



wwPDB EM Validation Summary Report ⓘ

Dec 12, 2022 – 03:32 am GMT

PDB ID : 6TRD
EMDB ID : EMD-10559
Title : Cryo- EM structure of the Thermosynechococcus elongatus photosystem I in the presence of cytochrome c6
Authors : Koelsch, A.; Radon, C.; Baumert, A.; Buerger, J.; Mielke, T.; Lisdat, F.; Zouni, A.; Wendler, P.
Deposited on : 2019-12-18
Resolution : 3.16 Å (reported)
Based on initial model : 1JB0

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

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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:

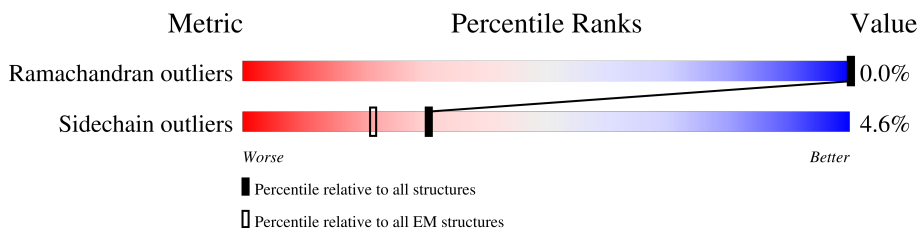
EMDB validation analysis : 0.0.1.dev43
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.3

1 Overall quality at a glance i

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

The reported resolution of this entry is 3.16 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Ramachandran outliers	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	1	755	27% 95% ...
1	A	755	33% 95% ...
1	a	755	36% 95% ...
2	2	741	24% 97% .
2	B	741	34% 97% .
2	b	741	22% 97% .
3	3	81	16% 99% .
3	C	81	11% 99% .
3	c	81	12% 99% .

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Mol	Chain	Length	Quality of chain
4	4	139	24% 94% 5%
4	D	139	28% 94% 5%
4	d	139	35% 94% 5%
5	5	76	51% 83% 9% 8%
5	E	76	58% 83% 9% 8%
5	e	76	58% 83% 9% 8%
6	6	141	80% 89% 11%
6	F	141	96% 89% 11%
6	f	141	91% 89% 11%
7	7	38	16% 97%
7	I	38	8% 97%
7	i	38	11% 97%
8	8	41	76% 90% 7%
8	J	41	95% 90% 7%
8	j	41	83% 90% 7%
9	9	83	88% 83% 10% 5%
9	K	83	87% 83% 10% 5%
9	k	83	94% 83% 10% 5%
10	0	155	10% 97%
10	L	155	12% 97%
10	l	155	15% 97%
11	M	31	32% 90% 6%
11	m	31	19% 90% 6%
11	y	31	39% 90% 6%
12	X	36	75% 64% 11% 25%

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Mol	Chain	Length	Quality of chain		
12	x	36	75%		
			64%	11%	25%
12	z	36	75%		
			64%	11%	25%

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
13	CL0	1	1602	X	-	-	-
13	CL0	A	801	X	-	-	-
13	CL0	a	801	X	-	-	-
14	CLA	0	205	X	-	-	-
14	CLA	0	206	X	-	-	-
14	CLA	0	207	X	-	-	-
14	CLA	1	1601	X	-	-	-
14	CLA	1	1603	X	-	-	-
14	CLA	1	1604	X	-	-	-
14	CLA	1	1605	X	-	-	-
14	CLA	1	1606	X	-	-	-
14	CLA	1	1607	X	-	-	-
14	CLA	1	1608	X	-	-	-
14	CLA	1	1609	X	-	-	-
14	CLA	1	1610	X	-	-	-
14	CLA	1	1611	X	-	-	-
14	CLA	1	1612	X	-	-	-
14	CLA	1	1613	X	-	-	-
14	CLA	1	1614	X	-	-	-
14	CLA	1	1615	X	-	-	-
14	CLA	1	1616	X	-	-	-
14	CLA	1	1617	X	-	-	-
14	CLA	1	1618	X	-	-	-
14	CLA	1	1619	X	-	-	-
14	CLA	1	1620	X	-	-	-
14	CLA	1	1621	X	-	-	-
14	CLA	1	1622	X	-	-	-
14	CLA	1	1623	X	-	-	-
14	CLA	1	1624	X	-	-	-
14	CLA	1	1625	X	-	-	-
14	CLA	1	1626	X	-	-	-
14	CLA	1	1627	X	-	-	-
14	CLA	1	1628	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
14	CLA	1	1629	X	-	-	-
14	CLA	1	1630	X	-	-	-
14	CLA	1	1631	X	-	-	-
14	CLA	1	1632	X	-	-	-
14	CLA	1	1633	X	-	-	-
14	CLA	1	1634	X	-	-	-
14	CLA	1	1635	X	-	-	-
14	CLA	1	1636	X	-	-	-
14	CLA	1	1637	X	-	-	-
14	CLA	1	1638	X	-	-	-
14	CLA	1	1639	X	-	-	-
14	CLA	1	1640	X	-	-	-
14	CLA	1	1641	X	-	-	-
14	CLA	1	1642	X	-	-	-
14	CLA	1	1643	X	-	-	-
14	CLA	1	1644	X	-	-	-
14	CLA	1	1645	X	-	-	-
14	CLA	2	802	X	-	-	-
14	CLA	2	803	X	-	-	-
14	CLA	2	804	X	-	-	-
14	CLA	2	805	X	-	-	-
14	CLA	2	806	X	-	-	-
14	CLA	2	807	X	-	-	-
14	CLA	2	808	X	-	-	-
14	CLA	2	809	X	-	-	-
14	CLA	2	810	X	-	-	-
14	CLA	2	811	X	-	-	-
14	CLA	2	812	X	-	-	-
14	CLA	2	813	X	-	-	-
14	CLA	2	814	X	-	-	-
14	CLA	2	815	X	-	-	-
14	CLA	2	816	X	-	-	-
14	CLA	2	817	X	-	-	-
14	CLA	2	818	X	-	-	-
14	CLA	2	819	X	-	-	-
14	CLA	2	820	X	-	-	-
14	CLA	2	821	X	-	-	-
14	CLA	2	822	X	-	-	-
14	CLA	2	823	X	-	-	-
14	CLA	2	824	X	-	-	-
14	CLA	2	825	X	-	-	-
14	CLA	2	826	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
14	CLA	2	827	X	-	-	-
14	CLA	2	828	X	-	-	-
14	CLA	2	829	X	-	-	-
14	CLA	2	830	X	-	-	-
14	CLA	2	831	X	-	-	-
14	CLA	2	832	X	-	-	-
14	CLA	2	833	X	-	-	-
14	CLA	2	834	X	-	-	-
14	CLA	2	835	X	-	-	-
14	CLA	2	836	X	-	-	-
14	CLA	2	837	X	-	-	-
14	CLA	2	838	X	-	-	-
14	CLA	2	839	X	-	-	-
14	CLA	2	841	X	-	-	-
14	CLA	2	842	X	-	-	-
14	CLA	6	201	X	-	-	-
14	CLA	6	203	X	-	-	-
14	CLA	8	1301	X	-	-	-
14	CLA	8	1302	X	-	-	-
14	CLA	8	1303	X	-	-	-
14	CLA	9	101	X	-	-	-
14	CLA	9	103	X	-	-	-
14	CLA	A	802	X	-	-	-
14	CLA	A	803	X	-	-	-
14	CLA	A	804	X	-	-	-
14	CLA	A	805	X	-	-	-
14	CLA	A	806	X	-	-	-
14	CLA	A	807	X	-	-	-
14	CLA	A	808	X	-	-	-
14	CLA	A	809	X	-	-	-
14	CLA	A	810	X	-	-	-
14	CLA	A	811	X	-	-	-
14	CLA	A	812	X	-	-	-
14	CLA	A	813	X	-	-	-
14	CLA	A	814	X	-	-	-
14	CLA	A	815	X	-	-	-
14	CLA	A	816	X	-	-	-
14	CLA	A	817	X	-	-	-
14	CLA	A	818	X	-	-	-
14	CLA	A	819	X	-	-	-
14	CLA	A	820	X	-	-	-
14	CLA	A	821	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
14	CLA	A	822	X	-	-	-
14	CLA	A	823	X	-	-	-
14	CLA	A	824	X	-	-	-
14	CLA	A	825	X	-	-	-
14	CLA	A	826	X	-	-	-
14	CLA	A	827	X	-	-	-
14	CLA	A	828	X	-	-	-
14	CLA	A	829	X	-	-	-
14	CLA	A	830	X	-	-	-
14	CLA	A	831	X	-	-	-
14	CLA	A	832	X	-	-	-
14	CLA	A	833	X	-	-	-
14	CLA	A	834	X	-	-	-
14	CLA	A	835	X	-	-	-
14	CLA	A	836	X	-	-	-
14	CLA	A	837	X	-	-	-
14	CLA	A	838	X	-	-	-
14	CLA	A	839	X	-	-	-
14	CLA	A	840	X	-	-	-
14	CLA	A	841	X	-	-	-
14	CLA	A	842	X	-	-	-
14	CLA	A	843	X	-	-	-
14	CLA	A	844	X	-	-	-
14	CLA	A	855	X	-	-	-
14	CLA	A	857	X	-	-	-
14	CLA	B	802	X	-	-	-
14	CLA	B	803	X	-	-	-
14	CLA	B	804	X	-	-	-
14	CLA	B	805	X	-	-	-
14	CLA	B	806	X	-	-	-
14	CLA	B	807	X	-	-	-
14	CLA	B	808	X	-	-	-
14	CLA	B	809	X	-	-	-
14	CLA	B	810	X	-	-	-
14	CLA	B	811	X	-	-	-
14	CLA	B	812	X	-	-	-
14	CLA	B	813	X	-	-	-
14	CLA	B	814	X	-	-	-
14	CLA	B	815	X	-	-	-
14	CLA	B	816	X	-	-	-
14	CLA	B	817	X	-	-	-
14	CLA	B	818	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
14	CLA	B	819	X	-	-	-
14	CLA	B	820	X	-	-	-
14	CLA	B	821	X	-	-	-
14	CLA	B	822	X	-	-	-
14	CLA	B	823	X	-	-	-
14	CLA	B	824	X	-	-	-
14	CLA	B	825	X	-	-	-
14	CLA	B	826	X	-	-	-
14	CLA	B	827	X	-	-	-
14	CLA	B	828	X	-	-	-
14	CLA	B	829	X	-	-	-
14	CLA	B	830	X	-	-	-
14	CLA	B	831	X	-	-	-
14	CLA	B	832	X	-	-	-
14	CLA	B	833	X	-	-	-
14	CLA	B	834	X	-	-	-
14	CLA	B	835	X	-	-	-
14	CLA	B	836	X	-	-	-
14	CLA	B	837	X	-	-	-
14	CLA	B	838	X	-	-	-
14	CLA	B	840	X	-	-	-
14	CLA	B	841	X	-	-	-
14	CLA	F	201	X	-	-	-
14	CLA	F	203	X	-	-	-
14	CLA	F	204	X	-	-	-
14	CLA	J	101	X	-	-	-
14	CLA	J	102	X	-	-	-
14	CLA	K	101	X	-	-	-
14	CLA	K	103	X	-	-	-
14	CLA	L	203	X	-	-	-
14	CLA	L	204	X	-	-	-
14	CLA	L	205	X	-	-	-
14	CLA	M	102	X	-	-	-
14	CLA	X	1701	X	-	-	-
14	CLA	a	802	X	-	-	-
14	CLA	a	803	X	-	-	-
14	CLA	a	804	X	-	-	-
14	CLA	a	805	X	-	-	-
14	CLA	a	806	X	-	-	-
14	CLA	a	807	X	-	-	-
14	CLA	a	808	X	-	-	-
14	CLA	a	809	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
14	CLA	a	810	X	-	-	-
14	CLA	a	811	X	-	-	-
14	CLA	a	812	X	-	-	-
14	CLA	a	813	X	-	-	-
14	CLA	a	814	X	-	-	-
14	CLA	a	815	X	-	-	-
14	CLA	a	816	X	-	-	-
14	CLA	a	817	X	-	-	-
14	CLA	a	818	X	-	-	-
14	CLA	a	819	X	-	-	-
14	CLA	a	820	X	-	-	-
14	CLA	a	821	X	-	-	-
14	CLA	a	822	X	-	-	-
14	CLA	a	823	X	-	-	-
14	CLA	a	824	X	-	-	-
14	CLA	a	825	X	-	-	-
14	CLA	a	826	X	-	-	-
14	CLA	a	827	X	-	-	-
14	CLA	a	828	X	-	-	-
14	CLA	a	829	X	-	-	-
14	CLA	a	830	X	-	-	-
14	CLA	a	831	X	-	-	-
14	CLA	a	832	X	-	-	-
14	CLA	a	833	X	-	-	-
14	CLA	a	834	X	-	-	-
14	CLA	a	835	X	-	-	-
14	CLA	a	836	X	-	-	-
14	CLA	a	837	X	-	-	-
14	CLA	a	838	X	-	-	-
14	CLA	a	839	X	-	-	-
14	CLA	a	840	X	-	-	-
14	CLA	a	841	X	-	-	-
14	CLA	a	842	X	-	-	-
14	CLA	a	843	X	-	-	-
14	CLA	a	844	X	-	-	-
14	CLA	b	802	X	-	-	-
14	CLA	b	803	X	-	-	-
14	CLA	b	804	X	-	-	-
14	CLA	b	805	X	-	-	-
14	CLA	b	806	X	-	-	-
14	CLA	b	807	X	-	-	-
14	CLA	b	808	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
14	CLA	b	809	X	-	-	-
14	CLA	b	810	X	-	-	-
14	CLA	b	811	X	-	-	-
14	CLA	b	812	X	-	-	-
14	CLA	b	813	X	-	-	-
14	CLA	b	814	X	-	-	-
14	CLA	b	815	X	-	-	-
14	CLA	b	816	X	-	-	-
14	CLA	b	817	X	-	-	-
14	CLA	b	818	X	-	-	-
14	CLA	b	819	X	-	-	-
14	CLA	b	820	X	-	-	-
14	CLA	b	821	X	-	-	-
14	CLA	b	822	X	-	-	-
14	CLA	b	823	X	-	-	-
14	CLA	b	824	X	-	-	-
14	CLA	b	825	X	-	-	-
14	CLA	b	826	X	-	-	-
14	CLA	b	827	X	-	-	-
14	CLA	b	828	X	-	-	-
14	CLA	b	829	X	-	-	-
14	CLA	b	830	X	-	-	-
14	CLA	b	831	X	-	-	-
14	CLA	b	832	X	-	-	-
14	CLA	b	833	X	-	-	-
14	CLA	b	834	X	-	-	-
14	CLA	b	835	X	-	-	-
14	CLA	b	836	X	-	-	-
14	CLA	b	837	X	-	-	-
14	CLA	b	838	X	-	-	-
14	CLA	b	839	X	-	-	-
14	CLA	b	841	X	-	-	-
14	CLA	b	842	X	-	-	-
14	CLA	f	201	X	-	-	-
14	CLA	f	203	X	-	-	-
14	CLA	j	1301	X	-	-	-
14	CLA	j	1302	X	-	-	-
14	CLA	j	1303	X	-	-	-
14	CLA	k	101	X	-	-	-
14	CLA	k	103	X	-	-	-
14	CLA	l	204	X	-	-	-
14	CLA	l	205	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
14	CLA	l	206	X	-	-	-
14	CLA	x	1701	X	-	-	-
14	CLA	z	102	X	-	-	-

2 Entry composition [i](#)

There are 21 unique types of molecules in this entry. The entry contains 74991 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Photosystem I P700 chlorophyll a apoprotein A1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	746	Total	C	N	O	S	0	0
			5826	3823	995	982	26		
1	a	746	Total	C	N	O	S	0	0
			5826	3823	995	982	26		
1	1	746	Total	C	N	O	S	0	0
			5826	3823	995	982	26		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	740	Total	C	N	O	S	0	0
			5894	3878	988	1007	21		
2	b	740	Total	C	N	O	S	0	0
			5894	3878	988	1007	21		
2	2	740	Total	C	N	O	S	0	0
			5894	3878	988	1007	21		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	80	Total	C	N	O	S	0	0
			598	367	103	117	11		
3	c	80	Total	C	N	O	S	0	0
			598	367	103	117	11		
3	3	80	Total	C	N	O	S	0	0
			598	367	103	117	11		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	D	138	Total	C	N	O	S	0	0
			1075	682	186	204	3		

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Mol	Chain	Residues	Atoms					AltConf	Trace
4	d	138	Total	C	N	O	S	0	0
			1075	682	186	204	3		
4	4	138	Total	C	N	O	S	0	0
			1075	682	186	204	3		

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

Mol	Chain	Residues	Atoms				AltConf	Trace
5	E	70	Total	C	N	O	0	0
			546	347	94	105		
5	e	70	Total	C	N	O	0	0
			546	347	94	105		
5	5	70	Total	C	N	O	0	0
			546	347	94	105		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
6	F	141	Total	C	N	O	S	0	0
			1065	680	184	197	4		
6	f	141	Total	C	N	O	S	0	0
			1065	680	184	197	4		
6	6	141	Total	C	N	O	S	0	0
			1065	680	184	197	4		

- Molecule 7 is a protein called Photosystem I reaction center subunit VIII.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	I	38	Total	C	N	O	S	0	0
			303	209	40	49	5		
7	i	38	Total	C	N	O	S	0	0
			303	209	40	49	5		
7	7	38	Total	C	N	O	S	0	0
			303	209	40	49	5		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
8	J	41	Total	C	N	O	S	0	0
			340	232	51	55	2		
8	j	41	Total	C	N	O	S	0	0
			340	232	51	55	2		

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Mol	Chain	Residues	Atoms					AltConf	Trace
8	8	41	Total	C	N	O	S	0	0
			340	232	51	55	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
9	K	79	Total	C	N	O	S	0	0
			571	377	92	101	1		
9	k	79	Total	C	N	O	S	0	0
			571	377	92	101	1		
9	9	79	Total	C	N	O	S	0	0
			571	377	92	101	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
10	L	152	Total	C	N	O	S	0	0
			1124	738	180	202	4		
10	l	152	Total	C	N	O	S	0	0
			1124	738	180	202	4		
10	0	152	Total	C	N	O	S	0	0
			1124	738	180	202	4		

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
L	143	LEU	SER	conflict	UNP Q8DGB4
l	143	LEU	SER	conflict	UNP Q8DGB4
0	143	LEU	SER	conflict	UNP Q8DGB4

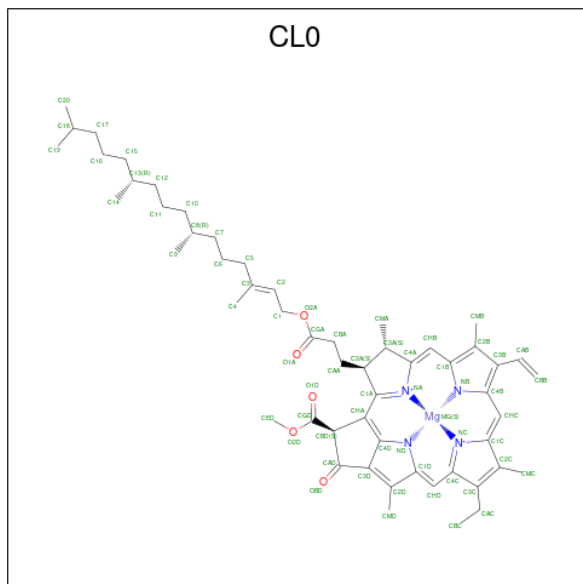
- Molecule 11 is a protein called Photosystem I reaction center subunit XII.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	M	31	Total	C	N	O	S	0	0
			241	161	36	43	1		
11	m	31	Total	C	N	O	S	0	0
			241	161	36	43	1		
11	y	31	Total	C	N	O	S	0	0
			241	161	36	43	1		

- Molecule 12 is a protein called Photosystem I 4.8K protein.

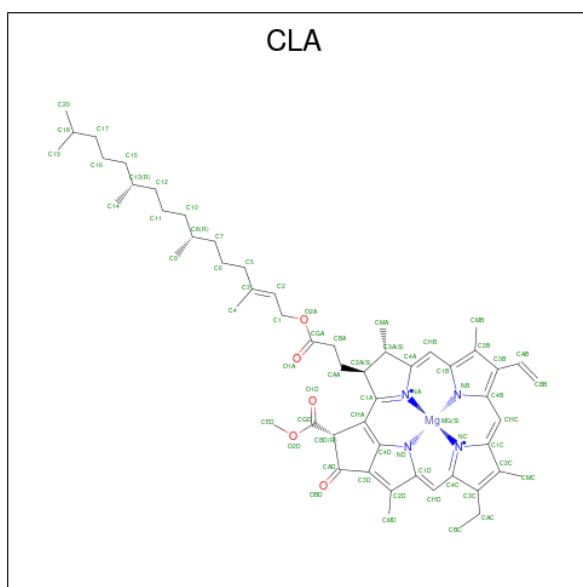
Mol	Chain	Residues	Atoms				AltConf	Trace
12	X	27	Total	C	N	O	0	0
			228	163	33	32		
12	x	27	Total	C	N	O	0	0
			228	163	33	32		
12	z	27	Total	C	N	O	0	0
			228	163	33	32		

- Molecule 13 is CHLOROPHYLL A ISOMER (three-letter code: CL0) (formula: $C_{55}H_{72}MgN_4O_5$).



Mol	Chain	Residues	Atoms					AltConf
13	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
13	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
13	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

- Molecule 14 is CHLOROPHYLL A (three-letter code: CLA) (formula: $C_{55}H_{72}MgN_4O_5$).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0
14	A	1	Total 2775	C 2329	Mg 45	N 180	O 221	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
14	A	1	2775	2329	45	180	221	0
14	A	1	2775	2329	45	180	221	0
14	A	1	2775	2329	45	180	221	0
14	A	1	2775	2329	45	180	221	0
14	A	1	2775	2329	45	180	221	0
14	A	1	2775	2329	45	180	221	0
14	A	1	2775	2329	45	180	221	0
14	A	1	2775	2329	45	180	221	0
14	A	1	2775	2329	45	180	221	0
14	A	1	2775	2329	45	180	221	0
14	A	1	2775	2329	45	180	221	0
14	B	1	2446	2046	40	160	200	0
14	B	1	2446	2046	40	160	200	0
14	B	1	2446	2046	40	160	200	0
14	B	1	2446	2046	40	160	200	0
14	B	1	2446	2046	40	160	200	0
14	B	1	2446	2046	40	160	200	0
14	B	1	2446	2046	40	160	200	0
14	B	1	2446	2046	40	160	200	0
14	B	1	2446	2046	40	160	200	0
14	B	1	2446	2046	40	160	200	0
14	B	1	2446	2046	40	160	200	0
14	B	1	2446	2046	40	160	200	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	B	1	Total 2446	C 2046	Mg 40	N 160	O 200	0
14	F	1	Total 153	C 123	Mg 3	N 12	O 15	0
14	F	1	Total 153	C 123	Mg 3	N 12	O 15	0
14	F	1	Total 153	C 123	Mg 3	N 12	O 15	0
14	J	1	Total 82	C 66	Mg 2	N 8	O 6	0
14	J	1	Total 82	C 66	Mg 2	N 8	O 6	0
14	K	1	Total 104	C 84	Mg 2	N 8	O 10	0
14	K	1	Total 104	C 84	Mg 2	N 8	O 10	0
14	L	1	Total 195	C 165	Mg 3	N 12	O 15	0
14	L	1	Total 195	C 165	Mg 3	N 12	O 15	0
14	L	1	Total 195	C 165	Mg 3	N 12	O 15	0
14	M	1	Total 36	C 30	Mg 1	N 4	O 1	0
14	X	1	Total 45	C 35	Mg 1	N 4	O 5	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0
14	a	1	Total 2674	C 2244	Mg 43	N 172	O 215	0

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Mol	Chain	Residues	Atoms					AltConf
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0

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Mol	Chain	Residues	Atoms					AltConf
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	b	1	Total 2511	C 2101	Mg 41	N 164	O 205	0
14	f	1	Total 108	C 88	Mg 2	N 8	O 10	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
14	f	1	108	88	2	8	10	0
14	j	1	127	101	3	12	11	0
14	j	1	127	101	3	12	11	0
14	j	1	127	101	3	12	11	0
14	k	1	104	84	2	8	10	0
14	k	1	104	84	2	8	10	0
14	l	1	195	165	3	12	15	0
14	l	1	195	165	3	12	15	0
14	l	1	195	165	3	12	15	0
14	x	1	45	35	1	4	5	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0
14	1	1	Total 2710	C 2274	Mg 44	N 176	O 216	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	1	1	2710	2274	44	176	216	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0

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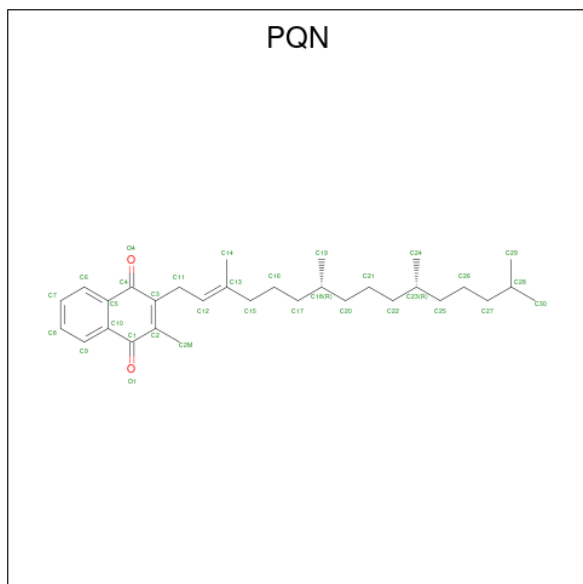
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			Total	C	Mg	N	O	
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14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	2	1	2511	2101	41	164	205	0
14	6	1	108	88	2	8	10	0
14	6	1	108	88	2	8	10	0
14	8	1	127	101	3	12	11	0
14	8	1	127	101	3	12	11	0
14	8	1	127	101	3	12	11	0
14	9	1	104	84	2	8	10	0
14	9	1	104	84	2	8	10	0
14	0	1	195	165	3	12	15	0
14	0	1	195	165	3	12	15	0
14	0	1	195	165	3	12	15	0

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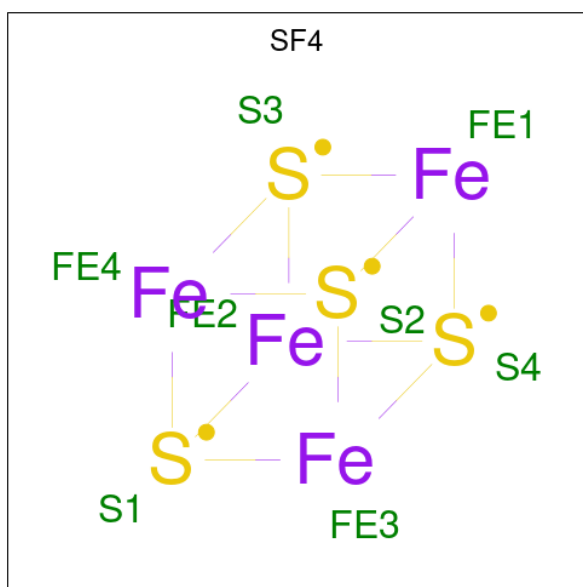
Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
14	z	1	45	35	1	4	5	0

- Molecule 15 is PHYLLOQUINONE (three-letter code: PQN) (formula: $C_{31}H_{46}O_2$).



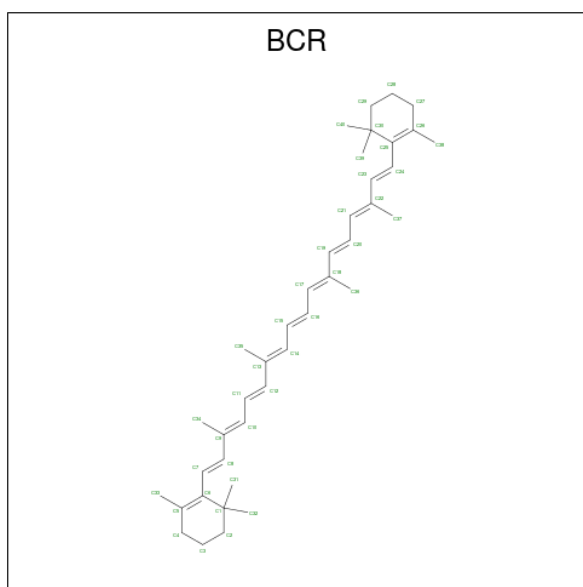
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
15	A	1	33	31	2	0
15	B	1	33	31	2	0
15	a	1	33	31	2	0
15	b	1	33	31	2	0
15	1	1	33	31	2	0
15	2	1	33	31	2	0

- Molecule 16 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe_4S_4).



Mol	Chain	Residues	Atoms			AltConf
			Total	Fe	S	
16	A	1	8	4	4	0
16	C	1	16	8	8	0
16	C	1	16	8	8	0
16	a	1	8	4	4	0
16	c	1	16	8	8	0
16	c	1	16	8	8	0
16	1	1	8	4	4	0
16	3	1	16	8	8	0
16	3	1	16	8	8	0

- Molecule 17 is BETA-CAROTENE (three-letter code: BCR) (formula: C₄₀H₅₆).



Mol	Chain	Residues	Atoms	AltConf
17	A	1	Total C 265 265	0
17	A	1	Total C 265 265	0
17	A	1	Total C 265 265	0
17	A	1	Total C 265 265	0
17	A	1	Total C 265 265	0
17	A	1	Total C 265 265	0
17	A	1	Total C 265 265	0
17	A	1	Total C 265 265	0
17	B	1	Total C 280 280	0
17	B	1	Total C 280 280	0
17	B	1	Total C 280 280	0
17	B	1	Total C 280 280	0
17	B	1	Total C 280 280	0
17	B	1	Total C 280 280	0
17	B	1	Total C 280 280	0

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Mol	Chain	Residues	Atoms		AltConf
17	F	1	Total 80	C 80	0
17	F	1	Total 80	C 80	0
17	I	1	Total 40	C 40	0
17	J	1	Total 40	C 40	0
17	K	1	Total 65	C 65	0
17	K	1	Total 65	C 65	0
17	L	1	Total 120	C 120	0
17	L	1	Total 120	C 120	0
17	L	1	Total 120	C 120	0
17	M	1	Total 40	C 40	0
17	a	1	Total 225	C 225	0
17	a	1	Total 225	C 225	0
17	a	1	Total 225	C 225	0
17	a	1	Total 225	C 225	0
17	a	1	Total 225	C 225	0
17	a	1	Total 225	C 225	0
17	b	1	Total 280	C 280	0
17	b	1	Total 280	C 280	0
17	b	1	Total 280	C 280	0
17	b	1	Total 280	C 280	0
17	b	1	Total 280	C 280	0

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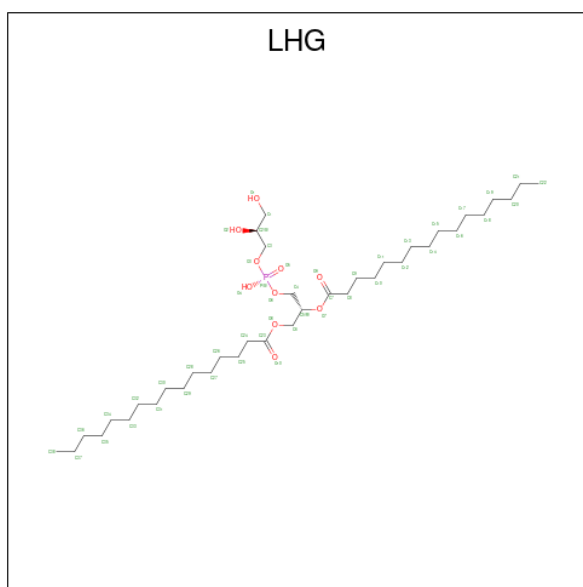
Mol	Chain	Residues	Atoms		AltConf
17	b	1	Total 280	C 280	0
17	b	1	Total 280	C 280	0
17	f	1	Total 80	C 80	0
17	f	1	Total 80	C 80	0
17	i	1	Total 40	C 40	0
17	j	1	Total 80	C 80	0
17	j	1	Total 80	C 80	0
17	k	1	Total 65	C 65	0
17	k	1	Total 65	C 65	0
17	l	1	Total 80	C 80	0
17	l	1	Total 80	C 80	0
17	m	1	Total 40	C 40	0
17	1	1	Total 225	C 225	0
17	1	1	Total 225	C 225	0
17	1	1	Total 225	C 225	0
17	1	1	Total 225	C 225	0
17	1	1	Total 225	C 225	0
17	1	1	Total 225	C 225	0
17	1	1	Total 225	C 225	0
17	2	1	Total 240	C 240	0
17	2	1	Total 240	C 240	0
17	2	1	Total 240	C 240	0

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Mol	Chain	Residues	Atoms		AltConf
17	2	1	Total 240	C 240	0
17	2	1	Total 240	C 240	0
17	2	1	Total 240	C 240	0
17	6	1	Total 80	C 80	0
17	6	1	Total 80	C 80	0
17	7	1	Total 40	C 40	0
17	8	1	Total 120	C 120	0
17	8	1	Total 120	C 120	0
17	8	1	Total 120	C 120	0
17	9	1	Total 65	C 65	0
17	9	1	Total 65	C 65	0
17	0	1	Total 160	C 160	0
17	0	1	Total 160	C 160	0
17	0	1	Total 160	C 160	0
17	0	1	Total 160	C 160	0
17	y	1	Total 40	C 40	0

- Molecule 18 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula: C₃₈H₇₅O₁₀P).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	O	P	
18	A	1	90	68	20	2	0
18	A	1	90	68	20	2	0
18	B	1	49	38	10	1	0
18	L	1	39	28	10	1	0
18	M	1	49	38	10	1	0
18	a	1	90	68	20	2	0
18	a	1	90	68	20	2	0
18	b	1	49	38	10	1	0
18	l	1	39	28	10	1	0
18	m	1	49	38	10	1	0
18	1	1	90	68	20	2	0
18	1	1	90	68	20	2	0
18	0	1	39	28	10	1	0
18	y	1	49	38	10	1	0

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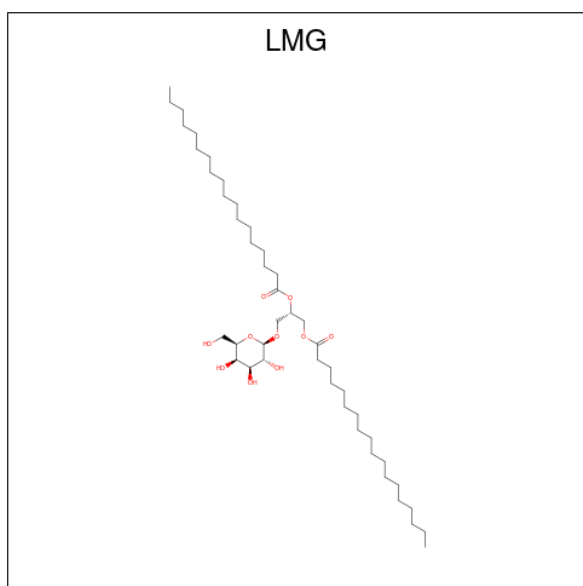
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Mol	Chain	Residues	Atoms				AltConf
			Total	C	O	P	
18	z	1	49	38	10	1	0

- Molecule 19 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		AltConf
19	B	1	Total	Ca	0
			1	1	
19	L	1	Total	Ca	0
			1	1	
19	b	1	Total	Ca	0
			1	1	
19	1	1	Total	Ca	0
			1	1	
19	2	1	Total	Ca	0
			1	1	
19	0	1	Total	Ca	0
			1	1	

- Molecule 20 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula: C₄₅H₈₆O₁₀).



Mol	Chain	Residues	Atoms			AltConf
20	B	1	Total	C	O	0
			55	45	10	
20	b	1	Total	C	O	0
			55	45	10	

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Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
20	2	1	55	45	10	0

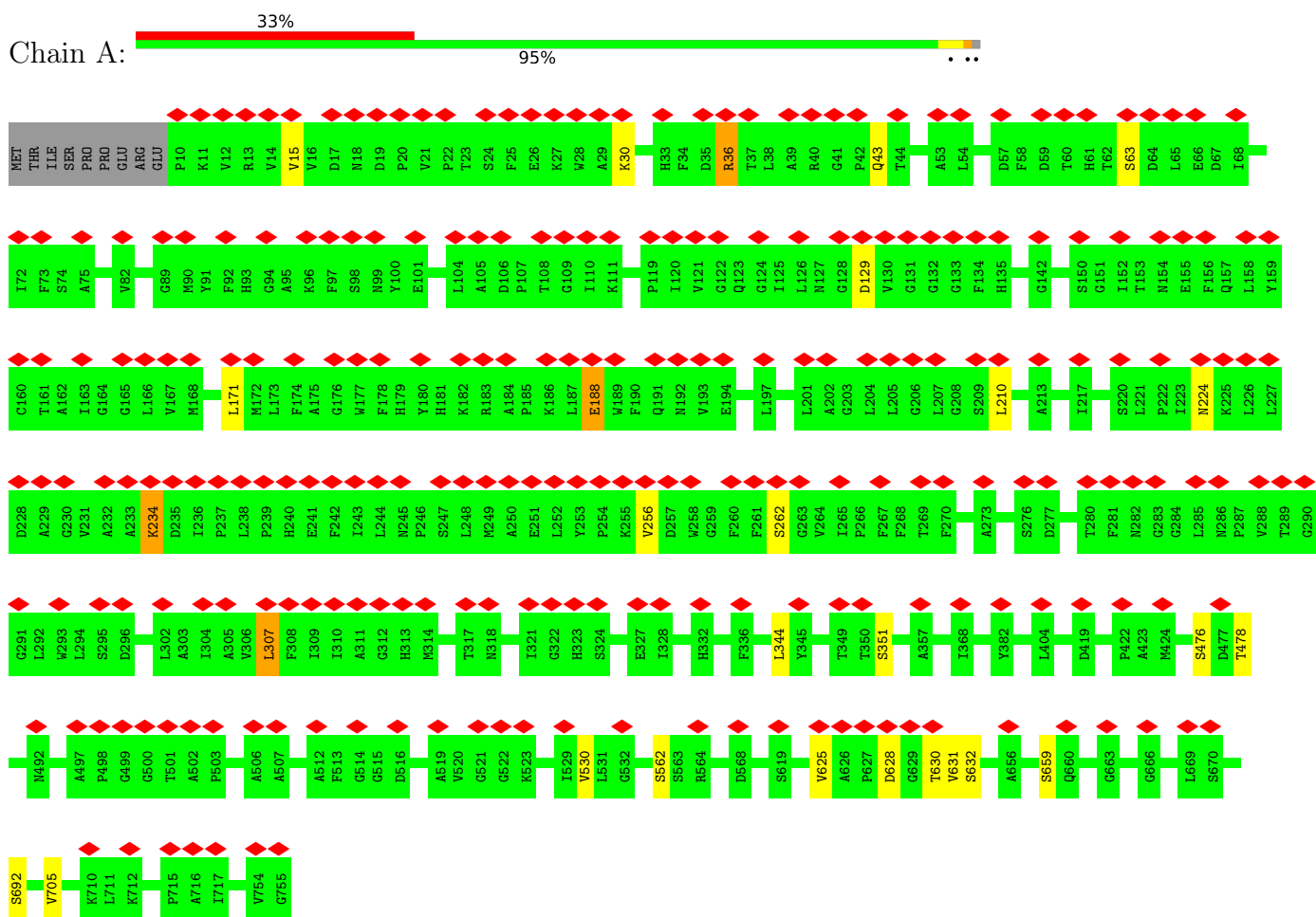
- Molecule 21 is water.

Mol	Chain	Residues	Atoms		AltConf
21	A	5	Total 5	O 5	0
21	B	8	Total 8	O 8	0
21	F	1	Total 1	O 1	0
21	J	1	Total 1	O 1	0
21	K	1	Total 1	O 1	0
21	L	1	Total 1	O 1	0
21	a	5	Total 5	O 5	0
21	b	8	Total 8	O 8	0
21	f	1	Total 1	O 1	0
21	j	1	Total 1	O 1	0
21	k	1	Total 1	O 1	0
21	l	1	Total 1	O 1	0
21	1	5	Total 5	O 5	0
21	2	8	Total 8	O 8	0
21	6	1	Total 1	O 1	0
21	8	1	Total 1	O 1	0
21	9	1	Total 1	O 1	0
21	0	1	Total 1	O 1	0

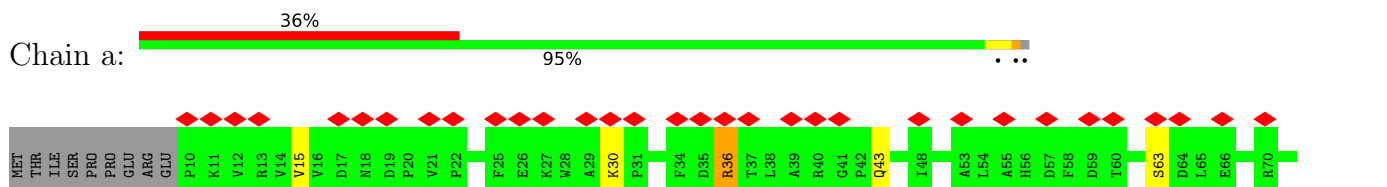
3 Residue-property plots [i](#)

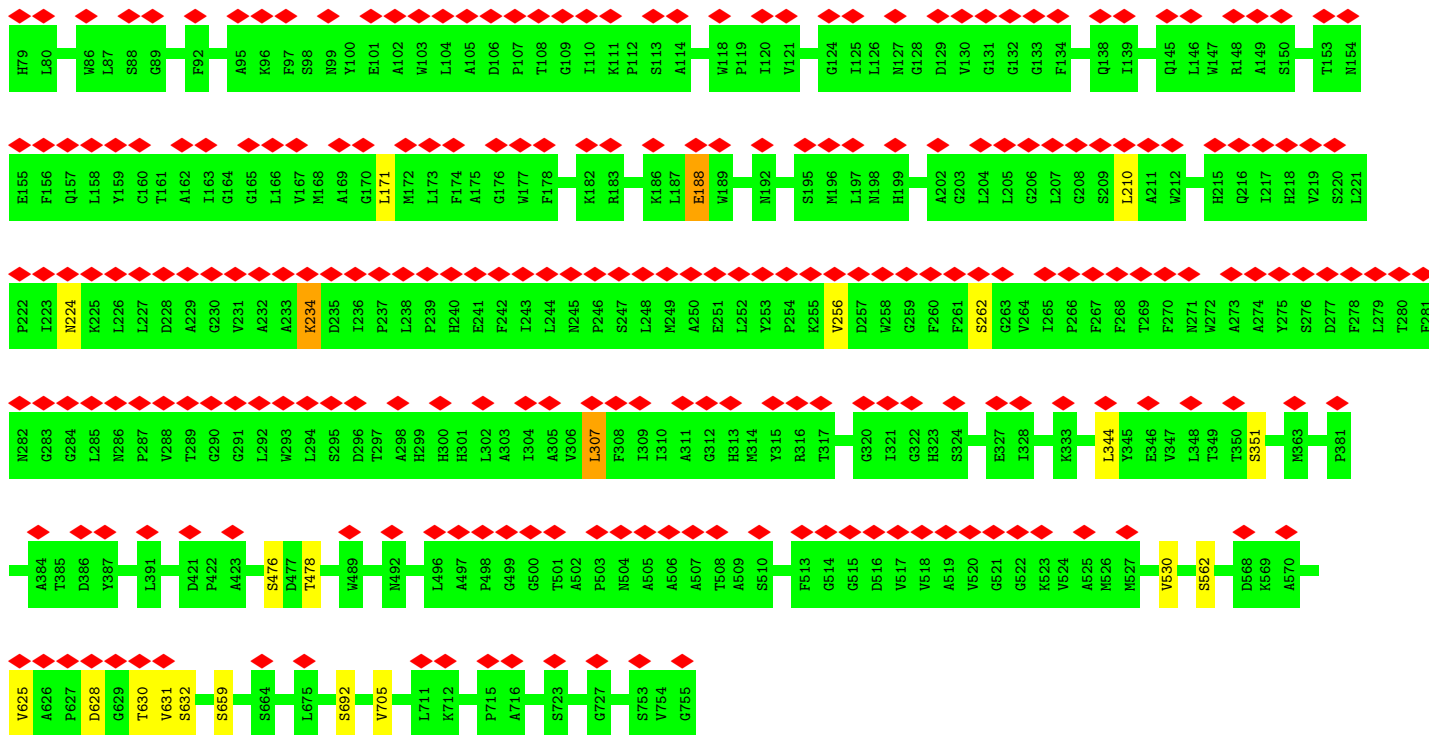
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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

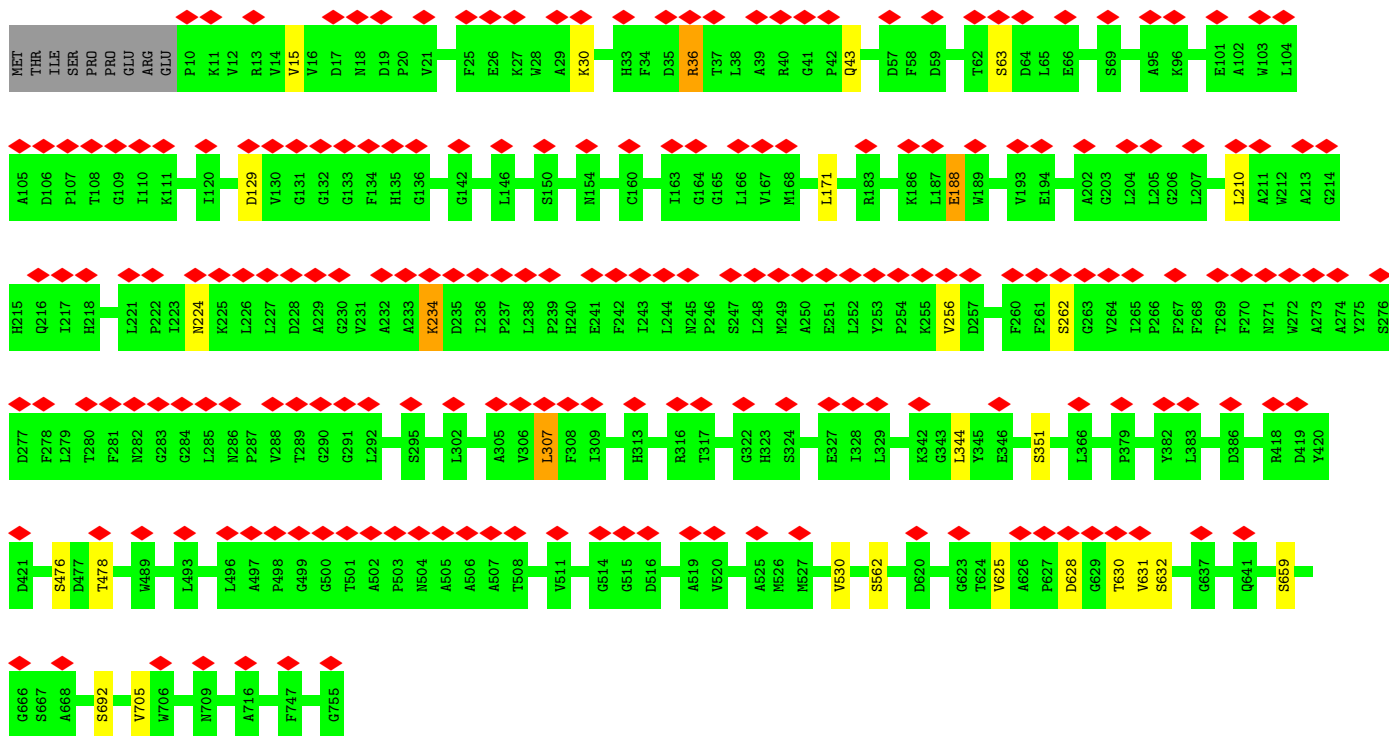
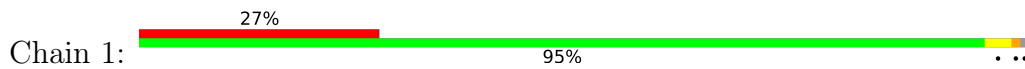


- Molecule 1: Photosystem I P700 chlorophyll a apoprotein A1





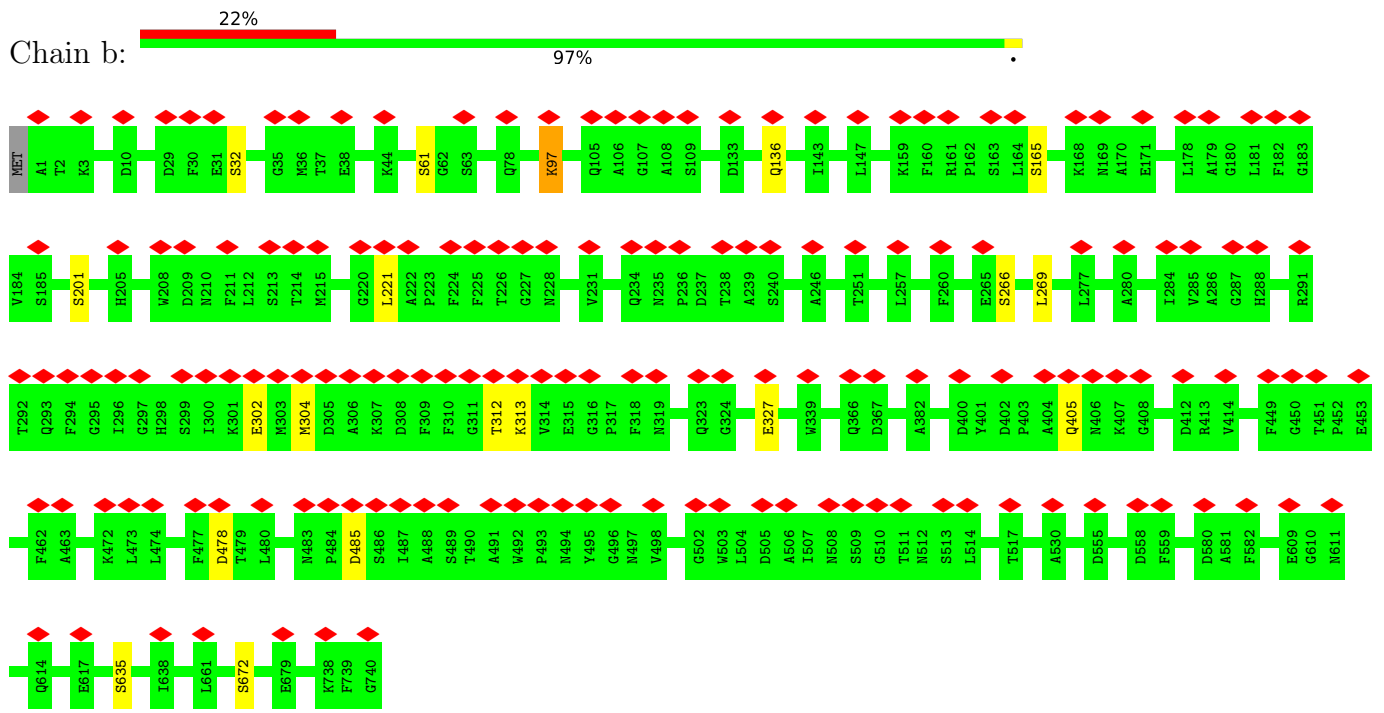
• Molecule 1: Photosystem I P700 chlorophyll a apoprotein A1



• Molecule 2: Photosystem I P700 chlorophyll a apoprotein A2

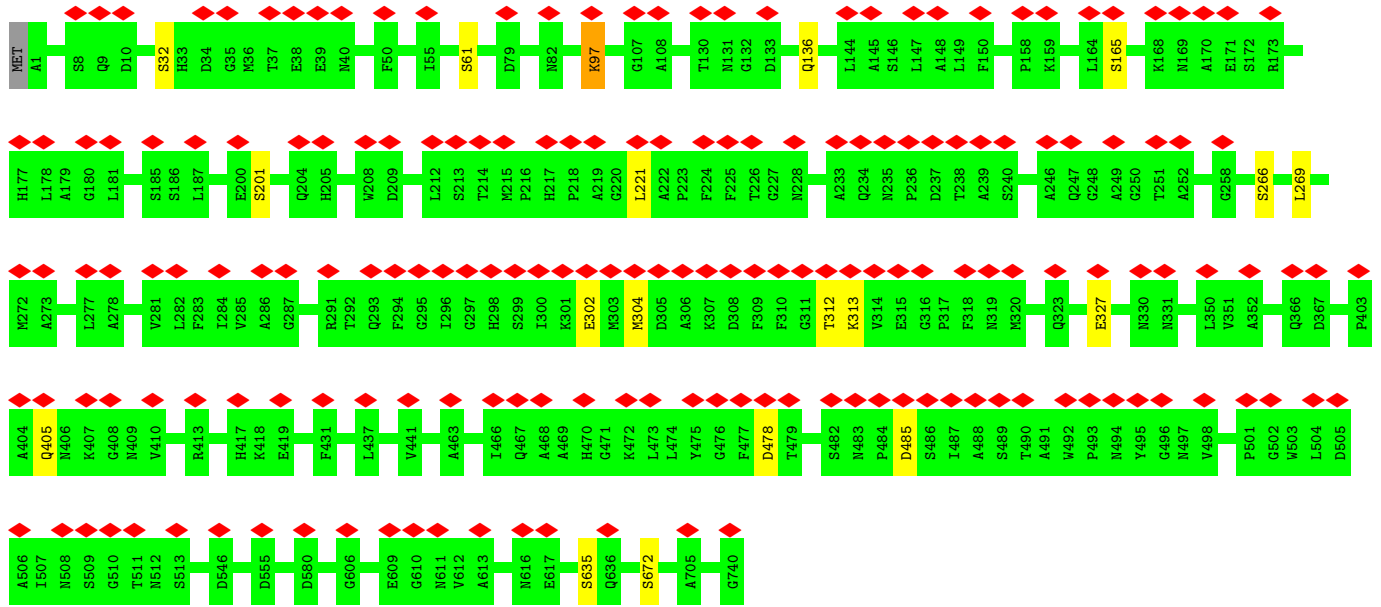


• Molecule 2: Photosystem I P700 chlorophyll a apoprotein A2

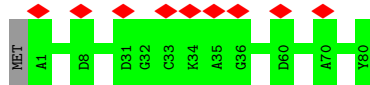


• Molecule 2: Photosystem I P700 chlorophyll a apoprotein A2

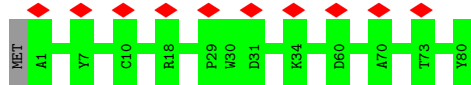




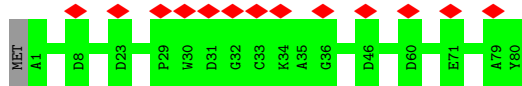
• Molecule 3: Photosystem I iron-sulfur center



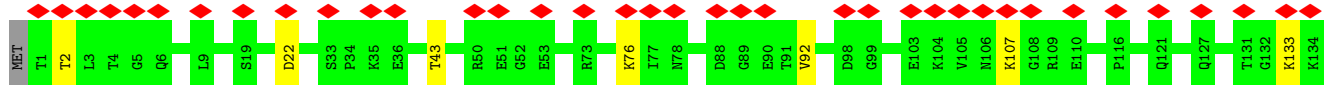
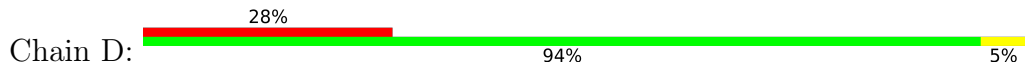
• Molecule 3: Photosystem I iron-sulfur center



• Molecule 3: Photosystem I iron-sulfur center

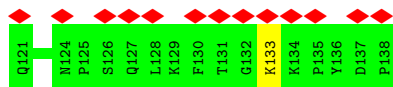
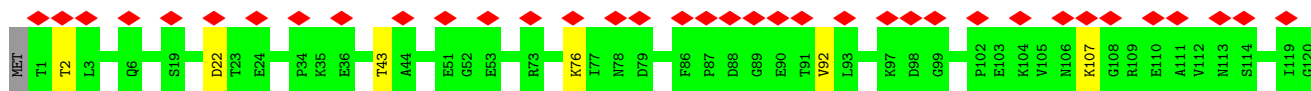
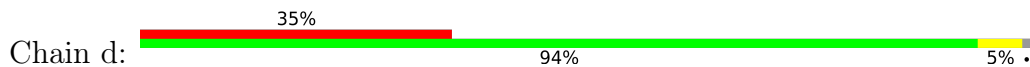


• Molecule 4: Photosystem I reaction center subunit II

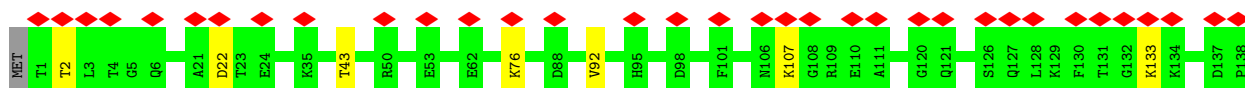
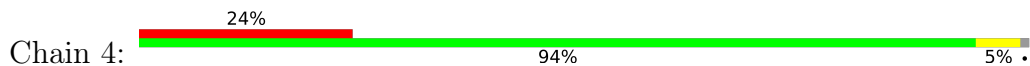




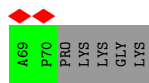
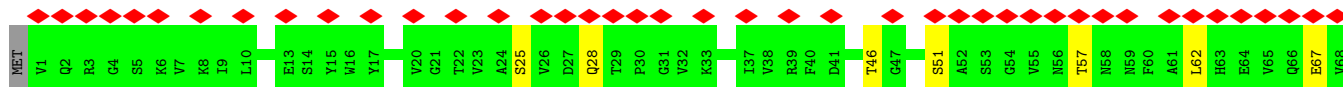
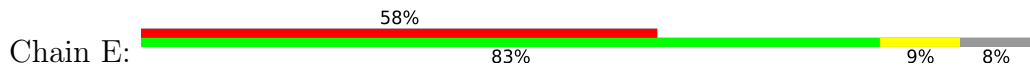
• Molecule 4: Photosystem I reaction center subunit II



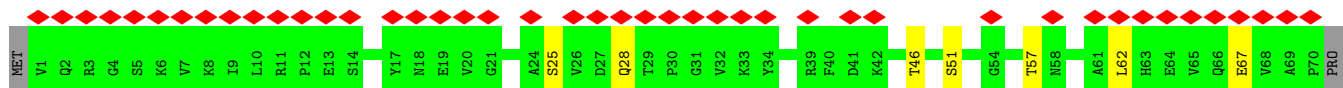
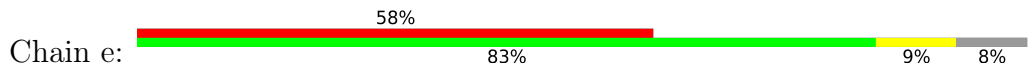
• Molecule 4: Photosystem I reaction center subunit II



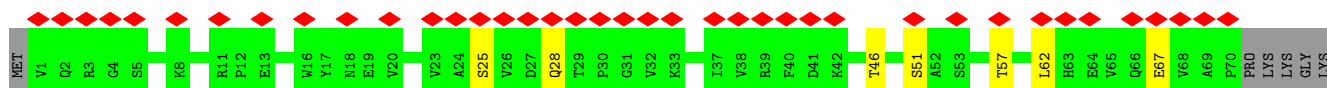
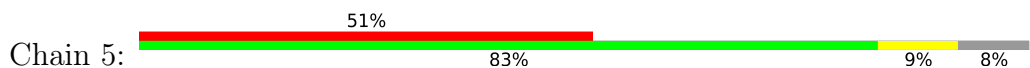
• Molecule 5: Photosystem I reaction center subunit IV



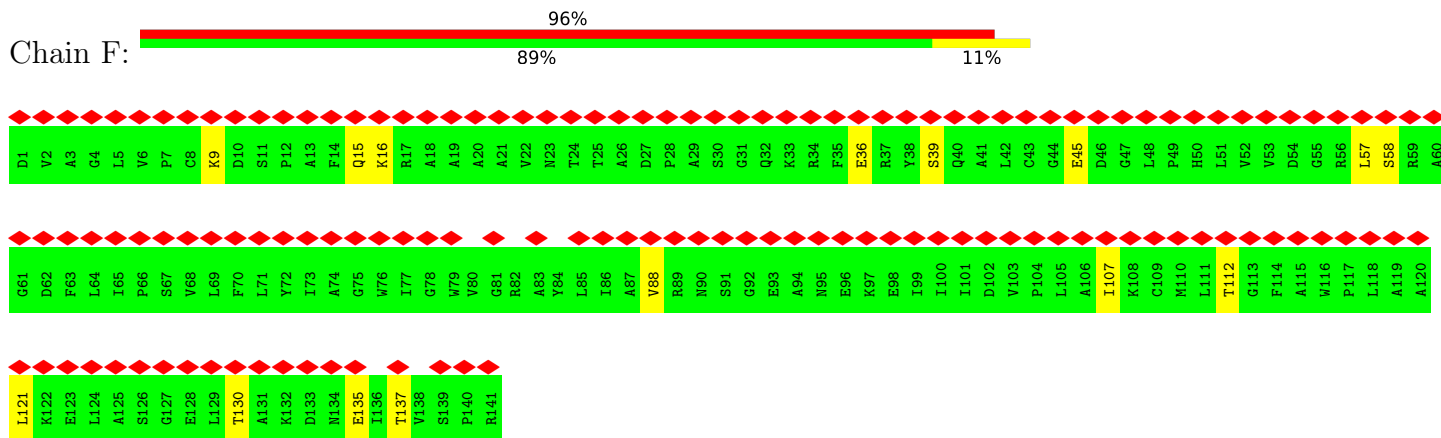
• Molecule 5: Photosystem I reaction center subunit IV



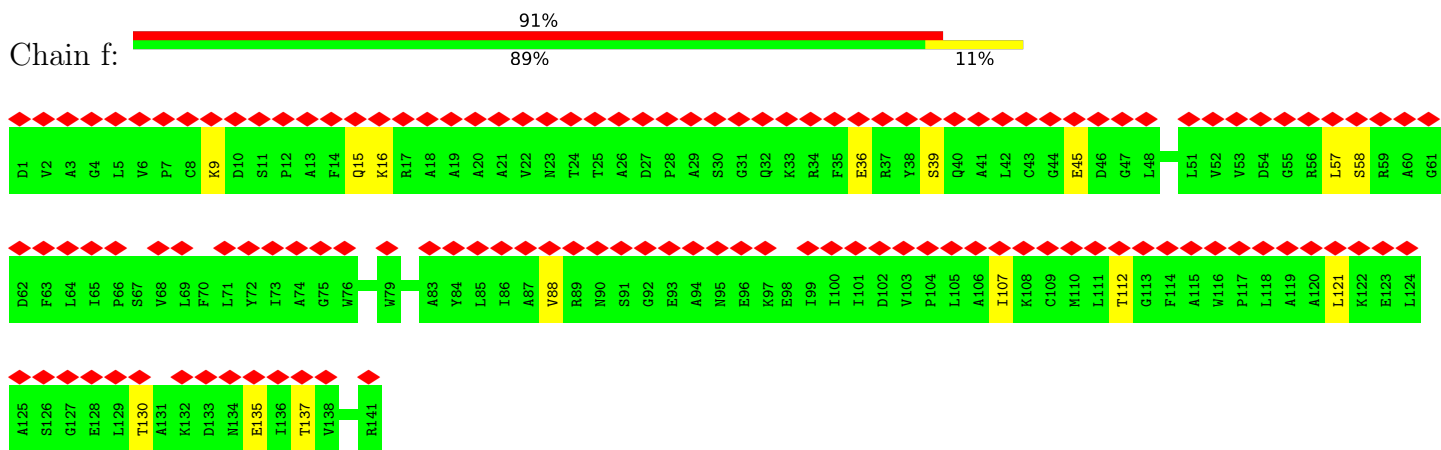
• Molecule 5: Photosystem I reaction center subunit IV



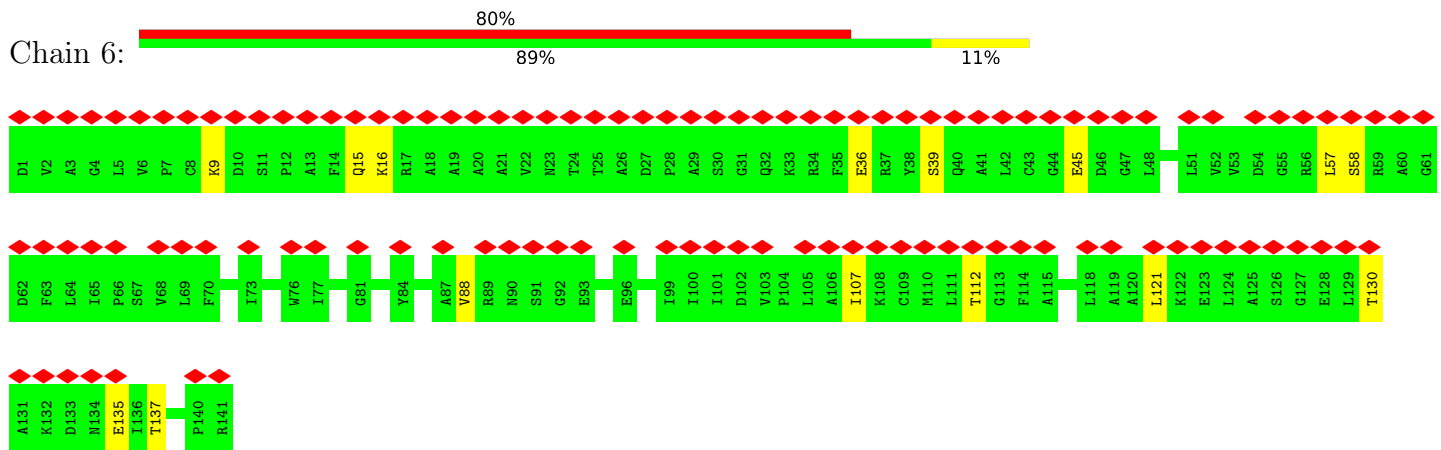
• Molecule 6: Photosystem I reaction center subunit III



• Molecule 6: Photosystem I reaction center subunit III

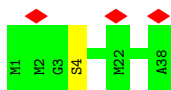


• Molecule 6: Photosystem I reaction center subunit III

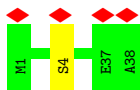


• Molecule 7: Photosystem I reaction center subunit VIII

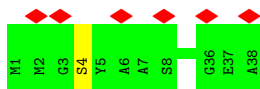




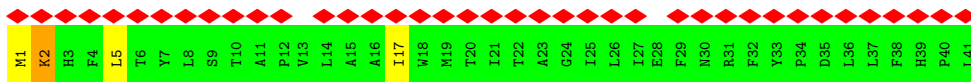
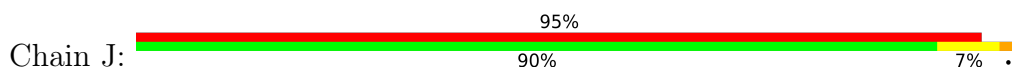
- Molecule 7: Photosystem I reaction center subunit VIII



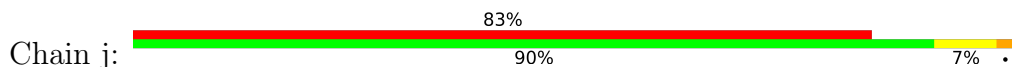
- Molecule 7: Photosystem I reaction center subunit VIII



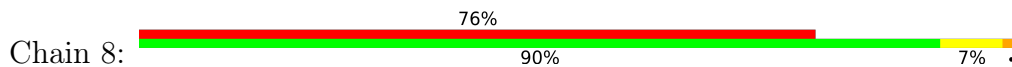
- Molecule 8: Photosystem I reaction center subunit IX



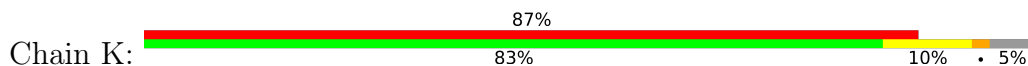
- Molecule 8: Photosystem I reaction center subunit IX

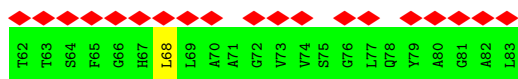


- Molecule 8: Photosystem I reaction center subunit IX

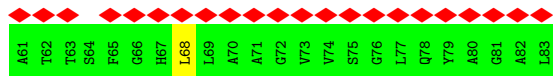
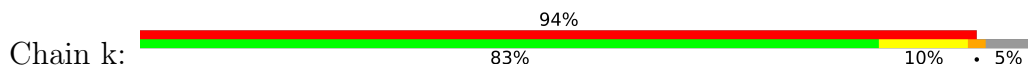


- Molecule 9: Photosystem I reaction center subunit PsaK

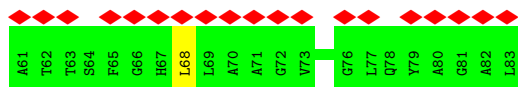
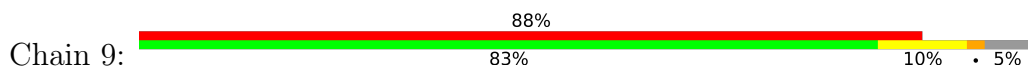




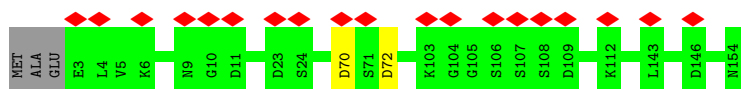
• Molecule 9: Photosystem I reaction center subunit PsaK



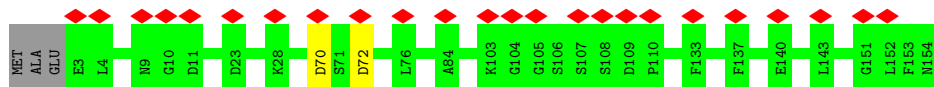
• Molecule 9: Photosystem I reaction center subunit PsaK



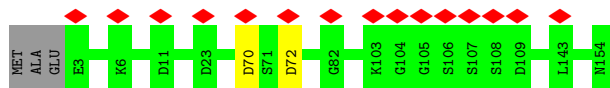
• Molecule 10: Photosystem I reaction center subunit XI



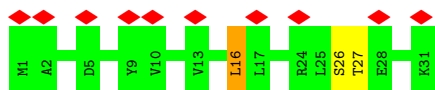
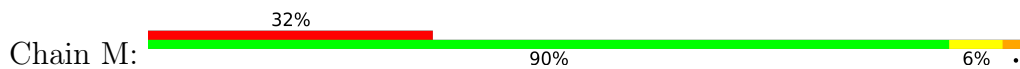
• Molecule 10: Photosystem I reaction center subunit XI



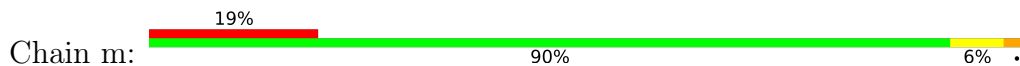
• Molecule 10: Photosystem I reaction center subunit XI



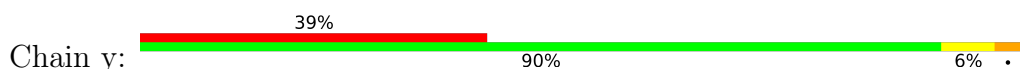
• Molecule 11: Photosystem I reaction center subunit XII



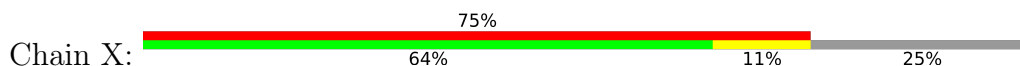
• Molecule 11: Photosystem I reaction center subunit XII



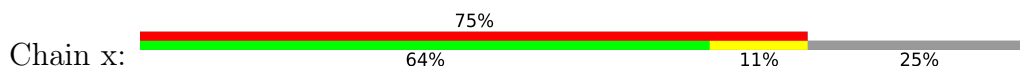
• Molecule 11: Photosystem I reaction center subunit XII



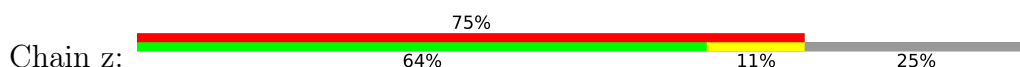
• Molecule 12: Photosystem I 4.8K protein



• Molecule 12: Photosystem I 4.8K protein



• Molecule 12: Photosystem I 4.8K protein



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	175999	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION; CTFFIND4 was used to estimate contrast transfer function parameters. CTF correction was done in Relion 3.0.	Depositor
Microscope	FEI POLARA 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	32	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.066	Depositor
Minimum map value	-0.067	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.002	Depositor
Recommended contour level	0.011	Depositor
Map size (Å)	351.68002, 351.68002, 351.68002	wwPDB
Map dimensions	560, 560, 560	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.628, 0.628, 0.628	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: CA, CL0, SF4, FME, PQN, LMG, CLA, BCR, LHG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	1	0.44	0/6027	0.54	6/8220 (0.1%)
1	A	0.44	0/6027	0.54	6/8220 (0.1%)
1	a	0.44	0/6027	0.54	6/8220 (0.1%)
2	2	0.44	0/6112	0.51	4/8350 (0.0%)
2	B	0.44	0/6112	0.51	4/8350 (0.0%)
2	b	0.44	0/6112	0.51	4/8350 (0.0%)
3	3	0.45	0/608	0.50	0/824
3	C	0.45	0/608	0.49	0/824
3	c	0.45	0/608	0.50	0/824
4	4	0.43	0/1101	0.70	2/1492 (0.1%)
4	D	0.43	0/1101	0.70	2/1492 (0.1%)
4	d	0.43	0/1101	0.70	2/1492 (0.1%)
5	5	0.39	0/559	0.60	1/762 (0.1%)
5	E	0.39	0/559	0.60	1/762 (0.1%)
5	e	0.39	0/559	0.60	1/762 (0.1%)
6	6	0.44	0/1087	0.99	6/1476 (0.4%)
6	F	0.44	0/1087	0.99	6/1476 (0.4%)
6	f	0.44	0/1087	0.99	6/1476 (0.4%)
7	7	0.50	0/304	0.56	0/415
7	I	0.50	0/304	0.55	0/415
7	i	0.50	0/304	0.55	0/415
8	8	0.37	0/342	0.65	1/467 (0.2%)
8	J	0.37	0/342	0.65	1/467 (0.2%)
8	j	0.37	0/342	0.65	1/467 (0.2%)
9	9	0.36	0/585	1.01	7/800 (0.9%)
9	K	0.36	0/585	1.02	7/800 (0.9%)
9	k	0.36	0/585	1.02	7/800 (0.9%)
10	0	0.50	0/1153	0.49	0/1565
10	L	0.50	0/1153	0.49	0/1565
10	l	0.50	0/1153	0.49	0/1565
11	M	0.42	0/244	0.54	1/332 (0.3%)
11	m	0.42	0/244	0.54	1/332 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
11	y	0.42	0/244	0.54	1/332 (0.3%)
12	X	0.47	0/236	1.77	5/321 (1.6%)
12	x	0.47	0/236	1.77	5/321 (1.6%)
12	z	0.48	0/236	1.77	5/321 (1.6%)
All	All	0.44	0/55074	0.63	99/75072 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
9	9	0	1
9	K	0	1
9	k	0	1
All	All	0	3

There are no bond length outliers.

The worst 5 of 99 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	z	25	LEU	CA-CB-CG	17.61	155.81	115.30
12	X	25	LEU	CA-CB-CG	17.61	155.79	115.30
12	x	25	LEU	CA-CB-CG	17.60	155.77	115.30
6	f	121	LEU	CA-CB-CG	16.85	154.04	115.30
6	F	121	LEU	CA-CB-CG	16.84	154.03	115.30

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
9	9	47	LEU	Peptide
9	K	47	LEU	Peptide
9	k	47	LEU	Peptide

5.2 Too-close contacts [i](#)

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

5.3 Torsion angles

5.3.1 Protein backbone

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	1	744/755 (98%)	684 (92%)	60 (8%)	0	100	100
1	A	744/755 (98%)	684 (92%)	60 (8%)	0	100	100
1	a	744/755 (98%)	684 (92%)	60 (8%)	0	100	100
2	2	738/741 (100%)	679 (92%)	59 (8%)	0	100	100
2	B	738/741 (100%)	679 (92%)	59 (8%)	0	100	100
2	b	738/741 (100%)	679 (92%)	59 (8%)	0	100	100
3	3	78/81 (96%)	73 (94%)	5 (6%)	0	100	100
3	C	78/81 (96%)	73 (94%)	5 (6%)	0	100	100
3	c	78/81 (96%)	73 (94%)	5 (6%)	0	100	100
4	4	136/139 (98%)	121 (89%)	15 (11%)	0	100	100
4	D	136/139 (98%)	121 (89%)	15 (11%)	0	100	100
4	d	136/139 (98%)	120 (88%)	16 (12%)	0	100	100
5	5	68/76 (90%)	62 (91%)	6 (9%)	0	100	100
5	E	68/76 (90%)	62 (91%)	6 (9%)	0	100	100
5	e	68/76 (90%)	62 (91%)	6 (9%)	0	100	100
6	6	139/141 (99%)	113 (81%)	26 (19%)	0	100	100
6	F	139/141 (99%)	112 (81%)	27 (19%)	0	100	100
6	f	139/141 (99%)	113 (81%)	26 (19%)	0	100	100
7	7	36/38 (95%)	33 (92%)	3 (8%)	0	100	100
7	I	36/38 (95%)	33 (92%)	3 (8%)	0	100	100
7	i	36/38 (95%)	33 (92%)	3 (8%)	0	100	100
8	8	39/41 (95%)	35 (90%)	3 (8%)	1 (3%)	5	28
8	J	39/41 (95%)	35 (90%)	3 (8%)	1 (3%)	5	28
8	j	39/41 (95%)	35 (90%)	3 (8%)	1 (3%)	5	28
9	9	77/83 (93%)	68 (88%)	9 (12%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	K	77/83 (93%)	68 (88%)	9 (12%)	0	100	100
9	k	77/83 (93%)	68 (88%)	9 (12%)	0	100	100
10	0	150/155 (97%)	143 (95%)	7 (5%)	0	100	100
10	L	150/155 (97%)	143 (95%)	7 (5%)	0	100	100
10	l	150/155 (97%)	143 (95%)	7 (5%)	0	100	100
11	M	29/31 (94%)	27 (93%)	2 (7%)	0	100	100
11	m	29/31 (94%)	27 (93%)	2 (7%)	0	100	100
11	y	29/31 (94%)	27 (93%)	2 (7%)	0	100	100
12	X	25/36 (69%)	23 (92%)	2 (8%)	0	100	100
12	x	25/36 (69%)	23 (92%)	2 (8%)	0	100	100
12	z	25/36 (69%)	23 (92%)	2 (8%)	0	100	100
All	All	6777/6951 (98%)	6181 (91%)	593 (9%)	3 (0%)	100	100

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
8	J	2	LYS
8	j	2	LYS
8	8	2	LYS

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	1	594/603 (98%)	568 (96%)	26 (4%)	28	61
1	A	594/603 (98%)	568 (96%)	26 (4%)	28	61
1	a	594/603 (98%)	569 (96%)	25 (4%)	30	62
2	2	597/598 (100%)	579 (97%)	18 (3%)	41	71
2	B	597/598 (100%)	579 (97%)	18 (3%)	41	71
2	b	597/598 (100%)	579 (97%)	18 (3%)	41	71

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	3	67/68 (98%)	67 (100%)	0	100	100
3	C	67/68 (98%)	67 (100%)	0	100	100
3	c	67/68 (98%)	67 (100%)	0	100	100
4	4	115/116 (99%)	110 (96%)	5 (4%)	29	62
4	D	115/116 (99%)	110 (96%)	5 (4%)	29	62
4	d	115/116 (99%)	110 (96%)	5 (4%)	29	62
5	5	60/65 (92%)	54 (90%)	6 (10%)	7	28
5	E	60/65 (92%)	54 (90%)	6 (10%)	7	28
5	e	60/65 (92%)	54 (90%)	6 (10%)	7	28
6	6	109/109 (100%)	97 (89%)	12 (11%)	6	24
6	F	109/109 (100%)	97 (89%)	12 (11%)	6	24
6	f	109/109 (100%)	97 (89%)	12 (11%)	6	24
7	7	31/31 (100%)	30 (97%)	1 (3%)	39	70
7	I	31/31 (100%)	30 (97%)	1 (3%)	39	70
7	i	31/31 (100%)	30 (97%)	1 (3%)	39	70
8	8	35/35 (100%)	33 (94%)	2 (6%)	20	53
8	J	35/35 (100%)	33 (94%)	2 (6%)	20	53
8	j	35/35 (100%)	33 (94%)	2 (6%)	20	53
9	9	58/61 (95%)	51 (88%)	7 (12%)	5	20
9	K	58/61 (95%)	51 (88%)	7 (12%)	5	20
9	k	58/61 (95%)	51 (88%)	7 (12%)	5	20
10	0	117/120 (98%)	115 (98%)	2 (2%)	60	82
10	L	117/120 (98%)	115 (98%)	2 (2%)	60	82
10	l	117/120 (98%)	115 (98%)	2 (2%)	60	82
11	M	26/26 (100%)	23 (88%)	3 (12%)	5	22
11	m	26/26 (100%)	23 (88%)	3 (12%)	5	22
11	y	26/26 (100%)	23 (88%)	3 (12%)	5	22
12	X	21/28 (75%)	19 (90%)	2 (10%)	8	30
12	x	21/28 (75%)	19 (90%)	2 (10%)	8	30
12	z	21/28 (75%)	19 (90%)	2 (10%)	8	30
All	All	5490/5580 (98%)	5239 (95%)	251 (5%)	31	60

5 of 251 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	b	266	SER
5	5	67	GLU
6	f	58	SER
5	5	51	SER
8	8	17	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 66 such sidechains are listed below:

Mol	Chain	Res	Type
2	2	642	ASN
4	4	71	GLN
10	0	75	ASN
10	L	75	ASN
9	K	23	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

6 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	$\# Z > 2$
7	FME	i	1	7	8,9,10	1.00	0	7,9,11	0.82	0
8	FME	8	1	8	8,9,10	1.02	0	7,9,11	1.37	2 (28%)
7	FME	I	1	7	8,9,10	0.98	0	7,9,11	0.83	0
8	FME	J	1	8	8,9,10	1.01	0	7,9,11	1.37	2 (28%)
8	FME	j	1	8	8,9,10	1.01	0	7,9,11	1.37	2 (28%)
7	FME	7	1	7	8,9,10	0.98	0	7,9,11	0.83	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
7	FME	i	1	7	-	1/7/9/11	-
8	FME	8	1	8	-	1/7/9/11	-
7	FME	I	1	7	-	1/7/9/11	-
8	FME	J	1	8	-	1/7/9/11	-
8	FME	j	1	8	-	1/7/9/11	-
7	FME	7	1	7	-	1/7/9/11	-

There are no bond length outliers.

The worst 5 of 6 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	j	1	FME	C-CA-N	2.57	114.36	109.73
8	8	1	FME	C-CA-N	2.56	114.36	109.73
8	J	1	FME	C-CA-N	2.56	114.34	109.73
8	j	1	FME	O-C-CA	-2.06	119.38	124.78
8	J	1	FME	O-C-CA	-2.06	119.38	124.78

There are no chirality outliers.

5 of 6 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
8	J	1	FME	CB-CA-N-CN
8	j	1	FME	CB-CA-N-CN
8	8	1	FME	CB-CA-N-CN
7	I	1	FME	N-CA-CB-CG
7	i	1	FME	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

Of 402 ligands modelled in this entry, 6 are monoatomic - leaving 396 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
18	LHG	B	850	-	48,48,48	0.61	1 (2%)	51,54,54	1.20	5 (9%)
17	BCR	L	206	-	41,41,41	1.21	3 (7%)	56,56,56	1.34	7 (12%)
14	CLA	b	813	-	45,53,73	1.80	8 (17%)	52,89,113	1.62	7 (13%)
14	CLA	j	1302	-	45,53,73	1.78	5 (11%)	52,89,113	1.59	8 (15%)
14	CLA	A	838	-	65,73,73	1.41	7 (10%)	76,113,113	1.61	7 (9%)
14	CLA	X	1701	12	45,53,73	1.81	6 (13%)	52,89,113	1.60	6 (11%)
14	CLA	1	1604	21	65,73,73	1.54	9 (13%)	76,113,113	1.30	8 (10%)
14	CLA	b	840	-	47,55,73	1.79	9 (19%)	54,91,113	1.48	7 (12%)
20	LMG	b	850	-	55,55,55	0.92	4 (7%)	63,63,63	1.35	10 (15%)
17	BCR	7	101	-	41,41,41	1.29	4 (9%)	56,56,56	1.24	3 (5%)
14	CLA	B	840	21	65,73,73	1.47	9 (13%)	76,113,113	1.43	10 (13%)
14	CLA	B	834	-	65,73,73	1.47	6 (9%)	76,113,113	1.45	9 (11%)
14	CLA	a	806	-	65,73,73	1.46	10 (15%)	76,113,113	1.59	12 (15%)
18	LHG	z	101	-	48,48,48	0.61	1 (2%)	51,54,54	1.20	5 (9%)
14	CLA	B	806	-	65,73,73	1.48	9 (13%)	76,113,113	1.40	8 (10%)
14	CLA	2	822	-	45,53,73	1.72	7 (15%)	52,89,113	1.78	9 (17%)
17	BCR	a	851	-	41,41,41	1.27	3 (7%)	56,56,56	1.29	7 (12%)
14	CLA	b	821	-	65,73,73	1.50	7 (10%)	76,113,113	1.34	8 (10%)
14	CLA	1	1609	-	51,59,73	1.66	9 (17%)	59,96,113	1.55	8 (13%)
14	CLA	K	101	-	46,54,73	1.74	7 (15%)	53,90,113	1.57	7 (13%)
14	CLA	a	826	21	65,73,73	1.46	9 (13%)	76,113,113	1.50	9 (11%)
14	CLA	2	833	-	65,73,73	1.49	8 (12%)	76,113,113	1.44	8 (10%)
14	CLA	b	828	-	65,73,73	1.50	8 (12%)	76,113,113	1.43	7 (9%)
14	CLA	1	1620	-	65,73,73	1.50	8 (12%)	76,113,113	1.47	9 (11%)
17	BCR	L	201	-	41,41,41	1.39	4 (9%)	56,56,56	1.33	7 (12%)
14	CLA	b	802	21	65,73,73	1.42	7 (10%)	76,113,113	1.60	8 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
14	CLA	6	201	21	58,66,73	1.58	7 (12%)	67,104,113	1.47	8 (11%)
17	BCR	b	852	-	41,41,41	1.21	2 (4%)	56,56,56	1.33	9 (16%)
14	CLA	a	819	-	65,73,73	1.49	8 (12%)	76,113,113	1.47	10 (13%)
14	CLA	6	203	-	50,58,73	1.72	5 (10%)	58,95,113	1.52	8 (13%)
14	CLA	8	1303	-	38,45,73	1.91	8 (21%)	43,78,113	1.68	7 (16%)
14	CLA	b	816	-	65,73,73	1.45	7 (10%)	76,113,113	1.39	7 (9%)
14	CLA	A	832	-	60,68,73	1.53	10 (16%)	70,107,113	1.43	6 (8%)
14	CLA	F	203	21	45,53,73	1.77	7 (15%)	52,89,113	1.68	7 (13%)
14	CLA	B	816	-	65,73,73	1.44	6 (9%)	76,113,113	1.48	8 (10%)
14	CLA	2	818	-	65,73,73	1.50	9 (13%)	76,113,113	1.49	9 (11%)
14	CLA	a	804	-	65,73,73	1.41	7 (10%)	76,113,113	1.50	7 (9%)
14	CLA	B	811	-	65,73,73	1.44	7 (10%)	76,113,113	1.54	9 (11%)
14	CLA	B	804	-	65,73,73	1.49	9 (13%)	76,113,113	1.46	11 (14%)
14	CLA	B	827	-	65,73,73	1.50	8 (12%)	76,113,113	1.43	7 (9%)
14	CLA	b	803	-	65,73,73	1.43	10 (15%)	76,113,113	1.44	8 (10%)
17	BCR	2	849	-	41,41,41	1.39	4 (9%)	56,56,56	1.29	6 (10%)
14	CLA	A	822	21	65,73,73	1.47	7 (10%)	76,113,113	1.46	7 (9%)
13	CL0	1	1602	-	65,73,73	1.45	10 (15%)	76,113,113	1.47	8 (10%)
14	CLA	0	206	-	65,73,73	1.45	10 (15%)	76,113,113	1.52	9 (11%)
14	CLA	A	818	-	65,73,73	1.46	6 (9%)	76,113,113	1.44	7 (9%)
14	CLA	1	1603	-	65,73,73	1.44	8 (12%)	76,113,113	1.54	8 (10%)
14	CLA	1	1608	-	65,73,73	1.43	7 (10%)	76,113,113	1.53	5 (6%)
14	CLA	a	802	-	65,73,73	1.45	8 (12%)	76,113,113	1.54	8 (10%)
14	CLA	a	838	-	65,73,73	1.42	7 (10%)	76,113,113	1.61	7 (9%)
14	CLA	b	830	-	65,73,73	1.44	12 (18%)	76,113,113	1.57	10 (13%)
15	PQN	B	842	-	34,34,34	0.45	0	42,45,45	0.38	0
14	CLA	2	805	-	65,73,73	1.50	9 (13%)	76,113,113	1.46	11 (14%)
14	CLA	1	1605	-	65,73,73	1.42	7 (10%)	76,113,113	1.49	7 (9%)
14	CLA	a	816	-	65,73,73	1.47	6 (9%)	76,113,113	1.39	7 (9%)
14	CLA	B	828	-	65,73,73	1.51	8 (12%)	76,113,113	1.30	7 (9%)
17	BCR	6	202	-	41,41,41	1.25	3 (7%)	56,56,56	1.25	6 (10%)
14	CLA	A	821	-	65,73,73	1.45	6 (9%)	76,113,113	1.51	7 (9%)
14	CLA	A	843	21	65,73,73	1.49	9 (13%)	76,113,113	1.42	7 (9%)
13	CL0	a	801	-	65,73,73	1.44	10 (15%)	76,113,113	1.46	8 (10%)
14	CLA	b	834	-	65,73,73	1.47	9 (13%)	76,113,113	1.45	7 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
14	CLA	2	829	-	65,73,73	1.51	8 (12%)	76,113,113	1.30	7 (9%)
17	BCR	f	202	-	41,41,41	1.24	3 (7%)	56,56,56	1.26	6 (10%)
17	BCR	k	104	-	25,25,41	1.14	1 (4%)	33,33,56	1.15	4 (12%)
17	BCR	I	101	-	41,41,41	1.28	4 (9%)	56,56,56	1.25	3 (5%)
14	CLA	A	813	-	45,53,73	1.78	8 (17%)	52,89,113	1.63	8 (15%)
17	BCR	1	1650	-	41,41,41	1.22	2 (4%)	56,56,56	1.20	6 (10%)
14	CLA	b	811	2	65,73,73	1.44	9 (13%)	76,113,113	1.52	8 (10%)
14	CLA	2	810	2	65,73,73	1.46	11 (16%)	76,113,113	1.60	9 (11%)
14	CLA	b	804	-	65,73,73	1.43	11 (16%)	76,113,113	1.51	8 (10%)
17	BCR	a	847	-	41,41,41	1.15	2 (4%)	56,56,56	1.30	7 (12%)
17	BCR	A	852	-	25,25,41	1.13	1 (4%)	33,33,56	1.28	4 (12%)
15	PQN	1	1646	-	34,34,34	0.40	0	42,45,45	0.36	0
14	CLA	1	1625	-	65,73,73	1.52	8 (12%)	76,113,113	1.39	9 (11%)
14	CLA	A	816	-	65,73,73	1.47	6 (9%)	76,113,113	1.39	7 (9%)
14	CLA	2	821	-	65,73,73	1.49	7 (10%)	76,113,113	1.32	7 (9%)
17	BCR	2	844	-	41,41,41	1.17	2 (4%)	56,56,56	1.22	4 (7%)
14	CLA	a	809	1	65,73,73	1.46	9 (13%)	76,113,113	1.51	9 (11%)
18	LHG	M	101	-	48,48,48	0.70	2 (4%)	51,54,54	1.22	3 (5%)
14	CLA	b	831	-	55,63,73	1.60	9 (16%)	64,101,113	1.49	9 (14%)
14	CLA	2	837	21	45,53,73	1.81	7 (15%)	52,89,113	1.51	5 (9%)
14	CLA	a	811	-	49,57,73	1.70	8 (16%)	55,93,113	1.49	8 (14%)
14	CLA	1	1633	-	60,68,73	1.52	10 (16%)	70,107,113	1.44	6 (8%)
14	CLA	1	1622	-	65,73,73	1.45	6 (9%)	76,113,113	1.52	7 (9%)
14	CLA	a	834	-	65,73,73	1.45	7 (10%)	76,113,113	1.59	12 (15%)
14	CLA	1	1632	-	65,73,73	1.51	9 (13%)	76,113,113	1.50	9 (11%)
14	CLA	2	826	21	65,73,73	1.50	9 (13%)	76,113,113	1.53	10 (13%)
14	CLA	1	1613	14	65,73,73	1.47	7 (10%)	76,113,113	1.36	7 (9%)
17	BCR	a	850	-	41,41,41	1.34	4 (9%)	56,56,56	1.29	7 (12%)
18	LHG	m	101	-	48,48,48	0.70	2 (4%)	51,54,54	1.22	3 (5%)
17	BCR	0	209	-	41,41,41	1.18	3 (7%)	56,56,56	1.28	7 (12%)
14	CLA	1	1629	-	65,73,73	1.47	7 (10%)	76,113,113	1.38	8 (10%)
14	CLA	b	822	-	45,53,73	1.73	7 (15%)	52,89,113	1.78	9 (17%)
14	CLA	2	811	2	65,73,73	1.45	9 (13%)	76,113,113	1.51	9 (11%)
14	CLA	a	830	-	65,73,73	1.41	9 (13%)	76,113,113	1.54	7 (9%)
14	CLA	b	824	-	45,53,73	1.74	7 (15%)	52,89,113	1.71	7 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
14	CLA	L	204	-	65,73,73	1.46	10 (15%)	76,113,113	1.53	9 (11%)
15	PQN	A	845	-	34,34,34	0.39	0	42,45,45	0.35	0
14	CLA	B	822	21	55,63,73	1.63	7 (12%)	64,101,113	1.47	6 (9%)
14	CLA	2	823	21	55,63,73	1.62	7 (12%)	64,101,113	1.46	6 (9%)
17	BCR	K	104	-	25,25,41	1.15	1 (4%)	33,33,56	1.15	4 (12%)
17	BCR	6	204	-	41,41,41	1.18	2 (4%)	56,56,56	1.36	8 (14%)
14	CLA	2	806	-	65,73,73	1.44	7 (10%)	76,113,113	1.58	8 (10%)
14	CLA	1	1623	21	65,73,73	1.48	7 (10%)	76,113,113	1.46	7 (9%)
14	CLA	a	843	21	65,73,73	1.50	9 (13%)	76,113,113	1.42	7 (9%)
14	CLA	1	1644	21	65,73,73	1.50	9 (13%)	76,113,113	1.42	7 (9%)
17	BCR	f	204	-	41,41,41	1.19	2 (4%)	56,56,56	1.36	8 (14%)
14	CLA	k	101	-	46,54,73	1.74	7 (15%)	53,90,113	1.57	7 (13%)
14	CLA	1	1640	-	65,73,73	1.44	9 (13%)	76,113,113	1.48	9 (11%)
17	BCR	a	849	-	41,41,41	1.22	2 (4%)	56,56,56	1.20	6 (10%)
16	SF4	1	1647	2,1	0,12,12	-	-	-	-	-
14	CLA	2	831	-	55,63,73	1.60	9 (16%)	64,101,113	1.50	9 (14%)
14	CLA	B	818	-	65,73,73	1.44	8 (12%)	76,113,113	1.51	9 (11%)
17	BCR	i	101	-	41,41,41	1.29	4 (9%)	56,56,56	1.24	3 (5%)
14	CLA	A	831	-	65,73,73	1.51	11 (16%)	76,113,113	1.49	9 (11%)
17	BCR	L	207	-	41,41,41	1.18	3 (7%)	56,56,56	1.28	7 (12%)
14	CLA	A	826	21	65,73,73	1.46	9 (13%)	76,113,113	1.49	9 (11%)
17	BCR	A	856	-	41,41,41	1.23	3 (7%)	56,56,56	1.28	8 (14%)
14	CLA	2	820	21	65,73,73	1.55	8 (12%)	76,113,113	1.35	9 (11%)
14	CLA	b	842	-	65,73,73	1.48	9 (13%)	76,113,113	1.47	7 (9%)
14	CLA	B	824	2	65,73,73	1.46	7 (10%)	76,113,113	1.47	8 (10%)
14	CLA	1	1607	-	65,73,73	1.45	10 (15%)	76,113,113	1.58	12 (15%)
14	CLA	a	837	1	45,53,73	1.79	7 (15%)	52,89,113	1.54	8 (15%)
14	CLA	1	1642	-	65,73,73	1.46	8 (12%)	76,113,113	1.46	8 (10%)
14	CLA	J	102	-	38,45,73	1.92	8 (21%)	43,78,113	1.68	7 (16%)
14	CLA	F	204	-	50,58,73	1.72	5 (10%)	58,95,113	1.52	8 (13%)
17	BCR	8	1305	-	41,41,41	1.22	2 (4%)	56,56,56	1.28	8 (14%)
14	CLA	A	811	-	49,57,73	1.70	9 (18%)	55,93,113	1.48	8 (14%)
14	CLA	A	804	-	65,73,73	1.42	7 (10%)	76,113,113	1.50	7 (9%)
14	CLA	a	839	-	65,73,73	1.45	9 (13%)	76,113,113	1.48	9 (11%)
14	CLA	A	824	-	65,73,73	1.52	8 (12%)	76,113,113	1.38	9 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
15	PQN	a	845	-	34,34,34	0.40	0	42,45,45	0.35	0
14	CLA	1	1615	-	65,73,73	1.49	9 (13%)	76,113,113	1.34	7 (9%)
17	BCR	A	850	-	41,41,41	1.33	3 (7%)	56,56,56	1.29	7 (12%)
14	CLA	A	820	-	65,73,73	1.45	7 (10%)	76,113,113	1.58	9 (11%)
14	CLA	a	814	-	65,73,73	1.50	9 (13%)	76,113,113	1.34	8 (10%)
14	CLA	2	808	-	65,73,73	1.48	9 (13%)	76,113,113	1.43	9 (11%)
14	CLA	2	832	-	49,57,73	1.65	7 (14%)	55,93,113	1.65	6 (10%)
14	CLA	B	814	-	65,73,73	1.44	7 (10%)	76,113,113	1.44	8 (10%)
17	BCR	A	847	-	41,41,41	1.15	2 (4%)	56,56,56	1.31	7 (12%)
14	CLA	1	1639	-	65,73,73	1.42	8 (12%)	76,113,113	1.61	7 (9%)
14	CLA	b	810	2	65,73,73	1.46	11 (16%)	76,113,113	1.61	10 (13%)
17	BCR	8	1304	-	41,41,41	1.17	3 (7%)	56,56,56	1.20	7 (12%)
14	CLA	1	1641	-	65,73,73	1.49	9 (13%)	76,113,113	1.44	8 (10%)
14	CLA	B	810	2	65,73,73	1.44	9 (13%)	76,113,113	1.52	9 (11%)
17	BCR	9	102	-	41,41,41	1.18	2 (4%)	56,56,56	1.32	7 (12%)
14	CLA	b	815	-	65,73,73	1.44	8 (12%)	76,113,113	1.43	8 (10%)
17	BCR	0	208	-	41,41,41	1.22	3 (7%)	56,56,56	1.34	7 (12%)
14	CLA	a	821	-	65,73,73	1.45	6 (9%)	76,113,113	1.52	7 (9%)
14	CLA	a	825	-	65,73,73	1.46	8 (12%)	76,113,113	1.45	8 (10%)
17	BCR	M	103	-	41,41,41	1.23	3 (7%)	56,56,56	1.22	5 (8%)
14	CLA	B	821	-	45,53,73	1.73	7 (15%)	52,89,113	1.78	9 (17%)
14	CLA	a	844	18	45,53,73	1.73	7 (15%)	52,89,113	1.70	7 (13%)
14	CLA	2	812	-	65,73,73	1.44	7 (10%)	76,113,113	1.55	9 (11%)
17	BCR	9	104	-	25,25,41	1.14	1 (4%)	33,33,56	1.15	4 (12%)
14	CLA	B	837	-	60,68,73	1.56	9 (15%)	70,107,113	1.46	7 (10%)
14	CLA	A	855	21	65,73,73	1.43	7 (10%)	76,113,113	1.61	8 (10%)
14	CLA	a	831	-	65,73,73	1.51	10 (15%)	76,113,113	1.49	9 (11%)
17	BCR	A	849	-	41,41,41	1.23	2 (4%)	56,56,56	1.20	6 (10%)
18	LHG	y	101	-	48,48,48	0.71	2 (4%)	51,54,54	1.22	3 (5%)
14	CLA	a	805	14	59,67,73	1.51	7 (11%)	68,105,113	1.54	8 (11%)
15	PQN	b	843	-	34,34,34	0.45	0	42,45,45	0.38	0
14	CLA	A	812	14	65,73,73	1.46	7 (10%)	76,113,113	1.35	7 (9%)
14	CLA	B	826	-	65,73,73	1.48	8 (12%)	76,113,113	1.43	8 (10%)
14	CLA	a	810	1	65,73,73	1.47	7 (10%)	76,113,113	1.45	7 (9%)
14	CLA	A	808	-	51,59,73	1.66	8 (15%)	59,96,113	1.54	8 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
14	CLA	2	825	2	65,73,73	1.46	8 (12%)	76,113,113	1.47	8 (10%)
16	SF4	c	101	3	0,12,12	-	-	-	-	-
18	LHG	1	1655	14	40,40,48	0.77	1 (2%)	43,46,54	1.21	4 (9%)
14	CLA	1	1616	-	65,73,73	1.50	8 (12%)	76,113,113	1.40	7 (9%)
14	CLA	b	839	-	65,73,73	1.47	9 (13%)	76,113,113	1.39	5 (6%)
14	CLA	2	813	-	45,53,73	1.80	8 (17%)	52,89,113	1.61	7 (13%)
14	CLA	A	825	-	65,73,73	1.46	9 (13%)	76,113,113	1.47	9 (11%)
14	CLA	a	823	-	45,53,73	1.75	6 (13%)	52,89,113	1.68	8 (15%)
14	CLA	1	1617	-	65,73,73	1.47	6 (9%)	76,113,113	1.38	7 (9%)
14	CLA	B	802	-	65,73,73	1.43	10 (15%)	76,113,113	1.44	8 (10%)
14	CLA	B	823	-	45,53,73	1.75	7 (15%)	52,89,113	1.71	7 (13%)
14	CLA	b	829	-	65,73,73	1.51	8 (12%)	76,113,113	1.30	6 (7%)
14	CLA	b	807	-	65,73,73	1.47	9 (13%)	76,113,113	1.41	8 (10%)
14	CLA	1	1606	14	59,67,73	1.51	7 (11%)	68,105,113	1.54	8 (11%)
14	CLA	B	820	-	65,73,73	1.50	7 (10%)	76,113,113	1.33	7 (9%)
17	BCR	b	844	-	41,41,41	1.17	2 (4%)	56,56,56	1.21	4 (7%)
14	CLA	1	1627	21	65,73,73	1.45	9 (13%)	76,113,113	1.50	9 (11%)
14	CLA	A	805	14	59,67,73	1.51	7 (11%)	68,105,113	1.55	8 (11%)
14	CLA	a	828	-	65,73,73	1.47	7 (10%)	76,113,113	1.38	8 (10%)
17	BCR	2	845	-	41,41,41	1.17	3 (7%)	56,56,56	1.19	3 (5%)
14	CLA	A	810	1	65,73,73	1.47	7 (10%)	76,113,113	1.46	7 (9%)
17	BCR	a	852	-	25,25,41	1.12	1 (4%)	33,33,56	1.29	4 (12%)
14	CLA	A	842	-	65,73,73	1.47	9 (13%)	76,113,113	1.50	9 (11%)
17	BCR	1	1653	-	25,25,41	1.13	1 (4%)	33,33,56	1.28	4 (12%)
14	CLA	2	819	-	65,73,73	1.44	8 (12%)	76,113,113	1.52	10 (13%)
14	CLA	B	831	-	49,57,73	1.66	7 (14%)	55,93,113	1.66	7 (12%)
14	CLA	B	841	-	65,73,73	1.48	9 (13%)	76,113,113	1.47	7 (9%)
14	CLA	b	826	21	65,73,73	1.51	9 (13%)	76,113,113	1.53	10 (13%)
14	CLA	b	837	21	45,53,73	1.82	7 (15%)	52,89,113	1.53	5 (9%)
14	CLA	1	1612	-	49,57,73	1.71	9 (18%)	55,93,113	1.49	8 (14%)
14	CLA	A	827	21	65,73,73	1.46	10 (15%)	76,113,113	1.53	10 (13%)
17	BCR	F	205	-	41,41,41	1.18	2 (4%)	56,56,56	1.36	8 (14%)
17	BCR	B	847	-	41,41,41	1.27	3 (7%)	56,56,56	1.31	9 (16%)
17	BCR	2	847	-	41,41,41	1.16	3 (7%)	56,56,56	1.25	7 (12%)
15	PQN	2	843	-	34,34,34	0.45	0	42,45,45	0.38	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
14	CLA	1	1630	-	65,73,73	1.45	7 (10%)	76,113,113	1.47	8 (10%)
14	CLA	2	809	-	65,73,73	1.44	8 (12%)	76,113,113	1.54	10 (13%)
14	CLA	J	101	-	45,53,73	1.78	5 (11%)	52,89,113	1.58	8 (15%)
14	CLA	a	835	-	65,73,73	1.44	9 (13%)	76,113,113	1.45	7 (9%)
18	LHG	0	202	-	38,38,48	0.73	1 (2%)	41,44,54	1.26	3 (7%)
14	CLA	a	833	-	65,73,73	1.45	10 (15%)	76,113,113	1.39	6 (7%)
14	CLA	a	820	-	65,73,73	1.45	7 (10%)	76,113,113	1.58	9 (11%)
16	SF4	C	102	3	0,12,12	-	-	-	-	-
14	CLA	8	1301	21	45,53,73	1.77	7 (15%)	52,89,113	1.68	7 (13%)
14	CLA	1	1611	1	65,73,73	1.47	7 (10%)	76,113,113	1.44	7 (9%)
14	CLA	0	207	21	65,73,73	1.45	10 (15%)	76,113,113	1.50	9 (11%)
14	CLA	2	839	-	65,73,73	1.46	9 (13%)	76,113,113	1.40	6 (7%)
14	CLA	a	812	14	65,73,73	1.47	7 (10%)	76,113,113	1.36	6 (7%)
14	CLA	z	102	12	45,53,73	1.80	6 (13%)	52,89,113	1.61	6 (11%)
14	CLA	B	838	-	65,73,73	1.47	9 (13%)	76,113,113	1.40	6 (7%)
14	CLA	B	812	-	45,53,73	1.78	8 (17%)	52,89,113	1.62	7 (13%)
17	BCR	y	102	-	41,41,41	1.24	3 (7%)	56,56,56	1.22	5 (8%)
14	CLA	2	842	-	65,73,73	1.48	9 (13%)	76,113,113	1.47	7 (9%)
17	BCR	A	851	-	41,41,41	1.27	2 (4%)	56,56,56	1.30	7 (12%)
14	CLA	b	806	-	65,73,73	1.44	7 (10%)	76,113,113	1.57	8 (10%)
17	BCR	2	846	-	41,41,41	1.26	3 (7%)	56,56,56	1.25	6 (10%)
14	CLA	A	839	-	65,73,73	1.44	9 (13%)	76,113,113	1.47	9 (11%)
14	CLA	A	815	-	65,73,73	1.50	8 (12%)	76,113,113	1.40	7 (9%)
14	CLA	A	802	-	65,73,73	1.45	8 (12%)	76,113,113	1.54	8 (10%)
14	CLA	A	829	-	65,73,73	1.45	7 (10%)	76,113,113	1.47	8 (10%)
14	CLA	a	803	21	65,73,73	1.54	9 (13%)	76,113,113	1.29	6 (7%)
14	CLA	a	818	-	65,73,73	1.46	6 (9%)	76,113,113	1.45	7 (9%)
17	BCR	B	844	-	41,41,41	1.17	3 (7%)	56,56,56	1.19	3 (5%)
16	SF4	3	101	3	0,12,12	-	-	-	-	-
14	CLA	1	1628	21	65,73,73	1.46	9 (13%)	76,113,113	1.52	10 (13%)
14	CLA	2	814	-	65,73,73	1.45	8 (12%)	76,113,113	1.45	9 (11%)
14	CLA	B	805	-	65,73,73	1.44	7 (10%)	76,113,113	1.57	8 (10%)
14	CLA	a	808	-	51,59,73	1.66	9 (17%)	59,96,113	1.53	8 (13%)
14	CLA	b	820	21	65,73,73	1.54	7 (10%)	76,113,113	1.35	9 (11%)
14	CLA	K	103	21	58,66,73	1.56	7 (12%)	67,104,113	1.50	9 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
17	BCR	2	848	-	41,41,41	1.28	3 (7%)	56,56,56	1.31	8 (14%)
14	CLA	A	837	1	45,53,73	1.79	7 (15%)	52,89,113	1.54	8 (15%)
14	CLA	2	807	-	65,73,73	1.48	9 (13%)	76,113,113	1.40	8 (10%)
14	CLA	b	812	-	65,73,73	1.45	7 (10%)	76,113,113	1.54	10 (13%)
14	CLA	b	838	-	60,68,73	1.56	9 (15%)	70,107,113	1.47	7 (10%)
17	BCR	l	202	-	41,41,41	1.39	4 (9%)	56,56,56	1.32	7 (12%)
20	LMG	B	849	-	55,55,55	0.92	4 (7%)	63,63,63	1.35	10 (15%)
14	CLA	1	1637	-	65,73,73	1.48	9 (13%)	76,113,113	1.44	7 (9%)
14	CLA	2	815	-	65,73,73	1.45	8 (12%)	76,113,113	1.44	8 (10%)
14	CLA	A	841	-	65,73,73	1.45	8 (12%)	76,113,113	1.46	8 (10%)
17	BCR	8	1306	-	41,41,41	1.21	2 (4%)	56,56,56	1.34	9 (16%)
17	BCR	B	848	-	41,41,41	1.39	4 (9%)	56,56,56	1.29	6 (10%)
14	CLA	A	807	-	65,73,73	1.44	8 (12%)	76,113,113	1.53	6 (7%)
14	CLA	a	817	21	65,73,73	1.48	7 (10%)	76,113,113	1.35	7 (9%)
14	CLA	b	825	2	65,73,73	1.47	7 (10%)	76,113,113	1.48	8 (10%)
14	CLA	B	825	21	65,73,73	1.51	9 (13%)	76,113,113	1.53	10 (13%)
18	LHG	1	1654	-	48,48,48	0.75	1 (2%)	51,54,54	1.23	4 (7%)
14	CLA	l	206	21	65,73,73	1.45	10 (15%)	76,113,113	1.49	10 (13%)
14	CLA	A	844	18	45,53,73	1.72	7 (15%)	52,89,113	1.69	7 (13%)
17	BCR	l	207	-	41,41,41	1.21	3 (7%)	56,56,56	1.34	7 (12%)
14	CLA	A	806	-	65,73,73	1.46	10 (15%)	76,113,113	1.58	12 (15%)
14	CLA	B	813	-	65,73,73	1.46	8 (12%)	76,113,113	1.44	9 (11%)
17	BCR	B	851	-	41,41,41	1.21	2 (4%)	56,56,56	1.34	9 (16%)
14	CLA	b	805	-	65,73,73	1.49	9 (13%)	76,113,113	1.46	12 (15%)
14	CLA	a	815	-	65,73,73	1.50	7 (10%)	76,113,113	1.40	7 (9%)
14	CLA	B	809	2	65,73,73	1.45	10 (15%)	76,113,113	1.61	10 (13%)
14	CLA	a	827	21	65,73,73	1.45	9 (13%)	76,113,113	1.52	10 (13%)
18	LHG	l	201	-	38,38,48	0.73	0	41,44,54	1.26	3 (7%)
14	CLA	a	832	-	60,68,73	1.52	10 (16%)	70,107,113	1.44	6 (8%)
14	CLA	2	838	-	60,68,73	1.56	9 (15%)	70,107,113	1.47	7 (10%)
14	CLA	M	102	-	36,44,73	1.96	7 (19%)	40,76,113	1.64	5 (12%)
14	CLA	2	841	21	65,73,73	1.47	9 (13%)	76,113,113	1.43	10 (13%)
14	CLA	f	201	21	58,66,73	1.58	7 (12%)	67,104,113	1.47	8 (11%)
17	BCR	B	846	-	41,41,41	1.16	3 (7%)	56,56,56	1.24	7 (12%)
14	CLA	B	819	21	65,73,73	1.55	8 (12%)	76,113,113	1.35	9 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
14	CLA	b	835	-	65,73,73	1.47	6 (9%)	76,113,113	1.44	9 (11%)
17	BCR	b	848	-	41,41,41	1.27	3 (7%)	56,56,56	1.31	9 (16%)
18	LHG	a	853	-	48,48,48	0.74	1 (2%)	51,54,54	1.23	4 (7%)
17	BCR	m	102	-	41,41,41	1.24	3 (7%)	56,56,56	1.22	5 (8%)
14	CLA	a	841	-	65,73,73	1.46	8 (12%)	76,113,113	1.46	8 (10%)
14	CLA	b	817	-	65,73,73	1.45	6 (9%)	76,113,113	1.47	8 (10%)
14	CLA	1	1624	-	45,53,73	1.76	7 (15%)	52,89,113	1.67	8 (15%)
14	CLA	B	817	-	65,73,73	1.52	9 (13%)	76,113,113	1.49	9 (11%)
17	BCR	b	845	-	41,41,41	1.17	3 (7%)	56,56,56	1.19	3 (5%)
14	CLA	L	205	21	65,73,73	1.45	10 (15%)	76,113,113	1.49	10 (13%)
16	SF4	3	102	3	0,12,12	-	-	-	-	-
18	LHG	a	854	14	40,40,48	0.77	1 (2%)	43,46,54	1.21	4 (9%)
14	CLA	a	829	-	65,73,73	1.46	7 (10%)	76,113,113	1.47	8 (10%)
14	CLA	B	839	-	47,55,73	1.80	9 (19%)	54,91,113	1.48	8 (14%)
17	BCR	1	1649	-	41,41,41	1.19	3 (7%)	56,56,56	1.22	6 (10%)
17	BCR	b	846	-	41,41,41	1.25	3 (7%)	56,56,56	1.24	6 (10%)
14	CLA	1	1634	-	65,73,73	1.45	10 (15%)	76,113,113	1.39	6 (7%)
17	BCR	1	1652	-	41,41,41	1.27	2 (4%)	56,56,56	1.29	7 (12%)
14	CLA	B	835	21	50,58,73	1.70	9 (18%)	58,95,113	1.53	8 (13%)
14	CLA	x	1701	12	45,53,73	1.79	6 (13%)	52,89,113	1.61	6 (11%)
14	CLA	2	835	-	65,73,73	1.47	6 (9%)	76,113,113	1.44	9 (11%)
17	BCR	b	849	-	41,41,41	1.39	4 (9%)	56,56,56	1.29	6 (10%)
14	CLA	b	819	-	65,73,73	1.43	7 (10%)	76,113,113	1.51	9 (11%)
14	CLA	A	836	-	65,73,73	1.48	9 (13%)	76,113,113	1.44	7 (9%)
14	CLA	8	1302	-	45,53,73	1.79	6 (13%)	52,89,113	1.58	8 (15%)
14	CLA	l	205	-	65,73,73	1.46	10 (15%)	76,113,113	1.53	9 (11%)
14	CLA	a	813	-	45,53,73	1.77	8 (17%)	52,89,113	1.63	7 (13%)
14	CLA	B	830	-	55,63,73	1.60	9 (16%)	64,101,113	1.50	9 (14%)
14	CLA	b	809	-	65,73,73	1.43	8 (12%)	76,113,113	1.53	10 (13%)
14	CLA	9	101	-	46,54,73	1.73	7 (15%)	53,90,113	1.58	7 (13%)
14	CLA	b	841	21	65,73,73	1.47	9 (13%)	76,113,113	1.43	10 (13%)
17	BCR	K	102	-	41,41,41	1.18	2 (4%)	56,56,56	1.31	7 (12%)
17	BCR	a	848	-	41,41,41	1.19	3 (7%)	56,56,56	1.23	6 (10%)
14	CLA	1	1614	-	45,53,73	1.78	8 (17%)	52,89,113	1.64	8 (15%)
14	CLA	a	807	-	65,73,73	1.44	8 (12%)	76,113,113	1.53	5 (6%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
14	CLA	B	829	-	65,73,73	1.44	12 (18%)	76,113,113	1.57	10 (13%)
14	CLA	B	807	-	65,73,73	1.48	9 (13%)	76,113,113	1.43	10 (13%)
14	CLA	2	816	-	65,73,73	1.46	7 (10%)	76,113,113	1.39	7 (9%)
14	CLA	2	836	21	50,58,73	1.70	9 (18%)	58,95,113	1.53	8 (13%)
14	CLA	b	814	-	65,73,73	1.45	8 (12%)	76,113,113	1.45	9 (11%)
14	CLA	A	809	1	65,73,73	1.45	8 (12%)	76,113,113	1.51	8 (10%)
14	CLA	1	1636	-	65,73,73	1.44	9 (13%)	76,113,113	1.45	6 (7%)
14	CLA	a	824	-	65,73,73	1.52	8 (12%)	76,113,113	1.39	9 (11%)
14	CLA	1	1635	-	65,73,73	1.45	8 (12%)	76,113,113	1.59	12 (15%)
14	CLA	2	802	21	65,73,73	1.42	8 (12%)	76,113,113	1.60	8 (10%)
17	BCR	0	201	-	41,41,41	1.18	3 (7%)	56,56,56	1.28	7 (12%)
17	BCR	1	1651	-	41,41,41	1.35	4 (9%)	56,56,56	1.28	7 (12%)
14	CLA	1	1610	1	65,73,73	1.46	8 (12%)	76,113,113	1.51	9 (11%)
18	LHG	L	208	-	38,38,48	0.73	0	41,44,54	1.26	3 (7%)
14	CLA	2	817	-	65,73,73	1.45	6 (9%)	76,113,113	1.48	8 (10%)
14	CLA	1	1631	-	65,73,73	1.41	9 (13%)	76,113,113	1.54	6 (7%)
14	CLA	1	1626	-	65,73,73	1.45	9 (13%)	76,113,113	1.45	9 (11%)
14	CLA	A	835	-	65,73,73	1.44	9 (13%)	76,113,113	1.44	6 (7%)
17	BCR	A	848	-	41,41,41	1.18	3 (7%)	56,56,56	1.23	6 (10%)
20	LMG	2	850	-	55,55,55	0.92	4 (7%)	63,63,63	1.35	9 (14%)
14	CLA	a	842	-	65,73,73	1.48	8 (12%)	76,113,113	1.50	9 (11%)
16	SF4	C	101	3	0,12,12	-	-	-	-	-
14	CLA	A	817	21	65,73,73	1.48	7 (10%)	76,113,113	1.35	7 (9%)
17	BCR	0	203	-	41,41,41	1.39	4 (9%)	56,56,56	1.33	7 (12%)
14	CLA	a	822	21	65,73,73	1.47	7 (10%)	76,113,113	1.46	7 (9%)
17	BCR	b	847	-	41,41,41	1.15	3 (7%)	56,56,56	1.25	8 (14%)
16	SF4	A	846	2,1	0,12,12	-	-	-	-	-
14	CLA	a	840	-	65,73,73	1.49	9 (13%)	76,113,113	1.44	8 (10%)
18	LHG	A	854	14	40,40,48	0.77	1 (2%)	43,46,54	1.22	4 (9%)
14	CLA	B	803	-	65,73,73	1.43	10 (15%)	76,113,113	1.52	8 (10%)
16	SF4	c	102	3	0,12,12	-	-	-	-	-
17	BCR	1	1648	-	41,41,41	1.15	2 (4%)	56,56,56	1.31	7 (12%)
14	CLA	b	827	-	65,73,73	1.48	8 (12%)	76,113,113	1.43	8 (10%)
14	CLA	B	815	-	65,73,73	1.45	7 (10%)	76,113,113	1.39	7 (9%)
14	CLA	A	828	-	65,73,73	1.46	7 (10%)	76,113,113	1.39	8 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
14	CLA	2	840	-	47,55,73	1.80	9 (19%)	54,91,113	1.48	8 (14%)
14	CLA	j	1303	-	38,45,73	1.92	8 (21%)	43,78,113	1.67	7 (16%)
14	CLA	B	833	-	65,73,73	1.48	9 (13%)	76,113,113	1.45	7 (9%)
14	CLA	1	1645	18	45,53,73	1.73	7 (15%)	52,89,113	1.69	7 (13%)
14	CLA	A	840	-	65,73,73	1.49	9 (13%)	76,113,113	1.43	8 (10%)
14	CLA	j	1301	21	45,53,73	1.77	7 (15%)	52,89,113	1.68	7 (13%)
14	CLA	F	201	21	58,66,73	1.59	7 (12%)	67,104,113	1.47	8 (11%)
14	CLA	A	857	-	36,44,73	1.96	7 (19%)	40,76,113	1.65	5 (12%)
14	CLA	B	832	-	65,73,73	1.50	8 (12%)	76,113,113	1.44	8 (10%)
14	CLA	f	203	-	50,58,73	1.72	5 (10%)	58,95,113	1.53	8 (13%)
14	CLA	l	204	10	65,73,73	1.52	9 (13%)	76,113,113	1.38	8 (10%)
14	CLA	k	103	21	58,66,73	1.57	7 (12%)	67,104,113	1.50	9 (13%)
14	CLA	B	836	21	45,53,73	1.82	7 (15%)	52,89,113	1.52	5 (9%)
14	CLA	b	823	21	55,63,73	1.62	7 (12%)	64,101,113	1.48	6 (9%)
14	CLA	A	814	-	65,73,73	1.49	9 (13%)	76,113,113	1.33	8 (10%)
16	SF4	a	846	2,1	0,12,12	-	-	-	-	-
17	BCR	j	1305	-	41,41,41	1.22	2 (4%)	56,56,56	1.28	8 (14%)
14	CLA	2	804	-	65,73,73	1.42	10 (15%)	76,113,113	1.50	8 (10%)
17	BCR	J	103	-	41,41,41	1.16	3 (7%)	56,56,56	1.19	6 (10%)
18	LHG	A	853	-	48,48,48	0.75	2 (4%)	51,54,54	1.23	4 (7%)
14	CLA	b	833	-	65,73,73	1.49	8 (12%)	76,113,113	1.44	8 (10%)
17	BCR	B	843	-	41,41,41	1.17	2 (4%)	56,56,56	1.21	4 (7%)
14	CLA	B	808	-	65,73,73	1.43	8 (12%)	76,113,113	1.54	10 (13%)
17	BCR	j	1304	-	41,41,41	1.17	3 (7%)	56,56,56	1.19	7 (12%)
14	CLA	b	836	21	50,58,73	1.69	9 (18%)	58,95,113	1.52	8 (13%)
14	CLA	a	836	-	65,73,73	1.48	9 (13%)	76,113,113	1.44	7 (9%)
14	CLA	A	834	-	65,73,73	1.45	7 (10%)	76,113,113	1.58	13 (17%)
14	CLA	2	830	-	65,73,73	1.43	12 (18%)	76,113,113	1.57	10 (13%)
14	CLA	1	1618	21	65,73,73	1.47	7 (10%)	76,113,113	1.36	7 (9%)
14	CLA	L	203	10	65,73,73	1.51	9 (13%)	76,113,113	1.38	8 (10%)
14	CLA	1	1643	-	65,73,73	1.47	8 (12%)	76,113,113	1.50	9 (11%)
17	BCR	k	102	-	41,41,41	1.18	2 (4%)	56,56,56	1.31	7 (12%)
14	CLA	A	803	21	65,73,73	1.54	9 (13%)	76,113,113	1.30	8 (10%)
14	CLA	1	1638	1	45,53,73	1.78	7 (15%)	52,89,113	1.53	8 (15%)
14	CLA	1	1601	-	36,44,73	1.95	7 (19%)	40,76,113	1.64	5 (12%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
14	CLA	0	205	10	65,73,73	1.52	9 (13%)	76,113,113	1.37	8 (10%)
14	CLA	2	828	-	65,73,73	1.51	8 (12%)	76,113,113	1.43	7 (9%)
14	CLA	A	833	-	65,73,73	1.45	10 (15%)	76,113,113	1.38	6 (7%)
14	CLA	A	830	-	65,73,73	1.41	9 (13%)	76,113,113	1.54	7 (9%)
14	CLA	9	103	21	58,66,73	1.56	7 (12%)	67,104,113	1.50	9 (13%)
14	CLA	1	1619	-	65,73,73	1.45	6 (9%)	76,113,113	1.45	7 (9%)
14	CLA	b	818	-	65,73,73	1.51	9 (13%)	76,113,113	1.49	9 (11%)
14	CLA	2	824	-	45,53,73	1.75	7 (15%)	52,89,113	1.71	7 (13%)
17	BCR	F	202	-	41,41,41	1.25	3 (7%)	56,56,56	1.25	6 (10%)
14	CLA	1	1621	-	65,73,73	1.44	7 (10%)	76,113,113	1.58	9 (11%)
14	CLA	2	827	-	65,73,73	1.48	8 (12%)	76,113,113	1.42	8 (10%)
14	CLA	2	834	-	65,73,73	1.47	9 (13%)	76,113,113	1.45	7 (9%)
17	BCR	B	845	-	41,41,41	1.26	3 (7%)	56,56,56	1.24	6 (10%)
14	CLA	A	819	-	65,73,73	1.49	8 (12%)	76,113,113	1.47	9 (11%)
13	CL0	A	801	-	65,73,73	1.45	10 (15%)	76,113,113	1.46	8 (10%)
18	LHG	b	851	-	48,48,48	0.61	1 (2%)	51,54,54	1.20	5 (9%)
14	CLA	A	823	-	45,53,73	1.75	6 (13%)	52,89,113	1.67	8 (15%)
14	CLA	b	808	-	65,73,73	1.48	9 (13%)	76,113,113	1.44	9 (11%)
14	CLA	2	803	-	65,73,73	1.45	10 (15%)	76,113,113	1.45	8 (10%)
14	CLA	b	832	-	49,57,73	1.65	7 (14%)	55,93,113	1.65	6 (10%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
18	LHG	B	850	-	-	18/53/53/53	-
17	BCR	L	206	-	-	10/29/63/63	0/2/2/2
14	CLA	b	813	-	1/1/11/20	0/13/91/115	-
14	CLA	j	1302	-	1/1/11/20	5/13/91/115	-
14	CLA	A	838	-	1/1/15/20	16/37/115/115	-
14	CLA	X	1701	12	1/1/11/20	7/13/91/115	-
14	CLA	1	1604	21	1/1/15/20	6/37/115/115	-
14	CLA	b	840	-	-	2/16/94/115	-
20	LMG	b	850	-	-	27/50/70/70	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
17	BCR	7	101	-	-	7/29/63/63	0/2/2/2
14	CLA	B	840	21	1/1/15/20	7/37/115/115	-
14	CLA	B	834	-	1/1/15/20	9/37/115/115	-
14	CLA	a	806	-	1/1/15/20	21/37/115/115	-
18	LHG	z	101	-	-	18/53/53/53	-
14	CLA	B	806	-	1/1/15/20	9/37/115/115	-
14	CLA	2	822	-	1/1/11/20	5/13/91/115	-
17	BCR	a	851	-	-	18/29/63/63	0/2/2/2
14	CLA	b	821	-	1/1/15/20	19/37/115/115	-
14	CLA	1	1609	-	1/1/12/20	4/21/99/115	-
14	CLA	K	101	-	1/1/11/20	10/15/93/115	-
14	CLA	a	826	21	1/1/15/20	13/37/115/115	-
14	CLA	2	833	-	1/1/15/20	16/37/115/115	-
14	CLA	b	828	-	1/1/15/20	15/37/115/115	-
14	CLA	1	1620	-	1/1/15/20	17/37/115/115	-
17	BCR	L	201	-	-	8/29/63/63	0/2/2/2
14	CLA	b	802	21	1/1/15/20	18/37/115/115	-
14	CLA	6	201	21	1/1/13/20	6/29/107/115	-
17	BCR	b	852	-	-	15/29/63/63	0/2/2/2
14	CLA	a	819	-	1/1/15/20	17/37/115/115	-
14	CLA	6	203	-	1/1/12/20	6/19/97/115	-
14	CLA	8	1303	-	1/1/8/20	0/2/76/115	-
14	CLA	b	816	-	1/1/15/20	13/37/115/115	-
14	CLA	A	832	-	1/1/14/20	6/31/109/115	-
14	CLA	F	203	21	1/1/11/20	2/13/91/115	-
14	CLA	B	816	-	1/1/15/20	12/37/115/115	-
14	CLA	2	818	-	1/1/15/20	13/37/115/115	-
14	CLA	a	804	-	1/1/15/20	16/37/115/115	-
14	CLA	B	811	-	1/1/15/20	10/37/115/115	-
14	CLA	B	804	-	1/1/15/20	17/37/115/115	-
14	CLA	B	827	-	1/1/15/20	15/37/115/115	-
14	CLA	b	803	-	1/1/15/20	18/37/115/115	-
17	BCR	2	849	-	-	5/29/63/63	0/2/2/2
14	CLA	A	822	21	1/1/15/20	12/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
13	CL0	1	1602	-	3/3/20/25	10/37/135/135	-
14	CLA	0	206	-	1/1/15/20	11/37/115/115	-
14	CLA	A	818	-	1/1/15/20	10/37/115/115	-
14	CLA	1	1603	-	1/1/15/20	15/37/115/115	-
14	CLA	1	1608	-	1/1/15/20	15/37/115/115	-
14	CLA	a	802	-	1/1/15/20	15/37/115/115	-
14	CLA	a	838	-	1/1/15/20	16/37/115/115	-
14	CLA	b	830	-	1/1/15/20	7/37/115/115	-
15	PQN	B	842	-	-	1/23/43/43	0/2/2/2
14	CLA	2	805	-	1/1/15/20	17/37/115/115	-
14	CLA	1	1605	-	1/1/15/20	16/37/115/115	-
14	CLA	a	816	-	1/1/15/20	19/37/115/115	-
14	CLA	B	828	-	1/1/15/20	11/37/115/115	-
17	BCR	6	202	-	-	12/29/63/63	0/2/2/2
14	CLA	A	821	-	1/1/15/20	16/37/115/115	-
14	CLA	A	843	21	1/1/15/20	16/37/115/115	-
13	CL0	a	801	-	3/3/20/25	10/37/135/135	-
14	CLA	b	834	-	1/1/15/20	11/37/115/115	-
14	CLA	2	829	-	1/1/15/20	11/37/115/115	-
17	BCR	f	202	-	-	12/29/63/63	0/2/2/2
17	BCR	k	104	-	-	4/18/35/63	0/1/1/2
17	BCR	I	101	-	-	7/29/63/63	0/2/2/2
14	CLA	A	813	-	1/1/11/20	4/13/91/115	-
17	BCR	1	1650	-	-	5/29/63/63	0/2/2/2
14	CLA	b	811	2	1/1/15/20	15/37/115/115	-
14	CLA	2	810	2	1/1/15/20	11/37/115/115	-
14	CLA	b	804	-	1/1/15/20	12/37/115/115	-
17	BCR	a	847	-	-	9/29/63/63	0/2/2/2
17	BCR	A	852	-	-	11/18/35/63	0/1/1/2
15	PQN	1	1646	-	-	1/23/43/43	0/2/2/2
14	CLA	1	1625	-	1/1/15/20	12/37/115/115	-
14	CLA	A	816	-	1/1/15/20	19/37/115/115	-
14	CLA	2	821	-	1/1/15/20	19/37/115/115	-
17	BCR	2	844	-	-	11/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
14	CLA	a	809	1	1/1/15/20	11/37/115/115	-
18	LHG	M	101	-	-	27/53/53/53	-
14	CLA	b	831	-	1/1/13/20	13/25/103/115	-
14	CLA	2	837	21	1/1/11/20	3/13/91/115	-
14	CLA	a	811	-	1/1/11/20	8/18/96/115	-
14	CLA	1	1633	-	1/1/14/20	6/31/109/115	-
14	CLA	1	1622	-	1/1/15/20	16/37/115/115	-
14	CLA	a	834	-	1/1/15/20	10/37/115/115	-
14	CLA	1	1632	-	1/1/15/20	7/37/115/115	-
14	CLA	2	826	21	1/1/15/20	11/37/115/115	-
14	CLA	1	1613	14	1/1/15/20	13/37/115/115	-
17	BCR	a	850	-	-	8/29/63/63	0/2/2/2
18	LHG	m	101	-	-	27/53/53/53	-
17	BCR	0	209	-	-	5/29/63/63	0/2/2/2
14	CLA	1	1629	-	1/1/15/20	7/37/115/115	-
14	CLA	b	822	-	1/1/11/20	5/13/91/115	-
14	CLA	2	811	2	1/1/15/20	15/37/115/115	-
14	CLA	a	830	-	1/1/15/20	15/37/115/115	-
14	CLA	b	824	-	1/1/11/20	5/13/91/115	-
14	CLA	L	204	-	1/1/15/20	11/37/115/115	-
15	PQN	A	845	-	-	1/23/43/43	0/2/2/2
14	CLA	B	822	21	1/1/13/20	5/25/103/115	-
14	CLA	2	823	21	1/1/13/20	5/25/103/115	-
17	BCR	K	104	-	-	4/18/35/63	0/1/1/2
17	BCR	6	204	-	-	8/29/63/63	0/2/2/2
14	CLA	2	806	-	1/1/15/20	16/37/115/115	-
14	CLA	1	1623	21	1/1/15/20	12/37/115/115	-
14	CLA	a	843	21	1/1/15/20	16/37/115/115	-
14	CLA	1	1644	21	1/1/15/20	16/37/115/115	-
17	BCR	f	204	-	-	8/29/63/63	0/2/2/2
14	CLA	k	101	-	1/1/11/20	10/15/93/115	-
14	CLA	1	1640	-	1/1/15/20	20/37/115/115	-
17	BCR	a	849	-	-	5/29/63/63	0/2/2/2
16	SF4	1	1647	2,1	-	-	0/6/5/5

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
14	CLA	2	831	-	1/1/13/20	13/25/103/115	-
14	CLA	B	818	-	1/1/15/20	17/37/115/115	-
17	BCR	i	101	-	-	7/29/63/63	0/2/2/2
14	CLA	A	831	-	1/1/15/20	7/37/115/115	-
17	BCR	L	207	-	-	5/29/63/63	0/2/2/2
14	CLA	A	826	21	1/1/15/20	13/37/115/115	-
17	BCR	A	856	-	-	13/29/63/63	0/2/2/2
14	CLA	2	820	21	1/1/15/20	15/37/115/115	-
14	CLA	b	842	-	1/1/15/20	10/37/115/115	-
14	CLA	B	824	2	1/1/15/20	14/37/115/115	-
14	CLA	1	1607	-	1/1/15/20	21/37/115/115	-
14	CLA	a	837	1	1/1/11/20	5/13/91/115	-
14	CLA	1	1642	-	1/1/15/20	14/37/115/115	-
14	CLA	J	102	-	1/1/8/20	0/2/76/115	-
14	CLA	F	204	-	1/1/12/20	6/19/97/115	-
17	BCR	8	1305	-	-	13/29/63/63	0/2/2/2
14	CLA	A	811	-	1/1/11/20	8/18/96/115	-
14	CLA	A	804	-	1/1/15/20	16/37/115/115	-
14	CLA	a	839	-	1/1/15/20	20/37/115/115	-
14	CLA	A	824	-	1/1/15/20	12/37/115/115	-
15	PQN	a	845	-	-	1/23/43/43	0/2/2/2
14	CLA	1	1615	-	1/1/15/20	15/37/115/115	-
17	BCR	A	850	-	-	8/29/63/63	0/2/2/2
14	CLA	A	820	-	1/1/15/20	10/37/115/115	-
14	CLA	a	814	-	1/1/15/20	15/37/115/115	-
14	CLA	2	808	-	1/1/15/20	6/37/115/115	-
14	CLA	2	832	-	1/1/11/20	10/18/96/115	-
14	CLA	B	814	-	1/1/15/20	13/37/115/115	-
17	BCR	A	847	-	-	9/29/63/63	0/2/2/2
14	CLA	1	1639	-	1/1/15/20	16/37/115/115	-
14	CLA	b	810	2	1/1/15/20	11/37/115/115	-
17	BCR	8	1304	-	-	11/29/63/63	0/2/2/2
14	CLA	1	1641	-	1/1/15/20	17/37/115/115	-
14	CLA	B	810	2	1/1/15/20	15/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
17	BCR	9	102	-	-	6/29/63/63	0/2/2/2
14	CLA	b	815	-	1/1/15/20	13/37/115/115	-
17	BCR	0	208	-	-	10/29/63/63	0/2/2/2
14	CLA	a	821	-	1/1/15/20	16/37/115/115	-
14	CLA	a	825	-	1/1/15/20	12/37/115/115	-
17	BCR	M	103	-	-	9/29/63/63	0/2/2/2
14	CLA	B	821	-	1/1/11/20	5/13/91/115	-
14	CLA	a	844	18	1/1/11/20	5/13/91/115	-
14	CLA	2	812	-	1/1/15/20	10/37/115/115	-
17	BCR	9	104	-	-	4/18/35/63	0/1/1/2
14	CLA	B	837	-	1/1/14/20	4/31/109/115	-
14	CLA	A	855	21	1/1/15/20	18/37/115/115	-
14	CLA	a	831	-	1/1/15/20	7/37/115/115	-
17	BCR	A	849	-	-	5/29/63/63	0/2/2/2
18	LHG	y	101	-	-	27/53/53/53	-
14	CLA	a	805	14	1/1/13/20	10/30/108/115	-
15	PQN	b	843	-	-	1/23/43/43	0/2/2/2
14	CLA	A	812	14	1/1/15/20	13/37/115/115	-
14	CLA	B	826	-	1/1/15/20	6/37/115/115	-
14	CLA	a	810	1	1/1/15/20	12/37/115/115	-
14	CLA	A	808	-	1/1/12/20	4/21/99/115	-
14	CLA	2	825	2	1/1/15/20	14/37/115/115	-
16	SF4	c	101	3	-	-	0/6/5/5
18	LHG	1	1655	14	-	13/45/45/53	-
14	CLA	1	1616	-	1/1/15/20	12/37/115/115	-
14	CLA	b	839	-	1/1/15/20	9/37/115/115	-
14	CLA	2	813	-	1/1/11/20	0/13/91/115	-
14	CLA	A	825	-	1/1/15/20	12/37/115/115	-
14	CLA	a	823	-	1/1/11/20	8/13/91/115	-
14	CLA	1	1617	-	1/1/15/20	19/37/115/115	-
14	CLA	B	802	-	1/1/15/20	18/37/115/115	-
14	CLA	B	823	-	1/1/11/20	5/13/91/115	-
14	CLA	b	829	-	1/1/15/20	11/37/115/115	-
14	CLA	b	807	-	1/1/15/20	9/37/115/115	-
14	CLA	1	1606	14	1/1/13/20	10/30/108/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
14	CLA	B	820	-	1/1/15/20	19/37/115/115	-
17	BCR	b	844	-	-	11/29/63/63	0/2/2/2
14	CLA	1	1627	21	1/1/15/20	13/37/115/115	-
14	CLA	A	805	14	1/1/13/20	10/30/108/115	-
14	CLA	a	828	-	1/1/15/20	7/37/115/115	-
17	BCR	2	845	-	-	8/29/63/63	0/2/2/2
14	CLA	A	810	1	1/1/15/20	12/37/115/115	-
17	BCR	a	852	-	-	11/18/35/63	0/1/1/2
14	CLA	A	842	-	1/1/15/20	12/37/115/115	-
17	BCR	1	1653	-	-	11/18/35/63	0/1/1/2
14	CLA	2	819	-	1/1/15/20	17/37/115/115	-
14	CLA	B	831	-	1/1/11/20	10/18/96/115	-
14	CLA	B	841	-	1/1/15/20	10/37/115/115	-
14	CLA	b	826	21	1/1/15/20	11/37/115/115	-
14	CLA	b	837	21	1/1/11/20	3/13/91/115	-
14	CLA	1	1612	-	1/1/11/20	8/18/96/115	-
14	CLA	A	827	21	1/1/15/20	9/37/115/115	-
17	BCR	F	205	-	-	8/29/63/63	0/2/2/2
17	BCR	B	847	-	-	11/29/63/63	0/2/2/2
17	BCR	2	847	-	-	12/29/63/63	0/2/2/2
15	PQN	2	843	-	-	1/23/43/43	0/2/2/2
14	CLA	1	1630	-	1/1/15/20	14/37/115/115	-
14	CLA	2	809	-	1/1/15/20	8/37/115/115	-
14	CLA	J	101	-	1/1/11/20	5/13/91/115	-
14	CLA	a	835	-	1/1/15/20	8/37/115/115	-
18	LHG	0	202	-	-	27/43/43/53	-
14	CLA	a	833	-	1/1/15/20	12/37/115/115	-
14	CLA	a	820	-	1/1/15/20	10/37/115/115	-
16	SF4	C	102	3	-	-	0/6/5/5
14	CLA	8	1301	21	1/1/11/20	2/13/91/115	-
14	CLA	1	1611	1	1/1/15/20	12/37/115/115	-
14	CLA	0	207	21	1/1/15/20	11/37/115/115	-
14	CLA	2	839	-	1/1/15/20	9/37/115/115	-
14	CLA	a	812	14	1/1/15/20	13/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
14	CLA	z	102	12	1/1/11/20	7/13/91/115	-
14	CLA	B	838	-	1/1/15/20	9/37/115/115	-
14	CLA	B	812	-	1/1/11/20	0/13/91/115	-
17	BCR	y	102	-	-	9/29/63/63	0/2/2/2
14	CLA	2	842	-	1/1/15/20	10/37/115/115	-
17	BCR	A	851	-	-	18/29/63/63	0/2/2/2
14	CLA	b	806	-	1/1/15/20	16/37/115/115	-
17	BCR	2	846	-	-	11/29/63/63	0/2/2/2
14	CLA	A	839	-	1/1/15/20	20/37/115/115	-
14	CLA	A	815	-	1/1/15/20	12/37/115/115	-
14	CLA	A	802	-	1/1/15/20	15/37/115/115	-
14	CLA	A	829	-	1/1/15/20	14/37/115/115	-
14	CLA	a	803	21	1/1/15/20	6/37/115/115	-
14	CLA	a	818	-	1/1/15/20	10/37/115/115	-
17	BCR	B	844	-	-	8/29/63/63	0/2/2/2
16	SF4	3	101	3	-	-	0/6/5/5
14	CLA	1	1628	21	1/1/15/20	9/37/115/115	-
14	CLA	2	814	-	1/1/15/20	16/37/115/115	-
14	CLA	B	805	-	1/1/15/20	16/37/115/115	-
14	CLA	a	808	-	1/1/12/20	4/21/99/115	-
14	CLA	b	820	21	1/1/15/20	15/37/115/115	-
14	CLA	K	103	21	1/1/13/20	9/29/107/115	-
17	BCR	2	848	-	-	11/29/63/63	0/2/2/2
14	CLA	A	837	1	1/1/11/20	5/13/91/115	-
14	CLA	2	807	-	1/1/15/20	9/37/115/115	-
14	CLA	b	812	-	1/1/15/20	10/37/115/115	-
14	CLA	b	838	-	1/1/14/20	5/31/109/115	-
17	BCR	l	202	-	-	8/29/63/63	0/2/2/2
20	LMG	B	849	-	-	27/50/70/70	0/1/1/1
14	CLA	1	1637	-	1/1/15/20	6/37/115/115	-
14	CLA	2	815	-	1/1/15/20	13/37/115/115	-
14	CLA	A	841	-	1/1/15/20	14/37/115/115	-
17	BCR	8	1306	-	-	15/29/63/63	0/2/2/2
17	BCR	B	848	-	-	5/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
14	CLA	A	807	-	1/1/15/20	15/37/115/115	-
14	CLA	a	817	21	1/1/15/20	12/37/115/115	-
14	CLA	b	825	2	1/1/15/20	14/37/115/115	-
14	CLA	B	825	21	1/1/15/20	11/37/115/115	-
18	LHG	1	1654	-	-	21/53/53/53	-
14	CLA	l	206	21	1/1/15/20	11/37/115/115	-
14	CLA	A	844	18	1/1/11/20	5/13/91/115	-
17	BCR	l	207	-	-	10/29/63/63	0/2/2/2
14	CLA	A	806	-	1/1/15/20	21/37/115/115	-
14	CLA	B	813	-	1/1/15/20	16/37/115/115	-
17	BCR	B	851	-	-	15/29/63/63	0/2/2/2
14	CLA	b	805	-	1/1/15/20	17/37/115/115	-
14	CLA	a	815	-	1/1/15/20	12/37/115/115	-
14	CLA	B	809	2	1/1/15/20	11/37/115/115	-
14	CLA	a	827	21	1/1/15/20	9/37/115/115	-
18	LHG	l	201	-	-	27/43/43/53	-
14	CLA	a	832	-	1/1/14/20	6/31/109/115	-
14	CLA	2	838	-	1/1/14/20	5/31/109/115	-
14	CLA	M	102	-	1/1/7/20	0/2/72/115	-
14	CLA	2	841	21	1/1/15/20	7/37/115/115	-
14	CLA	f	201	21	1/1/13/20	6/29/107/115	-
17	BCR	B	846	-	-	12/29/63/63	0/2/2/2
14	CLA	B	819	21	1/1/15/20	15/37/115/115	-
14	CLA	b	835	-	1/1/15/20	9/37/115/115	-
17	BCR	b	848	-	-	11/29/63/63	0/2/2/2
18	LHG	a	853	-	-	21/53/53/53	-
17	BCR	m	102	-	-	9/29/63/63	0/2/2/2
14	CLA	a	841	-	1/1/15/20	14/37/115/115	-
14	CLA	b	817	-	1/1/15/20	12/37/115/115	-
14	CLA	1	1624	-	1/1/11/20	8/13/91/115	-
14	CLA	B	817	-	1/1/15/20	13/37/115/115	-
17	BCR	b	845	-	-	8/29/63/63	0/2/2/2
14	CLA	L	205	21	1/1/15/20	11/37/115/115	-
16	SF4	3	102	3	-	-	0/6/5/5

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
18	LHG	a	854	14	-	13/45/45/53	-
14	CLA	a	829	-	1/1/15/20	14/37/115/115	-
14	CLA	B	839	-	-	2/16/94/115	-
17	BCR	1	1649	-	-	15/29/63/63	0/2/2/2
17	BCR	b	846	-	-	11/29/63/63	0/2/2/2
14	CLA	1	1634	-	1/1/15/20	12/37/115/115	-
17	BCR	1	1652	-	-	18/29/63/63	0/2/2/2
14	CLA	B	835	21	1/1/12/20	9/19/97/115	-
14	CLA	x	1701	12	1/1/11/20	7/13/91/115	-
14	CLA	2	835	-	1/1/15/20	9/37/115/115	-
17	BCR	b	849	-	-	5/29/63/63	0/2/2/2
14	CLA	b	819	-	1/1/15/20	17/37/115/115	-
14	CLA	A	836	-	1/1/15/20	6/37/115/115	-
14	CLA	8	1302	-	1/1/11/20	5/13/91/115	-
14	CLA	l	205	-	1/1/15/20	11/37/115/115	-
14	CLA	a	813	-	1/1/11/20	4/13/91/115	-
14	CLA	B	830	-	1/1/13/20	13/25/103/115	-
14	CLA	b	809	-	1/1/15/20	8/37/115/115	-
14	CLA	9	101	-	1/1/11/20	10/15/93/115	-
14	CLA	b	841	21	1/1/15/20	7/37/115/115	-
17	BCR	K	102	-	-	6/29/63/63	0/2/2/2
17	BCR	a	848	-	-	15/29/63/63	0/2/2/2
14	CLA	1	1614	-	1/1/11/20	4/13/91/115	-
14	CLA	a	807	-	1/1/15/20	15/37/115/115	-
14	CLA	B	829	-	1/1/15/20	7/37/115/115	-
14	CLA	B	807	-	1/1/15/20	6/37/115/115	-
14	CLA	2	816	-	1/1/15/20	13/37/115/115	-
14	CLA	2	836	21	1/1/12/20	9/19/97/115	-
14	CLA	b	814	-	1/1/15/20	16/37/115/115	-
14	CLA	A	809	1	1/1/15/20	11/37/115/115	-
14	CLA	1	1636	-	1/1/15/20	8/37/115/115	-
14	CLA	a	824	-	1/1/15/20	12/37/115/115	-
14	CLA	1	1635	-	1/1/15/20	10/37/115/115	-
14	CLA	2	802	21	1/1/15/20	18/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
17	BCR	0	201	-	-	5/29/63/63	0/2/2/2
17	BCR	1	1651	-	-	8/29/63/63	0/2/2/2
14	CLA	1	1610	1	1/1/15/20	11/37/115/115	-
18	LHG	L	208	-	-	27/43/43/53	-
14	CLA	2	817	-	1/1/15/20	12/37/115/115	-
14	CLA	1	1631	-	1/1/15/20	15/37/115/115	-
14	CLA	1	1626	-	1/1/15/20	12/37/115/115	-
14	CLA	A	835	-	1/1/15/20	8/37/115/115	-
17	BCR	A	848	-	-	15/29/63/63	0/2/2/2
20	LMG	2	850	-	-	27/50/70/70	0/1/1/1
14	CLA	a	842	-	1/1/15/20	12/37/115/115	-
16	SF4	C	101	3	-	-	0/6/5/5
14	CLA	A	817	21	1/1/15/20	12/37/115/115	-
17	BCR	0	203	-	-	8/29/63/63	0/2/2/2
14	CLA	a	822	21	1/1/15/20	12/37/115/115	-
17	BCR	b	847	-	-	12/29/63/63	0/2/2/2
16	SF4	A	846	2,1	-	-	0/6/5/5
14	CLA	a	840	-	1/1/15/20	17/37/115/115	-
18	LHG	A	854	14	-	13/45/45/53	-
14	CLA	B	803	-	1/1/15/20	12/37/115/115	-
16	SF4	c	102	3	-	-	0/6/5/5
17	BCR	1	1648	-	-	9/29/63/63	0/2/2/2
14	CLA	b	827	-	1/1/15/20	6/37/115/115	-
14	CLA	B	815	-	1/1/15/20	13/37/115/115	-
14	CLA	A	828	-	1/1/15/20	7/37/115/115	-
14	CLA	2	840	-	-	2/16/94/115	-
14	CLA	j	1303	-	1/1/8/20	0/2/76/115	-
14	CLA	B	833	-	1/1/15/20	11/37/115/115	-
14	CLA	1	1645	18	1/1/11/20	5/13/91/115	-
14	CLA	A	840	-	1/1/15/20	17/37/115/115	-
14	CLA	j	1301	21	1/1/11/20	2/13/91/115	-
14	CLA	F	201	21	1/1/13/20	6/29/107/115	-
14	CLA	A	857	-	1/1/7/20	0/2/72/115	-
14	CLA	B	832	-	1/1/15/20	16/37/115/115	-
14	CLA	f	203	-	1/1/12/20	6/19/97/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
14	CLA	l	204	10	1/1/15/20	17/37/115/115	-
14	CLA	k	103	21	1/1/13/20	9/29/107/115	-
14	CLA	B	836	21	1/1/11/20	3/13/91/115	-
14	CLA	b	823	21	1/1/13/20	5/25/103/115	-
14	CLA	A	814	-	1/1/15/20	15/37/115/115	-
16	SF4	a	846	2,1	-	-	0/6/5/5
17	BCR	j	1305	-	-	13/29/63/63	0/2/2/2
14	CLA	2	804	-	1/1/15/20	12/37/115/115	-
17	BCR	J	103	-	-	11/29/63/63	0/2/2/2
18	LHG	A	853	-	-	21/53/53/53	-
14	CLA	b	833	-	1/1/15/20	16/37/115/115	-
17	BCR	B	843	-	-	11/29/63/63	0/2/2/2
14	CLA	B	808	-	1/1/15/20	8/37/115/115	-
17	BCR	j	1304	-	-	11/29/63/63	0/2/2/2
14	CLA	b	836	21	1/1/12/20	9/19/97/115	-
14	CLA	a	836	-	1/1/15/20	6/37/115/115	-
14	CLA	A	834	-	1/1/15/20	10/37/115/115	-
14	CLA	2	830	-	1/1/15/20	7/37/115/115	-
14	CLA	1	1618	21	1/1/15/20	12/37/115/115	-
14	CLA	L	203	10	1/1/15/20	17/37/115/115	-
14	CLA	1	1643	-	1/1/15/20	12/37/115/115	-
17	BCR	k	102	-	-	6/29/63/63	0/2/2/2
14	CLA	A	803	21	1/1/15/20	6/37/115/115	-
14	CLA	1	1638	1	1/1/11/20	5/13/91/115	-
14	CLA	1	1601	-	1/1/7/20	0/2/72/115	-
14	CLA	0	205	10	1/1/15/20	17/37/115/115	-
14	CLA	2	828	-	1/1/15/20	15/37/115/115	-
14	CLA	A	833	-	1/1/15/20	12/37/115/115	-
14	CLA	A	830	-	1/1/15/20	15/37/115/115	-
14	CLA	9	103	21	1/1/13/20	9/29/107/115	-
14	CLA	1	1619	-	1/1/15/20	10/37/115/115	-
14	CLA	b	818	-	1/1/15/20	13/37/115/115	-
14	CLA	2	824	-	1/1/11/20	5/13/91/115	-
17	BCR	F	202	-	-	12/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
14	CLA	1	1621	-	1/1/15/20	10/37/115/115	-
14	CLA	2	827	-	1/1/15/20	6/37/115/115	-
14	CLA	2	834	-	1/1/15/20	11/37/115/115	-
17	BCR	B	845	-	-	11/29/63/63	0/2/2/2
14	CLA	A	819	-	1/1/15/20	17/37/115/115	-
13	CL0	A	801	-	3/3/20/25	10/37/135/135	-
18	LHG	b	851	-	-	18/53/53/53	-
14	CLA	A	823	-	1/1/11/20	8/13/91/115	-
14	CLA	b	808	-	1/1/15/20	6/37/115/115	-
14	CLA	2	803	-	1/1/15/20	18/37/115/115	-
14	CLA	b	832	-	1/1/11/20	10/18/96/115	-

The worst 5 of 2563 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	f	203	CLA	C4B-NB	7.82	1.42	1.35
14	A	824	CLA	C4B-NB	7.79	1.42	1.35
14	F	204	CLA	C4B-NB	7.74	1.42	1.35
14	1	1625	CLA	C4B-NB	7.74	1.42	1.35
14	6	203	CLA	C4B-NB	7.72	1.42	1.35

The worst 5 of 2850 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	B	808	CLA	C4A-NA-C1A	8.39	110.48	106.71
14	2	809	CLA	C4A-NA-C1A	8.34	110.46	106.71
14	b	809	CLA	C4A-NA-C1A	8.29	110.43	106.71
14	B	803	CLA	C4A-NA-C1A	8.28	110.43	106.71
14	a	835	CLA	C4A-NA-C1A	8.24	110.41	106.71

5 of 294 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
13	A	801	CL0	ND
13	A	801	CL0	NA
13	A	801	CL0	NC
13	a	801	CL0	ND
13	a	801	CL0	NA

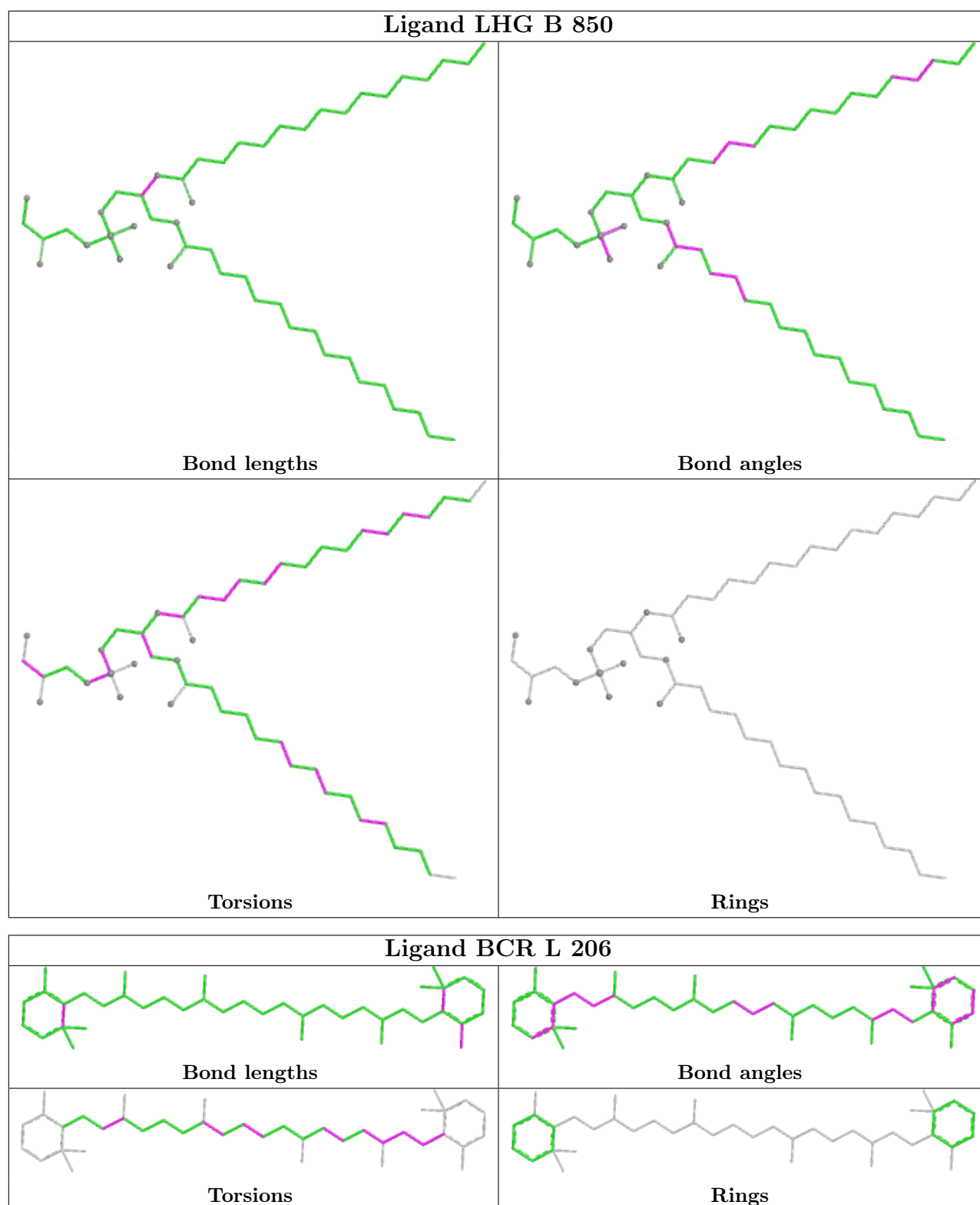
5 of 4211 torsion outliers are listed below:

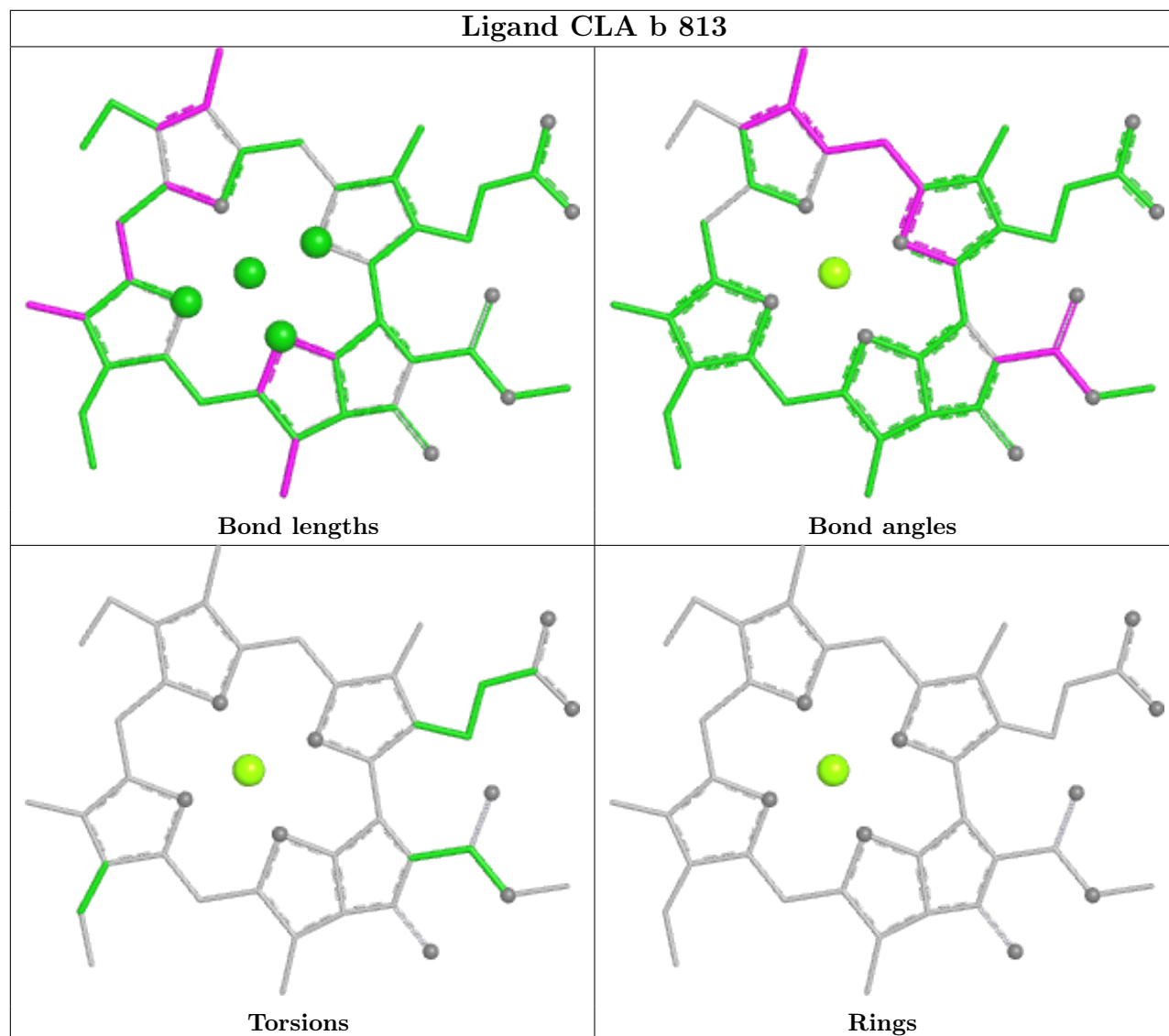
Mol	Chain	Res	Type	Atoms
14	A	802	CLA	CBD-CGD-O2D-CED
14	A	803	CLA	C6-C7-C8-C9
14	A	804	CLA	CHA-CBD-CGD-O1D
14	A	804	CLA	CHA-CBD-CGD-O2D
14	A	805	CLA	C1A-C2A-CAA-CBA

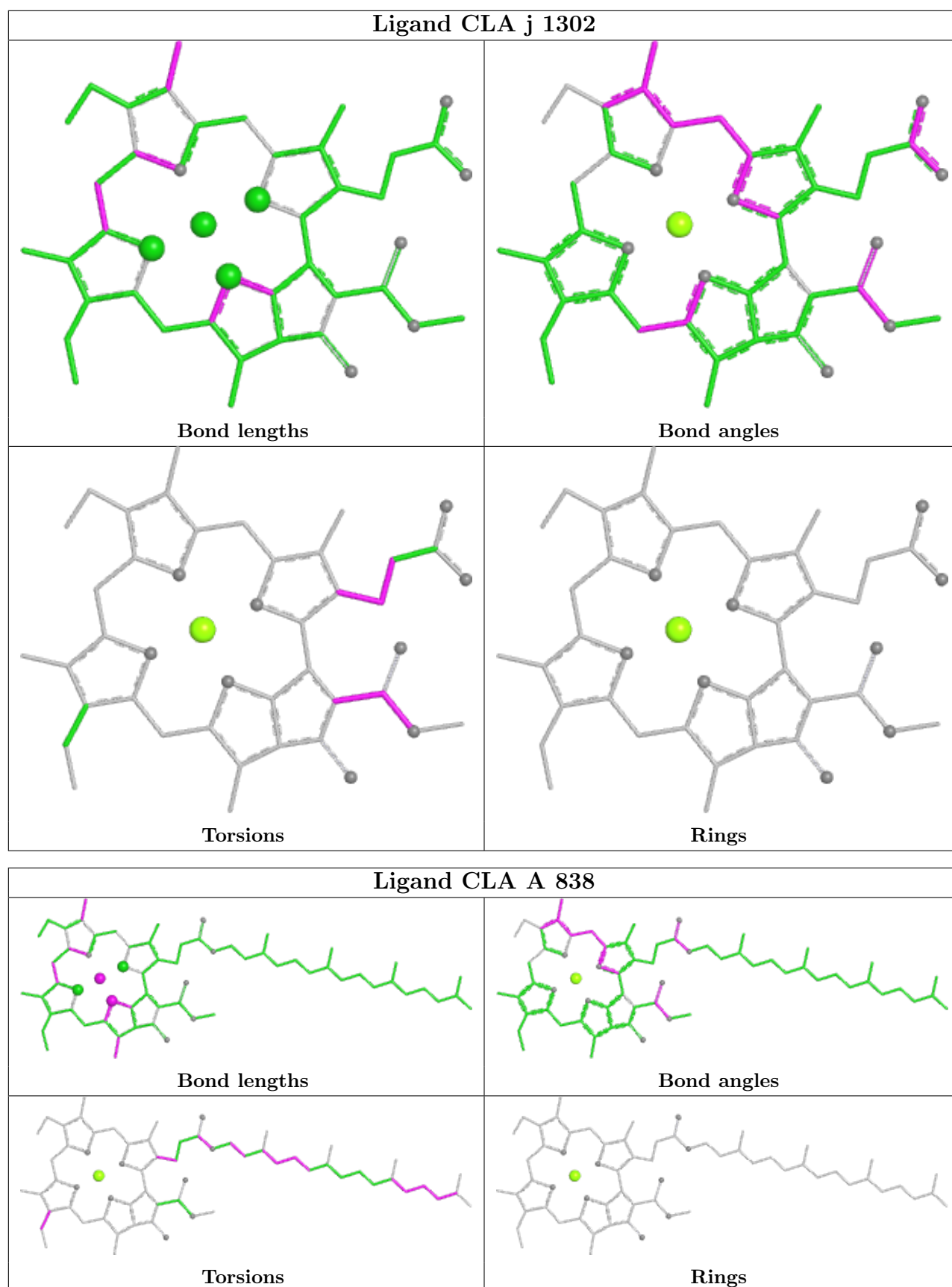
There are no ring outliers.

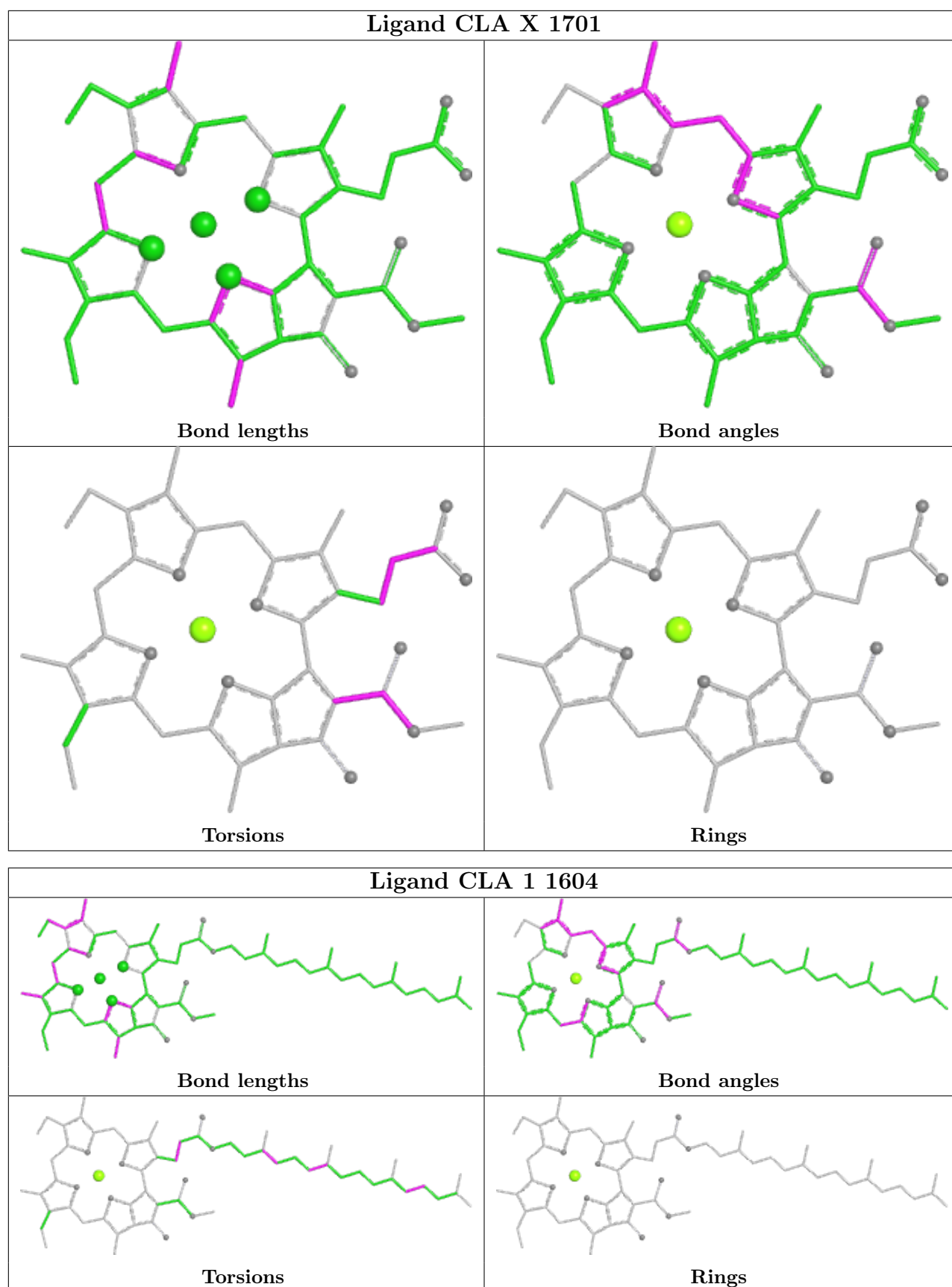
No monomer is involved in short contacts.

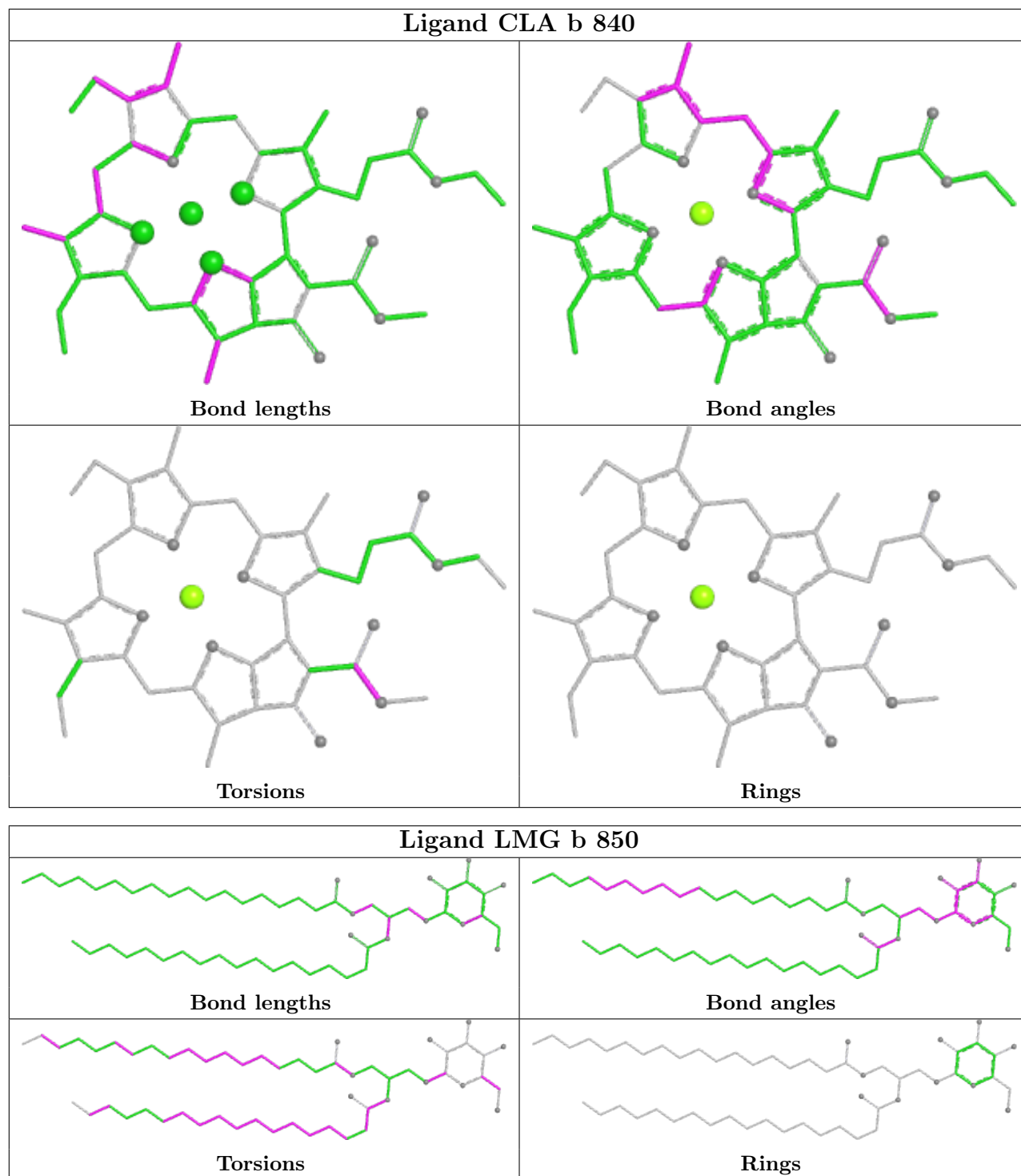
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

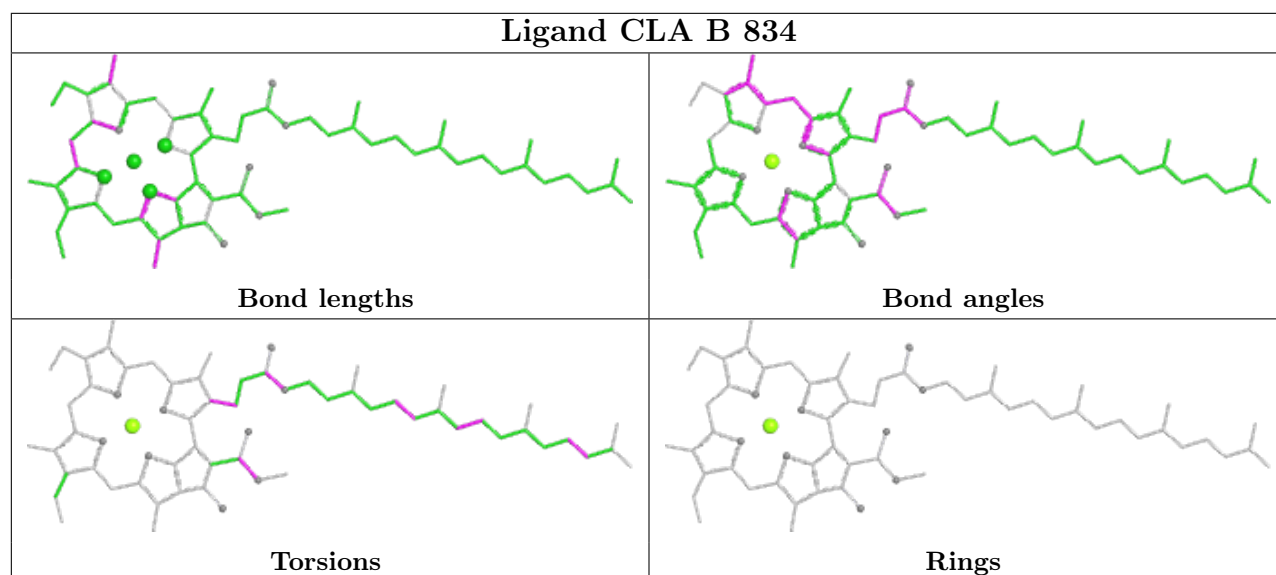
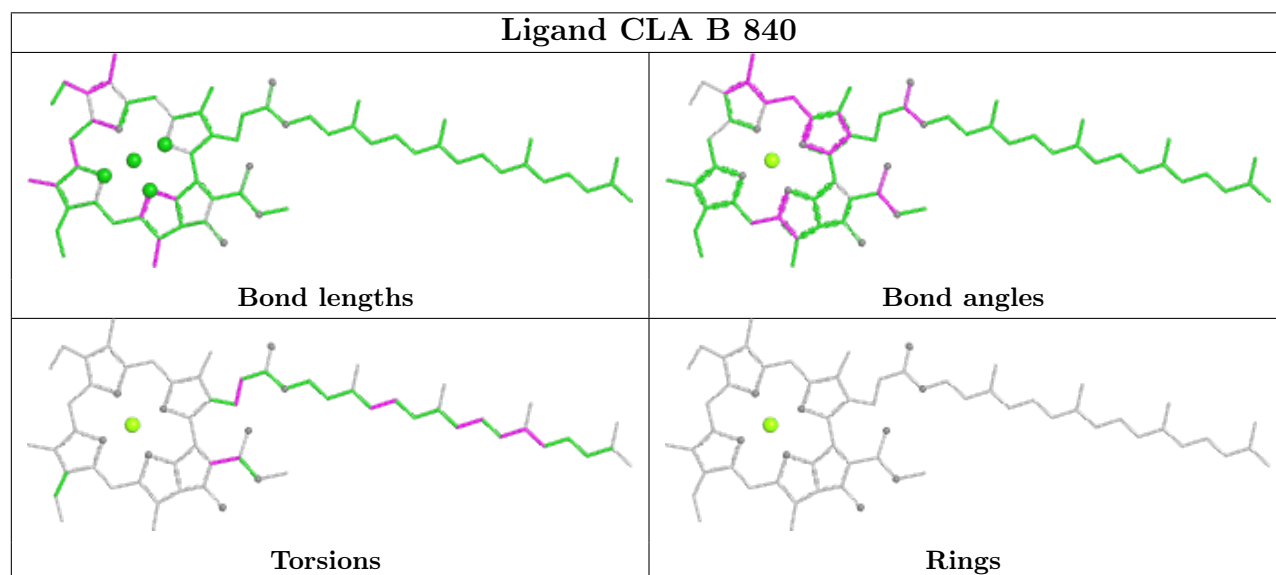
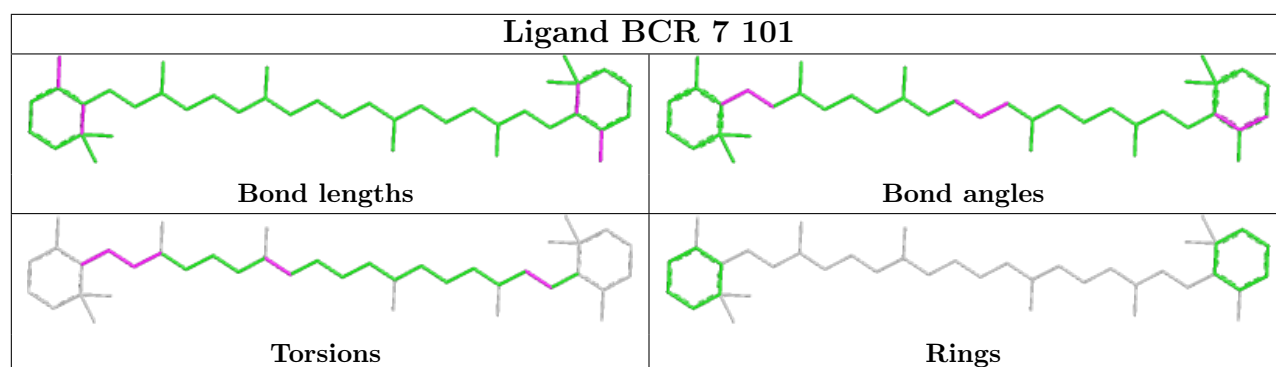


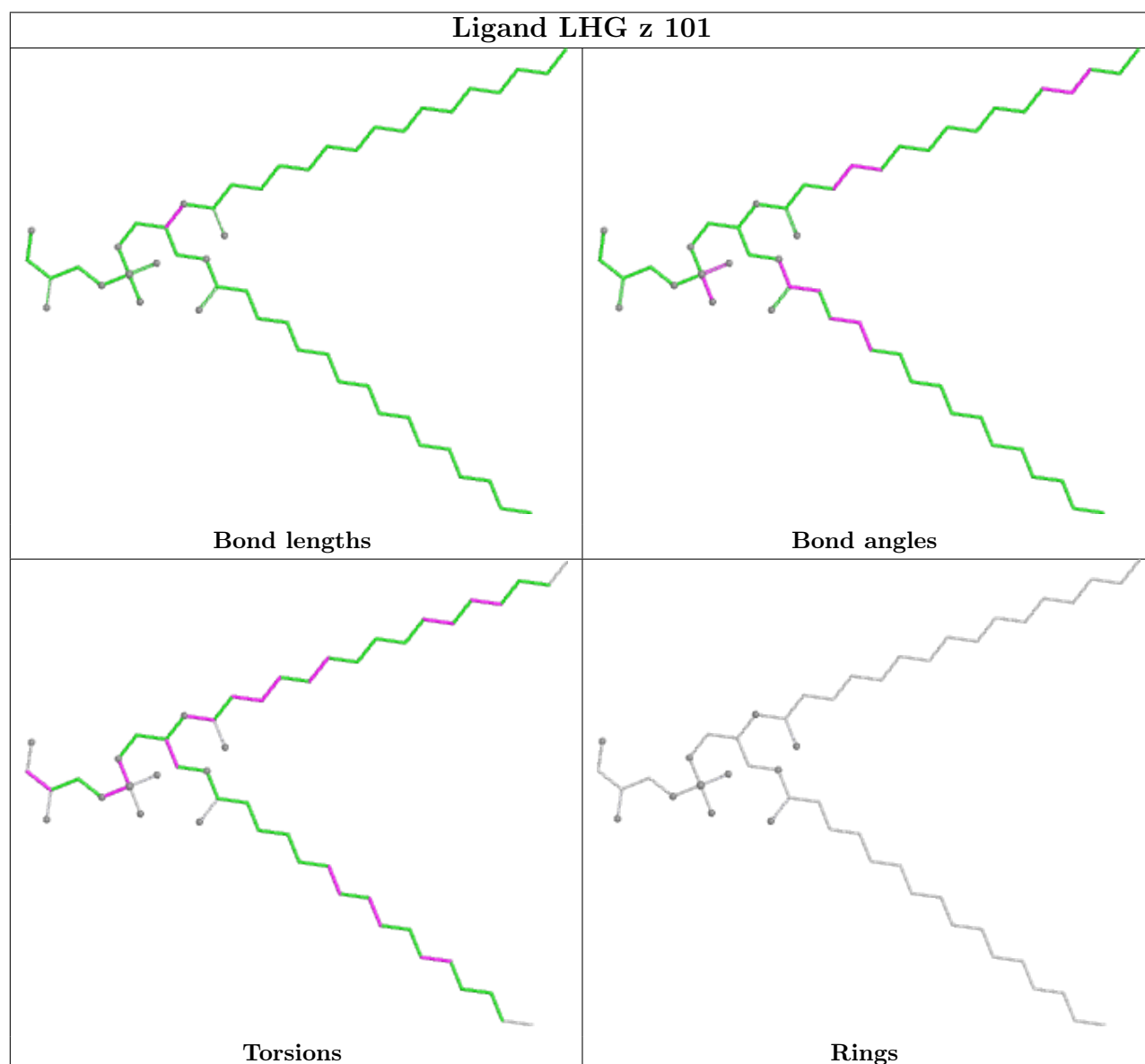
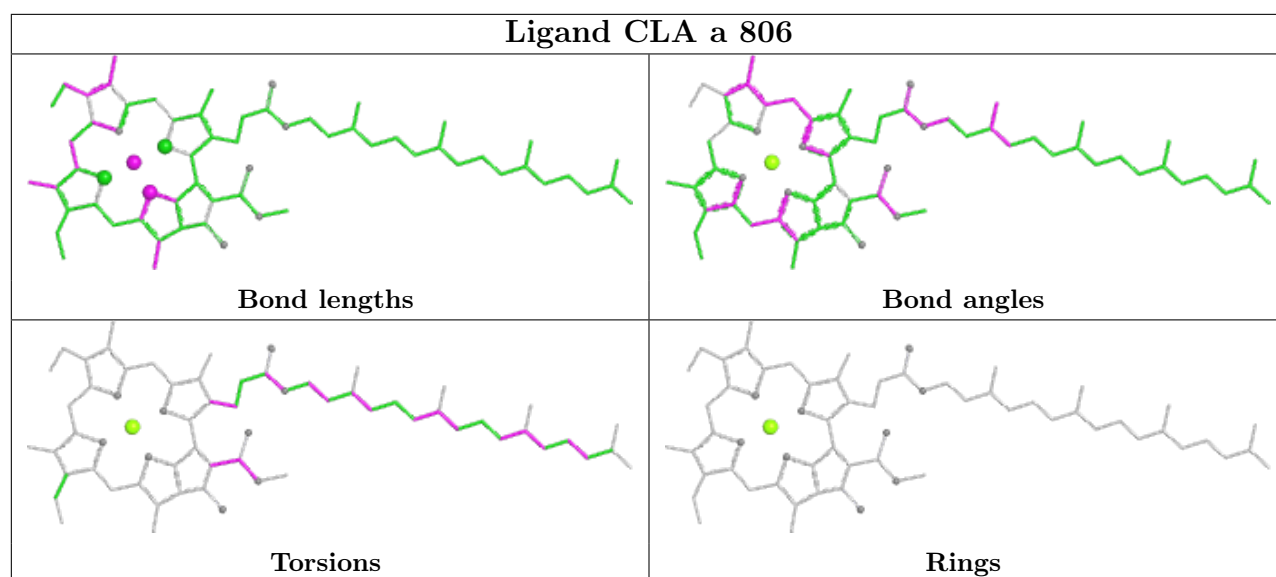


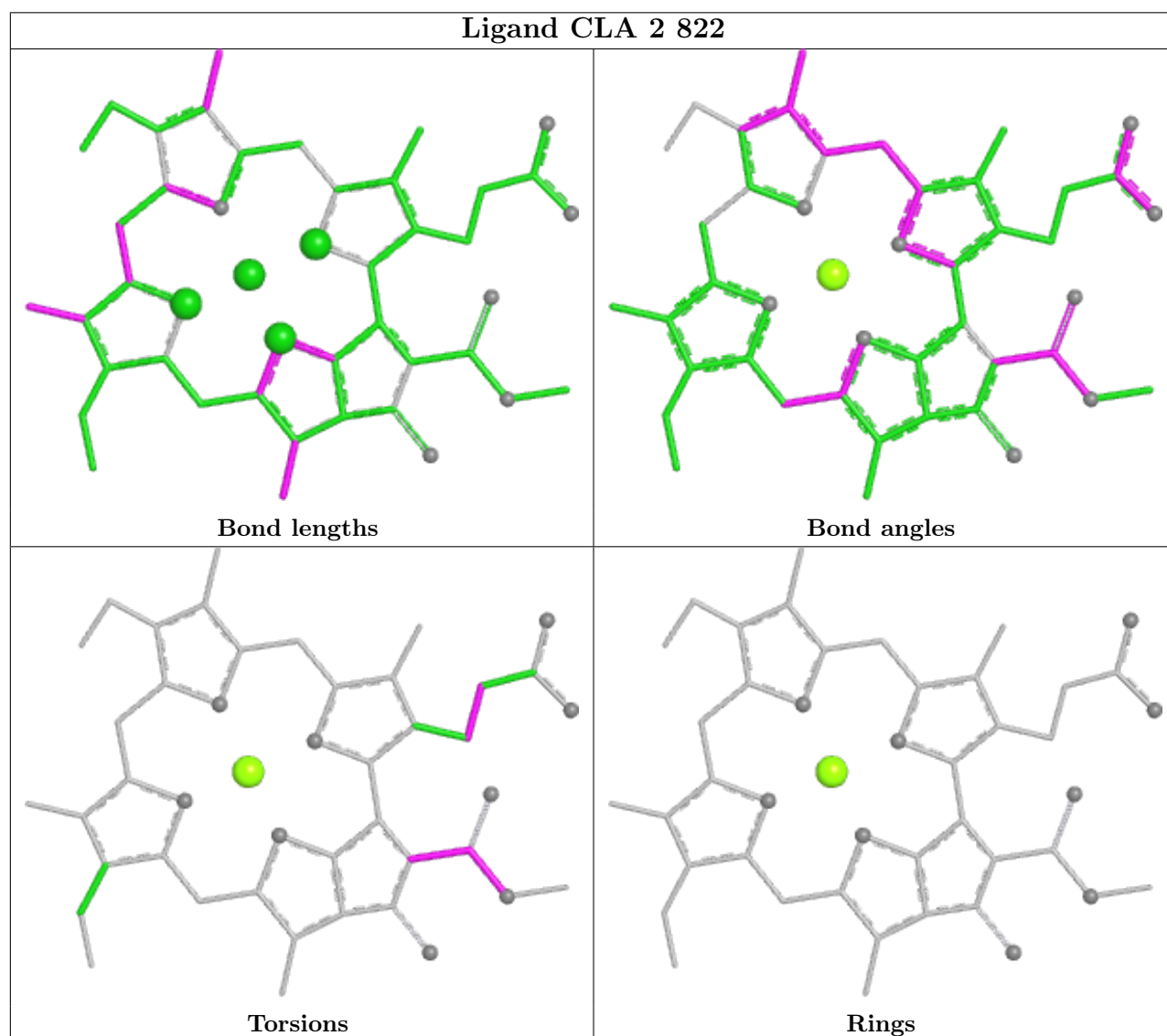
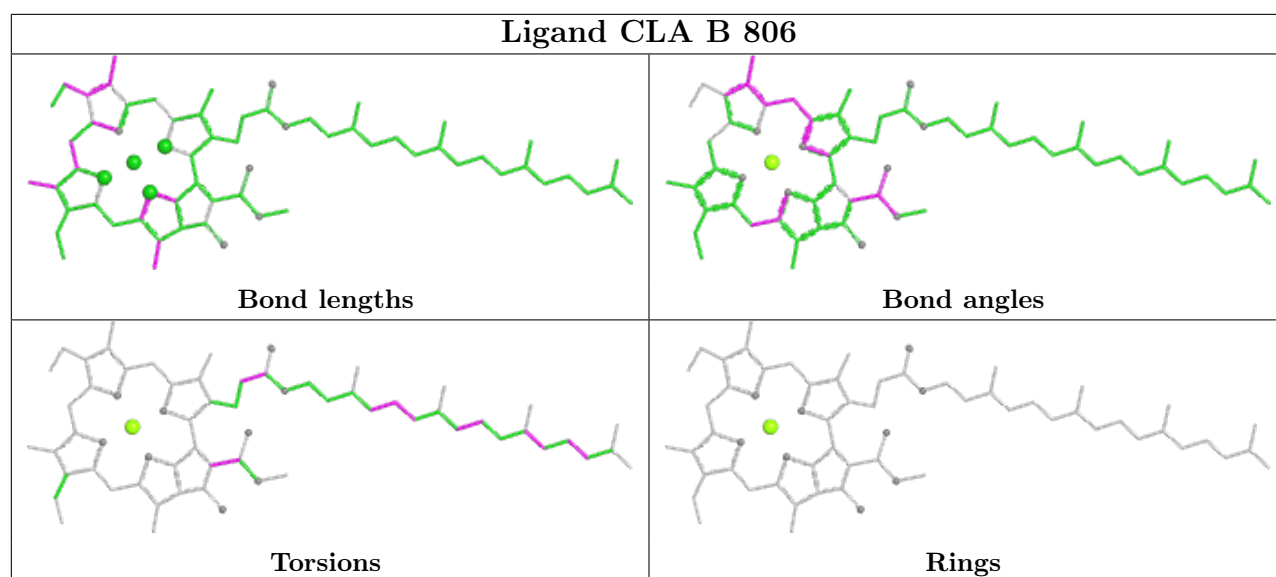


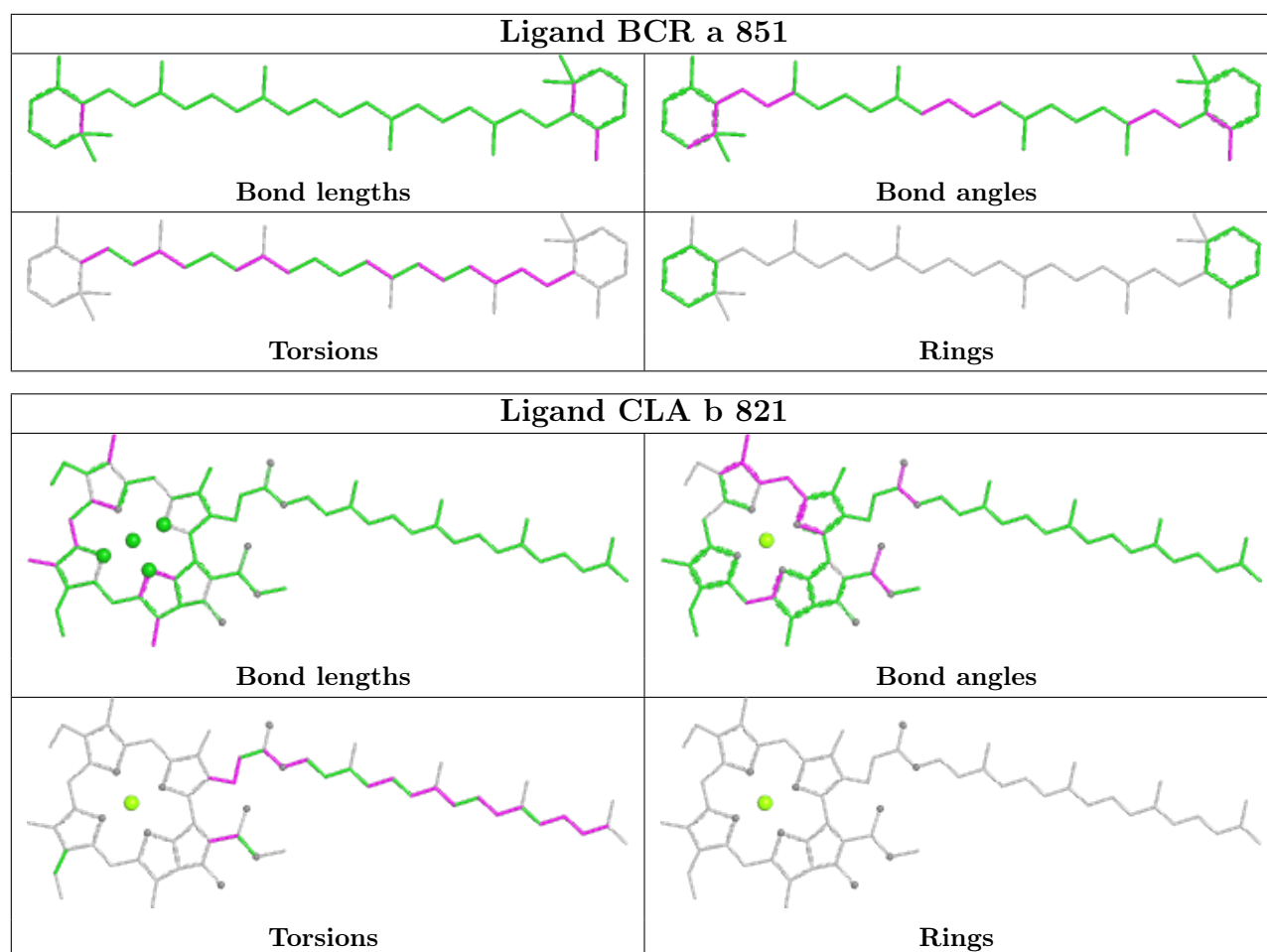


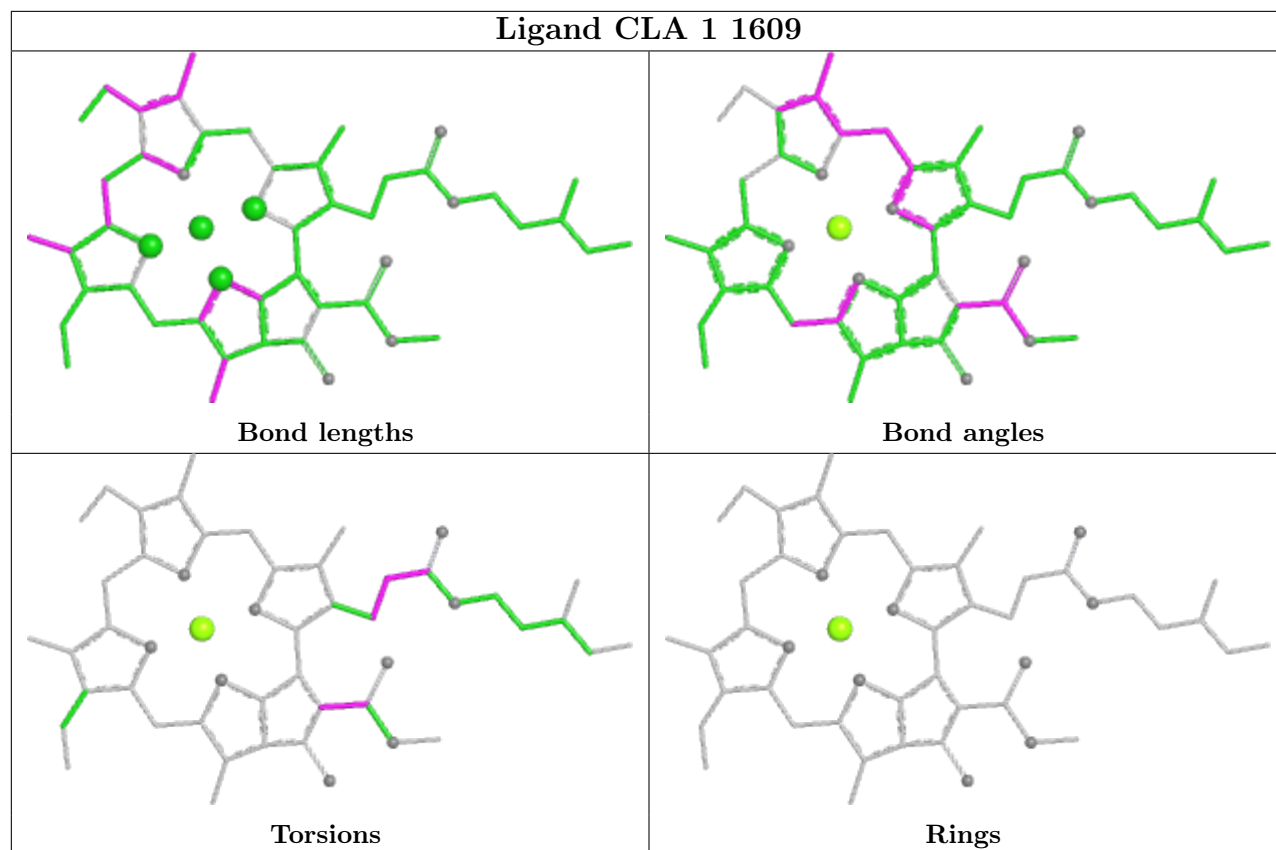


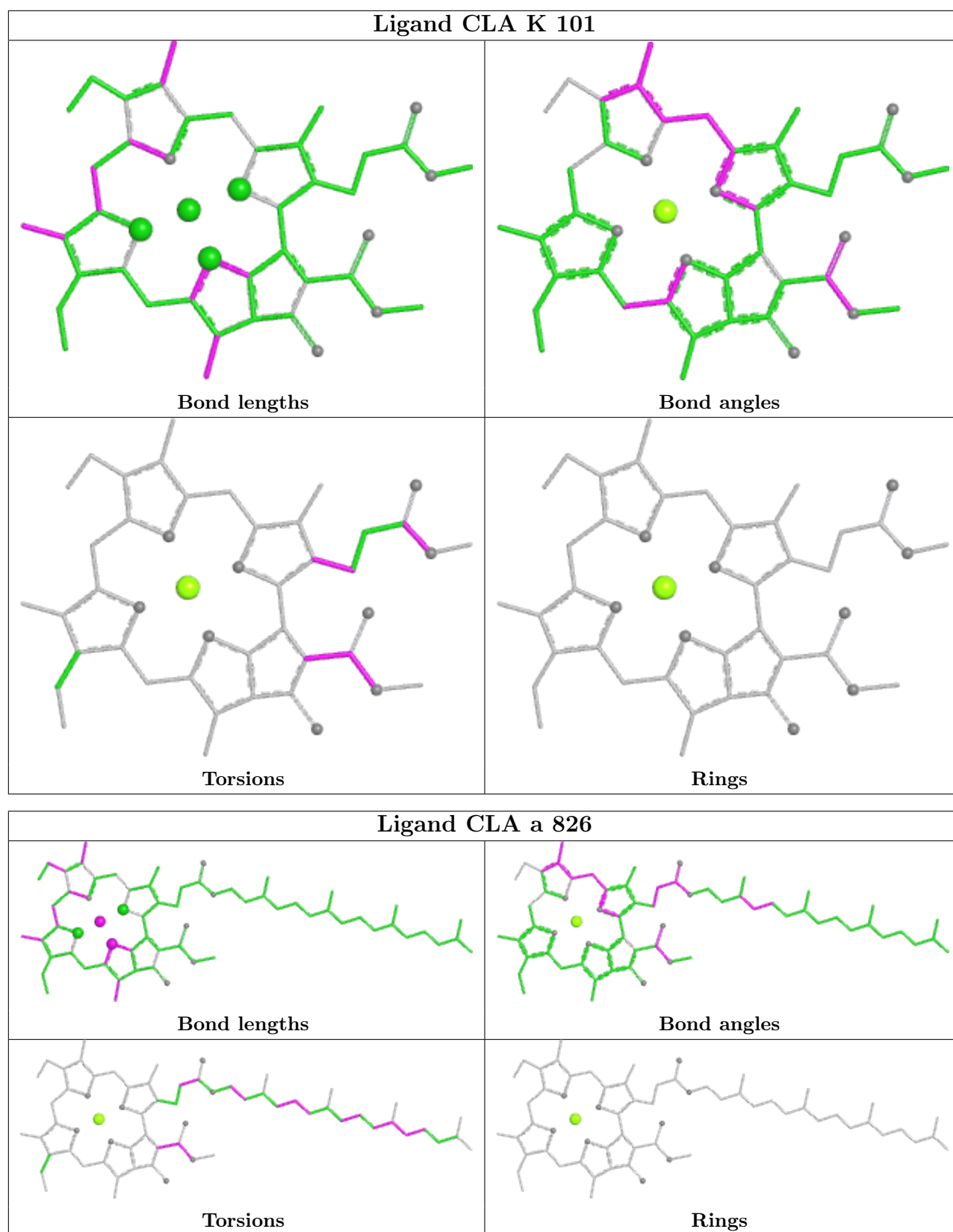


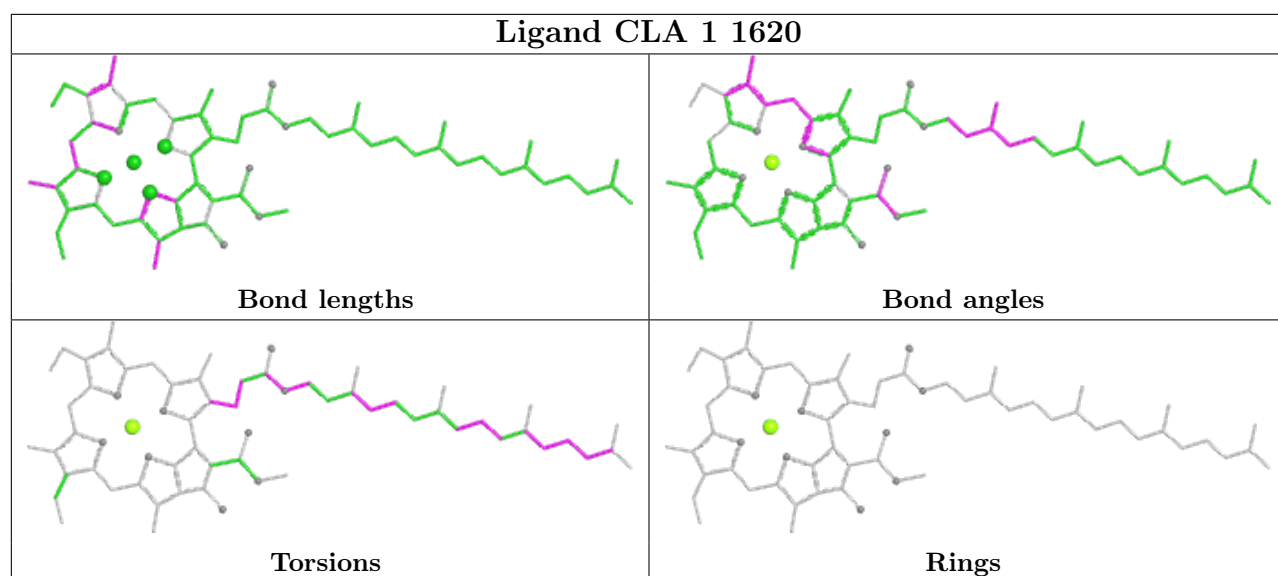
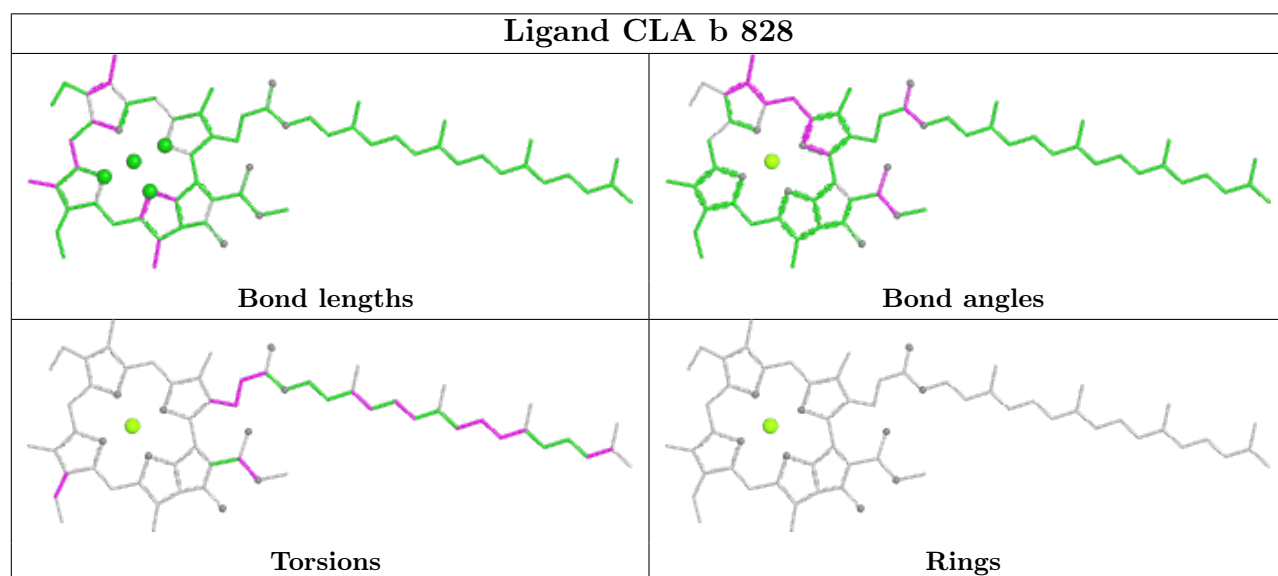
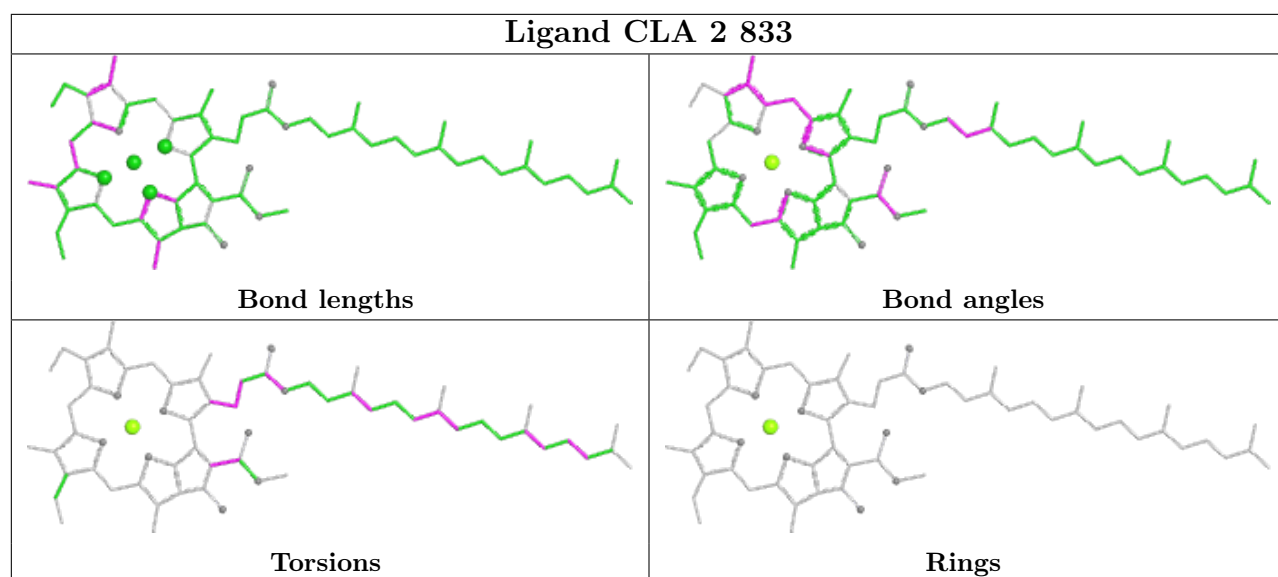


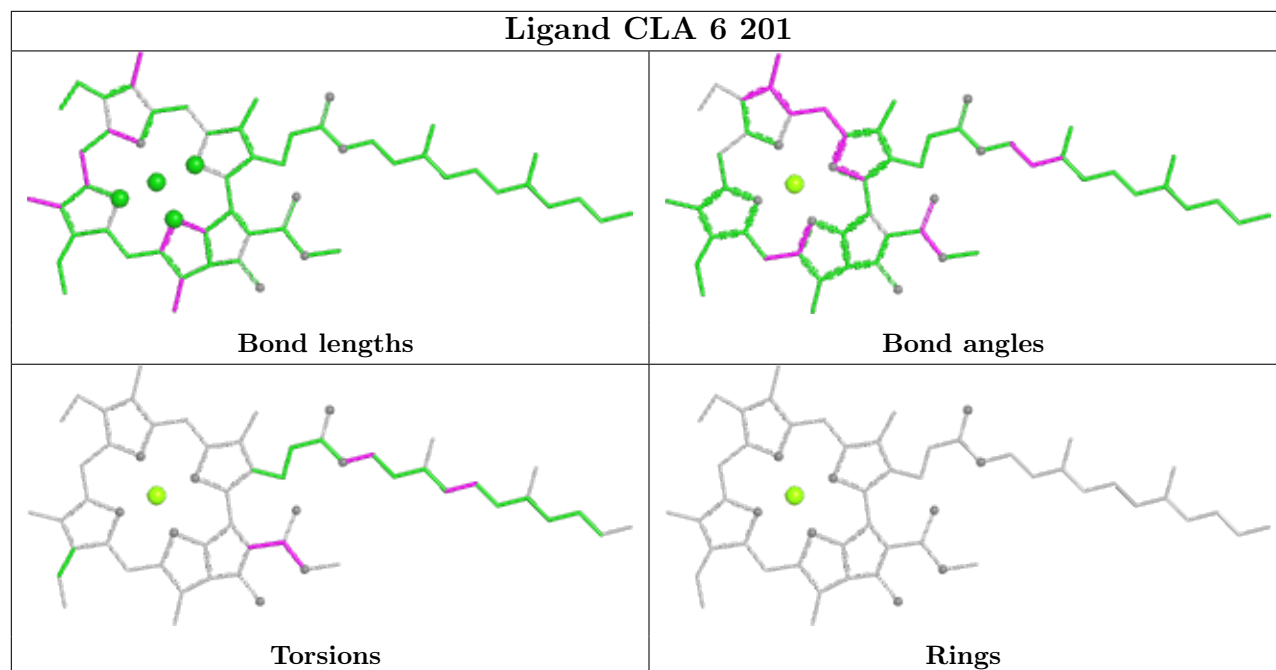
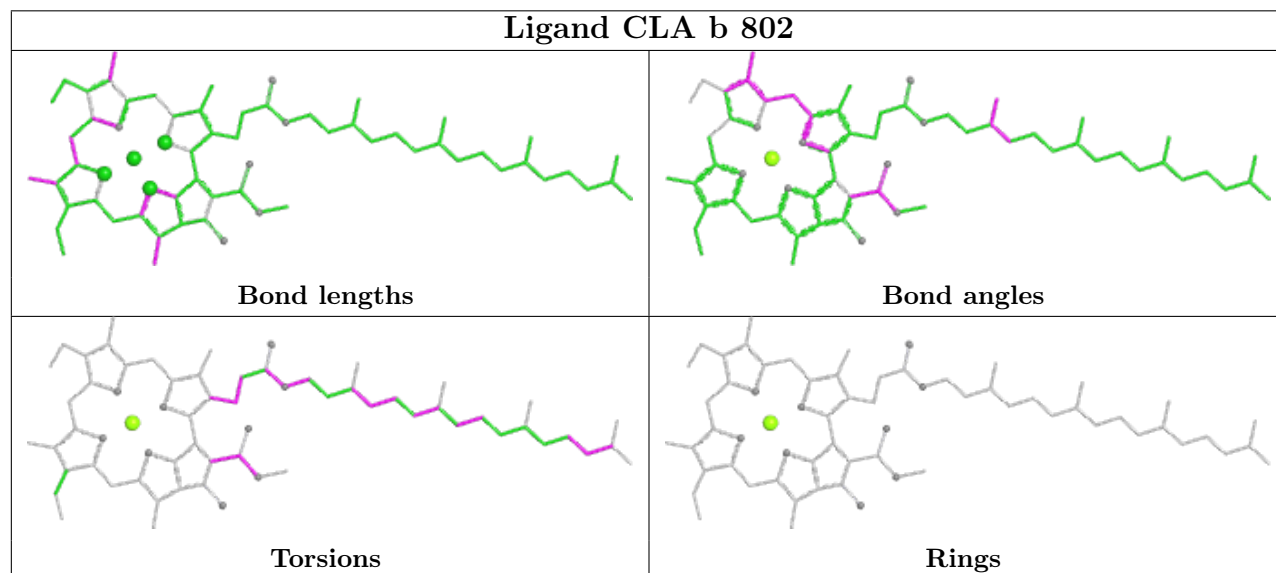
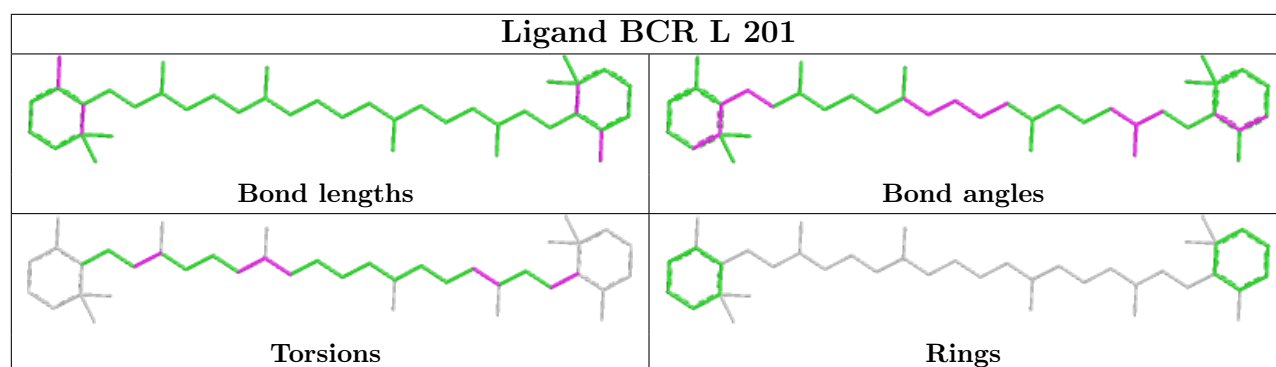


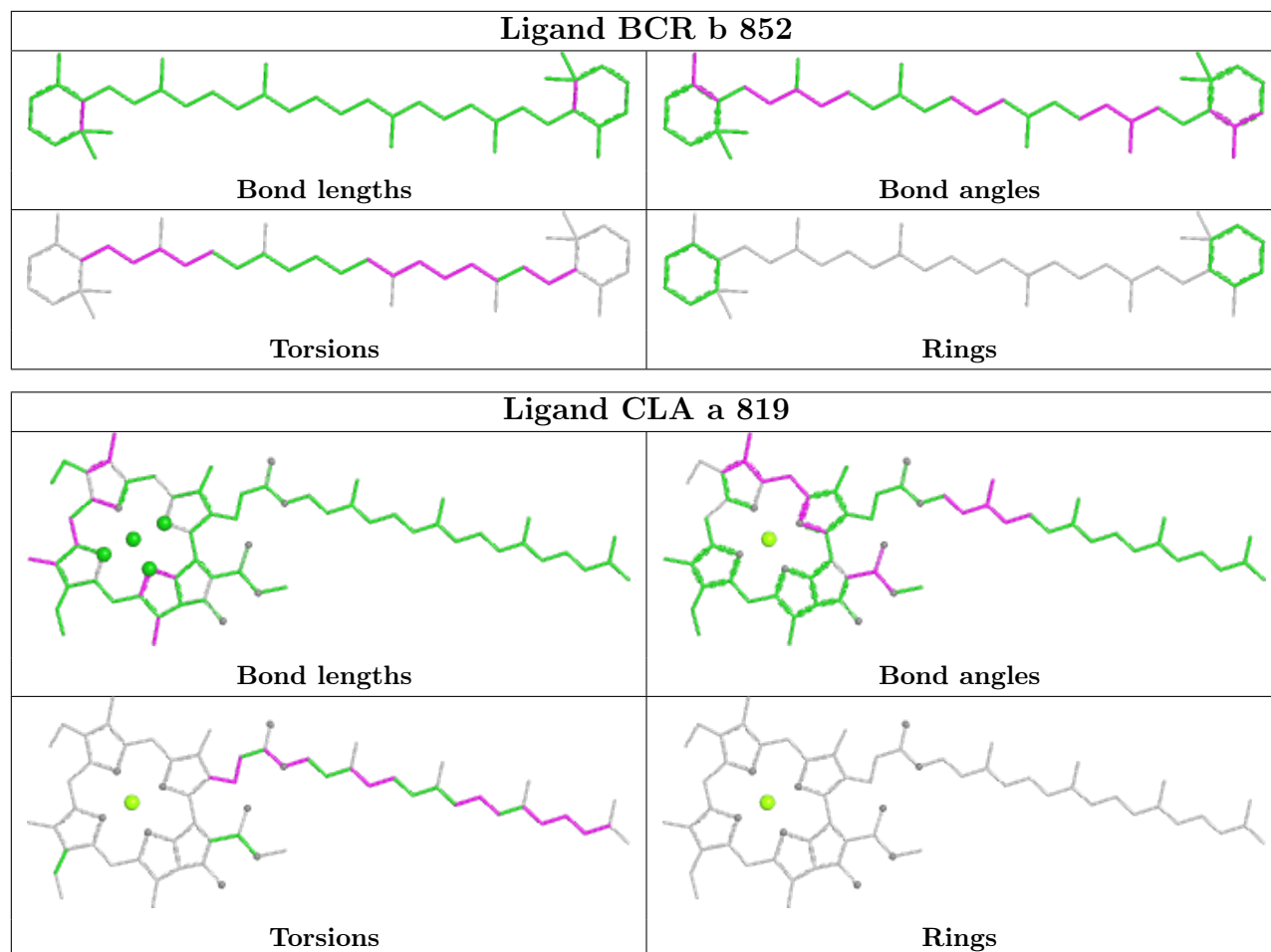


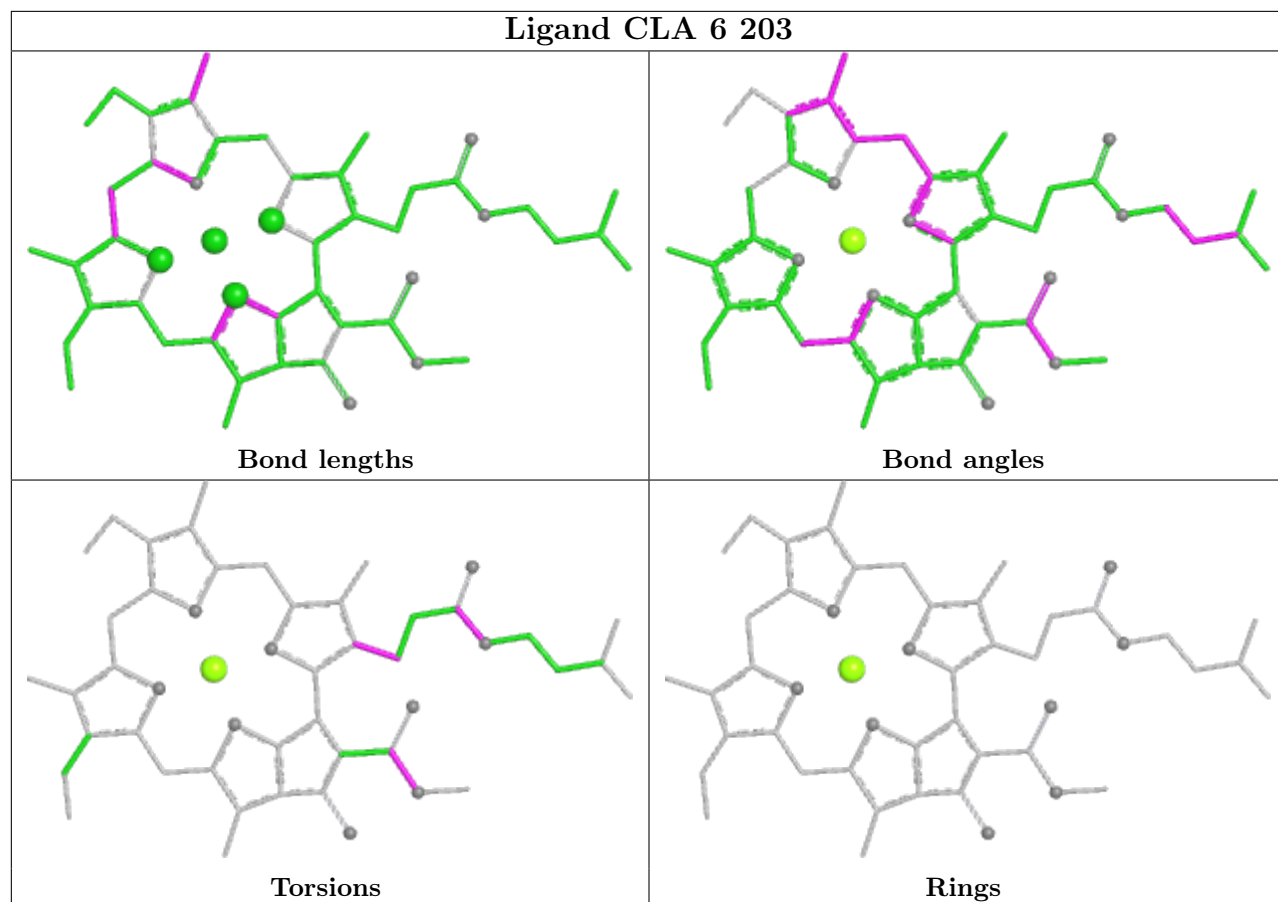


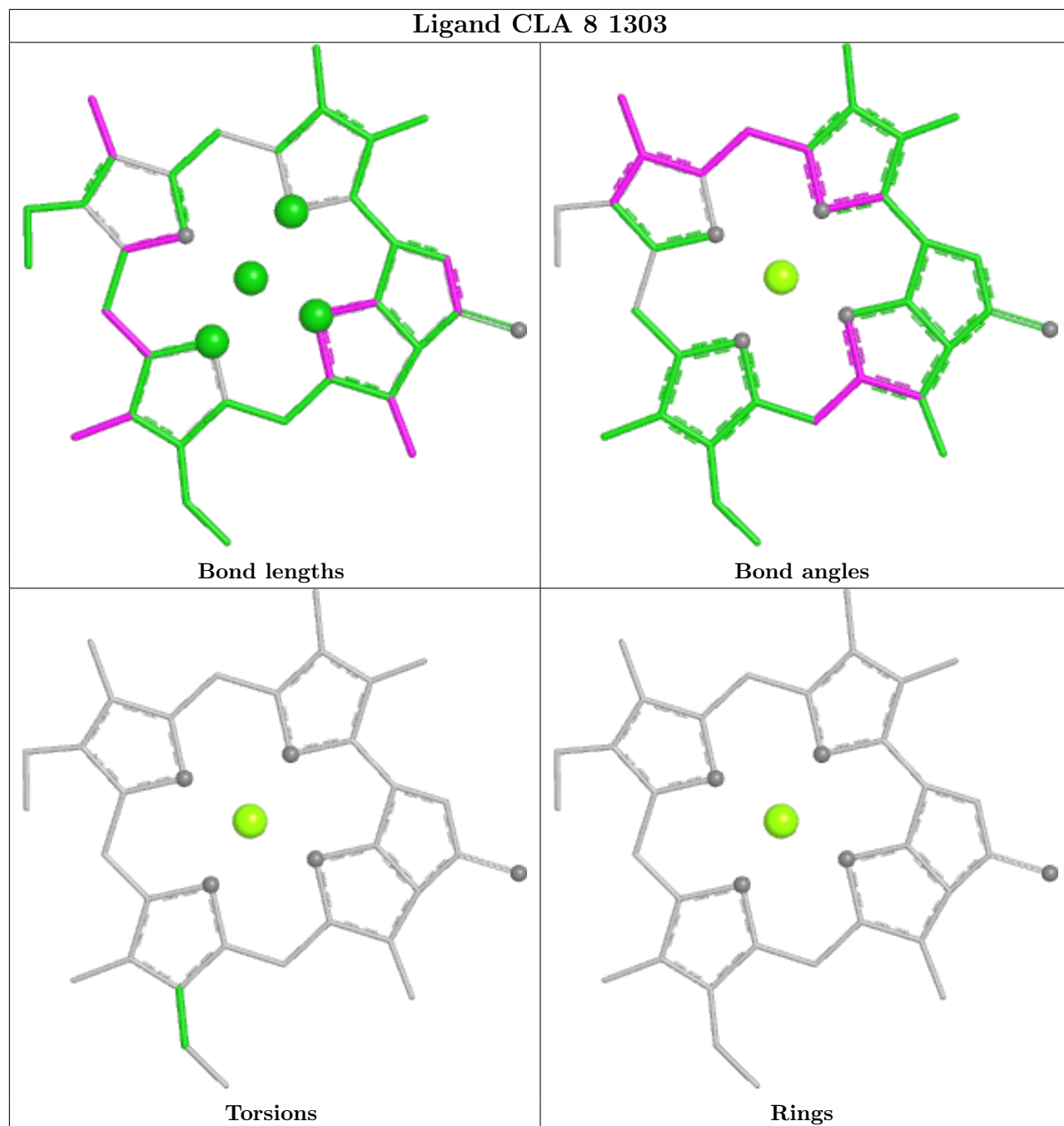


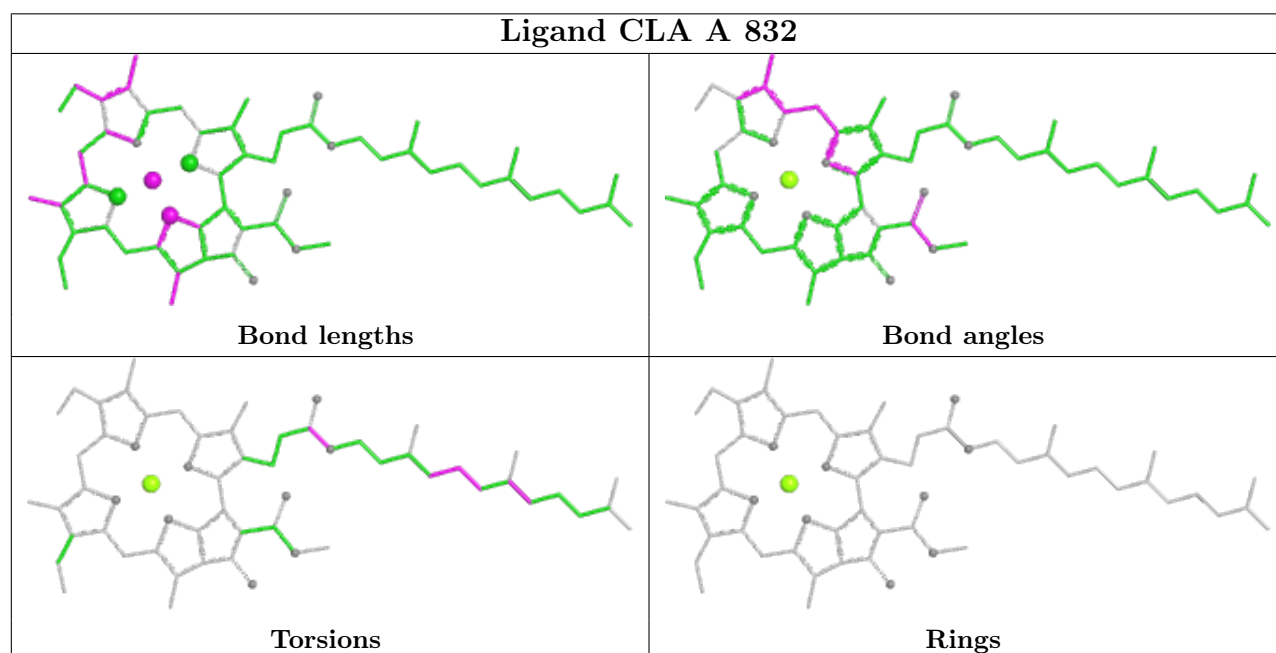
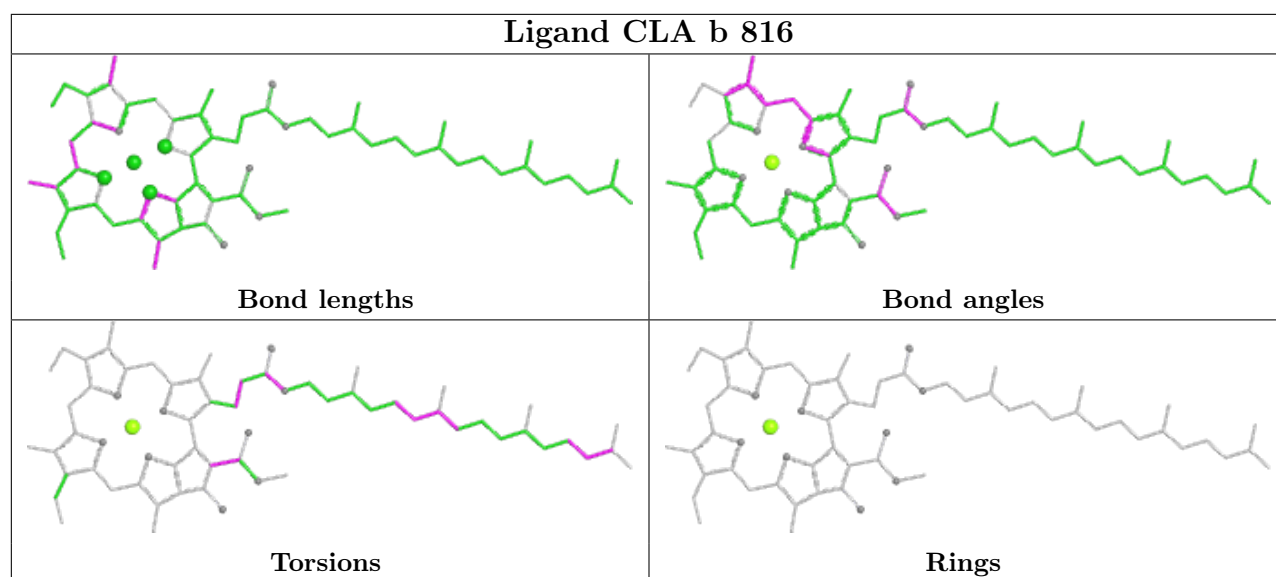


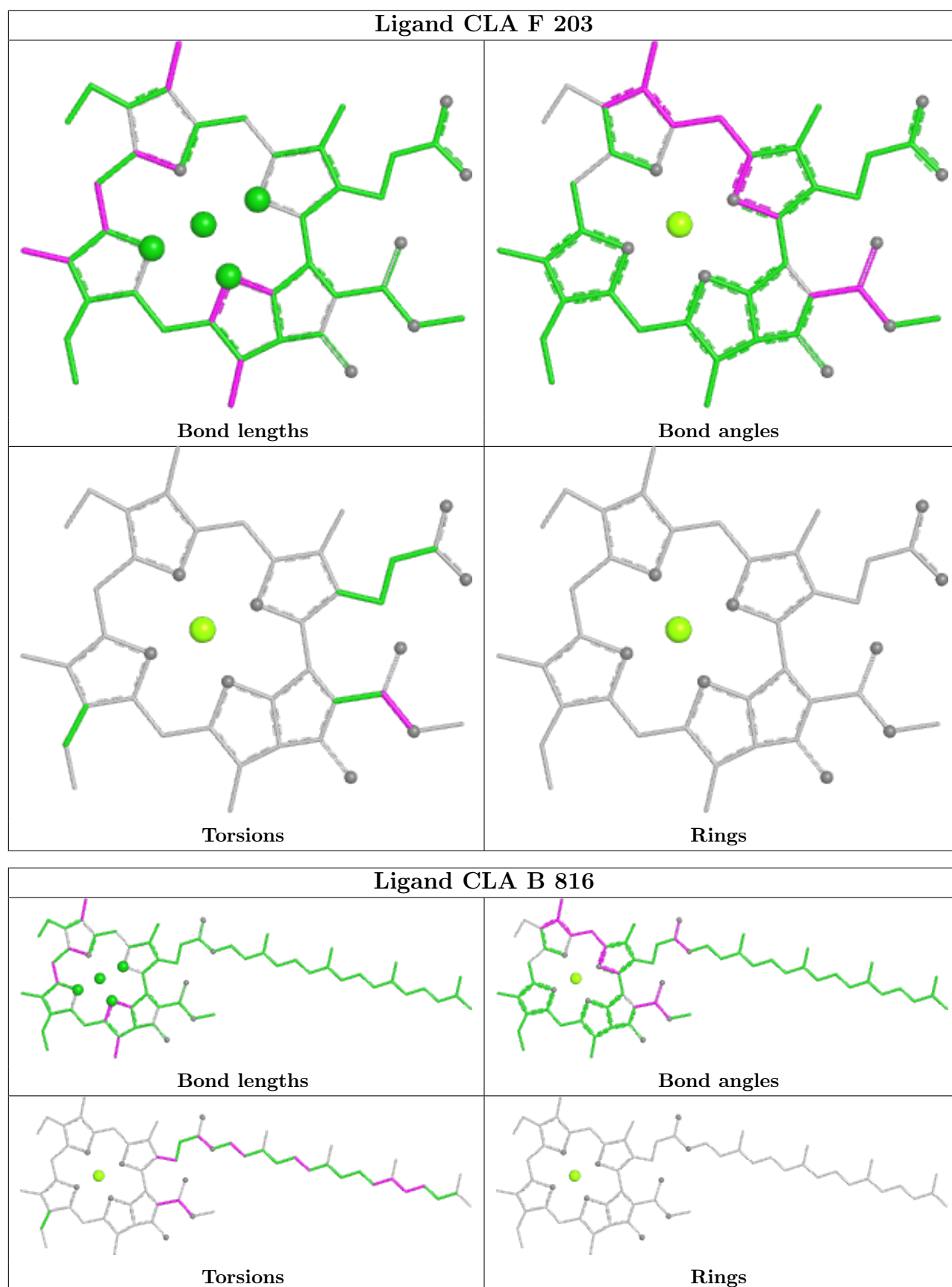


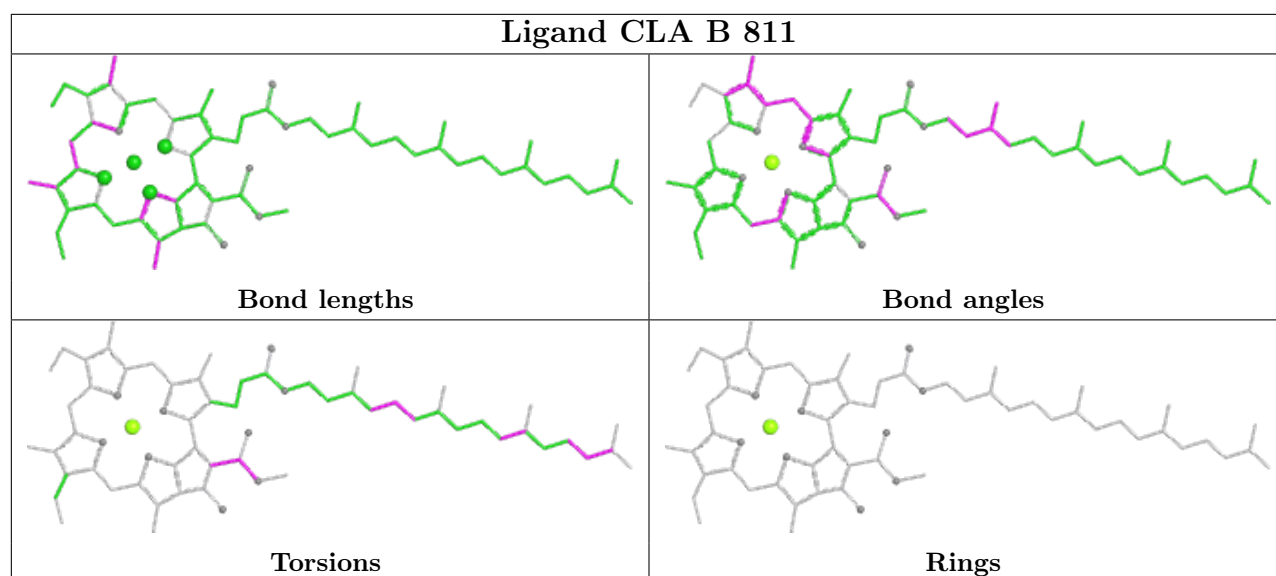
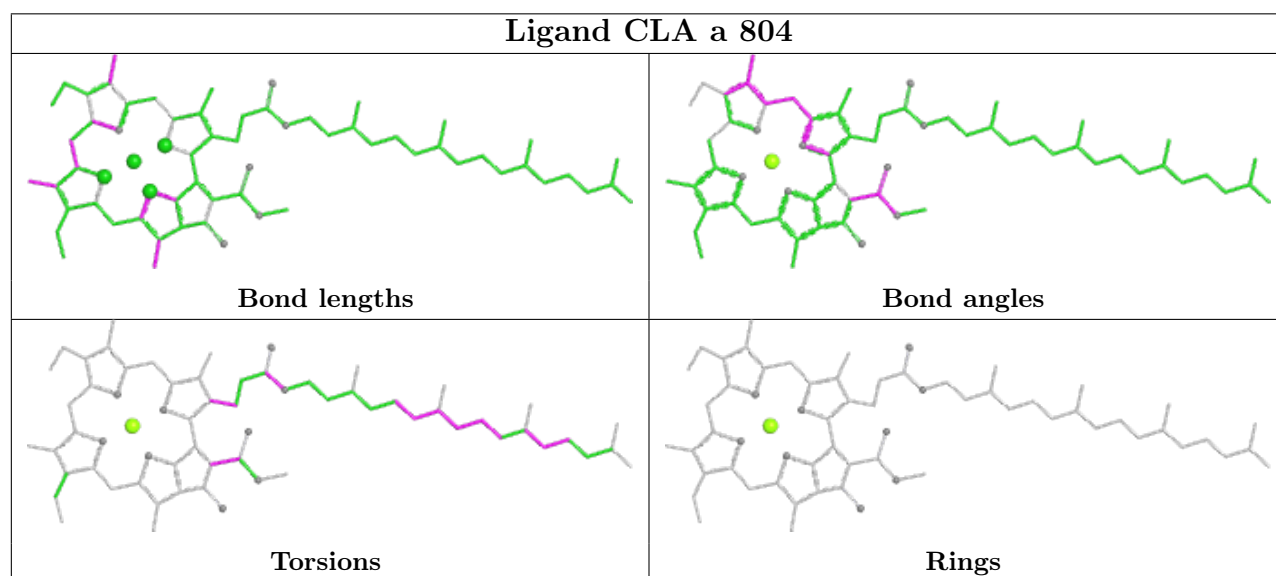
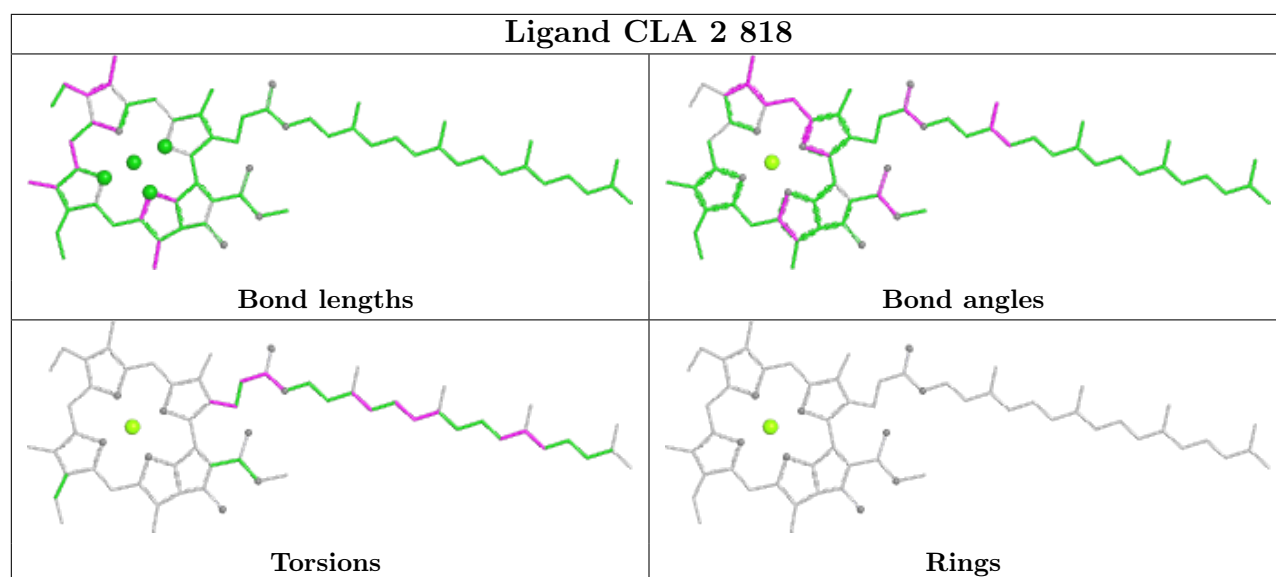


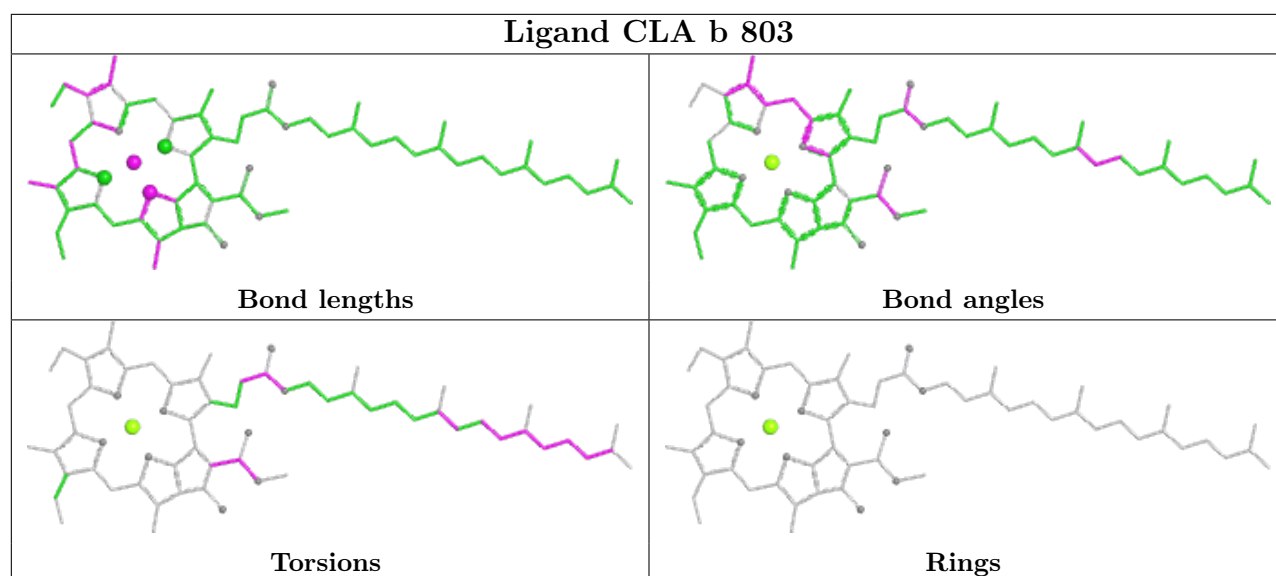
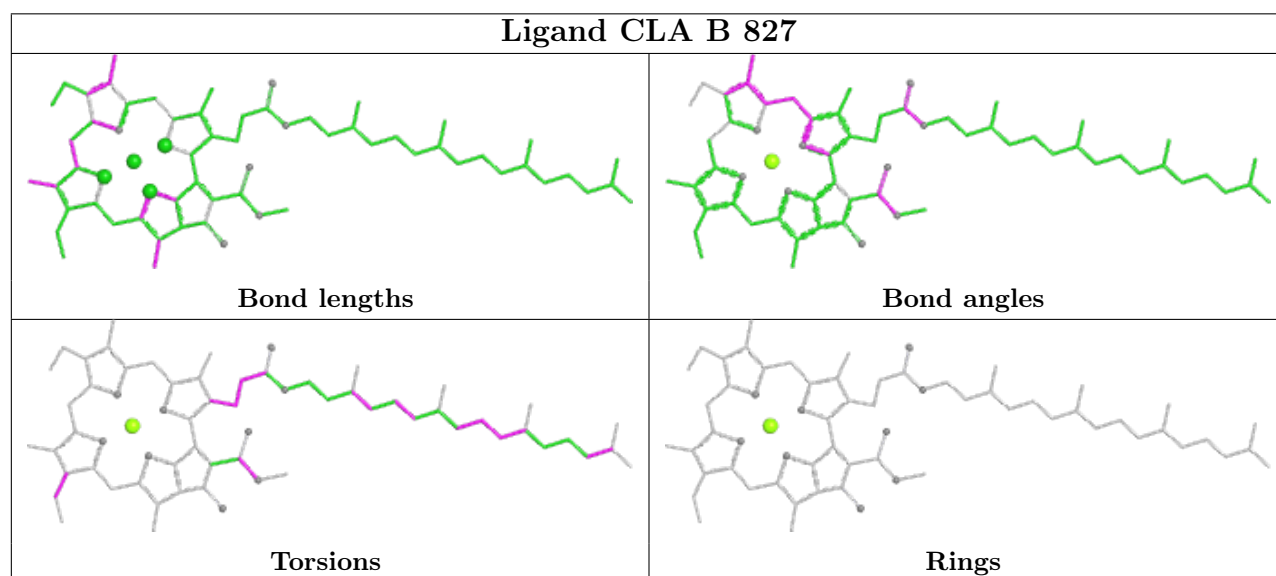
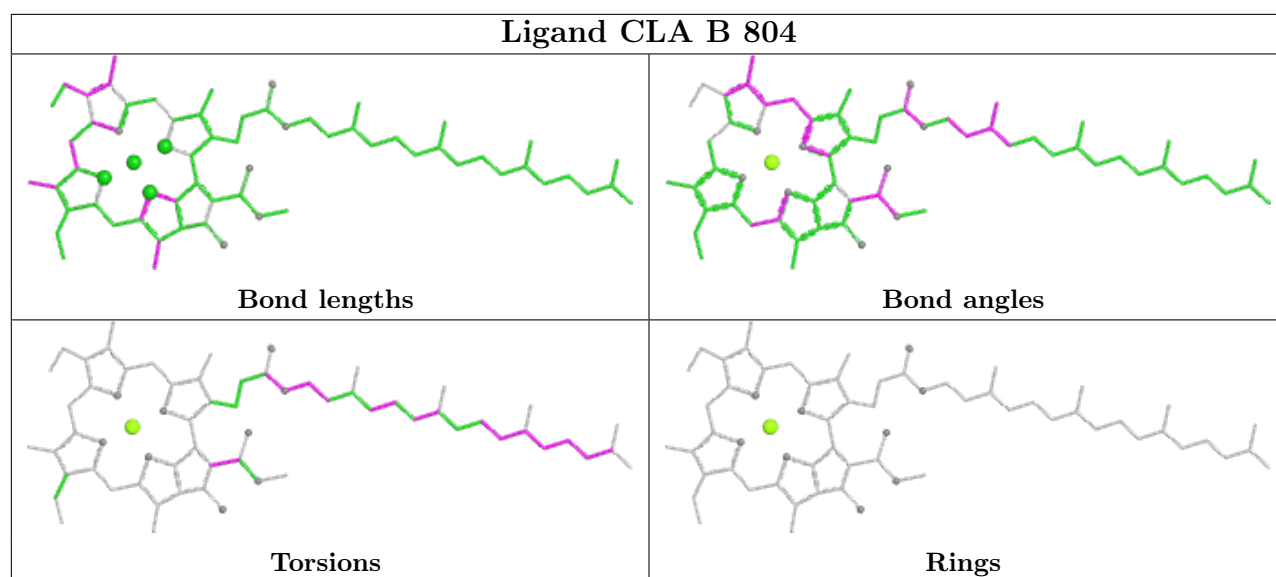


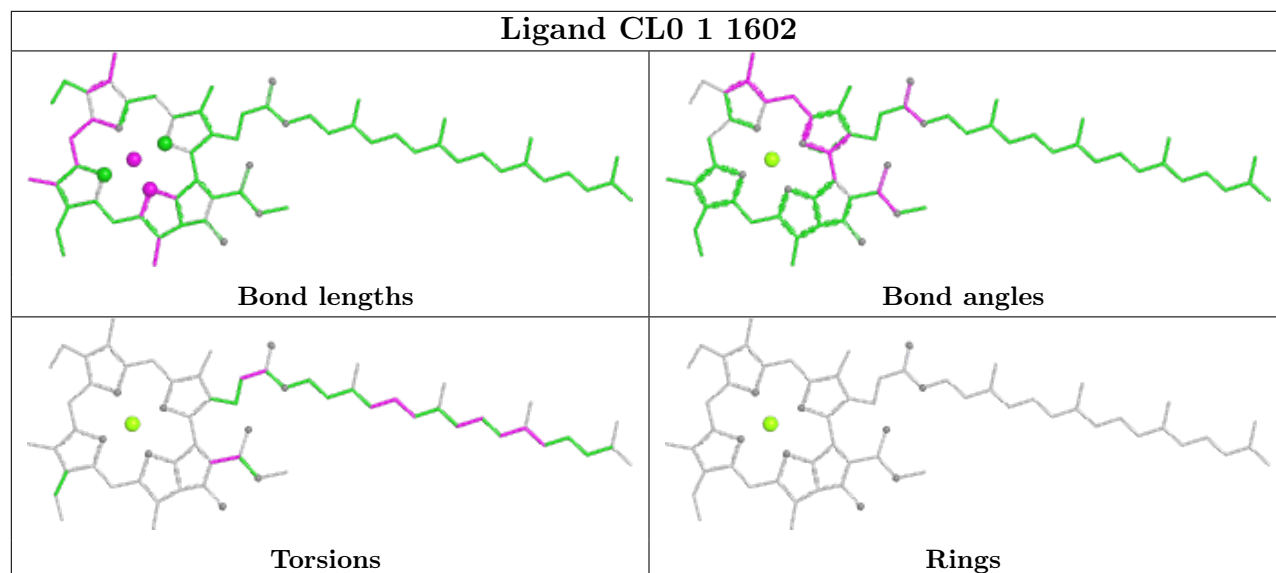
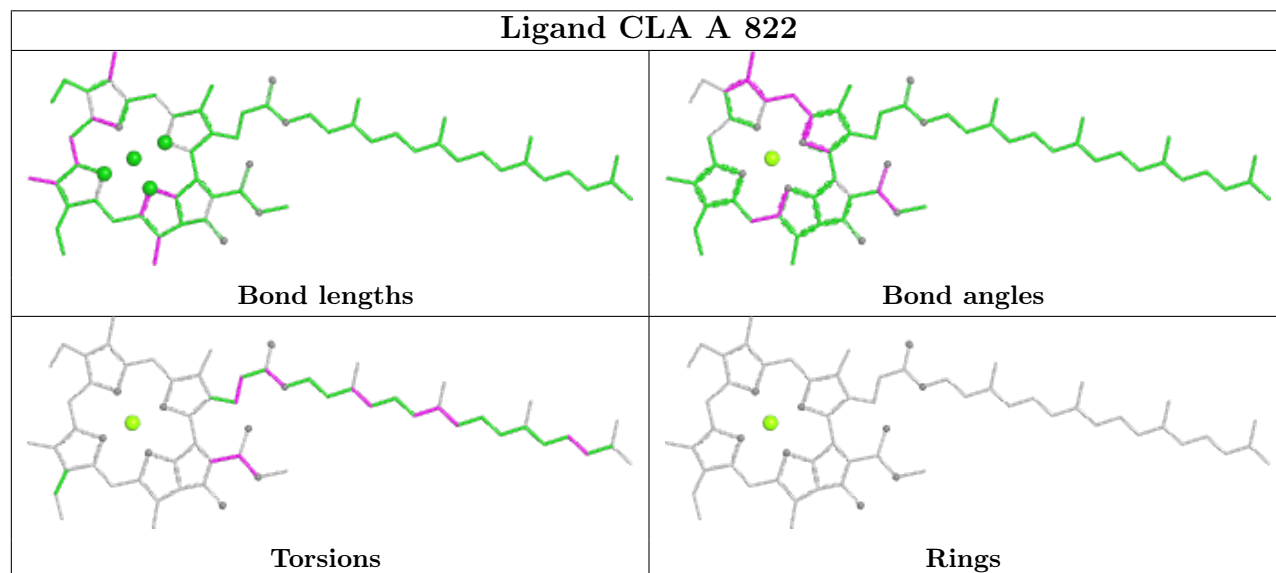
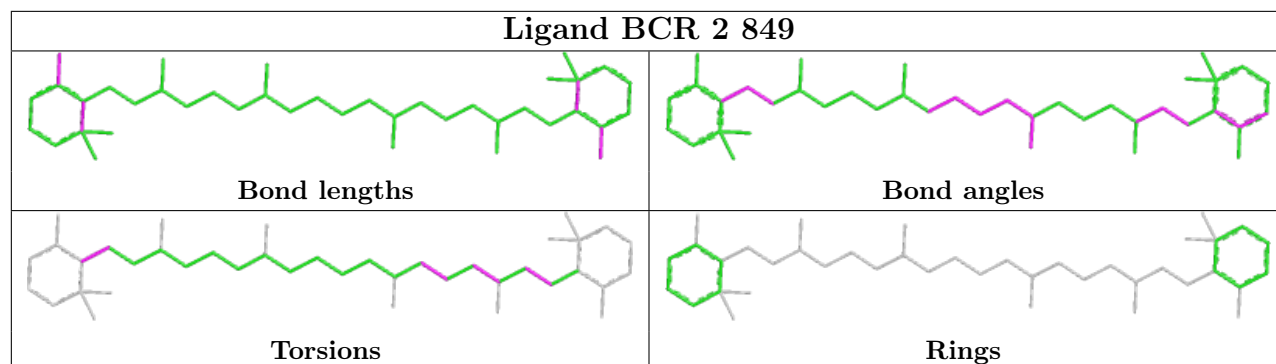


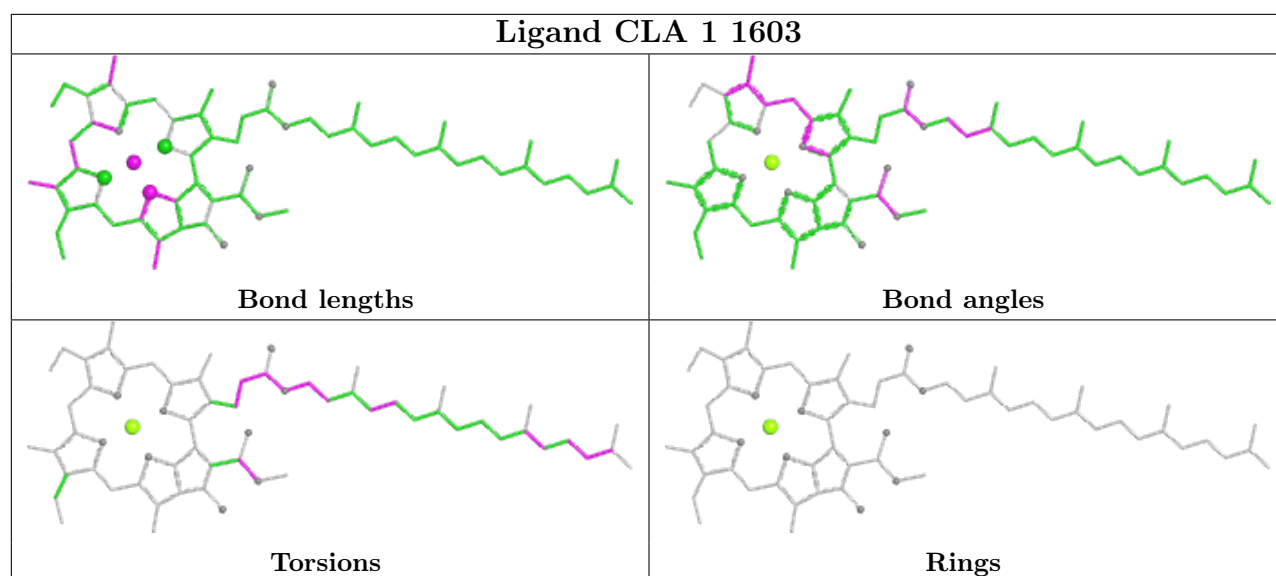
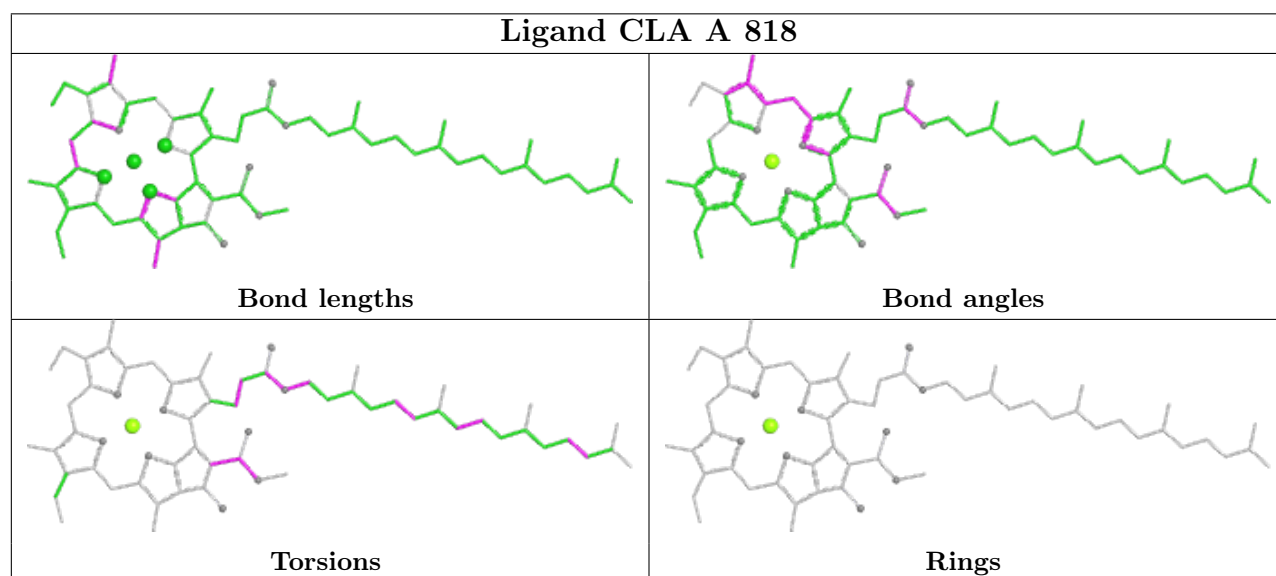
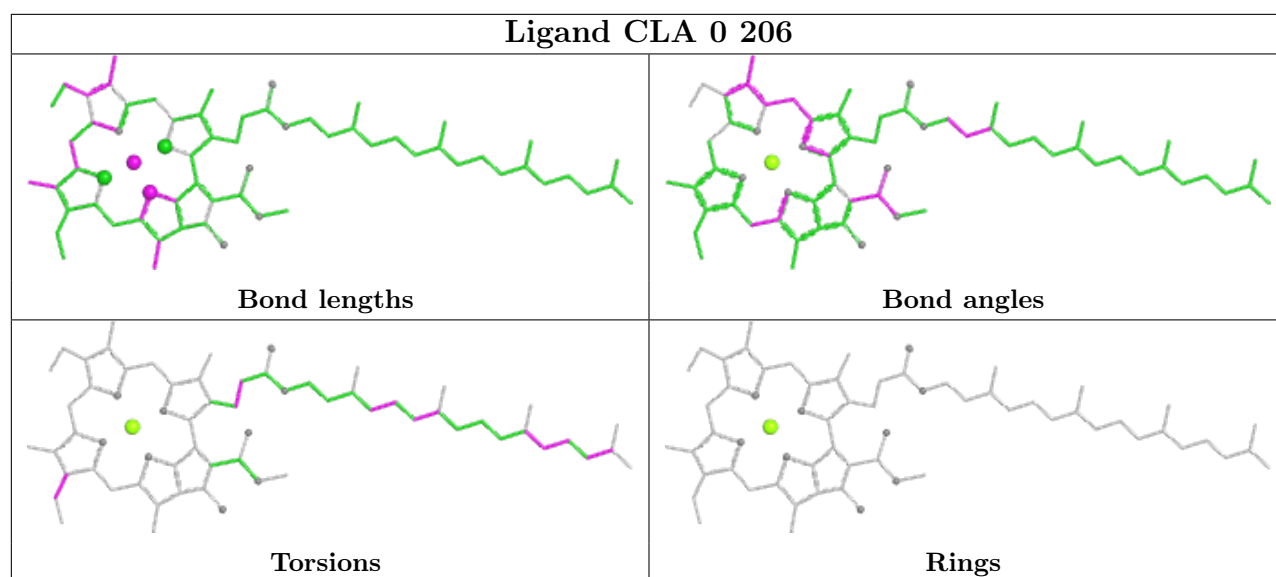


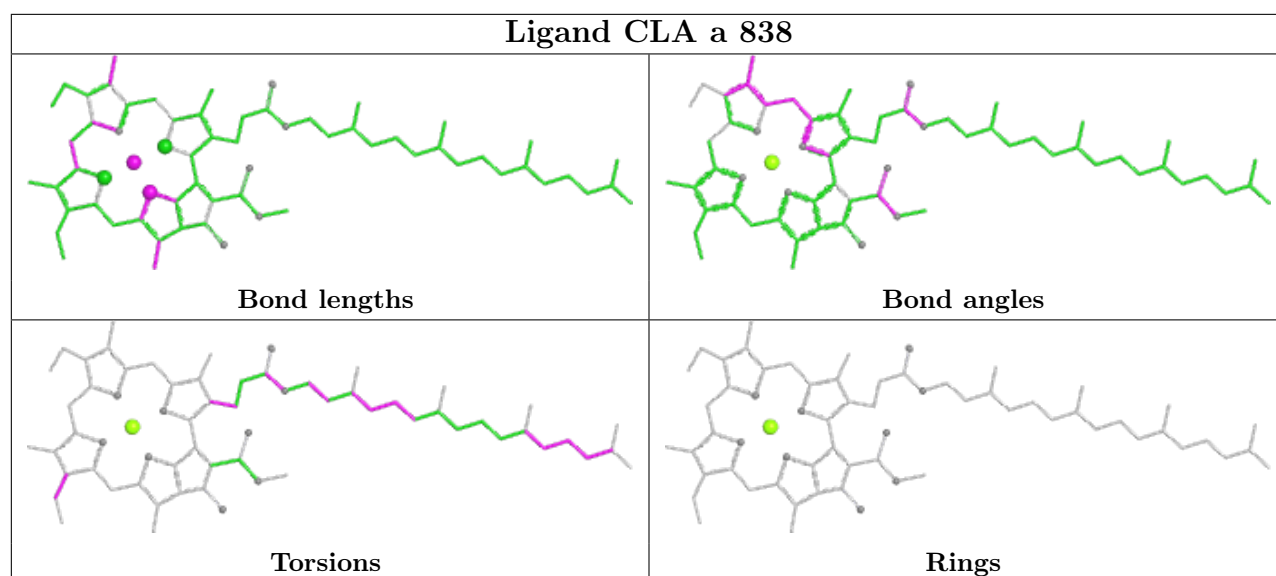
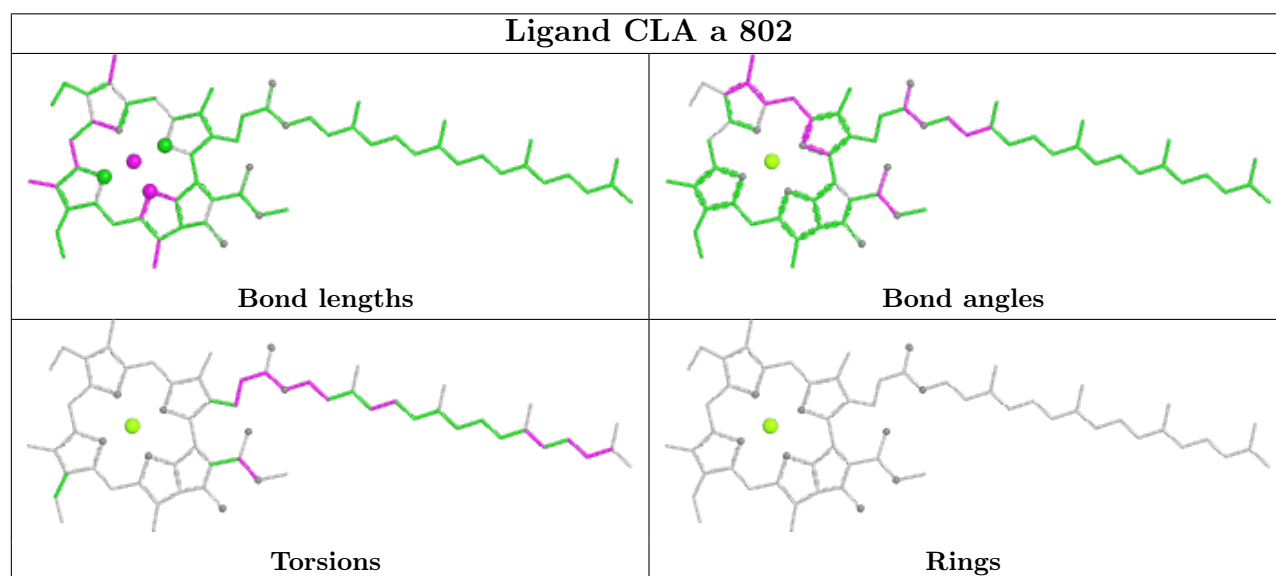
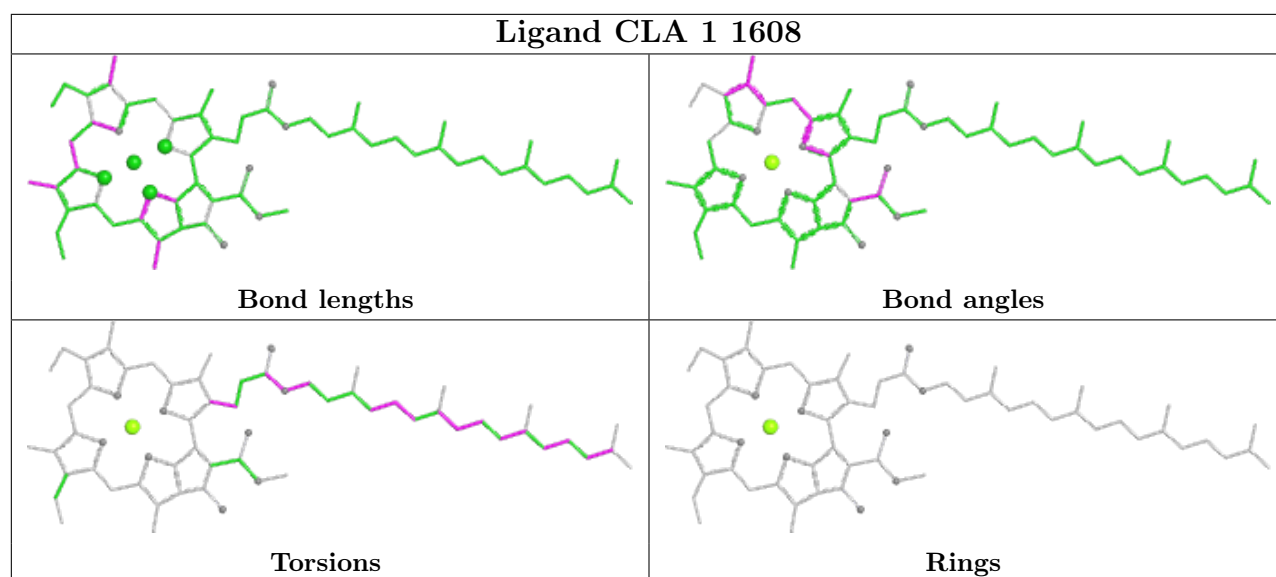


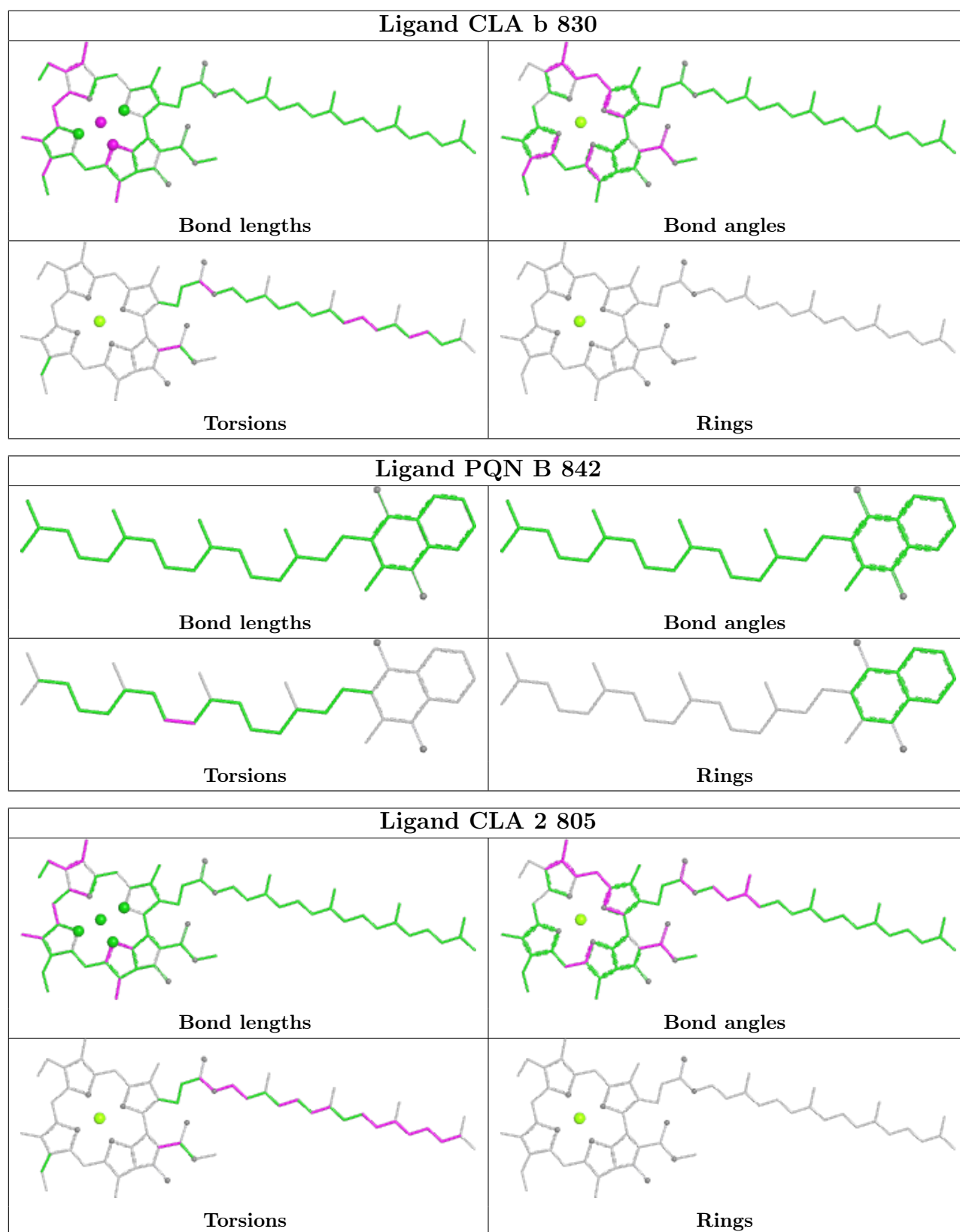


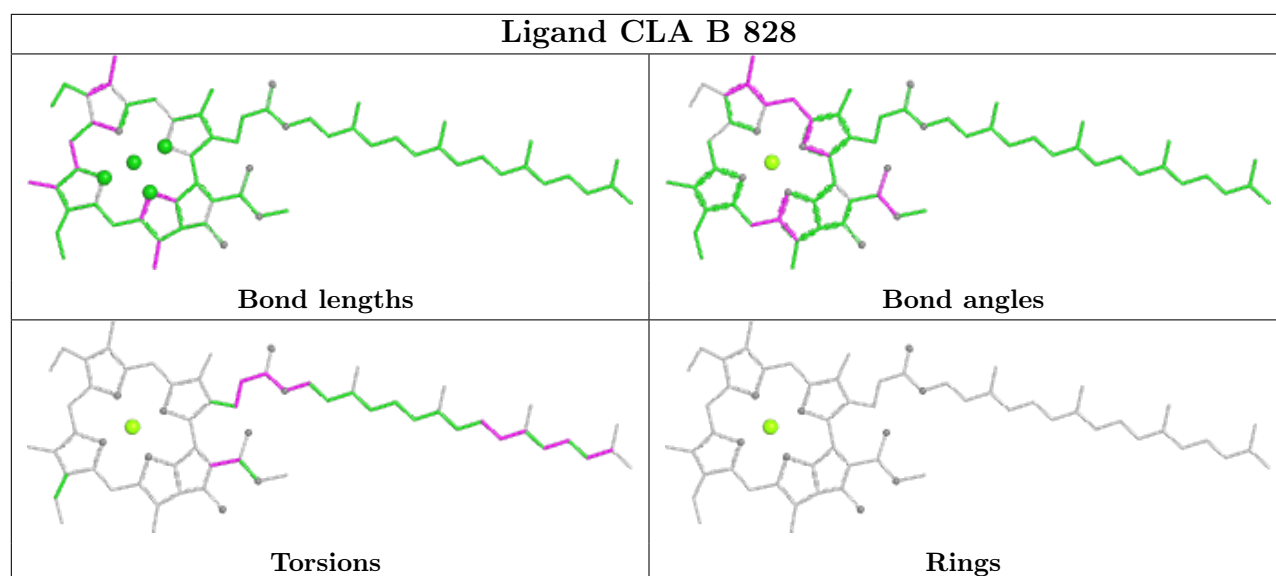
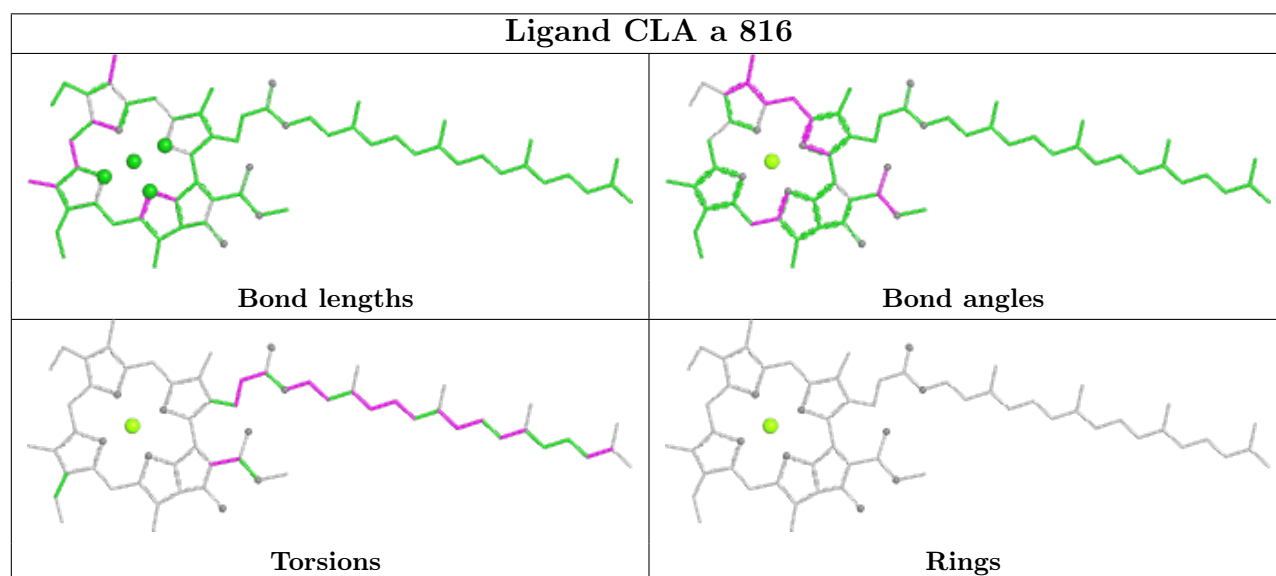
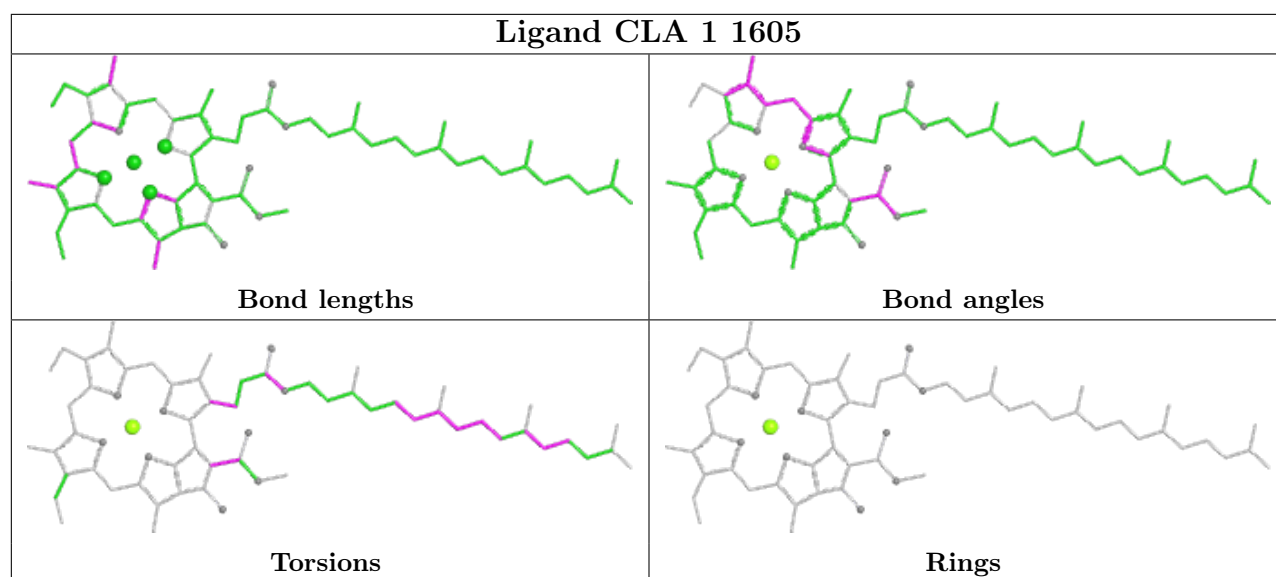


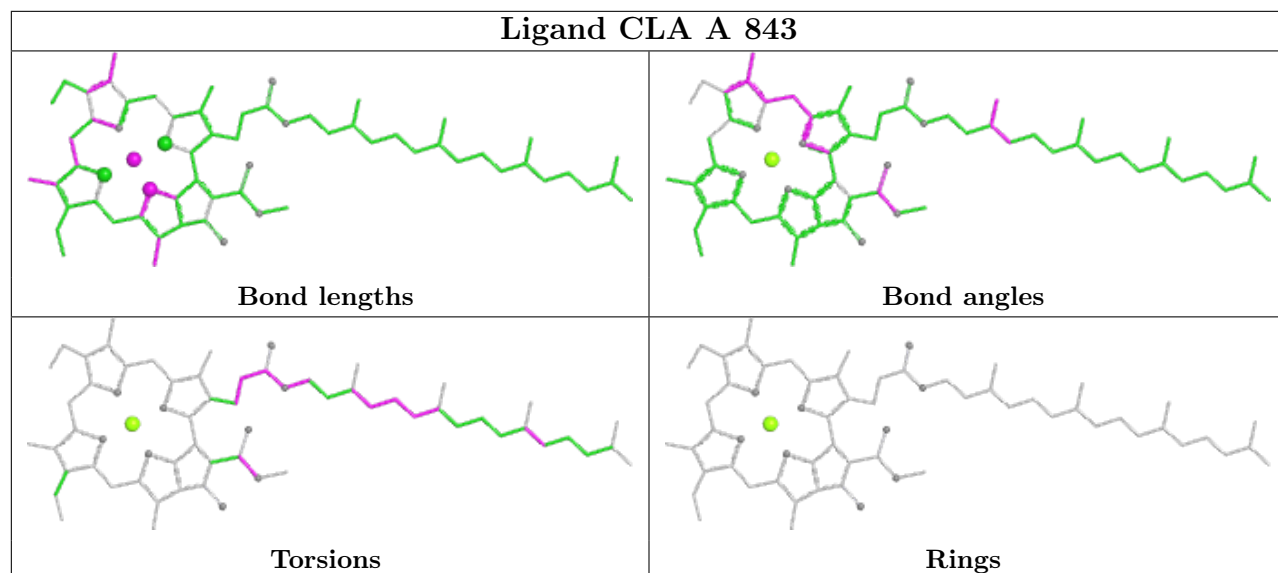
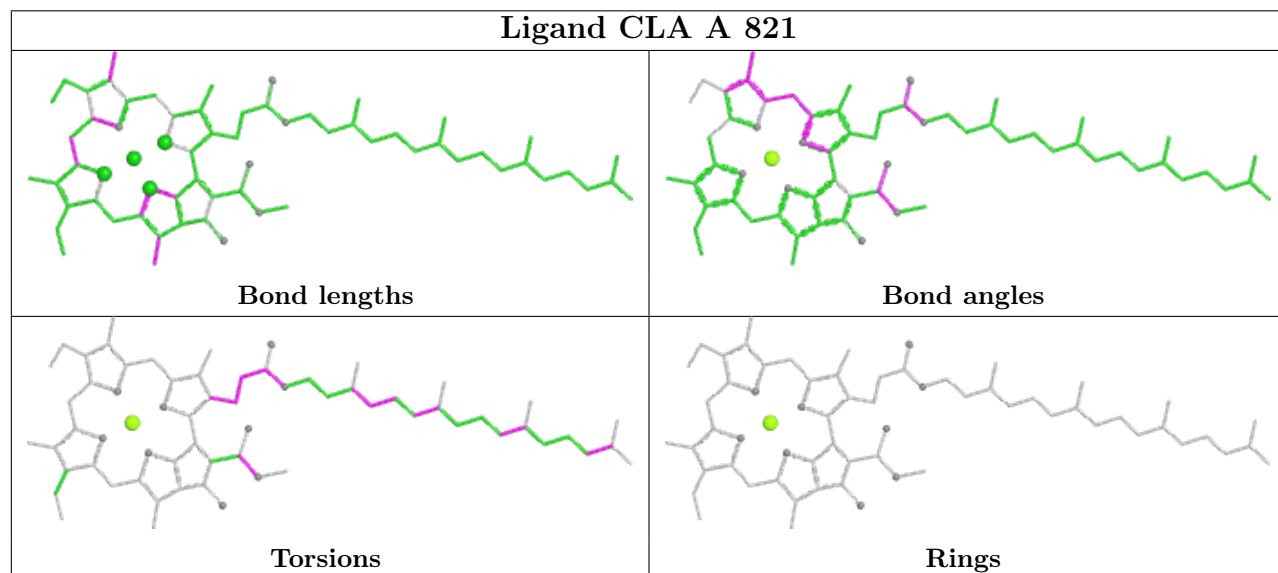
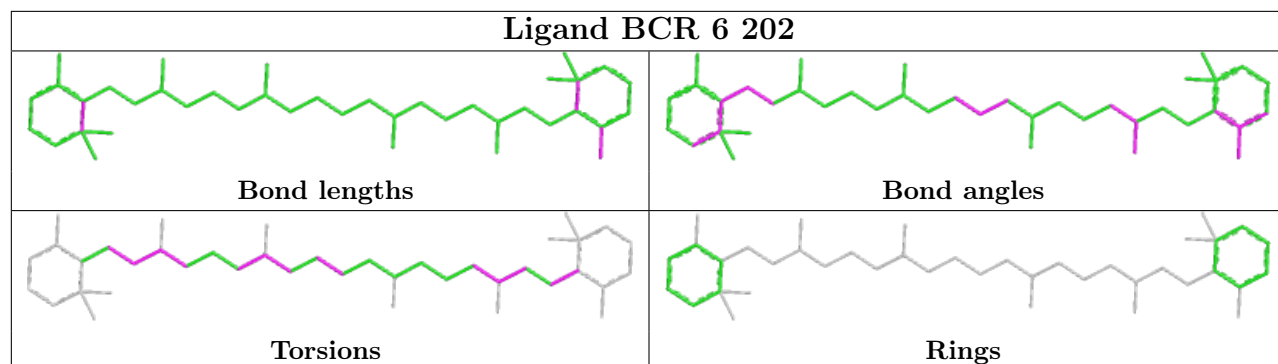


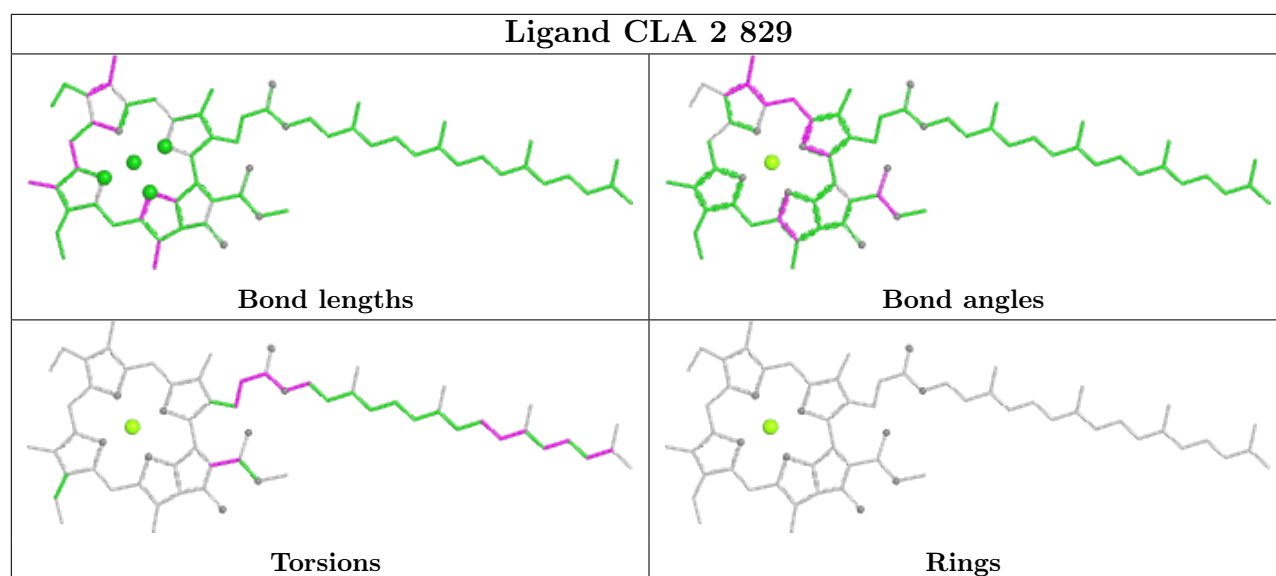
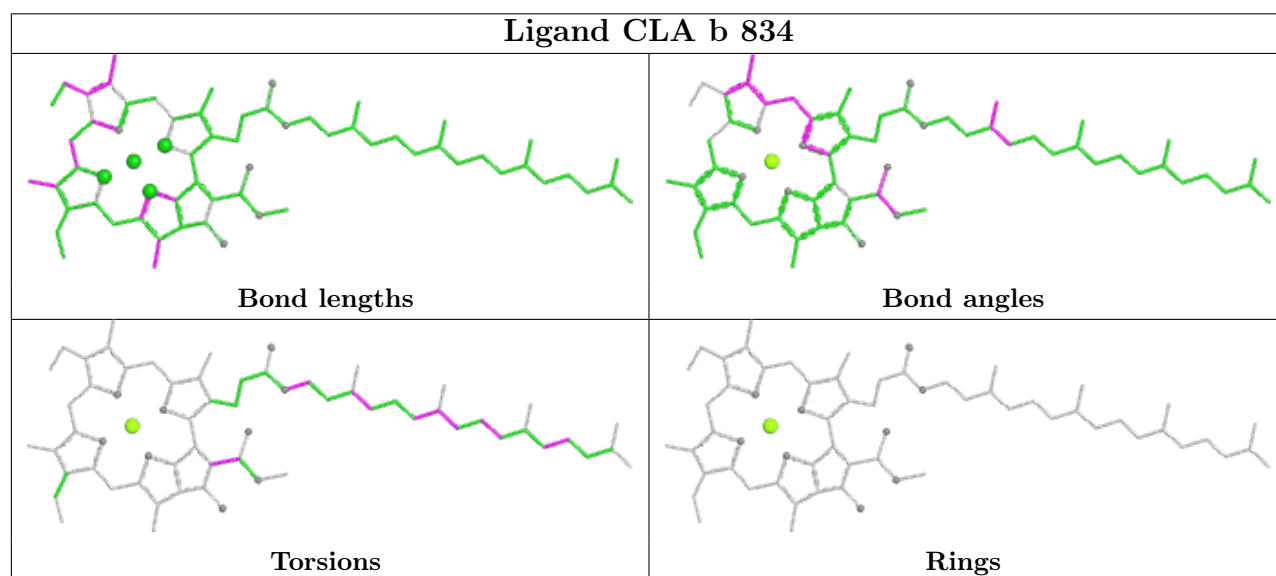
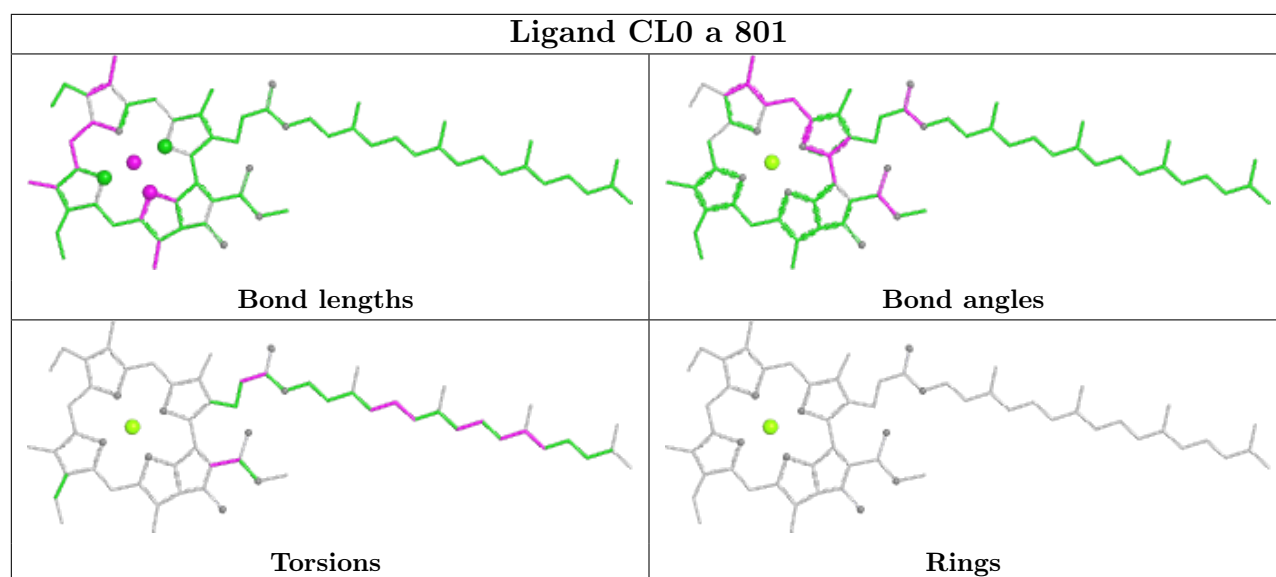


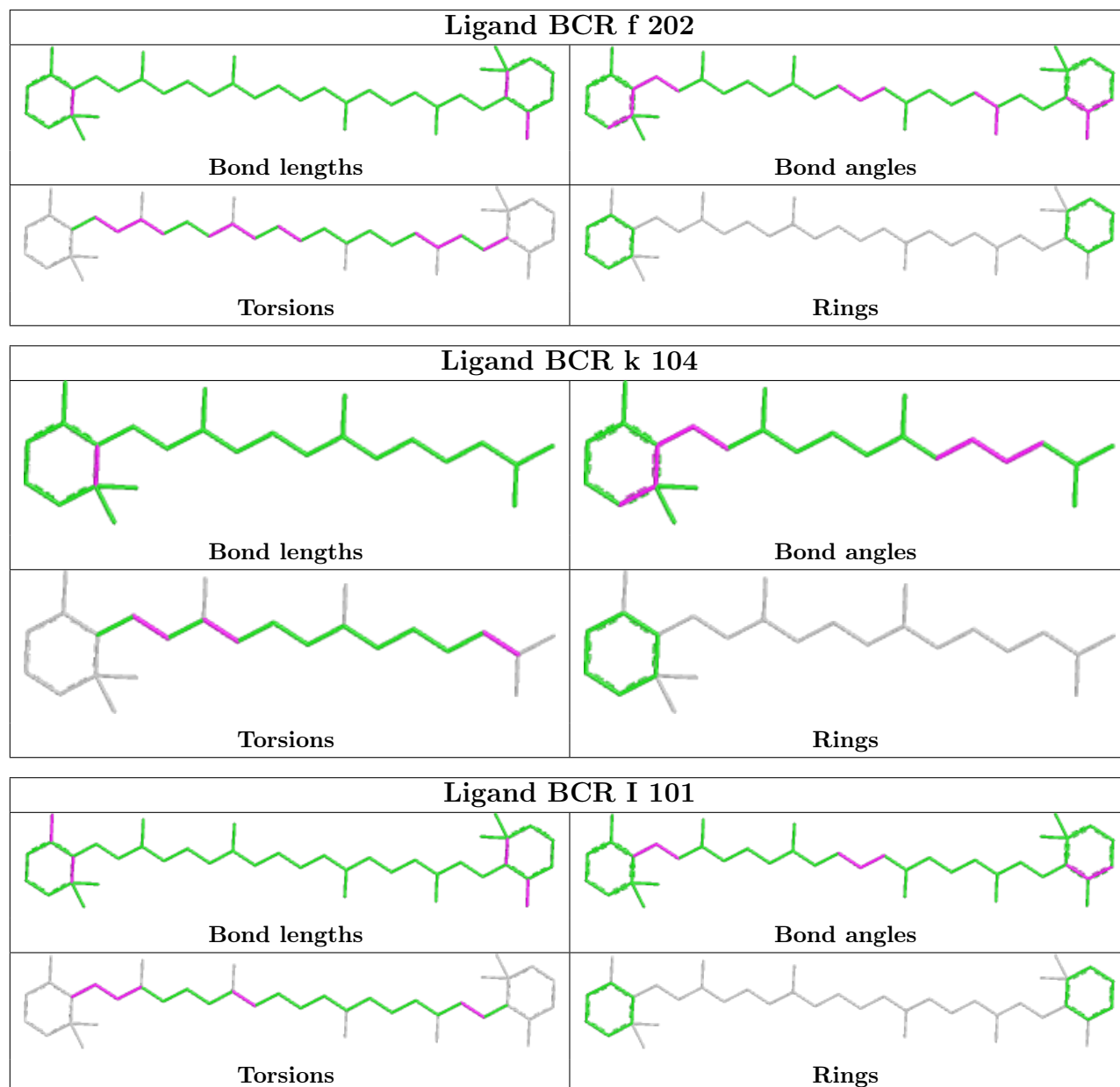


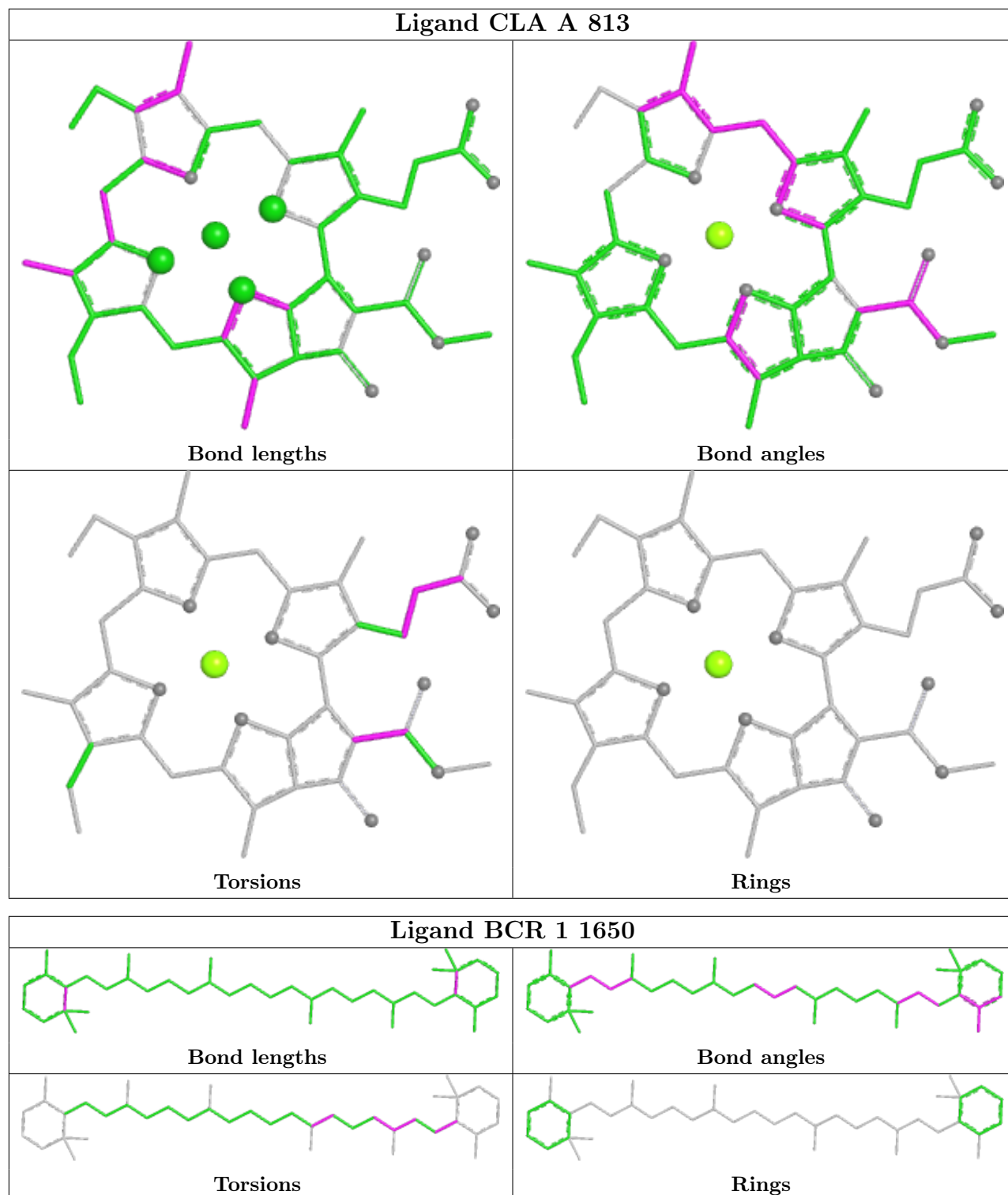


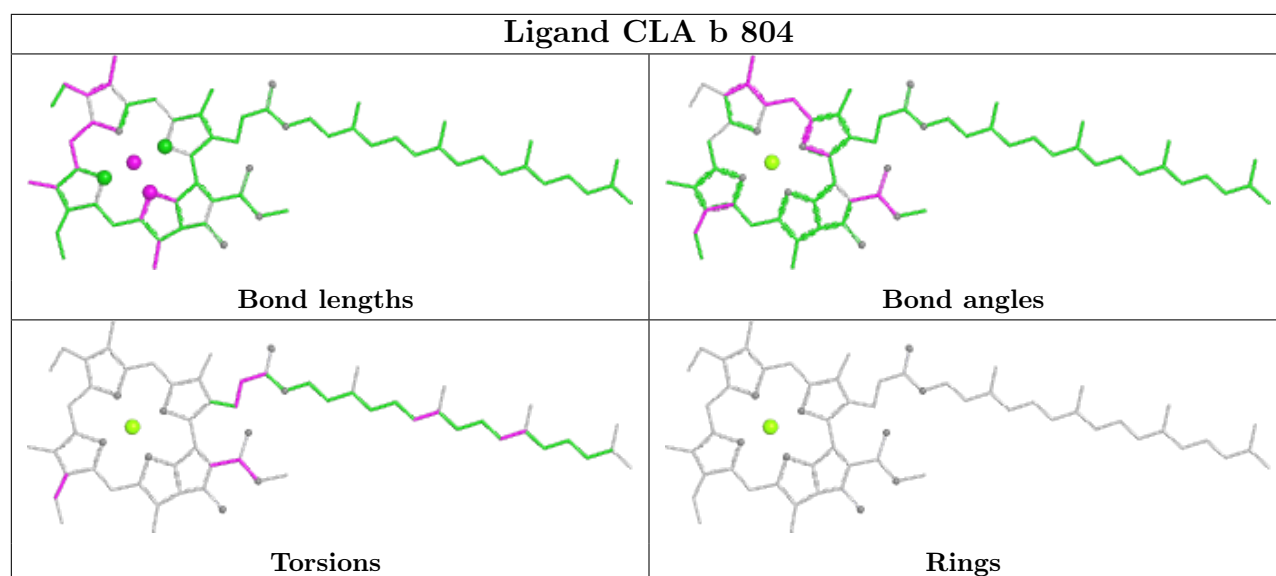
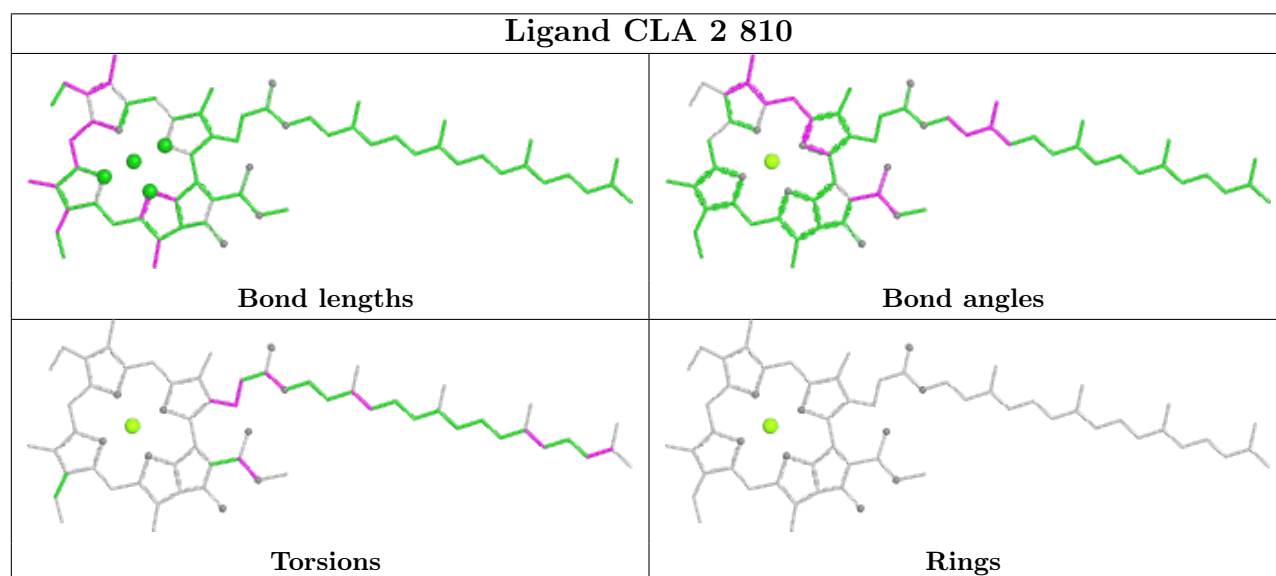
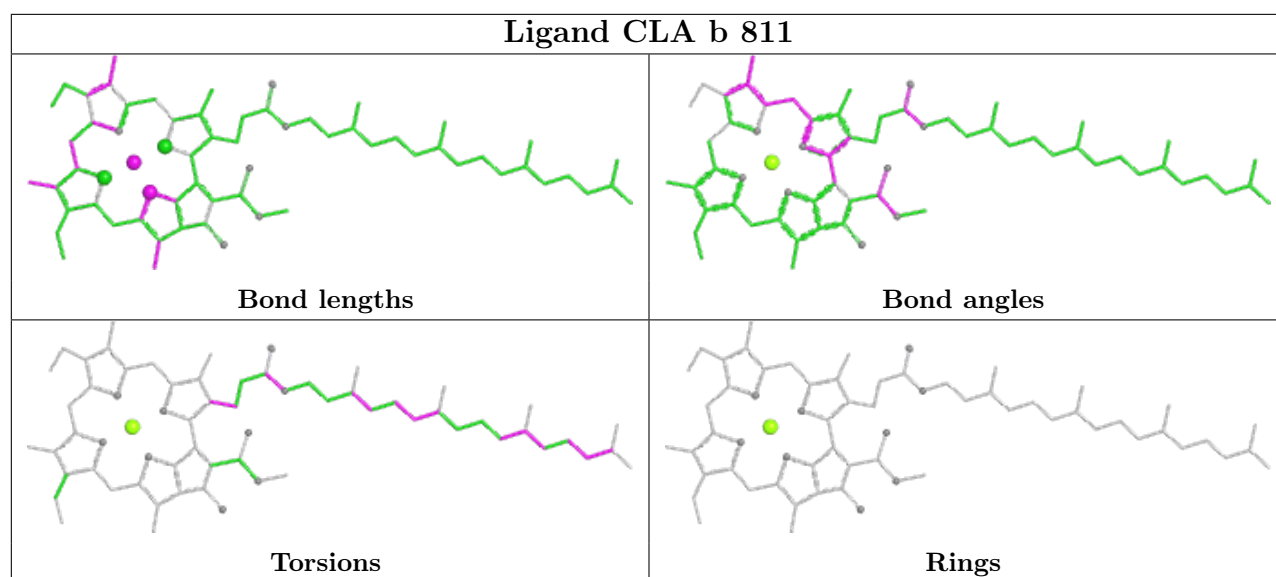


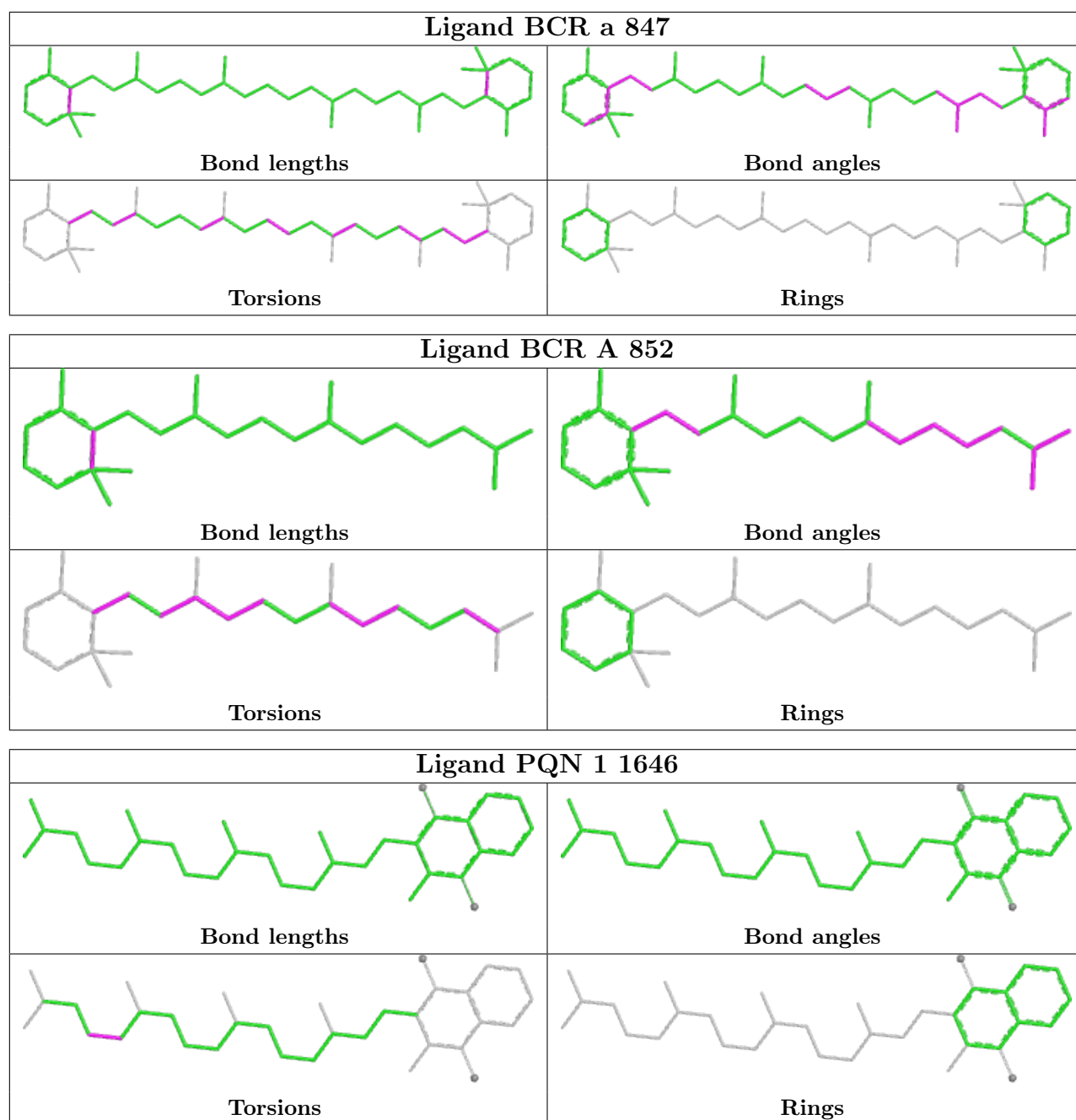


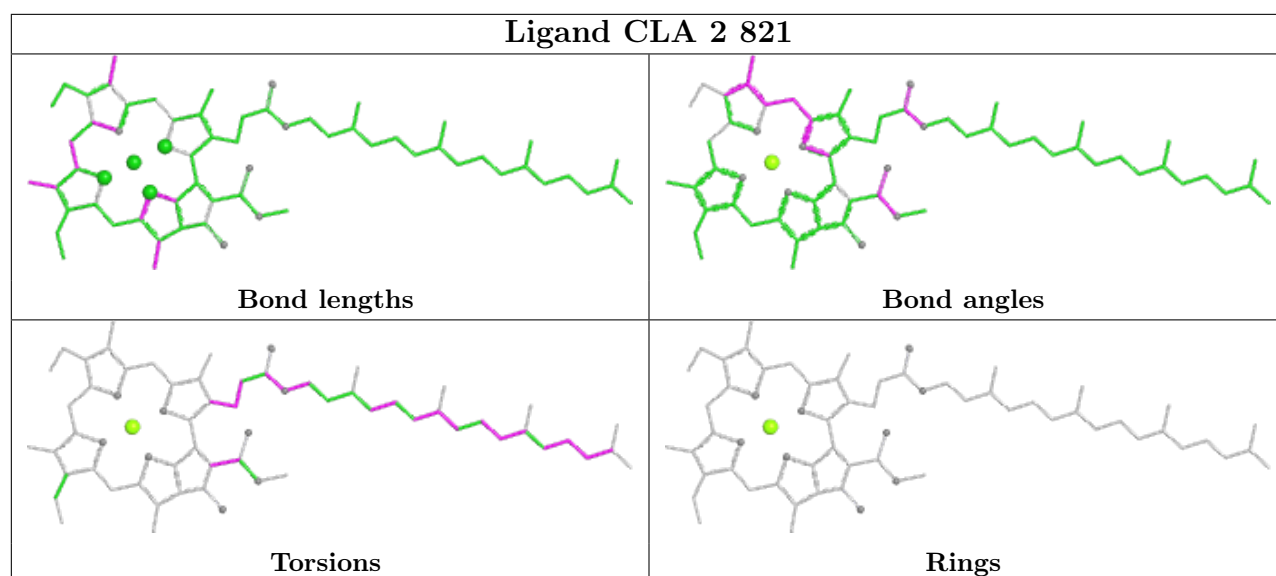
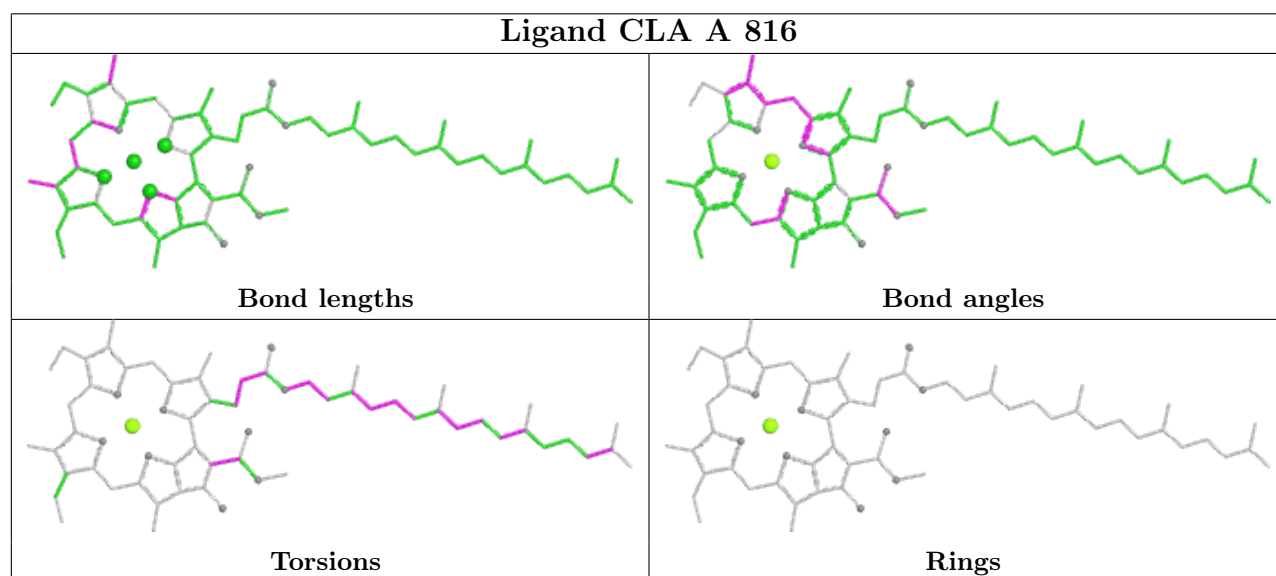
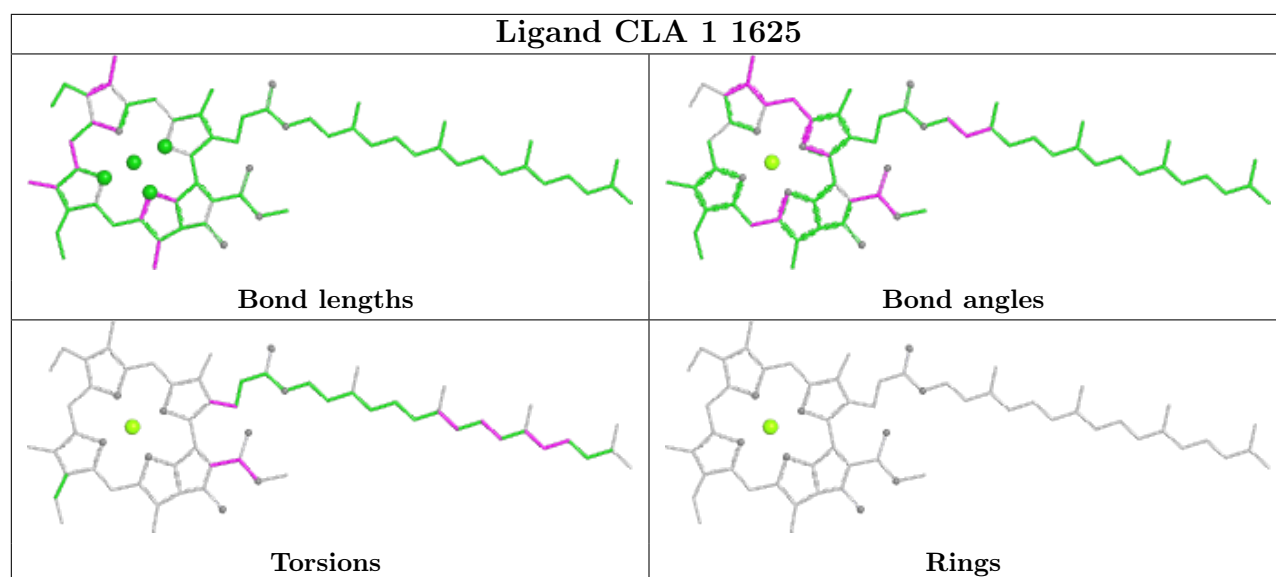


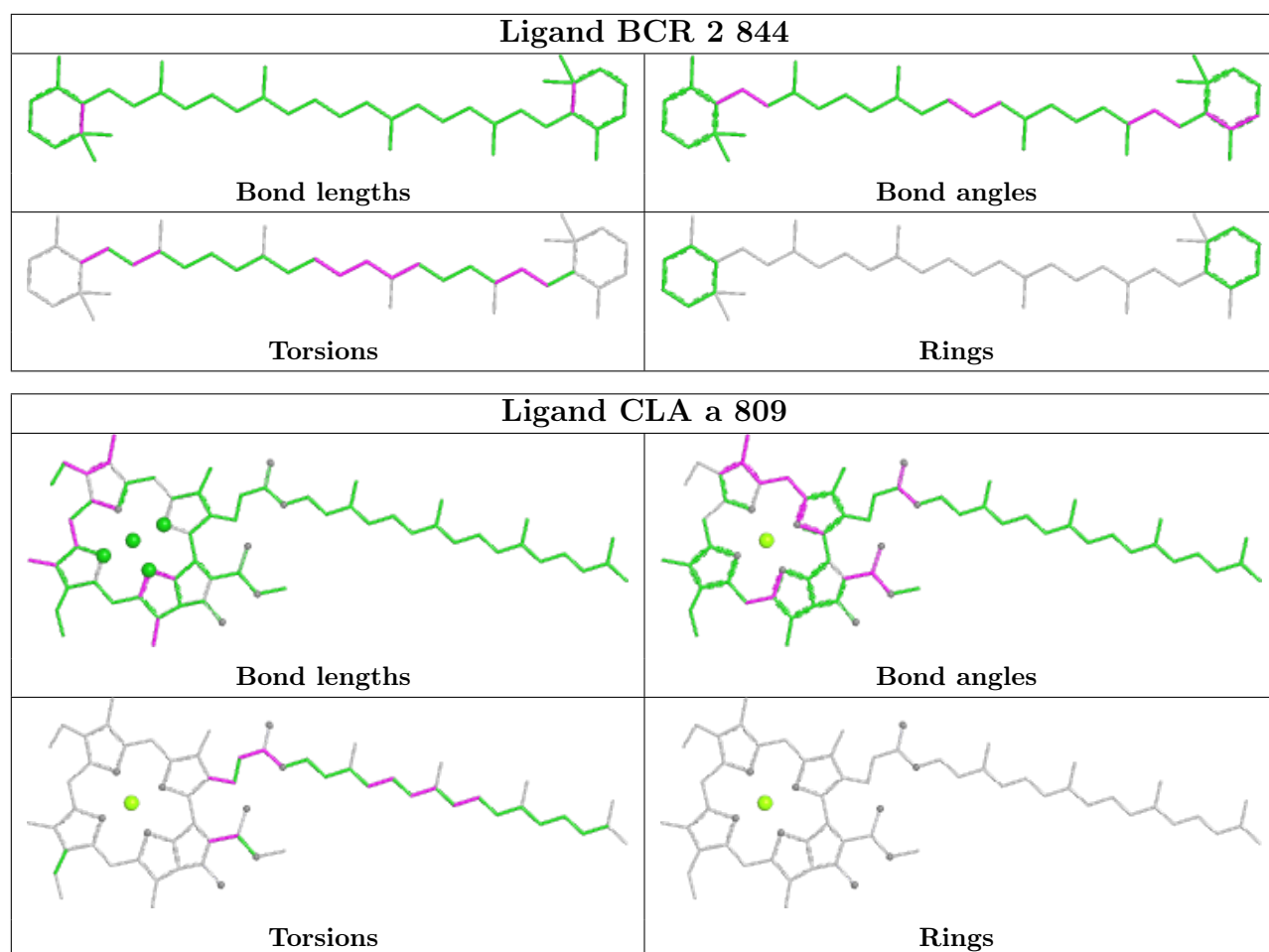


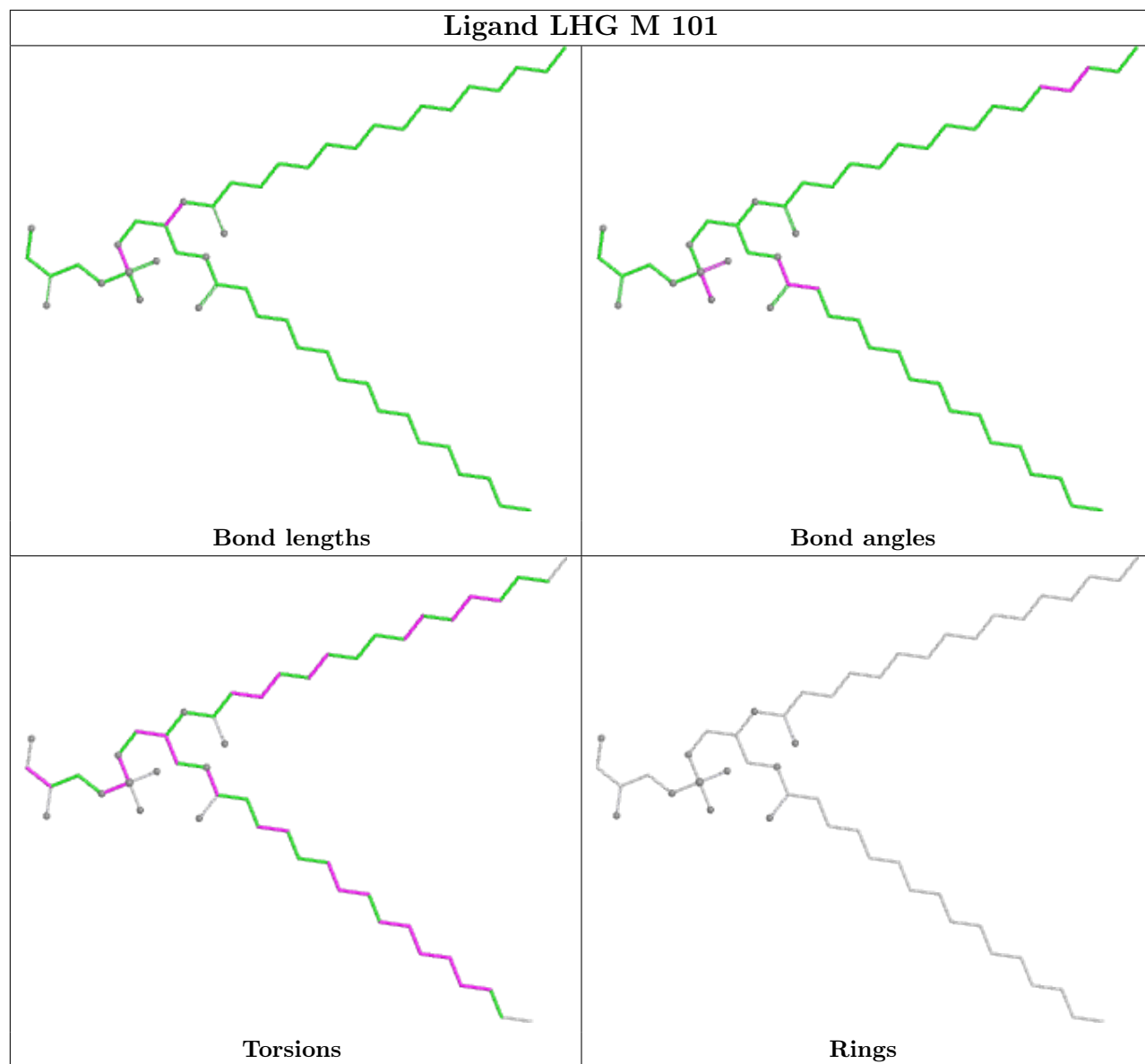


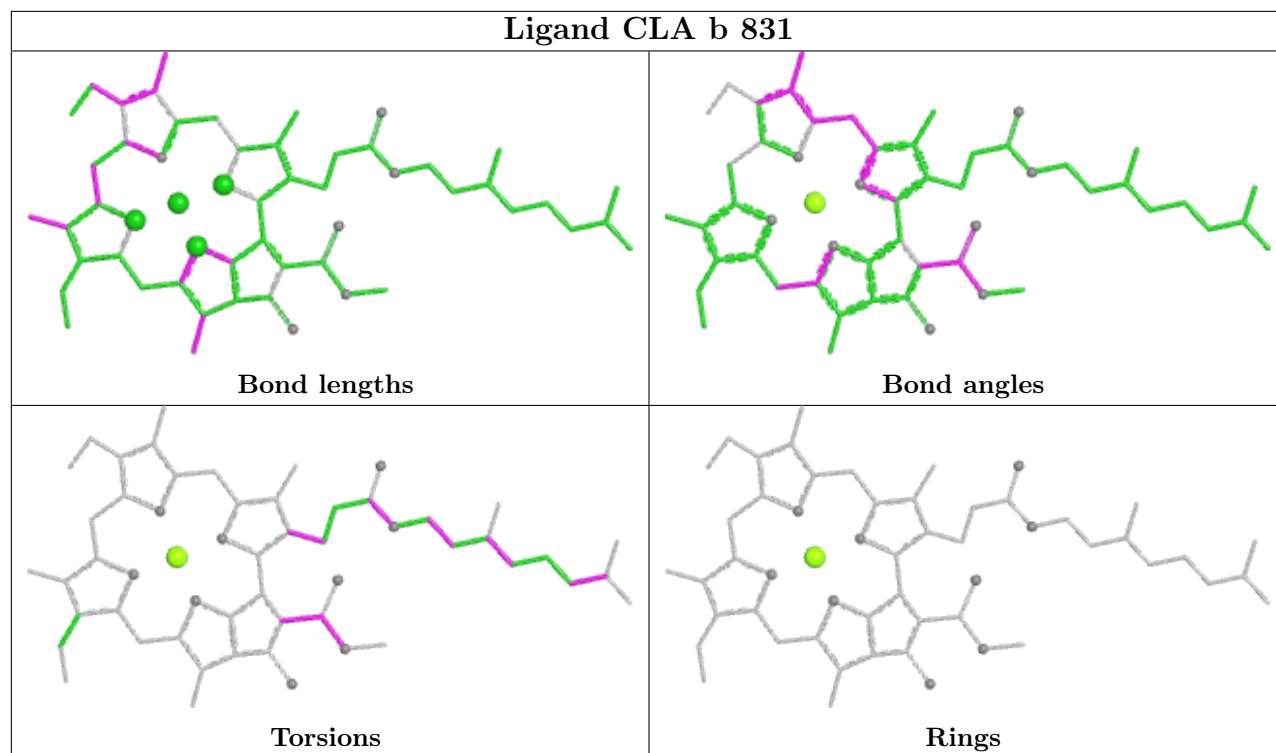


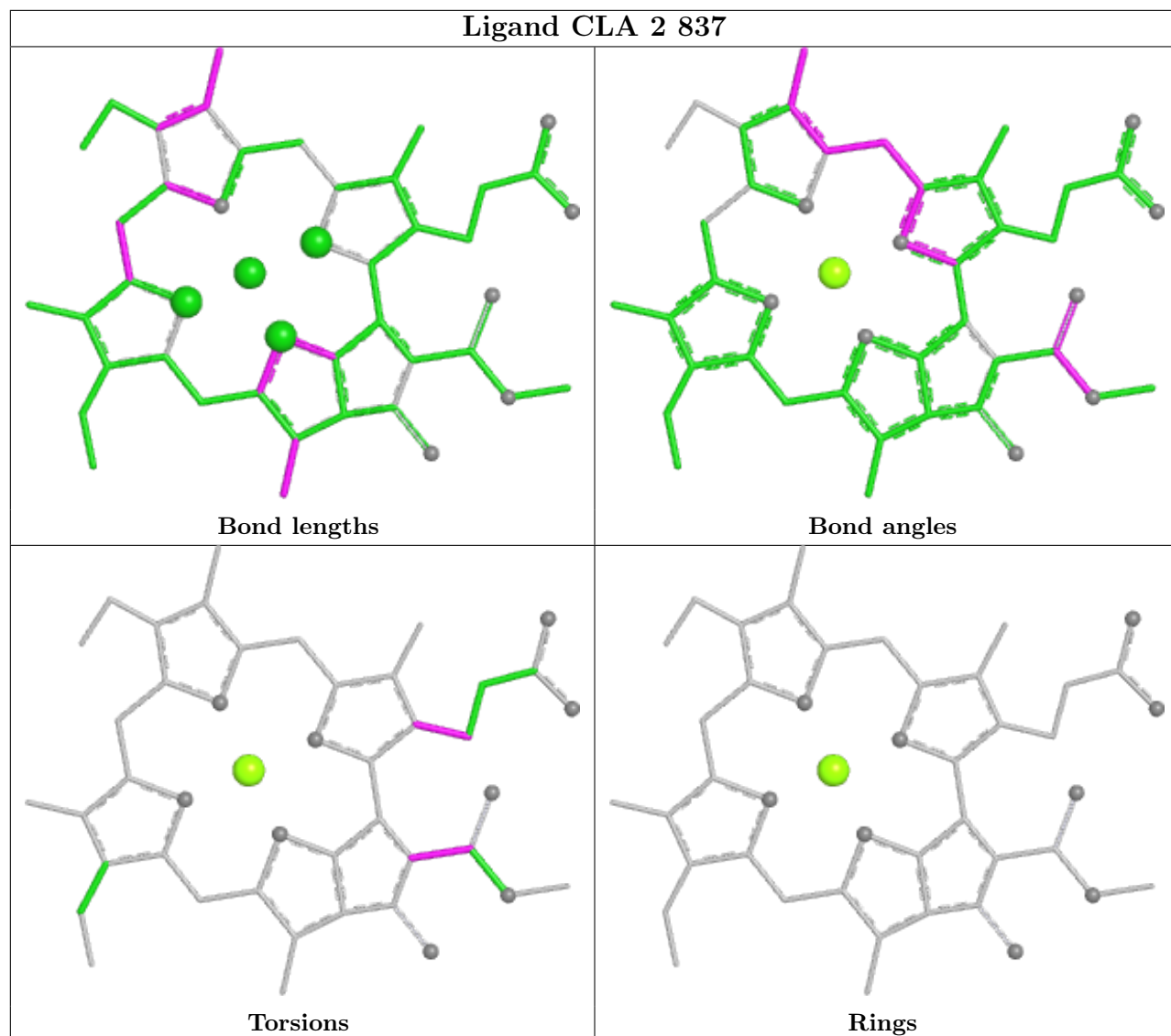


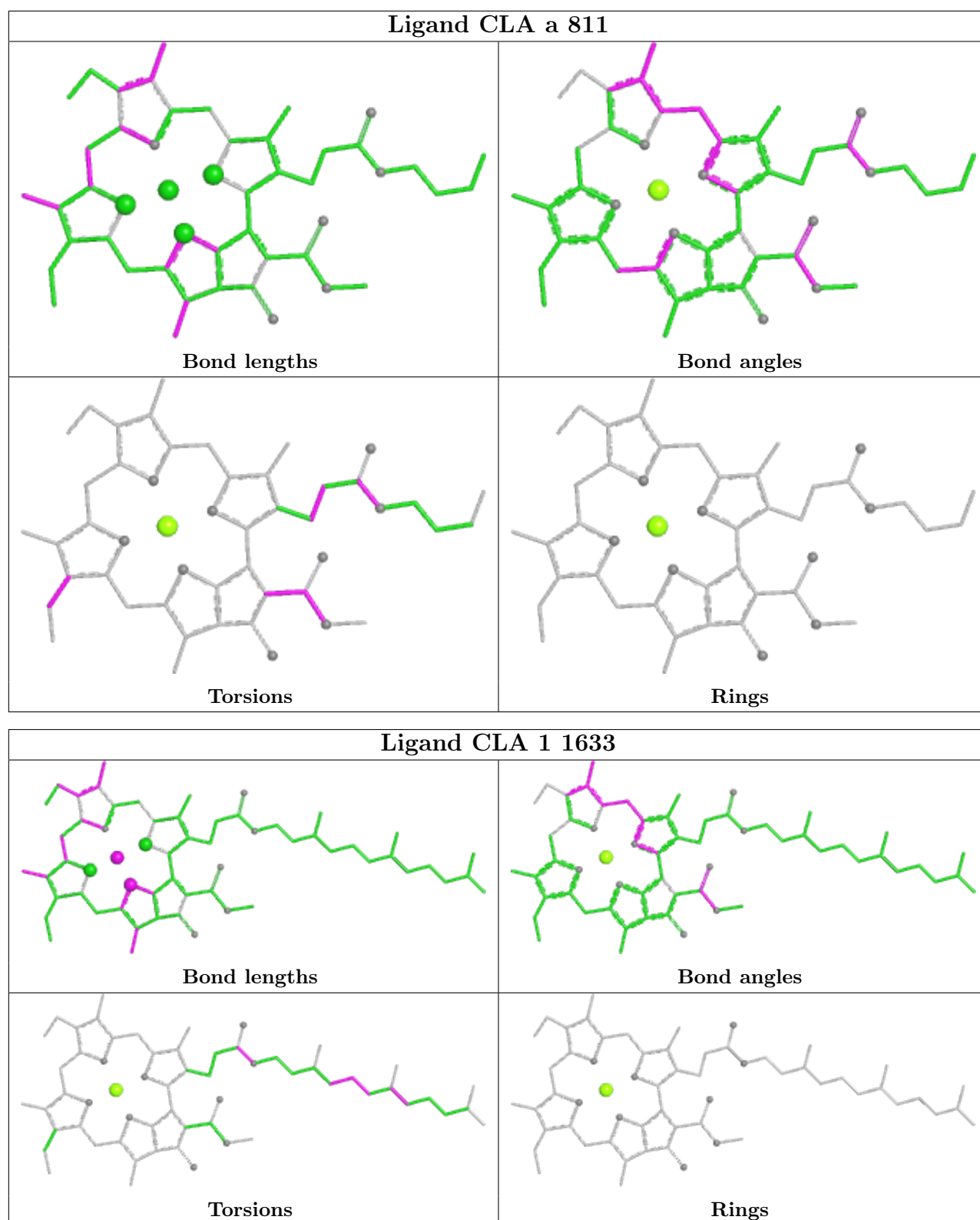


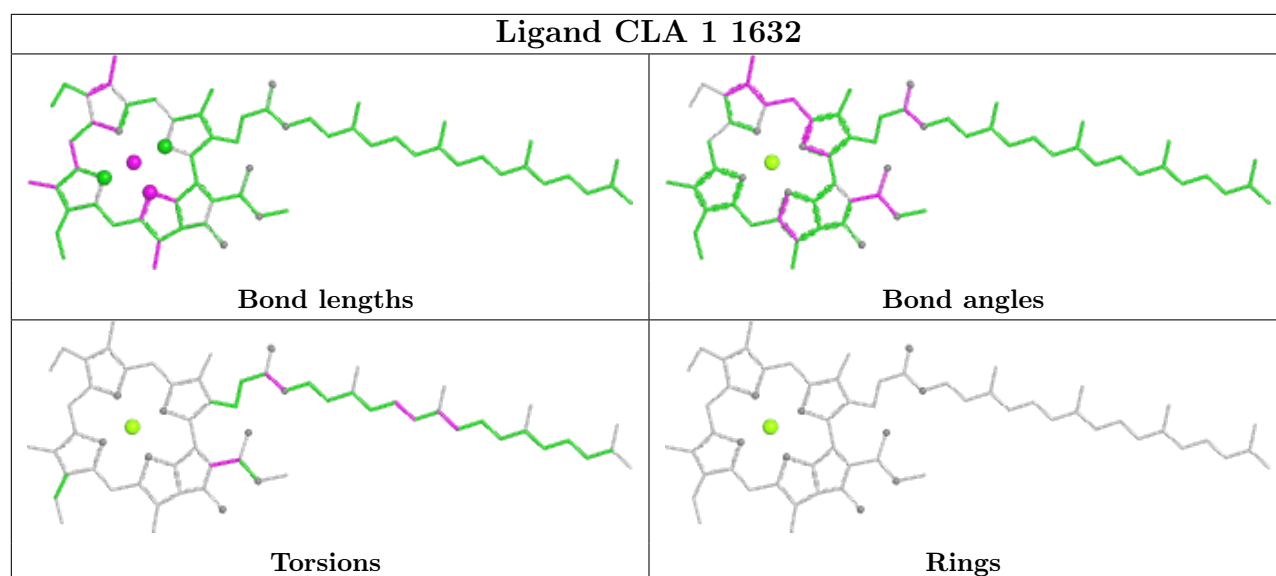
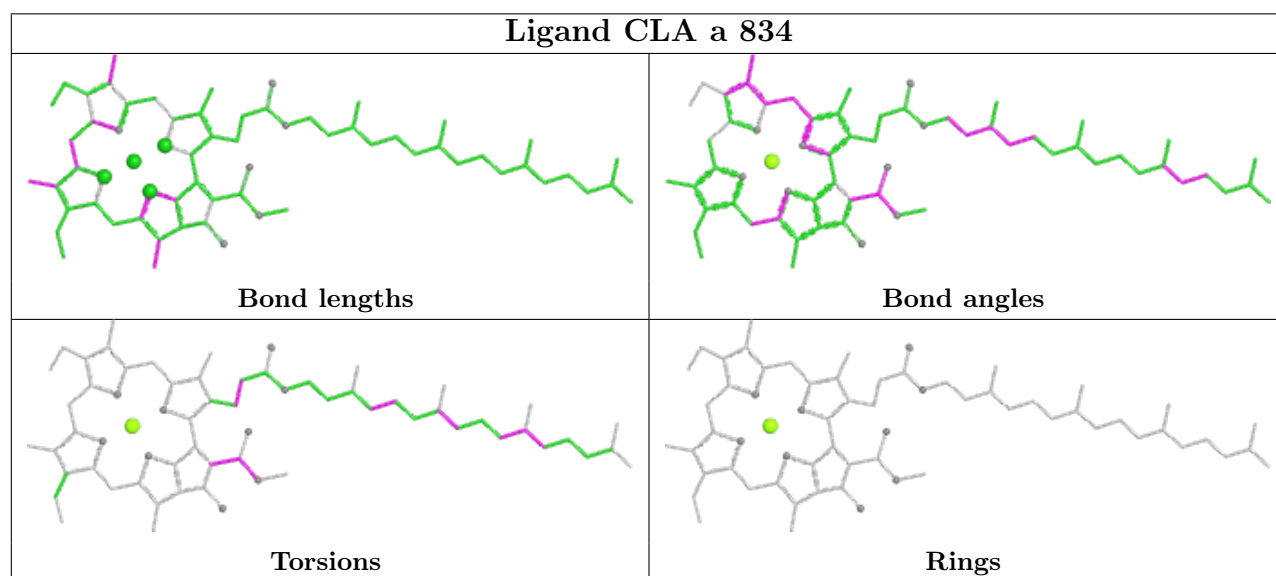
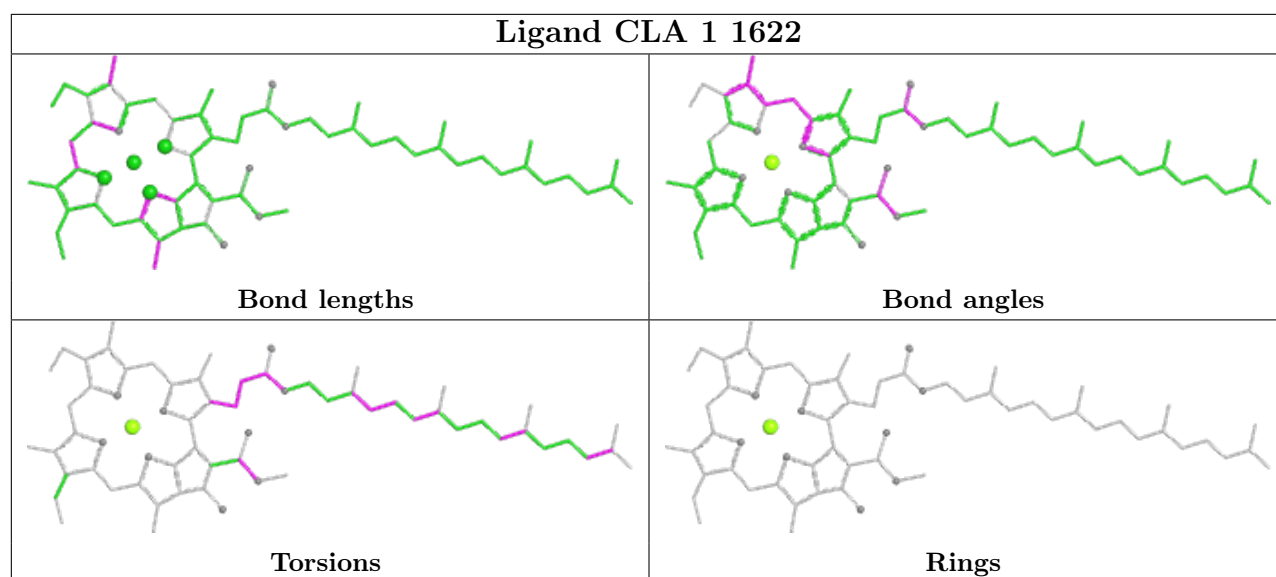


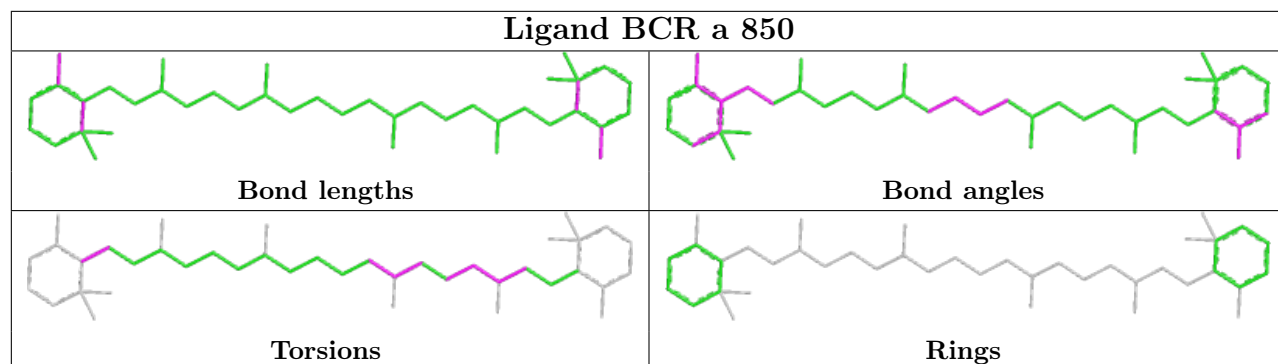
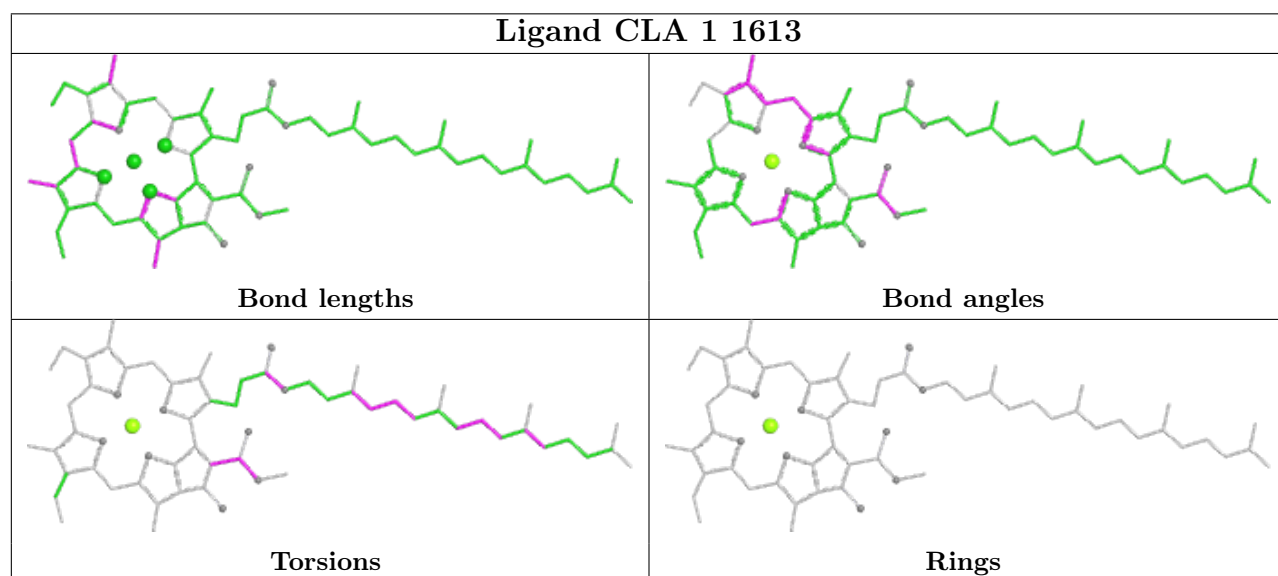
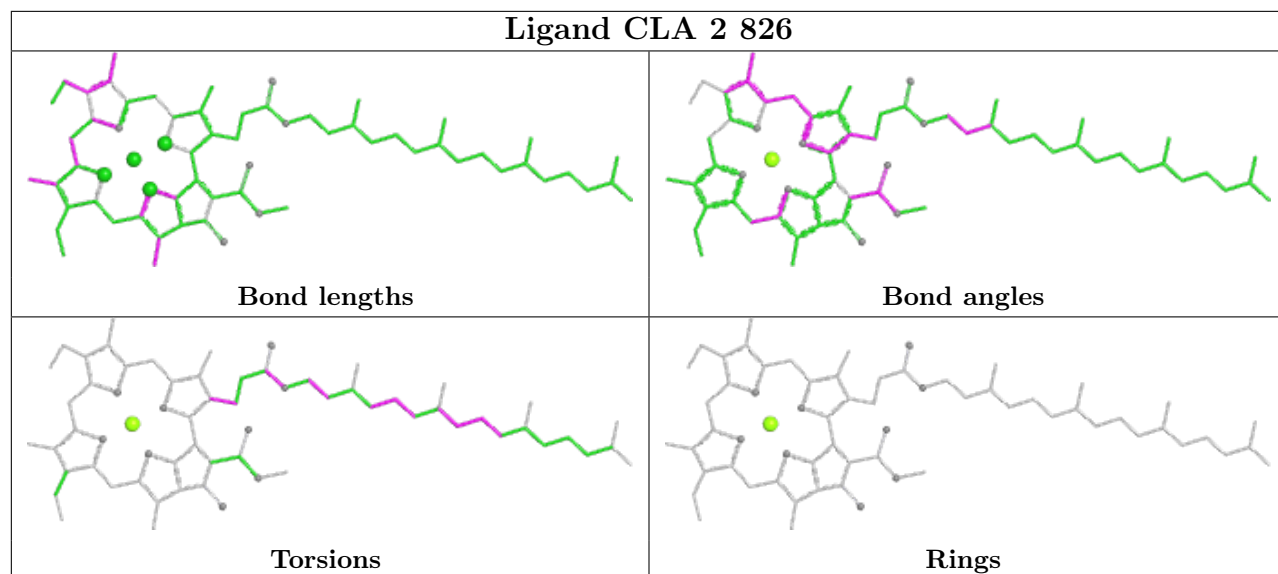


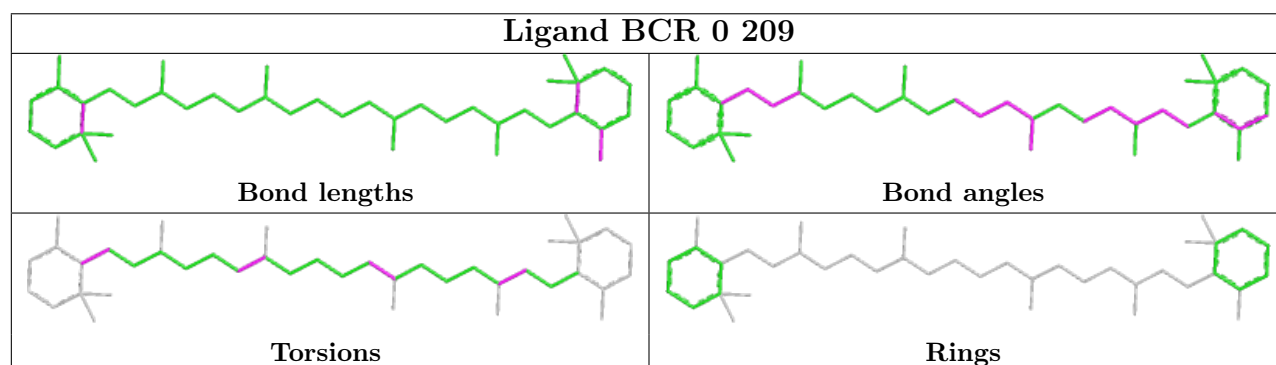
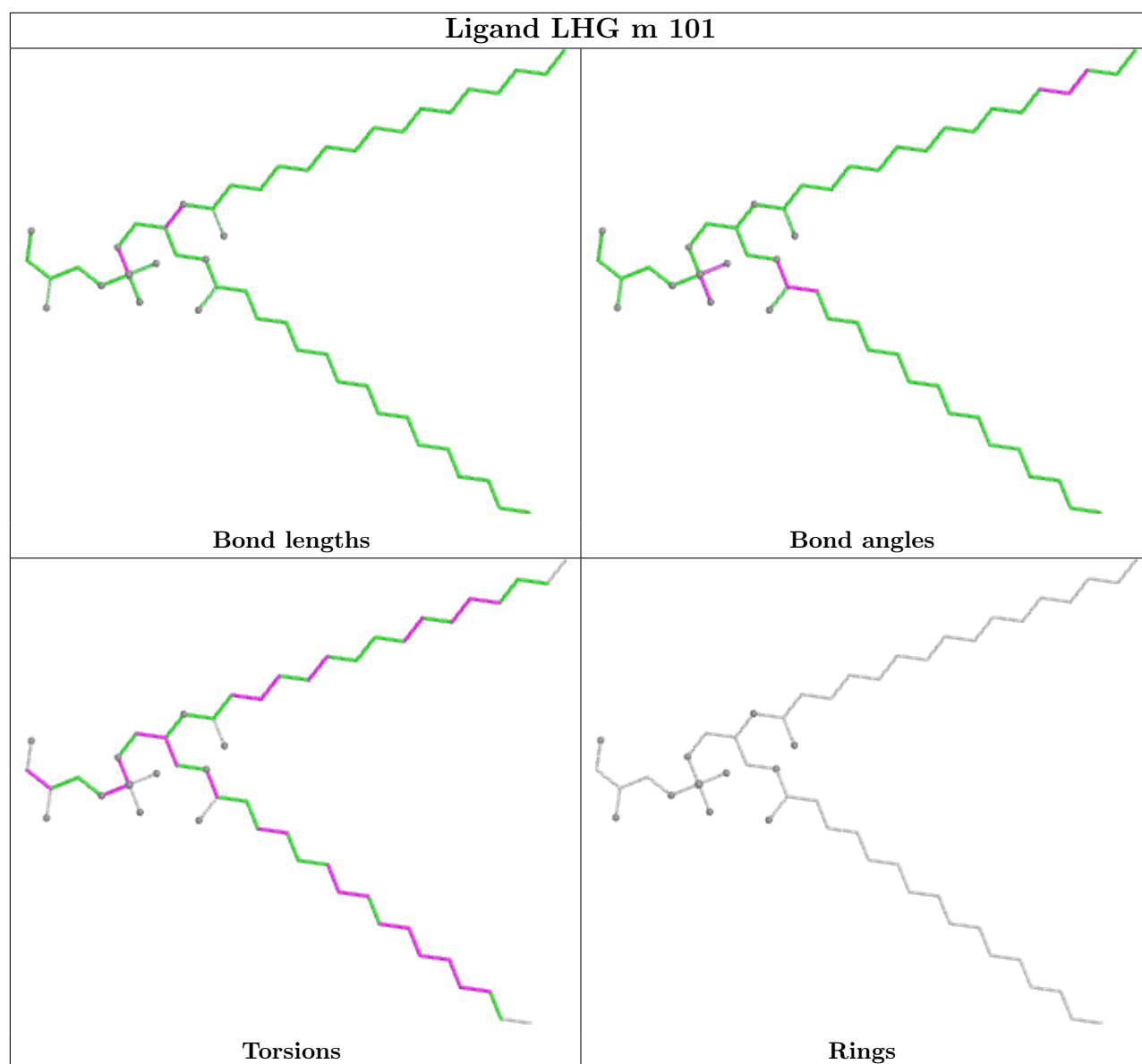


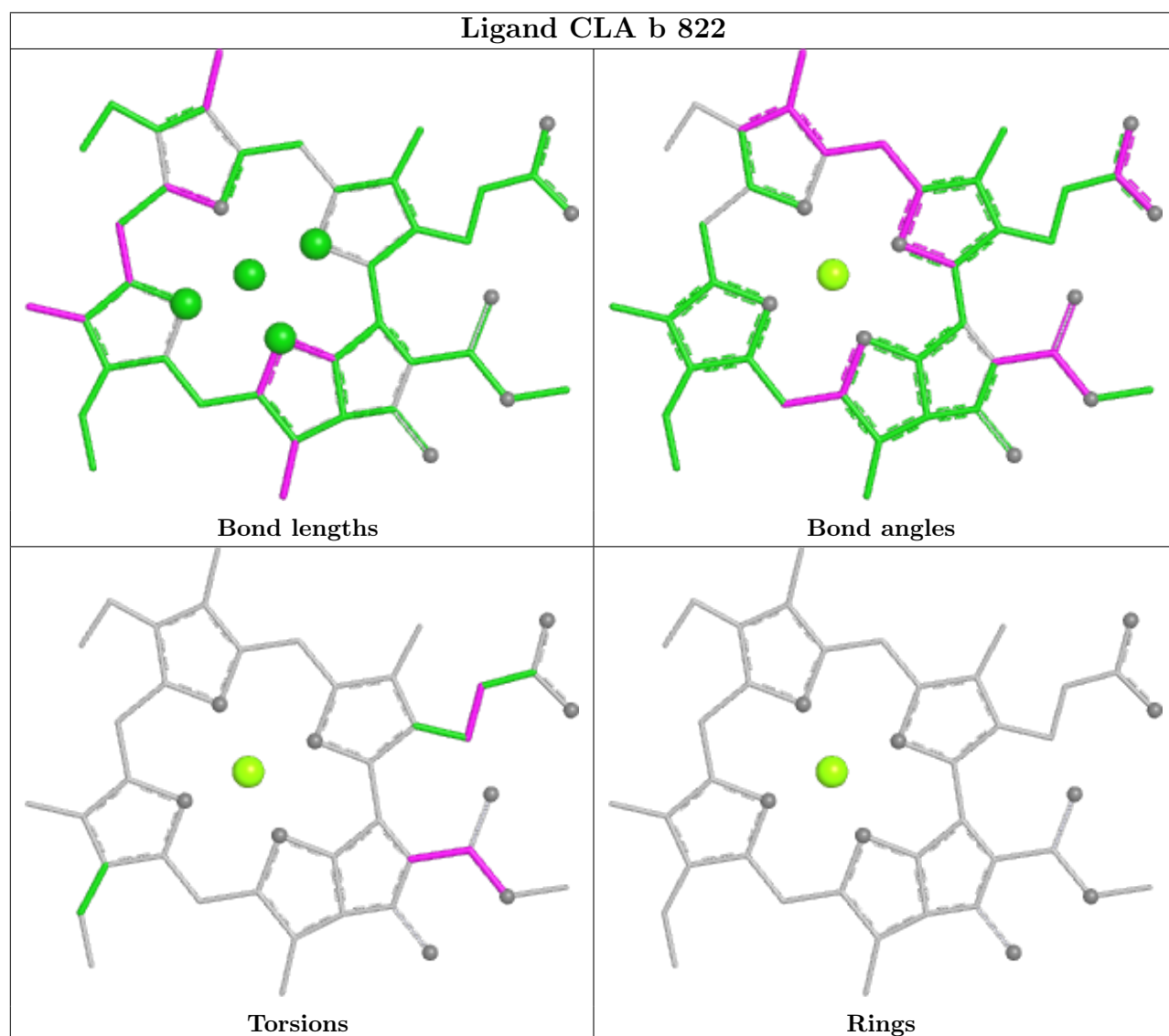
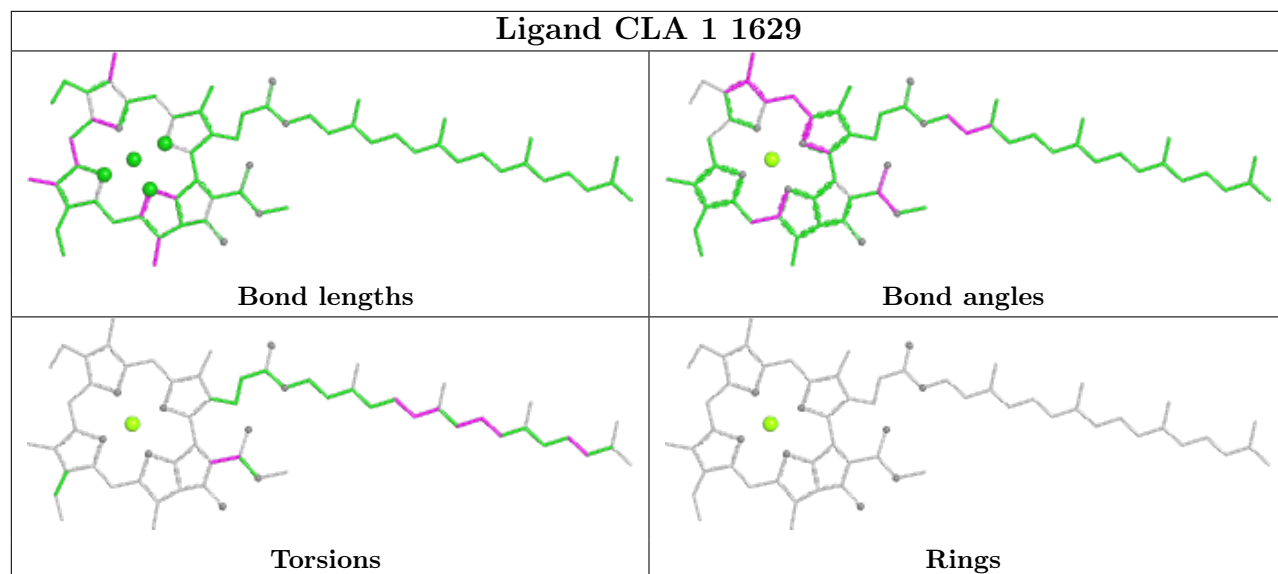


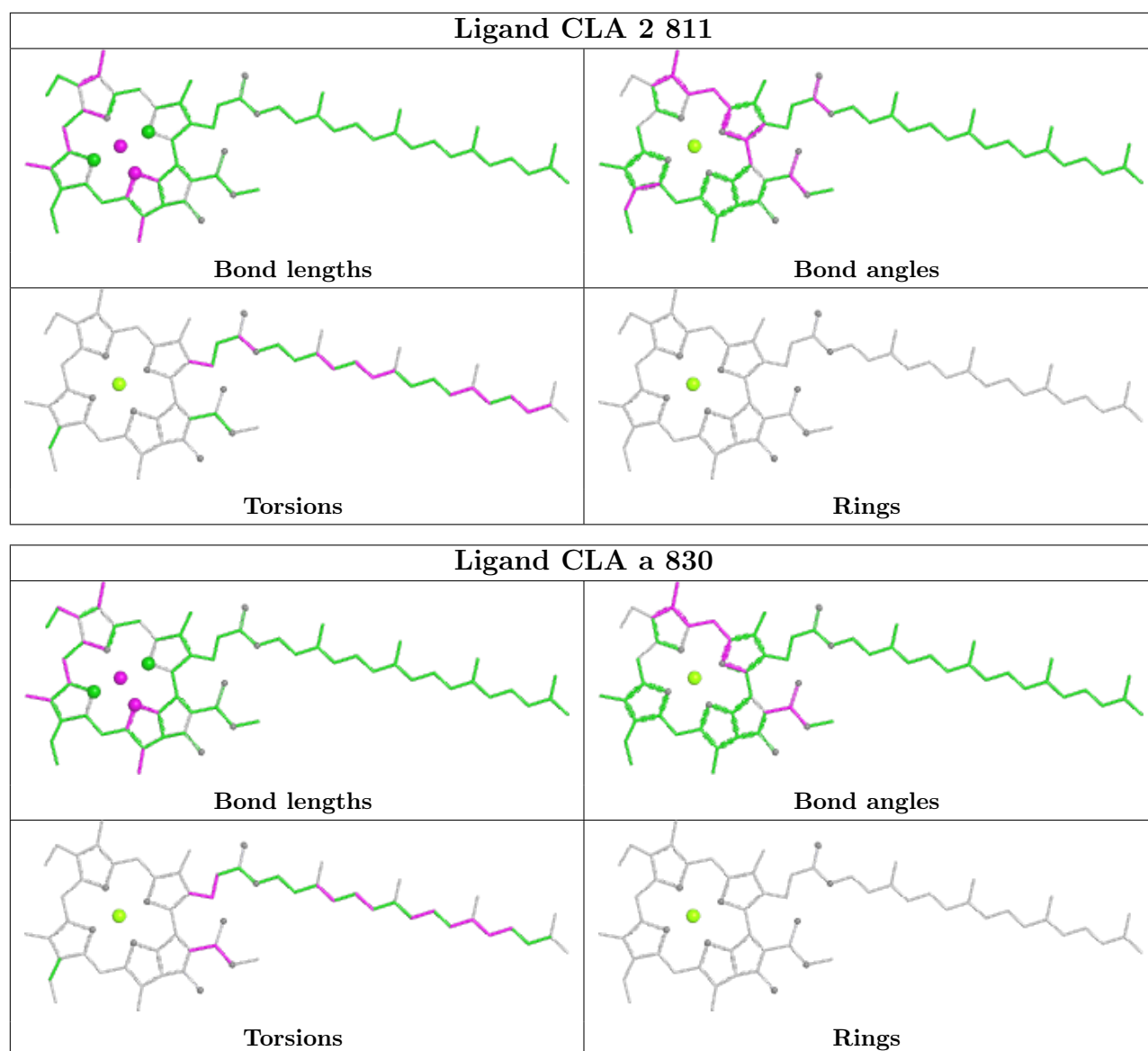


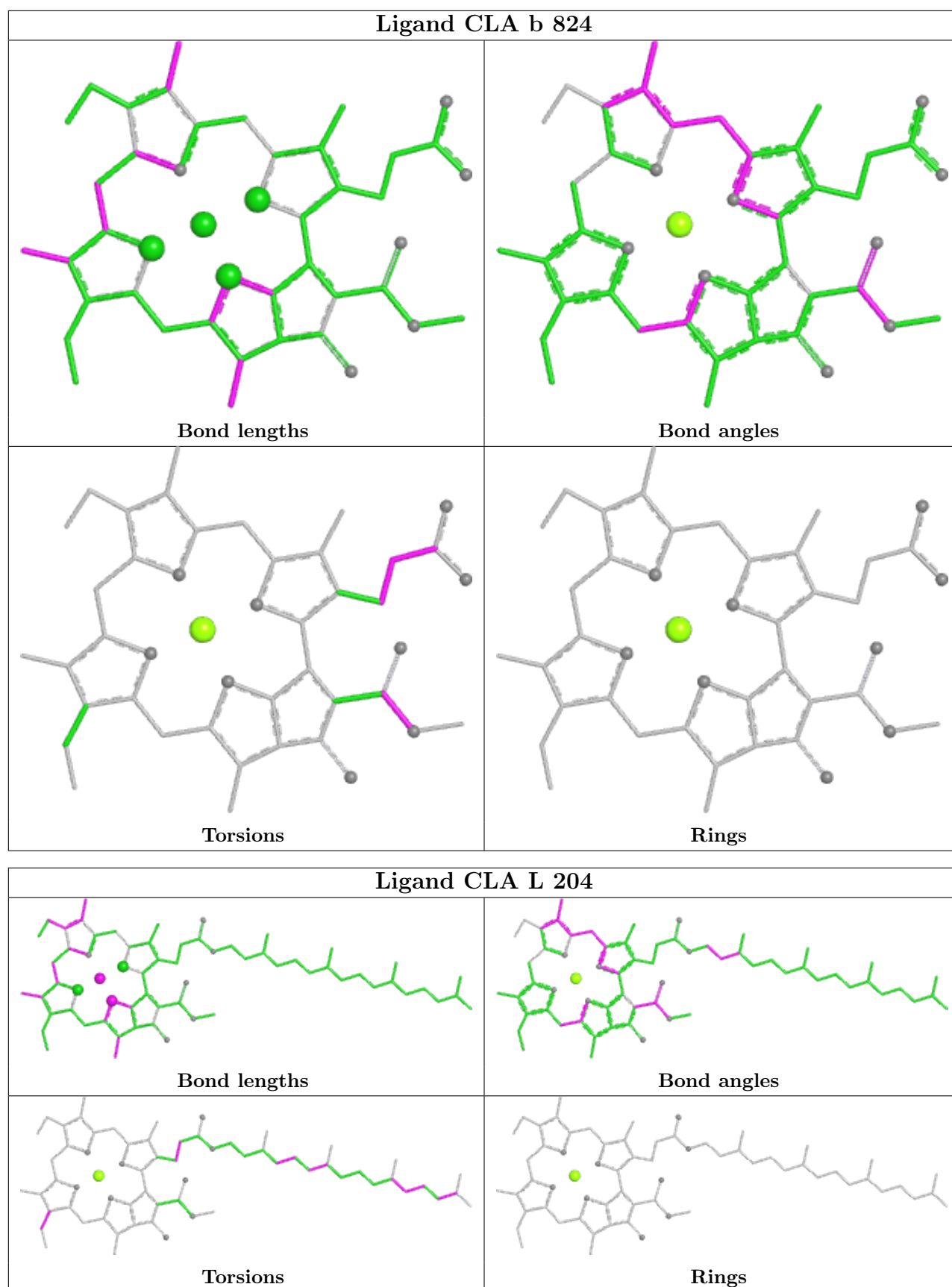


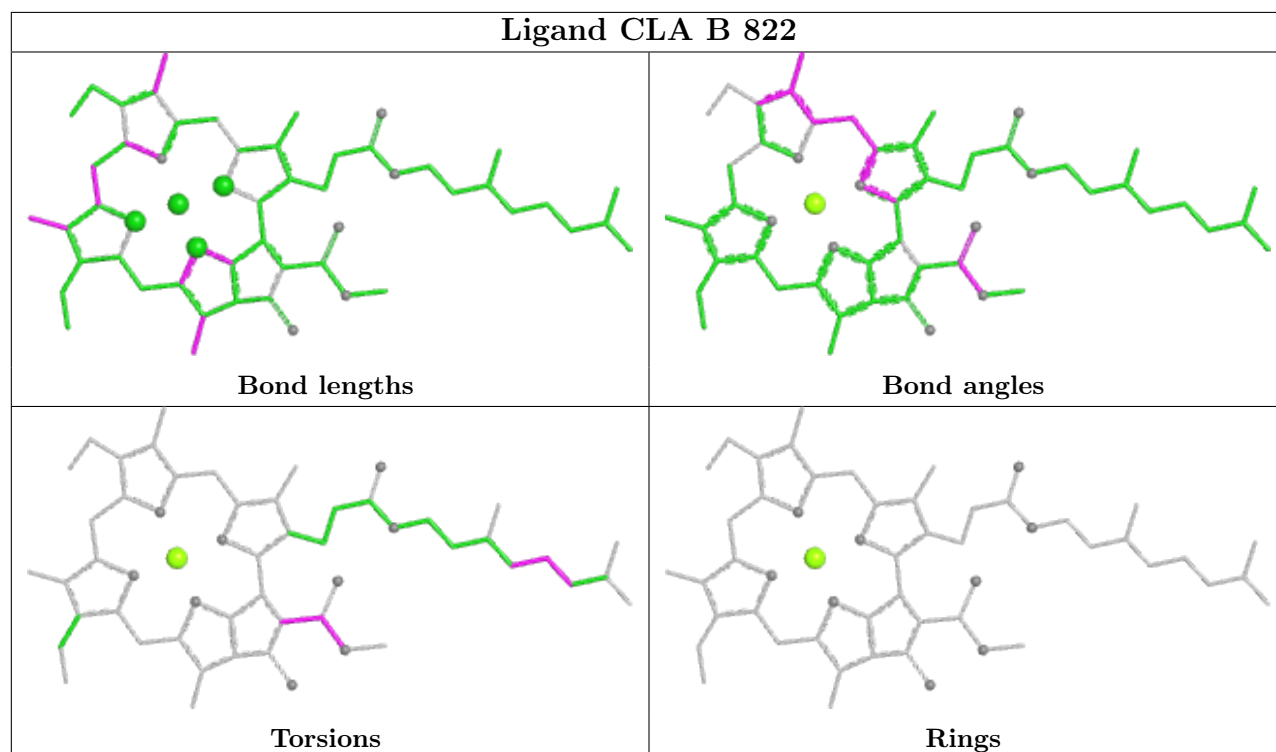
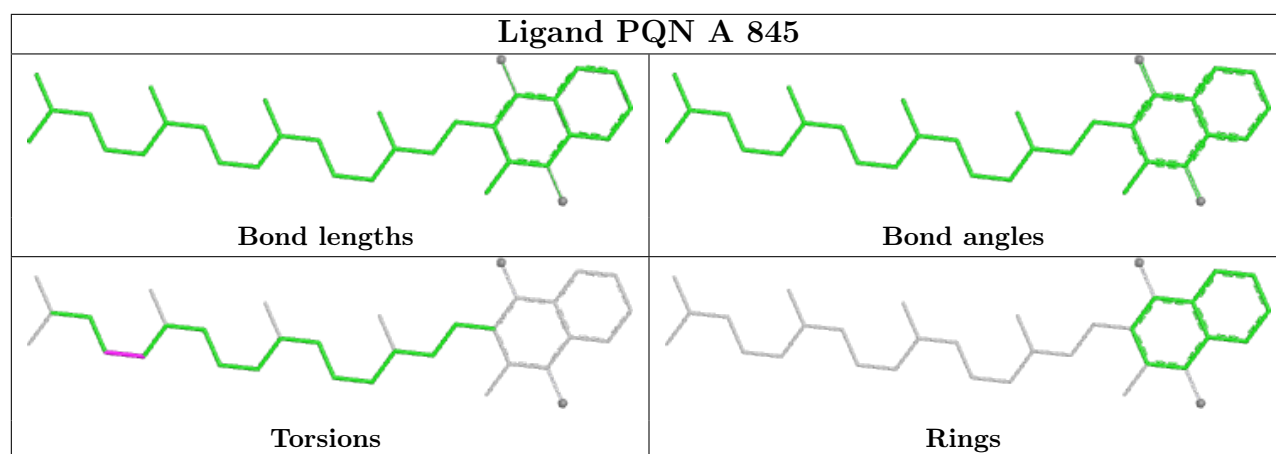


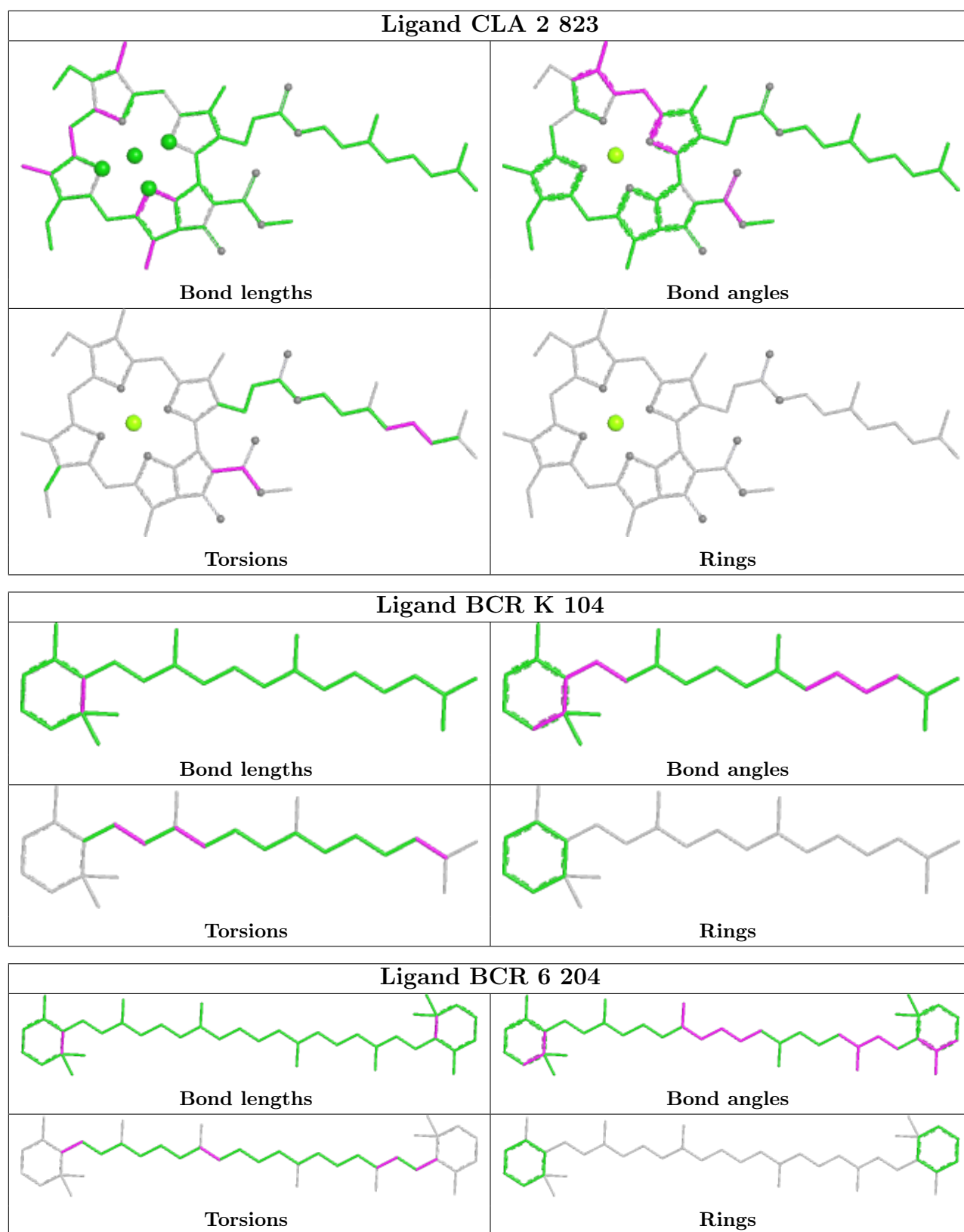


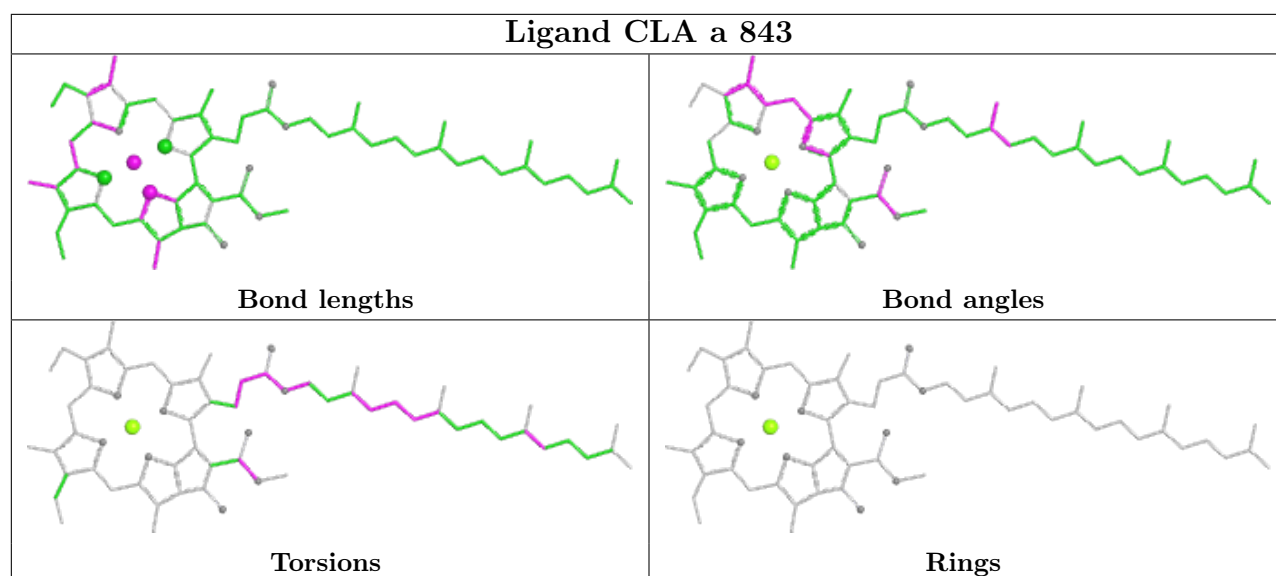
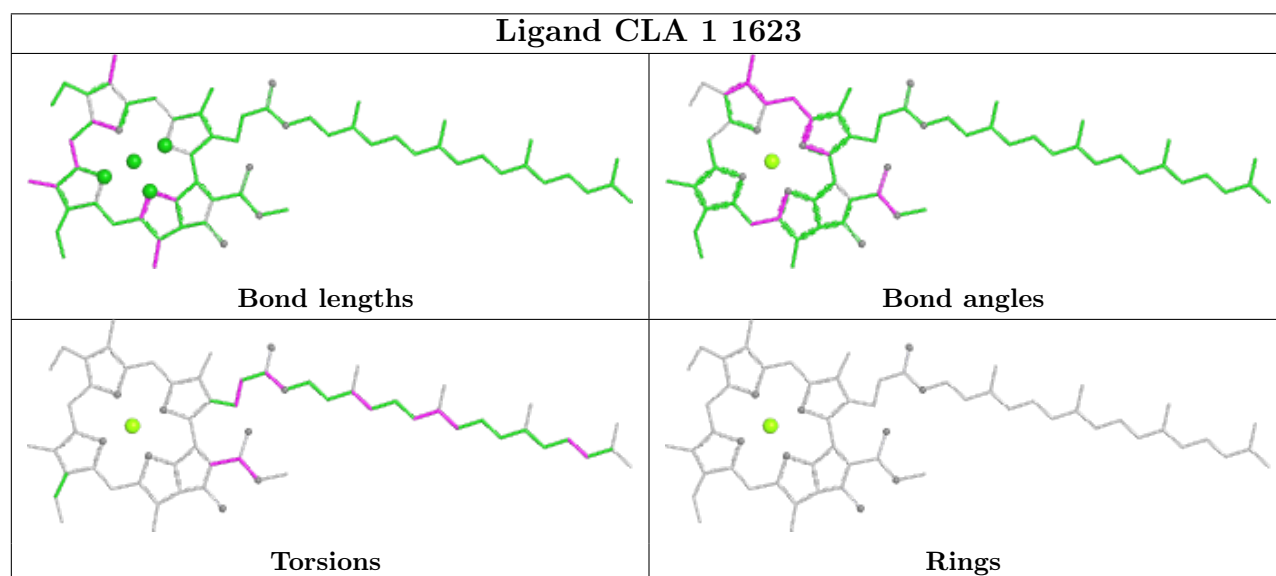
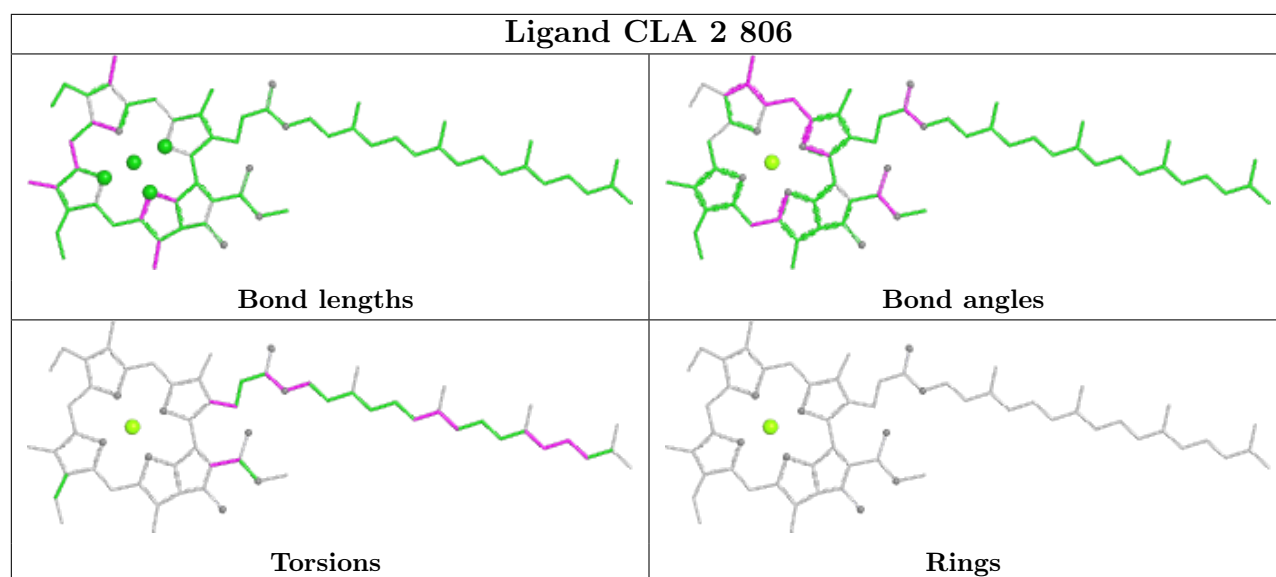


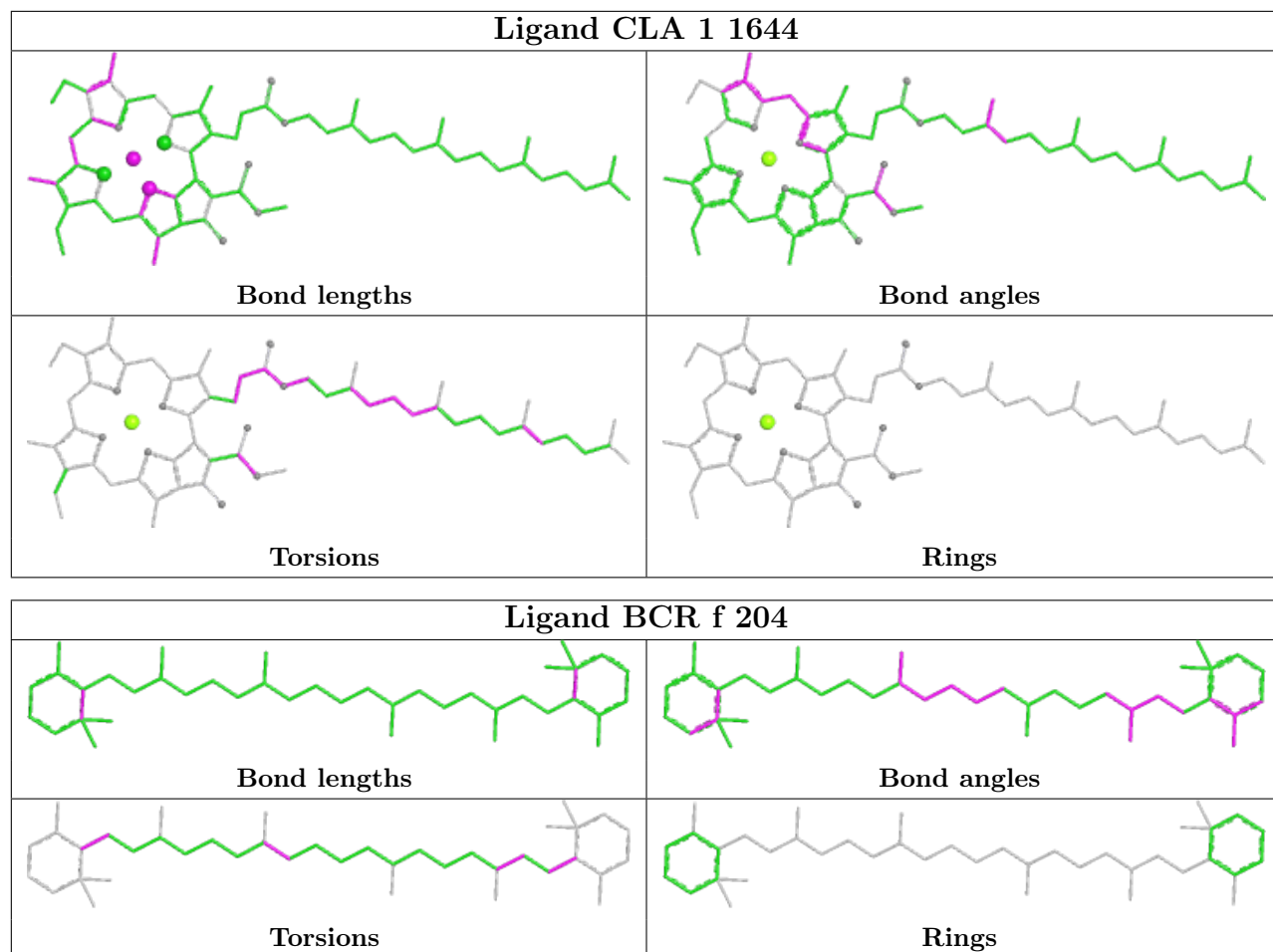


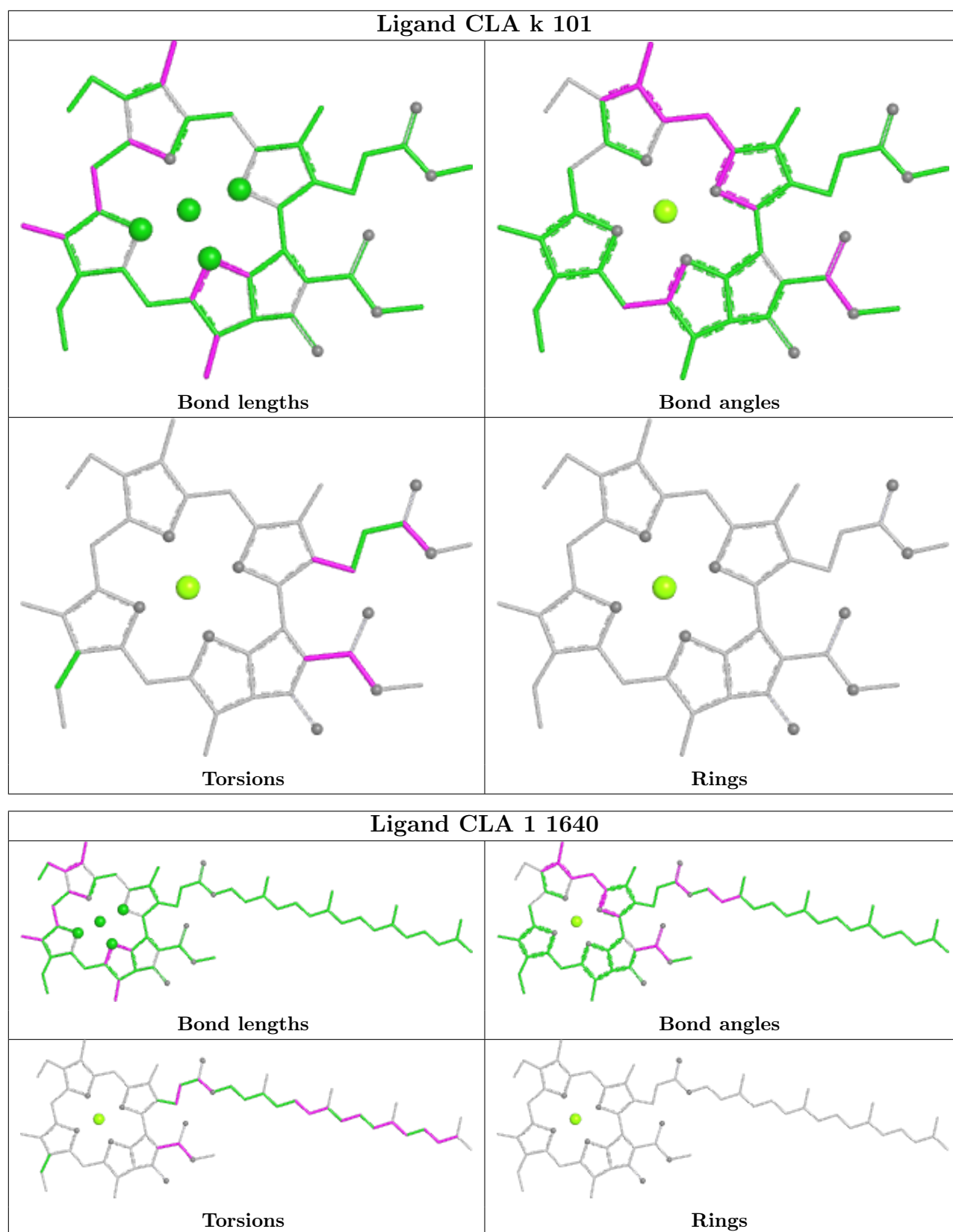


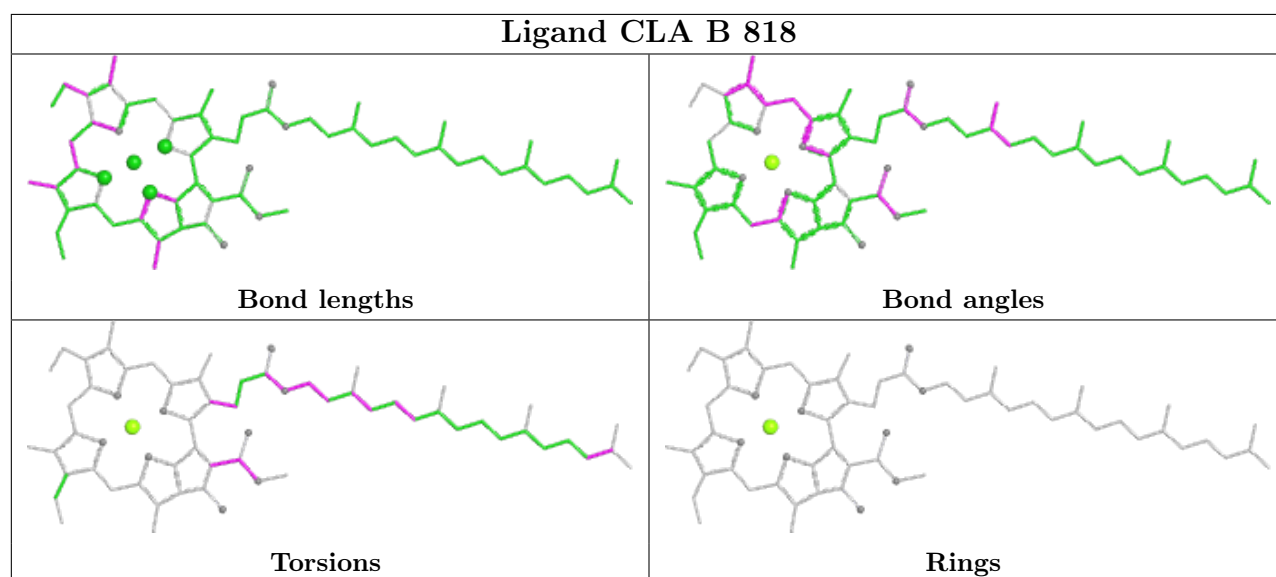
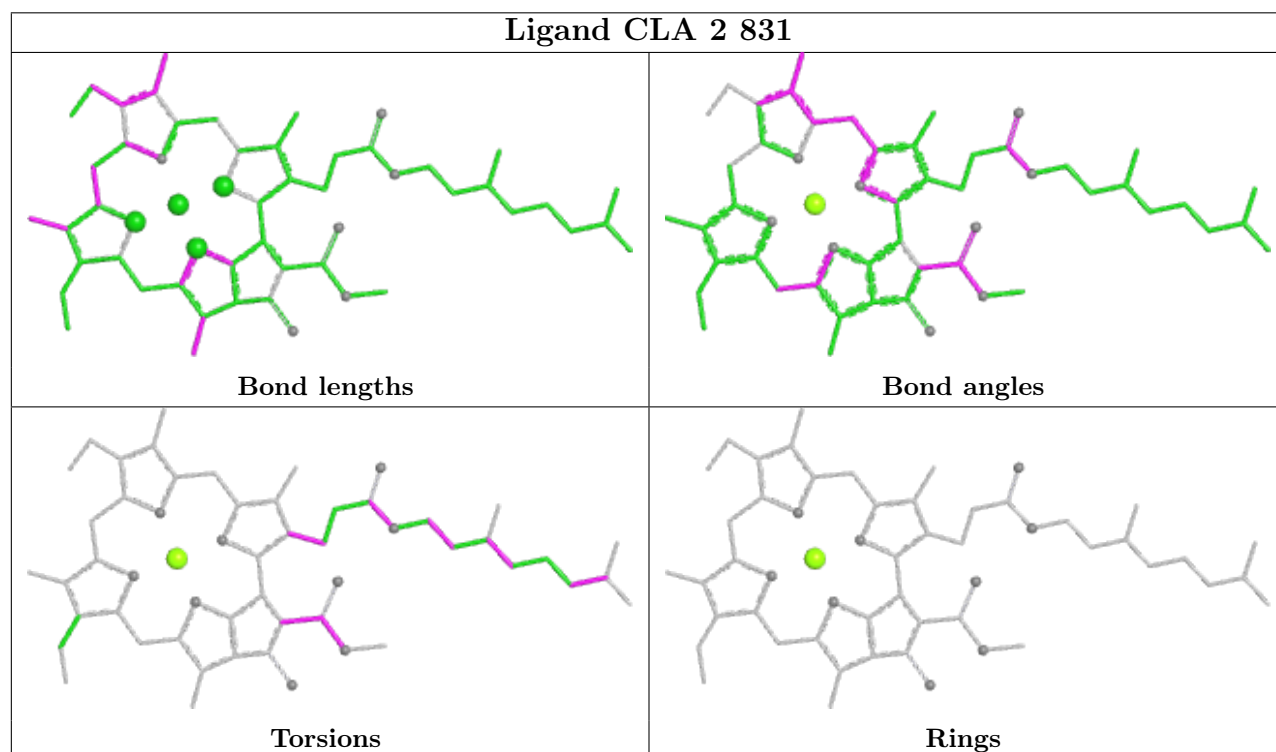
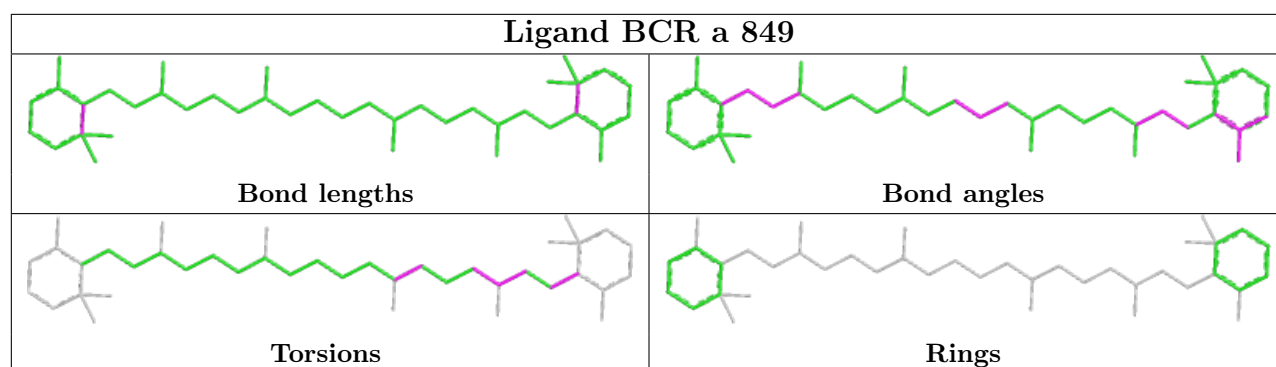


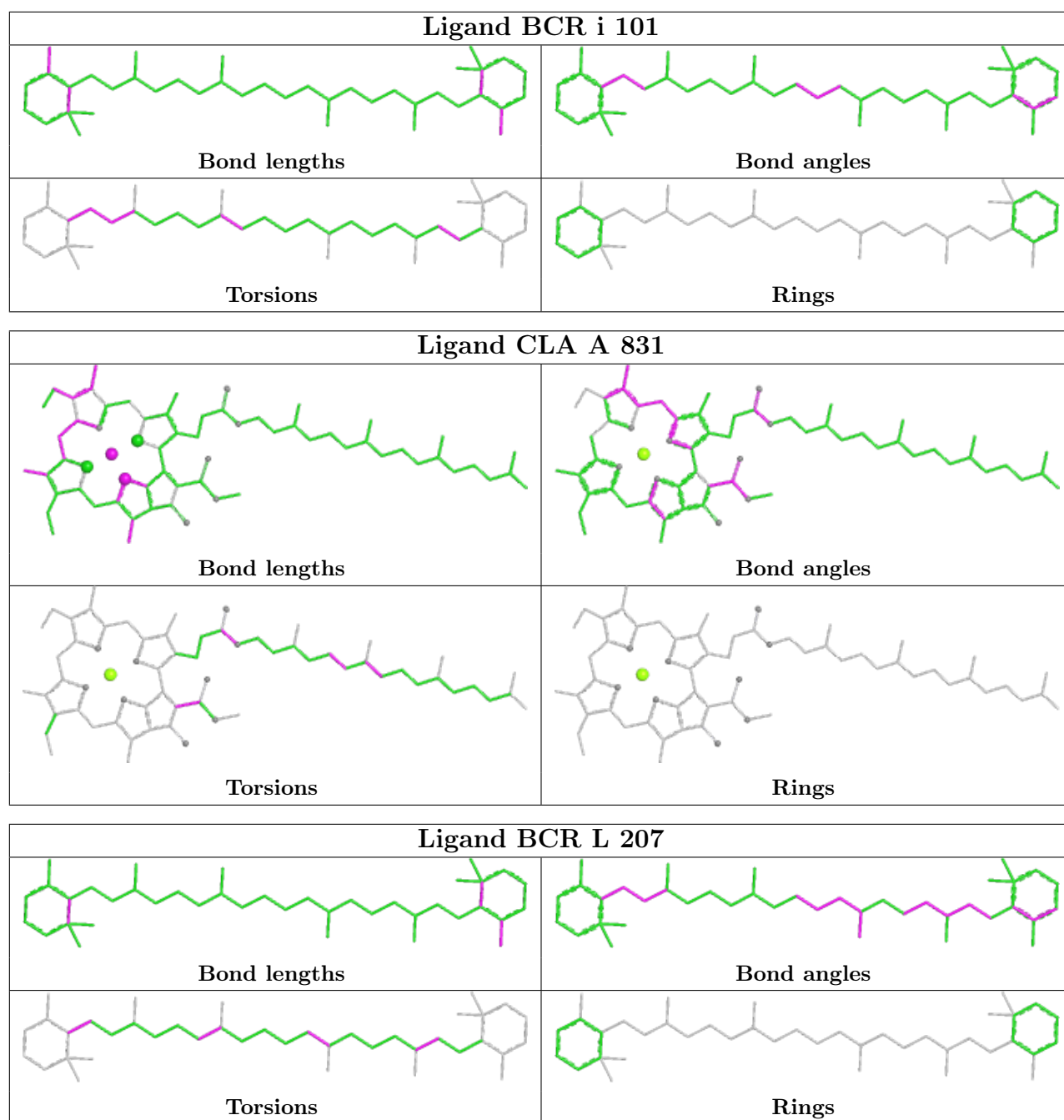


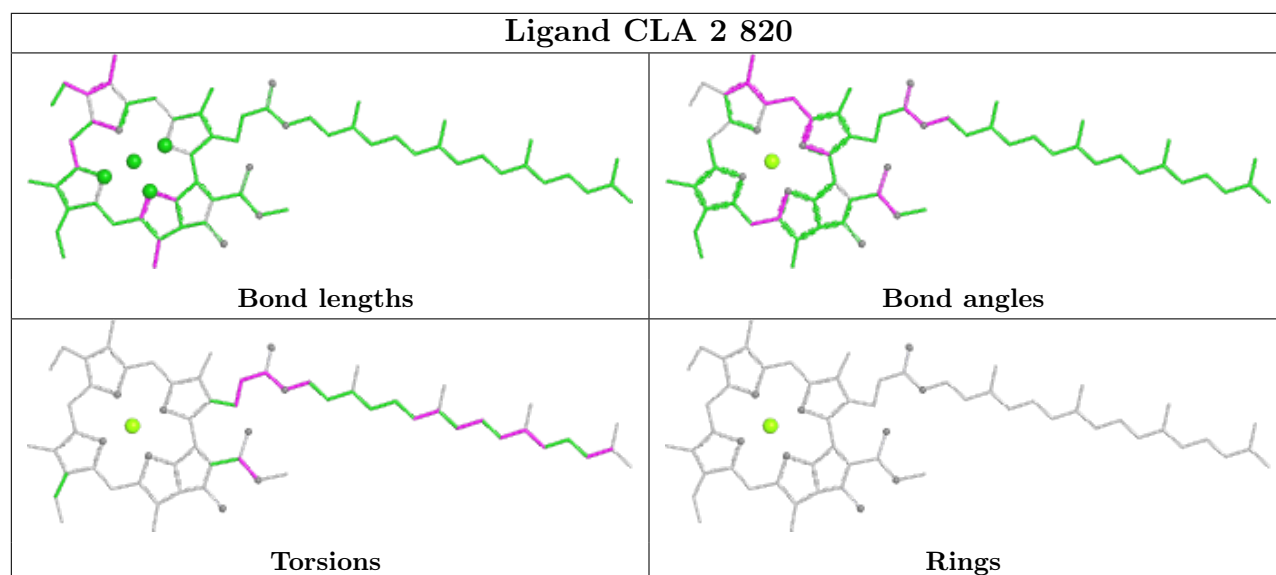
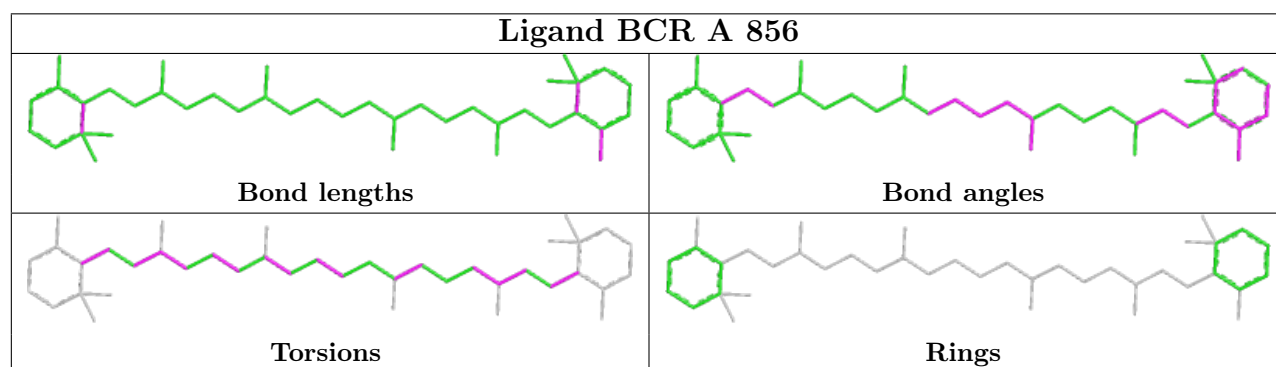
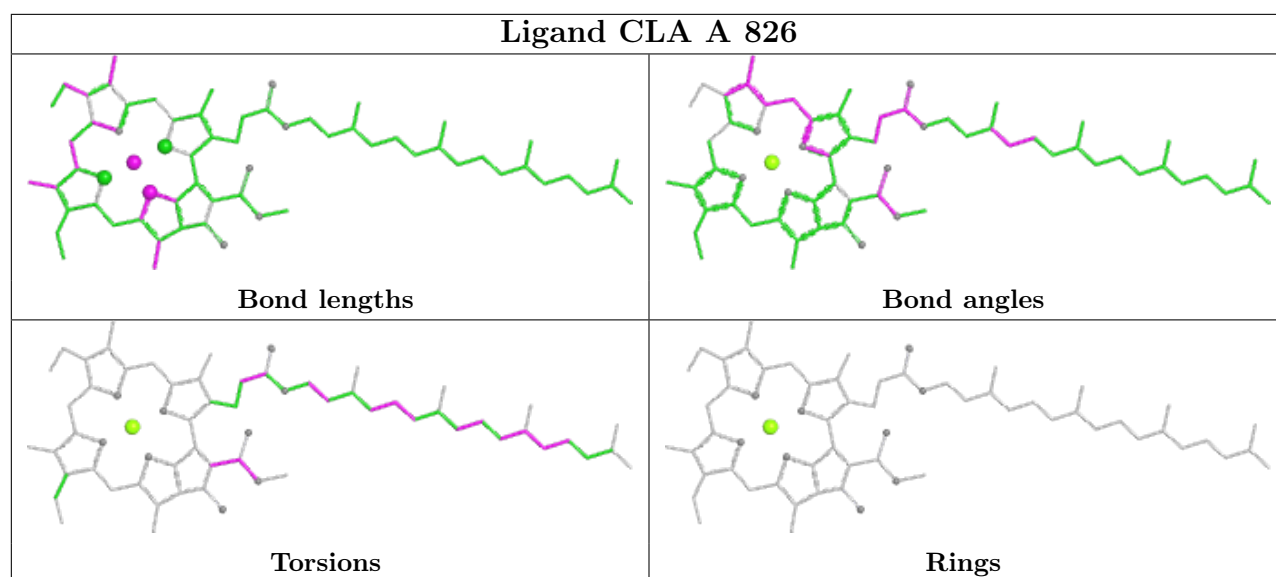


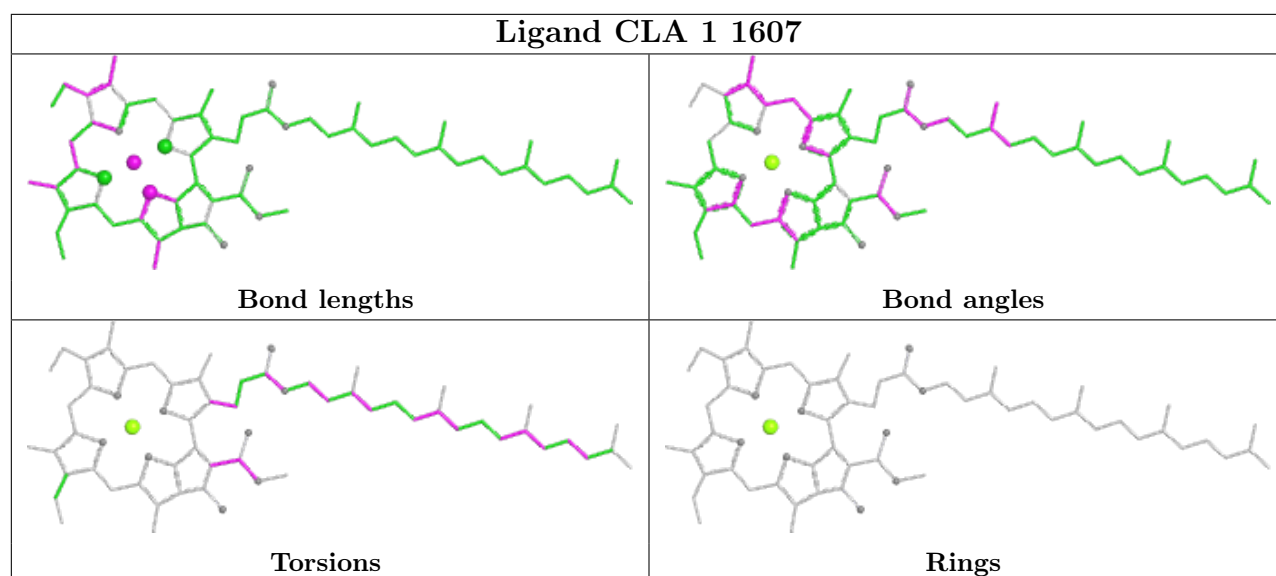
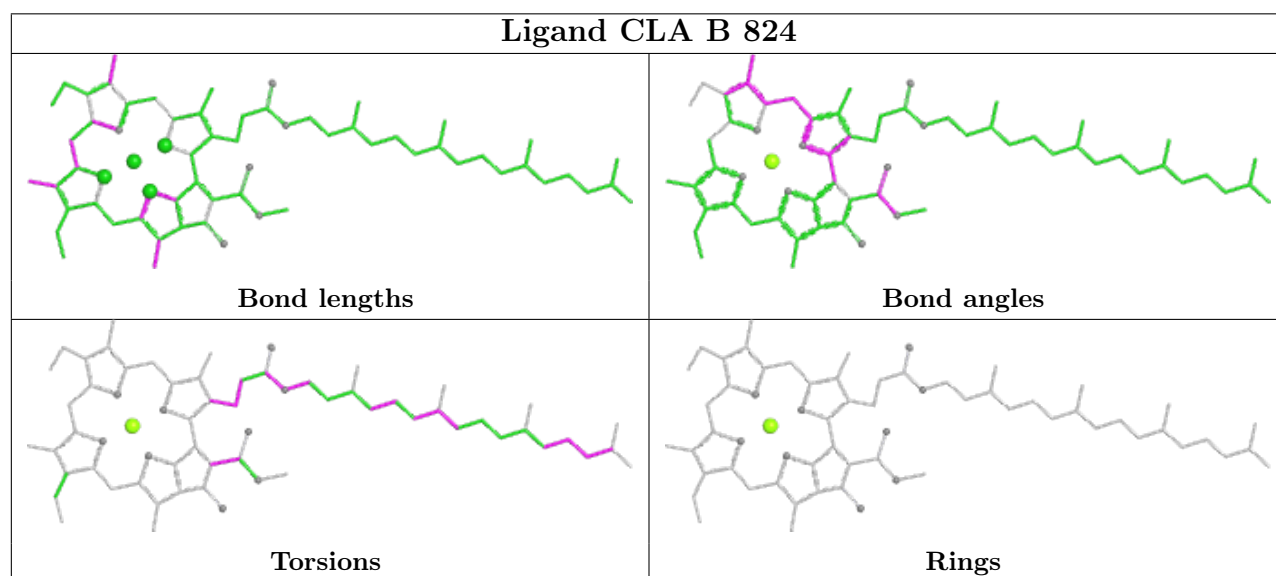
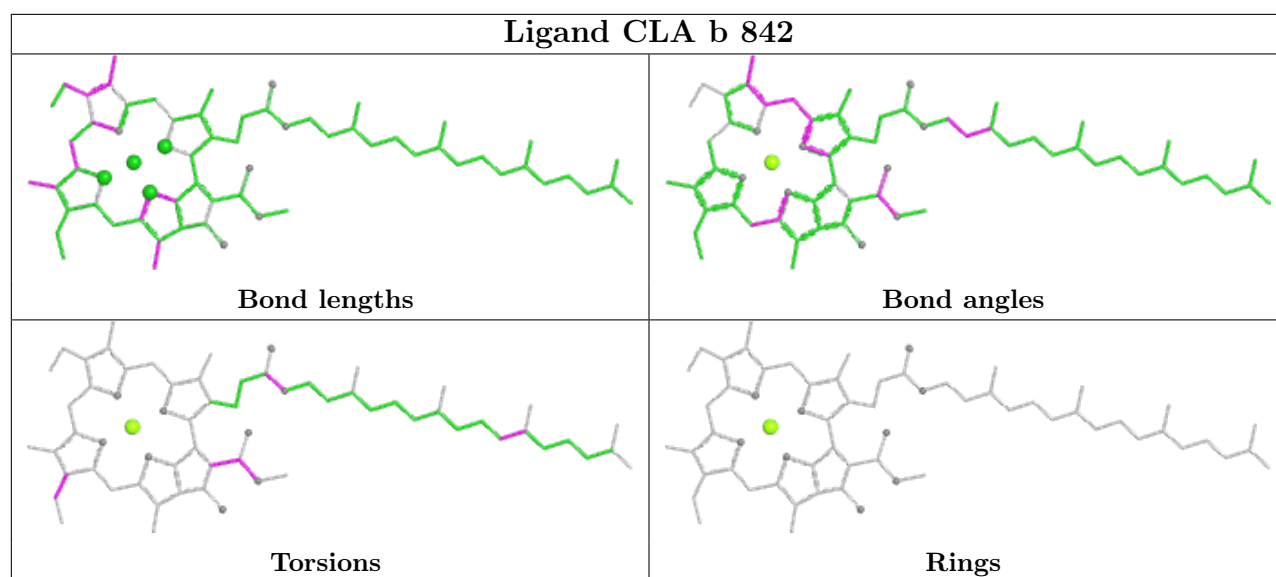


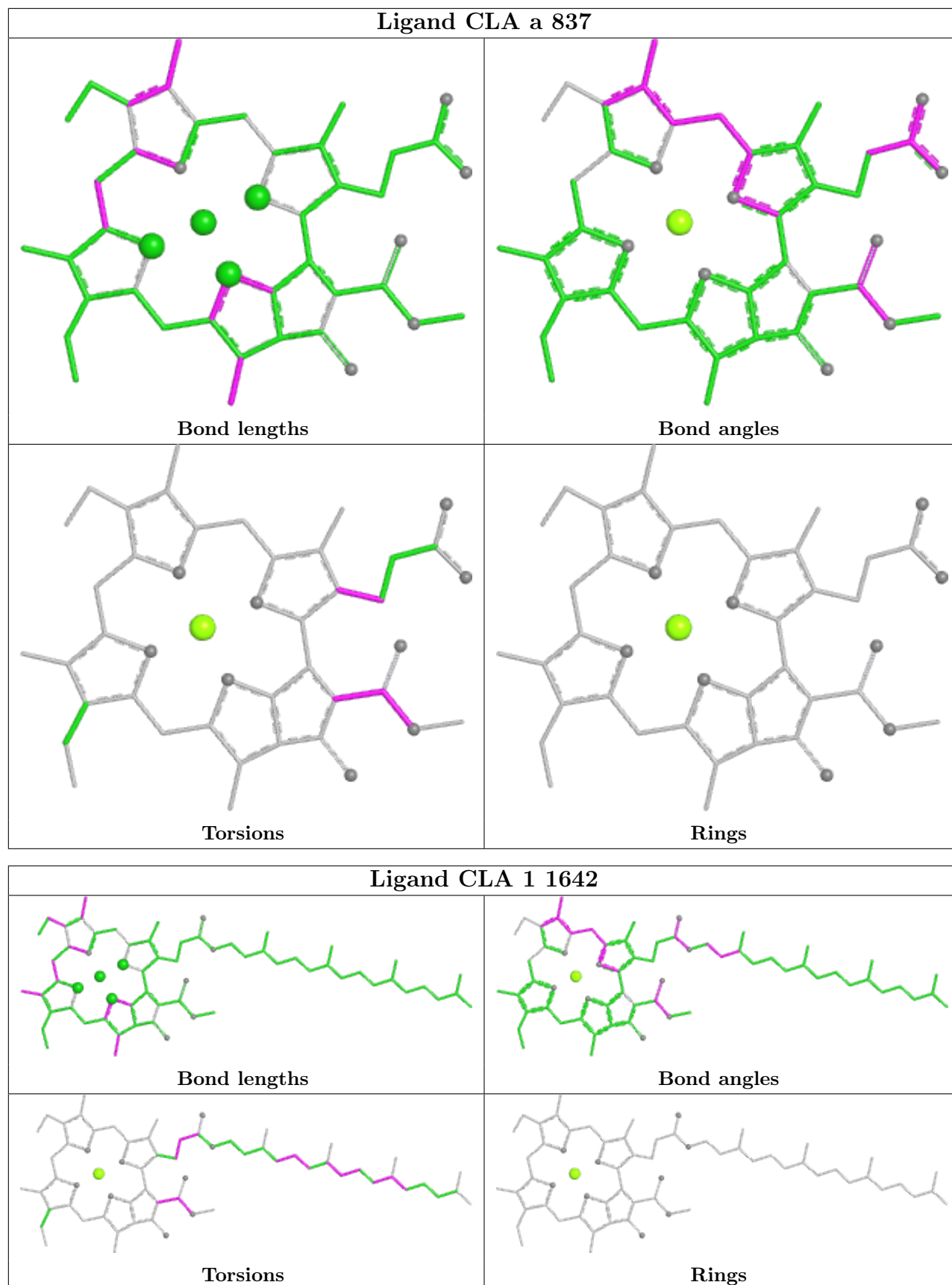


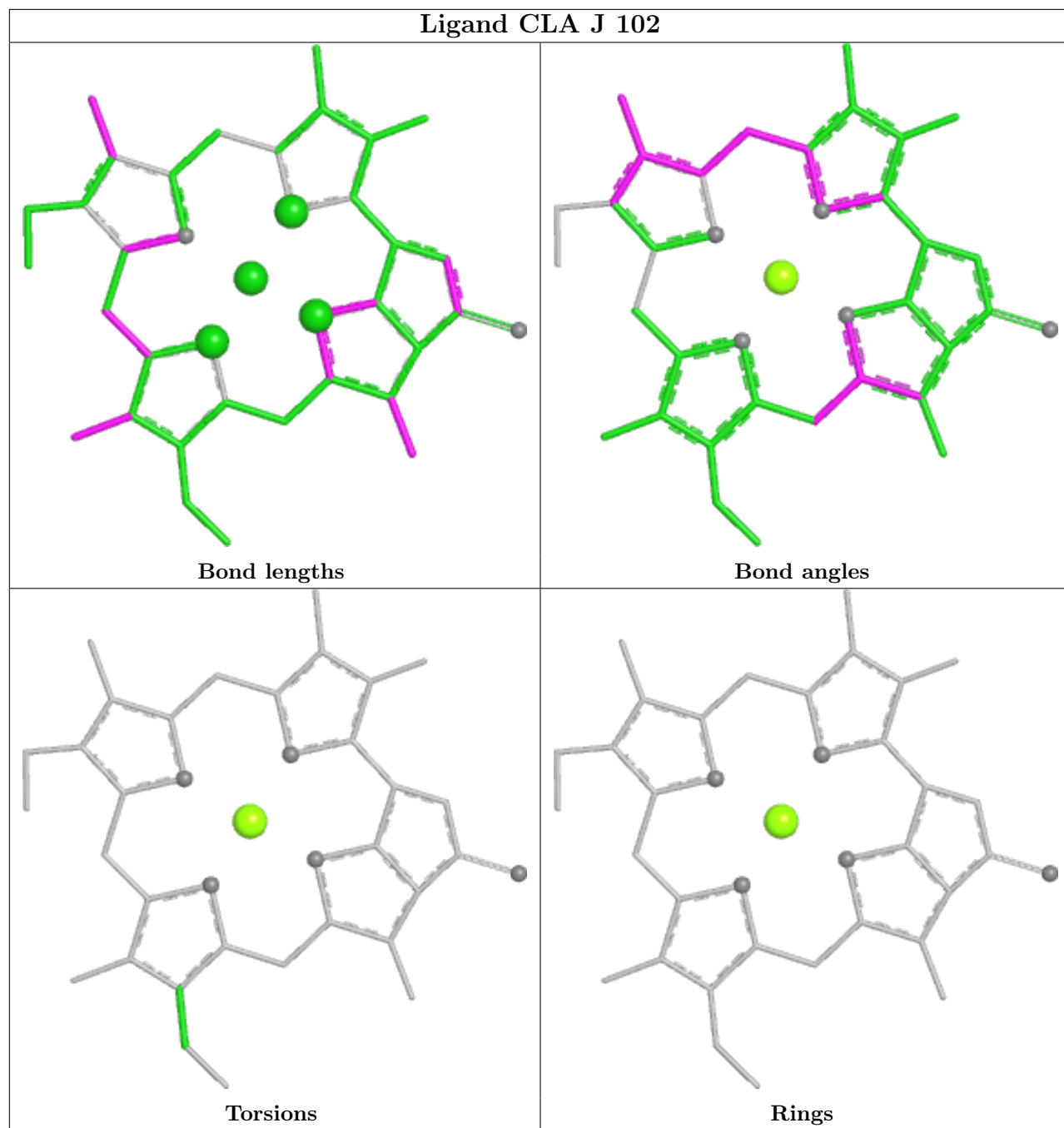


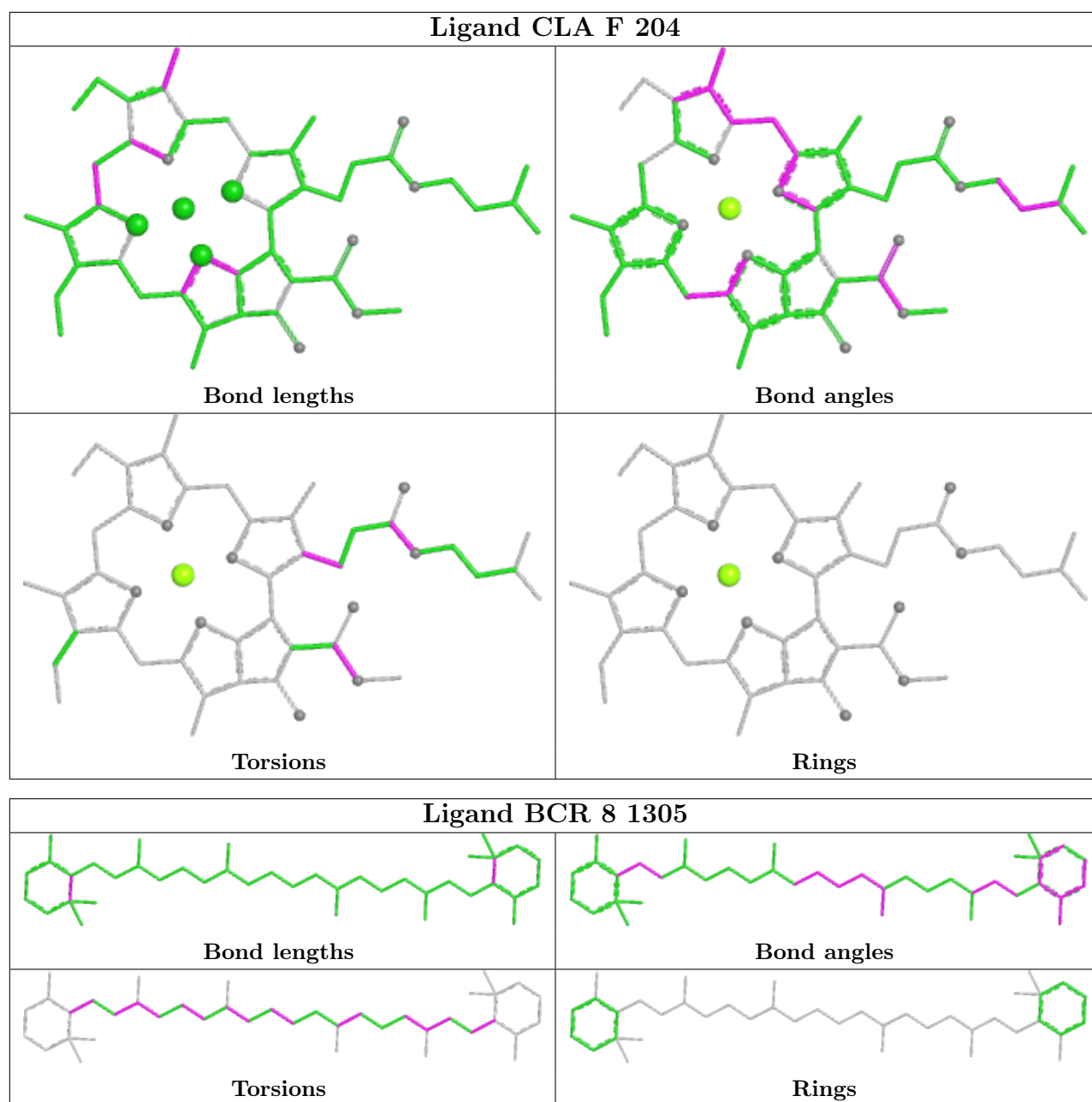


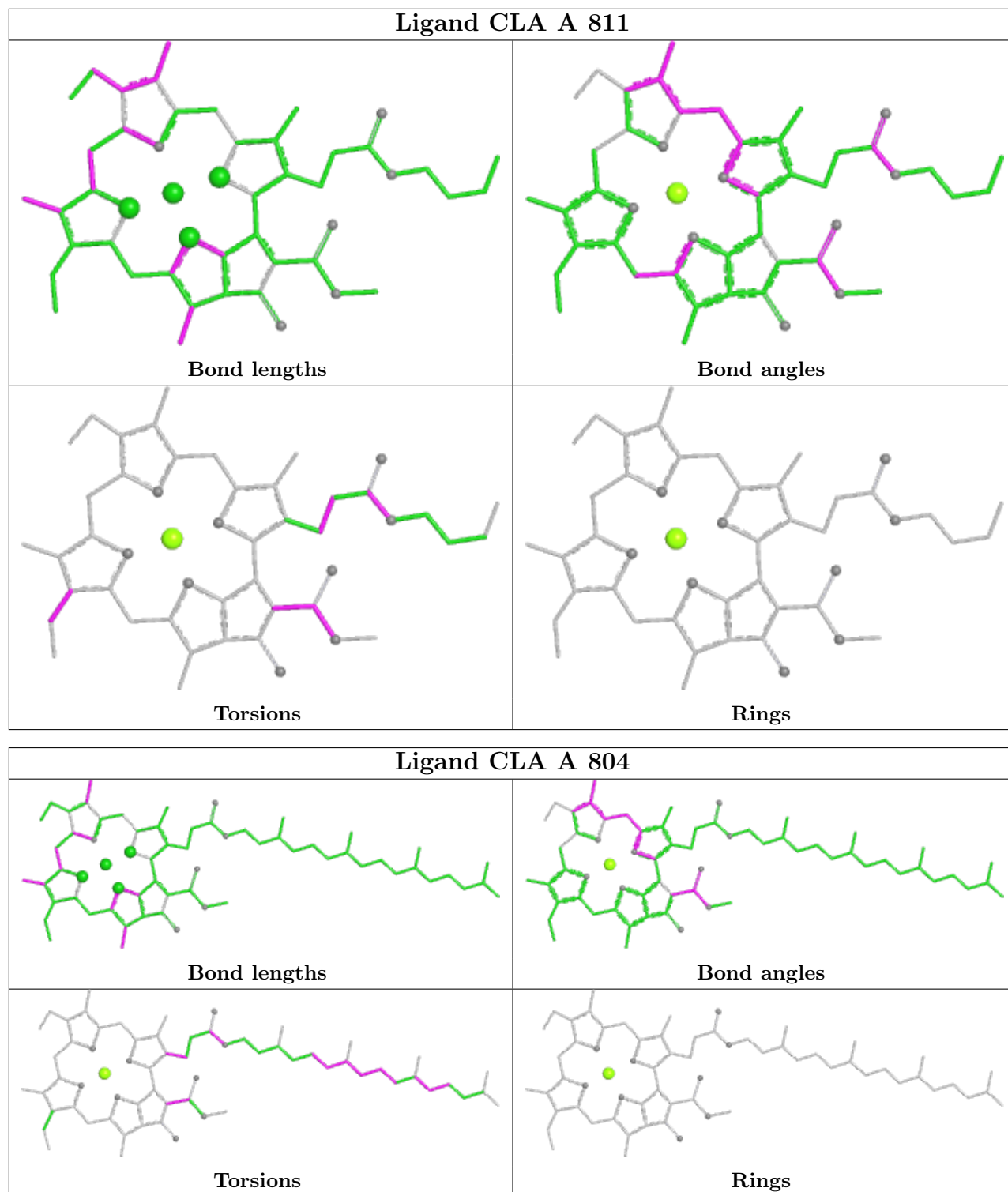


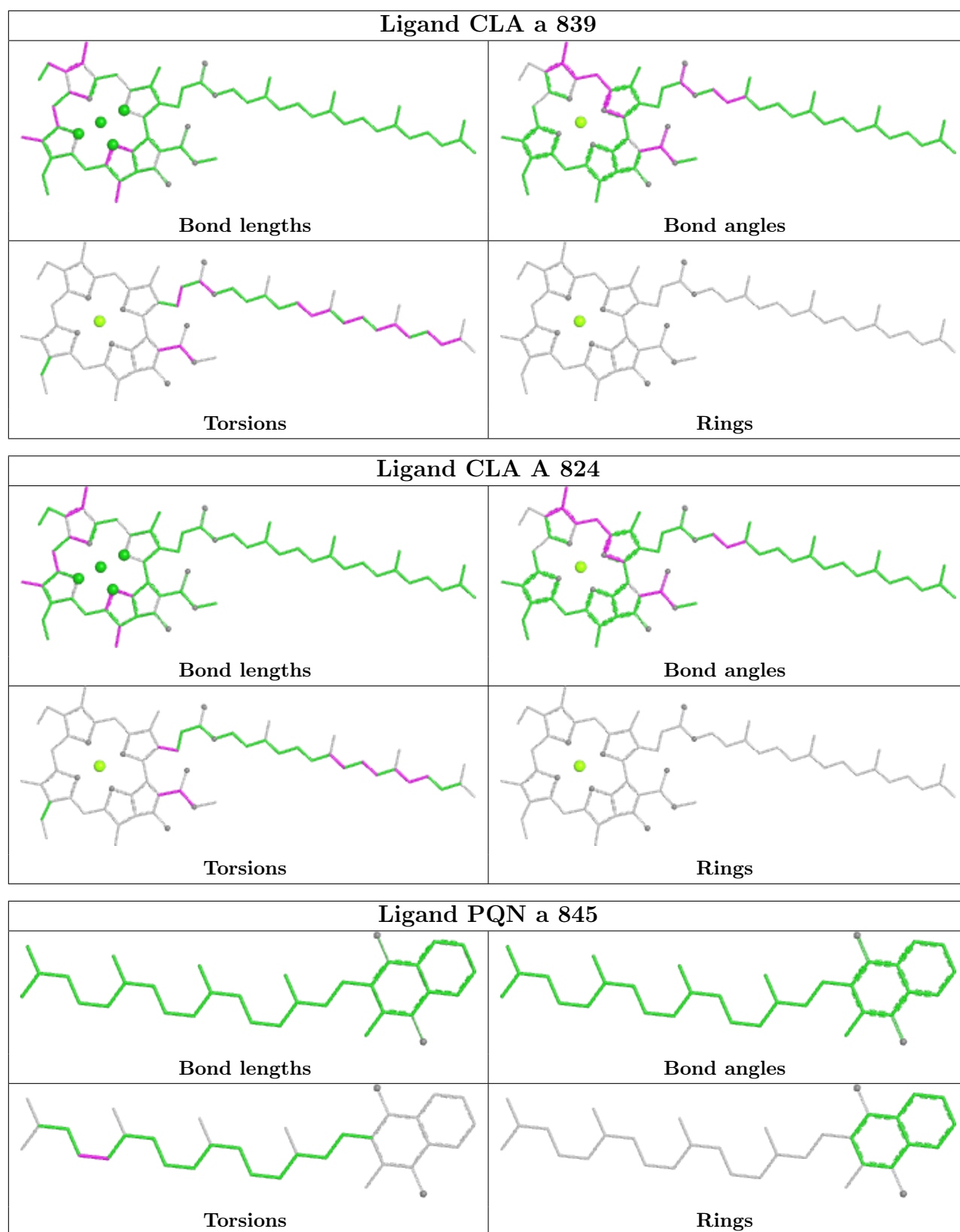


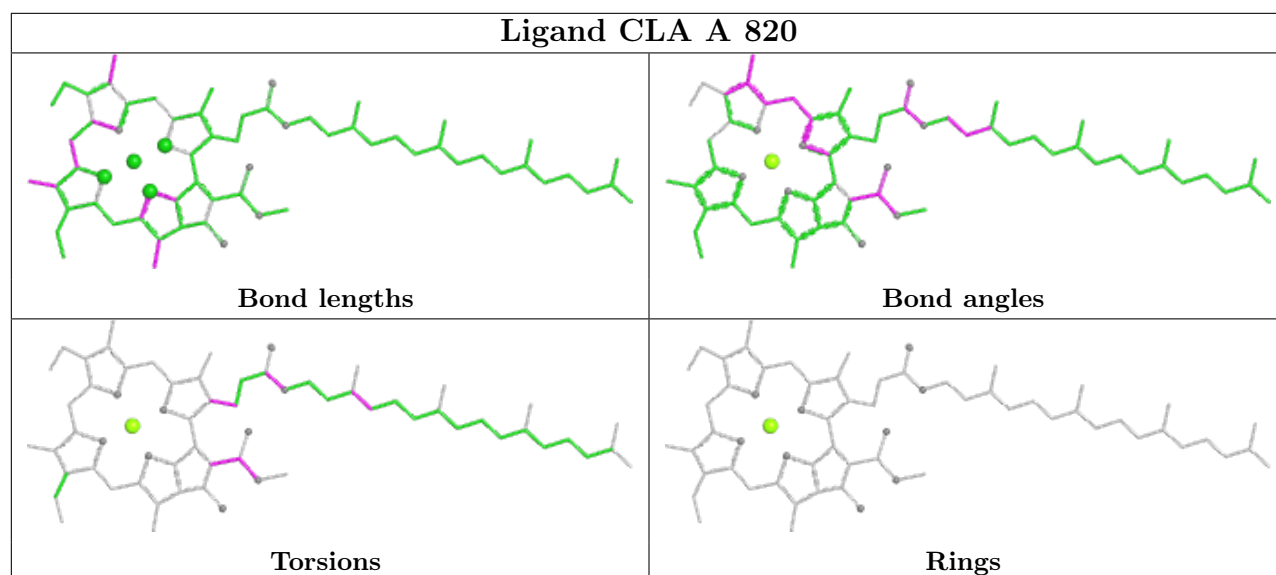
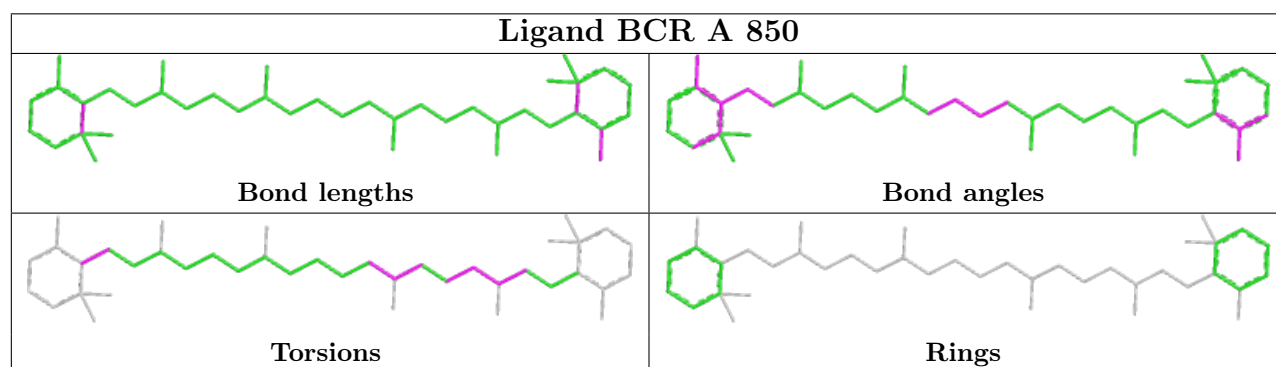
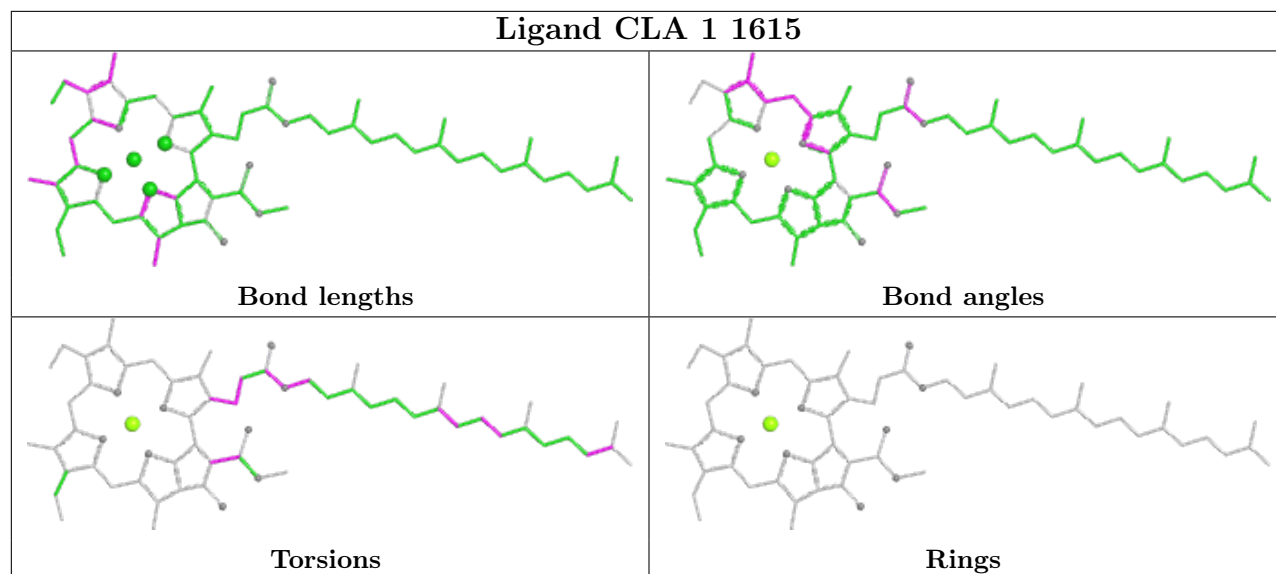


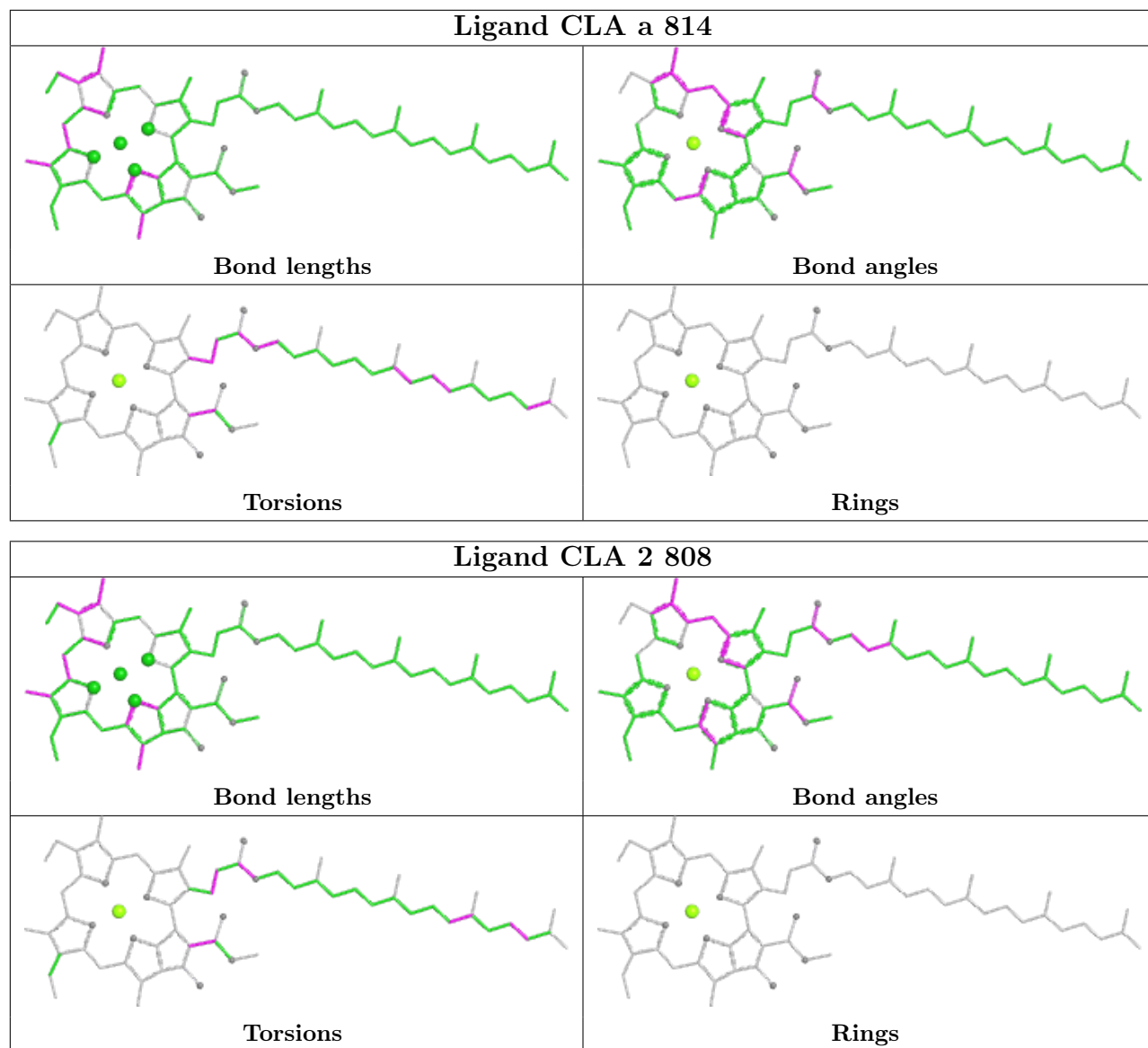


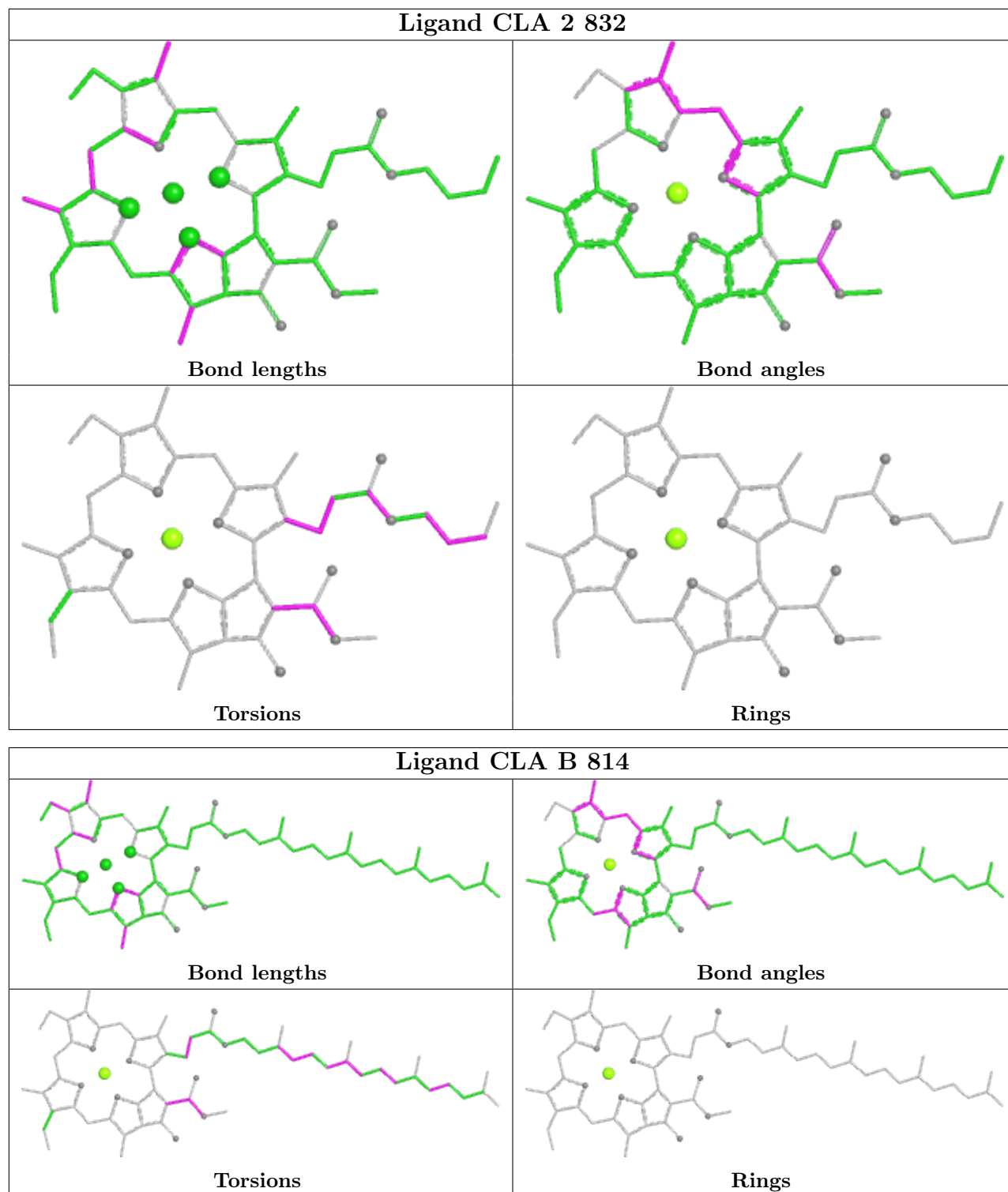


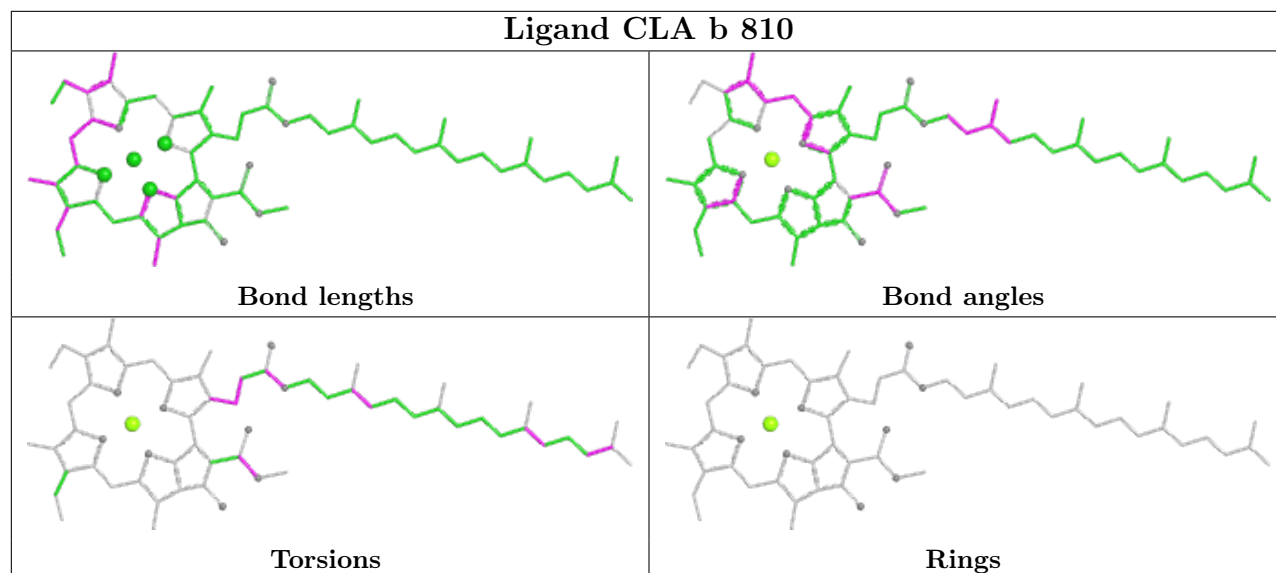
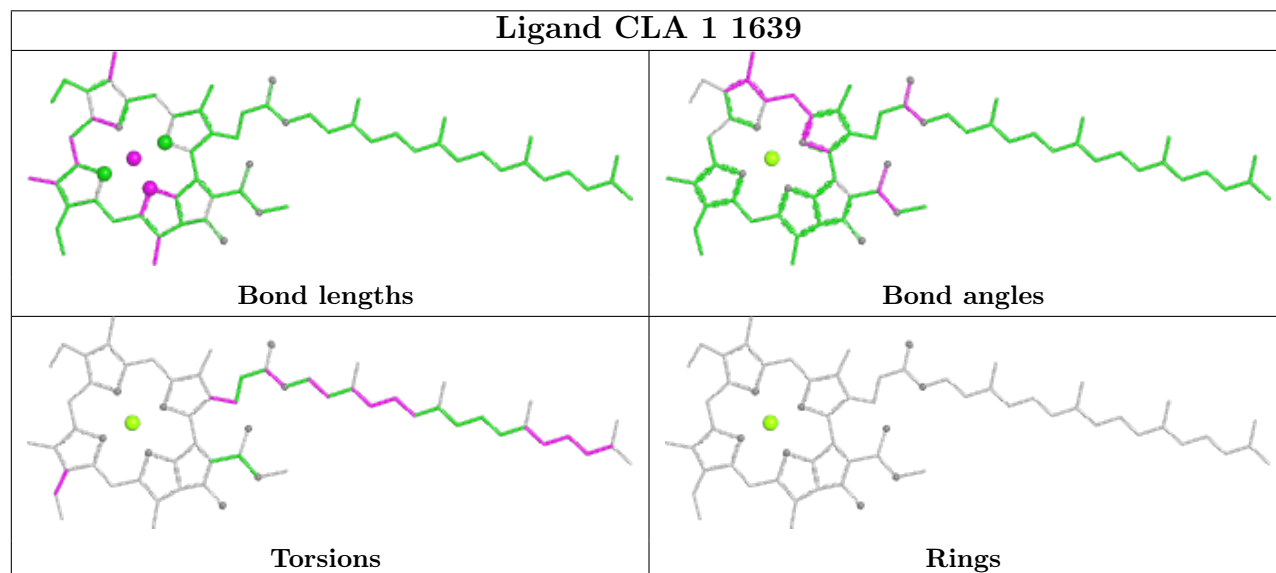
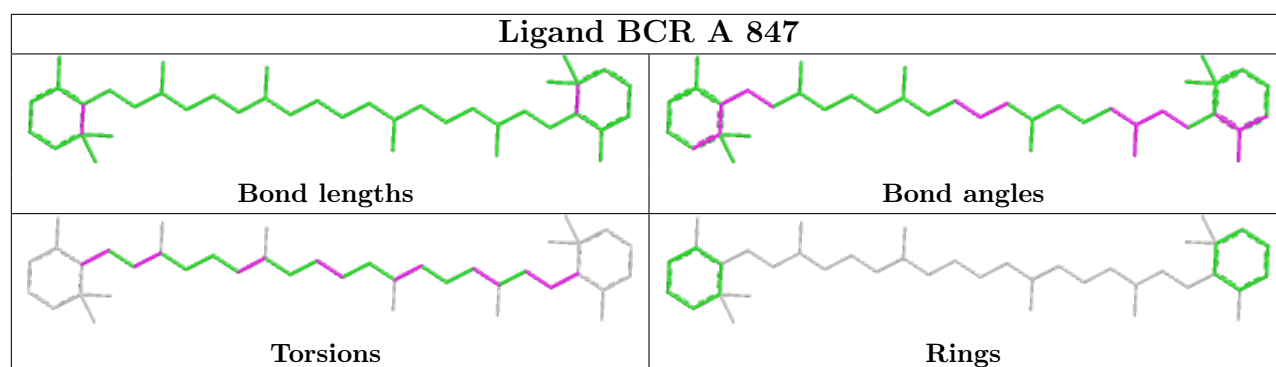


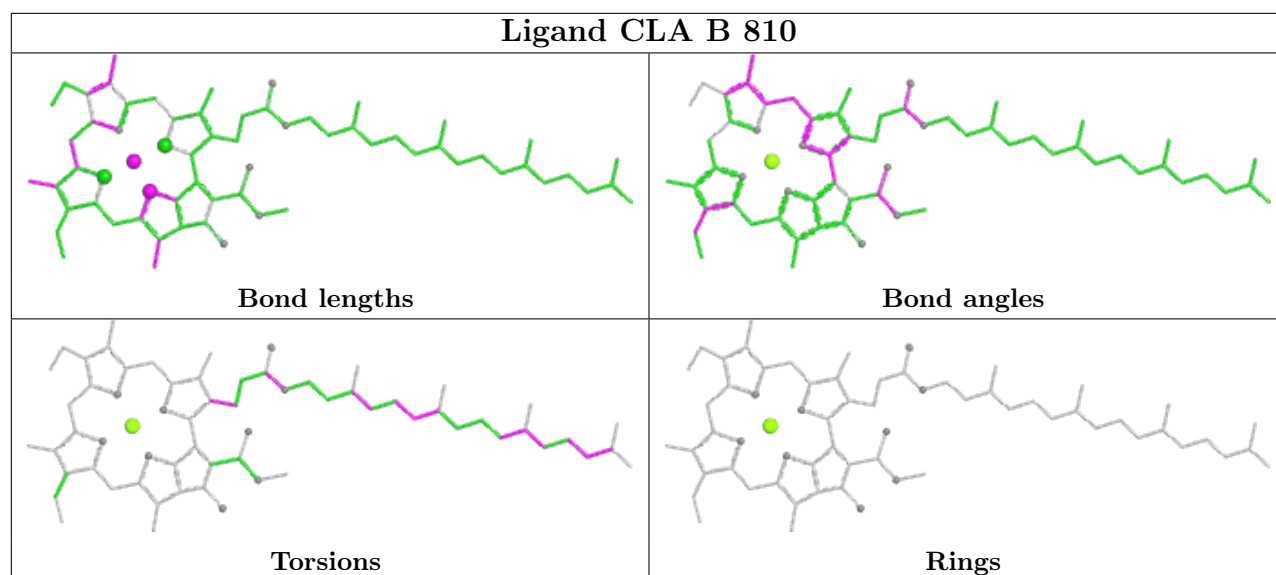
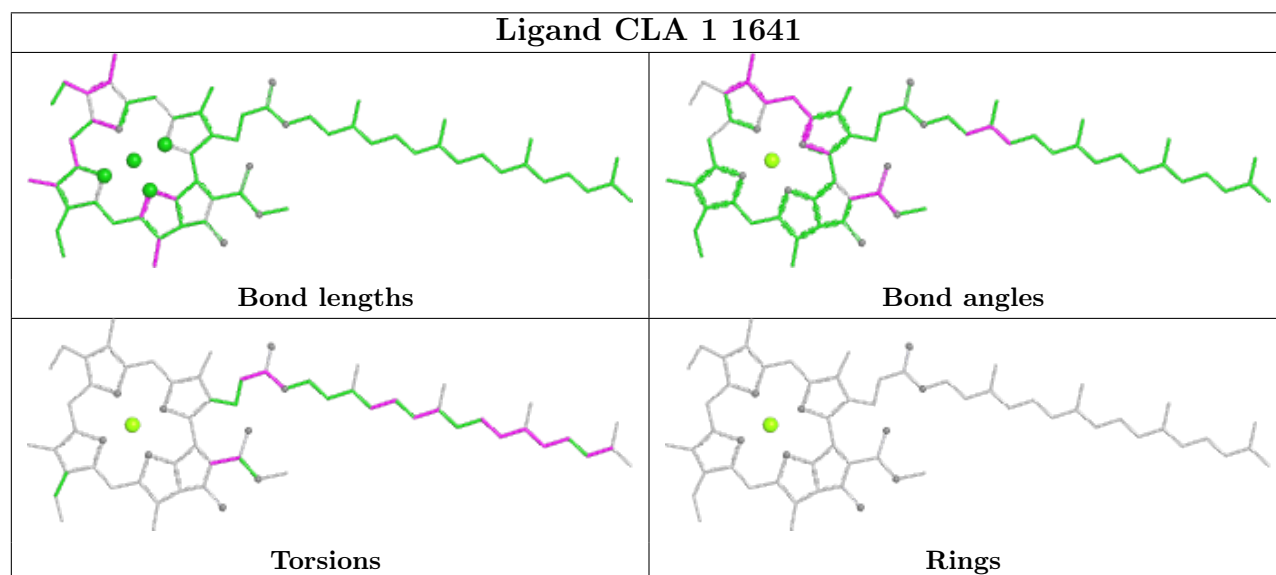
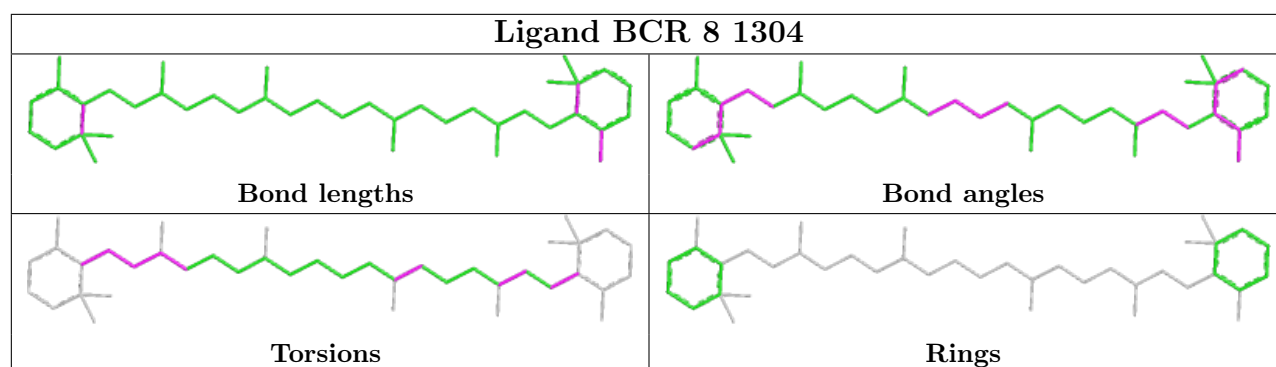


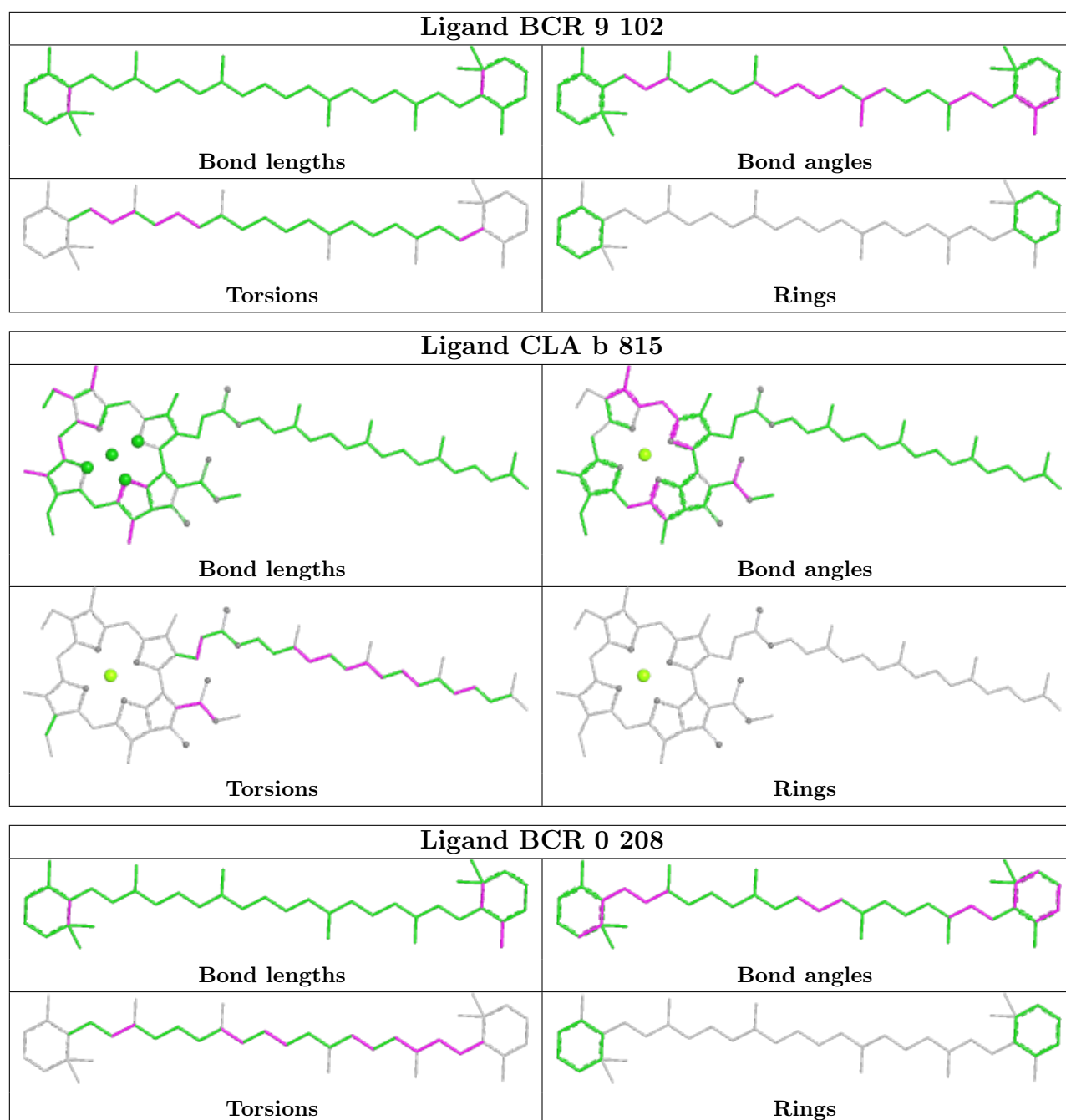


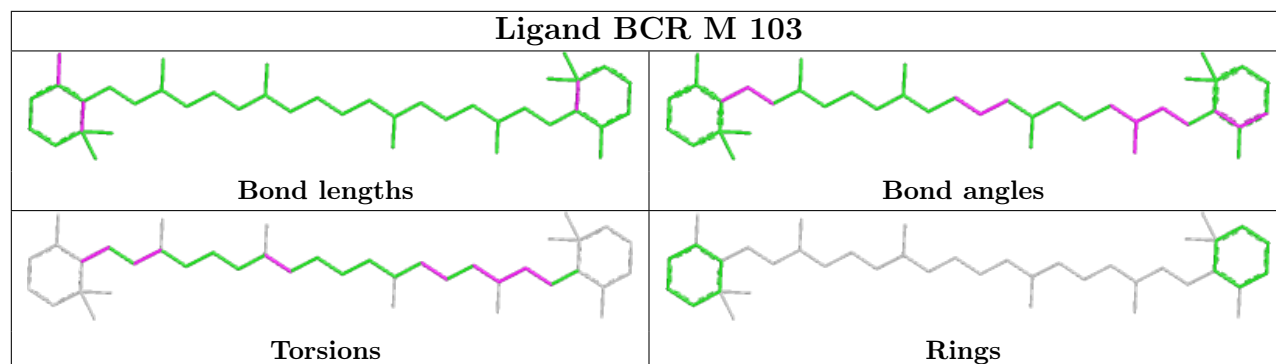
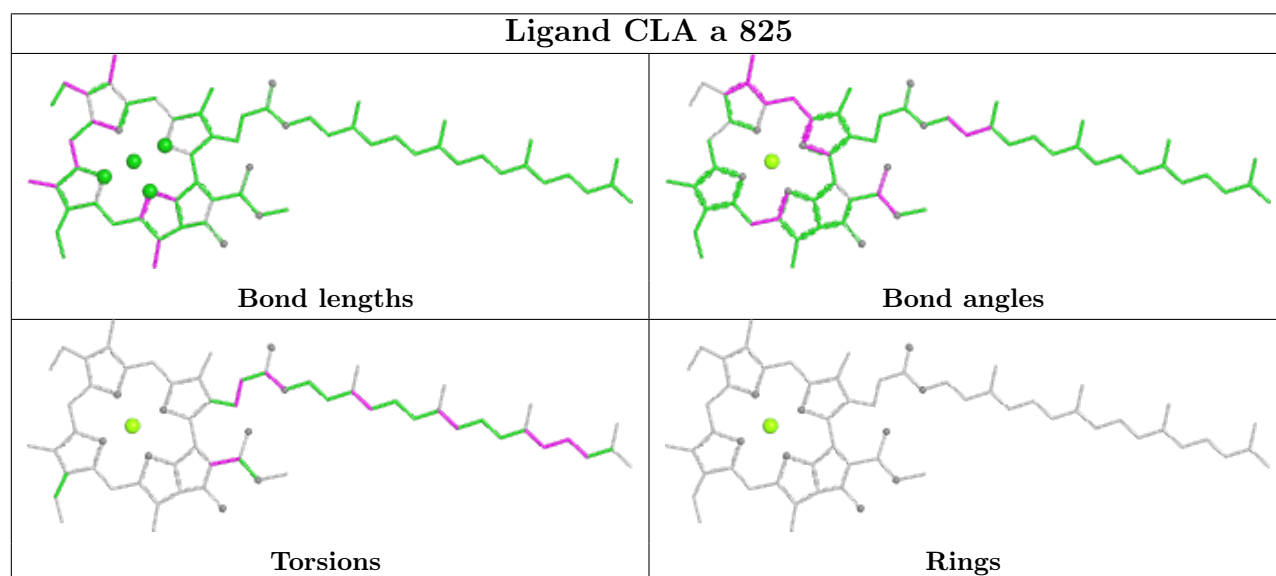
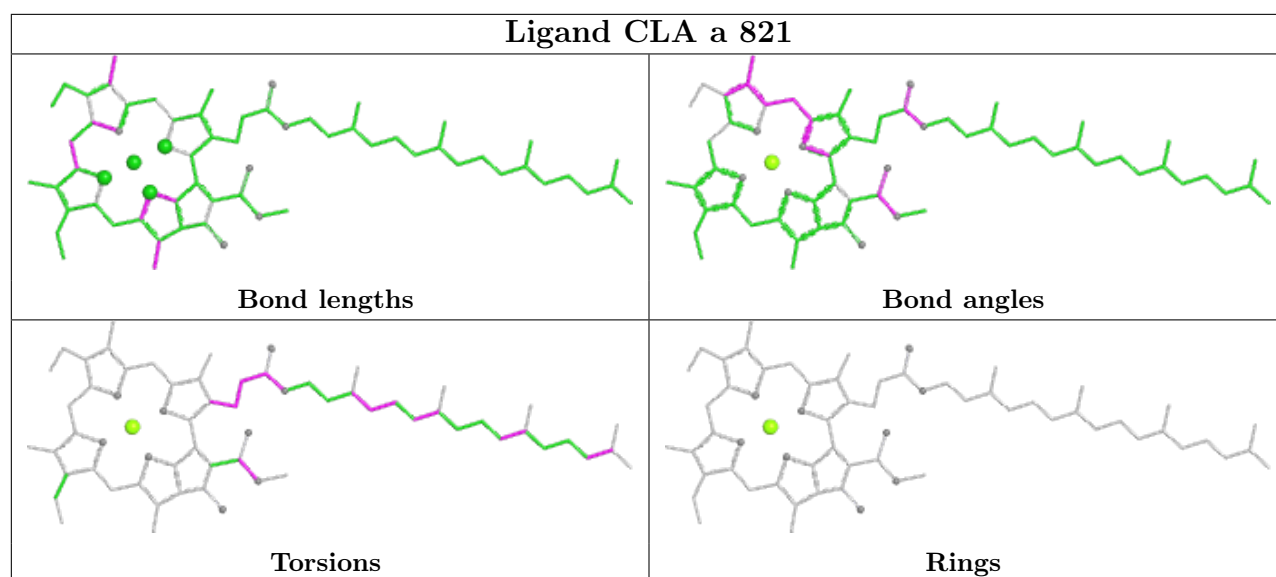


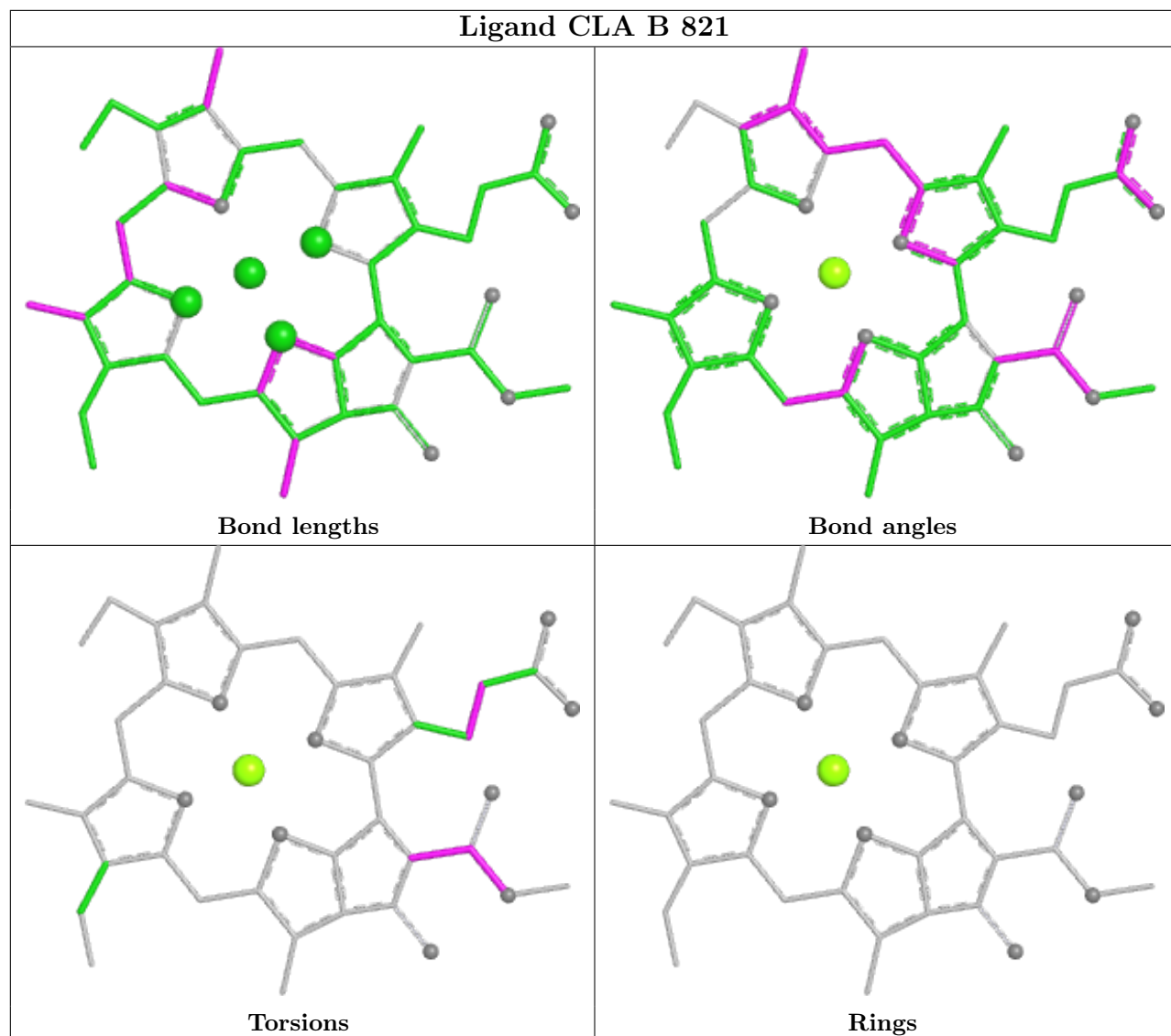


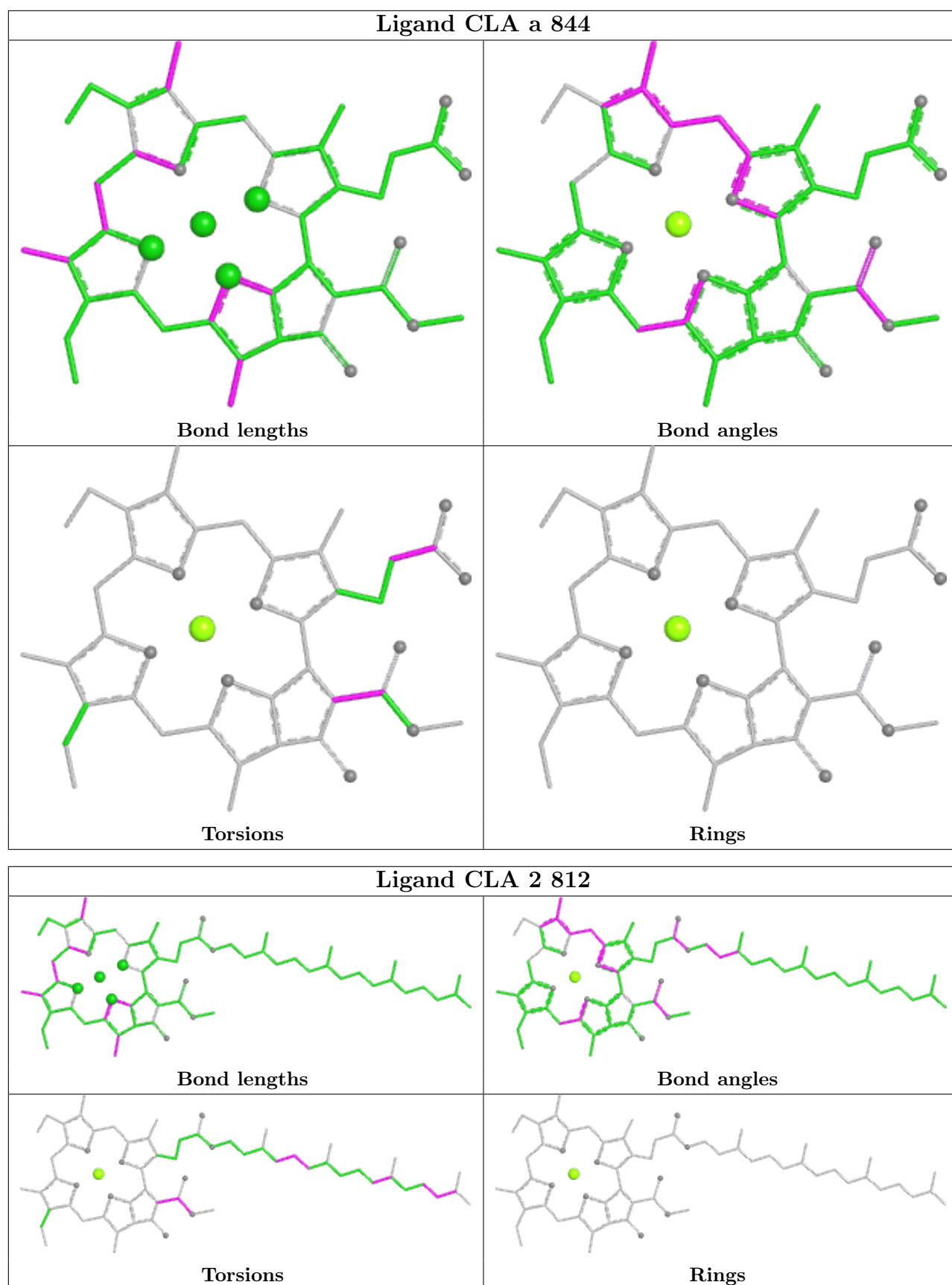


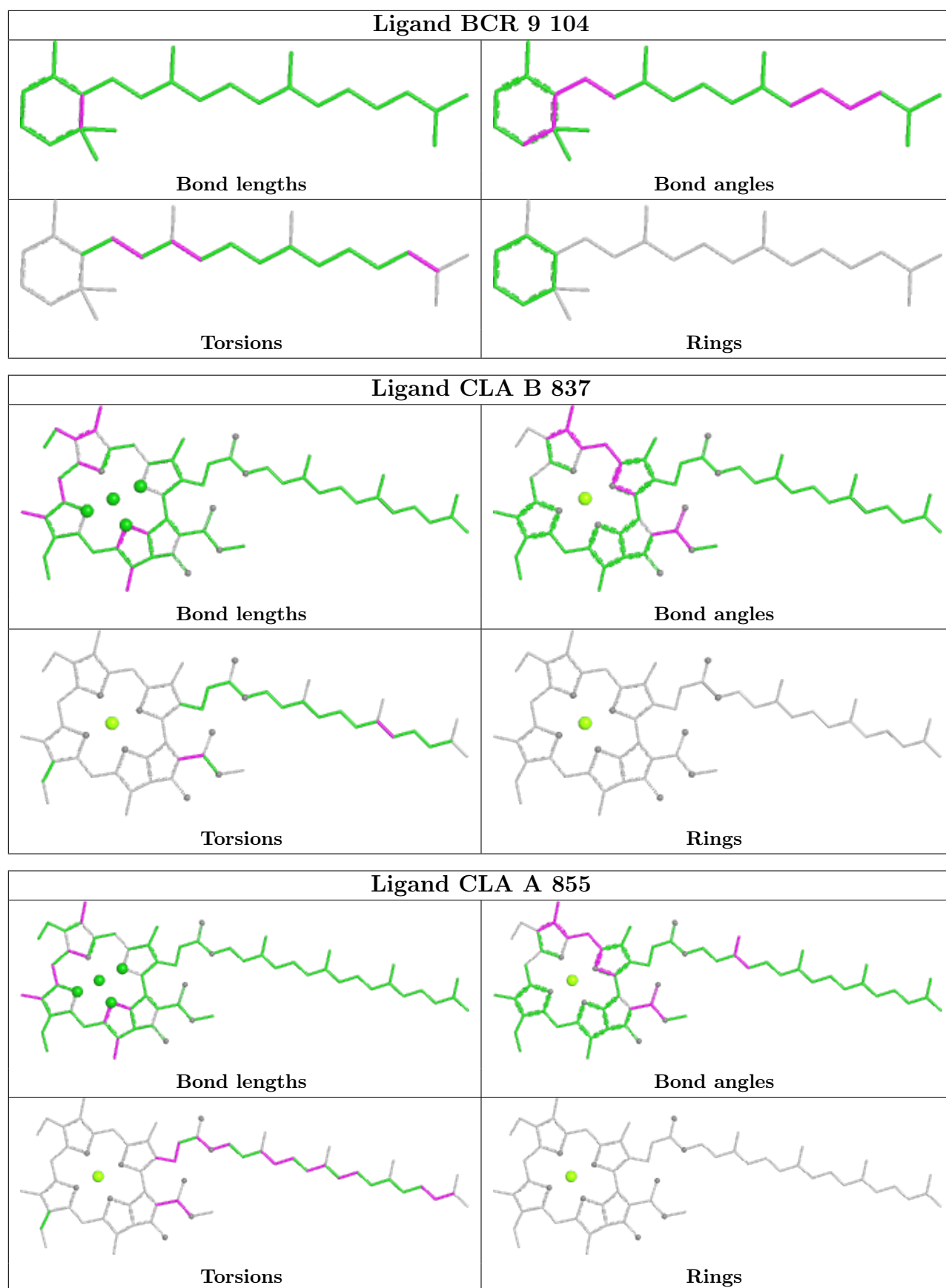


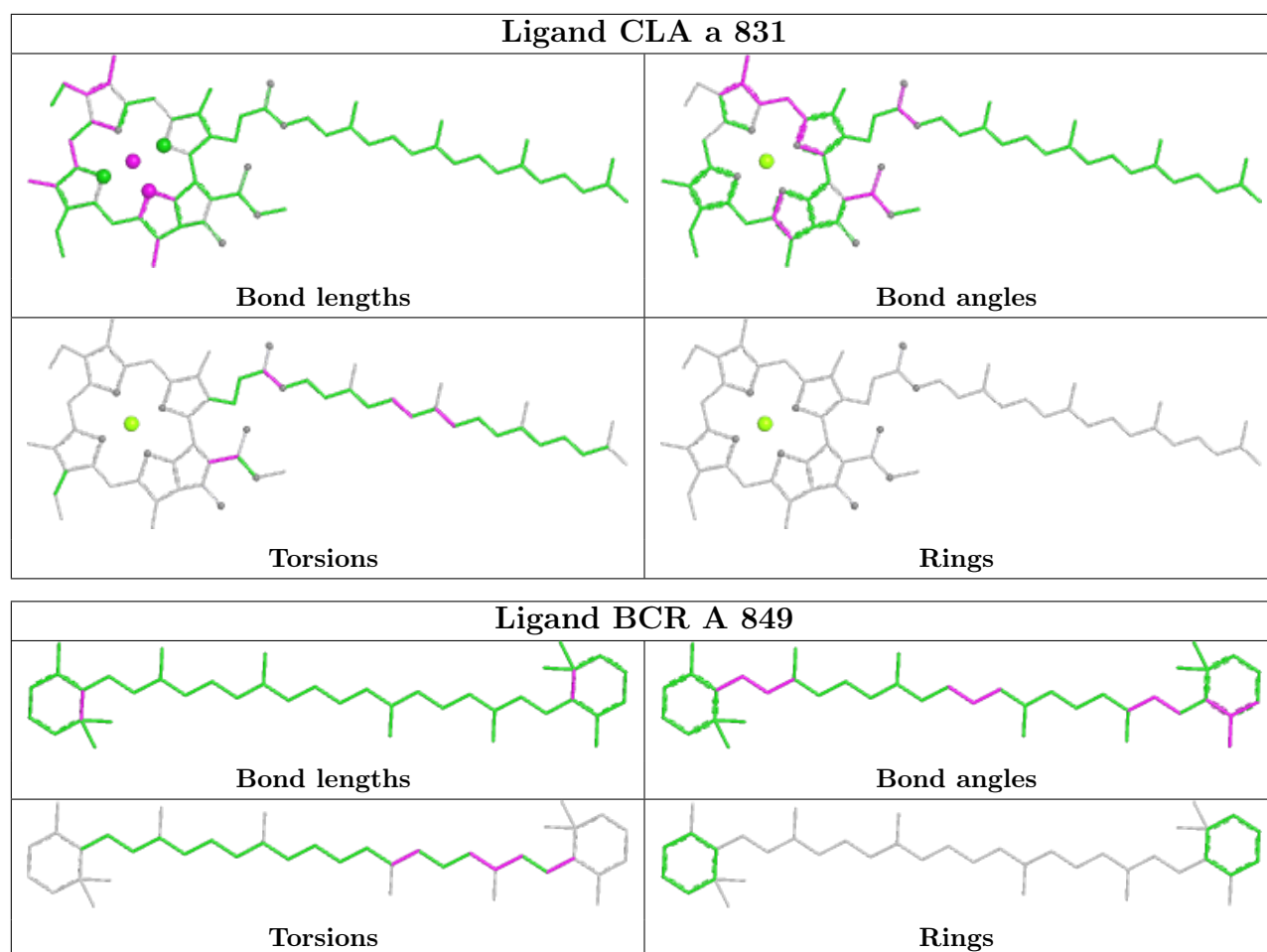


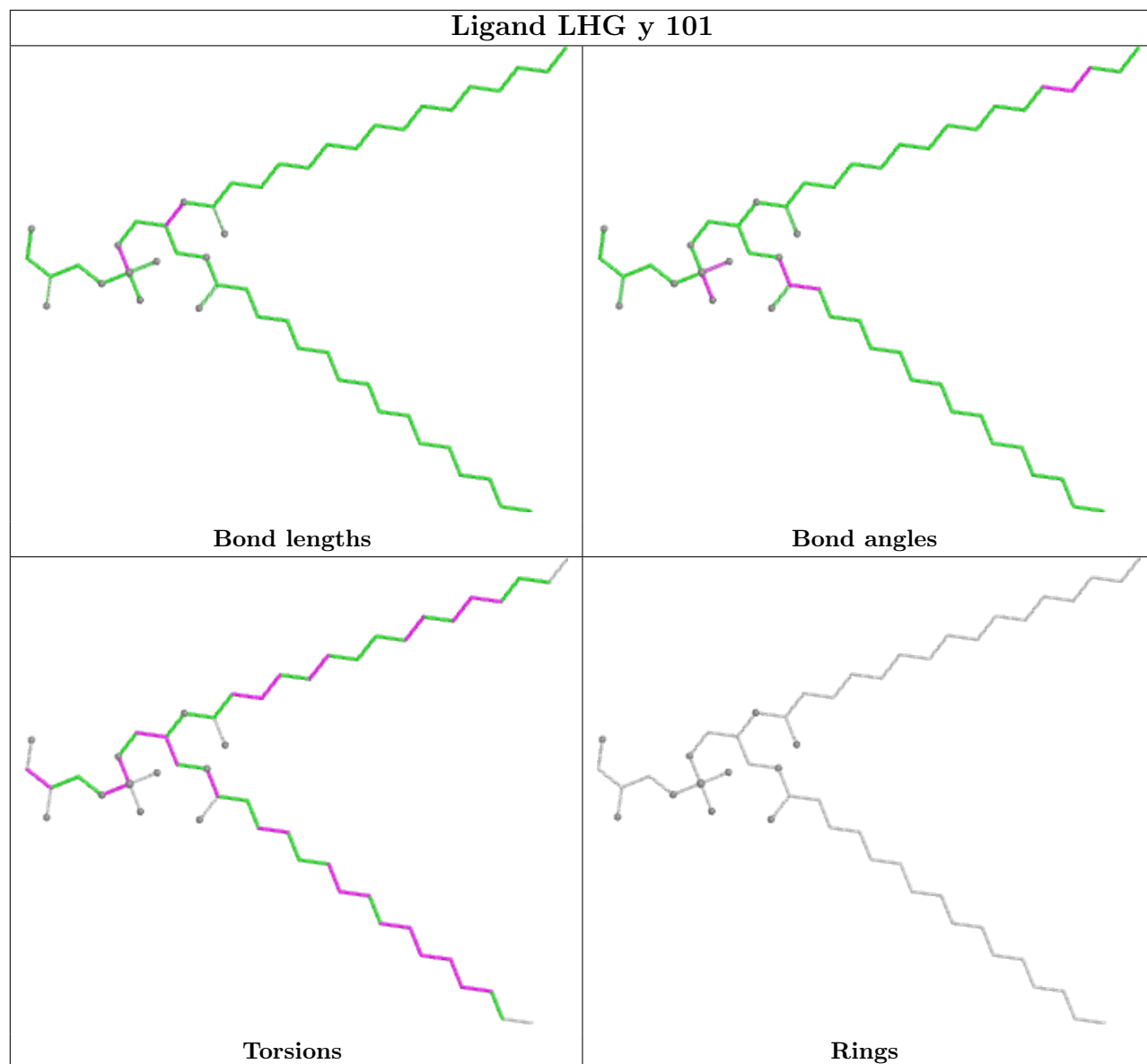


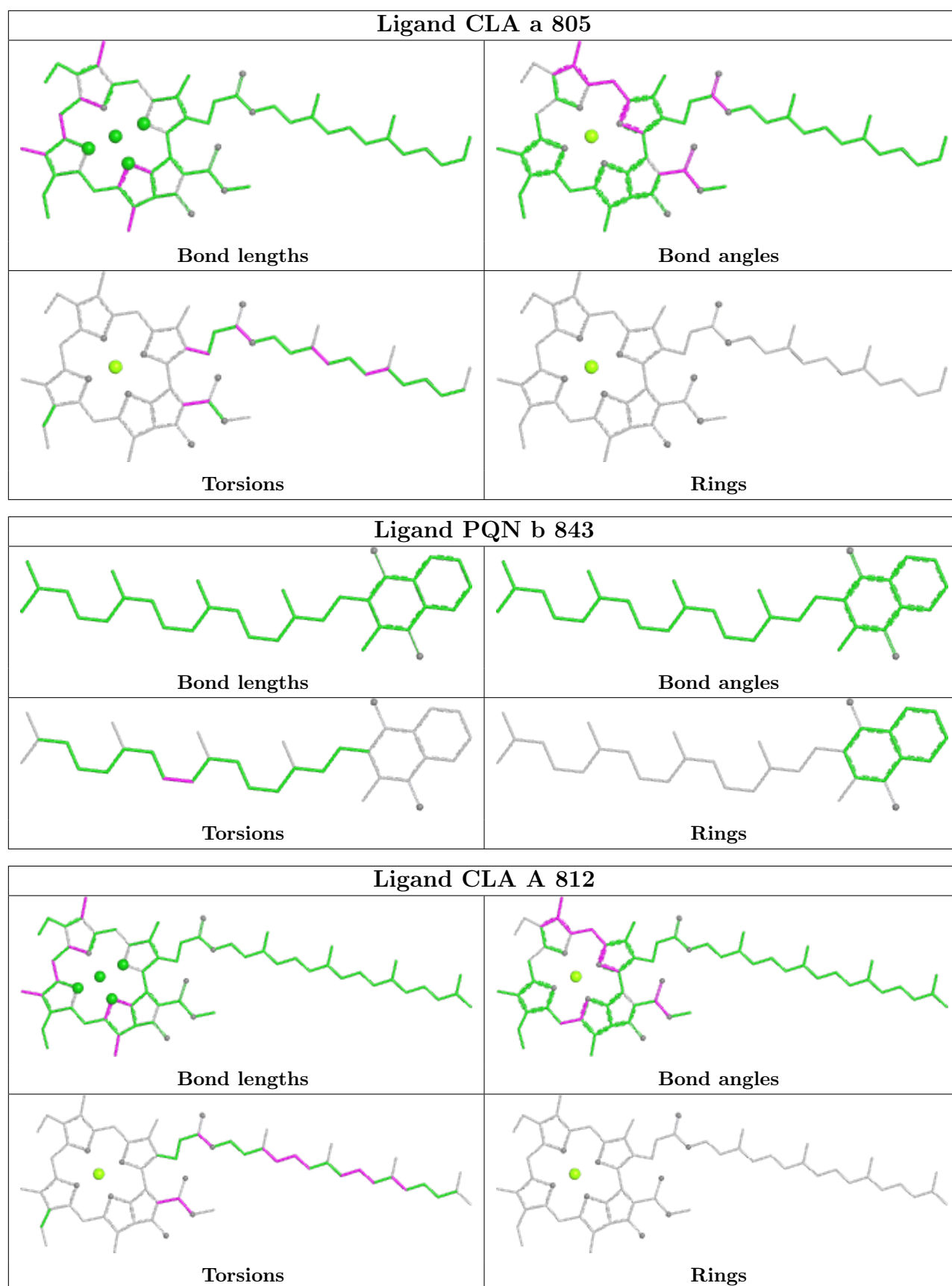


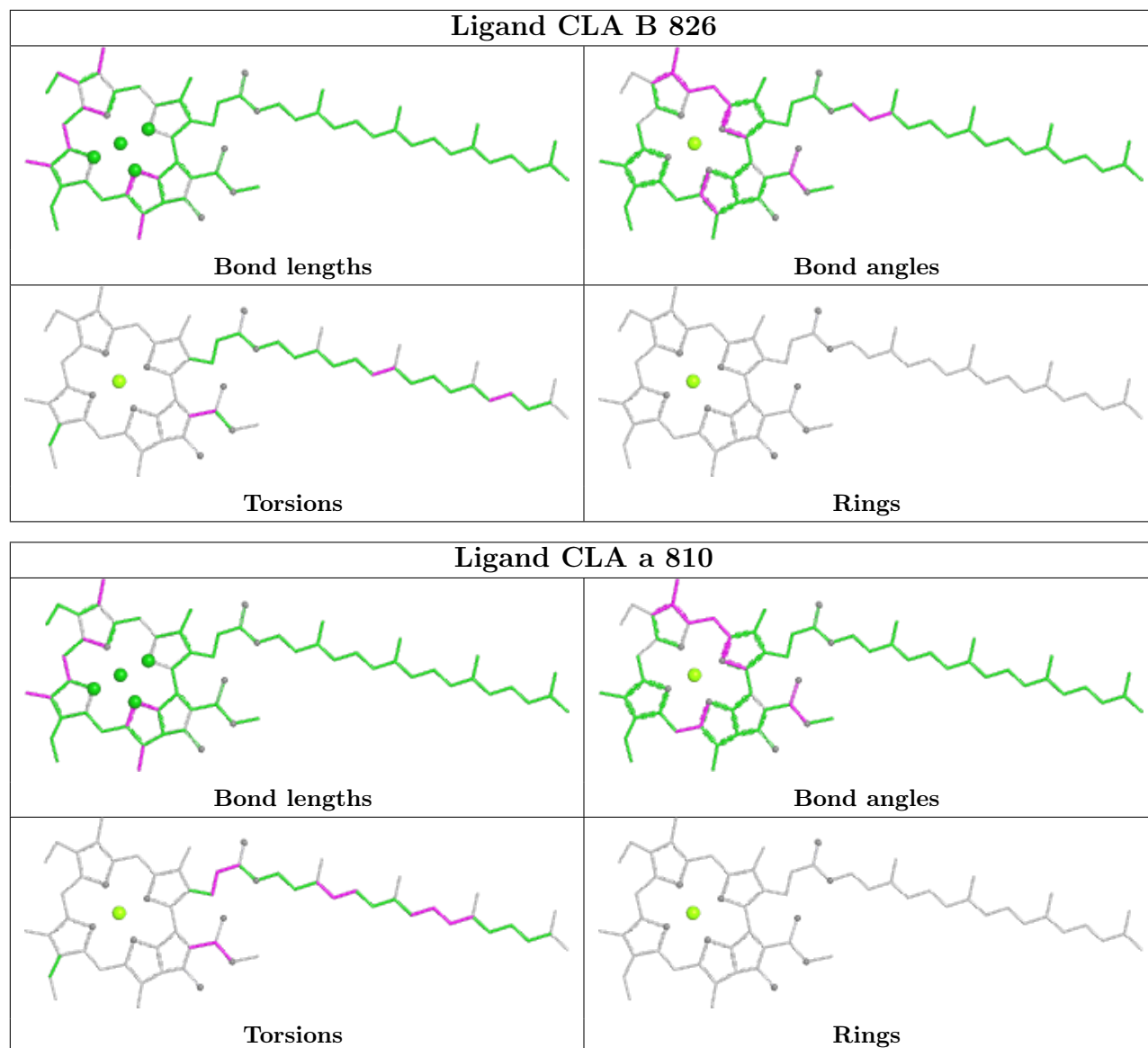


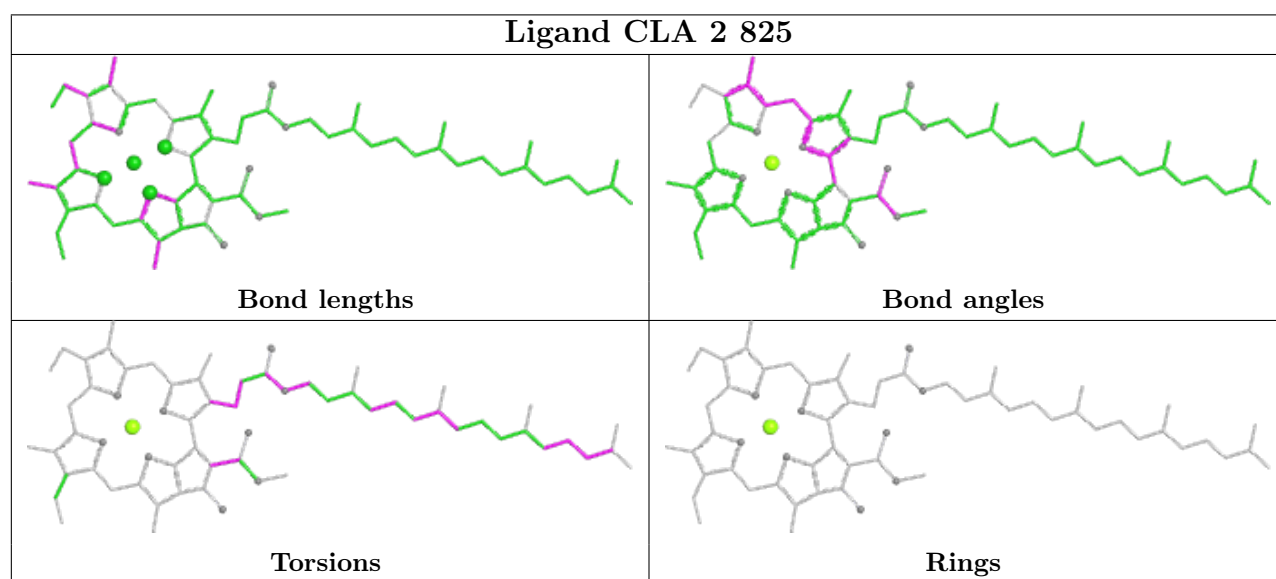
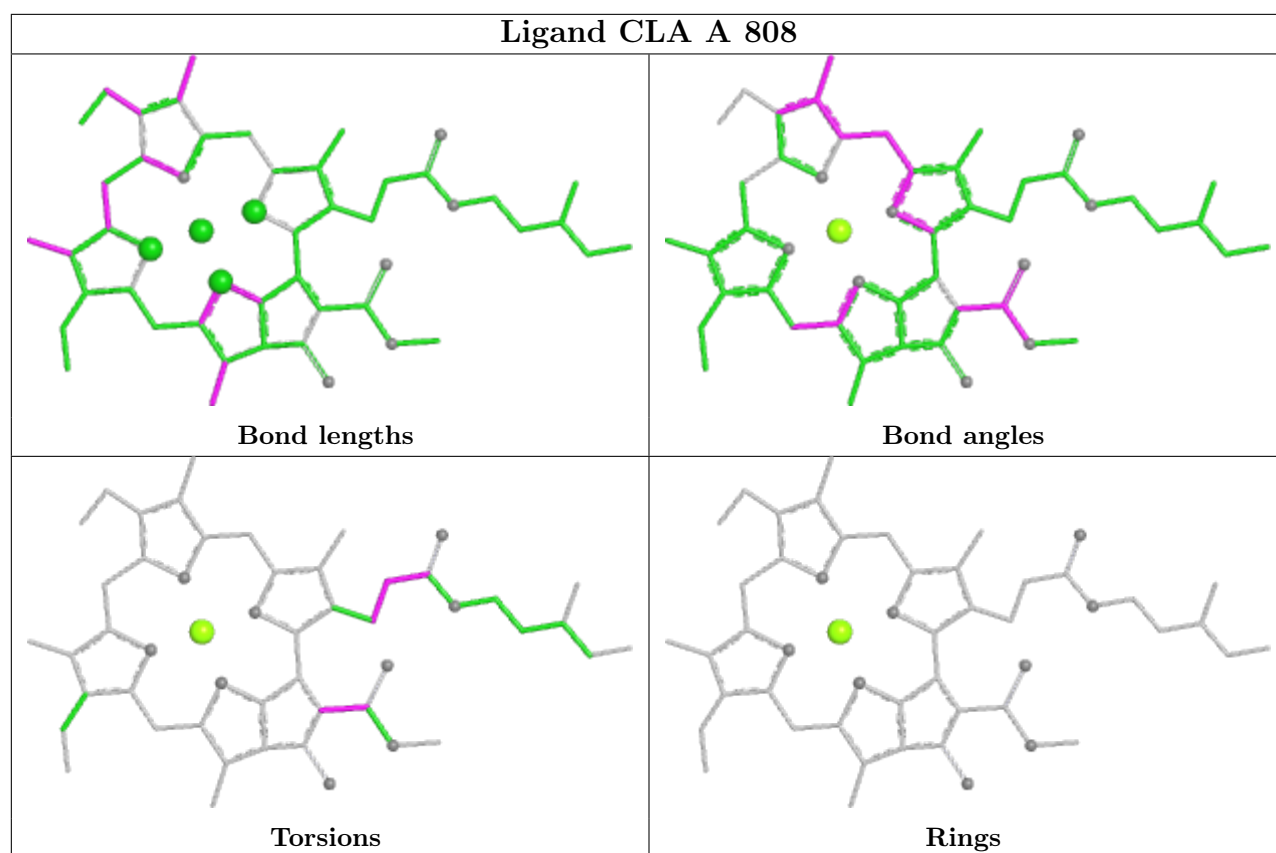


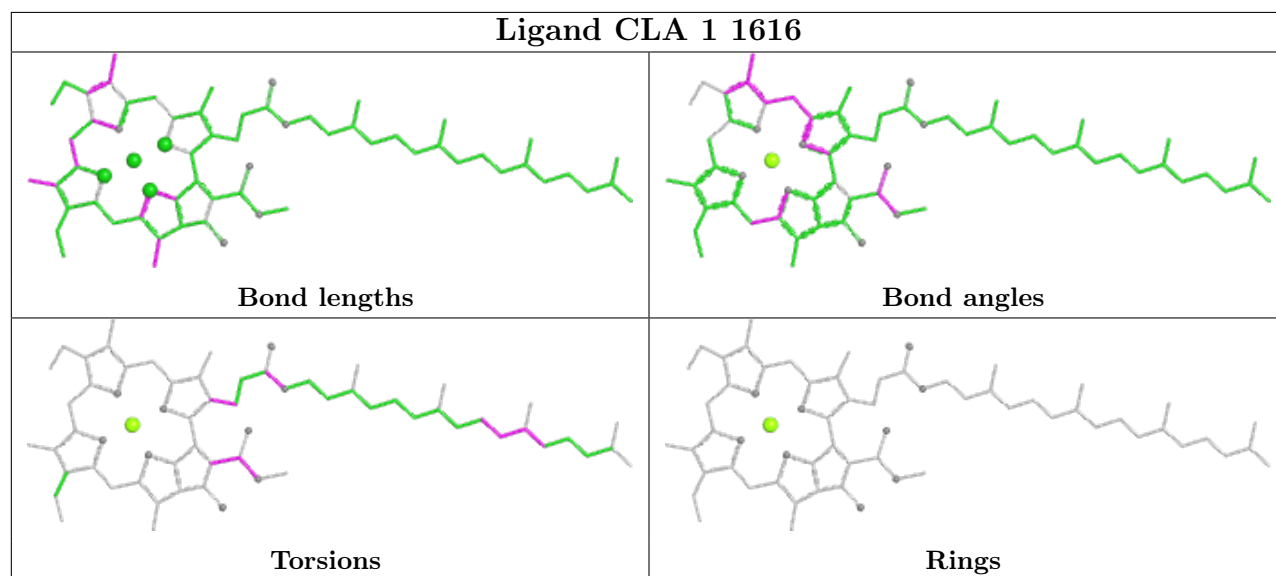
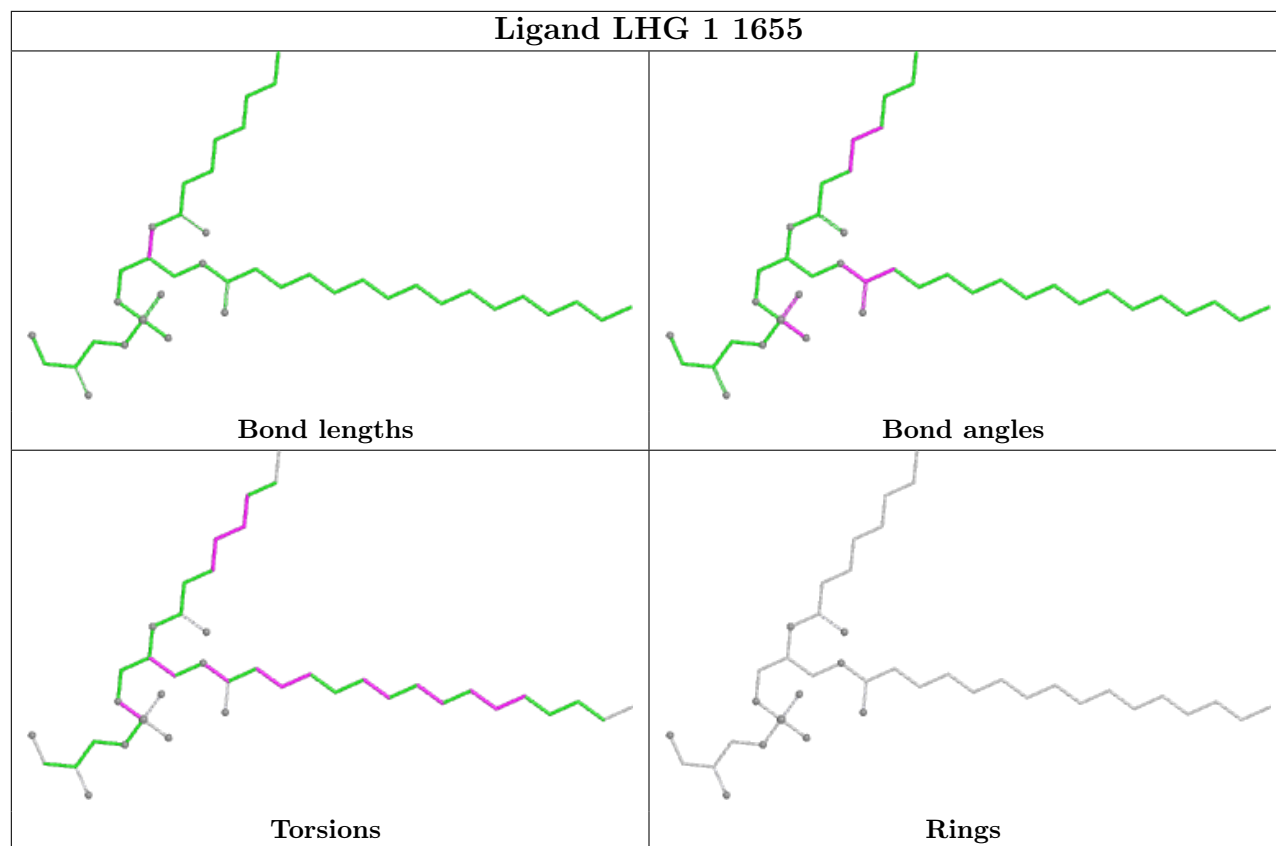


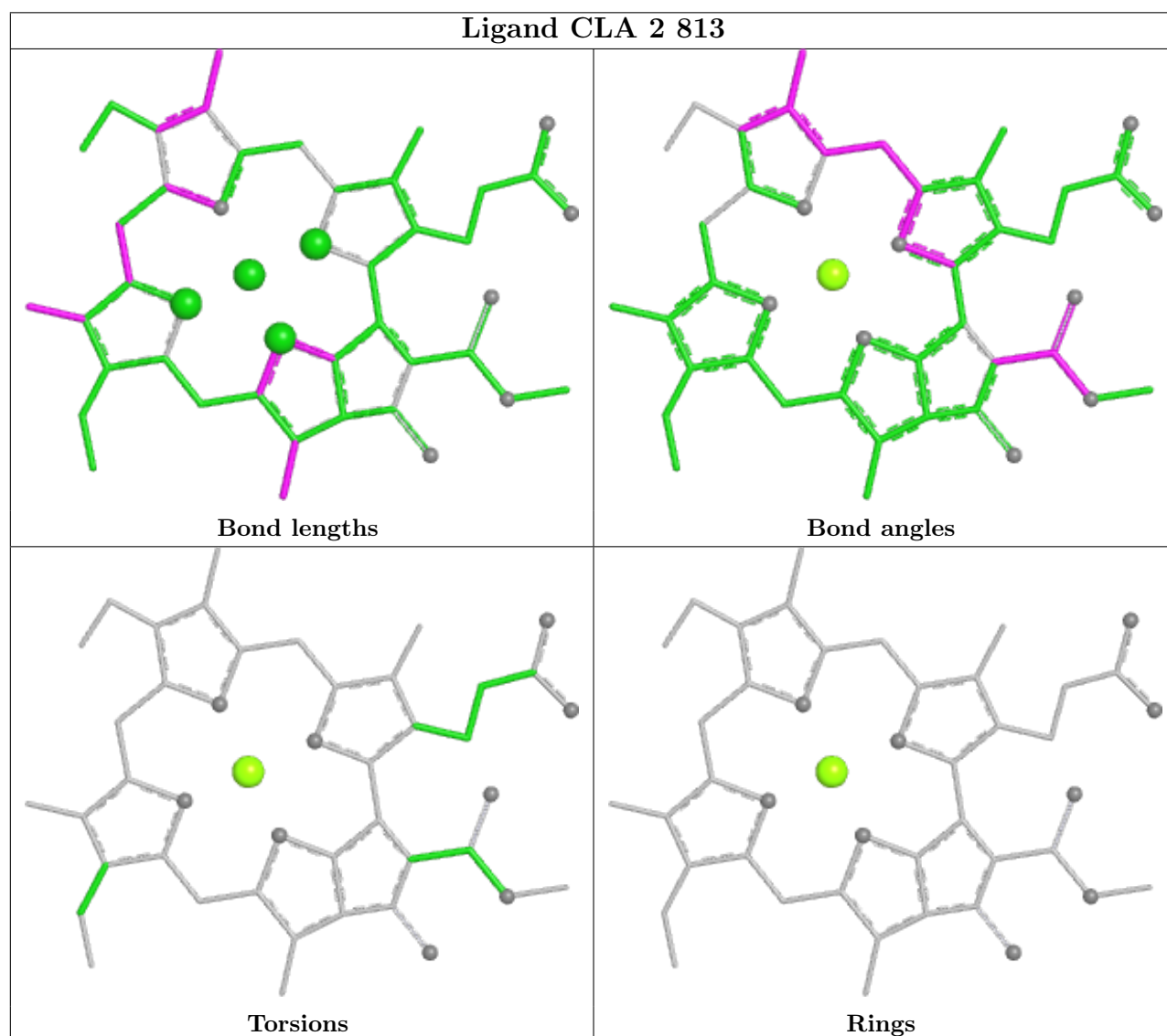
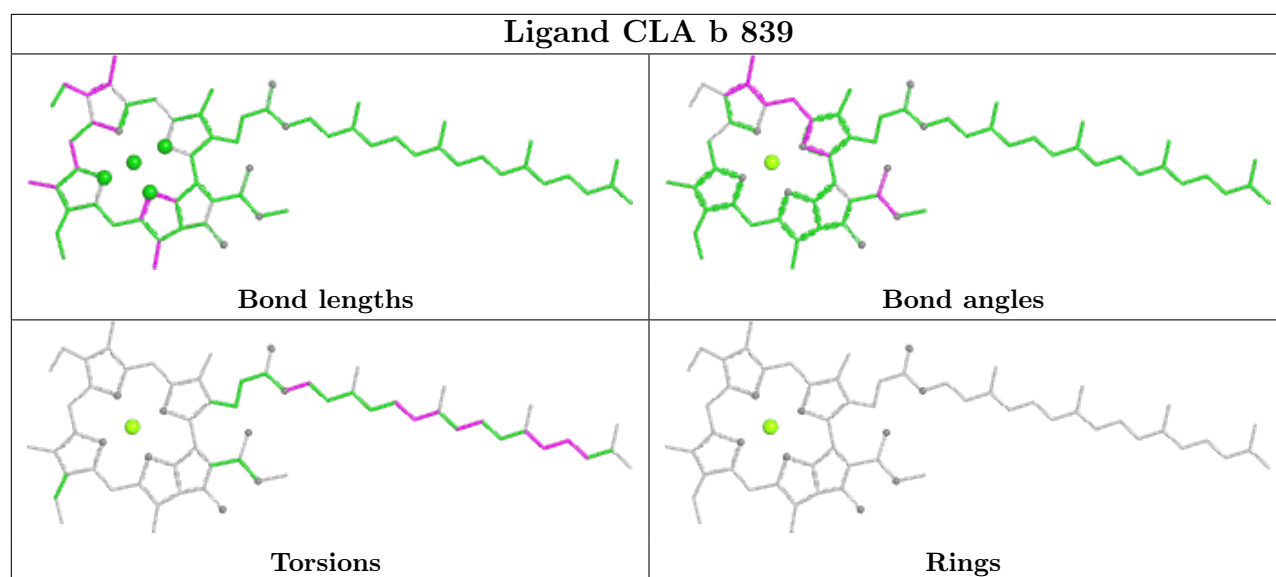


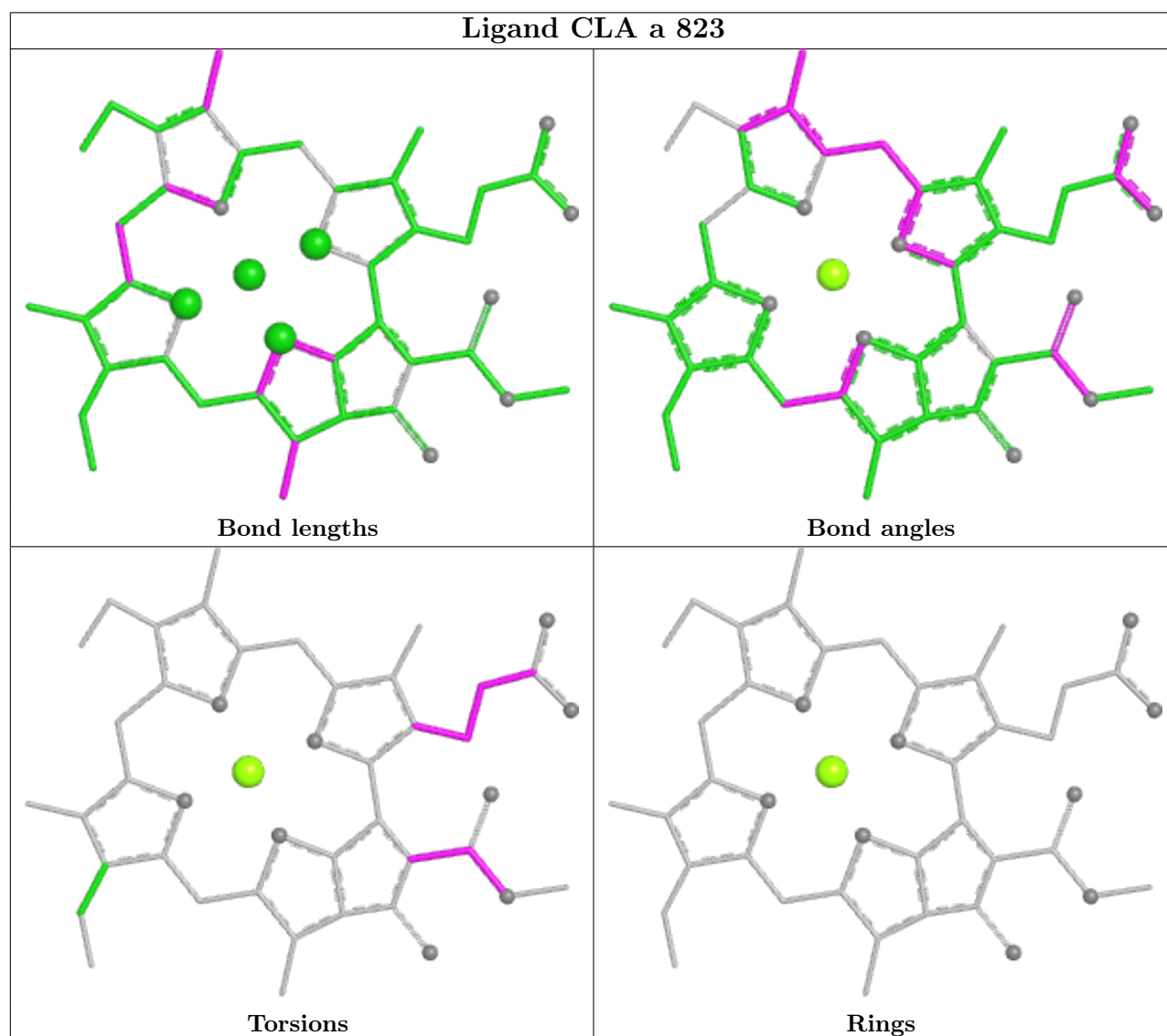
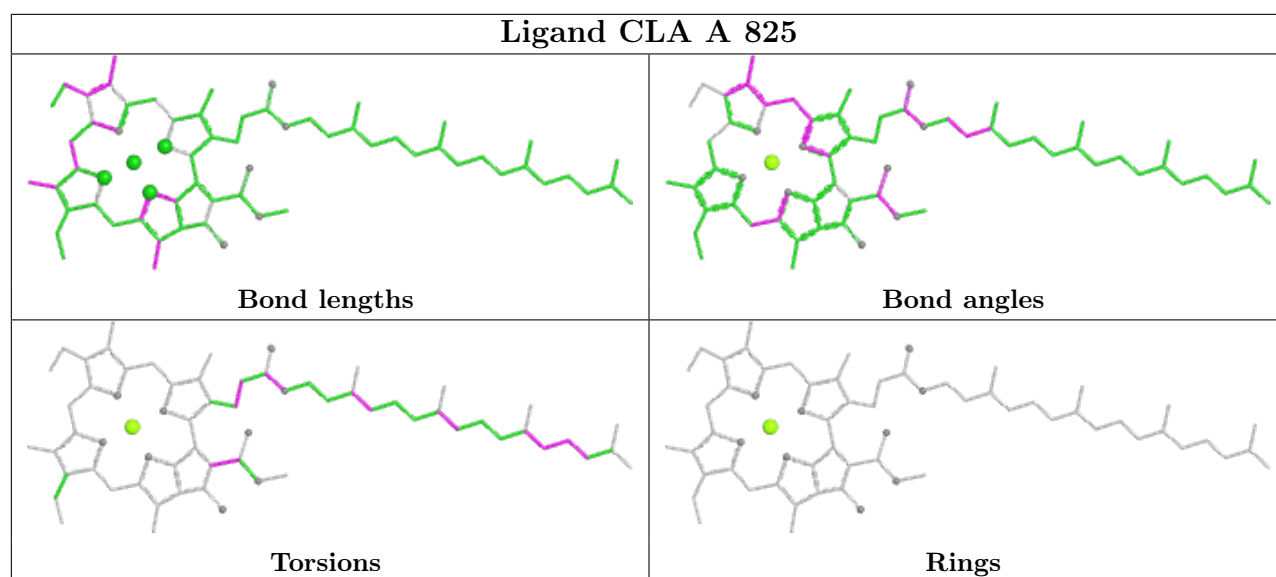


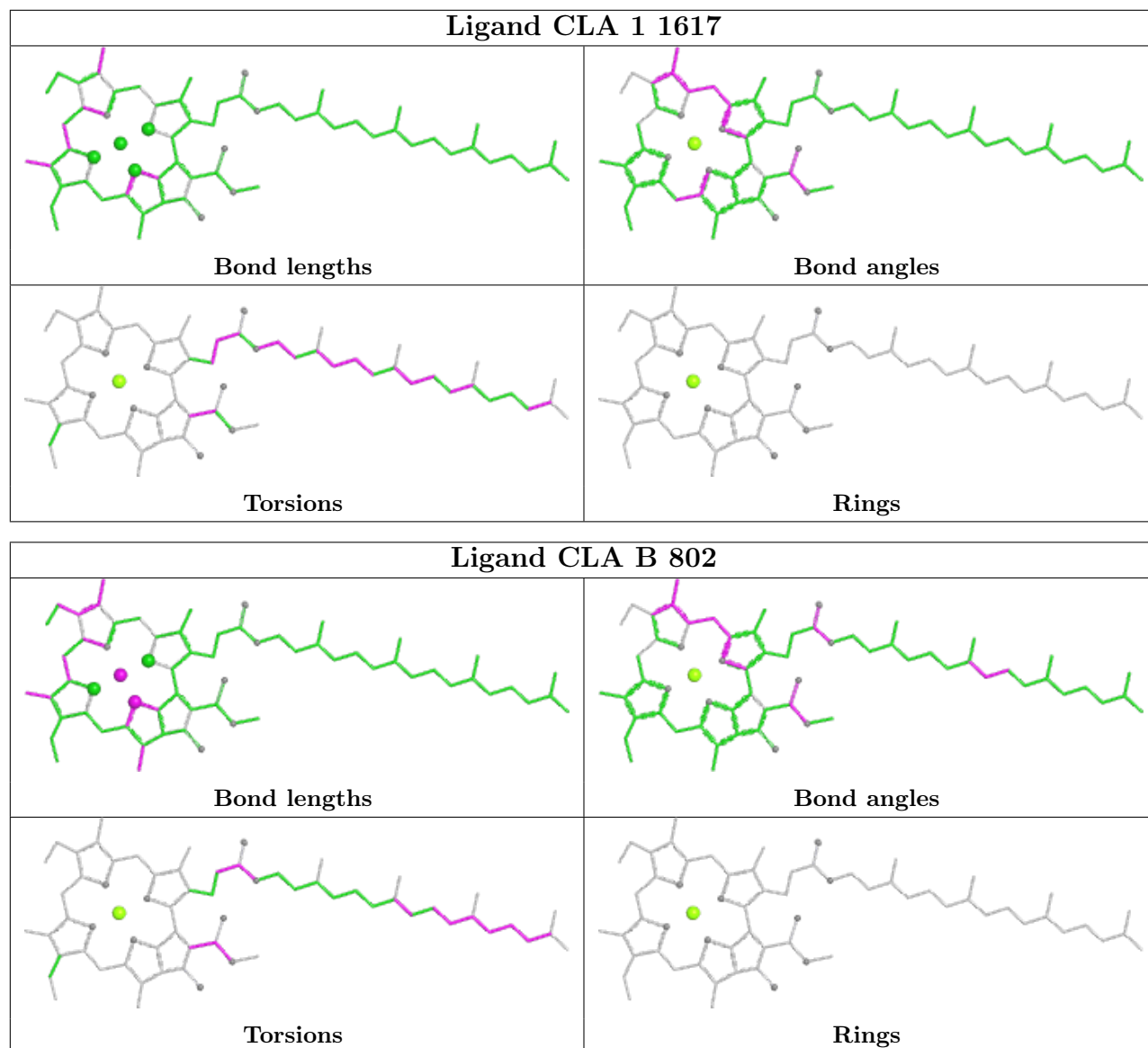


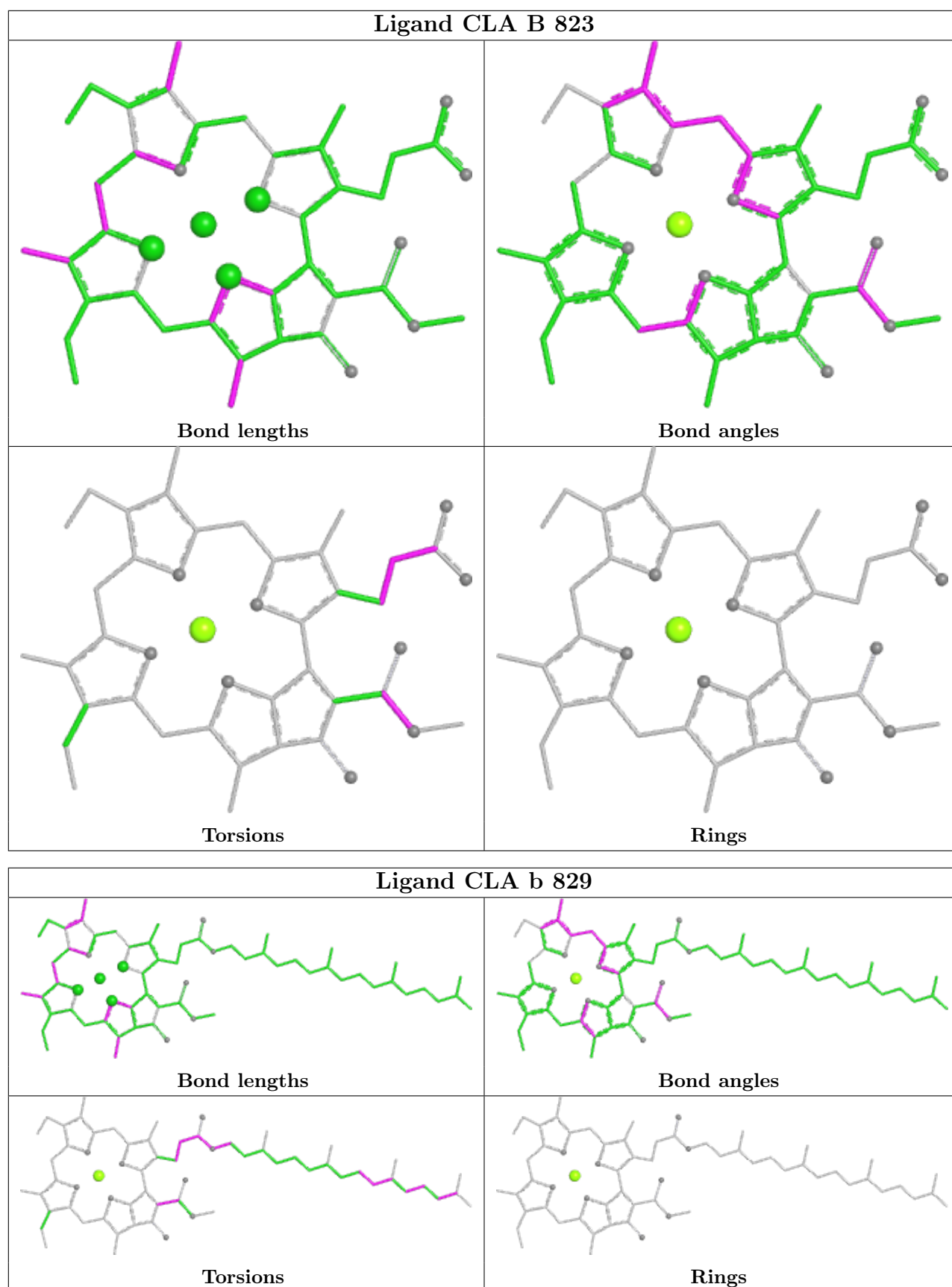


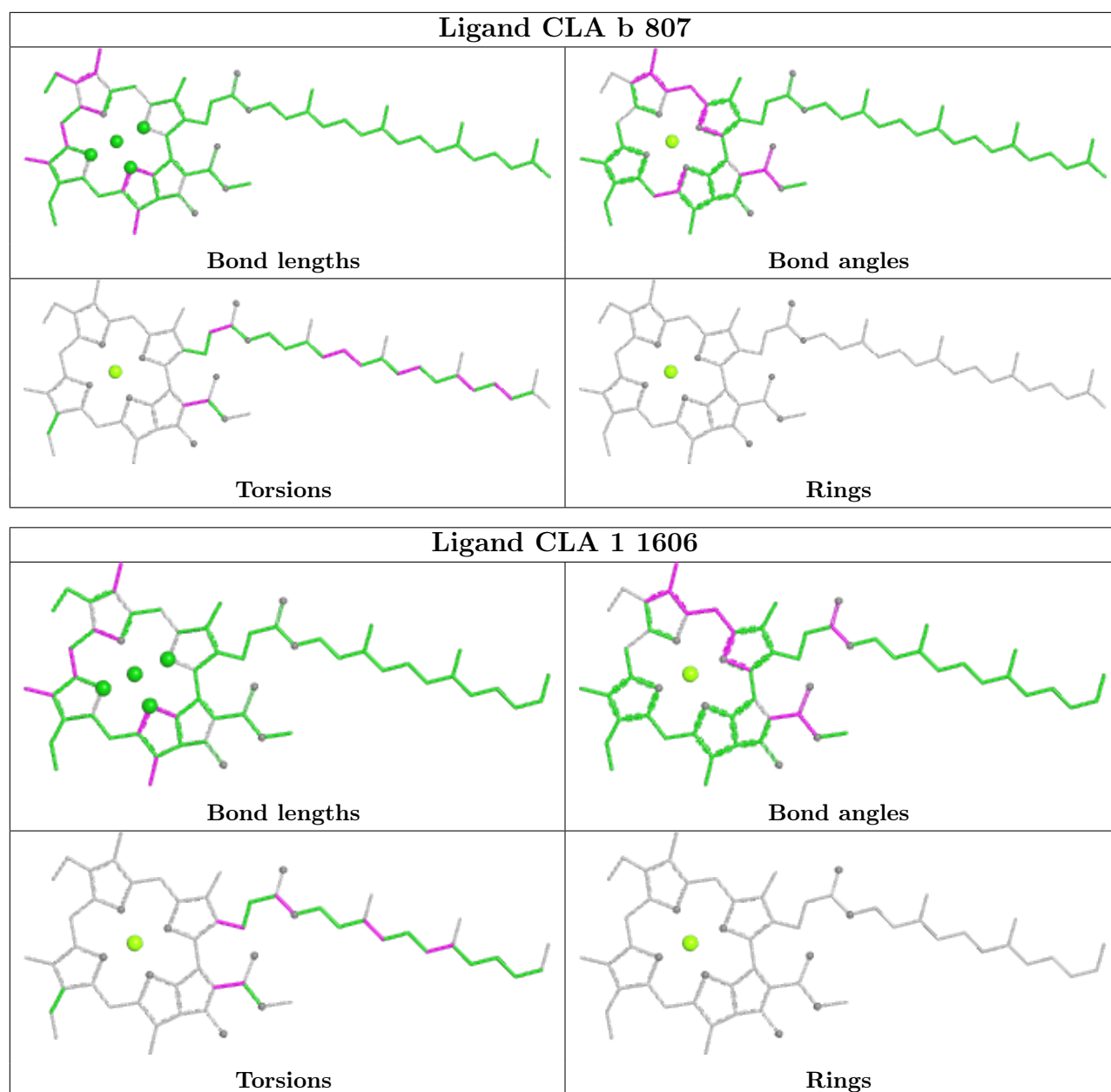


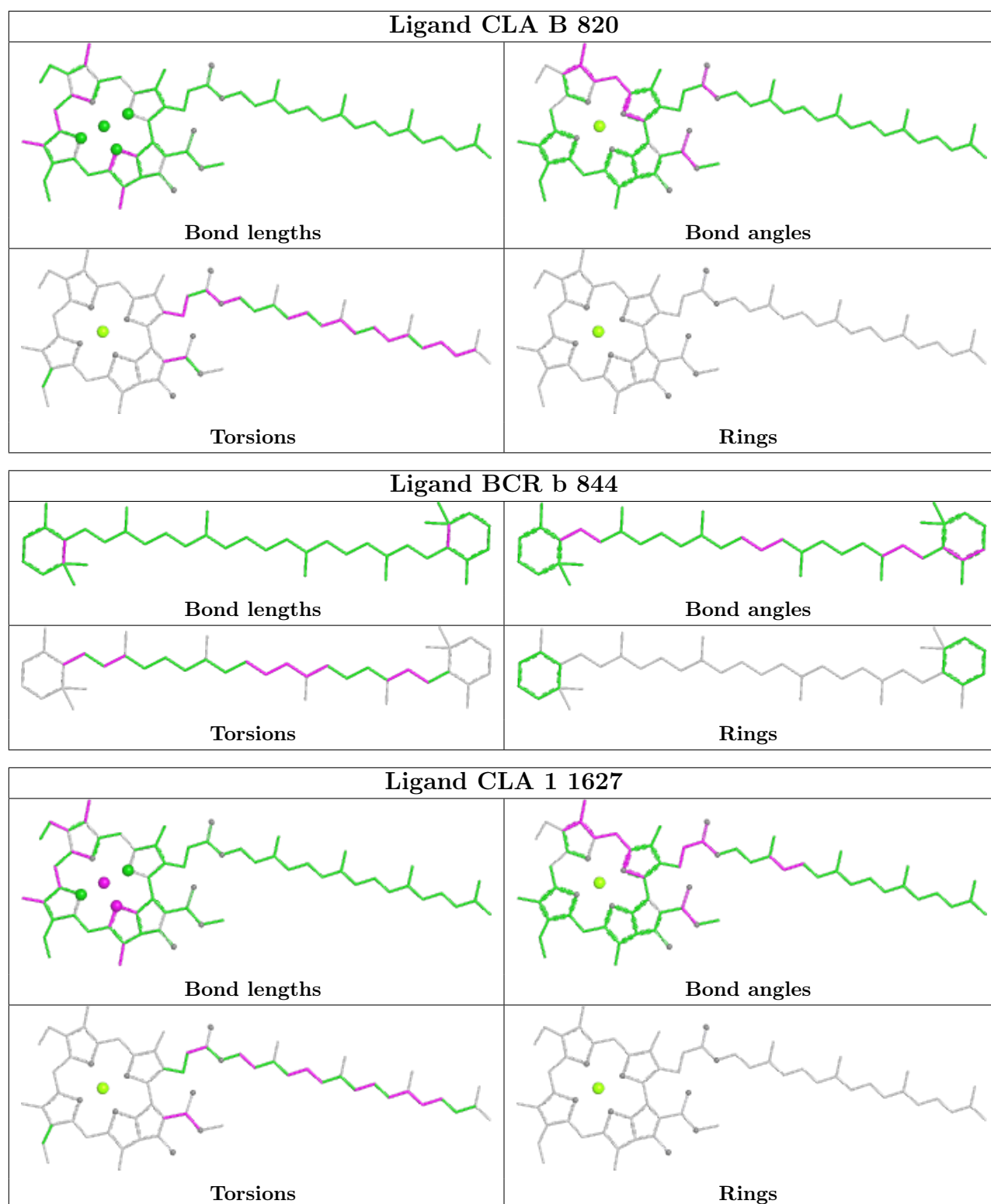


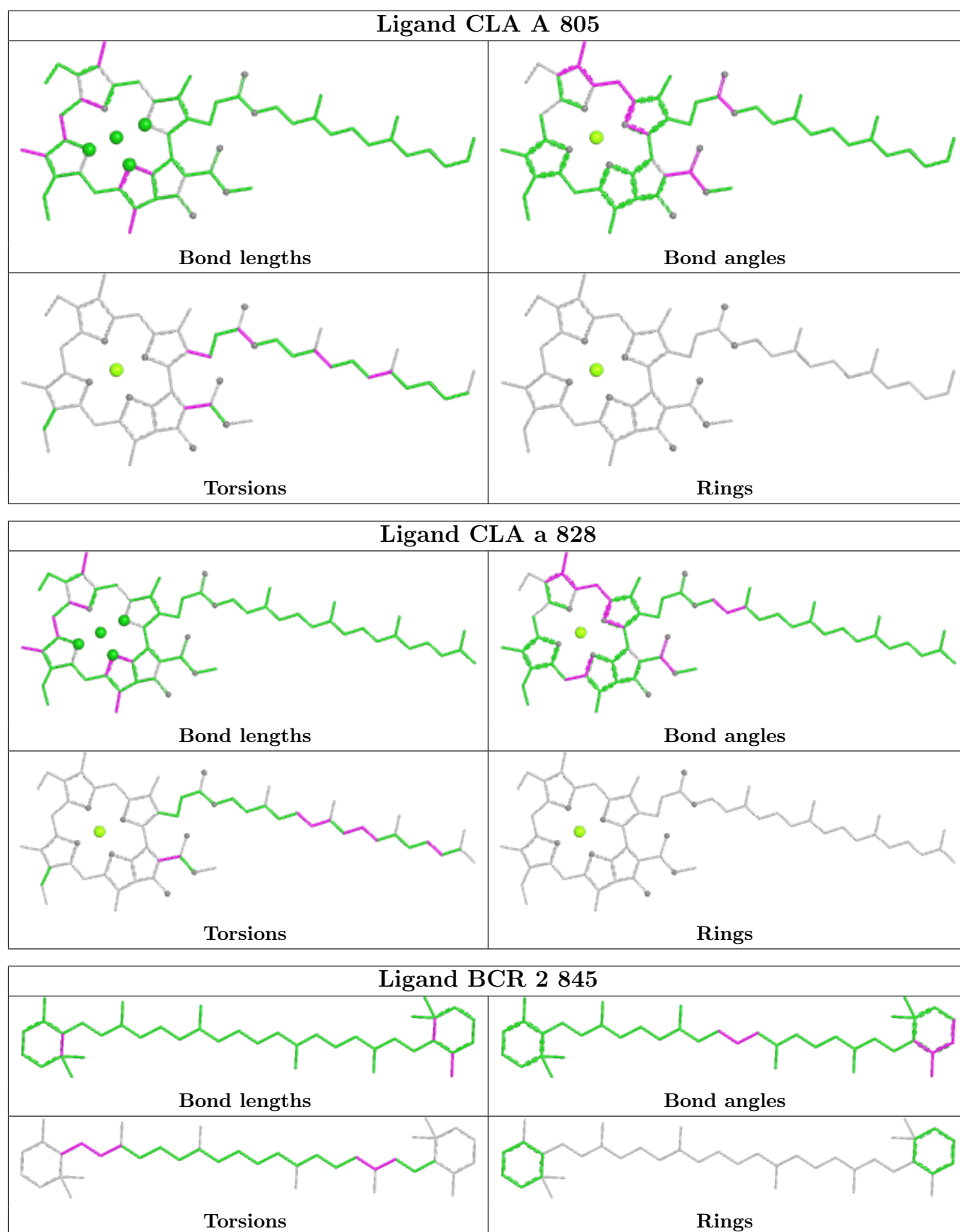


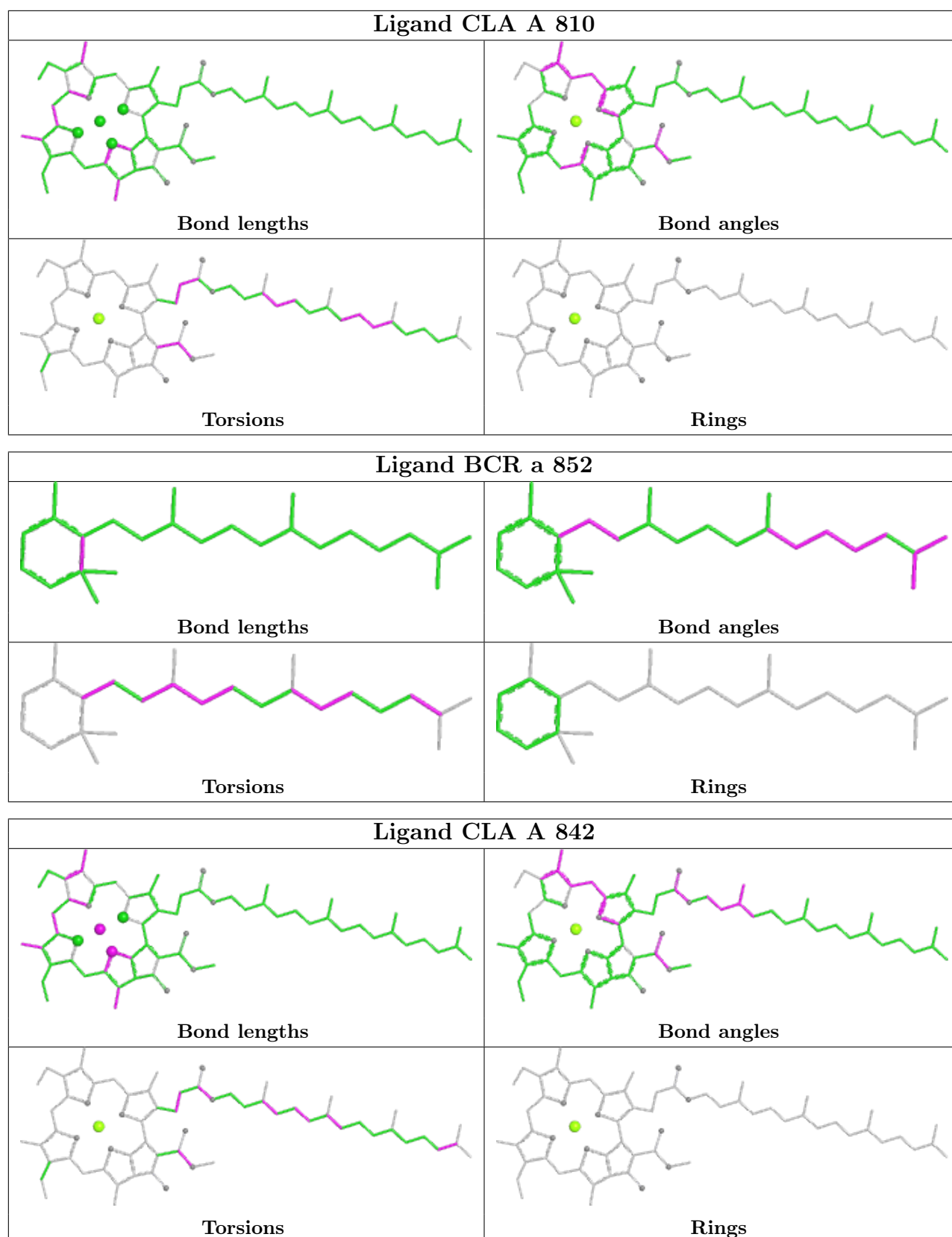


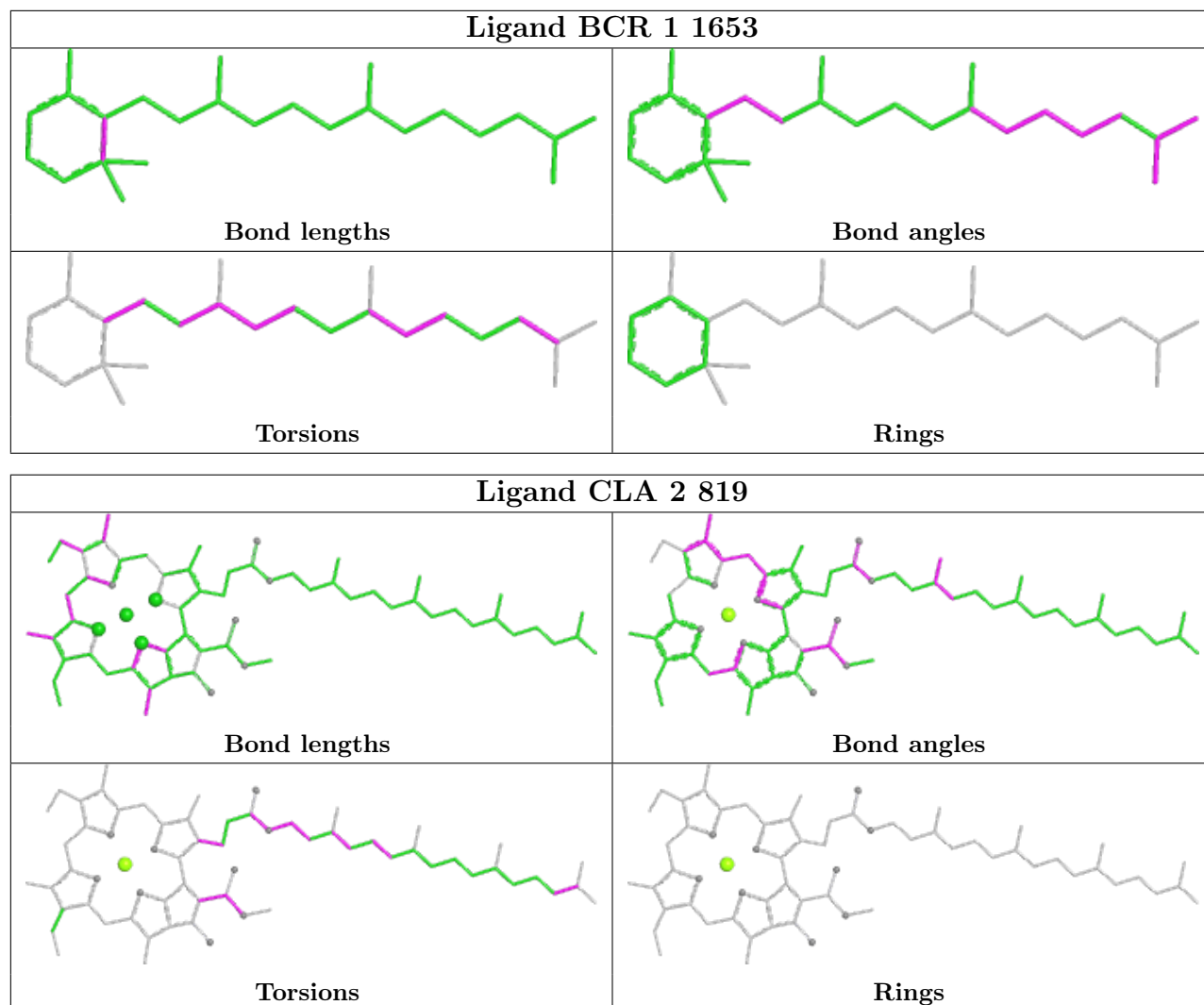


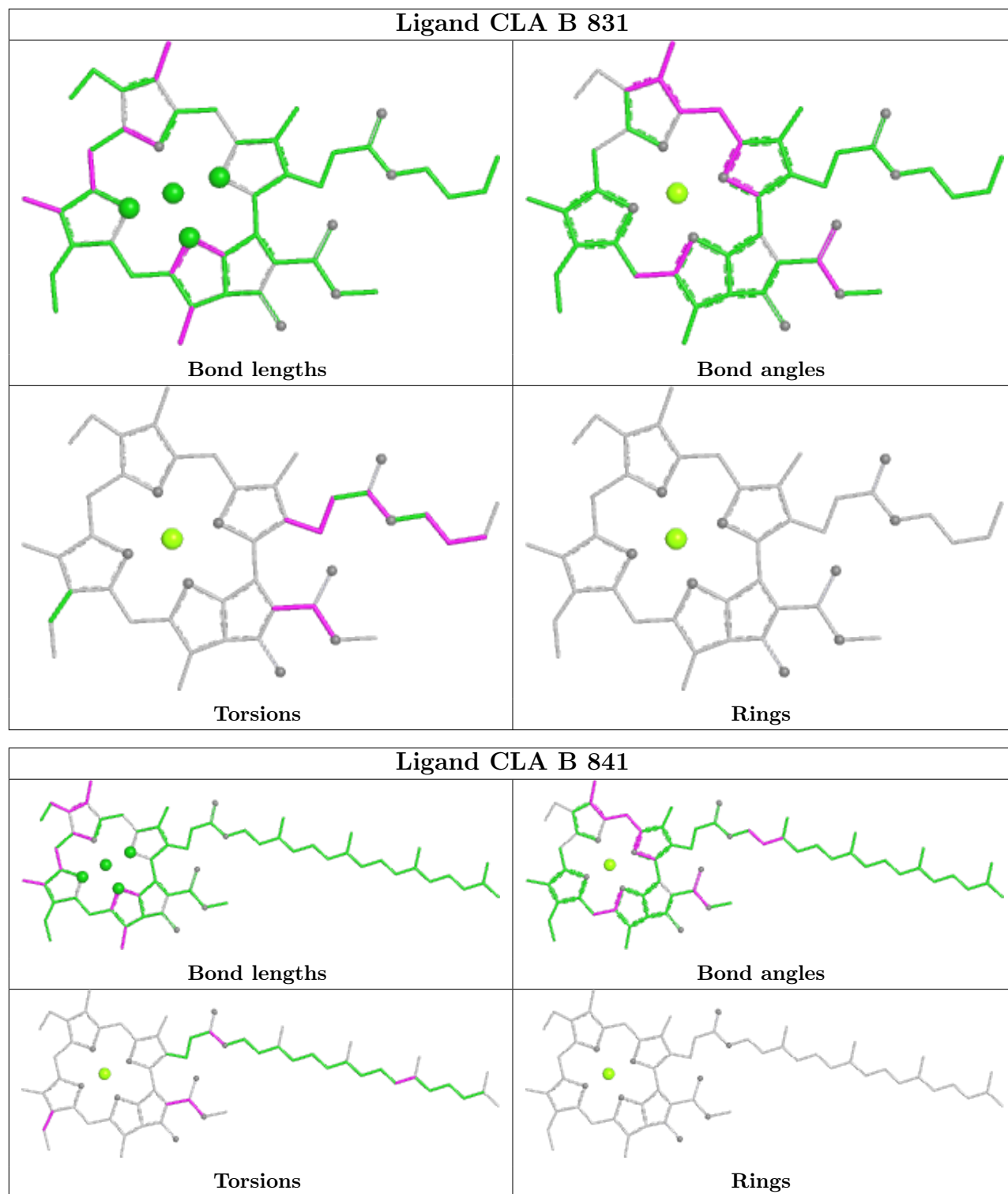


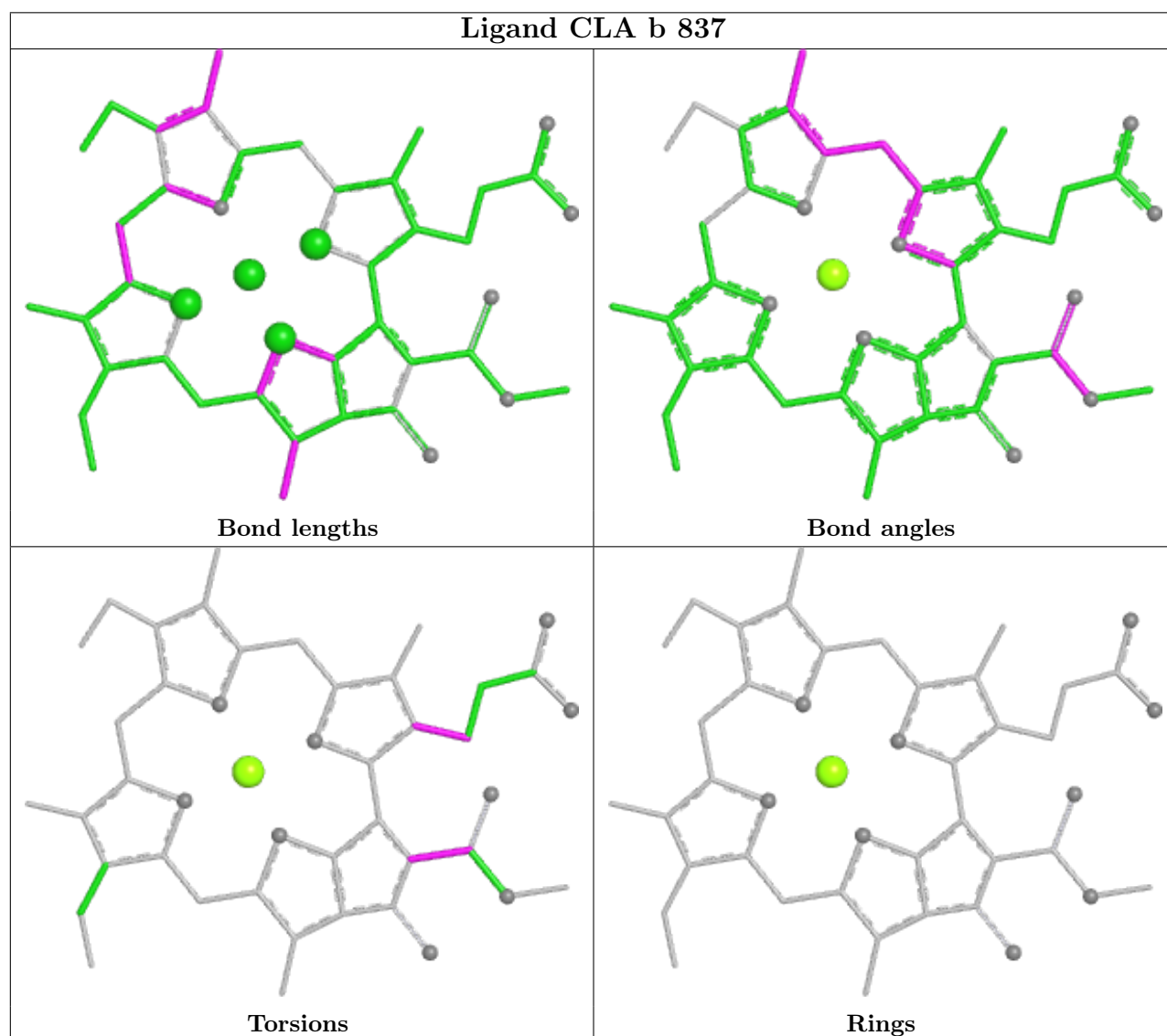
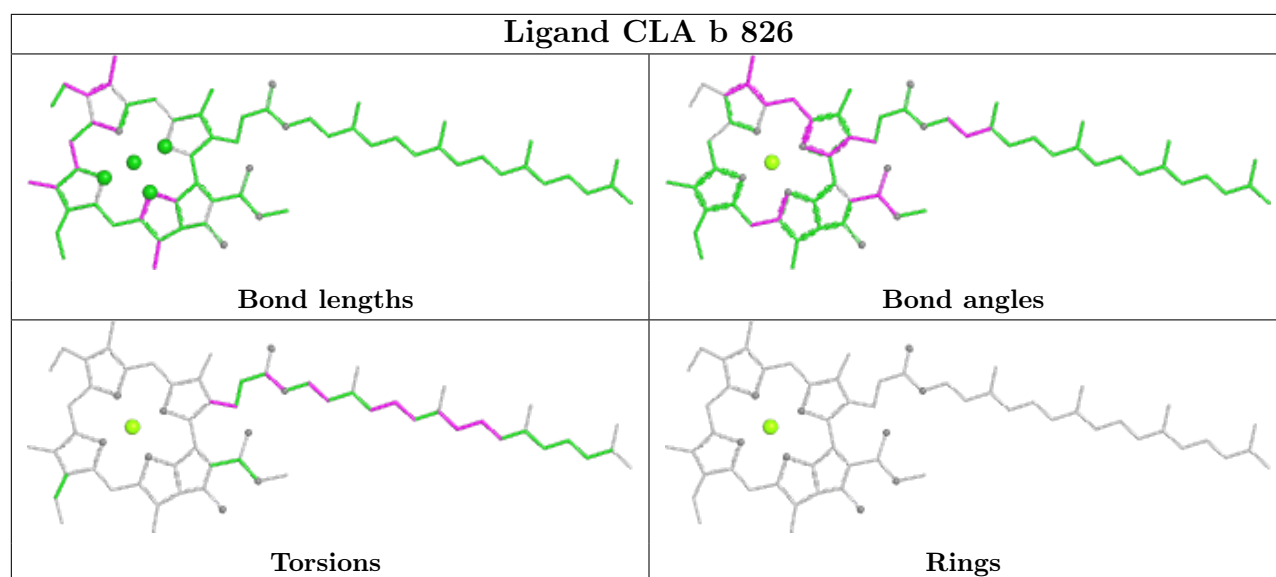


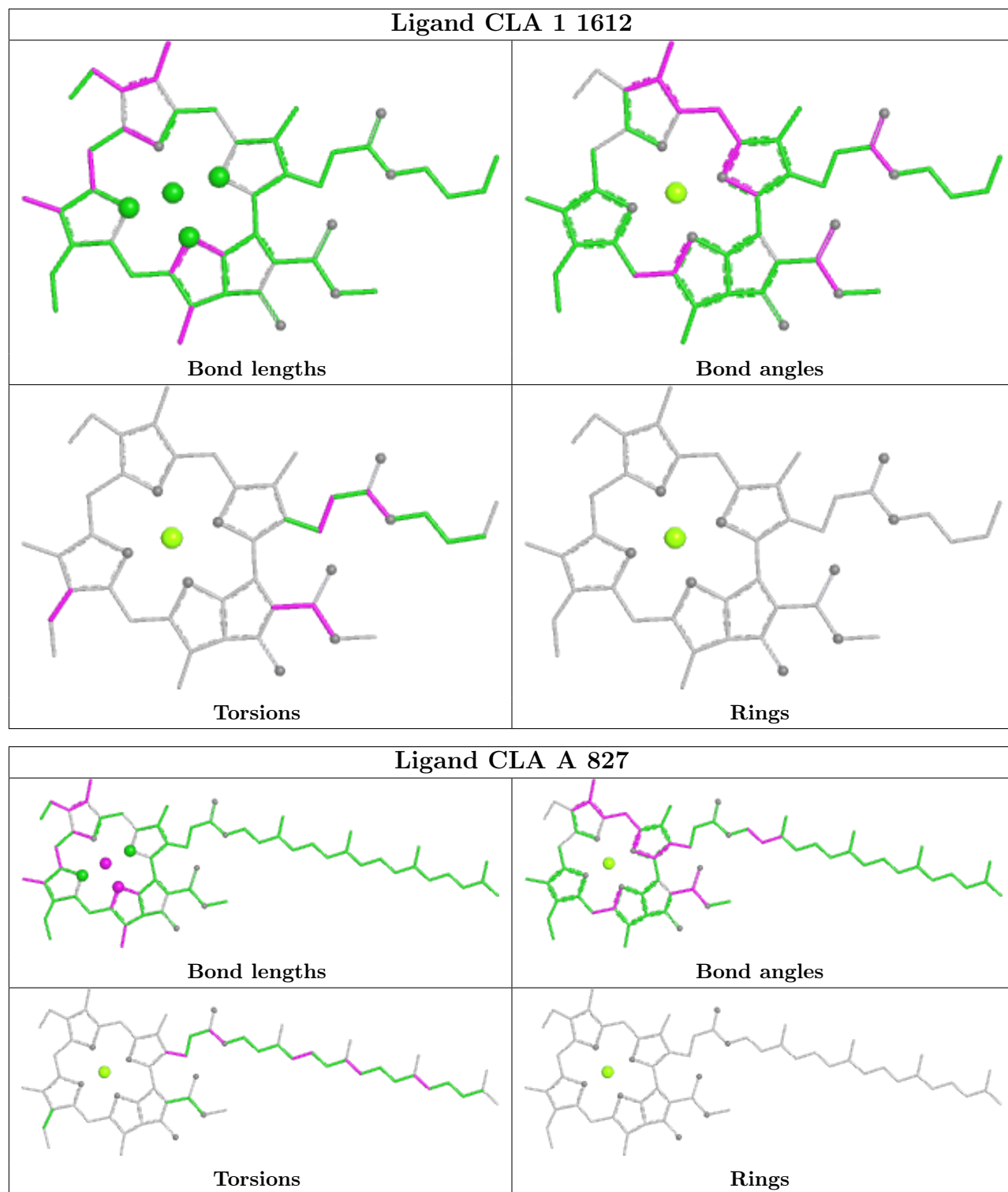


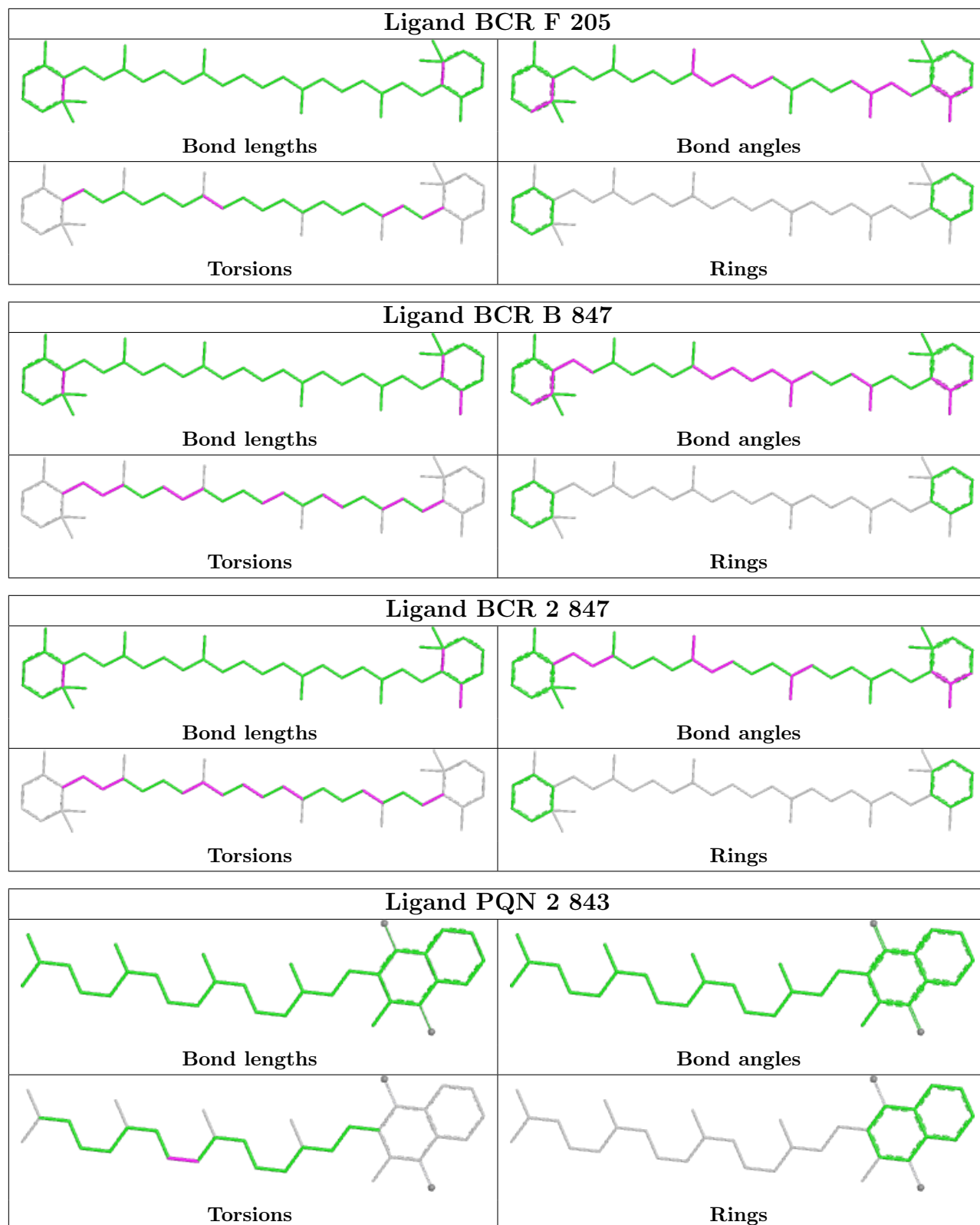


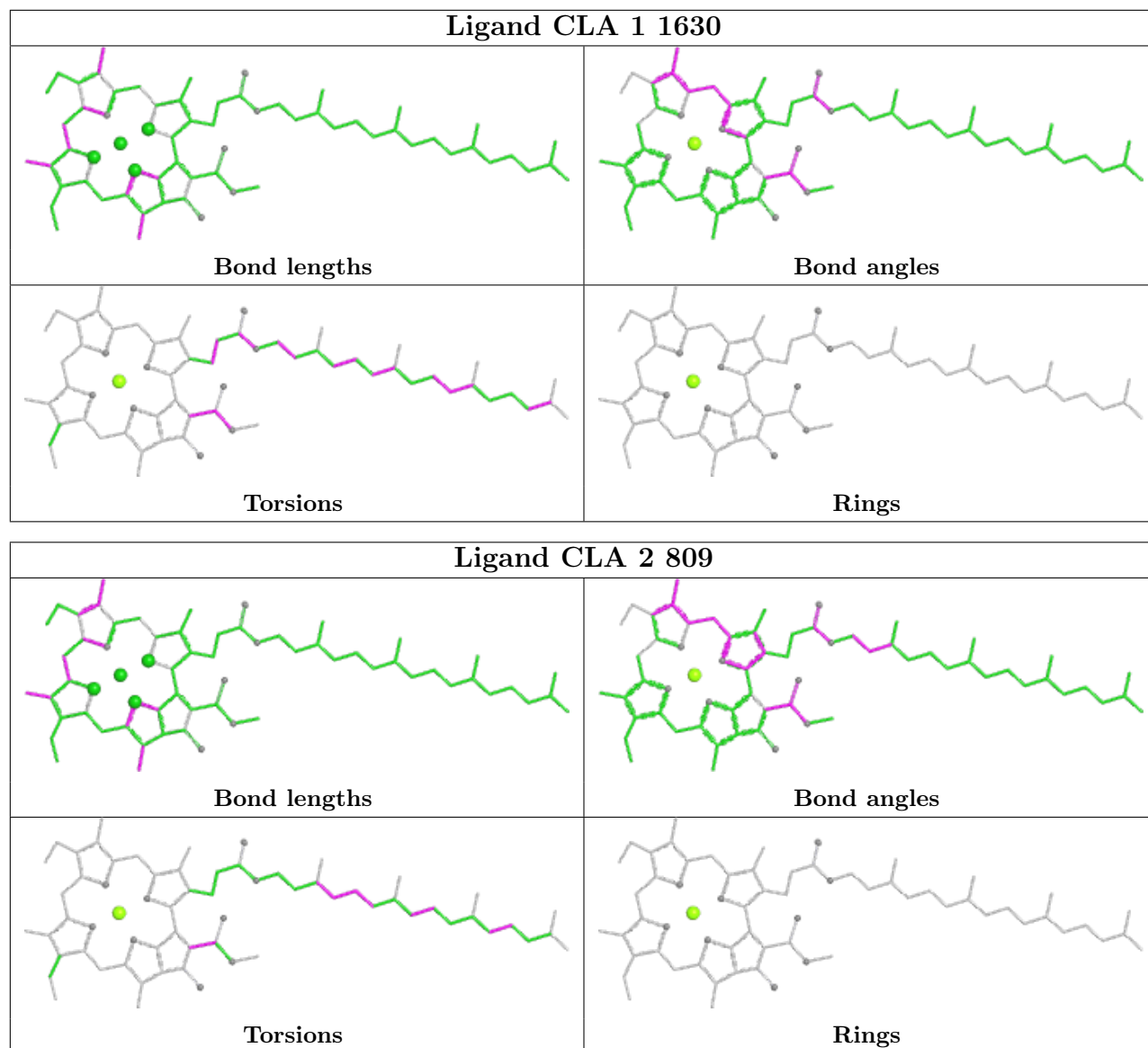


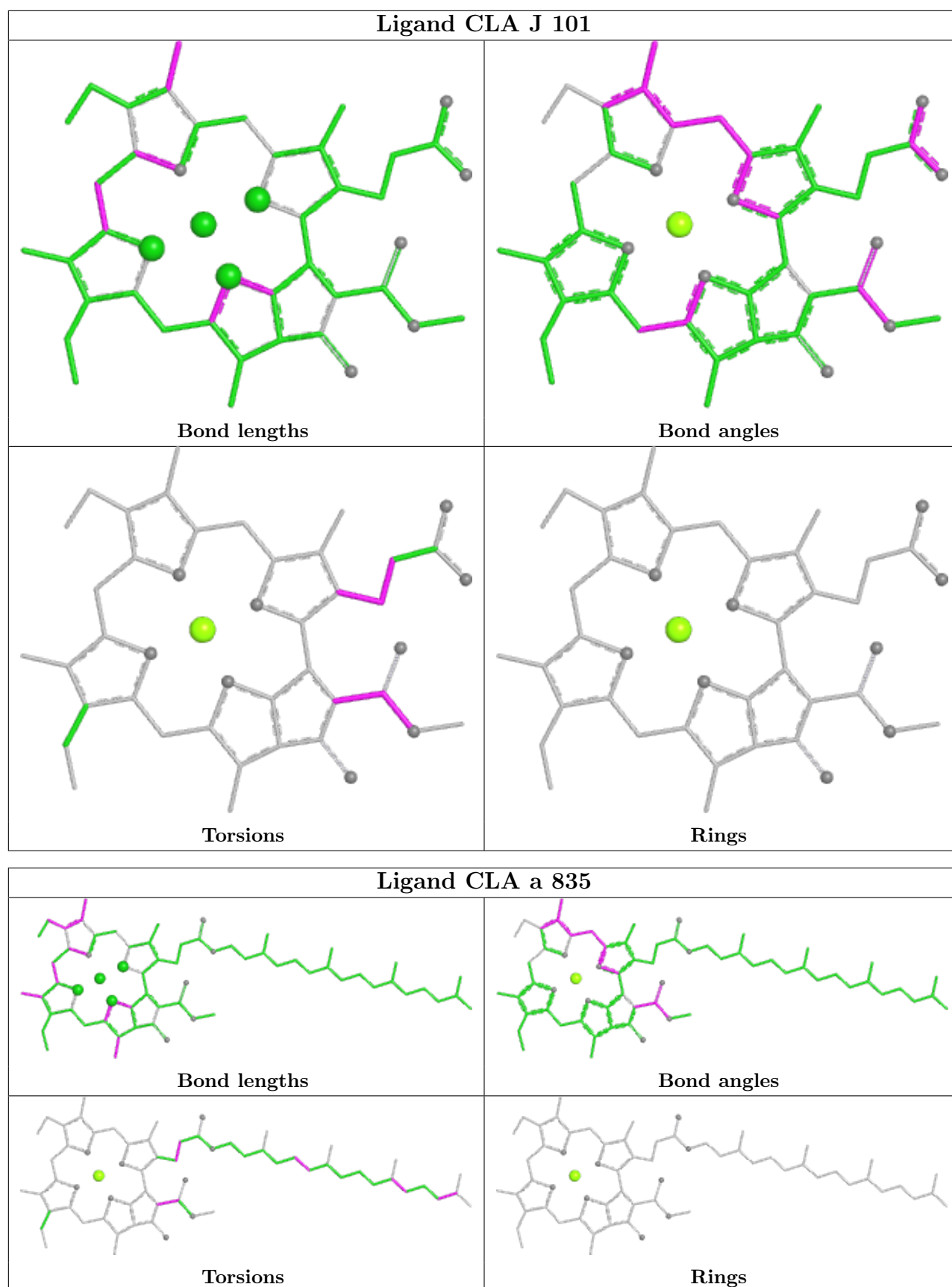


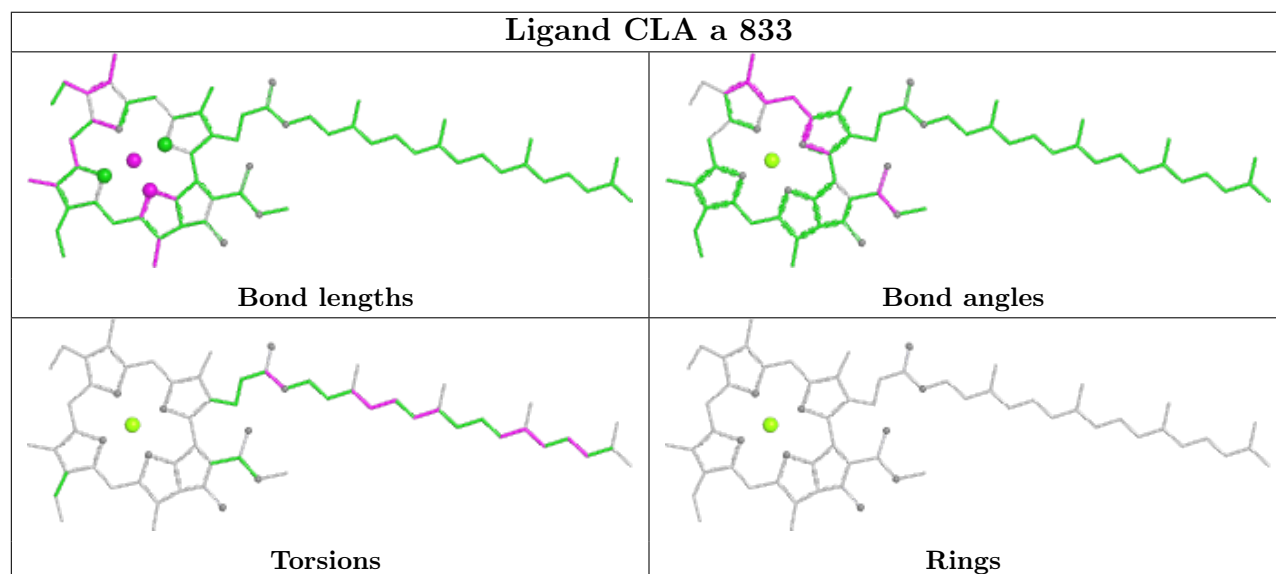
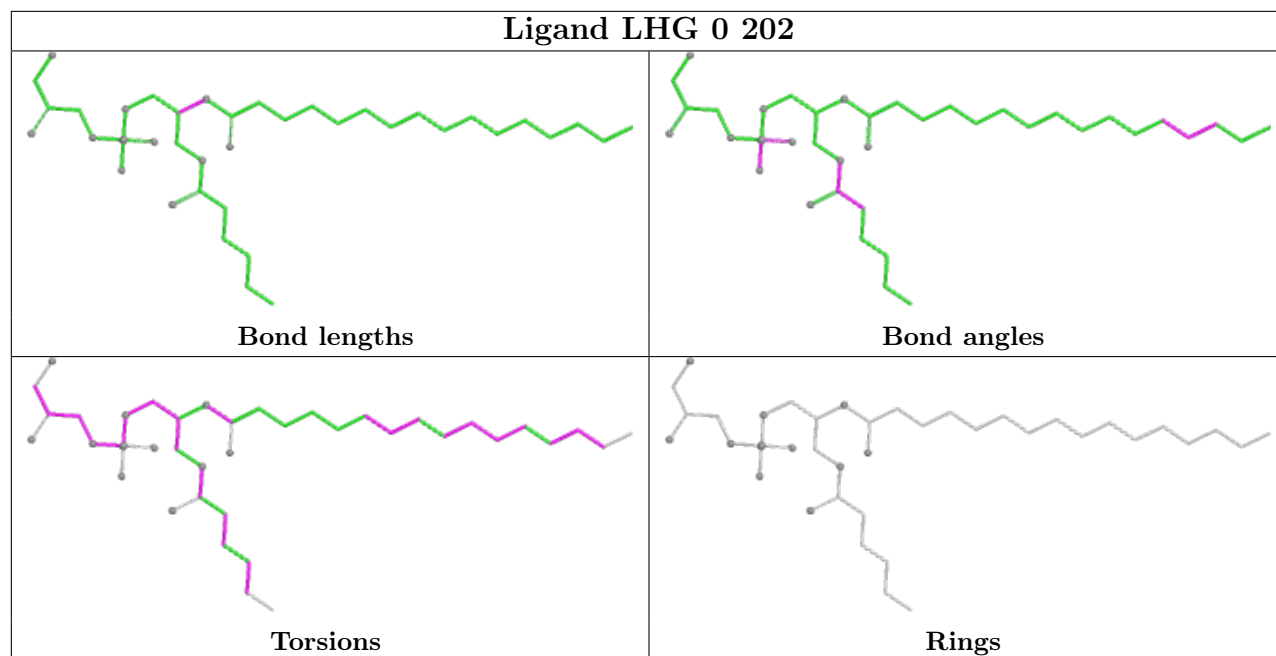


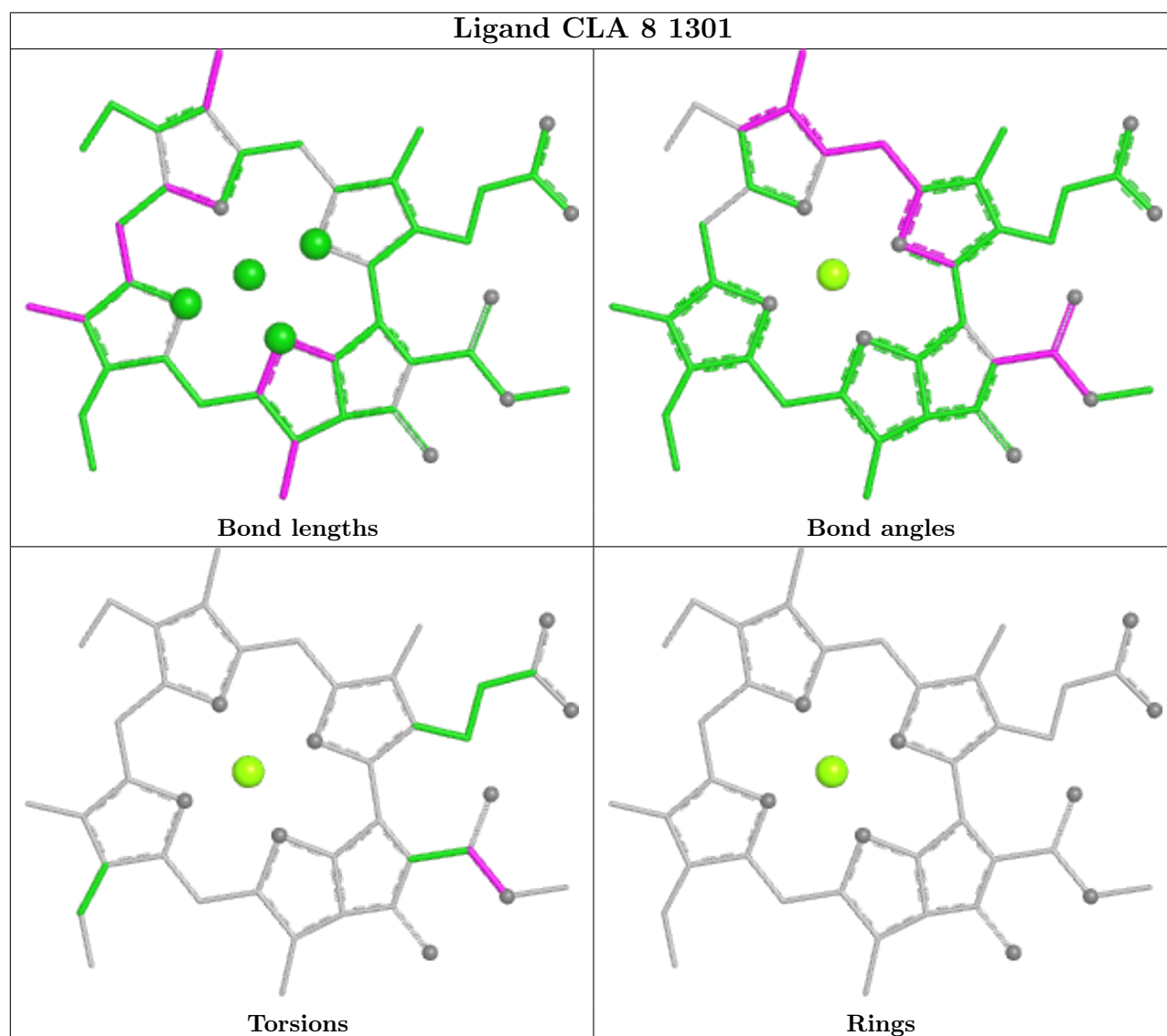
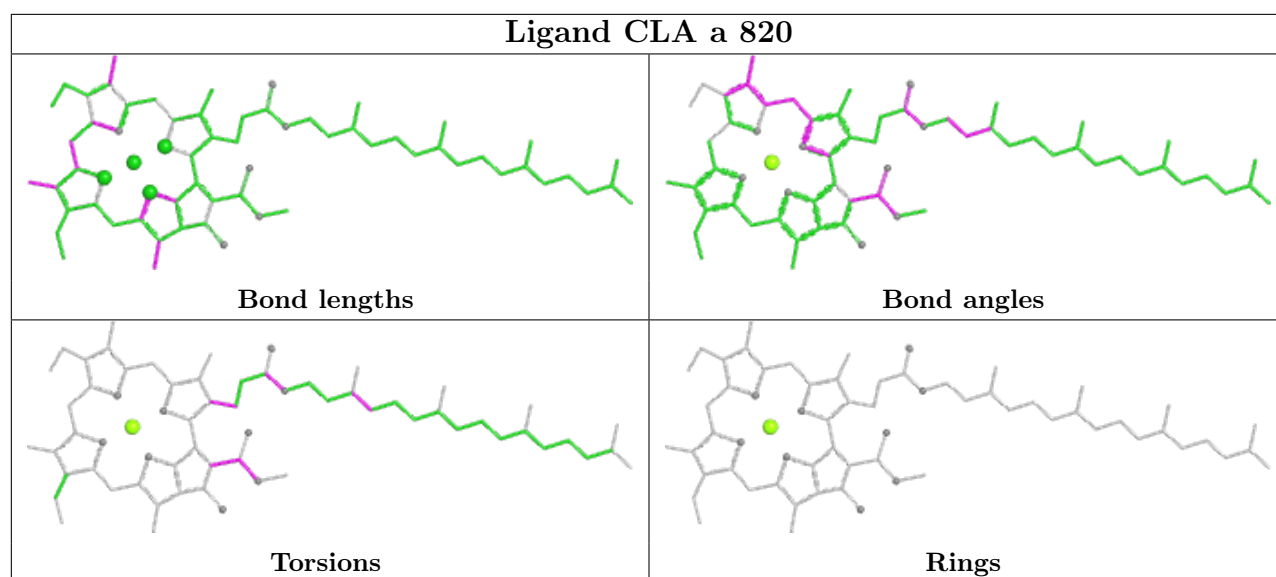


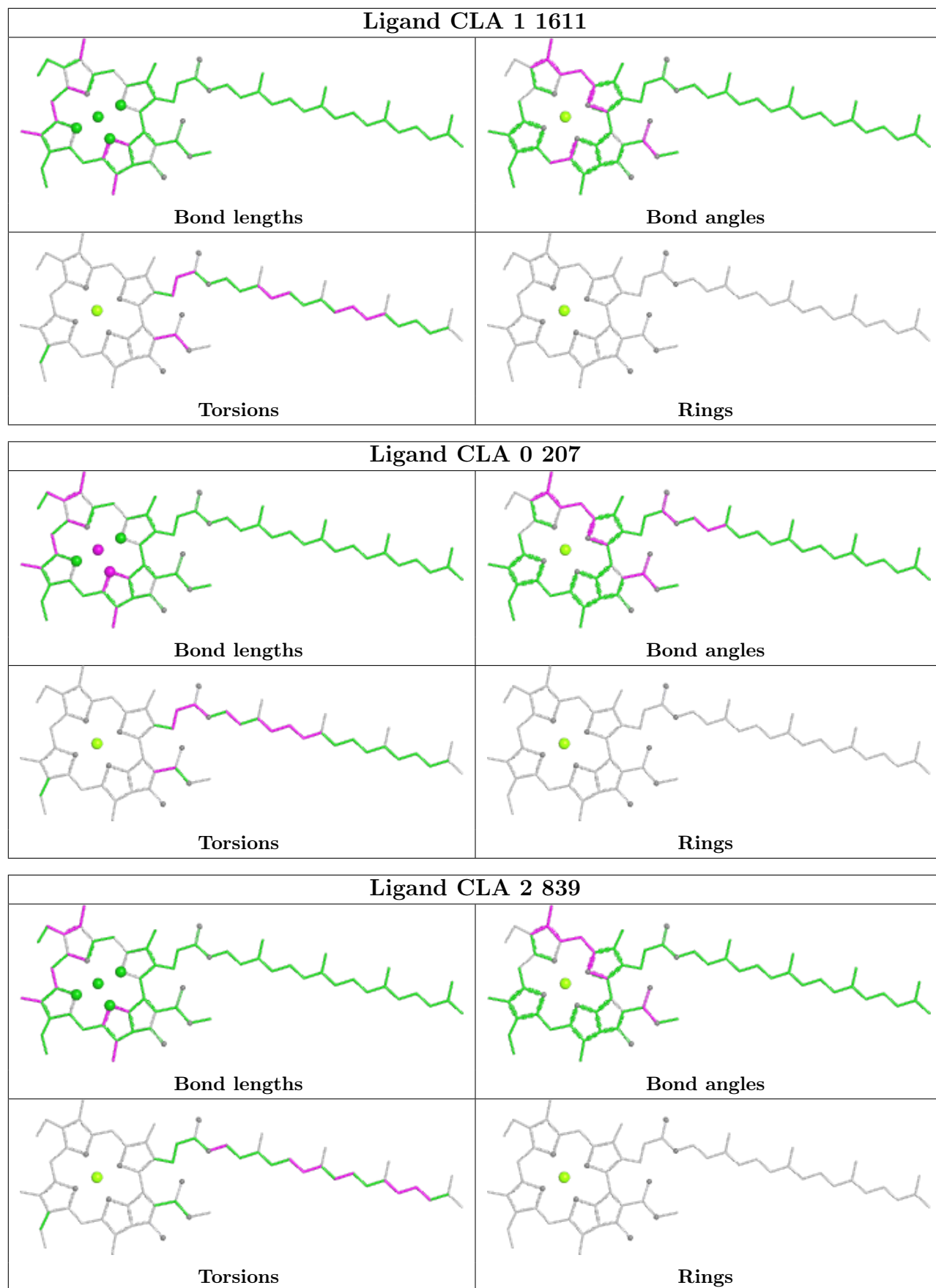


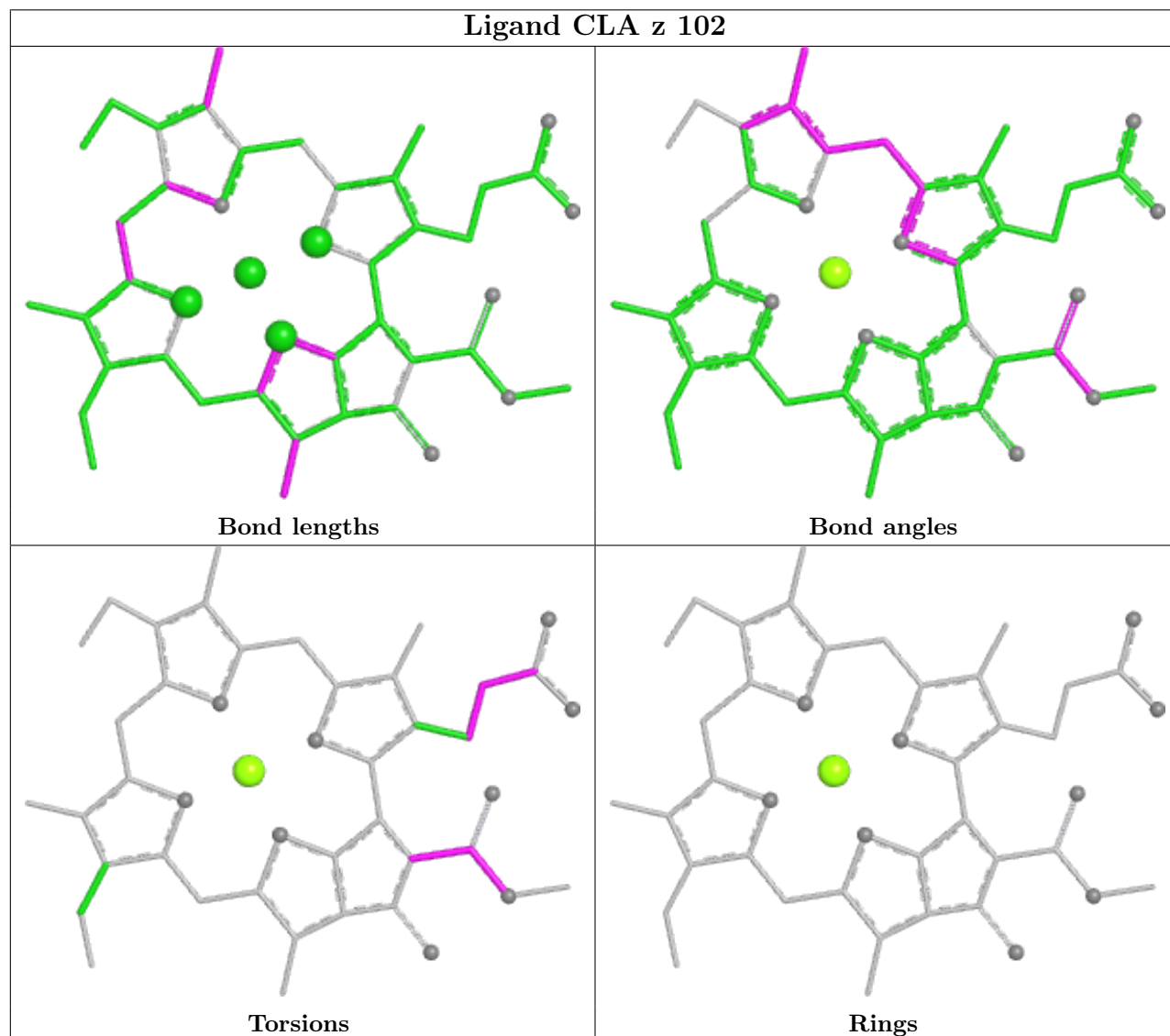
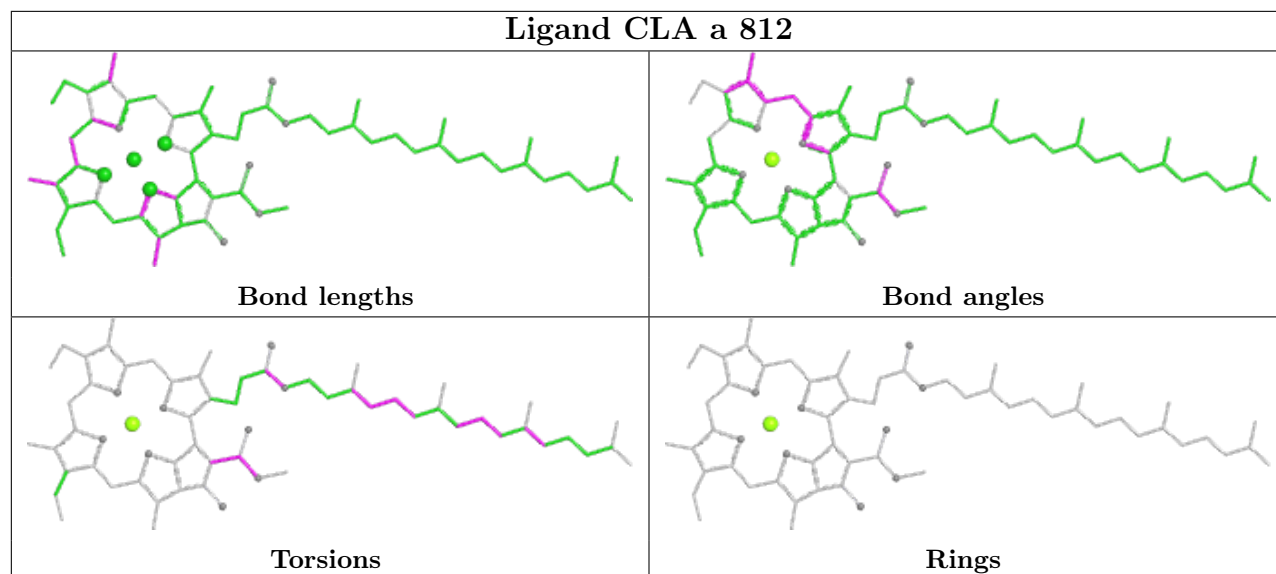


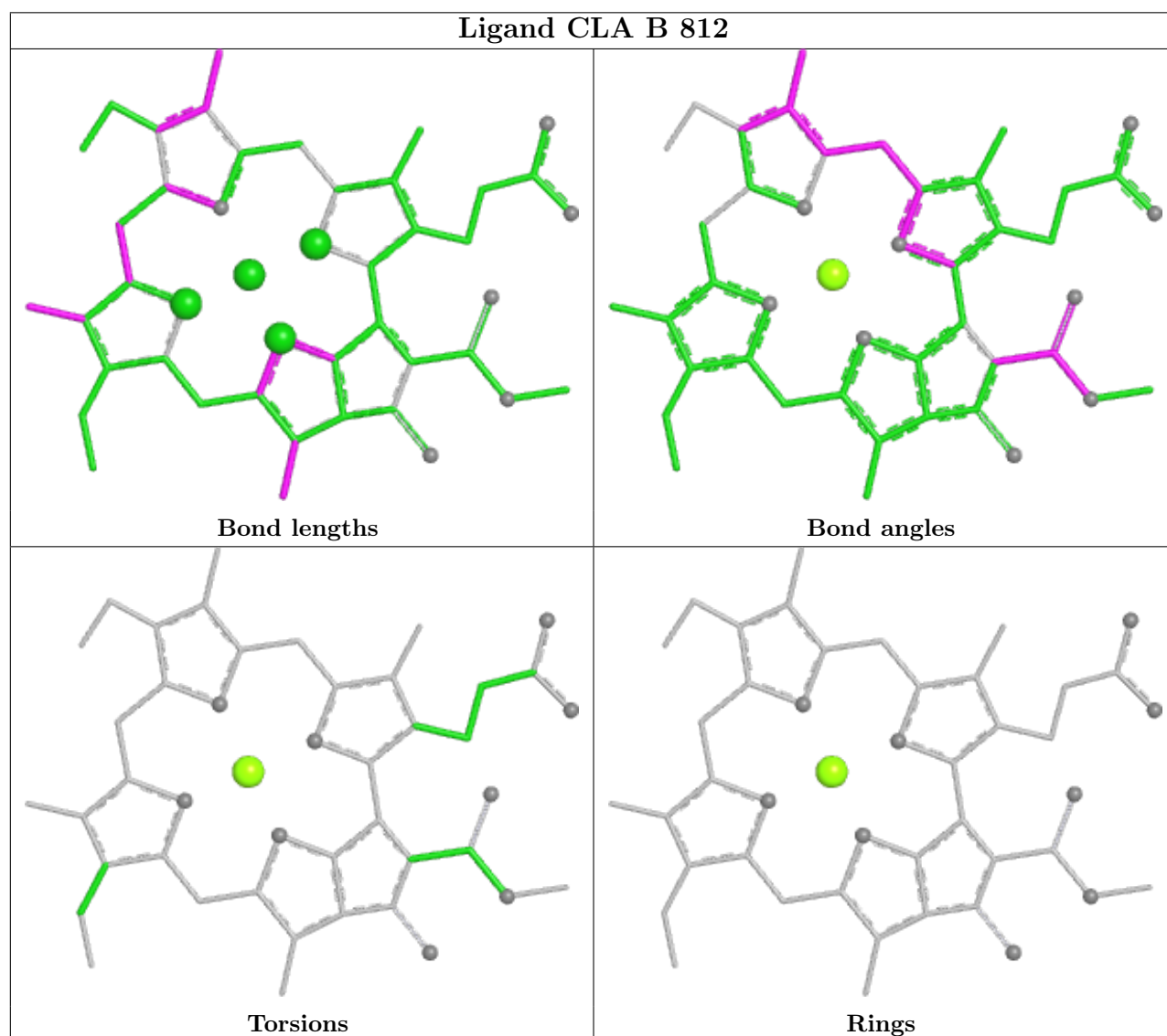
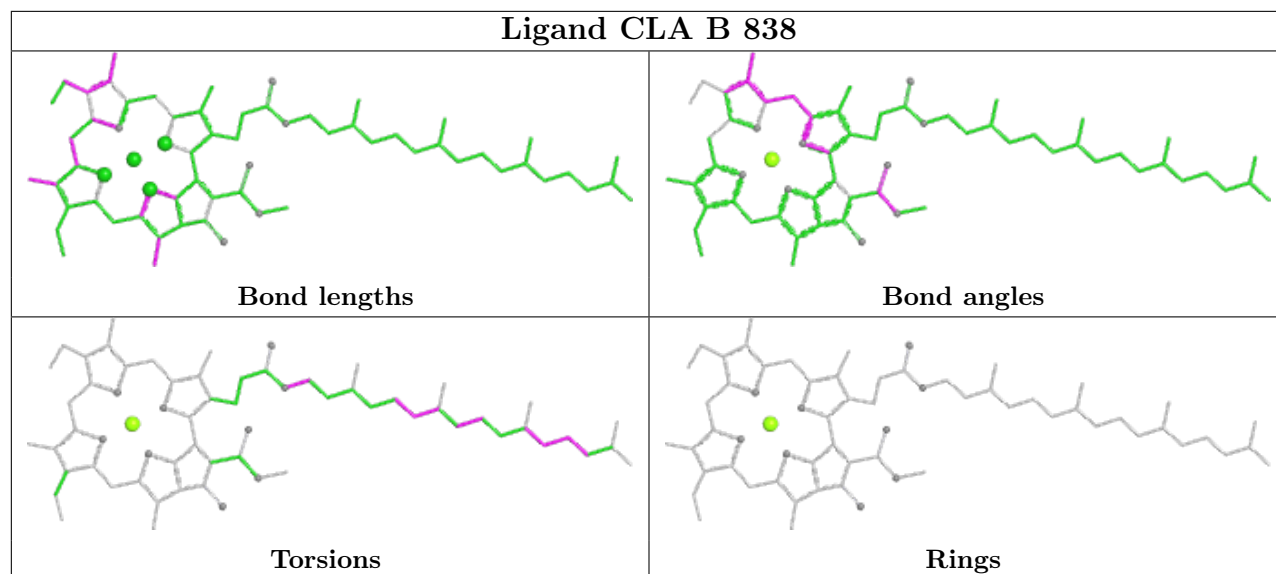


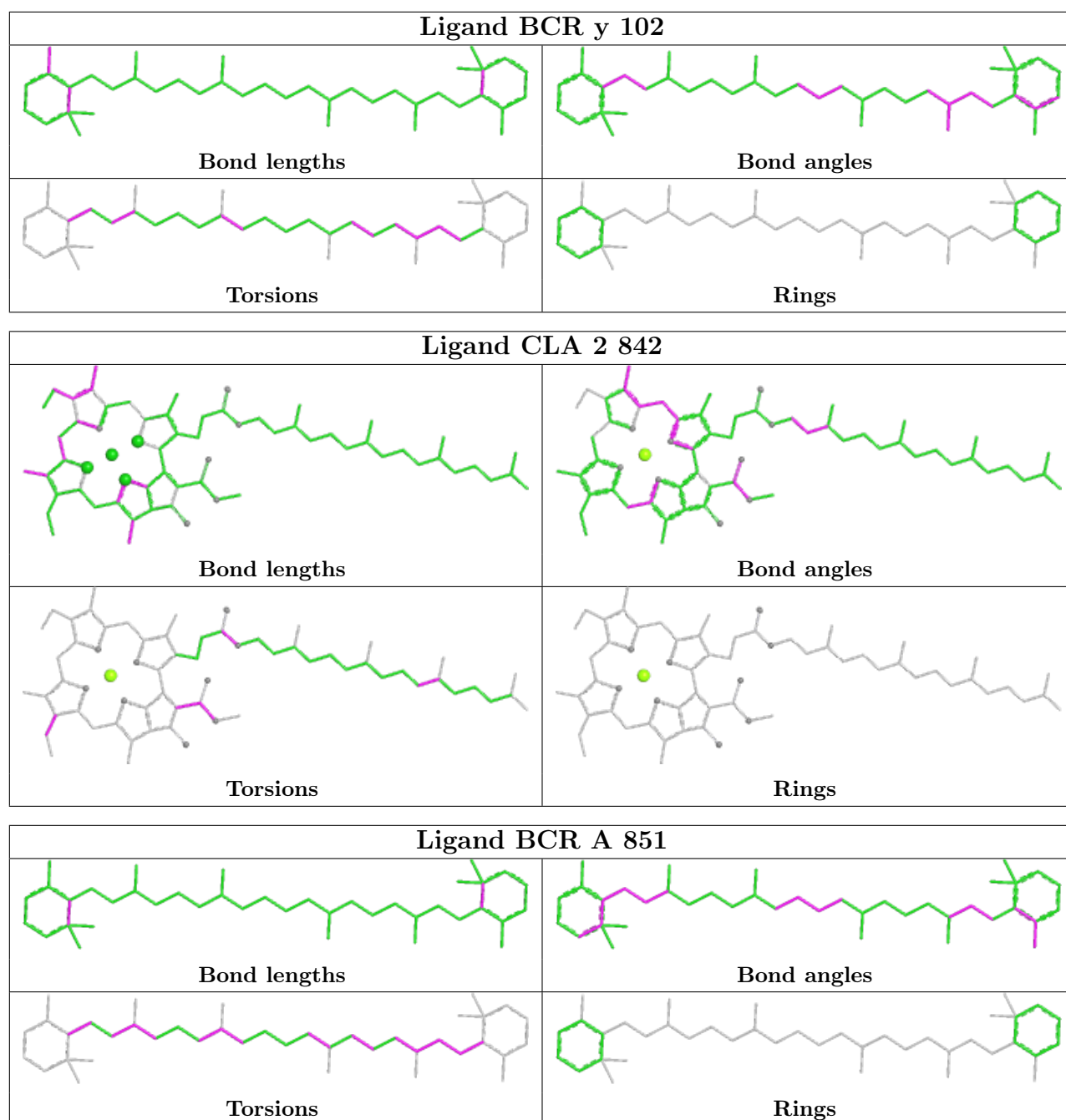


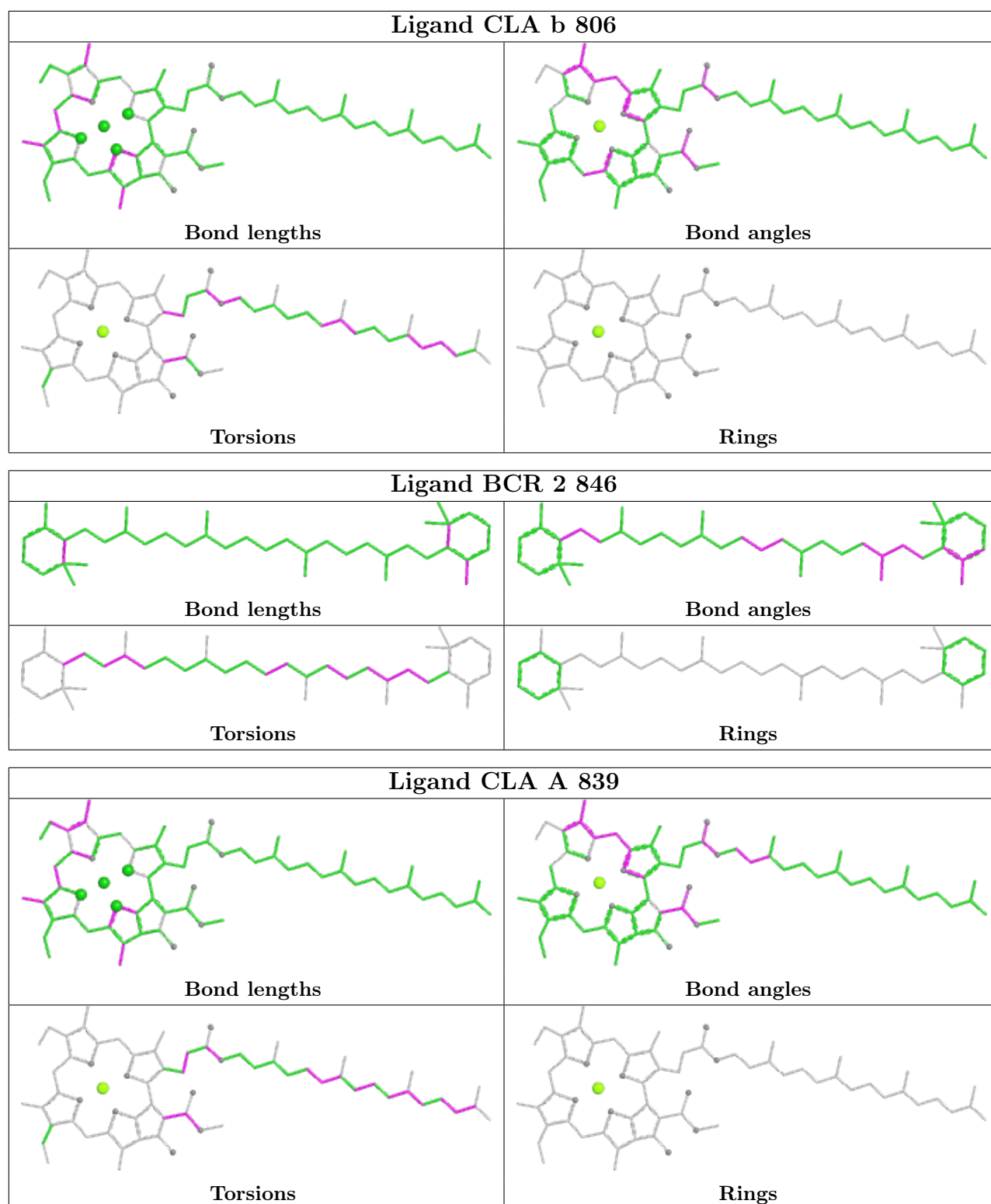


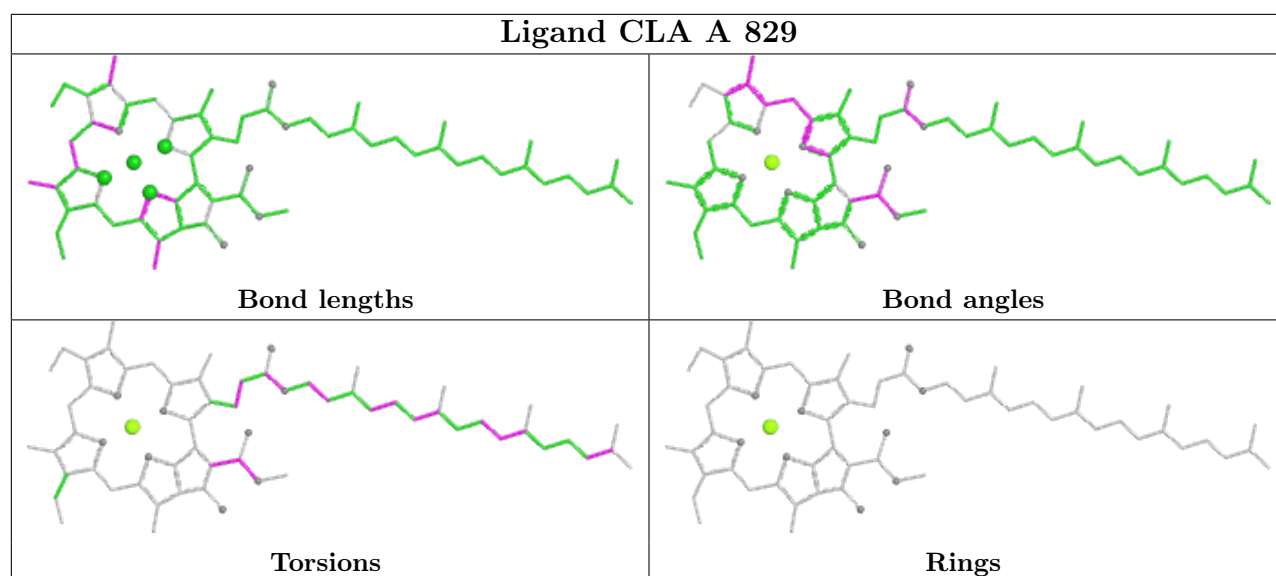
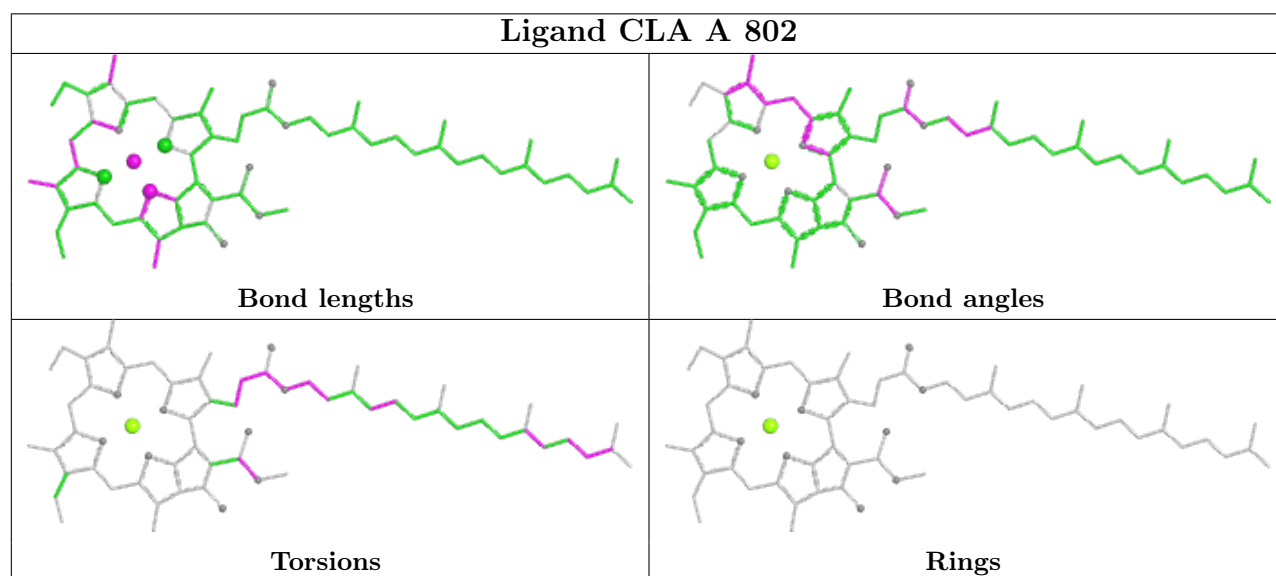
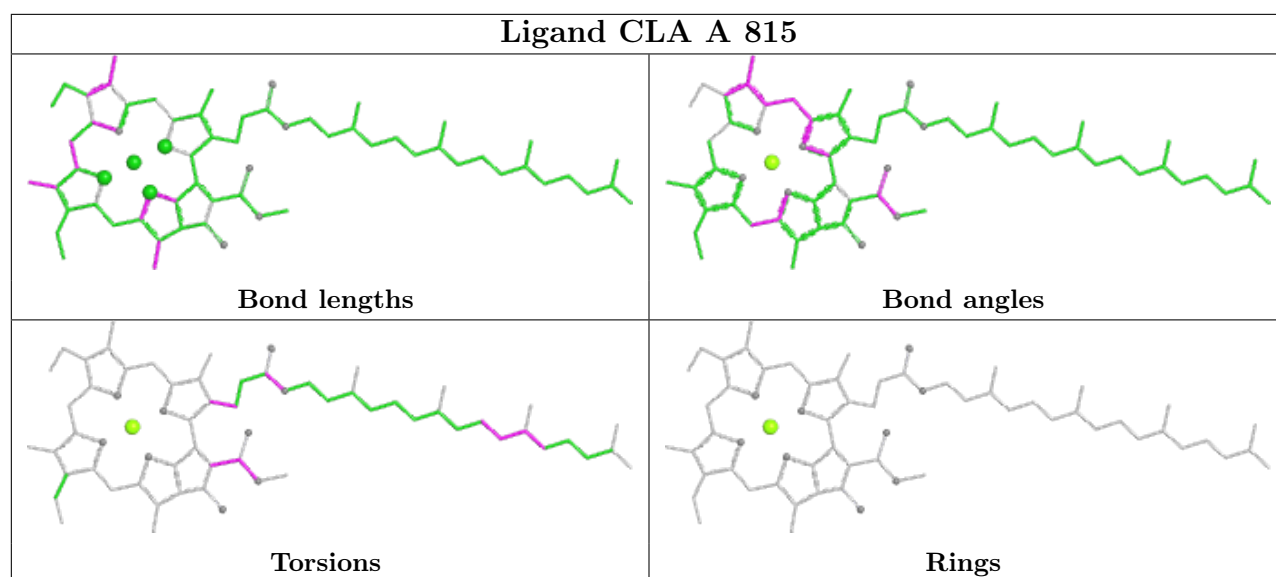


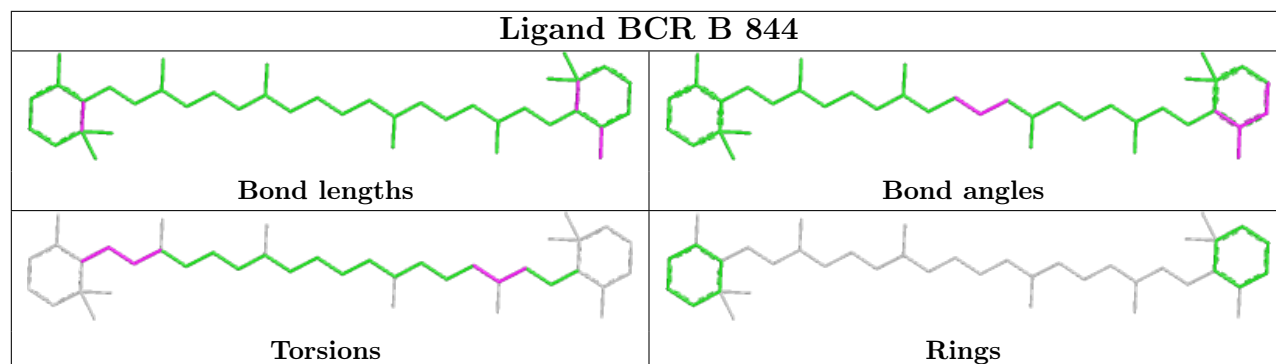
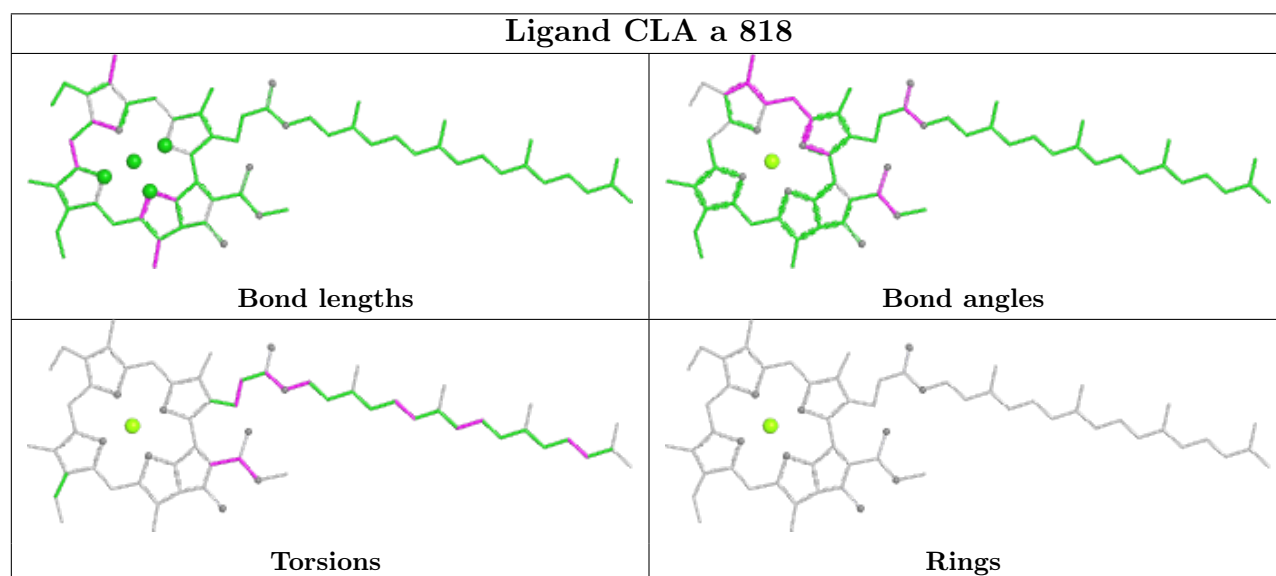
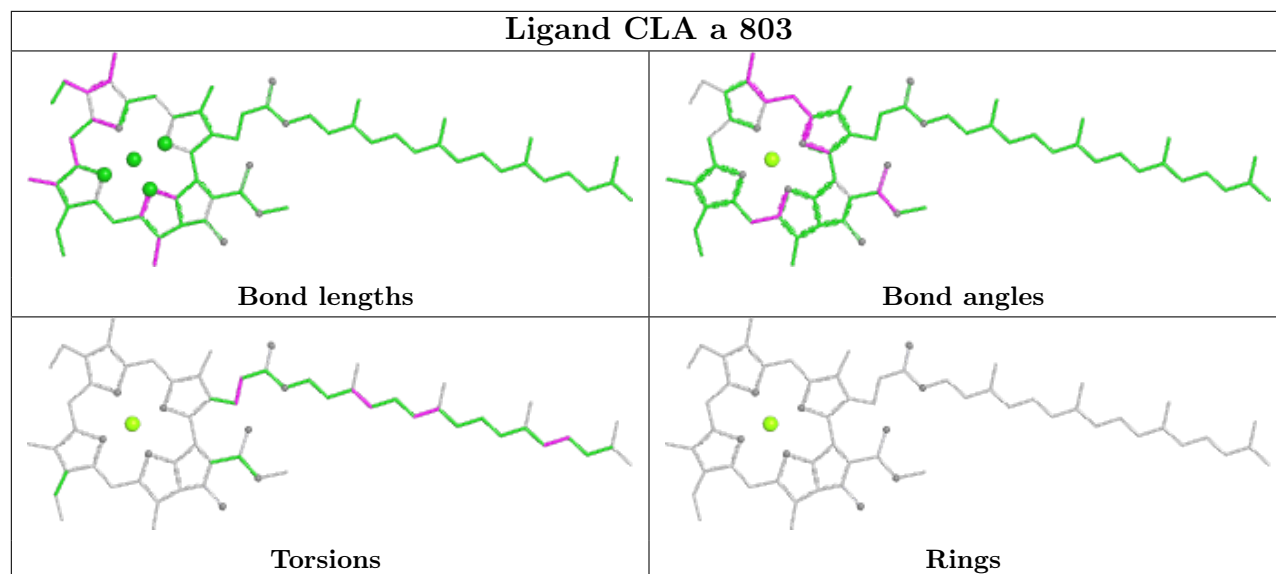


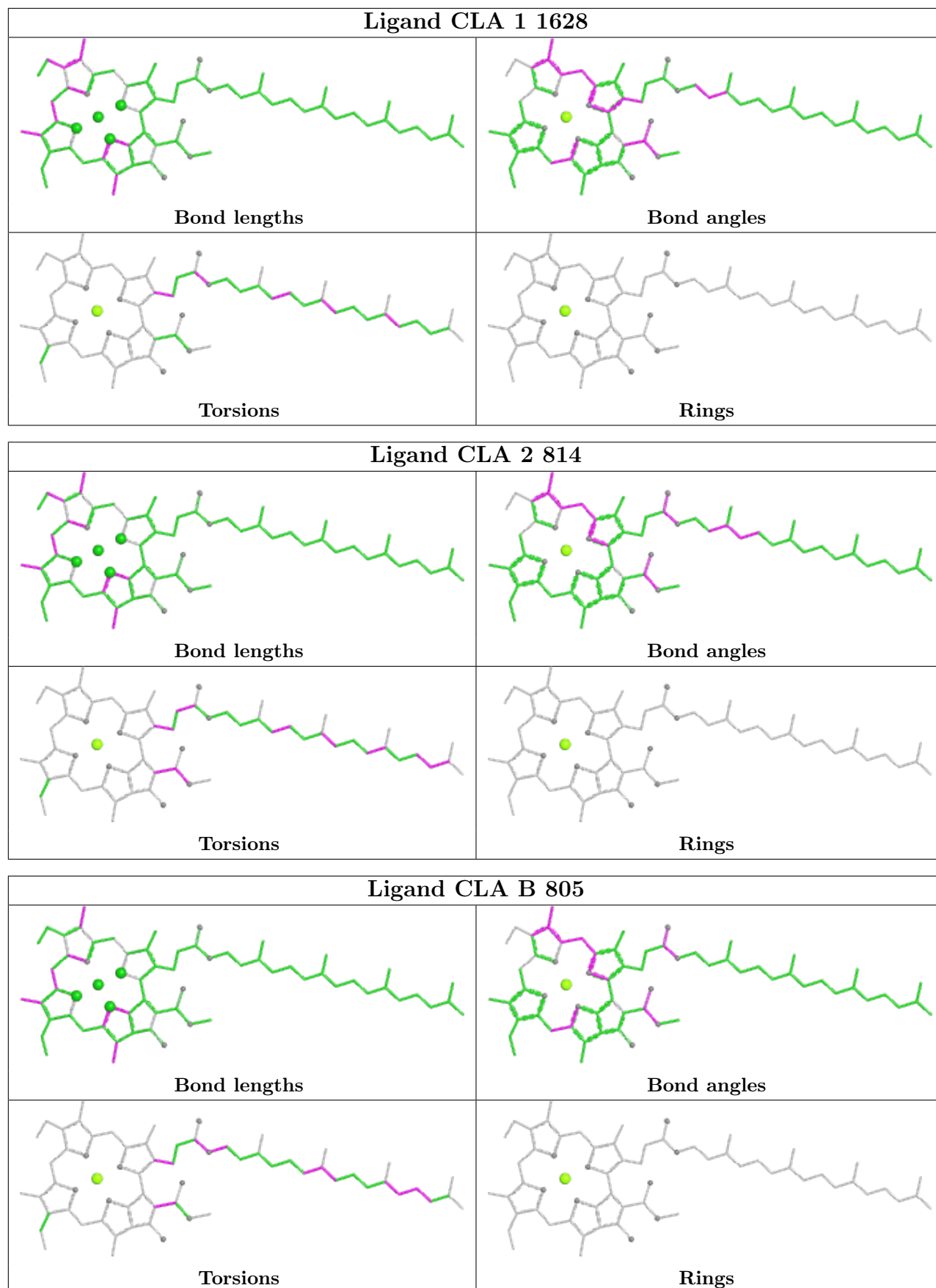


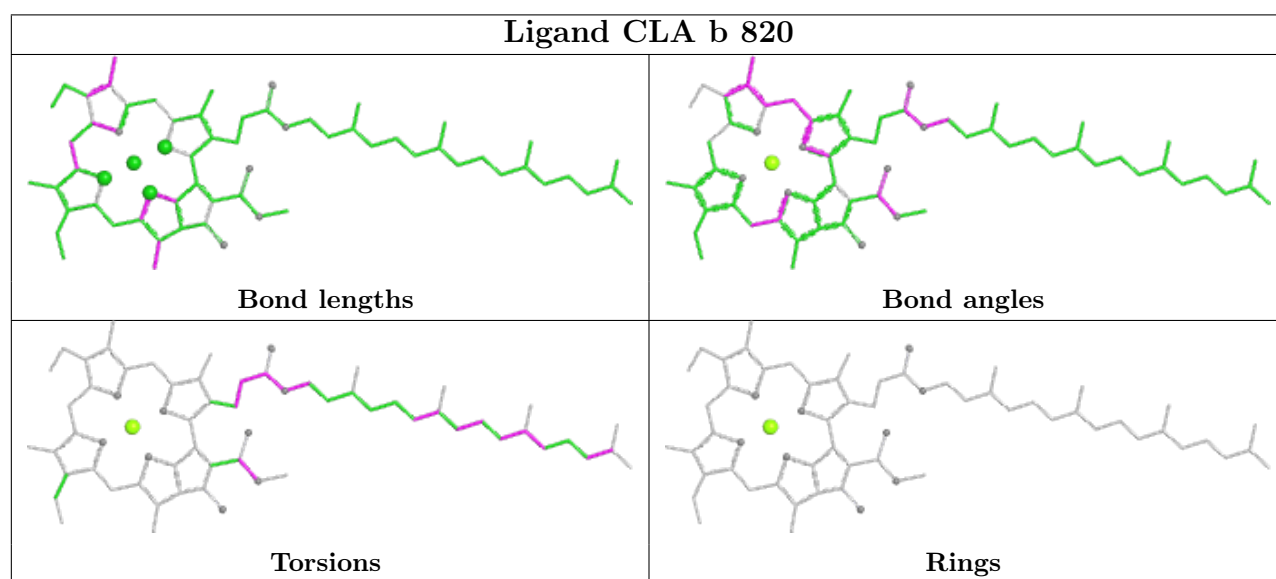
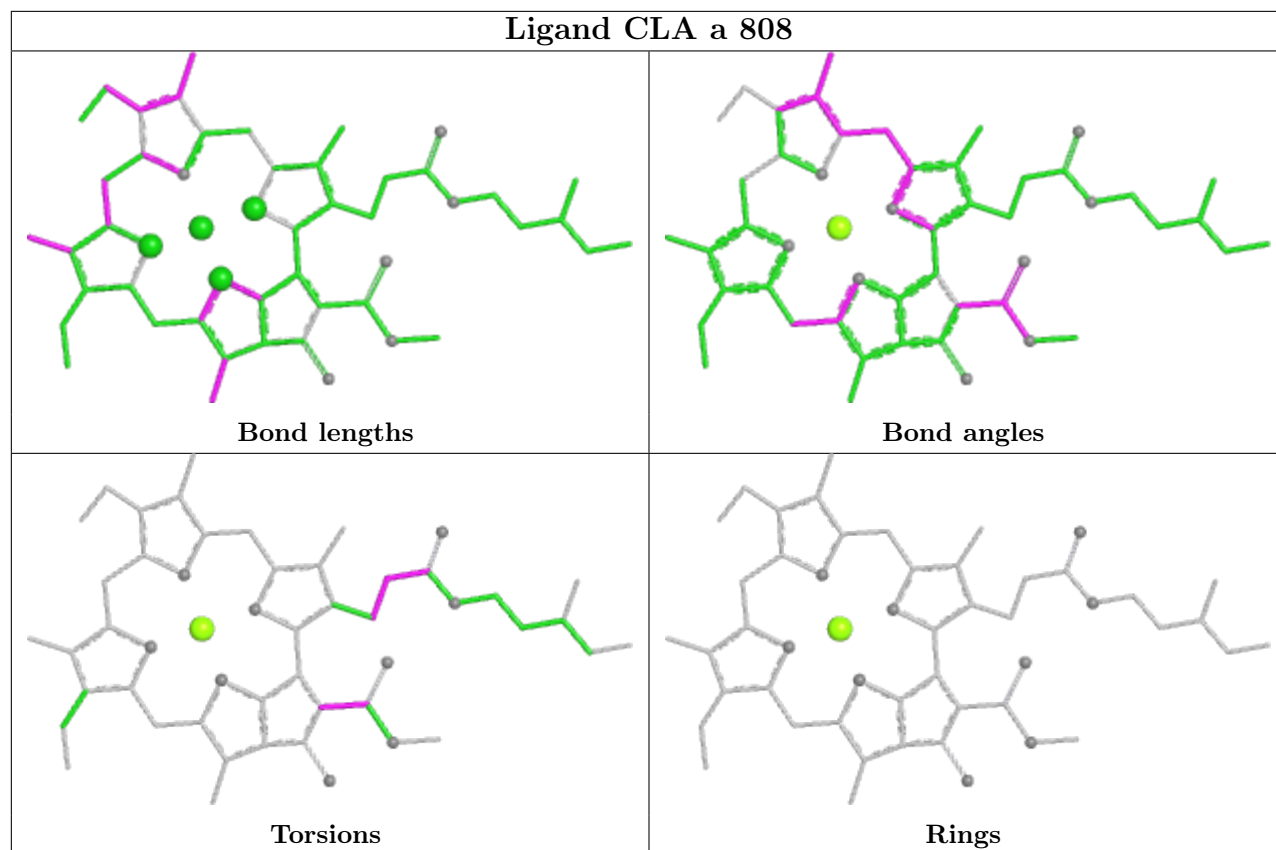


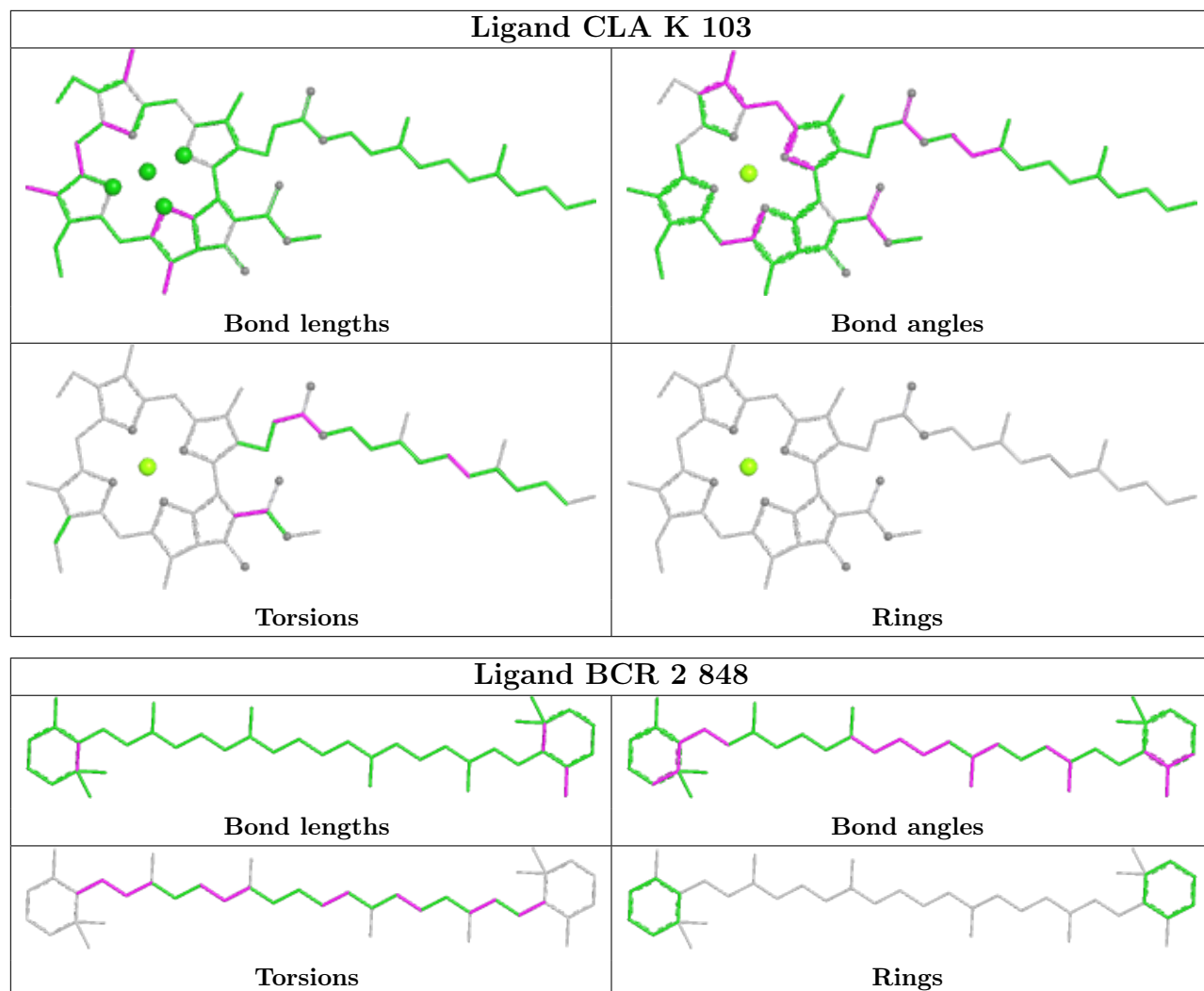


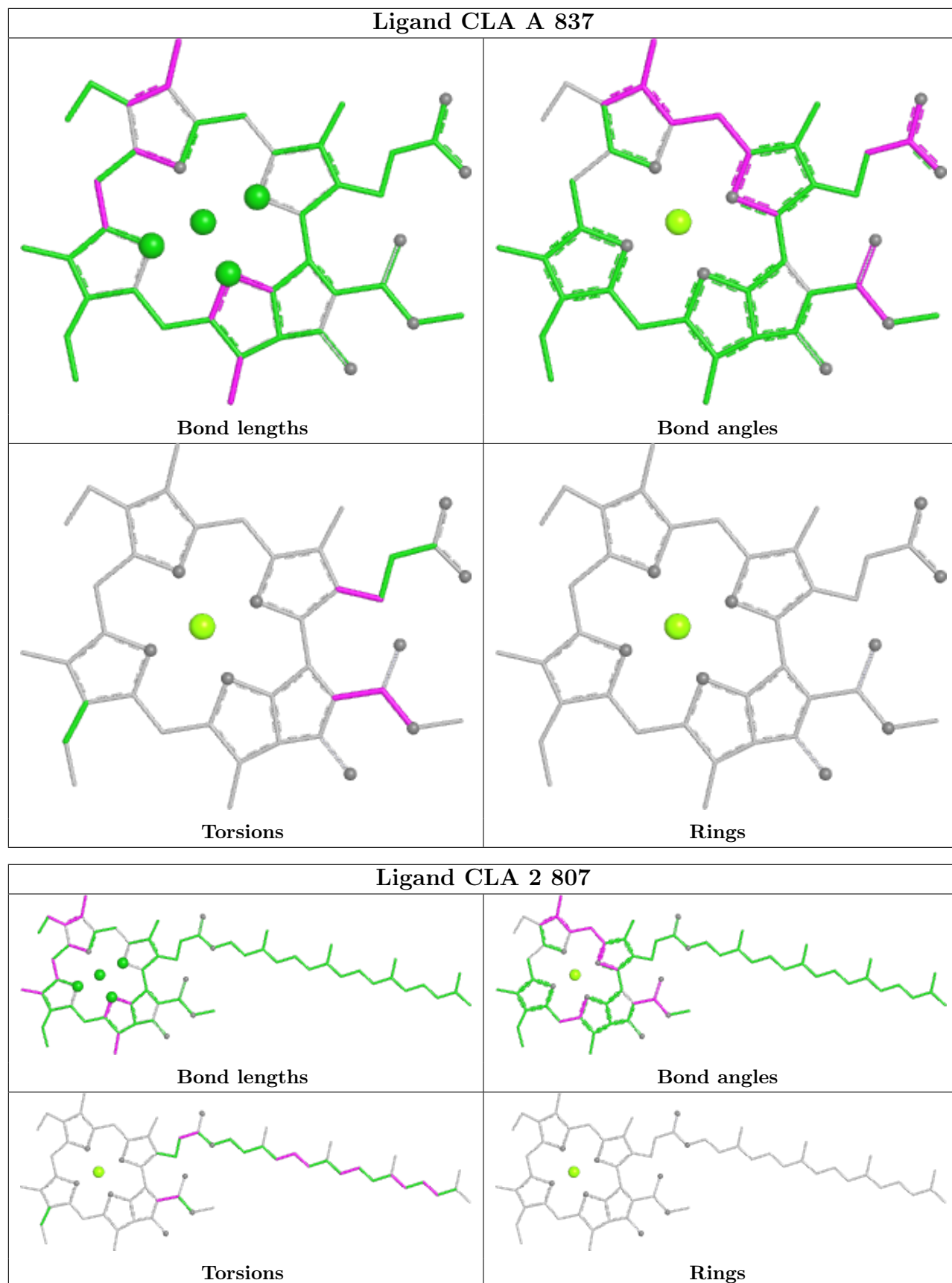


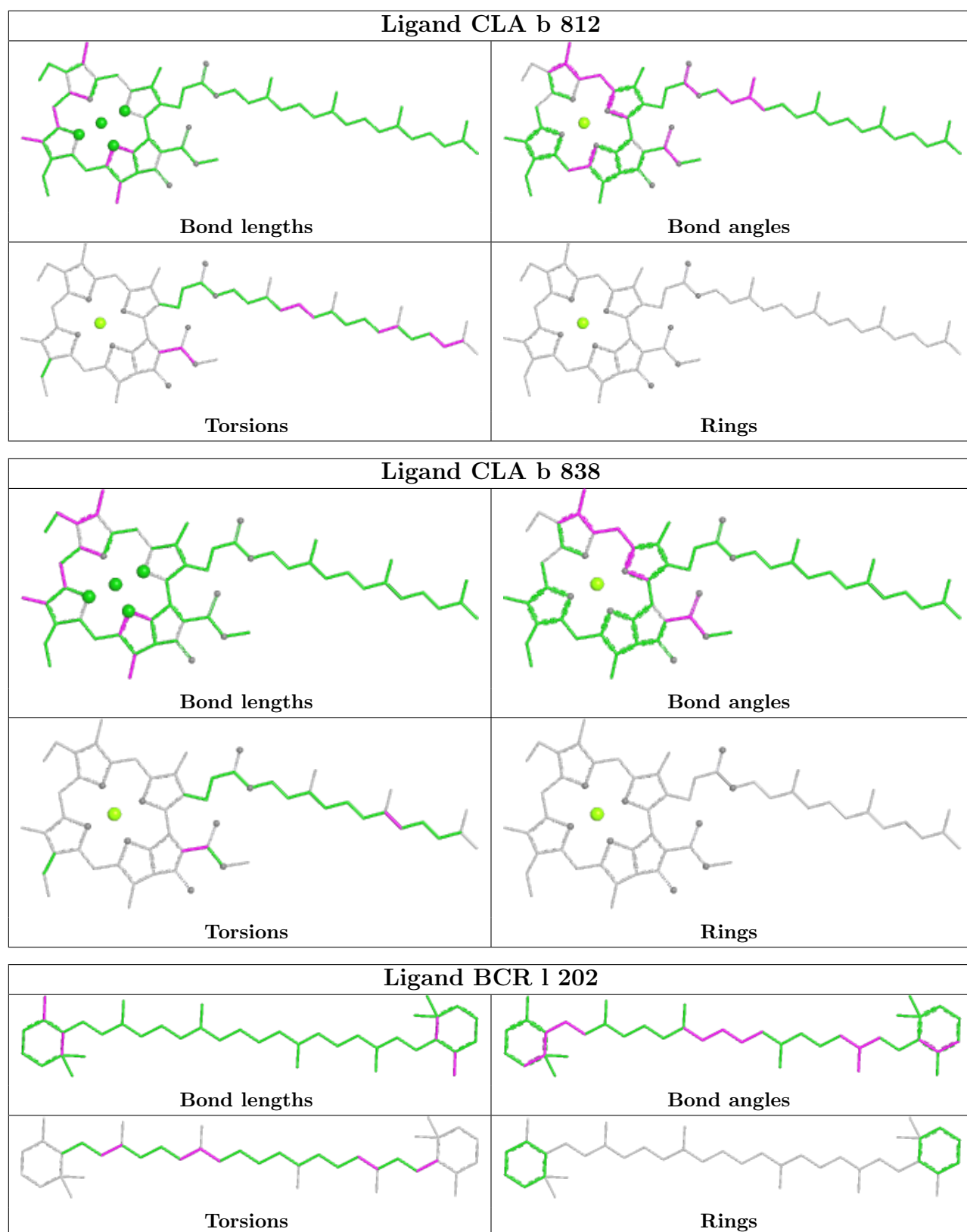


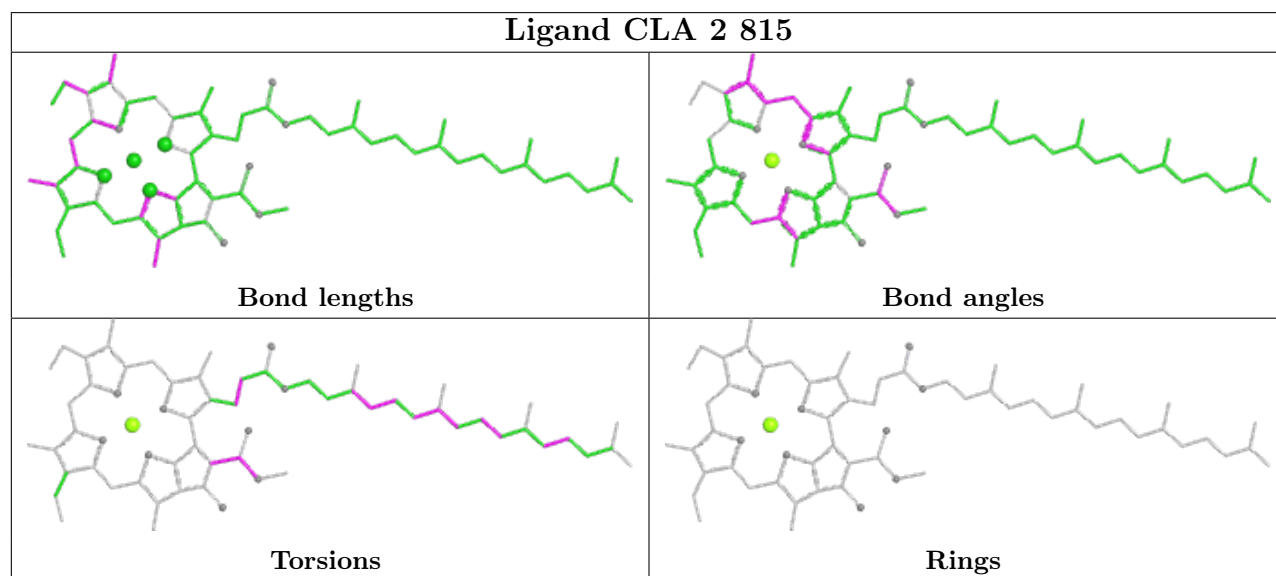
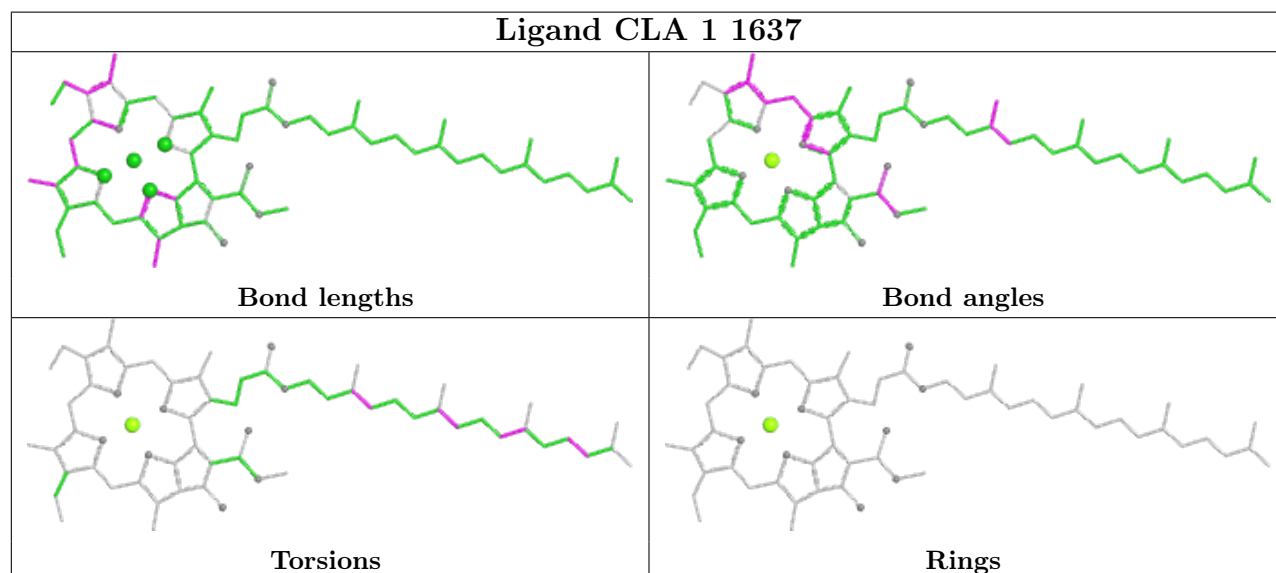
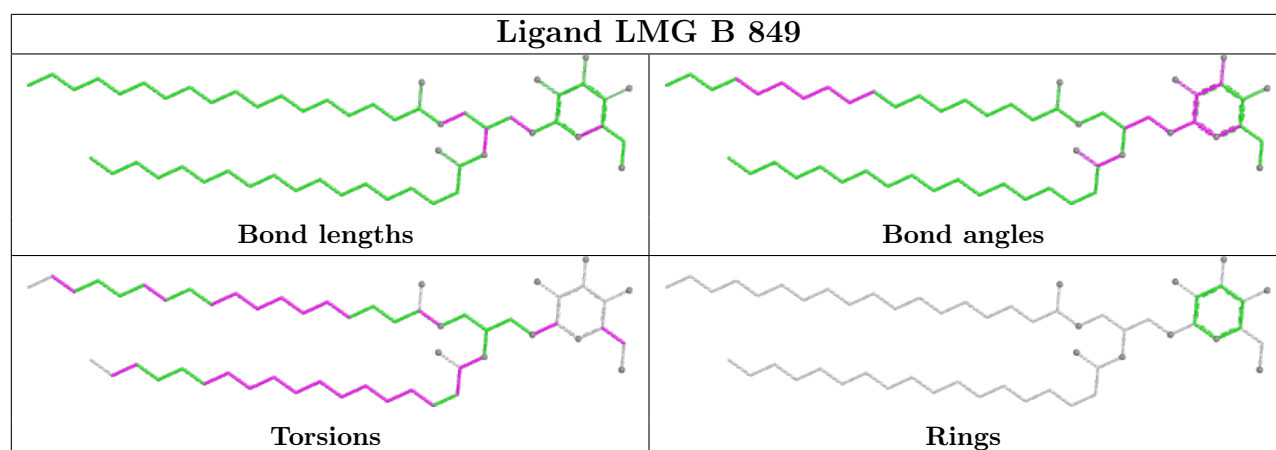


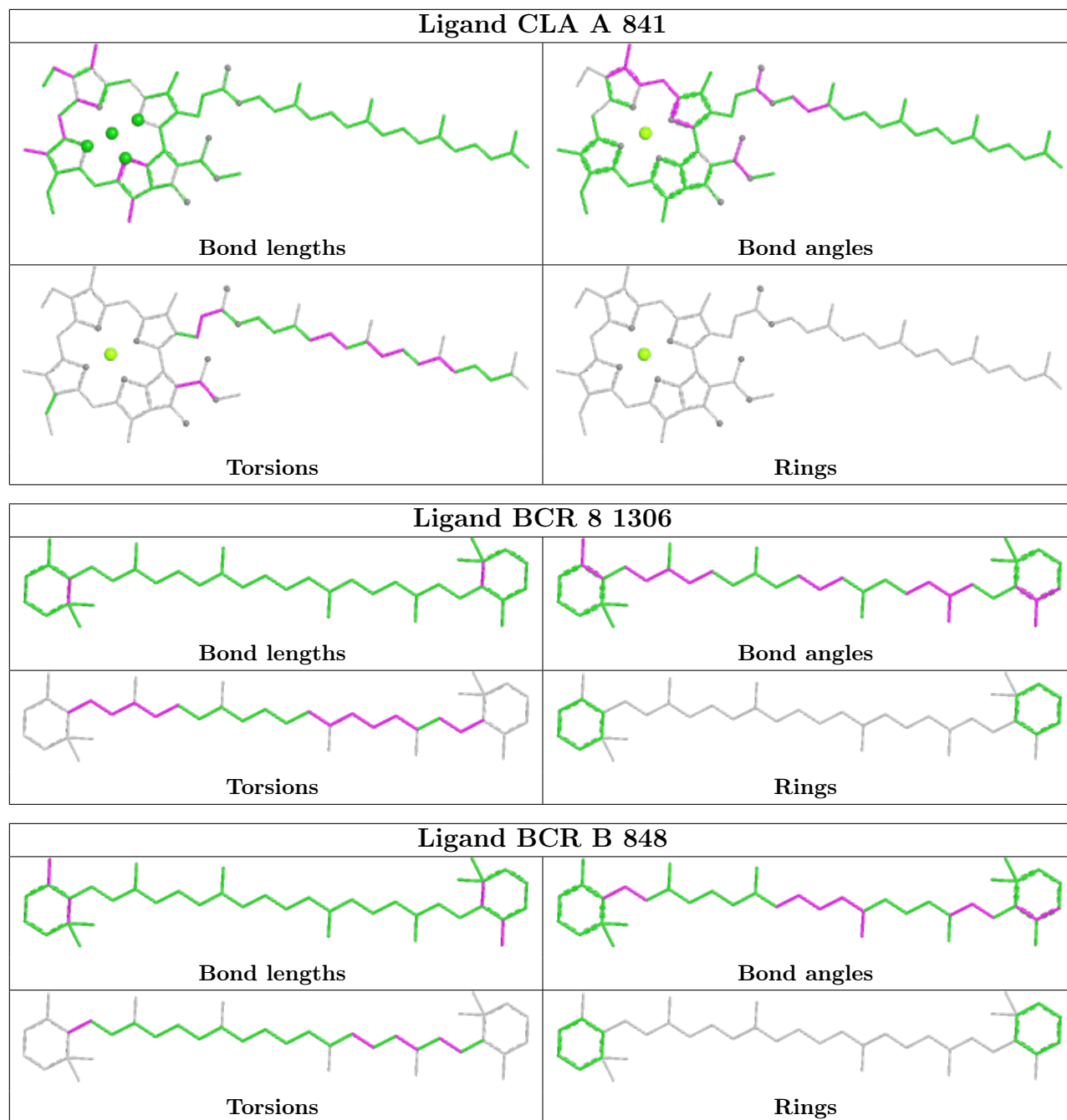


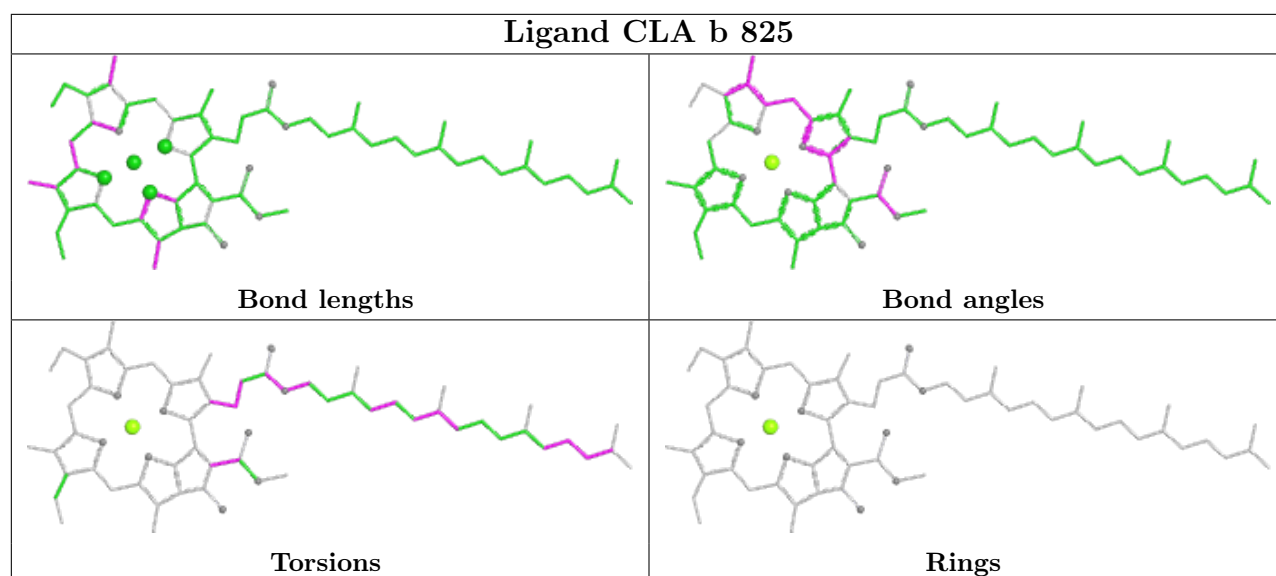
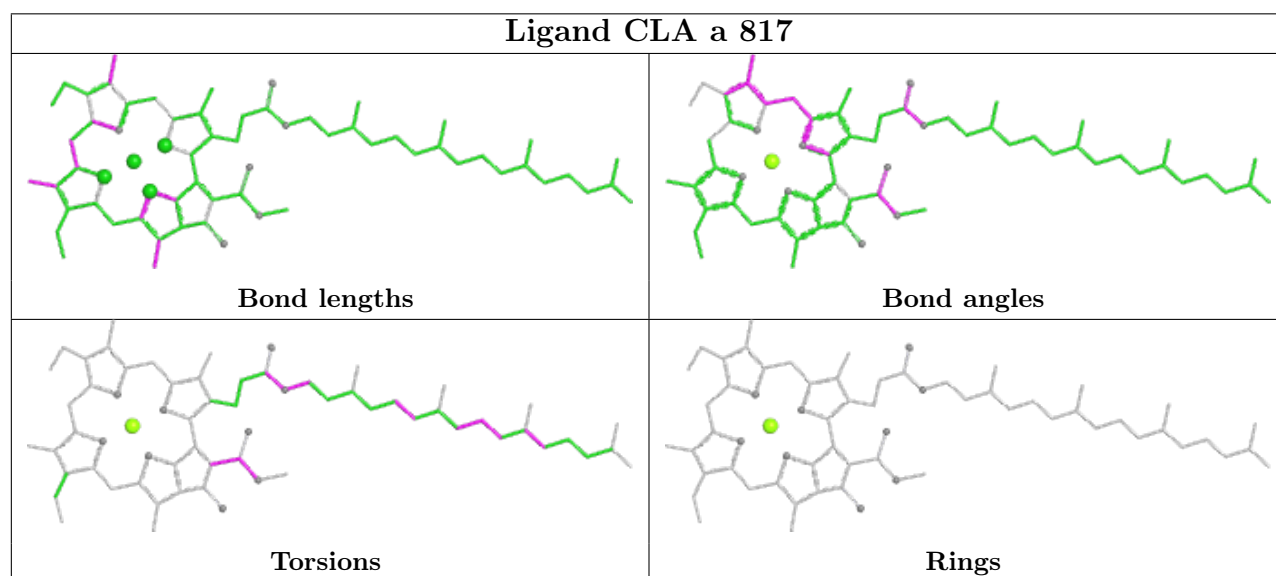
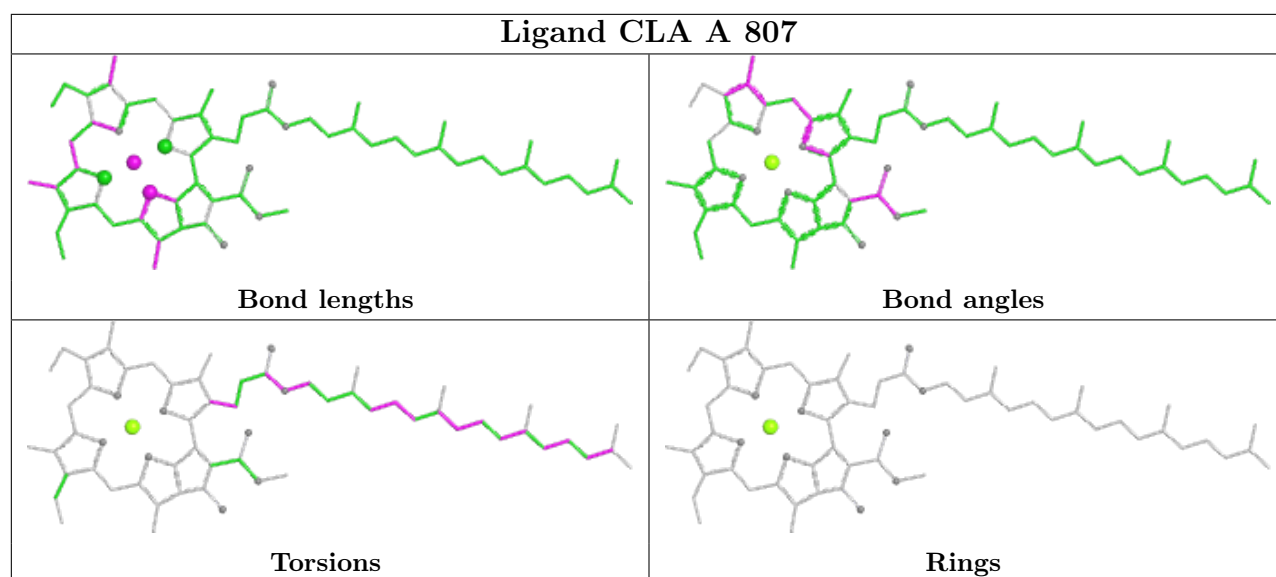


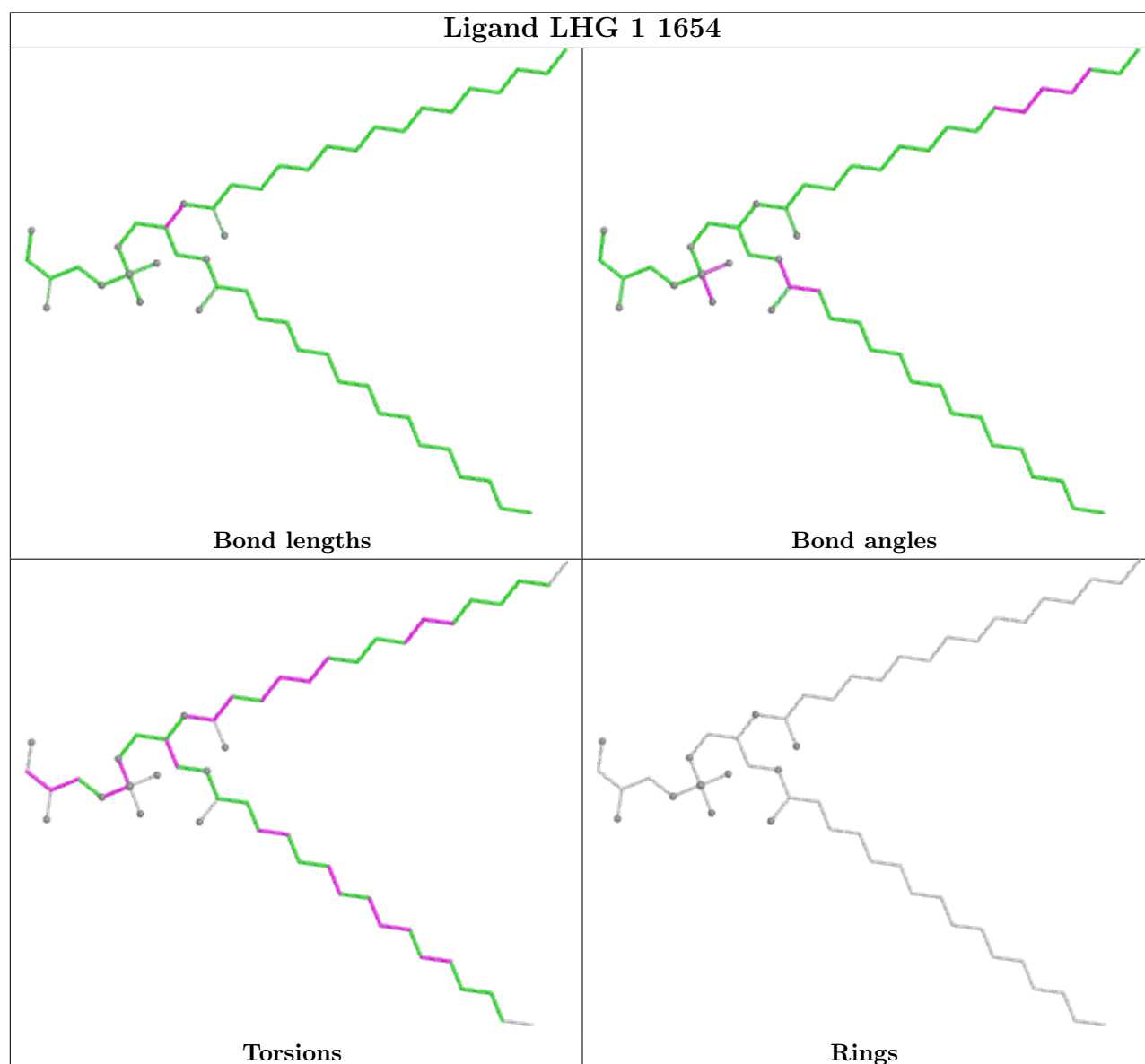
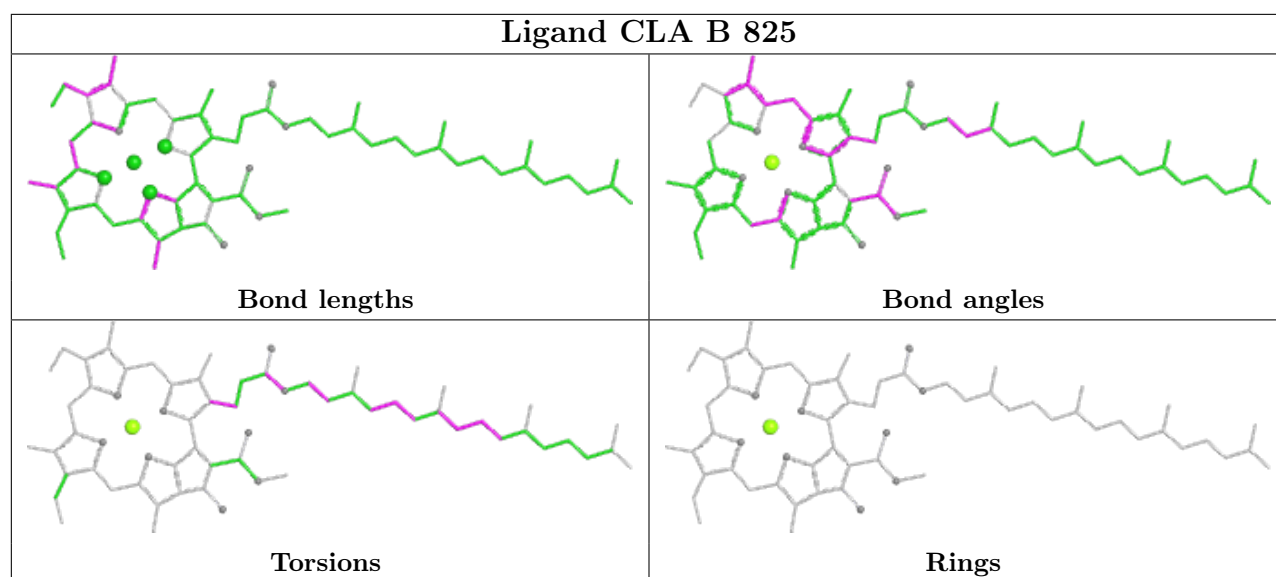


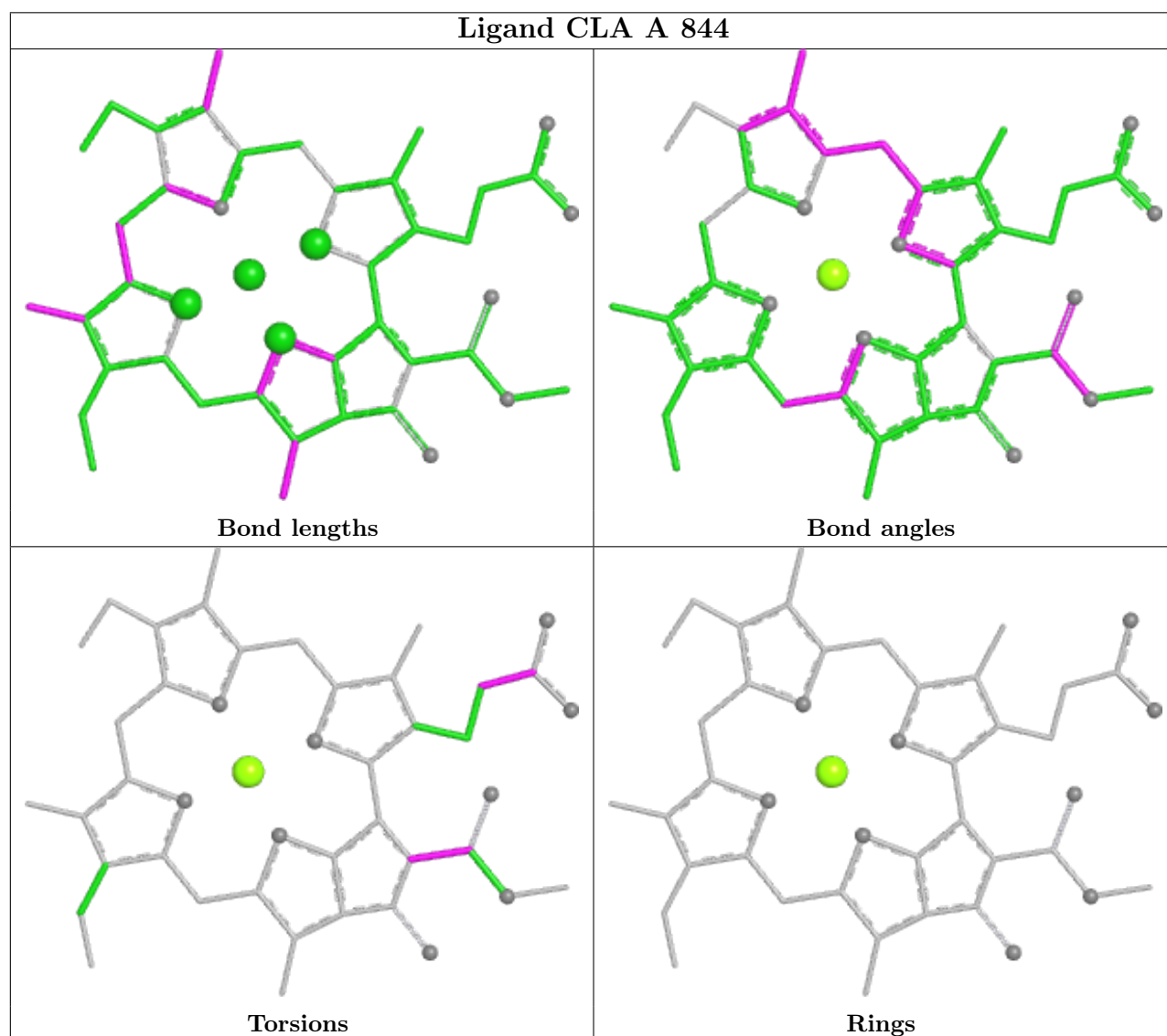
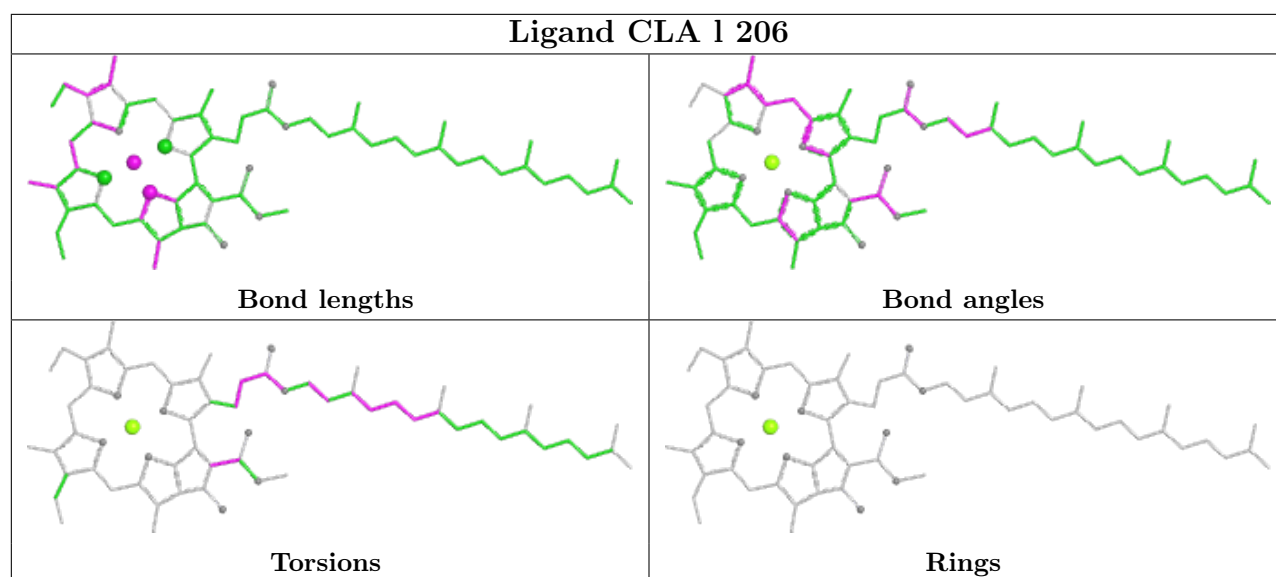


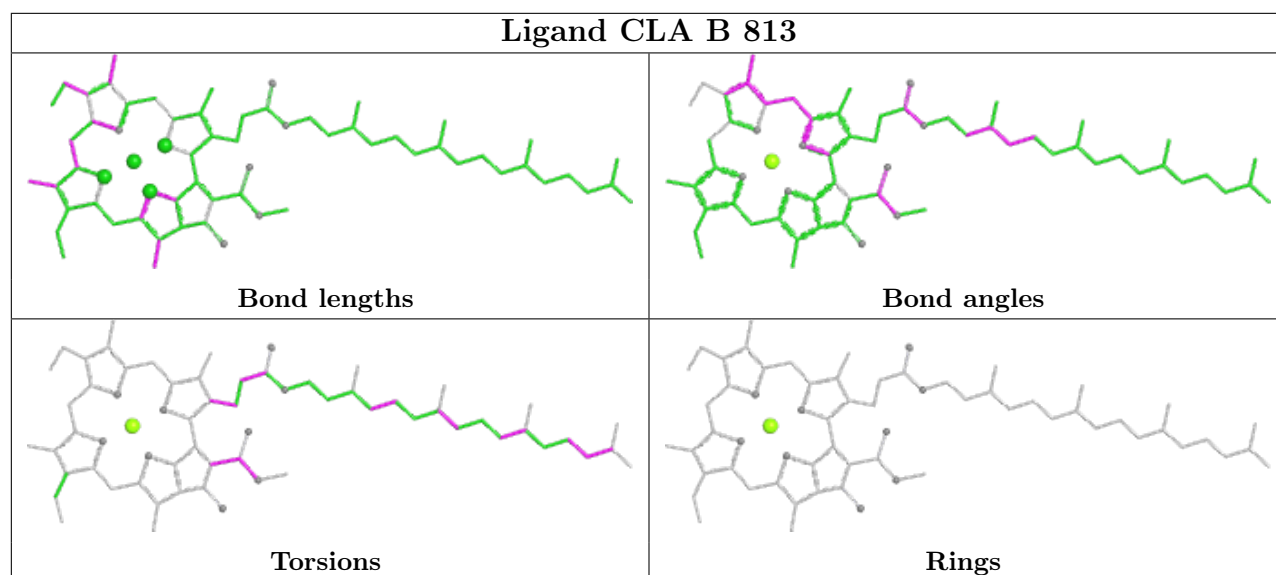
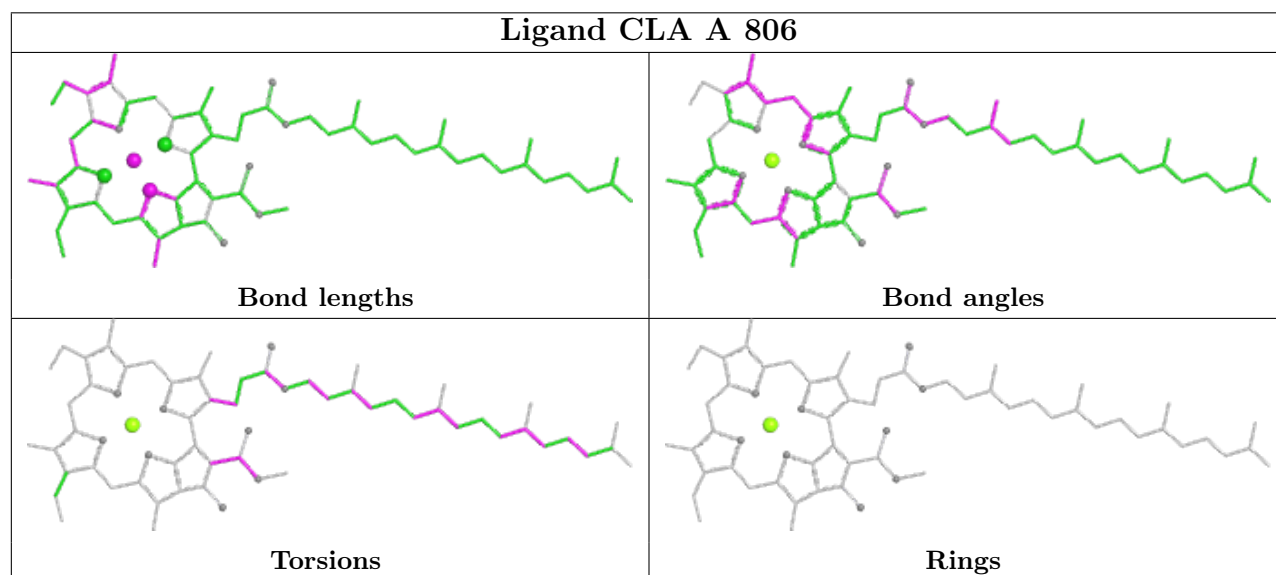
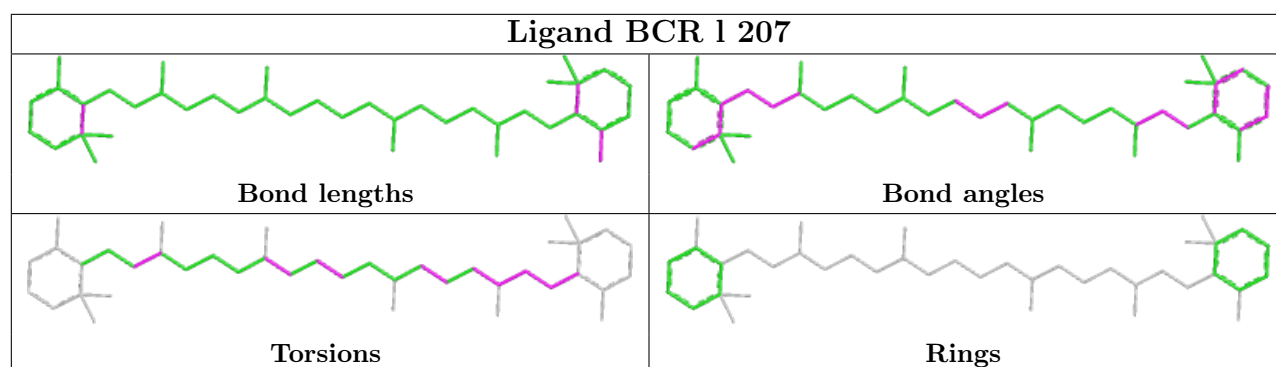


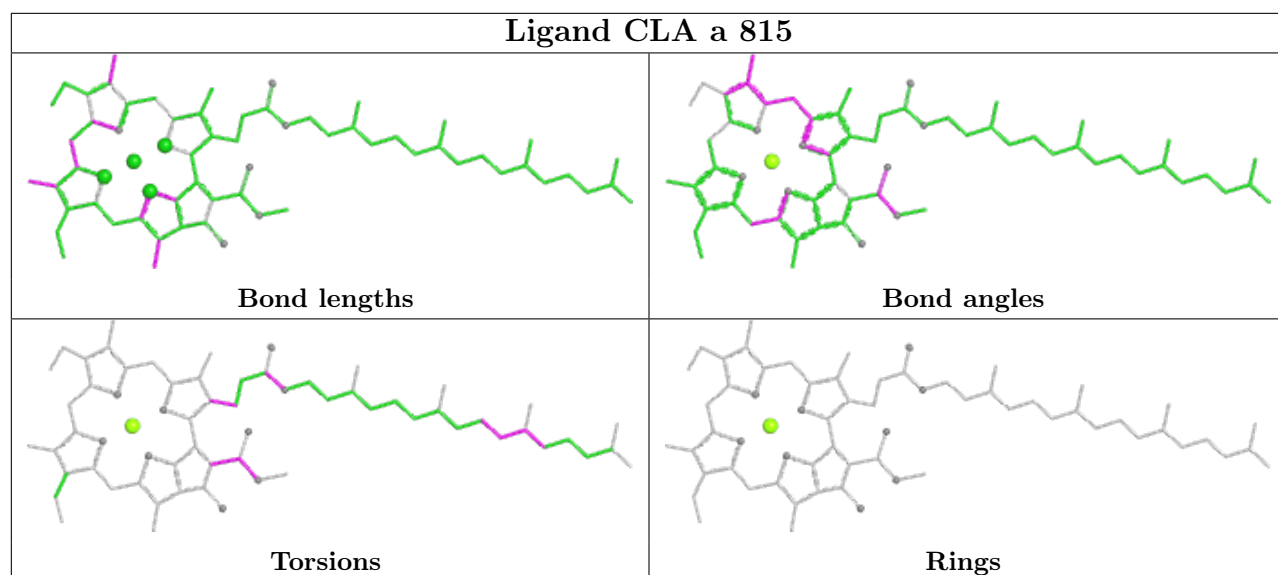
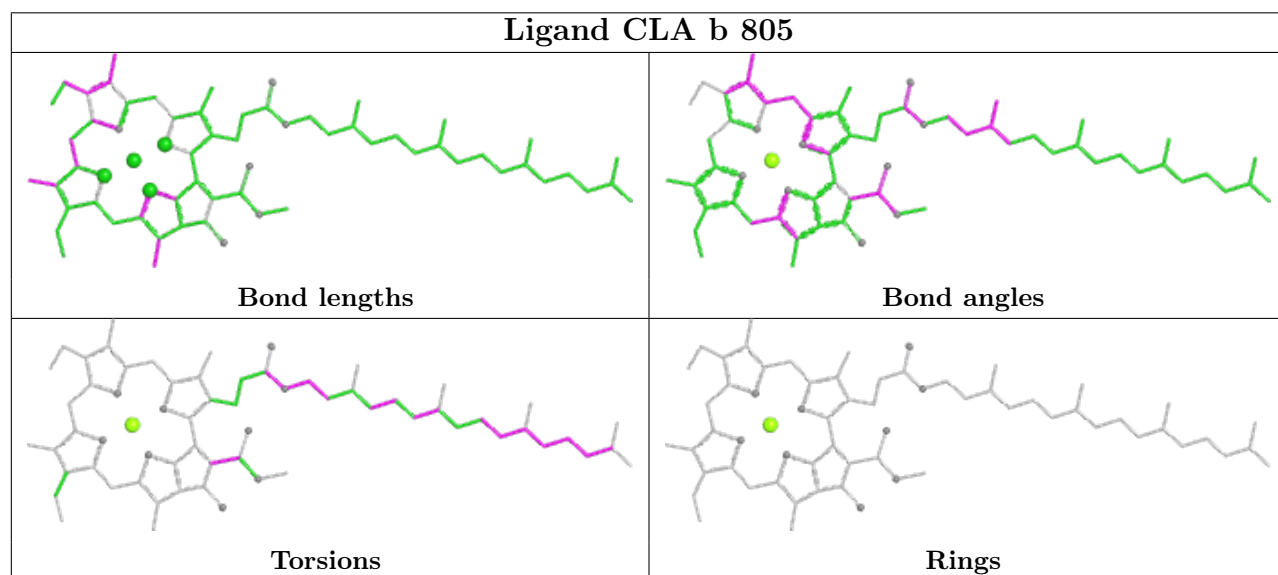
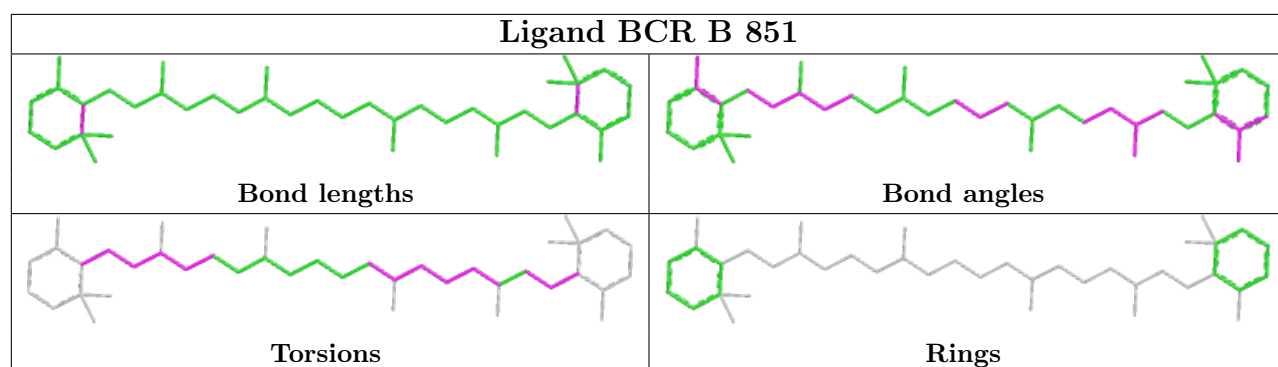


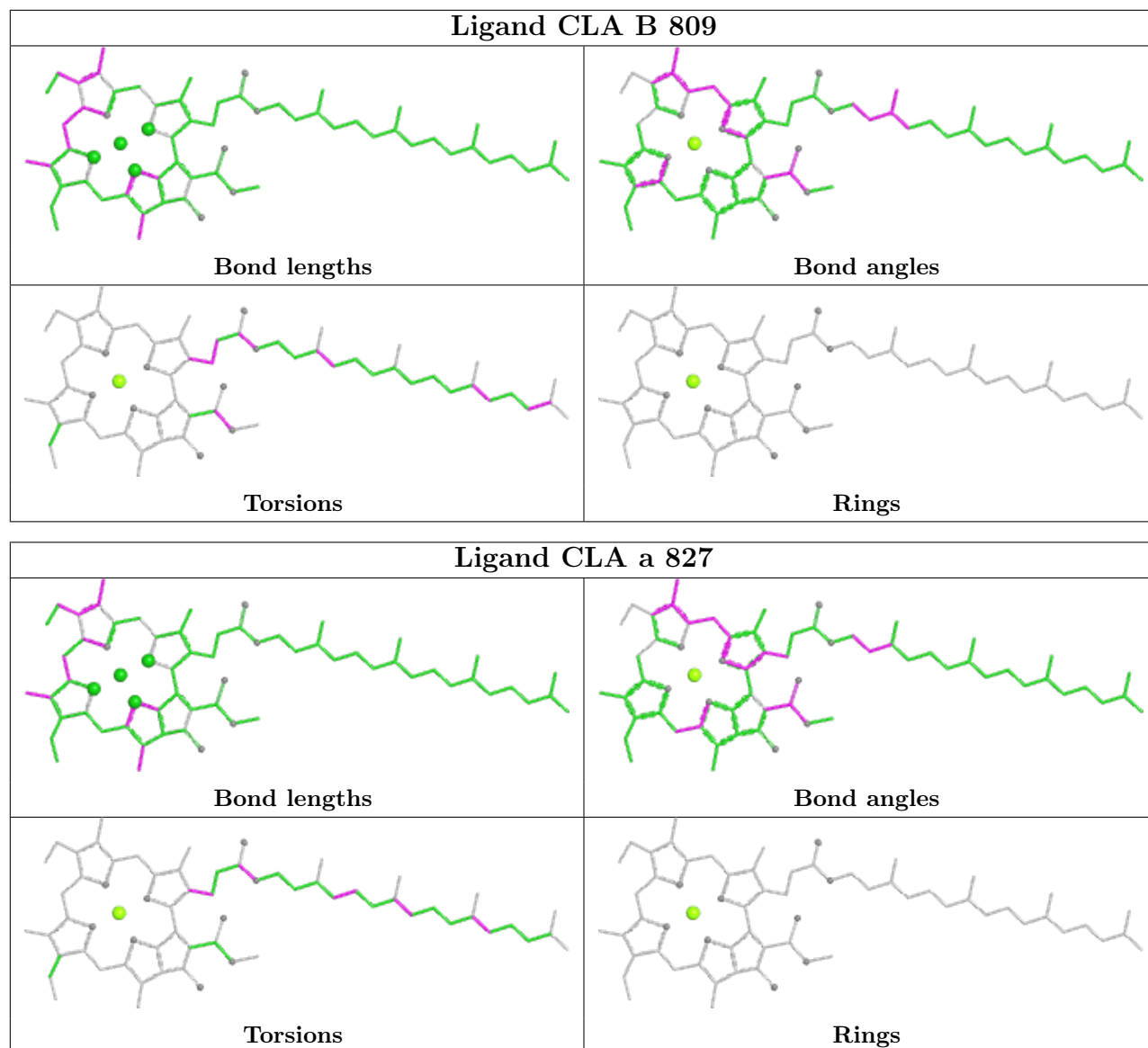


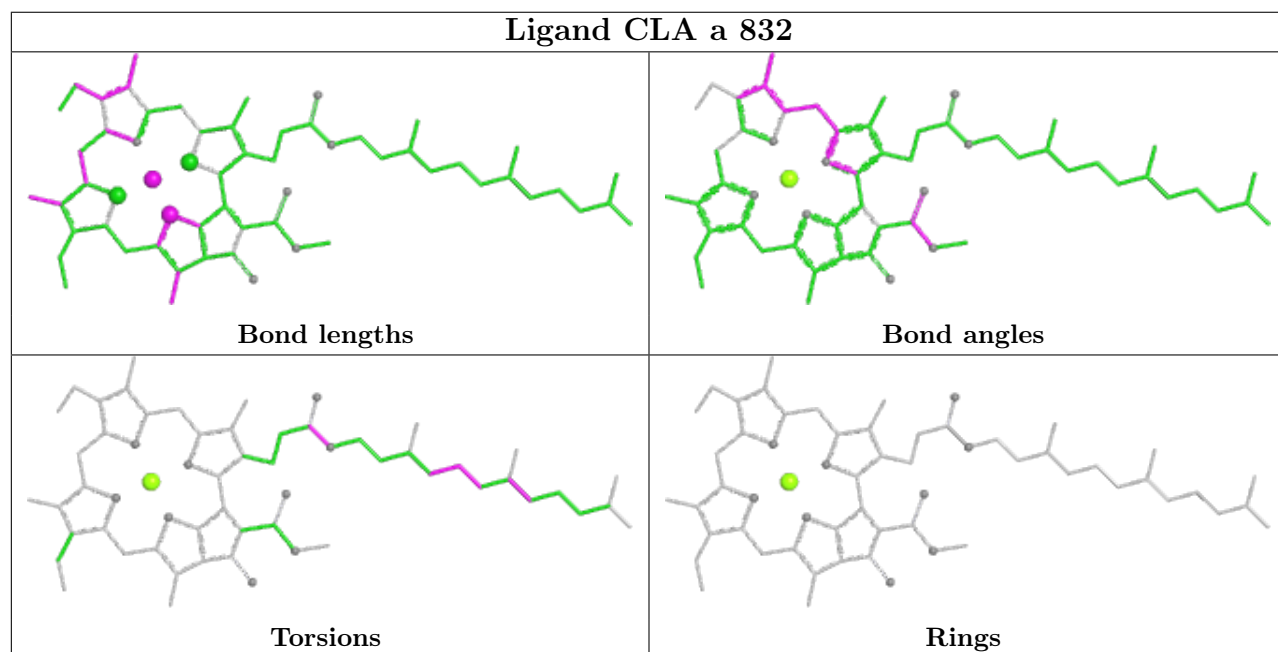
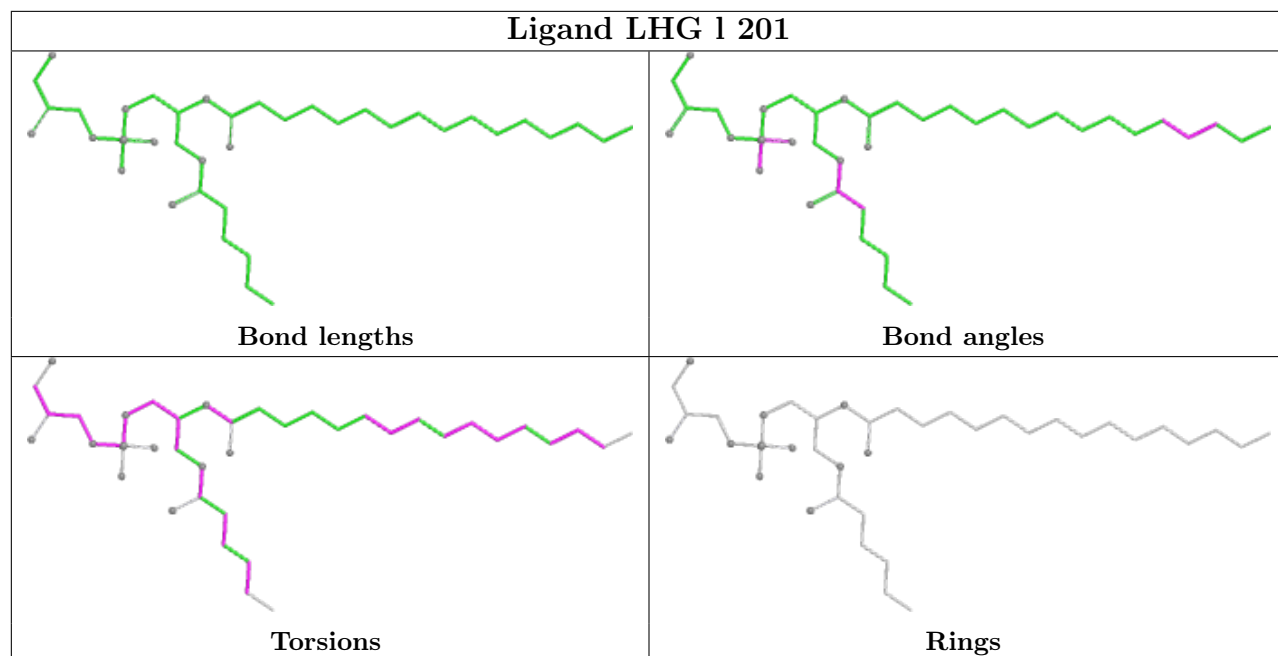


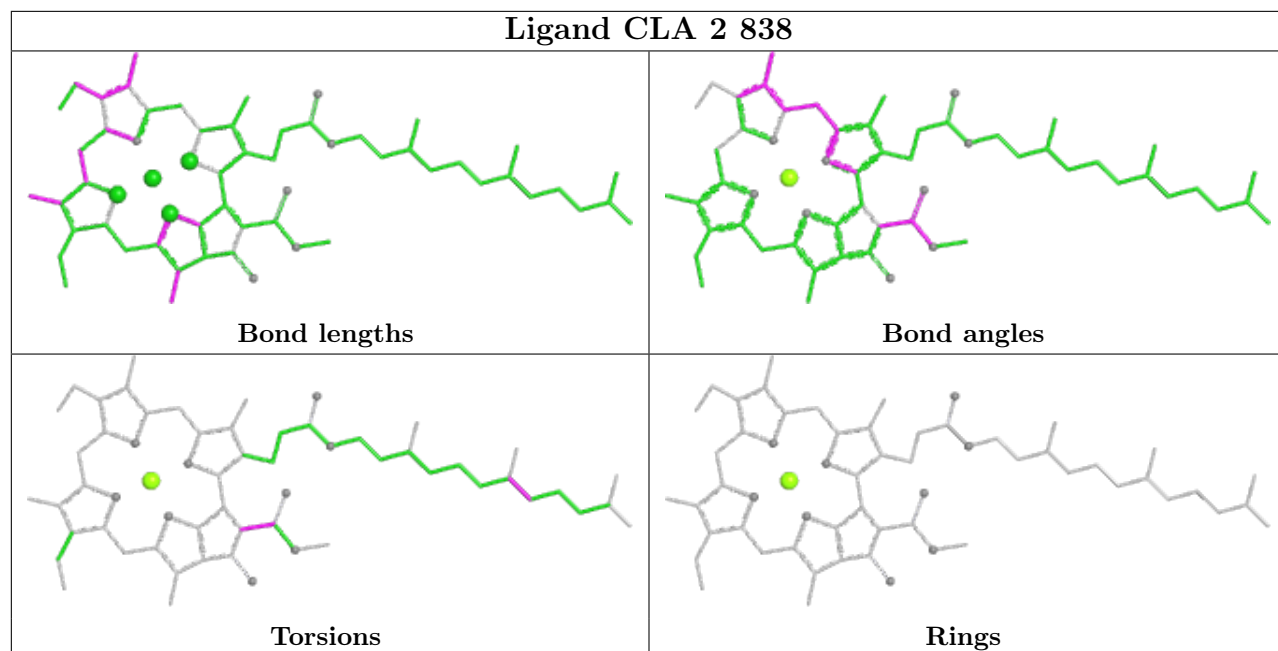


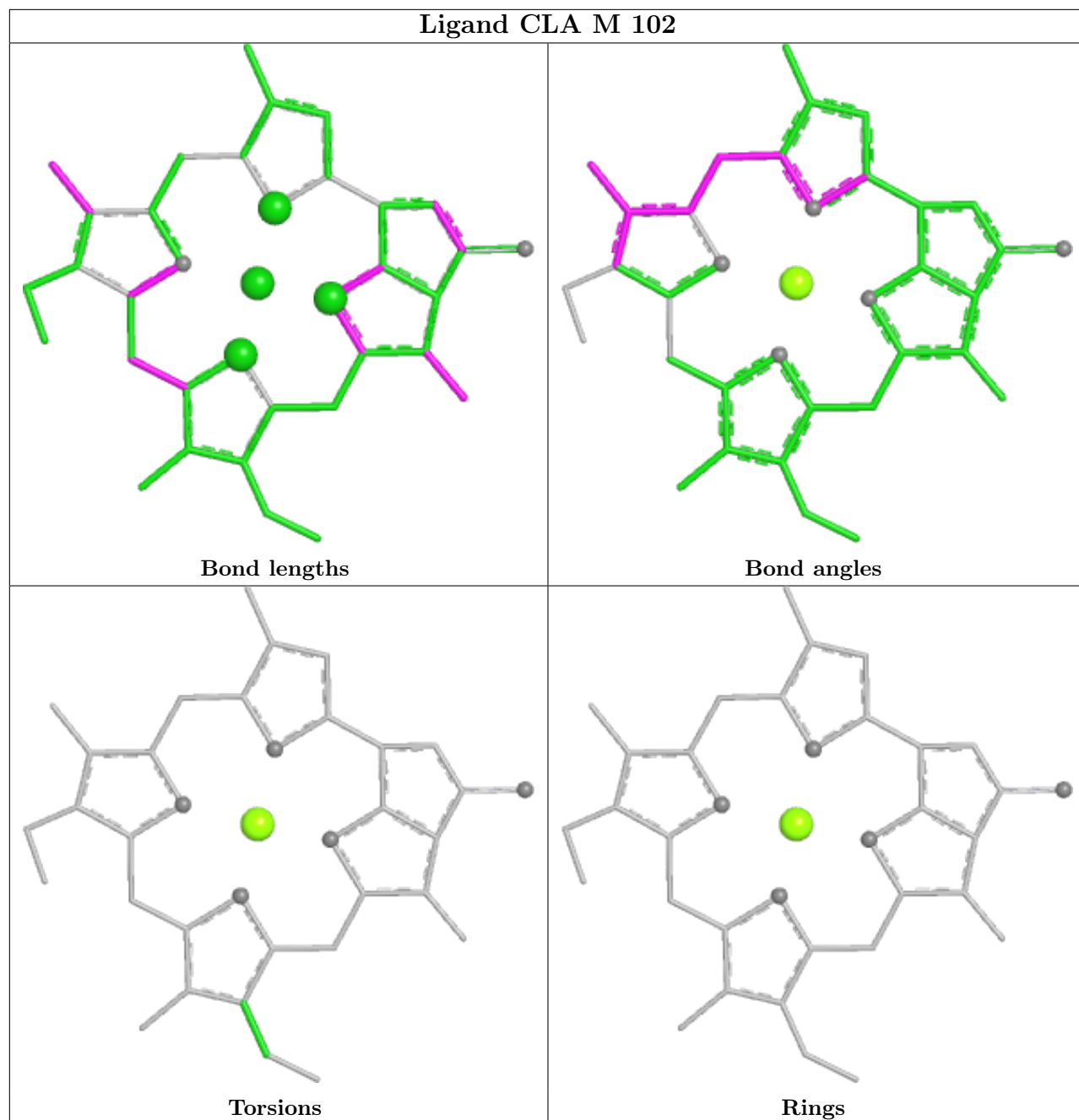


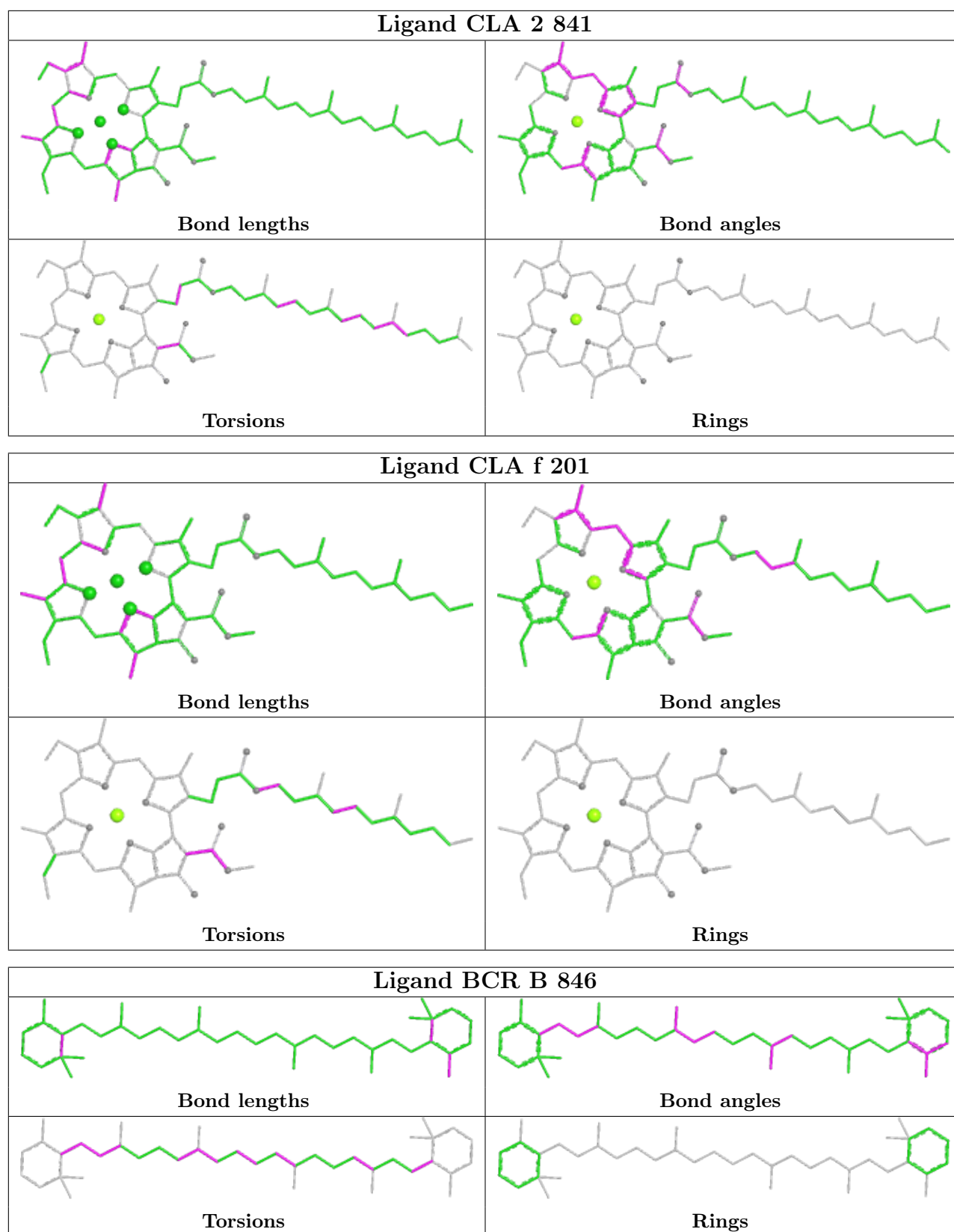


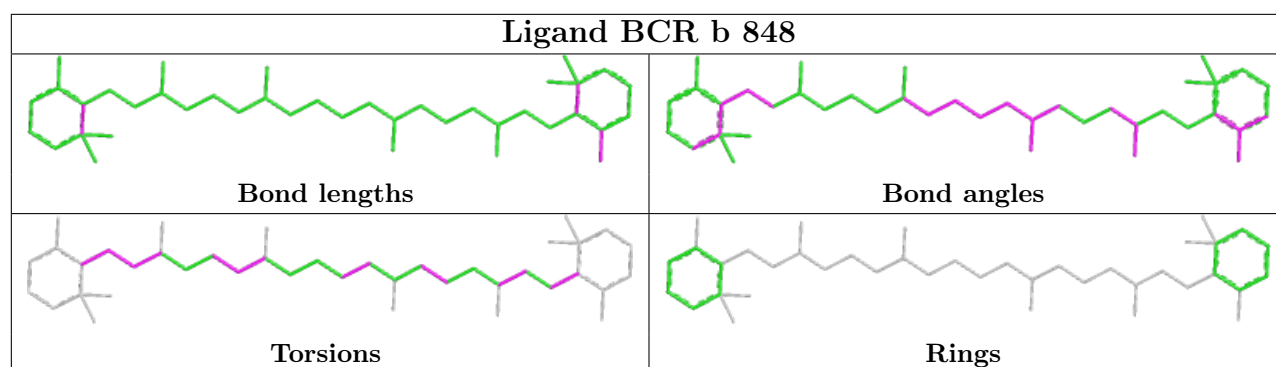
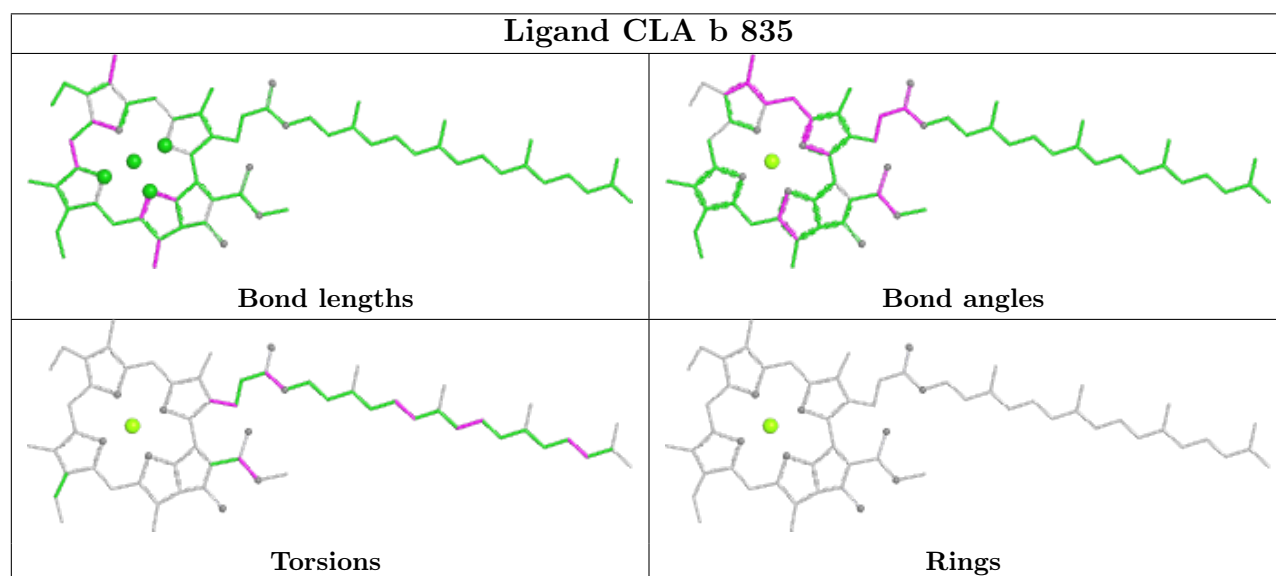
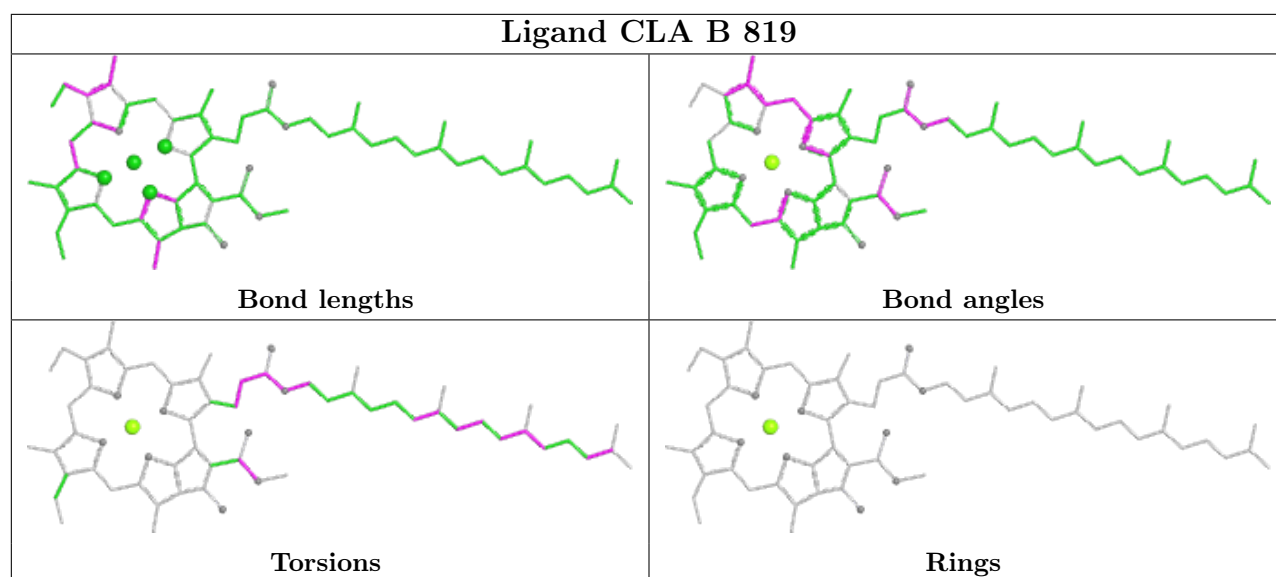


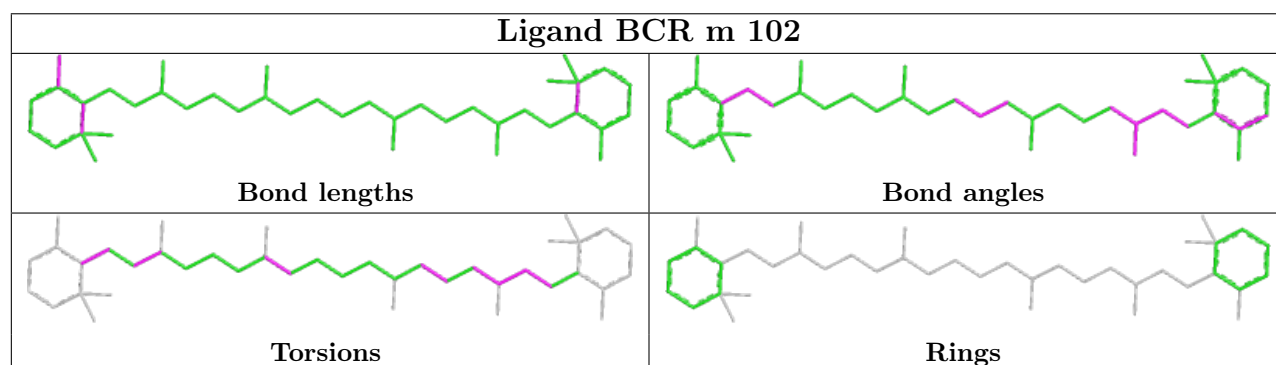
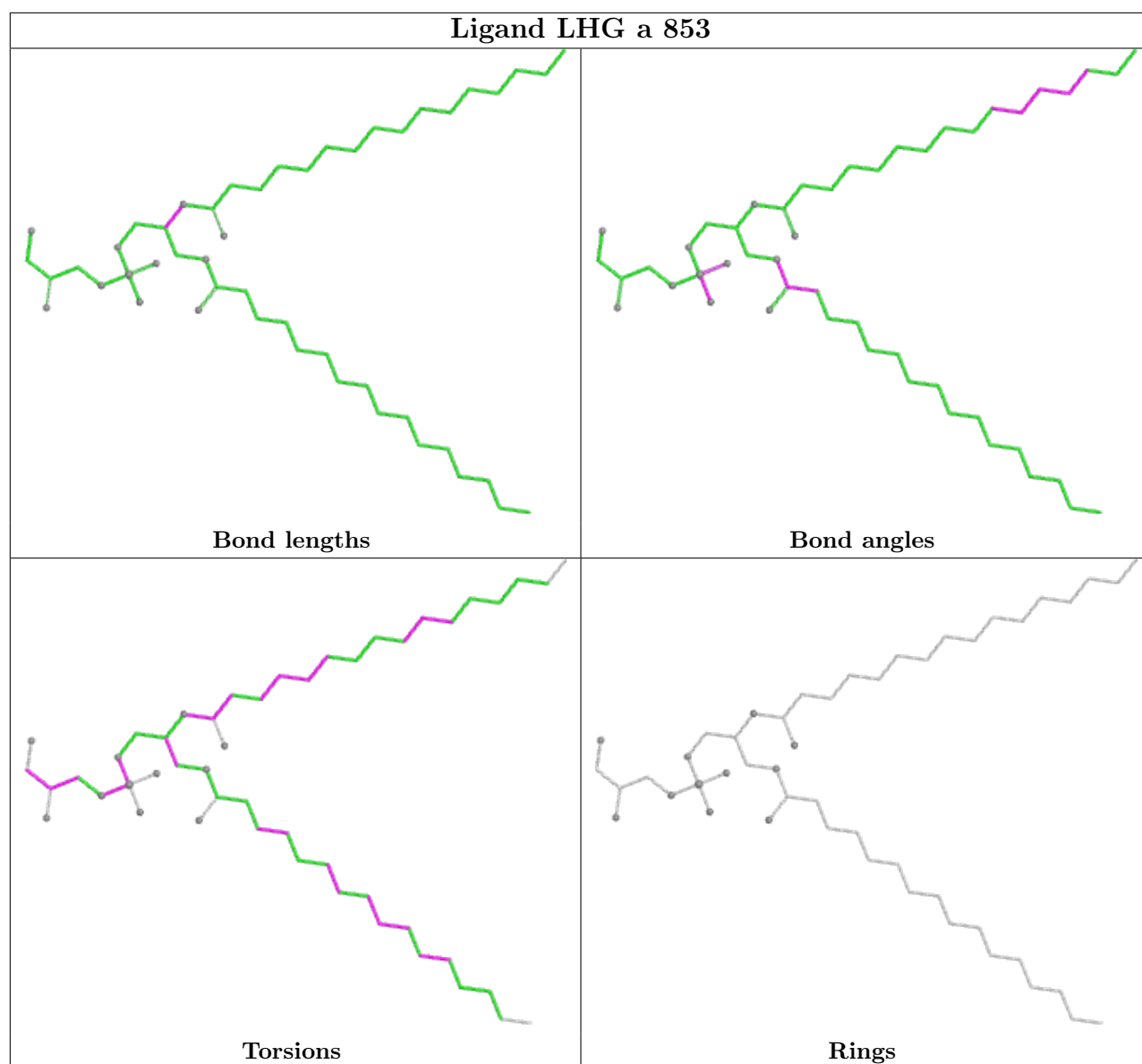


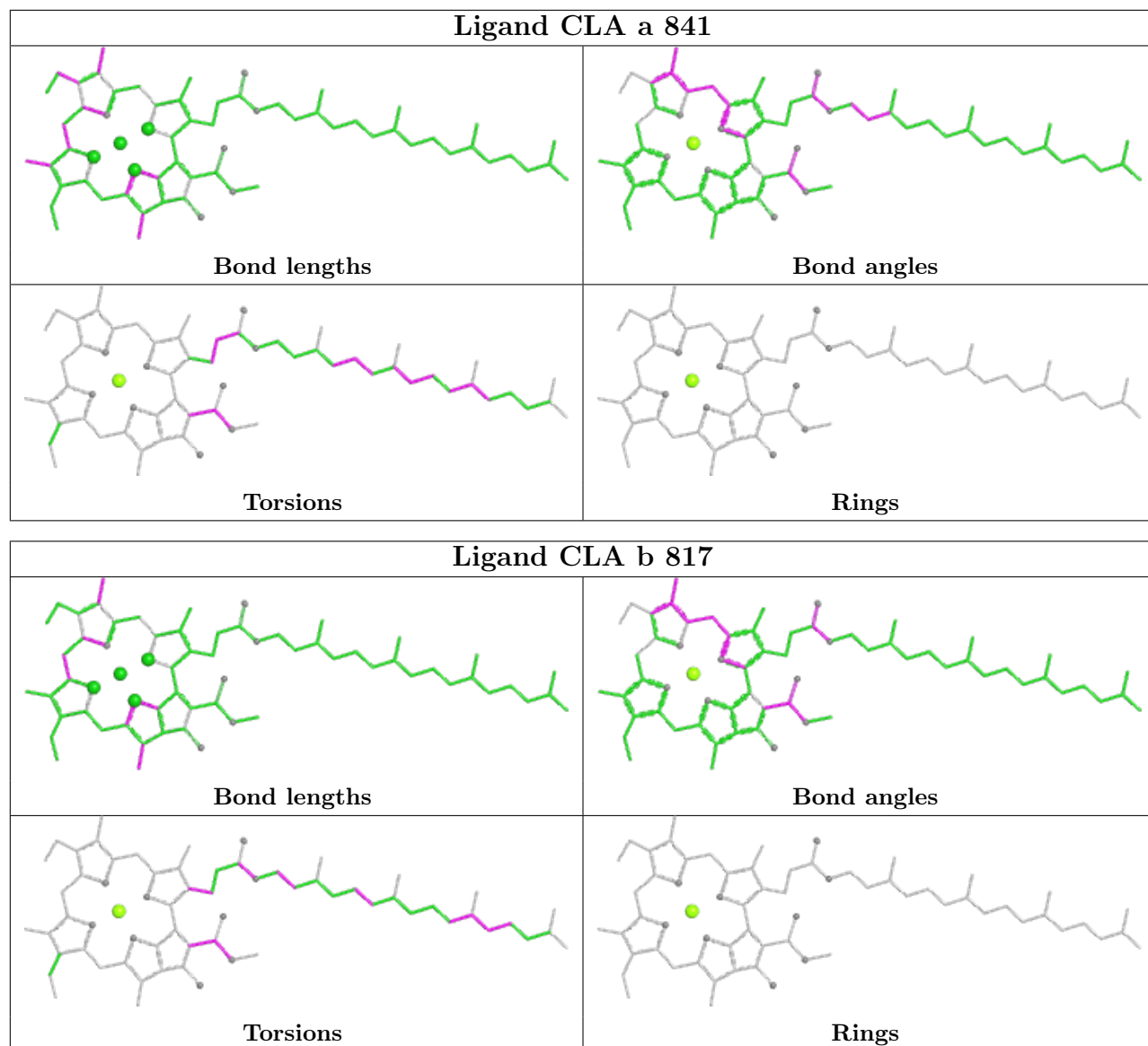


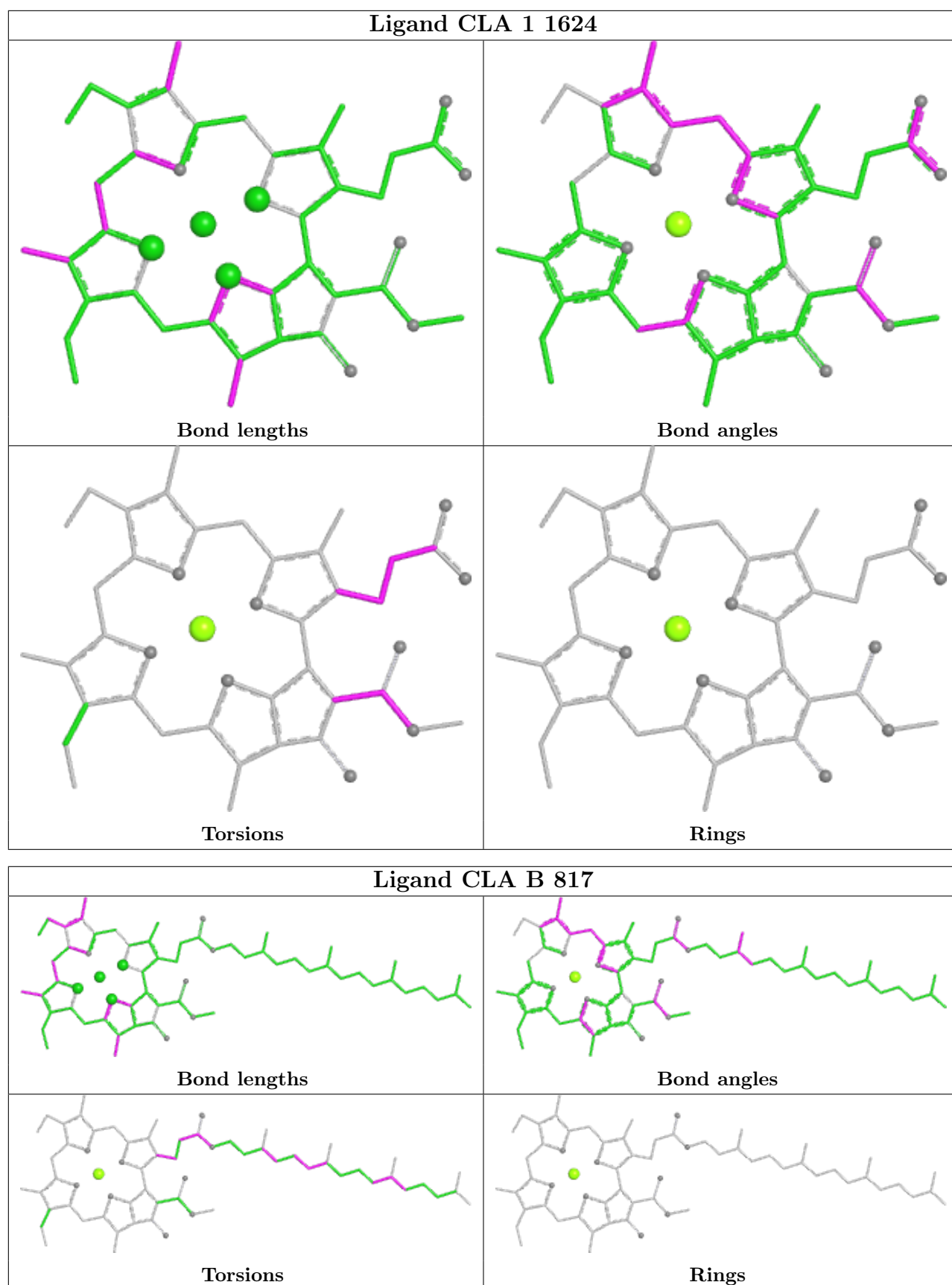


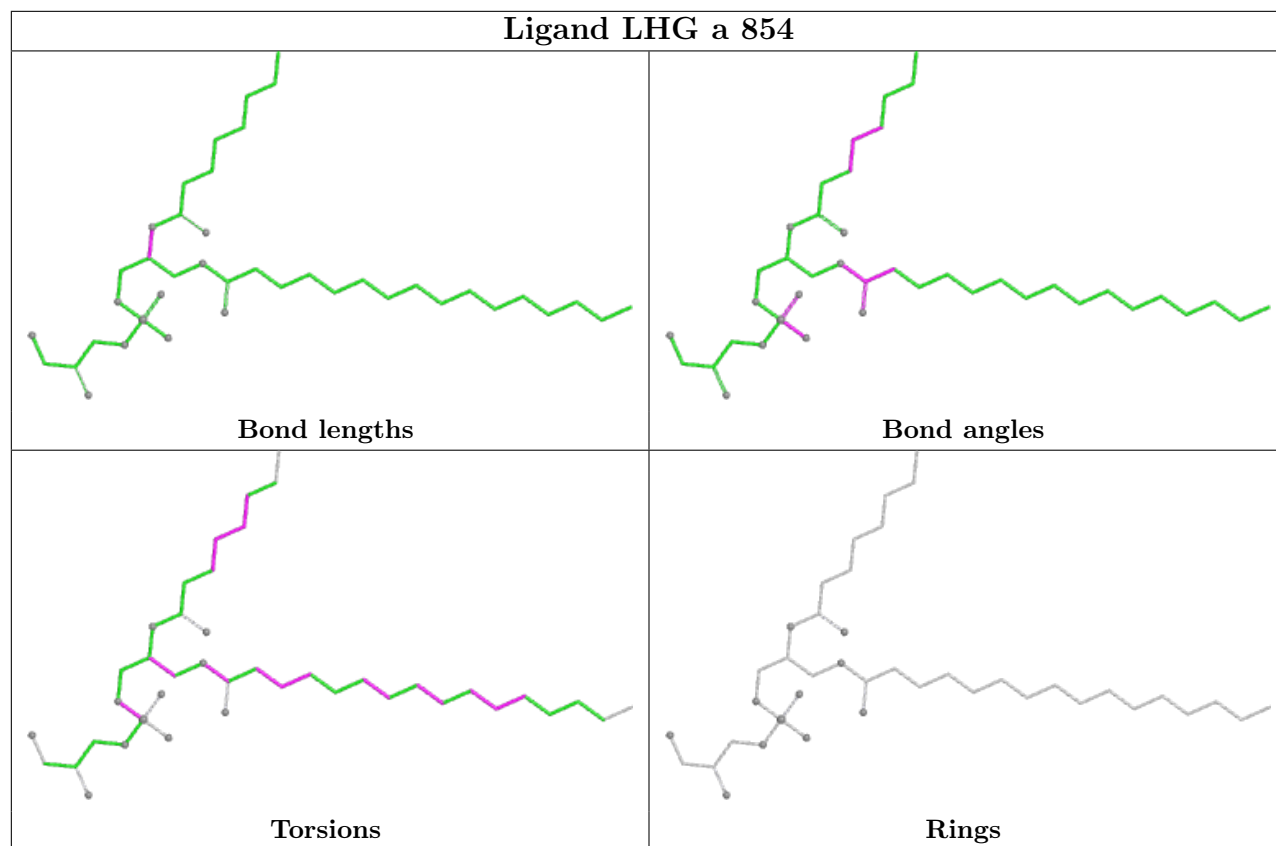
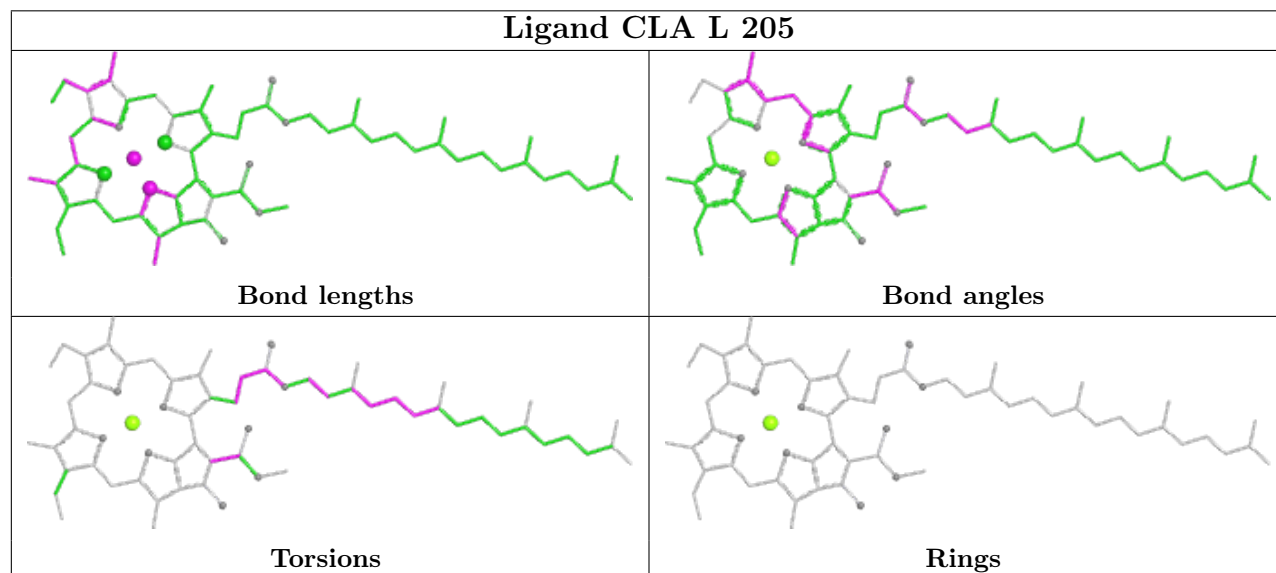
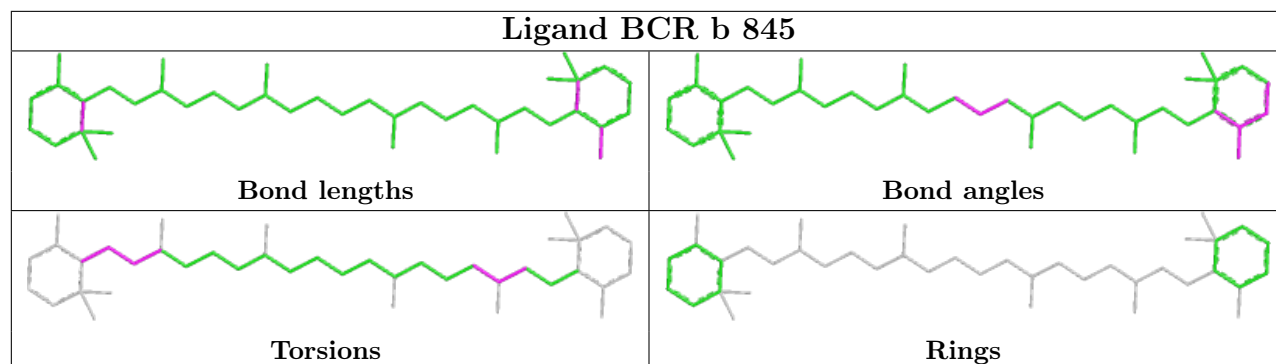


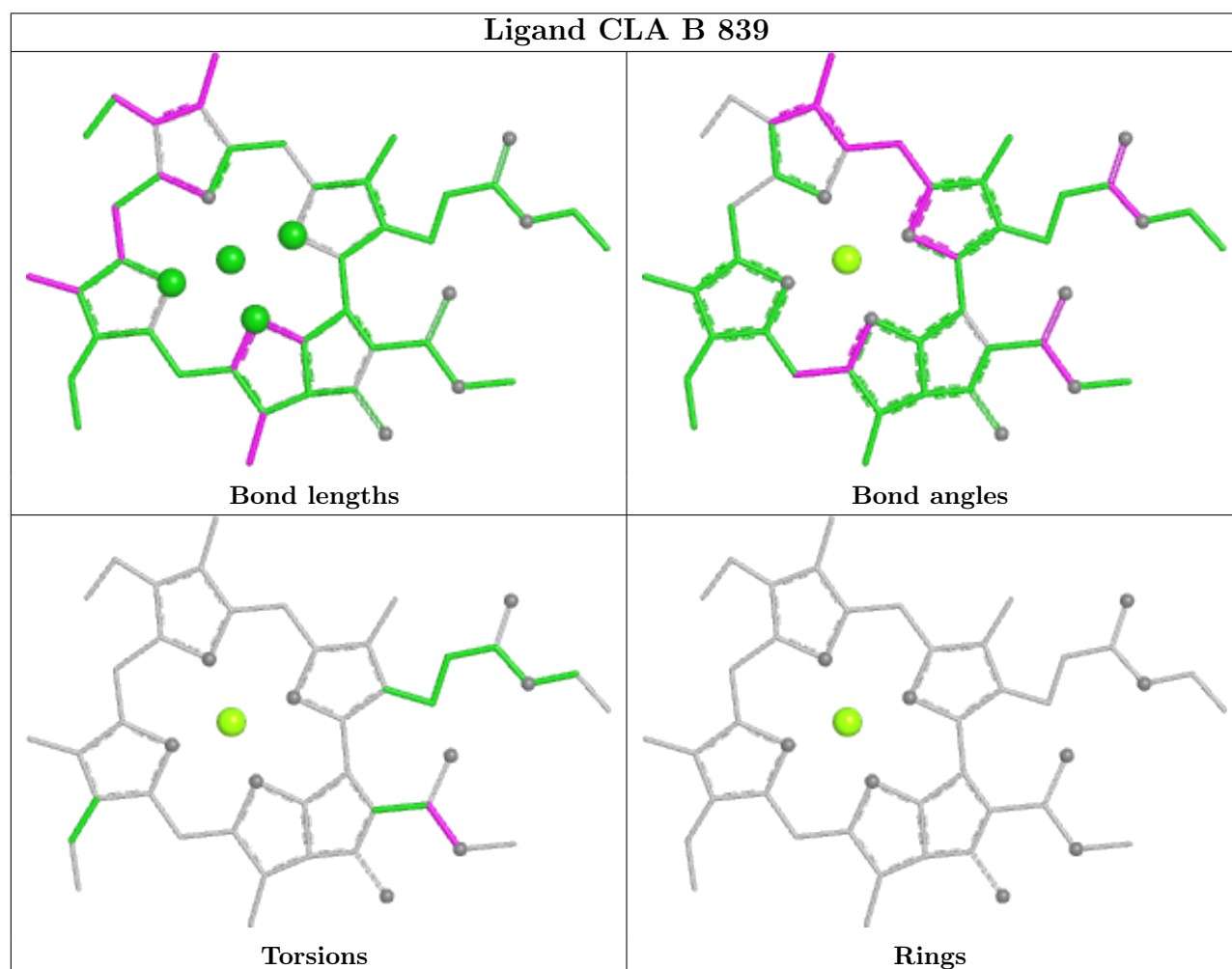
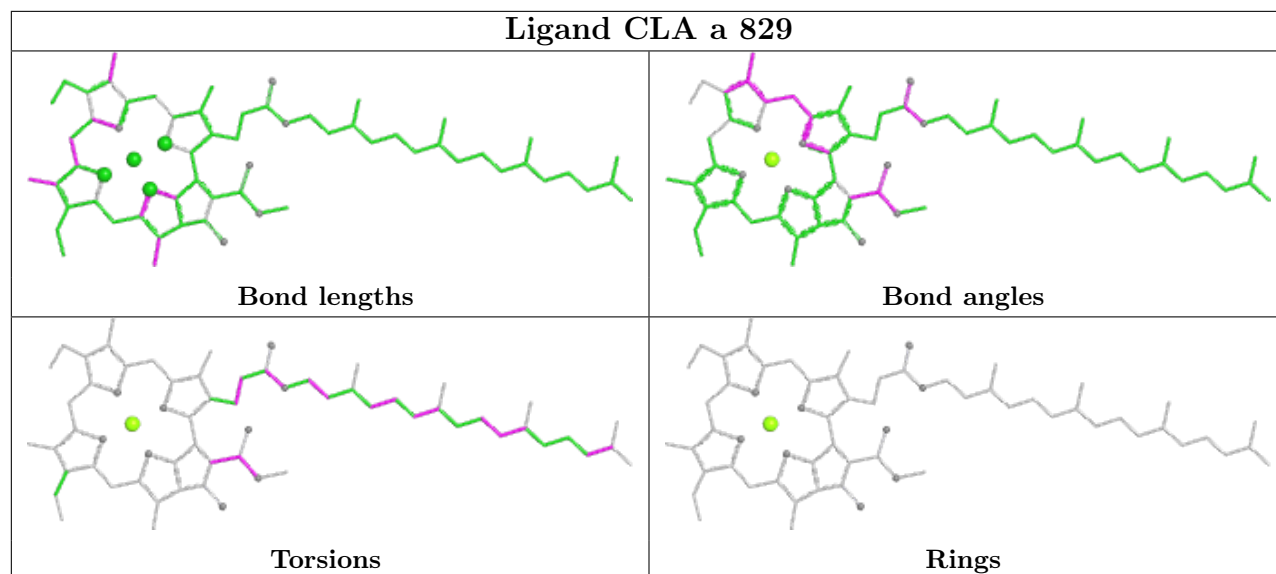


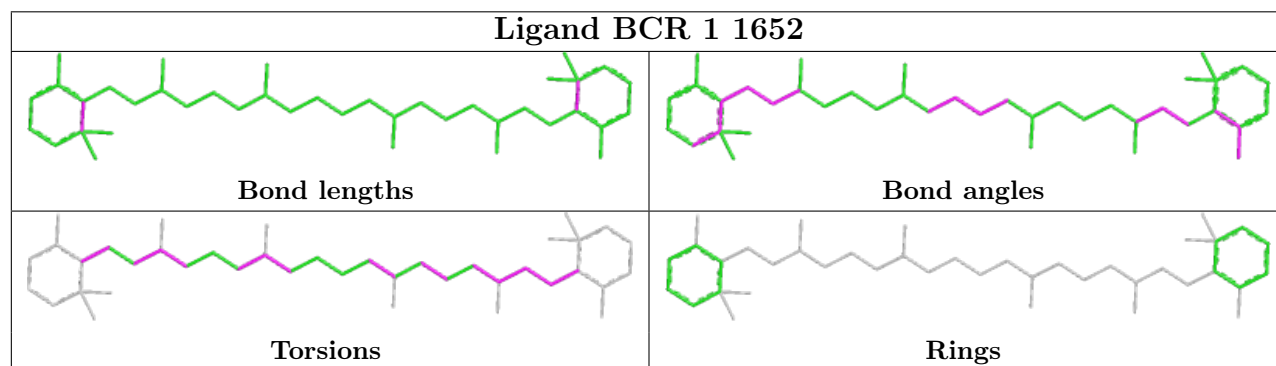
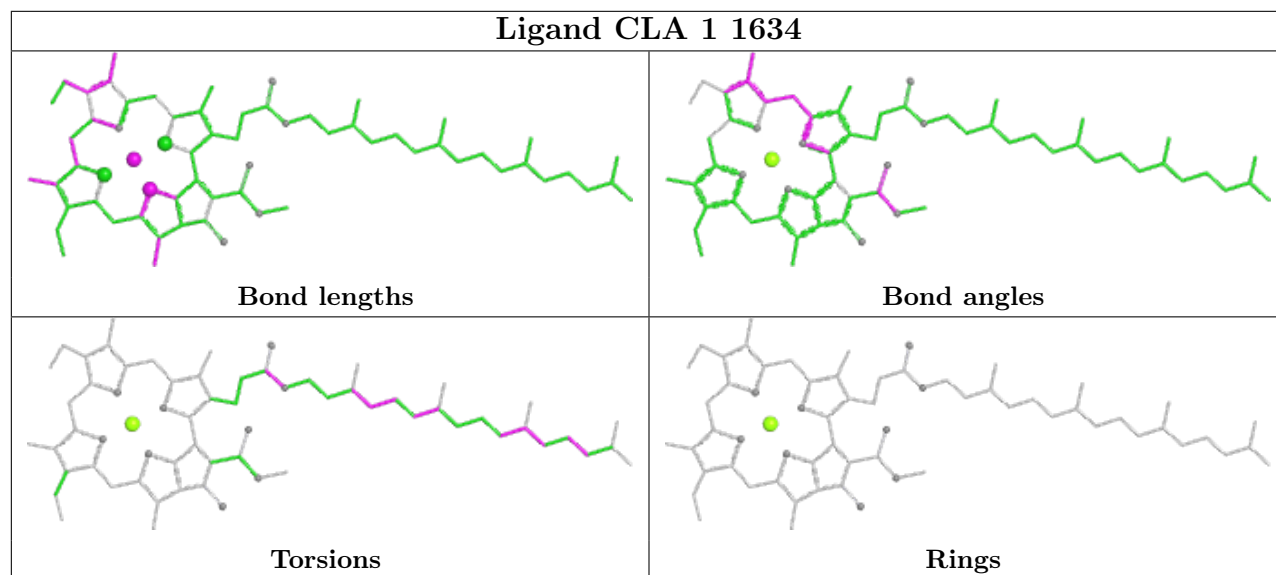
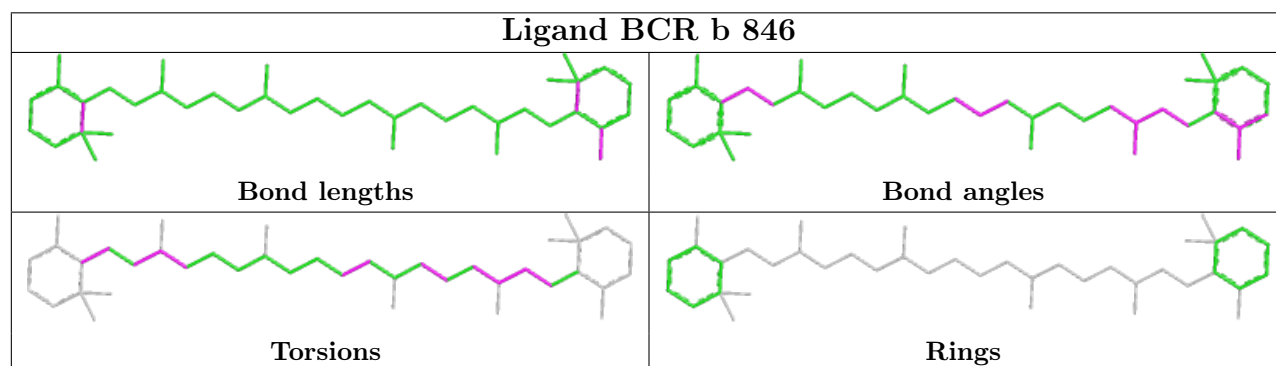
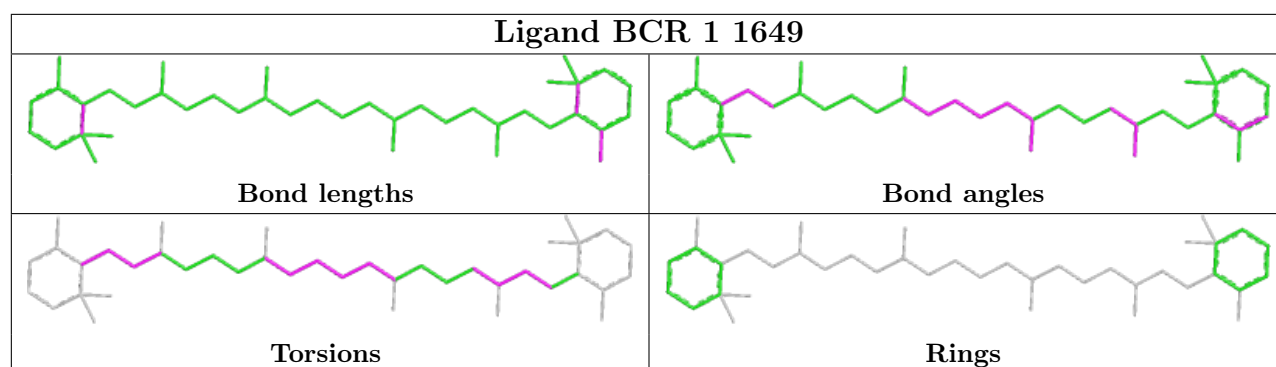


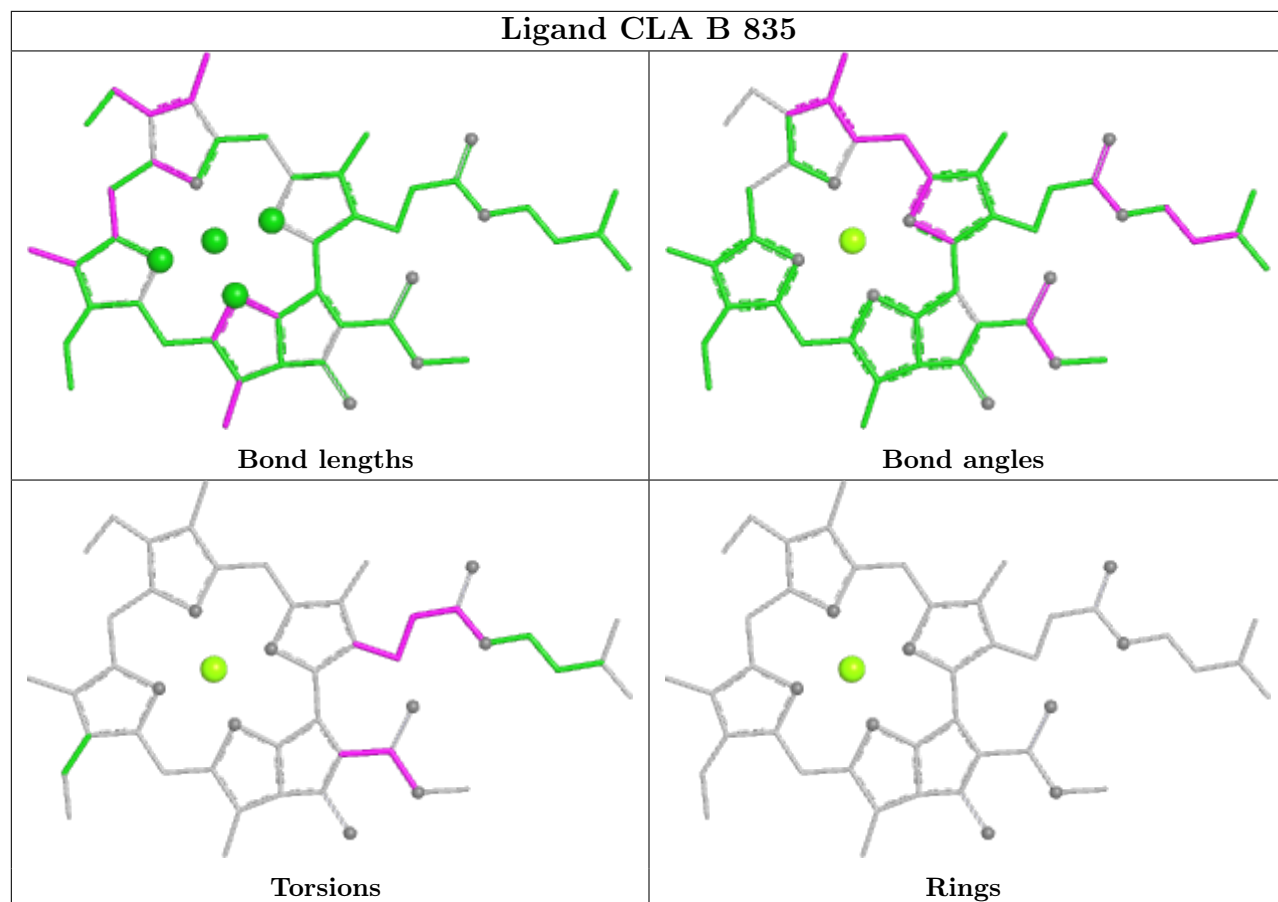


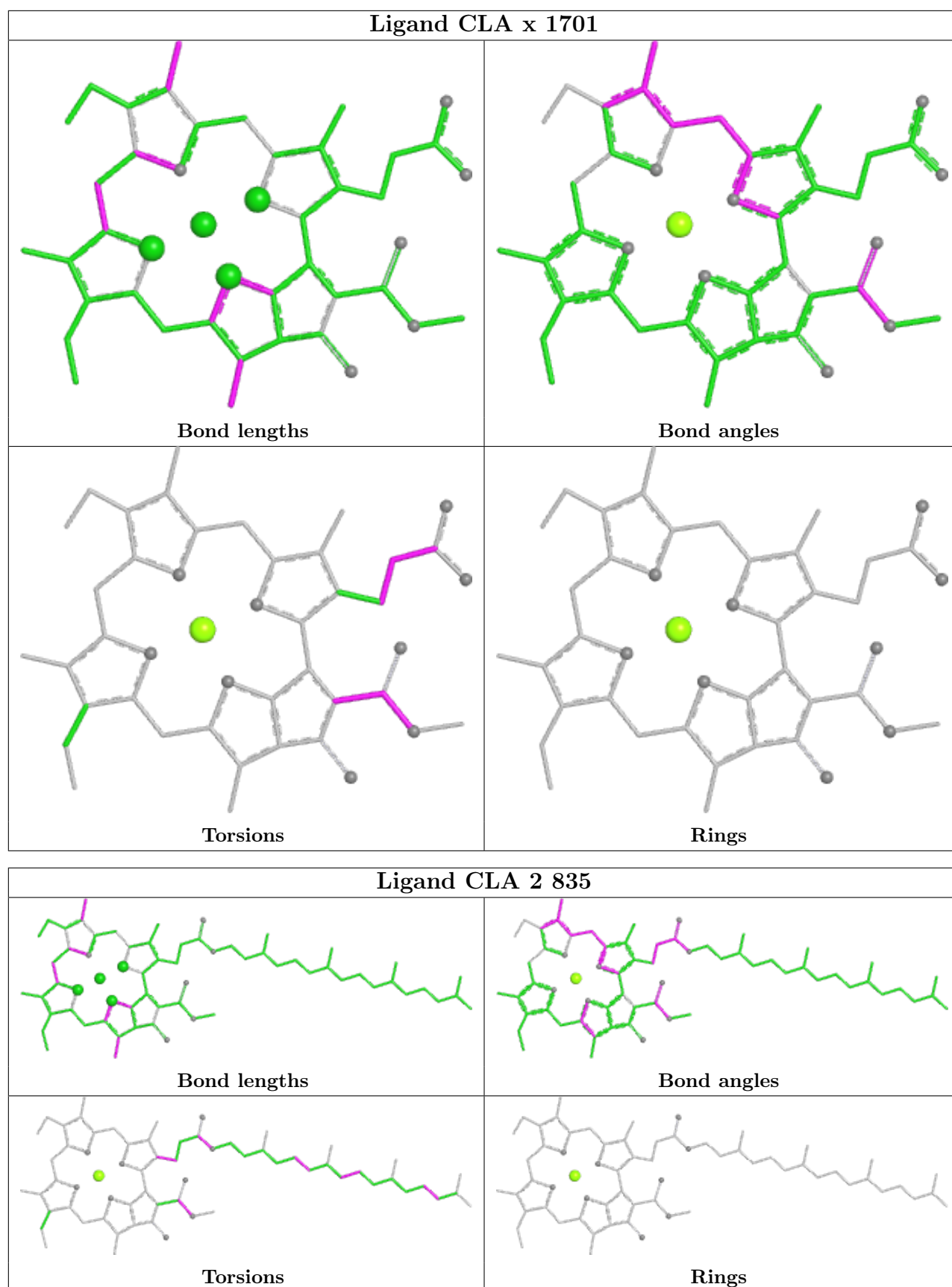


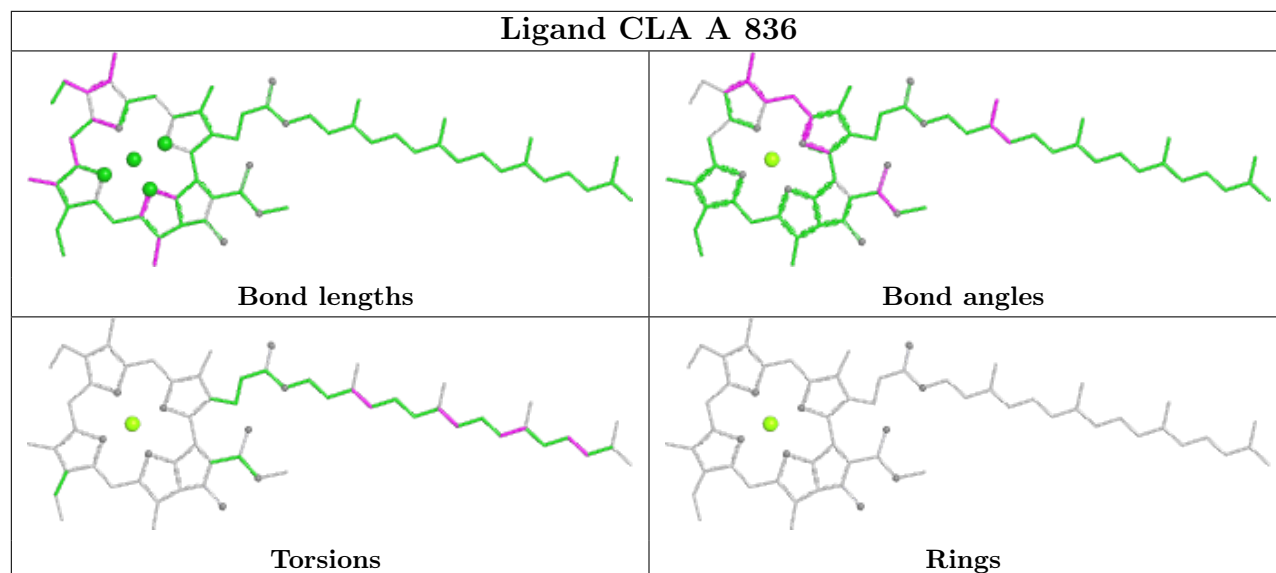
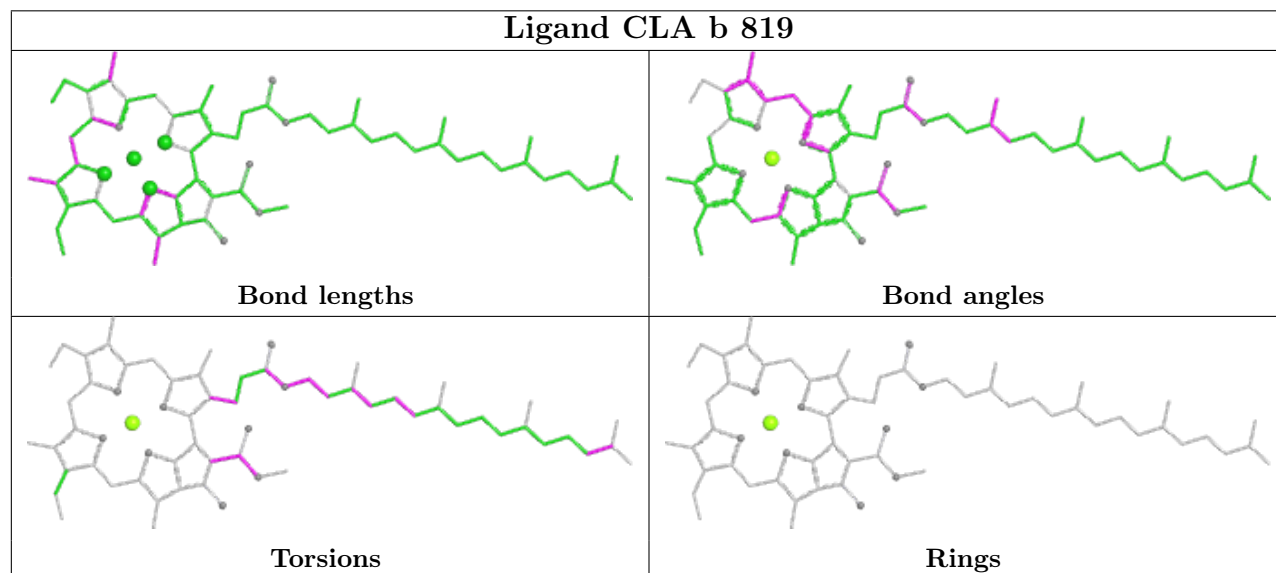
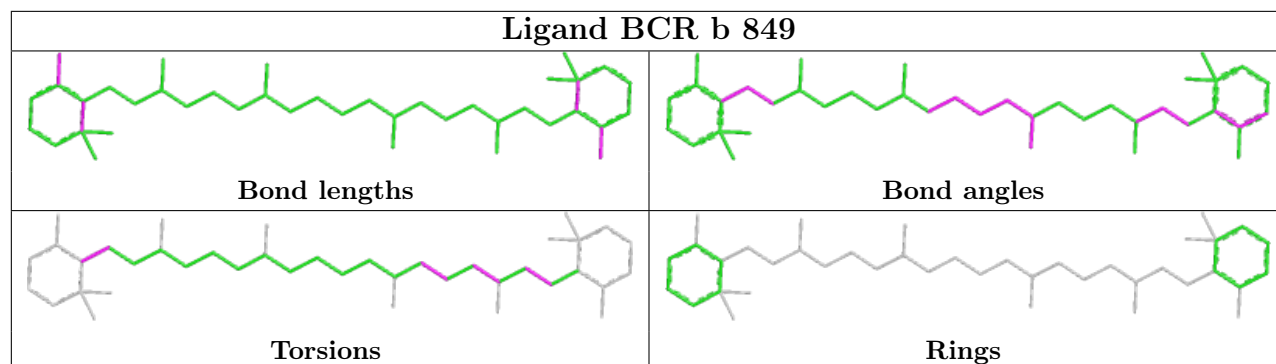


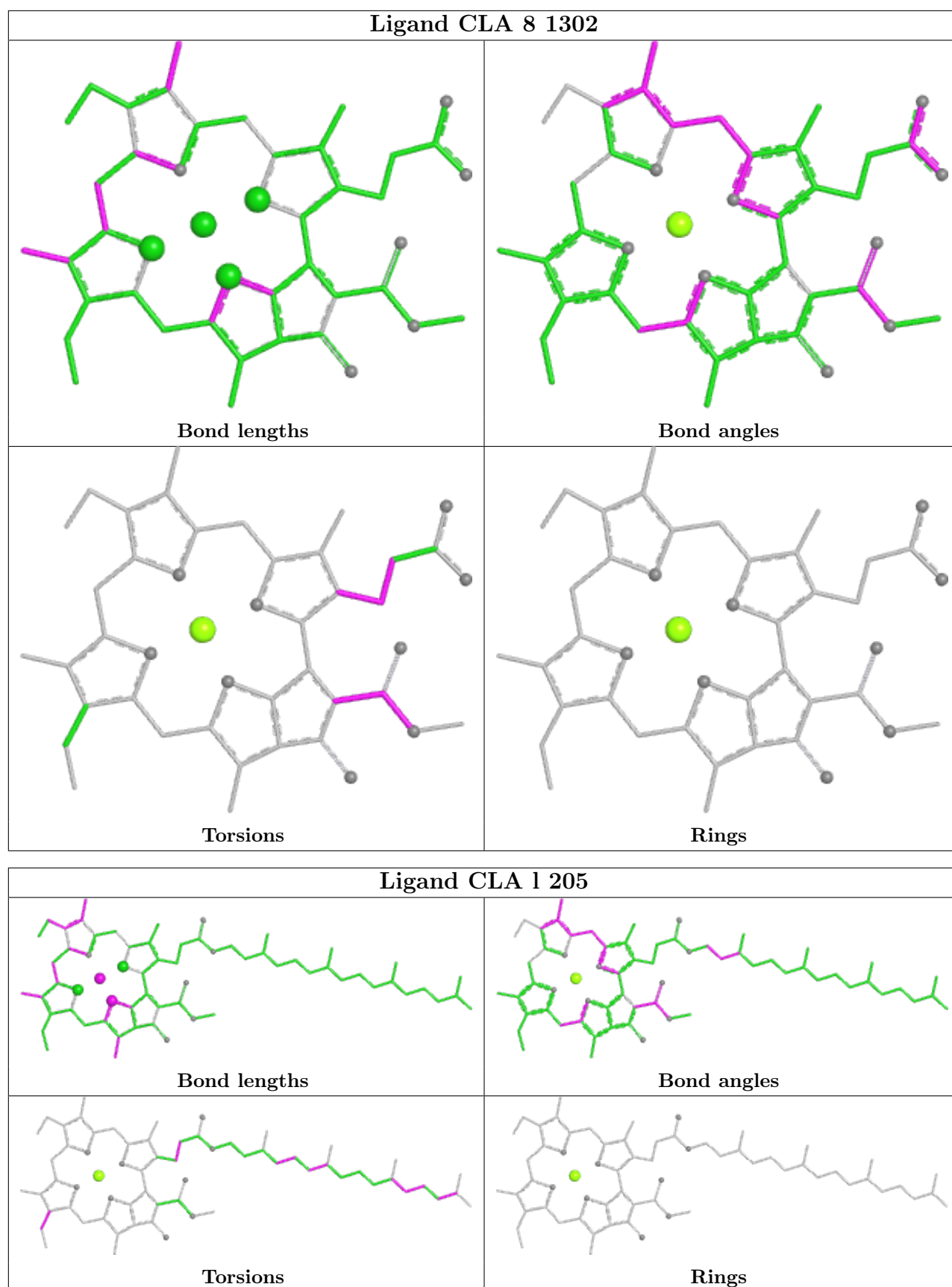


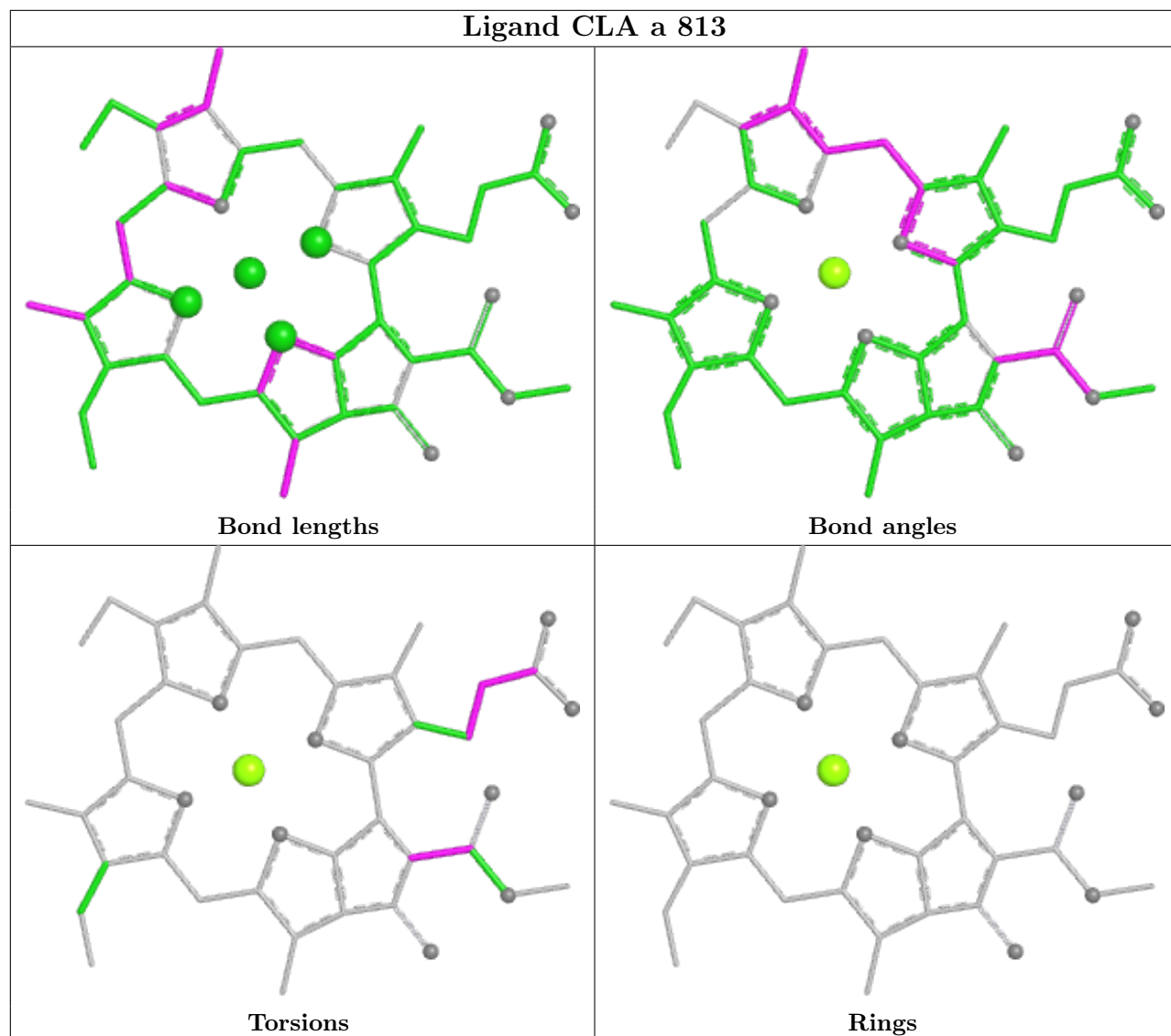


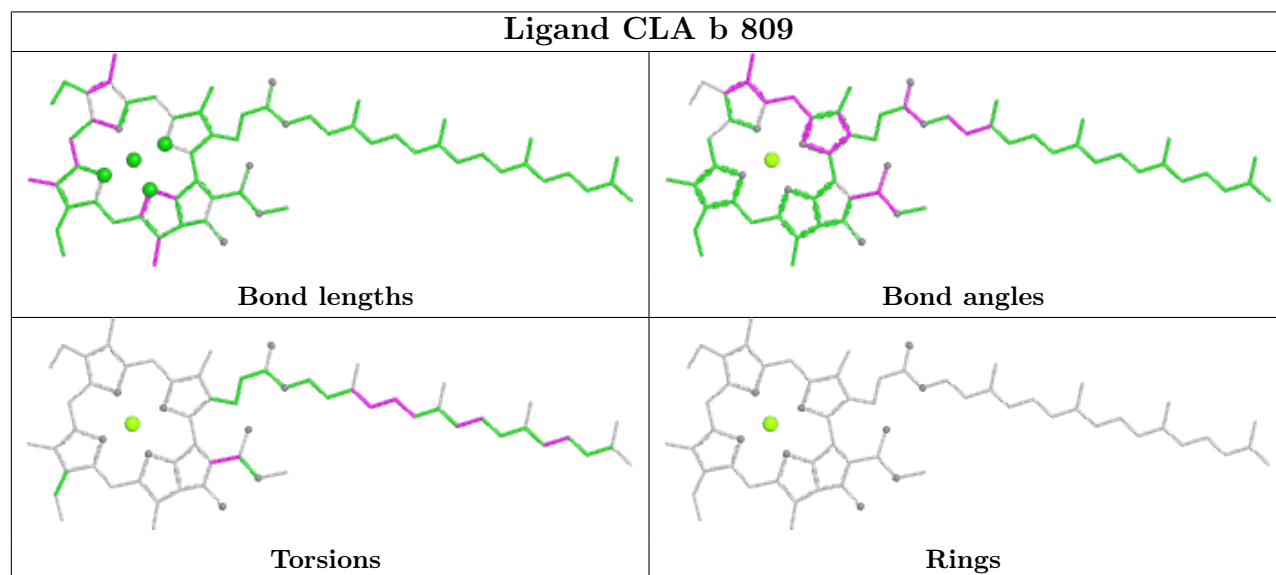
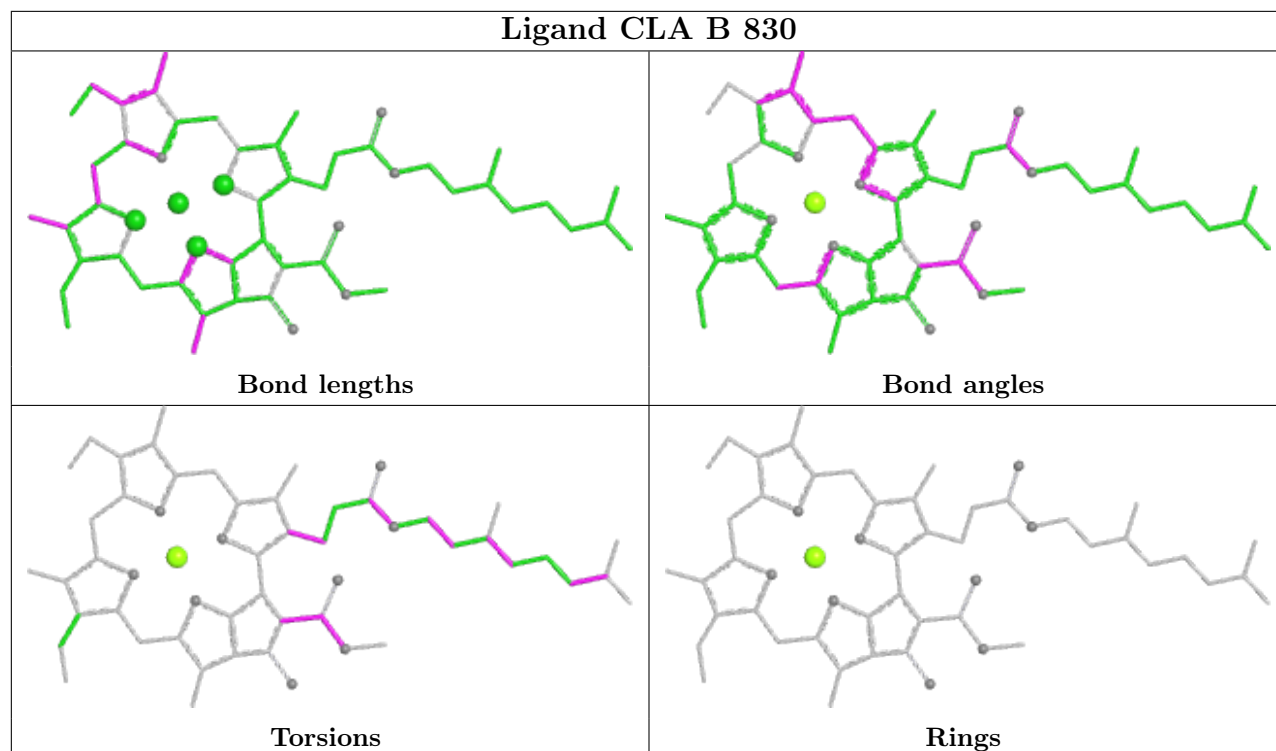


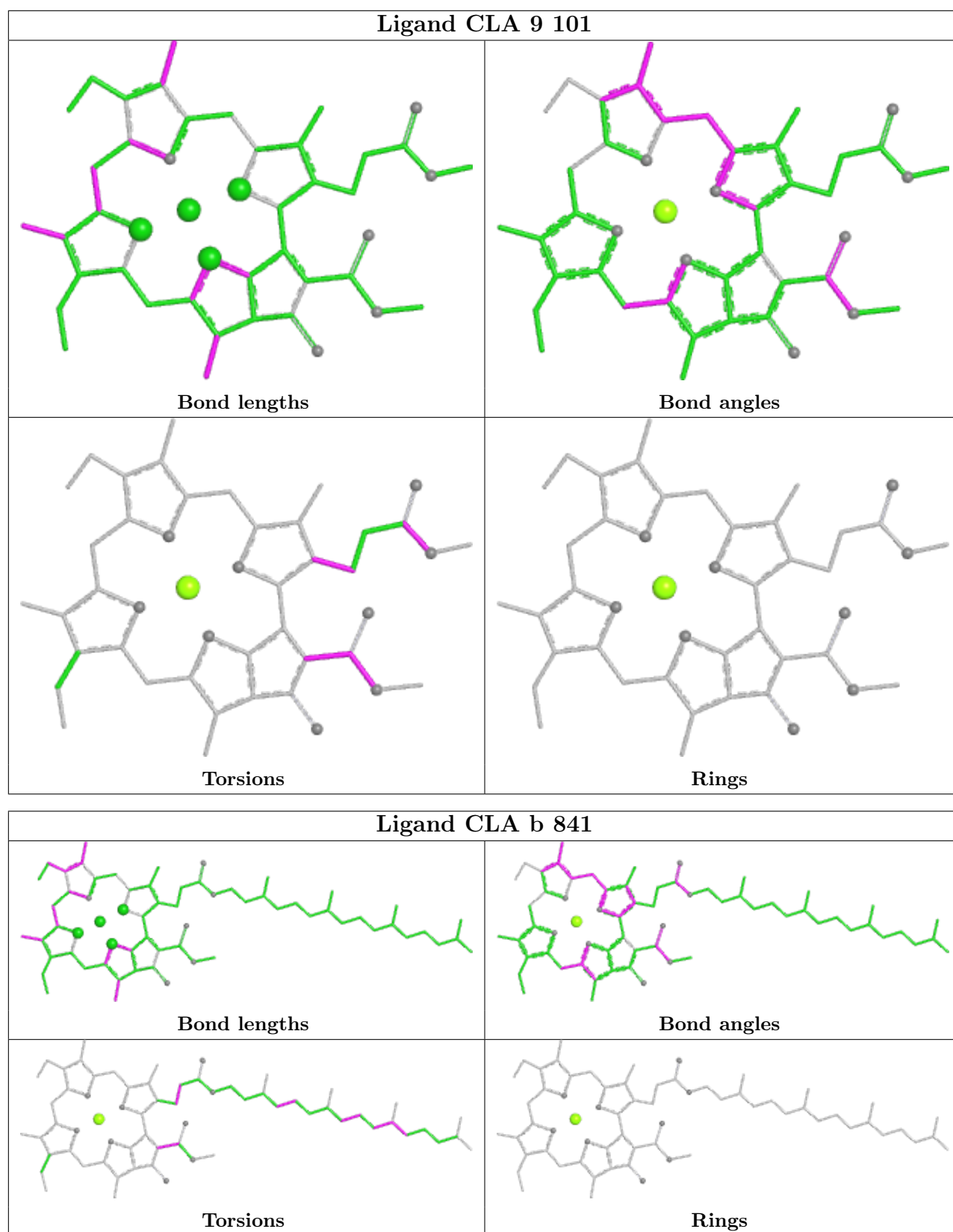


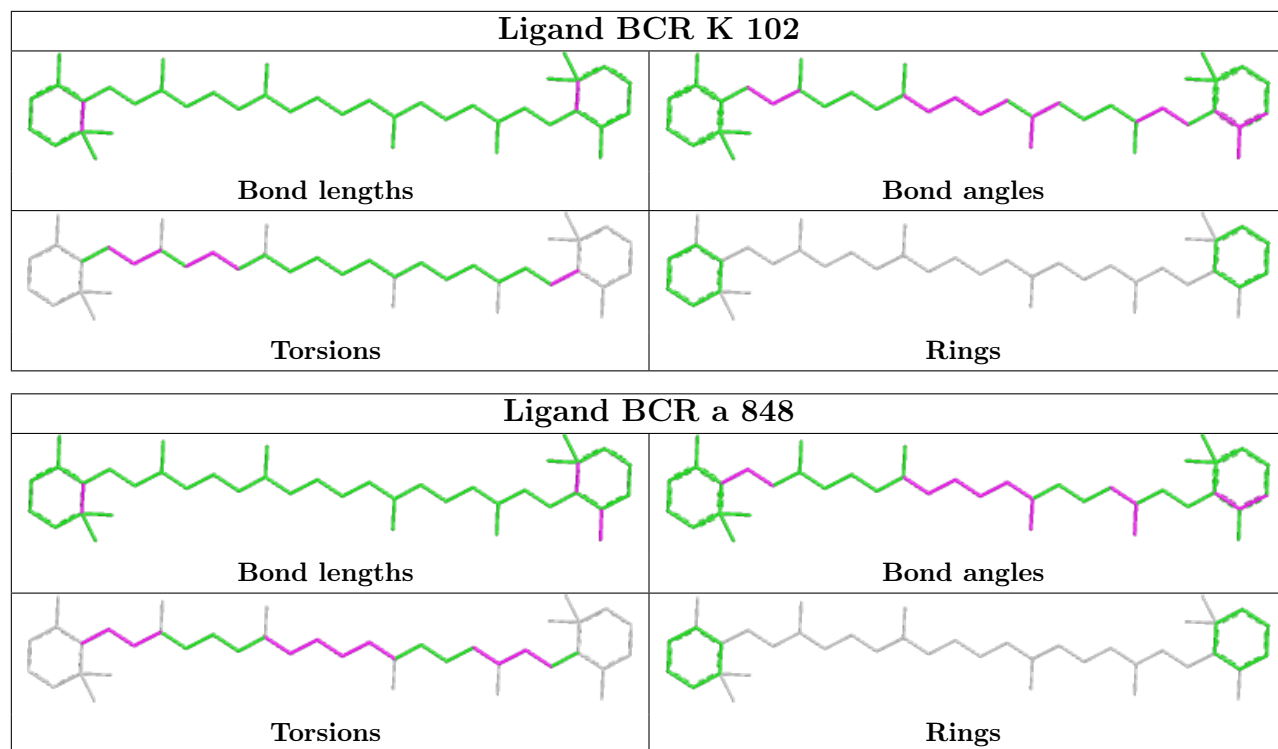


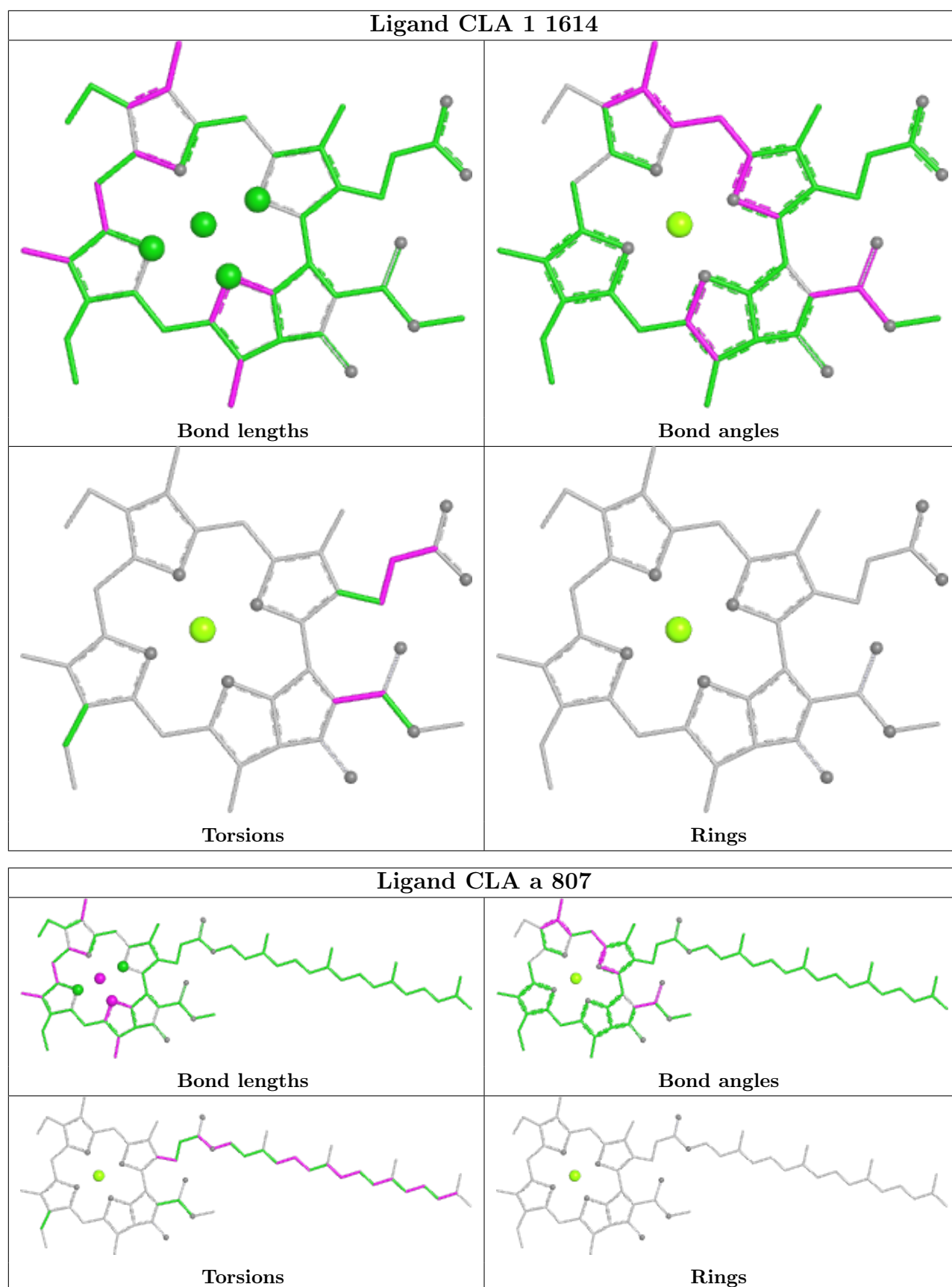


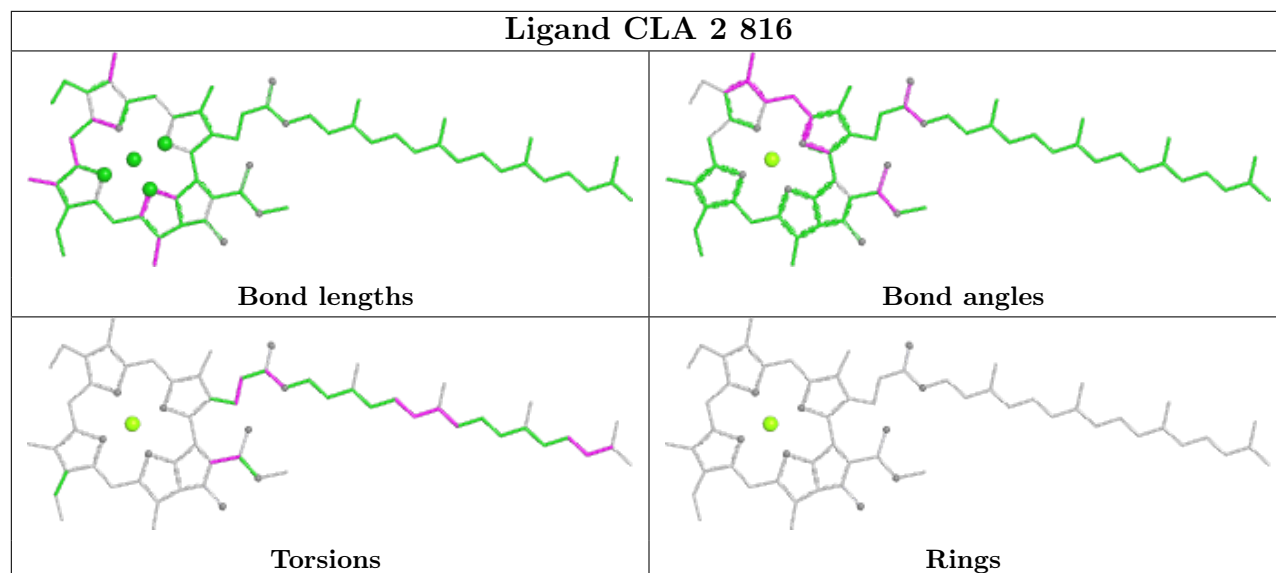
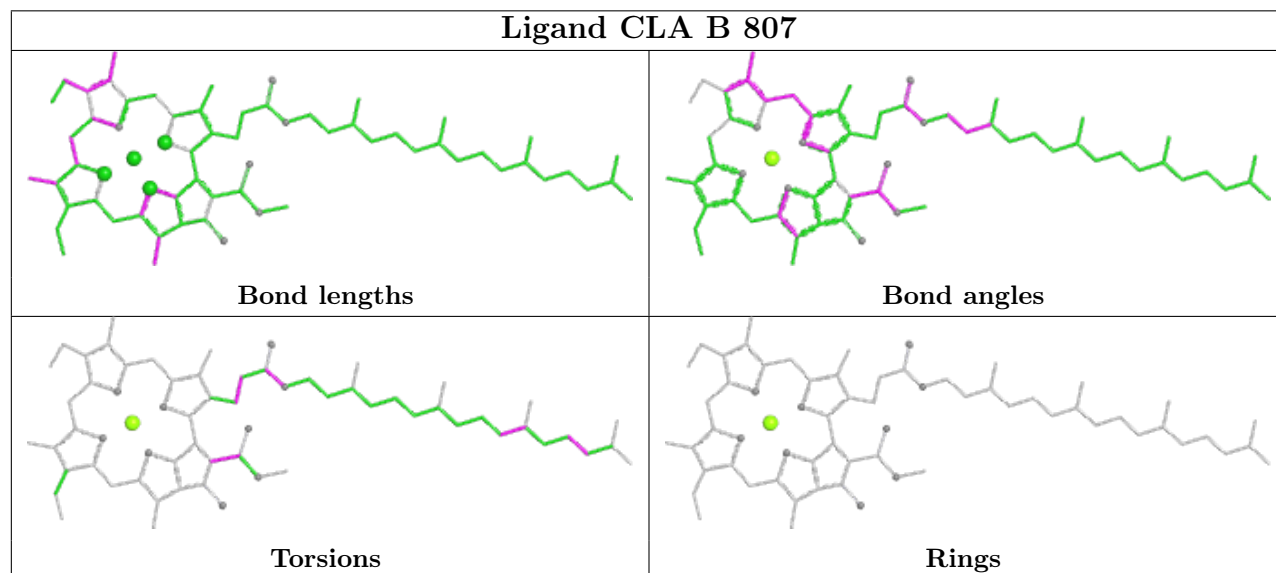
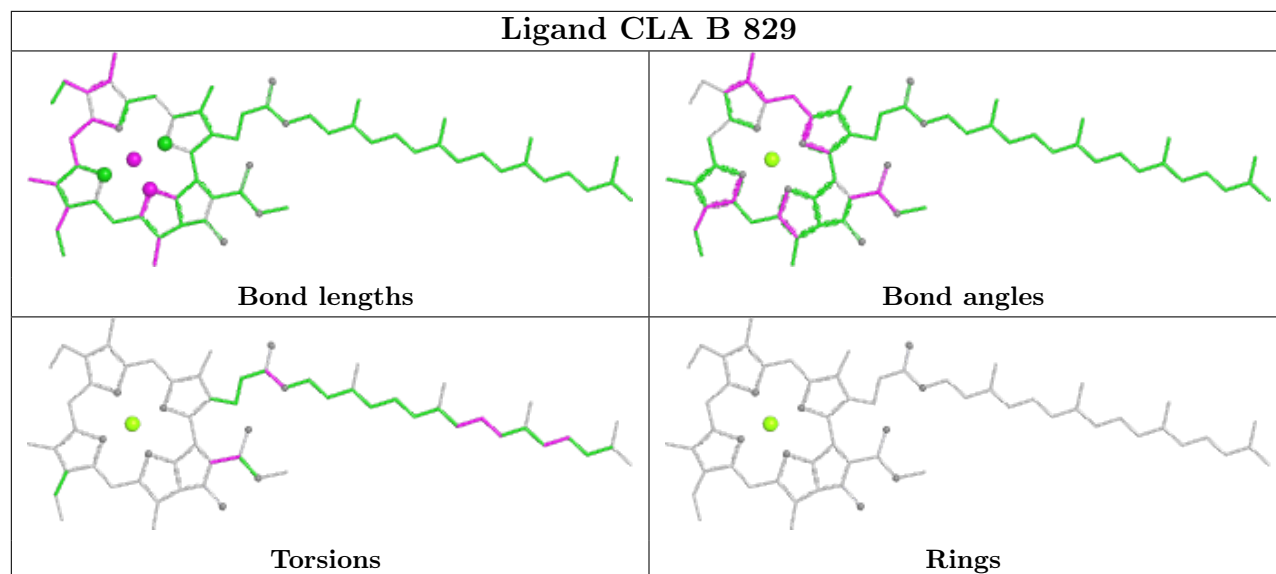


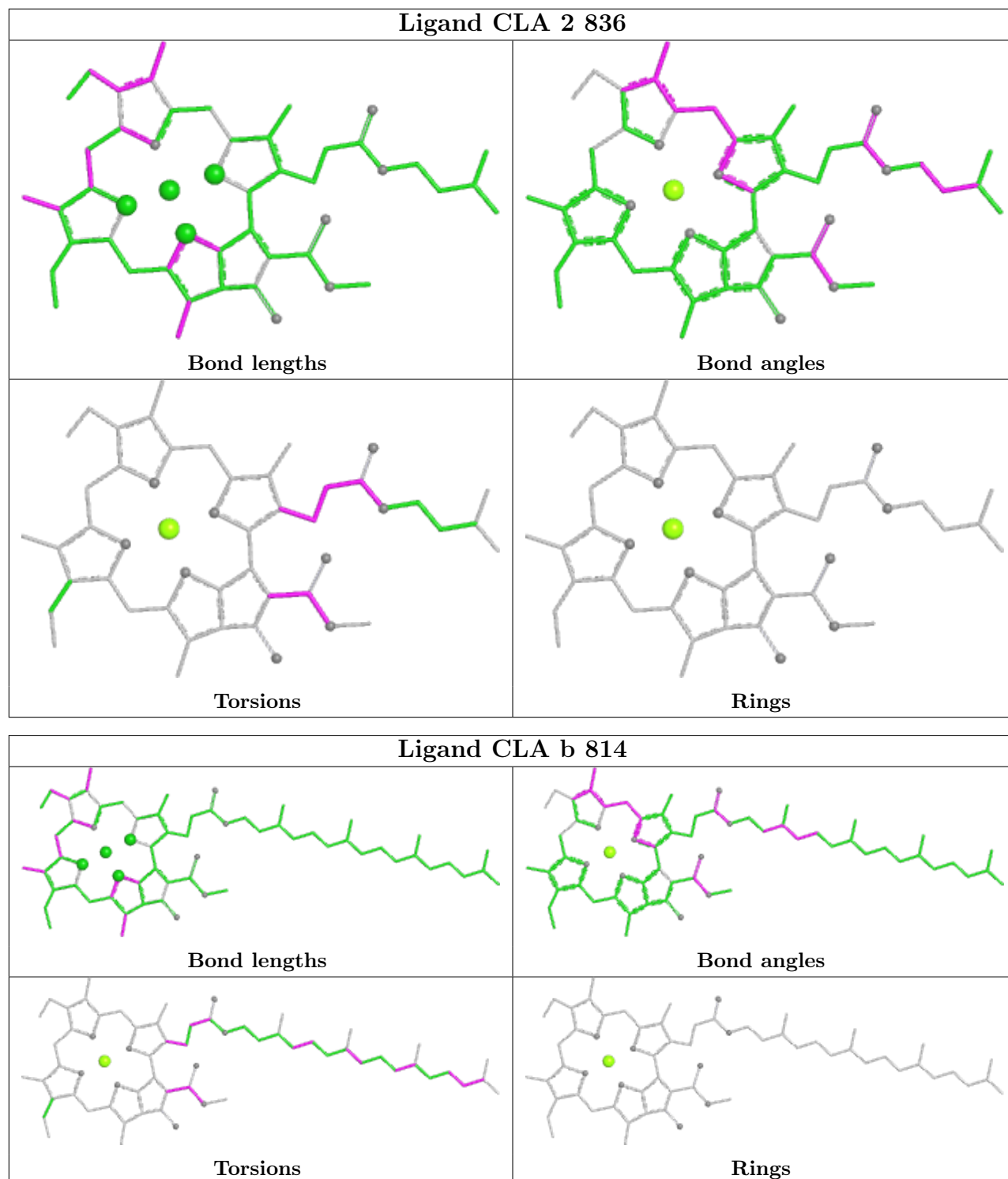


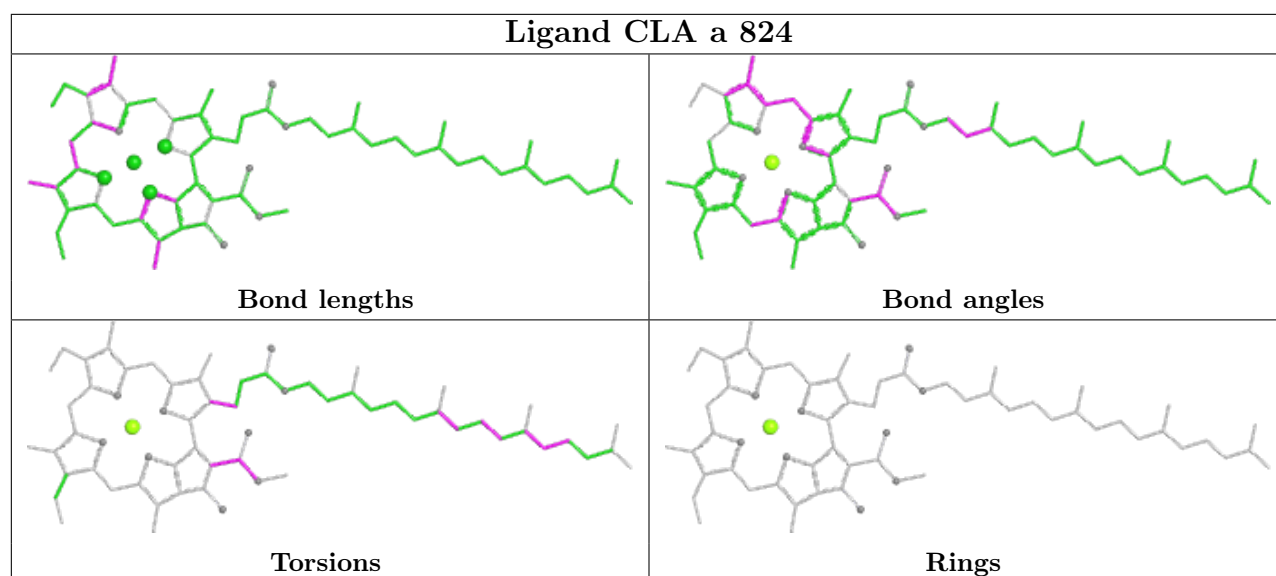
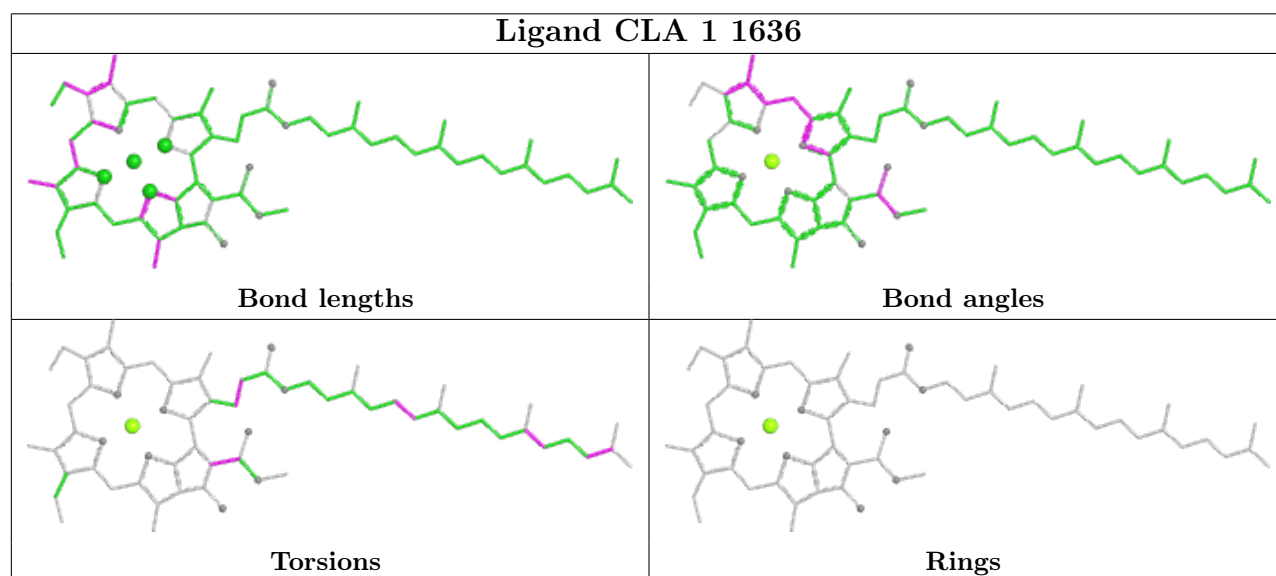
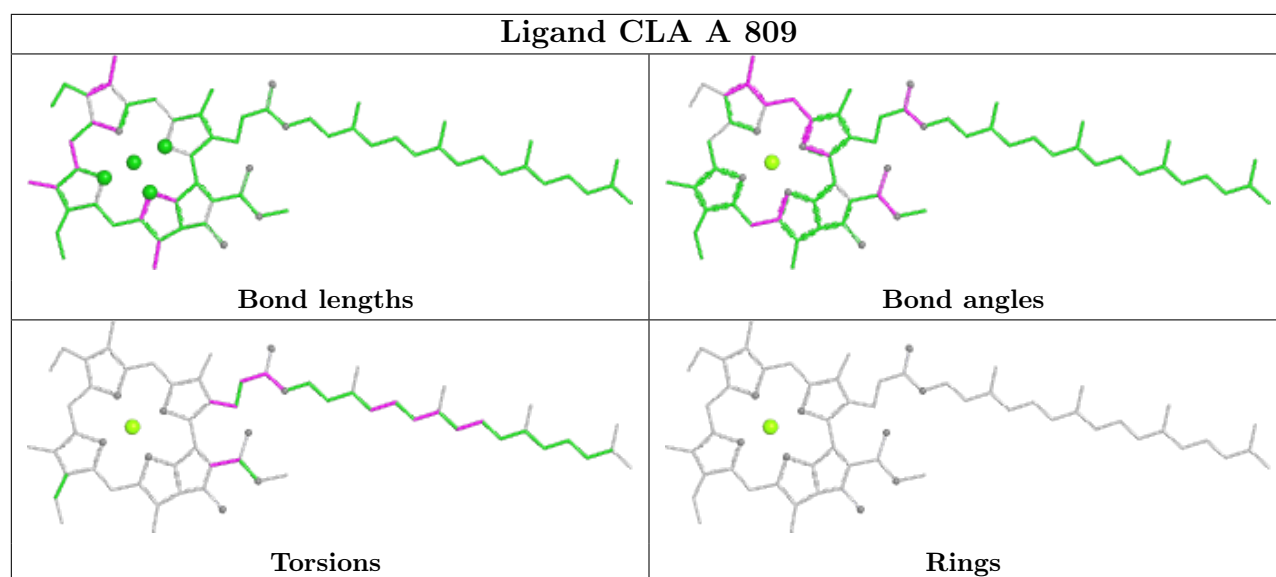


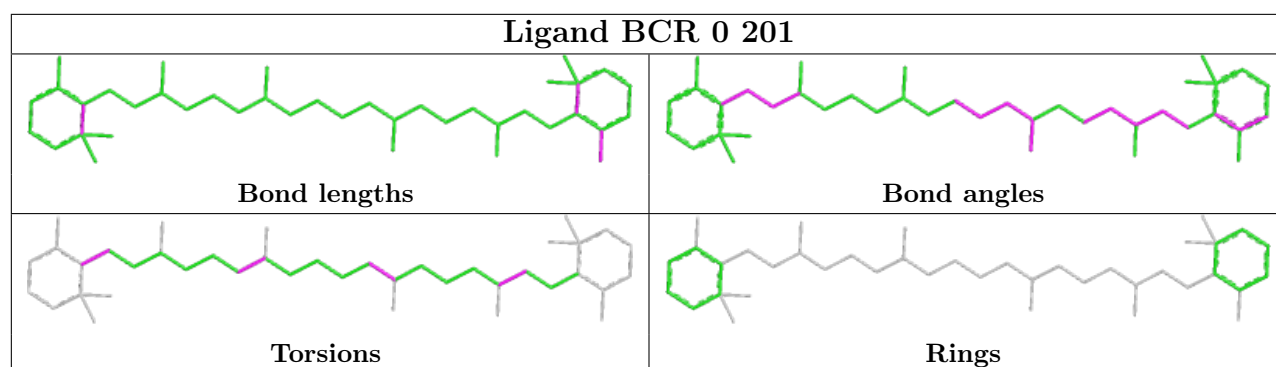
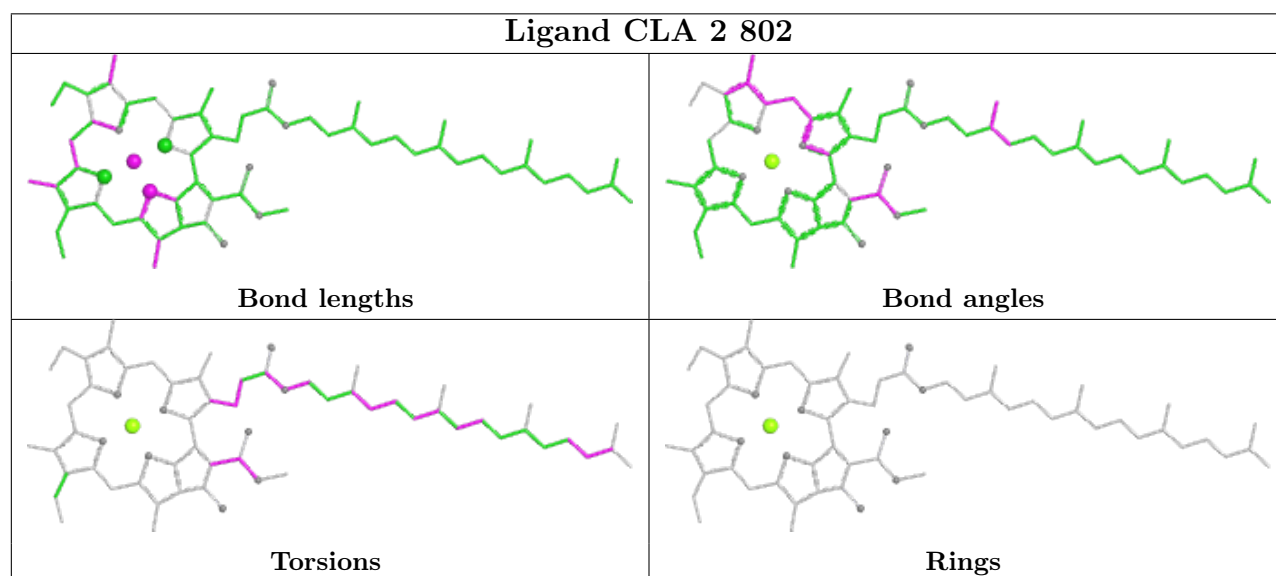
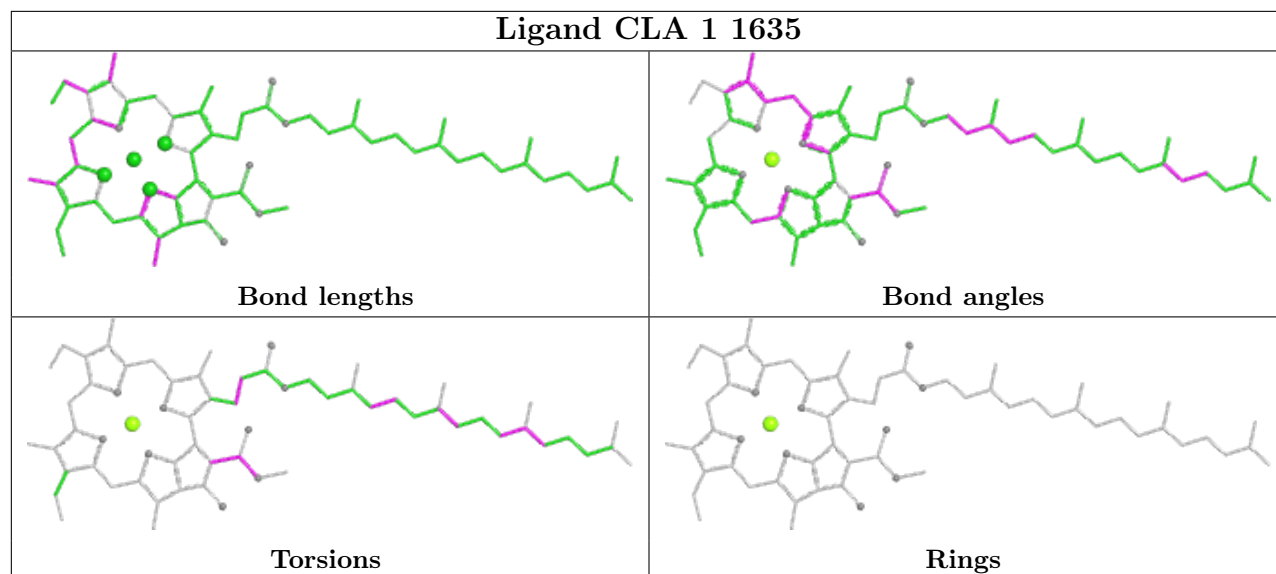


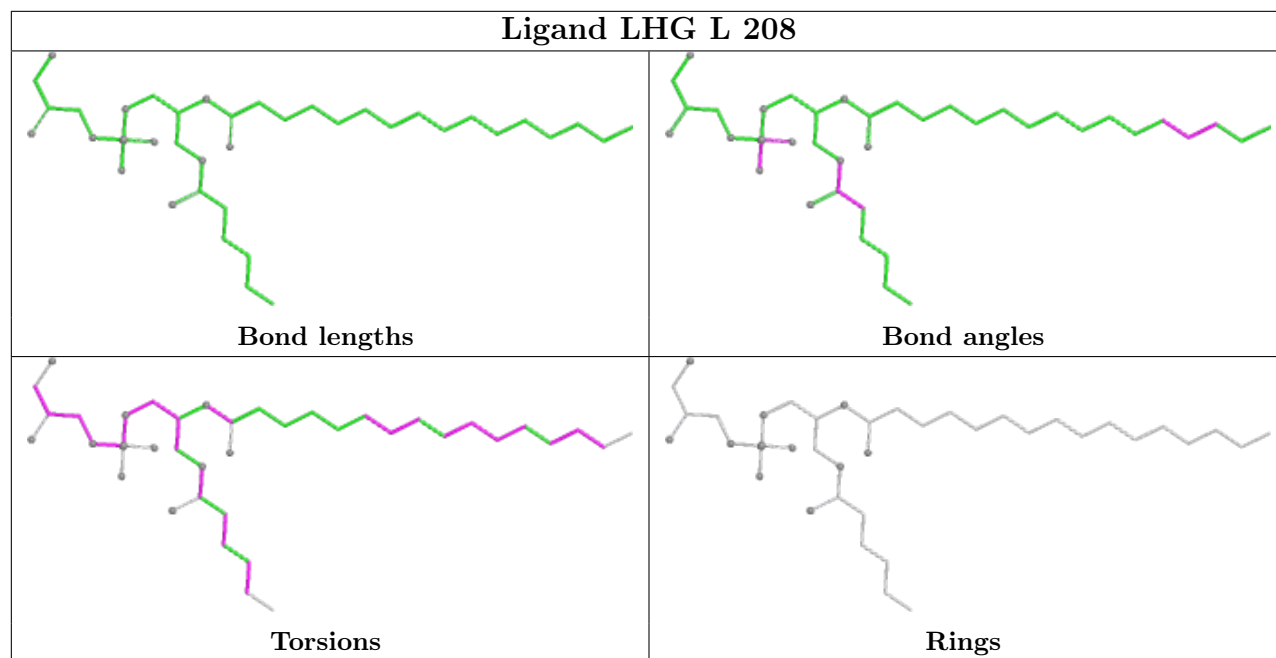
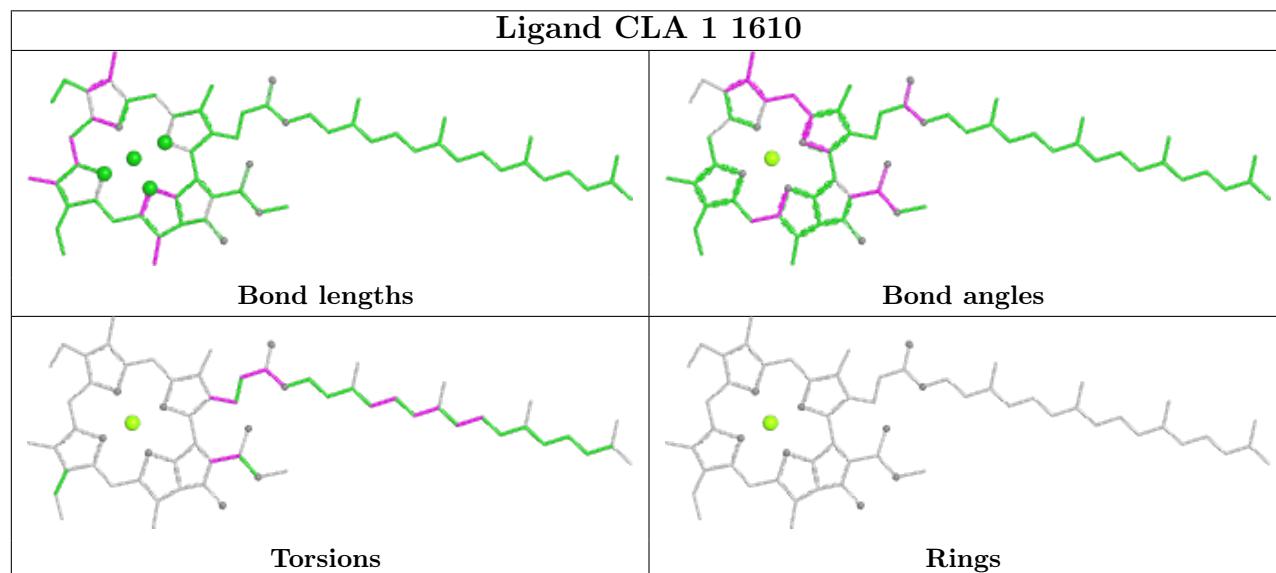
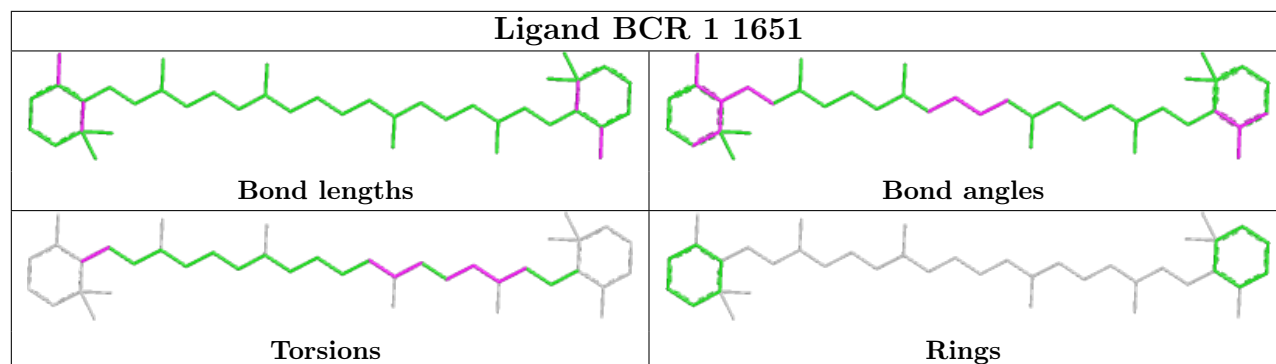


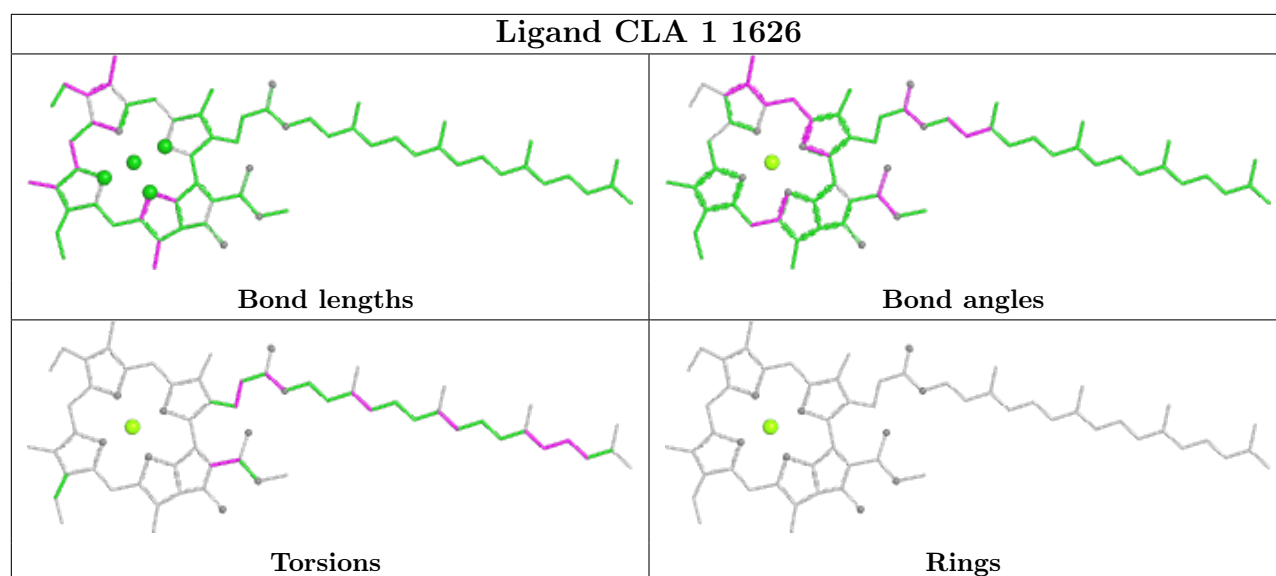
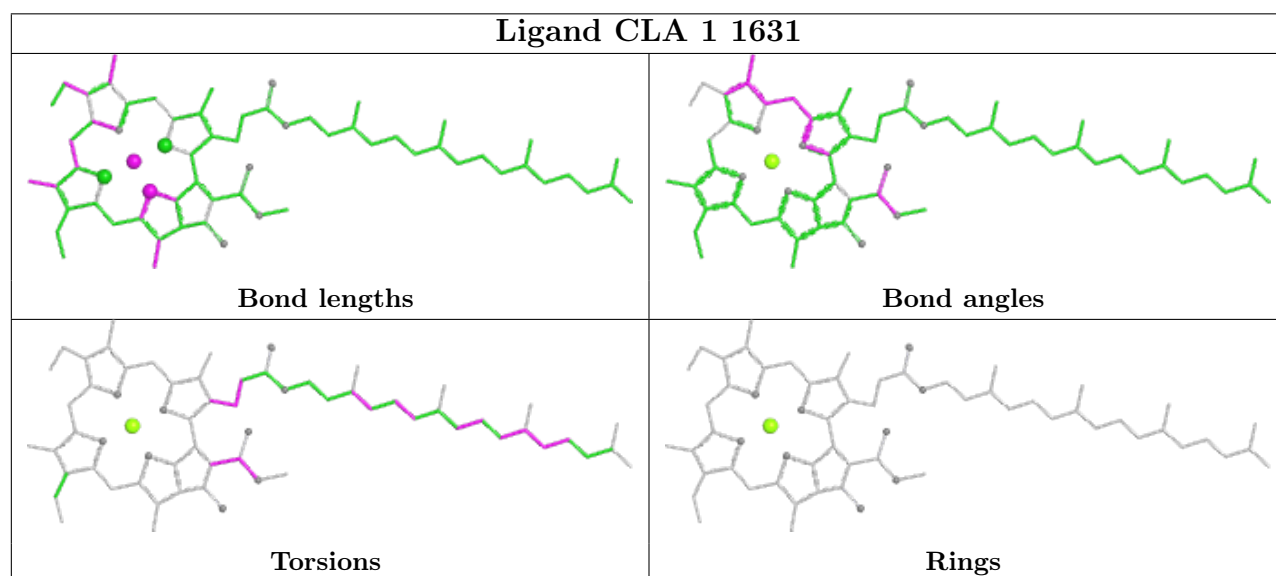
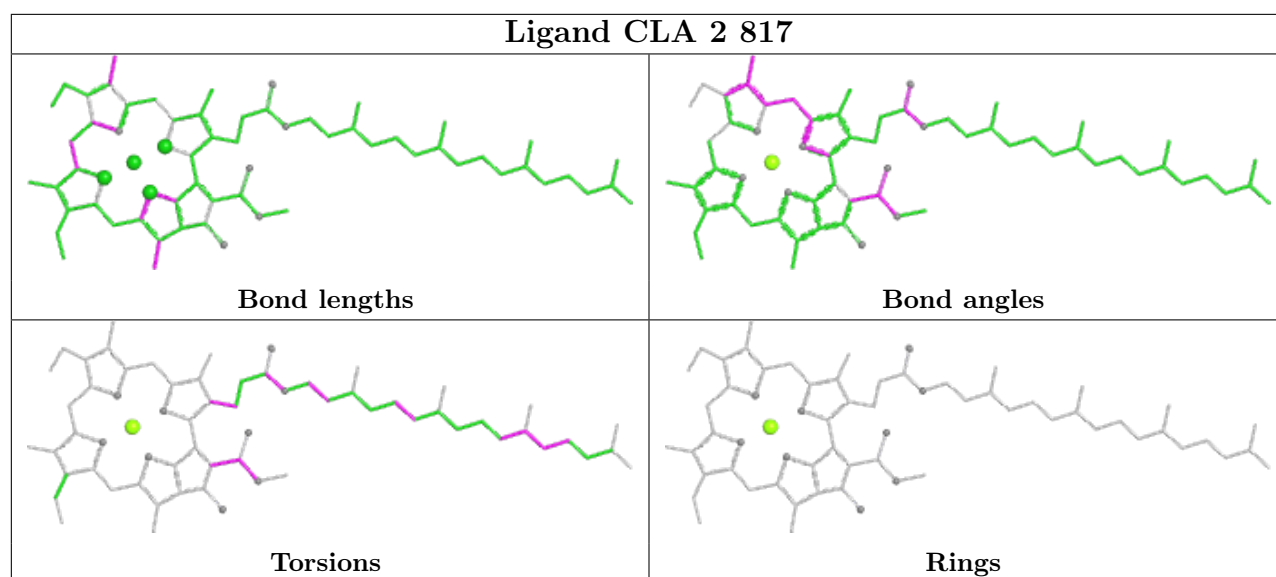


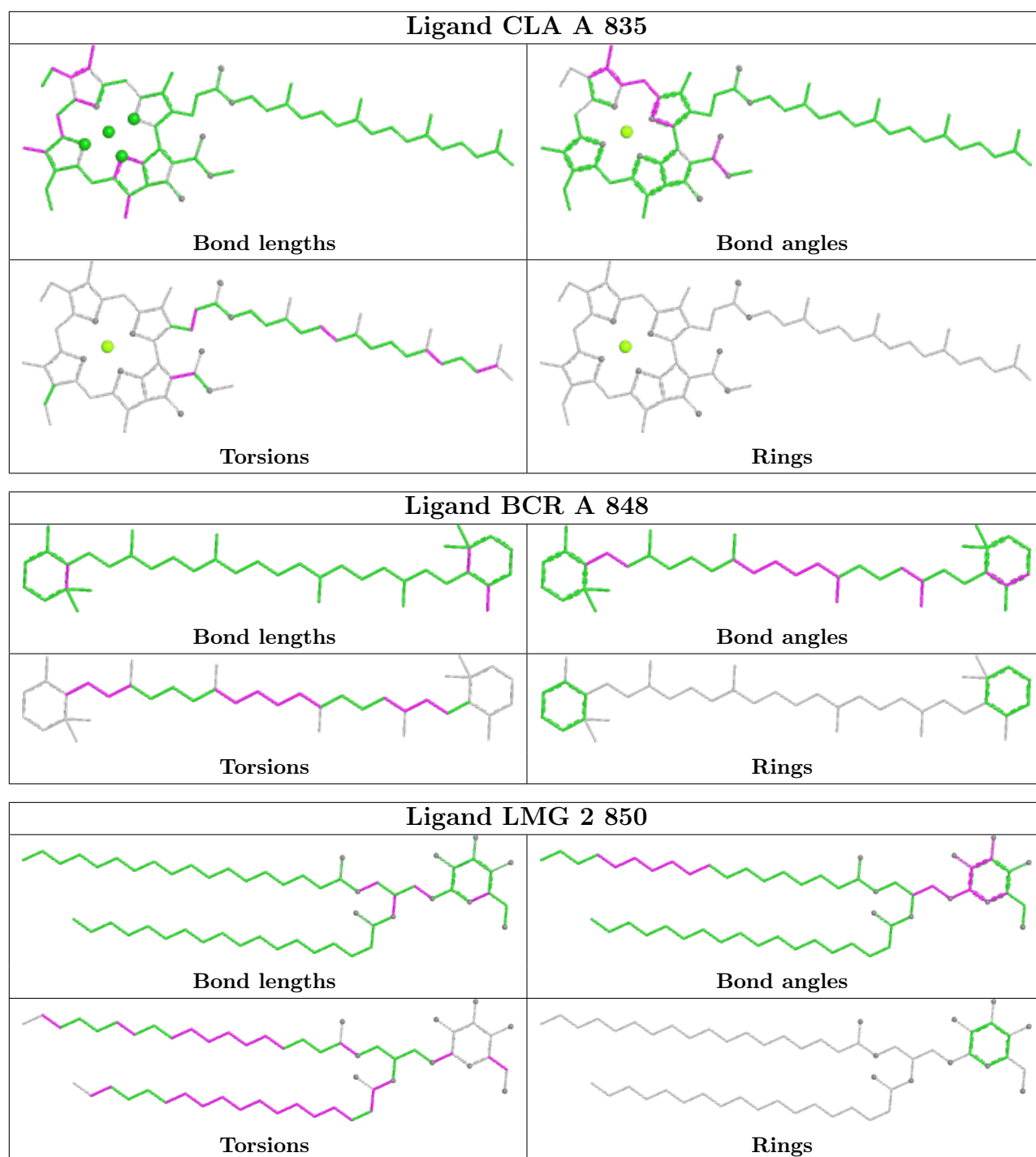


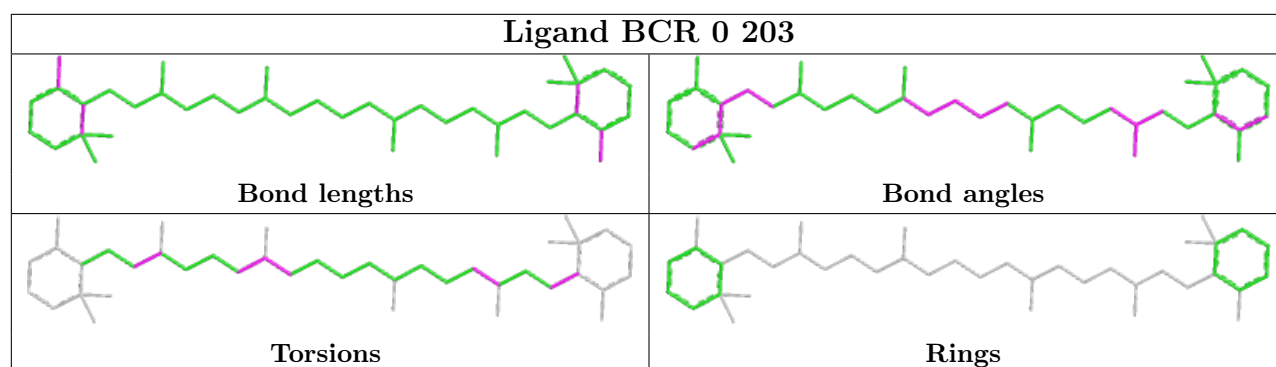
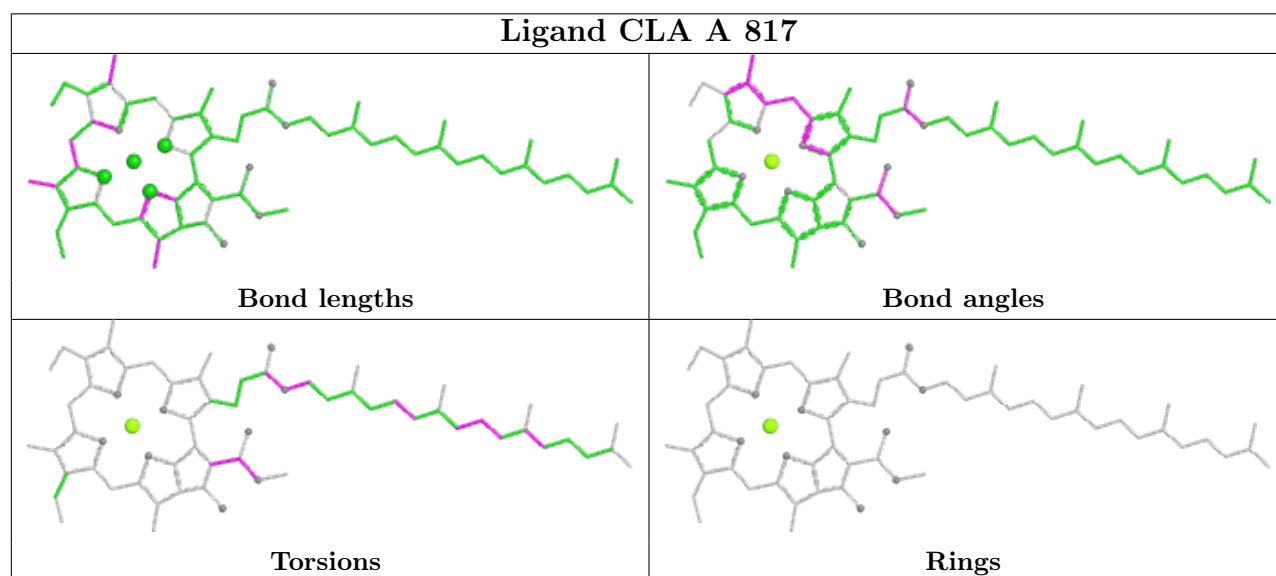
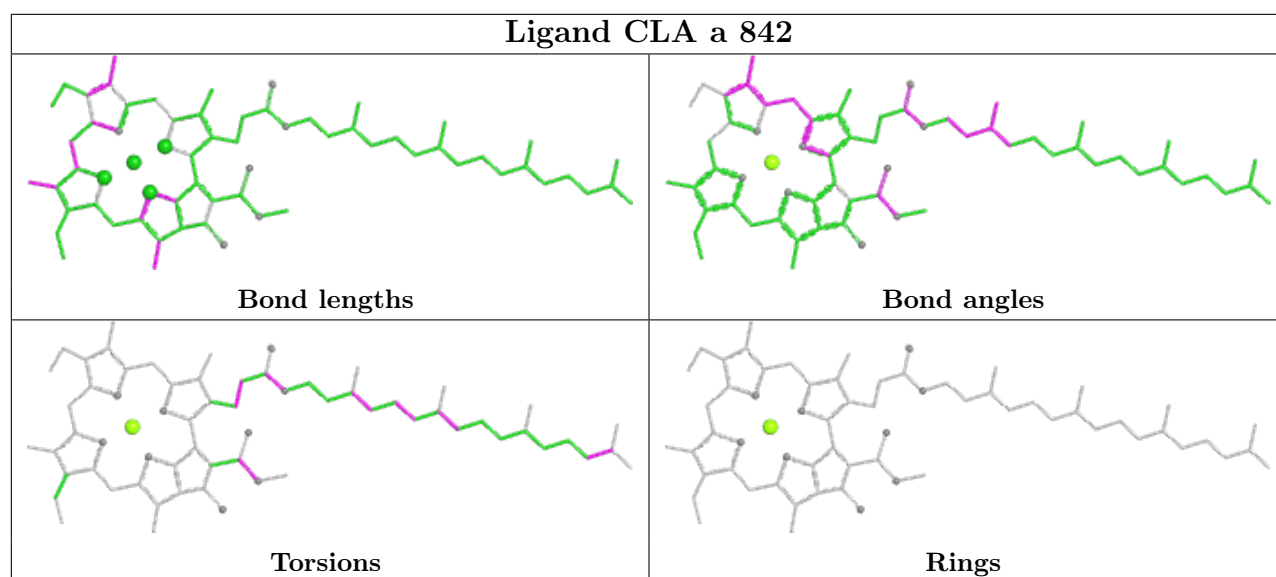


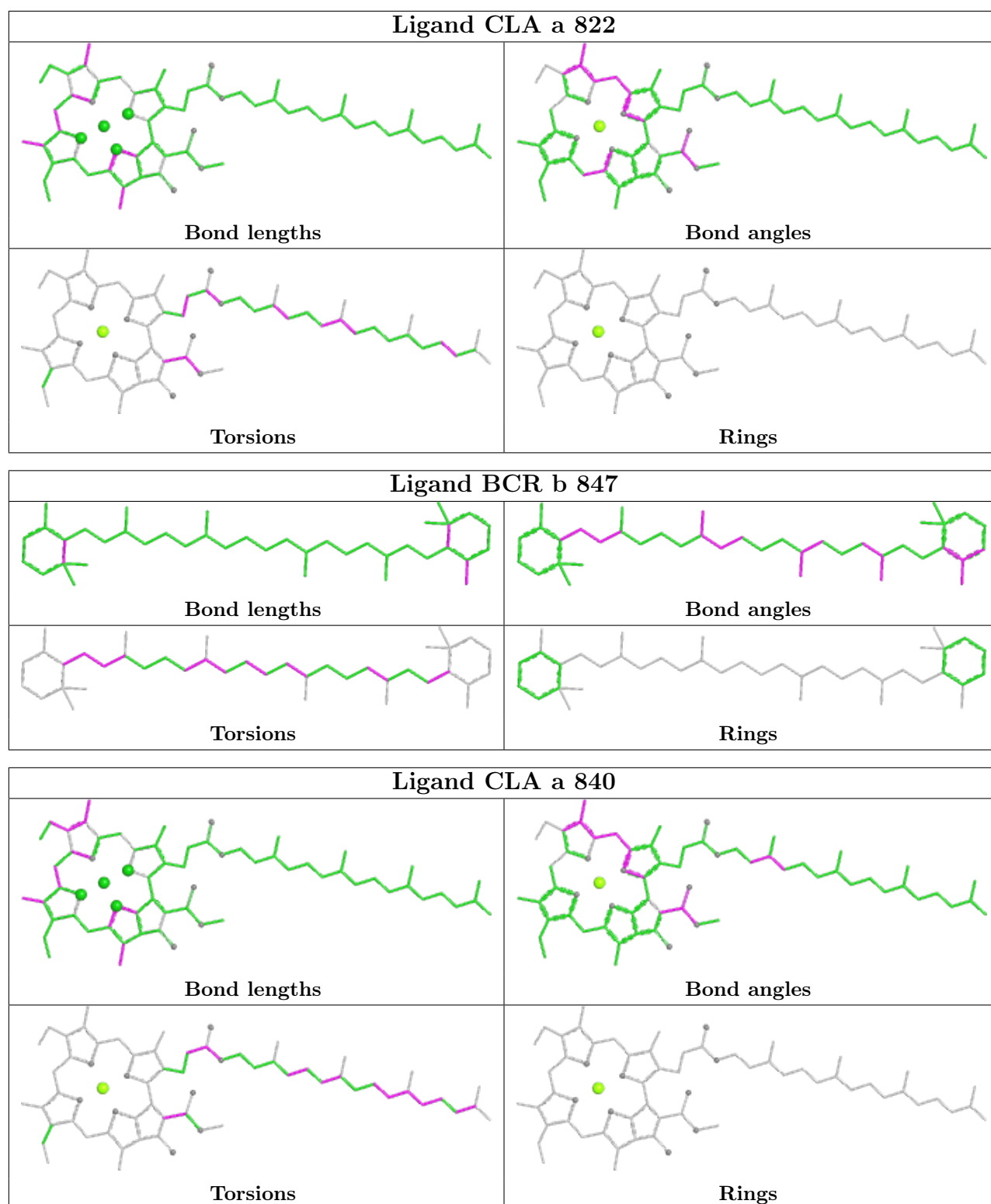


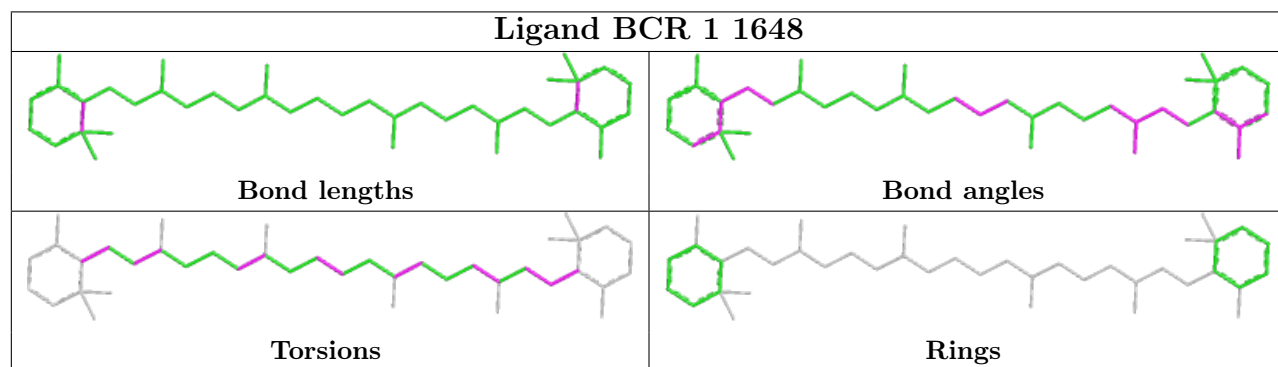
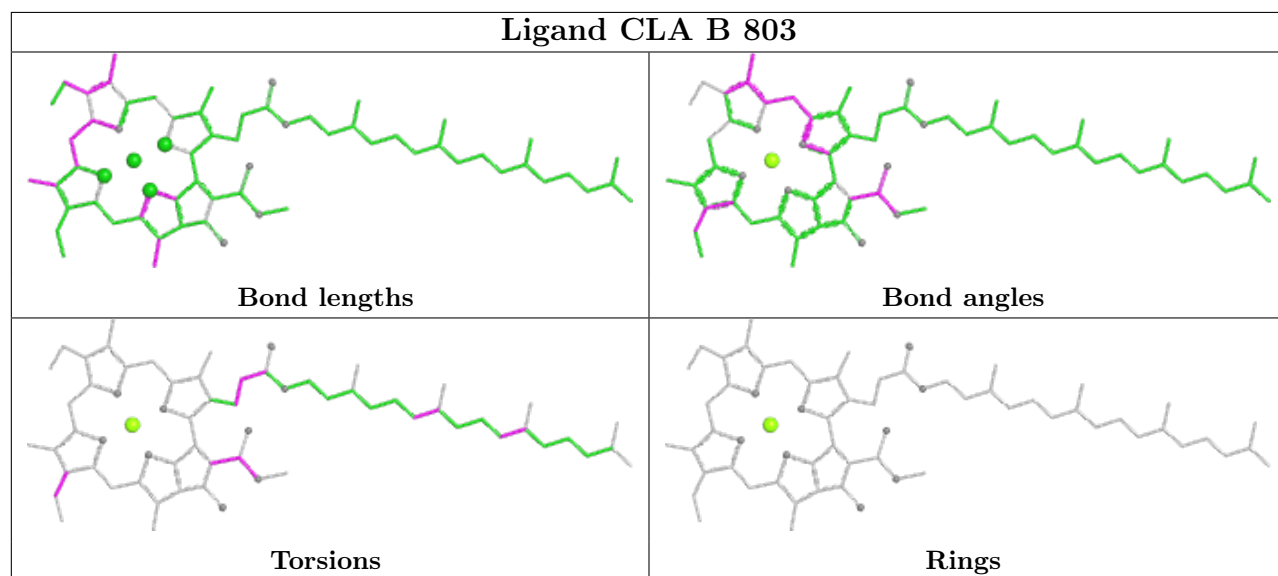
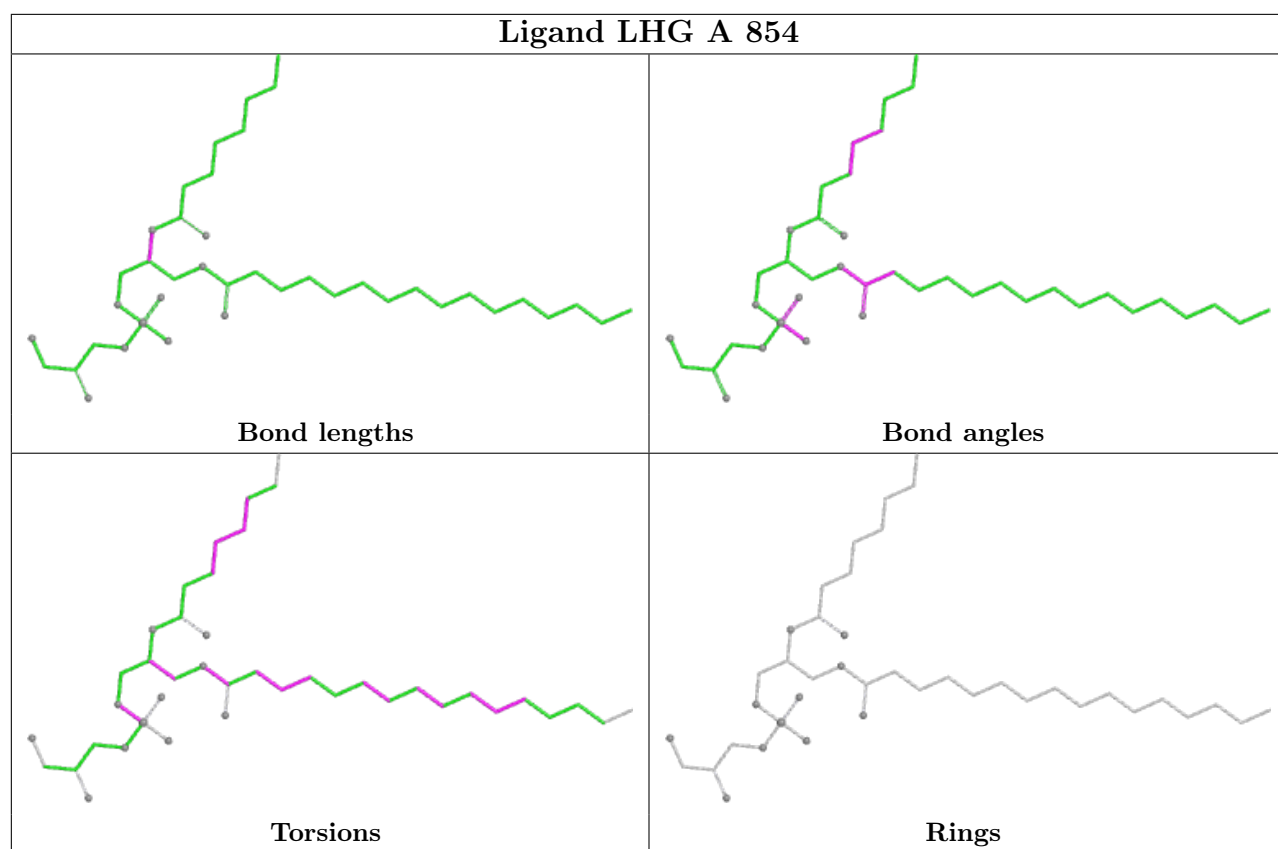


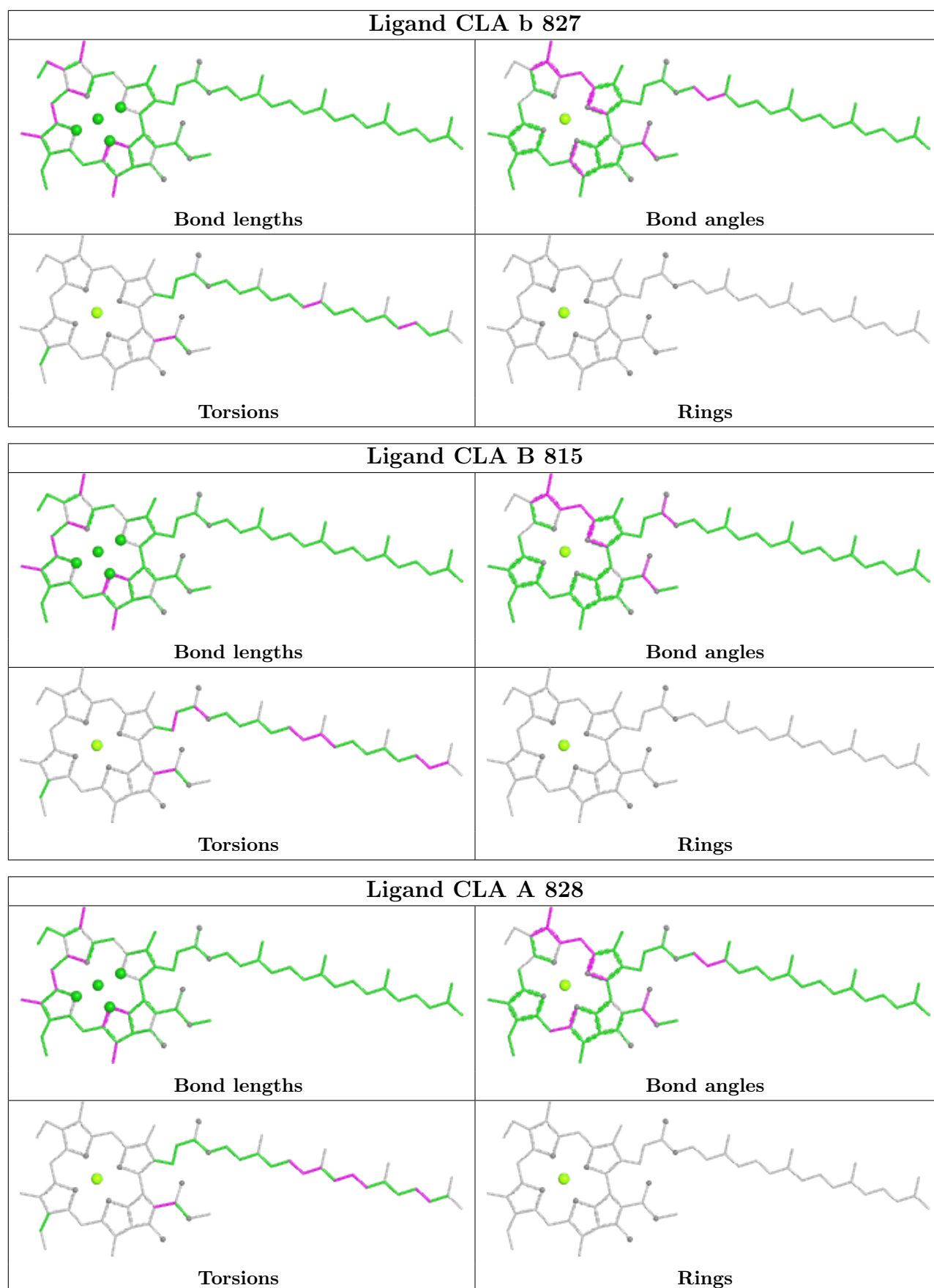


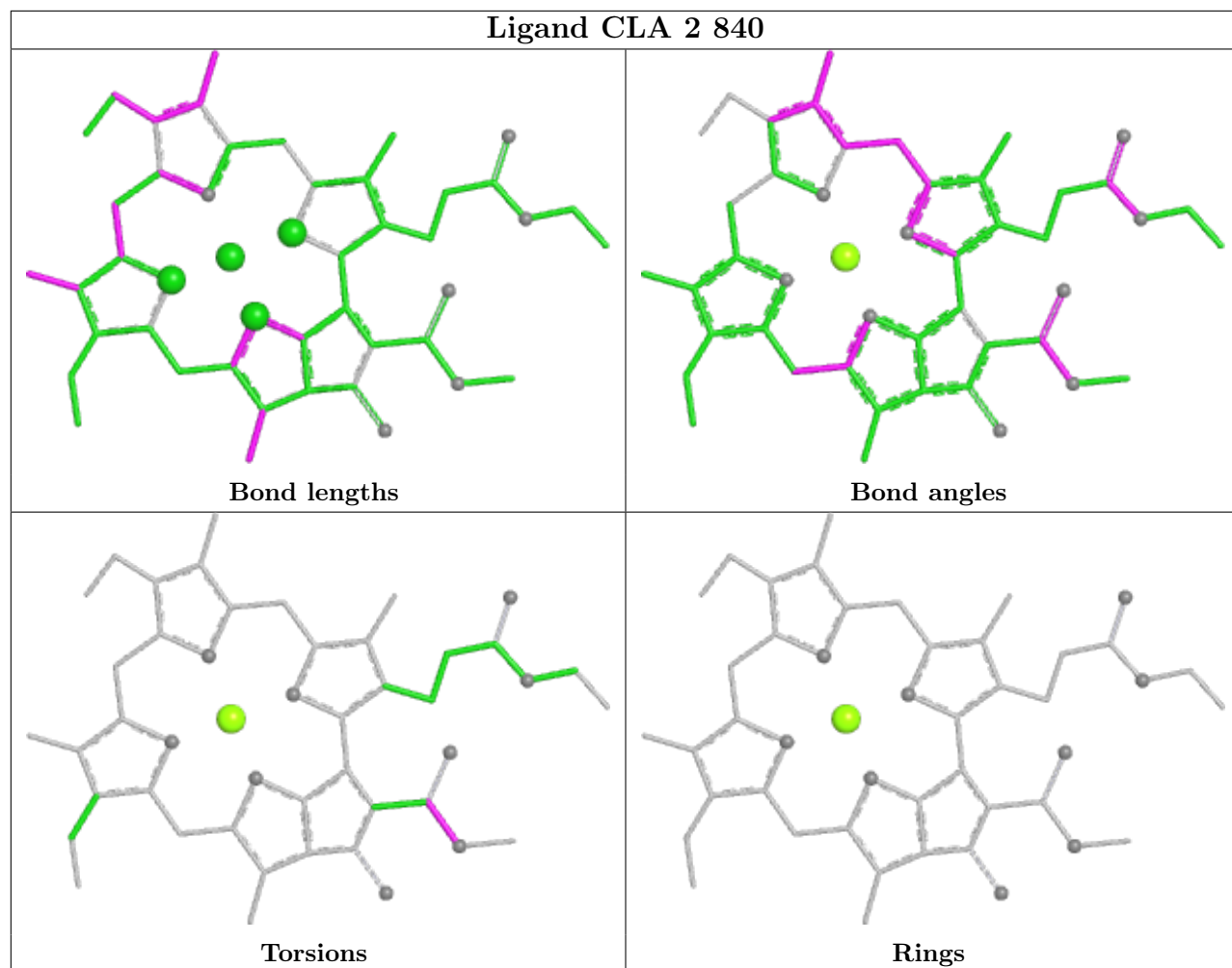


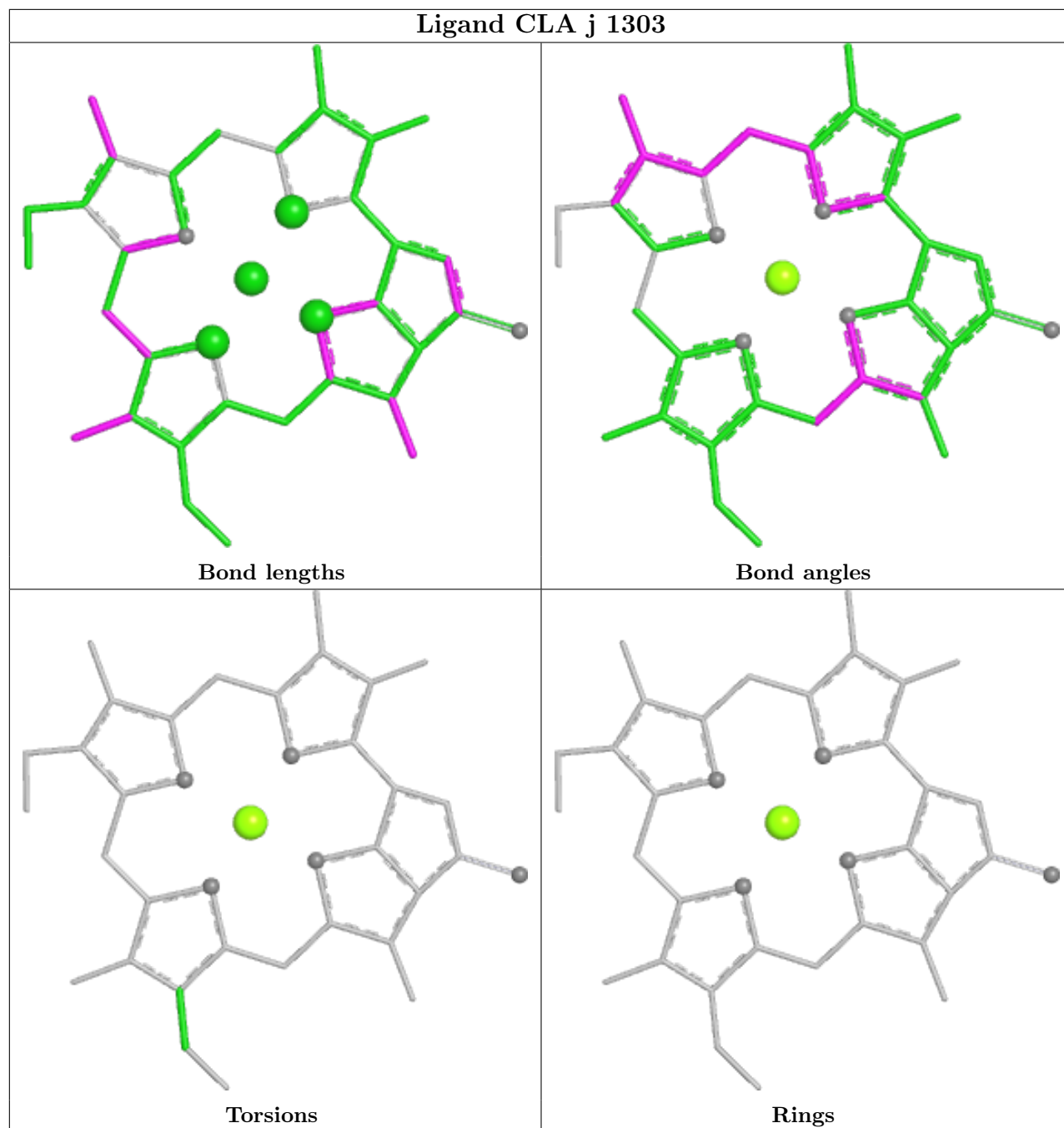


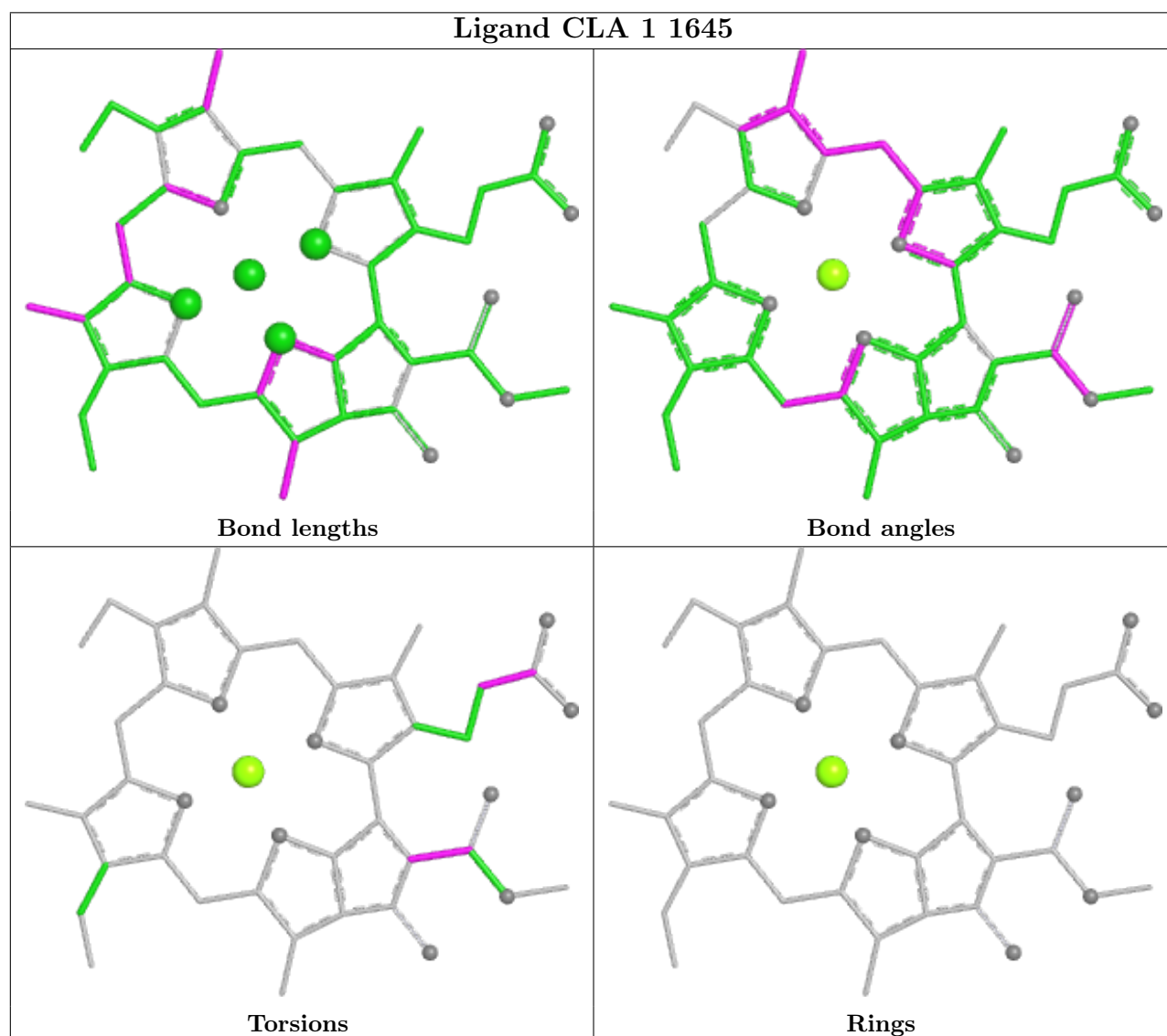
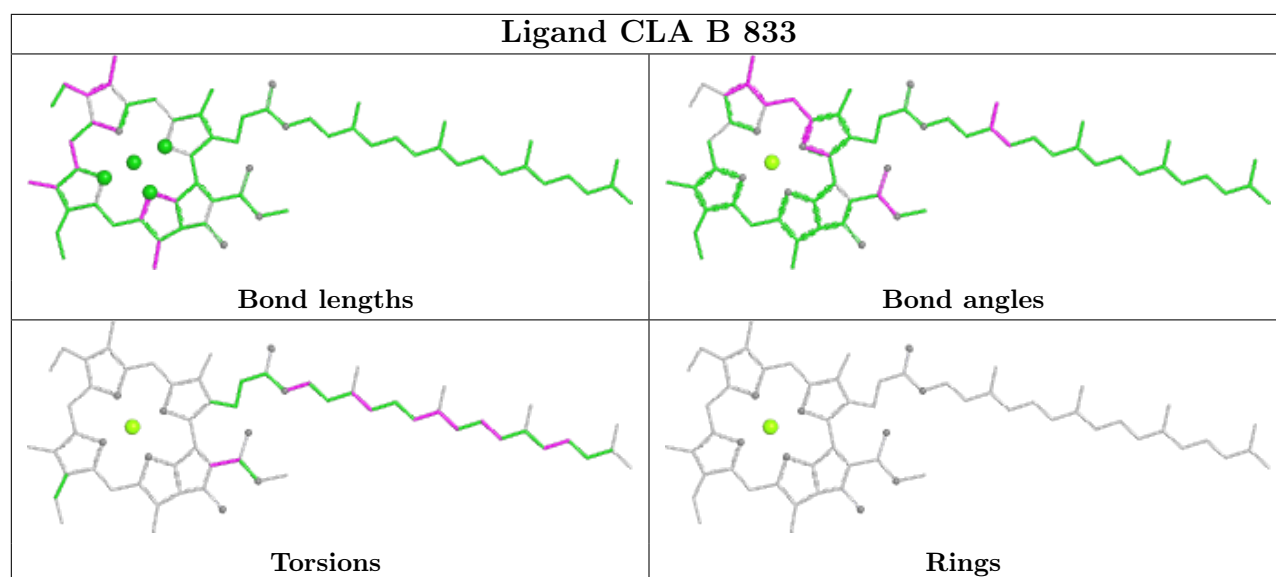


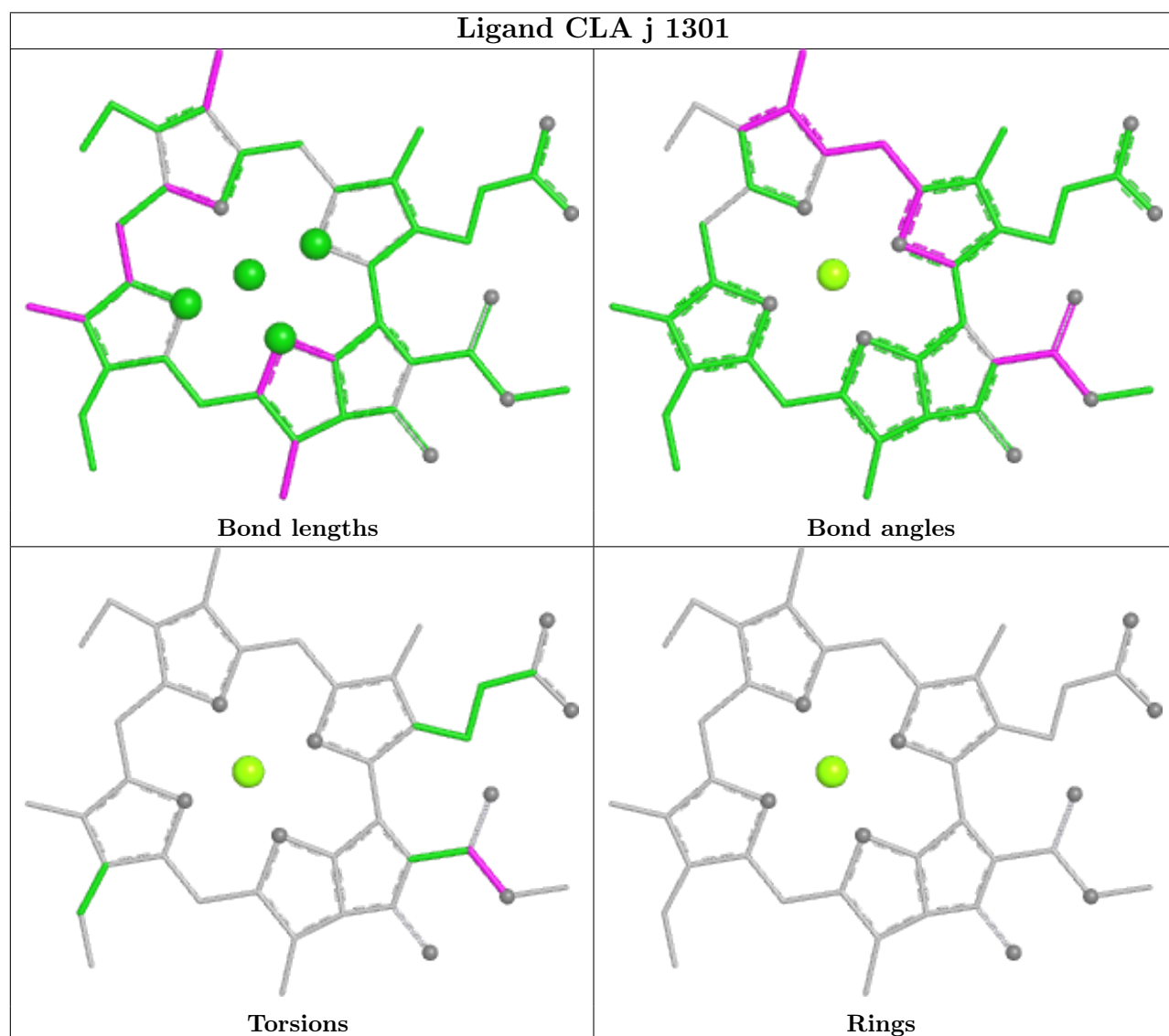
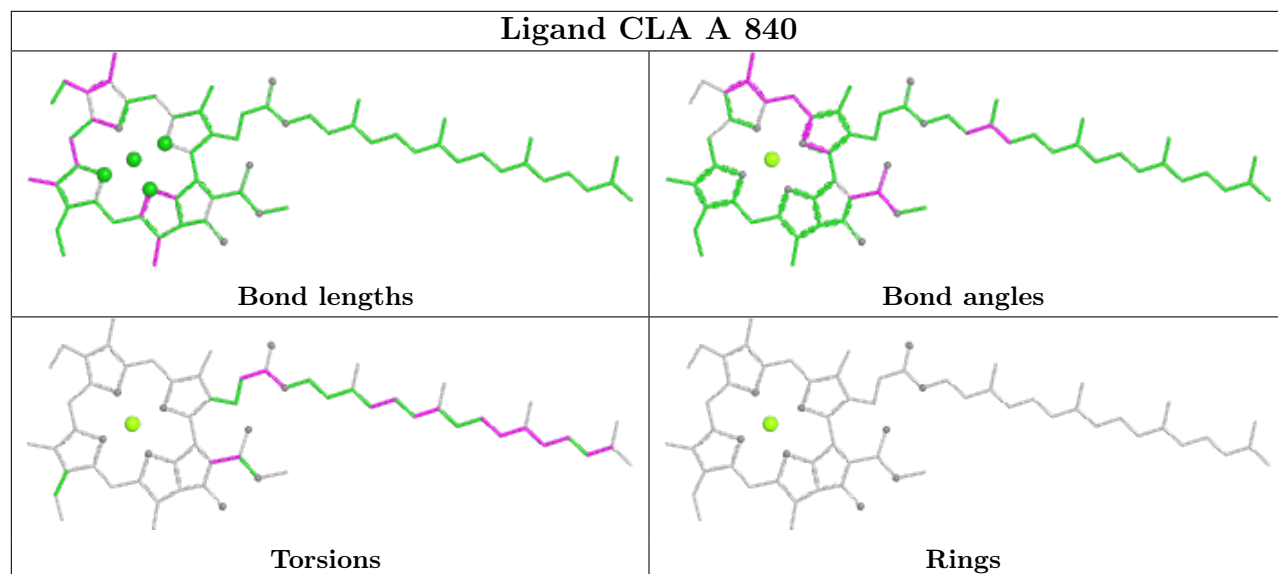


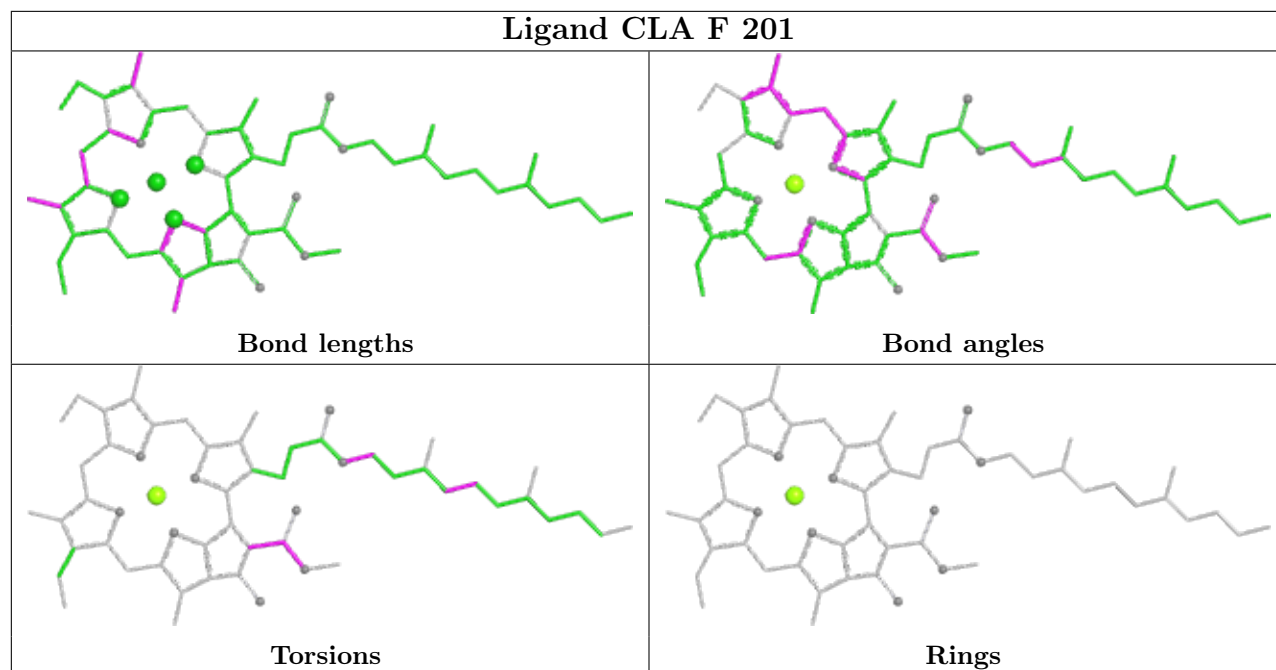


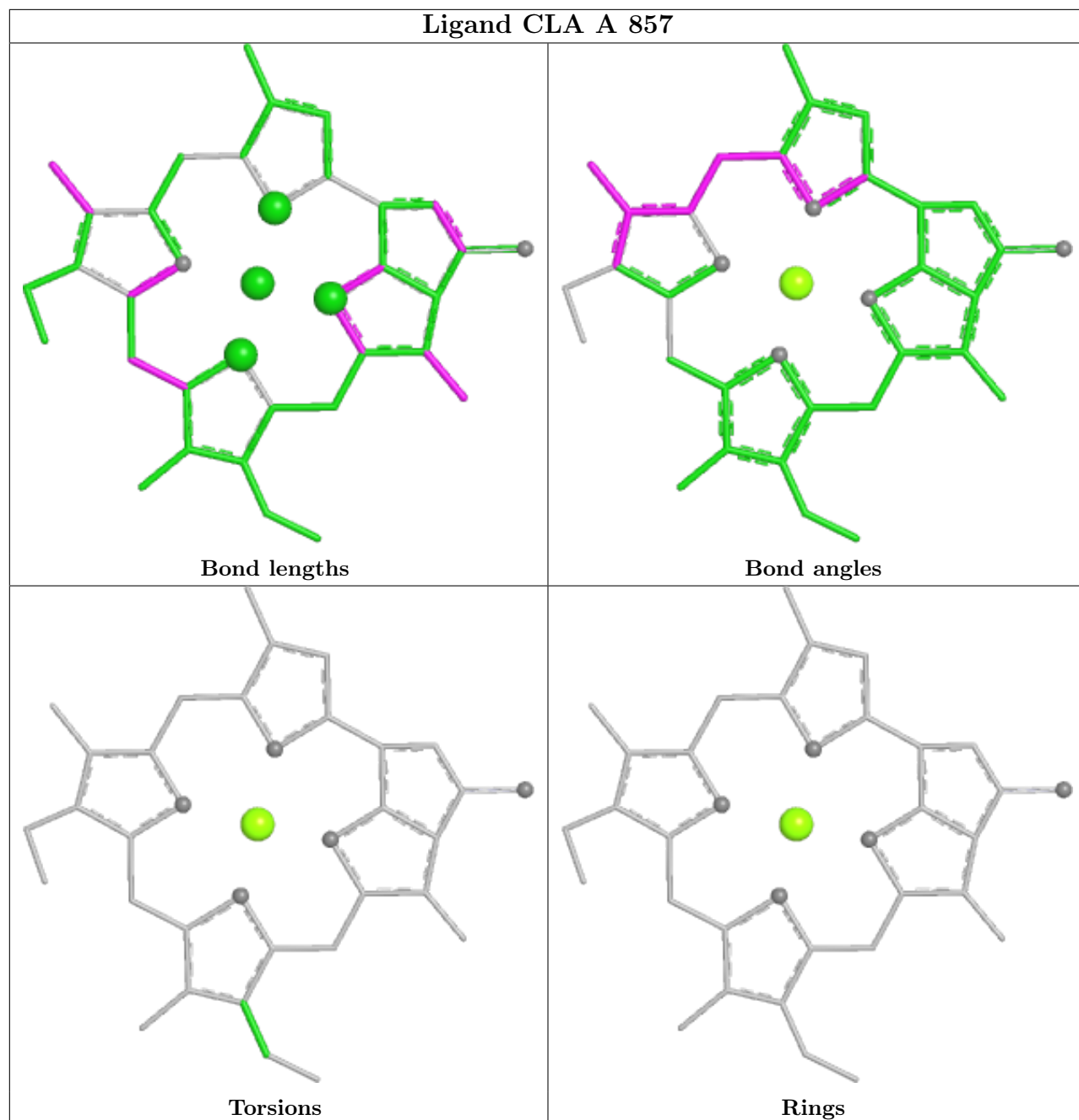


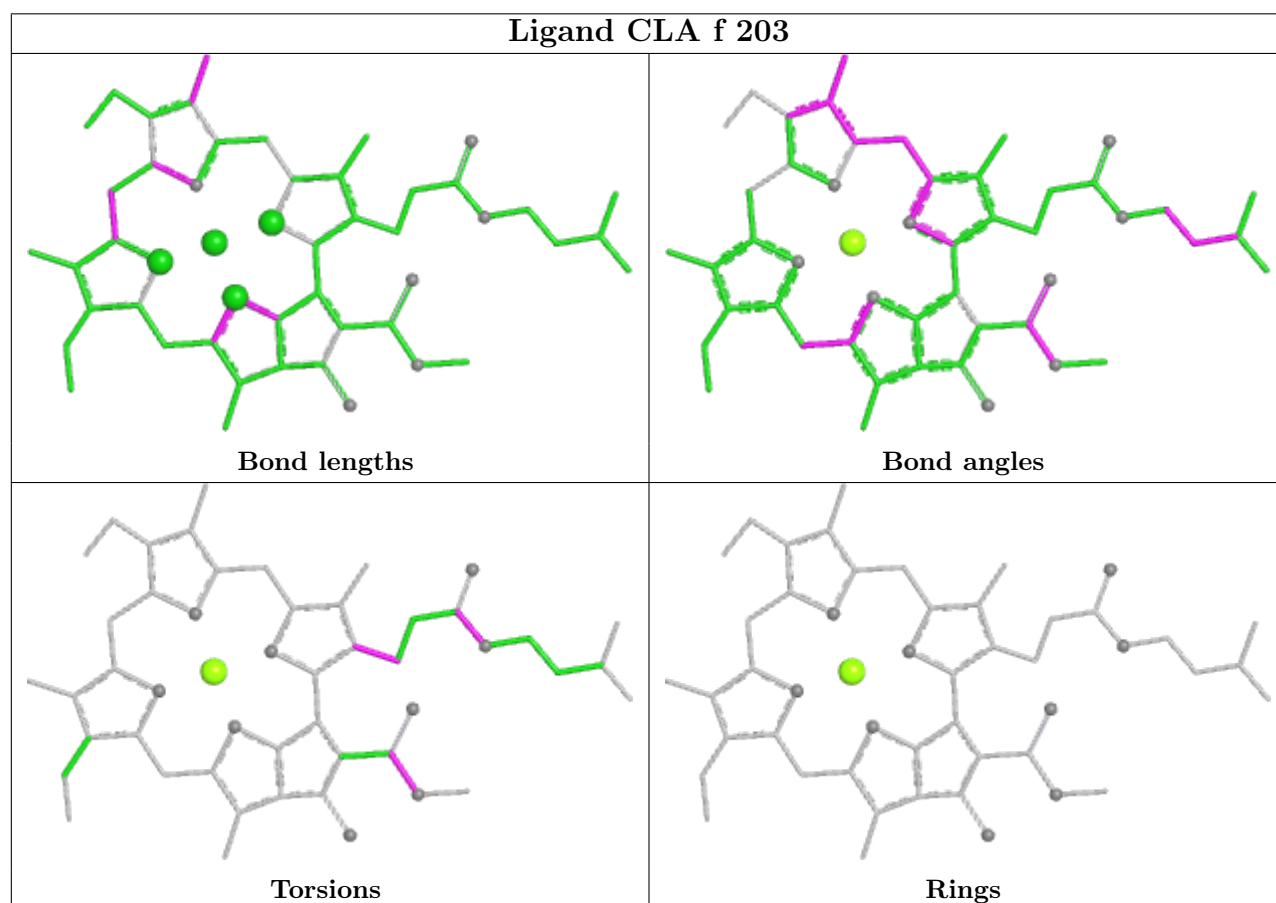
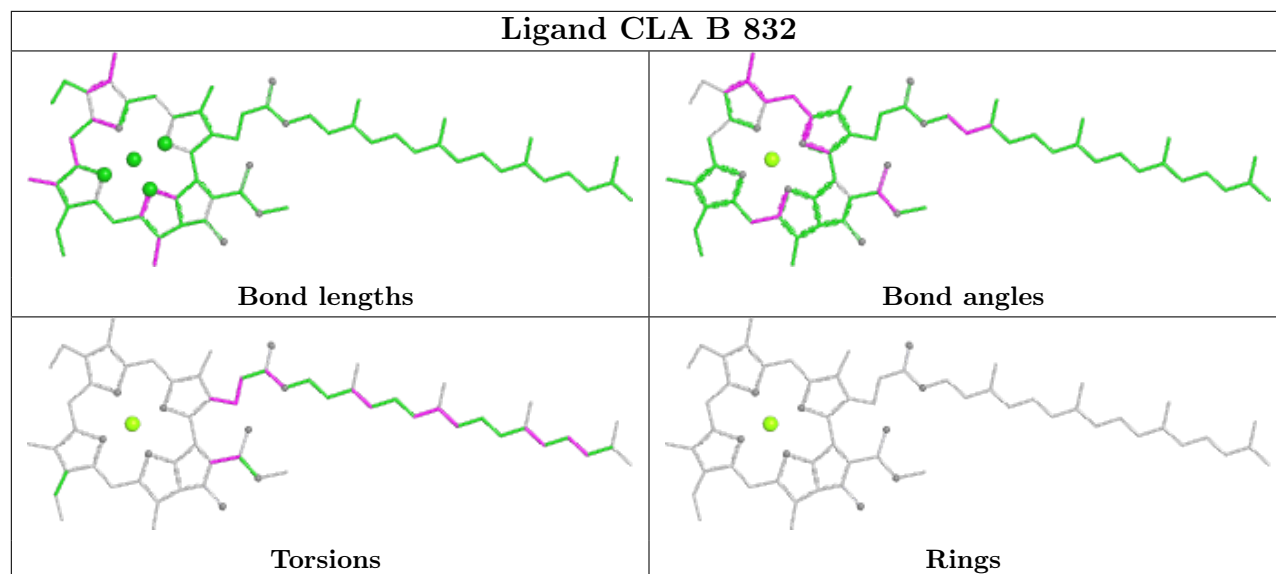


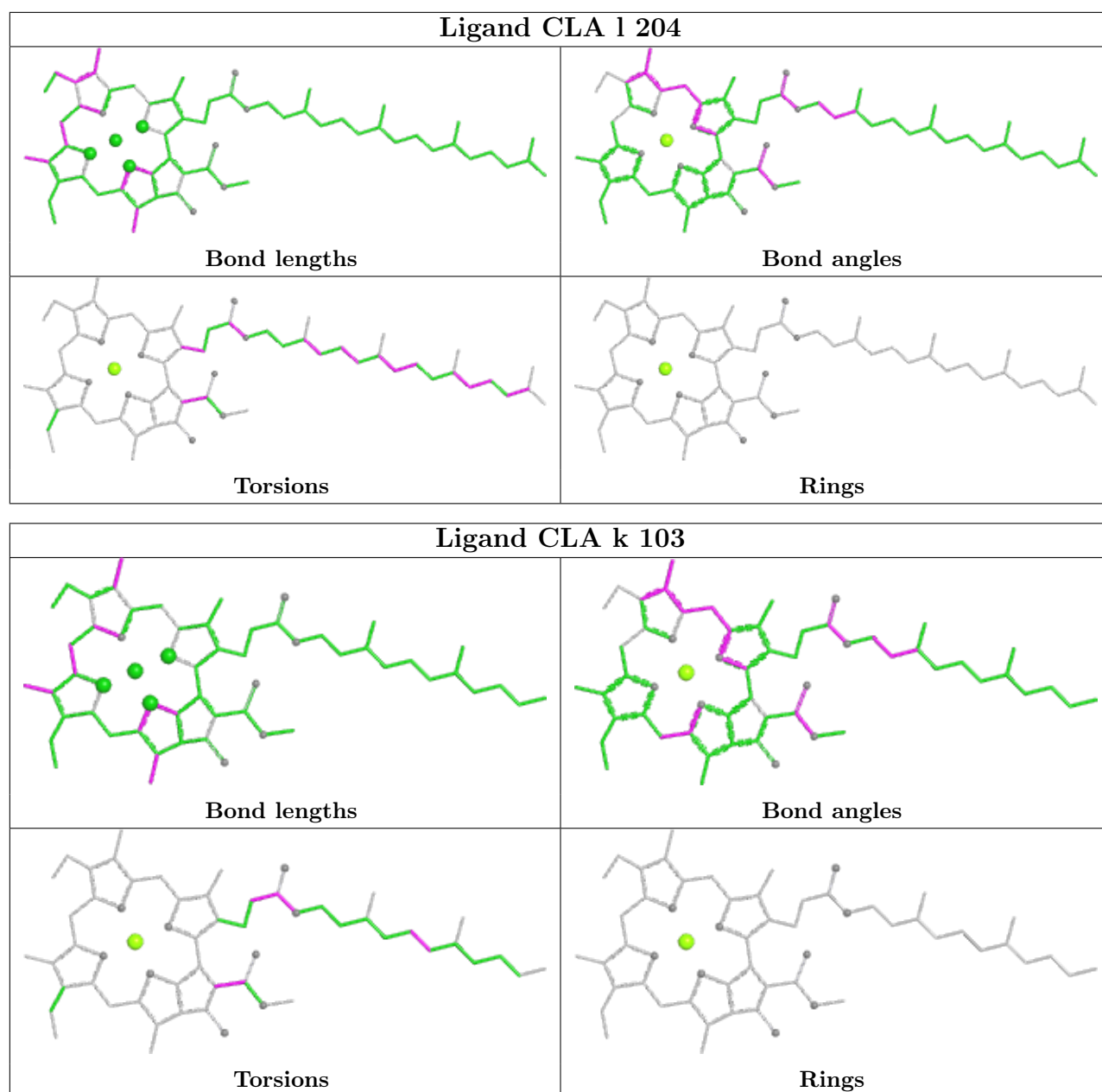


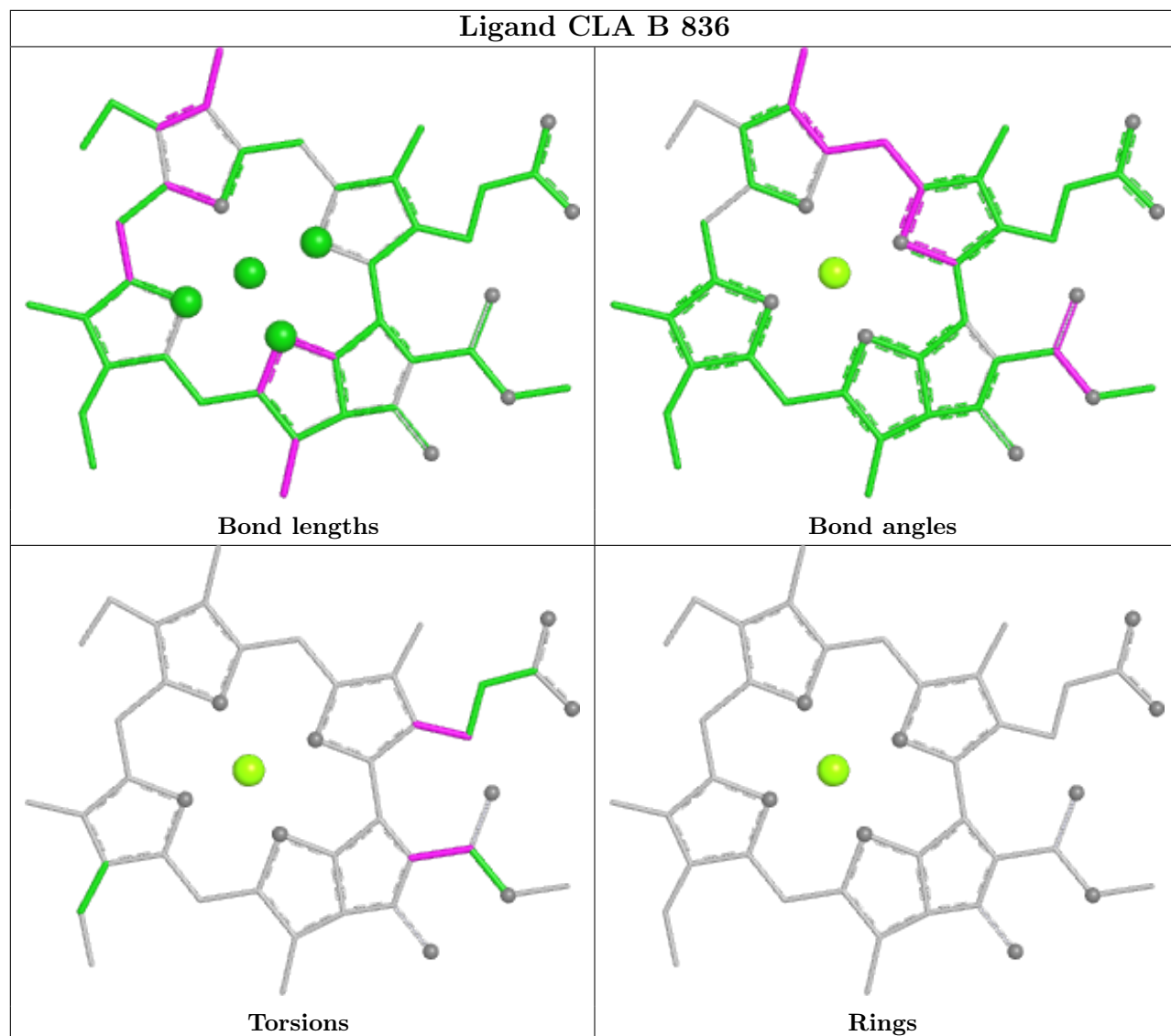


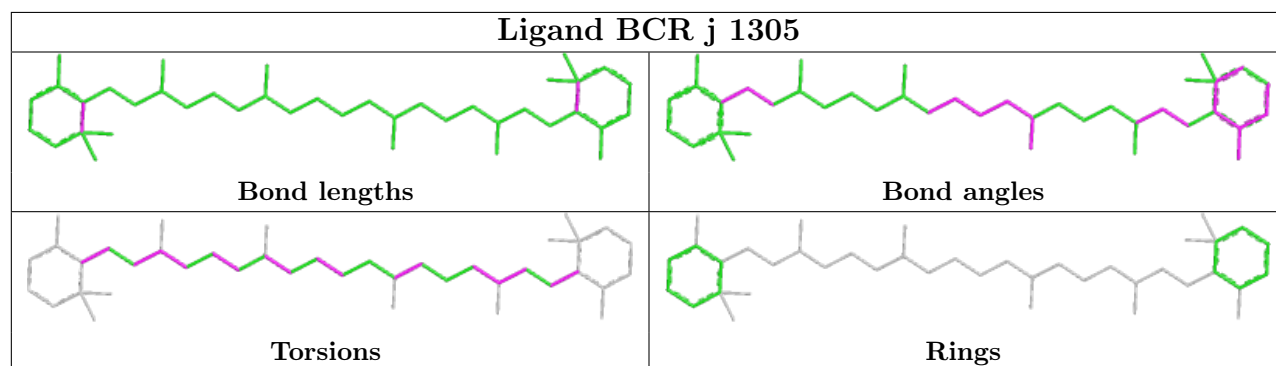
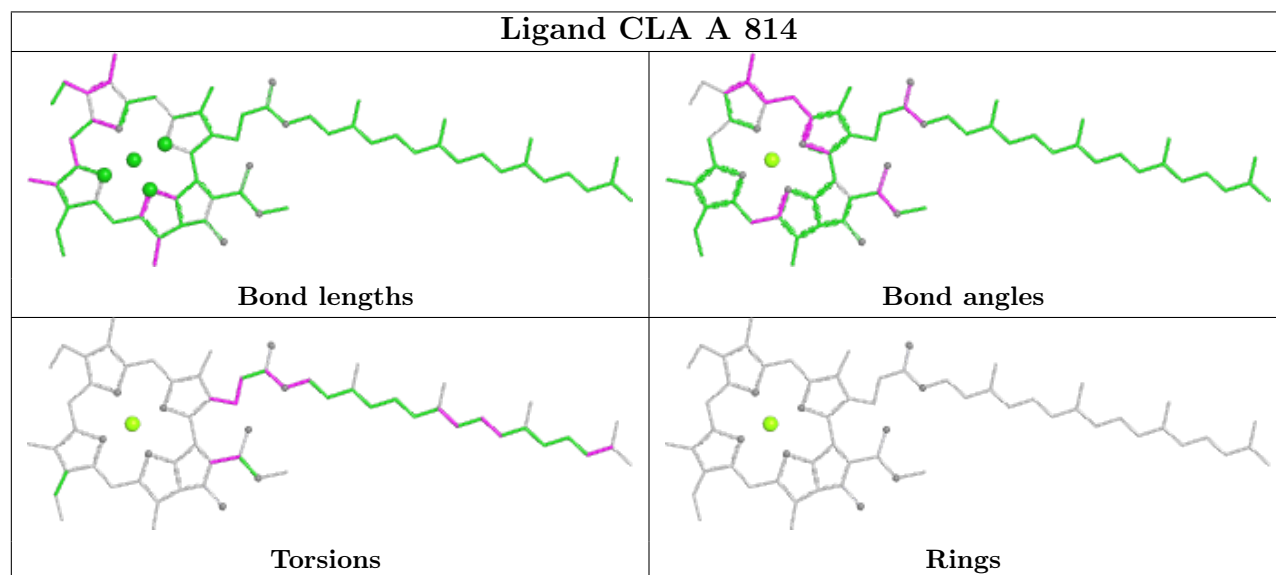
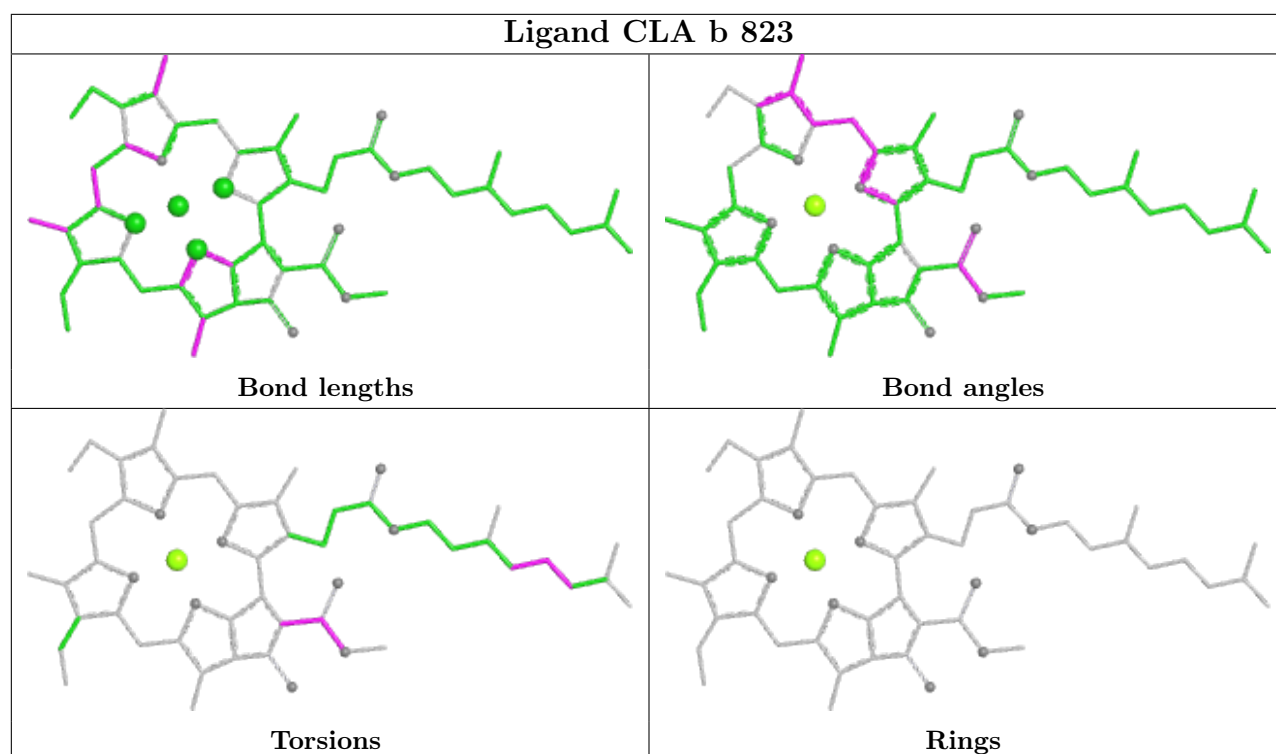


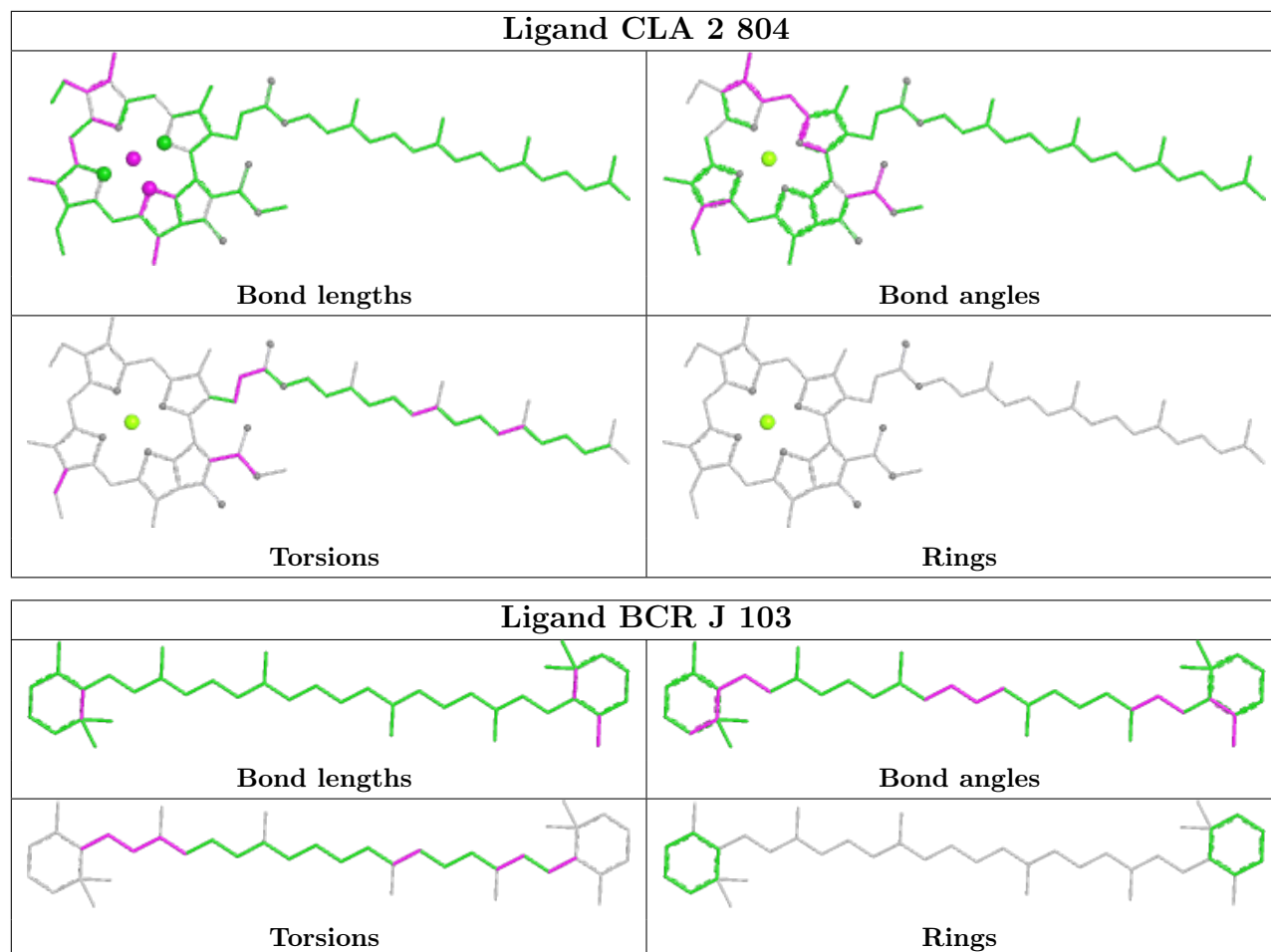


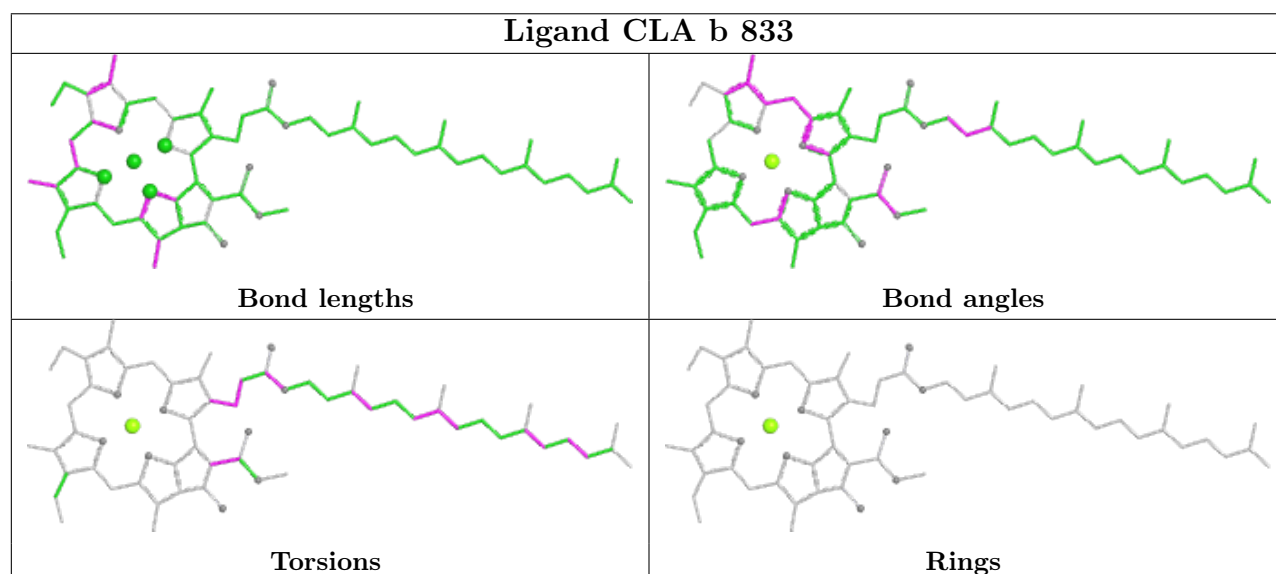
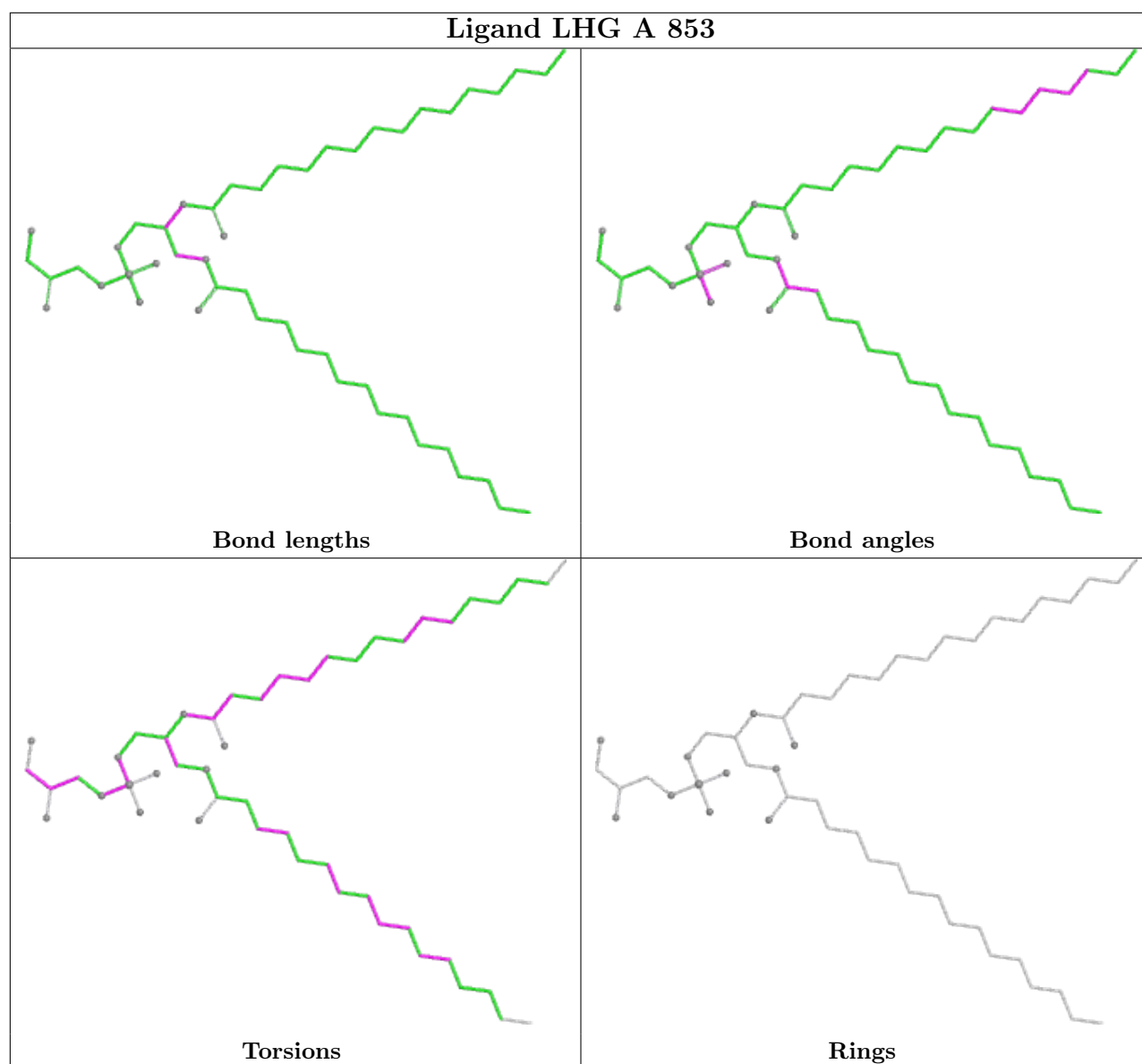


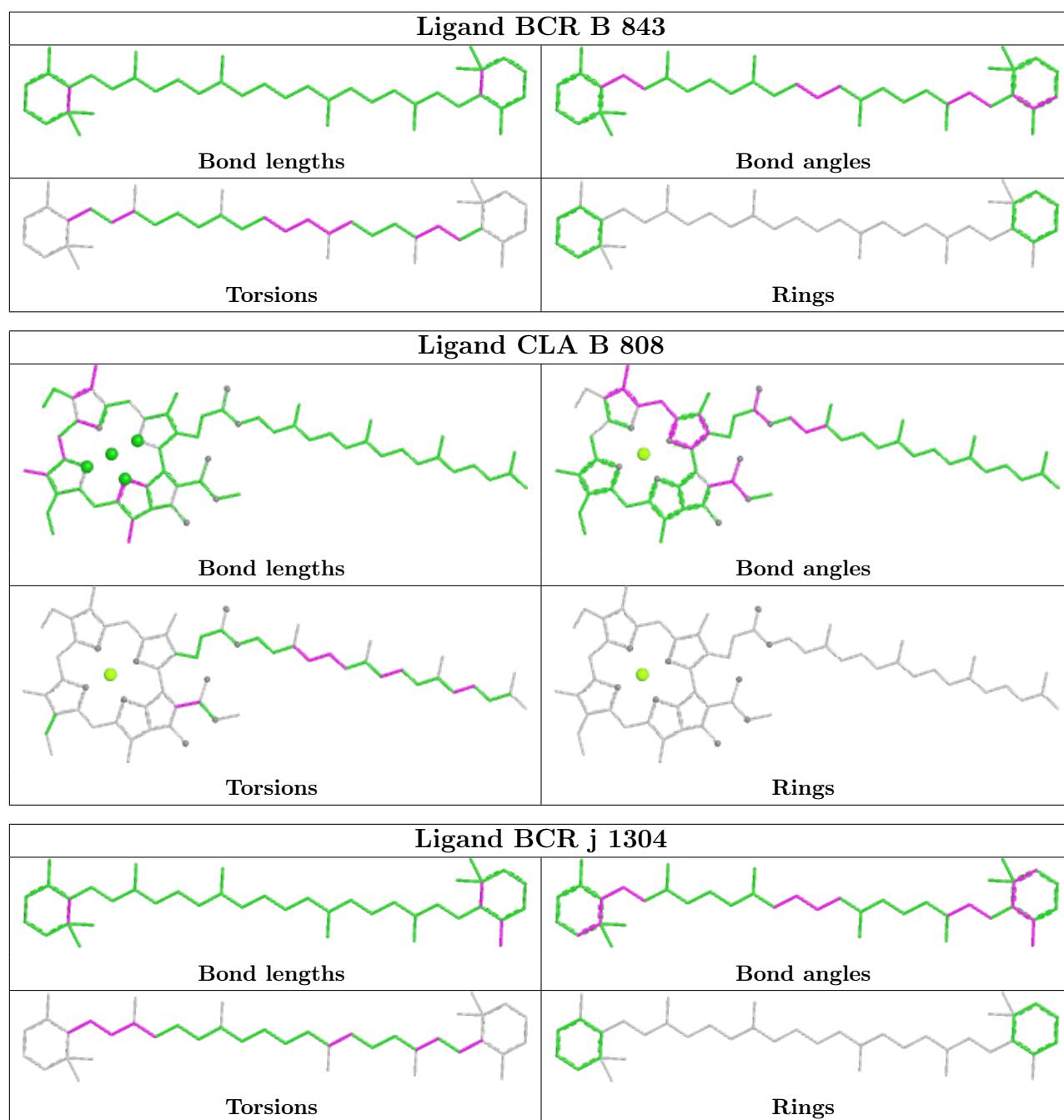


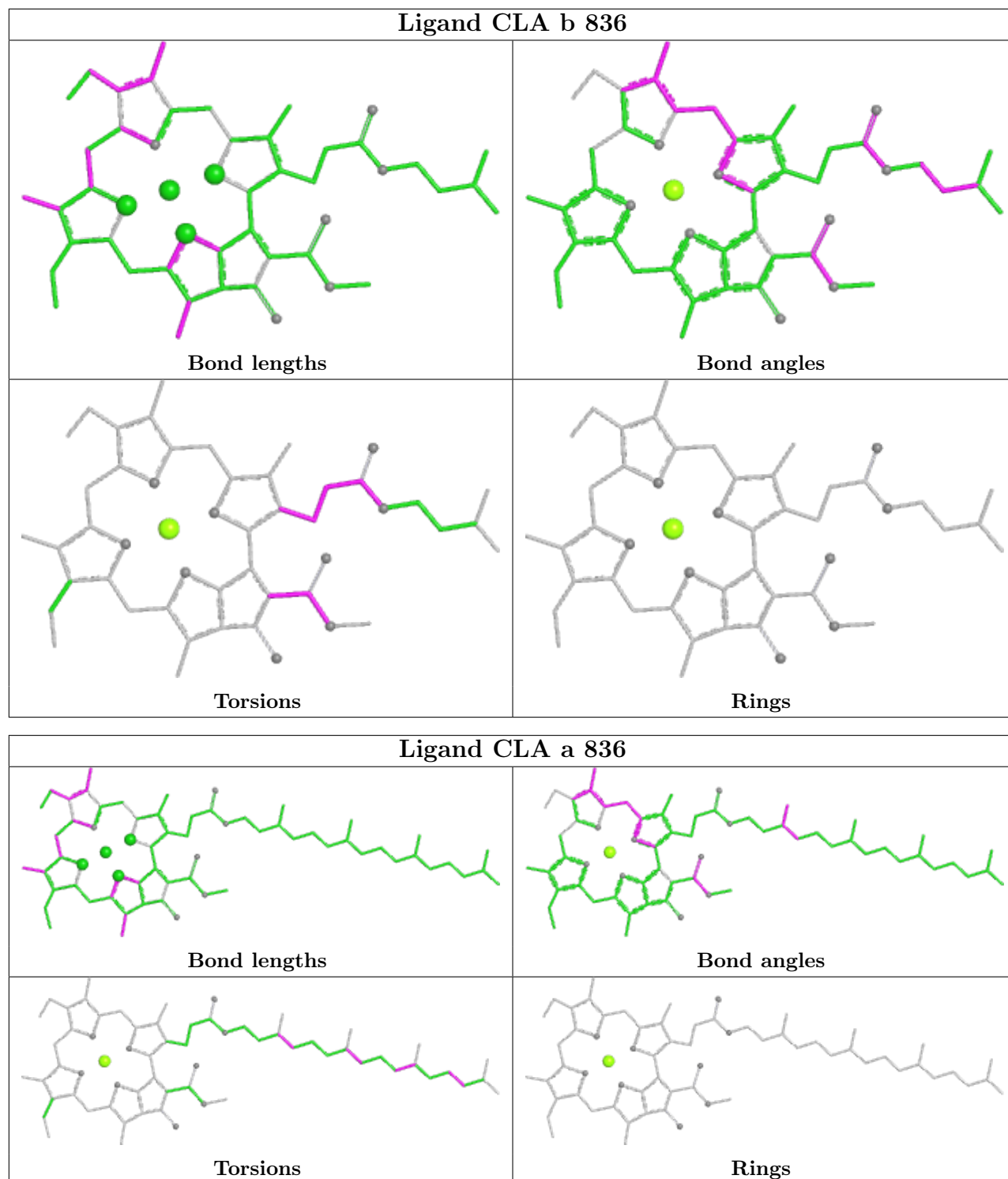


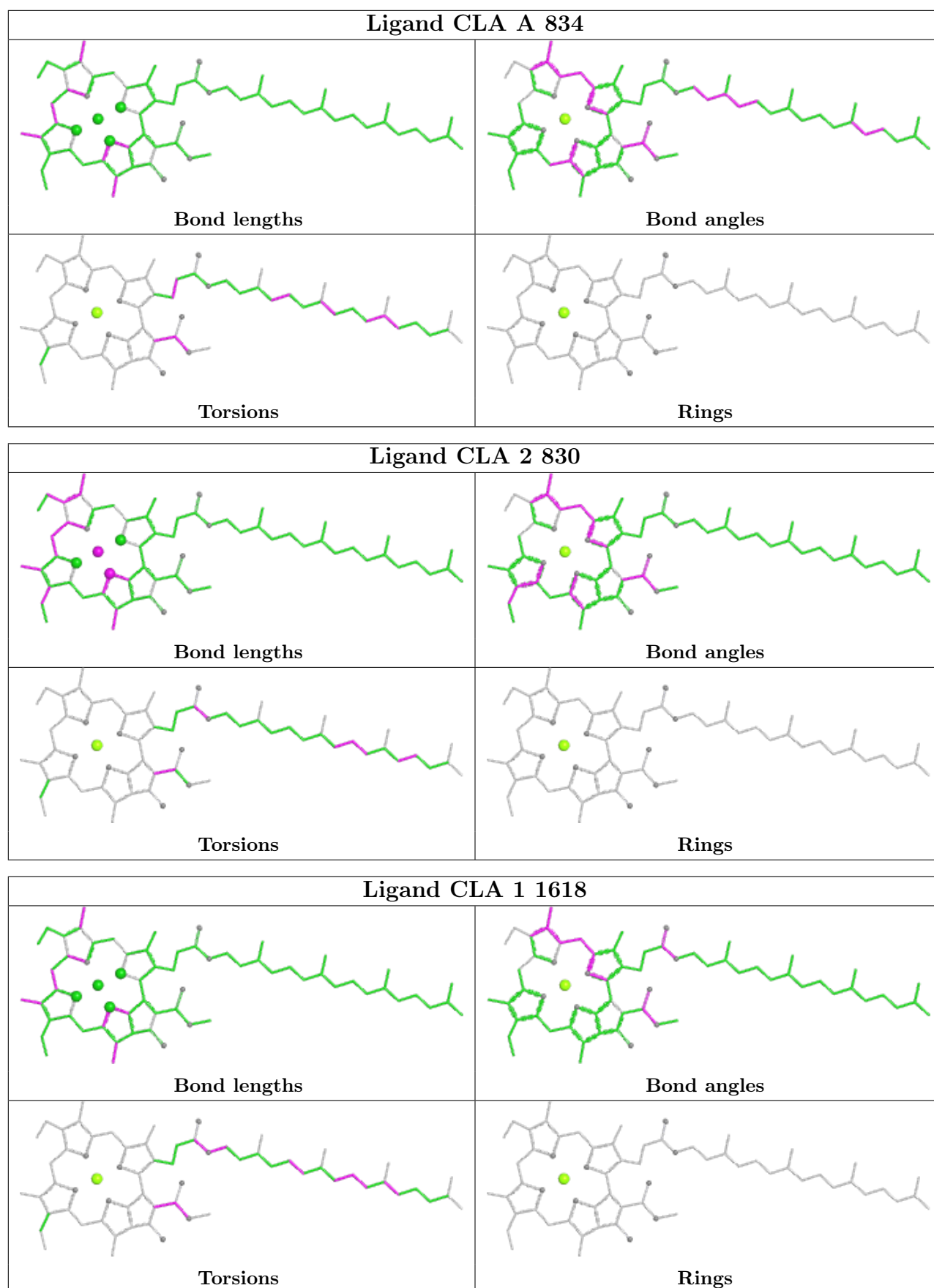


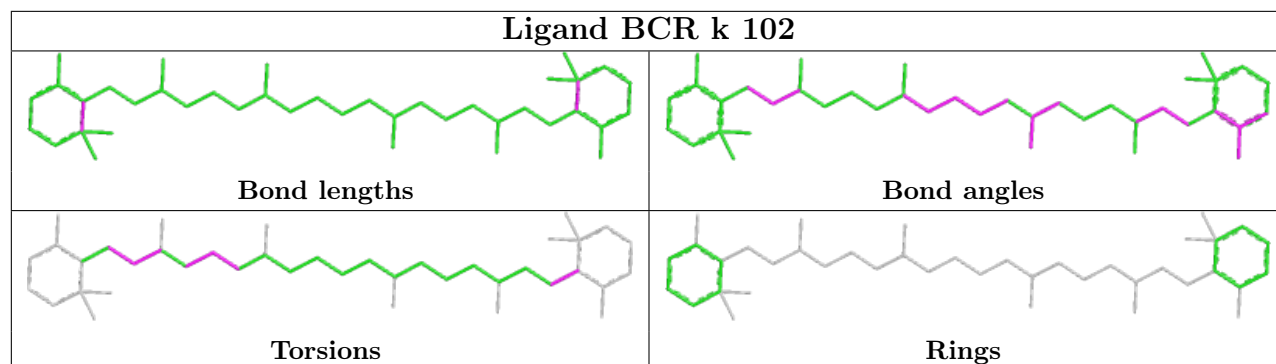
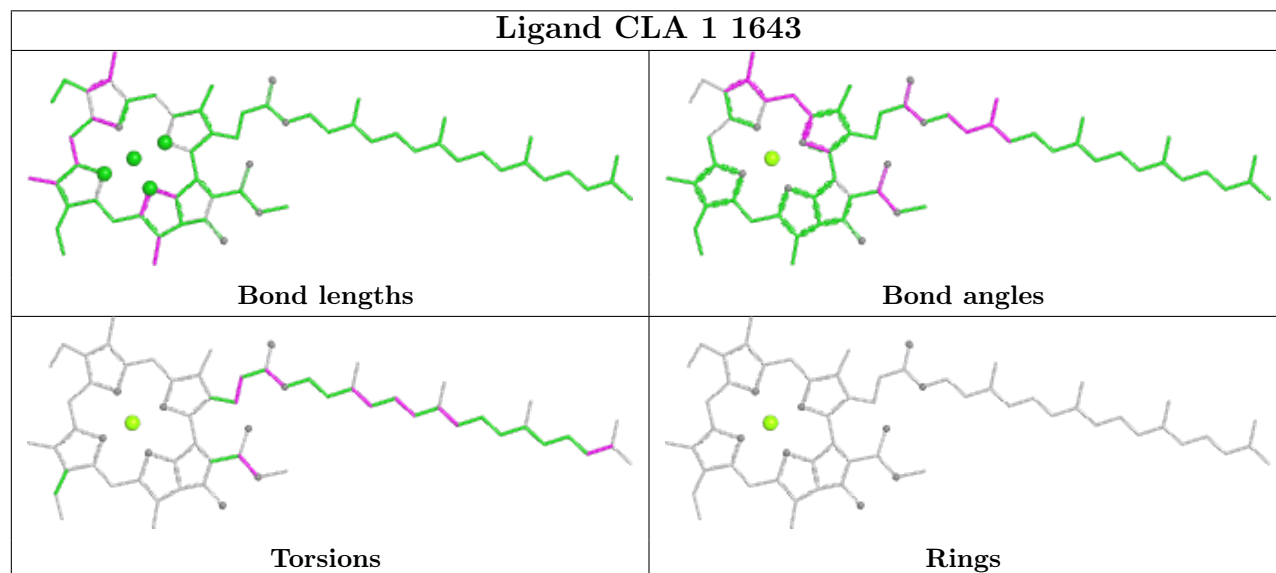
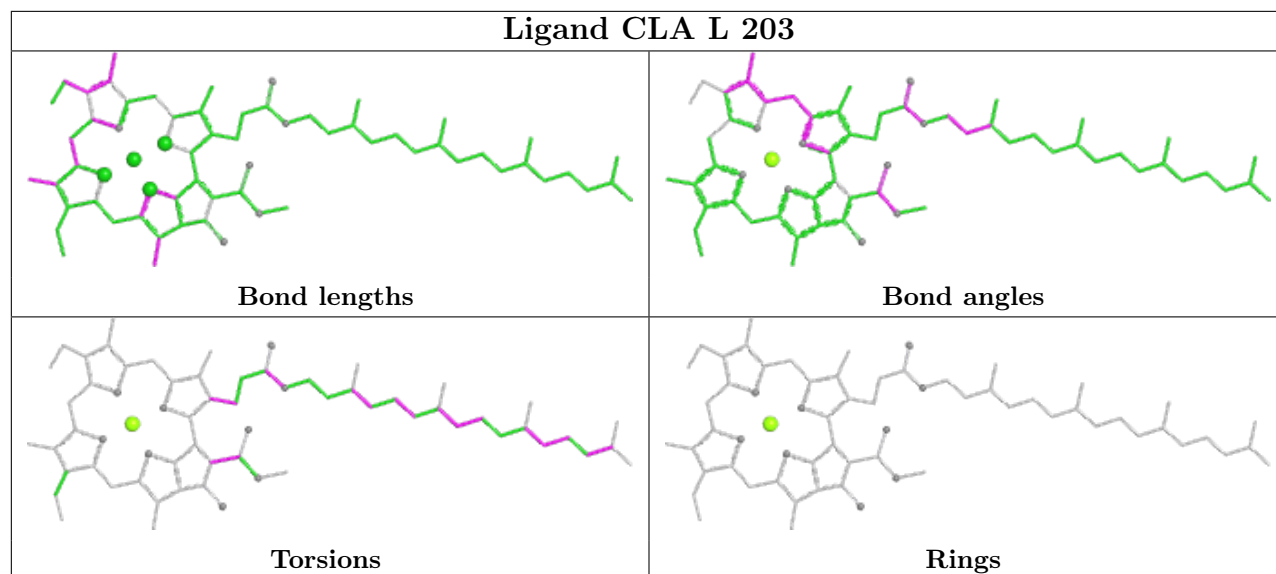


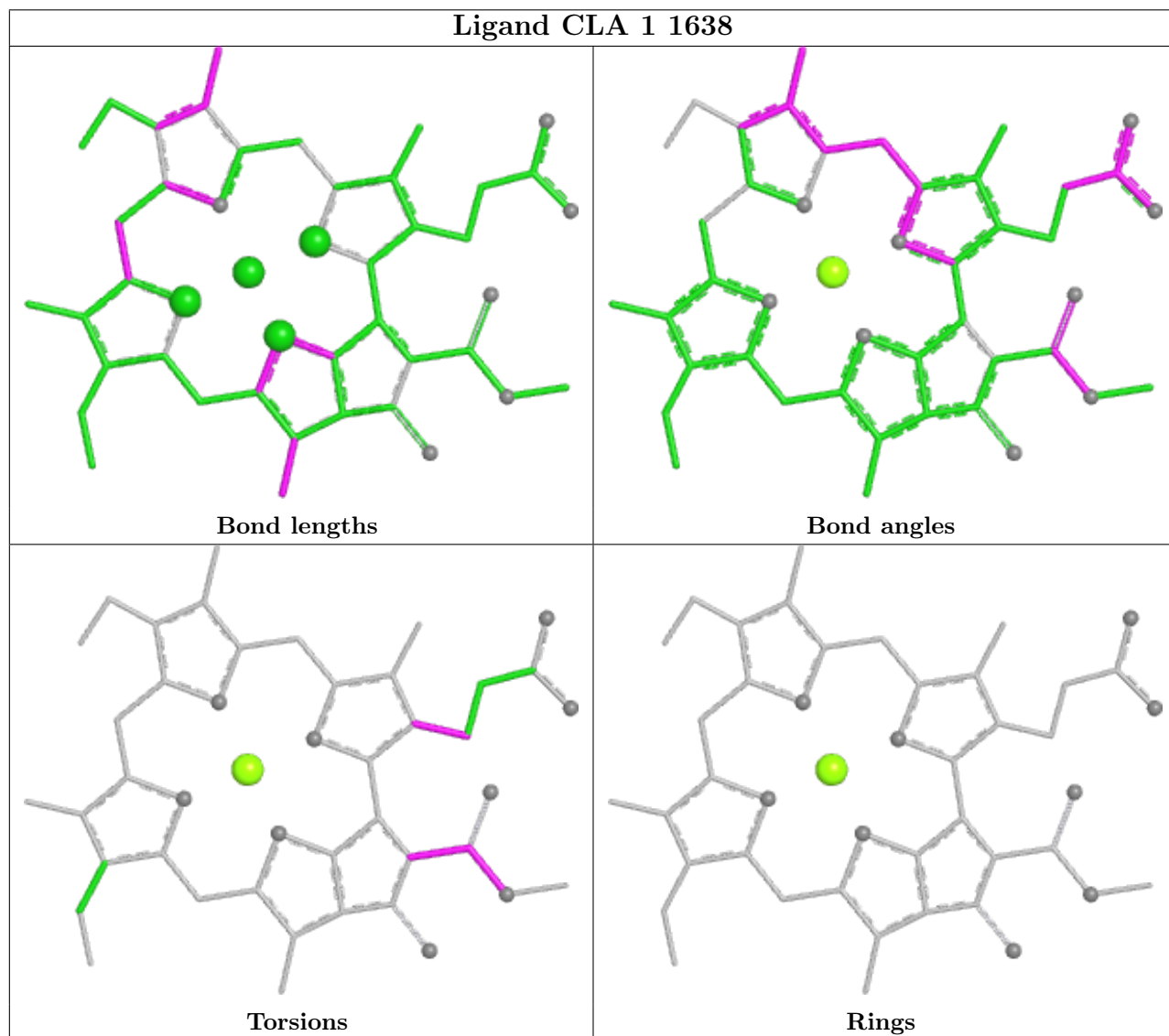
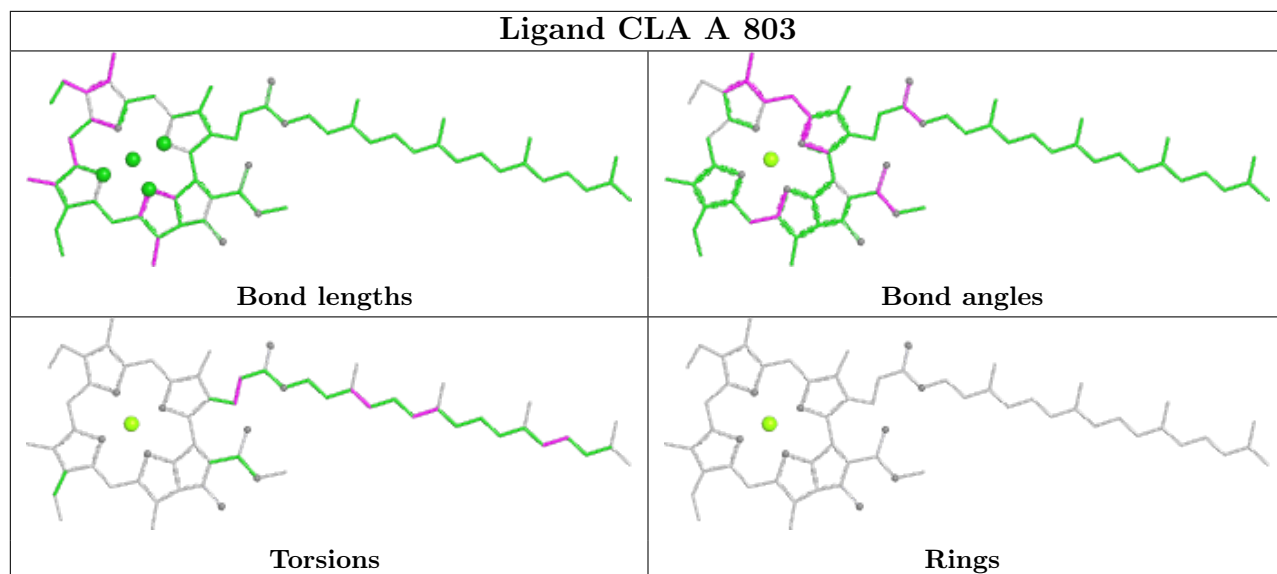


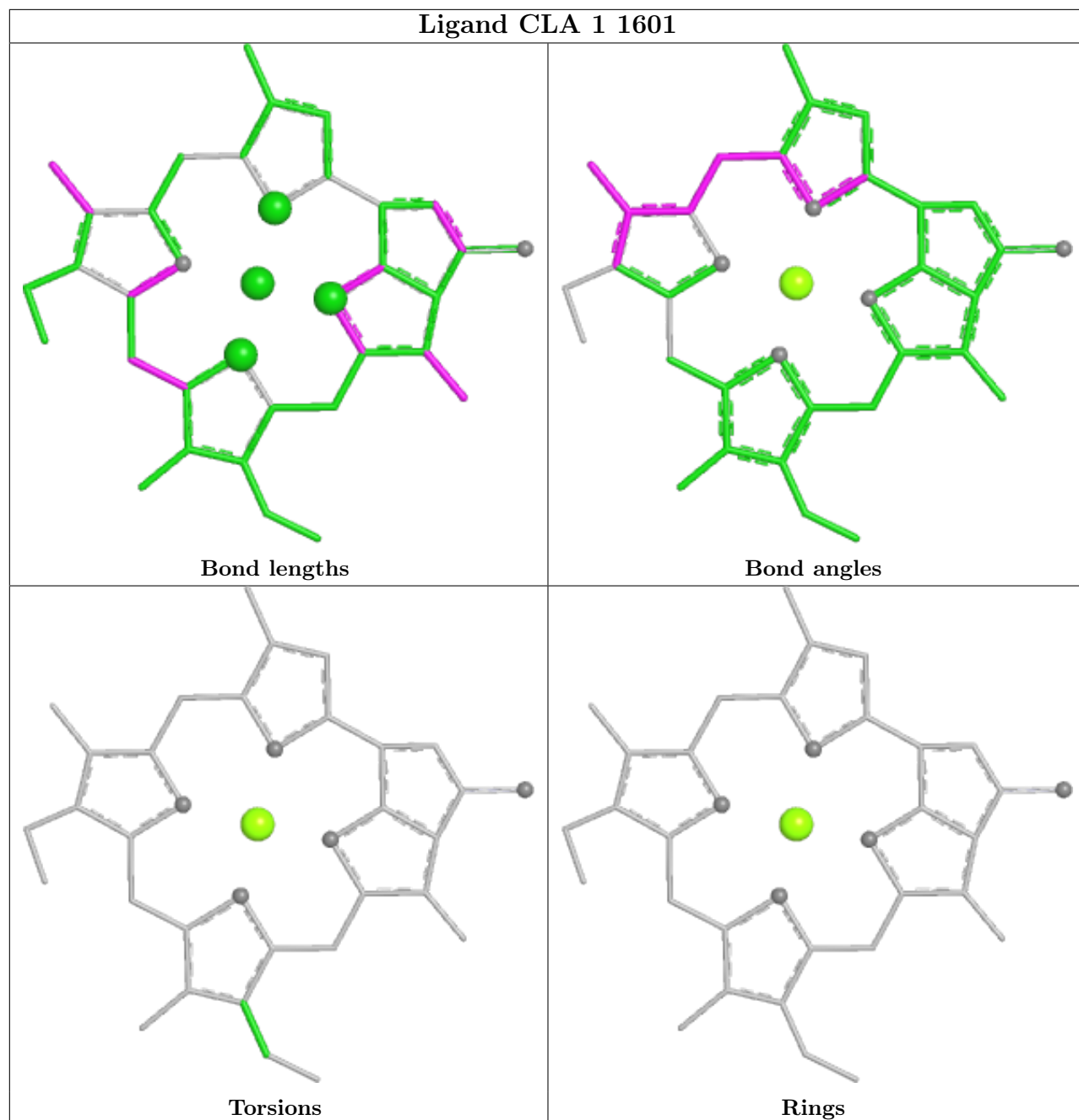


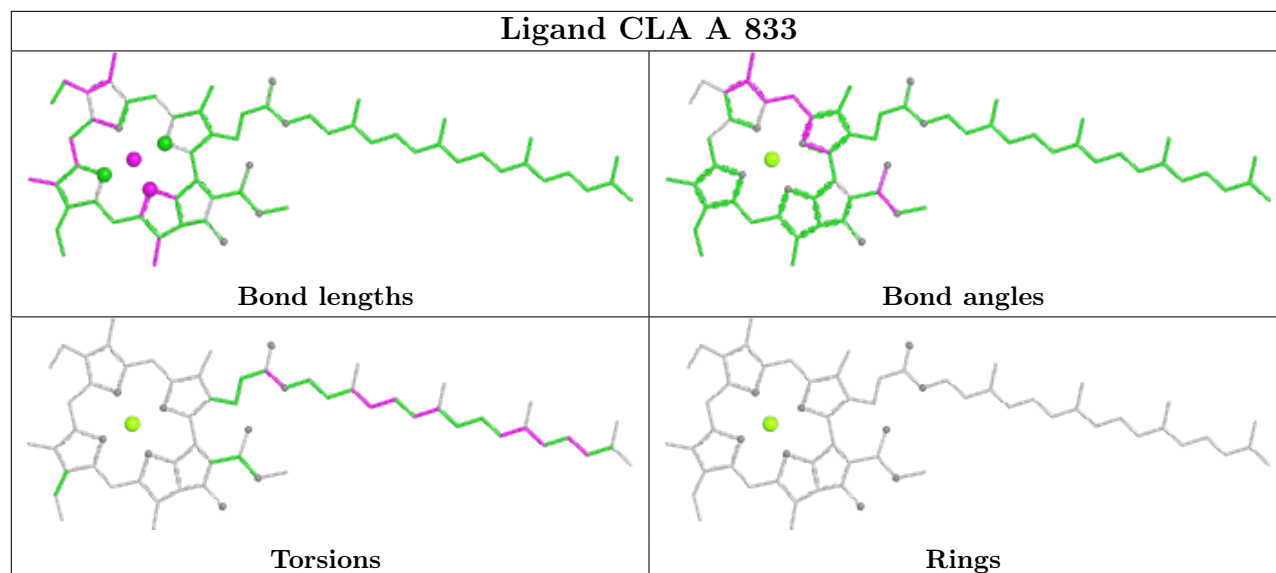
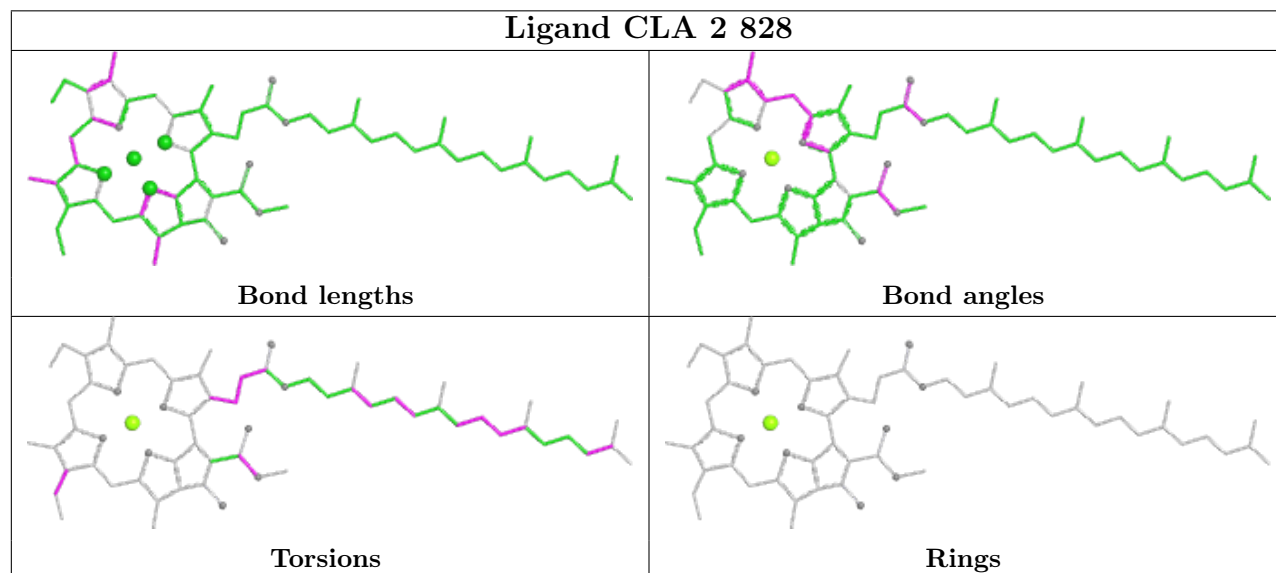
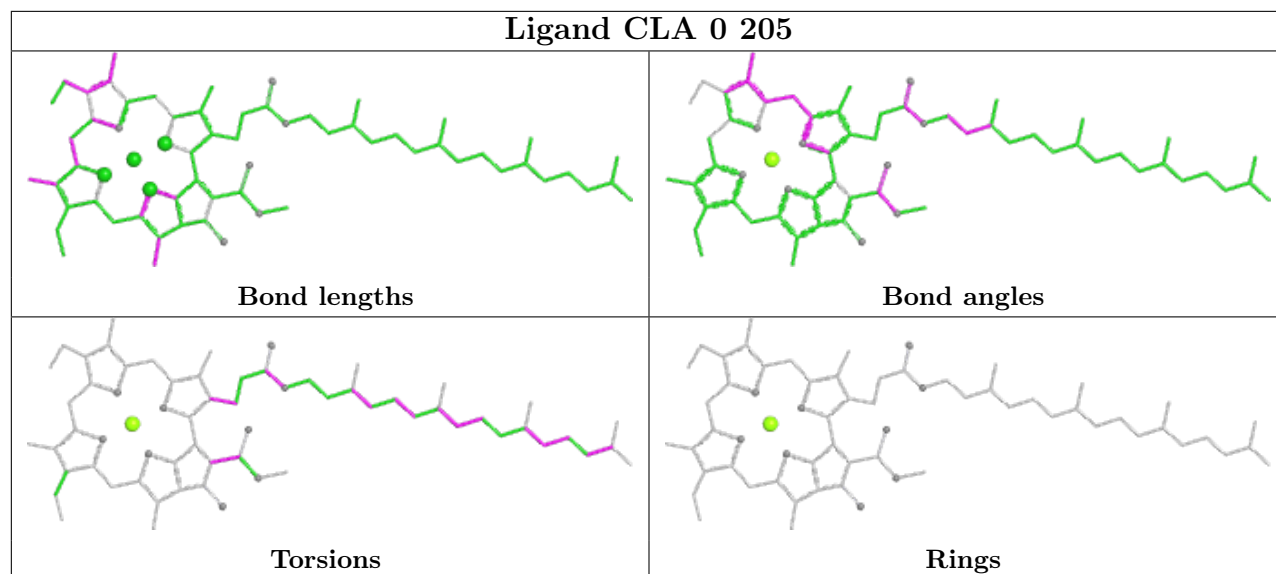


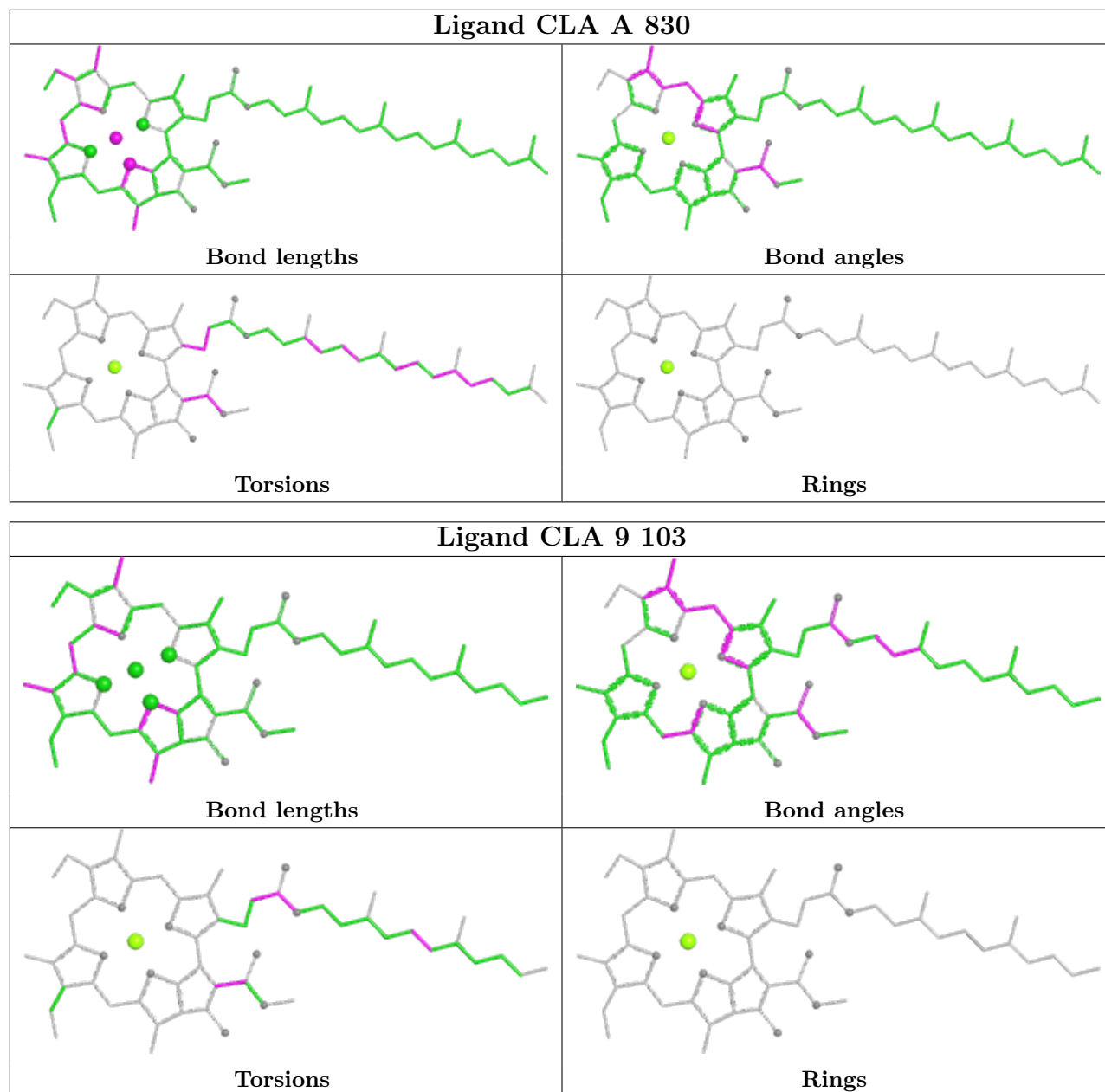


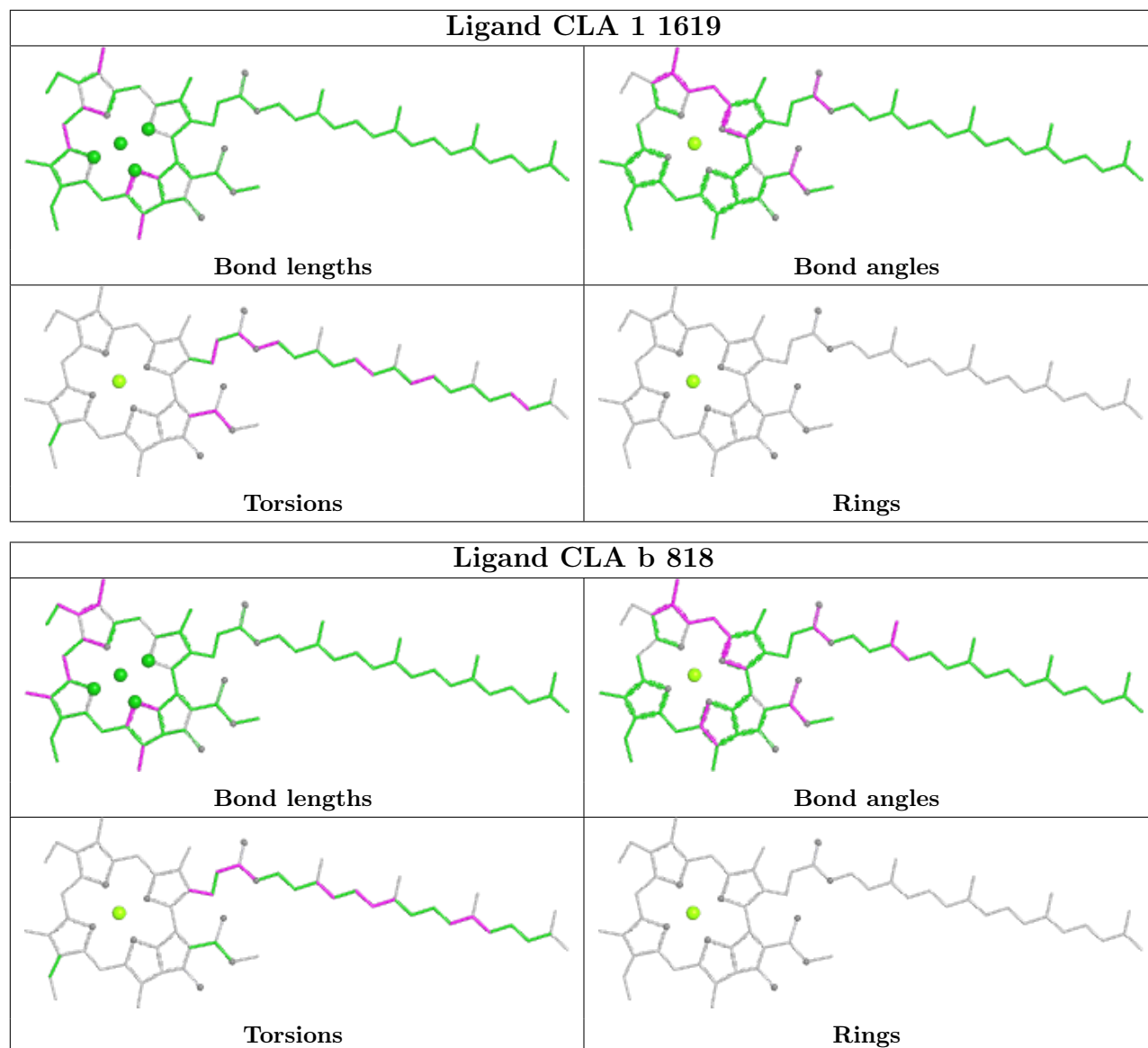


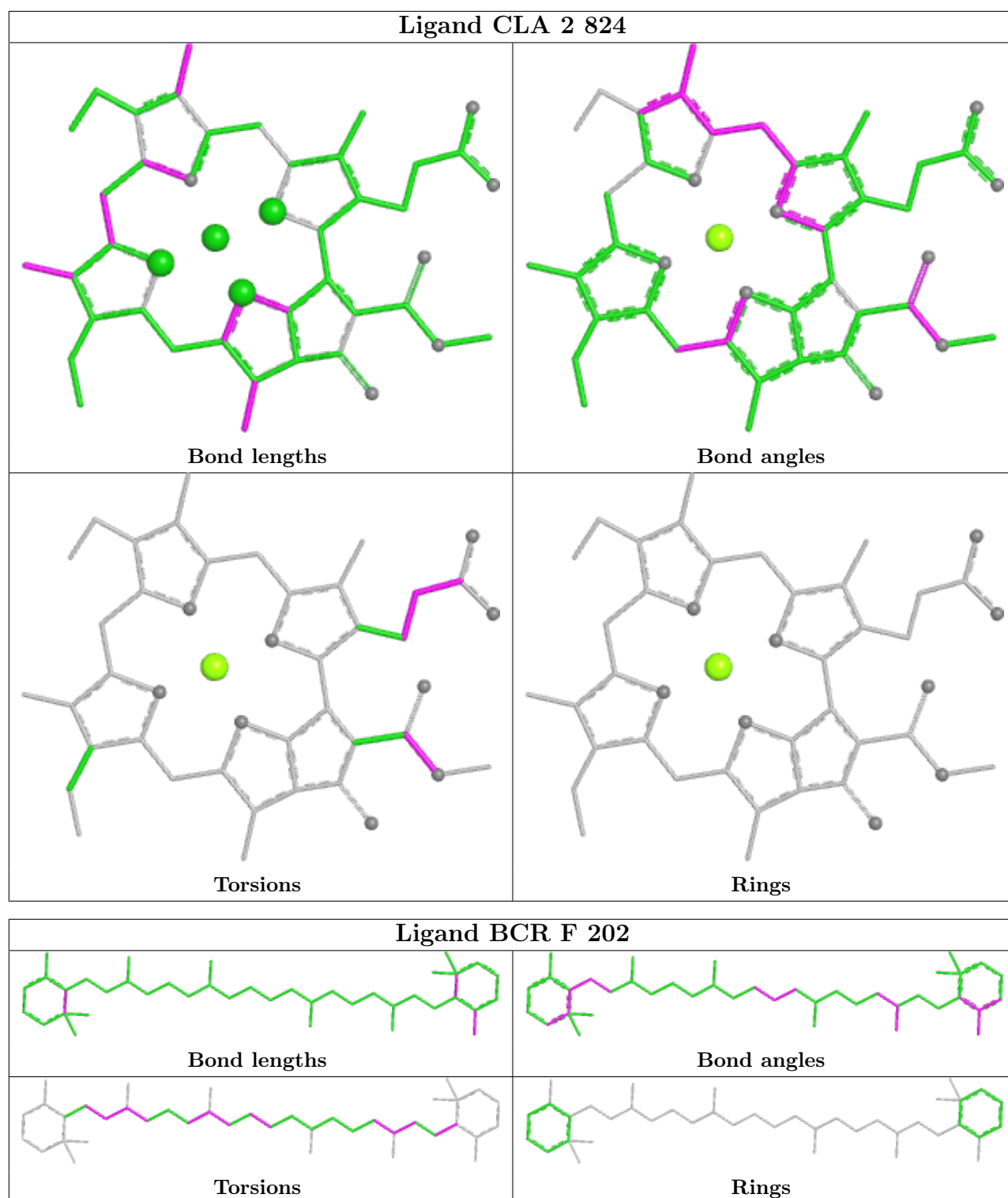


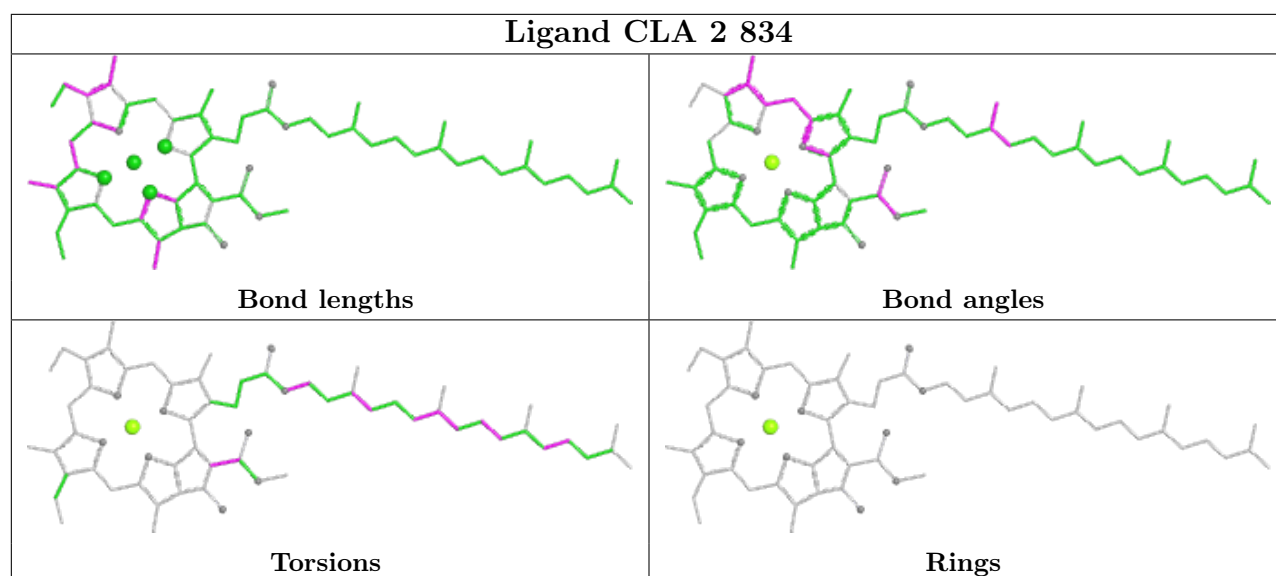
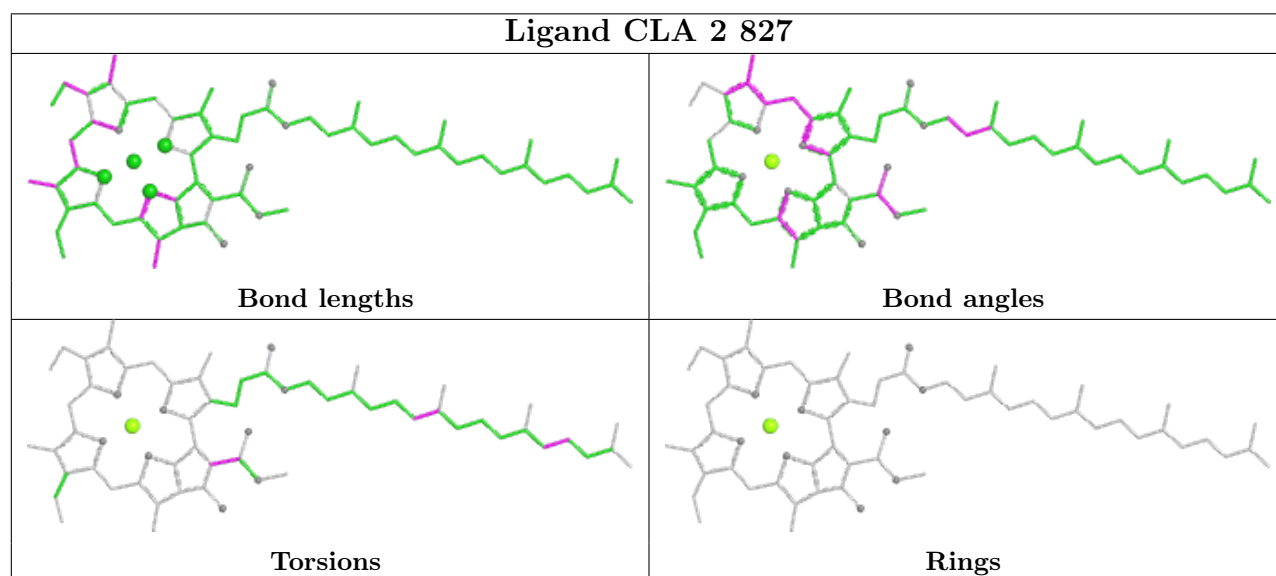
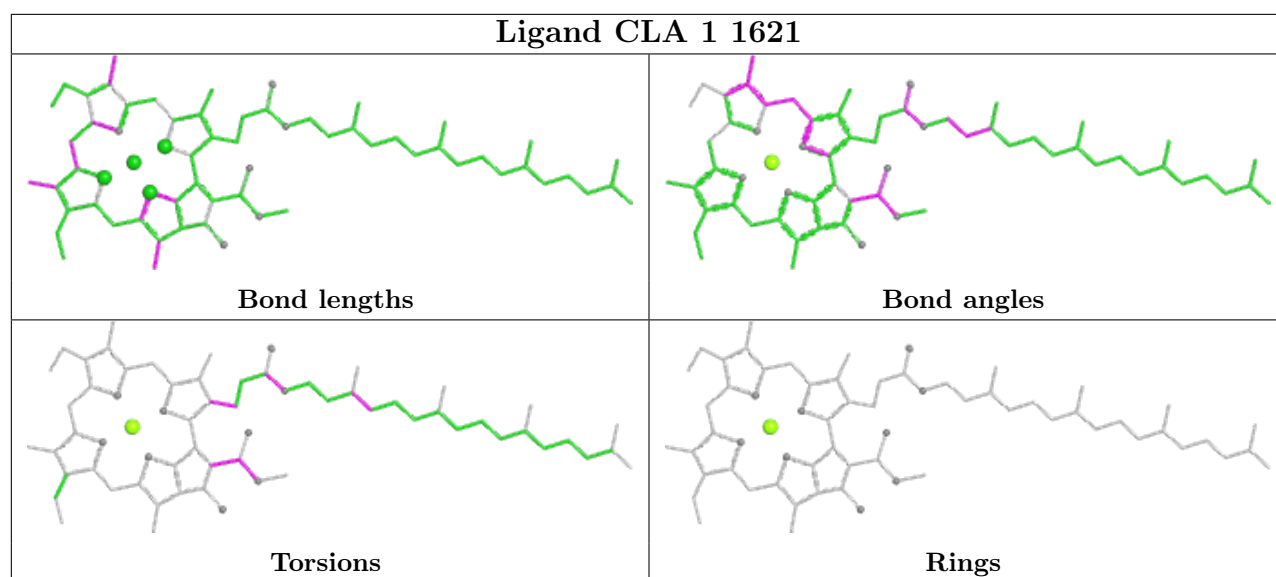


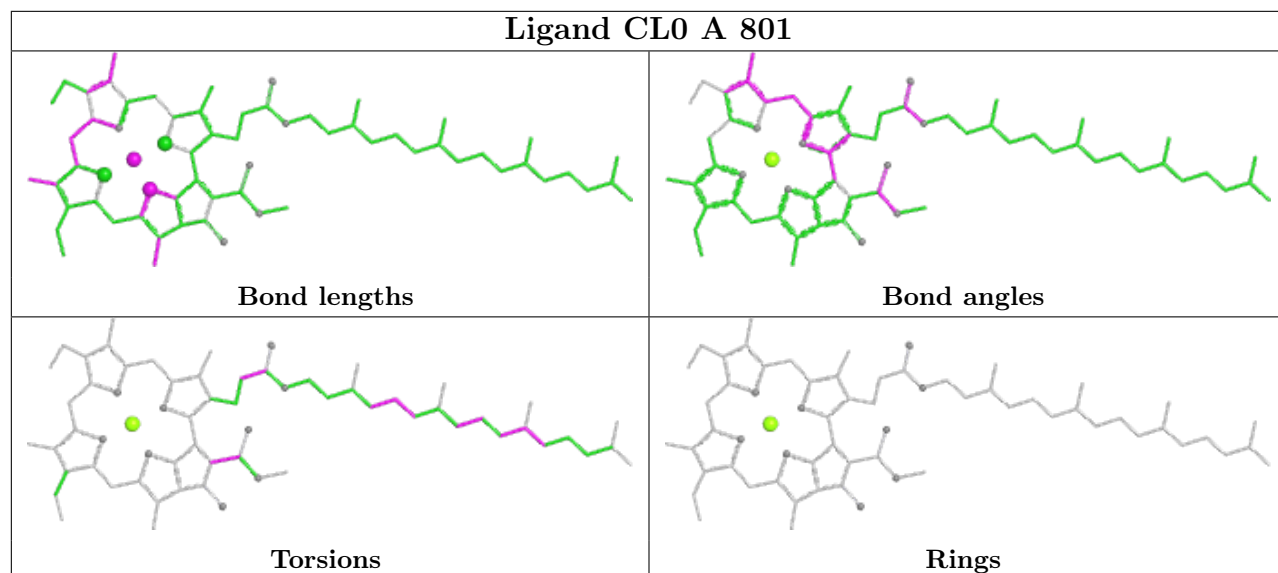
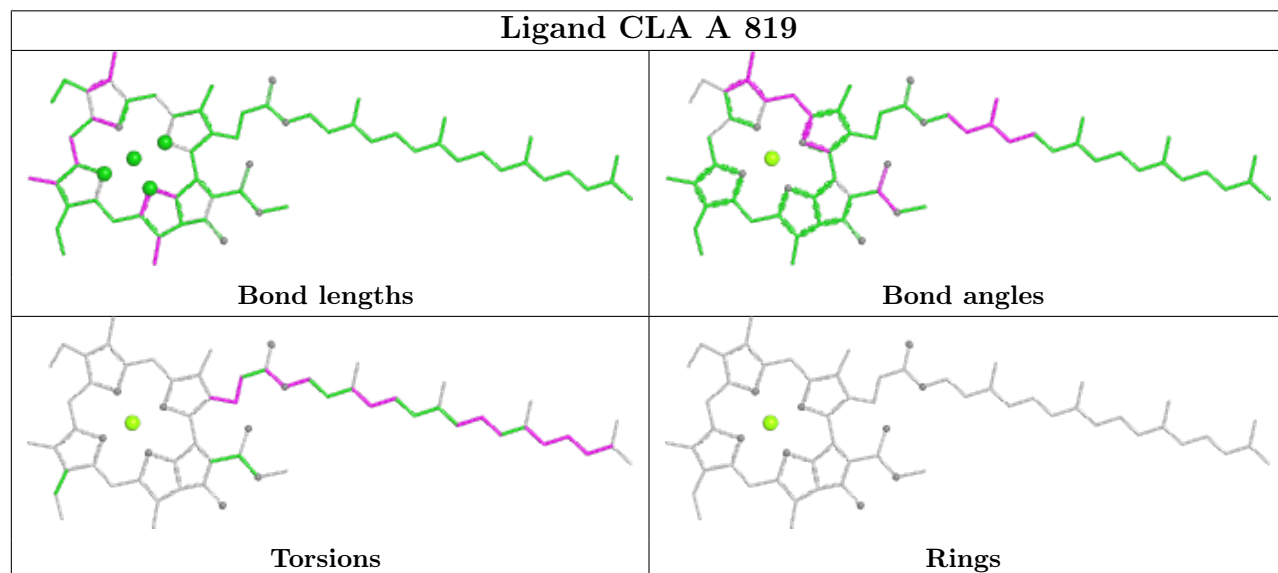
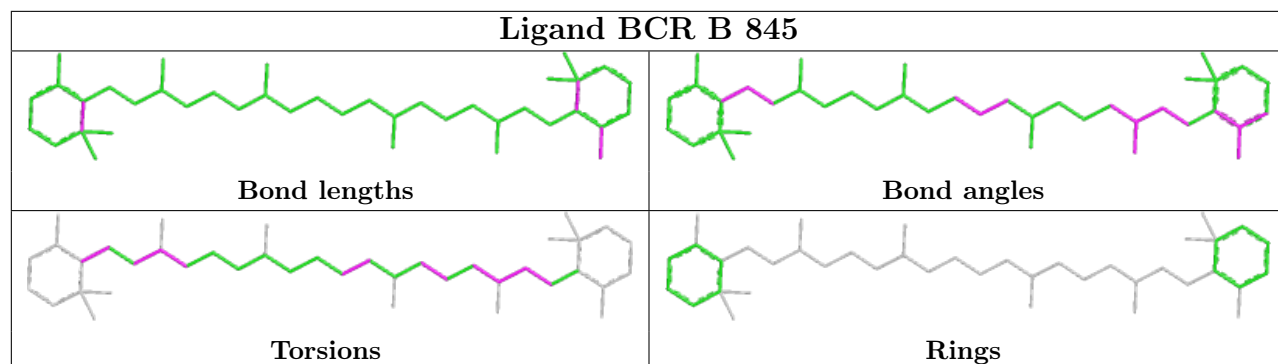


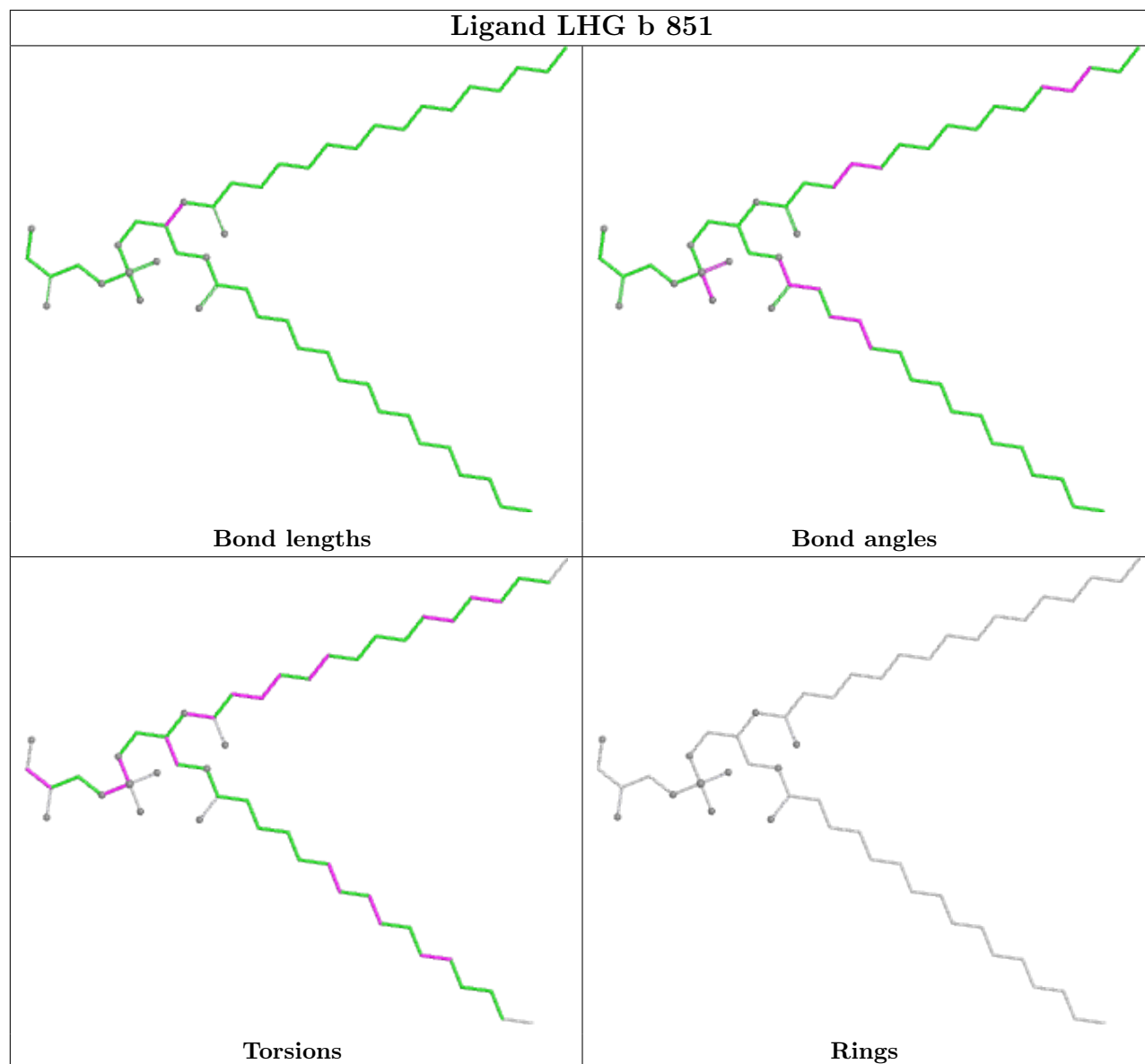


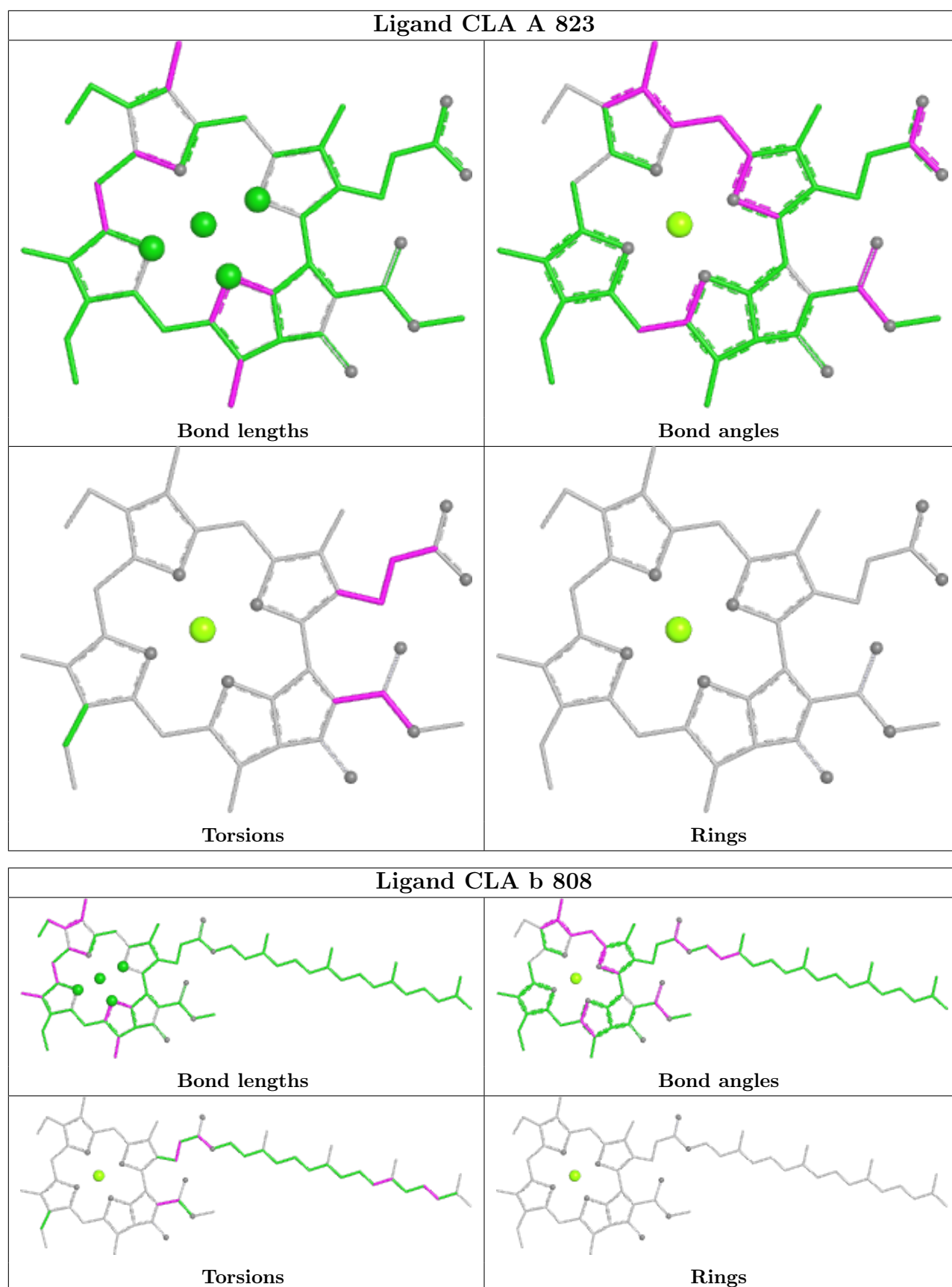


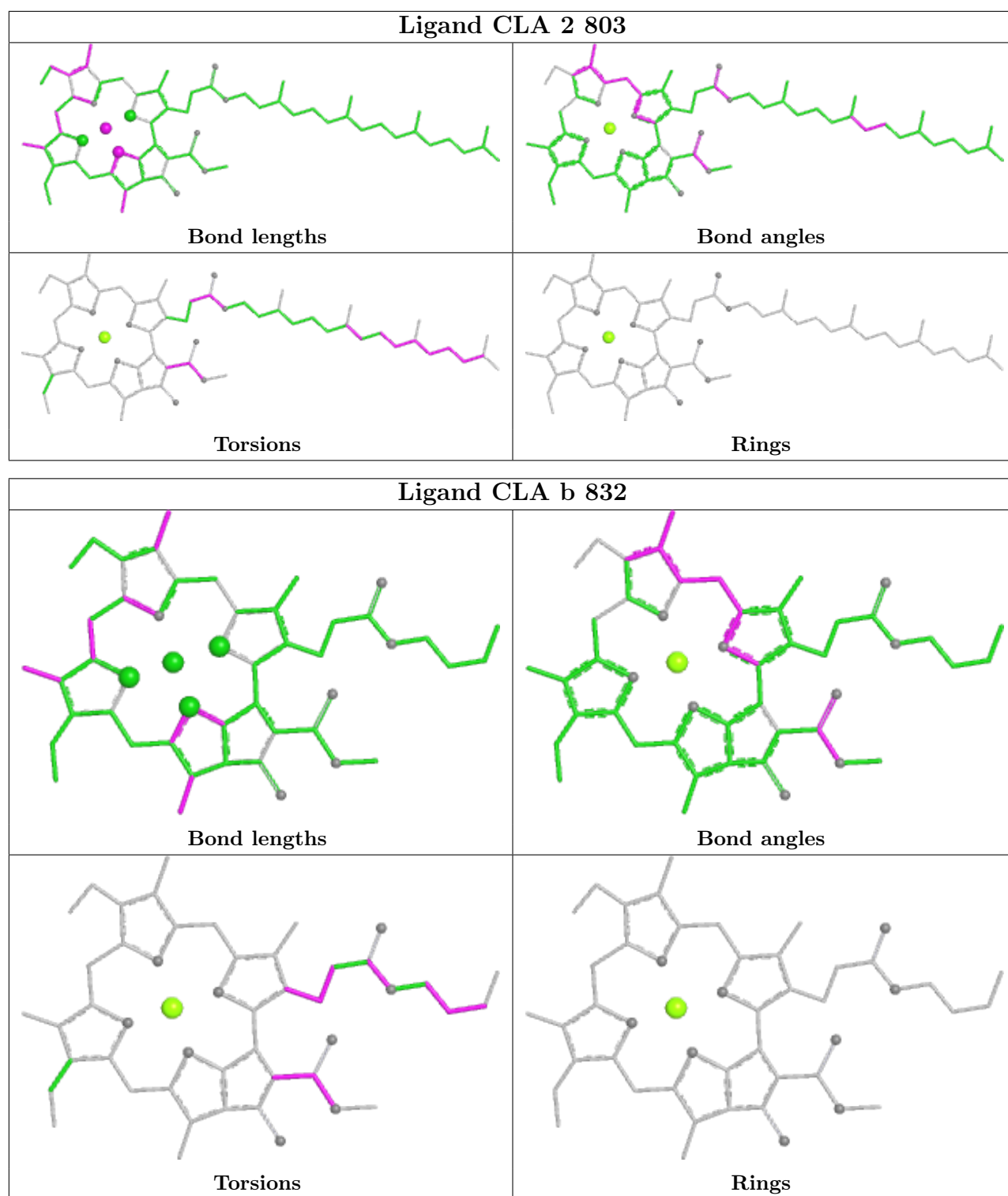












5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

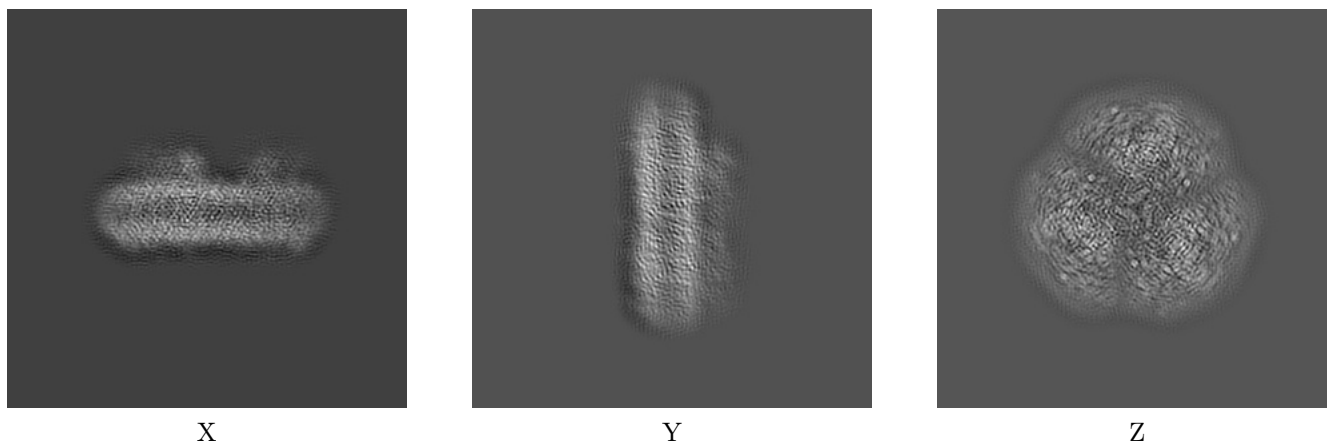
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-10559. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

6.1 Orthogonal projections [i](#)

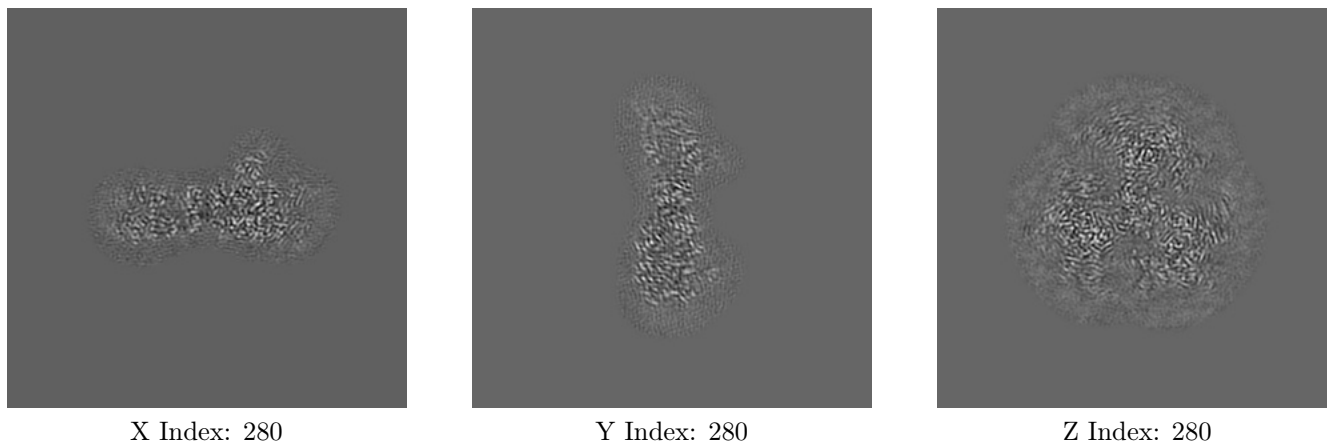
6.1.1 Primary map



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

6.2 Central slices [i](#)

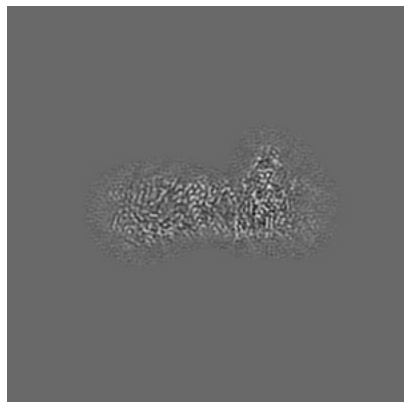
6.2.1 Primary map



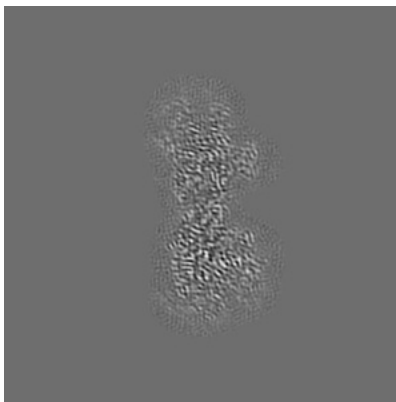
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

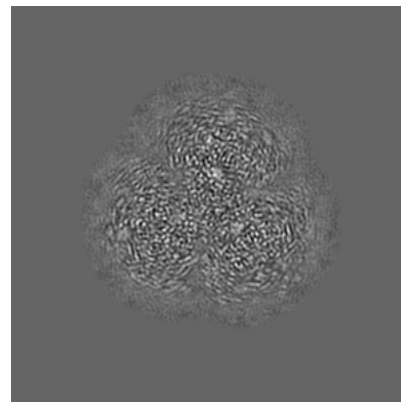
6.3.1 Primary map



X Index: 298



Y Index: 253



Z Index: 298

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



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.011. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

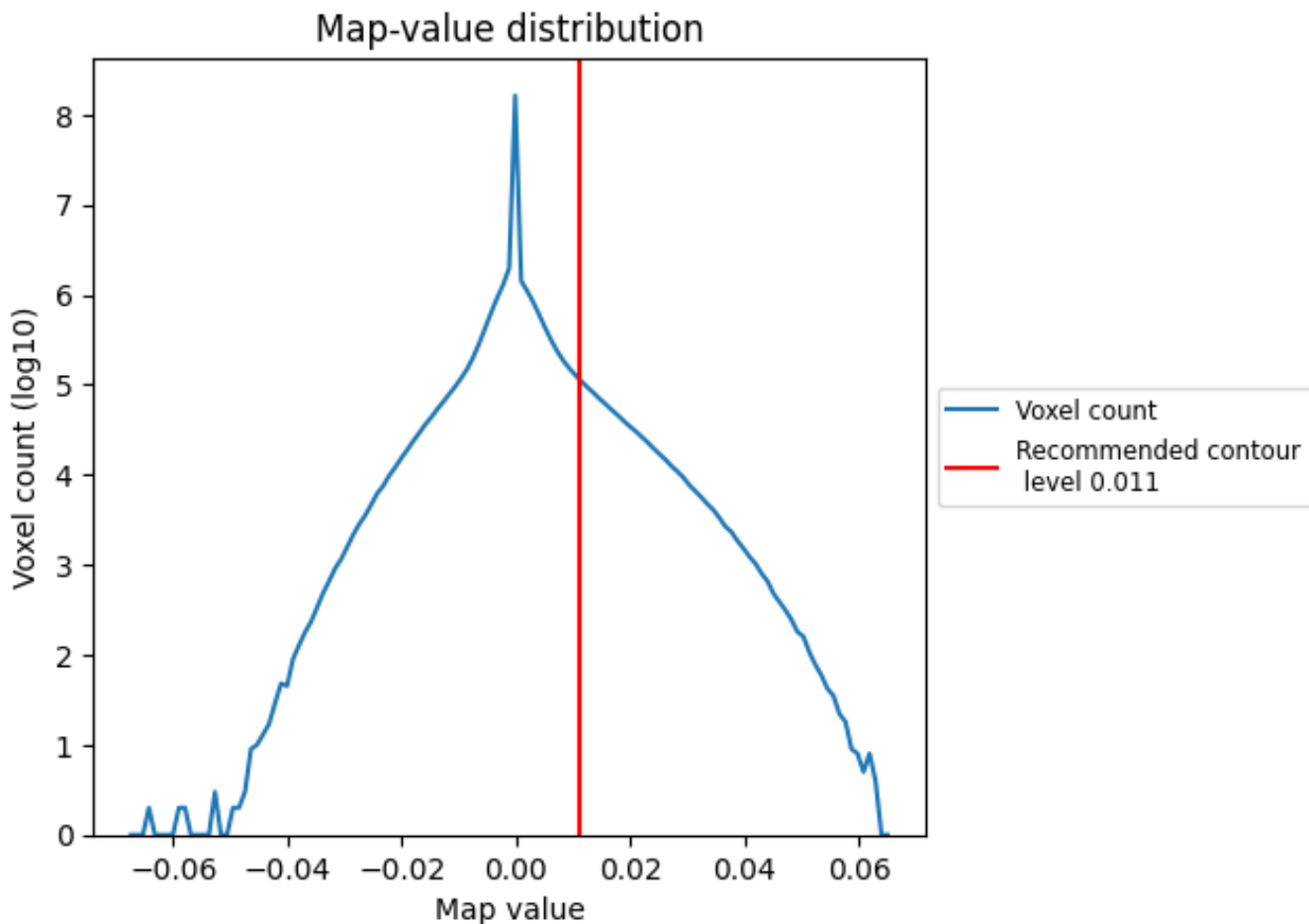
6.5 Mask visualisation

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

7 Map analysis [i](#)

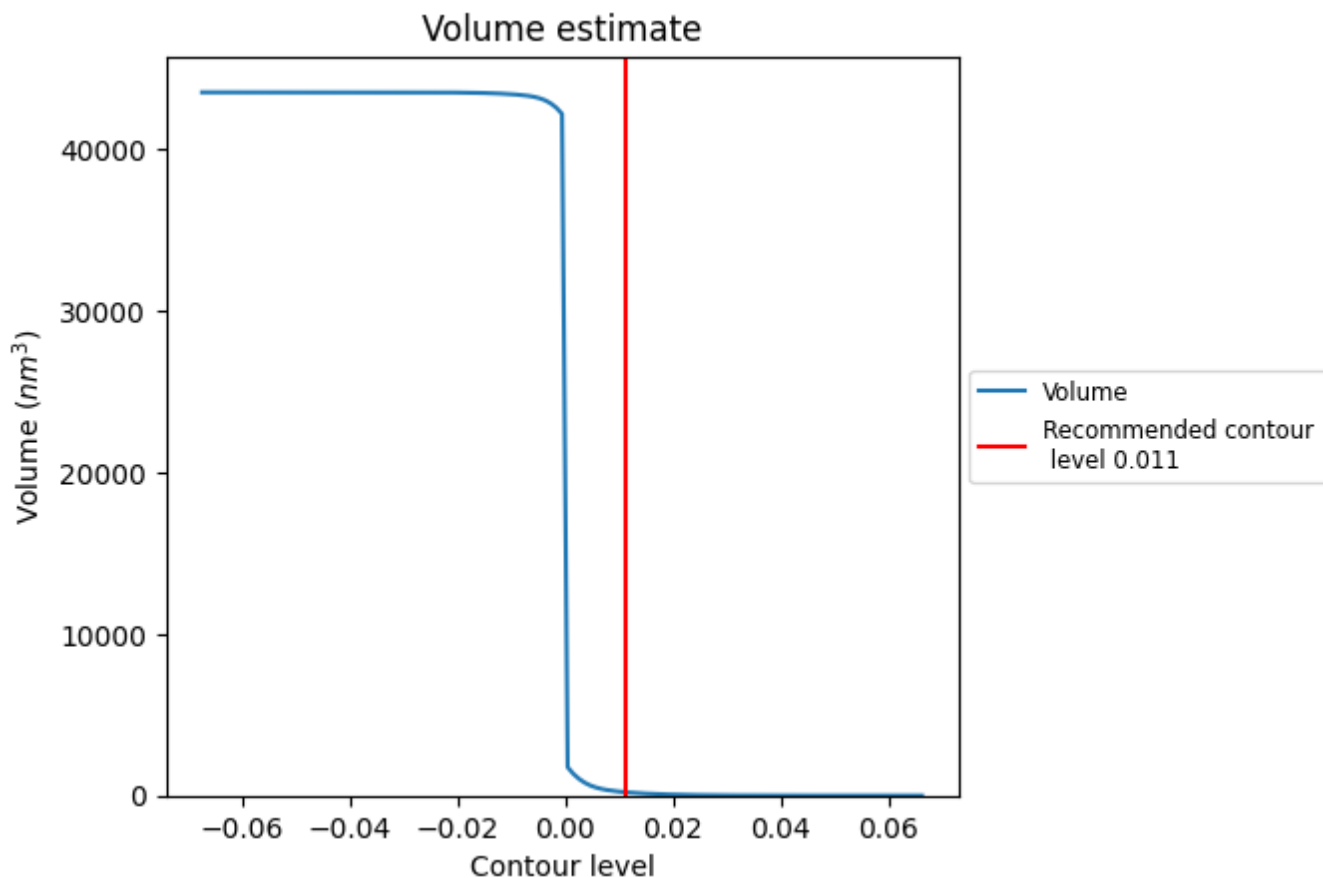
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

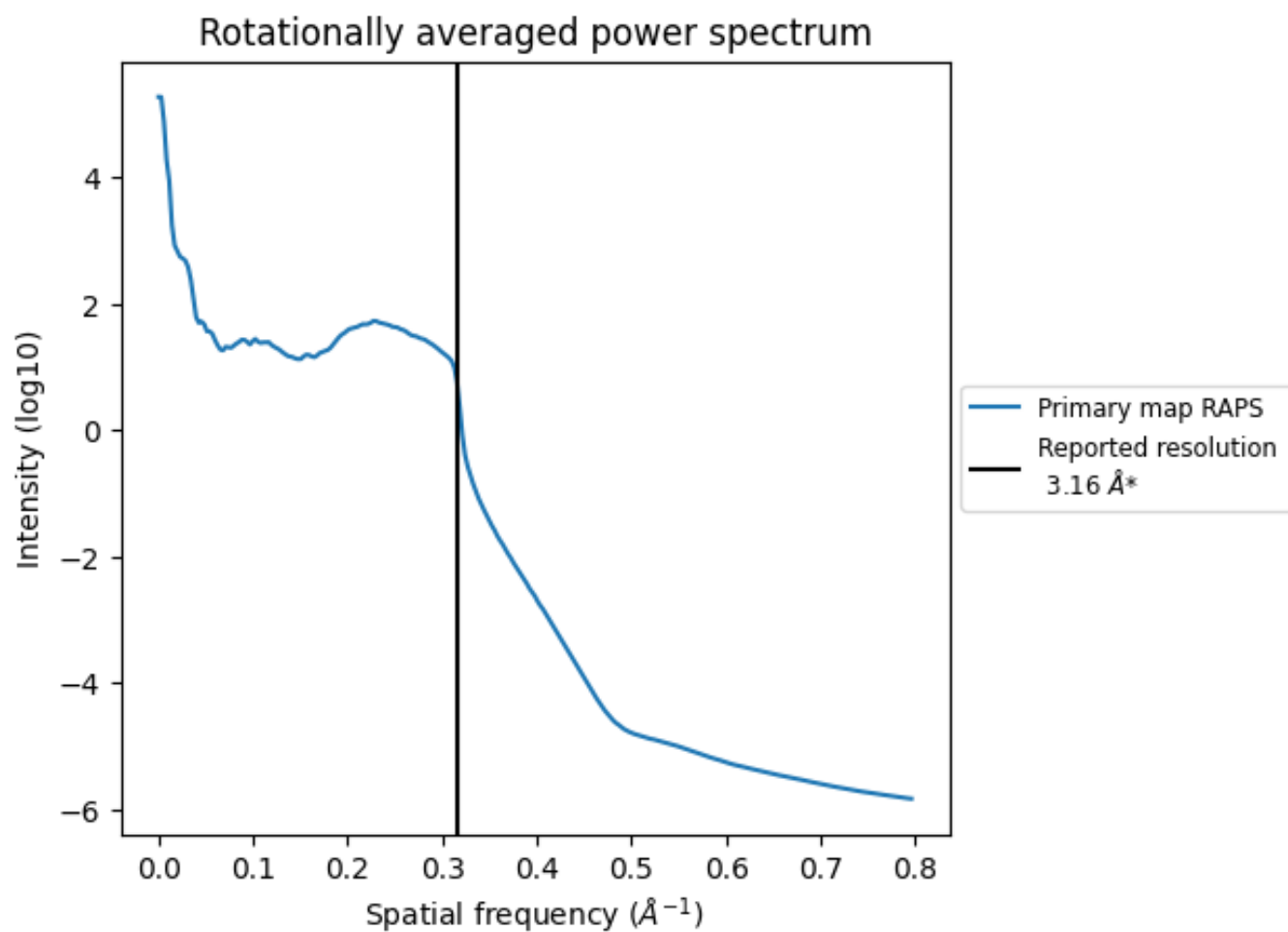
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 212 nm³; this corresponds to an approximate mass of 191 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](#)

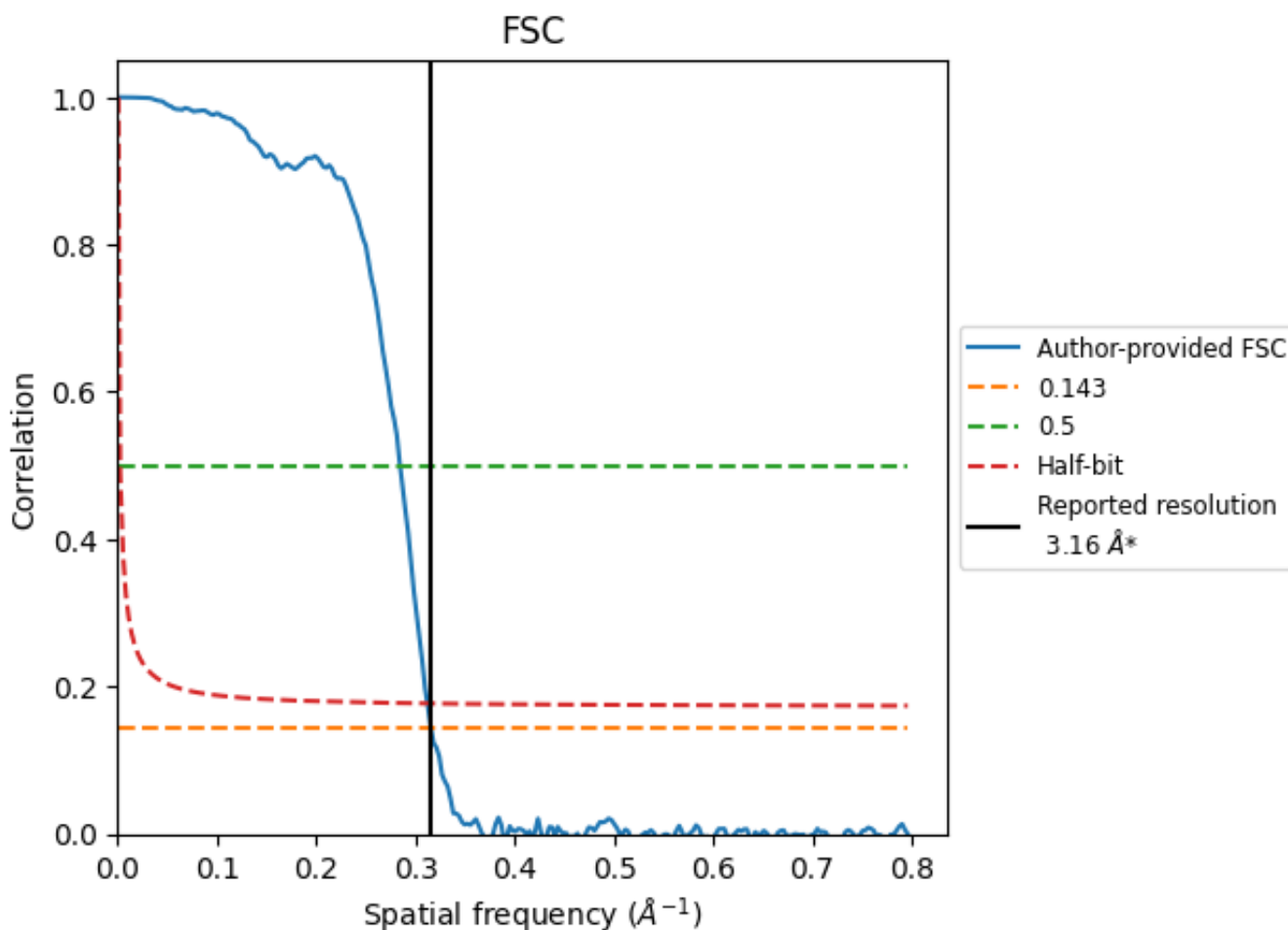


*Reported resolution corresponds to spatial frequency of 0.316\AA^{-1}

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 0.316 Å⁻¹

8.2 Resolution estimates [i](#)

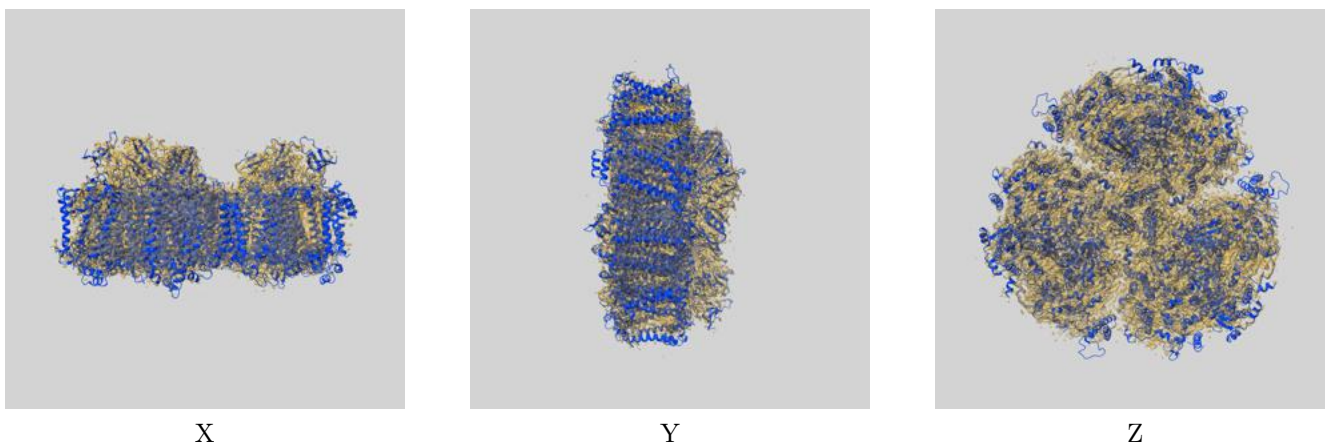
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.16	-	-
Author-provided FSC curve	3.17	3.51	3.20
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

9 Map-model fit [i](#)

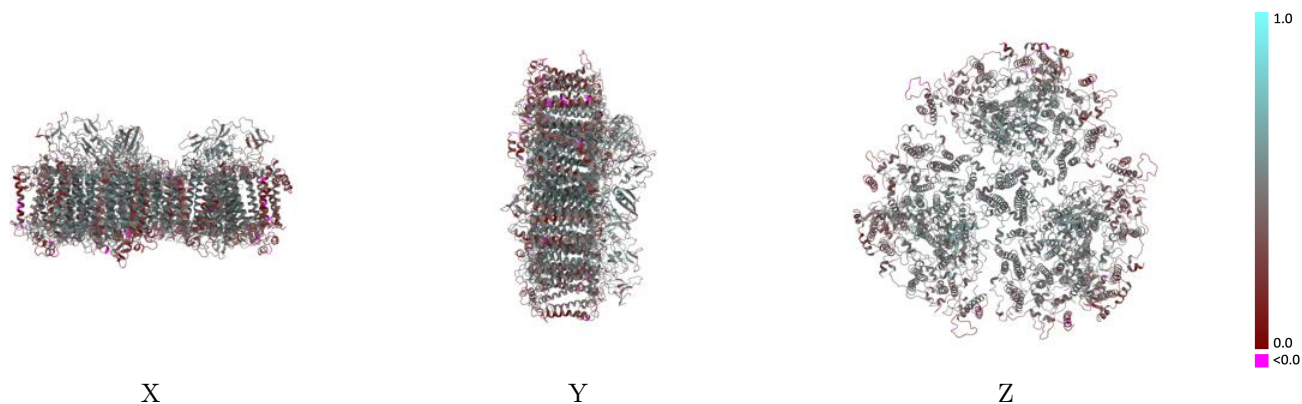
This section contains information regarding the fit between EMDB map EMD-10559 and PDB model 6TRD. Per-residue inclusion information can be found in section 3 on page 39.

9.1 Map-model overlay [i](#)



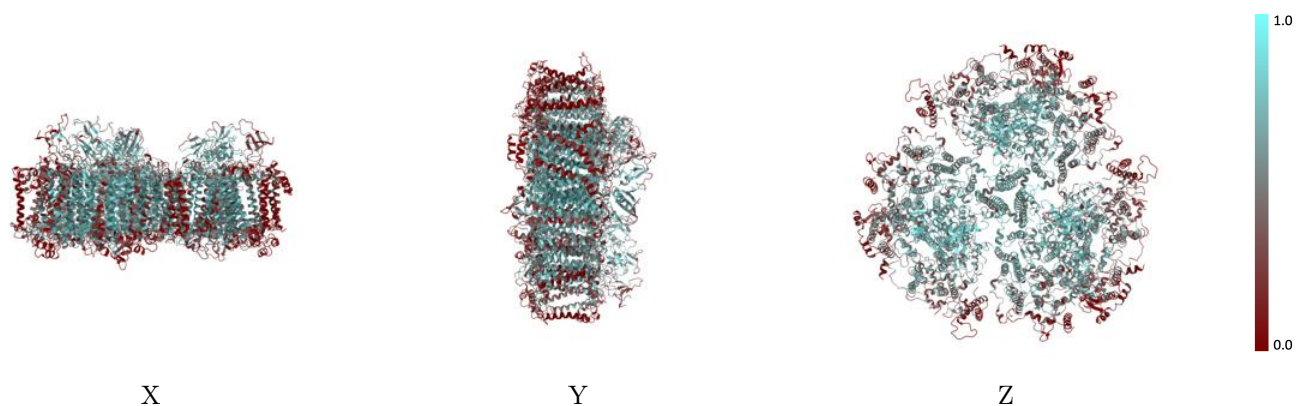
The images above show the 3D surface view of the map at the recommended contour level 0.011 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



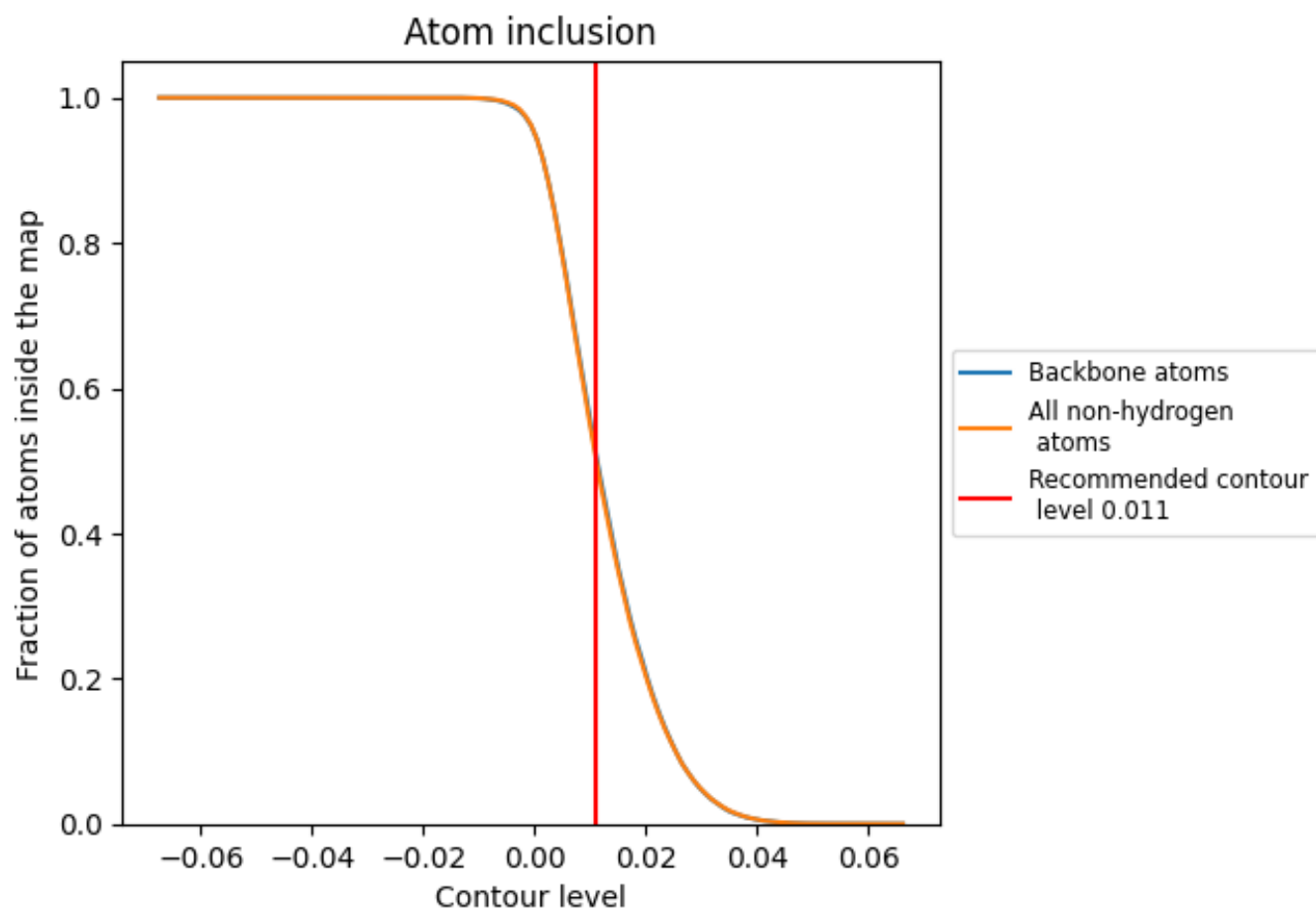
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.011).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 51% of all backbone atoms, 50% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.011) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.5028	 0.4500
0	 0.6796	 0.5210
1	 0.5783	 0.4730
2	 0.5742	 0.4770
3	 0.6633	 0.4830
4	 0.5645	 0.4700
5	 0.3820	 0.4120
6	 0.2118	 0.3470
7	 0.6726	 0.5060
8	 0.1877	 0.3310
9	 0.1283	 0.3720
A	 0.5254	 0.4540
B	 0.5126	 0.4490
C	 0.6833	 0.4970
D	 0.5522	 0.4870
E	 0.3258	 0.4300
F	 0.0997	 0.2840
I	 0.6637	 0.5280
J	 0.1136	 0.3370
K	 0.1476	 0.3590
L	 0.6845	 0.5250
M	 0.4777	 0.4820
X	 0.0000	 0.1740
a	 0.5032	 0.4360
b	 0.5758	 0.4770
c	 0.6117	 0.4930
d	 0.5009	 0.4630
e	 0.3390	 0.4240
f	 0.1733	 0.3380
i	 0.7050	 0.5110
j	 0.1623	 0.3670
k	 0.0593	 0.2860
l	 0.6622	 0.5180
m	 0.5245	 0.4520
x	 0.0114	 0.2250



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Chain	Atom inclusion	Q-score
y	 0.5123	 0.4820
z	 0.0224	 0.2350