



wwPDB EM Validation Summary Report ⓘ

Nov 14, 2022 – 11:53 pm GMT

PDB ID : 7ZQD
EMDB ID : EMD-14871
Title : Dimeric PSI of Chlamydomonas reinhardtii at 2.97 Å resolution
Authors : Naschberger, A.; Amunts, A.
Deposited on : 2022-04-29
Resolution : 2.97 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.dev43
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.2

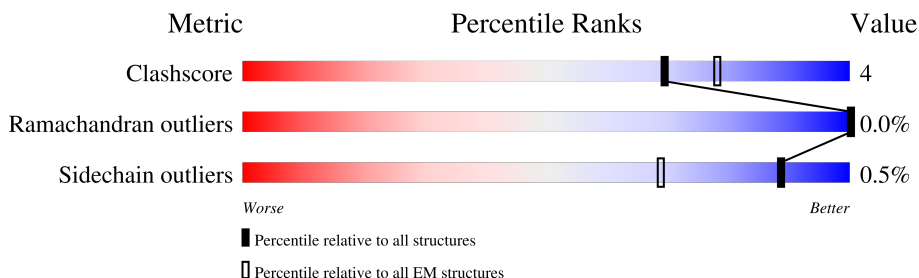
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 2.97 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)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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	751	
1	A2	751	
2	B	735	
2	B2	735	
3	C	81	
3	C2	81	
4	D	196	
4	D2	196	




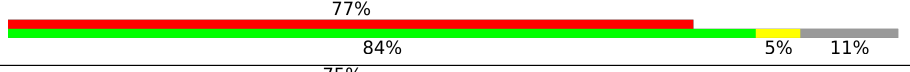

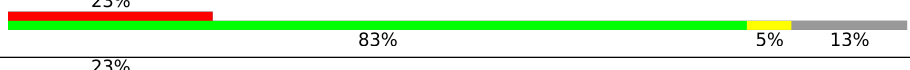

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Mol	Chain	Length	Quality of chain
5	E	97	15% 65% 34%
5	E2	97	16% 65% 34%
6	F	227	7% 67% 6% 27%
6	F2	227	9% 67% 6% 27%
7	G	126	24% 71% 5% 25%
7	G2	126	23% 71% 5% 25%
8	I	106	5% 31% 65%
8	I2	106	5% 31% 65%
9	J	40	8% 95% 5%
9	J2	40	5% 95% 5%
10	L	196	36% 59% 37%
10	L2	196	37% 59% 37%
11	K	113	46% 69% 7% 24%
11	K2	113	50% 69% 7% 24%
12	1	228	16% 80% 5% 15%
12	12	228	15% 81% 15%
12	Z	228	57% 79% 7% 15%
12	Z2	228	57% 79% 7% 15%
13	3	298	17% 68% 8% 24%
13	32	298	17% 68% 8% 24%
14	7	241	16% 85% 12%
14	72	241	17% 85% 12%
15	8	243	13% 86% 11%
15	82	243	12% 86% 11%
16	4	264	69% 77% 20%

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Mol	Chain	Length	Quality of chain
16	42	264	
17	5	257	
17	52	257	
18	6	257	
18	62	257	
19	9	213	
19	92	213	

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
20	CL0	A	801	X	-	-	-
20	CL0	A2	801	X	-	-	-
21	CLA	1	602	X	-	-	-
21	CLA	1	603	X	-	-	-
21	CLA	1	604	X	-	-	-
21	CLA	1	608	X	-	-	-
21	CLA	1	609	X	-	-	-
21	CLA	1	610	X	-	-	-
21	CLA	1	611	X	-	-	-
21	CLA	1	612	X	-	-	-
21	CLA	1	613	X	-	-	-
21	CLA	1	614	X	-	-	-
21	CLA	1	616	X	-	-	-
21	CLA	12	602	X	-	-	-
21	CLA	12	603	X	-	-	-
21	CLA	12	604	X	-	-	-
21	CLA	12	608	X	-	-	-
21	CLA	12	609	X	-	-	-
21	CLA	12	610	X	-	-	-
21	CLA	12	611	X	-	-	-
21	CLA	12	612	X	-	-	-
21	CLA	12	613	X	-	-	-
21	CLA	12	614	X	-	-	-
21	CLA	12	616	X	-	-	-
21	CLA	3	602	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
21	CLA	3	603	X	-	-	-
21	CLA	3	604	X	-	-	-
21	CLA	3	606	X	-	-	-
21	CLA	3	607	X	-	-	-
21	CLA	3	609	X	-	-	-
21	CLA	3	610	X	-	-	-
21	CLA	3	611	X	-	-	-
21	CLA	3	612	X	-	-	-
21	CLA	3	613	X	-	-	-
21	CLA	3	614	X	-	-	-
21	CLA	3	615	X	-	-	-
21	CLA	3	617	X	-	-	-
21	CLA	32	602	X	-	-	-
21	CLA	32	603	X	-	-	-
21	CLA	32	604	X	-	-	-
21	CLA	32	606	X	-	-	-
21	CLA	32	607	X	-	-	-
21	CLA	32	609	X	-	-	-
21	CLA	32	610	X	-	-	-
21	CLA	32	611	X	-	-	-
21	CLA	32	612	X	-	-	-
21	CLA	32	613	X	-	-	-
21	CLA	32	614	X	-	-	-
21	CLA	32	615	X	-	-	-
21	CLA	32	617	X	-	-	-
21	CLA	4	602	X	-	-	-
21	CLA	4	603	X	-	-	-
21	CLA	4	604	X	-	-	-
21	CLA	4	609	X	-	-	-
21	CLA	4	610	X	-	-	-
21	CLA	4	611	X	-	-	-
21	CLA	4	612	X	-	-	-
21	CLA	4	613	X	-	-	-
21	CLA	4	614	X	-	-	-
21	CLA	4	616	X	-	-	-
21	CLA	42	602	X	-	-	-
21	CLA	42	603	X	-	-	-
21	CLA	42	604	X	-	-	-
21	CLA	42	609	X	-	-	-
21	CLA	42	610	X	-	-	-
21	CLA	42	611	X	-	-	-
21	CLA	42	612	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
21	CLA	42	613	X	-	-	-
21	CLA	42	614	X	-	-	-
21	CLA	42	616	X	-	-	-
21	CLA	5	601	X	-	-	-
21	CLA	5	602	X	-	-	-
21	CLA	5	603	X	-	-	-
21	CLA	5	604	X	-	-	-
21	CLA	5	609	X	-	-	-
21	CLA	5	610	X	-	-	-
21	CLA	5	611	X	-	-	-
21	CLA	5	612	X	-	-	-
21	CLA	5	613	X	-	-	-
21	CLA	5	614	X	-	-	-
21	CLA	5	616	X	-	-	-
21	CLA	5	617	X	-	-	-
21	CLA	5	621	X	-	-	-
21	CLA	52	601	X	-	-	-
21	CLA	52	602	X	-	-	-
21	CLA	52	603	X	-	-	-
21	CLA	52	604	X	-	-	-
21	CLA	52	609	X	-	-	-
21	CLA	52	610	X	-	-	-
21	CLA	52	611	X	-	-	-
21	CLA	52	612	X	-	-	-
21	CLA	52	613	X	-	-	-
21	CLA	52	614	X	-	-	-
21	CLA	52	616	X	-	-	-
21	CLA	52	617	X	-	-	-
21	CLA	52	621	X	-	-	-
21	CLA	6	602	X	-	-	-
21	CLA	6	603	X	-	-	-
21	CLA	6	604	X	-	-	-
21	CLA	6	609	X	-	-	-
21	CLA	6	610	X	-	-	-
21	CLA	6	611	X	-	-	-
21	CLA	6	612	X	-	-	-
21	CLA	6	613	X	-	-	-
21	CLA	6	614	X	-	-	-
21	CLA	6	617	X	-	-	-
21	CLA	6	622	X	-	-	-
21	CLA	62	602	X	-	-	-
21	CLA	62	603	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
21	CLA	62	604	X	-	-	-
21	CLA	62	609	X	-	-	-
21	CLA	62	610	X	-	-	-
21	CLA	62	611	X	-	-	-
21	CLA	62	612	X	-	-	-
21	CLA	62	613	X	-	-	-
21	CLA	62	614	X	-	-	-
21	CLA	62	617	X	-	-	-
21	CLA	62	622	X	-	-	-
21	CLA	7	602	X	-	-	-
21	CLA	7	603	X	-	-	-
21	CLA	7	604	X	-	-	-
21	CLA	7	608	X	-	-	-
21	CLA	7	609	X	-	-	-
21	CLA	7	610	X	-	-	-
21	CLA	7	611	X	-	-	-
21	CLA	7	612	X	-	-	-
21	CLA	7	613	X	-	-	-
21	CLA	7	614	X	-	-	-
21	CLA	7	616	X	-	-	-
21	CLA	7	620	X	-	-	-
21	CLA	72	602	X	-	-	-
21	CLA	72	603	X	-	-	-
21	CLA	72	604	X	-	-	-
21	CLA	72	608	X	-	-	-
21	CLA	72	609	X	-	-	-
21	CLA	72	610	X	-	-	-
21	CLA	72	611	X	-	-	-
21	CLA	72	612	X	-	-	-
21	CLA	72	613	X	-	-	-
21	CLA	72	614	X	-	-	-
21	CLA	72	616	X	-	-	-
21	CLA	72	620	X	-	-	-
21	CLA	8	602	X	-	-	-
21	CLA	8	603	X	-	-	-
21	CLA	8	604	X	-	-	-
21	CLA	8	608	X	-	-	-
21	CLA	8	609	X	-	-	-
21	CLA	8	610	X	-	-	-
21	CLA	8	611	X	-	-	-
21	CLA	8	612	X	-	-	-
21	CLA	8	613	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
21	CLA	8	614	X	-	-	-
21	CLA	8	616	X	-	-	-
21	CLA	82	602	X	-	-	-
21	CLA	82	603	X	-	-	-
21	CLA	82	604	X	-	-	-
21	CLA	82	608	X	-	-	-
21	CLA	82	609	X	-	-	-
21	CLA	82	610	X	-	-	-
21	CLA	82	611	X	-	-	-
21	CLA	82	612	X	-	-	-
21	CLA	82	613	X	-	-	-
21	CLA	82	614	X	-	-	-
21	CLA	82	616	X	-	-	-
21	CLA	9	601	X	-	-	-
21	CLA	9	602	X	-	-	-
21	CLA	9	603	X	-	-	-
21	CLA	9	604	X	-	-	-
21	CLA	9	609	X	-	-	-
21	CLA	9	610	X	-	-	-
21	CLA	9	611	X	-	-	-
21	CLA	9	612	X	-	-	-
21	CLA	9	613	X	-	-	-
21	CLA	9	614	X	-	-	-
21	CLA	92	601	X	-	-	-
21	CLA	92	602	X	-	-	-
21	CLA	92	603	X	-	-	-
21	CLA	92	604	X	-	-	-
21	CLA	92	609	X	-	-	-
21	CLA	92	610	X	-	-	-
21	CLA	92	611	X	-	-	-
21	CLA	92	612	X	-	-	-
21	CLA	92	613	X	-	-	-
21	CLA	92	614	X	-	-	-
21	CLA	A	802	X	-	-	-
21	CLA	A	803	X	-	-	-
21	CLA	A	804	X	-	-	-
21	CLA	A	805	X	-	-	-
21	CLA	A	806	X	-	-	-
21	CLA	A	807	X	-	-	-
21	CLA	A	808	X	-	-	-
21	CLA	A	809	X	-	-	-
21	CLA	A	810	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
21	CLA	A	811	X	-	-	-
21	CLA	A	812	X	-	-	-
21	CLA	A	813	X	-	-	-
21	CLA	A	814	X	-	-	-
21	CLA	A	815	X	-	-	-
21	CLA	A	816	X	-	-	-
21	CLA	A	817	X	-	-	-
21	CLA	A	818	X	-	-	-
21	CLA	A	819	X	-	-	-
21	CLA	A	820	X	-	-	-
21	CLA	A	821	X	-	-	-
21	CLA	A	822	X	-	-	-
21	CLA	A	823	X	-	-	-
21	CLA	A	824	X	-	-	-
21	CLA	A	825	X	-	-	-
21	CLA	A	826	X	-	-	-
21	CLA	A	827	X	-	-	-
21	CLA	A	828	X	-	-	-
21	CLA	A	829	X	-	-	-
21	CLA	A	830	X	-	-	-
21	CLA	A	831	X	-	-	-
21	CLA	A	832	X	-	-	-
21	CLA	A	833	X	-	-	-
21	CLA	A	834	X	-	-	-
21	CLA	A	835	X	-	-	-
21	CLA	A	836	X	-	-	-
21	CLA	A	837	X	-	-	-
21	CLA	A	838	X	-	-	-
21	CLA	A	839	X	-	-	-
21	CLA	A	840	X	-	-	-
21	CLA	A	841	X	-	-	-
21	CLA	A	842	X	-	-	-
21	CLA	A	843	X	-	-	-
21	CLA	A	845	X	-	-	-
21	CLA	A	854	X	-	-	-
21	CLA	A2	802	X	-	-	-
21	CLA	A2	803	X	-	-	-
21	CLA	A2	804	X	-	-	-
21	CLA	A2	805	X	-	-	-
21	CLA	A2	806	X	-	-	-
21	CLA	A2	807	X	-	-	-
21	CLA	A2	808	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
21	CLA	A2	809	X	-	-	-
21	CLA	A2	810	X	-	-	-
21	CLA	A2	811	X	-	-	-
21	CLA	A2	812	X	-	-	-
21	CLA	A2	813	X	-	-	-
21	CLA	A2	814	X	-	-	-
21	CLA	A2	815	X	-	-	-
21	CLA	A2	816	X	-	-	-
21	CLA	A2	817	X	-	-	-
21	CLA	A2	818	X	-	-	-
21	CLA	A2	819	X	-	-	-
21	CLA	A2	820	X	-	-	-
21	CLA	A2	821	X	-	-	-
21	CLA	A2	822	X	-	-	-
21	CLA	A2	823	X	-	-	-
21	CLA	A2	824	X	-	-	-
21	CLA	A2	825	X	-	-	-
21	CLA	A2	826	X	-	-	-
21	CLA	A2	827	X	-	-	-
21	CLA	A2	828	X	-	-	-
21	CLA	A2	829	X	-	-	-
21	CLA	A2	830	X	-	-	-
21	CLA	A2	831	X	-	-	-
21	CLA	A2	832	X	-	-	-
21	CLA	A2	833	X	-	-	-
21	CLA	A2	834	X	-	-	-
21	CLA	A2	835	X	-	-	-
21	CLA	A2	836	X	-	-	-
21	CLA	A2	837	X	-	-	-
21	CLA	A2	838	X	-	-	-
21	CLA	A2	839	X	-	-	-
21	CLA	A2	840	X	-	-	-
21	CLA	A2	841	X	-	-	-
21	CLA	A2	842	X	-	-	-
21	CLA	A2	843	X	-	-	-
21	CLA	A2	845	X	-	-	-
21	CLA	A2	854	X	-	-	-
21	CLA	B	802	X	-	-	-
21	CLA	B	803	X	-	-	-
21	CLA	B	804	X	-	-	-
21	CLA	B	805	X	-	-	-
21	CLA	B	806	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
21	CLA	B	807	X	-	-	-
21	CLA	B	808	X	-	-	-
21	CLA	B	809	X	-	-	-
21	CLA	B	810	X	-	-	-
21	CLA	B	811	X	-	-	-
21	CLA	B	812	X	-	-	-
21	CLA	B	813	X	-	-	-
21	CLA	B	814	X	-	-	-
21	CLA	B	815	X	-	-	-
21	CLA	B	816	X	-	-	-
21	CLA	B	817	X	-	-	-
21	CLA	B	818	X	-	-	-
21	CLA	B	819	X	-	-	-
21	CLA	B	820	X	-	-	-
21	CLA	B	821	X	-	-	-
21	CLA	B	822	X	-	-	-
21	CLA	B	823	X	-	-	-
21	CLA	B	824	X	-	-	-
21	CLA	B	825	X	-	-	-
21	CLA	B	826	X	-	-	-
21	CLA	B	827	X	-	-	-
21	CLA	B	828	X	-	-	-
21	CLA	B	829	X	-	-	-
21	CLA	B	830	X	-	-	-
21	CLA	B	831	X	-	-	-
21	CLA	B	832	X	-	-	-
21	CLA	B	833	X	-	-	-
21	CLA	B	834	X	-	-	-
21	CLA	B	835	X	-	-	-
21	CLA	B	836	X	-	-	-
21	CLA	B	837	X	-	-	-
21	CLA	B	838	X	-	-	-
21	CLA	B	839	X	-	-	-
21	CLA	B	840	X	-	-	-
21	CLA	B	841	X	-	-	-
21	CLA	B2	802	X	-	-	-
21	CLA	B2	803	X	-	-	-
21	CLA	B2	804	X	-	-	-
21	CLA	B2	805	X	-	-	-
21	CLA	B2	806	X	-	-	-
21	CLA	B2	807	X	-	-	-
21	CLA	B2	808	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
21	CLA	B2	809	X	-	-	-
21	CLA	B2	810	X	-	-	-
21	CLA	B2	811	X	-	-	-
21	CLA	B2	812	X	-	-	-
21	CLA	B2	813	X	-	-	-
21	CLA	B2	814	X	-	-	-
21	CLA	B2	815	X	-	-	-
21	CLA	B2	816	X	-	-	-
21	CLA	B2	817	X	-	-	-
21	CLA	B2	818	X	-	-	-
21	CLA	B2	819	X	-	-	-
21	CLA	B2	820	X	-	-	-
21	CLA	B2	821	X	-	-	-
21	CLA	B2	822	X	-	-	-
21	CLA	B2	823	X	-	-	-
21	CLA	B2	824	X	-	-	-
21	CLA	B2	825	X	-	-	-
21	CLA	B2	826	X	-	-	-
21	CLA	B2	827	X	-	-	-
21	CLA	B2	828	X	-	-	-
21	CLA	B2	829	X	-	-	-
21	CLA	B2	830	X	-	-	-
21	CLA	B2	831	X	-	-	-
21	CLA	B2	832	X	-	-	-
21	CLA	B2	833	X	-	-	-
21	CLA	B2	834	X	-	-	-
21	CLA	B2	835	X	-	-	-
21	CLA	B2	836	X	-	-	-
21	CLA	B2	837	X	-	-	-
21	CLA	B2	838	X	-	-	-
21	CLA	B2	839	X	-	-	-
21	CLA	B2	840	X	-	-	-
21	CLA	B2	841	X	-	-	-
21	CLA	F	301	X	-	-	-
21	CLA	F	303	X	-	-	-
21	CLA	F	304	X	-	-	-
21	CLA	F2	301	X	-	-	-
21	CLA	F2	303	X	-	-	-
21	CLA	F2	304	X	-	-	-
21	CLA	G	203	X	-	-	-
21	CLA	G	204	X	-	-	-
21	CLA	G2	203	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
21	CLA	G2	204	X	-	-	-
21	CLA	J	101	X	-	-	-
21	CLA	J2	101	X	-	-	-
21	CLA	K	201	X	-	-	-
21	CLA	K	203	X	-	-	-
21	CLA	K	204	X	-	-	-
21	CLA	K	206	X	-	-	-
21	CLA	K2	201	X	-	-	-
21	CLA	K2	203	X	-	-	-
21	CLA	K2	204	X	-	-	-
21	CLA	K2	206	X	-	-	-
21	CLA	L	203	X	-	-	-
21	CLA	L	204	X	-	-	-
21	CLA	L2	203	X	-	-	-
21	CLA	L2	204	X	-	-	-
21	CLA	Z	602	X	-	-	-
21	CLA	Z	603	X	-	-	-
21	CLA	Z	604	X	-	-	-
21	CLA	Z	608	X	-	-	-
21	CLA	Z	609	X	-	-	-
21	CLA	Z	610	X	-	-	-
21	CLA	Z	611	X	-	-	-
21	CLA	Z	612	X	-	-	-
21	CLA	Z	613	X	-	-	-
21	CLA	Z	614	X	-	-	-
21	CLA	Z	616	X	-	-	-
21	CLA	Z2	602	X	-	-	-
21	CLA	Z2	603	X	-	-	-
21	CLA	Z2	604	X	-	-	-
21	CLA	Z2	608	X	-	-	-
21	CLA	Z2	609	X	-	-	-
21	CLA	Z2	610	X	-	-	-
21	CLA	Z2	611	X	-	-	-
21	CLA	Z2	612	X	-	-	-
21	CLA	Z2	613	X	-	-	-
21	CLA	Z2	614	X	-	-	-
21	CLA	Z2	616	X	-	-	-
30	CHL	1	601	X	-	-	-
30	CHL	1	606	X	-	-	-
30	CHL	1	607	X	-	-	-
30	CHL	12	601	X	-	-	-
30	CHL	12	606	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
30	CHL	12	607	X	-	-	-
30	CHL	3	608	X	-	-	-
30	CHL	32	608	X	-	-	-
30	CHL	4	601	X	-	-	-
30	CHL	4	606	X	-	-	-
30	CHL	4	607	X	-	-	-
30	CHL	4	608	X	-	-	-
30	CHL	4	618	X	-	-	-
30	CHL	42	601	X	-	-	-
30	CHL	42	606	X	-	-	-
30	CHL	42	607	X	-	-	-
30	CHL	42	608	X	-	-	-
30	CHL	42	618	X	-	-	-
30	CHL	5	606	X	-	-	-
30	CHL	5	607	X	-	-	-
30	CHL	5	608	X	-	-	-
30	CHL	5	618	X	-	-	-
30	CHL	52	606	X	-	-	-
30	CHL	52	607	X	-	-	-
30	CHL	52	608	X	-	-	-
30	CHL	52	618	X	-	-	-
30	CHL	6	601	X	-	-	-
30	CHL	6	606	X	-	-	-
30	CHL	6	607	X	-	-	-
30	CHL	6	608	X	-	-	-
30	CHL	6	616	X	-	-	-
30	CHL	6	618	X	-	-	-
30	CHL	62	601	X	-	-	-
30	CHL	62	606	X	-	-	-
30	CHL	62	607	X	-	-	-
30	CHL	62	608	X	-	-	-
30	CHL	62	616	X	-	-	-
30	CHL	62	618	X	-	-	-
30	CHL	7	601	X	-	-	-
30	CHL	7	606	X	-	-	-
30	CHL	7	607	X	-	-	-
30	CHL	72	601	X	-	-	-
30	CHL	72	606	X	-	-	-
30	CHL	72	607	X	-	-	-
30	CHL	8	601	X	-	-	-
30	CHL	8	606	X	-	-	-
30	CHL	8	607	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
30	CHL	82	601	X	-	-	-
30	CHL	82	606	X	-	-	-
30	CHL	82	607	X	-	-	-
30	CHL	9	606	X	-	-	-
30	CHL	9	607	X	-	-	-
30	CHL	92	606	X	-	-	-
30	CHL	92	607	X	-	-	-
30	CHL	Z	601	X	-	-	-
30	CHL	Z	606	X	-	-	-
30	CHL	Z	607	X	-	-	-
30	CHL	Z2	601	X	-	-	-
30	CHL	Z2	606	X	-	-	-
30	CHL	Z2	607	X	-	-	-
31	XAT	5	624	X	-	-	-
31	XAT	52	624	X	-	-	-

2 Entry composition [i](#)

There are 33 unique types of molecules in this entry. The entry contains 202818 atoms, of which 101988 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	H	N	O	S		
1	A	742	Total	C	H	N	O	S	0	0
			11500	3808	5675	994	1001	22		
1	A2	742	Total	C	H	N	O	S	0	0
			11500	3808	5675	994	1001	22		

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

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
2	B	733	Total	C	H	N	O	S	0	0
			11400	3824	5576	977	1005	18		
2	B2	733	Total	C	H	N	O	S	0	0
			11400	3824	5576	977	1005	18		

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

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
3	C	80	Total	C	H	N	O	S	0	0
			1183	369	582	103	117	12		
3	C2	80	Total	C	H	N	O	S	0	0
			1183	369	582	103	117	12		

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

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
4	D	144	Total	C	H	N	O	S	0	0
			2284	725	1151	200	201	7		
4	D2	144	Total	C	H	N	O	S	0	0
			2284	725	1151	200	201	7		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
5	E	64	Total	C	H	N	O	0	0
			1011	322	505	89	95		
5	E2	64	Total	C	H	N	O	0	0
			1011	322	505	89	95		

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

Mol	Chain	Residues	Atoms						AltConf	Trace
6	F	165	Total	C	H	N	O	S	0	0
			2568	817	1302	213	233	3		
6	F2	165	Total	C	H	N	O	S	0	0
			2568	817	1302	213	233	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	95	Total	C	H	N	O	0	0
			1393	452	687	119	135		
7	G2	95	Total	C	H	N	O	0	0
			1393	452	687	119	135		

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

Mol	Chain	Residues	Atoms					AltConf	Trace	
8	I	37	Total	C	H	N	O	S	0	0
			573	195	292	39	46	1		
8	I2	37	Total	C	H	N	O	S	0	0
			573	195	292	39	46	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace	
9	J	40	Total	C	H	N	O	S	0	0
			657	224	328	46	58	1		
9	J2	40	Total	C	H	N	O	S	0	0
			657	224	328	46	58	1		

- Molecule 10 is a protein called PSI subunit V.

Mol	Chain	Residues	Atoms					AltConf	Trace	
10	L	124	Total	C	H	N	O	S	0	0
			1806	586	907	146	164	3		

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Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
10	L2	124	1806	586	907	146	164	3	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
11	K	86	1203	370	620	100	111	2	0	0
11	K2	86	1203	370	620	100	111	2	0	0

- Molecule 12 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
12	1	194	2842	941	1397	240	261	3	0	0
12	Z	194	2842	941	1397	240	261	3	0	0
12	12	194	2842	941	1397	240	261	3	0	0
12	Z2	194	2842	941	1397	240	261	3	0	0

- Molecule 13 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
13	3	227	3431	1128	1695	283	317	8	0	0
13	32	227	3431	1128	1695	283	317	8	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
14	7	213	3240	1072	1590	274	298	6	0	0
14	72	213	3240	1072	1590	274	298	6	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
15	8	217	3280	1073	1630	280	293	4	0	0
15	82	217	3280	1073	1630	280	293	4	0	0

- Molecule 16 is a protein called Chlorophyll a-b binding protein, chloroplastic (Lhca4).

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
16	4	212	3251	1080	1603	268	295	5	0	0
16	42	212	3251	1080	1603	268	295	5	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
17	5	227	3522	1154	1747	297	316	8	0	0
17	52	227	3522	1154	1747	297	316	8	0	0

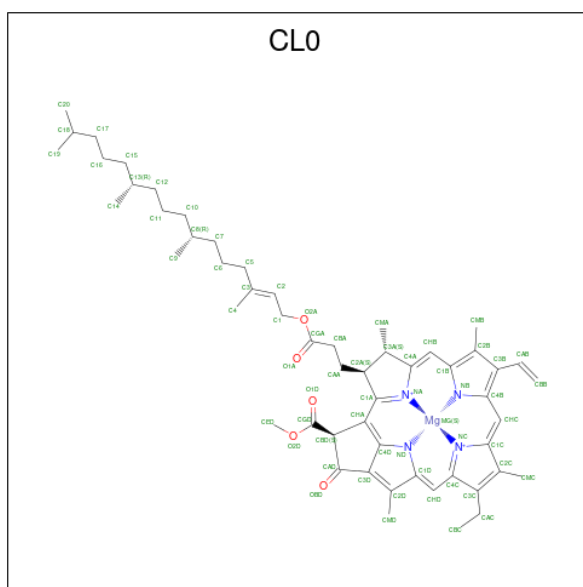
- Molecule 18 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
18	6	230	3542	1167	1770	293	306	6	0	0
18	62	230	3542	1167	1770	293	306	6	0	0

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

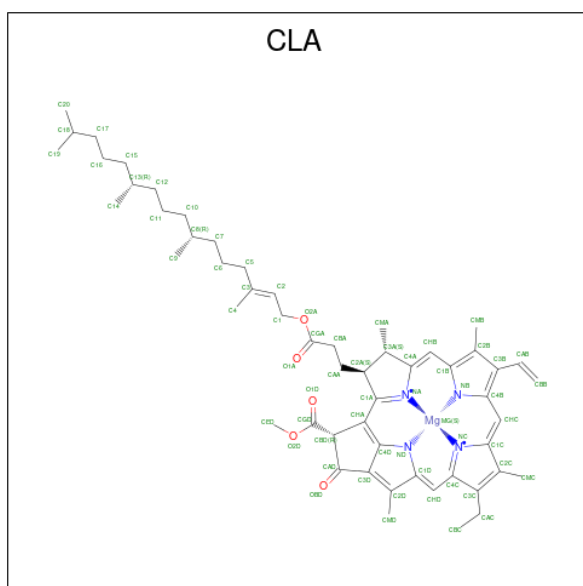
Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
19	9	186	2820	918	1400	238	257	7	0	0
19	92	186	2820	918	1400	238	257	7	0	0

- Molecule 20 is CHLOROPHYLL A ISOMER (three-letter code: CL0) (formula: C₅₅H₇₂MgN₄O₅) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
20	A	1	137	55	72	1	4	5	0
20	A2	1	137	55	72	1	4	5	0

- Molecule 21 is CHLOROPHYLL A (three-letter code: CLA) (formula: $C_{55}H_{72}MgN_4O_5$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
21	A	1	5574	2278	2856	44	176	220	0

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Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	B	1	5043	2063	2580	40	160	200	0
21	F	1	352	145	177	3	12	15	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
21	F	1	Total 352	C 145	H 177	Mg 3	N 12	O 15	0
21	F	1	Total 352	C 145	H 177	Mg 3	N 12	O 15	0
21	G	1	Total 198	C 86	H 92	Mg 2	N 8	O 10	0
21	G	1	Total 198	C 86	H 92	Mg 2	N 8	O 10	0
21	J	1	Total 104	C 45	H 49	Mg 1	N 4	O 5	0
21	L	1	Total 215	C 90	H 105	Mg 2	N 8	O 10	0
21	L	1	Total 215	C 90	H 105	Mg 2	N 8	O 10	0
21	K	1	Total 354	C 156	H 158	Mg 4	N 16	O 20	0
21	K	1	Total 354	C 156	H 158	Mg 4	N 16	O 20	0
21	K	1	Total 354	C 156	H 158	Mg 4	N 16	O 20	0
21	K	1	Total 354	C 156	H 158	Mg 4	N 16	O 20	0
21	1	1	Total 1264	C 529	H 625	Mg 11	N 44	O 55	0
21	1	1	Total 1264	C 529	H 625	Mg 11	N 44	O 55	0
21	1	1	Total 1264	C 529	H 625	Mg 11	N 44	O 55	0
21	1	1	Total 1264	C 529	H 625	Mg 11	N 44	O 55	0
21	1	1	Total 1264	C 529	H 625	Mg 11	N 44	O 55	0
21	1	1	Total 1264	C 529	H 625	Mg 11	N 44	O 55	0
21	1	1	Total 1264	C 529	H 625	Mg 11	N 44	O 55	0
21	1	1	Total 1264	C 529	H 625	Mg 11	N 44	O 55	0
21	1	1	Total 1264	C 529	H 625	Mg 11	N 44	O 55	0

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Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
21	1	1	Total 1264	C 529	H 625	Mg 11	N 44	O 55	0
21	3	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	3	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	3	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	3	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	3	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	3	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	3	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	3	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	3	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	3	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	3	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	3	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	3	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	3	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	3	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	7	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	7	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	7	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	7	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	7	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	7	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	7	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	7	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0

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Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
21	7	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	7	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	7	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	7	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	7	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	8	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	8	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	8	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	8	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	8	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	8	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	8	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	8	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	8	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	8	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	8	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	Z	1	Total 1220	C 517	H 593	Mg 11	N 44	O 55	0
21	Z	1	Total 1220	C 517	H 593	Mg 11	N 44	O 55	0
21	Z	1	Total 1220	C 517	H 593	Mg 11	N 44	O 55	0
21	Z	1	Total 1220	C 517	H 593	Mg 11	N 44	O 55	0
21	Z	1	Total 1220	C 517	H 593	Mg 11	N 44	O 55	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
21	Z	1	1220	517	593	11	44	55	0
21	Z	1	1220	517	593	11	44	55	0
21	Z	1	1220	517	593	11	44	55	0
21	Z	1	1220	517	593	11	44	55	0
21	Z	1	1220	517	593	11	44	55	0
21	Z	1	1220	517	593	11	44	55	0
21	4	1	1099	465	534	10	40	50	0
21	4	1	1099	465	534	10	40	50	0
21	4	1	1099	465	534	10	40	50	0
21	4	1	1099	465	534	10	40	50	0
21	4	1	1099	465	534	10	40	50	0
21	4	1	1099	465	534	10	40	50	0
21	4	1	1099	465	534	10	40	50	0
21	4	1	1099	465	534	10	40	50	0
21	4	1	1099	465	534	10	40	50	0
21	4	1	1099	465	534	10	40	50	0
21	4	1	1099	465	534	10	40	50	0
21	5	1	1452	610	712	13	52	65	0
21	5	1	1452	610	712	13	52	65	0
21	5	1	1452	610	712	13	52	65	0
21	5	1	1452	610	712	13	52	65	0
21	5	1	1452	610	712	13	52	65	0

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Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
21	5	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	5	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	5	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	5	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	5	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	5	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	5	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	6	1	Total	C	H	Mg	N	O	0
			1233	518	605	11	44	55	
21	6	1	Total	C	H	Mg	N	O	0
			1233	518	605	11	44	55	
21	6	1	Total	C	H	Mg	N	O	0
			1233	518	605	11	44	55	
21	6	1	Total	C	H	Mg	N	O	0
			1233	518	605	11	44	55	
21	6	1	Total	C	H	Mg	N	O	0
			1233	518	605	11	44	55	
21	6	1	Total	C	H	Mg	N	O	0
			1233	518	605	11	44	55	
21	6	1	Total	C	H	Mg	N	O	0
			1233	518	605	11	44	55	
21	6	1	Total	C	H	Mg	N	O	0
			1233	518	605	11	44	55	
21	6	1	Total	C	H	Mg	N	O	0
			1233	518	605	11	44	55	
21	6	1	Total	C	H	Mg	N	O	0
			1233	518	605	11	44	55	
21	6	1	Total	C	H	Mg	N	O	0
			1233	518	605	11	44	55	
21	9	1	Total	C	H	Mg	N	O	0
			1100	465	535	10	40	50	
21	9	1	Total	C	H	Mg	N	O	0
			1100	465	535	10	40	50	

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
21	9	1	Total 1100	C 465	H 535	Mg 10	N 40	O 50	0
21	9	1	Total 1100	C 465	H 535	Mg 10	N 40	O 50	0
21	9	1	Total 1100	C 465	H 535	Mg 10	N 40	O 50	0
21	9	1	Total 1100	C 465	H 535	Mg 10	N 40	O 50	0
21	9	1	Total 1100	C 465	H 535	Mg 10	N 40	O 50	0
21	9	1	Total 1100	C 465	H 535	Mg 10	N 40	O 50	0
21	9	1	Total 1100	C 465	H 535	Mg 10	N 40	O 50	0
21	9	1	Total 1100	C 465	H 535	Mg 10	N 40	O 50	0
21	A2	1	Total 5574	C 2278	H 2856	Mg 44	N 176	O 220	0
21	A2	1	Total 5574	C 2278	H 2856	Mg 44	N 176	O 220	0
21	A2	1	Total 5574	C 2278	H 2856	Mg 44	N 176	O 220	0
21	A2	1	Total 5574	C 2278	H 2856	Mg 44	N 176	O 220	0
21	A2	1	Total 5574	C 2278	H 2856	Mg 44	N 176	O 220	0
21	A2	1	Total 5574	C 2278	H 2856	Mg 44	N 176	O 220	0
21	A2	1	Total 5574	C 2278	H 2856	Mg 44	N 176	O 220	0
21	A2	1	Total 5574	C 2278	H 2856	Mg 44	N 176	O 220	0
21	A2	1	Total 5574	C 2278	H 2856	Mg 44	N 176	O 220	0
21	A2	1	Total 5574	C 2278	H 2856	Mg 44	N 176	O 220	0
21	A2	1	Total 5574	C 2278	H 2856	Mg 44	N 176	O 220	0
21	A2	1	Total 5574	C 2278	H 2856	Mg 44	N 176	O 220	0

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Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
21	A2	1	5574	2278	2856	44	176	220	0
21	A2	1	5574	2278	2856	44	176	220	0
21	A2	1	5574	2278	2856	44	176	220	0
21	A2	1	5574	2278	2856	44	176	220	0
21	A2	1	5574	2278	2856	44	176	220	0
21	A2	1	5574	2278	2856	44	176	220	0
21	A2	1	5574	2278	2856	44	176	220	0
21	A2	1	5574	2278	2856	44	176	220	0
21	A2	1	5574	2278	2856	44	176	220	0
21	A2	1	5574	2278	2856	44	176	220	0
21	A2	1	5574	2278	2856	44	176	220	0
21	B2	1	5043	2063	2580	40	160	200	0
21	B2	1	5043	2063	2580	40	160	200	0
21	B2	1	5043	2063	2580	40	160	200	0
21	B2	1	5043	2063	2580	40	160	200	0
21	B2	1	5043	2063	2580	40	160	200	0
21	B2	1	5043	2063	2580	40	160	200	0
21	B2	1	5043	2063	2580	40	160	200	0
21	B2	1	5043	2063	2580	40	160	200	0
21	B2	1	5043	2063	2580	40	160	200	0
21	B2	1	5043	2063	2580	40	160	200	0
21	B2	1	5043	2063	2580	40	160	200	0
21	B2	1	5043	2063	2580	40	160	200	0

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Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
21	B2	1	Total 5043	C 2063	H 2580	Mg 40	N 160	O 200	0
21	B2	1	Total 5043	C 2063	H 2580	Mg 40	N 160	O 200	0
21	B2	1	Total 5043	C 2063	H 2580	Mg 40	N 160	O 200	0
21	B2	1	Total 5043	C 2063	H 2580	Mg 40	N 160	O 200	0
21	B2	1	Total 5043	C 2063	H 2580	Mg 40	N 160	O 200	0
21	B2	1	Total 5043	C 2063	H 2580	Mg 40	N 160	O 200	0
21	B2	1	Total 5043	C 2063	H 2580	Mg 40	N 160	O 200	0
21	B2	1	Total 5043	C 2063	H 2580	Mg 40	N 160	O 200	0
21	F2	1	Total 352	C 145	H 177	Mg 3	N 12	O 15	0
21	F2	1	Total 352	C 145	H 177	Mg 3	N 12	O 15	0
21	F2	1	Total 352	C 145	H 177	Mg 3	N 12	O 15	0
21	G2	1	Total 198	C 86	H 92	Mg 2	N 8	O 10	0
21	G2	1	Total 198	C 86	H 92	Mg 2	N 8	O 10	0
21	J2	1	Total 104	C 45	H 49	Mg 1	N 4	O 5	0
21	L2	1	Total 215	C 90	H 105	Mg 2	N 8	O 10	0
21	L2	1	Total 215	C 90	H 105	Mg 2	N 8	O 10	0
21	K2	1	Total 354	C 156	H 158	Mg 4	N 16	O 20	0
21	K2	1	Total 354	C 156	H 158	Mg 4	N 16	O 20	0
21	K2	1	Total 354	C 156	H 158	Mg 4	N 16	O 20	0
21	K2	1	Total 354	C 156	H 158	Mg 4	N 16	O 20	0
21	12	1	Total 1264	C 529	H 625	Mg 11	N 44	O 55	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
21	12	1	1264	529	625	11	44	55	0
21	12	1	1264	529	625	11	44	55	0
21	12	1	1264	529	625	11	44	55	0
21	12	1	1264	529	625	11	44	55	0
21	12	1	1264	529	625	11	44	55	0
21	12	1	1264	529	625	11	44	55	0
21	12	1	1264	529	625	11	44	55	0
21	12	1	1264	529	625	11	44	55	0
21	12	1	1264	529	625	11	44	55	0
21	12	1	1264	529	625	11	44	55	0
21	12	1	1264	529	625	11	44	55	0
21	32	1	1458	612	718	13	52	63	0
21	32	1	1458	612	718	13	52	63	0
21	32	1	1458	612	718	13	52	63	0
21	32	1	1458	612	718	13	52	63	0
21	32	1	1458	612	718	13	52	63	0
21	32	1	1458	612	718	13	52	63	0
21	32	1	1458	612	718	13	52	63	0
21	32	1	1458	612	718	13	52	63	0
21	32	1	1458	612	718	13	52	63	0
21	32	1	1458	612	718	13	52	63	0
21	32	1	1458	612	718	13	52	63	0
21	32	1	1458	612	718	13	52	63	0

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Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
21	32	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	32	1	Total 1458	C 612	H 718	Mg 13	N 52	O 63	0
21	72	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	72	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	72	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	72	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	72	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	72	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	72	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	72	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	72	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	72	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	72	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	72	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	72	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	72	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	72	1	Total 1250	C 534	H 598	Mg 12	N 48	O 58	0
21	82	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	82	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	82	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	82	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	82	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	82	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	82	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	82	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0

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Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
21	82	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	82	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	82	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	82	1	Total 1192	C 504	H 578	Mg 11	N 44	O 55	0
21	Z2	1	Total 1220	C 517	H 593	Mg 11	N 44	O 55	0
21	Z2	1	Total 1220	C 517	H 593	Mg 11	N 44	O 55	0
21	Z2	1	Total 1220	C 517	H 593	Mg 11	N 44	O 55	0
21	Z2	1	Total 1220	C 517	H 593	Mg 11	N 44	O 55	0
21	Z2	1	Total 1220	C 517	H 593	Mg 11	N 44	O 55	0
21	Z2	1	Total 1220	C 517	H 593	Mg 11	N 44	O 55	0
21	Z2	1	Total 1220	C 517	H 593	Mg 11	N 44	O 55	0
21	Z2	1	Total 1220	C 517	H 593	Mg 11	N 44	O 55	0
21	Z2	1	Total 1220	C 517	H 593	Mg 11	N 44	O 55	0
21	Z2	1	Total 1220	C 517	H 593	Mg 11	N 44	O 55	0
21	Z2	1	Total 1220	C 517	H 593	Mg 11	N 44	O 55	0
21	42	1	Total 1099	C 465	H 534	Mg 10	N 40	O 50	0
21	42	1	Total 1099	C 465	H 534	Mg 10	N 40	O 50	0
21	42	1	Total 1099	C 465	H 534	Mg 10	N 40	O 50	0
21	42	1	Total 1099	C 465	H 534	Mg 10	N 40	O 50	0
21	42	1	Total 1099	C 465	H 534	Mg 10	N 40	O 50	0
21	42	1	Total 1099	C 465	H 534	Mg 10	N 40	O 50	0

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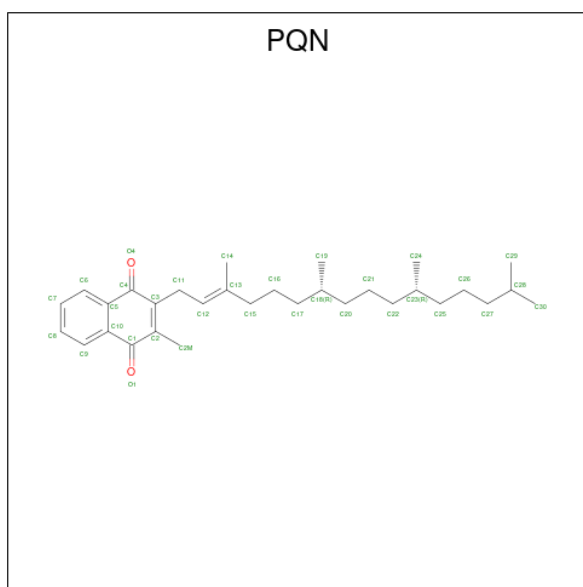
Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
21	42	1	Total	C	H	Mg	N	O	0
			1099	465	534	10	40	50	
21	42	1	Total	C	H	Mg	N	O	0
			1099	465	534	10	40	50	
21	42	1	Total	C	H	Mg	N	O	0
			1099	465	534	10	40	50	
21	42	1	Total	C	H	Mg	N	O	0
			1099	465	534	10	40	50	
21	52	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	52	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	52	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	52	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	52	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	52	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	52	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	52	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	52	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	52	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	52	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	52	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	52	1	Total	C	H	Mg	N	O	0
			1452	610	712	13	52	65	
21	62	1	Total	C	H	Mg	N	O	0
			1233	518	605	11	44	55	
21	62	1	Total	C	H	Mg	N	O	0
			1233	518	605	11	44	55	
21	62	1	Total	C	H	Mg	N	O	0
			1233	518	605	11	44	55	
21	62	1	Total	C	H	Mg	N	O	0
			1233	518	605	11	44	55	

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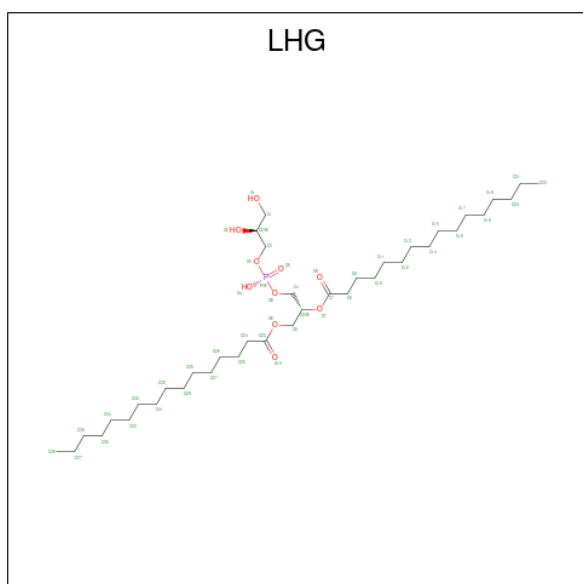
Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
21	62	1	1233	518	605	11	44	55	0
21	62	1	1233	518	605	11	44	55	0
21	62	1	1233	518	605	11	44	55	0
21	62	1	1233	518	605	11	44	55	0
21	62	1	1233	518	605	11	44	55	0
21	62	1	1233	518	605	11	44	55	0
21	62	1	1233	518	605	11	44	55	0
21	62	1	1233	518	605	11	44	55	0
21	92	1	1100	465	535	10	40	50	0
21	92	1	1100	465	535	10	40	50	0
21	92	1	1100	465	535	10	40	50	0
21	92	1	1100	465	535	10	40	50	0
21	92	1	1100	465	535	10	40	50	0
21	92	1	1100	465	535	10	40	50	0
21	92	1	1100	465	535	10	40	50	0
21	92	1	1100	465	535	10	40	50	0
21	92	1	1100	465	535	10	40	50	0
21	92	1	1100	465	535	10	40	50	0
21	92	1	1100	465	535	10	40	50	0

- Molecule 22 is PHYLLOQUINONE (three-letter code: PQN) (formula: C₃₁H₄₆O₂) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
22	A	1	79	31	46	2	0
22	B	1	79	31	46	2	0
22	A2	1	79	31	46	2	0
22	B2	1	79	31	46	2	0

- Molecule 23 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula: $C_{38}H_{75}O_{10}P$) (labeled as "Ligand of Interest" by depositor).



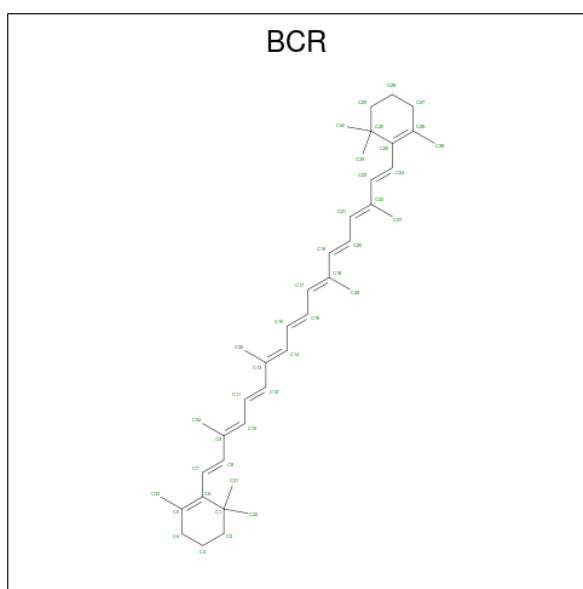
Mol	Chain	Residues	Atoms					AltConf
23	A	1	Total	C	H	O	P	0
			210	65	123	20	2	
23	A	1	Total	C	H	O	P	0
			210	65	123	20	2	
23	B	1	Total	C	H	O	P	0
			108	34	63	10	1	
23	1	1	Total	C	H	O	P	0
			87	28	48	10	1	
23	3	1	Total	C	H	O	P	0
			177	56	99	20	2	
23	3	1	Total	C	H	O	P	0
			177	56	99	20	2	
23	7	1	Total	C	H	O	P	0
			123	38	74	10	1	
23	8	1	Total	C	H	O	P	0
			105	33	61	10	1	
23	Z	1	Total	C	H	O	P	0
			87	28	48	10	1	
23	4	1	Total	C	H	O	P	0
			210	65	123	20	2	
23	4	1	Total	C	H	O	P	0
			210	65	123	20	2	
23	5	1	Total	C	H	O	P	0
			81	26	44	10	1	
23	6	1	Total	C	H	O	P	0
			201	63	116	20	2	
23	6	1	Total	C	H	O	P	0
			201	63	116	20	2	
23	9	1	Total	C	H	O	P	0
			96	30	55	10	1	
23	A2	1	Total	C	H	O	P	0
			210	65	123	20	2	
23	A2	1	Total	C	H	O	P	0
			210	65	123	20	2	
23	B2	1	Total	C	H	O	P	0
			108	34	63	10	1	
23	12	1	Total	C	H	O	P	0
			87	28	48	10	1	
23	32	1	Total	C	H	O	P	0
			177	56	99	20	2	
23	32	1	Total	C	H	O	P	0
			177	56	99	20	2	
23	72	1	Total	C	H	O	P	0
			123	38	74	10	1	

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	H	O	P	
23	82	1	Total 105	C 33	H 61	O 10	P 1	0
23	Z2	1	Total 87	C 28	H 48	O 10	P 1	0
23	42	1	Total 210	C 65	H 123	O 20	P 2	0
23	42	1	Total 210	C 65	H 123	O 20	P 2	0
23	52	1	Total 81	C 26	H 44	O 10	P 1	0
23	62	1	Total 201	C 63	H 116	O 20	P 2	0
23	62	1	Total 201	C 63	H 116	O 20	P 2	0
23	92	1	Total 96	C 30	H 55	O 10	P 1	0

- Molecule 24 is BETA-CAROTENE (three-letter code: BCR) (formula: C₄₀H₅₆) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	H	
24	A	1	Total 480	C 200	H 280	0
24	A	1	Total 480	C 200	H 280	0
24	A	1	Total 480	C 200	H 280	0

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Mol	Chain	Residues	Atoms			AltConf
			Total	C	H	
24	A	1	480	200	280	0
24	A	1	480	200	280	0
24	B	1	672	280	392	0
24	B	1	672	280	392	0
24	B	1	672	280	392	0
24	B	1	672	280	392	0
24	B	1	672	280	392	0
24	B	1	672	280	392	0
24	B	1	672	280	392	0
24	B	1	672	280	392	0
24	G	1	96	40	56	0
24	I	1	96	40	56	0
24	J	1	96	40	56	0
24	L	1	192	80	112	0
24	L	1	192	80	112	0
24	K	1	192	80	112	0
24	K	1	192	80	112	0
24	3	1	288	120	168	0
24	3	1	288	120	168	0
24	3	1	288	120	168	0
24	7	1	96	40	56	0
24	8	1	96	40	56	0

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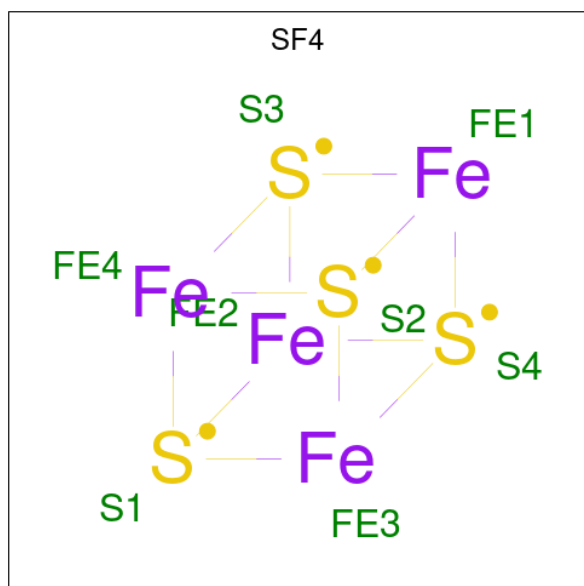
Mol	Chain	Residues	Atoms			AltConf
			Total	C	H	
24	4	1	96	40	56	0
24	5	1	96	40	56	0
24	6	1	96	40	56	0
24	9	1	96	40	56	0
24	A2	1	480	200	280	0
24	A2	1	480	200	280	0
24	A2	1	480	200	280	0
24	A2	1	480	200	280	0
24	A2	1	480	200	280	0
24	A2	1	480	200	280	0
24	B2	1	672	280	392	0
24	B2	1	672	280	392	0
24	B2	1	672	280	392	0
24	B2	1	672	280	392	0
24	B2	1	672	280	392	0
24	B2	1	672	280	392	0
24	B2	1	672	280	392	0
24	B2	1	672	280	392	0
24	B2	1	672	280	392	0
24	G2	1	96	40	56	0
24	I2	1	96	40	56	0
24	J2	1	96	40	56	0
24	L2	1	192	80	112	0
24	L2	1	192	80	112	0

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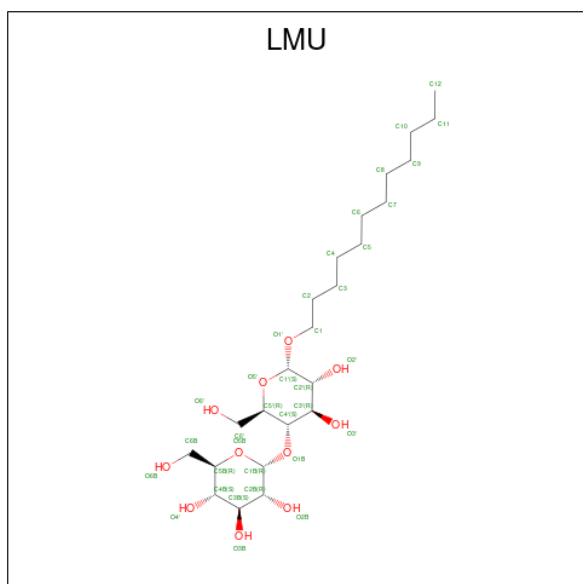
Mol	Chain	Residues	Atoms			AltConf
24	K2	1	Total	C	H	0
			192	80	112	
24	K2	1	Total	C	H	0
			192	80	112	
24	32	1	Total	C	H	0
			288	120	168	
24	32	1	Total	C	H	0
			288	120	168	
24	32	1	Total	C	H	0
			288	120	168	
24	72	1	Total	C	H	0
			96	40	56	
24	82	1	Total	C	H	0
			96	40	56	
24	42	1	Total	C	H	0
			96	40	56	
24	52	1	Total	C	H	0
			96	40	56	
24	62	1	Total	C	H	0
			96	40	56	
24	92	1	Total	C	H	0
			96	40	56	

- Molecule 25 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe₄S₄) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
			Total	Fe	S	
25	A	1	8	4	4	0
25	C	1	16	8	8	0
25	C	1	16	8	8	0
25	A2	1	8	4	4	0
25	C2	1	16	8	8	0
25	C2	1	16	8	8	0

- Molecule 26 is DODECYL-ALPHA-D-MALTOSE (three-letter code: LMU) (formula: $C_{24}H_{46}O_{11}$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
26	A	1	458	139	262	57	0
26	A	1	458	139	262	57	0
26	A	1	458	139	262	57	0
26	A	1	458	139	262	57	0
26	A	1	458	139	262	57	0

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Mol	Chain	Residues	Atoms				AltConf
26	A	1	Total	C	H	O	0
			458	139	262	57	
26	A	1	Total	C	H	O	0
			458	139	262	57	
26	B	1	Total	C	H	O	0
			81	24	46	11	
26	G	1	Total	C	H	O	0
			59	18	35	6	
26	K	1	Total	C	H	O	0
			59	18	35	6	
26	1	1	Total	C	H	O	0
			349	107	201	41	
26	1	1	Total	C	H	O	0
			349	107	201	41	
26	1	1	Total	C	H	O	0
			349	107	201	41	
26	1	1	Total	C	H	O	0
			349	107	201	41	
26	1	1	Total	C	H	O	0
			349	107	201	41	
26	1	1	Total	C	H	O	0
			349	107	201	41	
26	7	1	Total	C	H	O	0
			173	53	92	28	
26	7	1	Total	C	H	O	0
			173	53	92	28	
26	7	1	Total	C	H	O	0
			173	53	92	28	
26	8	1	Total	C	H	O	0
			258	78	151	29	
26	8	1	Total	C	H	O	0
			258	78	151	29	
26	8	1	Total	C	H	O	0
			258	78	151	29	
26	8	1	Total	C	H	O	0
			258	78	151	29	
26	Z	1	Total	C	H	O	0
			116	36	63	17	
26	Z	1	Total	C	H	O	0
			116	36	63	17	
26	4	1	Total	C	H	O	0
			116	36	63	17	

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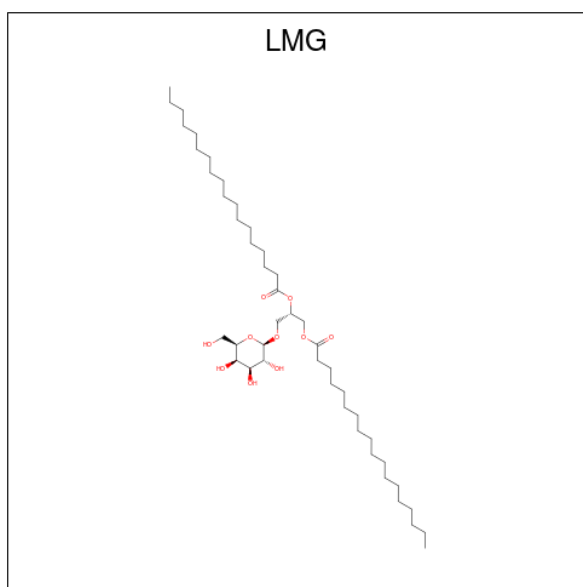
Mol	Chain	Residues	Atoms				AltConf
26	4	1	Total	C	H	O	0
			116	36	63	17	
26	5	1	Total	C	H	O	0
			59	18	35	6	
26	6	1	Total	C	H	O	0
			221	68	129	24	
26	6	1	Total	C	H	O	0
			221	68	129	24	
26	6	1	Total	C	H	O	0
			221	68	129	24	
26	6	1	Total	C	H	O	0
			221	68	129	24	
26	9	1	Total	C	H	O	0
			59	18	35	6	
26	A2	1	Total	C	H	O	0
			458	139	262	57	
26	A2	1	Total	C	H	O	0
			458	139	262	57	
26	A2	1	Total	C	H	O	0
			458	139	262	57	
26	A2	1	Total	C	H	O	0
			458	139	262	57	
26	A2	1	Total	C	H	O	0
			458	139	262	57	
26	A2	1	Total	C	H	O	0
			458	139	262	57	
26	A2	1	Total	C	H	O	0
			458	139	262	57	
26	B2	1	Total	C	H	O	0
			81	24	46	11	
26	G2	1	Total	C	H	O	0
			59	18	35	6	
26	K2	1	Total	C	H	O	0
			59	18	35	6	
26	12	1	Total	C	H	O	0
			349	107	201	41	
26	12	1	Total	C	H	O	0
			349	107	201	41	
26	12	1	Total	C	H	O	0
			349	107	201	41	
26	12	1	Total	C	H	O	0
			349	107	201	41	

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Mol	Chain	Residues	Atoms				AltConf
26	12	1	Total	C	H	O	0
			349	107	201	41	
26	12	1	Total	C	H	O	0
			349	107	201	41	
26	72	1	Total	C	H	O	0
			173	53	92	28	
26	72	1	Total	C	H	O	0
			173	53	92	28	
26	72	1	Total	C	H	O	0
			173	53	92	28	
26	82	1	Total	C	H	O	0
			258	78	151	29	
26	82	1	Total	C	H	O	0
			258	78	151	29	
26	82	1	Total	C	H	O	0
			258	78	151	29	
26	82	1	Total	C	H	O	0
			258	78	151	29	
26	Z2	1	Total	C	H	O	0
			116	36	63	17	
26	Z2	1	Total	C	H	O	0
			116	36	63	17	
26	42	1	Total	C	H	O	0
			116	36	63	17	
26	42	1	Total	C	H	O	0
			116	36	63	17	
26	52	1	Total	C	H	O	0
			59	18	35	6	
26	62	1	Total	C	H	O	0
			221	68	129	24	
26	62	1	Total	C	H	O	0
			221	68	129	24	
26	62	1	Total	C	H	O	0
			221	68	129	24	
26	62	1	Total	C	H	O	0
			221	68	129	24	
26	92	1	Total	C	H	O	0
			59	18	35	6	

- Molecule 27 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula: C₄₅H₈₆O₁₀) (labeled as "Ligand of Interest" by depositor).



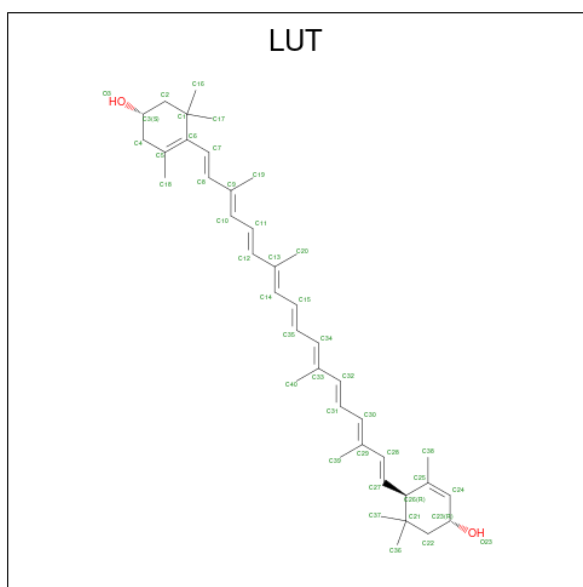
Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
27	A	1	195	64	111	20	0
27	A	1	195	64	111	20	0
27	B	1	177	59	98	20	0
27	B	1	177	59	98	20	0
27	J	1	174	57	97	20	0
27	J	1	174	57	97	20	0
27	1	1	174	58	96	20	0
27	1	1	174	58	96	20	0
27	3	1	120	40	75	5	0
27	7	1	81	27	44	10	0
27	8	1	165	54	91	20	0
27	8	1	165	54	91	20	0
27	4	1	96	31	55	10	0
27	6	1	55	18	35	2	0

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Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
27	9	1	Total	C	H	O	0
			105	34	61	10	
27	A2	1	Total	C	H	O	0
			195	64	111	20	
27	A2	1	Total	C	H	O	0
			195	64	111	20	
27	B2	1	Total	C	H	O	0
			177	59	98	20	
27	B2	1	Total	C	H	O	0
			177	59	98	20	
27	J2	1	Total	C	H	O	0
			174	57	97	20	
27	J2	1	Total	C	H	O	0
			174	57	97	20	
27	12	1	Total	C	H	O	0
			174	58	96	20	
27	12	1	Total	C	H	O	0
			174	58	96	20	
27	32	1	Total	C	H	O	0
			120	40	75	5	
27	72	1	Total	C	H	O	0
			81	27	44	10	
27	82	1	Total	C	H	O	0
			165	54	91	20	
27	82	1	Total	C	H	O	0
			165	54	91	20	
27	42	1	Total	C	H	O	0
			96	31	55	10	
27	62	1	Total	C	H	O	0
			55	18	35	2	
27	92	1	Total	C	H	O	0
			105	34	61	10	

- Molecule 28 is (3R,3'R,6S)-4,5-DIDEHYDRO-5,6-DIHYDRO-BETA,BETA-CAROTENE-3,3'-DIOL (three-letter code: LUT) (formula: C₄₀H₅₆O₂) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
28	A	1	Total	C	H	O	0
			98	40	56	2	
28	F	1	Total	C	H	O	0
			98	40	56	2	
28	1	1	Total	C	H	O	0
			196	80	112	4	
28	1	1	Total	C	H	O	0
			196	80	112	4	
28	3	1	Total	C	H	O	0
			294	120	168	6	
28	3	1	Total	C	H	O	0
			294	120	168	6	
28	3	1	Total	C	H	O	0
			294	120	168	6	
28	7	1	Total	C	H	O	0
			196	80	112	4	
28	7	1	Total	C	H	O	0
			196	80	112	4	
28	8	1	Total	C	H	O	0
			98	40	56	2	
28	Z	1	Total	C	H	O	0
			157	65	89	3	
28	Z	1	Total	C	H	O	0
			157	65	89	3	
28	4	1	Total	C	H	O	0
			98	40	56	2	
28	5	1	Total	C	H	O	0
			196	80	112	4	

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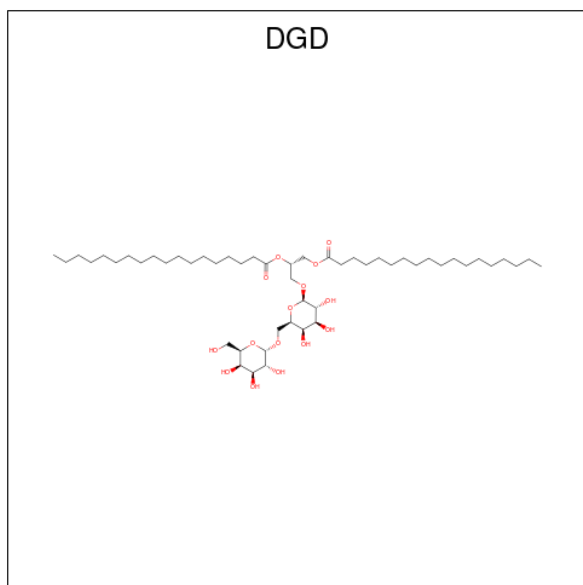
Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
28	5	1	Total 196	C 80	H 112	O 4	0
28	6	1	Total 98	C 40	H 56	O 2	0
28	9	1	Total 196	C 80	H 112	O 4	0
28	9	1	Total 196	C 80	H 112	O 4	0
28	A2	1	Total 98	C 40	H 56	O 2	0
28	F2	1	Total 98	C 40	H 56	O 2	0
28	12	1	Total 196	C 80	H 112	O 4	0
28	12	1	Total 196	C 80	H 112	O 4	0
28	32	1	Total 294	C 120	H 168	O 6	0
28	32	1	Total 294	C 120	H 168	O 6	0
28	32	1	Total 294	C 120	H 168	O 6	0
28	72	1	Total 196	C 80	H 112	O 4	0
28	72	1	Total 196	C 80	H 112	O 4	0
28	82	1	Total 98	C 40	H 56	O 2	0
28	Z2	1	Total 157	C 65	H 89	O 3	0
28	Z2	1	Total 157	C 65	H 89	O 3	0
28	42	1	Total 98	C 40	H 56	O 2	0
28	52	1	Total 196	C 80	H 112	O 4	0
28	52	1	Total 196	C 80	H 112	O 4	0
28	62	1	Total 98	C 40	H 56	O 2	0
28	92	1	Total 196	C 80	H 112	O 4	0

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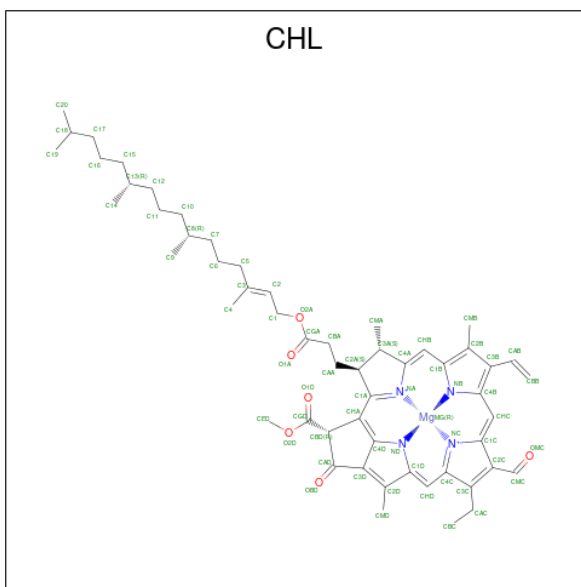
Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
28	92	1	196	80	112	4	0

- Molecule 29 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (three-letter code: DGD) (formula: $C_{51}H_{96}O_{15}$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
29	B	1	138	44	79	15	0
29	B2	1	138	44	79	15	0

- Molecule 30 is CHLOROPHYLL B (three-letter code: CHL) (formula: $C_{55}H_{70}MgN_4O_6$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
30	1	1	Total	C	H	Mg	N	O	0
			290	125	132	3	12	18	
30	1	1	Total	C	H	Mg	N	O	0
			290	125	132	3	12	18	
30	1	1	Total	C	H	Mg	N	O	0
			290	125	132	3	12	18	
30	3	1	Total	C	H	Mg	N	O	0
			136	55	70	1	4	6	
30	7	1	Total	C	H	Mg	N	O	0
			290	125	132	3	12	18	
30	7	1	Total	C	H	Mg	N	O	0
			290	125	132	3	12	18	
30	7	1	Total	C	H	Mg	N	O	0
			290	125	132	3	12	18	
30	8	1	Total	C	H	Mg	N	O	0
			408	165	210	3	12	18	
30	8	1	Total	C	H	Mg	N	O	0
			408	165	210	3	12	18	
30	8	1	Total	C	H	Mg	N	O	0
			408	165	210	3	12	18	
30	Z	1	Total	C	H	Mg	N	O	0
			349	145	171	3	12	18	
30	Z	1	Total	C	H	Mg	N	O	0
			349	145	171	3	12	18	
30	Z	1	Total	C	H	Mg	N	O	0
			349	145	171	3	12	18	
30	4	1	Total	C	H	Mg	N	O	0
			588	245	288	5	20	30	

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Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
30	4	1	Total 588	C 245	H 288	Mg 5	N 20	O 30	0
30	4	1	Total 588	C 245	H 288	Mg 5	N 20	O 30	0
30	4	1	Total 588	C 245	H 288	Mg 5	N 20	O 30	0
30	4	1	Total 588	C 245	H 288	Mg 5	N 20	O 30	0
30	5	1	Total 373	C 164	H 167	Mg 4	N 16	O 22	0
30	5	1	Total 373	C 164	H 167	Mg 4	N 16	O 22	0
30	5	1	Total 373	C 164	H 167	Mg 4	N 16	O 22	0
30	5	1	Total 373	C 164	H 167	Mg 4	N 16	O 22	0
30	6	1	Total 677	C 286	H 327	Mg 6	N 24	O 34	0
30	6	1	Total 677	C 286	H 327	Mg 6	N 24	O 34	0
30	6	1	Total 677	C 286	H 327	Mg 6	N 24	O 34	0
30	6	1	Total 677	C 286	H 327	Mg 6	N 24	O 34	0
30	6	1	Total 677	C 286	H 327	Mg 6	N 24	O 34	0
30	6	1	Total 677	C 286	H 327	Mg 6	N 24	O 34	0
30	6	1	Total 677	C 286	H 327	Mg 6	N 24	O 34	0
30	9	1	Total 157	C 73	H 64	Mg 2	N 8	O 10	0
30	9	1	Total 157	C 73	H 64	Mg 2	N 8	O 10	0
30	12	1	Total 290	C 125	H 132	Mg 3	N 12	O 18	0
30	12	1	Total 290	C 125	H 132	Mg 3	N 12	O 18	0
30	12	1	Total 290	C 125	H 132	Mg 3	N 12	O 18	0
30	32	1	Total 136	C 55	H 70	Mg 1	N 4	O 6	0
30	72	1	Total 290	C 125	H 132	Mg 3	N 12	O 18	0

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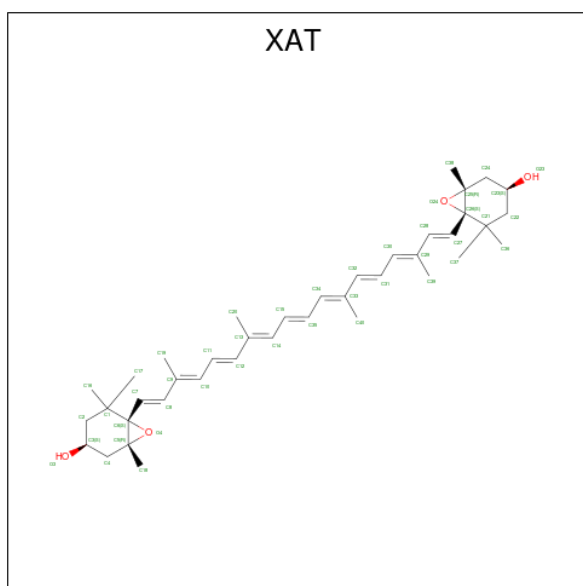
Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
30	72	1	Total 290	C 125	H 132	Mg 3	N 12	O 18	0
30	72	1	Total 290	C 125	H 132	Mg 3	N 12	O 18	0
30	82	1	Total 408	C 165	H 210	Mg 3	N 12	O 18	0
30	82	1	Total 408	C 165	H 210	Mg 3	N 12	O 18	0
30	82	1	Total 408	C 165	H 210	Mg 3	N 12	O 18	0
30	Z2	1	Total 349	C 145	H 171	Mg 3	N 12	O 18	0
30	Z2	1	Total 349	C 145	H 171	Mg 3	N 12	O 18	0
30	Z2	1	Total 349	C 145	H 171	Mg 3	N 12	O 18	0
30	42	1	Total 588	C 245	H 288	Mg 5	N 20	O 30	0
30	42	1	Total 588	C 245	H 288	Mg 5	N 20	O 30	0
30	42	1	Total 588	C 245	H 288	Mg 5	N 20	O 30	0
30	42	1	Total 588	C 245	H 288	Mg 5	N 20	O 30	0
30	42	1	Total 588	C 245	H 288	Mg 5	N 20	O 30	0
30	42	1	Total 588	C 245	H 288	Mg 5	N 20	O 30	0
30	52	1	Total 373	C 164	H 167	Mg 4	N 16	O 22	0
30	52	1	Total 373	C 164	H 167	Mg 4	N 16	O 22	0
30	52	1	Total 373	C 164	H 167	Mg 4	N 16	O 22	0
30	52	1	Total 373	C 164	H 167	Mg 4	N 16	O 22	0
30	62	1	Total 677	C 286	H 327	Mg 6	N 24	O 34	0
30	62	1	Total 677	C 286	H 327	Mg 6	N 24	O 34	0
30	62	1	Total 677	C 286	H 327	Mg 6	N 24	O 34	0
30	62	1	Total 677	C 286	H 327	Mg 6	N 24	O 34	0

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Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
30	62	1	Total	C	H	Mg	N	O	0
			677	286	327	6	24	34	
30	62	1	Total	C	H	Mg	N	O	0
			677	286	327	6	24	34	
30	92	1	Total	C	H	Mg	N	O	0
			157	73	64	2	8	10	
30	92	1	Total	C	H	Mg	N	O	0
			157	73	64	2	8	10	

- Molecule 31 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) (labeled as "Ligand of Interest" by depositor).



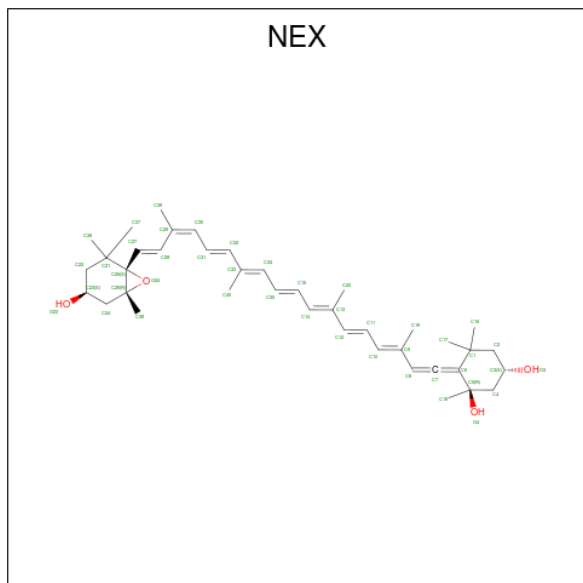
Mol	Chain	Residues	Atoms			AltConf	
			Total	C	H		O
31	1	1	Total	C	H	O	0
			100	40	56	4	
31	7	1	Total	C	H	O	0
			100	40	56	4	
31	8	1	Total	C	H	O	0
			100	40	56	4	
31	Z	1	Total	C	H	O	0
			100	40	56	4	
31	4	1	Total	C	H	O	0
			100	40	56	4	
31	5	1	Total	C	H	O	0
			100	40	56	4	

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Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
31	6	1	Total 100	C 40	H 56	O 4	0
31	12	1	Total 100	C 40	H 56	O 4	0
31	72	1	Total 100	C 40	H 56	O 4	0
31	82	1	Total 100	C 40	H 56	O 4	0
31	Z2	1	Total 100	C 40	H 56	O 4	0
31	42	1	Total 100	C 40	H 56	O 4	0
31	52	1	Total 100	C 40	H 56	O 4	0
31	62	1	Total 100	C 40	H 56	O 4	0

- Molecule 32 is (1R,3R)-6-{(3E,5E,7E,9E,11E,13E,15E,17E)-18-[(1S,4R,6R)-4-HYDROXY-2,2,6-TRIMETHYL-7-OXABICYCLO[4.1.0]HEPT-1-YL]-3,7,12,16-TETRAMETHYLOCTADEC-1,3,5,7,9,11,13,15,17-NONAENYLIDENE}-1,5,5-TRIMETHYLCYCLOHEXANE-1,3-DIOL (three-letter code: NEX) (formula: C₄₀H₅₆O₄) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
32	5	1	Total 100	C 40	H 56	O 4	0

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Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
32	6	1	100	40	56	4	0
32	52	1	100	40	56	4	0
32	62	1	100	40	56	4	0

- Molecule 33 is water.

Mol	Chain	Residues	Atoms		AltConf
33	H	10	Total	O	0
			160	160	
33	H	19	Total	O	0
			160	160	
33	H	1	Total	O	0
			160	160	
33	H	1	Total	O	0
			160	160	
33	H	4	Total	O	0
			160	160	
33	H	1	Total	O	0
			160	160	
33	H	1	Total	O	0
			160	160	
33	H	7	Total	O	0
			160	160	
33	H	6	Total	O	0
			160	160	
33	H	6	Total	O	0
			160	160	
33	H	6	Total	O	0
			160	160	
33	H	5	Total	O	0
			160	160	
33	H	3	Total	O	0
			160	160	
33	H	5	Total	O	0
			160	160	
33	H	5	Total	O	0
			160	160	
33	H	1	Total	O	0
			160	160	

Continued on next page...

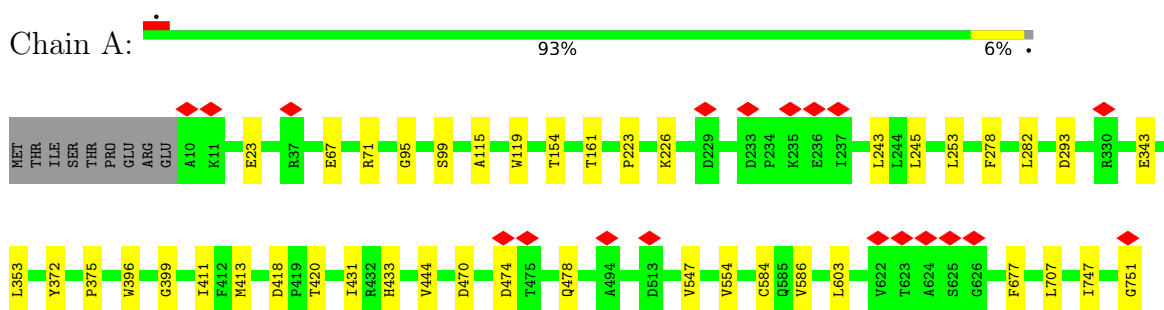
Continued from previous page...

Mol	Chain	Residues	Atoms		AltConf
33	H	11	Total 160	O 160	0
33	H	18	Total 160	O 160	0
33	H	1	Total 160	O 160	0
33	H	1	Total 160	O 160	0
33	H	4	Total 160	O 160	0
33	H	1	Total 160	O 160	0
33	H	1	Total 160	O 160	0
33	H	7	Total 160	O 160	0
33	H	5	Total 160	O 160	0
33	H	6	Total 160	O 160	0
33	H	5	Total 160	O 160	0
33	H	5	Total 160	O 160	0
33	H	3	Total 160	O 160	0
33	H	5	Total 160	O 160	0
33	H	5	Total 160	O 160	0
33	H	1	Total 160	O 160	0

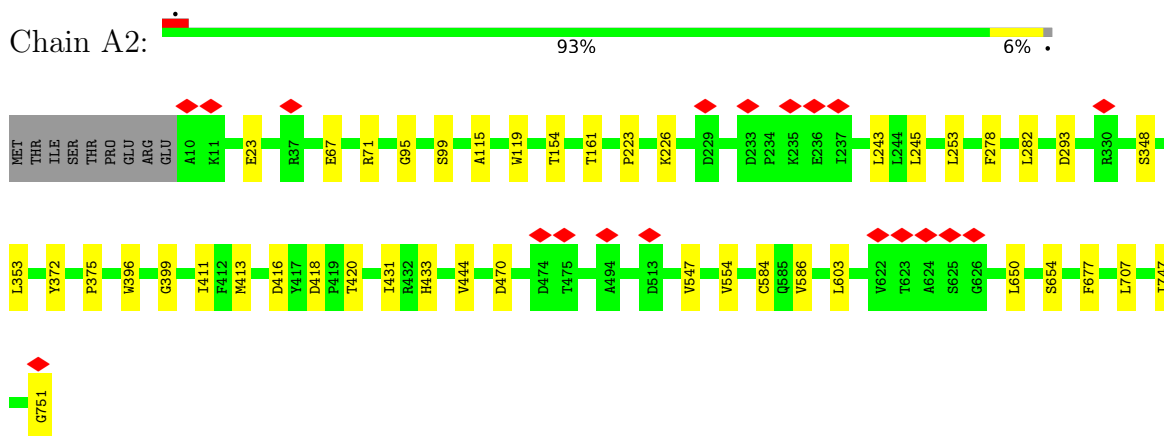
3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

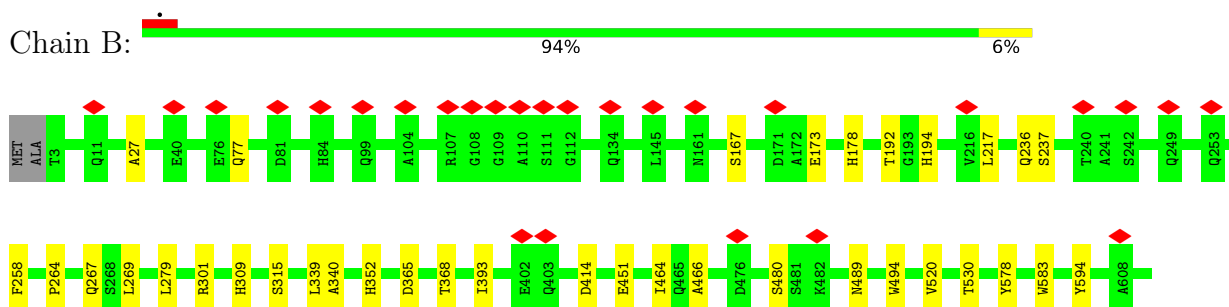
- Molecule 1: Photosystem I P700 chlorophyll a apoprotein A1

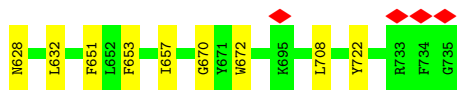


- Molecule 1: Photosystem I P700 chlorophyll a apoprotein A1

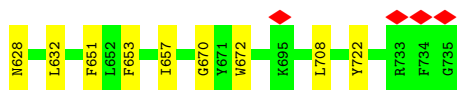
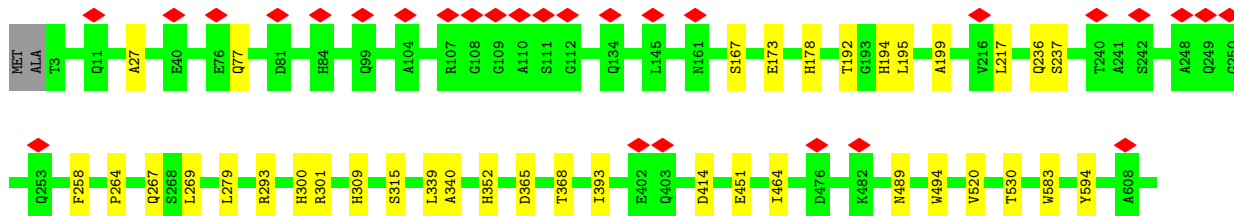


- Molecule 2: Photosystem I P700 chlorophyll a apoprotein A2

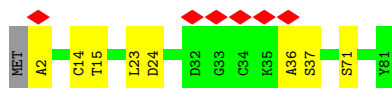
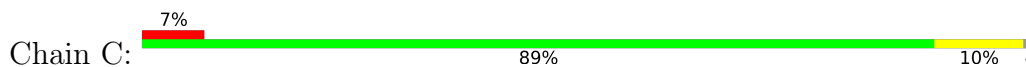




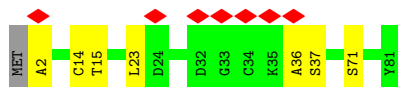
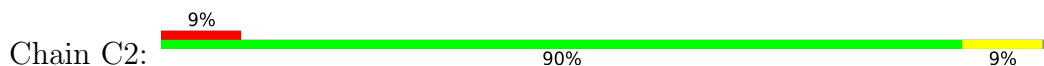
• Molecule 2: Photosystem I P700 chlorophyll a apoprotein A2



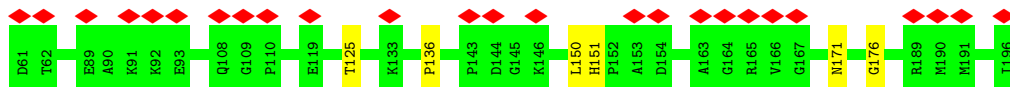
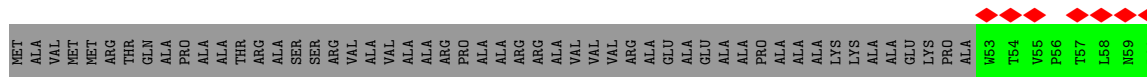
• Molecule 3: Photosystem I iron-sulfur center



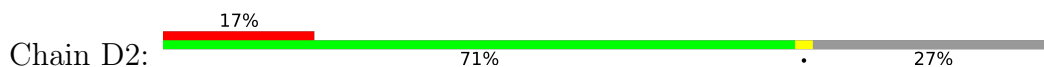
• Molecule 3: Photosystem I iron-sulfur center

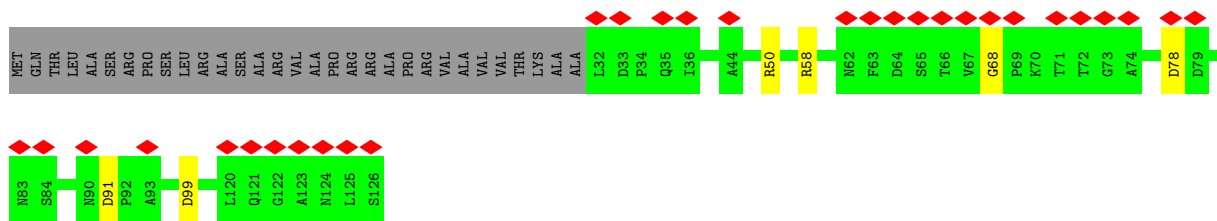


• Molecule 4: Photosystem I reaction center subunit II, chloroplastic

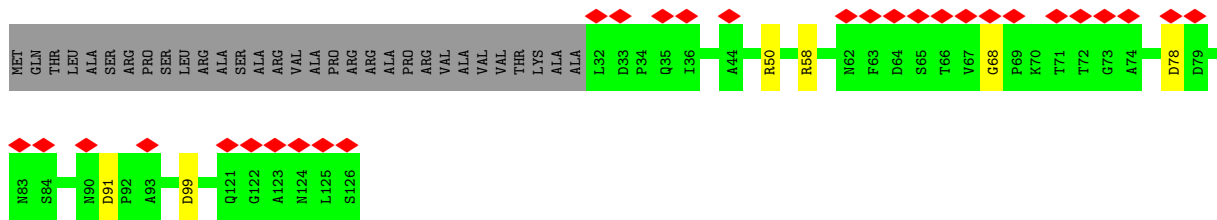


• Molecule 4: Photosystem I reaction center subunit II, chloroplastic

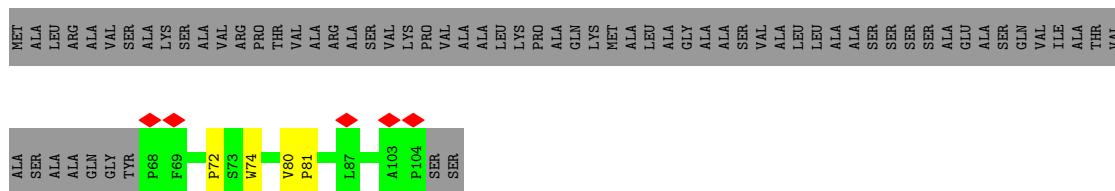




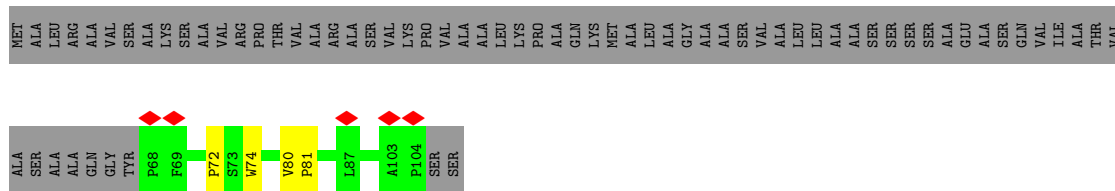
• Molecule 7: Photosystem I reaction center subunit V, chloroplastic



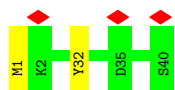
• Molecule 8: Photosystem I reaction center subunit VIII



• Molecule 8: Photosystem I reaction center subunit VIII



• Molecule 9: Photosystem I reaction center subunit IX

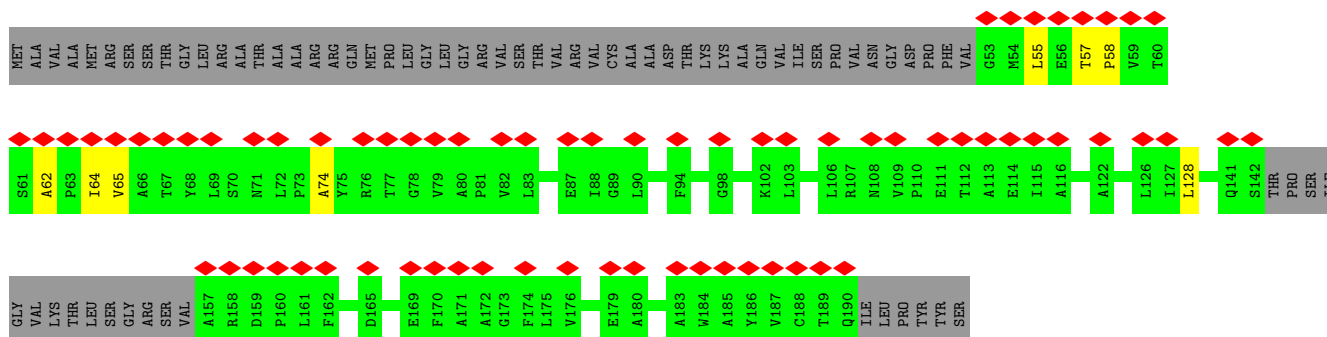


• Molecule 9: Photosystem I reaction center subunit IX

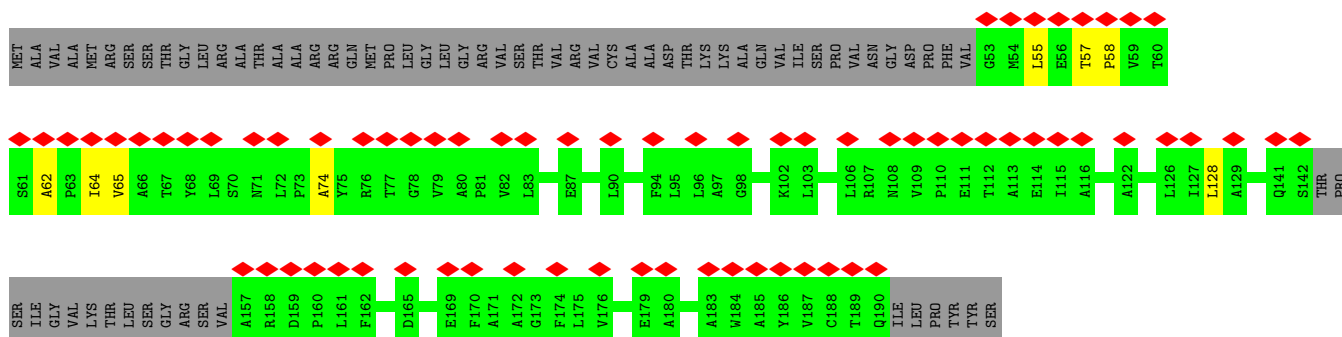
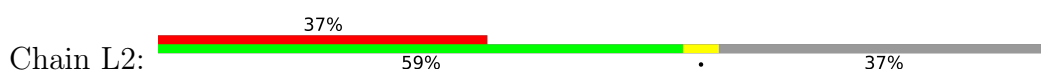




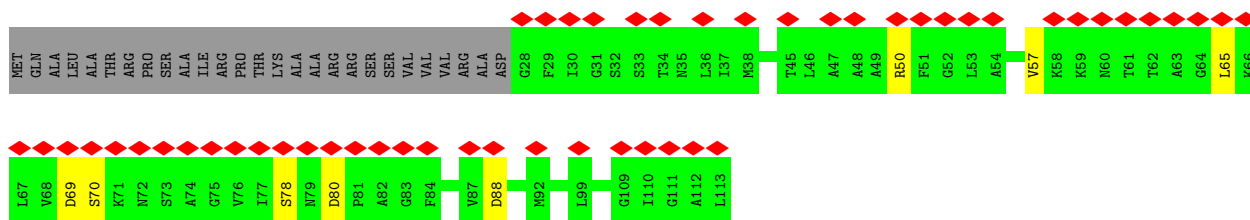
• Molecule 10: PSI subunit V



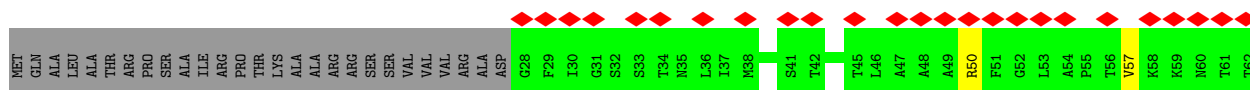
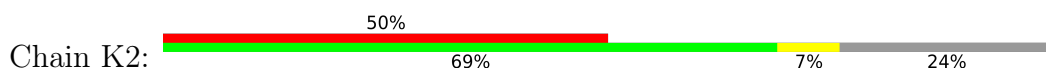
• Molecule 10: PSI subunit V

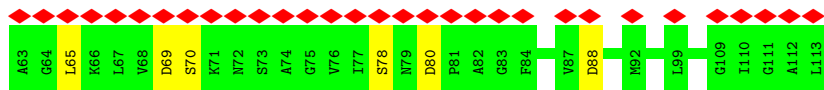


• Molecule 11: Photosystem I reaction center subunit psaK, chloroplastic

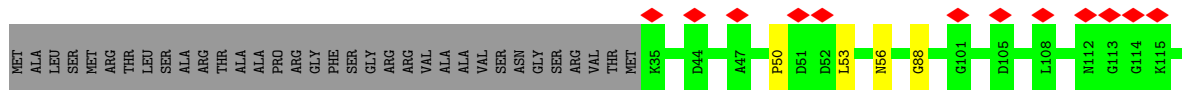
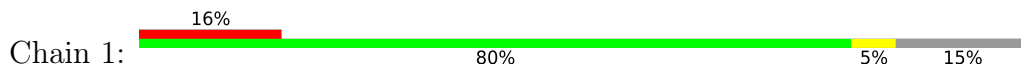


• Molecule 11: Photosystem I reaction center subunit psaK, chloroplastic

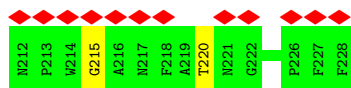
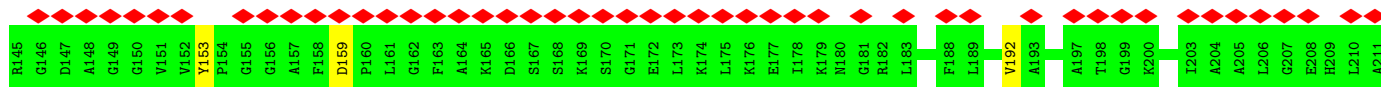
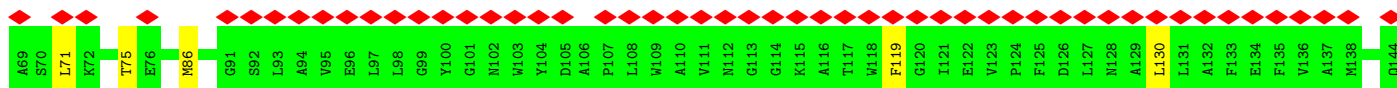
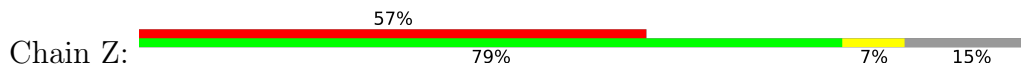




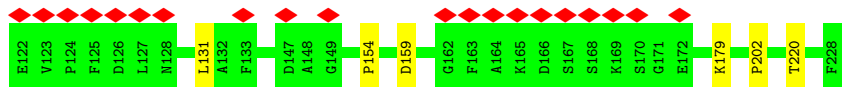
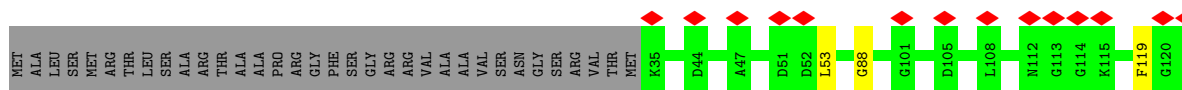
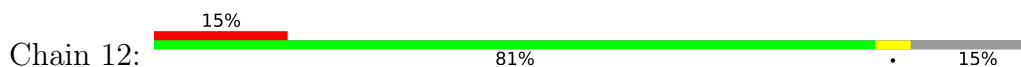
• Molecule 12: Chlorophyll a-b binding protein, chloroplastic



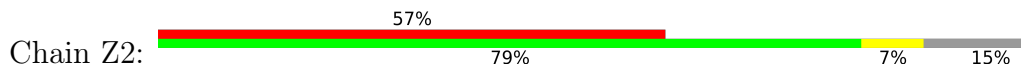
• Molecule 12: Chlorophyll a-b binding protein, chloroplastic

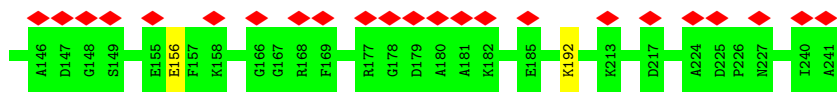


• Molecule 12: Chlorophyll a-b binding protein, chloroplastic

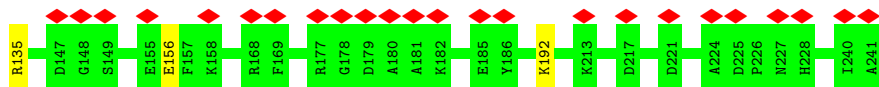
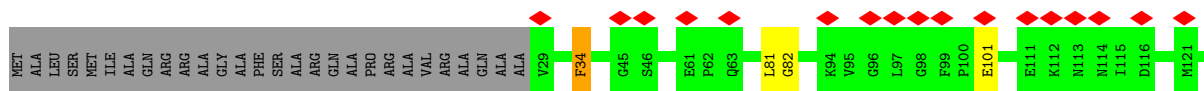
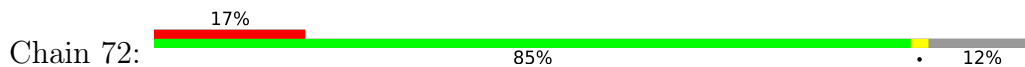


• Molecule 12: Chlorophyll a-b binding protein, chloroplastic

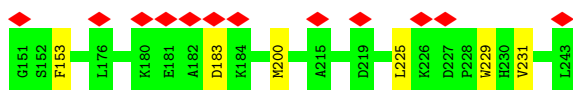
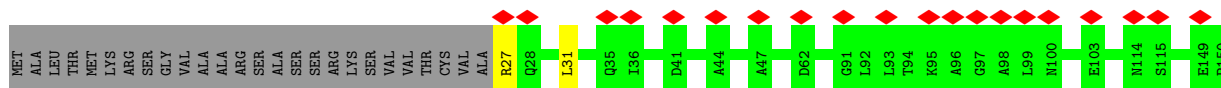
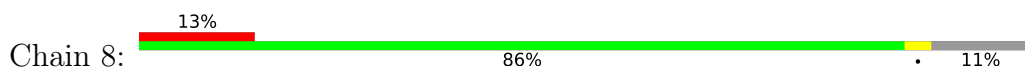




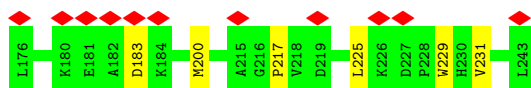
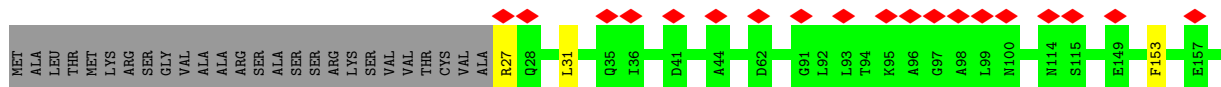
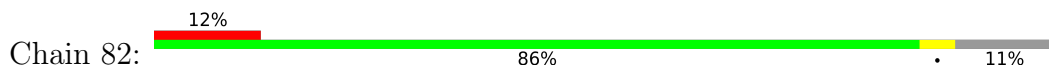
• Molecule 14: Chlorophyll a-b binding protein, chloroplastic



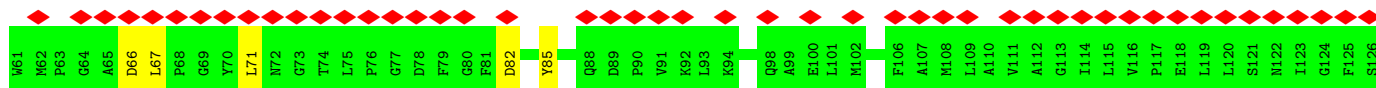
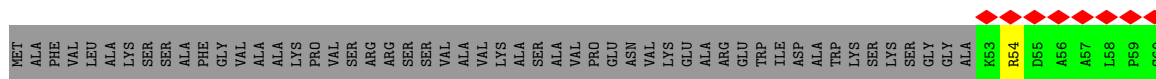
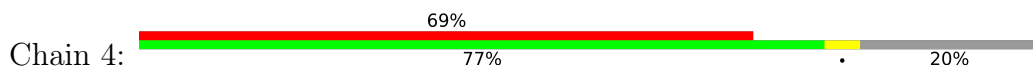
• Molecule 15: Chlorophyll a-b binding protein, chloroplastic

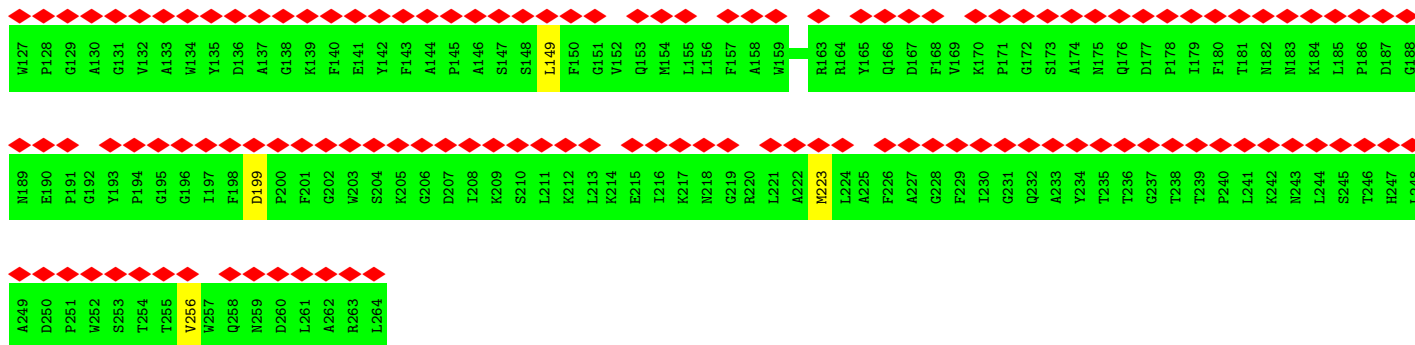


• Molecule 15: Chlorophyll a-b binding protein, chloroplastic

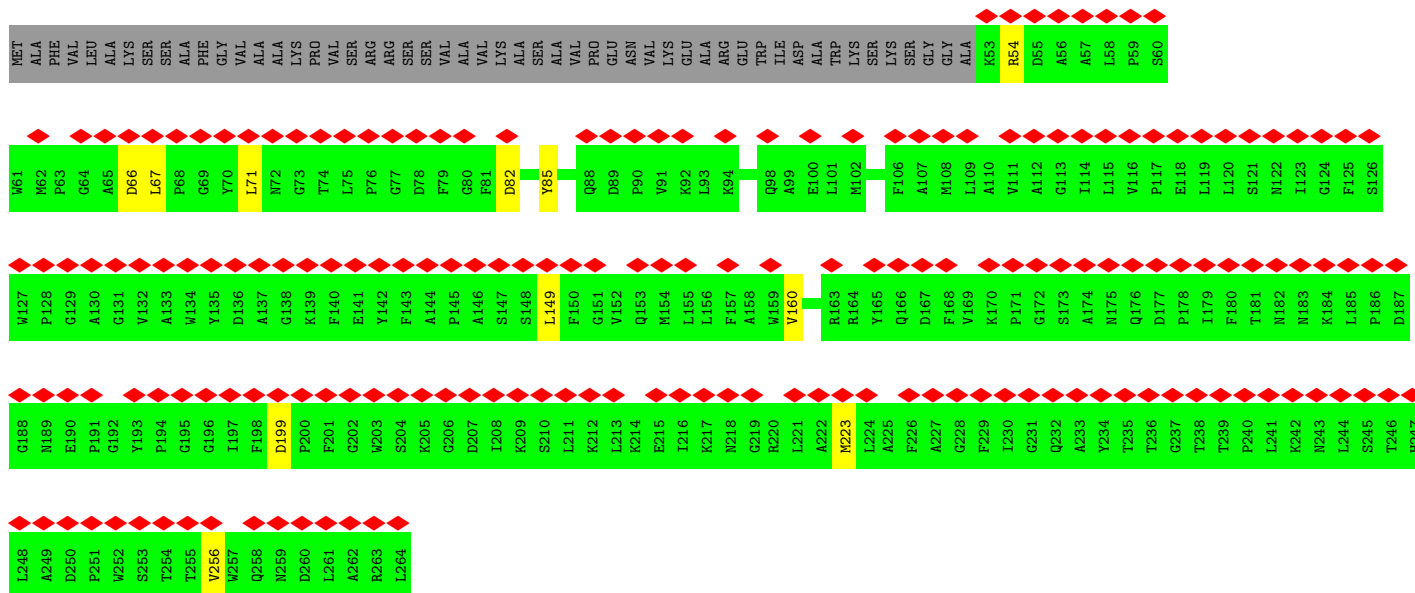
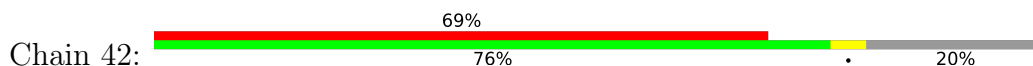


• Molecule 16: Chlorophyll a-b binding protein, chloroplastic (Lhca4)

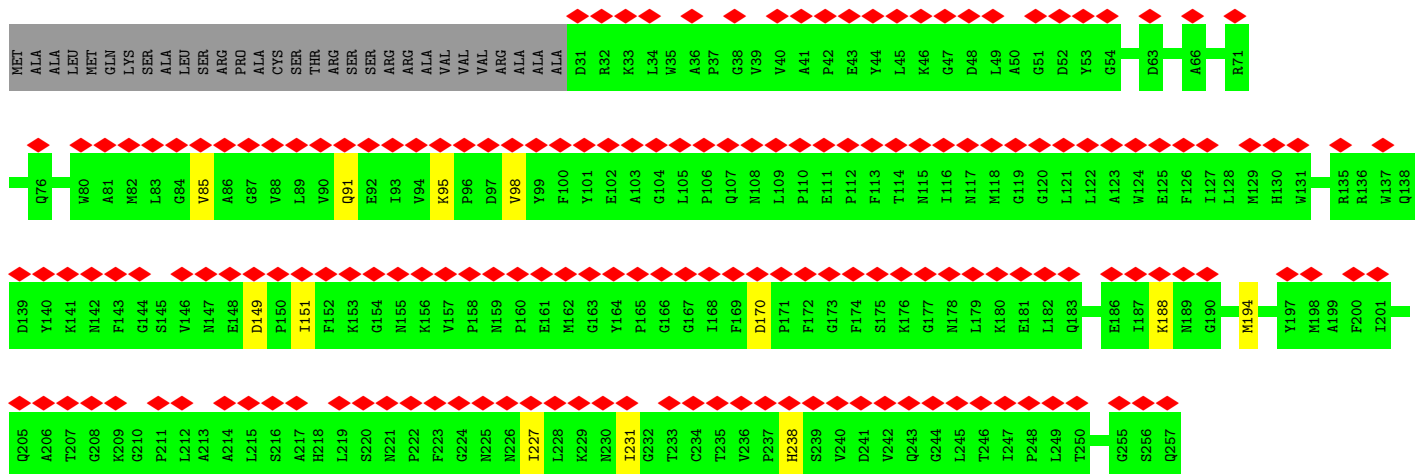
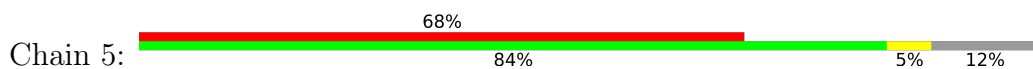





• Molecule 16: Chlorophyll a-b binding protein, chloroplastic (Lhca4)

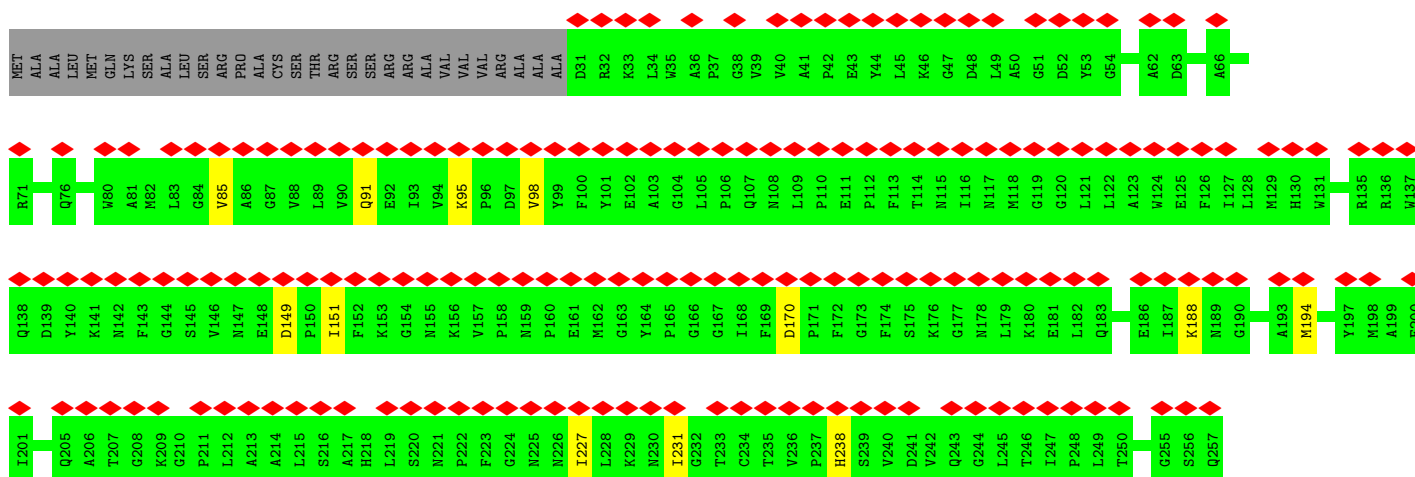


• Molecule 17: Chlorophyll a-b binding protein, chloroplastic




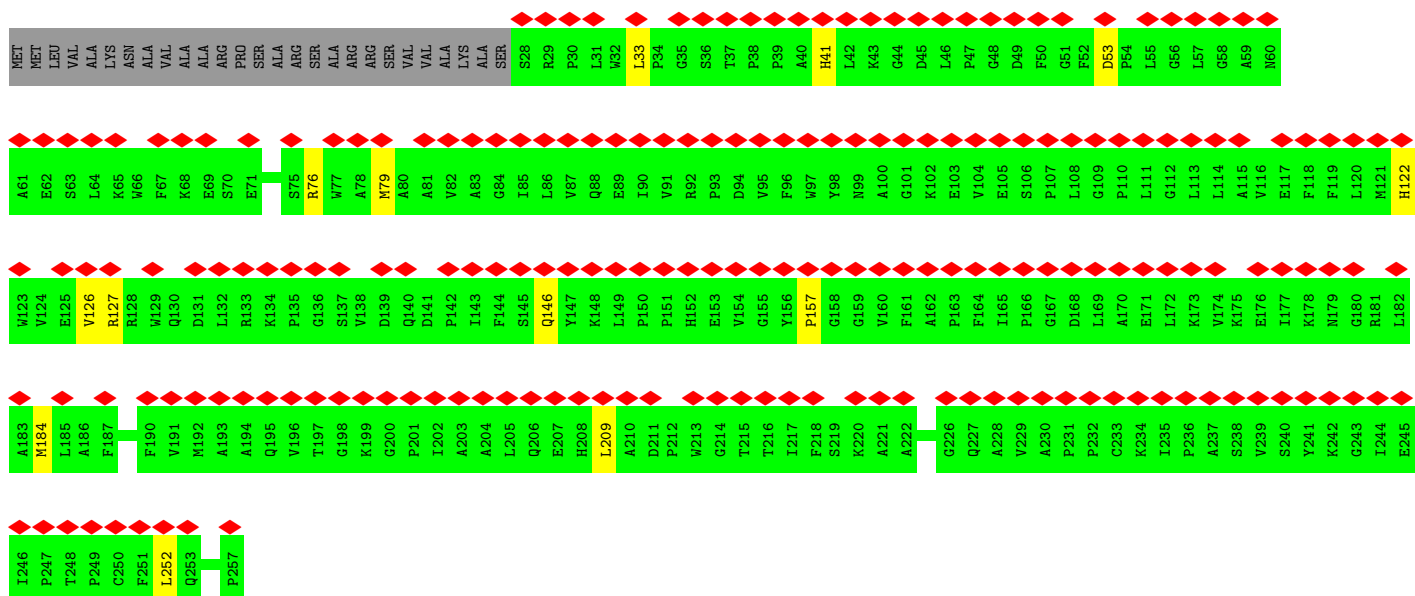
- Molecule 17: Chlorophyll a-b binding protein, chloroplastic

Chain 52: 




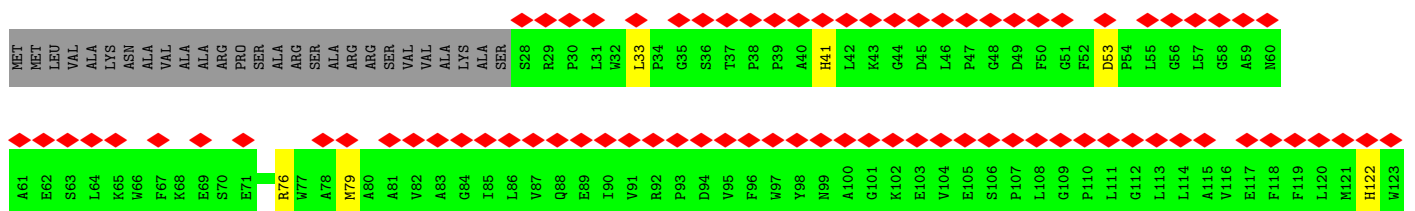
- Molecule 18: Chlorophyll a-b binding protein, chloroplastic

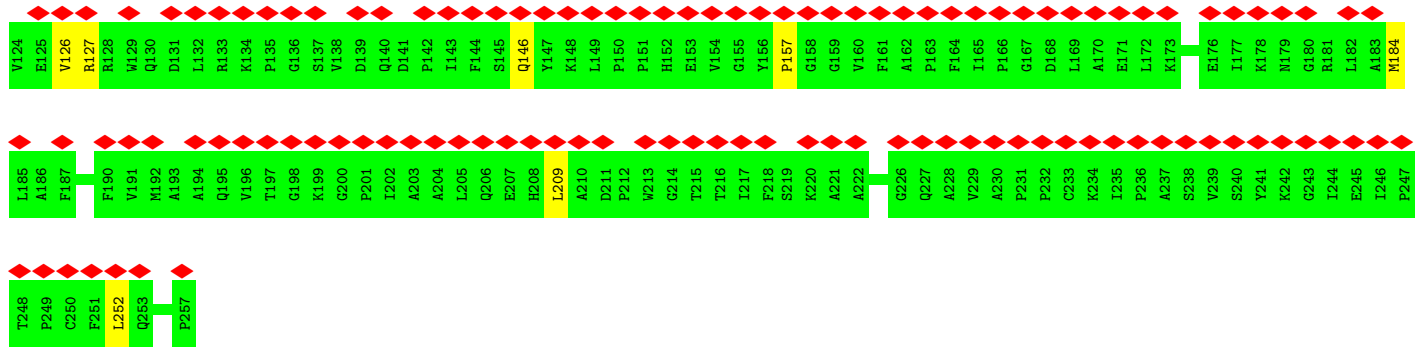
Chain 6: 



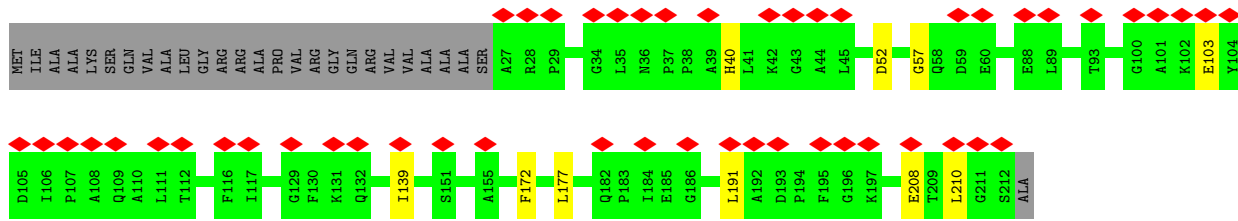
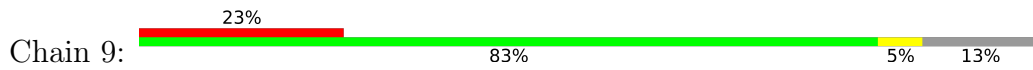
- Molecule 18: Chlorophyll a-b binding protein, chloroplastic

Chain 62: 

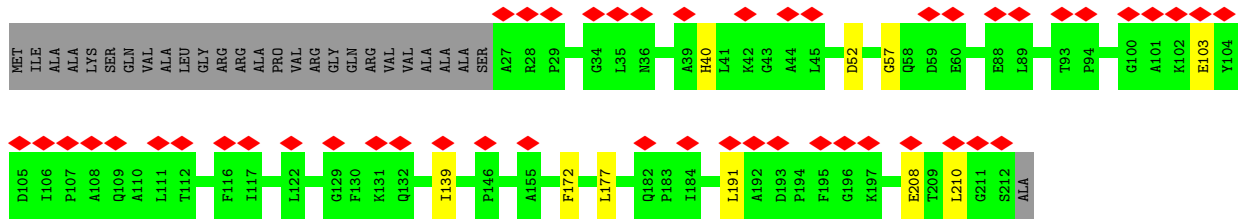
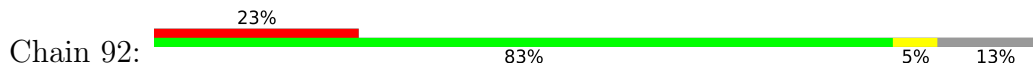




• Molecule 19: Chlorophyll a-b binding protein, chloroplastic



• Molecule 19: 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	17439	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	45.8	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	5000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.183	Depositor
Minimum map value	-0.090	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.003	Depositor
Recommended contour level	0.036	Depositor
Map size (\AA)	588.0, 588.0, 588.0	wwPDB
Map dimensions	700, 700, 700	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	0.84, 0.84, 0.84	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: XAT, PQN, CL0, BCR, DGD, NEX, SF4, AME, CHL, CLA, LHG, LMG, LMU, LUT

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	0.26	0/6021	0.43	0/8208
1	A2	0.26	0/6021	0.43	0/8208
2	B	0.27	0/6036	0.42	0/8240
2	B2	0.27	0/6036	0.42	0/8240
3	C	0.27	0/611	0.51	0/826
3	C2	0.27	0/611	0.51	0/826
4	D	0.27	0/1161	0.48	0/1567
4	D2	0.27	0/1161	0.48	0/1567
5	E	0.28	0/516	0.47	0/700
5	E2	0.28	0/516	0.47	0/700
6	F	0.26	0/1292	0.43	0/1747
6	F2	0.26	0/1292	0.43	0/1747
7	G	0.25	0/721	0.43	0/980
7	G2	0.26	0/721	0.43	0/980
8	I	0.27	0/293	0.38	0/406
8	I2	0.28	0/293	0.38	0/406
9	J	0.28	0/329	0.41	0/452
9	J2	0.28	0/329	0.41	0/452
10	L	0.26	0/920	0.42	0/1257
10	L2	0.26	0/920	0.42	0/1257
11	K	0.26	0/588	0.43	0/795
11	K2	0.26	0/588	0.43	0/795
12	1	0.26	0/1491	0.42	0/2028
12	12	0.26	0/1491	0.42	0/2028
12	Z	0.25	0/1491	0.40	0/2028
12	Z2	0.25	0/1491	0.40	0/2028
13	3	0.27	0/1784	0.43	0/2420
13	32	0.27	0/1784	0.43	0/2420
14	7	0.26	0/1702	0.41	0/2310
14	72	0.26	0/1702	0.41	0/2310
15	8	0.26	0/1701	0.42	0/2315
15	82	0.26	0/1701	0.42	0/2315

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
16	4	0.25	0/1703	0.40	0/2321
16	42	0.25	0/1703	0.40	0/2321
17	5	0.24	0/1830	0.41	0/2492
17	52	0.24	0/1830	0.41	0/2492
18	6	0.25	0/1834	0.41	0/2505
18	62	0.25	0/1834	0.41	0/2505
19	9	0.26	0/1461	0.42	0/1987
19	92	0.26	0/1461	0.42	0/1987
All	All	0.26	0/66970	0.42	0/91168

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5825	5675	5675	30	0
1	A2	5825	5675	5675	29	0
2	B	5824	5576	5577	39	0
2	B2	5824	5576	5577	40	0
3	C	601	582	581	4	0
3	C2	601	582	581	3	0
4	D	1133	1151	1150	4	0
4	D2	1133	1151	1150	2	0
5	E	506	505	504	1	0
5	E2	506	505	504	1	0
6	F	1266	1302	1301	11	0
6	F2	1266	1302	1301	10	0
7	G	706	687	686	4	0
7	G2	706	687	686	4	0
8	I	281	292	292	3	0
8	I2	281	292	292	3	0
9	J	329	328	328	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	J2	329	328	328	1	0
10	L	899	907	905	8	0
10	L2	899	907	905	9	0
11	K	583	620	620	5	0
11	K2	583	620	620	5	0
12	1	1445	1397	1396	11	0
12	12	1445	1397	1396	10	0
12	Z	1445	1397	1396	13	0
12	Z2	1445	1397	1396	13	0
13	3	1736	1695	1694	16	0
13	32	1736	1695	1694	15	0
14	7	1650	1590	1589	8	0
14	72	1650	1590	1589	8	0
15	8	1650	1630	1629	7	0
15	82	1650	1630	1629	8	0
16	4	1648	1603	1602	9	0
16	42	1648	1603	1602	10	0
17	5	1775	1747	1746	10	0
17	52	1775	1747	1746	10	0
18	6	1772	1770	1770	13	0
18	62	1772	1770	1770	13	0
19	9	1420	1400	1399	9	0
19	92	1420	1400	1399	9	0
20	A	65	72	72	1	0
20	A2	65	72	72	1	0
21	1	639	625	625	14	0
21	12	639	625	625	14	0
21	3	740	718	718	19	0
21	32	740	718	718	20	0
21	4	565	534	534	10	0
21	42	565	534	534	11	0
21	5	740	712	712	10	0
21	52	740	712	712	10	0
21	6	628	605	605	10	0
21	62	628	605	605	9	0
21	7	652	598	598	7	0
21	72	652	598	598	7	0
21	8	614	578	578	14	0
21	82	614	578	578	12	0
21	9	565	535	535	5	0
21	92	565	535	535	5	0
21	A	2718	2856	2856	41	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
21	A2	2718	2856	2856	41	0
21	B	2463	2580	2580	45	0
21	B2	2463	2580	2580	46	0
21	F	175	177	177	1	0
21	F2	175	177	177	1	0
21	G	106	92	92	0	0
21	G2	106	92	92	0	0
21	J	55	49	49	1	0
21	J2	55	49	49	1	0
21	K	196	158	158	1	0
21	K2	196	158	158	1	0
21	L	110	105	105	2	0
21	L2	110	105	105	1	0
21	Z	627	593	593	13	0
21	Z2	627	593	593	15	0
22	A	33	46	46	0	0
22	A2	33	46	46	0	0
22	B	33	46	46	1	0
22	B2	33	46	46	1	0
23	1	39	48	48	1	0
23	12	39	48	48	1	0
23	3	78	99	99	1	0
23	32	78	99	99	1	0
23	4	87	123	123	1	0
23	42	87	123	123	1	0
23	5	37	44	44	1	0
23	52	37	44	44	1	0
23	6	85	116	116	0	0
23	62	85	116	116	0	0
23	7	49	74	74	1	0
23	72	49	74	74	1	0
23	8	44	61	61	0	0
23	82	44	61	61	0	0
23	9	41	55	55	0	0
23	92	41	55	55	0	0
23	A	87	123	123	0	0
23	A2	87	123	123	0	0
23	B	45	63	63	0	0
23	B2	45	63	63	0	0
23	Z	39	48	48	0	0
23	Z2	39	48	48	1	0
24	3	120	168	168	7	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
24	32	120	168	168	4	0
24	4	40	56	56	0	0
24	42	40	56	56	1	0
24	5	40	56	56	0	0
24	52	40	56	56	0	0
24	6	40	56	56	3	0
24	62	40	56	56	2	0
24	7	40	56	56	0	0
24	72	40	56	56	0	0
24	8	40	56	56	2	0
24	82	40	56	56	2	0
24	9	40	56	56	1	0
24	92	40	56	56	2	0
24	A	200	280	280	12	0
24	A2	200	280	280	9	0
24	B	280	392	392	12	0
24	B2	280	392	392	12	0
24	G	40	56	56	0	0
24	G2	40	56	56	2	0
24	I	40	56	56	1	0
24	I2	40	56	56	1	0
24	J	40	56	56	1	0
24	J2	40	56	56	1	0
24	K	80	112	112	5	0
24	K2	80	112	112	6	0
24	L	80	112	112	5	0
24	L2	80	112	112	5	0
25	A	8	0	0	0	0
25	A2	8	0	0	0	0
25	C	16	0	0	0	0
25	C2	16	0	0	0	0
26	1	148	201	201	0	0
26	12	148	201	201	0	0
26	4	53	63	63	1	0
26	42	53	63	63	1	0
26	5	24	35	35	0	0
26	52	24	35	35	0	0
26	6	92	129	129	0	0
26	62	92	129	129	0	0
26	7	81	92	92	1	0
26	72	81	92	92	1	0
26	8	107	151	151	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
26	82	107	151	151	1	0
26	9	24	35	35	1	0
26	92	24	35	35	1	0
26	A	196	262	262	4	0
26	A2	196	262	262	2	0
26	B	35	46	46	3	0
26	B2	35	46	46	2	0
26	G	24	35	35	0	0
26	G2	24	35	35	0	0
26	K	24	35	35	0	0
26	K2	24	35	35	0	0
26	Z	53	63	63	1	0
26	Z2	53	63	63	1	0
27	1	78	96	96	0	0
27	12	78	96	96	0	0
27	3	45	75	75	1	0
27	32	45	75	75	1	0
27	4	41	55	55	0	0
27	42	41	55	55	0	0
27	6	20	35	35	0	0
27	62	20	35	35	0	0
27	7	37	44	44	0	0
27	72	37	44	44	0	0
27	8	74	91	91	1	0
27	82	74	91	91	0	0
27	9	44	61	61	2	0
27	92	44	61	61	2	0
27	A	84	111	111	1	0
27	A2	84	111	111	1	0
27	B	79	98	98	1	0
27	B2	79	98	98	1	0
27	J	77	97	97	2	0
27	J2	77	97	97	2	0
28	1	84	112	112	4	0
28	12	84	112	112	4	0
28	3	126	168	168	6	0
28	32	126	168	168	6	0
28	4	42	56	56	2	0
28	42	42	56	56	2	0
28	5	84	112	112	3	0
28	52	84	112	112	3	0
28	6	42	56	56	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
28	62	42	56	56	2	0
28	7	84	112	112	5	0
28	72	84	112	112	5	0
28	8	42	56	56	0	0
28	82	42	56	56	1	0
28	9	84	112	112	5	0
28	92	84	112	112	5	0
28	A	42	56	56	1	0
28	A2	42	56	56	2	0
28	F	42	56	56	4	0
28	F2	42	56	56	3	0
28	Z	68	89	89	2	0
28	Z2	68	89	89	2	0
29	B	59	79	79	1	0
29	B2	59	79	79	1	0
30	1	158	132	132	1	0
30	12	158	132	132	0	0
30	3	66	70	70	1	0
30	32	66	70	70	2	0
30	4	300	288	288	7	0
30	42	300	288	288	5	0
30	5	206	167	167	1	0
30	52	206	167	167	1	0
30	6	350	327	327	10	0
30	62	350	327	327	9	0
30	7	158	132	132	3	0
30	72	158	132	132	2	0
30	8	198	210	210	4	0
30	82	198	210	210	4	0
30	9	93	64	64	0	0
30	92	93	64	64	0	0
30	Z	178	171	171	4	0
30	Z2	178	171	171	4	0
31	1	44	56	56	2	0
31	12	44	56	56	2	0
31	4	44	56	56	1	0
31	42	44	56	56	1	0
31	5	44	56	56	1	0
31	52	44	56	56	1	0
31	6	44	56	56	1	0
31	62	44	56	56	1	0
31	7	44	56	56	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
31	72	44	56	56	2	0
31	8	44	56	56	1	0
31	82	44	56	56	1	0
31	Z	44	56	56	1	0
31	Z2	44	56	56	1	0
32	5	44	56	56	0	0
32	52	44	56	56	0	0
32	6	44	56	56	1	0
32	62	44	56	56	1	0
33	H	160	0	0	17	0
All	All	100830	101988	101960	751	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 4.

The worst 5 of 751 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:7:624:LUT:H381	28:7:624:LUT:H28	1.51	0.93
28:72:624:LUT:H381	28:72:624:LUT:H28	1.51	0.91
26:B:853:LMU:H2O1	26:B:853:LMU:H6'	1.13	0.90
1:A2:95:GLY:O	1:A2:99:SER:OG	1.95	0.83
17:5:170:ASP:OD1	28:5:620:LUT:O23	1.96	0.82

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	740/751 (98%)	727 (98%)	13 (2%)	0	100	100
1	A2	740/751 (98%)	727 (98%)	13 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	B	731/735 (100%)	718 (98%)	13 (2%)	0	100	100
2	B2	731/735 (100%)	718 (98%)	13 (2%)	0	100	100
3	C	78/81 (96%)	76 (97%)	2 (3%)	0	100	100
3	C2	78/81 (96%)	76 (97%)	2 (3%)	0	100	100
4	D	142/196 (72%)	139 (98%)	3 (2%)	0	100	100
4	D2	142/196 (72%)	139 (98%)	3 (2%)	0	100	100
5	E	62/97 (64%)	62 (100%)	0	0	100	100
5	E2	62/97 (64%)	62 (100%)	0	0	100	100
6	F	163/227 (72%)	163 (100%)	0	0	100	100
6	F2	163/227 (72%)	162 (99%)	1 (1%)	0	100	100
7	G	93/126 (74%)	92 (99%)	1 (1%)	0	100	100
7	G2	93/126 (74%)	92 (99%)	1 (1%)	0	100	100
8	I	35/106 (33%)	35 (100%)	0	0	100	100
8	I2	35/106 (33%)	35 (100%)	0	0	100	100
9	J	38/40 (95%)	37 (97%)	1 (3%)	0	100	100
9	J2	38/40 (95%)	37 (97%)	1 (3%)	0	100	100
10	L	120/196 (61%)	118 (98%)	2 (2%)	0	100	100
10	L2	120/196 (61%)	118 (98%)	2 (2%)	0	100	100
11	K	84/113 (74%)	82 (98%)	2 (2%)	0	100	100
11	K2	84/113 (74%)	82 (98%)	2 (2%)	0	100	100
12	1	192/228 (84%)	192 (100%)	0	0	100	100
12	12	192/228 (84%)	192 (100%)	0	0	100	100
12	Z	192/228 (84%)	190 (99%)	2 (1%)	0	100	100
12	Z2	192/228 (84%)	190 (99%)	2 (1%)	0	100	100
13	3	225/298 (76%)	218 (97%)	7 (3%)	0	100	100
13	32	225/298 (76%)	218 (97%)	7 (3%)	0	100	100
14	7	211/241 (88%)	210 (100%)	1 (0%)	0	100	100
14	72	211/241 (88%)	210 (100%)	1 (0%)	0	100	100
15	8	215/243 (88%)	212 (99%)	3 (1%)	0	100	100
15	82	215/243 (88%)	212 (99%)	3 (1%)	0	100	100
16	4	210/264 (80%)	207 (99%)	3 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
16	42	210/264 (80%)	207 (99%)	3 (1%)	0	100	100
17	5	225/257 (88%)	220 (98%)	5 (2%)	0	100	100
17	52	225/257 (88%)	220 (98%)	5 (2%)	0	100	100
18	6	228/257 (89%)	225 (99%)	3 (1%)	0	100	100
18	62	228/257 (89%)	225 (99%)	3 (1%)	0	100	100
19	9	184/213 (86%)	179 (97%)	4 (2%)	1 (0%)	29	66
19	92	184/213 (86%)	179 (97%)	4 (2%)	1 (0%)	29	66
All	All	8336/9794 (85%)	8203 (98%)	131 (2%)	2 (0%)	100	100

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
19	9	139	ILE
19	92	139	ILE

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	601/610 (98%)	597 (99%)	4 (1%)	84	93
1	A2	601/610 (98%)	597 (99%)	4 (1%)	84	93
2	B	596/597 (100%)	594 (100%)	2 (0%)	92	97
2	B2	596/597 (100%)	595 (100%)	1 (0%)	93	98
3	C	69/70 (99%)	68 (99%)	1 (1%)	67	86
3	C2	69/70 (99%)	68 (99%)	1 (1%)	67	86
4	D	121/152 (80%)	120 (99%)	1 (1%)	81	92
4	D2	121/152 (80%)	120 (99%)	1 (1%)	81	92
5	E	55/81 (68%)	55 (100%)	0	100	100
5	E2	55/81 (68%)	55 (100%)	0	100	100
6	F	127/169 (75%)	126 (99%)	1 (1%)	81	92

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	F2	127/169 (75%)	126 (99%)	1 (1%)	81	92
7	G	71/94 (76%)	71 (100%)	0	100	100
7	G2	71/94 (76%)	71 (100%)	0	100	100
8	I	31/76 (41%)	31 (100%)	0	100	100
8	I2	31/76 (41%)	31 (100%)	0	100	100
9	J	35/35 (100%)	35 (100%)	0	100	100
9	J2	35/35 (100%)	35 (100%)	0	100	100
10	L	90/148 (61%)	89 (99%)	1 (1%)	73	90
10	L2	90/148 (61%)	89 (99%)	1 (1%)	73	90
11	K	59/80 (74%)	59 (100%)	0	100	100
11	K2	59/80 (74%)	59 (100%)	0	100	100
12	1	137/162 (85%)	137 (100%)	0	100	100
12	12	137/162 (85%)	137 (100%)	0	100	100
12	Z	137/162 (85%)	137 (100%)	0	100	100
12	Z2	137/162 (85%)	137 (100%)	0	100	100
13	3	174/230 (76%)	171 (98%)	3 (2%)	60	84
13	32	174/230 (76%)	171 (98%)	3 (2%)	60	84
14	7	164/181 (91%)	163 (99%)	1 (1%)	86	94
14	72	164/181 (91%)	163 (99%)	1 (1%)	86	94
15	8	163/183 (89%)	161 (99%)	2 (1%)	71	89
15	82	163/183 (89%)	161 (99%)	2 (1%)	71	89
16	4	166/205 (81%)	166 (100%)	0	100	100
16	42	166/205 (81%)	166 (100%)	0	100	100
17	5	184/206 (89%)	182 (99%)	2 (1%)	73	90
17	52	184/206 (89%)	182 (99%)	2 (1%)	73	90
18	6	184/203 (91%)	184 (100%)	0	100	100
18	62	184/203 (91%)	184 (100%)	0	100	100
19	9	142/159 (89%)	142 (100%)	0	100	100
19	92	142/159 (89%)	142 (100%)	0	100	100
All	All	6612/7606 (87%)	6577 (100%)	35 (0%)	89	95

5 of 35 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
13	32	42	LYS
13	32	218	ILE
15	82	153	PHE
13	3	218	ILE
13	3	42	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 7 such sidechains are listed below:

Mol	Chain	Res	Type
7	G2	121	GLN
12	12	195	HIS
19	92	109	GLN
13	32	256	ASN
19	9	109	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

2 non-standard protein/DNA/RNA residues 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	$\# Z > 2$
9	AME	J2	1	9	9,10,11	0.51	0	9,11,13	0.89	1 (11%)
9	AME	J	1	9	9,10,11	0.50	0	9,11,13	0.89	1 (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. '2' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
9	AME	J2	1	9	-	2/9/10/12	-
9	AME	J	1	9	-	2/9/10/12	-

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
9	J2	1	AME	O-C-CA	-2.52	118.17	124.78
9	J	1	AME	O-C-CA	-2.51	118.20	124.78

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
9	J	1	AME	C-CA-CB-CG
9	J	1	AME	N-CA-CB-CG
9	J2	1	AME	C-CA-CB-CG
9	J2	1	AME	N-CA-CB-CG

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

706 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
21	CLA	72	604	33	51,59,73	1.17	3 (5%)	59,96,113	0.97	2 (3%)
21	CLA	32	613	13	60,68,73	1.07	3 (5%)	70,107,113	0.89	2 (2%)
21	CLA	32	604	33	65,73,73	1.04	3 (4%)	76,113,113	0.86	2 (2%)
30	CHL	5	618	17	43,51,74	2.50	9 (20%)	45,86,114	1.44	7 (15%)
21	CLA	12	610	12	65,73,73	1.01	4 (6%)	76,113,113	0.85	2 (2%)
21	CLA	B	818	-	65,73,73	1.02	3 (4%)	76,113,113	0.85	2 (2%)
21	CLA	32	602	13	60,68,73	1.06	3 (5%)	70,107,113	0.89	2 (2%)
26	LMU	12	623	-	24,24,36	0.14	0	29,29,47	0.27	0
21	CLA	G2	204	7	46,54,73	1.23	3 (6%)	53,90,113	1.01	2 (3%)
21	CLA	82	610	15	65,73,73	1.02	3 (4%)	76,113,113	0.84	2 (2%)
21	CLA	42	604	33	50,58,73	1.18	3 (6%)	58,95,113	1.00	3 (5%)
21	CLA	7	602	14	65,73,73	1.02	3 (4%)	76,113,113	0.85	2 (2%)
30	CHL	42	606	33	56,64,74	2.17	9 (16%)	61,102,114	1.32	8 (13%)
30	CHL	42	608	-	66,74,74	2.03	10 (15%)	73,114,114	1.13	7 (9%)
30	CHL	9	606	-	42,50,74	2.58	11 (26%)	44,85,114	1.43	7 (15%)
21	CLA	42	616	16	45,53,73	1.26	3 (6%)	52,89,113	1.03	2 (3%)
21	CLA	42	613	16	65,73,73	1.04	3 (4%)	76,113,113	0.86	2 (2%)
28	LUT	92	616	-	42,43,43	0.26	0	51,60,60	0.37	0
30	CHL	8	606	33	66,74,74	1.99	10 (15%)	73,114,114	1.13	8 (10%)
21	CLA	5	617	-	65,73,73	1.03	3 (4%)	76,113,113	0.85	2 (2%)
21	CLA	42	602	16	60,68,73	1.07	3 (5%)	70,107,113	0.88	2 (2%)
24	BCR	62	623	-	41,41,41	0.16	0	56,56,56	0.35	0
30	CHL	3	608	33	66,74,74	2.00	10 (15%)	73,114,114	1.15	7 (9%)
21	CLA	7	608	33	50,58,73	1.18	3 (6%)	58,95,113	0.97	2 (3%)
21	CLA	B	826	-	65,73,73	1.02	3 (4%)	76,113,113	0.83	2 (2%)
31	XAT	52	624	-	39,47,47	0.10	0	54,74,74	0.58	0
21	CLA	1	614	-	60,68,73	1.09	3 (5%)	70,107,113	0.93	2 (2%)
30	CHL	52	607	33	66,74,74	2.04	9 (13%)	73,114,114	1.18	8 (10%)
21	CLA	8	612	15	55,63,73	1.12	3 (5%)	64,101,113	0.91	2 (3%)
26	LMU	6	632	-	20,20,36	0.15	0	25,25,47	0.26	0
21	CLA	4	611	23	60,68,73	1.08	3 (5%)	70,107,113	0.90	3 (4%)
21	CLA	A	824	-	45,53,73	1.22	3 (6%)	52,89,113	1.05	2 (3%)
30	CHL	12	606	33	46,54,74	2.40	10 (21%)	49,90,114	1.38	7 (14%)
26	LMU	1	623	-	24,24,36	0.13	0	29,29,47	0.27	0
28	LUT	7	621	-	42,43,43	0.25	0	51,60,60	0.38	0
27	LMG	4	624	-	41,41,55	0.19	0	49,49,63	0.26	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
21	CLA	A2	823	-	65,73,73	1.04	4 (6%)	76,113,113	0.86	2 (2%)
24	BCR	3	620	-	41,41,41	0.19	0	56,56,56	0.36	0
30	CHL	82	606	33	66,74,74	1.99	9 (13%)	73,114,114	1.13	8 (10%)
23	LHG	4	622	21	48,48,48	0.24	0	51,54,54	0.27	0
21	CLA	A	817	33	55,63,73	1.14	3 (5%)	64,101,113	0.92	2 (3%)
21	CLA	3	613	13	60,68,73	1.07	3 (5%)	70,107,113	0.89	2 (2%)
30	CHL	4	618	16	46,54,74	2.43	9 (19%)	49,90,114	1.38	7 (14%)
21	CLA	B	829	-	65,73,73	1.00	4 (6%)	76,113,113	0.87	2 (2%)
21	CLA	A	836	-	65,73,73	1.04	4 (6%)	76,113,113	0.86	2 (2%)
21	CLA	B2	831	-	55,63,73	1.09	4 (7%)	64,101,113	0.93	3 (4%)
21	CLA	52	611	23	55,63,73	1.12	3 (5%)	64,101,113	0.93	2 (3%)
25	SF4	A2	853	1,2	0,12,12	-	-	-	-	-
21	CLA	9	609	19	51,59,73	1.16	3 (5%)	59,96,113	0.97	2 (3%)
21	CLA	6	603	-	65,73,73	1.04	3 (4%)	76,113,113	0.83	2 (2%)
24	BCR	32	620	-	41,41,41	0.19	0	56,56,56	0.36	0
21	CLA	32	610	13	65,73,73	1.03	4 (6%)	76,113,113	0.87	2 (2%)
23	LHG	Z2	620	21	38,38,48	0.26	0	41,44,54	0.28	0
29	DGD	B	850	-	60,60,67	0.18	0	74,74,81	0.52	0
21	CLA	92	611	23	65,73,73	1.03	3 (4%)	76,113,113	0.86	2 (2%)
30	CHL	52	618	17	43,51,74	2.50	9 (20%)	45,86,114	1.44	7 (15%)
21	CLA	62	603	-	65,73,73	1.04	3 (4%)	76,113,113	0.83	2 (2%)
21	CLA	92	604	19	53,61,73	1.13	4 (7%)	61,98,113	0.96	3 (4%)
21	CLA	A2	843	33	65,73,73	1.02	4 (6%)	76,113,113	0.88	2 (2%)
26	LMU	92	624	-	24,24,36	0.15	0	29,29,47	0.37	0
26	LMU	82	627	-	36,36,36	0.10	0	47,47,47	0.37	0
27	LMG	72	626	-	37,37,55	0.19	0	45,45,63	0.27	0
21	CLA	6	610	18	60,68,73	1.08	3 (5%)	70,107,113	0.89	2 (2%)
21	CLA	12	602	12	60,68,73	1.06	4 (6%)	70,107,113	0.90	2 (2%)
31	XAT	Z	618	-	39,47,47	0.13	0	54,74,74	0.56	0
28	LUT	32	622	-	42,43,43	0.32	0	51,60,60	0.35	0
24	BCR	B2	845	-	41,41,41	0.13	0	56,56,56	0.37	0
21	CLA	92	602	19	60,68,73	1.07	3 (5%)	70,107,113	0.89	2 (2%)
26	LMU	4	625	-	34,34,36	0.11	0	45,45,47	0.20	0
30	CHL	5	607	33	66,74,74	2.05	9 (13%)	73,114,114	1.19	9 (12%)
23	LHG	32	623	-	46,46,48	0.23	0	49,52,54	0.26	0
21	CLA	8	611	23	45,53,73	1.24	3 (6%)	52,89,113	1.07	3 (5%)
26	LMU	7	627	-	33,33,36	0.11	0	44,44,47	0.16	0
21	CLA	62	610	18	60,68,73	1.07	3 (5%)	70,107,113	0.89	2 (2%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
21	CLA	A	840	-	65,73,73	1.03	3 (4%)	76,113,113	0.86	2 (2%)
21	CLA	B	821	-	65,73,73	1.02	4 (6%)	76,113,113	0.85	2 (2%)
26	LMU	A2	858	-	36,36,36	0.08	0	47,47,47	0.19	0
21	CLA	A	842	-	65,73,73	0.99	4 (6%)	76,113,113	0.85	2 (2%)
21	CLA	B	813	-	65,73,73	1.03	3 (4%)	76,113,113	0.86	2 (2%)
21	CLA	A	822	33	65,73,73	1.03	4 (6%)	76,113,113	0.85	2 (2%)
31	XAT	4	620	-	39,47,47	0.10	0	54,74,74	0.65	0
24	BCR	B	845	-	41,41,41	0.14	0	56,56,56	0.37	0
25	SF4	C2	101	3	0,12,12	-	-	-	-	-
21	CLA	Z2	608	33	50,58,73	1.19	3 (6%)	58,95,113	1.00	2 (3%)
21	CLA	6	602	18	65,73,73	1.03	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	B	820	-	56,64,73	1.12	3 (5%)	65,102,113	0.90	2 (3%)
21	CLA	A2	821	-	55,63,73	1.12	3 (5%)	64,101,113	0.90	2 (3%)
21	CLA	A	838	-	51,59,73	1.17	3 (5%)	59,96,113	0.98	2 (3%)
21	CLA	F	303	33	45,53,73	1.25	3 (6%)	52,89,113	1.02	2 (3%)
21	CLA	82	604	33	60,68,73	1.09	4 (6%)	70,107,113	0.92	2 (2%)
23	LHG	12	620	21	38,38,48	0.26	0	41,44,54	0.29	0
21	CLA	32	615	33	65,73,73	1.05	3 (4%)	76,113,113	0.86	2 (2%)
21	CLA	F	304	6	65,73,73	1.05	3 (4%)	76,113,113	0.95	3 (3%)
21	CLA	B2	819	33	60,68,73	1.07	4 (6%)	70,107,113	0.89	2 (2%)
21	CLA	B2	809	2	65,73,73	1.03	3 (4%)	76,113,113	0.83	2 (2%)
21	CLA	32	612	13	46,54,73	1.23	3 (6%)	53,90,113	0.99	2 (3%)
21	CLA	82	616	15	45,53,73	1.24	3 (6%)	52,89,113	1.06	3 (5%)
21	CLA	A2	802	-	65,73,73	1.01	4 (6%)	76,113,113	0.81	2 (2%)
21	CLA	A2	803	33	65,73,73	1.03	4 (6%)	76,113,113	0.85	2 (2%)
21	CLA	7	614	-	43,51,73	1.28	3 (6%)	49,86,113	1.07	2 (4%)
21	CLA	32	607	13	55,63,73	1.12	3 (5%)	64,101,113	0.95	3 (4%)
21	CLA	8	614	-	57,65,73	1.11	3 (5%)	66,103,113	0.90	2 (3%)
23	LHG	5	623	21	36,36,48	0.26	0	39,42,54	0.27	0
21	CLA	A2	806	-	65,73,73	1.02	4 (6%)	76,113,113	0.89	3 (3%)
21	CLA	G	203	-	60,68,73	1.08	3 (5%)	70,107,113	0.84	2 (2%)
24	BCR	B2	846	-	41,41,41	0.13	0	56,56,56	0.34	0
26	LMU	A2	861	-	24,24,36	0.13	0	29,29,47	0.30	0
24	BCR	K2	202	-	41,41,41	0.15	0	56,56,56	0.36	0
21	CLA	42	612	16	45,53,73	1.27	3 (6%)	52,89,113	1.00	2 (3%)
21	CLA	Z2	610	12	60,68,73	1.07	3 (5%)	70,107,113	0.88	2 (2%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
30	CHL	1	607	33	46,54,74	2.38	10 (21%)	49,90,114	1.42	10 (20%)
30	CHL	6	608	33	51,59,74	2.31	10 (19%)	55,96,114	1.32	8 (14%)
27	LMG	32	722	-	44,44,55	0.21	0	46,46,63	0.26	0
21	CLA	A	837	1	57,65,73	1.11	4 (7%)	66,103,113	0.93	2 (3%)
24	BCR	5	622	-	41,41,41	0.17	0	56,56,56	0.32	0
26	LMU	6	631	-	24,24,36	0.15	0	29,29,47	0.28	0
21	CLA	B	825	33	65,73,73	1.01	4 (6%)	76,113,113	0.83	2 (2%)
21	CLA	B2	820	-	56,64,73	1.12	3 (5%)	65,102,113	0.91	2 (3%)
21	CLA	A2	810	1	65,73,73	1.03	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	52	601	17	65,73,73	1.05	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	82	609	15	45,53,73	1.24	3 (6%)	52,89,113	1.01	2 (3%)
24	BCR	92	623	-	41,41,41	0.15	0	56,56,56	0.34	0
21	CLA	5	614	-	45,53,73	1.27	3 (6%)	52,89,113	1.03	2 (3%)
21	CLA	3	615	33	65,73,73	1.05	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	A	833	-	65,73,73	1.03	4 (6%)	76,113,113	0.86	2 (2%)
23	LHG	A	846	-	48,48,48	0.24	0	51,54,54	0.29	0
29	DGD	B2	850	-	60,60,67	0.17	0	74,74,81	0.34	0
21	CLA	42	609	16	60,68,73	1.10	3 (5%)	70,107,113	0.92	2 (2%)
21	CLA	J2	101	9	55,63,73	1.13	3 (5%)	64,101,113	0.92	2 (3%)
21	CLA	9	612	19	65,73,73	1.03	3 (4%)	76,113,113	0.84	2 (2%)
21	CLA	82	608	33	50,58,73	1.19	3 (6%)	58,95,113	0.98	2 (3%)
27	LMG	1	624	-	36,36,55	0.20	0	44,44,63	0.19	0
21	CLA	A	845	23	45,53,73	1.24	3 (6%)	52,89,113	0.99	2 (3%)
30	CHL	72	601	14	66,74,74	2.01	10 (15%)	73,114,114	1.15	7 (9%)
30	CHL	6	607	33	66,74,74	2.06	9 (13%)	73,114,114	1.18	8 (10%)
21	CLA	A2	831	-	65,73,73	1.04	4 (6%)	76,113,113	0.86	2 (2%)
24	BCR	B	844	-	41,41,41	0.13	0	56,56,56	0.45	0
30	CHL	Z2	606	33	46,54,74	2.40	10 (21%)	49,90,114	1.37	7 (14%)
21	CLA	1	602	12	60,68,73	1.06	4 (6%)	70,107,113	0.91	2 (2%)
24	BCR	A2	849	-	41,41,41	0.17	0	56,56,56	0.31	0
26	LMU	1	626	-	24,24,36	0.12	0	29,29,47	0.27	0
21	CLA	A2	845	23	45,53,73	1.25	3 (6%)	52,89,113	1.00	2 (3%)
21	CLA	5	610	17	60,68,73	1.06	3 (5%)	70,107,113	0.89	2 (2%)
21	CLA	52	610	17	60,68,73	1.07	3 (5%)	70,107,113	0.88	2 (2%)
26	LMU	12	626	-	24,24,36	0.12	0	29,29,47	0.27	0
21	CLA	B2	826	-	65,73,73	1.02	3 (4%)	76,113,113	0.82	2 (2%)
23	LHG	3	623	-	46,46,48	0.23	0	49,52,54	0.26	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
31	XAT	8	618	-	39,47,47	0.16	0	54,74,74	0.57	0
30	CHL	12	607	33	46,54,74	2.37	10 (21%)	49,90,114	1.42	10 (20%)
21	CLA	Z2	612	12	45,53,73	1.26	3 (6%)	52,89,113	1.01	2 (3%)
21	CLA	42	610	16	60,68,73	1.08	3 (5%)	70,107,113	0.88	2 (2%)
21	CLA	Z	603	-	55,63,73	1.15	3 (5%)	64,101,113	0.91	2 (3%)
21	CLA	92	614	-	45,53,73	1.26	3 (6%)	52,89,113	1.03	3 (5%)
21	CLA	B2	807	-	55,63,73	1.13	3 (5%)	64,101,113	0.94	2 (3%)
24	BCR	A2	851	-	41,41,41	0.13	0	56,56,56	0.33	0
23	LHG	42	622	21	48,48,48	0.24	0	51,54,54	0.27	0
27	LMG	B	852	-	43,43,55	0.18	0	51,51,63	0.24	0
21	CLA	62	613	33	65,73,73	1.04	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	B	808	-	65,73,73	1.03	3 (4%)	76,113,113	0.85	2 (2%)
25	SF4	A	853	1,2	0,12,12	-	-	-	-	-
24	BCR	A	848	-	41,41,41	0.14	0	56,56,56	0.30	0
21	CLA	8	616	15	45,53,73	1.24	3 (6%)	52,89,113	1.05	3 (5%)
21	CLA	A	828	-	65,73,73	1.05	3 (4%)	76,113,113	0.81	2 (2%)
21	CLA	5	601	17	65,73,73	1.05	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	32	609	13	61,69,73	1.05	3 (4%)	71,108,113	0.87	2 (2%)
31	XAT	6	624	-	39,47,47	0.12	0	54,74,74	0.60	0
21	CLA	B	807	-	55,63,73	1.13	3 (5%)	64,101,113	0.94	2 (3%)
21	CLA	12	611	23	61,69,73	1.06	3 (4%)	71,108,113	0.87	2 (2%)
21	CLA	Z	613	33	65,73,73	1.03	3 (4%)	76,113,113	0.89	3 (3%)
24	BCR	A	849	-	41,41,41	0.17	0	56,56,56	0.31	0
21	CLA	3	612	13	46,54,73	1.23	3 (6%)	53,90,113	1.00	2 (3%)
21	CLA	A	811	-	65,73,73	1.02	4 (6%)	76,113,113	0.87	2 (2%)
21	CLA	8	609	15	45,53,73	1.23	3 (6%)	52,89,113	1.01	2 (3%)
21	CLA	A	854	33	65,73,73	1.05	4 (6%)	76,113,113	0.80	2 (2%)
21	CLA	3	607	13	55,63,73	1.12	3 (5%)	64,101,113	0.95	3 (4%)
21	CLA	5	611	23	55,63,73	1.13	3 (5%)	64,101,113	0.93	2 (3%)
21	CLA	92	601	19	46,54,73	1.24	3 (6%)	53,90,113	1.03	2 (3%)
21	CLA	7	620	33	53,61,73	1.14	3 (5%)	61,98,113	0.93	2 (3%)
27	LMG	1	628	-	42,42,55	0.19	0	50,50,63	0.28	0
26	LMU	82	625	-	24,24,36	0.12	0	29,29,47	0.28	0
21	CLA	A	841	-	65,73,73	1.02	4 (6%)	76,113,113	0.87	2 (2%)
21	CLA	F2	301	33	65,73,73	1.01	3 (4%)	76,113,113	0.83	2 (2%)
26	LMU	B	853	-	36,36,36	0.13	0	47,47,47	0.67	2 (4%)
21	CLA	Z2	614	-	50,58,73	1.19	3 (6%)	58,95,113	0.99	3 (5%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
21	CLA	82	612	15	55,63,73	1.13	3 (5%)	64,101,113	0.91	2 (3%)
22	PQN	A	844	-	34,34,34	0.31	0	42,45,45	0.36	0
21	CLA	7	612	14	52,60,73	1.16	3 (5%)	60,97,113	0.94	2 (3%)
21	CLA	72	612	14	52,60,73	1.16	3 (5%)	60,97,113	0.93	2 (3%)
26	LMU	Z2	622	-	32,32,36	0.10	0	43,43,47	0.17	0
21	CLA	A2	826	33	65,73,73	1.05	3 (4%)	76,113,113	0.84	2 (2%)
24	BCR	82	619	-	41,41,41	0.14	0	56,56,56	0.32	0
23	LHG	6	619	21	48,48,48	0.23	0	51,54,54	0.24	0
21	CLA	B2	815	-	65,73,73	1.02	3 (4%)	76,113,113	0.85	2 (2%)
27	LMG	3	722	-	44,44,55	0.21	0	46,46,63	0.25	0
26	LMU	12	621	-	36,36,36	0.10	0	47,47,47	0.28	0
21	CLA	L	204	-	45,53,73	1.26	3 (6%)	52,89,113	1.05	3 (5%)
21	CLA	72	610	14	65,73,73	1.02	3 (4%)	76,113,113	0.92	2 (2%)
23	LHG	62	619	21	48,48,48	0.23	0	51,54,54	0.24	0
30	CHL	52	608	33	51,59,74	2.29	10 (19%)	55,96,114	1.33	8 (14%)
21	CLA	5	609	17	65,73,73	1.03	3 (4%)	76,113,113	0.85	3 (3%)
21	CLA	A2	820	-	65,73,73	1.02	4 (6%)	76,113,113	0.88	2 (2%)
31	XAT	7	622	-	39,47,47	0.13	0	54,74,74	0.57	0
21	CLA	B	835	33	45,53,73	1.26	3 (6%)	52,89,113	1.03	2 (3%)
21	CLA	A	827	33	65,73,73	1.04	4 (6%)	76,113,113	0.87	2 (2%)
21	CLA	72	603	-	52,60,73	1.14	3 (5%)	60,97,113	0.98	2 (3%)
21	CLA	52	621	33	46,54,73	1.27	3 (6%)	53,90,113	1.12	5 (9%)
21	CLA	52	602	17	65,73,73	1.04	3 (4%)	76,113,113	0.84	2 (2%)
26	LMU	K	208	-	24,24,36	0.12	0	29,29,47	0.30	0
28	LUT	A	856	-	42,43,43	0.28	0	51,60,60	0.35	0
21	CLA	A	803	33	65,73,73	1.02	4 (6%)	76,113,113	0.86	2 (2%)
21	CLA	B2	811	-	65,73,73	1.02	3 (4%)	76,113,113	0.87	2 (2%)
28	LUT	32	720	-	42,43,43	0.22	0	51,60,60	0.33	0
21	CLA	B	809	2	65,73,73	1.03	3 (4%)	76,113,113	0.83	2 (2%)
26	LMU	1	622	-	19,19,36	0.14	0	24,24,47	0.31	0
21	CLA	B	812	-	65,73,73	1.03	4 (6%)	76,113,113	0.88	2 (2%)
21	CLA	3	611	-	65,73,73	1.04	3 (4%)	76,113,113	0.86	2 (2%)
21	CLA	B	817	-	65,73,73	1.03	3 (4%)	76,113,113	0.86	2 (2%)
26	LMU	12	622	-	19,19,36	0.14	0	24,24,47	0.31	0
21	CLA	A2	835	-	65,73,73	1.04	3 (4%)	76,113,113	0.86	2 (2%)
28	LUT	1	617	-	42,43,43	0.26	0	51,60,60	0.40	0
21	CLA	A	806	-	65,73,73	1.01	4 (6%)	76,113,113	0.88	3 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
30	CHL	4	606	33	56,64,74	2.17	10 (17%)	61,102,114	1.31	8 (13%)
21	CLA	A2	836	-	65,73,73	1.05	4 (6%)	76,113,113	0.86	2 (2%)
21	CLA	12	614	-	60,68,73	1.08	3 (5%)	70,107,113	0.93	2 (2%)
26	LMU	Z	621	-	22,22,36	0.15	0	27,27,47	0.26	0
21	CLA	A2	838	-	51,59,73	1.17	3 (5%)	59,96,113	0.98	2 (3%)
30	CHL	8	601	15	66,74,74	1.99	10 (15%)	73,114,114	1.10	7 (9%)
30	CHL	72	607	33	46,54,74	2.37	8 (17%)	49,90,114	1.38	7 (14%)
30	CHL	Z	606	33	46,54,74	2.41	10 (21%)	49,90,114	1.37	7 (14%)
21	CLA	5	604	33	55,63,73	1.13	3 (5%)	64,101,113	0.94	2 (3%)
21	CLA	52	604	33	55,63,73	1.13	3 (5%)	64,101,113	0.94	2 (3%)
21	CLA	1	610	12	65,73,73	1.01	3 (4%)	76,113,113	0.86	2 (2%)
21	CLA	B2	805	-	65,73,73	1.01	3 (4%)	76,113,113	0.88	2 (2%)
23	LHG	52	623	21	36,36,48	0.26	0	39,42,54	0.27	0
21	CLA	Z	612	12	45,53,73	1.26	3 (6%)	52,89,113	1.01	2 (3%)
30	CHL	4	608	-	66,74,74	2.02	10 (15%)	73,114,114	1.13	7 (9%)
21	CLA	A	815	-	55,63,73	1.13	3 (5%)	64,101,113	0.90	2 (3%)
21	CLA	B	840	-	65,73,73	1.01	4 (6%)	76,113,113	0.87	2 (2%)
30	CHL	92	606	-	42,50,74	2.57	11 (26%)	44,85,114	1.43	7 (15%)
27	LMG	J	104	-	35,35,55	0.20	0	43,43,63	0.20	0
21	CLA	A	818	-	65,73,73	1.03	3 (4%)	76,113,113	0.85	2 (2%)
24	BCR	G2	205	-	41,41,41	0.14	0	56,56,56	0.32	0
21	CLA	B2	836	-	60,68,73	1.07	3 (5%)	70,107,113	0.90	2 (2%)
21	CLA	4	602	16	60,68,73	1.07	3 (5%)	70,107,113	0.88	2 (2%)
21	CLA	A	807	1	65,73,73	1.03	4 (6%)	76,113,113	0.81	2 (2%)
23	LHG	3	721	-	30,30,48	0.27	0	33,36,54	0.35	0
21	CLA	A2	840	-	65,73,73	1.03	3 (4%)	76,113,113	0.86	2 (2%)
21	CLA	Z2	616	12	60,68,73	1.08	3 (5%)	70,107,113	0.89	2 (2%)
26	LMU	8	627	-	36,36,36	0.10	0	47,47,47	0.37	0
23	LHG	A	847	21	37,37,48	0.26	0	40,43,54	0.30	0
21	CLA	1	611	23	61,69,73	1.06	3 (4%)	71,108,113	0.87	2 (2%)
21	CLA	A2	822	33	65,73,73	1.03	4 (6%)	76,113,113	0.85	2 (2%)
21	CLA	42	614	-	55,63,73	1.15	3 (5%)	64,101,113	0.93	2 (3%)
26	LMU	52	627	-	24,24,36	0.13	0	29,29,47	0.26	0
28	LUT	82	617	-	42,43,43	0.29	0	51,60,60	0.42	0
21	CLA	9	611	23	65,73,73	1.03	3 (4%)	76,113,113	0.86	2 (2%)
30	CHL	Z	607	33	66,74,74	1.99	9 (13%)	73,114,114	1.16	8 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
21	CLA	A2	808	-	50,58,73	1.17	3 (6%)	58,95,113	0.95	2 (3%)
27	LMG	7	626	-	37,37,55	0.20	0	45,45,63	0.27	0
21	CLA	B	814	-	60,68,73	1.07	3 (5%)	70,107,113	0.89	3 (4%)
21	CLA	F2	303	33	45,53,73	1.25	3 (6%)	52,89,113	1.02	2 (3%)
25	SF4	C	101	3	0,12,12	-	-	-	-	-
21	CLA	92	613	19	65,73,73	1.01	3 (4%)	76,113,113	0.89	2 (2%)
26	LMU	B2	853	-	36,36,36	0.13	0	47,47,47	0.67	2 (4%)
21	CLA	B	832	-	65,73,73	1.00	4 (6%)	76,113,113	0.86	2 (2%)
21	CLA	B	804	-	45,53,73	1.25	3 (6%)	52,89,113	1.00	2 (3%)
21	CLA	52	609	17	65,73,73	1.03	3 (4%)	76,113,113	0.85	3 (3%)
21	CLA	1	603	-	57,65,73	1.10	3 (5%)	66,103,113	0.92	2 (3%)
30	CHL	62	608	33	51,59,74	2.32	10 (19%)	55,96,114	1.33	8 (14%)
26	LMU	A	865	-	24,24,36	0.13	0	29,29,47	0.47	0
21	CLA	62	622	33	55,63,73	1.12	3 (5%)	64,101,113	0.91	2 (3%)
21	CLA	A2	814	-	65,73,73	1.03	3 (4%)	76,113,113	0.83	2 (2%)
27	LMG	J2	104	-	35,35,55	0.20	0	43,43,63	0.20	0
21	CLA	92	609	19	51,59,73	1.17	3 (5%)	59,96,113	0.97	3 (5%)
31	XAT	12	618	-	39,47,47	0.13	0	54,74,74	0.69	2 (3%)
21	CLA	B2	818	-	65,73,73	1.02	4 (6%)	76,113,113	0.86	2 (2%)
24	BCR	9	623	-	41,41,41	0.14	0	56,56,56	0.34	0
24	BCR	52	622	-	41,41,41	0.17	0	56,56,56	0.32	0
21	CLA	72	620	33	53,61,73	1.15	3 (5%)	61,98,113	0.94	2 (3%)
21	CLA	A2	832	-	55,63,73	1.12	3 (5%)	64,101,113	0.95	2 (3%)
21	CLA	A2	824	-	45,53,73	1.22	4 (8%)	52,89,113	1.05	2 (3%)
21	CLA	3	609	13	61,69,73	1.05	3 (4%)	71,108,113	0.88	2 (2%)
31	XAT	42	620	-	39,47,47	0.11	0	54,74,74	0.65	0
32	NEX	52	625	-	38,46,46	0.46	1 (2%)	50,70,70	0.80	2 (4%)
21	CLA	12	604	33	50,58,73	1.17	3 (6%)	58,95,113	0.99	2 (3%)
24	BCR	L	201	-	41,41,41	0.17	0	56,56,56	0.36	0
26	LMU	8	624	-	24,24,36	0.14	0	29,29,47	0.26	0
21	CLA	B	830	-	45,53,73	1.20	4 (8%)	52,89,113	1.03	2 (3%)
30	CHL	6	616	18	66,74,74	2.01	10 (15%)	73,114,114	1.17	9 (12%)
21	CLA	B	819	33	60,68,73	1.07	3 (5%)	70,107,113	0.89	2 (2%)
21	CLA	G2	203	-	60,68,73	1.07	3 (5%)	70,107,113	0.84	2 (2%)
24	BCR	8	619	-	41,41,41	0.14	0	56,56,56	0.31	0
21	CLA	7	616	14	46,54,73	1.22	4 (8%)	53,90,113	1.01	2 (3%)
21	CLA	Z	602	12	60,68,73	1.07	3 (5%)	70,107,113	0.92	2 (2%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
21	CLA	8	603	-	65,73,73	1.05	3 (4%)	76,113,113	0.84	2 (2%)
21	CLA	12	616	12	46,54,73	1.21	3 (6%)	53,90,113	1.02	2 (3%)
21	CLA	72	616	14	46,54,73	1.22	3 (6%)	53,90,113	1.02	2 (3%)
26	LMU	A2	862	-	20,20,36	0.13	0	25,25,47	0.28	0
30	CHL	62	616	18	66,74,74	2.01	10 (15%)	73,114,114	1.17	9 (12%)
30	CHL	9	607	33	51,59,74	2.36	9 (17%)	55,96,114	1.32	8 (14%)
21	CLA	B2	813	-	65,73,73	1.03	3 (4%)	76,113,113	0.85	2 (2%)
30	CHL	42	618	16	46,54,74	2.42	9 (19%)	49,90,114	1.38	7 (14%)
21	CLA	3	617	13	46,54,73	1.22	3 (6%)	53,90,113	1.02	2 (3%)
21	CLA	A	805	-	55,63,73	1.11	4 (7%)	64,101,113	0.90	2 (3%)
24	BCR	L2	205	-	41,41,41	0.15	0	56,56,56	0.37	0
23	LHG	6	629	-	35,35,48	0.26	0	38,41,54	0.28	0
24	BCR	42	621	-	41,41,41	0.14	0	56,56,56	0.35	0
21	CLA	6	611	23	58,66,73	1.10	3 (5%)	67,104,113	0.91	2 (2%)
26	LMU	Z2	621	-	22,22,36	0.15	0	27,27,47	0.27	0
24	BCR	A2	852	-	41,41,41	0.14	0	56,56,56	0.38	0
21	CLA	A	826	33	65,73,73	1.05	3 (4%)	76,113,113	0.84	2 (2%)
21	CLA	A	831	-	65,73,73	1.03	3 (4%)	76,113,113	0.86	2 (2%)
27	LMG	42	624	-	41,41,55	0.19	0	49,49,63	0.26	0
21	CLA	1	604	33	50,58,73	1.16	3 (6%)	58,95,113	0.99	2 (3%)
24	BCR	K	207	-	41,41,41	0.14	0	56,56,56	0.27	0
23	LHG	B	851	21	44,44,48	0.25	0	47,50,54	0.31	0
26	LMU	A	858	-	36,36,36	0.08	0	47,47,47	0.19	0
21	CLA	3	614	-	45,53,73	1.25	3 (6%)	52,89,113	1.04	2 (3%)
28	LUT	12	619	-	42,43,43	0.21	0	51,60,60	0.40	0
28	LUT	3	720	-	42,43,43	0.23	0	51,60,60	0.34	0
21	CLA	A	832	-	55,63,73	1.12	4 (7%)	64,101,113	0.94	2 (3%)
21	CLA	A2	834	-	65,73,73	1.03	3 (4%)	76,113,113	0.87	2 (2%)
28	LUT	3	622	-	42,43,43	0.31	0	51,60,60	0.34	0
21	CLA	B2	817	-	65,73,73	1.04	4 (6%)	76,113,113	0.86	2 (2%)
26	LMU	K2	208	-	24,24,36	0.11	0	29,29,47	0.31	0
23	LHG	1	620	21	38,38,48	0.26	0	41,44,54	0.29	0
27	LMG	J2	103	-	42,42,55	0.18	0	50,50,63	0.39	0
21	CLA	32	611	-	65,73,73	1.04	3 (4%)	76,113,113	0.86	2 (2%)
28	LUT	5	626	-	42,43,43	0.24	0	51,60,60	0.36	0
28	LUT	32	621	-	42,43,43	0.29	0	51,60,60	0.37	0
21	CLA	B	802	-	65,73,73	1.01	3 (4%)	76,113,113	0.85	3 (3%)
21	CLA	4	612	16	45,53,73	1.28	3 (6%)	52,89,113	1.01	2 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	BCR	32	719	-	41,41,41	0.11	0	56,56,56	0.40	0
26	LMU	1	627	-	22,22,36	0.13	0	27,27,47	0.29	0
30	CHL	52	606	33	46,54,74	2.40	9 (19%)	49,90,114	1.37	7 (14%)
21	CLA	B	810	-	65,73,73	1.03	3 (4%)	76,113,113	0.87	2 (2%)
24	BCR	L	205	-	41,41,41	0.15	0	56,56,56	0.37	0
21	CLA	12	613	33	65,73,73	1.02	4 (6%)	76,113,113	0.88	2 (2%)
21	CLA	B2	821	-	65,73,73	1.03	4 (6%)	76,113,113	0.86	2 (2%)
21	CLA	B2	833	-	58,66,73	1.05	4 (6%)	67,104,113	0.95	3 (4%)
21	CLA	A2	827	33	65,73,73	1.03	4 (6%)	76,113,113	0.87	2 (2%)
31	XAT	Z2	618	-	39,47,47	0.14	0	54,74,74	0.56	0
23	LHG	7	625	21	48,48,48	0.24	0	51,54,54	0.23	0
26	LMU	7	628	-	22,22,36	0.15	0	27,27,47	0.33	0
26	LMU	6	630	-	24,24,36	0.15	0	29,29,47	0.29	0
26	LMU	5	627	-	24,24,36	0.13	0	29,29,47	0.26	0
21	CLA	B	841	23	65,73,73	1.03	3 (4%)	76,113,113	0.88	2 (2%)
21	CLA	52	612	17	45,53,73	1.25	3 (6%)	52,89,113	1.01	2 (3%)
21	CLA	12	609	12	65,73,73	1.04	3 (4%)	76,113,113	0.86	2 (2%)
21	CLA	72	608	33	50,58,73	1.18	3 (6%)	58,95,113	0.96	2 (3%)
21	CLA	A2	816	-	65,73,73	1.03	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	5	602	17	65,73,73	1.03	3 (4%)	76,113,113	0.84	2 (2%)
21	CLA	6	604	-	65,73,73	1.04	3 (4%)	76,113,113	0.85	2 (2%)
21	CLA	B2	828	-	65,73,73	1.02	3 (4%)	76,113,113	0.84	2 (2%)
21	CLA	92	612	19	65,73,73	1.03	3 (4%)	76,113,113	0.84	2 (2%)
23	LHG	62	629	-	35,35,48	0.27	0	38,41,54	0.28	0
30	CHL	42	601	16	66,74,74	2.00	10 (15%)	73,114,114	1.14	7 (9%)
21	CLA	62	604	-	65,73,73	1.03	3 (4%)	76,113,113	0.85	2 (2%)
26	LMU	A	857	-	35,35,36	0.10	0	46,46,47	0.18	0
21	CLA	1	608	33	65,73,73	1.04	3 (4%)	76,113,113	0.86	2 (2%)
28	LUT	3	621	-	42,43,43	0.29	0	51,60,60	0.37	0
21	CLA	62	611	23	58,66,73	1.10	3 (5%)	67,104,113	0.91	2 (2%)
21	CLA	12	608	33	65,73,73	1.05	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	A2	841	-	65,73,73	1.02	4 (6%)	76,113,113	0.87	2 (2%)
21	CLA	6	613	33	65,73,73	1.04	3 (4%)	76,113,113	0.88	2 (2%)
21	CLA	B	834	-	60,68,73	1.06	3 (5%)	70,107,113	0.90	2 (2%)
28	LUT	Z2	617	-	42,43,43	0.27	0	51,60,60	0.40	0
21	CLA	7	611	23	65,73,73	1.03	3 (4%)	76,113,113	0.84	2 (2%)
21	CLA	4	614	-	55,63,73	1.14	3 (5%)	64,101,113	0.94	2 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	BCR	A2	850	-	41,41,41	0.15	0	56,56,56	0.24	0
27	LMG	82	626	-	32,32,55	0.20	0	40,40,63	0.19	0
21	CLA	B	823	-	65,73,73	1.02	4 (6%)	76,113,113	0.89	2 (2%)
28	LUT	4	619	-	42,43,43	0.25	0	51,60,60	0.43	0
21	CLA	1	616	12	46,54,73	1.22	3 (6%)	53,90,113	1.03	2 (3%)
26	LMU	A2	857	-	35,35,36	0.10	0	46,46,47	0.17	0
21	CLA	1	613	33	65,73,73	1.02	4 (6%)	76,113,113	0.88	2 (2%)
21	CLA	B	803	-	65,73,73	1.03	3 (4%)	76,113,113	0.83	2 (2%)
21	CLA	Z	610	12	60,68,73	1.06	3 (5%)	70,107,113	0.88	2 (2%)
21	CLA	52	617	-	65,73,73	1.04	3 (4%)	76,113,113	0.85	2 (2%)
32	NEX	5	625	-	38,46,46	0.54	1 (2%)	50,70,70	0.80	2 (4%)
21	CLA	32	617	13	46,54,73	1.22	3 (6%)	53,90,113	1.02	2 (3%)
24	BCR	I2	172	-	41,41,41	0.19	0	56,56,56	0.37	0
21	CLA	B2	810	-	65,73,73	1.02	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	7	603	-	52,60,73	1.14	3 (5%)	60,97,113	0.98	2 (3%)
28	LUT	72	621	-	42,43,43	0.25	0	51,60,60	0.38	0
21	CLA	52	614	-	45,53,73	1.26	3 (6%)	52,89,113	1.03	2 (3%)
28	LUT	52	626	-	42,43,43	0.23	0	51,60,60	0.36	0
27	LMG	62	633	-	19,19,55	0.31	0	19,19,63	0.30	0
24	BCR	I	172	-	41,41,41	0.20	0	56,56,56	0.37	0
28	LUT	7	624	-	42,43,43	0.21	0	51,60,60	0.41	0
21	CLA	A	809	1	65,73,73	1.03	4 (6%)	76,113,113	0.94	4 (5%)
28	LUT	52	620	-	42,43,43	0.24	0	51,60,60	0.44	0
21	CLA	B	824	33	65,73,73	1.04	3 (4%)	76,113,113	0.85	2 (2%)
21	CLA	B2	812	-	65,73,73	1.03	4 (6%)	76,113,113	0.87	2 (2%)
27	LMG	9	620	21	44,44,55	0.18	0	52,52,63	0.35	0
21	CLA	3	603	-	65,73,73	1.02	3 (4%)	76,113,113	0.84	2 (2%)
21	CLA	9	603	27,19	55,63,73	1.13	4 (7%)	64,101,113	0.93	2 (3%)
23	LHG	B2	851	21	44,44,48	0.25	0	47,50,54	0.31	0
24	BCR	72	623	-	41,41,41	0.15	0	56,56,56	0.38	0
21	CLA	B2	830	-	45,53,73	1.22	4 (8%)	52,89,113	1.05	2 (3%)
21	CLA	7	610	14	65,73,73	1.02	3 (4%)	76,113,113	0.91	2 (2%)
21	CLA	Z	608	33	50,58,73	1.19	3 (6%)	58,95,113	1.00	2 (3%)
21	CLA	32	614	-	45,53,73	1.25	3 (6%)	52,89,113	1.03	2 (3%)
21	CLA	K	201	11	45,53,73	1.27	3 (6%)	52,89,113	1.01	2 (3%)
21	CLA	62	614	-	50,58,73	1.19	3 (6%)	58,95,113	0.99	2 (3%)
21	CLA	Z2	604	33	57,65,73	1.10	3 (5%)	66,103,113	0.93	2 (3%)
26	LMU	12	627	-	22,22,36	0.14	0	27,27,47	0.30	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
21	CLA	92	610	19	60,68,73	1.07	4 (6%)	70,107,113	0.94	3 (4%)
21	CLA	A	820	-	65,73,73	1.02	4 (6%)	76,113,113	0.87	3 (3%)
26	LMU	82	624	-	24,24,36	0.15	0	29,29,47	0.26	0
26	LMU	A2	865	-	24,24,36	0.13	0	29,29,47	0.46	0
21	CLA	A	821	-	55,63,73	1.11	3 (5%)	64,101,113	0.90	2 (3%)
21	CLA	9	610	19	60,68,73	1.08	4 (6%)	70,107,113	0.94	3 (4%)
21	CLA	Z	611	23	60,68,73	1.07	3 (5%)	70,107,113	0.91	2 (2%)
21	CLA	A2	828	-	65,73,73	1.05	3 (4%)	76,113,113	0.80	2 (2%)
21	CLA	A2	805	-	55,63,73	1.10	4 (7%)	64,101,113	0.90	2 (3%)
27	LMG	B2	852	-	43,43,55	0.18	0	51,51,63	0.24	0
21	CLA	A2	815	-	55,63,73	1.13	3 (5%)	64,101,113	0.90	2 (3%)
21	CLA	A	829	-	65,73,73	1.04	3 (4%)	76,113,113	0.84	2 (2%)
21	CLA	B2	832	-	65,73,73	1.01	4 (6%)	76,113,113	0.86	2 (2%)
28	LUT	9	617	-	42,43,43	0.21	0	51,60,60	0.38	0
24	BCR	3	719	-	41,41,41	0.12	0	56,56,56	0.40	0
21	CLA	B	839	33	65,73,73	1.06	3 (4%)	76,113,113	0.89	2 (2%)
21	CLA	B2	814	-	60,68,73	1.07	3 (5%)	70,107,113	0.90	3 (4%)
21	CLA	Z2	609	12	65,73,73	1.06	3 (4%)	76,113,113	0.86	2 (2%)
26	LMU	8	628	-	24,24,36	0.16	0	29,29,47	0.32	0
21	CLA	A2	813	-	65,73,73	1.04	3 (4%)	76,113,113	0.90	2 (2%)
27	LMG	A	860	-	36,36,55	0.20	0	44,44,63	0.26	0
28	LUT	Z	617	-	42,43,43	0.26	0	51,60,60	0.40	0
21	CLA	A2	833	-	65,73,73	1.03	4 (6%)	76,113,113	0.86	2 (2%)
21	CLA	8	604	33	60,68,73	1.09	3 (5%)	70,107,113	0.92	2 (2%)
26	LMU	62	631	-	24,24,36	0.15	0	29,29,47	0.28	0
21	CLA	B2	825	33	65,73,73	1.02	4 (6%)	76,113,113	0.82	2 (2%)
30	CHL	1	601	12	66,74,74	1.97	9 (13%)	73,114,114	1.13	7 (9%)
21	CLA	A2	839	-	65,73,73	1.04	4 (6%)	76,113,113	0.87	2 (2%)
24	BCR	B	848	-	41,41,41	0.13	0	56,56,56	0.46	0
21	CLA	12	612	12	45,53,73	1.26	3 (6%)	52,89,113	1.01	2 (3%)
21	CLA	92	603	27,19	55,63,73	1.13	3 (5%)	64,101,113	0.94	2 (3%)
21	CLA	A	839	-	65,73,73	1.03	4 (6%)	76,113,113	0.86	2 (2%)
23	LHG	82	620	21	43,43,48	0.25	0	46,49,54	0.26	0
28	LUT	9	616	-	42,43,43	0.26	0	51,60,60	0.37	0
26	LMU	8	625	-	24,24,36	0.12	0	29,29,47	0.28	0
21	CLA	5	612	17	45,53,73	1.26	3 (6%)	52,89,113	1.02	2 (3%)
24	BCR	G	205	-	41,41,41	0.14	0	56,56,56	0.32	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
21	CLA	A2	842	-	65,73,73	1.00	4 (6%)	76,113,113	0.86	2 (2%)
27	LMG	12	628	-	42,42,55	0.19	0	50,50,63	0.28	0
26	LMU	G	206	-	24,24,36	0.14	0	29,29,47	0.25	0
30	CHL	6	601	18	66,74,74	2.02	10 (15%)	73,114,114	1.19	8 (10%)
21	CLA	7	613	14	65,73,73	1.03	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	72	609	14	45,53,73	1.25	3 (6%)	52,89,113	1.01	2 (3%)
21	CLA	Z	614	-	50,58,73	1.18	3 (6%)	58,95,113	0.99	3 (5%)
30	CHL	62	601	18	66,74,74	2.01	9 (13%)	73,114,114	1.19	8 (10%)
30	CHL	62	607	33	66,74,74	2.05	9 (13%)	73,114,114	1.18	8 (10%)
28	LUT	6	621	-	42,43,43	0.24	0	51,60,60	0.39	0
26	LMU	Z	622	-	32,32,36	0.11	0	43,43,47	0.17	0
27	LMG	J	103	-	42,42,55	0.18	0	50,50,63	0.39	0
30	CHL	7	607	33	46,54,74	2.37	9 (19%)	49,90,114	1.39	7 (14%)
23	LHG	72	625	21	48,48,48	0.23	0	51,54,54	0.23	0
21	CLA	B2	841	23	65,73,73	1.02	3 (4%)	76,113,113	0.88	2 (2%)
21	CLA	12	603	-	57,65,73	1.10	3 (5%)	66,103,113	0.91	2 (3%)
26	LMU	6	628	-	24,24,36	0.13	0	29,29,47	0.29	0
21	CLA	B2	829	-	65,73,73	0.99	4 (6%)	76,113,113	0.87	2 (2%)
26	LMU	A	861	-	24,24,36	0.13	0	29,29,47	0.30	0
21	CLA	4	616	16	45,53,73	1.26	3 (6%)	52,89,113	1.04	2 (3%)
24	BCR	J	102	-	41,41,41	0.14	0	56,56,56	0.31	0
21	CLA	B2	834	-	60,68,73	1.06	3 (5%)	70,107,113	0.91	2 (2%)
21	CLA	B	822	-	59,67,73	1.08	3 (5%)	68,105,113	0.91	2 (2%)
21	CLA	A2	812	-	65,73,73	1.00	4 (6%)	76,113,113	0.84	2 (2%)
27	LMG	B2	854	-	36,36,55	0.20	0	44,44,63	0.17	0
24	BCR	B2	843	-	41,41,41	0.16	0	56,56,56	0.30	0
26	LMU	A2	863	-	36,36,36	0.10	0	47,47,47	0.27	0
25	SF4	C	102	3	0,12,12	-	-	-	-	-
21	CLA	6	617	-	45,53,73	1.26	3 (6%)	52,89,113	1.03	3 (5%)
26	LMU	A	863	-	36,36,36	0.10	0	47,47,47	0.27	0
21	CLA	A	808	-	50,58,73	1.18	4 (8%)	58,95,113	0.96	2 (3%)
21	CLA	A2	837	1	57,65,73	1.12	3 (5%)	66,103,113	0.94	2 (3%)
21	CLA	B2	803	-	65,73,73	1.03	3 (4%)	76,113,113	0.83	2 (2%)
21	CLA	52	616	17	53,61,73	1.16	3 (5%)	61,98,113	0.97	2 (3%)
26	LMU	4	626	-	20,20,36	0.15	0	25,25,47	0.28	0
27	LMG	8	626	-	32,32,55	0.20	0	40,40,63	0.19	0
20	CL0	A2	801	-	65,73,73	1.96	9 (13%)	76,113,113	1.11	7 (9%)
21	CLA	A	843	33	65,73,73	1.03	4 (6%)	76,113,113	0.88	2 (2%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
21	CLA	9	604	19	53,61,73	1.14	4 (7%)	61,98,113	0.97	3 (4%)
21	CLA	Z	609	12	65,73,73	1.06	3 (4%)	76,113,113	0.86	2 (2%)
28	LUT	A2	856	-	42,43,43	0.27	0	51,60,60	0.35	0
30	CHL	4	607	33	66,74,74	2.00	10 (15%)	73,114,114	1.14	8 (10%)
27	LMG	8	629	-	42,42,55	0.19	0	50,50,63	0.16	0
21	CLA	6	612	18	45,53,73	1.25	3 (6%)	52,89,113	1.02	2 (3%)
21	CLA	B	838	-	50,58,73	1.19	3 (6%)	58,95,113	0.97	2 (3%)
23	LHG	A2	846	-	48,48,48	0.24	0	51,54,54	0.29	0
27	LMG	A2	859	-	48,48,55	0.18	0	56,56,63	0.17	0
25	SF4	C2	102	3	0,12,12	-	-	-	-	-
32	NEX	6	625	-	38,46,46	0.19	0	50,70,70	0.83	2 (4%)
26	LMU	7	629	-	28,28,36	0.10	0	39,39,47	0.27	0
24	BCR	B	846	-	41,41,41	0.13	0	56,56,56	0.33	0
21	CLA	B2	840	-	65,73,73	1.01	4 (6%)	76,113,113	0.86	2 (2%)
21	CLA	72	602	14	65,73,73	1.03	3 (4%)	76,113,113	0.86	2 (2%)
21	CLA	32	603	-	65,73,73	1.03	3 (4%)	76,113,113	0.84	2 (2%)
30	CHL	92	607	33	51,59,74	2.37	9 (17%)	55,96,114	1.34	9 (16%)
21	CLA	Z	616	12	60,68,73	1.08	3 (5%)	70,107,113	0.89	2 (2%)
23	LHG	9	622	21	40,40,48	0.25	0	43,46,54	0.28	0
21	CLA	6	609	18	55,63,73	1.12	3 (5%)	64,101,113	0.97	3 (4%)
21	CLA	B2	808	-	65,73,73	1.03	3 (4%)	76,113,113	0.84	2 (2%)
21	CLA	A2	807	1	65,73,73	1.02	4 (6%)	76,113,113	0.81	2 (2%)
21	CLA	B2	838	-	50,58,73	1.18	3 (6%)	58,95,113	0.96	2 (3%)
26	LMU	62	632	-	20,20,36	0.16	0	25,25,47	0.26	0
26	LMU	G2	206	-	24,24,36	0.14	0	29,29,47	0.25	0
28	LUT	5	620	-	42,43,43	0.25	0	51,60,60	0.44	0
21	CLA	B	837	-	65,73,73	1.03	4 (6%)	76,113,113	0.86	2 (2%)
30	CHL	5	606	33	46,54,74	2.41	9 (19%)	49,90,114	1.36	7 (14%)
22	PQN	B2	842	-	34,34,34	0.30	0	42,45,45	0.37	0
21	CLA	J	101	9	55,63,73	1.13	3 (5%)	64,101,113	0.92	2 (3%)
28	LUT	F	305	-	42,43,43	0.39	0	51,60,60	0.78	1 (1%)
21	CLA	B2	839	33	65,73,73	1.05	3 (4%)	76,113,113	0.88	2 (2%)
31	XAT	62	624	-	39,47,47	0.12	0	54,74,74	0.59	0
21	CLA	72	613	14	65,73,73	1.03	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	B	811	-	65,73,73	1.03	4 (6%)	76,113,113	0.87	2 (2%)
21	CLA	4	609	16	60,68,73	1.09	3 (5%)	70,107,113	0.91	2 (2%)
21	CLA	42	603	16	65,73,73	1.05	4 (6%)	76,113,113	0.85	2 (2%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
26	LMU	42	625	-	34,34,36	0.11	0	45,45,47	0.20	0
21	CLA	B2	802	-	65,73,73	1.01	3 (4%)	76,113,113	0.85	3 (3%)
21	CLA	B	833	-	58,66,73	1.05	4 (6%)	67,104,113	0.95	2 (2%)
27	LMG	A2	860	-	36,36,55	0.20	0	44,44,63	0.26	0
30	CHL	42	607	33	66,74,74	2.00	10 (15%)	73,114,114	1.14	8 (10%)
30	CHL	82	601	15	66,74,74	1.98	10 (15%)	73,114,114	1.10	7 (9%)
30	CHL	Z2	601	12	66,74,74	1.98	9 (13%)	73,114,114	1.14	7 (9%)
30	CHL	7	601	14	66,74,74	2.01	10 (15%)	73,114,114	1.14	7 (9%)
21	CLA	A2	811	-	65,73,73	1.01	4 (6%)	76,113,113	0.86	2 (2%)
21	CLA	F2	304	6	65,73,73	1.05	3 (4%)	76,113,113	0.94	3 (3%)
21	CLA	82	602	15	62,70,73	1.07	4 (6%)	72,109,113	0.88	2 (2%)
24	BCR	B	847	-	41,41,41	0.19	0	56,56,56	0.41	0
28	LUT	Z2	619	-	26,26,43	0.36	0	34,35,60	0.37	0
31	XAT	5	624	-	39,47,47	0.11	0	54,74,74	0.59	0
21	CLA	B2	837	-	65,73,73	1.02	4 (6%)	76,113,113	0.86	2 (2%)
21	CLA	5	621	33	46,54,73	1.28	3 (6%)	53,90,113	1.13	5 (9%)
21	CLA	62	612	18	45,53,73	1.25	3 (6%)	52,89,113	1.02	2 (3%)
31	XAT	1	618	-	39,47,47	0.13	0	54,74,74	0.68	2 (3%)
21	CLA	A2	829	-	65,73,73	1.04	3 (4%)	76,113,113	0.84	2 (2%)
21	CLA	K	203	33	60,68,73	1.09	3 (5%)	70,107,113	0.89	2 (2%)
21	CLA	32	606	33	42,50,73	1.28	3 (7%)	48,85,113	1.07	2 (4%)
24	BCR	B	843	-	41,41,41	0.16	0	56,56,56	0.31	0
32	NEX	62	625	-	38,46,46	0.28	0	50,70,70	0.85	2 (4%)
28	LUT	8	617	-	42,43,43	0.29	0	51,60,60	0.42	0
21	CLA	1	612	12	45,53,73	1.25	3 (6%)	52,89,113	1.01	2 (3%)
24	BCR	3	718	-	41,41,41	0.15	0	56,56,56	0.34	0
21	CLA	8	610	15	65,73,73	1.02	3 (4%)	76,113,113	0.86	2 (2%)
24	BCR	B2	844	-	41,41,41	0.14	0	56,56,56	0.45	0
27	LMG	A	859	-	48,48,55	0.18	0	56,56,63	0.17	0
24	BCR	4	621	-	41,41,41	0.13	0	56,56,56	0.36	0
23	LHG	32	721	-	30,30,48	0.27	0	33,36,54	0.35	0
26	LMU	9	624	-	24,24,36	0.15	0	29,29,47	0.38	0
30	CHL	1	606	33	46,54,74	2.40	10 (21%)	49,90,114	1.38	7 (14%)
21	CLA	A	819	-	60,68,73	1.09	3 (5%)	70,107,113	0.92	2 (2%)
24	BCR	32	718	-	41,41,41	0.16	0	56,56,56	0.34	0
21	CLA	B	816	-	65,73,73	1.02	3 (4%)	76,113,113	0.88	2 (2%)
21	CLA	Z2	603	-	55,63,73	1.14	3 (5%)	64,101,113	0.92	2 (3%)
27	LMG	92	620	21	44,44,55	0.18	0	52,52,63	0.36	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	BCR	7	623	-	41,41,41	0.15	0	56,56,56	0.38	0
21	CLA	A	835	-	65,73,73	1.03	3 (4%)	76,113,113	0.86	2 (2%)
21	CLA	5	616	17	53,61,73	1.15	3 (5%)	61,98,113	0.96	2 (3%)
21	CLA	1	609	12	65,73,73	1.04	3 (4%)	76,113,113	0.87	2 (2%)
30	CHL	4	601	16	66,74,74	2.00	9 (13%)	73,114,114	1.15	7 (9%)
21	CLA	82	611	23	45,53,73	1.24	3 (6%)	52,89,113	1.07	3 (5%)
21	CLA	3	606	33	42,50,73	1.28	3 (7%)	48,85,113	1.07	2 (4%)
21	CLA	Z2	611	23	60,68,73	1.06	3 (5%)	70,107,113	0.91	2 (2%)
24	BCR	B2	801	-	41,41,41	0.17	0	56,56,56	0.38	0
21	CLA	K2	204	-	46,54,73	1.21	3 (6%)	53,90,113	1.04	2 (3%)
23	LHG	42	623	-	37,37,48	0.25	0	40,43,54	0.29	0
21	CLA	A	812	-	65,73,73	1.00	4 (6%)	76,113,113	0.85	2 (2%)
30	CHL	8	607	33	66,74,74	2.01	8 (12%)	73,114,114	1.16	8 (10%)
23	LHG	A2	847	21	37,37,48	0.26	0	40,43,54	0.29	0
21	CLA	K	204	-	46,54,73	1.23	3 (6%)	53,90,113	1.05	3 (5%)
26	LMU	72	627	-	33,33,36	0.11	0	44,44,47	0.16	0
21	CLA	B2	816	-	65,73,73	1.01	3 (4%)	76,113,113	0.88	2 (2%)
30	CHL	6	606	33	58,66,74	2.16	9 (15%)	63,104,114	1.23	7 (11%)
24	BCR	B2	848	-	41,41,41	0.13	0	56,56,56	0.46	0
21	CLA	L2	204	-	45,53,73	1.26	3 (6%)	52,89,113	1.05	3 (5%)
26	LMU	72	629	-	28,28,36	0.10	0	39,39,47	0.27	0
21	CLA	A	830	-	65,73,73	1.03	3 (4%)	76,113,113	0.85	2 (2%)
26	LMU	42	626	-	20,20,36	0.15	0	25,25,47	0.28	0
21	CLA	A2	825	-	55,63,73	1.12	3 (5%)	64,101,113	0.94	2 (3%)
23	LHG	Z	620	21	38,38,48	0.25	0	41,44,54	0.28	0
27	LMG	82	629	-	42,42,55	0.19	0	50,50,63	0.16	0
21	CLA	62	602	18	65,73,73	1.03	3 (4%)	76,113,113	0.86	2 (2%)
21	CLA	B	827	-	65,73,73	1.04	3 (4%)	76,113,113	0.87	2 (2%)
24	BCR	A2	848	-	41,41,41	0.13	0	56,56,56	0.30	0
21	CLA	A2	817	33	55,63,73	1.14	3 (5%)	64,101,113	0.92	2 (3%)
26	LMU	12	625	-	24,24,36	0.12	0	29,29,47	0.31	0
30	CHL	82	607	33	66,74,74	2.01	8 (12%)	73,114,114	1.16	8 (10%)
24	BCR	L2	201	-	41,41,41	0.17	0	56,56,56	0.35	0
24	BCR	J2	102	-	41,41,41	0.16	0	56,56,56	0.30	0
21	CLA	8	602	15	62,70,73	1.06	4 (6%)	72,109,113	0.88	2 (2%)
21	CLA	72	611	23	65,73,73	1.03	3 (4%)	76,113,113	0.85	2 (2%)
21	CLA	A2	818	-	65,73,73	1.01	3 (4%)	76,113,113	0.84	2 (2%)
27	LMG	12	624	-	36,36,55	0.20	0	44,44,63	0.18	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
21	CLA	K2	201	11	45,53,73	1.27	3 (6%)	52,89,113	1.00	2 (3%)
22	PQN	A2	844	-	34,34,34	0.31	0	42,45,45	0.36	0
27	LMG	6	633	-	19,19,55	0.31	0	19,19,63	0.29	0
21	CLA	4	613	16	65,73,73	1.04	3 (4%)	76,113,113	0.88	2 (2%)
21	CLA	42	611	23	60,68,73	1.08	3 (5%)	70,107,113	0.90	3 (4%)
30	CHL	12	601	12	66,74,74	1.97	9 (13%)	73,114,114	1.12	7 (9%)
21	CLA	A2	830	-	65,73,73	1.01	3 (4%)	76,113,113	0.85	2 (2%)
21	CLA	A	813	-	65,73,73	1.04	3 (4%)	76,113,113	0.90	2 (2%)
21	CLA	B	828	-	65,73,73	1.03	3 (4%)	76,113,113	0.84	2 (2%)
28	LUT	62	621	-	42,43,43	0.23	0	51,60,60	0.39	0
21	CLA	A	814	-	65,73,73	1.03	3 (4%)	76,113,113	0.84	2 (2%)
21	CLA	K2	203	33	60,68,73	1.10	3 (5%)	70,107,113	0.89	2 (2%)
21	CLA	A2	819	-	60,68,73	1.08	3 (5%)	70,107,113	0.91	2 (2%)
21	CLA	9	601	19	46,54,73	1.23	3 (6%)	53,90,113	1.03	2 (3%)
26	LMU	82	628	-	24,24,36	0.16	0	29,29,47	0.31	0
28	LUT	92	617	-	42,43,43	0.21	0	51,60,60	0.38	0
21	CLA	6	614	-	50,58,73	1.19	3 (6%)	58,95,113	0.99	2 (3%)
21	CLA	B2	827	-	65,73,73	1.04	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	A	804	-	65,73,73	1.02	4 (6%)	76,113,113	0.85	2 (2%)
21	CLA	Z2	613	33	65,73,73	1.03	3 (4%)	76,113,113	0.88	3 (3%)
26	LMU	72	628	-	22,22,36	0.15	0	27,27,47	0.33	0
21	CLA	52	613	17	56,64,73	1.11	3 (5%)	65,102,113	0.93	2 (3%)
26	LMU	62	628	-	24,24,36	0.13	0	29,29,47	0.30	0
21	CLA	4	603	16	65,73,73	1.06	4 (6%)	76,113,113	0.85	2 (2%)
21	CLA	A	816	-	65,73,73	1.03	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	B2	822	-	59,67,73	1.07	3 (5%)	68,105,113	0.91	2 (2%)
21	CLA	62	617	-	45,53,73	1.25	3 (6%)	52,89,113	1.03	2 (3%)
21	CLA	9	614	-	45,53,73	1.26	3 (6%)	52,89,113	1.03	2 (3%)
21	CLA	B2	806	2	65,73,73	1.04	3 (4%)	76,113,113	0.79	2 (2%)
20	CL0	A	801	-	65,73,73	1.96	9 (13%)	76,113,113	1.10	7 (9%)
24	BCR	A	852	-	41,41,41	0.14	0	56,56,56	0.39	0
21	CLA	B	805	-	65,73,73	1.00	4 (6%)	76,113,113	0.88	2 (2%)
21	CLA	4	604	33	50,58,73	1.18	3 (6%)	58,95,113	0.99	3 (5%)
30	CHL	62	606	33	58,66,74	2.16	9 (15%)	63,104,114	1.23	7 (11%)
21	CLA	K	206	11	45,53,73	1.24	3 (6%)	52,89,113	1.02	2 (3%)
21	CLA	B	815	-	65,73,73	1.02	3 (4%)	76,113,113	0.85	2 (2%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
26	LMU	62	630	-	24,24,36	0.15	0	29,29,47	0.28	0
21	CLA	5	603	-	65,73,73	1.03	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	72	614	-	43,51,73	1.27	3 (6%)	49,86,113	1.07	2 (4%)
21	CLA	9	613	19	65,73,73	1.01	3 (4%)	76,113,113	0.89	2 (2%)
21	CLA	52	603	-	65,73,73	1.04	3 (4%)	76,113,113	0.86	3 (3%)
28	LUT	F2	305	-	42,43,43	0.38	0	51,60,60	0.78	1 (1%)
31	XAT	82	618	-	39,47,47	0.15	0	54,74,74	0.57	0
28	LUT	72	624	-	42,43,43	0.21	0	51,60,60	0.41	0
21	CLA	4	610	16	60,68,73	1.08	3 (5%)	70,107,113	0.88	2 (2%)
30	CHL	Z	601	12	66,74,74	1.99	11 (16%)	73,114,114	1.15	7 (9%)
21	CLA	A2	804	-	65,73,73	1.01	4 (6%)	76,113,113	0.84	2 (2%)
21	CLA	B	806	2	65,73,73	1.03	3 (4%)	76,113,113	0.78	2 (2%)
21	CLA	B	831	-	55,63,73	1.10	4 (7%)	64,101,113	0.93	3 (4%)
21	CLA	8	613	15	65,73,73	1.02	3 (4%)	76,113,113	0.86	2 (2%)
24	BCR	B	801	-	41,41,41	0.17	0	56,56,56	0.38	0
27	LMG	B	854	-	36,36,55	0.19	0	44,44,63	0.17	0
21	CLA	L	203	-	65,73,73	1.03	3 (4%)	76,113,113	0.84	2 (2%)
21	CLA	B2	835	33	45,53,73	1.24	3 (6%)	52,89,113	1.02	2 (3%)
21	CLA	62	609	18	55,63,73	1.12	3 (5%)	64,101,113	0.97	3 (4%)
21	CLA	A	810	1	65,73,73	1.03	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	A	825	-	55,63,73	1.12	4 (7%)	64,101,113	0.93	2 (3%)
24	BCR	K2	207	-	41,41,41	0.14	0	56,56,56	0.28	0
30	CHL	7	606	33	46,54,74	2.38	10 (21%)	49,90,114	1.36	8 (16%)
30	CHL	72	606	33	46,54,74	2.38	10 (21%)	49,90,114	1.38	8 (16%)
21	CLA	7	604	33	51,59,73	1.16	3 (5%)	59,96,113	0.96	2 (3%)
21	CLA	A	834	-	65,73,73	1.04	4 (6%)	76,113,113	0.87	2 (2%)
26	LMU	A	862	-	20,20,36	0.14	0	25,25,47	0.28	0
21	CLA	B2	823	-	65,73,73	1.03	4 (6%)	76,113,113	0.90	2 (2%)
21	CLA	82	614	-	57,65,73	1.12	3 (5%)	66,103,113	0.90	2 (3%)
21	CLA	8	608	33	50,58,73	1.19	3 (6%)	58,95,113	0.97	2 (3%)
24	BCR	A	850	-	41,41,41	0.15	0	56,56,56	0.24	0
21	CLA	L2	203	-	65,73,73	1.03	3 (4%)	76,113,113	0.84	2 (2%)
21	CLA	B	836	-	60,68,73	1.07	3 (5%)	70,107,113	0.91	2 (2%)
26	LMU	A2	864	-	24,24,36	0.12	0	29,29,47	0.29	0
21	CLA	6	622	33	55,63,73	1.13	3 (5%)	64,101,113	0.92	2 (3%)
28	LUT	1	619	-	42,43,43	0.21	0	51,60,60	0.40	0
21	CLA	B2	804	-	45,53,73	1.24	3 (6%)	52,89,113	0.99	2 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
23	LHG	8	620	21	43,43,48	0.25	0	46,49,54	0.26	0
24	BCR	6	623	-	41,41,41	0.16	0	56,56,56	0.35	0
28	LUT	Z	619	-	26,26,43	0.36	0	34,35,60	0.37	0
23	LHG	4	623	-	37,37,48	0.25	0	40,43,54	0.28	0
23	LHG	92	622	21	40,40,48	0.25	0	43,46,54	0.28	0
26	LMU	A	864	-	24,24,36	0.12	0	29,29,47	0.28	0
26	LMU	1	625	-	24,24,36	0.11	0	29,29,47	0.30	0
30	CHL	6	618	18	43,51,74	2.49	10 (23%)	45,86,114	1.47	9 (20%)
21	CLA	82	613	15	65,73,73	1.02	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	3	610	13	65,73,73	1.02	3 (4%)	76,113,113	0.87	2 (2%)
21	CLA	A	823	-	65,73,73	1.03	3 (4%)	76,113,113	0.86	3 (3%)
30	CHL	62	618	18	43,51,74	2.50	10 (23%)	45,86,114	1.46	9 (20%)
21	CLA	7	609	14	45,53,73	1.25	3 (6%)	52,89,113	1.00	2 (3%)
21	CLA	Z2	602	12	60,68,73	1.07	3 (5%)	70,107,113	0.91	2 (2%)
21	CLA	A2	854	33	65,73,73	1.06	3 (4%)	76,113,113	0.81	2 (2%)
21	CLA	A	802	-	65,73,73	1.01	4 (6%)	76,113,113	0.82	2 (2%)
21	CLA	G	204	7	46,54,73	1.23	3 (6%)	53,90,113	1.01	2 (3%)
24	BCR	B2	847	-	41,41,41	0.19	0	56,56,56	0.41	0
21	CLA	3	604	33	65,73,73	1.03	3 (4%)	76,113,113	0.86	2 (2%)
24	BCR	A	851	-	41,41,41	0.14	0	56,56,56	0.33	0
21	CLA	Z	604	33	57,65,73	1.10	3 (5%)	66,103,113	0.92	2 (3%)
28	LUT	12	617	-	42,43,43	0.26	0	51,60,60	0.40	0
21	CLA	82	603	-	65,73,73	1.06	4 (6%)	76,113,113	0.84	2 (2%)
22	PQN	B	842	-	34,34,34	0.31	0	42,45,45	0.37	0
21	CLA	B2	824	33	65,73,73	1.04	3 (4%)	76,113,113	0.86	2 (2%)
24	BCR	K	202	-	41,41,41	0.15	0	56,56,56	0.36	0
21	CLA	K2	206	11	45,53,73	1.25	3 (6%)	52,89,113	1.04	2 (3%)
21	CLA	3	602	13	60,68,73	1.07	4 (6%)	70,107,113	0.88	2 (2%)
21	CLA	9	602	19	60,68,73	1.07	4 (6%)	70,107,113	0.89	2 (2%)
21	CLA	5	613	17	56,64,73	1.11	3 (5%)	65,102,113	0.94	2 (3%)
21	CLA	F	301	33	65,73,73	1.00	3 (4%)	76,113,113	0.83	2 (2%)
28	LUT	42	619	-	42,43,43	0.25	0	51,60,60	0.43	0
30	CHL	5	608	33	51,59,74	2.29	10 (19%)	55,96,114	1.33	8 (14%)
21	CLA	A2	809	1	65,73,73	1.04	4 (6%)	76,113,113	0.93	3 (3%)
30	CHL	32	608	33	66,74,74	2.00	10 (15%)	73,114,114	1.15	7 (9%)
30	CHL	Z2	607	33	66,74,74	2.00	9 (13%)	73,114,114	1.16	7 (9%)
31	XAT	72	622	-	39,47,47	0.12	0	54,74,74	0.57	0
26	LMU	1	621	-	36,36,36	0.10	0	47,47,47	0.28	0

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
21	CLA	72	604	33	1/1/17/20	1/21/99/115	-
21	CLA	32	613	13	1/1/19/20	3/31/109/115	-
21	CLA	32	604	33	1/1/20/20	1/37/115/115	-
30	CHL	5	618	17	3/3/20/26	2/12/110/137	-
21	CLA	12	610	12	1/1/20/20	0/37/115/115	-
21	CLA	B	818	-	1/1/20/20	2/37/115/115	-
21	CLA	32	602	13	1/1/19/20	1/31/109/115	-
26	LMU	12	623	-	-	1/15/35/61	0/1/1/2
21	CLA	G2	204	7	1/1/15/20	4/15/93/115	-
21	CLA	82	610	15	1/1/20/20	2/37/115/115	-
21	CLA	42	604	33	1/1/17/20	1/19/97/115	-
21	CLA	7	602	14	1/1/20/20	2/37/115/115	-
30	CHL	42	606	33	3/3/24/26	1/27/125/137	-
30	CHL	42	608	-	3/3/26/26	3/39/137/137	-
30	CHL	9	606	-	3/3/20/26	0/10/108/137	-
21	CLA	42	616	16	1/1/15/20	0/13/91/115	-
21	CLA	42	613	16	1/1/20/20	5/37/115/115	-
28	LUT	92	616	-	-	2/29/67/67	0/2/2/2
30	CHL	8	606	33	3/3/26/26	3/39/137/137	-
21	CLA	5	617	-	1/1/20/20	6/37/115/115	-
21	CLA	42	602	16	1/1/19/20	2/31/109/115	-
24	BCR	62	623	-	-	2/29/63/63	0/2/2/2
30	CHL	3	608	33	3/3/26/26	3/39/137/137	-
21	CLA	7	608	33	1/1/17/20	0/19/97/115	-
21	CLA	B	826	-	1/1/20/20	3/37/115/115	-
31	XAT	52	624	-	1/1/26/26	0/31/93/93	0/4/4/4
21	CLA	1	614	-	1/1/19/20	4/31/109/115	-
30	CHL	52	607	33	3/3/26/26	8/39/137/137	-
21	CLA	8	612	15	1/1/18/20	6/25/103/115	-
26	LMU	6	632	-	-	3/11/31/61	0/1/1/2
21	CLA	4	611	23	1/1/19/20	4/31/109/115	-
21	CLA	A	824	-	1/1/15/20	2/13/91/115	-
30	CHL	12	606	33	3/3/21/26	0/15/113/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
26	LMU	1	623	-	-	1/15/35/61	0/1/1/2
28	LUT	7	621	-	-	2/29/67/67	0/2/2/2
27	LMG	4	624	-	-	5/36/56/70	0/1/1/1
21	CLA	A2	823	-	1/1/20/20	6/37/115/115	-
30	CHL	82	606	33	3/3/26/26	3/39/137/137	-
24	BCR	3	620	-	-	4/29/63/63	0/2/2/2
23	LHG	4	622	21	-	13/53/53/53	-
21	CLA	A	817	33	1/1/18/20	4/25/103/115	-
21	CLA	3	613	13	1/1/19/20	3/31/109/115	-
30	CHL	4	618	16	3/3/21/26	2/15/113/137	-
21	CLA	B	829	-	1/1/20/20	3/37/115/115	-
21	CLA	A	836	-	1/1/20/20	4/37/115/115	-
21	CLA	B2	831	-	1/1/18/20	1/25/103/115	-
21	CLA	52	611	23	1/1/18/20	2/25/103/115	-
25	SF4	A2	853	1,2	-	-	0/6/5/5
21	CLA	9	609	19	1/1/17/20	2/21/99/115	-
21	CLA	6	603	-	1/1/20/20	7/37/115/115	-
24	BCR	32	620	-	-	4/29/63/63	0/2/2/2
21	CLA	32	610	13	1/1/20/20	0/37/115/115	-
23	LHG	Z2	620	21	-	6/43/43/53	-
29	DGD	B	850	-	-	15/48/88/95	0/2/2/2
21	CLA	92	611	23	1/1/20/20	4/37/115/115	-
30	CHL	52	618	17	3/3/20/26	2/12/110/137	-
21	CLA	62	603	-	1/1/20/20	7/37/115/115	-
21	CLA	92	604	19	1/1/17/20	1/23/101/115	-
21	CLA	A2	843	33	1/1/20/20	5/37/115/115	-
26	LMU	92	624	-	-	4/15/35/61	0/1/1/2
26	LMU	82	627	-	-	9/21/61/61	0/2/2/2
27	LMG	72	626	-	-	7/32/52/70	0/1/1/1
21	CLA	6	610	18	1/1/19/20	3/31/109/115	-
21	CLA	12	602	12	1/1/19/20	2/31/109/115	-
31	XAT	Z	618	-	-	0/31/93/93	0/4/4/4
28	LUT	32	622	-	-	2/29/67/67	0/2/2/2
24	BCR	B2	845	-	-	4/29/63/63	0/2/2/2
21	CLA	92	602	19	1/1/19/20	2/31/109/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
30	CHL	5	607	33	3/3/26/26	8/39/137/137	-
26	LMU	4	625	-	-	3/19/59/61	0/2/2/2
23	LHG	32	623	-	-	13/51/51/53	-
21	CLA	8	611	23	1/1/15/20	2/13/91/115	-
26	LMU	7	627	-	-	2/18/58/61	0/2/2/2
21	CLA	62	610	18	1/1/19/20	2/31/109/115	-
21	CLA	A	840	-	1/1/20/20	9/37/115/115	-
21	CLA	B	821	-	1/1/20/20	3/37/115/115	-
26	LMU	A2	858	-	-	6/21/61/61	0/2/2/2
21	CLA	A	842	-	1/1/20/20	1/37/115/115	-
21	CLA	B	813	-	1/1/20/20	4/37/115/115	-
21	CLA	A	822	33	1/1/20/20	0/37/115/115	-
31	XAT	4	620	-	-	0/31/93/93	0/4/4/4
24	BCR	B	845	-	-	4/29/63/63	0/2/2/2
25	SF4	C2	101	3	-	-	0/6/5/5
21	CLA	Z2	608	33	1/1/17/20	0/19/97/115	-
21	CLA	6	602	18	1/1/20/20	2/37/115/115	-
21	CLA	B	820	-	1/1/18/20	5/27/105/115	-
21	CLA	A2	821	-	1/1/18/20	2/25/103/115	-
21	CLA	A	838	-	1/1/17/20	1/21/99/115	-
21	CLA	F	303	33	1/1/15/20	2/13/91/115	-
21	CLA	82	604	33	1/1/19/20	2/31/109/115	-
23	LHG	12	620	21	-	9/43/43/53	-
21	CLA	32	615	33	1/1/20/20	6/37/115/115	-
21	CLA	F	304	6	1/1/20/20	7/37/115/115	-
21	CLA	B2	819	33	1/1/19/20	3/31/109/115	-
21	CLA	B2	809	2	1/1/20/20	6/37/115/115	-
21	CLA	32	612	13	1/1/15/20	1/15/93/115	-
21	CLA	82	616	15	1/1/15/20	0/13/91/115	-
21	CLA	A2	802	-	1/1/20/20	0/37/115/115	-
21	CLA	A2	803	33	1/1/20/20	2/37/115/115	-
21	CLA	7	614	-	1/1/14/20	4/11/89/115	-
21	CLA	32	607	13	1/1/18/20	4/25/103/115	-
21	CLA	8	614	-	1/1/18/20	7/28/106/115	-
23	LHG	5	623	21	-	12/41/41/53	-
21	CLA	A2	806	-	1/1/20/20	12/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	CLA	G	203	-	1/1/19/20	3/31/109/115	-
24	BCR	B2	846	-	-	2/29/63/63	0/2/2/2
26	LMU	A2	861	-	-	3/15/35/61	0/1/1/2
24	BCR	K2	202	-	-	2/29/63/63	0/2/2/2
21	CLA	42	612	16	1/1/15/20	4/13/91/115	-
21	CLA	Z2	610	12	1/1/19/20	0/31/109/115	-
30	CHL	1	607	33	3/3/21/26	3/15/113/137	-
30	CHL	6	608	33	3/3/23/26	0/21/119/137	-
27	LMG	32	722	-	-	5/46/46/70	-
21	CLA	A	837	1	1/1/18/20	3/28/106/115	-
24	BCR	5	622	-	-	3/29/63/63	0/2/2/2
26	LMU	6	631	-	-	4/15/35/61	0/1/1/2
21	CLA	B	825	33	1/1/20/20	2/37/115/115	-
21	CLA	B2	820	-	1/1/18/20	4/27/105/115	-
21	CLA	A2	810	1	1/1/20/20	8/37/115/115	-
21	CLA	52	601	17	1/1/20/20	5/37/115/115	-
21	CLA	82	609	15	1/1/15/20	0/13/91/115	-
24	BCR	92	623	-	-	2/29/63/63	0/2/2/2
21	CLA	5	614	-	1/1/15/20	2/13/91/115	-
21	CLA	3	615	33	1/1/20/20	6/37/115/115	-
21	CLA	A	833	-	1/1/20/20	1/37/115/115	-
23	LHG	A	846	-	-	10/53/53/53	-
29	DGD	B2	850	-	-	10/48/88/95	0/2/2/2
21	CLA	42	609	16	1/1/19/20	5/31/109/115	-
21	CLA	J2	101	9	1/1/18/20	5/25/103/115	-
21	CLA	9	612	19	1/1/20/20	5/37/115/115	-
21	CLA	82	608	33	1/1/17/20	0/19/97/115	-
27	LMG	1	624	-	-	4/31/51/70	0/1/1/1
21	CLA	A	845	23	1/1/15/20	4/13/91/115	-
30	CHL	72	601	14	3/3/26/26	5/39/137/137	-
30	CHL	6	607	33	3/3/26/26	7/39/137/137	-
21	CLA	A2	831	-	1/1/20/20	2/37/115/115	-
24	BCR	B	844	-	-	0/29/63/63	0/2/2/2
30	CHL	Z2	606	33	3/3/21/26	5/15/113/137	-
21	CLA	1	602	12	1/1/19/20	2/31/109/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	BCR	A2	849	-	-	0/29/63/63	0/2/2/2
26	LMU	1	626	-	-	0/15/35/61	0/1/1/2
21	CLA	A2	845	23	1/1/15/20	4/13/91/115	-
21	CLA	5	610	17	1/1/19/20	2/31/109/115	-
21	CLA	52	610	17	1/1/19/20	2/31/109/115	-
26	LMU	12	626	-	-	0/15/35/61	0/1/1/2
21	CLA	B2	826	-	1/1/20/20	3/37/115/115	-
23	LHG	3	623	-	-	13/51/51/53	-
31	XAT	8	618	-	-	0/31/93/93	0/4/4/4
30	CHL	12	607	33	3/3/21/26	3/15/113/137	-
21	CLA	Z2	612	12	1/1/15/20	3/13/91/115	-
21	CLA	42	610	16	1/1/19/20	3/31/109/115	-
21	CLA	Z	603	-	1/1/18/20	6/25/103/115	-
21	CLA	92	614	-	1/1/15/20	3/13/91/115	-
21	CLA	B2	807	-	1/1/18/20	2/25/103/115	-
24	BCR	A2	851	-	-	2/29/63/63	0/2/2/2
23	LHG	42	622	21	-	13/53/53/53	-
27	LMG	B	852	-	-	7/38/58/70	0/1/1/1
21	CLA	62	613	33	1/1/20/20	4/37/115/115	-
21	CLA	B	808	-	1/1/20/20	7/37/115/115	-
25	SF4	A	853	1,2	-	-	0/6/5/5
24	BCR	A	848	-	-	2/29/63/63	0/2/2/2
21	CLA	8	616	15	1/1/15/20	0/13/91/115	-
21	CLA	A	828	-	1/1/20/20	6/37/115/115	-
21	CLA	5	601	17	1/1/20/20	5/37/115/115	-
21	CLA	32	609	13	1/1/19/20	3/33/111/115	-
31	XAT	6	624	-	-	0/31/93/93	0/4/4/4
21	CLA	B	807	-	1/1/18/20	2/25/103/115	-
21	CLA	12	611	23	1/1/19/20	3/33/111/115	-
21	CLA	Z	613	33	1/1/20/20	2/37/115/115	-
24	BCR	A	849	-	-	0/29/63/63	0/2/2/2
21	CLA	3	612	13	1/1/15/20	1/15/93/115	-
21	CLA	A	811	-	1/1/20/20	5/37/115/115	-
21	CLA	8	609	15	1/1/15/20	0/13/91/115	-
21	CLA	A	854	33	1/1/20/20	1/37/115/115	-
21	CLA	3	607	13	1/1/18/20	4/25/103/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	CLA	5	611	23	1/1/18/20	2/25/103/115	-
21	CLA	92	601	19	1/1/15/20	0/15/93/115	-
21	CLA	7	620	33	1/1/17/20	5/23/101/115	-
27	LMG	1	628	-	-	6/37/57/70	0/1/1/1
26	LMU	82	625	-	-	2/15/35/61	0/1/1/2
21	CLA	A	841	-	1/1/20/20	7/37/115/115	-
21	CLA	F2	301	33	1/1/20/20	3/37/115/115	-
26	LMU	B	853	-	-	7/21/61/61	0/2/2/2
21	CLA	Z2	614	-	1/1/17/20	0/19/97/115	-
21	CLA	82	612	15	1/1/18/20	6/25/103/115	-
22	PQN	A	844	-	-	3/23/43/43	0/2/2/2
21	CLA	7	612	14	1/1/17/20	3/22/100/115	-
21	CLA	72	612	14	1/1/17/20	3/22/100/115	-
26	LMU	Z2	622	-	-	3/17/57/61	0/2/2/2
21	CLA	A2	826	33	1/1/20/20	9/37/115/115	-
24	BCR	82	619	-	-	4/29/63/63	0/2/2/2
23	LHG	6	619	21	-	5/53/53/53	-
21	CLA	B2	815	-	1/1/20/20	4/37/115/115	-
27	LMG	3	722	-	-	6/46/46/70	-
26	LMU	12	621	-	-	6/21/61/61	0/2/2/2
21	CLA	L	204	-	1/1/15/20	2/13/91/115	-
21	CLA	72	610	14	1/1/20/20	4/37/115/115	-
23	LHG	62	619	21	-	5/53/53/53	-
30	CHL	52	608	33	3/3/23/26	0/21/119/137	-
21	CLA	5	609	17	1/1/20/20	2/37/115/115	-
21	CLA	A2	820	-	1/1/20/20	8/37/115/115	-
31	XAT	7	622	-	-	0/31/93/93	0/4/4/4
21	CLA	B	835	33	1/1/15/20	0/13/91/115	-
21	CLA	A	827	33	1/1/20/20	3/37/115/115	-
21	CLA	72	603	-	1/1/17/20	5/22/100/115	-
21	CLA	52	621	33	1/1/15/20	8/15/93/115	-
21	CLA	52	602	17	1/1/20/20	0/37/115/115	-
26	LMU	K	208	-	-	3/15/35/61	0/1/1/2
28	LUT	A	856	-	-	4/29/67/67	0/2/2/2
21	CLA	A	803	33	1/1/20/20	2/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	CLA	B2	811	-	1/1/20/20	8/37/115/115	-
28	LUT	32	720	-	-	0/29/67/67	0/2/2/2
21	CLA	B	809	2	1/1/20/20	6/37/115/115	-
26	LMU	1	622	-	-	4/10/30/61	0/1/1/2
21	CLA	B	812	-	1/1/20/20	2/37/115/115	-
21	CLA	3	611	-	1/1/20/20	3/37/115/115	-
21	CLA	B	817	-	1/1/20/20	6/37/115/115	-
26	LMU	12	622	-	-	4/10/30/61	0/1/1/2
21	CLA	A2	835	-	1/1/20/20	4/37/115/115	-
28	LUT	1	617	-	-	2/29/67/67	0/2/2/2
21	CLA	A	806	-	1/1/20/20	12/37/115/115	-
30	CHL	4	606	33	3/3/24/26	1/27/125/137	-
21	CLA	A2	836	-	1/1/20/20	4/37/115/115	-
21	CLA	12	614	-	1/1/19/20	5/31/109/115	-
26	LMU	Z	621	-	-	2/13/33/61	0/1/1/2
21	CLA	A2	838	-	1/1/17/20	1/21/99/115	-
30	CHL	8	601	15	3/3/26/26	10/39/137/137	-
30	CHL	72	607	33	3/3/21/26	1/15/113/137	-
30	CHL	Z	606	33	3/3/21/26	5/15/113/137	-
21	CLA	5	604	33	1/1/18/20	4/25/103/115	-
21	CLA	52	604	33	1/1/18/20	4/25/103/115	-
21	CLA	1	610	12	1/1/20/20	0/37/115/115	-
21	CLA	B2	805	-	1/1/20/20	9/37/115/115	-
23	LHG	52	623	21	-	12/41/41/53	-
21	CLA	Z	612	12	1/1/15/20	3/13/91/115	-
30	CHL	4	608	-	3/3/26/26	3/39/137/137	-
21	CLA	A	815	-	1/1/18/20	3/25/103/115	-
21	CLA	B	840	-	1/1/20/20	5/37/115/115	-
30	CHL	92	606	-	3/3/20/26	0/10/108/137	-
27	LMG	J	104	-	-	8/30/50/70	0/1/1/1
21	CLA	A	818	-	1/1/20/20	2/37/115/115	-
24	BCR	G2	205	-	-	2/29/63/63	0/2/2/2
21	CLA	B2	836	-	1/1/19/20	5/31/109/115	-
21	CLA	4	602	16	1/1/19/20	2/31/109/115	-
21	CLA	A	807	1	1/1/20/20	3/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
23	LHG	3	721	-	-	12/35/35/53	-
21	CLA	A2	840	-	1/1/20/20	9/37/115/115	-
21	CLA	Z2	616	12	1/1/19/20	2/31/109/115	-
26	LMU	8	627	-	-	9/21/61/61	0/2/2/2
23	LHG	A	847	21	-	6/42/42/53	-
21	CLA	1	611	23	1/1/19/20	3/33/111/115	-
21	CLA	A2	822	33	1/1/20/20	0/37/115/115	-
21	CLA	42	614	-	1/1/18/20	4/25/103/115	-
26	LMU	52	627	-	-	1/15/35/61	0/1/1/2
28	LUT	82	617	-	-	2/29/67/67	0/2/2/2
21	CLA	9	611	23	1/1/20/20	4/37/115/115	-
30	CHL	Z	607	33	3/3/26/26	4/39/137/137	-
21	CLA	A2	808	-	1/1/17/20	1/19/97/115	-
27	LMG	7	626	-	-	7/32/52/70	0/1/1/1
21	CLA	B	814	-	1/1/19/20	3/31/109/115	-
21	CLA	F2	303	33	1/1/15/20	2/13/91/115	-
25	SF4	C	101	3	-	-	0/6/5/5
21	CLA	92	613	19	1/1/20/20	4/37/115/115	-
26	LMU	B2	853	-	-	7/21/61/61	0/2/2/2
21	CLA	B	832	-	1/1/20/20	3/37/115/115	-
21	CLA	B	804	-	1/1/15/20	5/13/91/115	-
21	CLA	52	609	17	1/1/20/20	2/37/115/115	-
21	CLA	1	603	-	1/1/18/20	4/28/106/115	-
30	CHL	62	608	33	3/3/23/26	0/21/119/137	-
26	LMU	A	865	-	-	3/15/35/61	0/1/1/2
21	CLA	62	622	33	1/1/18/20	3/25/103/115	-
21	CLA	A2	814	-	1/1/20/20	6/37/115/115	-
27	LMG	J2	104	-	-	8/30/50/70	0/1/1/1
21	CLA	92	609	19	1/1/17/20	2/21/99/115	-
31	XAT	12	618	-	-	0/31/93/93	0/4/4/4
21	CLA	B2	818	-	1/1/20/20	2/37/115/115	-
24	BCR	9	623	-	-	2/29/63/63	0/2/2/2
24	BCR	52	622	-	-	3/29/63/63	0/2/2/2
21	CLA	72	620	33	1/1/17/20	5/23/101/115	-
21	CLA	A2	832	-	1/1/18/20	1/25/103/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	CLA	A2	824	-	1/1/15/20	2/13/91/115	-
21	CLA	3	609	13	1/1/19/20	3/33/111/115	-
31	XAT	42	620	-	-	0/31/93/93	0/4/4/4
32	NEX	52	625	-	-	2/27/83/83	1/3/3/3
21	CLA	12	604	33	1/1/17/20	1/19/97/115	-
24	BCR	L	201	-	-	4/29/63/63	0/2/2/2
26	LMU	8	624	-	-	1/15/35/61	0/1/1/2
21	CLA	B	830	-	1/1/15/20	0/13/91/115	-
30	CHL	6	616	18	3/3/26/26	5/39/137/137	-
21	CLA	B	819	33	1/1/19/20	3/31/109/115	-
21	CLA	G2	203	-	1/1/19/20	3/31/109/115	-
24	BCR	8	619	-	-	4/29/63/63	0/2/2/2
21	CLA	7	616	14	1/1/15/20	3/15/93/115	-
21	CLA	Z	602	12	1/1/19/20	1/31/109/115	-
21	CLA	8	603	-	1/1/20/20	5/37/115/115	-
21	CLA	12	616	12	1/1/15/20	2/15/93/115	-
21	CLA	72	616	14	1/1/15/20	3/15/93/115	-
30	CHL	62	616	18	3/3/26/26	5/39/137/137	-
26	LMU	A2	862	-	-	2/11/31/61	0/1/1/2
30	CHL	9	607	33	3/3/23/26	8/21/119/137	-
21	CLA	B2	813	-	1/1/20/20	4/37/115/115	-
30	CHL	42	618	16	3/3/21/26	2/15/113/137	-
21	CLA	3	617	13	1/1/15/20	2/15/93/115	-
21	CLA	A	805	-	1/1/18/20	1/25/103/115	-
24	BCR	L2	205	-	-	2/29/63/63	0/2/2/2
23	LHG	6	629	-	-	10/40/40/53	-
24	BCR	42	621	-	-	2/29/63/63	0/2/2/2
21	CLA	6	611	23	1/1/18/20	2/29/107/115	-
26	LMU	Z2	621	-	-	2/13/33/61	0/1/1/2
24	BCR	A2	852	-	-	4/29/63/63	0/2/2/2
21	CLA	A	826	33	1/1/20/20	9/37/115/115	-
21	CLA	A	831	-	1/1/20/20	2/37/115/115	-
27	LMG	42	624	-	-	5/36/56/70	0/1/1/1
21	CLA	1	604	33	1/1/17/20	1/19/97/115	-
24	BCR	K	207	-	-	4/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
23	LHG	B	851	21	-	13/49/49/53	-
26	LMU	A	858	-	-	6/21/61/61	0/2/2/2
21	CLA	3	614	-	1/1/15/20	0/13/91/115	-
28	LUT	12	619	-	-	2/29/67/67	0/2/2/2
28	LUT	3	720	-	-	0/29/67/67	0/2/2/2
21	CLA	A	832	-	1/1/18/20	1/25/103/115	-
21	CLA	A2	834	-	1/1/20/20	5/37/115/115	-
28	LUT	3	622	-	-	2/29/67/67	0/2/2/2
21	CLA	B2	817	-	1/1/20/20	6/37/115/115	-
26	LMU	K2	208	-	-	3/15/35/61	0/1/1/2
23	LHG	1	620	21	-	9/43/43/53	-
27	LMG	J2	103	-	-	2/37/57/70	0/1/1/1
21	CLA	32	611	-	1/1/20/20	3/37/115/115	-
28	LUT	5	626	-	-	4/29/67/67	0/2/2/2
28	LUT	32	621	-	-	2/29/67/67	0/2/2/2
21	CLA	B	802	-	1/1/20/20	4/37/115/115	-
21	CLA	4	612	16	1/1/15/20	4/13/91/115	-
24	BCR	32	719	-	-	2/29/63/63	0/2/2/2
26	LMU	1	627	-	-	3/13/33/61	0/1/1/2
30	CHL	52	606	33	3/3/21/26	0/15/113/137	-
21	CLA	B	810	-	1/1/20/20	3/37/115/115	-
24	BCR	L	205	-	-	2/29/63/63	0/2/2/2
21	CLA	12	613	33	1/1/20/20	4/37/115/115	-
21	CLA	B2	821	-	1/1/20/20	2/37/115/115	-
21	CLA	B2	833	-	1/1/18/20	4/29/107/115	-
21	CLA	A2	827	33	1/1/20/20	3/37/115/115	-
31	XAT	Z2	618	-	-	0/31/93/93	0/4/4/4
23	LHG	7	625	21	-	16/53/53/53	-
26	LMU	7	628	-	-	3/13/33/61	0/1/1/2
26	LMU	6	630	-	-	1/15/35/61	0/1/1/2
26	LMU	5	627	-	-	1/15/35/61	0/1/1/2
21	CLA	B	841	23	1/1/20/20	5/37/115/115	-
21	CLA	52	612	17	1/1/15/20	3/13/91/115	-
21	CLA	12	609	12	1/1/20/20	5/37/115/115	-
21	CLA	72	608	33	1/1/17/20	0/19/97/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	CLA	A2	816	-	1/1/20/20	6/37/115/115	-
21	CLA	5	602	17	1/1/20/20	0/37/115/115	-
21	CLA	6	604	-	1/1/20/20	4/37/115/115	-
21	CLA	B2	828	-	1/1/20/20	4/37/115/115	-
21	CLA	92	612	19	1/1/20/20	6/37/115/115	-
23	LHG	62	629	-	-	10/40/40/53	-
30	CHL	42	601	16	3/3/26/26	6/39/137/137	-
21	CLA	62	604	-	1/1/20/20	4/37/115/115	-
26	LMU	A	857	-	-	3/20/60/61	0/2/2/2
21	CLA	1	608	33	1/1/20/20	2/37/115/115	-
28	LUT	3	621	-	-	2/29/67/67	0/2/2/2
21	CLA	62	611	23	1/1/18/20	2/29/107/115	-
21	CLA	12	608	33	1/1/20/20	2/37/115/115	-
21	CLA	A2	841	-	1/1/20/20	7/37/115/115	-
21	CLA	6	613	33	1/1/20/20	3/37/115/115	-
21	CLA	B	834	-	1/1/19/20	6/31/109/115	-
28	LUT	Z2	617	-	-	2/29/67/67	0/2/2/2
21	CLA	7	611	23	1/1/20/20	5/37/115/115	-
21	CLA	4	614	-	1/1/18/20	4/25/103/115	-
24	BCR	A2	850	-	-	1/29/63/63	0/2/2/2
27	LMG	82	626	-	-	6/27/47/70	0/1/1/1
21	CLA	B	823	-	1/1/20/20	7/37/115/115	-
28	LUT	4	619	-	-	2/29/67/67	0/2/2/2
21	CLA	1	616	12	1/1/15/20	2/15/93/115	-
26	LMU	A2	857	-	-	3/20/60/61	0/2/2/2
21	CLA	1	613	33	1/1/20/20	4/37/115/115	-
21	CLA	B	803	-	1/1/20/20	2/37/115/115	-
21	CLA	Z	610	12	1/1/19/20	0/31/109/115	-
21	CLA	52	617	-	1/1/20/20	6/37/115/115	-
32	NEX	5	625	-	-	2/27/83/83	1/3/3/3
21	CLA	32	617	13	1/1/15/20	2/15/93/115	-
24	BCR	I2	172	-	-	0/29/63/63	0/2/2/2
21	CLA	B2	810	-	1/1/20/20	3/37/115/115	-
21	CLA	7	603	-	1/1/17/20	4/22/100/115	-
28	LUT	72	621	-	-	2/29/67/67	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	CLA	52	614	-	1/1/15/20	2/13/91/115	-
28	LUT	52	626	-	-	4/29/67/67	0/2/2/2
27	LMG	62	633	-	-	1/17/17/70	-
24	BCR	I	172	-	-	0/29/63/63	0/2/2/2
28	LUT	7	624	-	-	4/29/67/67	0/2/2/2
21	CLA	A	809	1	1/1/20/20	5/37/115/115	-
28	LUT	52	620	-	-	2/29/67/67	0/2/2/2
21	CLA	B	824	33	1/1/20/20	3/37/115/115	-
21	CLA	B2	812	-	1/1/20/20	3/37/115/115	-
27	LMG	9	620	21	-	6/39/59/70	0/1/1/1
21	CLA	3	603	-	1/1/20/20	5/37/115/115	-
21	CLA	9	603	27,19	1/1/18/20	4/25/103/115	-
23	LHG	B2	851	21	-	13/49/49/53	-
24	BCR	72	623	-	-	2/29/63/63	0/2/2/2
21	CLA	B2	830	-	1/1/15/20	0/13/91/115	-
21	CLA	7	610	14	1/1/20/20	4/37/115/115	-
21	CLA	Z	608	33	1/1/17/20	0/19/97/115	-
21	CLA	32	614	-	1/1/15/20	0/13/91/115	-
21	CLA	K	201	11	1/1/15/20	1/13/91/115	-
21	CLA	62	614	-	1/1/17/20	0/19/97/115	-
21	CLA	Z2	604	33	1/1/18/20	3/28/106/115	-
26	LMU	12	627	-	-	3/13/33/61	0/1/1/2
21	CLA	92	610	19	1/1/19/20	0/31/109/115	-
21	CLA	A	820	-	1/1/20/20	8/37/115/115	-
26	LMU	82	624	-	-	1/15/35/61	0/1/1/2
26	LMU	A2	865	-	-	3/15/35/61	0/1/1/2
21	CLA	A	821	-	1/1/18/20	2/25/103/115	-
21	CLA	9	610	19	1/1/19/20	0/31/109/115	-
21	CLA	Z	611	23	1/1/19/20	4/31/109/115	-
21	CLA	A2	828	-	1/1/20/20	6/37/115/115	-
21	CLA	A2	805	-	1/1/18/20	1/25/103/115	-
27	LMG	B2	852	-	-	7/38/58/70	0/1/1/1
21	CLA	A2	815	-	1/1/18/20	3/25/103/115	-
21	CLA	A	829	-	1/1/20/20	7/37/115/115	-
21	CLA	B2	832	-	1/1/20/20	3/37/115/115	-
28	LUT	9	617	-	-	0/29/67/67	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	BCR	3	719	-	-	2/29/63/63	0/2/2/2
21	CLA	B	839	33	1/1/20/20	4/37/115/115	-
21	CLA	B2	814	-	1/1/19/20	3/31/109/115	-
21	CLA	Z2	609	12	1/1/20/20	7/37/115/115	-
26	LMU	8	628	-	-	4/15/35/61	0/1/1/2
21	CLA	A2	813	-	1/1/20/20	5/37/115/115	-
27	LMG	A	860	-	-	6/31/51/70	0/1/1/1
28	LUT	Z	617	-	-	2/29/67/67	0/2/2/2
21	CLA	A2	833	-	1/1/20/20	1/37/115/115	-
21	CLA	8	604	33	1/1/19/20	2/31/109/115	-
26	LMU	62	631	-	-	4/15/35/61	0/1/1/2
21	CLA	B2	825	33	1/1/20/20	3/37/115/115	-
30	CHL	1	601	12	3/3/26/26	10/39/137/137	-
21	CLA	A2	839	-	1/1/20/20	2/37/115/115	-
24	BCR	B	848	-	-	2/29/63/63	0/2/2/2
21	CLA	12	612	12	1/1/15/20	3/13/91/115	-
21	CLA	92	603	27,19	1/1/18/20	4/25/103/115	-
21	CLA	A	839	-	1/1/20/20	2/37/115/115	-
23	LHG	82	620	21	-	16/48/48/53	-
28	LUT	9	616	-	-	2/29/67/67	0/2/2/2
26	LMU	8	625	-	-	2/15/35/61	0/1/1/2
21	CLA	5	612	17	1/1/15/20	3/13/91/115	-
24	BCR	G	205	-	-	2/29/63/63	0/2/2/2
21	CLA	A2	842	-	1/1/20/20	1/37/115/115	-
30	CHL	6	601	18	3/3/26/26	8/39/137/137	-
26	LMU	G	206	-	-	4/15/35/61	0/1/1/2
27	LMG	12	628	-	-	6/37/57/70	0/1/1/1
21	CLA	7	613	14	1/1/20/20	1/37/115/115	-
21	CLA	72	609	14	1/1/15/20	0/13/91/115	-
21	CLA	Z	614	-	1/1/17/20	0/19/97/115	-
30	CHL	62	601	18	3/3/26/26	8/39/137/137	-
30	CHL	62	607	33	3/3/26/26	7/39/137/137	-
28	LUT	6	621	-	-	2/29/67/67	0/2/2/2
26	LMU	Z	622	-	-	3/17/57/61	0/2/2/2
27	LMG	J	103	-	-	2/37/57/70	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
30	CHL	7	607	33	3/3/21/26	1/15/113/137	-
23	LHG	72	625	21	-	15/53/53/53	-
21	CLA	B2	841	23	1/1/20/20	5/37/115/115	-
21	CLA	12	603	-	1/1/18/20	4/28/106/115	-
26	LMU	6	628	-	-	2/15/35/61	0/1/1/2
21	CLA	B2	829	-	1/1/20/20	4/37/115/115	-
26	LMU	A	861	-	-	3/15/35/61	0/1/1/2
21	CLA	4	616	16	1/1/15/20	0/13/91/115	-
24	BCR	J	102	-	-	2/29/63/63	0/2/2/2
21	CLA	B2	834	-	1/1/19/20	6/31/109/115	-
21	CLA	B	822	-	1/1/18/20	5/30/108/115	-
21	CLA	A2	812	-	1/1/20/20	8/37/115/115	-
27	LMG	B2	854	-	-	2/31/51/70	0/1/1/1
24	BCR	B2	843	-	-	0/29/63/63	0/2/2/2
26	LMU	A2	863	-	-	7/21/61/61	0/2/2/2
25	SF4	C	102	3	-	-	0/6/5/5
21	CLA	6	617	-	1/1/15/20	1/13/91/115	-
26	LMU	A	863	-	-	7/21/61/61	0/2/2/2
21	CLA	A	808	-	1/1/17/20	1/19/97/115	-
21	CLA	A2	837	1	1/1/18/20	3/28/106/115	-
21	CLA	B2	803	-	1/1/20/20	2/37/115/115	-
21	CLA	52	616	17	1/1/17/20	4/23/101/115	-
26	LMU	4	626	-	-	0/11/31/61	0/1/1/2
27	LMG	8	626	-	-	6/27/47/70	0/1/1/1
20	CL0	A2	801	-	3/3/25/25	1/37/135/135	-
21	CLA	A	843	33	1/1/20/20	5/37/115/115	-
21	CLA	9	604	19	1/1/17/20	1/23/101/115	-
21	CLA	Z	609	12	1/1/20/20	7/37/115/115	-
28	LUT	A2	856	-	-	4/29/67/67	0/2/2/2
30	CHL	4	607	33	3/3/26/26	0/39/137/137	-
27	LMG	8	629	-	-	8/37/57/70	0/1/1/1
21	CLA	6	612	18	1/1/15/20	2/13/91/115	-
21	CLA	B	838	-	1/1/17/20	1/19/97/115	-
23	LHG	A2	846	-	-	10/53/53/53	-
27	LMG	A2	859	-	-	8/43/63/70	0/1/1/1
32	NEX	6	625	-	-	4/27/83/83	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	SF4	C2	102	3	-	-	0/6/5/5
26	LMU	7	629	-	-	4/13/53/61	0/2/2/2
24	BCR	B	846	-	-	2/29/63/63	0/2/2/2
21	CLA	B2	840	-	1/1/20/20	5/37/115/115	-
21	CLA	72	602	14	1/1/20/20	2/37/115/115	-
21	CLA	32	603	-	1/1/20/20	5/37/115/115	-
30	CHL	92	607	33	3/3/23/26	7/21/119/137	-
21	CLA	Z	616	12	1/1/19/20	2/31/109/115	-
23	LHG	9	622	21	-	13/45/45/53	-
21	CLA	6	609	18	1/1/18/20	2/25/103/115	-
21	CLA	B2	808	-	1/1/20/20	7/37/115/115	-
21	CLA	A2	807	1	1/1/20/20	3/37/115/115	-
21	CLA	B2	838	-	1/1/17/20	1/19/97/115	-
26	LMU	62	632	-	-	3/11/31/61	0/1/1/2
26	LMU	G2	206	-	-	4/15/35/61	0/1/1/2
28	LUT	5	620	-	-	2/29/67/67	0/2/2/2
21	CLA	B	837	-	1/1/20/20	2/37/115/115	-
30	CHL	5	606	33	3/3/21/26	0/15/113/137	-
22	PQN	B2	842	-	-	1/23/43/43	0/2/2/2
21	CLA	J	101	9	1/1/18/20	5/25/103/115	-
28	LUT	F	305	-	-	5/29/67/67	0/2/2/2
21	CLA	B2	839	33	1/1/20/20	4/37/115/115	-
31	XAT	62	624	-	-	0/31/93/93	0/4/4/4
21	CLA	72	613	14	1/1/20/20	1/37/115/115	-
21	CLA	B	811	-	1/1/20/20	8/37/115/115	-
21	CLA	4	609	16	1/1/19/20	5/31/109/115	-
21	CLA	42	603	16	1/1/20/20	6/37/115/115	-
26	LMU	42	625	-	-	3/19/59/61	0/2/2/2
21	CLA	B2	802	-	1/1/20/20	4/37/115/115	-
21	CLA	B	833	-	1/1/18/20	4/29/107/115	-
30	CHL	42	607	33	3/3/26/26	0/39/137/137	-
27	LMG	A2	860	-	-	7/31/51/70	0/1/1/1
30	CHL	82	601	15	3/3/26/26	10/39/137/137	-
30	CHL	Z2	601	12	3/3/26/26	7/39/137/137	-
30	CHL	7	601	14	3/3/26/26	5/39/137/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	CLA	A2	811	-	1/1/20/20	5/37/115/115	-
21	CLA	F2	304	6	1/1/20/20	7/37/115/115	-
21	CLA	82	602	15	1/1/19/20	2/34/112/115	-
24	BCR	B	847	-	-	2/29/63/63	0/2/2/2
31	XAT	5	624	-	1/1/26/26	0/31/93/93	0/4/4/4
28	LUT	Z2	619	-	-	2/18/37/67	0/1/1/2
21	CLA	B2	837	-	1/1/20/20	2/37/115/115	-
21	CLA	5	621	33	1/1/15/20	8/15/93/115	-
21	CLA	62	612	18	1/1/15/20	2/13/91/115	-
31	XAT	1	618	-	-	0/31/93/93	0/4/4/4
21	CLA	A2	829	-	1/1/20/20	7/37/115/115	-
21	CLA	K	203	33	1/1/19/20	4/31/109/115	-
21	CLA	32	606	33	1/1/14/20	0/10/88/115	-
24	BCR	B	843	-	-	0/29/63/63	0/2/2/2
32	NEX	62	625	-	-	5/27/83/83	0/3/3/3
28	LUT	8	617	-	-	2/29/67/67	0/2/2/2
21	CLA	1	612	12	1/1/15/20	3/13/91/115	-
24	BCR	3	718	-	-	2/29/63/63	0/2/2/2
21	CLA	8	610	15	1/1/20/20	2/37/115/115	-
24	BCR	B2	844	-	-	0/29/63/63	0/2/2/2
27	LMG	A	859	-	-	8/43/63/70	0/1/1/1
24	BCR	4	621	-	-	2/29/63/63	0/2/2/2
23	LHG	32	721	-	-	12/35/35/53	-
26	LMU	9	624	-	-	4/15/35/61	0/1/1/2
30	CHL	1	606	33	3/3/21/26	0/15/113/137	-
21	CLA	A	819	-	1/1/19/20	1/31/109/115	-
24	BCR	32	718	-	-	2/29/63/63	0/2/2/2
21	CLA	B	816	-	1/1/20/20	1/37/115/115	-
21	CLA	Z2	603	-	1/1/18/20	6/25/103/115	-
27	LMG	92	620	21	-	6/39/59/70	0/1/1/1
24	BCR	7	623	-	-	2/29/63/63	0/2/2/2
21	CLA	A	835	-	1/1/20/20	4/37/115/115	-
21	CLA	5	616	17	1/1/17/20	4/23/101/115	-
21	CLA	1	609	12	1/1/20/20	5/37/115/115	-
30	CHL	4	601	16	3/3/26/26	6/39/137/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	CLA	82	611	23	1/1/15/20	2/13/91/115	-
21	CLA	3	606	33	1/1/14/20	0/10/88/115	-
21	CLA	Z2	611	23	1/1/19/20	4/31/109/115	-
24	BCR	B2	801	-	-	0/29/63/63	0/2/2/2
21	CLA	K2	204	-	1/1/15/20	1/15/93/115	-
30	CHL	8	607	33	3/3/26/26	8/39/137/137	-
21	CLA	A	812	-	1/1/20/20	8/37/115/115	-
23	LHG	42	623	-	-	15/42/42/53	-
23	LHG	A2	847	21	-	6/42/42/53	-
21	CLA	K	204	-	1/1/15/20	1/15/93/115	-
26	LMU	72	627	-	-	2/18/58/61	0/2/2/2
21	CLA	B2	816	-	1/1/20/20	1/37/115/115	-
30	CHL	6	606	33	3/3/24/26	0/30/128/137	-
24	BCR	B2	848	-	-	2/29/63/63	0/2/2/2
21	CLA	L2	204	-	1/1/15/20	2/13/91/115	-
26	LMU	72	629	-	-	4/13/53/61	0/2/2/2
21	CLA	A	830	-	1/1/20/20	4/37/115/115	-
26	LMU	42	626	-	-	0/11/31/61	0/1/1/2
21	CLA	A2	825	-	1/1/18/20	6/25/103/115	-
23	LHG	Z	620	21	-	7/43/43/53	-
27	LMG	82	629	-	-	8/37/57/70	0/1/1/1
21	CLA	62	602	18	1/1/20/20	2/37/115/115	-
21	CLA	B	827	-	1/1/20/20	5/37/115/115	-
24	BCR	A2	848	-	-	2/29/63/63	0/2/2/2
21	CLA	A2	817	33	1/1/18/20	4/25/103/115	-
26	LMU	12	625	-	-	5/15/35/61	0/1/1/2
30	CHL	82	607	33	3/3/26/26	8/39/137/137	-
24	BCR	L2	201	-	-	4/29/63/63	0/2/2/2
24	BCR	J2	102	-	-	2/29/63/63	0/2/2/2
21	CLA	8	602	15	1/1/19/20	1/34/112/115	-
21	CLA	72	611	23	1/1/20/20	5/37/115/115	-
21	CLA	A2	818	-	1/1/20/20	2/37/115/115	-
27	LMG	12	624	-	-	4/31/51/70	0/1/1/1
21	CLA	K2	201	11	1/1/15/20	1/13/91/115	-
22	PQN	A2	844	-	-	3/23/43/43	0/2/2/2
27	LMG	6	633	-	-	1/17/17/70	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	CLA	4	613	16	1/1/20/20	5/37/115/115	-
21	CLA	42	611	23	1/1/19/20	4/31/109/115	-
30	CHL	12	601	12	3/3/26/26	10/39/137/137	-
21	CLA	A2	830	-	1/1/20/20	4/37/115/115	-
21	CLA	A	813	-	1/1/20/20	5/37/115/115	-
21	CLA	B	828	-	1/1/20/20	4/37/115/115	-
28	LUT	62	621	-	-	2/29/67/67	0/2/2/2
21	CLA	A	814	-	1/1/20/20	5/37/115/115	-
21	CLA	K2	203	33	1/1/19/20	4/31/109/115	-
21	CLA	A2	819	-	1/1/19/20	1/31/109/115	-
21	CLA	9	601	19	1/1/15/20	0/15/93/115	-
26	LMU	82	628	-	-	4/15/35/61	0/1/1/2
28	LUT	92	617	-	-	0/29/67/67	0/2/2/2
21	CLA	6	614	-	1/1/17/20	0/19/97/115	-
21	CLA	B2	827	-	1/1/20/20	5/37/115/115	-
21	CLA	A	804	-	1/1/20/20	5/37/115/115	-
21	CLA	Z2	613	33	1/1/20/20	2/37/115/115	-
26	LMU	72	628	-	-	3/13/33/61	0/1/1/2
21	CLA	52	613	17	1/1/18/20	4/27/105/115	-
26	LMU	62	628	-	-	2/15/35/61	0/1/1/2
21	CLA	4	603	16	1/1/20/20	6/37/115/115	-
21	CLA	A	816	-	1/1/20/20	6/37/115/115	-
21	CLA	B2	822	-	1/1/18/20	5/30/108/115	-
21	CLA	62	617	-	1/1/15/20	2/13/91/115	-
21	CLA	9	614	-	1/1/15/20	3/13/91/115	-
21	CLA	B2	806	2	1/1/20/20	3/37/115/115	-
20	CL0	A	801	-	3/3/25/25	1/37/135/135	-
24	BCR	A	852	-	-	4/29/63/63	0/2/2/2
21	CLA	B	805	-	1/1/20/20	9/37/115/115	-
21	CLA	4	604	33	1/1/17/20	1/19/97/115	-
30	CHL	62	606	33	3/3/24/26	0/30/128/137	-
21	CLA	K	206	11	1/1/15/20	2/13/91/115	-
21	CLA	B	815	-	1/1/20/20	4/37/115/115	-
26	LMU	62	630	-	-	1/15/35/61	0/1/1/2
21	CLA	5	603	-	1/1/20/20	16/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	CLA	72	614	-	1/1/14/20	4/11/89/115	-
21	CLA	9	613	19	1/1/20/20	4/37/115/115	-
21	CLA	52	603	-	1/1/20/20	16/37/115/115	-
28	LUT	F2	305	-	-	5/29/67/67	0/2/2/2
31	XAT	82	618	-	-	0/31/93/93	0/4/4/4
28	LUT	72	624	-	-	4/29/67/67	0/2/2/2
21	CLA	4	610	16	1/1/19/20	3/31/109/115	-
30	CHL	Z	601	12	3/3/26/26	7/39/137/137	-
21	CLA	A2	804	-	1/1/20/20	5/37/115/115	-
21	CLA	B	806	2	1/1/20/20	3/37/115/115	-
21	CLA	B	831	-	1/1/18/20	1/25/103/115	-
21	CLA	8	613	15	1/1/20/20	5/37/115/115	-
24	BCR	B	801	-	-	0/29/63/63	0/2/2/2
27	LMG	B	854	-	-	2/31/51/70	0/1/1/1
21	CLA	L	203	-	1/1/20/20	6/37/115/115	-
21	CLA	B2	835	33	1/1/15/20	1/13/91/115	-
21	CLA	62	609	18	1/1/18/20	2/25/103/115	-
21	CLA	A	810	1	1/1/20/20	8/37/115/115	-
21	CLA	A	825	-	1/1/18/20	6/25/103/115	-
24	BCR	K2	207	-	-	4/29/63/63	0/2/2/2
30	CHL	7	606	33	3/3/21/26	3/15/113/137	-
30	CHL	72	606	33	3/3/21/26	3/15/113/137	-
21	CLA	7	604	33	1/1/17/20	1/21/99/115	-
21	CLA	A	834	-	1/1/20/20	5/37/115/115	-
26	LMU	A	862	-	-	2/11/31/61	0/1/1/2
21	CLA	B2	823	-	1/1/20/20	7/37/115/115	-
21	CLA	82	614	-	1/1/18/20	7/28/106/115	-
21	CLA	8	608	33	1/1/17/20	0/19/97/115	-
24	BCR	A	850	-	-	1/29/63/63	0/2/2/2
21	CLA	L2	203	-	1/1/20/20	6/37/115/115	-
21	CLA	B	836	-	1/1/19/20	5/31/109/115	-
26	LMU	A2	864	-	-	2/15/35/61	0/1/1/2
21	CLA	6	622	33	1/1/18/20	3/25/103/115	-
28	LUT	1	619	-	-	2/29/67/67	0/2/2/2
21	CLA	B2	804	-	1/1/15/20	5/13/91/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
23	LHG	8	620	21	-	16/48/48/53	-
24	BCR	6	623	-	-	2/29/63/63	0/2/2/2
28	LUT	Z	619	-	-	2/18/37/67	0/1/1/2
23	LHG	4	623	-	-	15/42/42/53	-
30	CHL	6	618	18	3/3/20/26	2/12/110/137	-
23	LHG	92	622	21	-	13/45/45/53	-
26	LMU	A	864	-	-	2/15/35/61	0/1/1/2
26	LMU	1	625	-	-	5/15/35/61	0/1/1/2
21	CLA	82	613	15	1/1/20/20	5/37/115/115	-
21	CLA	3	610	13	1/1/20/20	0/37/115/115	-
21	CLA	A	823	-	1/1/20/20	6/37/115/115	-
30	CHL	62	618	18	3/3/20/26	2/12/110/137	-
21	CLA	7	609	14	1/1/15/20	0/13/91/115	-
21	CLA	Z2	602	12	1/1/19/20	1/31/109/115	-
21	CLA	A2	854	33	1/1/20/20	1/37/115/115	-
21	CLA	A	802	-	1/1/20/20	0/37/115/115	-
21	CLA	G	204	7	1/1/15/20	4/15/93/115	-
24	BCR	B2	847	-	-	2/29/63/63	0/2/2/2
21	CLA	3	604	33	1/1/20/20	1/37/115/115	-
24	BCR	A	851	-	-	2/29/63/63	0/2/2/2
21	CLA	Z	604	33	1/1/18/20	3/28/106/115	-
28	LUT	12	617	-	-	2/29/67/67	0/2/2/2
21	CLA	82	603	-	1/1/20/20	5/37/115/115	-
22	PQN	B	842	-	-	1/23/43/43	0/2/2/2
21	CLA	B2	824	33	1/1/20/20	3/37/115/115	-
24	BCR	K	202	-	-	2/29/63/63	0/2/2/2
21	CLA	K2	206	11	1/1/15/20	2/13/91/115	-
21	CLA	3	602	13	1/1/19/20	1/31/109/115	-
21	CLA	9	602	19	1/1/19/20	2/31/109/115	-
21	CLA	5	613	17	1/1/18/20	4/27/105/115	-
21	CLA	F	301	33	1/1/20/20	3/37/115/115	-
30	CHL	5	608	33	3/3/23/26	0/21/119/137	-
30	CHL	Z2	607	33	3/3/26/26	4/39/137/137	-
21	CLA	A2	809	1	1/1/20/20	5/37/115/115	-
30	CHL	32	608	33	3/3/26/26	3/39/137/137	-
28	LUT	42	619	-	-	2/29/67/67	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	XAT	72	622	-	-	0/31/93/93	0/4/4/4
26	LMU	1	621	-	-	6/21/61/61	0/2/2/2

The worst 5 of 1873 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	92	607	CHL	C4B-NB	12.30	1.46	1.35
30	6	607	CHL	C4B-NB	12.27	1.46	1.35
30	62	607	CHL	C4B-NB	12.20	1.46	1.35
30	9	607	CHL	C4B-NB	12.08	1.46	1.35
30	62	608	CHL	C4B-NB	12.05	1.46	1.35

The worst 5 of 1334 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	92	610	CLA	C1D-ND-C4D	-4.52	103.12	106.33
21	9	610	CLA	C1D-ND-C4D	-4.50	103.14	106.33
21	Z	613	CLA	C1D-ND-C4D	-4.41	103.20	106.33
21	9	604	CLA	C1D-ND-C4D	-4.38	103.22	106.33
30	3	608	CHL	CHD-C1D-ND	-4.36	120.44	124.45

5 of 584 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
20	A	801	CL0	NA
20	A	801	CL0	NC
20	A	801	CL0	ND
20	A2	801	CL0	NA
20	A2	801	CL0	NC

5 of 2525 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
21	A	806	CLA	CHA-CBD-CGD-O1D
21	A	806	CLA	CHA-CBD-CGD-O2D
21	A	806	CLA	CAD-CBD-CGD-O1D
21	A	806	CLA	CAD-CBD-CGD-O2D
21	A	806	CLA	C4-C3-C5-C6

All (2) ring outliers are listed below:

Mol	Chain	Res	Type	Atoms
32	52	625	NEX	C1-C2-C3-C4-C5-C6
32	5	625	NEX	C1-C2-C3-C4-C5-C6

402 monomers are involved in 578 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
21	12	610	CLA	1	0
21	32	602	CLA	2	0
21	82	610	CLA	1	0
21	7	602	CLA	1	0
30	42	606	CHL	2	0
30	42	608	CHL	1	0
21	42	613	CLA	3	0
28	92	616	LUT	2	0
30	8	606	CHL	2	0
21	42	602	CLA	2	0
24	62	623	BCR	2	0
30	3	608	CHL	1	0
21	7	608	CLA	1	0
21	B	826	CLA	1	0
31	52	624	XAT	1	0
21	1	614	CLA	1	0
21	8	612	CLA	1	0
21	4	611	CLA	1	0
28	7	621	LUT	1	0
24	3	620	BCR	1	0
30	82	606	CHL	2	0
21	A	817	CLA	2	0
21	B	829	CLA	6	0
21	6	603	CLA	1	0
21	32	610	CLA	4	0
23	Z2	620	LHG	1	0
29	B	850	DGD	1	0
21	62	603	CLA	1	0
21	A2	843	CLA	1	0
26	92	624	LMU	1	0
21	6	610	CLA	3	0
21	12	602	CLA	2	0
31	Z	618	XAT	1	0
28	32	622	LUT	4	0
24	B2	845	BCR	2	0
21	92	602	CLA	1	0
26	4	625	LMU	1	0
23	32	623	LHG	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
21	8	611	CLA	1	0
21	62	610	CLA	2	0
21	A	840	CLA	4	0
21	B	821	CLA	1	0
26	A2	858	LMU	1	0
21	B	813	CLA	2	0
21	A	822	CLA	2	0
31	4	620	XAT	1	0
24	B	845	BCR	3	0
21	Z2	608	CLA	1	0
21	6	602	CLA	2	0
21	A	838	CLA	1	0
21	82	604	CLA	4	0
23	12	620	LHG	1	0
21	32	615	CLA	6	0
21	F	304	CLA	1	0
21	B2	819	CLA	1	0
21	32	612	CLA	1	0
21	A2	802	CLA	4	0
21	A2	803	CLA	2	0
21	32	607	CLA	2	0
21	8	614	CLA	1	0
23	5	623	LHG	1	0
21	A2	806	CLA	1	0
24	K2	202	BCR	4	0
21	42	612	CLA	2	0
21	Z2	610	CLA	2	0
30	6	608	CHL	4	0
27	32	722	LMG	1	0
21	A2	810	CLA	2	0
24	92	623	BCR	2	0
21	3	615	CLA	5	0
21	A	833	CLA	3	0
29	B2	850	DGD	1	0
21	42	609	CLA	1	0
21	J2	101	CLA	1	0
21	9	612	CLA	1	0
30	72	601	CHL	2	0
30	6	607	CHL	1	0
21	A2	831	CLA	1	0
24	B	844	BCR	4	0
30	Z2	606	CHL	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
21	1	602	CLA	2	0
24	A2	849	BCR	2	0
21	52	610	CLA	1	0
21	B2	826	CLA	1	0
23	3	623	LHG	1	0
31	8	618	XAT	1	0
21	42	610	CLA	3	0
21	Z	603	CLA	3	0
21	92	614	CLA	1	0
24	A2	851	BCR	1	0
21	62	613	CLA	2	0
21	B	808	CLA	2	0
24	A	848	BCR	3	0
21	32	609	CLA	1	0
31	6	624	XAT	1	0
21	Z	613	CLA	1	0
24	A	849	BCR	2	0
21	3	612	CLA	1	0
21	A	811	CLA	2	0
21	8	609	CLA	1	0
21	A	854	CLA	5	0
21	3	607	CLA	2	0
21	7	620	CLA	1	0
26	82	625	LMU	1	0
26	B	853	LMU	3	0
26	Z2	622	LMU	1	0
21	A2	826	CLA	3	0
24	82	619	BCR	2	0
27	3	722	LMG	1	0
21	72	610	CLA	4	0
30	52	608	CHL	1	0
21	A2	820	CLA	2	0
31	7	622	XAT	1	0
21	B	835	CLA	4	0
21	52	621	CLA	3	0
21	52	602	CLA	3	0
28	A	856	LUT	1	0
21	A	803	CLA	2	0
21	B2	811	CLA	1	0
21	3	611	CLA	1	0
21	B	817	CLA	2	0
21	A2	835	CLA	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
28	1	617	LUT	3	0
21	A	806	CLA	1	0
30	4	606	CHL	4	0
21	12	614	CLA	1	0
21	A2	838	CLA	1	0
30	8	601	CHL	2	0
30	Z	606	CHL	2	0
21	1	610	CLA	1	0
23	52	623	LHG	1	0
30	4	608	CHL	1	0
21	B	840	CLA	2	0
27	J	104	LMG	1	0
21	A	818	CLA	1	0
24	G2	205	BCR	2	0
21	B2	836	CLA	2	0
21	4	602	CLA	2	0
21	A2	840	CLA	4	0
21	Z2	616	CLA	3	0
26	8	627	LMU	1	0
21	A2	822	CLA	2	0
21	42	614	CLA	1	0
28	82	617	LUT	1	0
21	B	814	CLA	1	0
26	B2	853	LMU	2	0
21	B	832	CLA	1	0
21	1	603	CLA	4	0
30	62	608	CHL	3	0
27	J2	104	LMG	1	0
31	12	618	XAT	2	0
24	9	623	BCR	1	0
21	72	620	CLA	1	0
21	A2	832	CLA	1	0
21	3	609	CLA	1	0
31	42	620	XAT	1	0
21	12	604	CLA	2	0
24	L	201	BCR	1	0
21	B	830	CLA	1	0
21	B	819	CLA	1	0
24	8	619	BCR	2	0
21	Z	602	CLA	2	0
21	8	603	CLA	2	0
21	B2	813	CLA	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	L2	205	BCR	4	0
24	42	621	BCR	1	0
24	A2	852	BCR	2	0
21	A	826	CLA	3	0
21	A	831	CLA	2	0
21	1	604	CLA	2	0
24	K	207	BCR	2	0
26	A	858	LMU	2	0
28	12	619	LUT	1	0
28	3	622	LUT	4	0
21	B2	817	CLA	2	0
23	1	620	LHG	1	0
27	J2	103	LMG	1	0
21	32	611	CLA	1	0
28	32	621	LUT	2	0
21	B	802	CLA	4	0
21	4	612	CLA	2	0
24	32	719	BCR	4	0
24	L	205	BCR	4	0
21	12	613	CLA	2	0
21	B2	821	CLA	1	0
21	B2	833	CLA	2	0
31	Z2	618	XAT	1	0
23	7	625	LHG	1	0
26	7	628	LMU	1	0
21	B	841	CLA	4	0
21	12	609	CLA	1	0
21	72	608	CLA	1	0
21	5	602	CLA	3	0
21	92	612	CLA	1	0
30	42	601	CHL	1	0
26	A	857	LMU	1	0
21	1	608	CLA	2	0
28	3	621	LUT	2	0
21	12	608	CLA	2	0
21	6	613	CLA	2	0
21	B	834	CLA	3	0
28	Z2	617	LUT	2	0
21	4	614	CLA	1	0
24	A2	850	BCR	3	0
21	B	823	CLA	1	0
28	4	619	LUT	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
26	A2	857	LMU	1	0
21	1	613	CLA	2	0
21	Z	610	CLA	2	0
21	52	617	CLA	1	0
24	I2	172	BCR	1	0
28	72	621	LUT	1	0
24	I	172	BCR	1	0
28	7	624	LUT	4	0
21	A	809	CLA	2	0
28	52	620	LUT	3	0
21	B	824	CLA	1	0
27	9	620	LMG	2	0
21	3	603	CLA	3	0
21	B2	830	CLA	1	0
21	7	610	CLA	4	0
21	Z	608	CLA	1	0
21	K	201	CLA	1	0
21	62	614	CLA	3	0
21	Z2	604	CLA	1	0
21	92	610	CLA	2	0
21	A	820	CLA	1	0
21	9	610	CLA	2	0
21	A	829	CLA	4	0
21	B2	832	CLA	2	0
28	9	617	LUT	3	0
24	3	719	BCR	5	0
21	B	839	CLA	1	0
21	B2	814	CLA	1	0
21	Z2	609	CLA	1	0
21	A2	813	CLA	1	0
27	A	860	LMG	1	0
28	Z	617	LUT	2	0
21	A2	833	CLA	3	0
21	8	604	CLA	4	0
30	1	601	CHL	1	0
24	B	848	BCR	1	0
28	9	616	LUT	2	0
26	8	625	LMU	1	0
30	6	601	CHL	3	0
21	72	609	CLA	1	0
30	62	601	CHL	3	0
30	62	607	CHL	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
28	6	621	LUT	2	0
26	Z	622	LMU	1	0
27	J	103	LMG	1	0
23	72	625	LHG	1	0
21	B2	841	CLA	4	0
21	12	603	CLA	4	0
21	B2	829	CLA	6	0
24	J	102	BCR	1	0
21	B2	834	CLA	2	0
21	A2	812	CLA	1	0
27	B2	854	LMG	1	0
24	B2	843	BCR	2	0
21	6	617	CLA	1	0
26	A	863	LMU	1	0
21	52	616	CLA	2	0
27	8	626	LMG	1	0
20	A2	801	CL0	1	0
21	A	843	CLA	1	0
21	Z	609	CLA	1	0
28	A2	856	LUT	2	0
30	4	607	CHL	1	0
21	B	838	CLA	1	0
32	6	625	NEX	1	0
21	B2	840	CLA	3	0
21	72	602	CLA	1	0
21	32	603	CLA	3	0
21	Z	616	CLA	3	0
21	6	609	CLA	1	0
21	B2	808	CLA	2	0
21	B2	838	CLA	1	0
28	5	620	LUT	3	0
21	B	837	CLA	3	0
22	B2	842	PQN	1	0
21	J	101	CLA	1	0
28	F	305	LUT	4	0
21	B2	839	CLA	1	0
31	62	624	XAT	1	0
21	B	811	CLA	1	0
21	4	609	CLA	2	0
21	42	603	CLA	1	0
26	42	625	LMU	1	0
21	B2	802	CLA	5	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
21	B	833	CLA	2	0
27	A2	860	LMG	1	0
30	42	607	CHL	1	0
30	82	601	CHL	2	0
30	Z2	601	CHL	2	0
30	7	601	CHL	3	0
21	A2	811	CLA	1	0
21	F2	304	CLA	1	0
21	82	602	CLA	3	0
24	B	847	BCR	1	0
31	5	624	XAT	1	0
21	B2	837	CLA	2	0
21	5	621	CLA	4	0
31	1	618	XAT	2	0
21	A2	829	CLA	3	0
21	32	606	CLA	1	0
24	B	843	BCR	2	0
32	62	625	NEX	1	0
24	3	718	BCR	1	0
21	8	610	CLA	1	0
24	B2	844	BCR	3	0
26	9	624	LMU	1	0
21	B	816	CLA	2	0
21	Z2	603	CLA	4	0
27	92	620	LMG	2	0
21	A	835	CLA	1	0
21	5	616	CLA	3	0
21	1	609	CLA	1	0
30	4	601	CHL	1	0
21	82	611	CLA	1	0
21	3	606	CLA	1	0
21	Z2	611	CLA	1	0
24	B2	801	BCR	3	0
23	42	623	LHG	1	0
21	A	812	CLA	1	0
21	B2	816	CLA	2	0
30	6	606	CHL	2	0
24	B2	848	BCR	1	0
21	62	602	CLA	2	0
21	B	827	CLA	1	0
24	A2	848	BCR	2	0
21	A2	817	CLA	2	0

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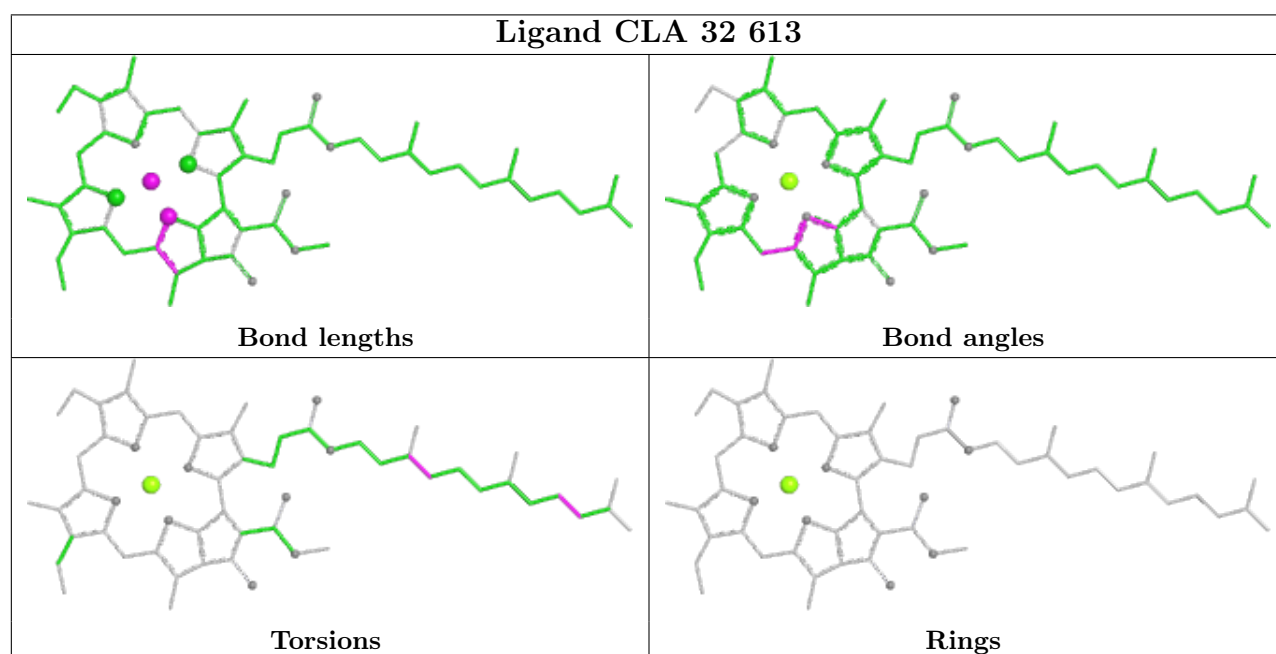
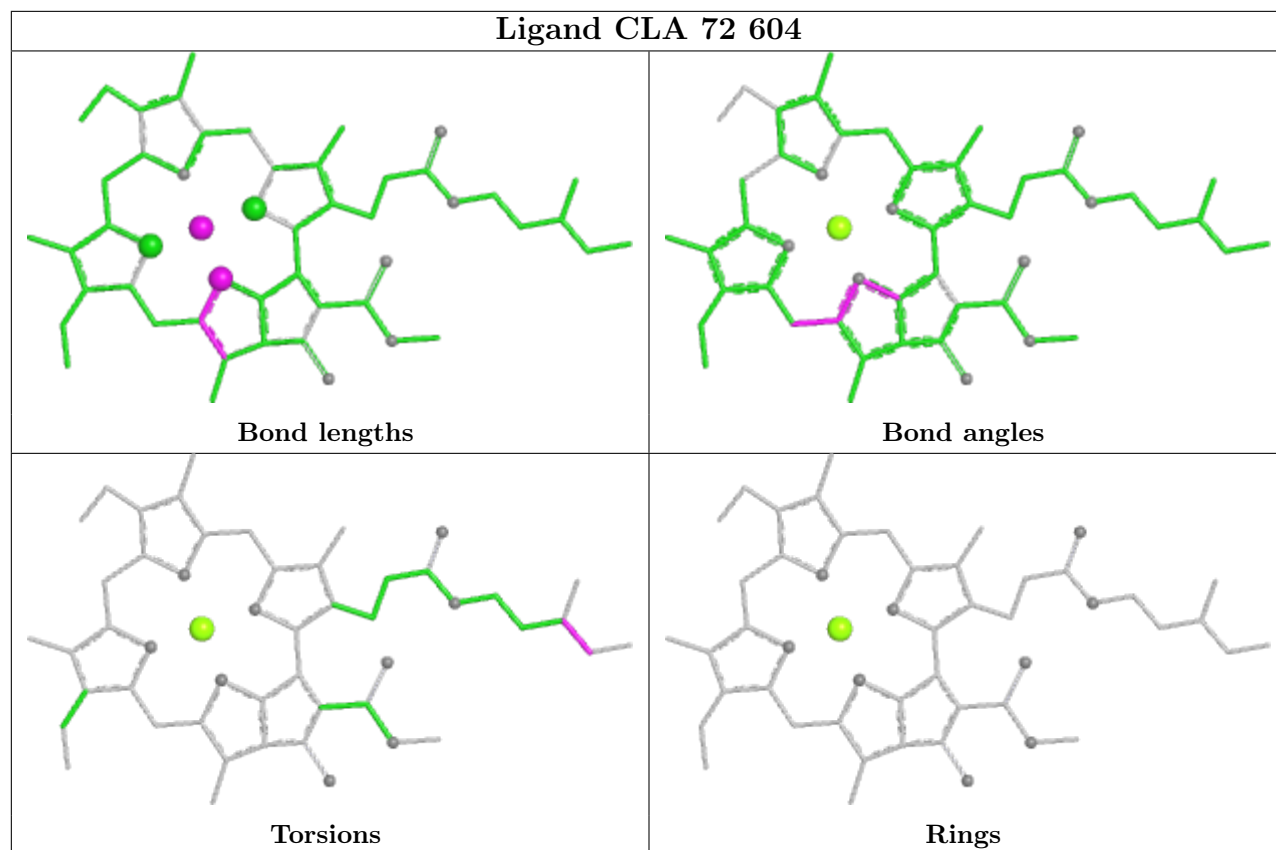
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24	L2	201	BCR	1	0
24	J2	102	BCR	1	0
21	8	602	CLA	3	0
21	A2	818	CLA	1	0
21	K2	201	CLA	1	0
21	4	613	CLA	2	0
21	42	611	CLA	1	0
21	A2	830	CLA	1	0
21	A	813	CLA	2	0
28	62	621	LUT	2	0
28	92	617	LUT	3	0
21	6	614	CLA	3	0
21	B2	827	CLA	1	0
21	A	804	CLA	1	0
21	Z2	613	CLA	1	0
26	72	628	LMU	1	0
21	4	603	CLA	1	0
21	62	617	CLA	1	0
21	9	614	CLA	1	0
21	B2	806	CLA	2	0
20	A	801	CL0	1	0
24	A	852	BCR	4	0
30	62	606	CHL	2	0
21	5	603	CLA	1	0
21	52	603	CLA	1	0
28	F2	305	LUT	3	0
31	82	618	XAT	1	0
28	72	624	LUT	4	0
21	4	610	CLA	2	0
30	Z	601	CHL	2	0
21	A2	804	CLA	1	0
21	B	806	CLA	2	0
21	8	613	CLA	1	0
24	B	801	BCR	1	0
27	B	854	LMG	1	0
21	L	203	CLA	2	0
21	B2	835	CLA	3	0
21	62	609	CLA	1	0
21	A	810	CLA	2	0
24	K2	207	BCR	2	0
26	A	862	LMU	1	0
21	B2	823	CLA	1	0

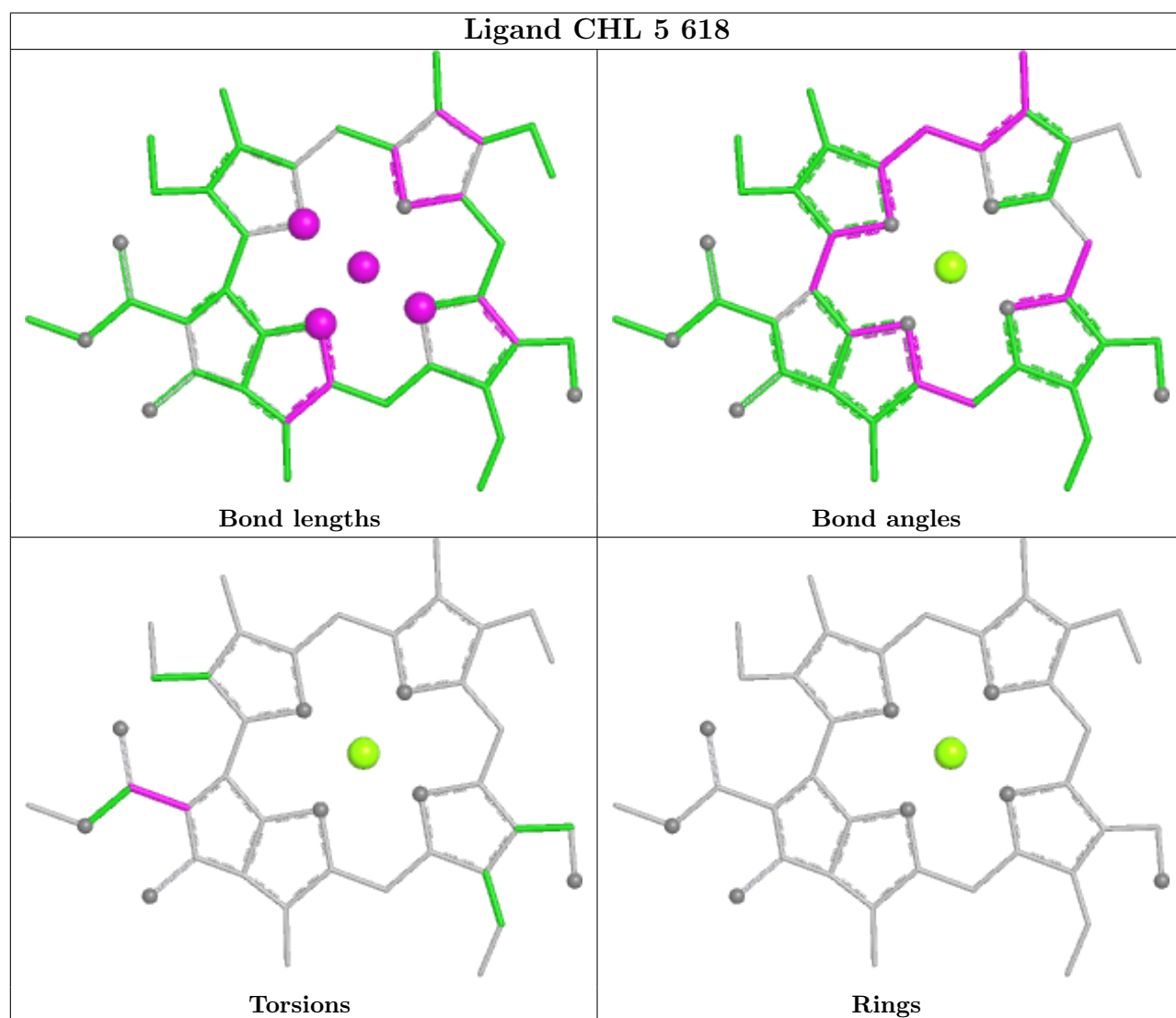
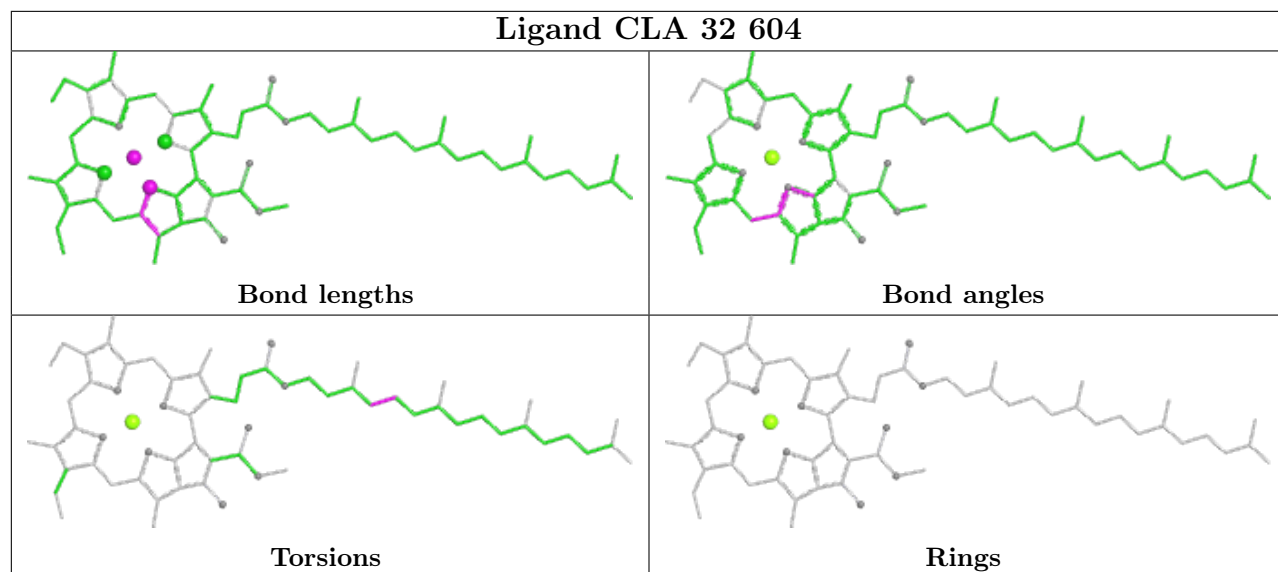
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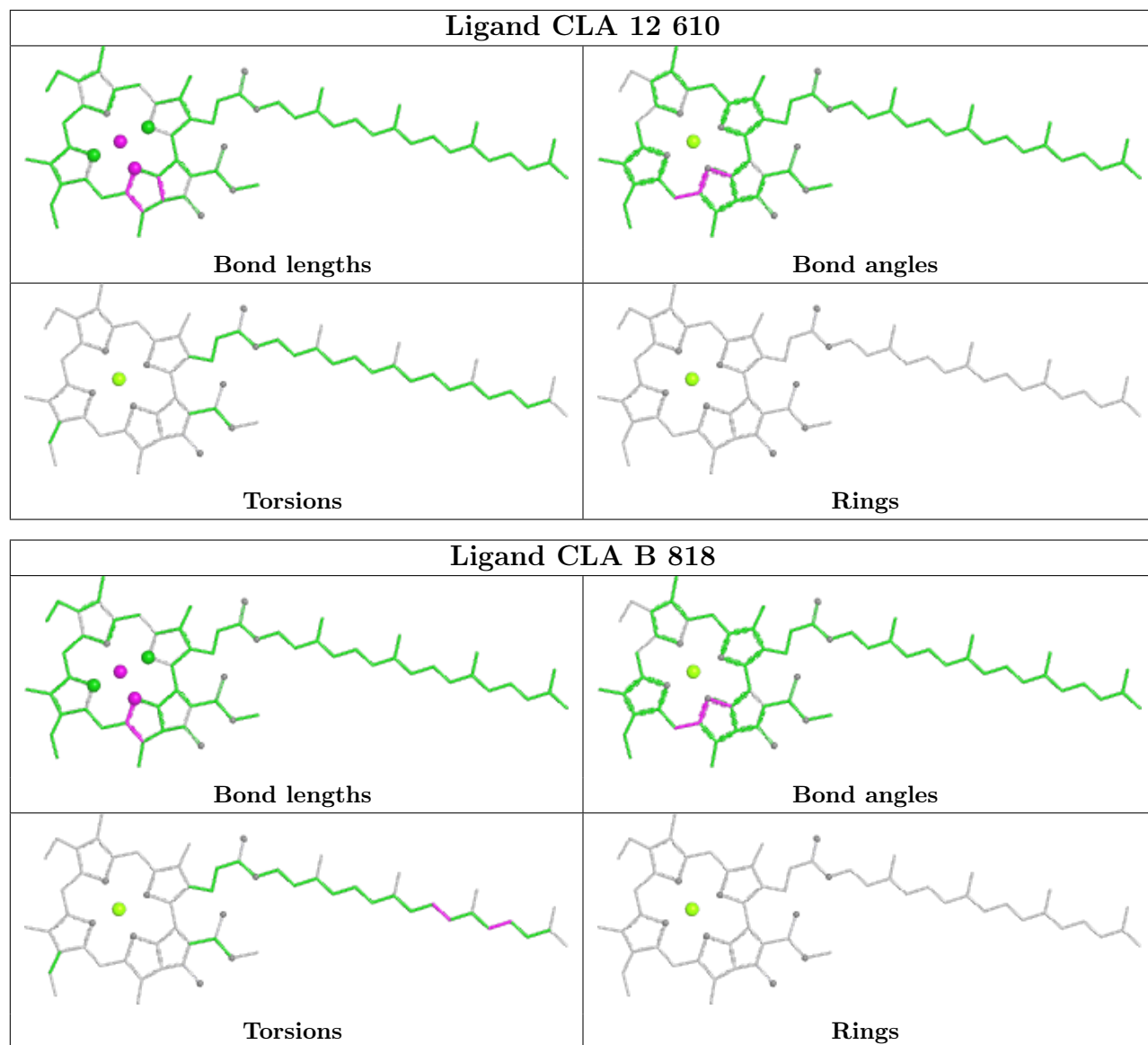
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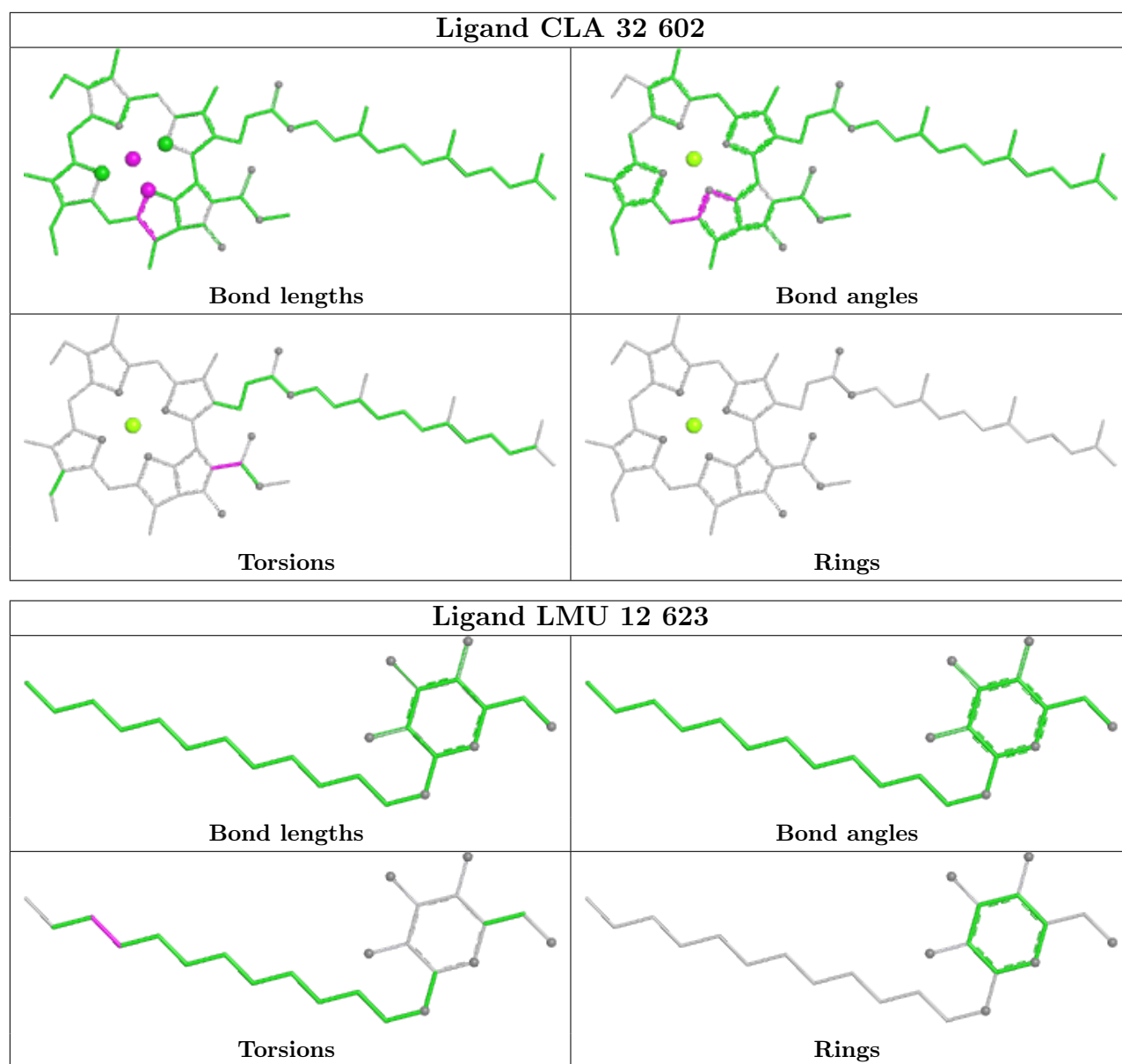
Mol	Chain	Res	Type	Clashes	Symm-Clashes
21	82	614	CLA	1	0
24	A	850	BCR	1	0
21	L2	203	CLA	1	0
21	B	836	CLA	2	0
28	1	619	LUT	1	0
24	6	623	BCR	3	0
23	4	623	LHG	1	0
21	82	613	CLA	1	0
21	3	610	CLA	4	0
21	7	609	CLA	1	0
21	Z2	602	CLA	2	0
21	A2	854	CLA	6	0
21	A	802	CLA	4	0
24	B2	847	BCR	1	0
24	A	851	BCR	3	0
21	Z	604	CLA	1	0
28	12	617	LUT	3	0
21	82	603	CLA	1	0
22	B	842	PQN	1	0
21	B2	824	CLA	1	0
24	K	202	BCR	3	0
21	3	602	CLA	2	0
21	9	602	CLA	1	0
28	42	619	LUT	2	0
30	5	608	CHL	1	0
21	A2	809	CLA	2	0
30	32	608	CHL	2	0
31	72	622	XAT	2	0

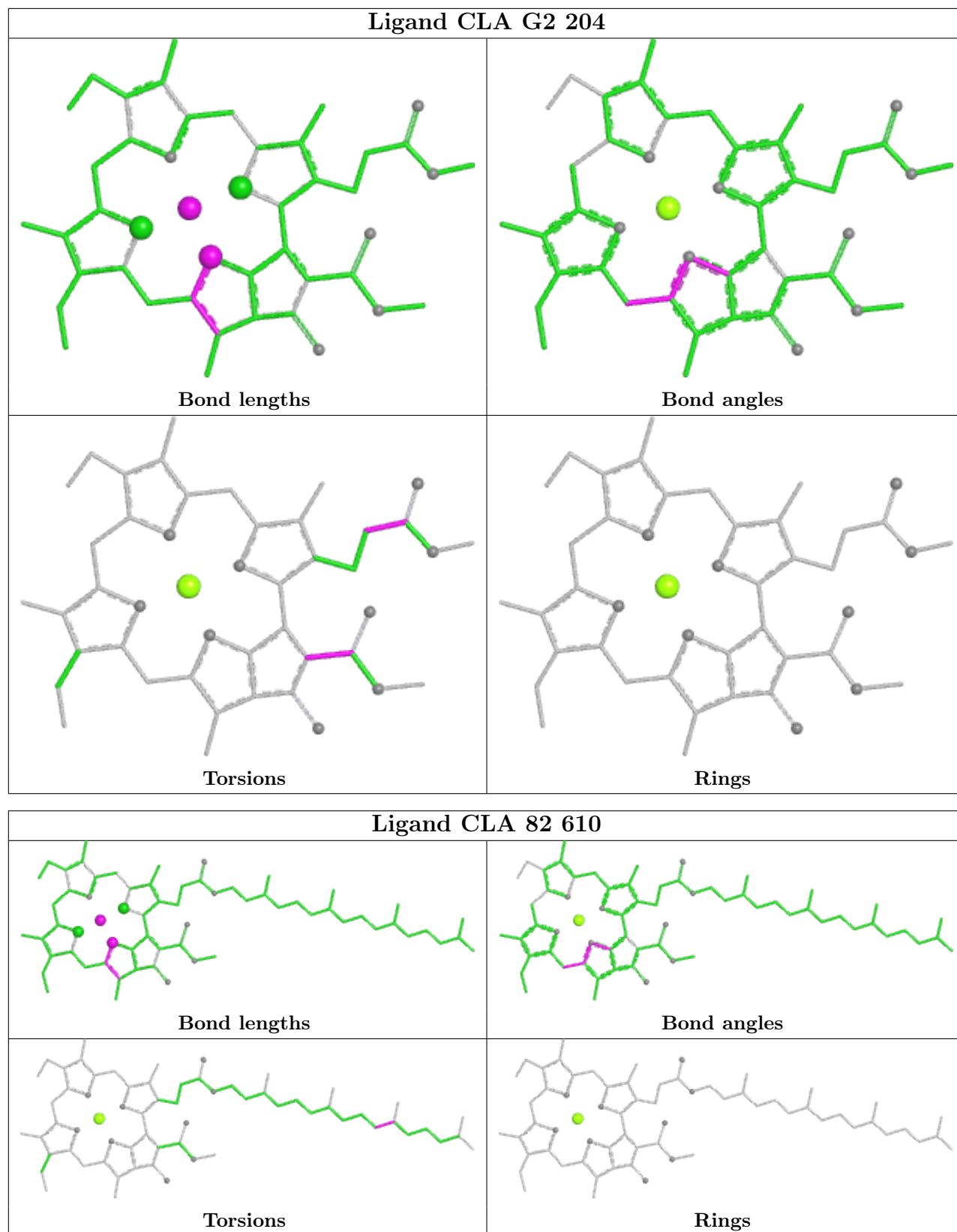
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less 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.

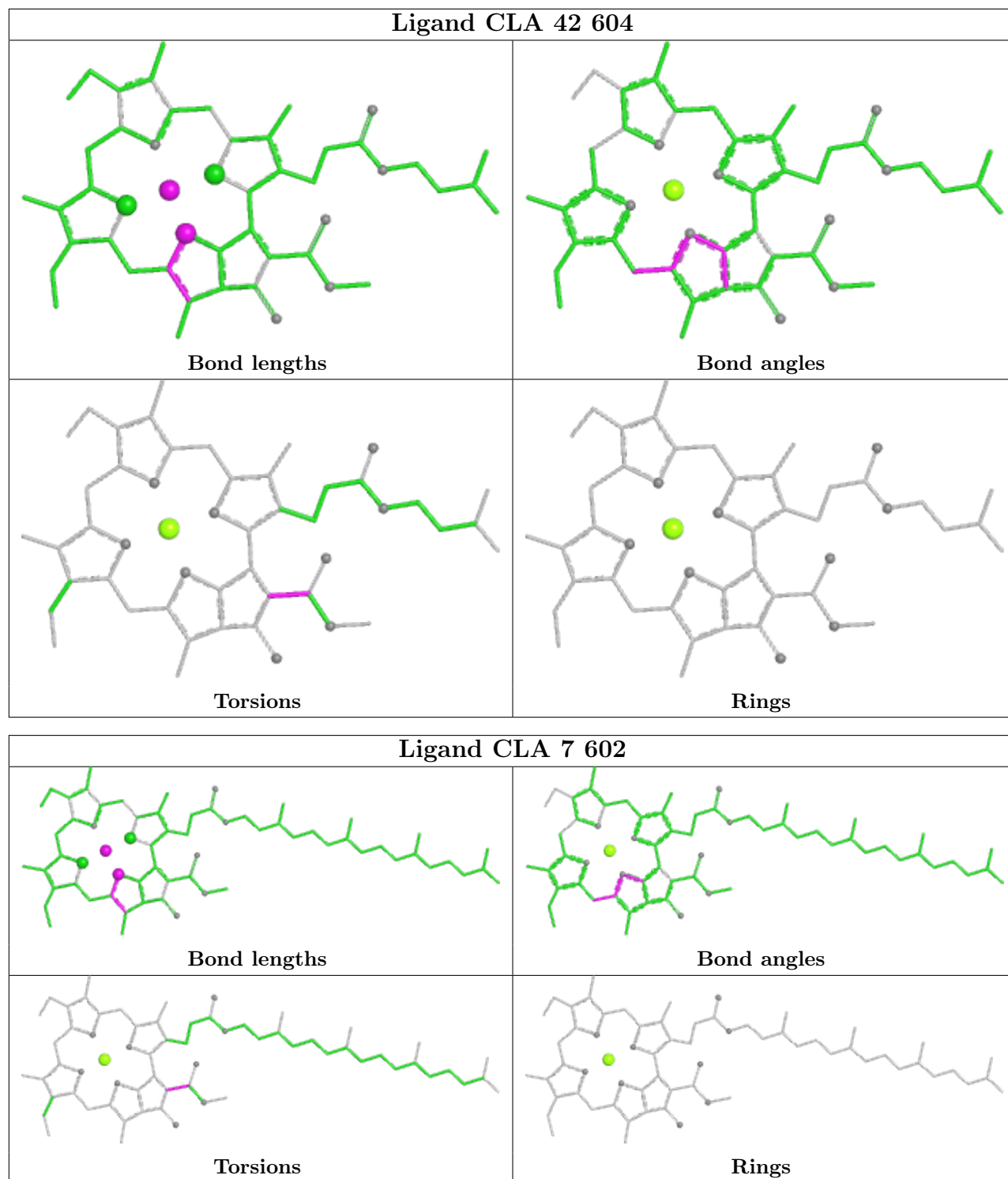


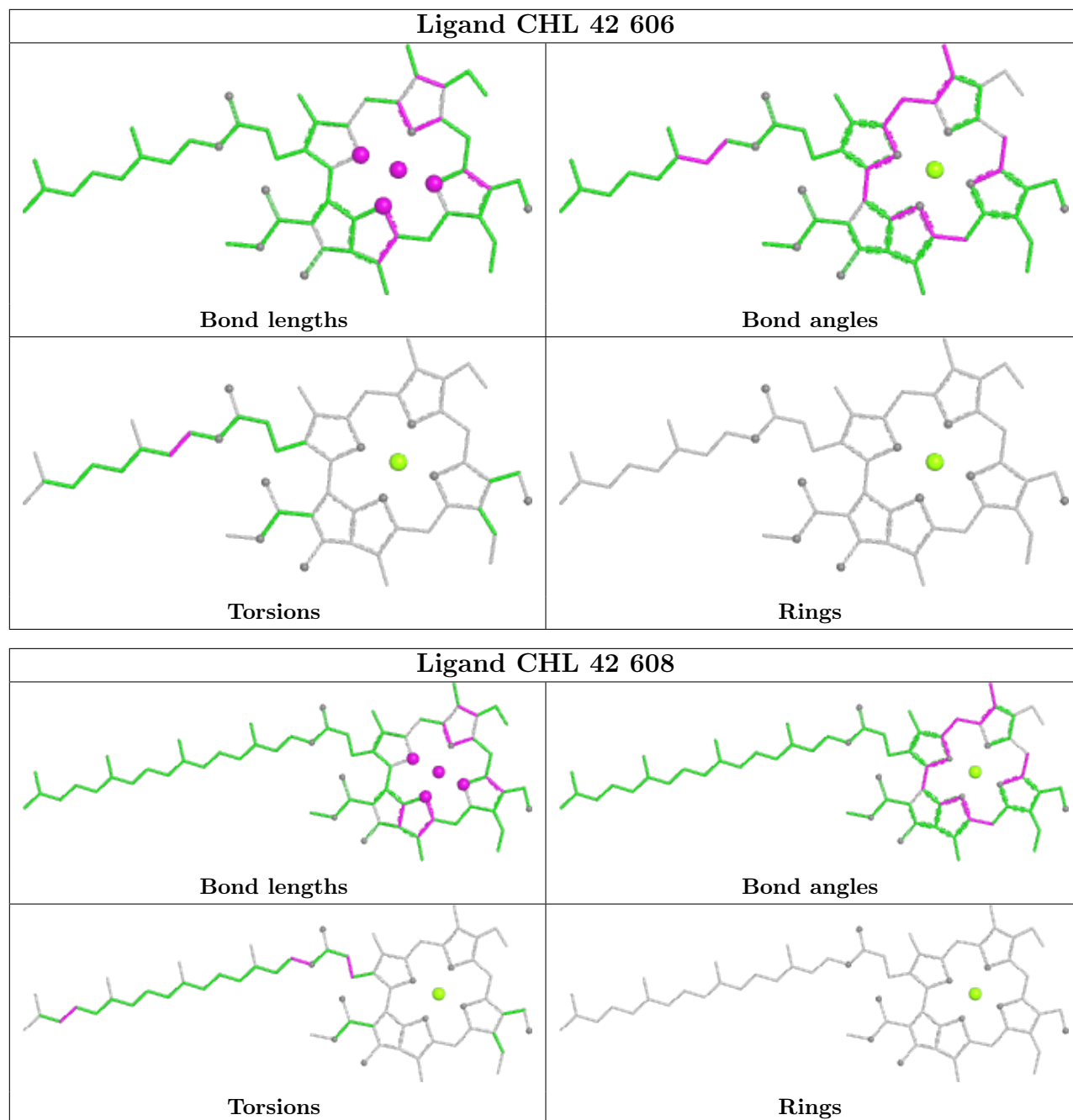


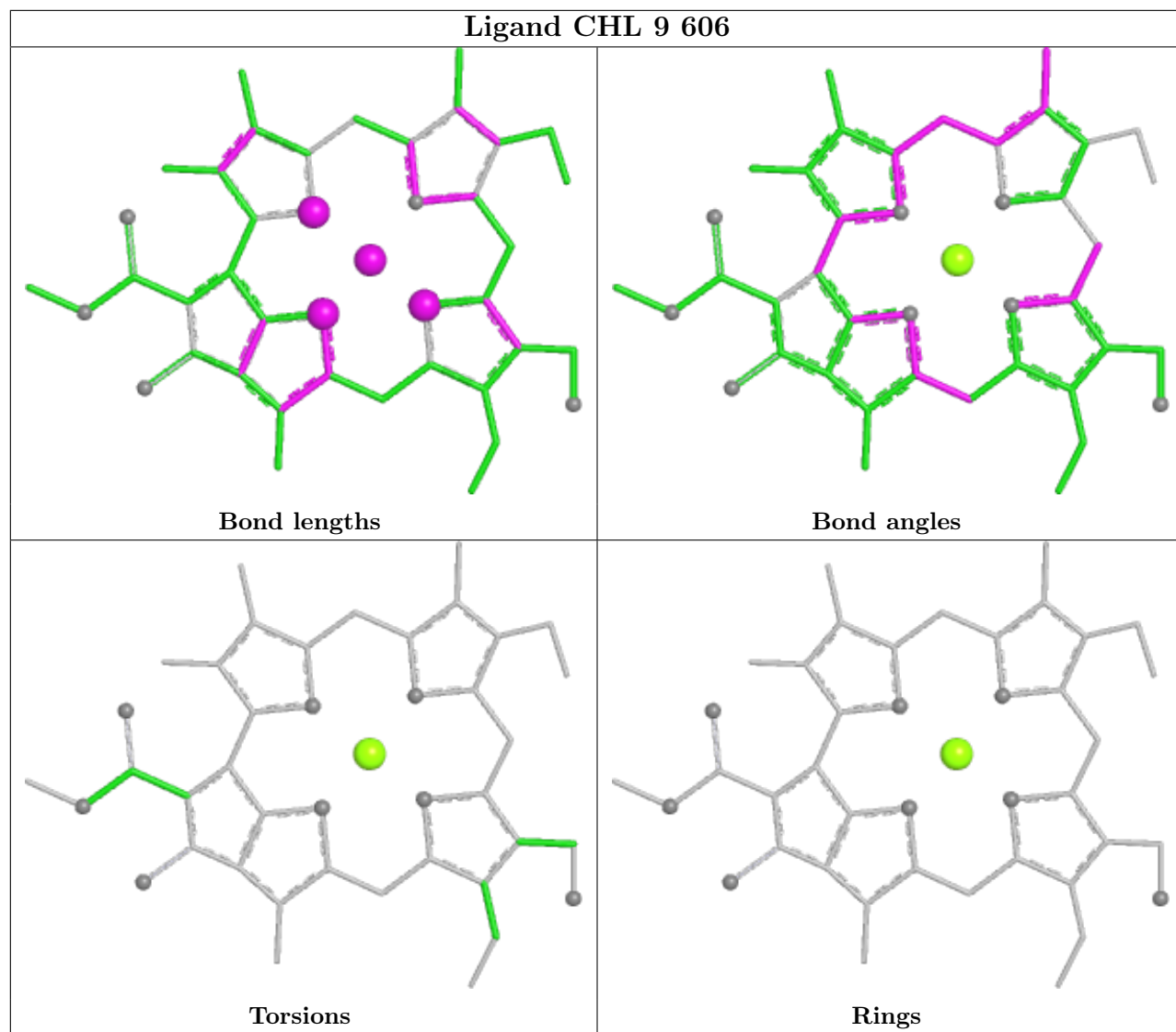


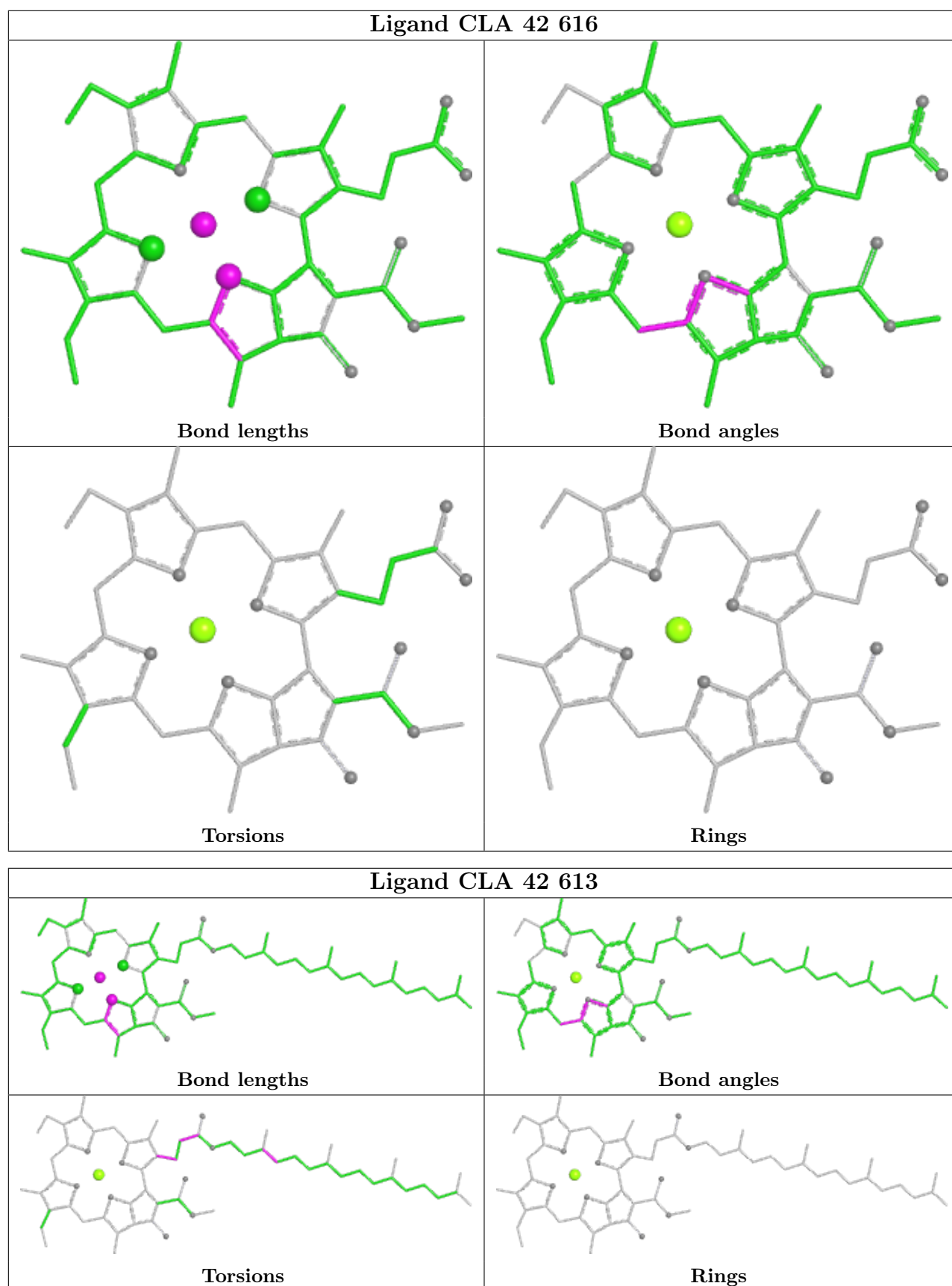


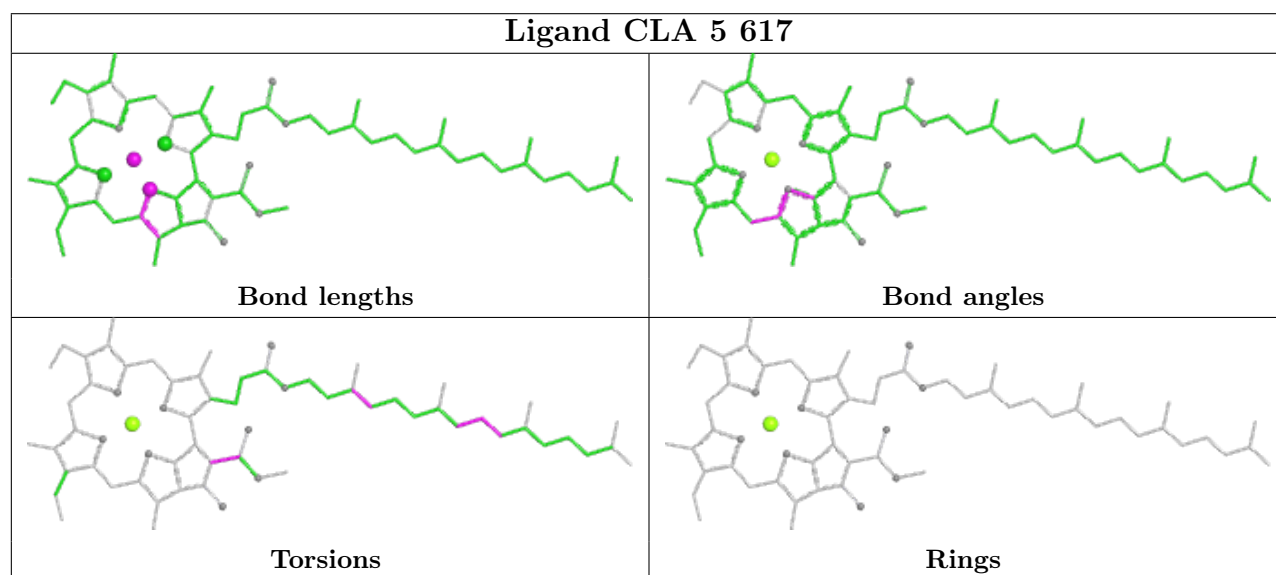
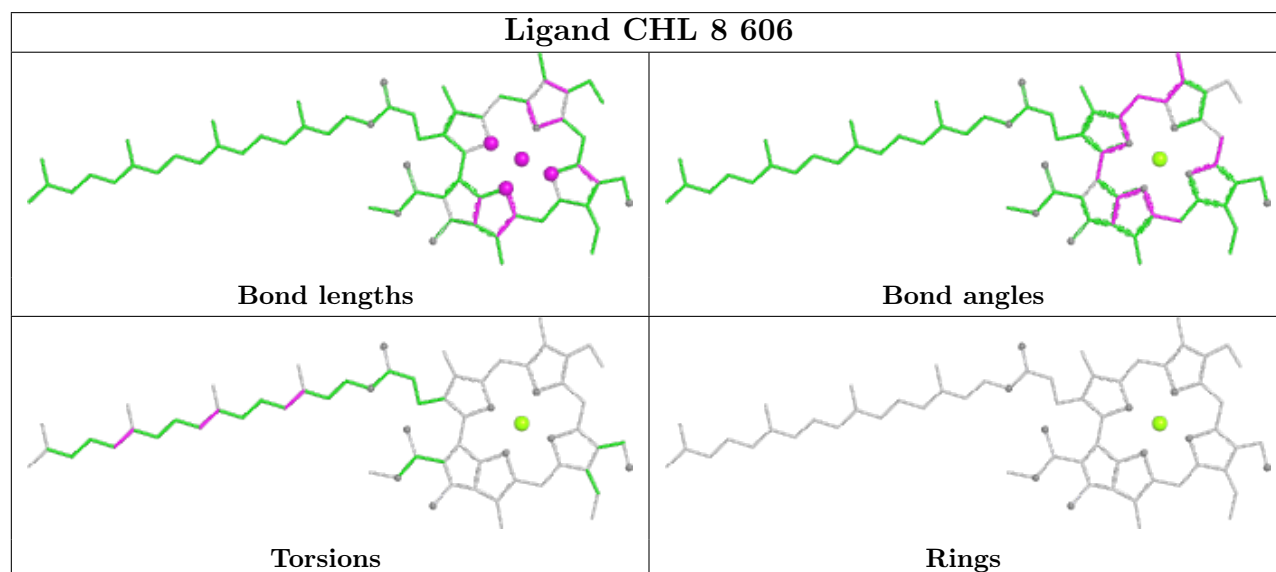
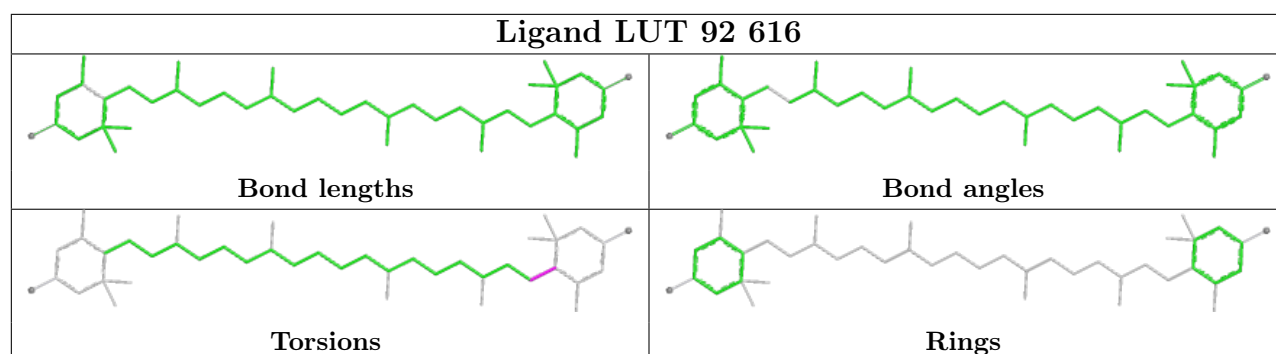


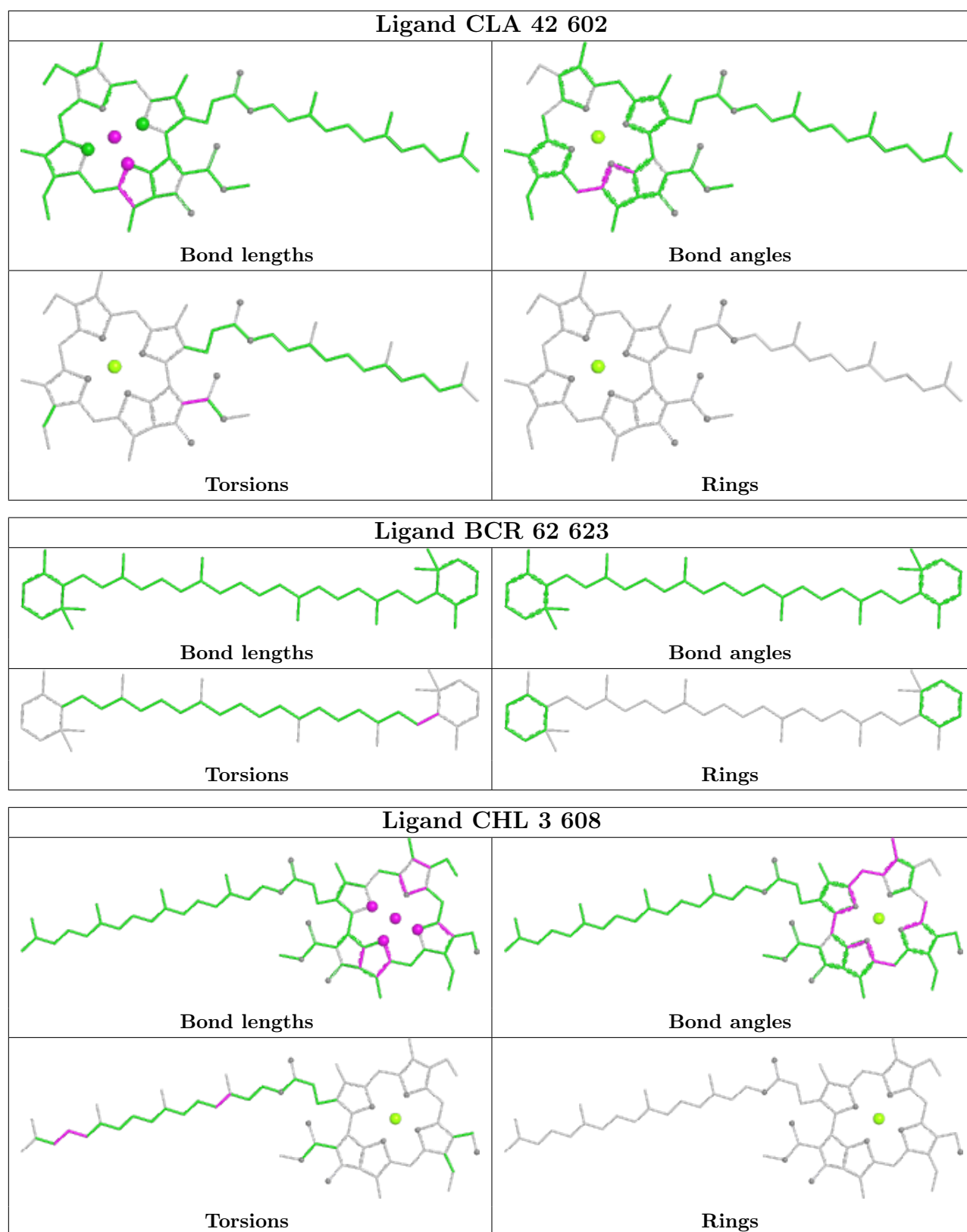


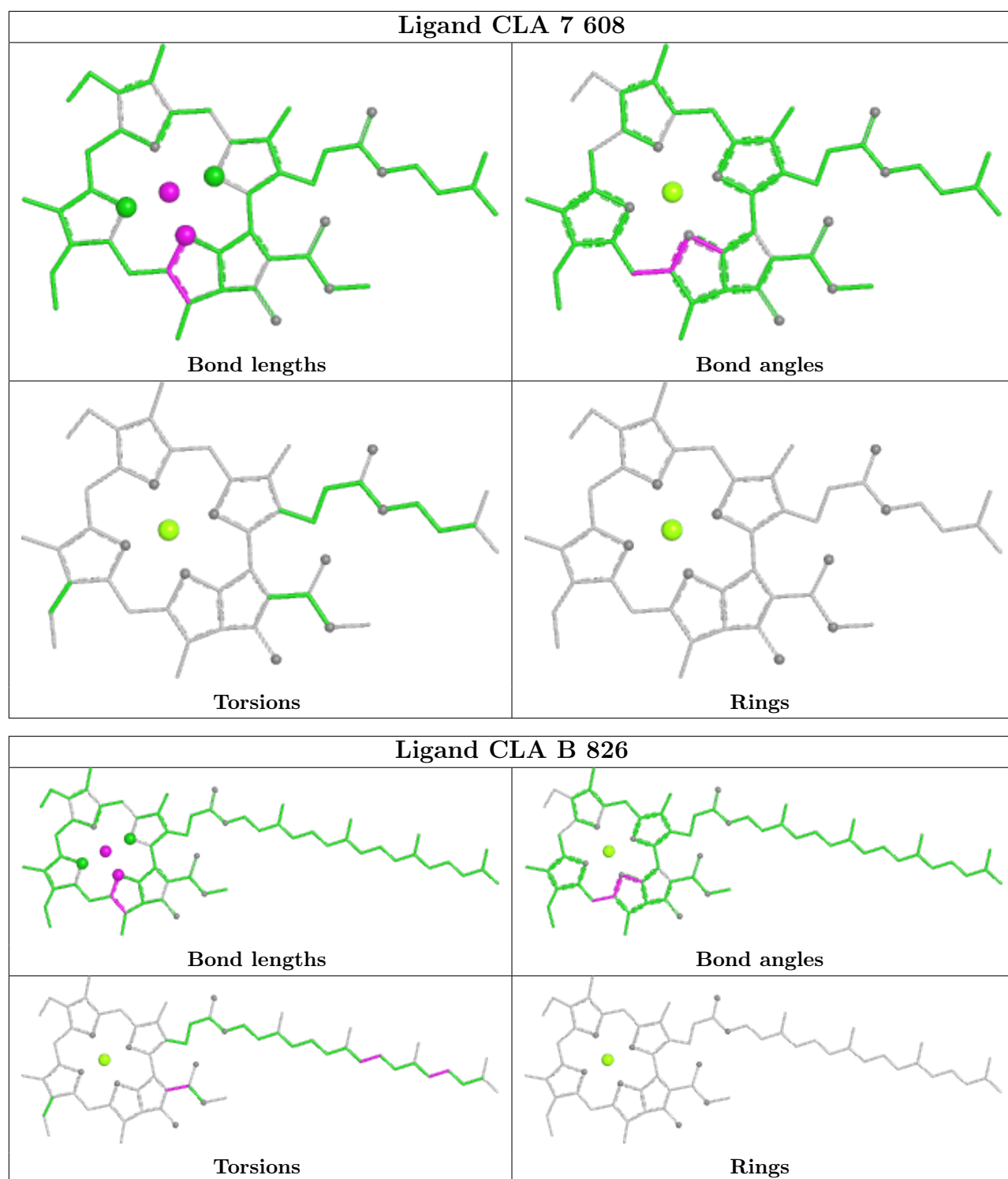


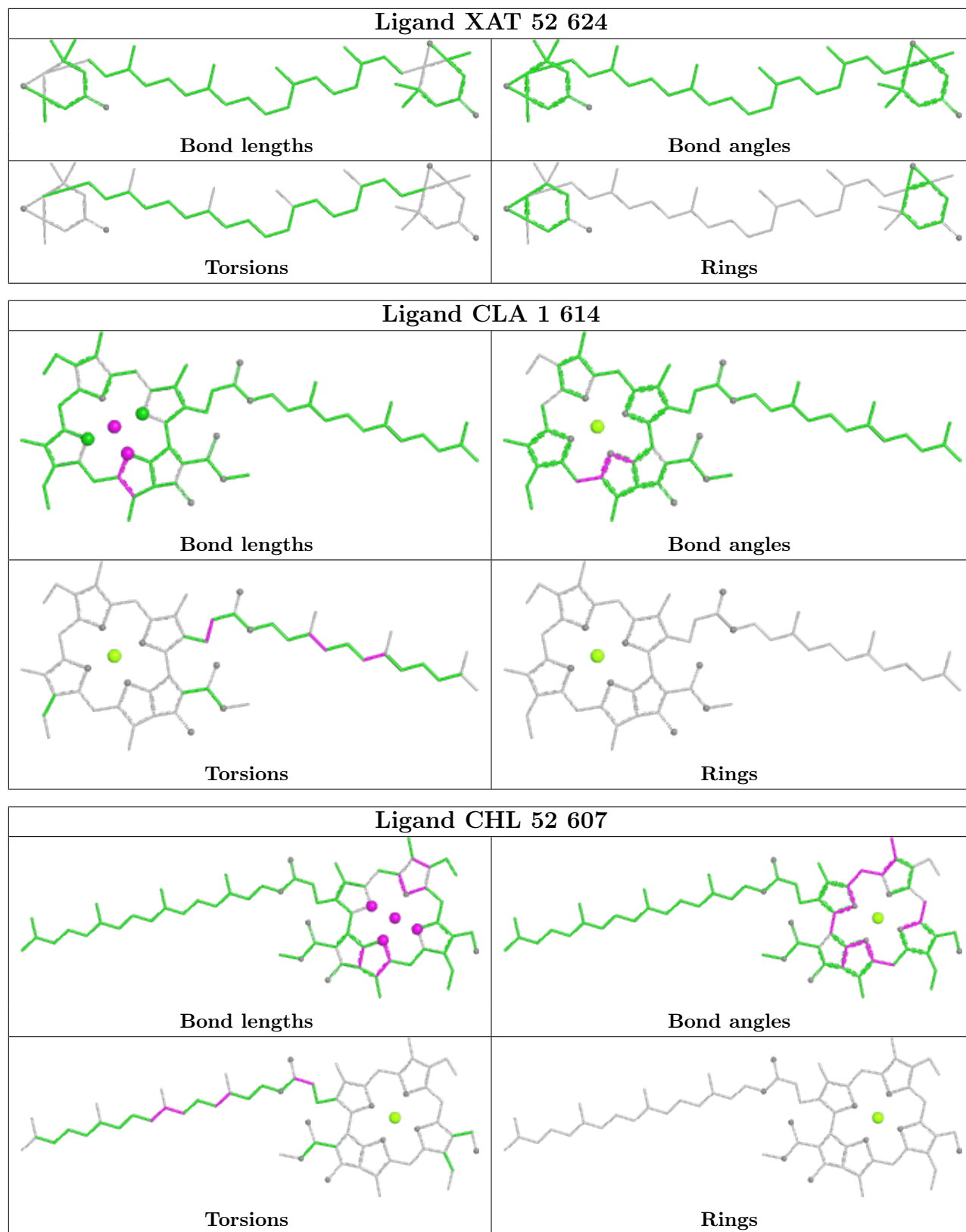


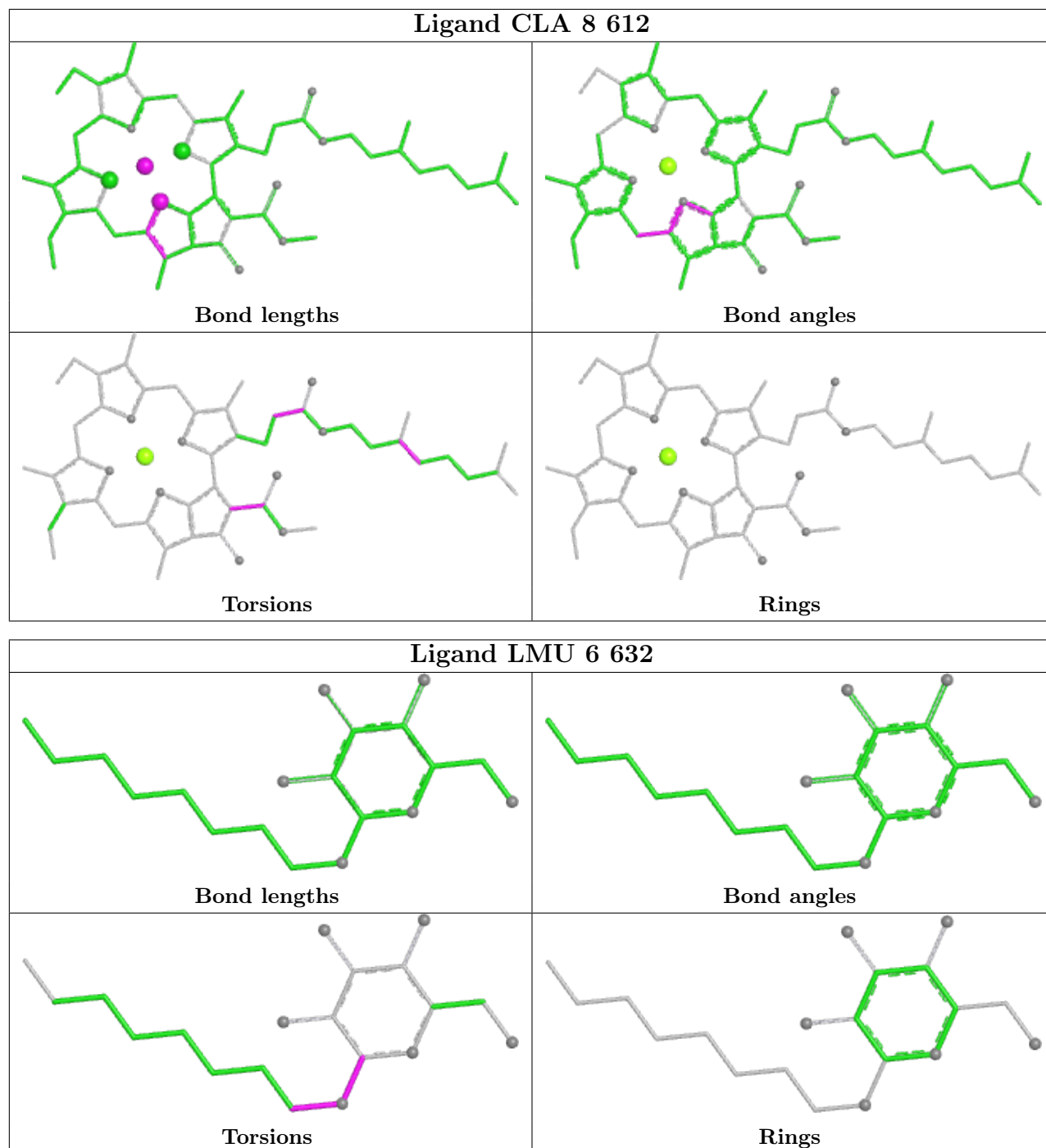


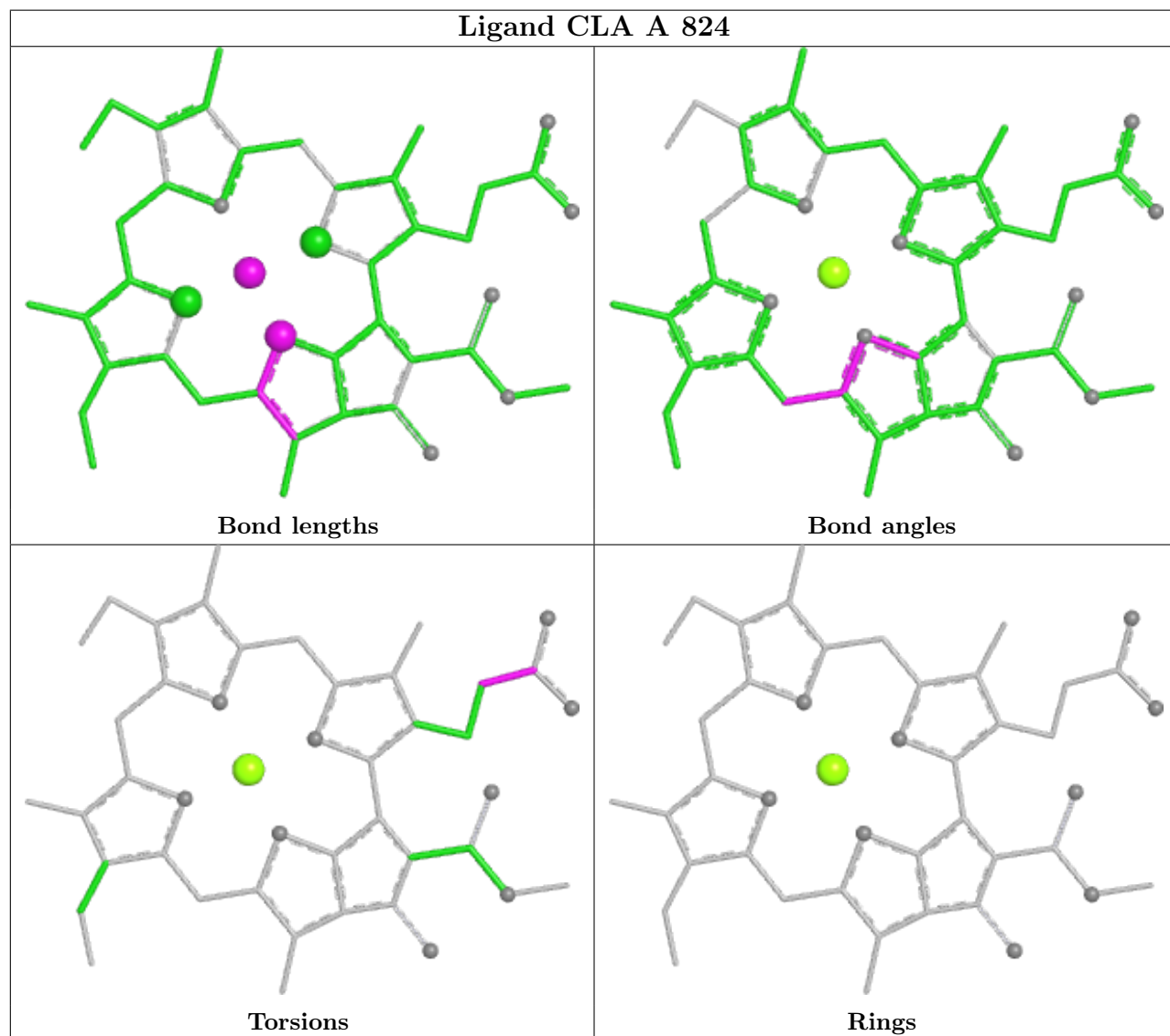
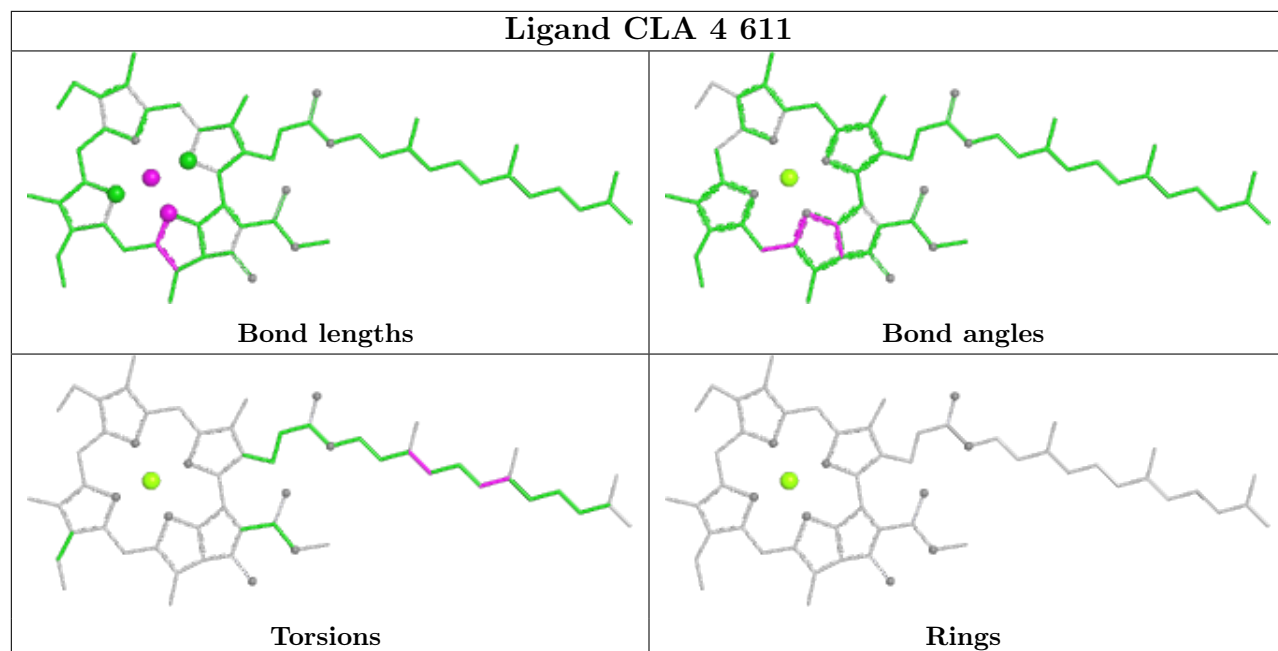


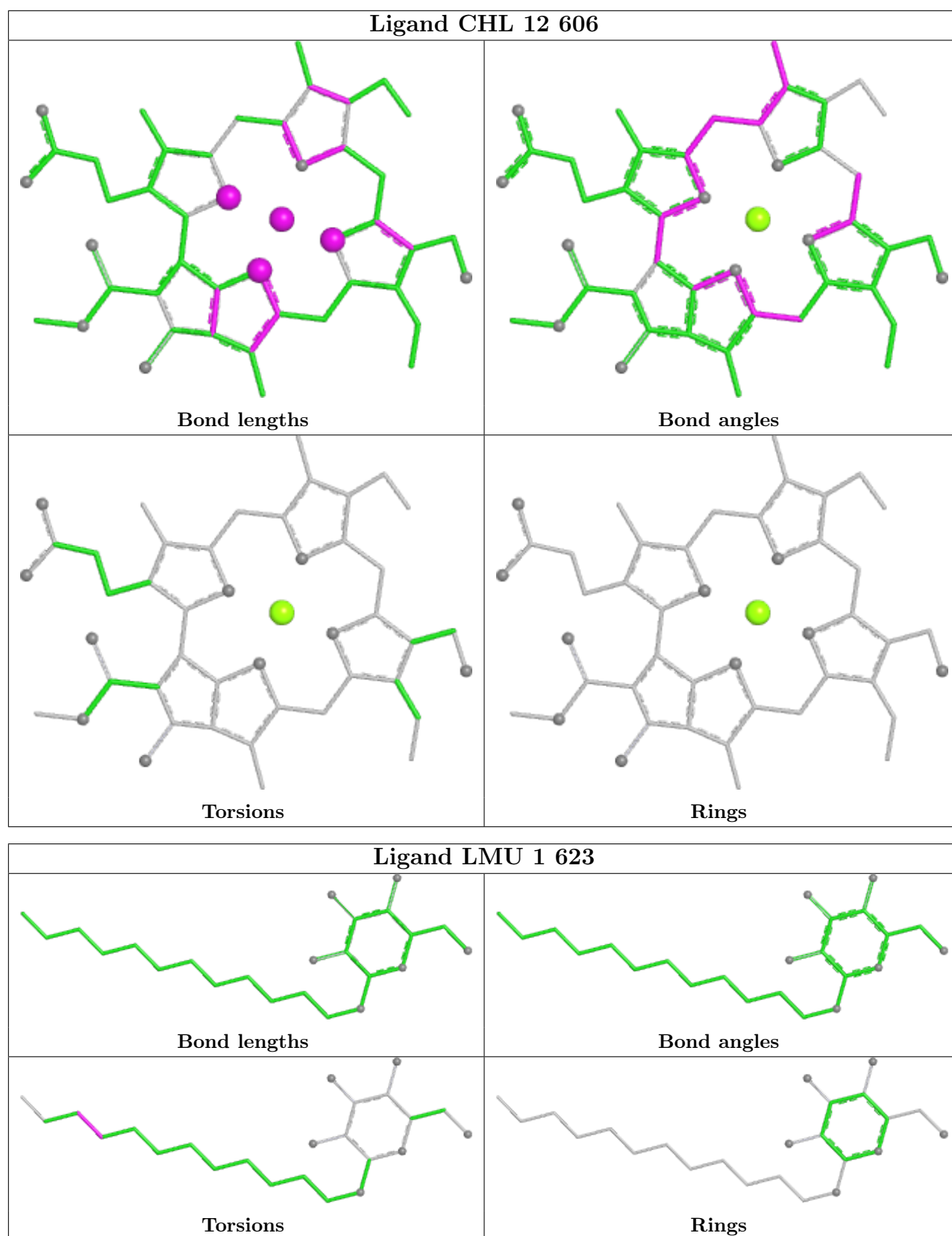


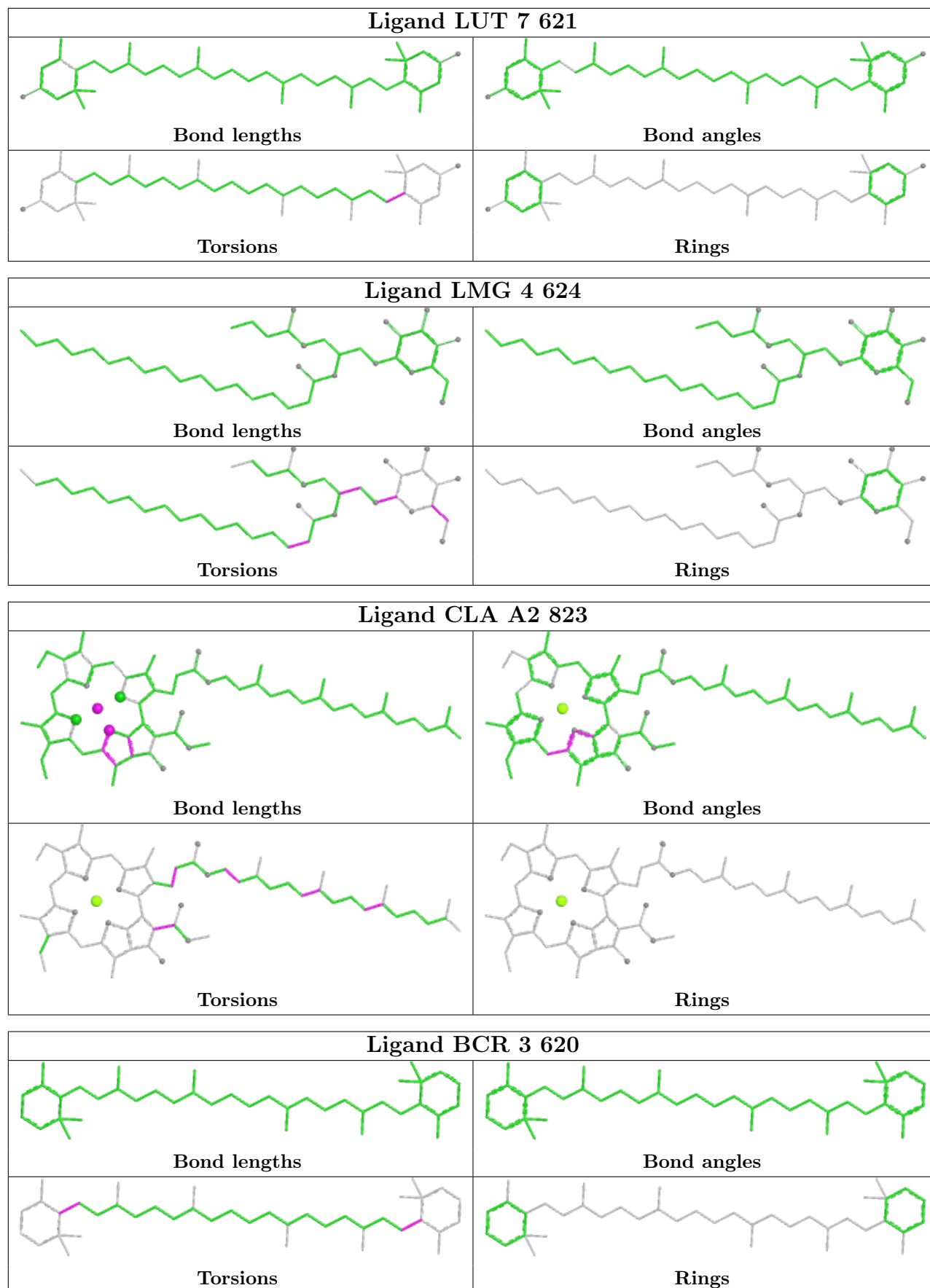


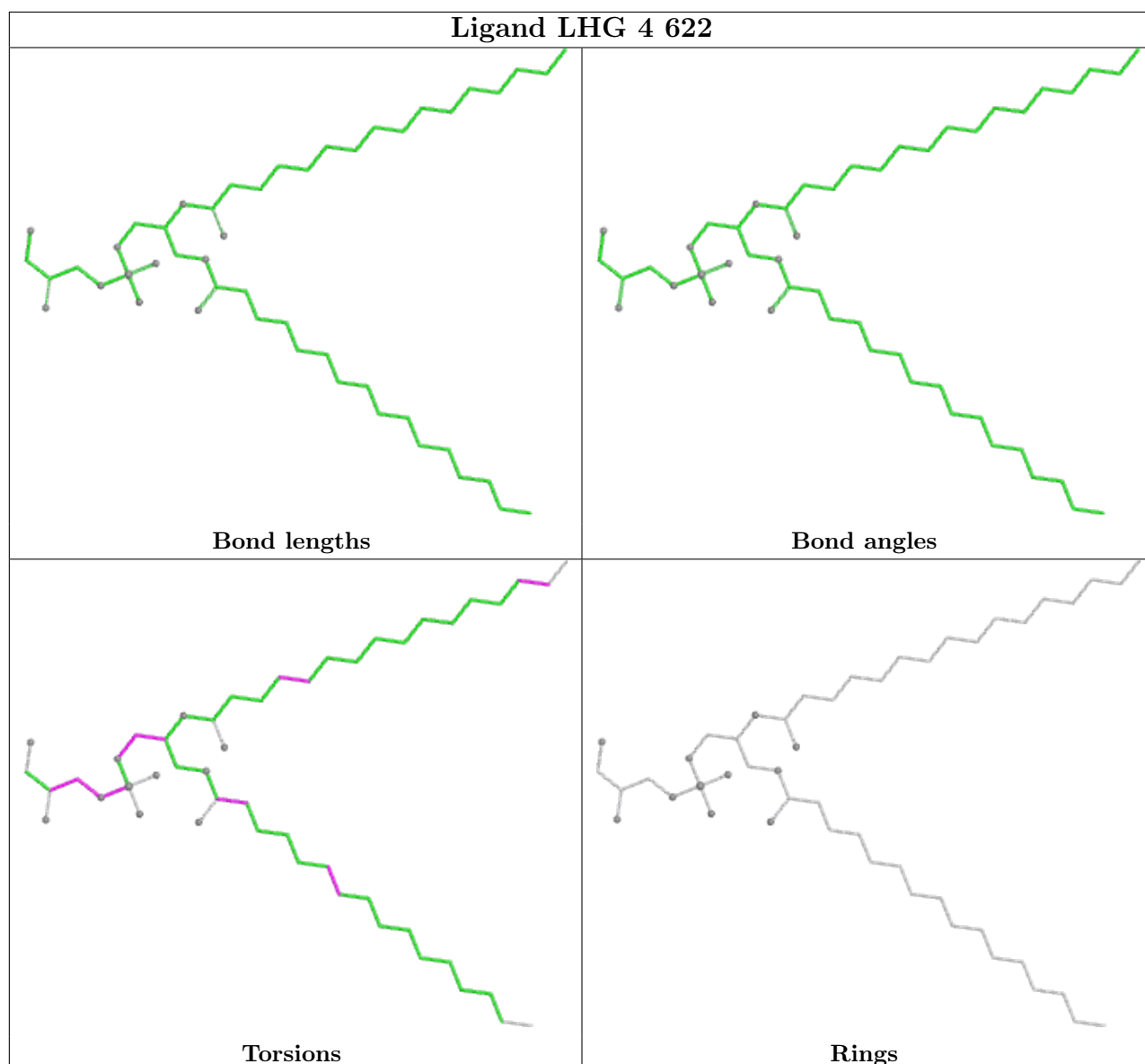
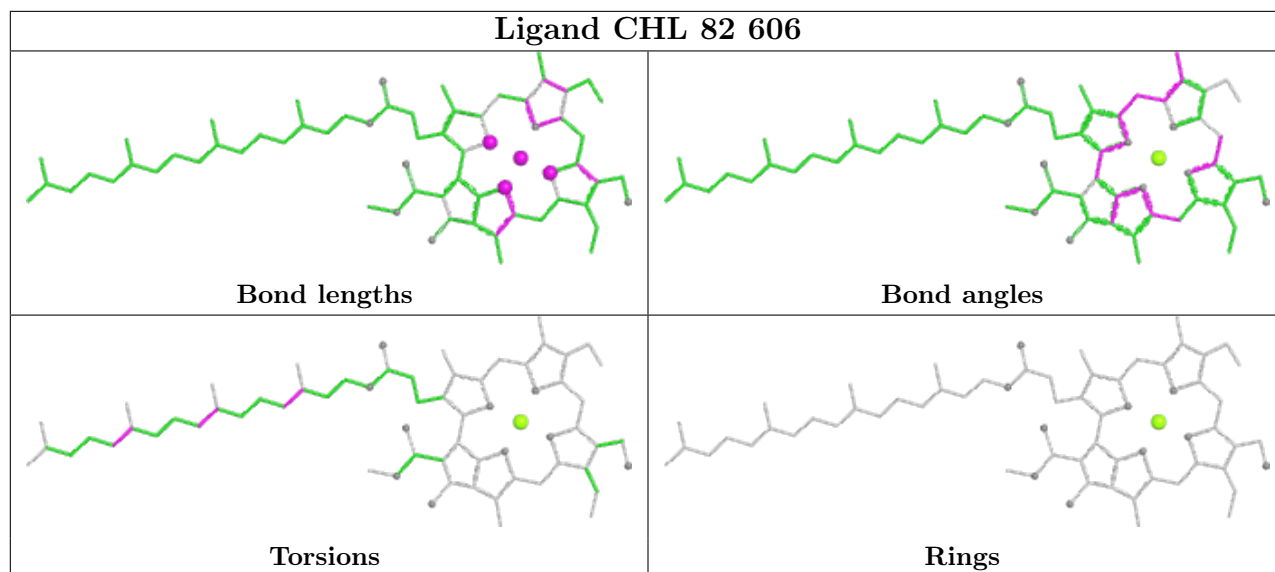


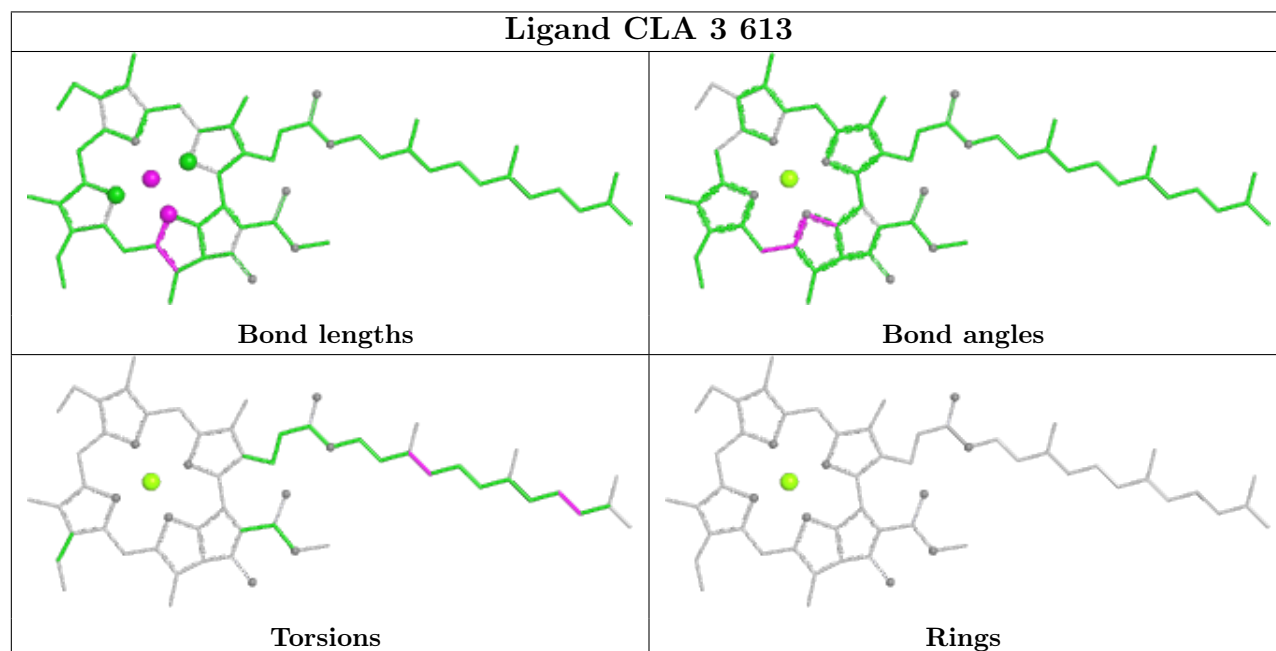
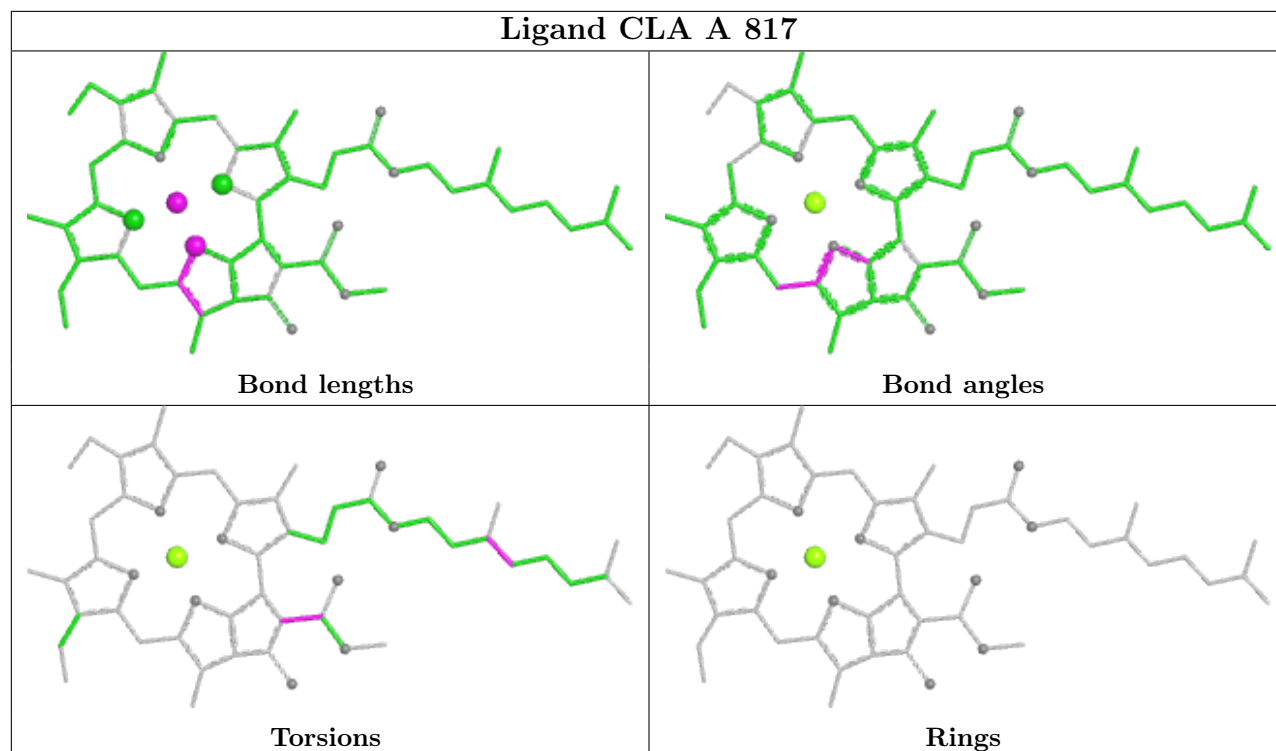


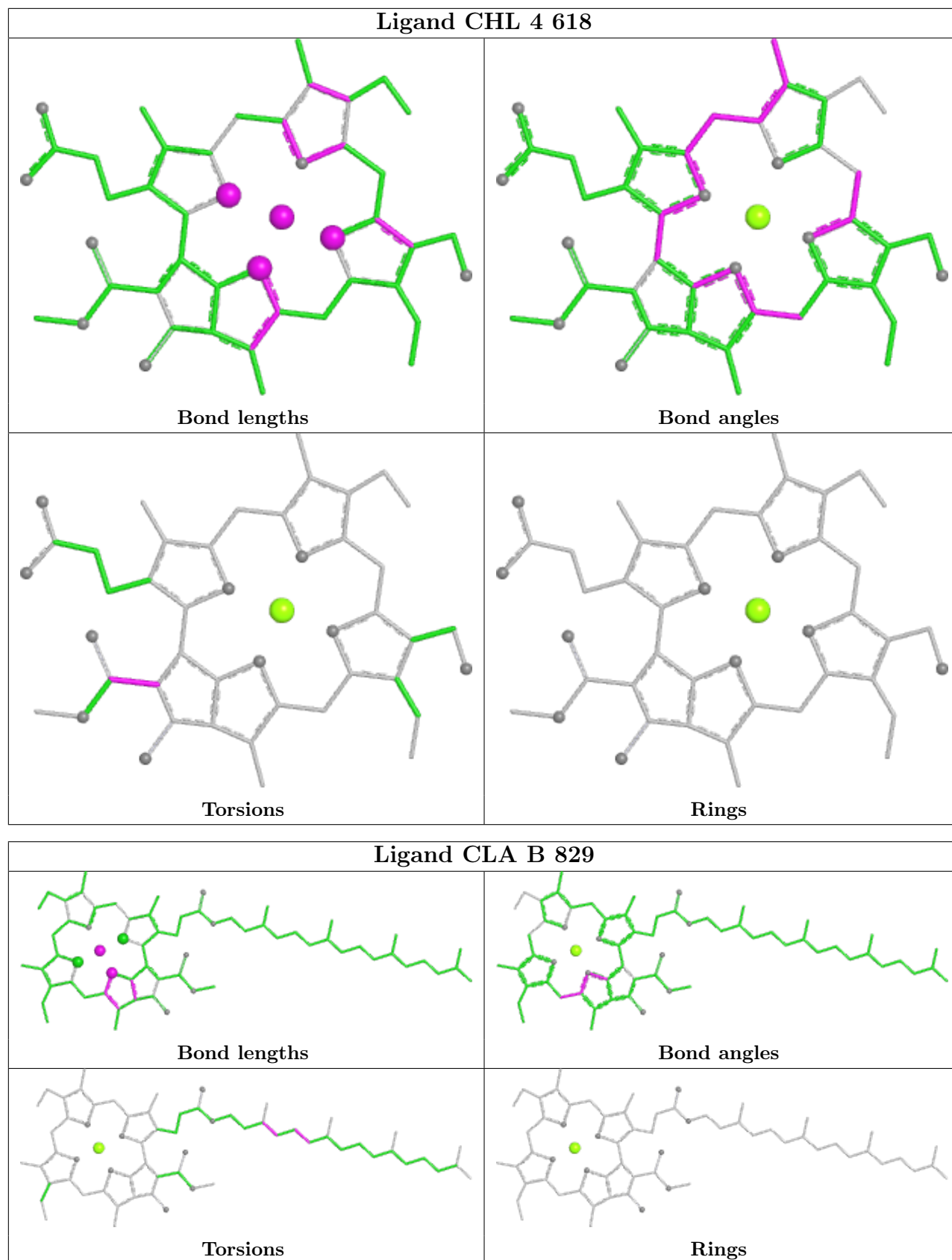


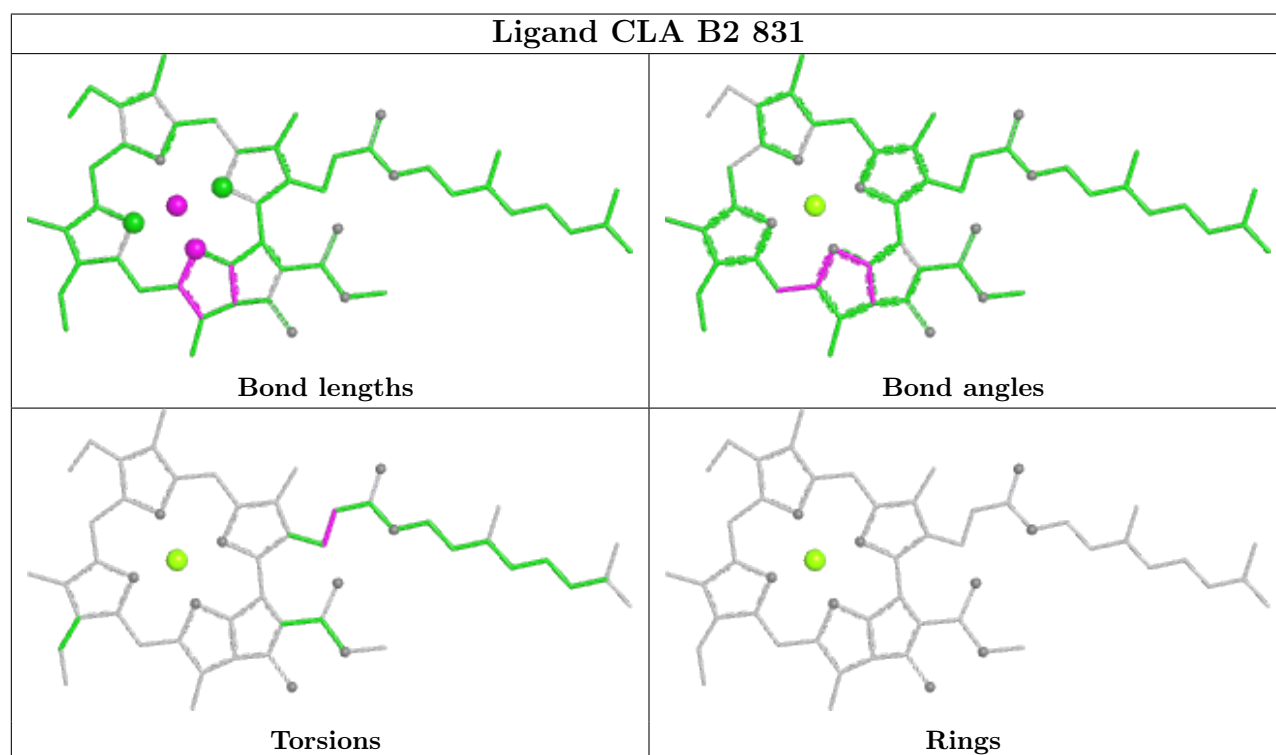
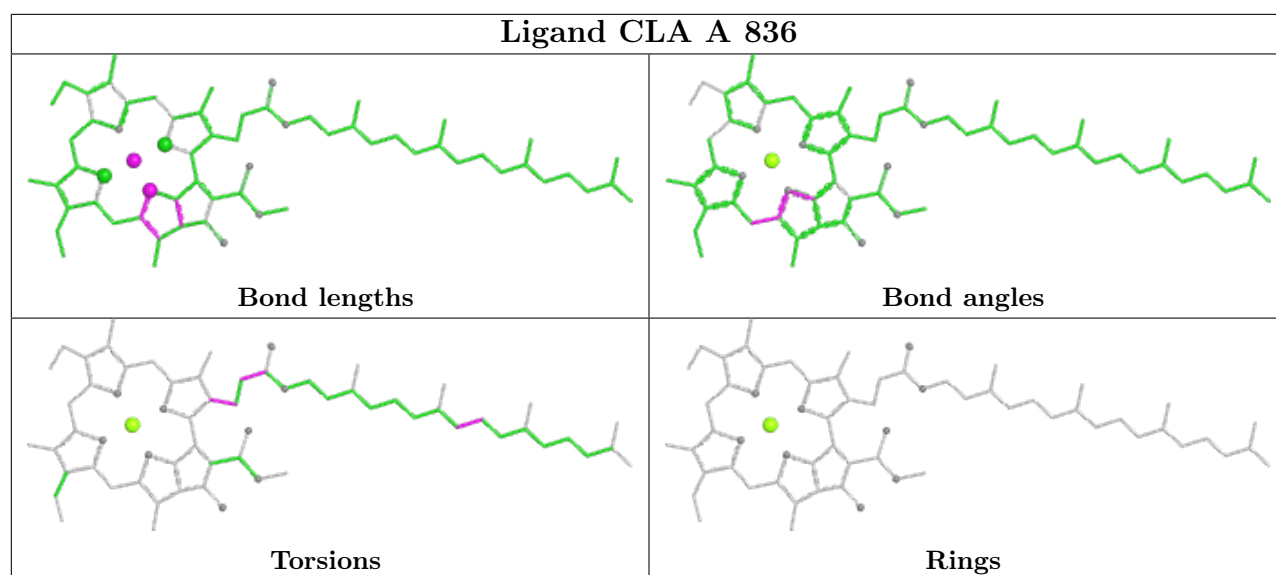


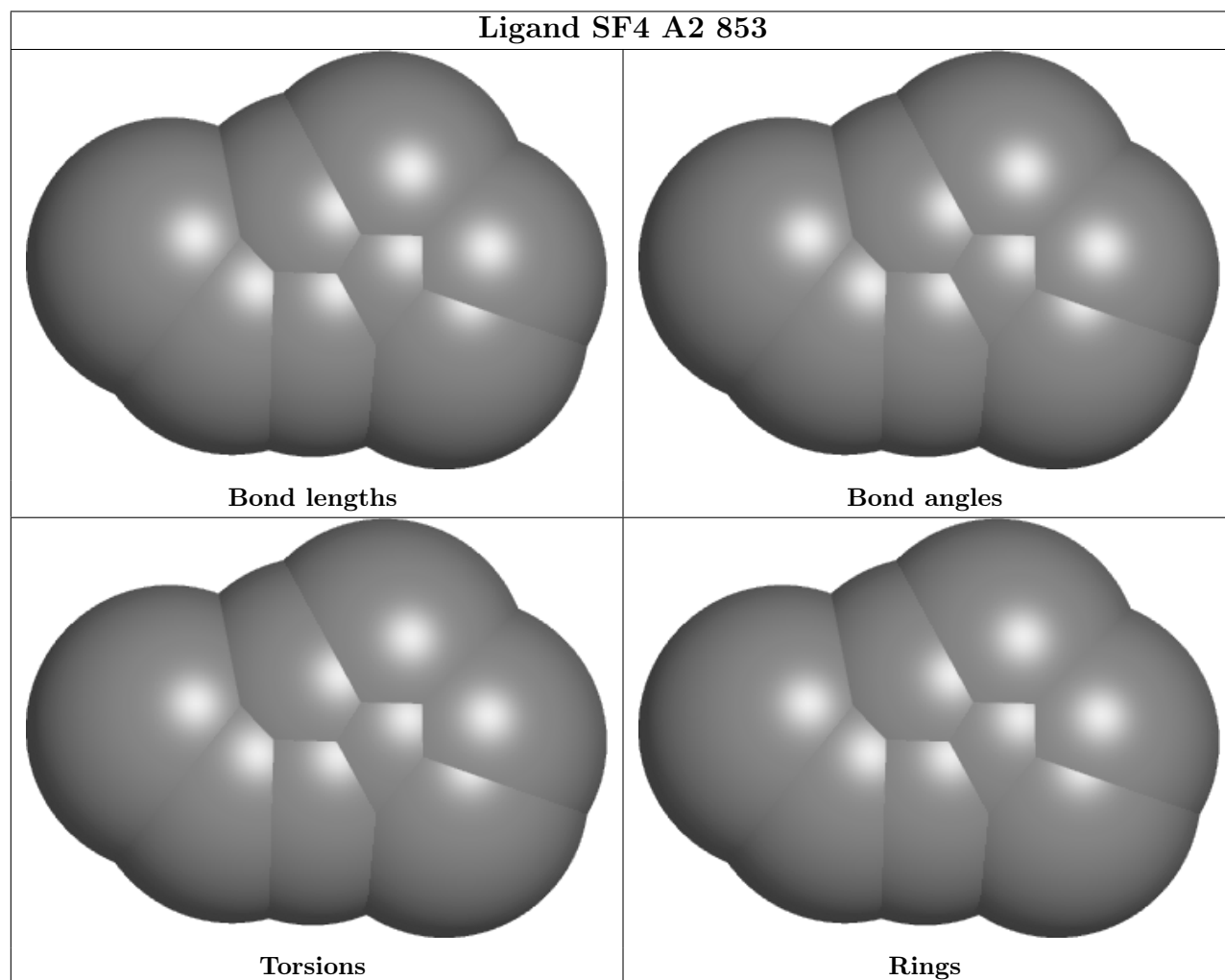
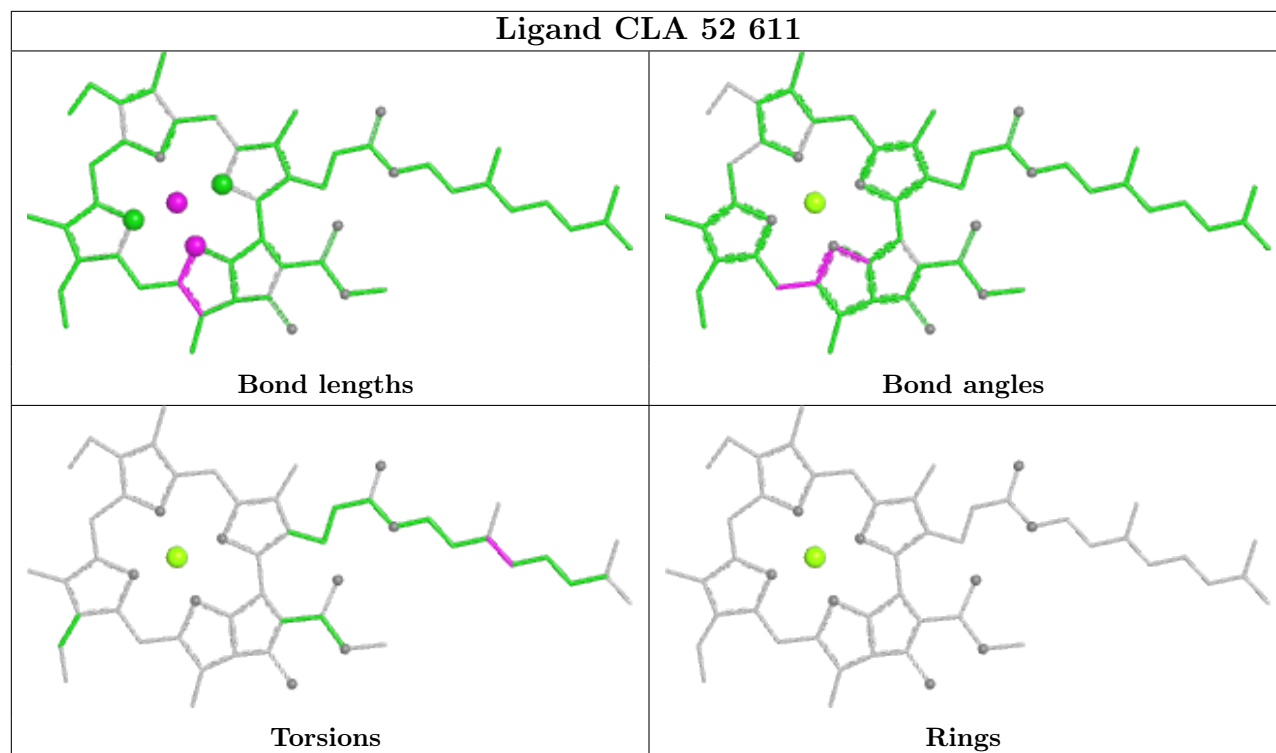


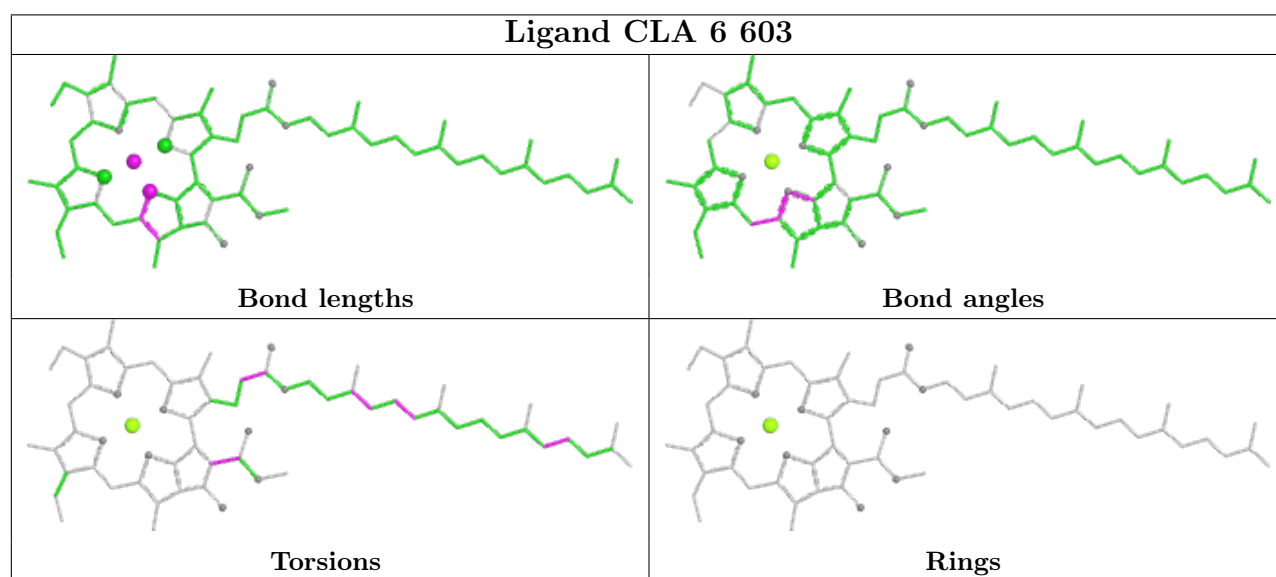
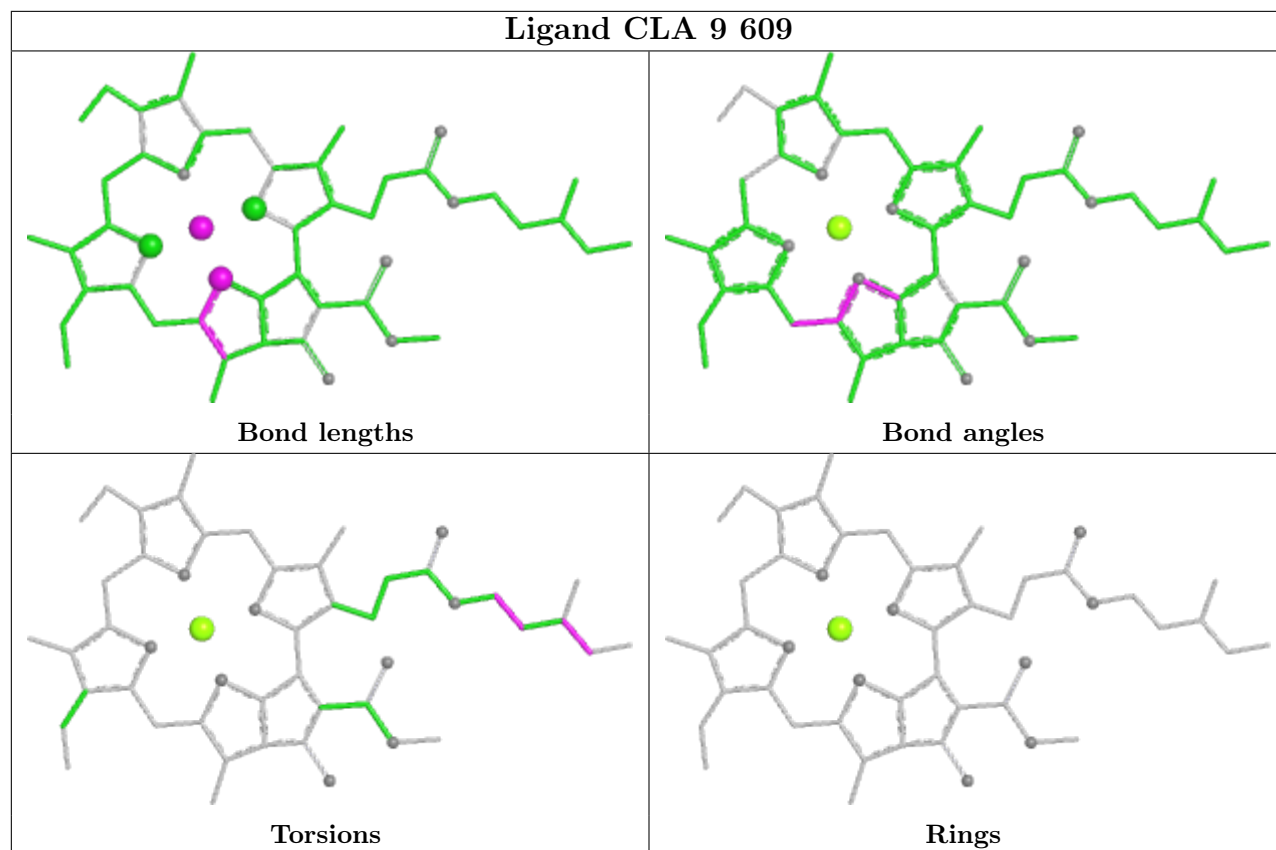


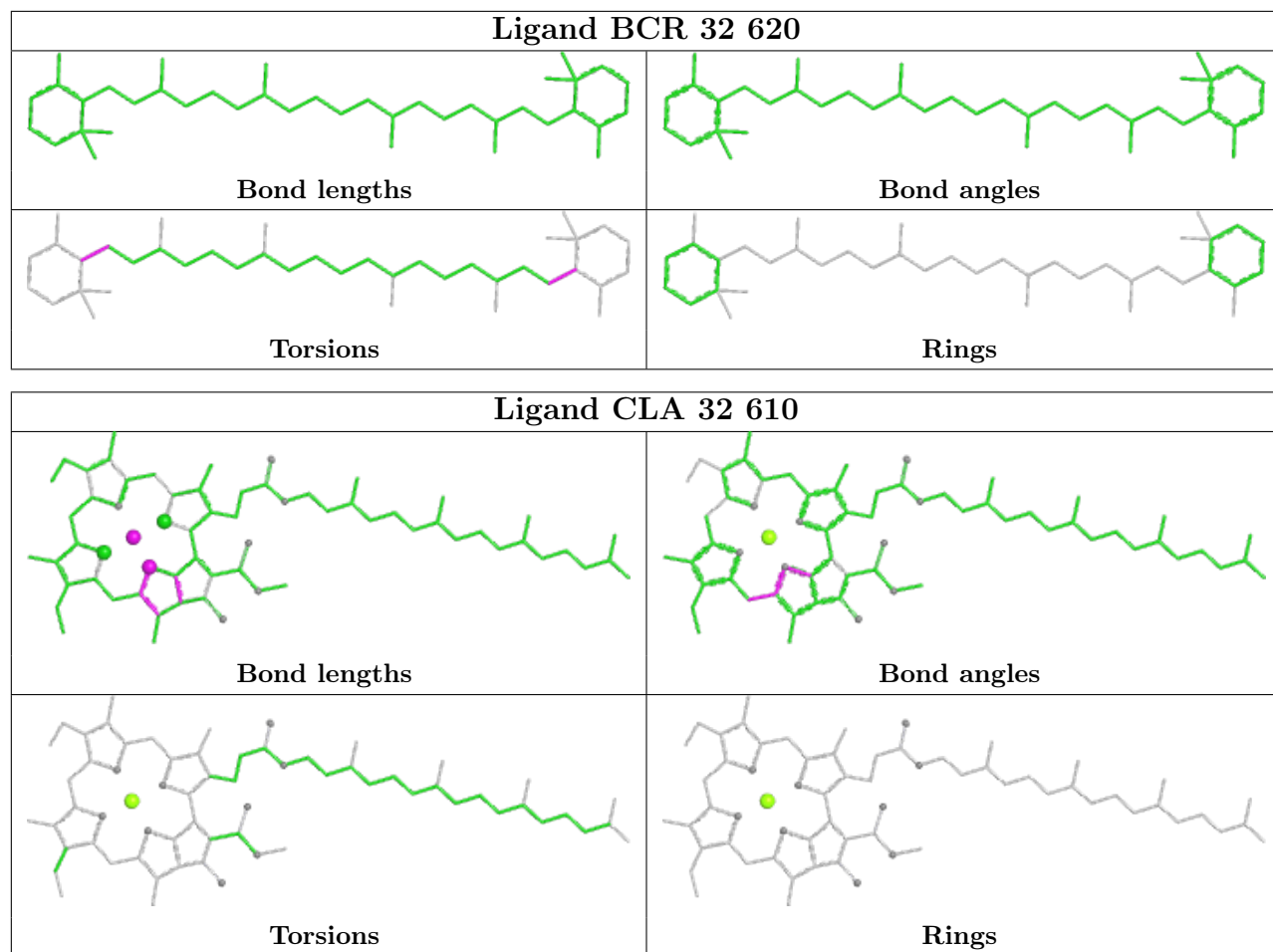


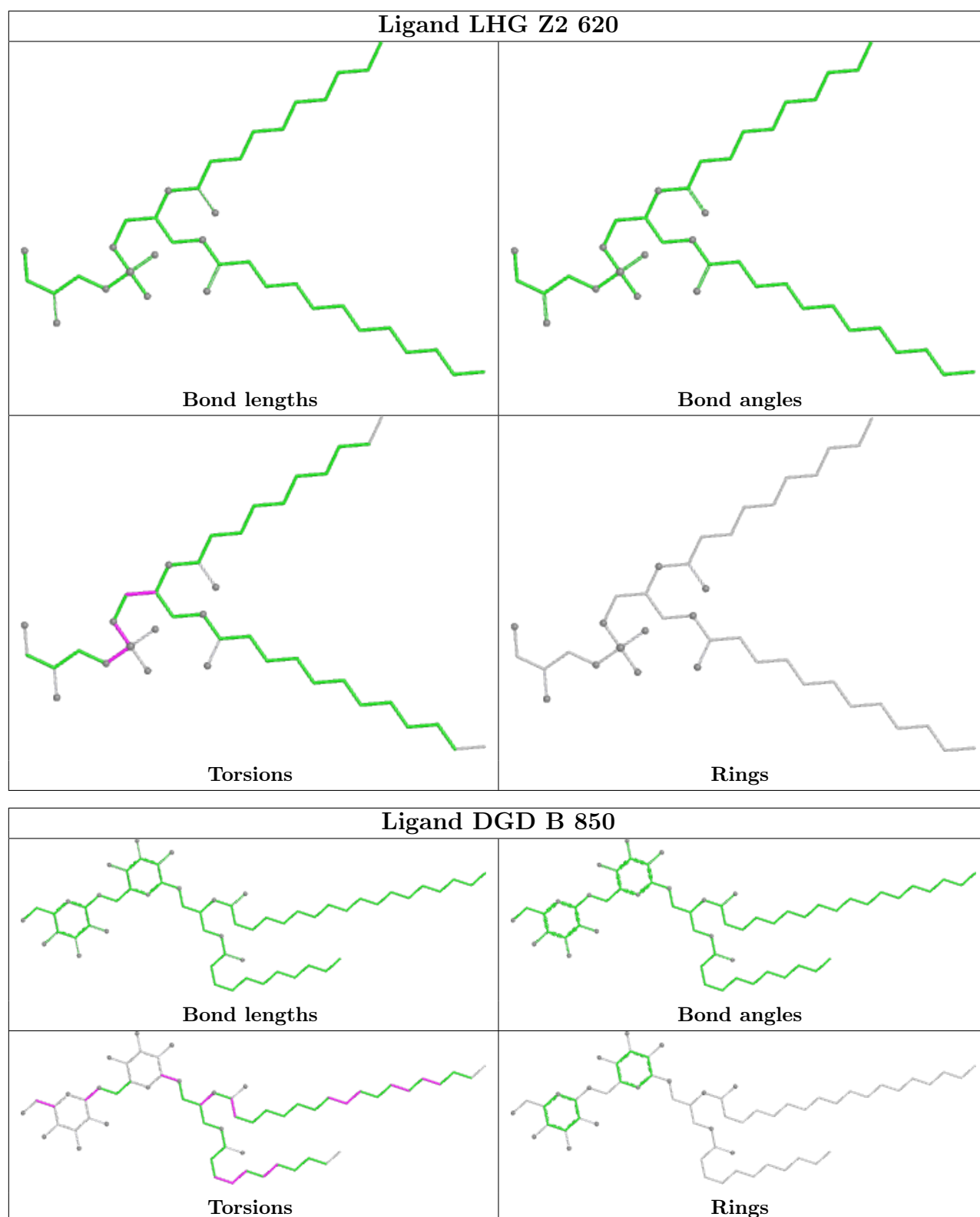


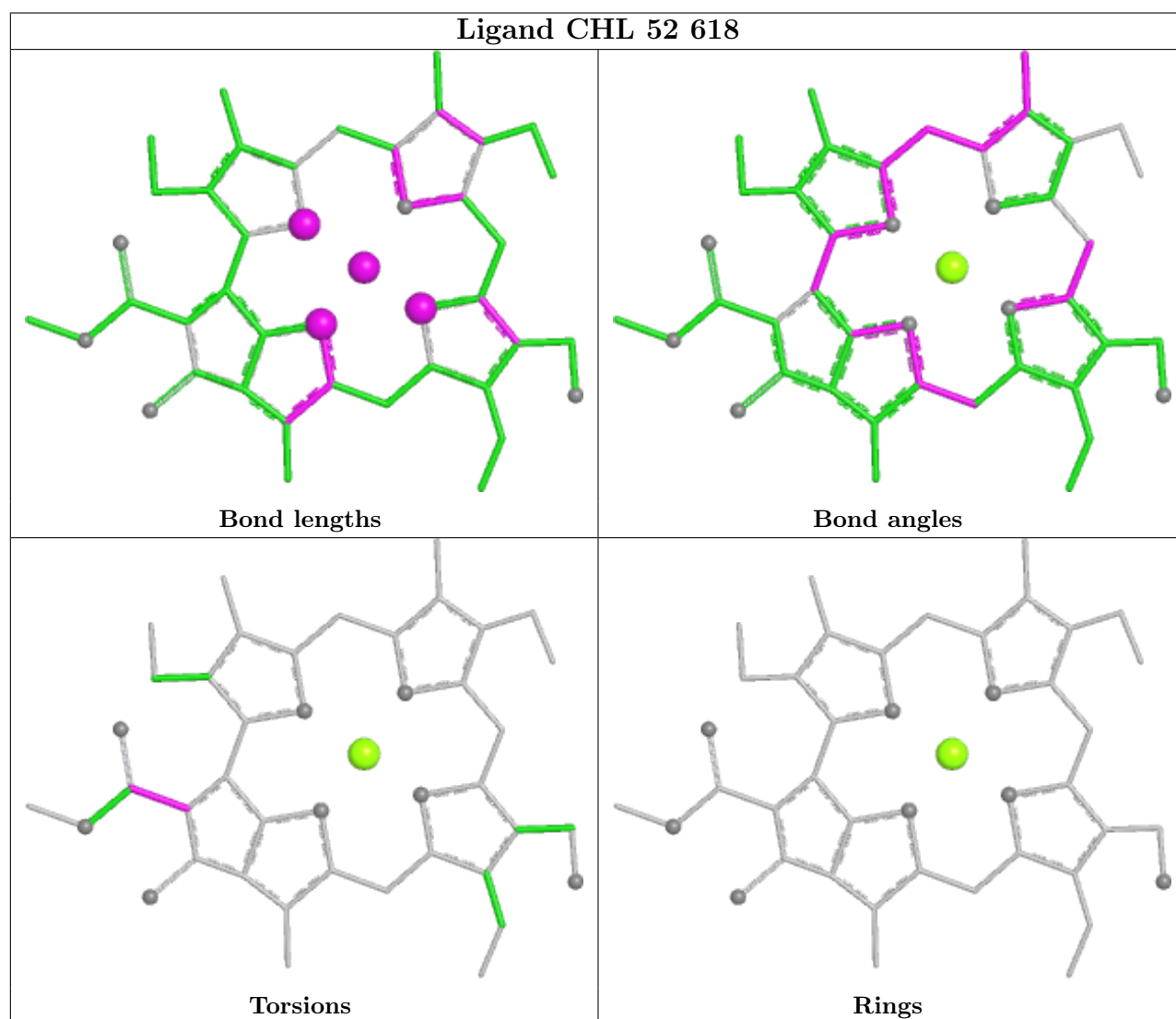
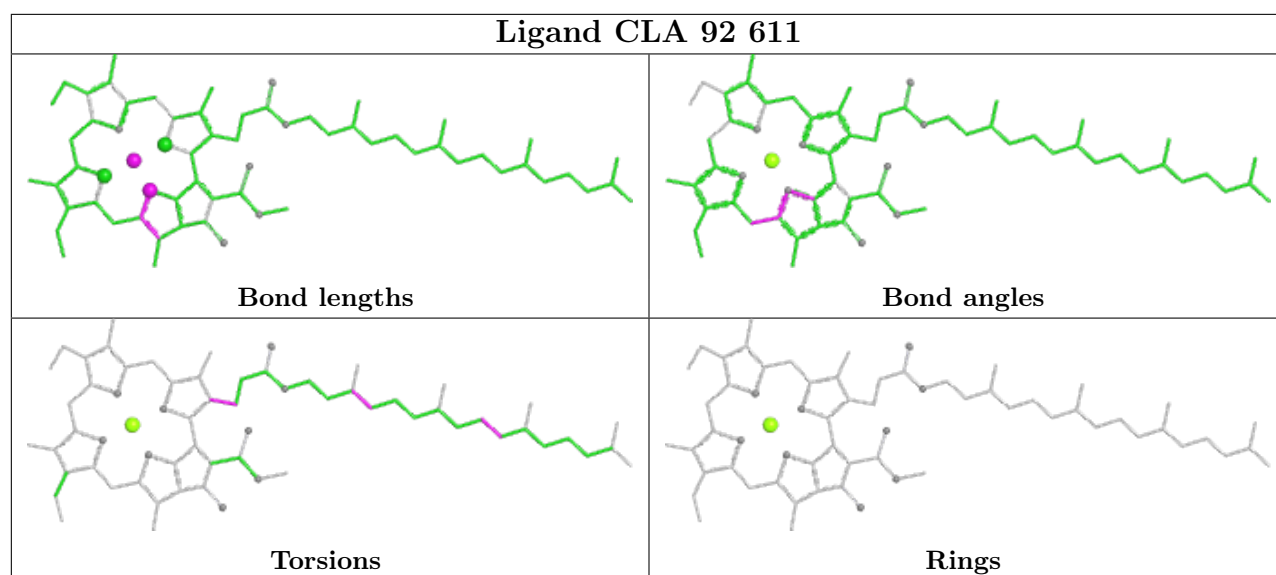


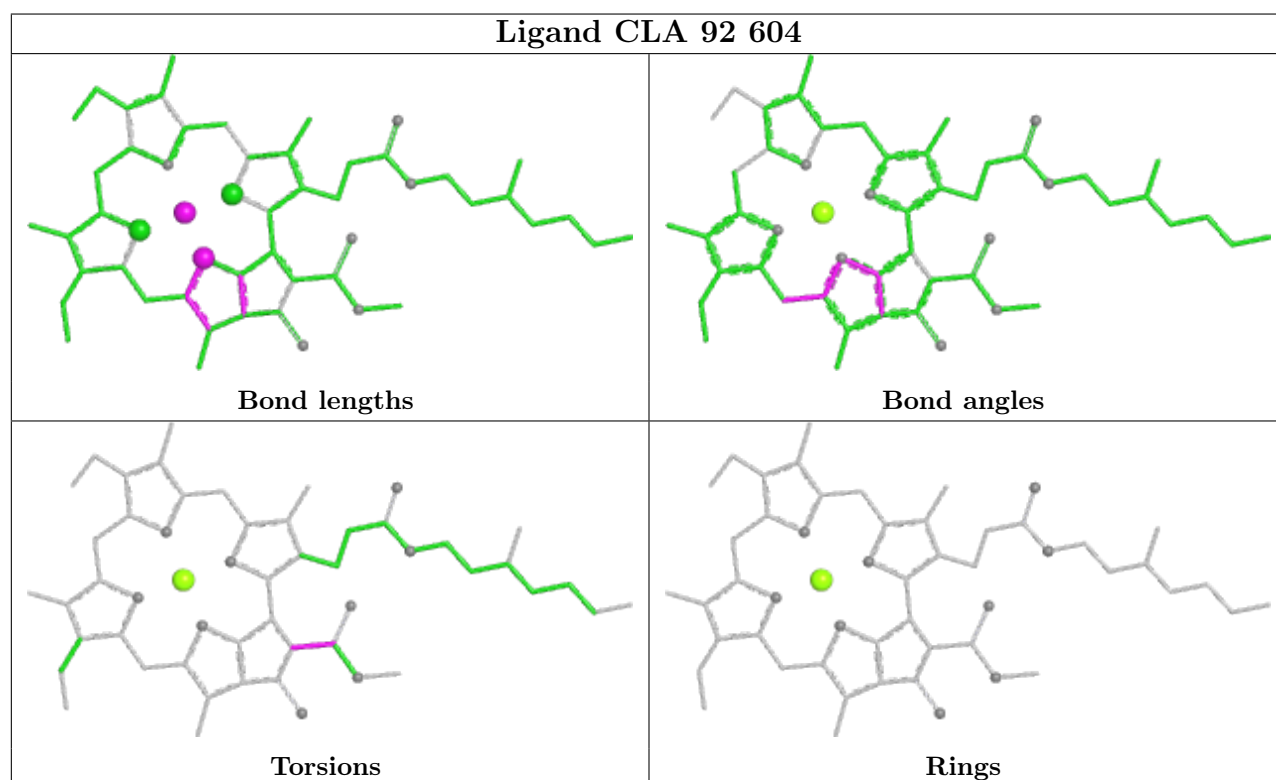
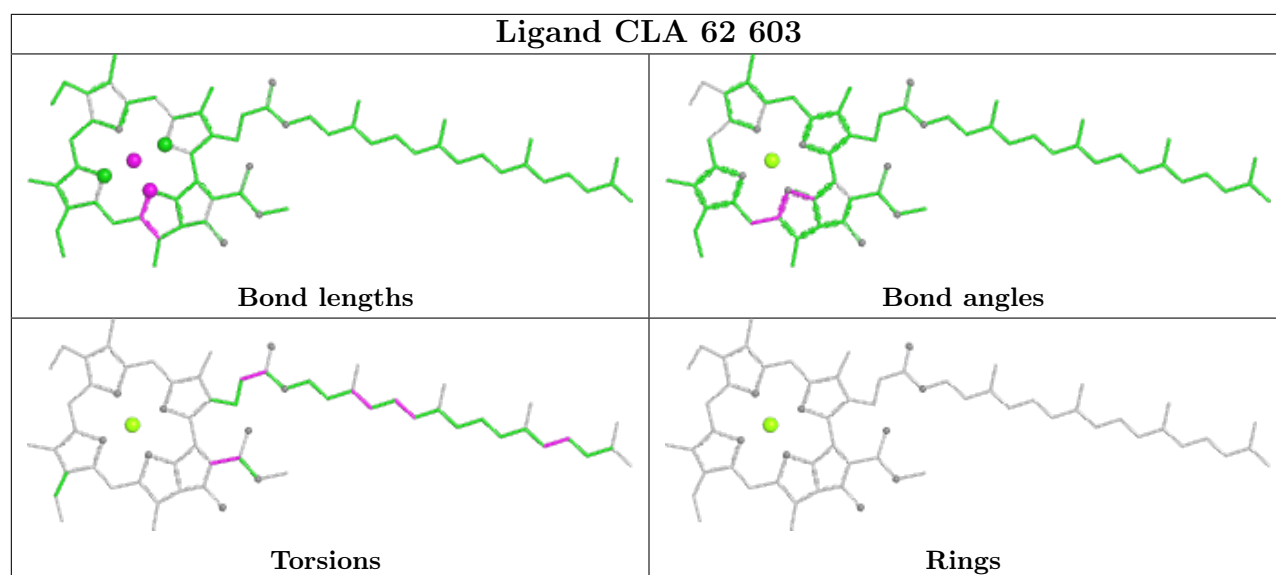


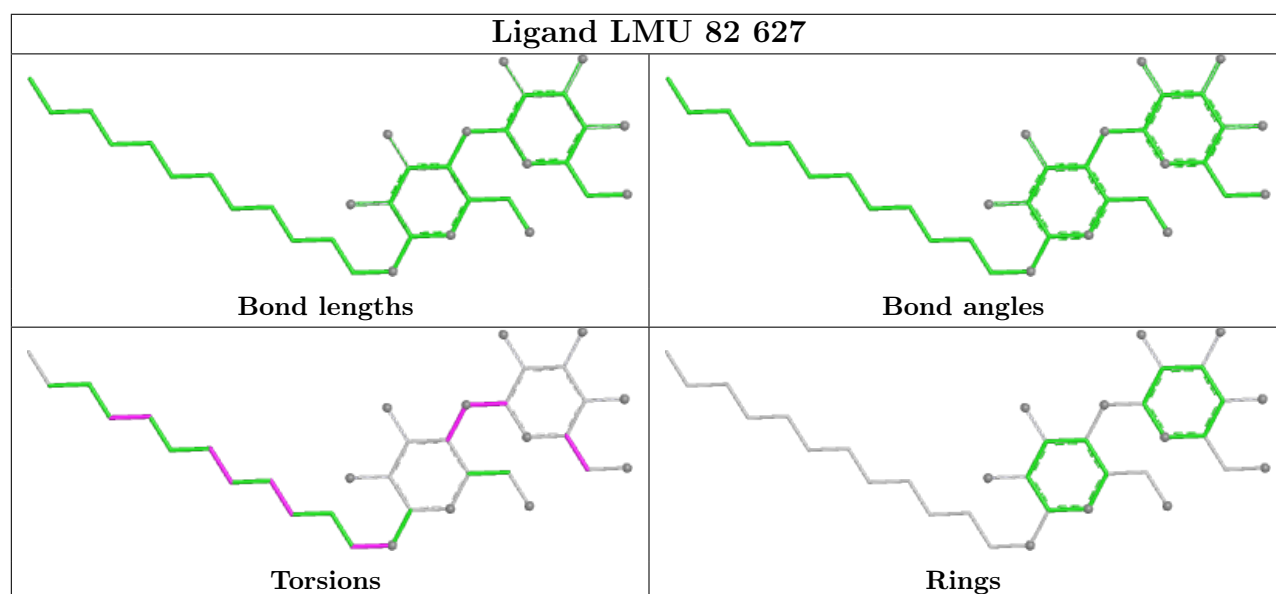
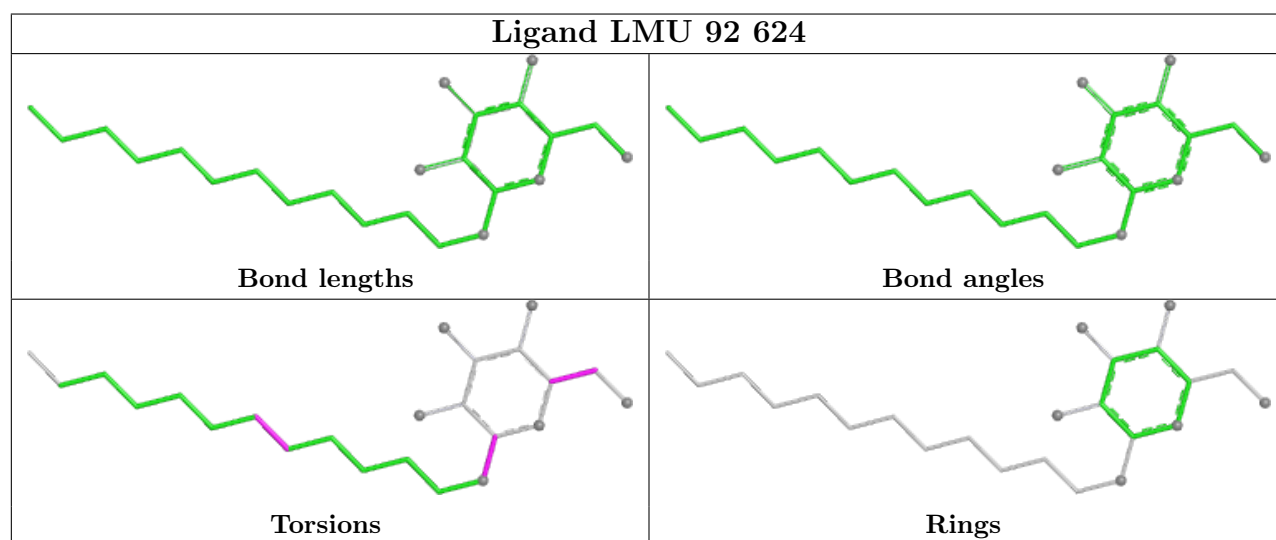
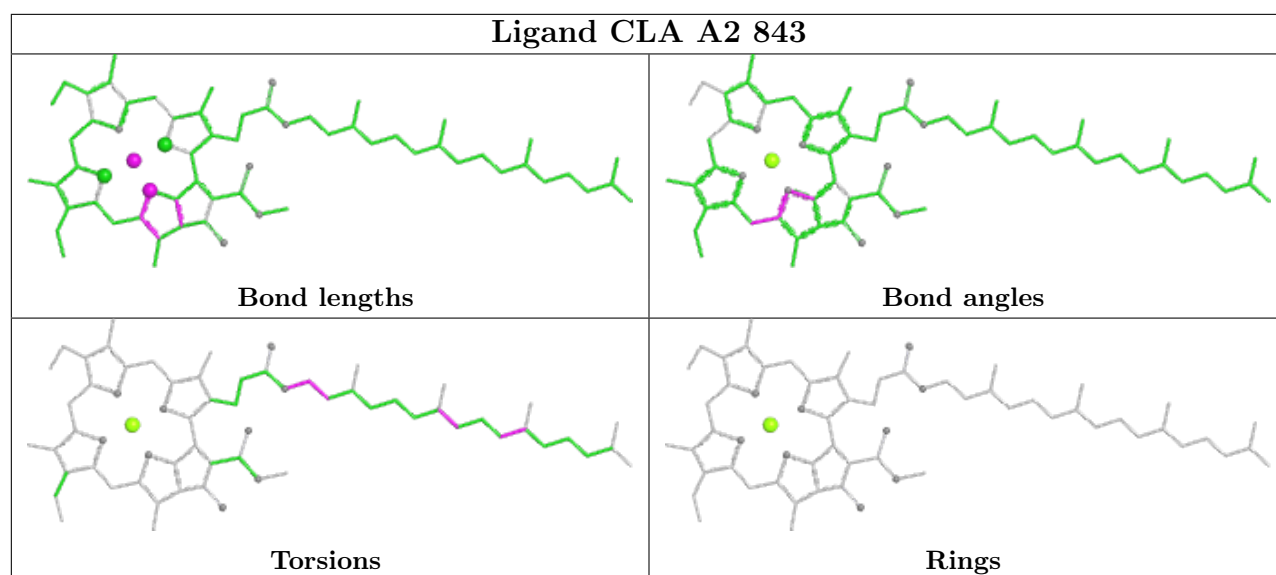


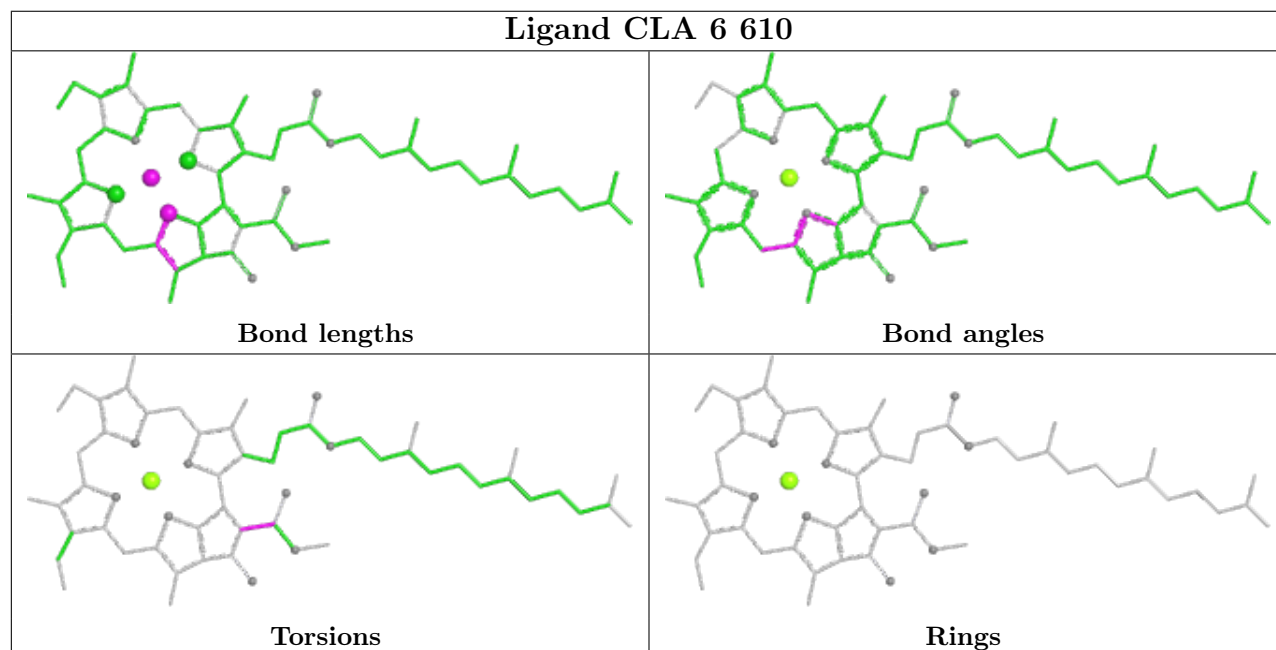
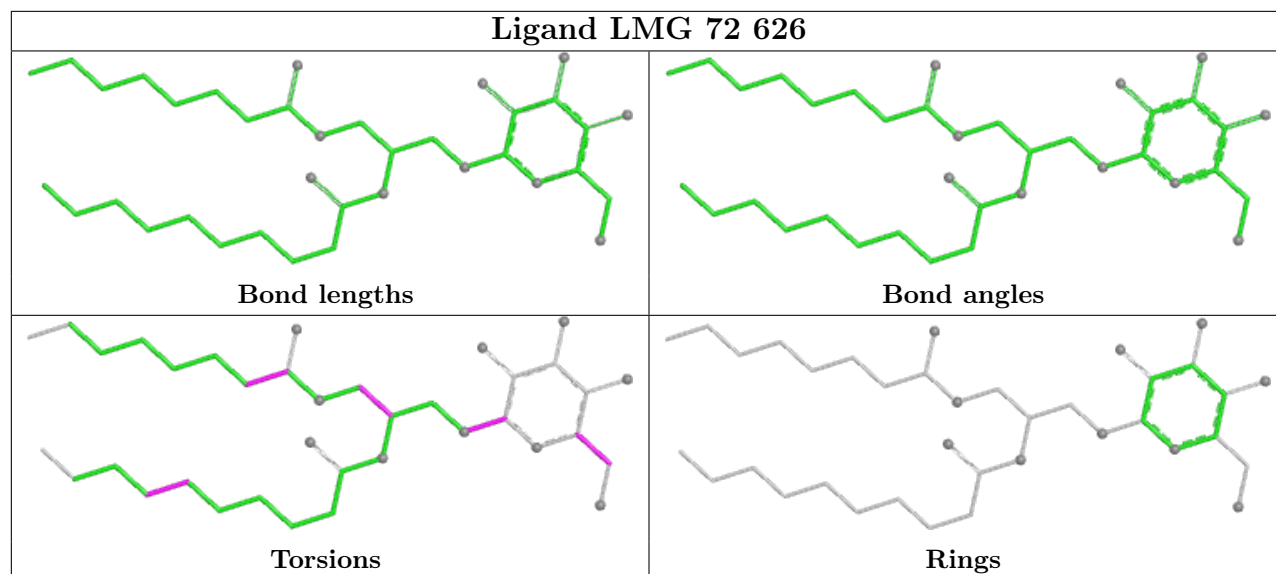


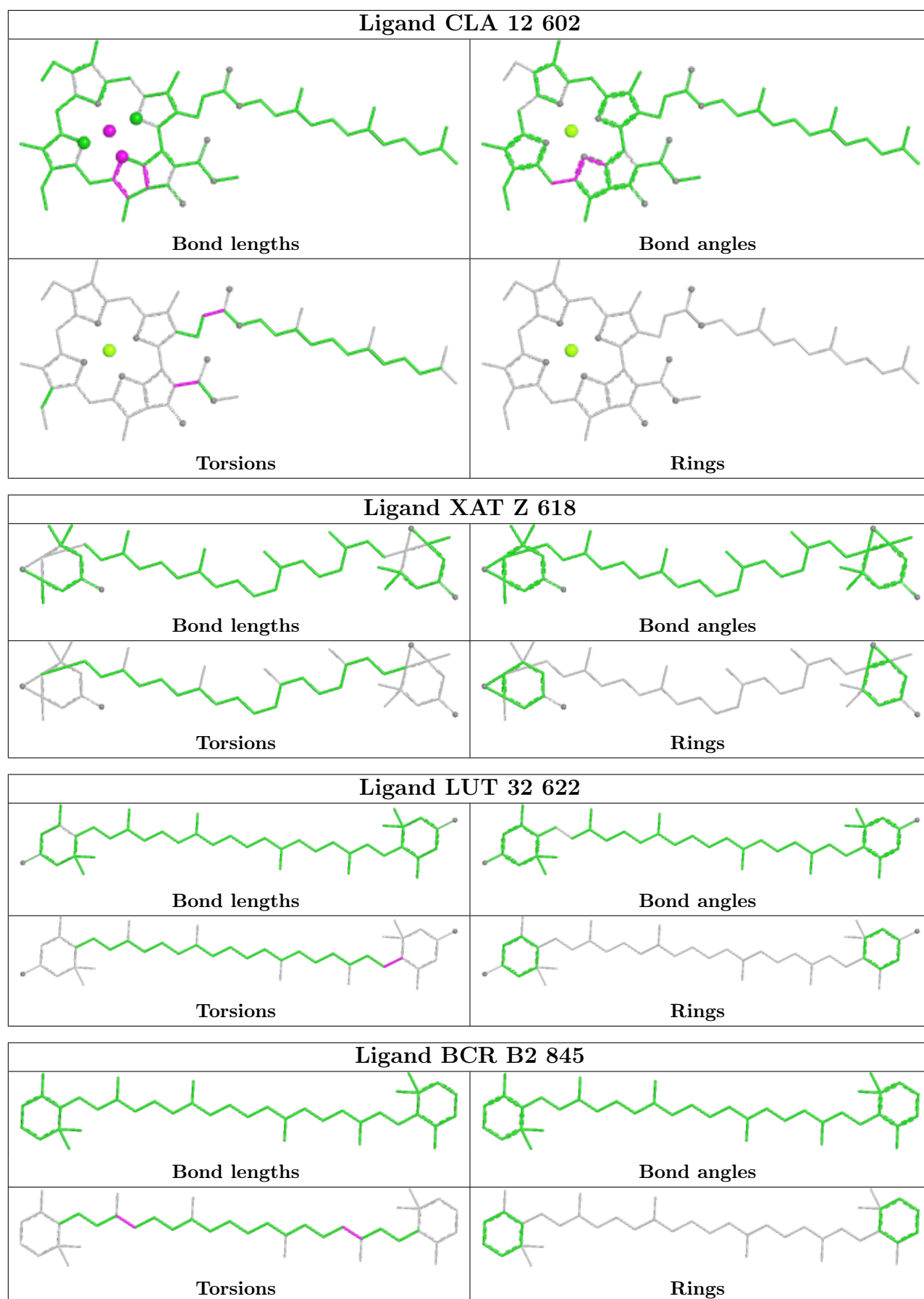


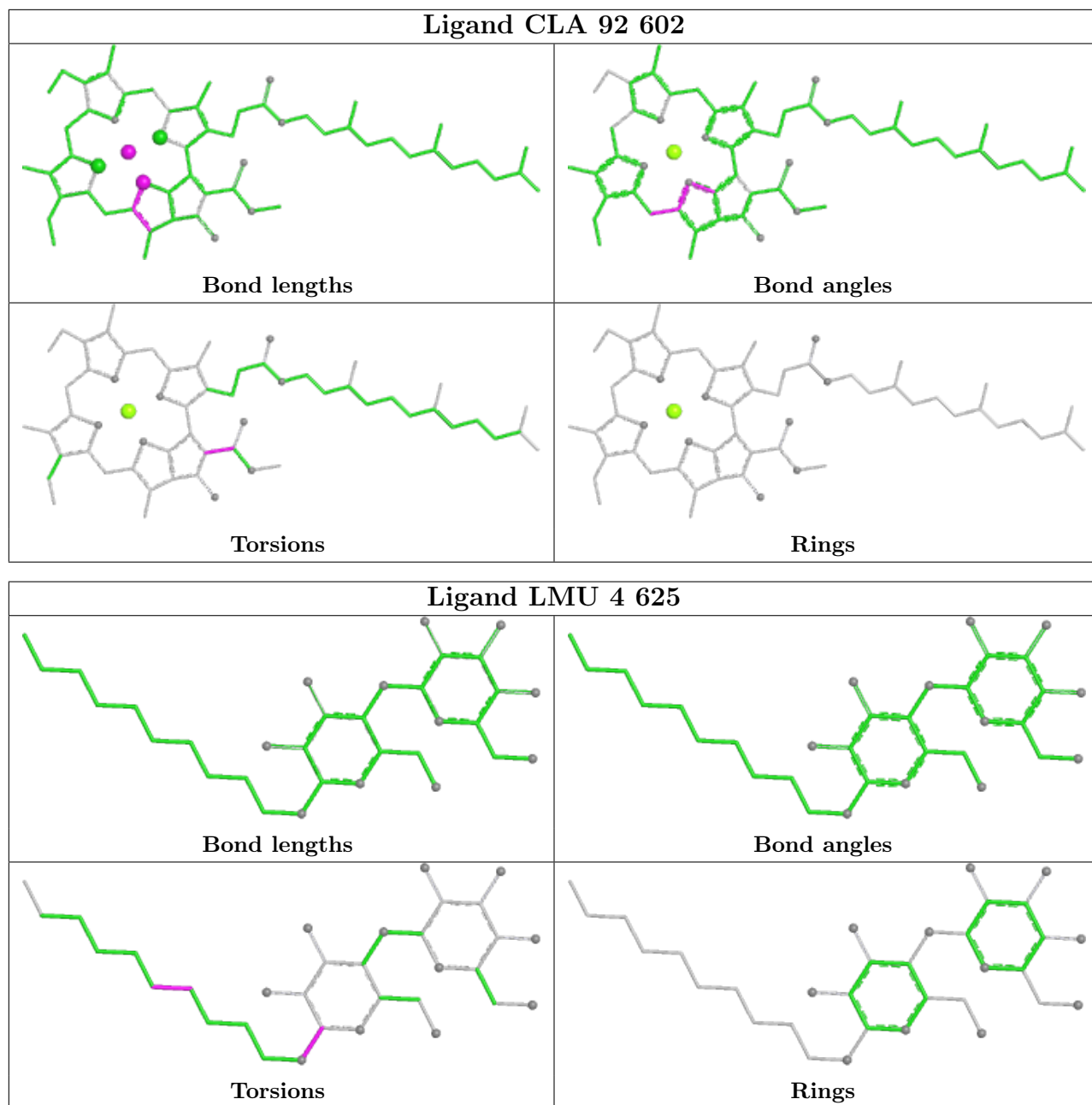


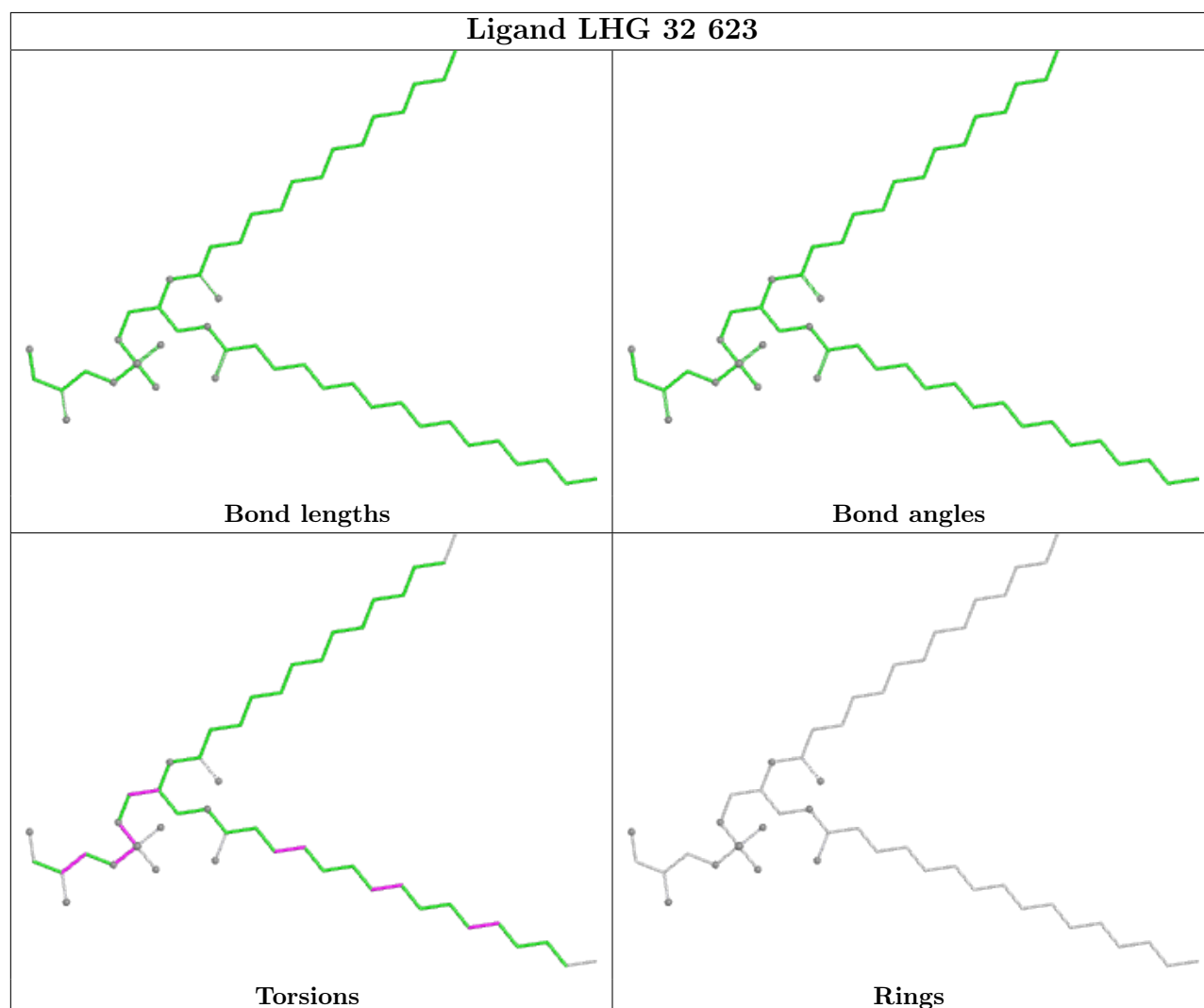
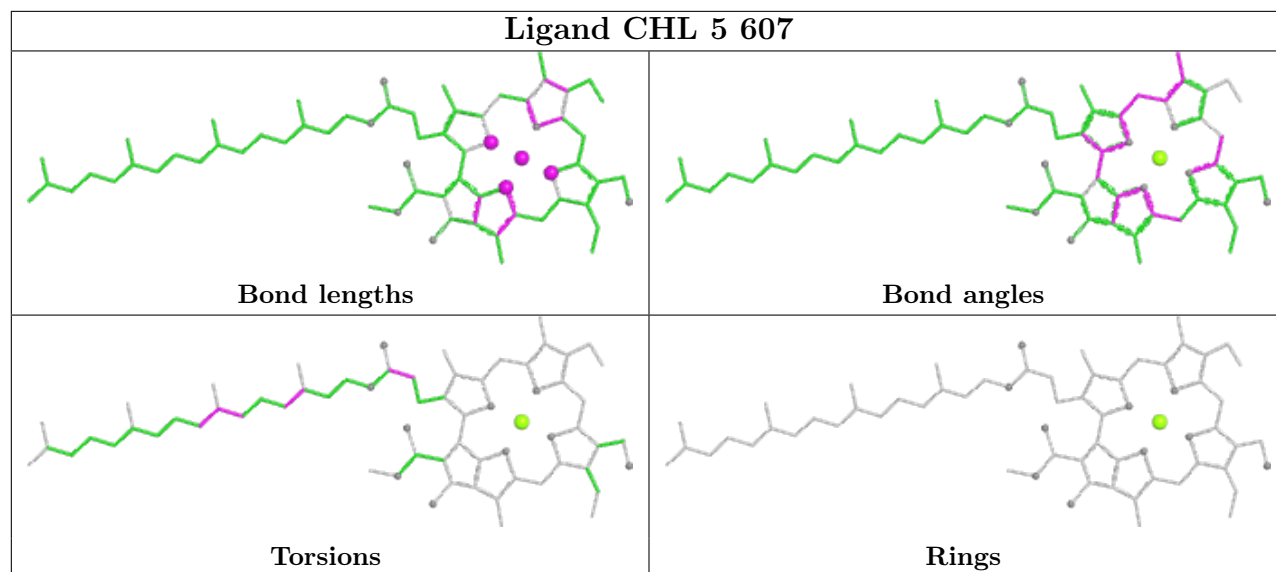


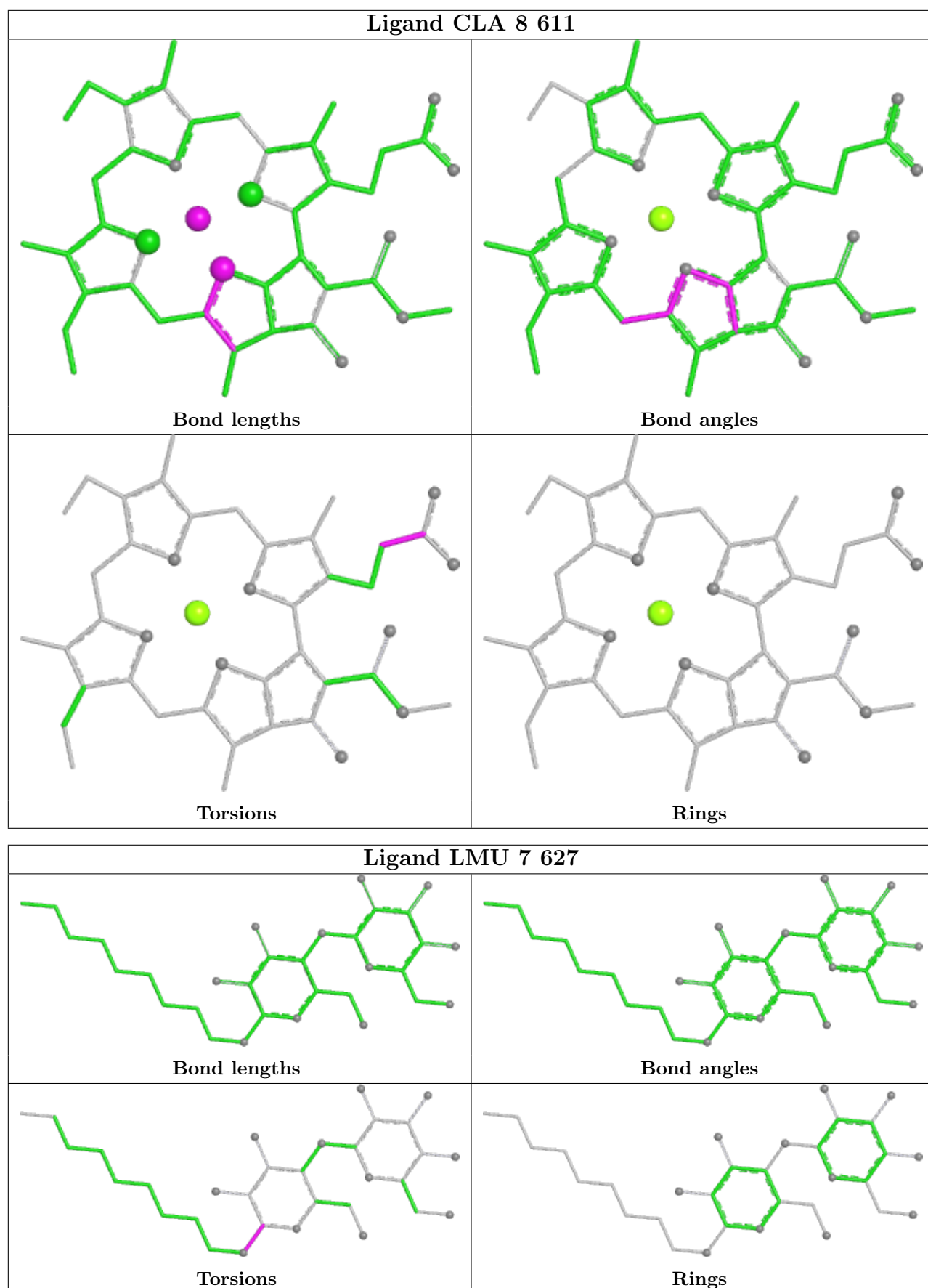


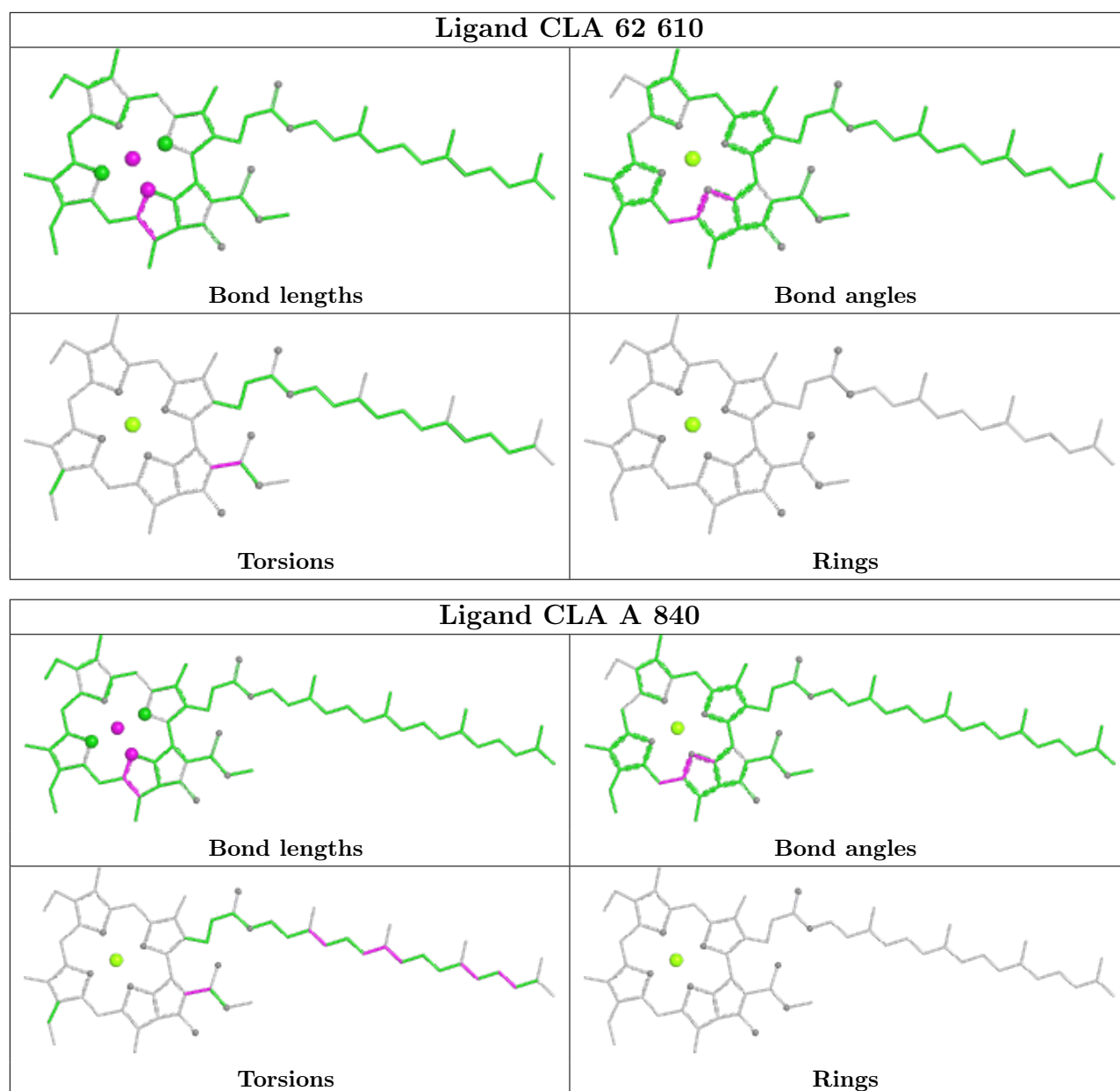


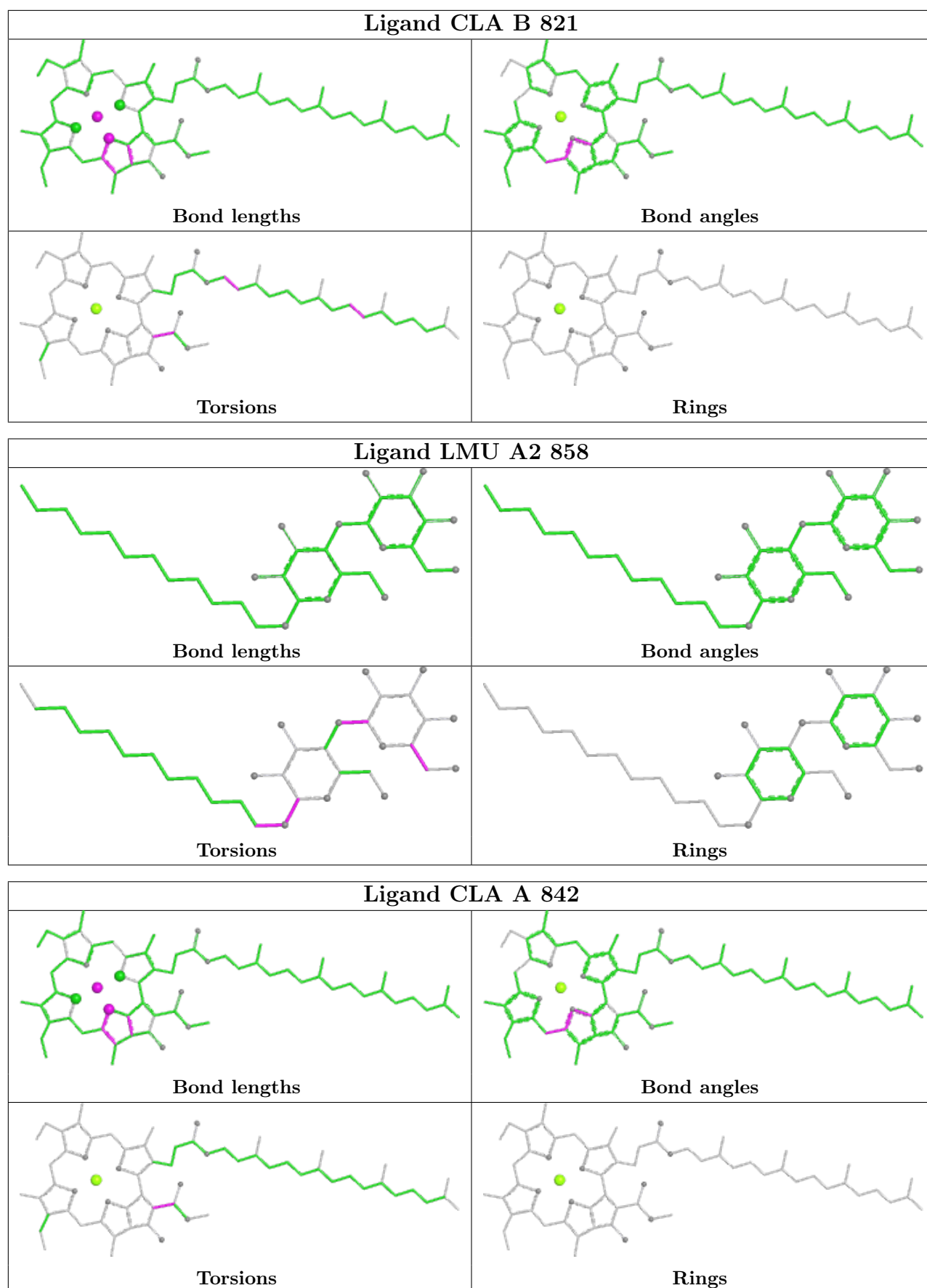


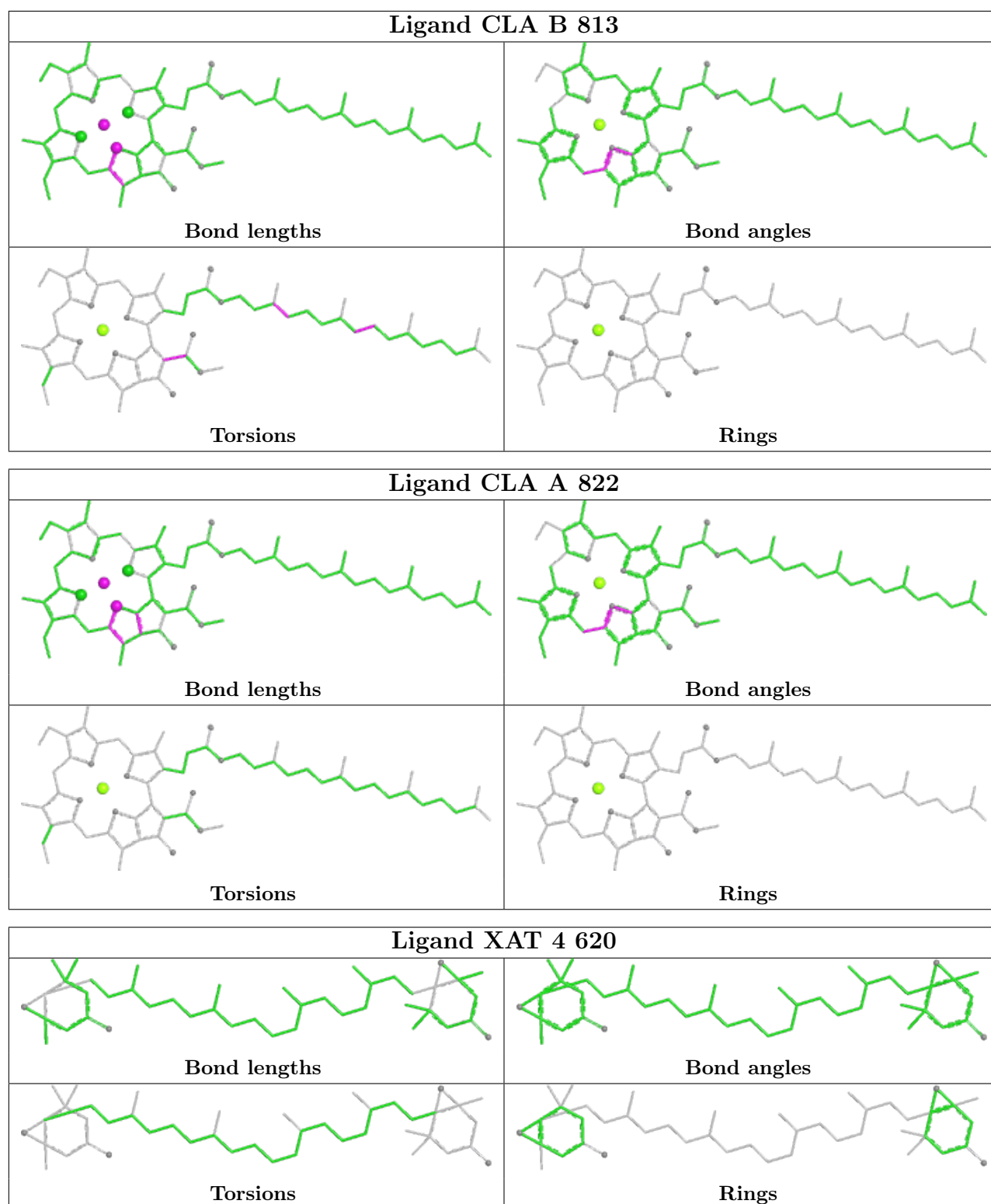


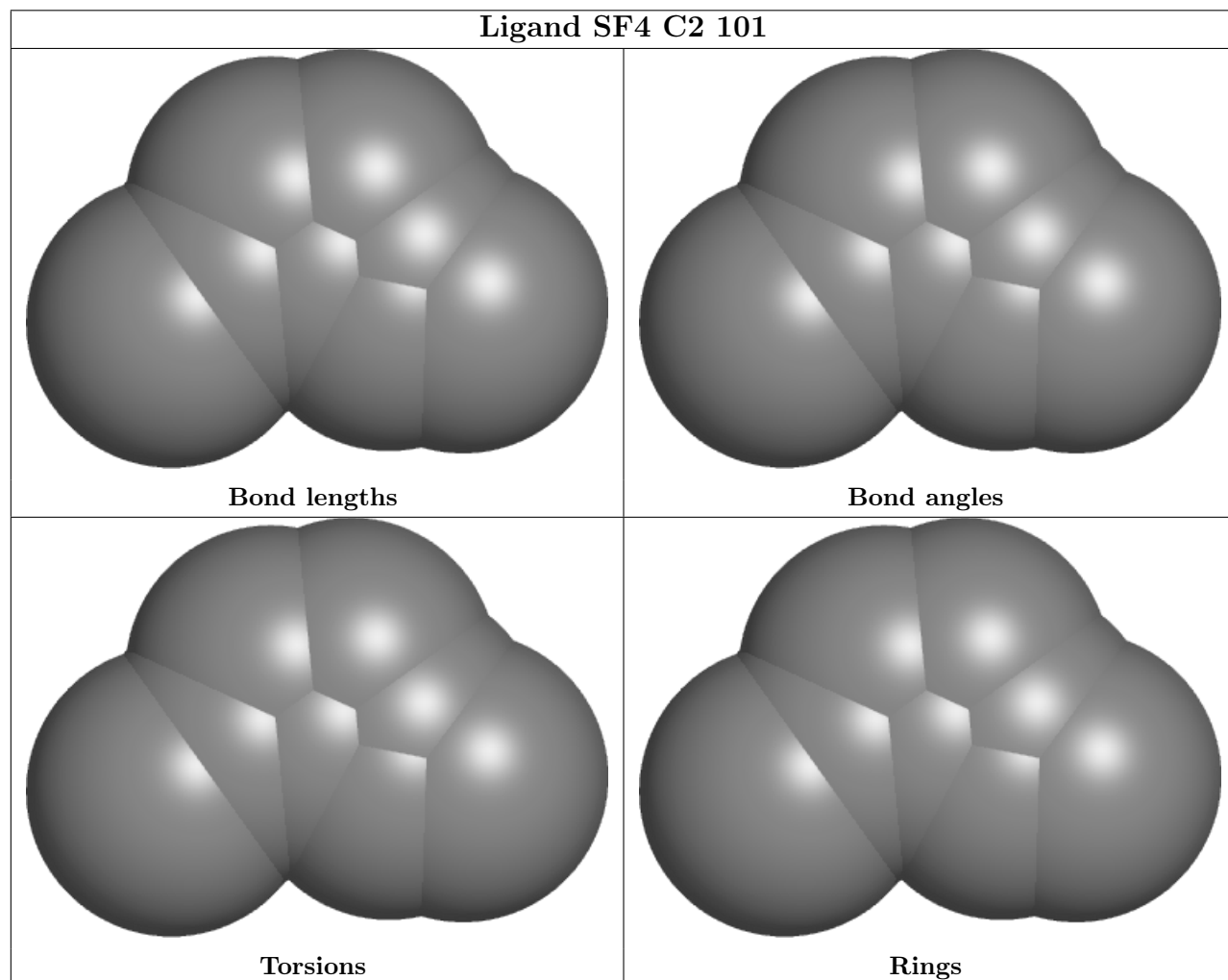
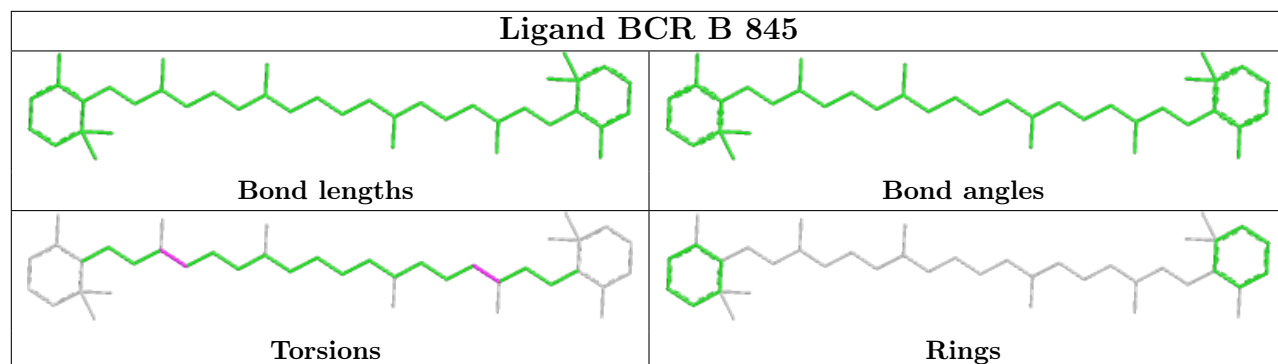


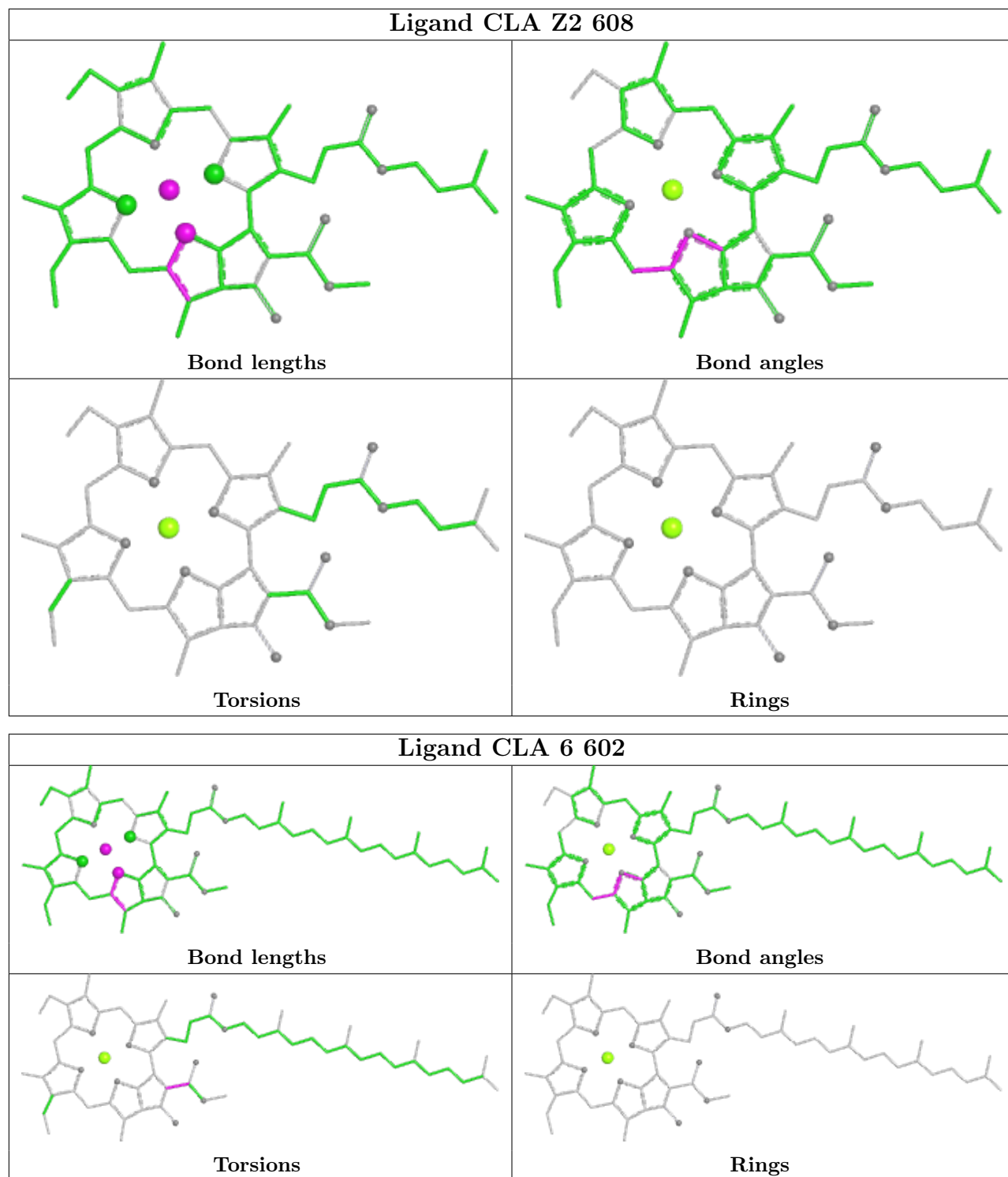


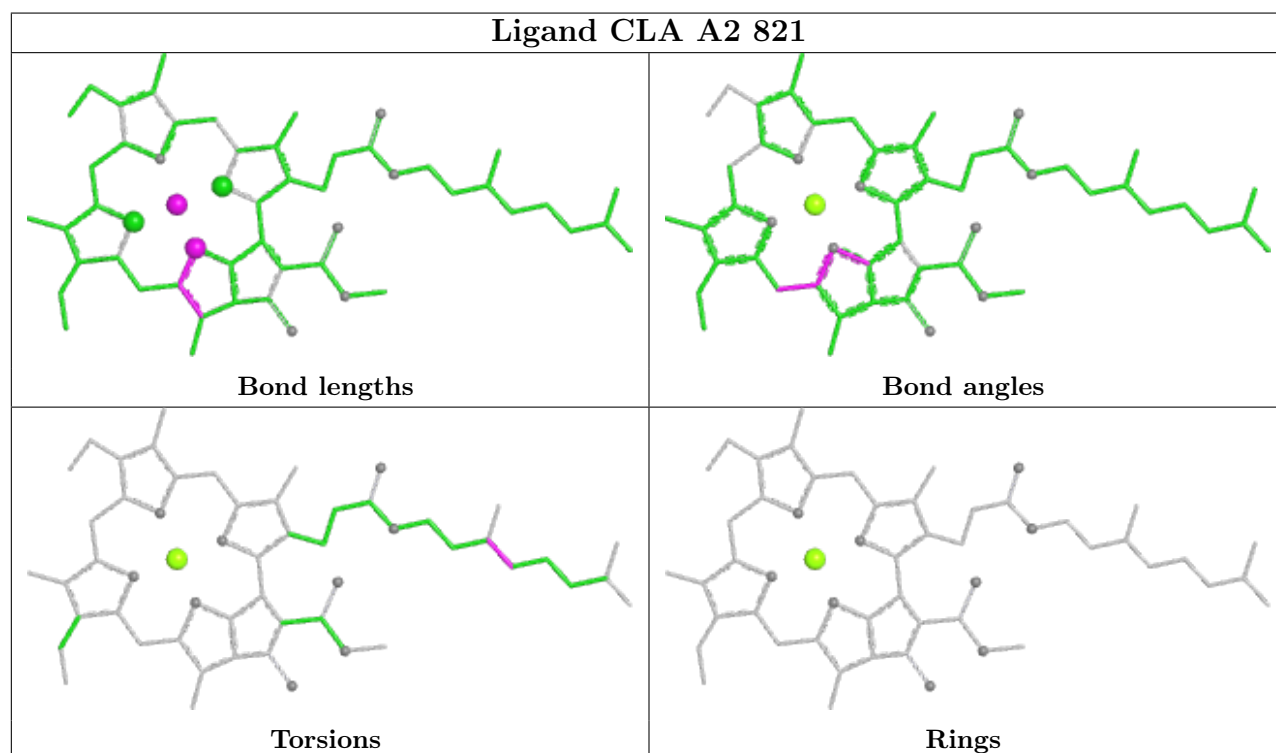
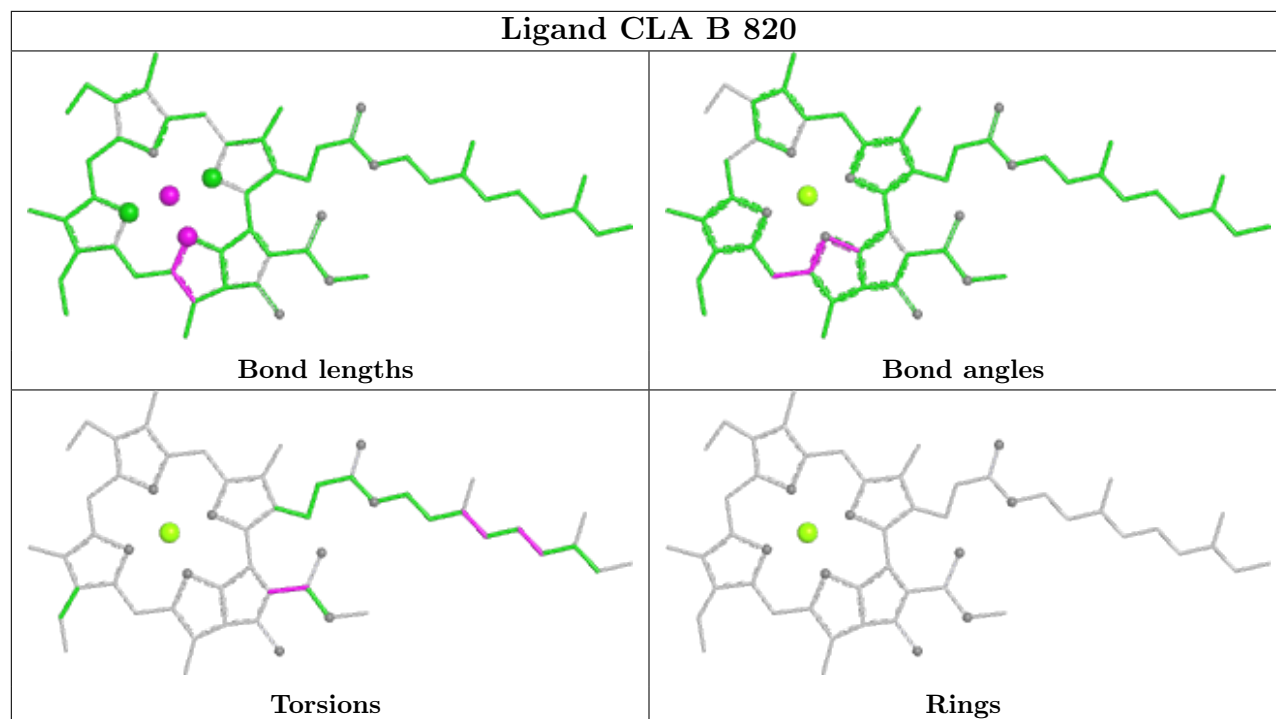


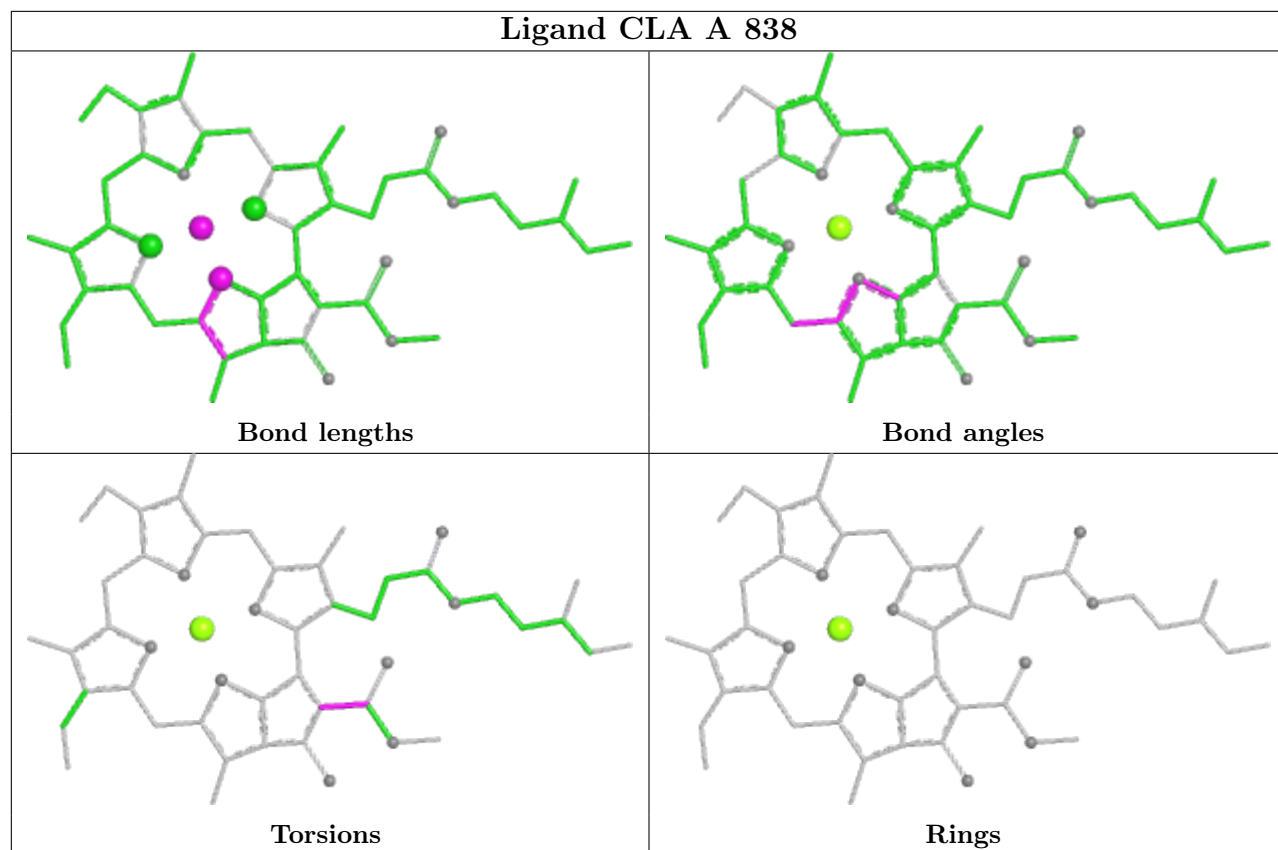


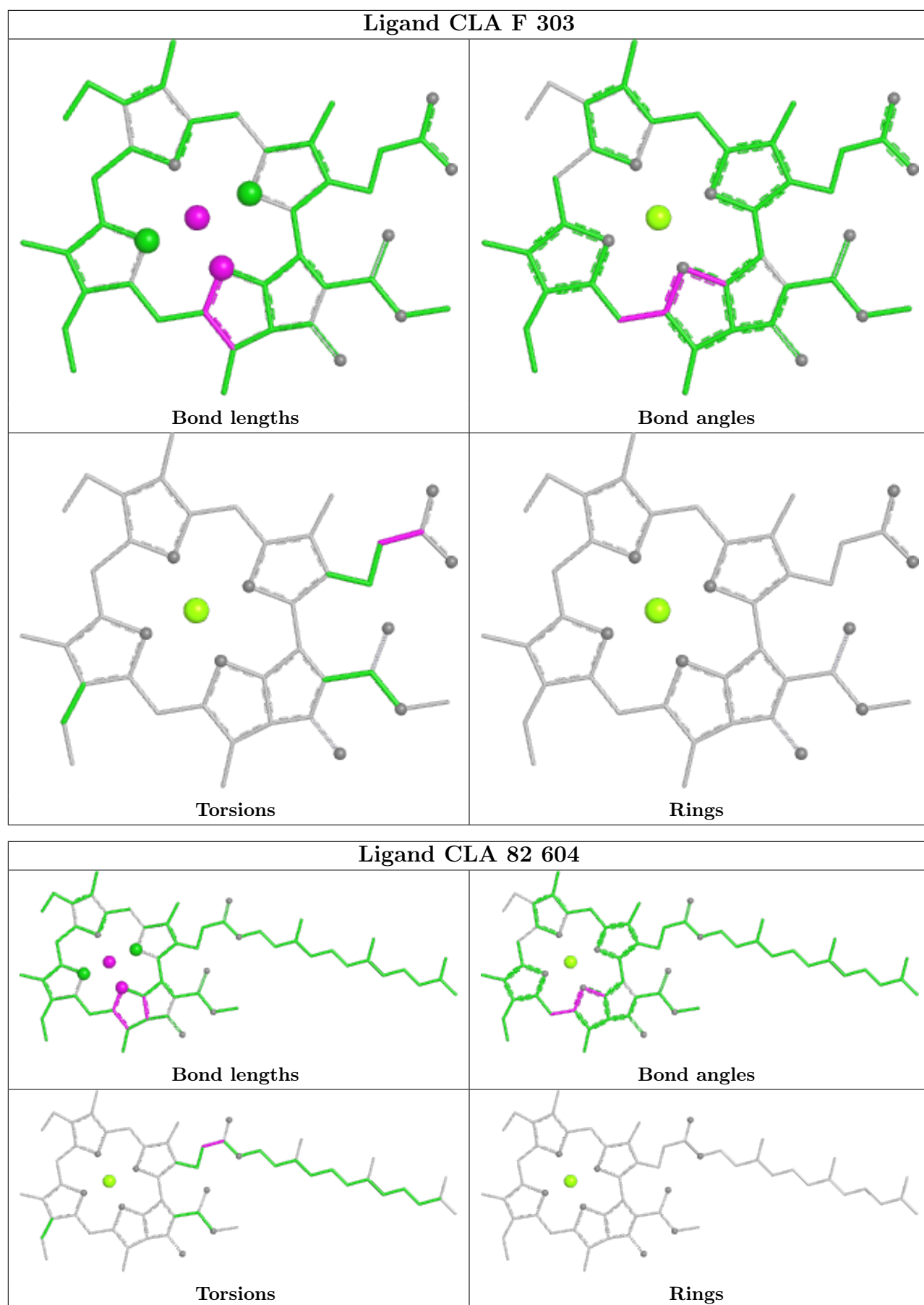


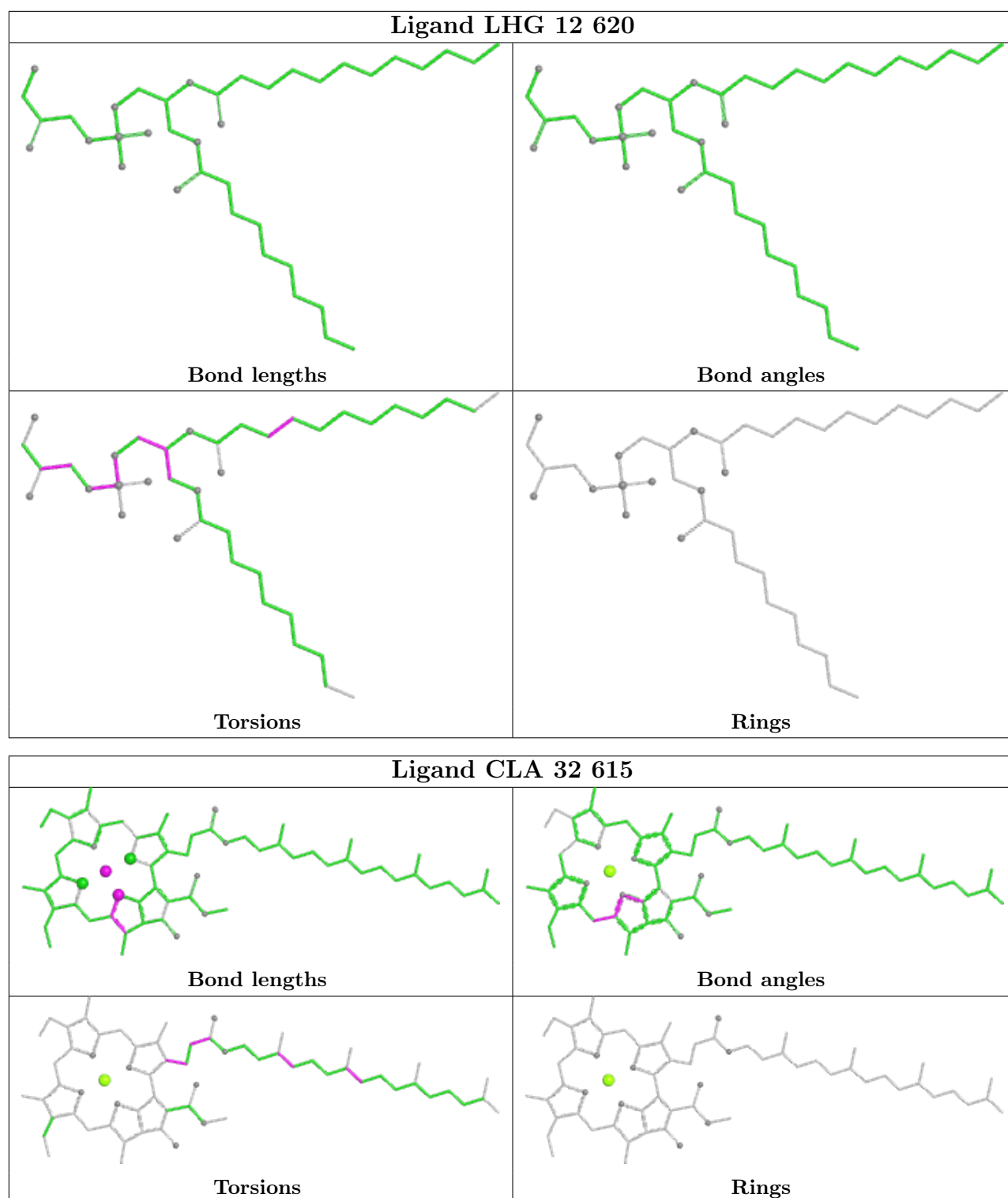


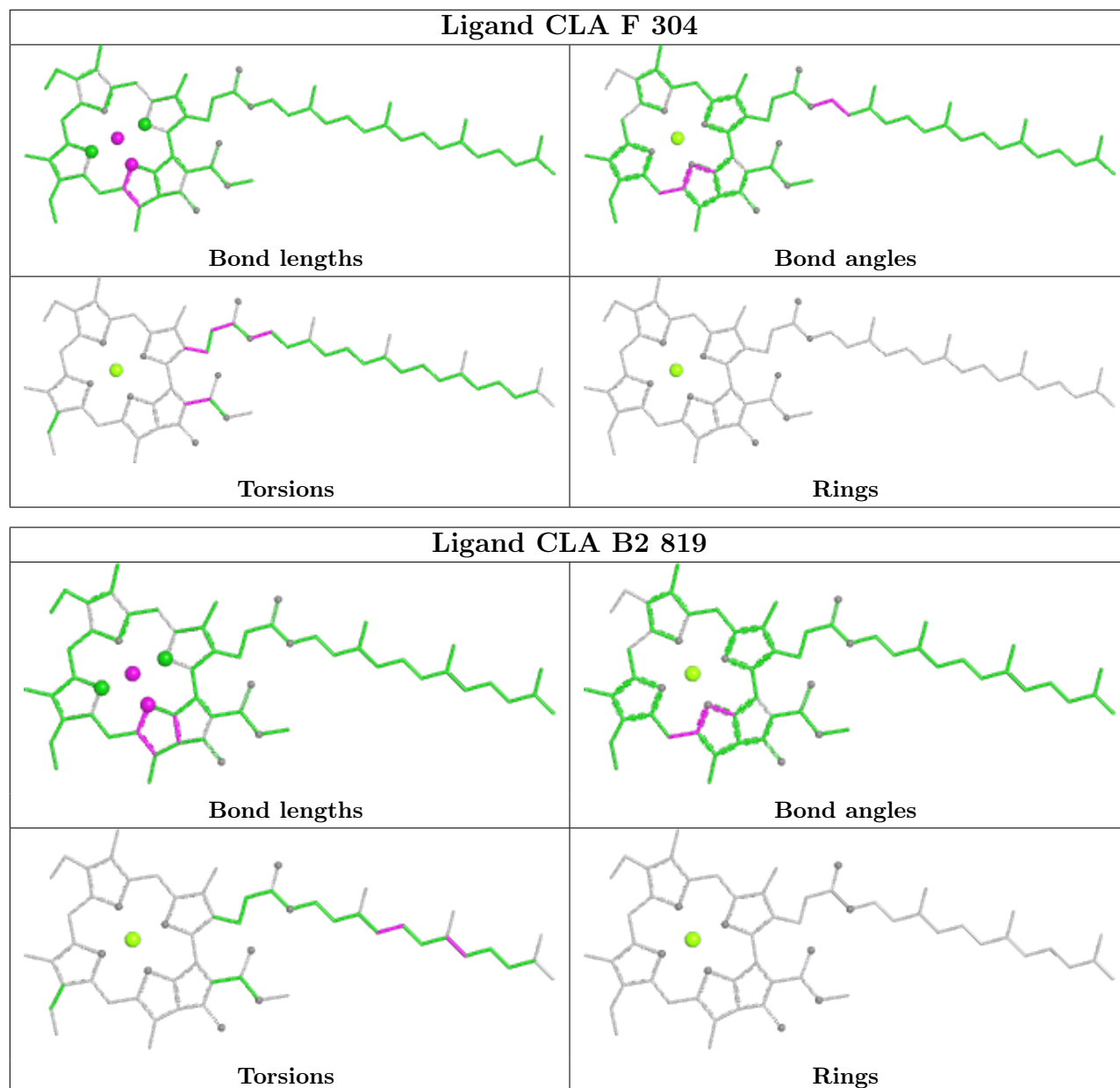


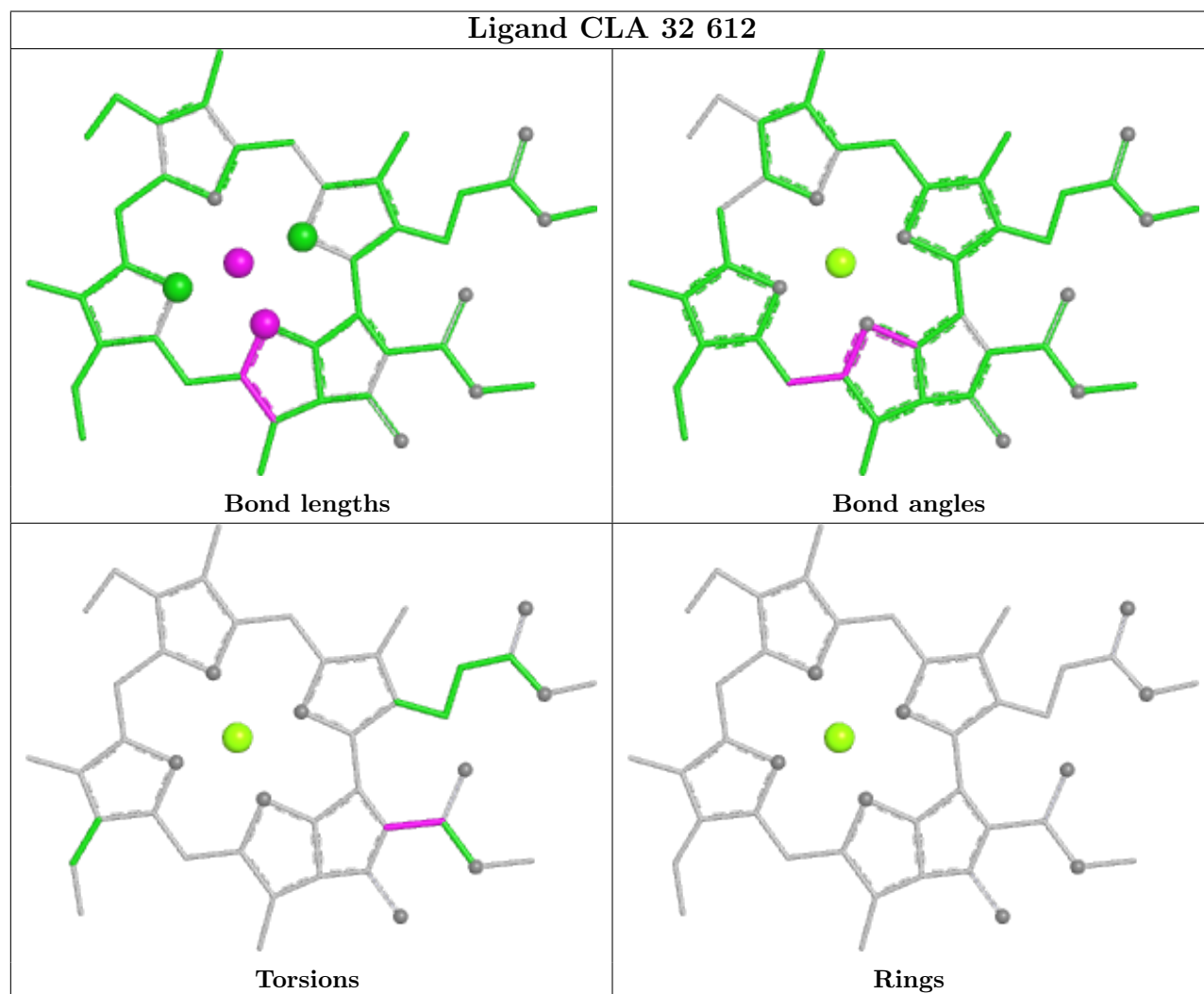
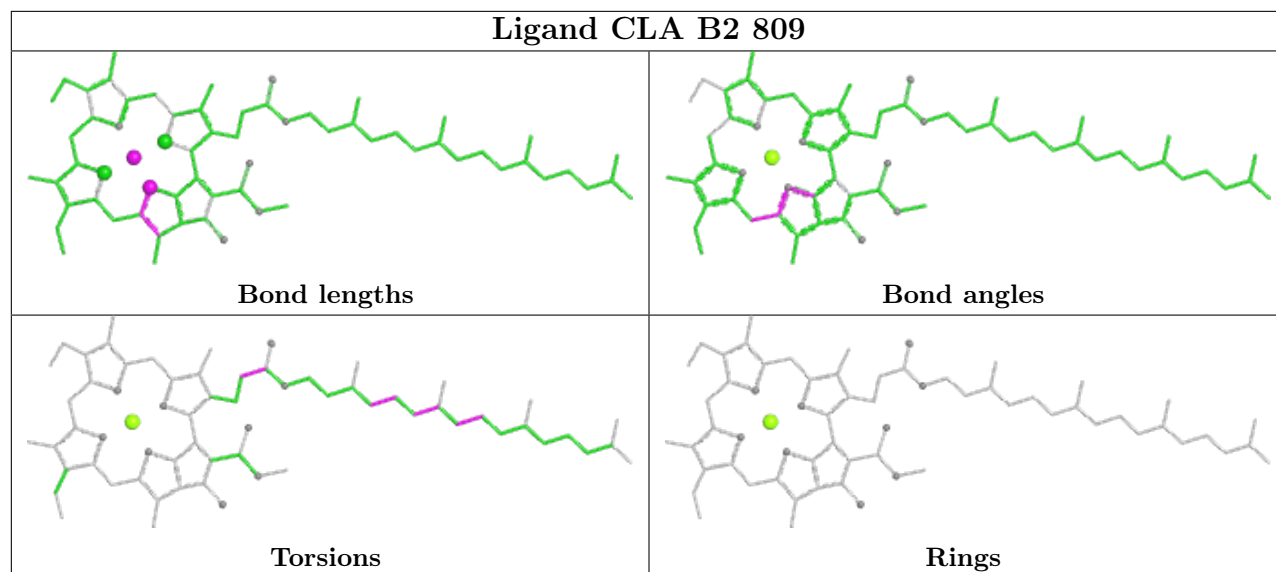


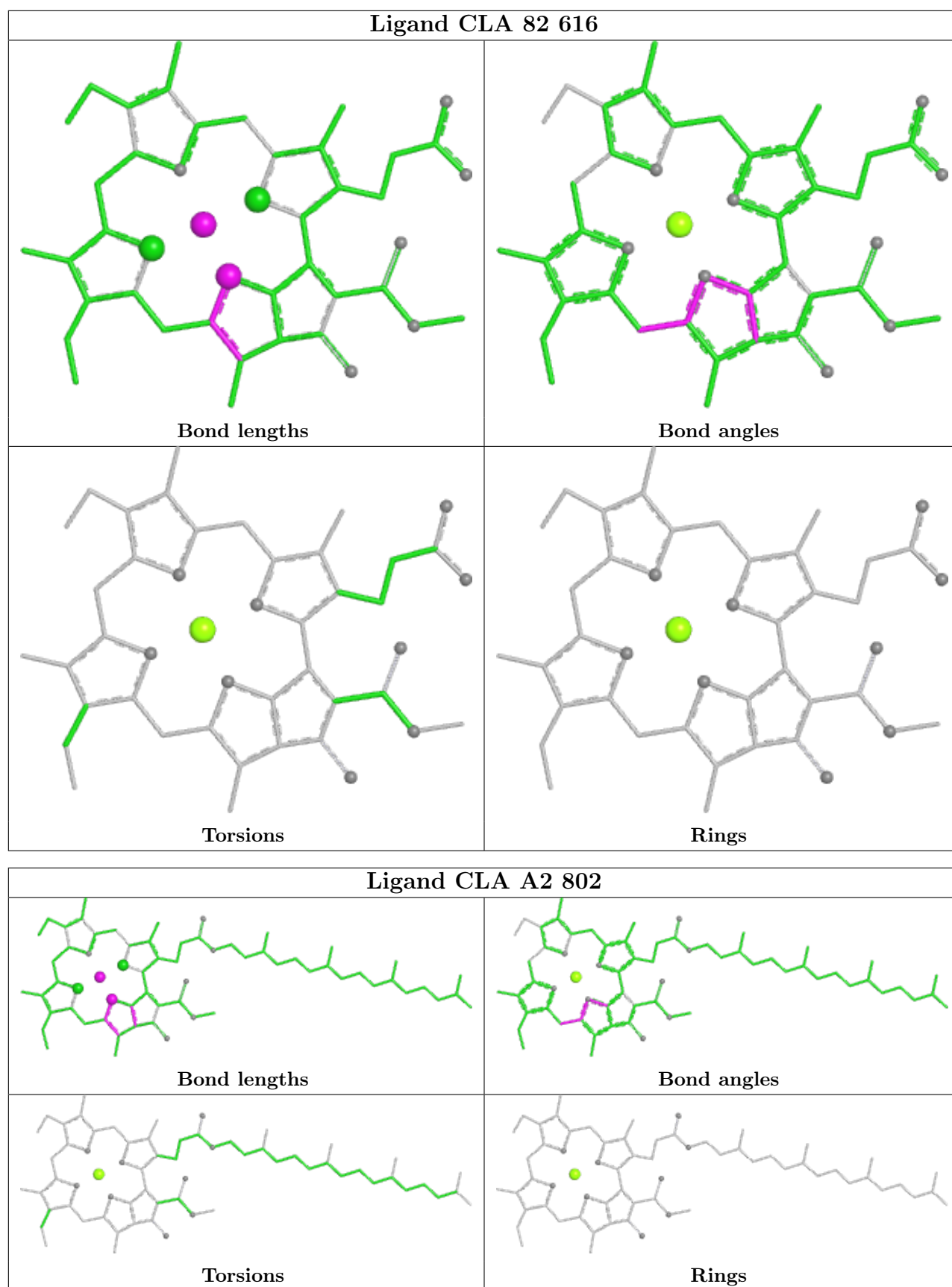


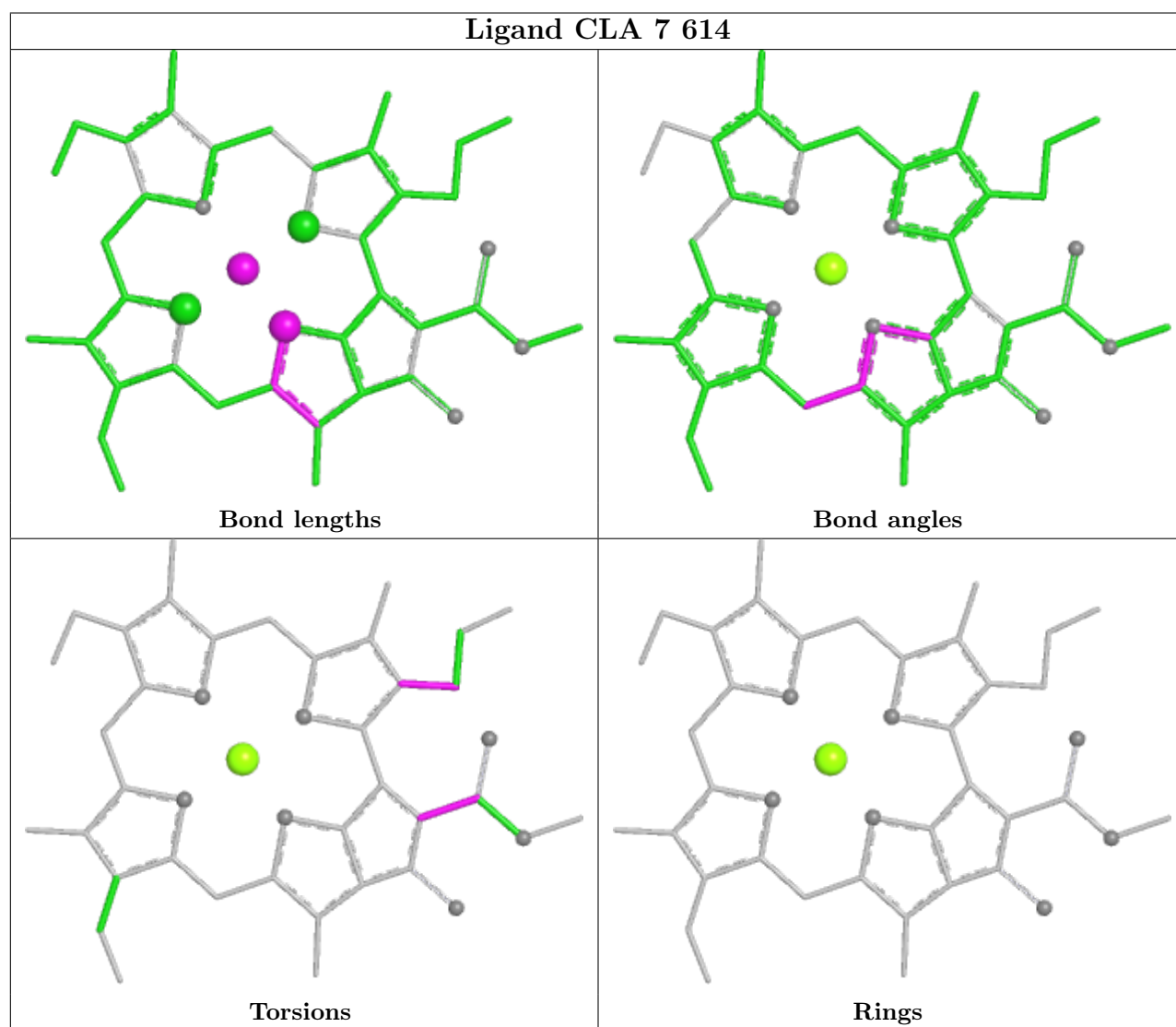
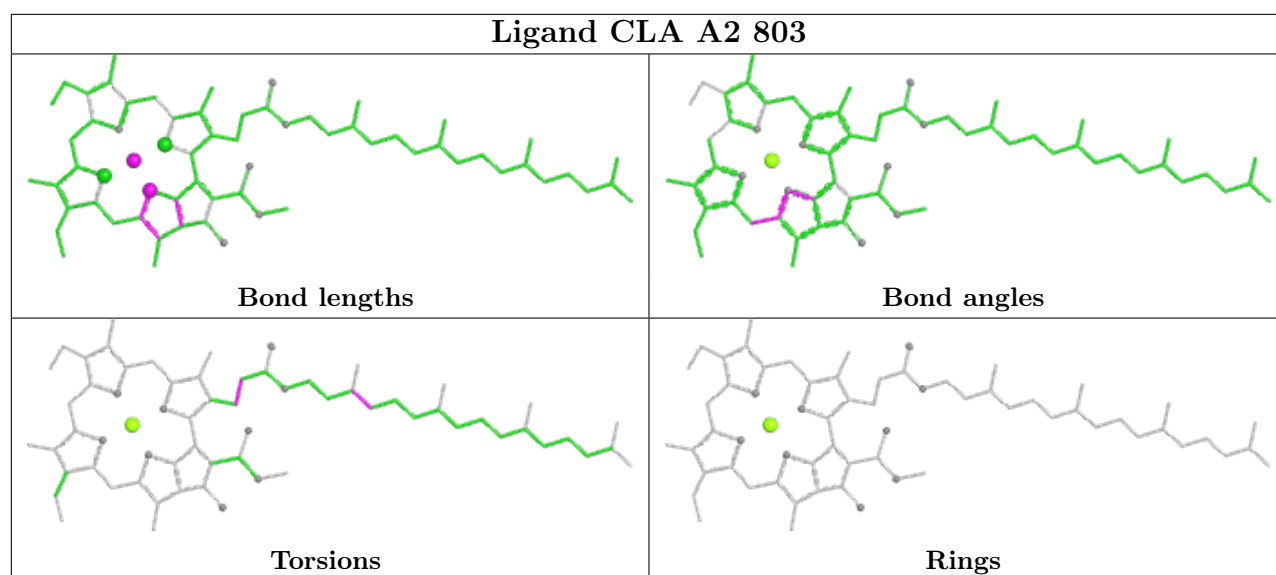


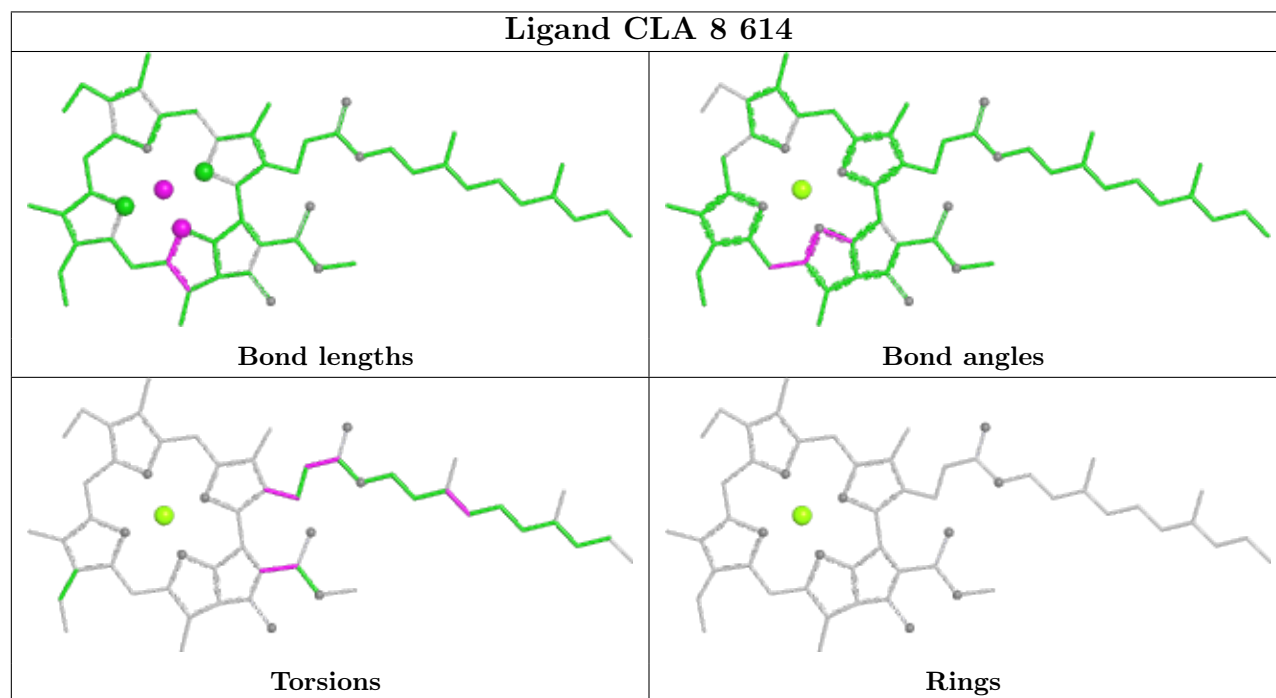
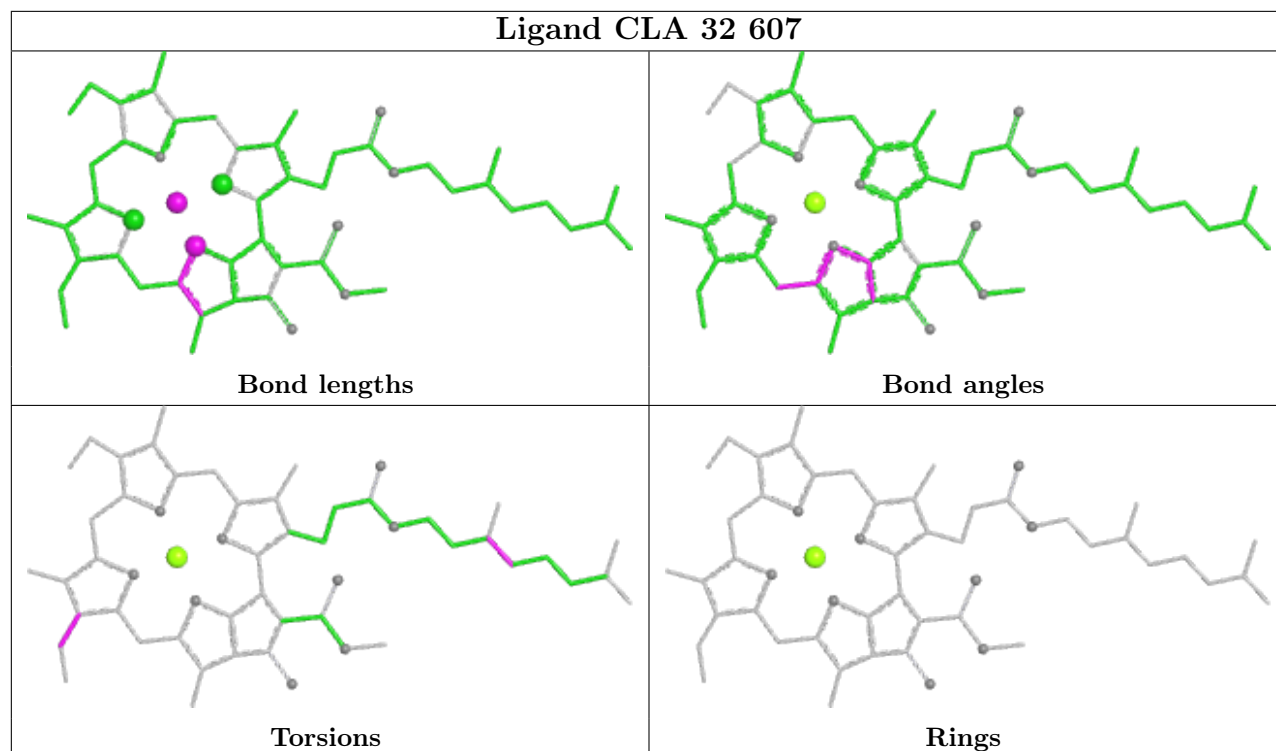


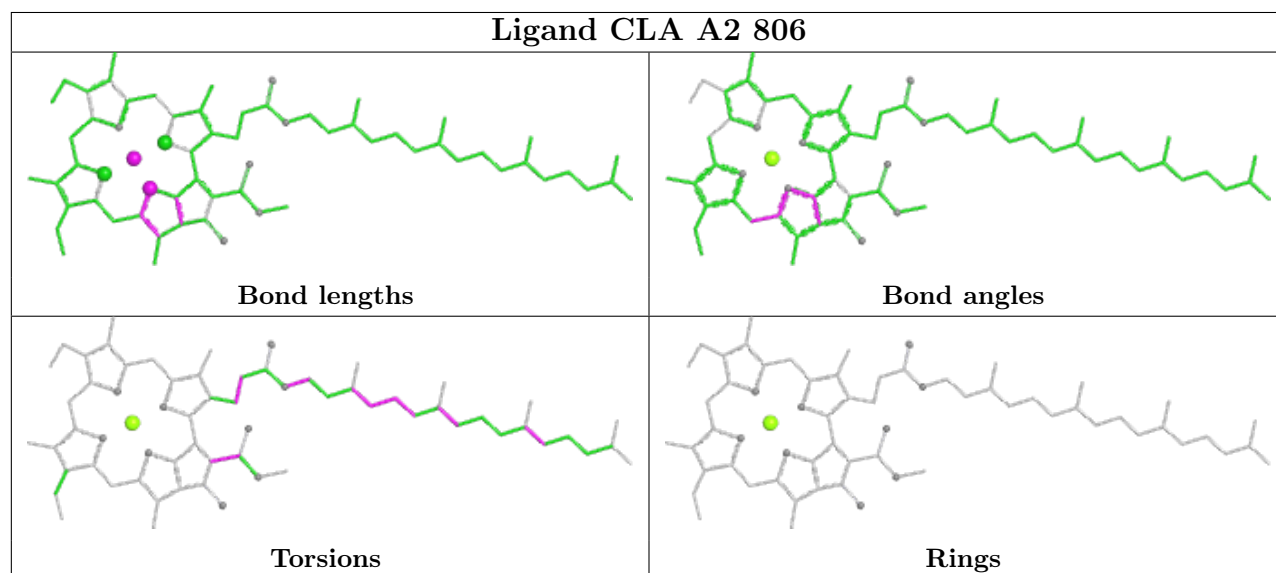
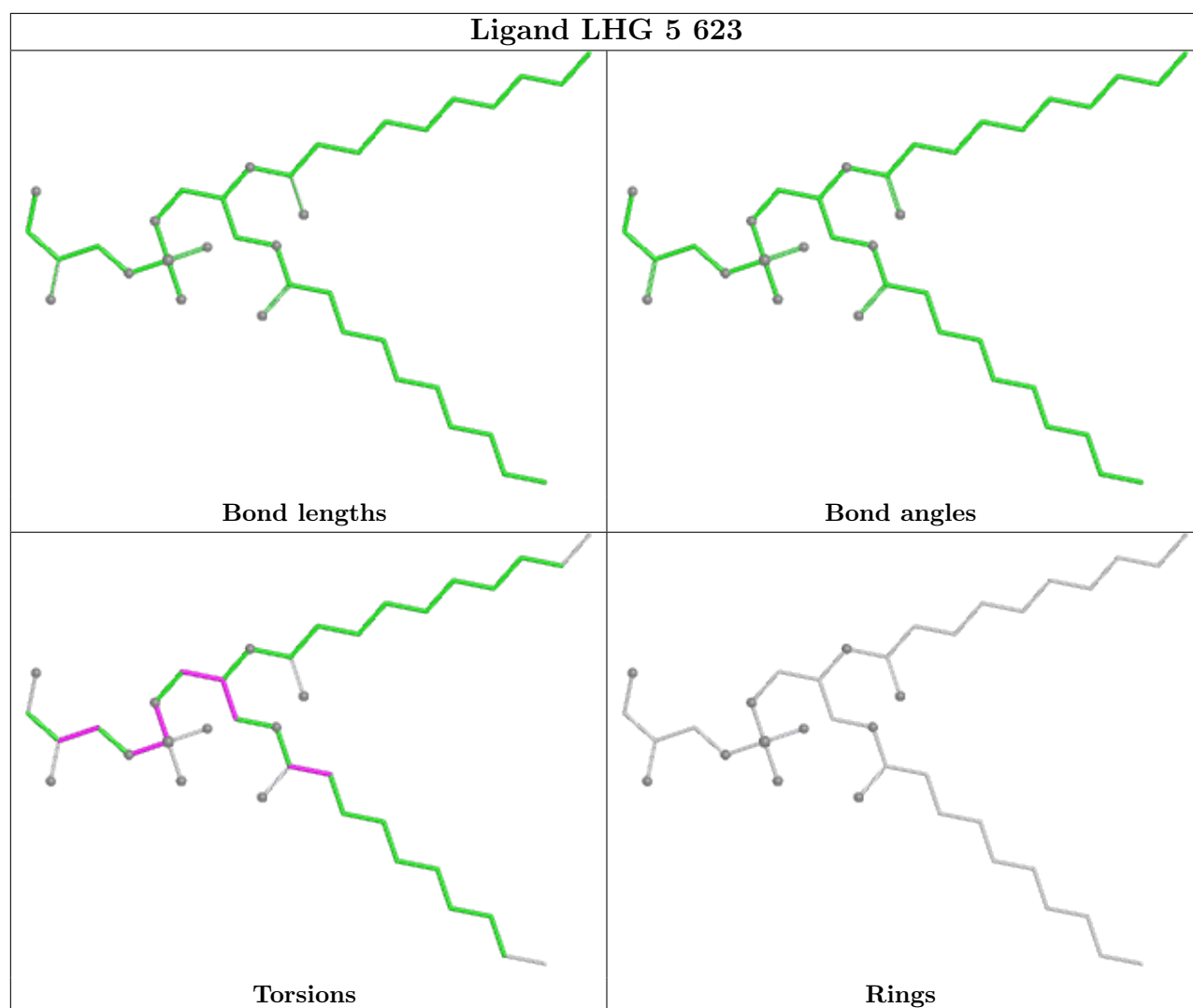


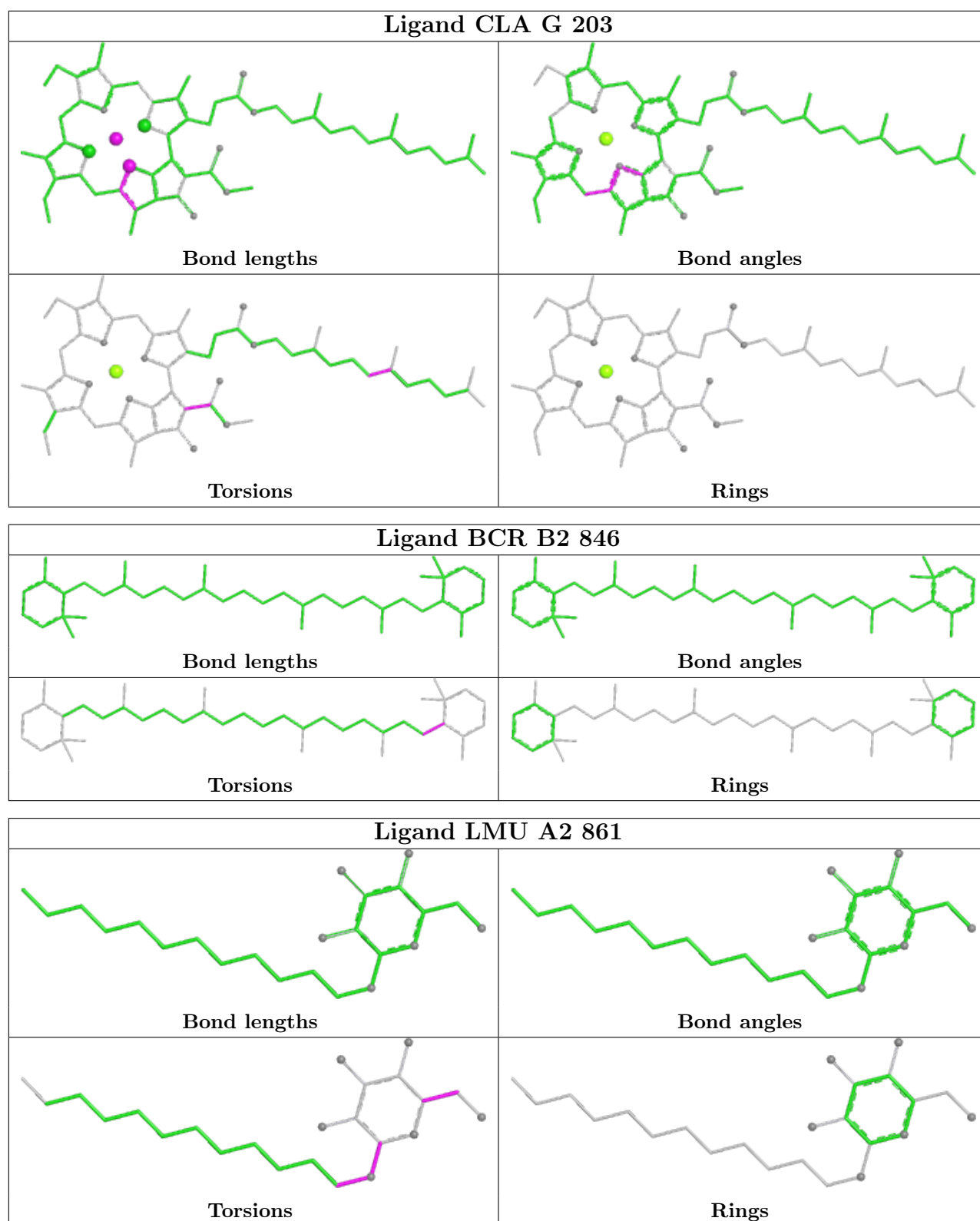


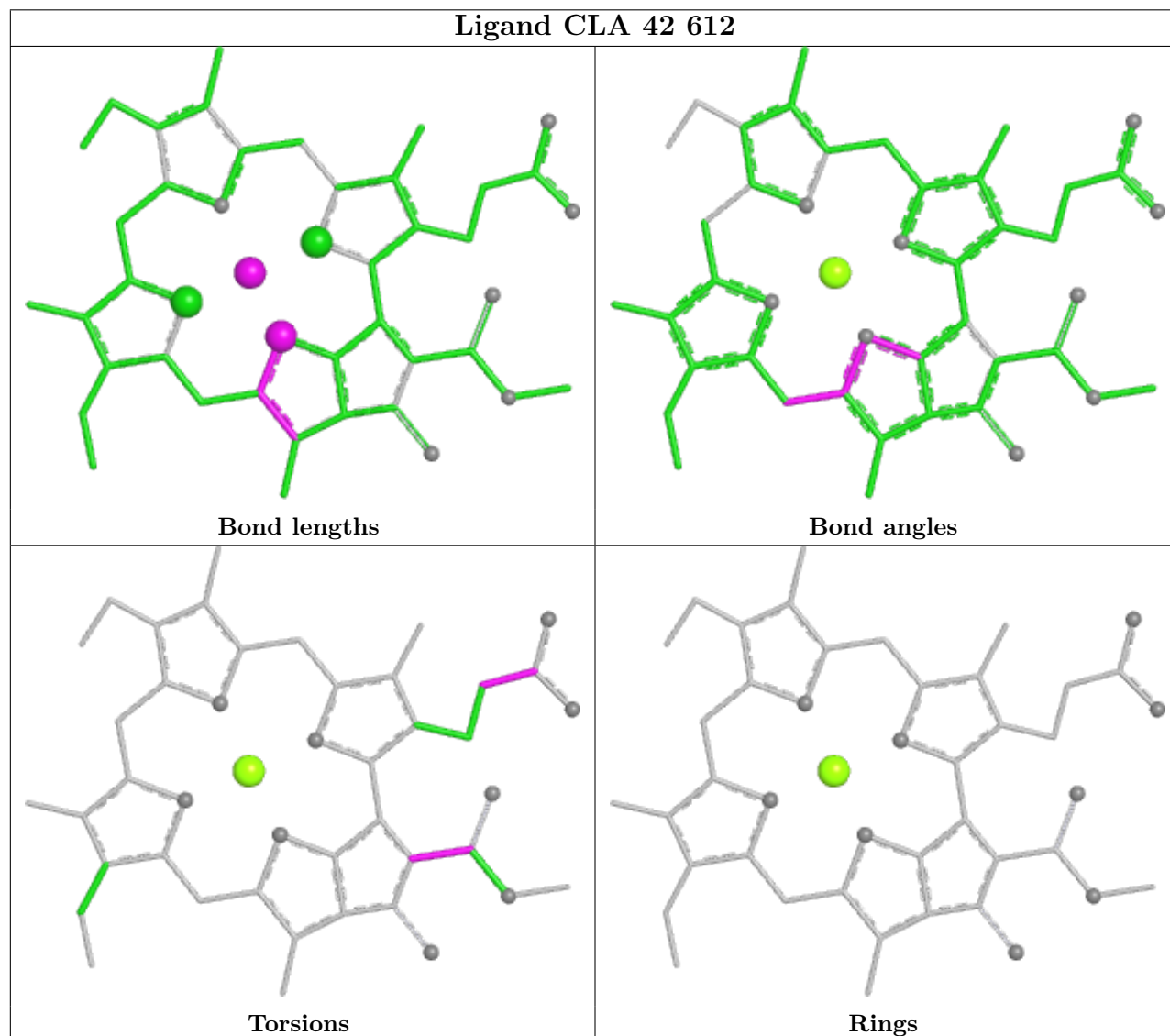
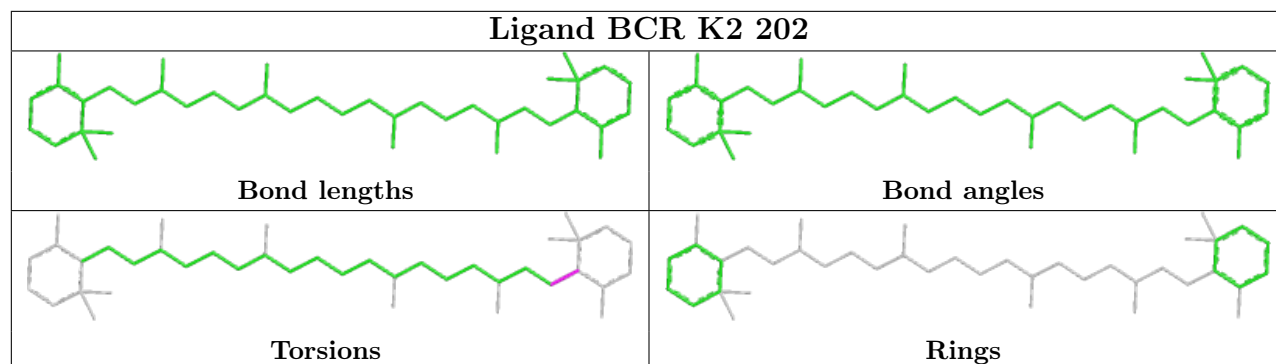


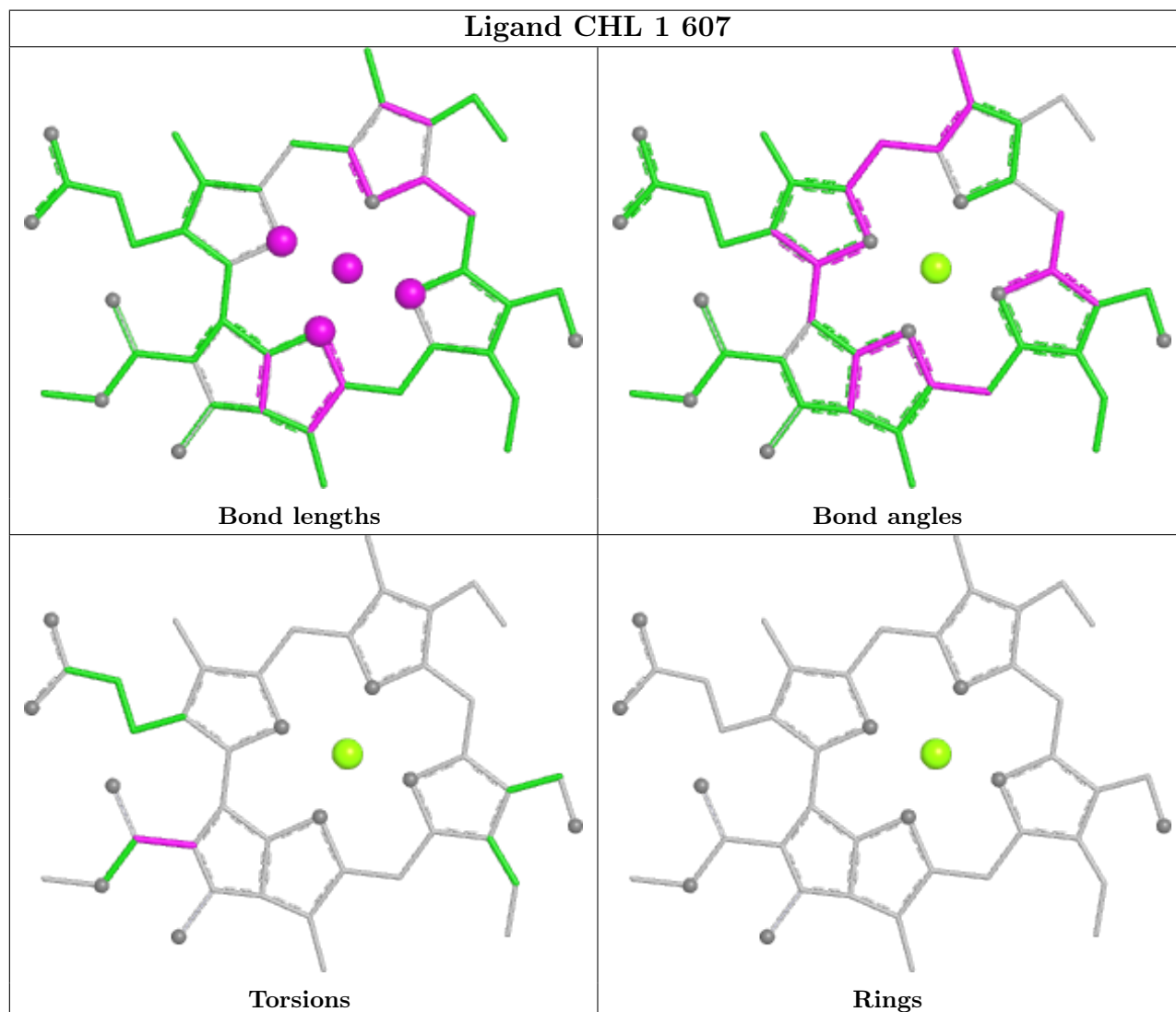
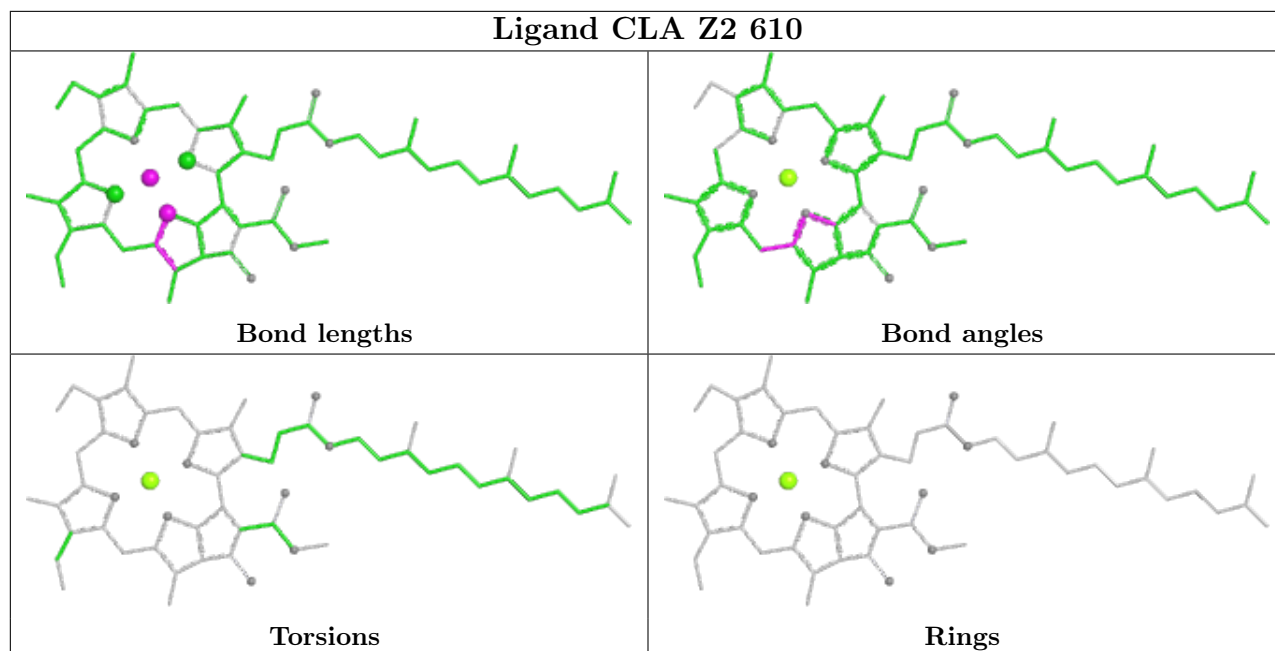


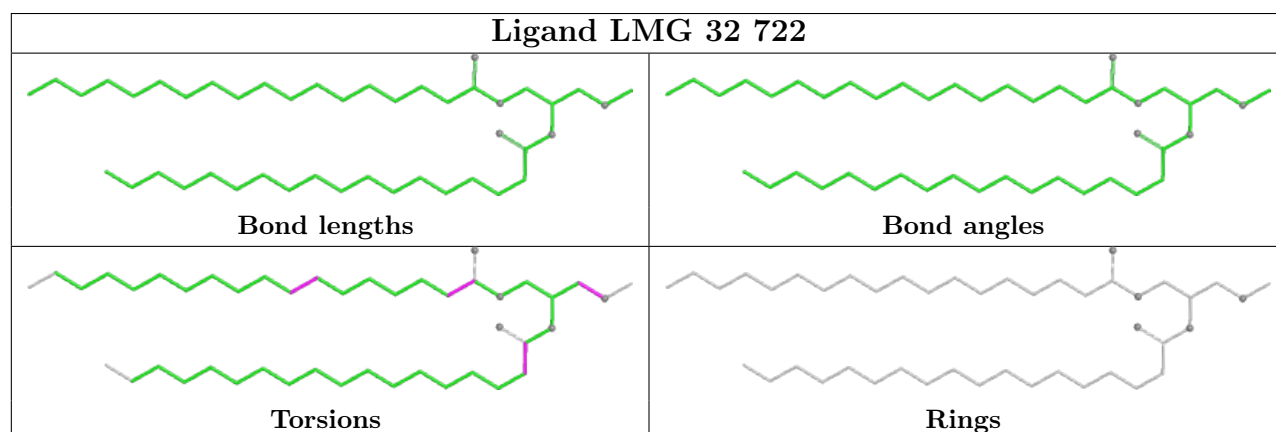
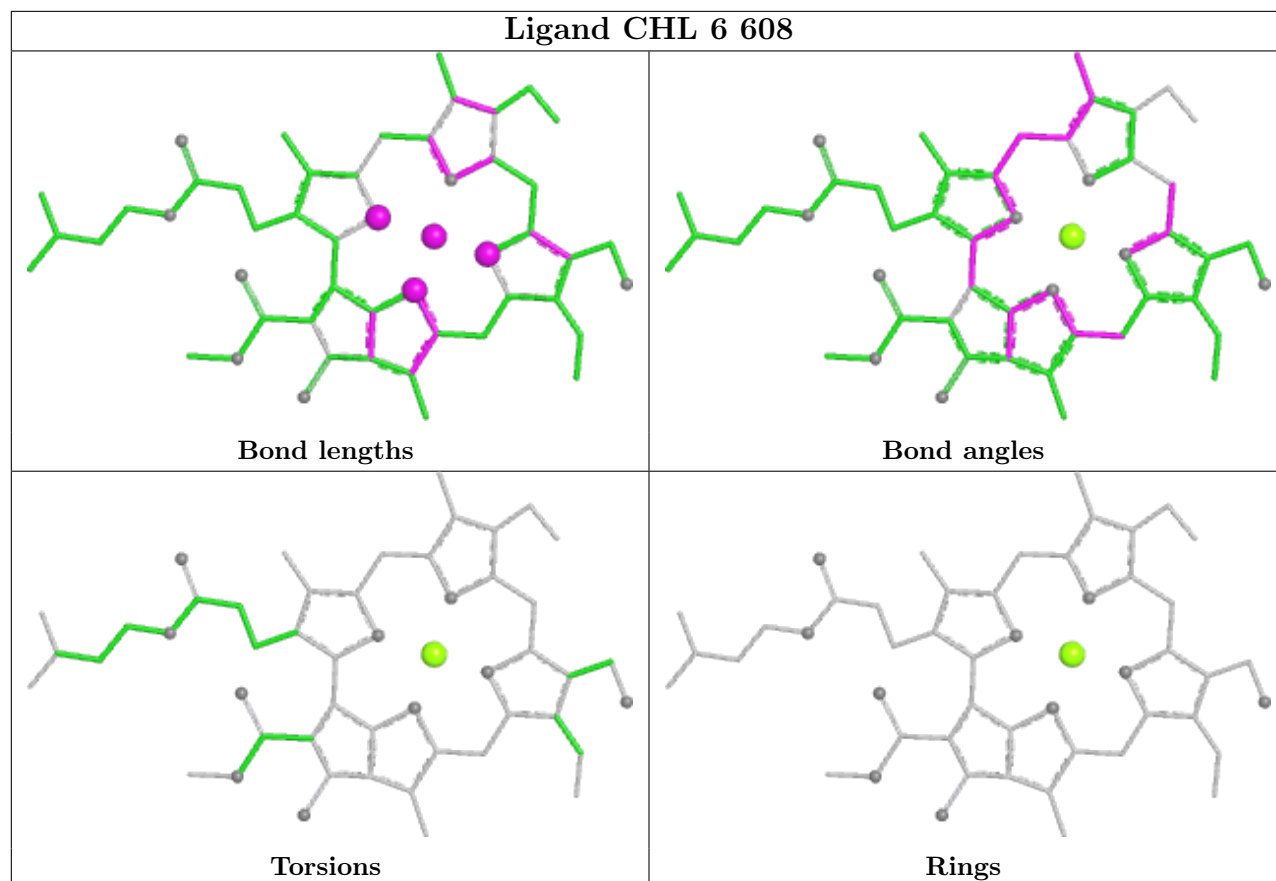


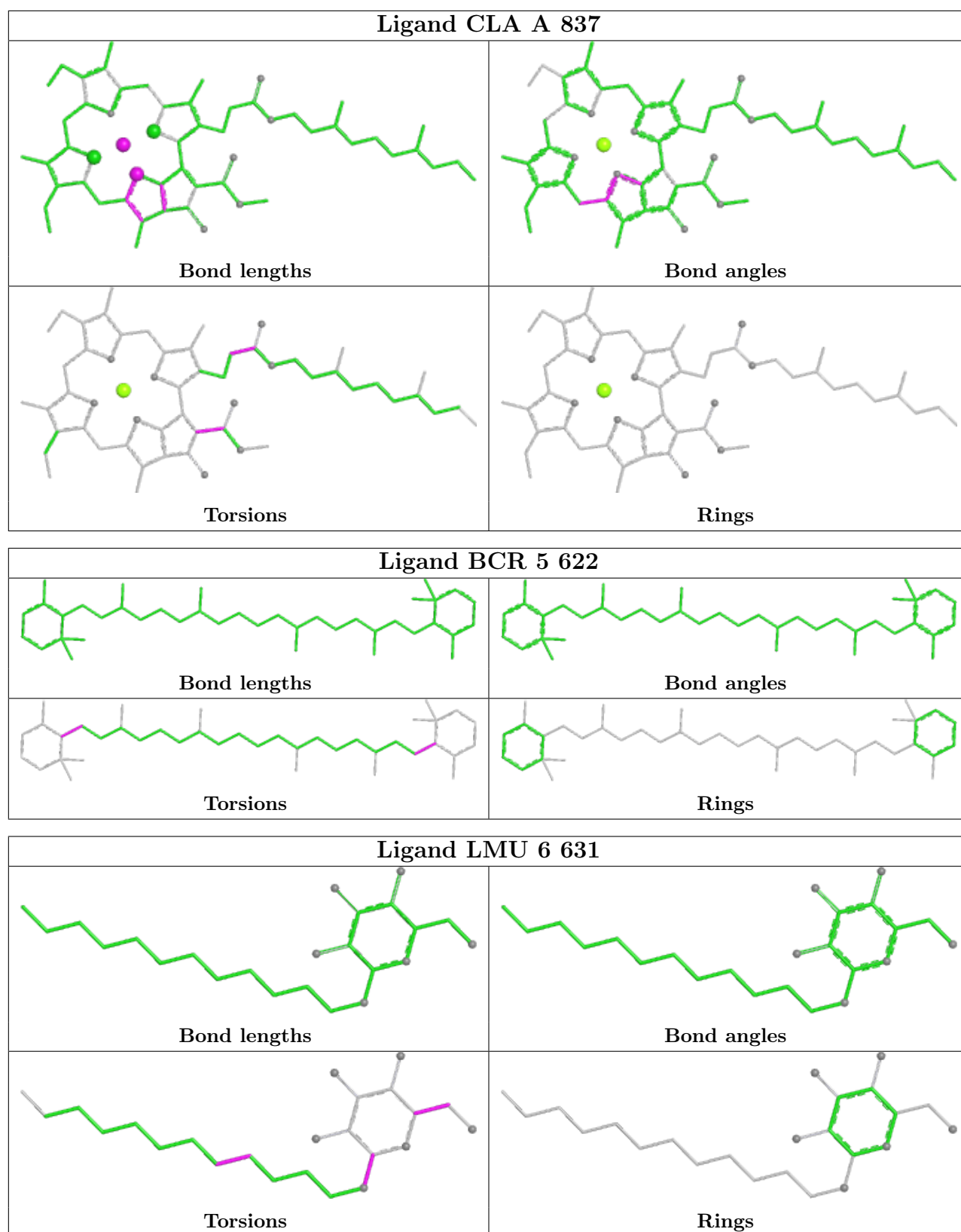


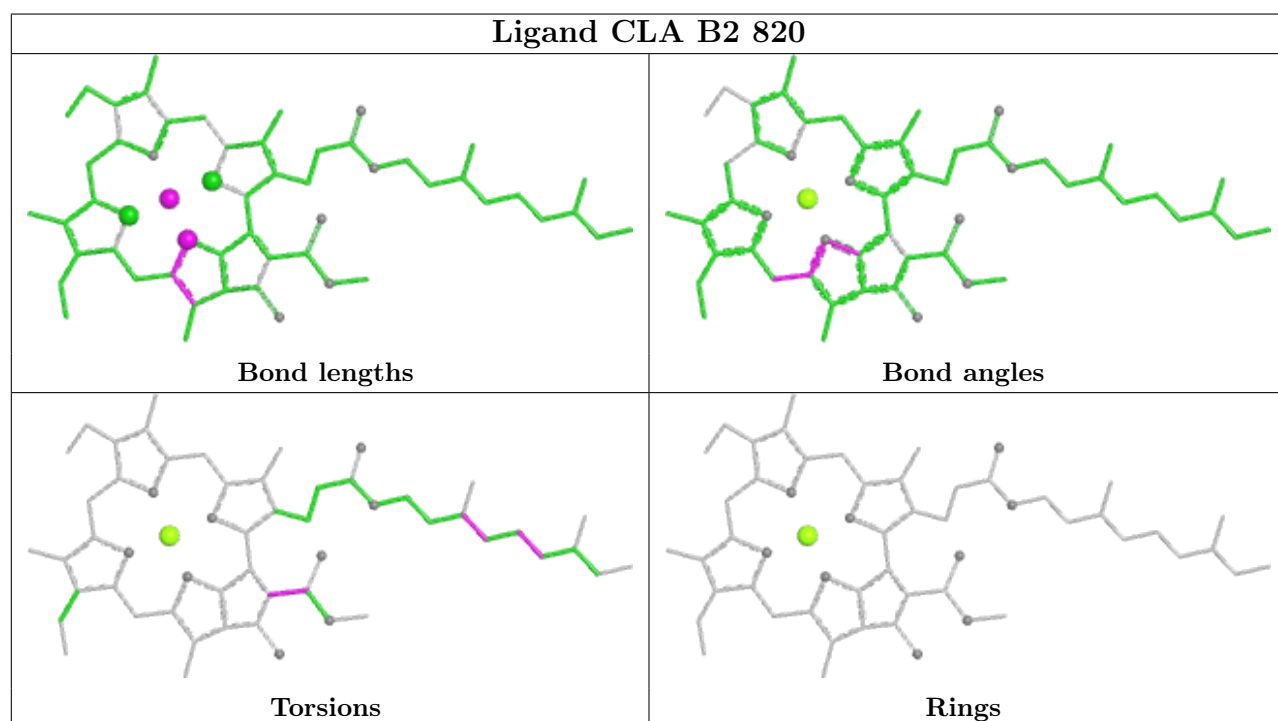
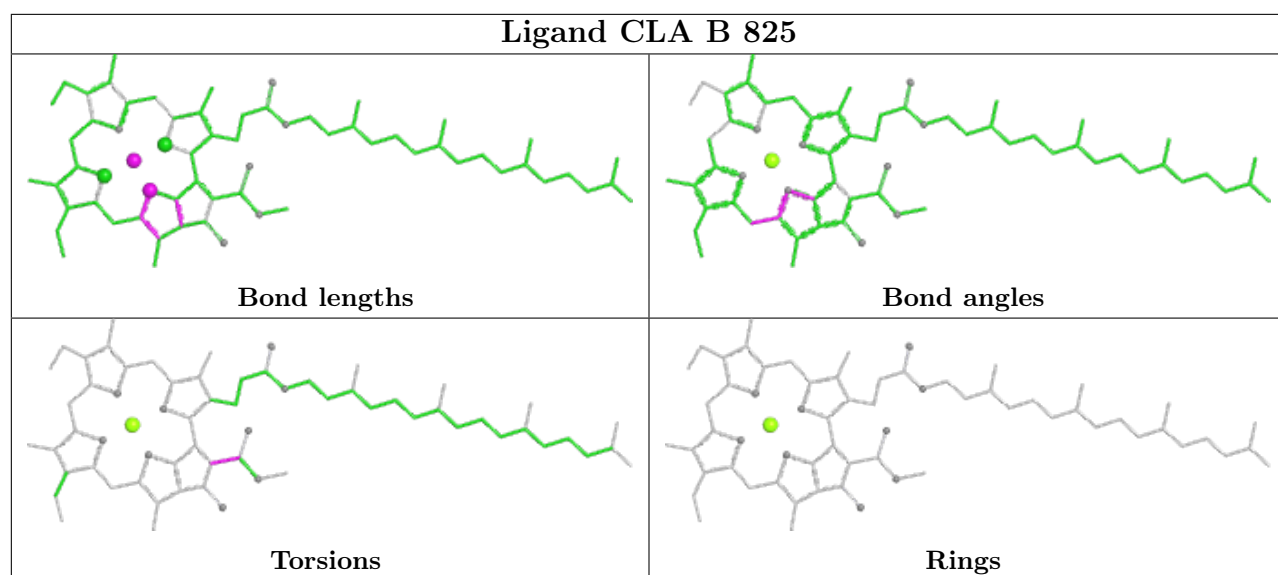


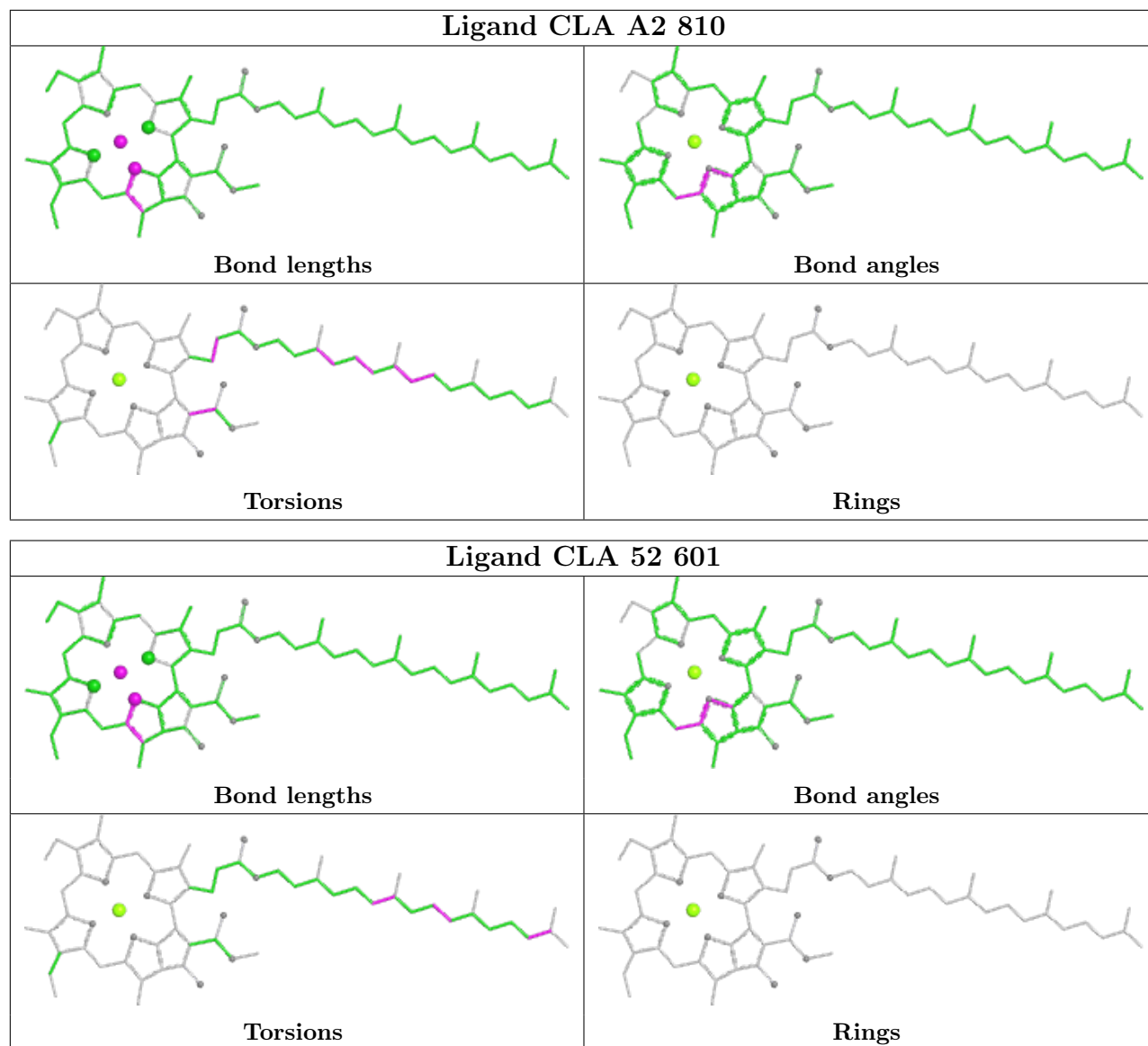


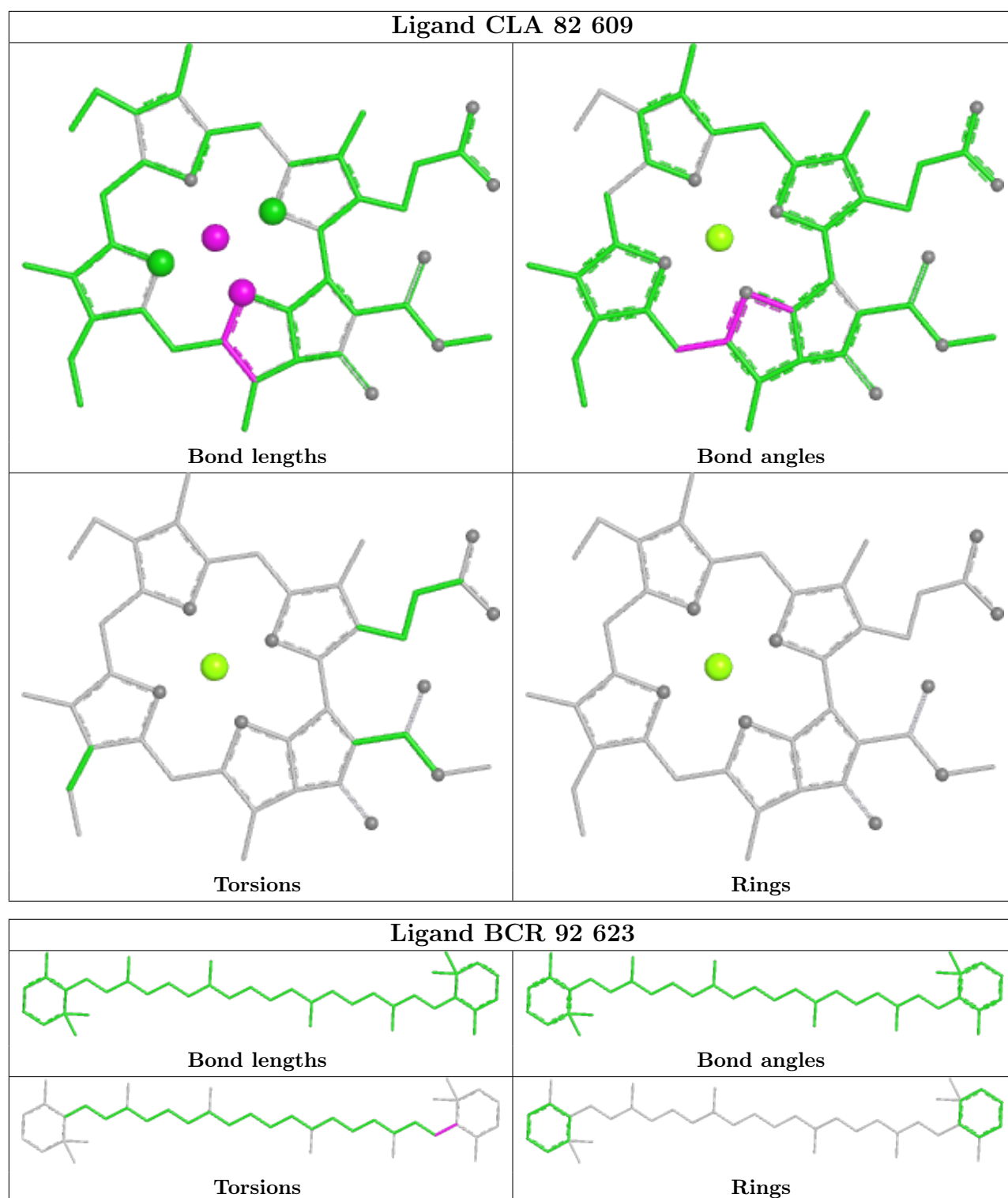


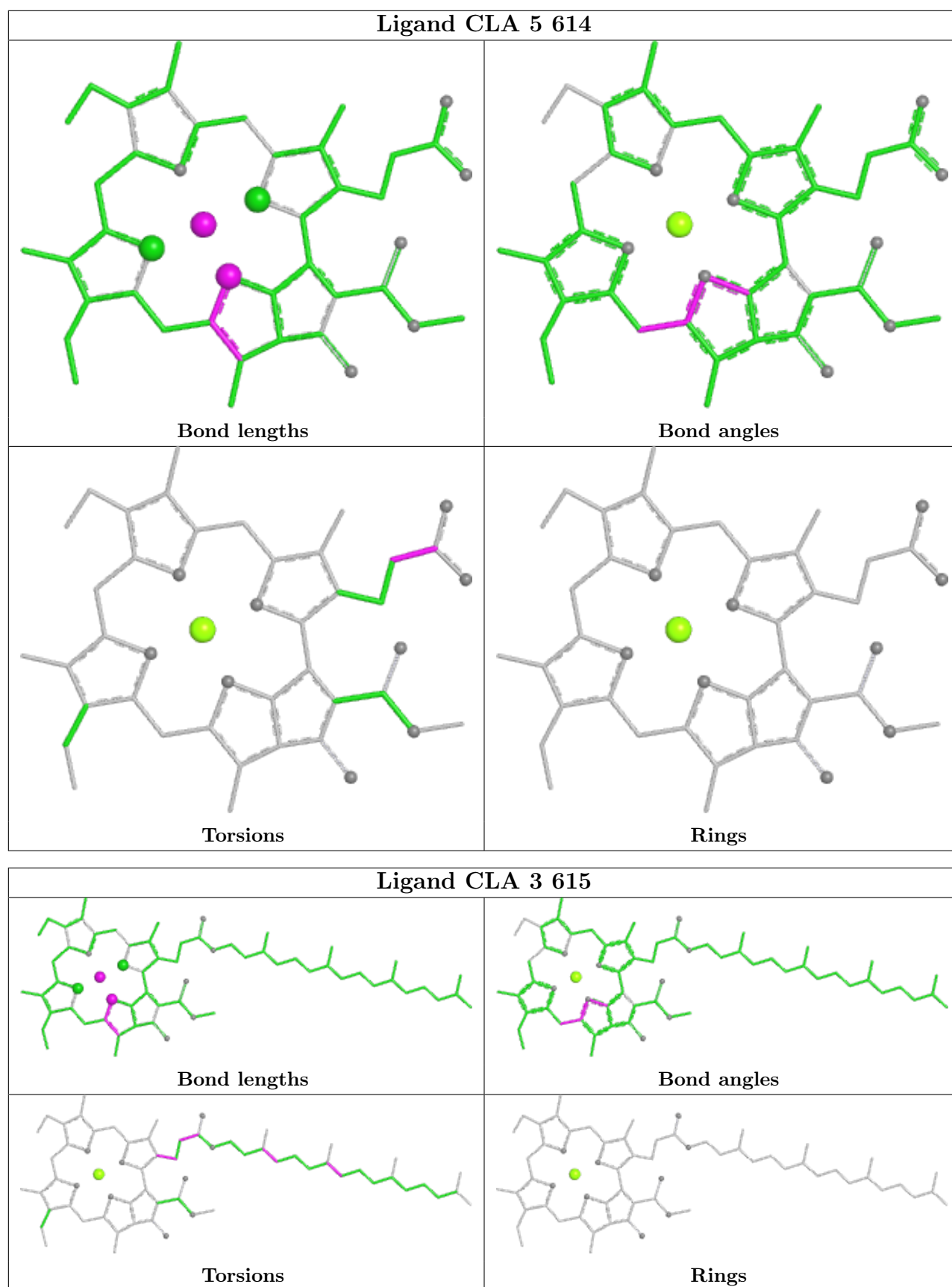


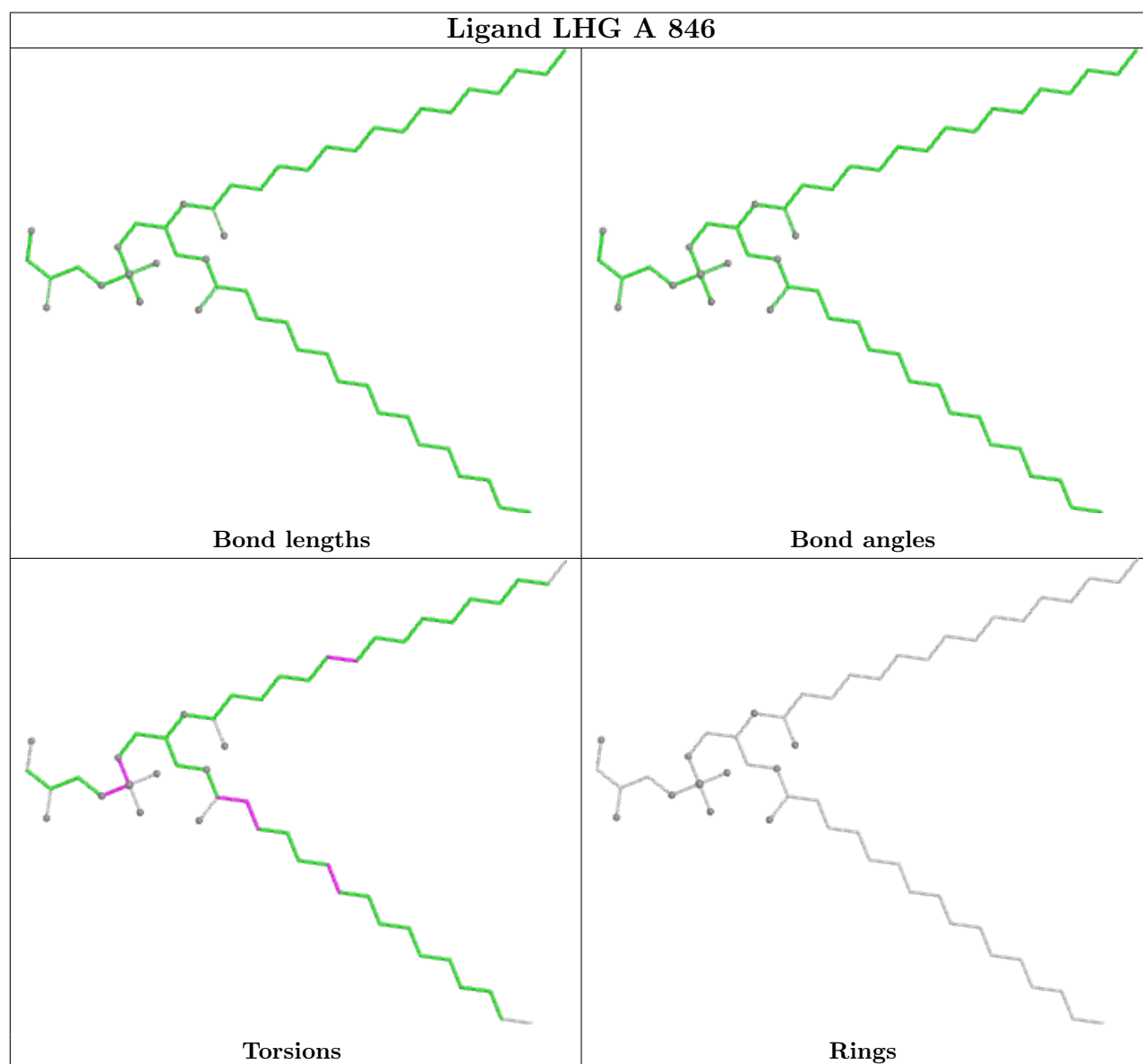
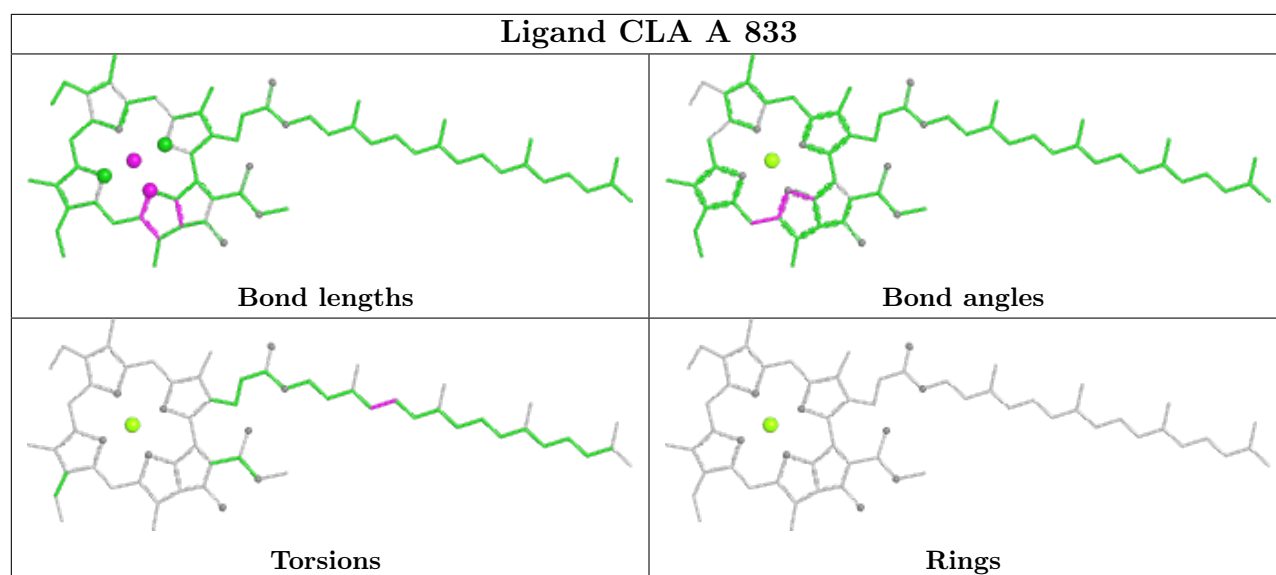


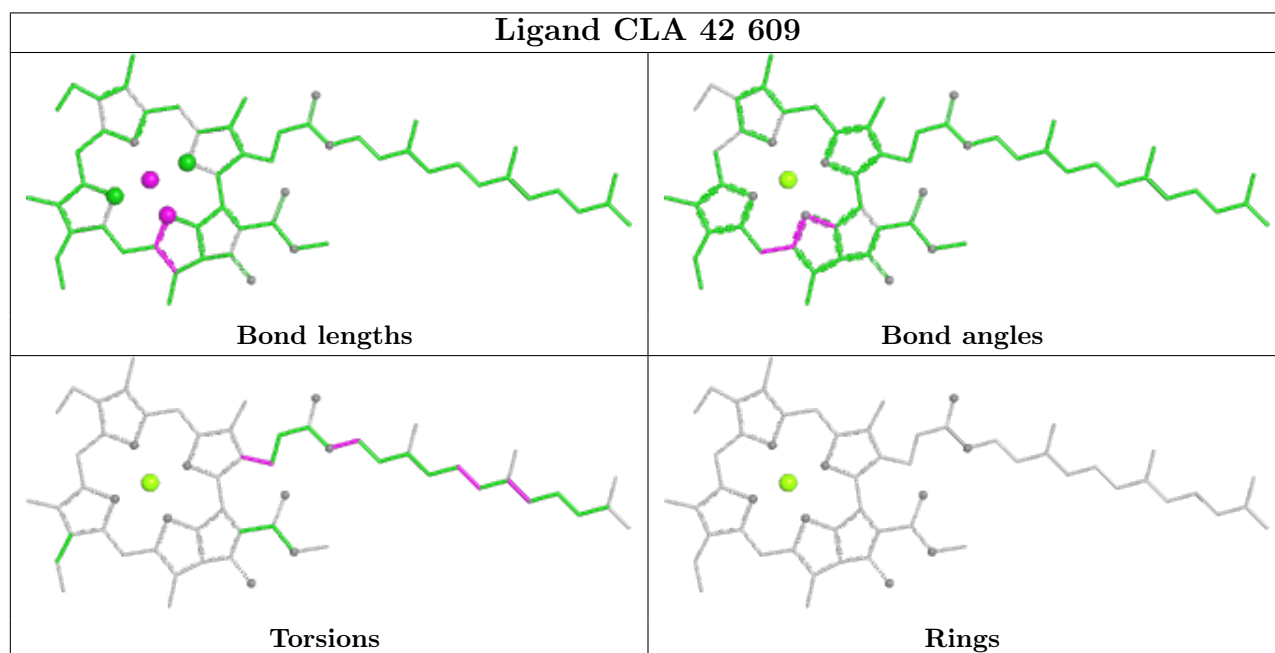
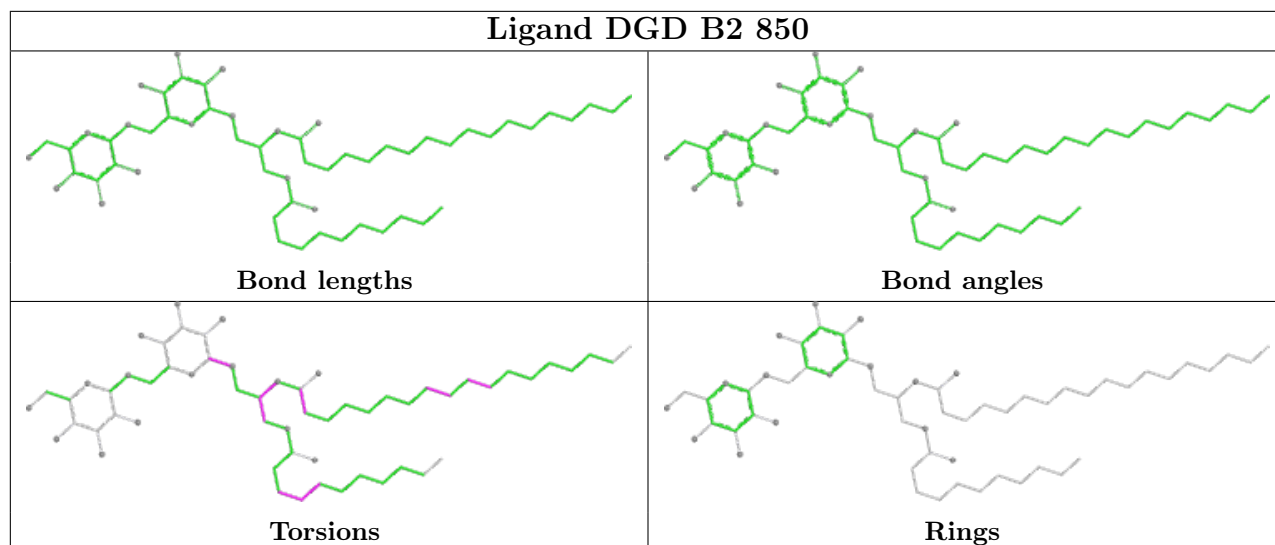


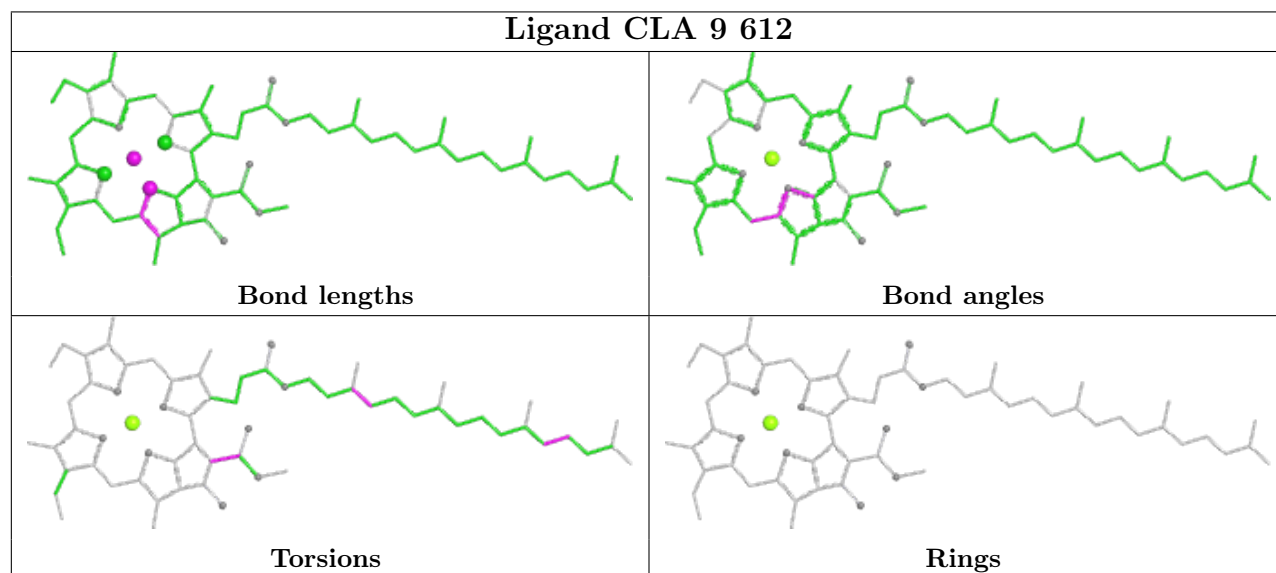
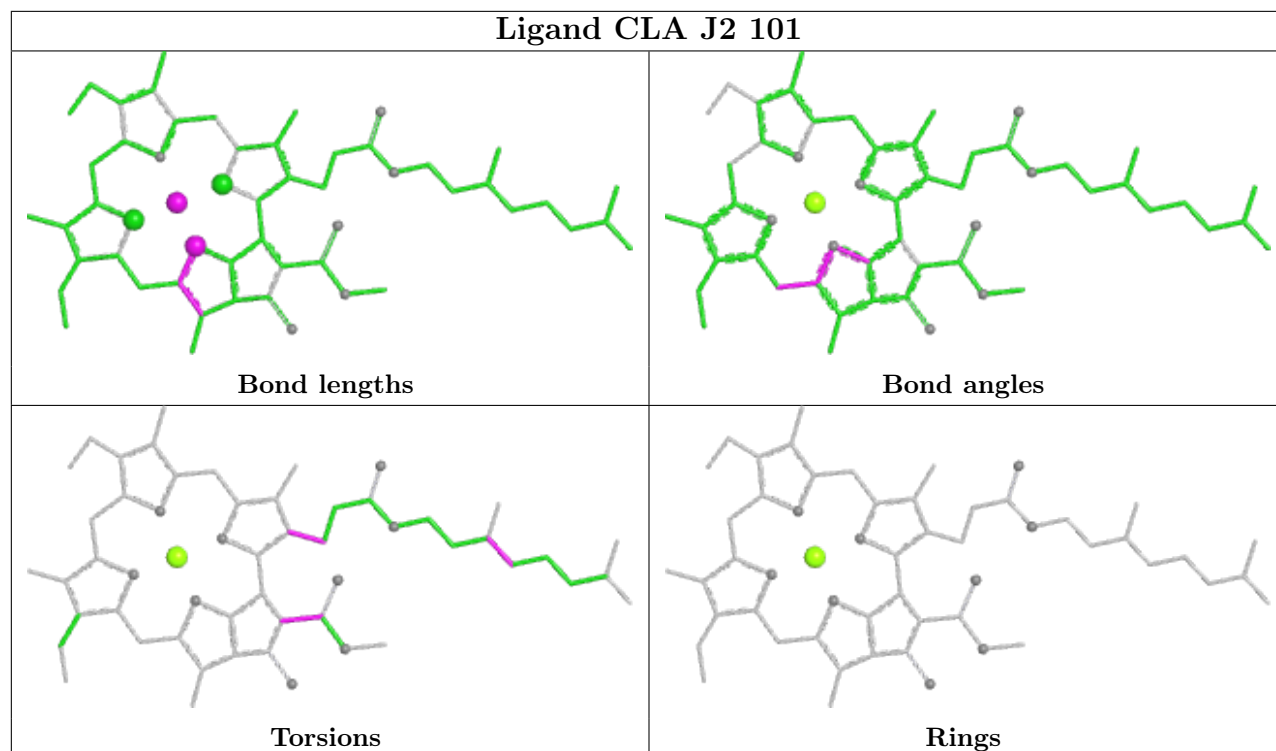


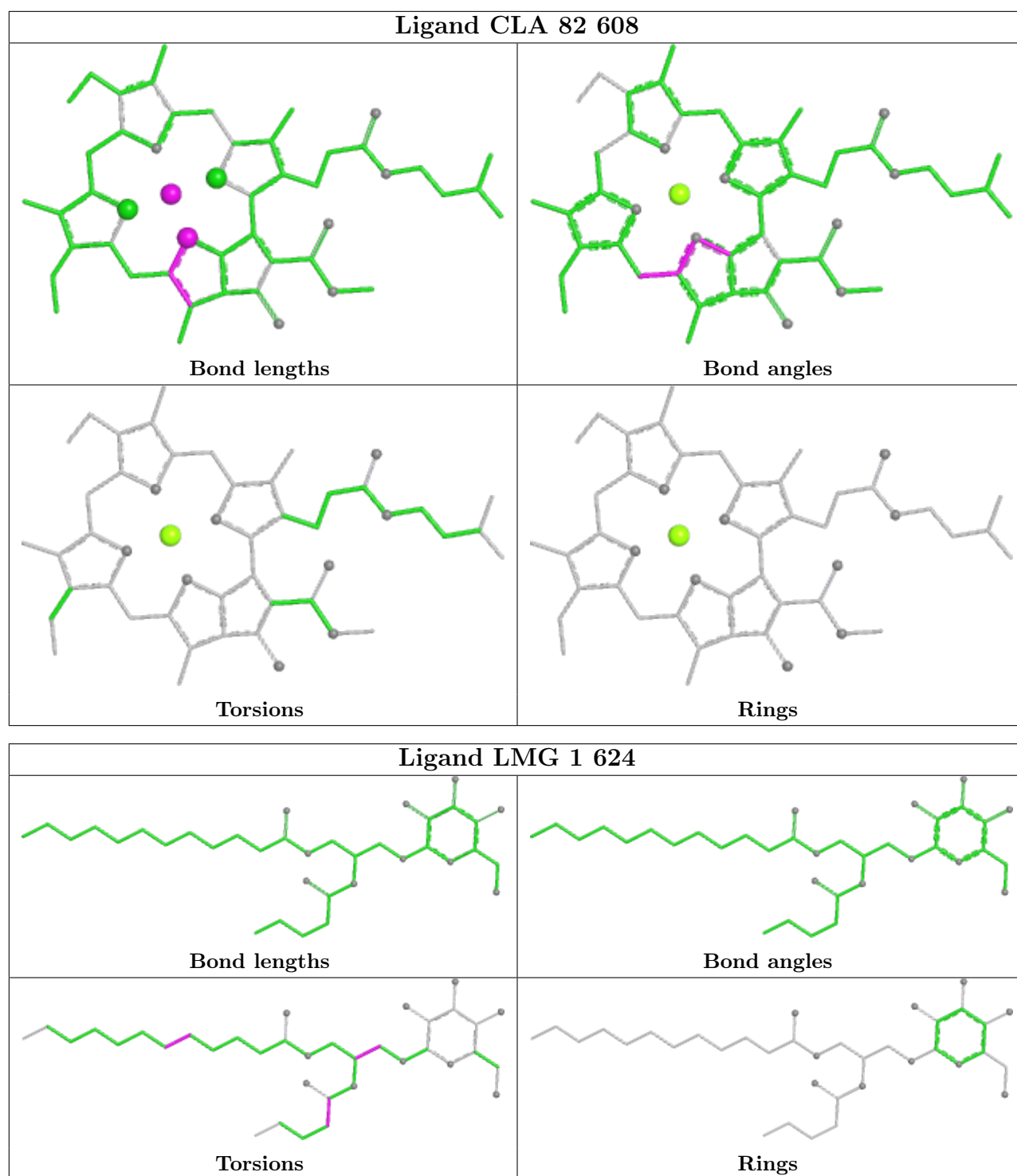


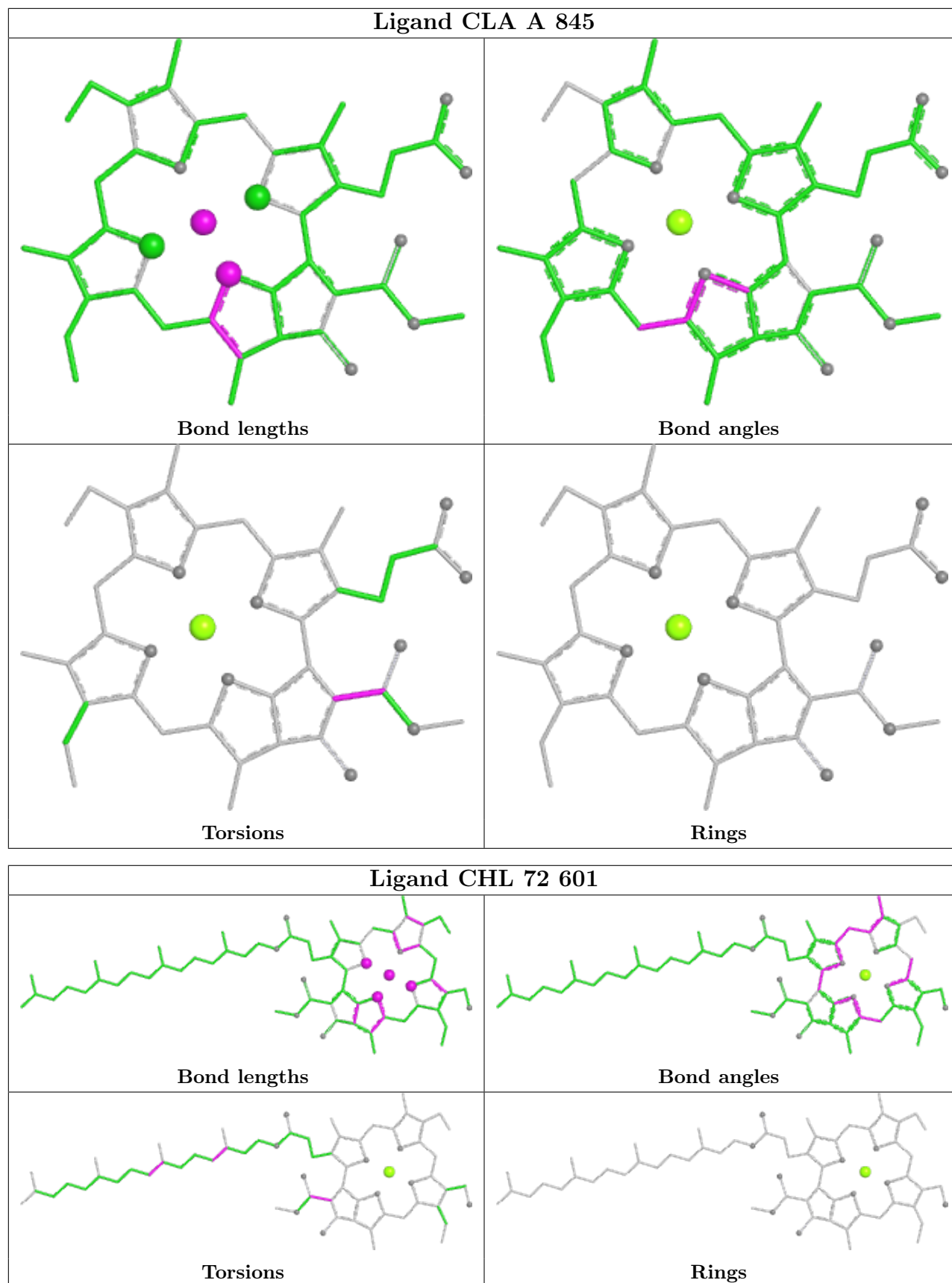


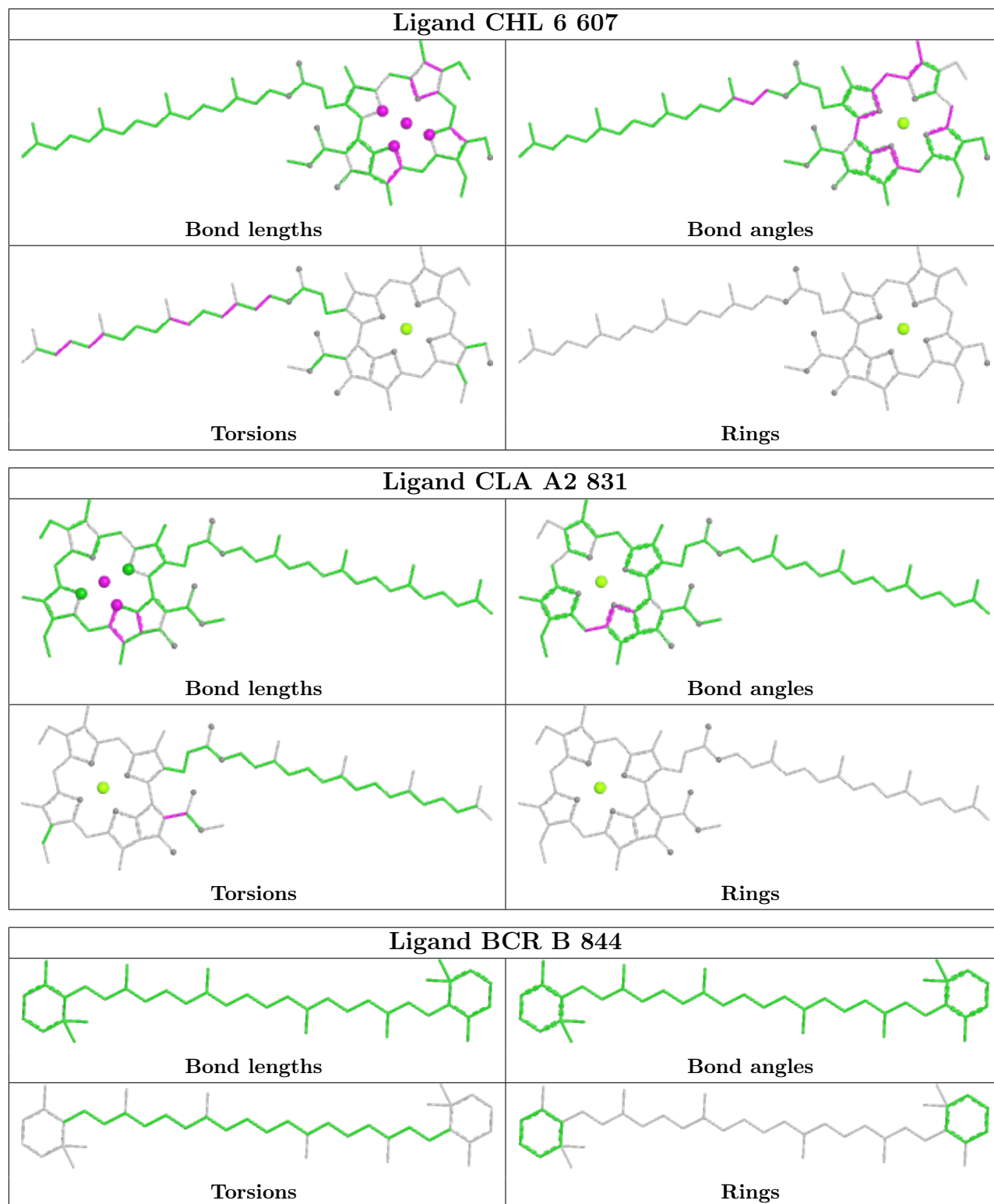


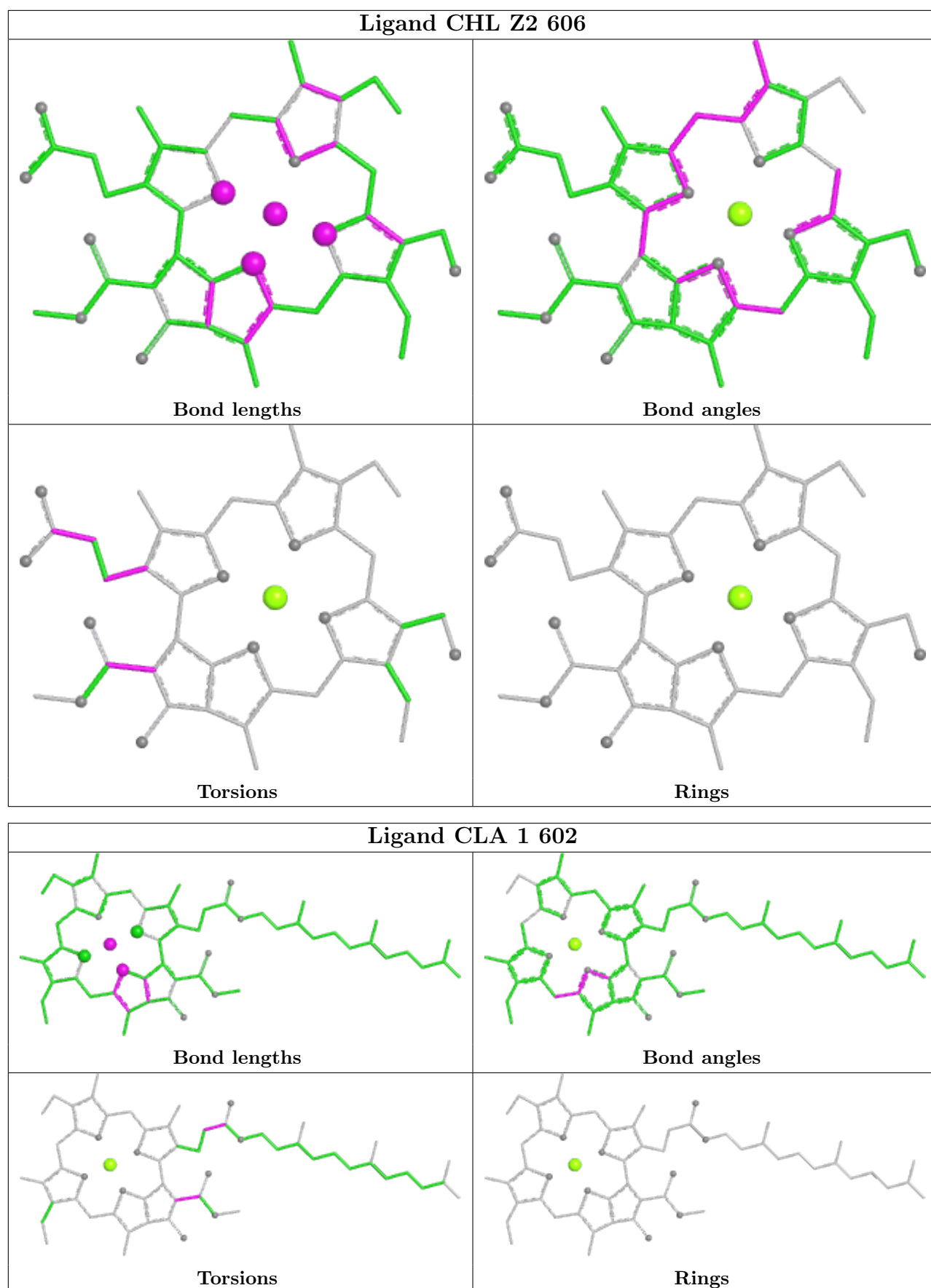


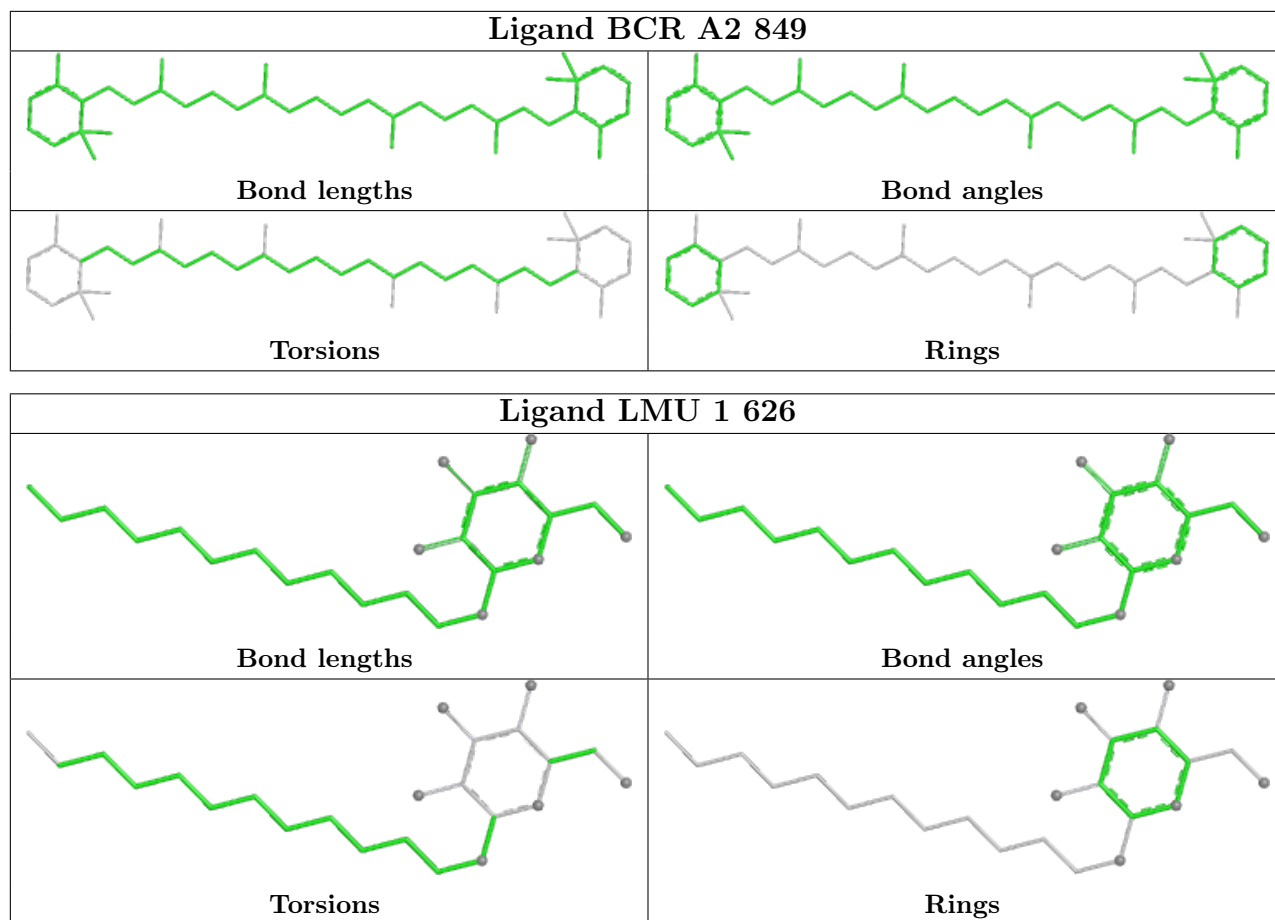


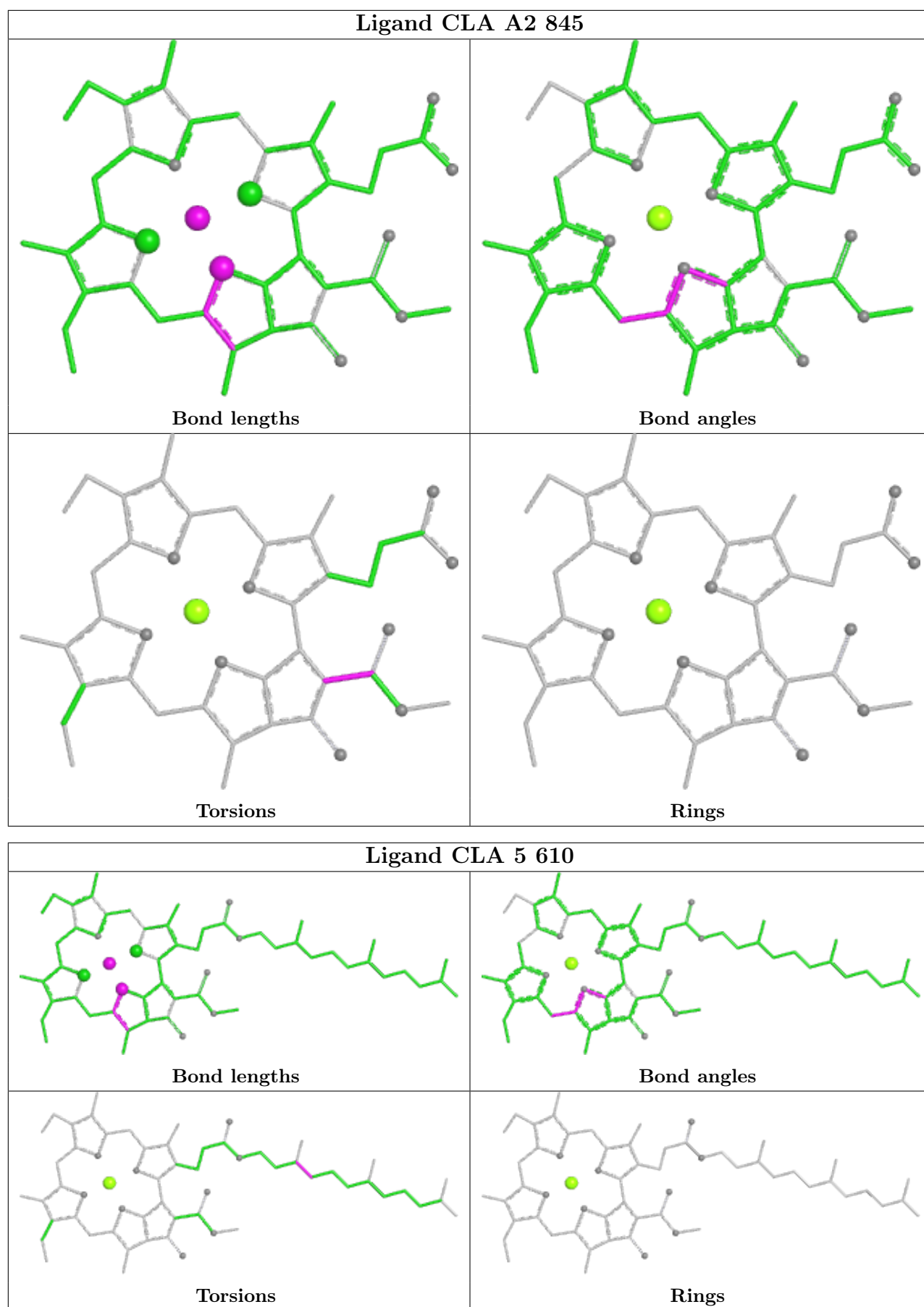


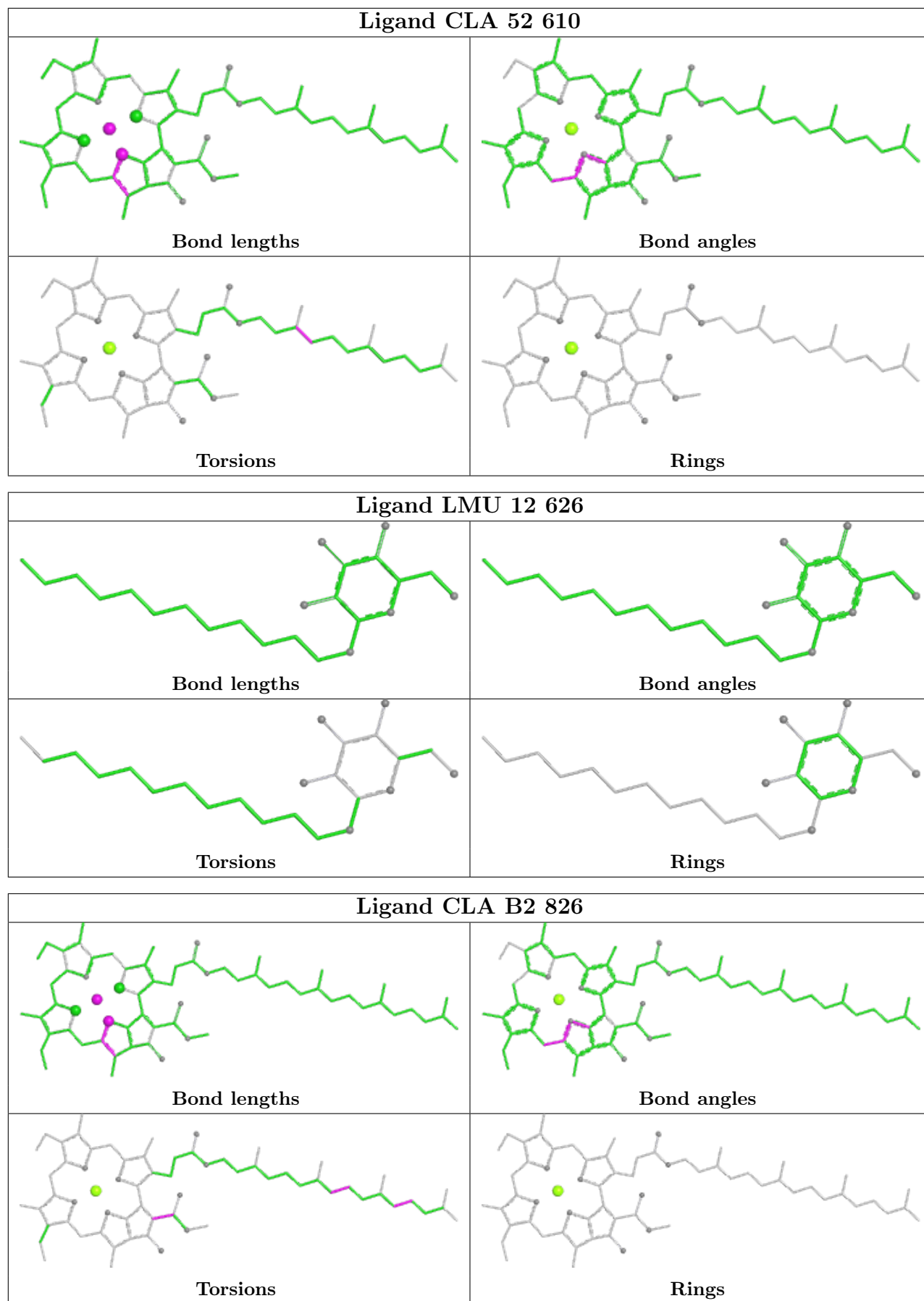


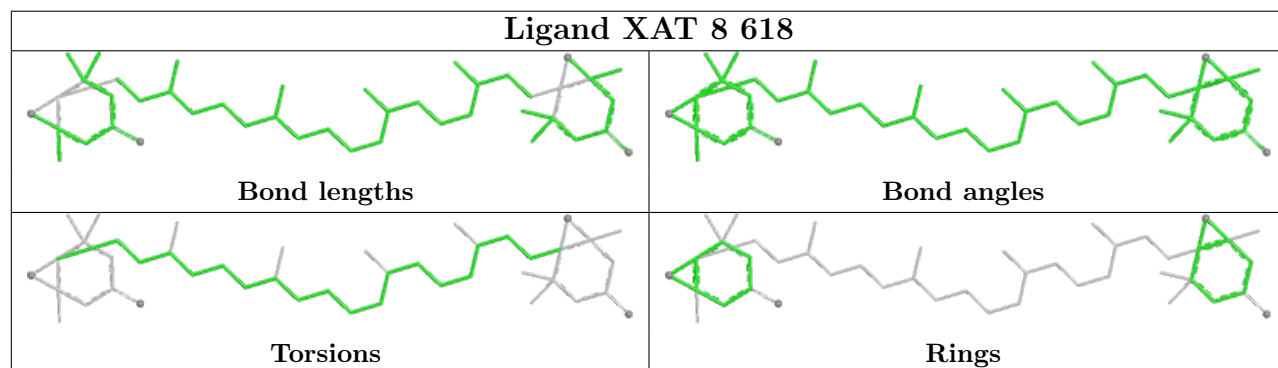
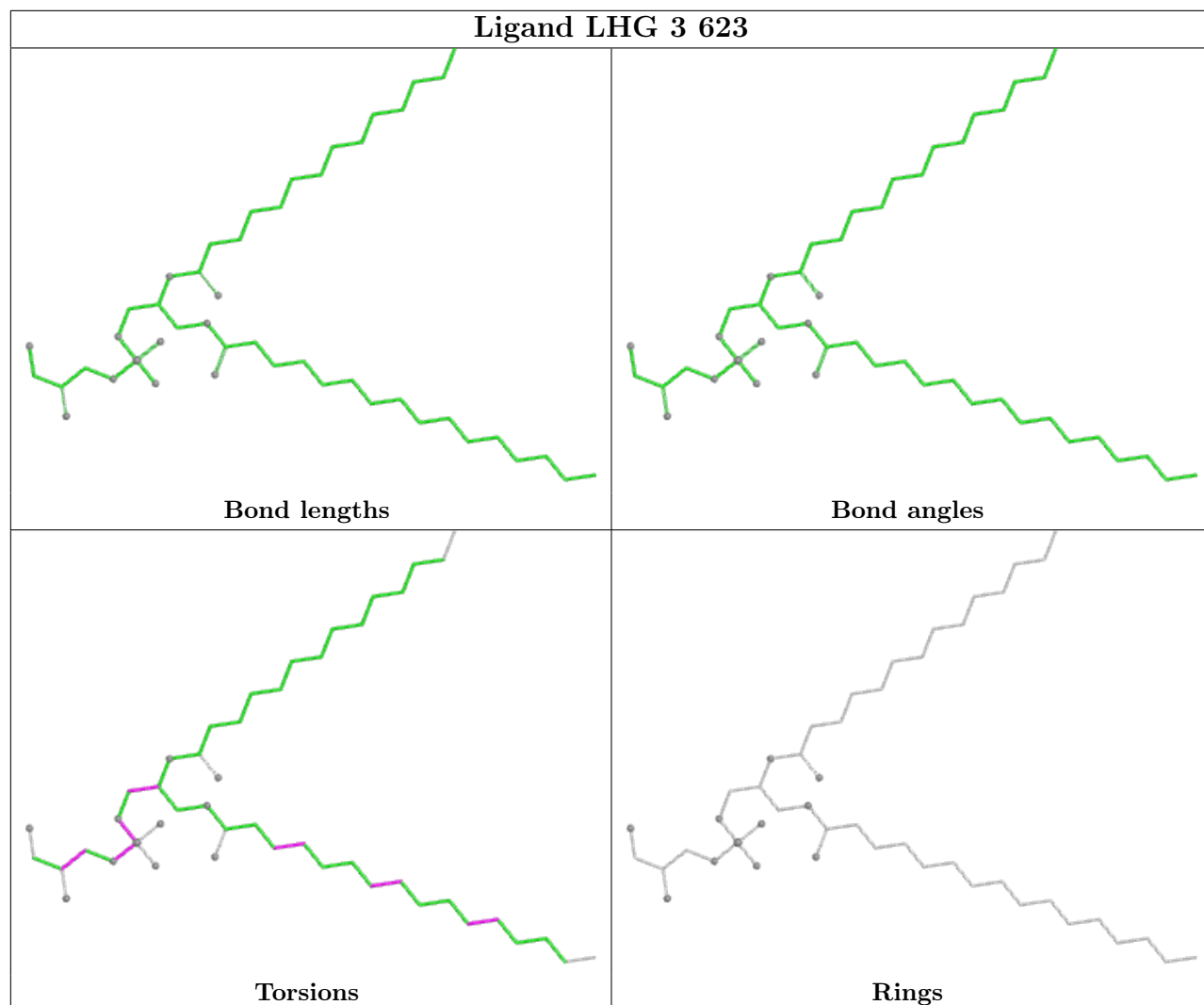


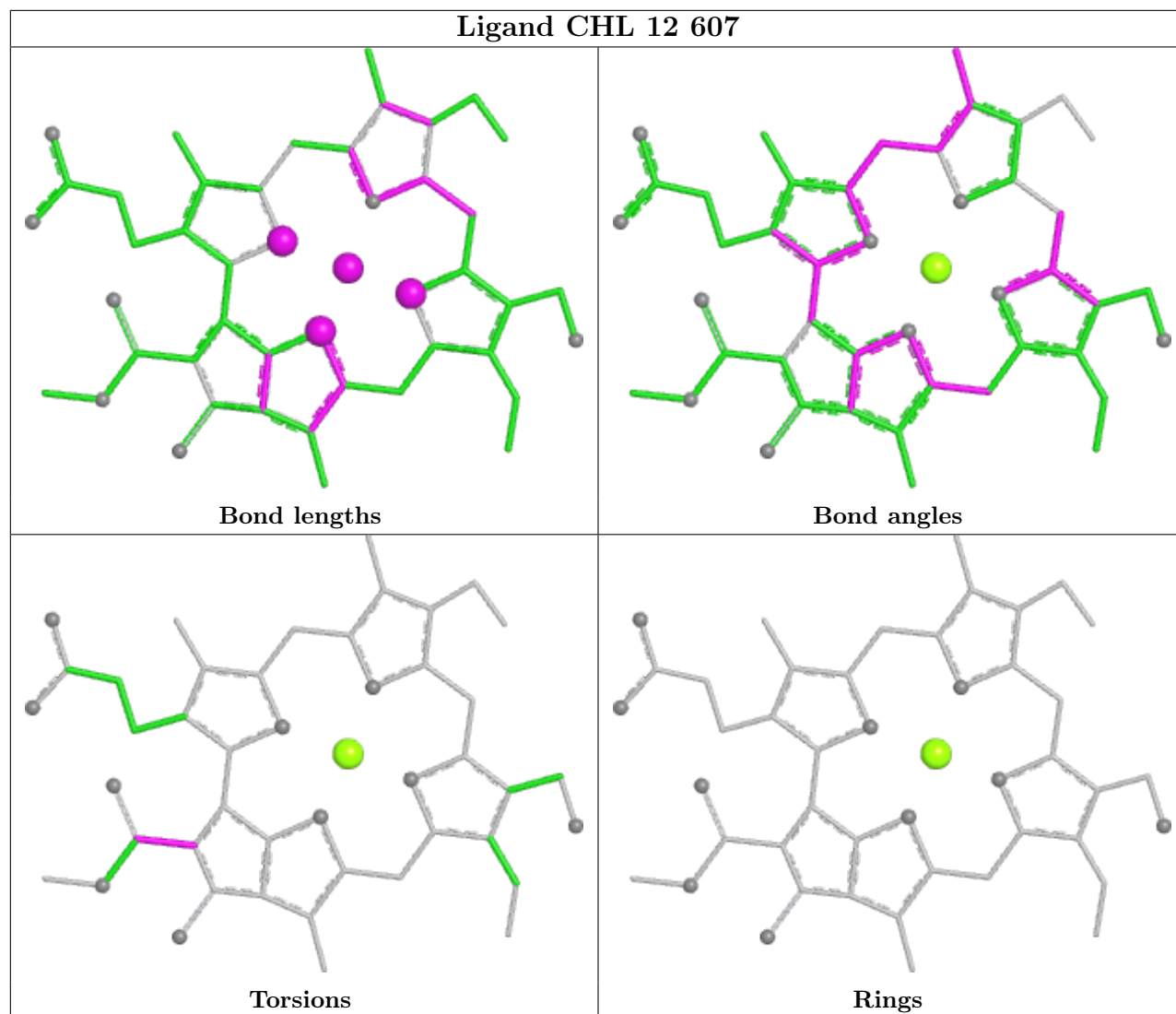


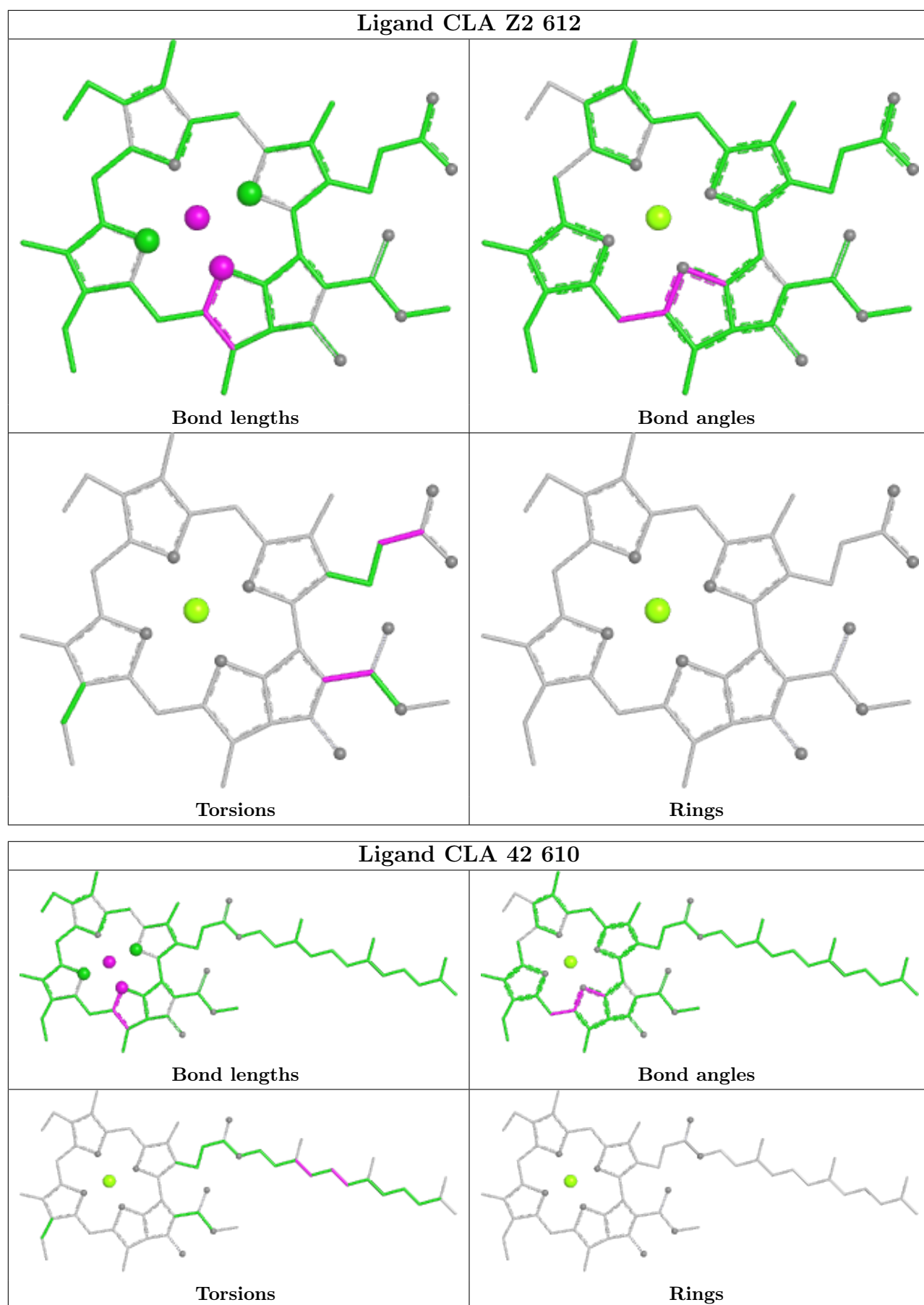


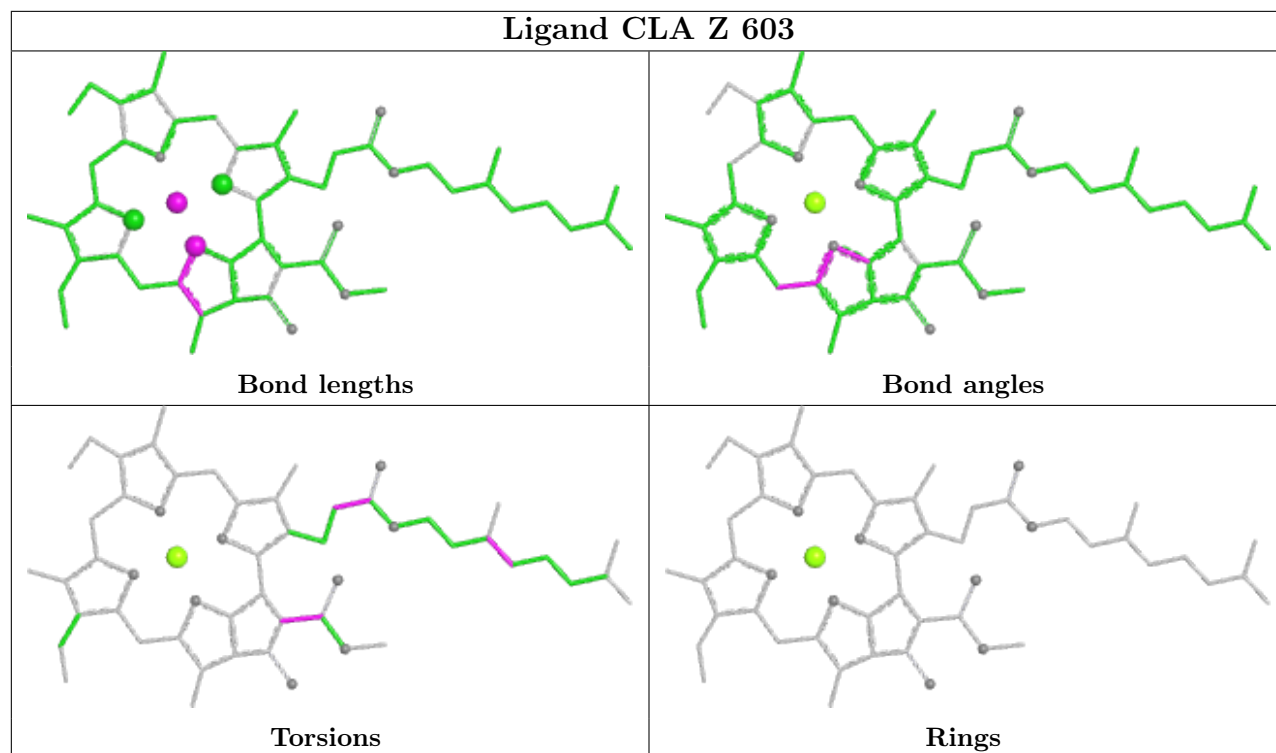


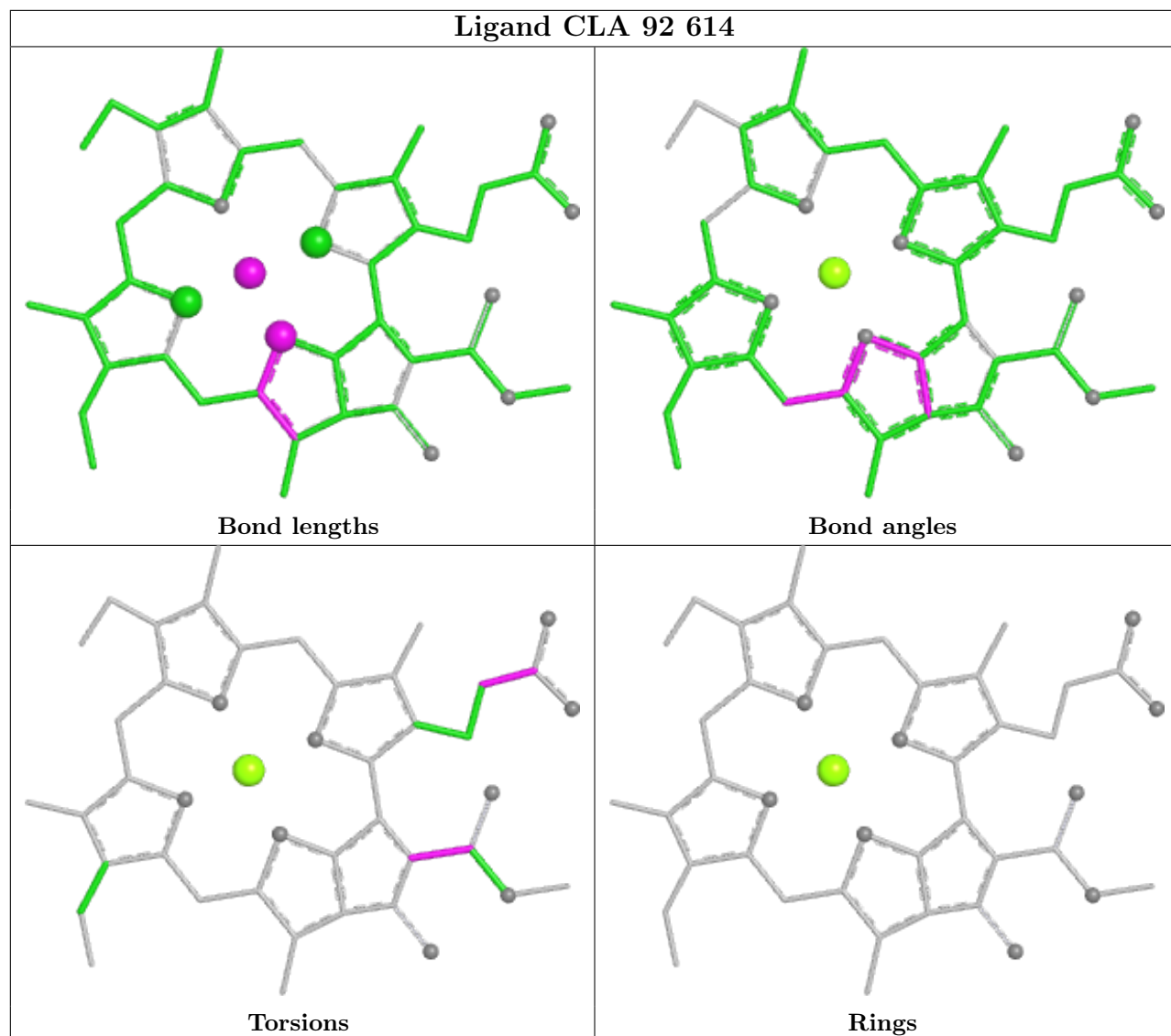


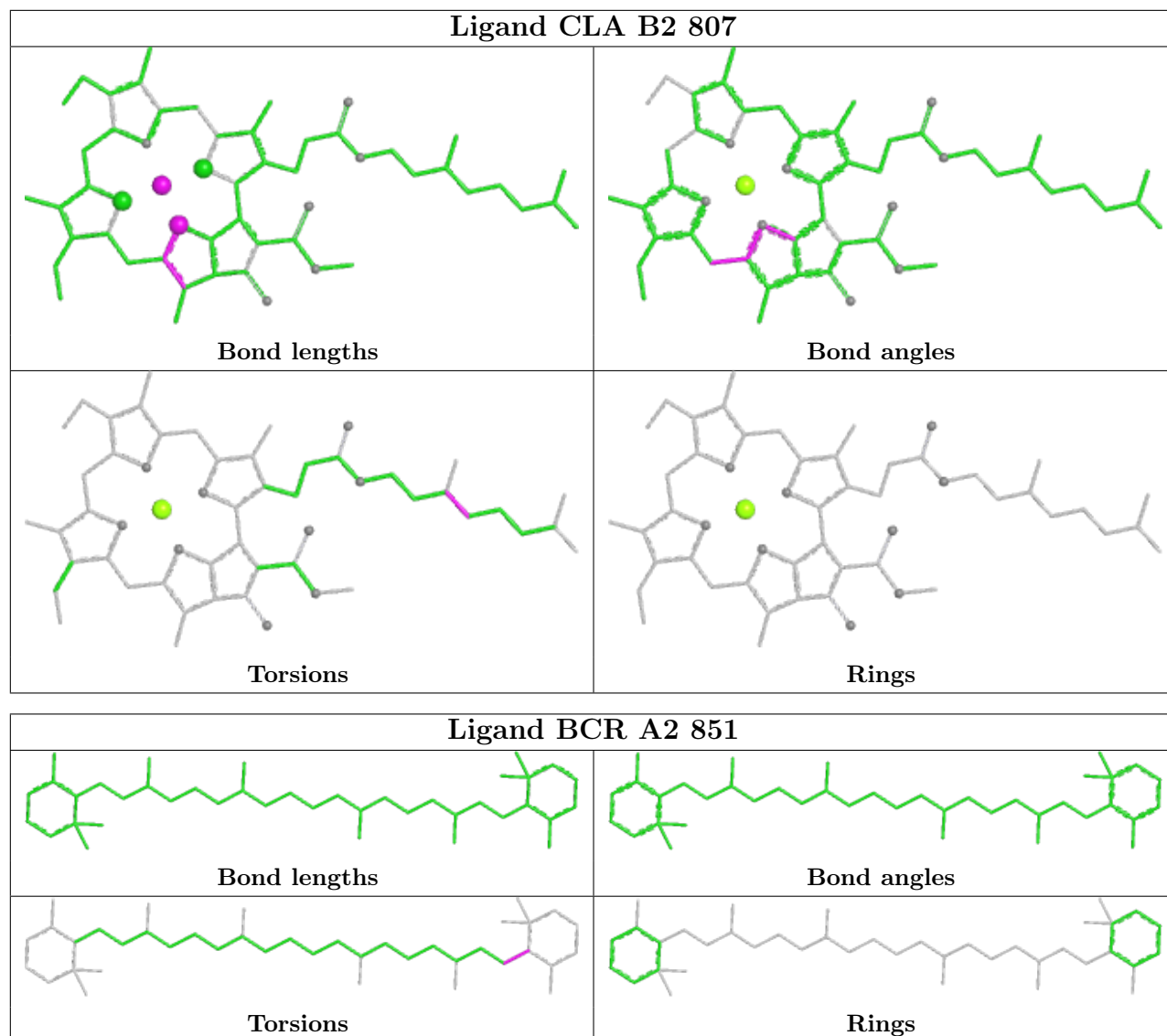


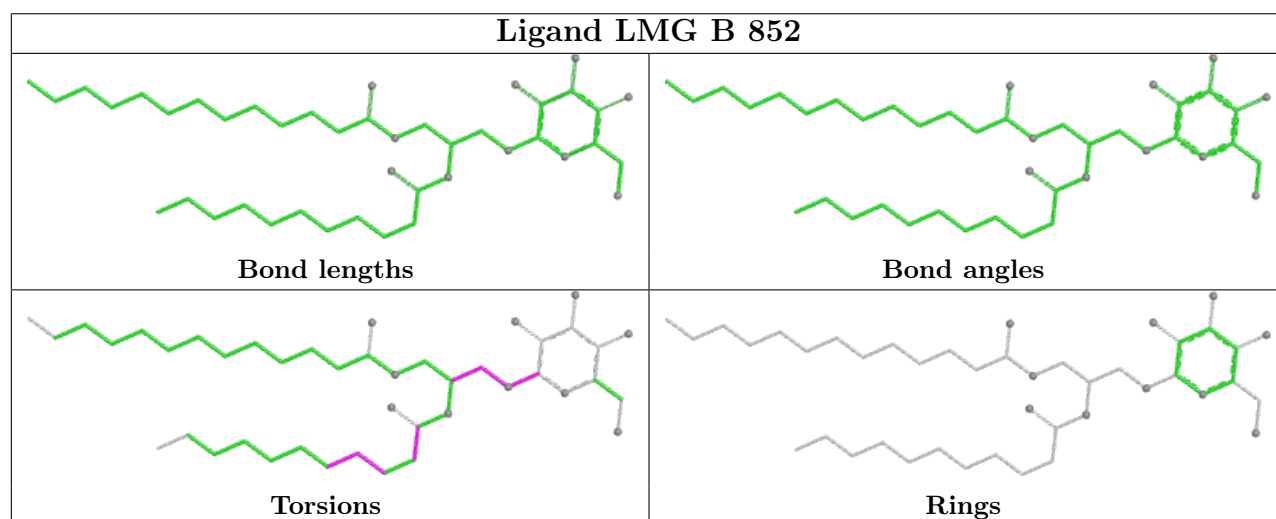
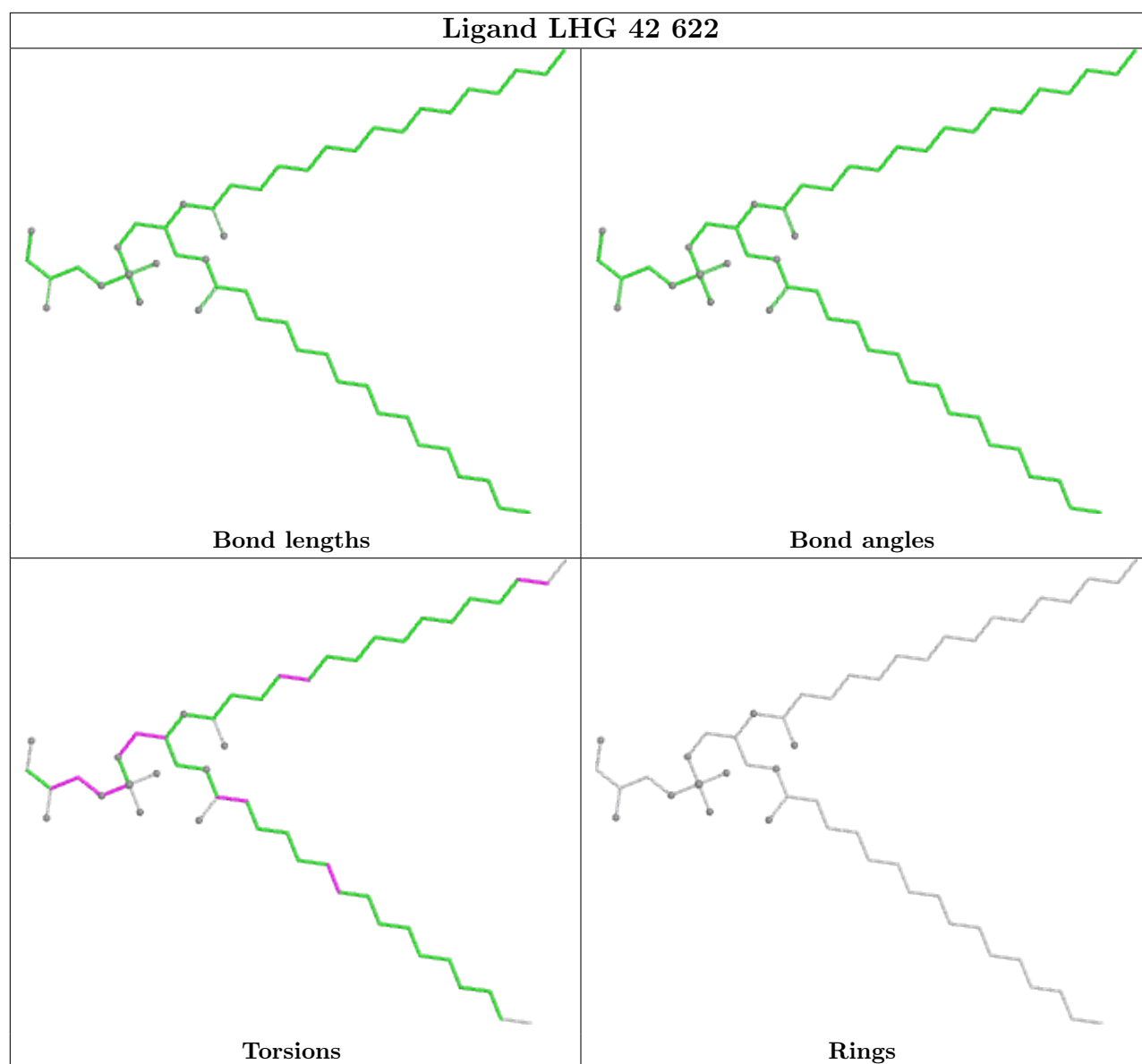


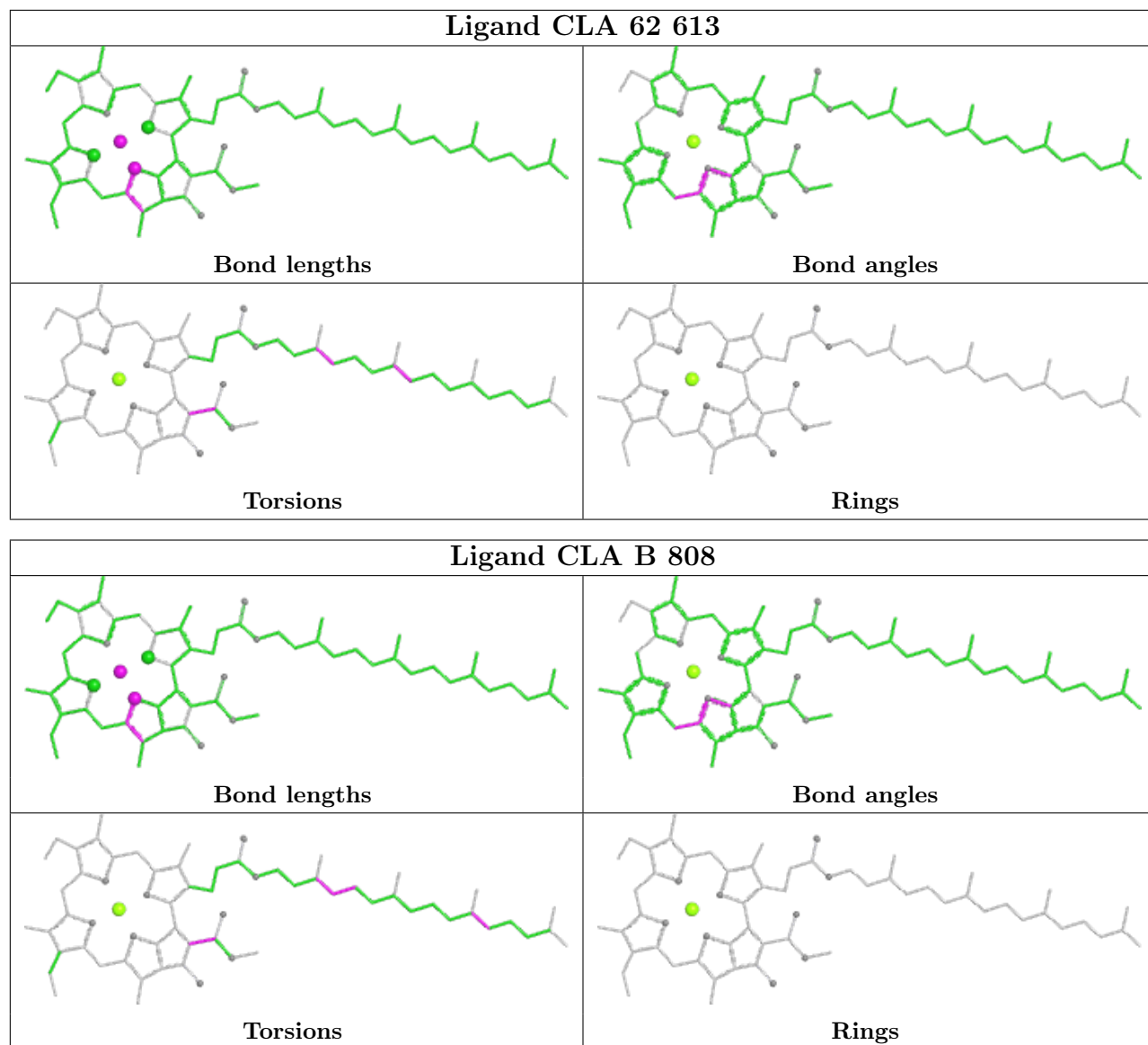


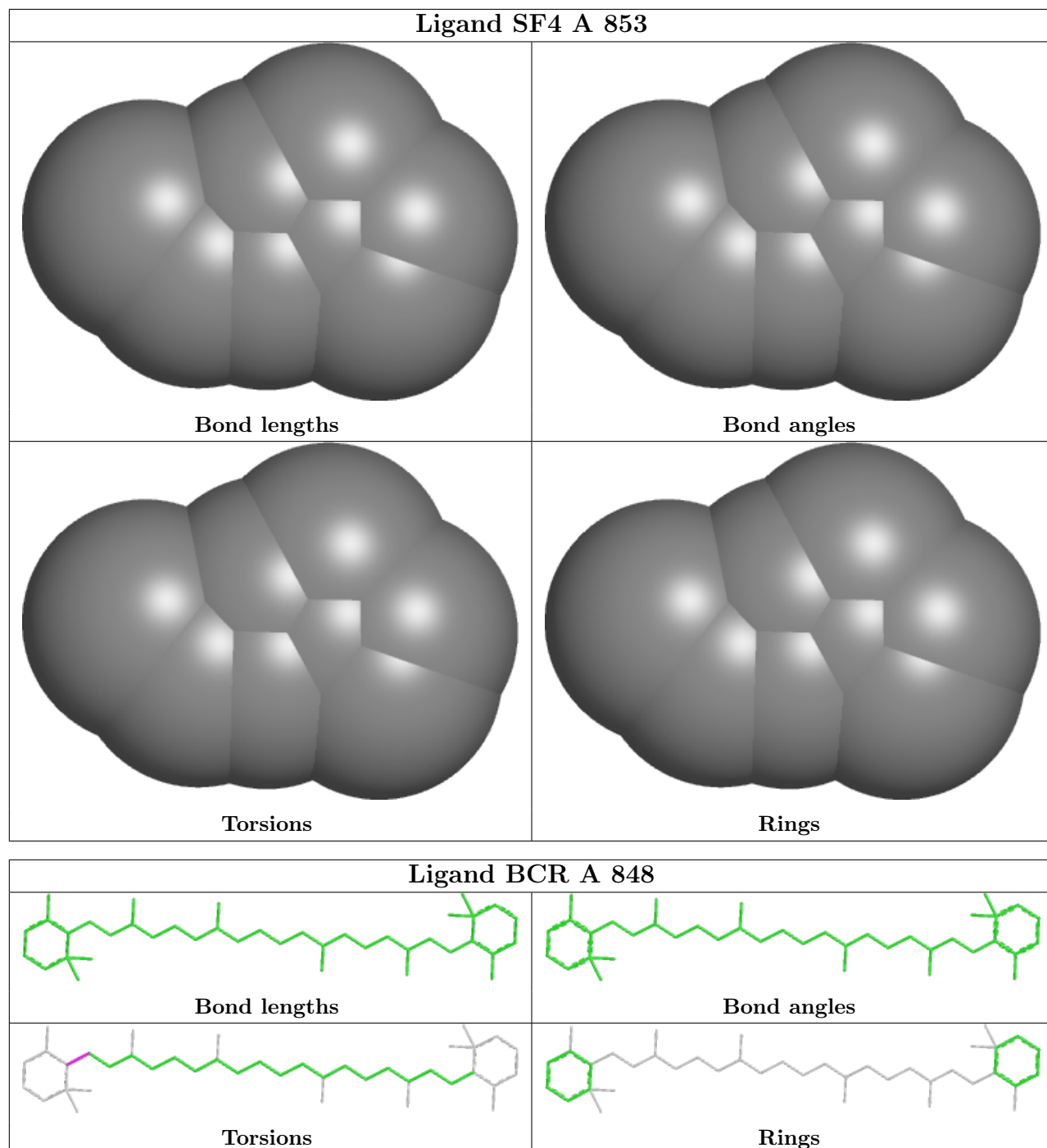


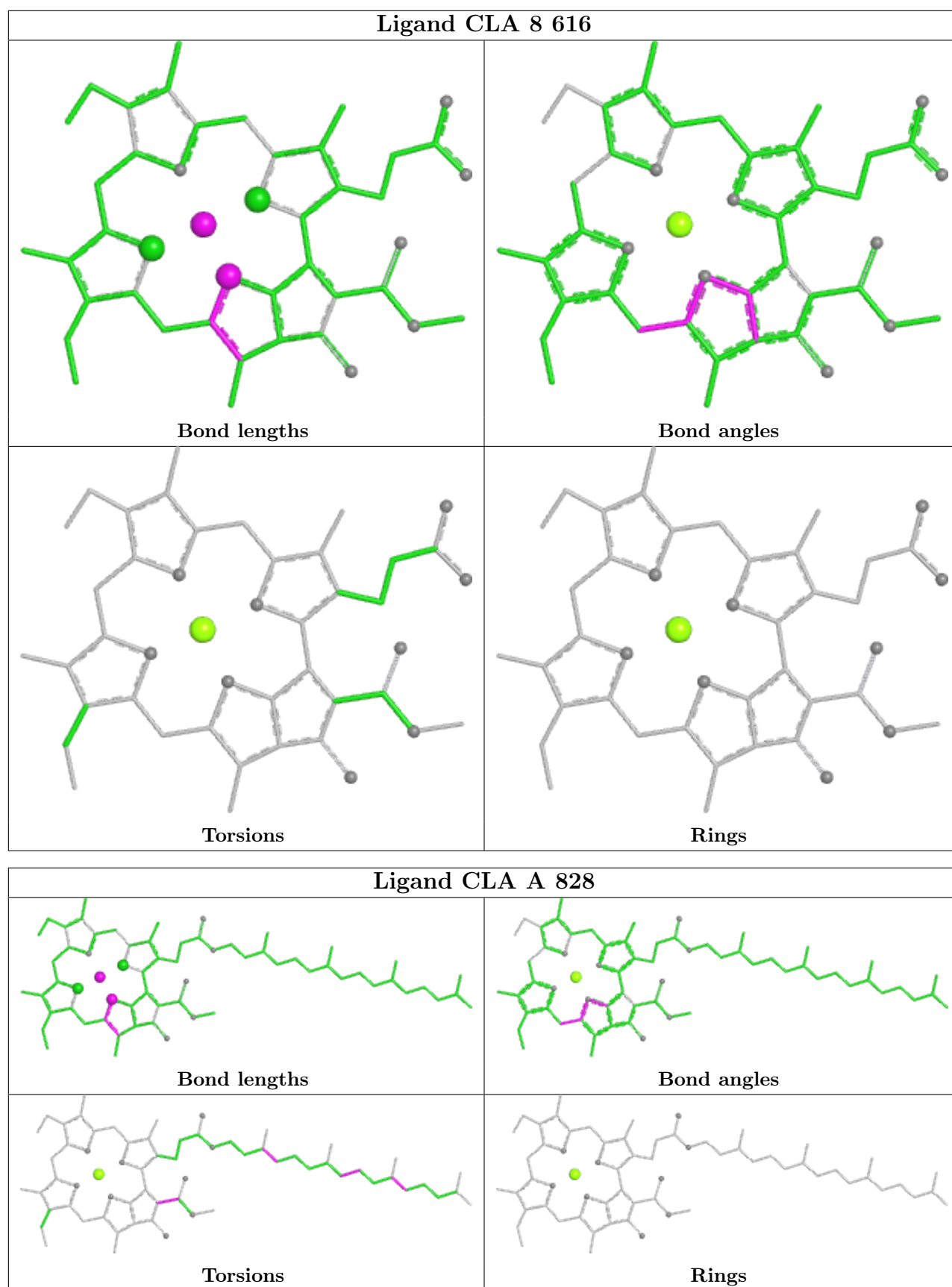


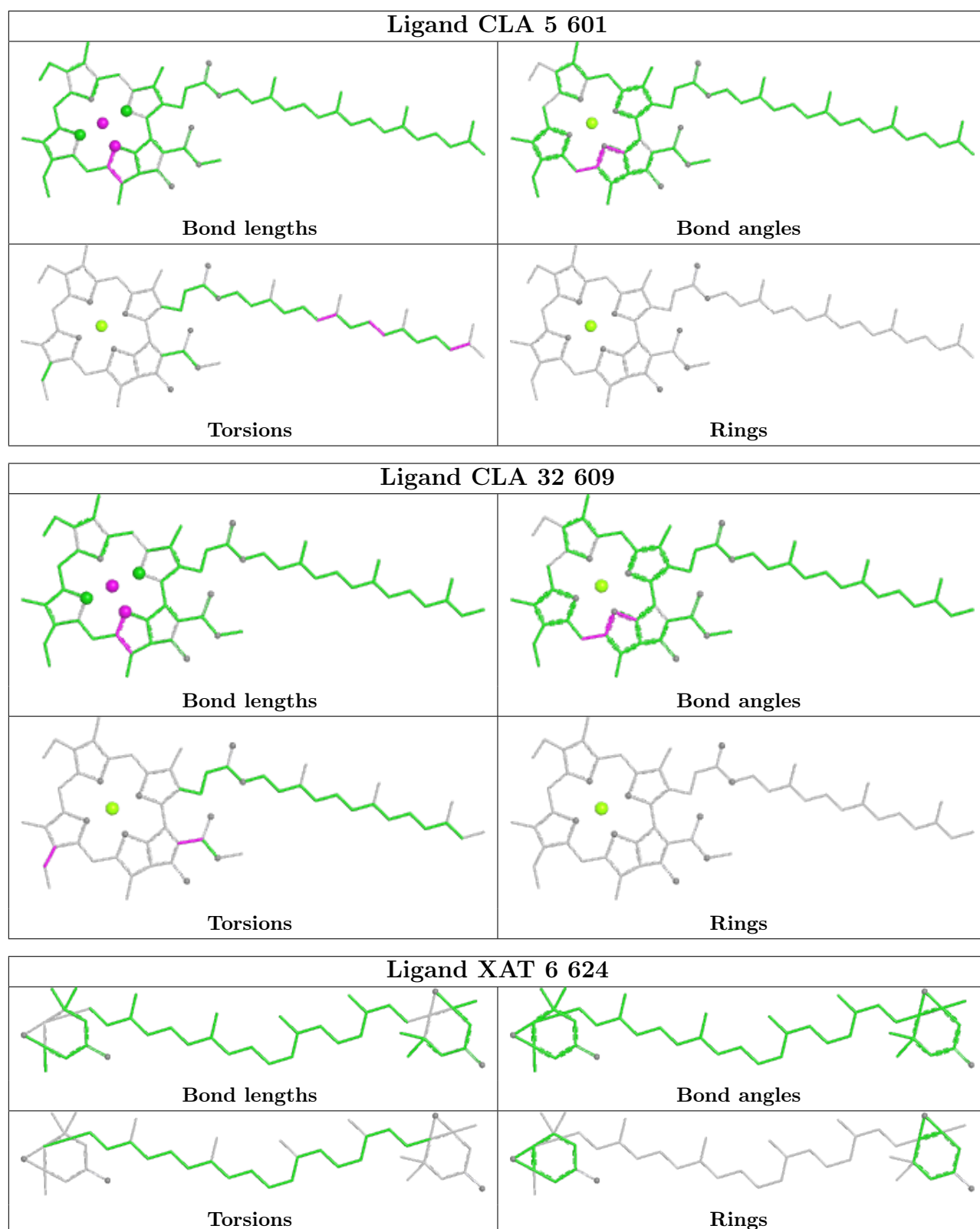


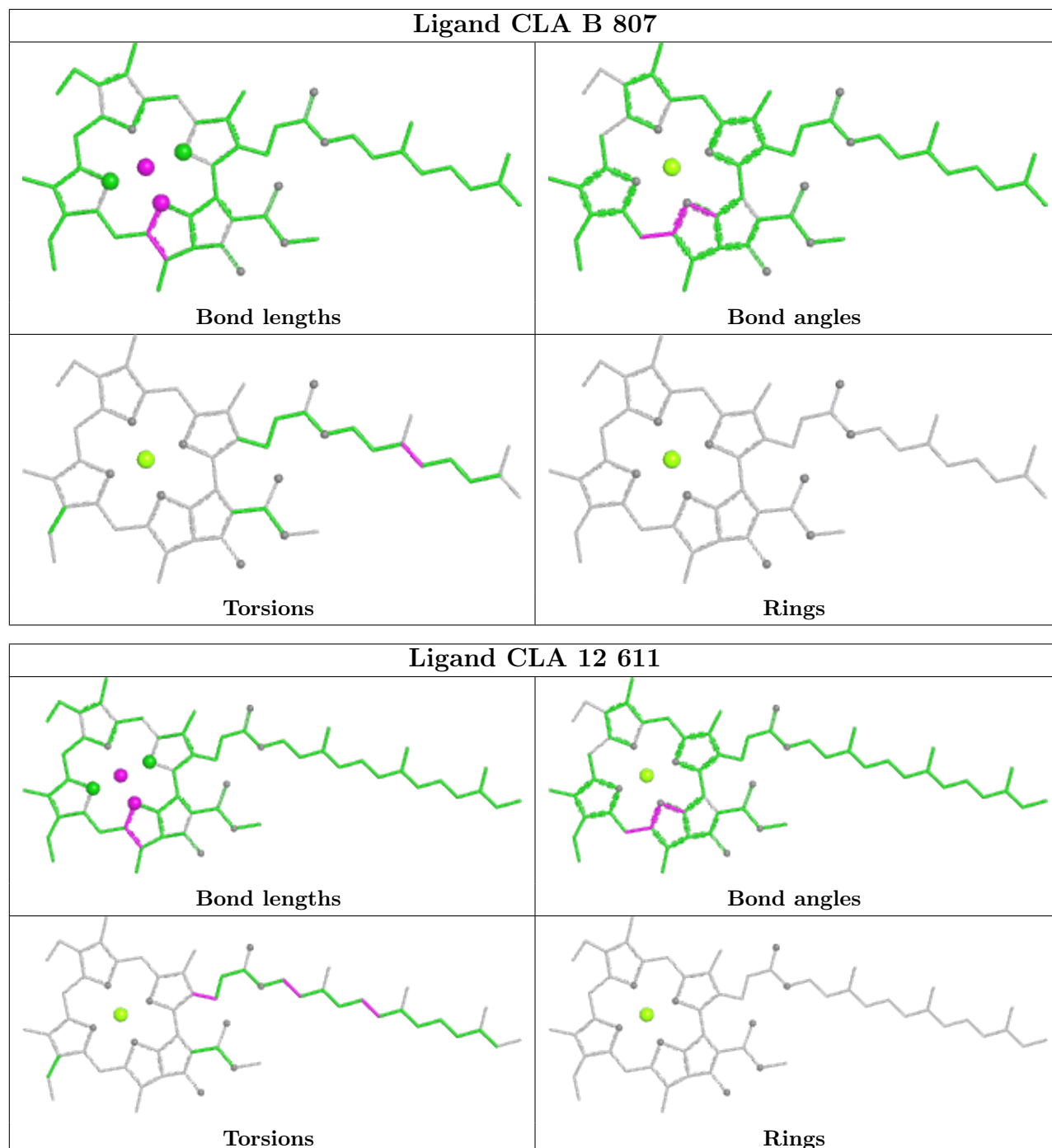


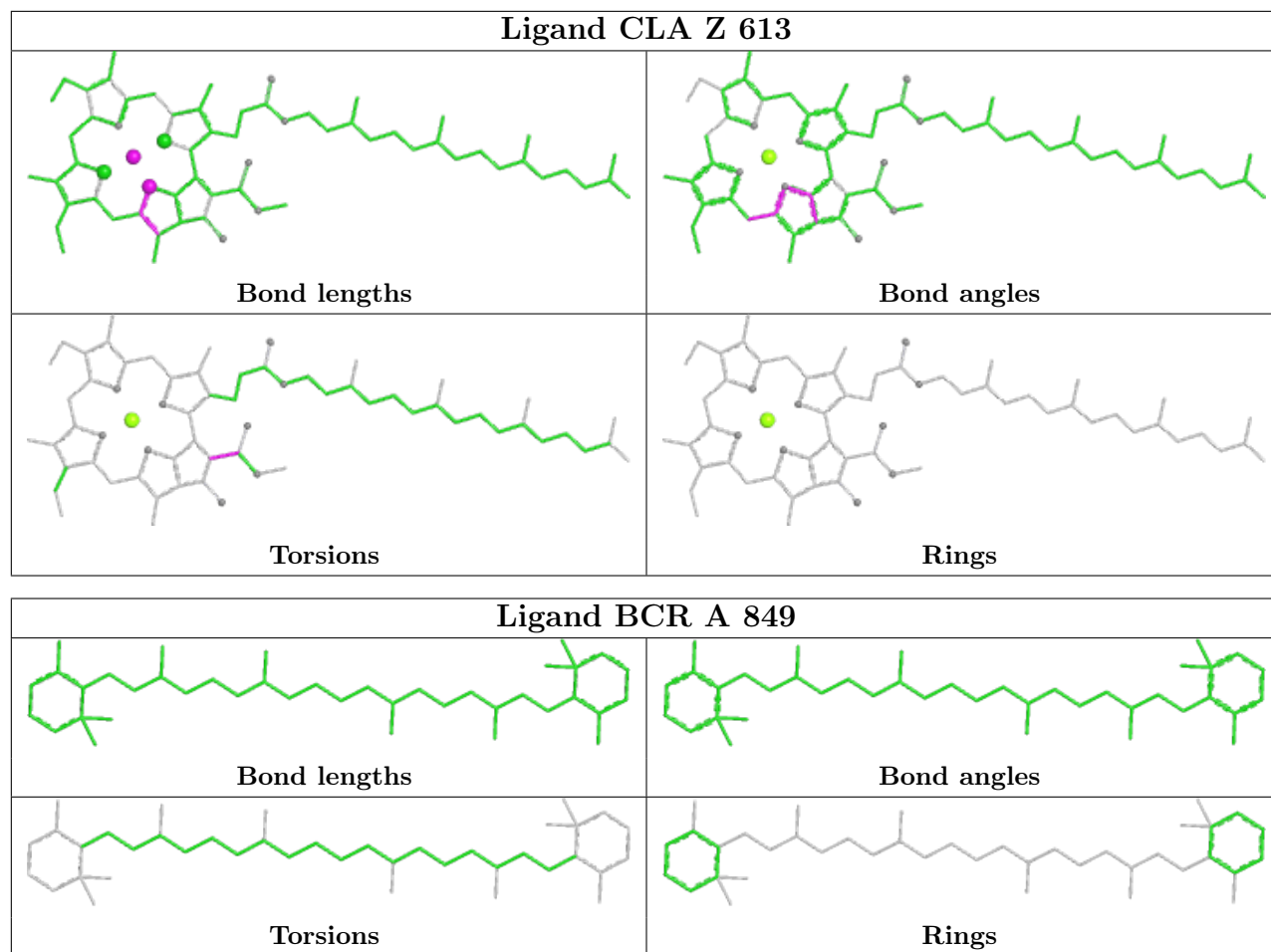


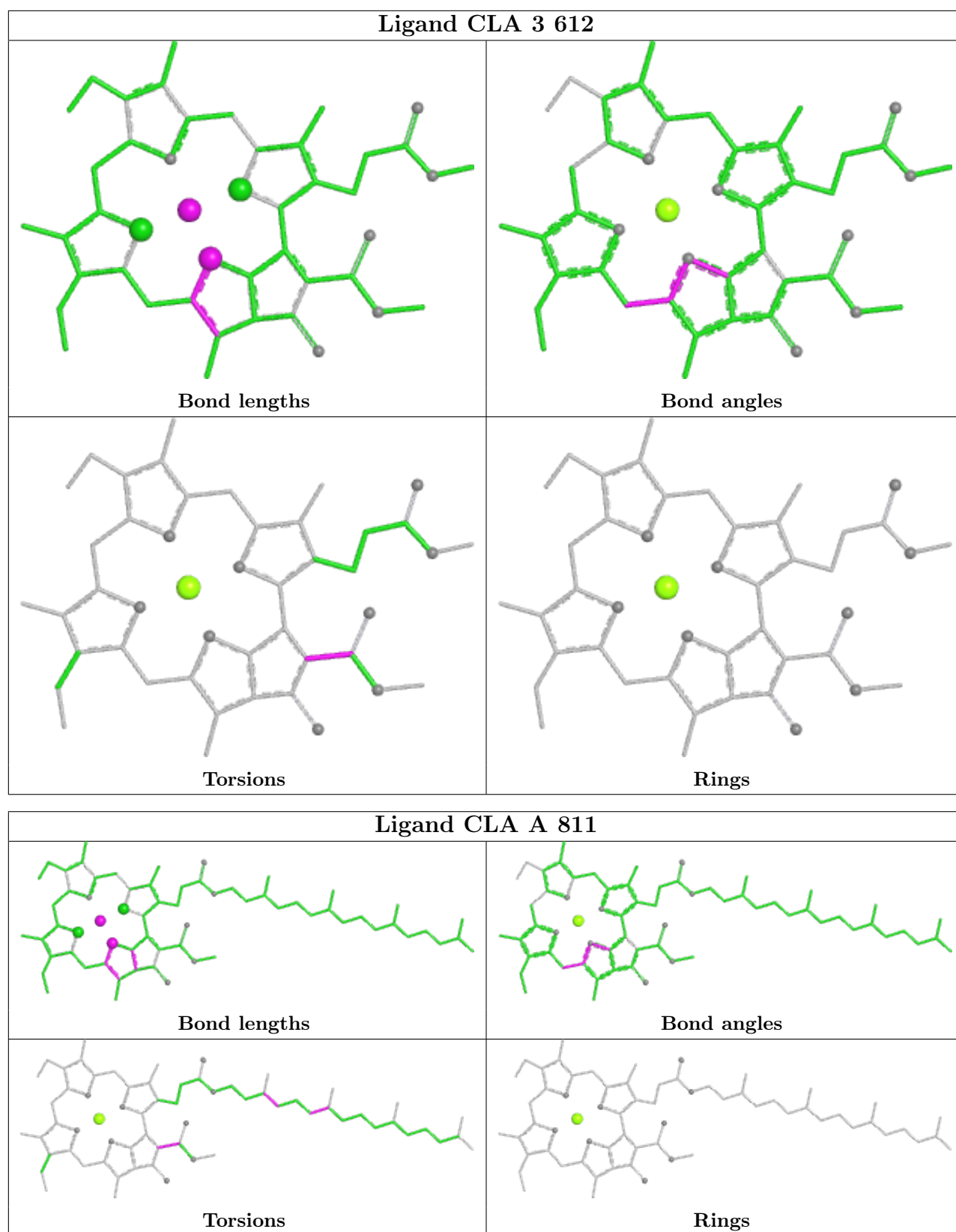


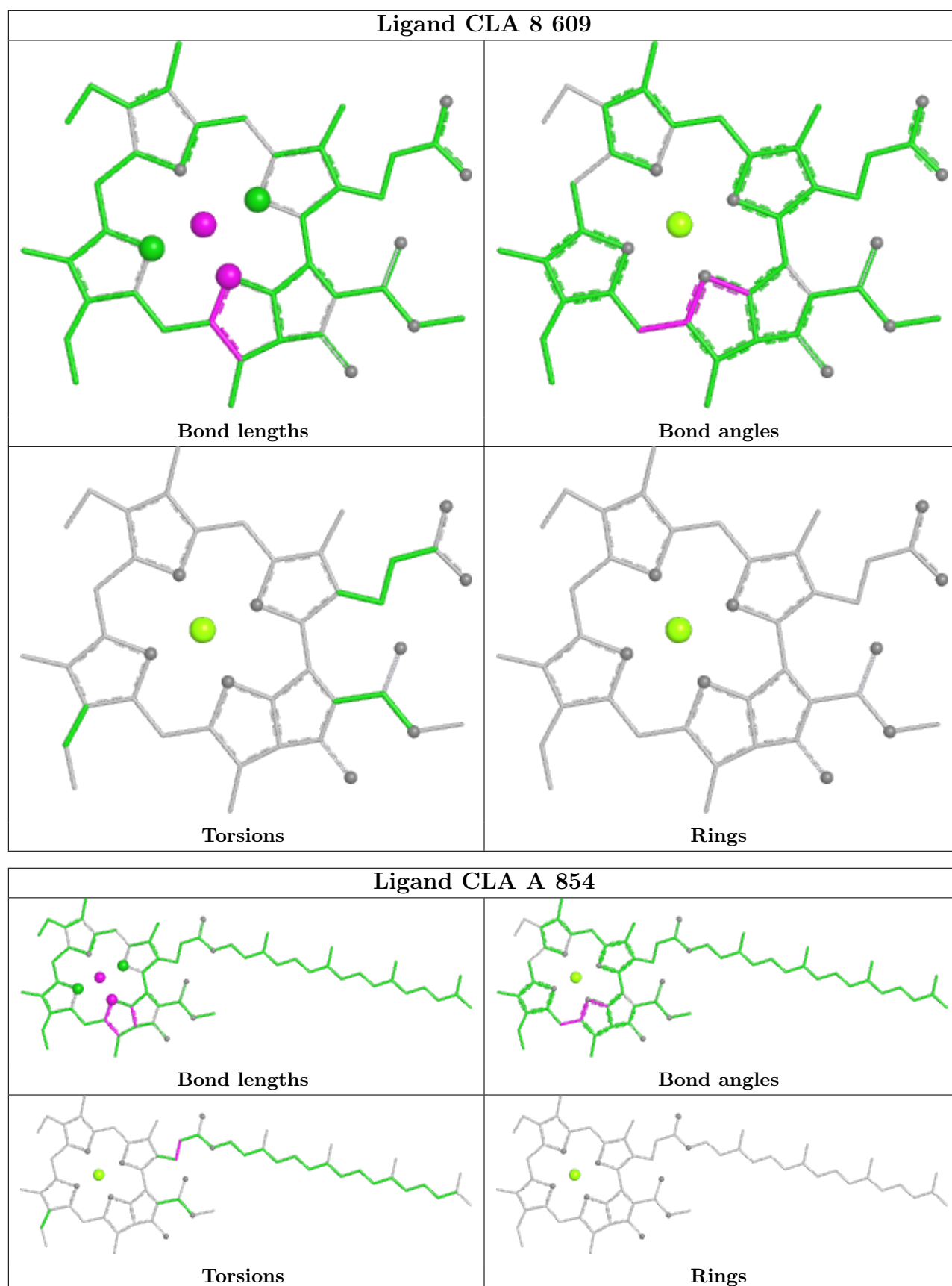


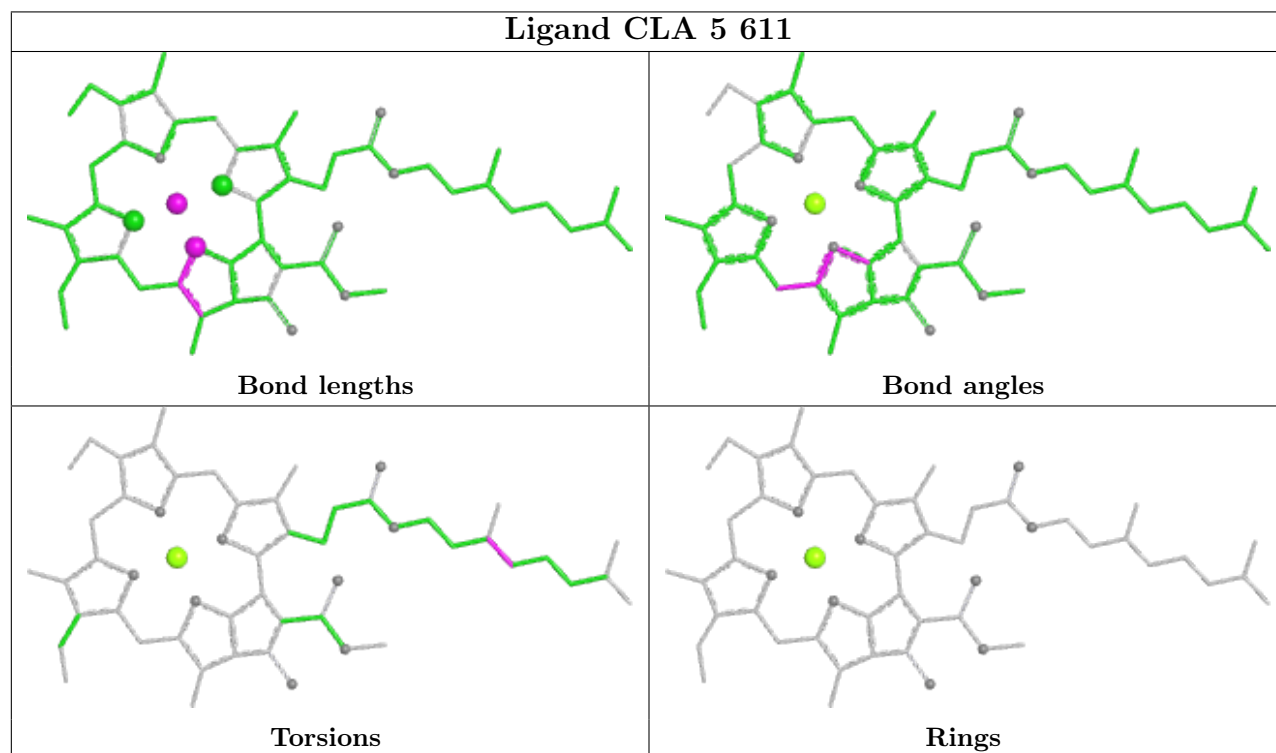
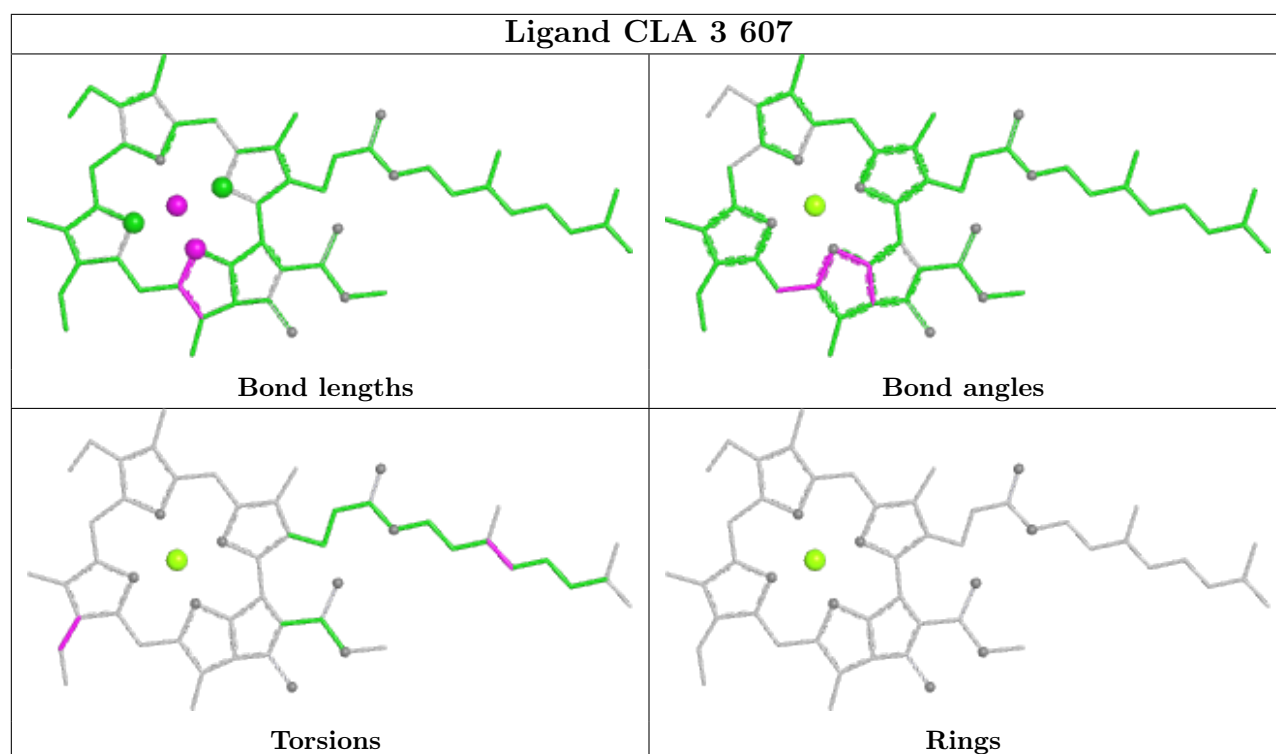


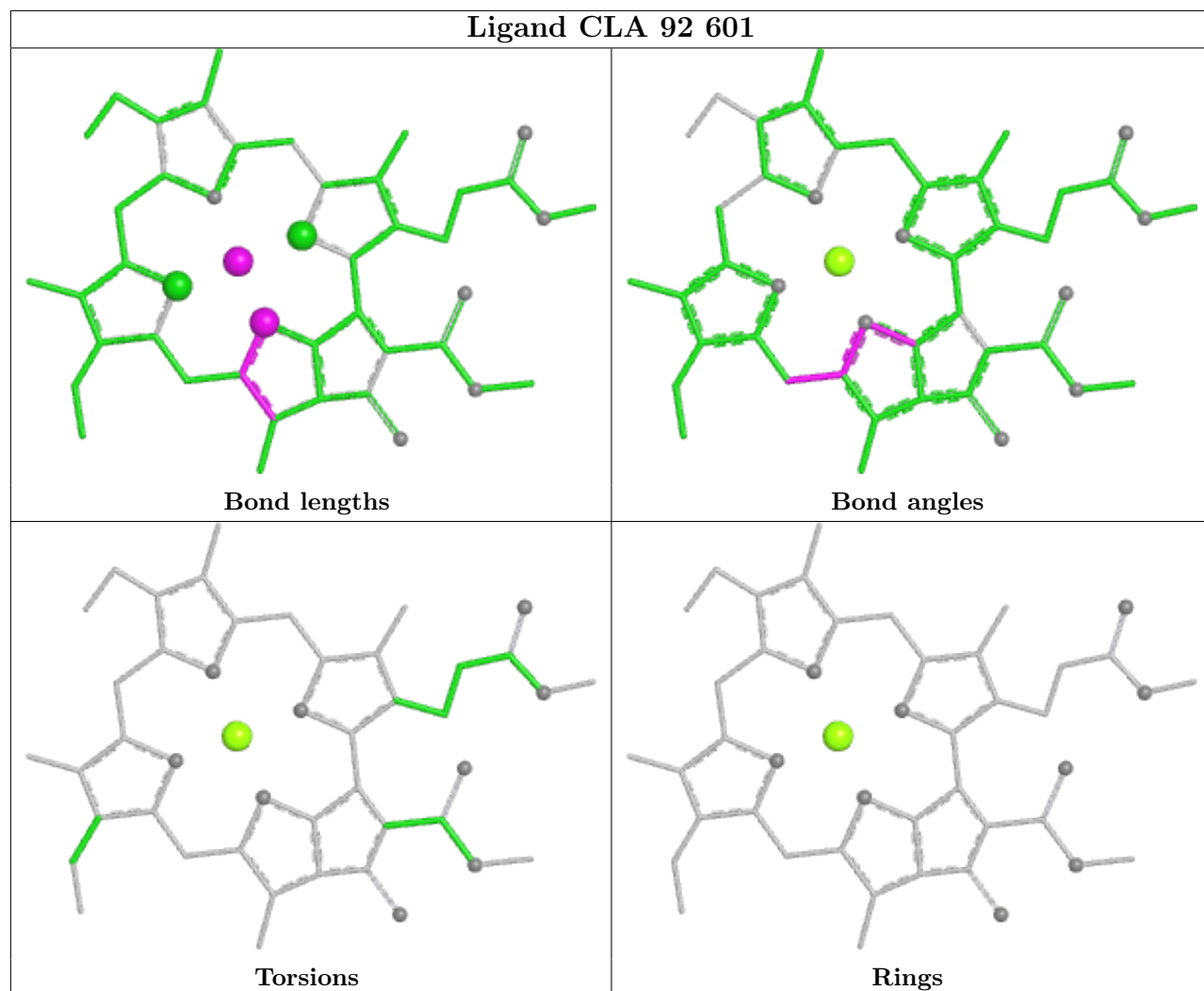


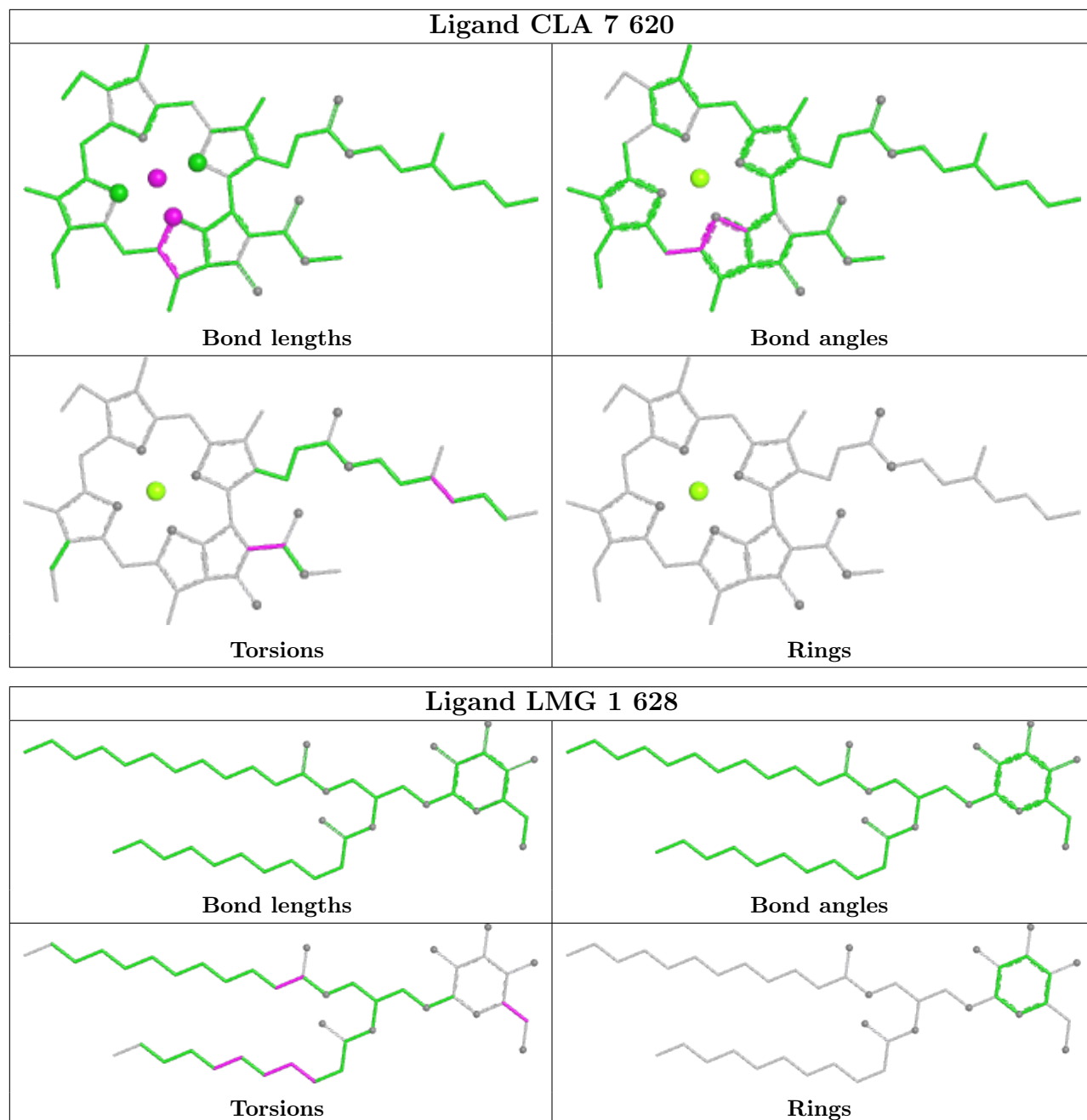


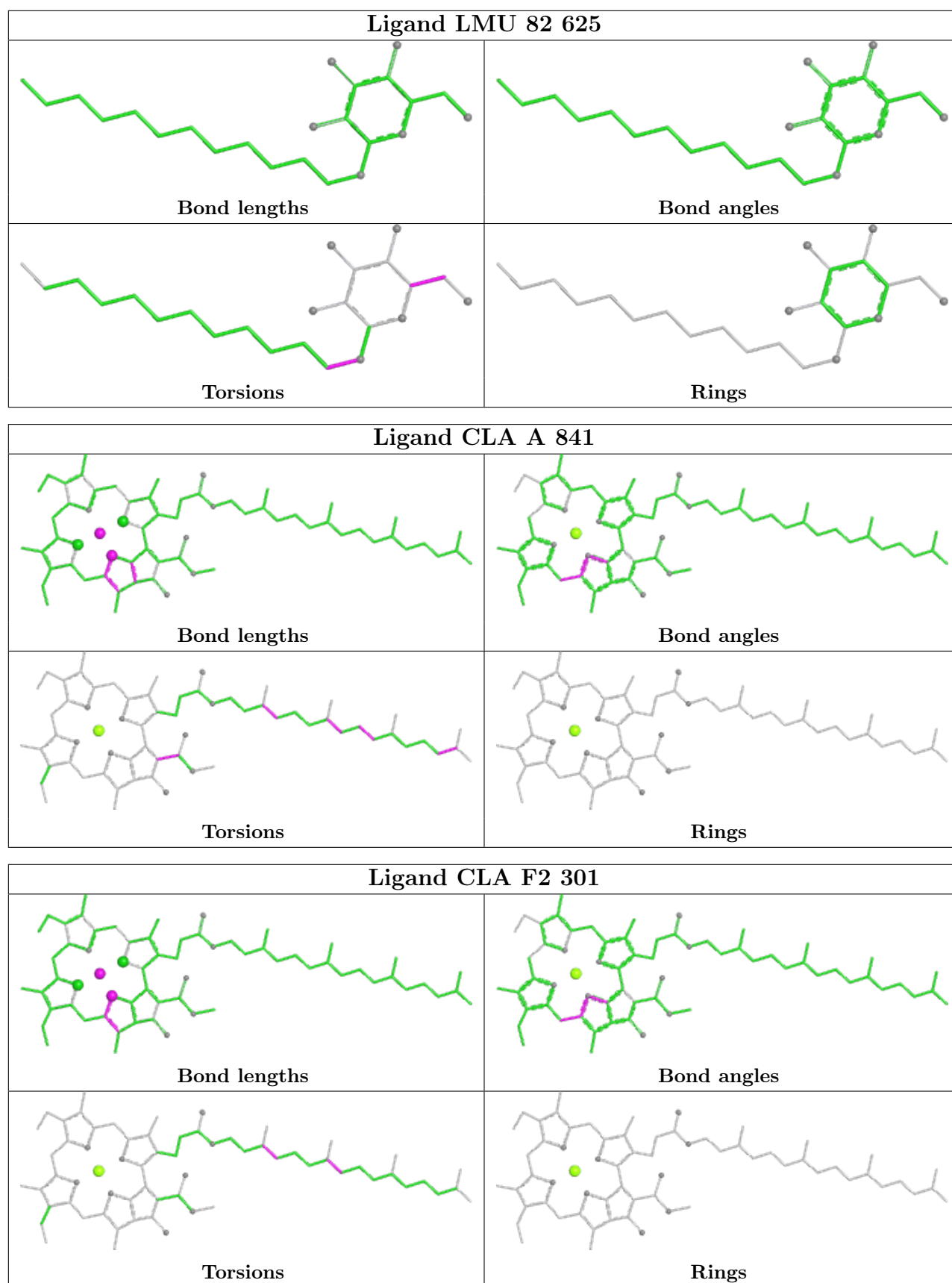


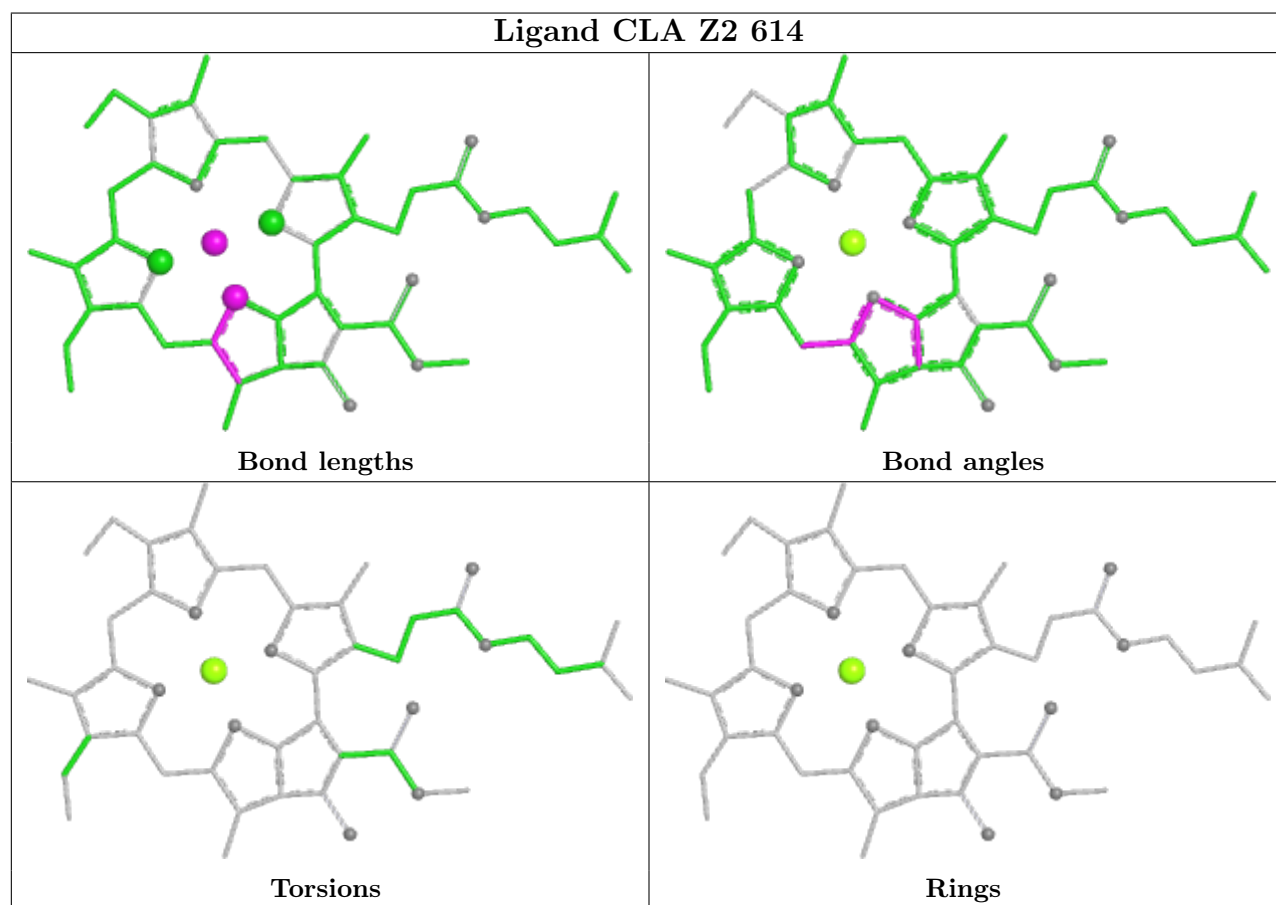
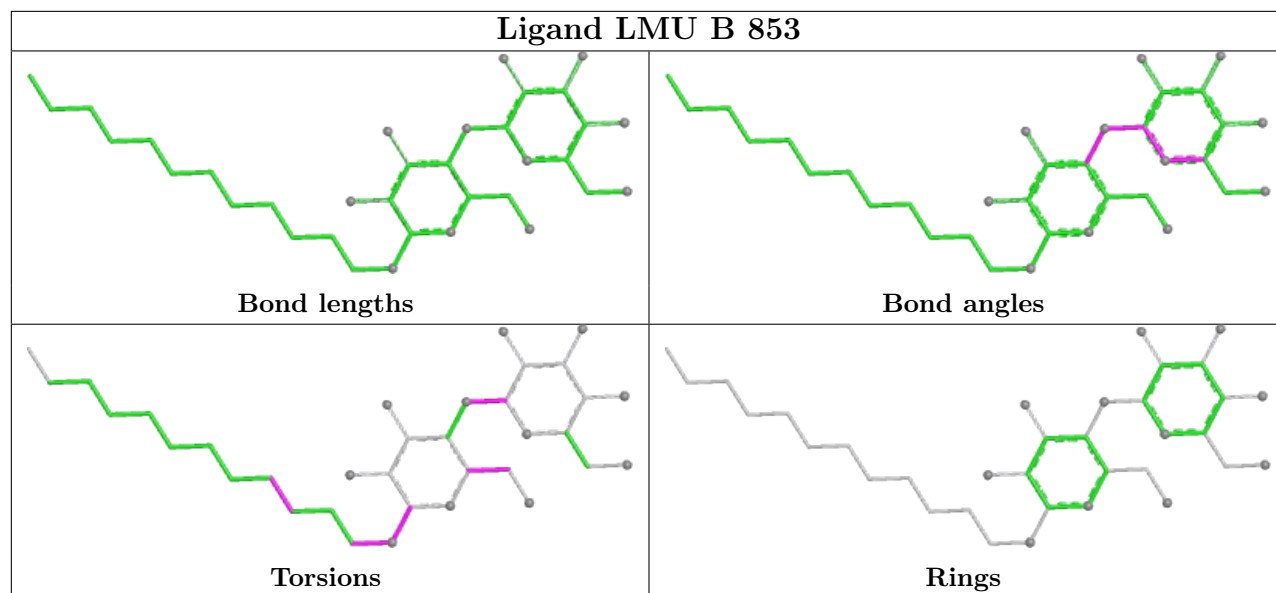


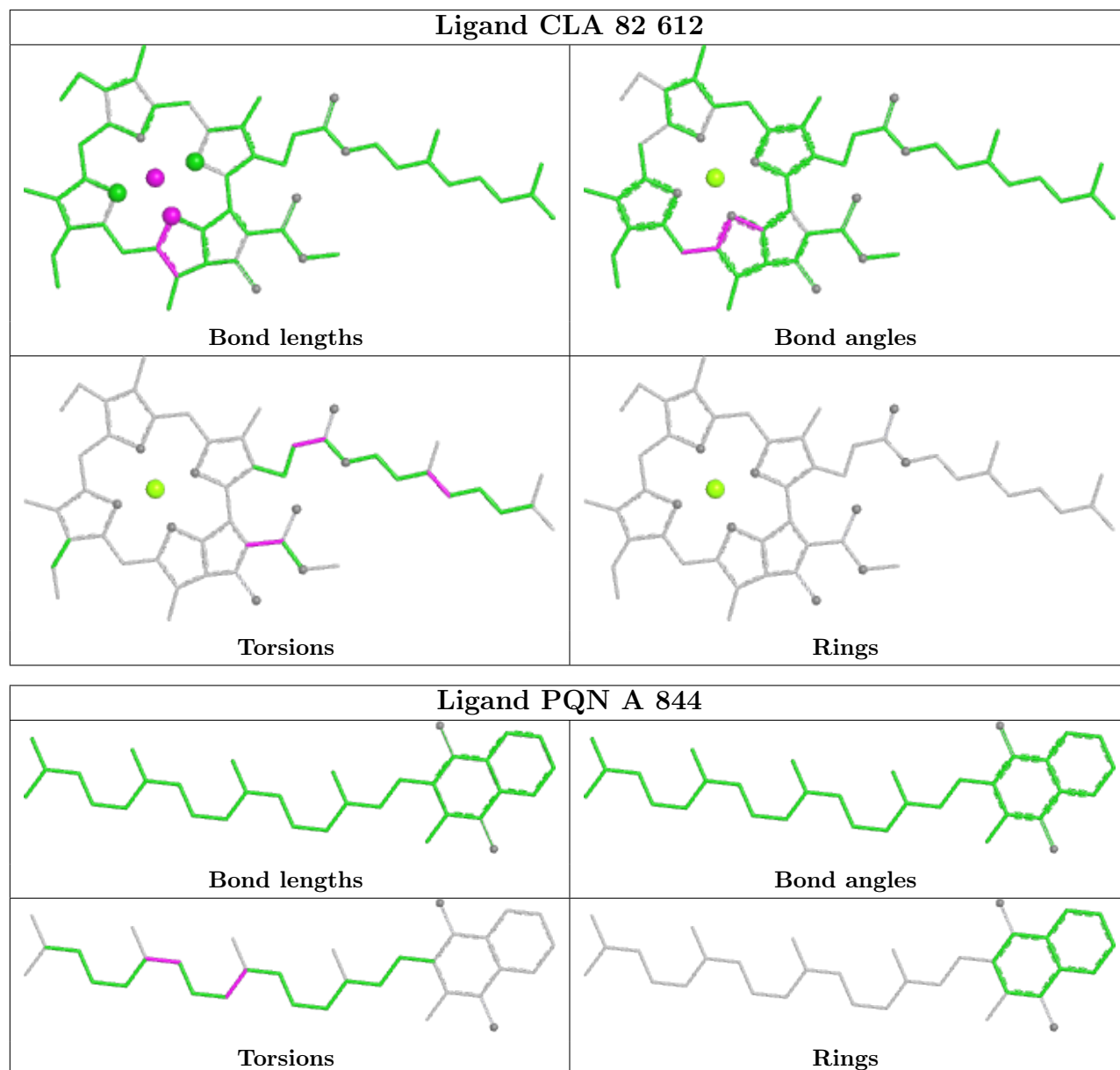


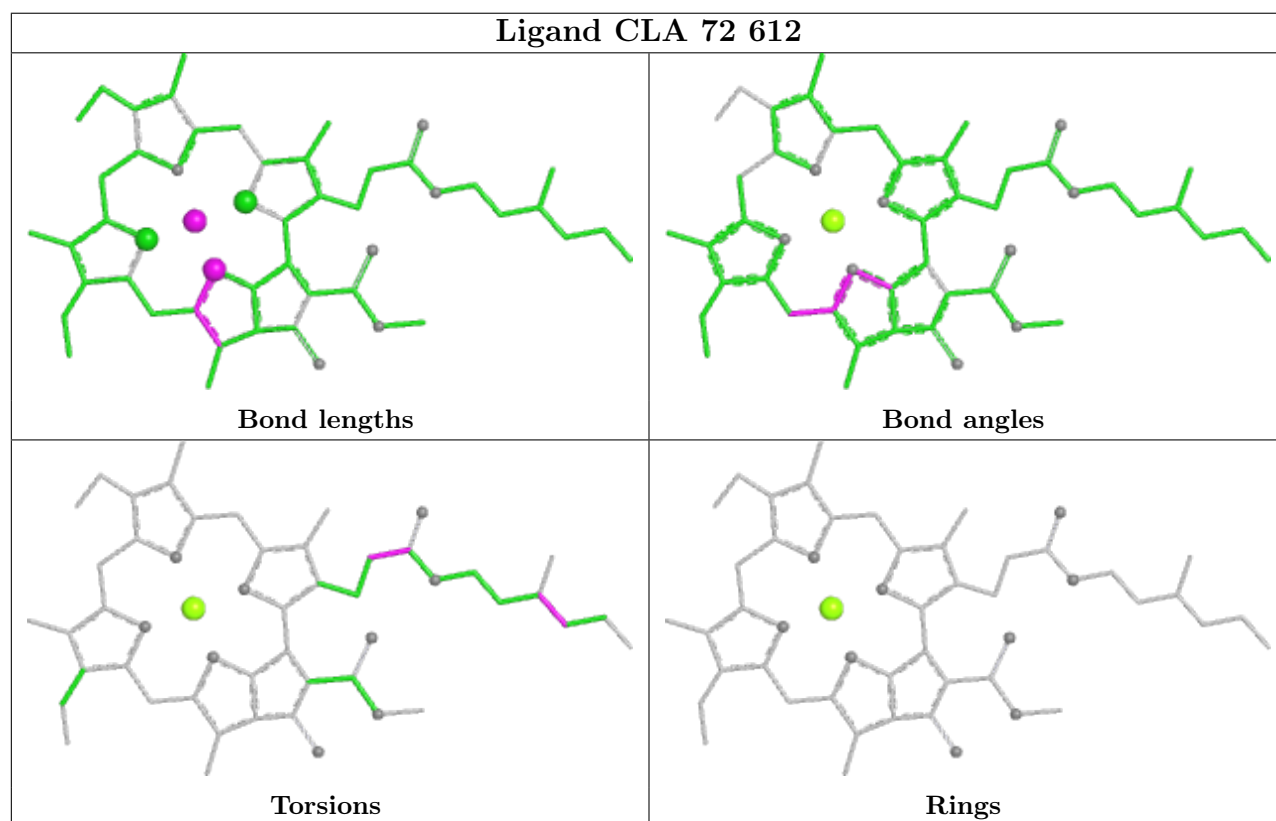
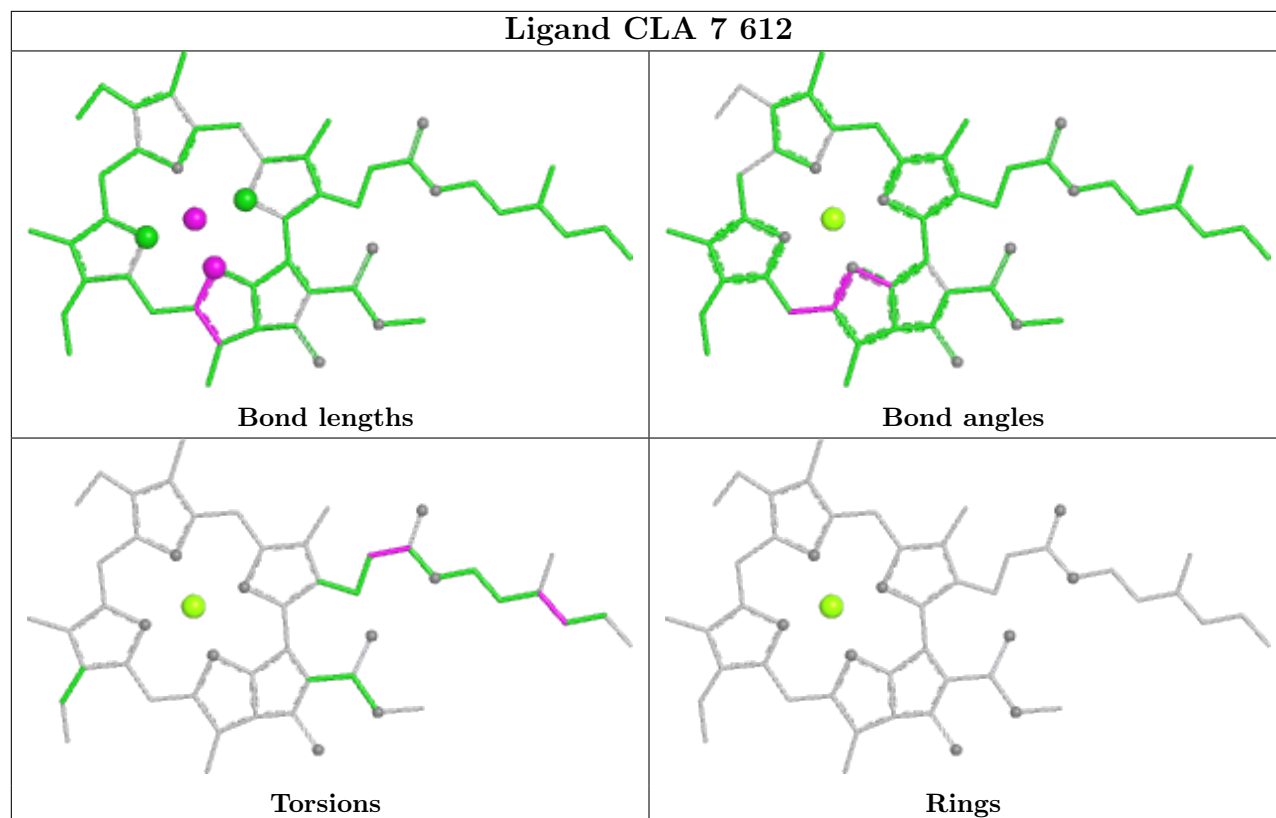


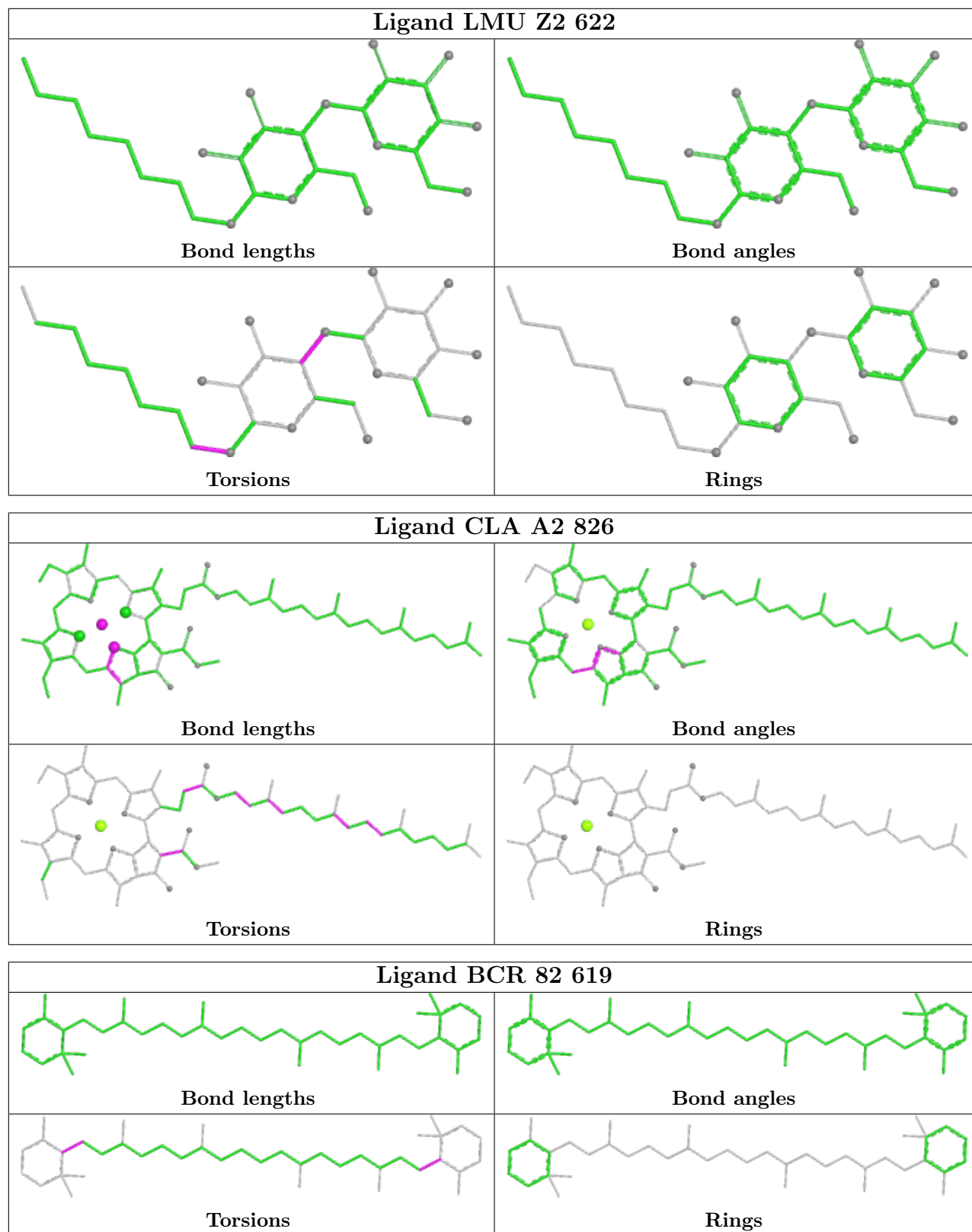


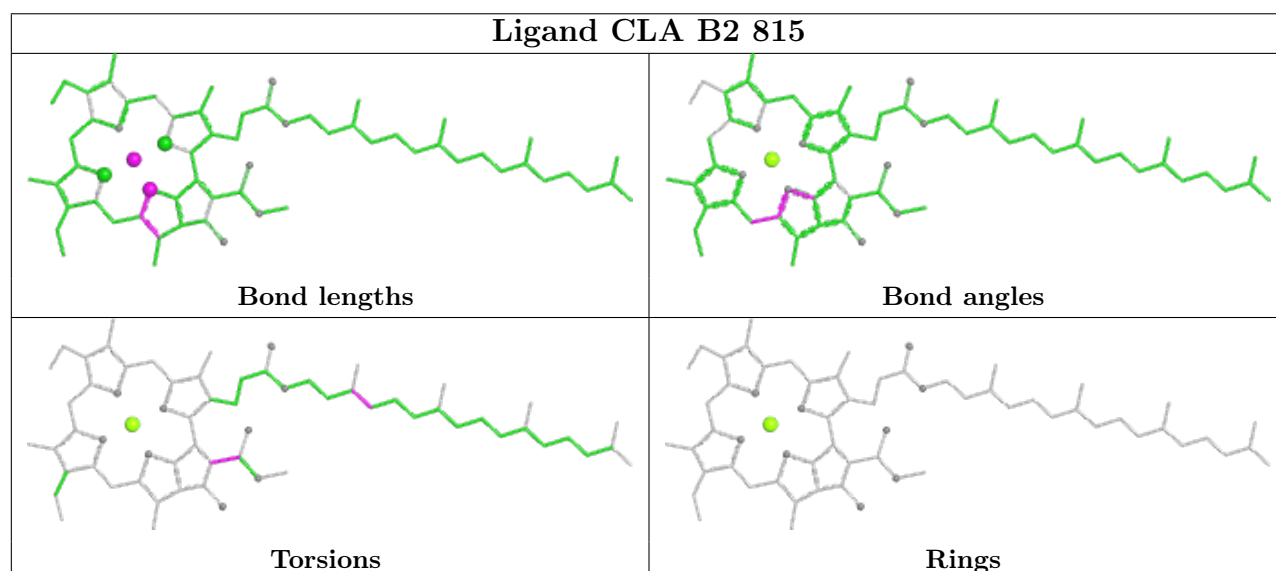
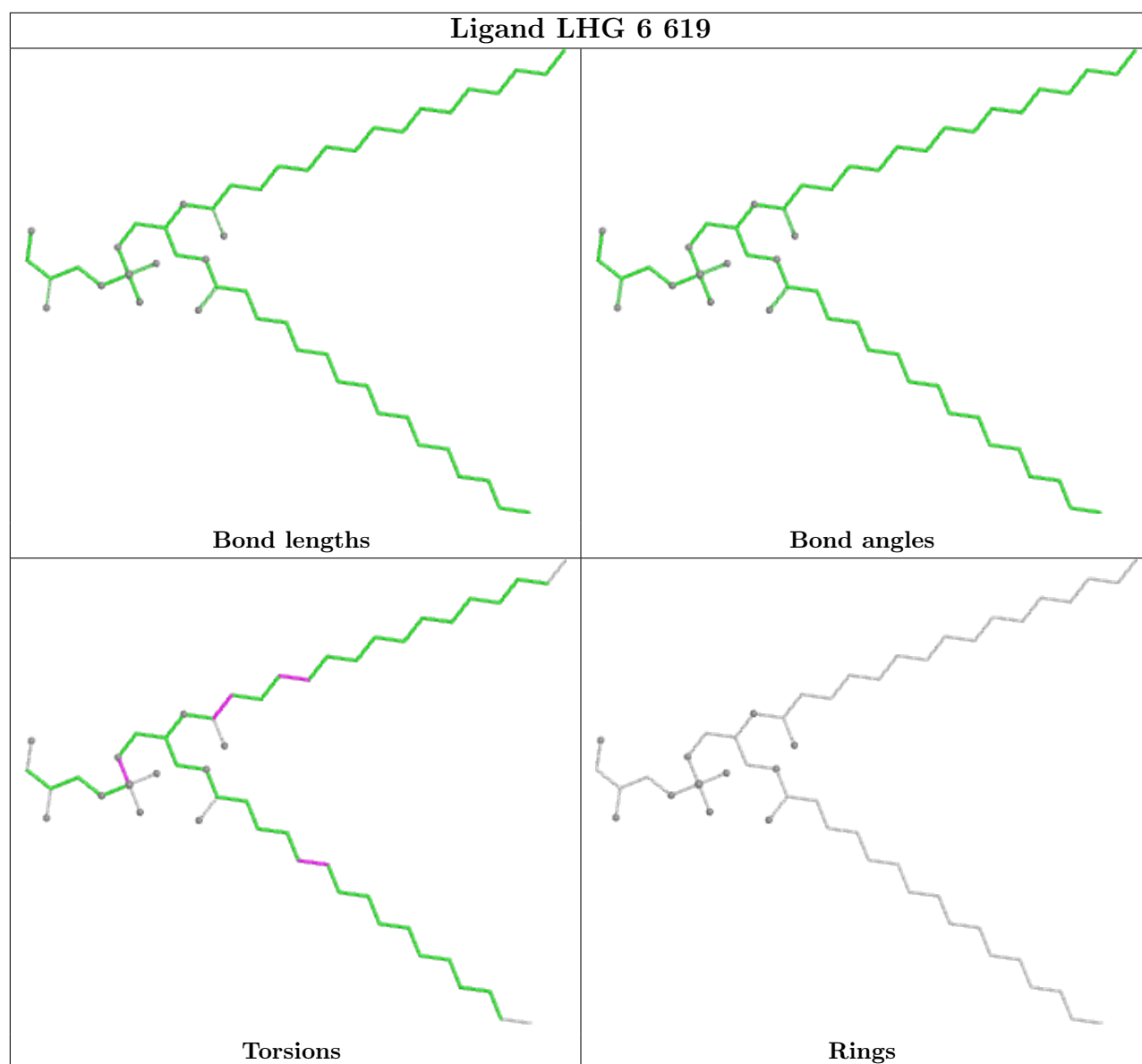


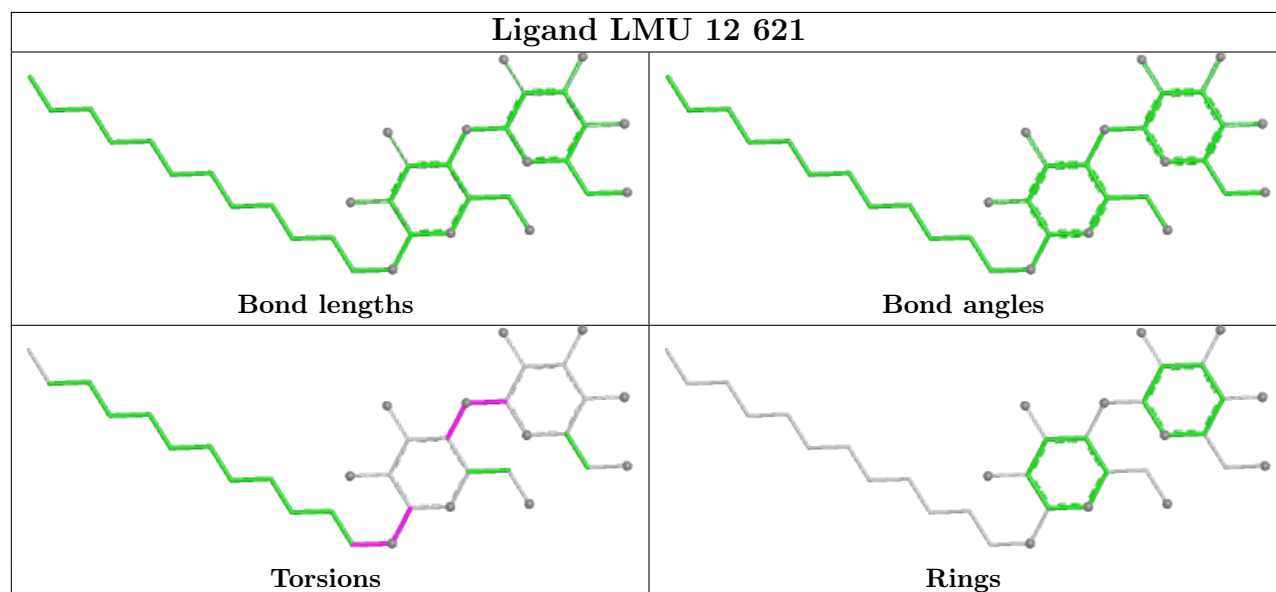
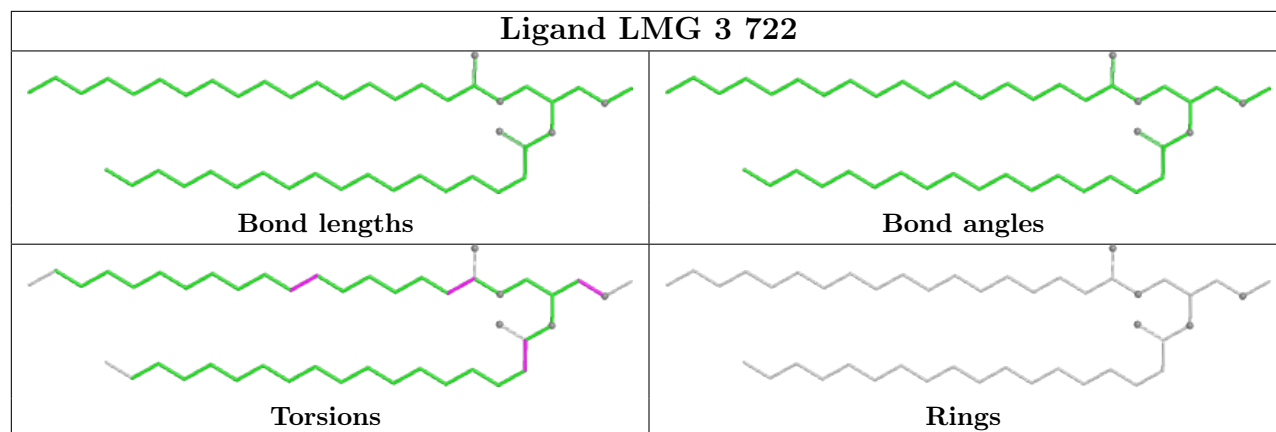


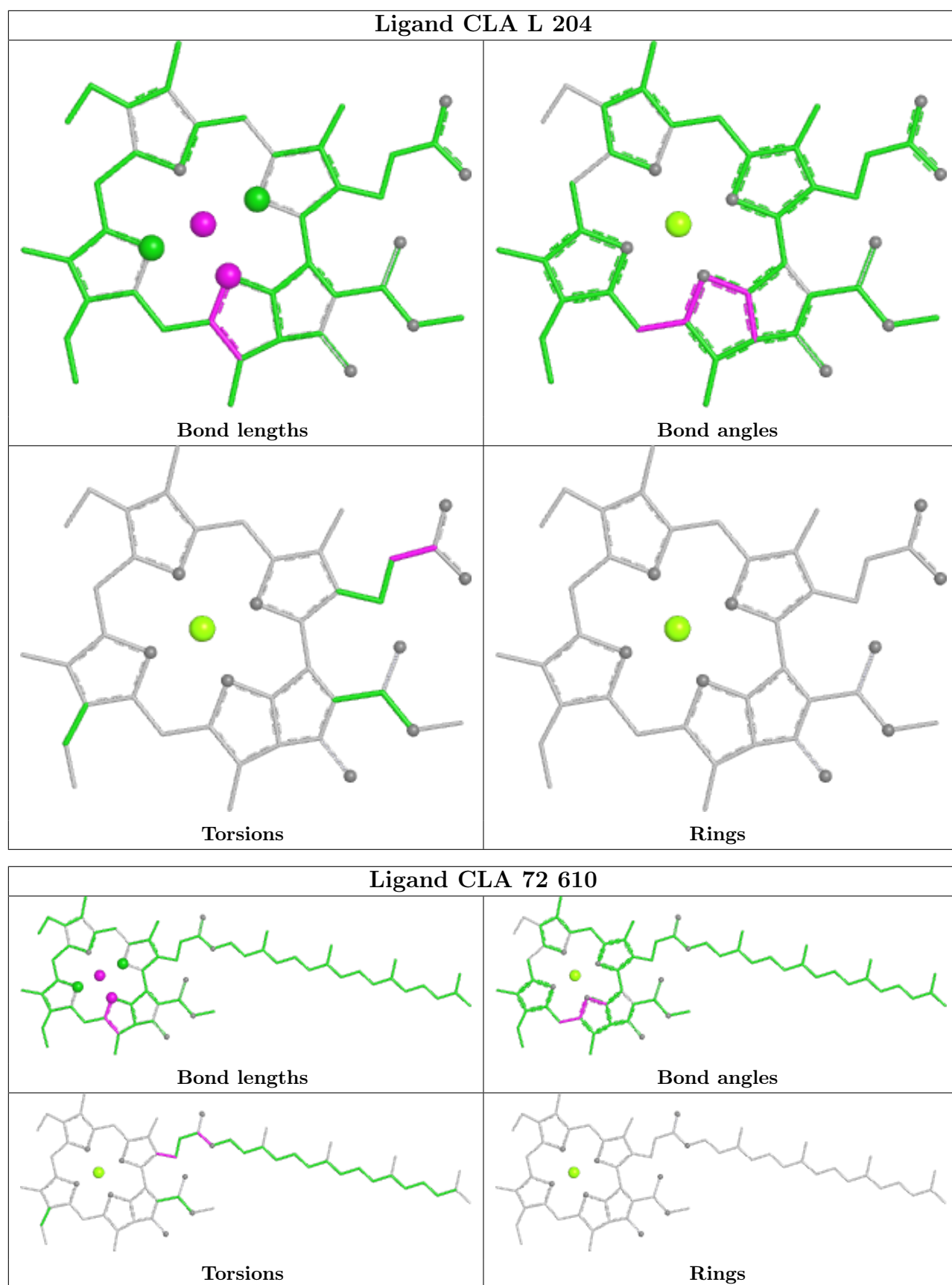


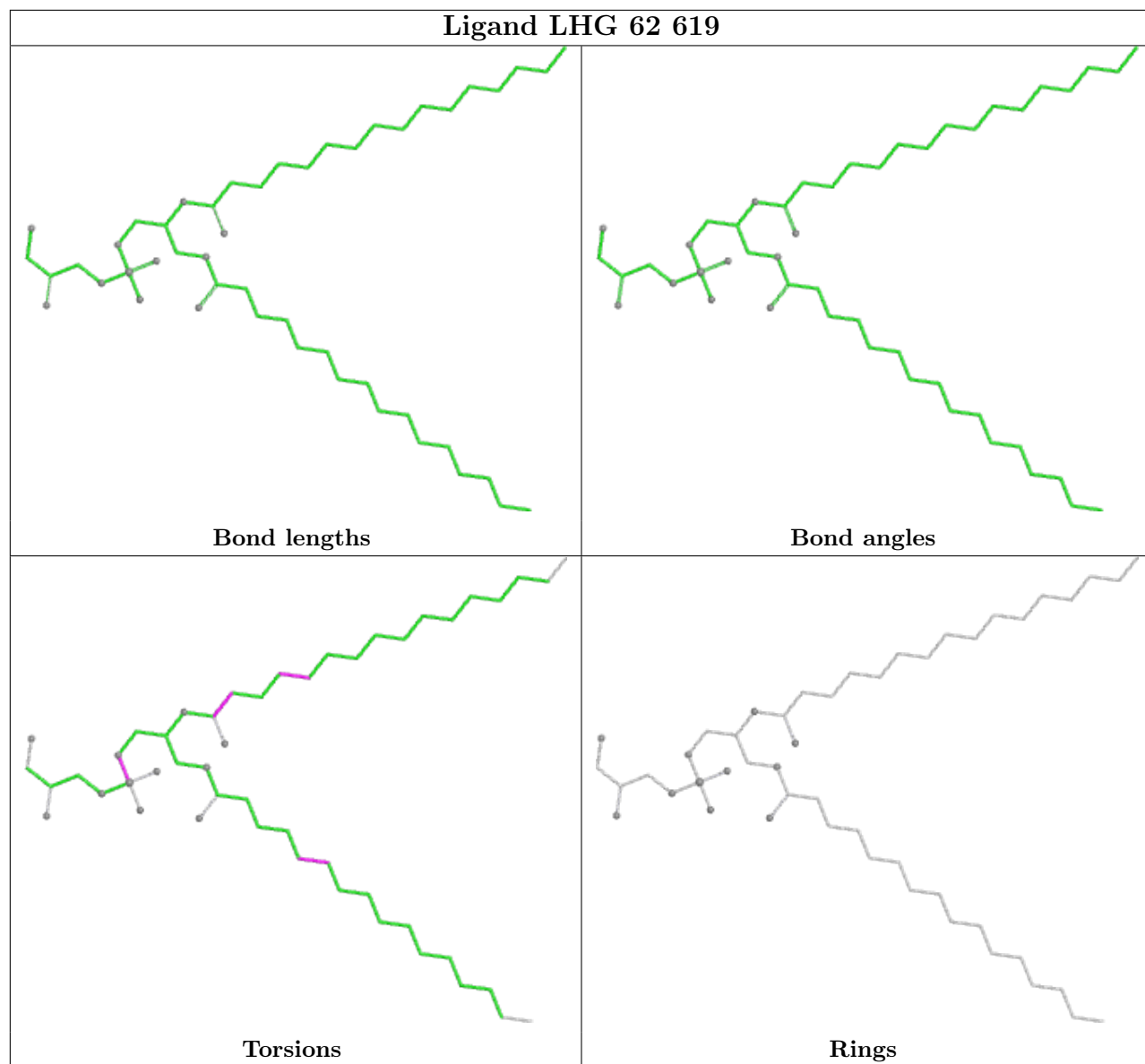


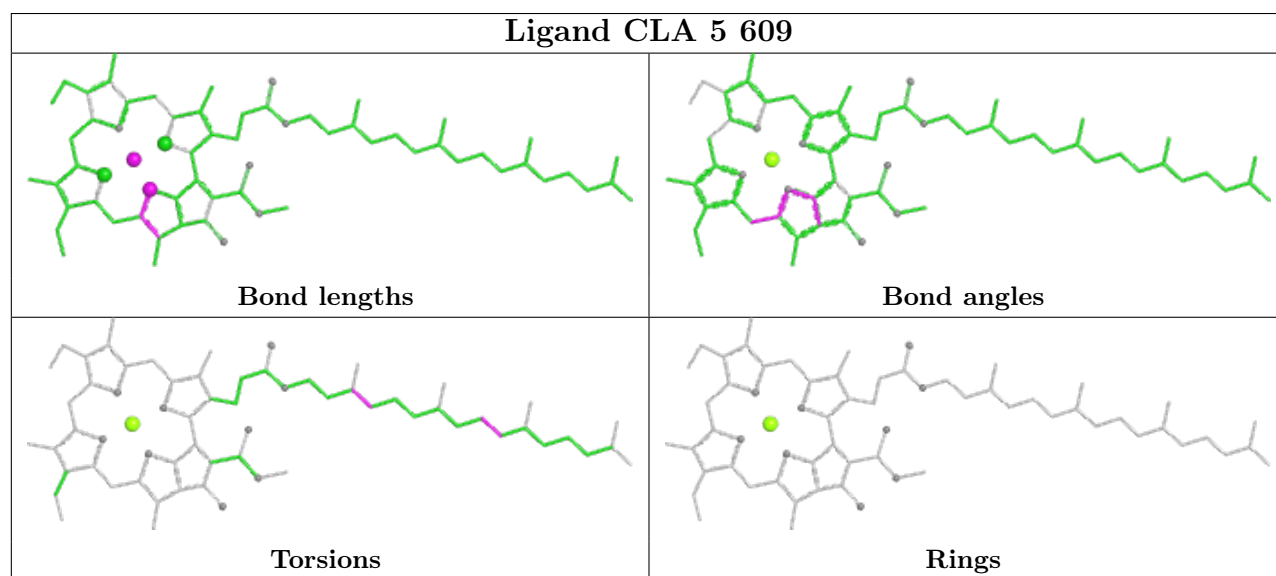
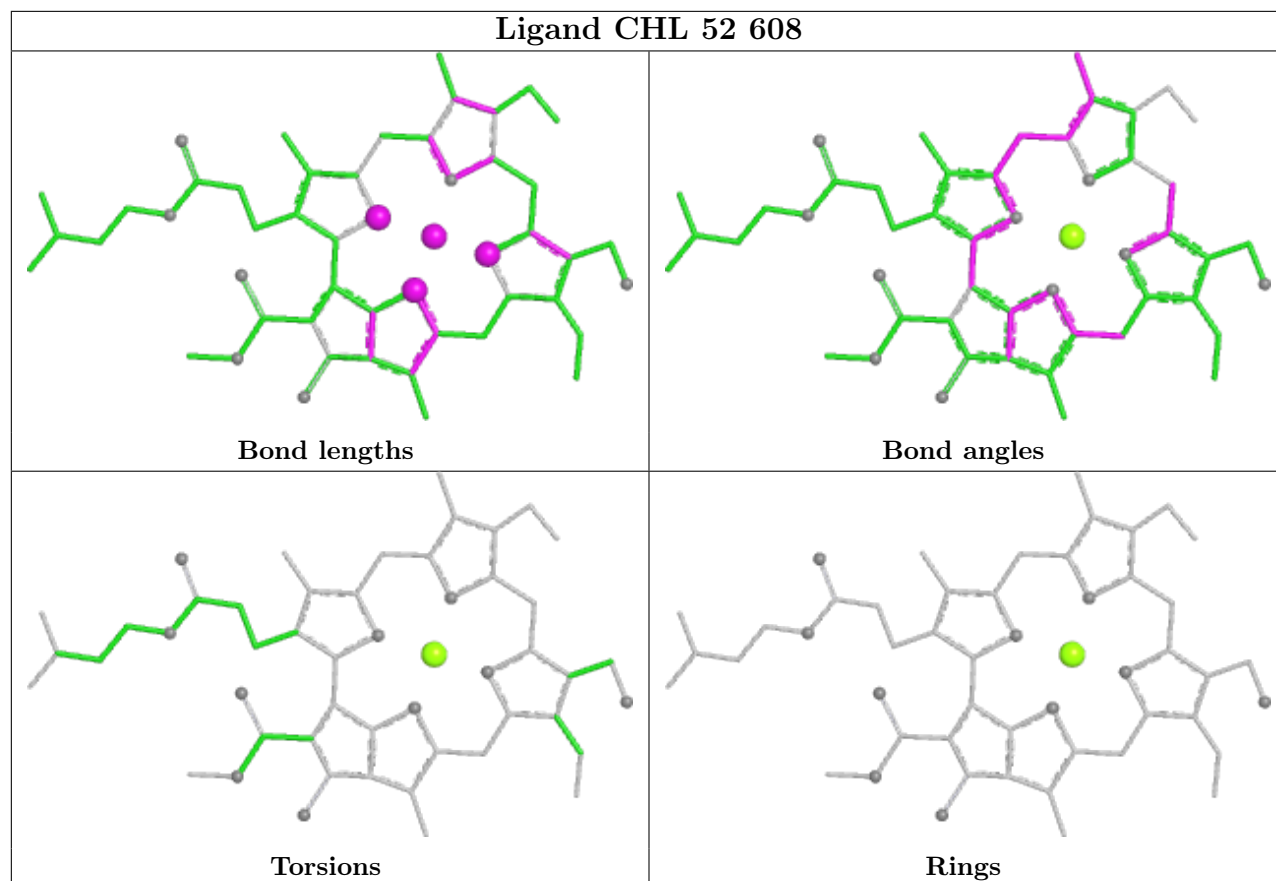


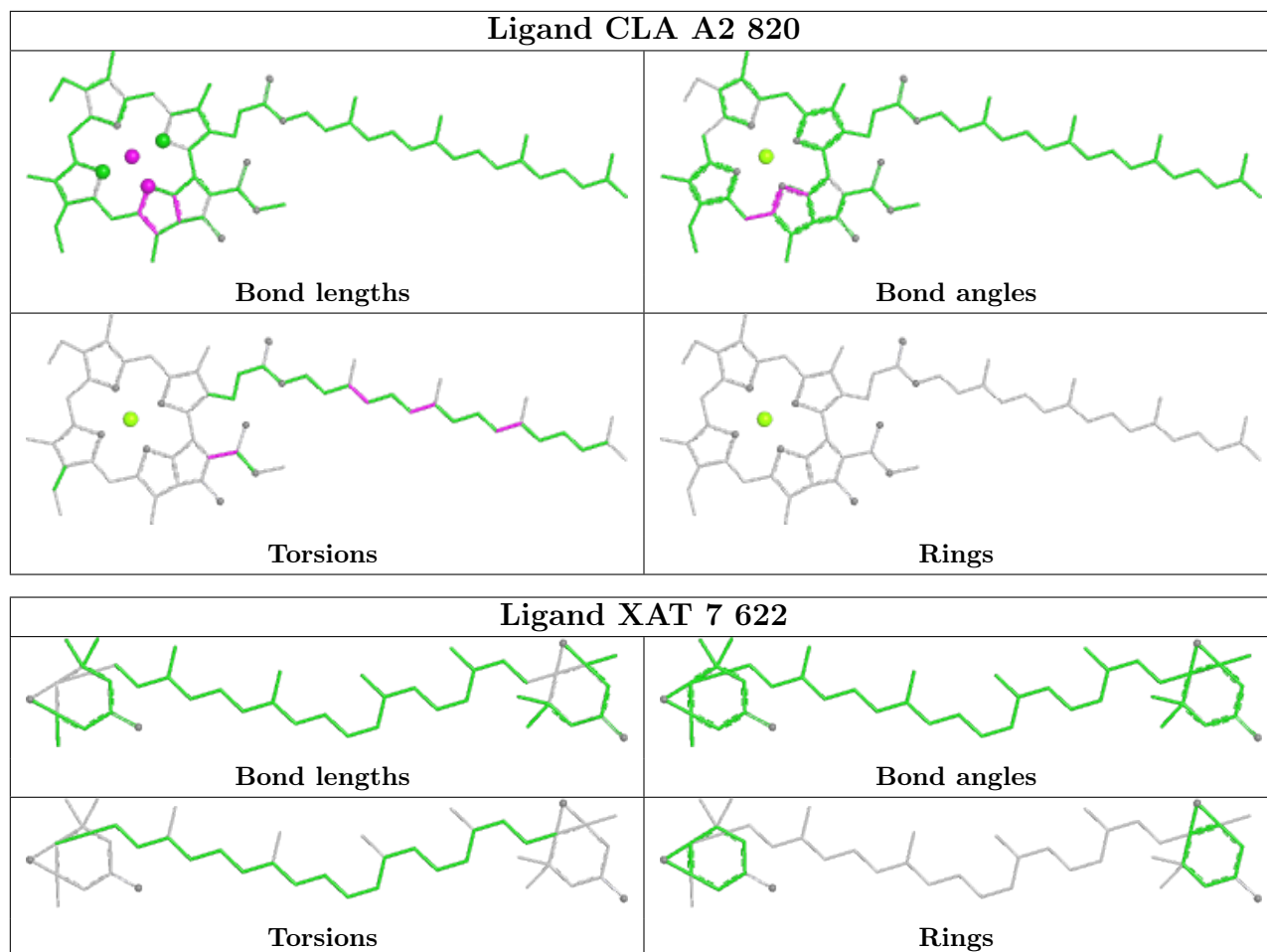


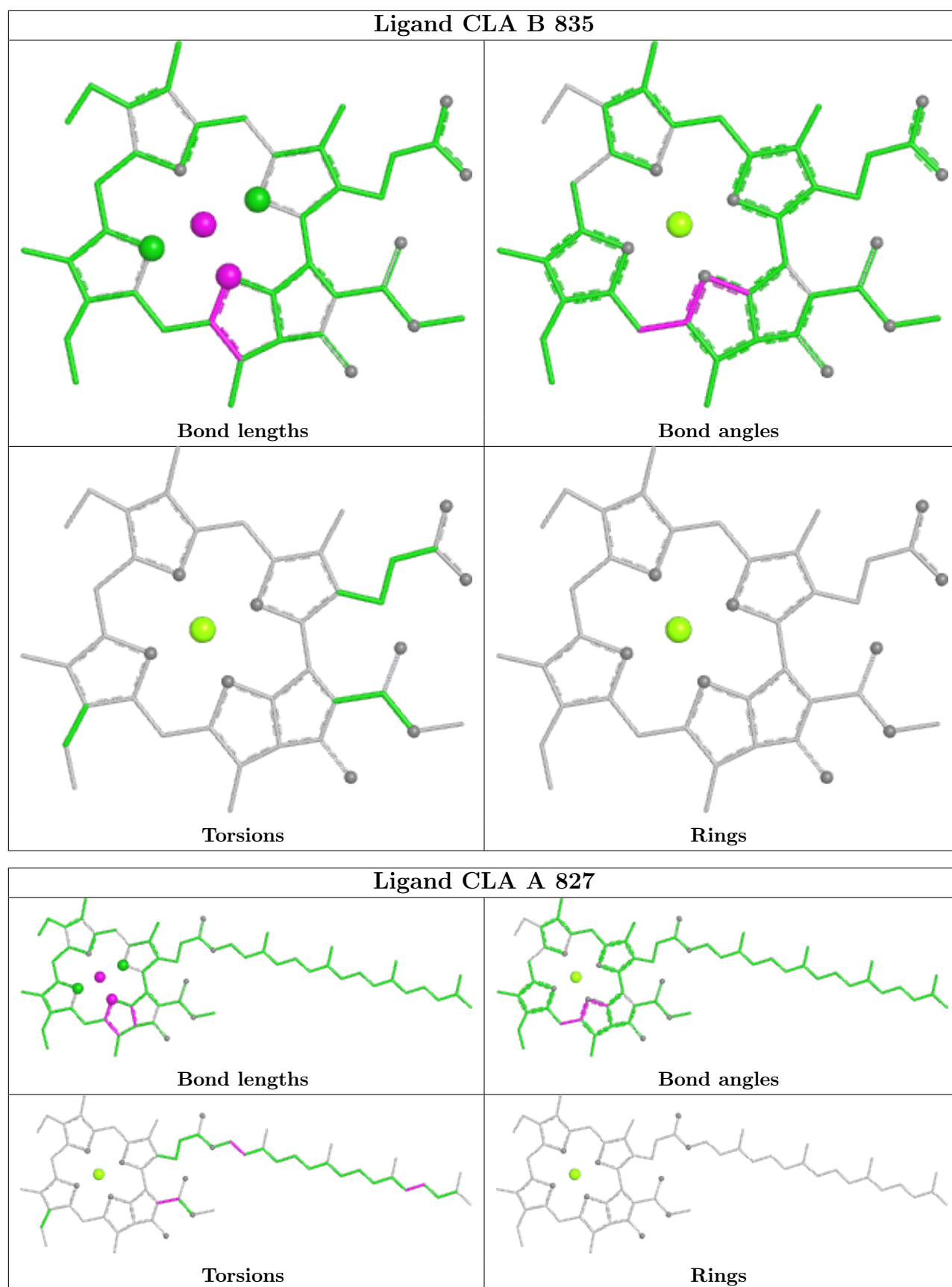


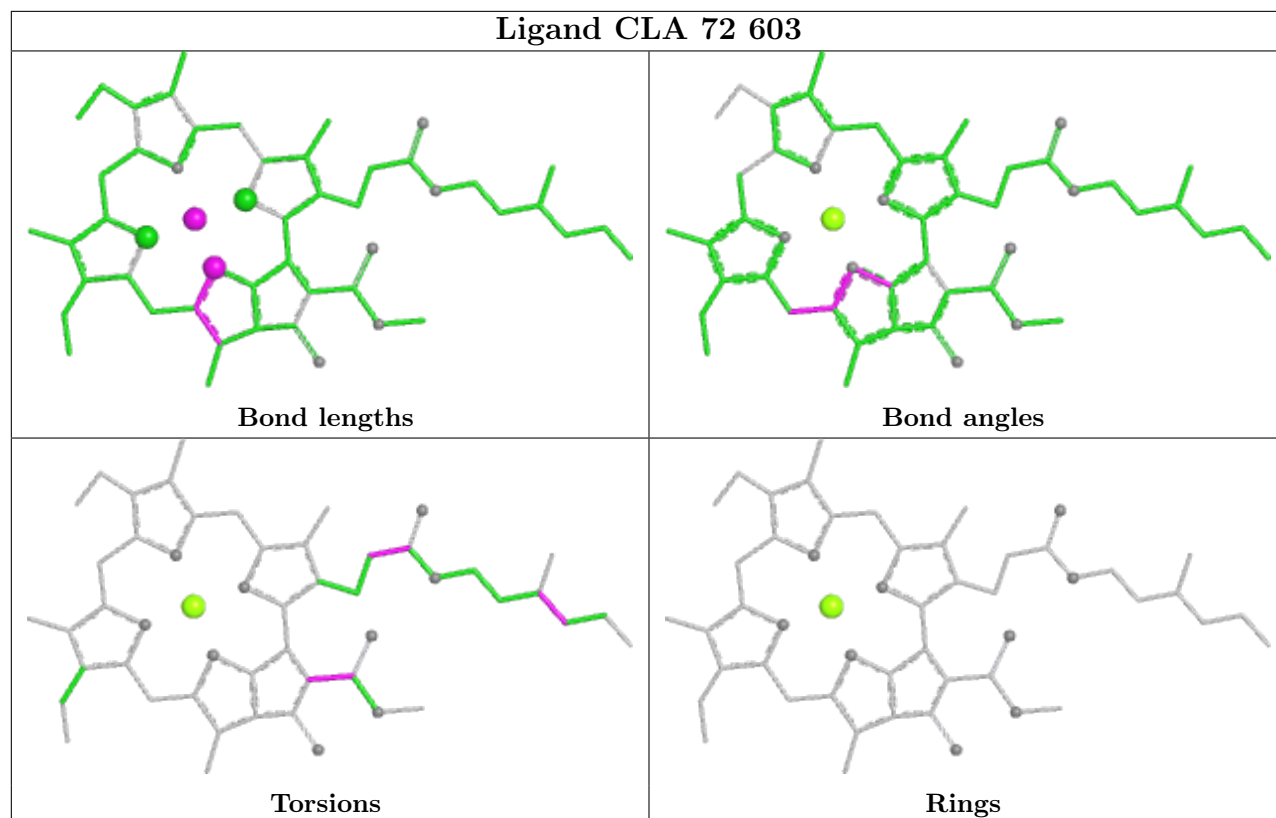


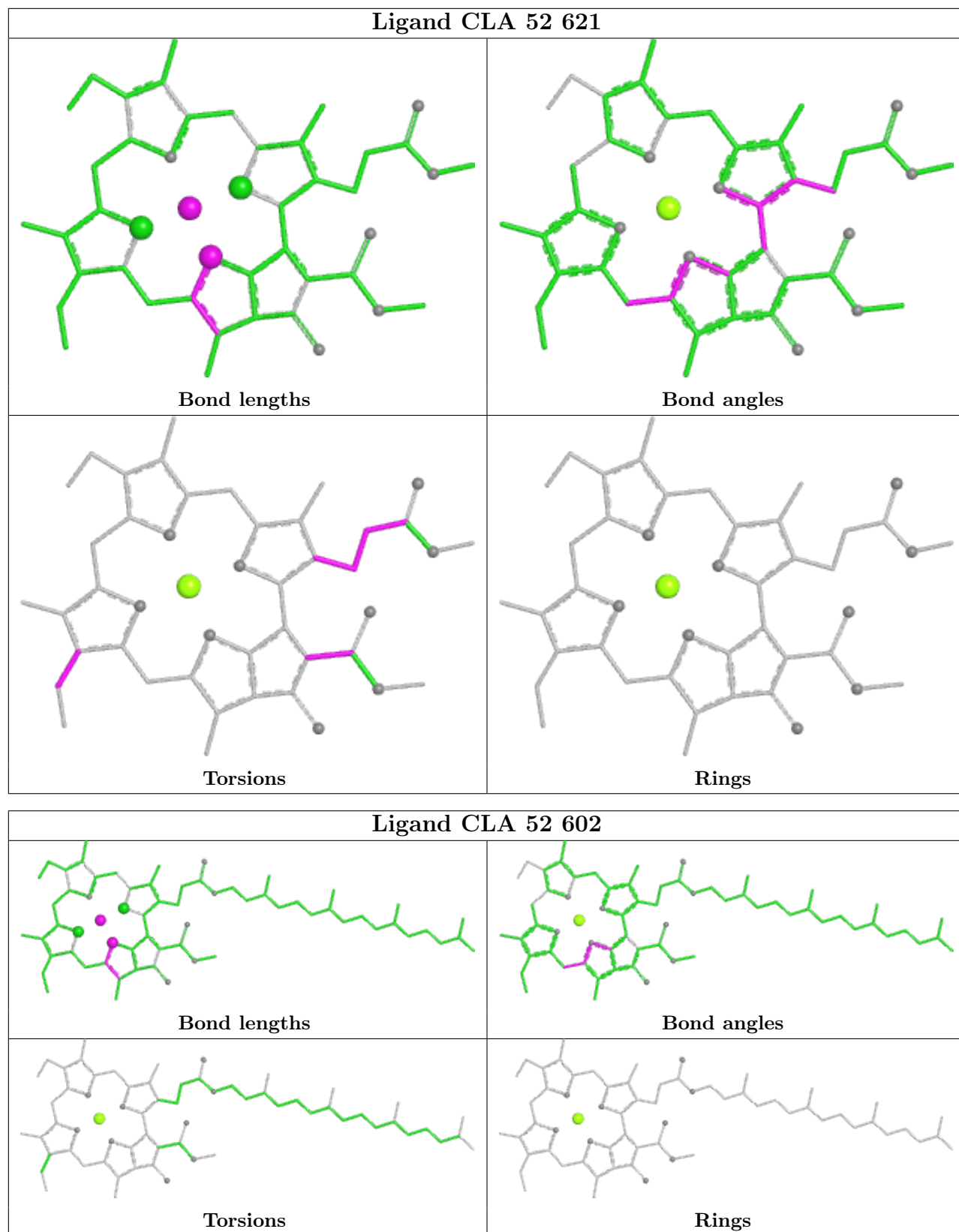


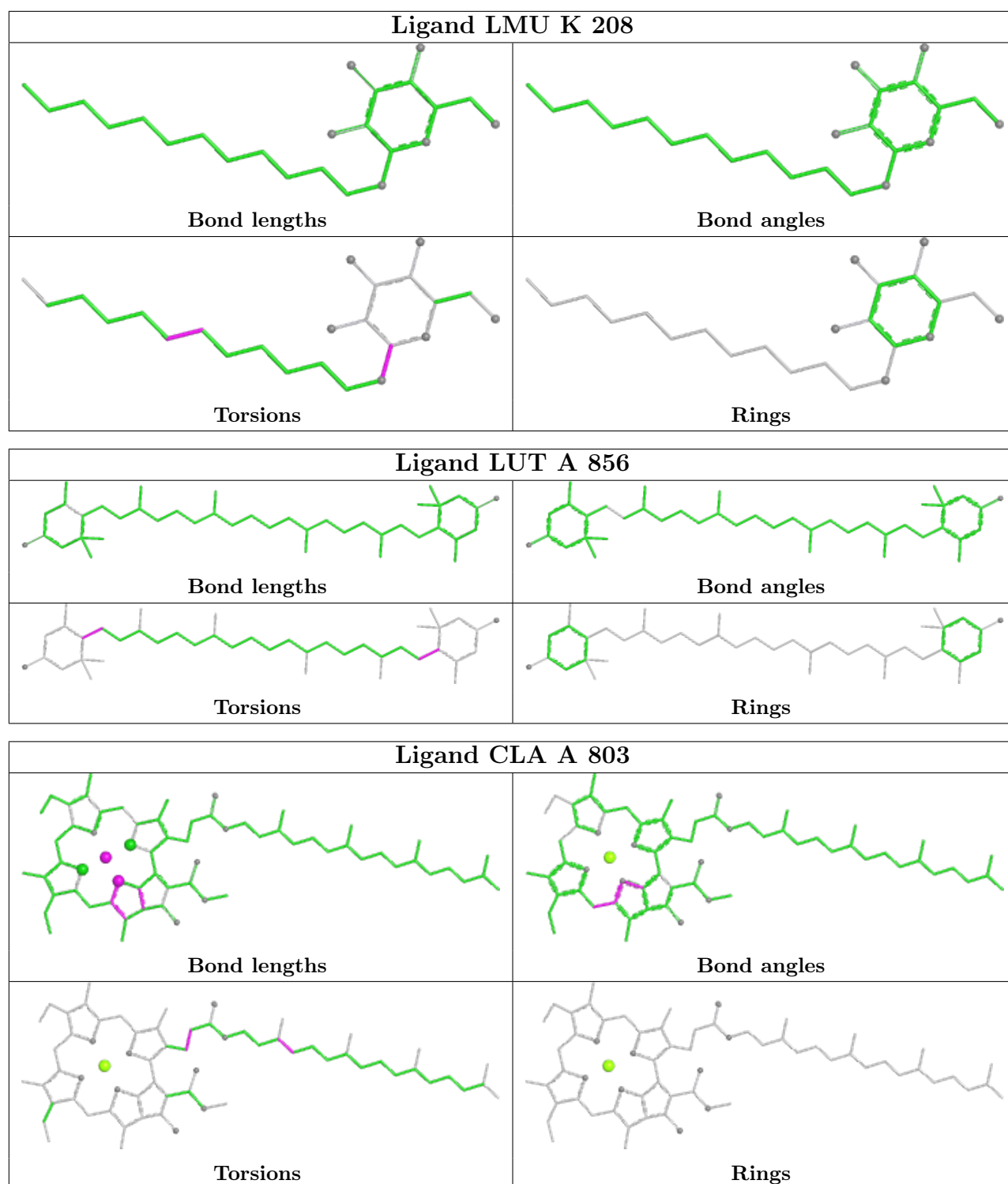


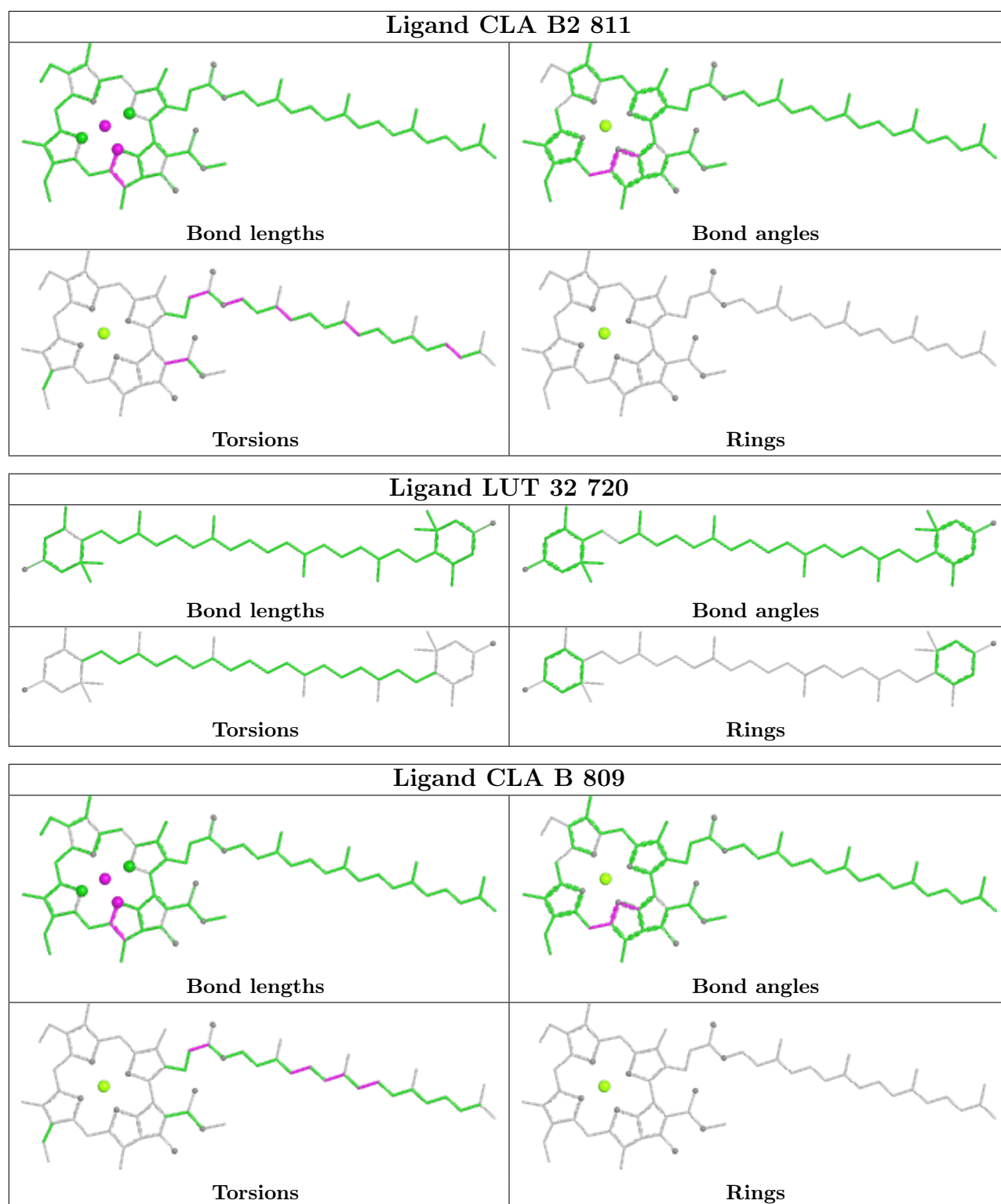


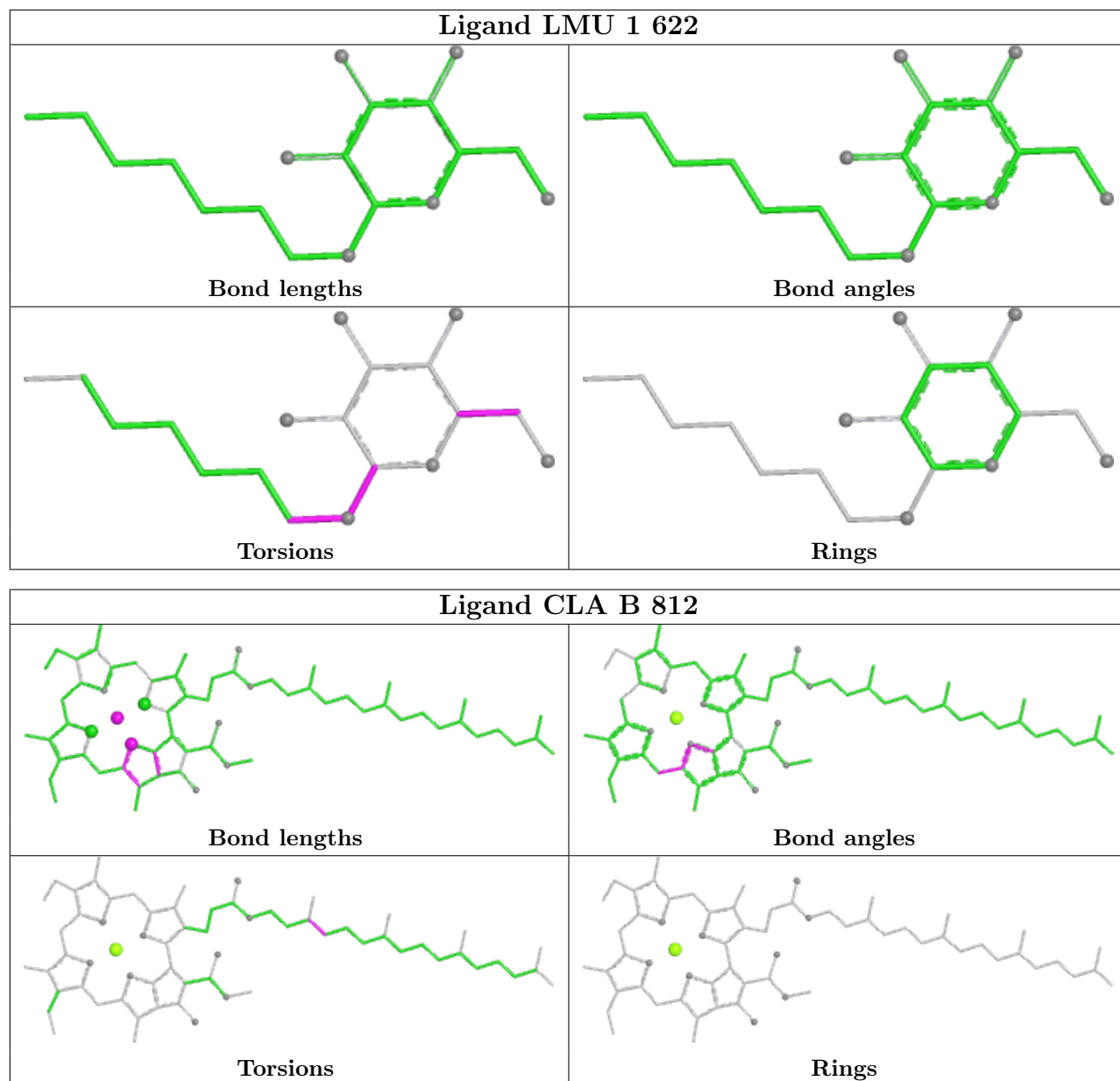


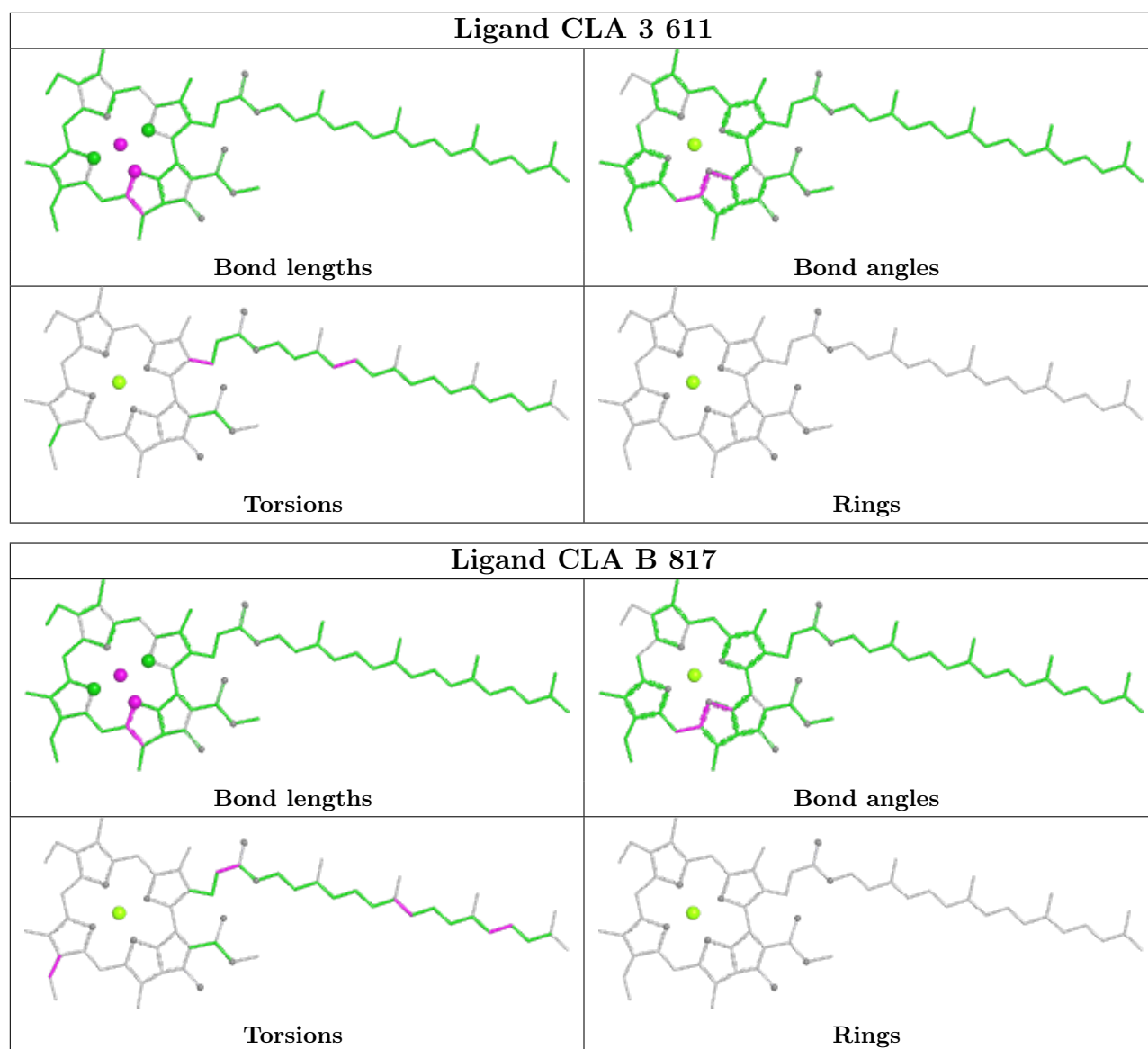


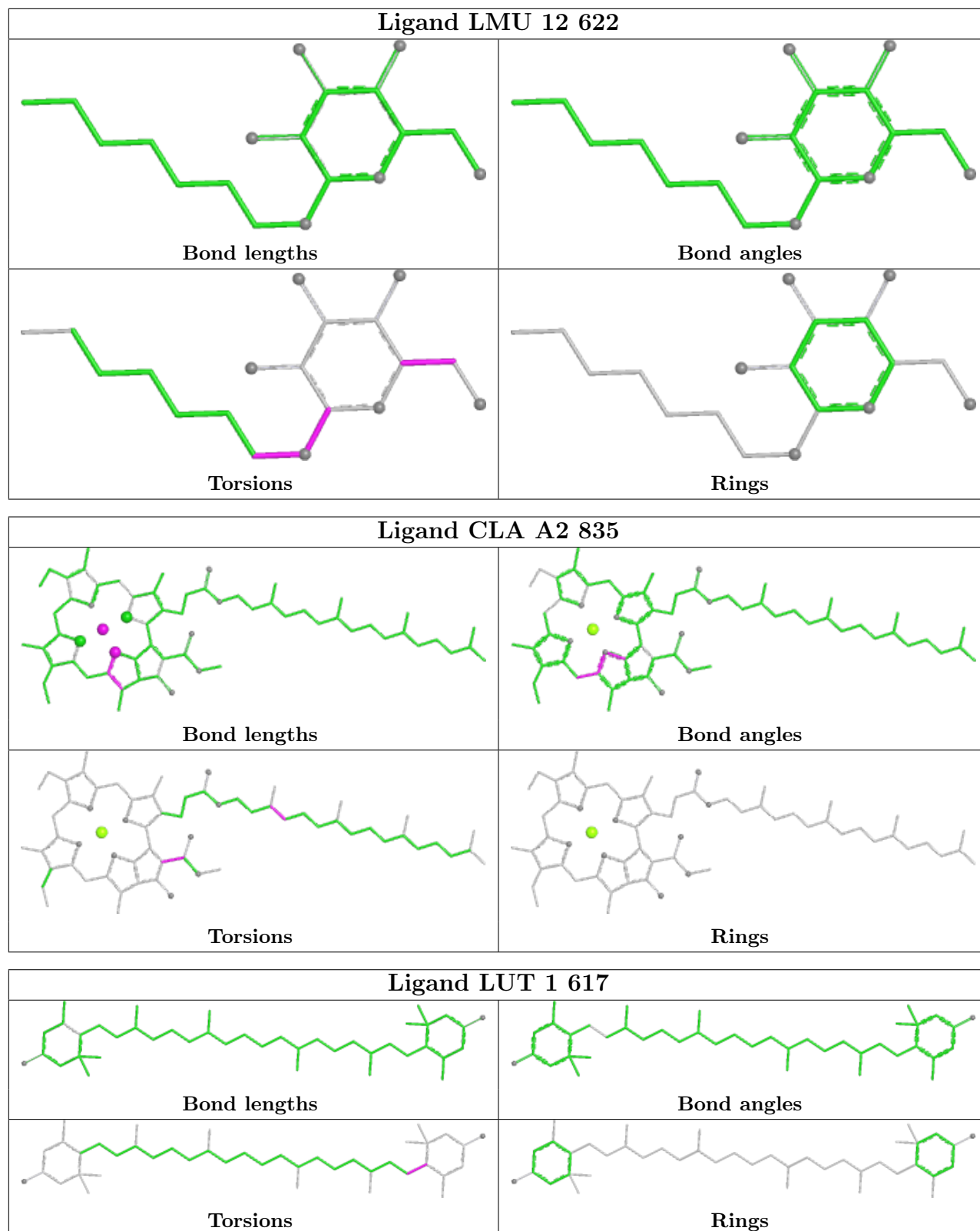


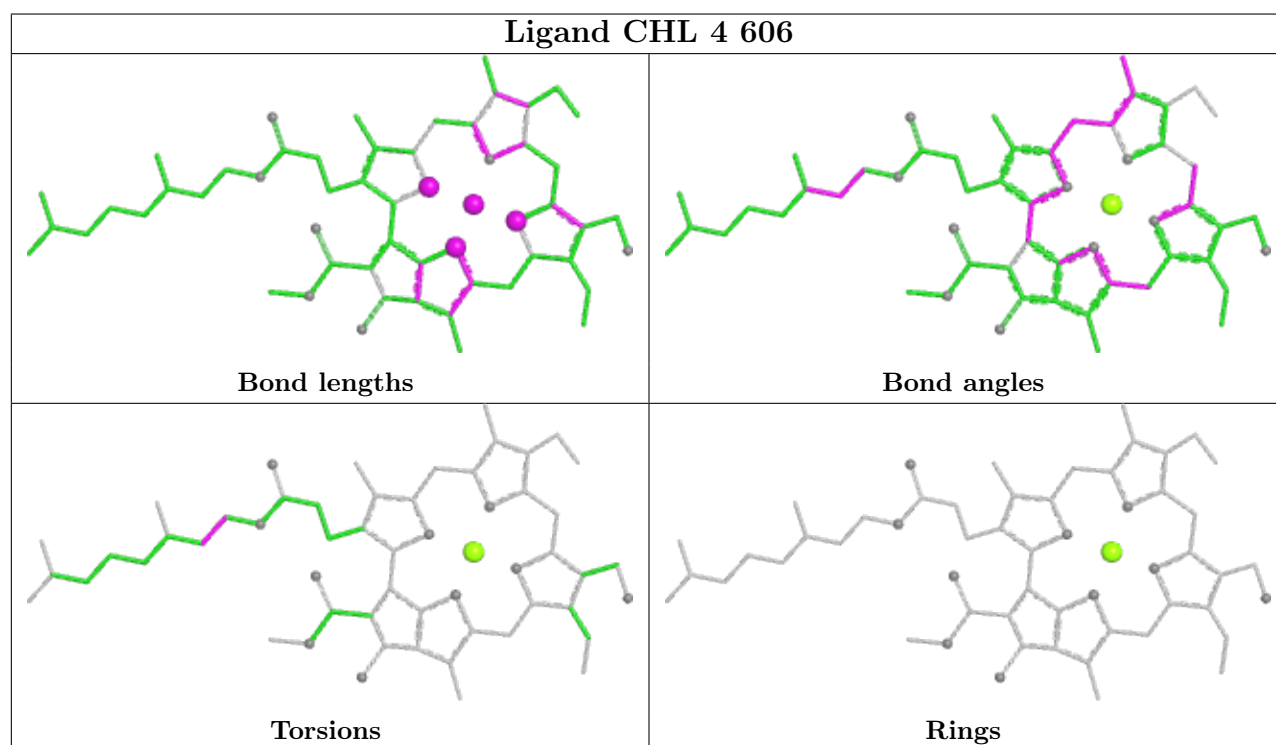
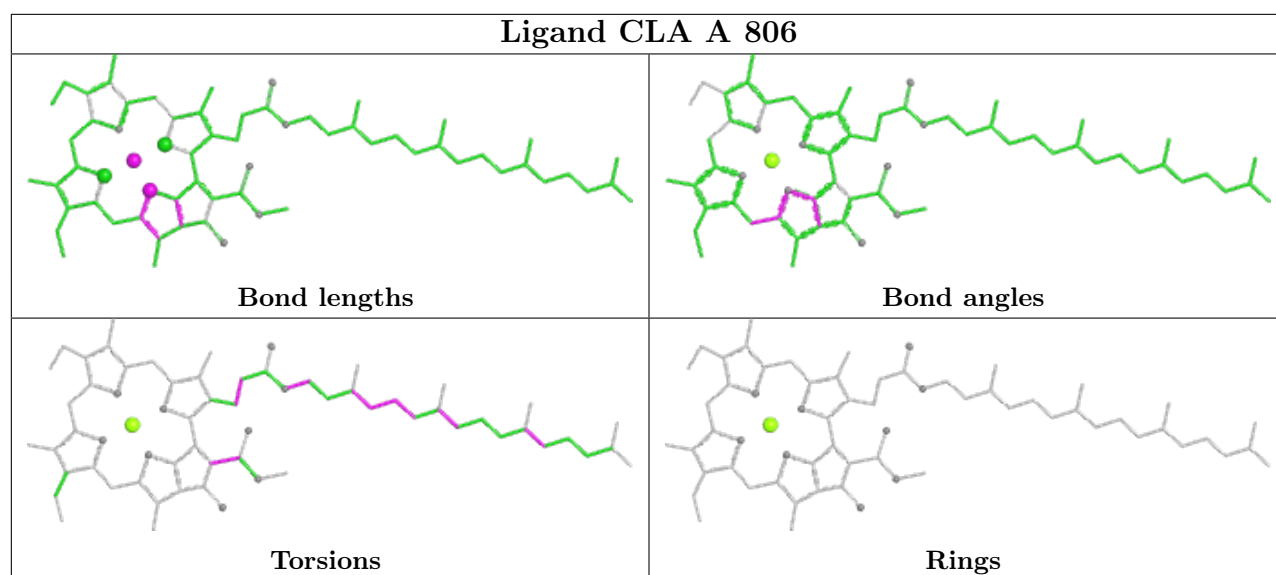


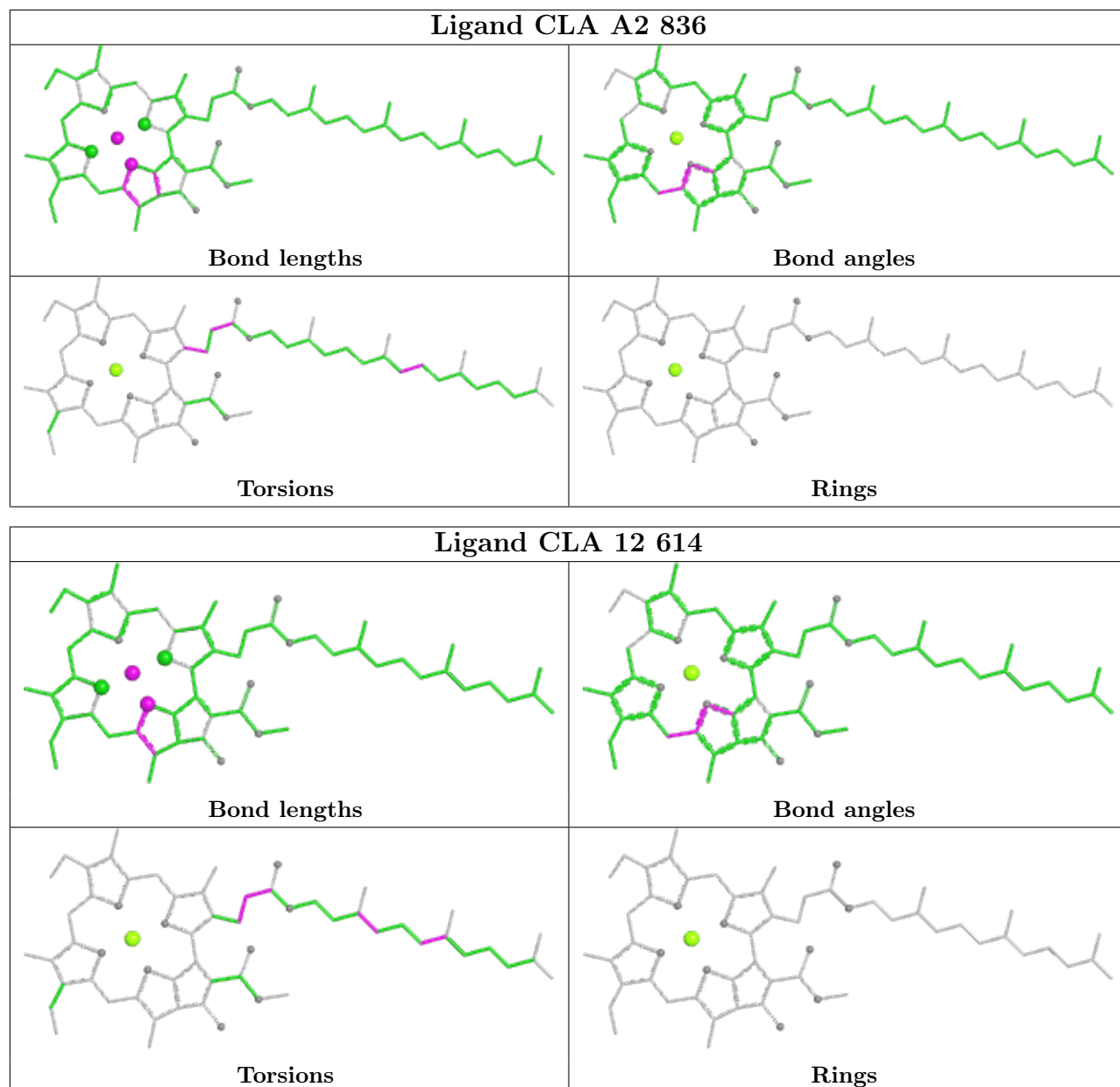


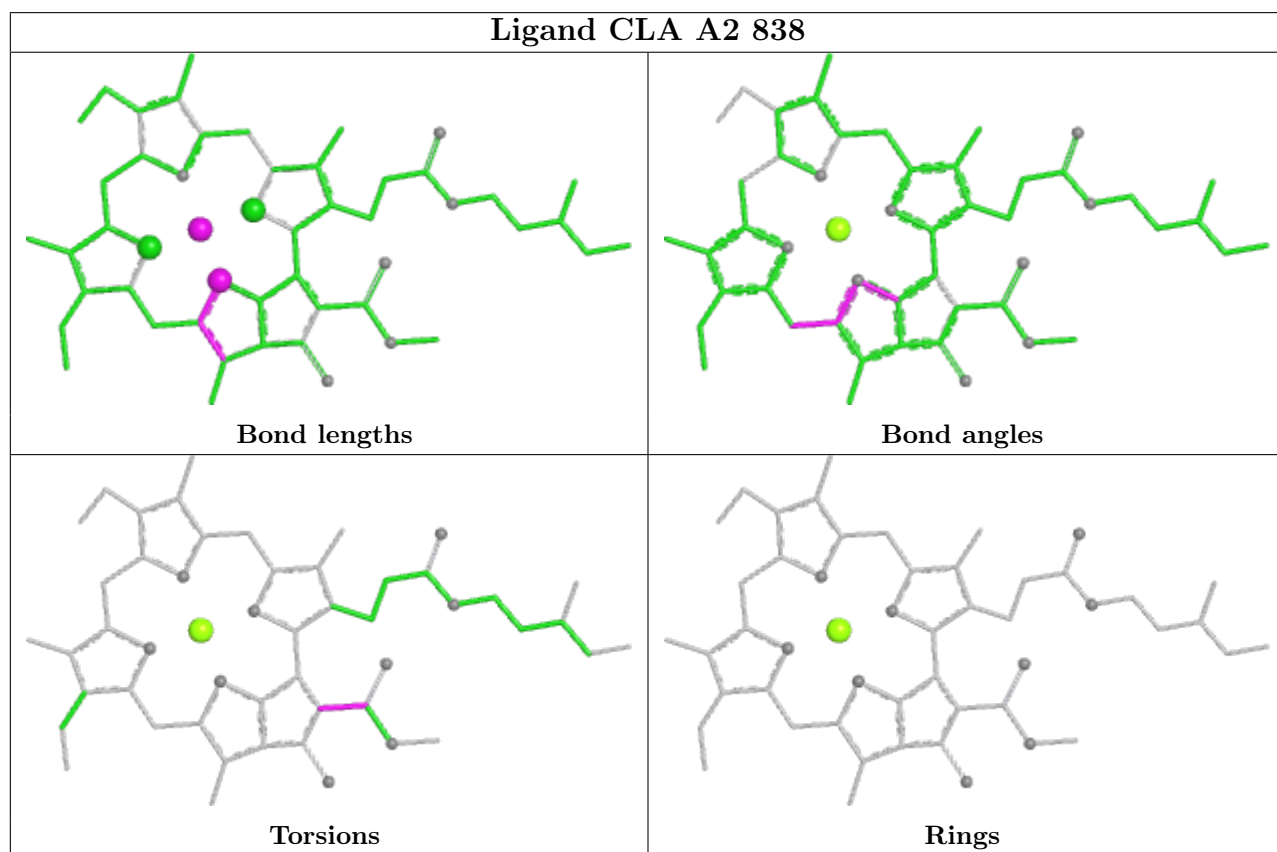
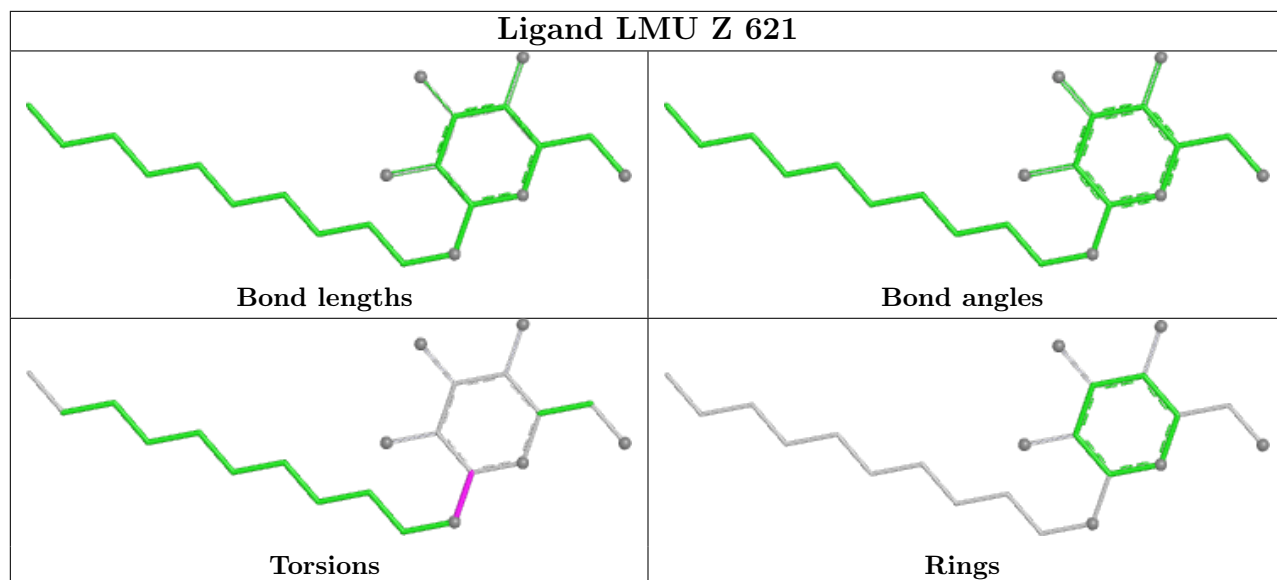


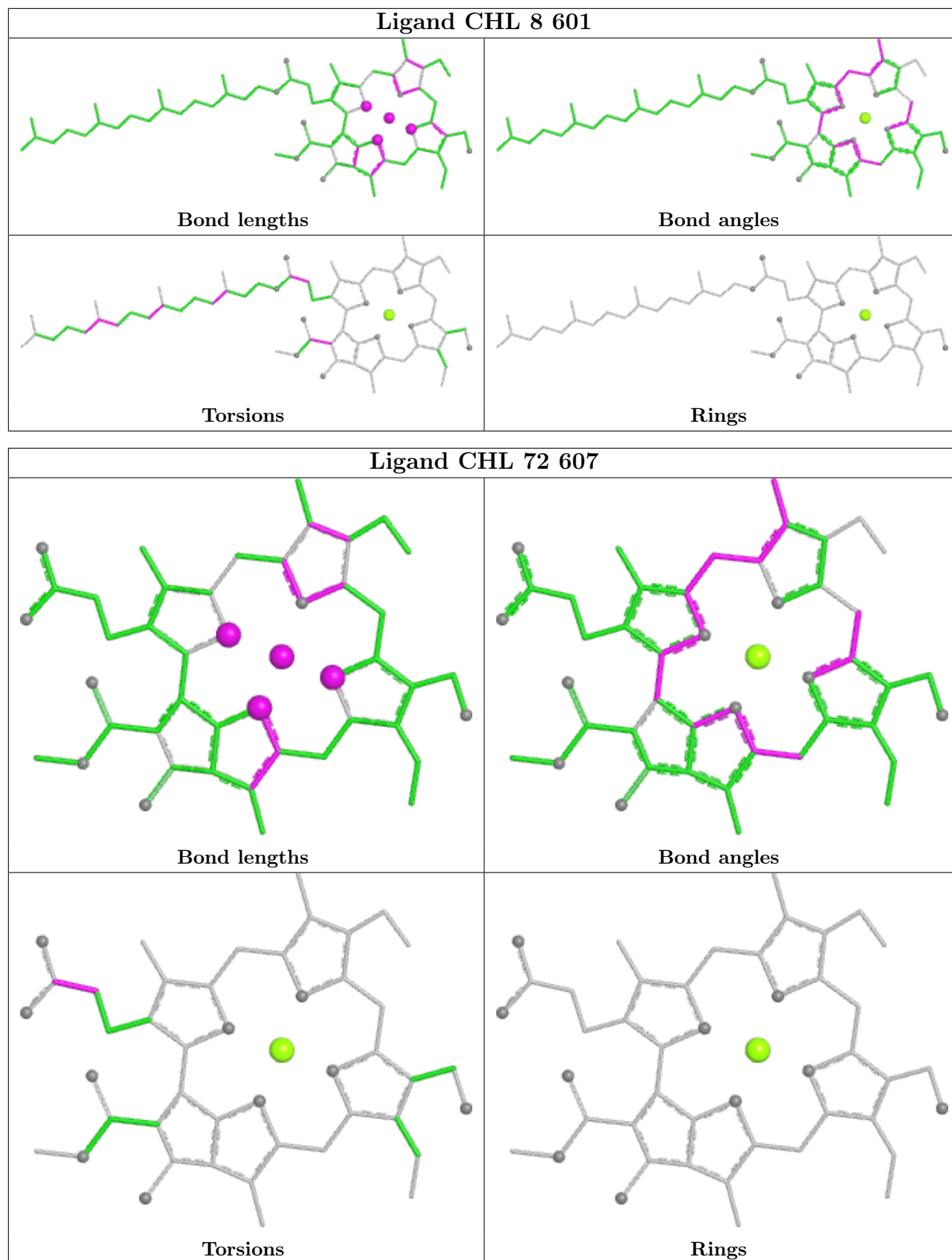


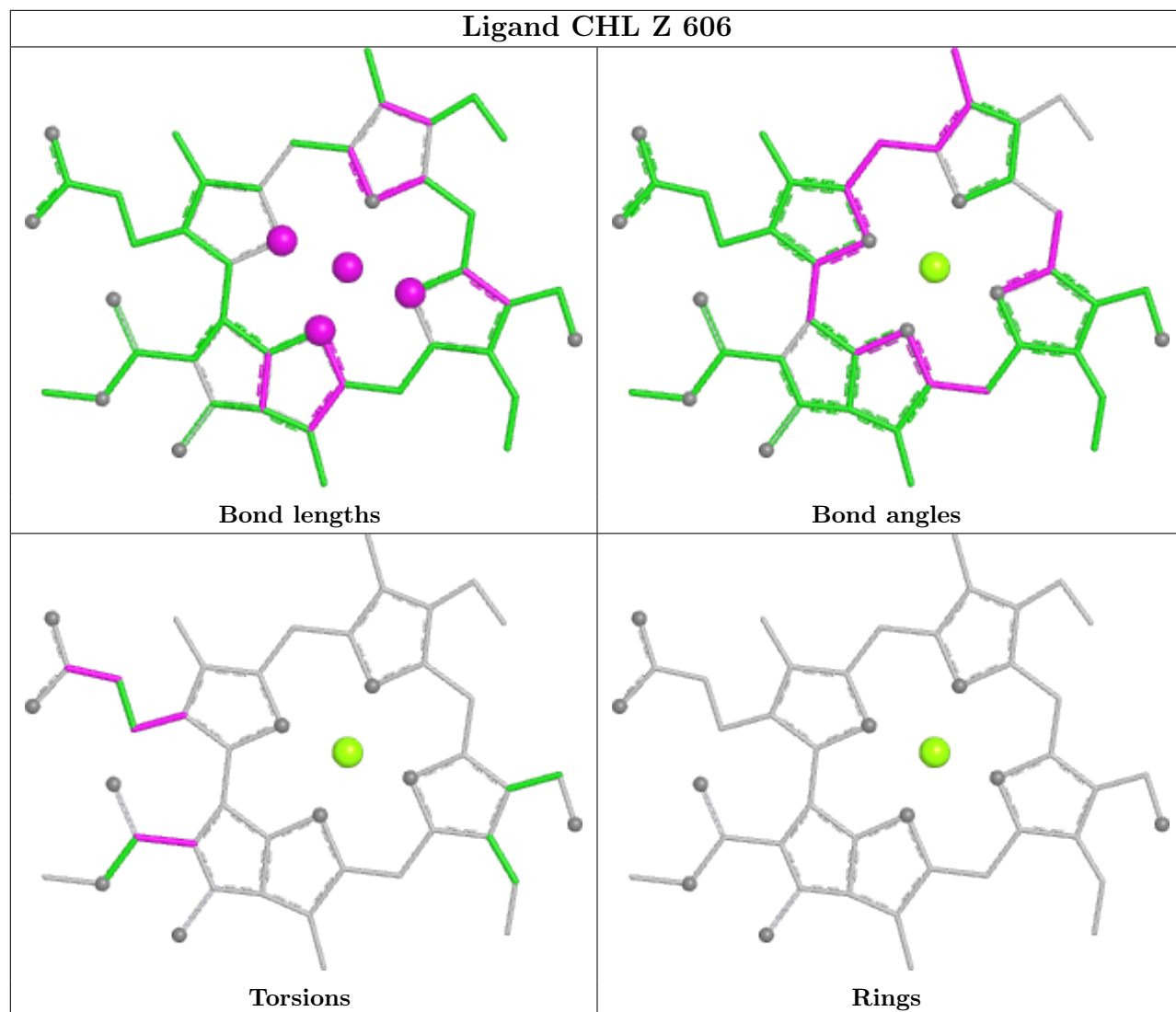


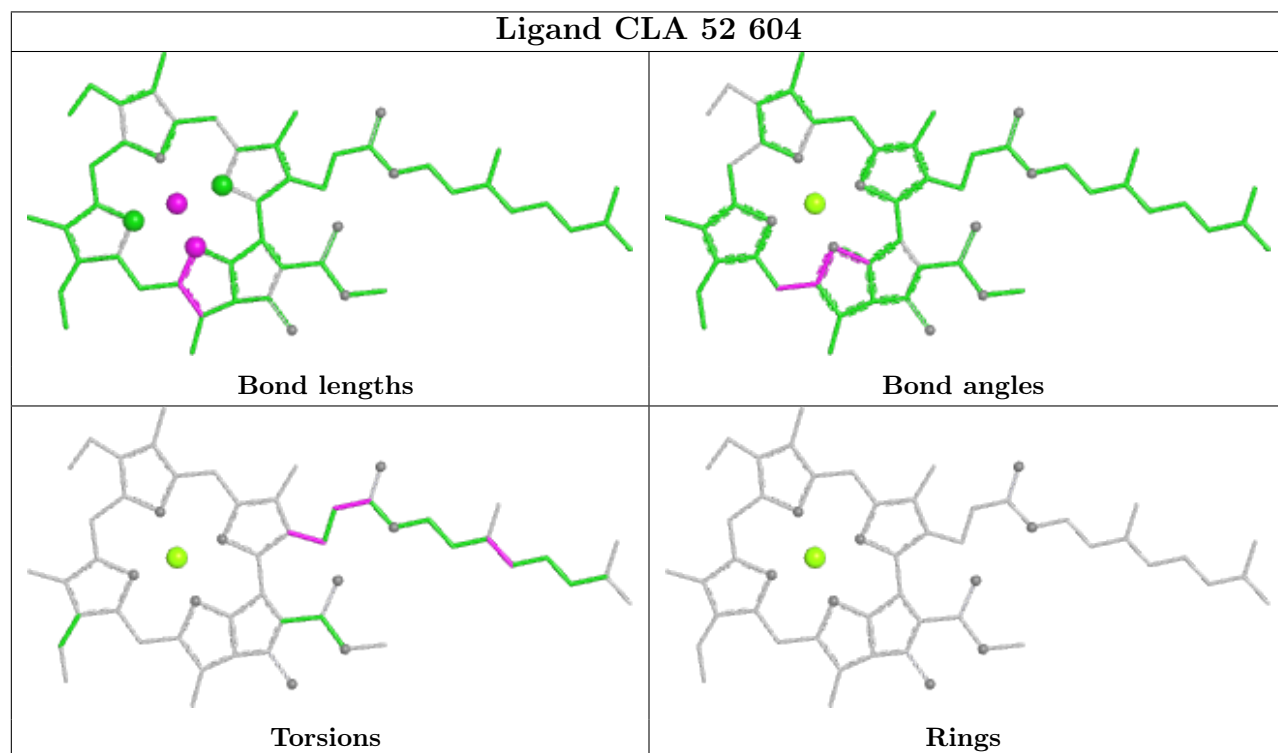
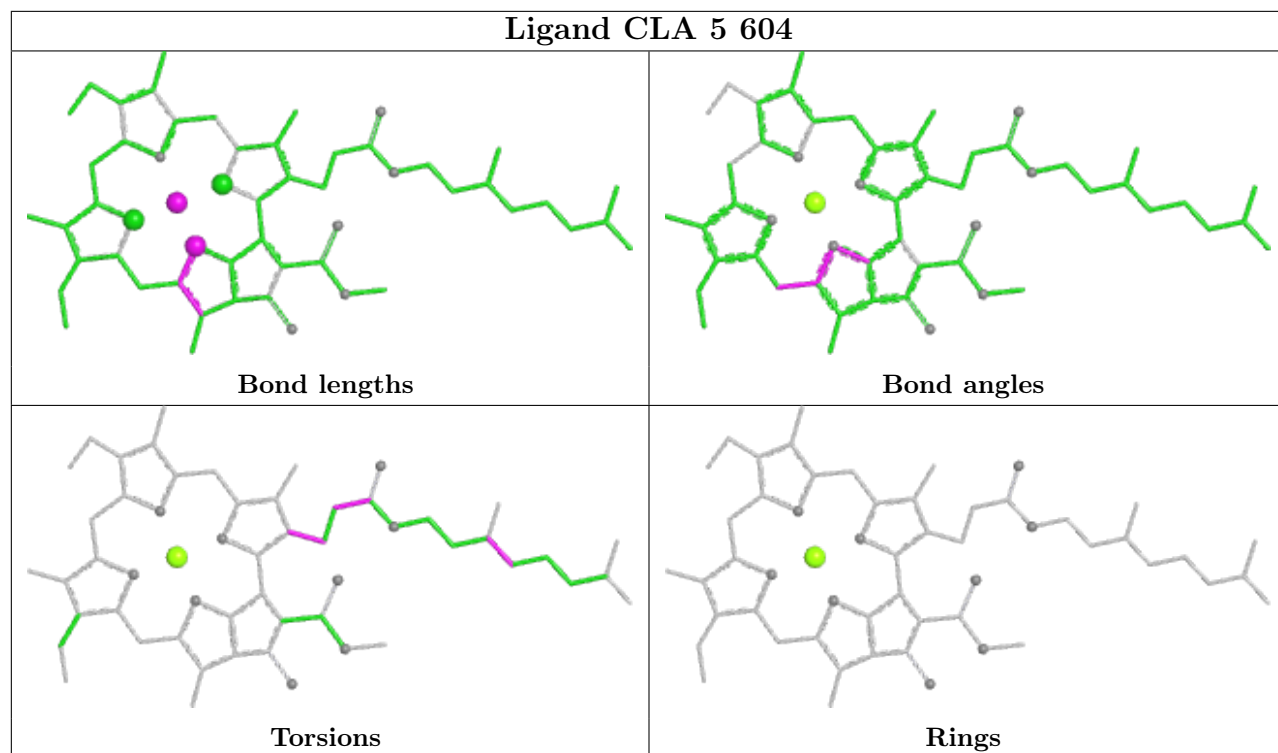


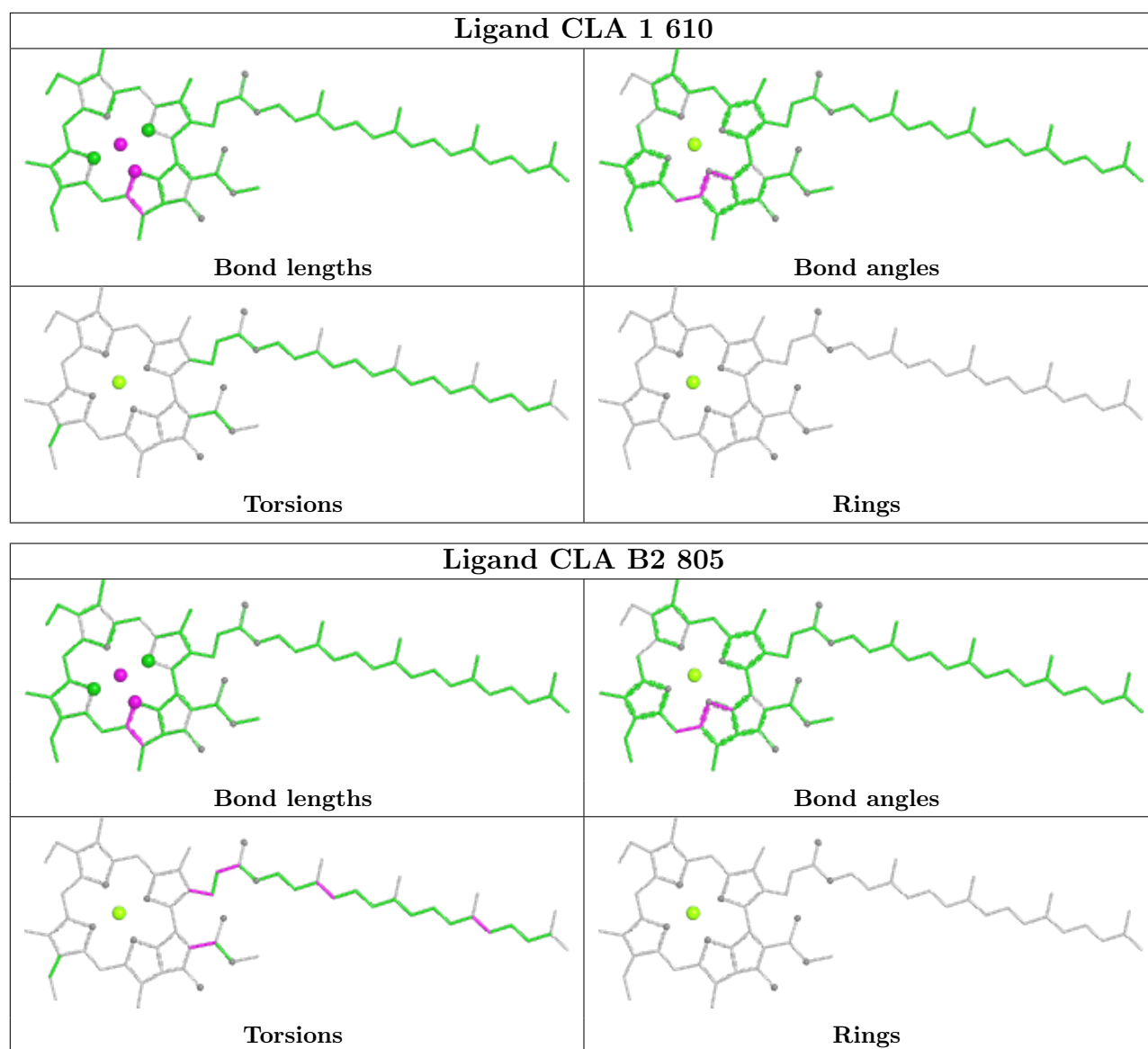


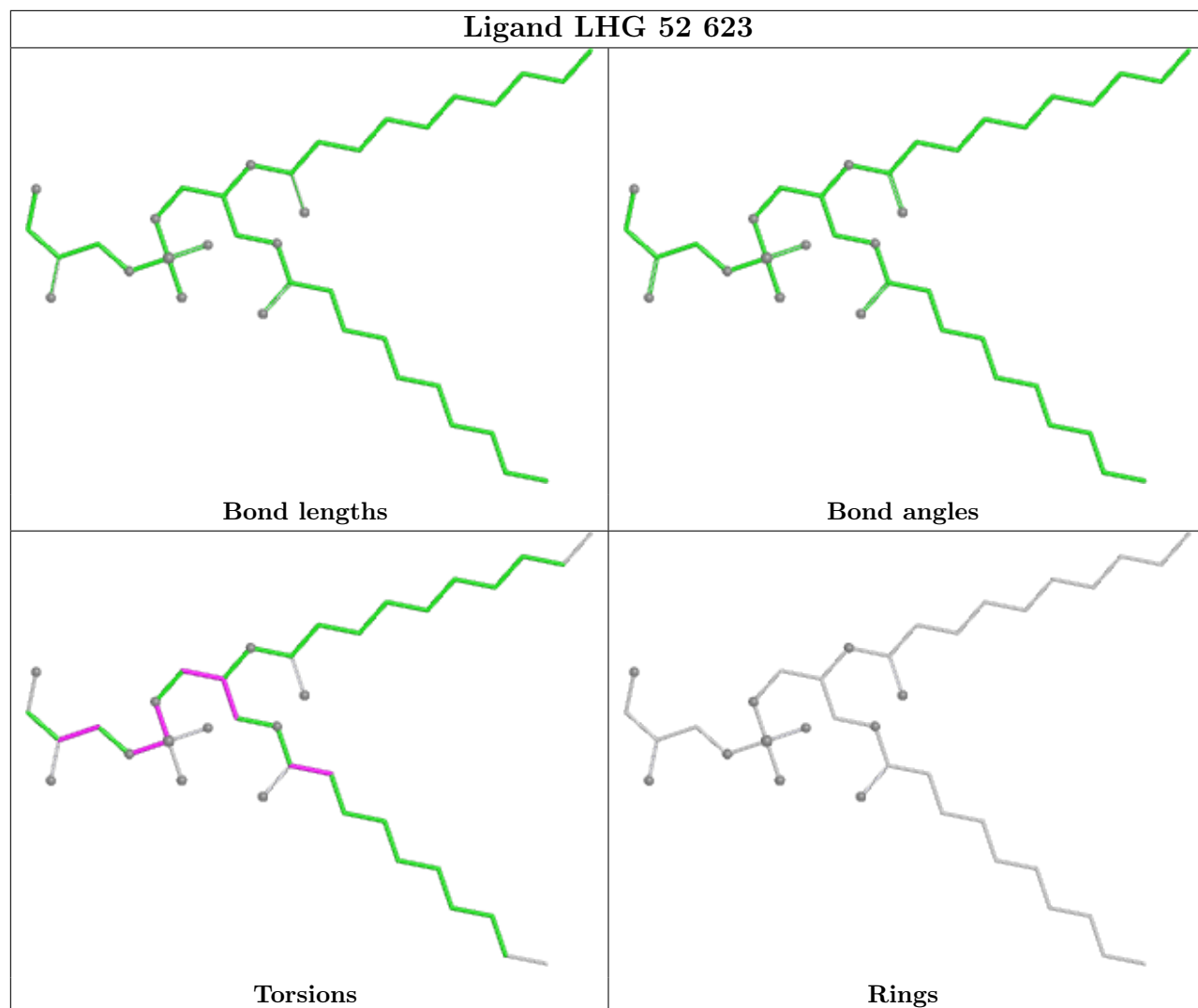


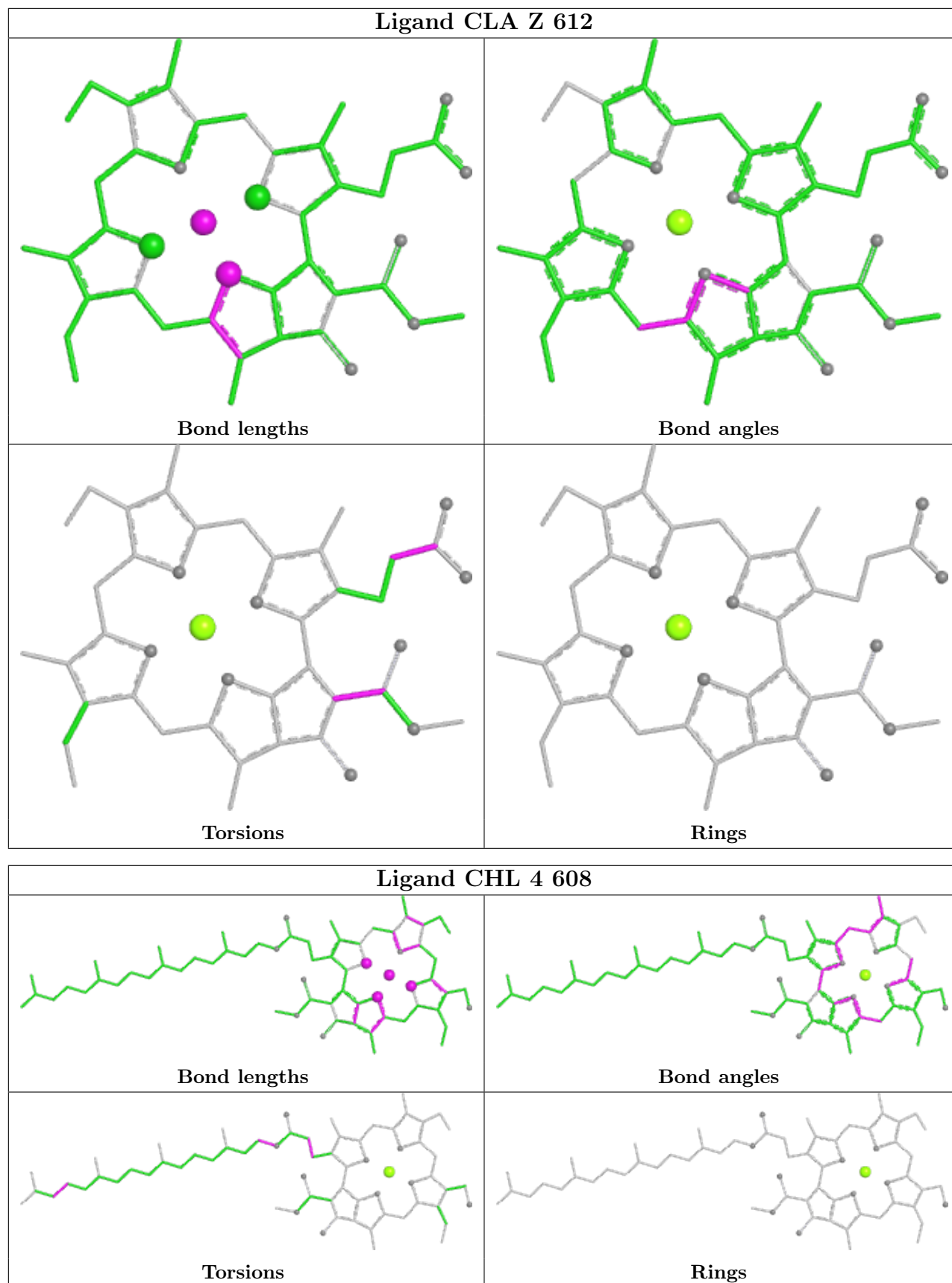


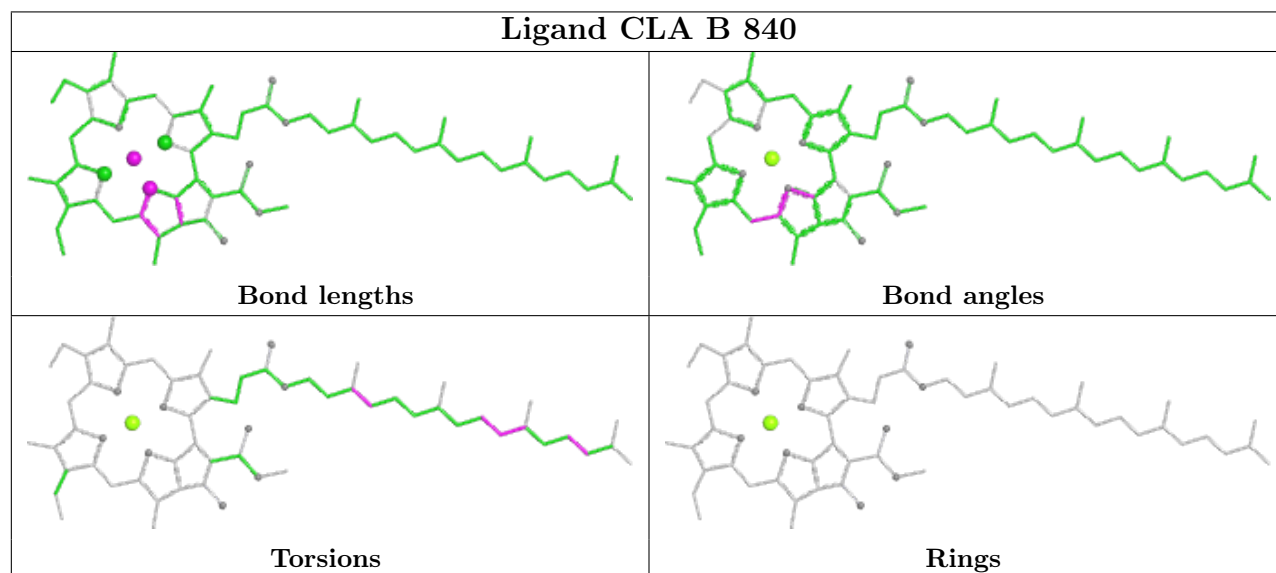
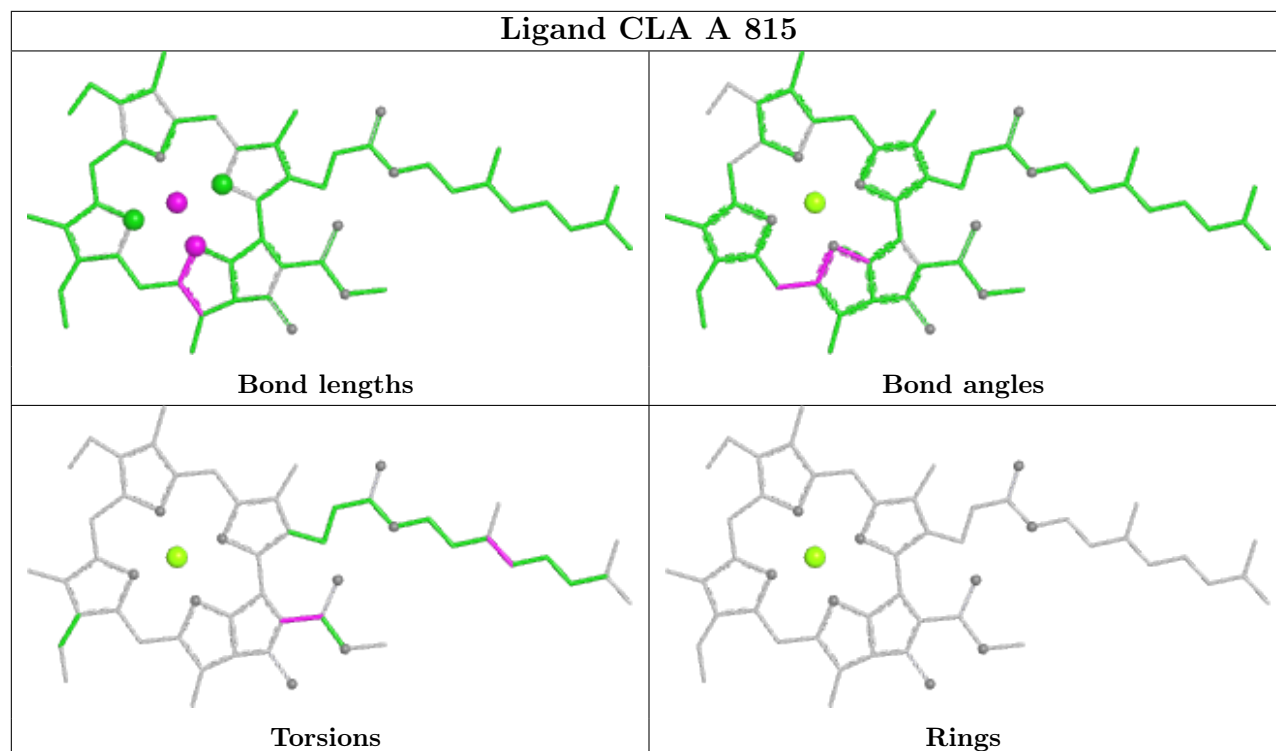


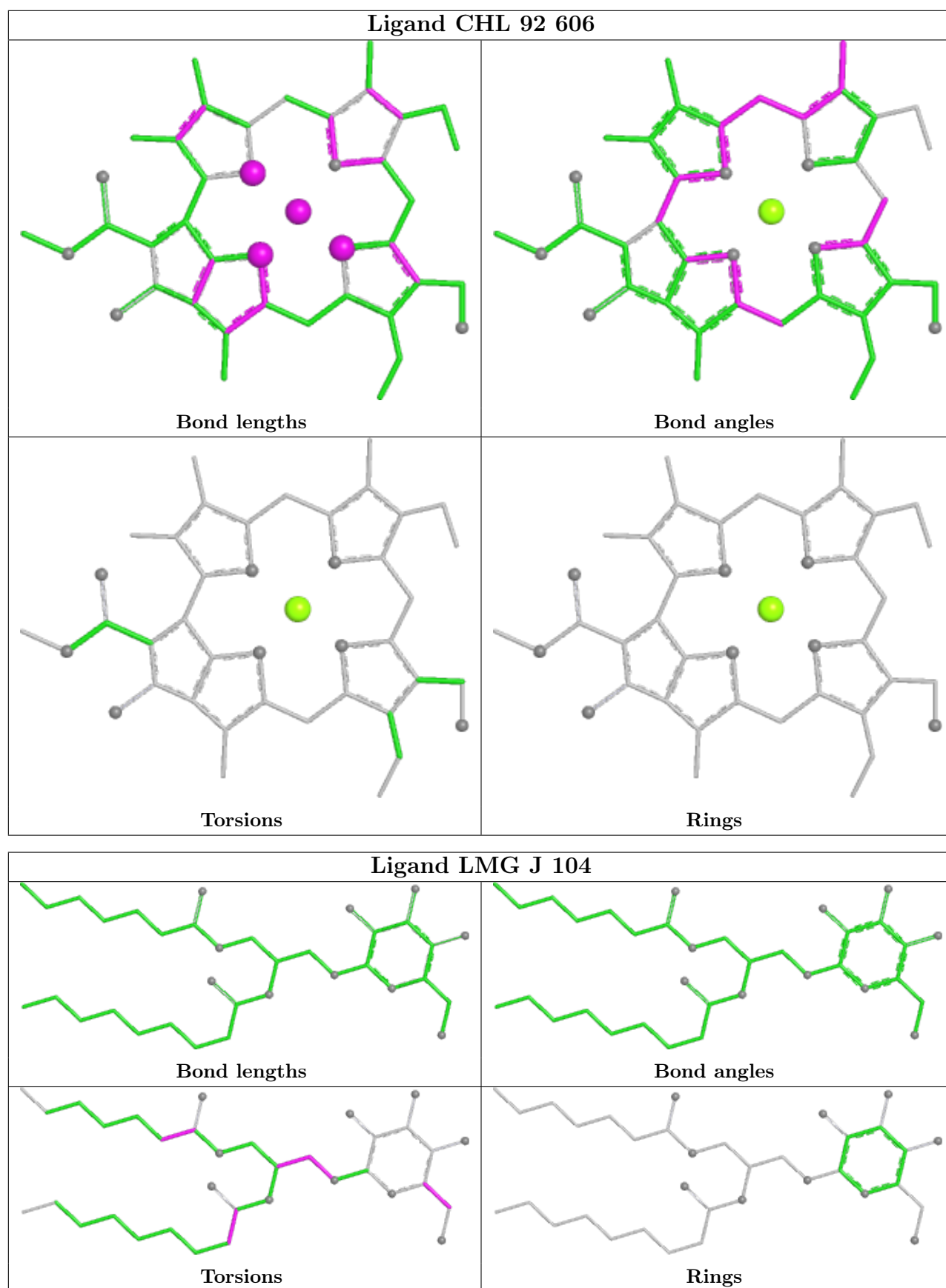


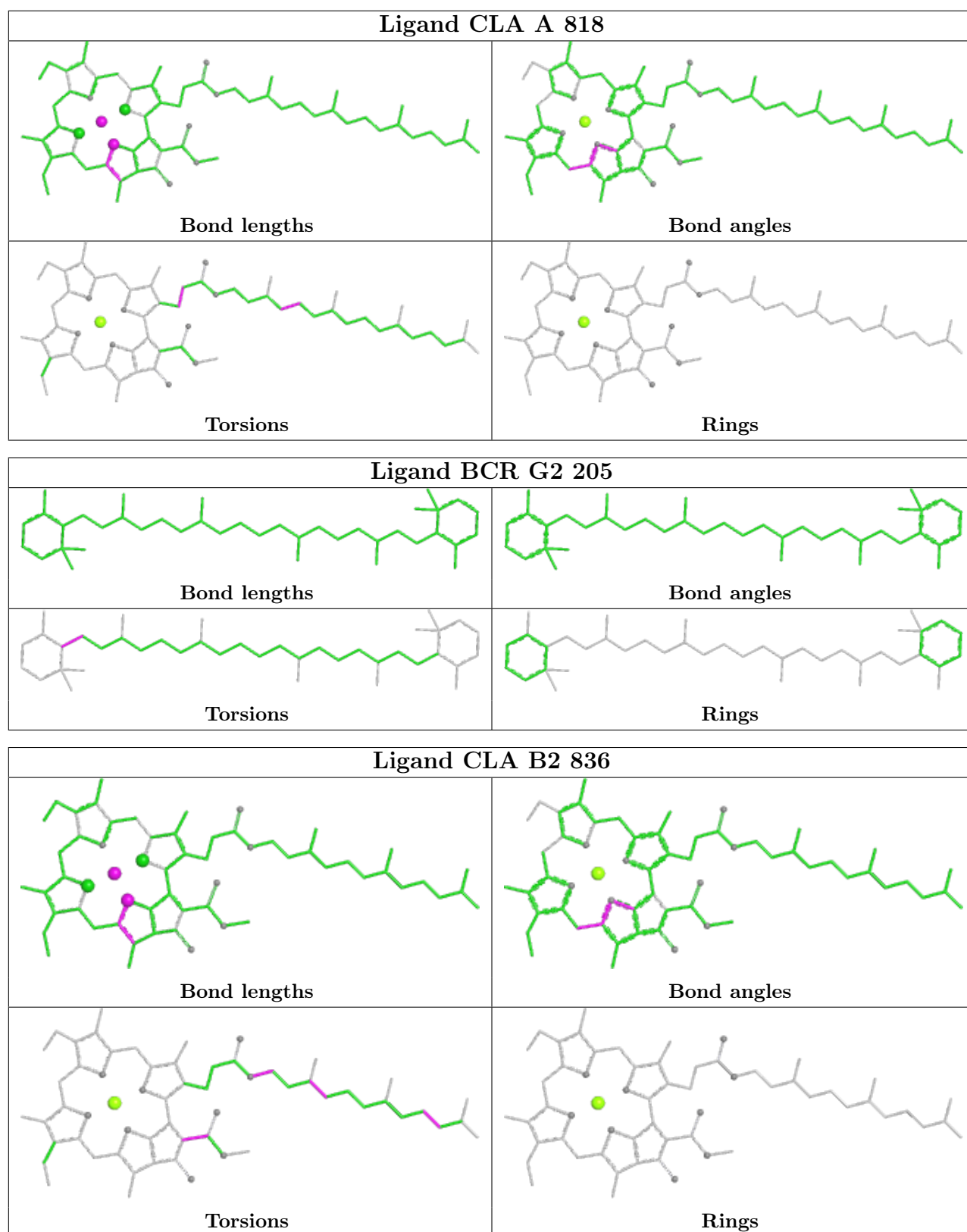


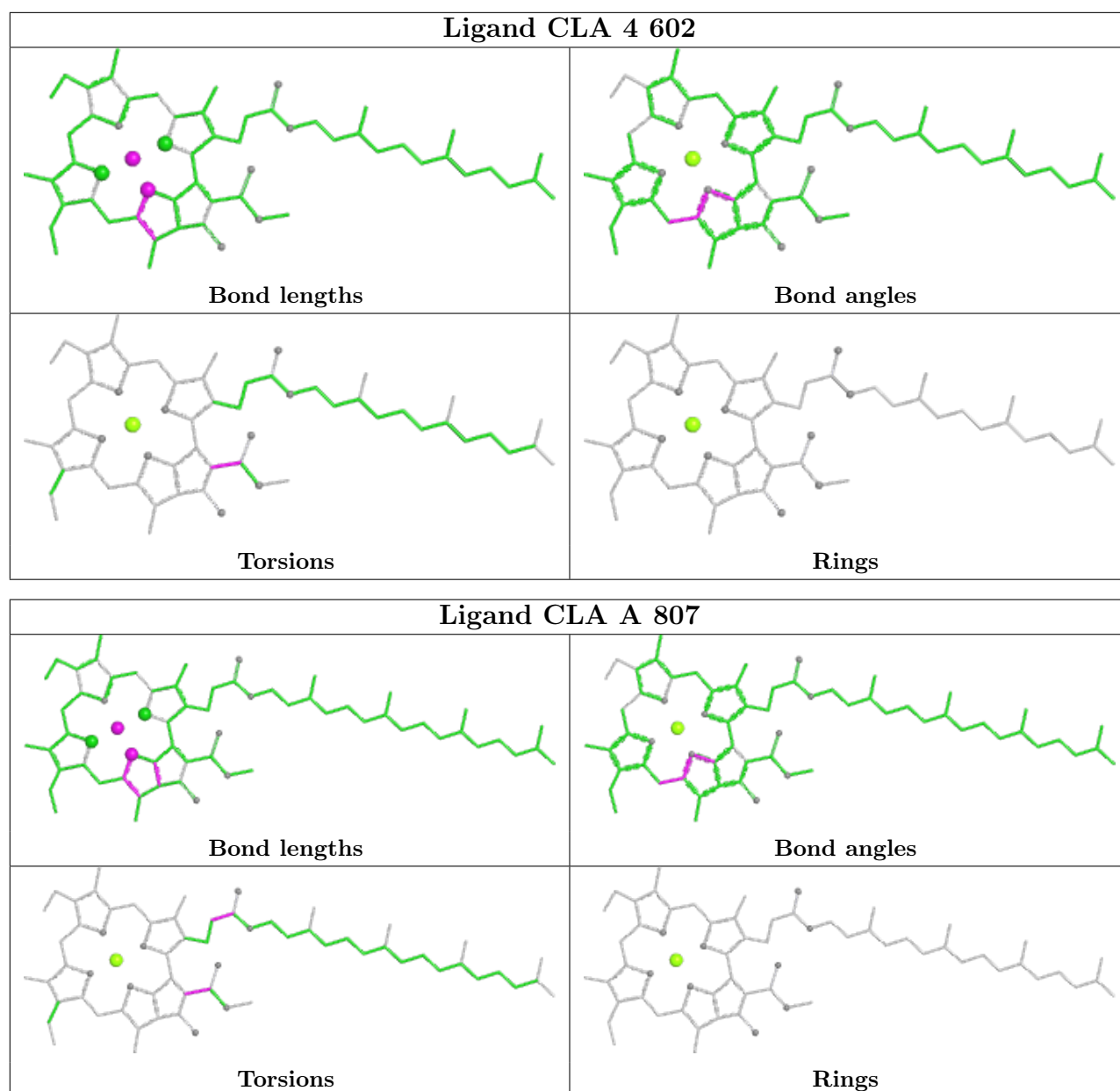


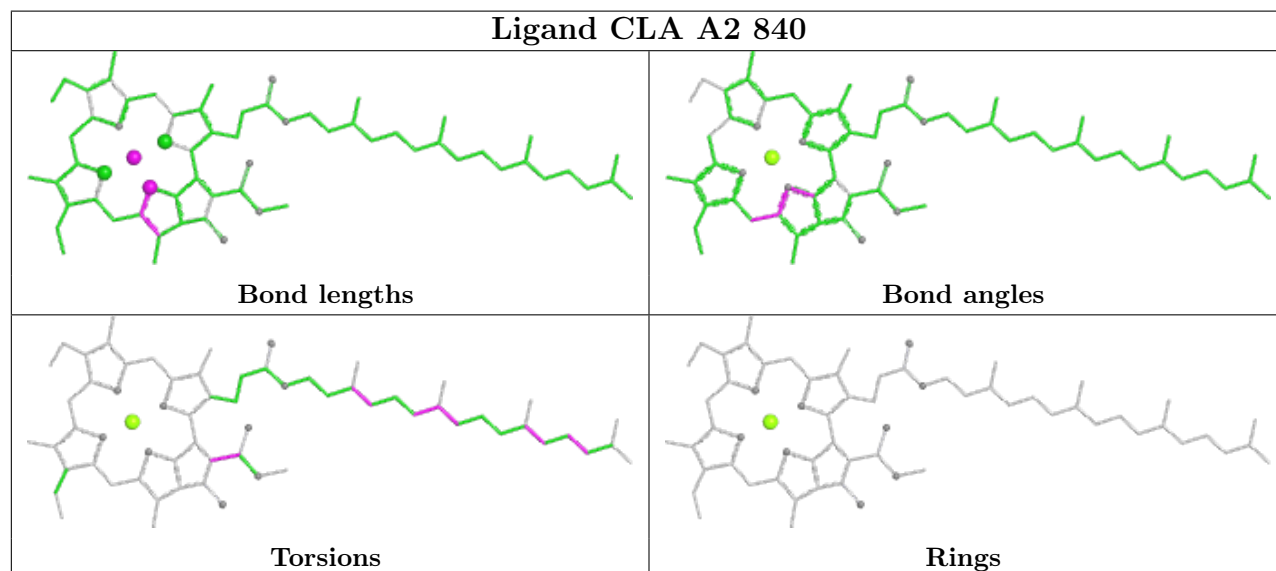
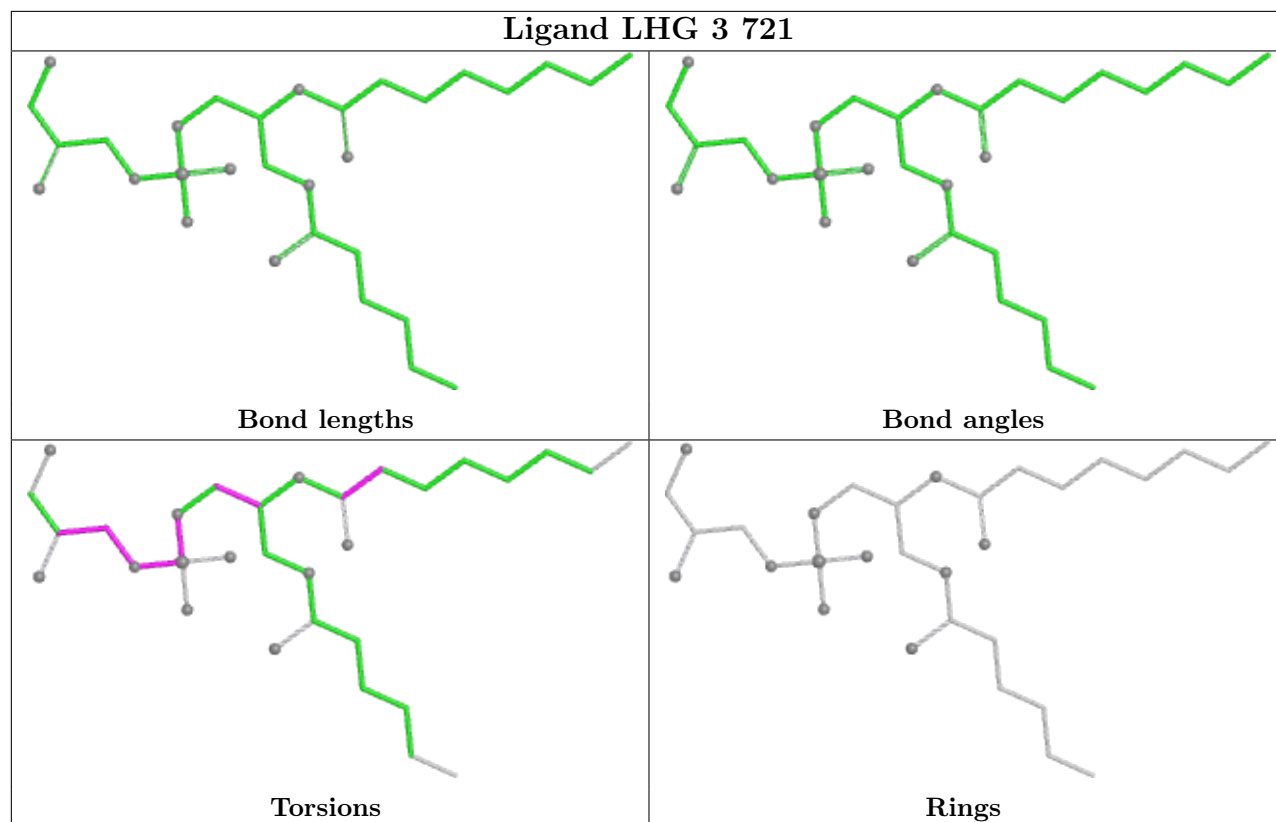


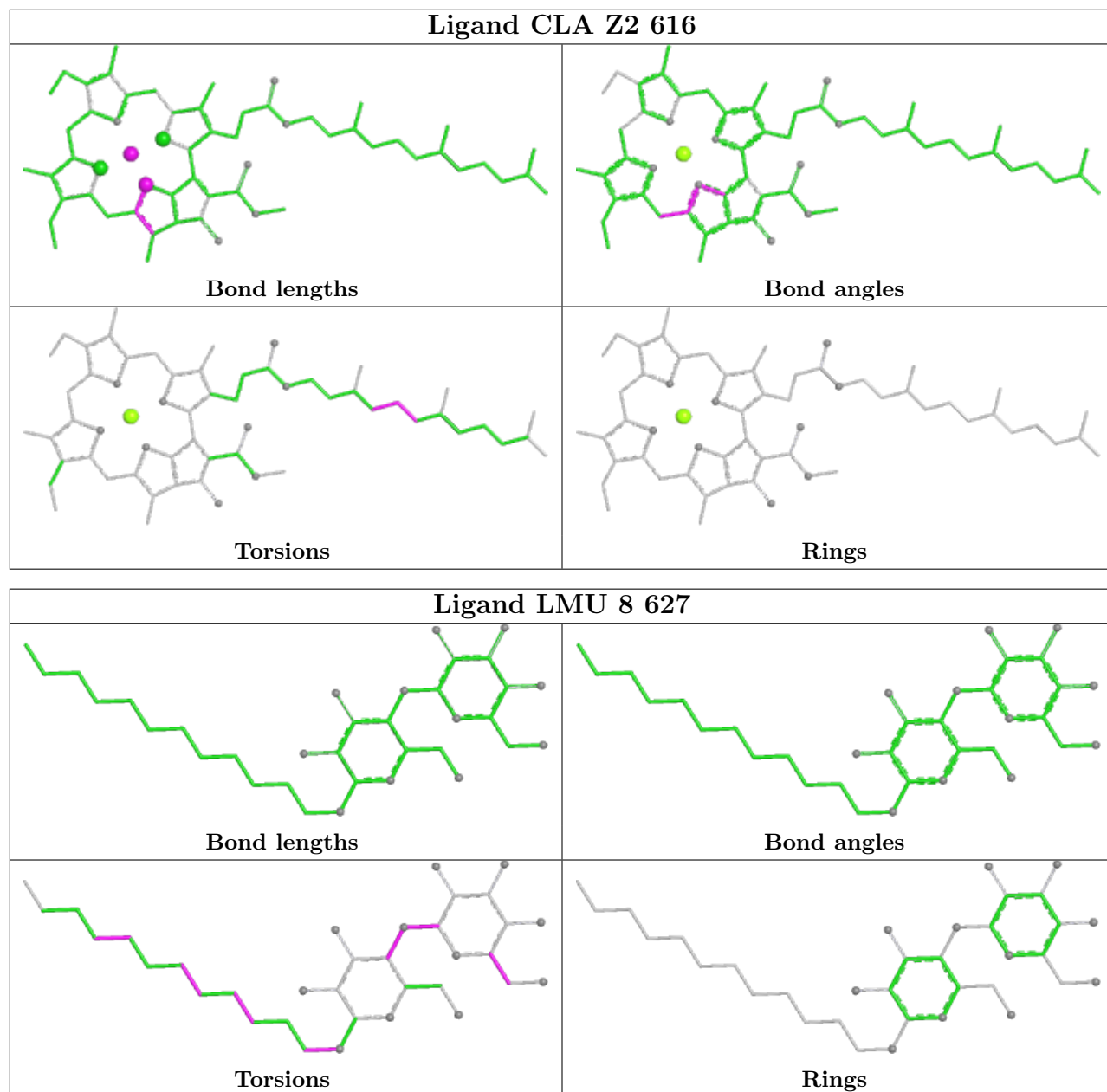


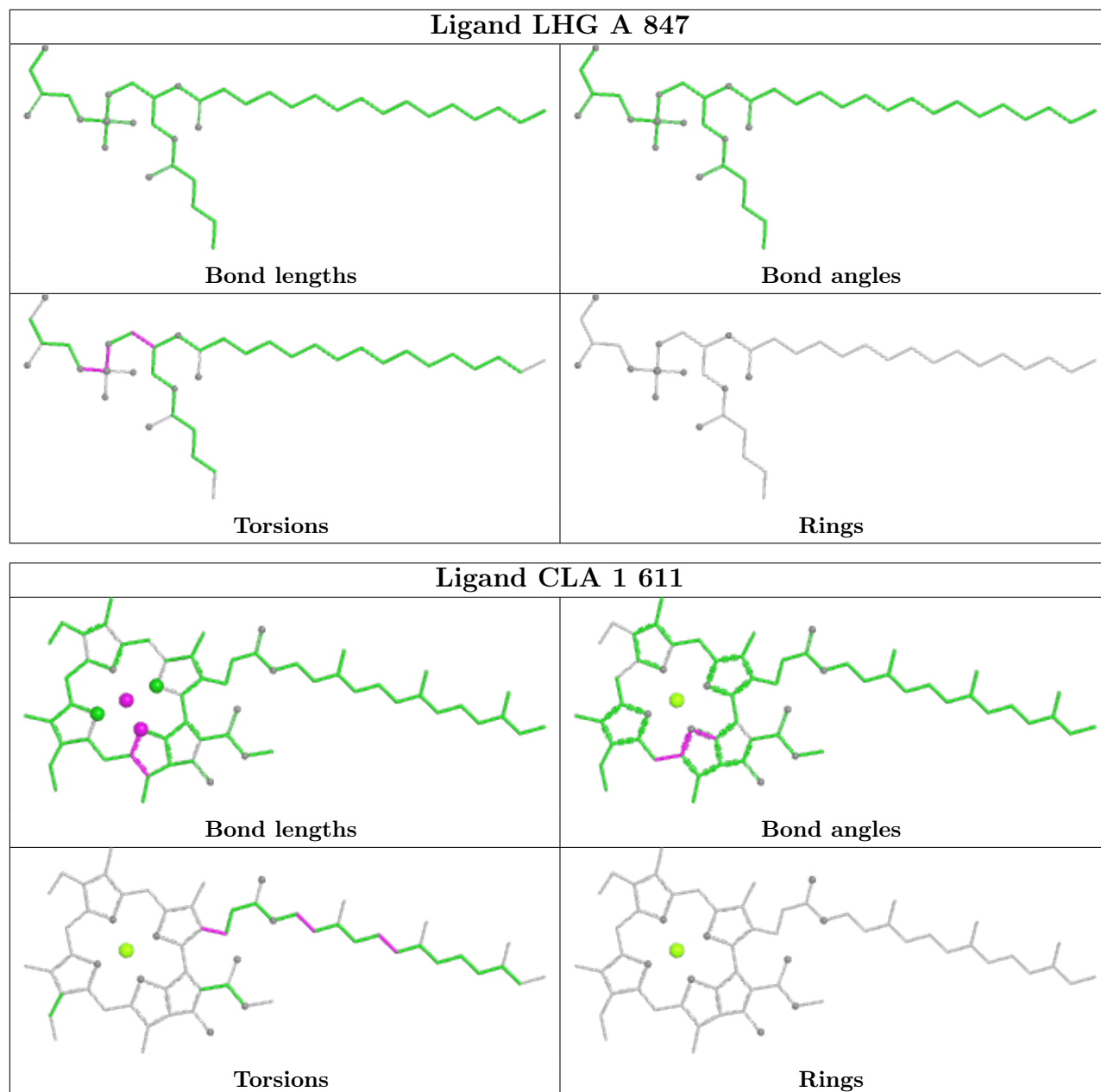


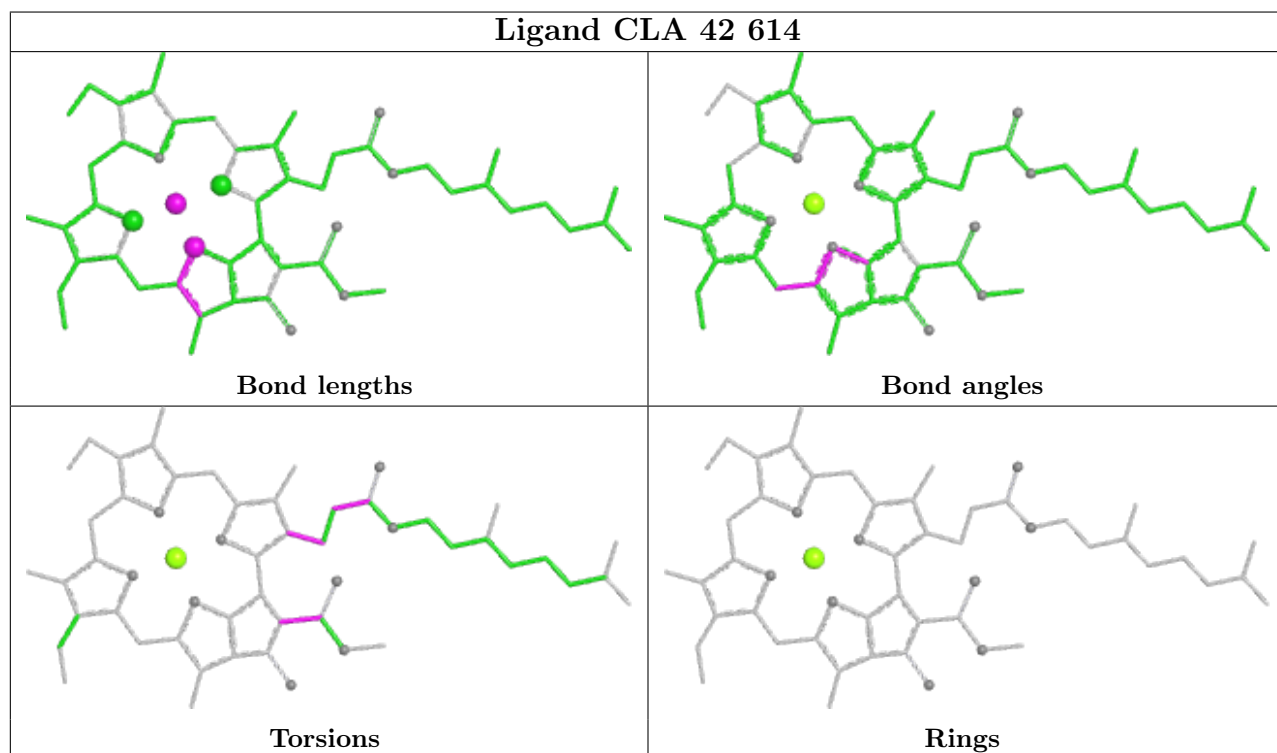
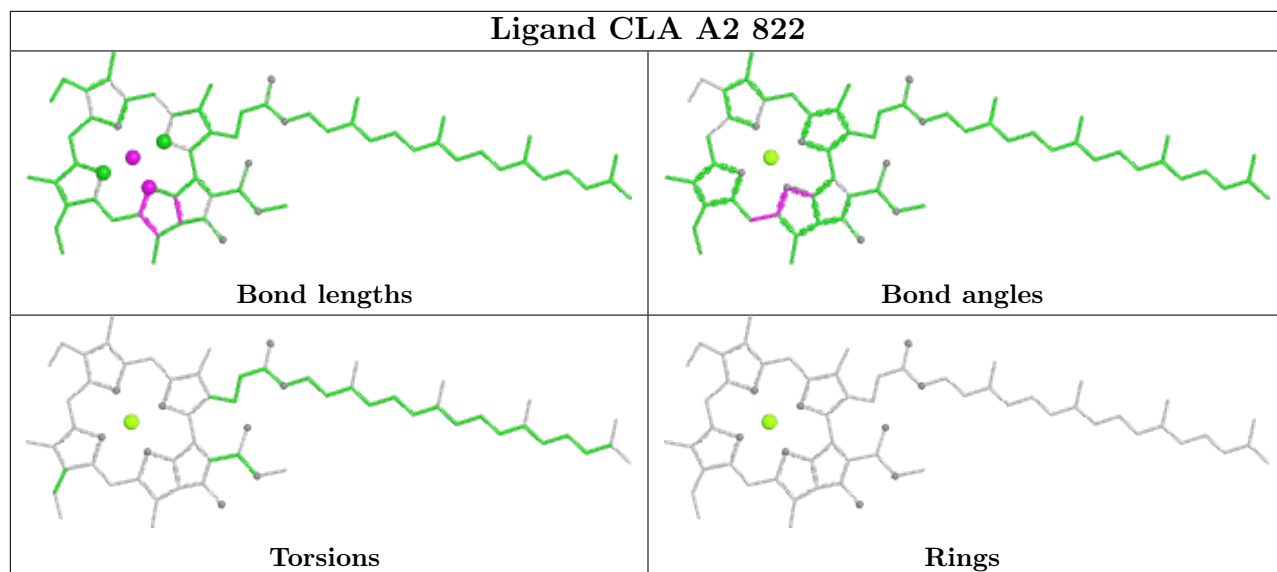


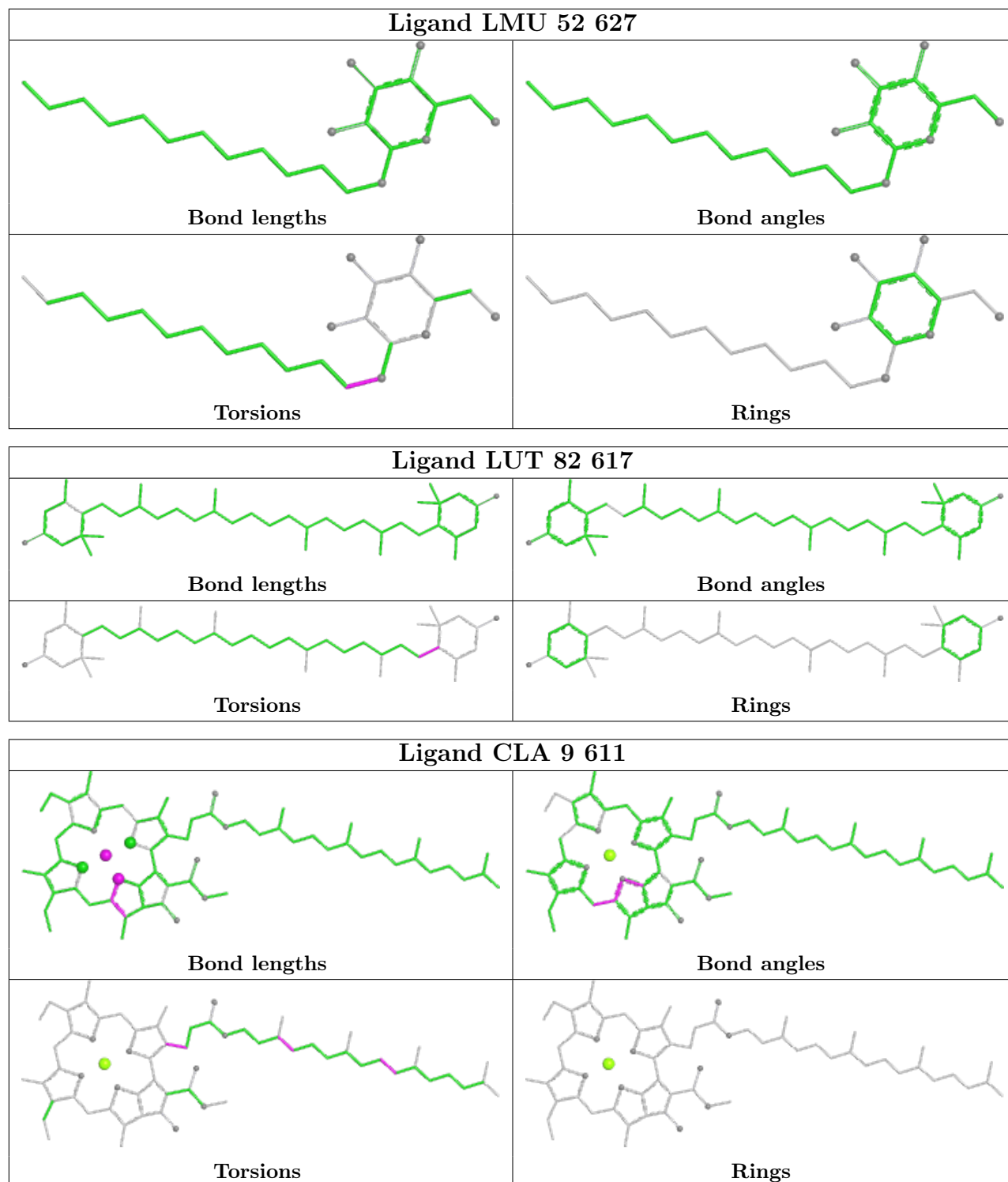


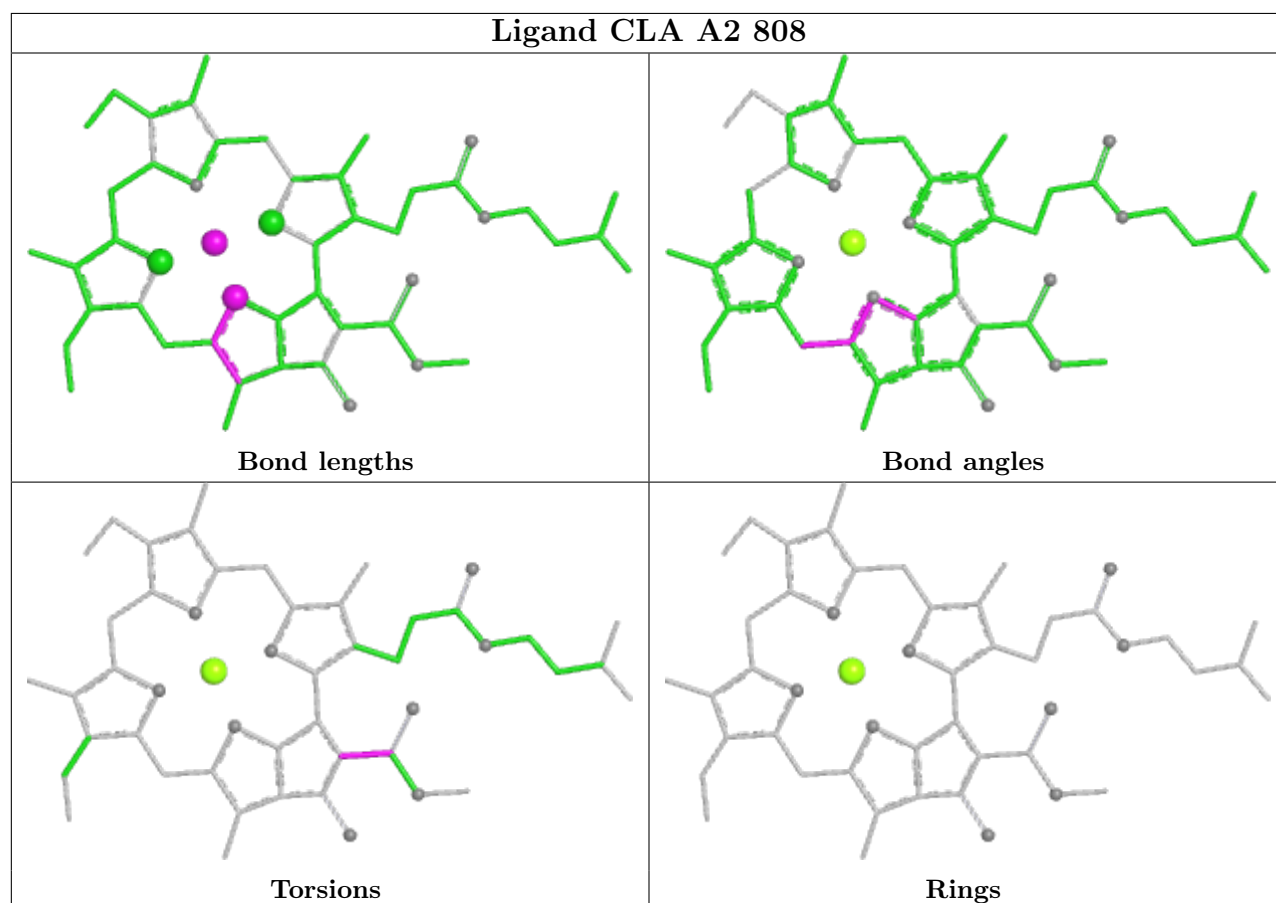
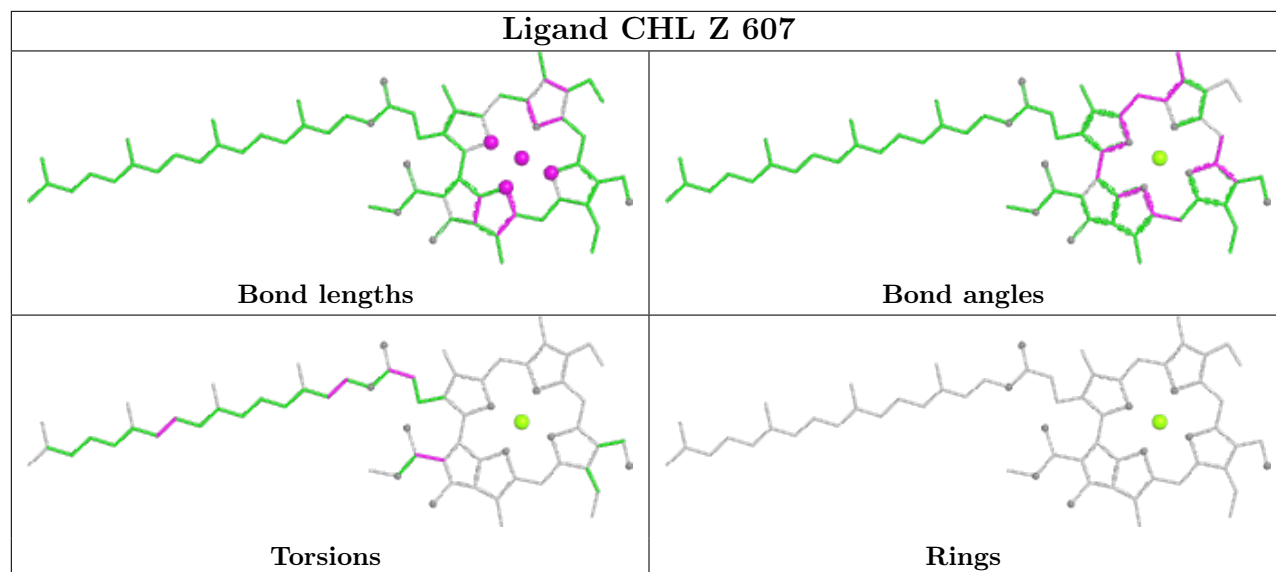


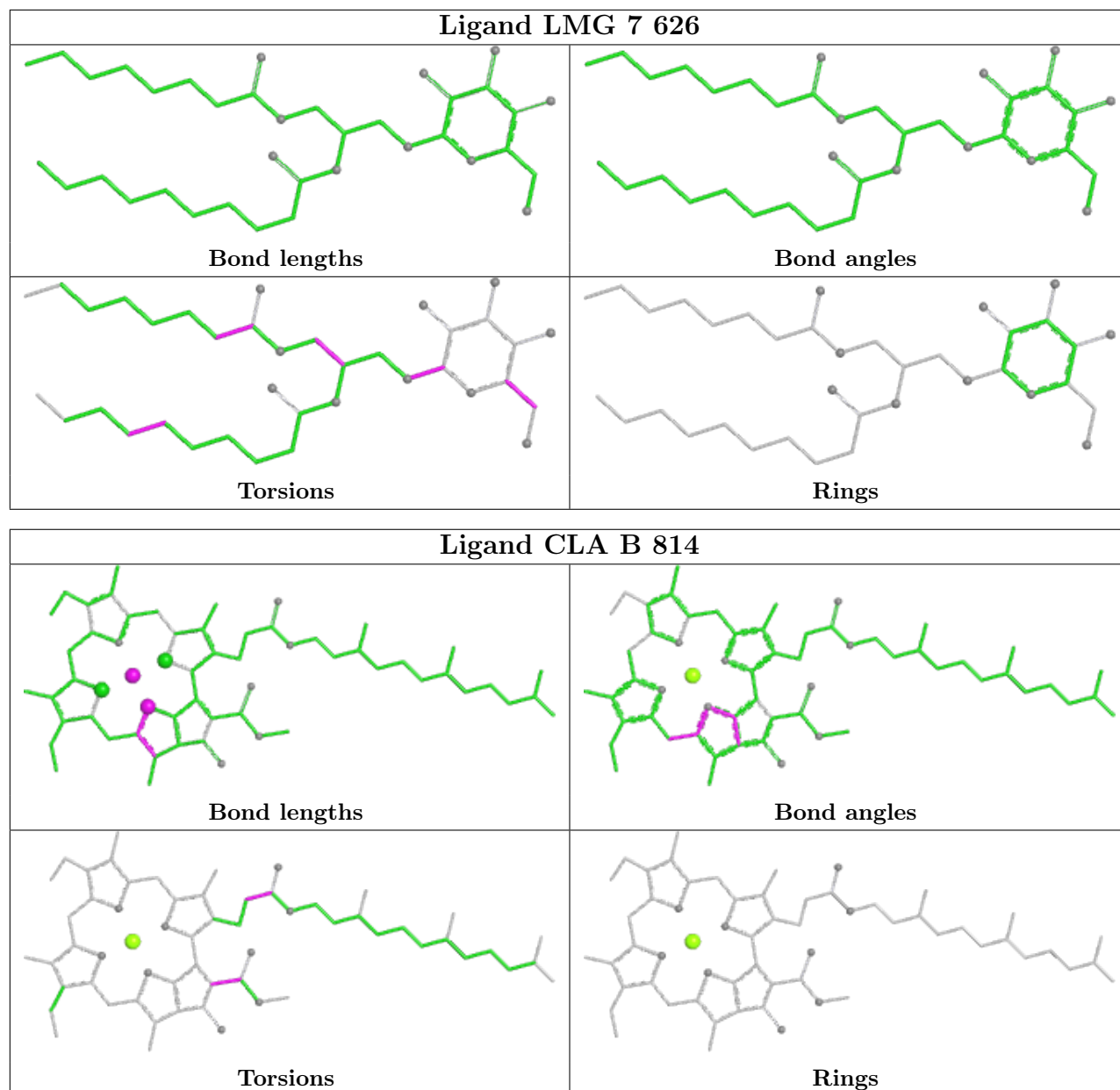


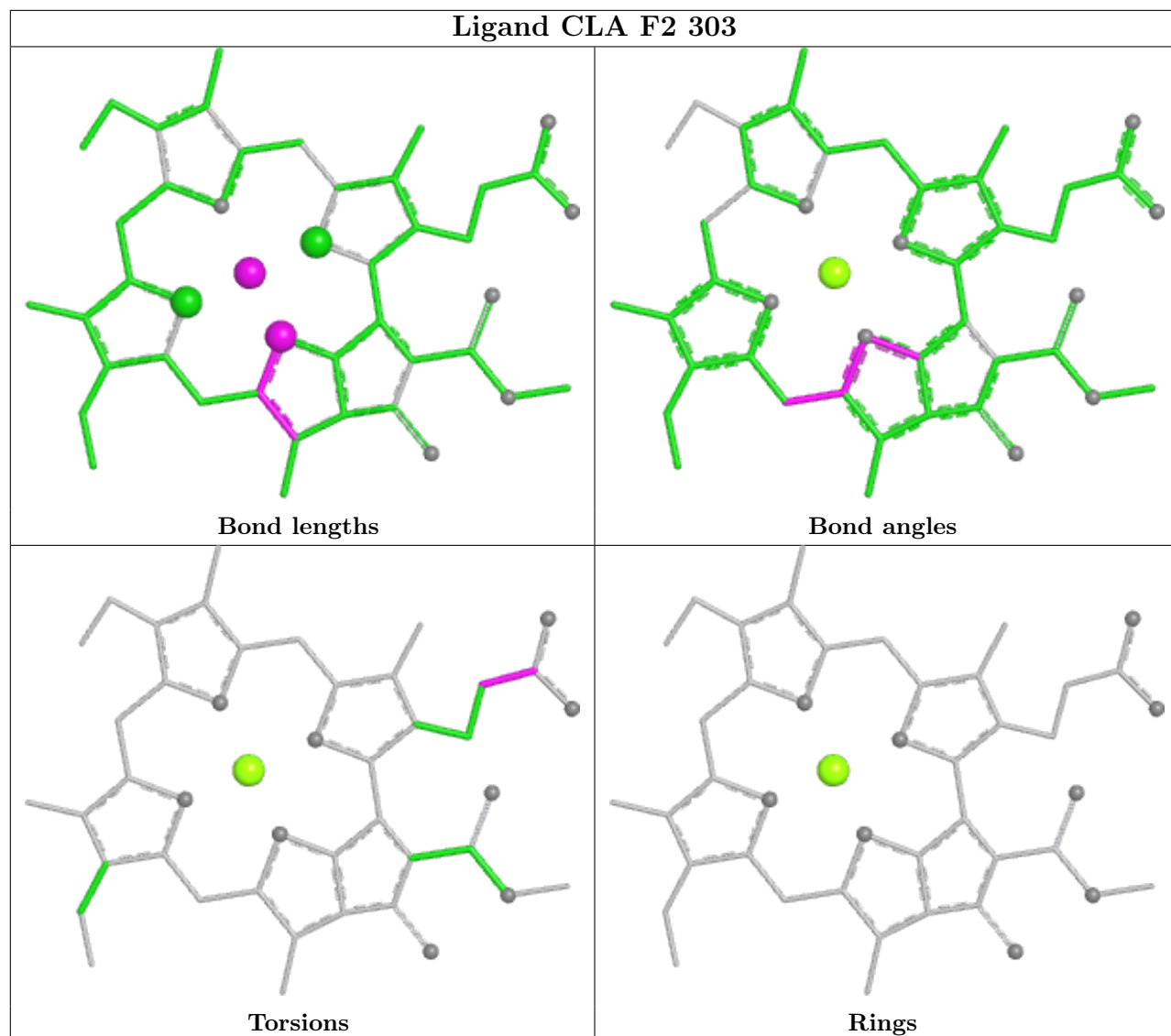


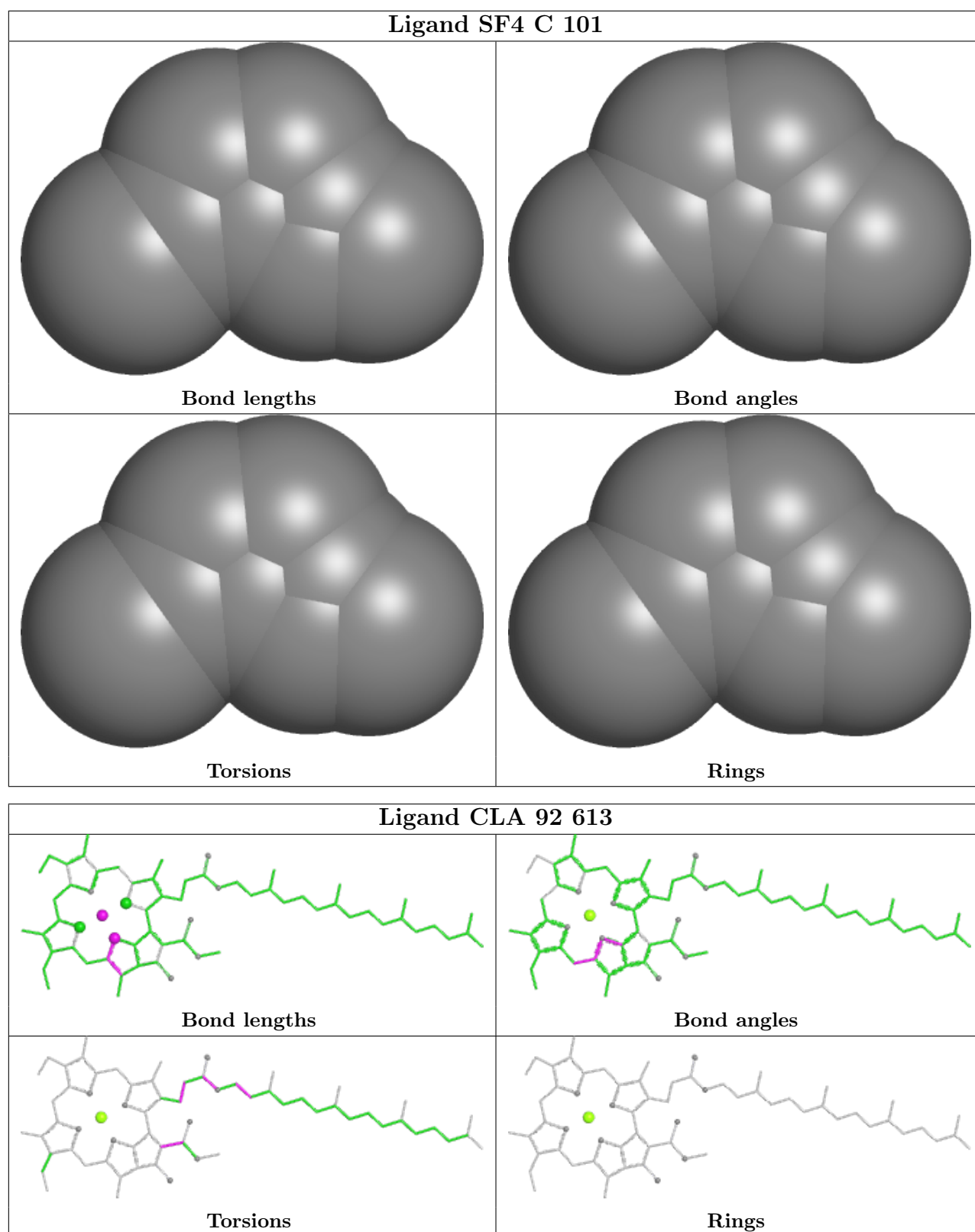


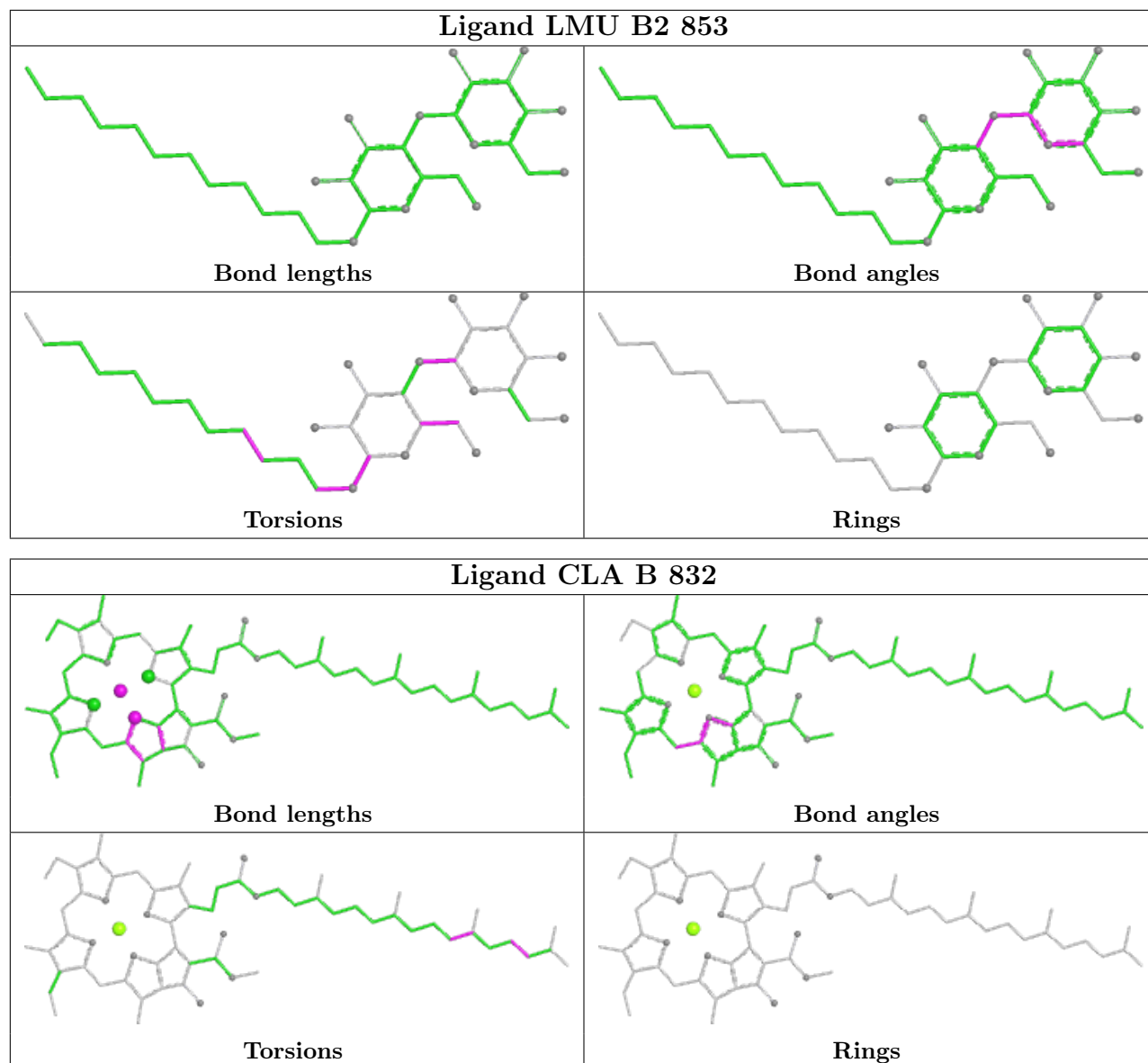


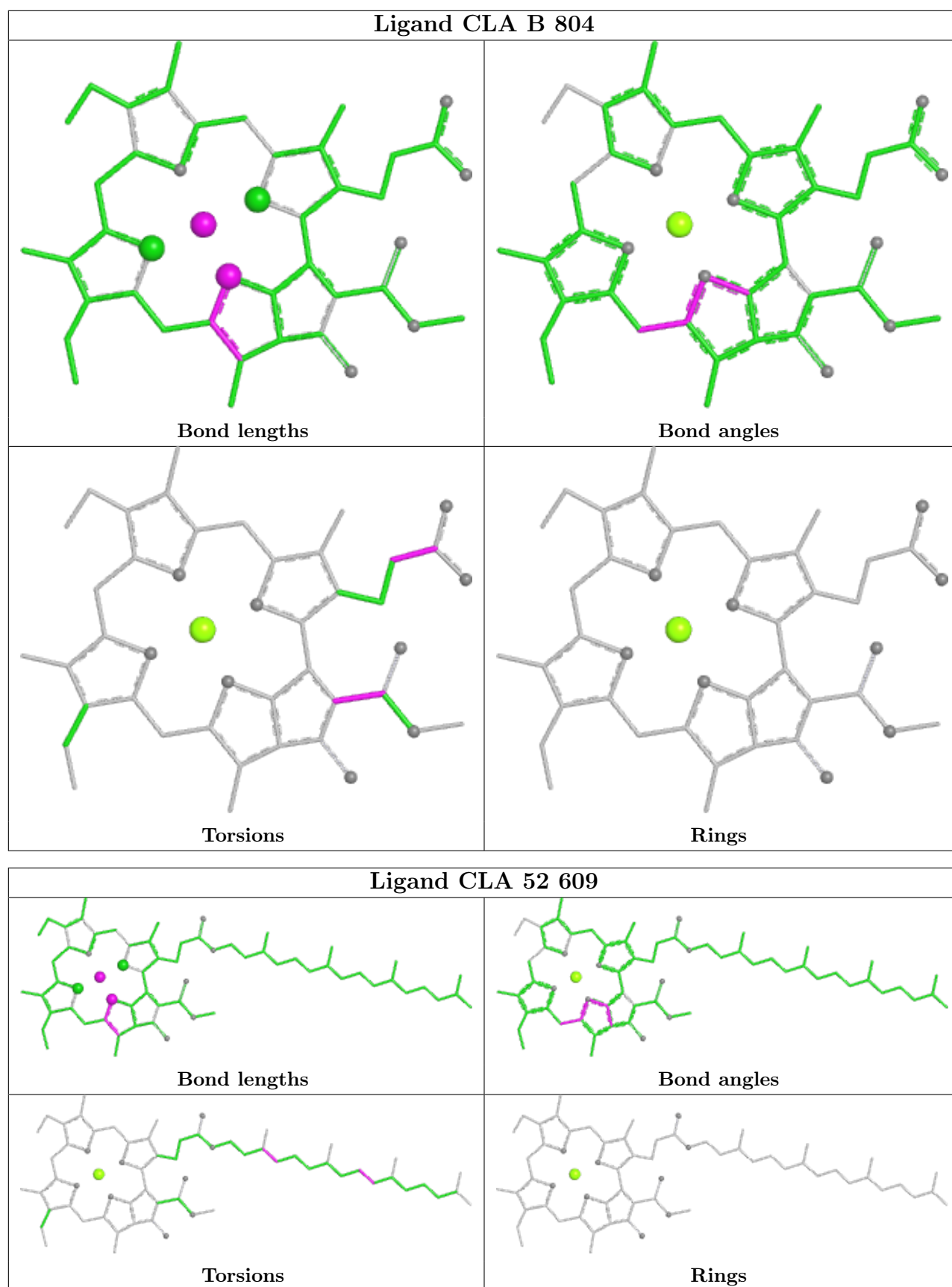


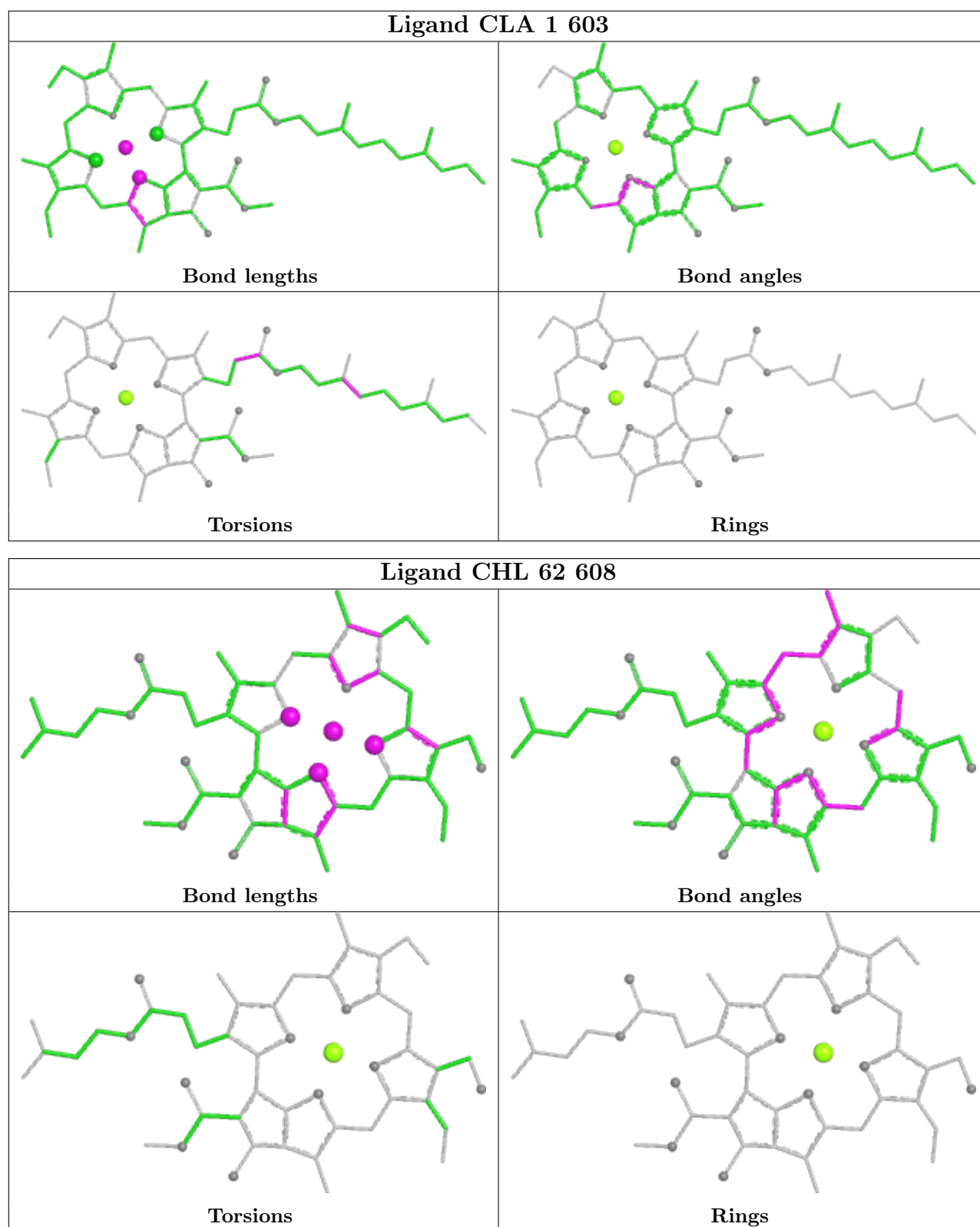


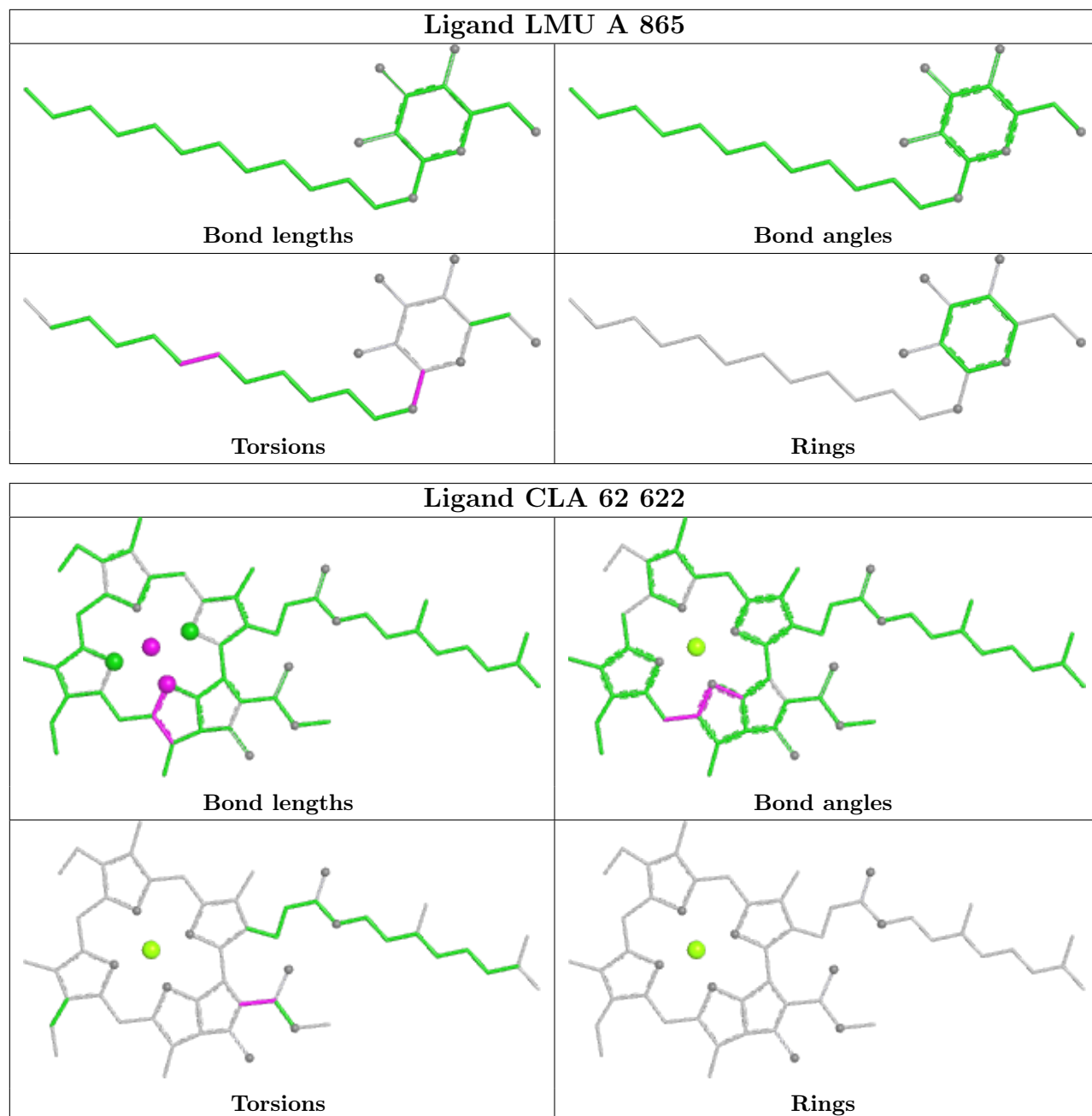


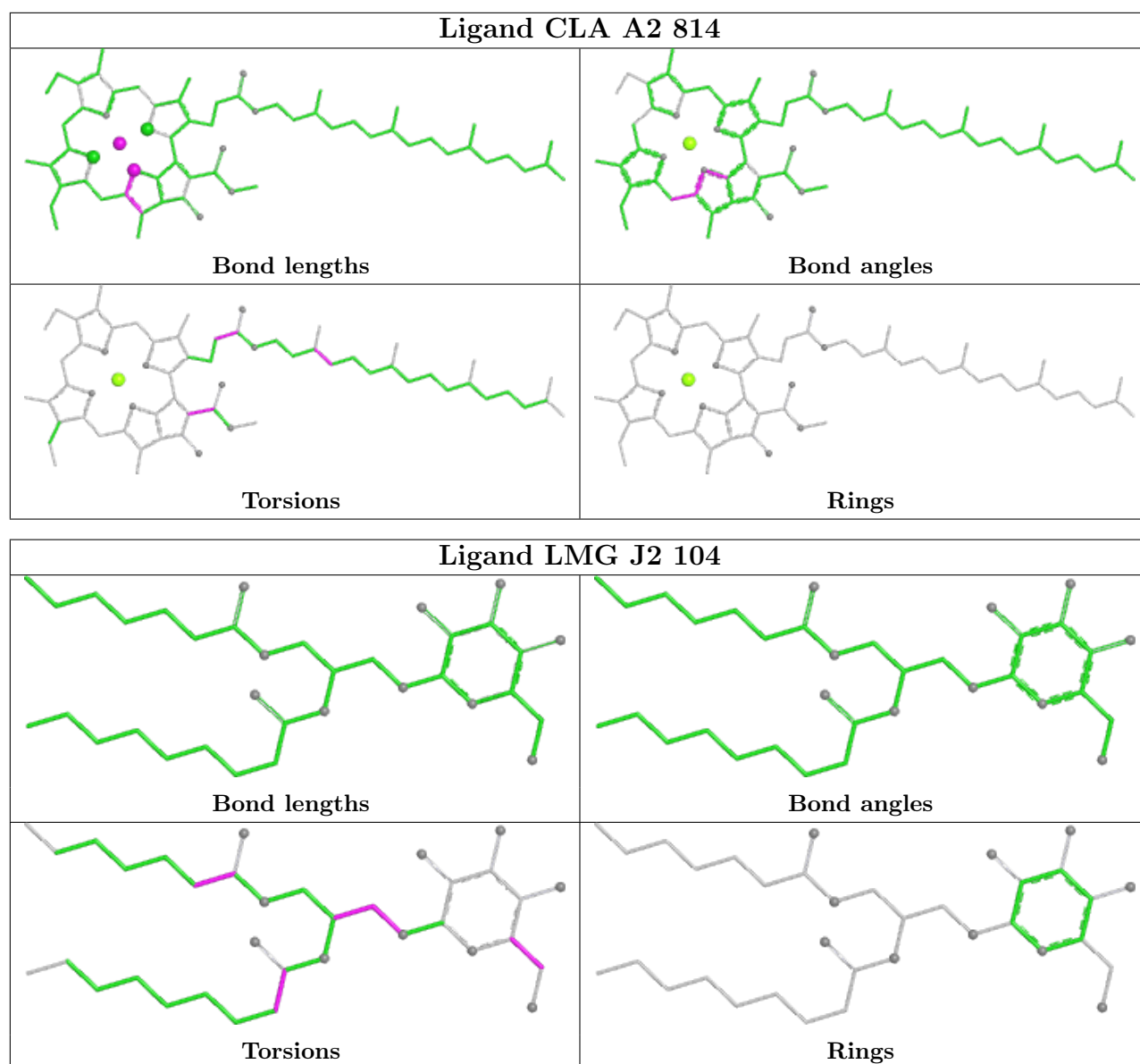


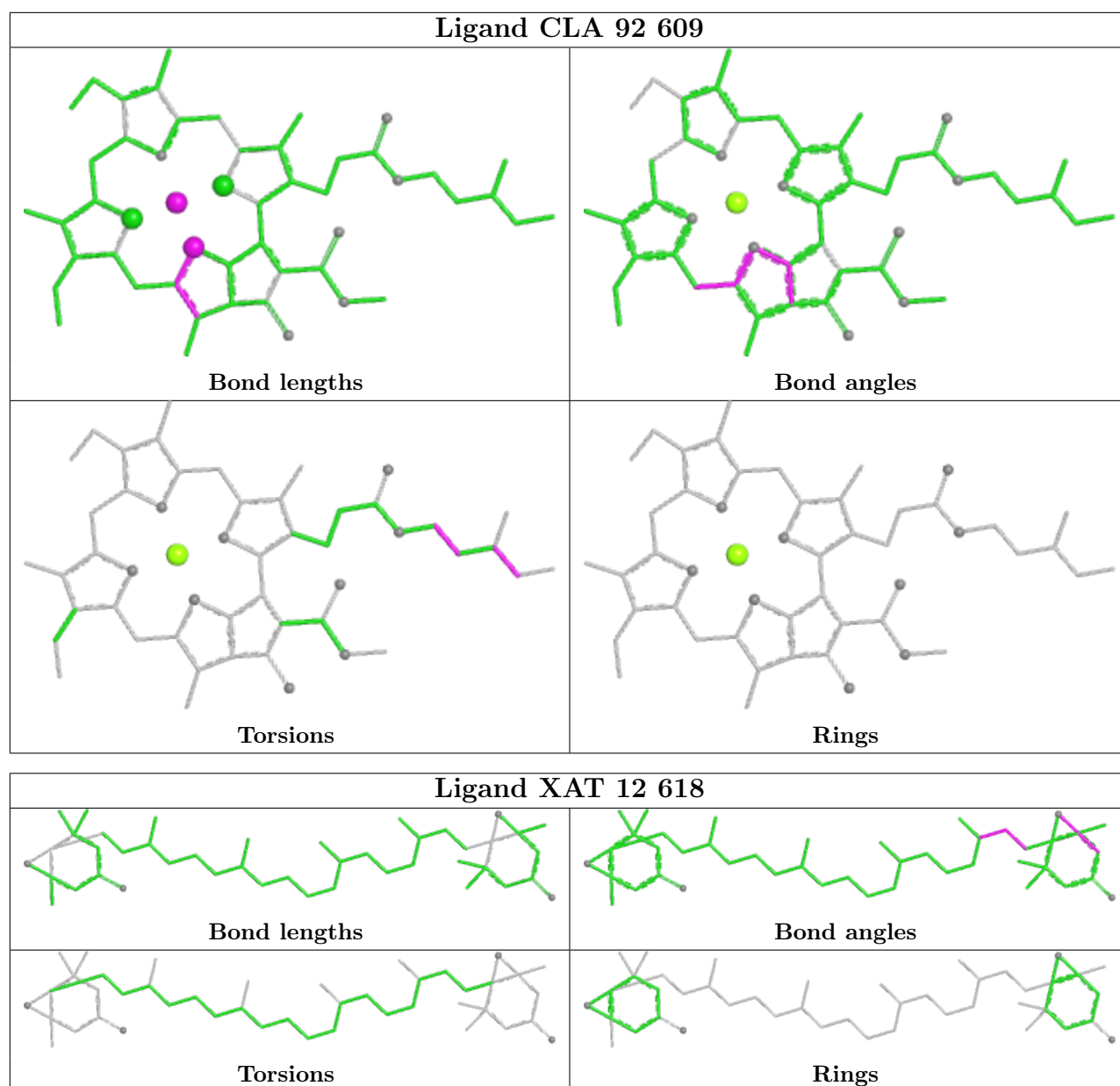


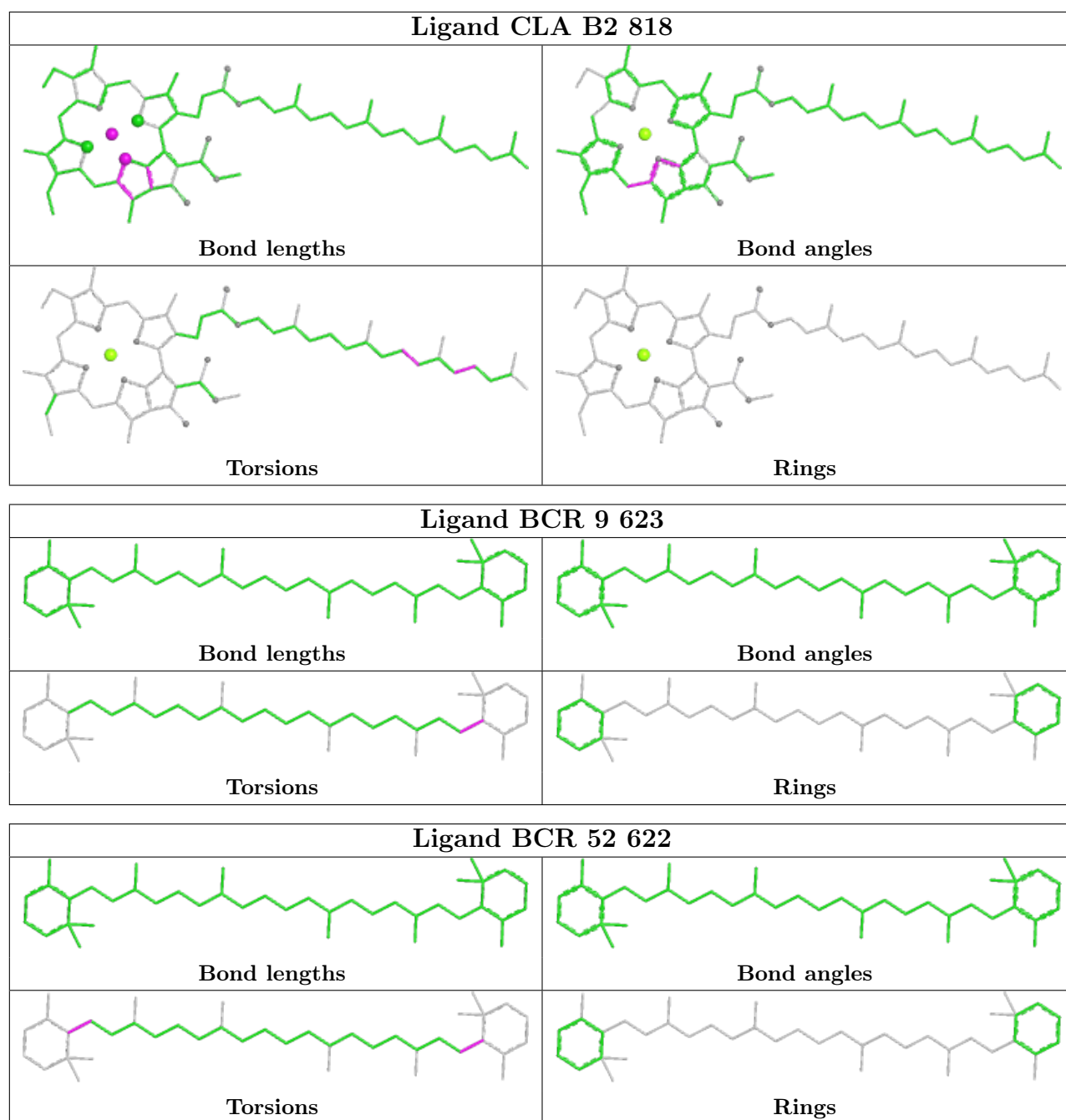


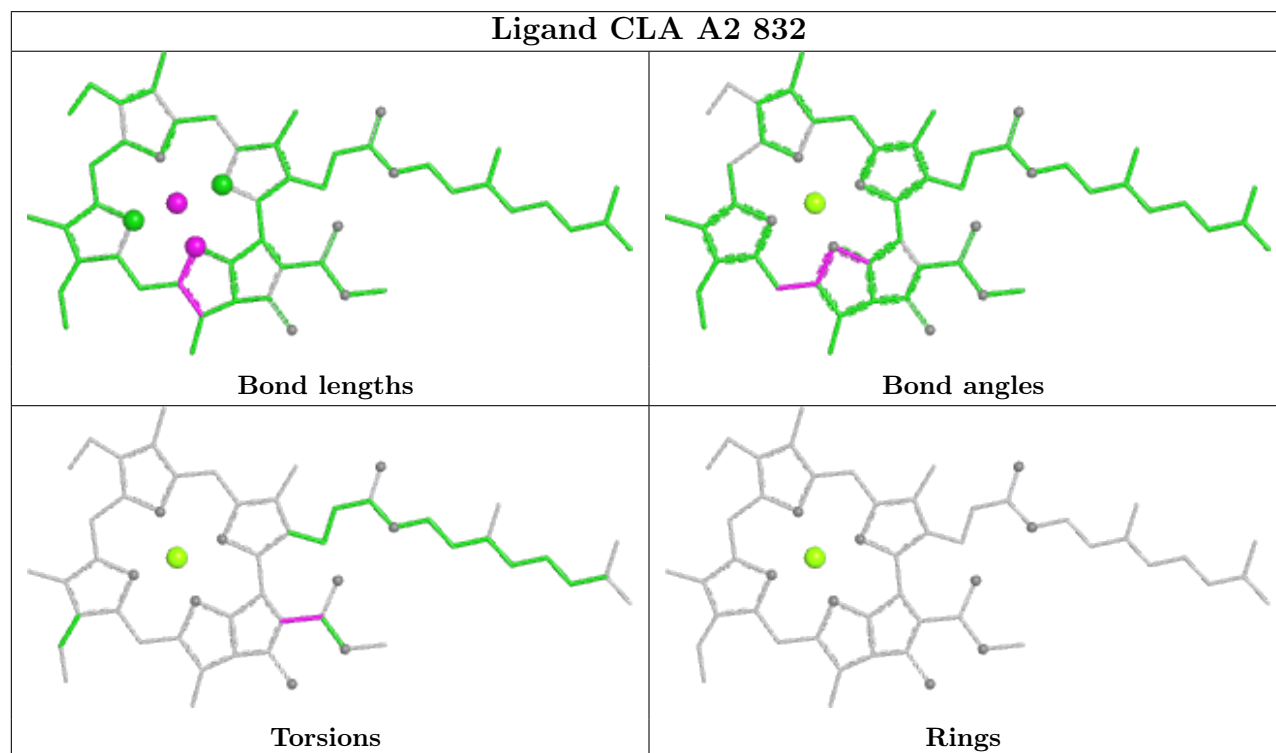
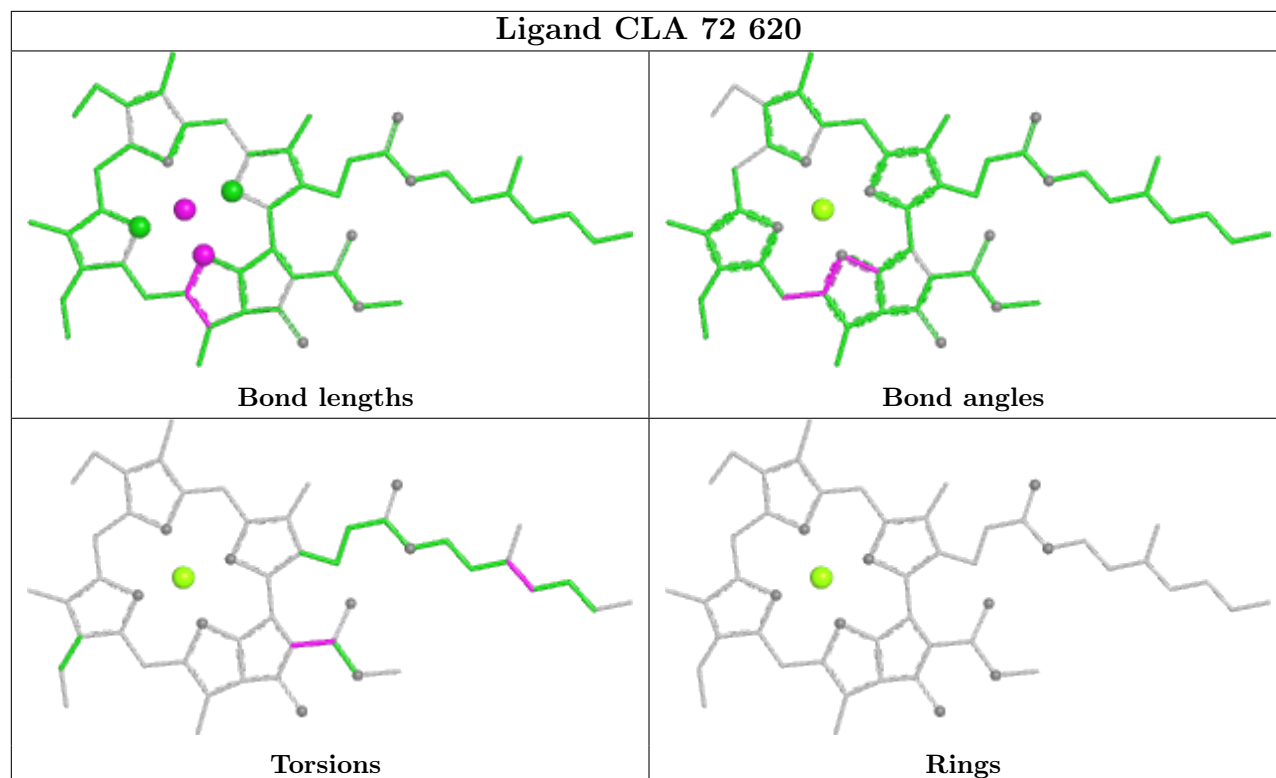


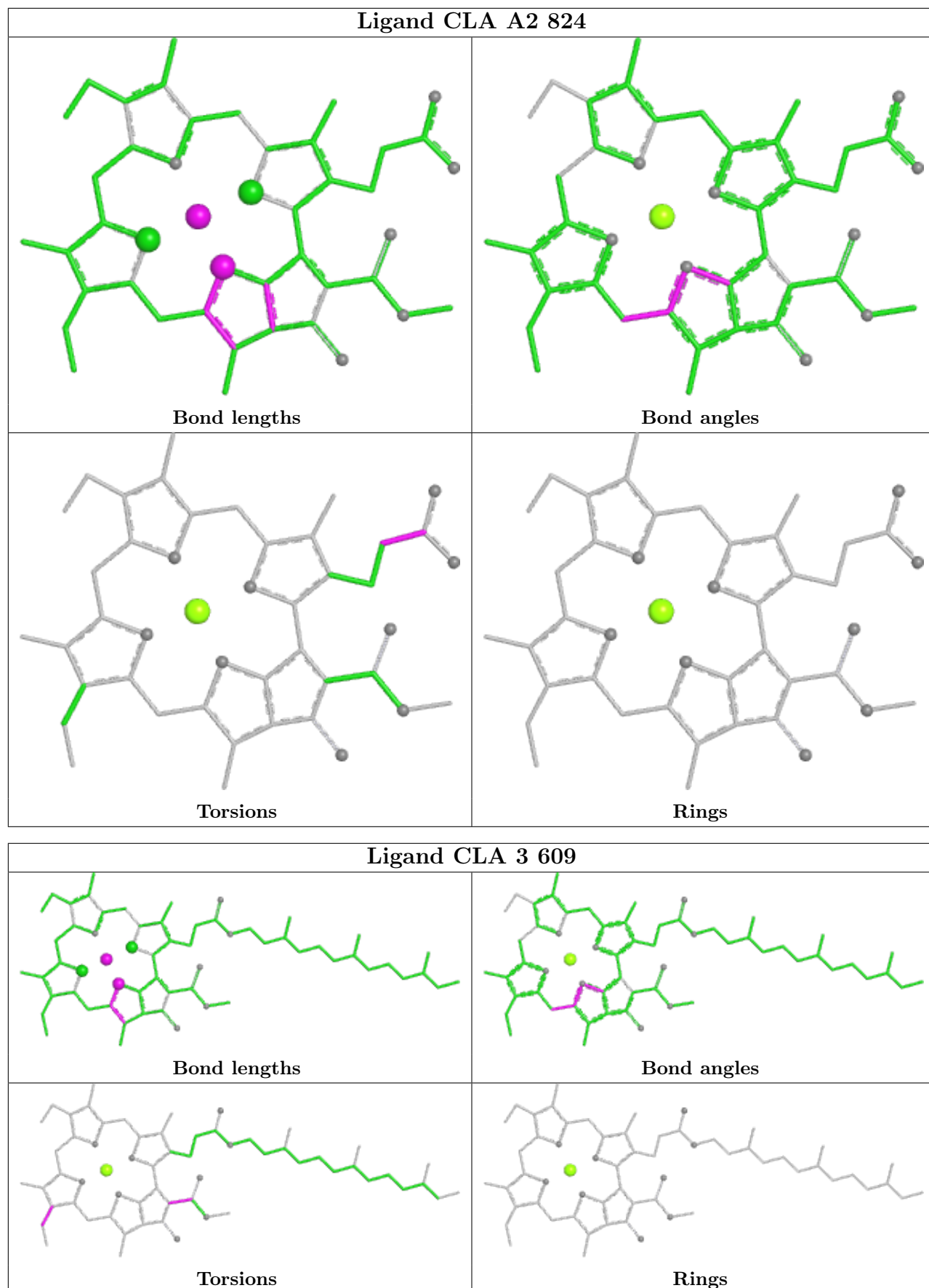


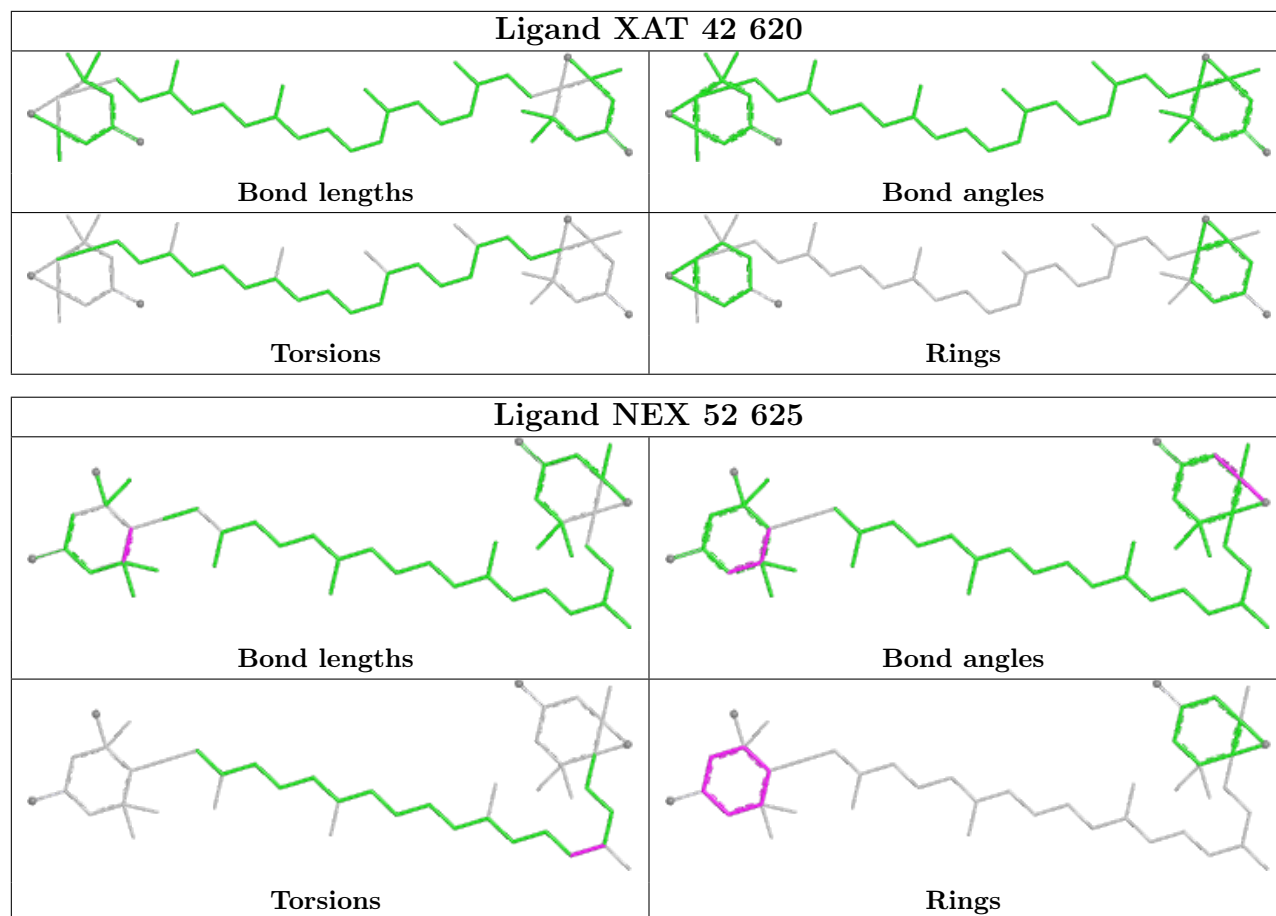


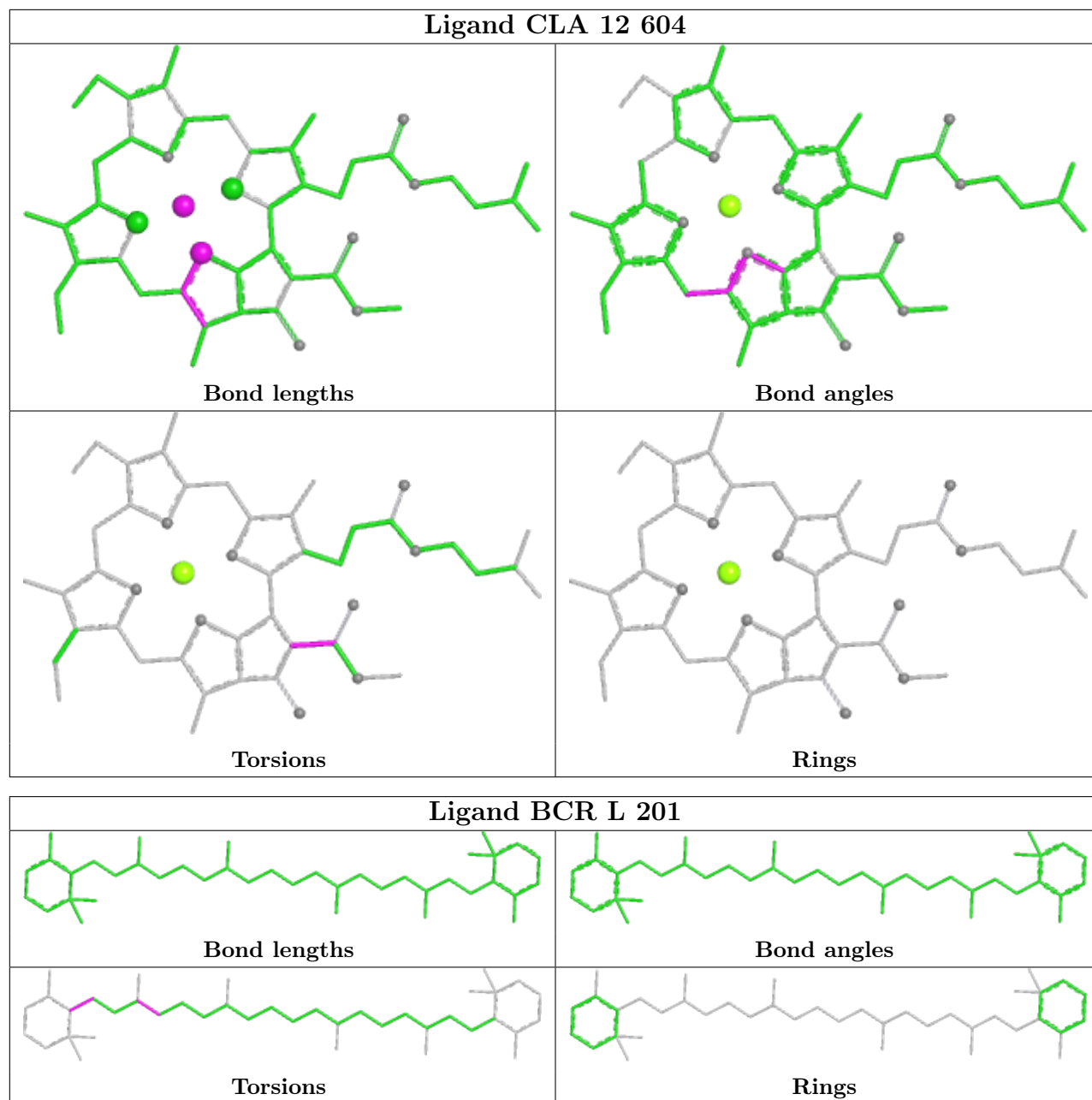


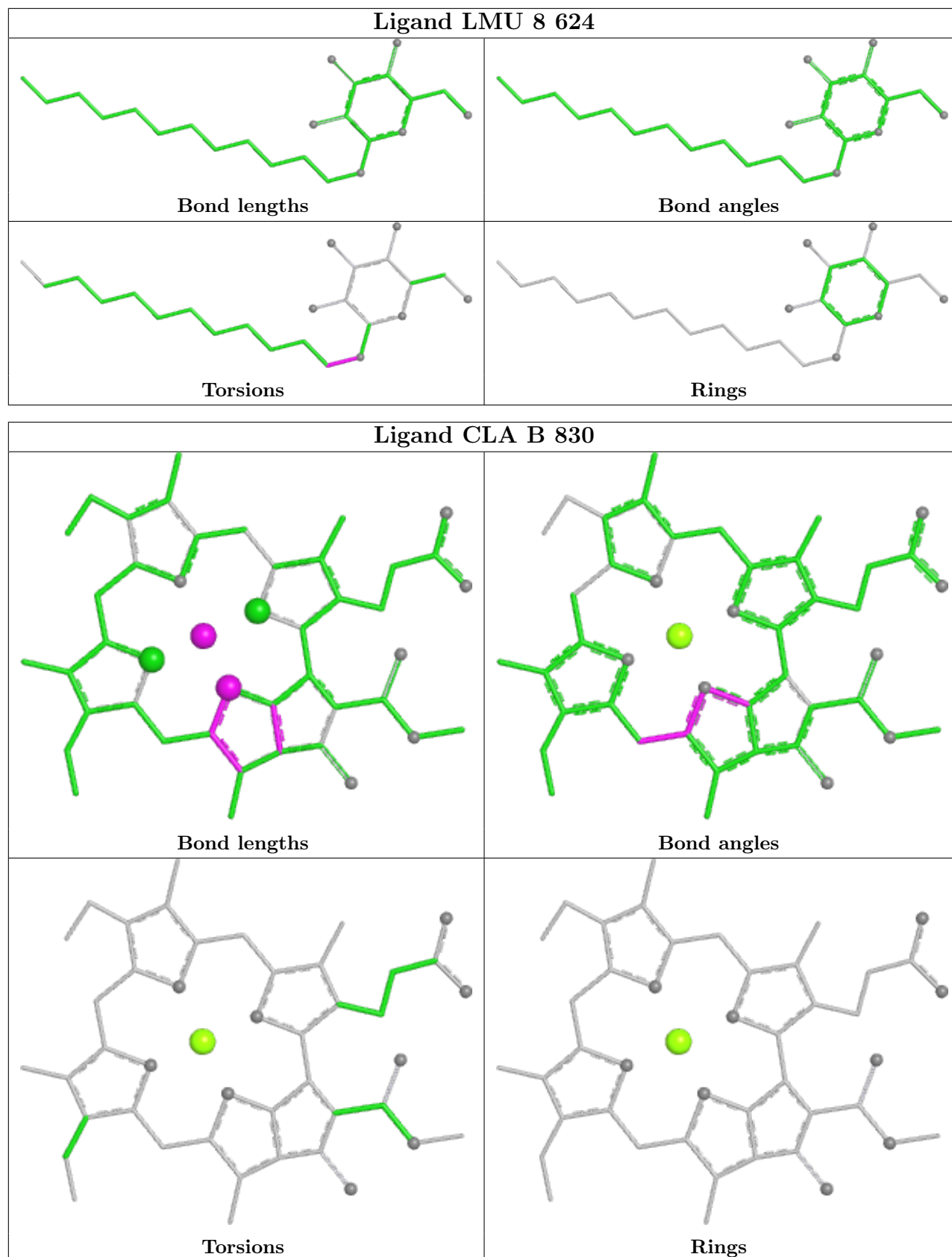


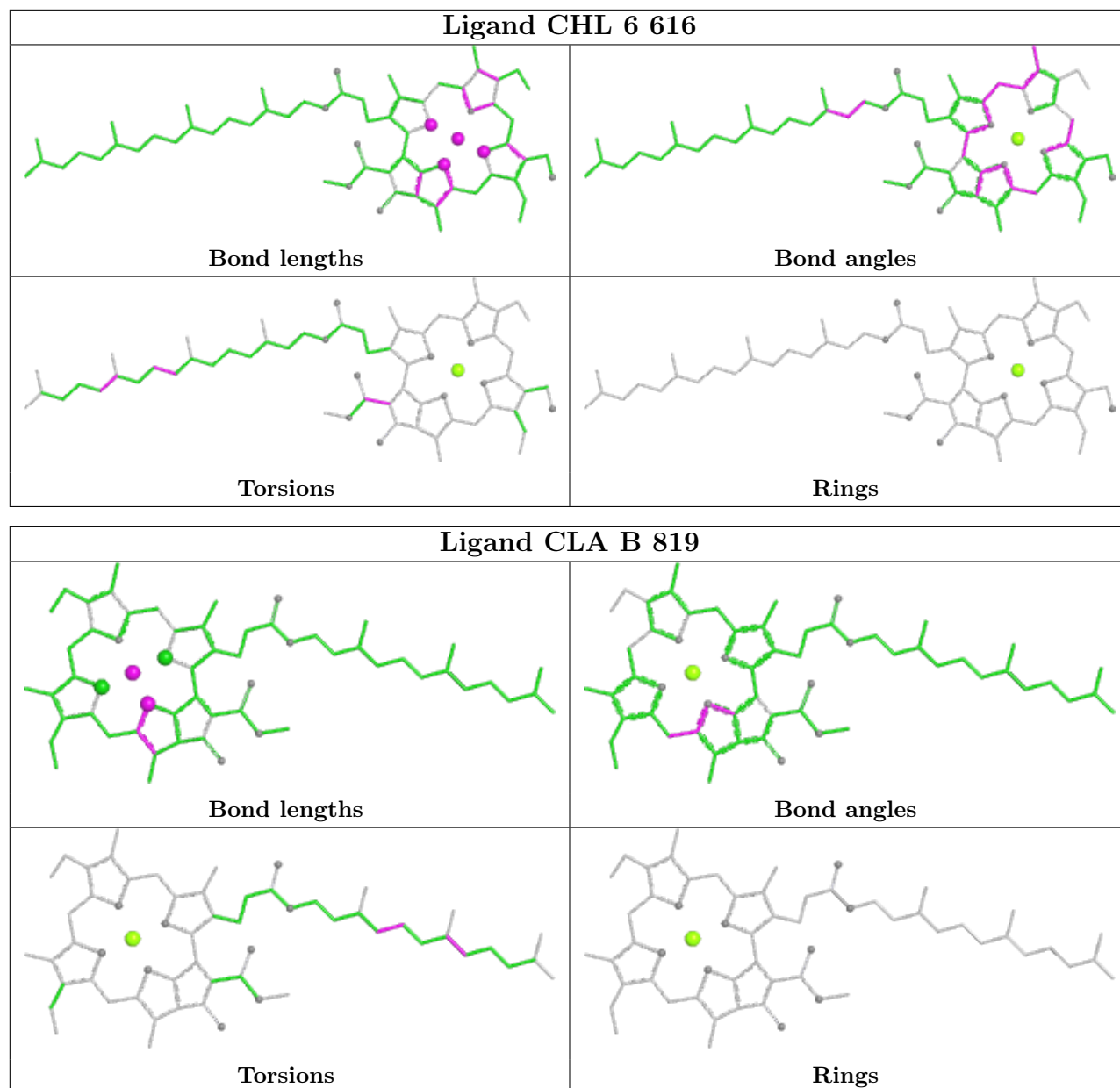


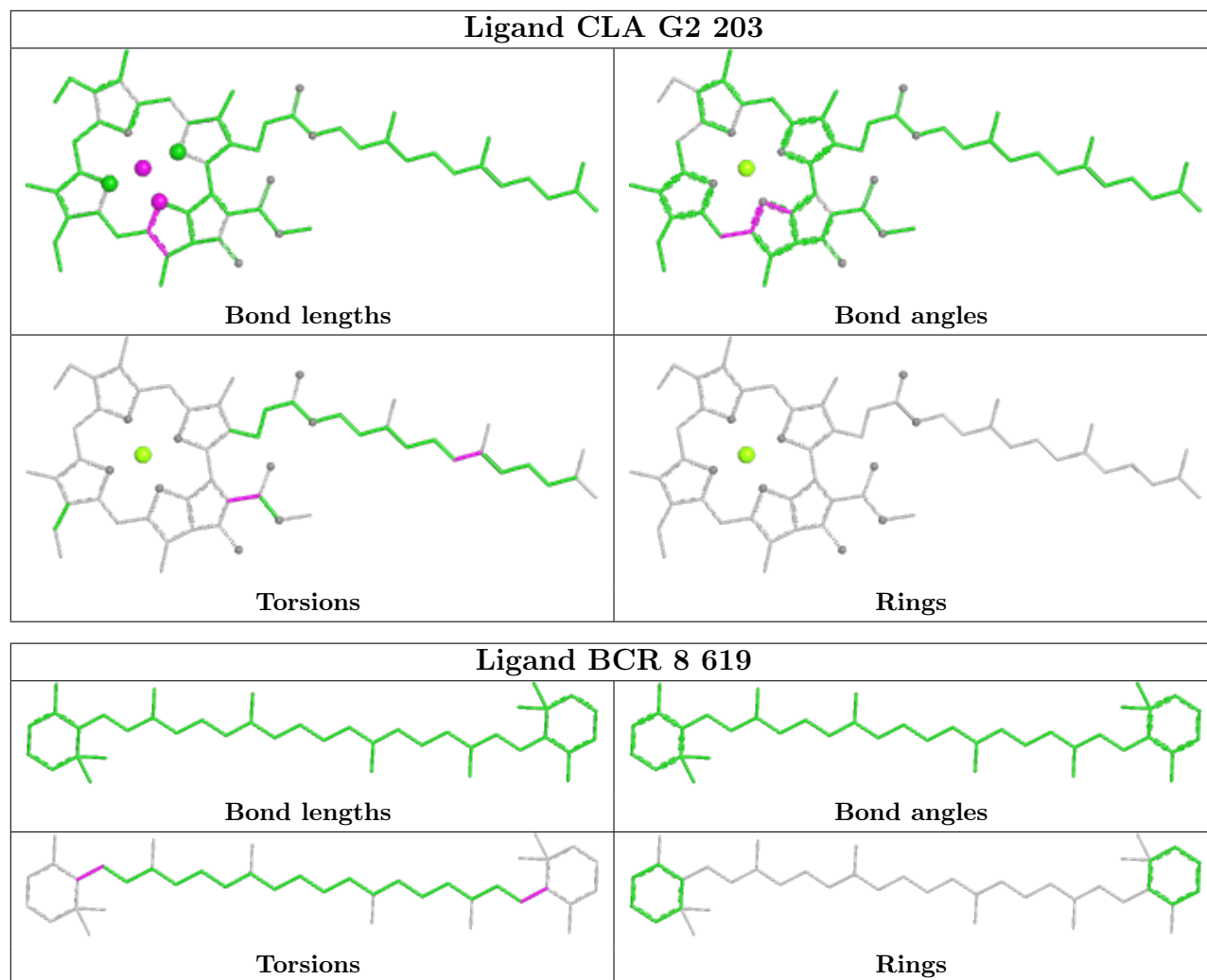


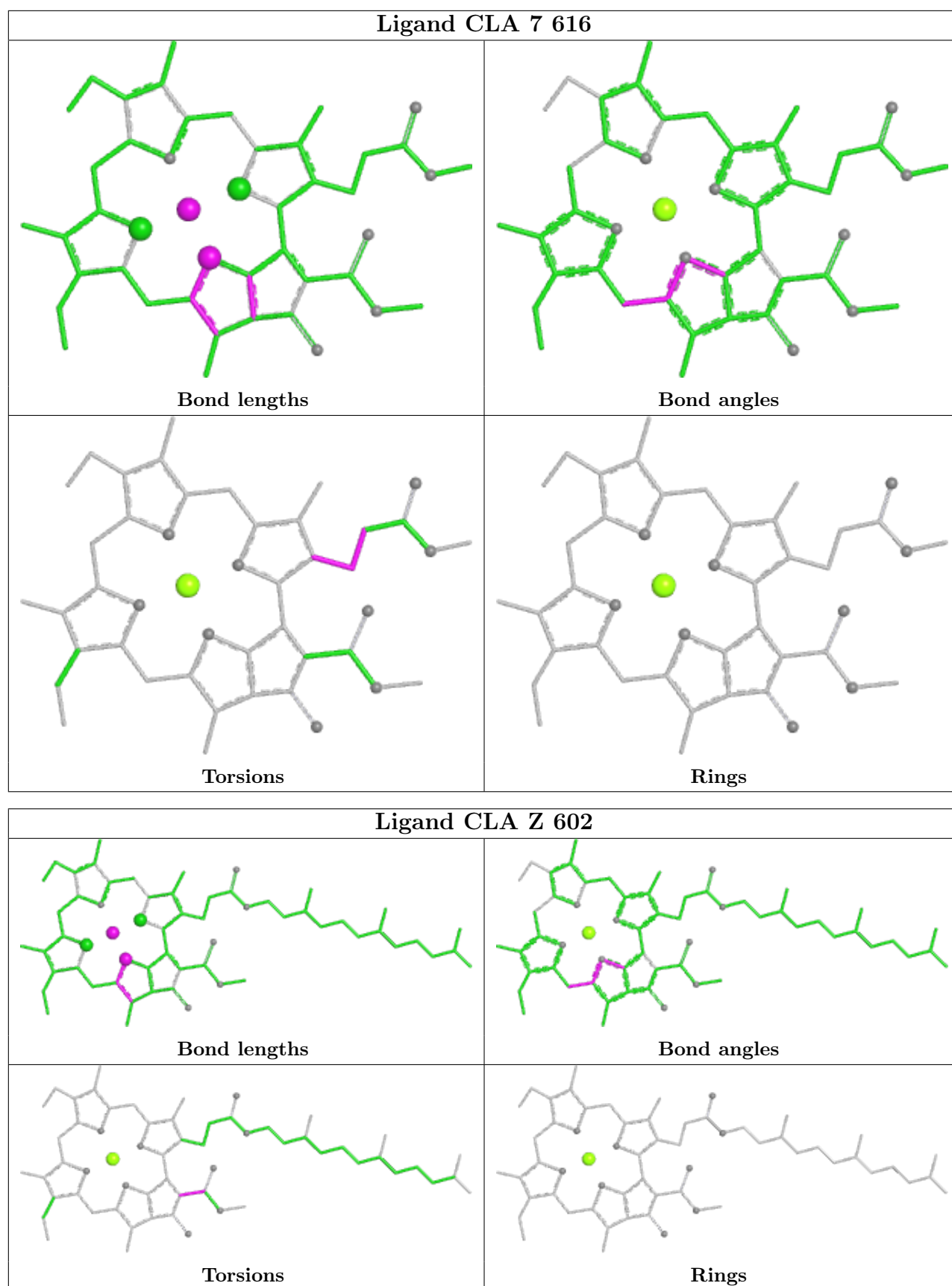


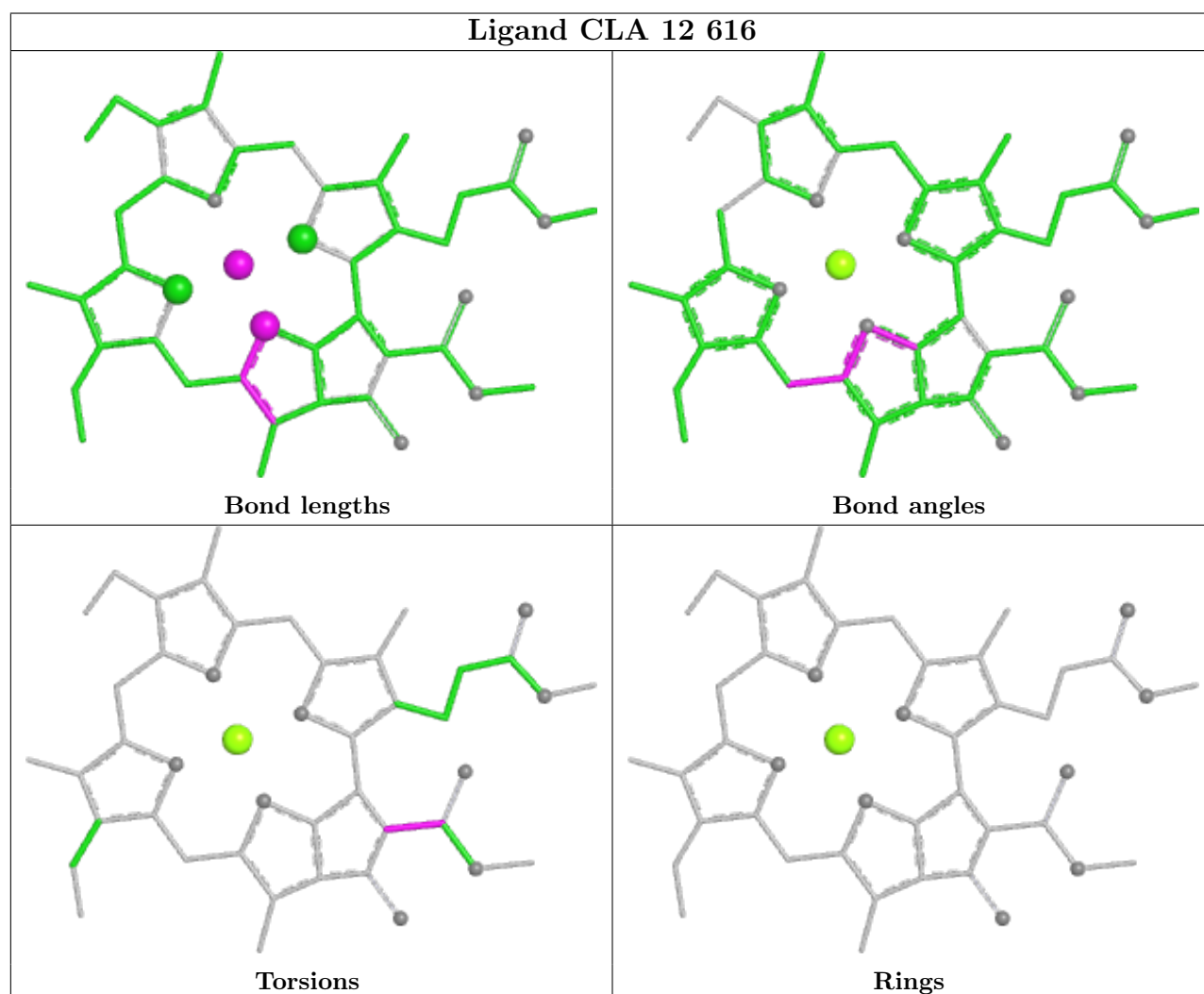
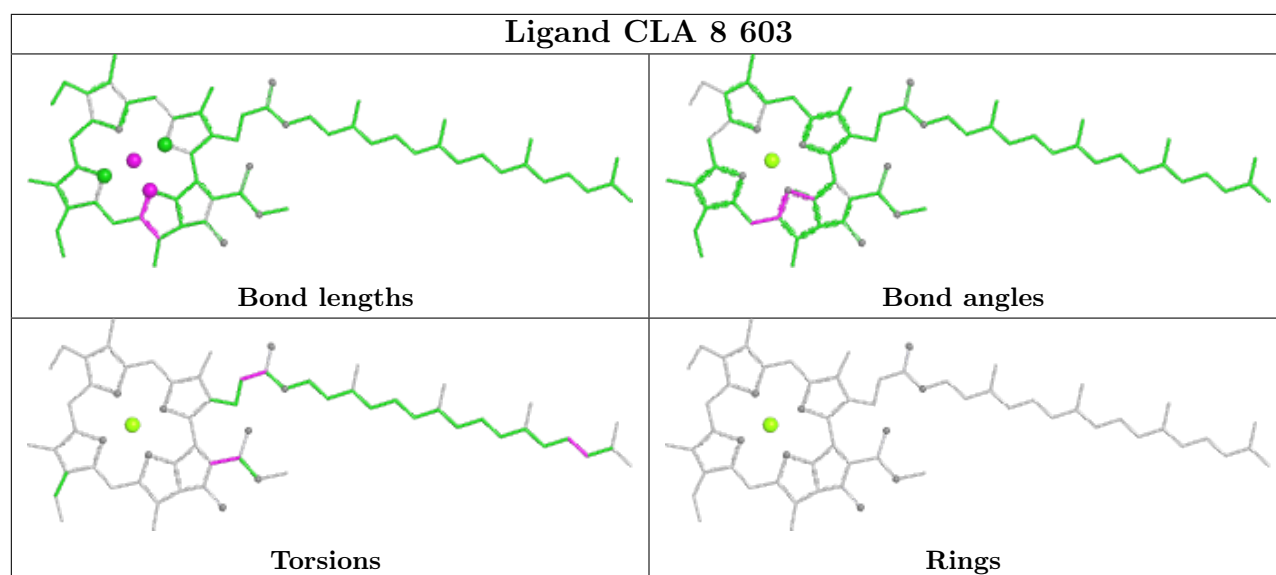


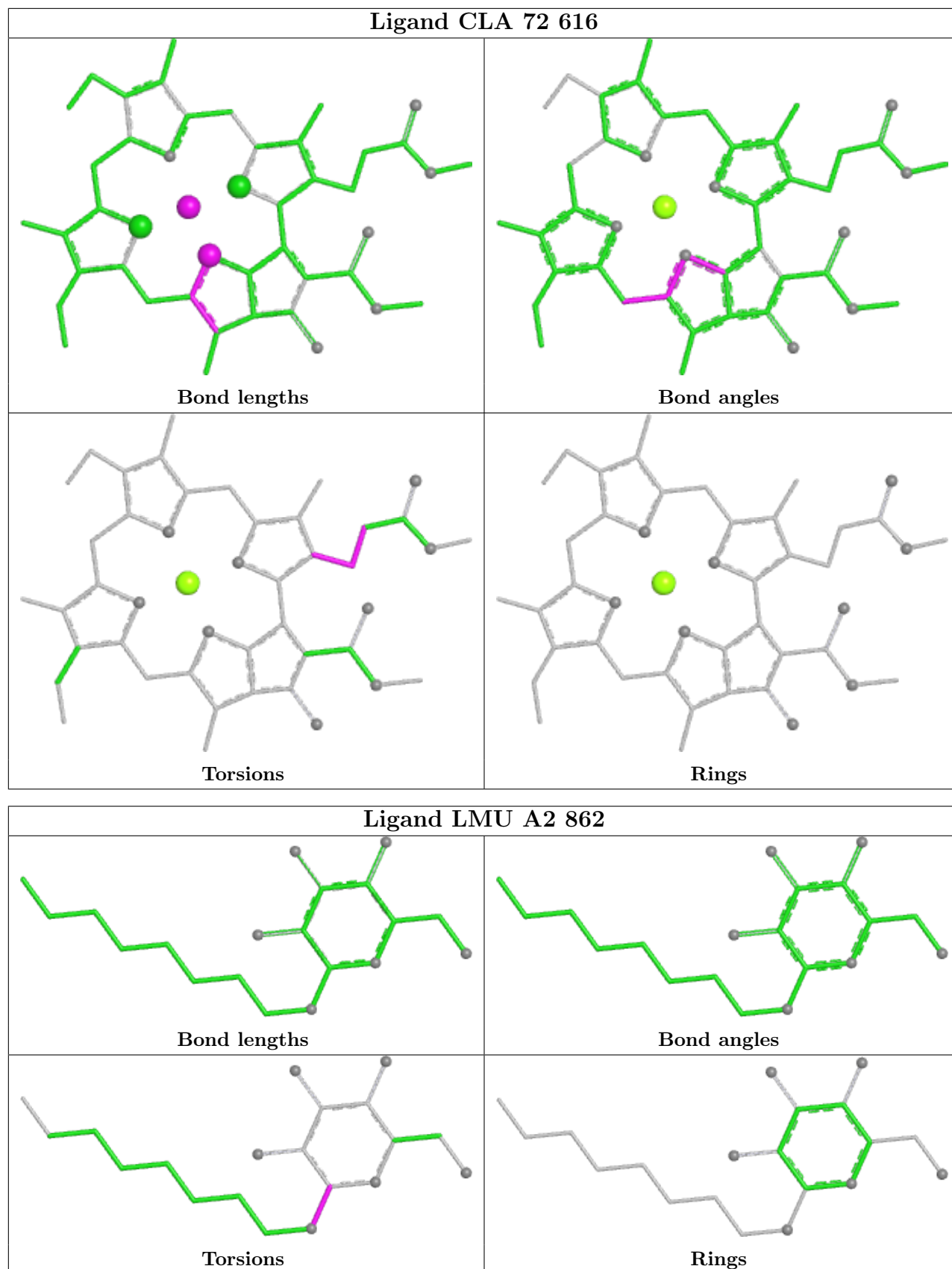


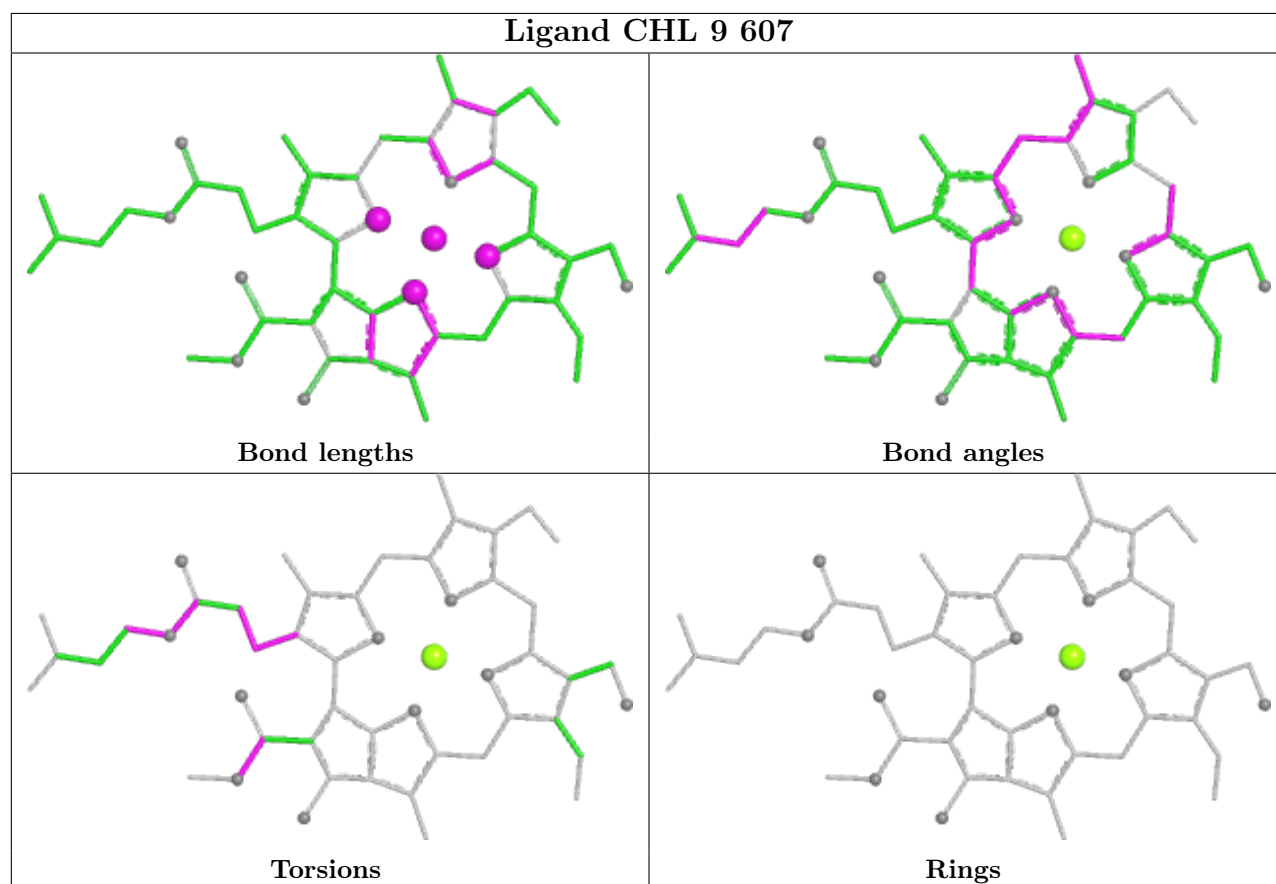
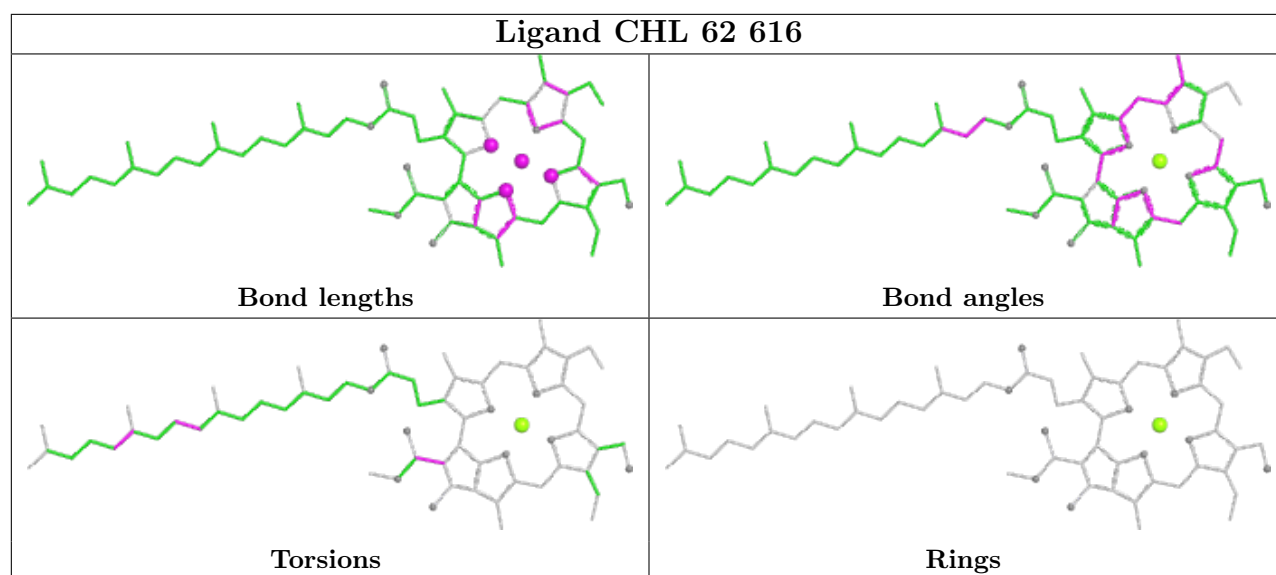


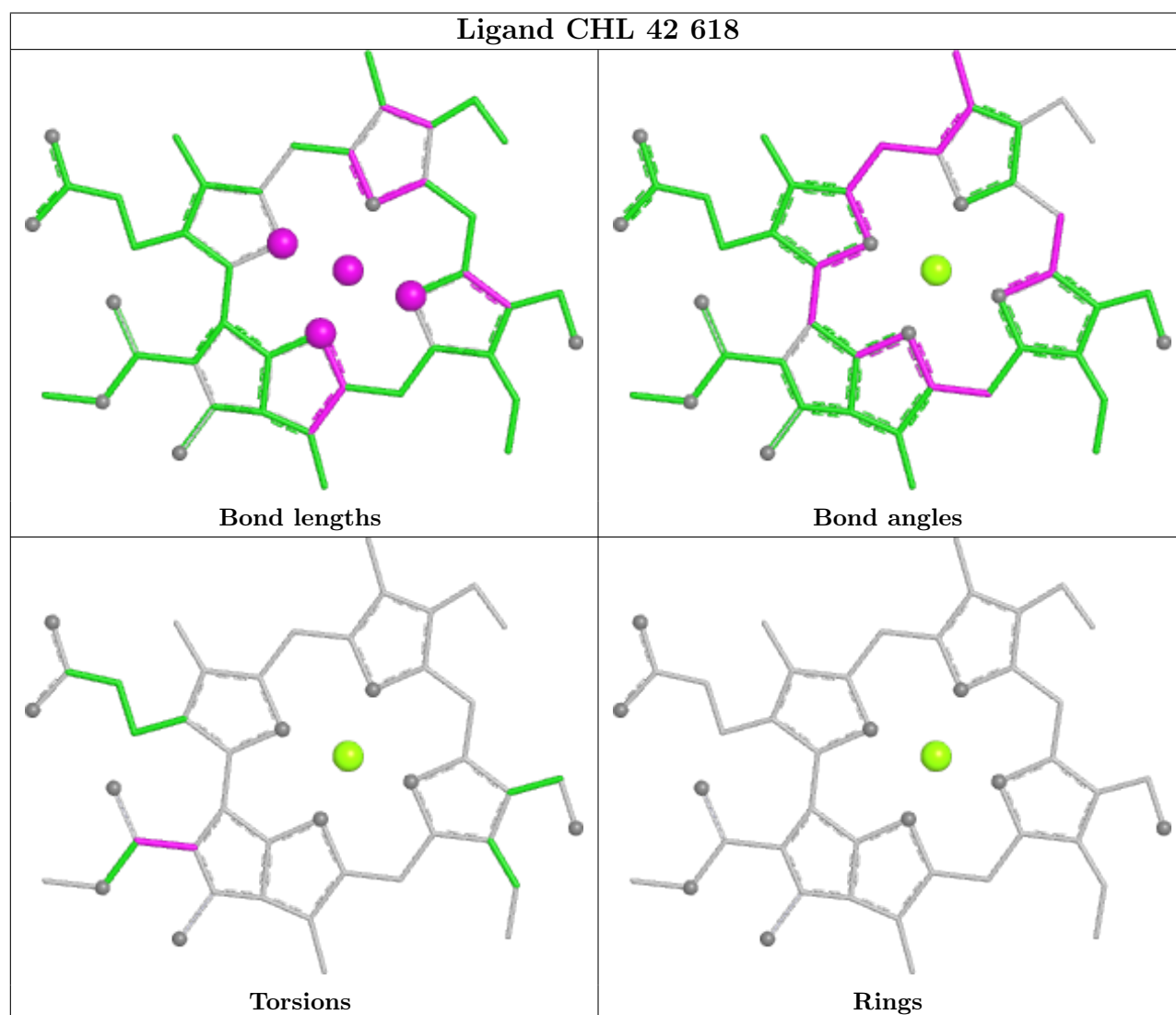
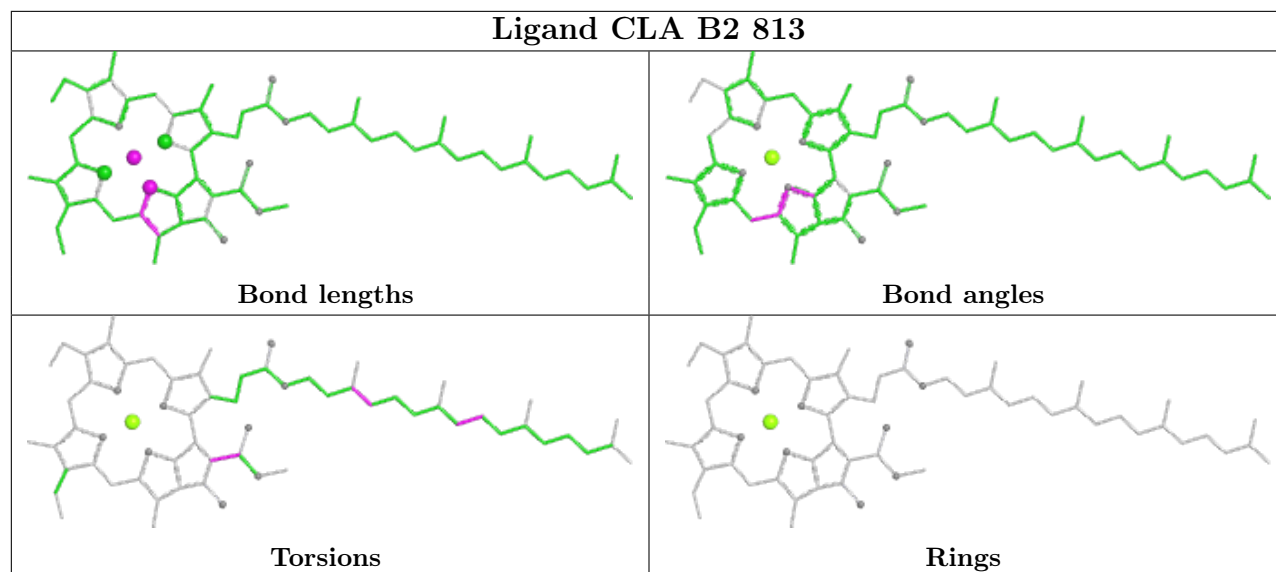


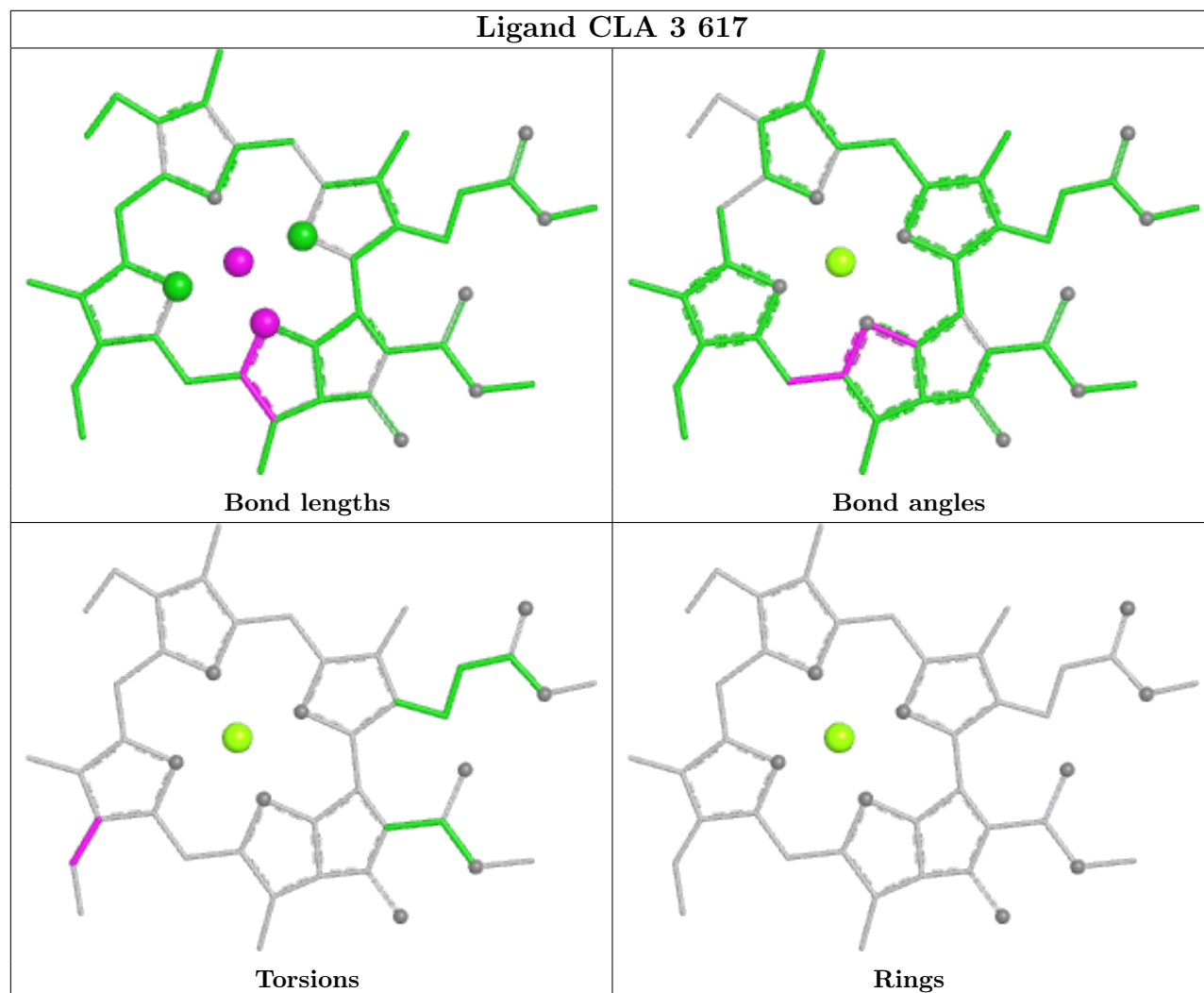


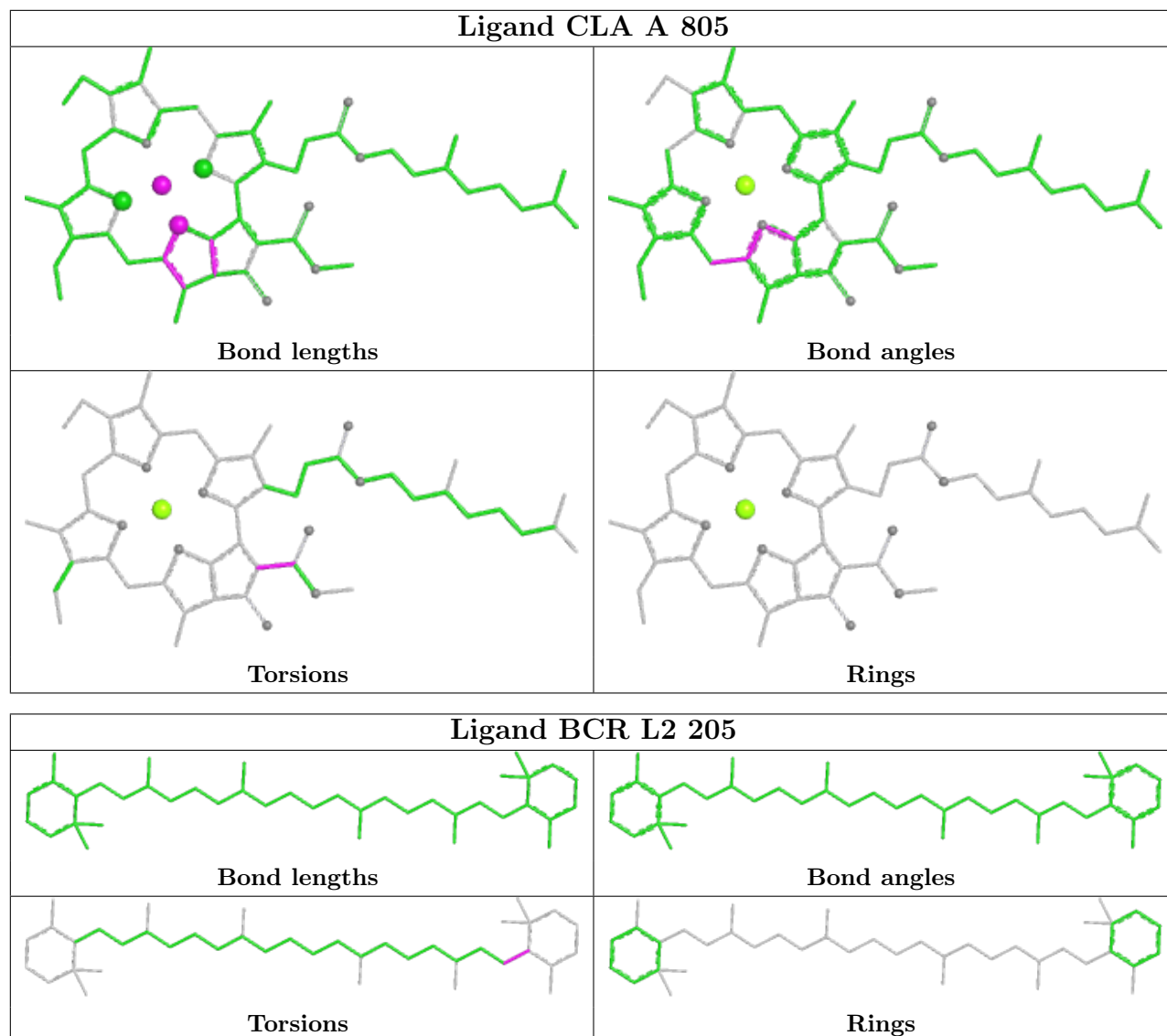


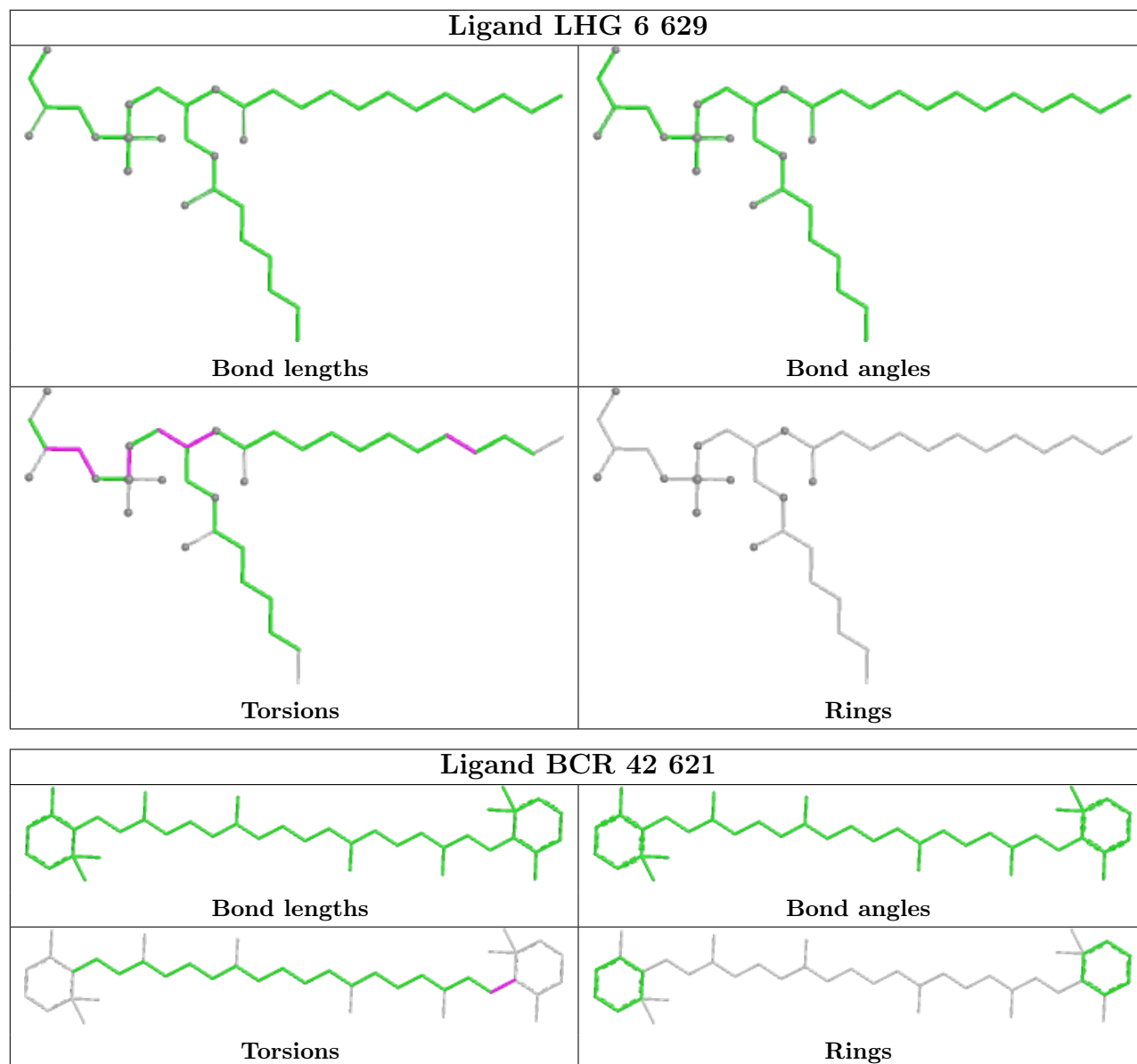


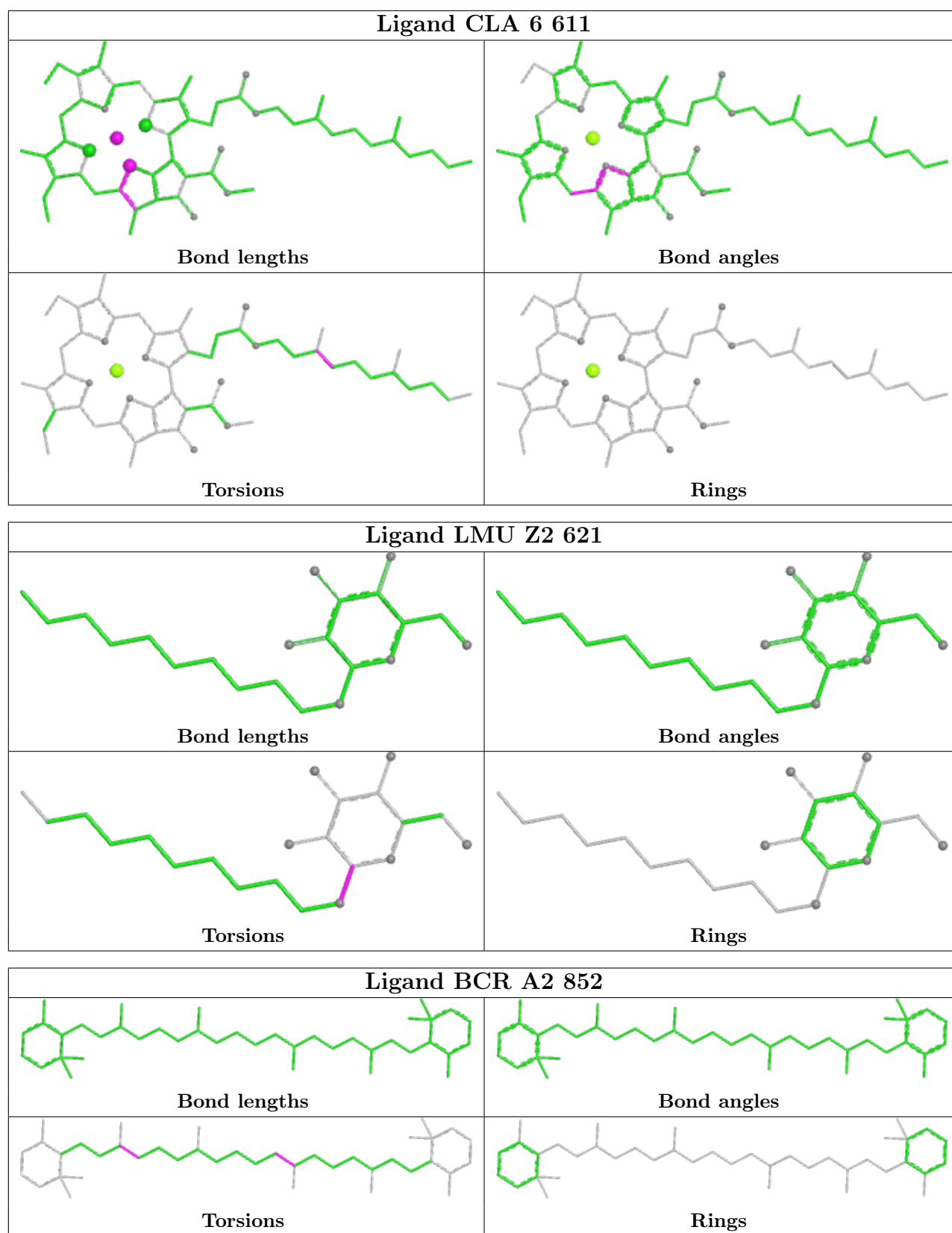


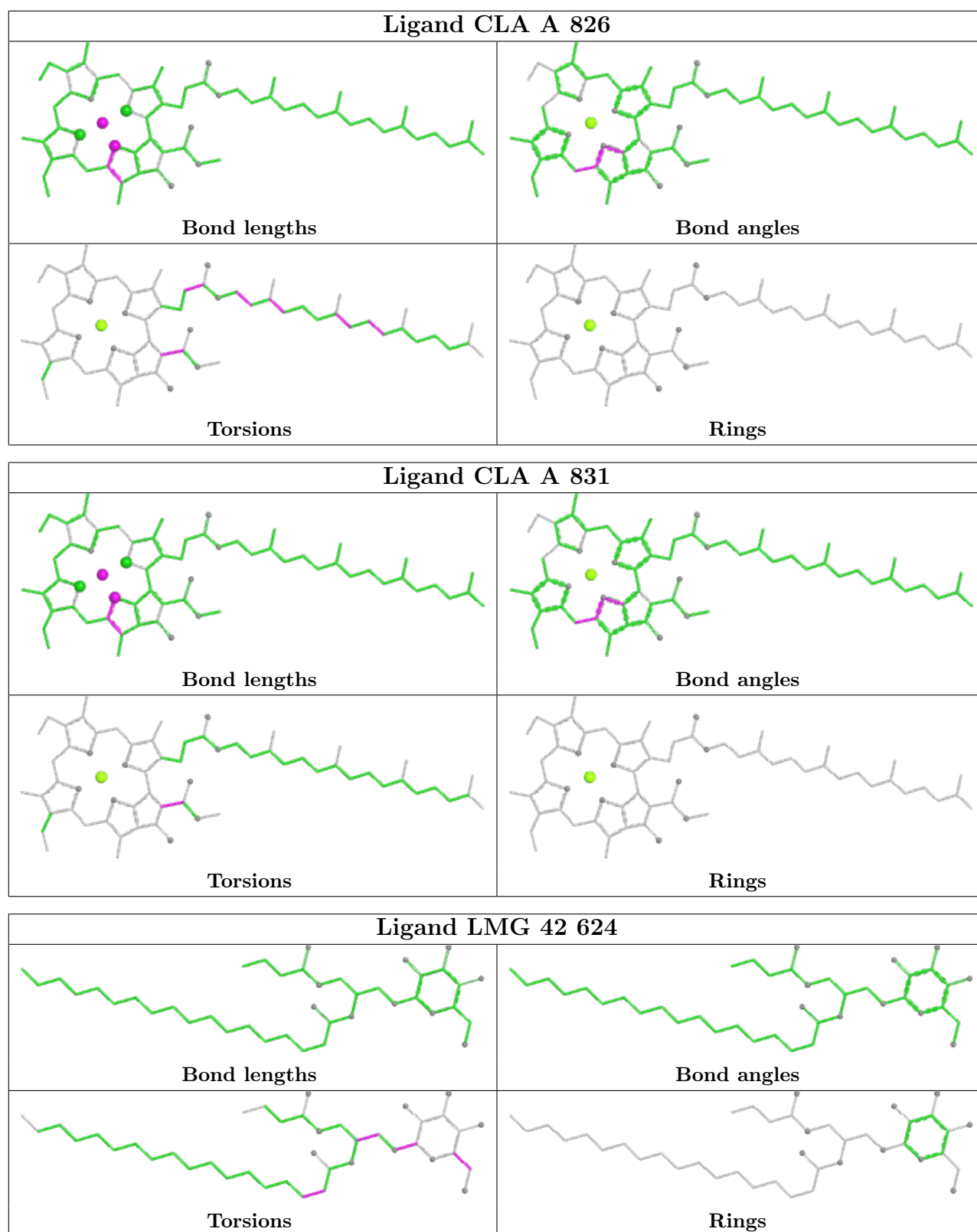


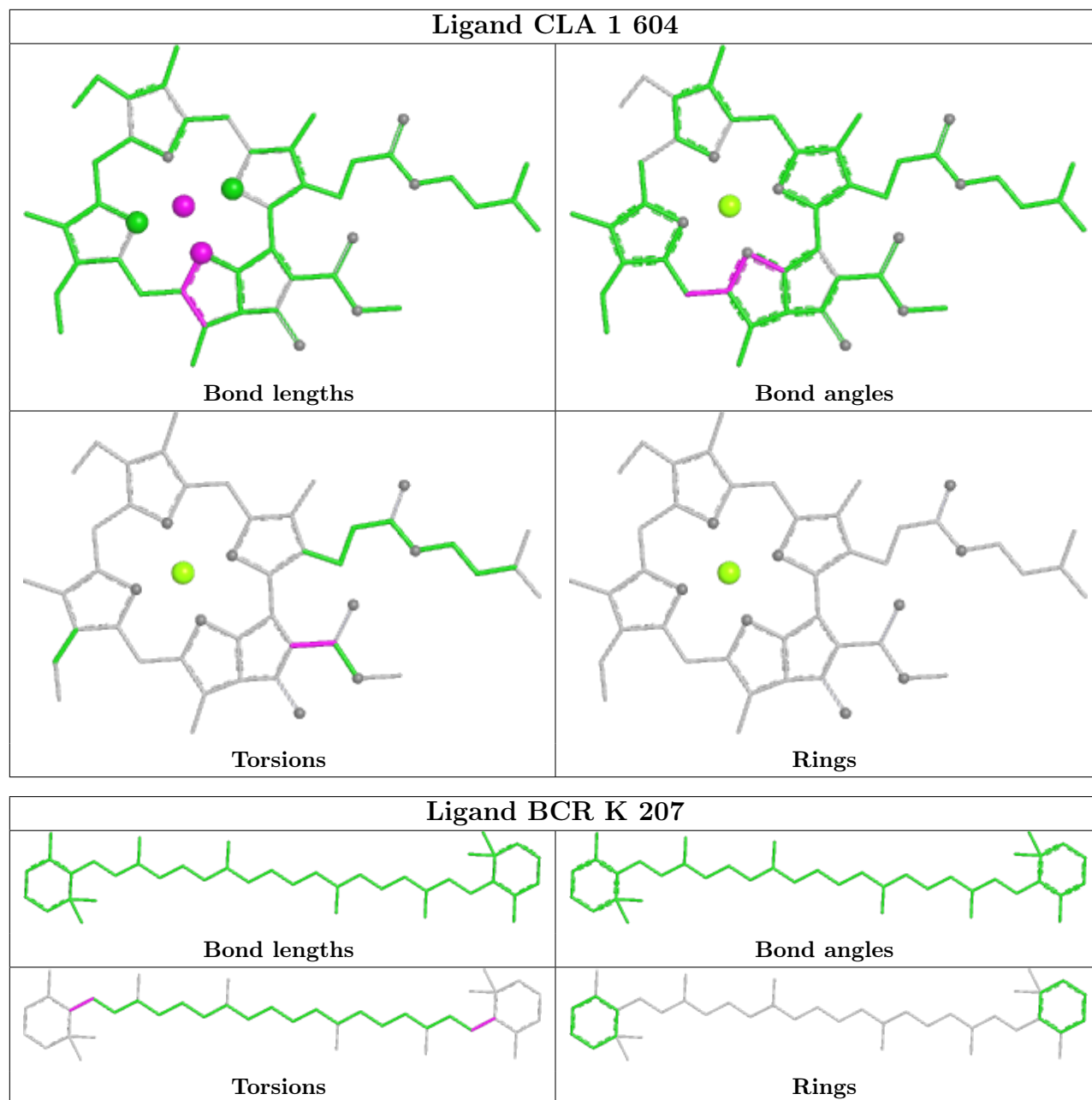


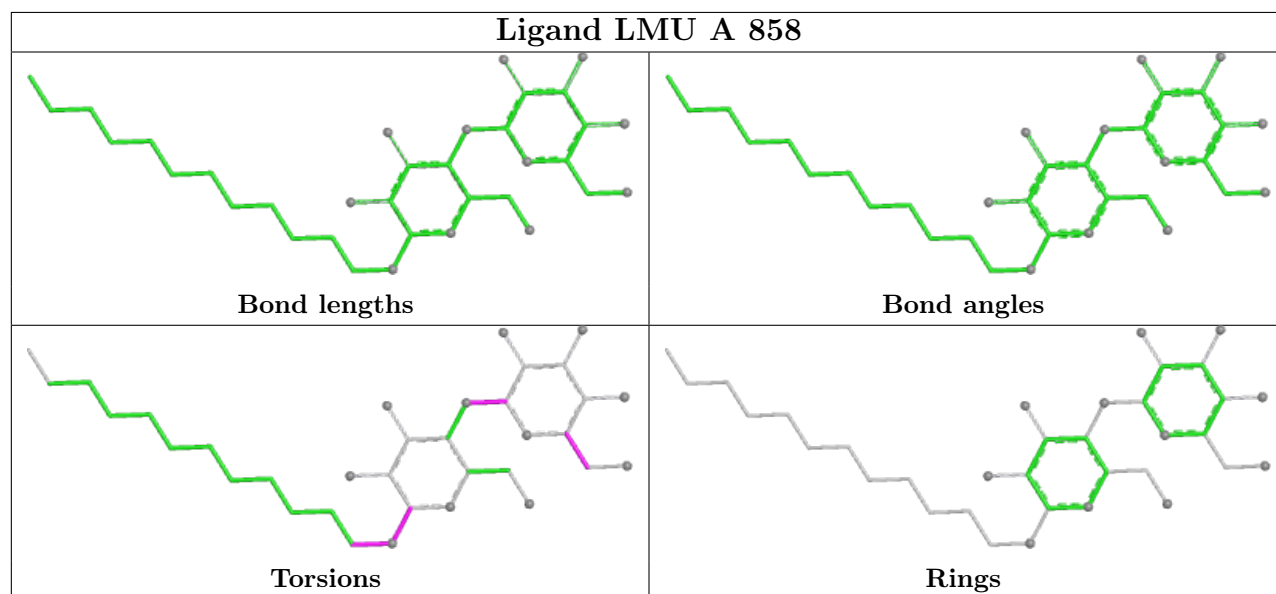
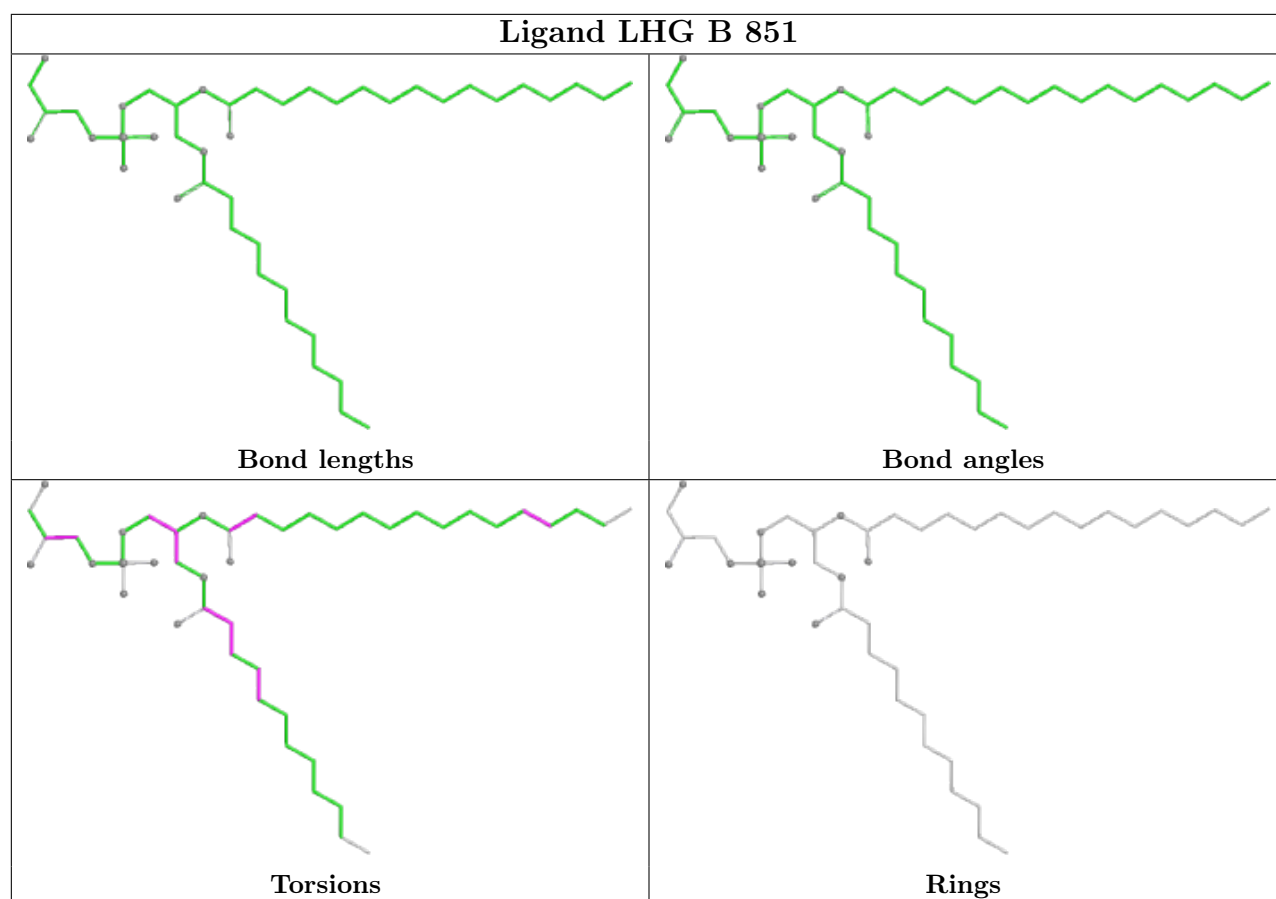


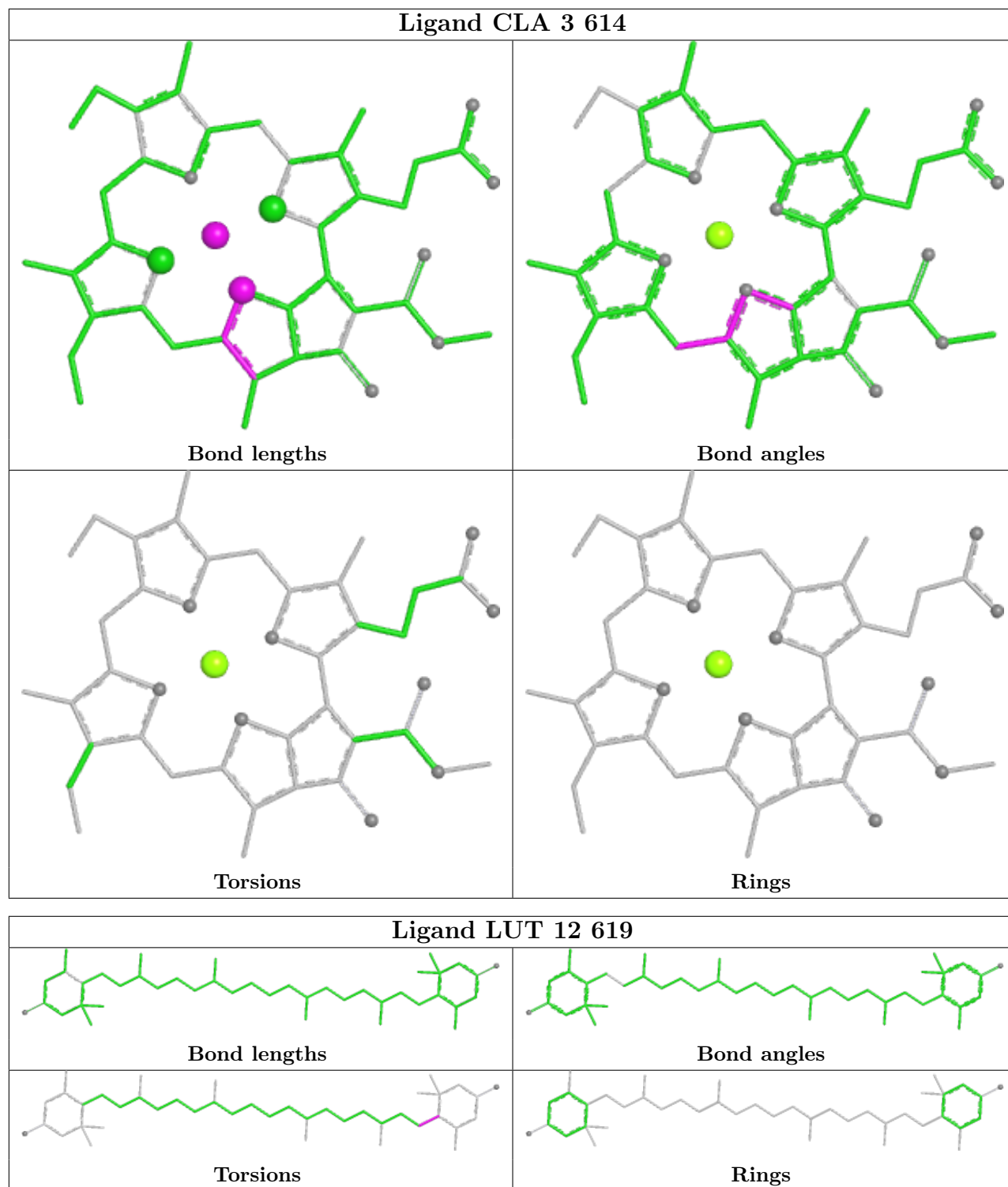


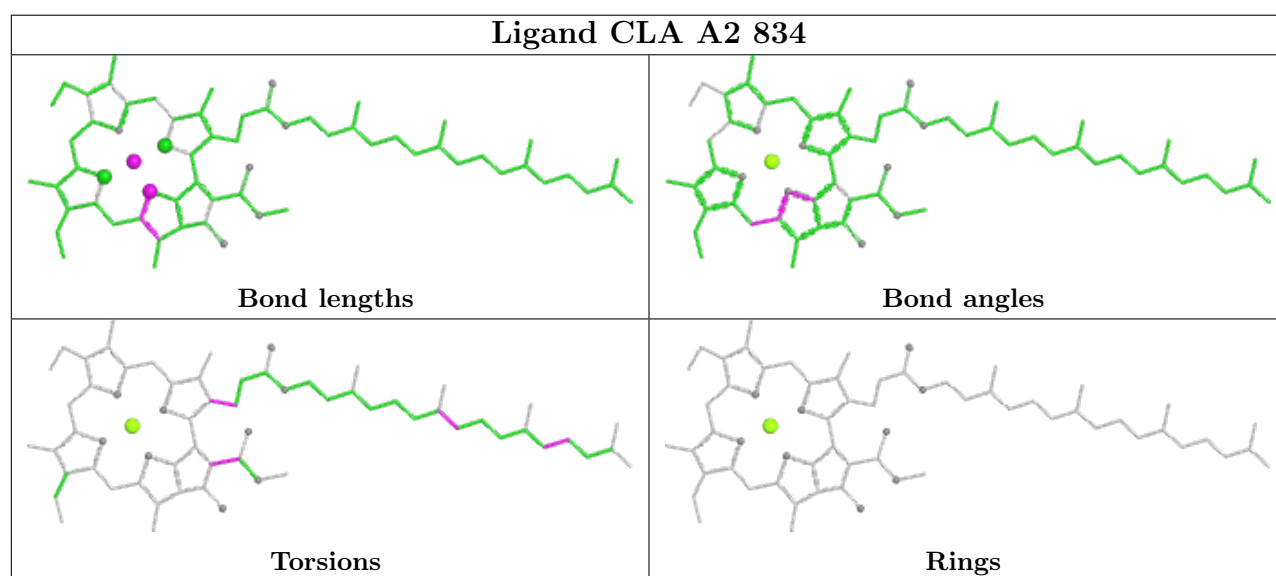
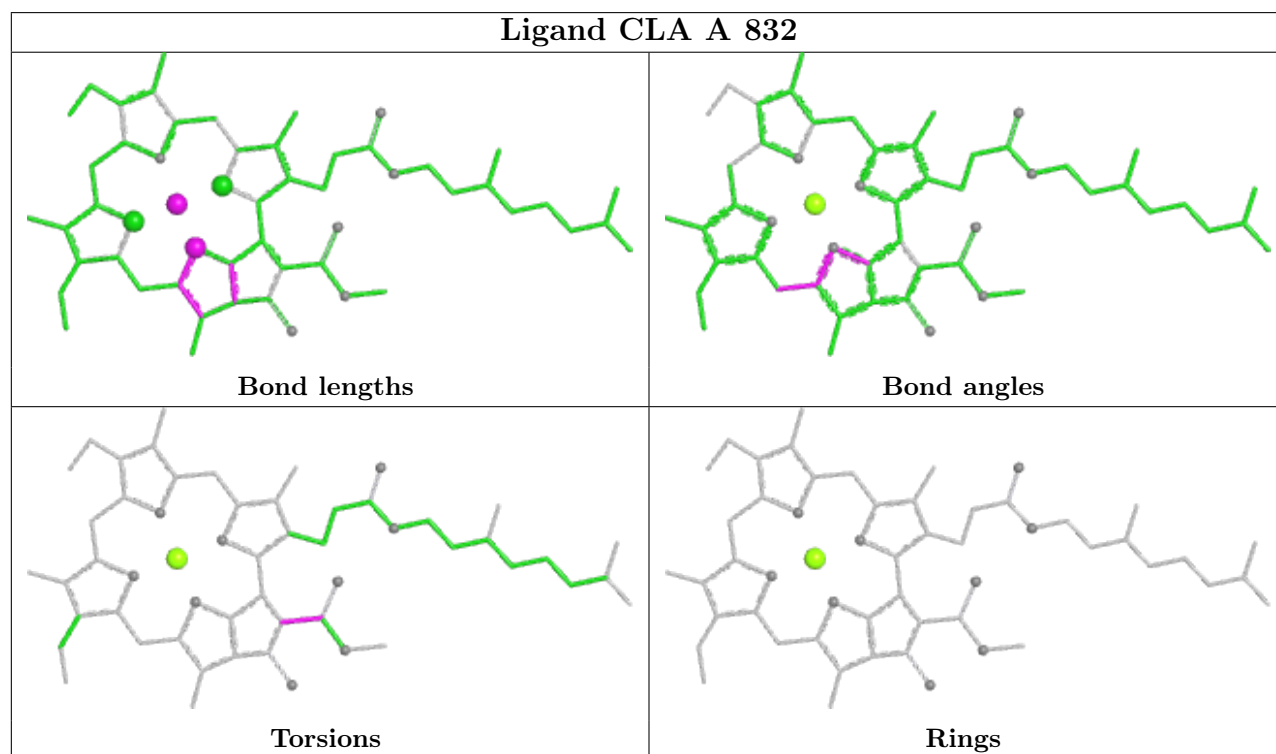
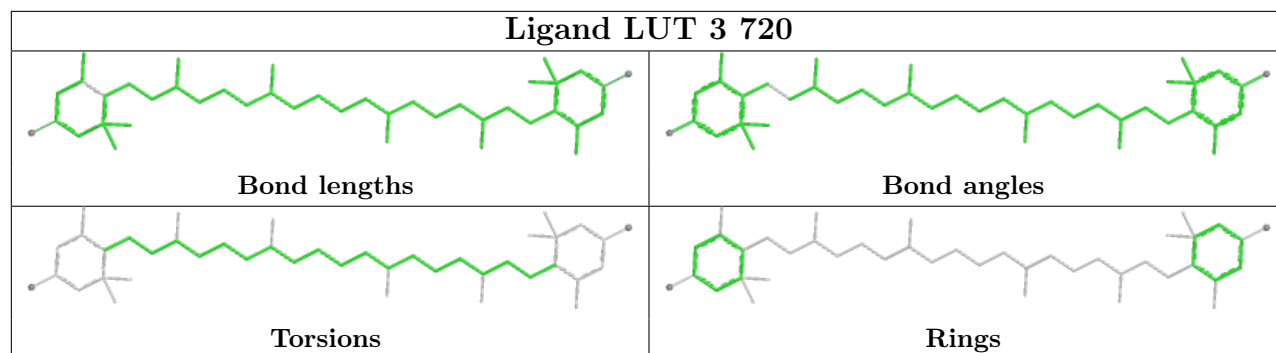


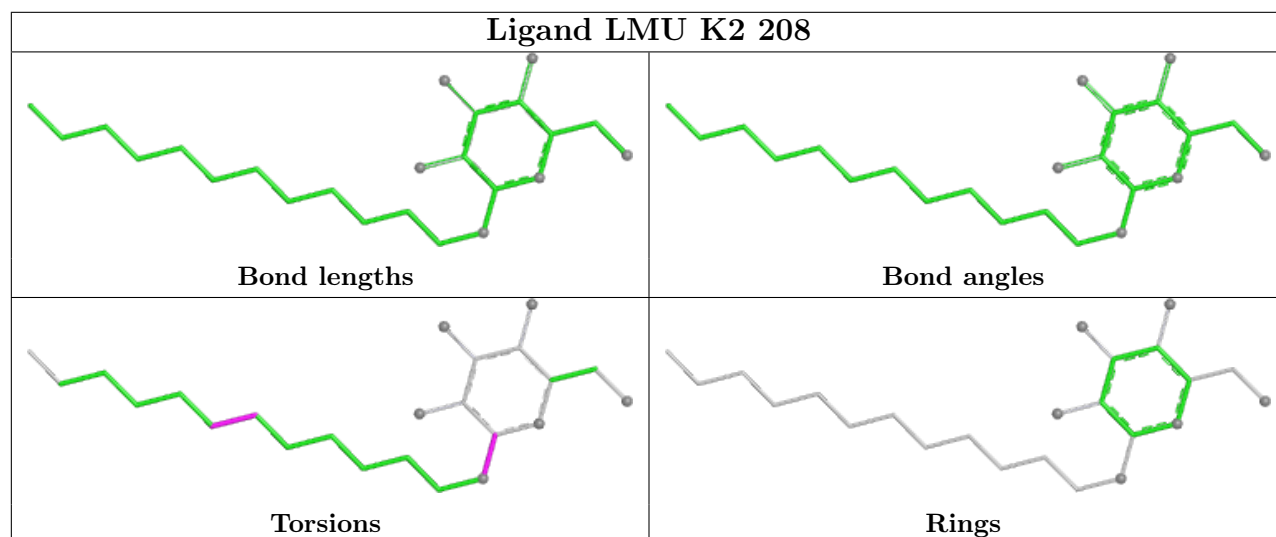
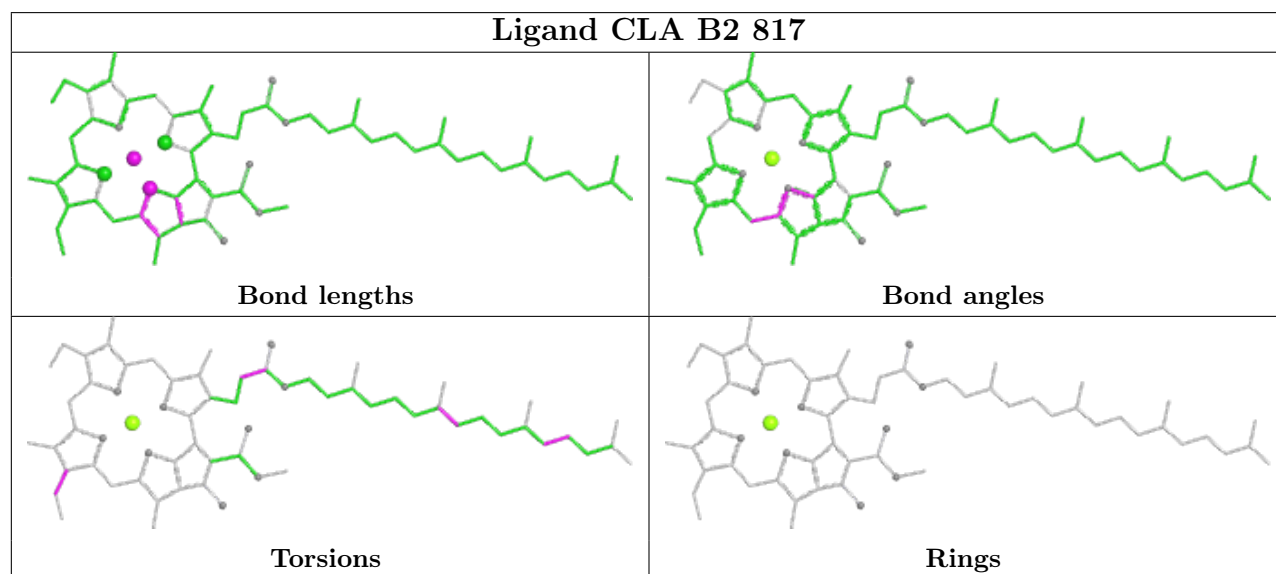
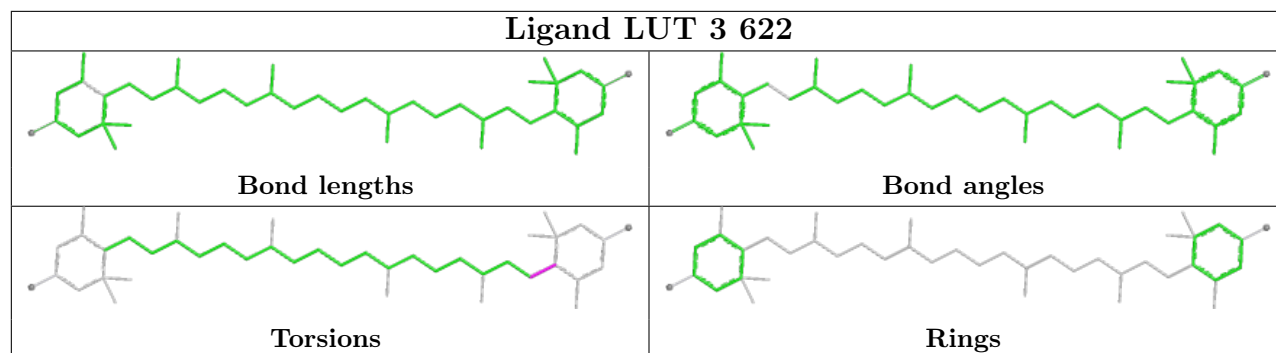


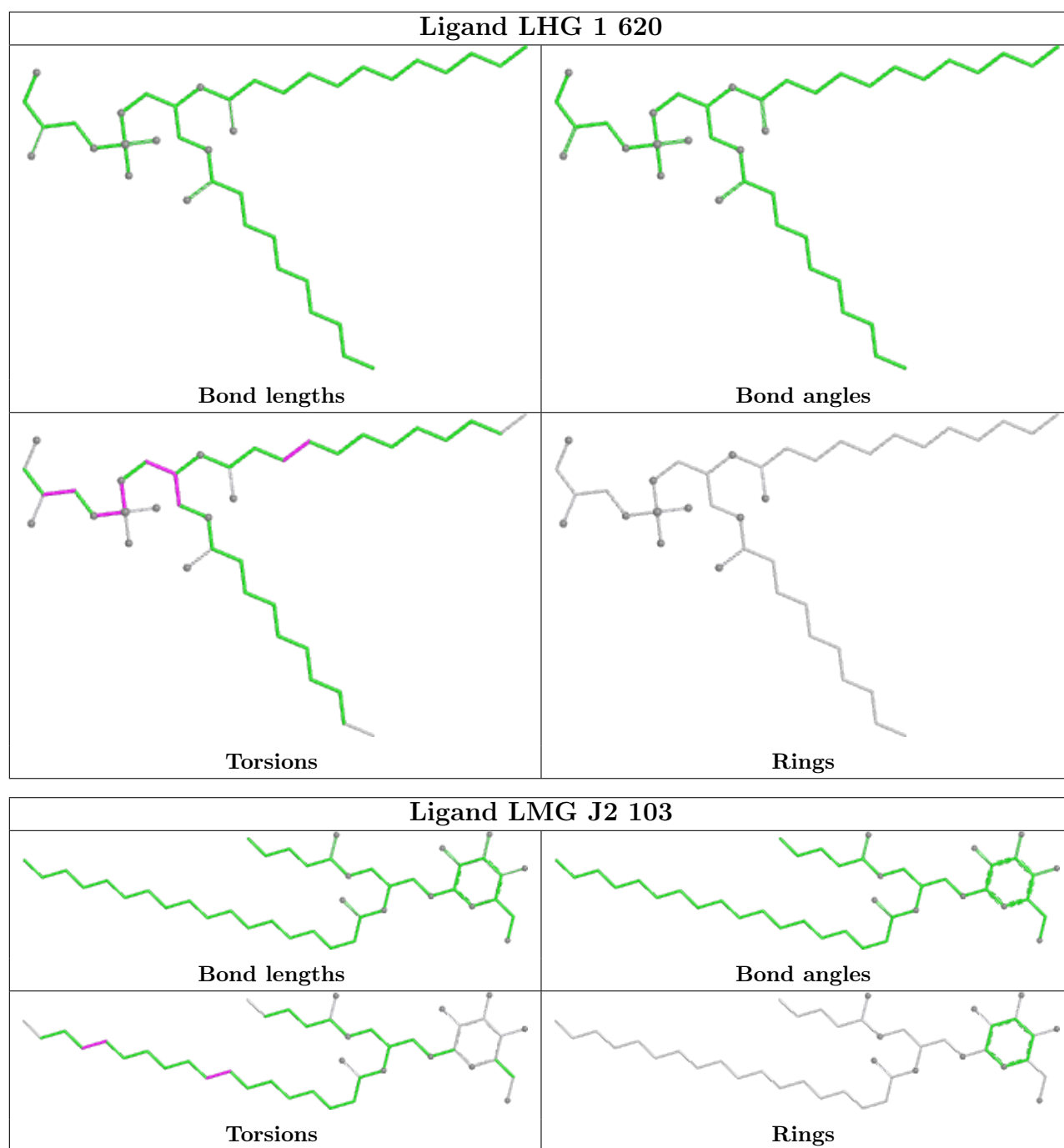


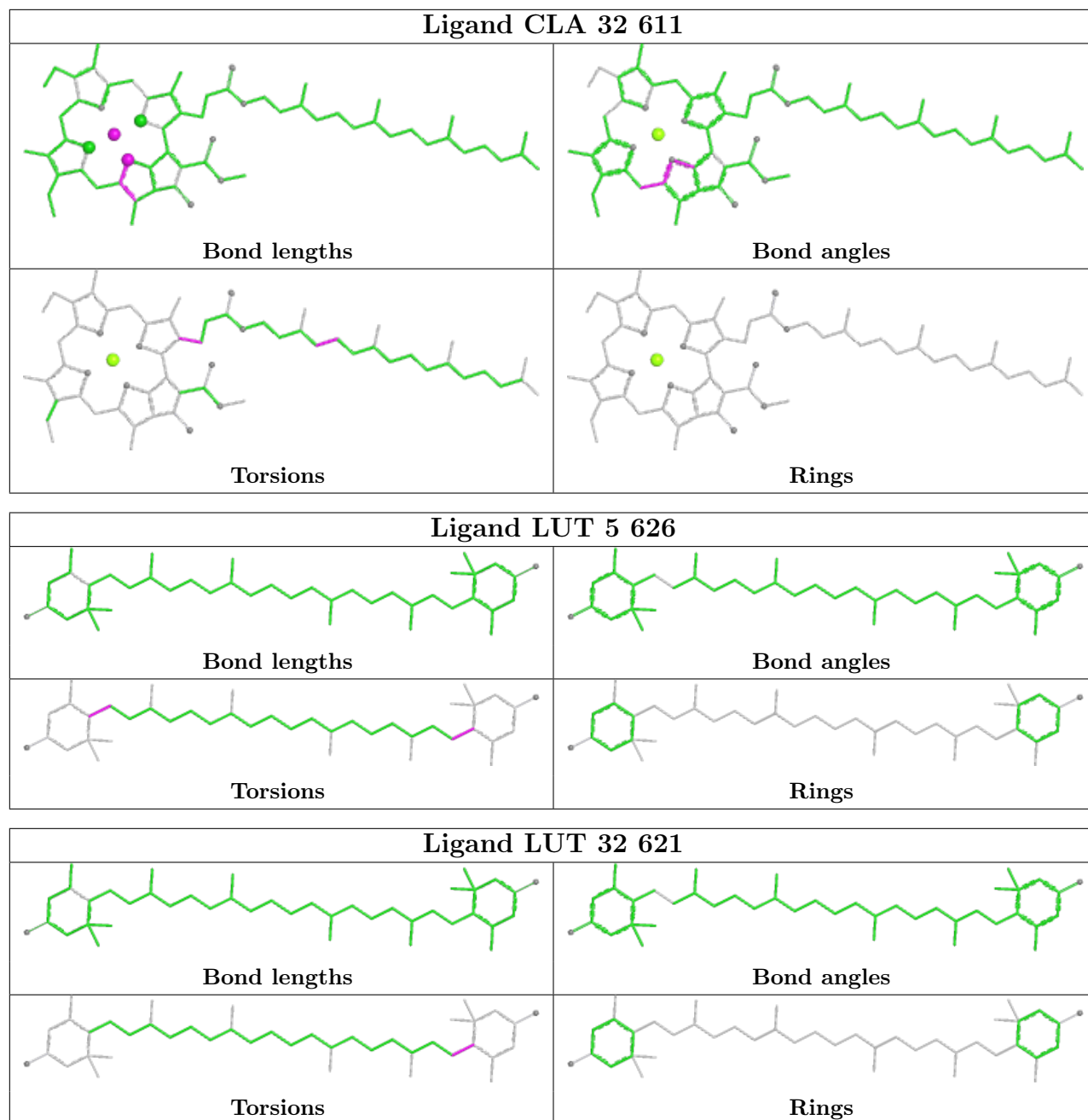


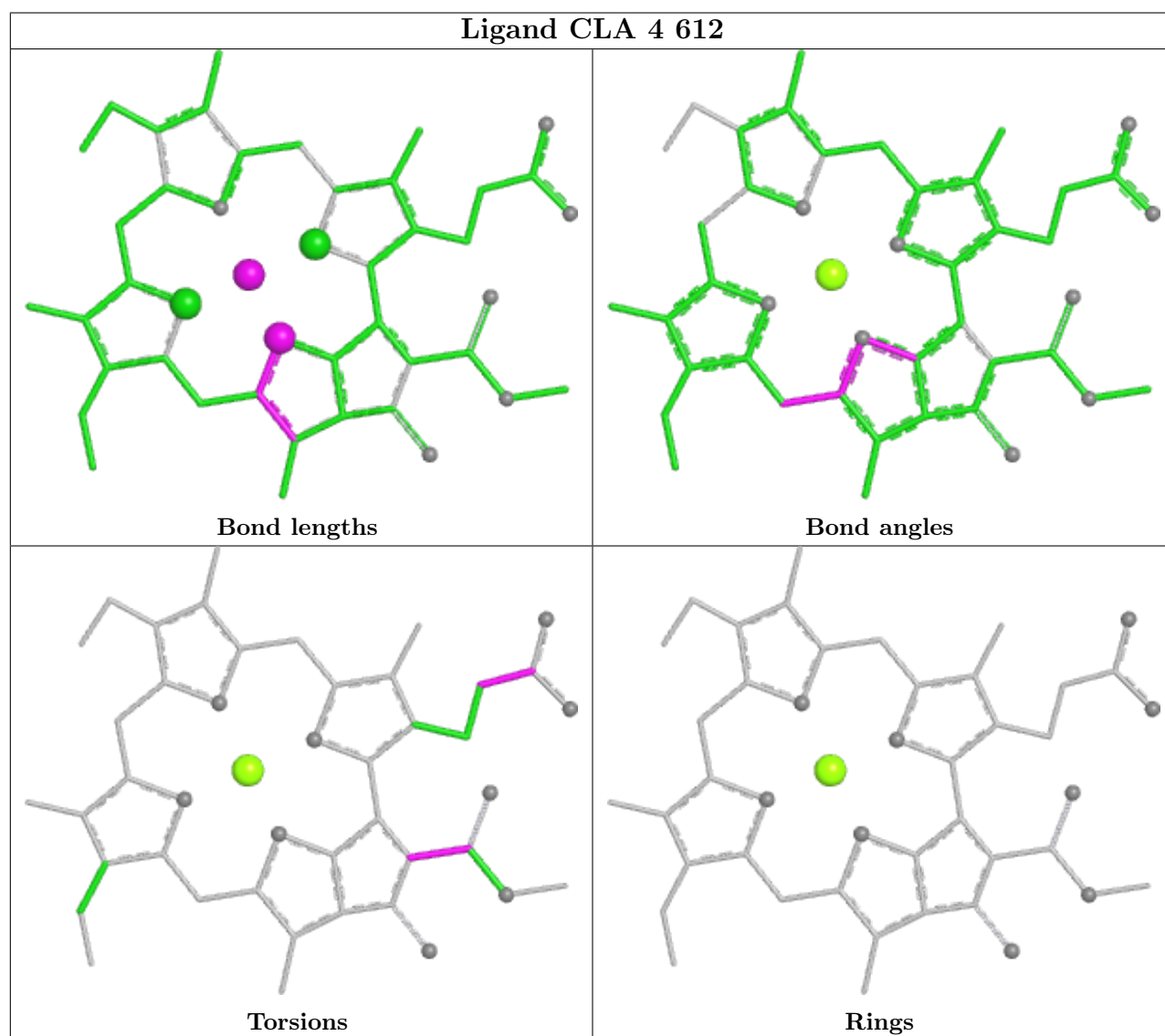
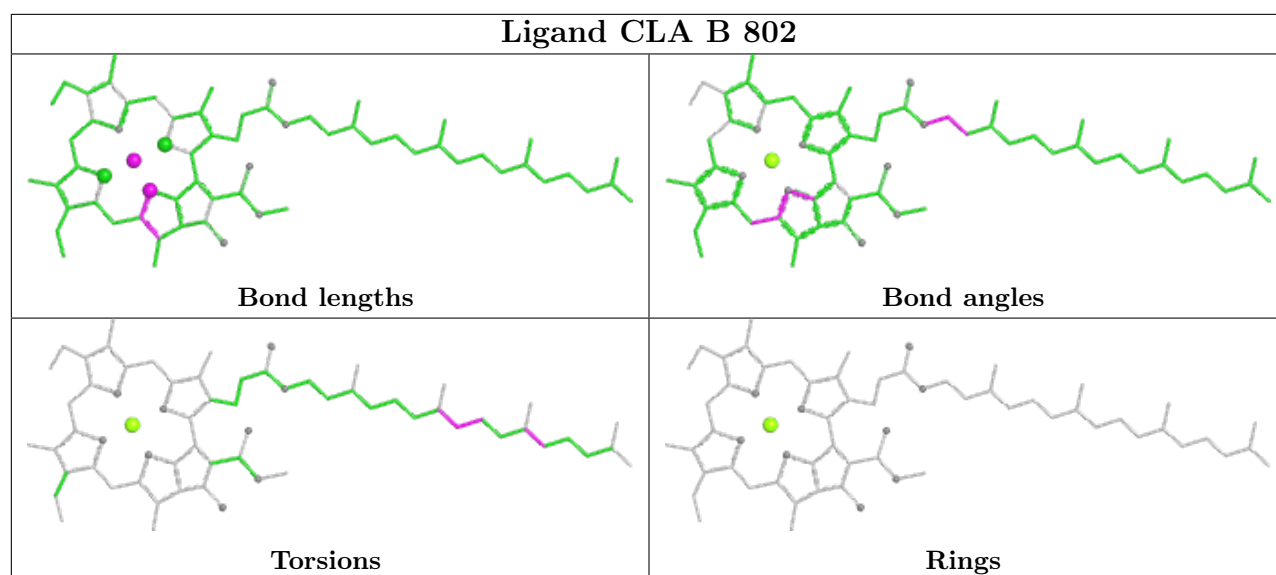


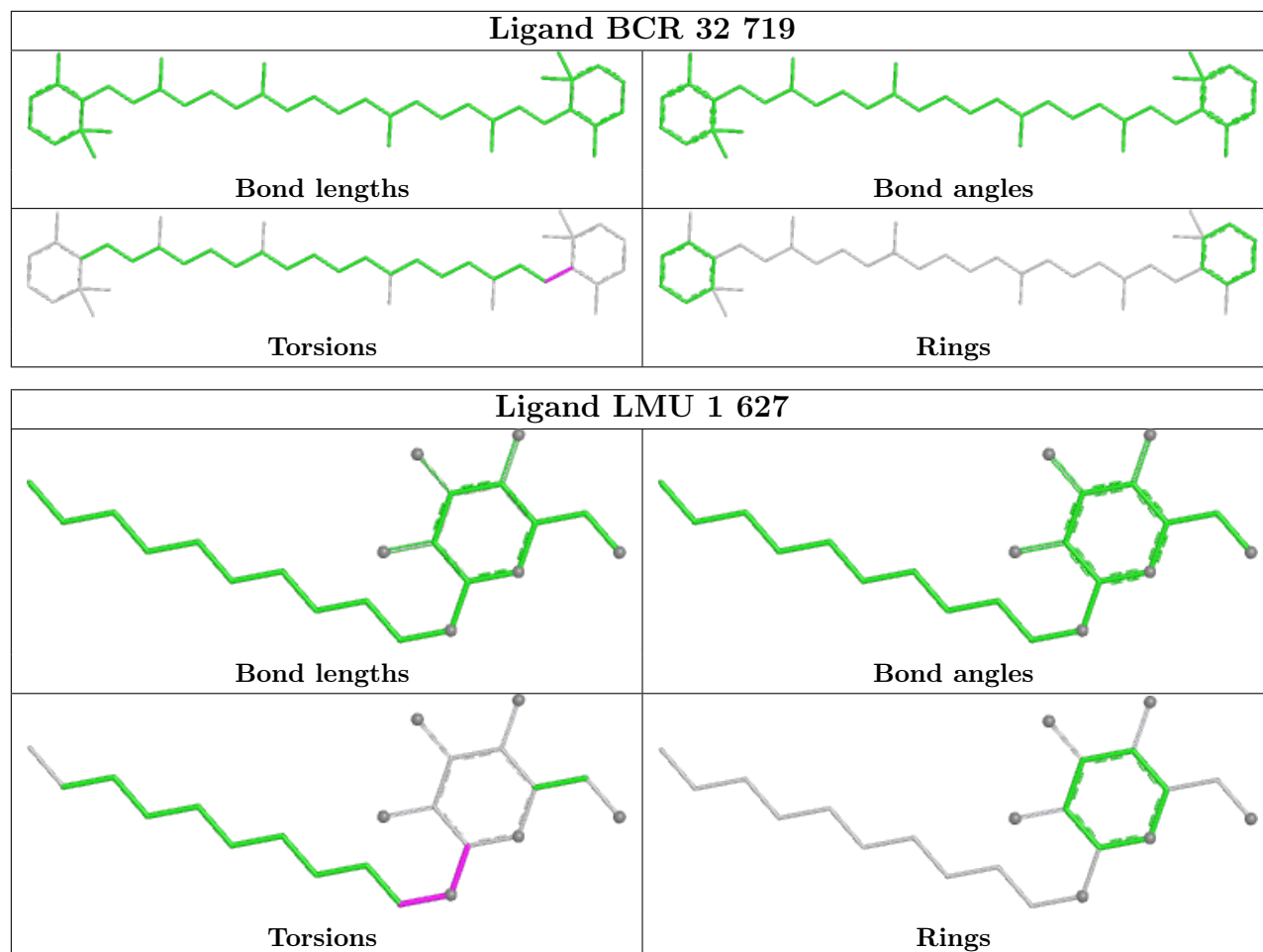


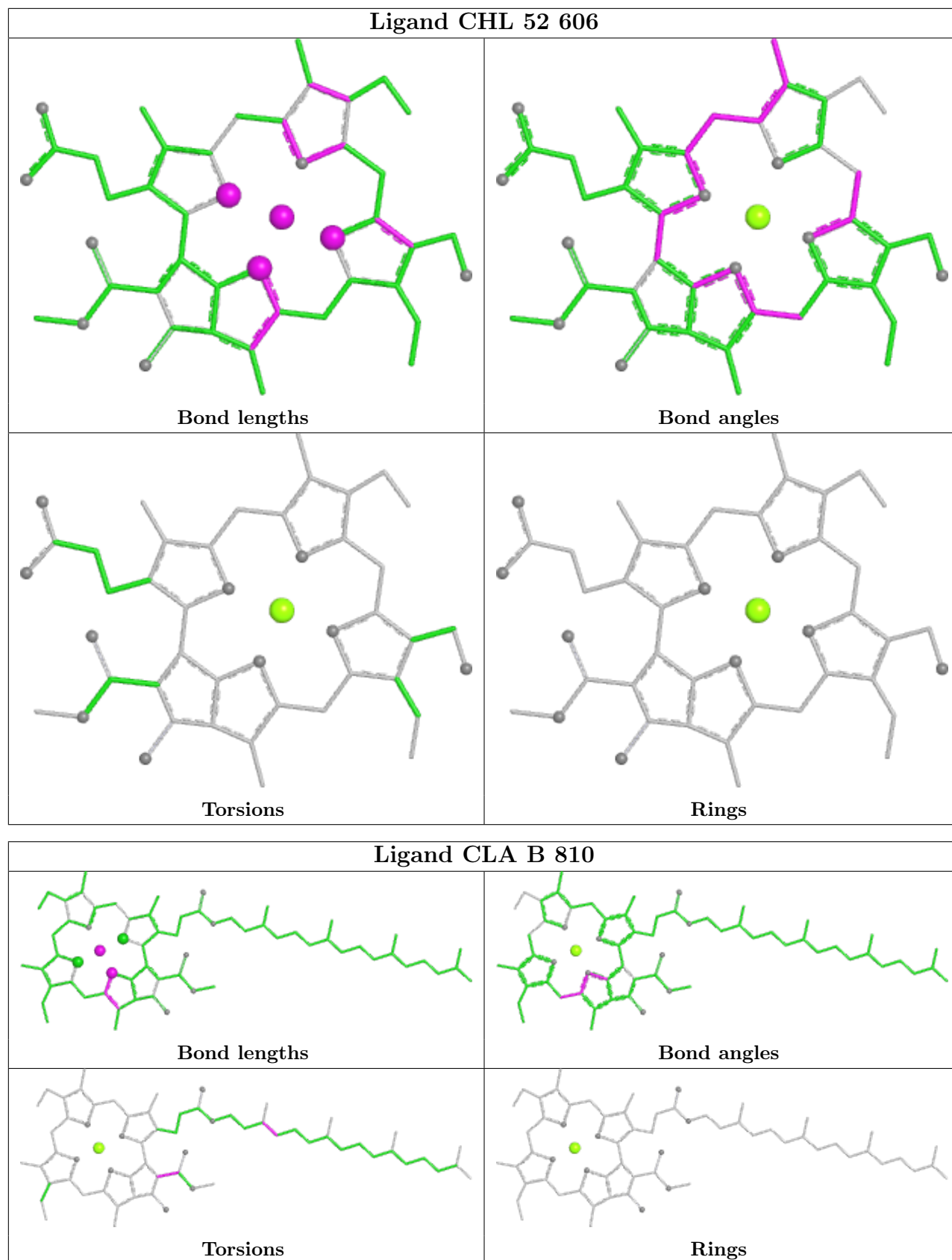


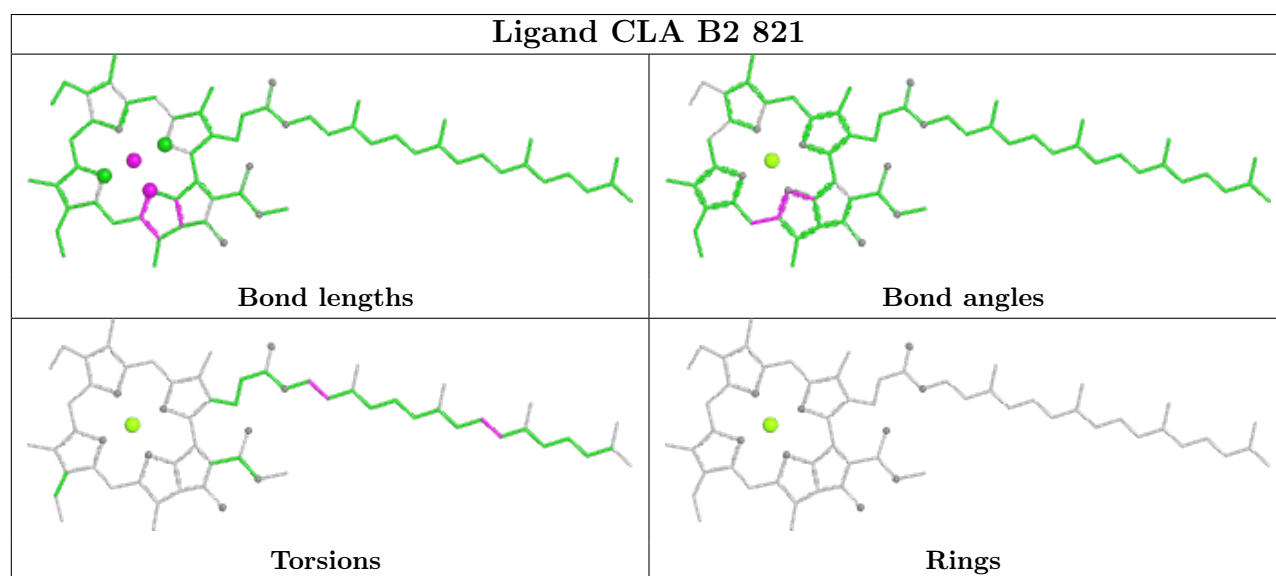
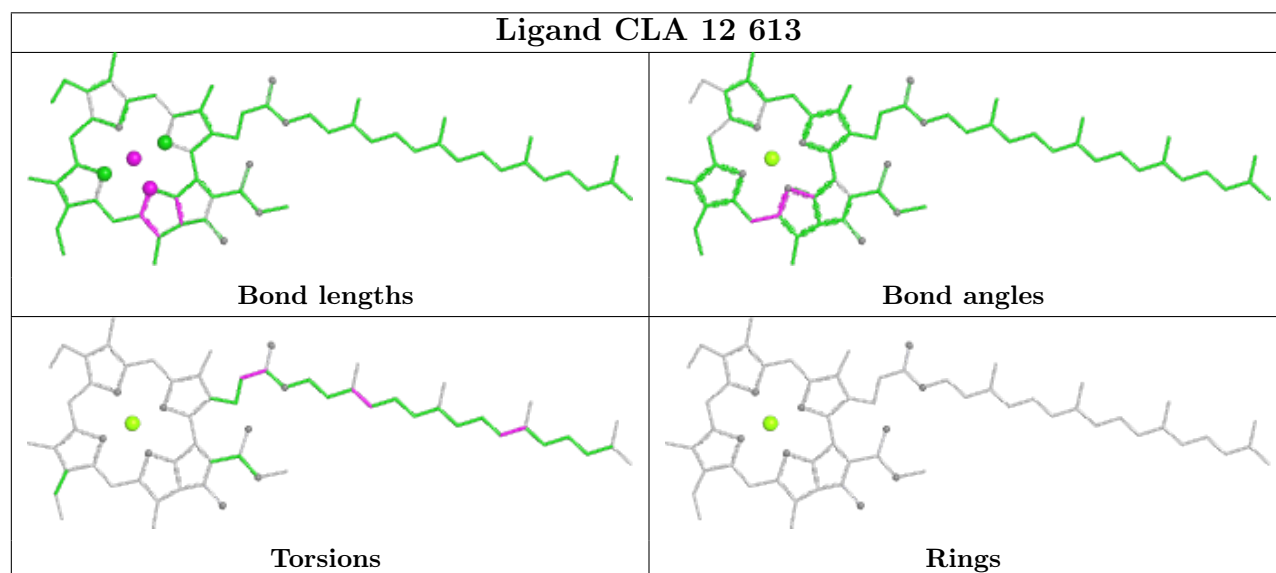
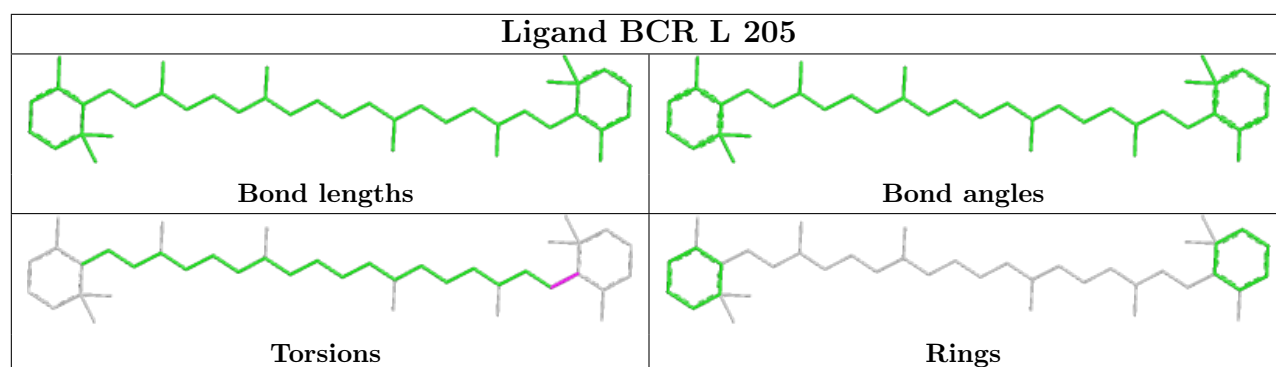


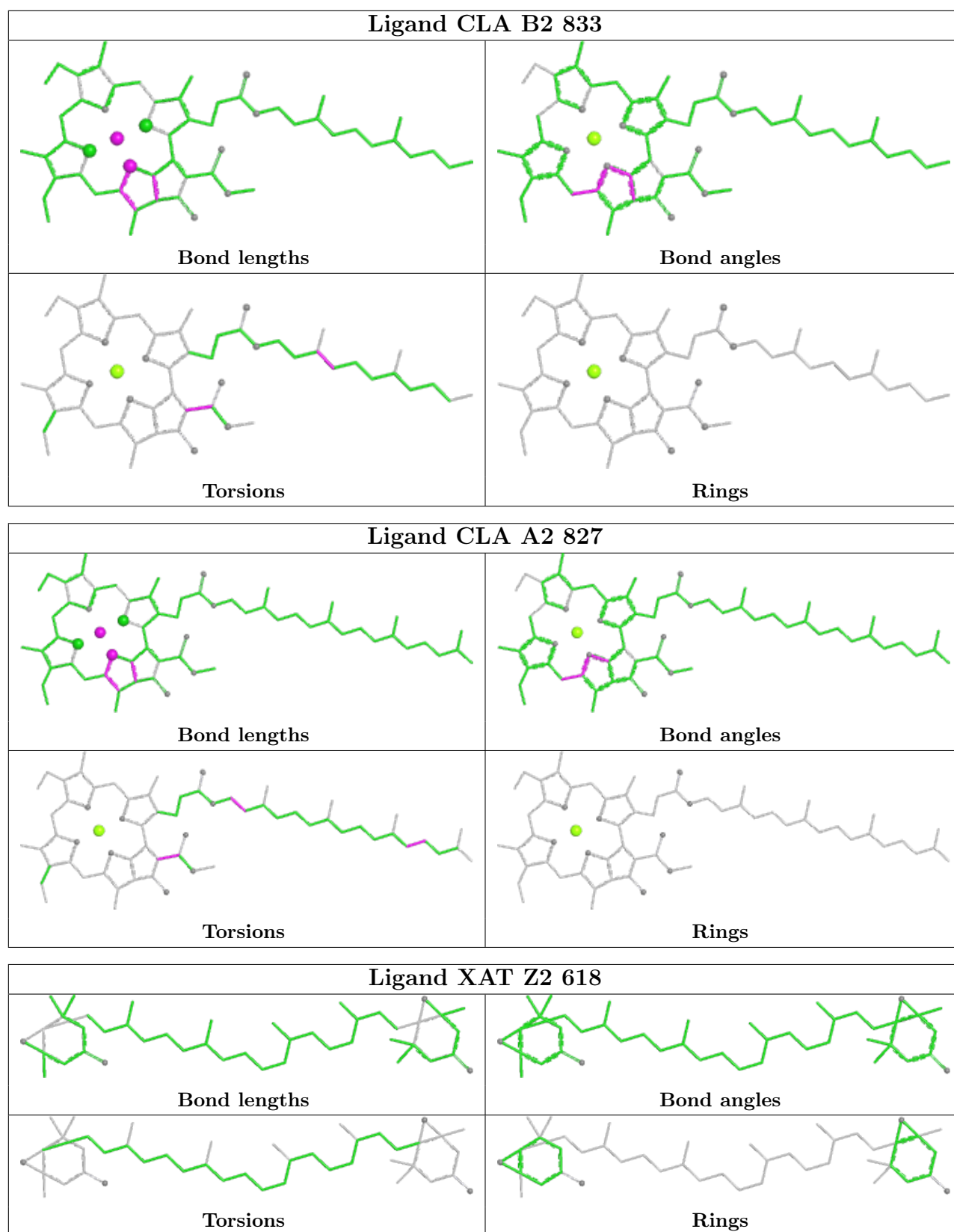


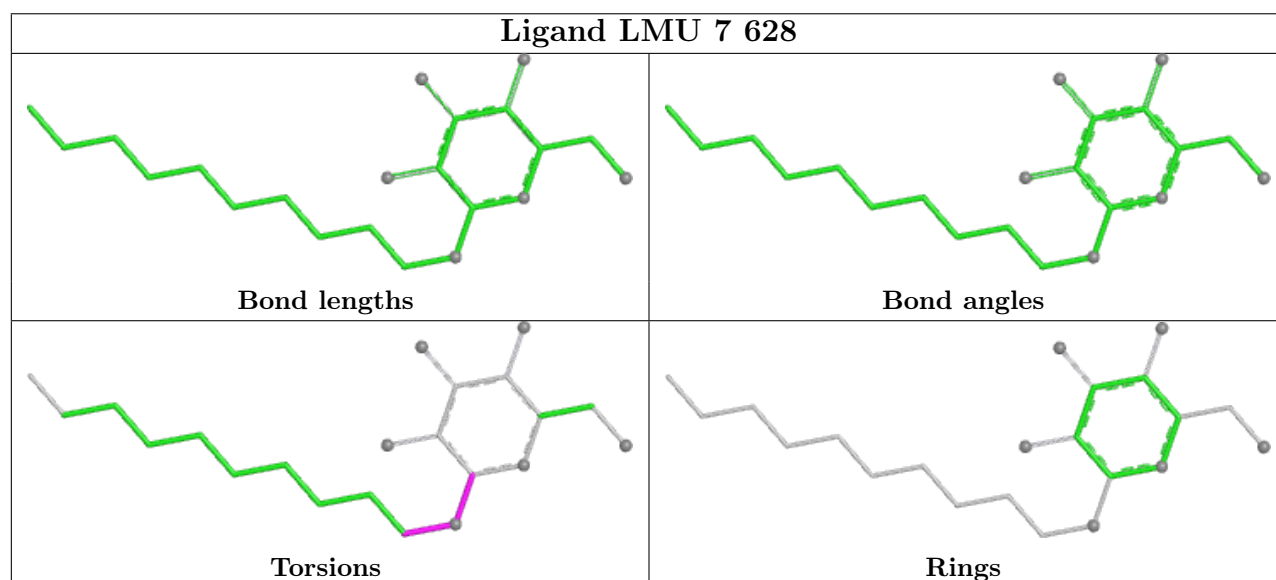
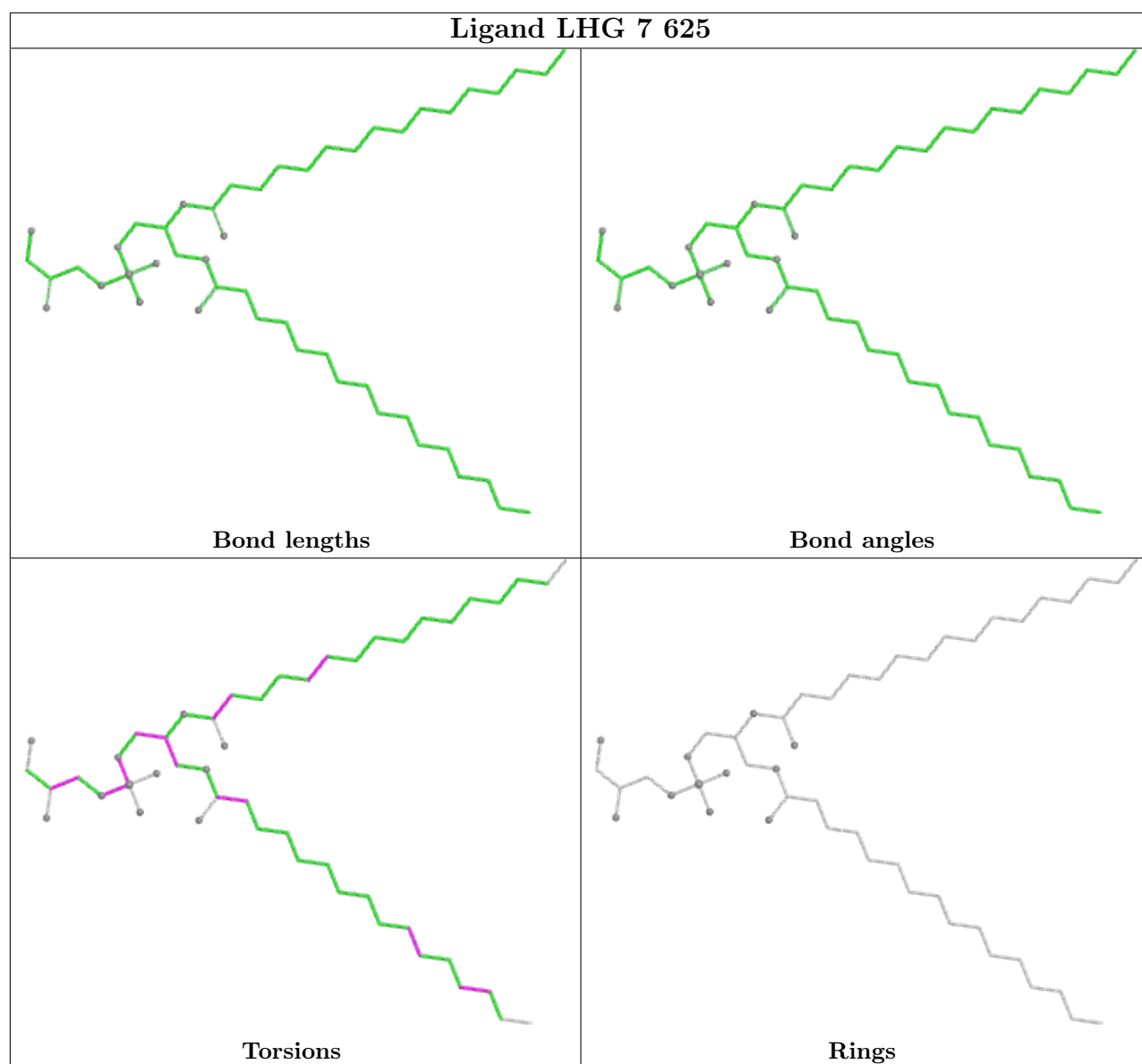


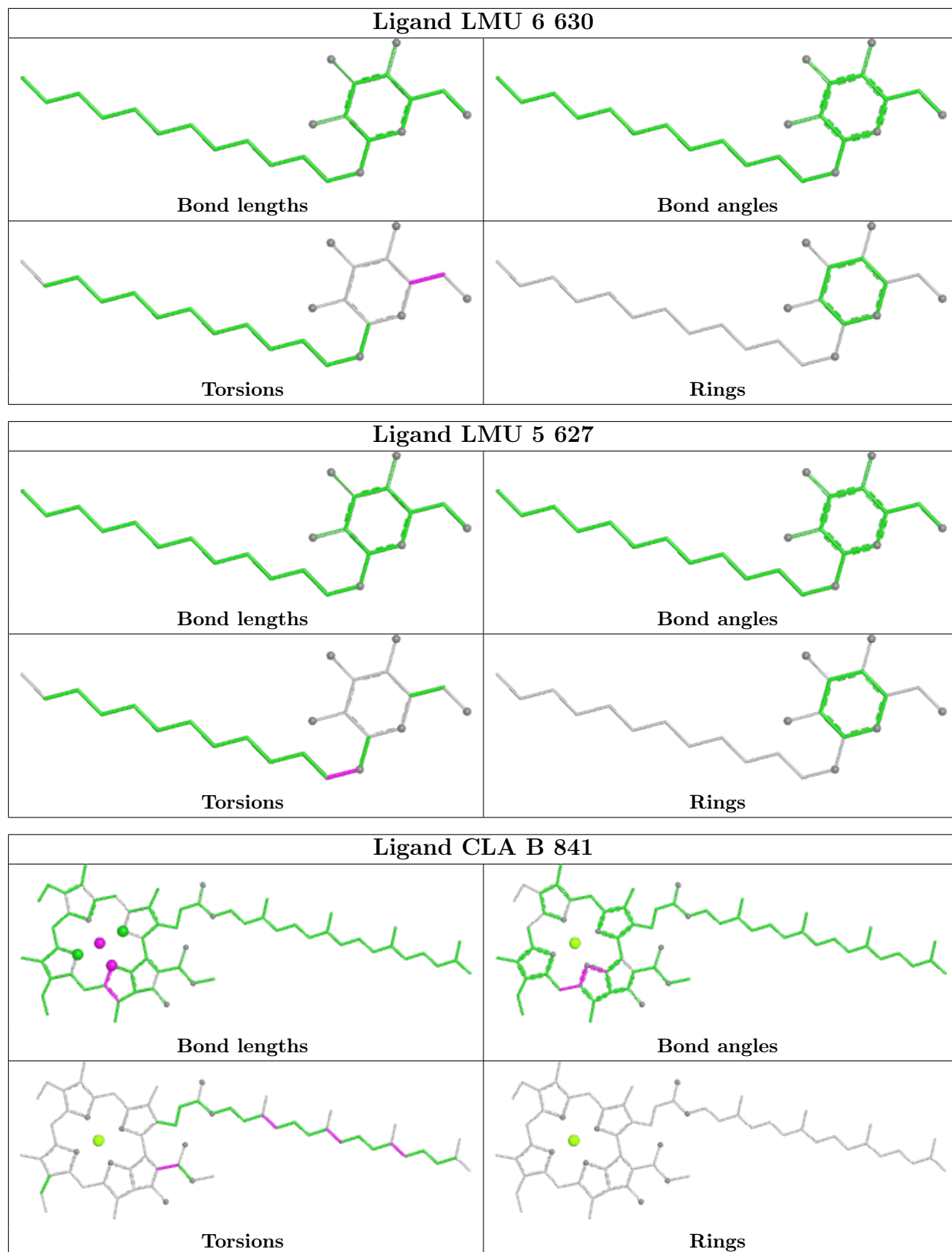


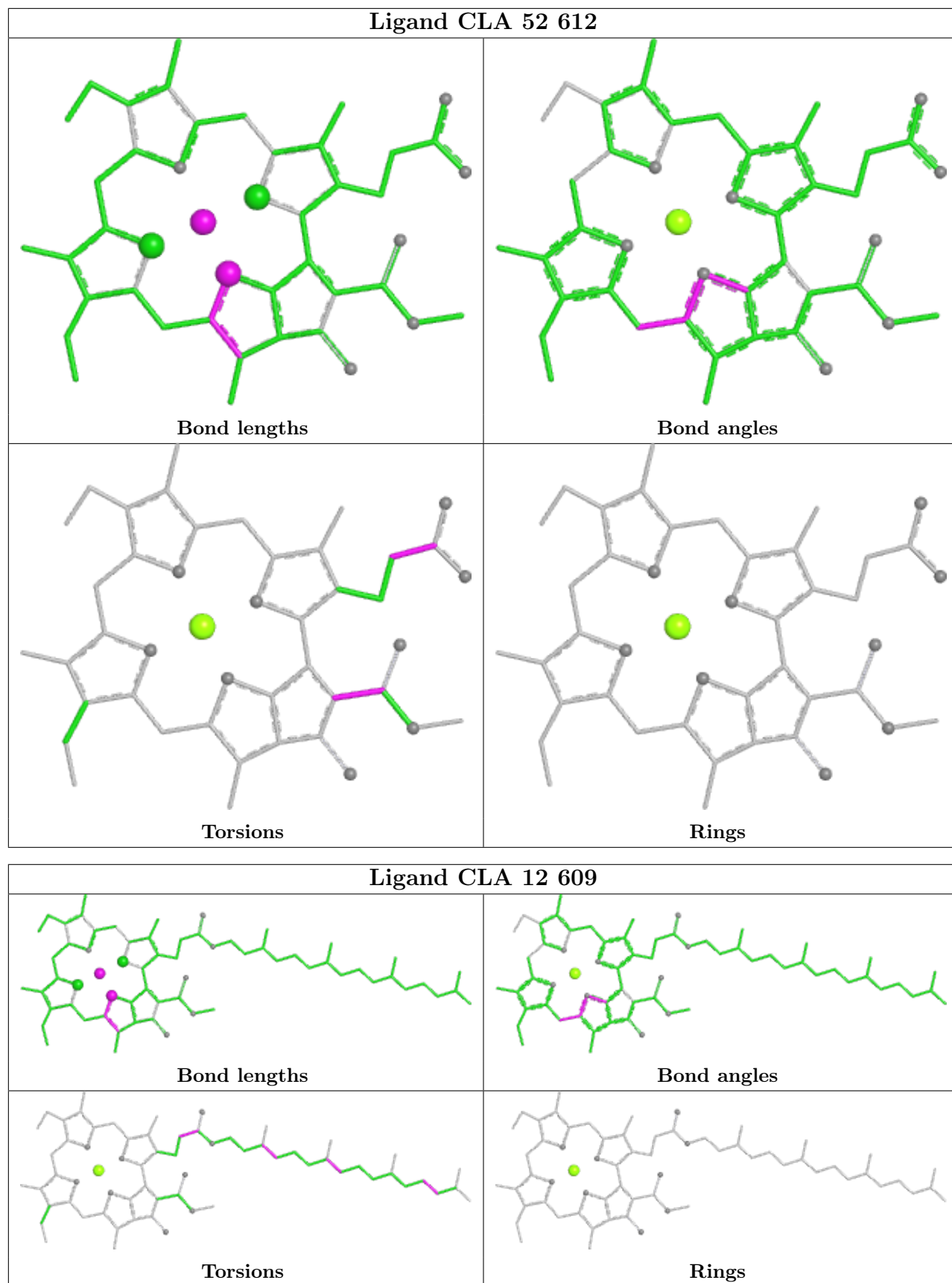


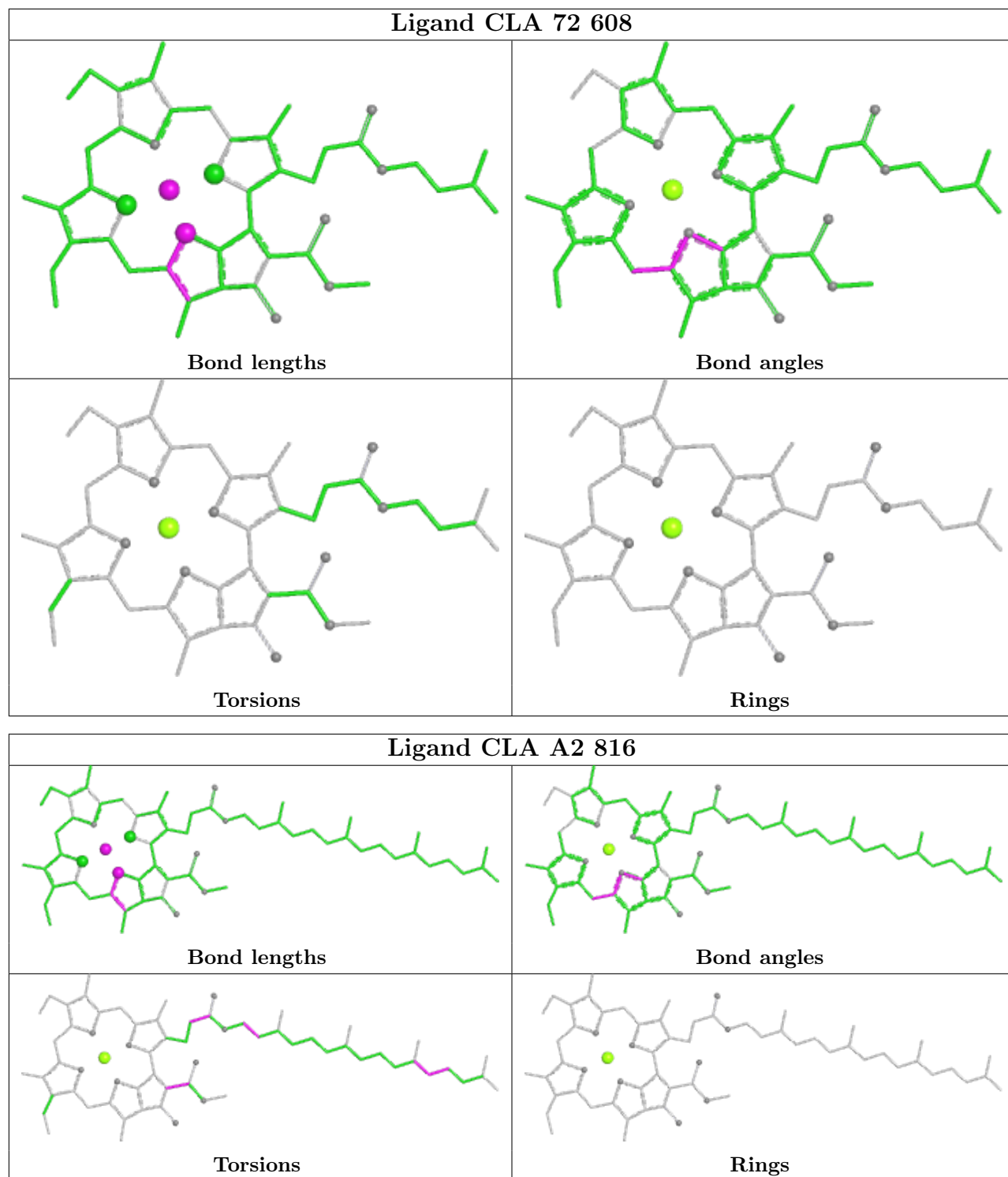


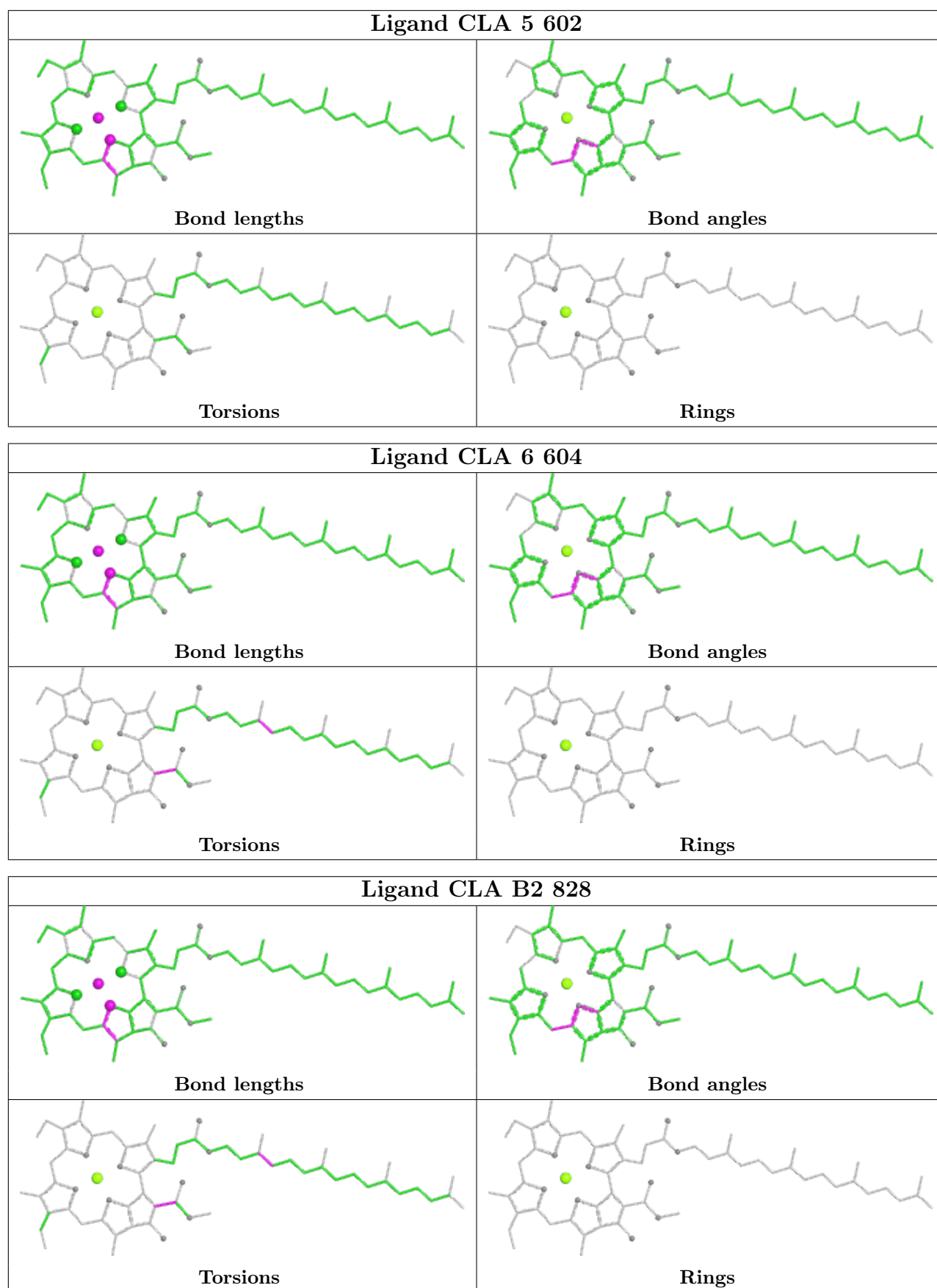


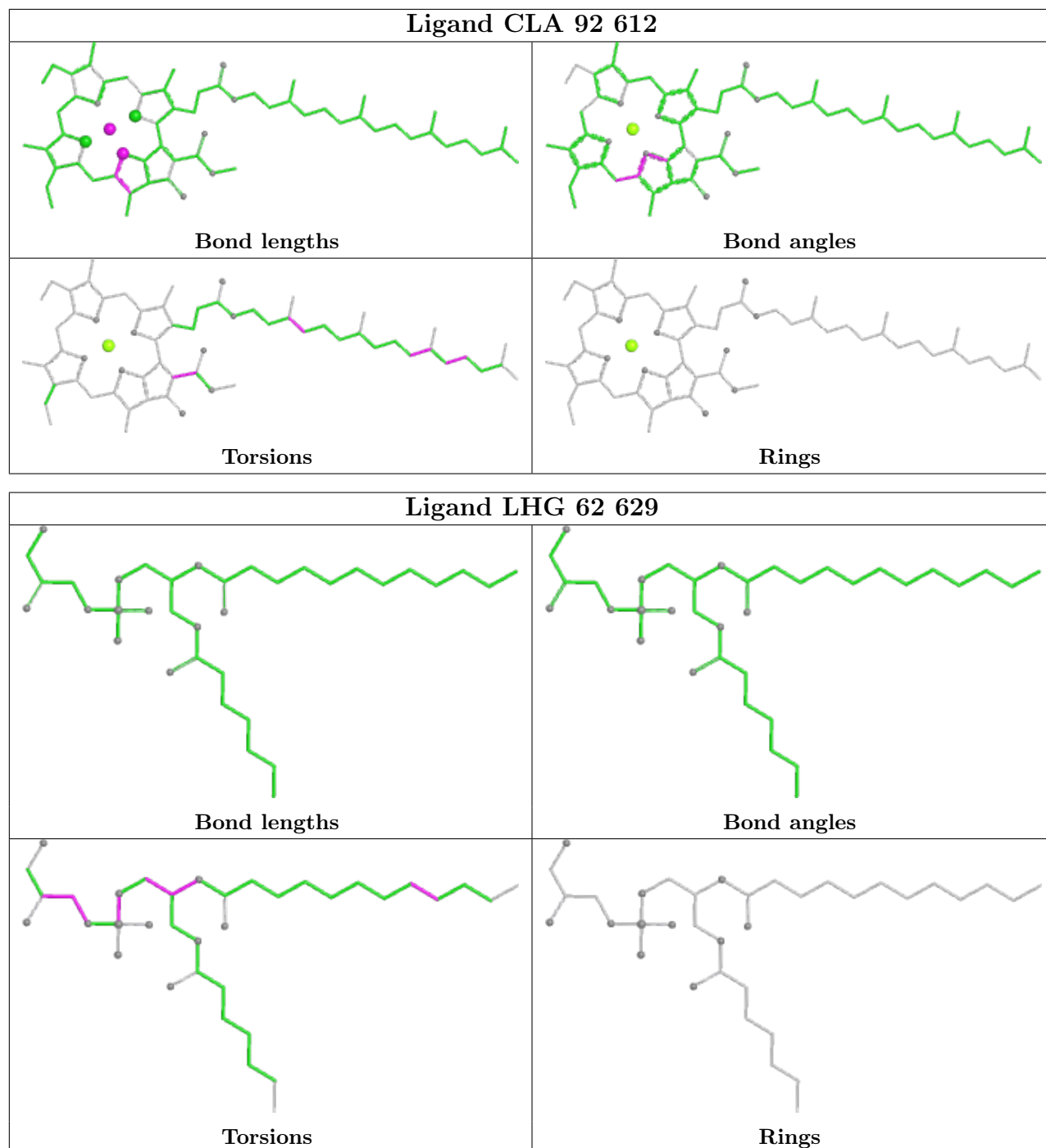


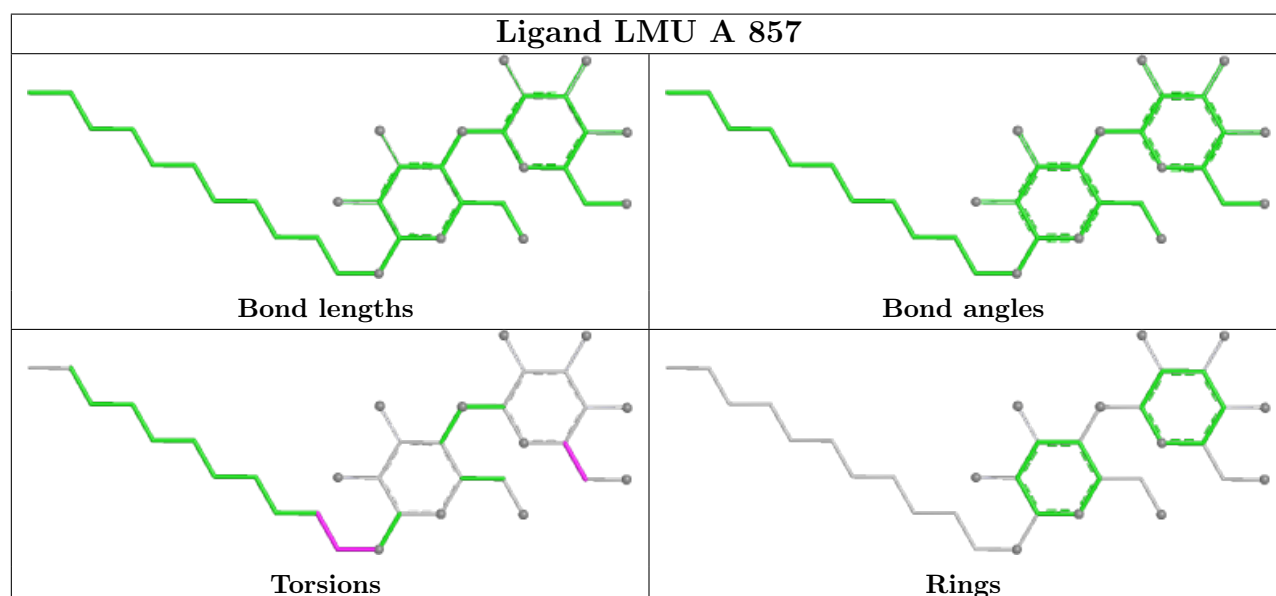
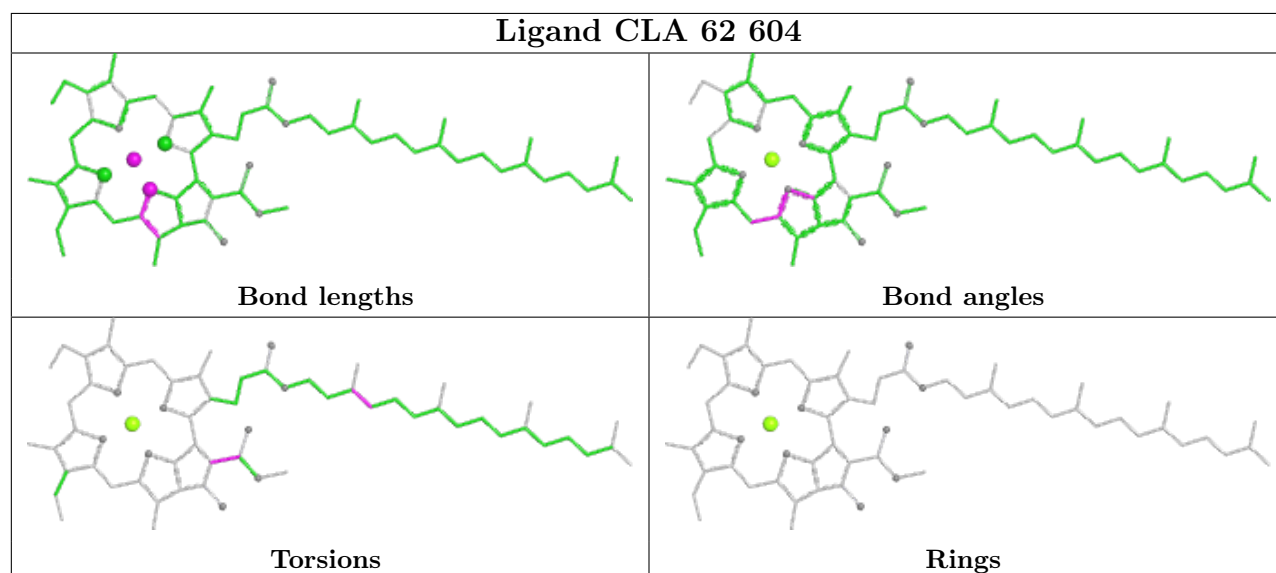
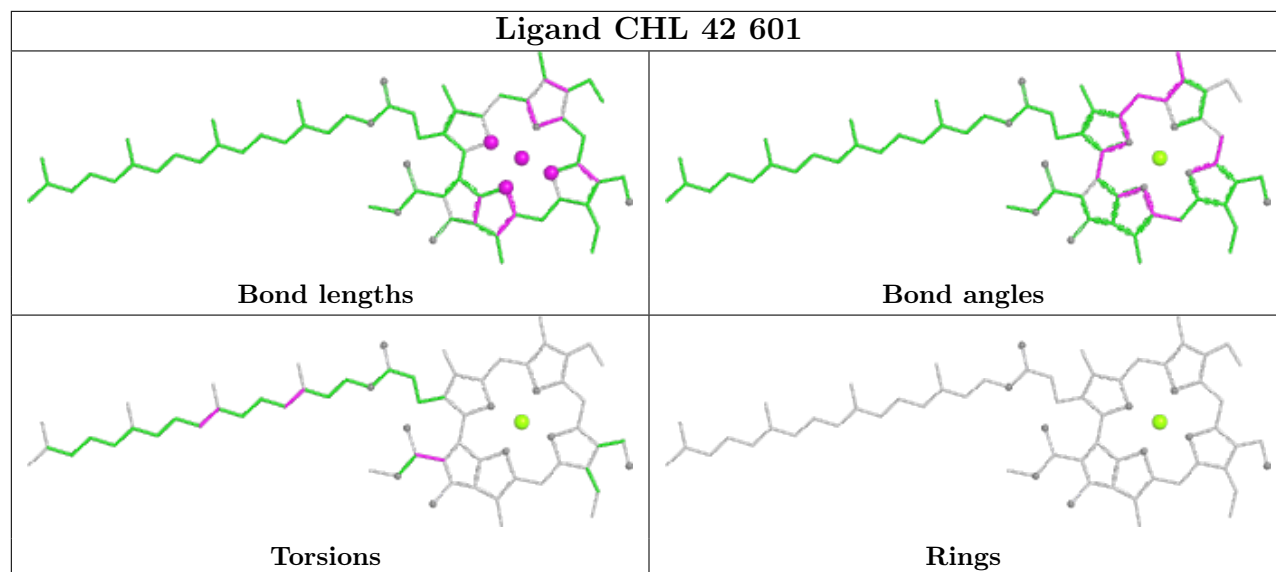


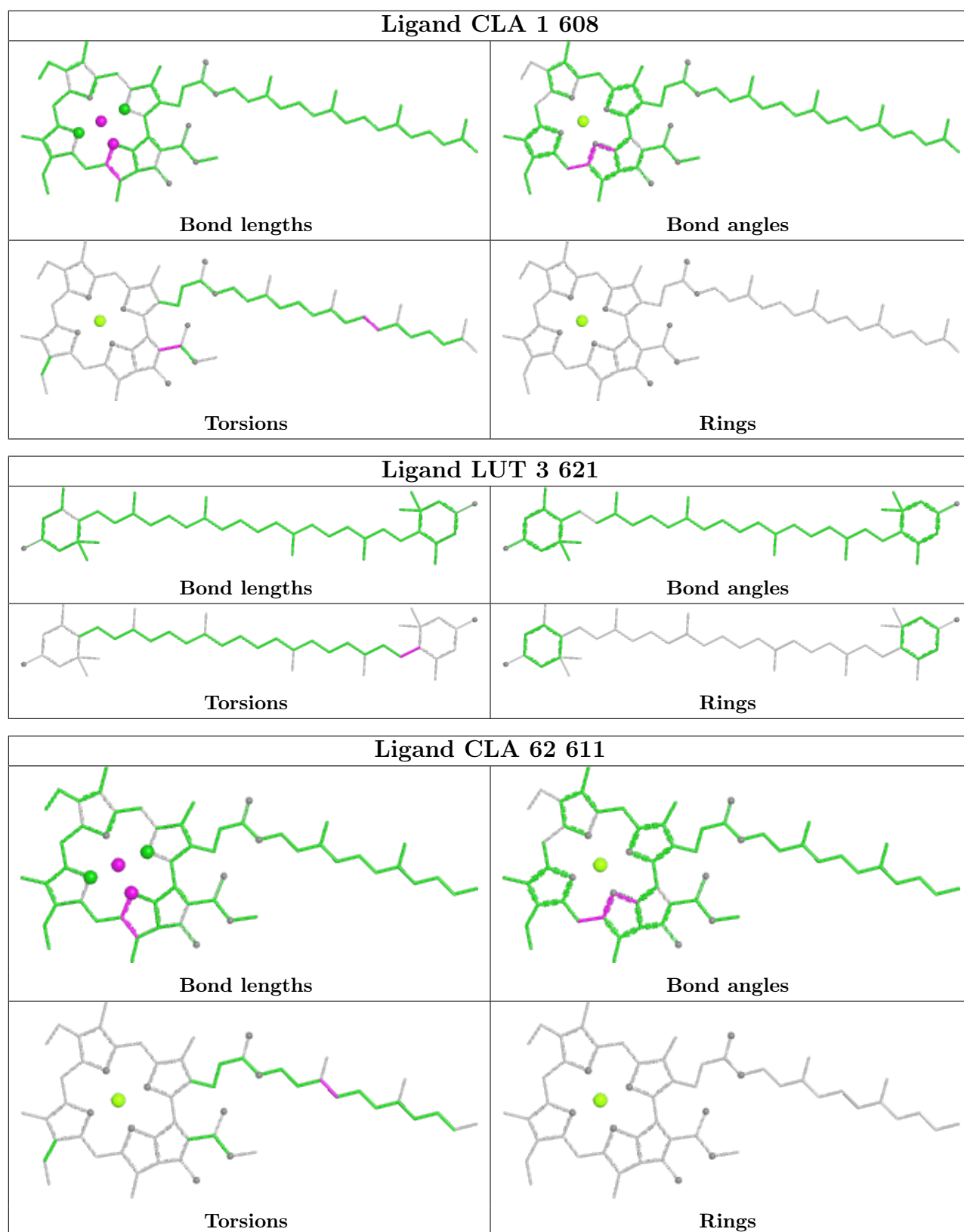


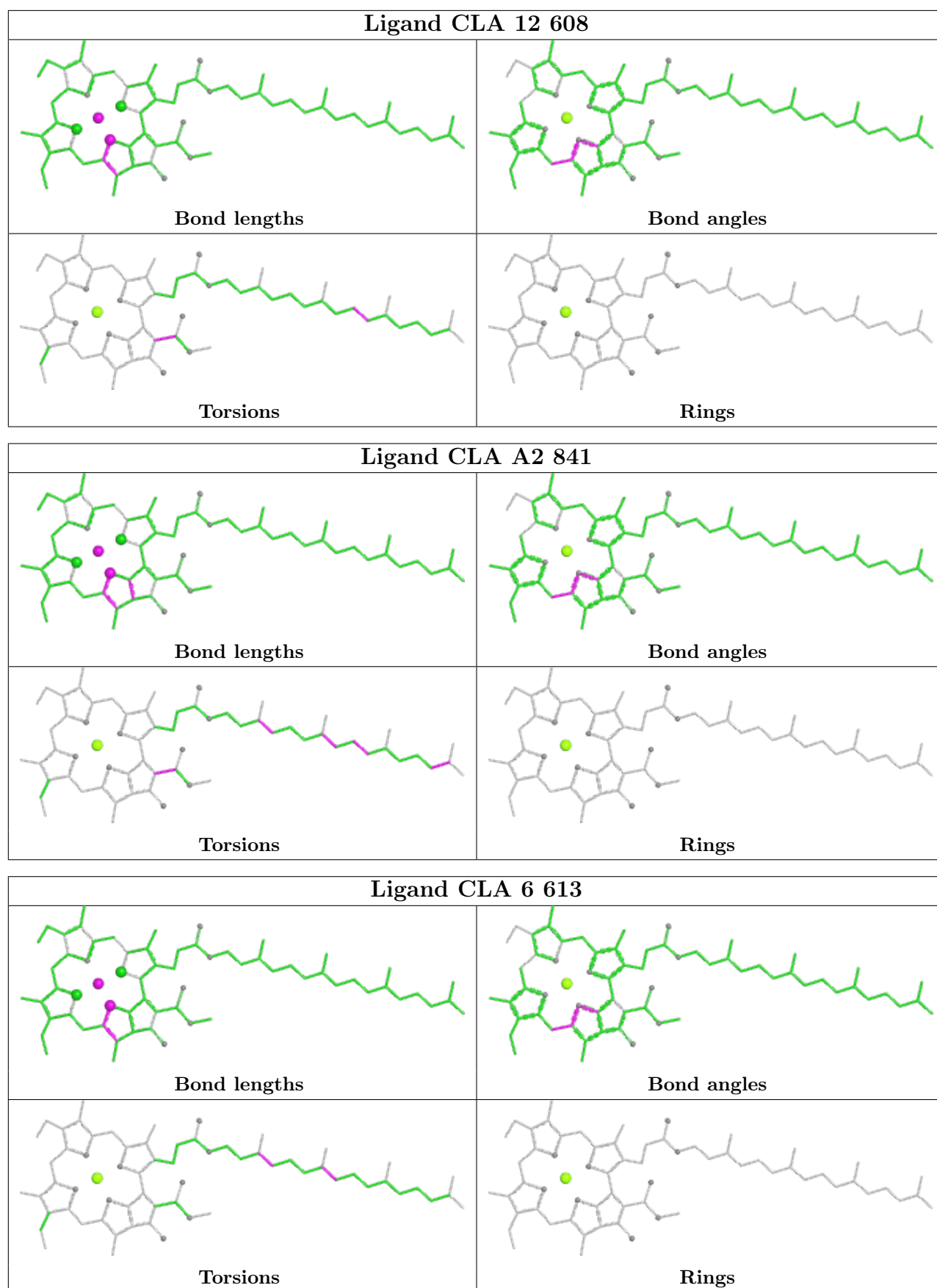


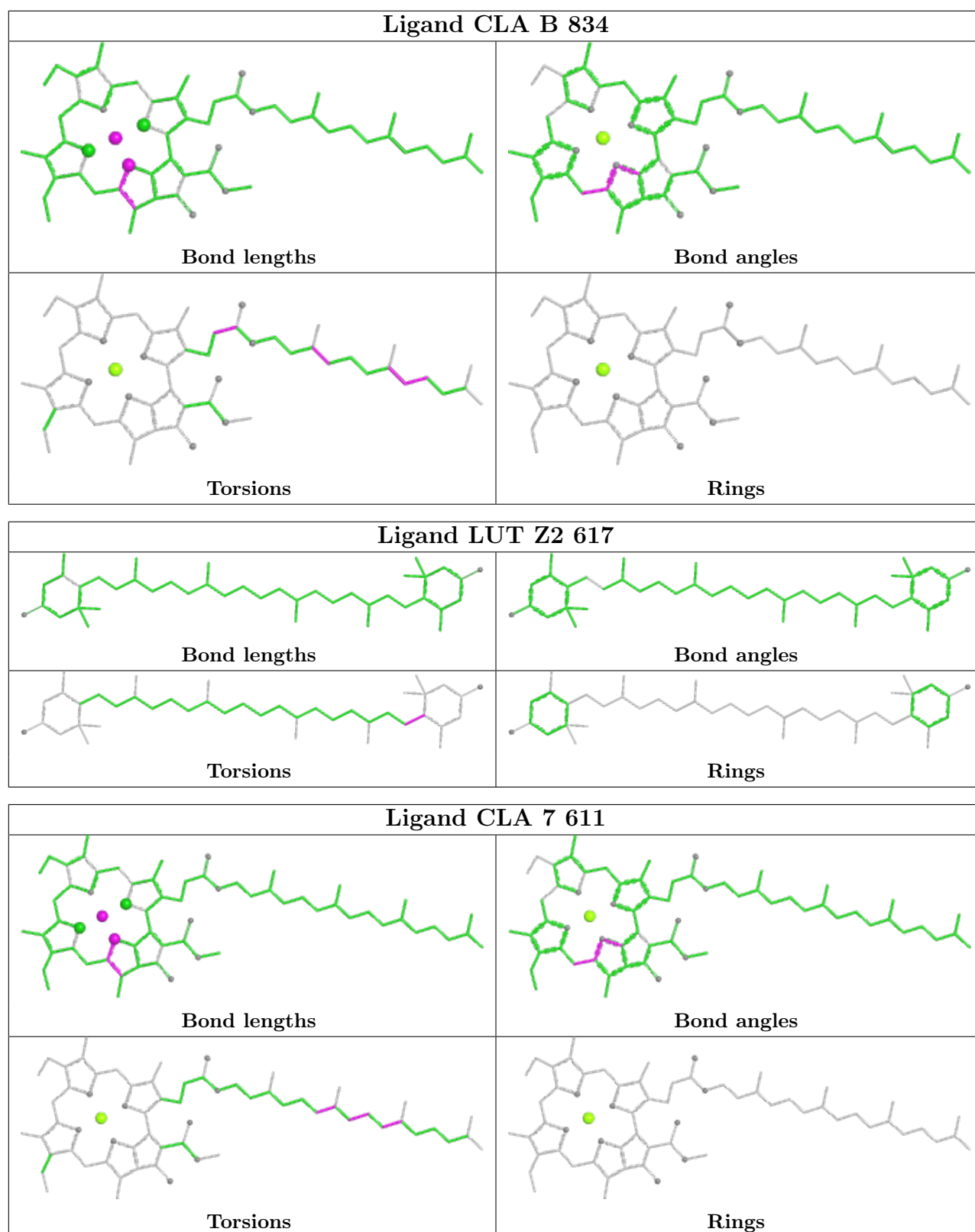


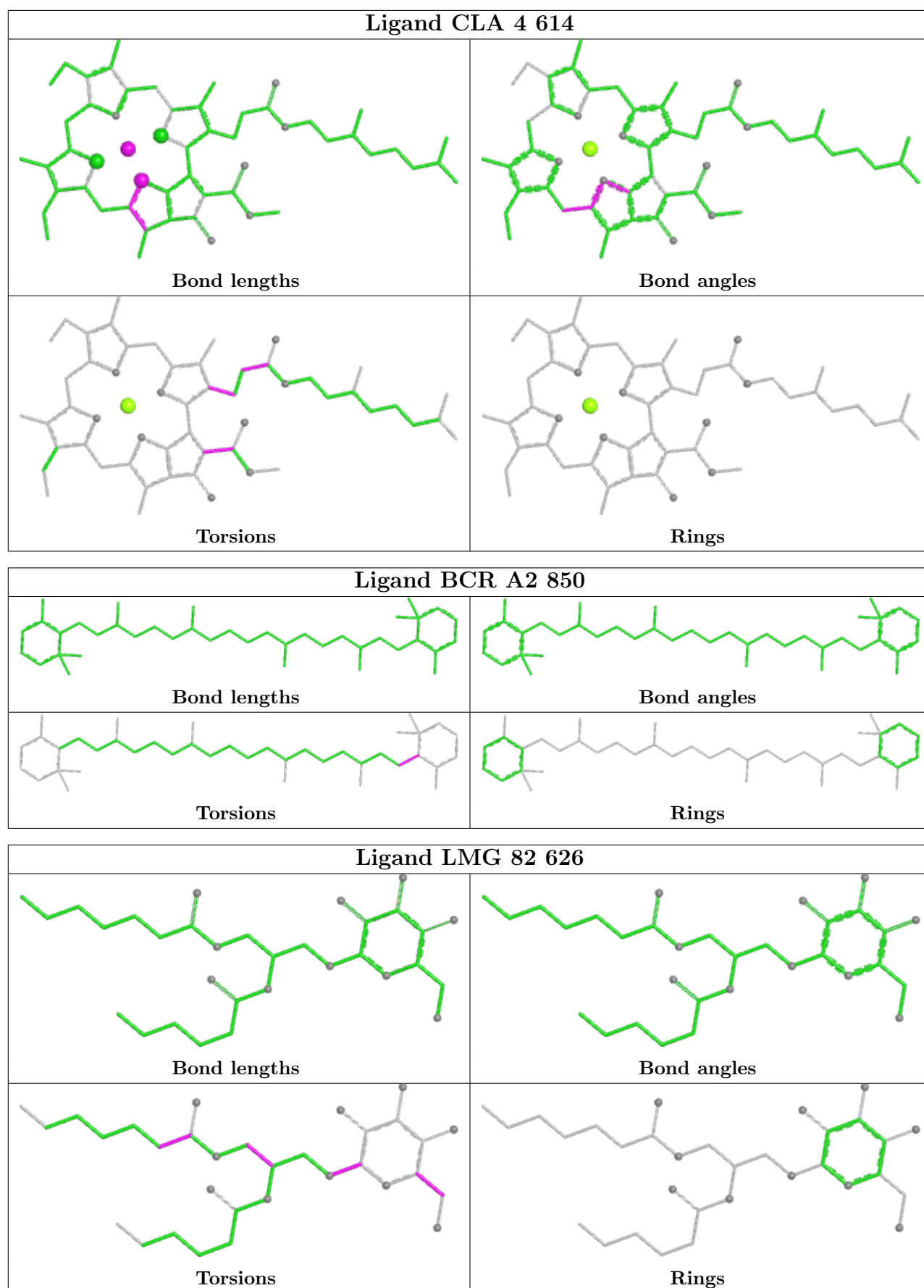


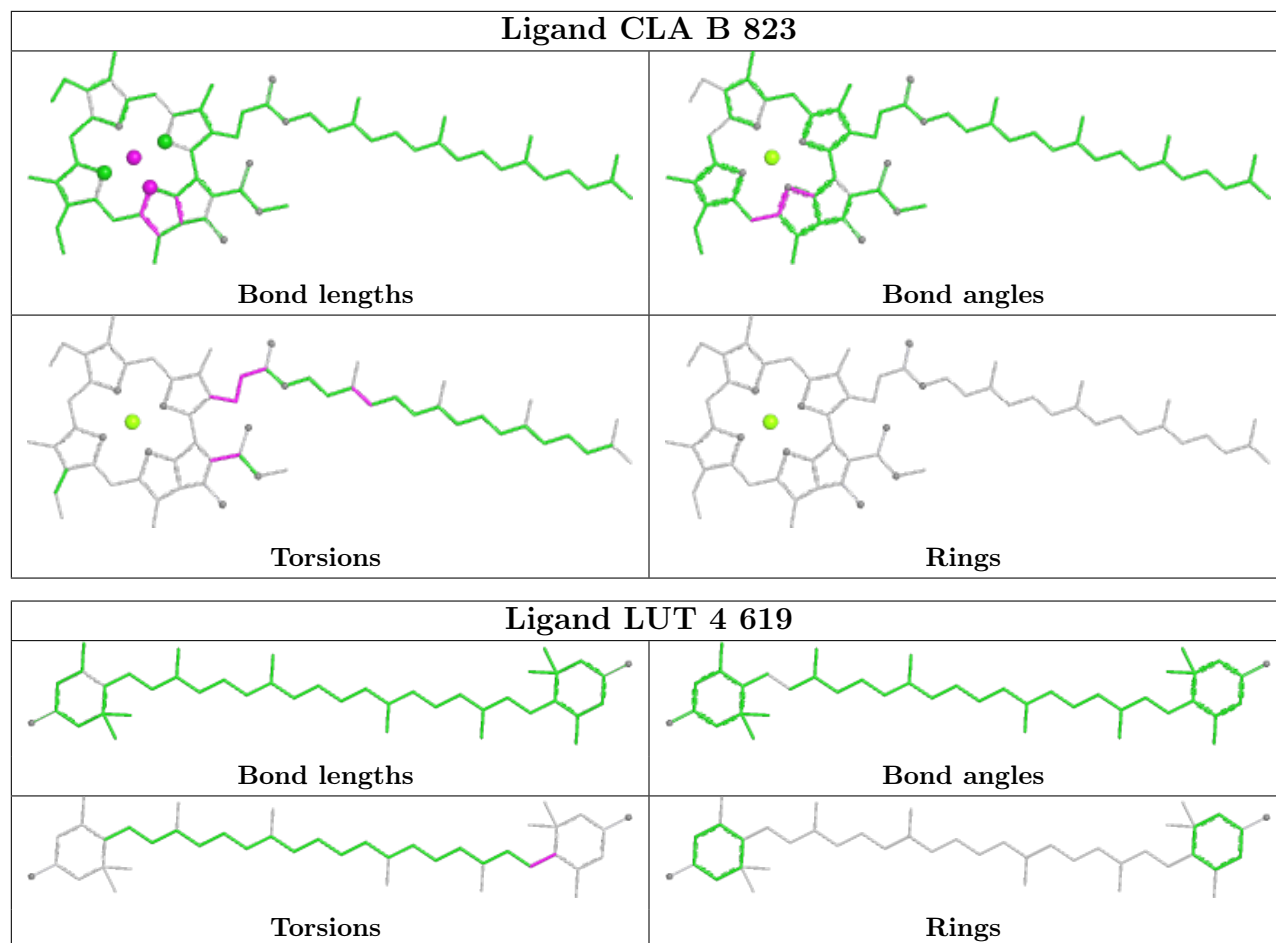


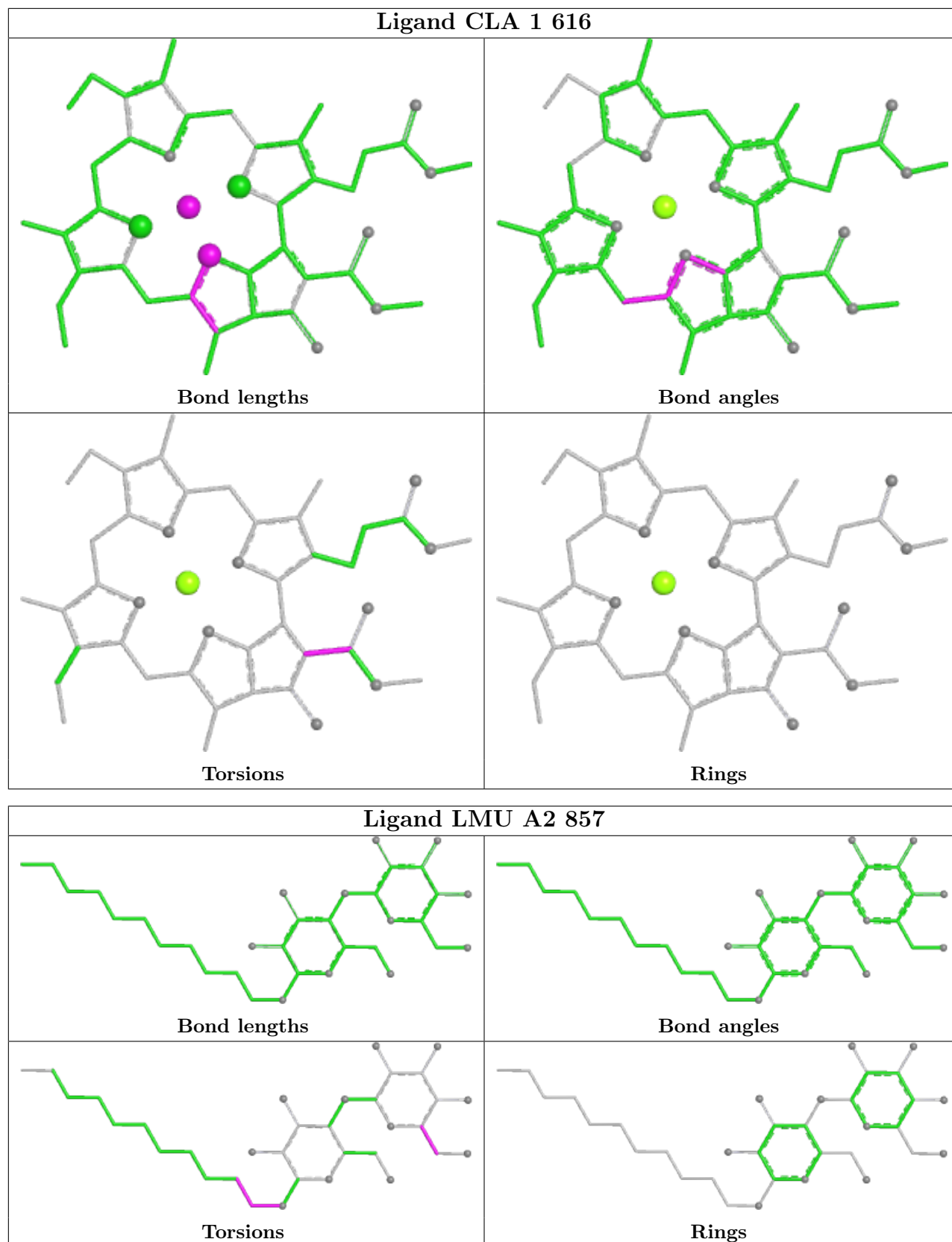


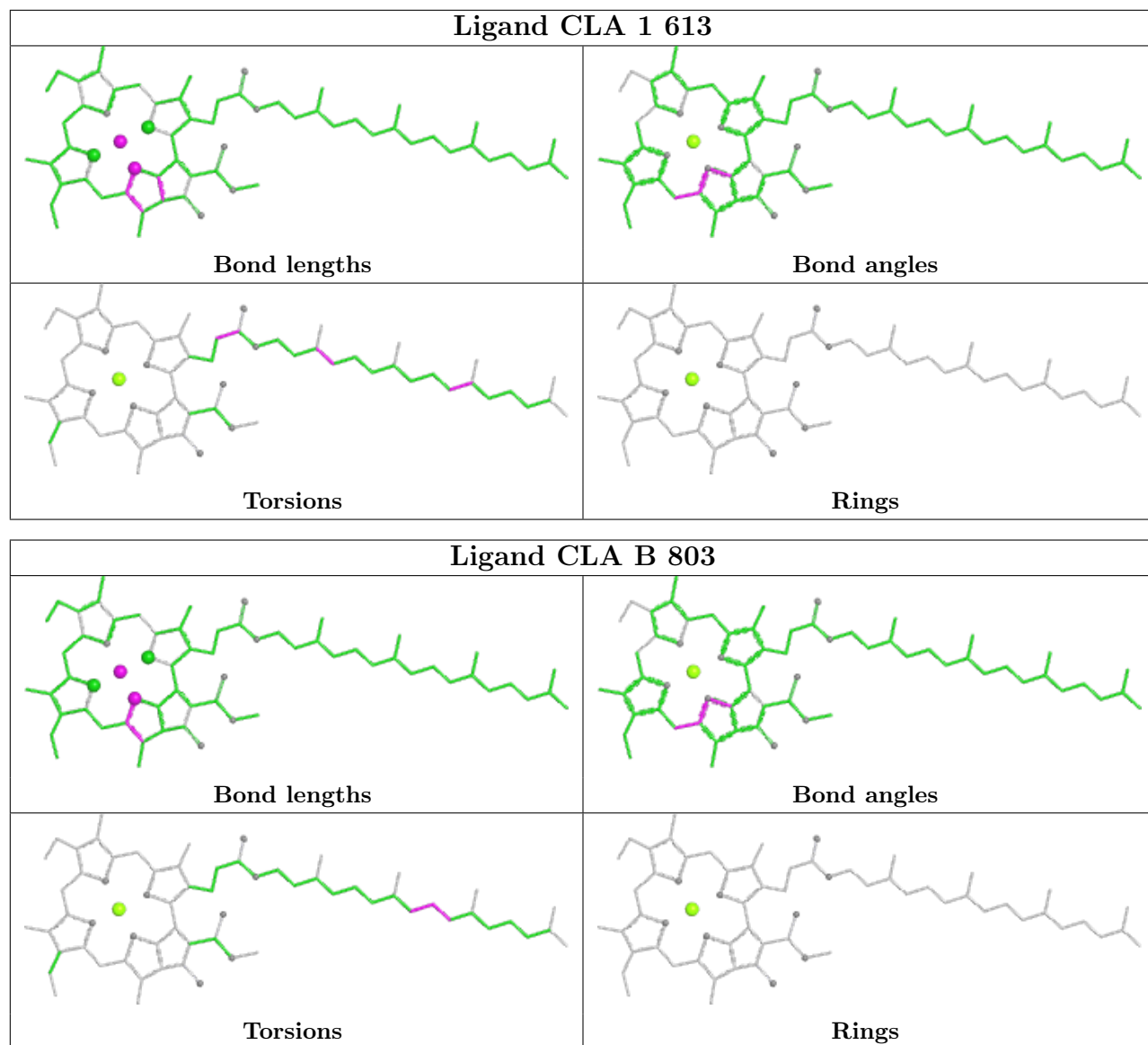


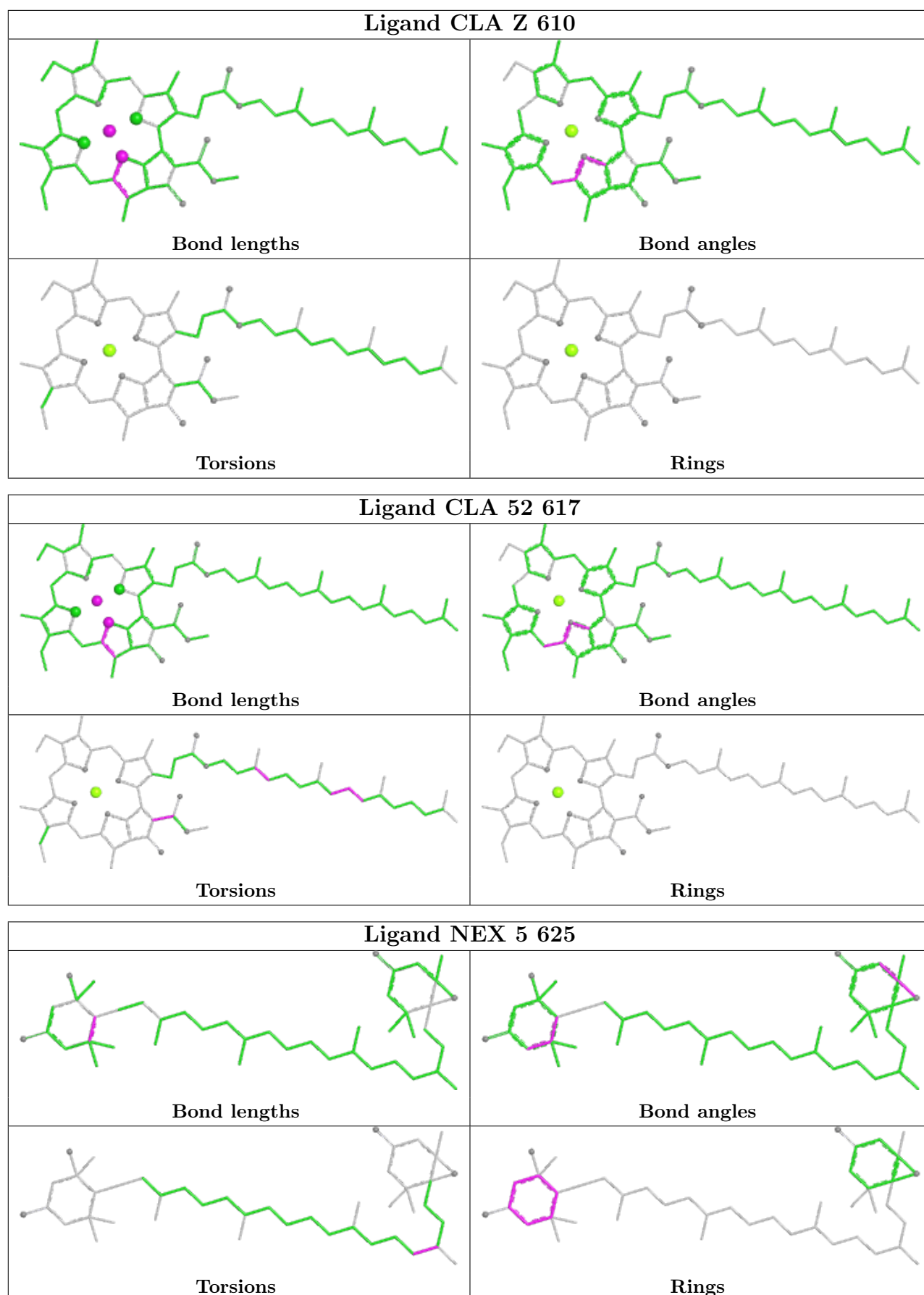


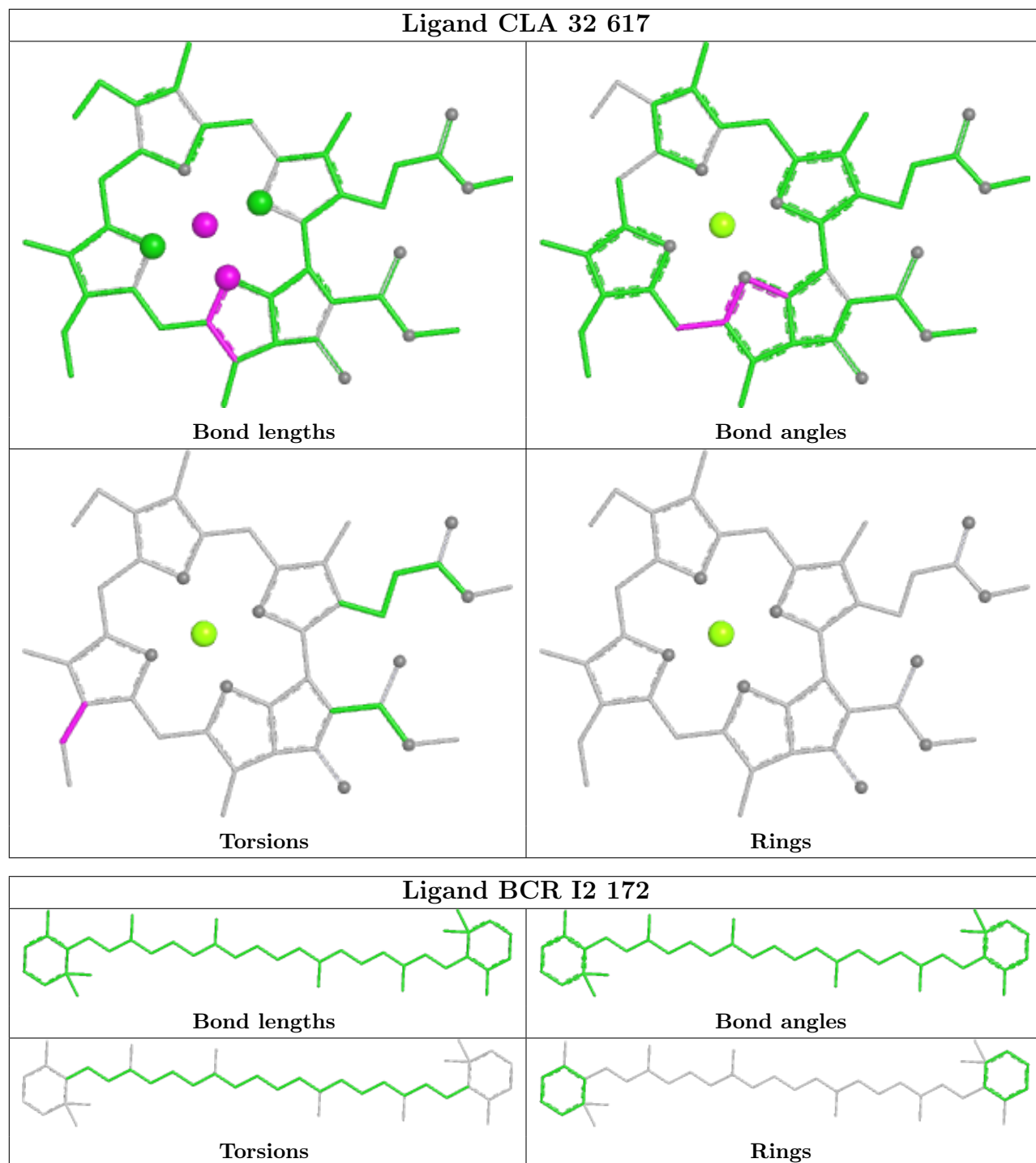


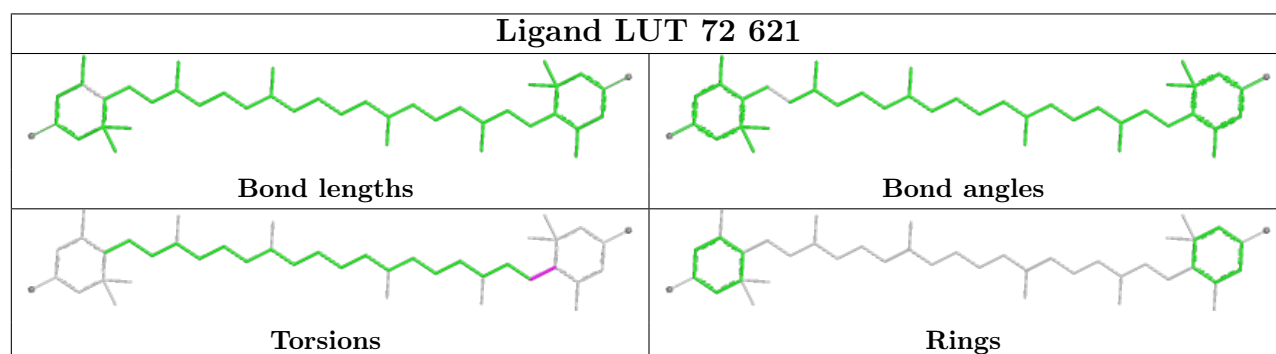
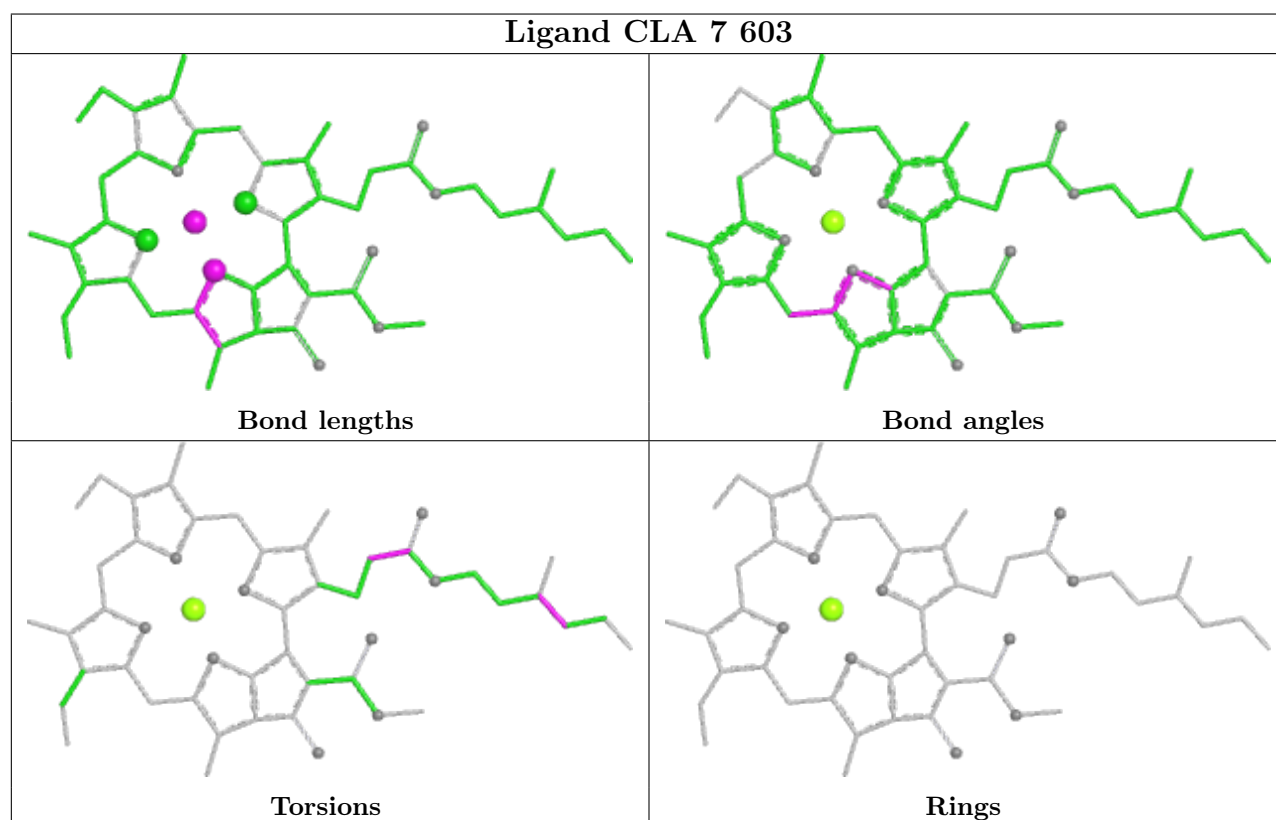
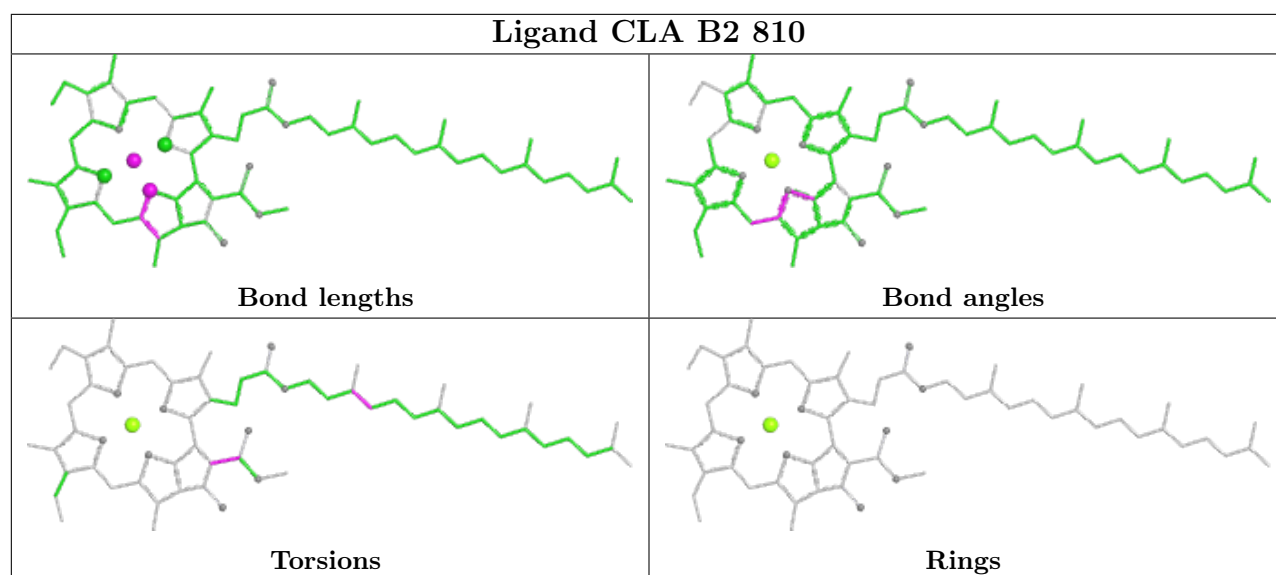


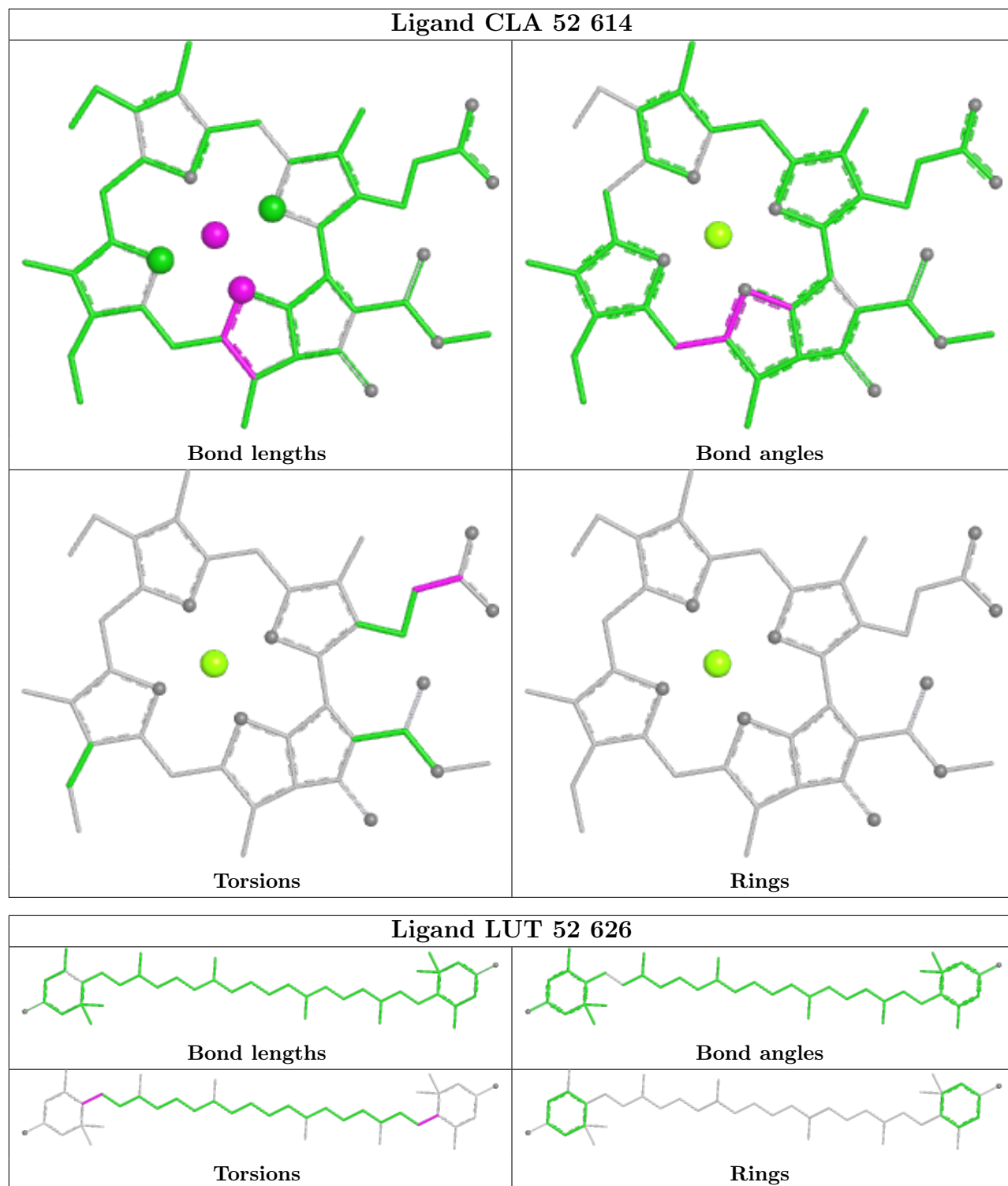


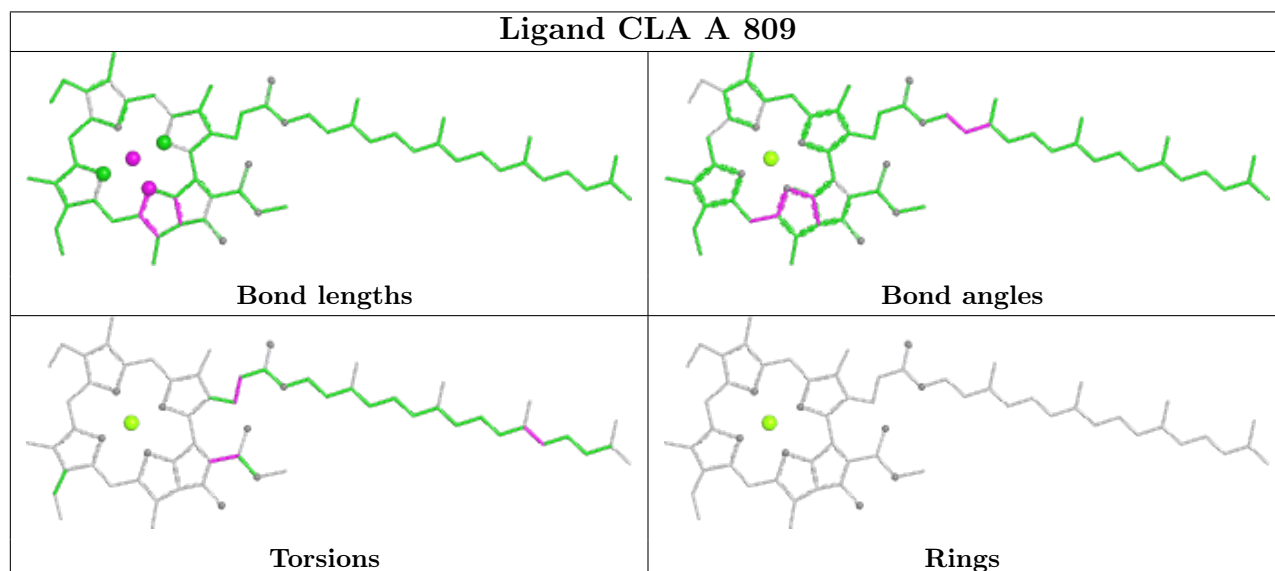
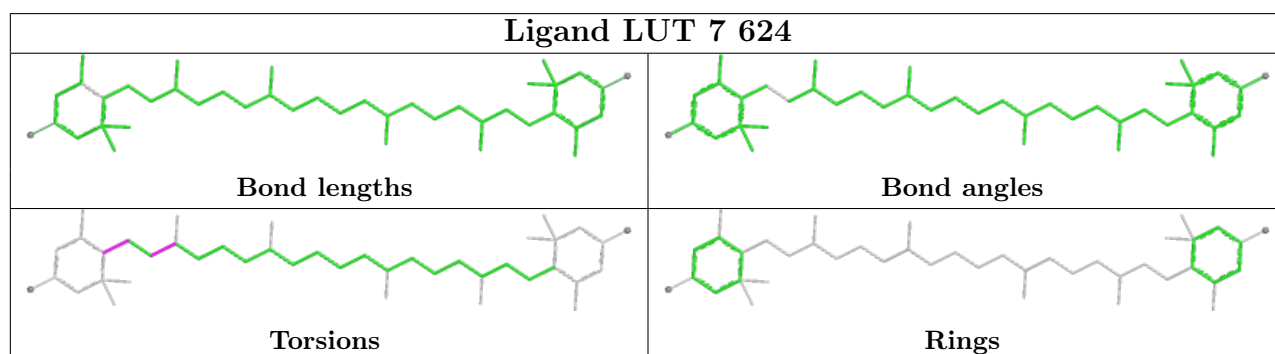
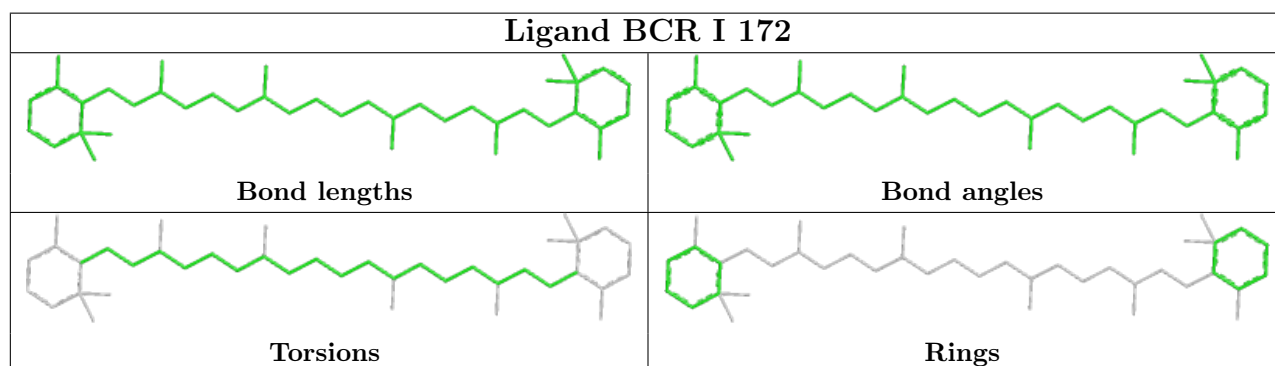
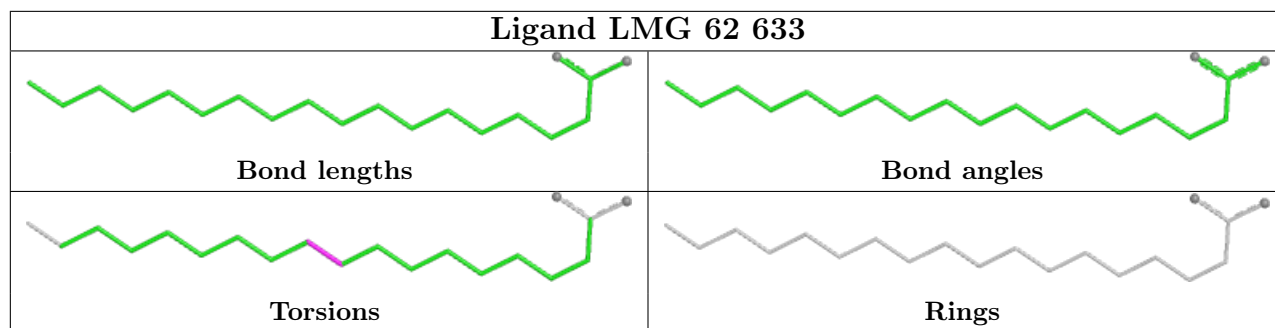


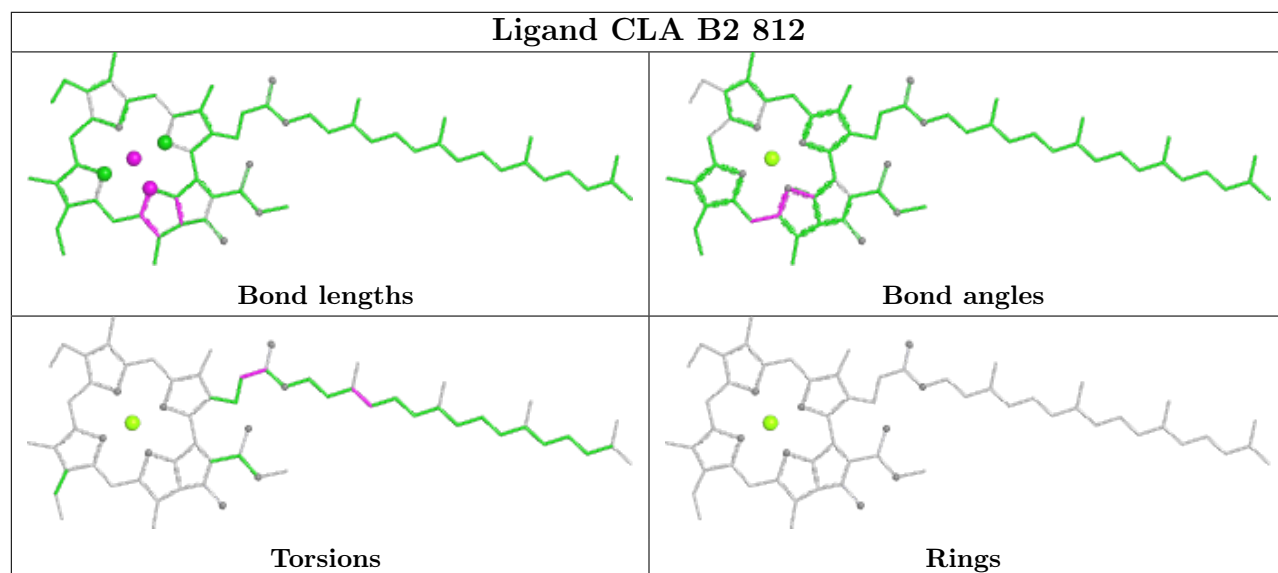
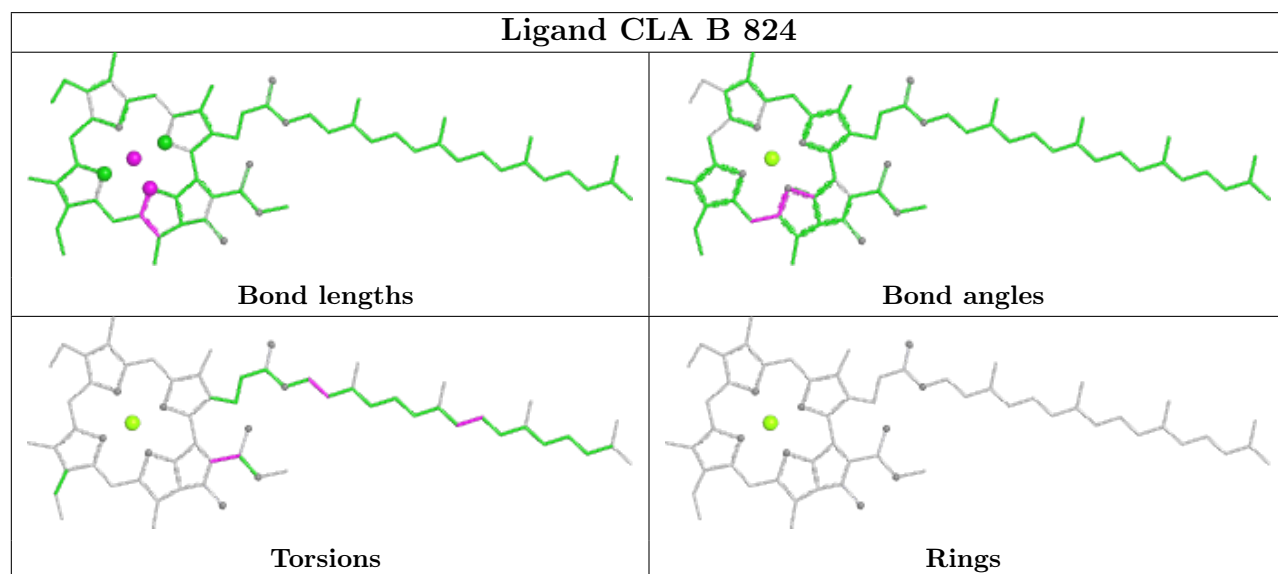
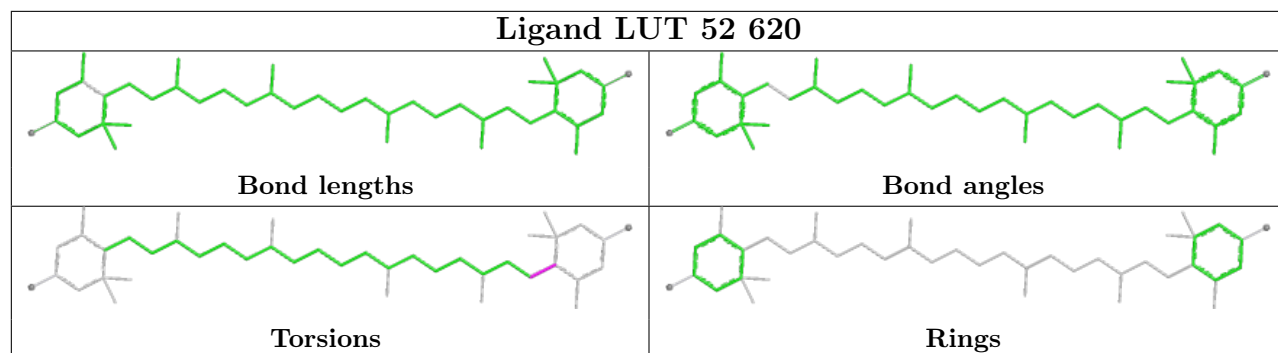


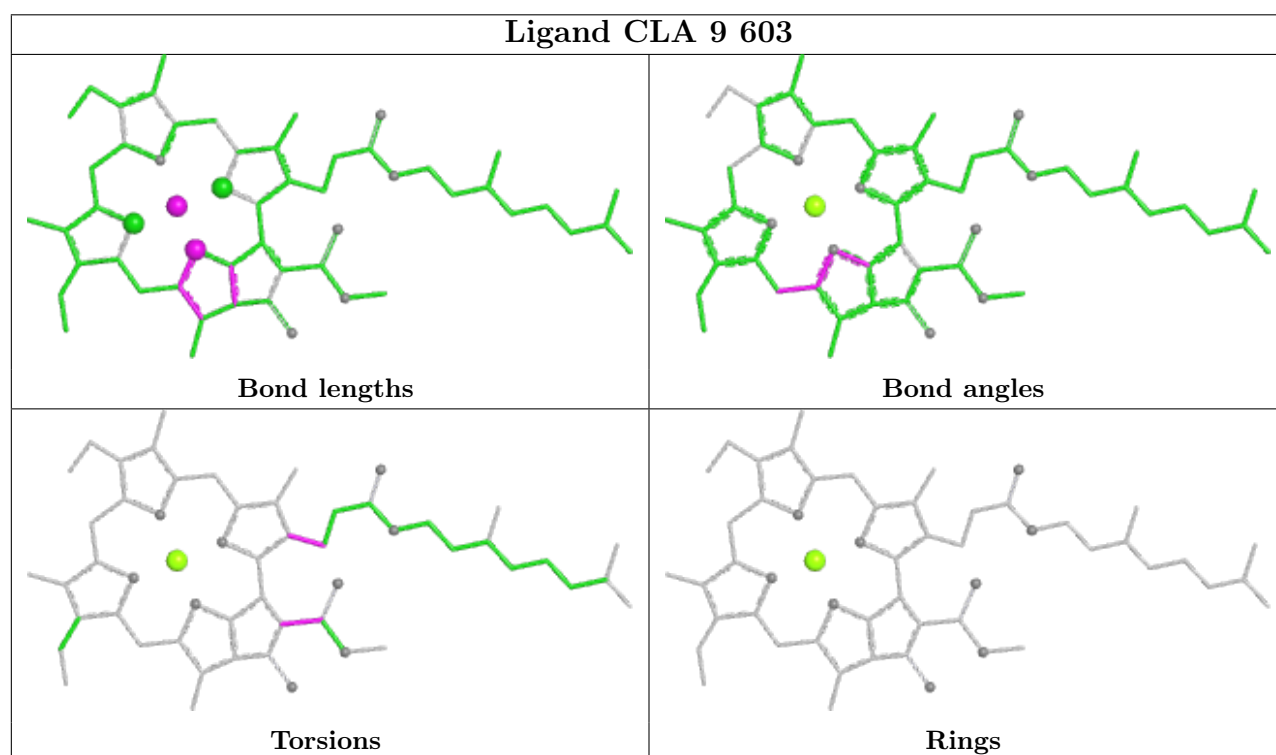
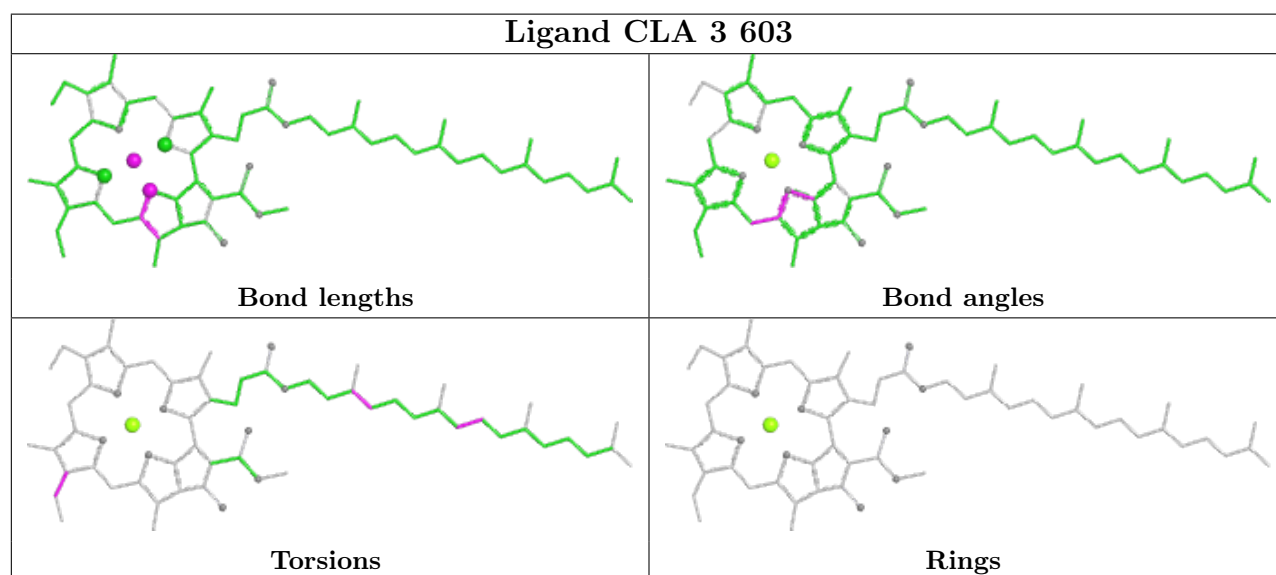
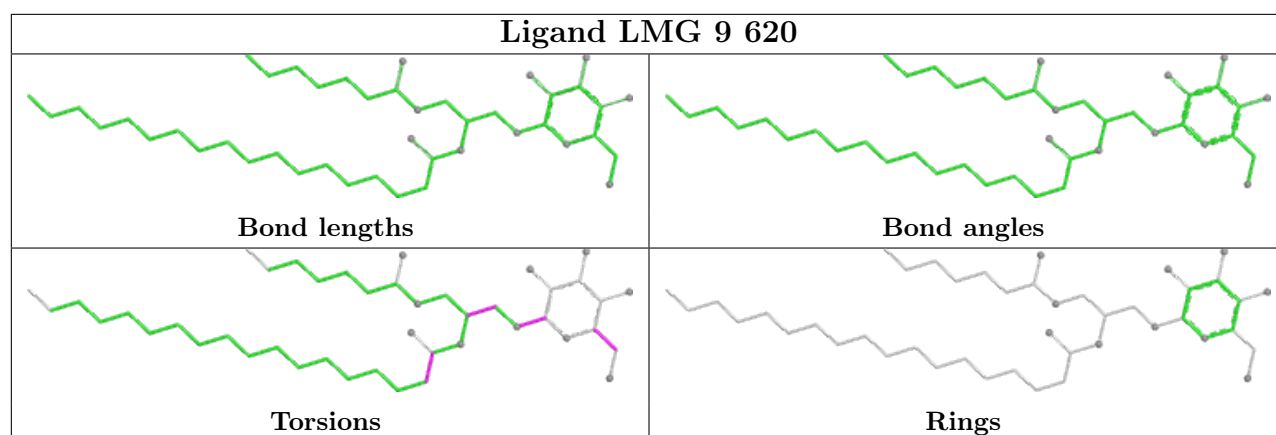


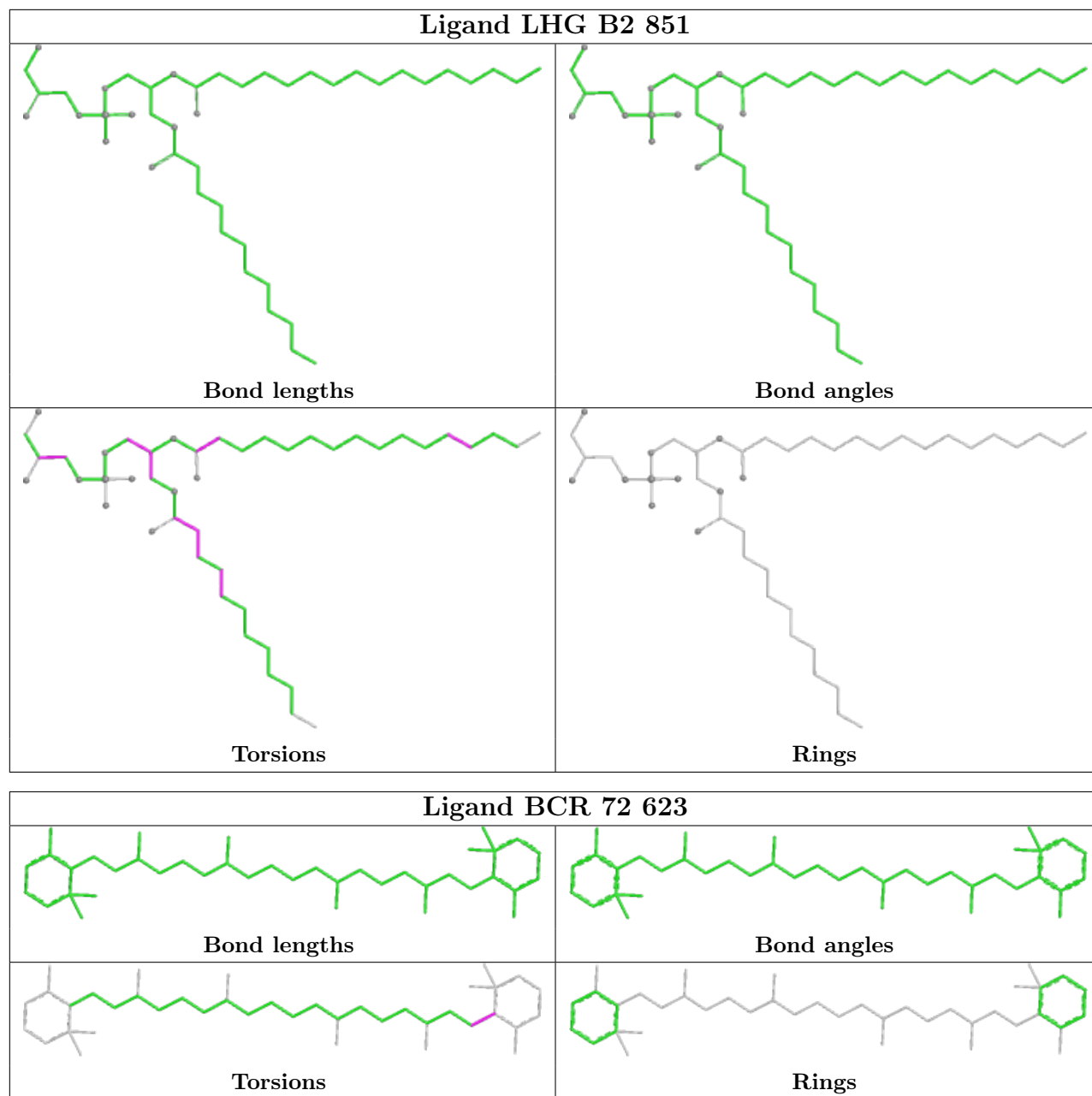


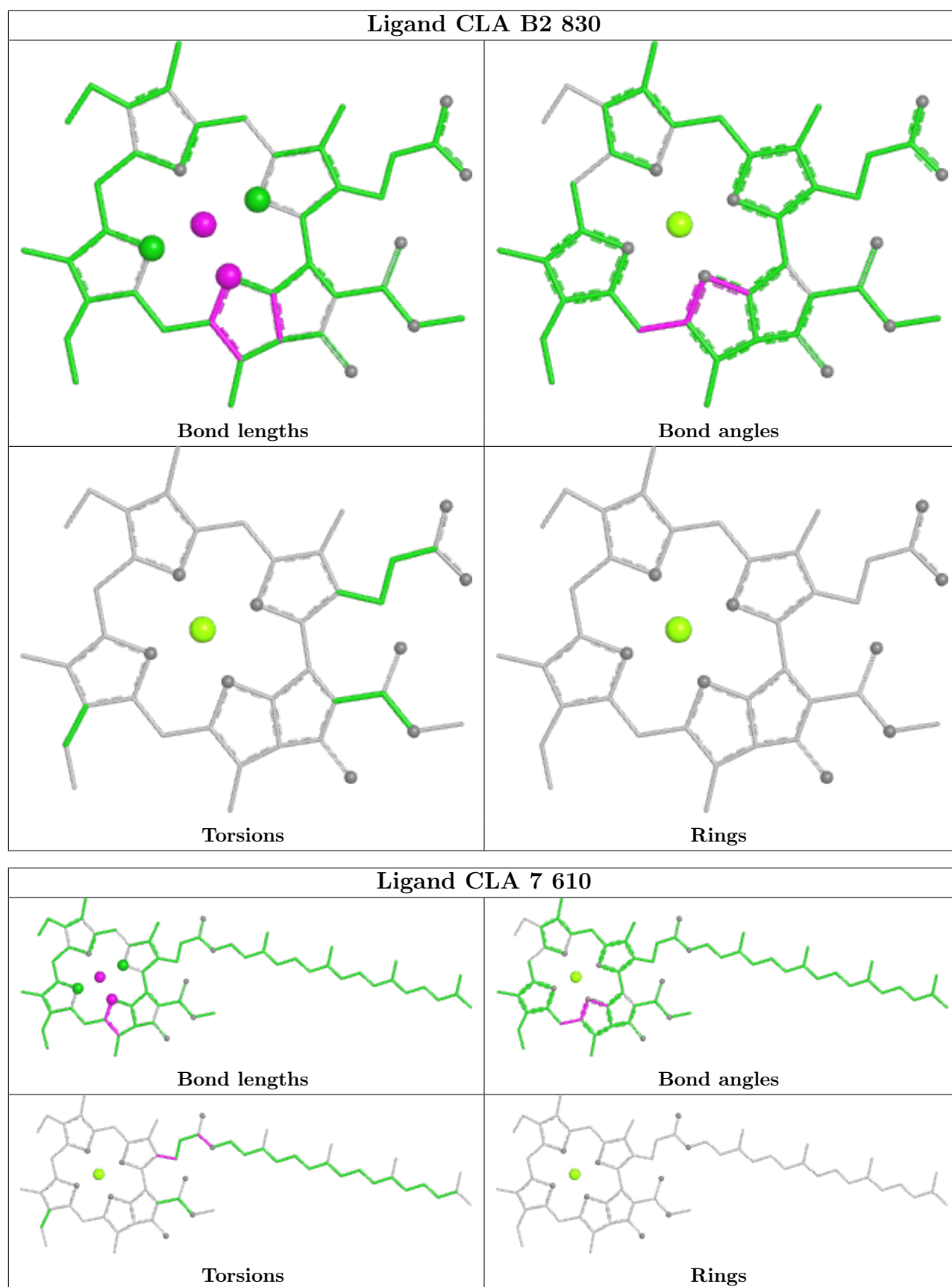


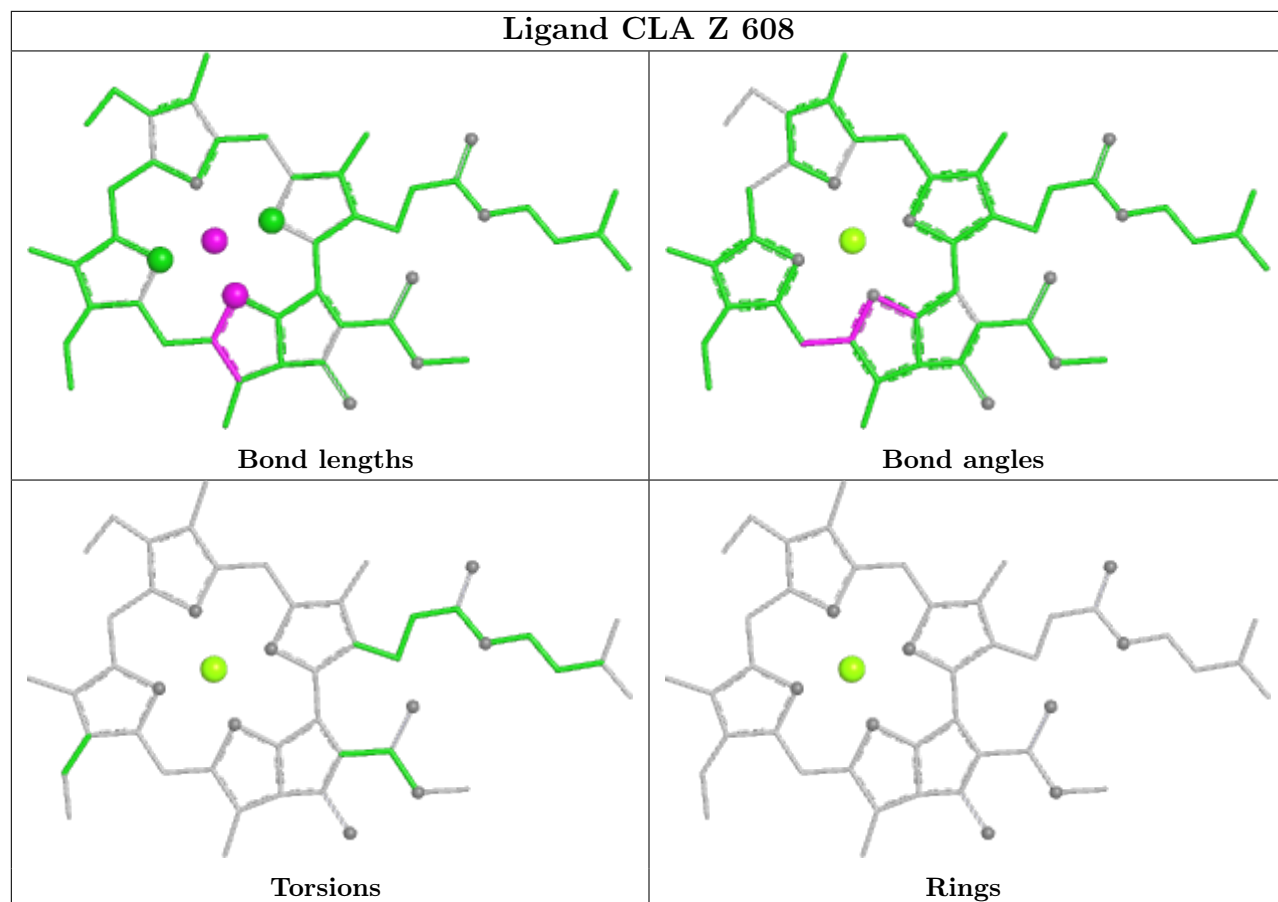


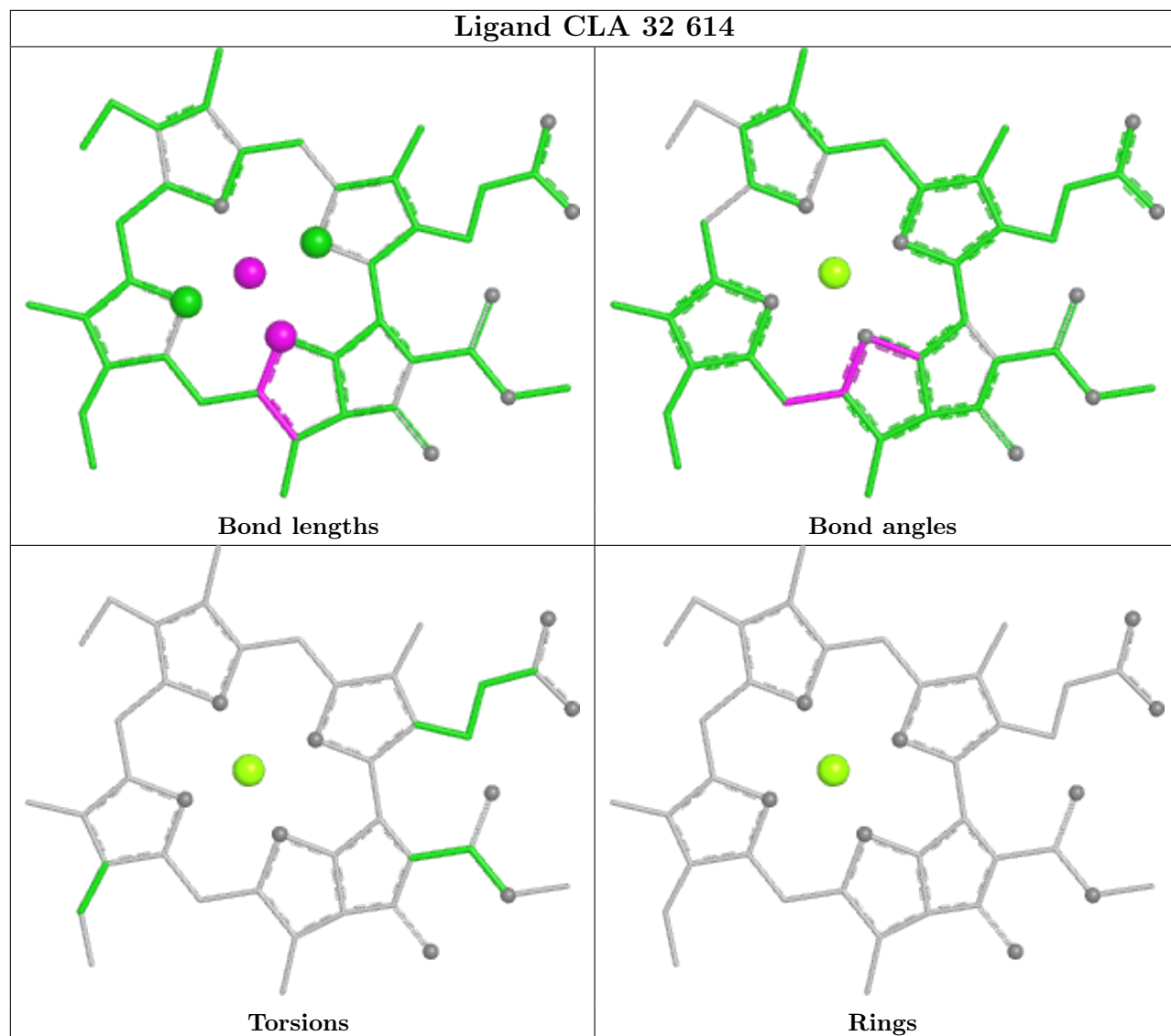


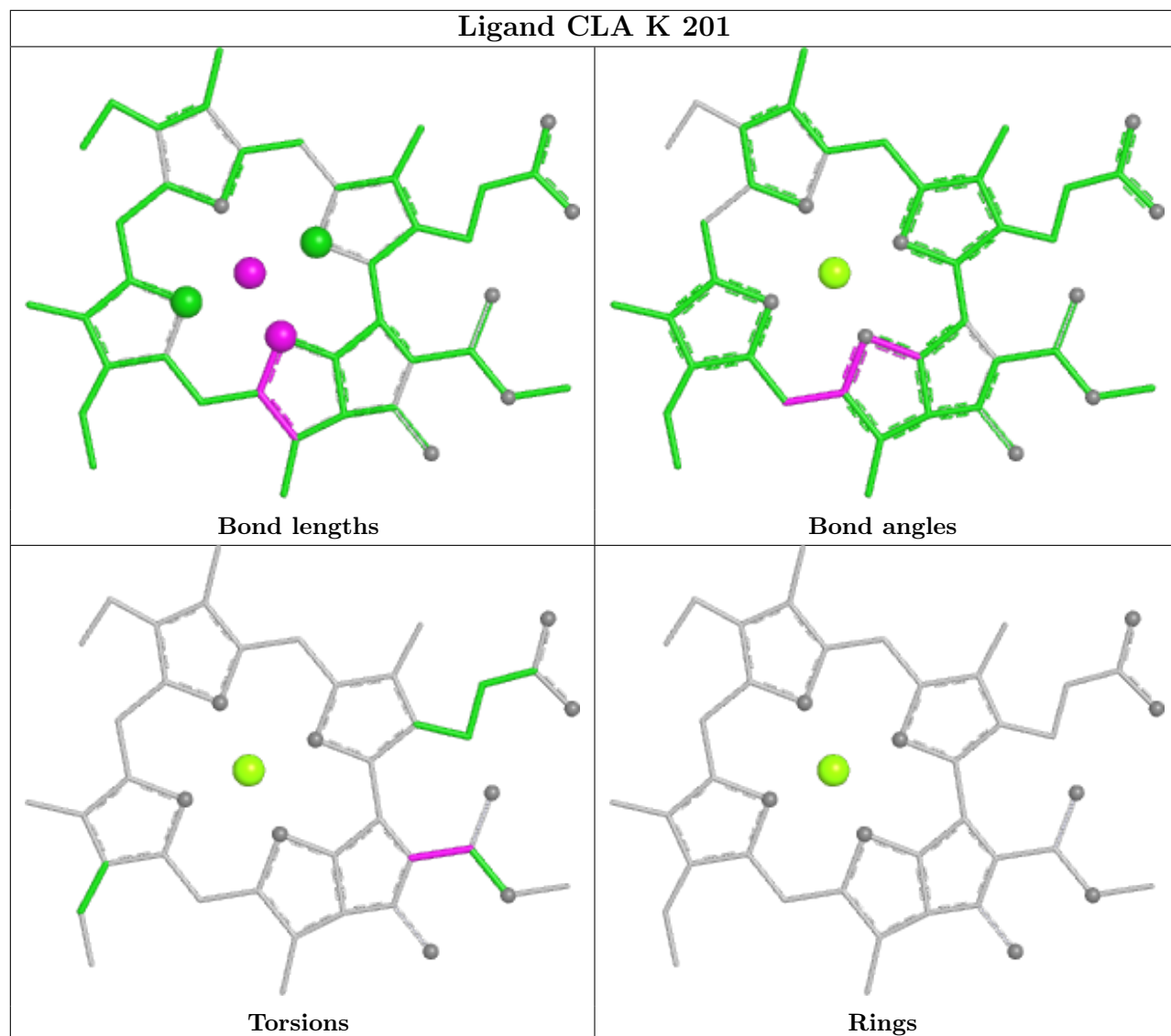


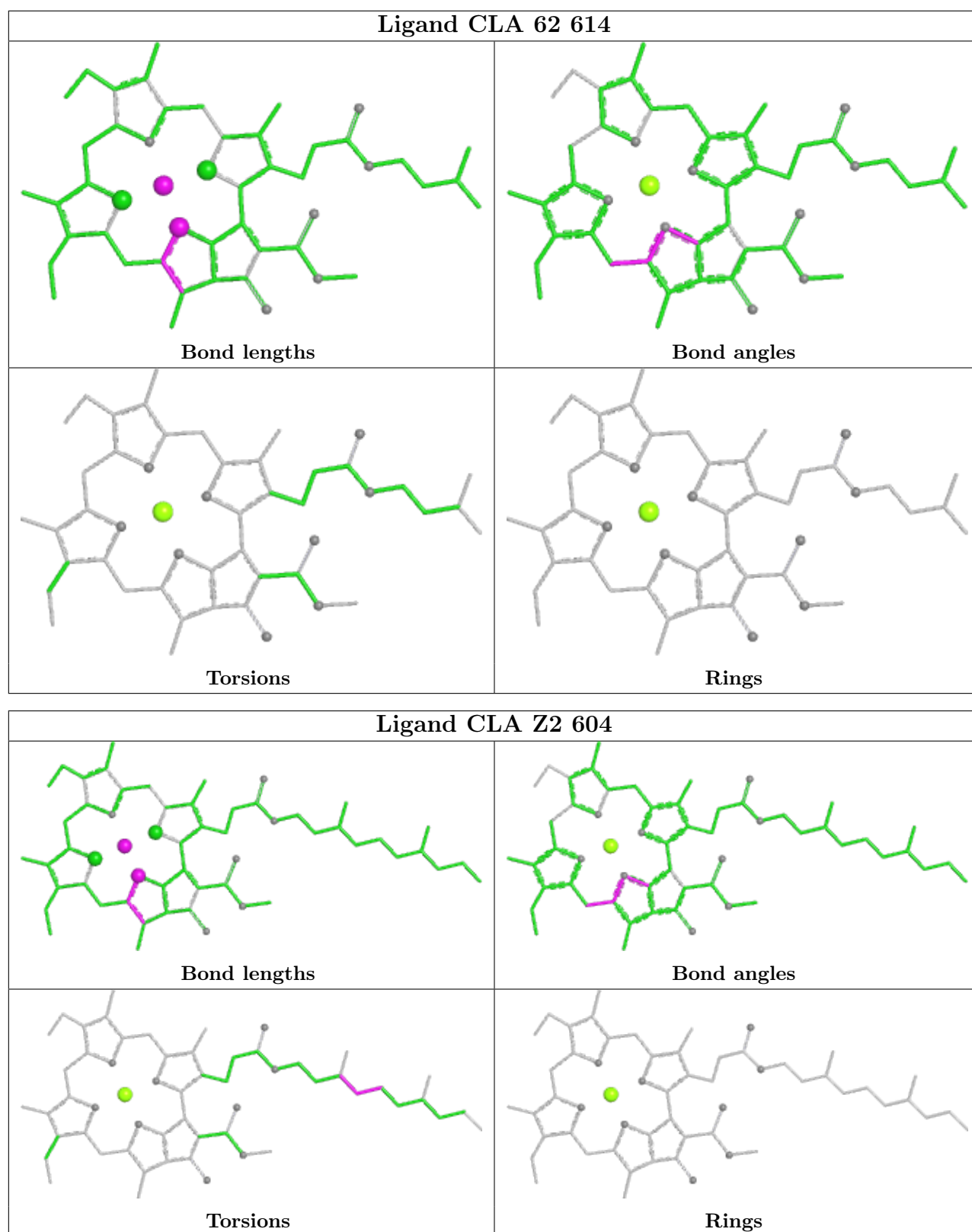


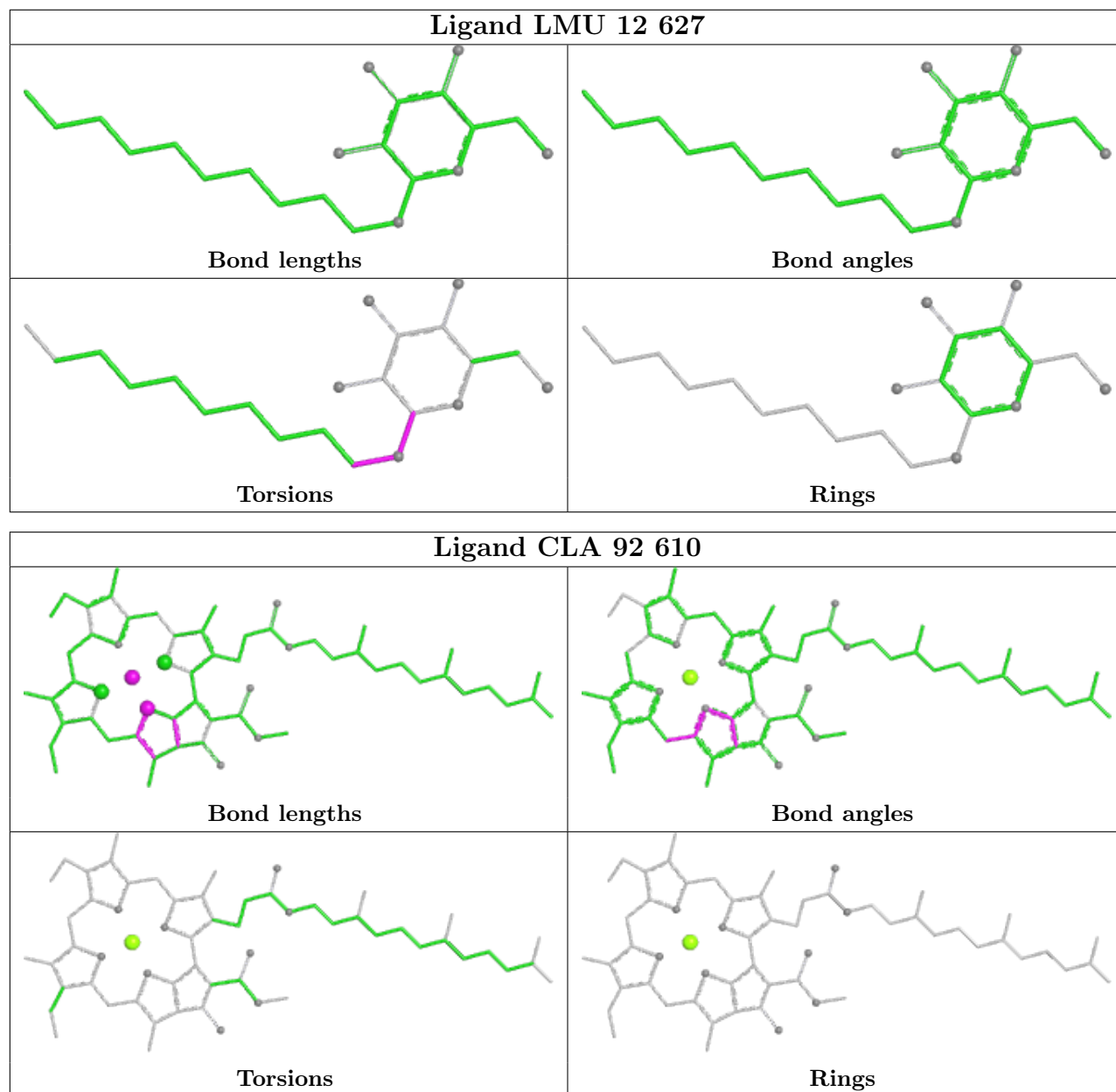


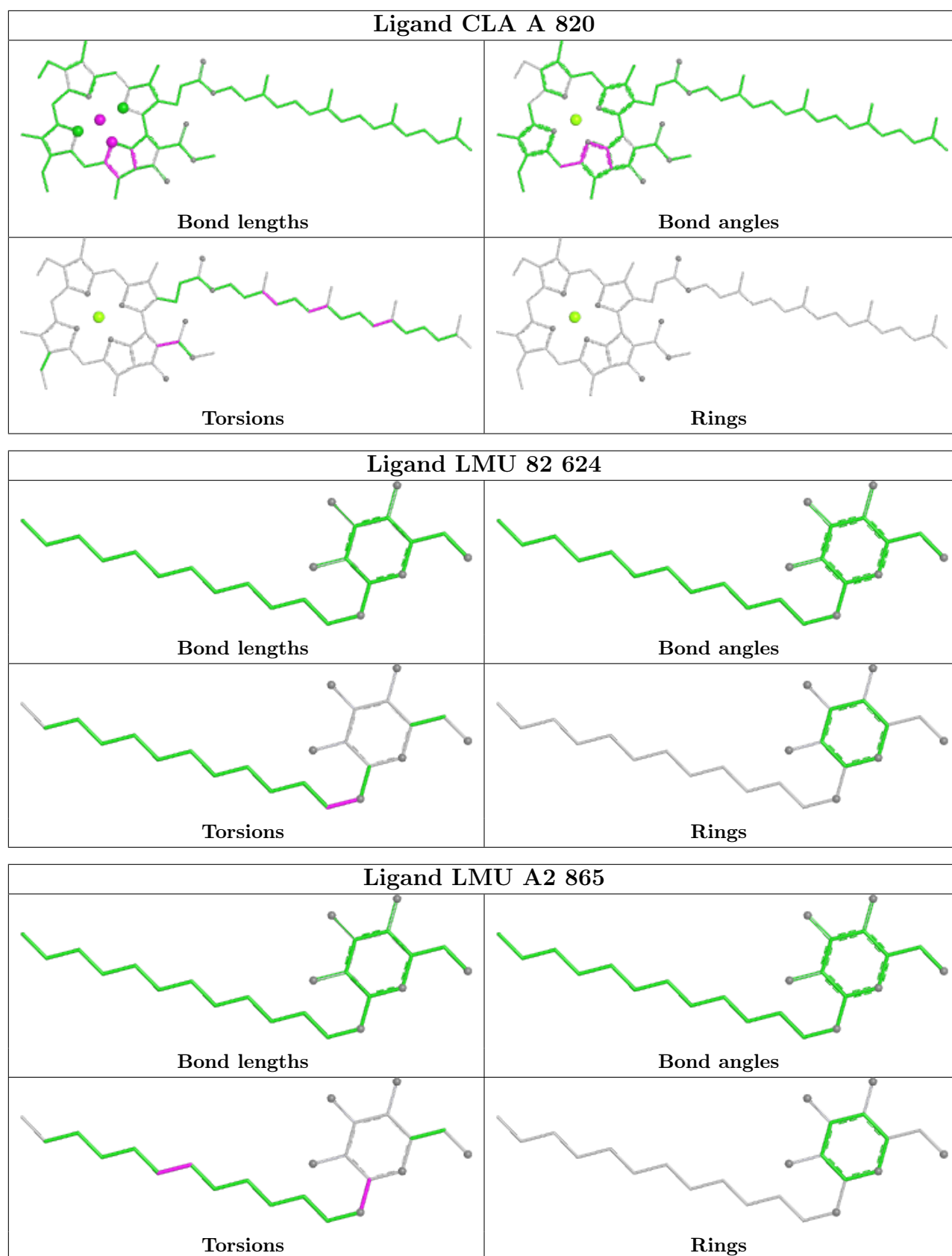


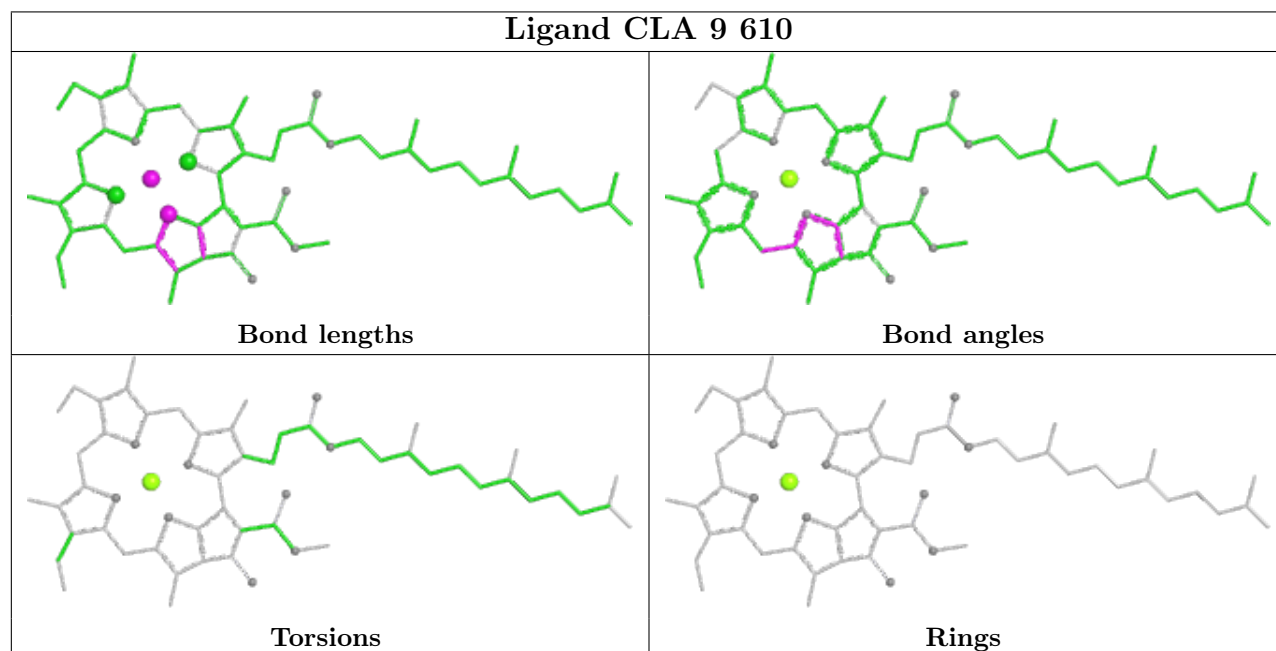
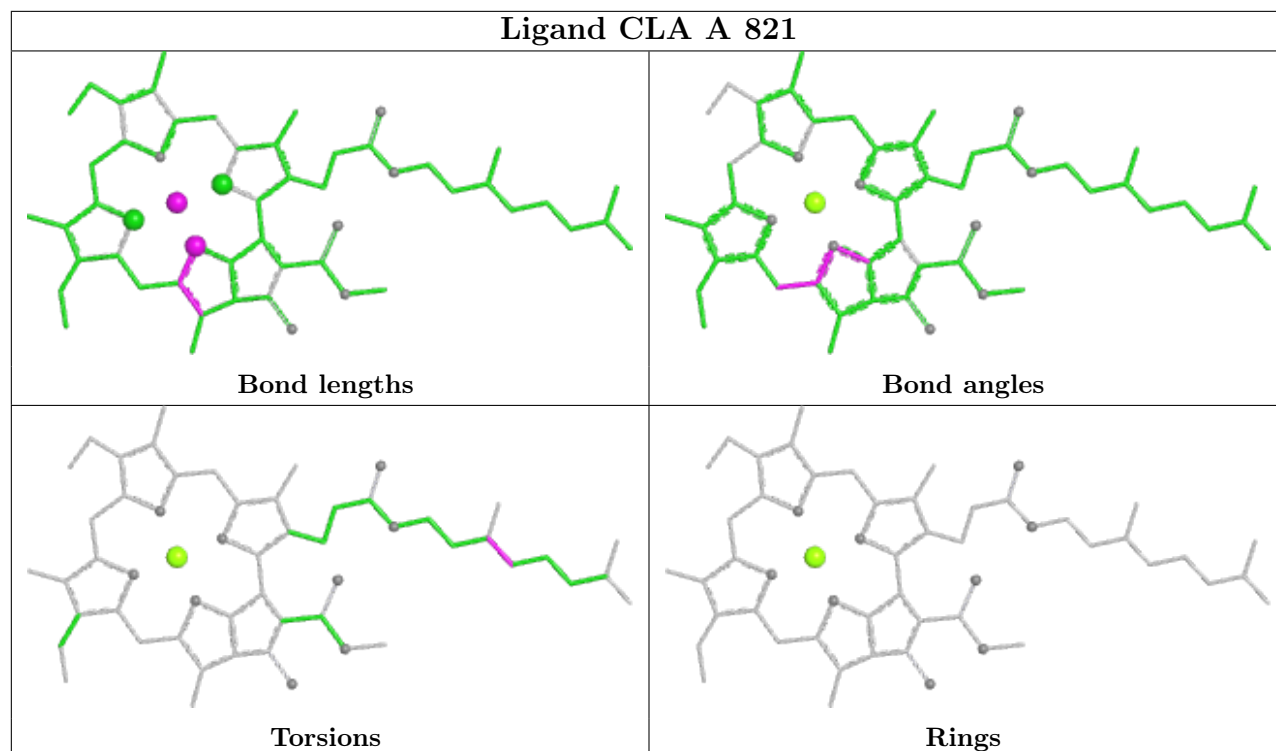


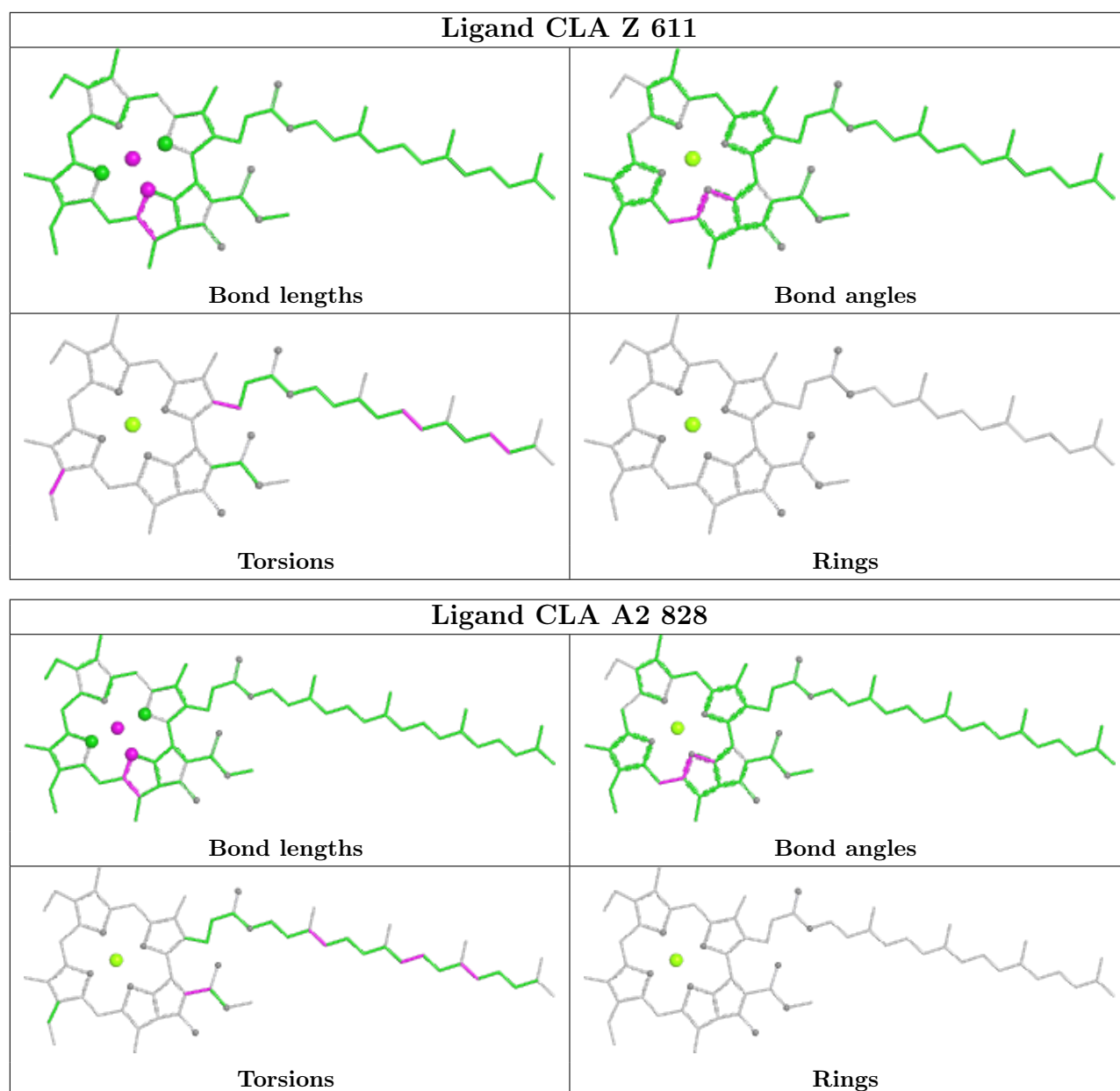


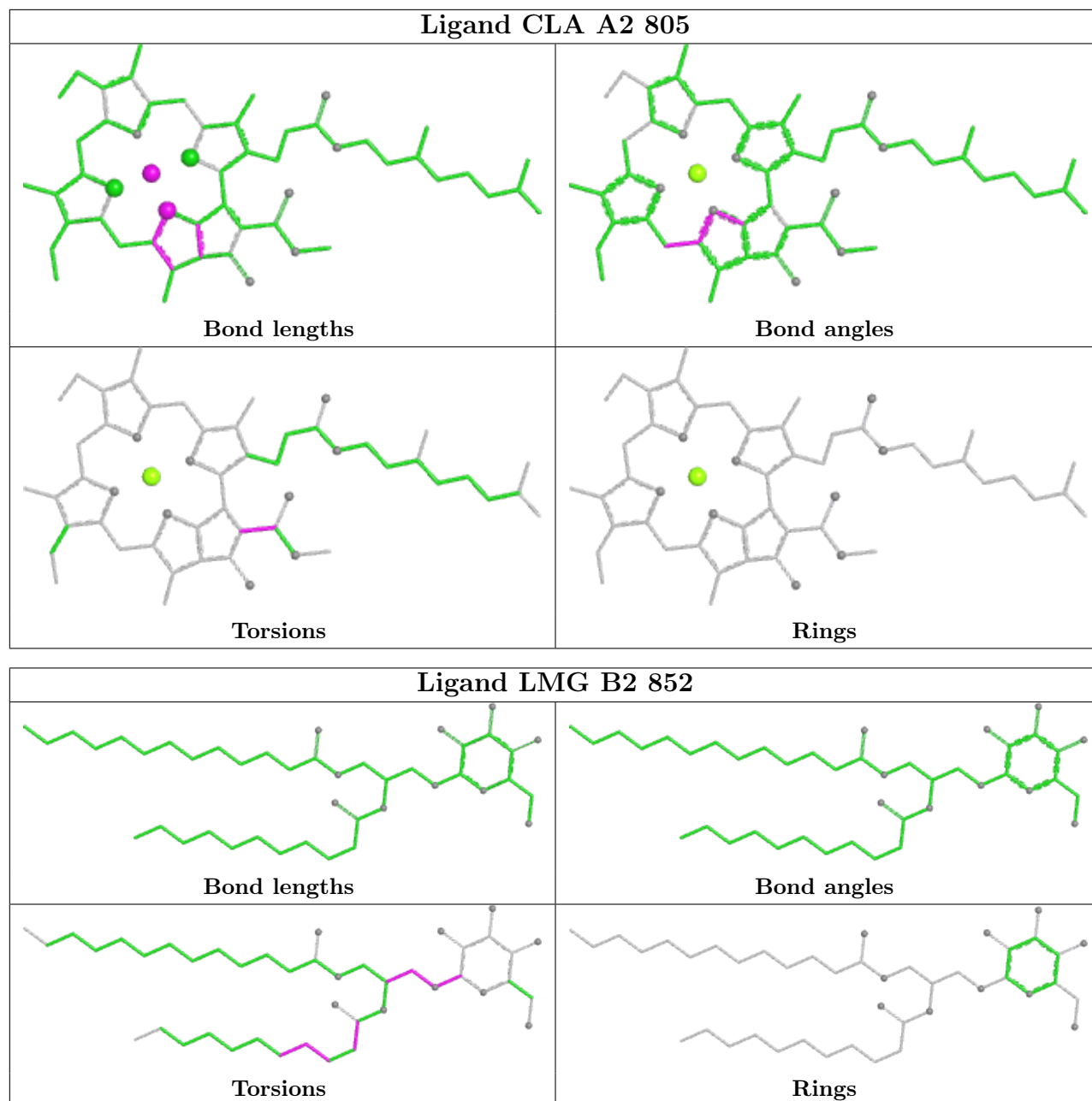


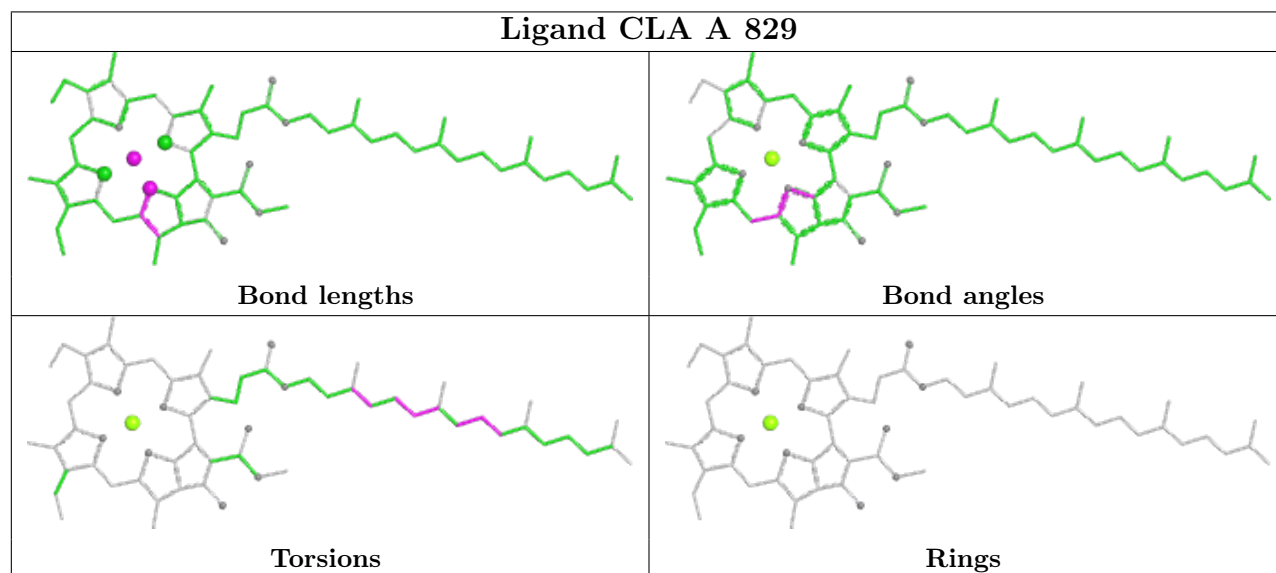
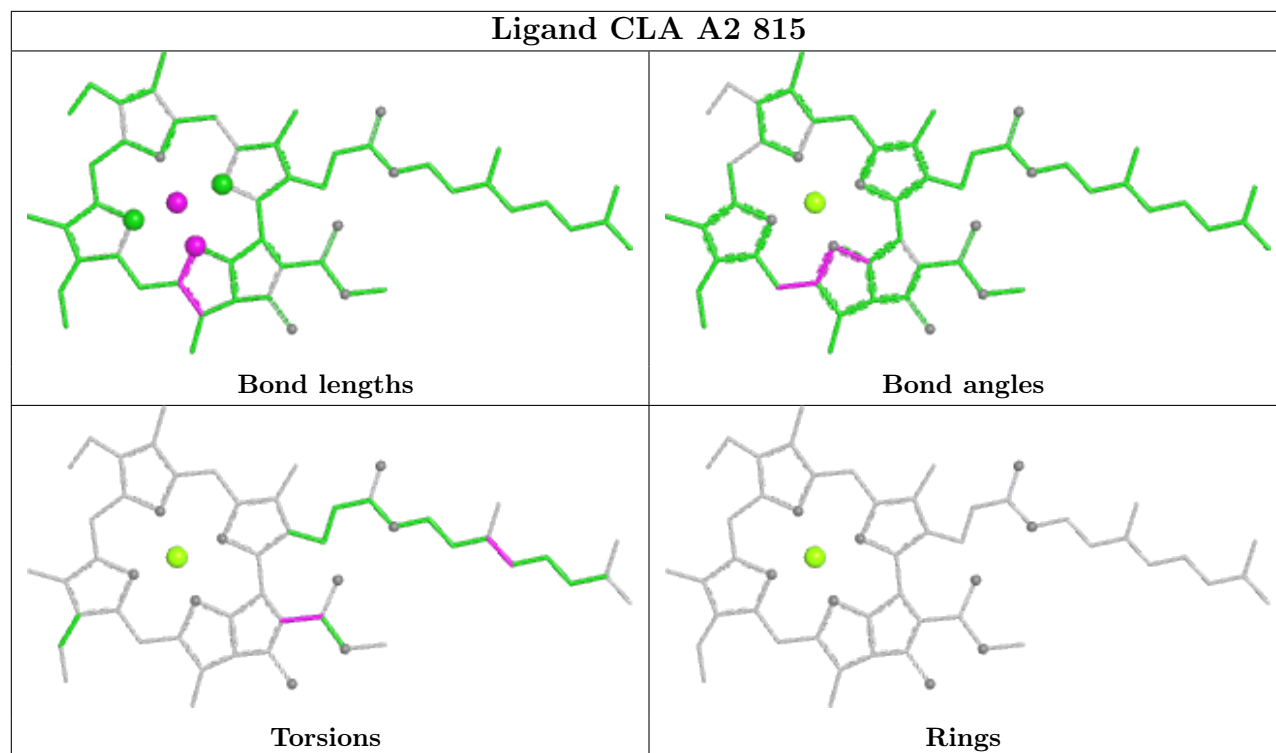


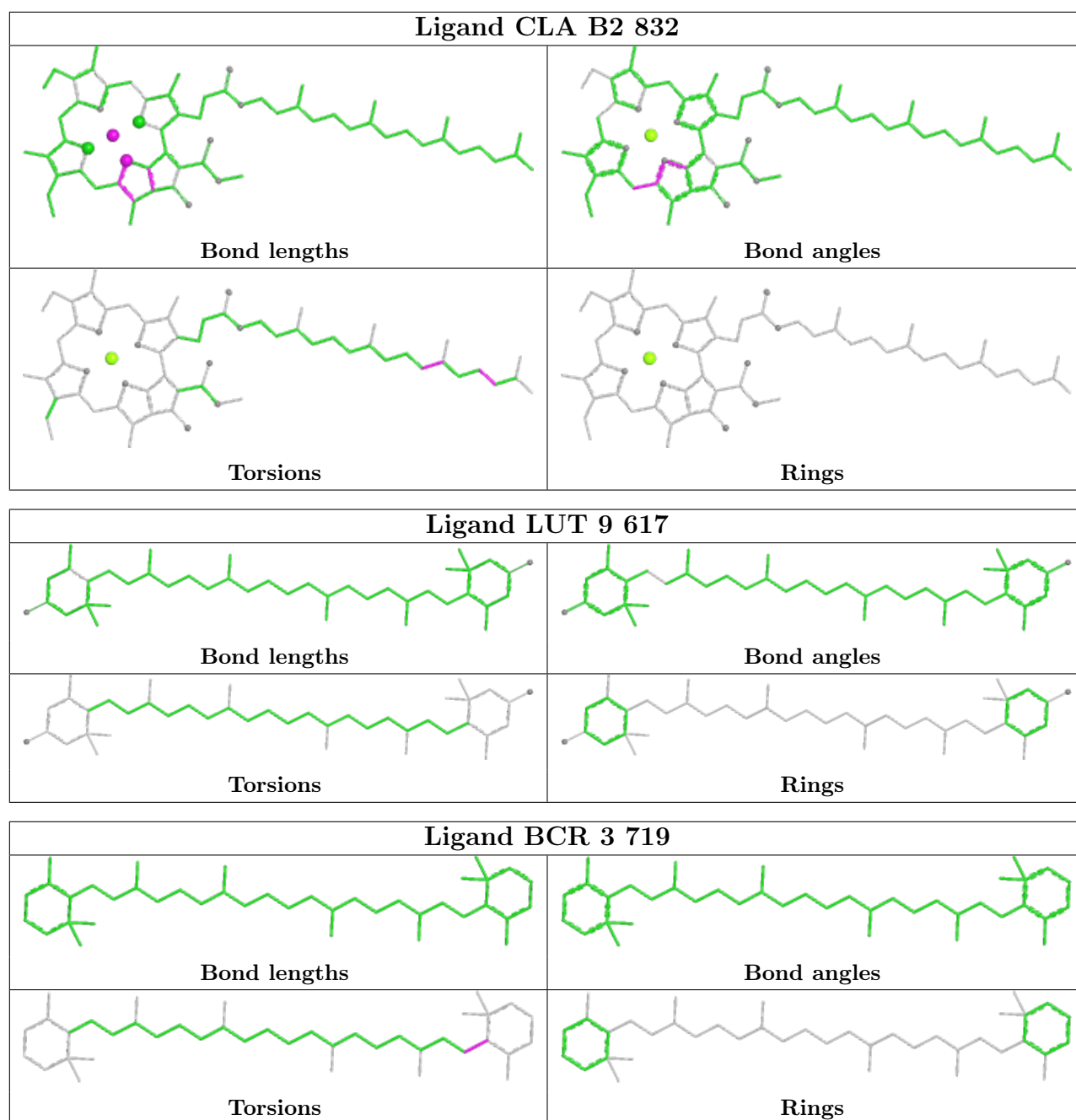


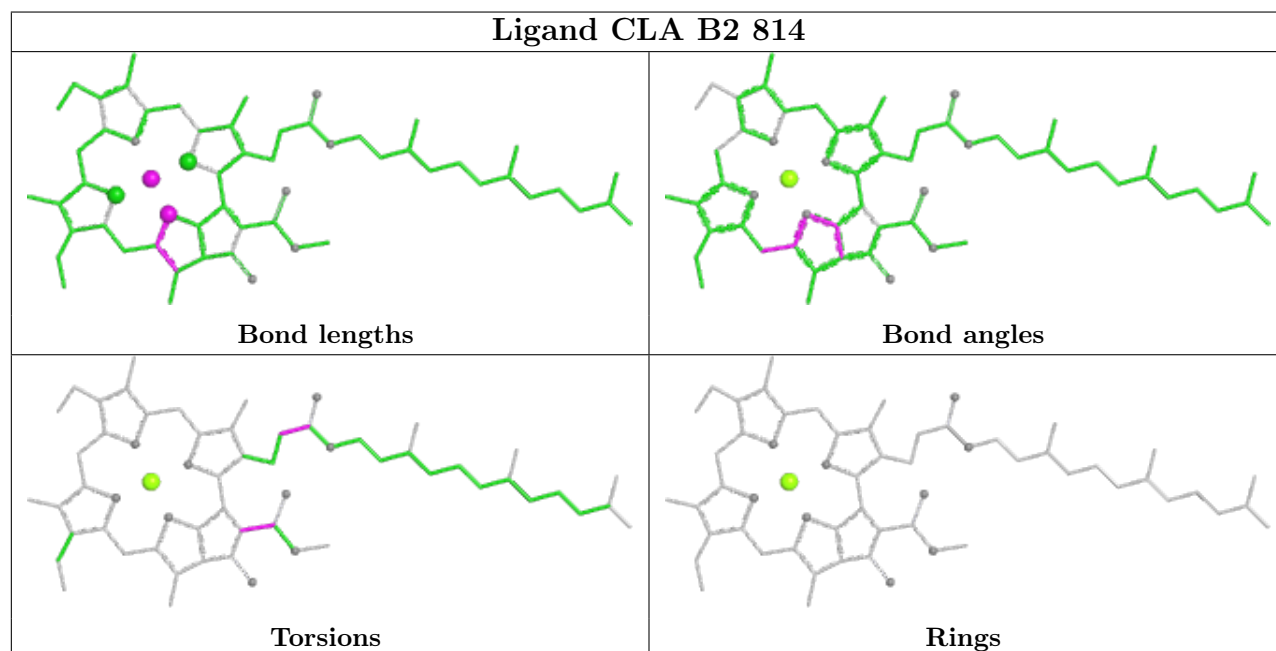
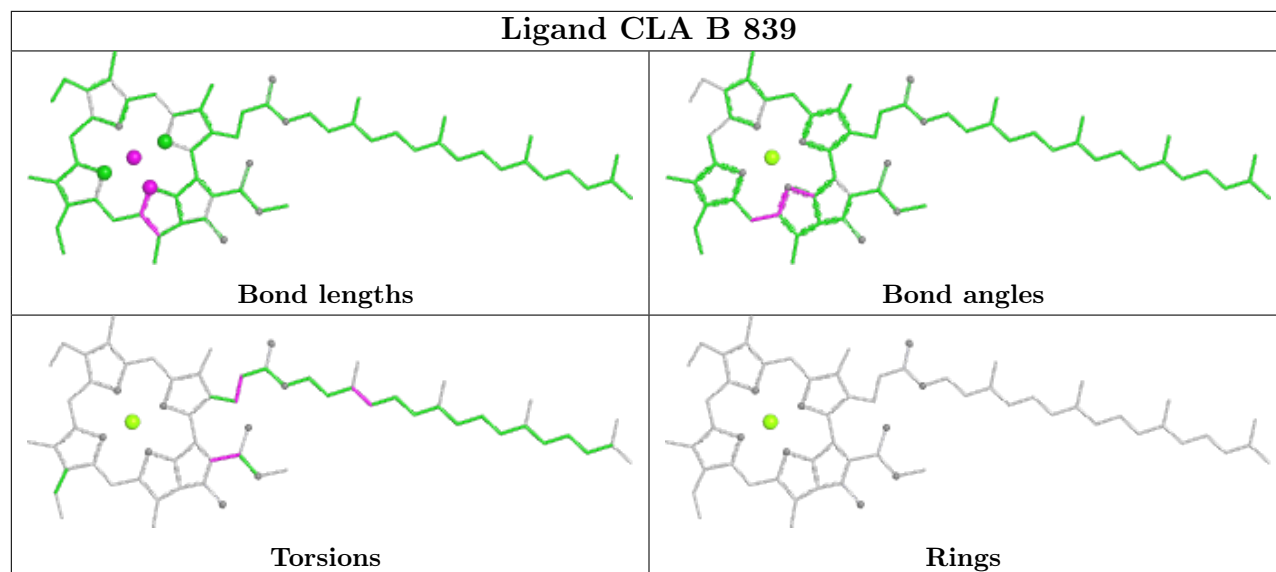


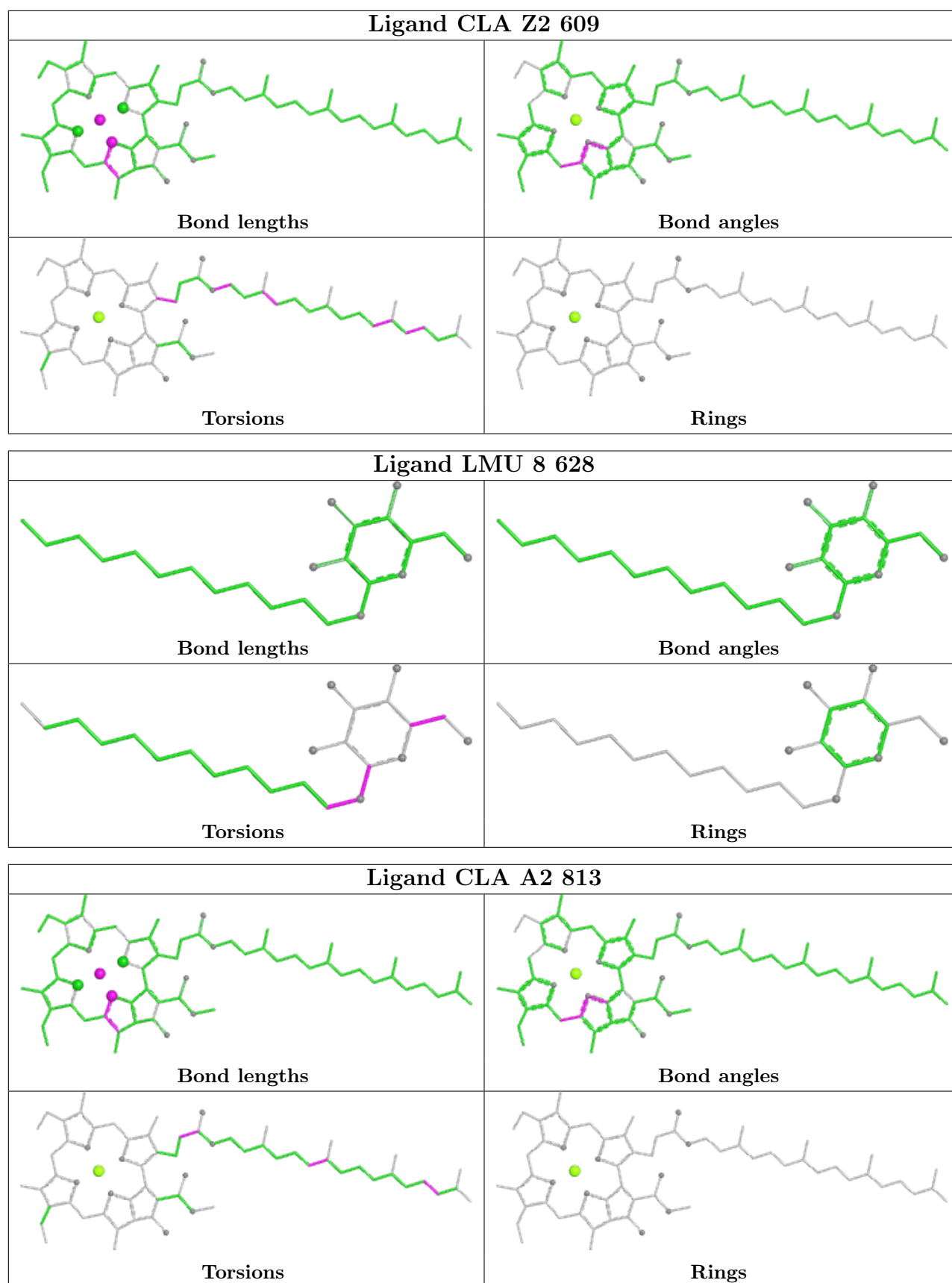


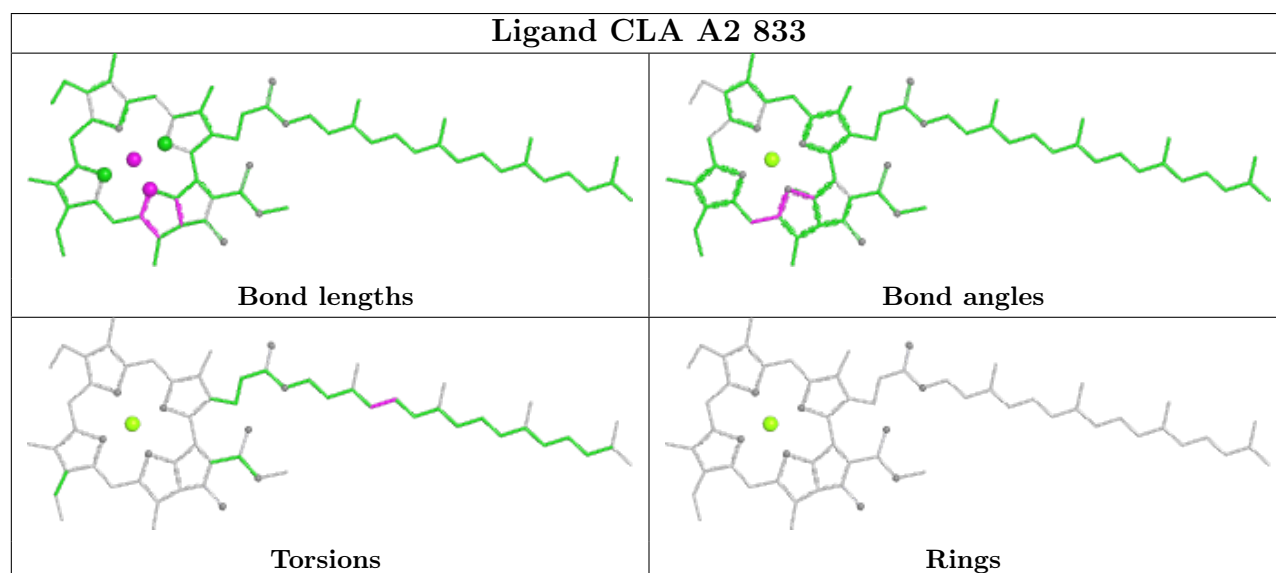
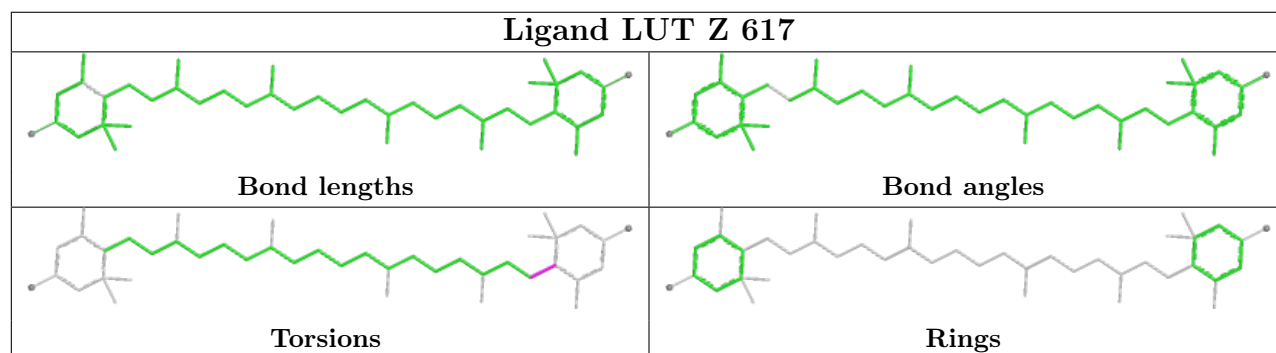
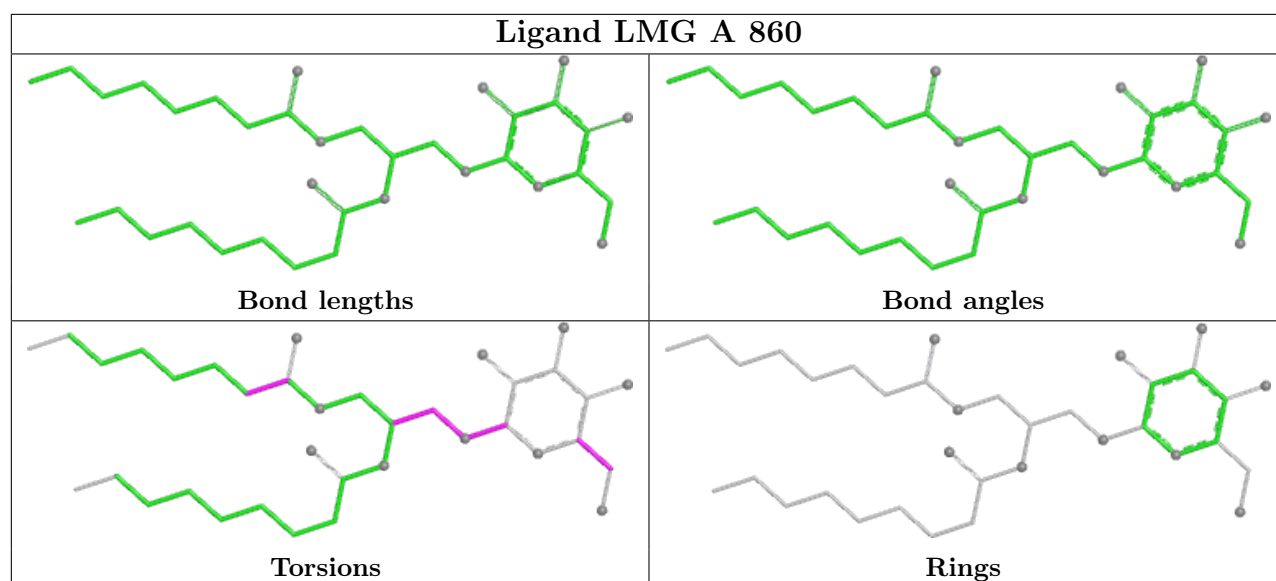


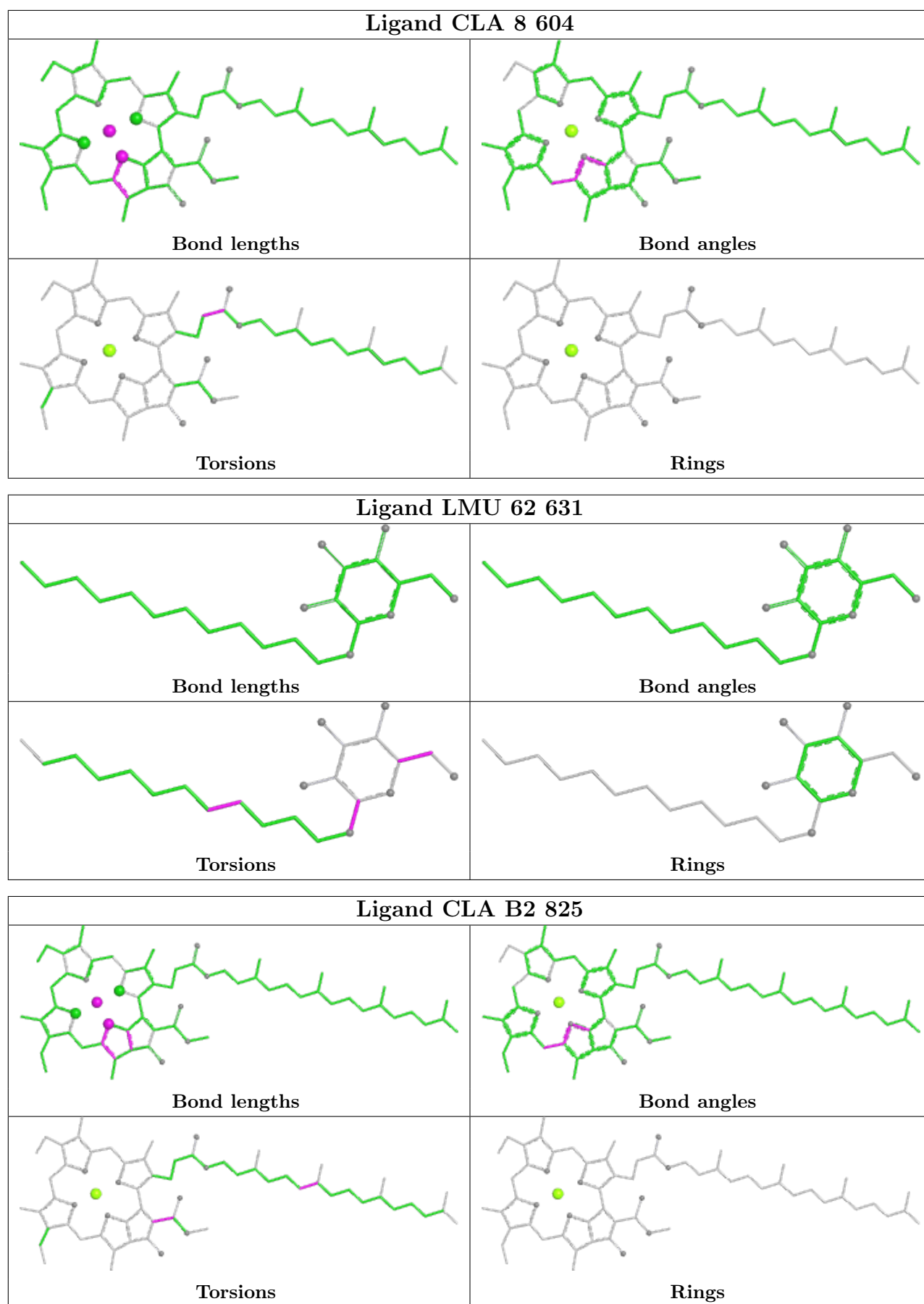


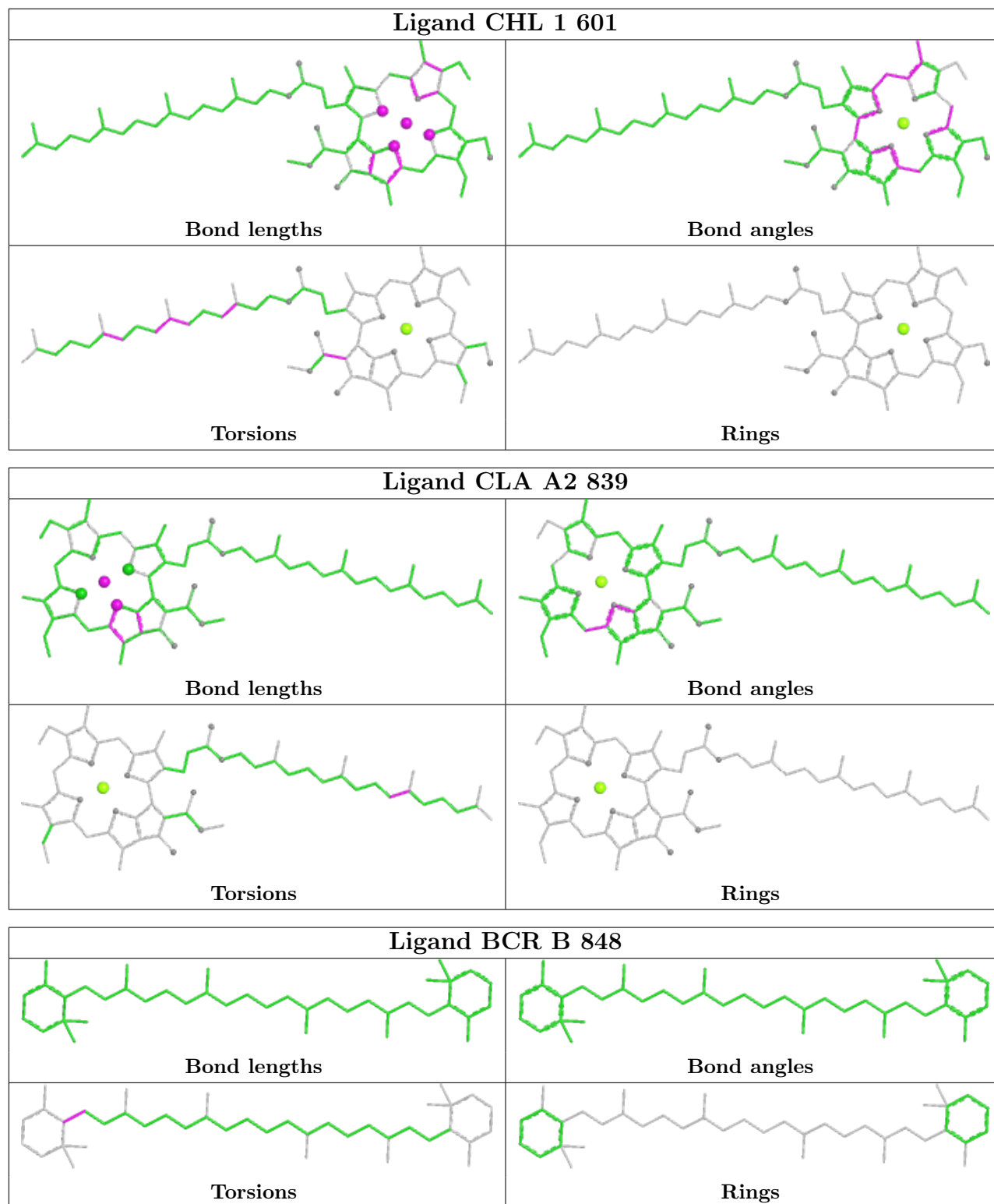


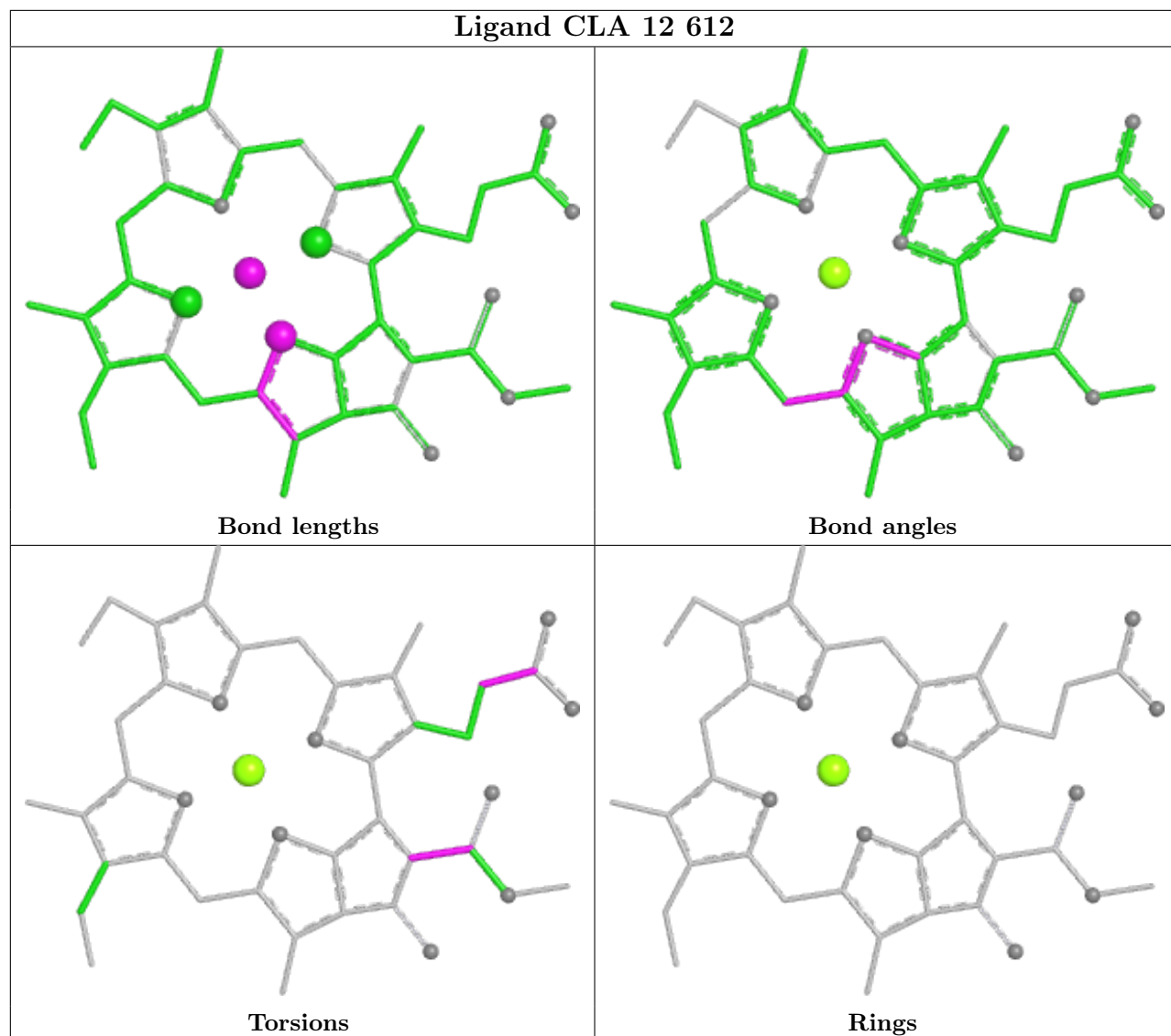


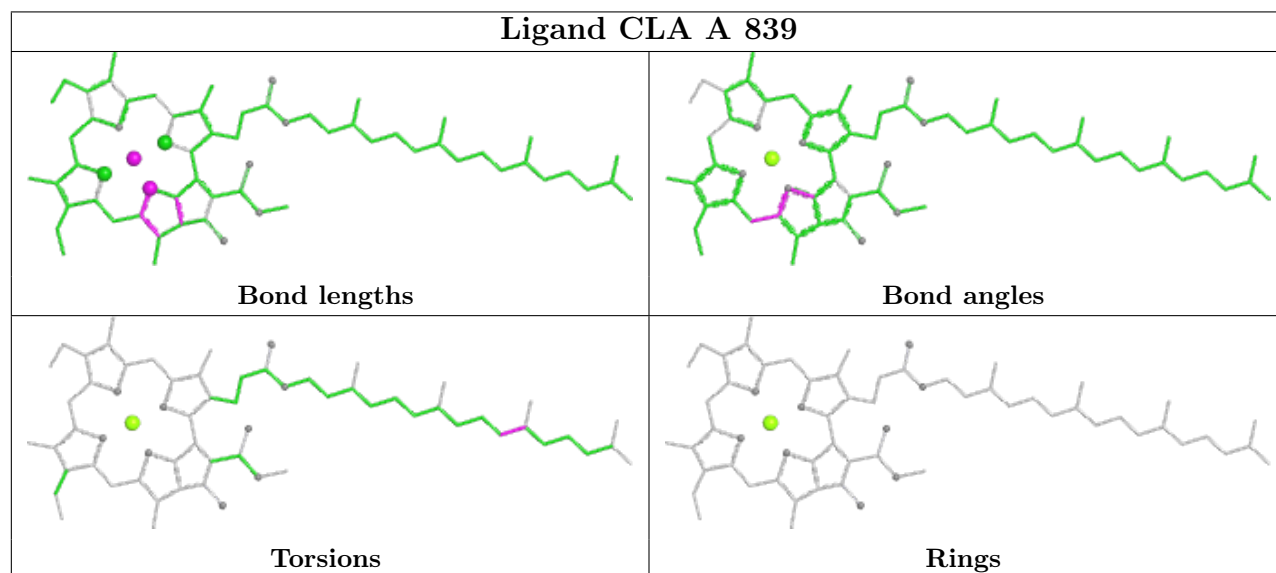
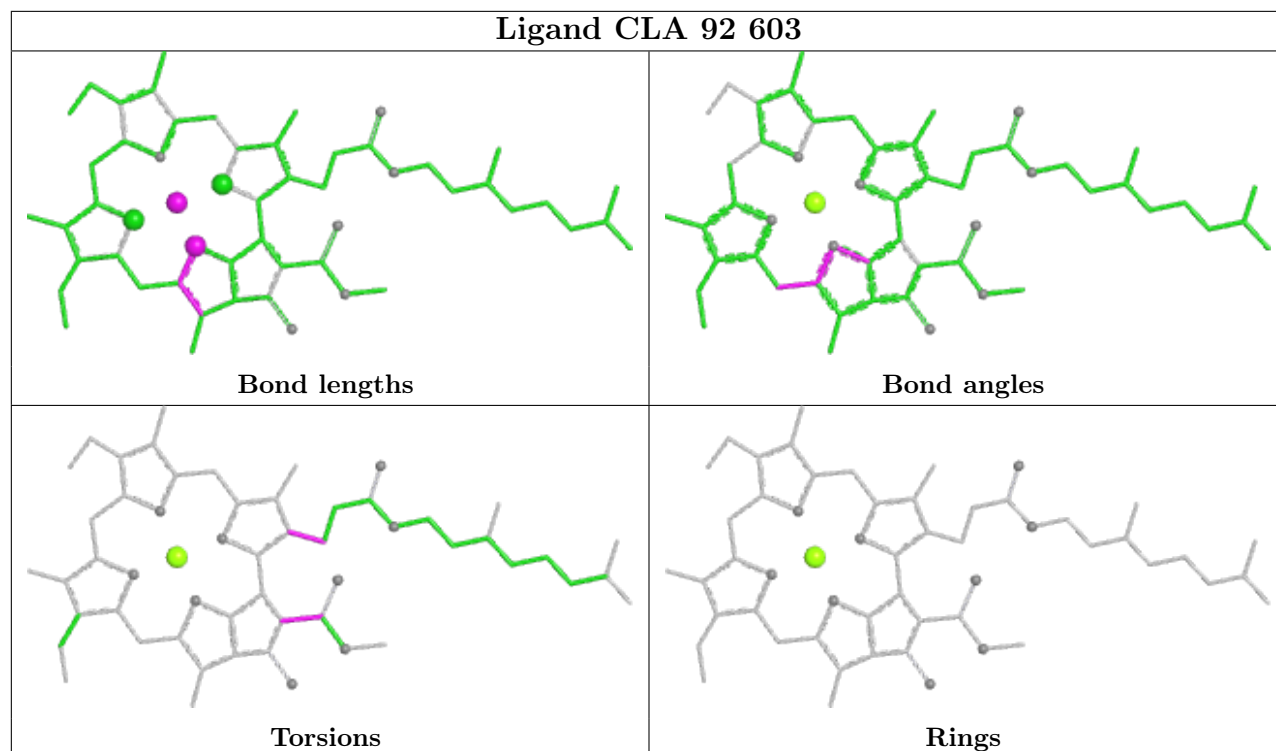


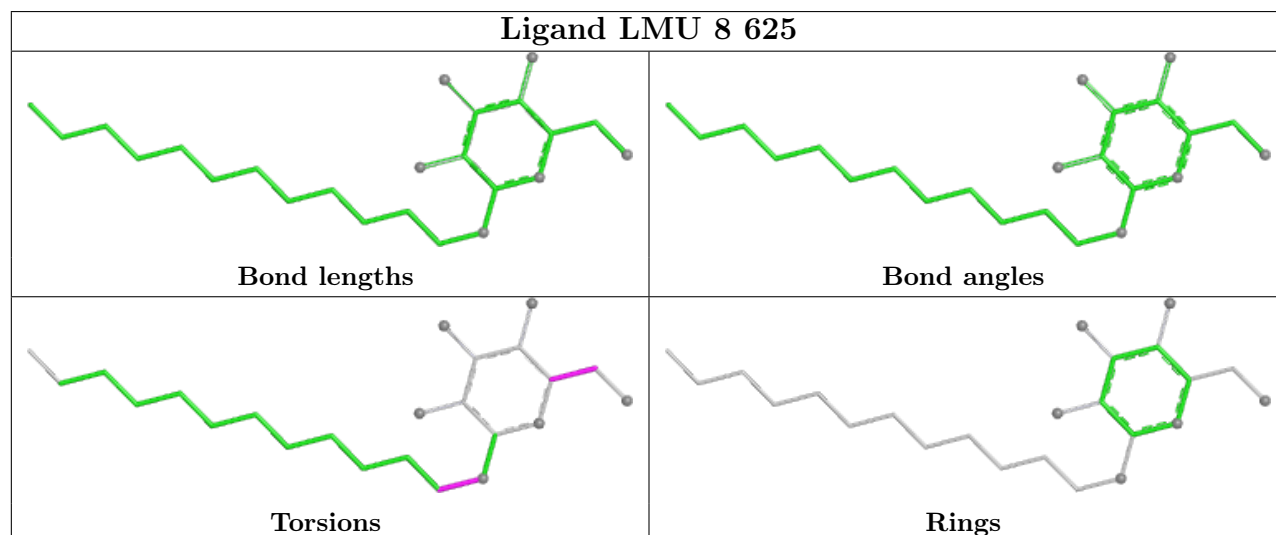
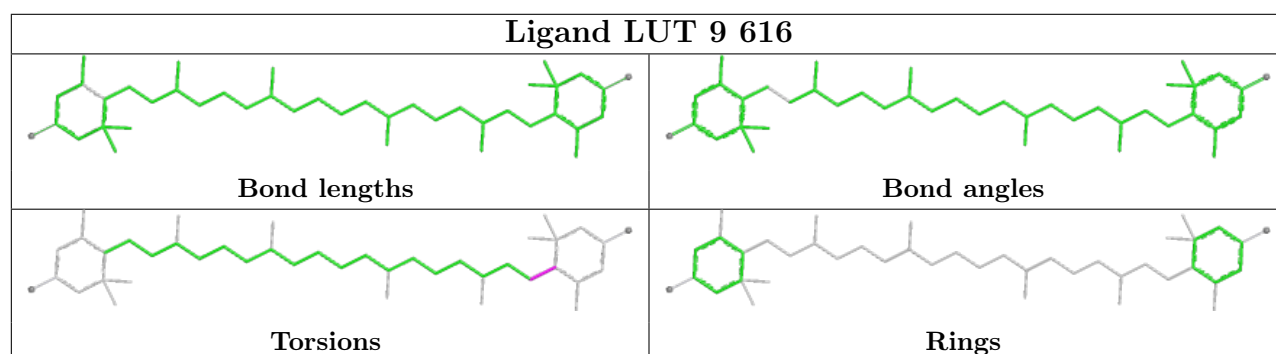
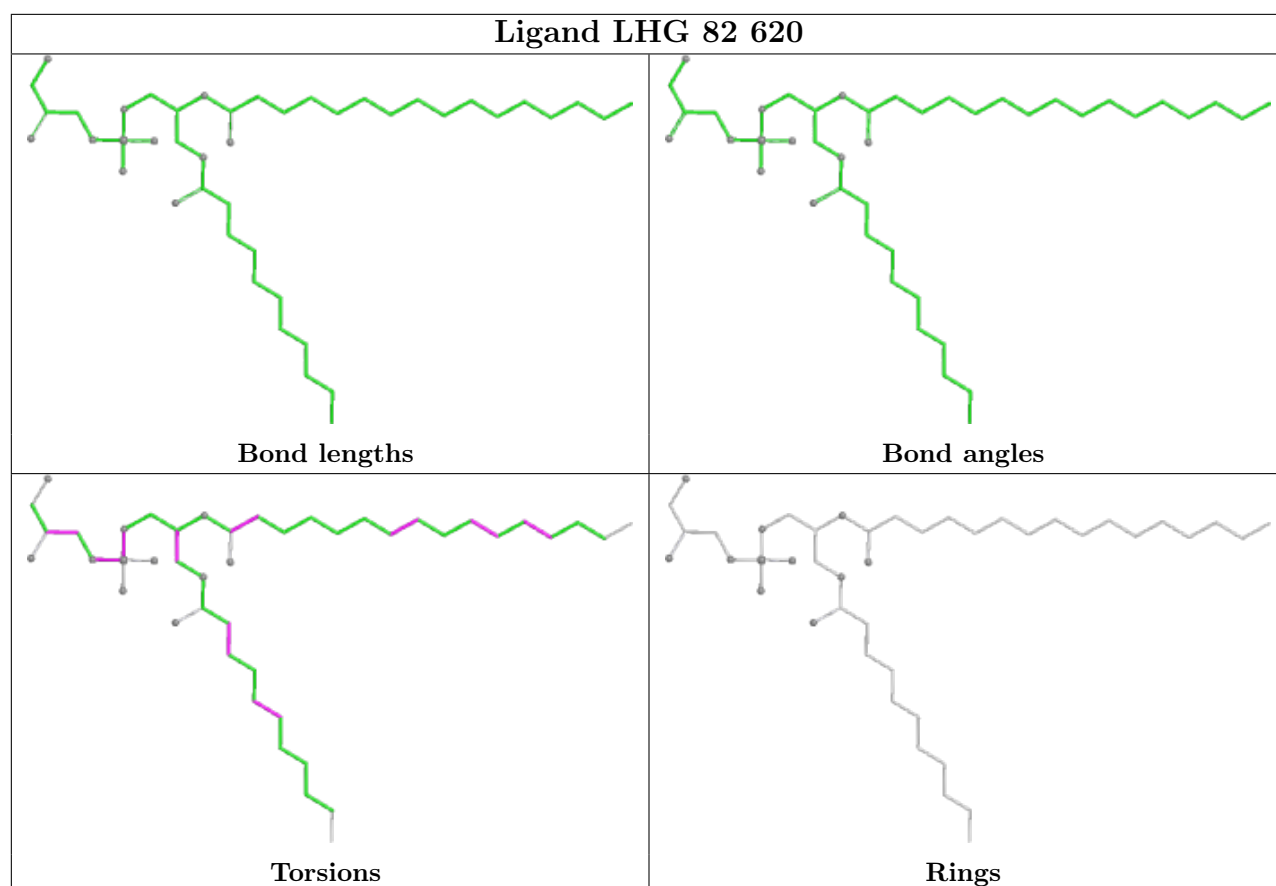


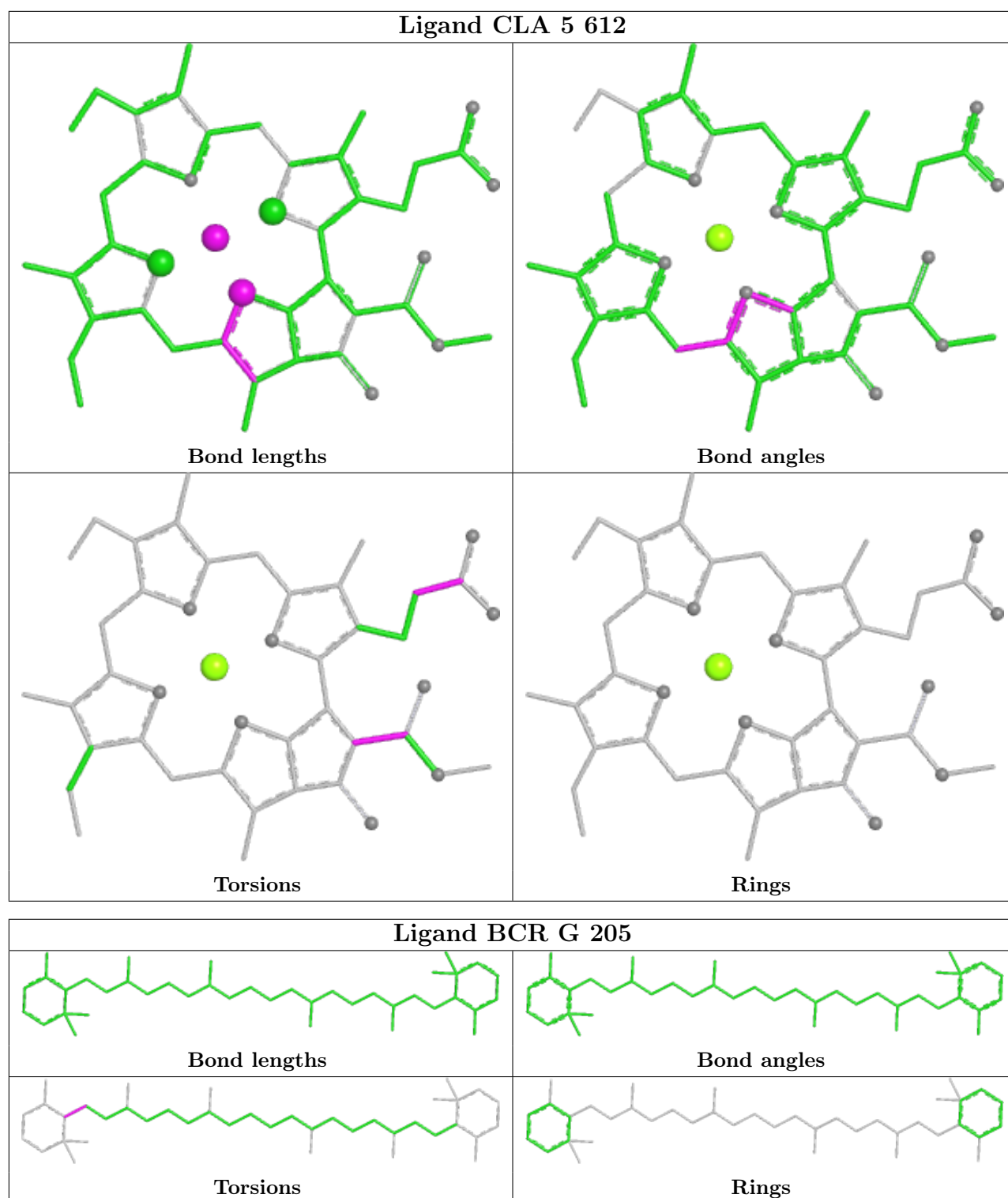


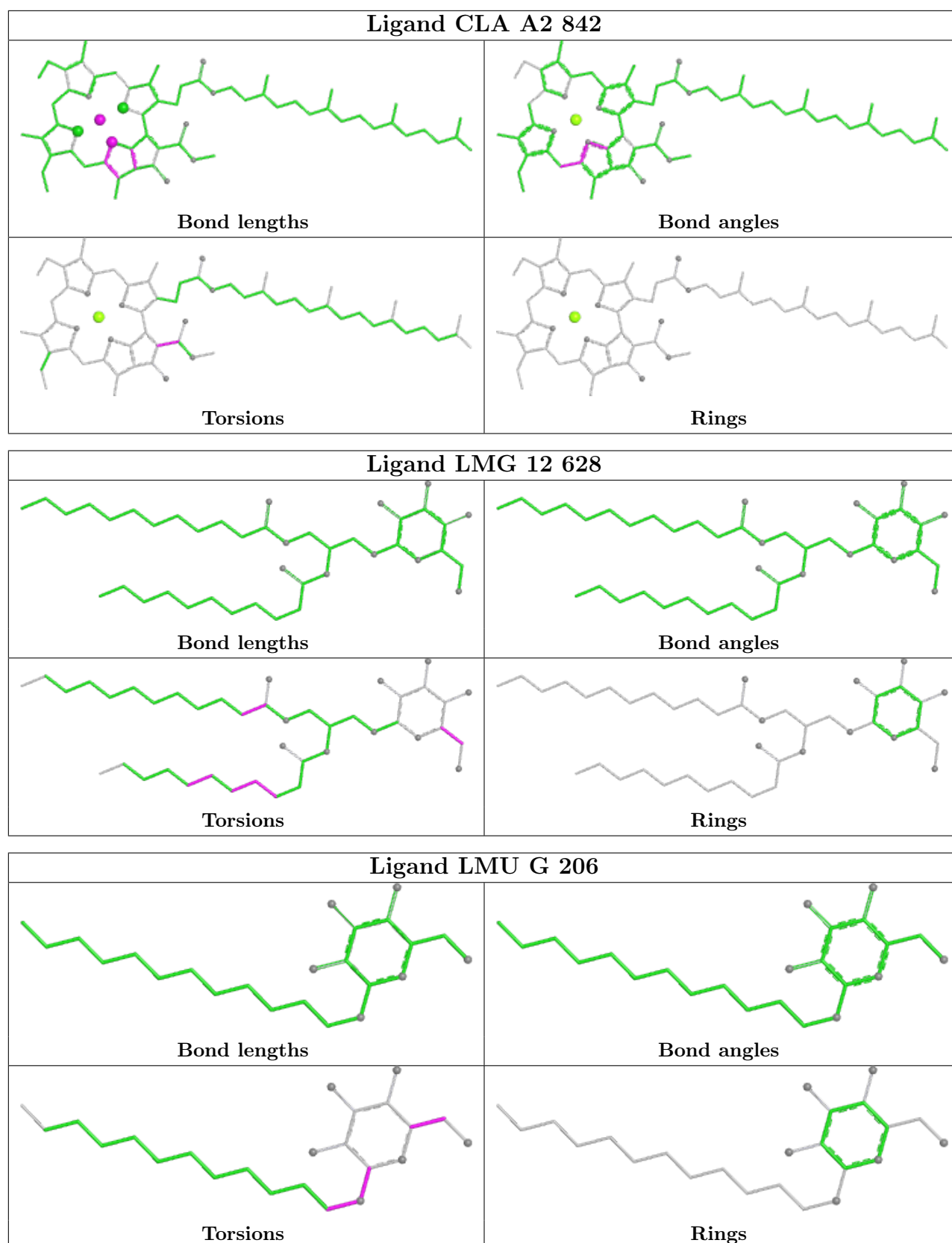


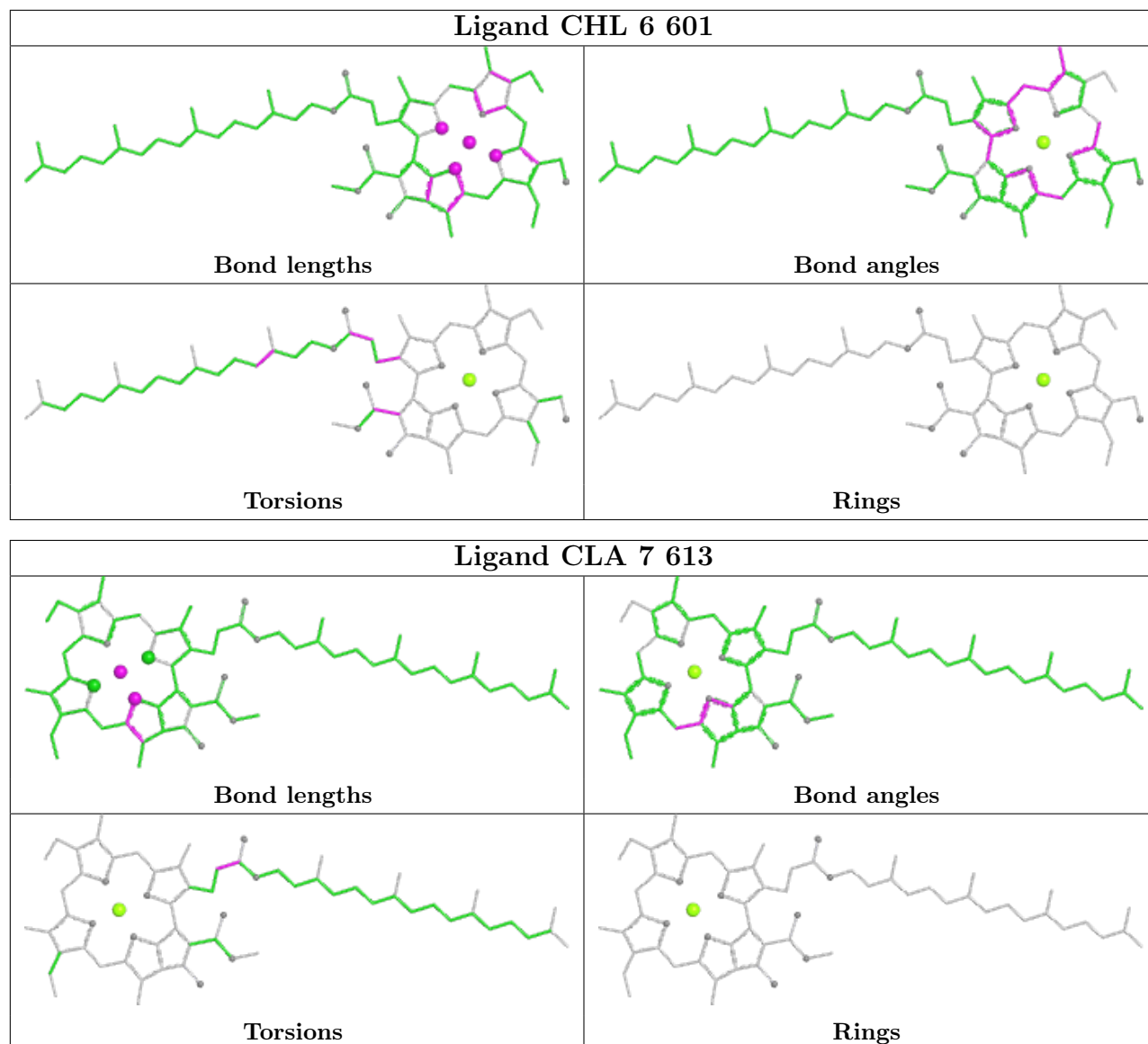


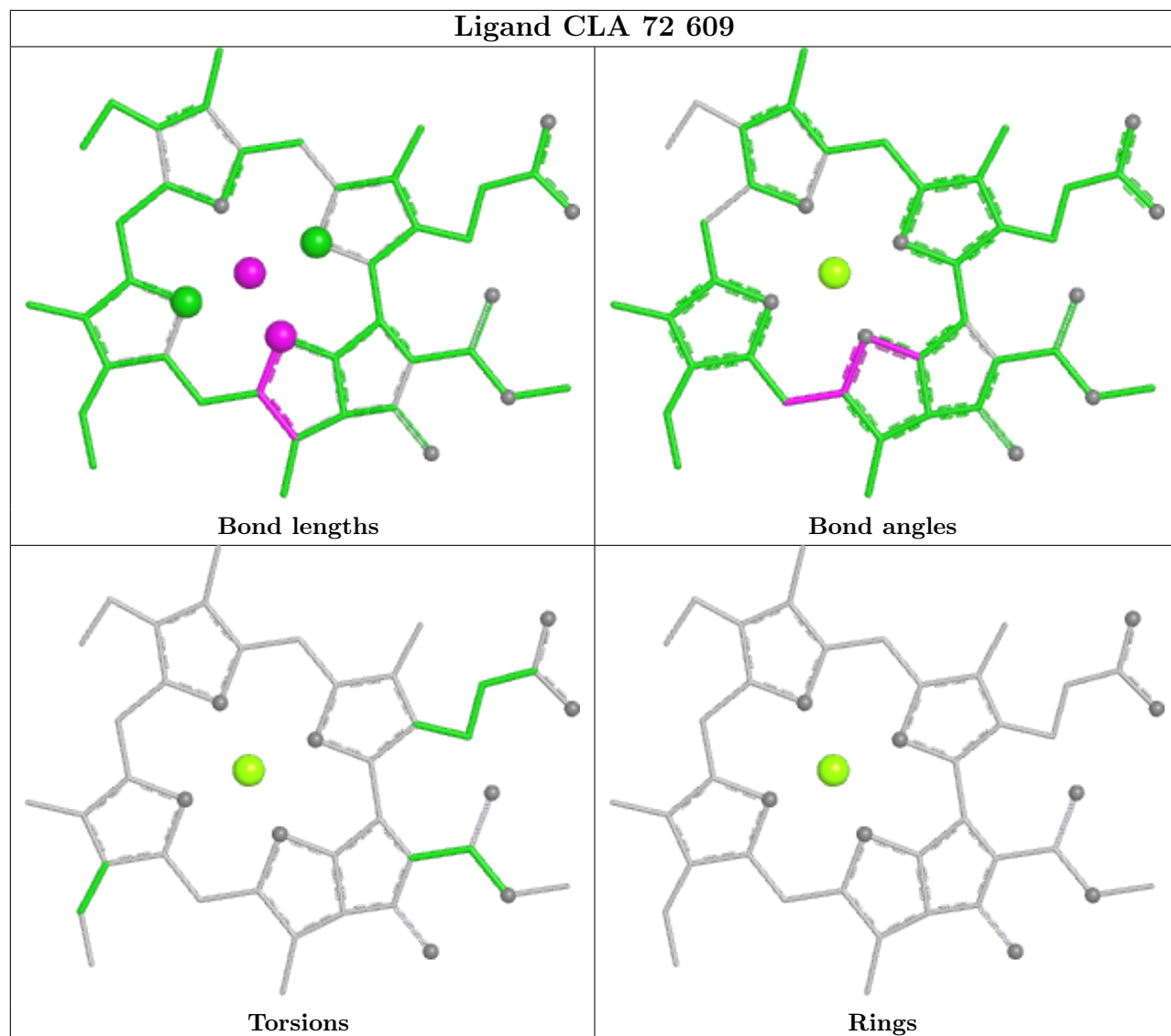


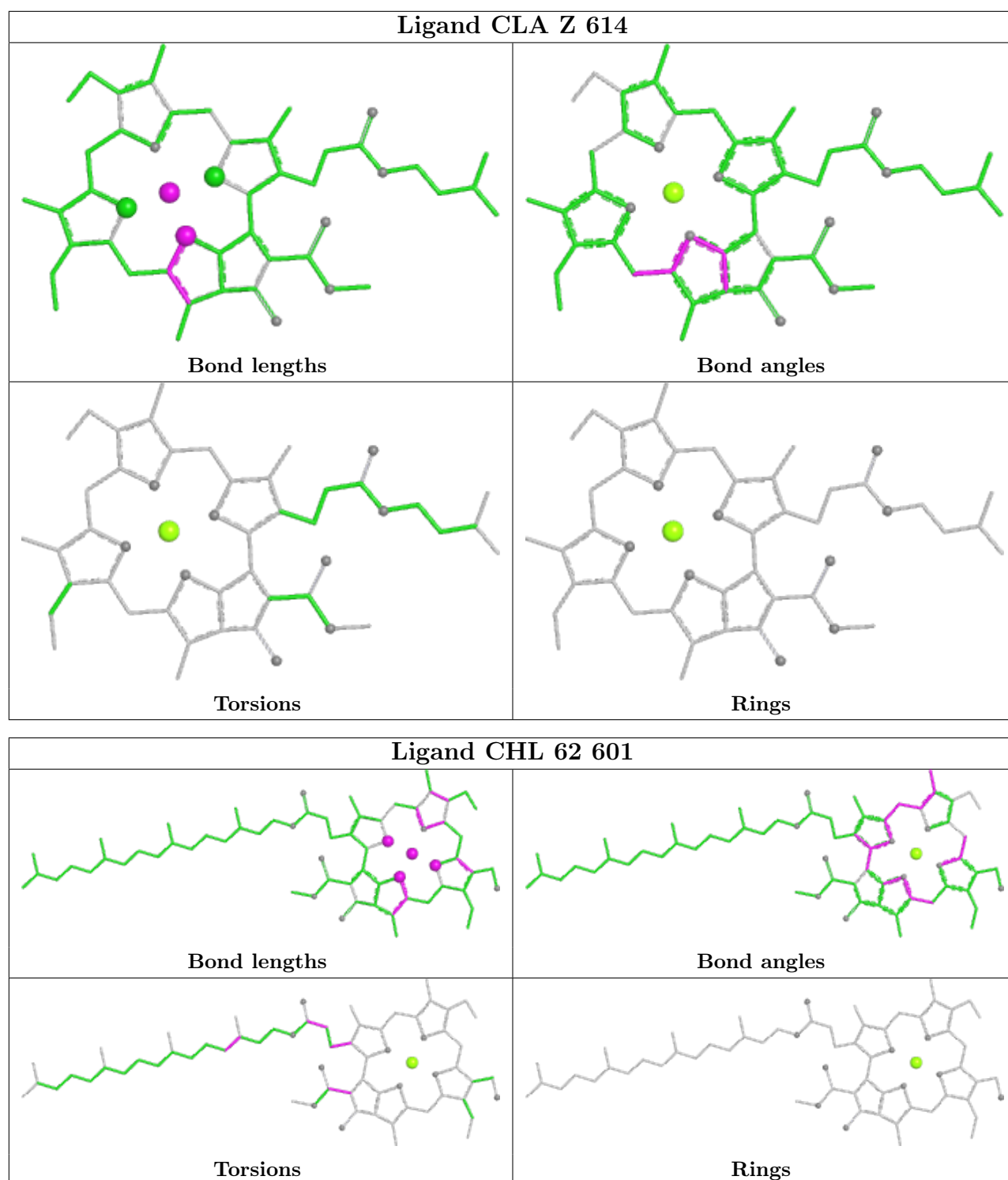


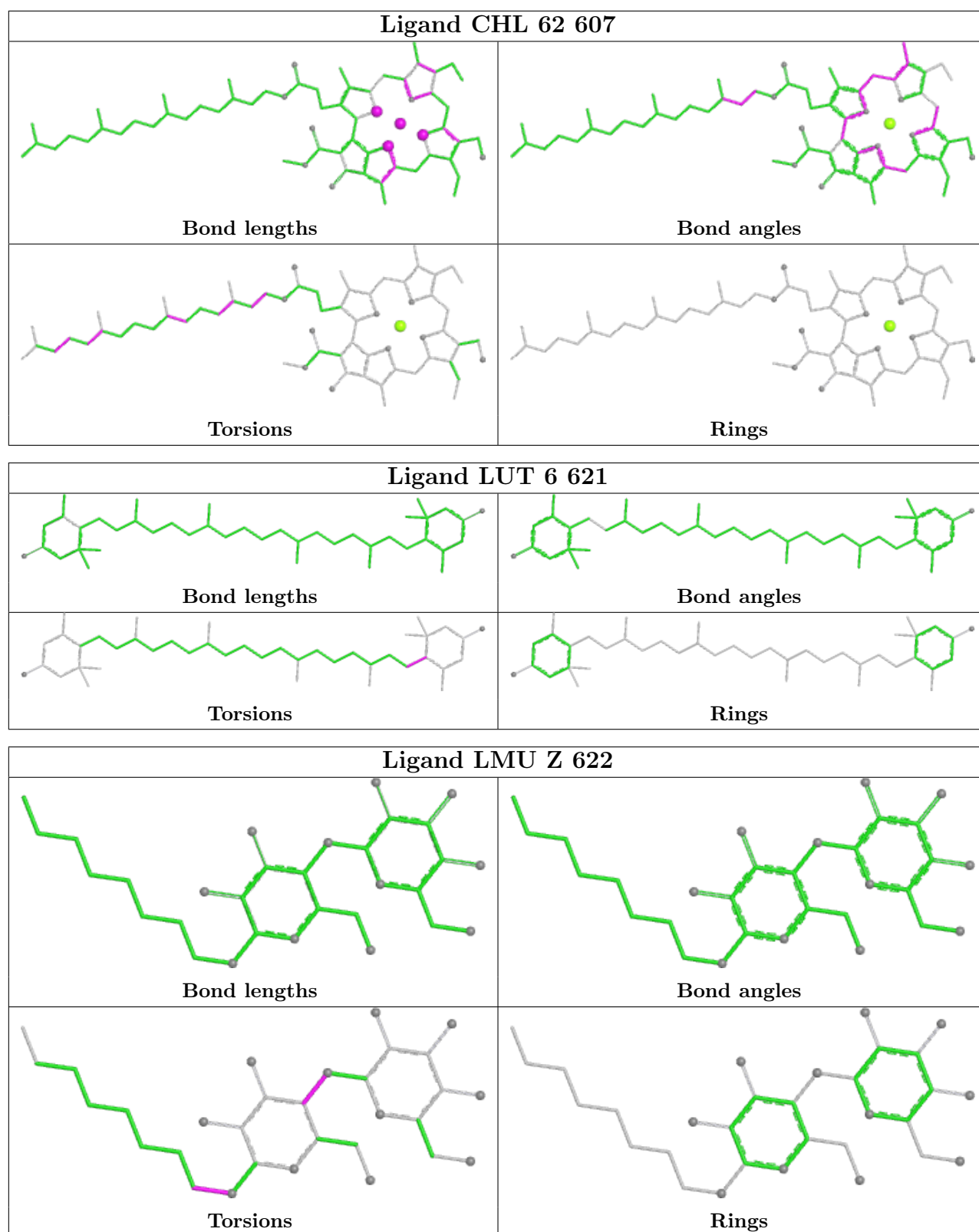


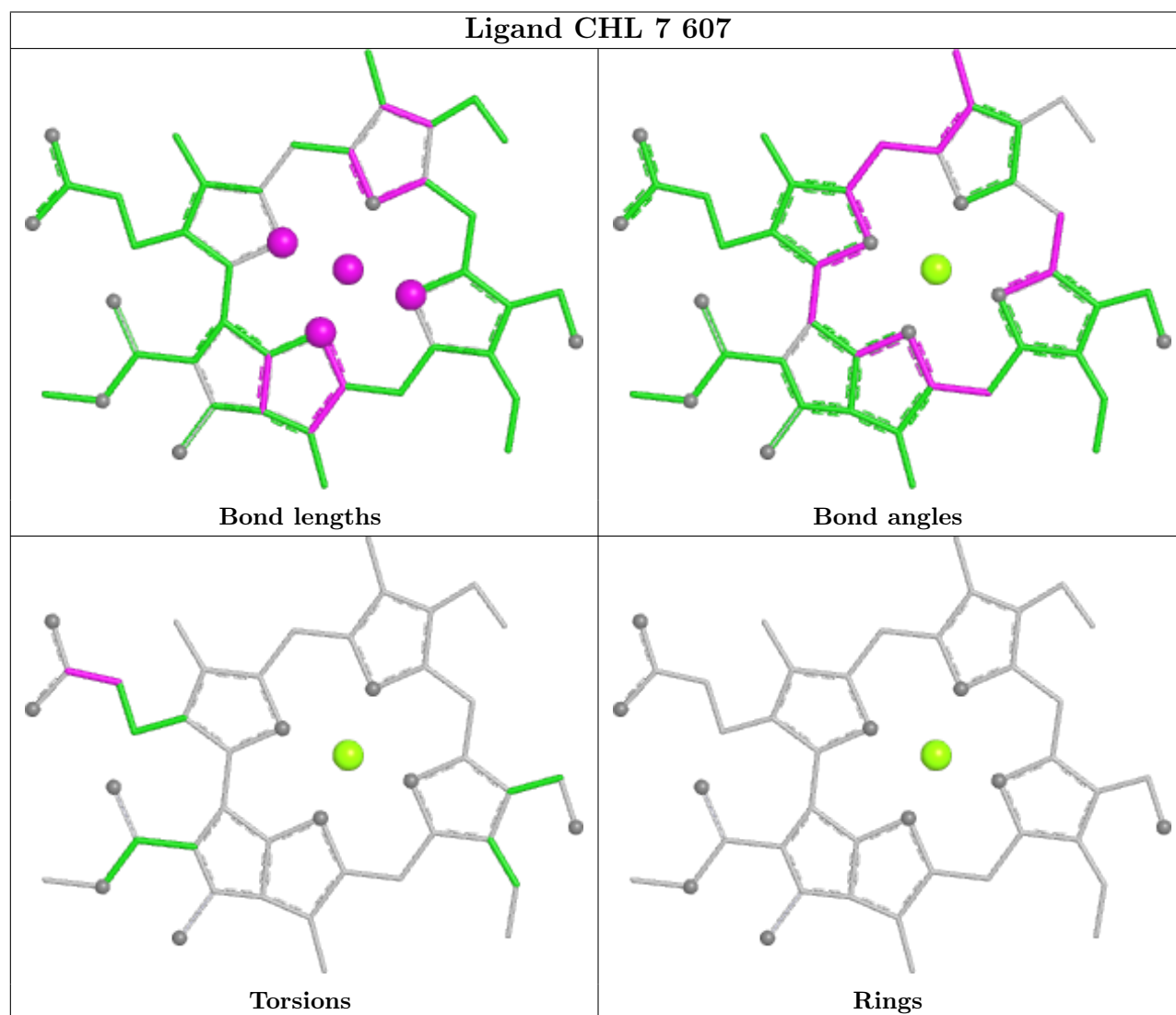
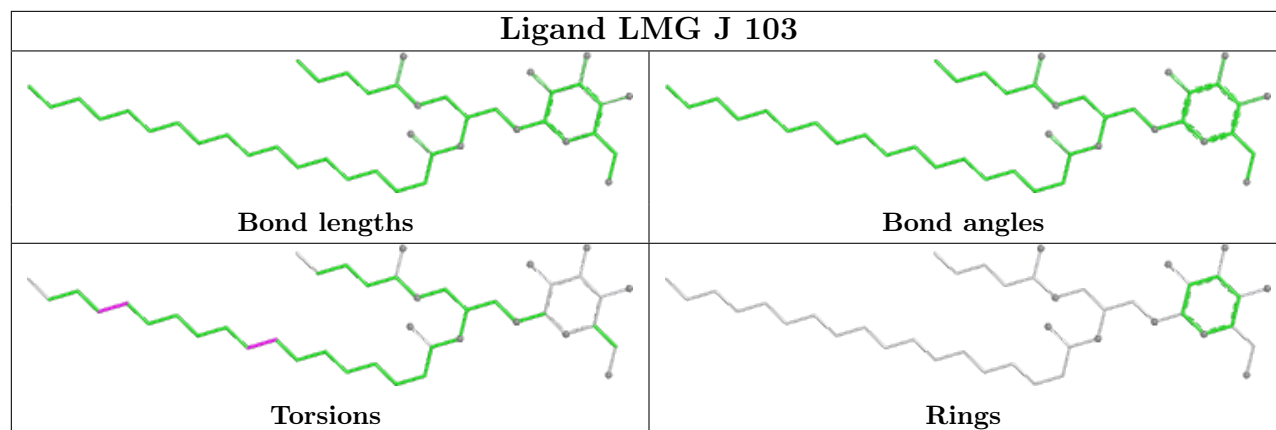


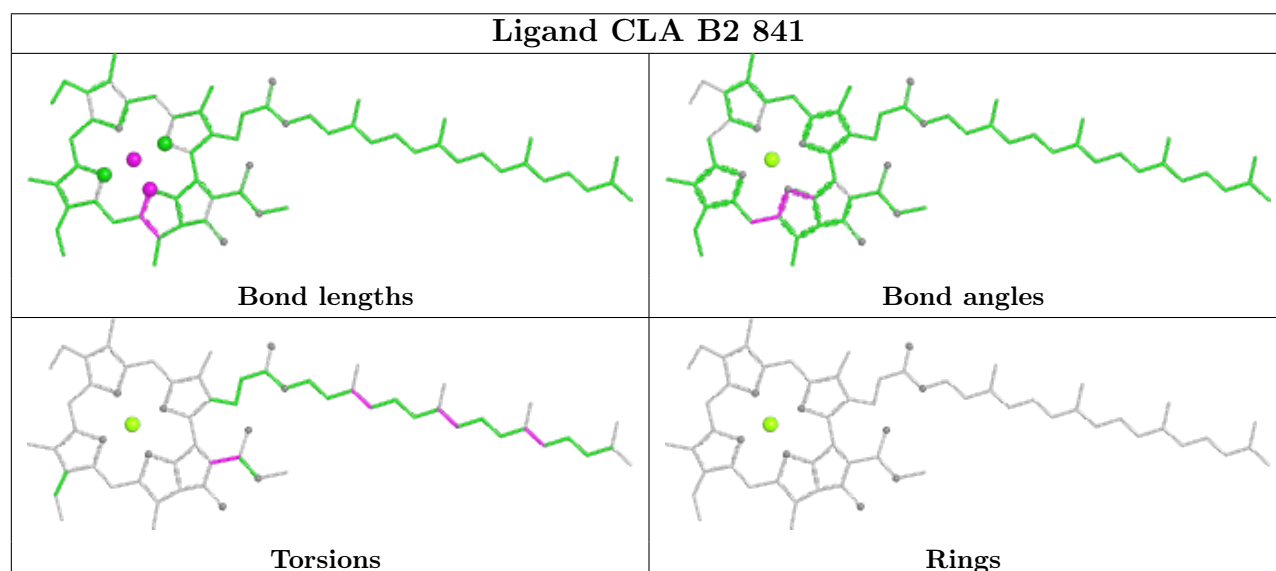
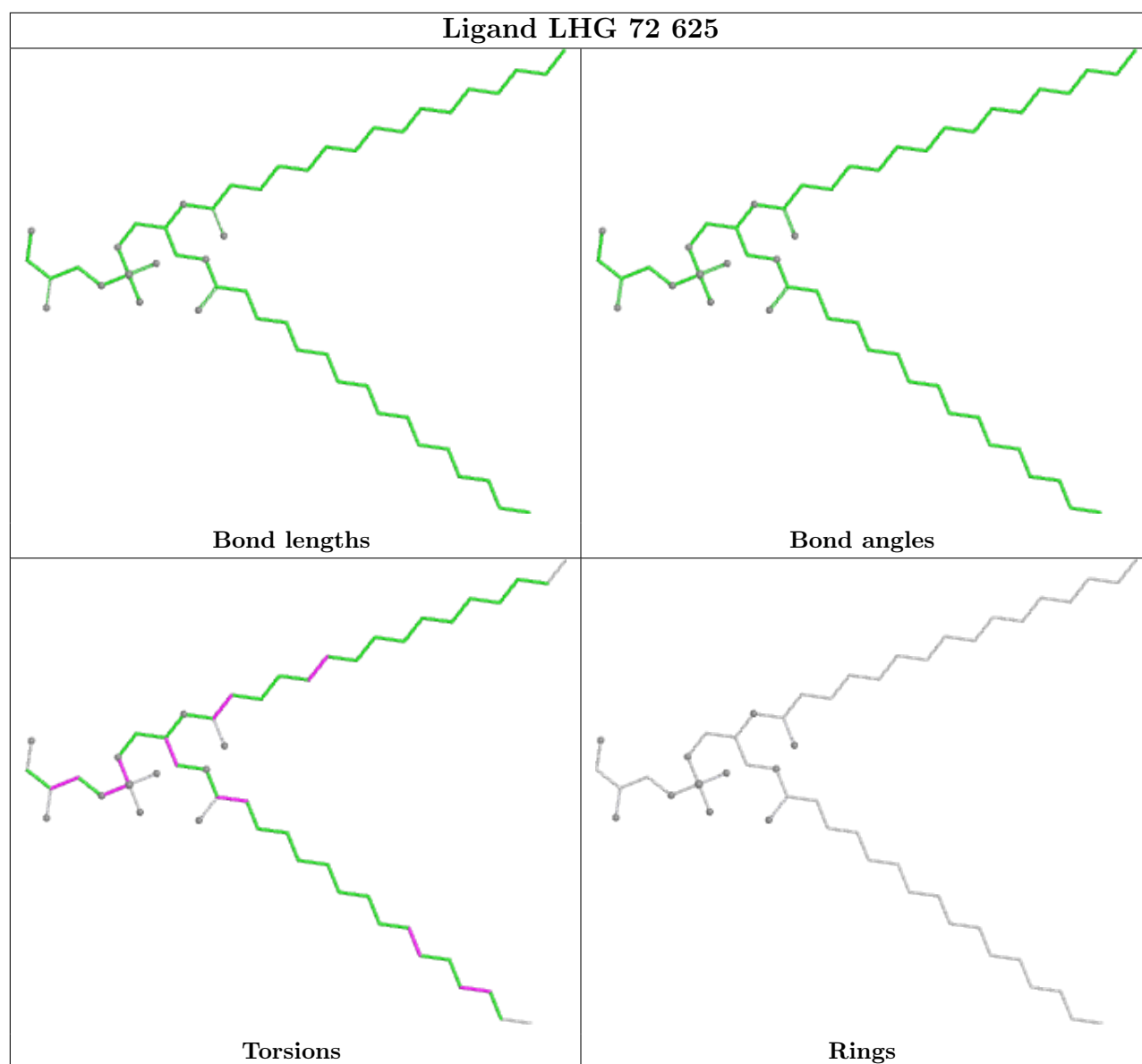


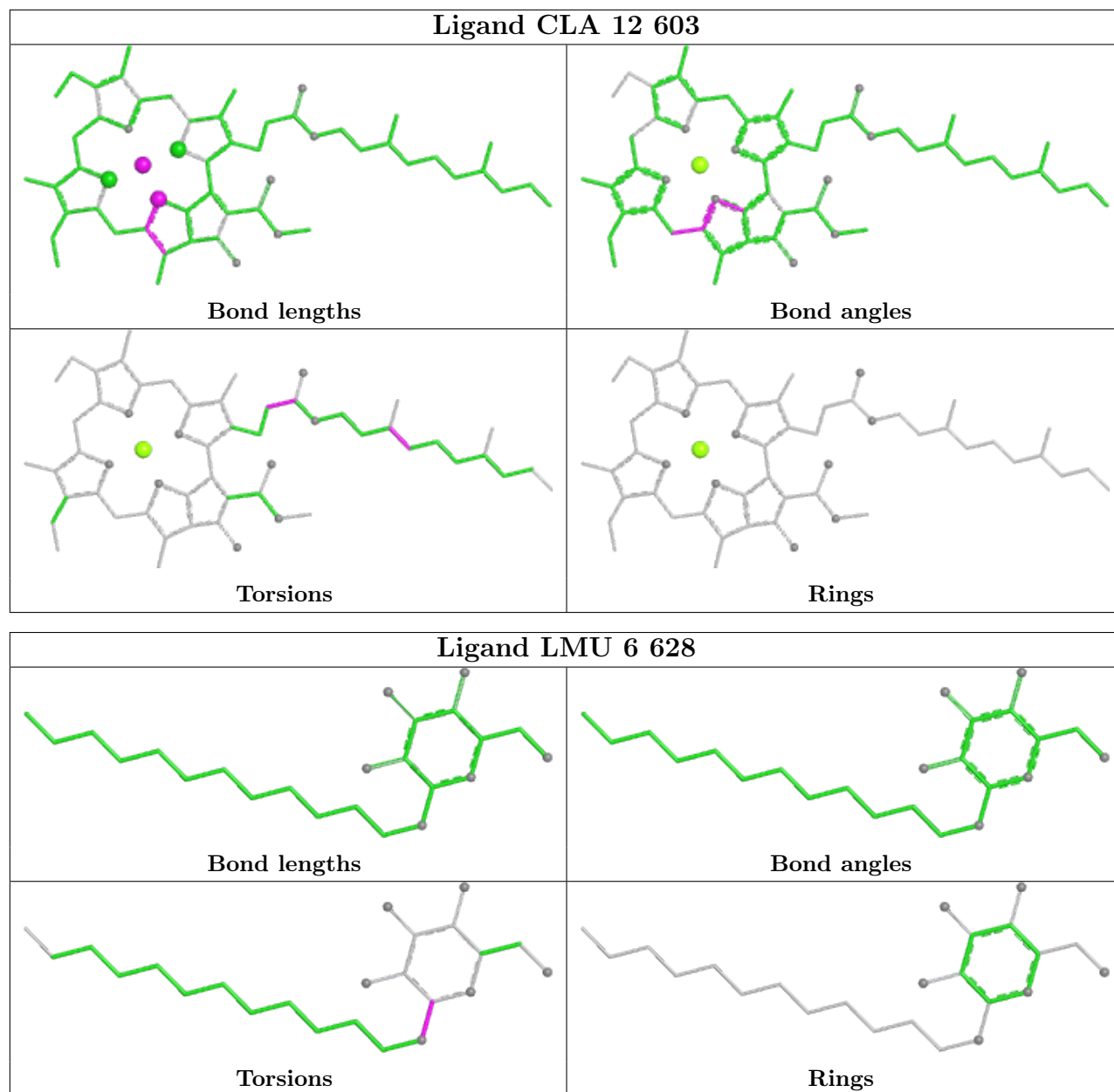


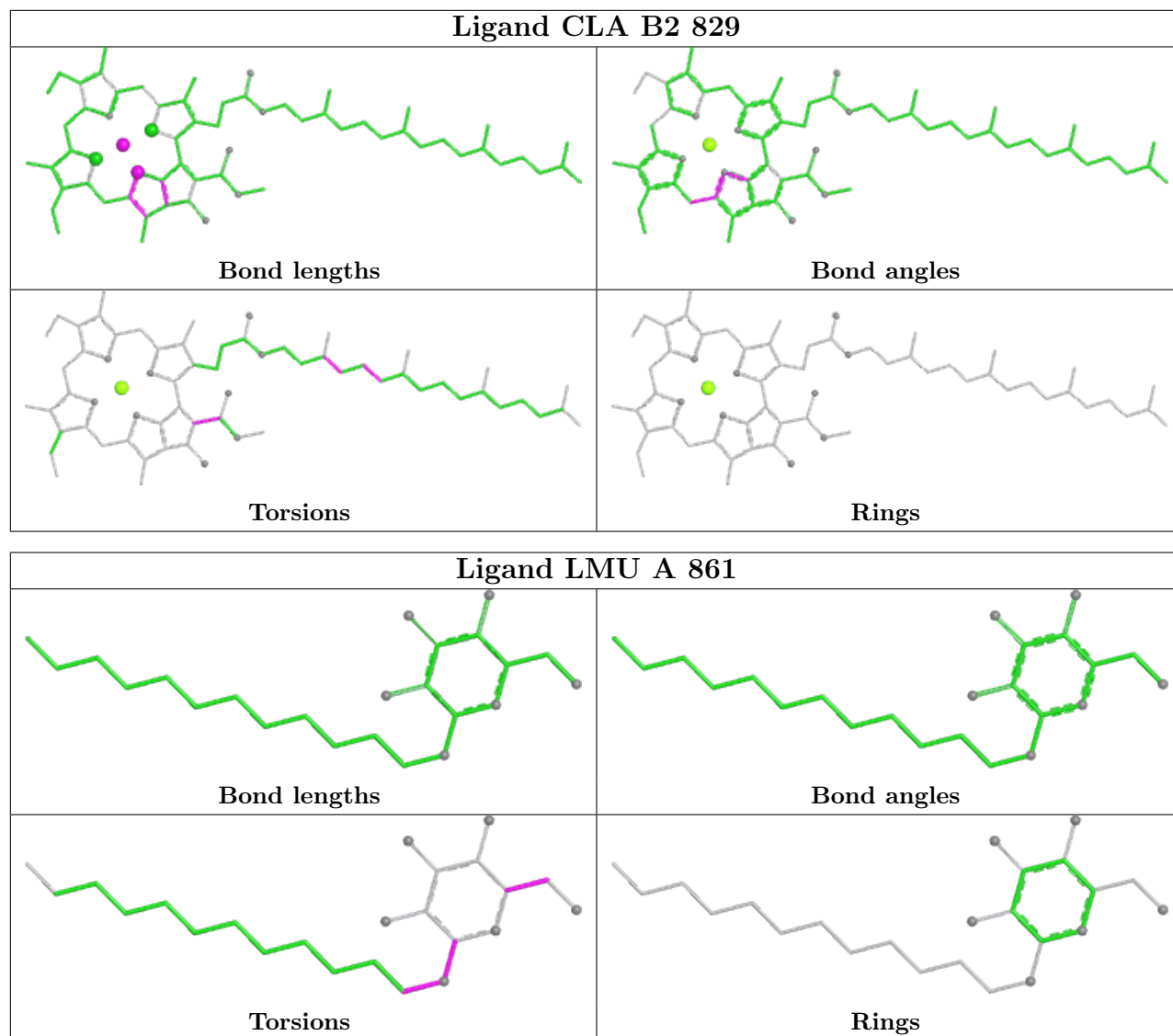


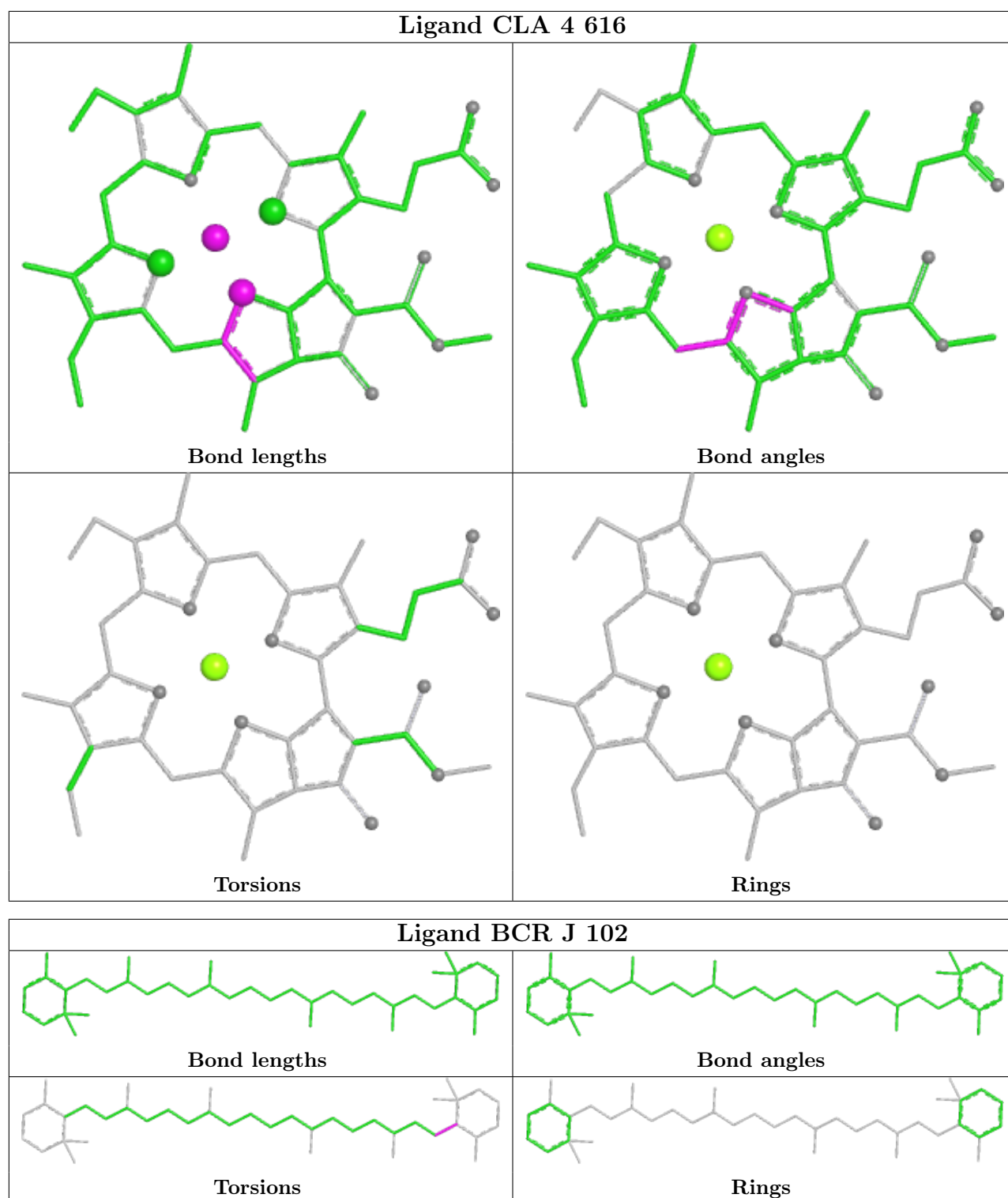


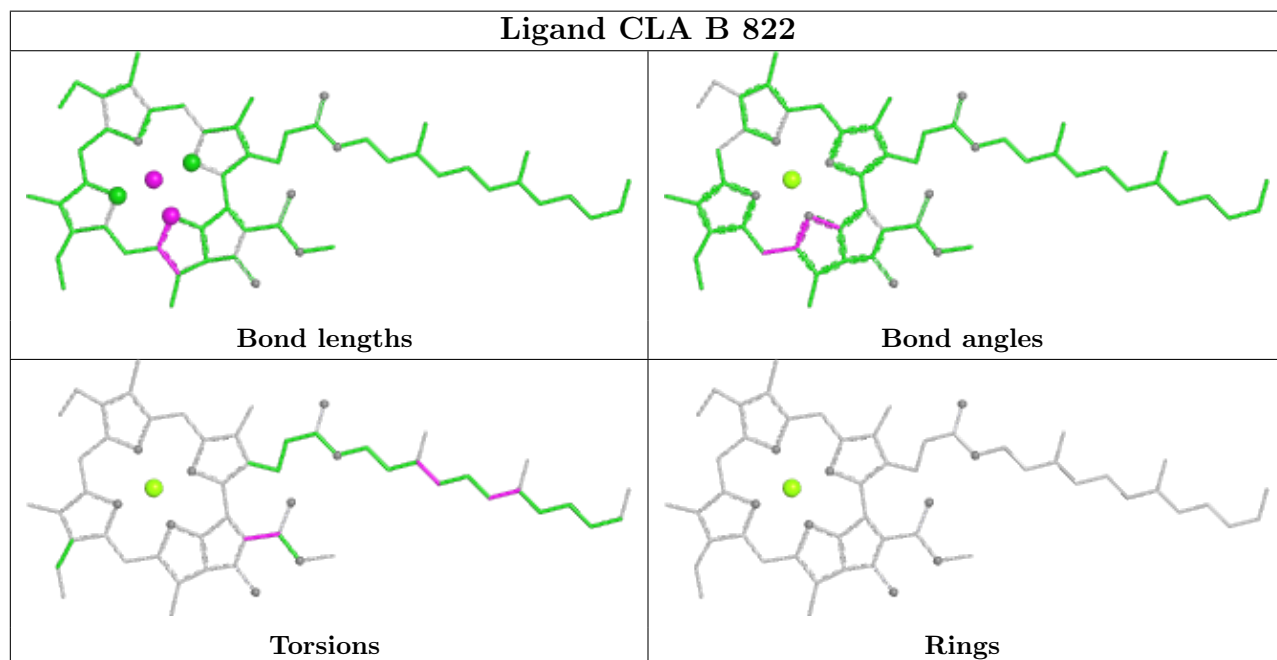
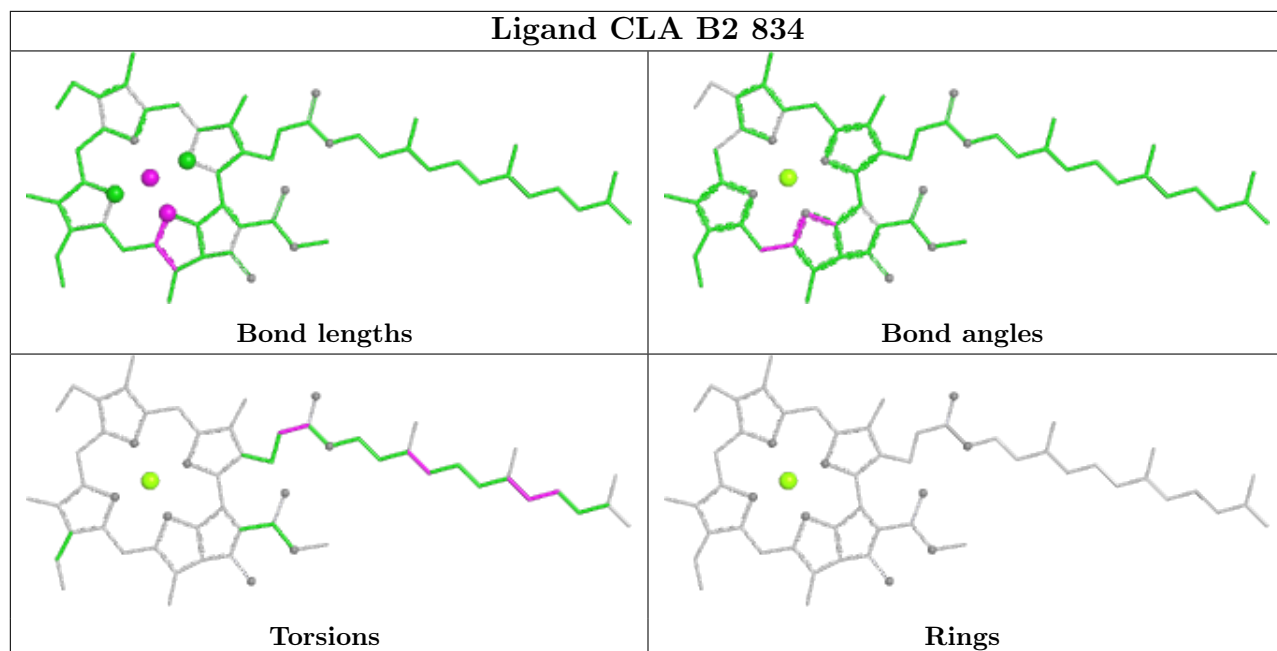


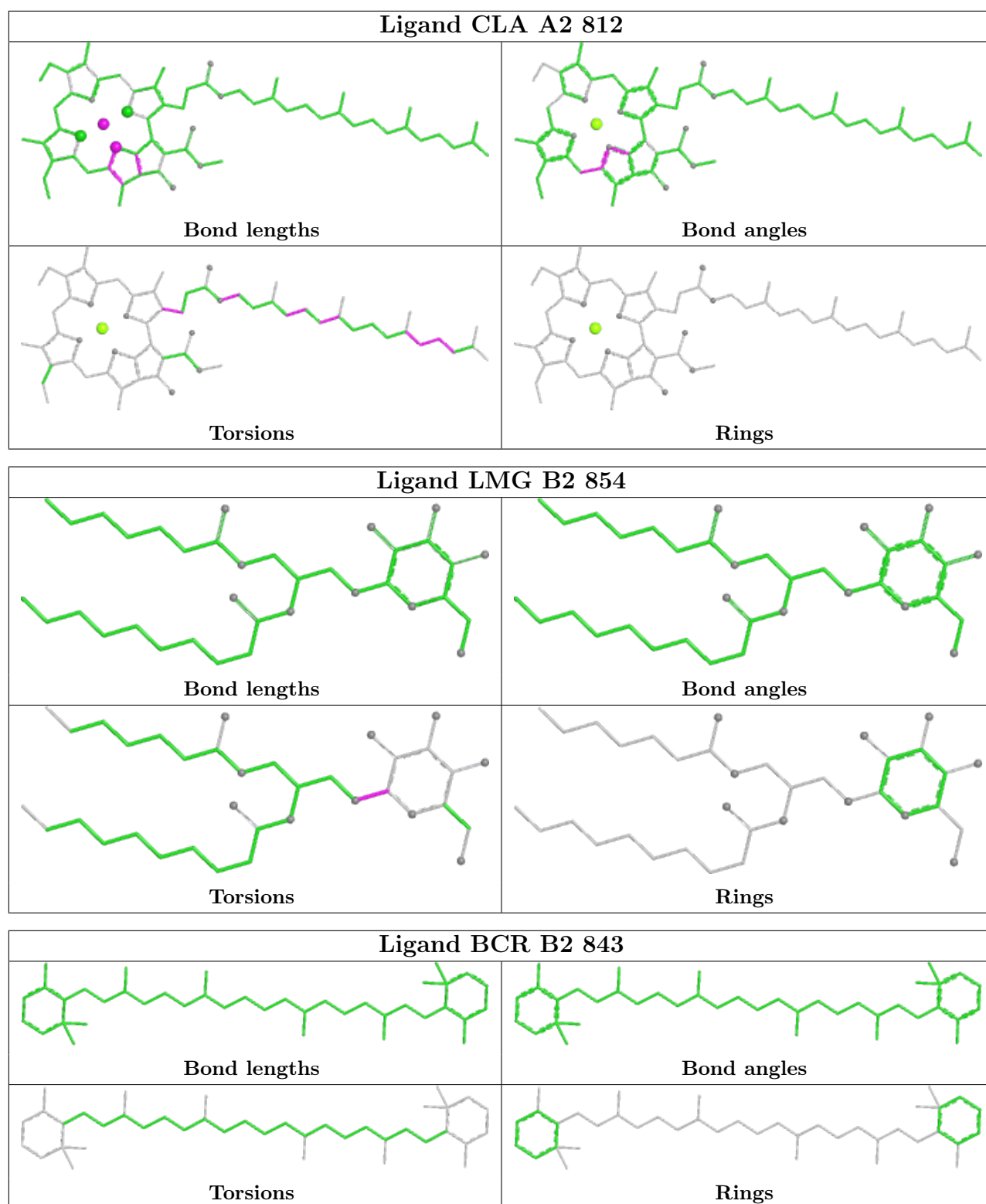


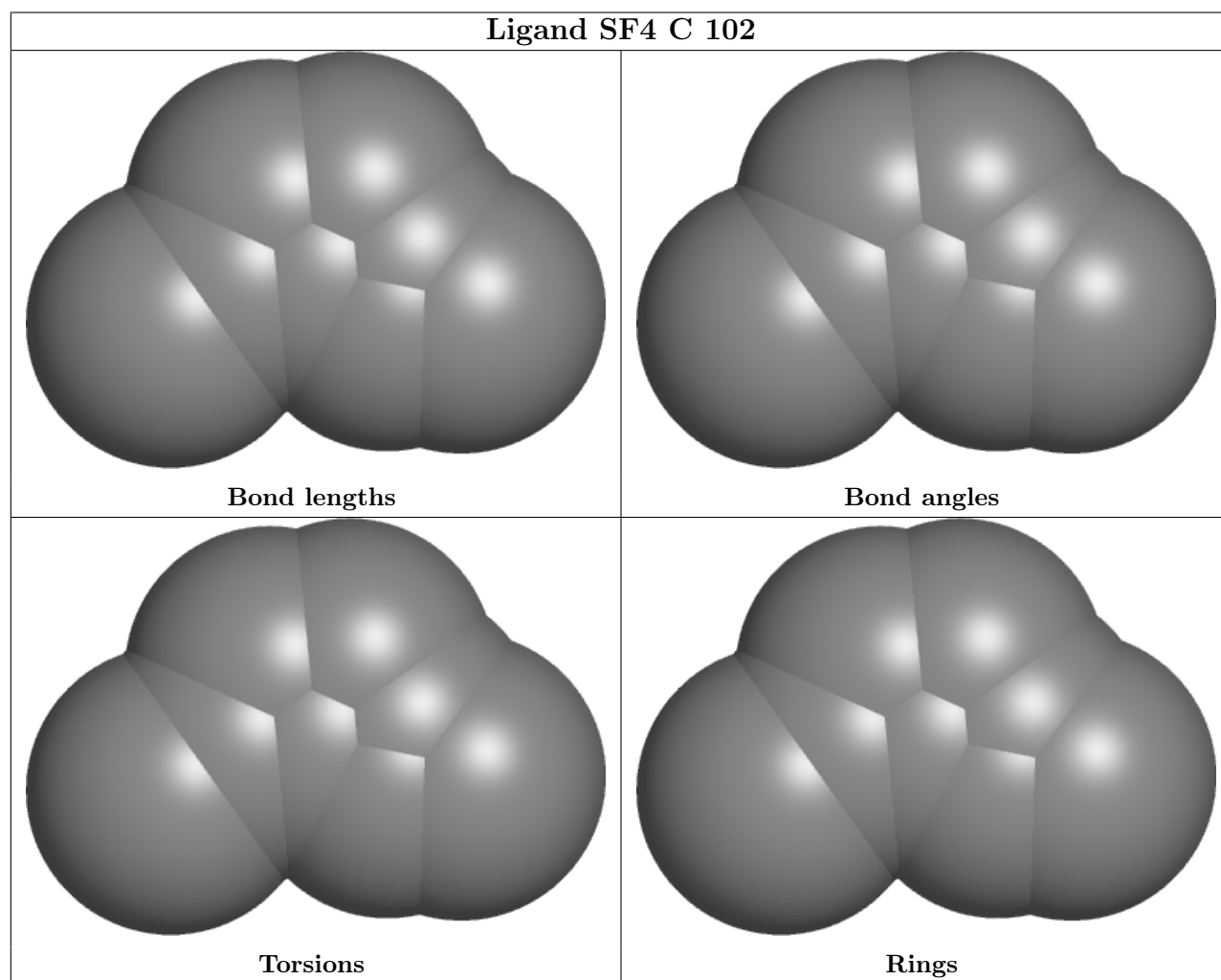
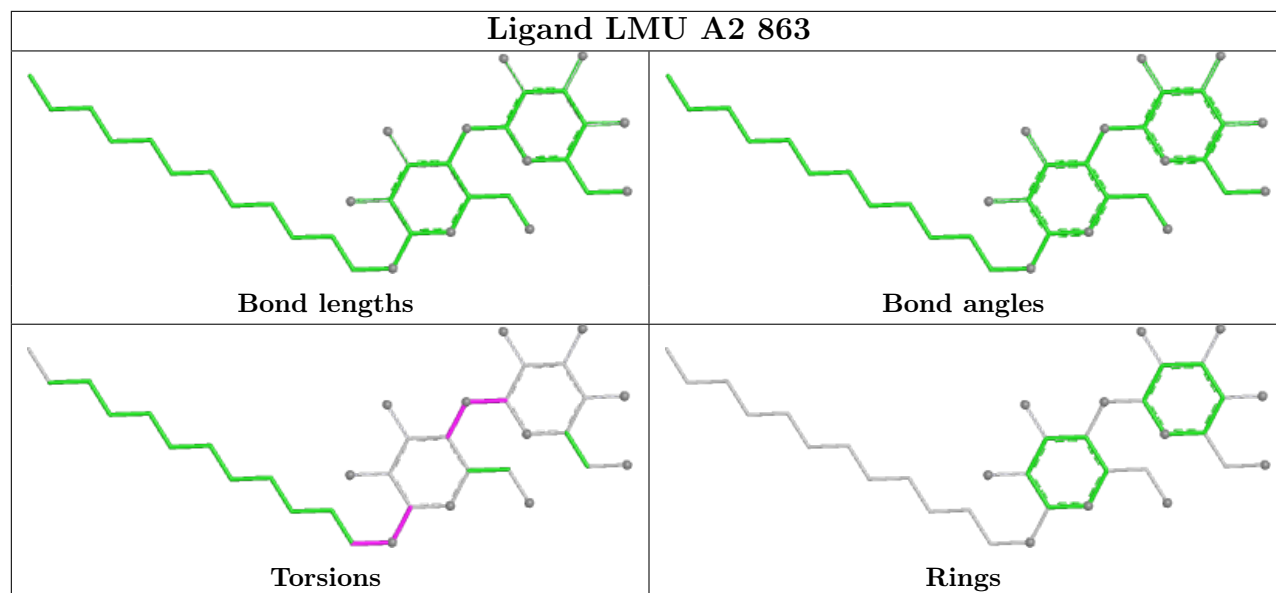


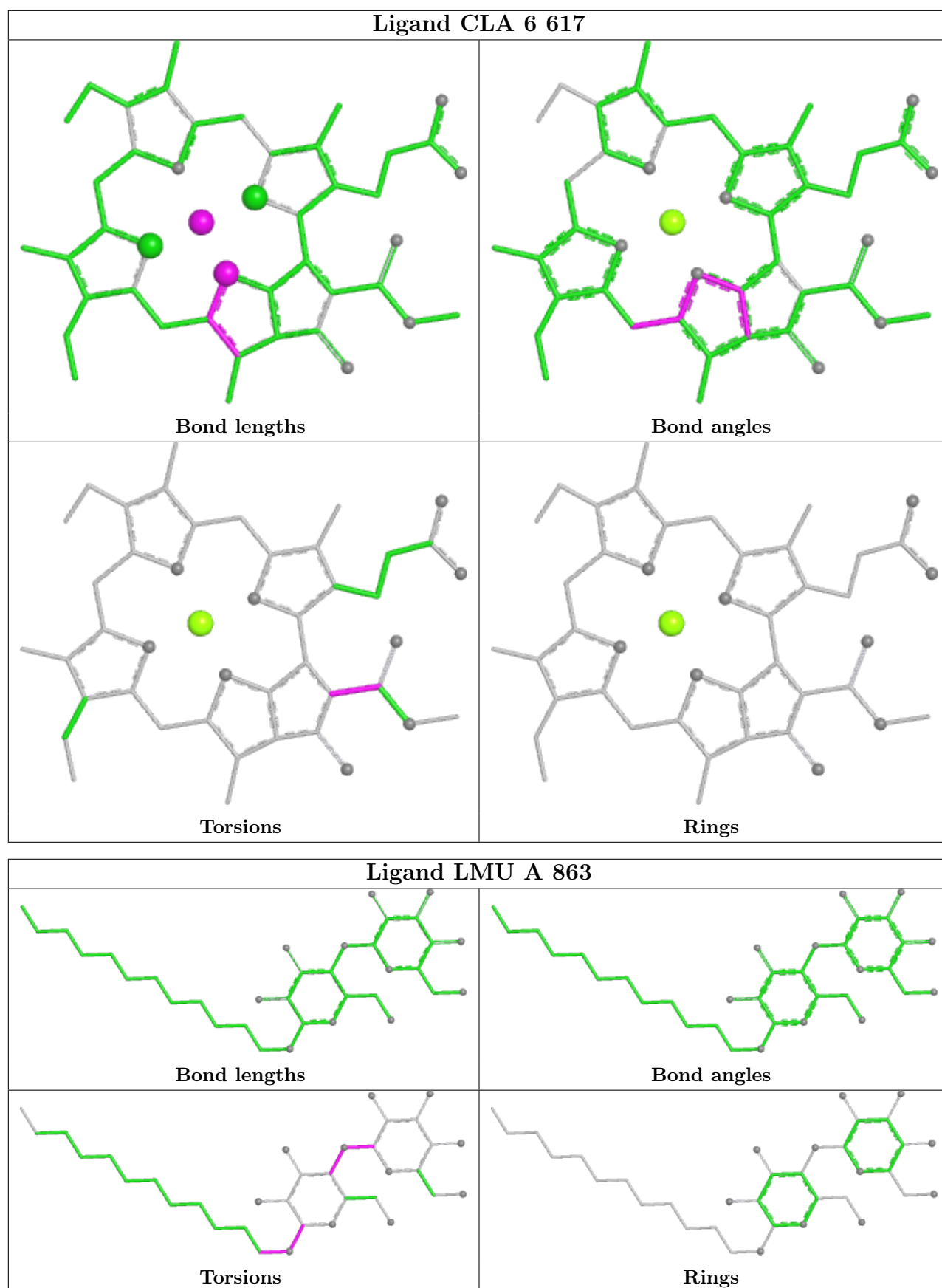


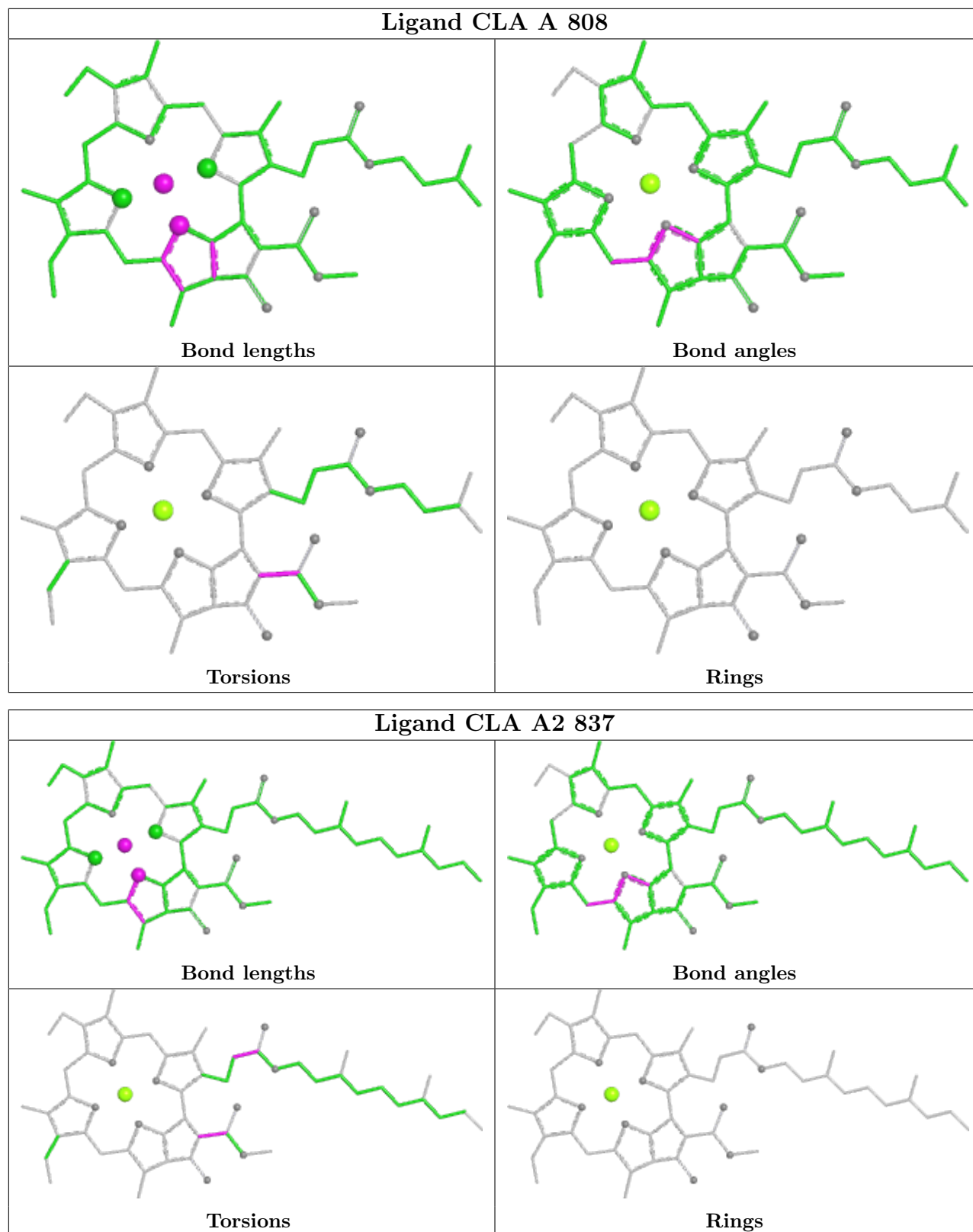


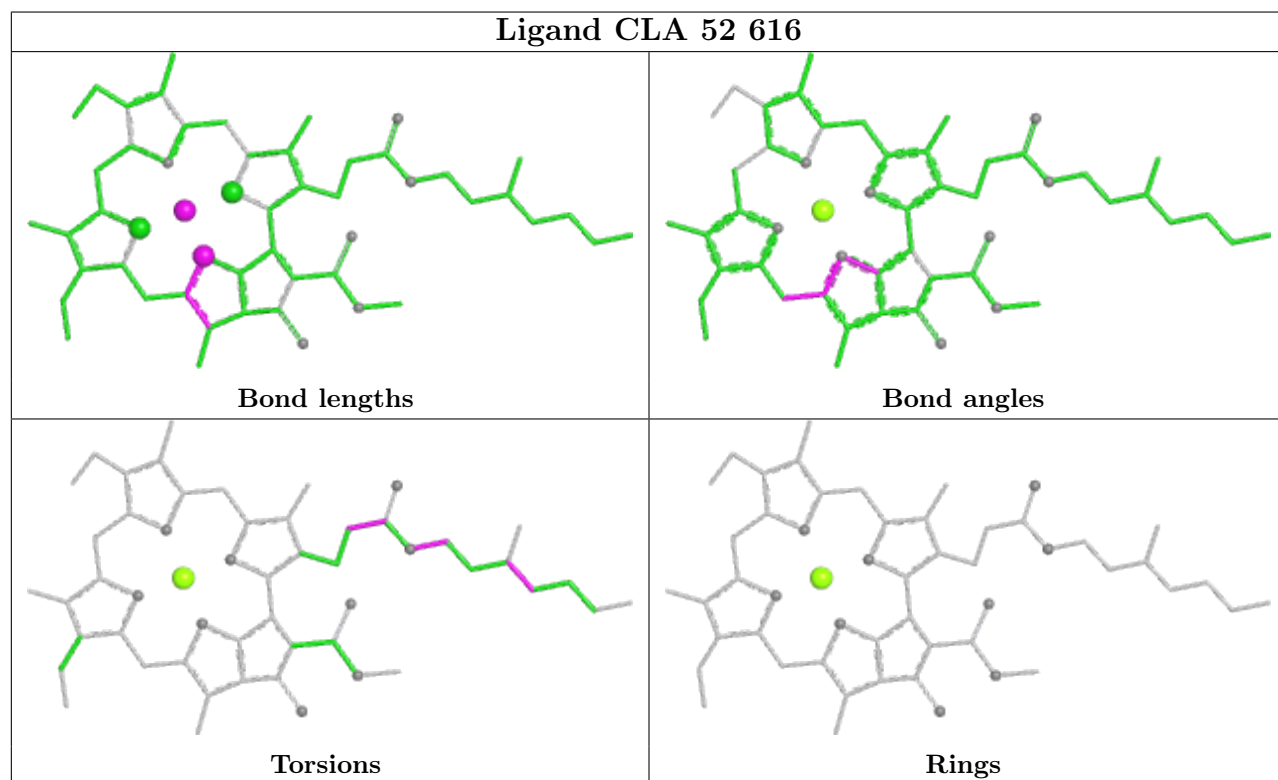
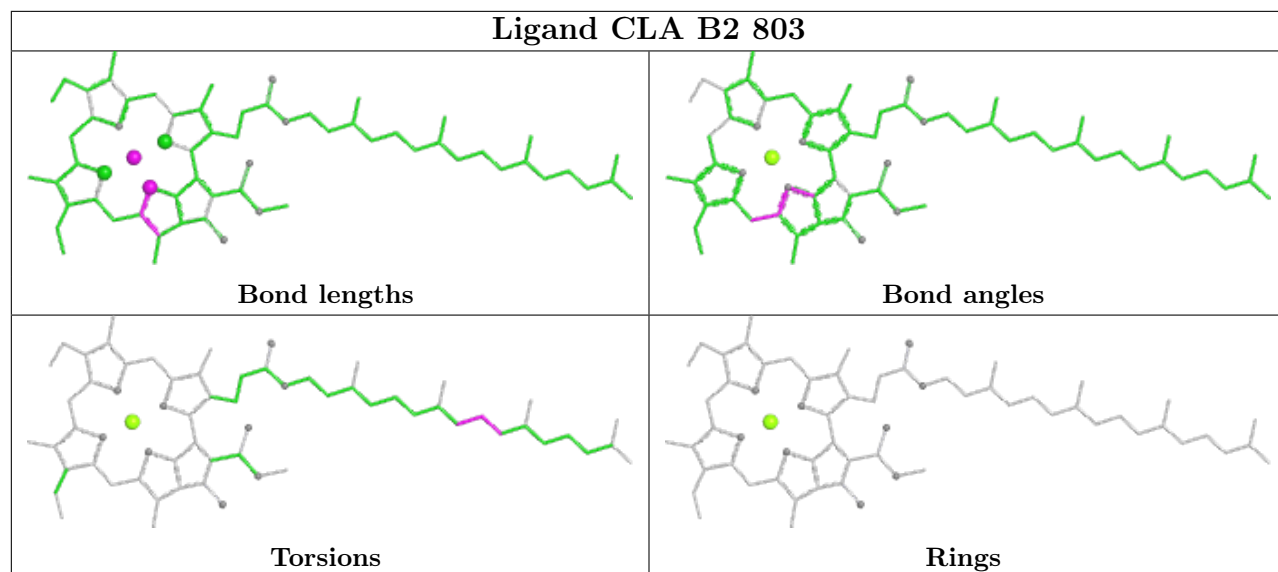


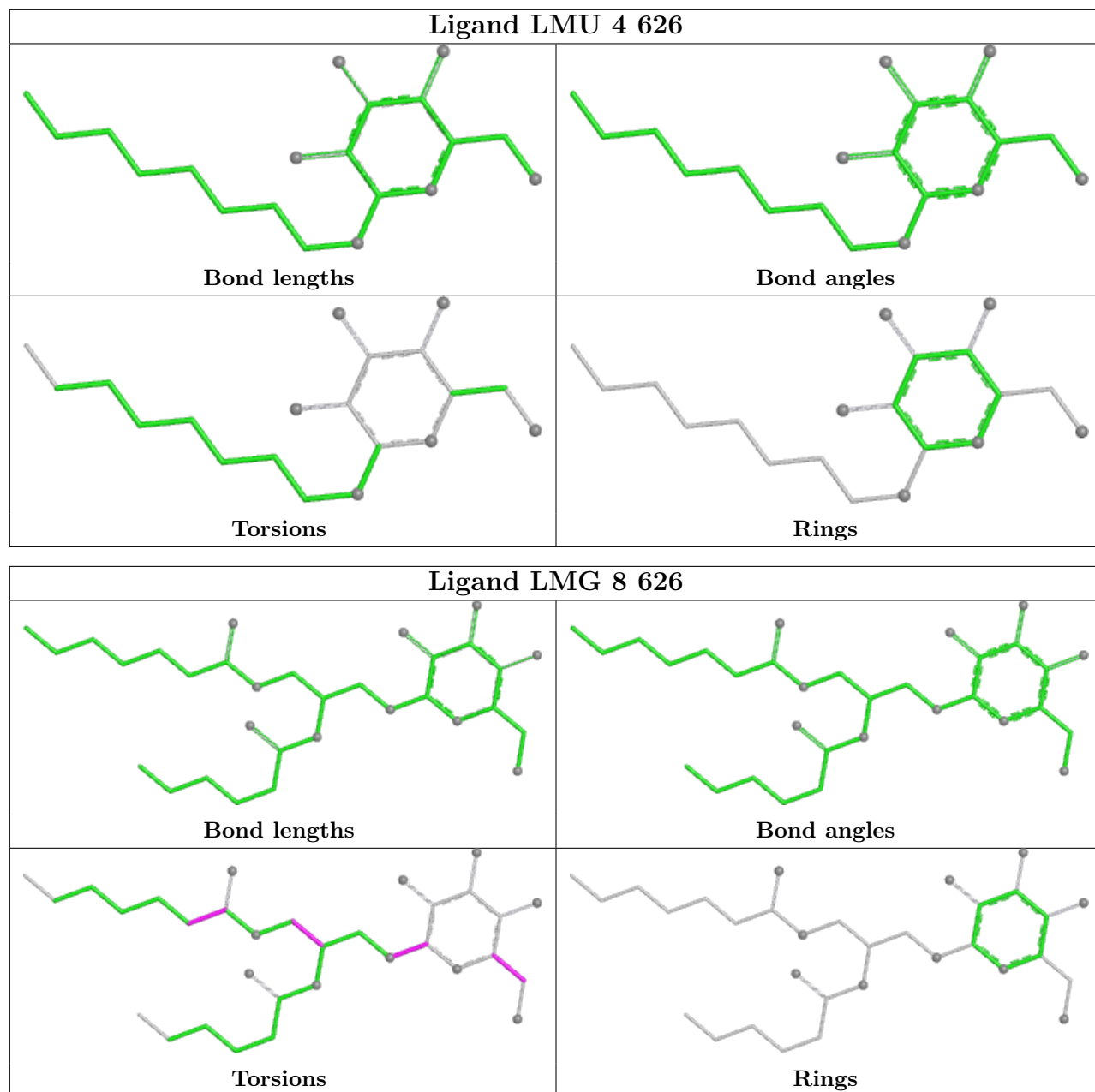


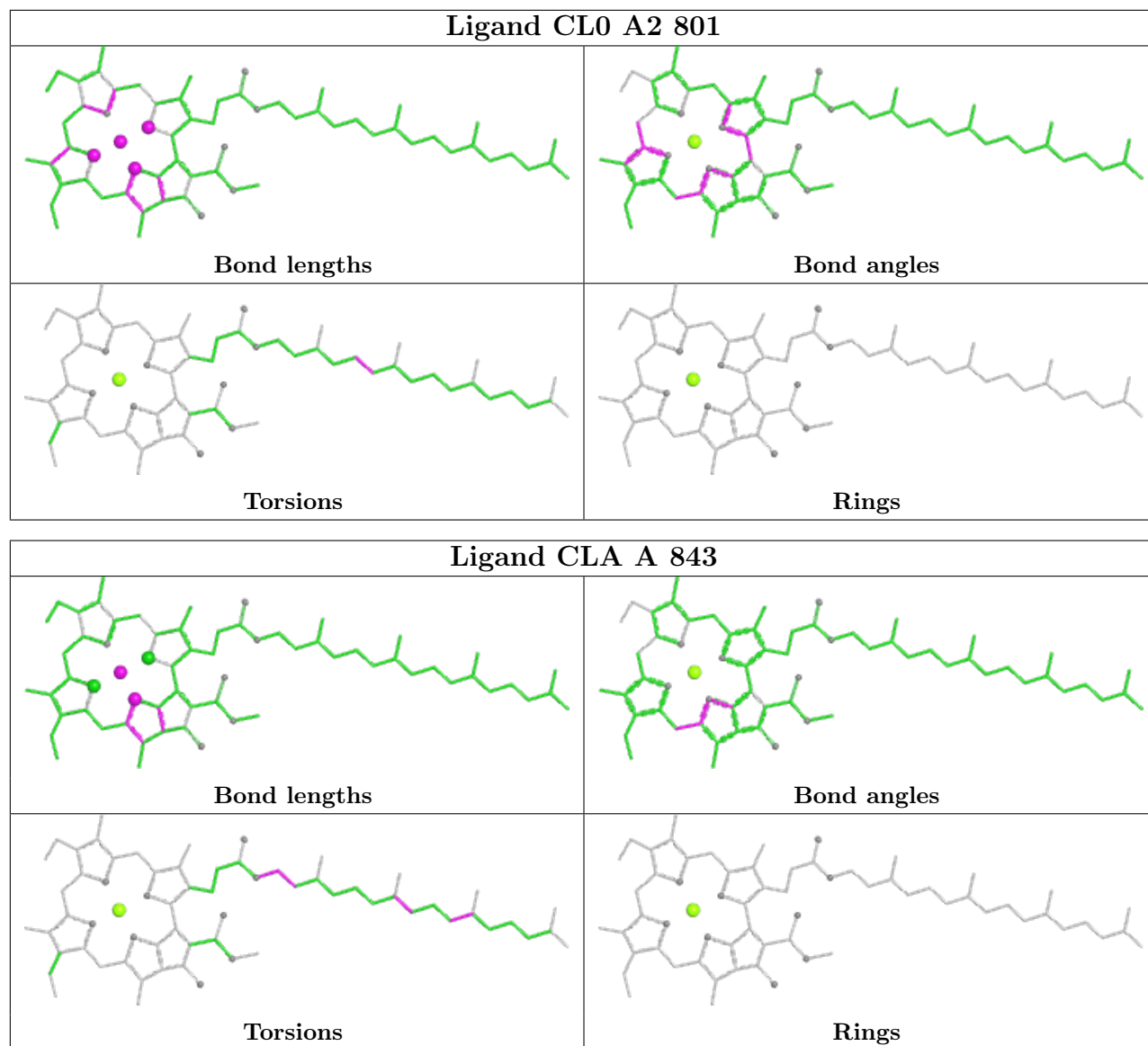


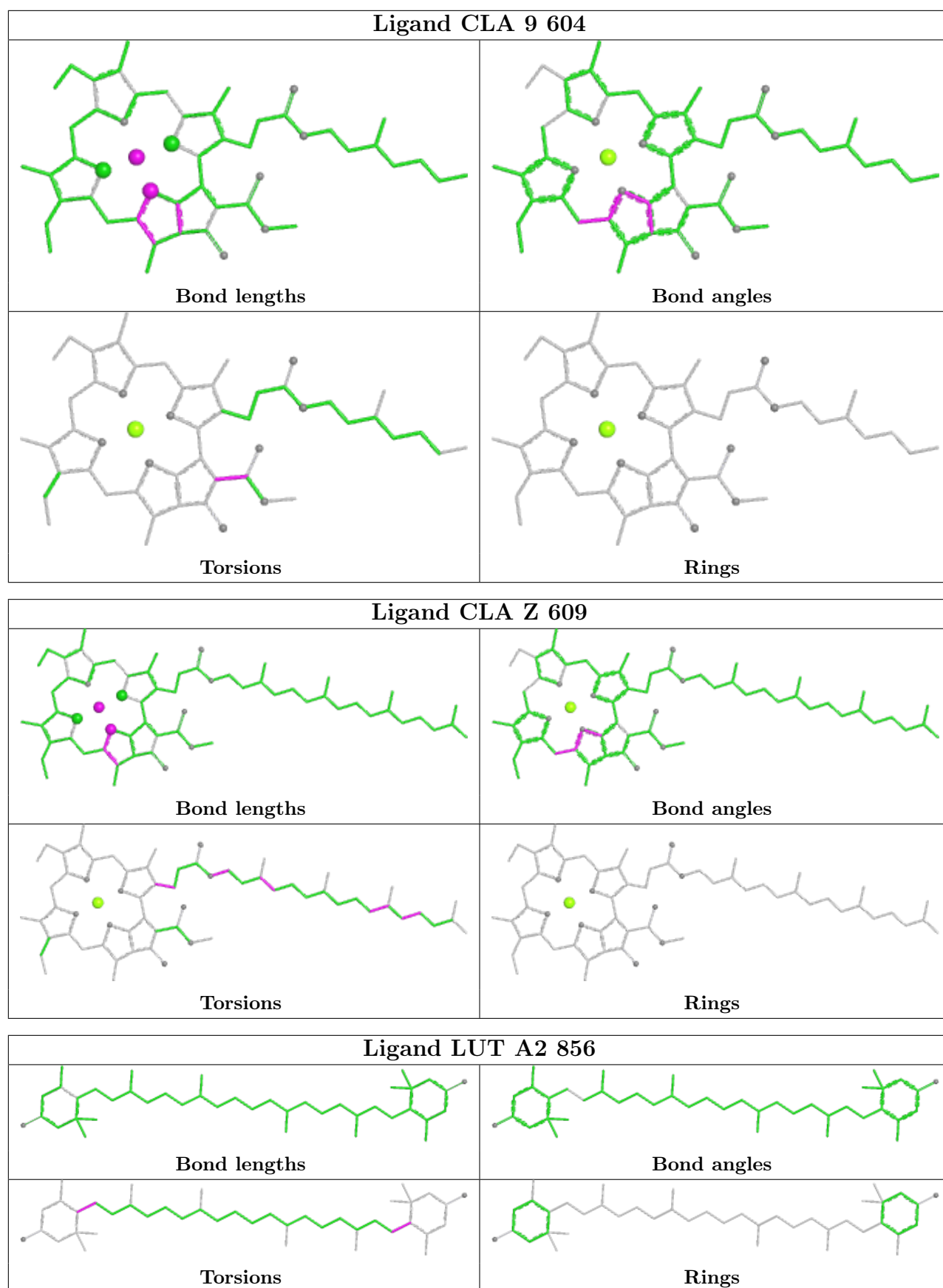


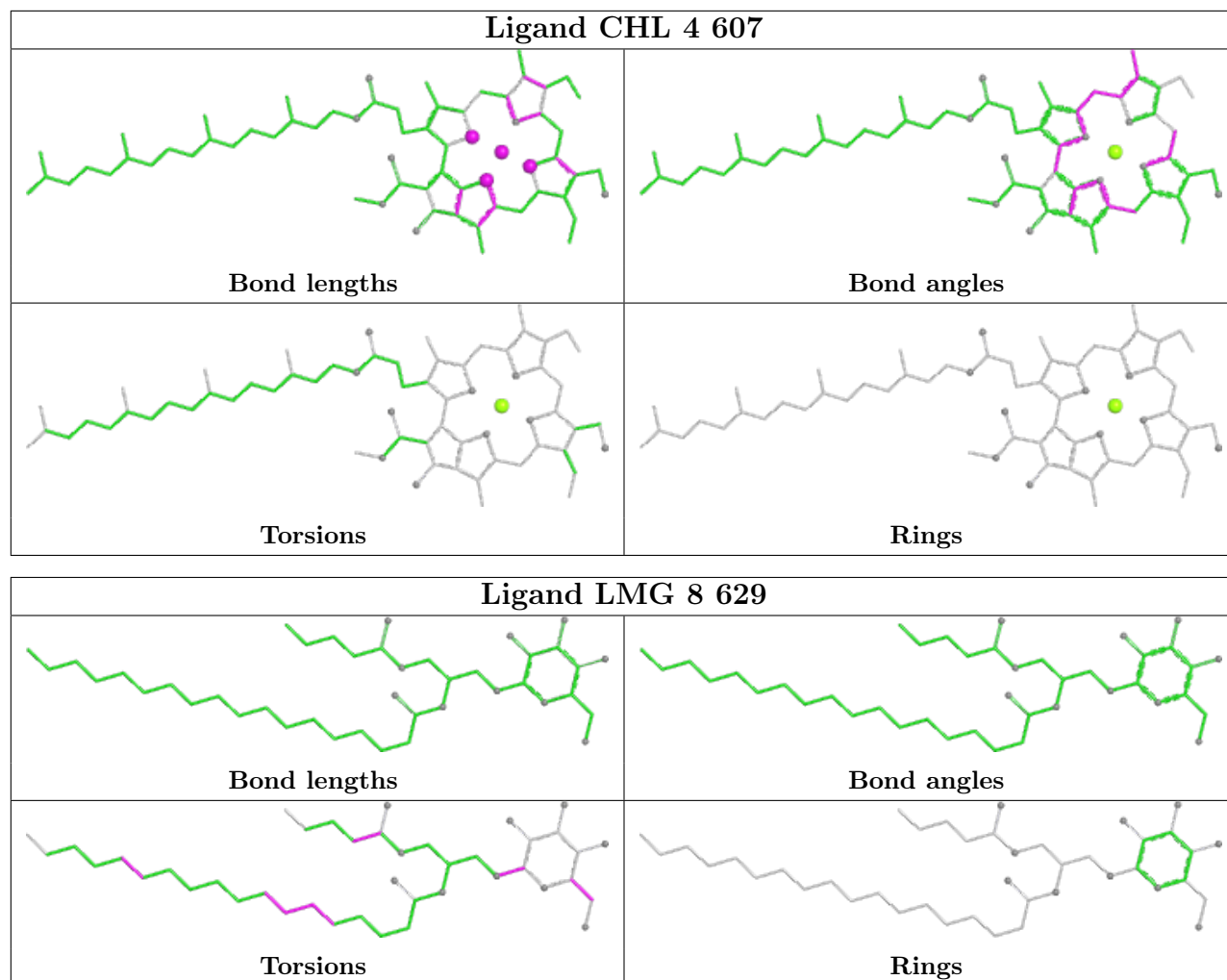


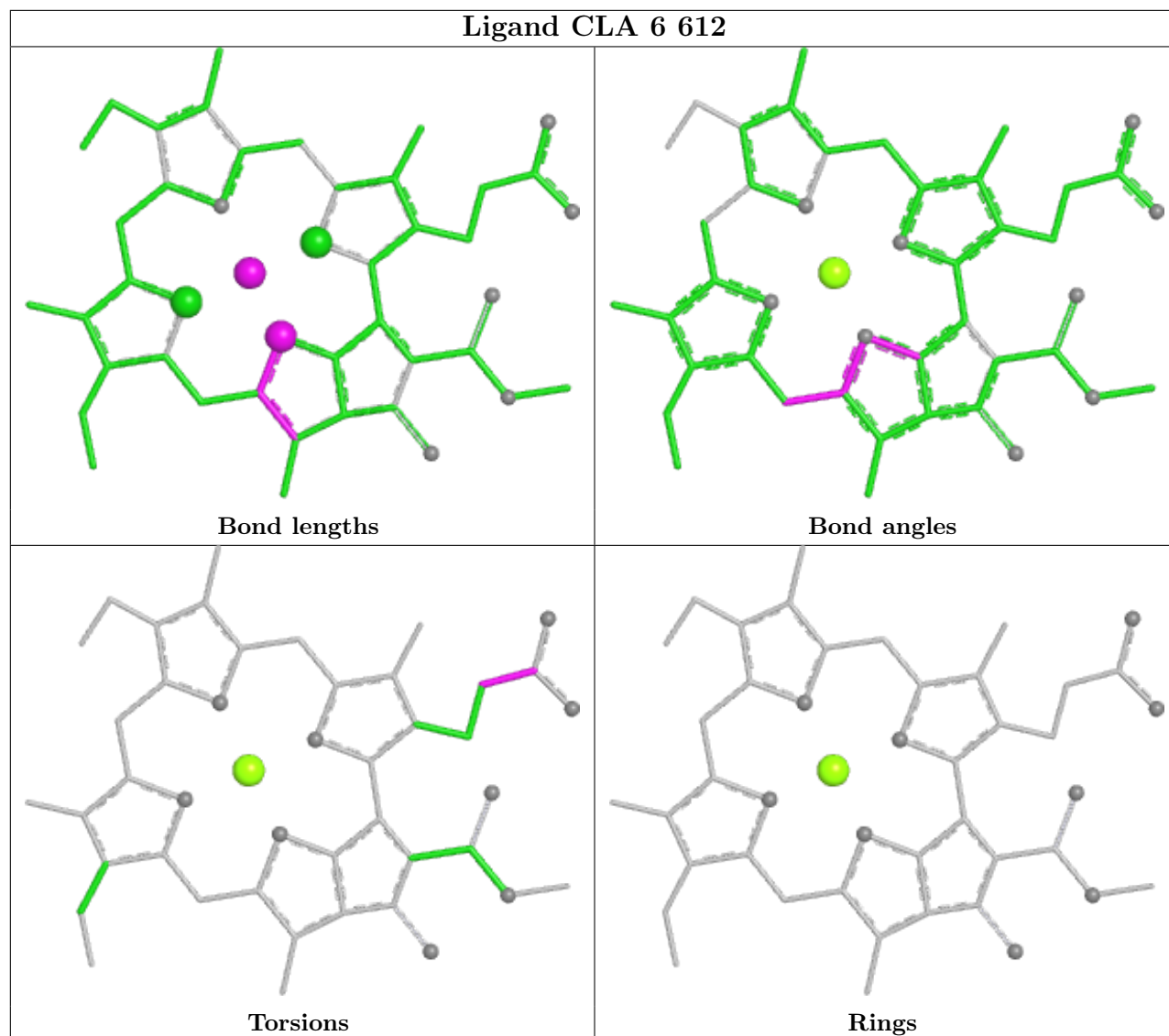


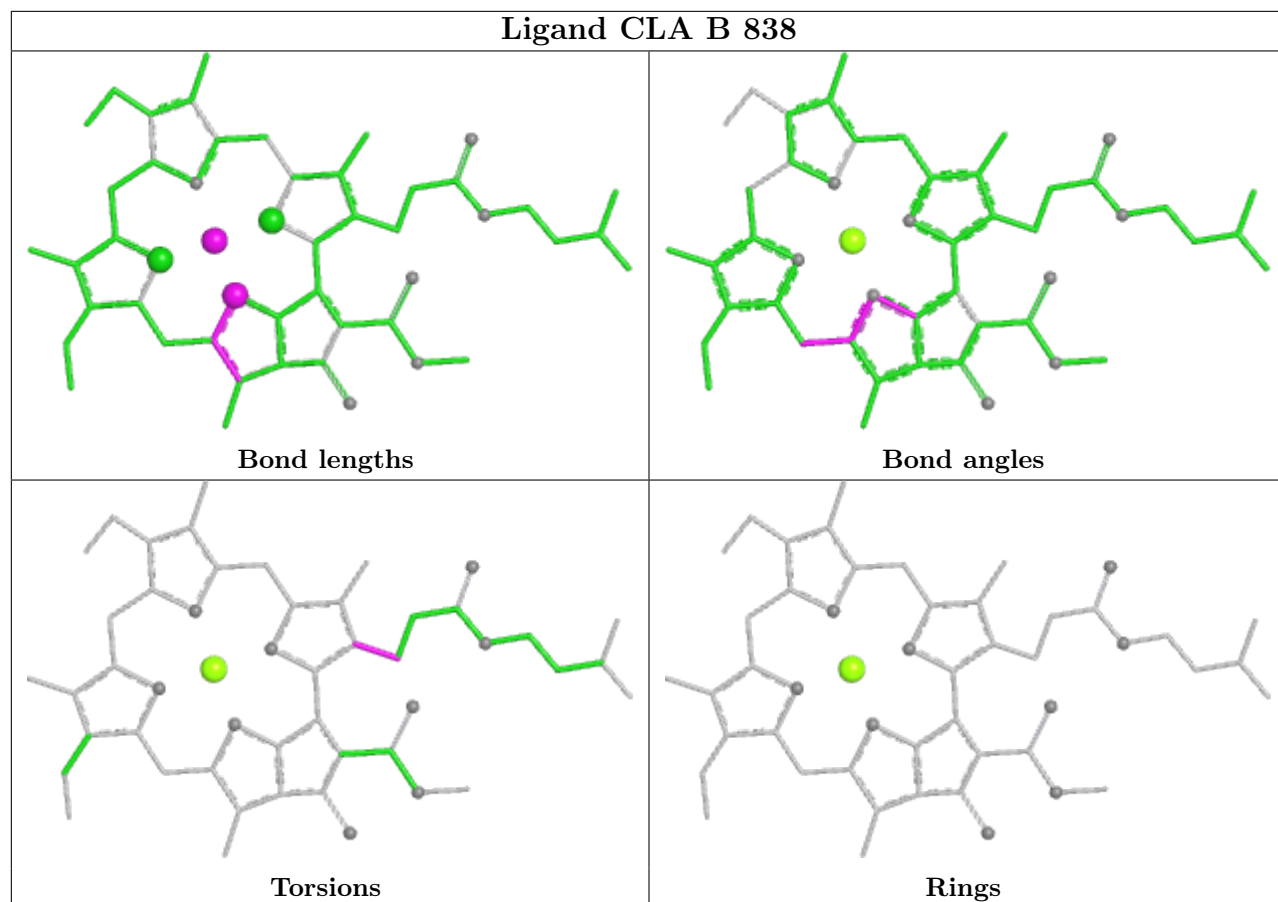


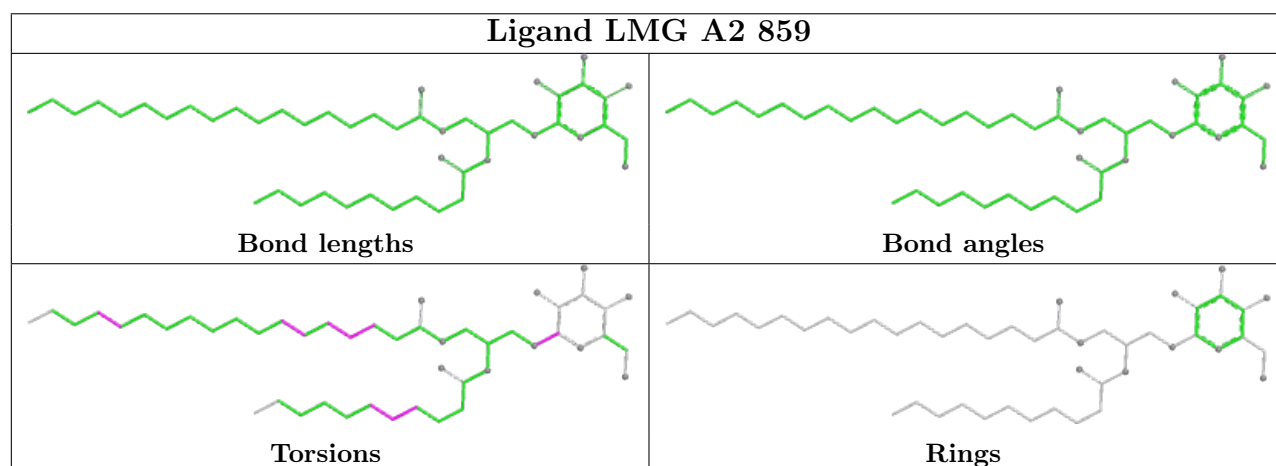
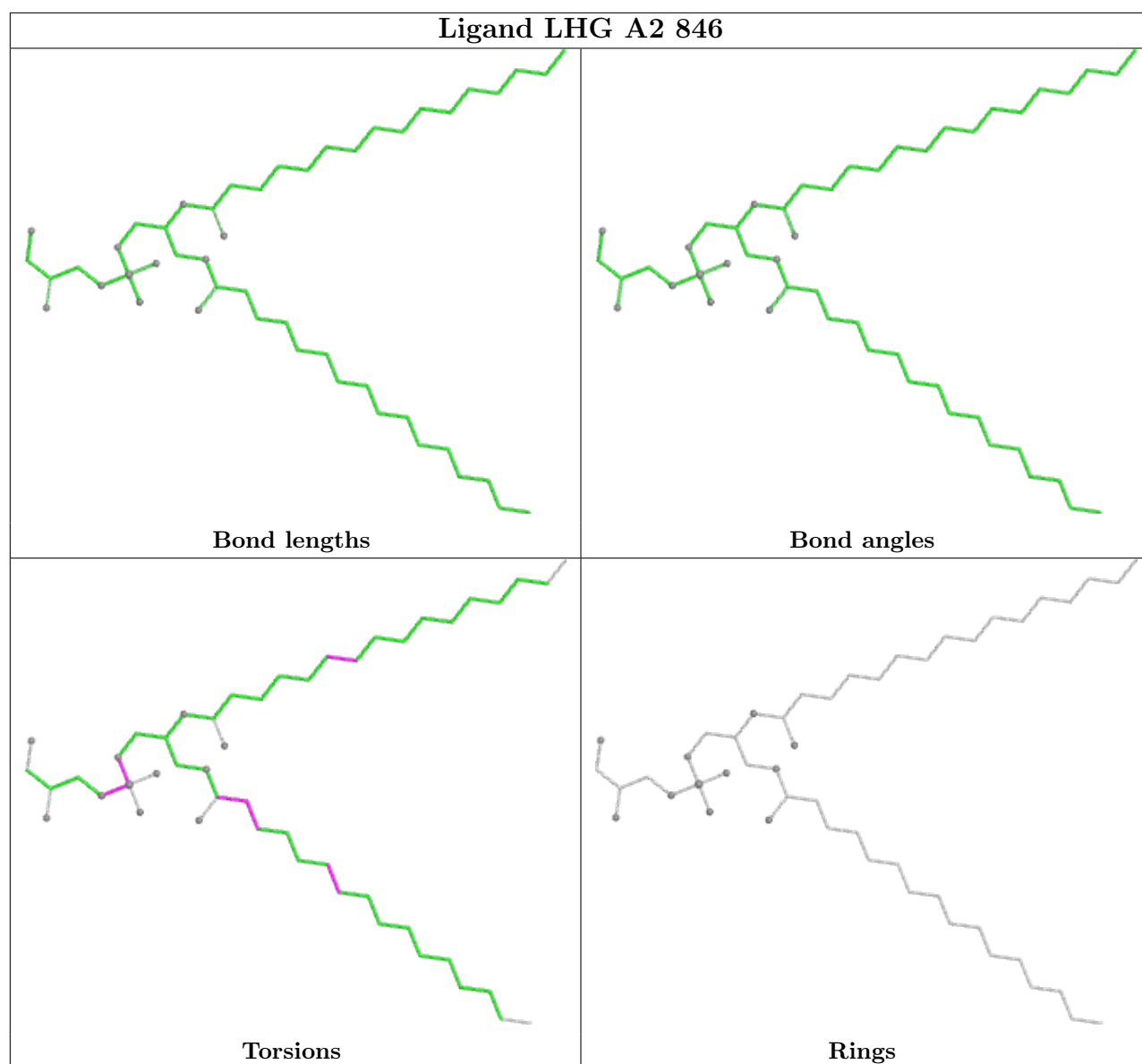


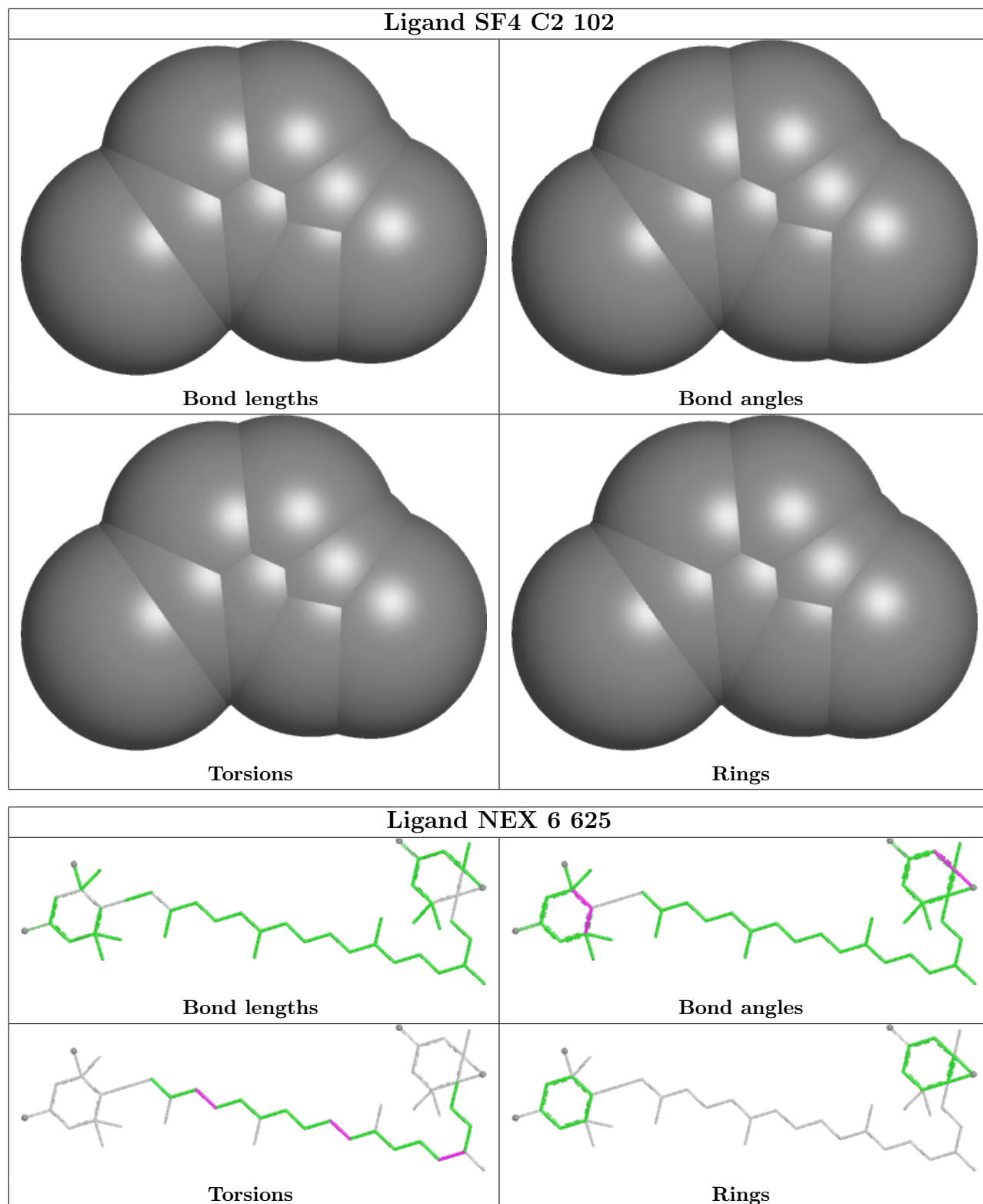


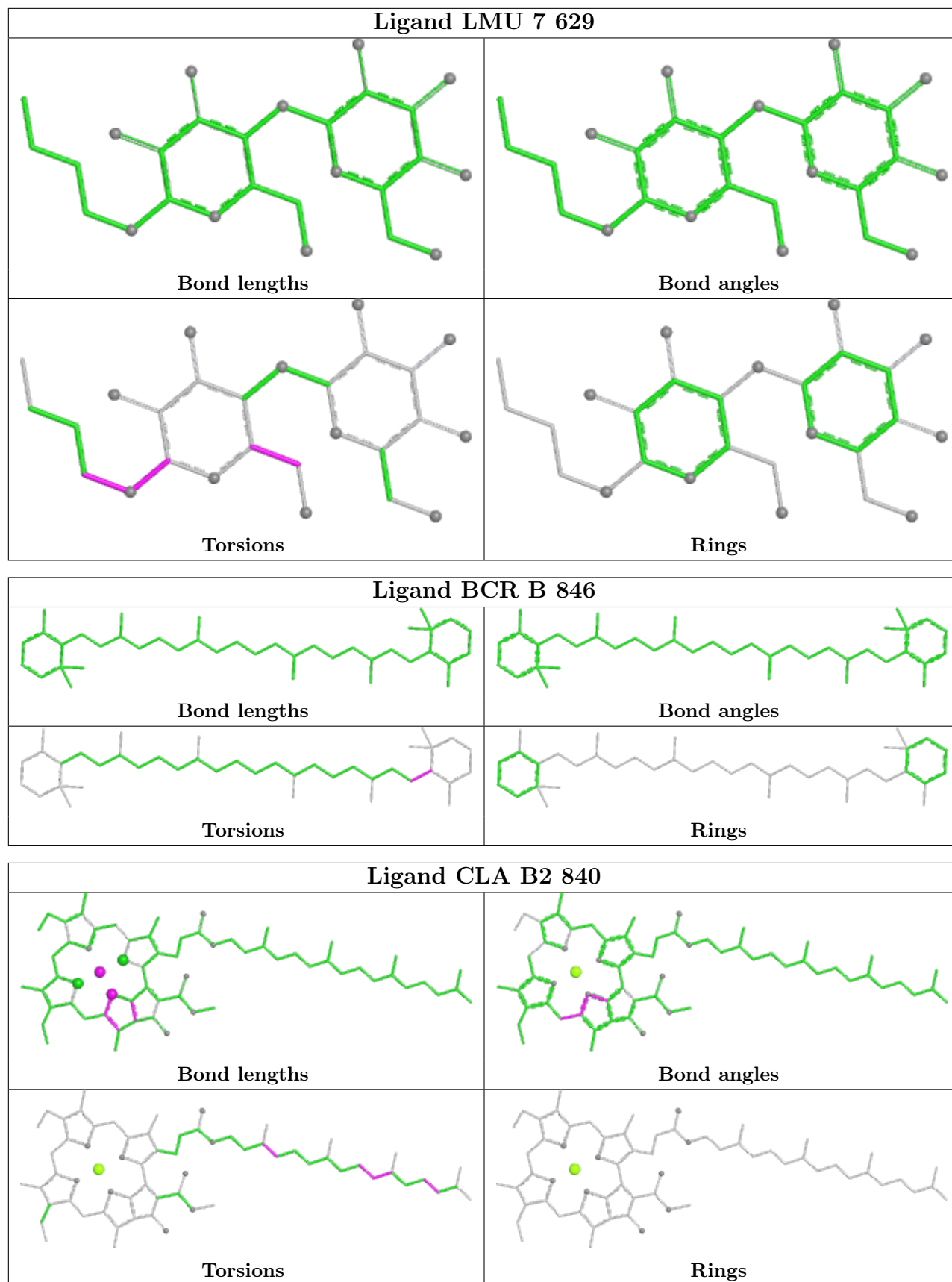


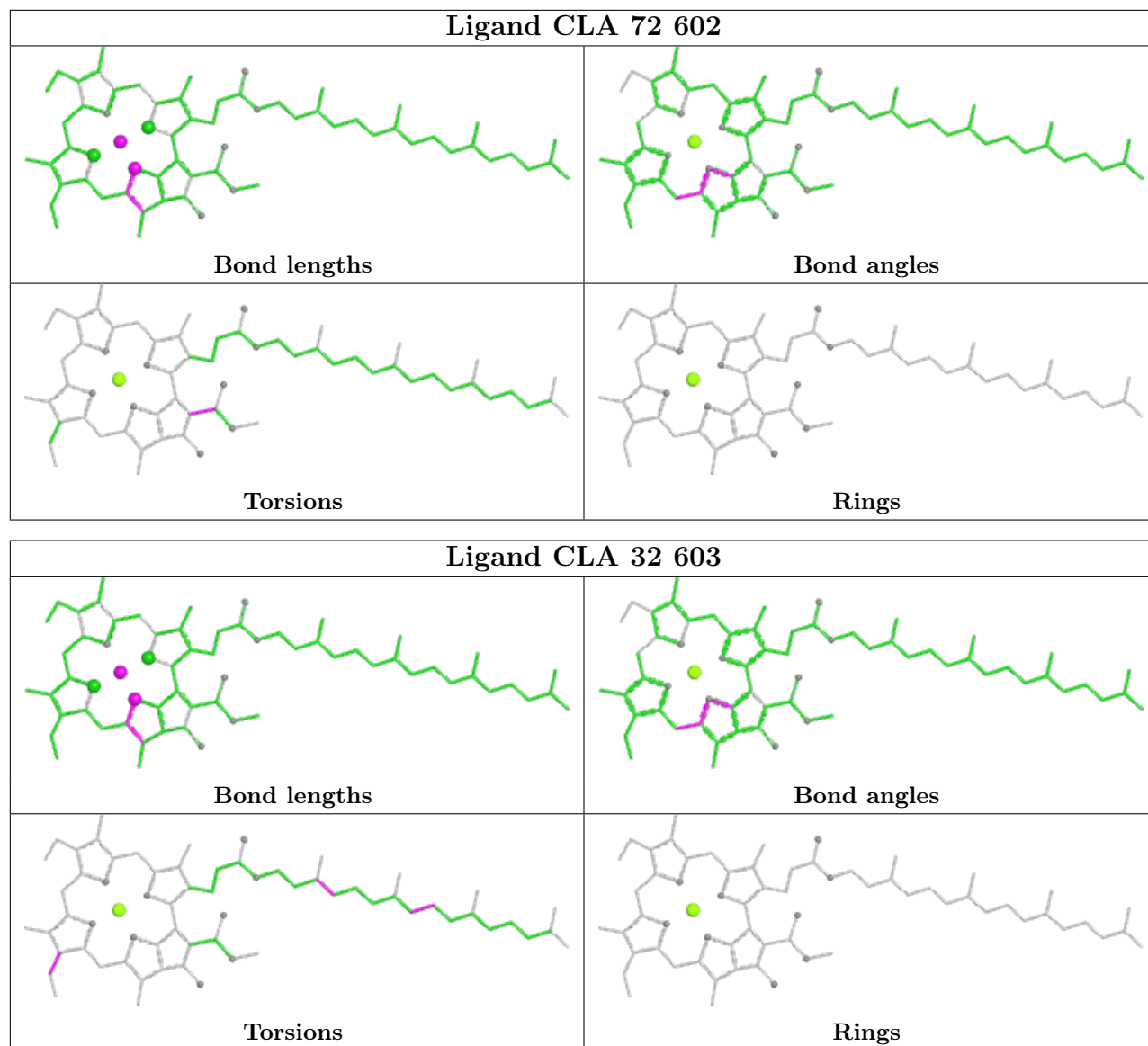


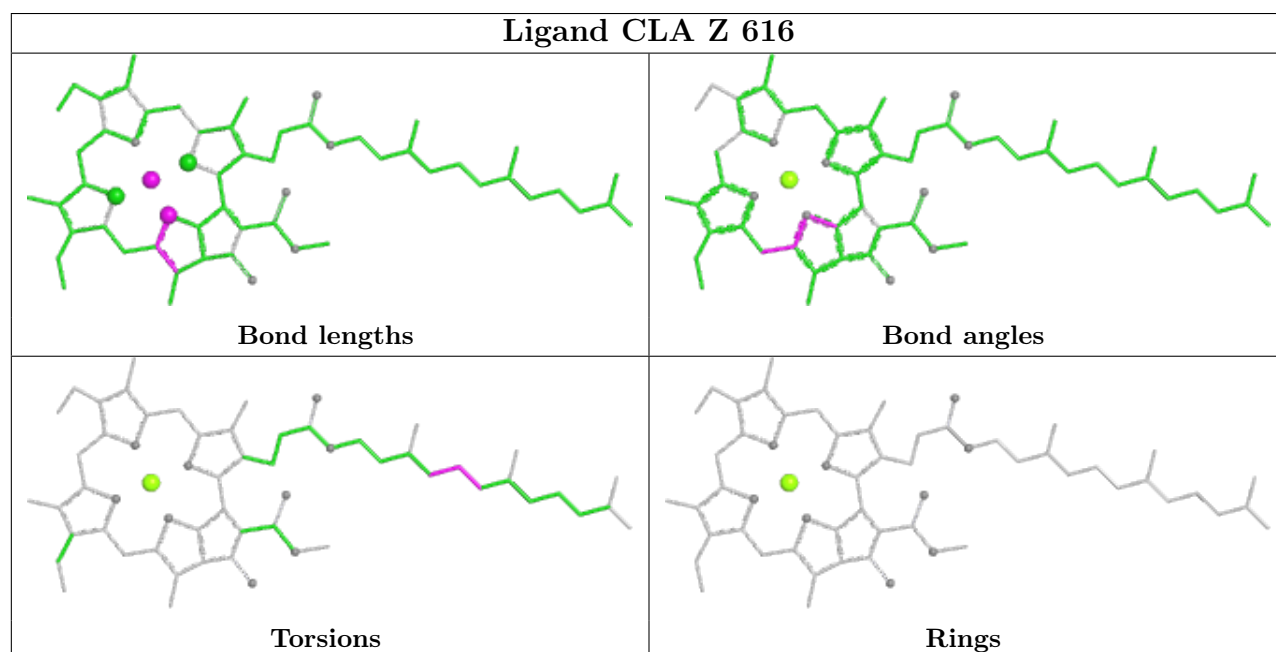
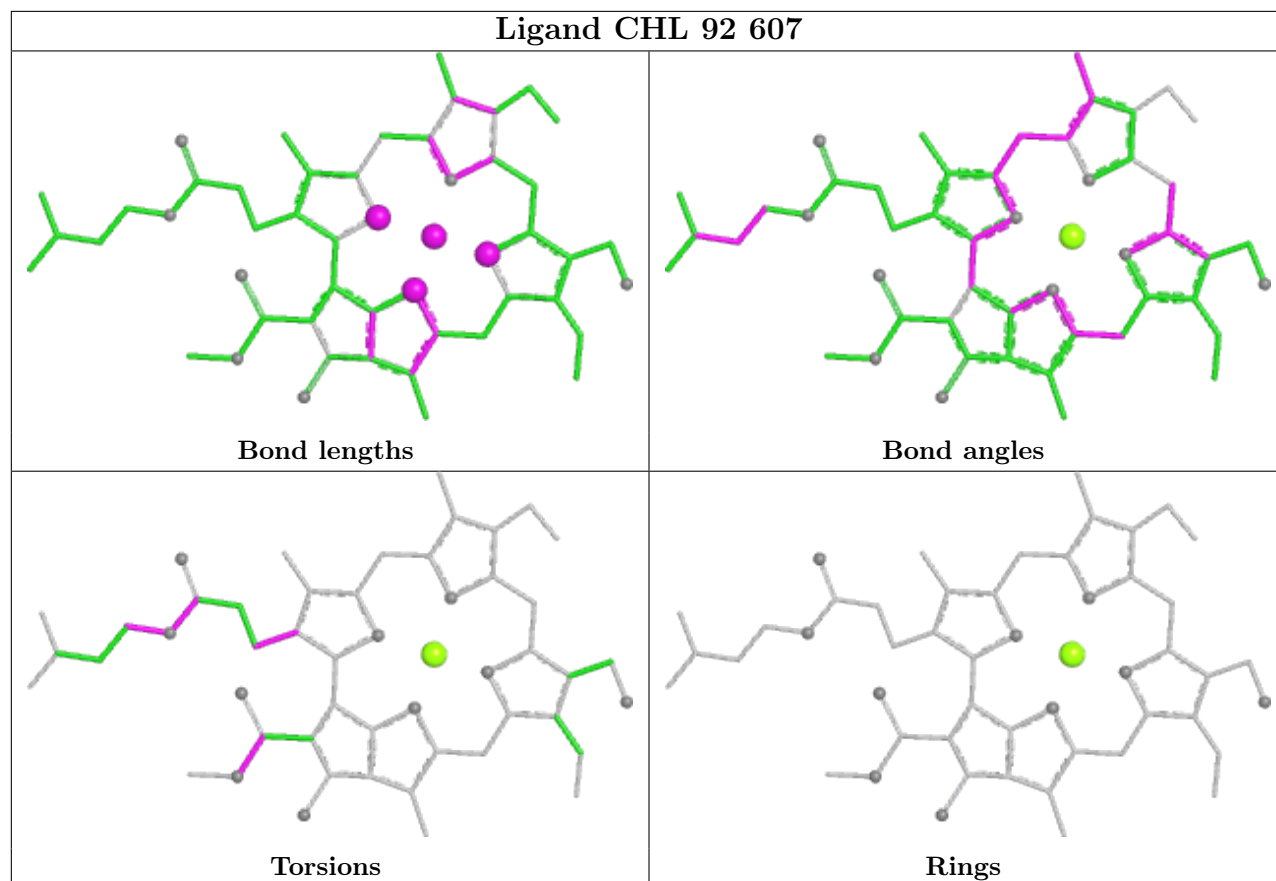


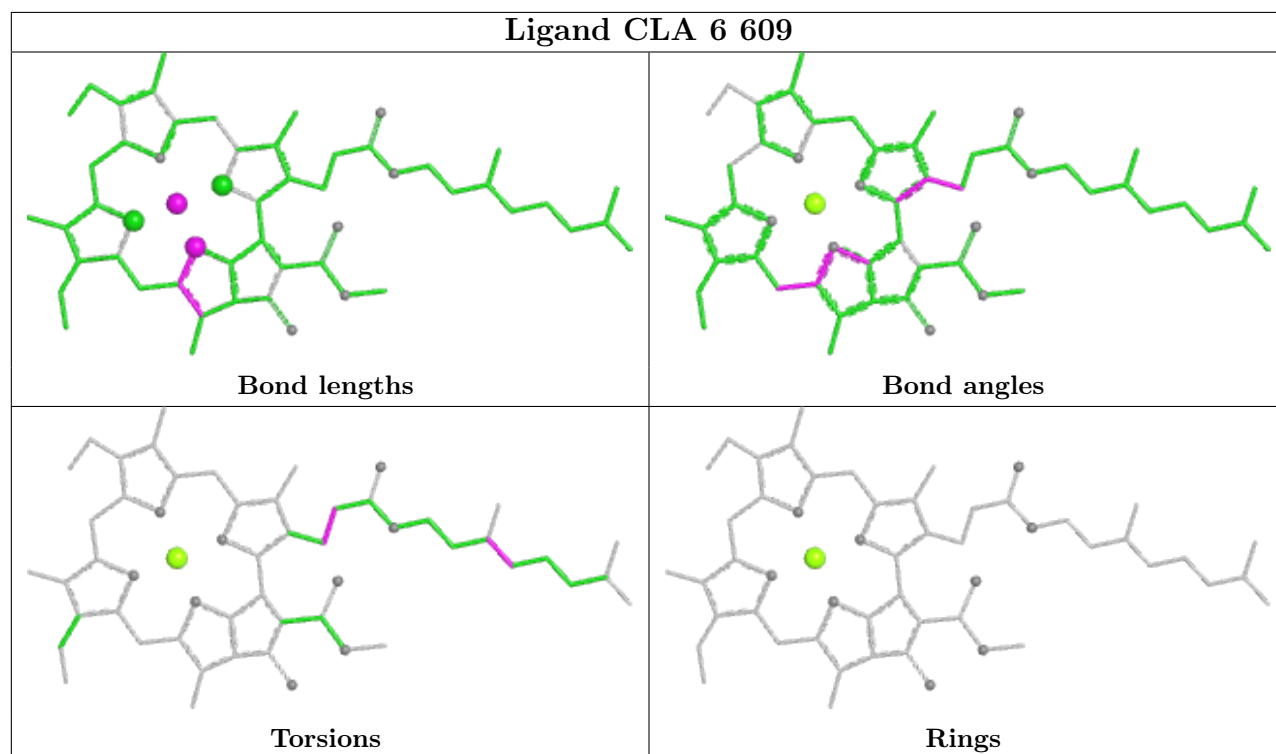
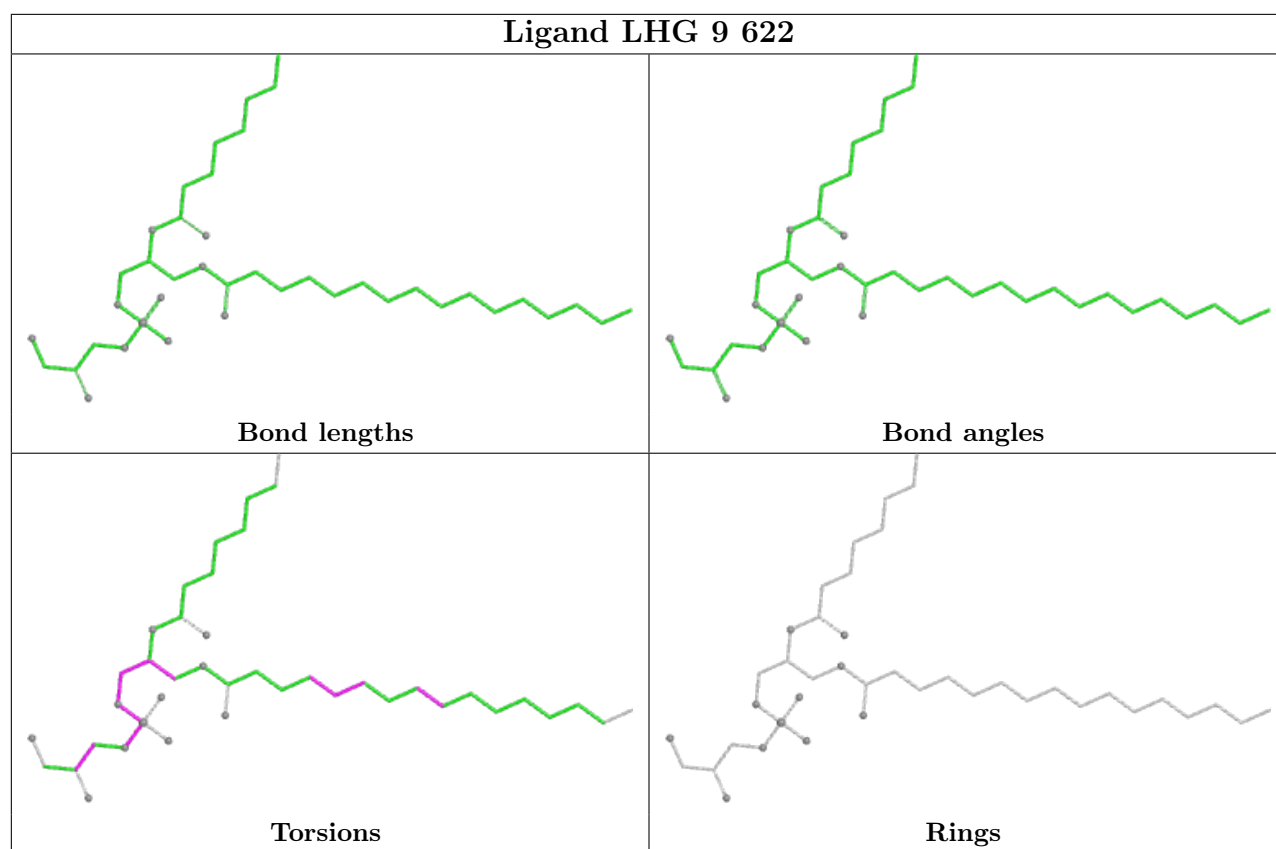


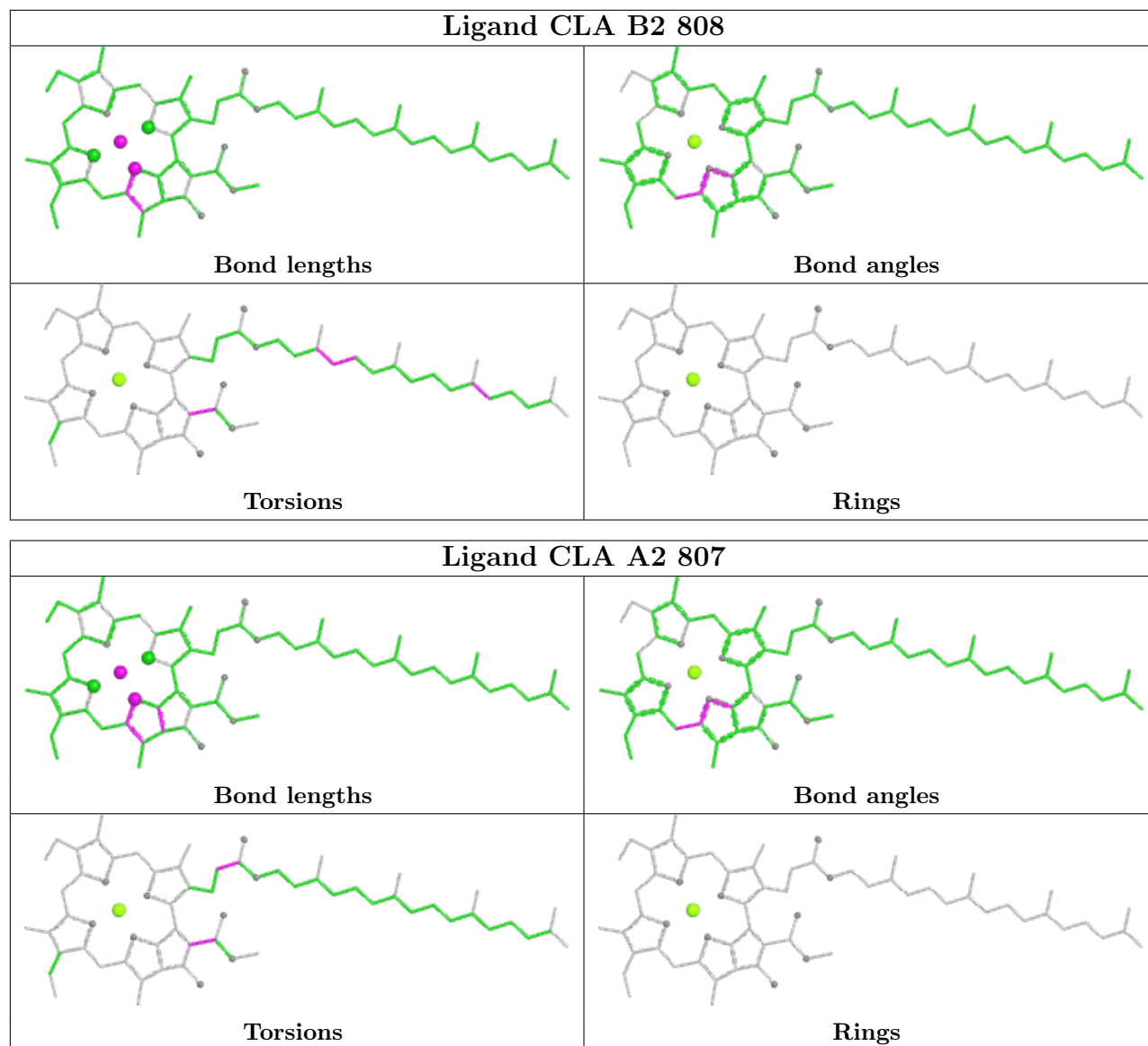


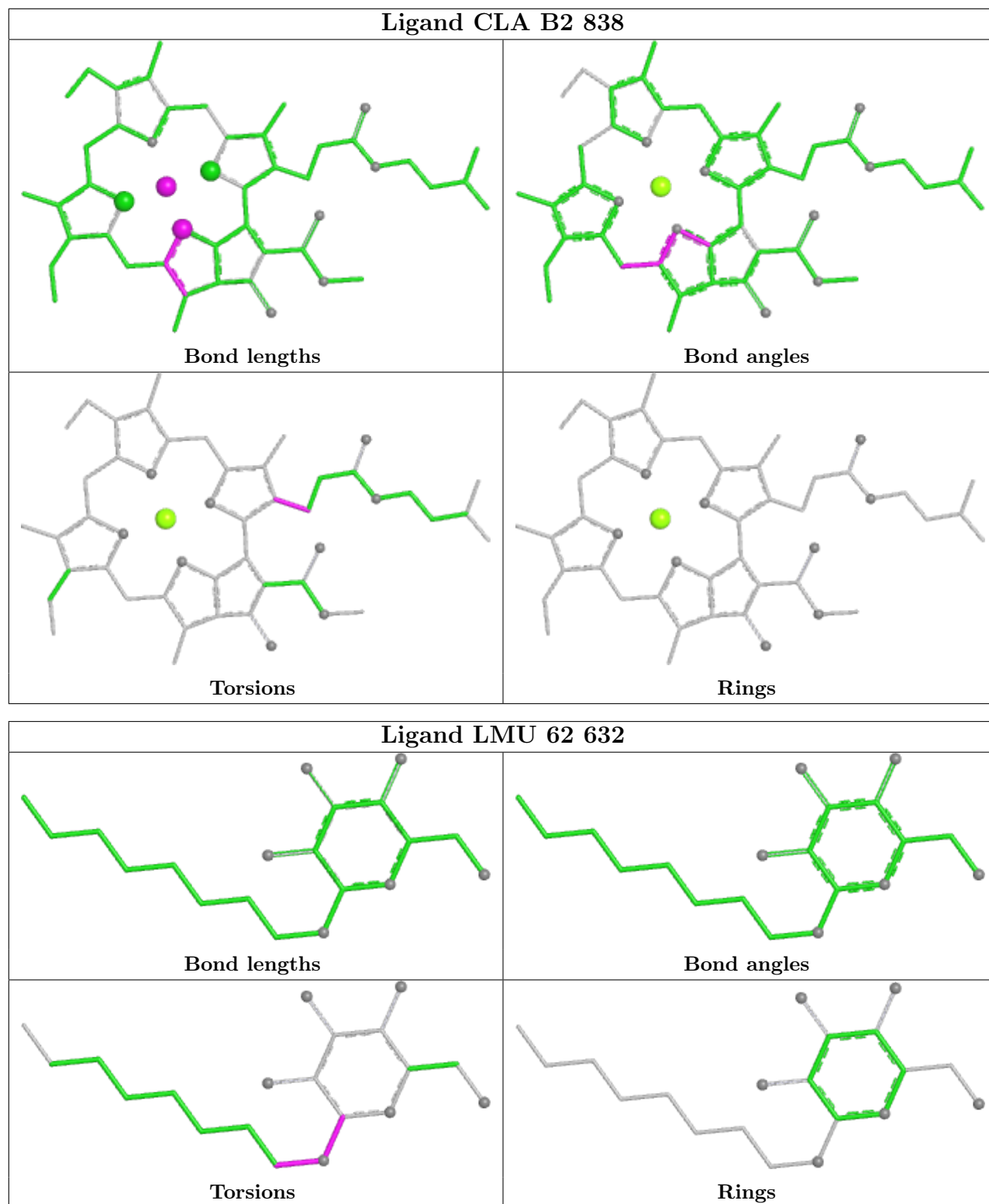


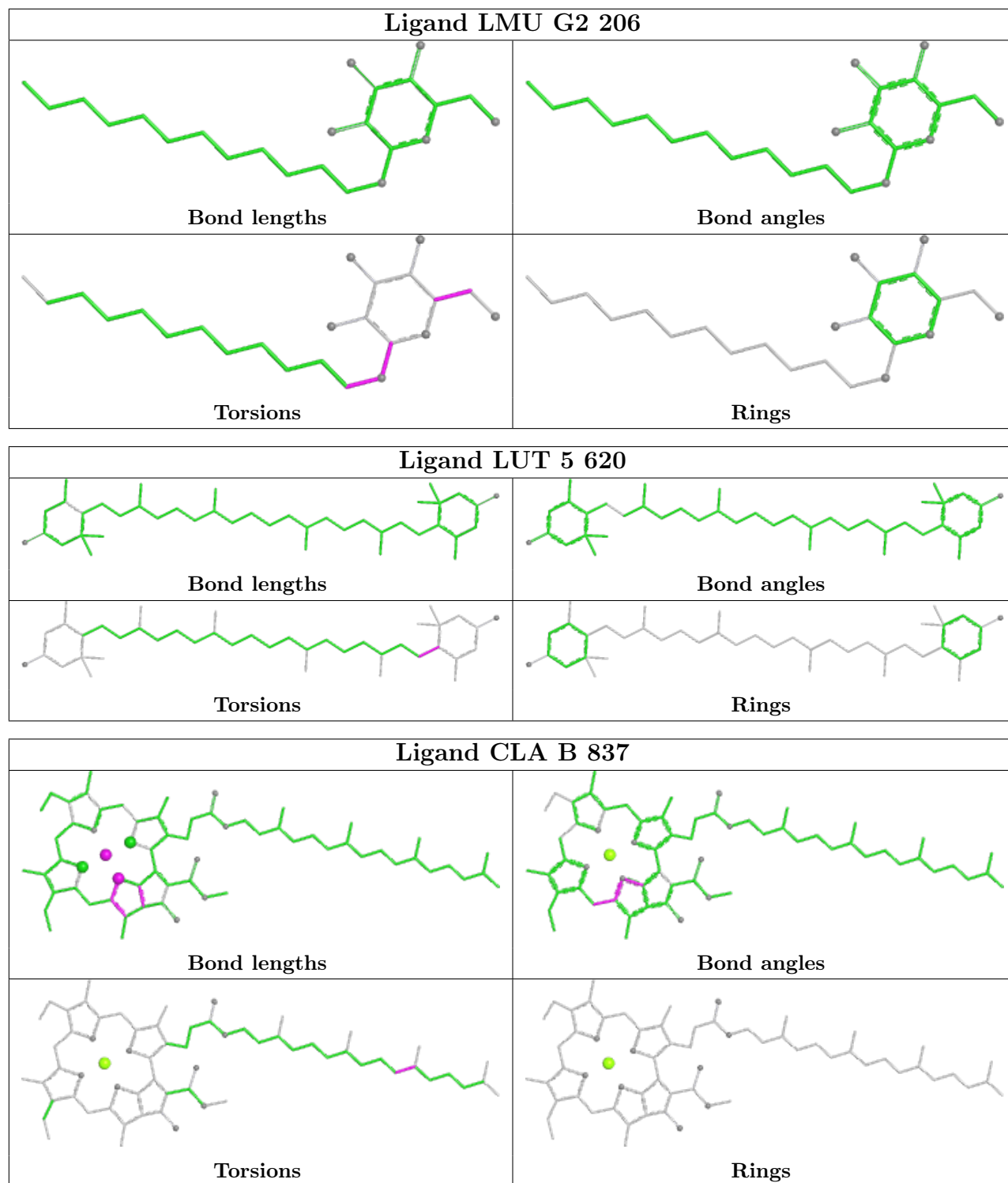


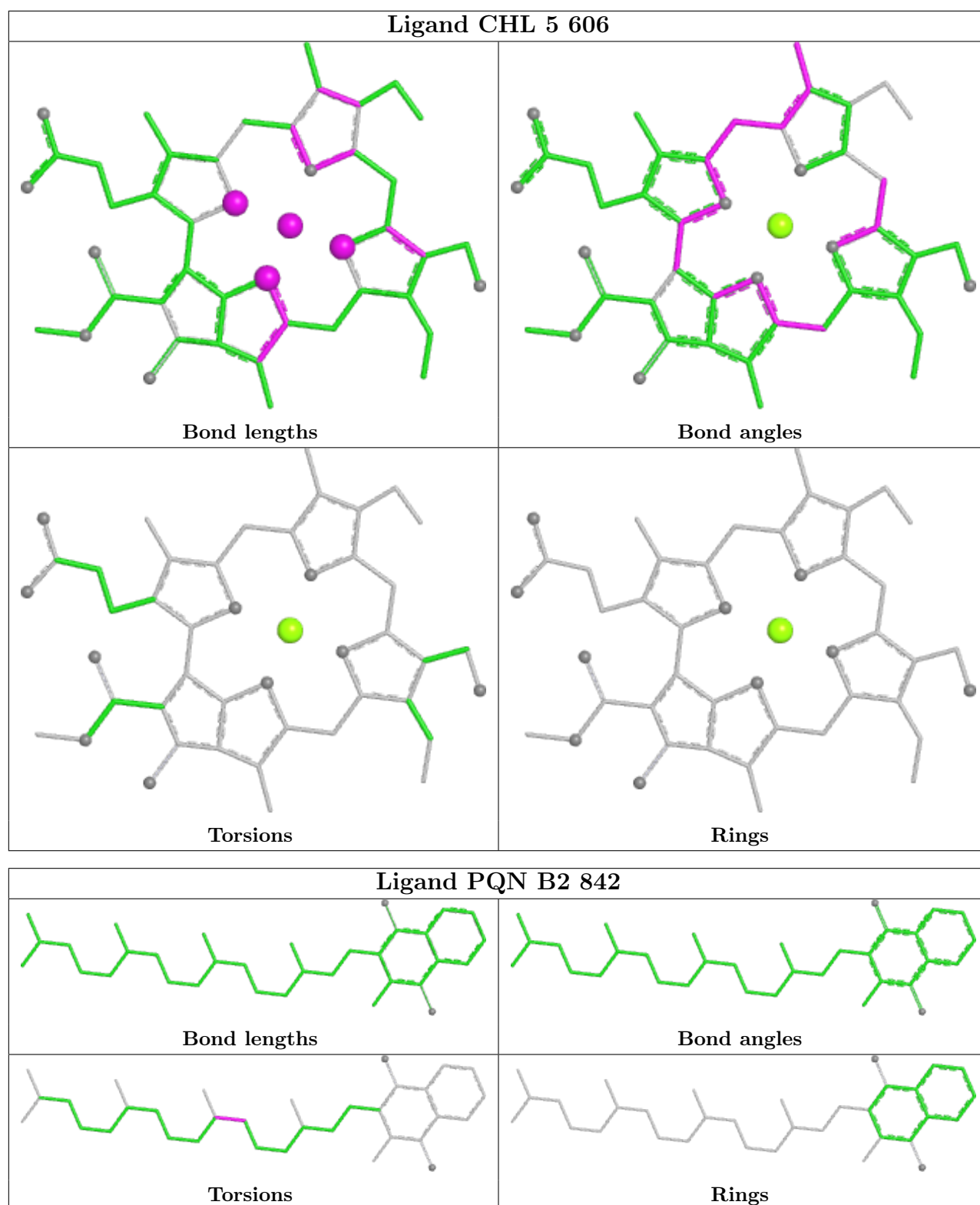


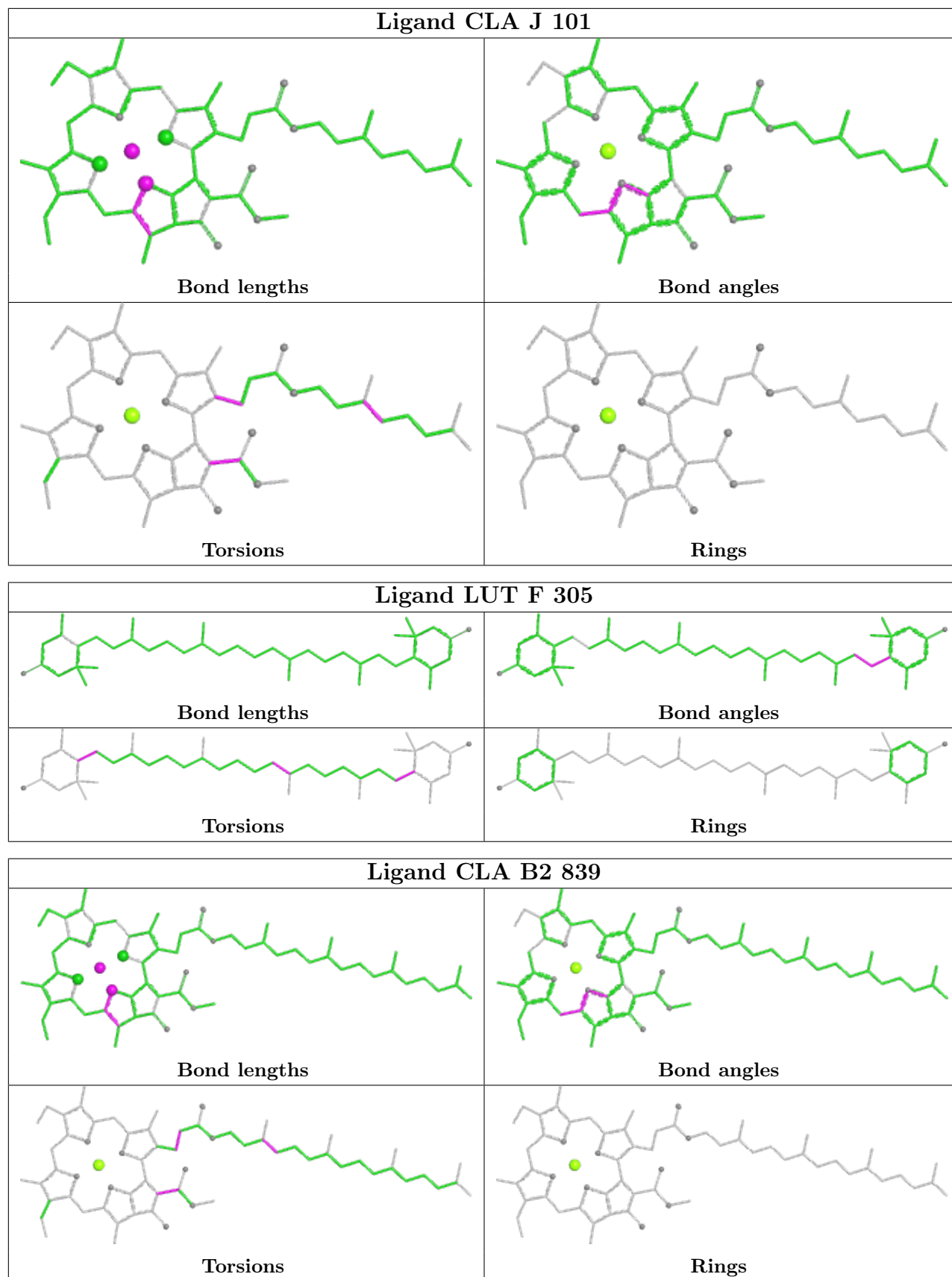


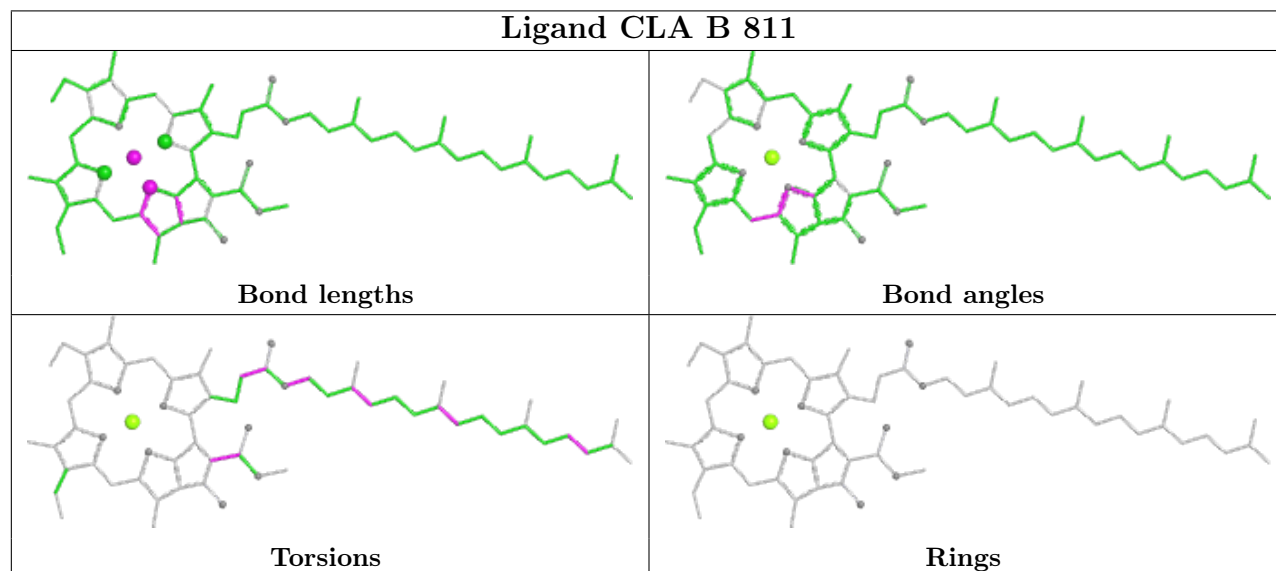
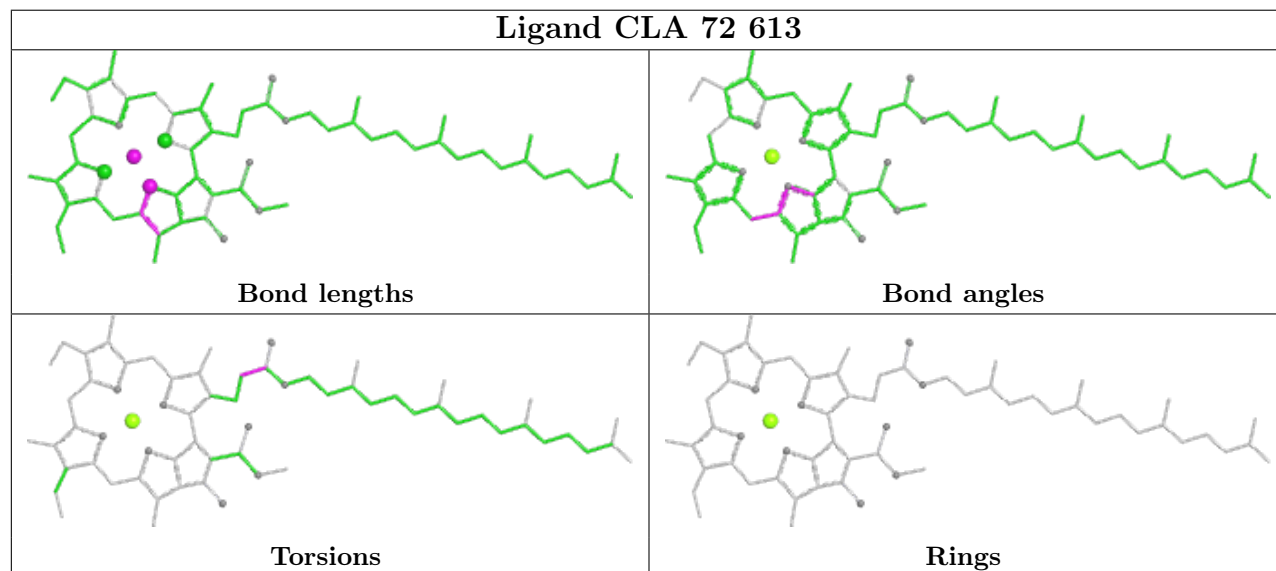
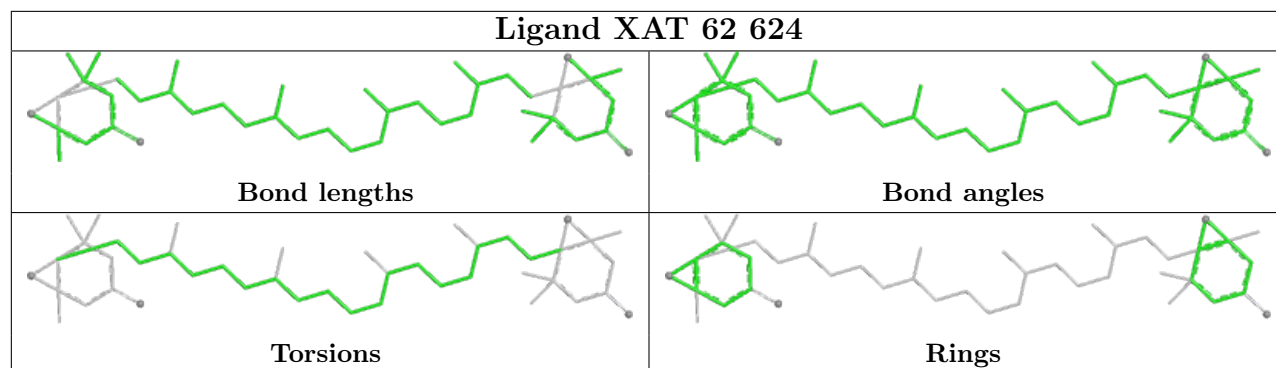


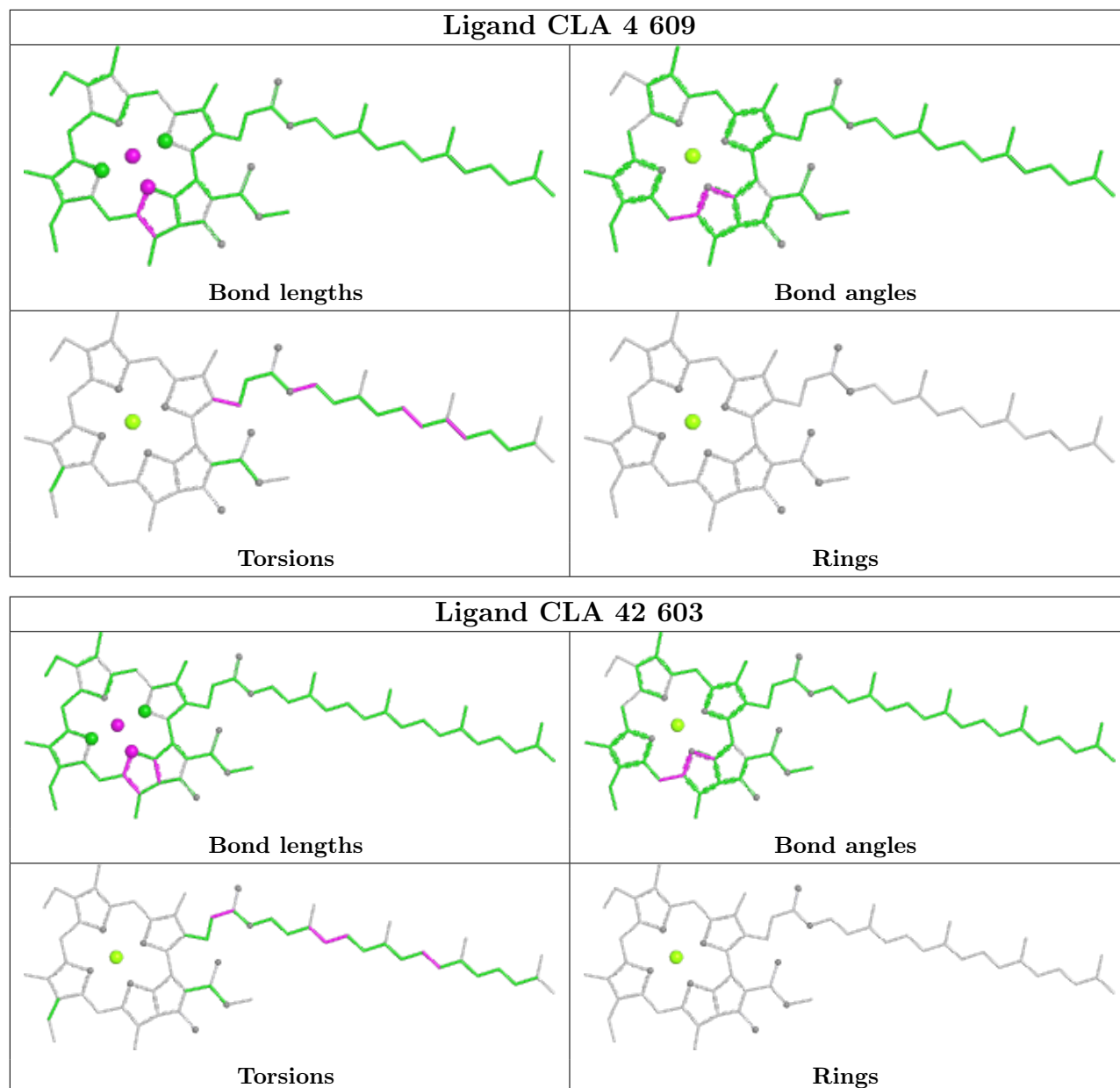


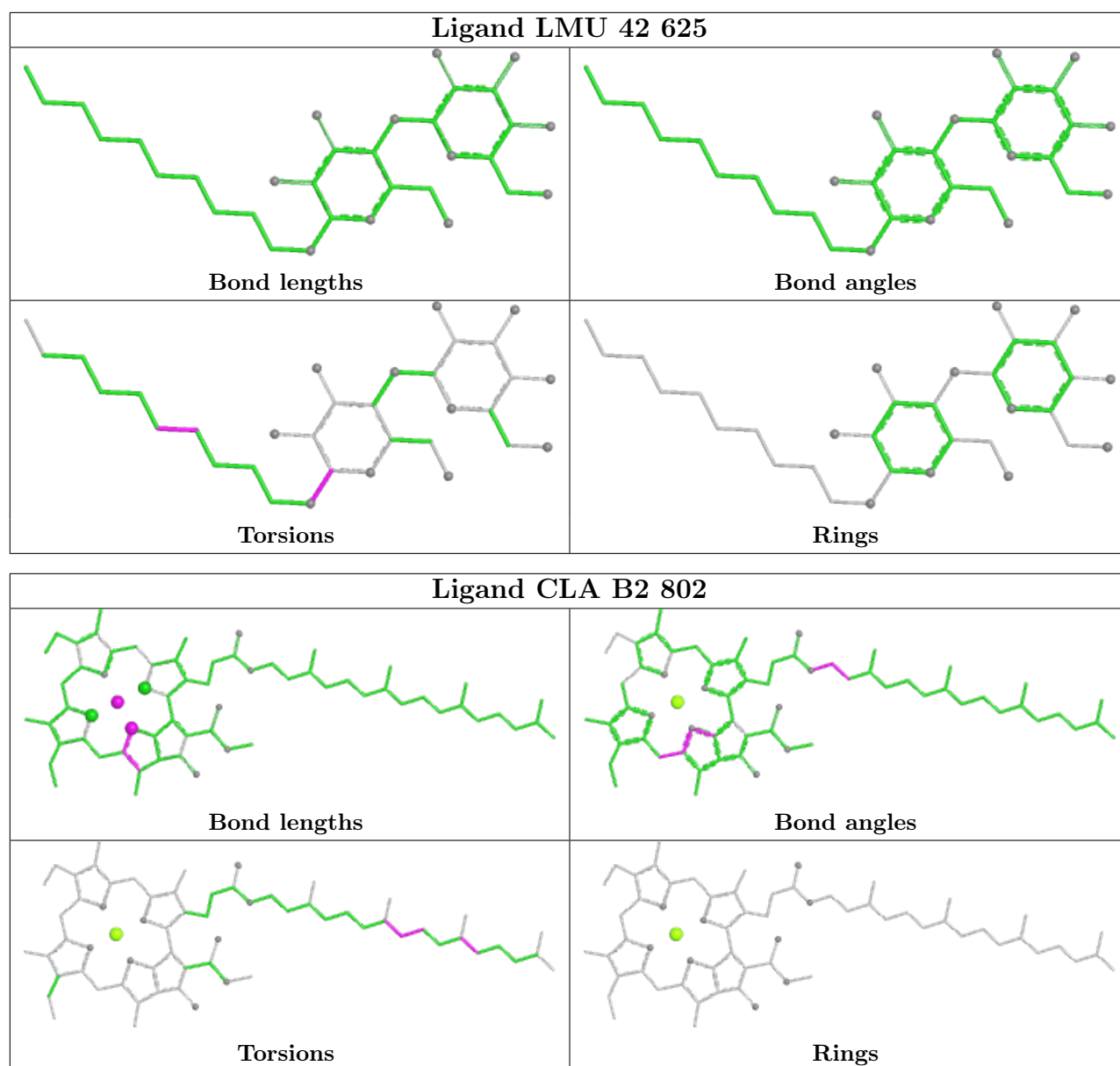


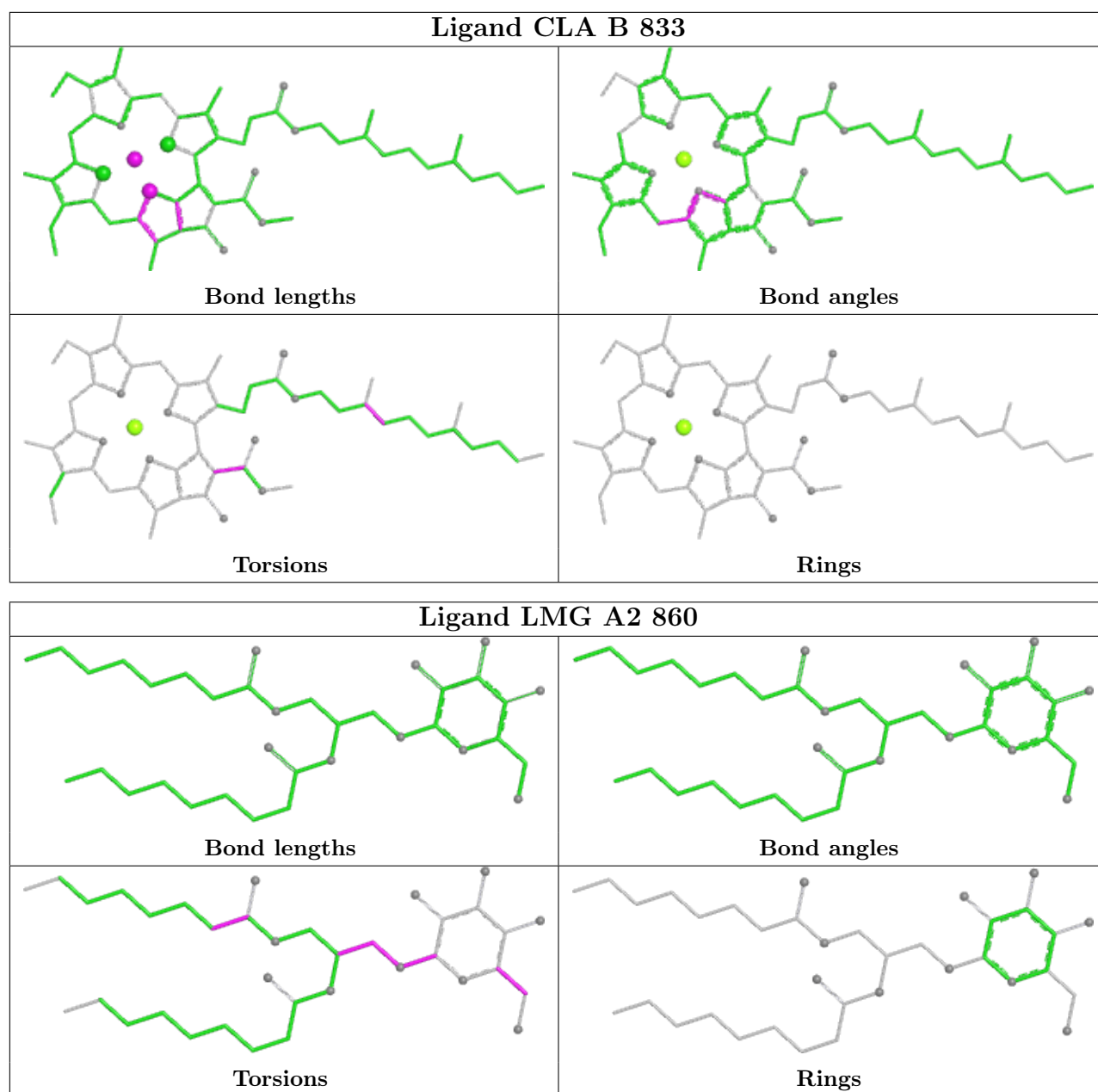


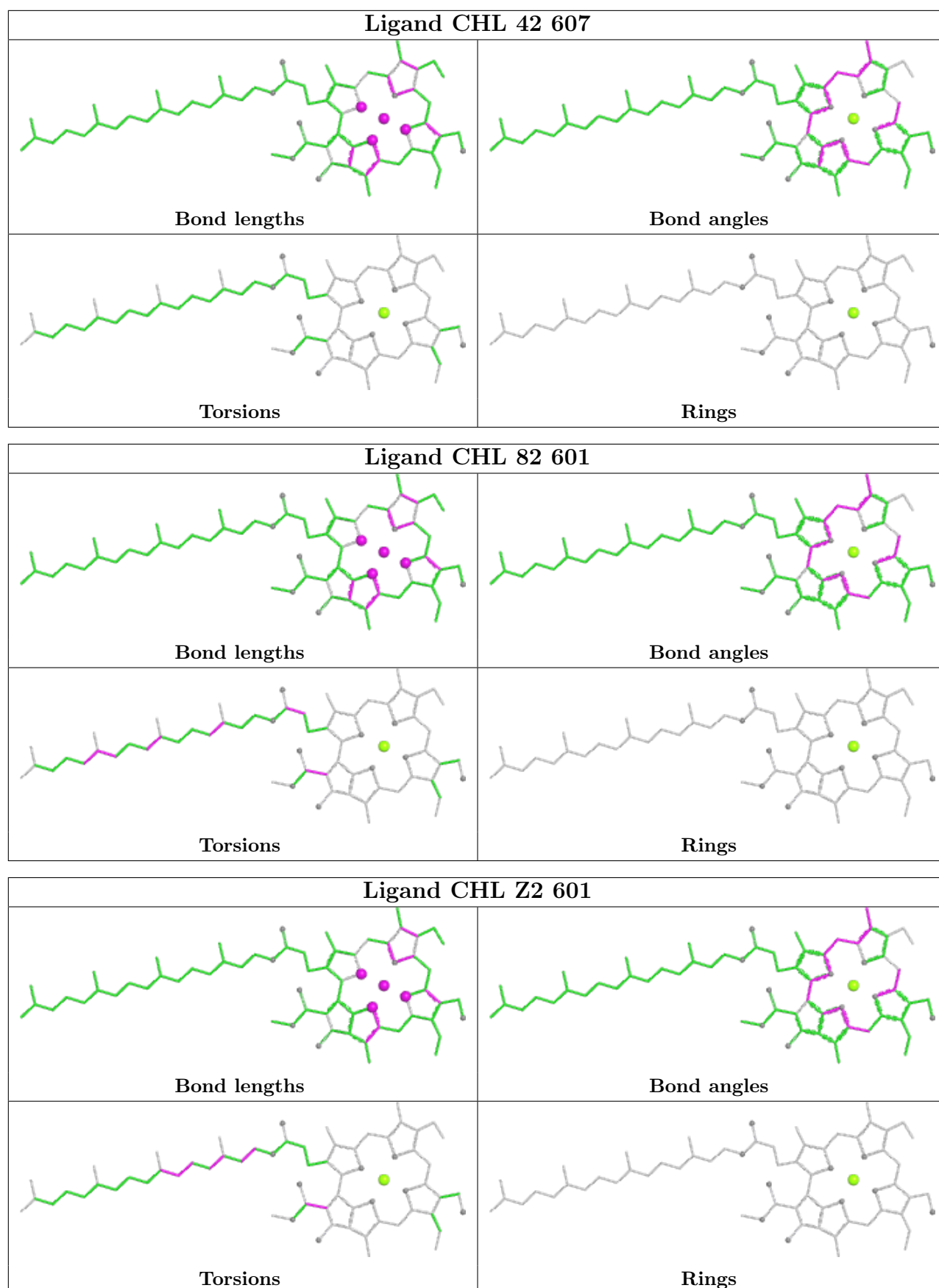


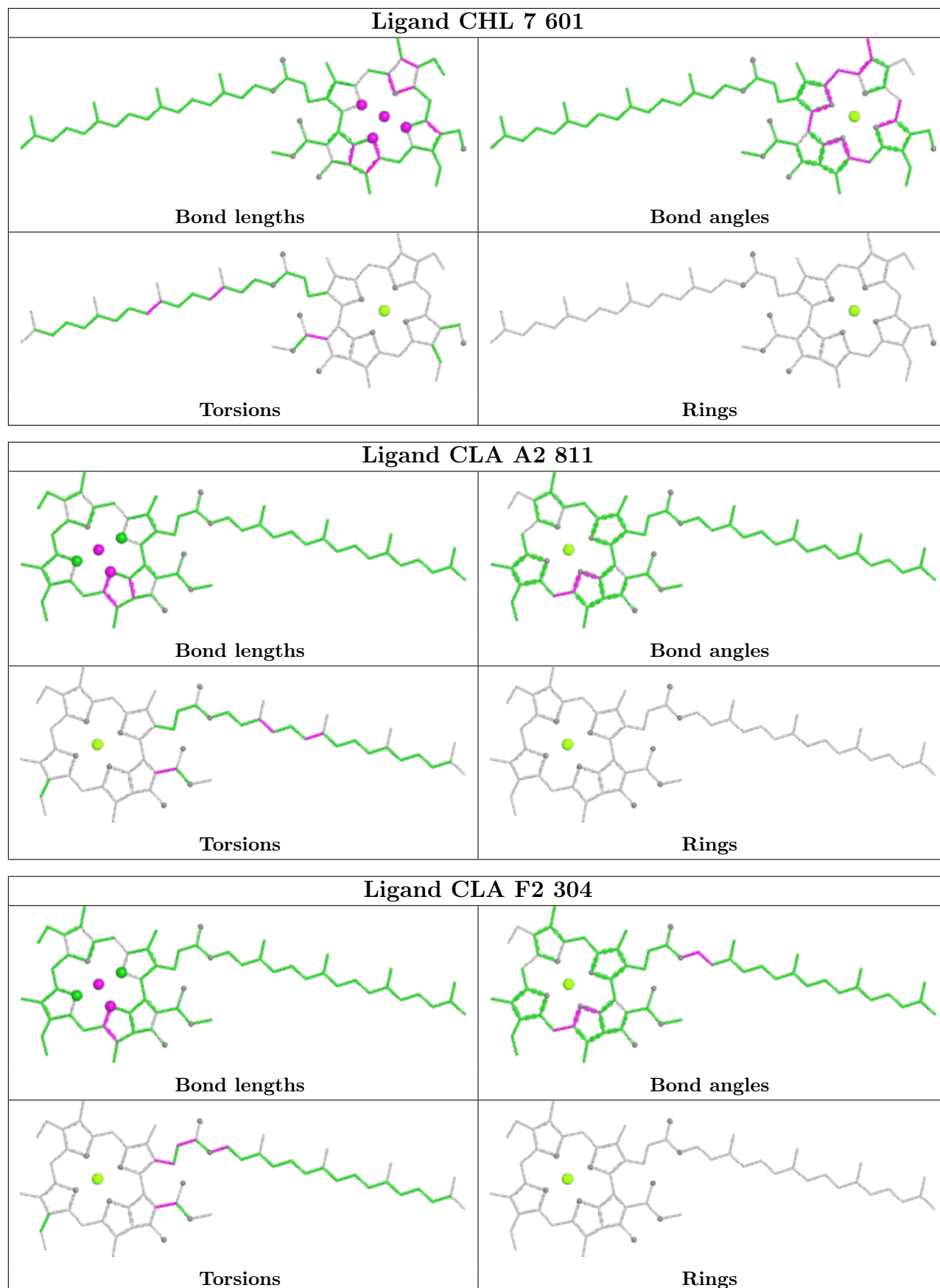


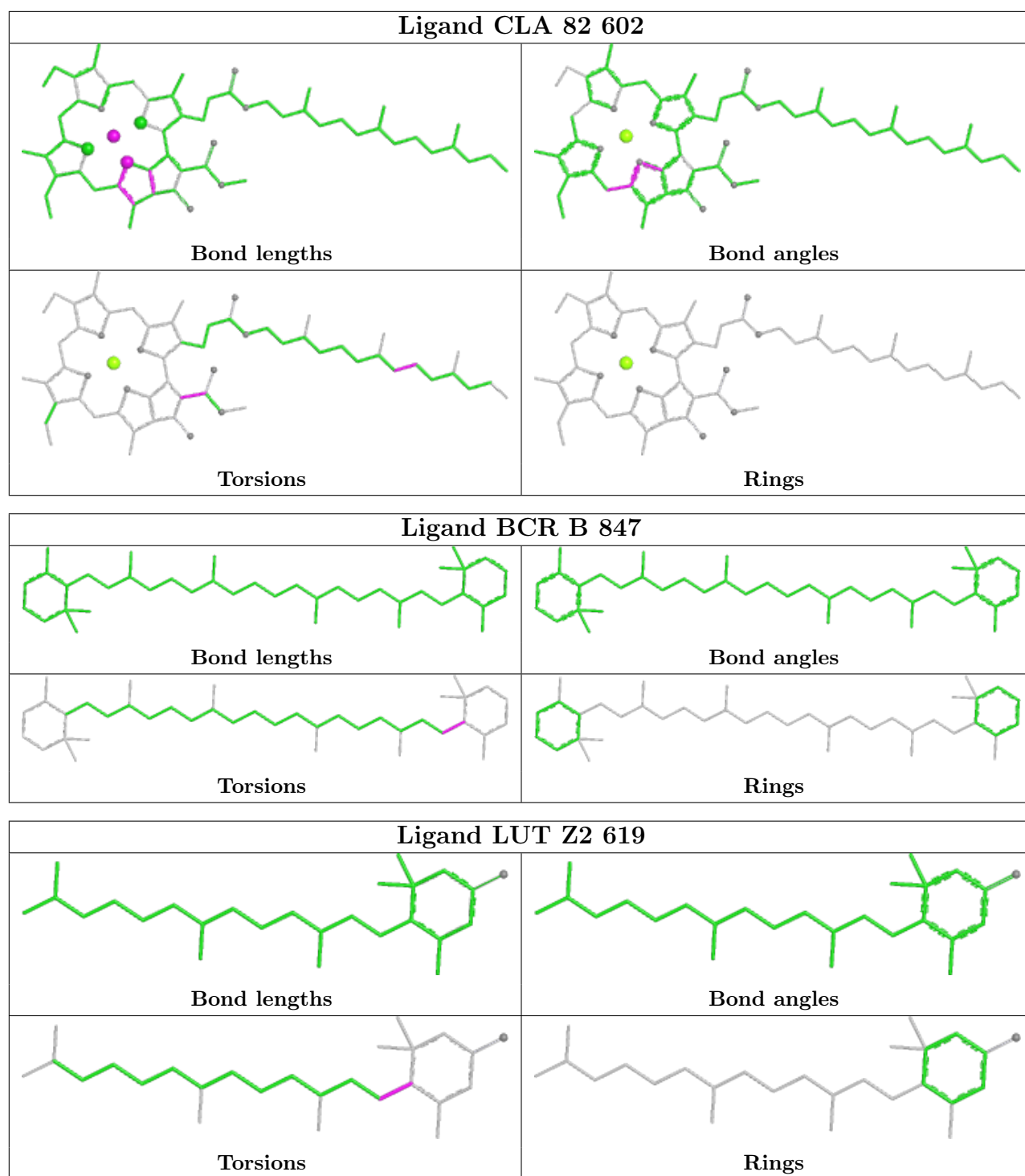


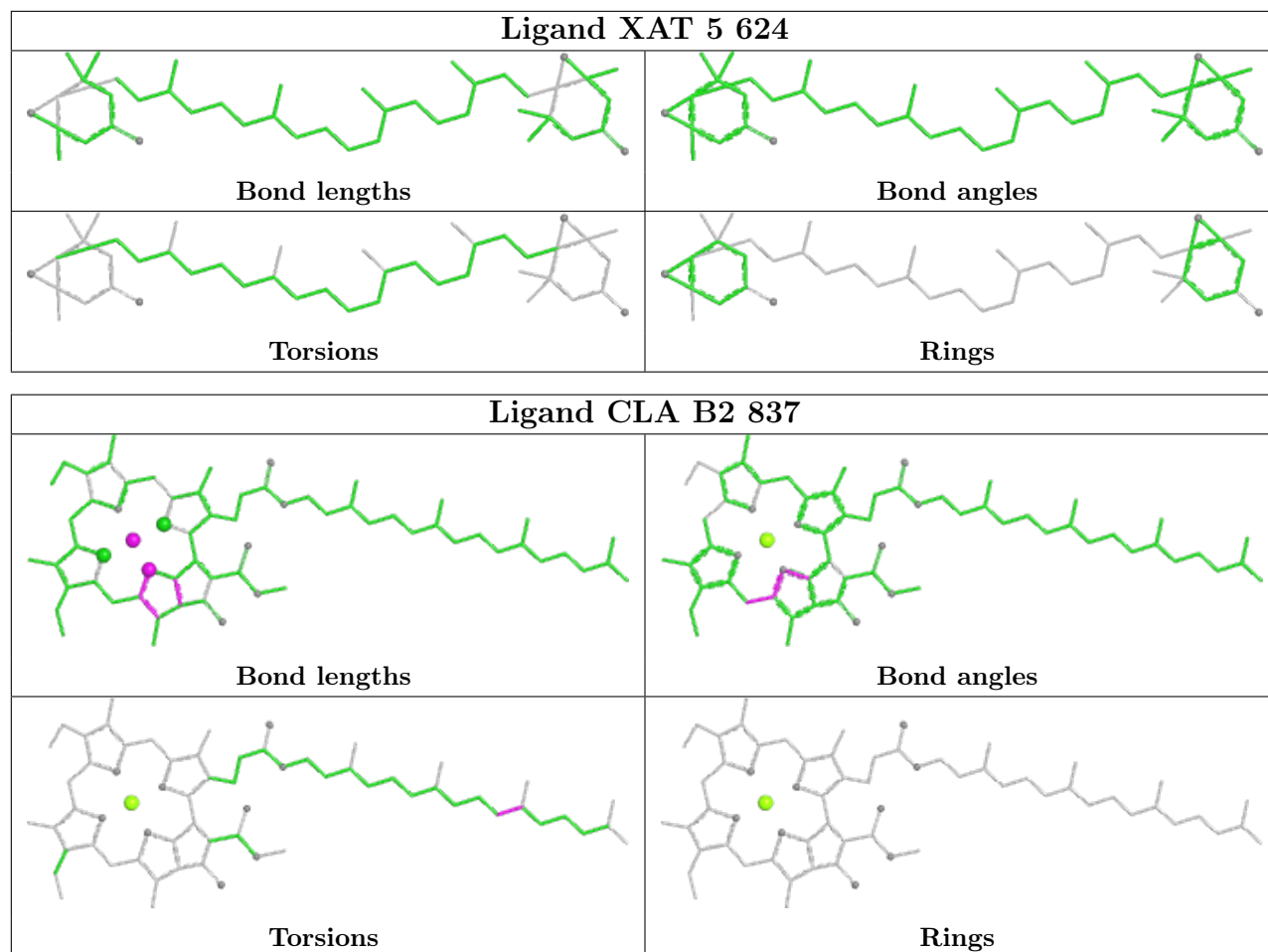


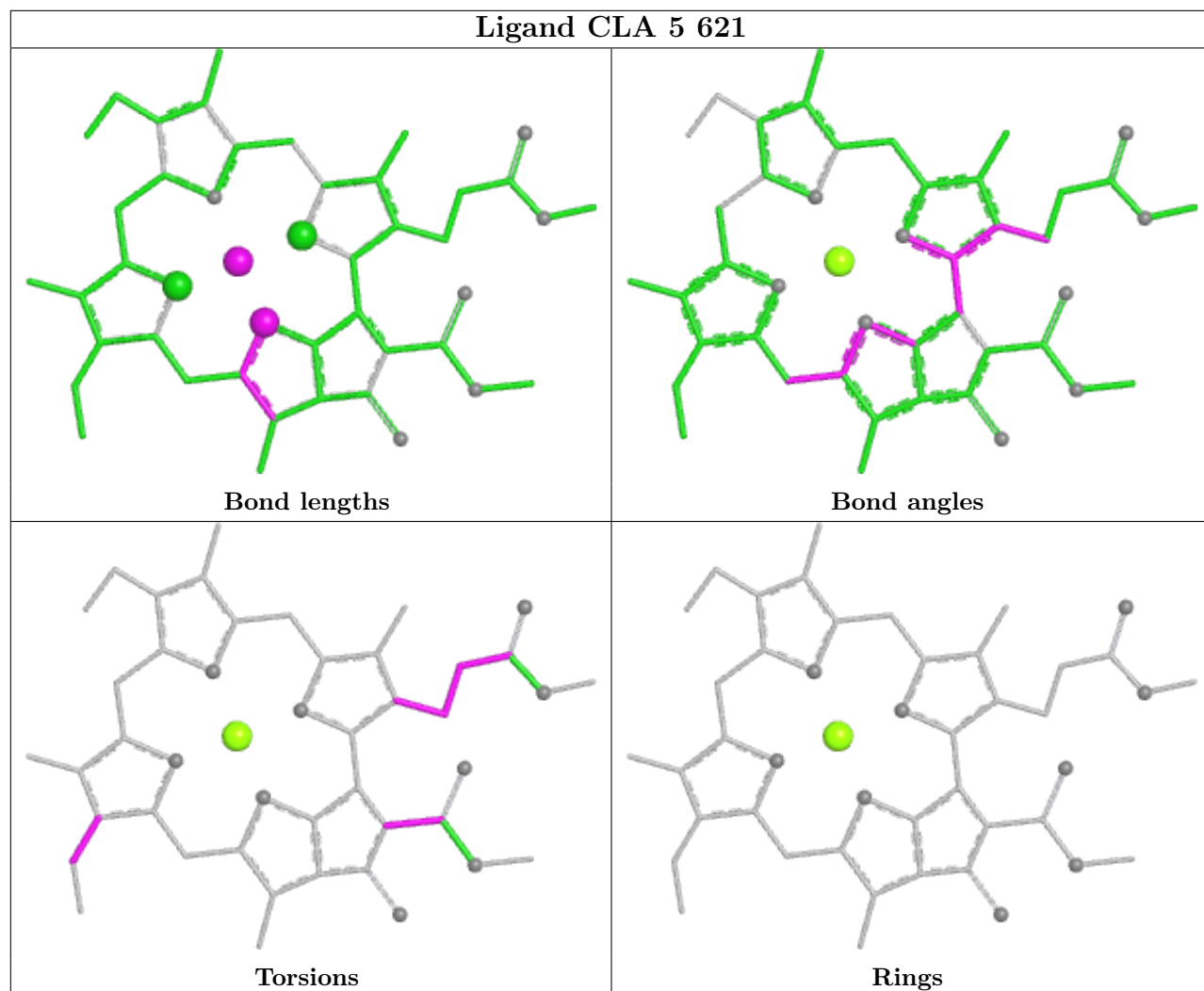


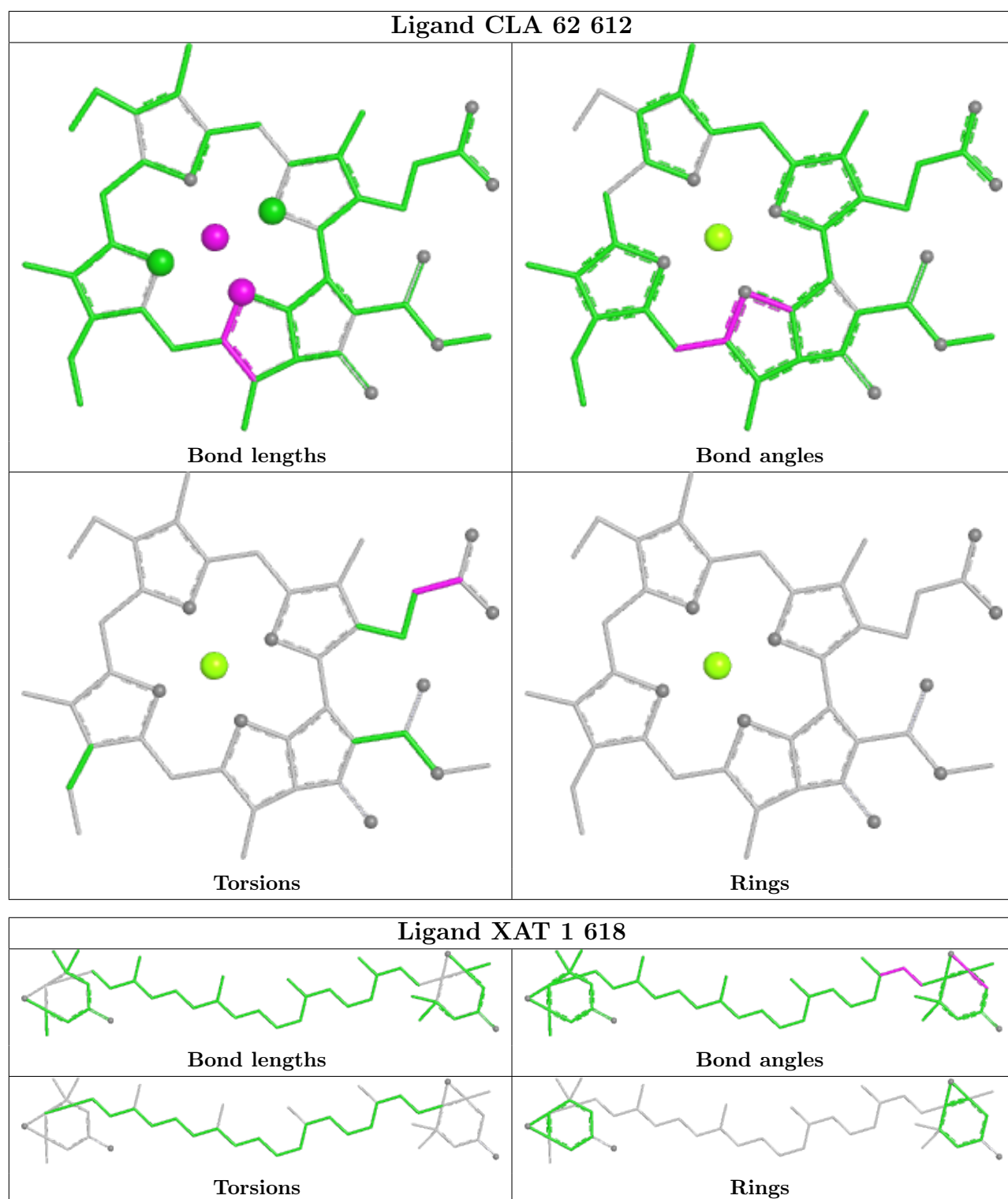


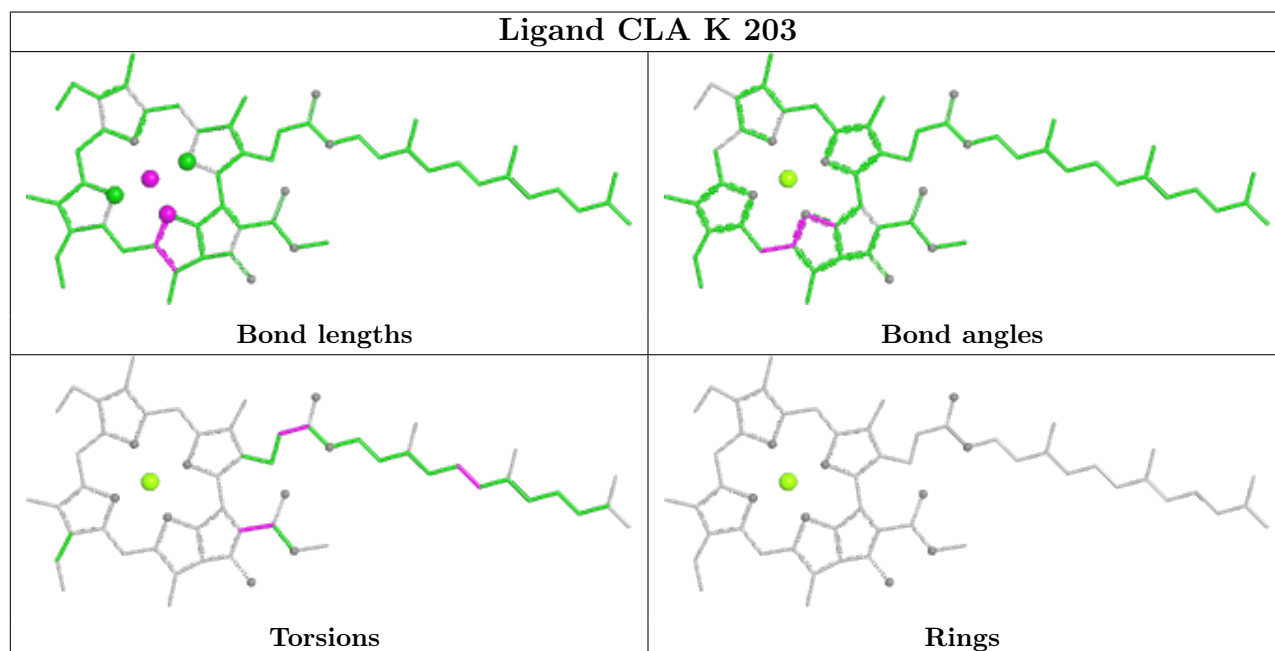
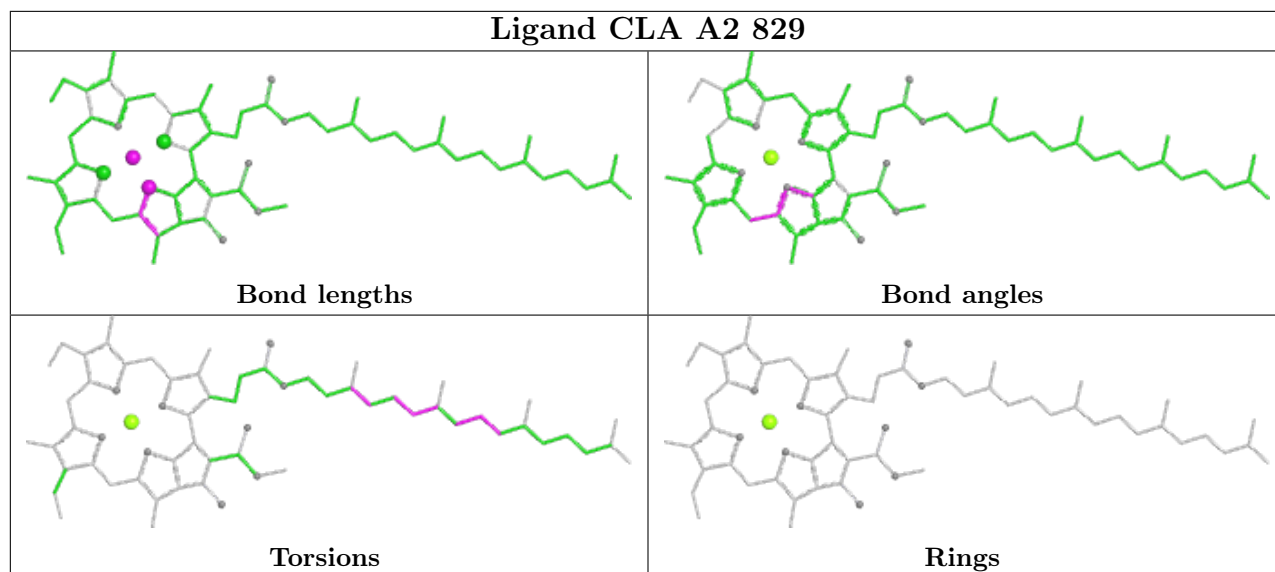


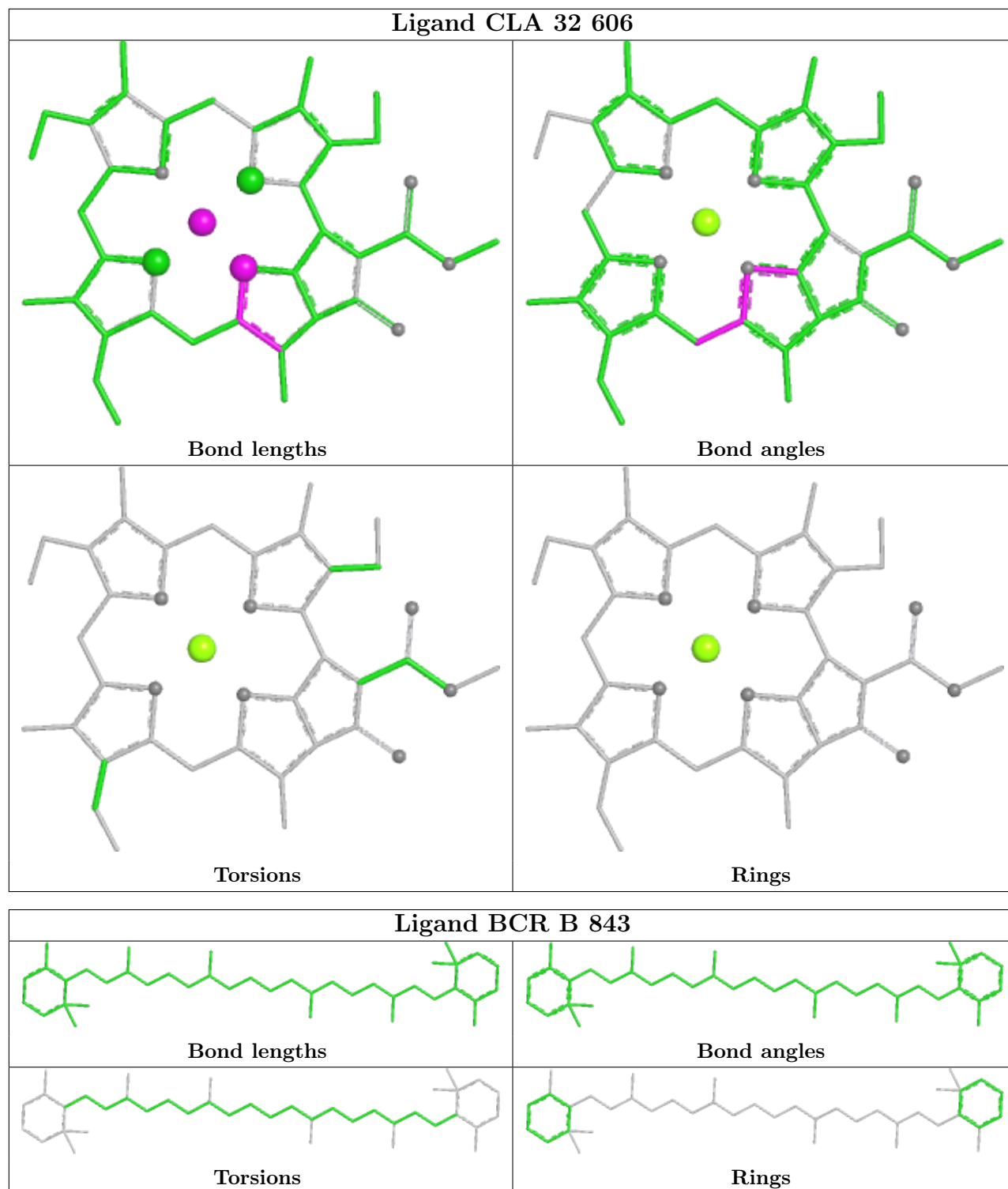


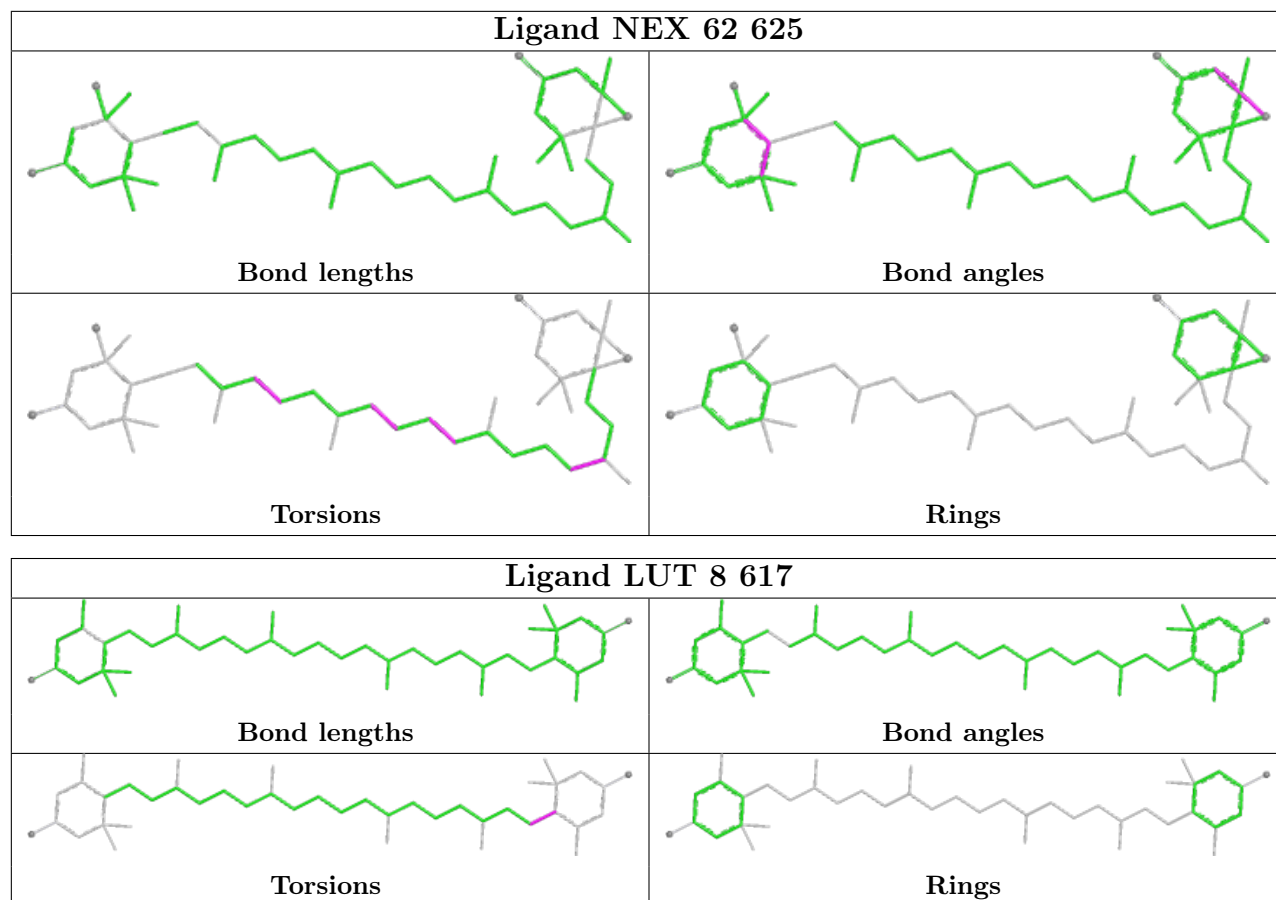


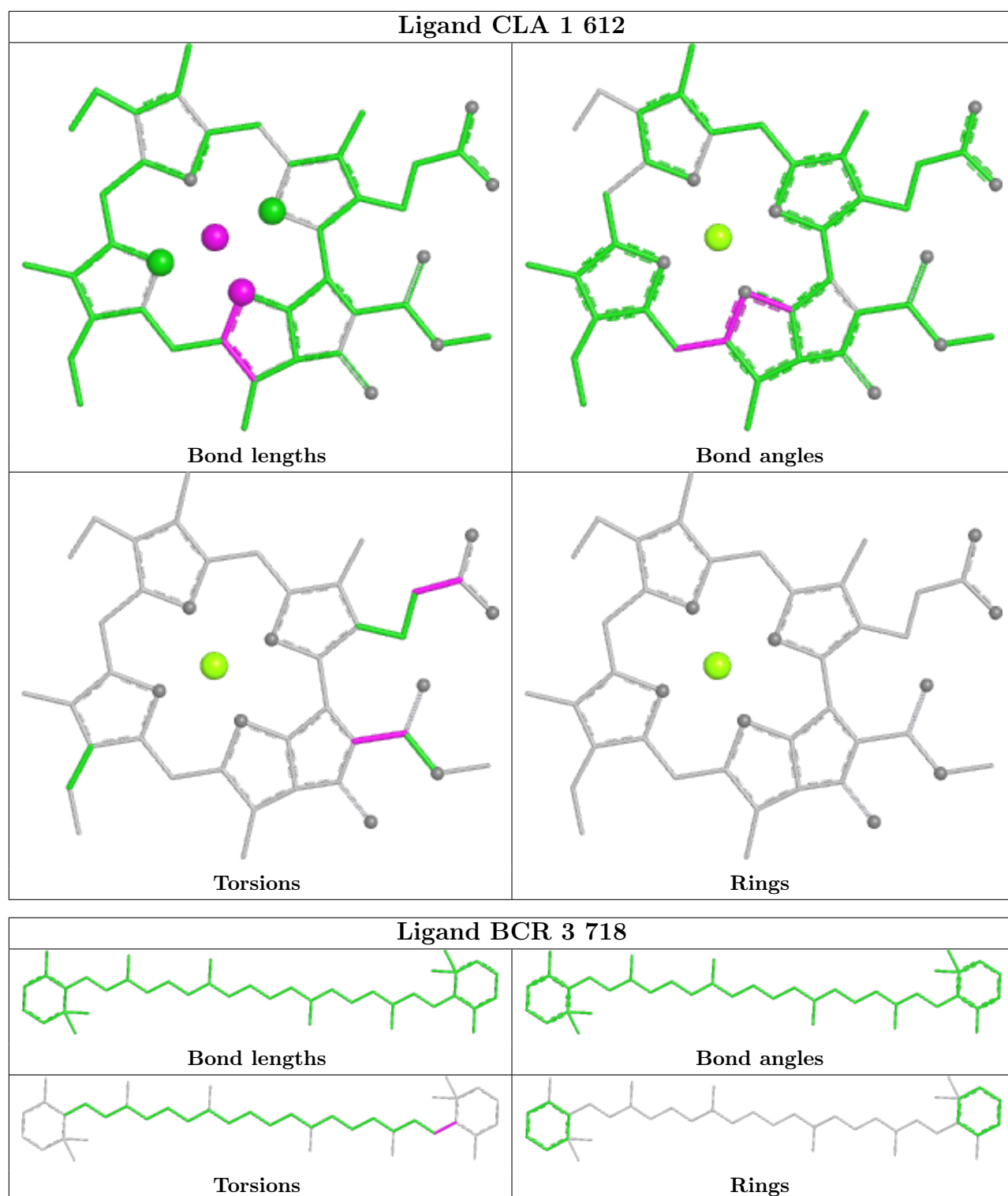


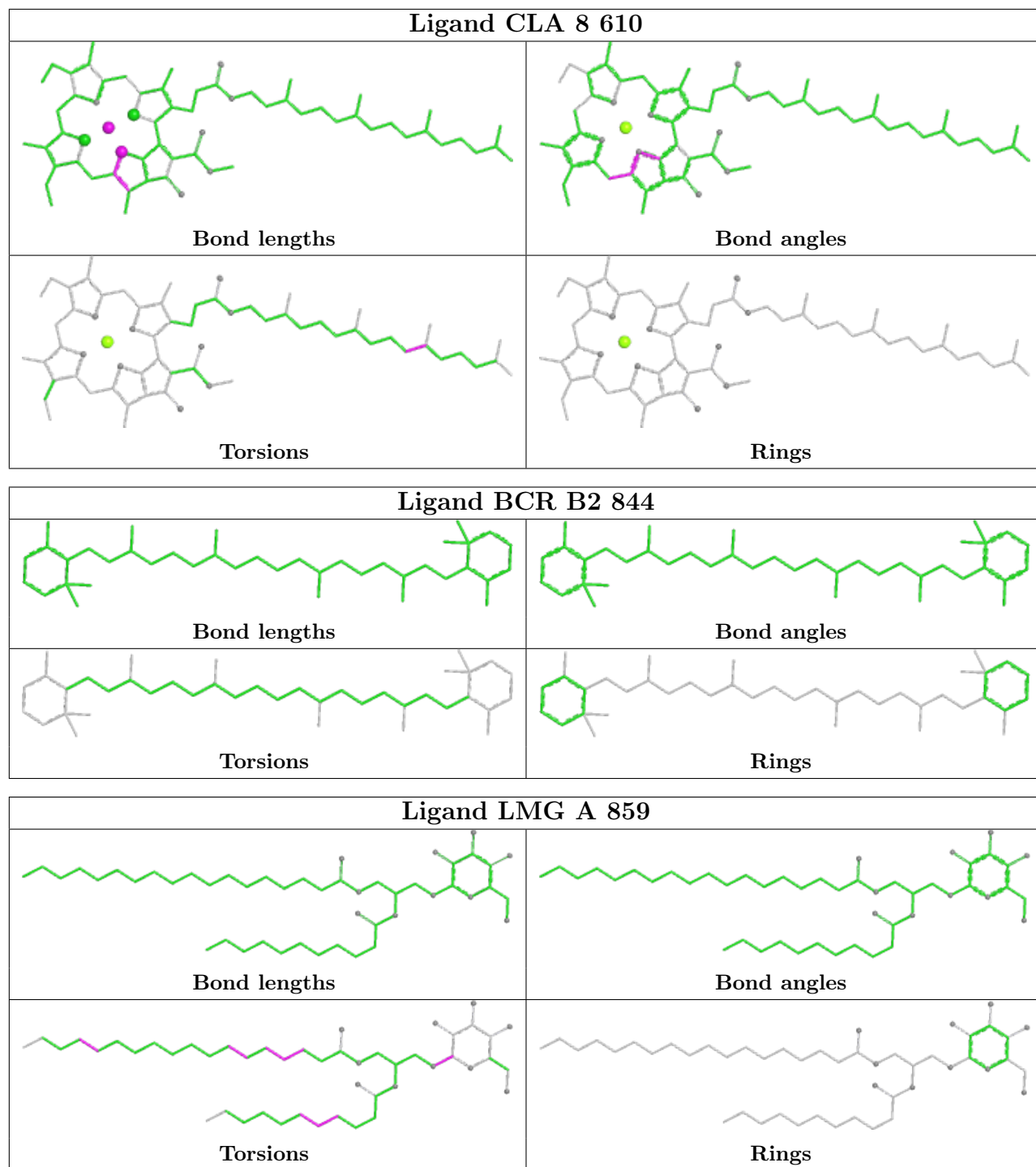


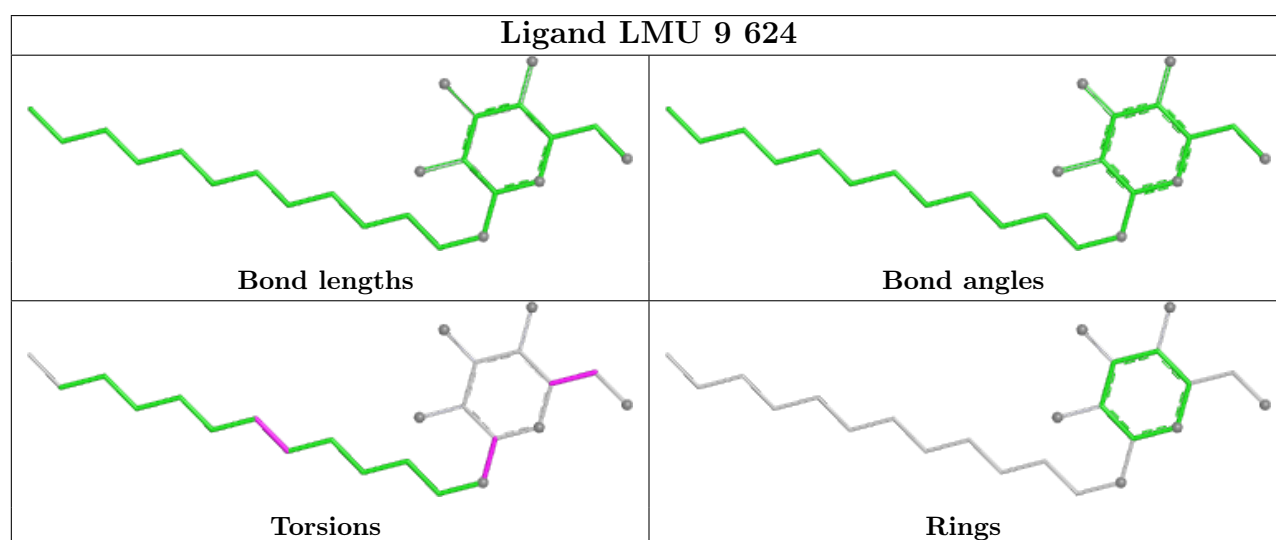
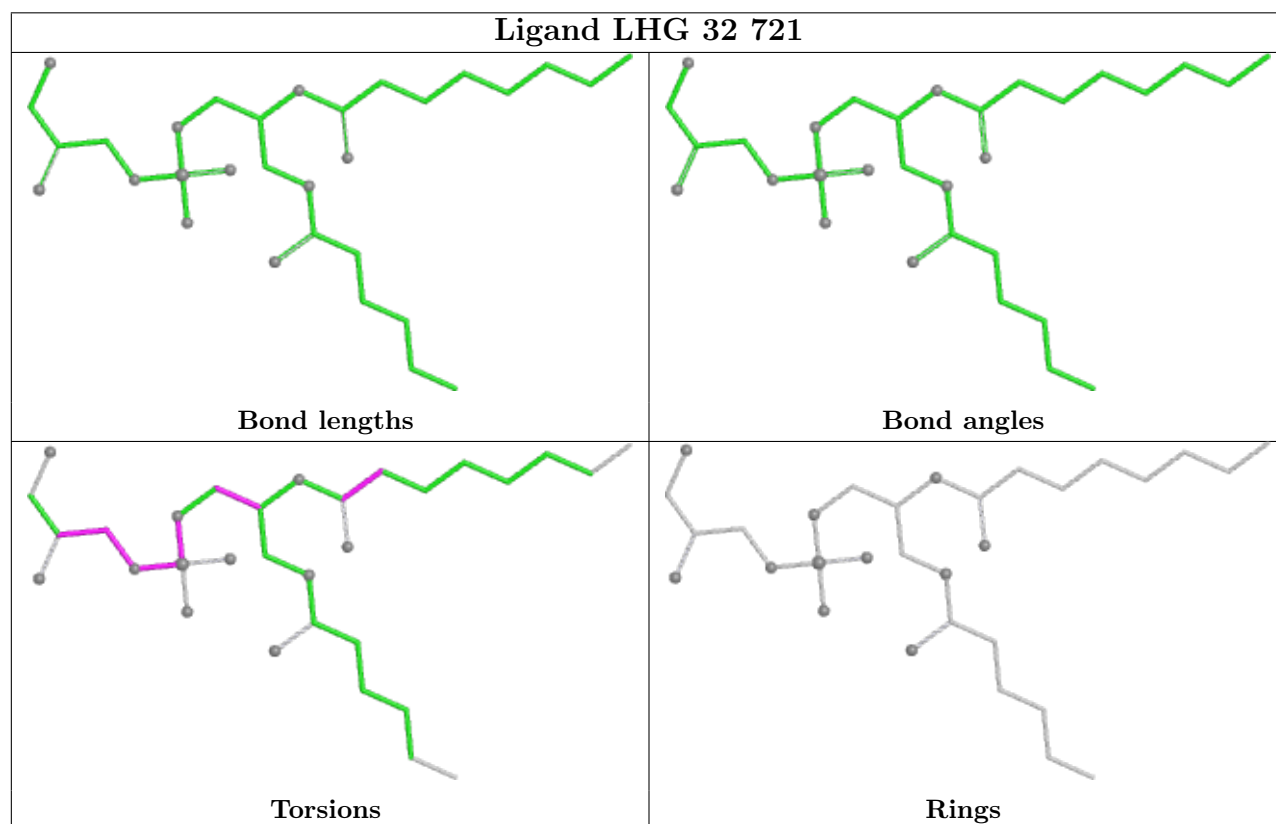
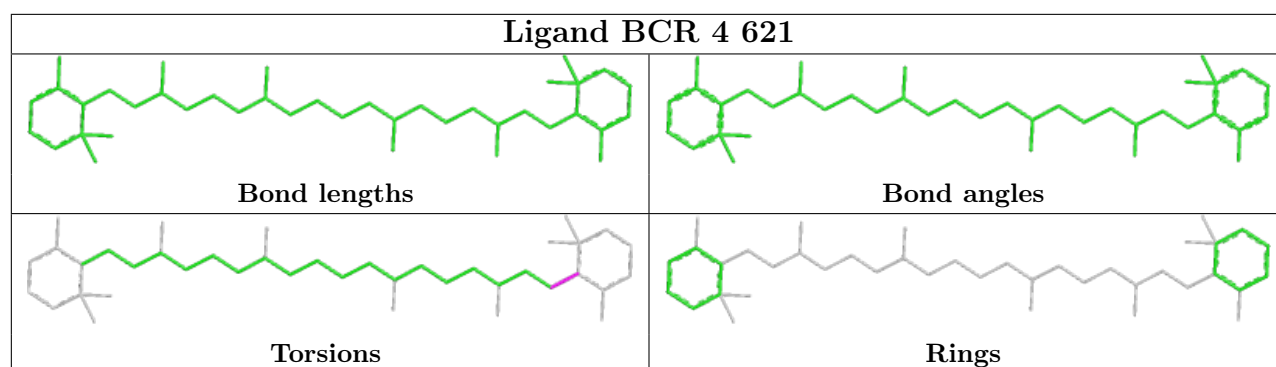


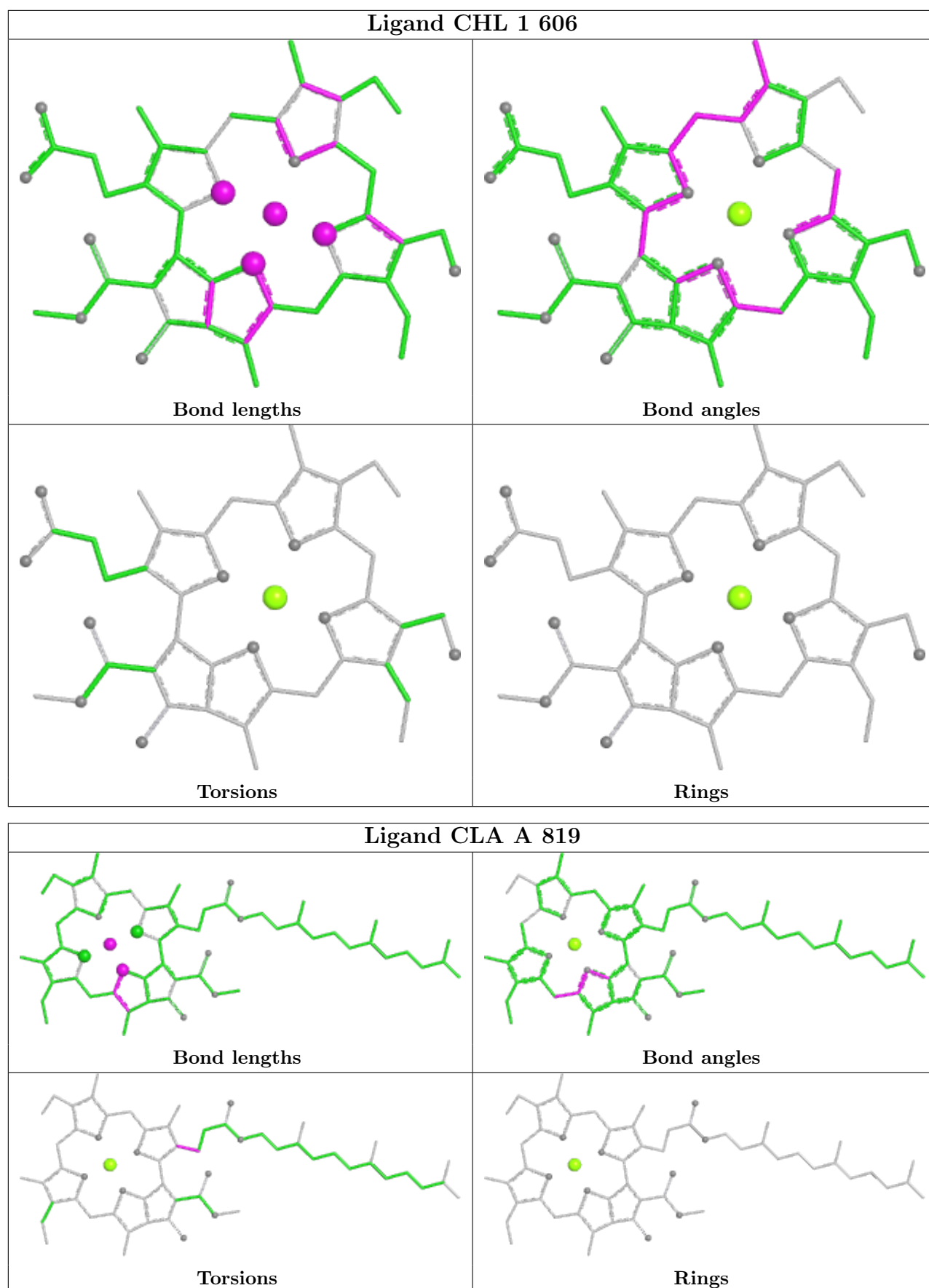


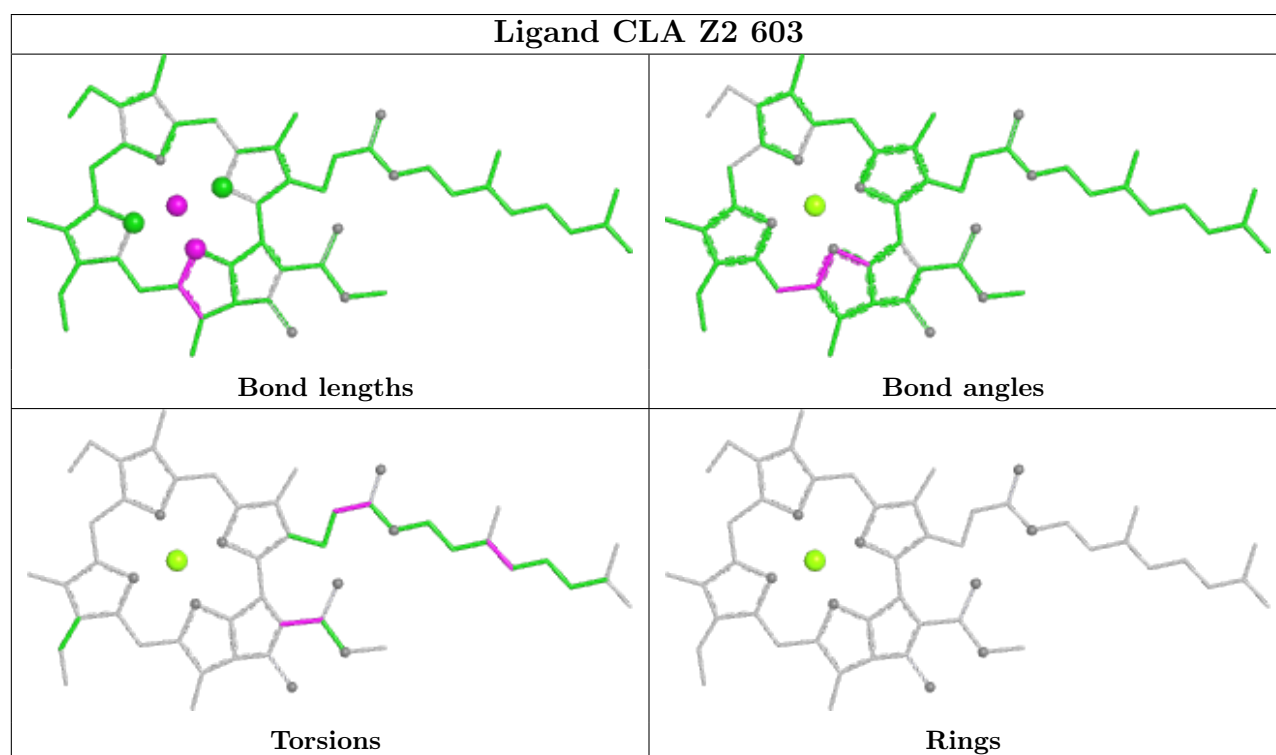
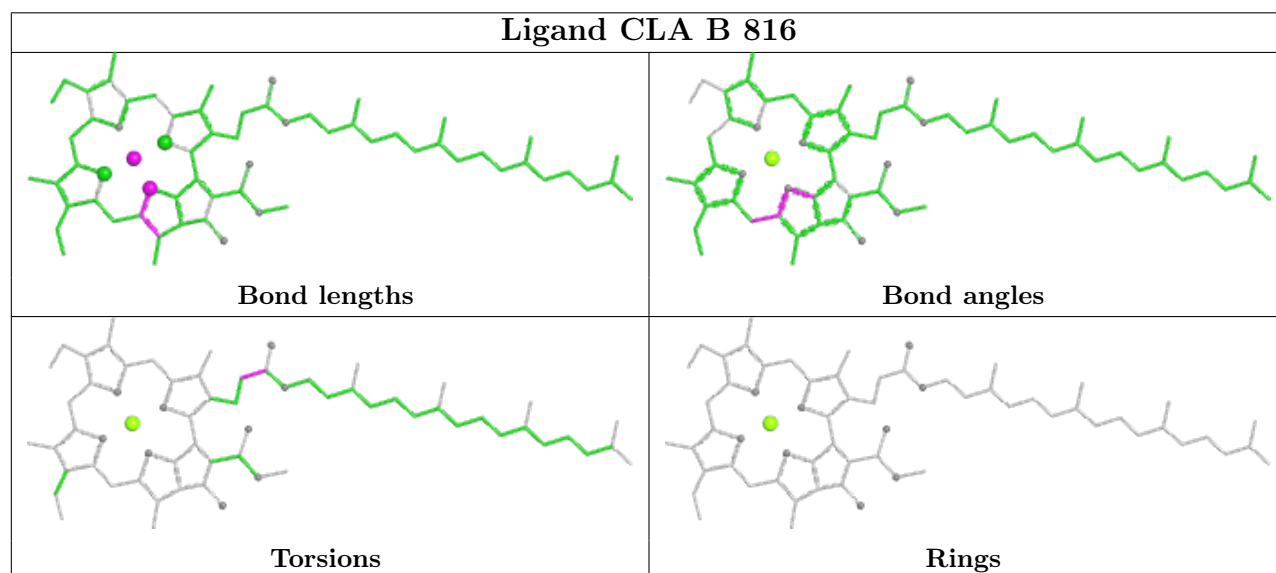
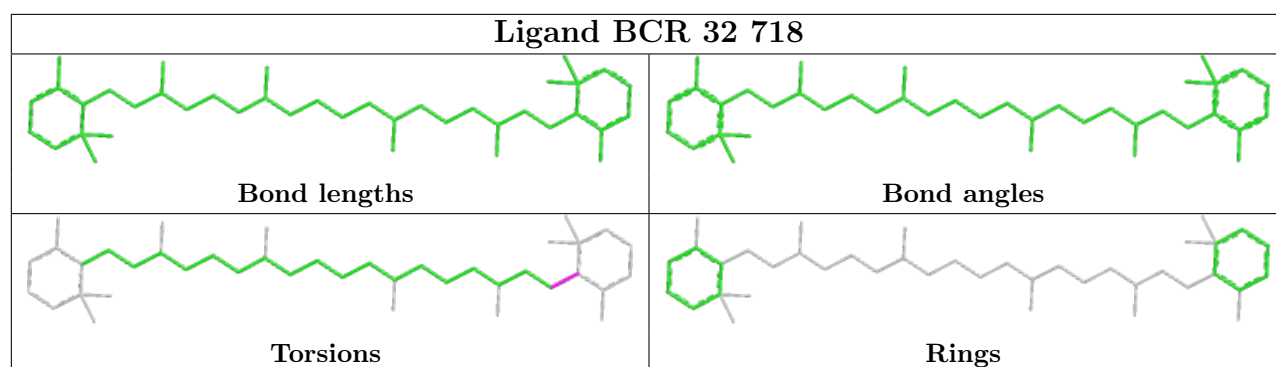


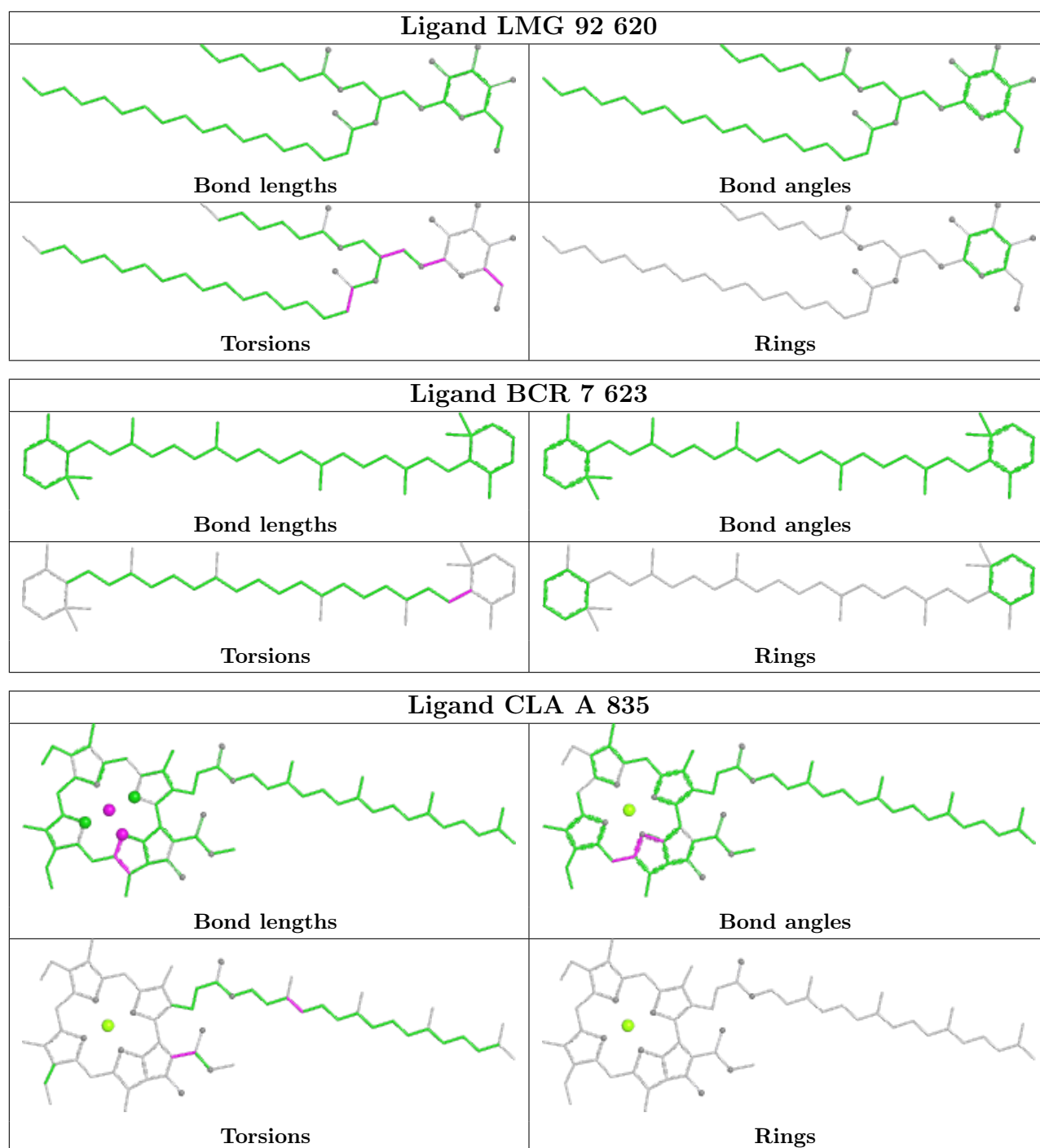


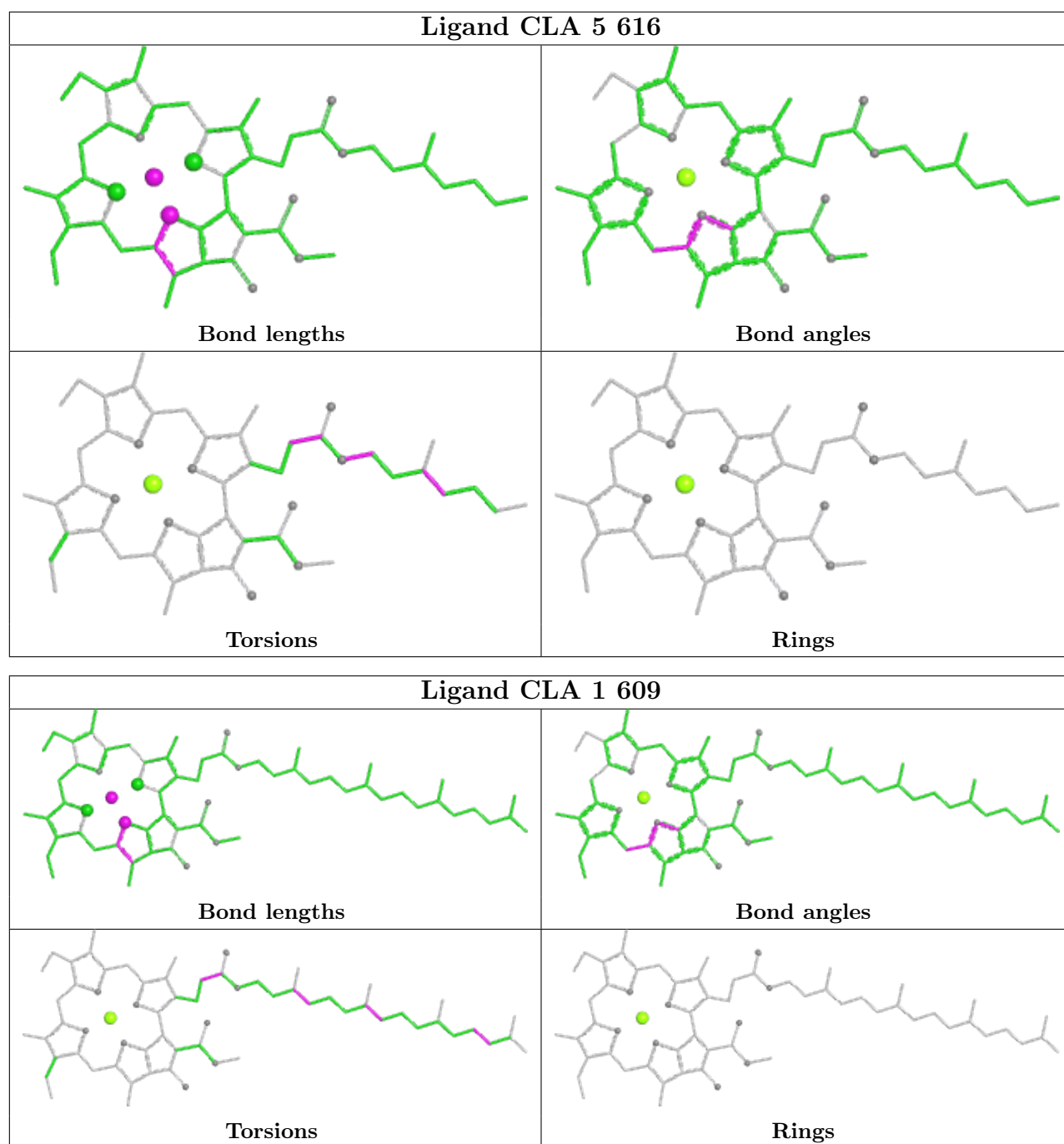


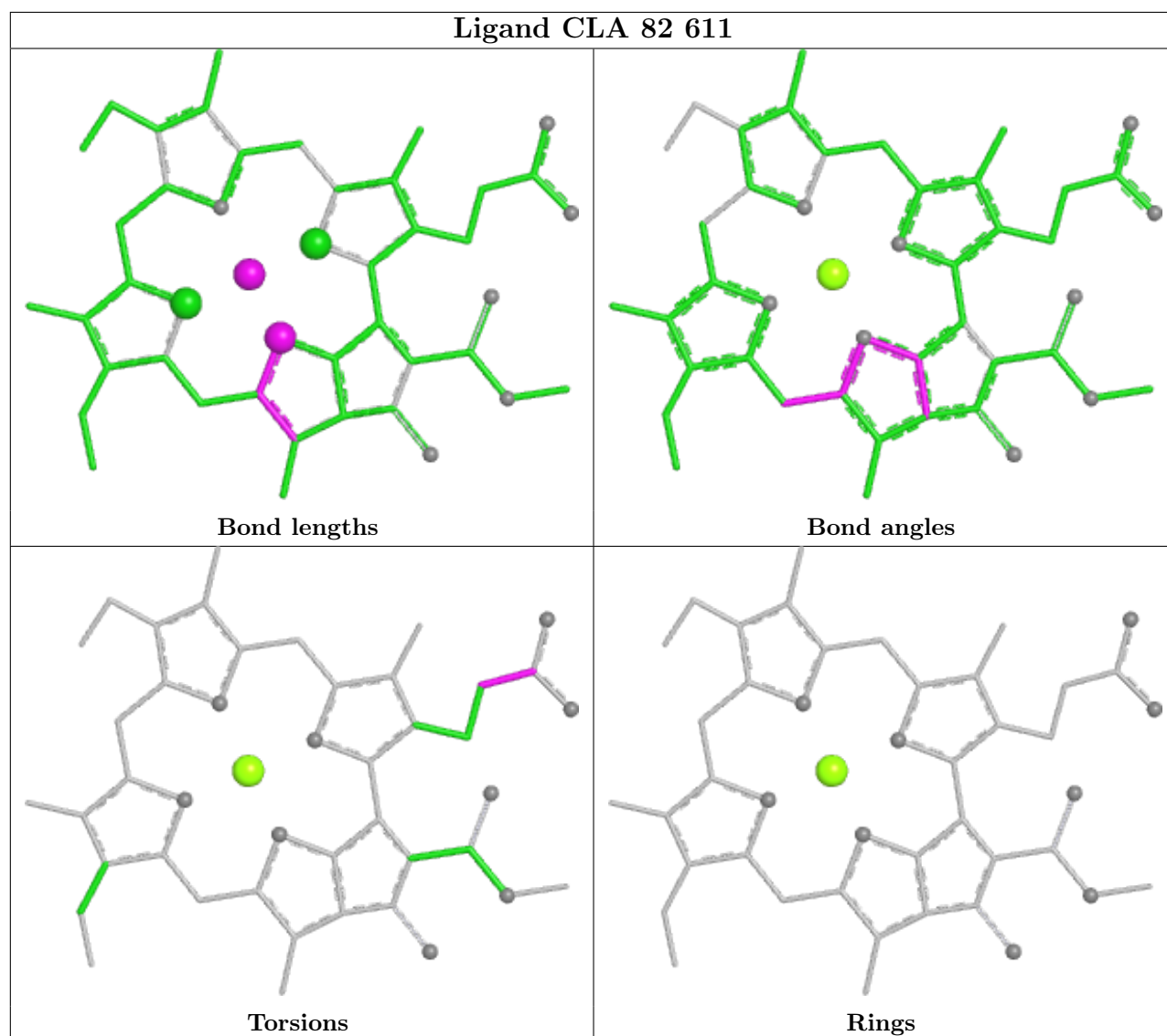
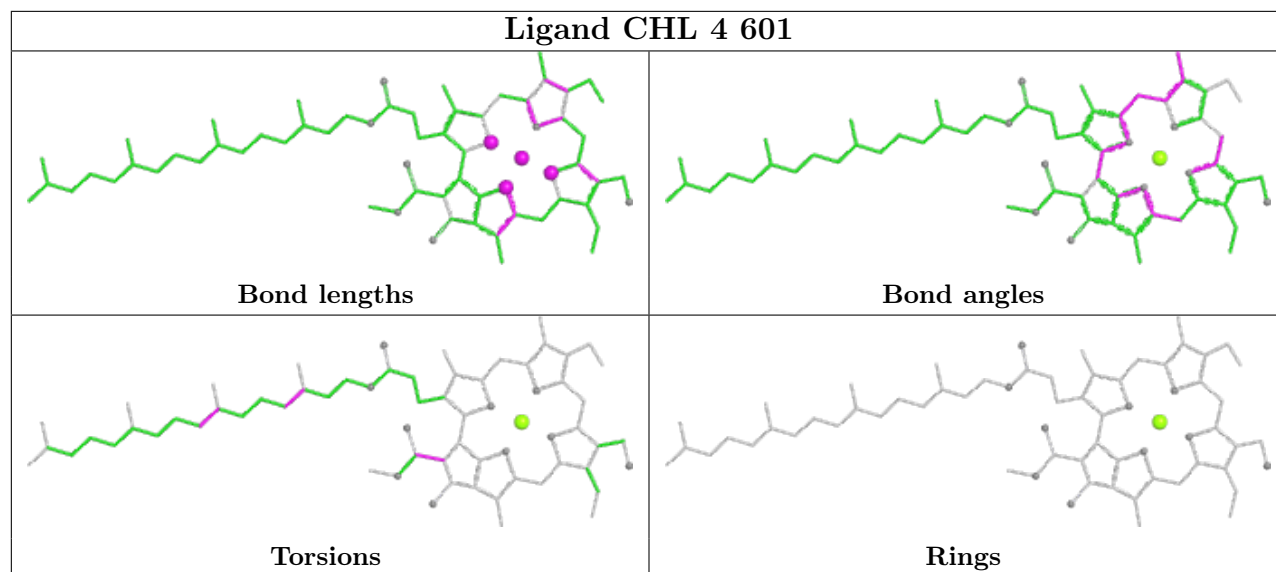


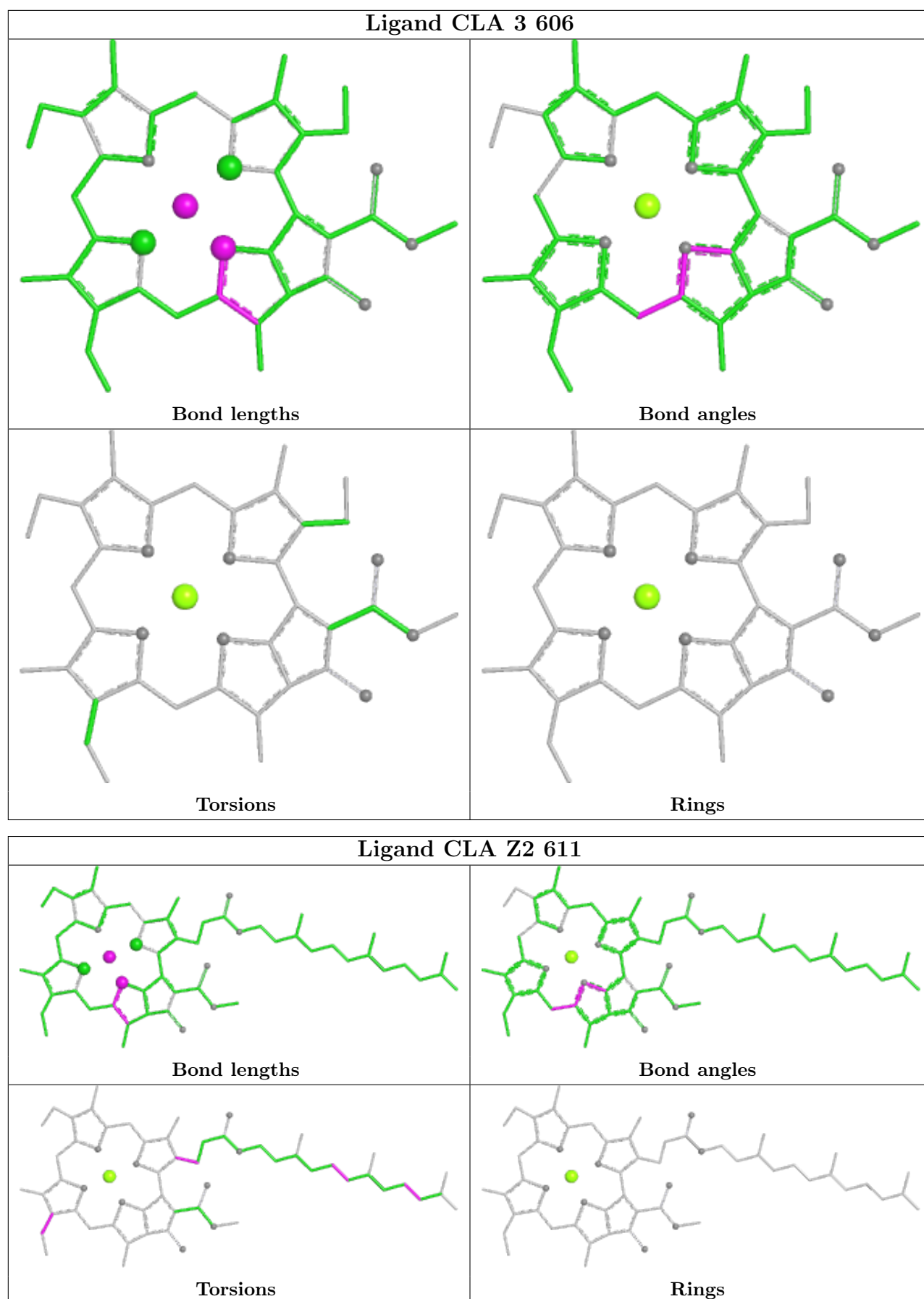


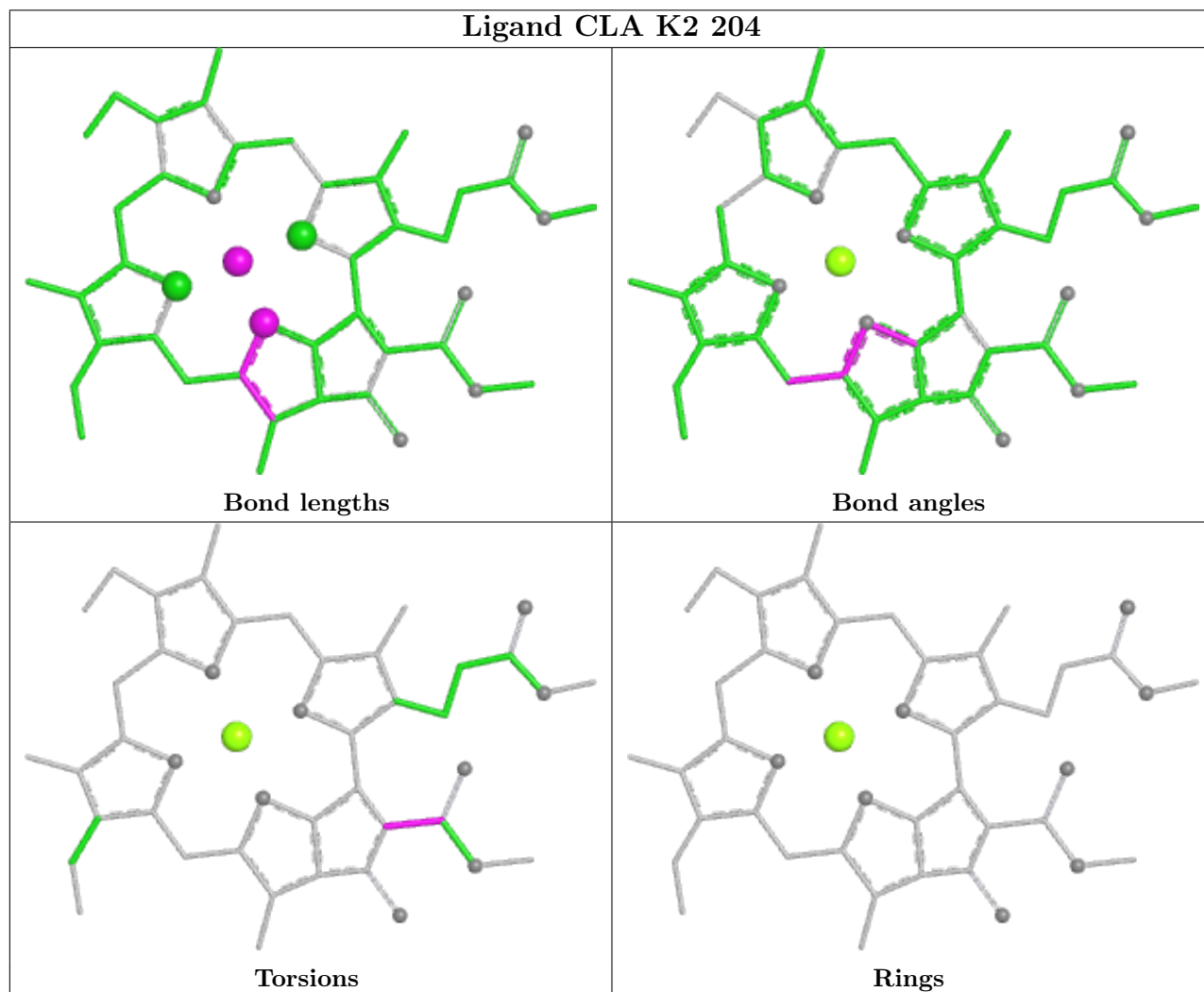
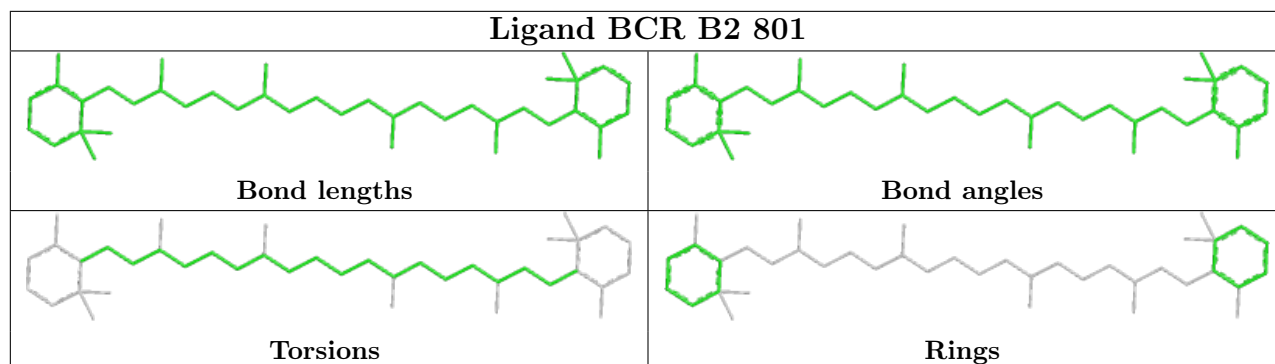


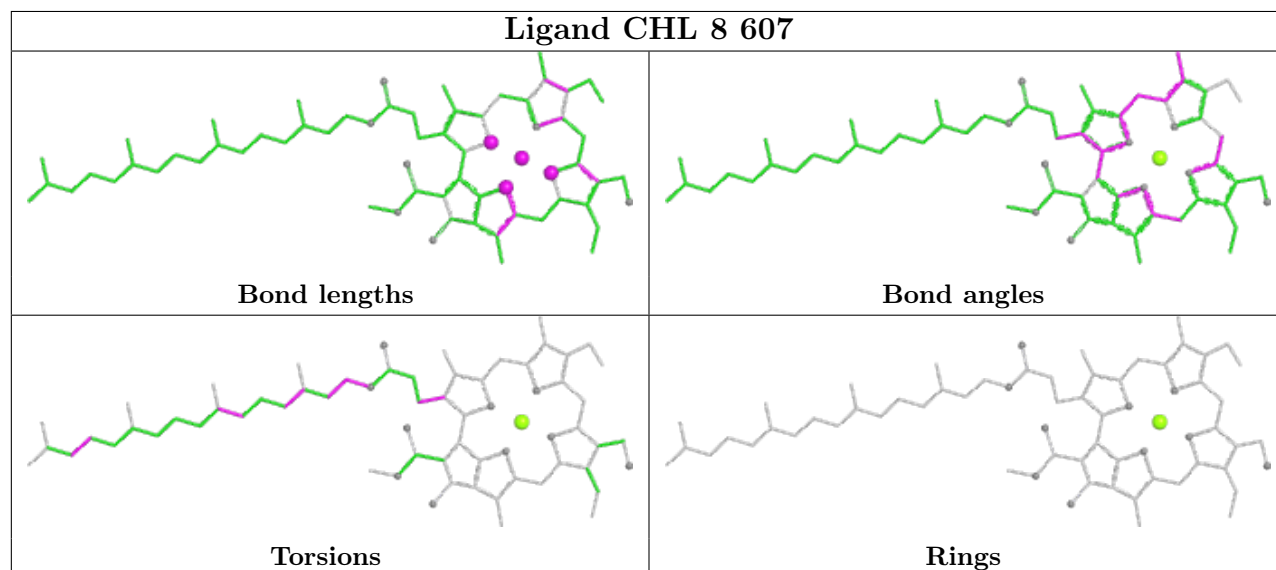
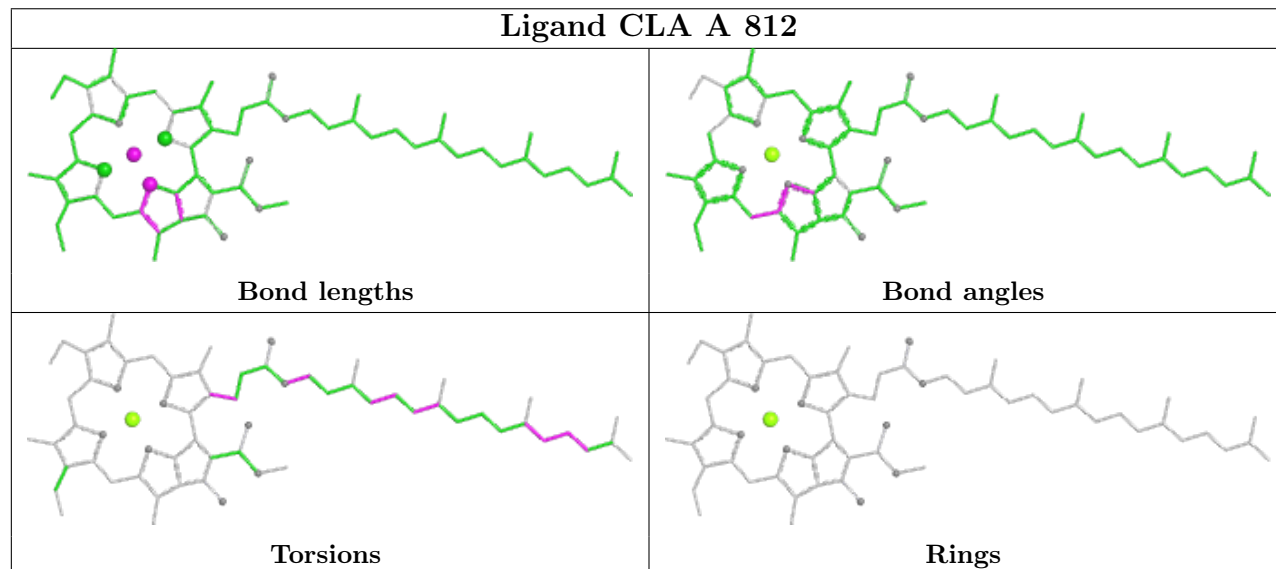
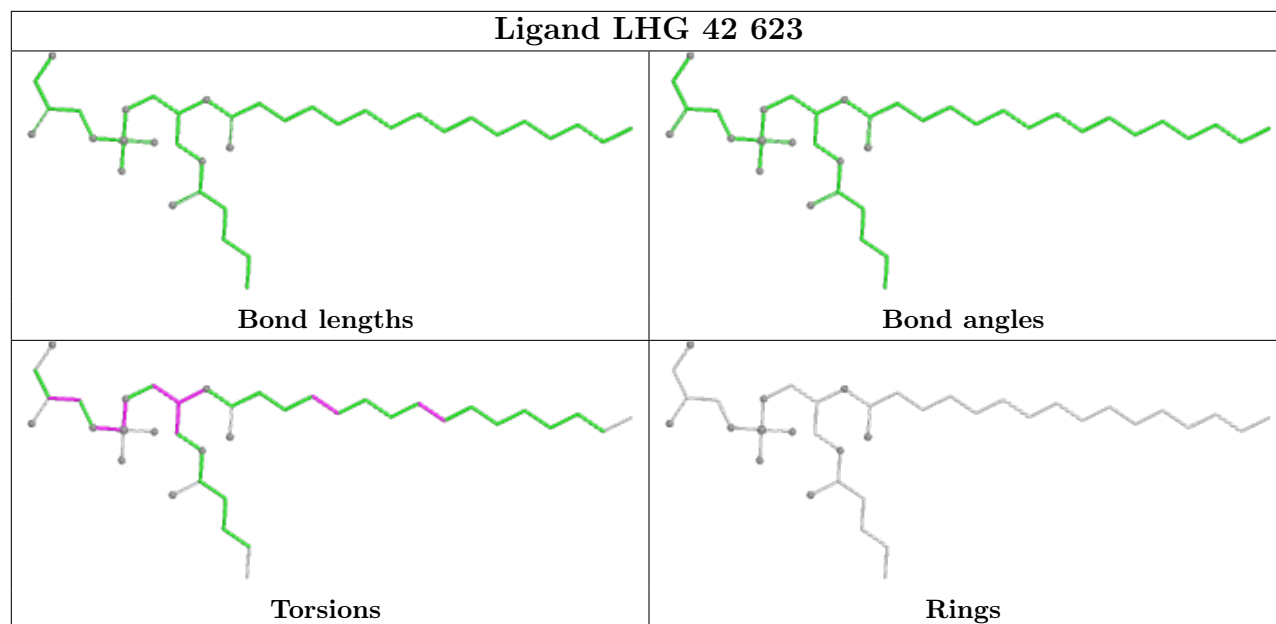


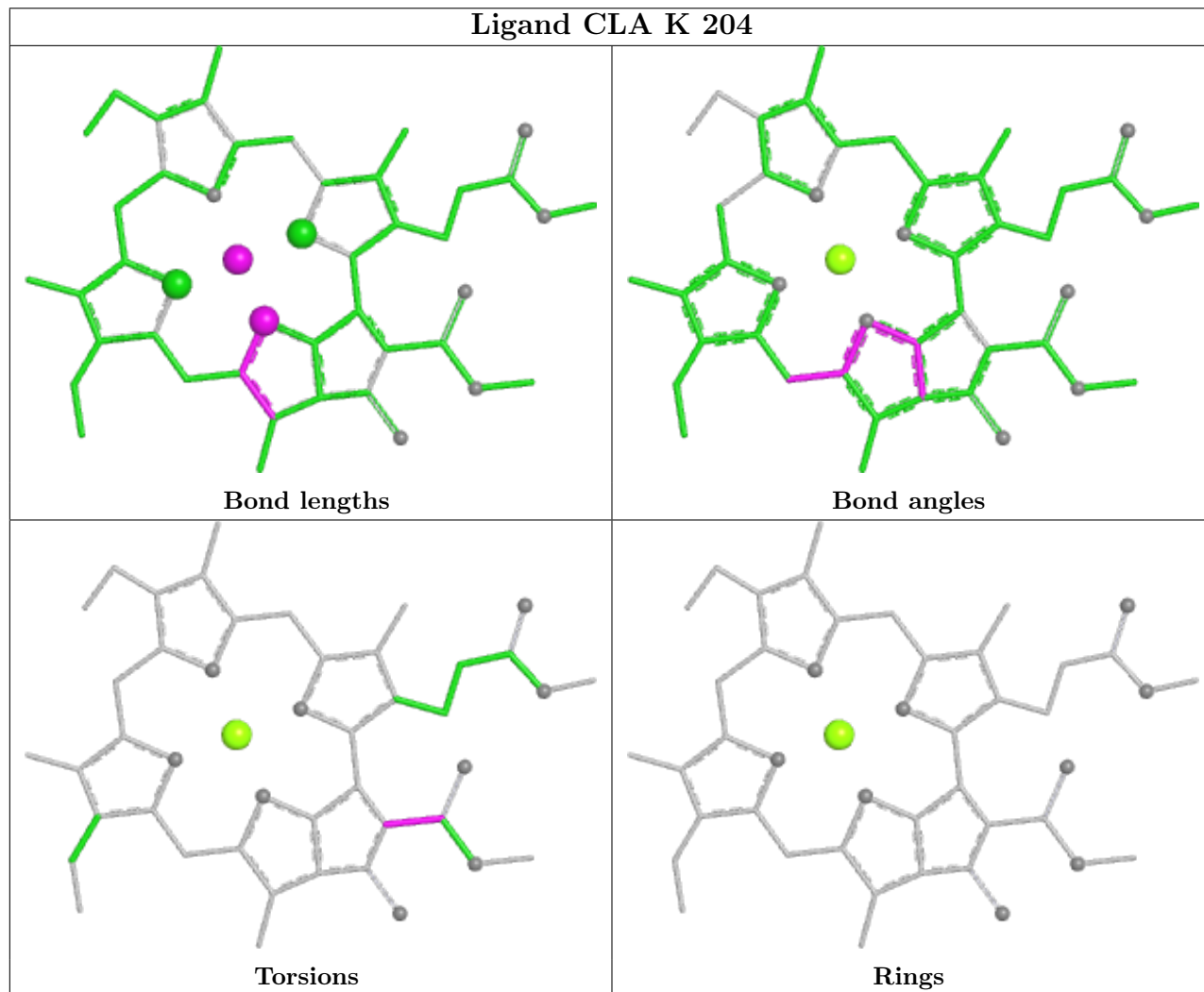
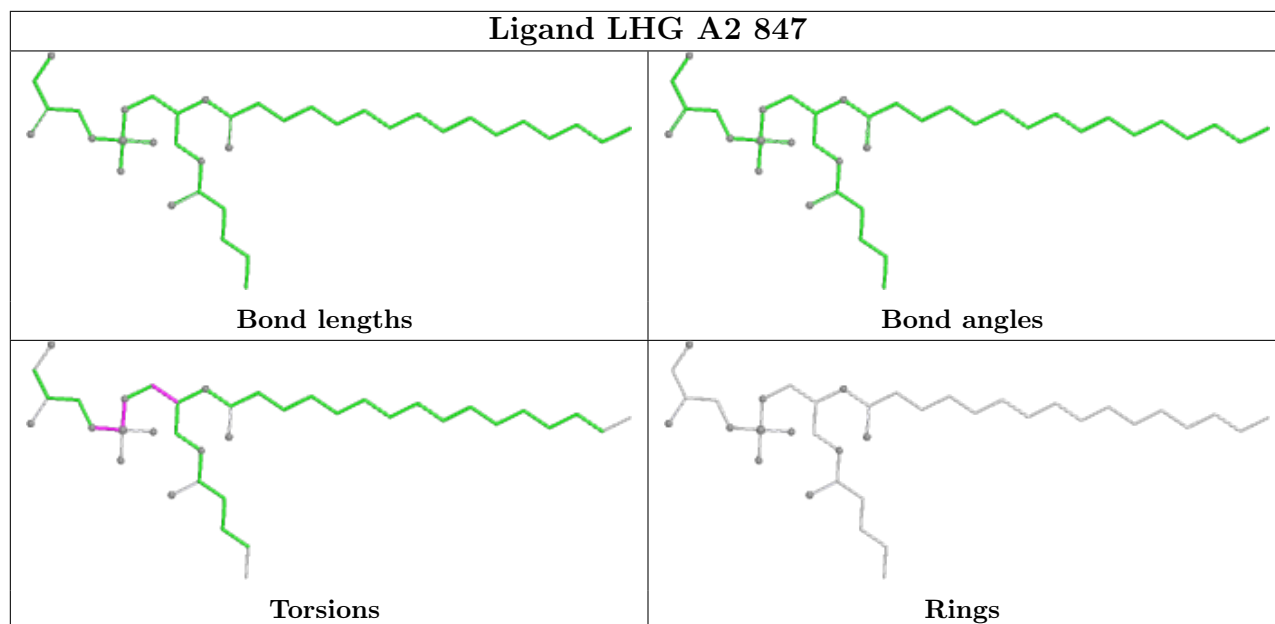


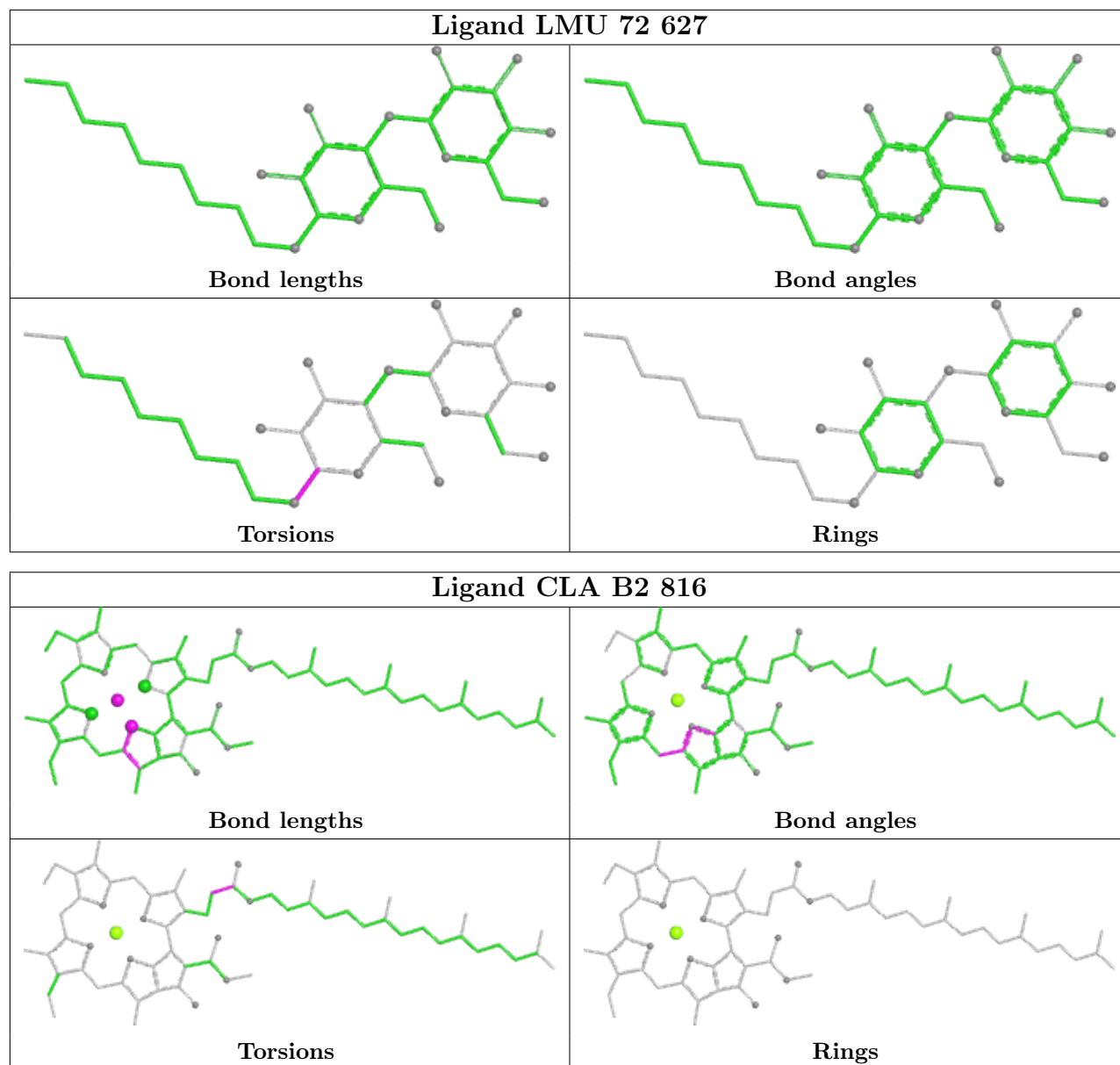


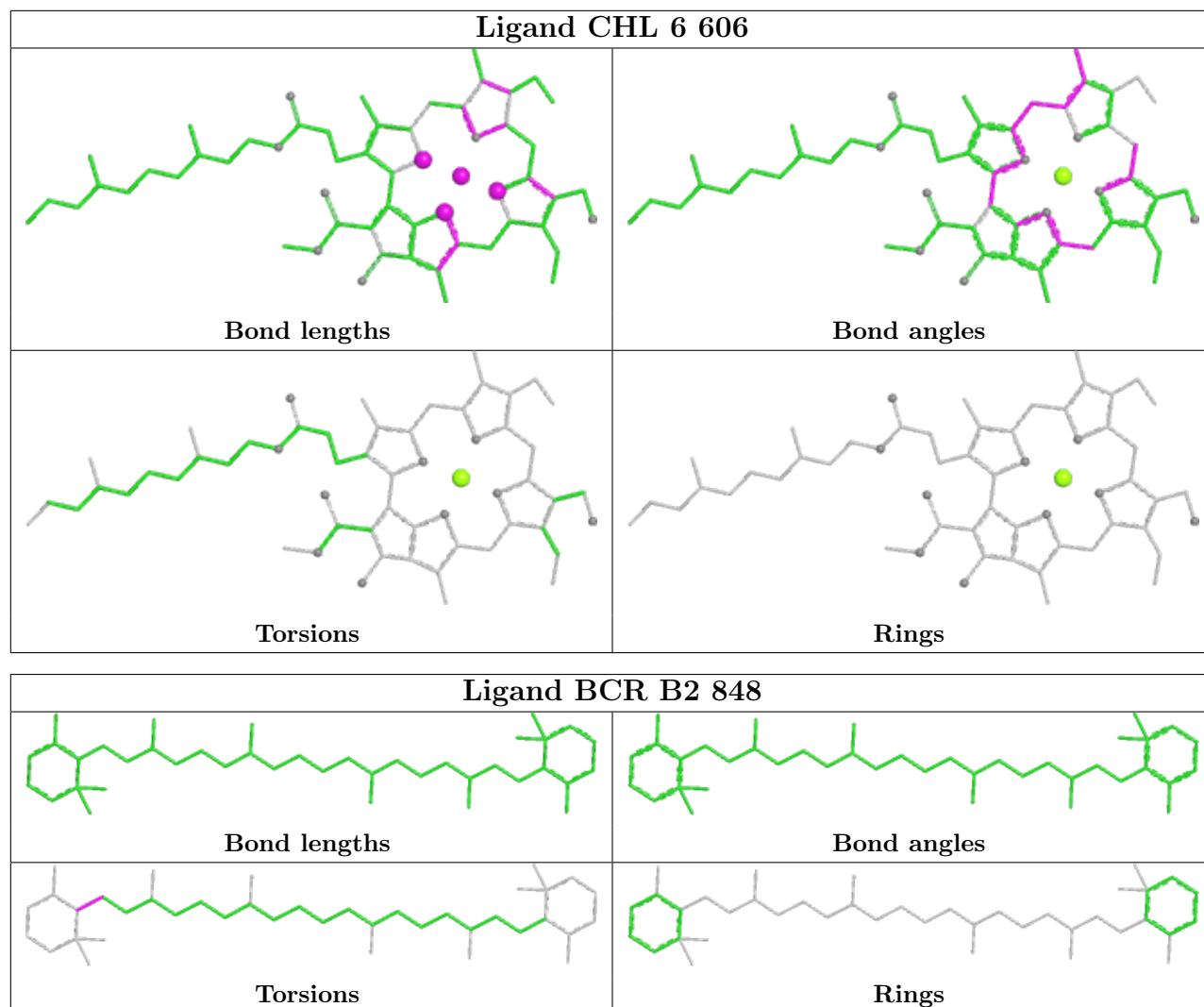


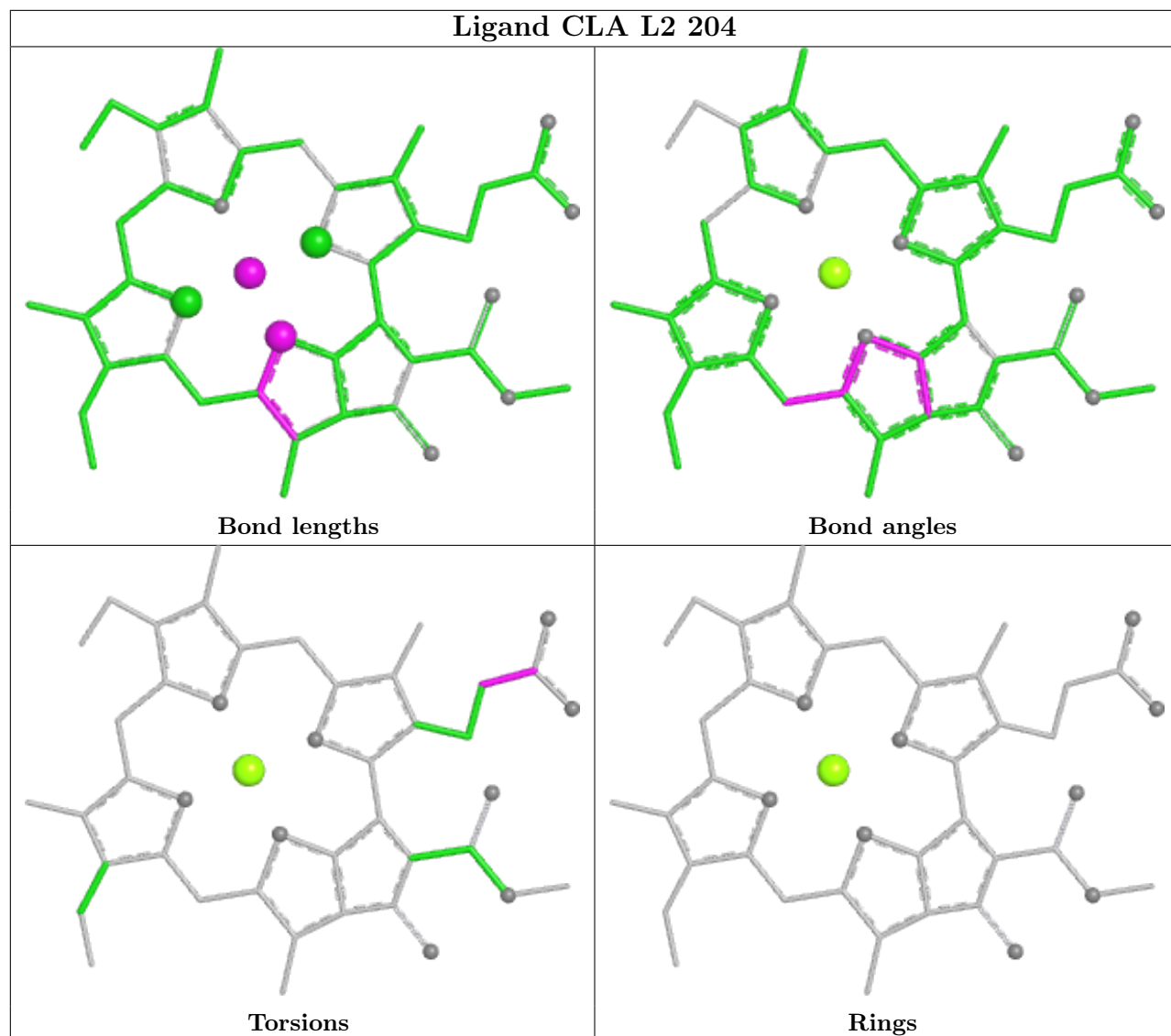


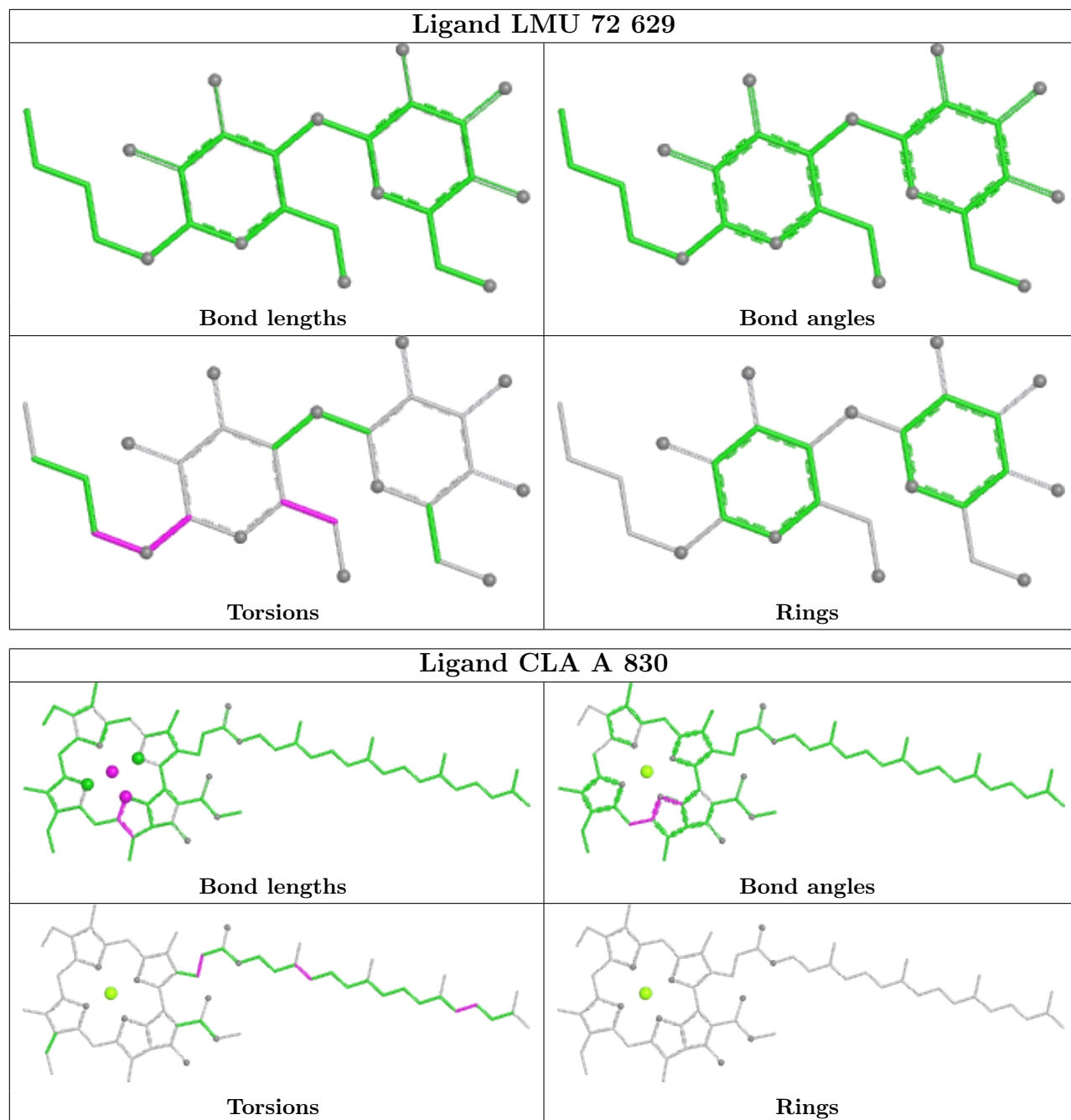


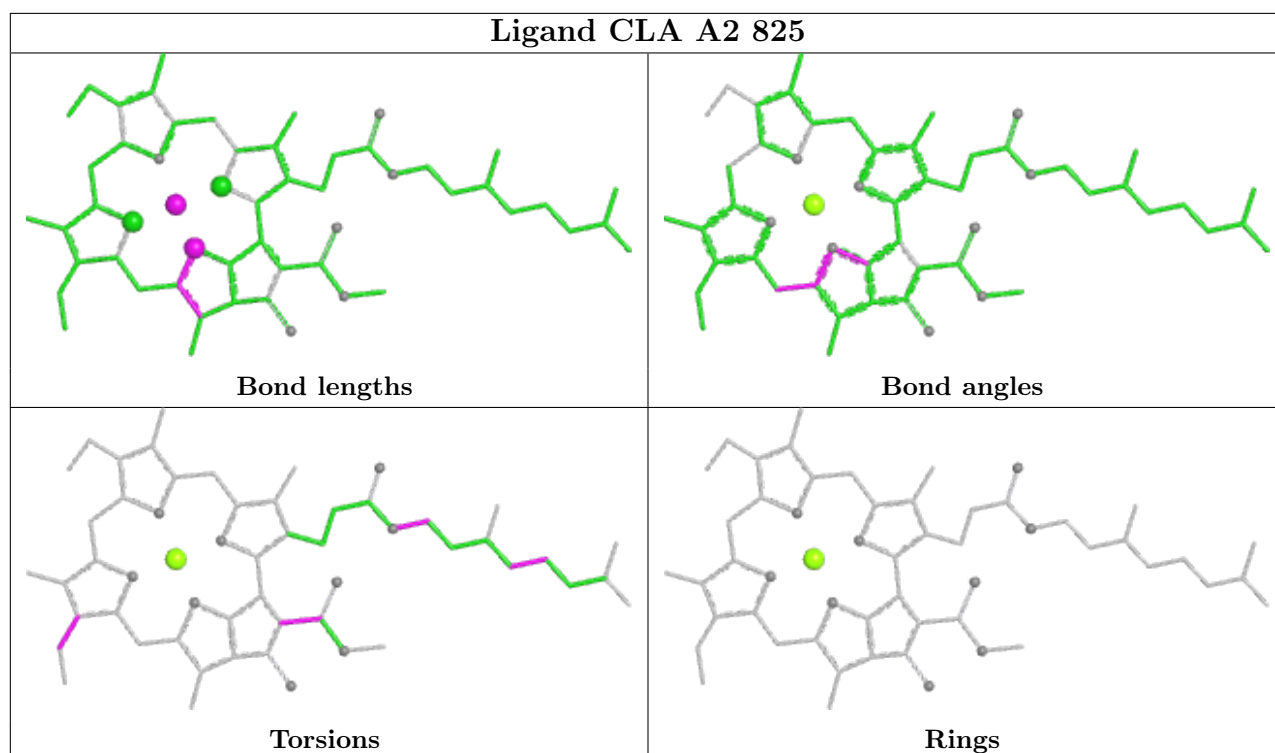
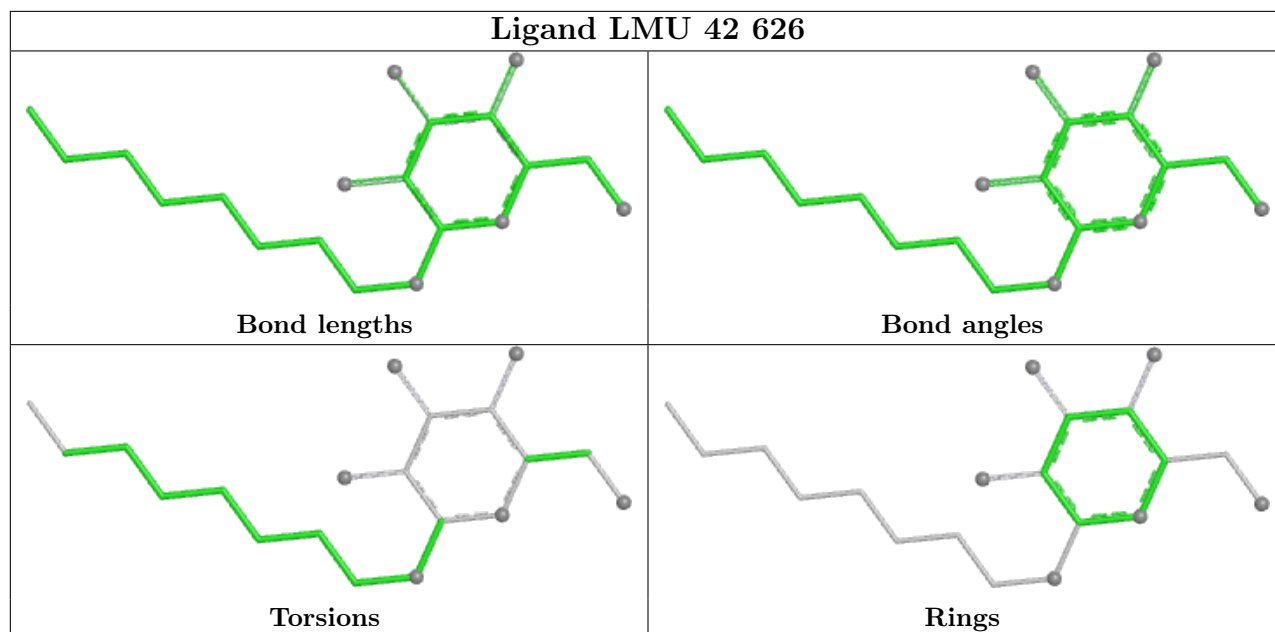


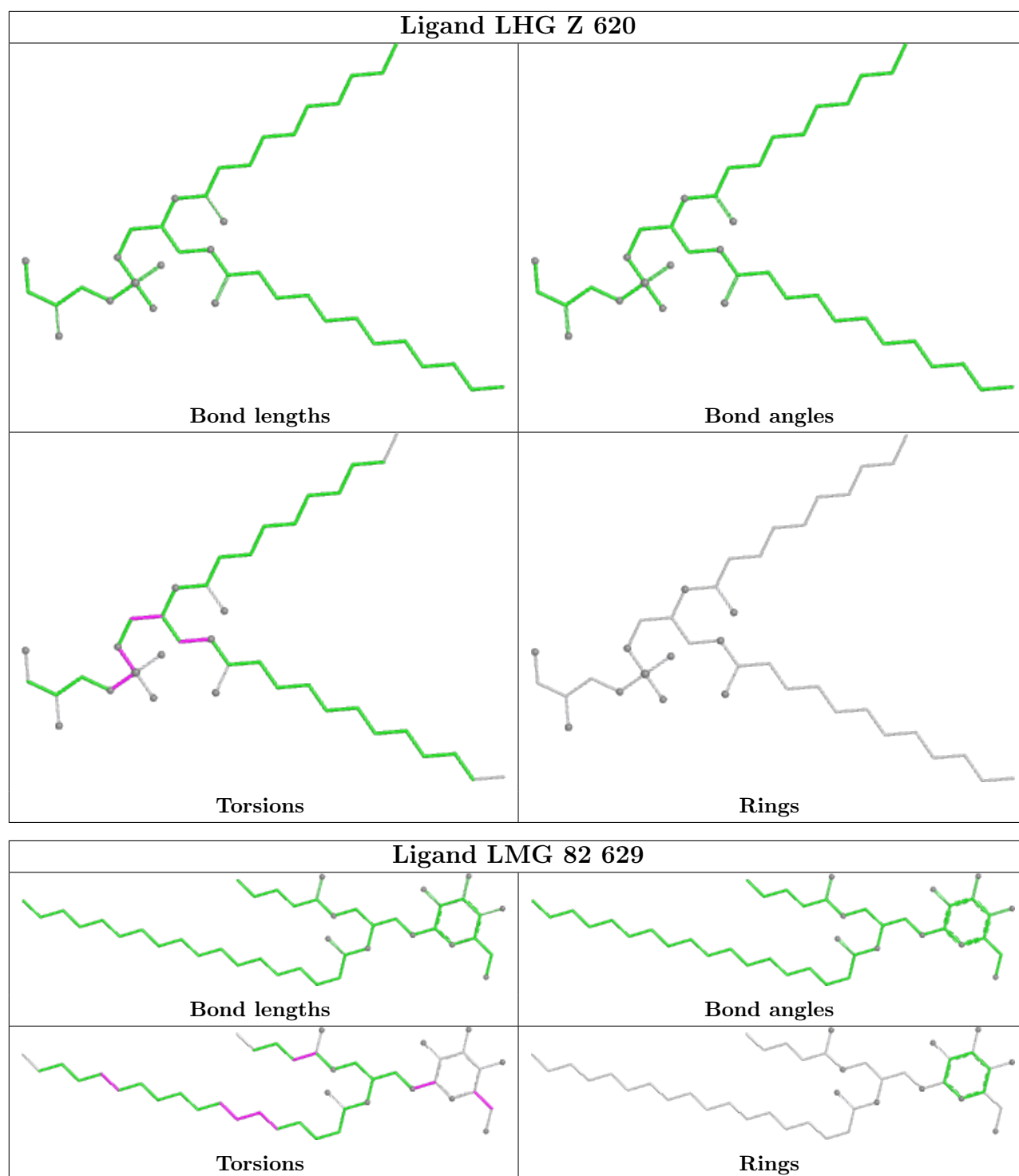


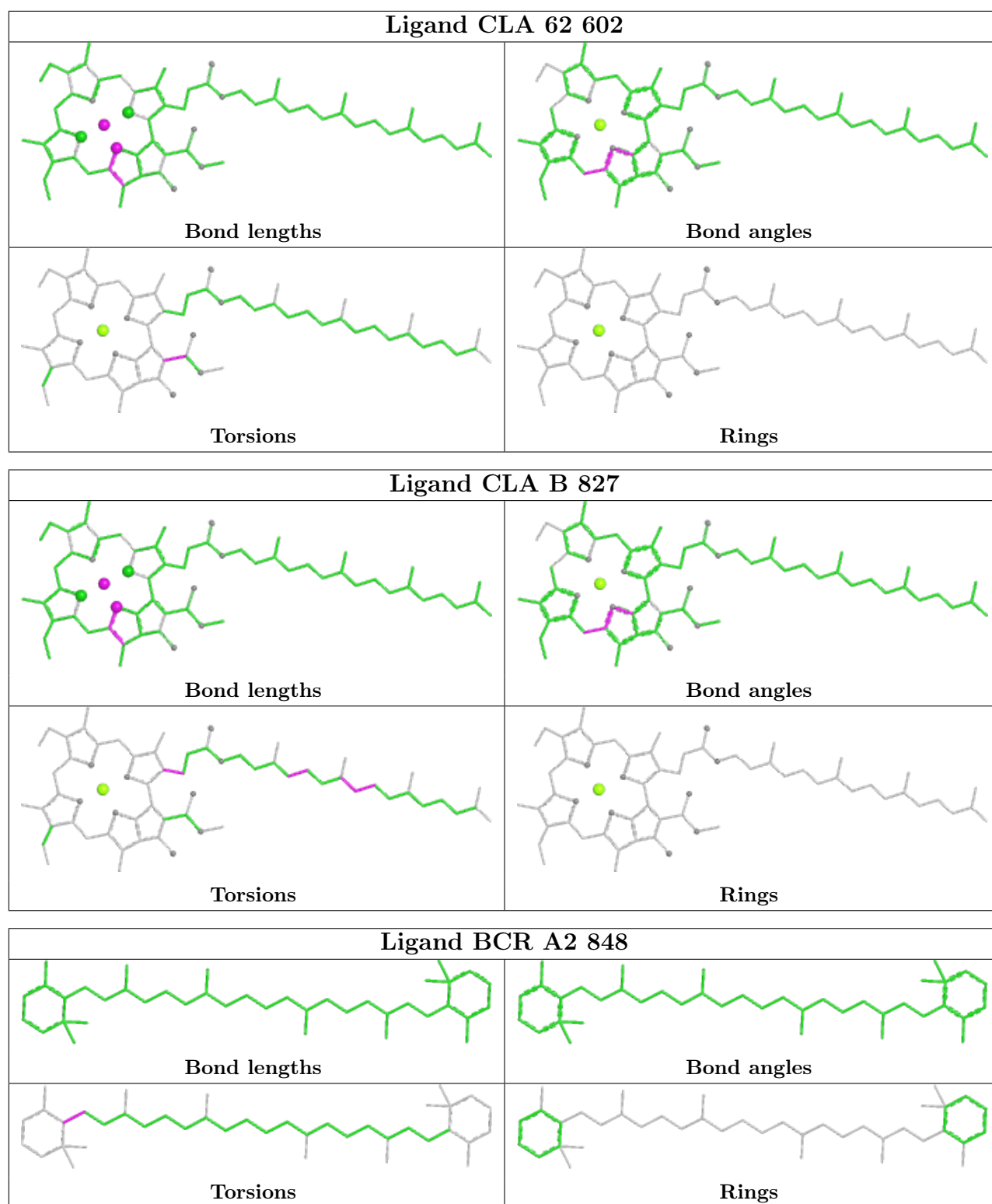


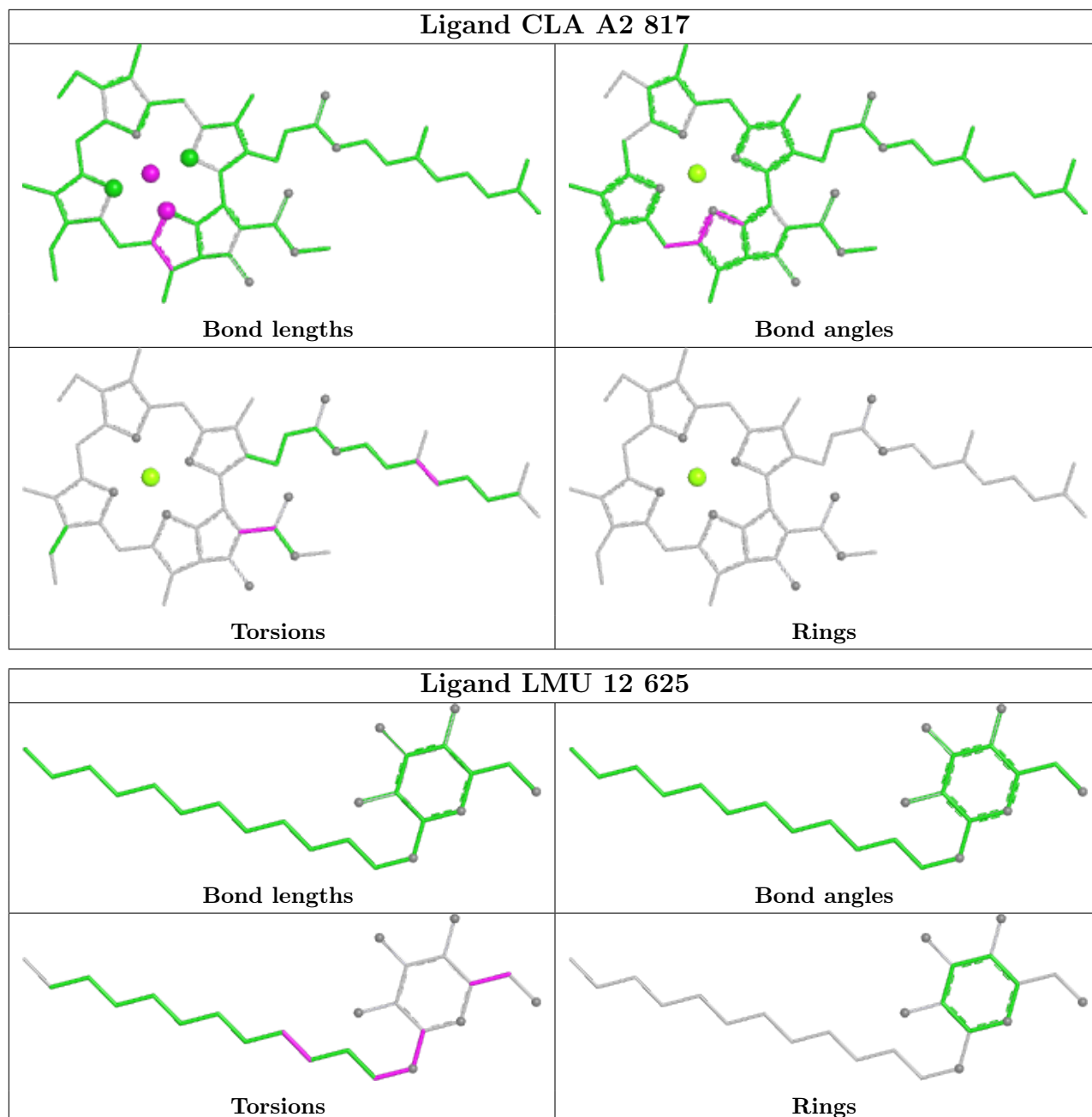


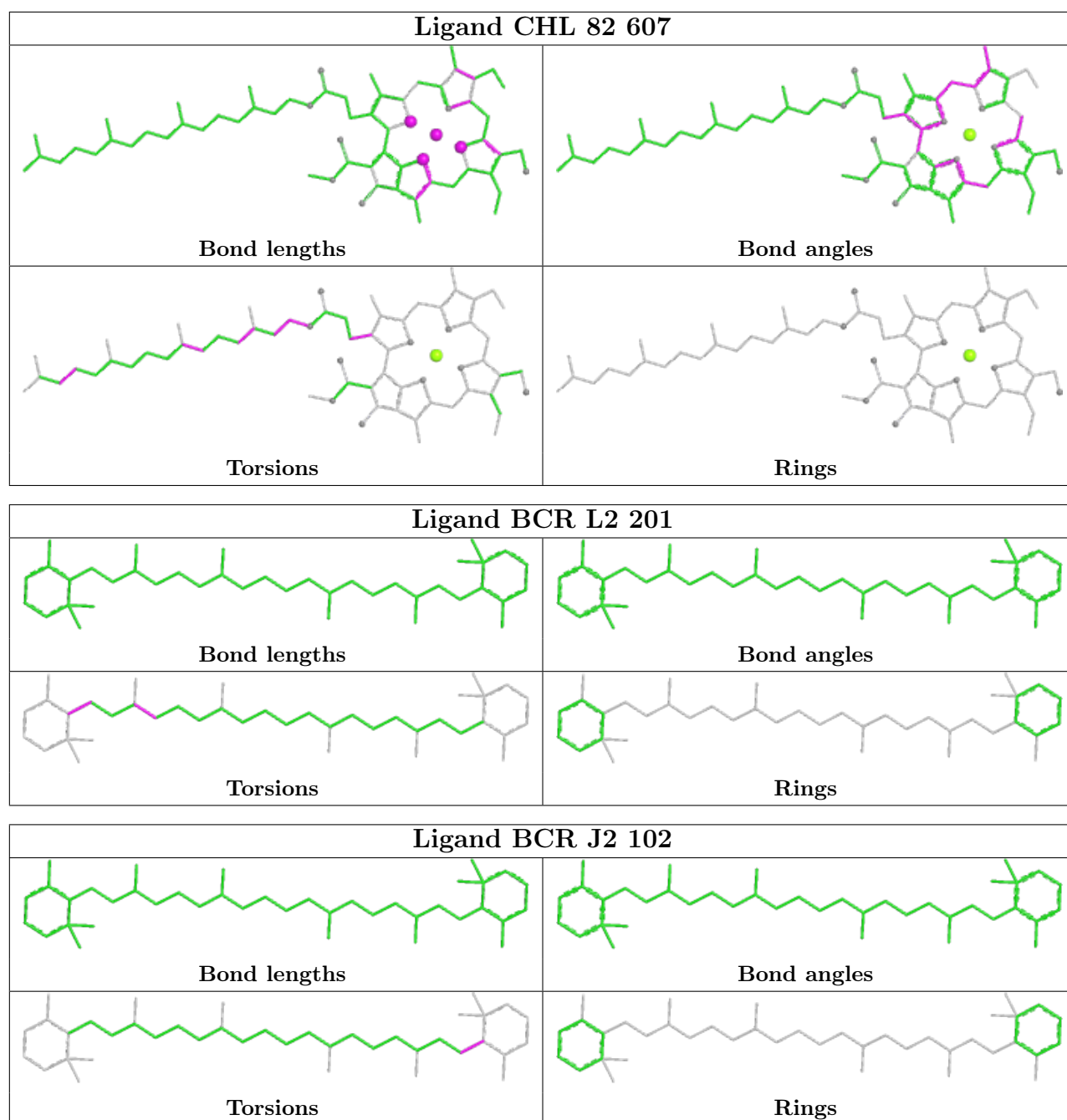


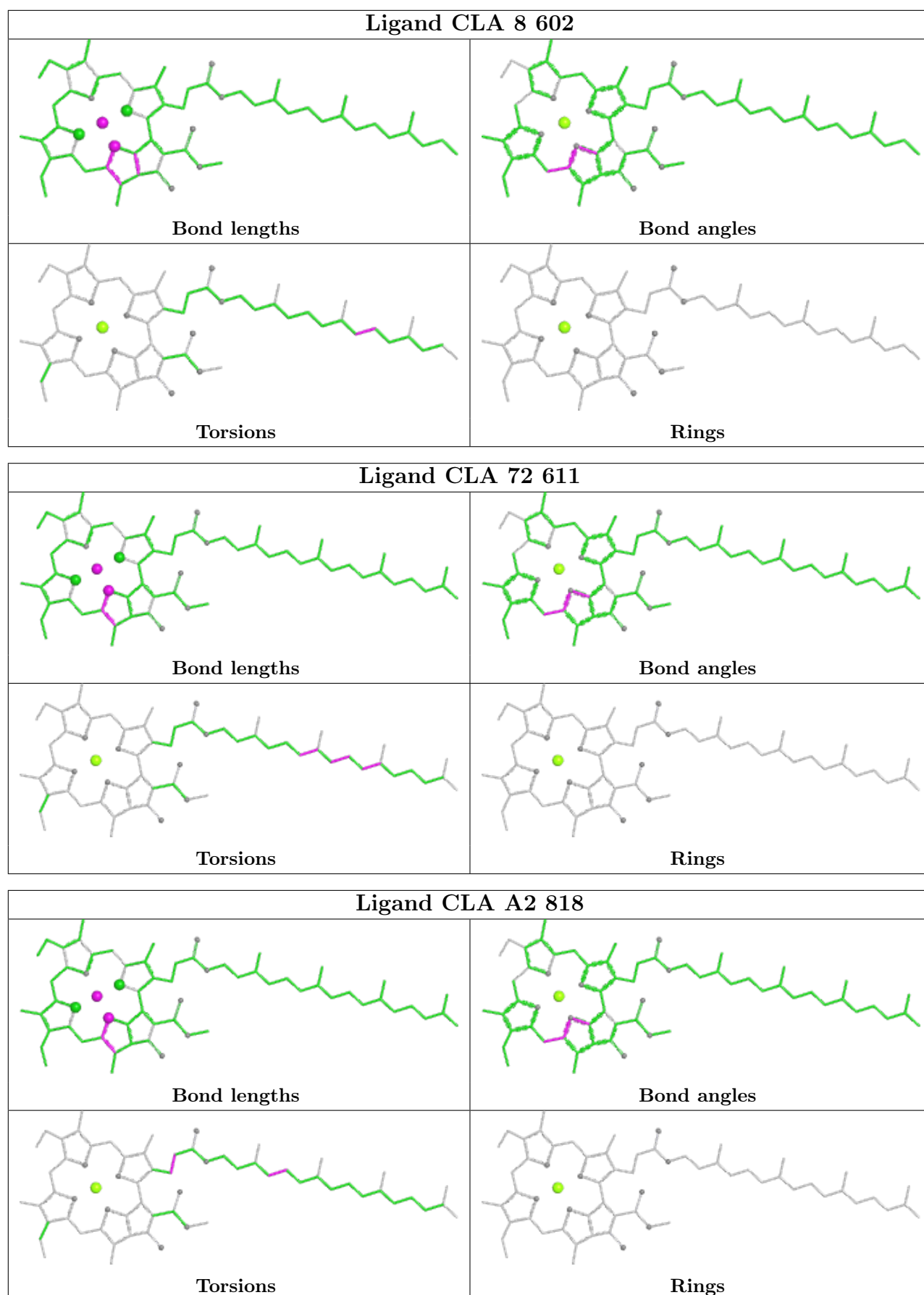


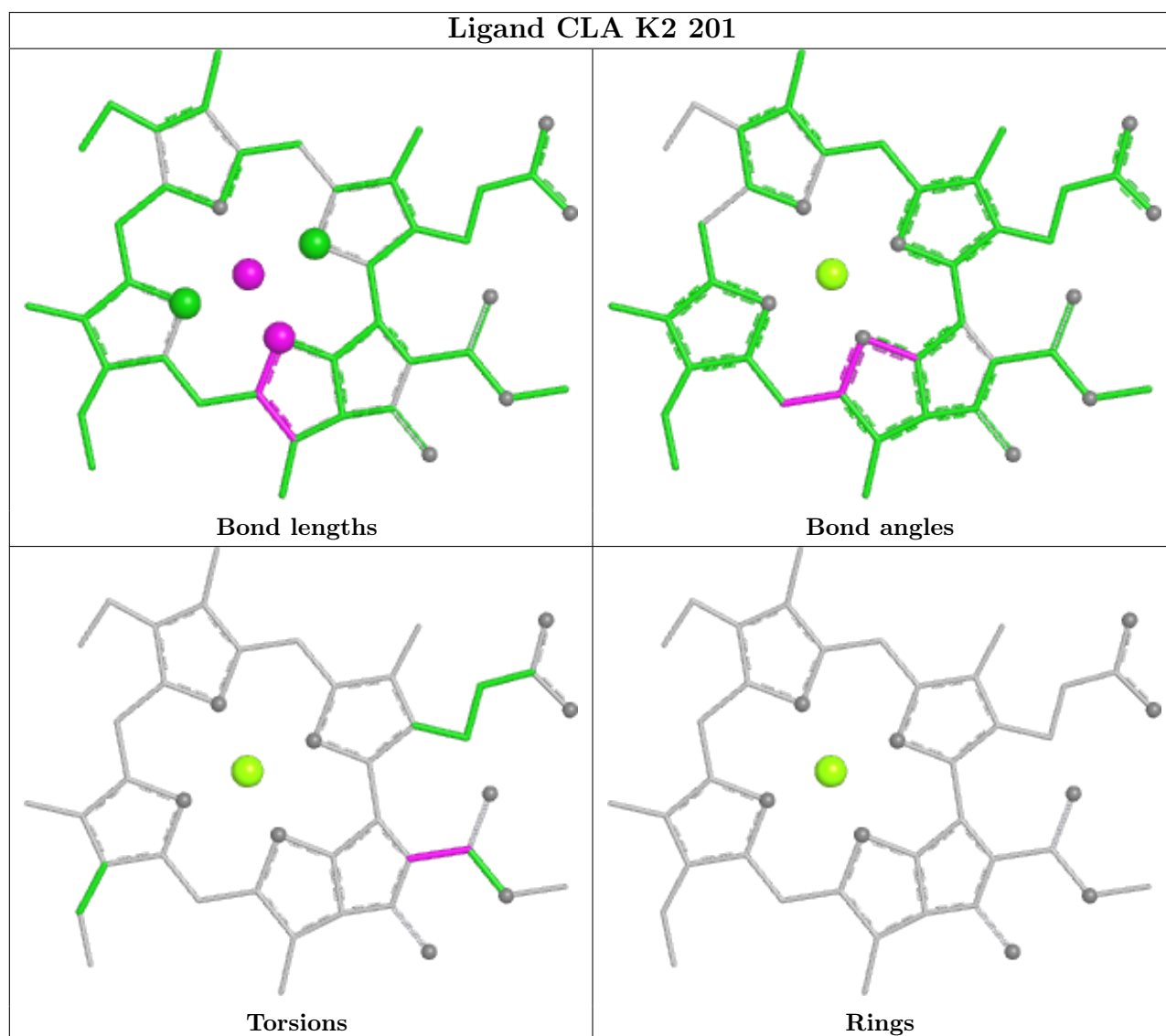
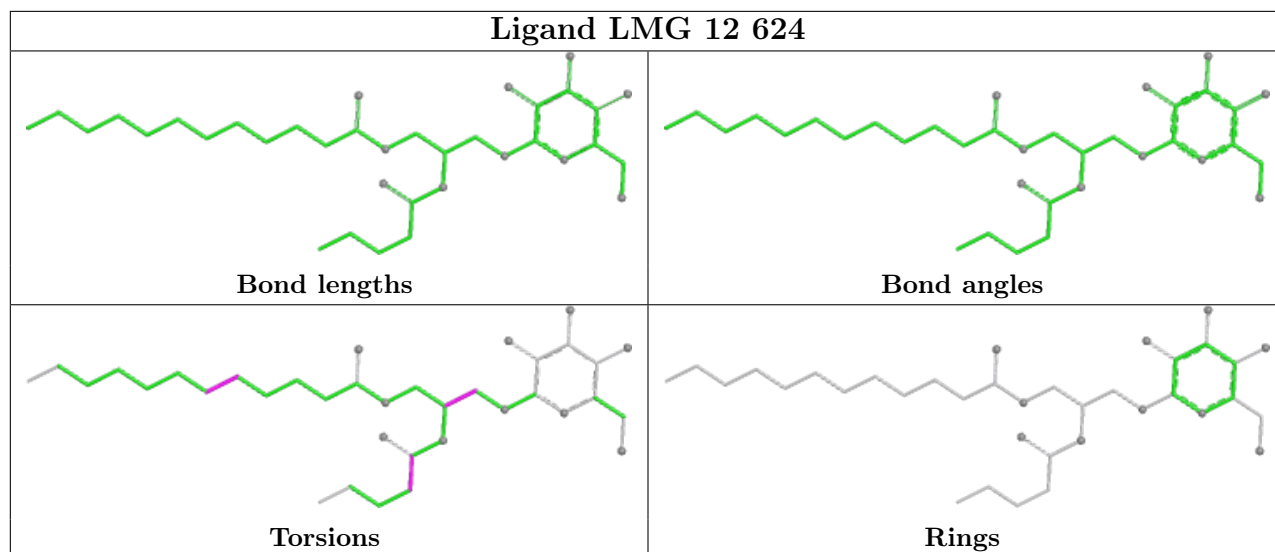


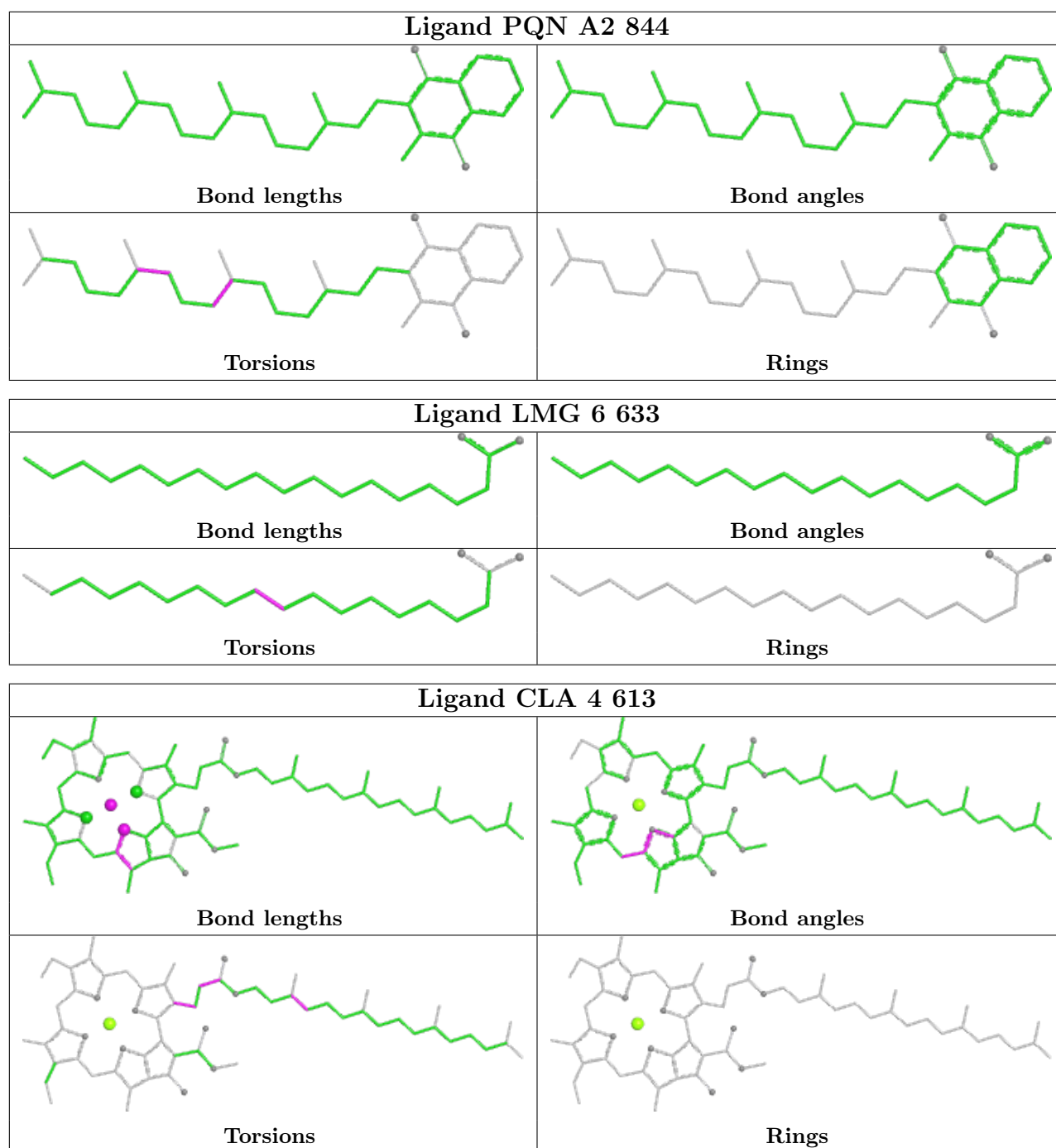


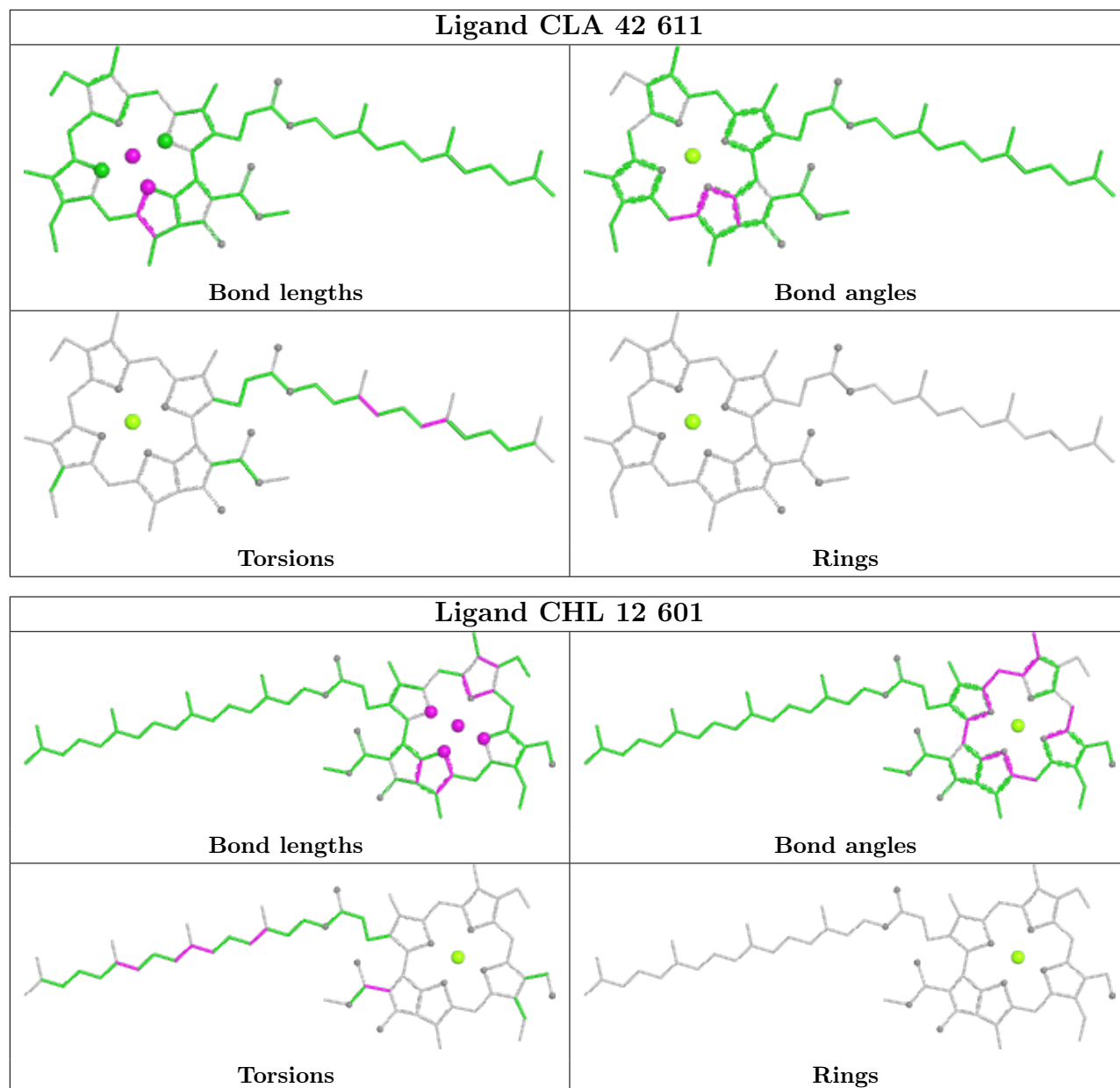


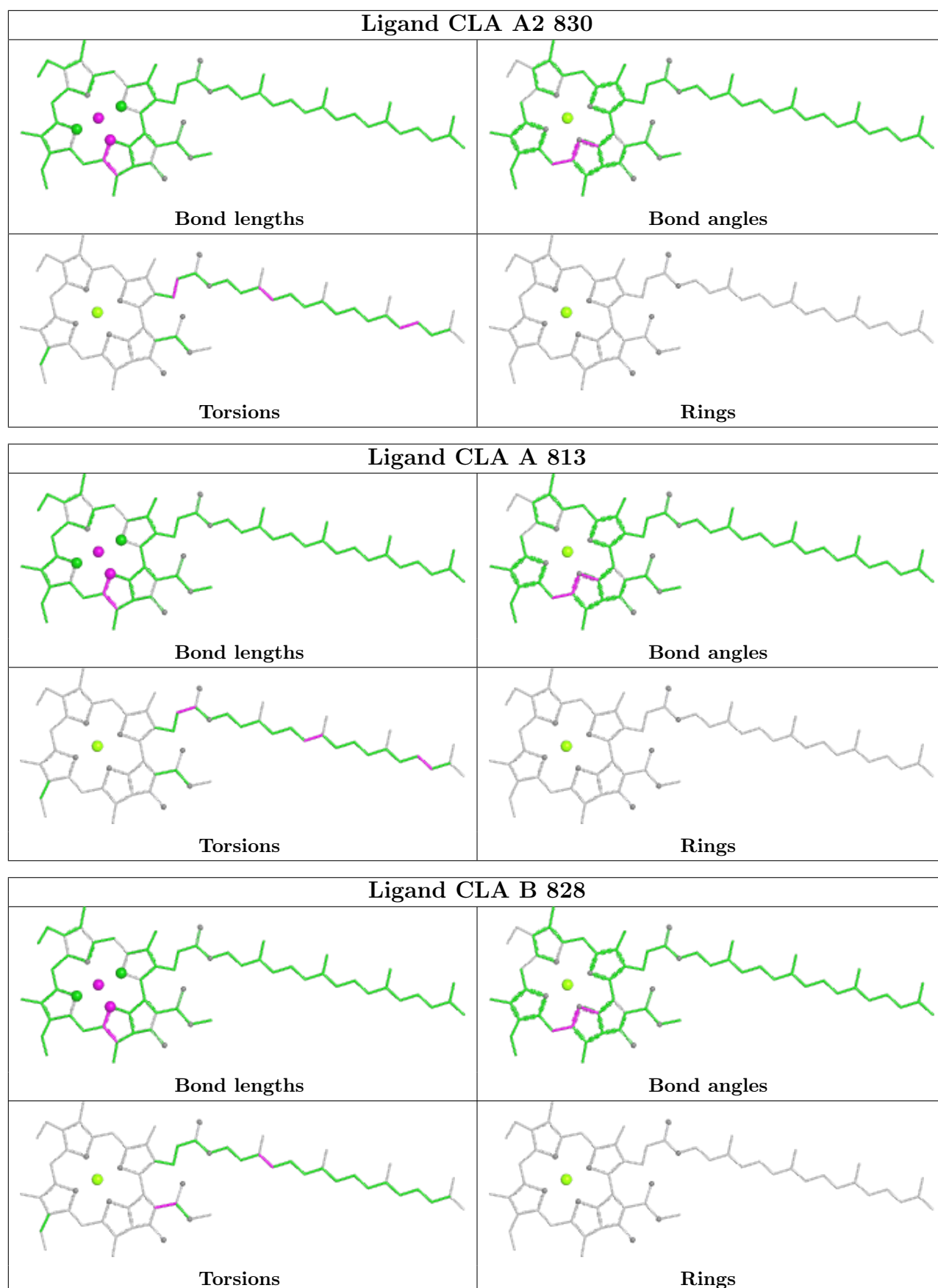


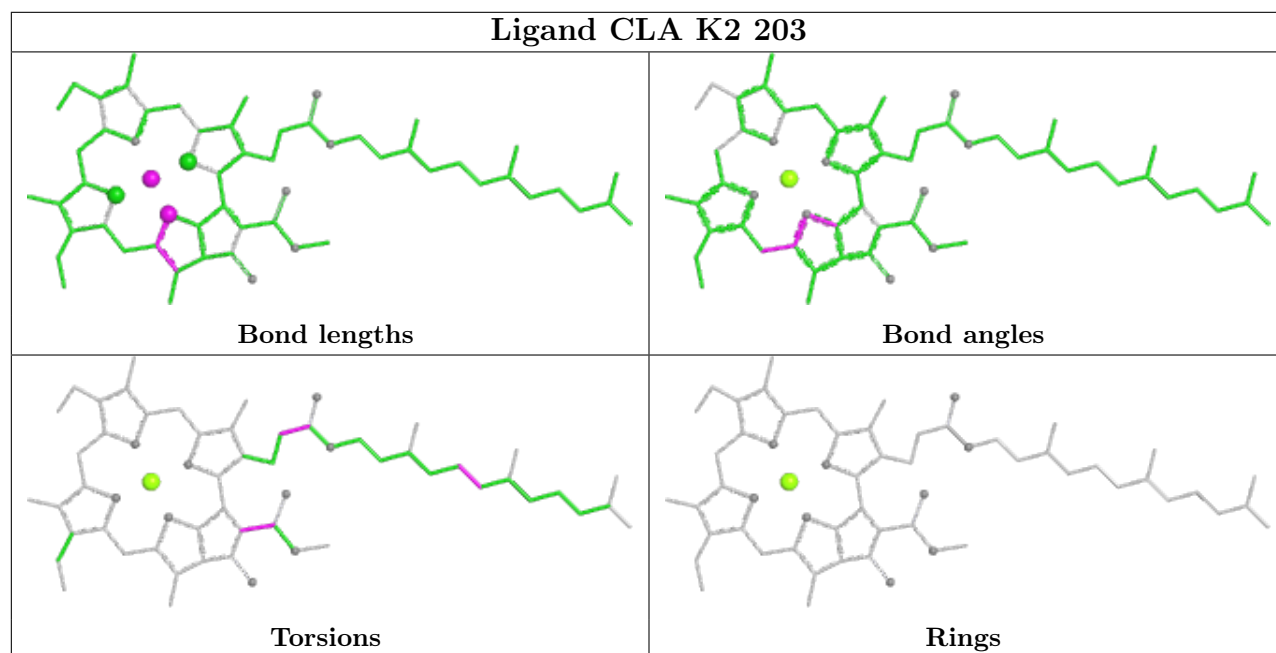
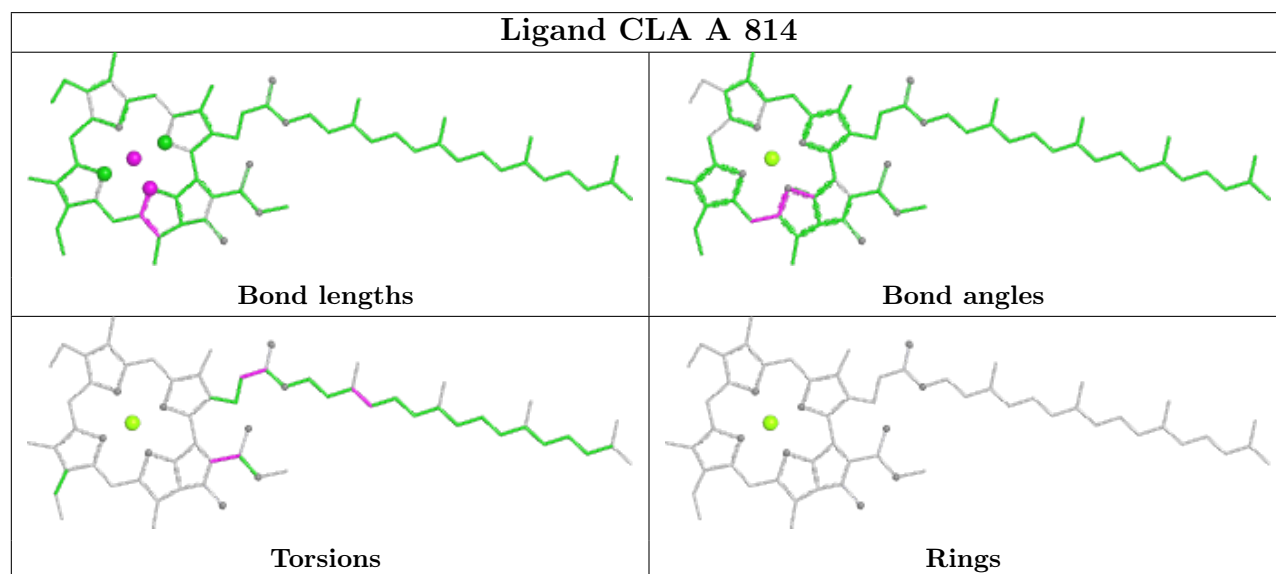
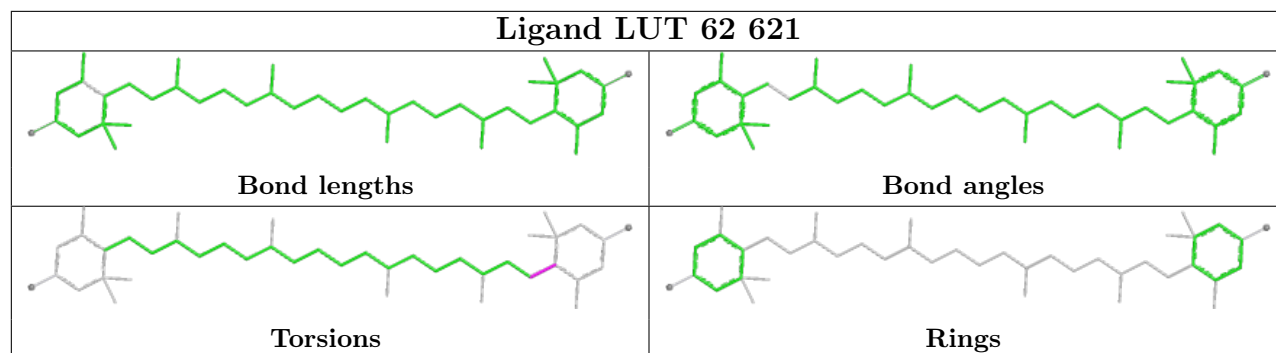


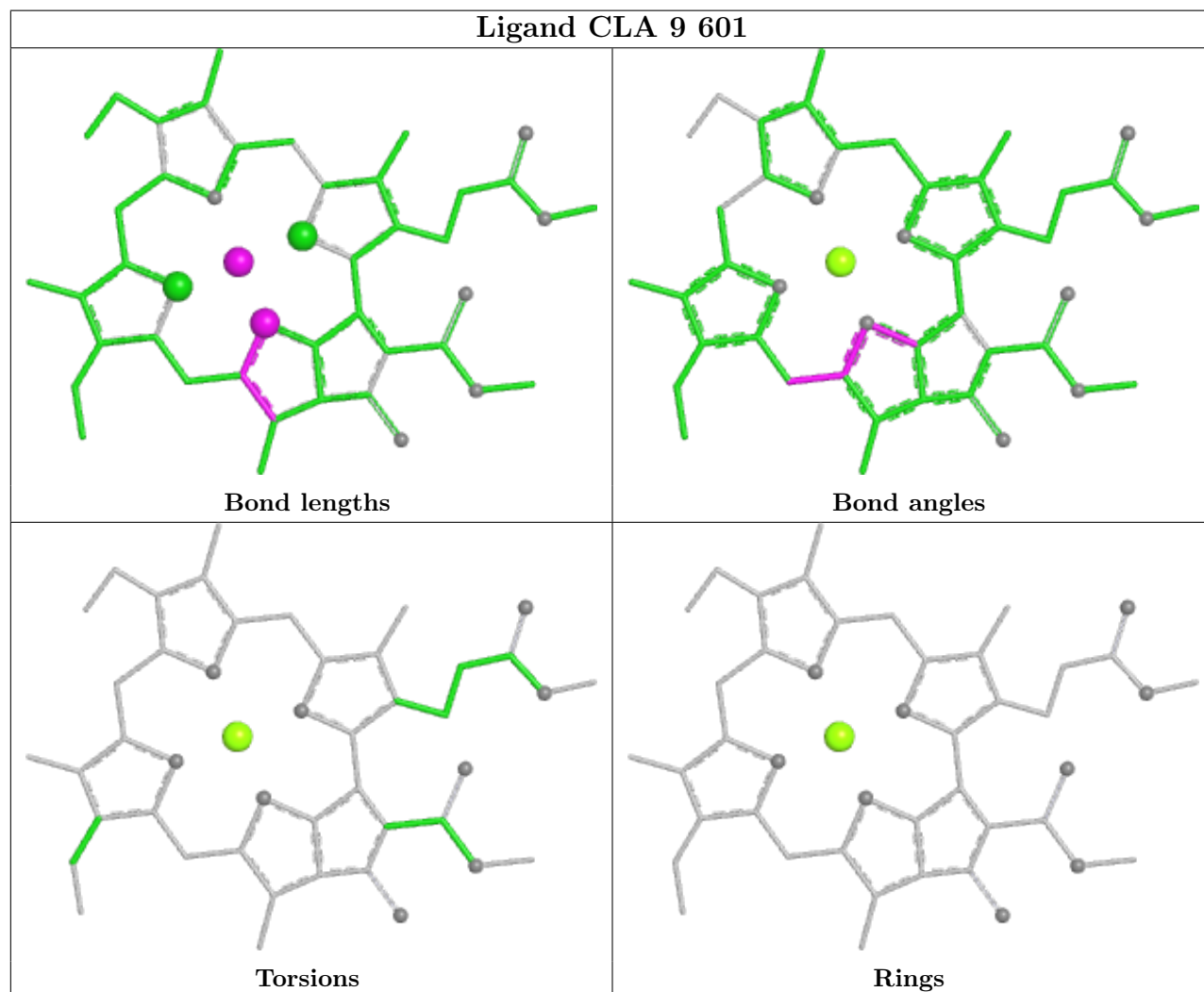
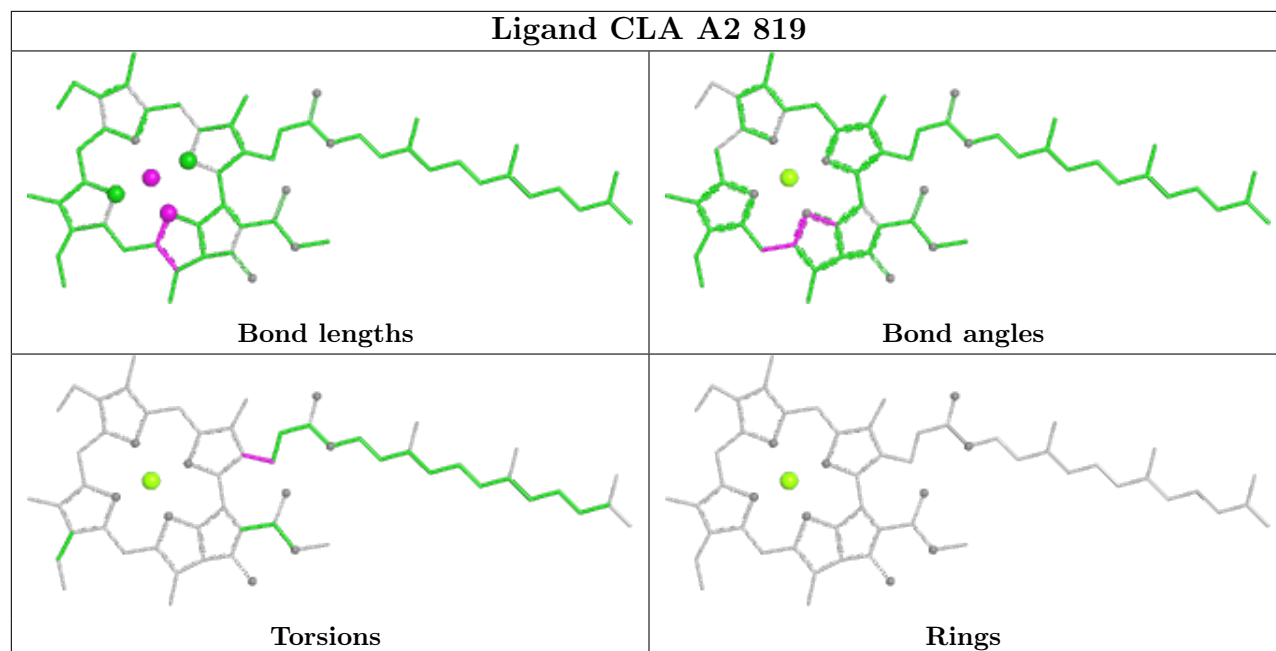


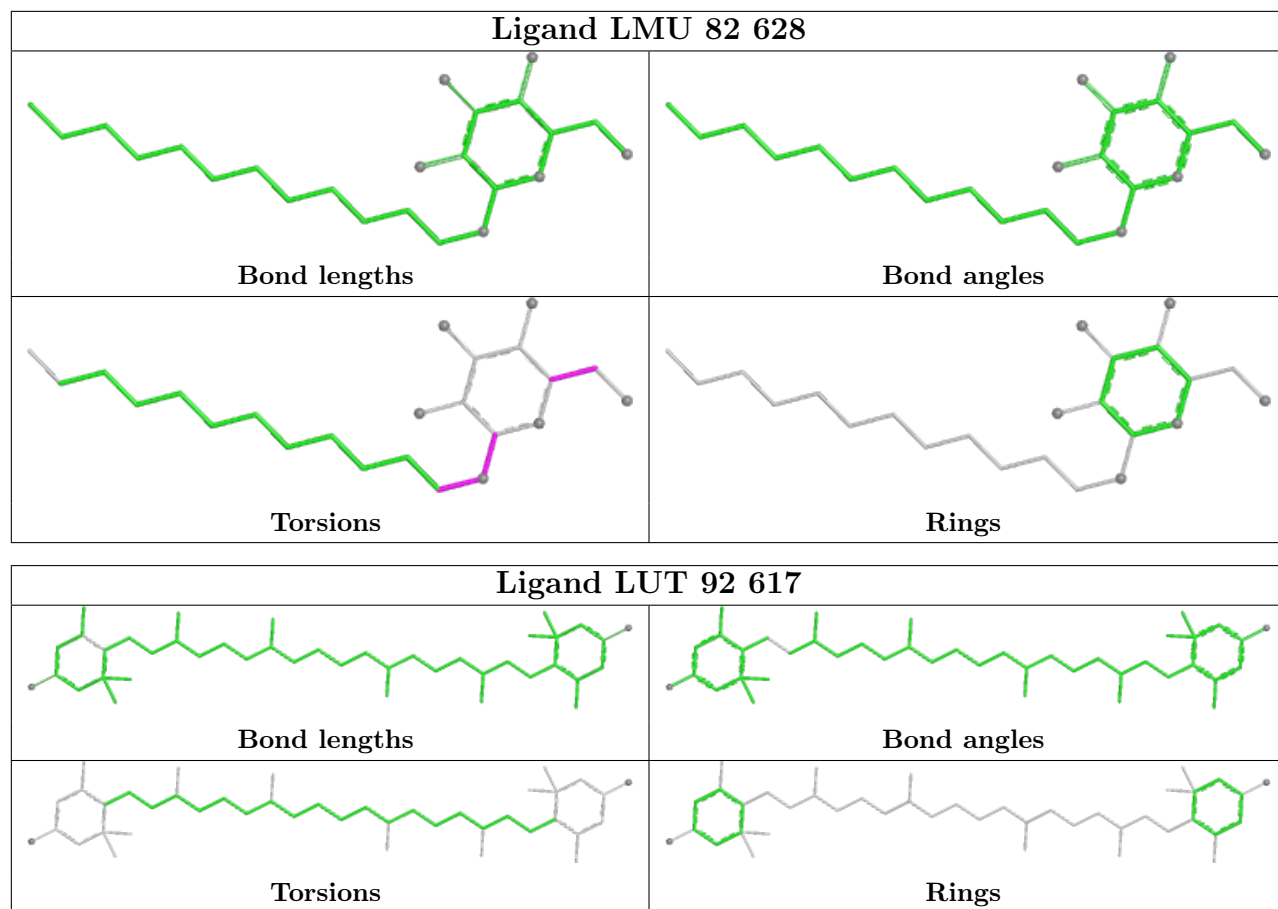


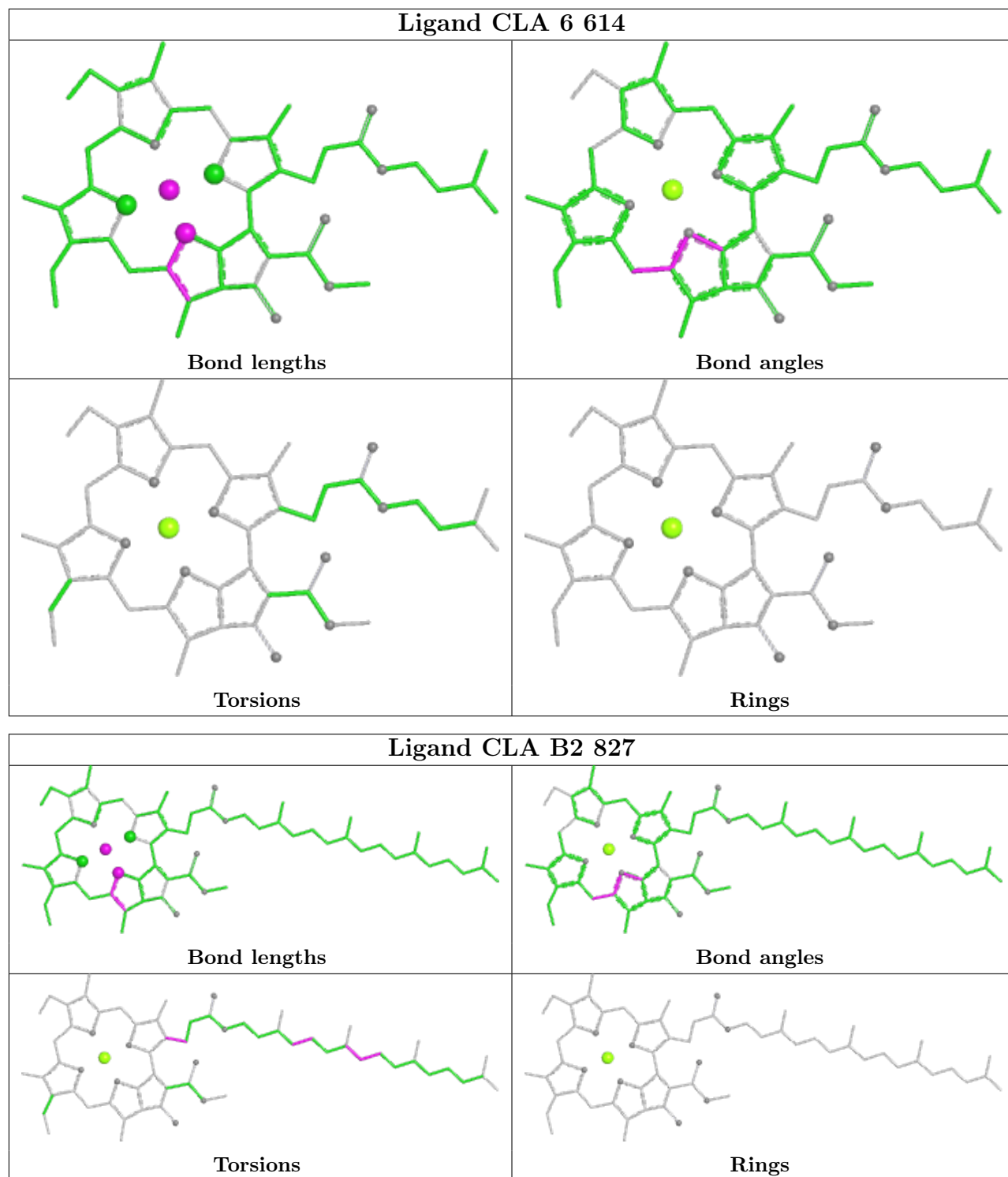


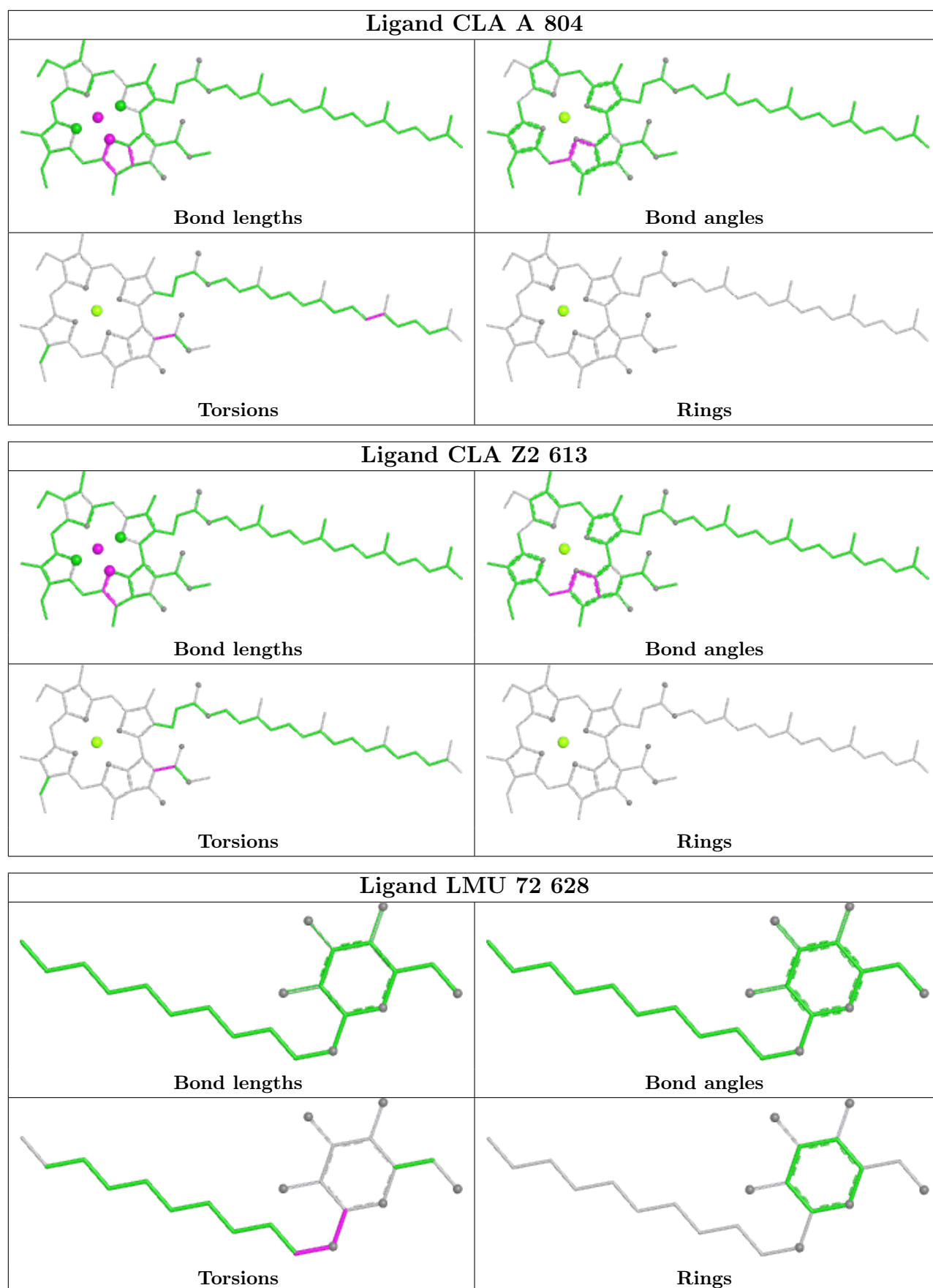


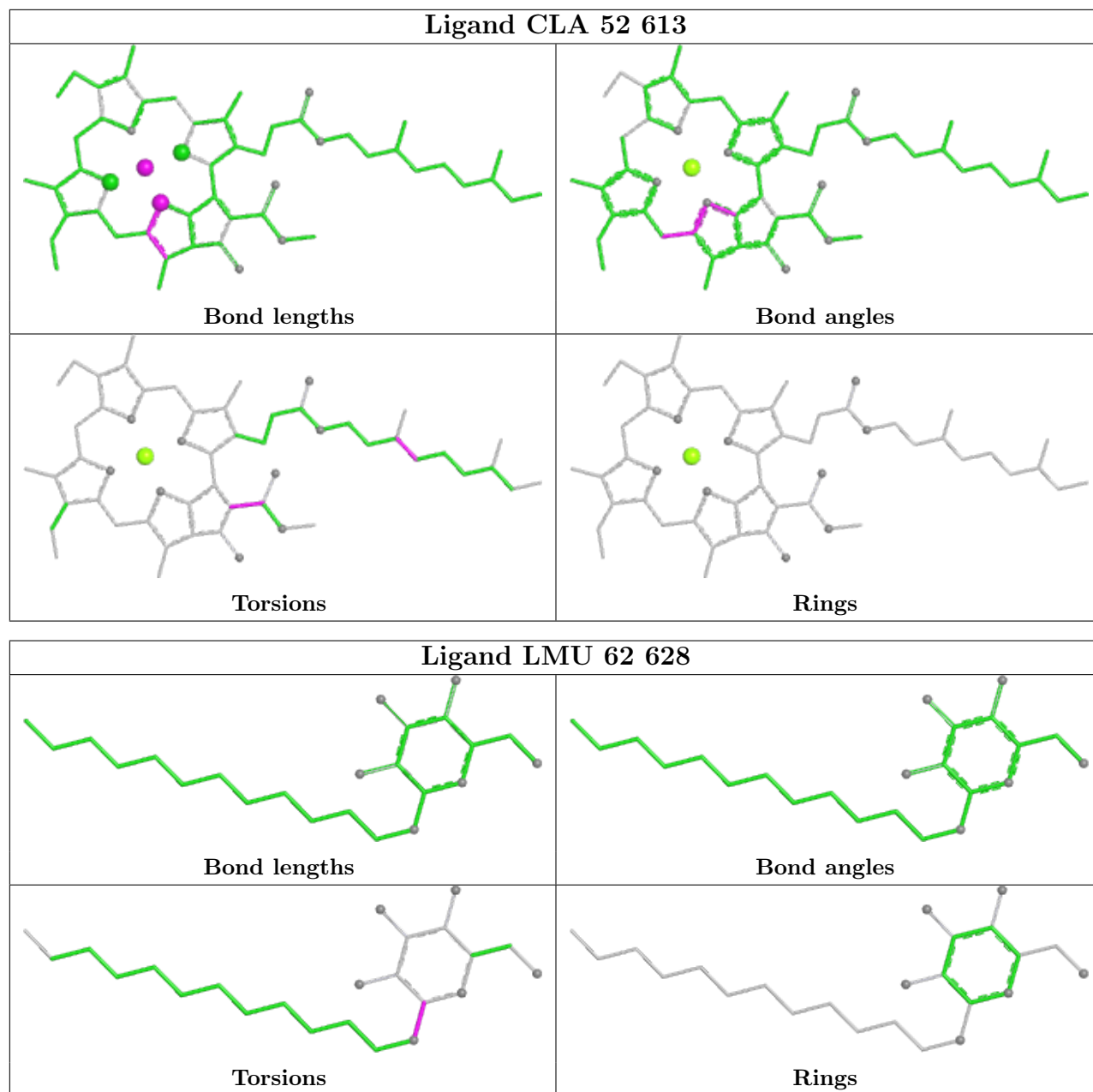


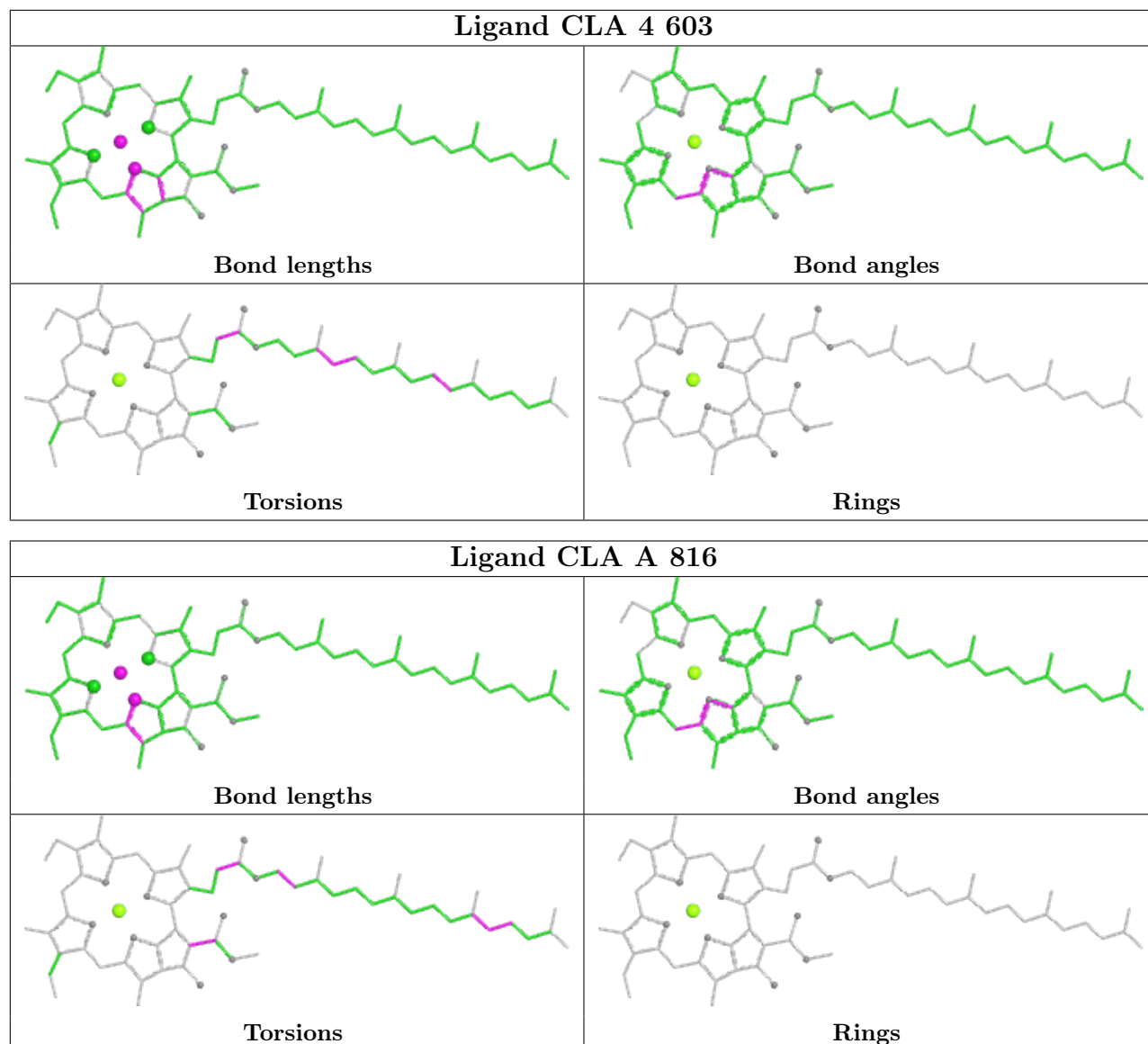


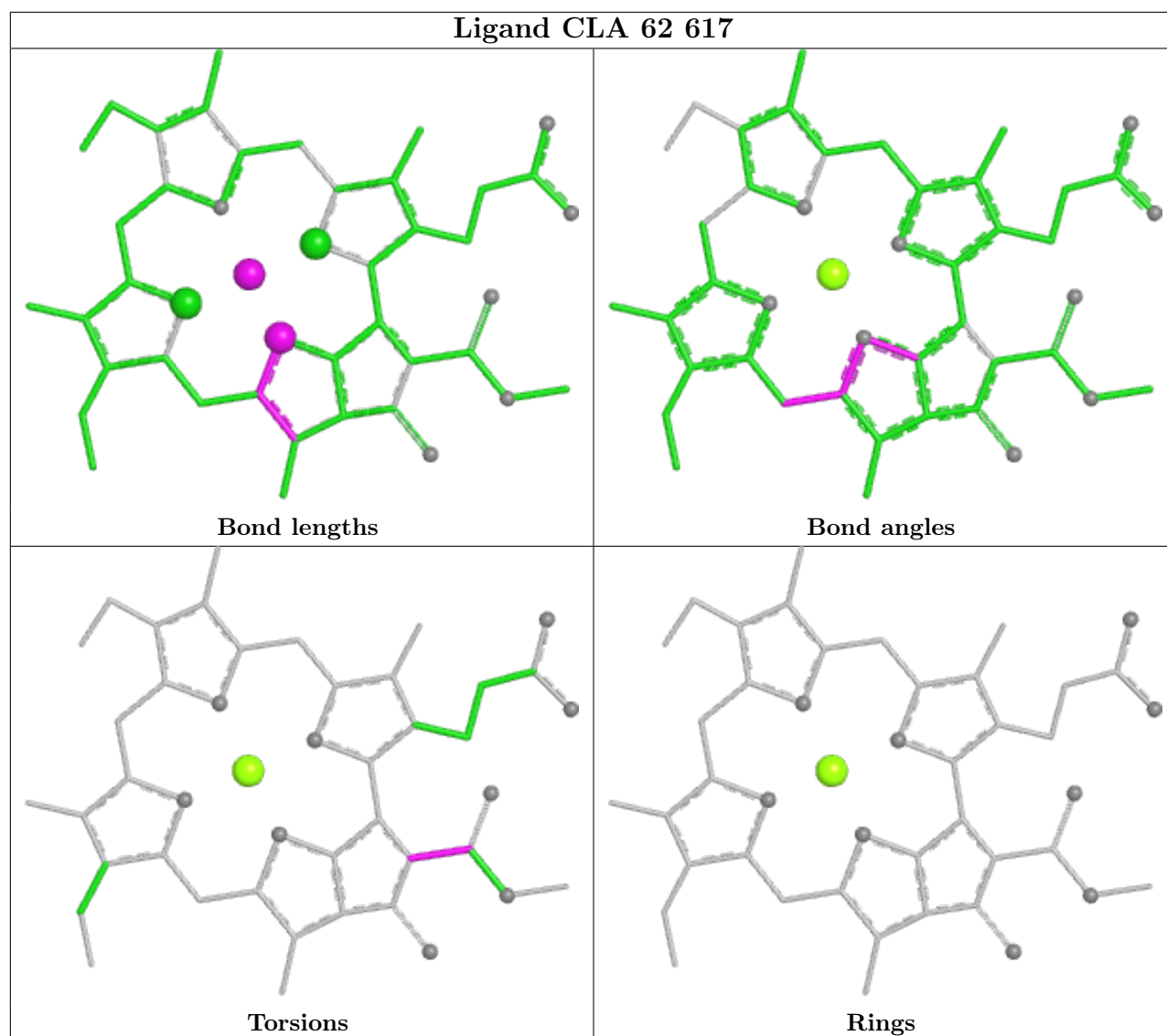
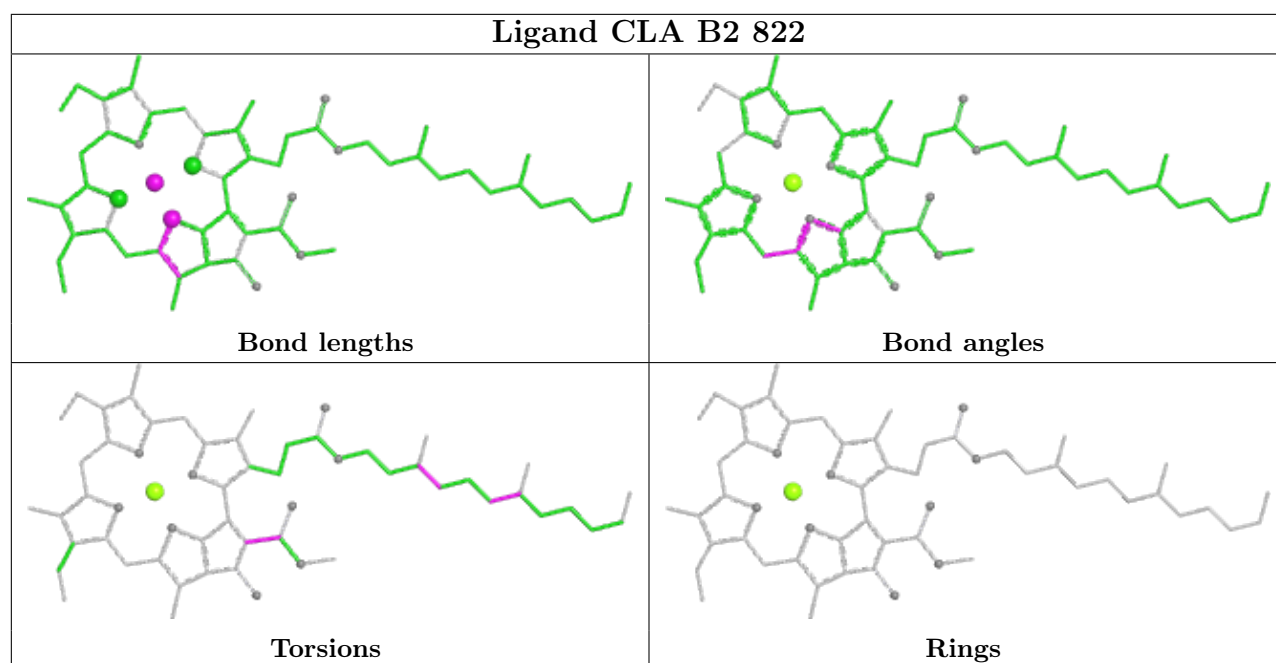


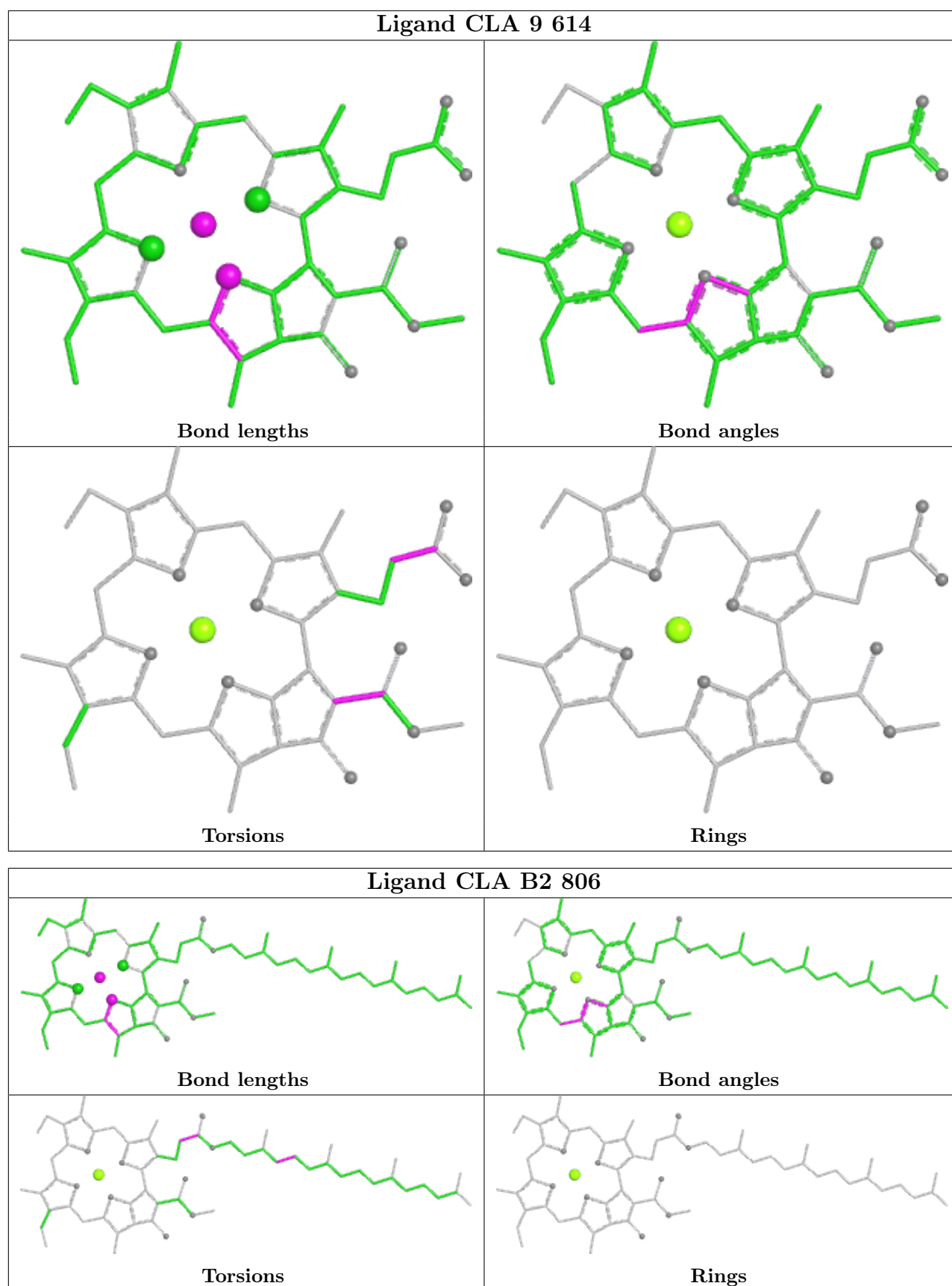


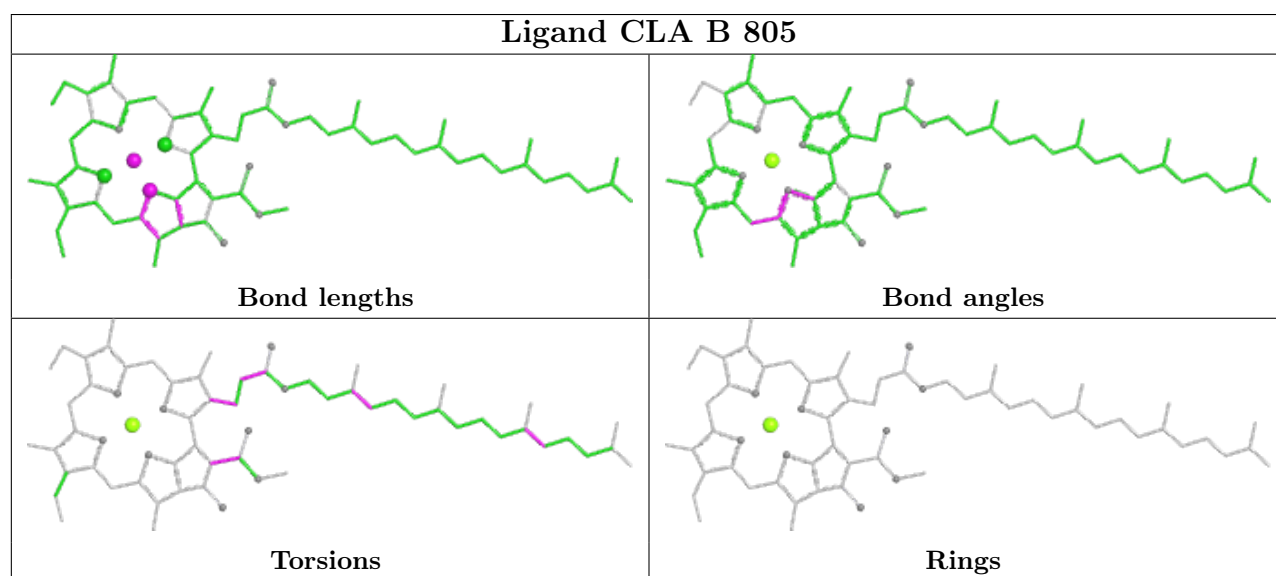
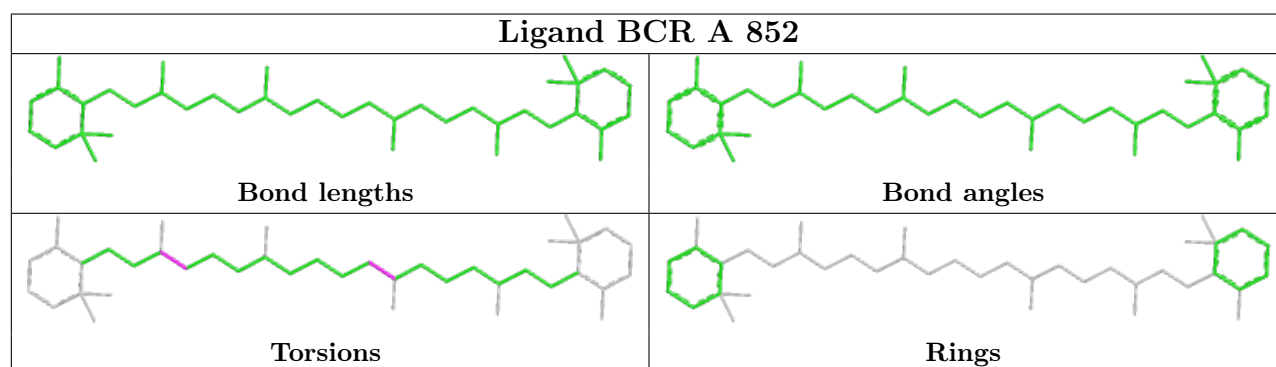
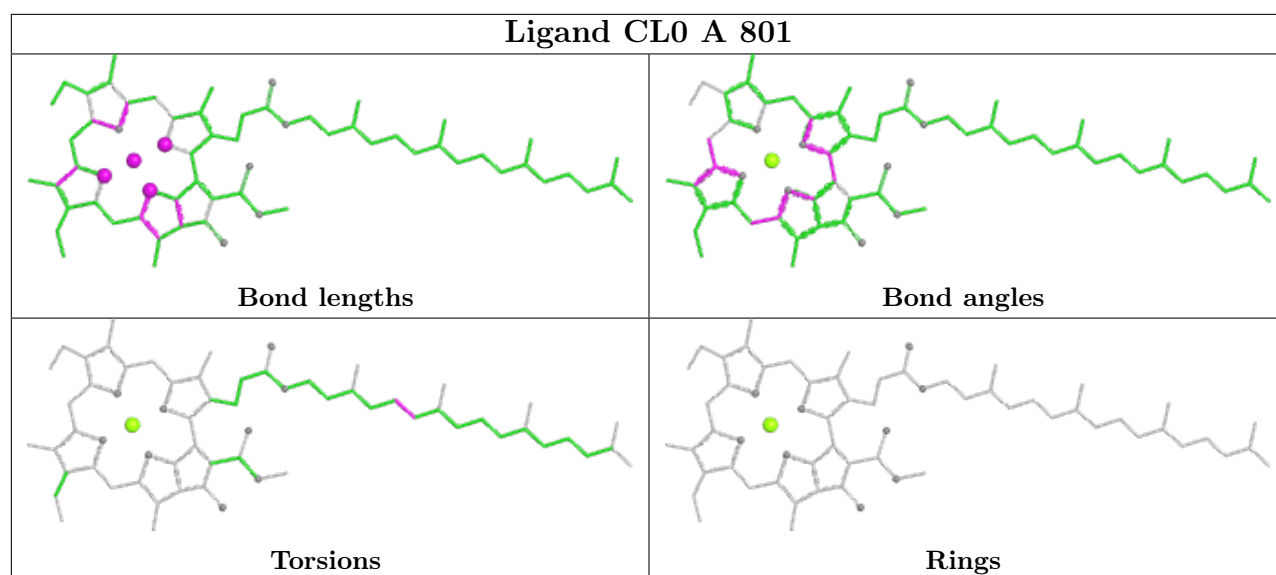


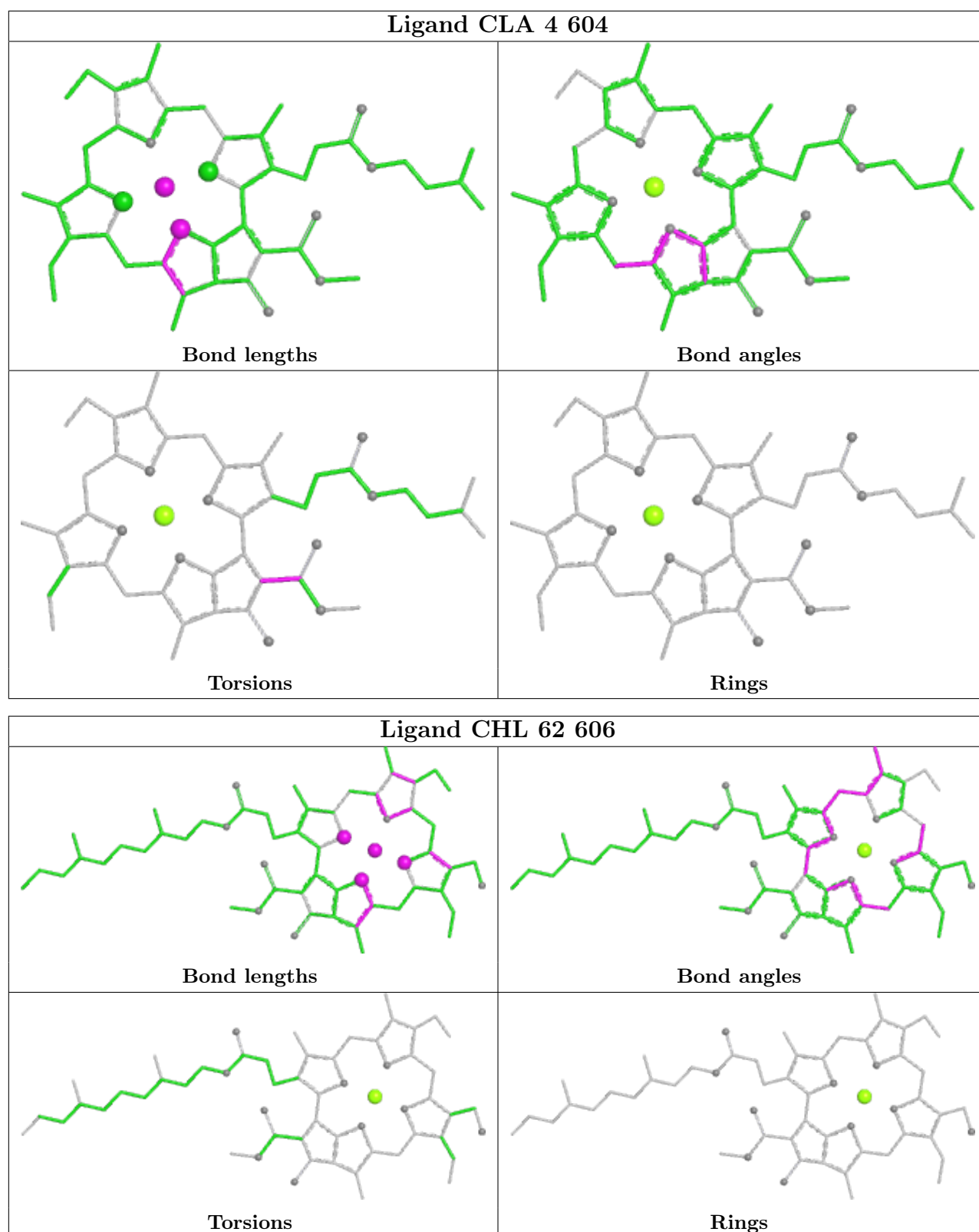


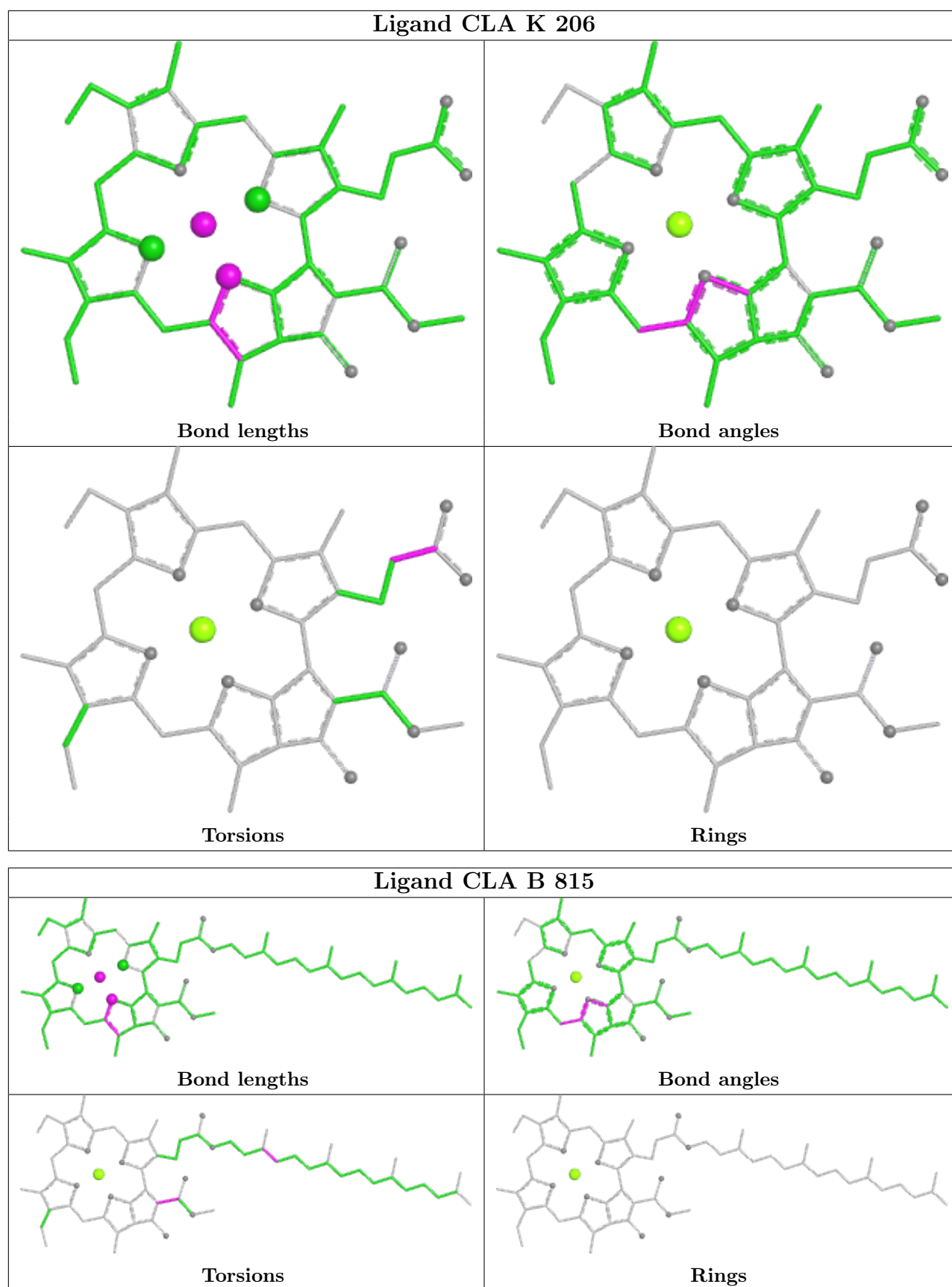


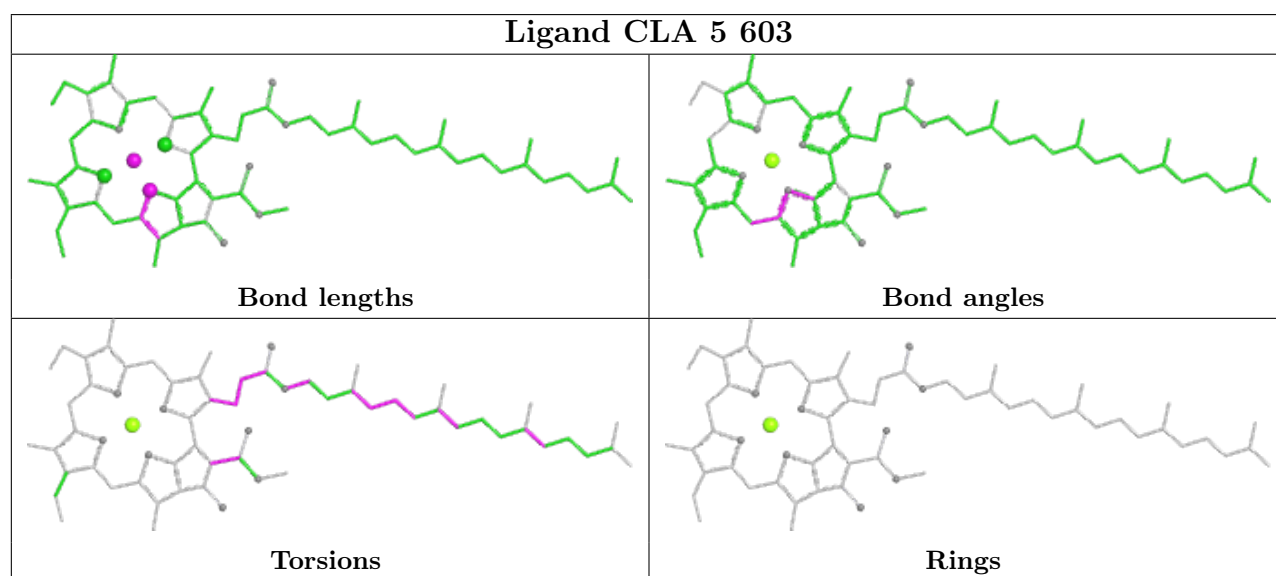
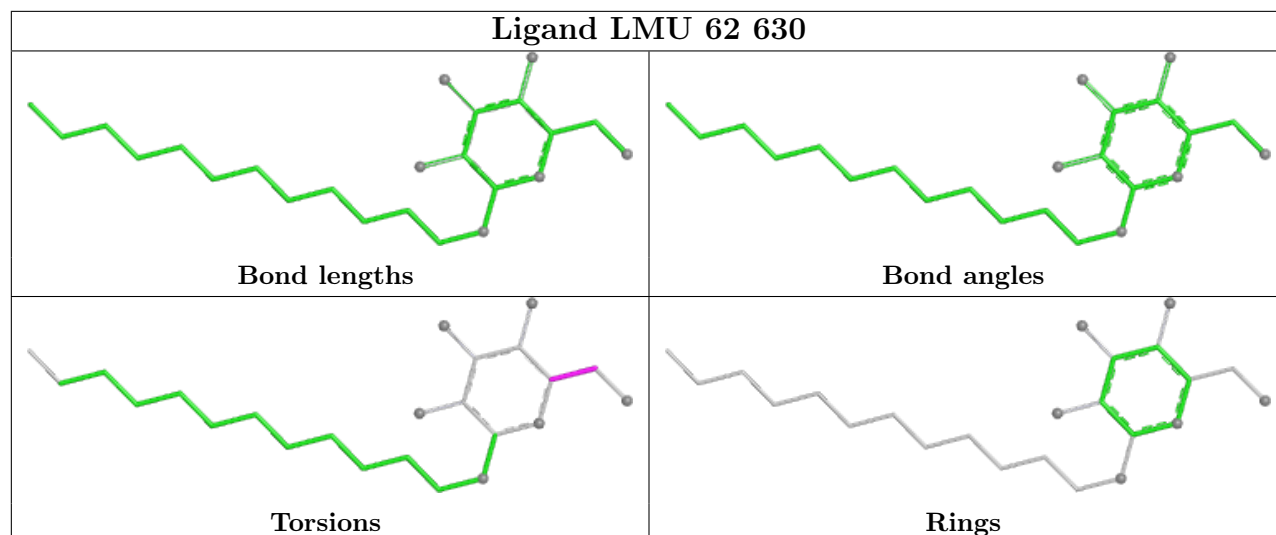


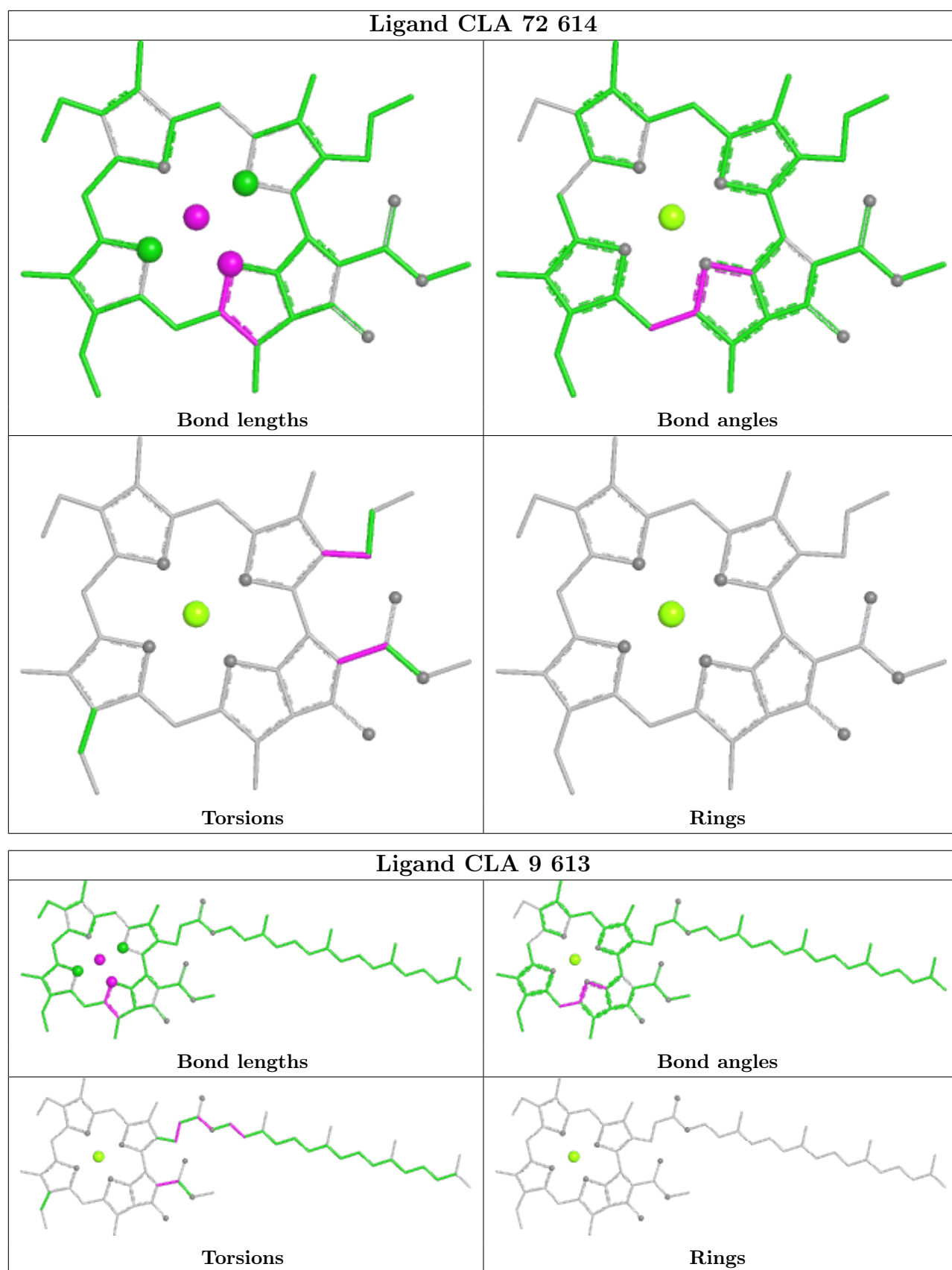


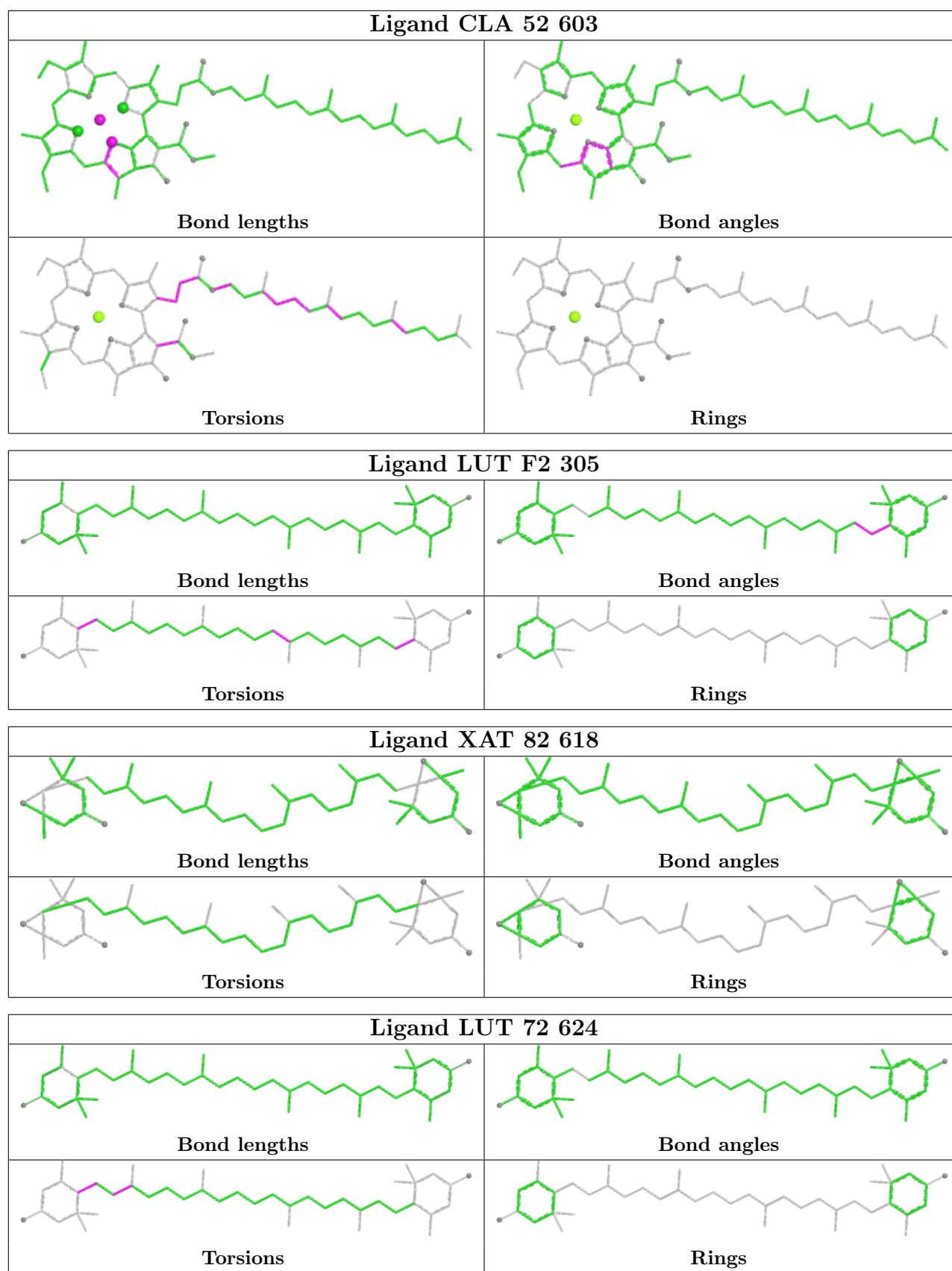


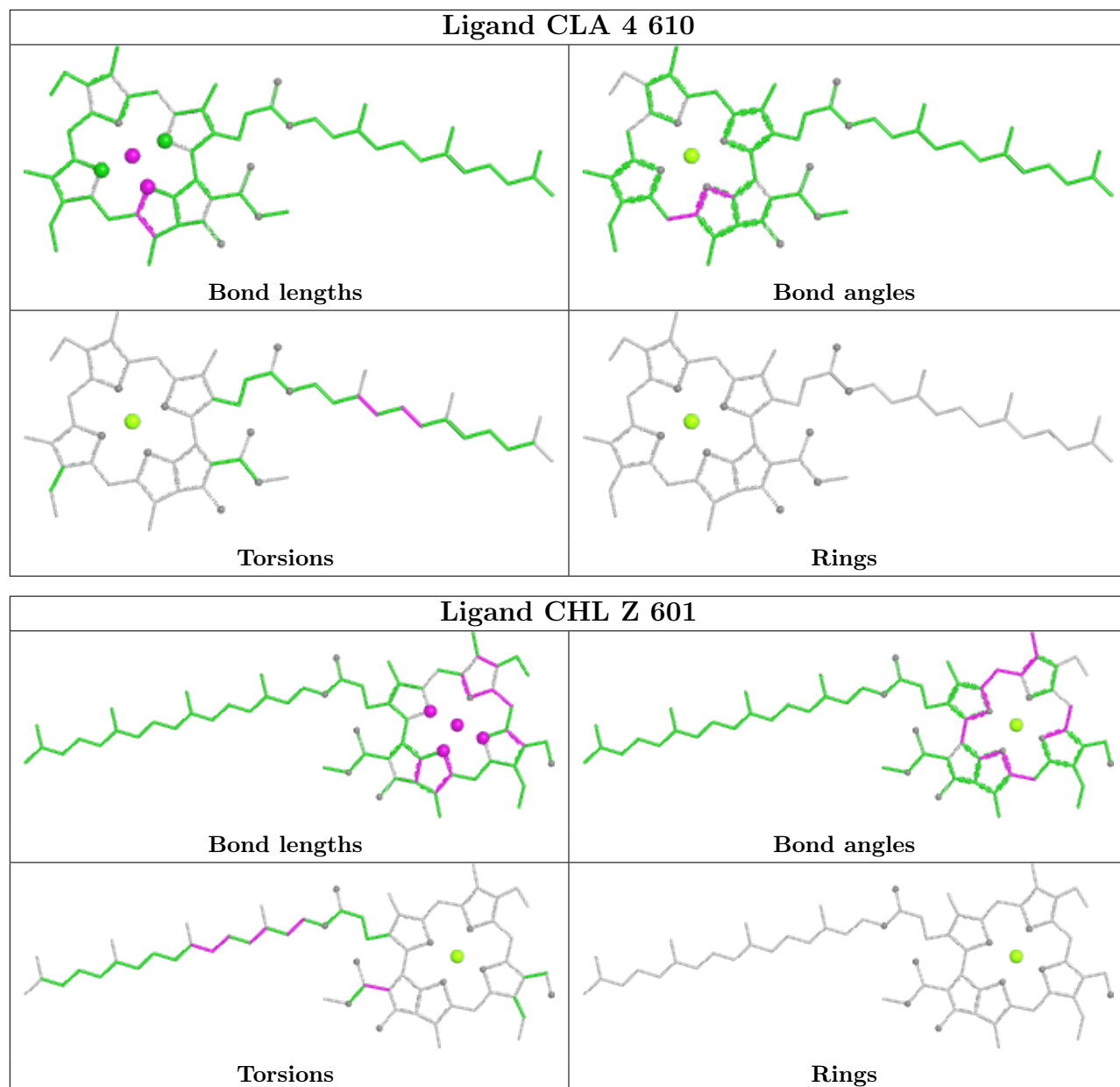


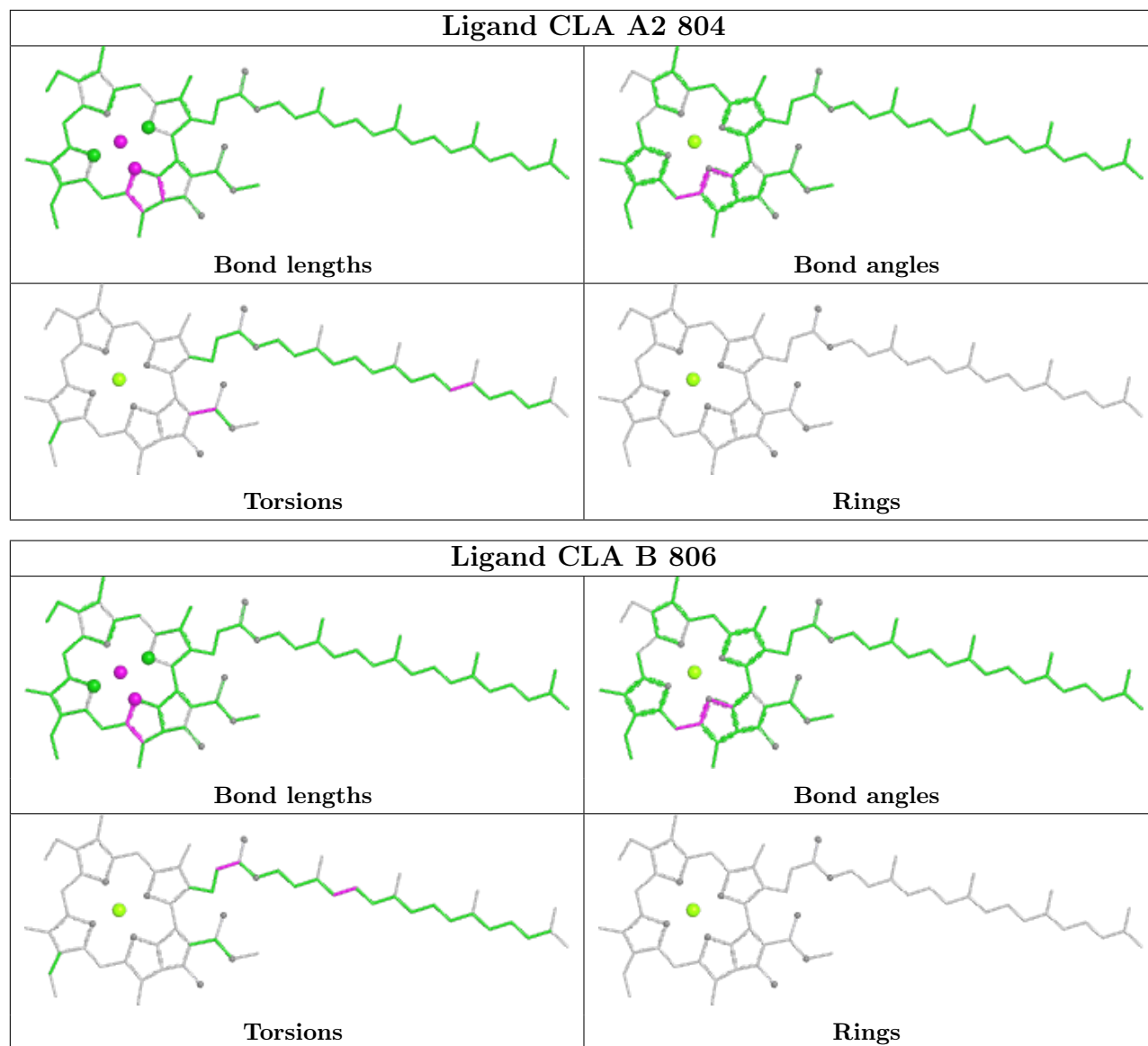


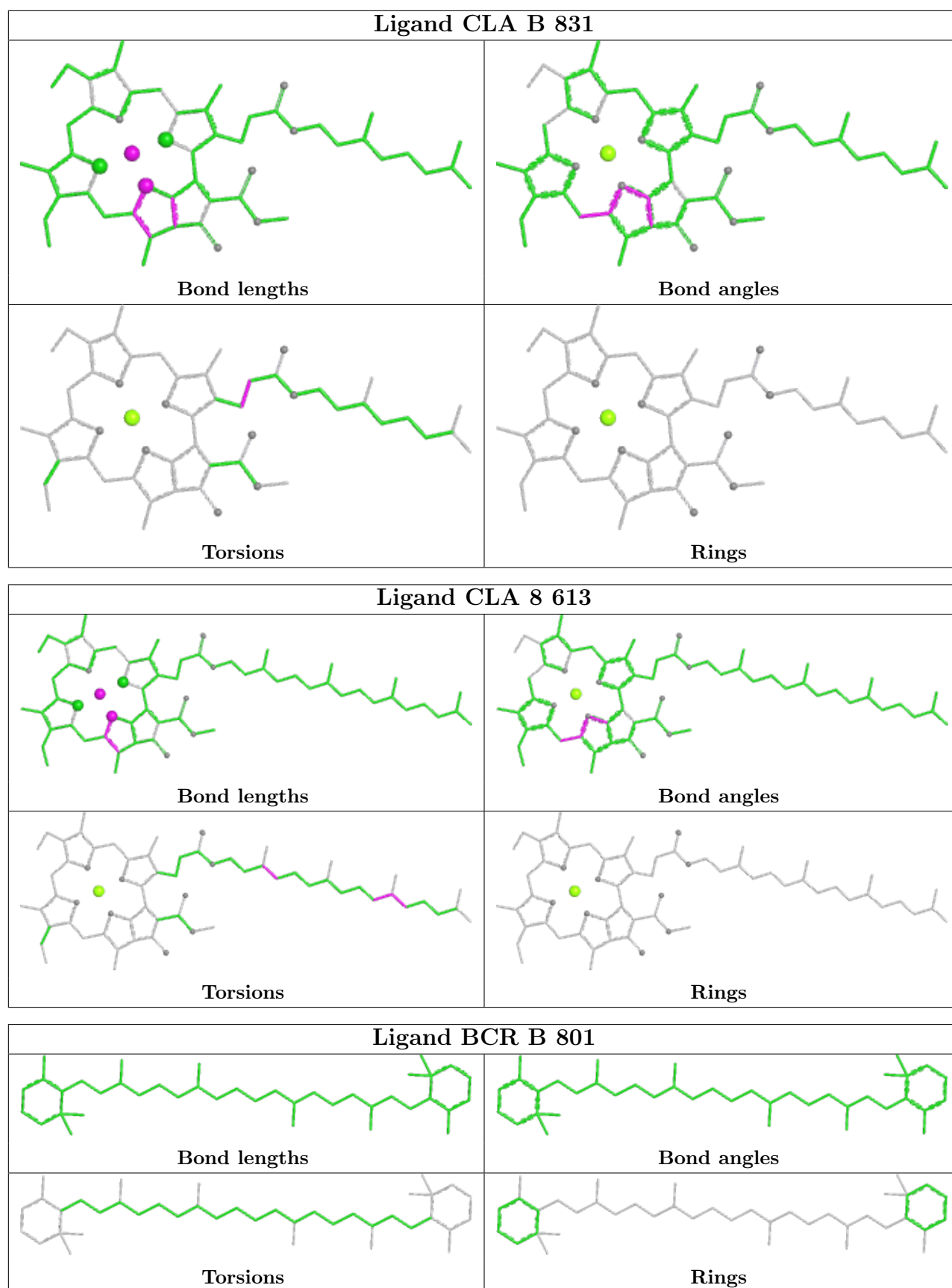


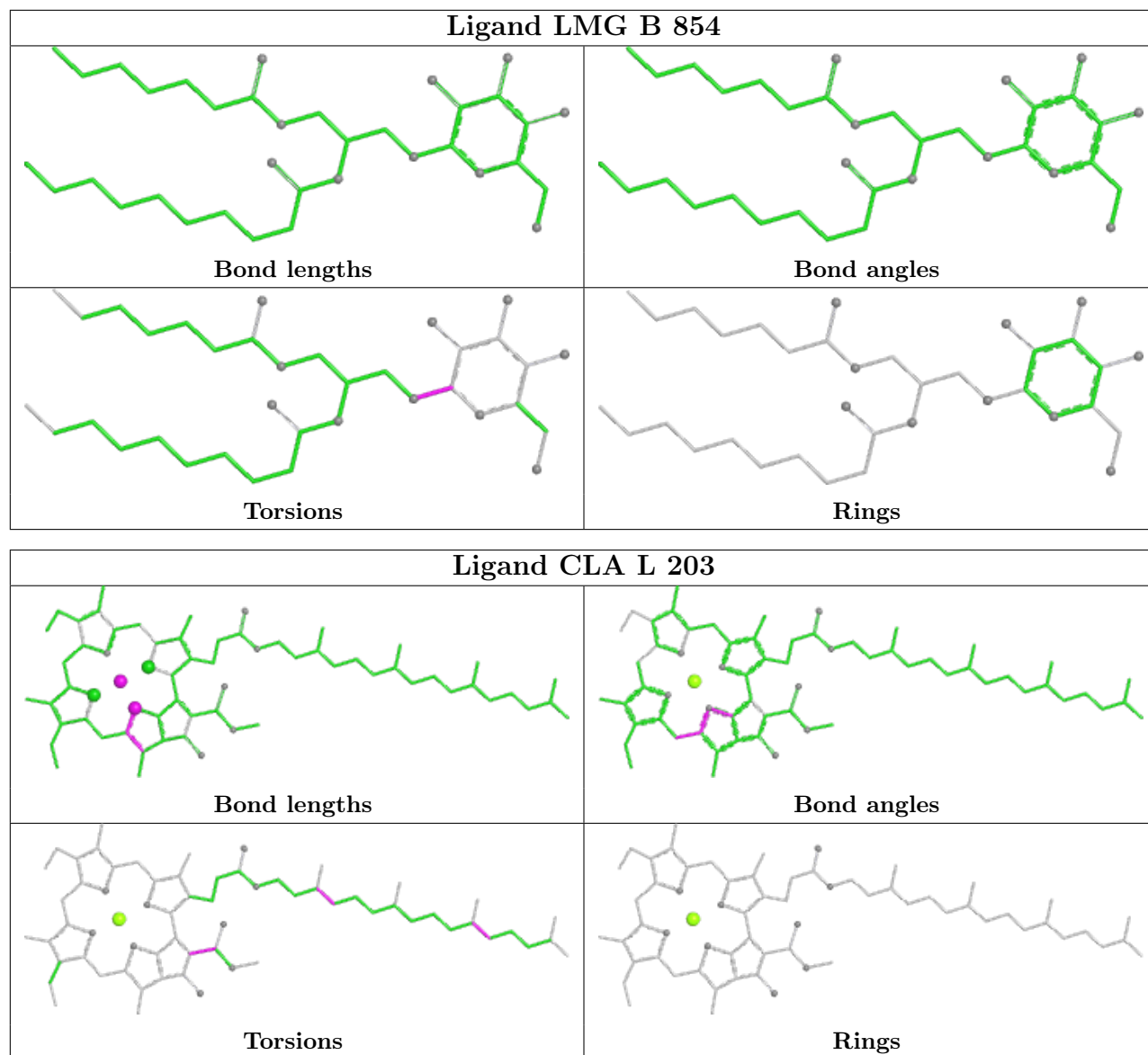


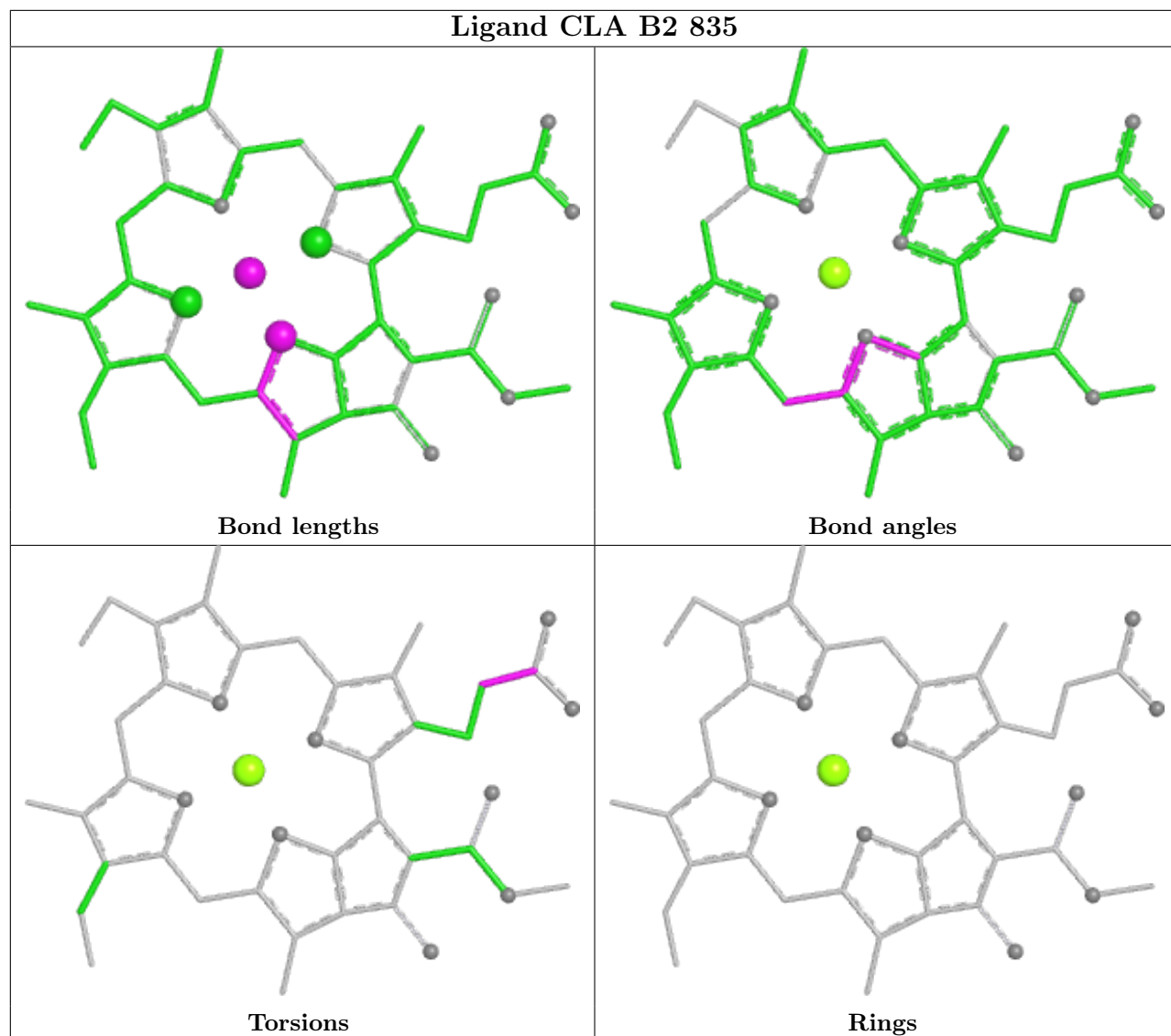


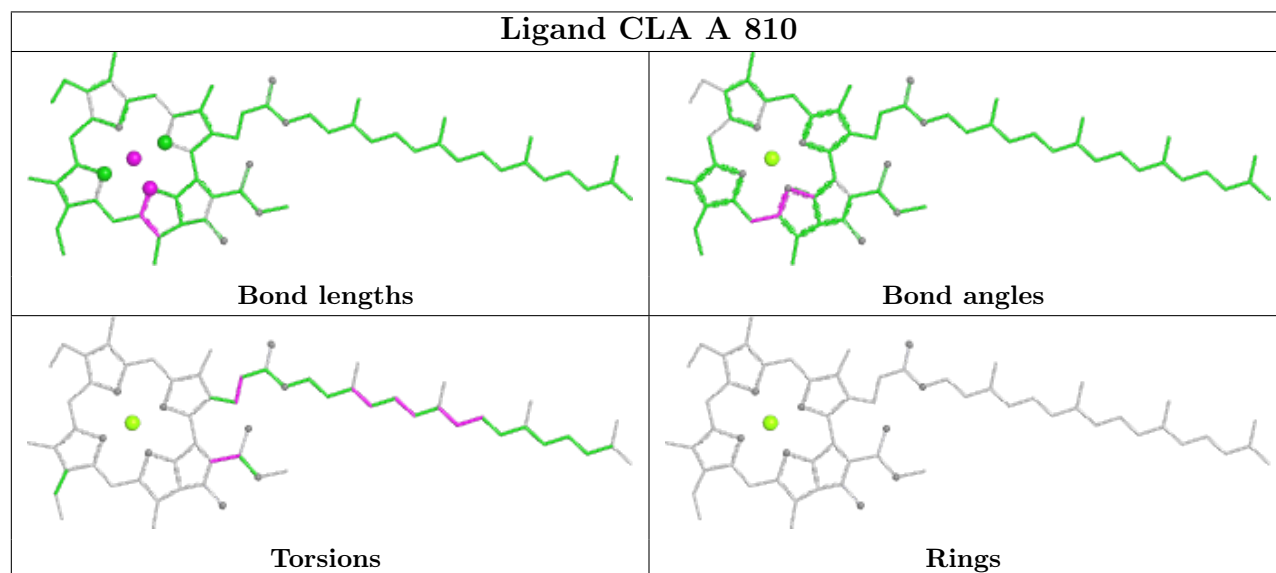
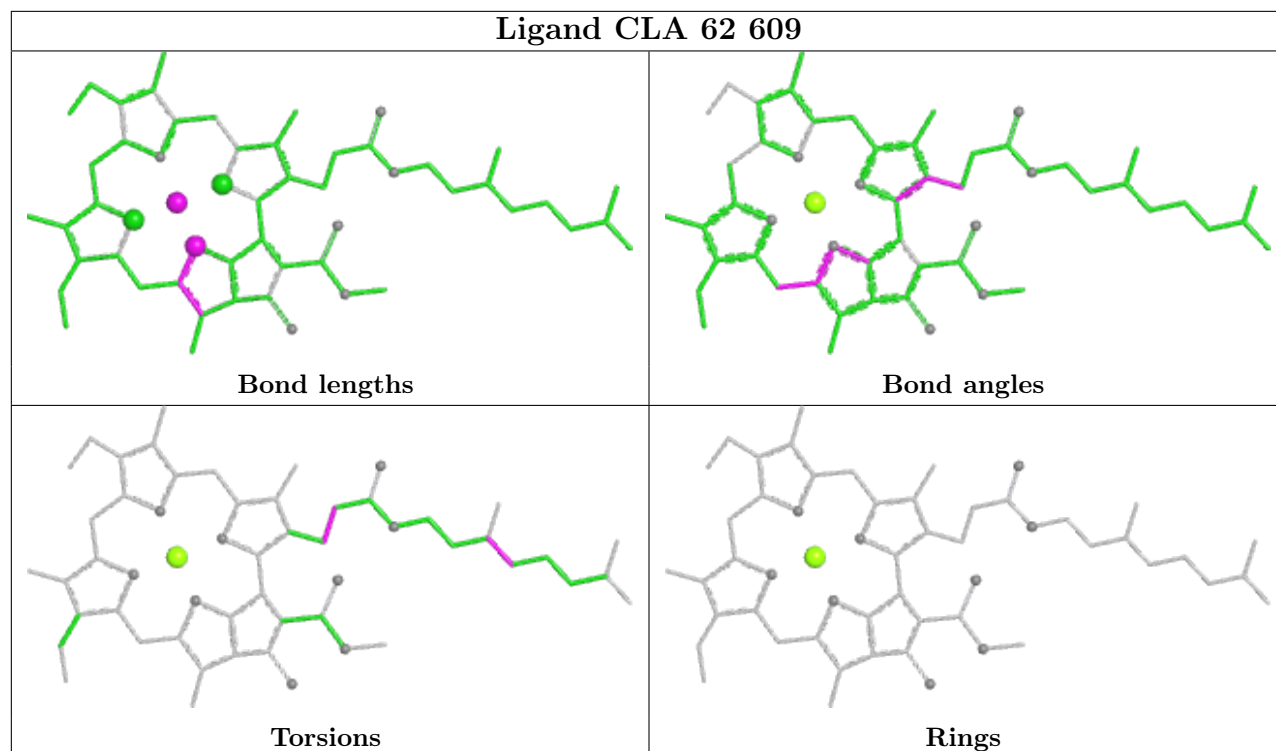


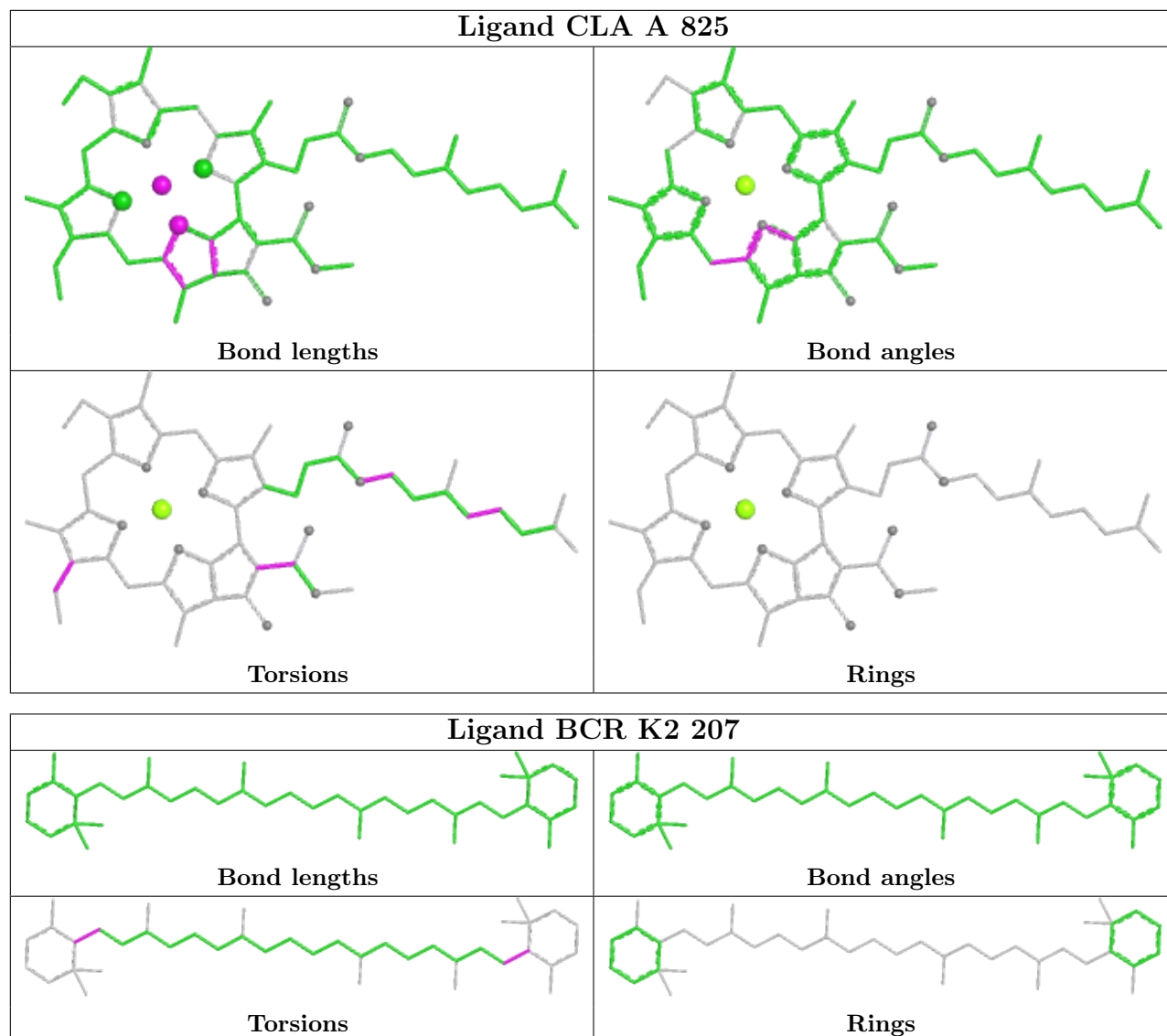


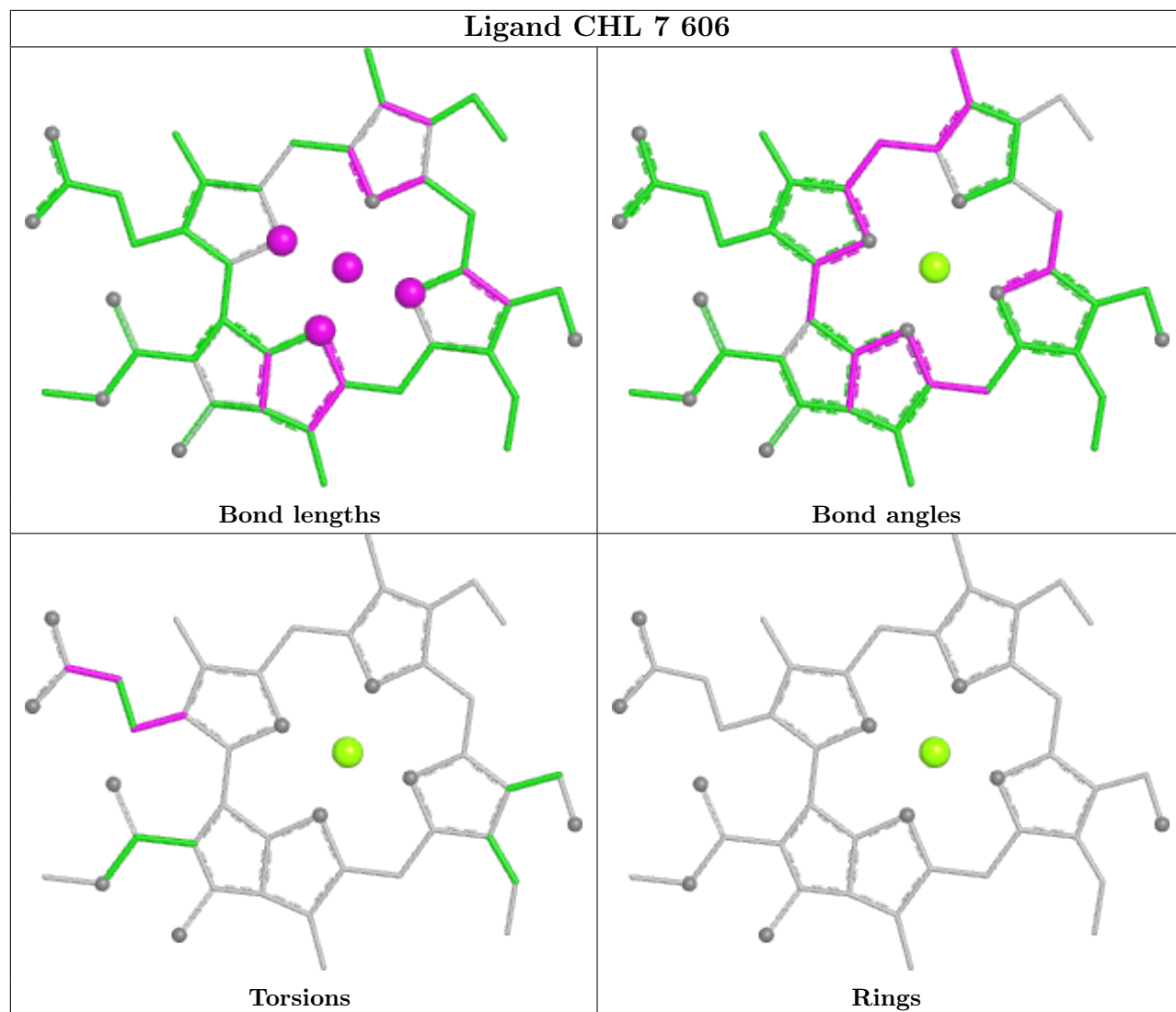


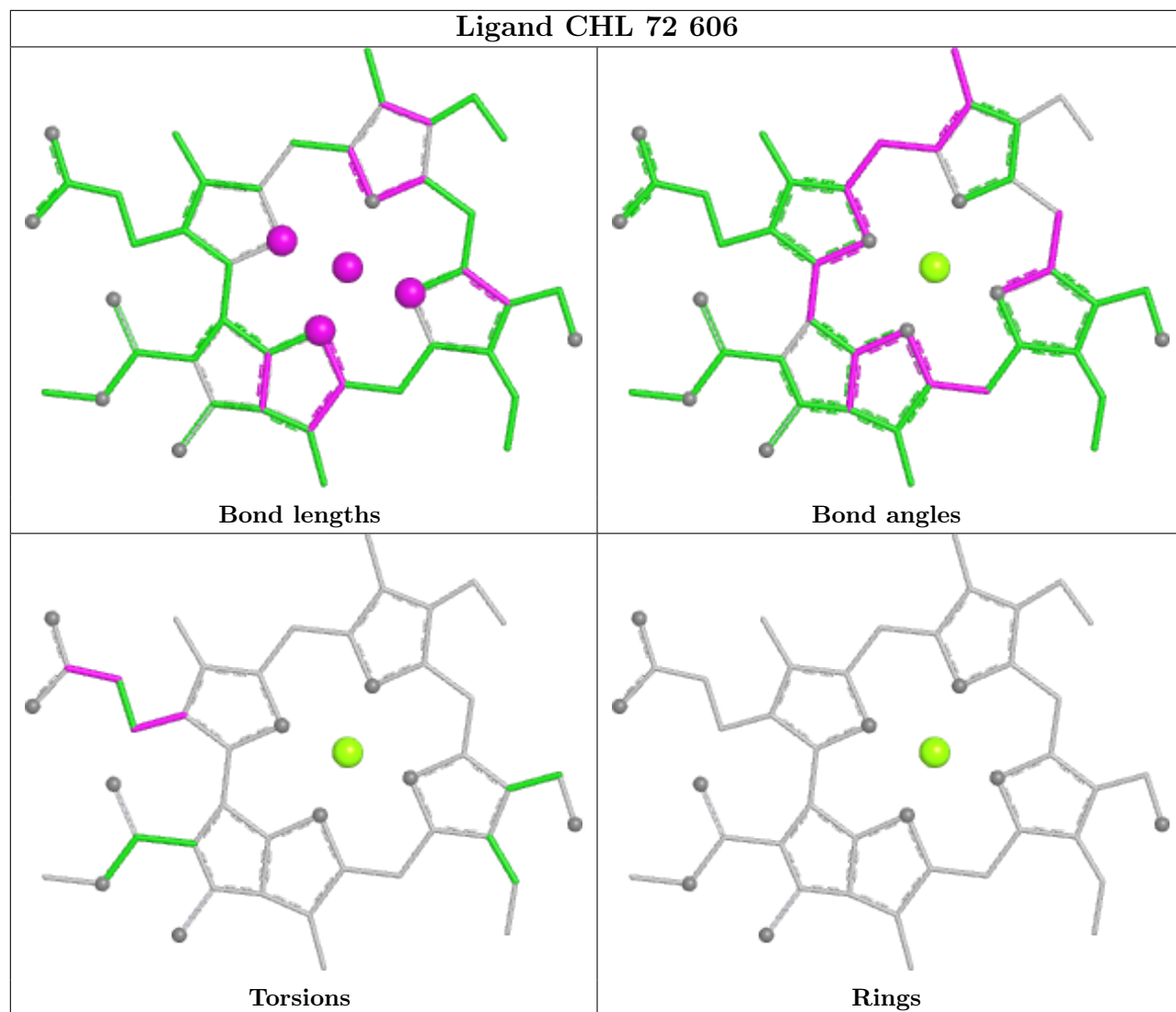


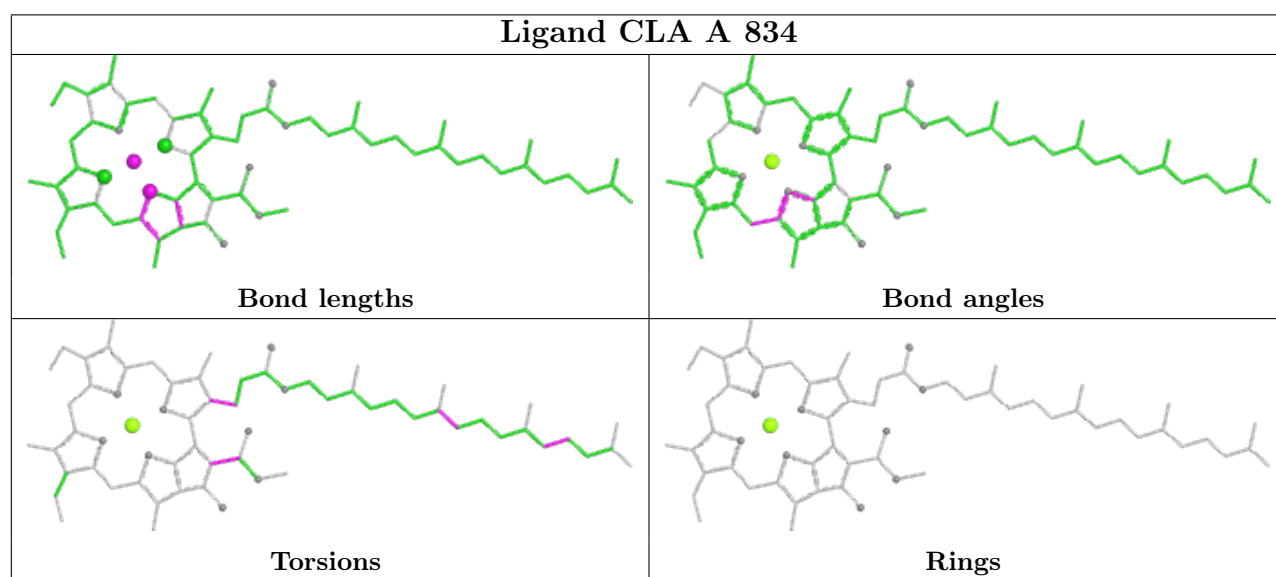
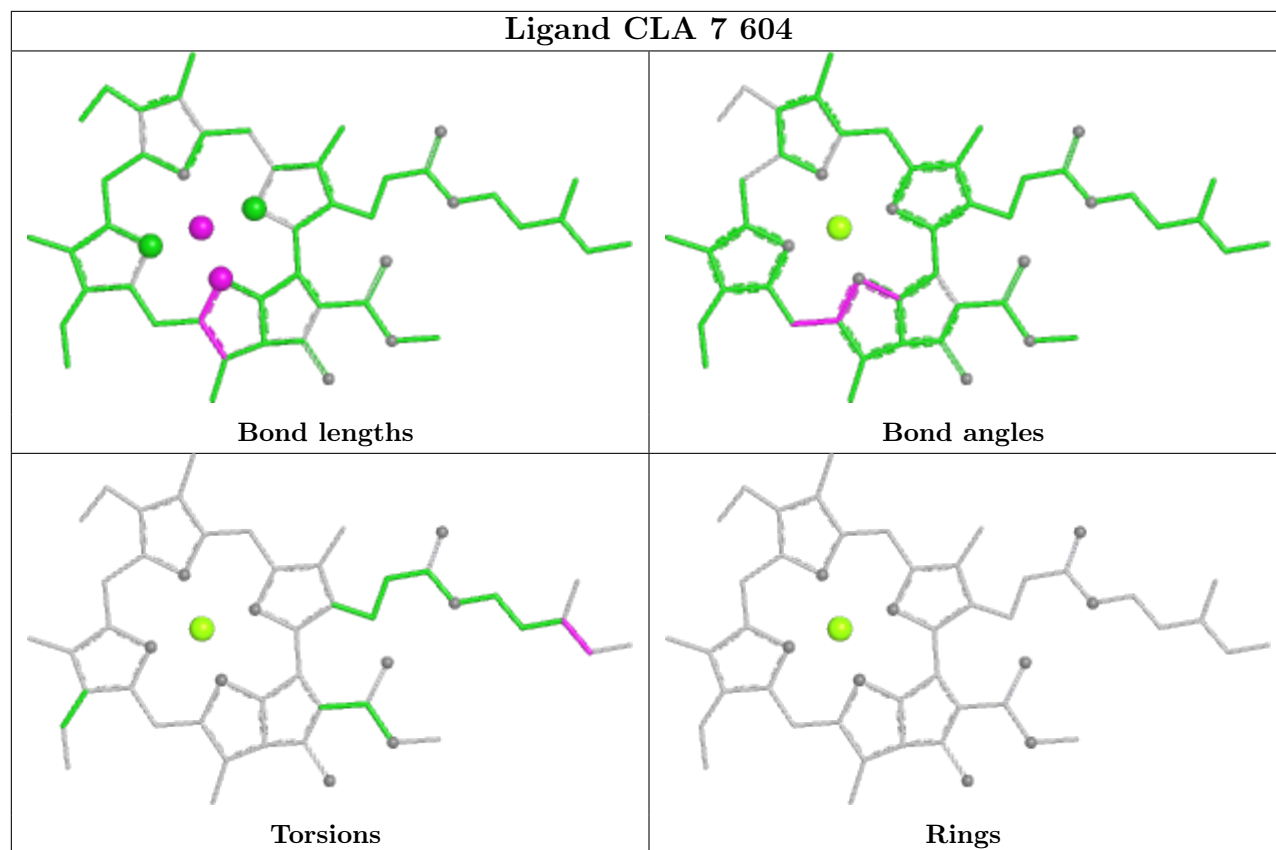


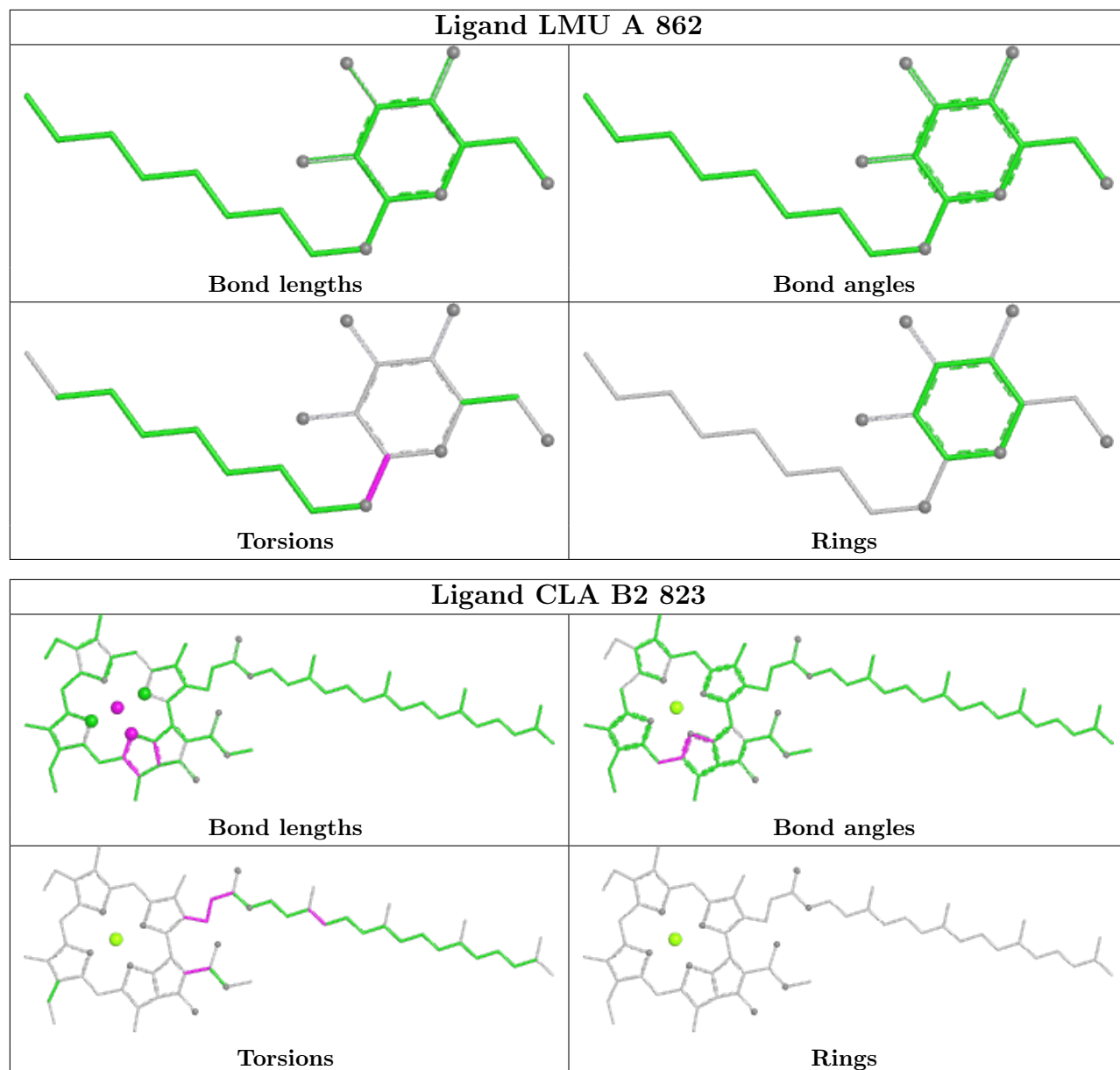


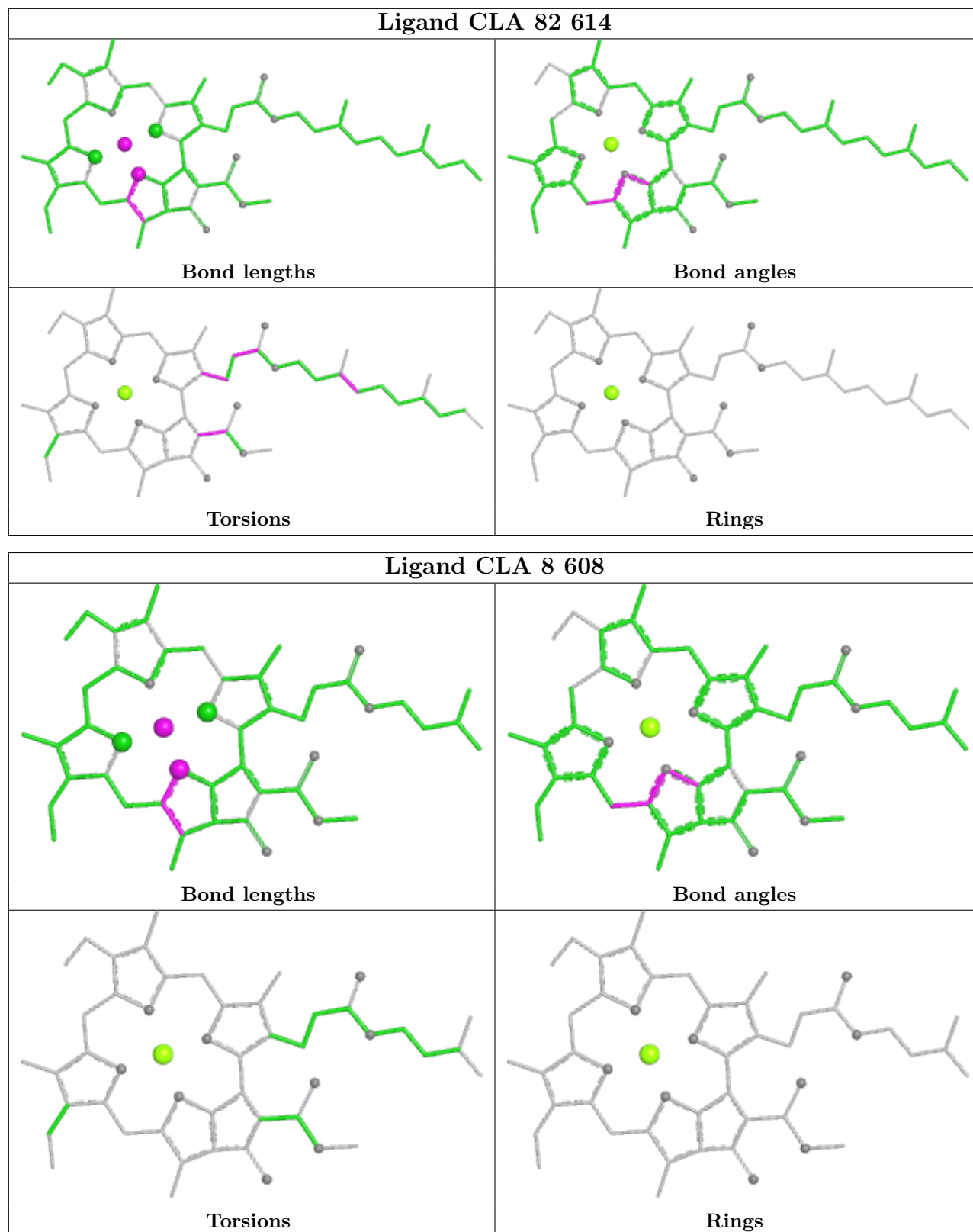


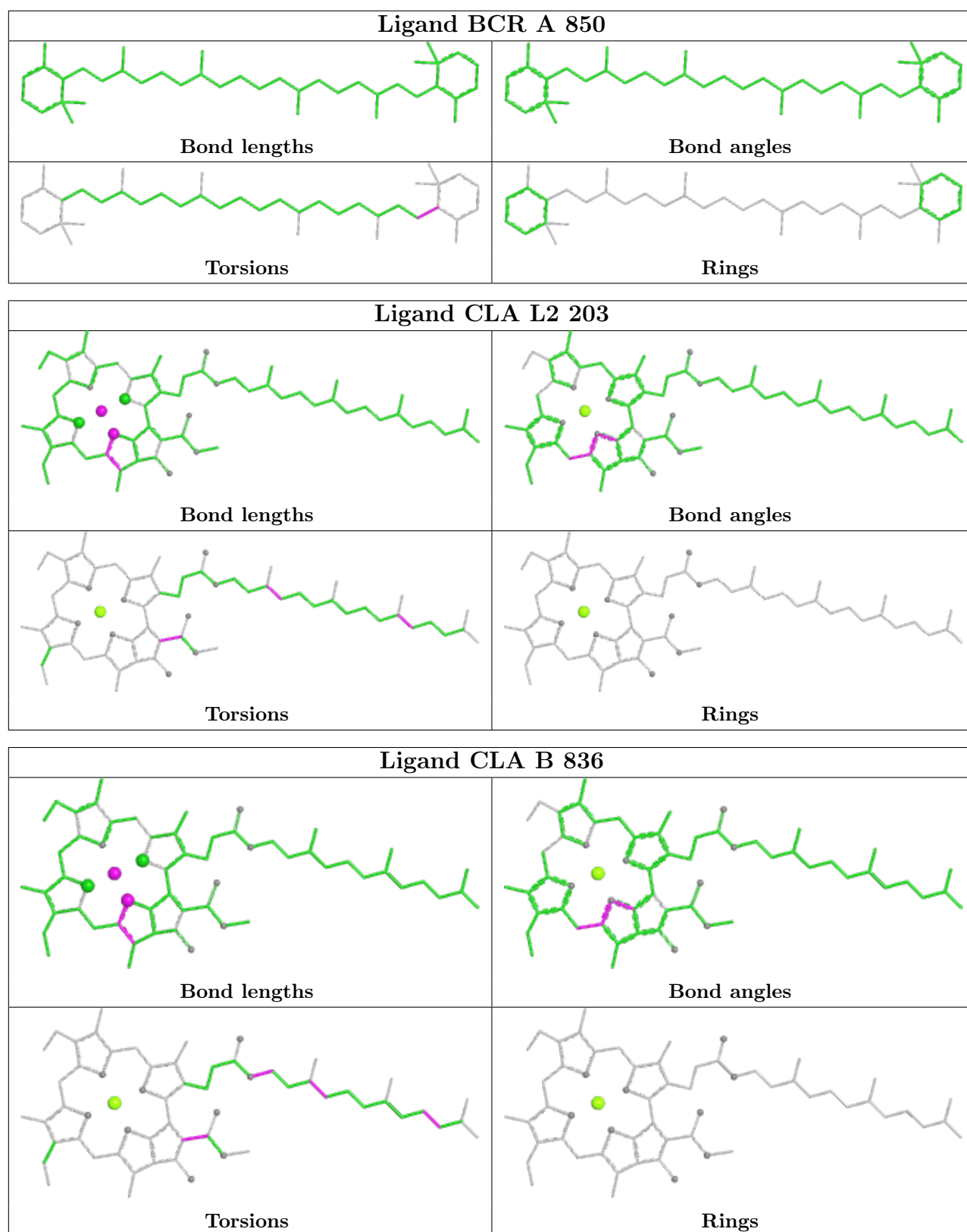


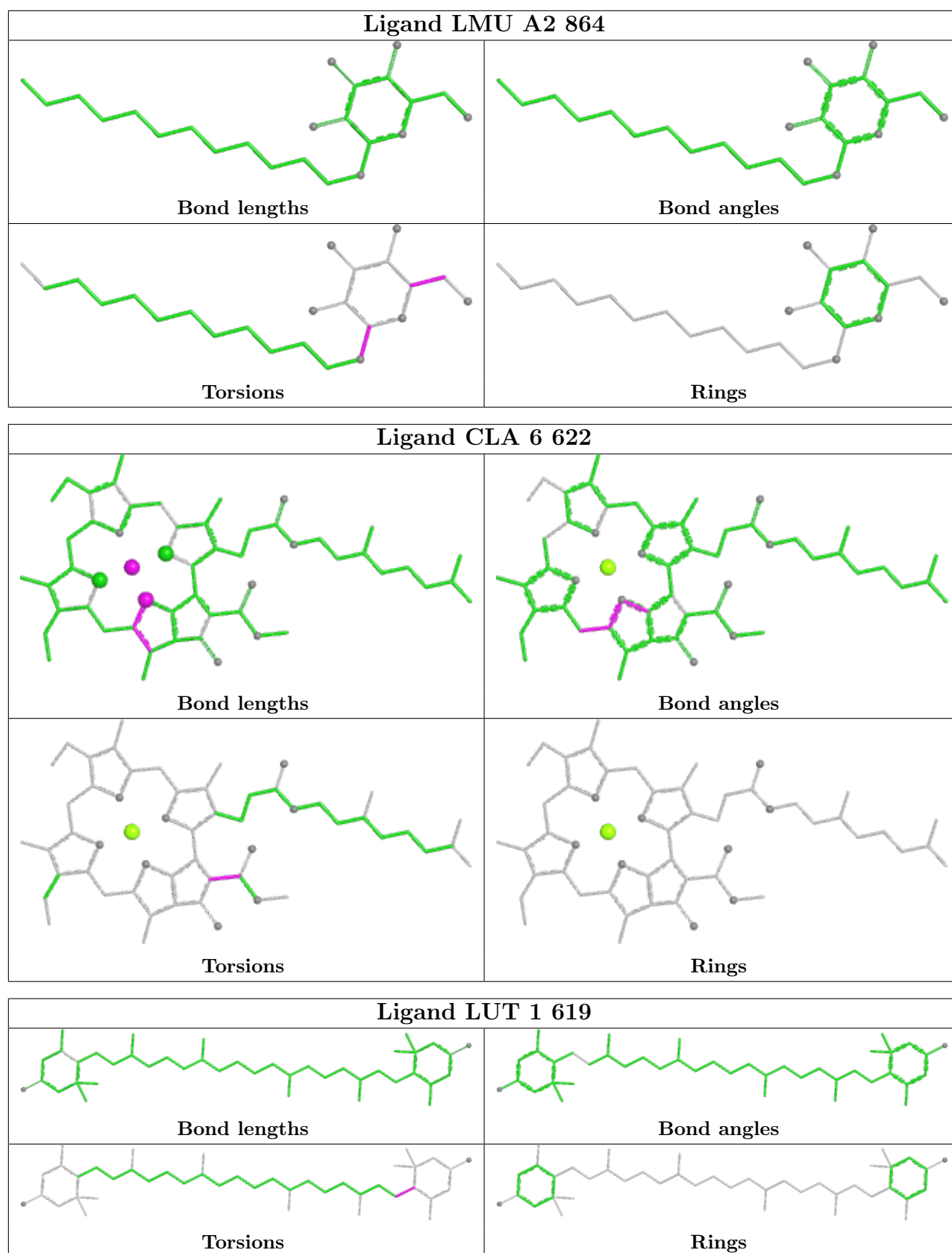


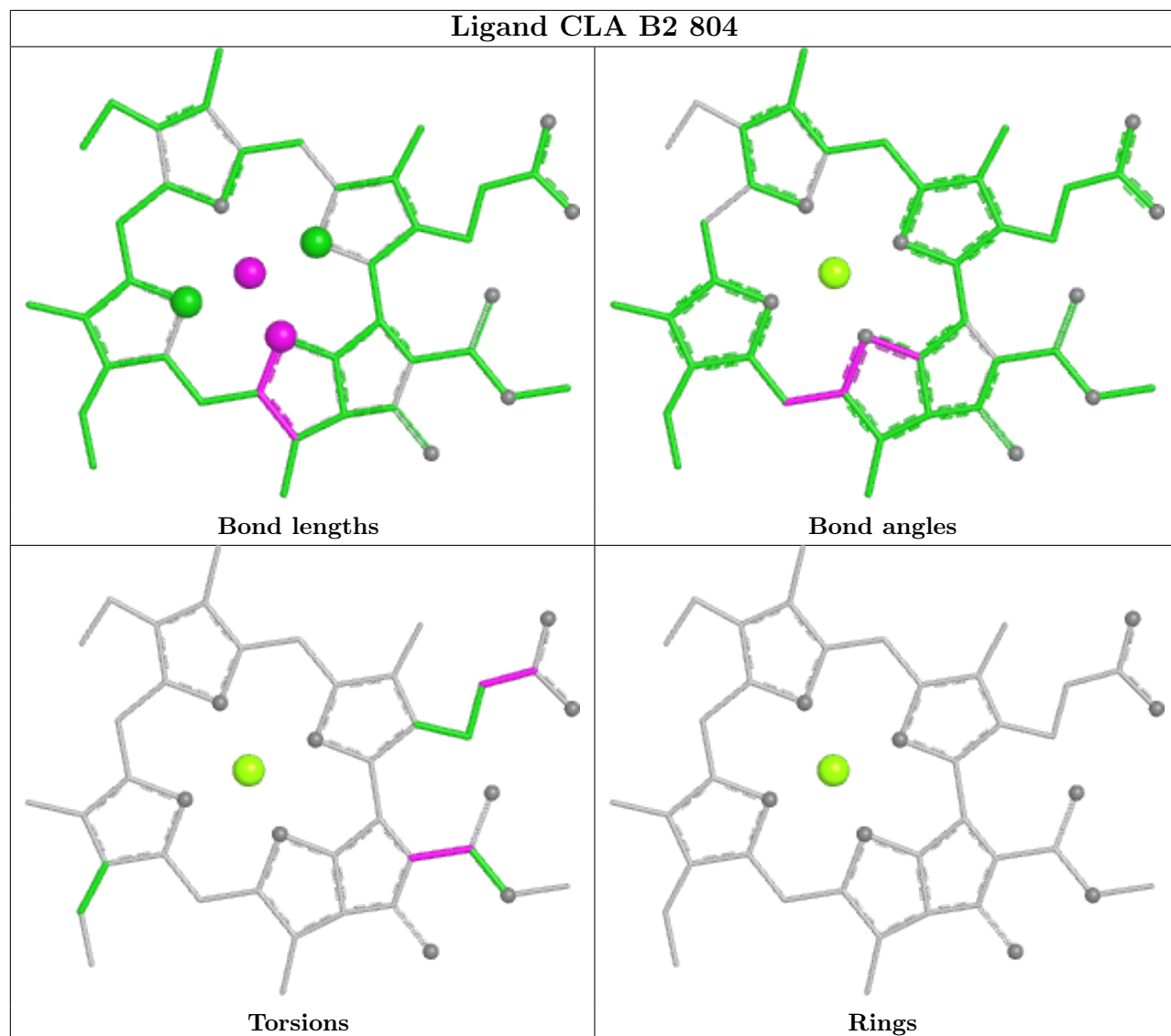


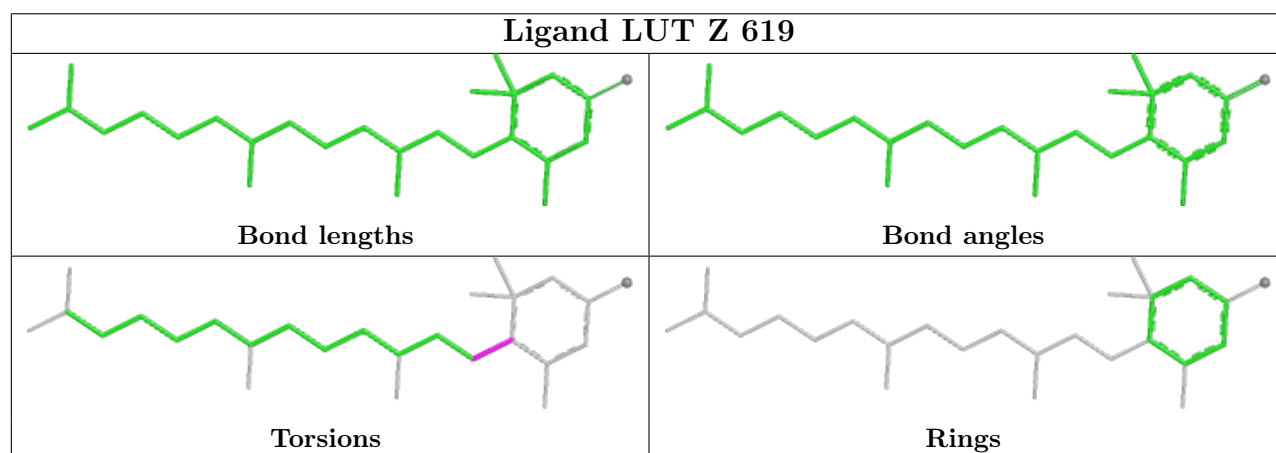
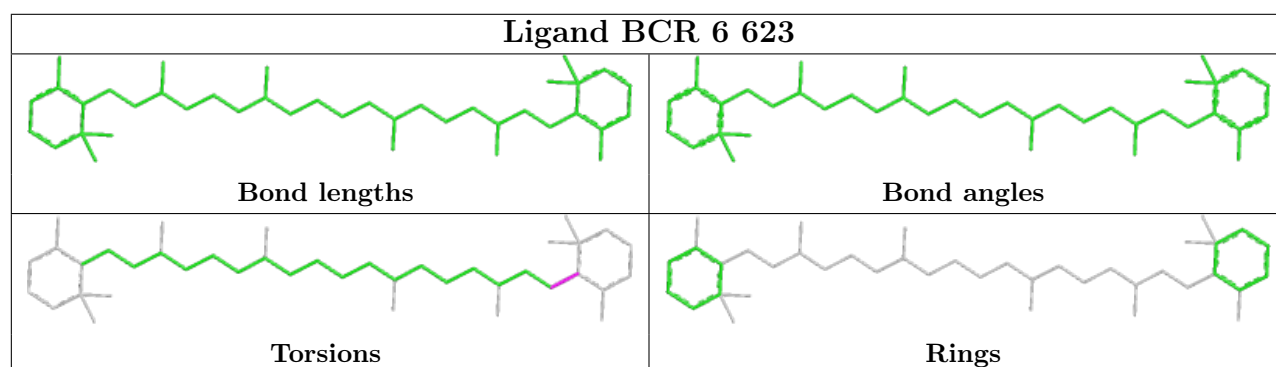
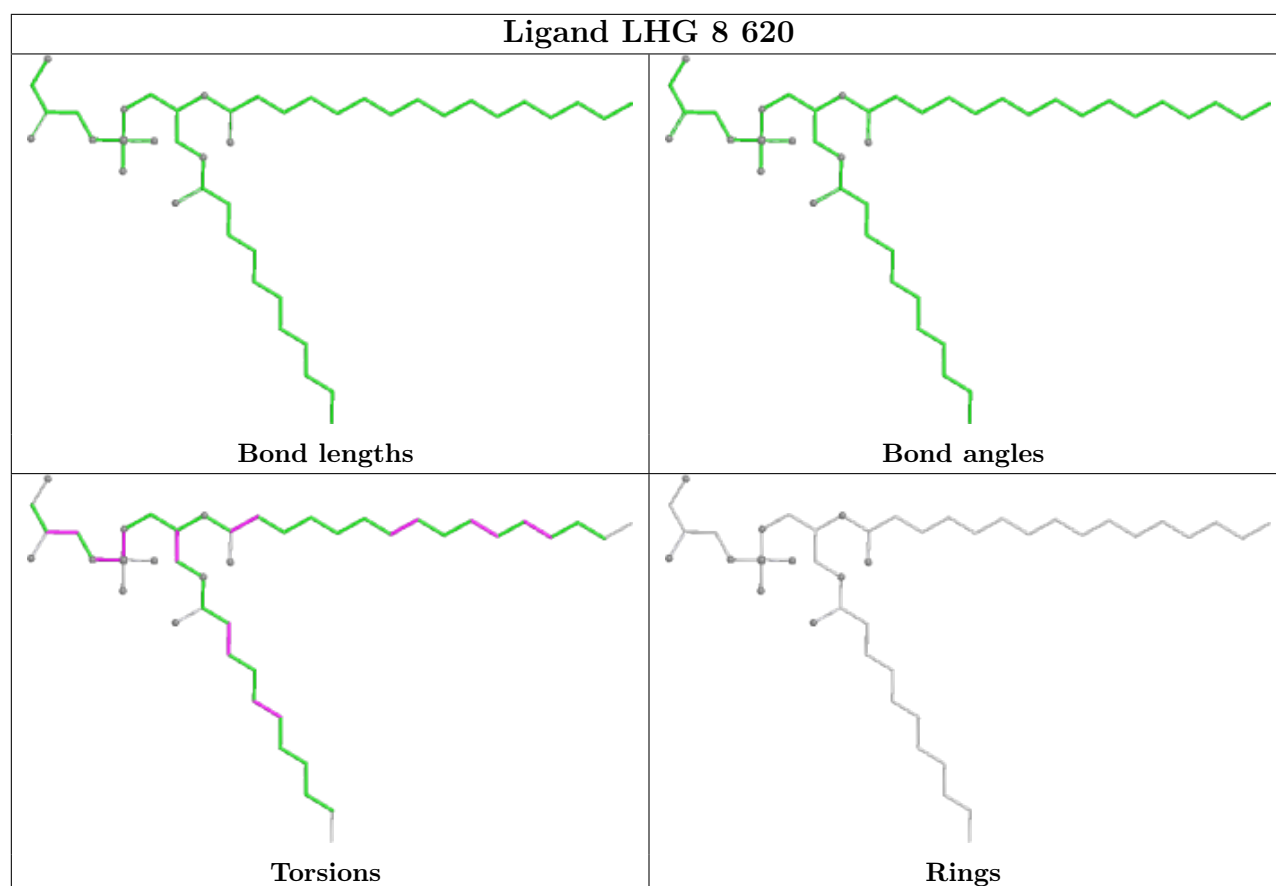


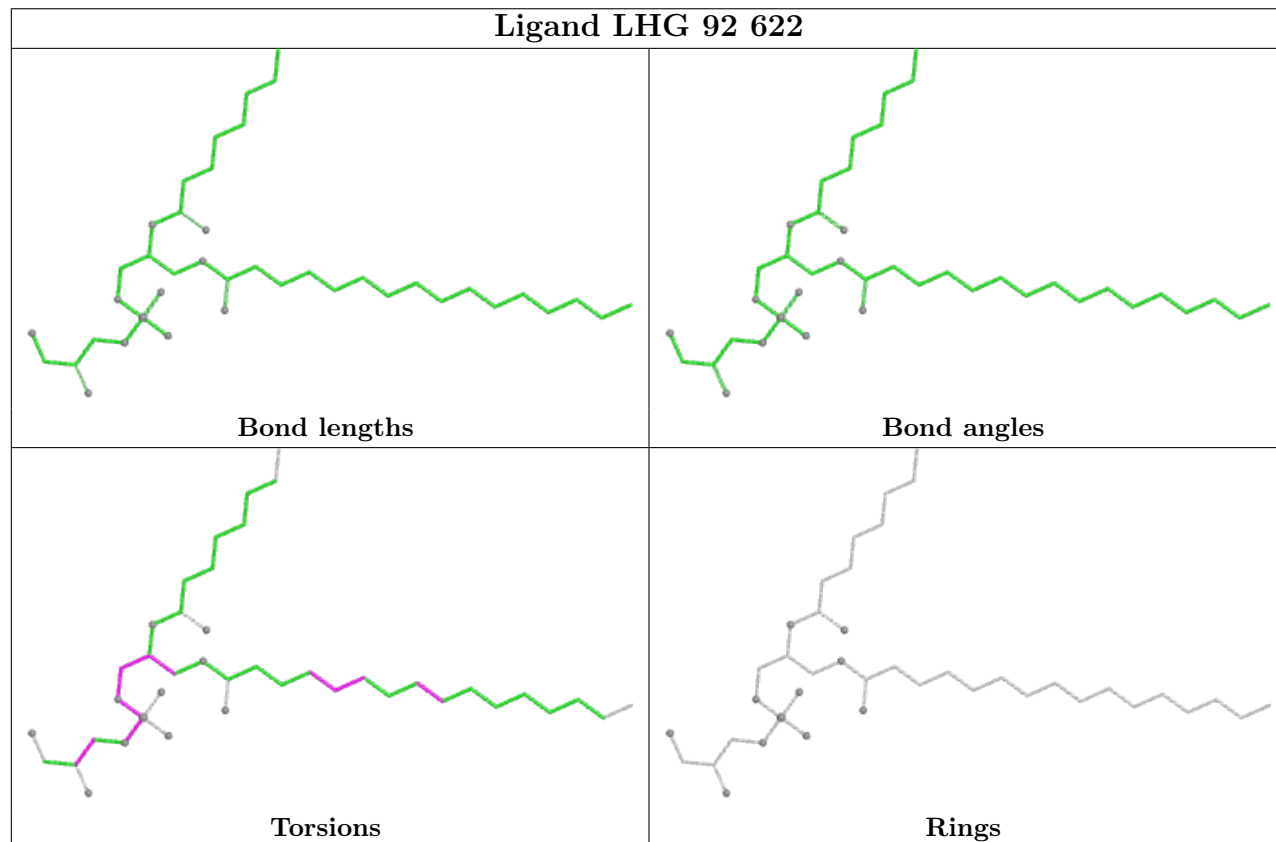
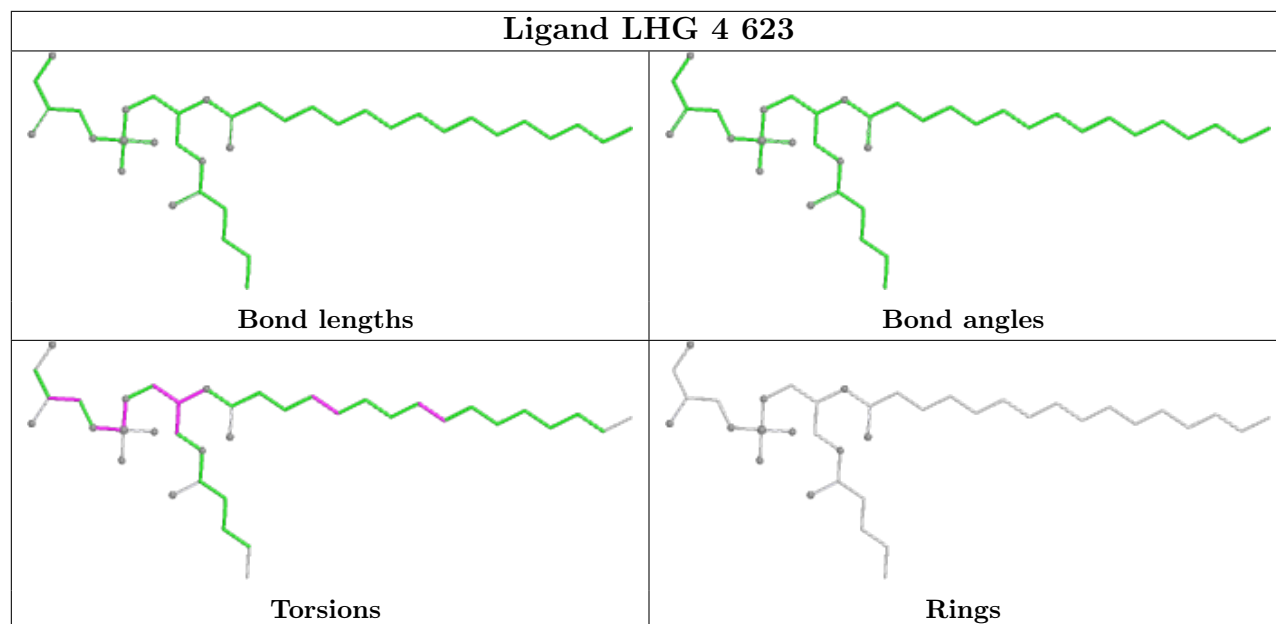


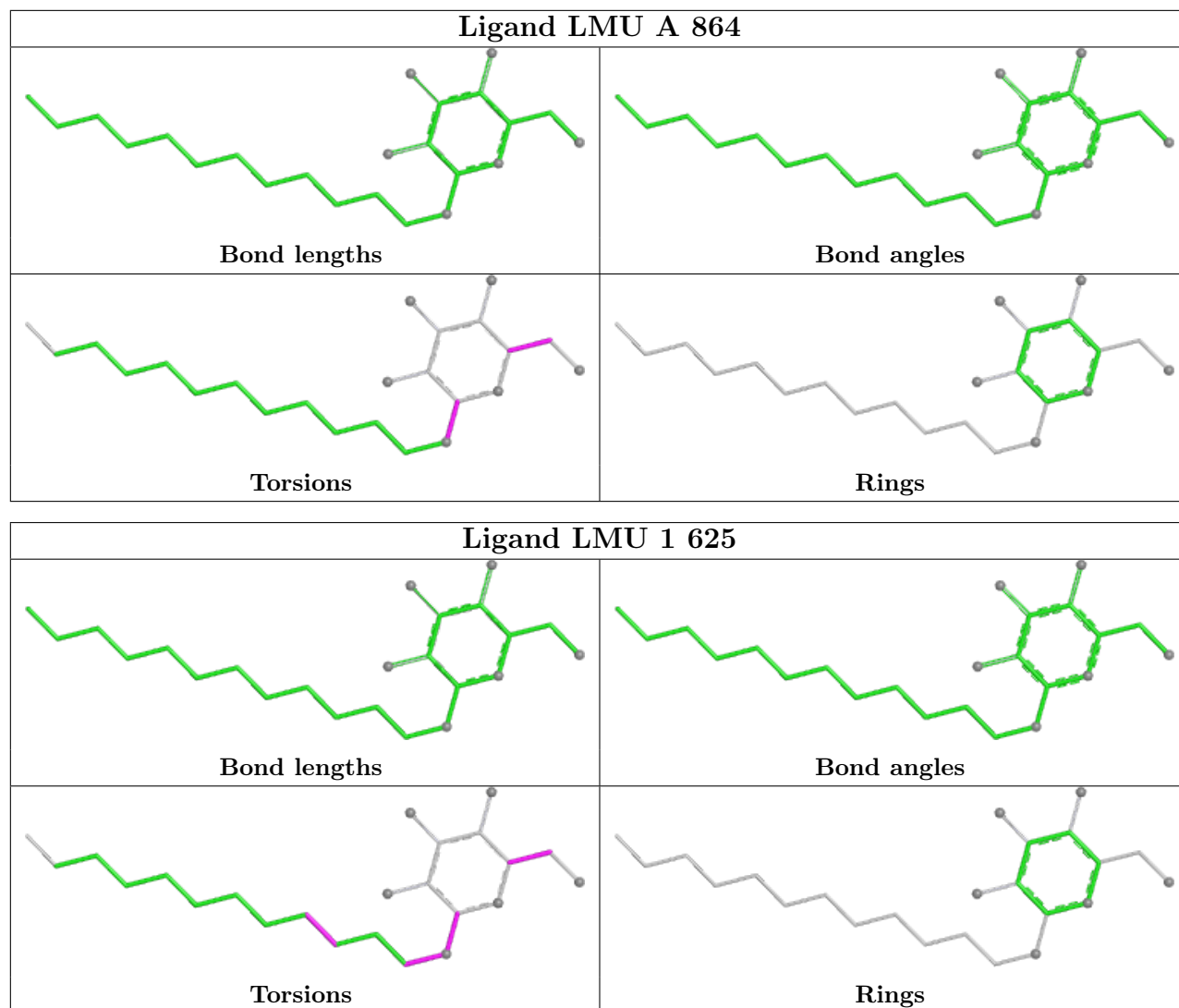


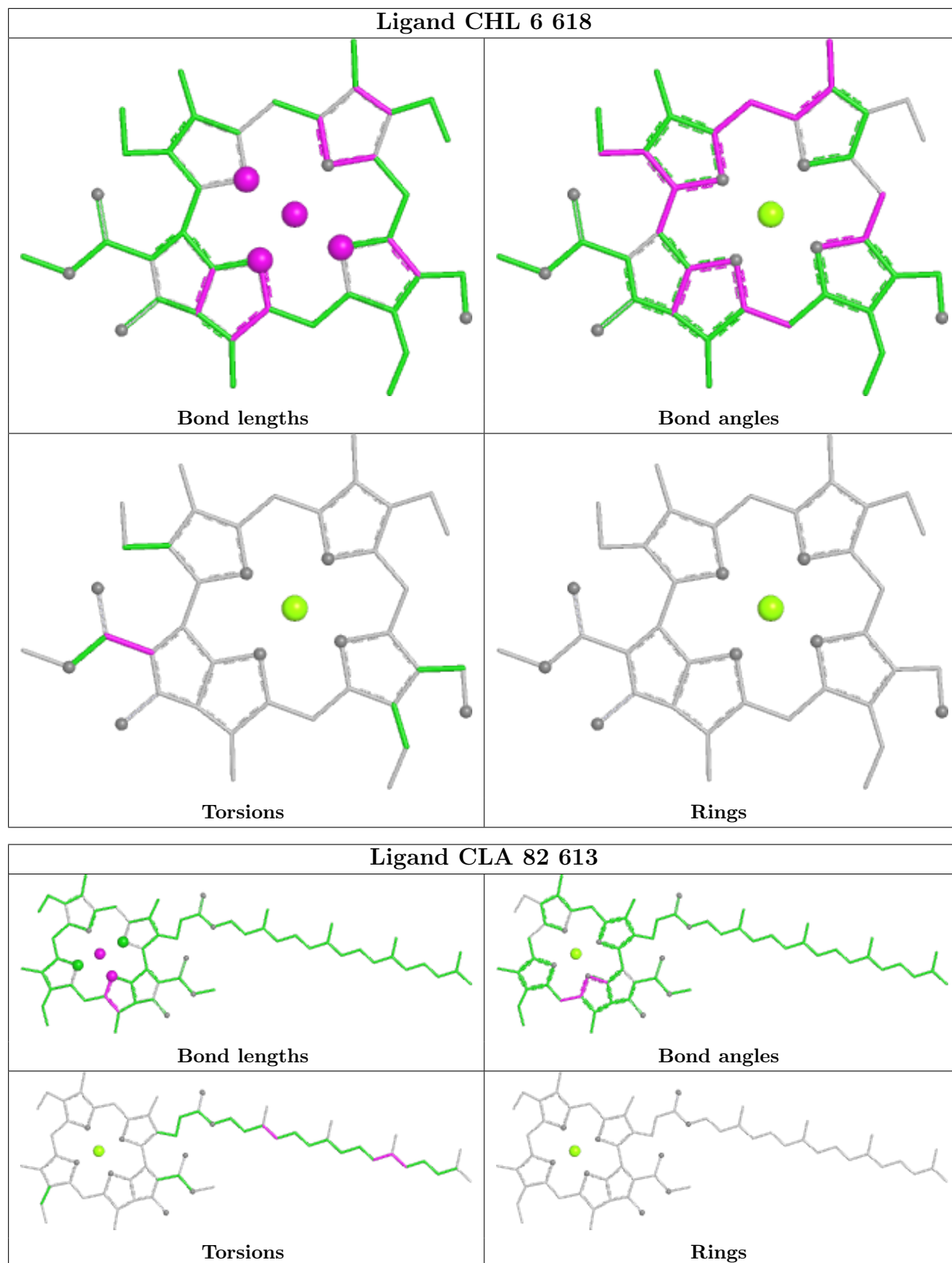


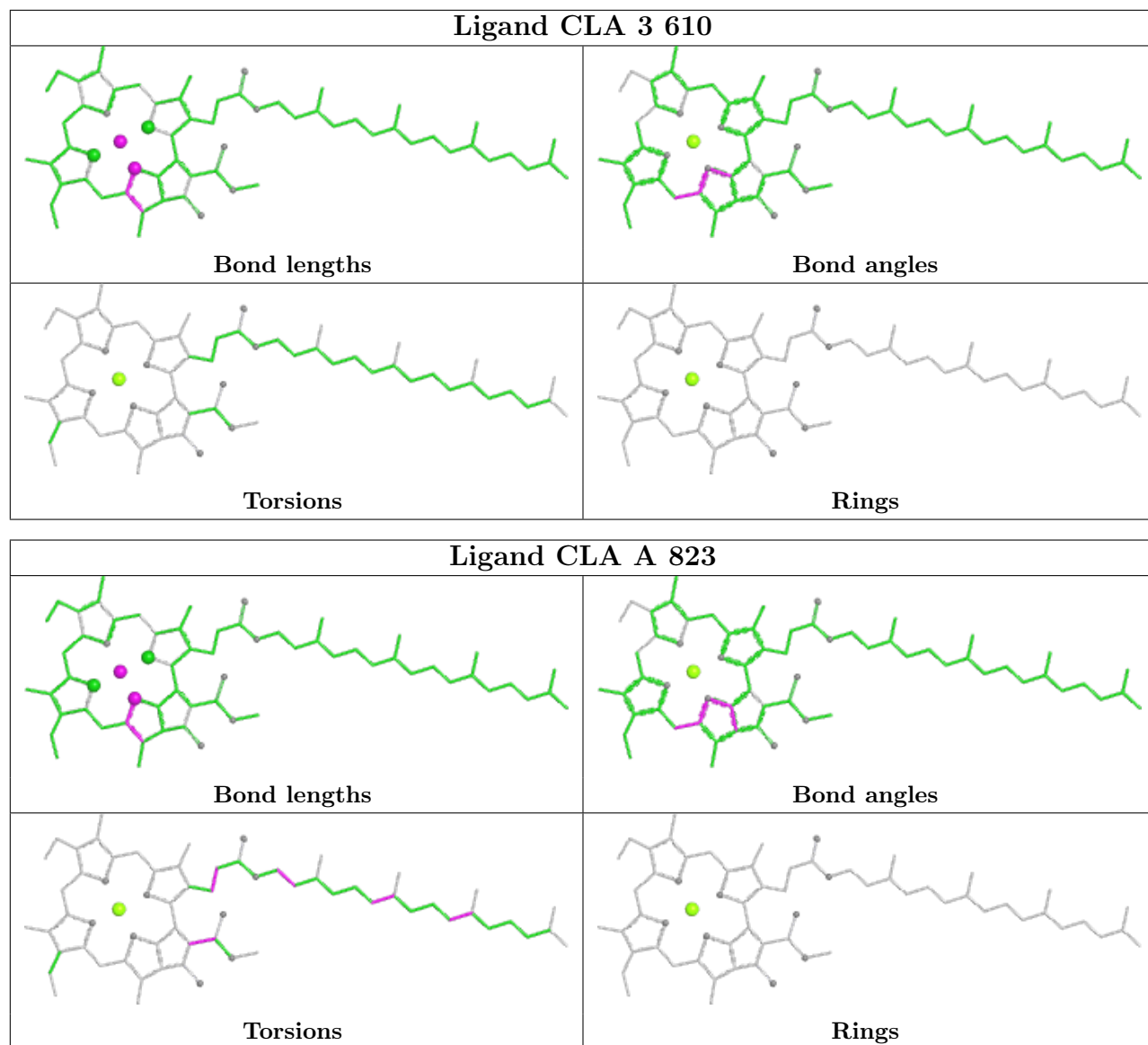


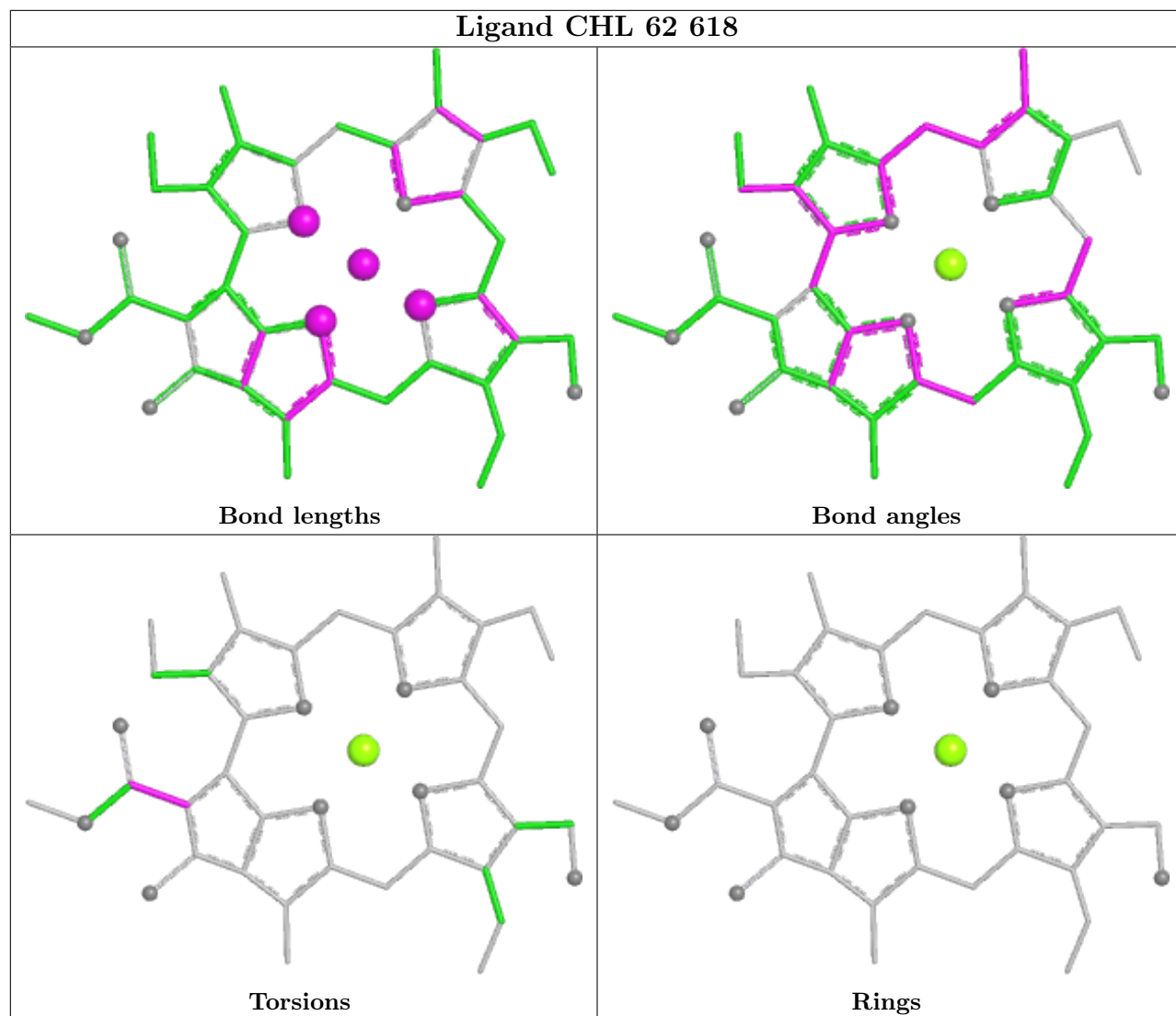


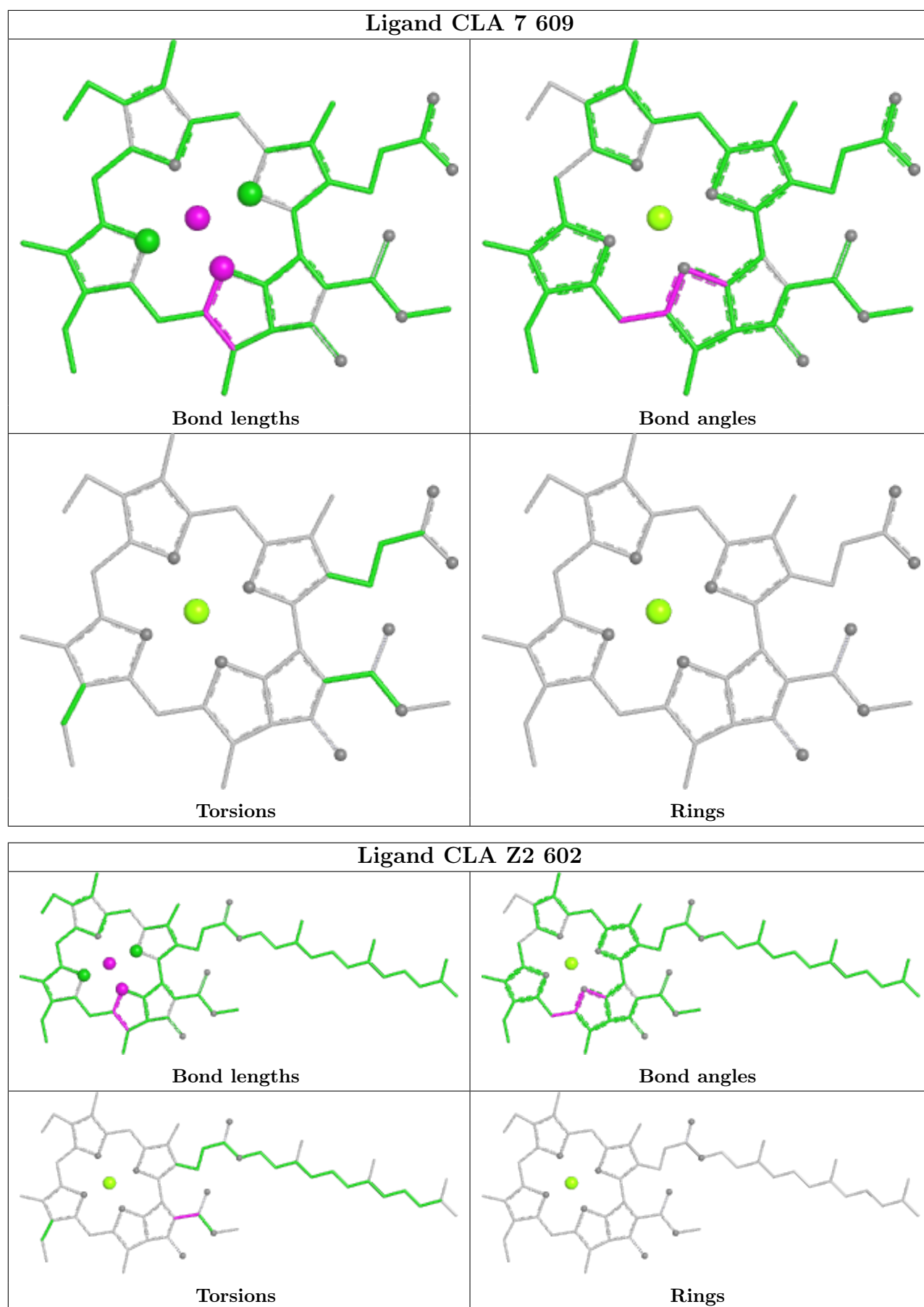


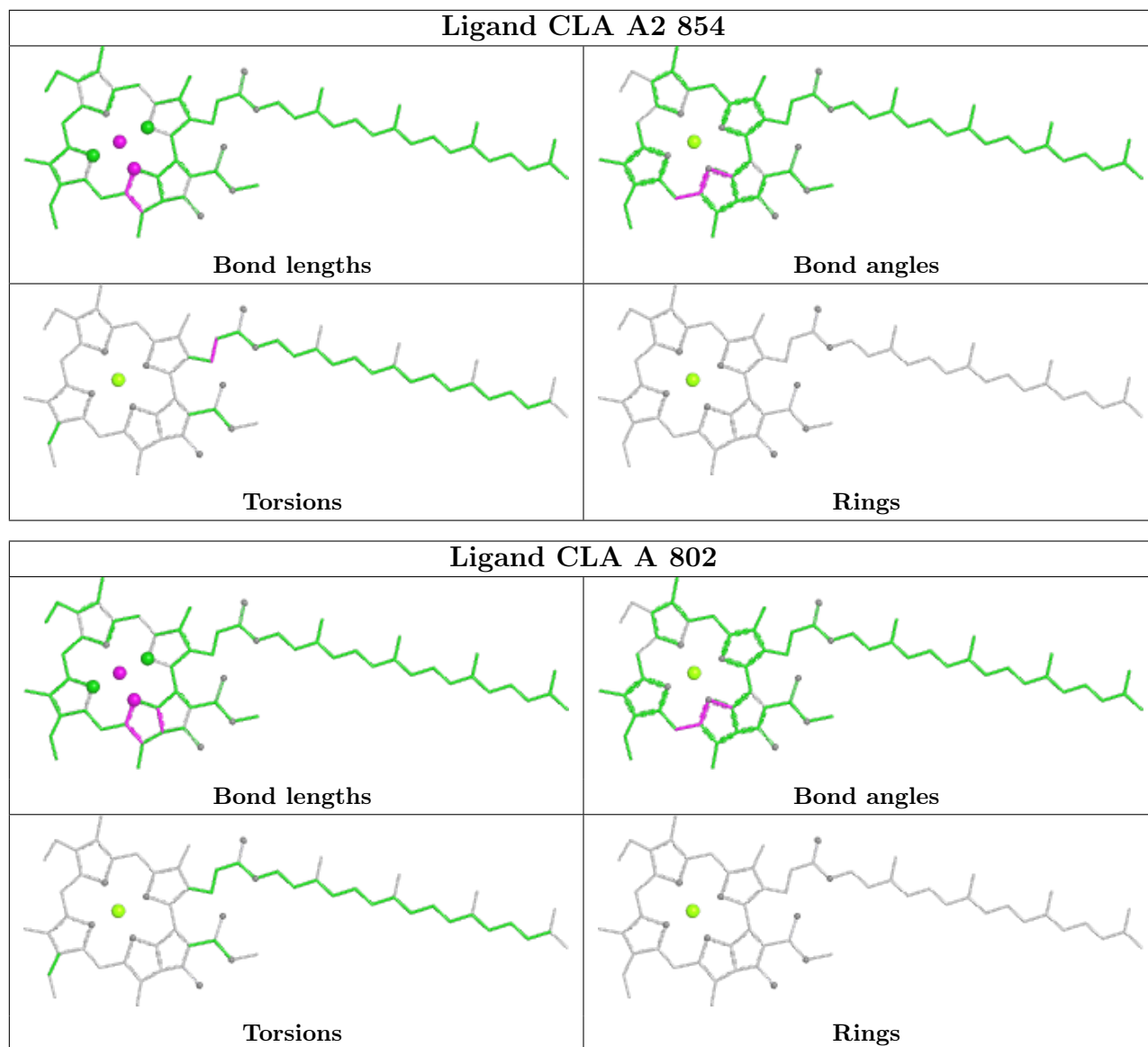


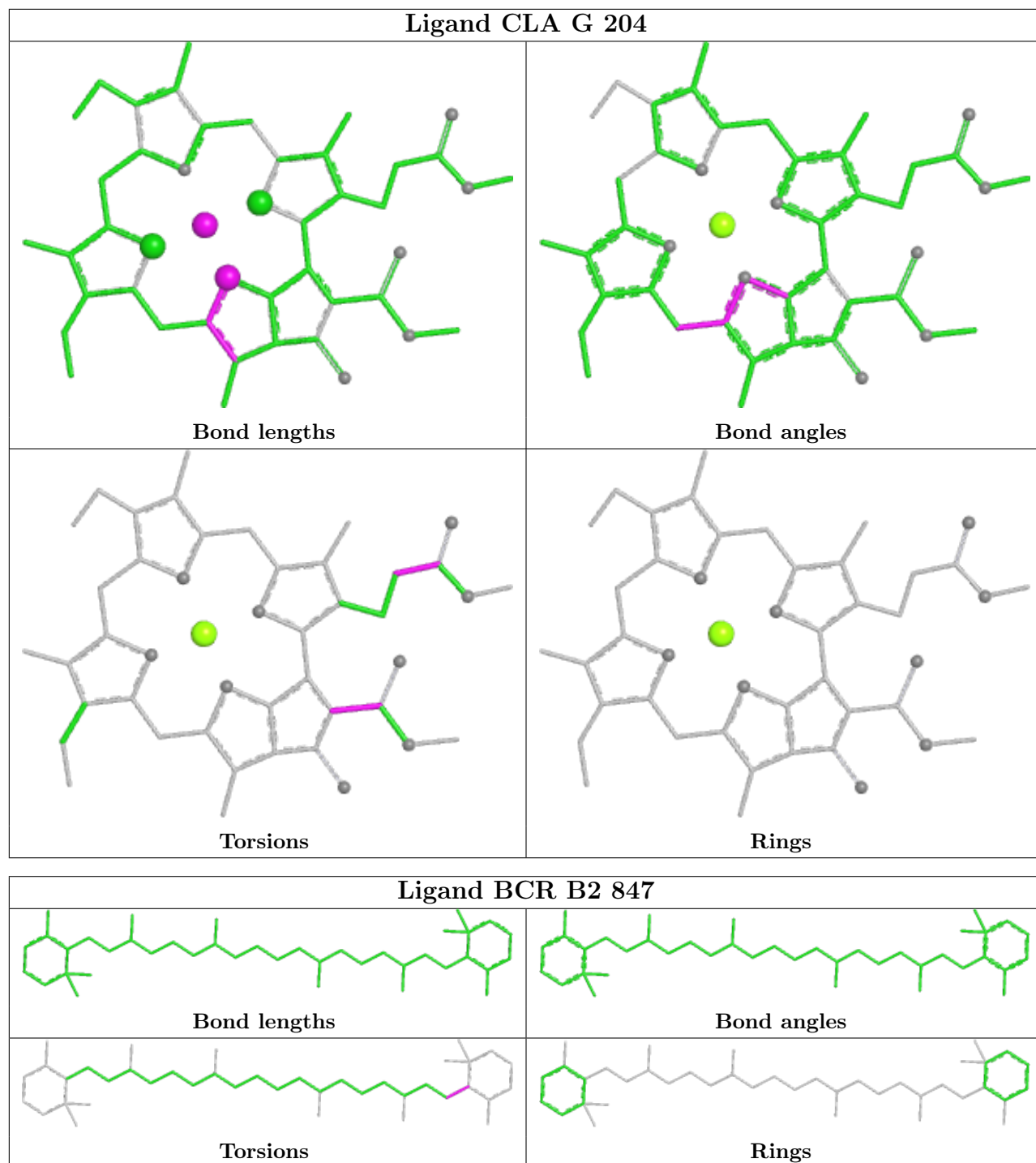


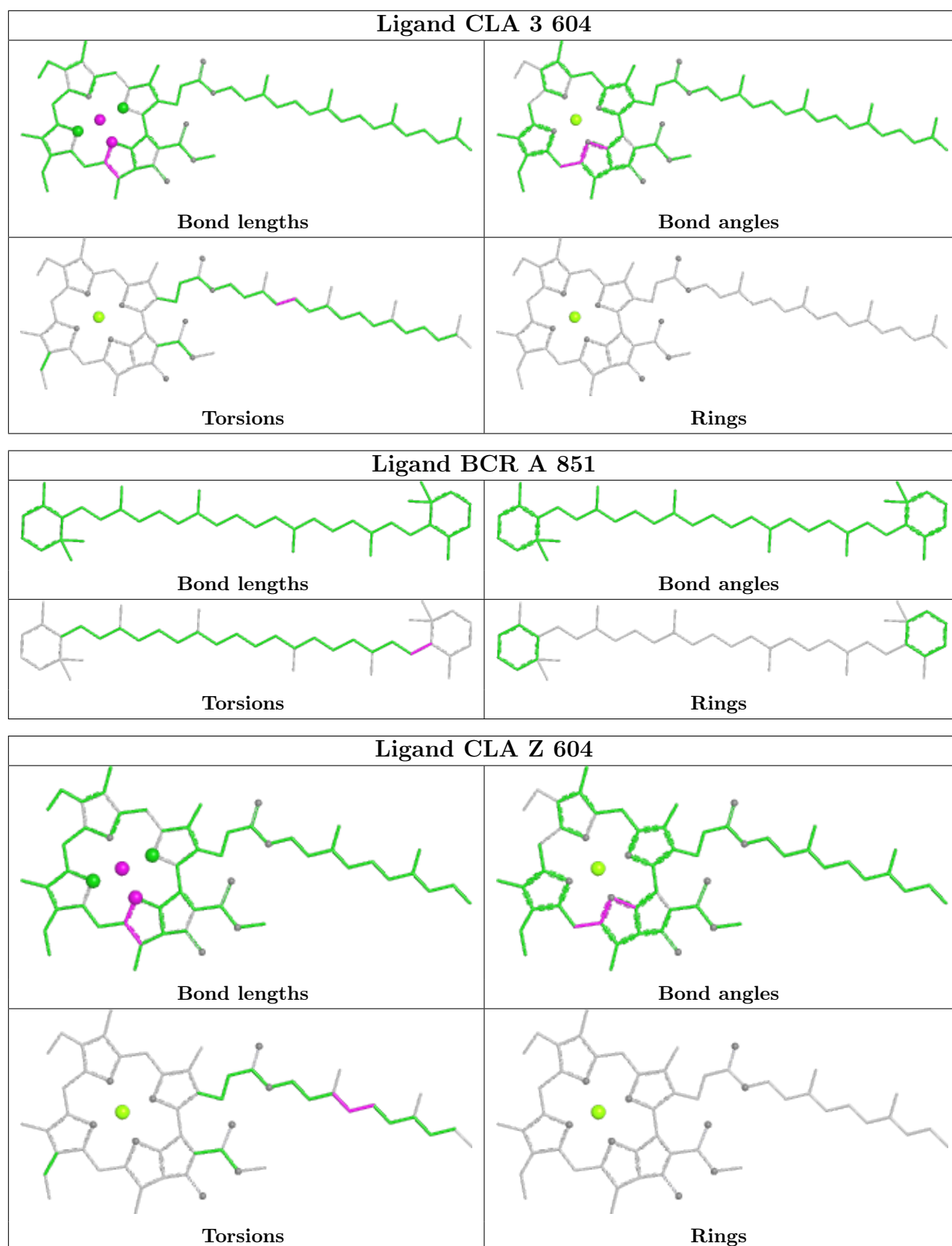


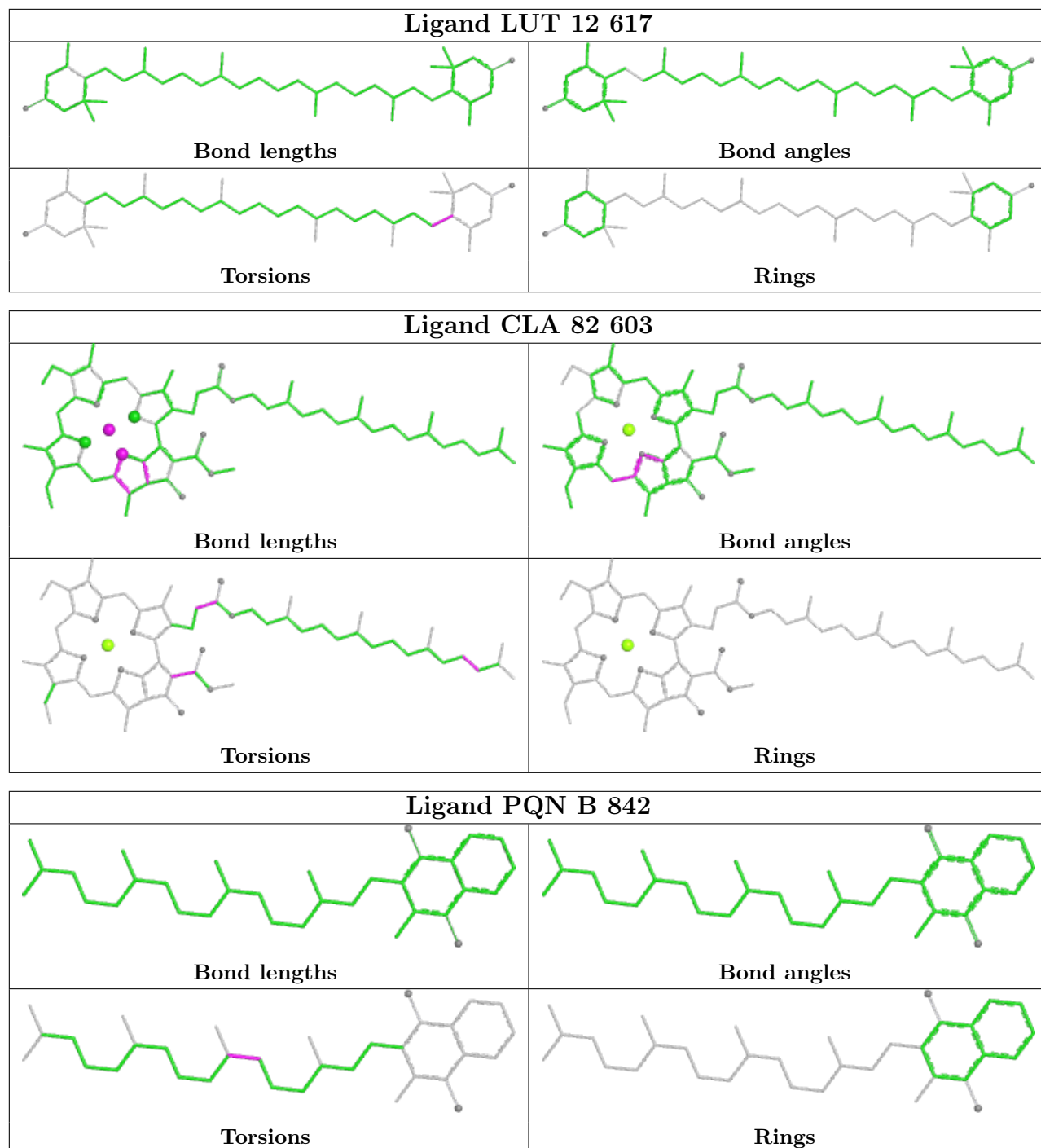


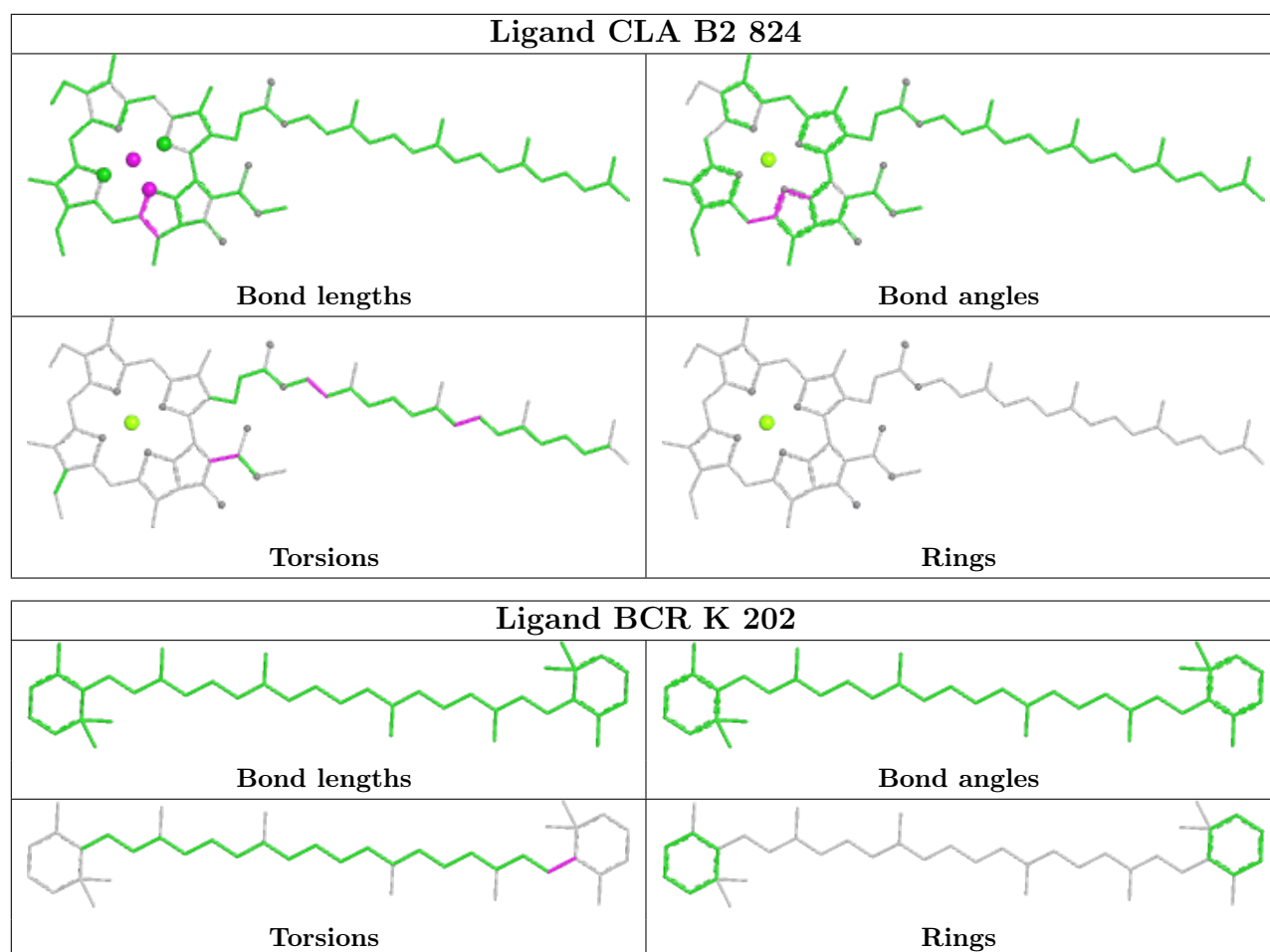


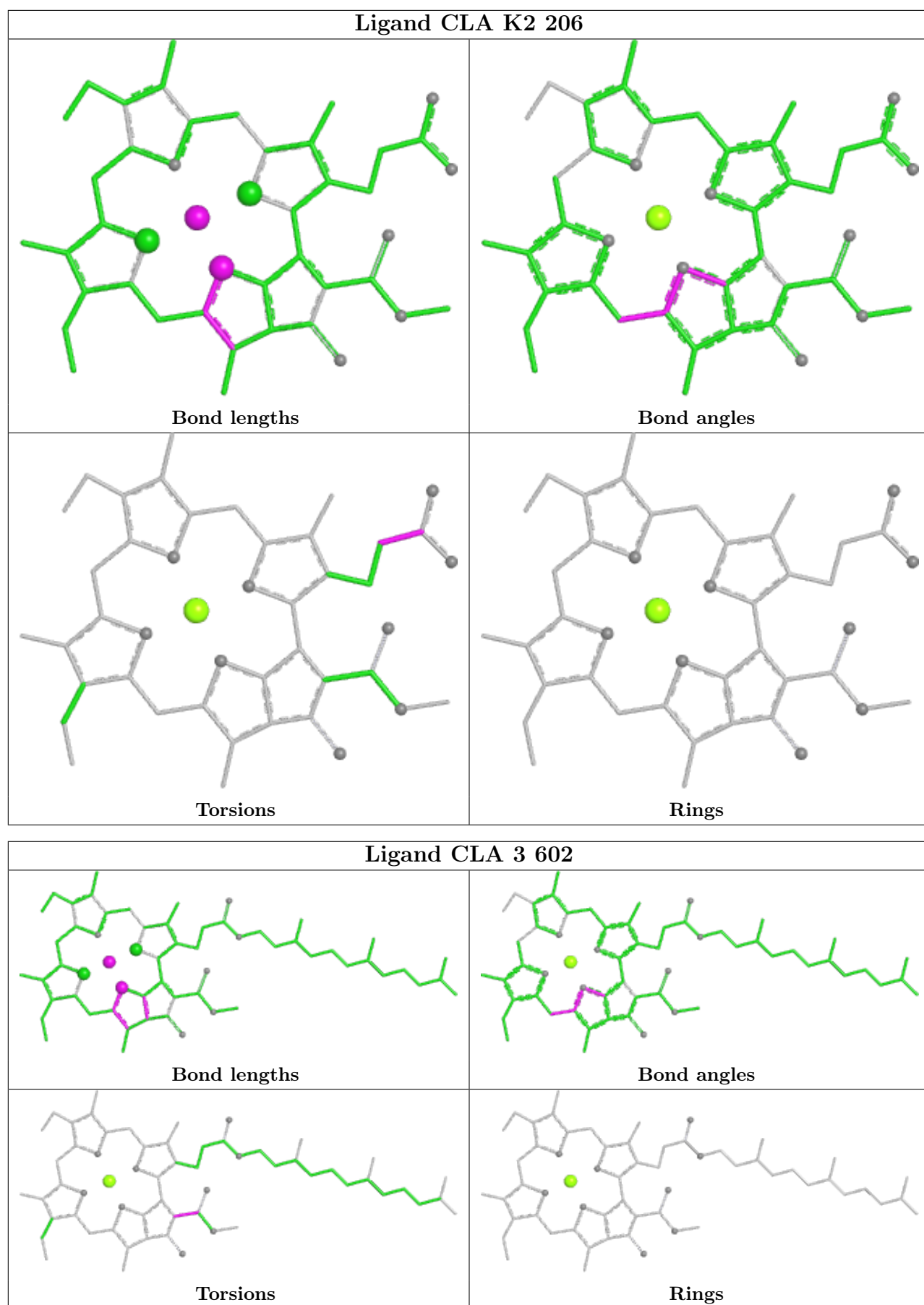


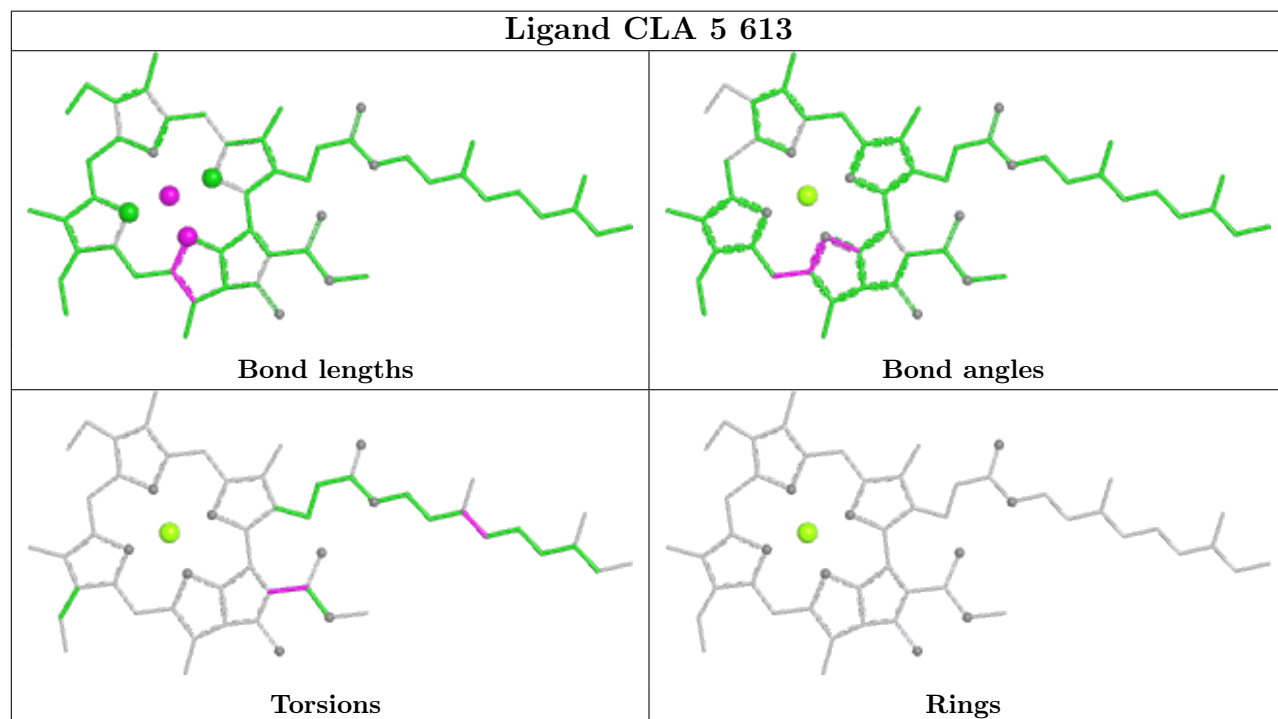
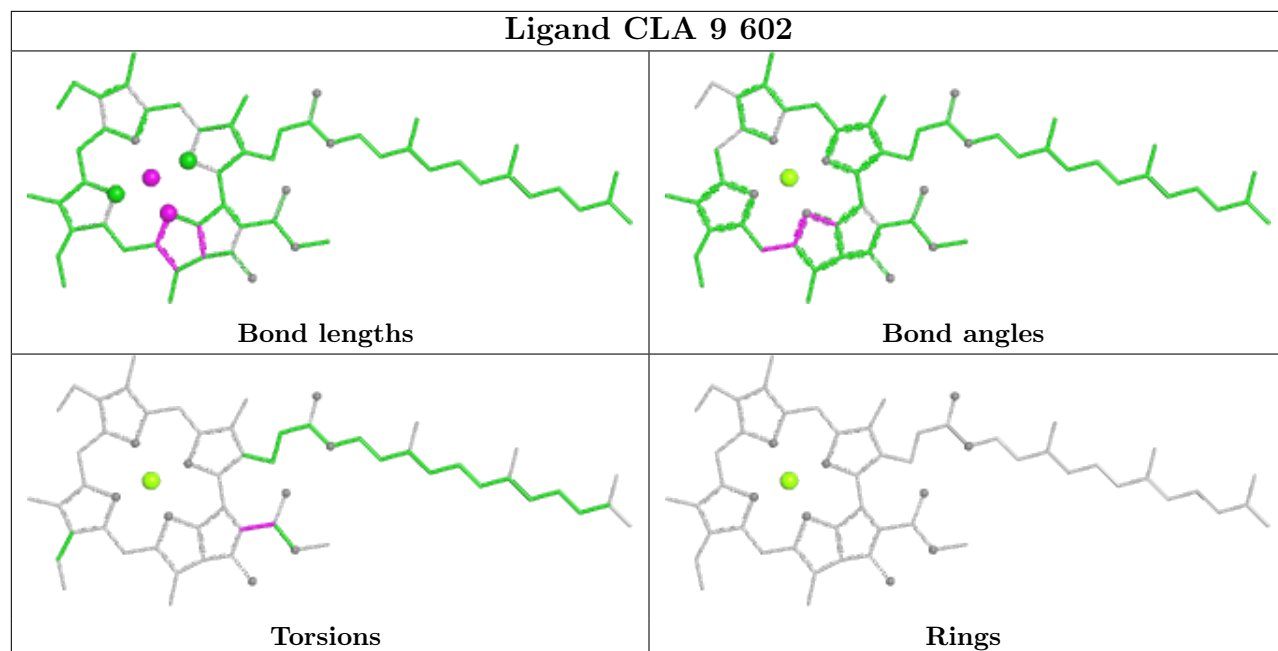


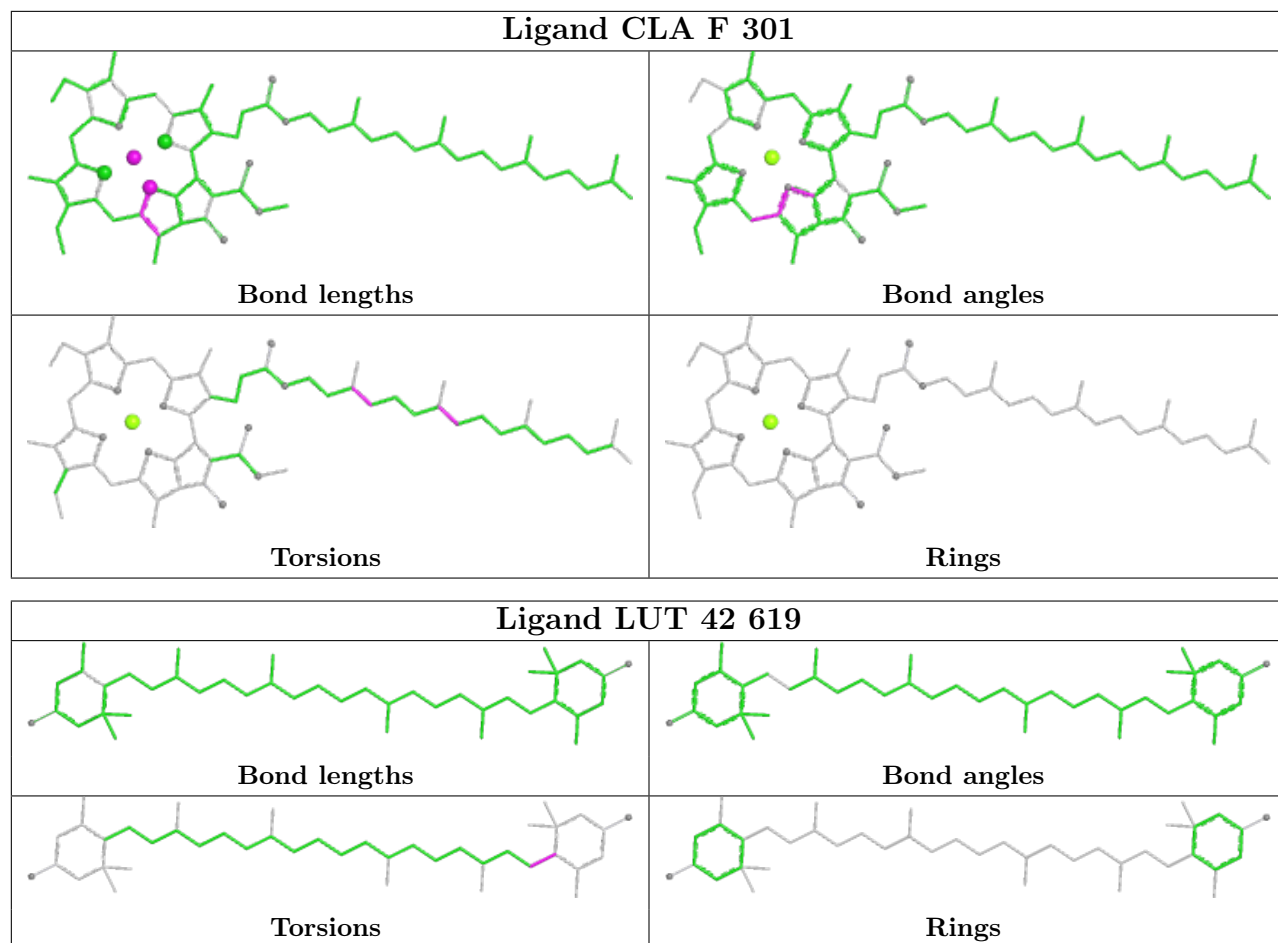


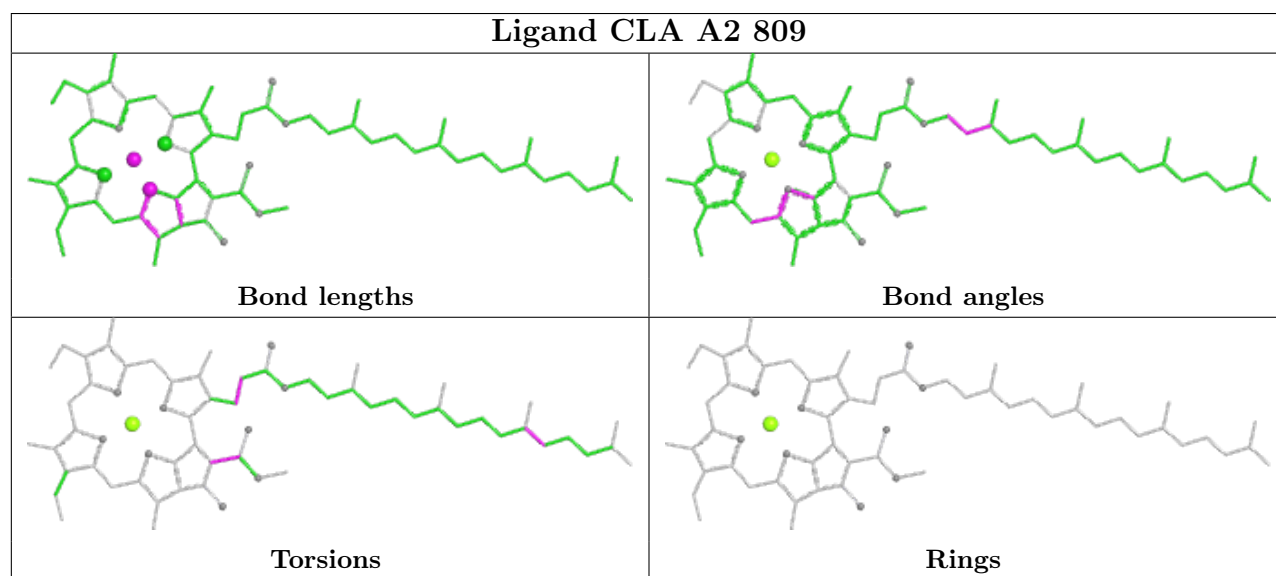
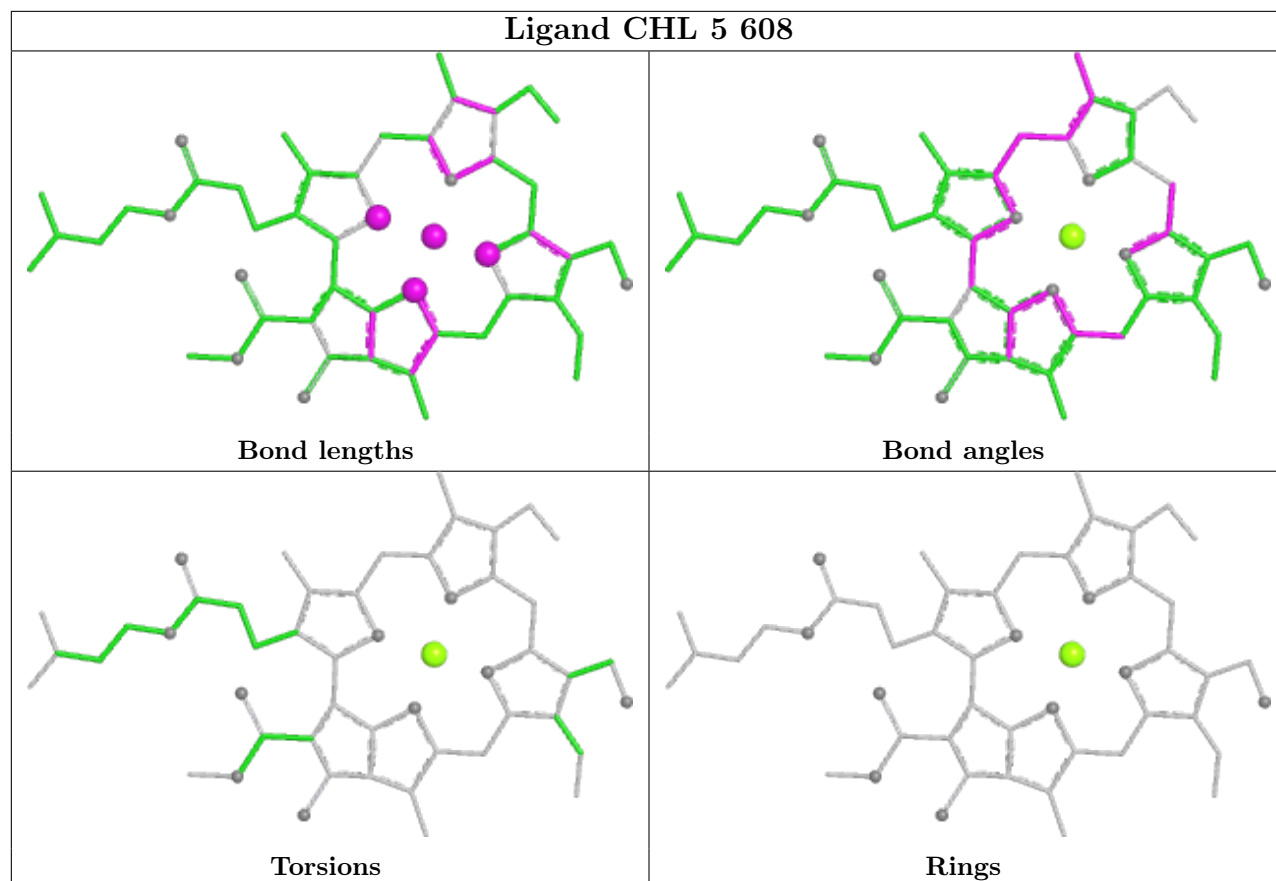


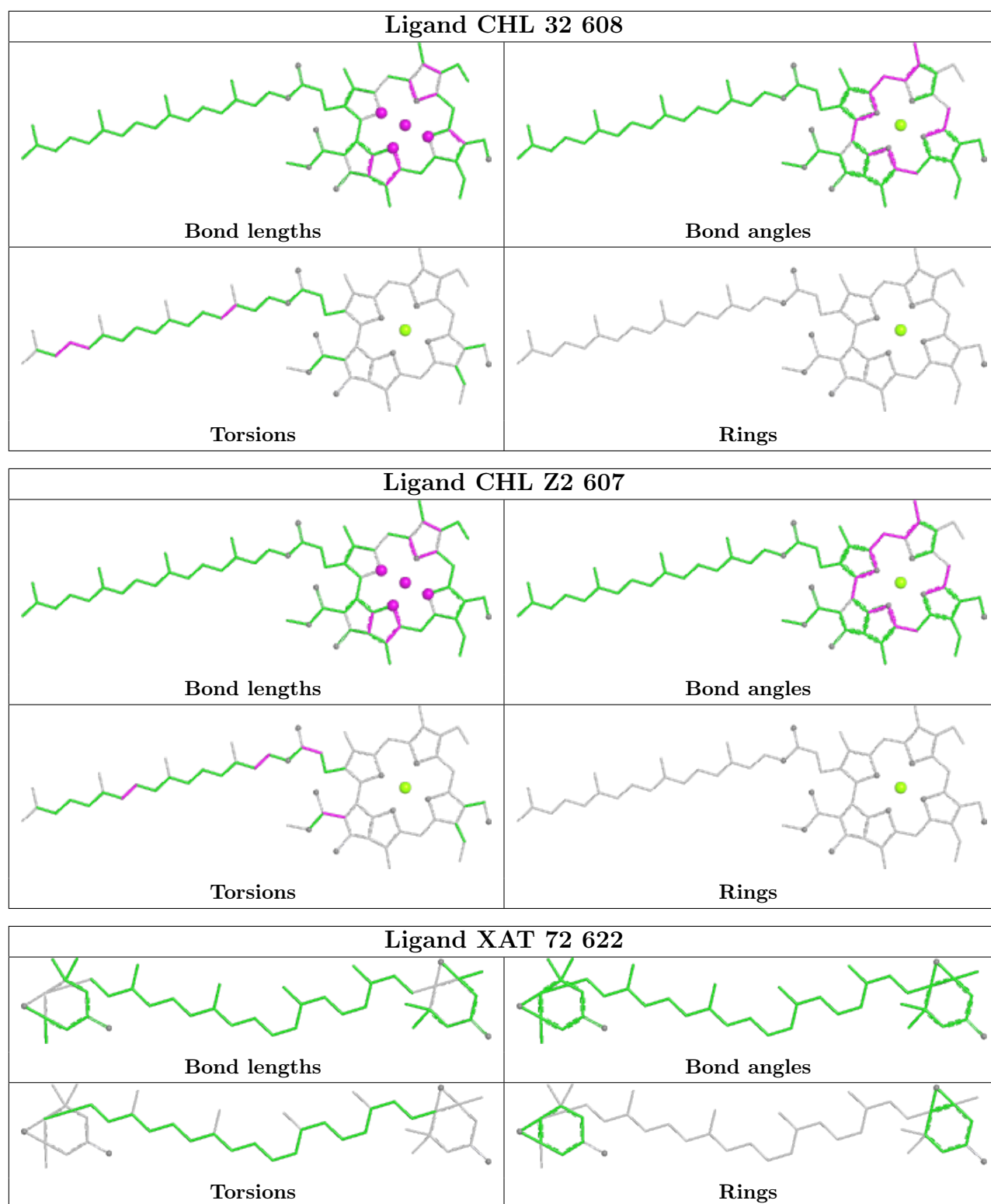


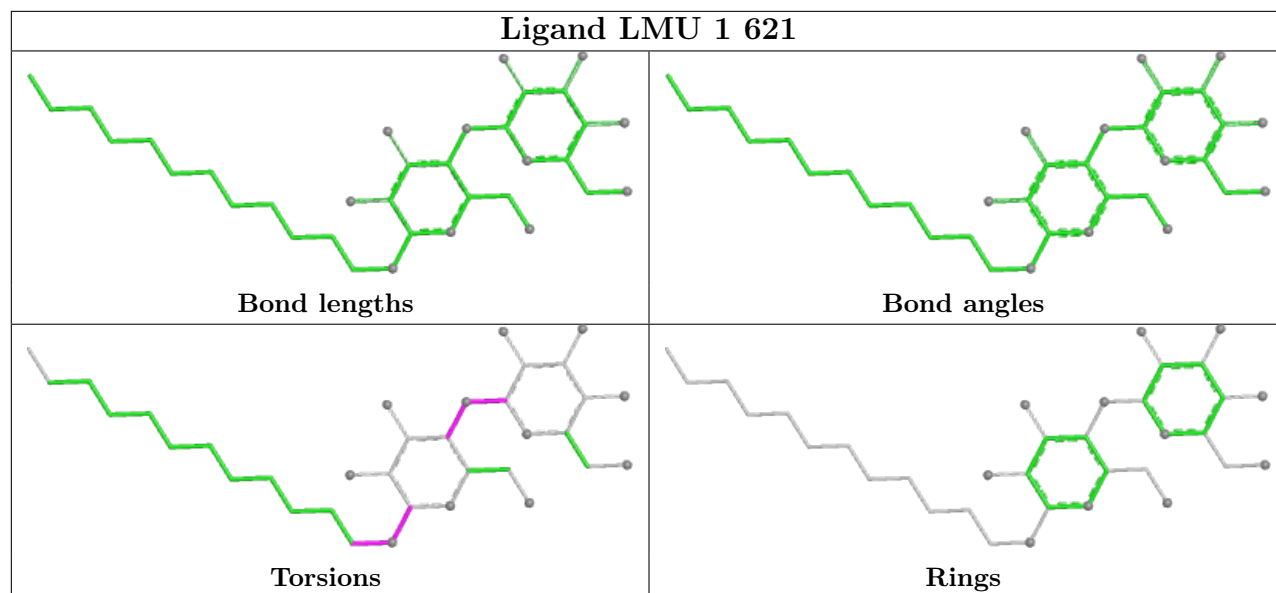












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

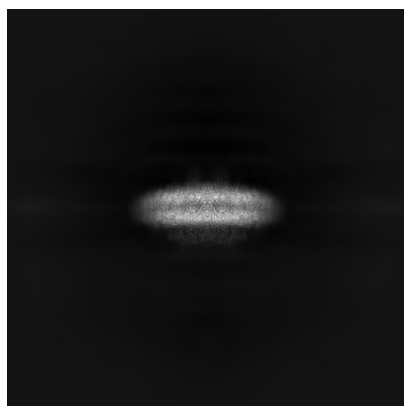
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-14871. These allow visual inspection of the internal detail of the map and identification of artifacts.

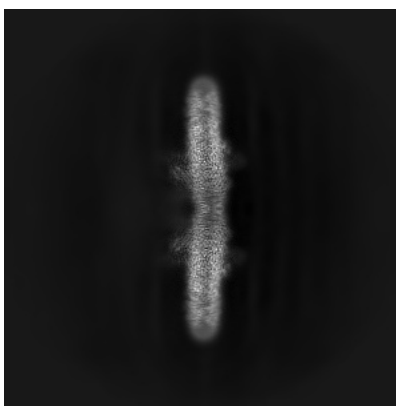
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

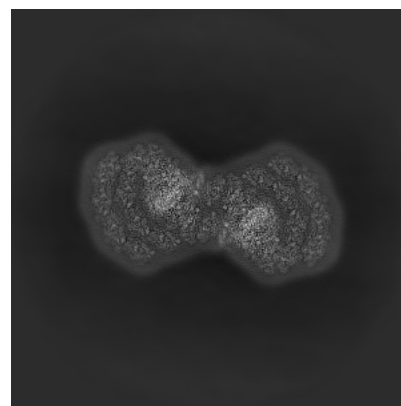
6.1.1 Primary map



X

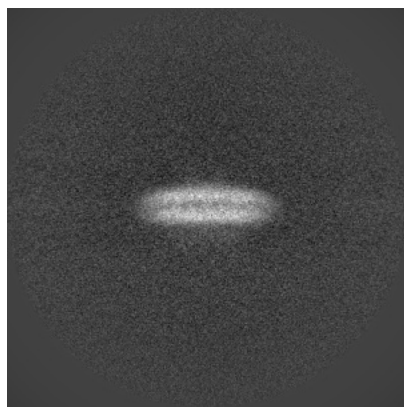


Y

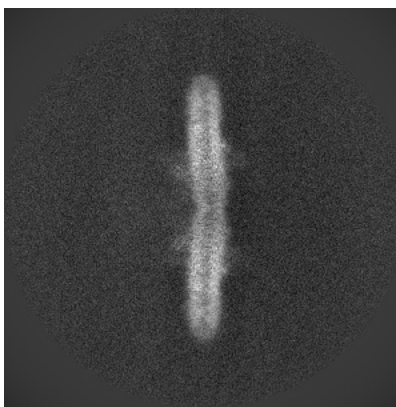


Z

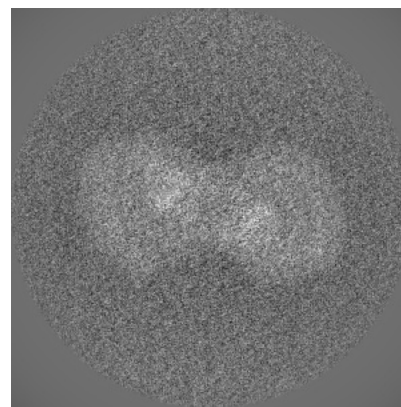
6.1.2 Raw map



X



Y



Z

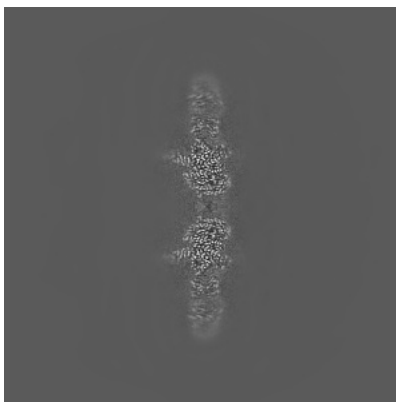
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

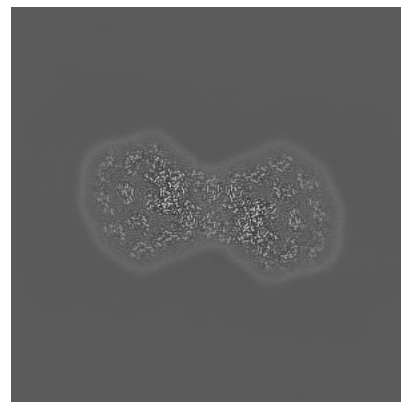
6.2.1 Primary map



X Index: 350

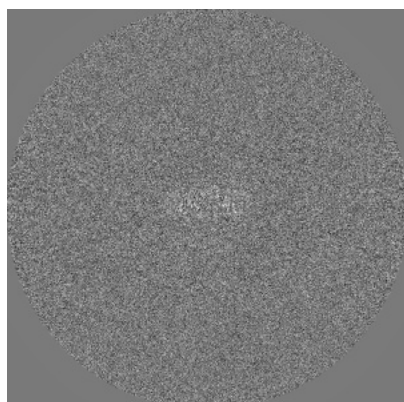


Y Index: 350

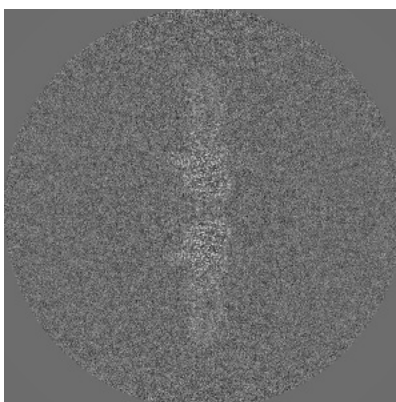


Z Index: 350

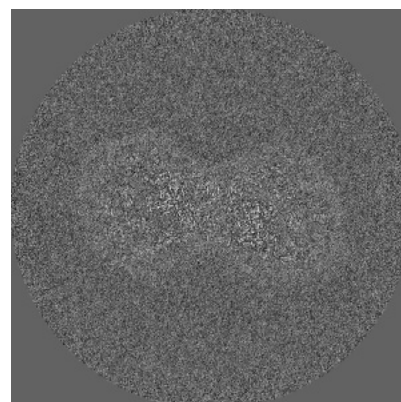
6.2.2 Raw map



X Index: 350



Y Index: 350



Z Index: 350

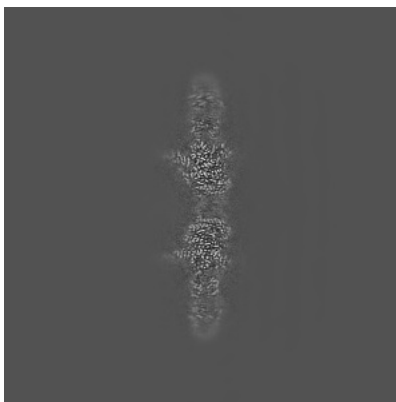
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

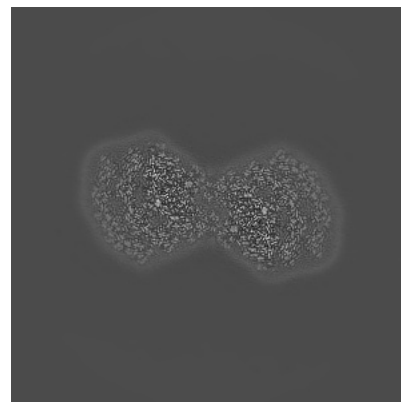
6.3.1 Primary map



X Index: 422

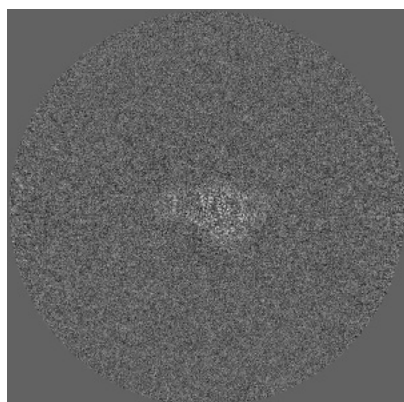


Y Index: 349

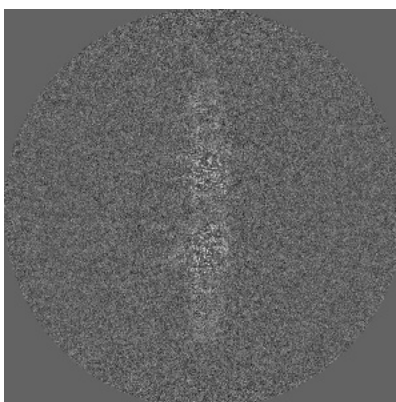


Z Index: 340

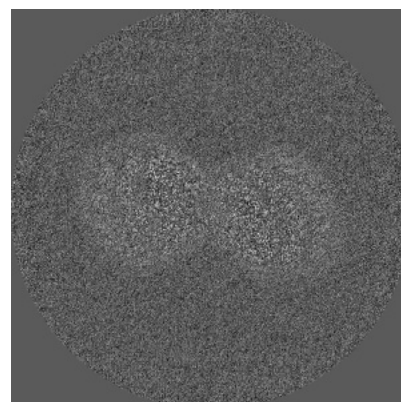
6.3.2 Raw map



X Index: 292



Y Index: 355

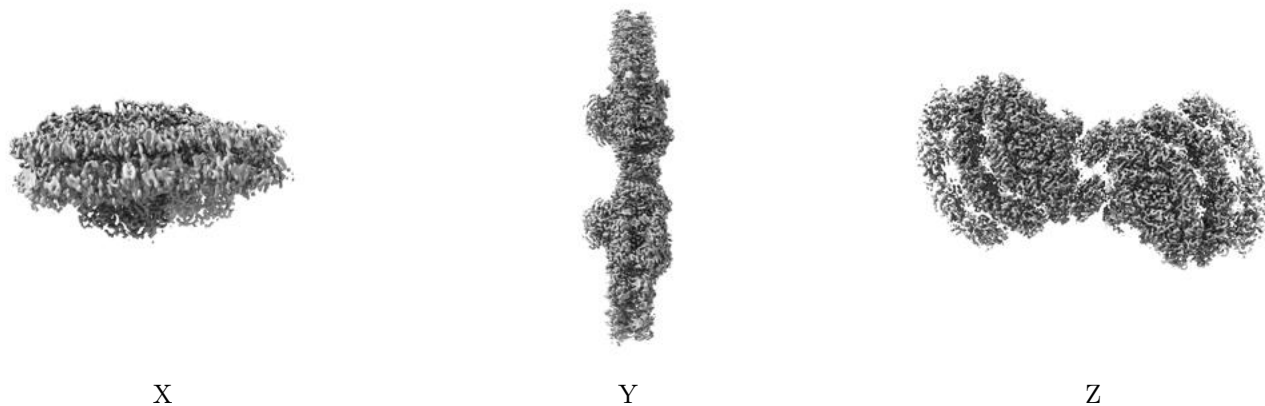


Z Index: 339

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

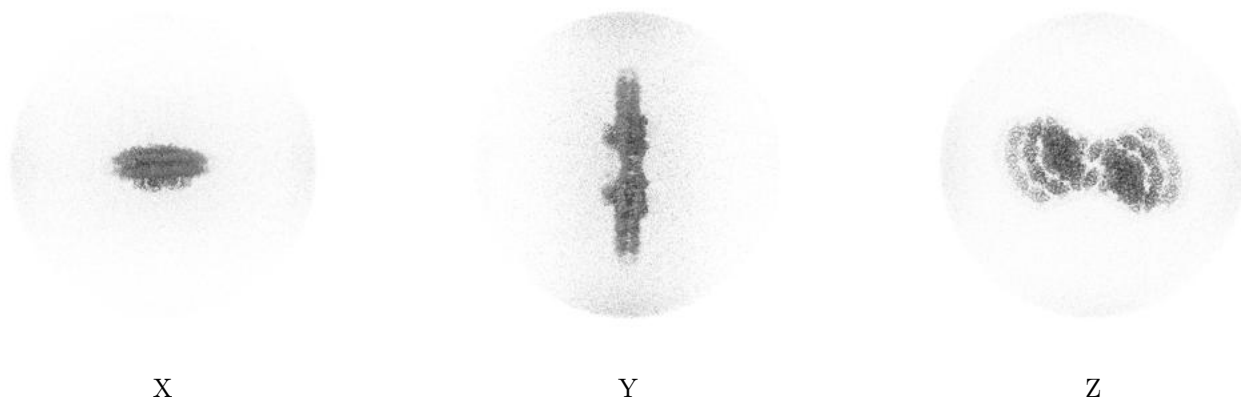
6.4 Orthogonal surface views [i](#)

6.4.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.036. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.4.2 Raw map



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

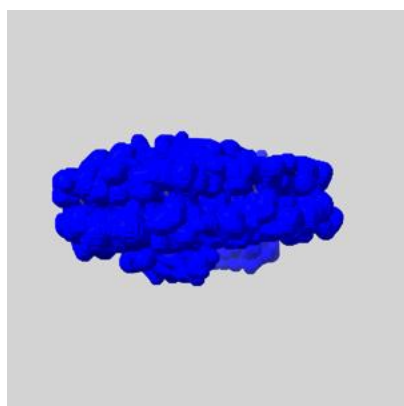
6.5 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

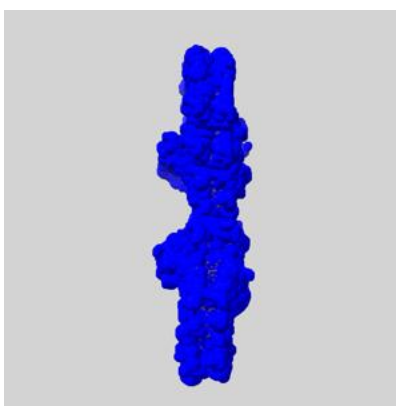
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

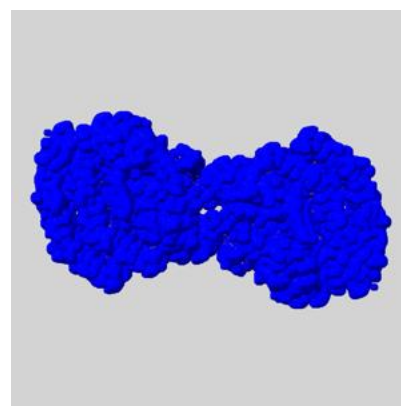
6.5.1 emd_14871_msk_1.map [i](#)



X



Y

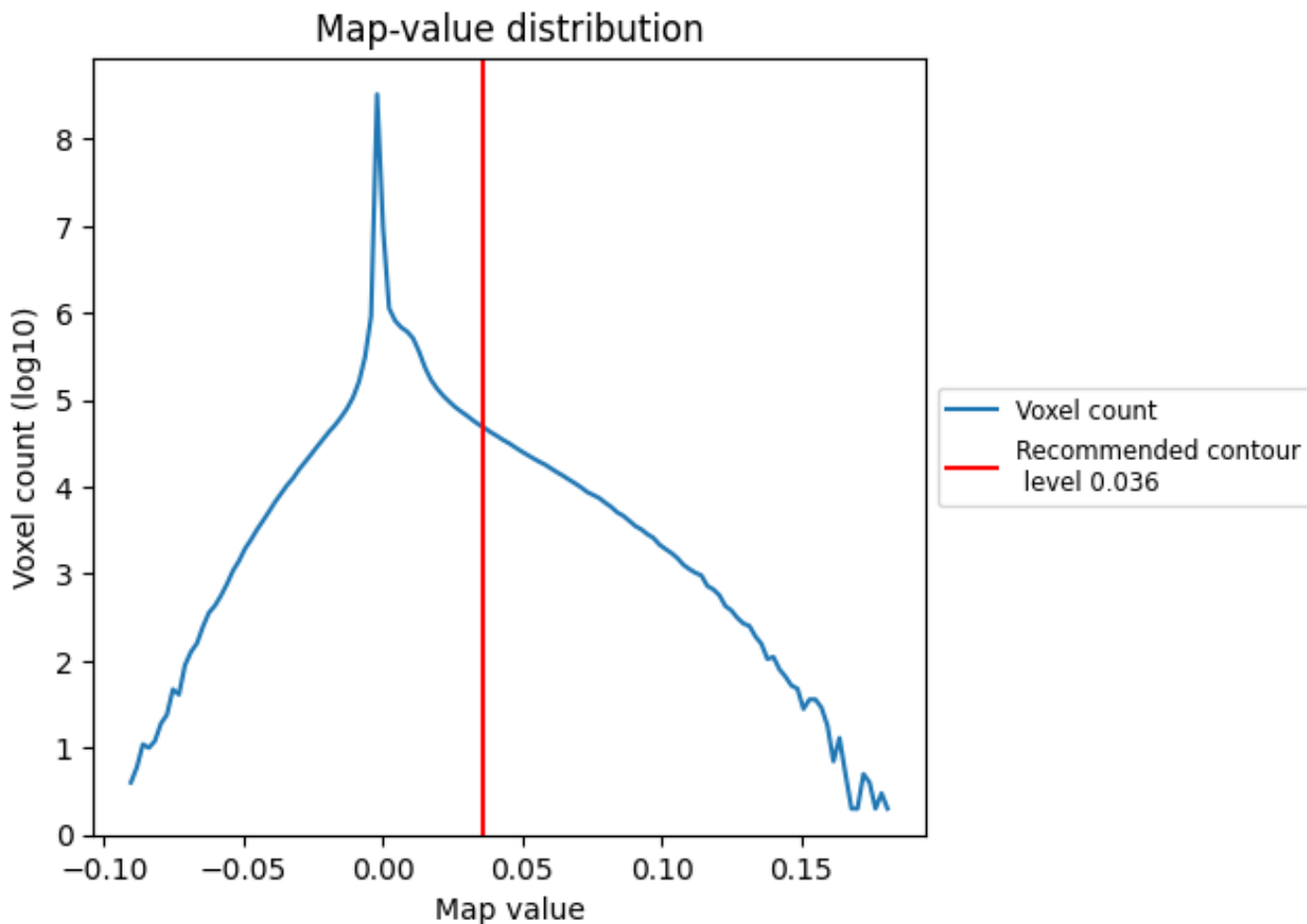


Z

7 Map analysis [i](#)

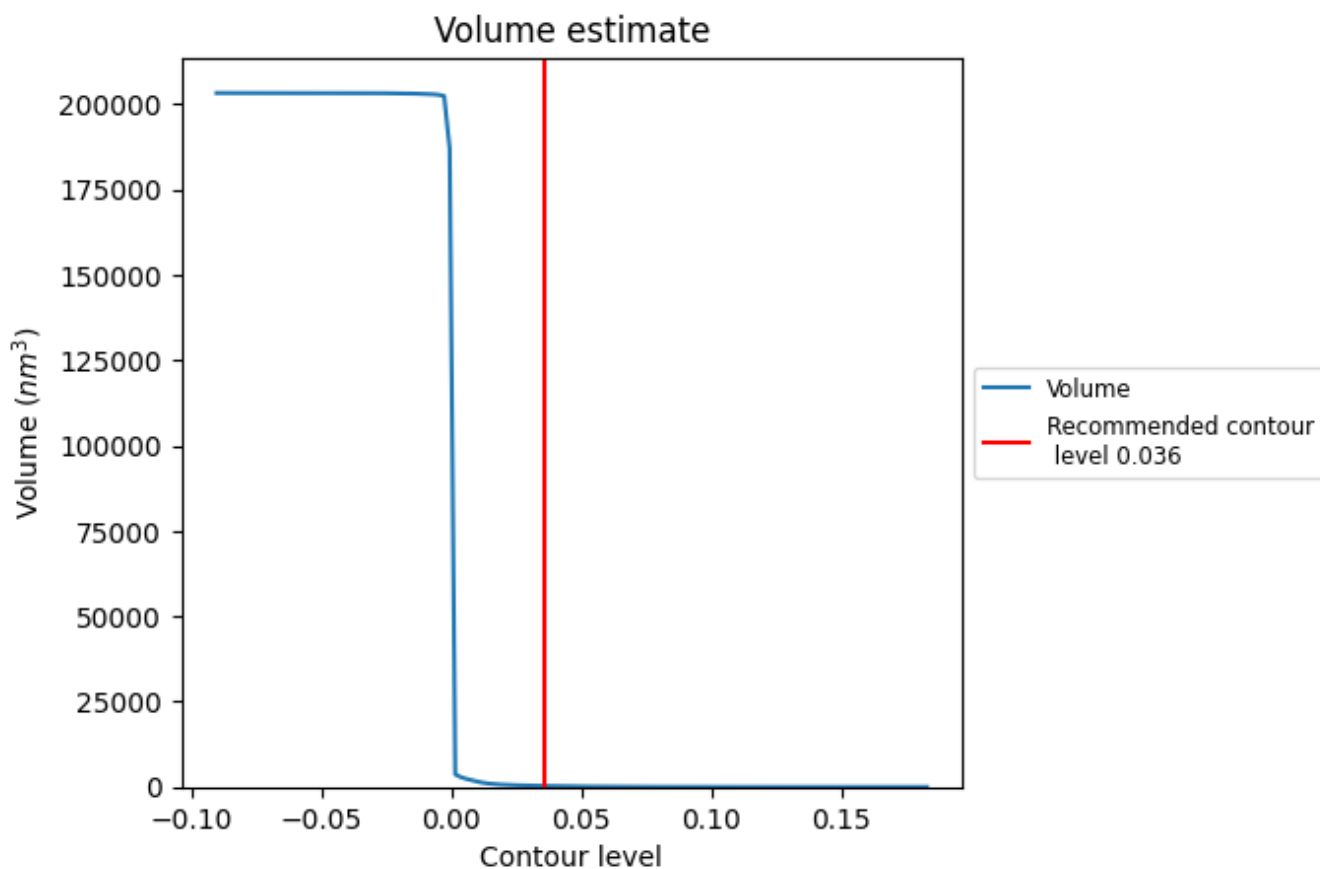
This section contains the results of statistical analysis of the map.

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.

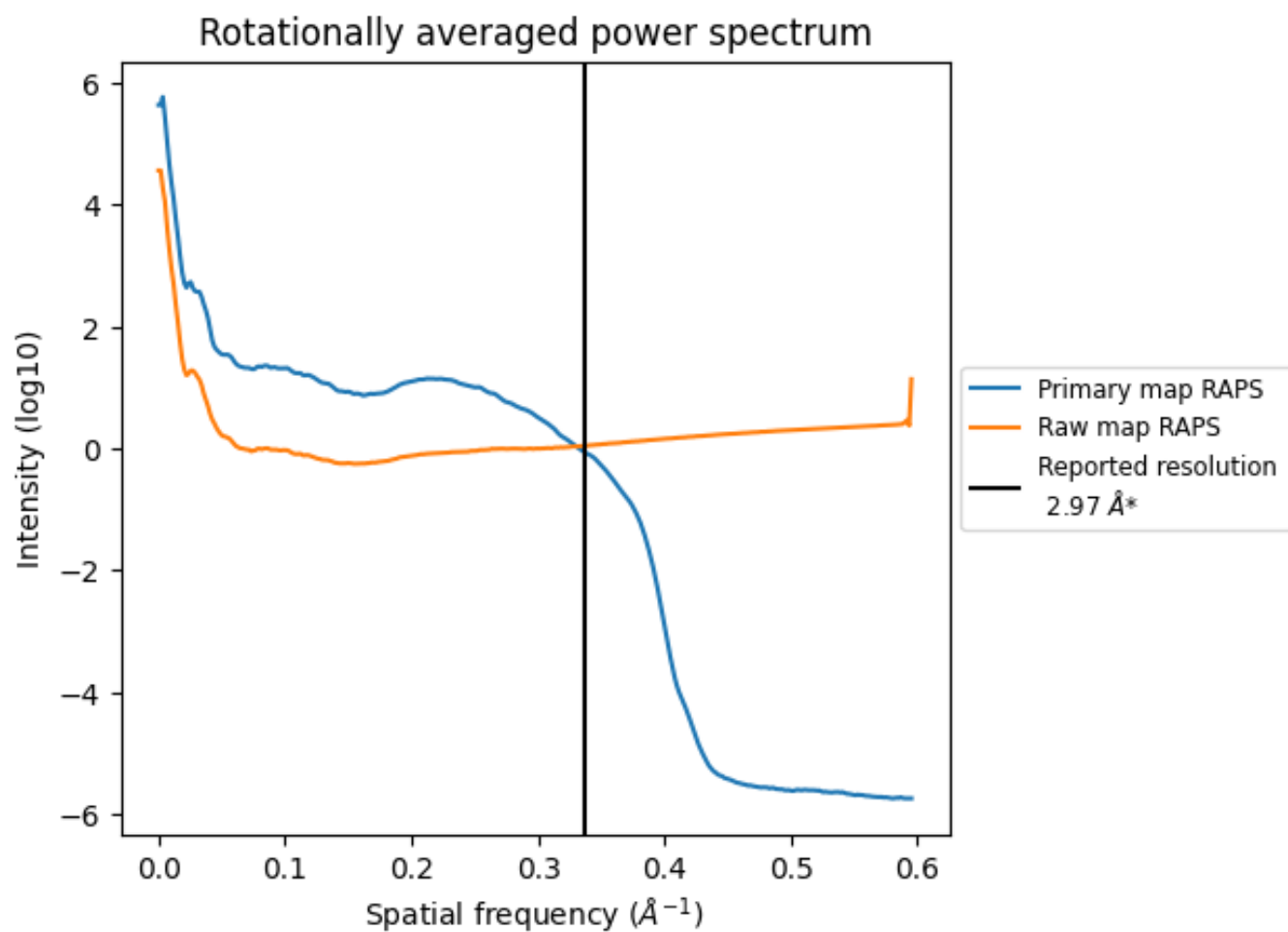
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 297 nm³; this corresponds to an approximate mass of 268 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

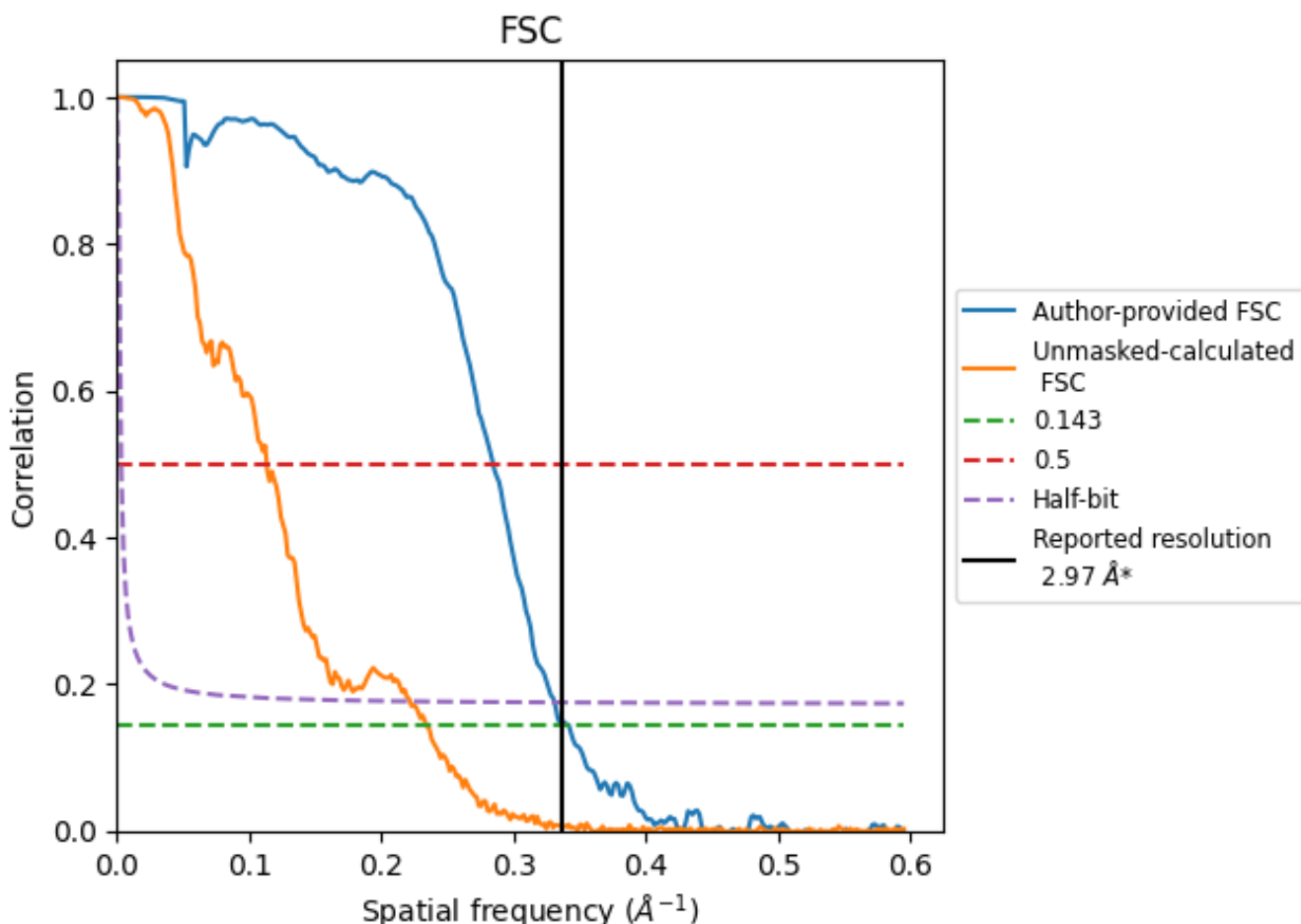


*Reported resolution corresponds to spatial frequency of 0.337 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.337 Å⁻¹

8.2 Resolution estimates [i](#)

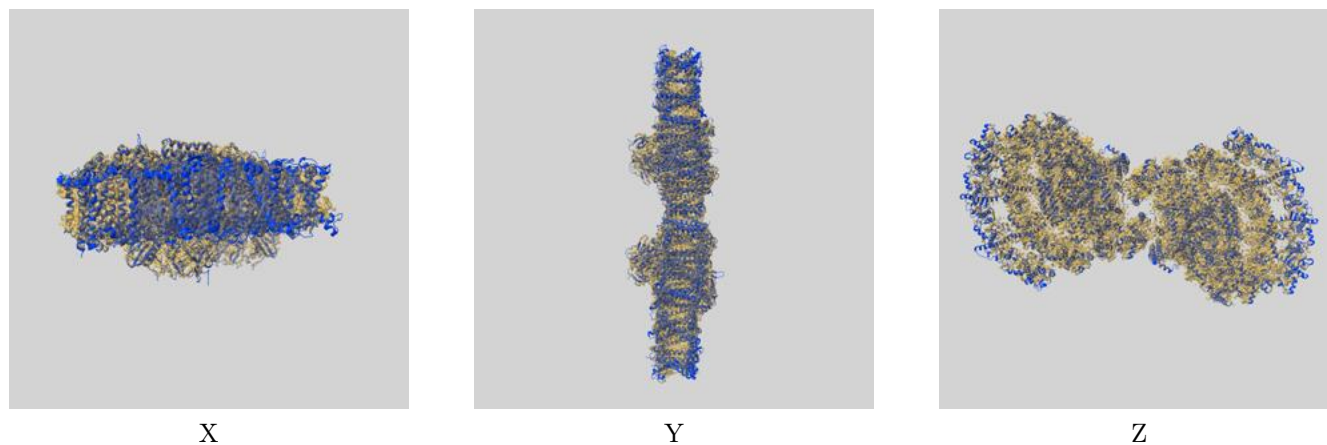
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.97	-	-
Author-provided FSC curve	2.92	3.51	3.02
Unmasked-calculated*	4.27	8.82	4.51

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.27 differs from the reported value 2.97 by more than 10 %

9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-14871 and PDB model 7ZQD. Per-residue inclusion information can be found in section 3 on page 62.

9.1 Map-model overlay [i](#)

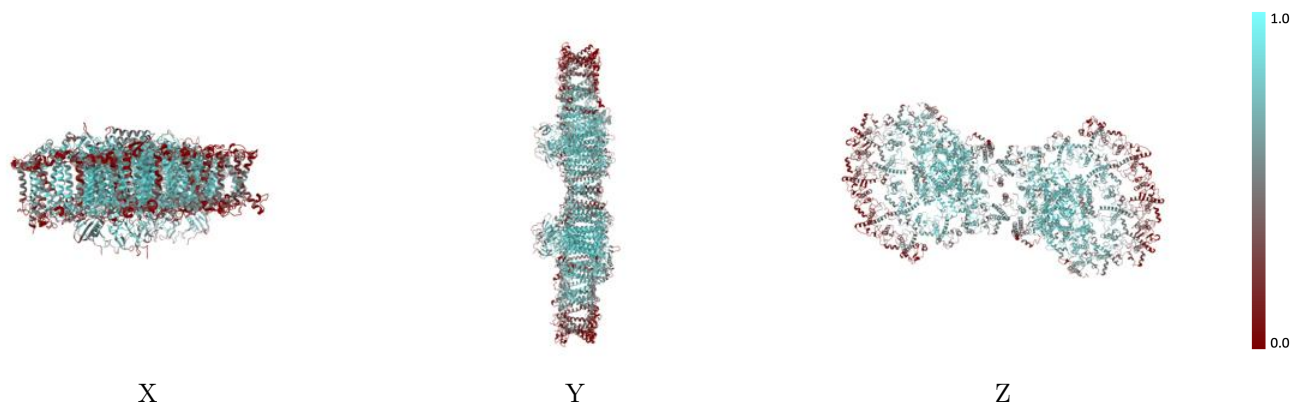


The images above show the 3D surface view of the map at the recommended contour level 0.036 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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

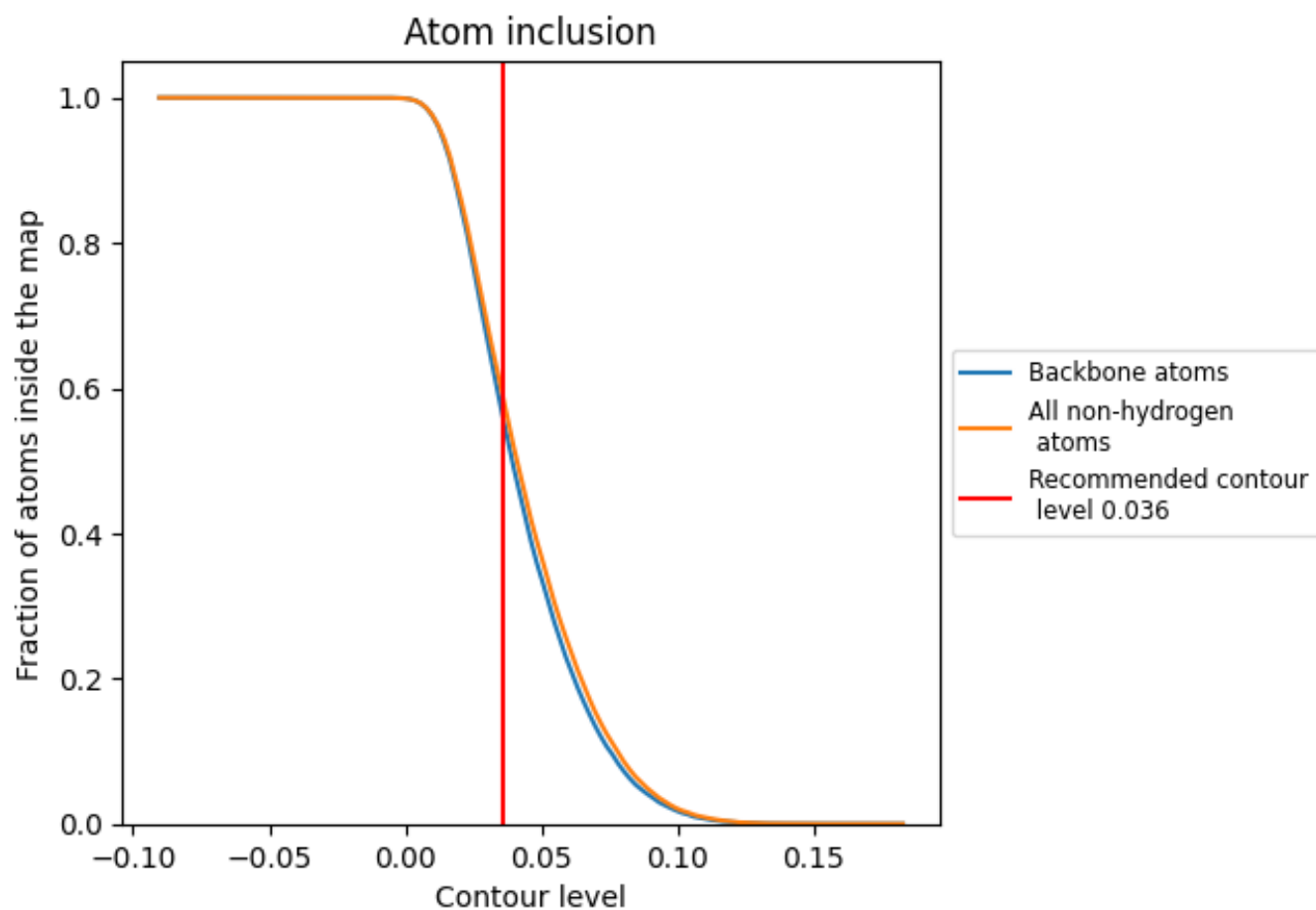
This section was not generated.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.036).

9.4 Atom inclusion [i](#)



At the recommended contour level, 56% of all backbone atoms, 59% 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 (0.036) and Q-score for the entire model and for each chain.

Chain	Atom inclusion
All	0.5861
1	0.5836
12	0.5941
3	0.5550
32	0.5536
4	0.2174
42	0.2182
5	0.2788
52	0.2723
6	0.1972
62	0.2044
7	0.5825
72	0.5770
8	0.6234
82	0.6215
9	0.5399
92	0.5426
A	0.7974
A2	0.7976
B	0.8062
B2	0.8072
C	0.7496
C2	0.7512
D	0.5599
D2	0.5608
E	0.6126
E2	0.6045
F	0.6943
F2	0.6888
G	0.5064
G2	0.5052
I	0.5737
I2	0.5737
J	0.7276
J2	0.7337



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Chain	Atom inclusion
K	 0.3468
K2	 0.3191
L	 0.3927
L2	 0.3889
Z	 0.3190
Z2	 0.3190