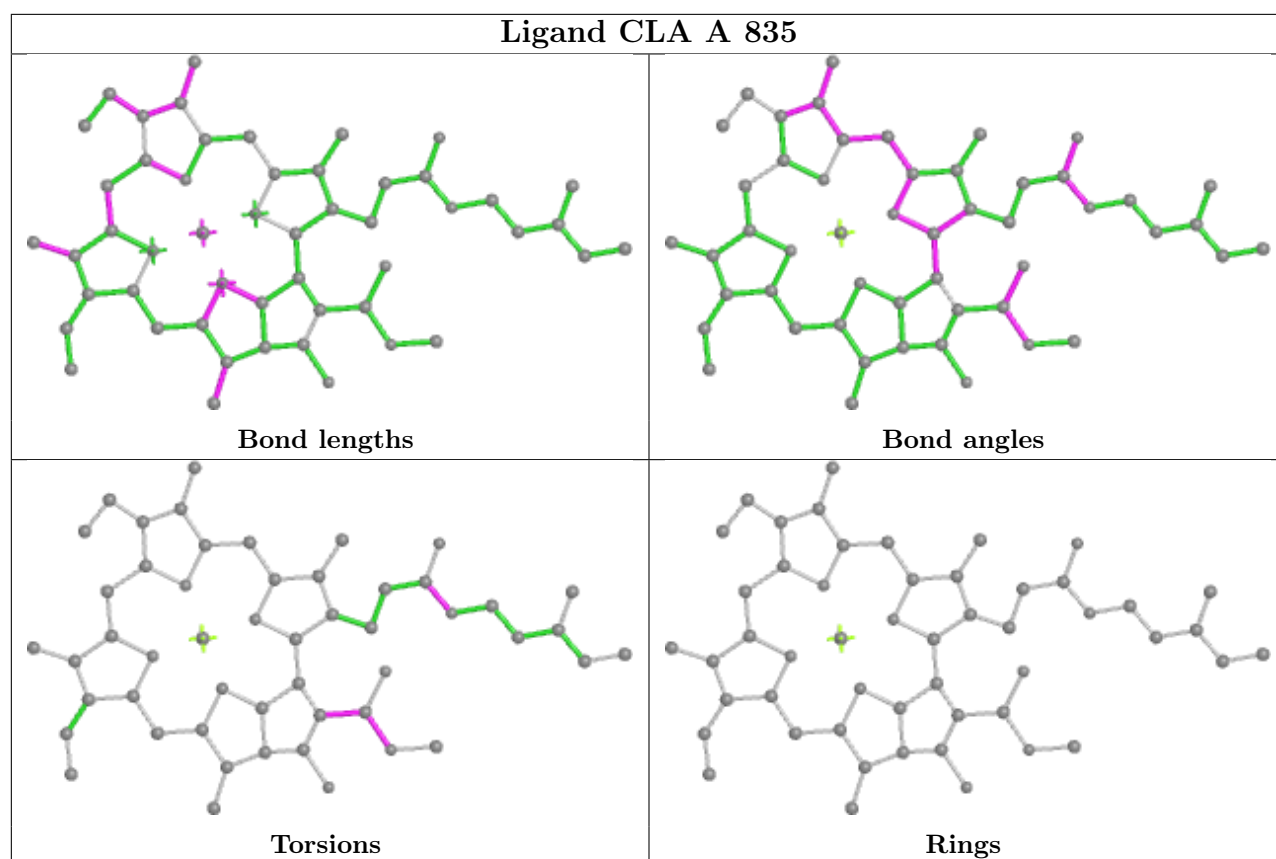


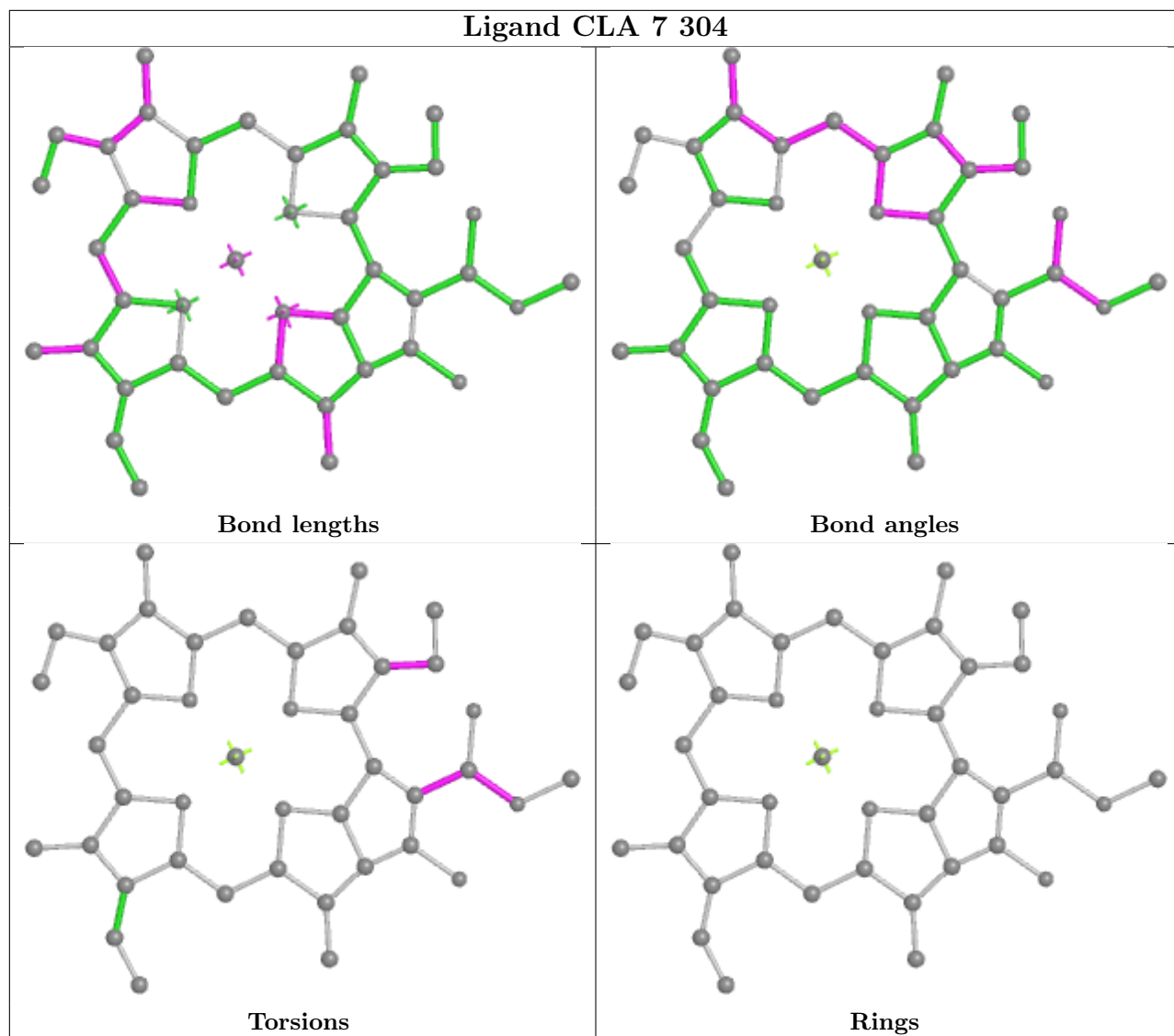


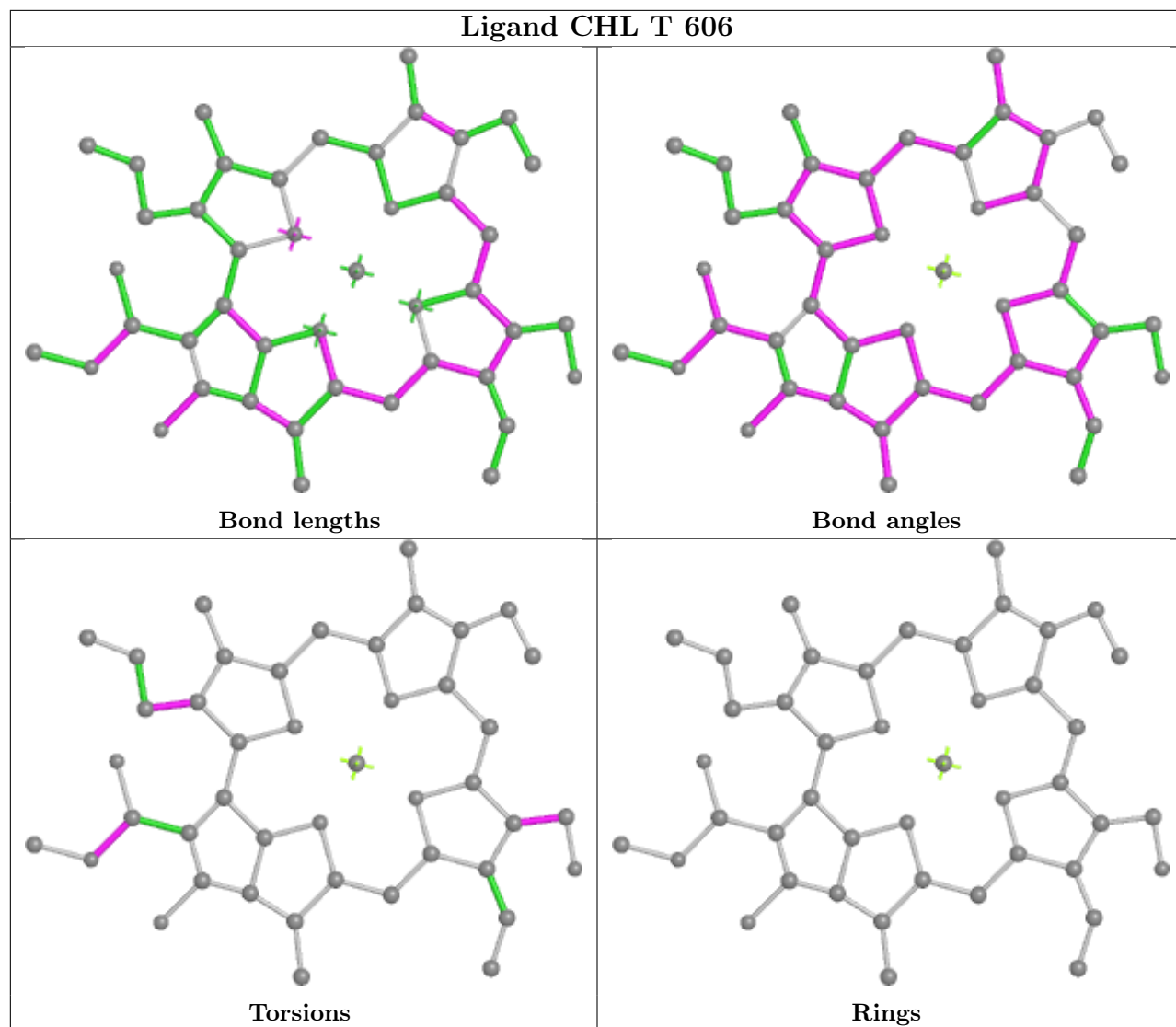


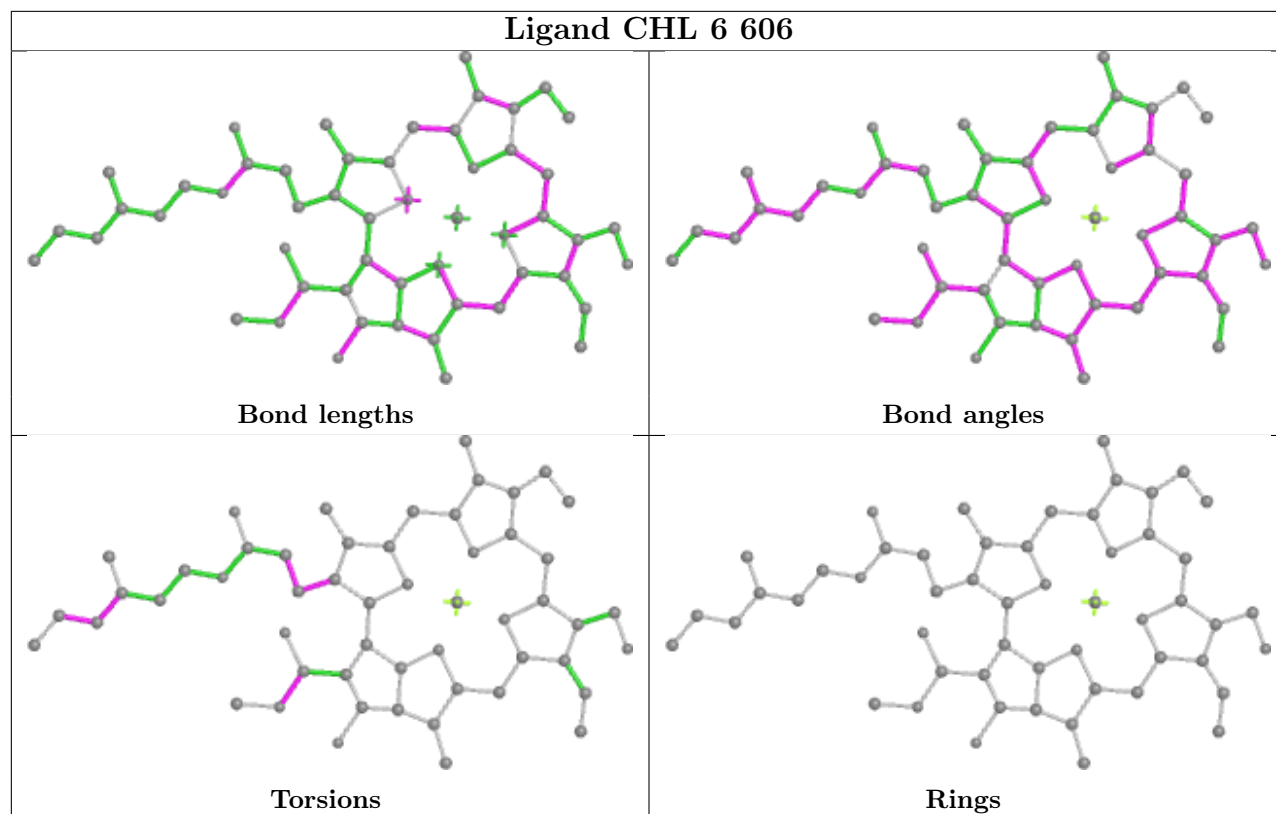


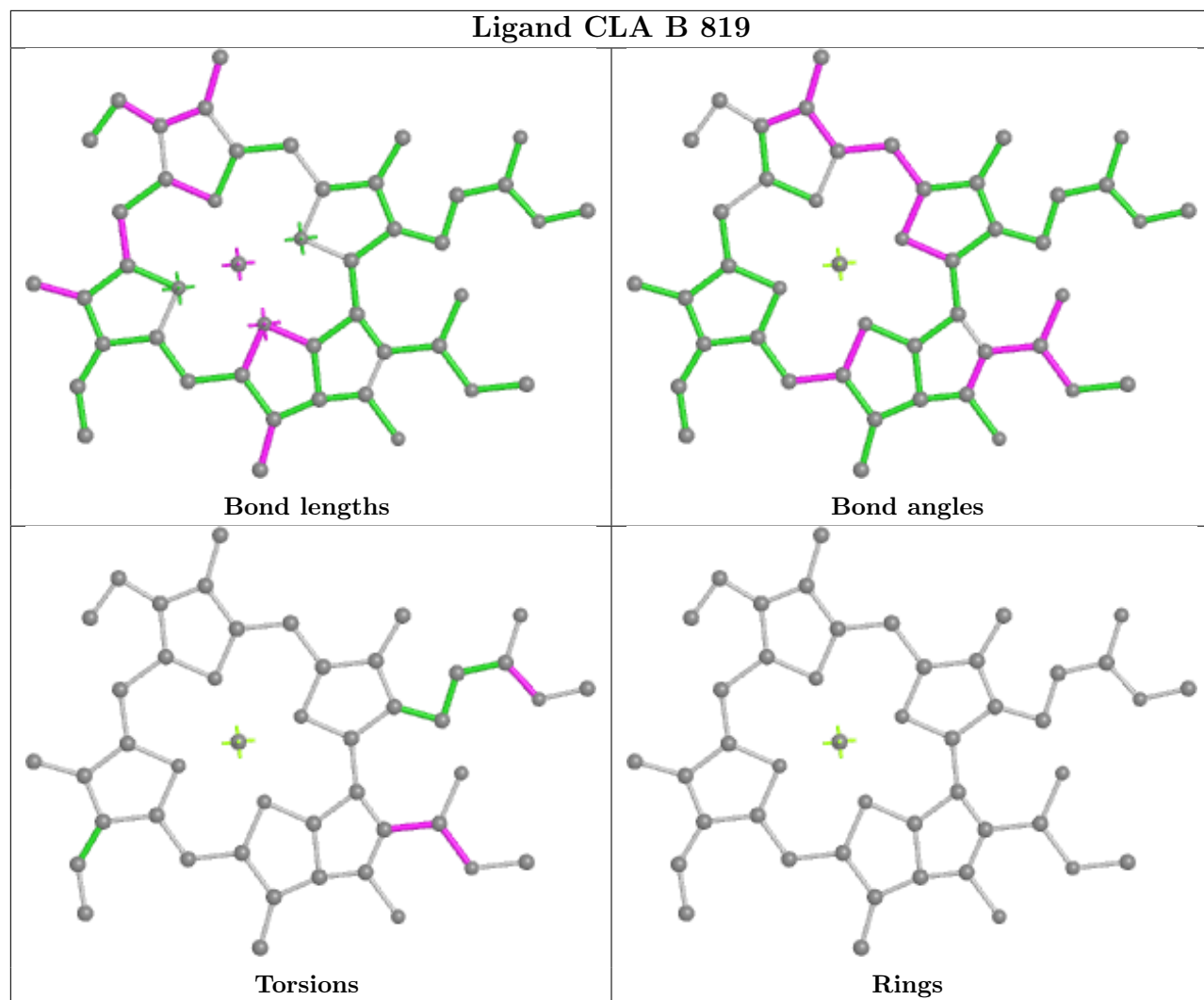


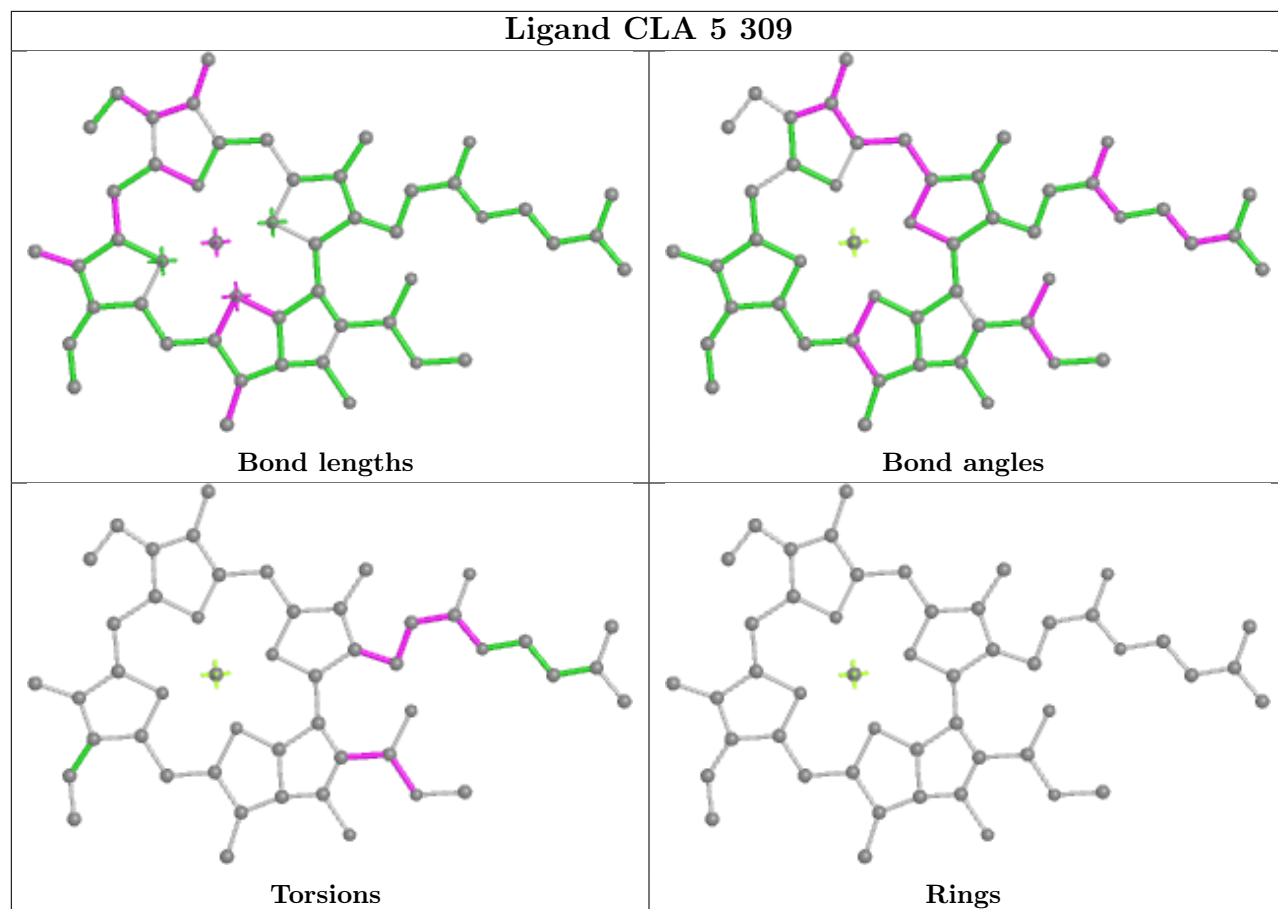


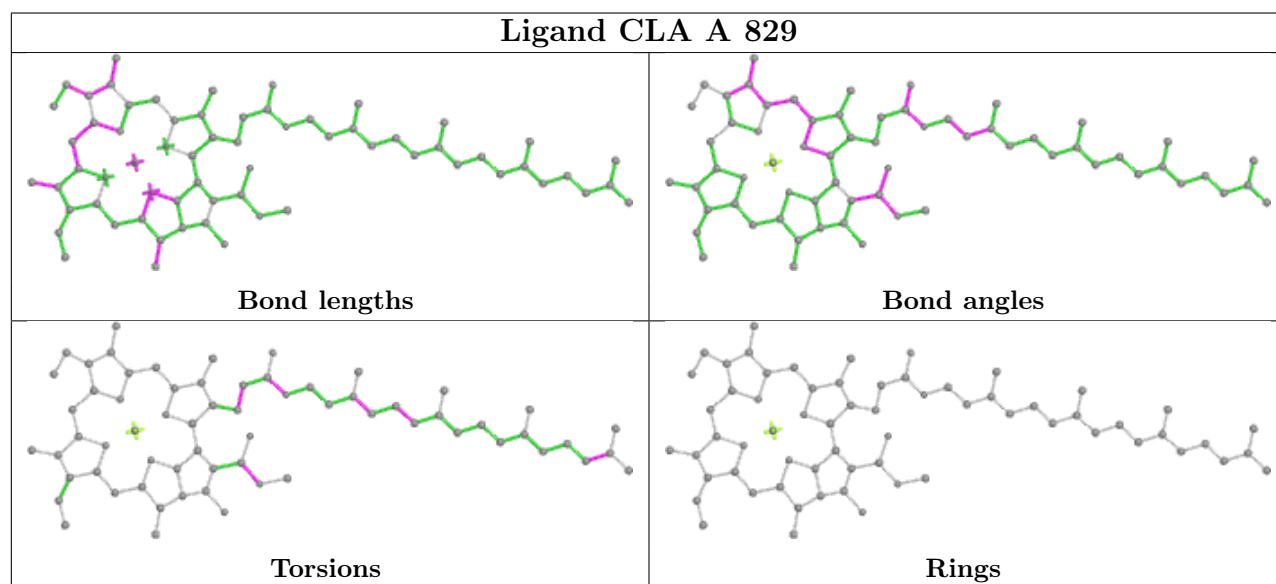
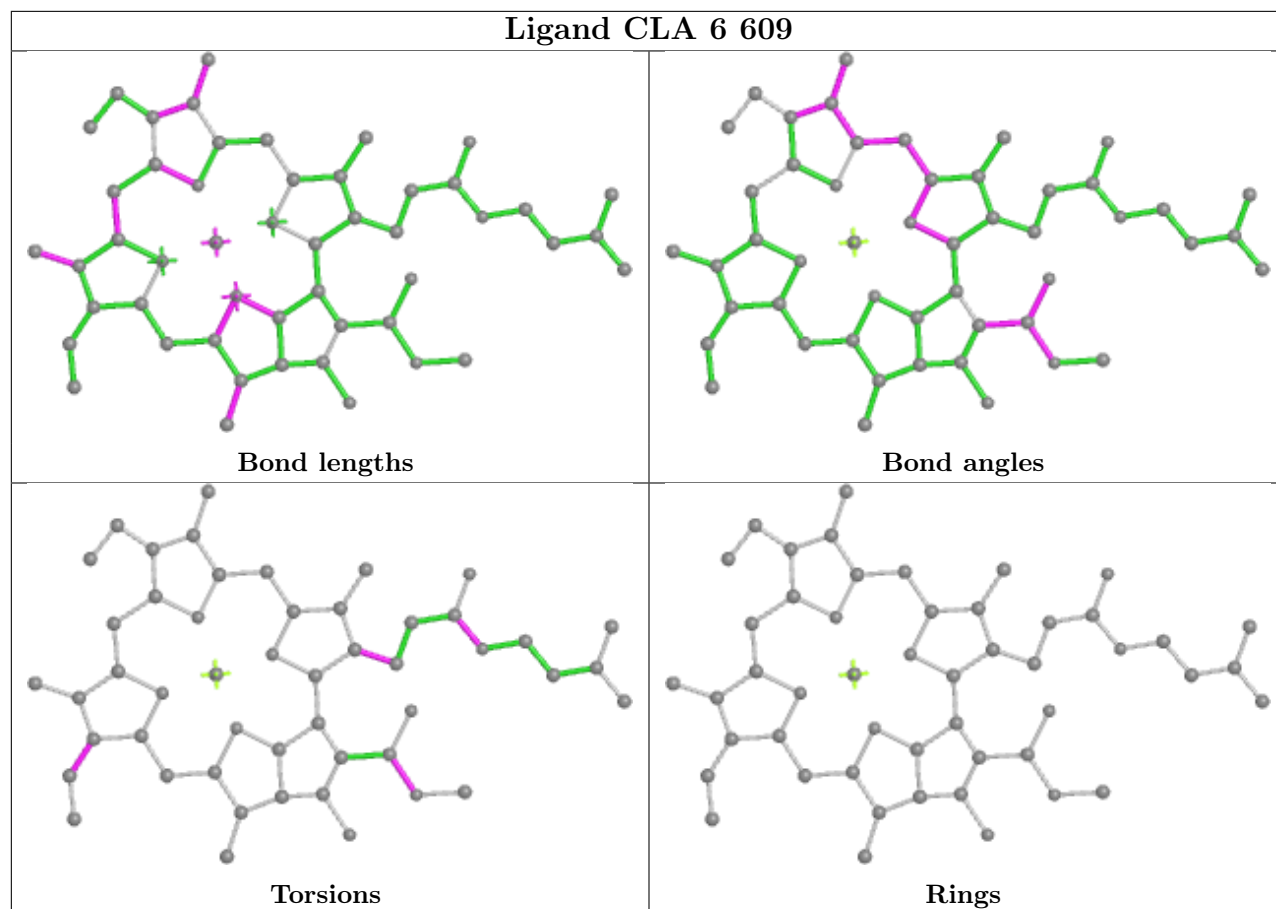


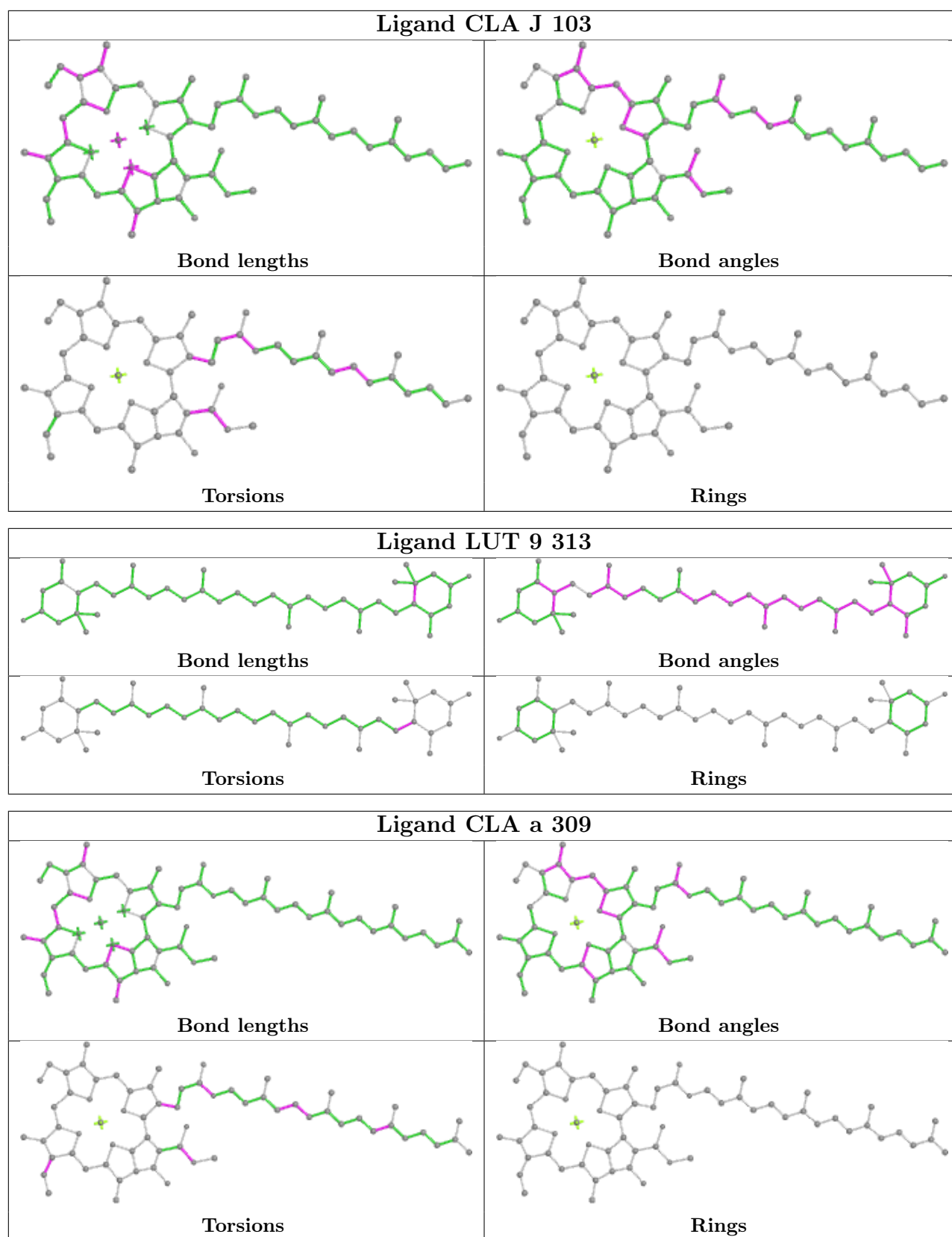


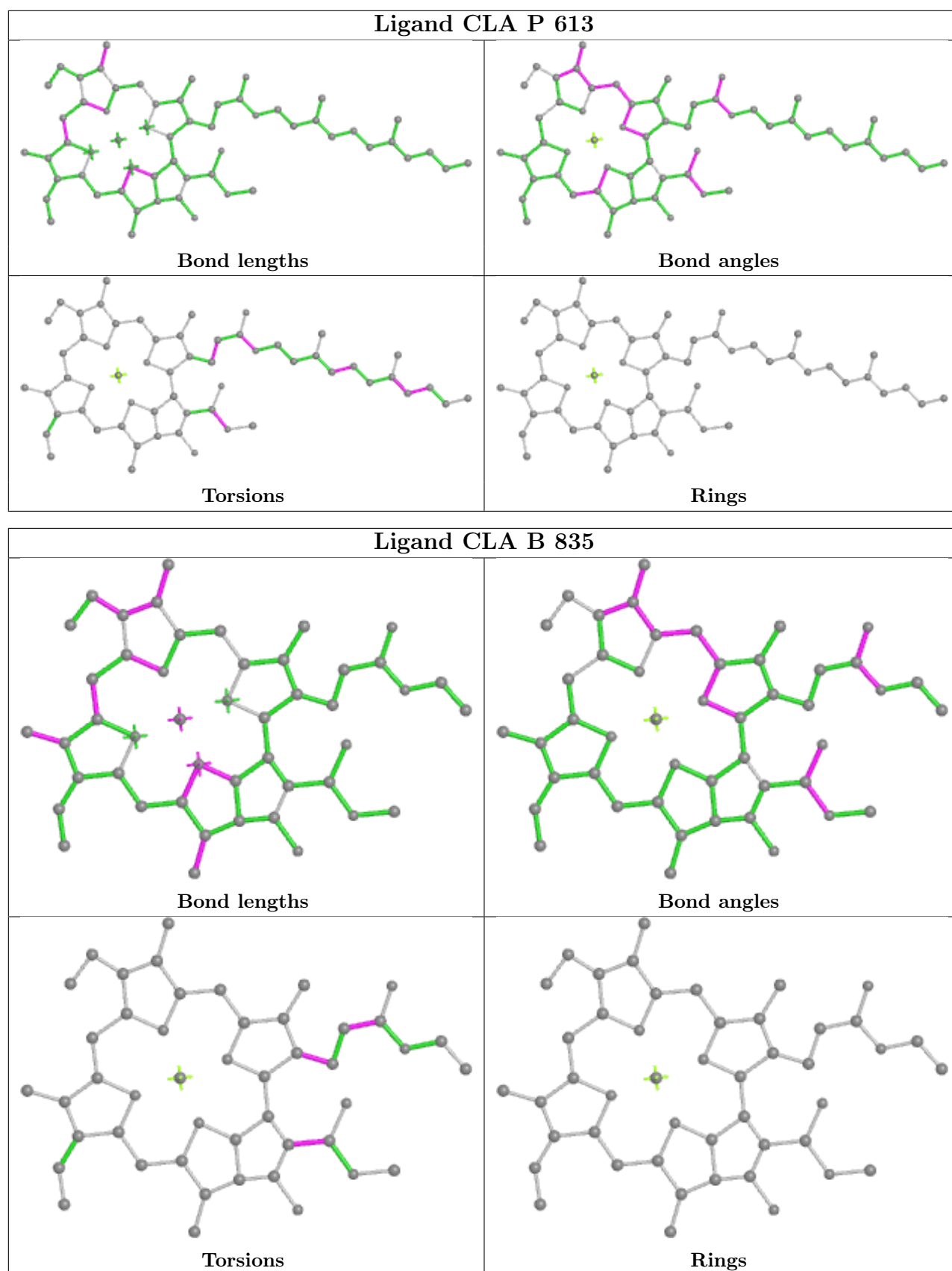


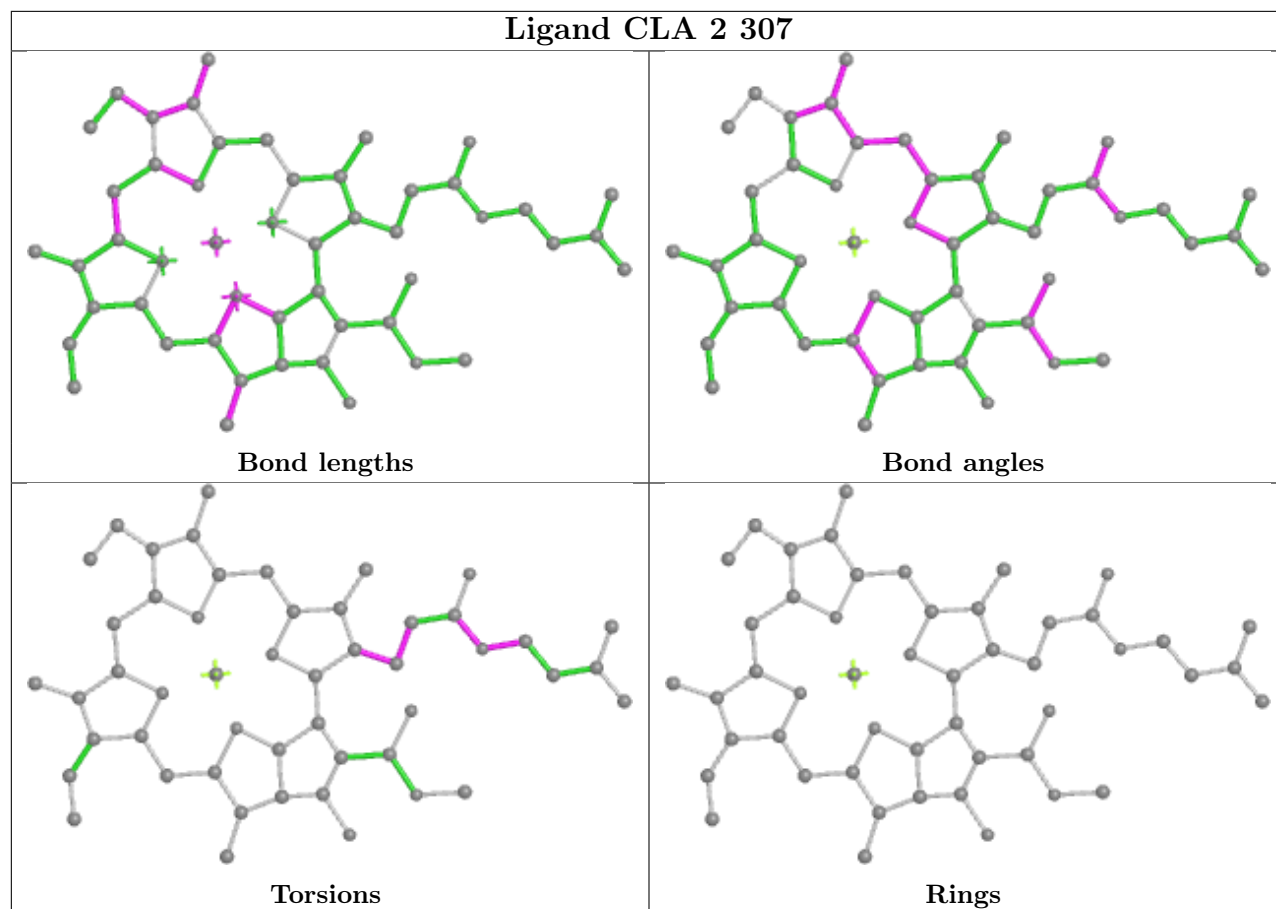


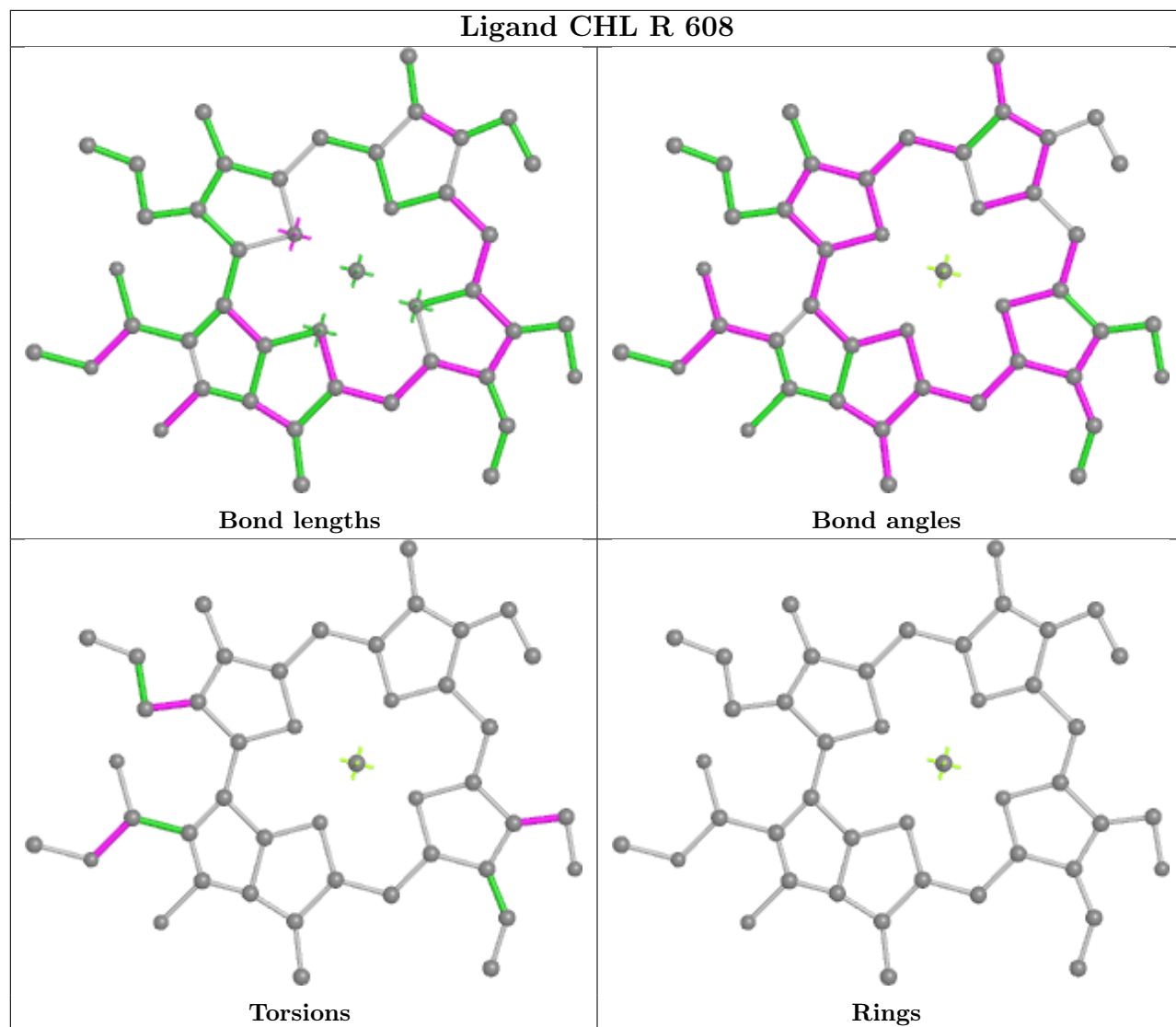


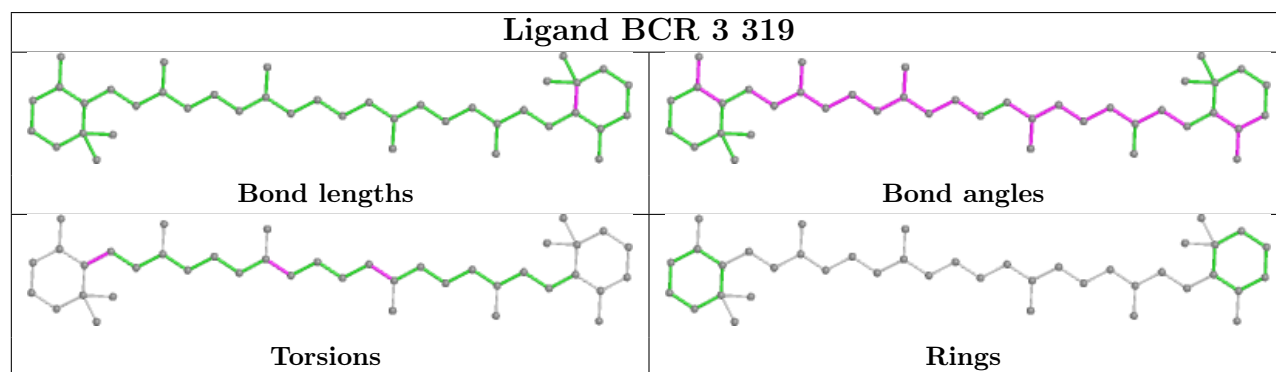
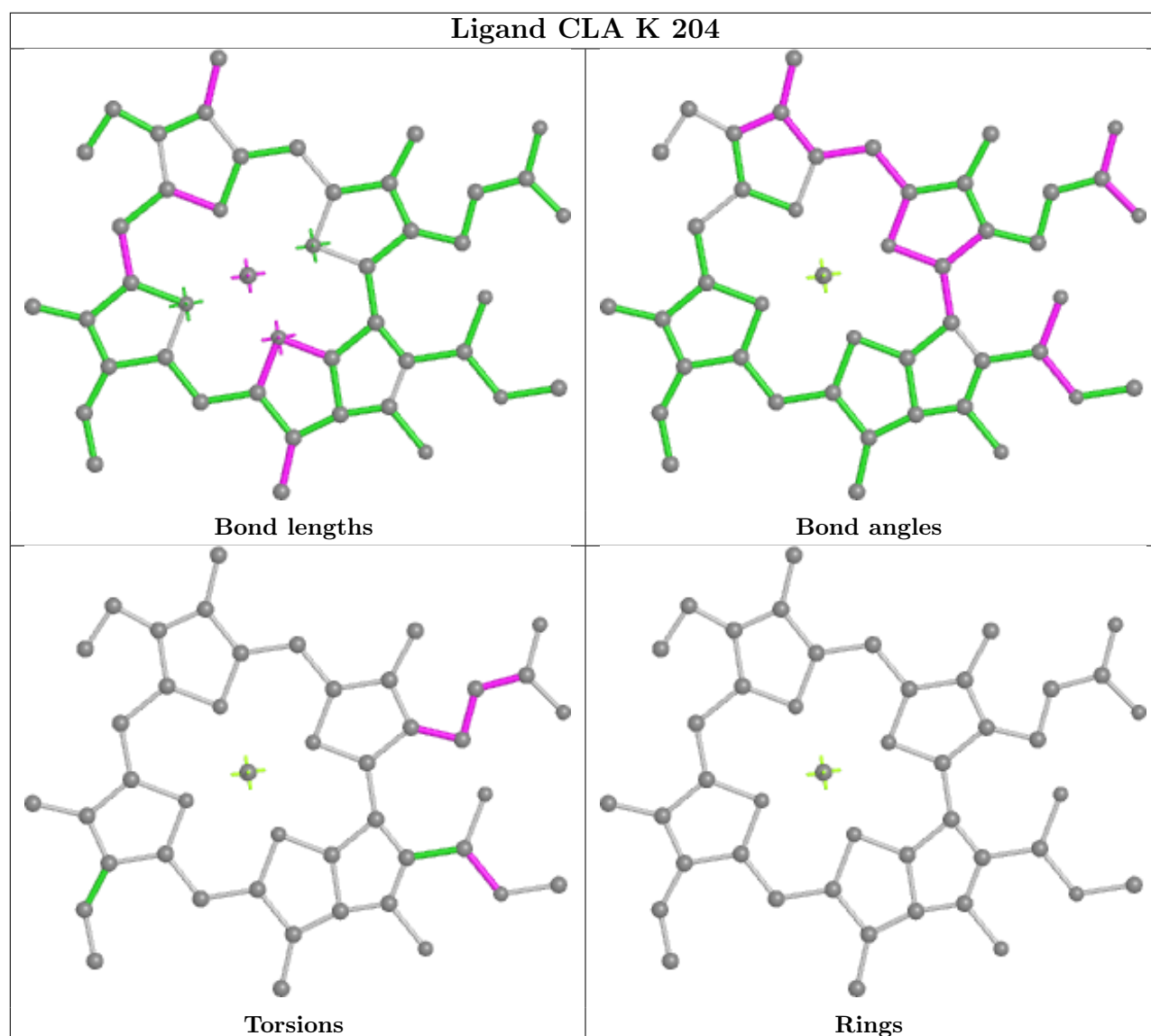


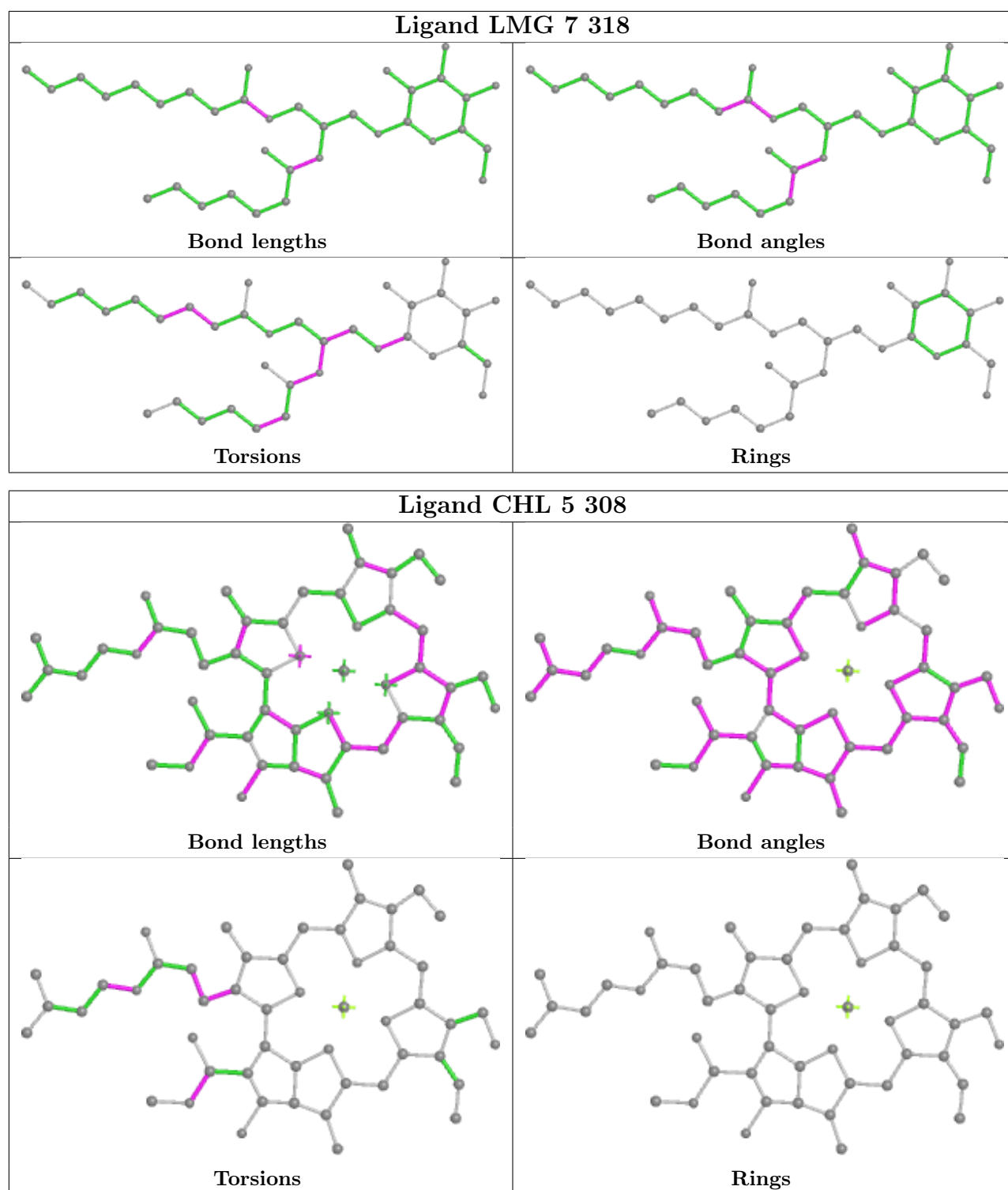


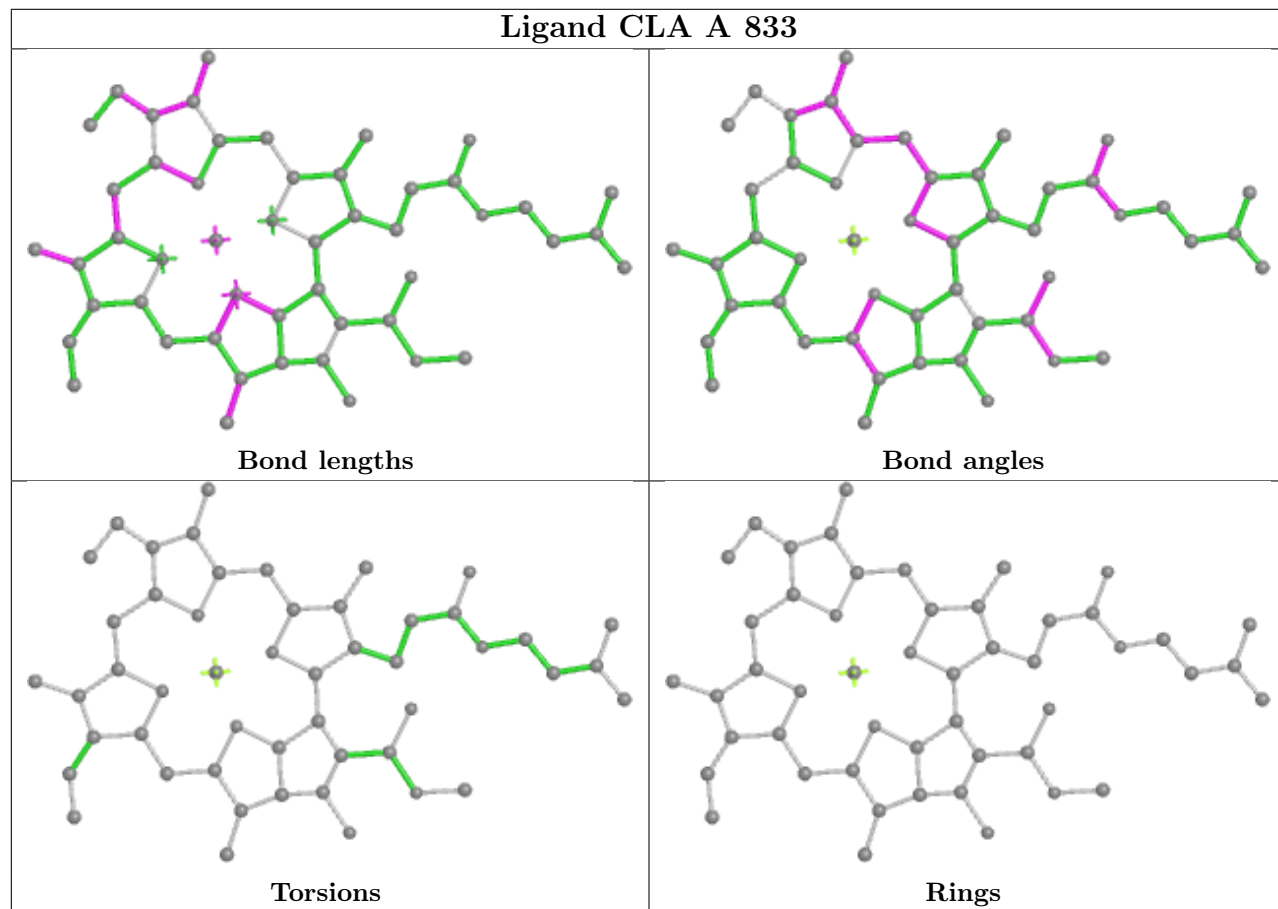
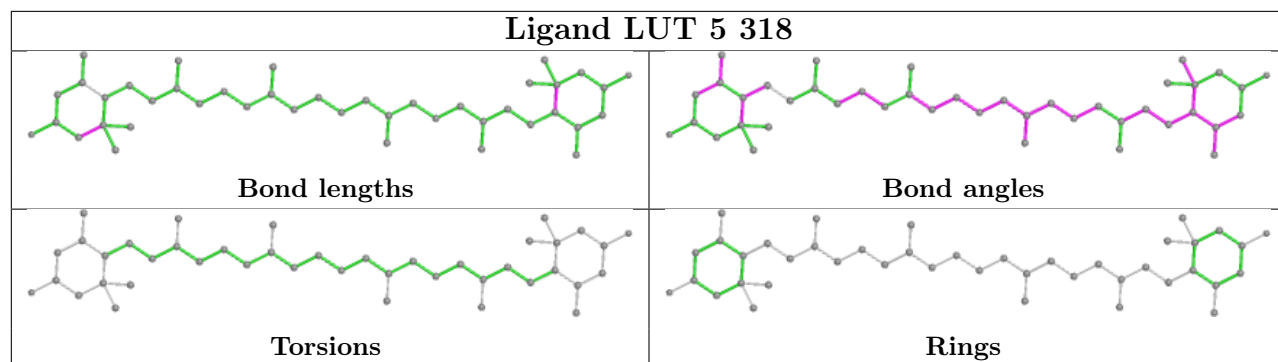


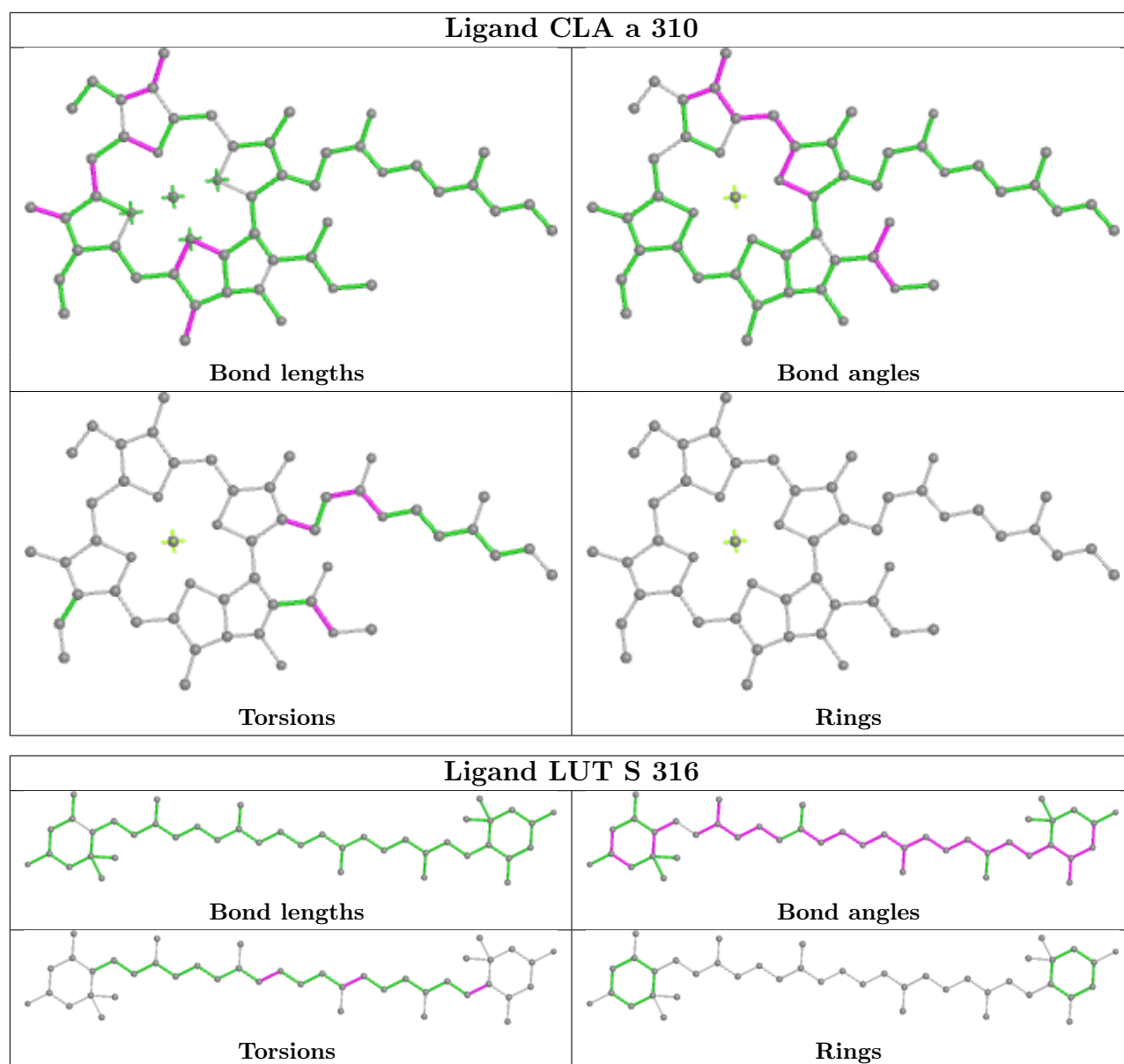


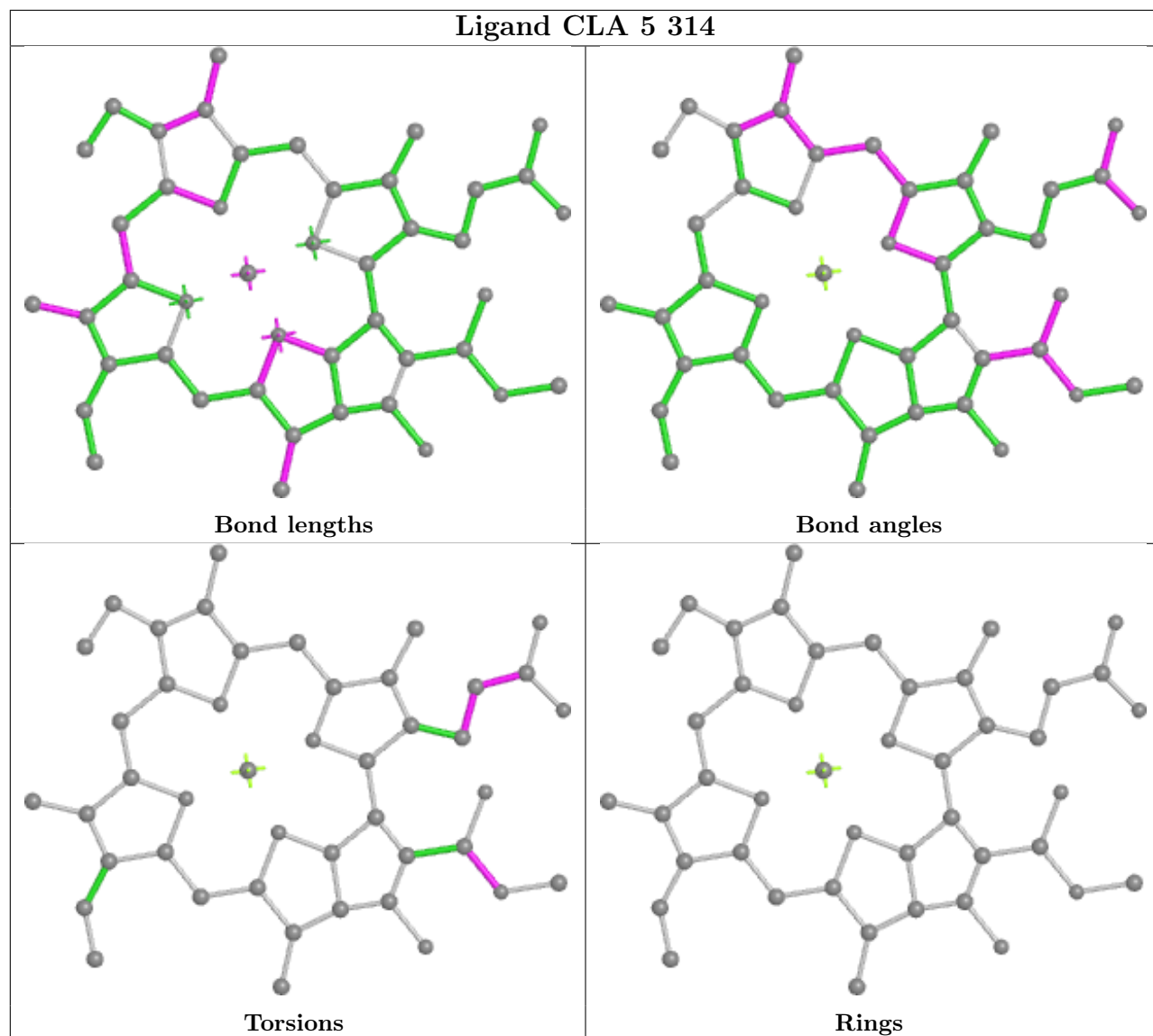


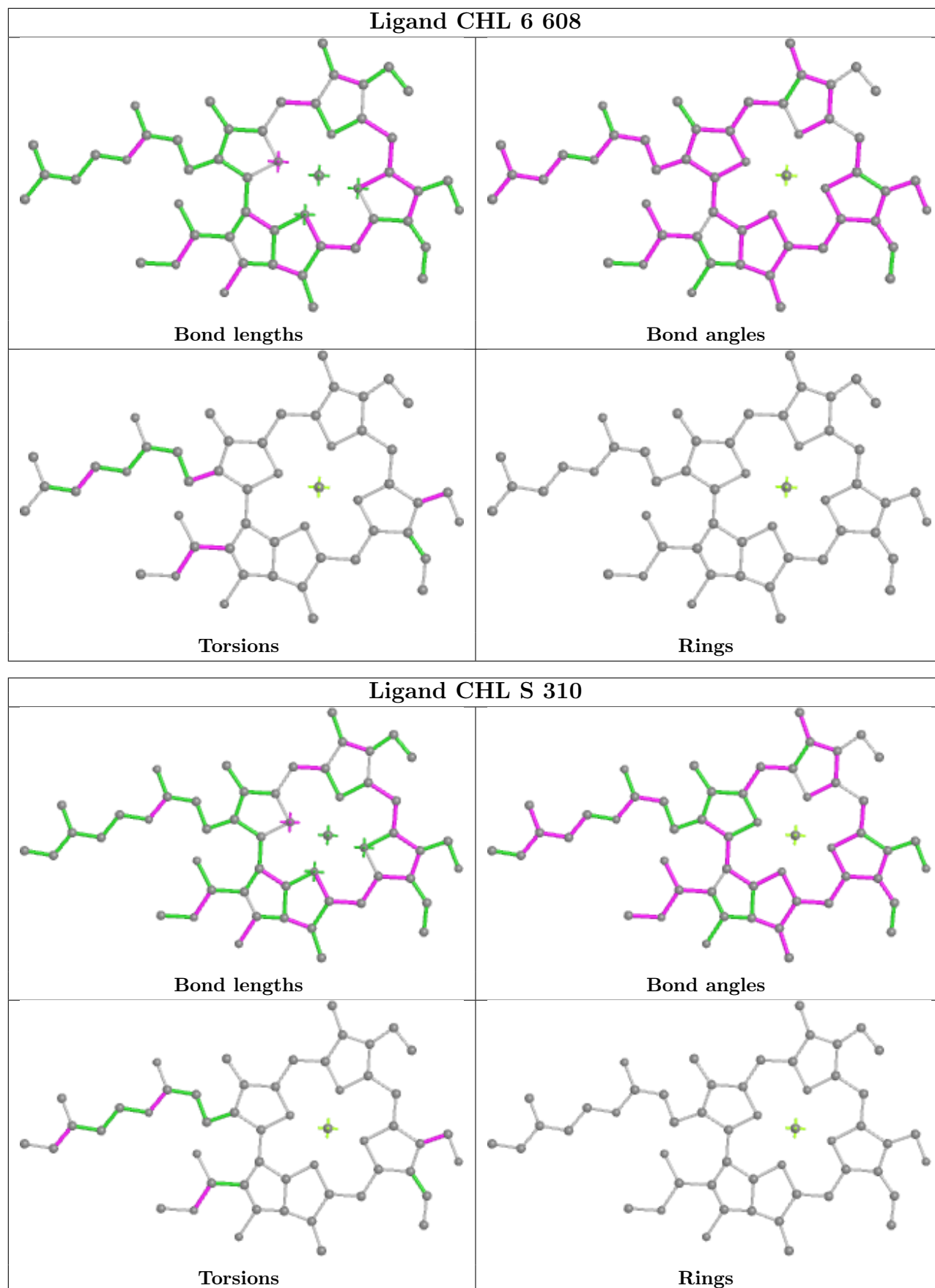


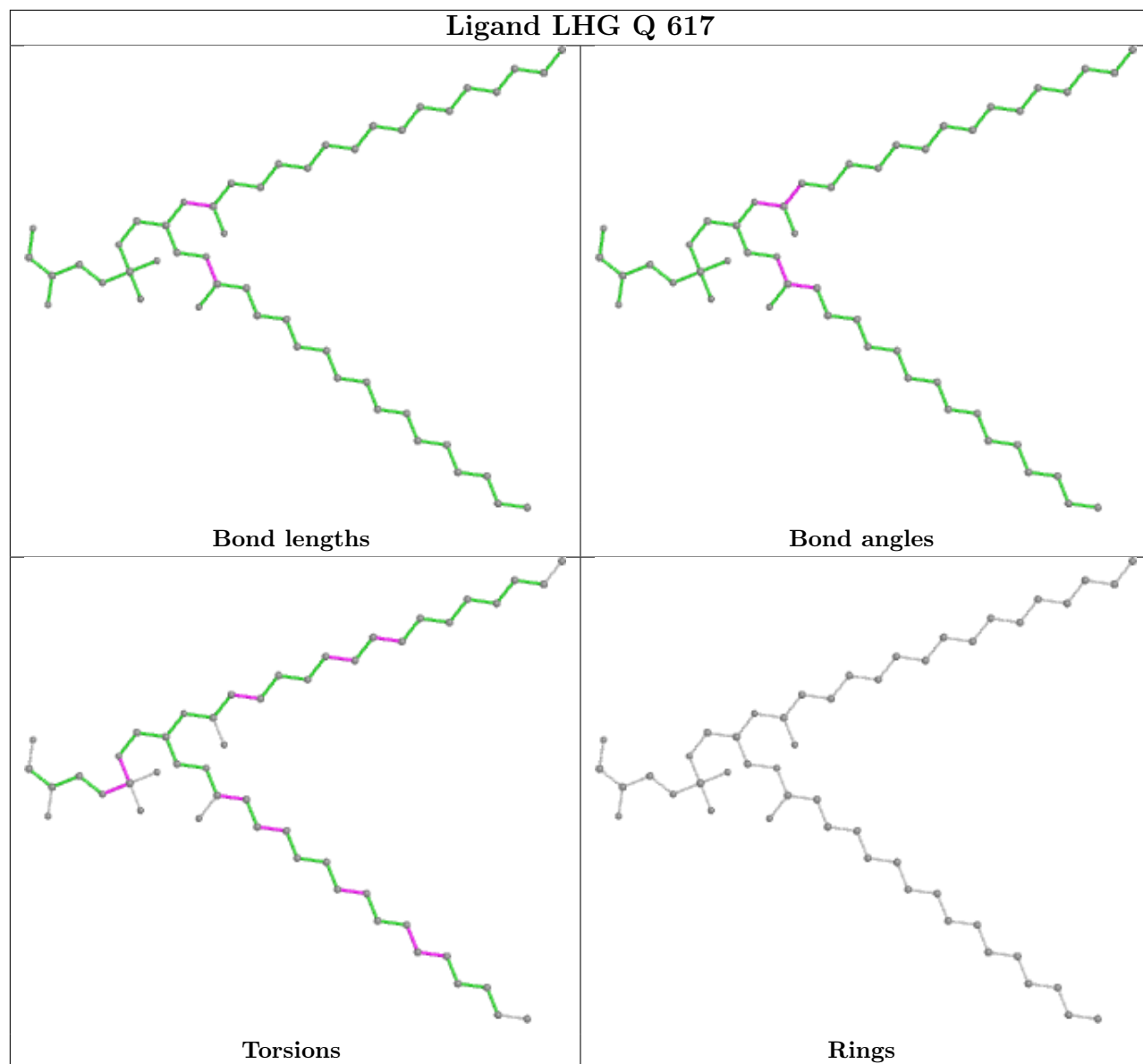


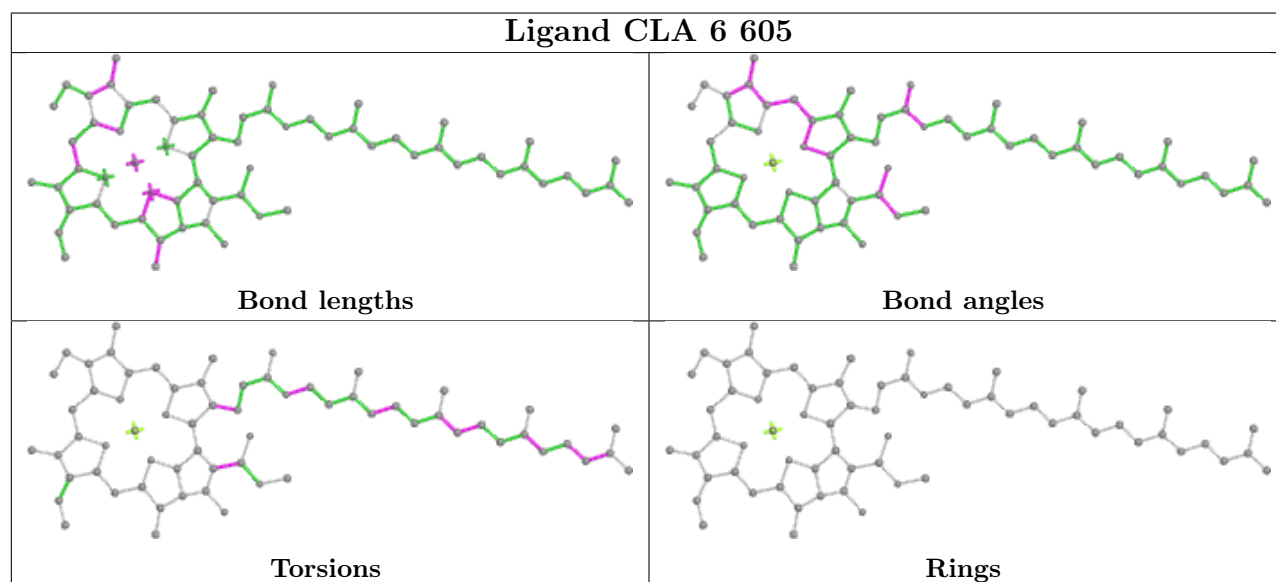
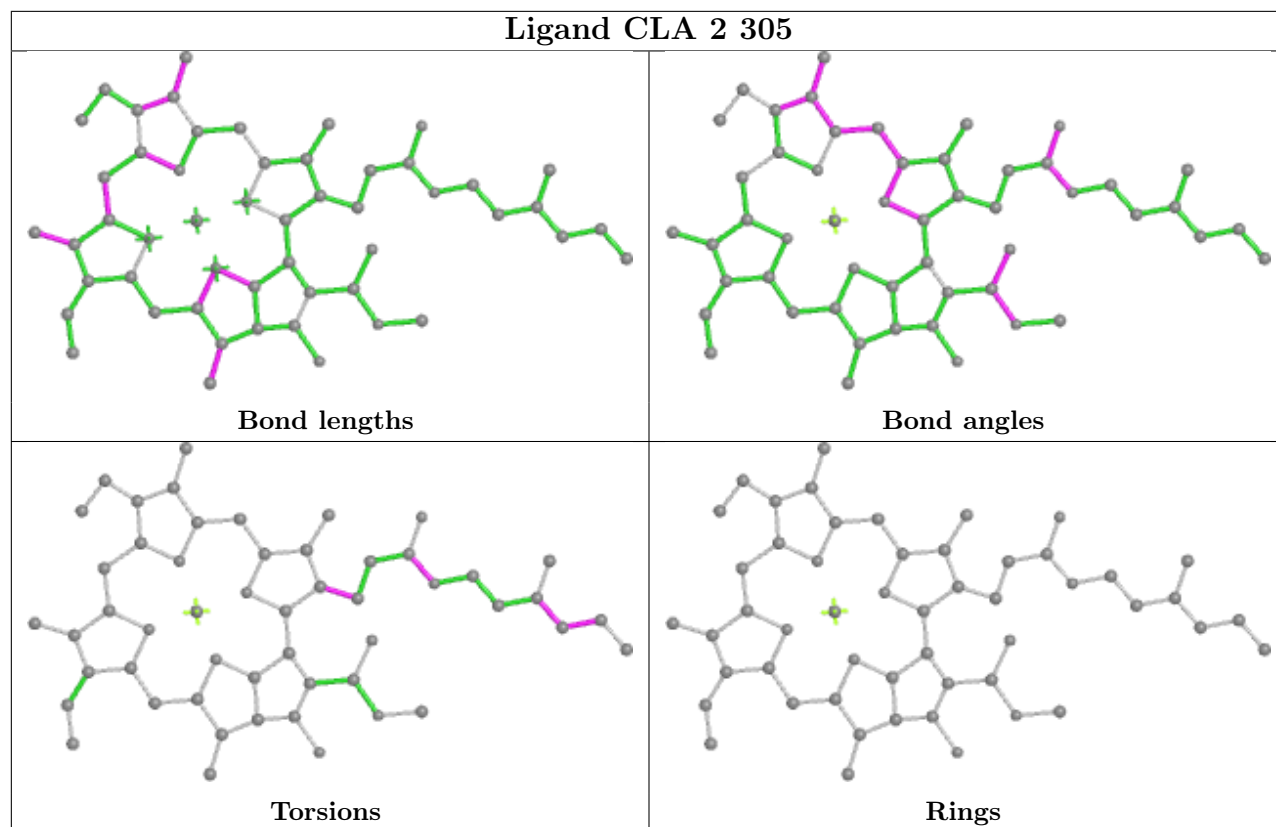


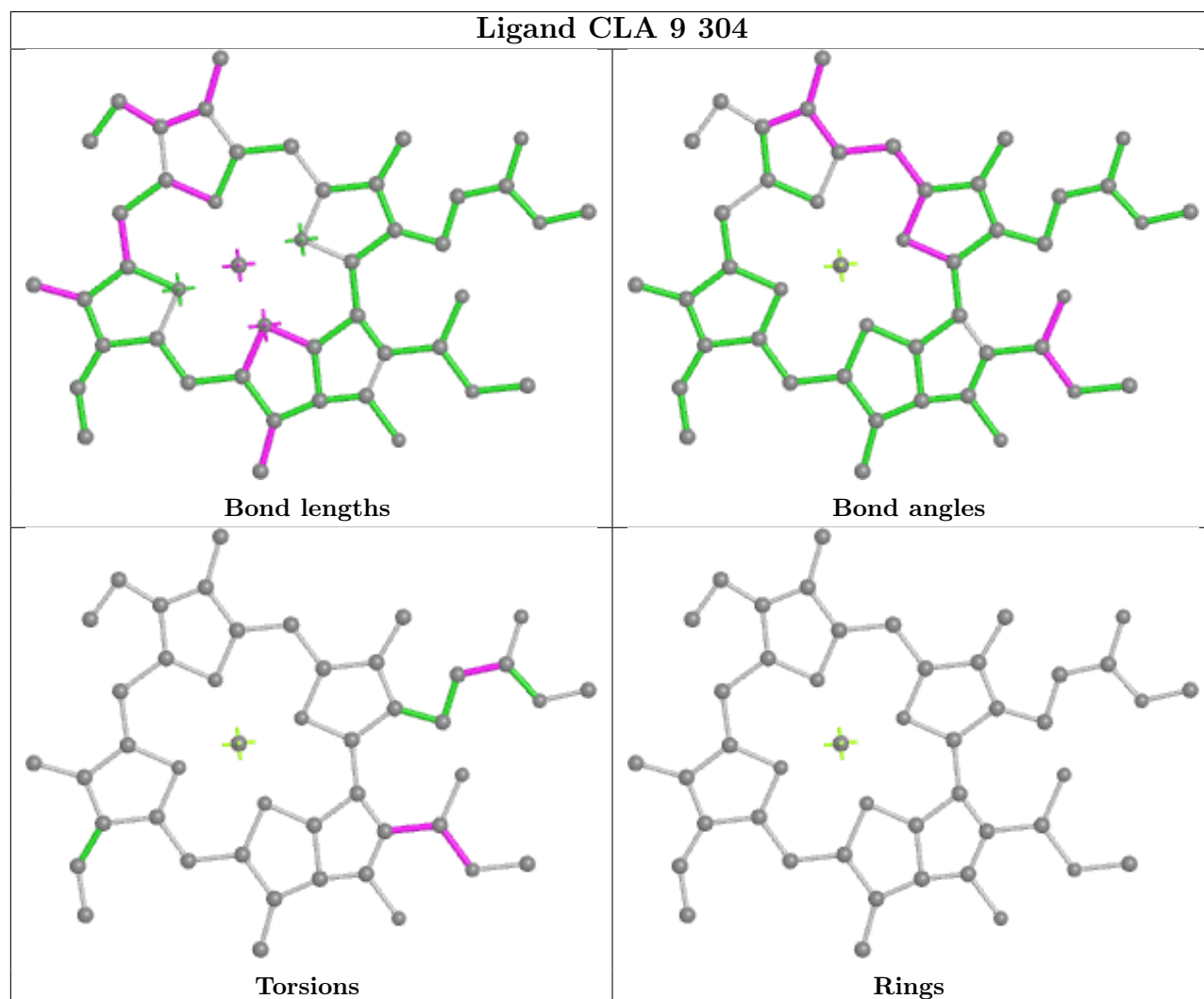
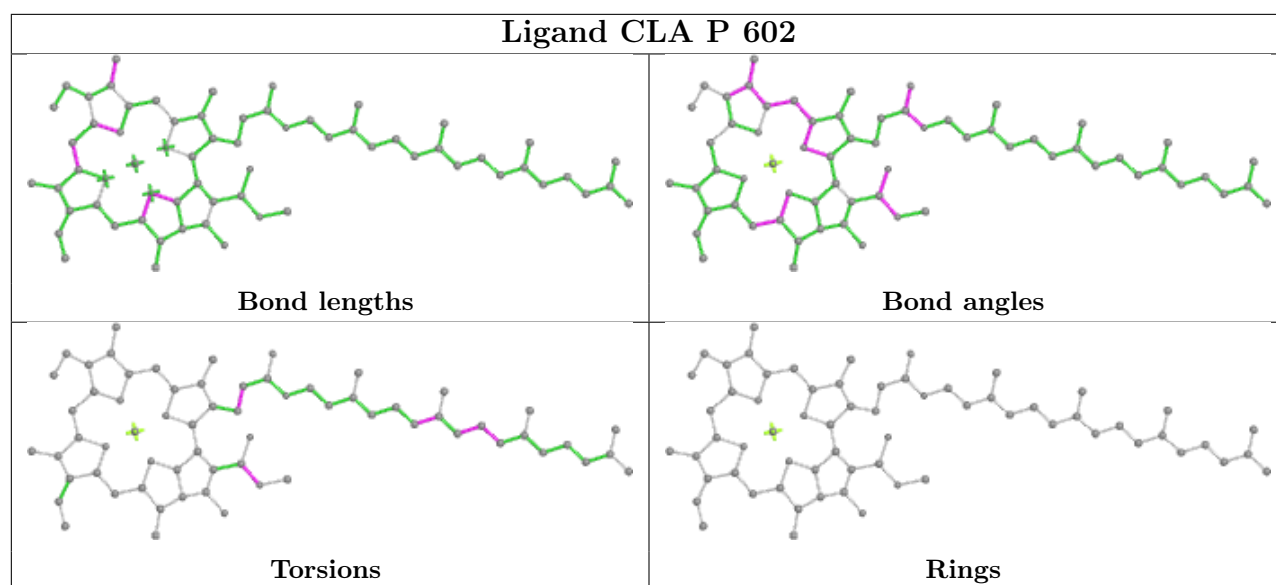


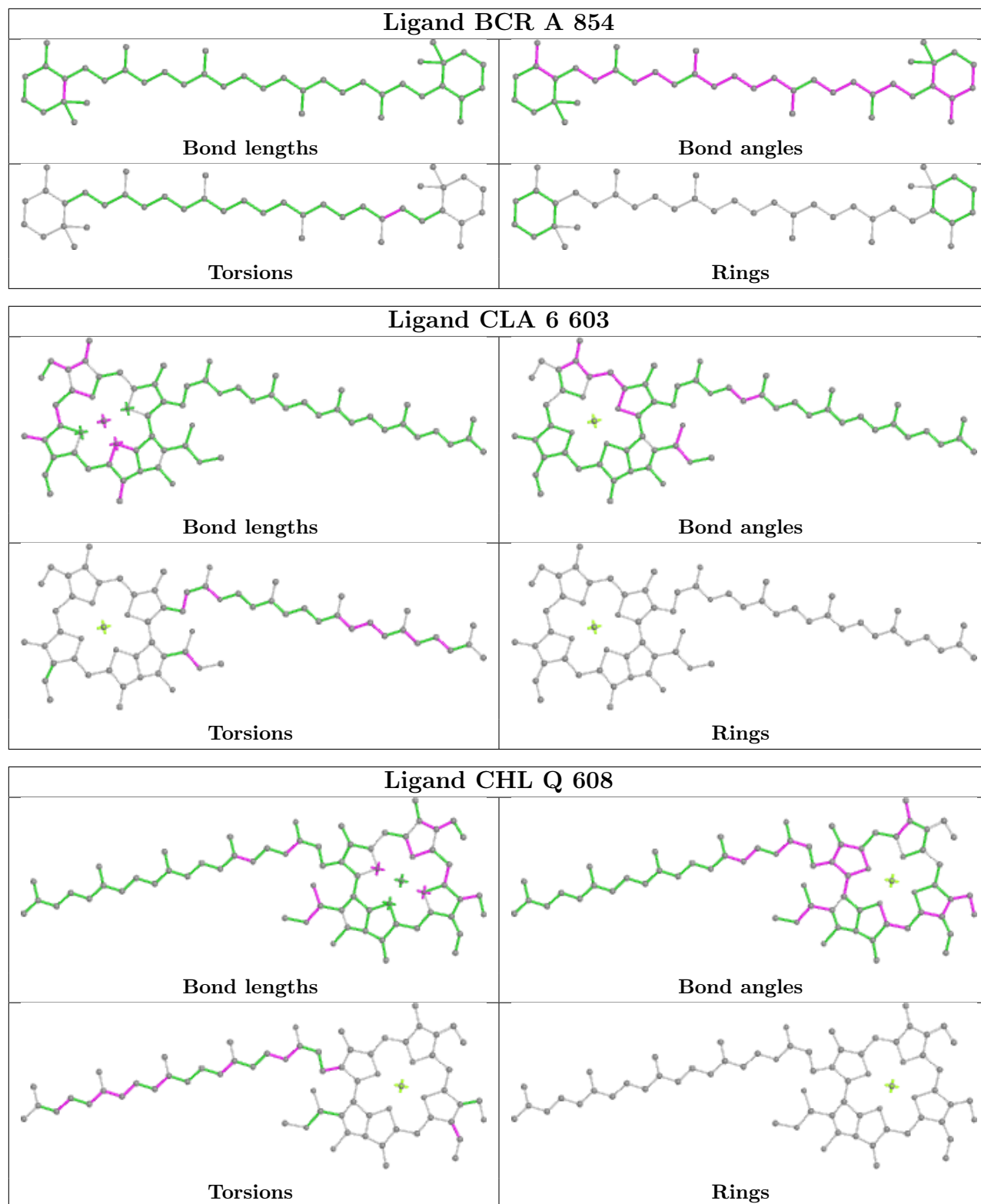


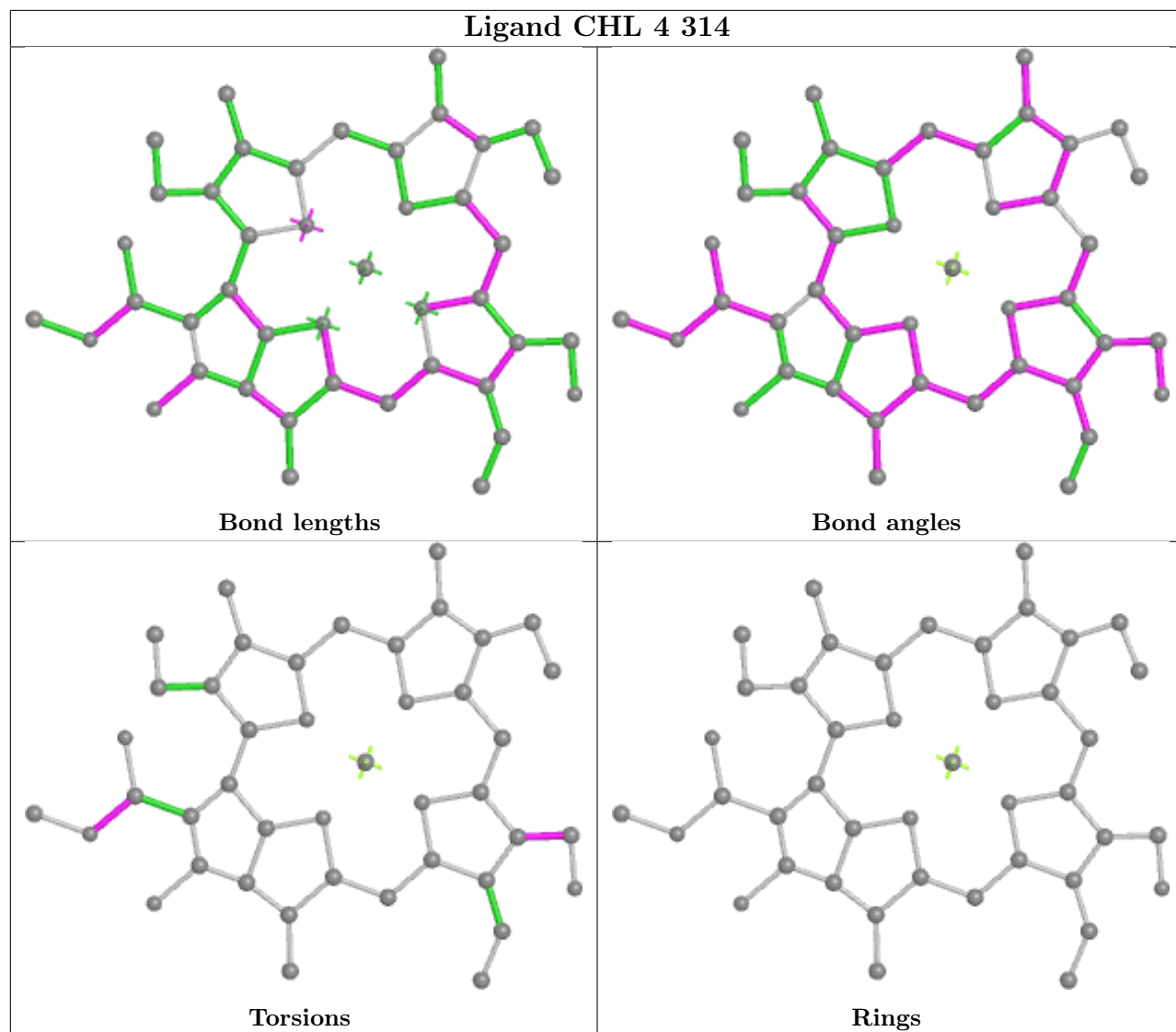


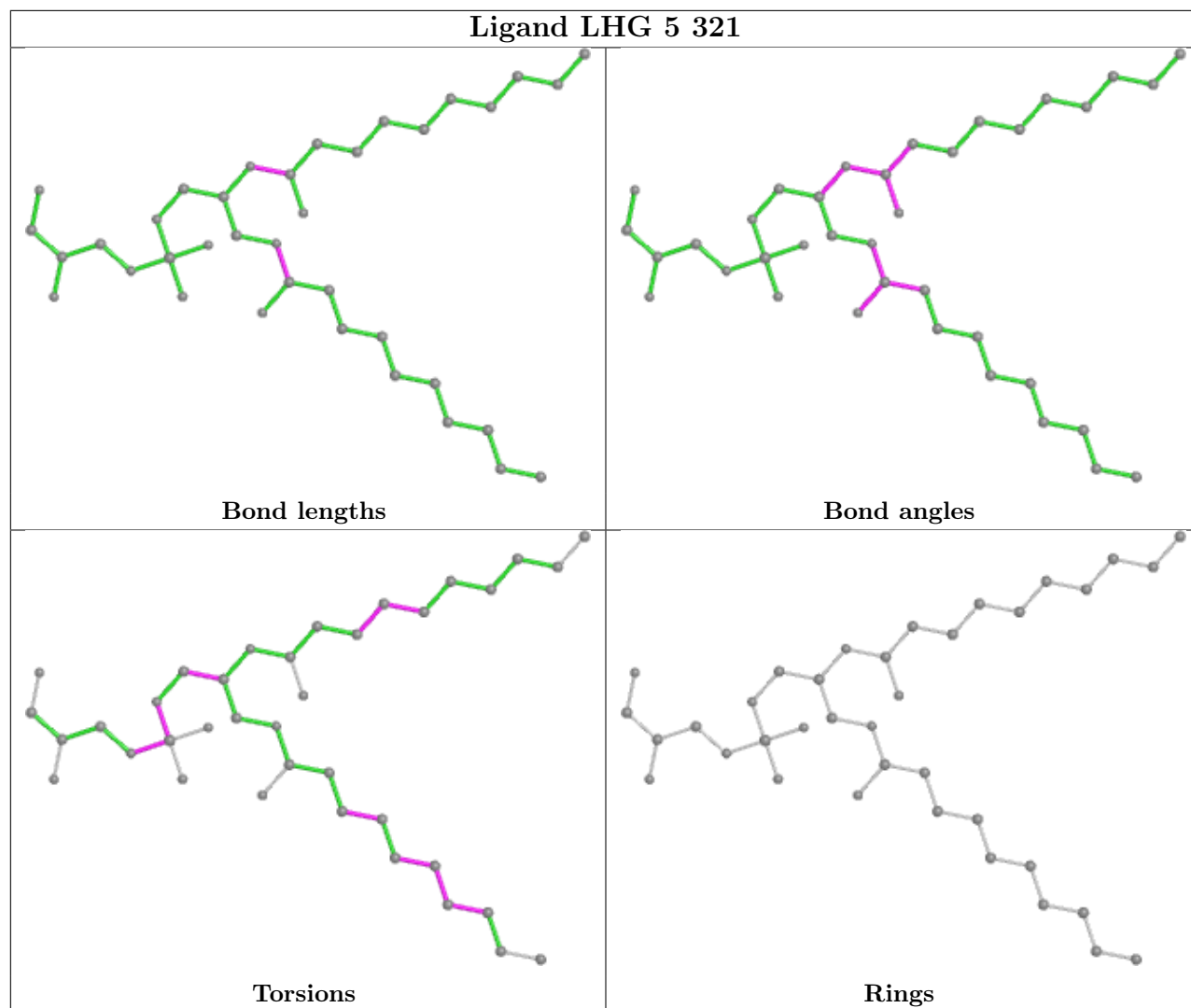


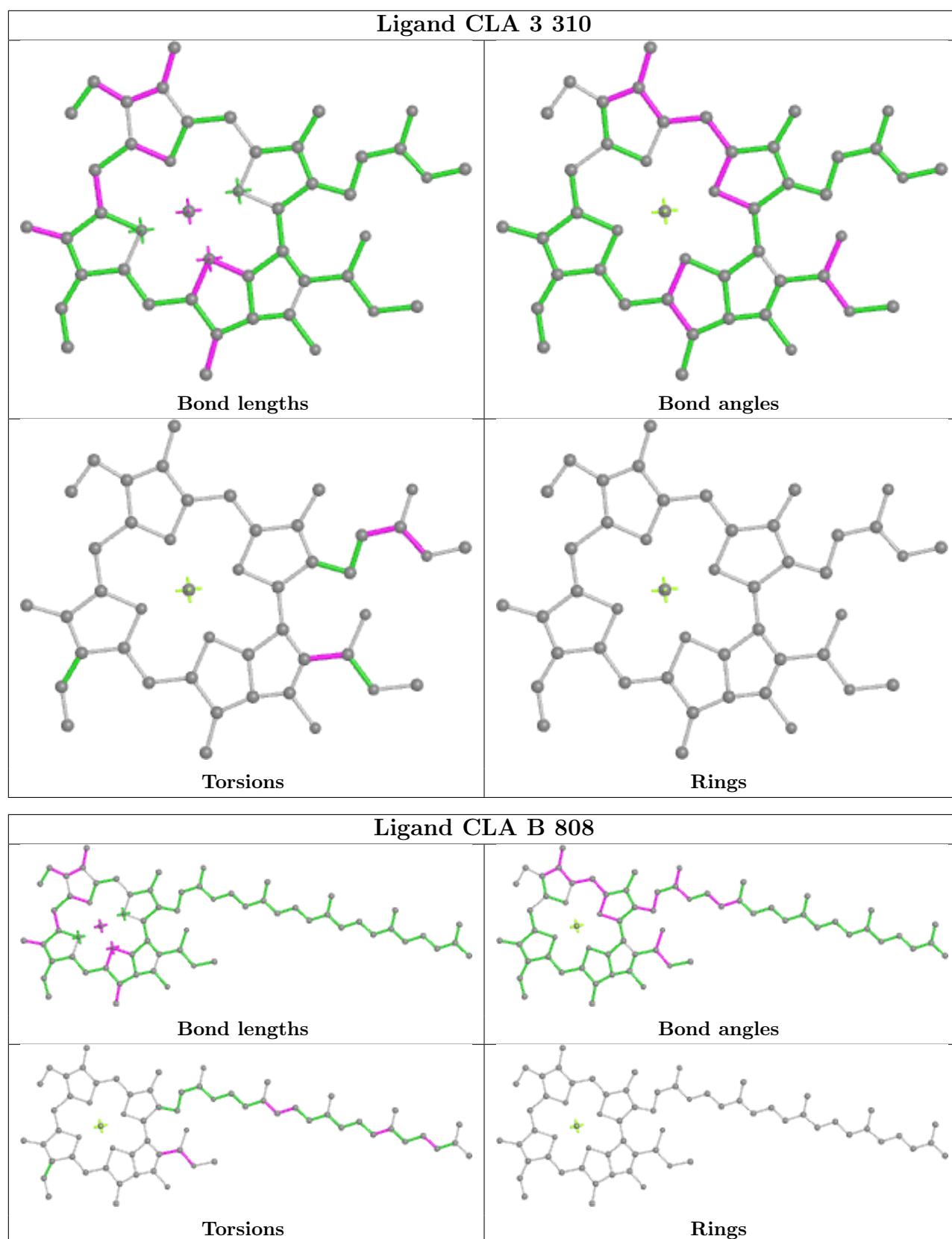


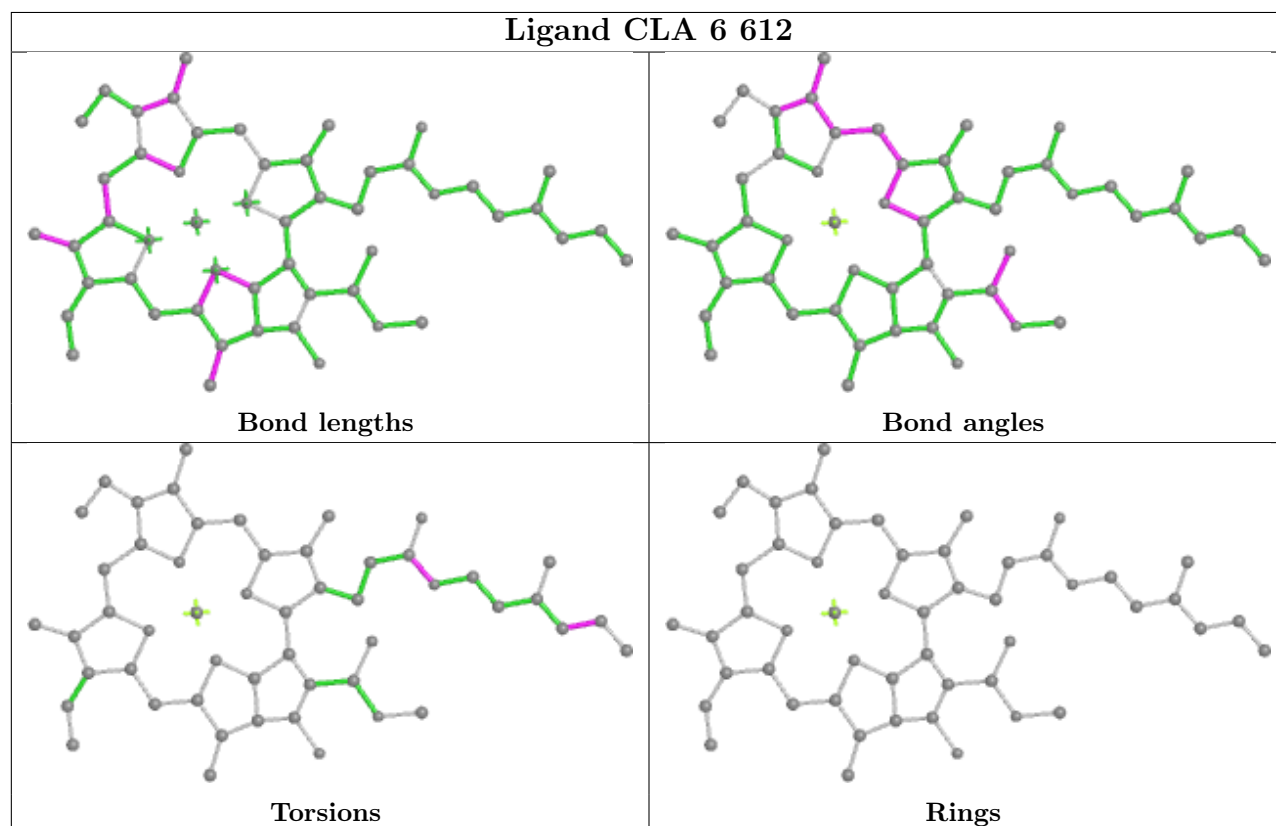
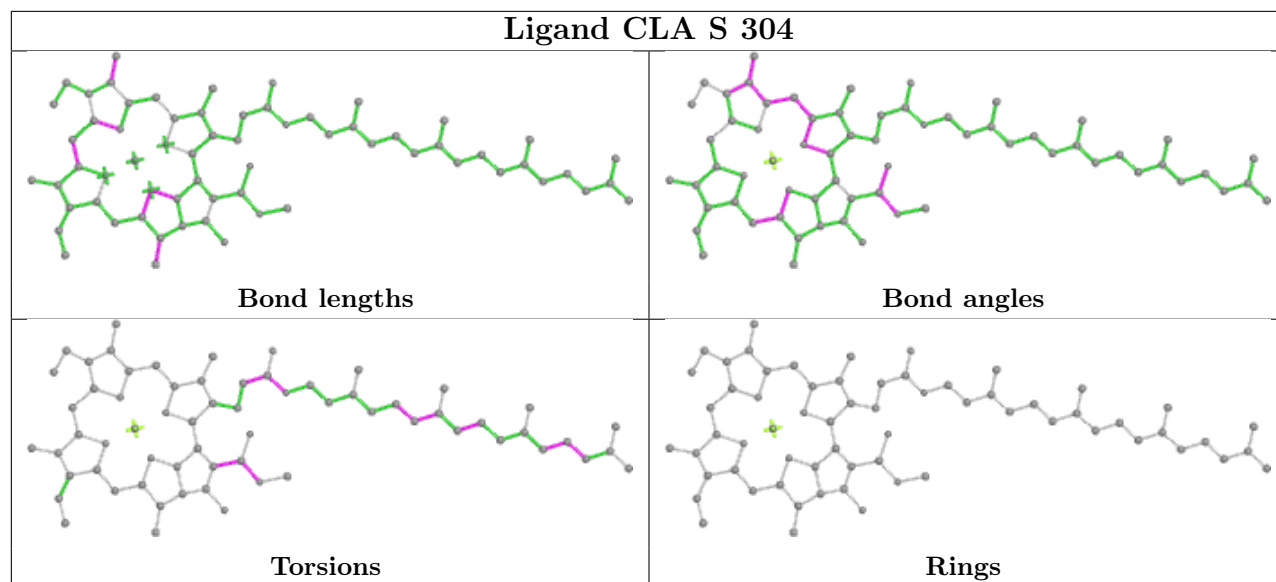


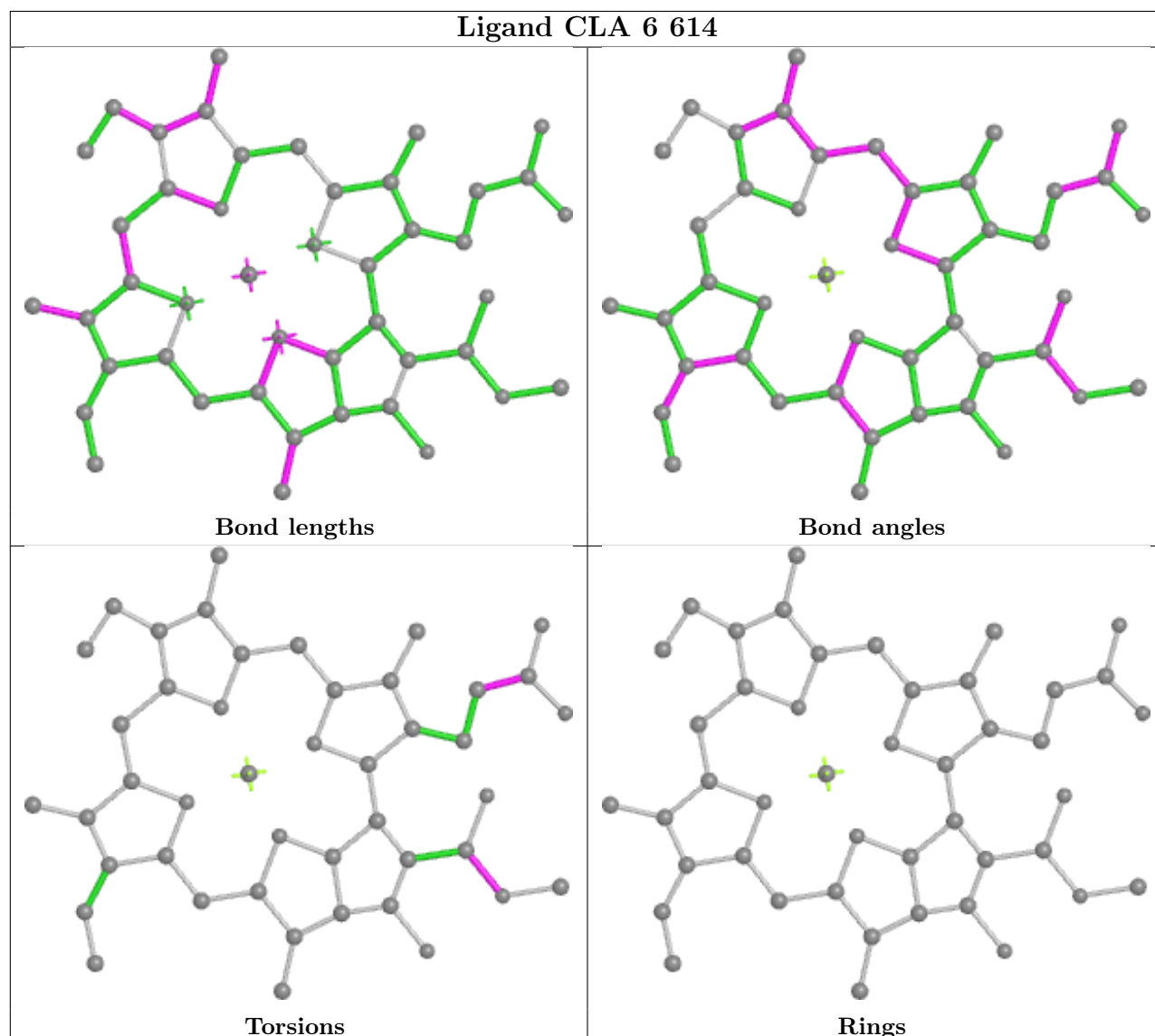
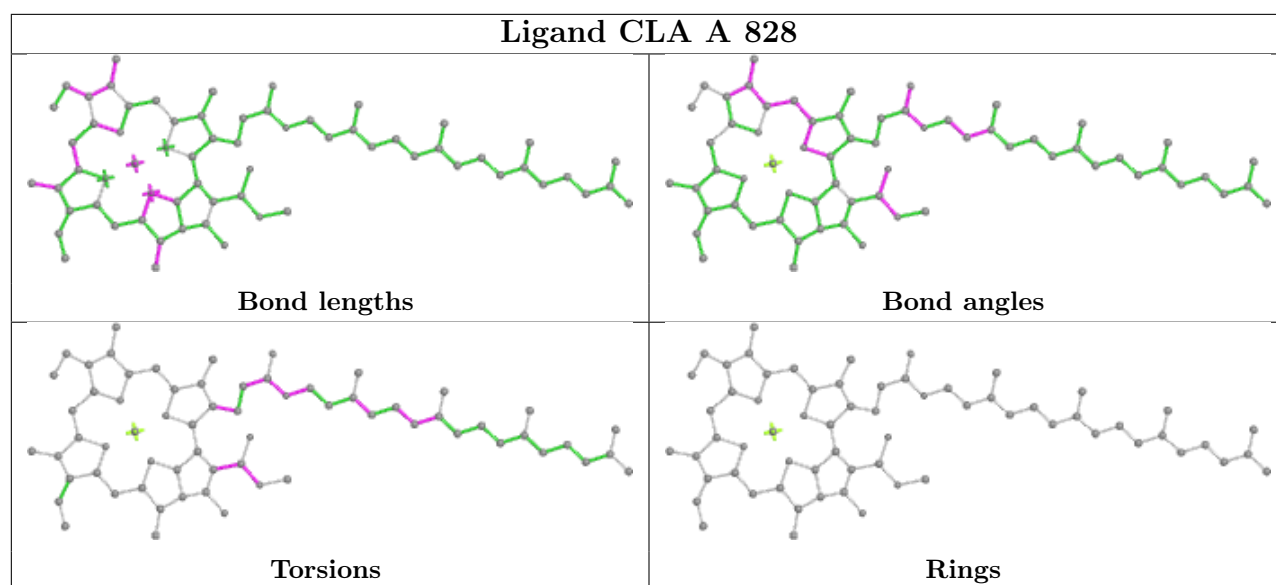


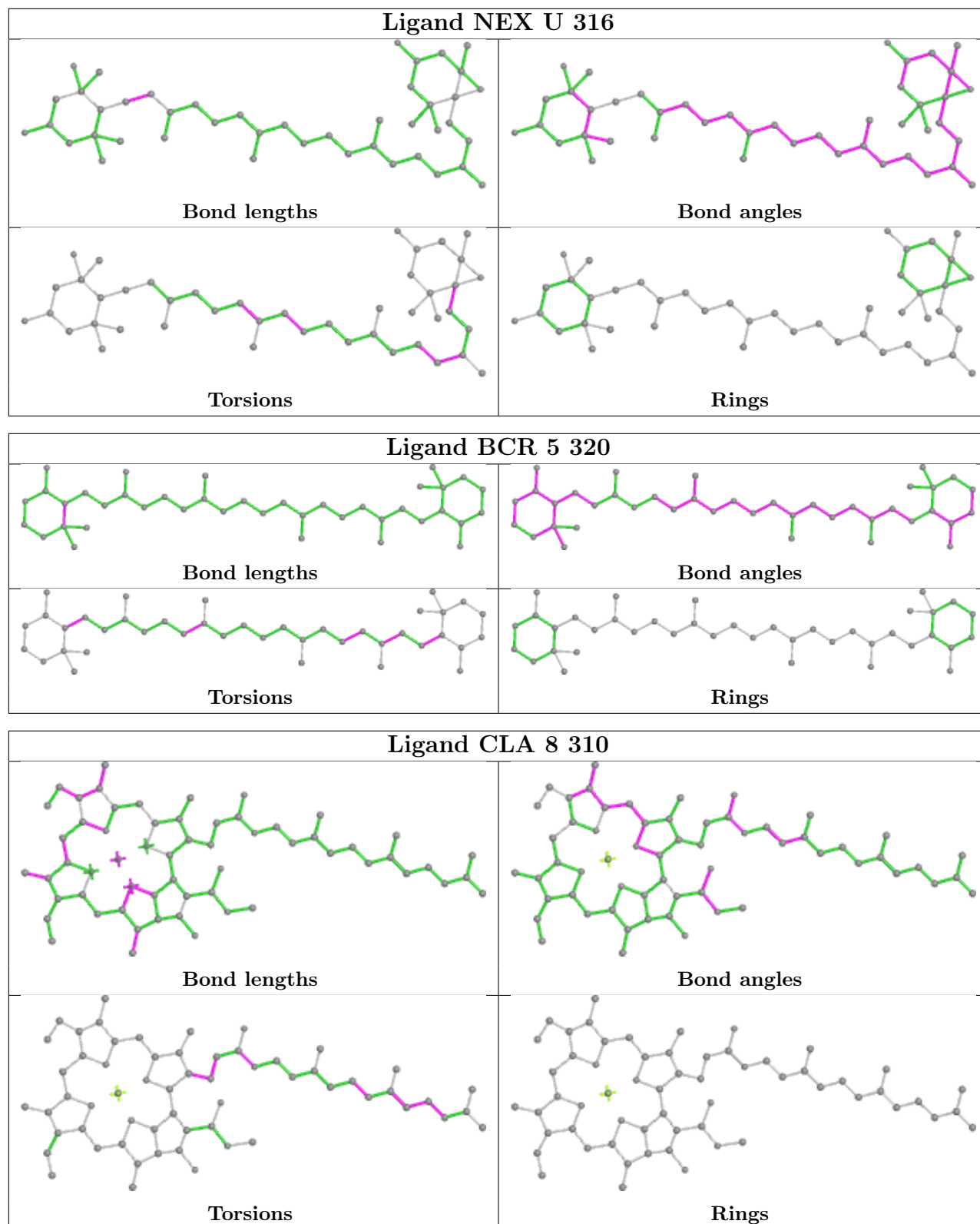


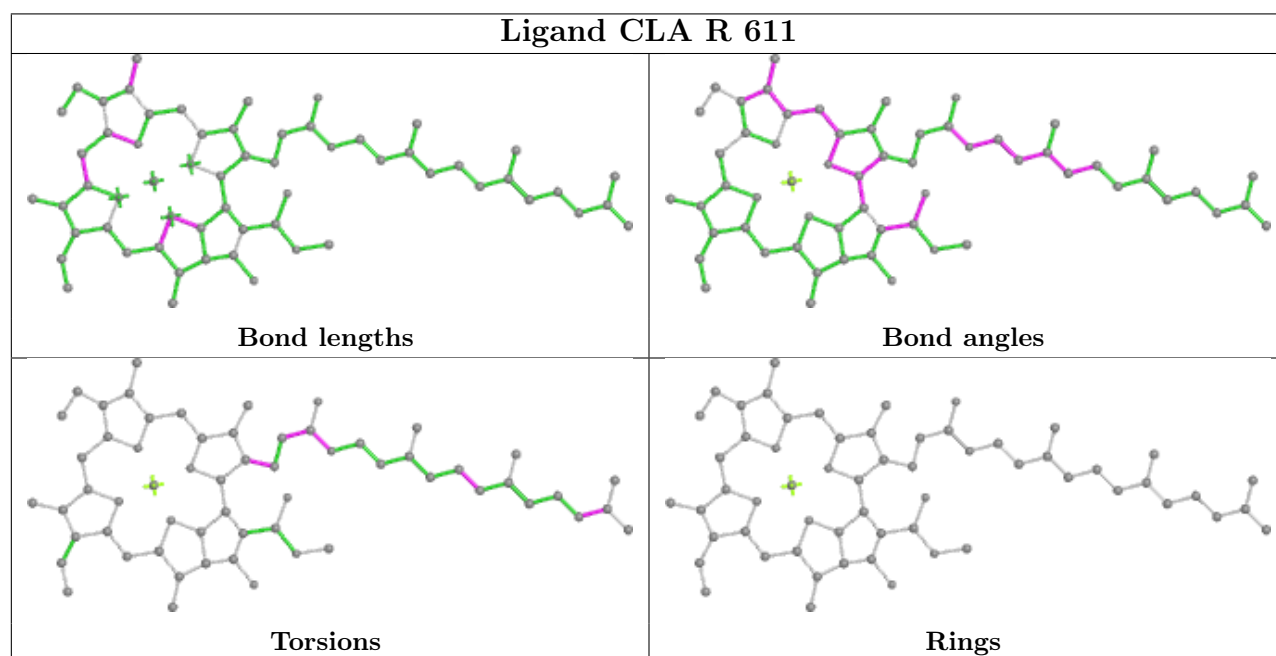
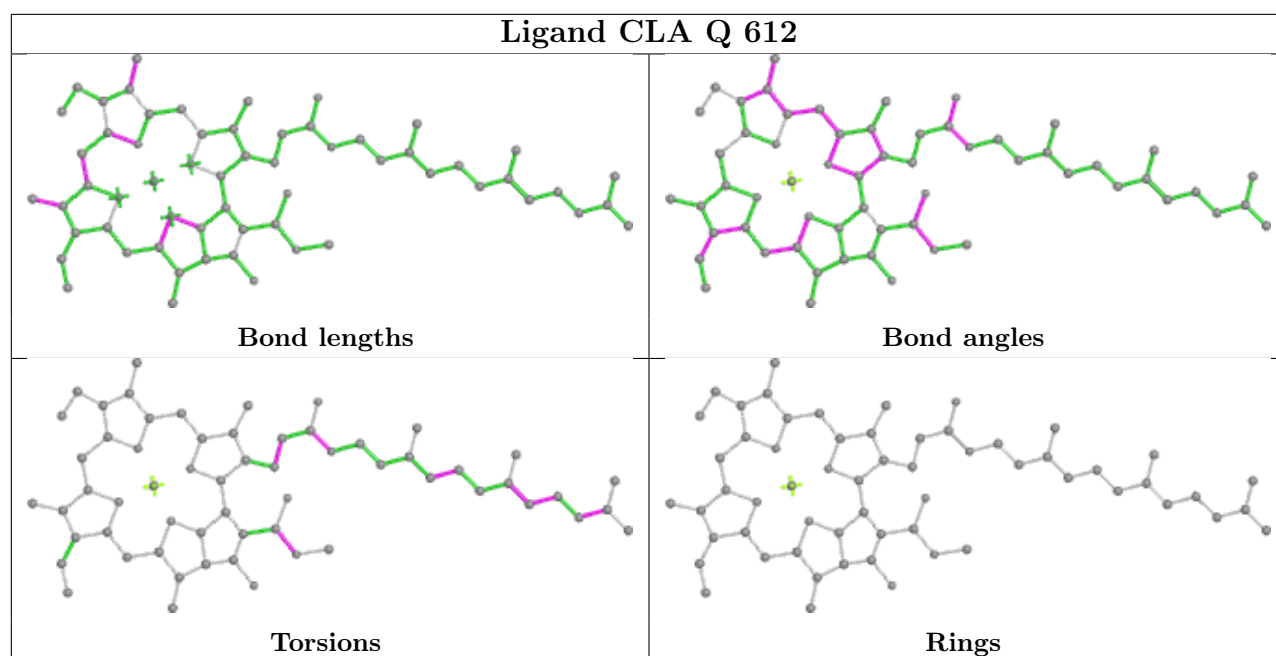


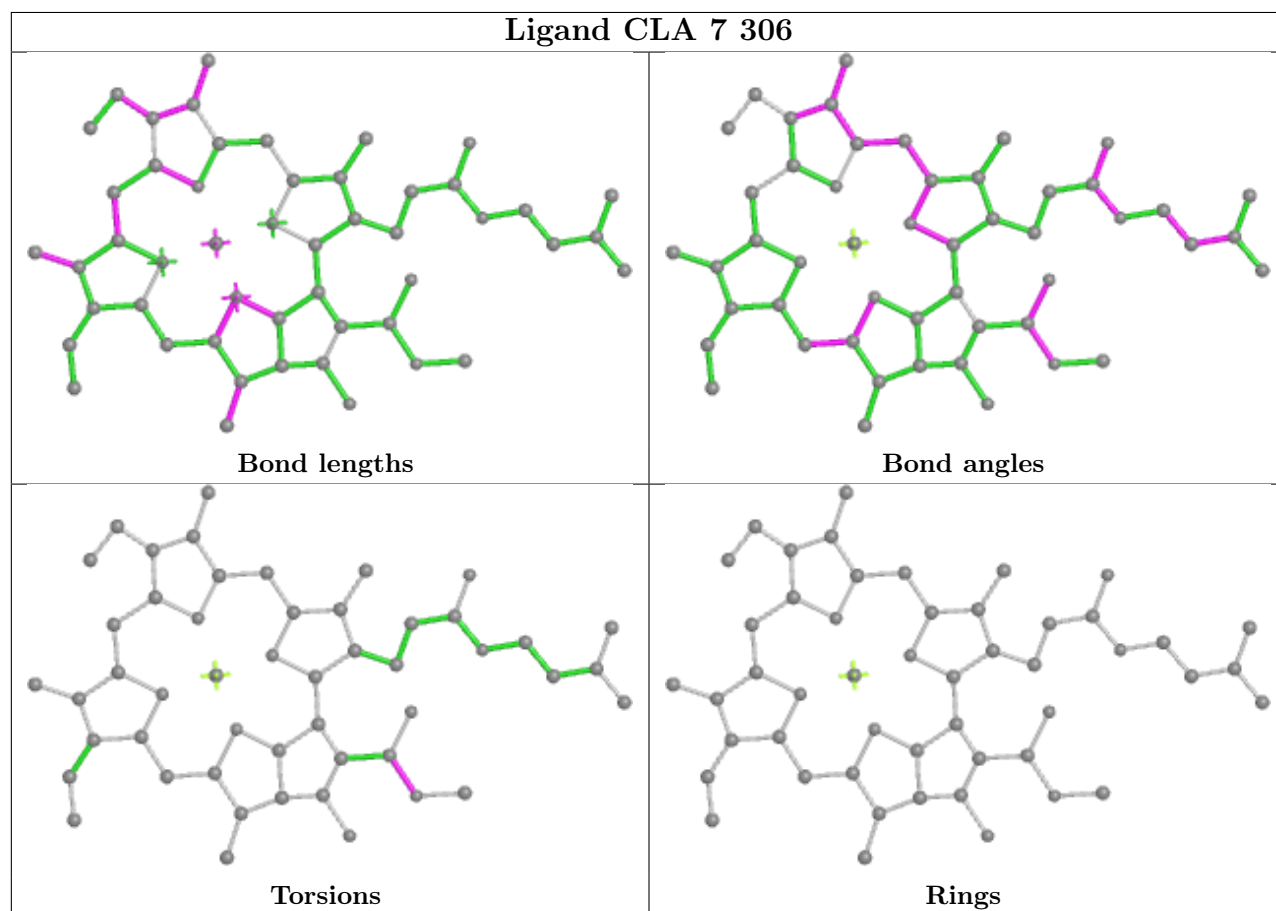
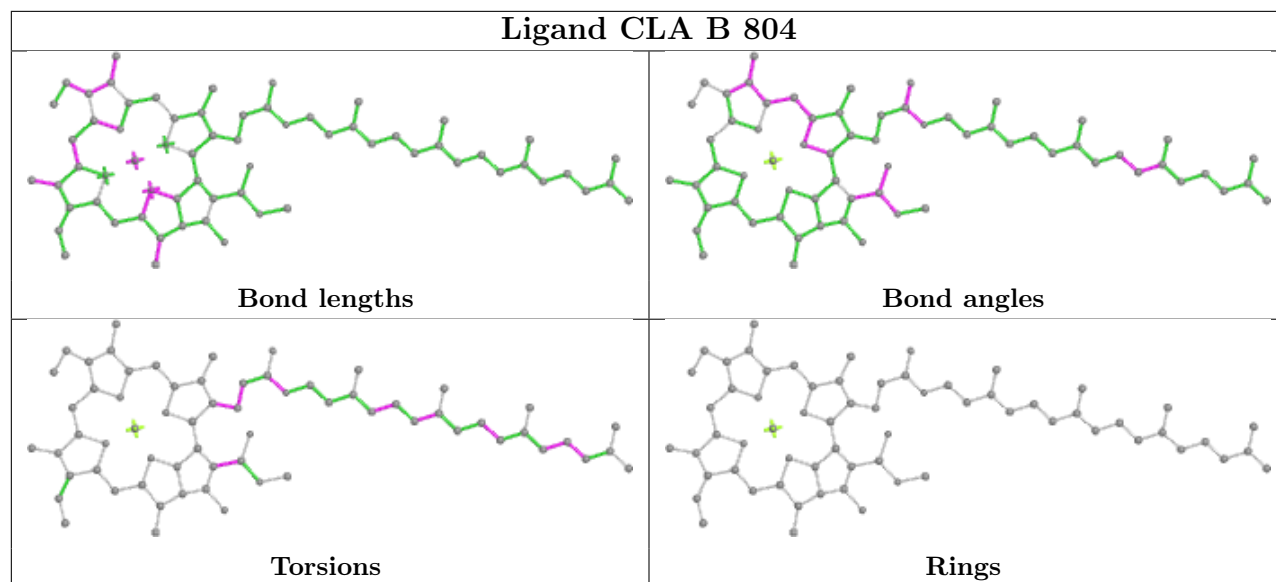


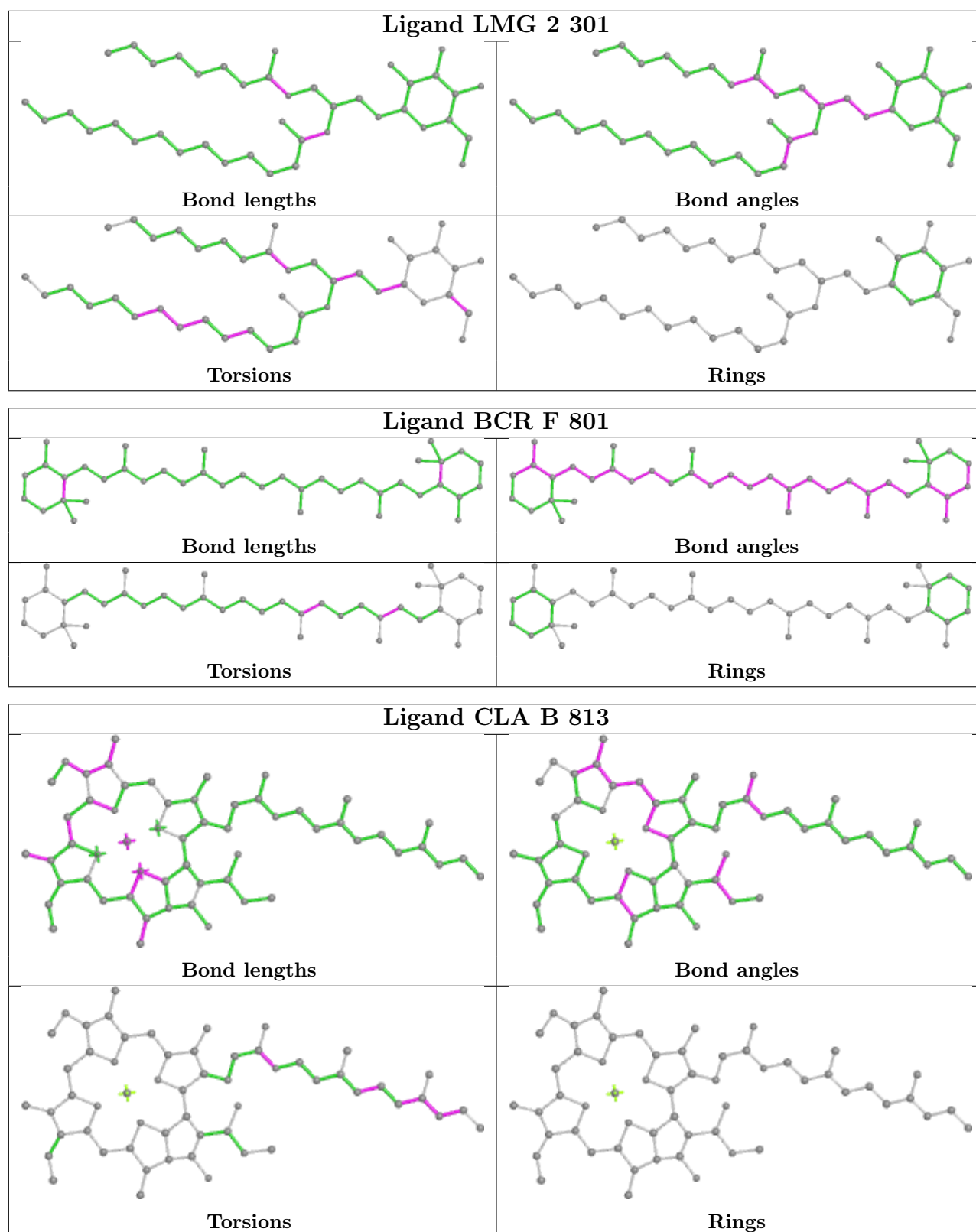


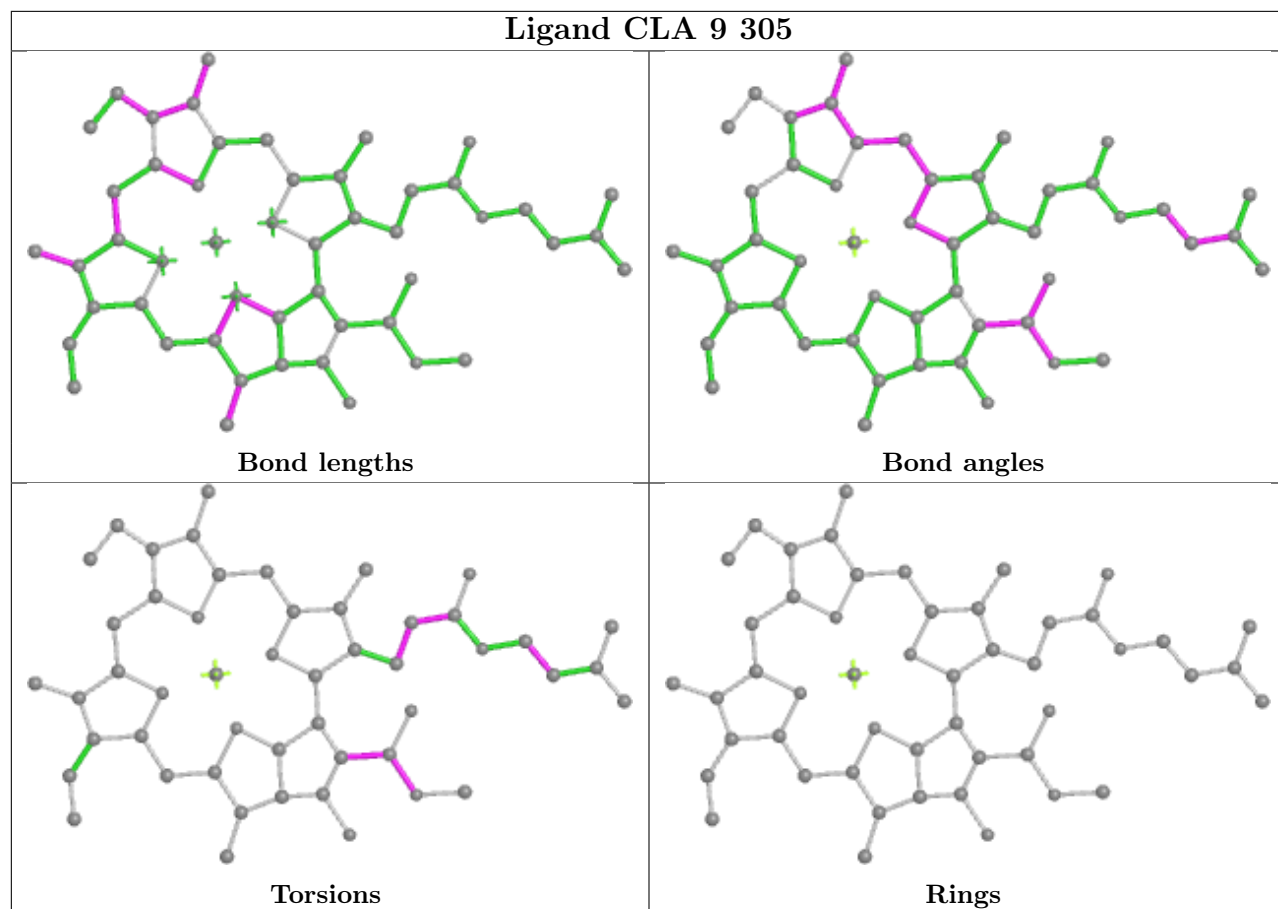


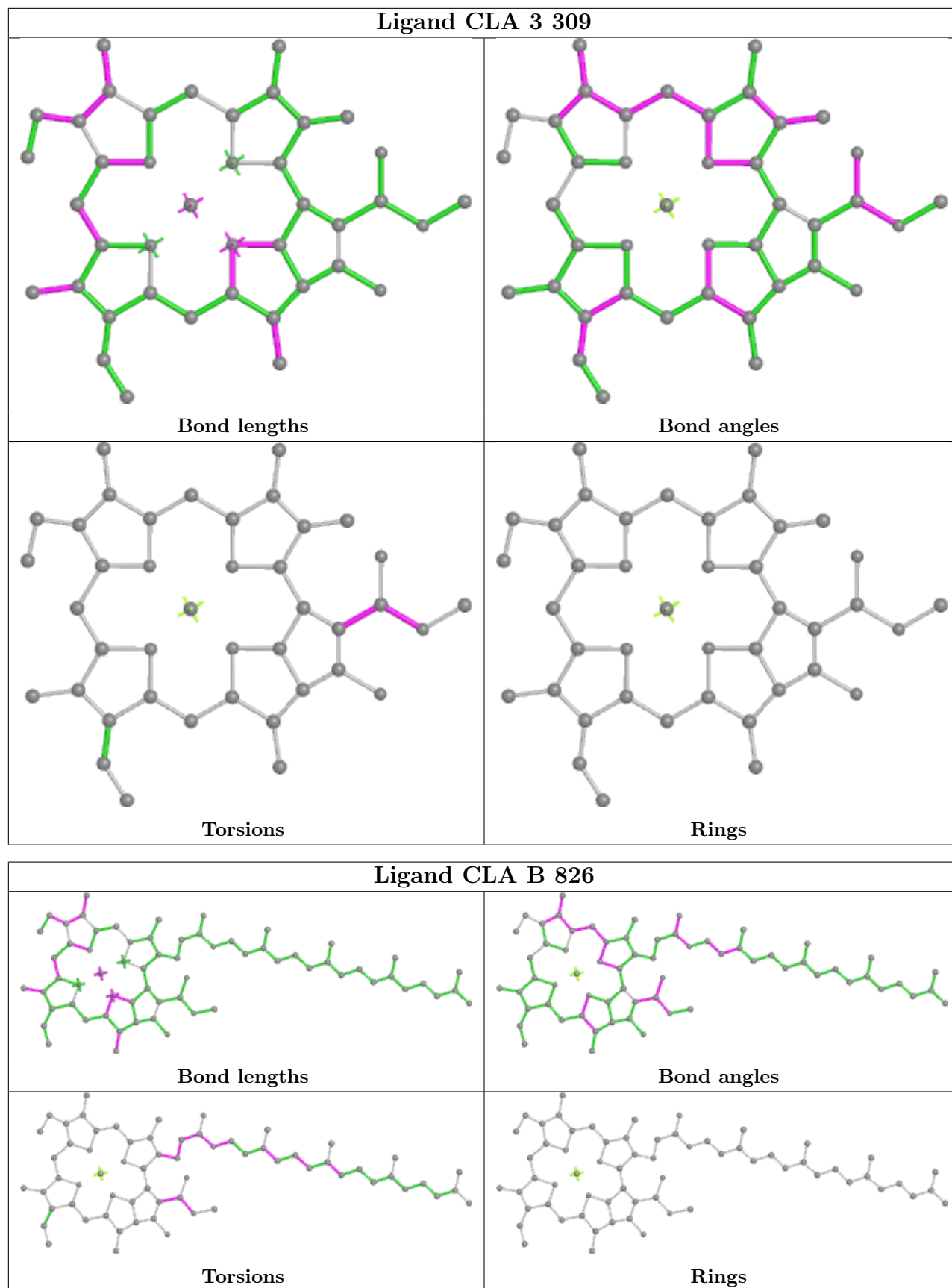


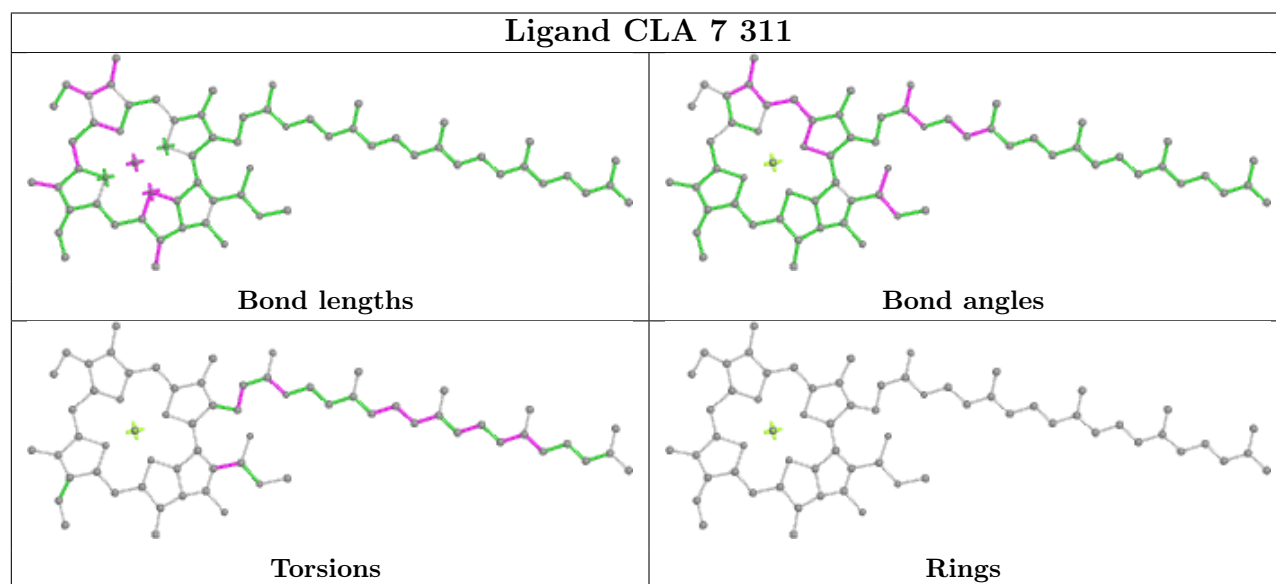
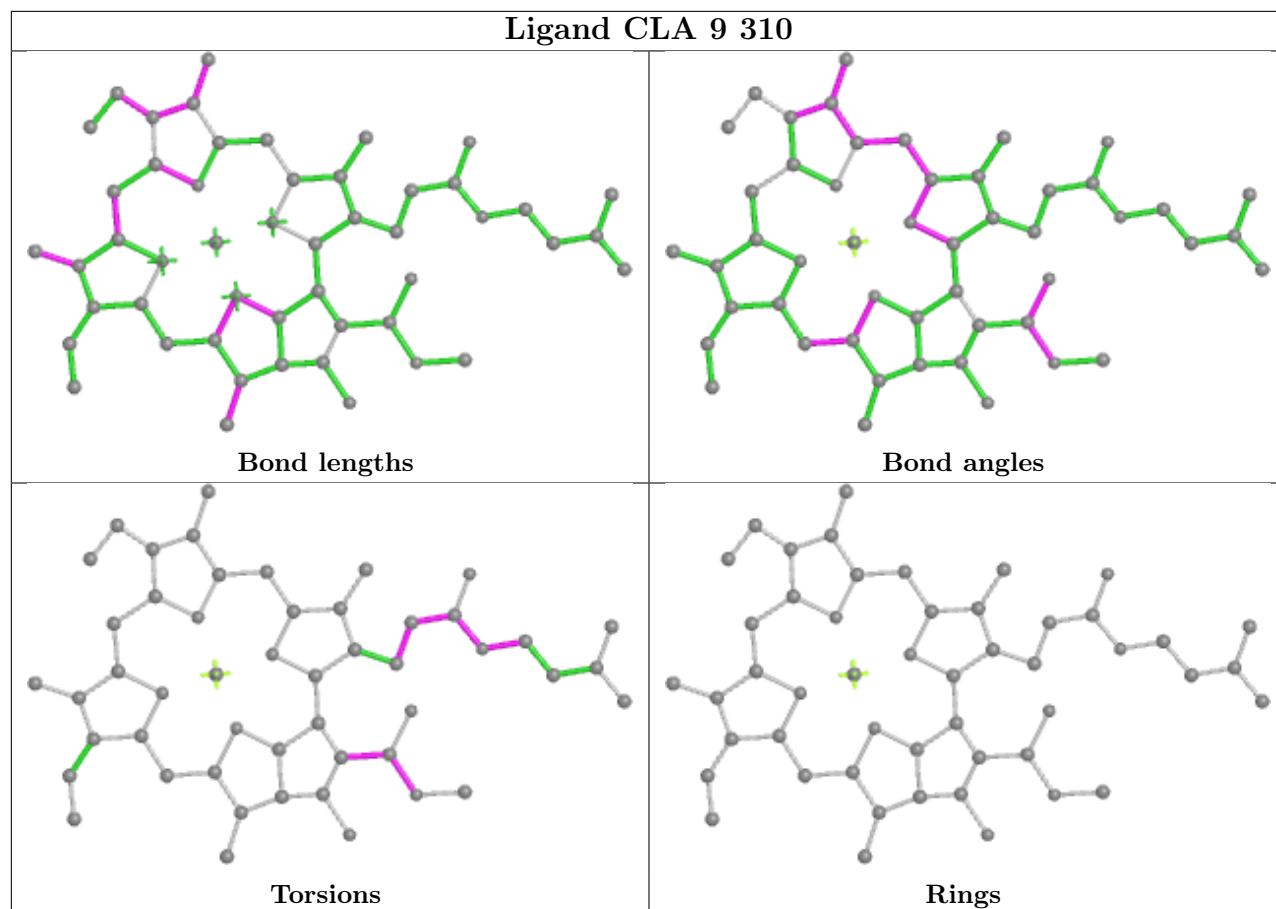


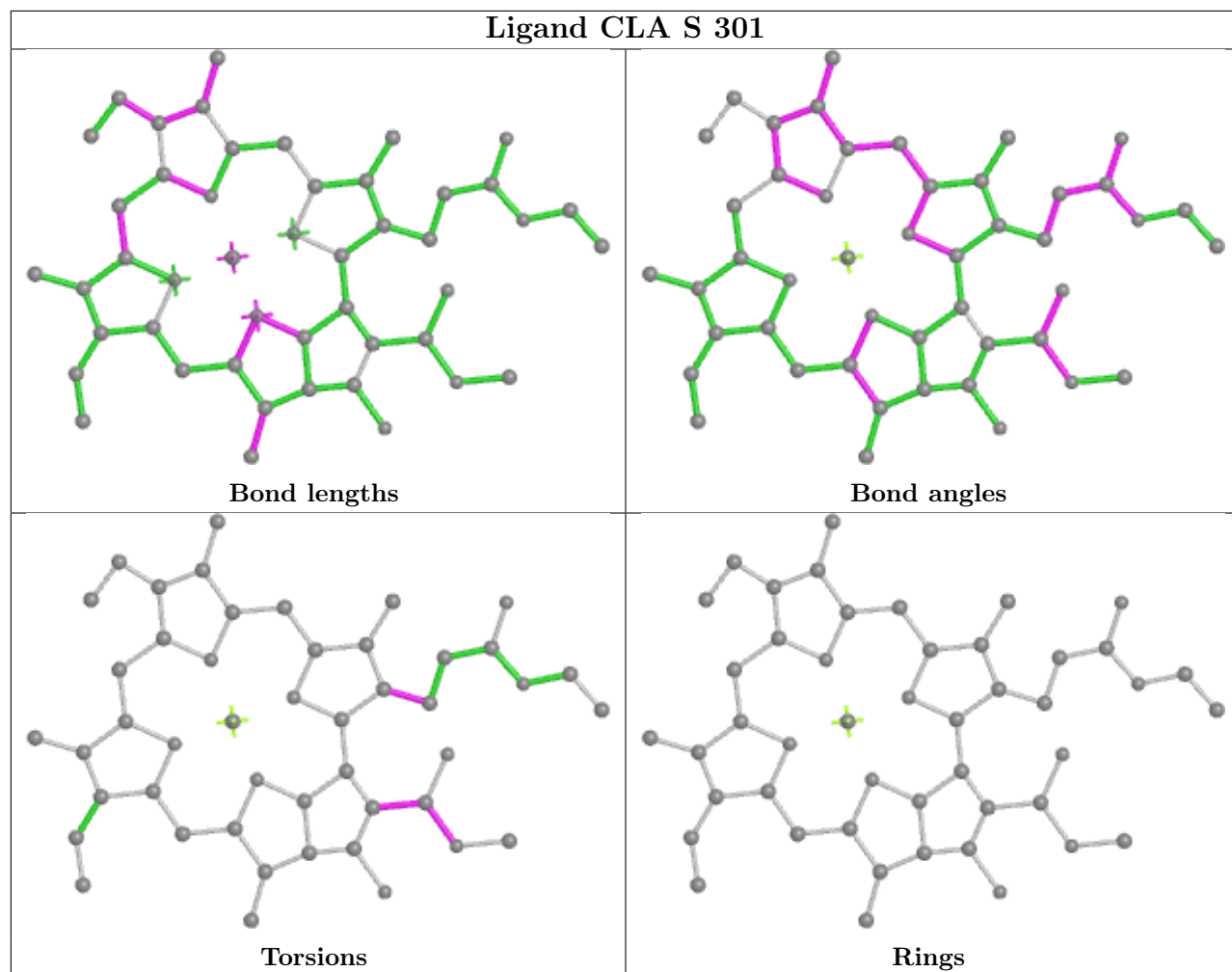


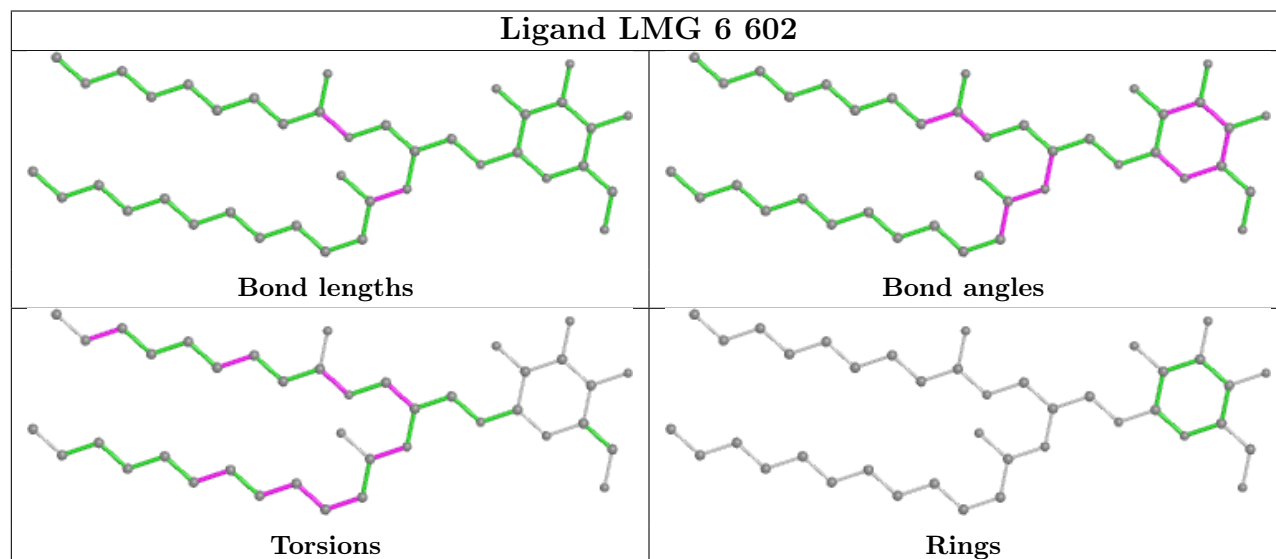
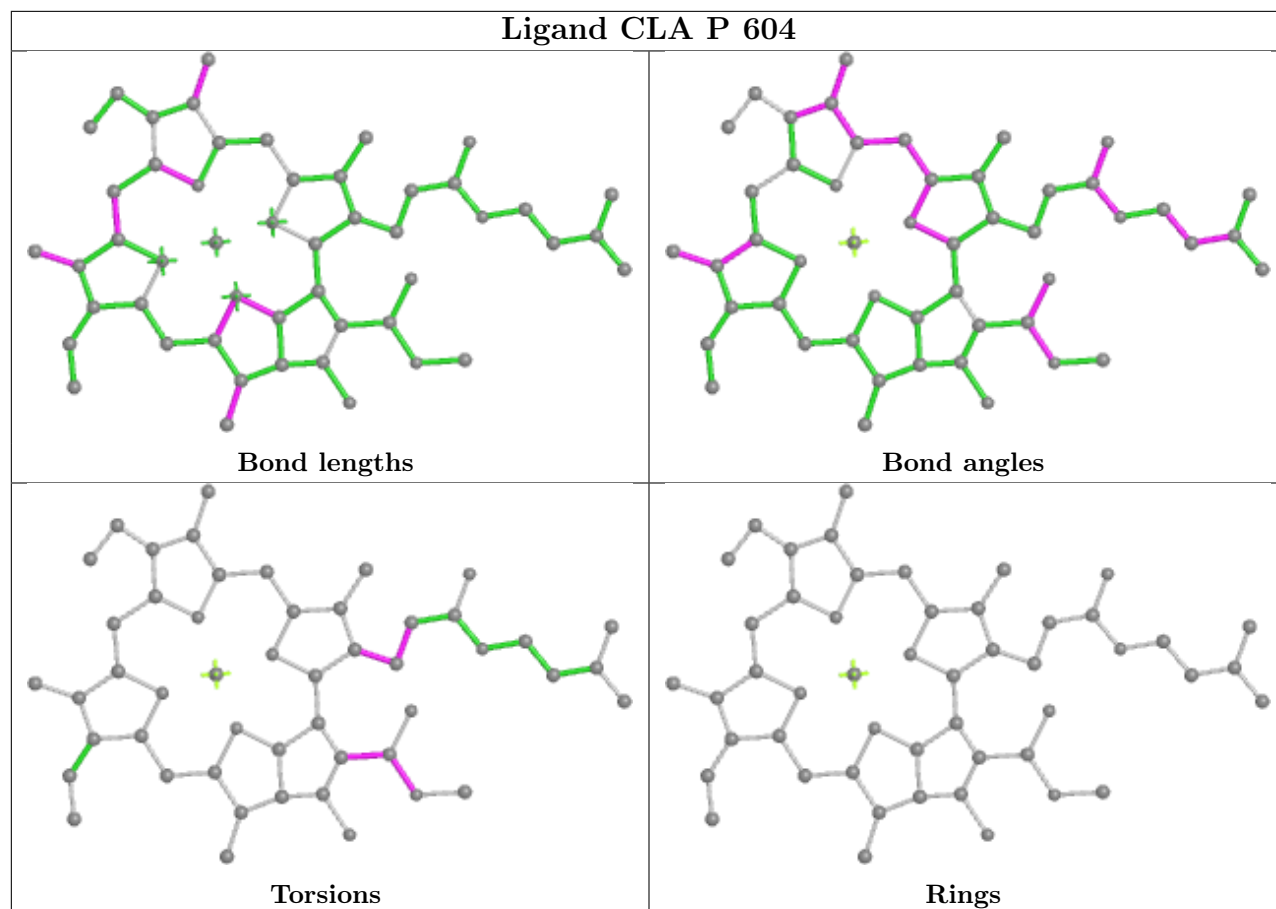


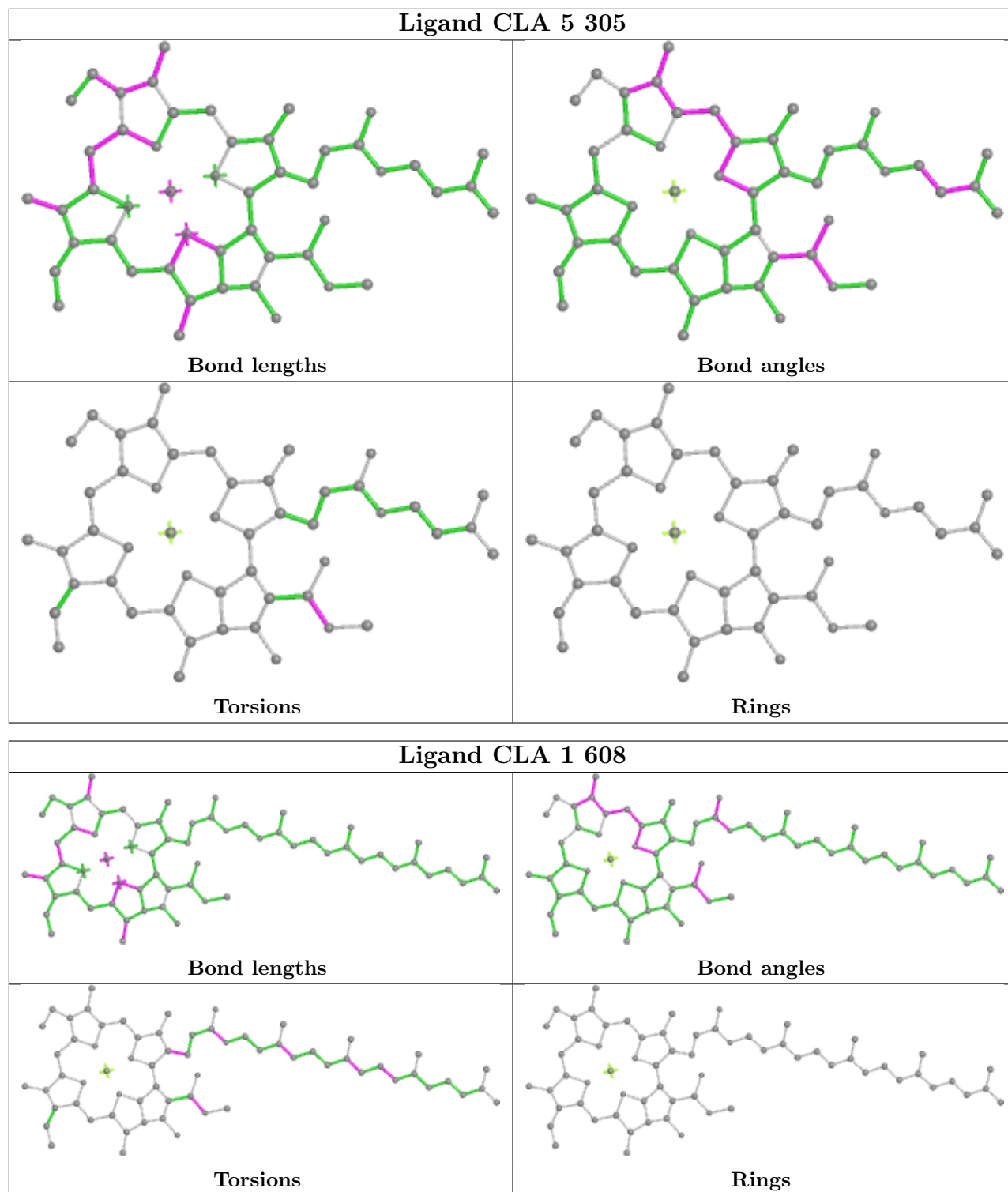


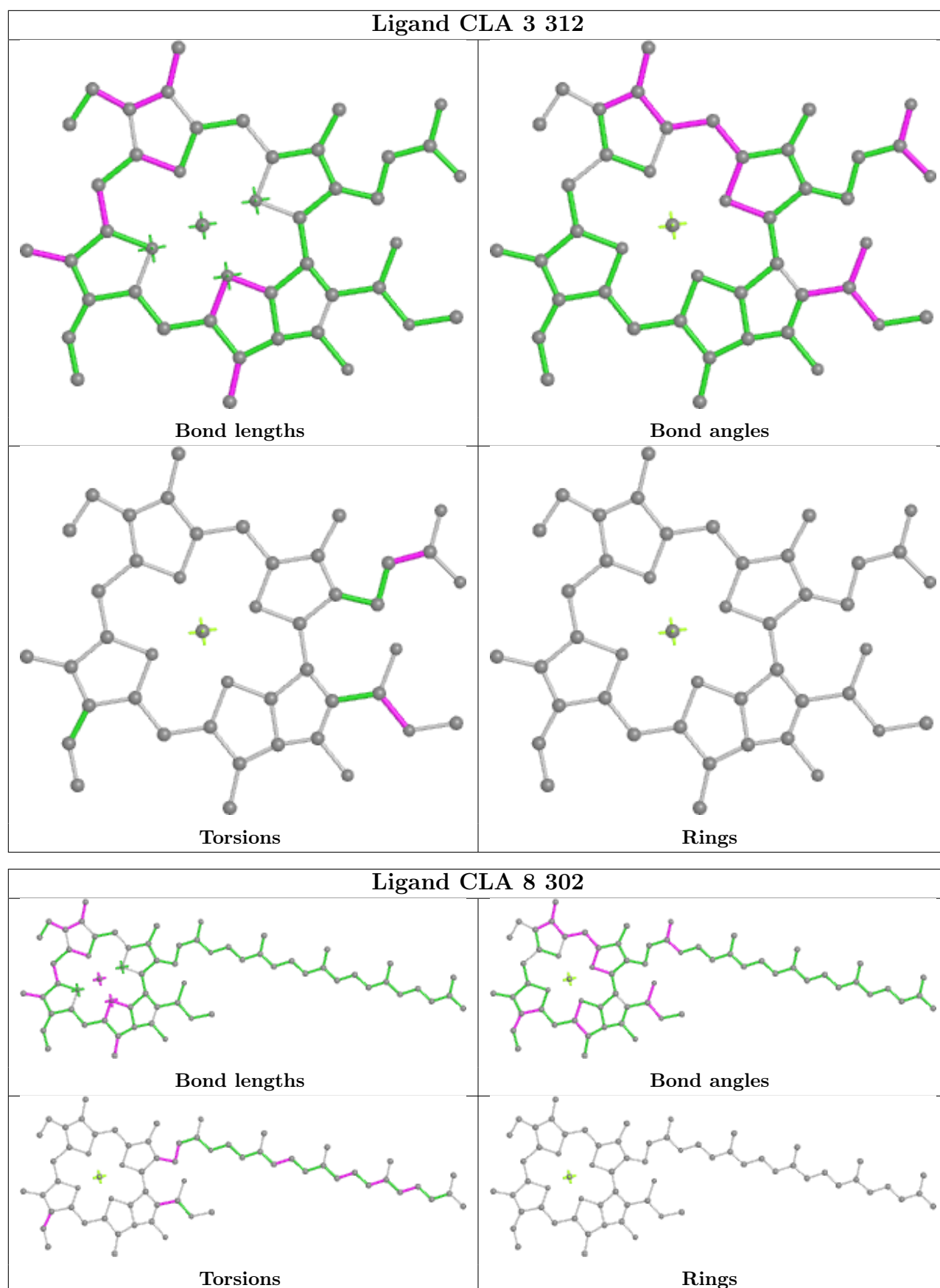


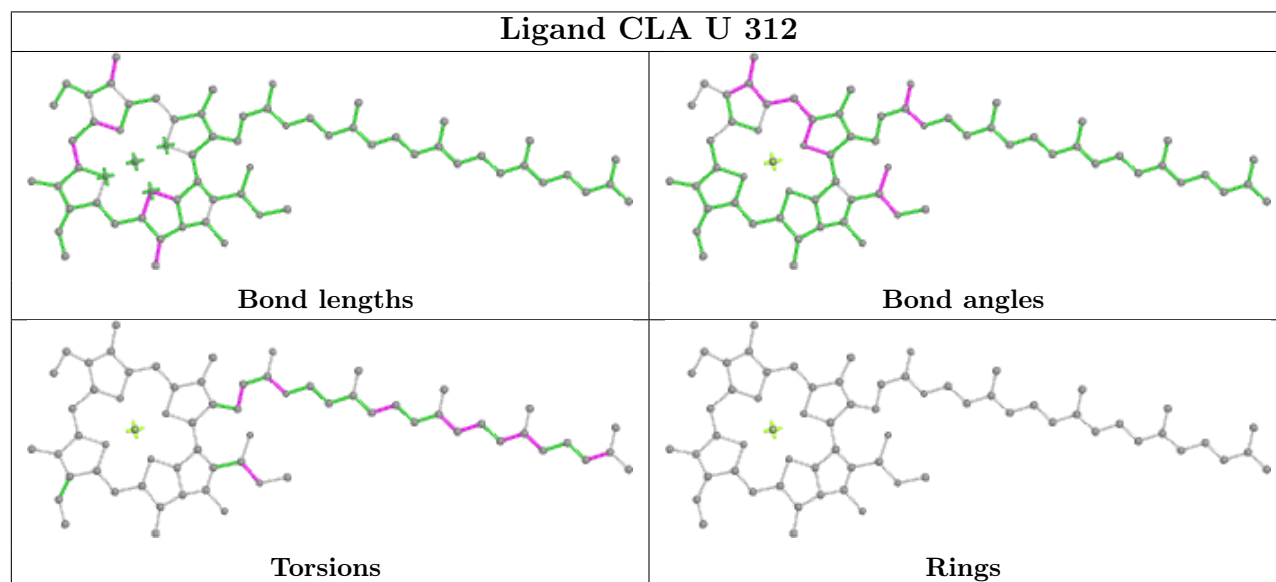
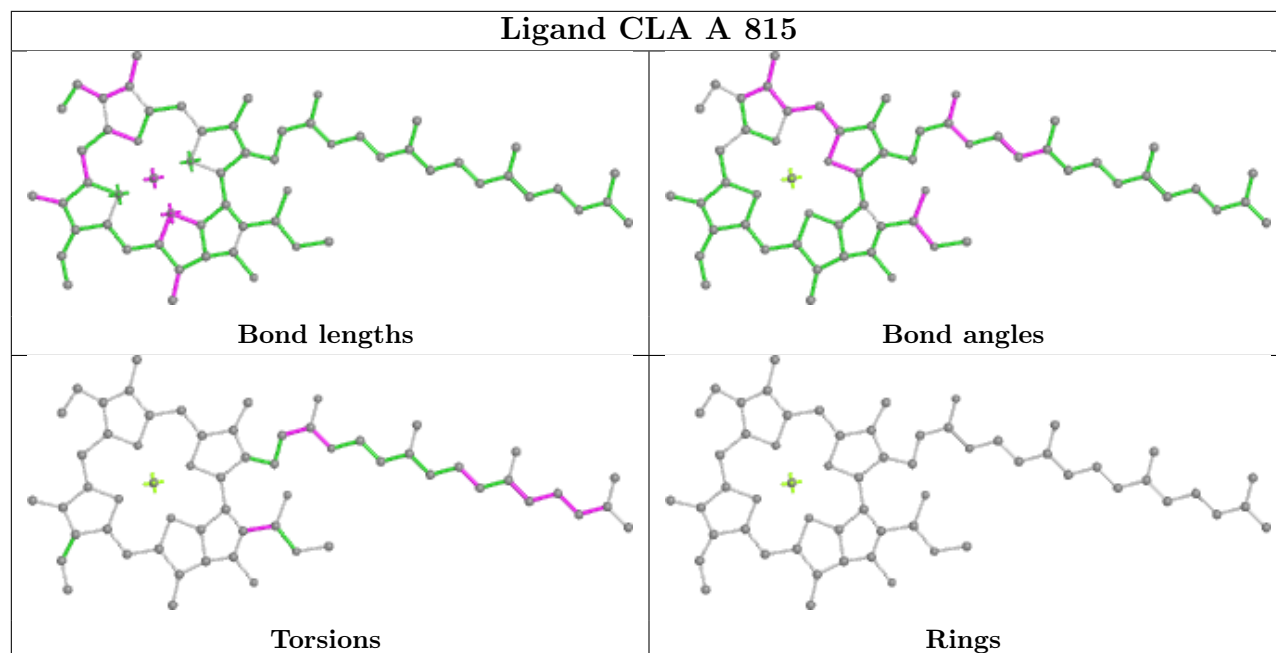


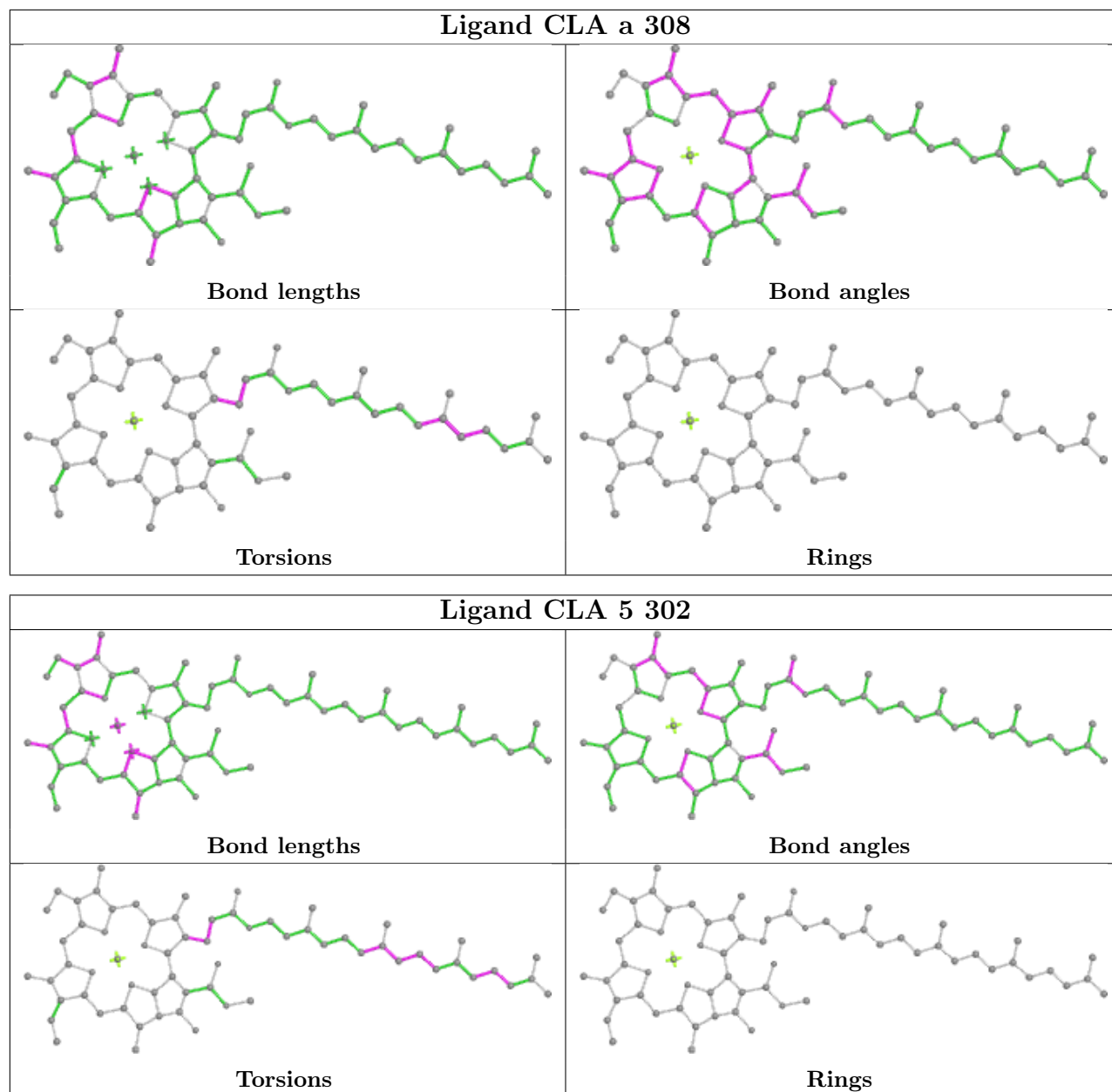


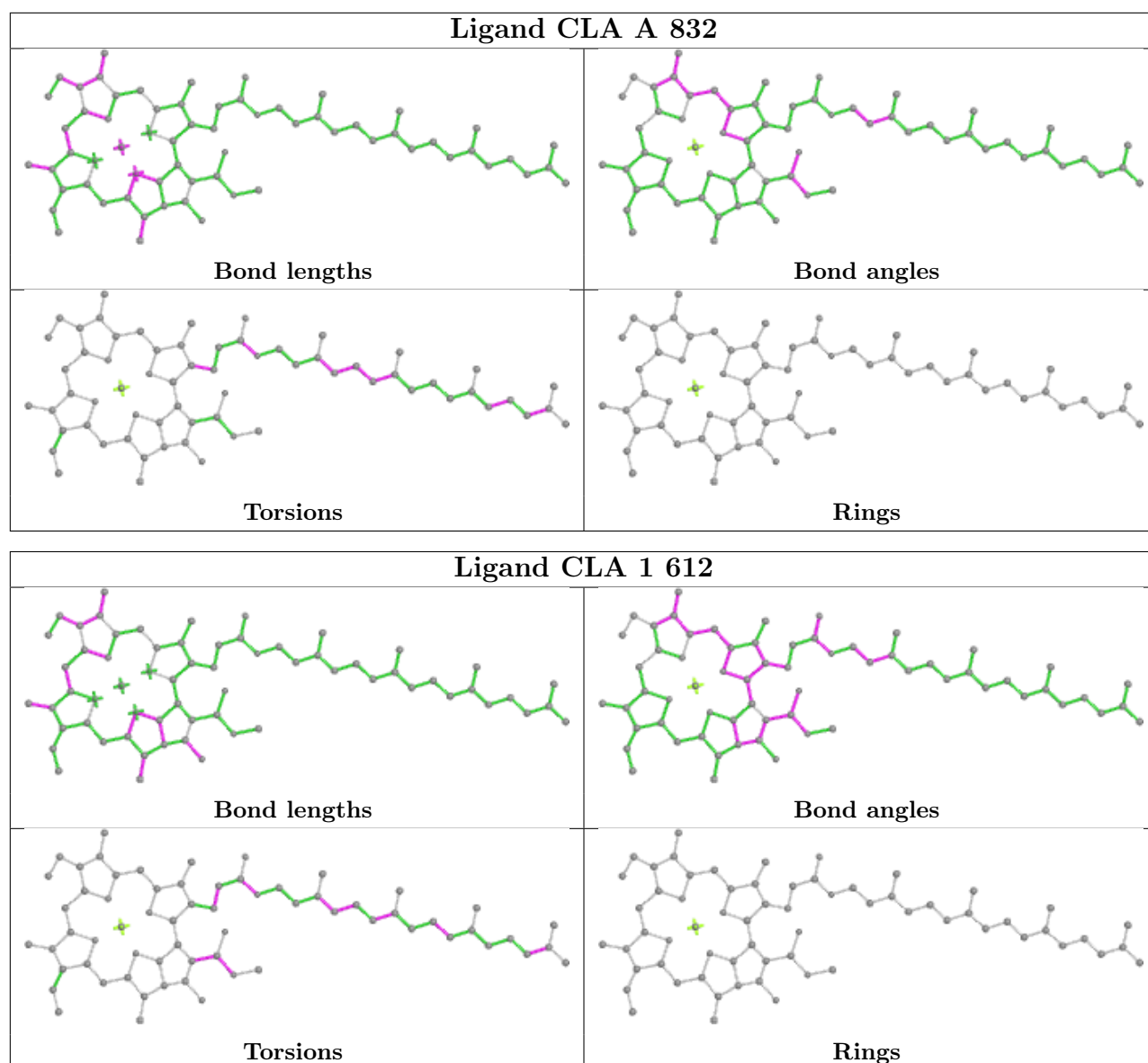


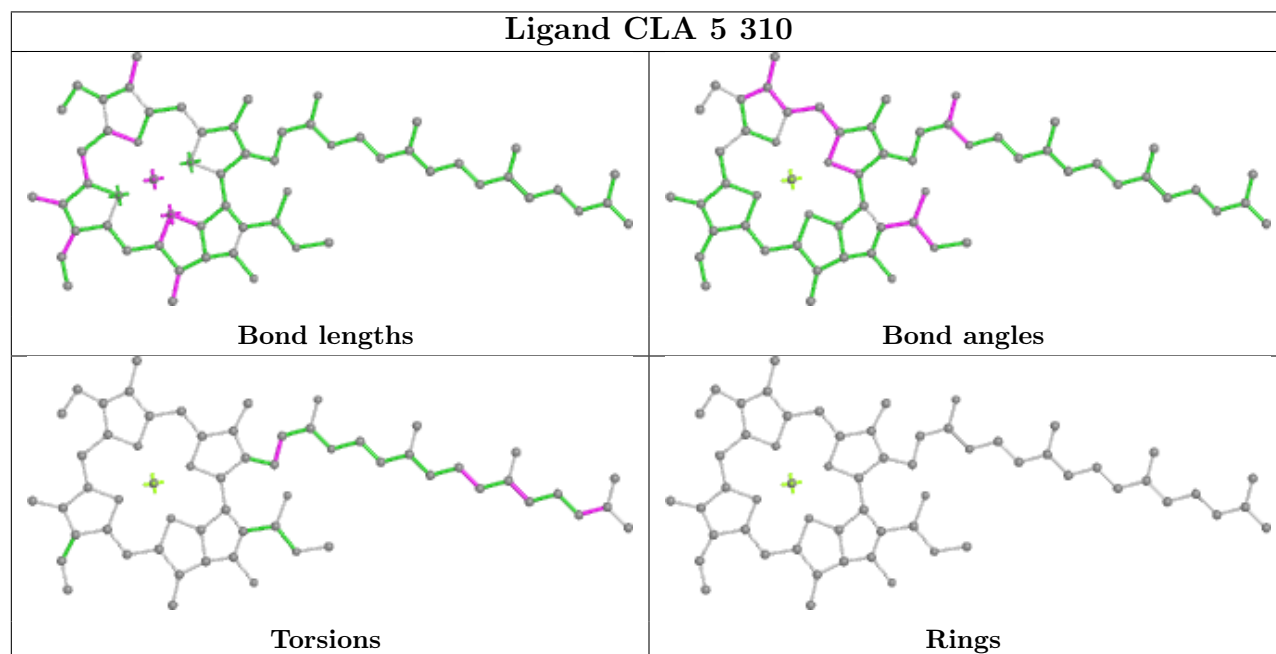
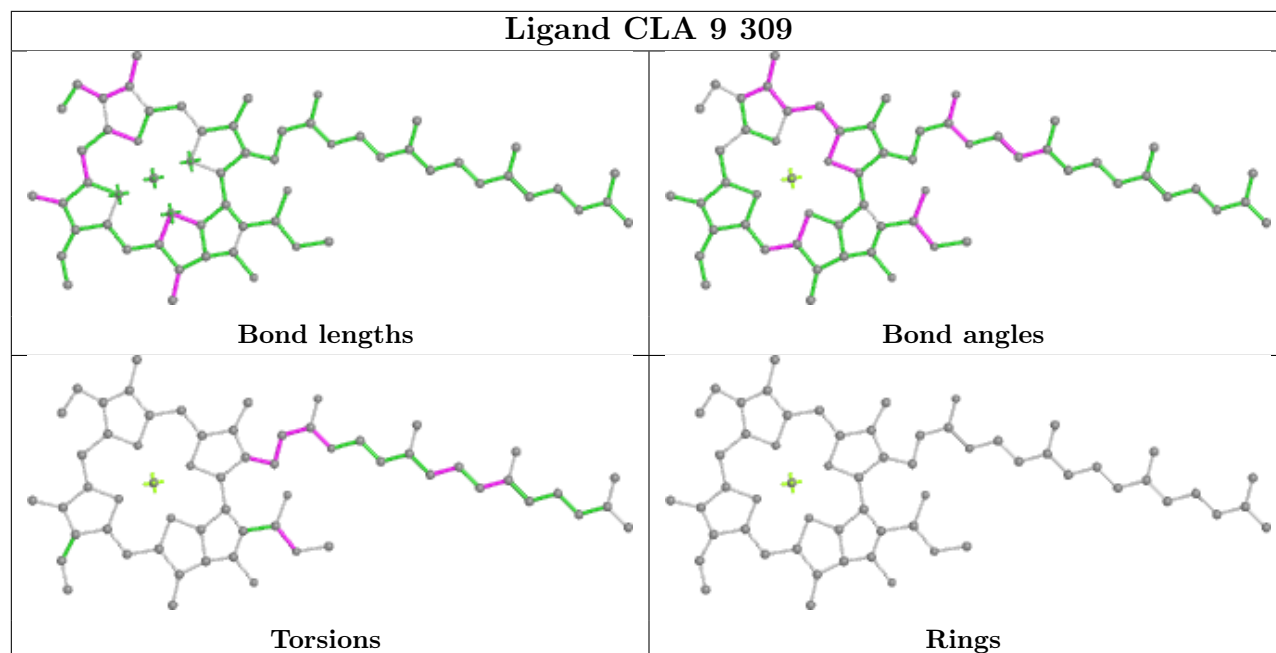


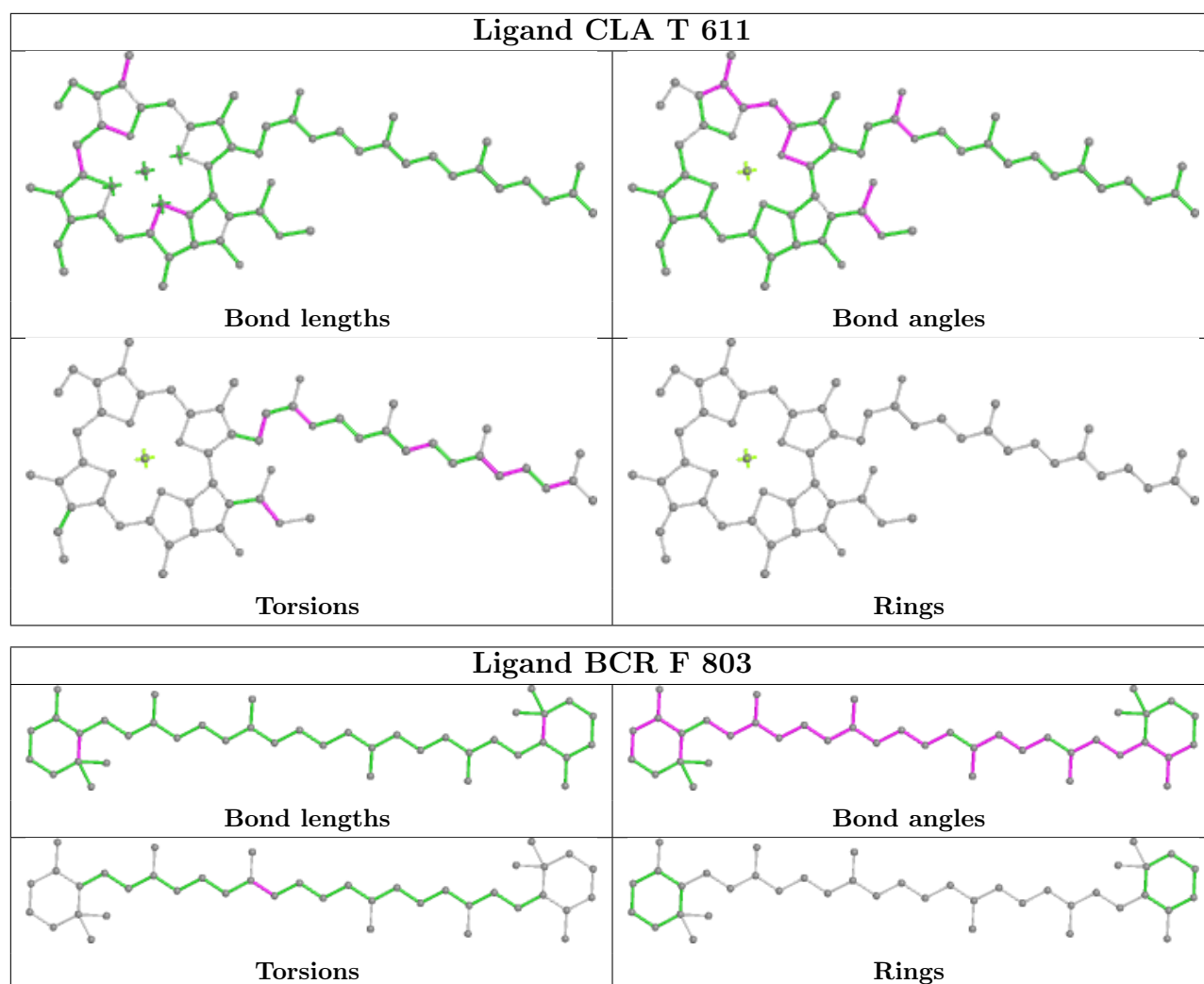


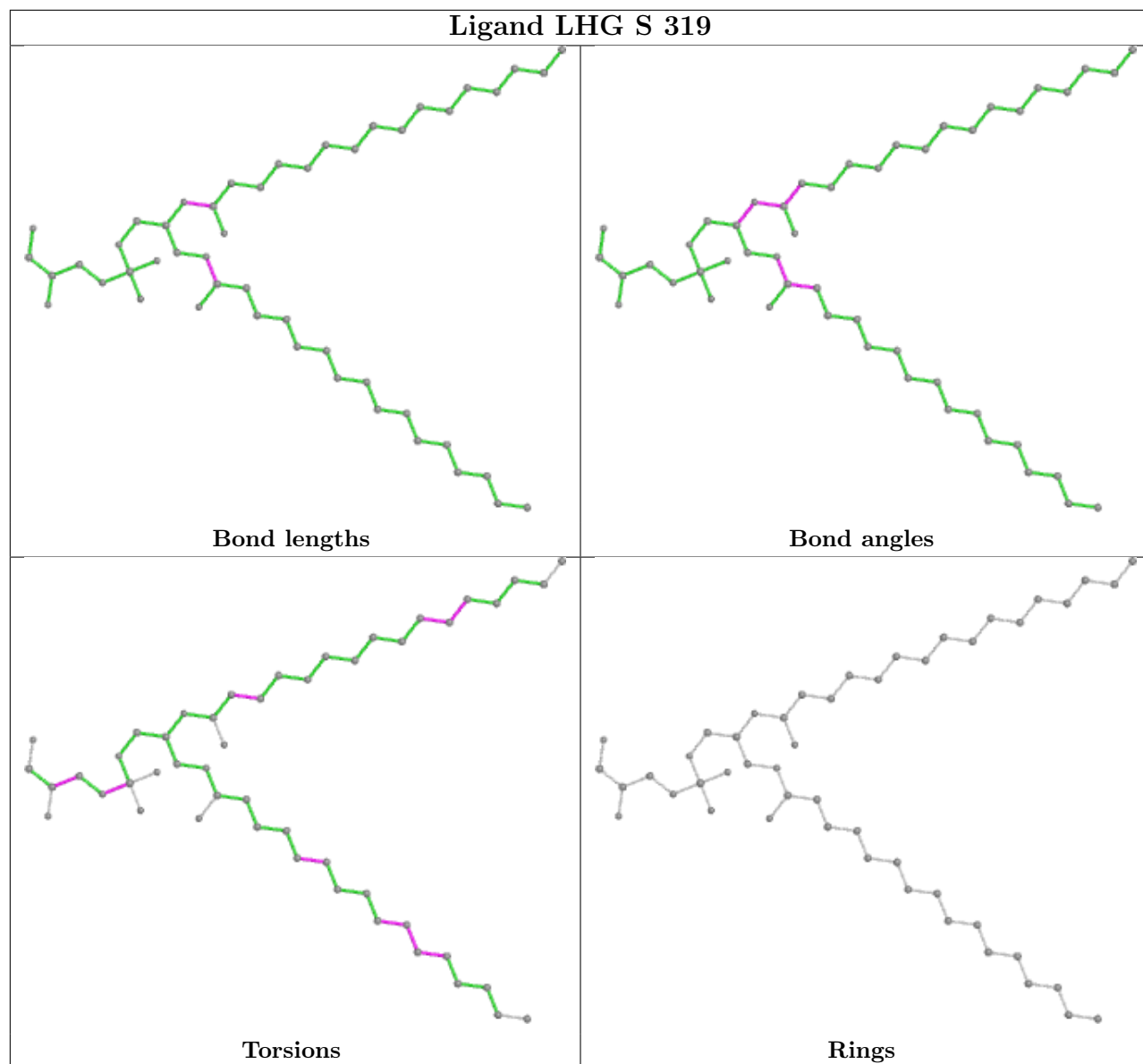


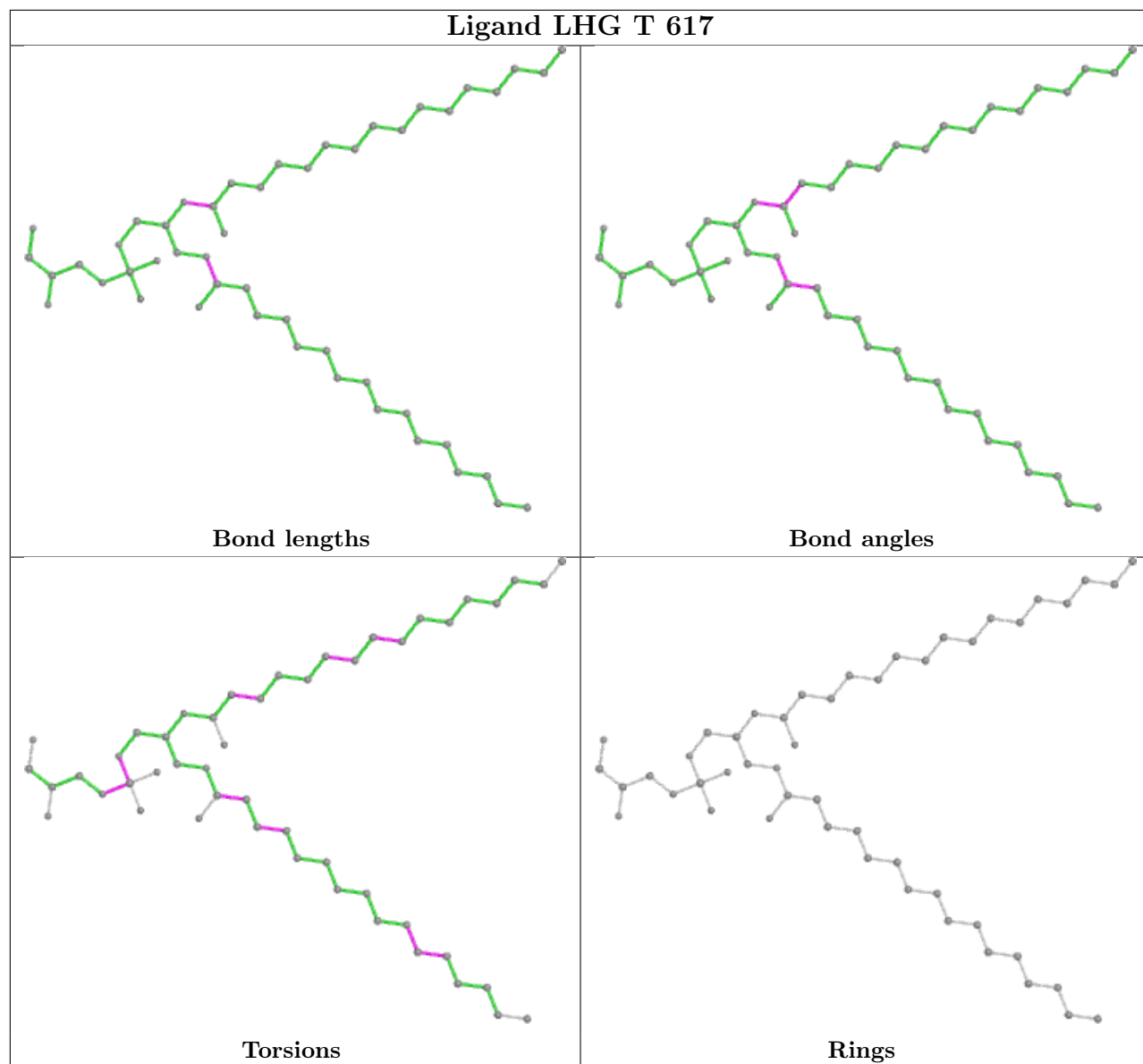


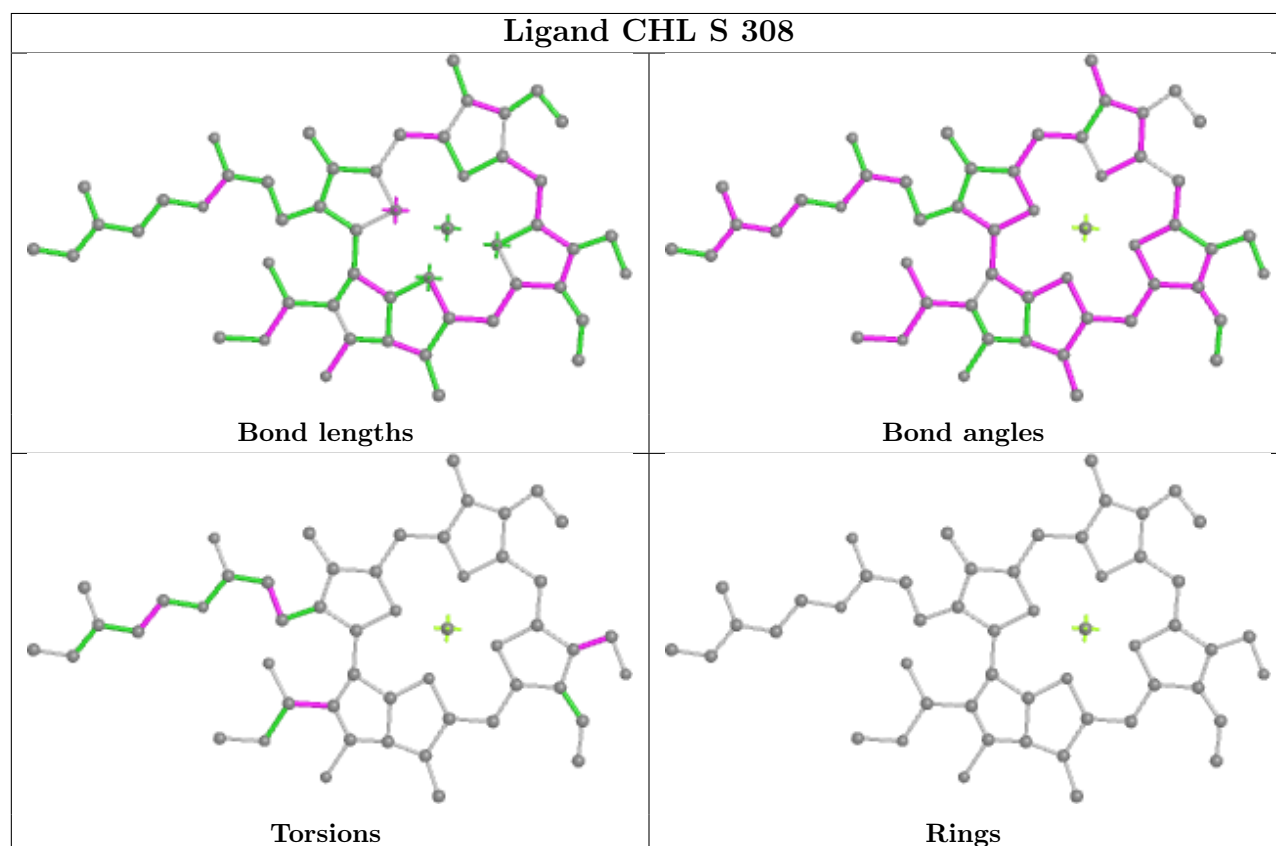
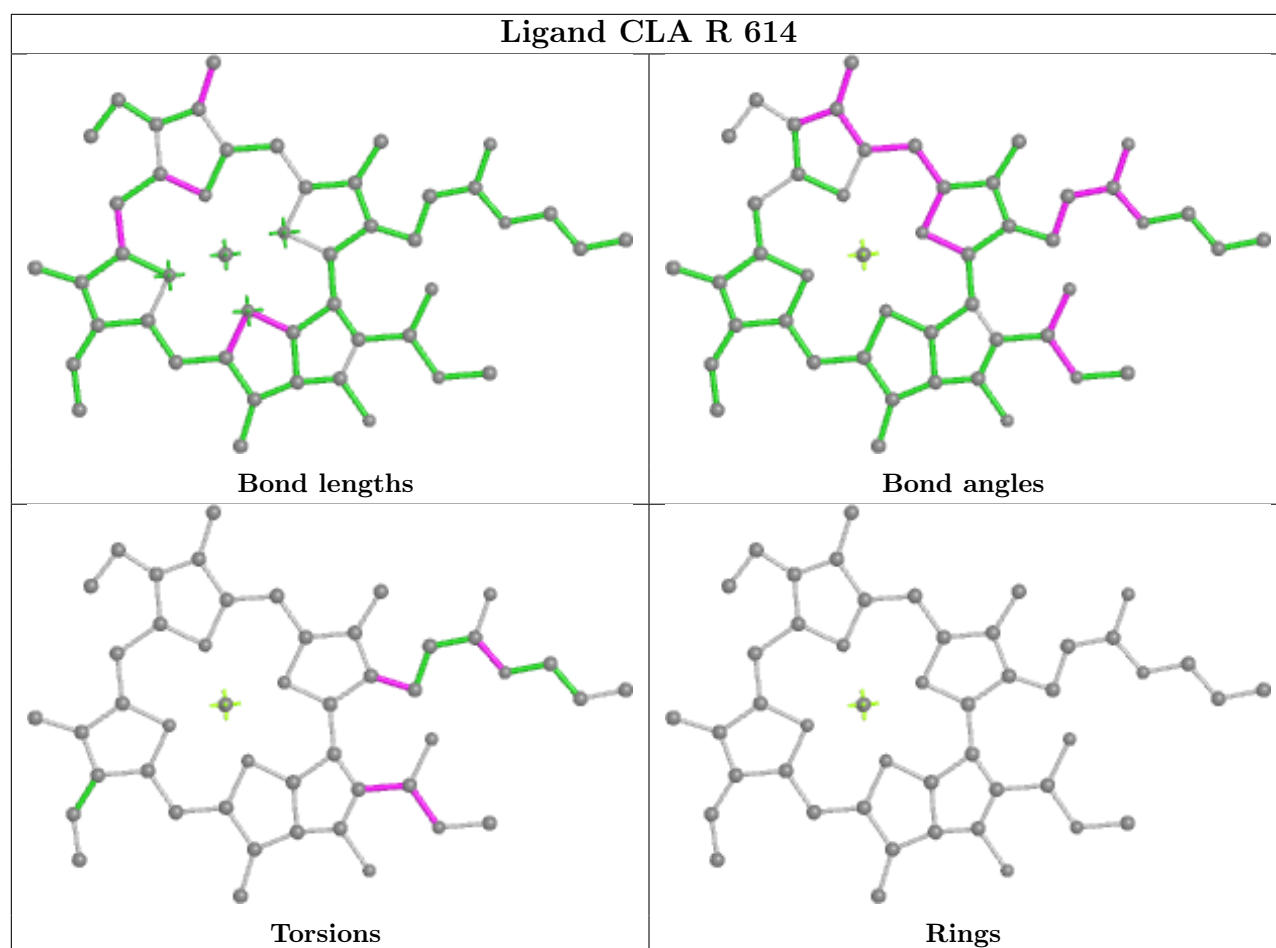


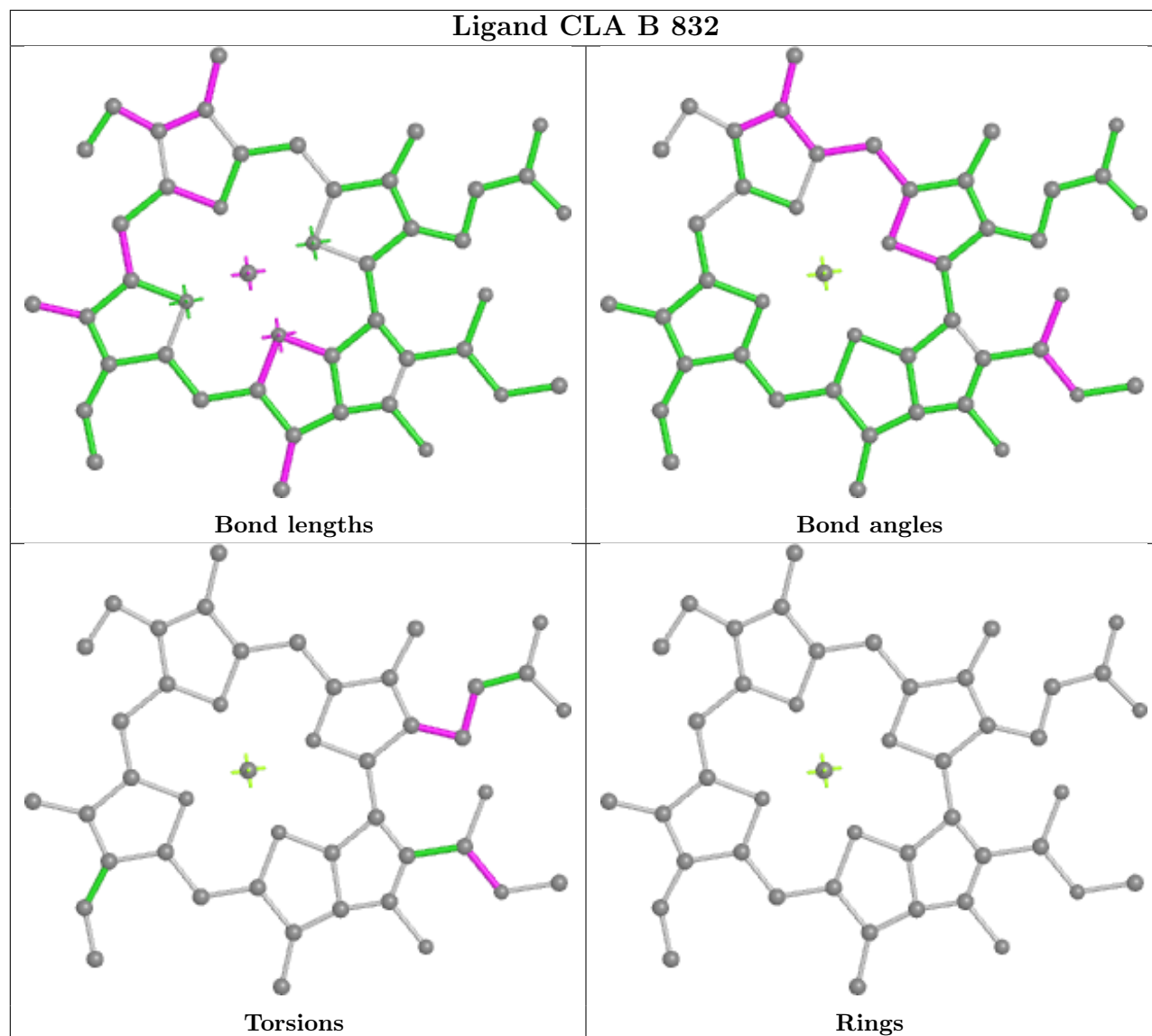


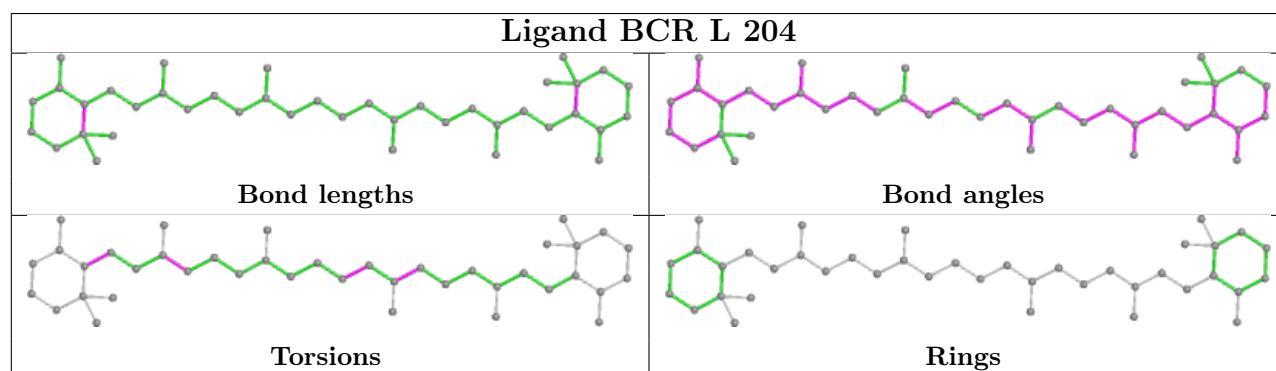
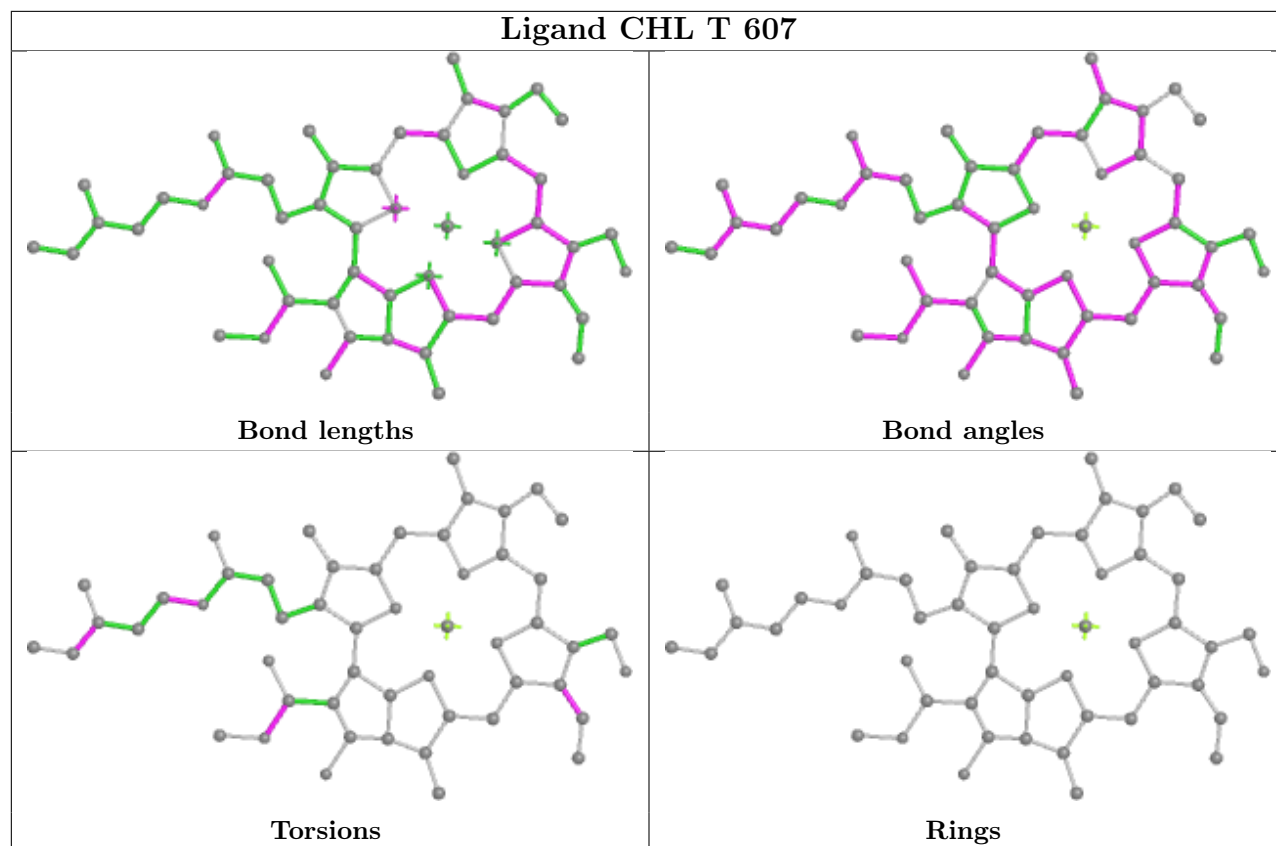


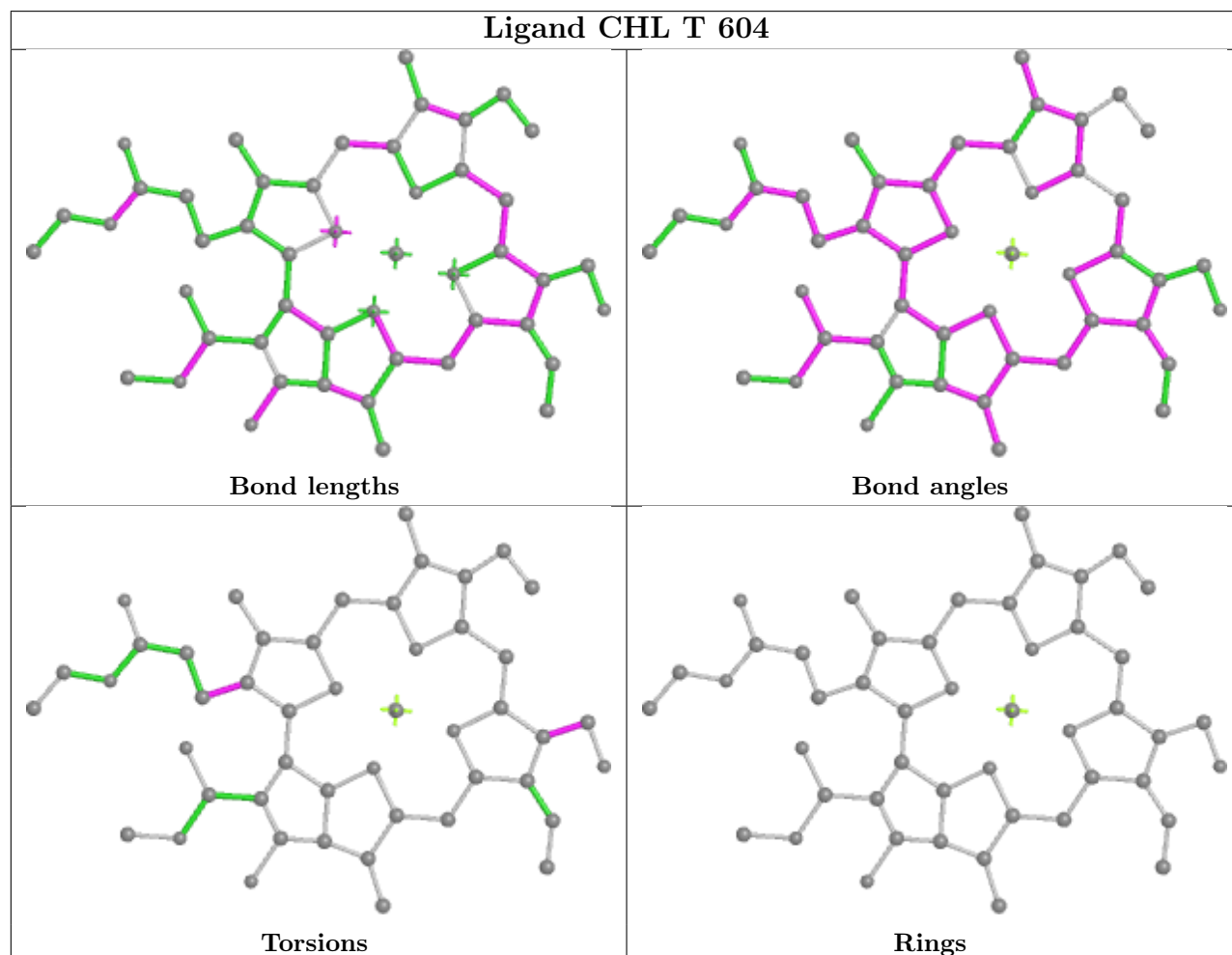
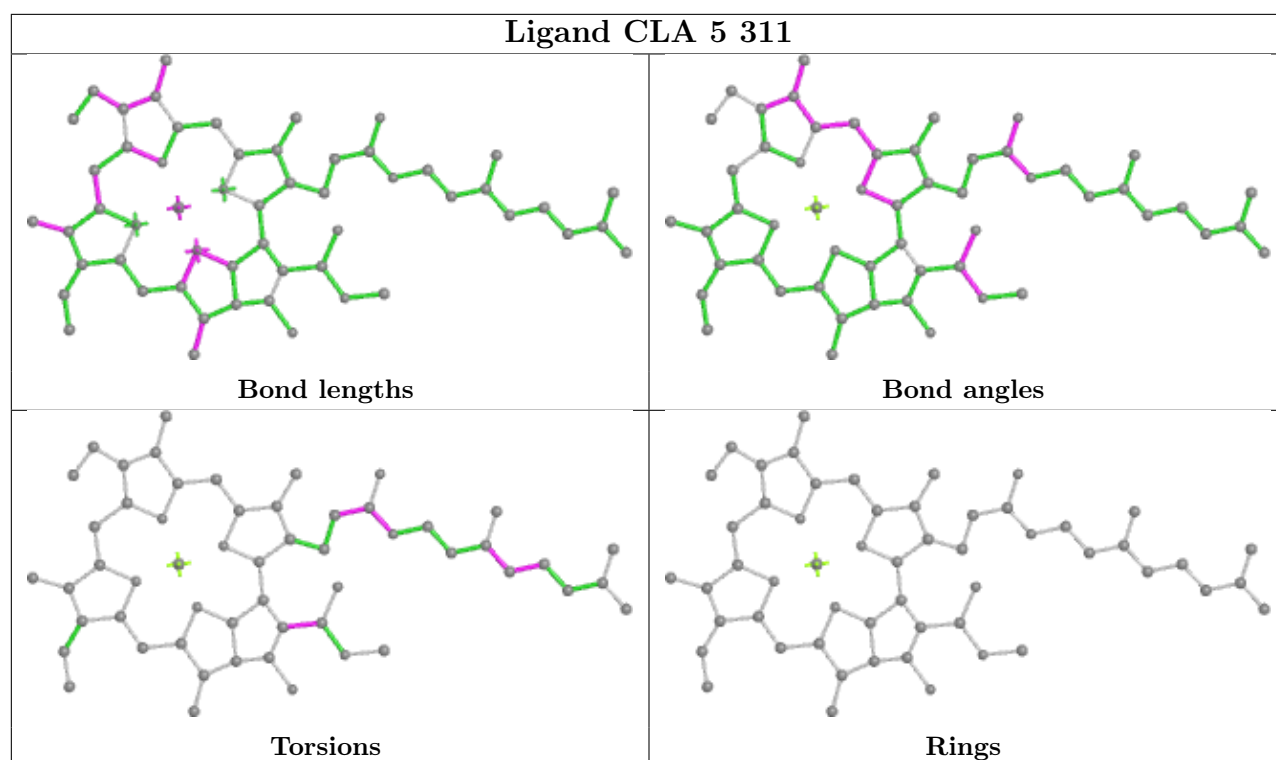


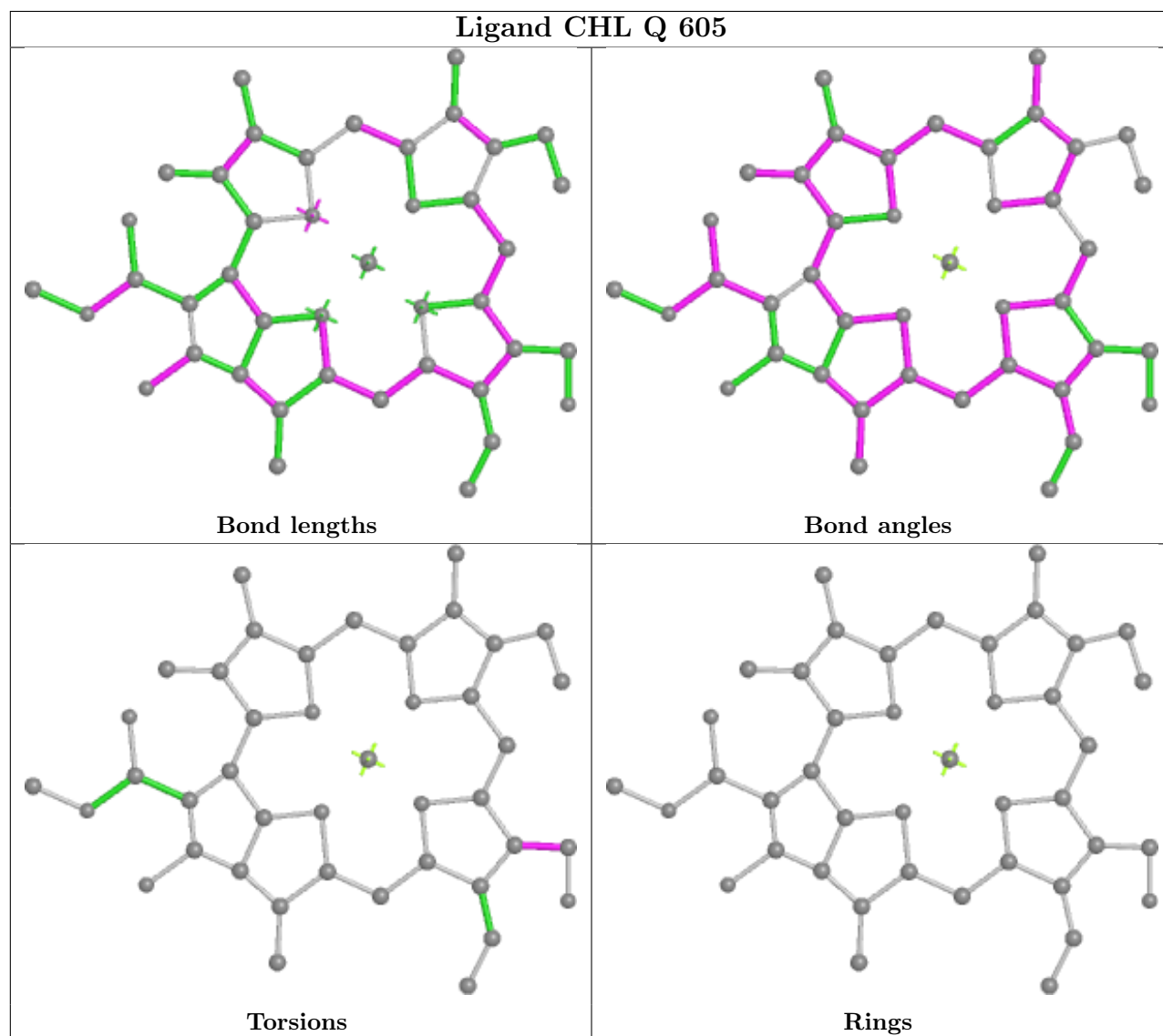
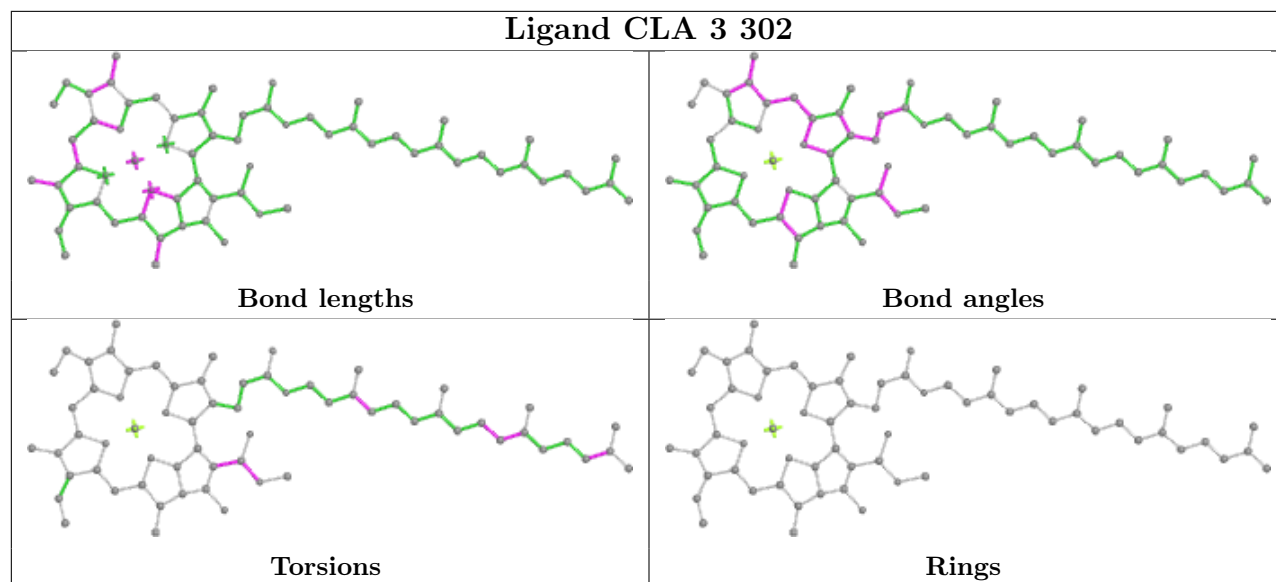


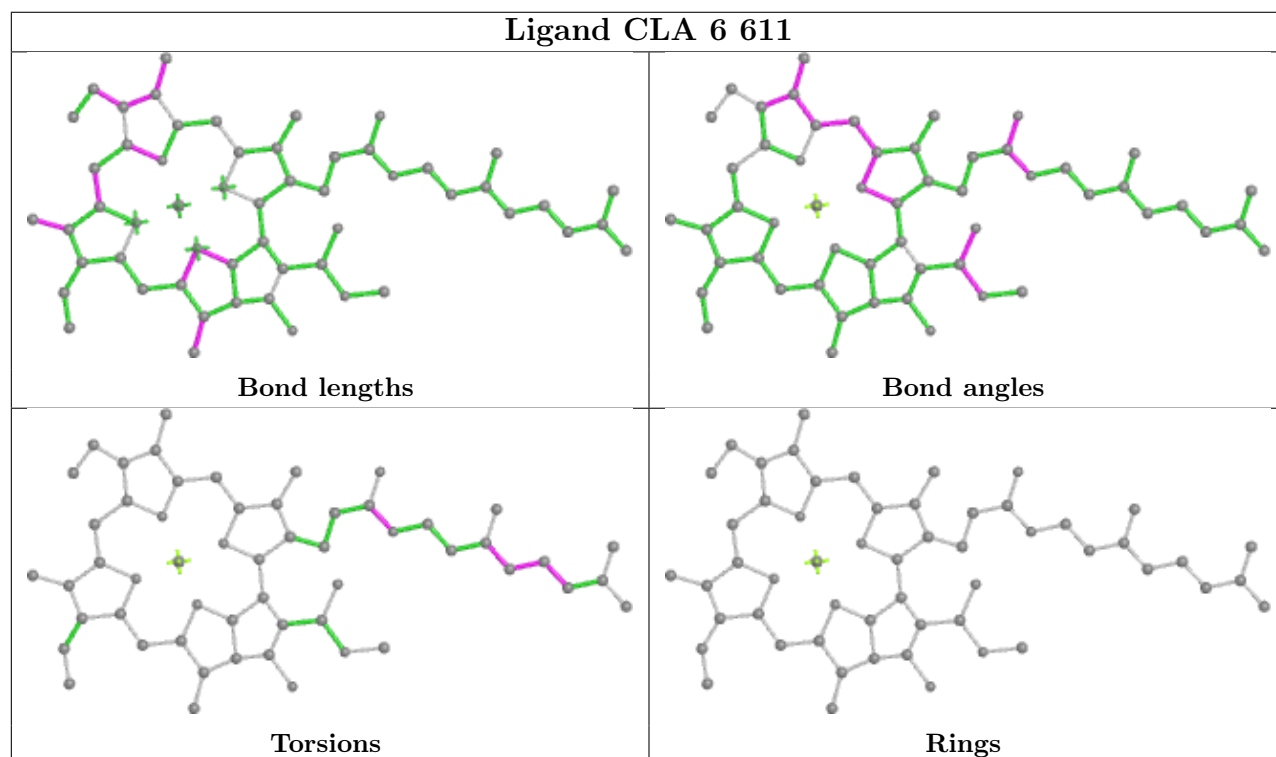
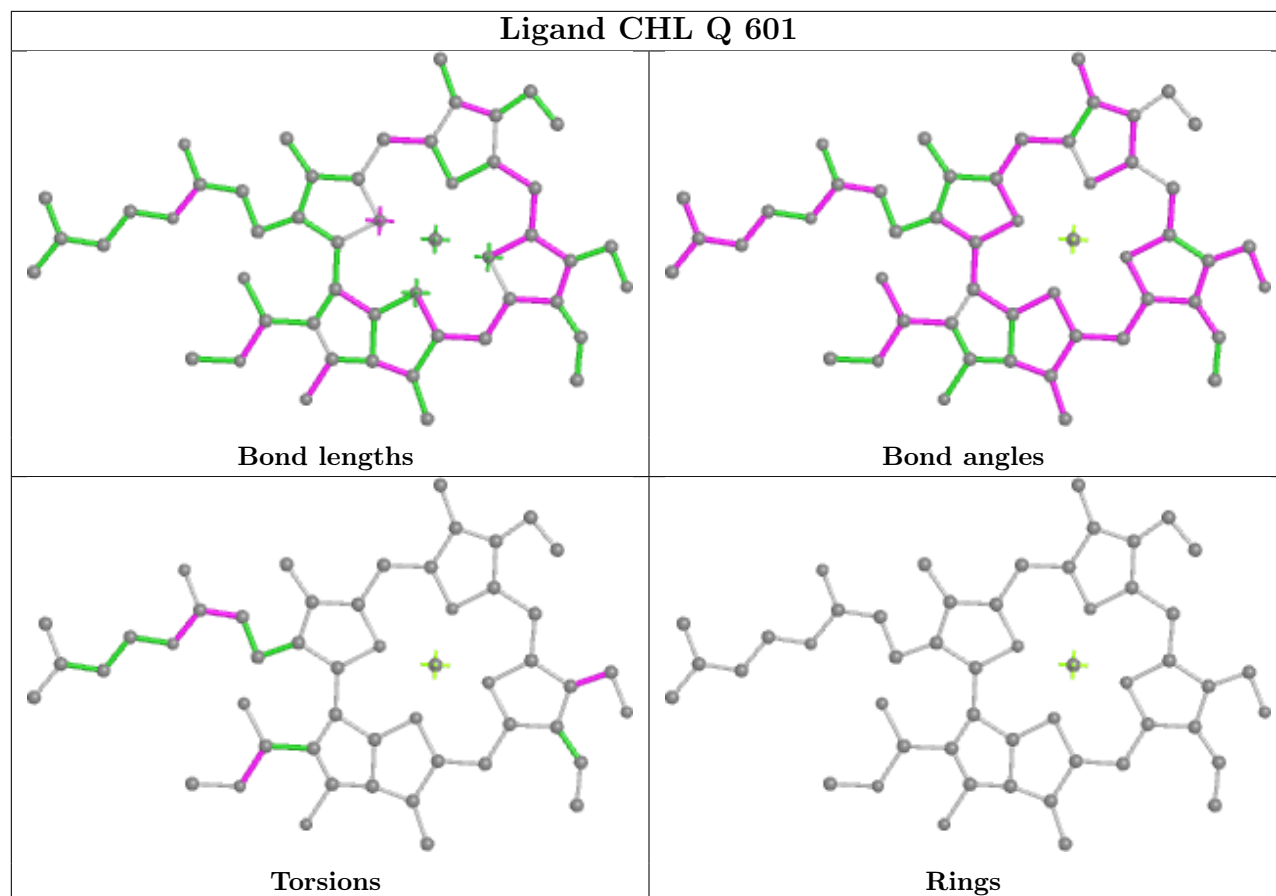


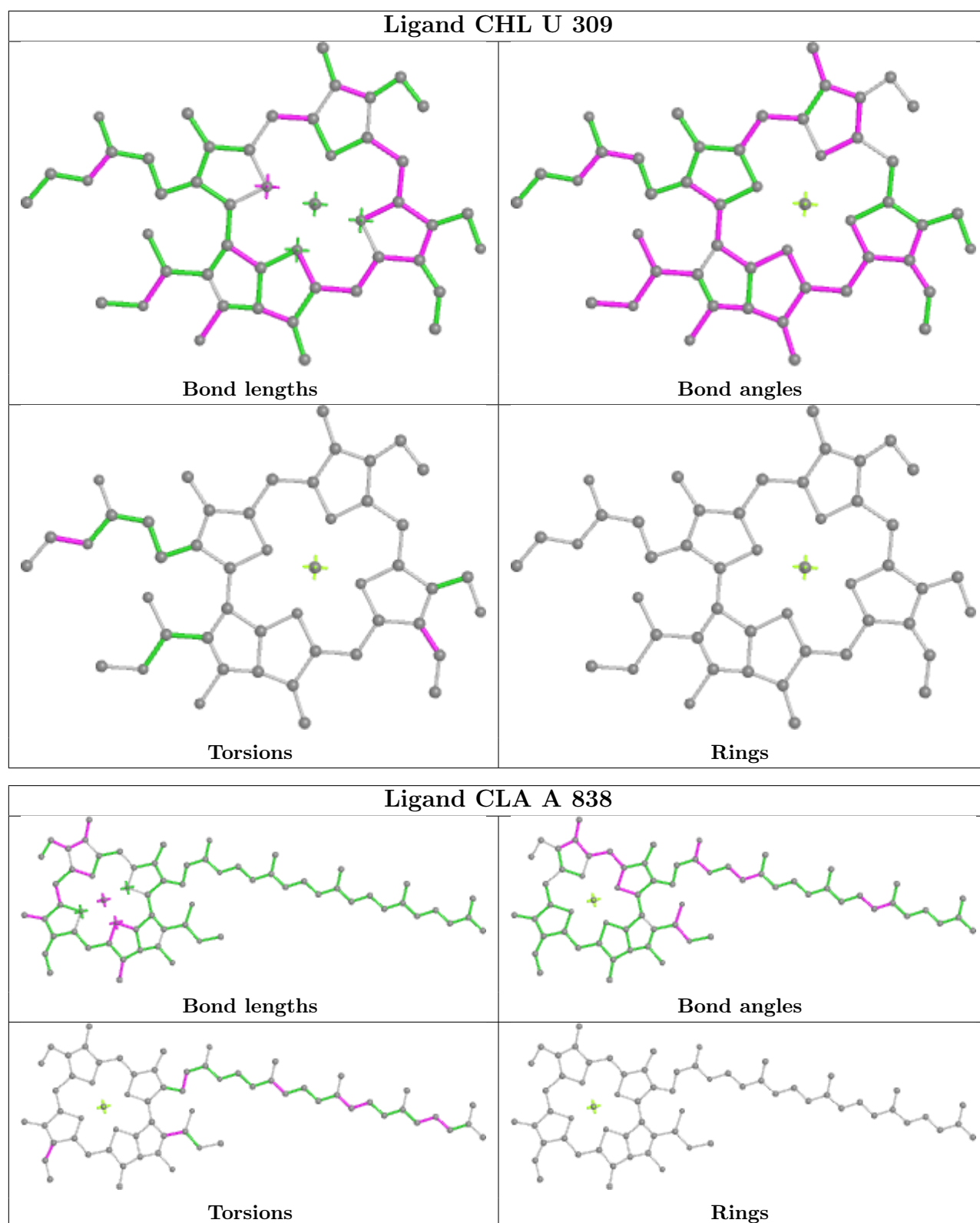












5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

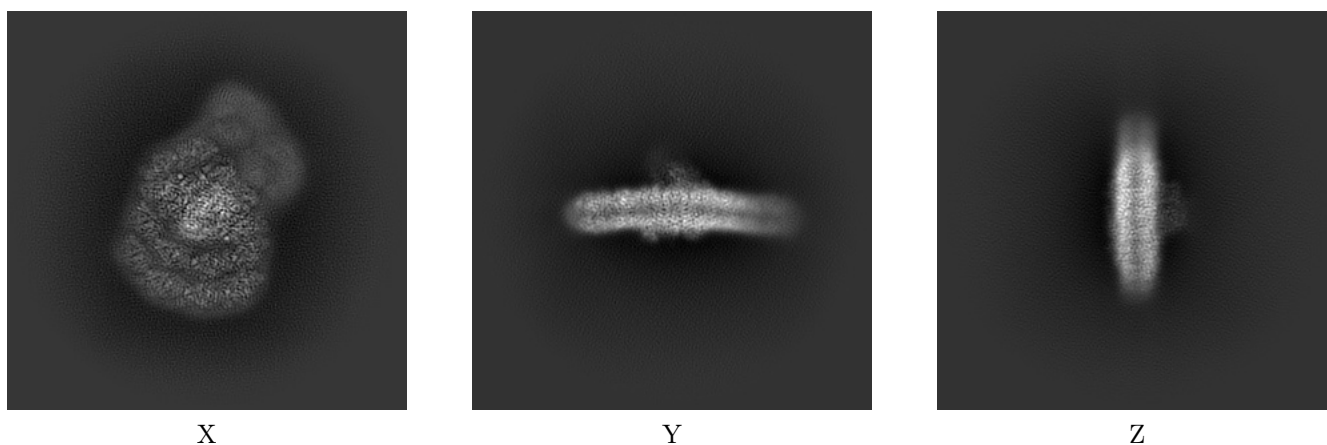
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-30536. These allow visual inspection of the internal detail of the map and identification of artifacts.

No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

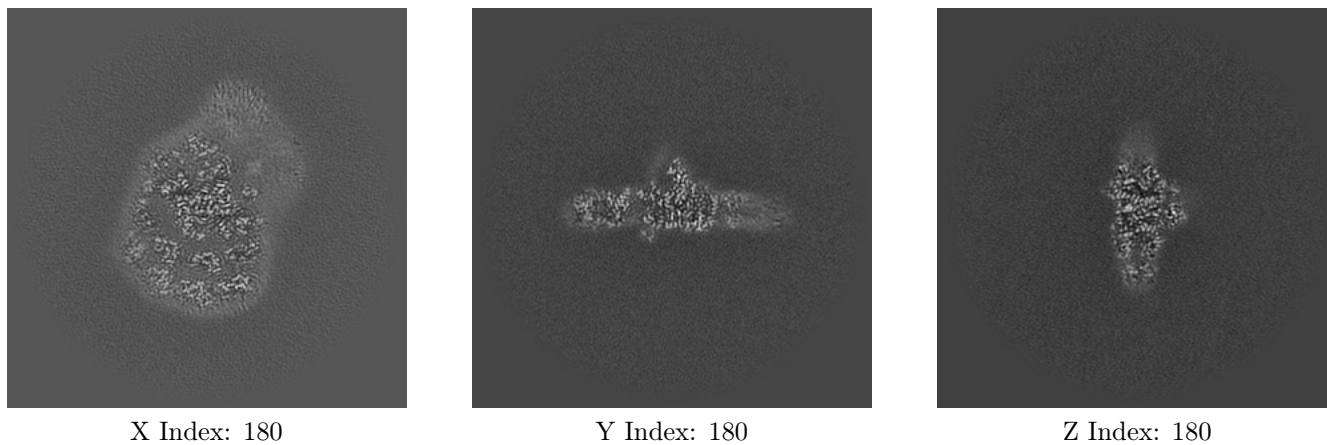
6.1.1 Primary map



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

6.2 Central slices [i](#)

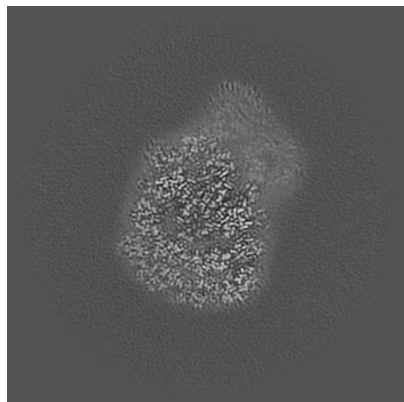
6.2.1 Primary map



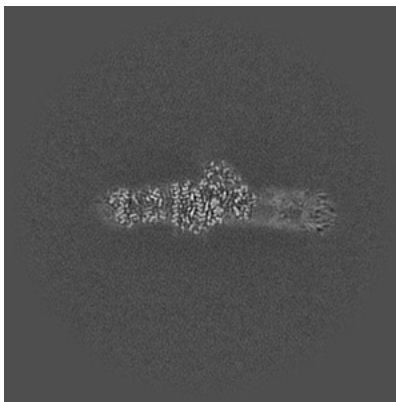
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

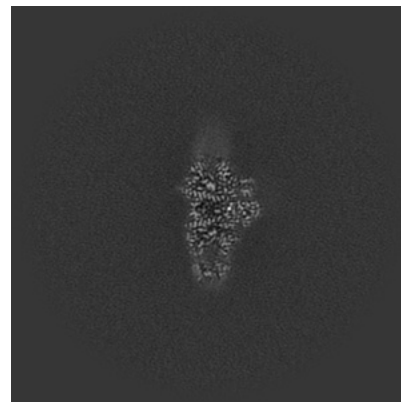
6.3.1 Primary map



X Index: 187



Y Index: 198

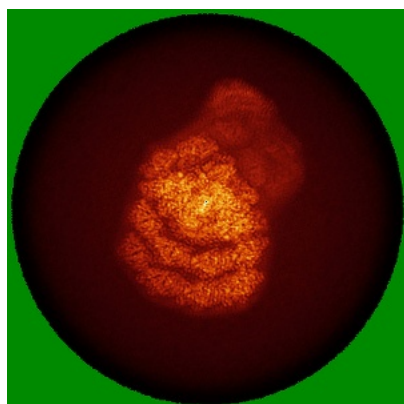


Z Index: 182

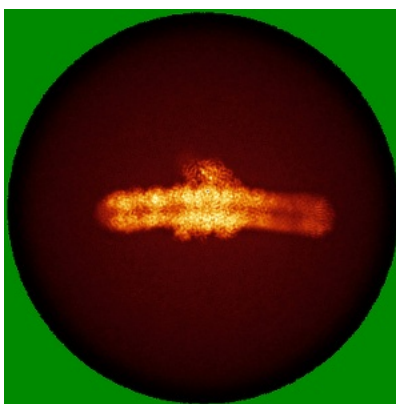
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

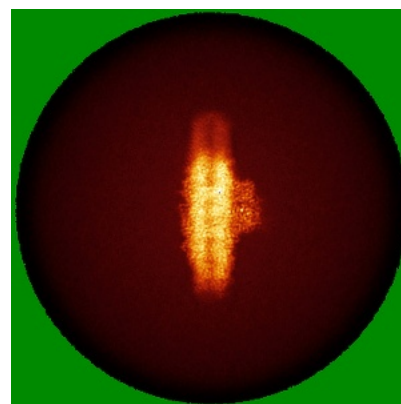
6.4.1 Primary map



X



Y

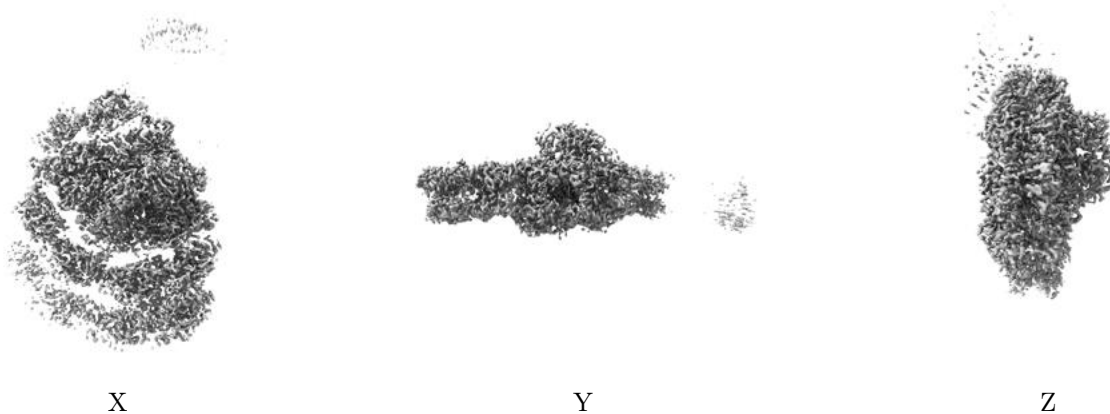


Z

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 1.0. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

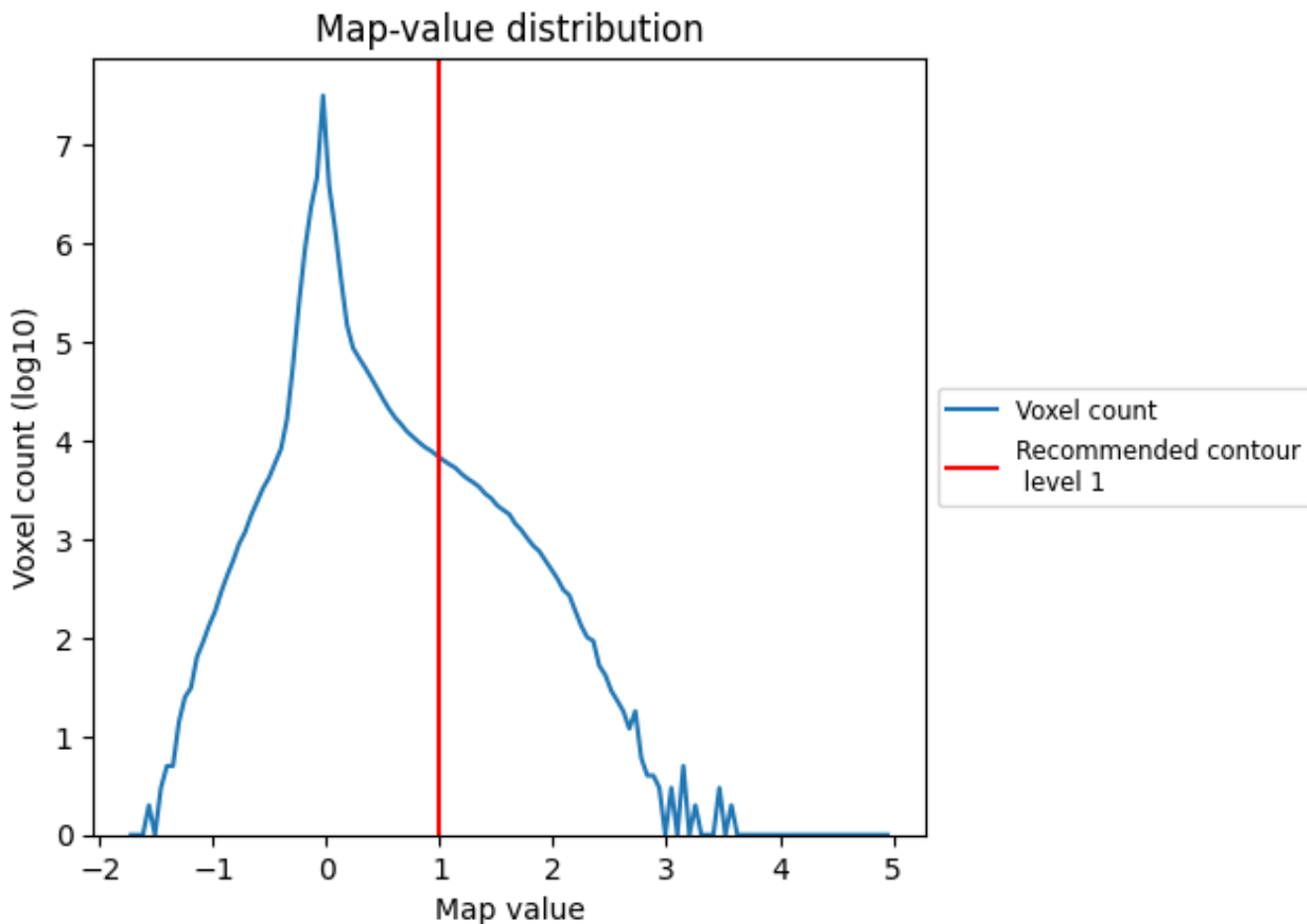
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

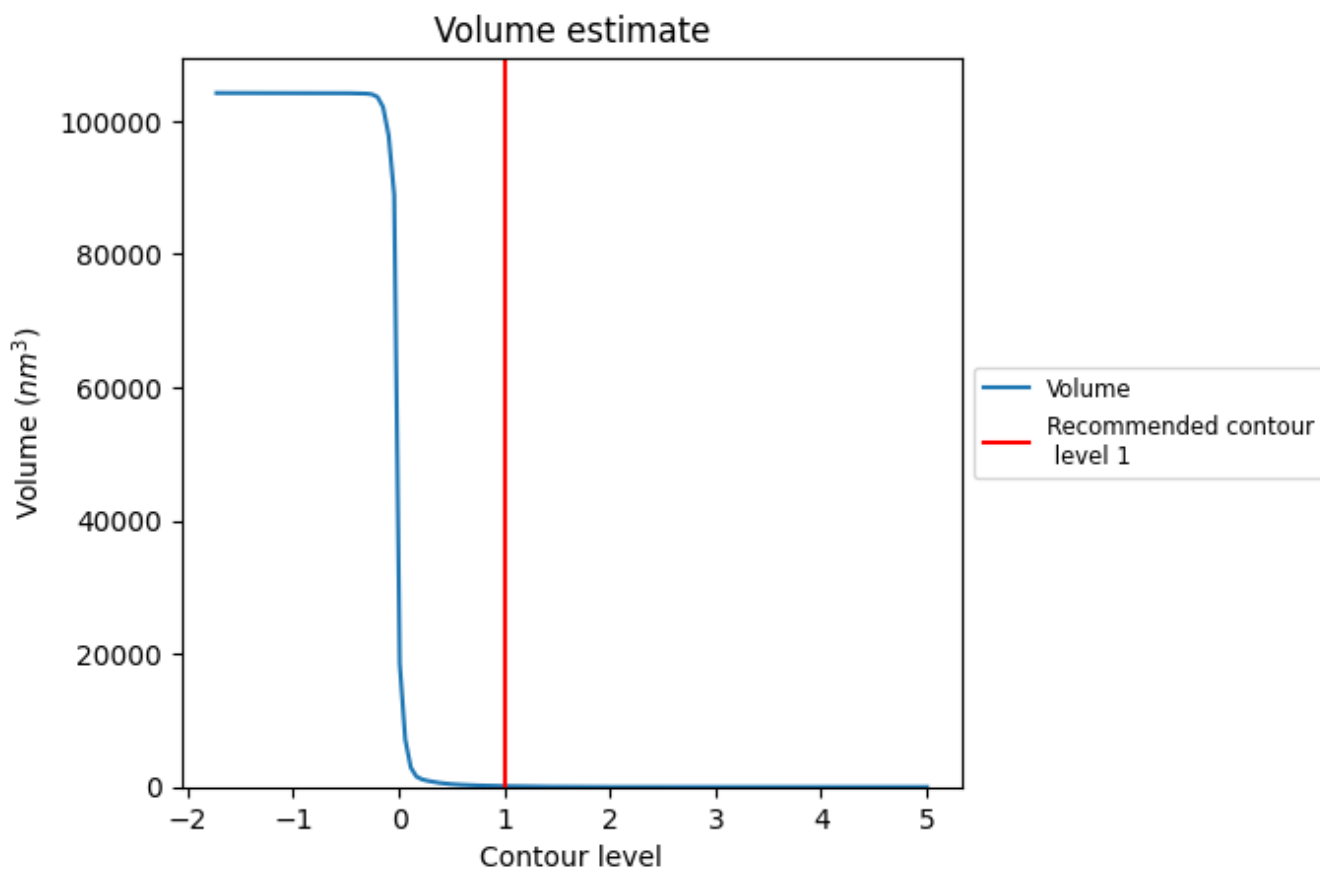
This section contains the results of statistical analysis of the map.

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.

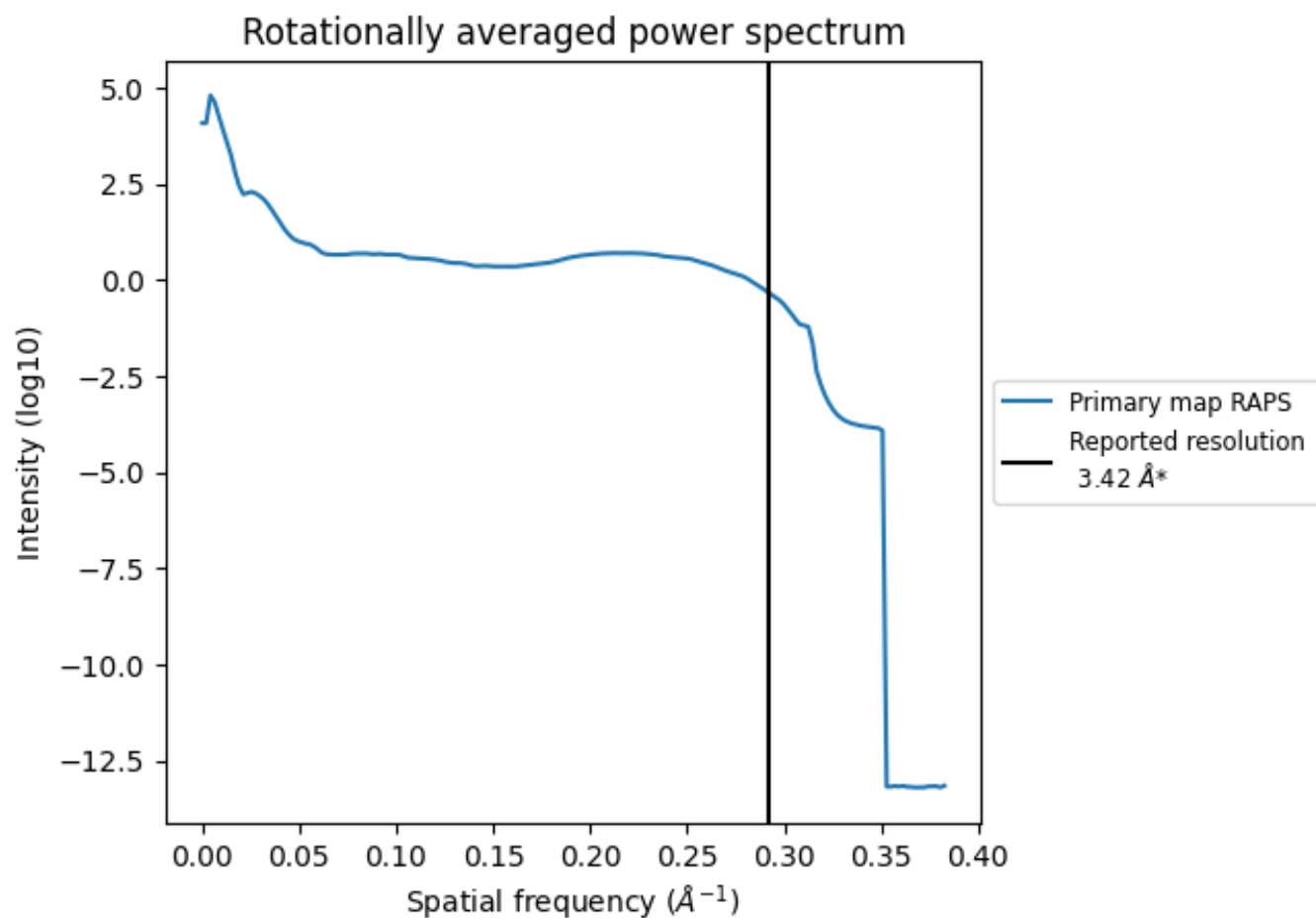
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 128 nm^3 ; this corresponds to an approximate mass of 115 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 0.292\AA^{-1}

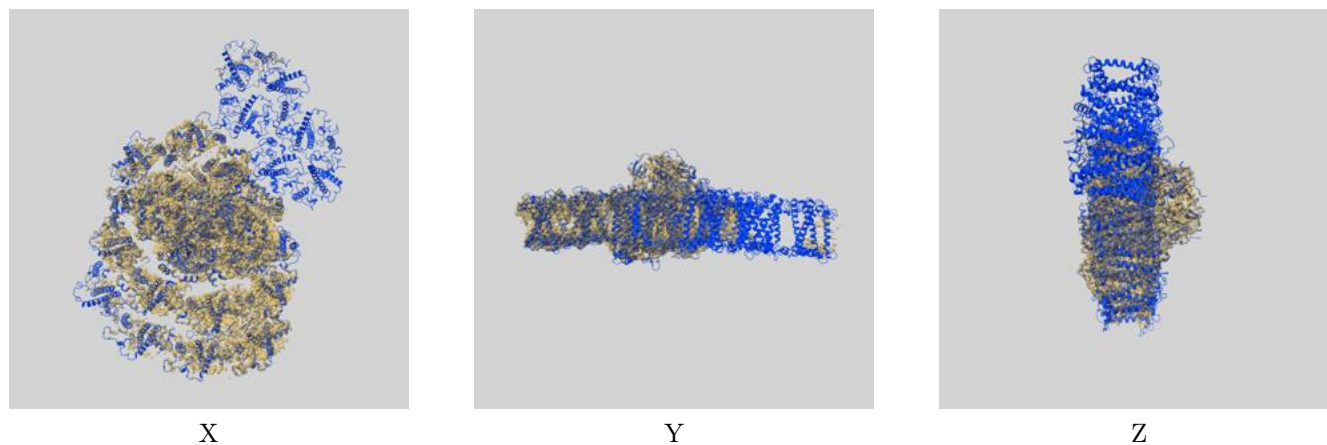
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit [i](#)

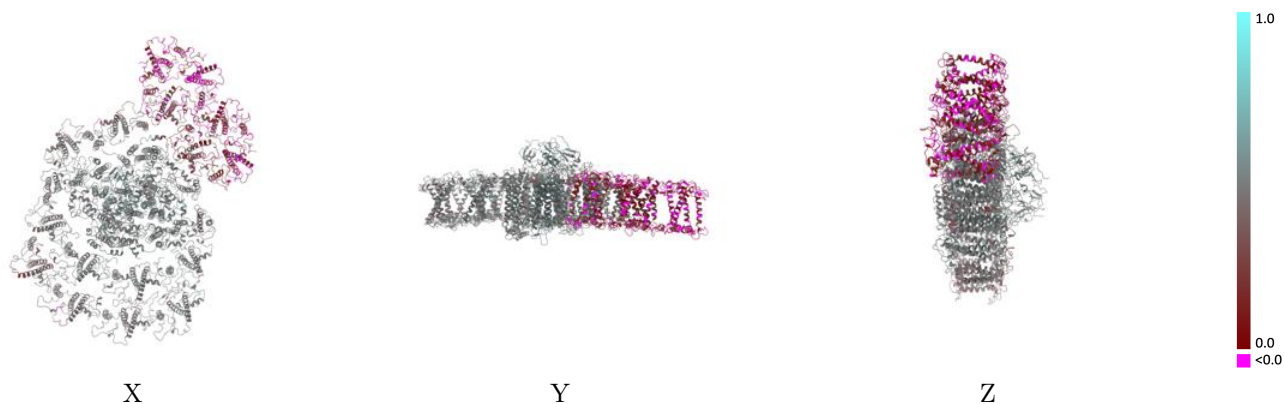
This section contains information regarding the fit between EMDB map EMD-30536 and PDB model 7D0J. Per-residue inclusion information can be found in section [3](#) on page [44](#).

9.1 Map-model overlay [i](#)



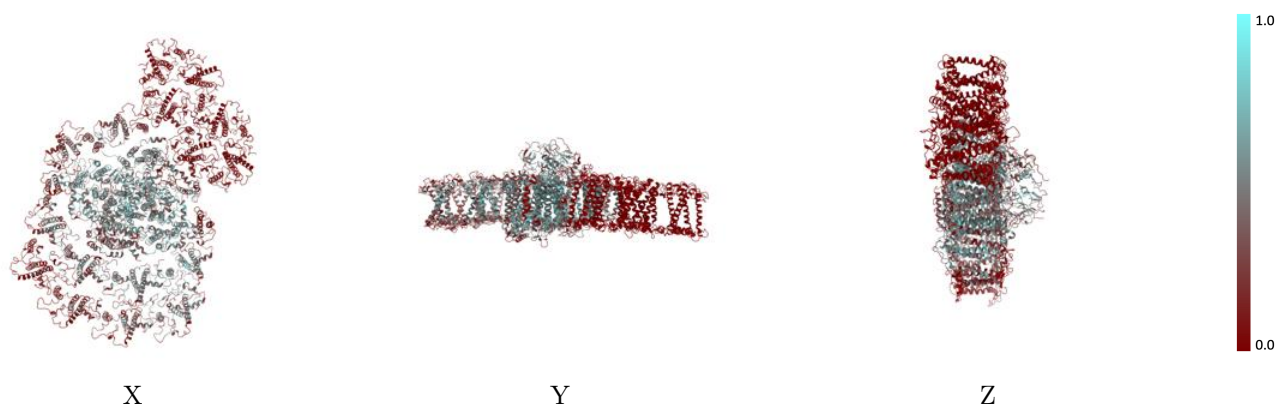
The images above show the 3D surface view of the map at the recommended contour level 1.0 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



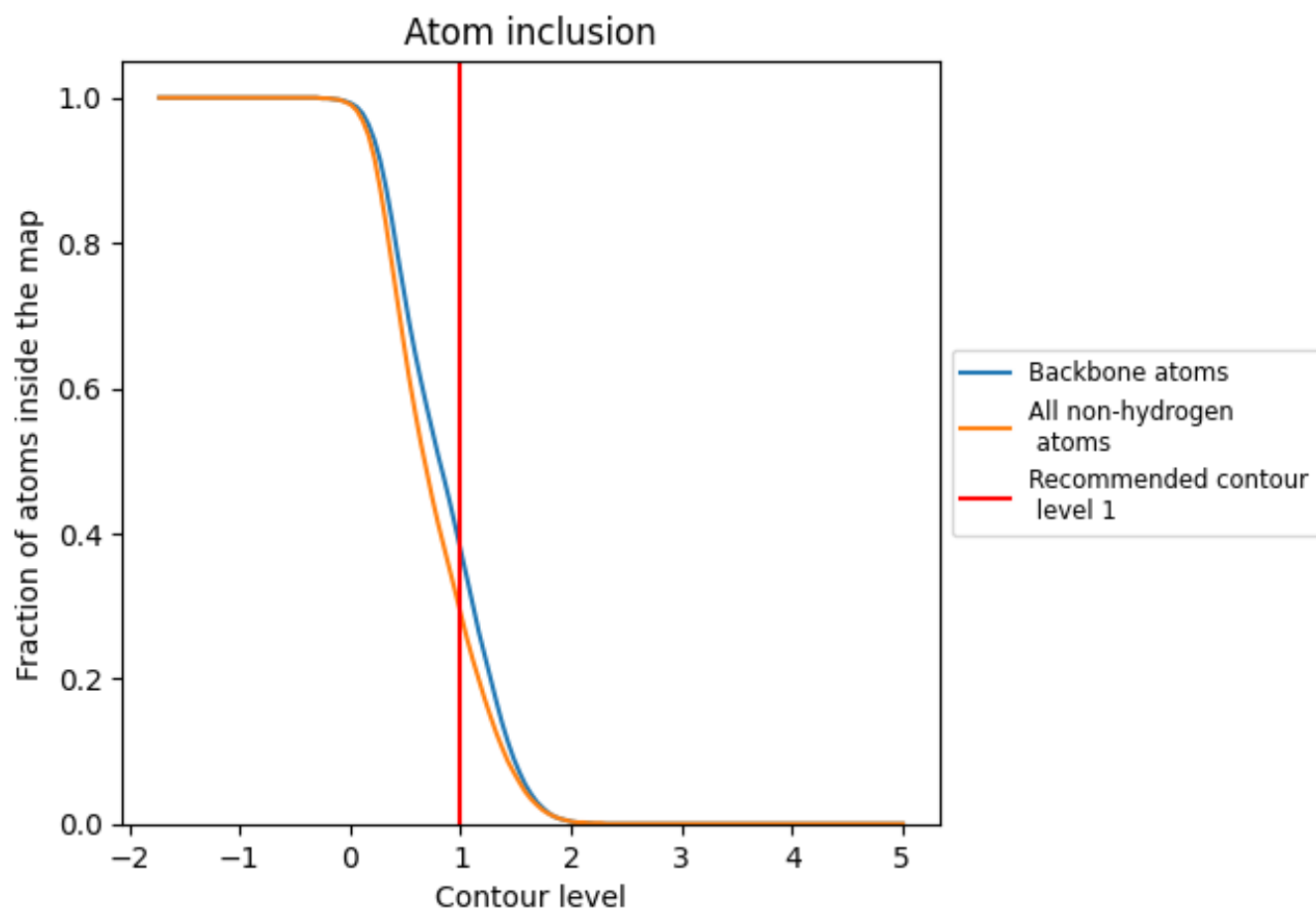
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (1).





























































9.4 Atom inclusion [i](#)



At the recommended contour level, 38% of all backbone atoms, 29% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary [i](#)

The table lists the average atom inclusion at the recommended contour level (1) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.2900	 0.4070
1	 0.3150	 0.4760
2	 0.2700	 0.4450
3	 0.4270	 0.5110
4	 0.1240	 0.4380
5	 0.3910	 0.4980
6	 0.2670	 0.4690
7	 0.4370	 0.5110
8	 0.3670	 0.4930
9	 0.2290	 0.4440
A	 0.5310	 0.5300
B	 0.5200	 0.5290
C	 0.5710	 0.5210
D	 0.3740	 0.5140
E	 0.3710	 0.5020
F	 0.2700	 0.4750
G	 0.1380	 0.4410
H	 0.3030	 0.4750
I	 0.4730	 0.5110
J	 0.2900	 0.5190
K	 0.1580	 0.4560
L	 0.4360	 0.5030
O	 0.3060	 0.4670
P	 0.0000	 0.1620
Q	 0.0020	 0.0510
R	 0.0050	 0.0630
S	 0.0030	 0.2360
T	 0.0000	 0.1130
U	 0.0000	 0.1020
a	 0.0570	 0.3750

