



wwPDB EM Validation Summary Report ⓘ

May 22, 2024 – 06:37 PM JST

PDB ID : 8WMW
EMDB ID : EMD-37660
Title : The structure of PSI-11CAC at the stationary growth phase
Authors : Zhang, S.M.; Si, L.; Li, M.
Deposited on : 2023-10-04
Resolution : 3.30 Å (reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

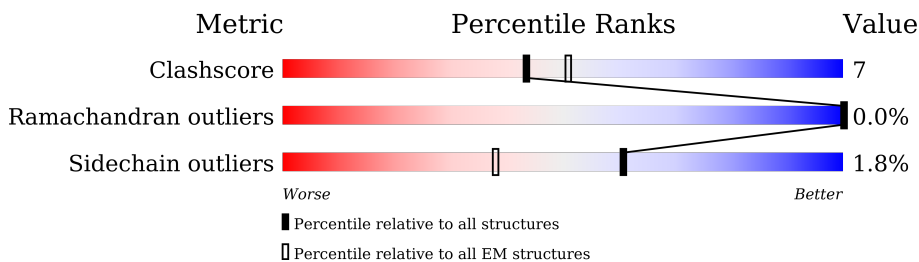
EMDB validation analysis : 0.0.1.dev92
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36.2

1 Overall quality at a glance

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

The reported resolution of this entry is 3.30 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	752	
2	B	734	
3	C	81	
4	D	141	
5	E	64	
6	F	188	
7	I	36	
8	J	42	

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Mol	Chain	Length	Quality of chain
9	L	153	
10	M	30	
11	O	146	
12	K	87	
13	c	216	
14	a	216	
15	b	223	
16	h	225	
17	e	203	
18	k	241	
19	f	212	
19	j	212	
20	i	218	
21	d	213	
22	g	255	
23	R	129	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
24	CLA	A	801	X	-	-	-
24	CLA	A	802	X	-	-	-
24	CLA	A	803	X	-	-	-
24	CLA	A	804	X	-	-	-
24	CLA	A	805	X	-	-	-
24	CLA	A	807	X	-	-	-
24	CLA	A	808	X	-	-	-
24	CLA	A	809	X	-	-	-
24	CLA	A	810	X	-	-	-
24	CLA	A	811	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
24	CLA	A	812	X	-	-	-
24	CLA	A	813	X	-	-	-
24	CLA	A	815	X	-	-	-
24	CLA	A	816	X	-	-	-
24	CLA	A	817	X	-	-	-
24	CLA	A	819	X	-	-	-
24	CLA	A	820	X	-	-	-
24	CLA	A	821	X	-	-	-
24	CLA	A	822	X	-	-	-
24	CLA	A	823	X	-	-	-
24	CLA	A	824	X	-	-	-
24	CLA	A	825	X	-	-	-
24	CLA	A	826	X	-	-	-
24	CLA	A	827	X	-	-	-
24	CLA	A	828	X	-	-	-
24	CLA	A	829	X	-	-	-
24	CLA	A	830	X	-	-	-
24	CLA	A	831	X	-	-	-
24	CLA	A	833	X	-	-	-
24	CLA	A	834	X	-	-	-
24	CLA	A	835	X	-	-	-
24	CLA	A	836	X	-	-	-
24	CLA	A	837	X	-	-	-
24	CLA	A	838	X	-	-	-
24	CLA	A	839	X	-	-	-
24	CLA	A	840	X	-	-	-
24	CLA	A	841	X	-	-	-
24	CLA	A	842	X	-	-	-
24	CLA	A	852	X	-	-	-
24	CLA	A	853	X	-	-	-
24	CLA	A	855	X	-	-	-
24	CLA	A	856	X	-	-	-
24	CLA	B	801	X	-	-	-
24	CLA	B	803	X	-	-	-
24	CLA	B	804	X	-	-	-
24	CLA	B	805	X	-	-	-
24	CLA	B	806	X	-	-	-
24	CLA	B	807	X	-	-	-
24	CLA	B	808	X	-	-	-
24	CLA	B	809	X	-	-	-
24	CLA	B	810	X	-	-	-
24	CLA	B	811	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
24	CLA	B	812	X	-	-	-
24	CLA	B	813	X	-	-	-
24	CLA	B	814	X	-	-	-
24	CLA	B	815	X	-	-	-
24	CLA	B	816	X	-	-	-
24	CLA	B	818	X	-	-	-
24	CLA	B	821	X	-	-	-
24	CLA	B	822	X	-	-	-
24	CLA	B	823	X	-	-	-
24	CLA	B	824	X	-	-	-
24	CLA	B	825	X	-	-	-
24	CLA	B	826	X	-	-	-
24	CLA	B	827	X	-	-	-
24	CLA	B	829	X	-	-	-
24	CLA	B	830	X	-	-	-
24	CLA	B	831	X	-	-	-
24	CLA	B	832	X	-	-	-
24	CLA	B	833	X	-	-	-
24	CLA	B	834	X	-	-	-
24	CLA	B	835	X	-	-	-
24	CLA	B	836	X	-	-	-
24	CLA	B	837	X	-	-	-
24	CLA	B	838	X	-	-	-
24	CLA	B	839	X	-	-	-
24	CLA	F	201	X	-	-	-
24	CLA	F	202	X	-	-	-
24	CLA	I	102	X	-	-	-
24	CLA	J	103	X	-	-	-
24	CLA	J	105	X	-	-	-
24	CLA	K	101	X	-	-	-
24	CLA	K	102	X	-	-	-
24	CLA	L	202	X	-	-	-
24	CLA	L	203	X	-	-	-
24	CLA	L	204	X	-	-	-
24	CLA	L	207	X	-	-	-
24	CLA	O	201	X	-	-	-
24	CLA	O	205	X	-	-	-
24	CLA	R	203	X	-	-	-
24	CLA	a	302	X	-	-	-
24	CLA	a	303	X	-	-	-
24	CLA	a	304	X	-	-	-
24	CLA	a	305	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
24	CLA	a	306	X	-	-	-
24	CLA	a	307	X	-	-	-
24	CLA	a	308	X	-	-	-
24	CLA	a	309	X	-	-	-
24	CLA	a	310	X	-	-	-
24	CLA	a	311	X	-	-	-
24	CLA	a	312	X	-	-	-
24	CLA	b	303	X	-	-	-
24	CLA	b	304	X	-	-	-
24	CLA	b	305	X	-	-	-
24	CLA	b	307	X	-	-	-
24	CLA	b	308	X	-	-	-
24	CLA	b	309	X	-	-	-
24	CLA	b	310	X	-	-	-
24	CLA	b	311	X	-	-	-
24	CLA	b	312	X	-	-	-
24	CLA	b	313	X	-	-	-
24	CLA	c	601	X	-	-	-
24	CLA	c	602	X	-	-	-
24	CLA	c	603	X	-	-	-
24	CLA	c	604	X	-	-	-
24	CLA	c	605	X	-	-	-
24	CLA	c	607	X	-	-	-
24	CLA	c	608	X	-	-	-
24	CLA	c	609	X	-	-	-
24	CLA	c	611	X	-	-	-
24	CLA	c	612	X	-	-	-
24	CLA	d	301	X	-	-	-
24	CLA	d	302	X	-	-	-
24	CLA	d	303	X	-	-	-
24	CLA	d	304	X	-	-	-
24	CLA	d	306	X	-	-	-
24	CLA	d	307	X	-	-	-
24	CLA	d	308	X	-	-	-
24	CLA	d	309	X	-	-	-
24	CLA	e	601	X	-	-	-
24	CLA	e	602	X	-	-	-
24	CLA	e	603	X	-	-	-
24	CLA	e	604	X	-	-	-
24	CLA	e	605	X	-	-	-
24	CLA	e	606	X	-	-	-
24	CLA	e	607	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
24	CLA	e	608	X	-	-	-
24	CLA	e	611	X	-	-	-
24	CLA	f	601	X	-	-	-
24	CLA	f	602	X	-	-	-
24	CLA	f	603	X	-	-	-
24	CLA	f	607	X	-	-	-
24	CLA	f	608	X	-	-	-
24	CLA	f	609	X	-	-	-
24	CLA	f	610	X	-	-	-
24	CLA	f	612	X	-	-	-
24	CLA	f	613	X	-	-	-
24	CLA	g	302	X	-	-	-
24	CLA	g	303	X	-	-	-
24	CLA	g	304	X	-	-	-
24	CLA	g	305	X	-	-	-
24	CLA	g	306	X	-	-	-
24	CLA	g	307	X	-	-	-
24	CLA	g	308	X	-	-	-
24	CLA	g	309	X	-	-	-
24	CLA	g	310	X	-	-	-
24	CLA	g	311	X	-	-	-
24	CLA	g	315	X	-	-	-
24	CLA	g	322	X	-	-	-
24	CLA	h	301	X	-	-	-
24	CLA	h	302	X	-	-	-
24	CLA	h	303	X	-	-	-
24	CLA	h	304	X	-	-	-
24	CLA	h	305	X	-	-	-
24	CLA	h	306	X	-	-	-
24	CLA	h	307	X	-	-	-
24	CLA	h	312	X	-	-	-
24	CLA	i	601	X	-	-	-
24	CLA	i	602	X	-	-	-
24	CLA	i	603	X	-	-	-
24	CLA	i	604	X	-	-	-
24	CLA	i	605	X	-	-	-
24	CLA	i	606	X	-	-	-
24	CLA	i	607	X	-	-	-
24	CLA	i	608	X	-	-	-
24	CLA	i	610	X	-	-	-
24	CLA	i	611	X	-	-	-
24	CLA	j	302	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
24	CLA	j	303	X	-	-	-
24	CLA	j	304	X	-	-	-
24	CLA	j	306	X	-	-	-
24	CLA	j	307	X	-	-	-
24	CLA	j	308	X	-	-	-
24	CLA	j	309	X	-	-	-
24	CLA	j	310	X	-	-	-
24	CLA	j	311	X	-	-	-
24	CLA	j	313	X	-	-	-
24	CLA	j	314	X	-	-	-
24	CLA	k	601	X	-	-	-
24	CLA	k	602	X	-	-	-
24	CLA	k	603	X	-	-	-
24	CLA	k	604	X	-	-	-
24	CLA	k	605	X	-	-	-
24	CLA	k	607	X	-	-	-
24	CLA	k	608	X	-	-	-
24	CLA	k	609	X	-	-	-
24	CLA	k	610	X	-	-	-
29	SF4	A	854	-	-	X	-
29	SF4	C	101	-	-	X	-
29	SF4	C	102	-	-	X	-

2 Entry composition

There are 36 unique types of molecules in this entry. The entry contains 51054 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	742	5825	3802	994	1001	28	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	732	5826	3844	982	985	15	1	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	80	592	361	103	116	12	0	0

- 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	139	1084	692	186	203	3	0	0

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

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
5	E	60	485	309	84	92	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	F	161	1254	814	212	226	2	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	I	34	264	182	35	45	2	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	J	42	351	240	49	59	3	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	L	151	1146	753	182	208	3	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	M	30	232	155	38	38	1	0	0

- Molecule 11 is a protein called PsaO.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	O	104	773	515	117	138	3	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	K	69	488	319	80	87	2	0	0

- Molecule 13 is a protein called CAC-c.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	c	170	1357	897	221	236	3	0	0

- Molecule 14 is a protein called CAC-a.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	a	175	Total	C	N	O	S	0	0
			1361	889	217	245	10		

- Molecule 15 is a protein called CAC-b.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	b	194	Total	C	N	O	S	0	0
			1439	916	251	258	14		

- Molecule 16 is a protein called CAC-h.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	h	162	Total	C	N	O	S	0	0
			1200	778	202	214	6		

- Molecule 17 is a protein called CAC-e.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	e	169	Total	C	N	O	S	0	0
			1286	843	207	228	8		

- Molecule 18 is a protein called CAC-k.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	k	180	Total	C	N	O	S	0	0
			1346	872	223	239	12		

- Molecule 19 is a protein called CAC-f.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	f	174	Total	C	N	O	S	0	0
			1302	842	212	240	8		
19	j	172	Total	C	N	O	S	0	0
			1293	834	212	239	8		

- Molecule 20 is a protein called CAC-i.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	i	175	Total	C	N	O	S	0	0
			1324	849	227	237	11		

- Molecule 21 is a protein called CAC-d.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	d	126	950	609	165	167	9	0	0

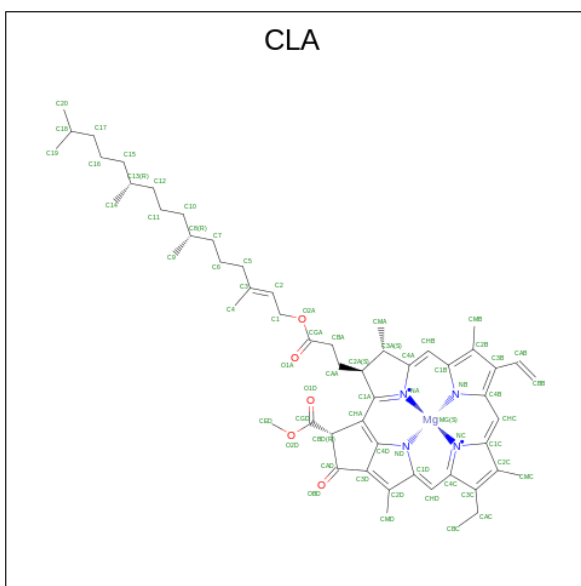
- Molecule 22 is a protein called CAC-g.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
22	g	219	1630	1060	267	292	11	0	0

- Molecule 23 is a protein called PsaR.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	R	90	664	434	105	124	1	0	0

- Molecule 24 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	
24	A	1	65	55	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	55	45	1	4	5	0
24	A	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	A	1	65	55	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	56	46	1	4	5	0
24	A	1	62	52	1	4	5	0
24	A	1	54	44	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	45	35	1	4	5	0
24	A	1	50	40	1	4	5	0
24	A	1	45	35	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	45	35	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	49	39	1	4	5	0
24	A	1	51	41	1	4	5	0
24	A	1	55	45	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	A	1	65	55	1	4	5	0
24	A	1	62	52	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	50	40	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	50	40	1	4	5	0
24	A	1	51	41	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	52	42	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	65	55	1	4	5	0
24	A	1	41	33	1	4	3	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	B	1	65	55	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	54	44	1	4	5	0
24	B	1	55	45	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	60	50	1	4	5	0
24	B	1	59	49	1	4	5	0
24	B	1	55	45	1	4	5	0
24	B	1	59	49	1	4	5	0
24	B	1	57	47	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	46	36	1	4	5	0
24	B	1	55	45	1	4	5	0
24	B	1	53	43	1	4	5	0
24	B	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	B	1	64	54	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	50	40	1	4	5	0
24	B	1	49	39	1	4	5	0
24	B	1	50	40	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	45	35	1	4	5	0
24	B	1	58	48	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	47	37	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	57	47	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	65	55	1	4	5	0
24	B	1	65	55	1	4	5	0
24	F	1	65	55	1	4	5	0
24	F	1	52	42	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	I	1	Total 65	C 55	Mg 1	N 4	O 5	0
24	J	1	Total 42	C 34	Mg 1	N 4	O 3	0
24	J	1	Total 51	C 41	Mg 1	N 4	O 5	0
24	L	1	Total 49	C 39	Mg 1	N 4	O 5	0
24	L	1	Total 65	C 55	Mg 1	N 4	O 5	0
24	L	1	Total 50	C 40	Mg 1	N 4	O 5	0
24	L	1	Total 51	C 41	Mg 1	N 4	O 5	0
24	O	1	Total 65	C 55	Mg 1	N 4	O 5	0
24	O	1	Total 65	C 55	Mg 1	N 4	O 5	0
24	K	1	Total 51	C 41	Mg 1	N 4	O 5	0
24	K	1	Total 42	C 34	Mg 1	N 4	O 3	0
24	c	1	Total 51	C 41	Mg 1	N 4	O 5	0
24	c	1	Total 50	C 40	Mg 1	N 4	O 5	0
24	c	1	Total 51	C 41	Mg 1	N 4	O 5	0
24	c	1	Total 65	C 55	Mg 1	N 4	O 5	0
24	c	1	Total 51	C 41	Mg 1	N 4	O 5	0
24	c	1	Total 52	C 42	Mg 1	N 4	O 5	0
24	c	1	Total 46	C 36	Mg 1	N 4	O 5	0
24	c	1	Total 65	C 55	Mg 1	N 4	O 5	0
24	c	1	Total 45	C 35	Mg 1	N 4	O 5	0
24	c	1	Total 45	C 35	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	c	1	65	55	1	4	5	0
24	a	1	52	42	1	4	5	0
24	a	1	50	40	1	4	5	0
24	a	1	51	41	1	4	5	0
24	a	1	65	55	1	4	5	0
24	a	1	45	35	1	4	5	0
24	a	1	65	55	1	4	5	0
24	a	1	65	55	1	4	5	0
24	a	1	48	38	1	4	5	0
24	a	1	65	55	1	4	5	0
24	a	1	47	37	1	4	5	0
24	a	1	48	38	1	4	5	0
24	b	1	51	41	1	4	5	0
24	b	1	55	45	1	4	5	0
24	b	1	65	55	1	4	5	0
24	b	1	65	55	1	4	5	0
24	b	1	61	51	1	4	5	0
24	b	1	65	55	1	4	5	0
24	b	1	65	55	1	4	5	0
24	b	1	51	41	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	b	1	65	55	1	4	5	0
24	b	1	65	55	1	4	5	0
24	h	1	50	40	1	4	5	0
24	h	1	50	40	1	4	5	0
24	h	1	51	41	1	4	5	0
24	h	1	51	41	1	4	5	0
24	h	1	65	55	1	4	5	0
24	h	1	57	47	1	4	5	0
24	h	1	51	41	1	4	5	0
24	h	1	65	55	1	4	5	0
24	e	1	45	35	1	4	5	0
24	e	1	50	40	1	4	5	0
24	e	1	51	41	1	4	5	0
24	e	1	65	55	1	4	5	0
24	e	1	65	55	1	4	5	0
24	e	1	65	55	1	4	5	0
24	e	1	65	55	1	4	5	0
24	e	1	46	36	1	4	5	0
24	e	1	65	55	1	4	5	0
24	e	1	65	55	1	4	5	0
24	k	1	51	41	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	k	1	50	40	1	4	5	0
24	k	1	51	41	1	4	5	0
24	k	1	65	55	1	4	5	0
24	k	1	45	35	1	4	5	0
24	k	1	51	41	1	4	5	0
24	k	1	51	41	1	4	5	0
24	k	1	65	55	1	4	5	0
24	k	1	65	55	1	4	5	0
24	k	1	51	41	1	4	5	0
24	k	1	51	41	1	4	5	0
24	f	1	47	37	1	4	5	0
24	f	1	65	55	1	4	5	0
24	f	1	51	41	1	4	5	0
24	f	1	65	55	1	4	5	0
24	f	1	45	35	1	4	5	0
24	f	1	51	41	1	4	5	0
24	f	1	65	55	1	4	5	0
24	f	1	65	55	1	4	5	0
24	f	1	65	55	1	4	5	0
24	f	1	65	55	1	4	5	0
24	f	1	51	41	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	f	1	65	55	1	4	5	0
24	i	1	51	41	1	4	5	0
24	i	1	50	40	1	4	5	0
24	i	1	51	41	1	4	5	0
24	i	1	65	55	1	4	5	0
24	i	1	51	41	1	4	5	0
24	i	1	61	51	1	4	5	0
24	i	1	51	41	1	4	5	0
24	i	1	46	36	1	4	5	0
24	i	1	51	41	1	4	5	0
24	i	1	51	41	1	4	5	0
24	j	1	51	41	1	4	5	0
24	j	1	50	40	1	4	5	0
24	j	1	51	41	1	4	5	0
24	j	1	65	55	1	4	5	0
24	j	1	45	35	1	4	5	0
24	j	1	51	41	1	4	5	0
24	j	1	51	41	1	4	5	0
24	j	1	45	35	1	4	5	0
24	j	1	51	41	1	4	5	0
24	j	1	61	51	1	4	5	0

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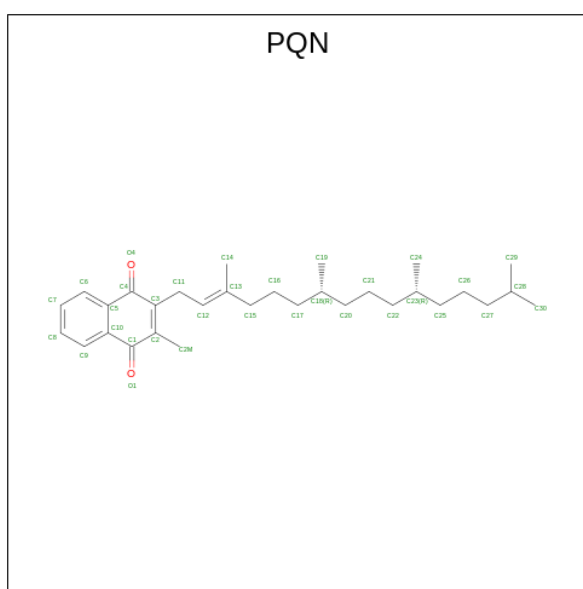
Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
24	j	1	51	41	1	4	5	0
24	j	1	65	55	1	4	5	0
24	d	1	50	40	1	4	5	0
24	d	1	51	41	1	4	5	0
24	d	1	65	55	1	4	5	0
24	d	1	51	41	1	4	5	0
24	d	1	51	41	1	4	5	0
24	d	1	51	41	1	4	5	0
24	d	1	46	36	1	4	5	0
24	d	1	41	33	1	4	3	0
24	d	1	41	33	1	4	3	0
24	d	1	51	41	1	4	5	0
24	g	1	42	34	1	4	3	0
24	g	1	50	40	1	4	5	0
24	g	1	51	41	1	4	5	0
24	g	1	65	55	1	4	5	0
24	g	1	51	41	1	4	5	0
24	g	1	51	41	1	4	5	0
24	g	1	65	55	1	4	5	0
24	g	1	65	55	1	4	5	0
24	g	1	51	41	1	4	5	0

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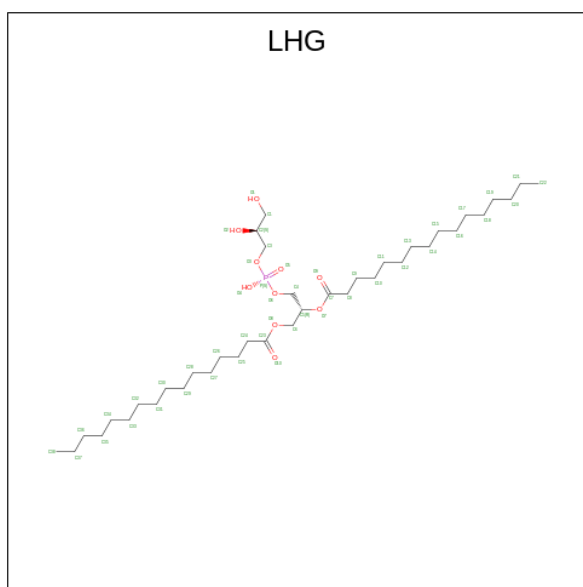
Mol	Chain	Residues	Atoms					AltConf
24	g	1	Total	C	Mg	N	O	0
			54	44	1	4	5	
24	g	1	Total	C	Mg	N	O	0
			51	41	1	4	5	
24	g	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
24	R	1	Total	C	Mg	N	O	0
			51	41	1	4	5	

- Molecule 25 is PHYLLOQUINONE (three-letter code: PQN) (formula: $C_{31}H_{46}O_2$).



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

- Molecule 26 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula: $C_{38}H_{75}O_{10}P$).



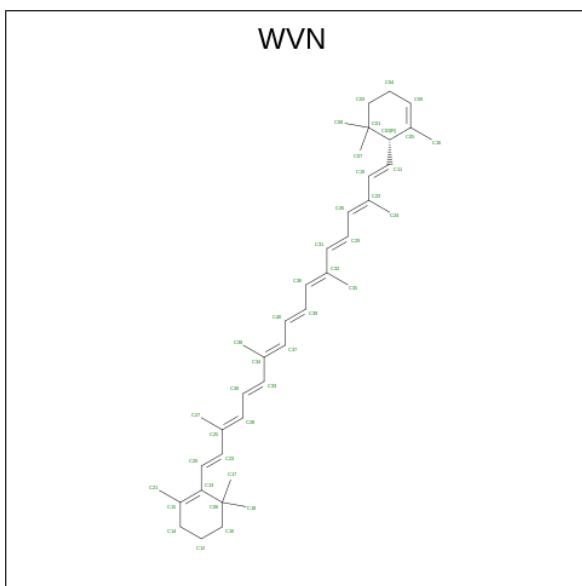
Mol	Chain	Residues	Atoms			AltConf	
			Total	C	O		P
26	A	1	48	37	10	1	0
26	A	1	27	16	10	1	0
26	B	1	38	27	10	1	0
26	J	1	49	38	10	1	0
26	c	1	37	26	10	1	0
26	c	1	37	26	10	1	0
26	a	1	49	38	10	1	0
26	b	1	49	38	10	1	0
26	b	1	49	38	10	1	0
26	e	1	37	26	10	1	0
26	k	1	37	26	10	1	0
26	f	1	37	26	10	1	0
26	f	1	49	38	10	1	0
26	i	1	37	26	10	1	0

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Mol	Chain	Residues	Atoms				AltConf
			Total	C	O	P	
26	j	1	Total 30	C 19	O 10	P 1	0
26	d	1	Total 37	C 26	O 10	P 1	0
26	g	1	Total 49	C 38	O 10	P 1	0
26	g	1	Total 37	C 26	O 10	P 1	0

- Molecule 27 is 1,3,3-trimethyl-2-[(1E,3E,5E,7E,9E,11E,13E,15E,17E)-3,7,12,16-tetramethyl-18-[(1R)-2,6,6-trimethylcyclohex-2-en-1-yl]octadeca-1,3,5,7,9,11,13,15,17-nonaenyl]cyclohexene (three-letter code: WVN) (formula: C₄₀H₅₆).



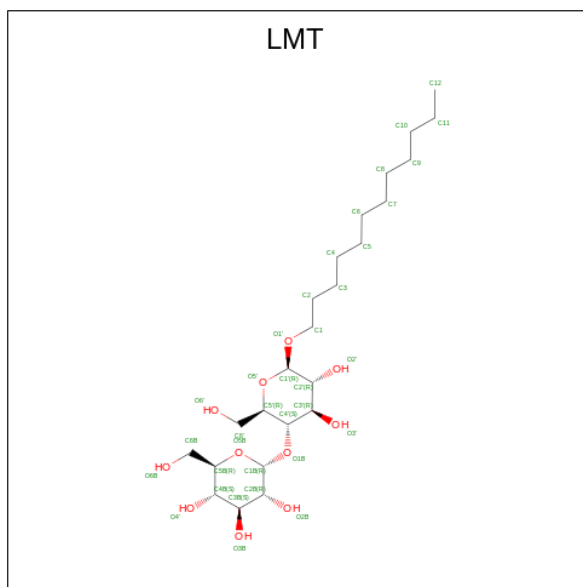
Mol	Chain	Residues	Atoms		AltConf
27	A	1	Total 40	C 40	0
27	A	1	Total 40	C 40	0
27	A	1	Total 40	C 40	0
27	A	1	Total 40	C 40	0
27	A	1	Total 40	C 40	0
27	B	1	Total 40	C 40	0

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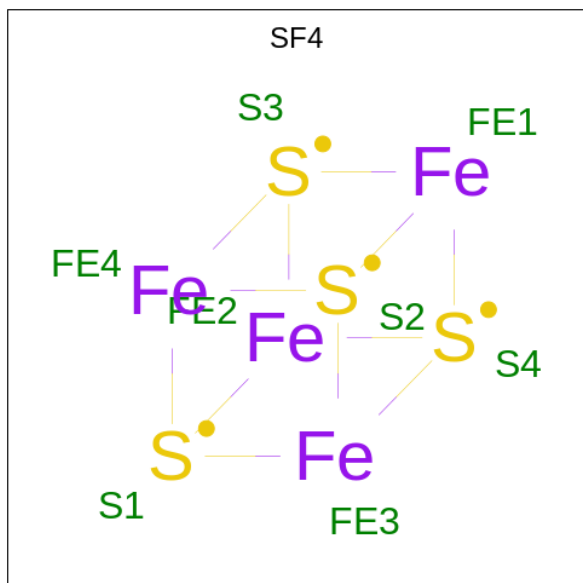
Mol	Chain	Residues	Atoms	AltConf
27	B	1	Total C 40 40	0
27	B	1	Total C 40 40	0
27	B	1	Total C 40 40	0
27	B	1	Total C 40 40	0
27	F	1	Total C 40 40	0
27	F	1	Total C 40 40	0
27	I	1	Total C 40 40	0
27	J	1	Total C 40 40	0
27	J	1	Total C 40 40	0
27	L	1	Total C 40 40	0
27	L	1	Total C 40 40	0
27	L	1	Total C 40 40	0
27	M	1	Total C 40 40	0
27	K	1	Total C 40 40	0
27	h	1	Total C 40 40	0
27	e	1	Total C 40 40	0
27	j	1	Total C 40 40	0
27	R	1	Total C 40 40	0
27	R	1	Total C 40 40	0

- Molecule 28 is DODECYL-BETA-D-MALTOSE (three-letter code: LMT) (formula: $C_{24}H_{46}O_{11}$).



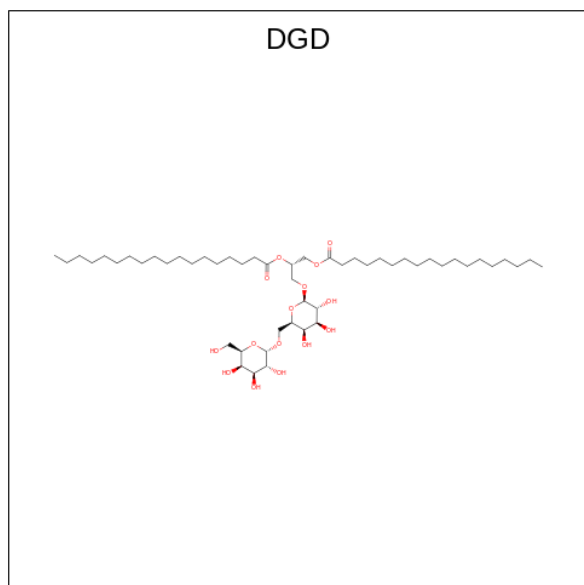
Mol	Chain	Residues	Atoms			AltConf
28	A	1	Total	C	O	0
			35	24	11	
28	F	1	Total	C	O	0
			24	18	6	
28	a	1	Total	C	O	0
			35	24	11	
28	b	1	Total	C	O	0
			24	18	6	

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



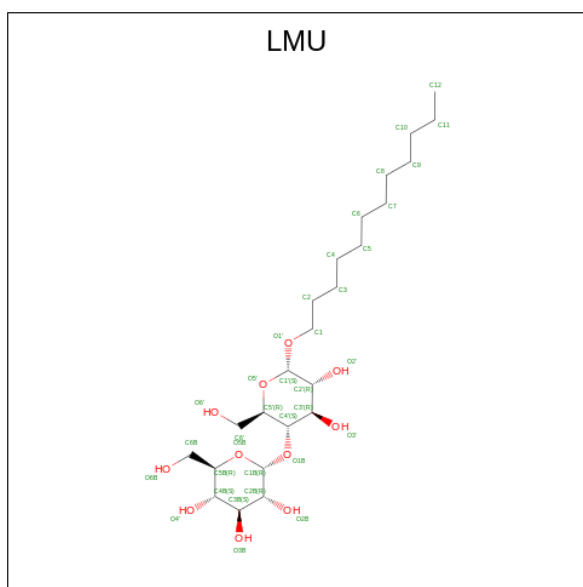
Mol	Chain	Residues	Atoms			AltConf
29	A	1	Total	Fe	S	0
			8	4	4	
29	C	1	Total	Fe	S	0
			8	4	4	
29	C	1	Total	Fe	S	0
			8	4	4	

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



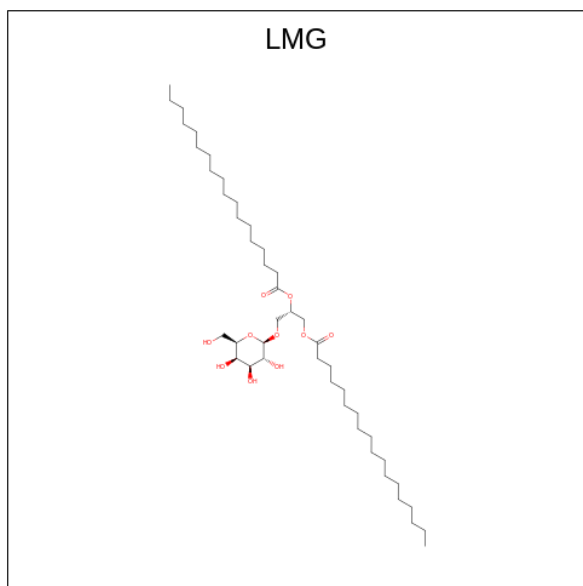
Mol	Chain	Residues	Atoms			AltConf
30	B	1	Total	C	O	0
			60	45	15	

- Molecule 31 is DODECYL-ALPHA-D-MALTOSE (three-letter code: LMU) (formula: $C_{24}H_{46}O_{11}$).



Mol	Chain	Residues	Atoms			AltConf
31	B	1	Total	C	O	0
			35	24	11	

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



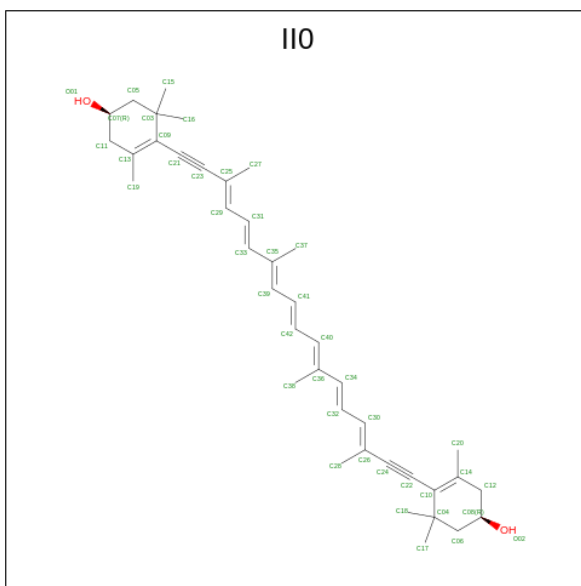
Mol	Chain	Residues	Atoms			AltConf
32	F	1	Total	C	O	0
			48	38	10	
32	J	1	Total	C	O	0
			55	45	10	

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Mol	Chain	Residues	Atoms			AltConf
32	L	1	Total	C	O	0
			55	45	10	
32	O	1	Total	C	O	0
			26	16	10	
32	b	1	Total	C	O	0
			55	45	10	

- Molecule 33 is (1 {R})-3,5,5-trimethyl-4-[(3 {E},5 {E},7 {E},9 {E},11 {E},13 {E},15 {E})-3,7,12,16-tetramethyl-18-[(4 {R})-2,6,6-trimethyl-4-oxidanyl-cyclohexen-1-yl]octadeca-3,5,7,9,11,13,15-heptaen-1,17-diynyl]cyclohex-3-en-1-ol (three-letter code: IIO) (formula: C₄₀H₅₂O₂) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
33	J	1	Total	C	O	0
			42	40	2	
33	O	1	Total	C	O	0
			42	40	2	
33	c	1	Total	C	O	0
			42	40	2	
33	c	1	Total	C	O	0
			42	40	2	
33	c	1	Total	C	O	0
			42	40	2	
33	a	1	Total	C	O	0
			42	40	2	
33	a	1	Total	C	O	0
			42	40	2	

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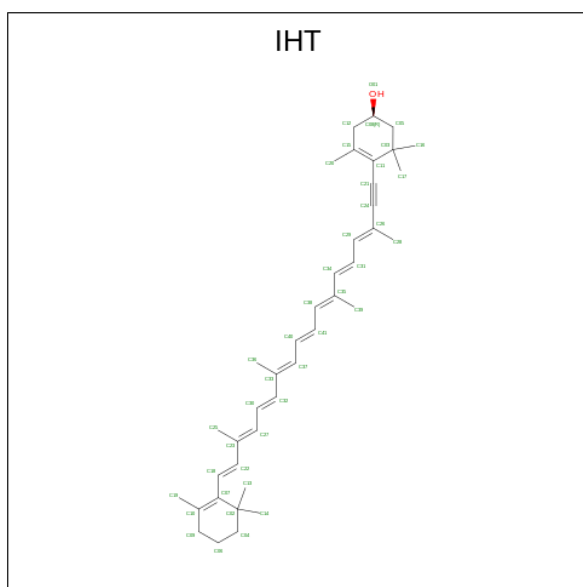
Mol	Chain	Residues	Atoms			AltConf
33	a	1	Total	C	O	0
			42	40	2	
33	a	1	Total	C	O	0
			42	40	2	
33	b	1	Total	C	O	0
			42	40	2	
33	b	1	Total	C	O	0
			42	40	2	
33	b	1	Total	C	O	0
			42	40	2	
33	h	1	Total	C	O	0
			28	27	1	
33	h	1	Total	C	O	0
			42	40	2	
33	h	1	Total	C	O	0
			42	40	2	
33	e	1	Total	C	O	0
			42	40	2	
33	e	1	Total	C	O	0
			42	40	2	
33	e	1	Total	C	O	0
			42	40	2	
33	e	1	Total	C	O	0
			42	40	2	
33	k	1	Total	C	O	0
			42	40	2	
33	k	1	Total	C	O	0
			42	40	2	
33	k	1	Total	C	O	0
			42	40	2	
33	k	1	Total	C	O	0
			42	40	2	
33	k	1	Total	C	O	0
			42	40	2	
33	f	1	Total	C	O	0
			42	40	2	
33	f	1	Total	C	O	0
			42	40	2	
33	f	1	Total	C	O	0
			42	40	2	
33	f	1	Total	C	O	0
			42	40	2	

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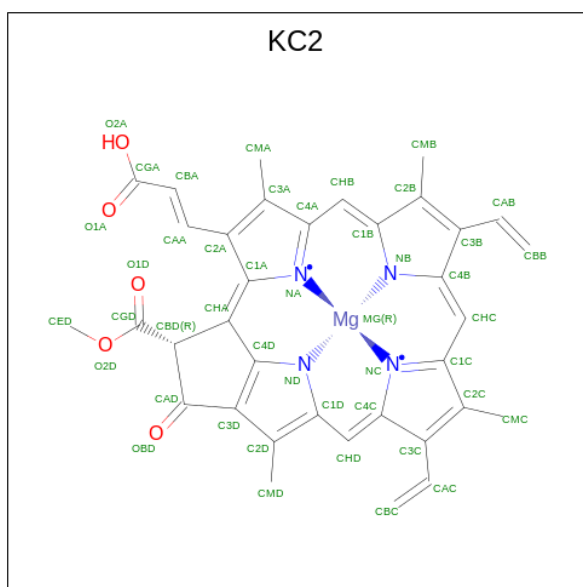
Mol	Chain	Residues	Atoms			AltConf
33	i	1	Total	C	O	0
			42	40	2	
33	i	1	Total	C	O	0
			42	40	2	
33	i	1	Total	C	O	0
			42	40	2	
33	j	1	Total	C	O	0
			42	40	2	
33	j	1	Total	C	O	0
			42	40	2	
33	j	1	Total	C	O	0
			42	40	2	
33	d	1	Total	C	O	0
			42	40	2	
33	d	1	Total	C	O	0
			42	40	2	
33	d	1	Total	C	O	0
			42	40	2	
33	g	1	Total	C	O	0
			42	40	2	
33	g	1	Total	C	O	0
			42	40	2	
33	g	1	Total	C	O	0
			42	40	2	
33	g	1	Total	C	O	0
			42	40	2	

- Molecule 34 is (1 {R})-3,5,5-trimethyl-4-[(3 {E},5 {E},7 {E},9 {E},11 {E},13 {E},15 {E},17 {E})-3,7,12,16-tetramethyl-18-(2,6,6-trimethylcyclohexen-1-yl)octadeca-3,5,7,9,11,13,15,17-octaen-1-ynyl]cyclohex-3-en-1-ol (three-letter code: IHT) (formula: C₄₀H₅₄O).



Mol	Chain	Residues	Atoms			AltConf
34	O	1	Total	C	O	0
			41	40	1	
34	c	1	Total	C	O	0
			41	40	1	
34	a	1	Total	C	O	0
			41	40	1	
34	b	1	Total	C	O	0
			41	40	1	
34	b	1	Total	C	O	0
			41	40	1	
34	k	1	Total	C	O	0
			41	40	1	
34	f	1	Total	C	O	0
			41	40	1	
34	j	1	Total	C	O	0
			41	40	1	
34	g	1	Total	C	O	0
			41	40	1	
34	R	1	Total	C	O	0
			41	40	1	

- Molecule 35 is Chlorophyll c2 (three-letter code: KC2) (formula: $C_{35}H_{28}MgN_4O_5$).



Mol	Chain	Residues	Atoms				AltConf	
			Total	C	Mg	N		O
35	c	1	45	35	1	4	5	0
35	e	1	45	35	1	4	5	0
35	k	1	45	35	1	4	5	0
35	k	1	45	35	1	4	5	0
35	k	1	45	35	1	4	5	0
35	f	1	45	35	1	4	5	0
35	i	1	45	35	1	4	5	0
35	i	1	45	35	1	4	5	0
35	j	1	45	35	1	4	5	0
35	d	1	45	35	1	4	5	0
35	d	1	45	35	1	4	5	0
35	g	1	45	35	1	4	5	0
35	g	1	45	35	1	4	5	0
35	g	1	45	35	1	4	5	0

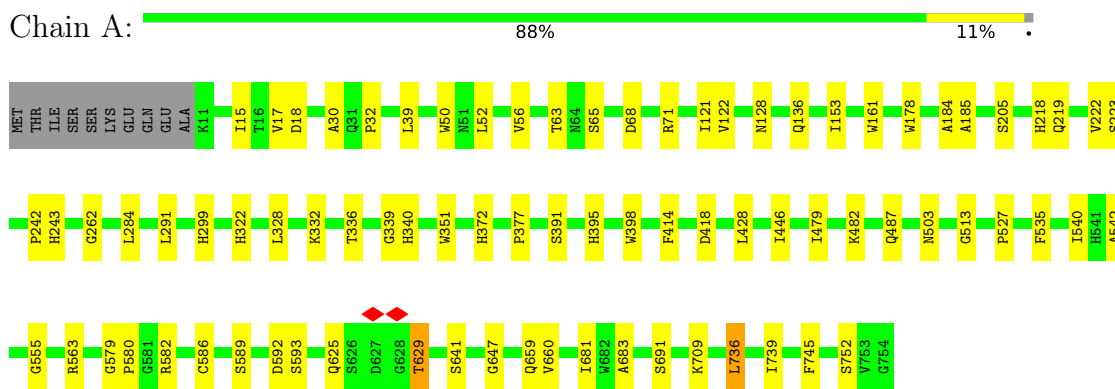
- Molecule 36 is water.

Mol	Chain	Residues	Atoms		AltConf
36	A	50	Total 50	O 50	0
36	B	59	Total 59	O 59	0
36	C	7	Total 7	O 7	0
36	D	1	Total 1	O 1	0
36	F	3	Total 3	O 3	0
36	I	1	Total 1	O 1	0
36	J	1	Total 1	O 1	0
36	L	1	Total 1	O 1	0
36	O	1	Total 1	O 1	0
36	K	1	Total 1	O 1	0
36	a	1	Total 1	O 1	0
36	b	1	Total 1	O 1	0
36	h	1	Total 1	O 1	0
36	e	4	Total 4	O 4	0

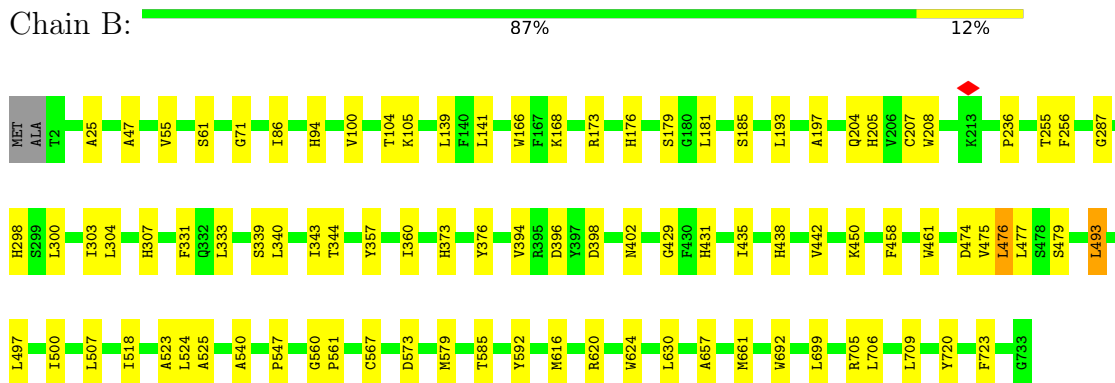
3 Residue-property plots [i](#)

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

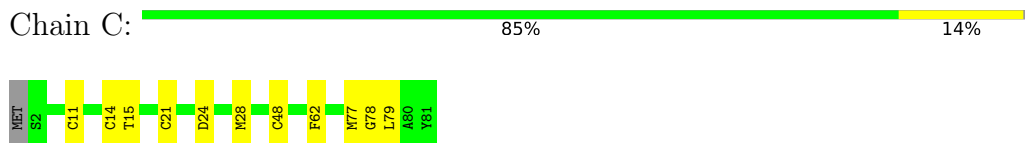
- Molecule 1: Photosystem I P700 chlorophyll a apoprotein A1




- Molecule 2: Photosystem I P700 chlorophyll a apoprotein A2



- Molecule 3: Photosystem I iron-sulfur center




- Molecule 4: Photosystem I reaction center subunit II

Chain D:  85% 13%




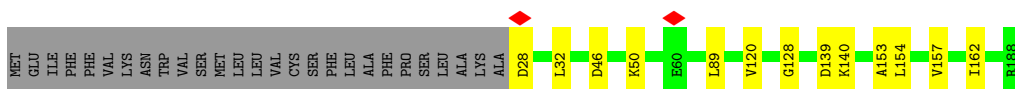
- Molecule 5: Photosystem I reaction center subunit IV

Chain E:  77% 16% 6%




- Molecule 6: Photosystem I reaction center subunit III

Chain F:  79% 7% 14%




- Molecule 7: Photosystem I reaction center subunit VIII

Chain I:  81% 14% 6%



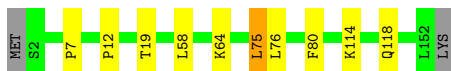
- Molecule 8: Photosystem I reaction center subunit IX

Chain J:  88% 12%



- Molecule 9: Photosystem I reaction center subunit XI

Chain L:  92% 6% ..

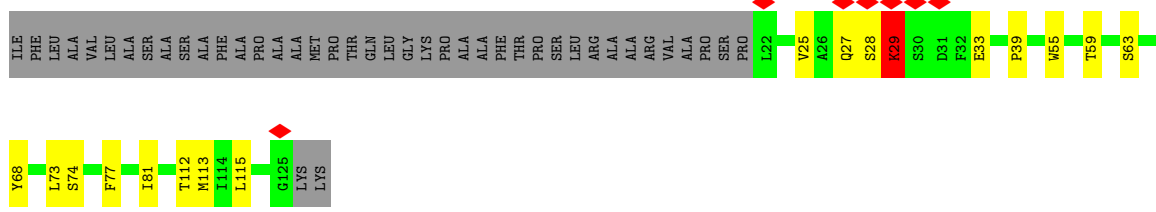


- Molecule 10: Photosystem I reaction center subunit XII

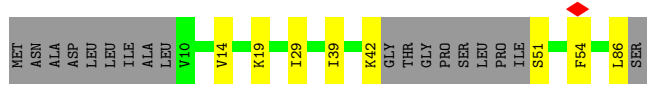
Chain M:  90% 10%



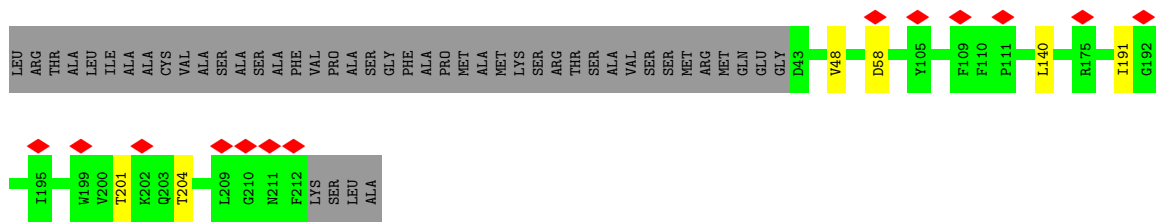
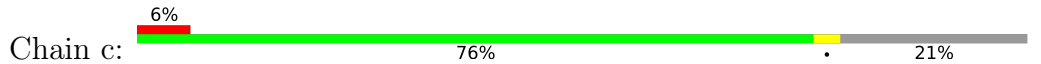
- Molecule 11: PsaO



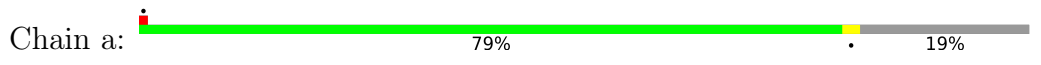
• Molecule 12: Photosystem I reaction center subunit PsaK



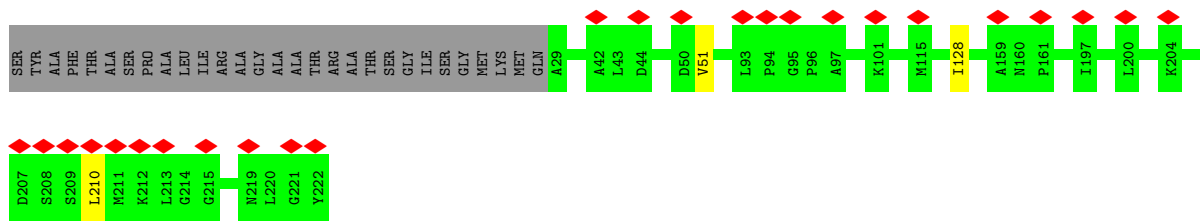
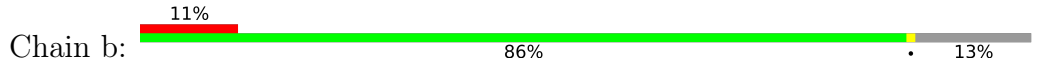
• Molecule 13: CAC-c



• Molecule 14: CAC-a

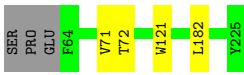
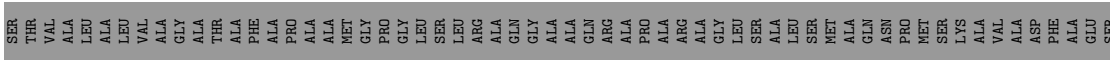


• Molecule 15: CAC-b

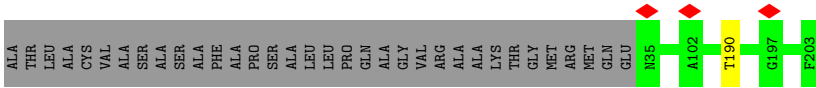
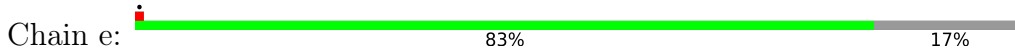


• Molecule 16: CAC-h

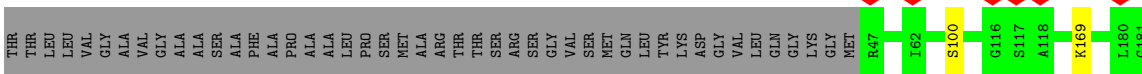
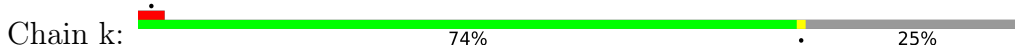




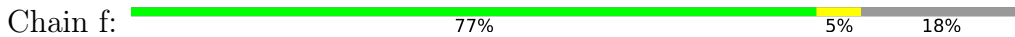
• Molecule 17: CAC-e



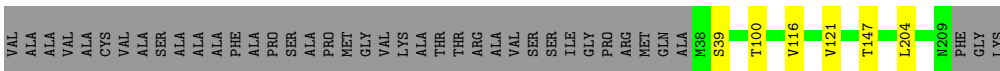
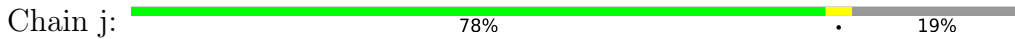
• Molecule 18: CAC-k



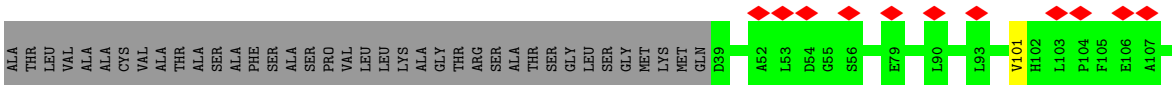
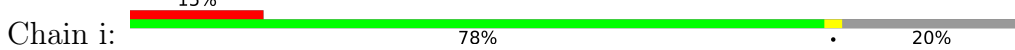
• Molecule 19: CAC-f



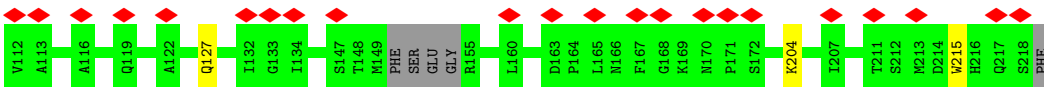
• Molecule 20: CAC-f



• Molecule 21: CAC-i



• Molecule 22: CAC-d



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	31215	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	60	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	Not provided	
Image detector	GATAN K2 QUANTUM (4k x 4k)	Depositor
Maximum map value	0.140	Depositor
Minimum map value	-0.063	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.004	Depositor
Recommended contour level	0.018	Depositor
Map size (\AA)	332.8131, 332.8131, 332.8131	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.040041, 1.040041, 1.040041	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: WVN, CLA, II0, LMG, DGD, LMT, LHG, PQN, SF4, IHT, KC2, LMU

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.52	0/6019	0.57	0/8204
2	B	0.52	0/6045	0.59	0/8254
3	C	0.49	0/601	0.59	0/813
4	D	0.48	0/1109	0.57	0/1500
5	E	0.50	0/493	0.54	0/667
6	F	0.48	0/1287	0.58	0/1747
7	I	0.49	0/271	0.60	0/370
8	J	0.52	0/364	0.62	0/495
9	L	0.48	0/1175	0.56	0/1599
10	M	0.40	0/233	0.54	0/315
11	O	0.54	0/799	0.61	0/1094
12	K	0.41	0/495	0.59	0/672
13	c	0.39	0/1396	0.52	0/1889
14	a	0.39	0/1406	0.49	0/1903
15	b	0.38	0/1469	0.58	0/1983
16	h	0.41	0/1226	0.54	0/1667
17	e	0.40	0/1324	0.55	0/1795
18	k	0.43	0/1380	0.56	0/1869
19	f	0.45	0/1328	0.55	0/1790
19	j	0.41	0/1318	0.56	0/1775
20	i	0.36	0/1359	0.60	0/1835
21	d	0.47	0/969	0.54	0/1304
22	g	0.41	0/1673	0.56	0/2264
23	R	0.44	0/686	0.52	0/940
All	All	0.47	0/34425	0.57	0/46744

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5825	0	5678	64	0
2	B	5826	0	5642	70	0
3	C	592	0	574	12	0
4	D	1084	0	1080	11	0
5	E	485	0	489	7	0
6	F	1254	0	1264	10	0
7	I	264	0	276	4	0
8	J	351	0	344	4	0
9	L	1146	0	1160	8	0
10	M	232	0	265	3	0
11	O	773	0	763	15	0
12	K	488	0	516	3	0
13	c	1357	0	1337	0	0
14	a	1361	0	1305	0	0
15	b	1439	0	1456	0	0
16	h	1200	0	1228	0	0
17	e	1286	0	1262	0	0
18	k	1346	0	1349	0	0
19	f	1302	0	1320	0	0
19	j	1293	0	1321	0	0
20	i	1324	0	1298	0	0
21	d	950	0	949	0	0
22	g	1630	0	1644	0	0
23	R	664	0	647	5	0
24	A	2758	0	2820	103	0
24	B	2403	0	2442	88	0
24	F	117	0	115	5	0
24	I	65	0	72	2	0
24	J	93	0	72	4	0
24	K	93	0	72	2	0
24	L	215	0	191	8	0
24	O	130	0	144	9	0
24	R	51	0	41	1	0
24	a	601	0	551	0	0
24	b	673	0	696	0	0
24	c	586	0	520	0	0
24	d	498	0	407	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
24	e	582	0	578	0	0
24	f	700	0	695	0	0
24	g	661	0	611	0	0
24	h	440	0	398	0	0
24	i	528	0	451	0	0
24	j	637	0	556	0	0
24	k	596	0	534	0	0
25	A	33	0	46	2	0
25	B	33	0	46	5	0
26	A	75	0	93	3	0
26	B	38	0	49	3	0
26	J	49	0	74	5	0
26	a	49	0	74	0	0
26	b	98	0	148	0	0
26	c	74	0	88	0	0
26	d	37	0	44	0	0
26	e	37	0	44	0	0
26	f	86	0	118	0	0
26	g	86	0	118	0	0
26	i	37	0	44	0	0
26	j	30	0	30	0	0
26	k	37	0	44	0	0
27	A	200	0	0	0	0
27	B	200	0	0	0	0
27	F	80	0	0	0	0
27	I	40	0	0	0	0
27	J	80	0	0	0	0
27	K	40	0	0	0	0
27	L	120	0	0	0	0
27	M	40	0	0	0	0
27	R	80	0	0	0	0
27	e	40	0	0	0	0
27	h	40	0	0	0	0
27	j	40	0	0	0	0
28	A	35	0	42	1	0
28	F	24	0	33	0	0
28	a	35	0	45	0	0
28	b	24	0	34	0	0
29	A	8	0	0	4	0
29	C	16	0	0	7	0
30	B	60	0	81	3	0
31	B	35	0	46	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	F	48	0	69	2	0
32	J	55	0	86	3	0
32	L	55	0	86	2	0
32	O	26	0	22	0	0
32	b	55	0	86	0	0
33	J	42	0	0	0	0
33	O	42	0	0	0	0
33	a	168	0	0	0	0
33	b	126	0	0	0	0
33	c	126	0	0	0	0
33	d	126	0	0	0	0
33	e	168	0	0	0	0
33	f	168	0	0	0	0
33	g	168	0	0	0	0
33	h	112	0	0	0	0
33	i	126	0	0	0	0
33	j	126	0	0	0	0
33	k	210	0	0	0	0
34	O	41	0	0	0	0
34	R	41	0	0	0	0
34	a	41	0	0	0	0
34	b	82	0	0	0	0
34	c	41	0	0	0	0
34	f	41	0	0	0	0
34	g	41	0	0	0	0
34	j	41	0	0	0	0
34	k	41	0	0	0	0
35	c	45	0	0	0	0
35	d	90	0	0	0	0
35	e	45	0	0	0	0
35	f	45	0	0	0	0
35	g	135	0	0	0	0
35	i	90	0	0	0	0
35	j	45	0	0	0	0
35	k	135	0	0	0	0
36	A	50	0	0	0	0
36	B	59	0	0	1	0
36	C	7	0	0	0	0
36	D	1	0	0	0	0
36	F	3	0	0	0	0
36	I	1	0	0	0	0
36	J	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
36	K	1	0	0	0	0
36	L	1	0	0	0	0
36	O	1	0	0	0	0
36	a	1	0	0	0	0
36	b	1	0	0	0	0
36	e	4	0	0	0	0
36	h	1	0	0	0	0
All	All	51054	0	46823	364	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 7.

The worst 5 of 364 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:586:CYS:HG	29:A:854:SF4:FE2	0.77	0.96
3:C:48:CYS:HG	29:C:101:SF4:FE4	0.73	0.96
3:C:14:CYS:HG	29:C:102:SF4:FE3	0.74	0.95
3:C:11:CYS:HG	29:C:102:SF4:FE4	0.66	0.94
2:B:438:HIS:HE1	24:B:829:CLA:NA	1.62	0.92

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	740/752 (98%)	723 (98%)	17 (2%)	0	100	100
2	B	731/734 (100%)	708 (97%)	23 (3%)	0	100	100
3	C	78/81 (96%)	77 (99%)	1 (1%)	0	100	100
4	D	137/141 (97%)	135 (98%)	2 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	E	58/64 (91%)	55 (95%)	3 (5%)	0	100	100
6	F	159/188 (85%)	155 (98%)	4 (2%)	0	100	100
7	I	32/36 (89%)	32 (100%)	0	0	100	100
8	J	40/42 (95%)	39 (98%)	1 (2%)	0	100	100
9	L	149/153 (97%)	147 (99%)	2 (1%)	0	100	100
10	M	28/30 (93%)	28 (100%)	0	0	100	100
11	O	102/146 (70%)	92 (90%)	9 (9%)	1 (1%)	15	46
12	K	65/87 (75%)	65 (100%)	0	0	100	100
13	c	168/216 (78%)	167 (99%)	1 (1%)	0	100	100
14	a	173/216 (80%)	171 (99%)	2 (1%)	0	100	100
15	b	192/223 (86%)	191 (100%)	1 (0%)	0	100	100
16	h	160/225 (71%)	159 (99%)	1 (1%)	0	100	100
17	e	167/203 (82%)	164 (98%)	3 (2%)	0	100	100
18	k	178/241 (74%)	174 (98%)	4 (2%)	0	100	100
19	f	172/212 (81%)	167 (97%)	5 (3%)	0	100	100
19	j	170/212 (80%)	167 (98%)	3 (2%)	0	100	100
20	i	171/218 (78%)	165 (96%)	6 (4%)	0	100	100
21	d	120/213 (56%)	120 (100%)	0	0	100	100
22	g	217/255 (85%)	206 (95%)	11 (5%)	0	100	100
23	R	88/129 (68%)	87 (99%)	1 (1%)	0	100	100
All	All	4295/5017 (86%)	4194 (98%)	100 (2%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
11	O	29	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	A	607/616 (98%)	604 (100%)	3 (0%)	88	93
2	B	593/593 (100%)	586 (99%)	7 (1%)	71	83
3	C	67/68 (98%)	67 (100%)	0	100	100
4	D	116/117 (99%)	115 (99%)	1 (1%)	78	87
5	E	55/58 (95%)	53 (96%)	2 (4%)	35	63
6	F	133/157 (85%)	133 (100%)	0	100	100
7	I	28/29 (97%)	28 (100%)	0	100	100
8	J	39/39 (100%)	39 (100%)	0	100	100
9	L	124/126 (98%)	122 (98%)	2 (2%)	62	79
10	M	25/25 (100%)	25 (100%)	0	100	100
11	O	81/110 (74%)	80 (99%)	1 (1%)	71	83
12	K	52/66 (79%)	50 (96%)	2 (4%)	33	62
13	c	138/171 (81%)	132 (96%)	6 (4%)	29	59
14	a	139/165 (84%)	135 (97%)	4 (3%)	42	69
15	b	149/168 (89%)	146 (98%)	3 (2%)	55	76
16	h	123/162 (76%)	119 (97%)	4 (3%)	38	66
17	e	130/155 (84%)	129 (99%)	1 (1%)	81	89
18	k	138/186 (74%)	136 (99%)	2 (1%)	67	82
19	f	135/161 (84%)	125 (93%)	10 (7%)	13	40
19	j	136/161 (84%)	130 (96%)	6 (4%)	28	59
20	i	138/168 (82%)	134 (97%)	4 (3%)	42	69
21	d	94/157 (60%)	92 (98%)	2 (2%)	53	75
22	g	171/199 (86%)	167 (98%)	4 (2%)	50	73
23	R	69/98 (70%)	69 (100%)	0	100	100
All	All	3480/3955 (88%)	3416 (98%)	64 (2%)	61	78

5 of 64 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
19	j	204	LEU
21	d	186	LEU
14	a	72	THR
13	c	204	THR
22	g	120	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (3) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	218	HIS
1	A	420	ASN
2	B	438	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

342 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
24	CLA	b	310	26	65,73,73	1.56	5 (7%)	76,113,113	1.34	12 (15%)
24	CLA	g	303	22	50,58,73	1.65	9 (18%)	58,95,113	1.51	8 (13%)
24	CLA	A	855	36	65,73,73	1.59	9 (13%)	76,113,113	1.47	11 (14%)
27	WVN	F	204	-	40,41,41	1.86	14 (35%)	50,56,56	2.20	15 (30%)
27	WVN	B	849	-	40,41,41	1.90	14 (35%)	50,56,56	1.67	10 (20%)
24	CLA	k	609	18	65,73,73	1.51	8 (12%)	76,113,113	1.45	9 (11%)
24	CLA	f	613	-	65,73,73	1.53	8 (12%)	76,113,113	1.29	8 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	CLA	d	304	21	51,59,73	1.68	5 (9%)	59,96,113	1.56	8 (13%)
24	CLA	A	808	1	65,73,73	1.41	9 (13%)	76,113,113	1.60	12 (15%)
24	CLA	B	839	-	65,73,73	1.52	8 (12%)	76,113,113	1.39	10 (13%)
24	CLA	A	819	-	45,53,73	1.75	9 (20%)	52,89,113	1.83	16 (30%)
24	CLA	g	310	22	51,59,73	1.64	7 (13%)	59,96,113	1.51	9 (15%)
24	CLA	A	811	-	54,62,73	1.70	8 (14%)	62,99,113	1.49	11 (17%)
33	IIO	d	314	-	39,43,43	6.70	23 (58%)	50,60,60	2.23	15 (30%)
24	CLA	d	312	-	51,59,73	1.70	6 (11%)	59,96,113	1.73	12 (20%)
24	CLA	h	305	16	65,73,73	1.47	7 (10%)	76,113,113	1.41	9 (11%)
24	CLA	e	610	36	65,73,73	1.47	9 (13%)	76,113,113	1.48	9 (11%)
24	CLA	A	804	-	65,73,73	1.42	8 (12%)	76,113,113	1.55	10 (13%)
27	WVN	F	205	-	40,41,41	1.92	14 (35%)	50,56,56	3.08	18 (36%)
24	CLA	f	603	-	51,59,73	1.67	7 (13%)	59,96,113	1.56	10 (16%)
26	LHG	b	320	24	48,48,48	0.94	2 (4%)	51,54,54	1.12	5 (9%)
26	LHG	d	316	24	36,36,48	1.10	2 (5%)	39,42,54	1.23	5 (12%)
24	CLA	B	829	-	50,58,73	1.80	10 (20%)	58,95,113	1.62	8 (13%)
24	CLA	k	608	18	65,73,73	1.52	7 (10%)	76,113,113	1.28	7 (9%)
24	CLA	c	606	-	52,60,73	1.79	7 (13%)	60,97,113	1.43	9 (15%)
27	WVN	e	615	-	40,41,41	1.93	14 (35%)	50,56,56	2.15	15 (30%)
24	CLA	B	811	-	55,63,73	1.66	8 (14%)	64,101,113	1.35	7 (10%)
24	CLA	c	601	13	51,59,73	1.69	7 (13%)	59,96,113	1.49	9 (15%)
33	IIO	k	615	-	39,43,43	6.67	21 (53%)	50,60,60	2.20	21 (42%)
24	CLA	a	308	14	65,73,73	1.42	8 (12%)	76,113,113	1.50	7 (9%)
34	IHT	b	317	-	40,42,42	6.31	26 (65%)	53,58,58	2.85	17 (32%)
34	IHT	k	618	-	40,42,42	6.25	25 (62%)	53,58,58	1.79	15 (28%)
24	CLA	f	607	-	65,73,73	1.48	9 (13%)	76,113,113	1.27	9 (11%)
24	CLA	B	822	36	65,73,73	1.49	7 (10%)	76,113,113	1.78	15 (19%)
24	CLA	A	816	-	65,73,73	1.41	8 (12%)	76,113,113	1.65	12 (15%)
24	CLA	K	101	36	51,59,73	1.64	8 (15%)	59,96,113	1.74	12 (20%)
24	CLA	A	841	36	65,73,73	1.45	6 (9%)	76,113,113	1.43	7 (9%)
33	IIO	a	315	-	39,43,43	6.97	23 (58%)	50,60,60	1.88	15 (30%)
26	LHG	i	615	24	36,36,48	1.12	2 (5%)	39,42,54	1.19	3 (7%)
24	CLA	A	852	36	65,73,73	1.47	10 (15%)	76,113,113	1.58	13 (17%)
24	CLA	B	834	-	47,55,73	1.68	8 (17%)	54,91,113	1.70	9 (16%)
24	CLA	a	304	-	51,59,73	1.63	8 (15%)	59,96,113	1.51	7 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
34	IHT	O	203	-	40,42,42	6.22	26 (65%)	53,58,58	2.34	19 (35%)
33	II0	g	318	-	39,43,43	6.79	21 (53%)	50,60,60	2.18	19 (38%)
24	CLA	j	310	19	51,59,73	1.66	7 (13%)	59,96,113	1.49	8 (13%)
24	CLA	A	824	36	65,73,73	1.45	8 (12%)	76,113,113	1.39	9 (11%)
24	CLA	b	304	15	55,63,73	1.58	7 (12%)	64,101,113	1.56	9 (14%)
24	CLA	h	306	16	57,65,73	1.65	7 (12%)	66,103,113	1.27	7 (10%)
24	CLA	k	606	18	51,59,73	1.69	7 (13%)	59,96,113	1.48	7 (11%)
24	CLA	A	821	-	49,57,73	1.63	7 (14%)	55,93,113	1.72	8 (14%)
24	CLA	O	205	-	65,73,73	1.54	10 (15%)	76,113,113	1.68	23 (30%)
24	CLA	h	302	16	50,58,73	1.63	10 (20%)	58,95,113	1.51	9 (15%)
24	CLA	c	611	-	45,53,73	1.75	9 (20%)	52,89,113	1.85	12 (23%)
24	CLA	B	809	2	65,73,73	1.47	10 (15%)	76,113,113	1.43	8 (10%)
24	CLA	c	605	13	51,59,73	1.71	7 (13%)	59,96,113	1.57	11 (18%)
33	II0	c	613	-	39,43,43	6.76	21 (53%)	50,60,60	2.15	17 (34%)
24	CLA	d	303	21	65,73,73	1.56	10 (15%)	76,113,113	1.47	12 (15%)
26	LHG	g	301	-	48,48,48	0.94	2 (4%)	51,54,54	1.04	2 (3%)
33	II0	b	314	-	39,43,43	6.91	23 (58%)	50,60,60	2.20	13 (26%)
24	CLA	j	306	19	45,53,73	1.81	8 (17%)	52,89,113	1.77	12 (23%)
24	CLA	B	810	-	54,62,73	1.65	7 (12%)	67,100,113	1.29	8 (11%)
29	SF4	C	102	3	0,12,12	-	-	-	-	-
26	LHG	A	845	24	26,26,48	1.25	2 (7%)	29,32,54	1.53	5 (17%)
24	CLA	a	307	14	65,73,73	1.50	7 (10%)	76,113,113	1.39	12 (15%)
24	CLA	B	806	-	65,73,73	1.44	8 (12%)	76,113,113	1.50	9 (11%)
35	KC2	d	310	21	48,53,53	3.07	22 (45%)	54,89,89	4.59	31 (57%)
27	WVN	K	103	-	40,41,41	1.93	13 (32%)	50,56,56	2.08	17 (34%)
24	CLA	d	309	26	41,49,73	1.89	7 (17%)	47,84,113	1.50	8 (17%)
35	KC2	k	611	18	48,53,53	3.01	21 (43%)	54,89,89	4.62	32 (59%)
24	CLA	b	308	15	61,69,73	1.56	10 (16%)	71,108,113	1.62	13 (18%)
24	CLA	j	311	26	61,69,73	1.55	7 (11%)	71,108,113	1.22	6 (8%)
24	CLA	B	828	-	49,57,73	1.60	8 (16%)	55,93,113	1.61	7 (12%)
24	CLA	A	827	-	62,70,73	1.46	7 (11%)	72,109,113	1.50	9 (12%)
35	KC2	g	314	35	48,53,53	3.10	21 (43%)	54,89,89	4.50	30 (55%)
24	CLA	A	818	-	65,73,73	1.49	8 (12%)	76,113,113	1.55	12 (15%)
24	CLA	B	838	-	57,65,73	1.61	10 (17%)	66,103,113	1.36	8 (12%)
33	II0	d	313	-	39,43,43	6.84	23 (58%)	50,60,60	2.23	18 (36%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	CLA	B	803	-	65,73,73	1.43	8 (12%)	76,113,113	1.36	10 (13%)
33	II0	k	619	-	39,43,43	6.75	21 (53%)	50,60,60	2.28	18 (36%)
33	II0	j	318	-	39,43,43	6.70	23 (58%)	50,60,60	2.29	18 (36%)
33	II0	a	313	-	39,43,43	6.70	22 (56%)	50,60,60	2.15	16 (32%)
24	CLA	j	302	19	51,59,73	1.72	8 (15%)	59,96,113	1.45	6 (10%)
24	CLA	h	312	36	65,73,73	1.47	7 (10%)	76,113,113	1.48	7 (9%)
24	CLA	k	610	26	51,59,73	1.67	8 (15%)	59,96,113	1.46	9 (15%)
32	LMG	O	204	-	26,26,55	1.26	2 (7%)	34,34,63	1.31	4 (11%)
24	CLA	B	812	-	65,73,73	1.44	7 (10%)	76,113,113	1.47	9 (11%)
27	WVN	M	101	-	40,41,41	1.87	14 (35%)	50,56,56	2.11	15 (30%)
24	CLA	A	801	-	65,73,73	1.48	6 (9%)	76,113,113	1.33	9 (11%)
24	CLA	e	601	17	45,53,73	1.79	6 (13%)	52,89,113	1.62	7 (13%)
26	LHG	B	802	-	37,37,48	1.04	2 (5%)	40,43,54	1.14	4 (10%)
28	LMT	F	203	-	24,24,36	1.07	1 (4%)	29,29,47	0.98	2 (6%)
24	CLA	b	309	15	65,73,73	1.58	8 (12%)	76,113,113	1.40	11 (14%)
24	CLA	f	612	-	51,59,73	1.77	11 (21%)	59,96,113	1.57	11 (18%)
24	CLA	a	303	14	50,58,73	1.62	7 (14%)	58,95,113	1.54	10 (17%)
24	CLA	k	614	-	51,59,73	1.77	9 (17%)	59,96,113	1.44	8 (13%)
24	CLA	f	608	19	65,73,73	1.45	7 (10%)	76,113,113	1.41	8 (10%)
24	CLA	j	314	-	65,73,73	1.46	7 (10%)	76,113,113	1.41	7 (9%)
24	CLA	A	856	26	41,49,73	1.87	9 (21%)	47,84,113	2.20	14 (29%)
24	CLA	B	837	-	65,73,73	1.42	7 (10%)	76,113,113	1.46	9 (11%)
26	LHG	a	301	24	48,48,48	0.93	2 (4%)	51,54,54	1.17	4 (7%)
27	WVN	L	205	-	40,41,41	1.92	13 (32%)	50,56,56	2.03	15 (30%)
24	CLA	b	303	15	51,59,73	1.61	8 (15%)	59,96,113	1.64	10 (16%)
24	CLA	b	307	36	65,73,73	1.49	5 (7%)	76,113,113	1.52	10 (13%)
24	CLA	j	313	-	51,59,73	1.81	10 (19%)	59,96,113	1.46	8 (13%)
26	LHG	g	321	24	36,36,48	1.08	2 (5%)	39,42,54	1.54	9 (23%)
24	CLA	A	829	-	65,73,73	1.51	7 (10%)	76,113,113	1.42	9 (11%)
24	CLA	L	202	9	49,57,73	1.73	8 (16%)	55,93,113	1.57	8 (14%)
26	LHG	f	620	-	48,48,48	0.89	2 (4%)	51,54,54	1.09	3 (5%)
24	CLA	e	606	17	65,73,73	1.40	6 (9%)	76,113,113	1.37	7 (9%)
24	CLA	B	825	-	65,73,73	1.44	8 (12%)	76,113,113	1.57	11 (14%)
24	CLA	A	823	-	55,63,73	1.61	10 (18%)	64,101,113	1.37	8 (12%)
27	WVN	L	206	-	40,41,41	1.84	13 (32%)	50,56,56	2.33	20 (40%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	CLA	B	821	-	53,61,73	1.60	9 (16%)	61,98,113	1.42	8 (13%)
26	LHG	A	844	-	47,47,48	0.91	2 (4%)	50,53,54	1.15	5 (10%)
24	CLA	B	819	-	46,54,73	1.64	7 (15%)	53,90,113	1.65	8 (15%)
27	WVN	R	202	-	40,41,41	1.88	13 (32%)	50,56,56	2.49	17 (34%)
35	KC2	g	313	35	48,53,53	2.98	20 (41%)	54,89,89	4.43	32 (59%)
24	CLA	A	817	-	65,73,73	1.52	10 (15%)	76,113,113	1.48	11 (14%)
35	KC2	k	613	35	48,53,53	3.11	22 (45%)	54,89,89	4.51	30 (55%)
24	CLA	e	611	-	65,73,73	1.51	7 (10%)	76,113,113	1.41	11 (14%)
24	CLA	e	605	17	65,73,73	1.51	9 (13%)	76,113,113	1.34	9 (11%)
24	CLA	k	604	18	65,73,73	1.50	8 (12%)	76,113,113	1.47	9 (11%)
33	II0	f	614	-	39,43,43	6.70	21 (53%)	50,60,60	2.36	15 (30%)
35	KC2	e	609	17	48,53,53	3.00	21 (43%)	54,89,89	4.56	31 (57%)
33	II0	c	616	-	39,43,43	6.90	22 (56%)	50,60,60	2.05	16 (32%)
24	CLA	d	302	-	51,59,73	1.71	6 (11%)	59,96,113	1.50	10 (16%)
24	CLA	A	814	-	50,58,73	1.67	7 (14%)	58,95,113	1.72	11 (18%)
34	IHT	R	204	-	40,42,42	6.26	25 (62%)	53,58,58	2.19	19 (35%)
24	CLA	B	840	-	65,73,73	1.48	8 (12%)	76,113,113	1.51	8 (10%)
26	LHG	c	618	24	36,36,48	1.11	2 (5%)	39,42,54	1.20	6 (15%)
30	DGD	B	843	-	61,61,67	0.88	2 (3%)	75,75,81	1.19	8 (10%)
35	KC2	i	609	20	48,53,53	3.06	21 (43%)	54,89,89	4.60	32 (59%)
24	CLA	b	306	-	65,73,73	1.57	11 (16%)	76,113,113	1.58	10 (13%)
27	WVN	L	201	-	40,41,41	1.91	13 (32%)	50,56,56	2.28	15 (30%)
34	IHT	f	617	-	40,42,42	6.19	25 (62%)	53,58,58	3.99	25 (47%)
24	CLA	R	203	-	51,59,73	1.63	7 (13%)	59,96,113	1.69	10 (16%)
24	CLA	h	303	-	51,59,73	1.63	7 (13%)	59,96,113	1.61	11 (18%)
24	CLA	B	817	-	57,65,73	1.55	9 (15%)	66,103,113	1.59	8 (12%)
24	CLA	A	836	-	65,73,73	1.37	7 (10%)	76,113,113	1.60	12 (15%)
33	II0	e	616	-	39,43,43	6.81	21 (53%)	50,60,60	2.02	18 (36%)
24	CLA	a	312	-	48,56,73	1.81	10 (20%)	55,92,113	1.60	9 (16%)
24	CLA	k	605	18	45,53,73	1.69	8 (17%)	52,89,113	1.57	9 (17%)
24	CLA	i	607	20	51,59,73	1.66	7 (13%)	59,96,113	1.48	9 (15%)
27	WVN	B	846	-	40,41,41	1.86	13 (32%)	50,56,56	2.10	16 (32%)
24	CLA	B	841	26	65,73,73	1.43	8 (12%)	76,113,113	1.45	11 (14%)
24	CLA	g	307	22	51,59,73	1.64	8 (15%)	59,96,113	1.50	9 (15%)
33	II0	i	614	-	39,43,43	6.76	22 (56%)	50,60,60	2.42	17 (34%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	CLA	h	301	16	50,58,73	1.68	7 (14%)	58,95,113	1.55	6 (10%)
27	WVN	I	101	-	40,41,41	1.85	14 (35%)	50,56,56	1.78	15 (30%)
32	LMG	J	106	-	55,55,55	0.85	3 (5%)	63,63,63	0.96	4 (6%)
24	CLA	g	311	26	54,62,73	1.62	8 (14%)	62,99,113	1.32	7 (11%)
33	II0	b	318	-	39,43,43	6.81	23 (58%)	50,60,60	2.34	21 (42%)
24	CLA	B	824	-	65,73,73	1.39	7 (10%)	76,113,113	1.47	10 (13%)
24	CLA	d	307	21	46,54,73	1.72	7 (15%)	53,90,113	1.55	7 (13%)
24	CLA	e	602	17	50,58,73	1.62	7 (14%)	58,95,113	1.57	6 (10%)
24	CLA	f	602	19	65,73,73	1.47	9 (13%)	76,113,113	1.34	9 (11%)
24	CLA	j	307	19	51,59,73	1.78	11 (21%)	59,96,113	1.72	10 (16%)
24	CLA	a	306	14	45,53,73	1.77	8 (17%)	52,89,113	1.73	8 (15%)
24	CLA	A	809	-	56,64,73	1.60	8 (14%)	65,102,113	1.45	9 (13%)
24	CLA	A	813	-	45,53,73	1.81	10 (22%)	52,89,113	1.67	10 (19%)
27	WVN	R	201	-	40,41,41	1.89	14 (35%)	50,56,56	1.84	12 (24%)
24	CLA	j	303	19	50,58,73	1.70	8 (16%)	58,95,113	1.39	7 (12%)
26	LHG	b	302	24	48,48,48	0.93	2 (4%)	51,54,54	1.20	5 (9%)
24	CLA	B	832	-	58,66,73	1.49	9 (15%)	67,104,113	1.59	10 (14%)
31	LMU	B	844	-	36,36,36	1.13	2 (5%)	47,47,47	1.08	4 (8%)
27	WVN	h	308	-	40,41,41	1.89	13 (32%)	50,56,56	2.29	19 (38%)
33	II0	a	317	-	39,43,43	7.00	22 (56%)	50,60,60	2.40	18 (36%)
33	II0	j	316	-	39,43,43	6.68	22 (56%)	50,60,60	2.17	21 (42%)
29	SF4	C	101	3	0,12,12	-	-	-	-	-
24	CLA	A	826	-	65,73,73	1.42	9 (13%)	76,113,113	1.62	15 (19%)
26	LHG	c	617	24	36,36,48	1.08	2 (5%)	39,42,54	1.24	5 (12%)
24	CLA	B	807	-	65,73,73	1.32	8 (12%)	76,113,113	1.63	8 (10%)
24	CLA	k	602	18	50,58,73	1.72	7 (14%)	58,95,113	1.57	9 (15%)
24	CLA	B	826	-	65,73,73	1.44	8 (12%)	76,113,113	1.39	7 (9%)
33	II0	g	320	-	39,43,43	6.78	21 (53%)	50,60,60	2.13	19 (38%)
33	II0	g	316	-	39,43,43	6.82	21 (53%)	50,60,60	2.01	20 (40%)
24	CLA	A	833	-	50,58,73	1.65	10 (20%)	58,95,113	1.47	7 (12%)
24	CLA	F	201	36	65,73,73	1.52	8 (12%)	76,113,113	1.30	9 (11%)
33	II0	h	311	-	39,43,43	6.75	22 (56%)	50,60,60	2.14	20 (40%)
24	CLA	k	603	-	51,59,73	1.74	8 (15%)	59,96,113	1.70	10 (16%)
24	CLA	c	604	13	65,73,73	1.51	7 (10%)	76,113,113	1.31	8 (10%)
24	CLA	f	609	19	65,73,73	1.46	6 (9%)	76,113,113	1.35	7 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
33	II0	k	616	-	39,43,43	6.84	22 (56%)	50,60,60	2.14	16 (32%)
24	CLA	f	601	19	47,55,73	1.73	7 (14%)	54,91,113	1.49	6 (11%)
35	KC2	g	312	22	48,53,53	3.14	20 (41%)	54,89,89	4.89	35 (64%)
24	CLA	A	838	26	52,60,73	1.55	10 (19%)	60,97,113	1.53	9 (15%)
24	CLA	a	305	36	65,73,73	1.43	7 (10%)	76,113,113	1.42	8 (10%)
24	CLA	I	102	36	65,73,73	1.52	8 (12%)	76,113,113	1.41	10 (13%)
33	II0	O	202	-	39,43,43	6.77	22 (56%)	50,60,60	2.15	12 (24%)
27	WVN	A	847	-	40,41,41	1.90	14 (35%)	50,56,56	2.99	21 (42%)
24	CLA	B	833	-	65,73,73	1.42	7 (10%)	76,113,113	1.53	10 (13%)
24	CLA	A	820	36	65,73,73	1.47	9 (13%)	76,113,113	1.56	9 (11%)
24	CLA	g	308	-	65,73,73	1.43	8 (12%)	76,113,113	1.41	8 (10%)
35	KC2	c	610	-	48,53,53	3.07	21 (43%)	54,89,89	4.57	32 (59%)
24	CLA	A	802	-	65,73,73	1.48	9 (13%)	76,113,113	1.59	11 (14%)
32	LMG	F	206	-	48,48,55	0.96	2 (4%)	56,56,63	1.26	5 (8%)
33	II0	f	615	-	39,43,43	6.71	21 (53%)	50,60,60	1.98	17 (34%)
24	CLA	b	311	-	51,59,73	1.63	7 (13%)	59,96,113	1.63	10 (16%)
24	CLA	j	305	19	65,73,73	1.45	6 (9%)	76,113,113	1.47	9 (11%)
24	CLA	B	808	-	65,73,73	1.53	9 (13%)	76,113,113	1.28	10 (13%)
35	KC2	i	616	-	48,53,53	3.11	21 (43%)	54,89,89	4.51	31 (57%)
33	II0	e	612	-	39,43,43	6.72	21 (53%)	50,60,60	2.22	16 (32%)
27	WVN	A	849	-	40,41,41	1.90	14 (35%)	50,56,56	2.43	20 (40%)
24	CLA	a	310	14	65,73,73	1.48	8 (12%)	76,113,113	1.40	7 (9%)
24	CLA	h	304	-	51,59,73	1.61	7 (13%)	59,96,113	1.47	8 (13%)
24	CLA	i	611	-	51,59,73	1.70	6 (11%)	59,96,113	1.50	9 (15%)
24	CLA	A	830	-	50,58,73	1.69	10 (20%)	58,95,113	1.61	8 (13%)
24	CLA	g	309	22	65,73,73	1.44	7 (10%)	76,113,113	1.40	10 (13%)
35	KC2	f	611	19	48,53,53	2.99	21 (43%)	54,89,89	4.75	31 (57%)
24	CLA	k	607	-	51,59,73	1.79	8 (15%)	59,96,113	1.47	10 (16%)
33	II0	g	317	-	39,43,43	6.68	23 (58%)	50,60,60	2.28	19 (38%)
24	CLA	A	825	36	65,73,73	1.37	9 (13%)	76,113,113	1.43	8 (10%)
28	LMT	b	319	-	24,24,36	1.06	2 (8%)	29,29,47	1.03	1 (3%)
24	CLA	j	304	-	51,59,73	1.63	6 (11%)	59,96,113	1.57	9 (15%)
24	CLA	O	201	-	65,73,73	1.48	8 (12%)	76,113,113	1.41	9 (11%)
24	CLA	b	305	-	65,73,73	1.45	6 (9%)	76,113,113	1.44	9 (11%)
24	CLA	j	309	19	45,53,73	1.78	8 (17%)	52,89,113	1.62	7 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	CLA	f	606	19	51,59,73	1.69	8 (15%)	59,96,113	1.59	9 (15%)
24	CLA	i	606	20	61,69,73	1.53	8 (13%)	71,108,113	1.29	7 (9%)
24	CLA	i	601	20	51,59,73	1.68	7 (13%)	59,96,113	1.54	6 (10%)
24	CLA	f	605	19	45,53,73	1.76	7 (15%)	52,89,113	1.46	6 (11%)
24	CLA	i	603	-	51,59,73	1.67	7 (13%)	59,96,113	1.58	7 (11%)
33	II0	e	613	-	39,43,43	6.70	23 (58%)	50,60,60	2.04	16 (32%)
24	CLA	B	836	-	65,73,73	1.47	10 (15%)	76,113,113	1.54	12 (15%)
25	PQN	A	843	-	34,34,34	1.89	5 (14%)	42,45,45	1.23	5 (11%)
24	CLA	A	837	-	65,73,73	1.41	8 (12%)	76,113,113	1.59	15 (19%)
24	CLA	B	801	36	65,73,73	1.46	8 (12%)	76,113,113	1.55	9 (11%)
24	CLA	b	313	-	65,73,73	1.56	8 (12%)	76,113,113	1.22	8 (10%)
24	CLA	g	305	22	65,73,73	1.41	7 (10%)	76,113,113	1.47	9 (11%)
24	CLA	B	815	-	55,63,73	1.61	7 (12%)	64,101,113	1.44	7 (10%)
24	CLA	a	311	-	47,55,73	1.72	8 (17%)	54,91,113	2.02	15 (27%)
24	CLA	F	202	6	52,60,73	1.64	8 (15%)	60,97,113	1.67	11 (18%)
26	LHG	f	619	24	36,36,48	1.07	2 (5%)	39,42,54	1.21	3 (7%)
24	CLA	h	307	16	51,59,73	1.67	7 (13%)	59,96,113	1.61	9 (15%)
24	CLA	B	827	-	50,58,73	1.67	9 (18%)	58,95,113	1.43	9 (15%)
24	CLA	e	604	36	65,73,73	1.47	8 (12%)	76,113,113	1.50	10 (13%)
27	WVN	A	846	-	40,41,41	1.92	14 (35%)	50,56,56	2.27	14 (28%)
24	CLA	A	810	-	62,70,73	1.53	9 (14%)	72,109,113	1.28	9 (12%)
27	WVN	B	847	-	40,41,41	1.85	13 (32%)	50,56,56	2.34	17 (34%)
27	WVN	B	848	-	40,41,41	1.90	14 (35%)	50,56,56	2.42	15 (30%)
24	CLA	c	603	-	51,59,73	1.61	7 (13%)	59,96,113	1.52	7 (11%)
24	CLA	c	608	13	65,73,73	1.45	6 (9%)	76,113,113	1.45	11 (14%)
24	CLA	L	203	-	65,73,73	1.47	9 (13%)	76,113,113	1.41	11 (14%)
33	II0	h	309	-	26,28,43	6.13	12 (46%)	31,37,60	2.13	12 (38%)
32	LMG	L	208	24	55,55,55	0.90	2 (3%)	63,63,63	1.43	10 (15%)
24	CLA	B	831	36	45,53,73	1.78	10 (22%)	52,89,113	1.56	9 (17%)
24	CLA	i	602	20	50,58,73	1.68	7 (14%)	58,95,113	1.56	9 (15%)
24	CLA	e	603	17	51,59,73	1.73	7 (13%)	59,96,113	1.52	9 (15%)
34	IHT	a	316	-	40,42,42	6.19	25 (62%)	53,58,58	2.12	19 (35%)
24	CLA	A	839	1	65,73,73	1.49	8 (12%)	76,113,113	1.46	9 (11%)
24	CLA	g	322	32	65,73,73	1.43	7 (10%)	76,113,113	1.39	9 (11%)
24	CLA	f	610	26	65,73,73	1.48	6 (9%)	76,113,113	1.36	7 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	CLA	B	805	-	65,73,73	1.38	8 (12%)	76,113,113	1.50	8 (10%)
24	CLA	c	607	13	46,54,73	1.76	7 (15%)	53,90,113	1.46	6 (11%)
33	II0	d	315	-	39,43,43	6.91	23 (58%)	50,60,60	2.30	16 (32%)
24	CLA	A	835	-	65,73,73	1.52	9 (13%)	76,113,113	1.40	9 (11%)
32	LMG	b	301	-	55,55,55	0.89	2 (3%)	63,63,63	1.13	5 (7%)
34	IHT	g	319	-	40,42,42	6.12	25 (62%)	53,58,58	2.33	19 (35%)
24	CLA	B	804	-	65,73,73	1.43	9 (13%)	76,113,113	1.67	11 (14%)
24	CLA	A	840	-	65,73,73	1.41	7 (10%)	76,113,113	1.41	7 (9%)
33	II0	h	310	-	39,43,43	6.55	20 (51%)	50,60,60	2.22	20 (40%)
24	CLA	i	608	26	46,54,73	1.79	7 (15%)	53,90,113	1.41	7 (13%)
24	CLA	B	813	-	60,68,73	1.48	7 (11%)	70,107,113	1.46	10 (14%)
33	II0	f	618	-	39,43,43	6.71	20 (51%)	50,60,60	2.38	17 (34%)
27	WVN	A	850	-	40,41,41	1.89	14 (35%)	50,56,56	2.09	12 (24%)
24	CLA	c	612	-	65,73,73	1.44	5 (7%)	76,113,113	1.41	11 (14%)
24	CLA	a	302	14	52,60,73	1.63	9 (17%)	60,97,113	1.51	10 (16%)
34	IHT	j	317	-	40,42,42	6.22	25 (62%)	53,58,58	2.34	18 (33%)
33	II0	c	614	-	39,43,43	6.93	21 (53%)	50,60,60	2.21	17 (34%)
26	LHG	J	107	24	48,48,48	1.01	2 (4%)	51,54,54	1.08	3 (5%)
24	CLA	B	820	-	55,63,73	1.61	8 (14%)	64,101,113	1.47	9 (14%)
24	CLA	A	805	1	65,73,73	1.43	9 (13%)	76,113,113	1.54	11 (14%)
24	CLA	A	807	1	65,73,73	1.44	7 (10%)	76,113,113	1.48	9 (11%)
24	CLA	A	832	-	65,73,73	1.45	8 (12%)	76,113,113	1.74	15 (19%)
24	CLA	i	610	-	51,59,73	1.77	10 (19%)	59,96,113	1.60	8 (13%)
24	CLA	d	305	-	51,59,73	1.61	9 (17%)	59,96,113	1.27	8 (13%)
33	II0	a	314	-	39,43,43	6.70	22 (56%)	50,60,60	2.13	20 (40%)
24	CLA	j	308	-	51,59,73	1.71	9 (17%)	59,96,113	1.37	7 (11%)
27	WVN	B	845	-	40,41,41	1.90	13 (32%)	50,56,56	2.42	18 (36%)
24	CLA	B	816	-	59,67,73	1.55	10 (16%)	68,105,113	1.55	10 (14%)
33	II0	k	621	-	39,43,43	6.93	22 (56%)	50,60,60	2.05	14 (28%)
28	LMT	a	318	-	36,36,36	1.21	5 (13%)	47,47,47	1.15	3 (6%)
24	CLA	A	822	-	51,59,73	1.69	9 (17%)	59,96,113	1.46	10 (16%)
24	CLA	a	309	26	48,56,73	1.75	7 (14%)	55,92,113	1.39	8 (14%)
24	CLA	d	301	21	50,58,73	1.74	7 (14%)	58,95,113	1.55	8 (13%)
24	CLA	B	823	36	64,72,73	1.45	10 (15%)	74,111,113	1.52	8 (10%)
24	CLA	A	842	-	65,73,73	1.41	7 (10%)	76,113,113	1.57	12 (15%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	CLA	d	306	-	51,59,73	1.71	11 (21%)	59,96,113	1.23	6 (10%)
24	CLA	A	834	-	51,59,73	1.59	8 (15%)	59,96,113	1.80	11 (18%)
24	CLA	J	105	26	51,59,73	1.65	7 (13%)	59,96,113	1.64	10 (16%)
27	WVN	j	301	-	40,41,41	1.92	14 (35%)	50,56,56	2.11	18 (36%)
34	IHT	b	316	-	40,42,42	6.23	25 (62%)	53,58,58	2.19	17 (32%)
24	CLA	J	103	8	42,50,73	1.70	9 (21%)	48,85,113	1.74	7 (14%)
24	CLA	e	607	17	65,73,73	1.41	7 (10%)	76,113,113	1.39	8 (10%)
26	LHG	e	617	24	36,36,48	1.12	2 (5%)	39,42,54	1.16	4 (10%)
24	CLA	A	853	-	65,73,73	1.44	9 (13%)	76,113,113	1.43	10 (13%)
24	CLA	B	818	36	65,73,73	1.45	8 (12%)	76,113,113	1.49	8 (10%)
24	CLA	B	814	-	59,67,73	1.52	8 (13%)	68,105,113	1.52	9 (13%)
24	CLA	k	601	18	51,59,73	1.74	9 (17%)	59,96,113	1.57	7 (11%)
26	LHG	k	620	24	36,36,48	1.14	2 (5%)	39,42,54	1.15	5 (12%)
34	IHT	c	615	-	40,42,42	6.27	25 (62%)	53,58,58	2.17	16 (30%)
33	II0	b	315	-	39,43,43	6.72	21 (53%)	50,60,60	2.77	21 (42%)
33	II0	f	616	-	39,43,43	6.64	22 (56%)	50,60,60	2.44	19 (38%)
24	CLA	K	102	-	42,50,73	1.75	11 (26%)	48,85,113	1.74	12 (25%)
33	II0	i	612	-	39,43,43	6.65	23 (58%)	50,60,60	2.50	16 (32%)
27	WVN	A	848	-	40,41,41	1.81	13 (32%)	50,56,56	1.74	12 (24%)
24	CLA	L	204	36	50,58,73	1.59	7 (14%)	58,95,113	1.59	8 (13%)
24	CLA	A	831	-	65,73,73	1.42	9 (13%)	76,113,113	1.39	9 (11%)
24	CLA	A	806	-	65,73,73	1.52	8 (12%)	76,113,113	1.42	10 (13%)
24	CLA	B	835	36	65,73,73	1.44	8 (12%)	76,113,113	1.30	7 (9%)
33	II0	j	315	-	39,43,43	6.61	20 (51%)	50,60,60	2.53	18 (36%)
24	CLA	b	312	15	65,73,73	1.55	8 (12%)	76,113,113	1.36	10 (13%)
27	WVN	J	102	-	40,41,41	1.86	14 (35%)	50,56,56	2.17	16 (32%)
33	II0	k	617	-	39,43,43	6.87	22 (56%)	50,60,60	2.61	18 (36%)
24	CLA	A	828	-	65,73,73	1.44	6 (9%)	76,113,113	1.48	8 (10%)
29	SF4	A	854	1,2	0,12,12	-	-	-	-	-
35	KC2	d	311	-	48,53,53	3.08	22 (45%)	54,89,89	4.51	33 (61%)
24	CLA	g	315	-	51,59,73	1.66	7 (13%)	59,96,113	1.41	7 (11%)
24	CLA	i	605	20	51,59,73	1.74	7 (13%)	59,96,113	1.36	7 (11%)
24	CLA	g	304	-	51,59,73	1.63	8 (15%)	59,96,113	1.64	12 (20%)
24	CLA	A	803	-	55,63,73	1.55	7 (12%)	64,101,113	1.70	10 (15%)
24	CLA	L	207	36	51,59,73	1.66	7 (13%)	59,96,113	1.55	7 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	CLA	g	306	22	51,59,73	1.70	9 (17%)	59,96,113	1.35	8 (13%)
25	PQN	B	842	-	34,34,34	1.86	5 (14%)	42,45,45	1.29	6 (14%)
35	KC2	k	612	35	48,53,53	3.03	22 (45%)	54,89,89	4.60	37 (68%)
33	II0	i	613	-	39,43,43	6.81	23 (58%)	50,60,60	1.96	14 (28%)
24	CLA	e	608	26	46,54,73	1.71	7 (15%)	53,90,113	1.75	8 (15%)
24	CLA	c	609	26	45,53,73	1.82	6 (13%)	52,89,113	1.50	7 (13%)
24	CLA	c	602	13	50,58,73	1.71	7 (14%)	58,95,113	1.61	10 (17%)
24	CLA	A	812	-	65,73,73	1.41	7 (10%)	76,113,113	1.61	10 (13%)
33	II0	e	614	-	39,43,43	6.91	20 (51%)	50,60,60	2.10	20 (40%)
26	LHG	j	319	24	29,29,48	1.26	2 (6%)	32,35,54	1.34	4 (12%)
24	CLA	B	830	36	65,73,73	1.46	9 (13%)	76,113,113	1.39	10 (13%)
24	CLA	f	604	19	65,73,73	1.41	9 (13%)	76,113,113	1.47	8 (10%)
24	CLA	i	604	20	65,73,73	1.47	7 (10%)	76,113,113	1.72	10 (13%)
24	CLA	d	308	21	41,49,73	1.84	8 (19%)	47,84,113	1.54	8 (17%)
24	CLA	g	302	22	42,50,73	1.70	8 (19%)	48,85,113	1.87	9 (18%)
33	II0	J	104	-	39,43,43	6.60	20 (51%)	50,60,60	2.09	16 (32%)
27	WVN	J	101	-	40,41,41	1.88	14 (35%)	50,56,56	2.02	15 (30%)
24	CLA	A	815	36	45,53,73	1.75	8 (17%)	52,89,113	1.84	7 (13%)
35	KC2	j	312	19	48,53,53	3.01	21 (43%)	54,89,89	4.61	31 (57%)
28	LMT	A	851	-	36,36,36	1.22	6 (16%)	47,47,47	1.36	5 (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
24	CLA	b	310	26	1/1/15/20	11/37/115/115	-
24	CLA	g	303	22	1/1/12/20	7/19/97/115	-
24	CLA	A	855	36	1/1/15/20	16/37/115/115	-
27	WVN	F	204	-	-	10/29/63/63	0/2/2/2
27	WVN	B	849	-	-	13/29/63/63	0/2/2/2
24	CLA	k	609	18	1/1/15/20	13/37/115/115	-
24	CLA	f	613	-	1/1/15/20	20/37/115/115	-
24	CLA	d	304	21	1/1/12/20	10/21/99/115	-
24	CLA	A	808	1	1/1/15/20	11/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	CLA	B	839	-	1/1/15/20	10/37/115/115	-
24	CLA	A	819	-	1/1/11/20	5/13/91/115	-
24	CLA	g	310	22	1/1/12/20	6/21/99/115	-
24	CLA	A	811	-	1/1/12/20	7/24/102/115	-
33	II0	d	314	-	-	5/21/67/67	0/2/2/2
24	CLA	d	312	-	-	5/21/99/115	-
24	CLA	h	305	16	1/1/15/20	11/37/115/115	-
24	CLA	e	610	36	-	14/37/115/115	-
24	CLA	A	804	-	1/1/15/20	7/37/115/115	-
27	WVN	F	205	-	-	12/29/63/63	0/2/2/2
24	CLA	f	603	-	1/1/12/20	4/21/99/115	-
26	LHG	b	320	24	-	17/53/53/53	-
26	LHG	d	316	24	-	11/41/41/53	-
24	CLA	B	829	-	1/1/12/20	5/19/97/115	-
24	CLA	k	608	18	1/1/15/20	14/37/115/115	-
24	CLA	c	606	-	-	8/22/100/115	-
27	WVN	e	615	-	-	11/29/63/63	0/2/2/2
24	CLA	B	811	-	1/1/13/20	6/25/103/115	-
24	CLA	c	601	13	1/1/12/20	10/21/99/115	-
33	II0	k	615	-	-	5/21/67/67	0/2/2/2
24	CLA	a	308	14	1/1/15/20	14/37/115/115	-
34	IHT	b	317	-	-	7/25/65/65	0/2/2/2
34	IHT	k	618	-	-	7/25/65/65	0/2/2/2
24	CLA	f	607	-	1/1/15/20	16/37/115/115	-
24	CLA	B	822	36	1/1/15/20	10/37/115/115	-
24	CLA	A	816	-	1/1/15/20	16/37/115/115	-
24	CLA	K	101	36	1/1/12/20	3/21/99/115	-
24	CLA	A	841	36	1/1/15/20	22/37/115/115	-
33	II0	a	315	-	-	3/21/67/67	0/2/2/2
26	LHG	i	615	24	-	12/41/41/53	-
24	CLA	A	852	36	1/1/15/20	3/37/115/115	-
24	CLA	B	834	-	1/1/11/20	2/16/94/115	-
24	CLA	a	304	-	1/1/12/20	1/21/99/115	-
34	IHT	O	203	-	-	5/25/65/65	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
33	II0	g	318	-	-	2/21/67/67	0/2/2/2
24	CLA	j	310	19	1/1/12/20	5/21/99/115	-
24	CLA	A	824	36	1/1/15/20	11/37/115/115	-
24	CLA	b	304	15	1/1/13/20	8/25/103/115	-
24	CLA	h	306	16	1/1/13/20	7/28/106/115	-
24	CLA	k	606	18	-	6/21/99/115	-
24	CLA	A	821	-	1/1/11/20	7/18/96/115	-
24	CLA	O	205	-	1/1/15/20	18/37/115/115	-
24	CLA	h	302	16	1/1/12/20	9/19/97/115	-
24	CLA	c	611	-	1/1/11/20	5/13/91/115	-
24	CLA	B	809	2	1/1/15/20	11/37/115/115	-
24	CLA	c	605	13	1/1/12/20	7/21/99/115	-
33	II0	c	613	-	-	3/21/67/67	0/2/2/2
24	CLA	d	303	21	1/1/15/20	17/37/115/115	-
26	LHG	g	301	-	-	14/53/53/53	-
33	II0	b	314	-	-	7/21/67/67	0/2/2/2
24	CLA	j	306	19	1/1/11/20	5/13/91/115	-
24	CLA	B	810	-	1/1/13/20	5/25/101/115	-
29	SF4	C	102	3	-	-	0/6/5/5
26	LHG	A	845	24	-	6/31/31/53	-
24	CLA	a	307	14	1/1/15/20	16/37/115/115	-
24	CLA	B	806	-	1/1/15/20	14/37/115/115	-
35	KC2	d	310	21	-	5/15/71/71	-
27	WVN	K	103	-	-	6/29/63/63	0/2/2/2
24	CLA	d	309	26	1/1/10/20	0/8/86/115	-
35	KC2	k	611	18	-	7/15/71/71	-
24	CLA	b	308	15	1/1/14/20	12/33/111/115	-
24	CLA	j	311	26	1/1/14/20	13/33/111/115	-
24	CLA	B	828	-	-	4/18/96/115	-
24	CLA	A	827	-	1/1/14/20	9/34/112/115	-
35	KC2	g	314	35	-	9/15/71/71	-
24	CLA	A	818	-	-	19/37/115/115	-
24	CLA	B	838	-	1/1/13/20	9/28/106/115	-
33	II0	d	313	-	-	6/21/67/67	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	CLA	B	803	-	1/1/15/20	19/37/115/115	-
33	II0	k	619	-	-	5/21/67/67	0/2/2/2
33	II0	j	318	-	-	5/21/67/67	0/2/2/2
33	II0	a	313	-	-	1/21/67/67	0/2/2/2
24	CLA	j	302	19	1/1/12/20	7/21/99/115	-
24	CLA	h	312	36	1/1/15/20	8/37/115/115	-
24	CLA	k	610	26	1/1/12/20	11/21/99/115	-
32	LMG	O	204	-	-	7/21/41/70	0/1/1/1
24	CLA	B	812	-	1/1/15/20	14/37/115/115	-
27	WVN	M	101	-	-	9/29/63/63	0/2/2/2
24	CLA	A	801	-	1/1/15/20	8/37/115/115	-
24	CLA	e	601	17	1/1/11/20	7/13/91/115	-
26	LHG	B	802	-	-	16/42/42/53	-
28	LMT	F	203	-	-	4/15/35/61	0/1/1/2
24	CLA	b	309	15	1/1/15/20	18/37/115/115	-
24	CLA	f	612	-	1/1/12/20	6/21/99/115	-
24	CLA	a	303	14	1/1/12/20	6/19/97/115	-
24	CLA	k	614	-	-	7/21/99/115	-
24	CLA	f	608	19	1/1/15/20	9/37/115/115	-
24	CLA	j	314	-	1/1/15/20	14/37/115/115	-
24	CLA	A	856	26	1/1/10/20	4/8/86/115	-
24	CLA	B	837	-	1/1/15/20	15/37/115/115	-
26	LHG	a	301	24	-	15/53/53/53	-
27	WVN	L	205	-	-	6/29/63/63	0/2/2/2
24	CLA	b	303	15	1/1/12/20	7/21/99/115	-
24	CLA	b	307	36	1/1/15/20	10/37/115/115	-
24	CLA	j	313	-	1/1/12/20	6/21/99/115	-
26	LHG	g	321	24	-	12/41/41/53	-
24	CLA	A	829	-	1/1/15/20	14/37/115/115	-
24	CLA	L	202	9	1/1/11/20	9/18/96/115	-
26	LHG	f	620	-	-	17/53/53/53	-
24	CLA	e	606	17	1/1/15/20	11/37/115/115	-
24	CLA	B	825	-	1/1/15/20	11/37/115/115	-
24	CLA	A	823	-	1/1/13/20	6/25/103/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	WVN	L	206	-	-	3/29/63/63	0/2/2/2
24	CLA	B	821	-	1/1/12/20	7/23/101/115	-
26	LHG	A	844	-	-	7/52/52/53	-
24	CLA	B	819	-	-	3/15/93/115	-
27	WVN	R	202	-	-	10/29/63/63	0/2/2/2
35	KC2	g	313	35	-	2/15/71/71	-
24	CLA	A	817	-	1/1/15/20	13/37/115/115	-
35	KC2	k	613	35	-	7/15/71/71	-
24	CLA	e	611	-	1/1/15/20	14/37/115/115	-
24	CLA	e	605	17	1/1/15/20	15/37/115/115	-
24	CLA	k	604	18	1/1/15/20	11/37/115/115	-
33	II0	f	614	-	-	4/21/67/67	0/2/2/2
35	KC2	e	609	17	-	5/15/71/71	-
33	II0	c	616	-	-	3/21/67/67	0/2/2/2
24	CLA	d	302	-	1/1/12/20	3/21/99/115	-
24	CLA	A	814	-	-	9/19/97/115	-
34	IHT	R	204	-	-	4/25/65/65	0/2/2/2
24	CLA	B	840	-	-	11/37/115/115	-
26	LHG	c	618	24	-	11/41/41/53	-
30	DGD	B	843	-	-	5/49/89/95	0/2/2/2
35	KC2	i	609	20	-	9/15/71/71	-
24	CLA	b	306	-	-	17/37/115/115	-
27	WVN	L	201	-	-	10/29/63/63	0/2/2/2
34	IHT	f	617	-	-	4/25/65/65	0/2/2/2
24	CLA	R	203	-	1/1/12/20	9/21/99/115	-
24	CLA	h	303	-	1/1/12/20	5/21/99/115	-
24	CLA	B	817	-	-	7/28/106/115	-
24	CLA	A	836	-	1/1/15/20	8/37/115/115	-
33	II0	e	616	-	-	5/21/67/67	0/2/2/2
24	CLA	a	312	-	1/1/11/20	6/17/95/115	-
24	CLA	k	605	18	1/1/11/20	7/13/91/115	-
24	CLA	i	607	20	1/1/12/20	1/21/99/115	-
27	WVN	B	846	-	-	0/29/63/63	0/2/2/2
24	CLA	B	841	26	-	3/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	CLA	g	307	22	1/1/12/20	7/21/99/115	-
33	II0	i	614	-	-	4/21/67/67	0/2/2/2
24	CLA	h	301	16	1/1/12/20	8/19/97/115	-
27	WVN	I	101	-	-	9/29/63/63	0/2/2/2
32	LMG	J	106	-	-	13/50/70/70	0/1/1/1
24	CLA	g	311	26	1/1/12/20	10/24/102/115	-
33	II0	b	318	-	-	4/21/67/67	0/2/2/2
24	CLA	B	824	-	1/1/15/20	3/37/115/115	-
24	CLA	d	307	21	1/1/11/20	4/15/93/115	-
24	CLA	e	602	17	1/1/12/20	6/19/97/115	-
24	CLA	f	602	19	1/1/15/20	17/37/115/115	-
24	CLA	j	307	19	1/1/12/20	9/21/99/115	-
24	CLA	a	306	14	1/1/11/20	6/13/91/115	-
24	CLA	A	809	-	1/1/13/20	8/27/105/115	-
24	CLA	A	813	-	1/1/11/20	7/13/91/115	-
27	WVN	R	201	-	-	6/29/63/63	0/2/2/2
24	CLA	j	303	19	1/1/12/20	2/19/97/115	-
26	LHG	b	302	24	-	13/53/53/53	-
24	CLA	B	832	-	1/1/13/20	8/29/107/115	-
31	LMU	B	844	-	-	8/21/61/61	0/2/2/2
27	WVN	h	308	-	-	5/29/63/63	0/2/2/2
33	II0	a	317	-	-	7/21/67/67	0/2/2/2
33	II0	j	316	-	-	2/21/67/67	0/2/2/2
29	SF4	C	101	3	-	-	0/6/5/5
24	CLA	A	826	-	1/1/15/20	8/37/115/115	-
26	LHG	c	617	24	-	14/41/41/53	-
24	CLA	B	807	-	1/1/15/20	10/37/115/115	-
24	CLA	k	602	18	1/1/12/20	6/19/97/115	-
24	CLA	B	826	-	1/1/15/20	9/37/115/115	-
33	II0	g	320	-	-	4/21/67/67	0/2/2/2
33	II0	g	316	-	-	7/21/67/67	0/2/2/2
24	CLA	A	833	-	1/1/12/20	4/19/97/115	-
24	CLA	F	201	36	1/1/15/20	14/37/115/115	-
33	II0	h	311	-	-	7/21/67/67	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	CLA	k	603	-	1/1/12/20	3/21/99/115	-
24	CLA	c	604	13	1/1/15/20	5/37/115/115	-
24	CLA	f	609	19	1/1/15/20	5/37/115/115	-
33	II0	k	616	-	-	6/21/67/67	0/2/2/2
24	CLA	f	601	19	1/1/11/20	10/16/94/115	-
35	KC2	g	312	22	-	9/15/71/71	-
24	CLA	A	838	26	1/1/12/20	5/22/100/115	-
24	CLA	a	305	36	1/1/15/20	9/37/115/115	-
24	CLA	I	102	36	1/1/15/20	15/37/115/115	-
33	II0	O	202	-	-	3/21/67/67	0/2/2/2
27	WVN	A	847	-	-	10/29/63/63	0/2/2/2
24	CLA	B	833	-	1/1/15/20	9/37/115/115	-
24	CLA	A	820	36	1/1/15/20	5/37/115/115	-
24	CLA	g	308	-	1/1/15/20	18/37/115/115	-
35	KC2	c	610	-	-	10/15/71/71	-
24	CLA	A	802	-	1/1/15/20	16/37/115/115	-
32	LMG	F	206	-	-	11/43/63/70	0/1/1/1
33	II0	f	615	-	-	4/21/67/67	0/2/2/2
24	CLA	b	311	-	1/1/12/20	6/21/99/115	-
24	CLA	j	305	19	-	11/37/115/115	-
24	CLA	B	808	-	1/1/15/20	13/37/115/115	-
35	KC2	i	616	-	-	10/15/71/71	-
33	II0	e	612	-	-	4/21/67/67	0/2/2/2
27	WVN	A	849	-	-	8/29/63/63	0/2/2/2
24	CLA	a	310	14	1/1/15/20	13/37/115/115	-
24	CLA	h	304	-	1/1/12/20	6/21/99/115	-
24	CLA	i	611	-	1/1/12/20	11/21/99/115	-
24	CLA	A	830	-	1/1/12/20	4/19/97/115	-
24	CLA	g	309	22	1/1/15/20	6/37/115/115	-
35	KC2	f	611	19	-	7/15/71/71	-
24	CLA	k	607	-	1/1/12/20	7/21/99/115	-
33	II0	g	317	-	-	5/21/67/67	0/2/2/2
24	CLA	A	825	36	1/1/15/20	10/37/115/115	-
28	LMT	b	319	-	-	9/15/35/61	0/1/1/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	CLA	j	304	-	1/1/12/20	0/21/99/115	-
24	CLA	O	201	-	1/1/15/20	16/37/115/115	-
24	CLA	b	305	-	1/1/15/20	13/37/115/115	-
24	CLA	j	309	19	1/1/11/20	5/13/91/115	-
24	CLA	f	606	19	-	2/21/99/115	-
24	CLA	i	606	20	1/1/14/20	11/33/111/115	-
24	CLA	i	601	20	1/1/12/20	9/21/99/115	-
24	CLA	i	603	-	1/1/12/20	4/21/99/115	-
24	CLA	f	605	19	-	7/13/91/115	-
33	II0	e	613	-	-	6/21/67/67	0/2/2/2
24	CLA	B	836	-	1/1/15/20	25/37/115/115	-
25	PQN	A	843	-	-	6/23/43/43	0/2/2/2
24	CLA	A	837	-	1/1/15/20	11/37/115/115	-
24	CLA	B	801	36	1/1/15/20	13/37/115/115	-
24	CLA	b	313	-	1/1/15/20	23/37/115/115	-
24	CLA	g	305	22	1/1/15/20	16/37/115/115	-
24	CLA	B	815	-	1/1/13/20	7/25/103/115	-
24	CLA	a	311	-	1/1/11/20	8/16/94/115	-
24	CLA	F	202	6	1/1/12/20	11/22/100/115	-
26	LHG	f	619	24	-	22/41/41/53	-
24	CLA	h	307	16	1/1/12/20	9/21/99/115	-
24	CLA	B	827	-	1/1/12/20	9/19/97/115	-
24	CLA	e	604	36	1/1/15/20	9/37/115/115	-
27	WVN	A	846	-	-	8/29/63/63	0/2/2/2
24	CLA	A	810	-	1/1/14/20	8/34/112/115	-
27	WVN	B	847	-	-	12/29/63/63	0/2/2/2
27	WVN	B	848	-	-	7/29/63/63	0/2/2/2
24	CLA	c	603	-	1/1/12/20	3/21/99/115	-
24	CLA	c	608	13	1/1/15/20	17/37/115/115	-
24	CLA	L	203	-	1/1/15/20	11/37/115/115	-
33	II0	h	309	-	-	3/17/40/67	0/1/1/2
32	LMG	L	208	24	-	19/50/70/70	0/1/1/1
24	CLA	B	831	36	1/1/11/20	4/13/91/115	-
24	CLA	i	602	20	1/1/12/20	9/19/97/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	CLA	e	603	17	1/1/12/20	5/21/99/115	-
34	IHT	a	316	-	-	9/25/65/65	0/2/2/2
24	CLA	A	839	1	1/1/15/20	15/37/115/115	-
24	CLA	g	322	32	1/1/15/20	13/37/115/115	-
24	CLA	f	610	26	1/1/15/20	15/37/115/115	-
24	CLA	B	805	-	1/1/15/20	17/37/115/115	-
24	CLA	c	607	13	1/1/11/20	2/15/93/115	-
33	II0	d	315	-	-	8/21/67/67	0/2/2/2
24	CLA	A	835	-	1/1/15/20	12/37/115/115	-
32	LMG	b	301	-	-	17/50/70/70	0/1/1/1
34	IHT	g	319	-	-	11/25/65/65	0/2/2/2
24	CLA	B	804	-	1/1/15/20	9/37/115/115	-
24	CLA	A	840	-	1/1/15/20	16/37/115/115	-
33	II0	h	310	-	-	8/21/67/67	0/2/2/2
24	CLA	i	608	26	1/1/11/20	5/15/93/115	-
24	CLA	B	813	-	1/1/14/20	14/31/109/115	-
33	II0	f	618	-	-	7/21/67/67	0/2/2/2
27	WVN	A	850	-	-	14/29/63/63	0/2/2/2
24	CLA	c	612	-	1/1/15/20	11/37/115/115	-
24	CLA	a	302	14	1/1/12/20	9/22/100/115	-
34	IHT	j	317	-	-	7/25/65/65	0/2/2/2
33	II0	c	614	-	-	1/21/67/67	0/2/2/2
26	LHG	J	107	24	-	19/53/53/53	-
24	CLA	B	820	-	-	8/25/103/115	-
24	CLA	A	805	1	1/1/15/20	7/37/115/115	-
24	CLA	A	807	1	1/1/15/20	9/37/115/115	-
24	CLA	A	832	-	-	12/37/115/115	-
24	CLA	i	610	-	1/1/12/20	7/21/99/115	-
24	CLA	d	305	-	-	5/21/99/115	-
33	II0	a	314	-	-	7/21/67/67	0/2/2/2
24	CLA	j	308	-	1/1/12/20	8/21/99/115	-
27	WVN	B	845	-	-	6/29/63/63	0/2/2/2
24	CLA	B	816	-	1/1/13/20	7/30/108/115	-
33	II0	k	621	-	-	4/21/67/67	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
28	LMT	a	318	-	-	3/21/61/61	0/2/2/2
24	CLA	A	822	-	1/1/12/20	6/21/99/115	-
24	CLA	a	309	26	1/1/11/20	6/17/95/115	-
24	CLA	d	301	21	1/1/12/20	7/19/97/115	-
24	CLA	B	823	36	1/1/14/20	11/36/114/115	-
24	CLA	A	842	-	1/1/15/20	21/37/115/115	-
24	CLA	d	306	-	1/1/12/20	10/21/99/115	-
24	CLA	A	834	-	1/1/12/20	4/21/99/115	-
24	CLA	J	105	26	1/1/12/20	5/21/99/115	-
27	WVN	j	301	-	-	9/29/63/63	0/2/2/2
34	IHT	b	316	-	-	3/25/65/65	0/2/2/2
24	CLA	J	103	8	1/1/10/20	5/10/88/115	-
24	CLA	e	607	17	1/1/15/20	10/37/115/115	-
26	LHG	e	617	24	-	11/41/41/53	-
24	CLA	A	853	-	1/1/15/20	14/37/115/115	-
24	CLA	B	818	36	1/1/15/20	7/37/115/115	-
24	CLA	B	814	-	1/1/13/20	13/30/108/115	-
24	CLA	k	601	18	1/1/12/20	10/21/99/115	-
26	LHG	k	620	24	-	14/41/41/53	-
34	IHT	c	615	-	-	10/25/65/65	0/2/2/2
33	II0	b	315	-	-	5/21/67/67	0/2/2/2
33	II0	f	616	-	-	5/21/67/67	0/2/2/2
24	CLA	K	102	-	1/1/10/20	5/10/88/115	-
33	II0	i	612	-	-	7/21/67/67	0/2/2/2
27	WVN	A	848	-	-	9/29/63/63	0/2/2/2
24	CLA	L	204	36	1/1/12/20	7/19/97/115	-
24	CLA	A	831	-	1/1/15/20	9/37/115/115	-
24	CLA	B	835	36	1/1/15/20	9/37/115/115	-
24	CLA	A	806	-	-	10/37/115/115	-
33	II0	j	315	-	-	5/21/67/67	0/2/2/2
24	CLA	b	312	15	1/1/15/20	20/37/115/115	-
27	WVN	J	102	-	-	8/29/63/63	0/2/2/2
33	II0	k	617	-	-	3/21/67/67	0/2/2/2
24	CLA	A	828	-	1/1/15/20	8/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	SF4	A	854	1,2	-	-	0/6/5/5
35	KC2	d	311	-	-	7/15/71/71	-
24	CLA	g	315	-	1/1/12/20	7/21/99/115	-
24	CLA	i	605	20	1/1/12/20	6/21/99/115	-
24	CLA	g	304	-	1/1/12/20	4/21/99/115	-
24	CLA	A	803	-	1/1/13/20	6/25/103/115	-
24	CLA	L	207	36	1/1/12/20	5/21/99/115	-
24	CLA	g	306	22	1/1/12/20	7/21/99/115	-
25	PQN	B	842	-	-	13/23/43/43	0/2/2/2
35	KC2	k	612	35	-	8/15/71/71	-
33	II0	i	613	-	-	4/21/67/67	0/2/2/2
24	CLA	e	608	26	1/1/11/20	10/15/93/115	-
24	CLA	c	609	26	1/1/11/20	4/13/91/115	-
24	CLA	c	602	13	1/1/12/20	11/19/97/115	-
24	CLA	A	812	-	1/1/15/20	22/37/115/115	-
33	II0	e	614	-	-	3/21/67/67	0/2/2/2
26	LHG	j	319	24	-	5/34/34/53	-
24	CLA	B	830	36	1/1/15/20	13/37/115/115	-
24	CLA	f	604	19	-	8/37/115/115	-
24	CLA	i	604	20	1/1/15/20	12/37/115/115	-
24	CLA	d	308	21	1/1/10/20	3/8/86/115	-
24	CLA	g	302	22	1/1/10/20	0/10/88/115	-
33	II0	J	104	-	-	7/21/67/67	0/2/2/2
27	WVN	J	101	-	-	8/29/63/63	0/2/2/2
24	CLA	A	815	36	1/1/11/20	7/13/91/115	-
35	KC2	j	312	19	-	5/15/71/71	-
28	LMT	A	851	-	-	9/21/61/61	0/2/2/2

The worst 5 of 3566 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	b	317	IHT	C15-C11	25.48	1.63	1.34
34	R	204	IHT	C15-C11	25.36	1.63	1.34
34	c	615	IHT	C15-C11	25.20	1.63	1.34
34	k	618	IHT	C15-C11	25.15	1.63	1.34
34	j	317	IHT	C15-C11	25.06	1.62	1.34

The worst 5 of 3883 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	f	617	IHT	C40-C37-C33	-13.58	107.93	127.31
35	f	611	KC2	C1A-NA-C4A	-12.51	101.08	106.71
34	b	317	IHT	C40-C37-C33	-12.44	109.55	127.31
35	k	613	KC2	C1A-NA-C4A	-11.85	101.38	106.71
34	f	617	IHT	C30-C27-C23	-11.73	110.57	127.31

5 of 197 chirality outliers are listed below:

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

5 of 2931 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
24	A	801	CLA	CBD-CGD-O2D-CED
24	A	802	CLA	C1A-C2A-CAA-CBA
24	A	802	CLA	CBA-CGA-O2A-C1
24	A	802	CLA	O1A-CGA-O2A-C1
24	A	802	CLA	C11-C10-C8-C9

There are no ring outliers.

107 monomers are involved in 243 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	A	855	CLA	6	0
24	A	808	CLA	1	0
24	B	839	CLA	2	0
24	A	819	CLA	1	0
24	A	811	CLA	2	0
24	A	804	CLA	3	0
24	B	829	CLA	2	0
24	B	811	CLA	1	0
24	B	822	CLA	6	0
24	K	101	CLA	2	0
24	A	841	CLA	3	0
24	A	852	CLA	2	0
24	B	834	CLA	3	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	A	824	CLA	2	0
24	A	821	CLA	2	0
24	O	205	CLA	6	0
24	B	809	CLA	1	0
24	B	810	CLA	2	0
29	C	102	SF4	3	0
26	A	845	LHG	1	0
24	B	806	CLA	3	0
24	B	828	CLA	2	0
24	A	827	CLA	6	0
24	A	818	CLA	2	0
24	B	803	CLA	4	0
24	B	812	CLA	4	0
24	A	801	CLA	4	0
26	B	802	LHG	3	0
24	A	856	CLA	1	0
24	B	837	CLA	4	0
24	A	829	CLA	3	0
24	L	202	CLA	2	0
24	B	825	CLA	3	0
24	A	823	CLA	3	0
24	B	821	CLA	1	0
26	A	844	LHG	2	0
24	B	819	CLA	1	0
24	A	817	CLA	4	0
24	A	814	CLA	2	0
24	B	840	CLA	2	0
30	B	843	DGD	3	0
24	R	203	CLA	1	0
24	B	817	CLA	2	0
24	A	836	CLA	3	0
24	B	841	CLA	5	0
32	J	106	LMG	3	0
24	B	824	CLA	3	0
24	A	809	CLA	3	0
24	A	813	CLA	2	0
24	B	832	CLA	4	0
31	B	844	LMU	1	0
29	C	101	SF4	4	0
24	B	807	CLA	2	0
24	B	826	CLA	1	0
24	F	201	CLA	3	0

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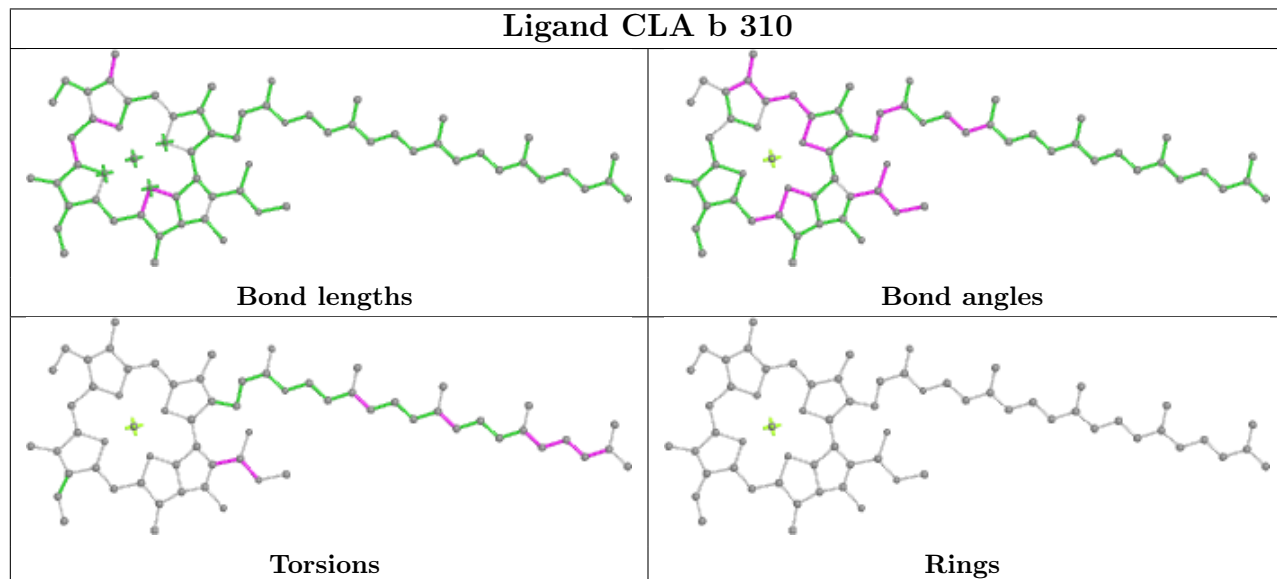
Mol	Chain	Res	Type	Clashes	Symm-Clashes
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24	I	102	CLA	2	0
24	B	833	CLA	3	0
24	A	820	CLA	4	0
24	A	802	CLA	6	0
32	F	206	LMG	2	0
24	B	808	CLA	1	0
24	A	830	CLA	1	0
24	O	201	CLA	3	0
24	B	836	CLA	5	0
25	A	843	PQN	2	0
24	A	837	CLA	2	0
24	B	801	CLA	7	0
24	B	815	CLA	1	0
24	F	202	CLA	2	0
24	B	827	CLA	4	0
24	A	810	CLA	1	0
24	L	203	CLA	4	0
32	L	208	LMG	2	0
24	B	831	CLA	2	0
24	A	839	CLA	5	0
24	B	805	CLA	1	0
24	A	835	CLA	3	0
24	B	804	CLA	3	0
24	A	840	CLA	5	0
26	J	107	LHG	5	0
24	B	820	CLA	4	0
24	A	805	CLA	1	0
24	A	807	CLA	4	0
24	B	816	CLA	2	0
24	A	822	CLA	2	0
24	B	823	CLA	6	0
24	A	842	CLA	8	0
24	A	834	CLA	1	0
24	J	105	CLA	3	0
24	J	103	CLA	1	0
24	A	853	CLA	2	0
24	B	818	CLA	1	0
24	B	814	CLA	1	0
24	L	204	CLA	1	0
24	A	831	CLA	1	0
24	A	806	CLA	6	0

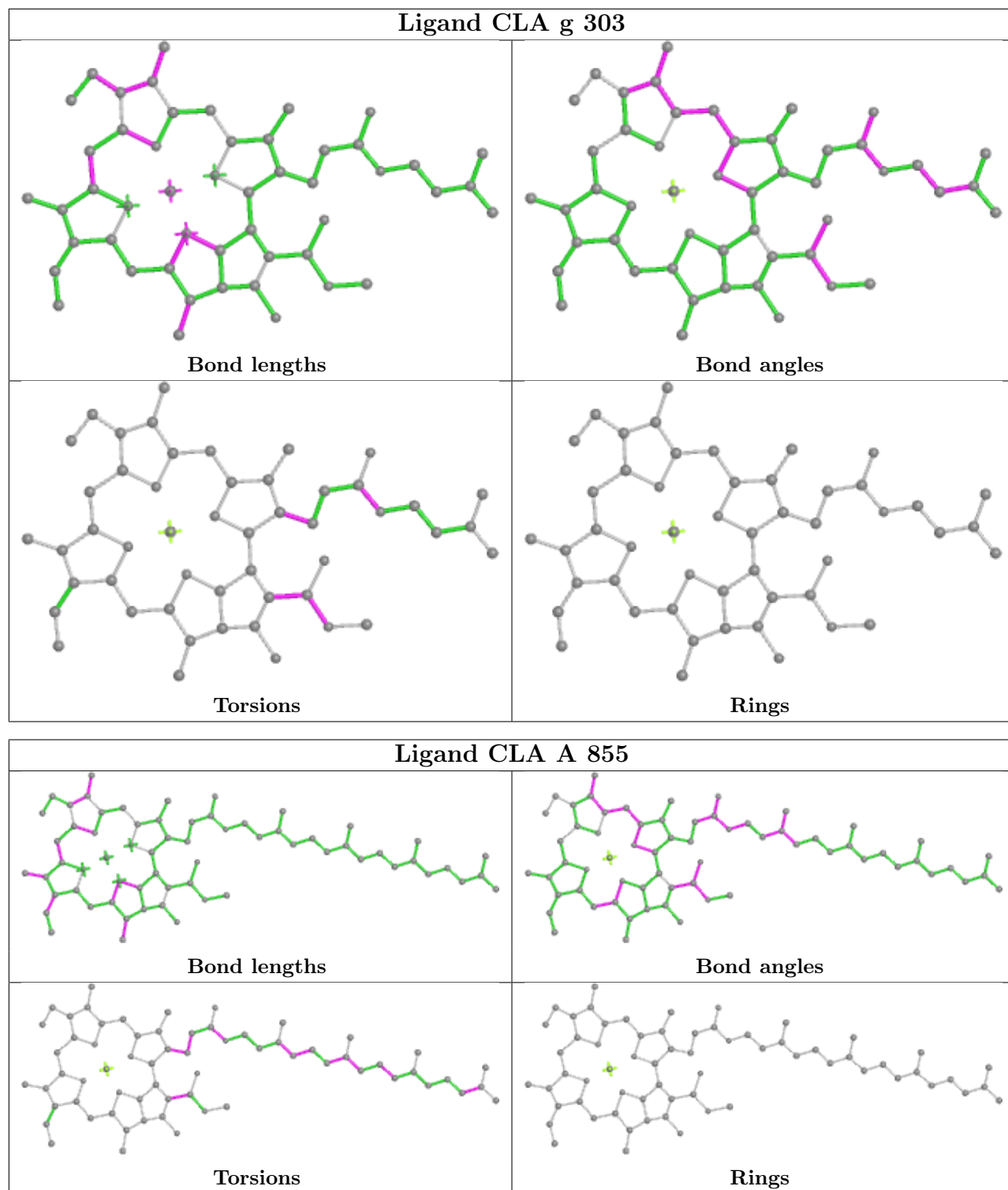
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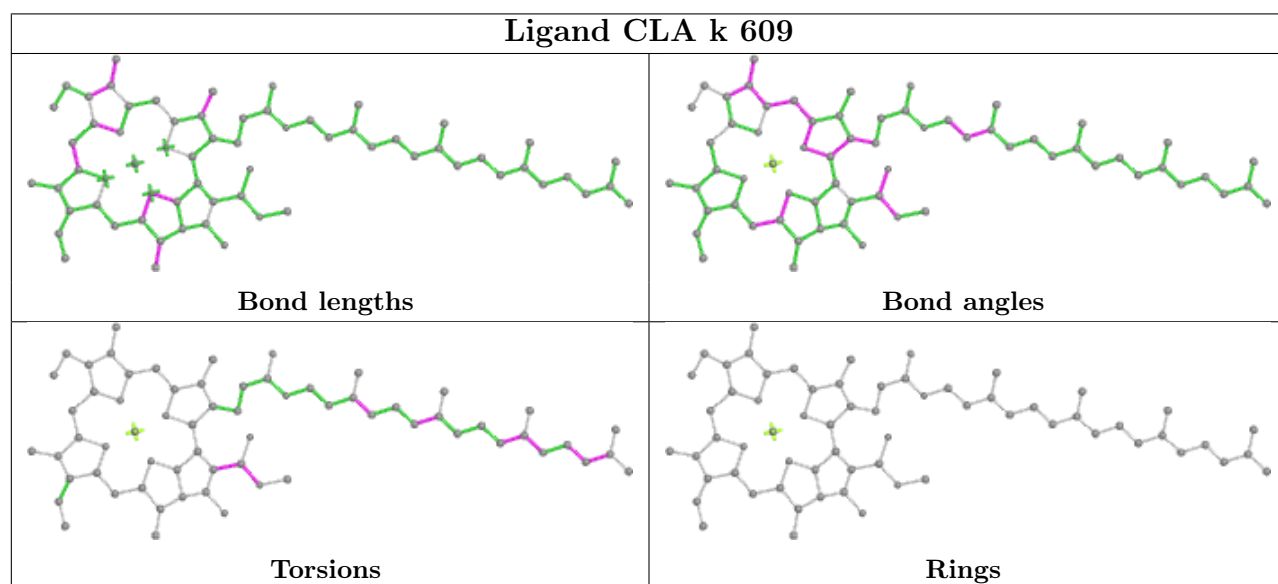
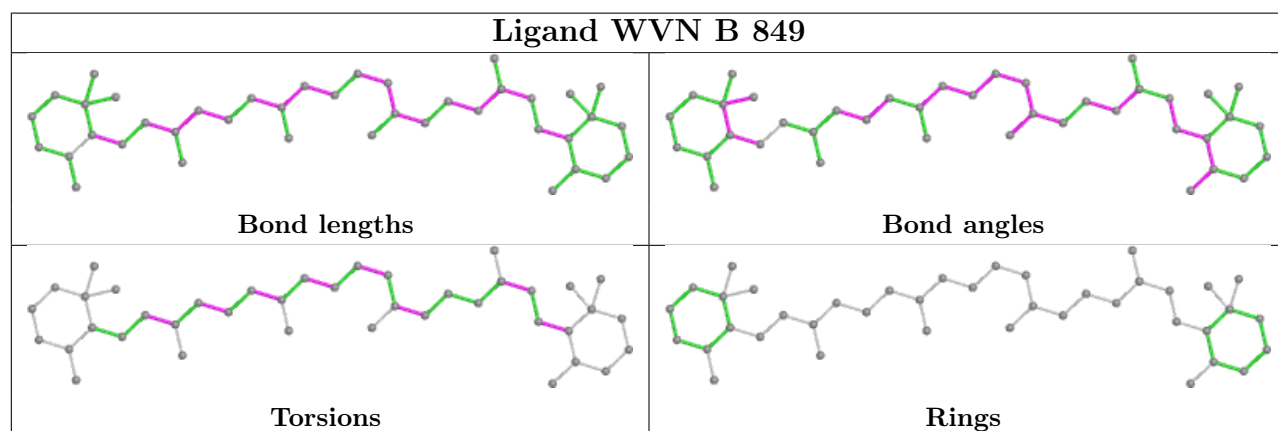
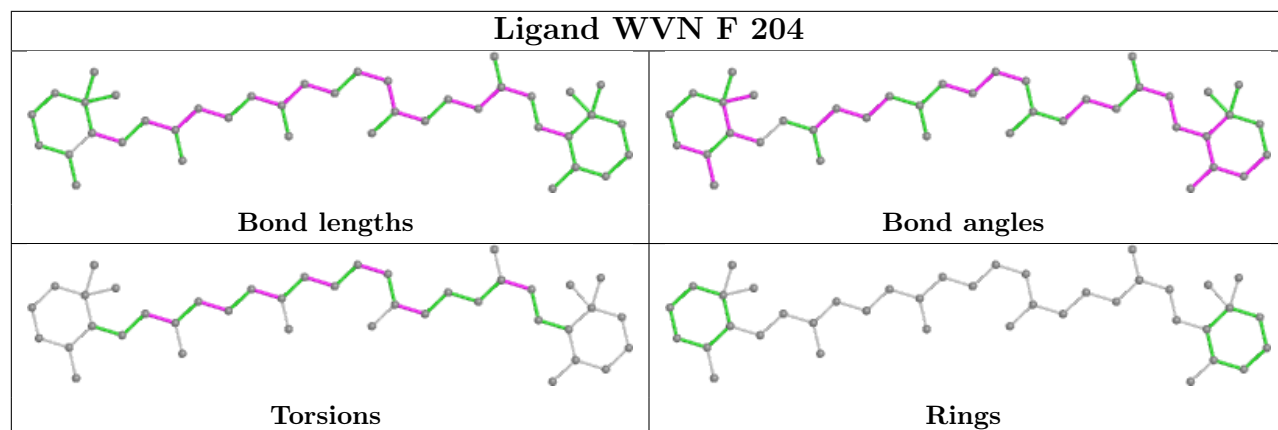
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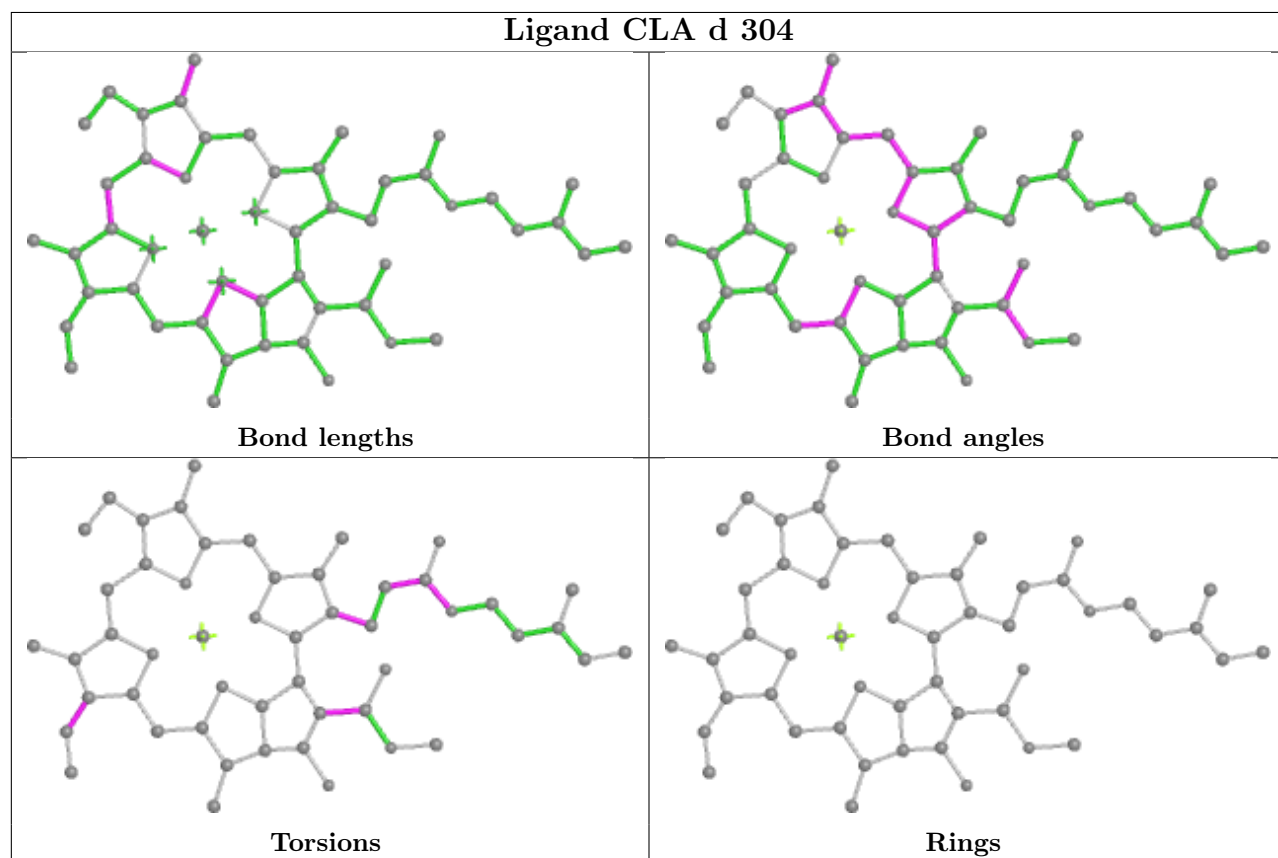
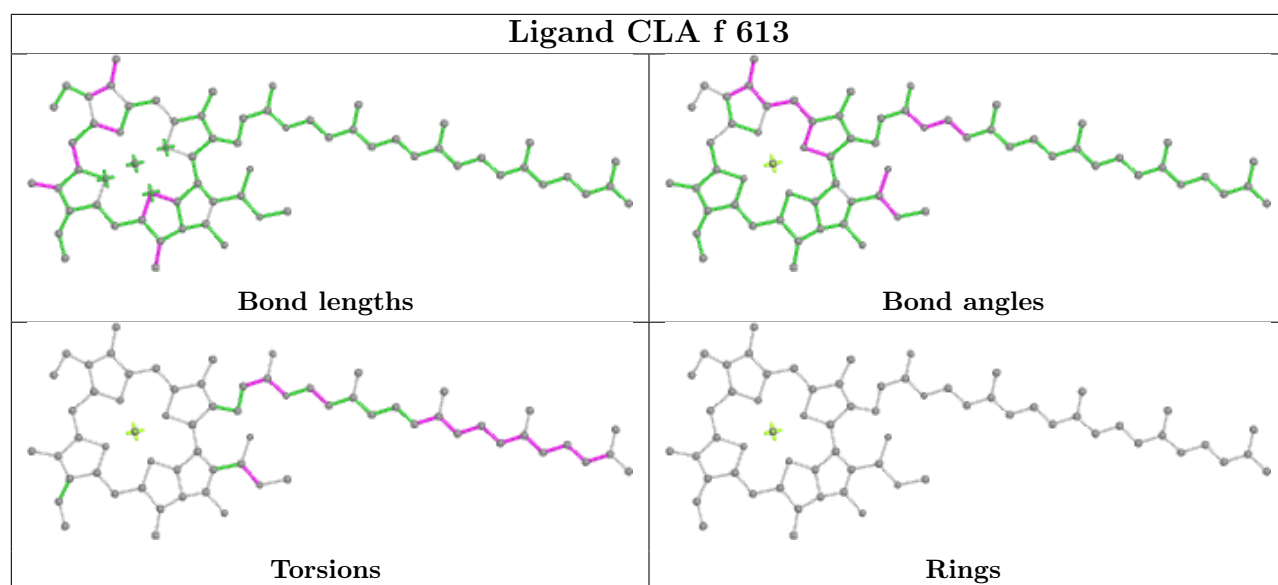
Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	B	835	CLA	4	0
24	A	828	CLA	2	0
29	A	854	SF4	4	0
24	A	803	CLA	3	0
24	L	207	CLA	1	0
25	B	842	PQN	5	0
24	A	812	CLA	2	0
24	B	830	CLA	3	0
24	A	815	CLA	2	0
28	A	851	LMT	1	0

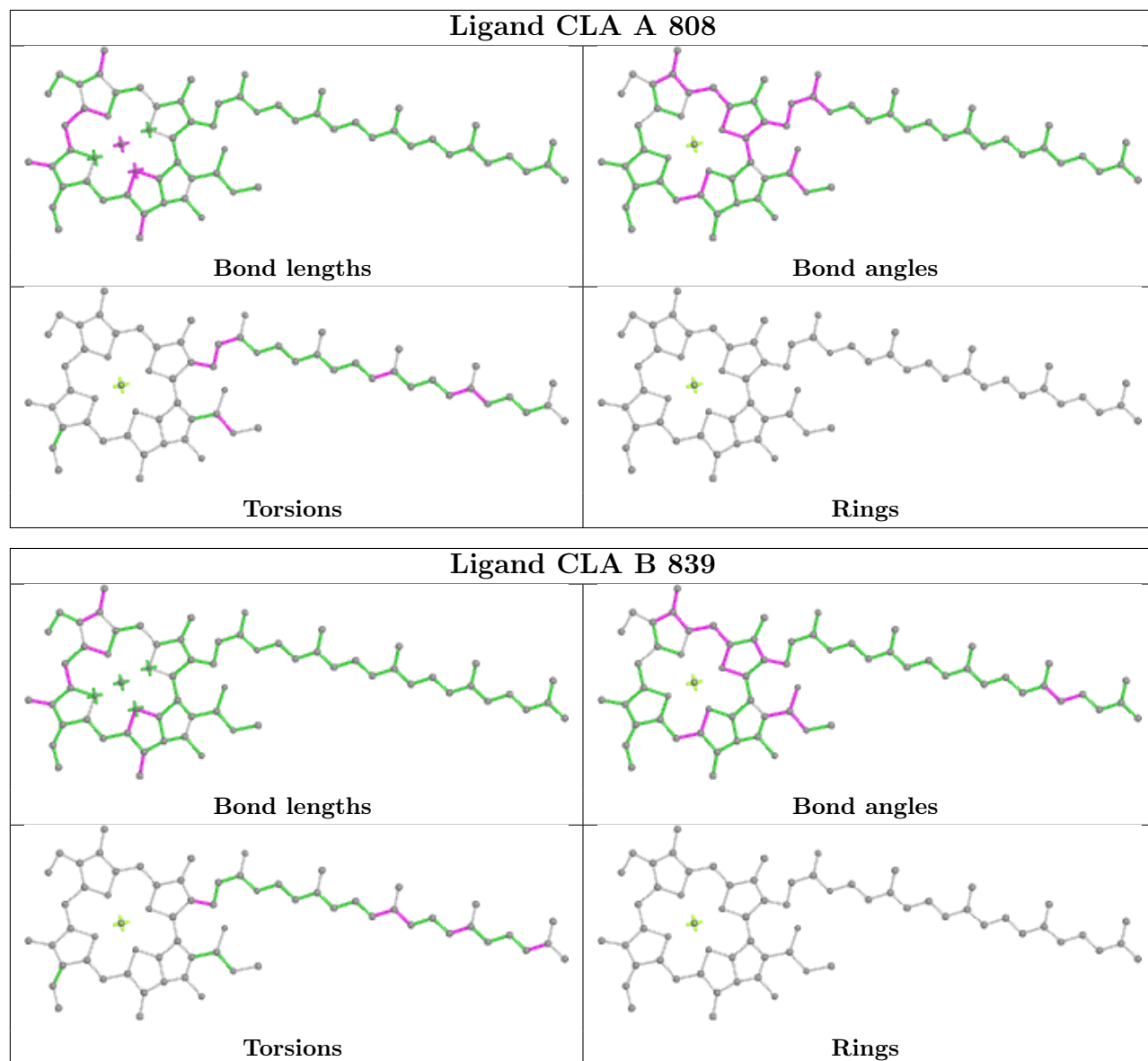
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

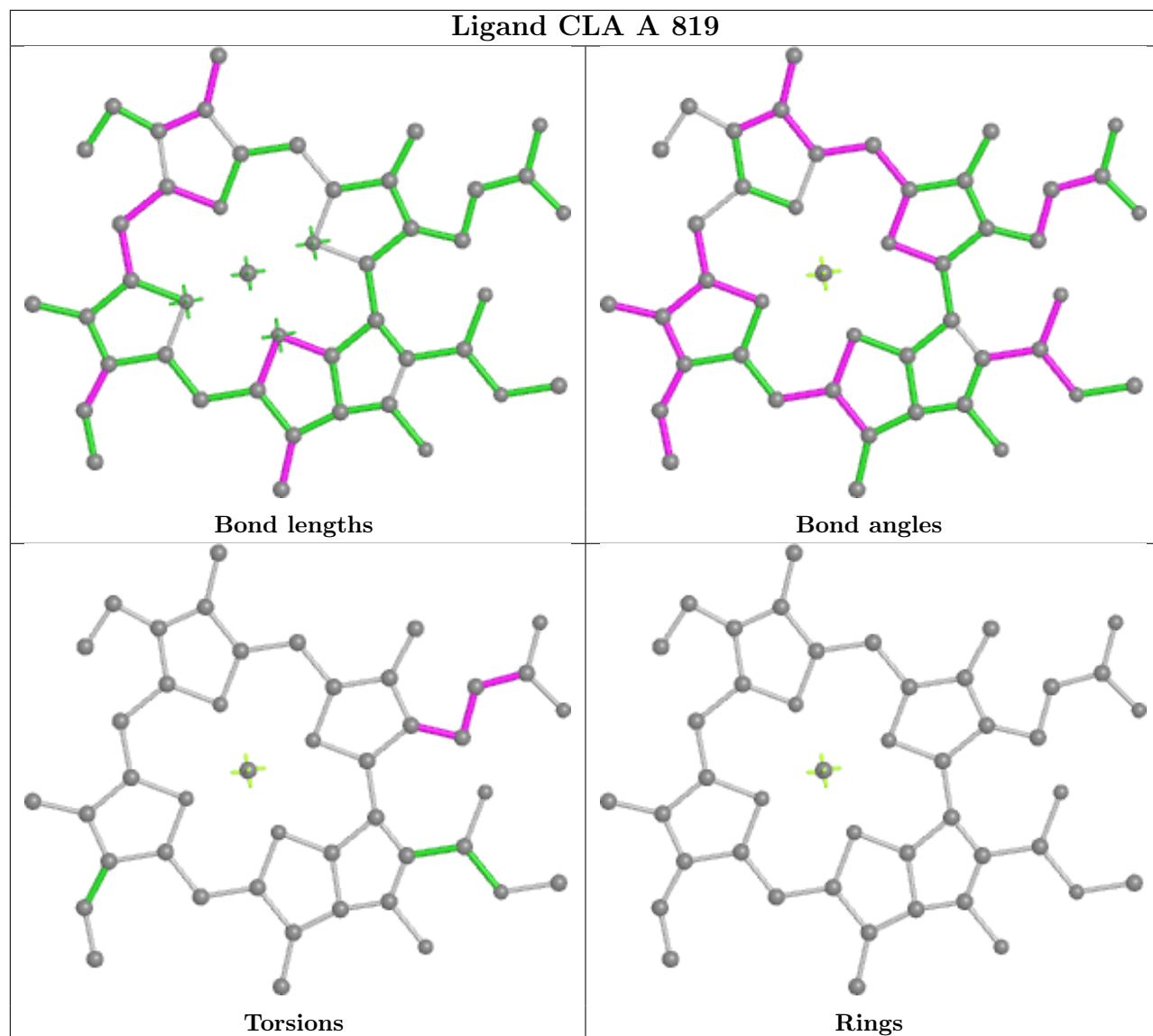


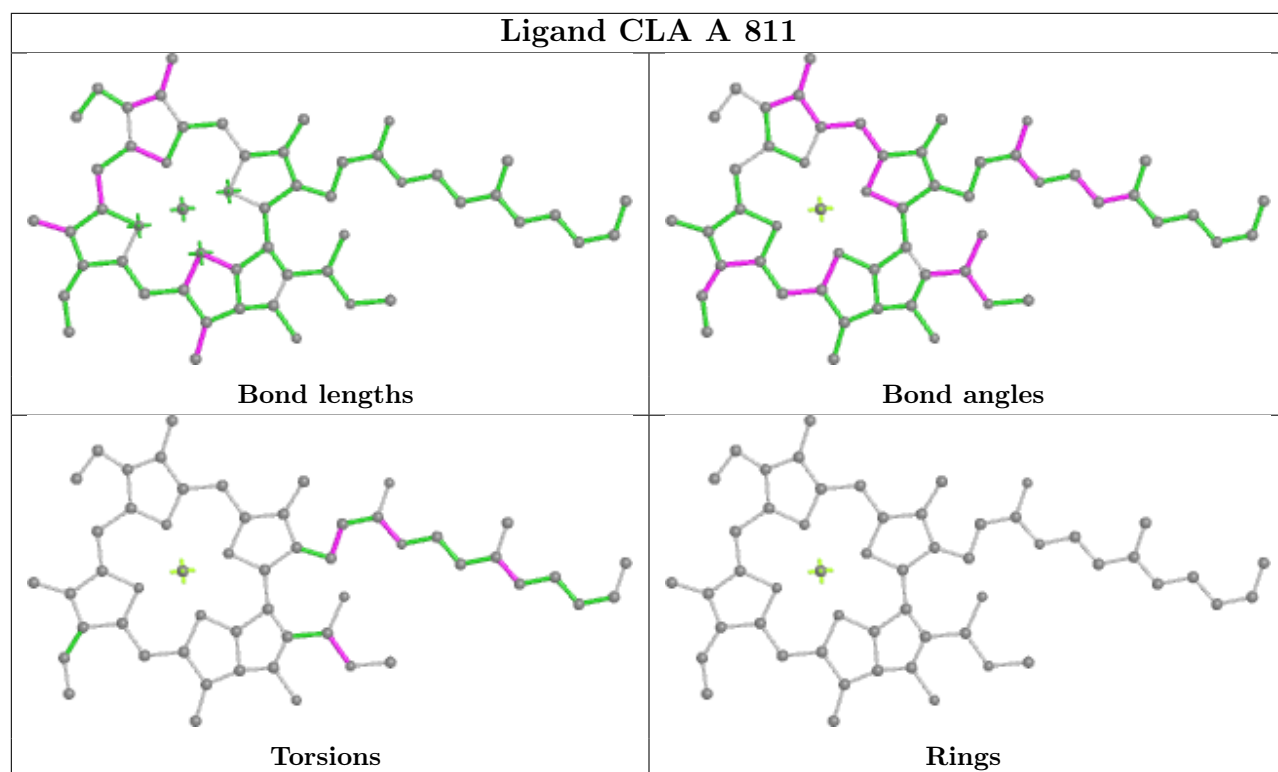
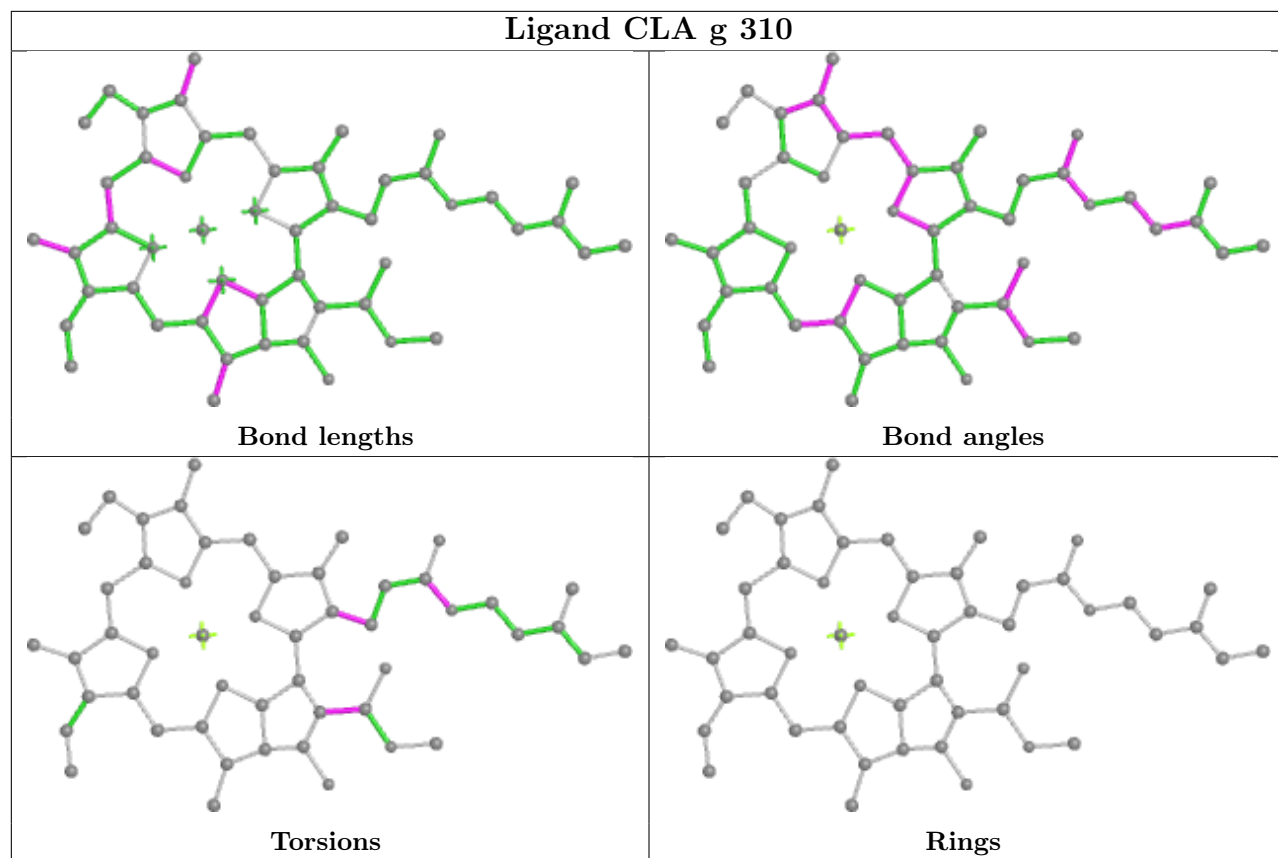


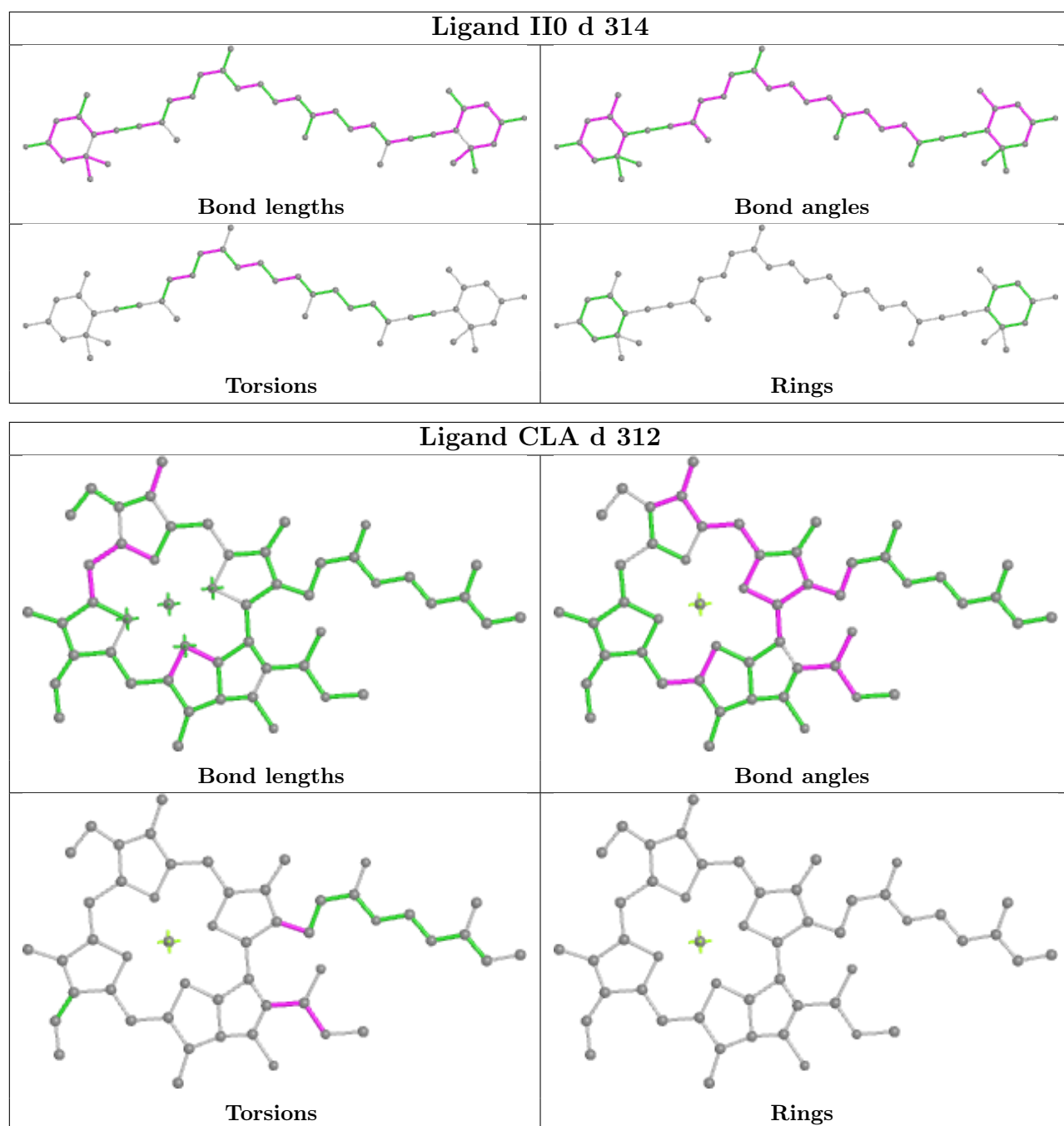


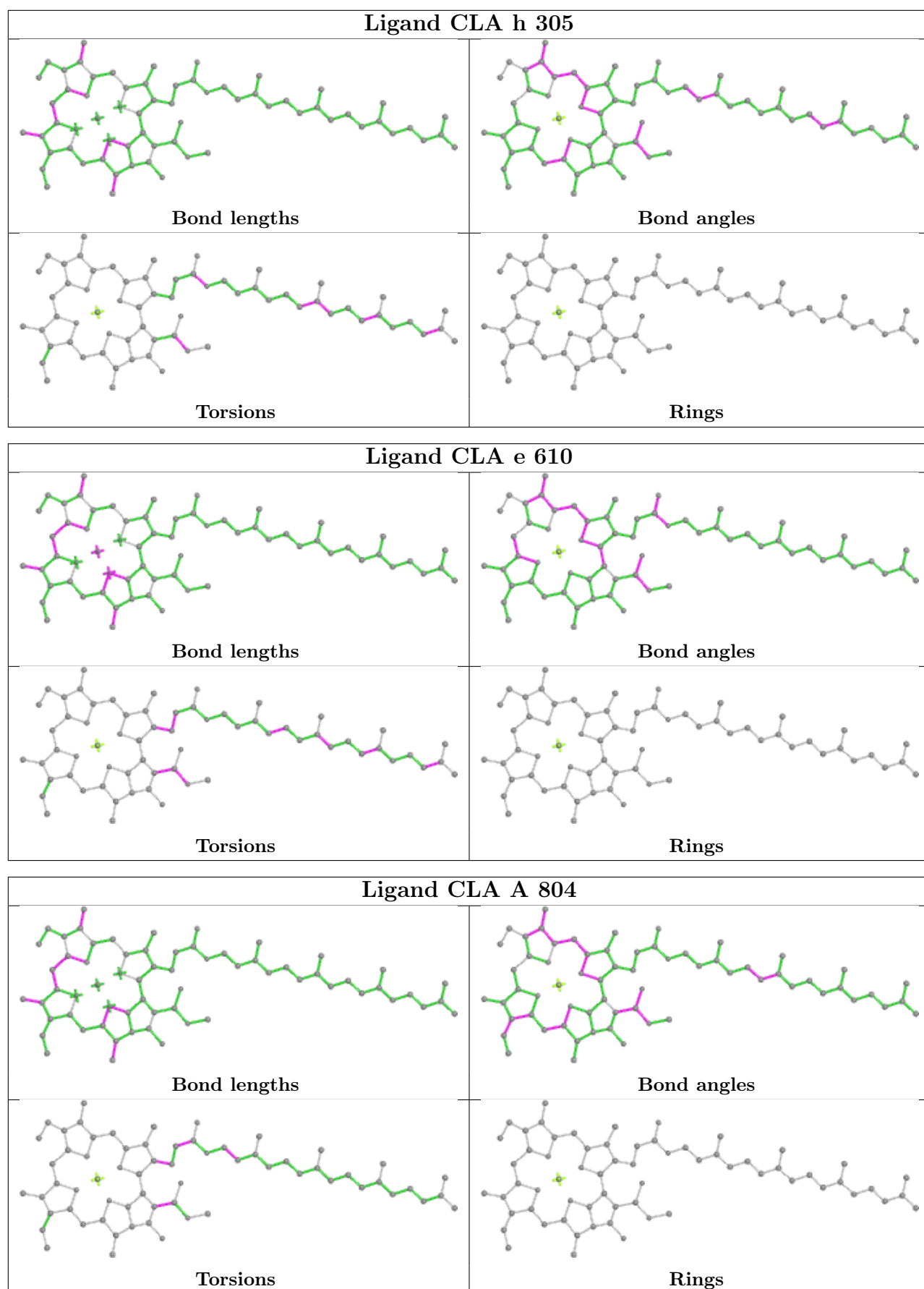


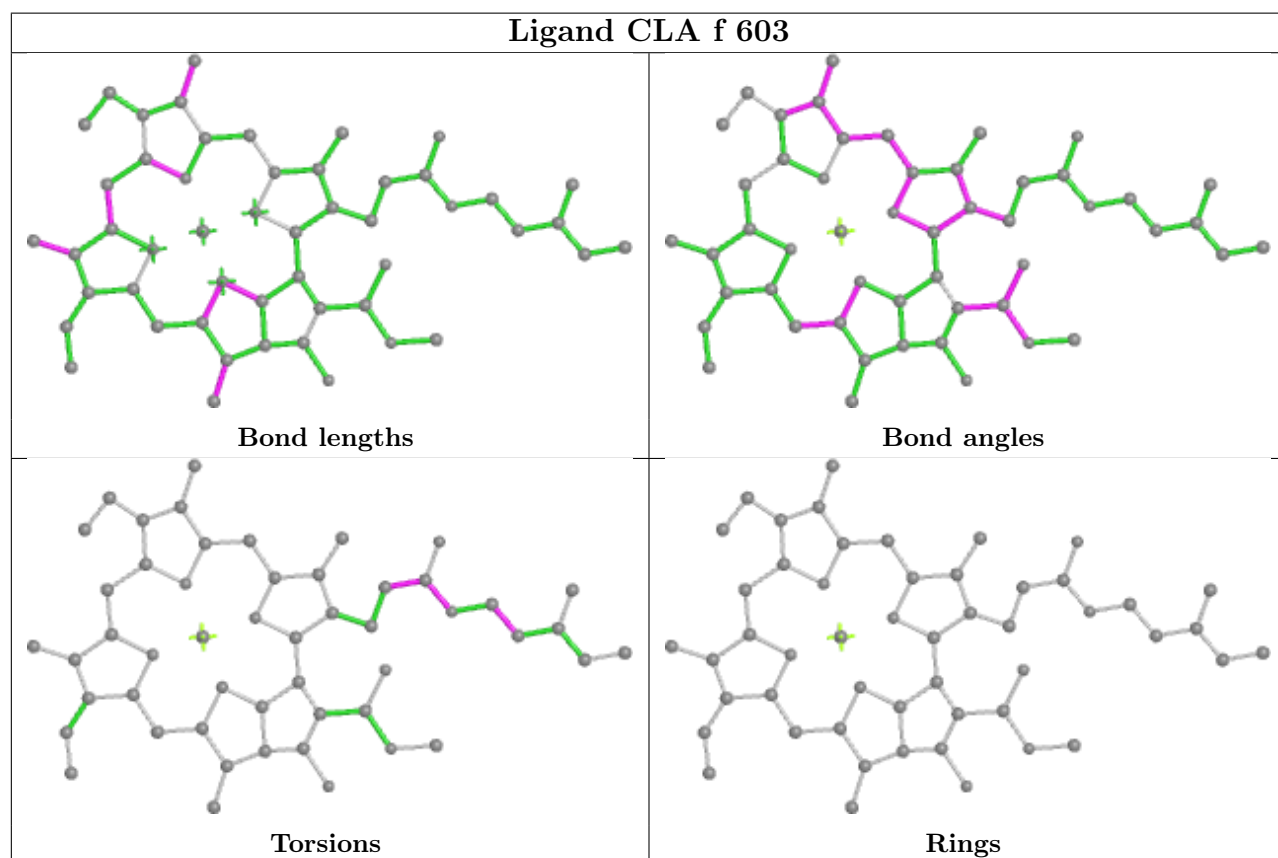
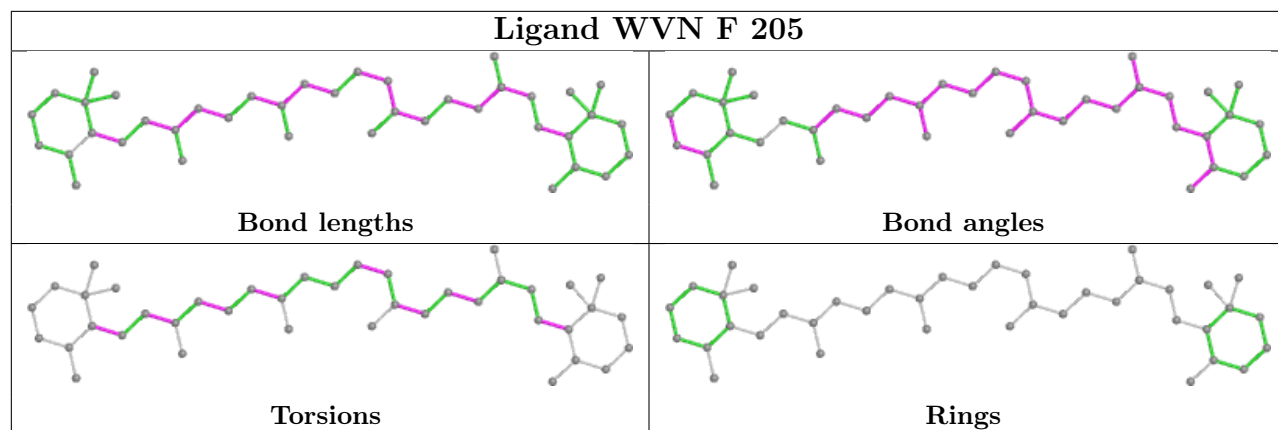


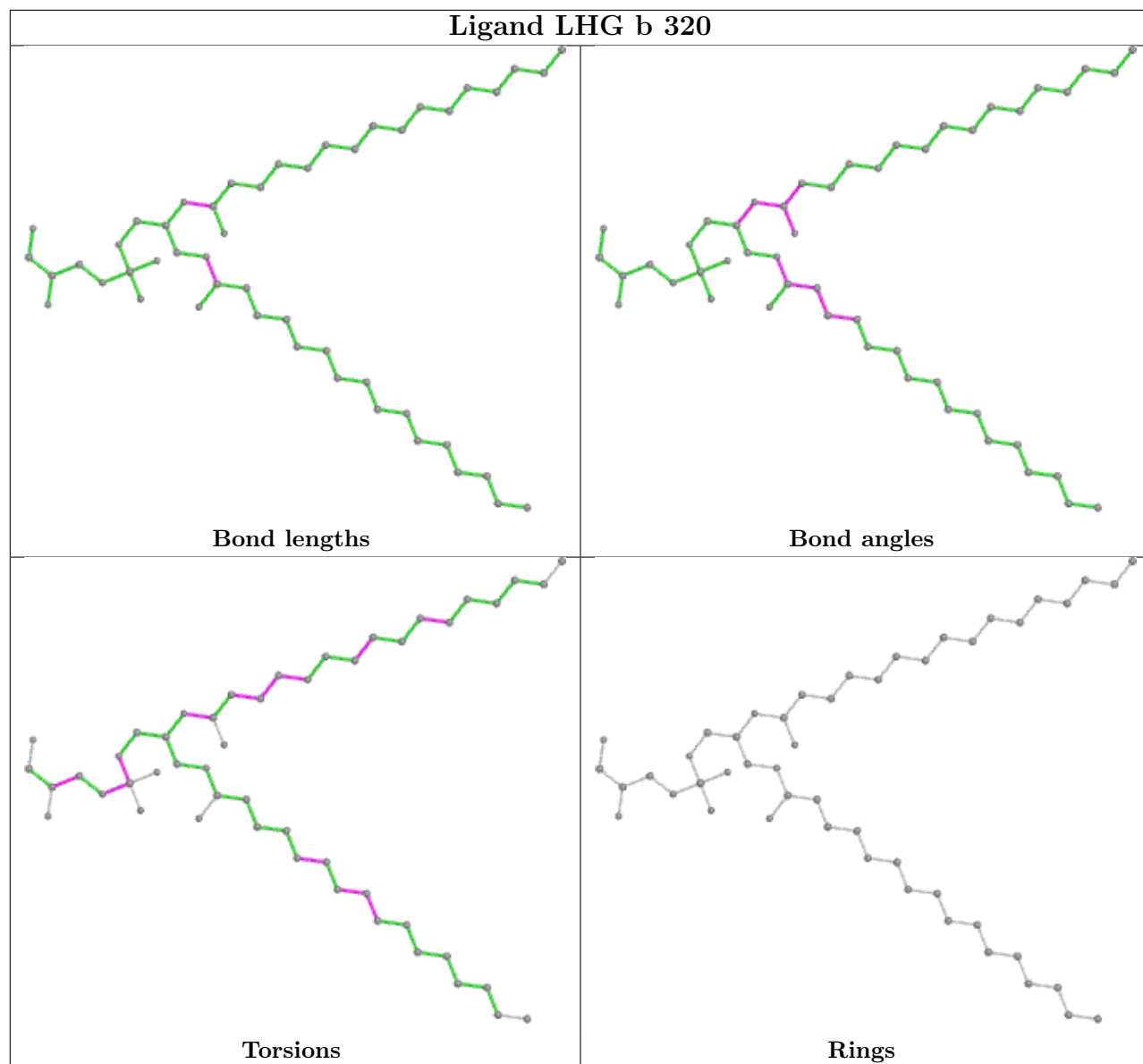


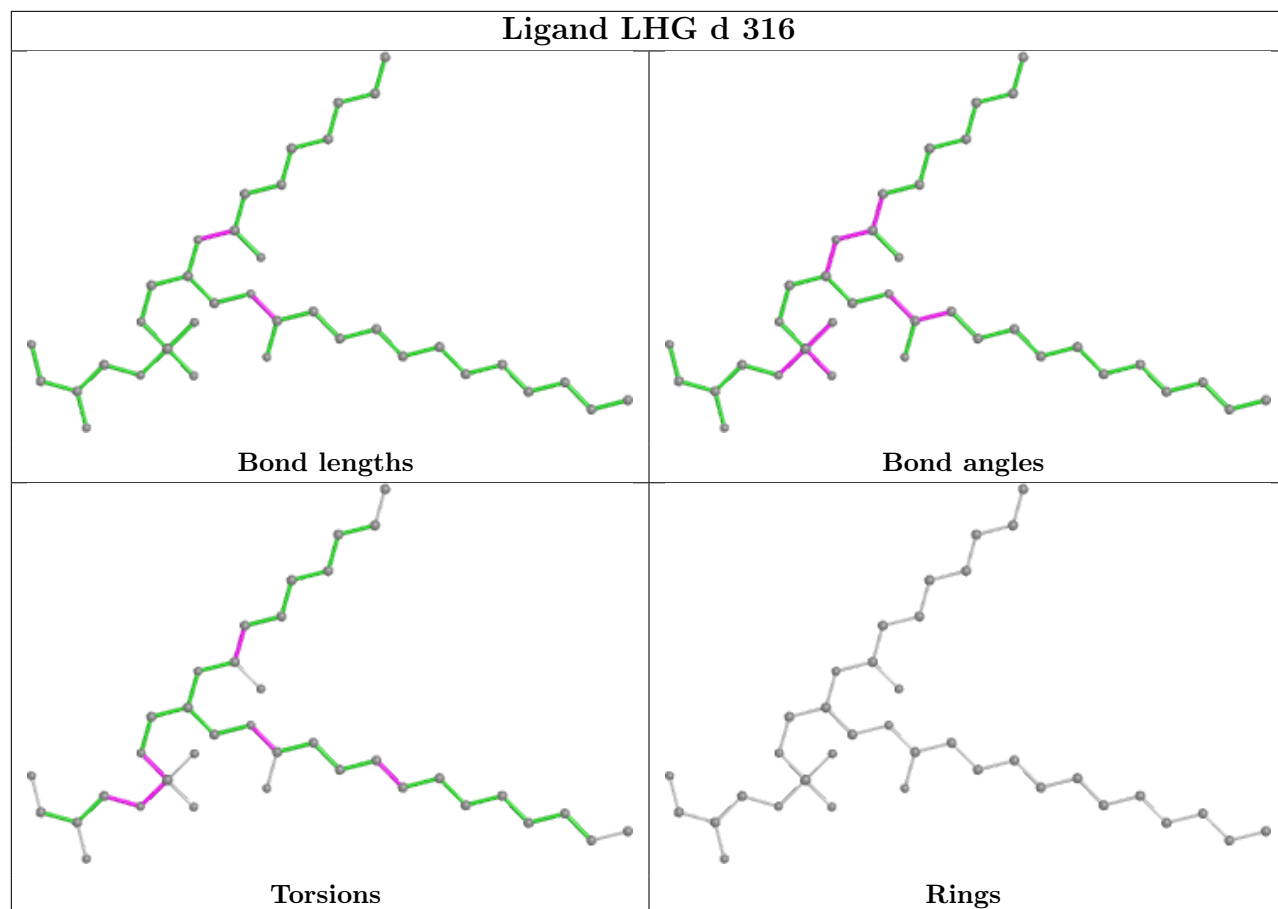


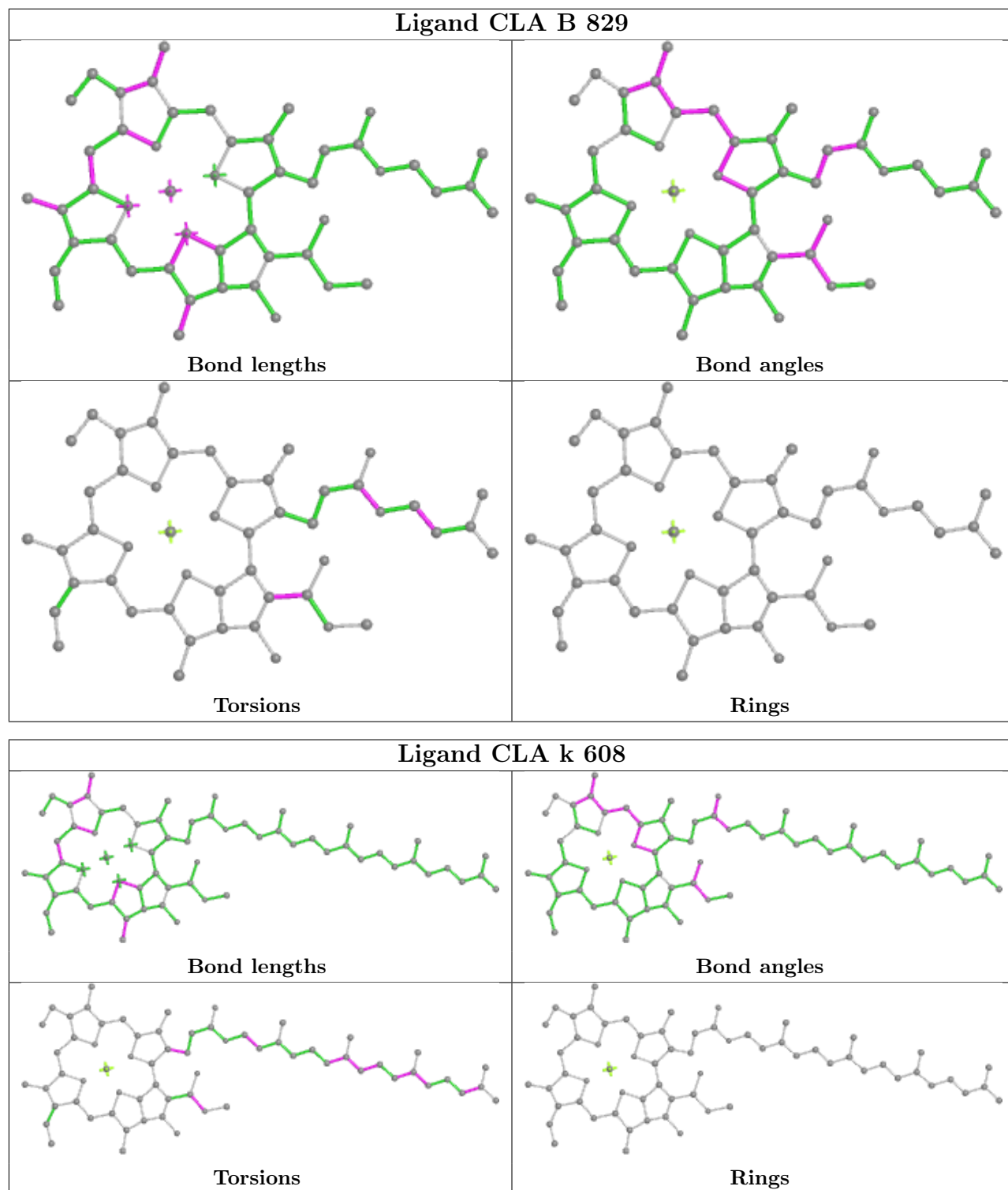


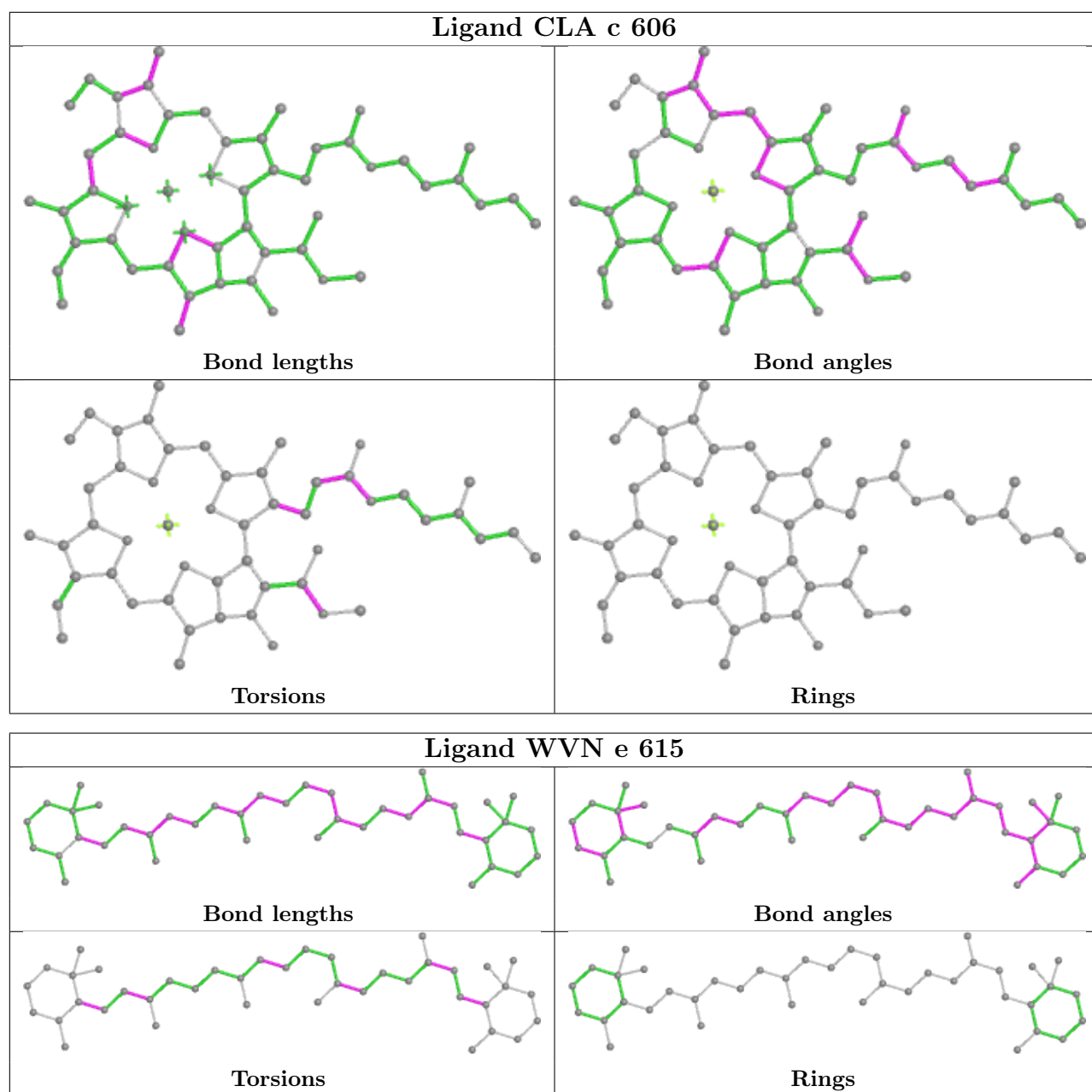


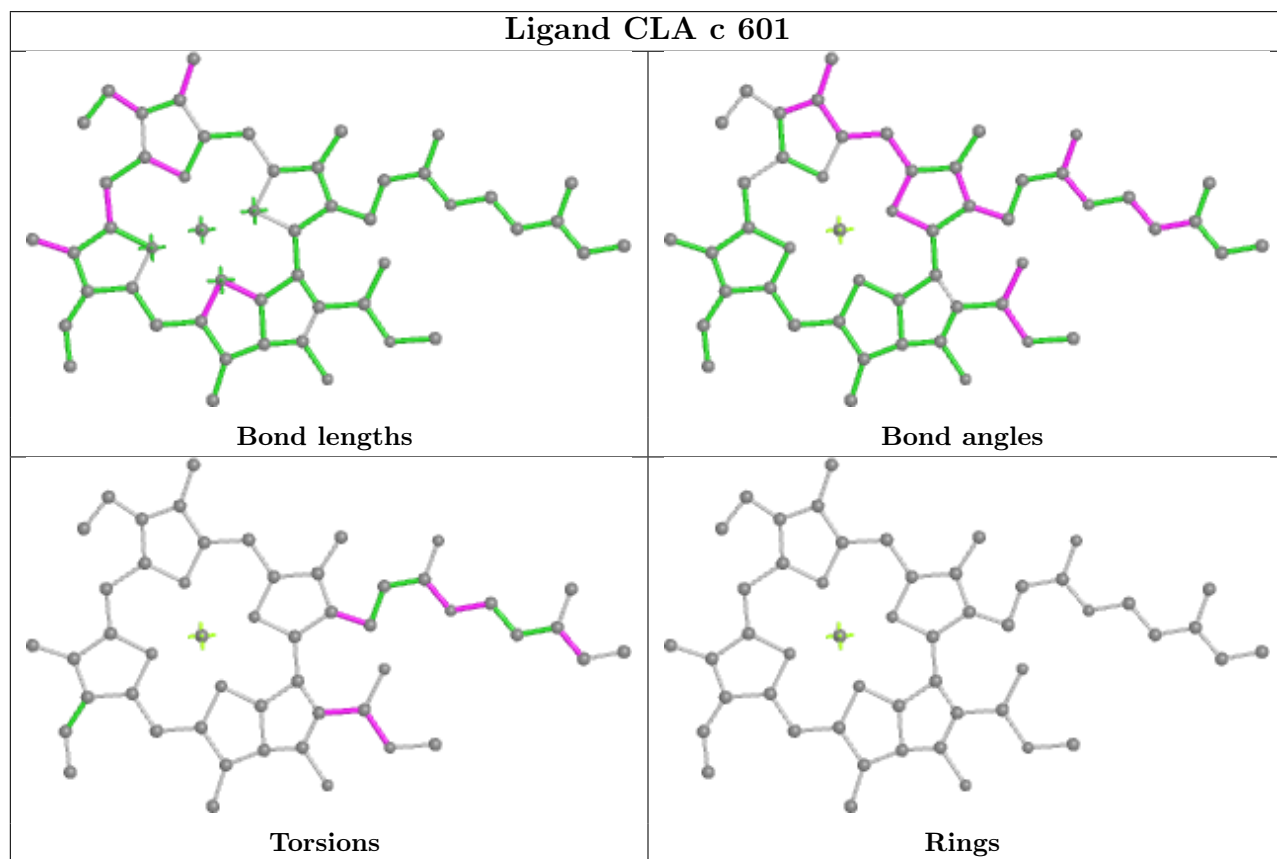
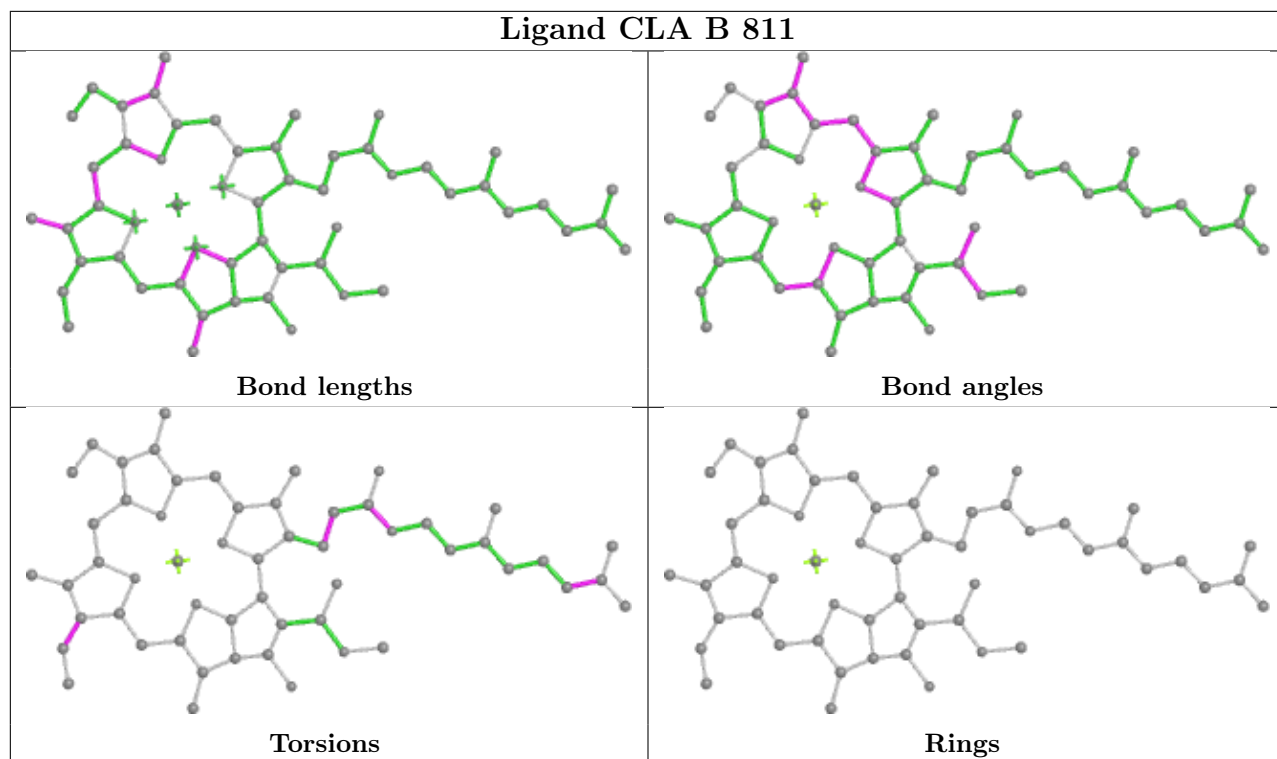


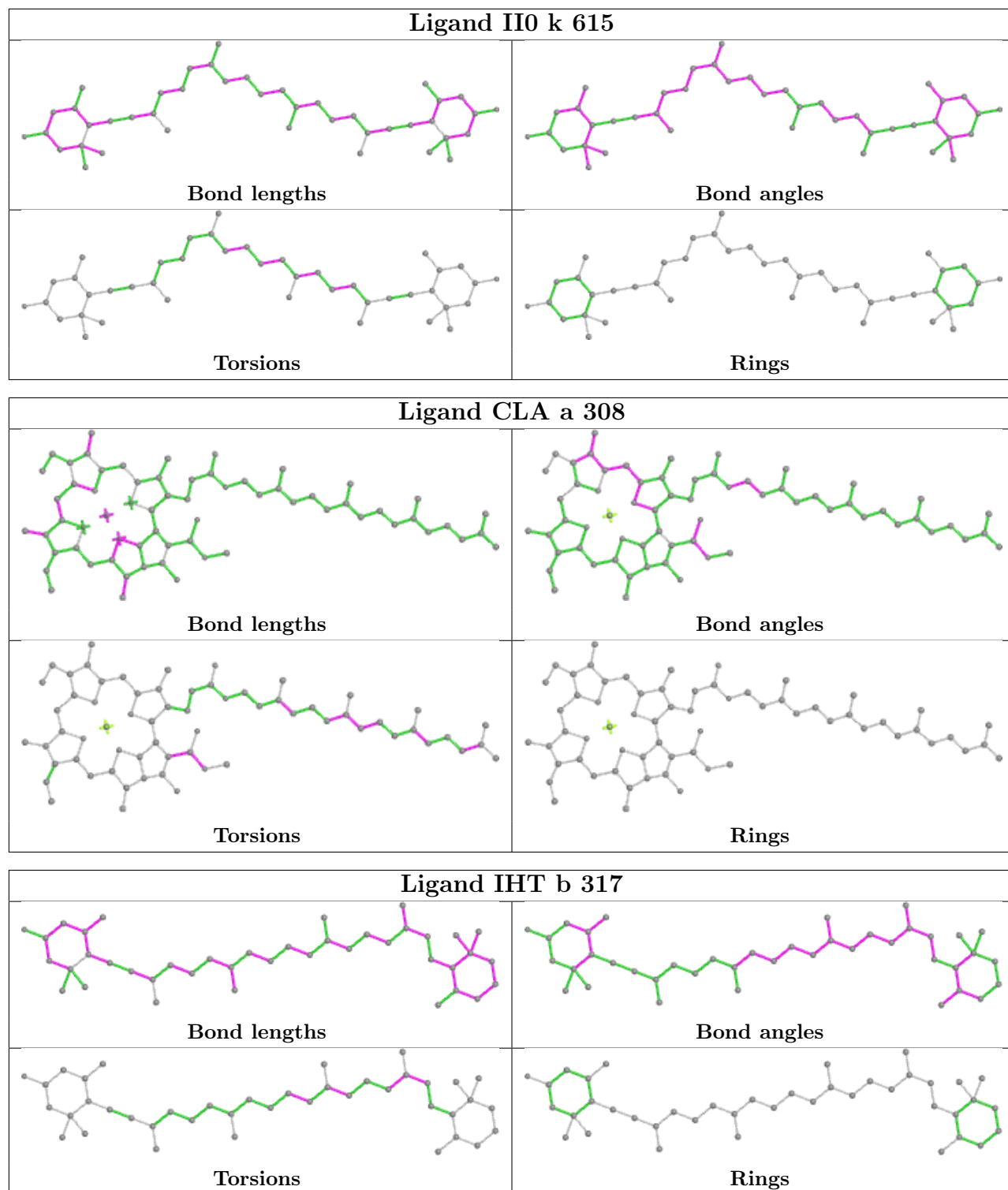


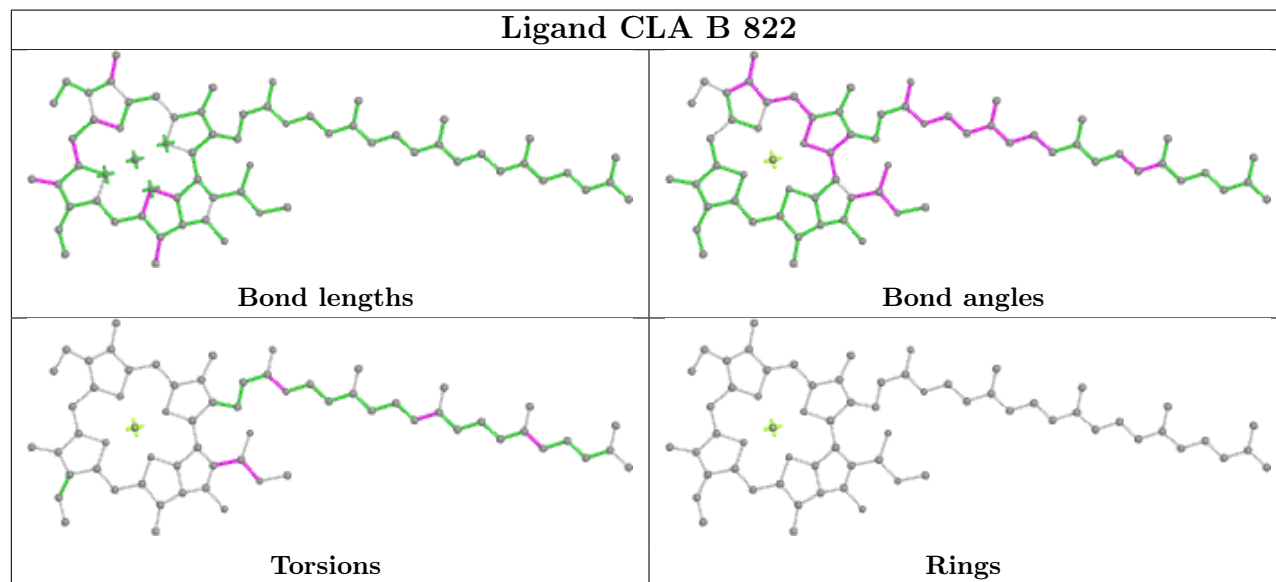
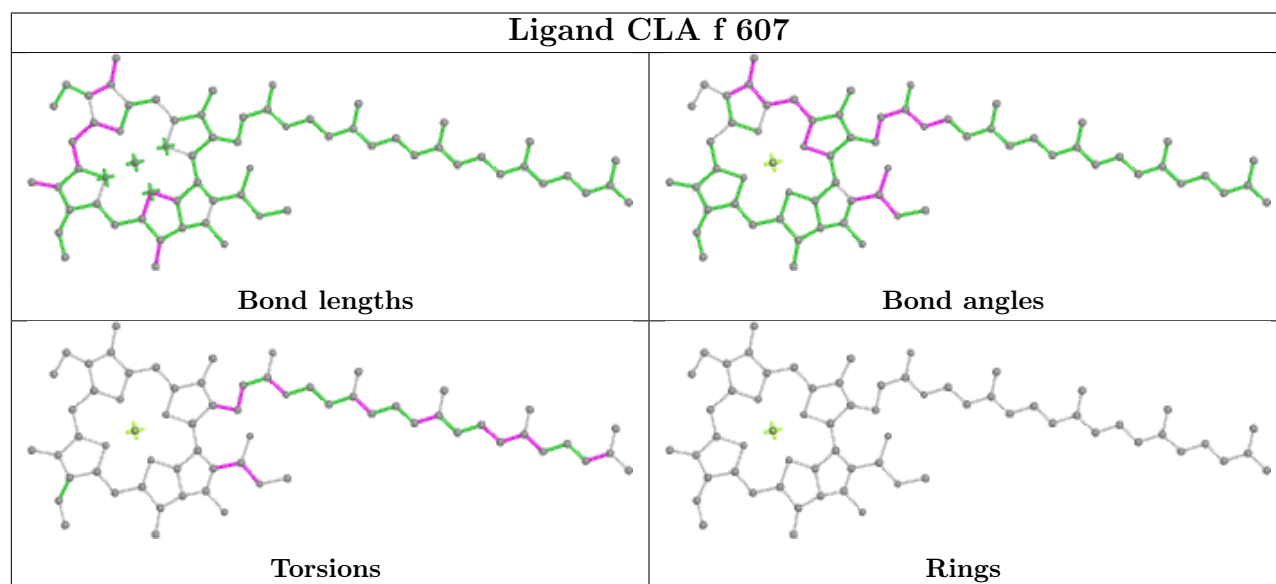
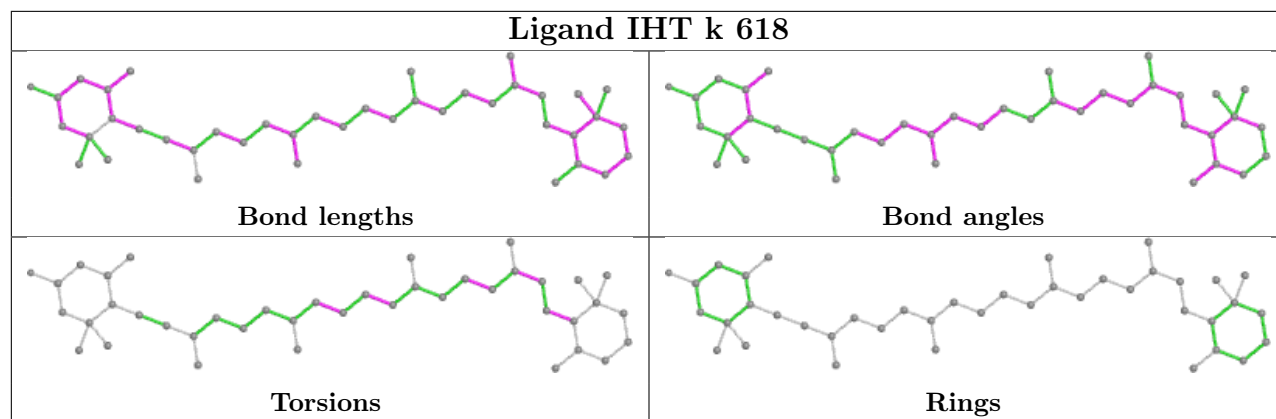


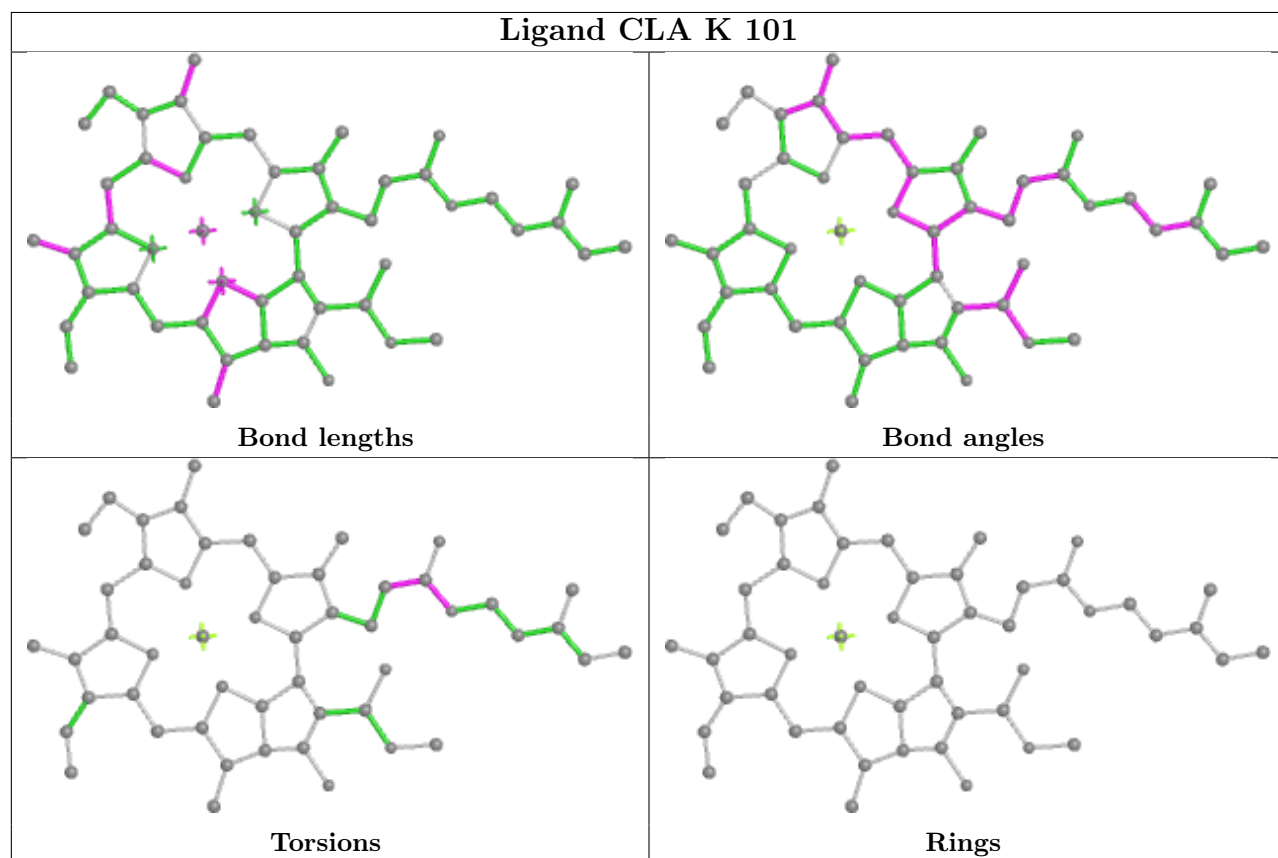
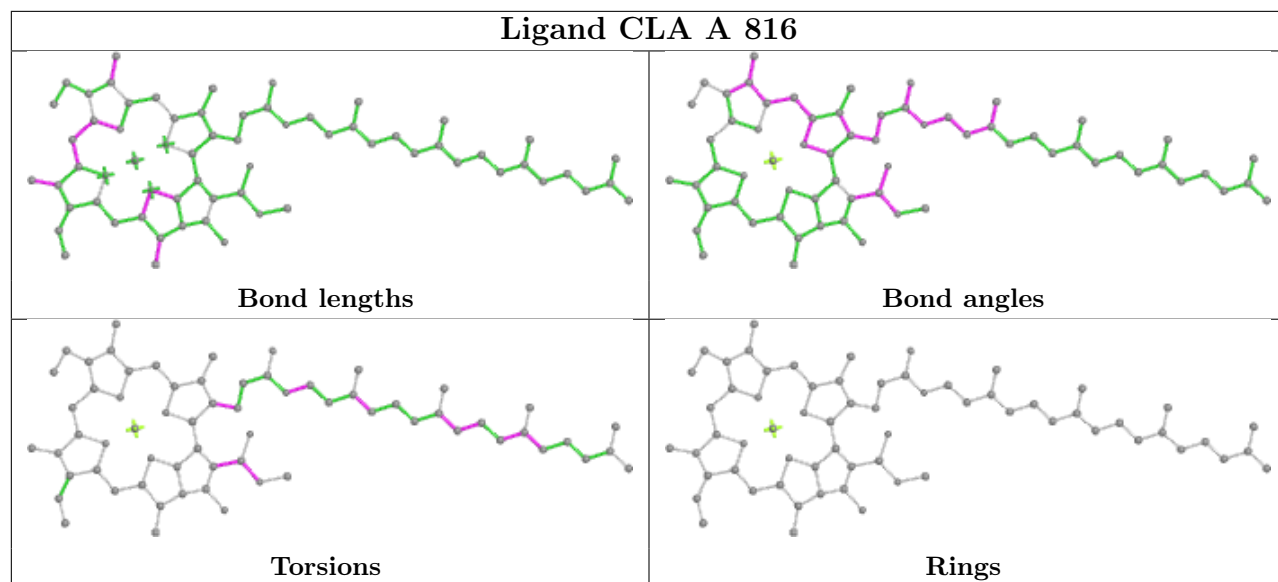


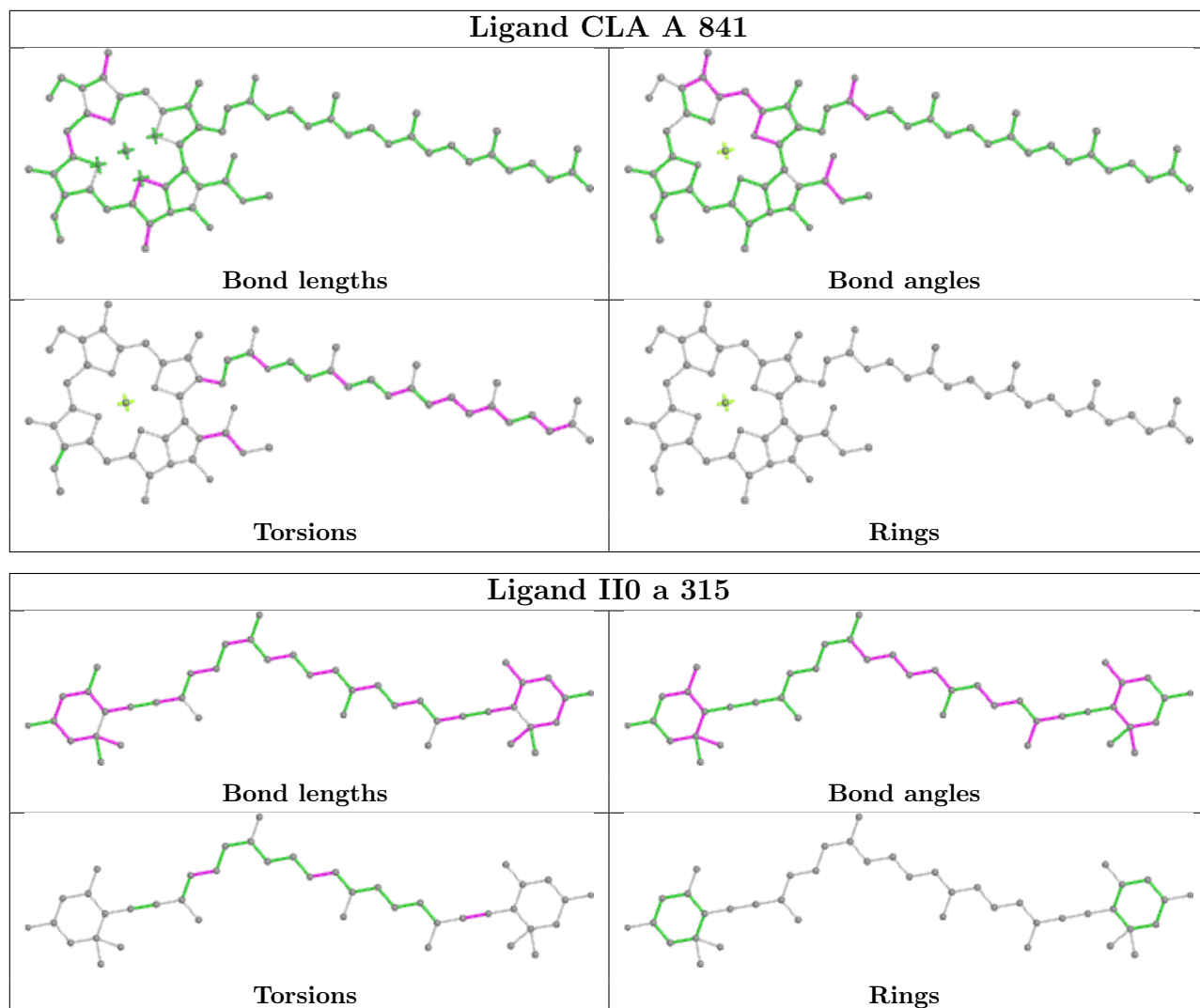


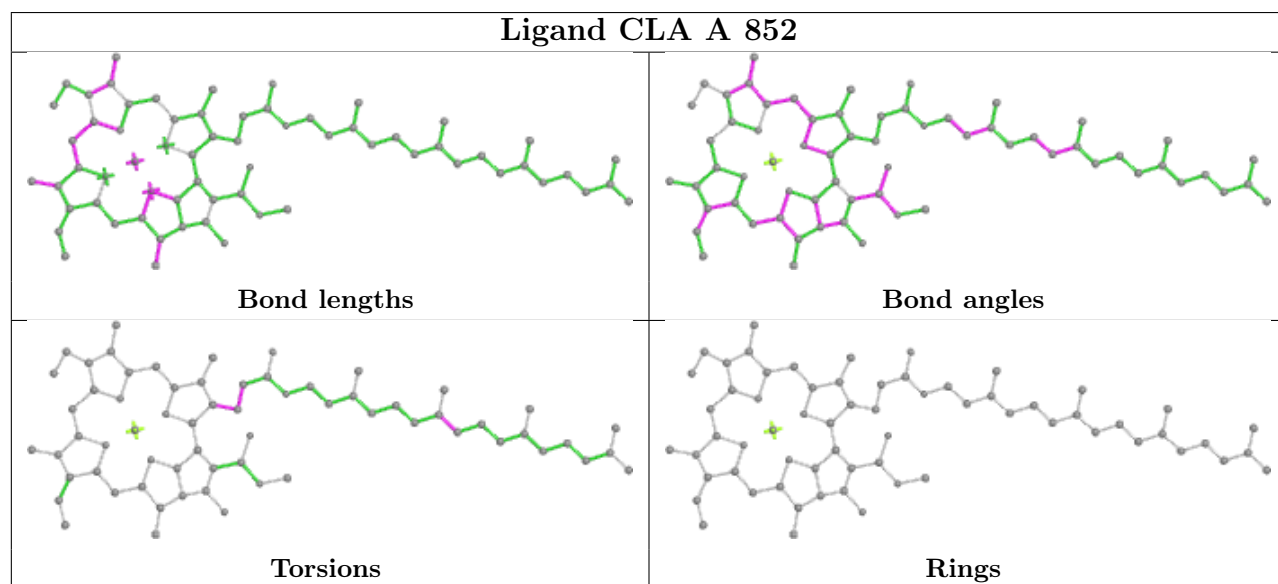
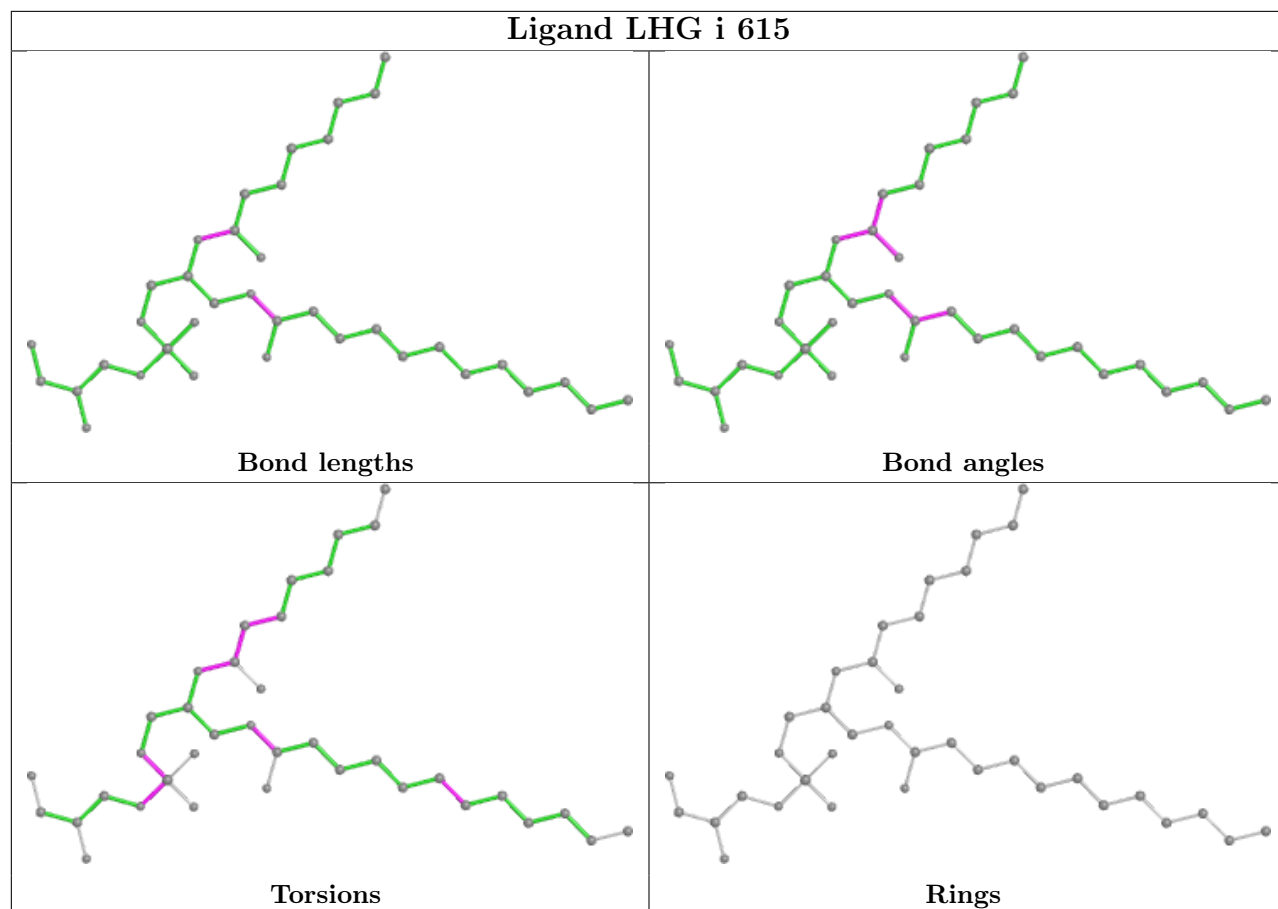


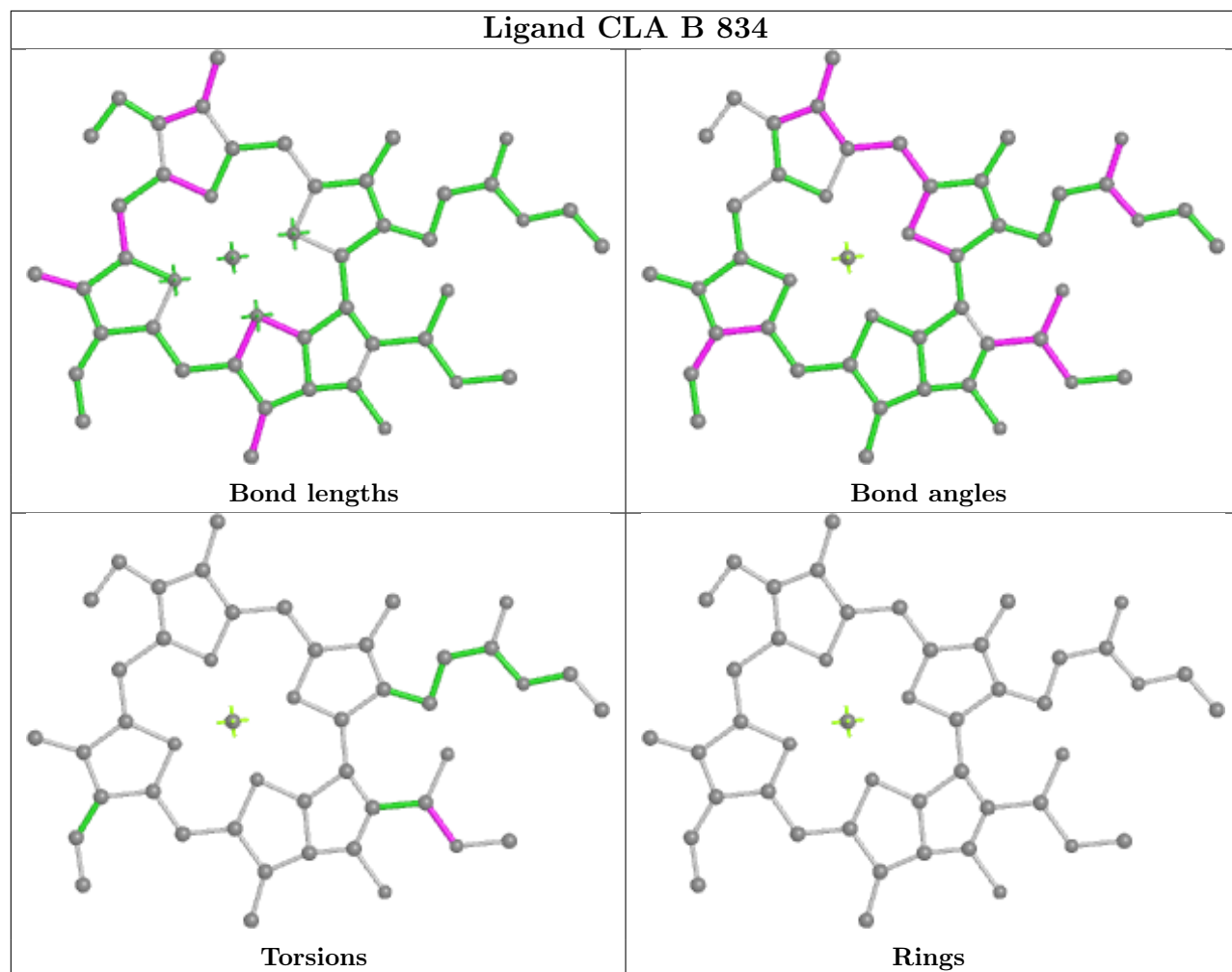


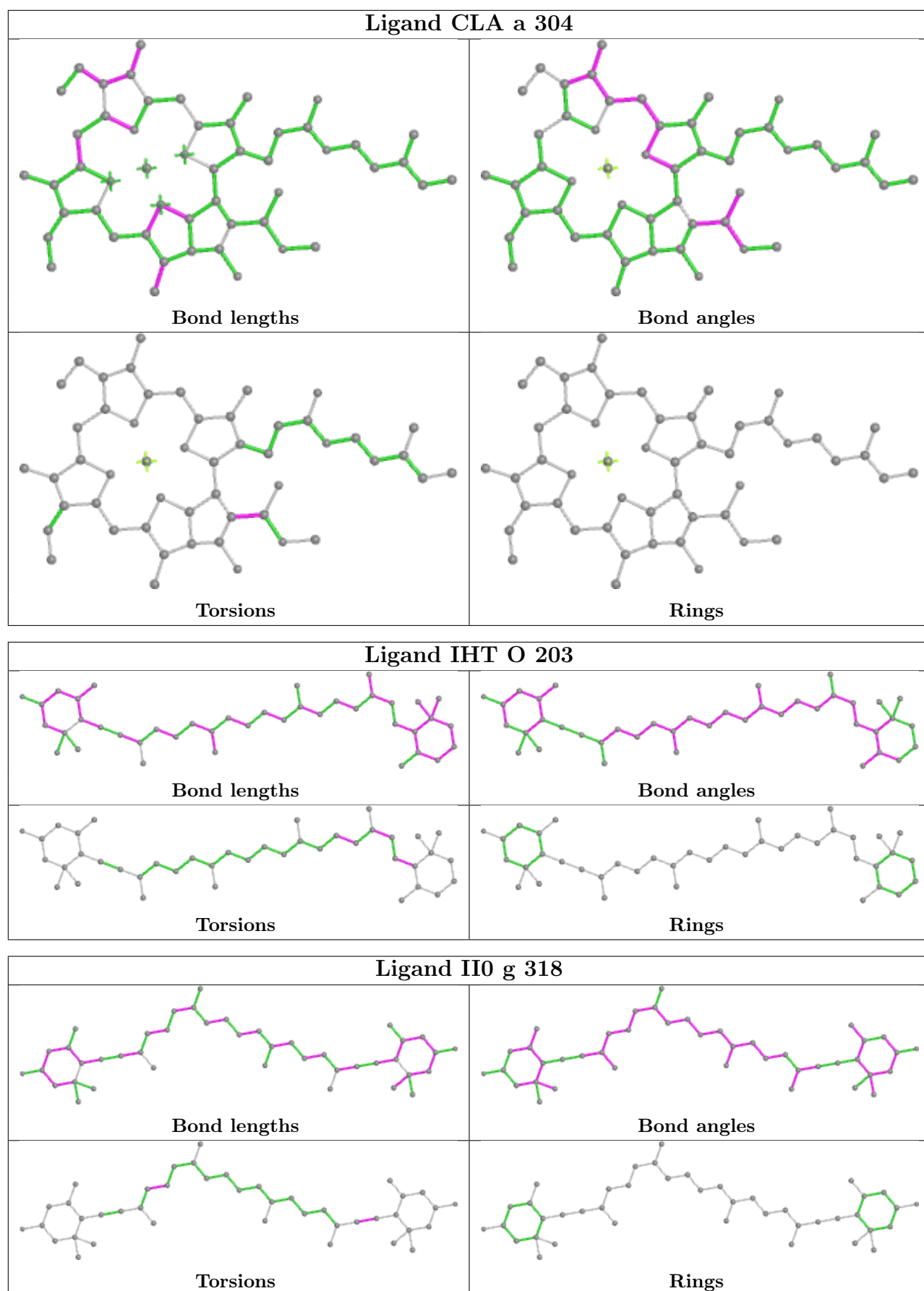


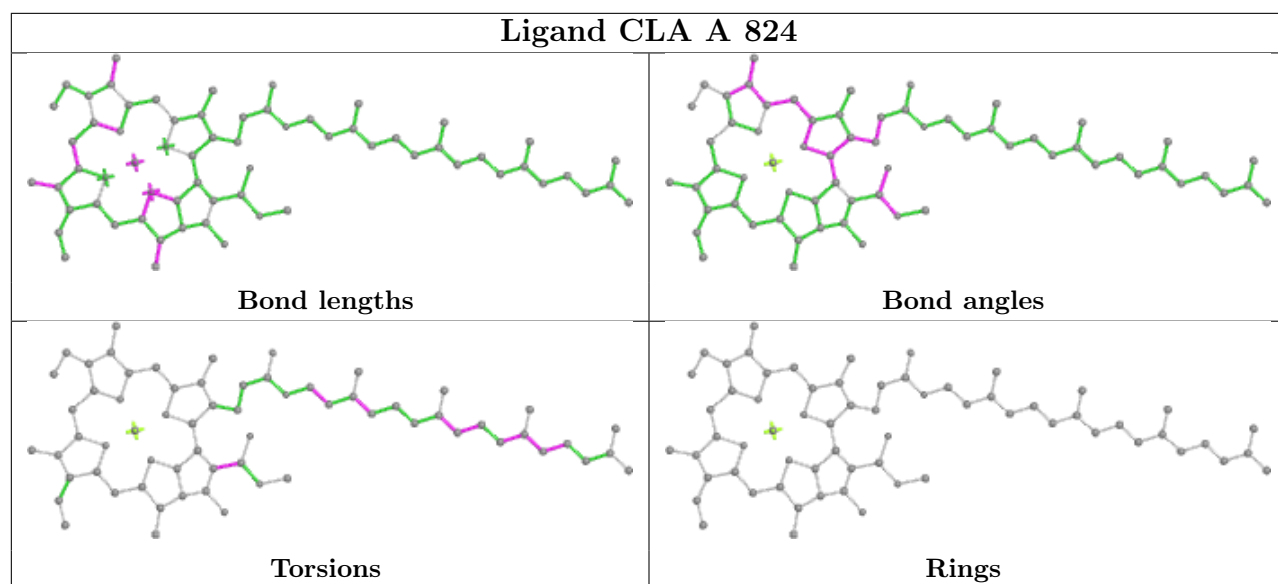
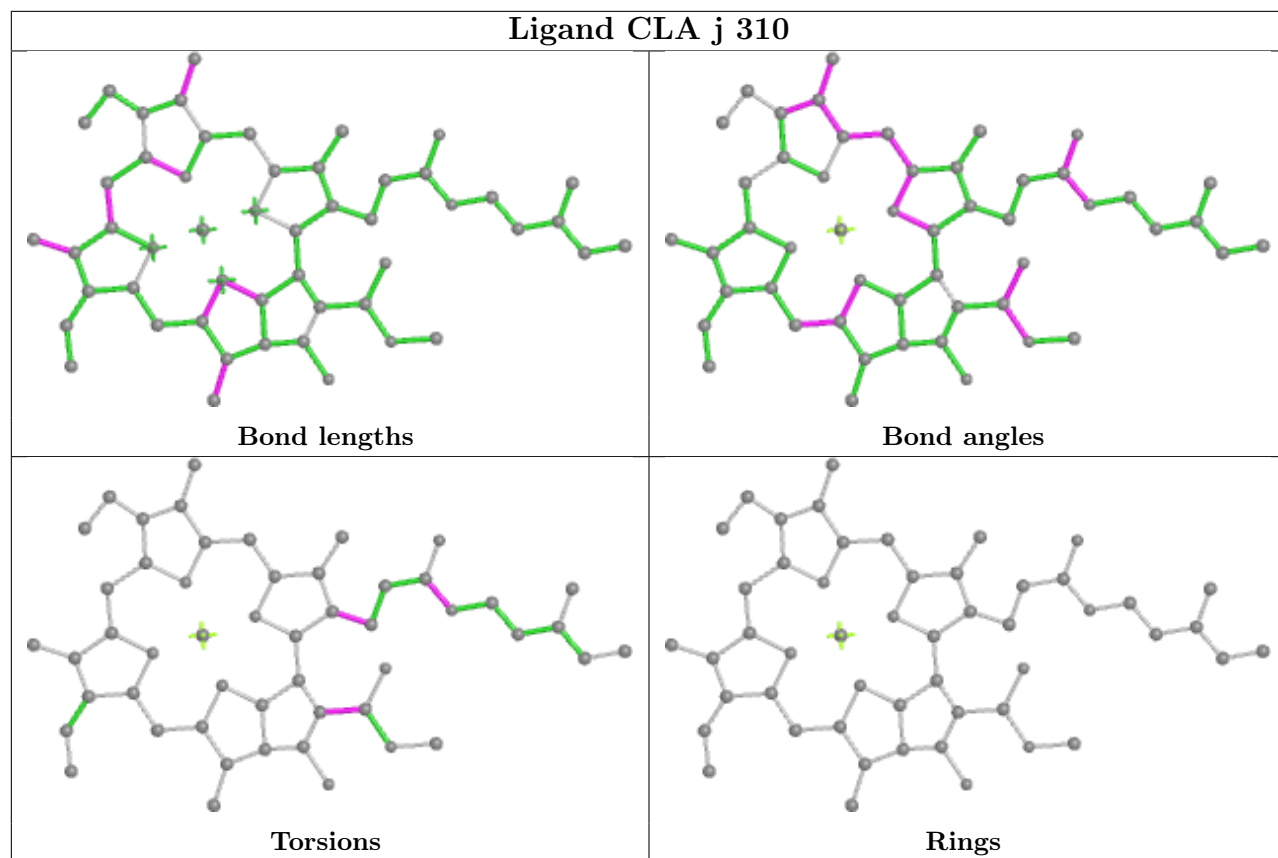


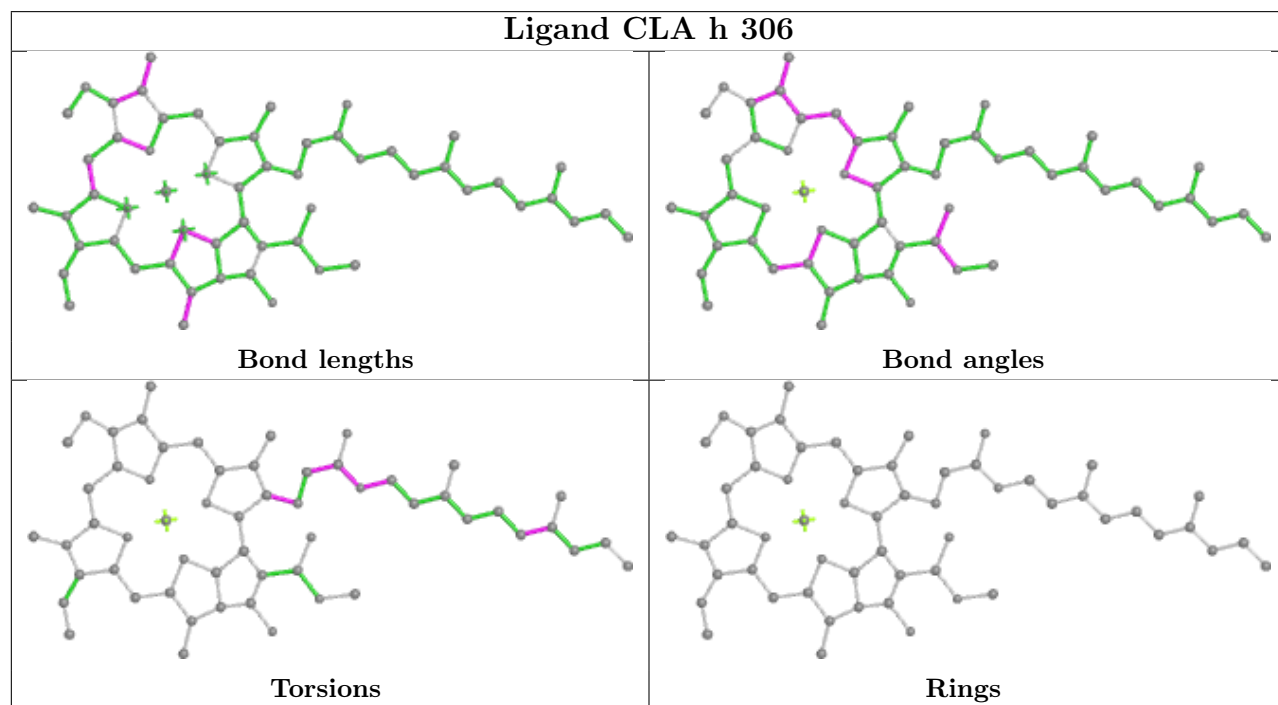
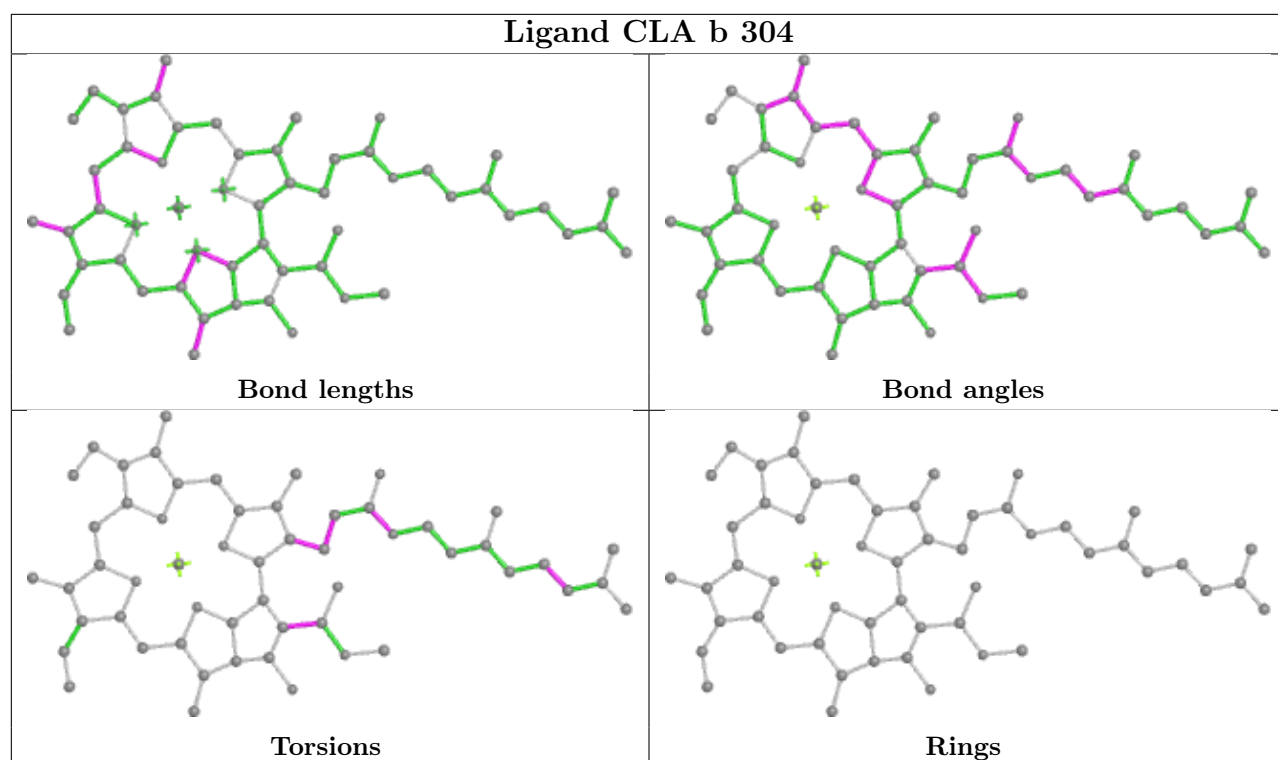


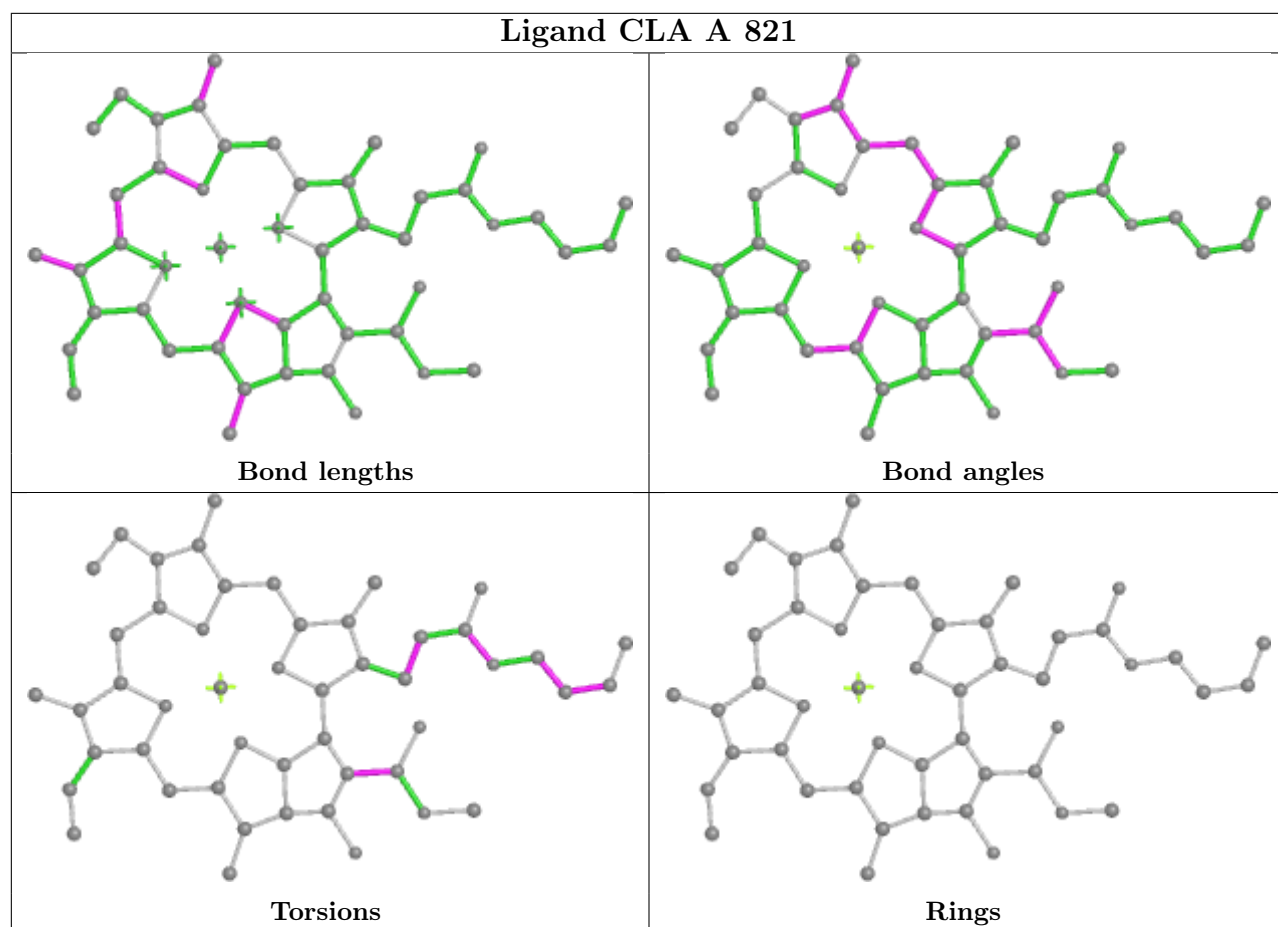
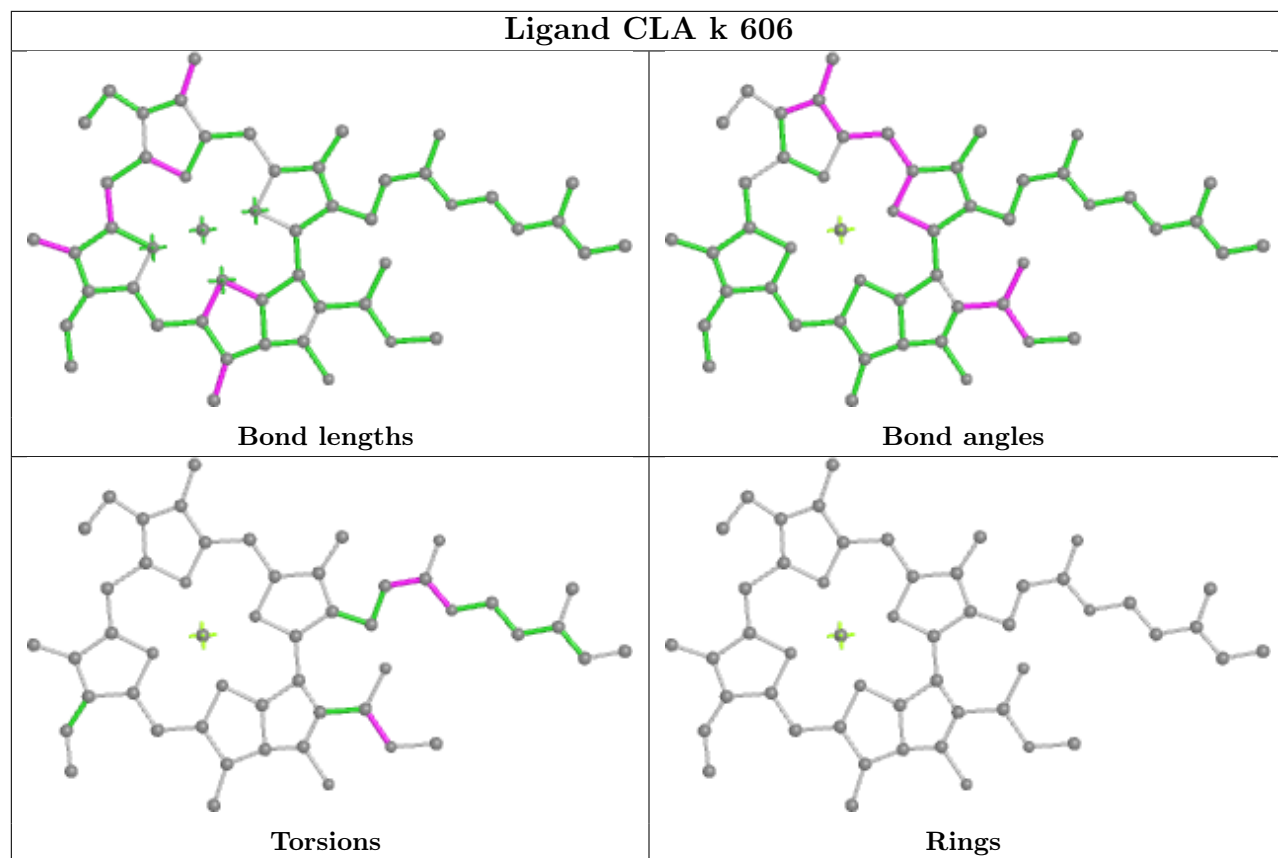


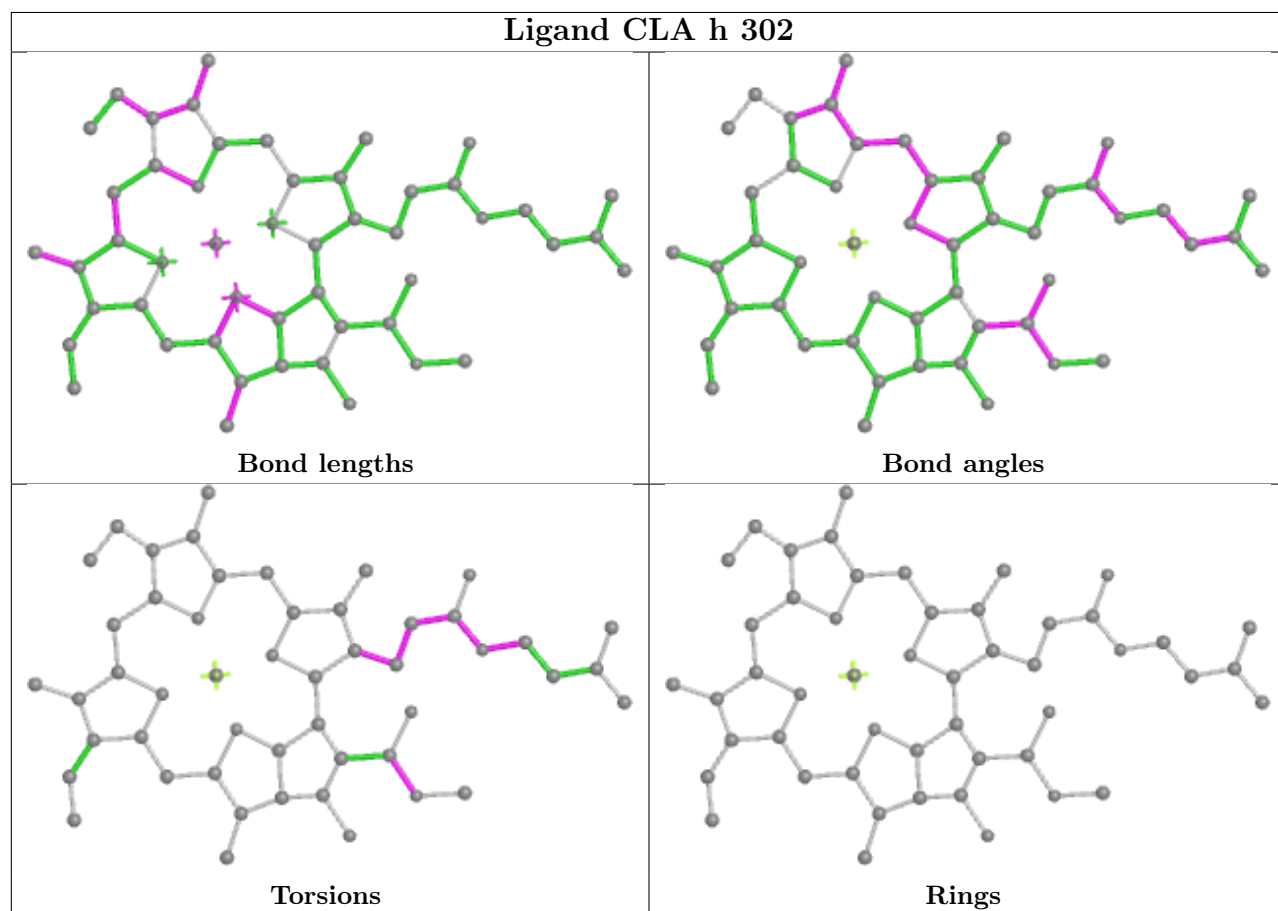
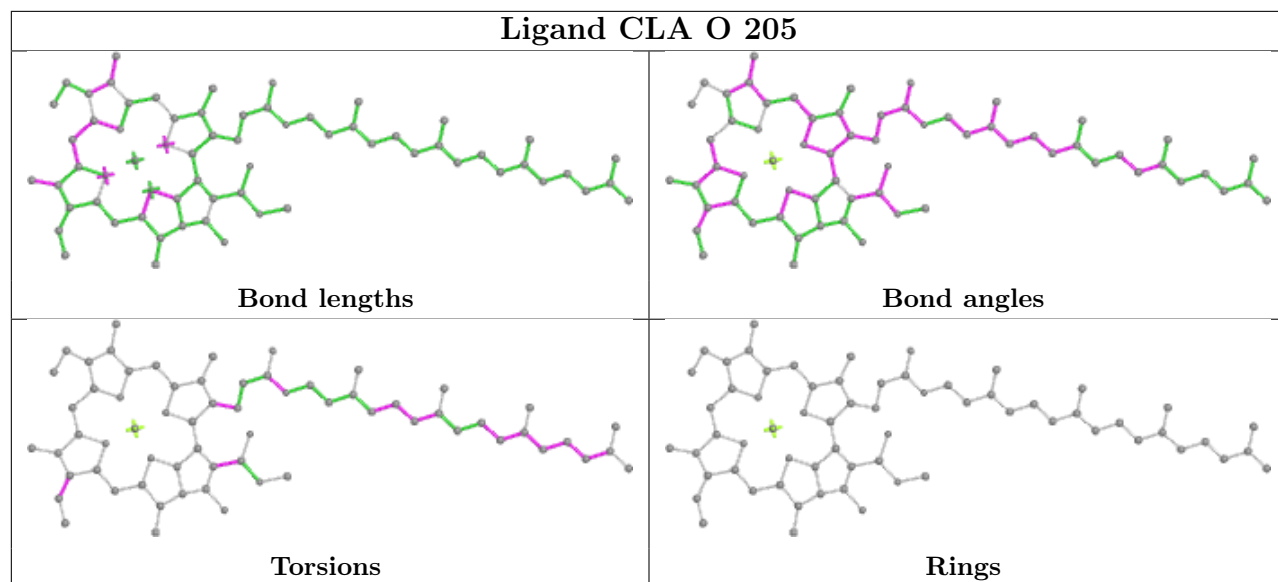


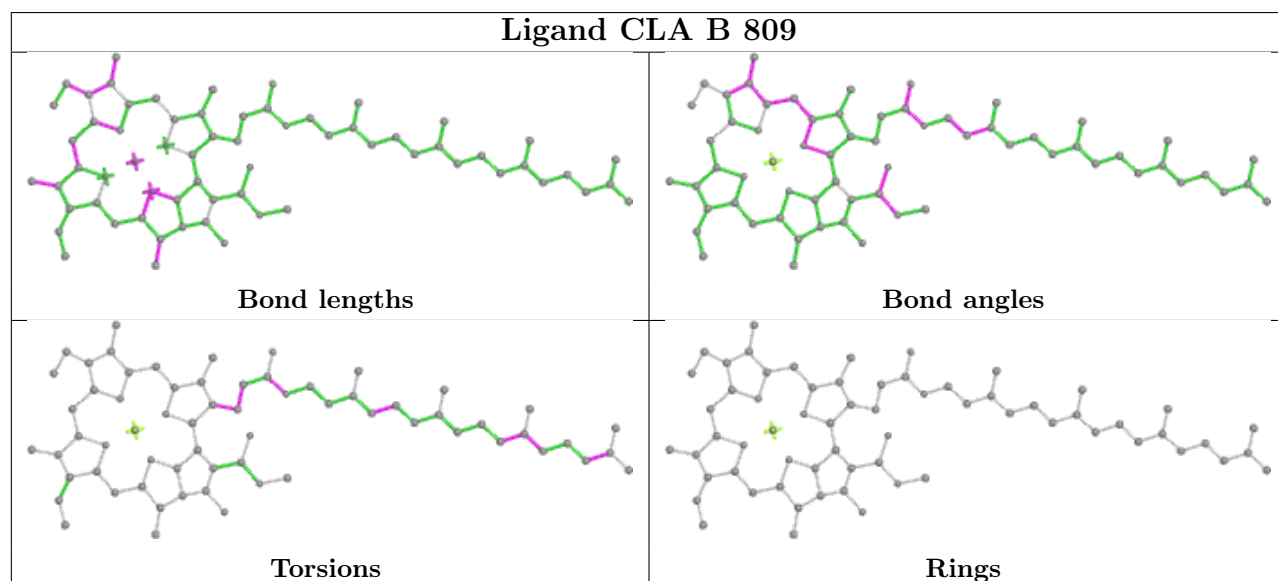
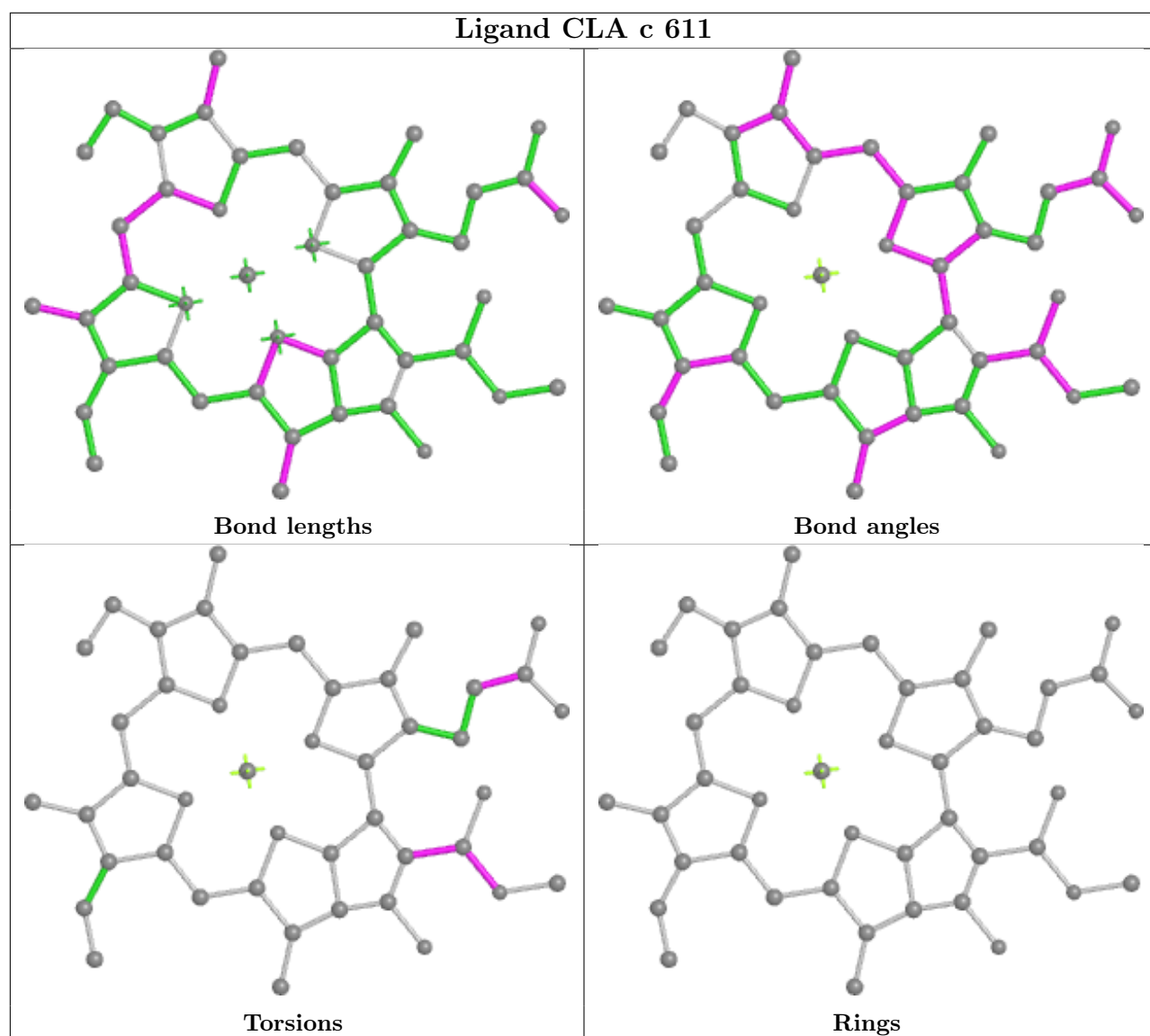


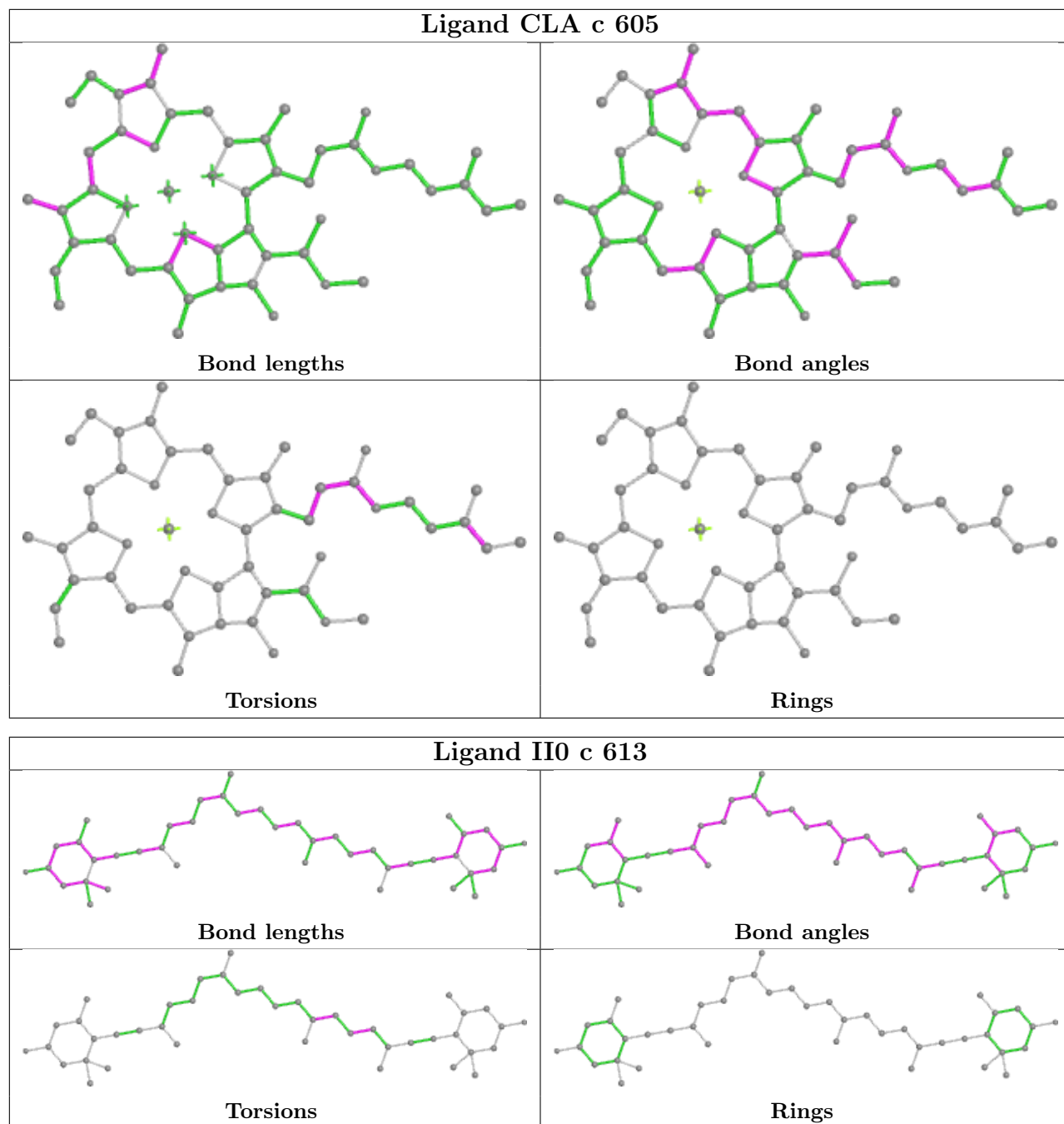


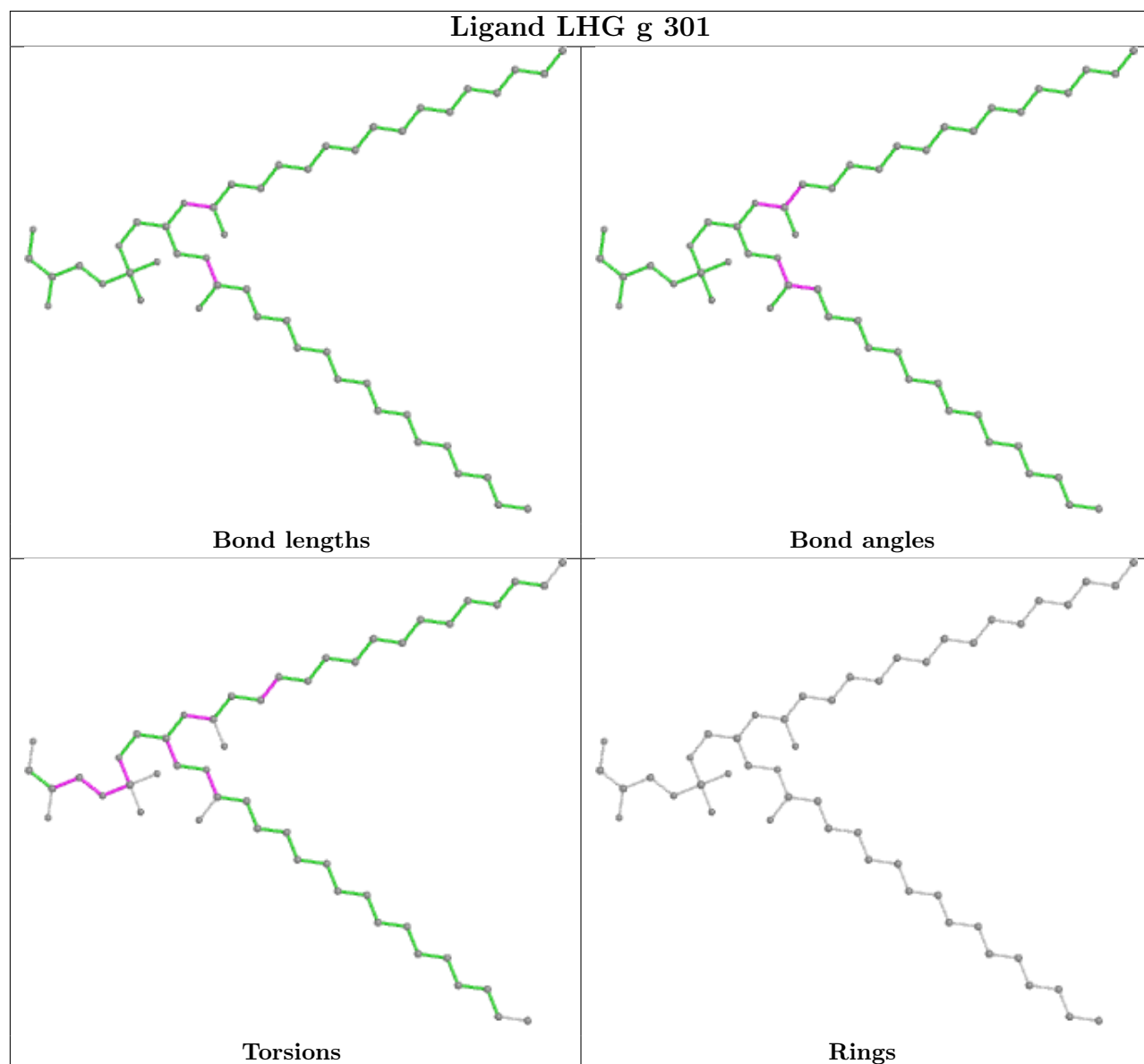
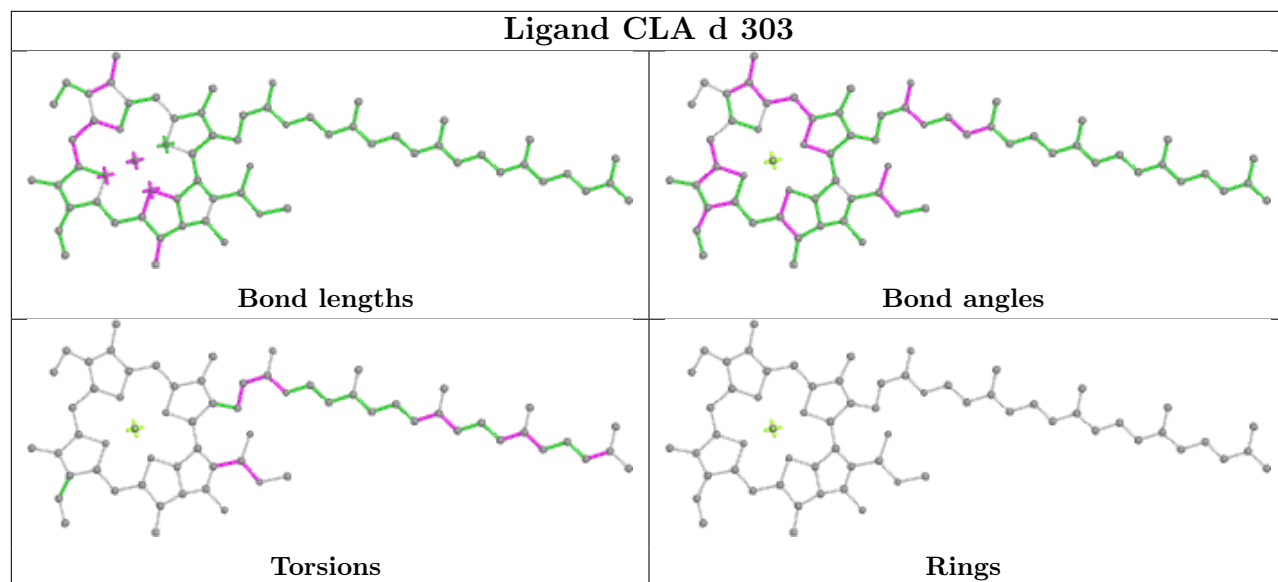


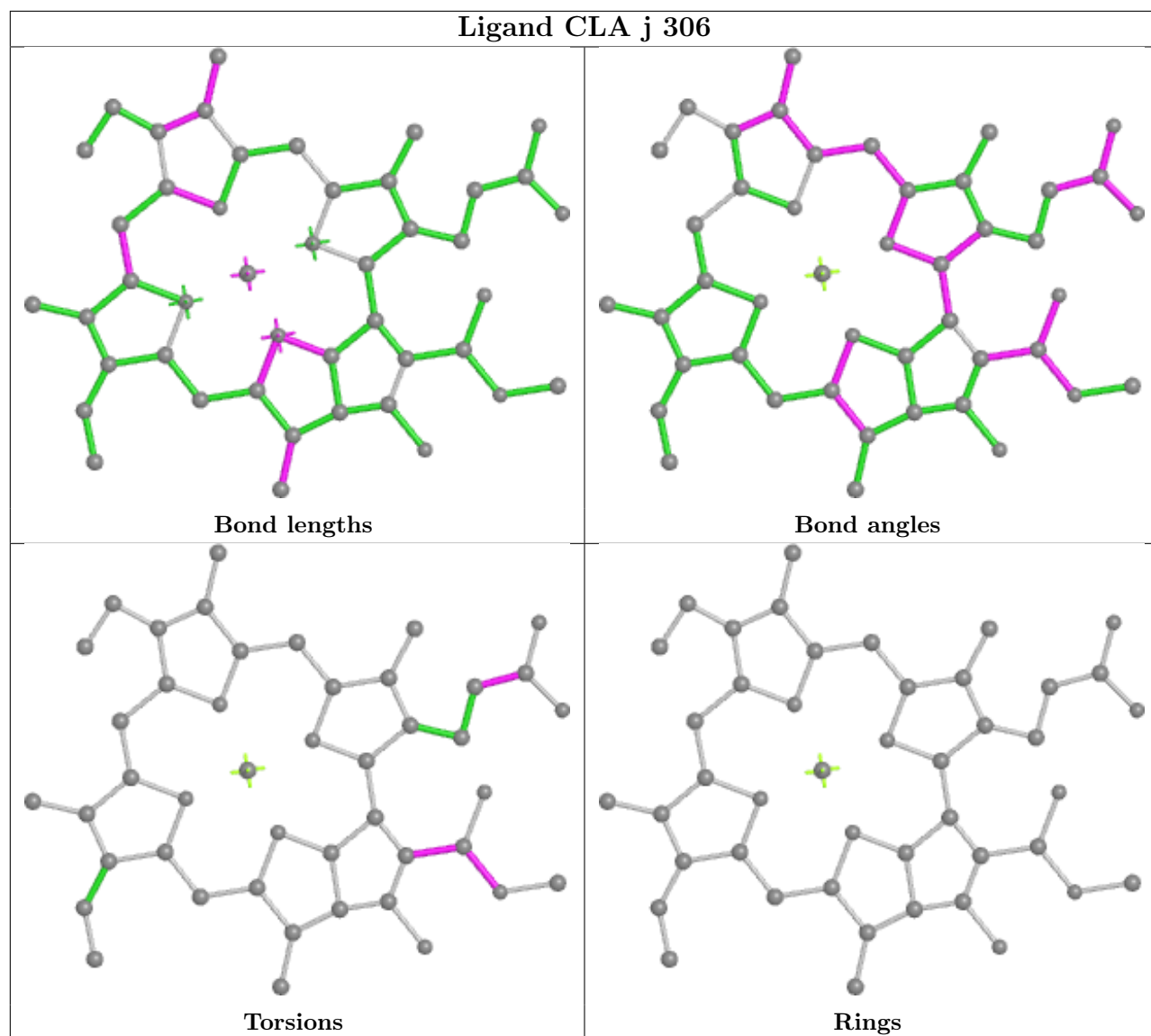
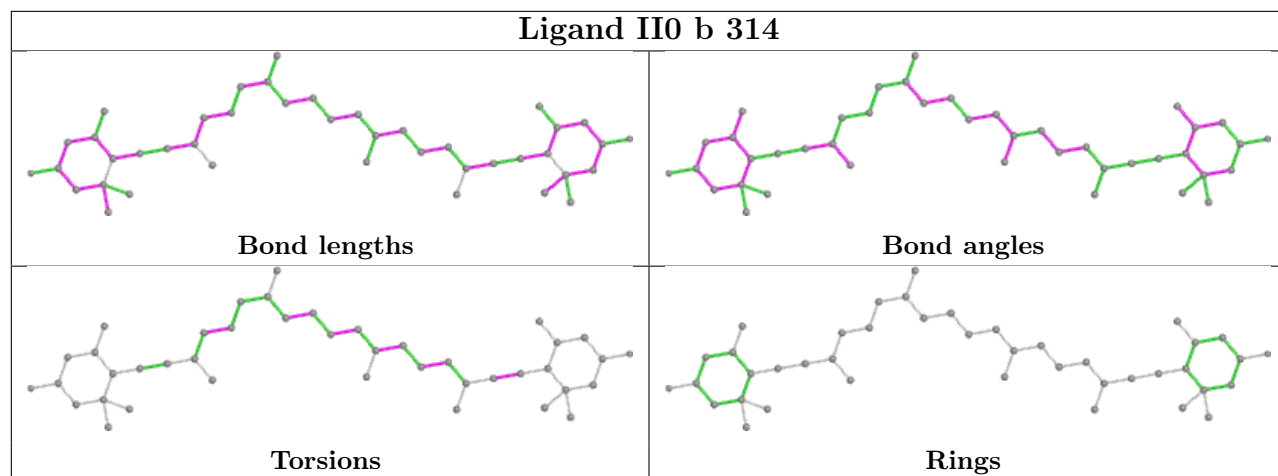


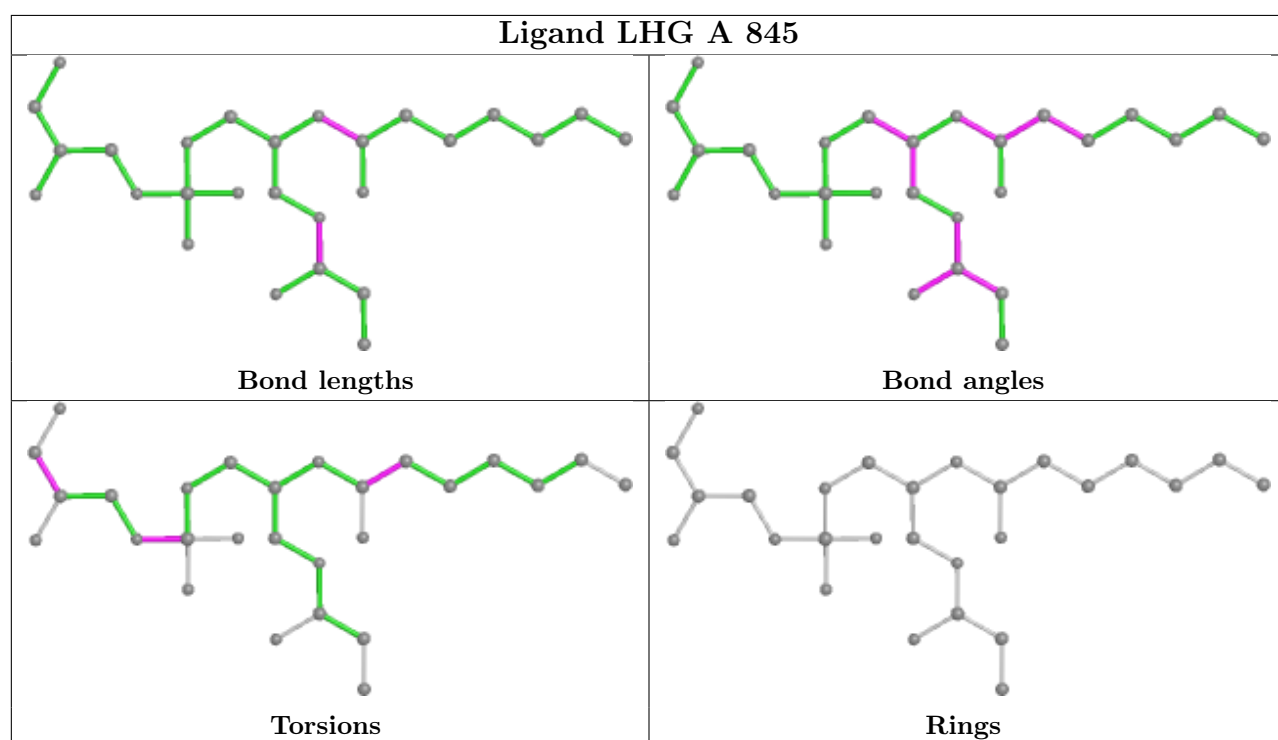
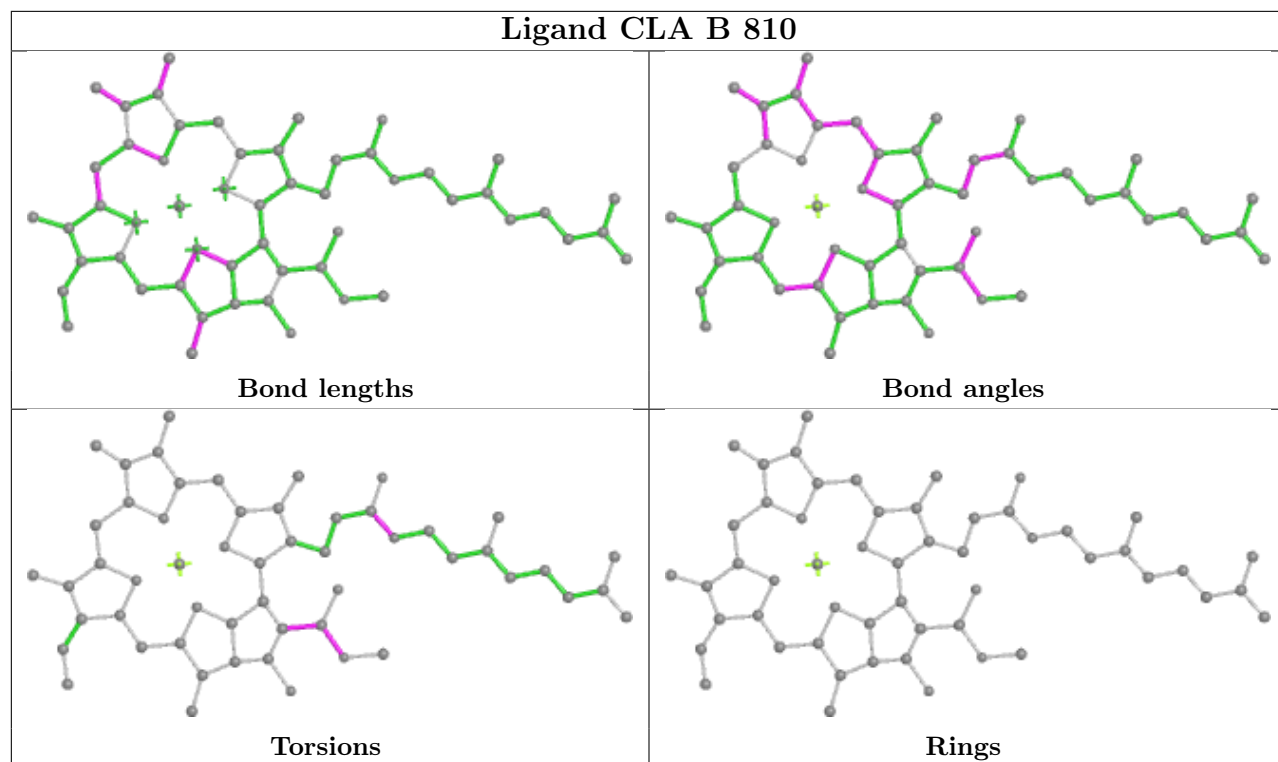


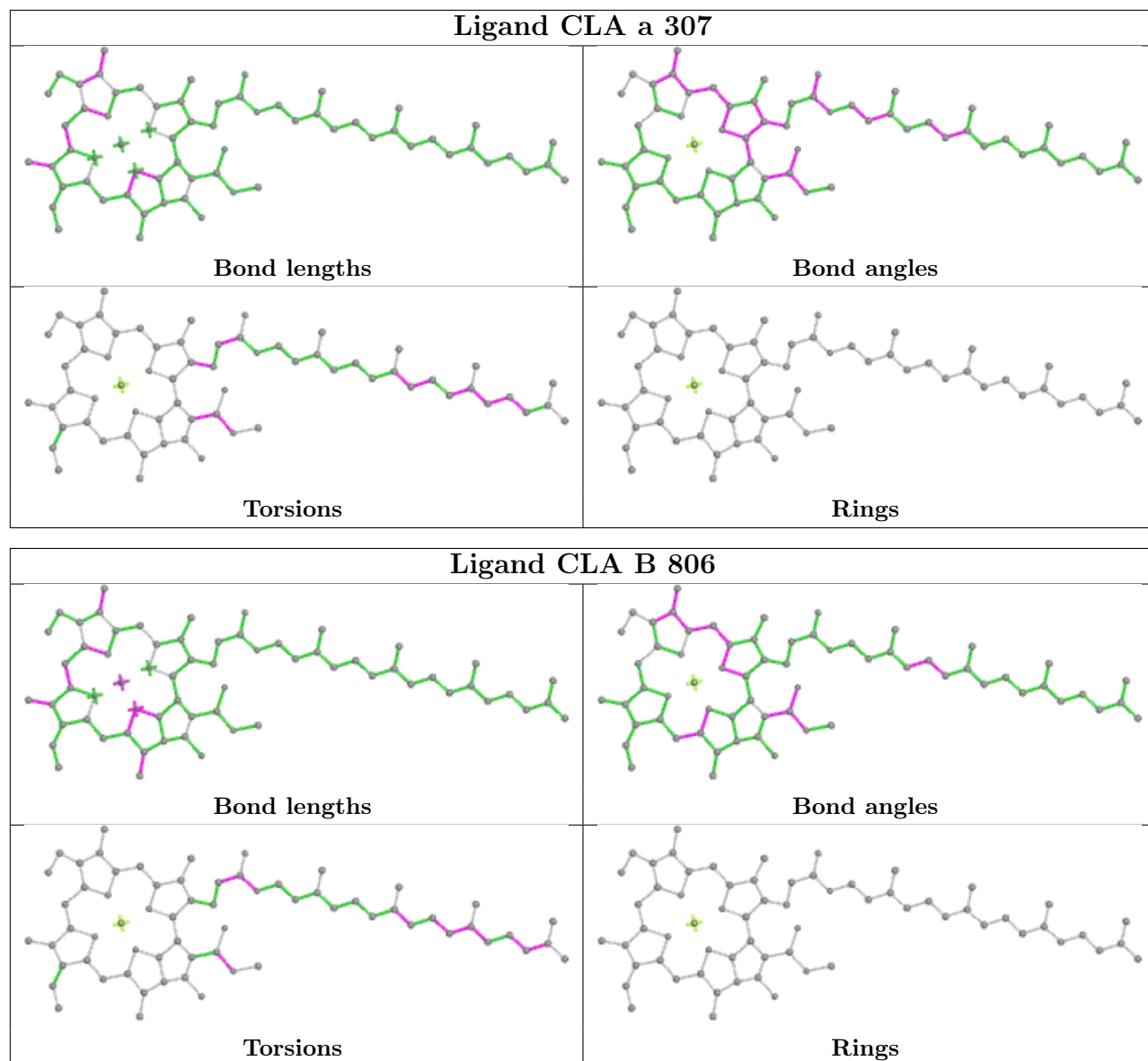


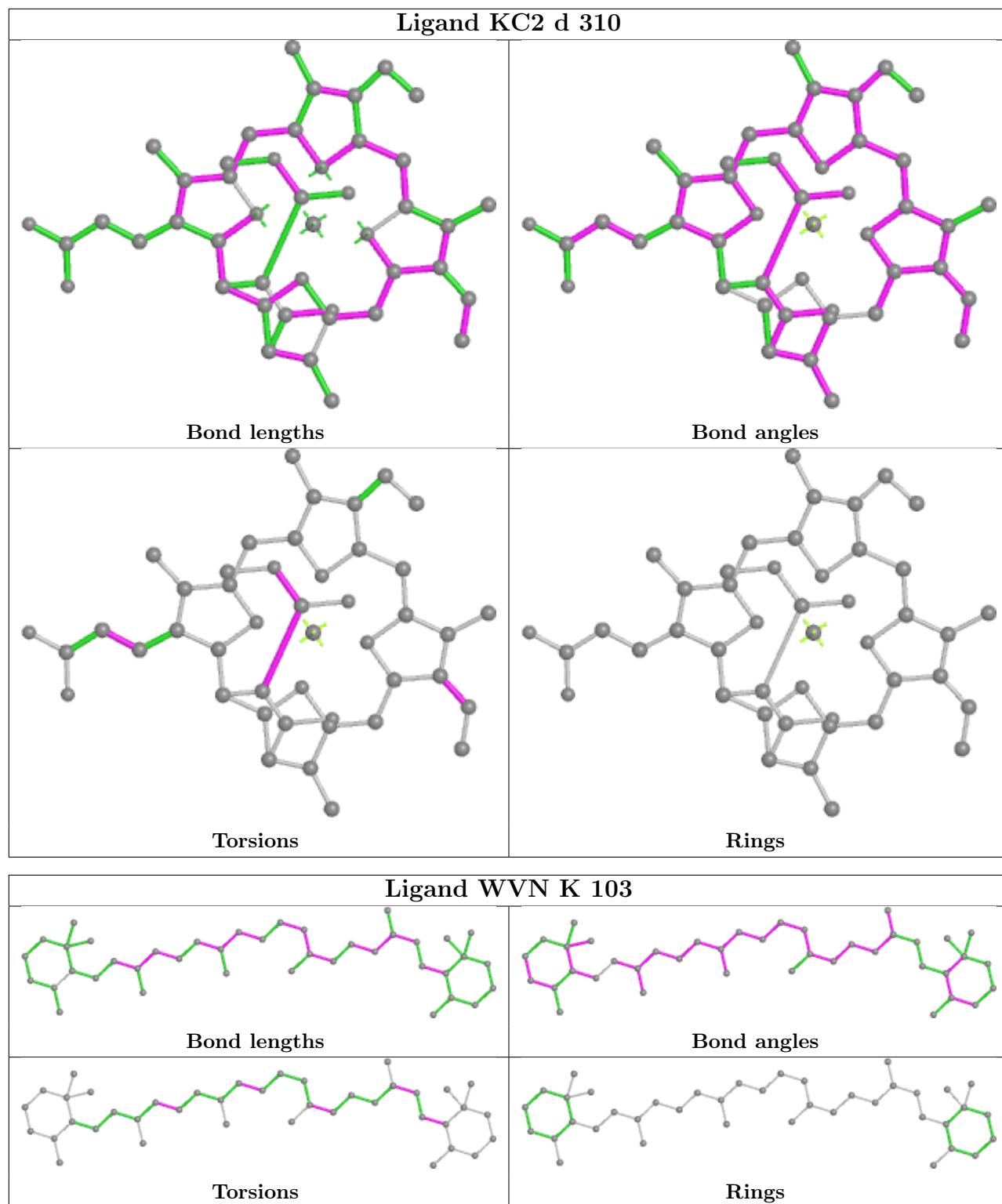


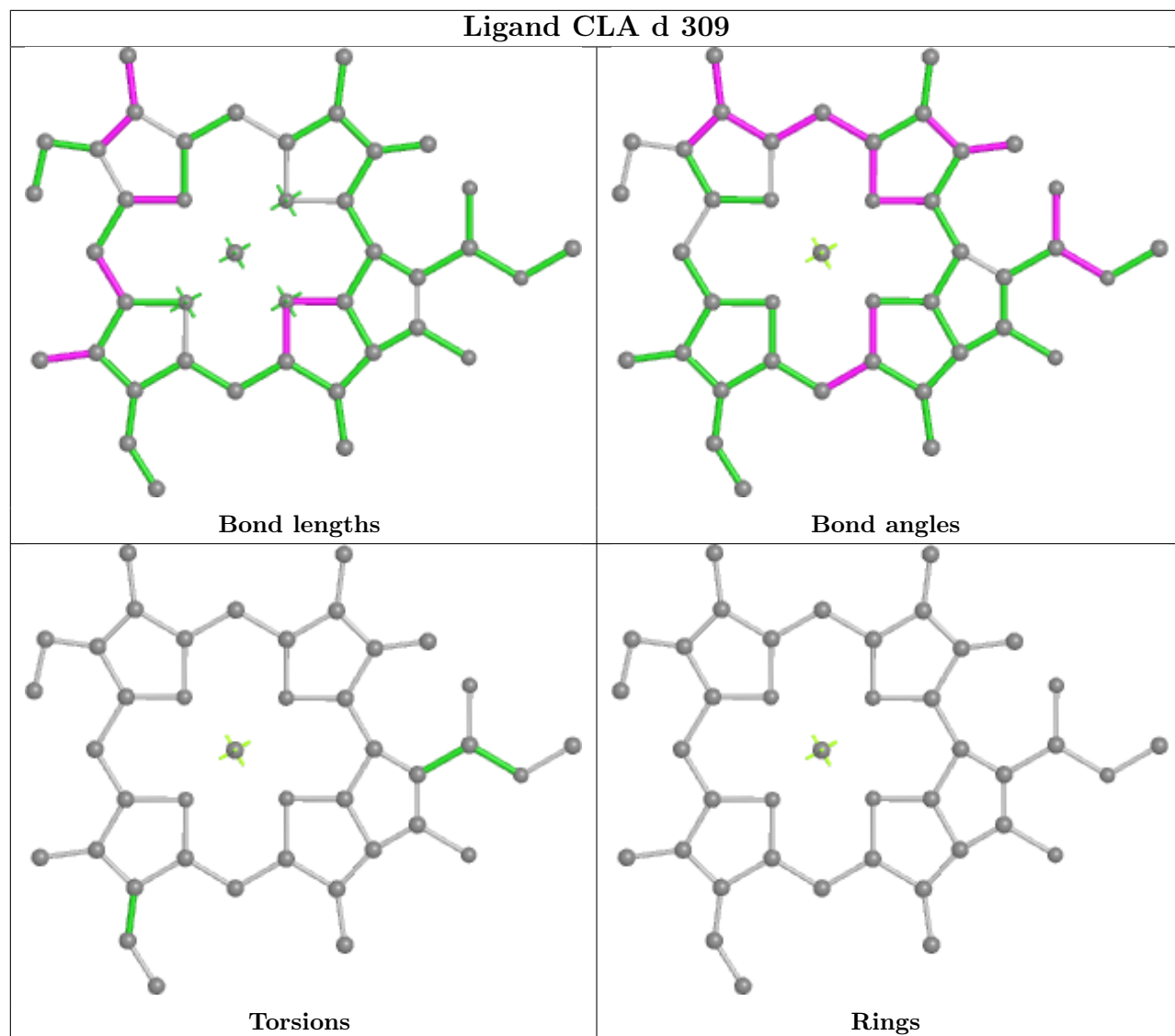


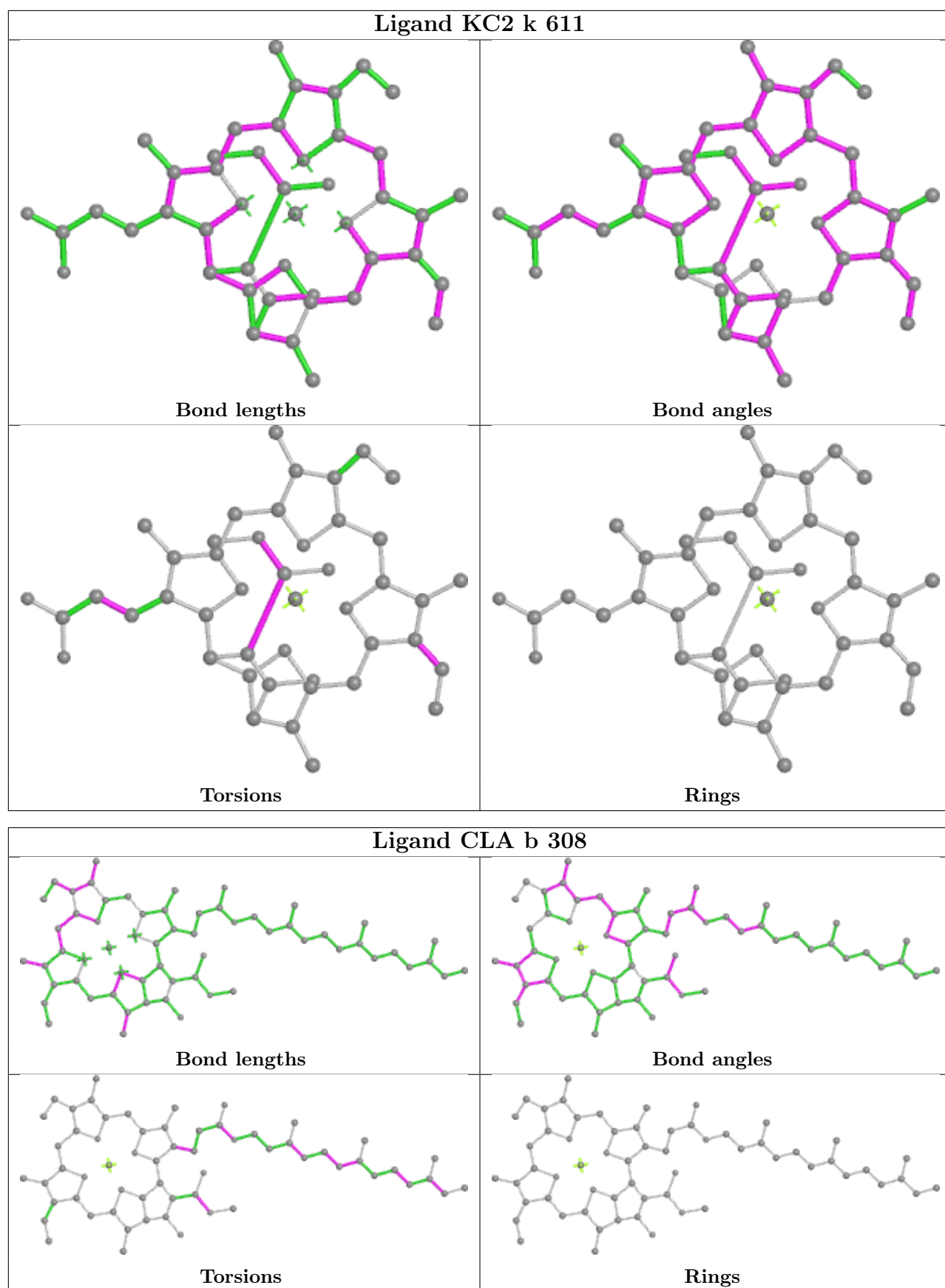


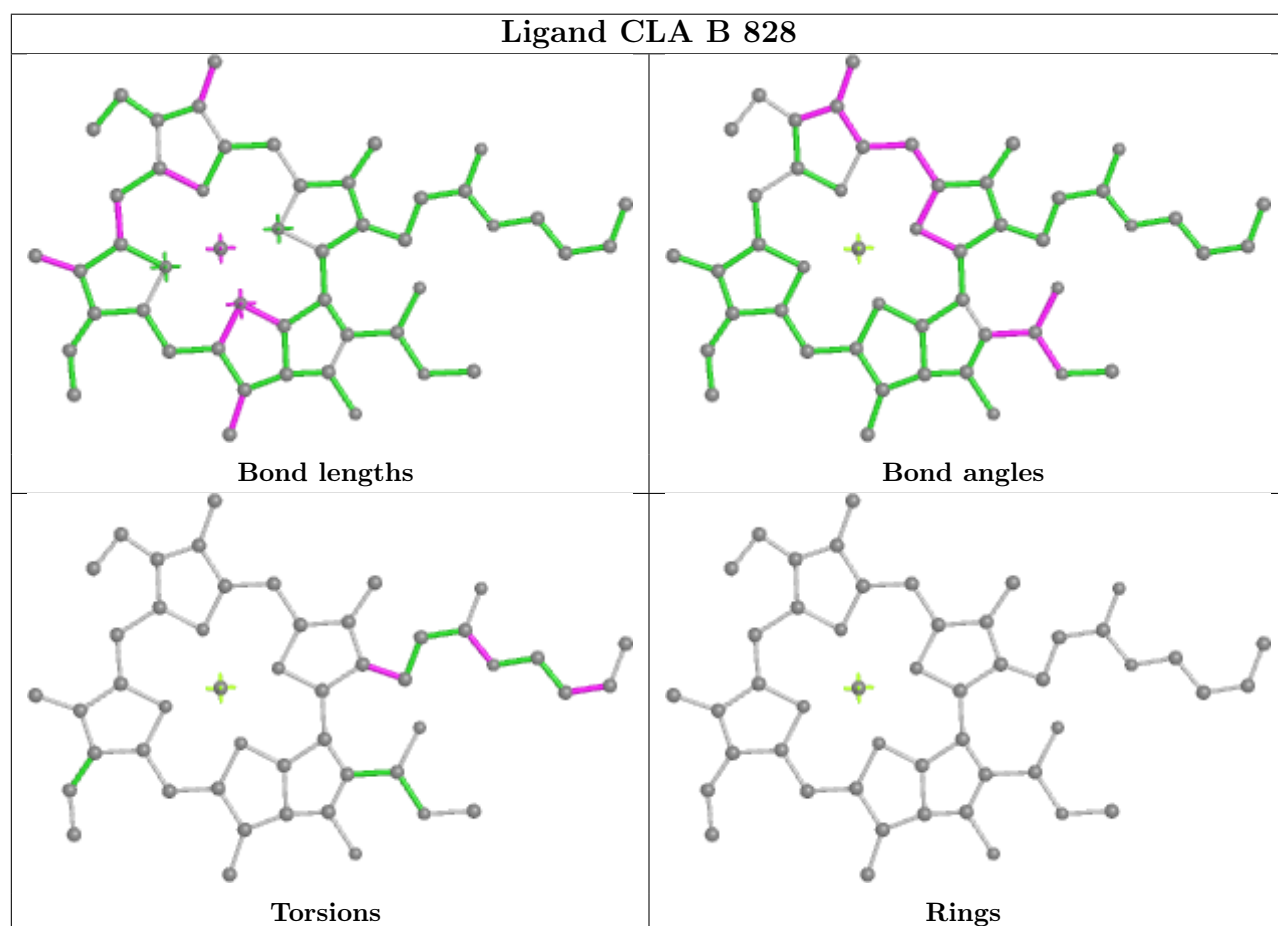
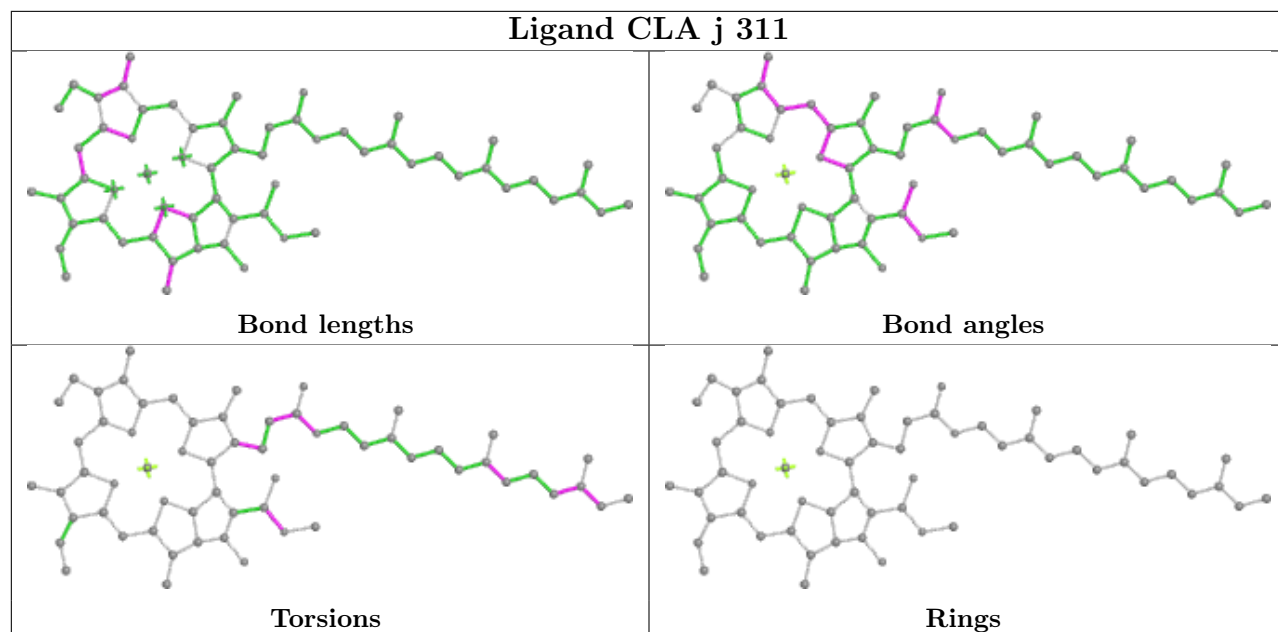


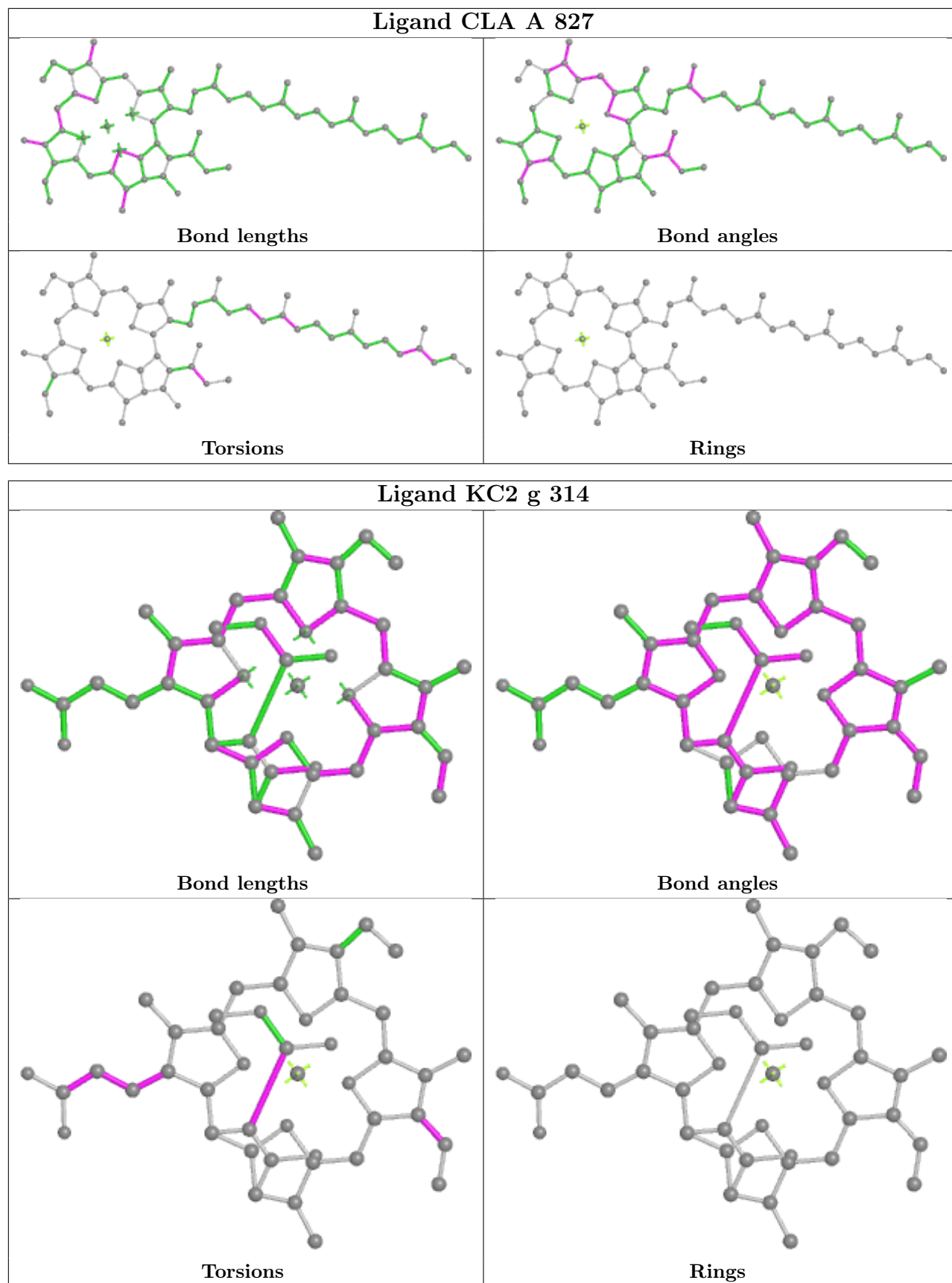


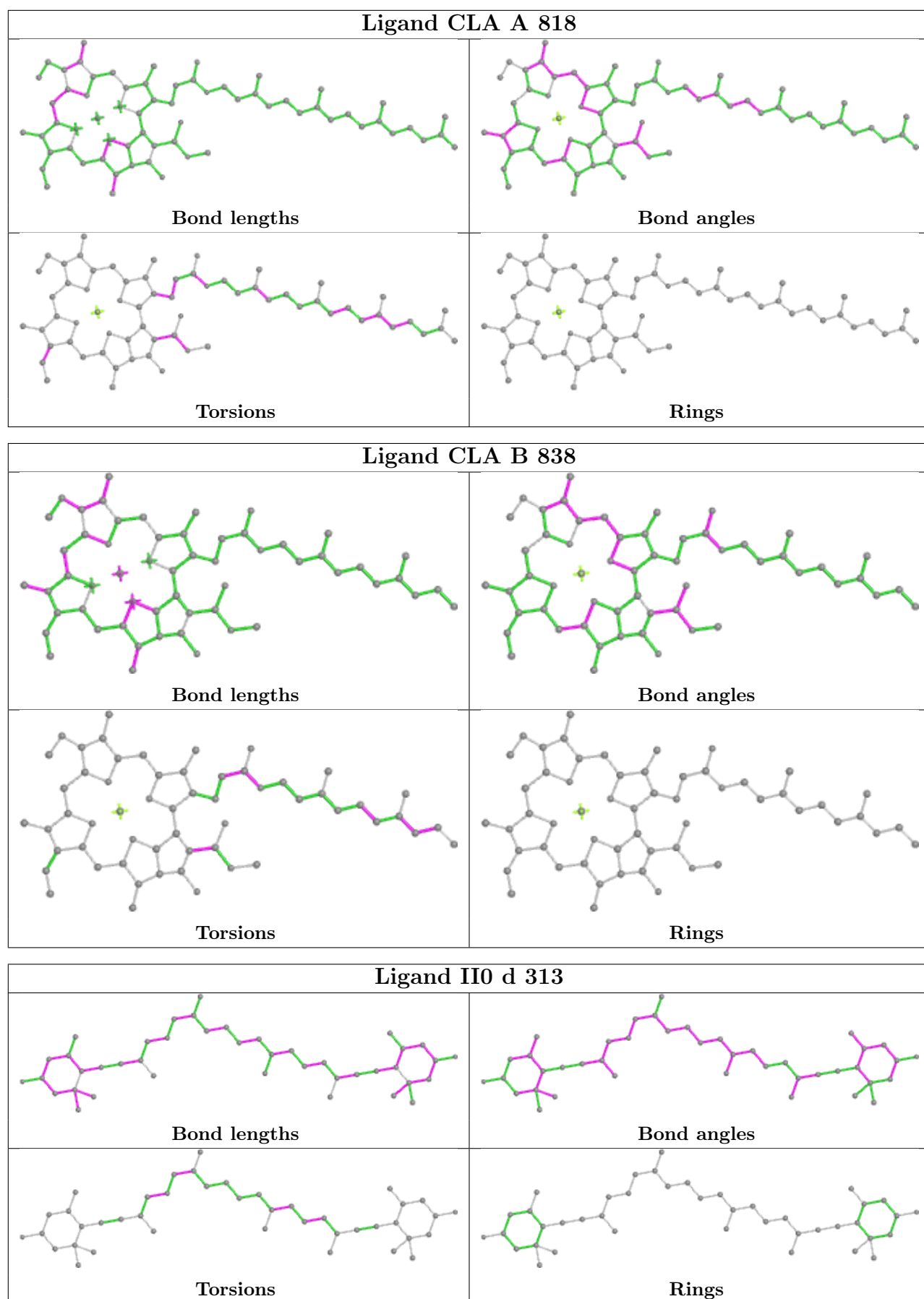


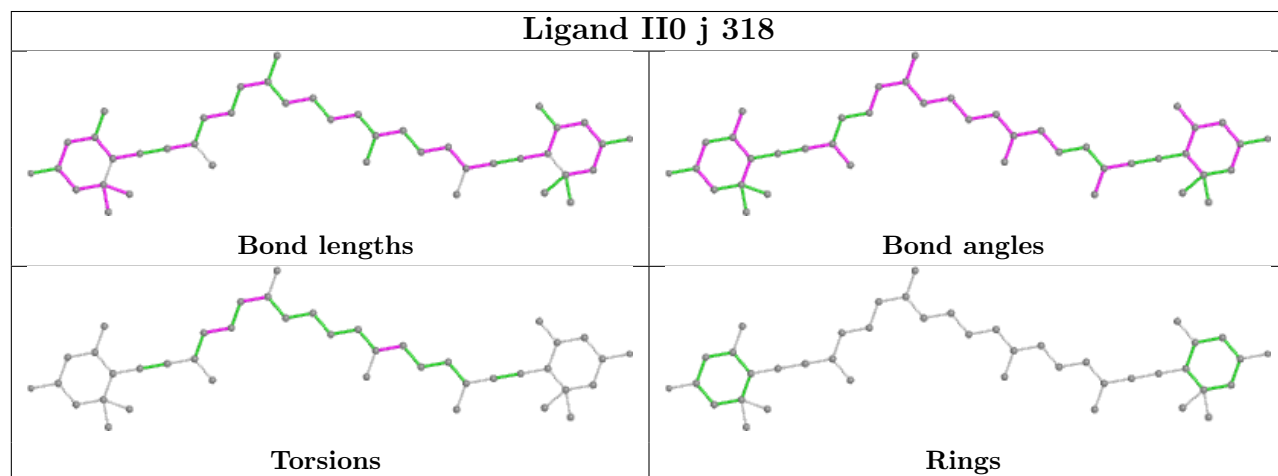
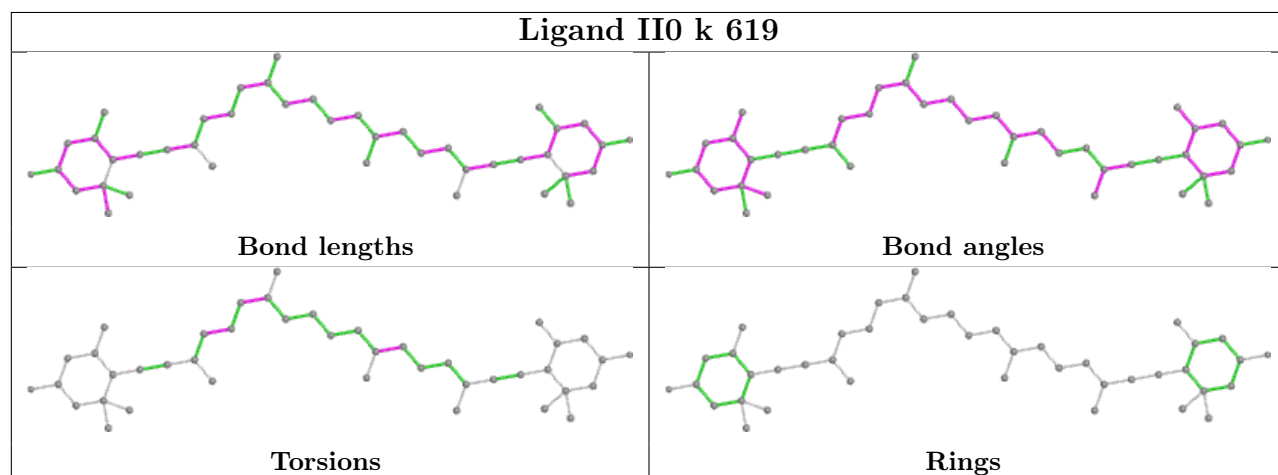
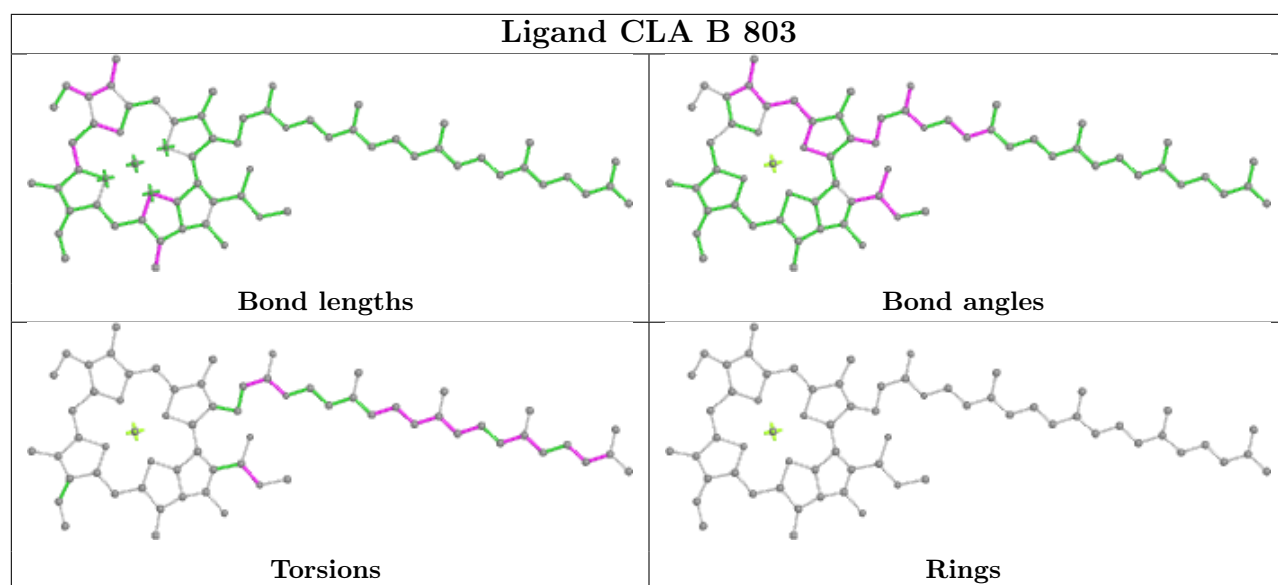


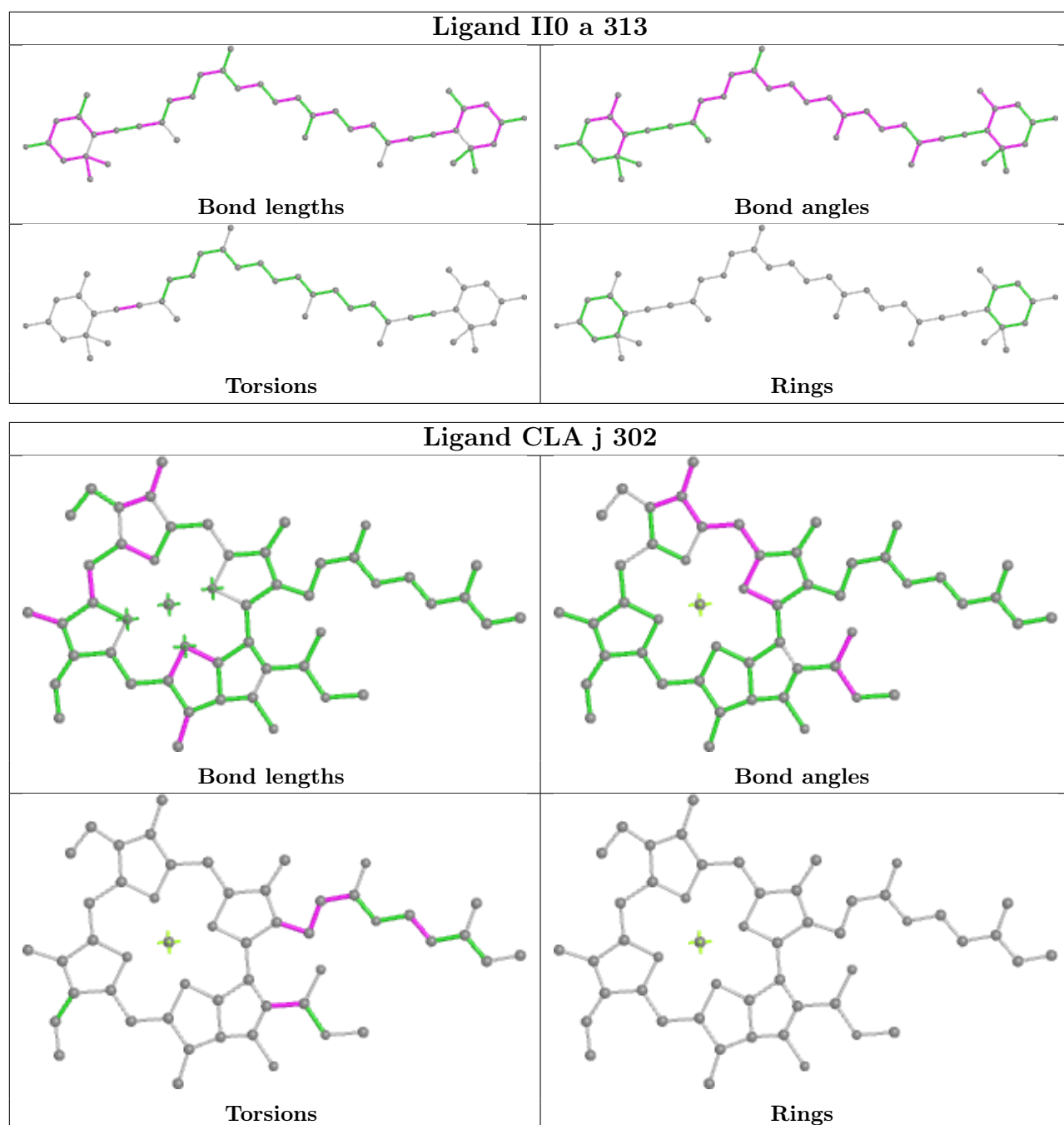


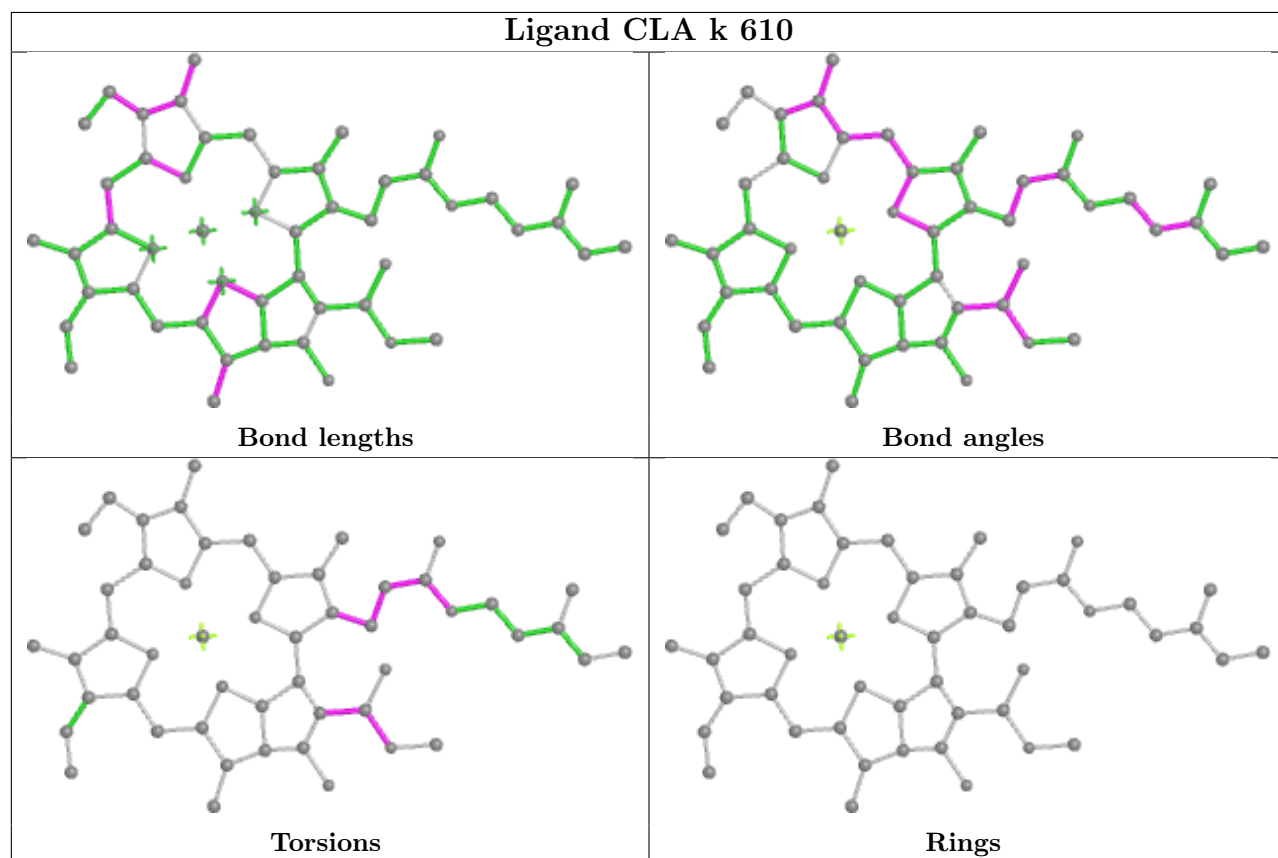
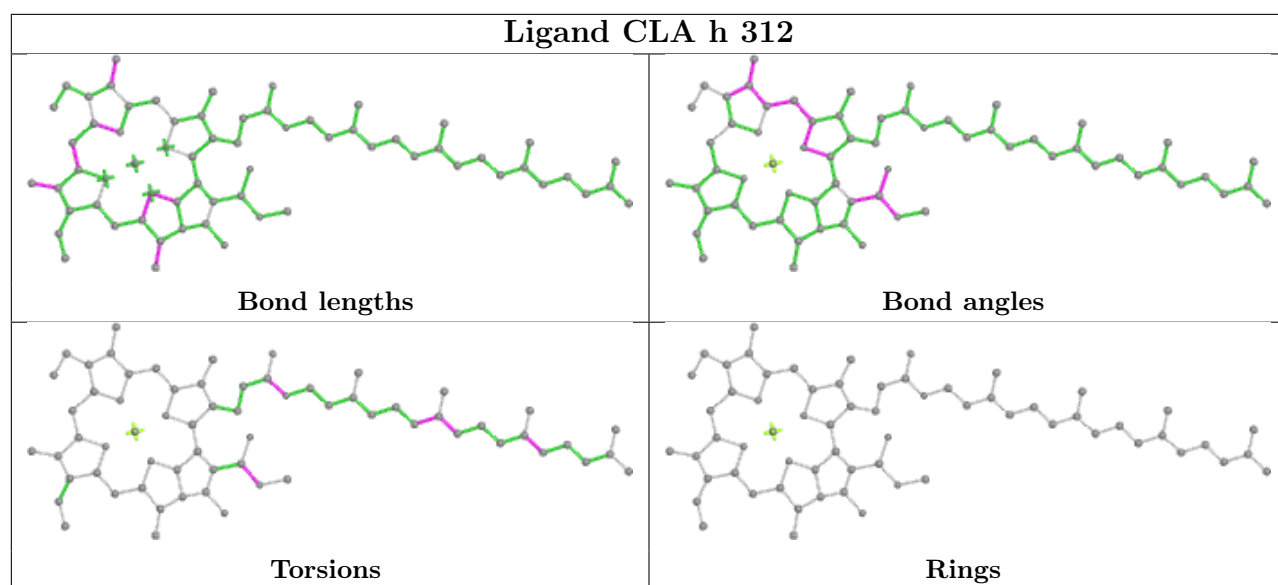


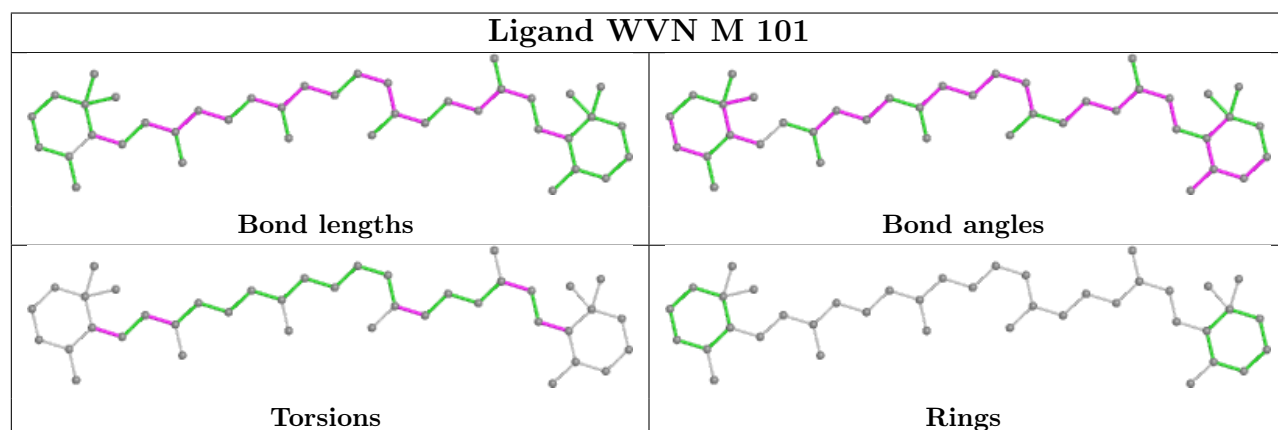
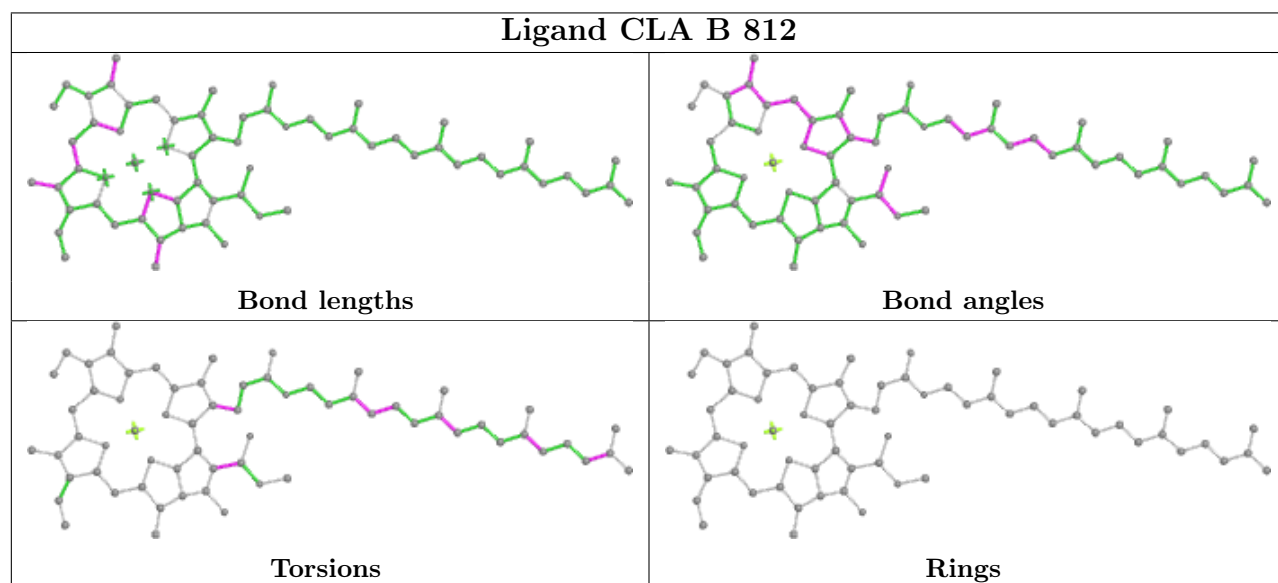
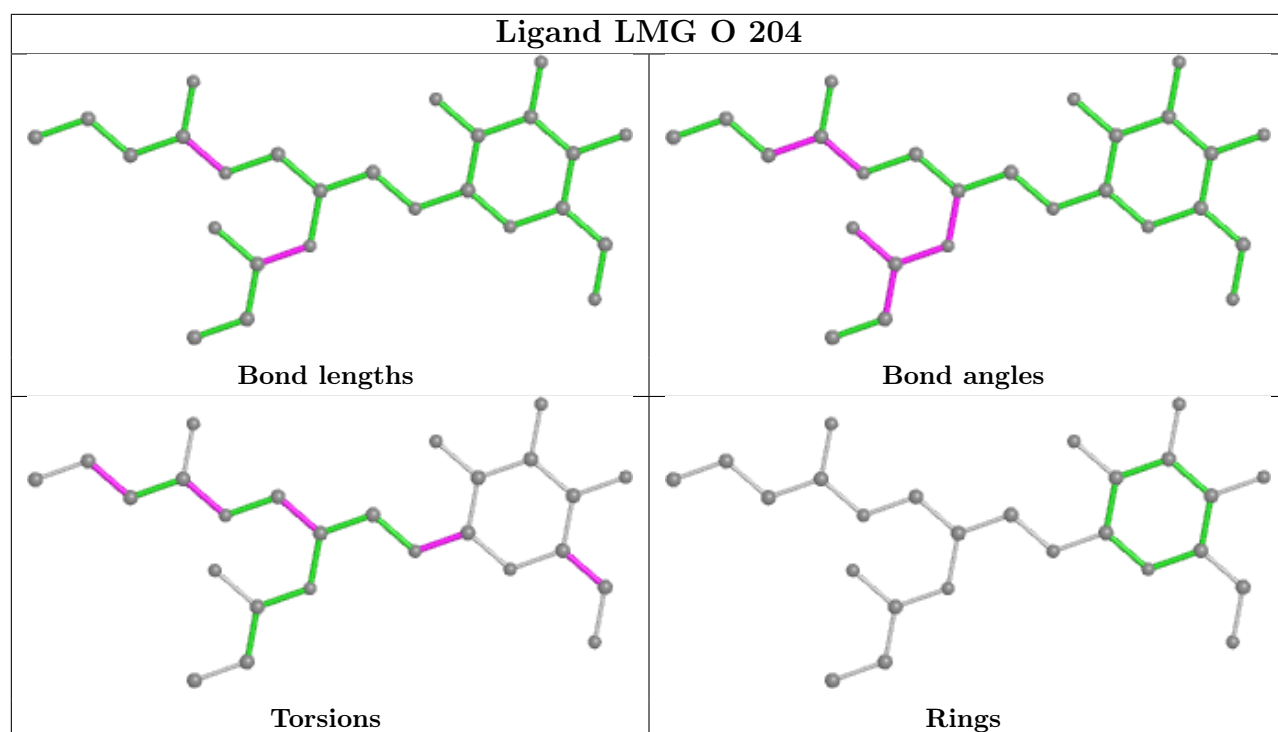


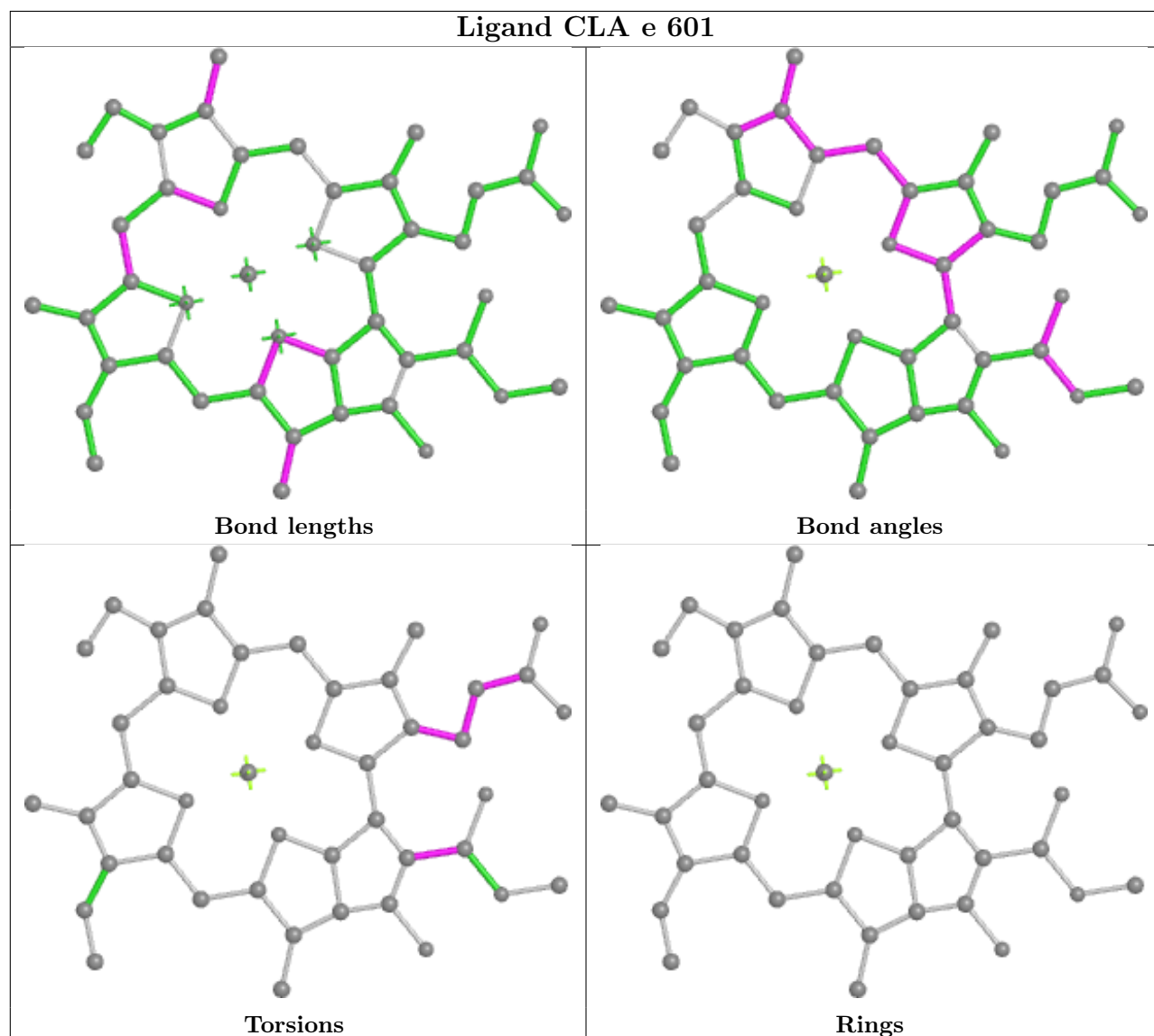
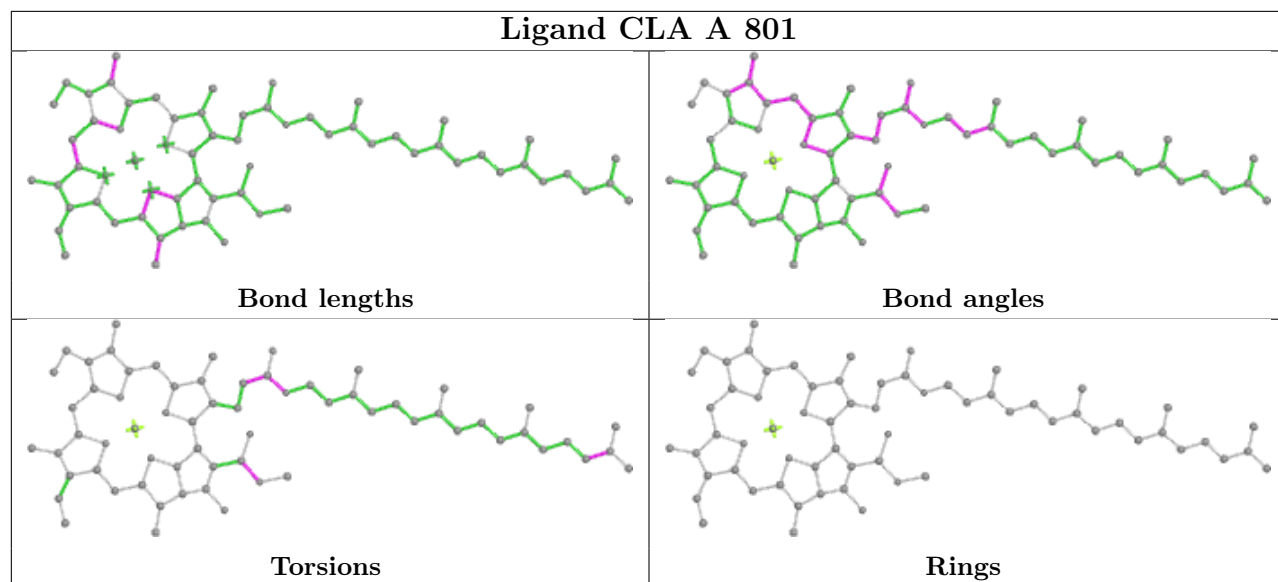


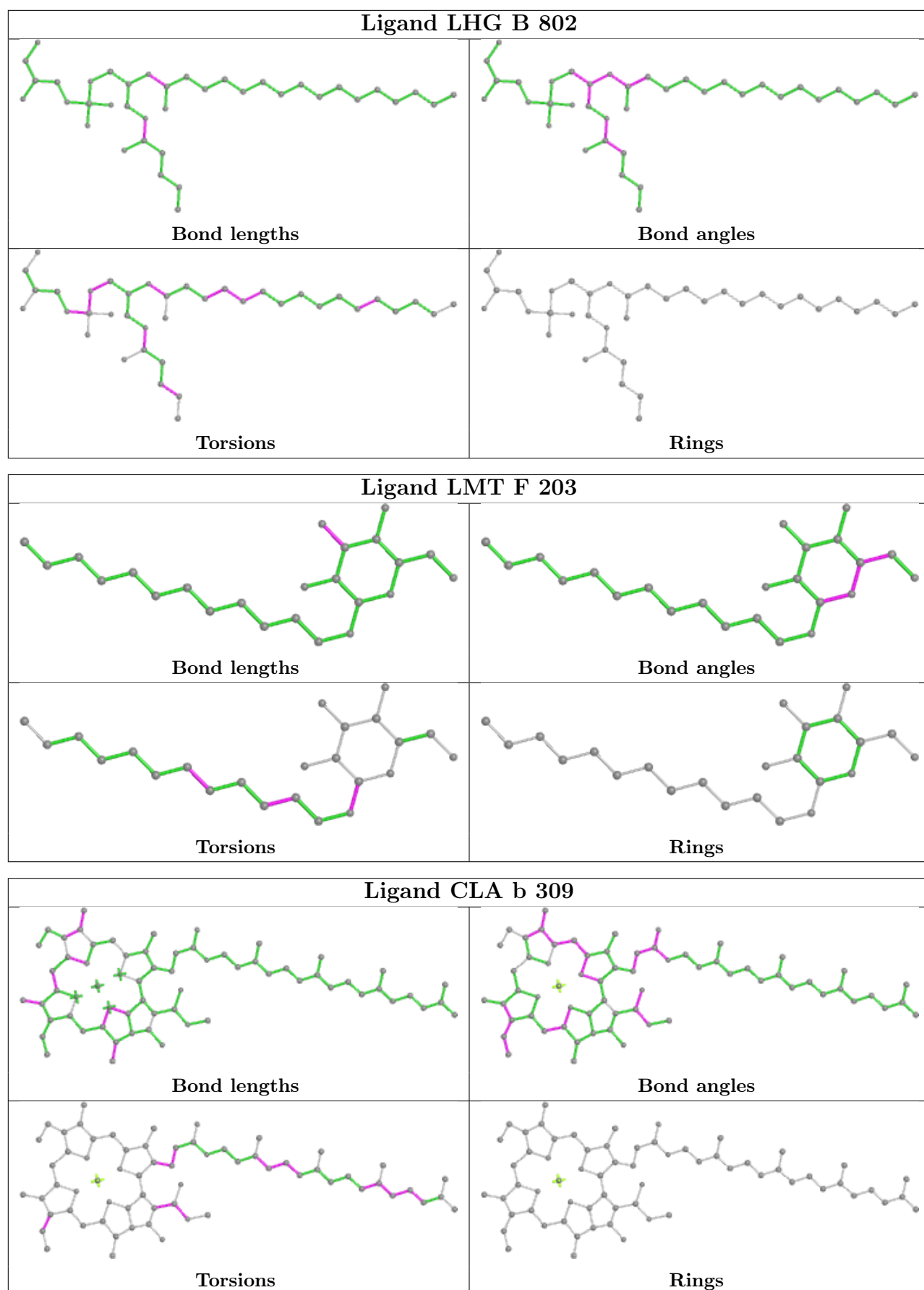


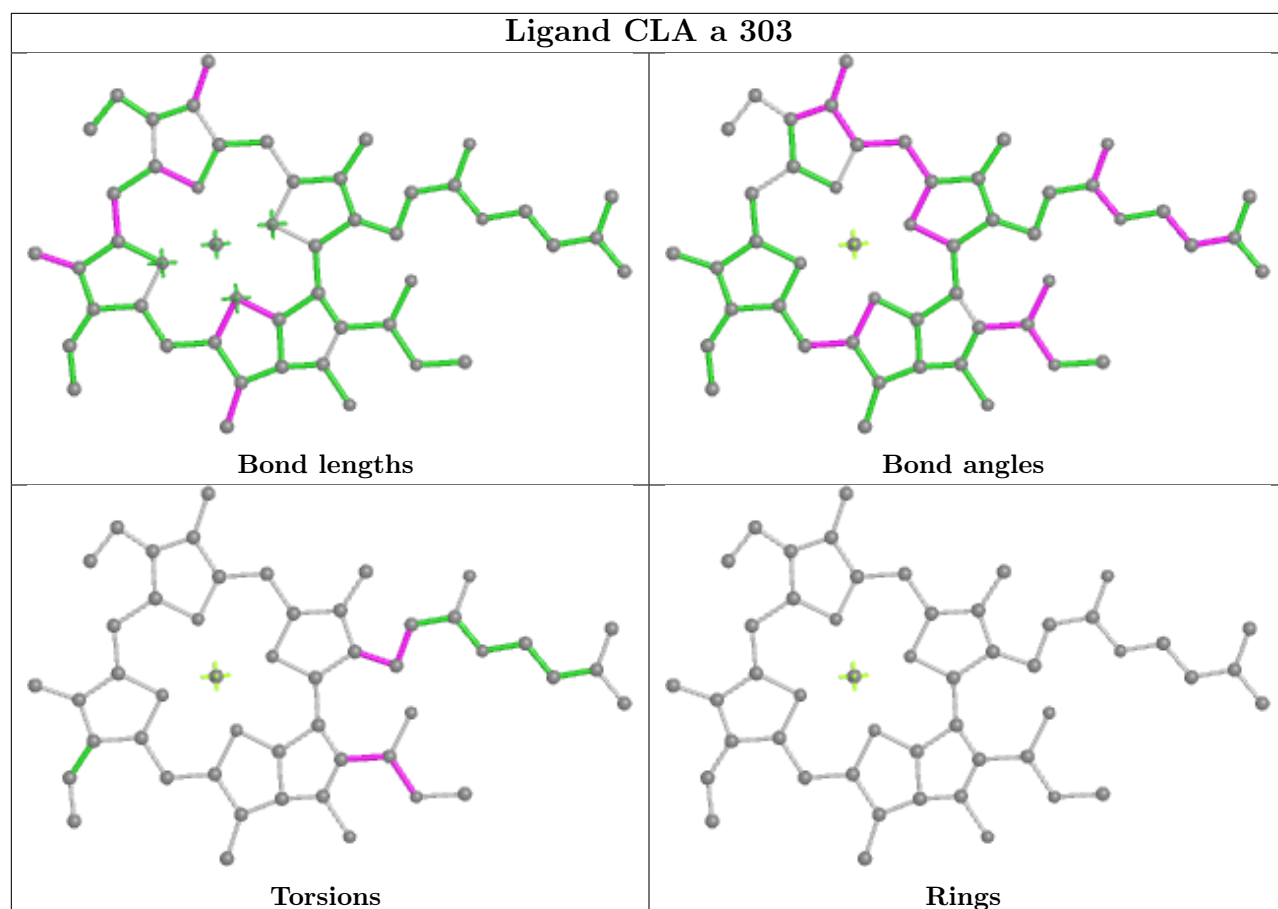
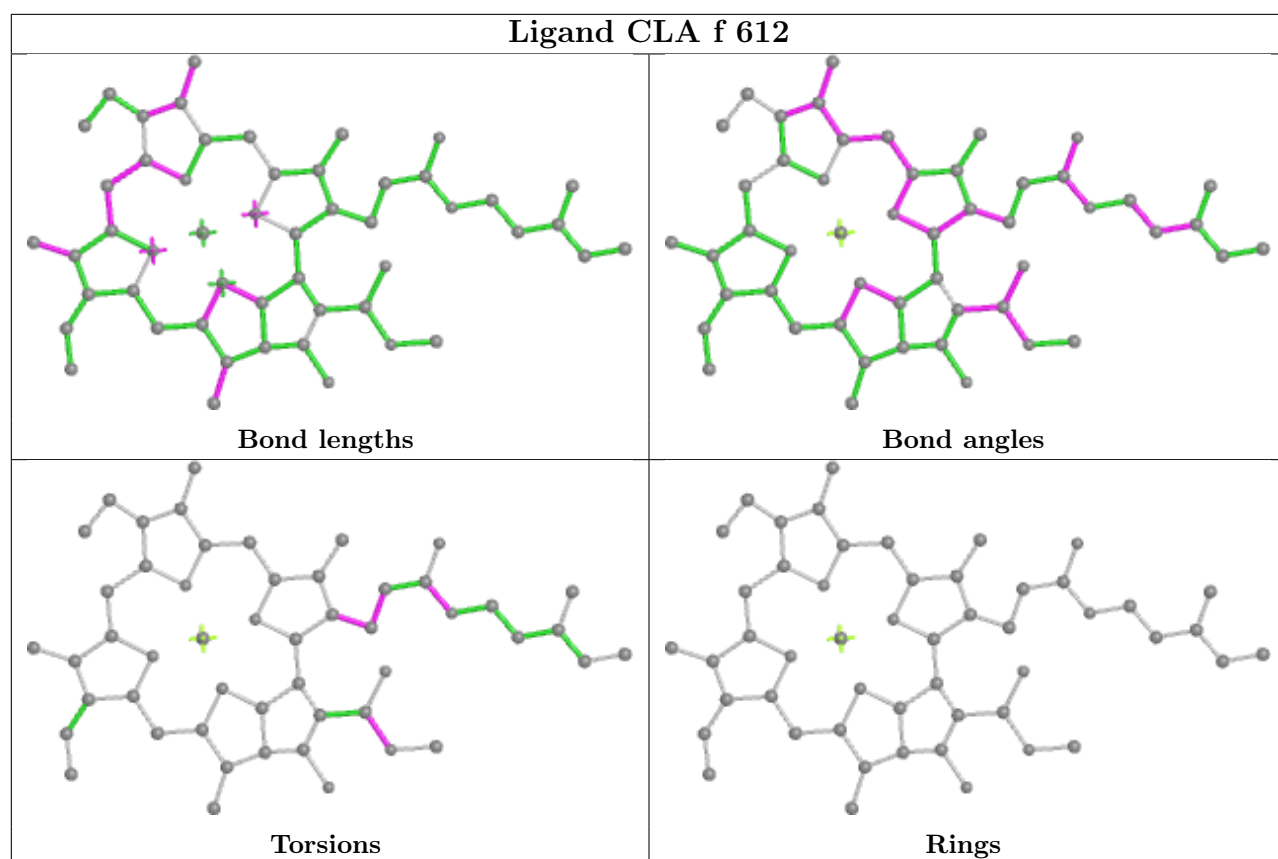


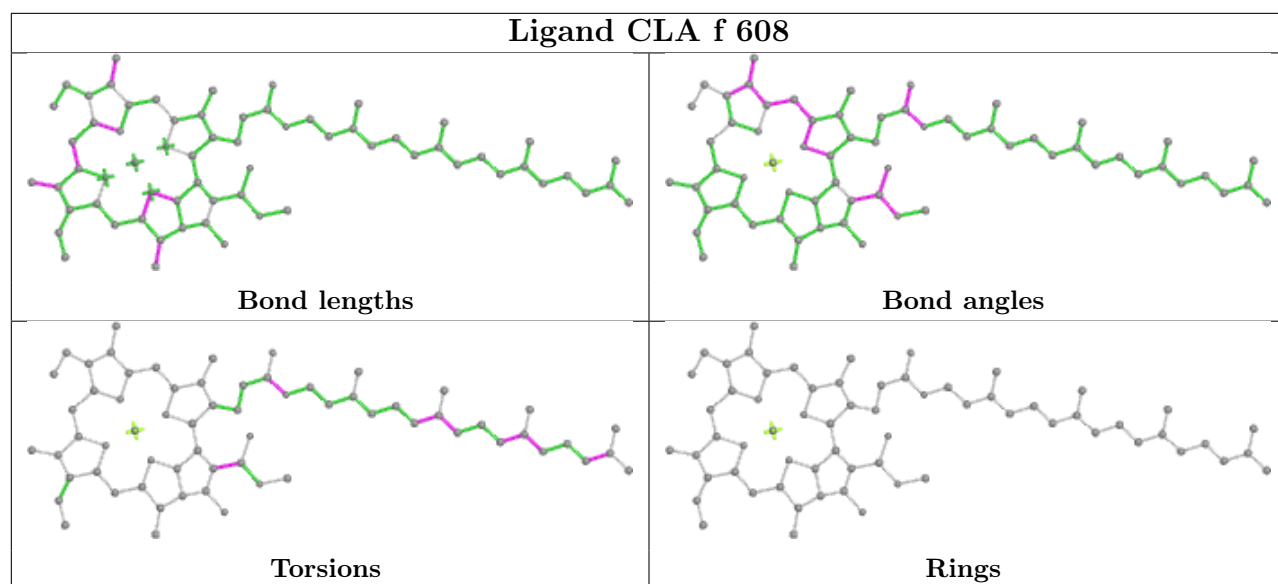
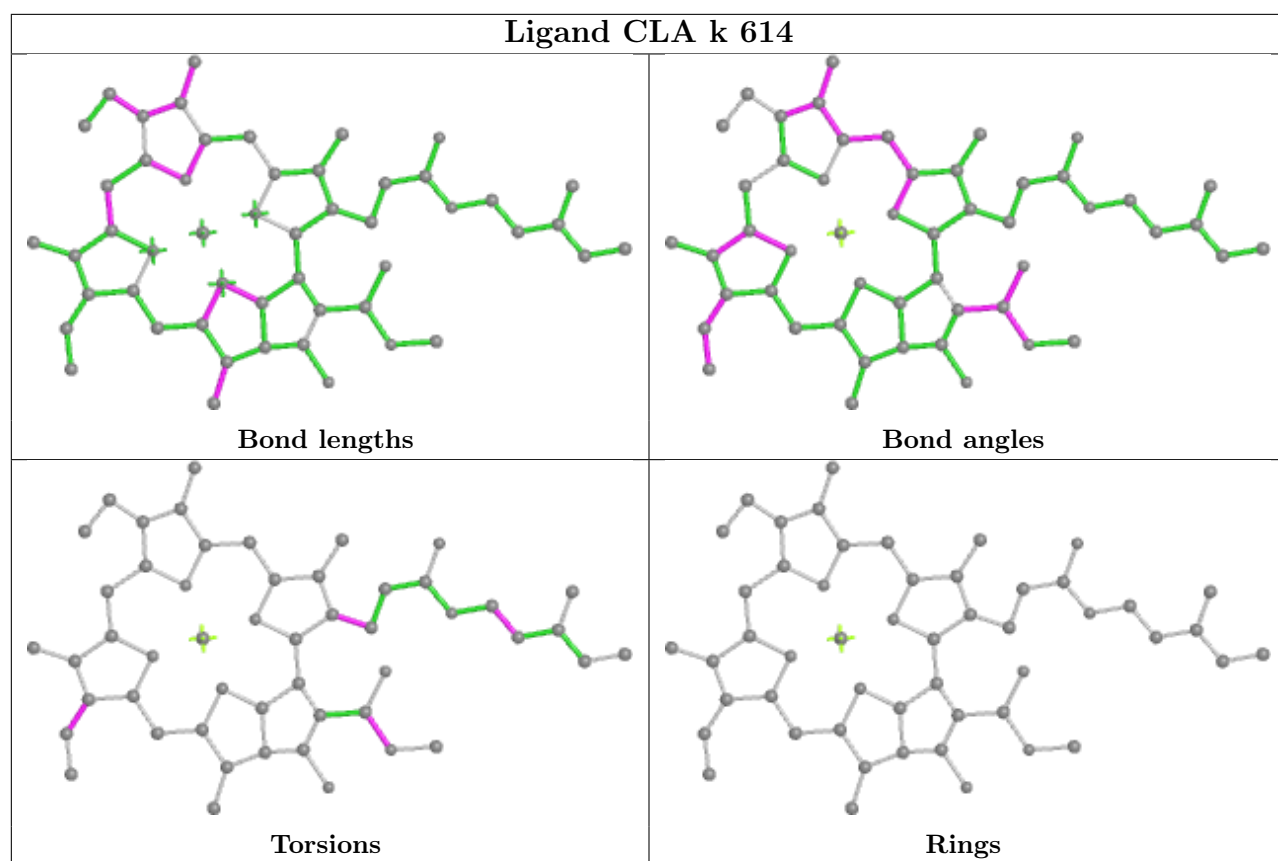


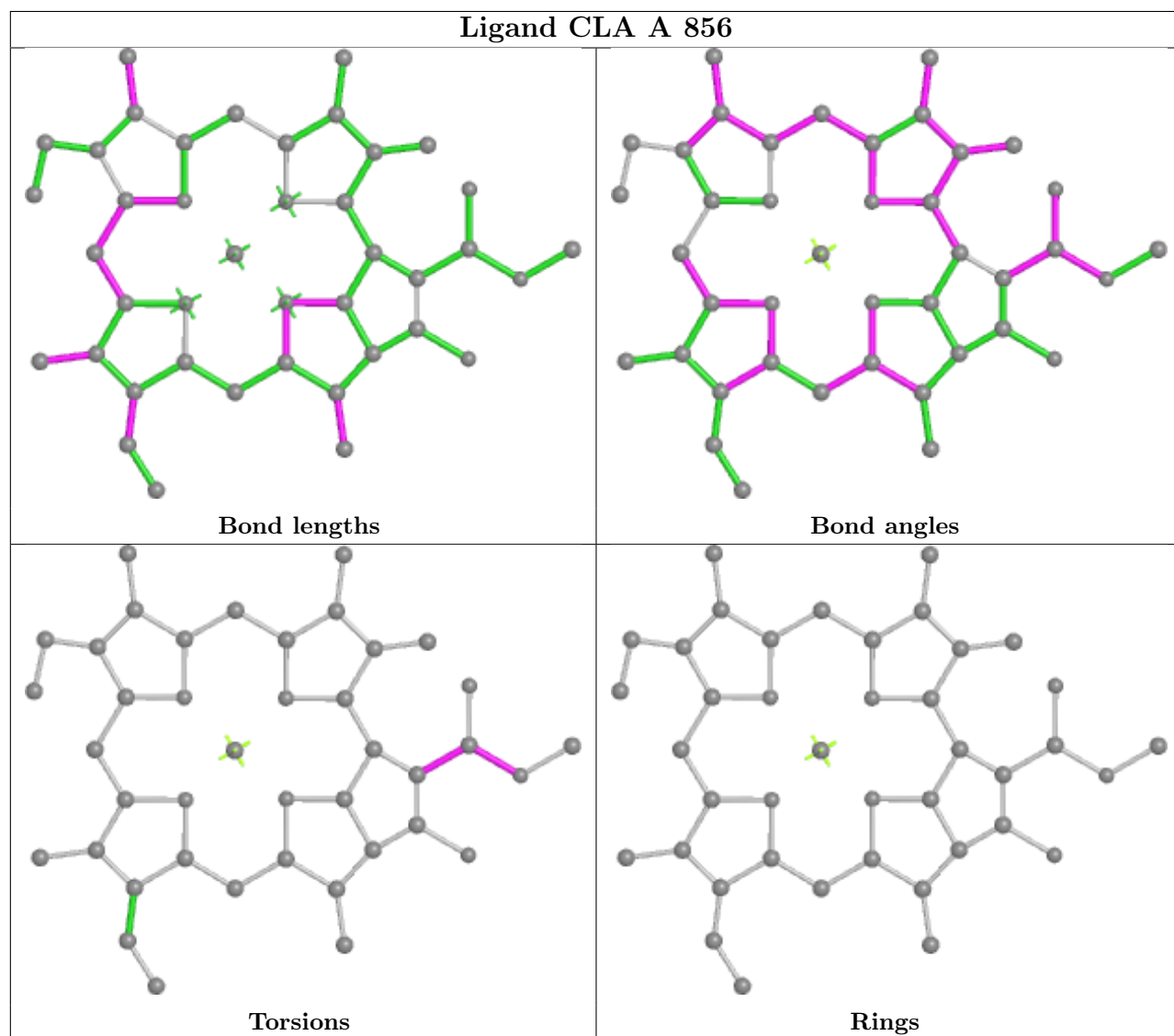
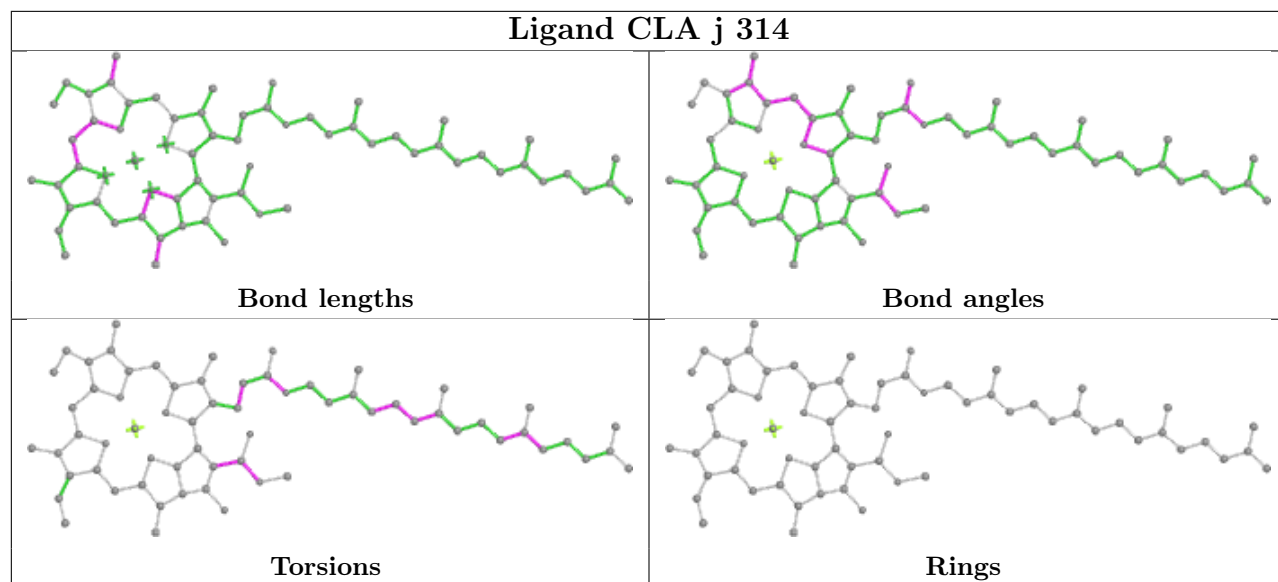


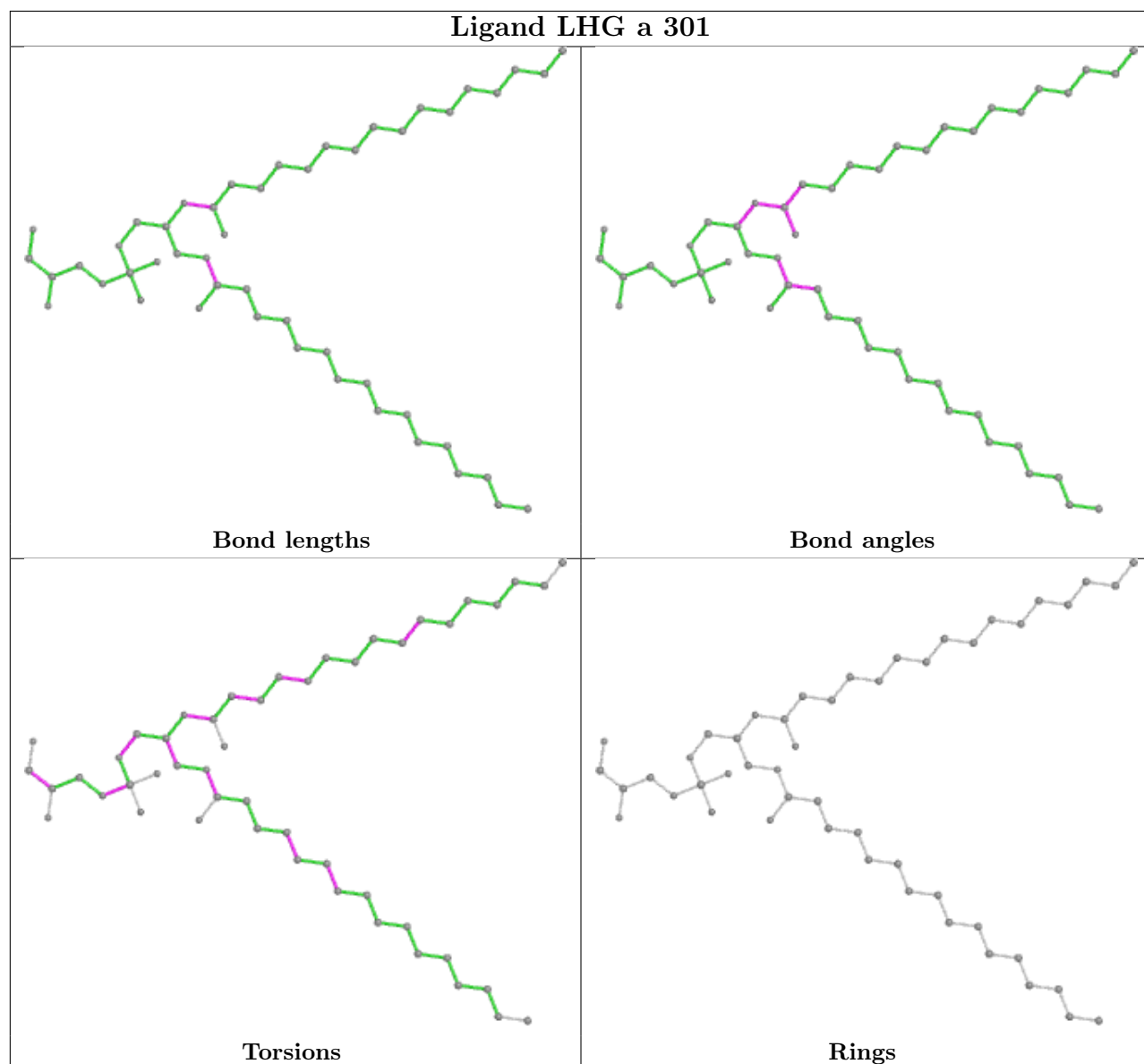
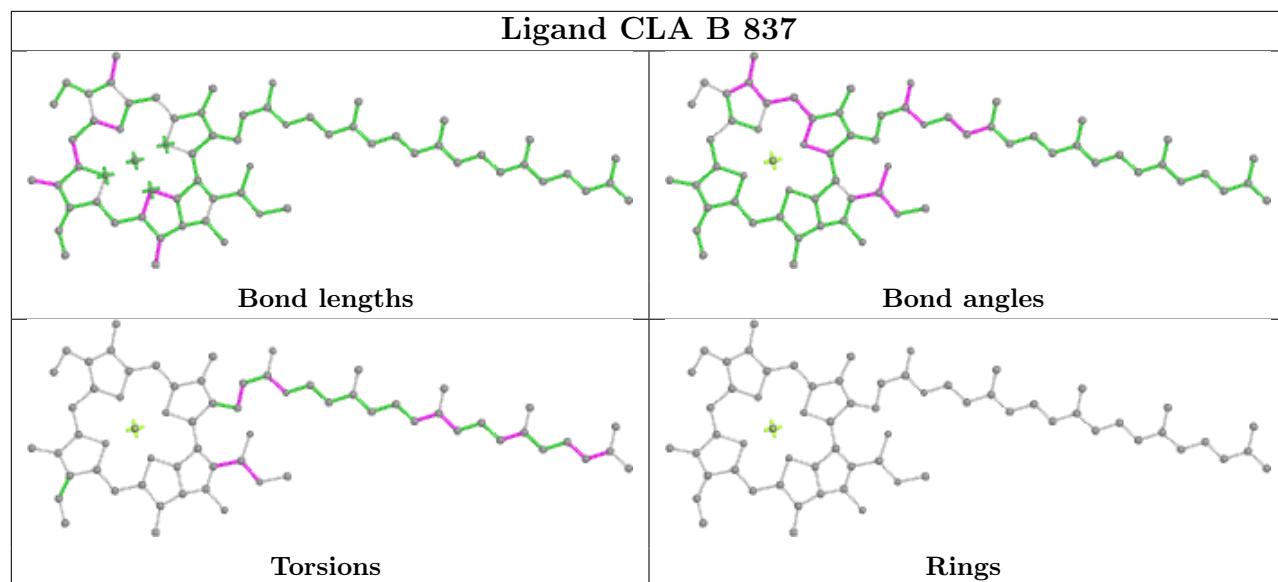


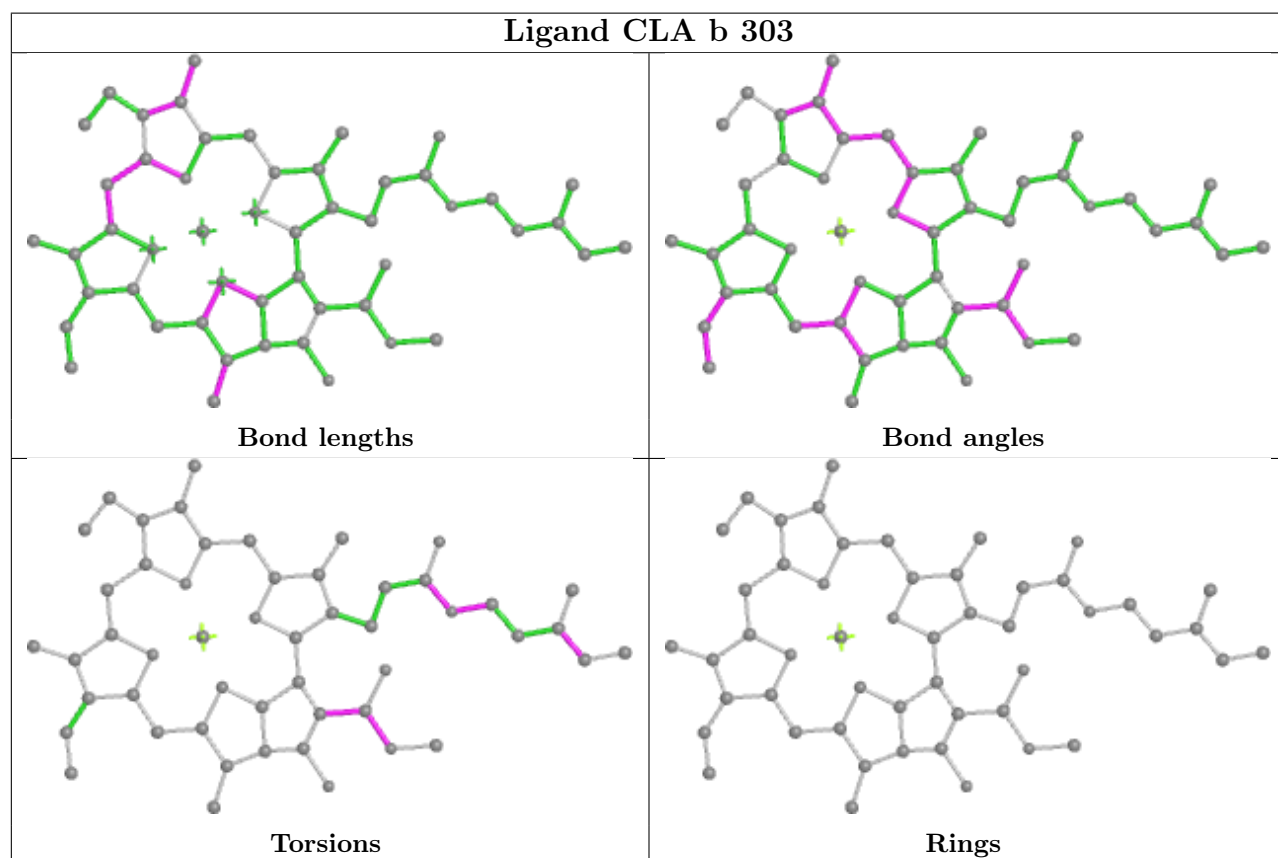
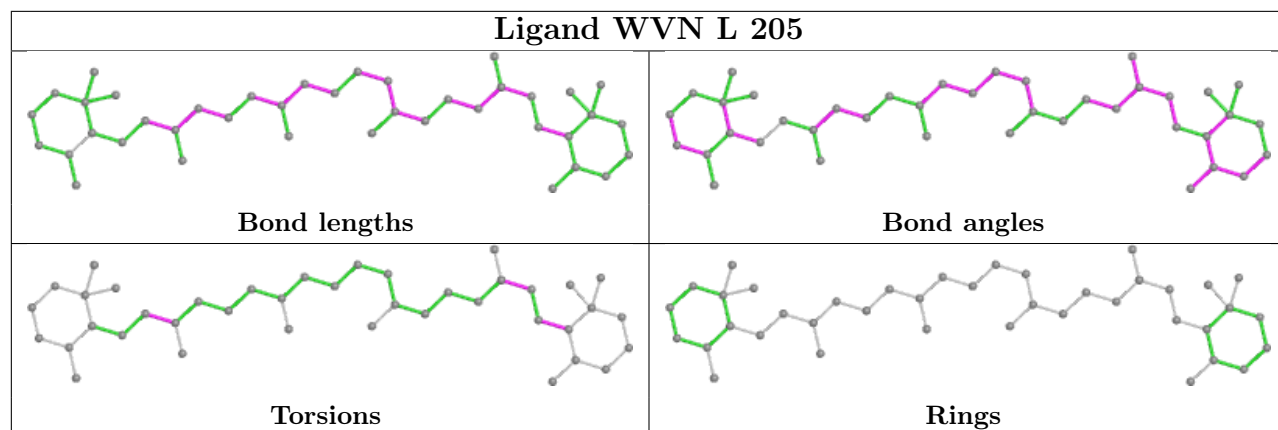


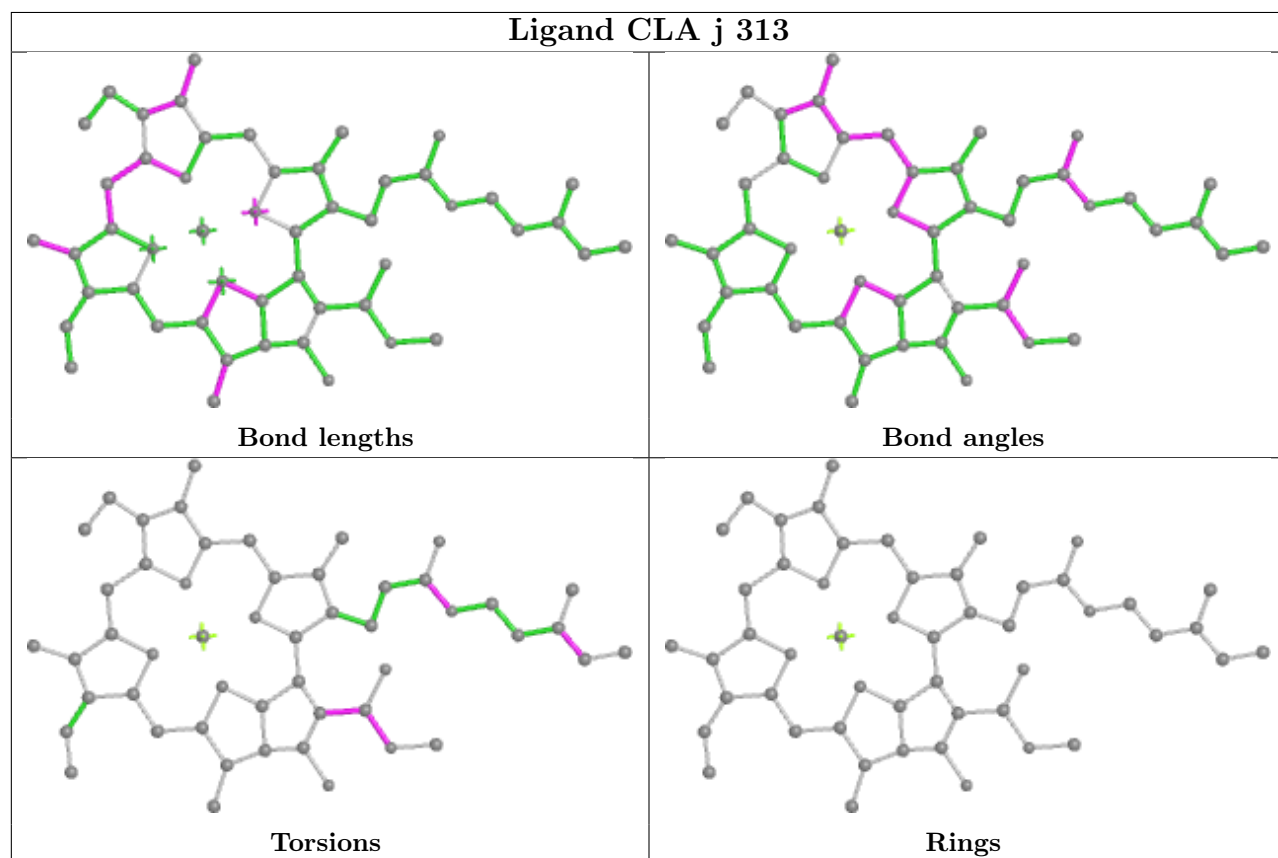
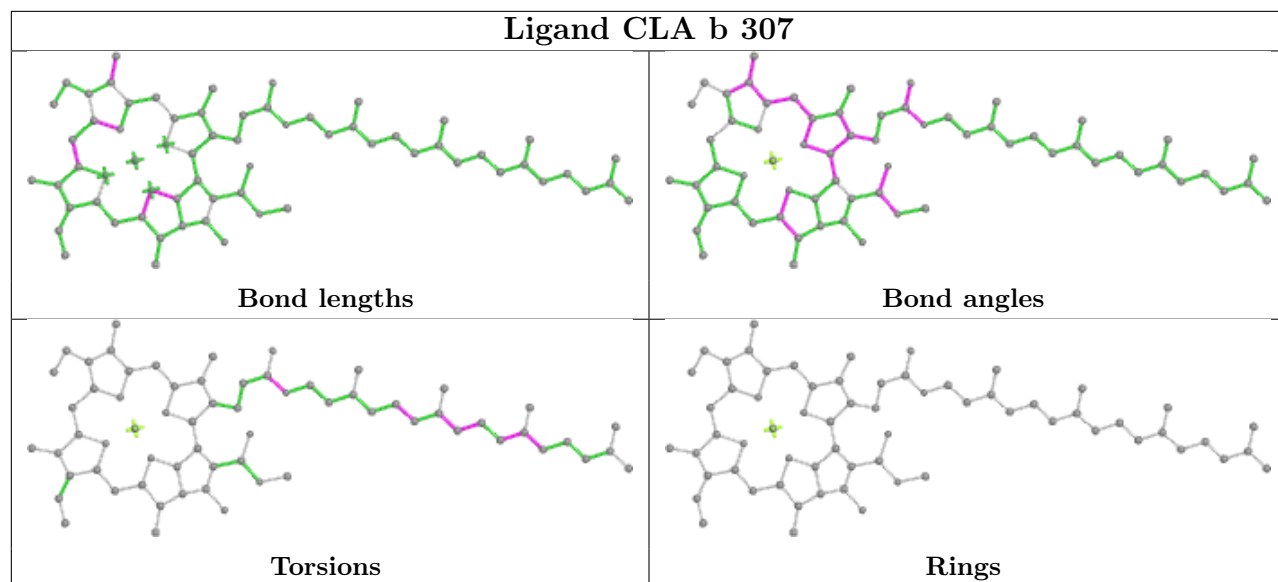


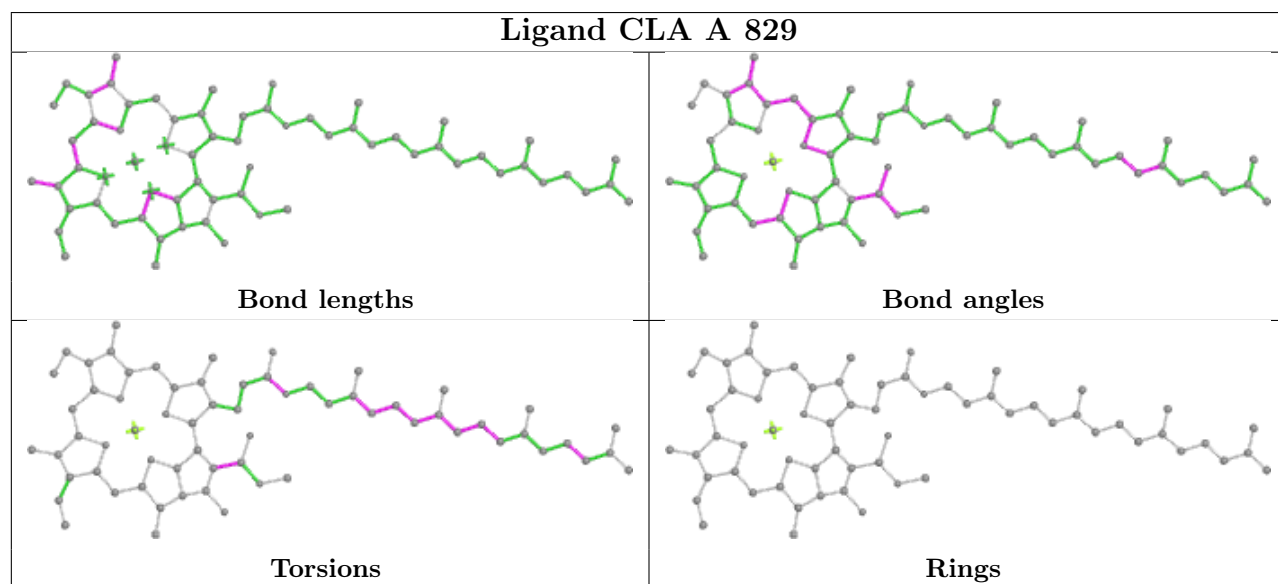
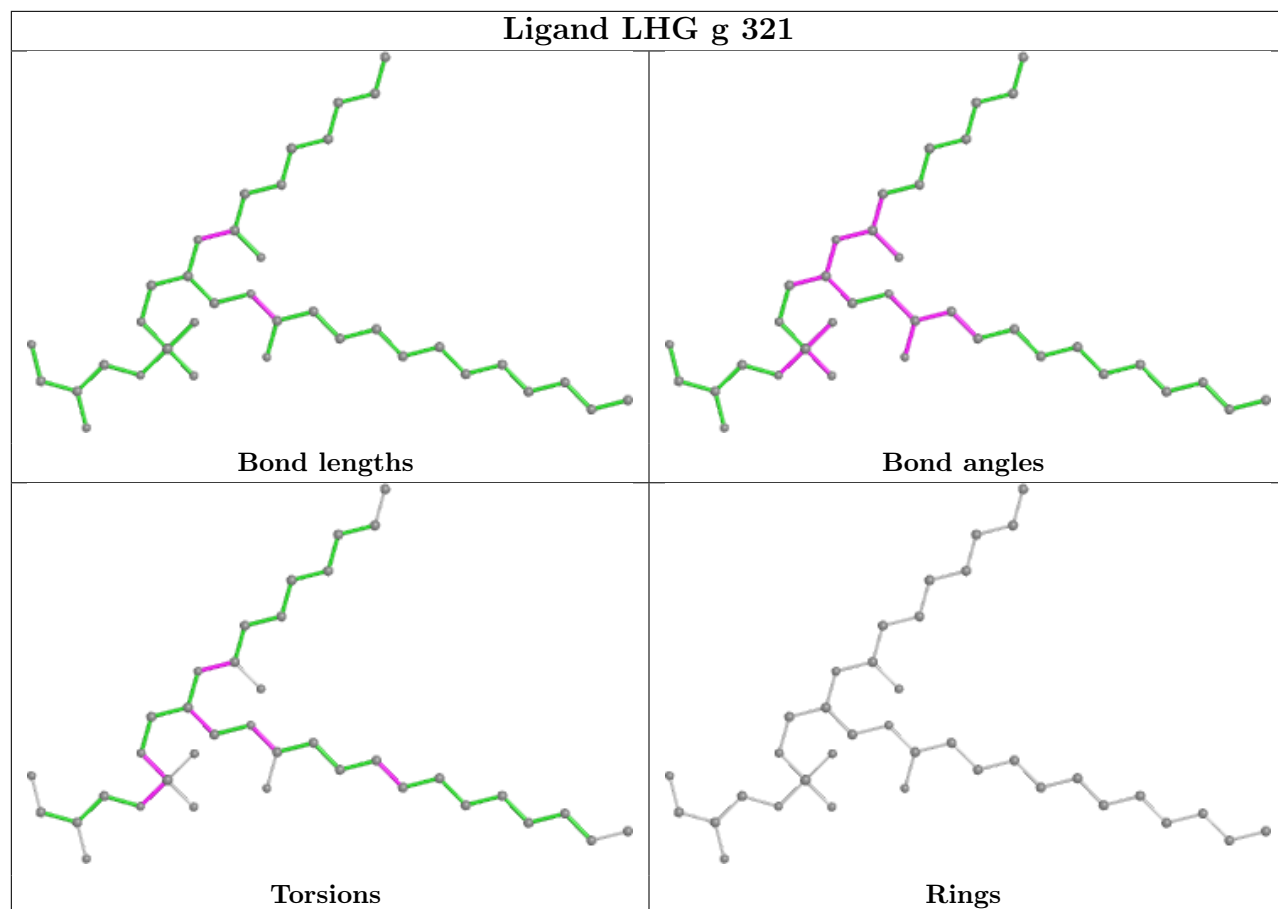


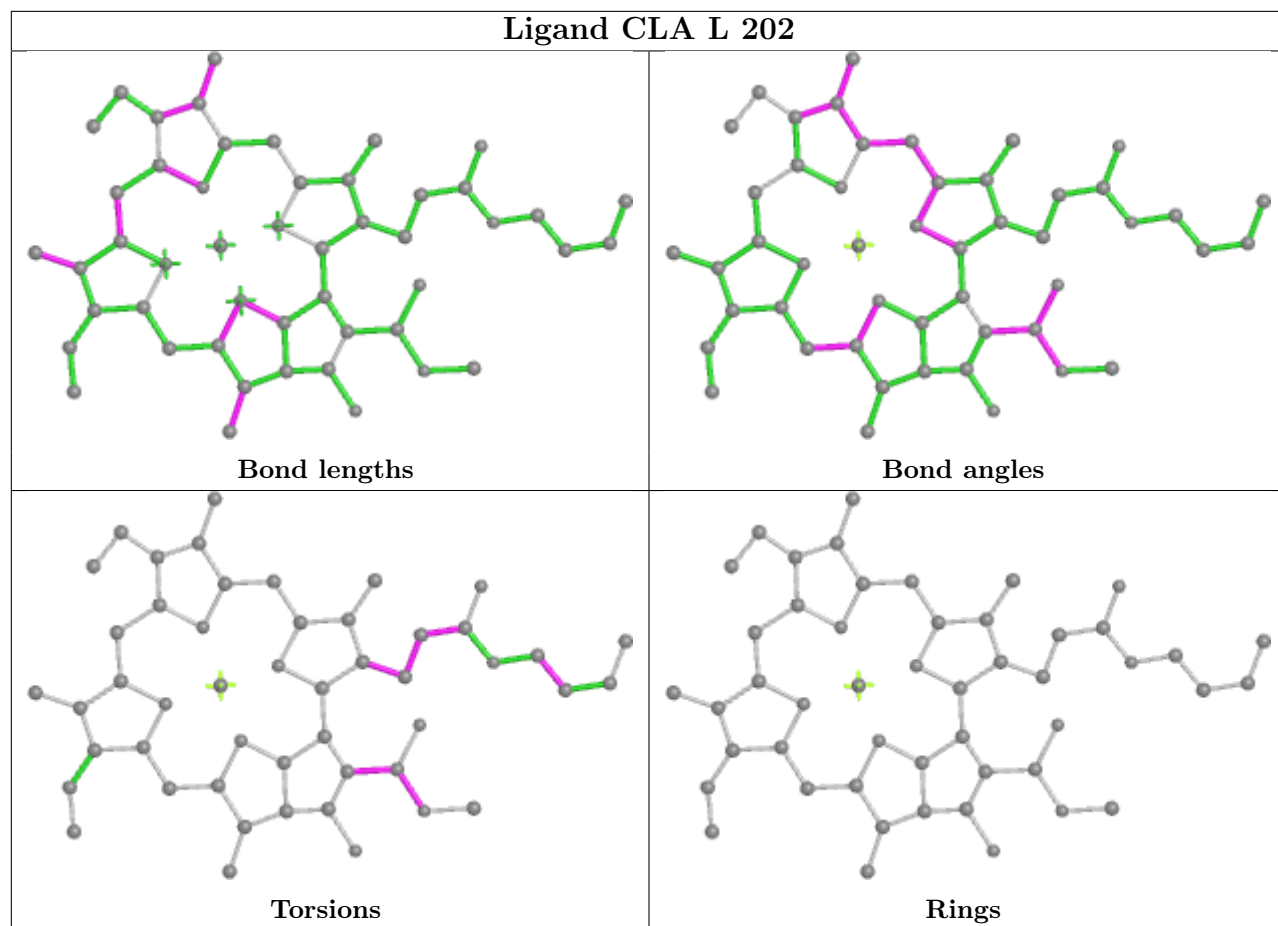


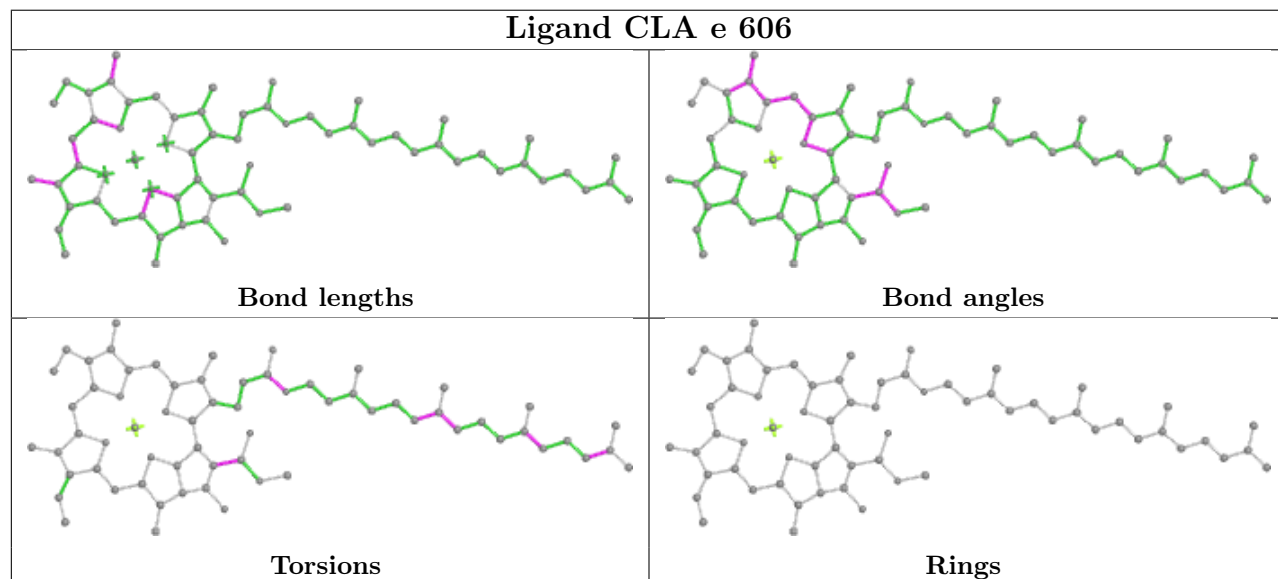
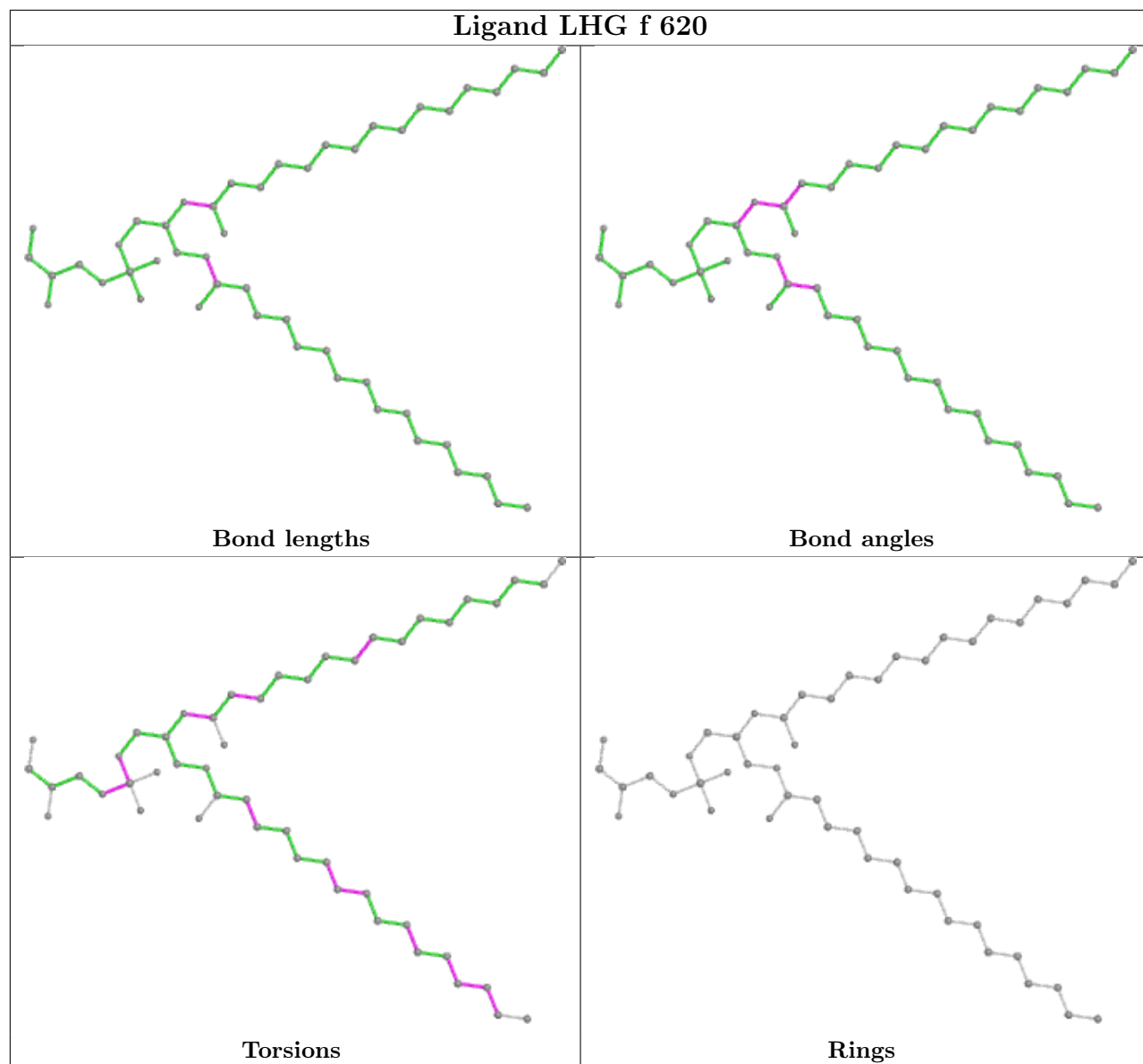


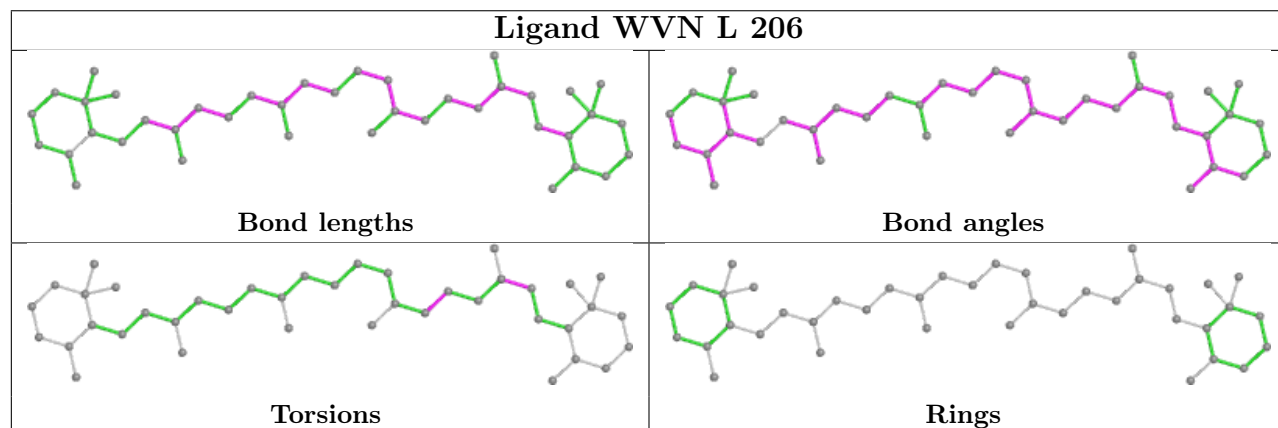
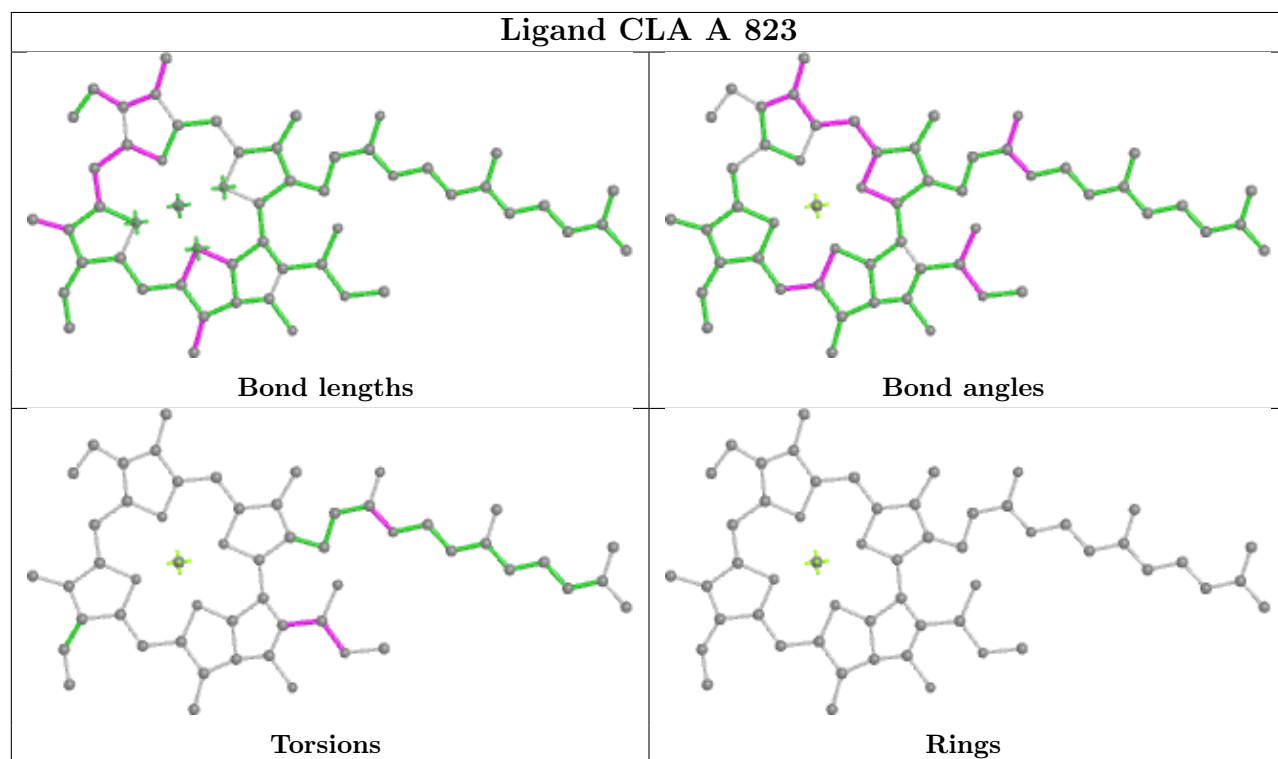
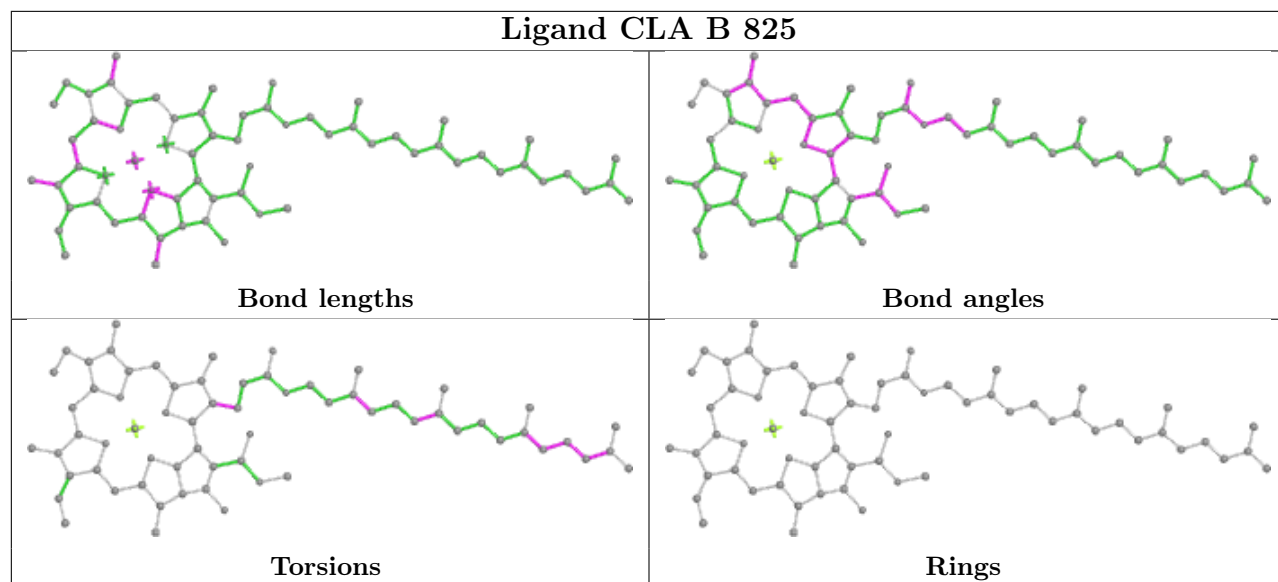


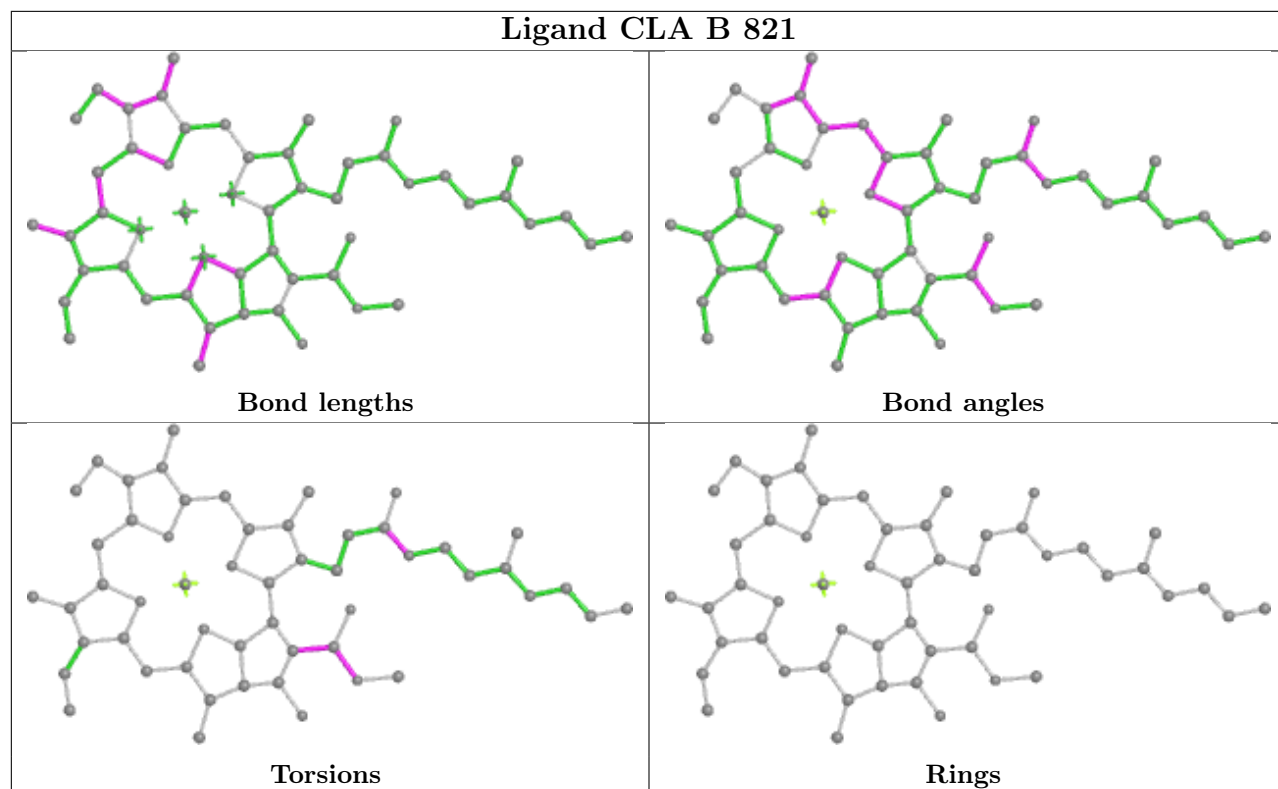


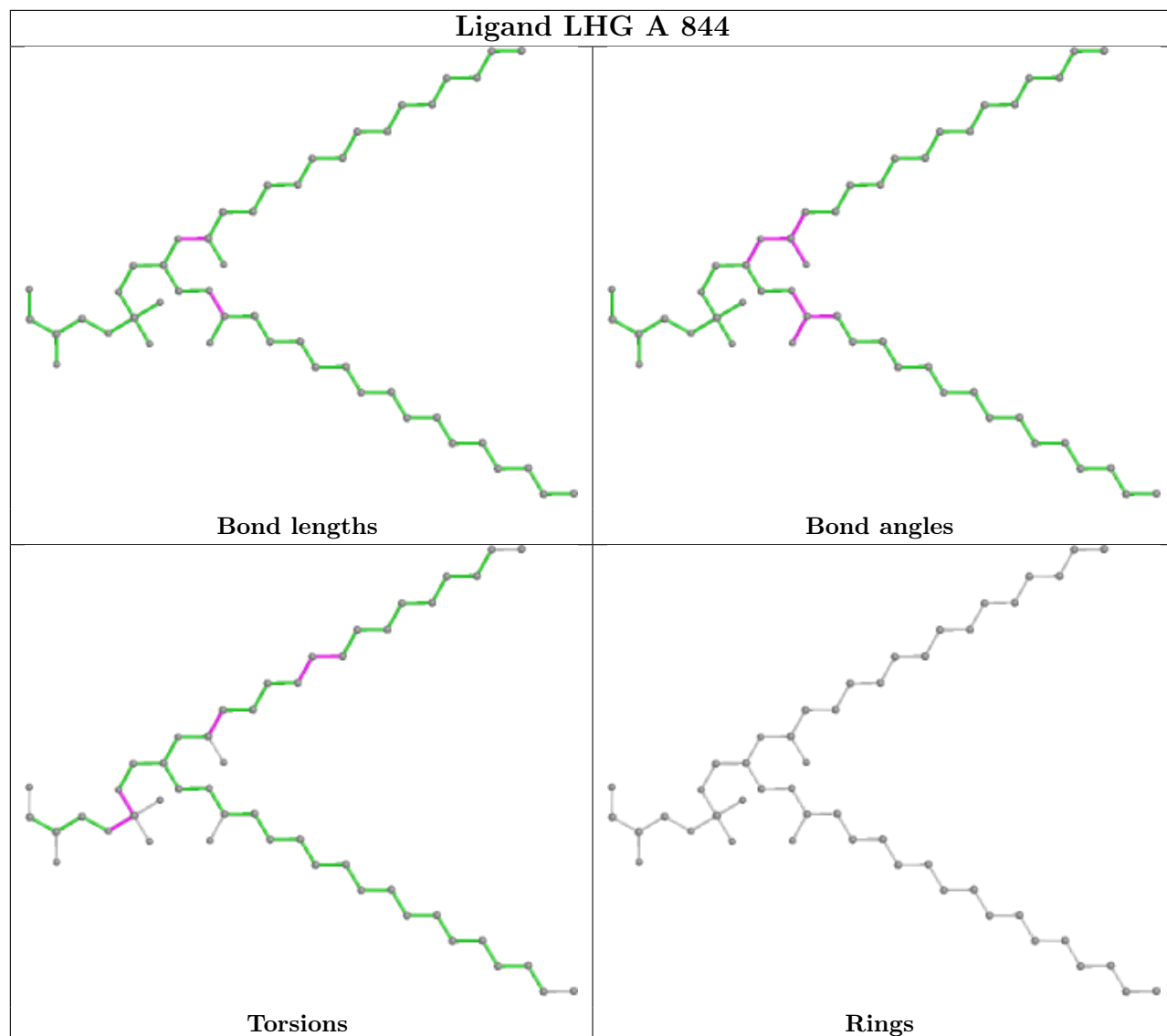


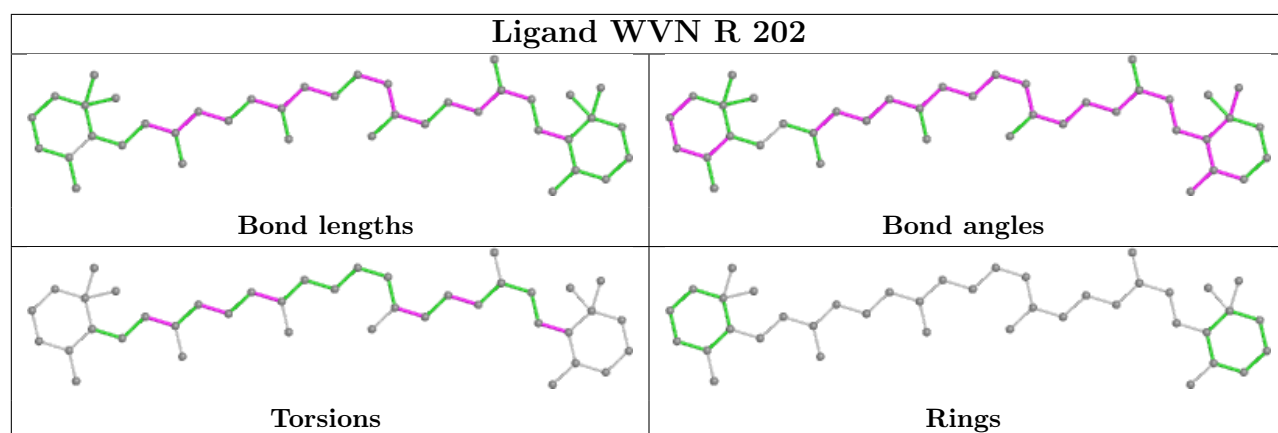
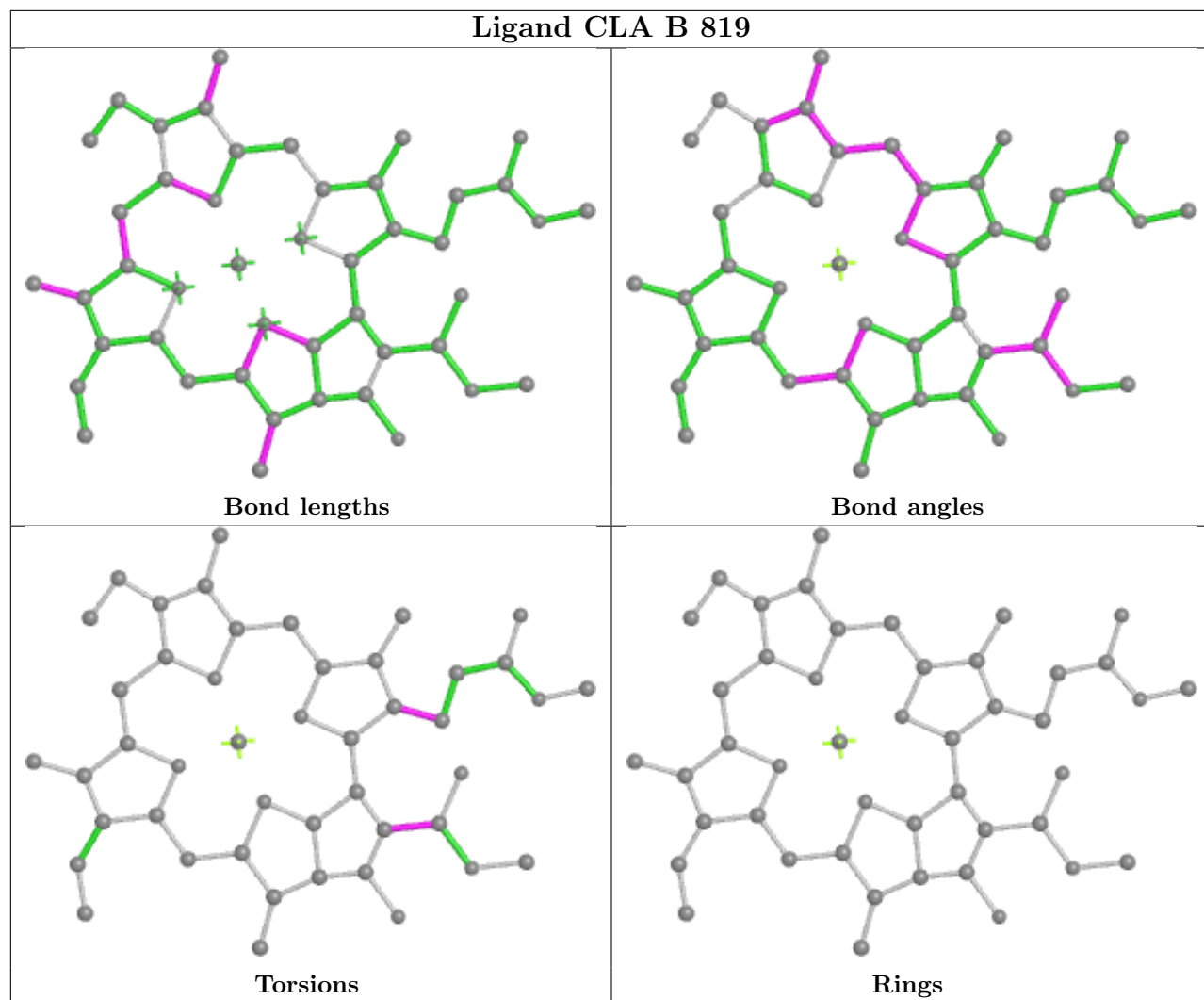


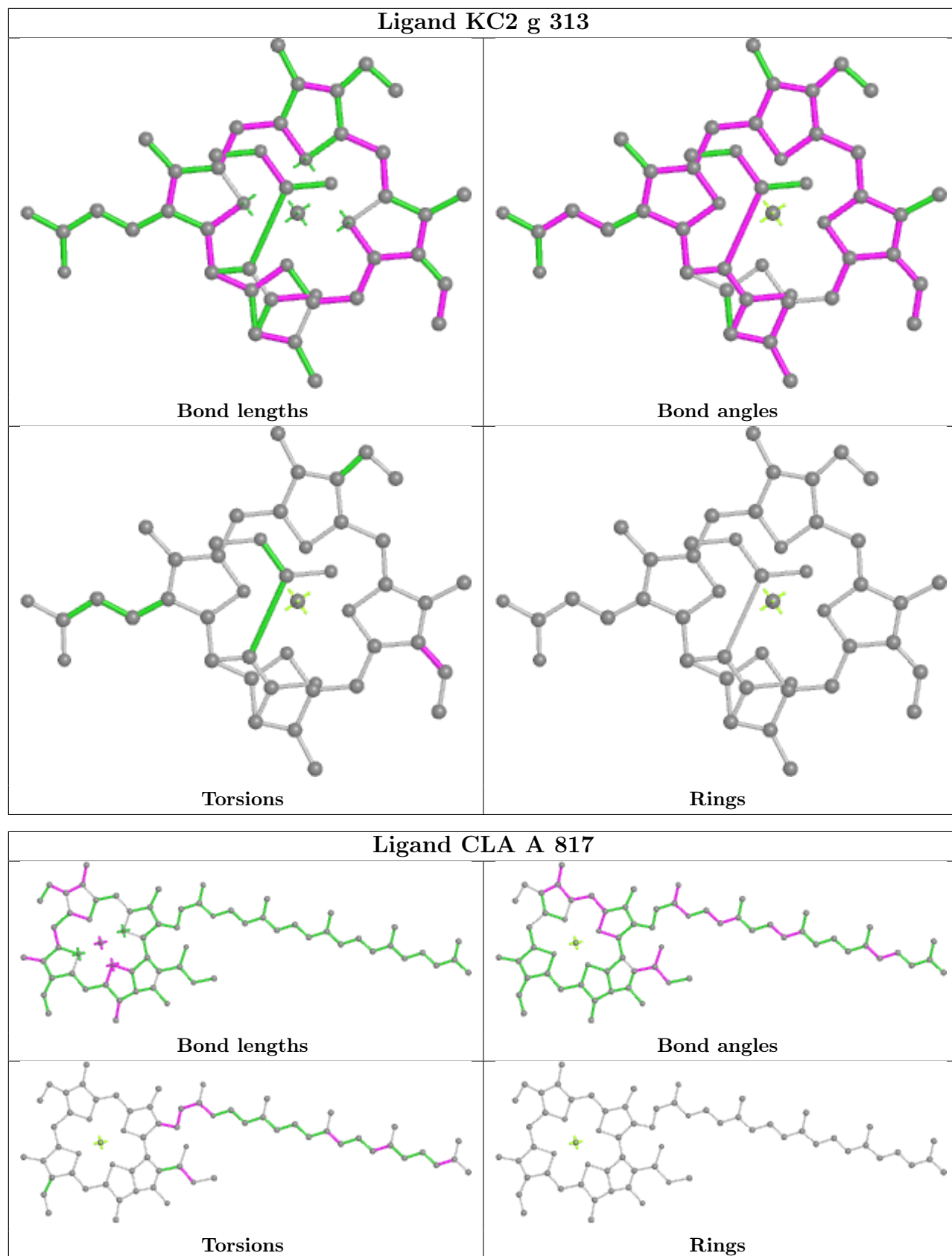


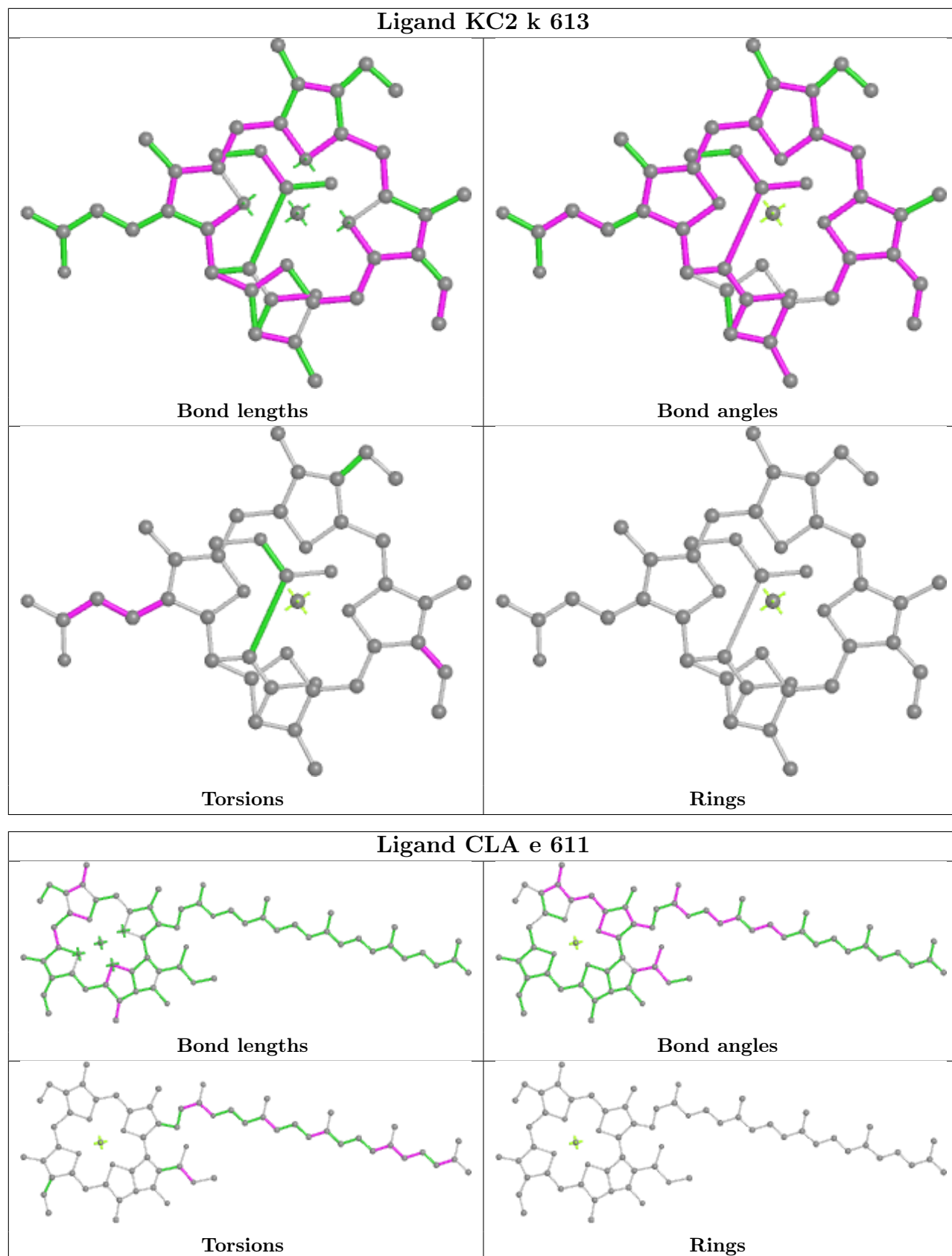


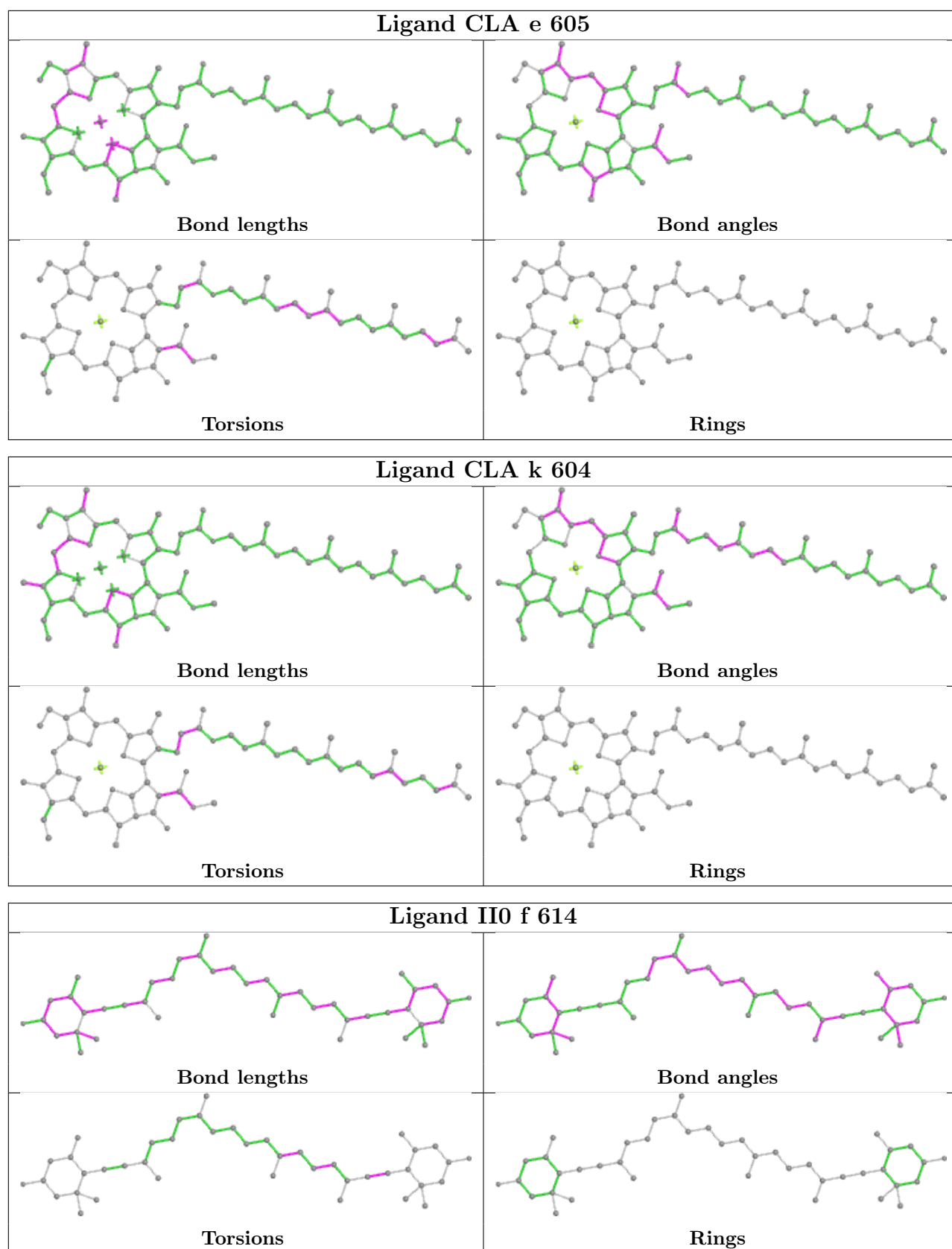


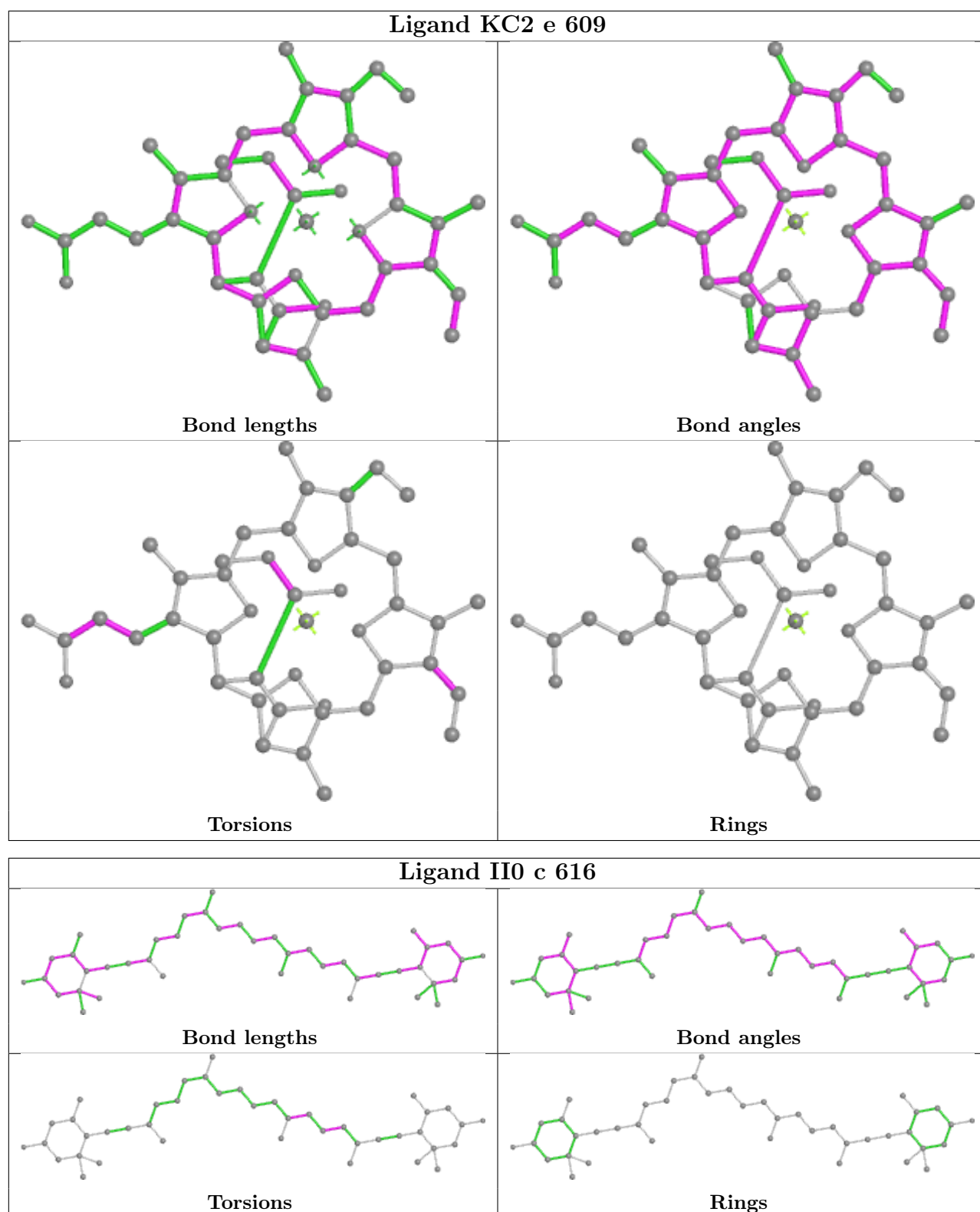


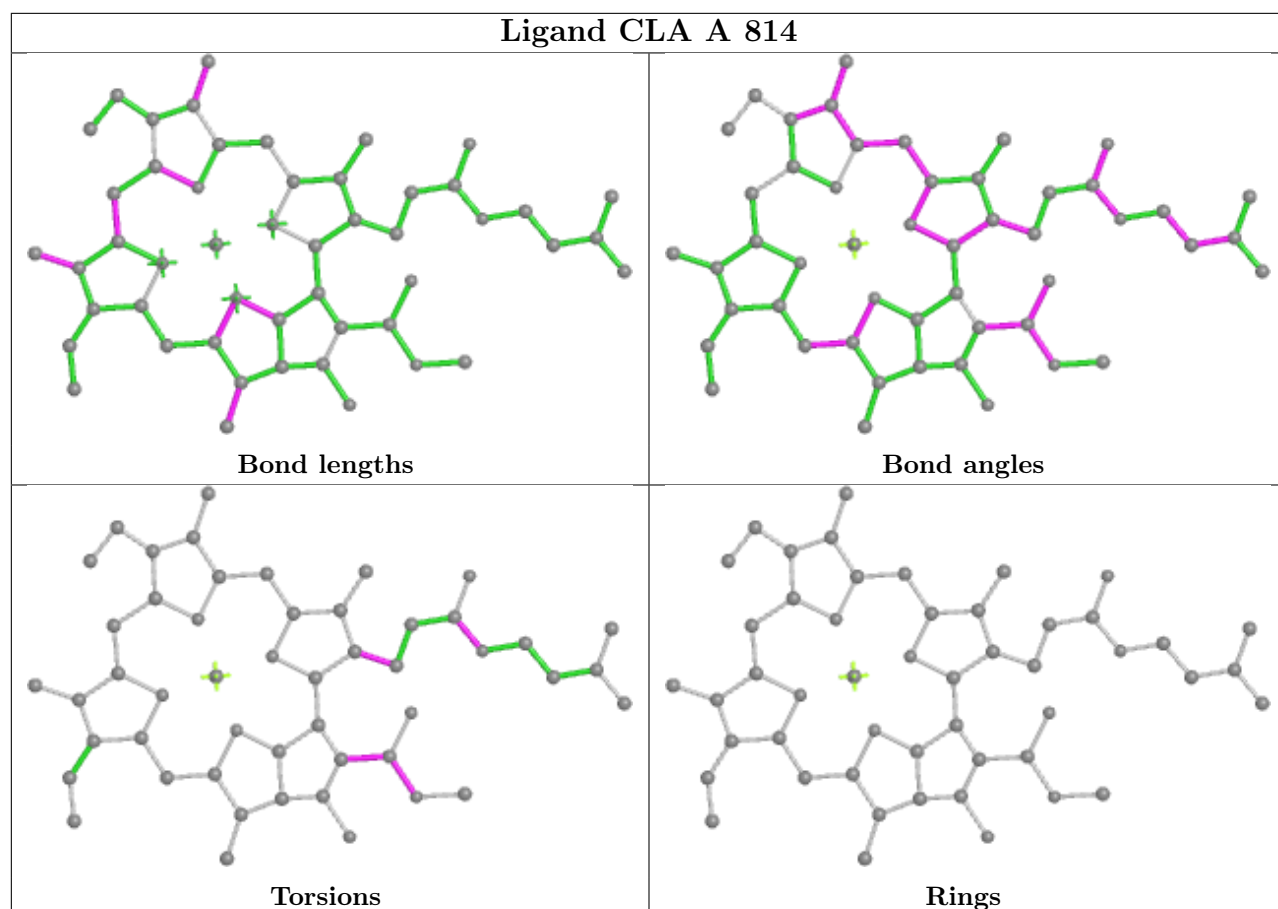
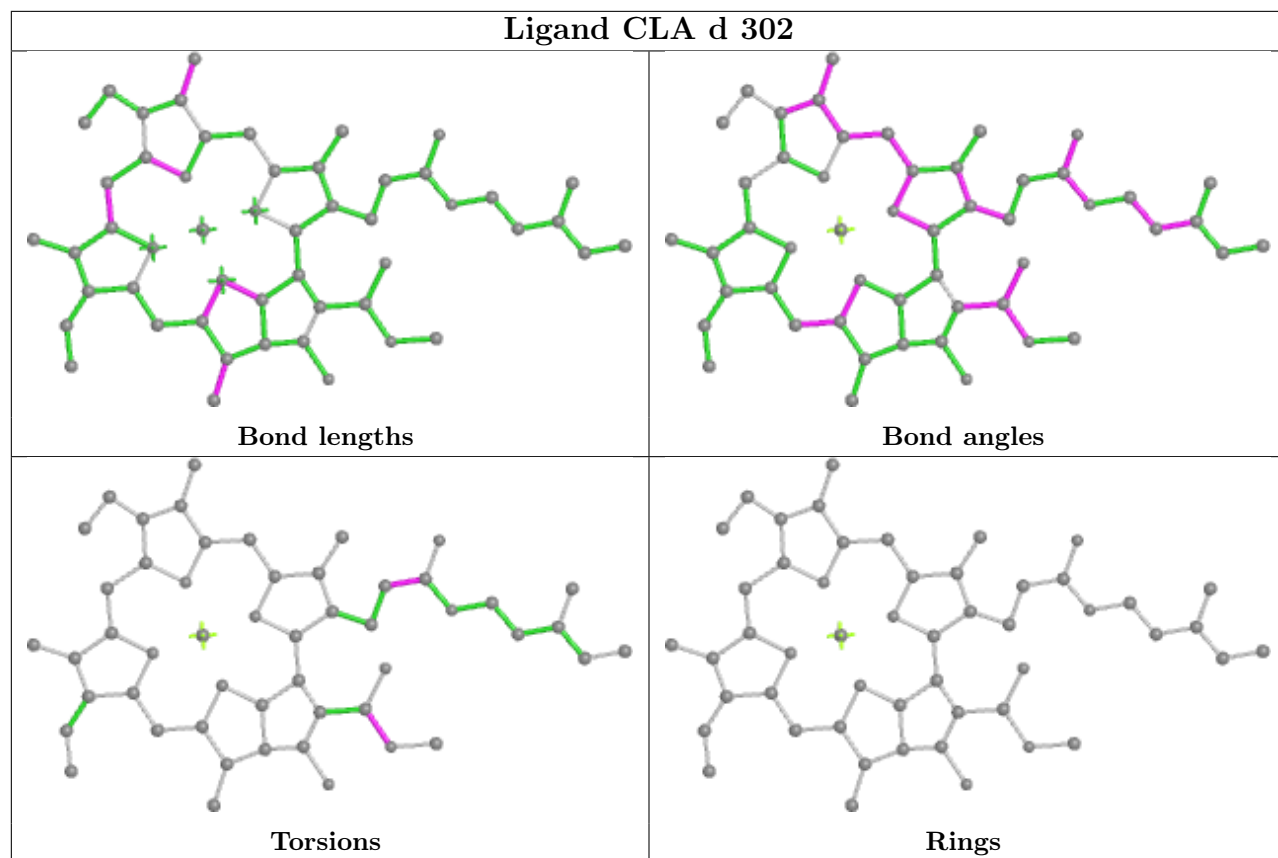


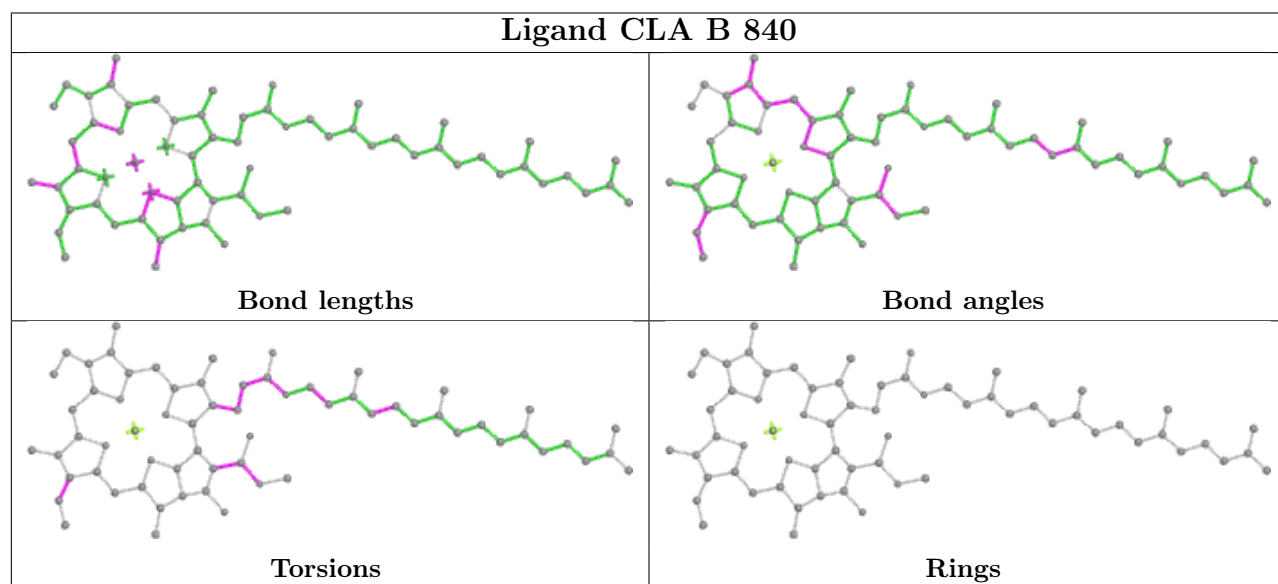
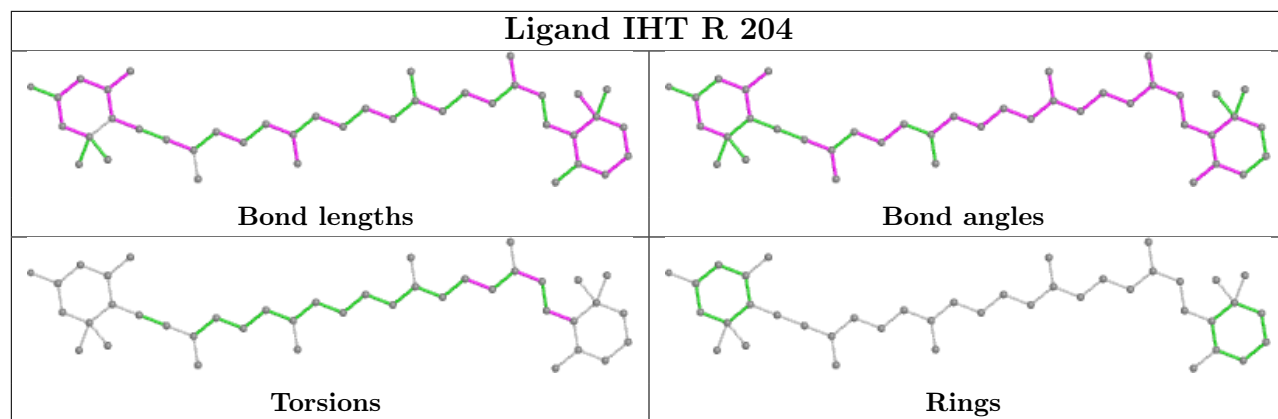


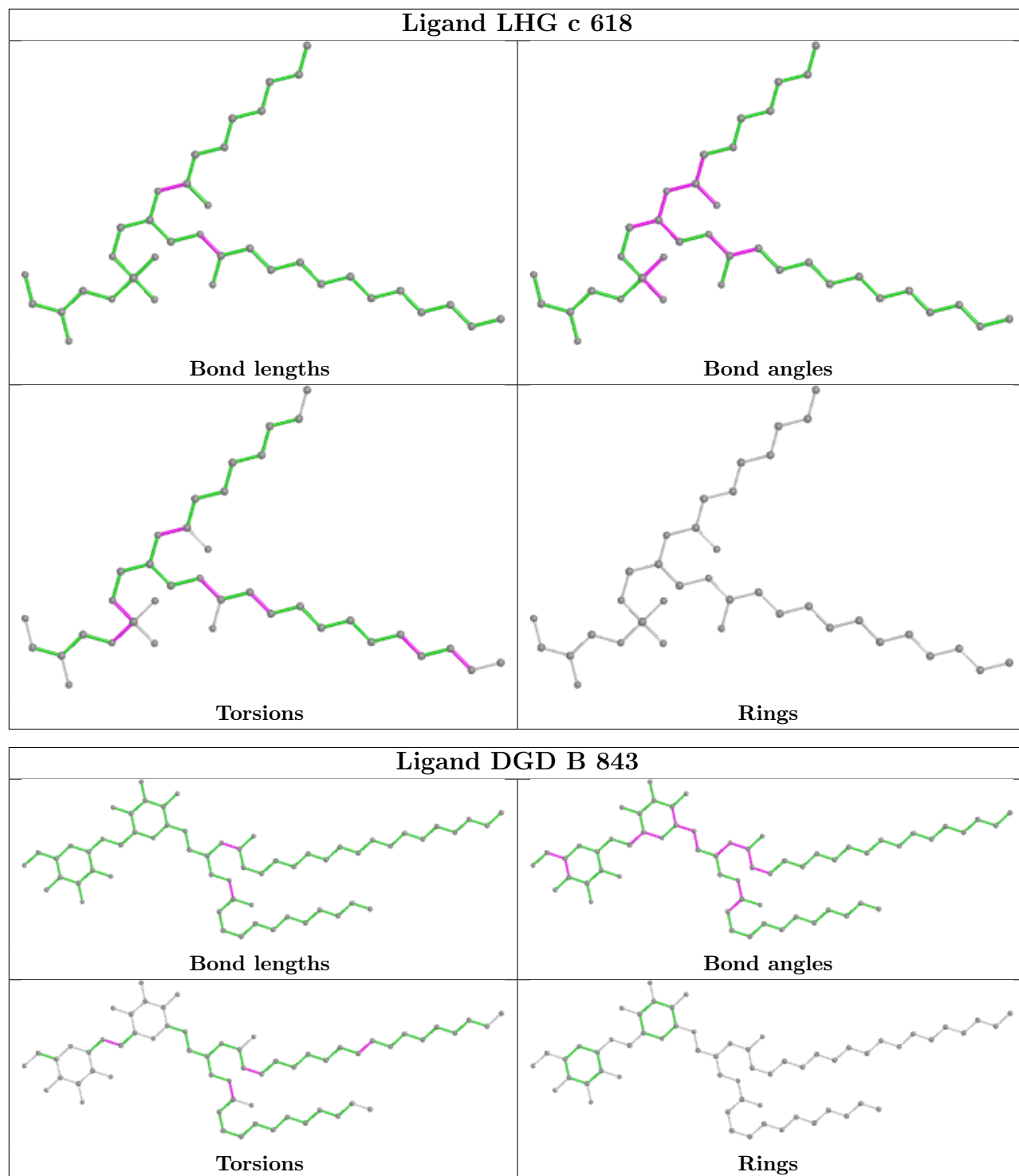


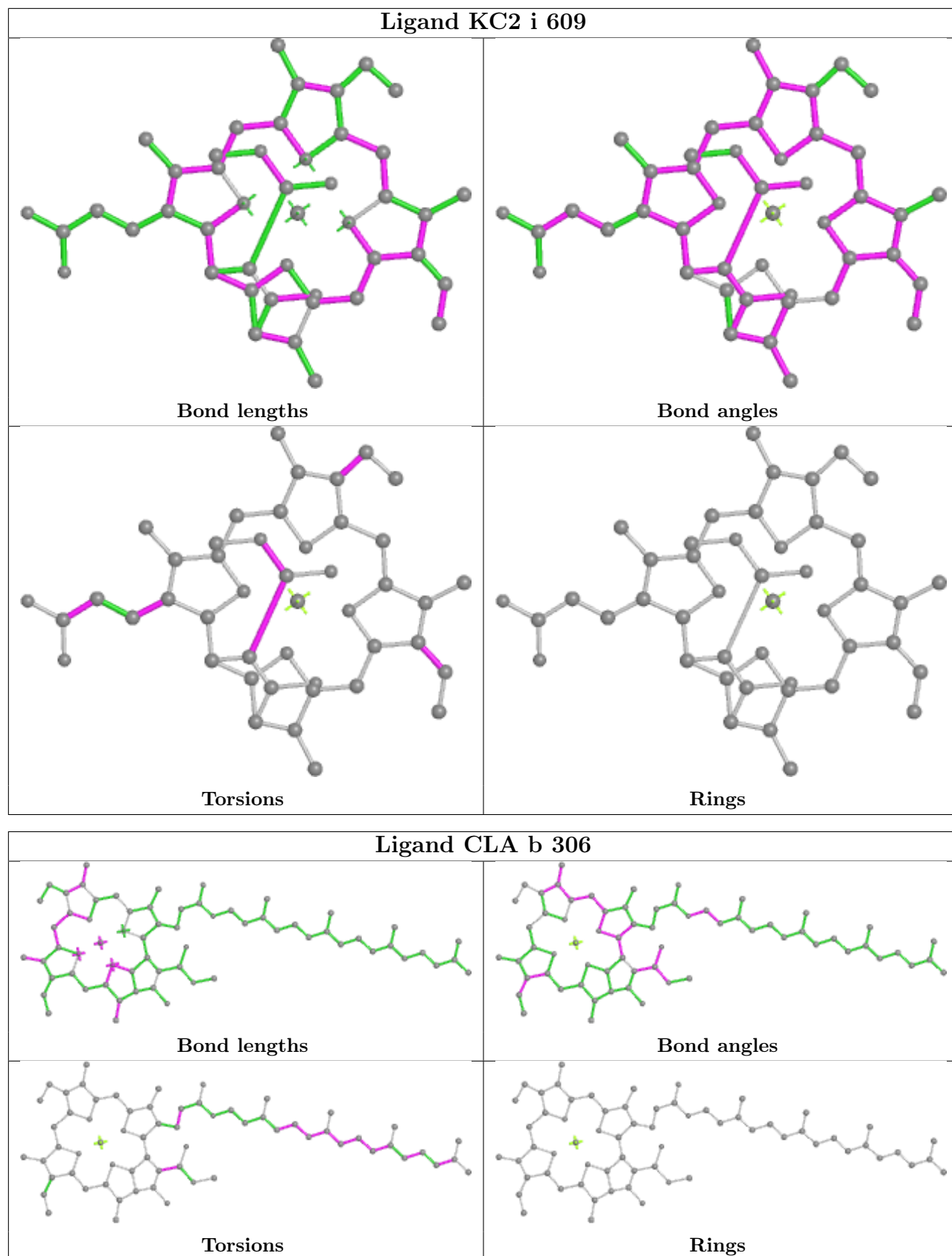


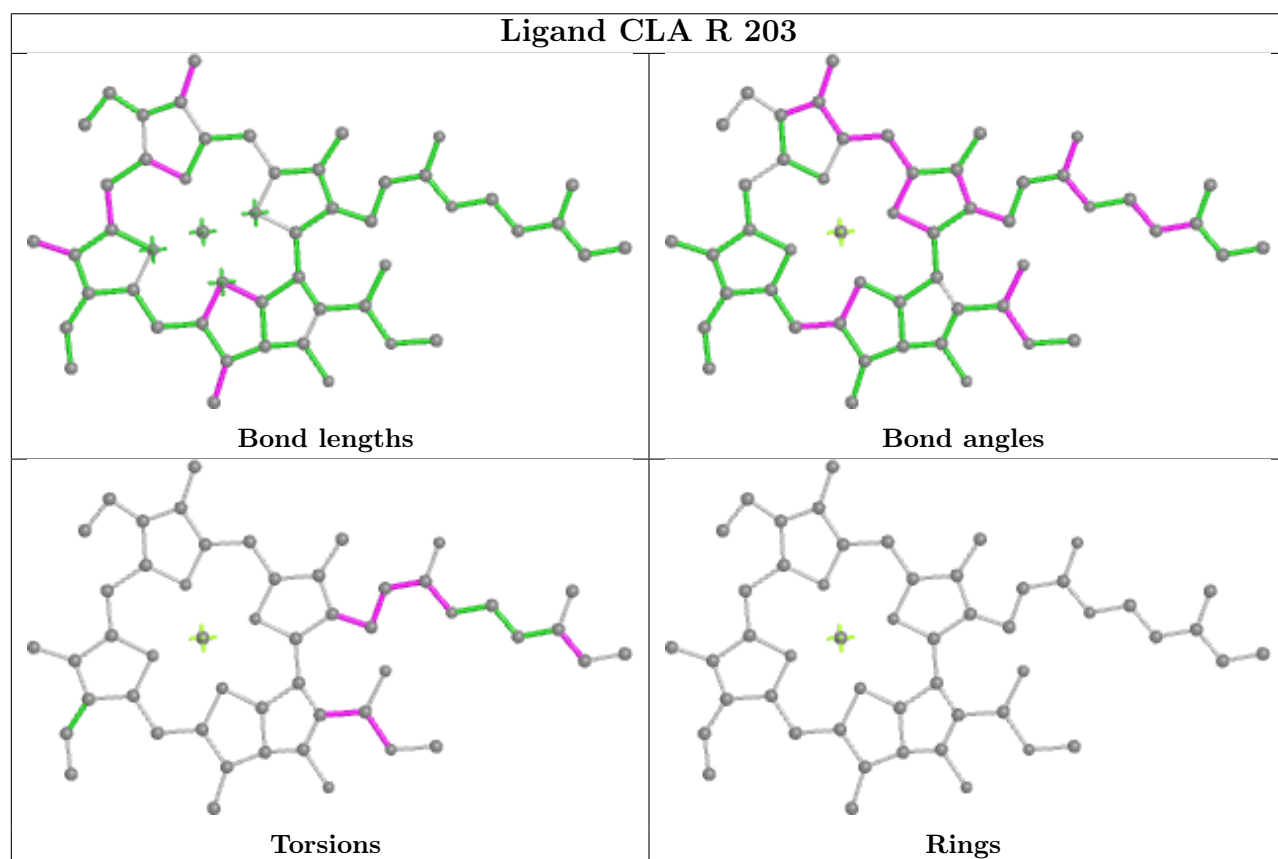
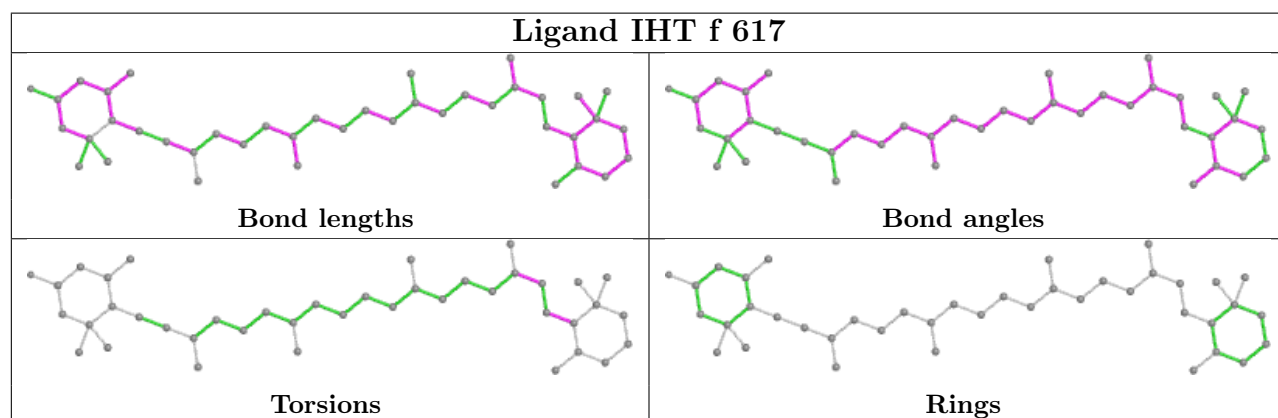
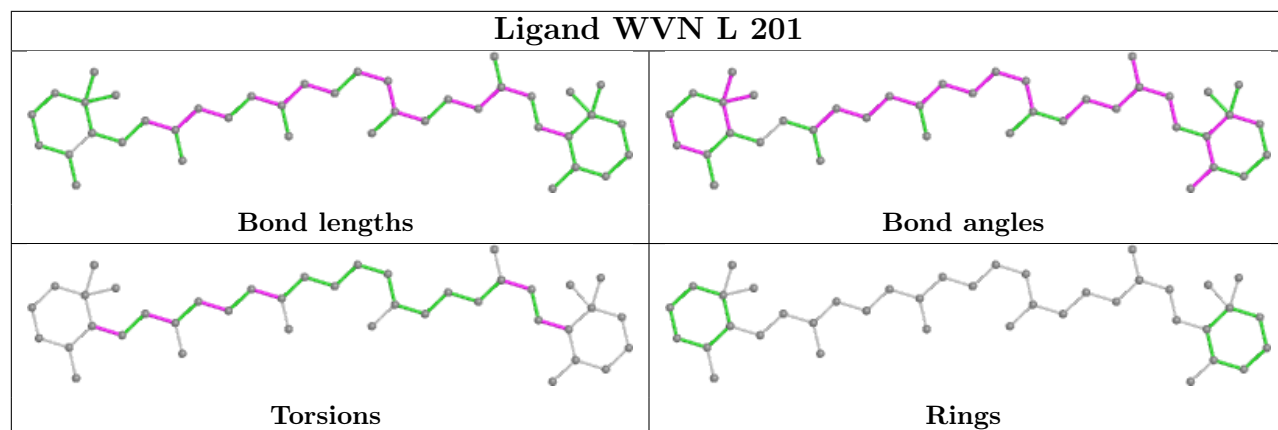


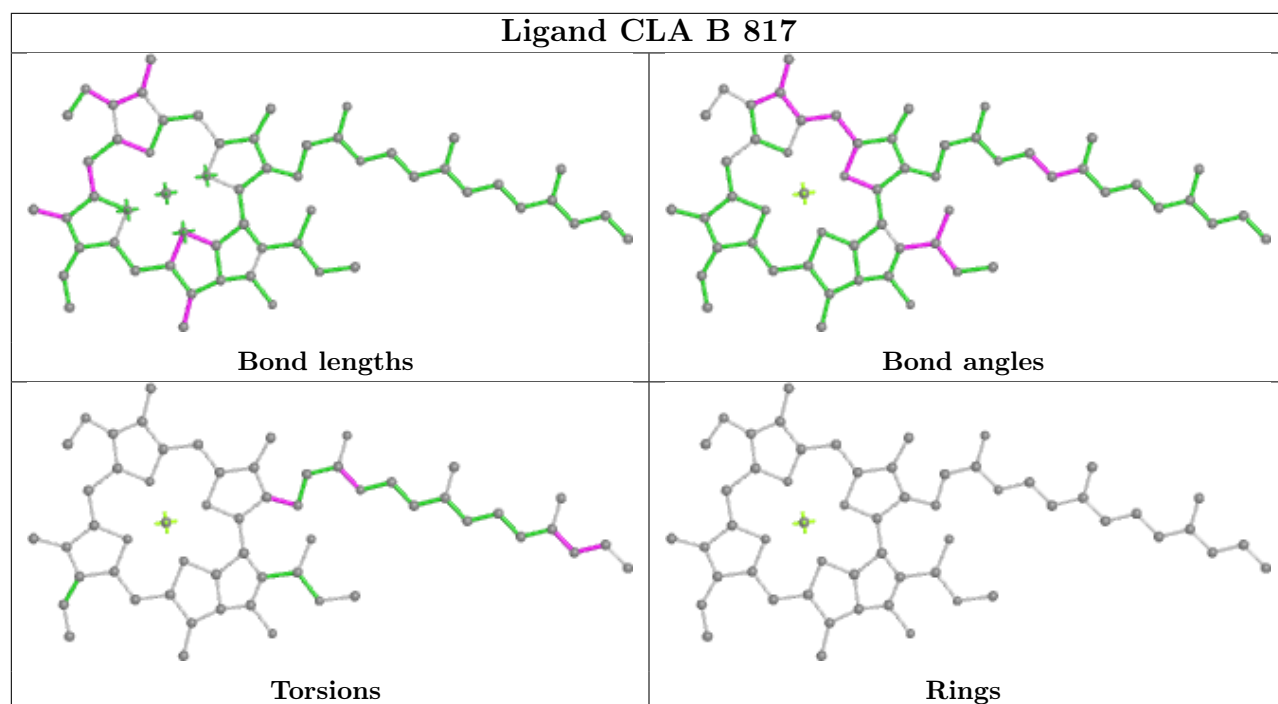
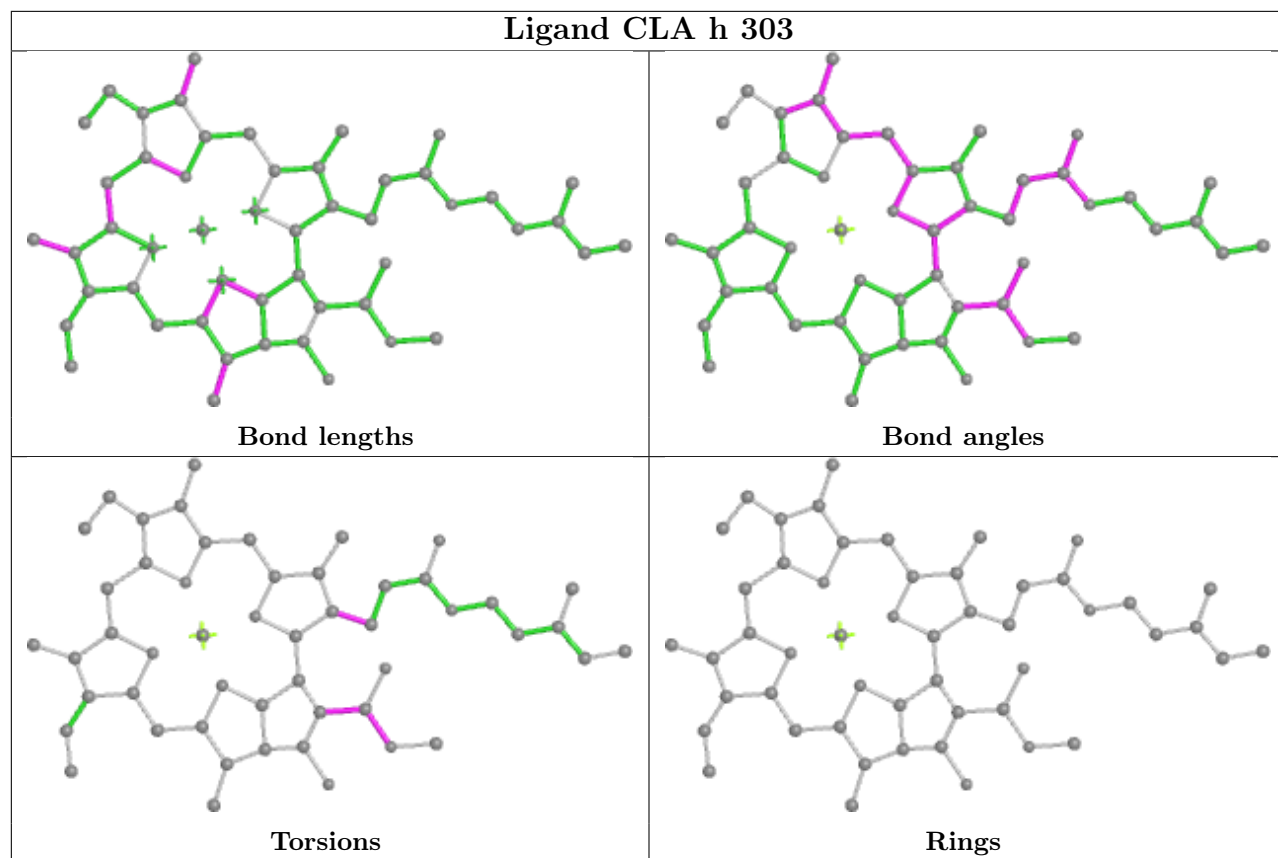


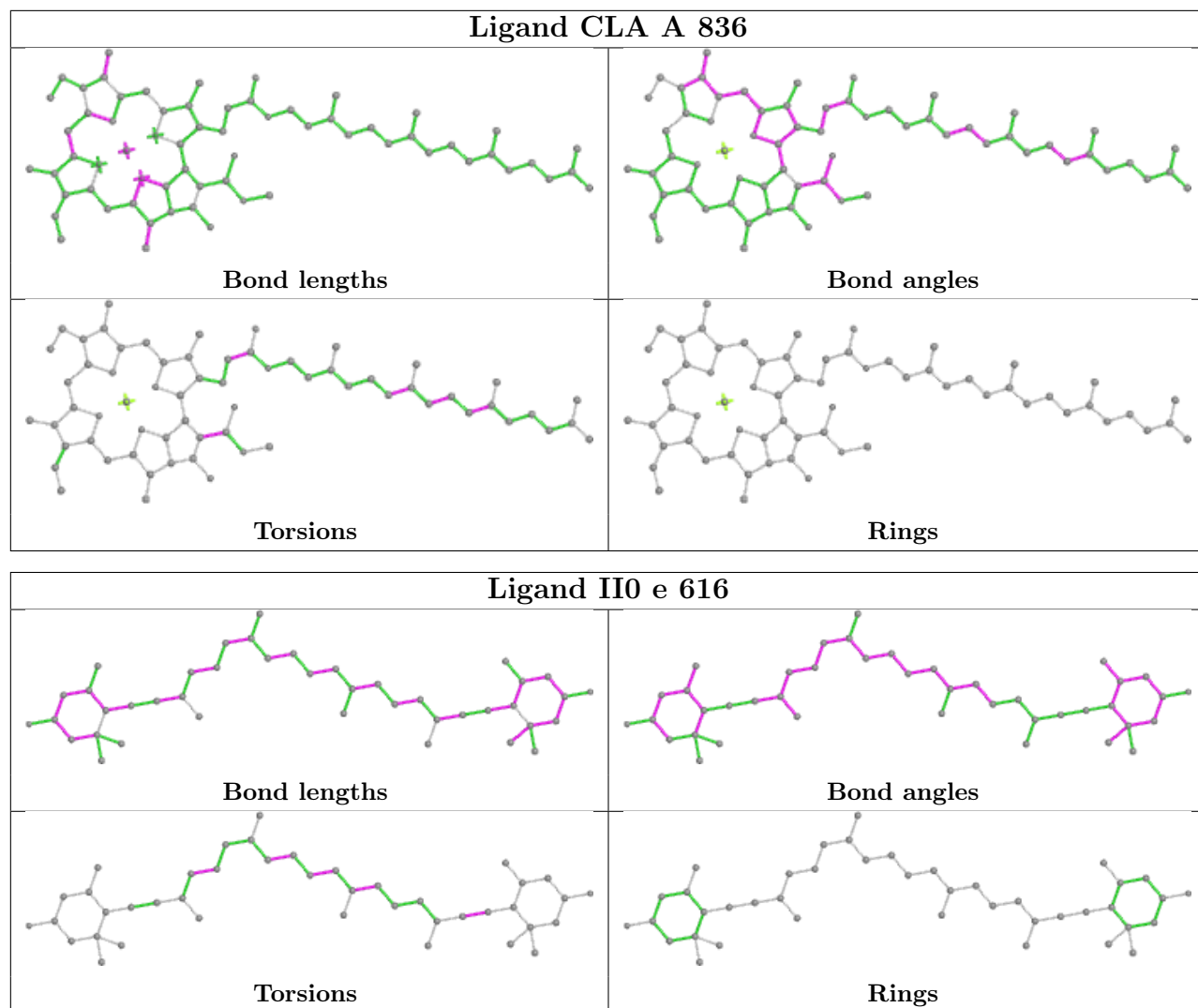


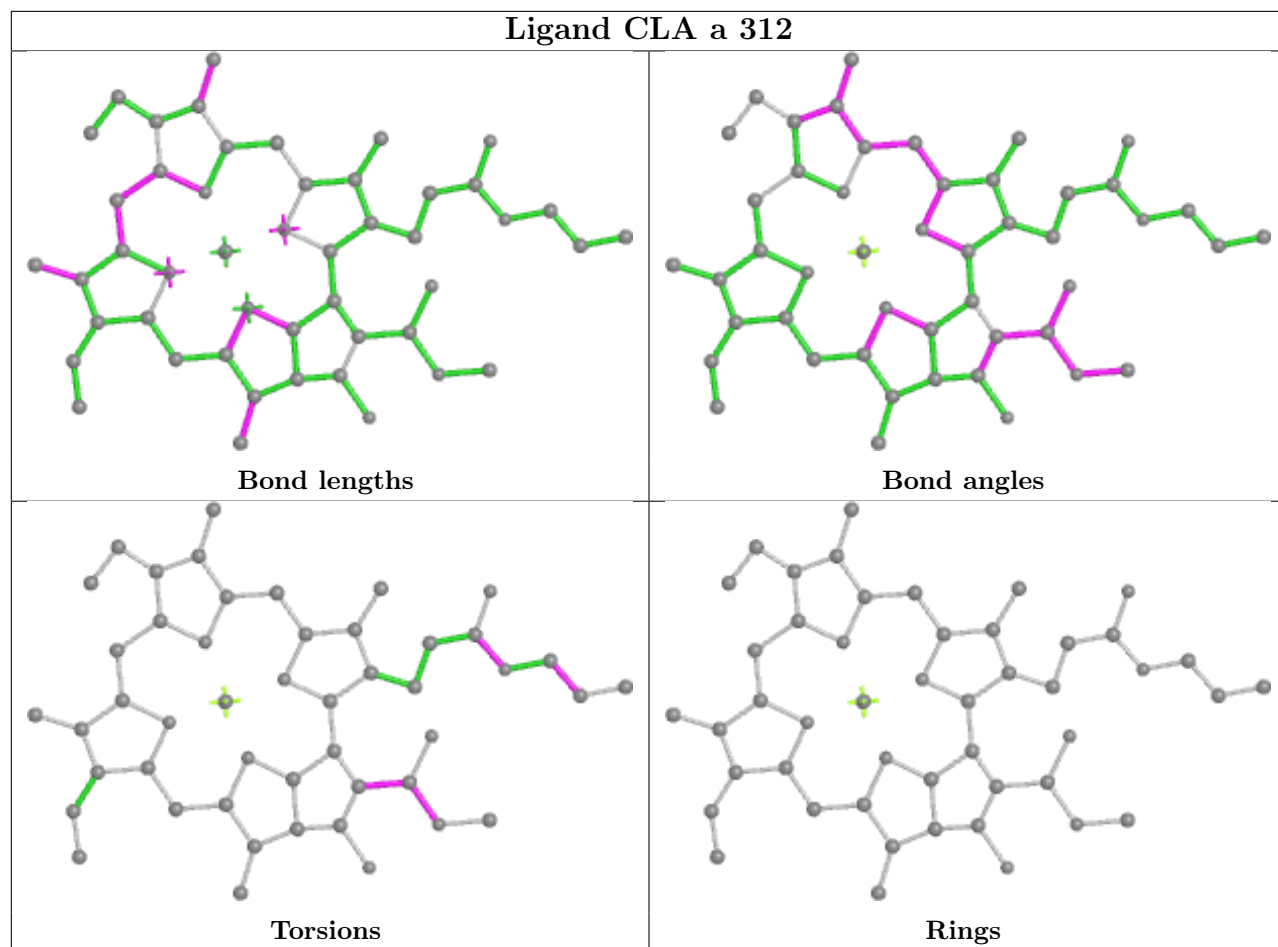


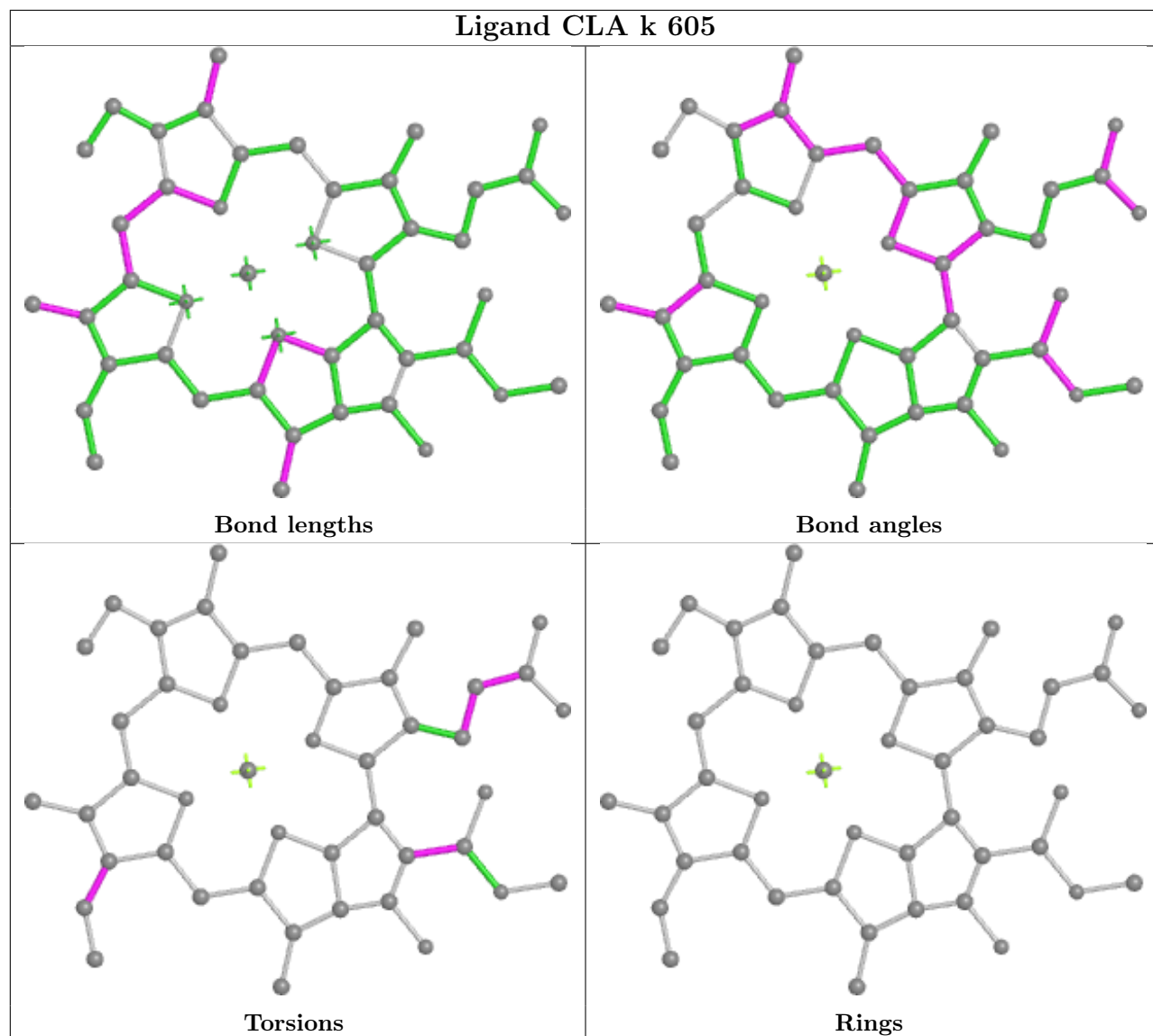


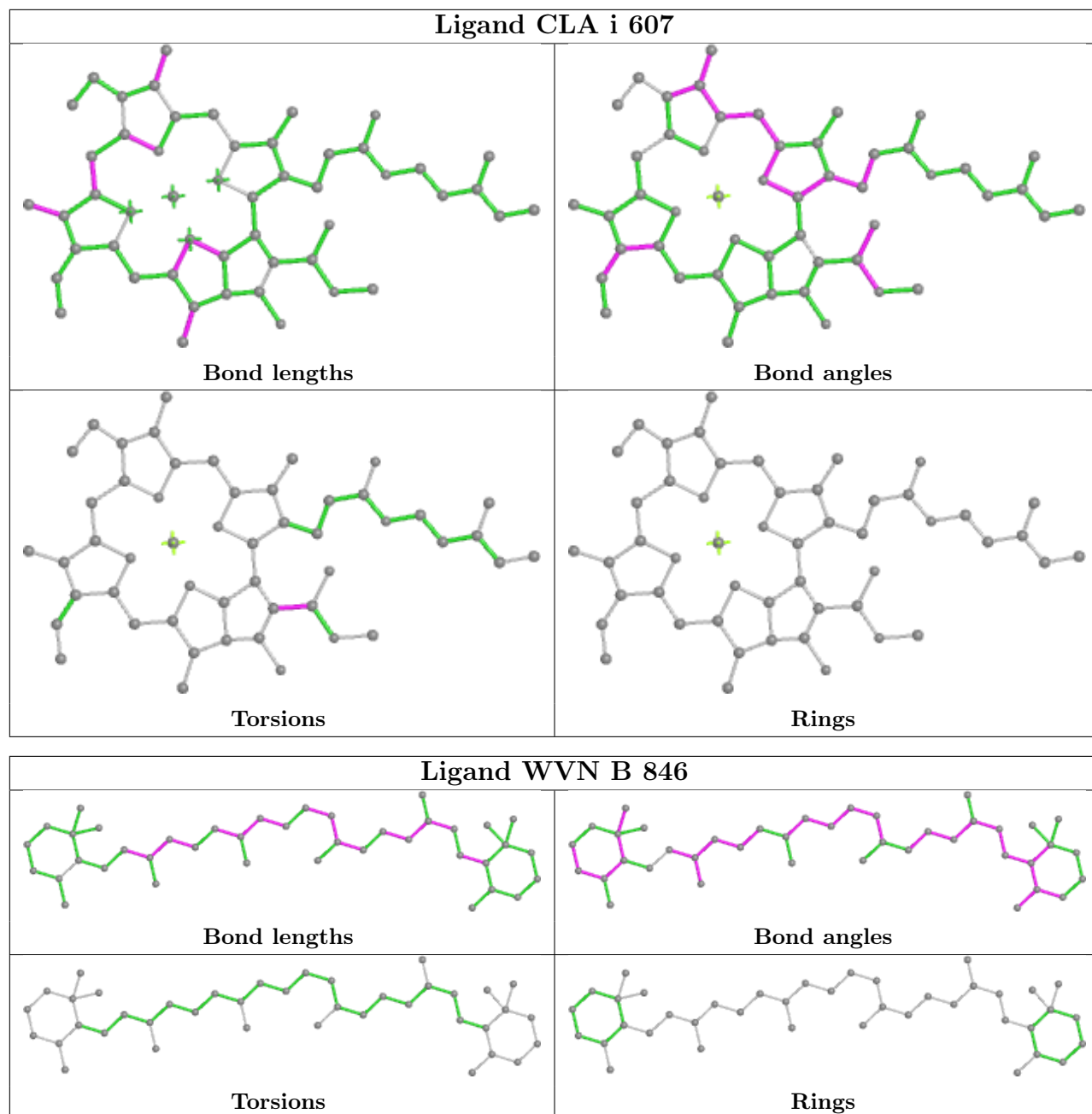


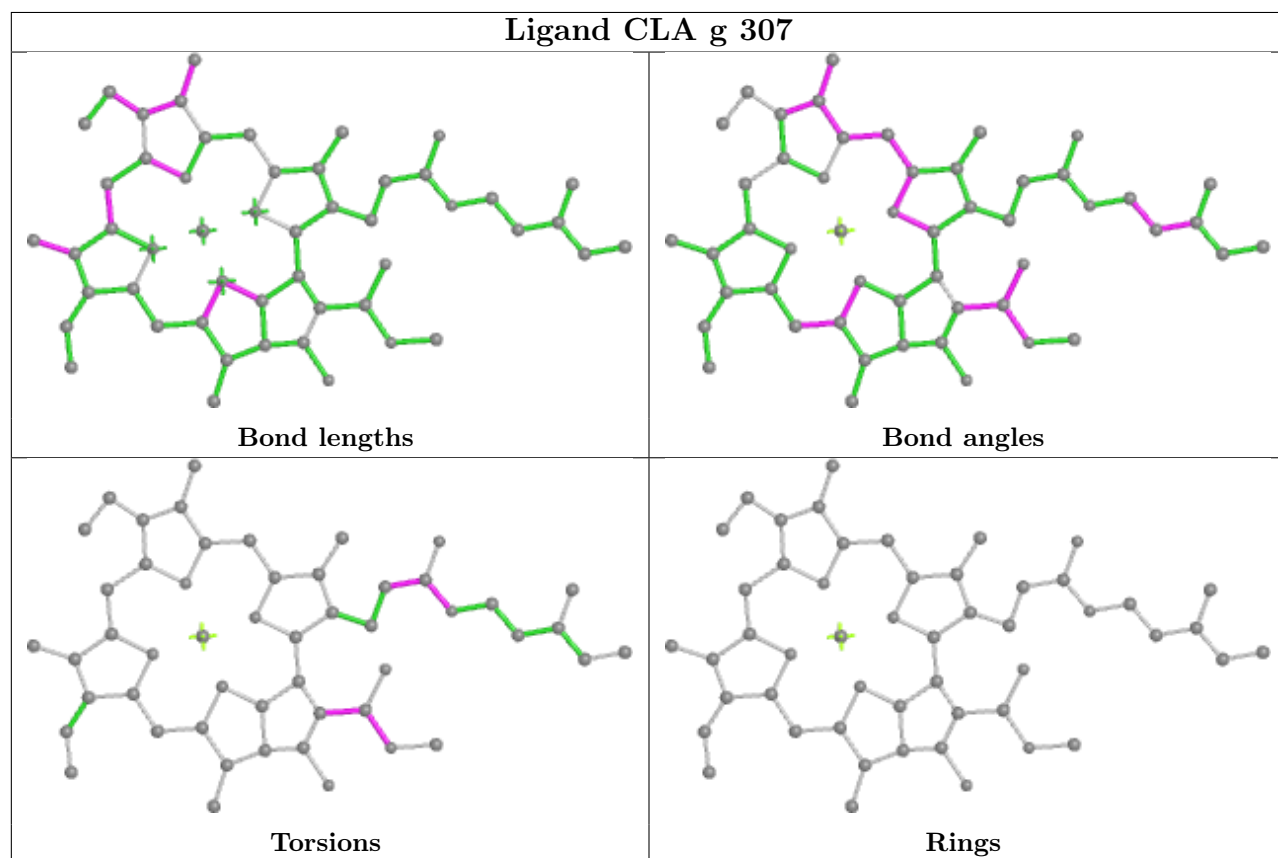
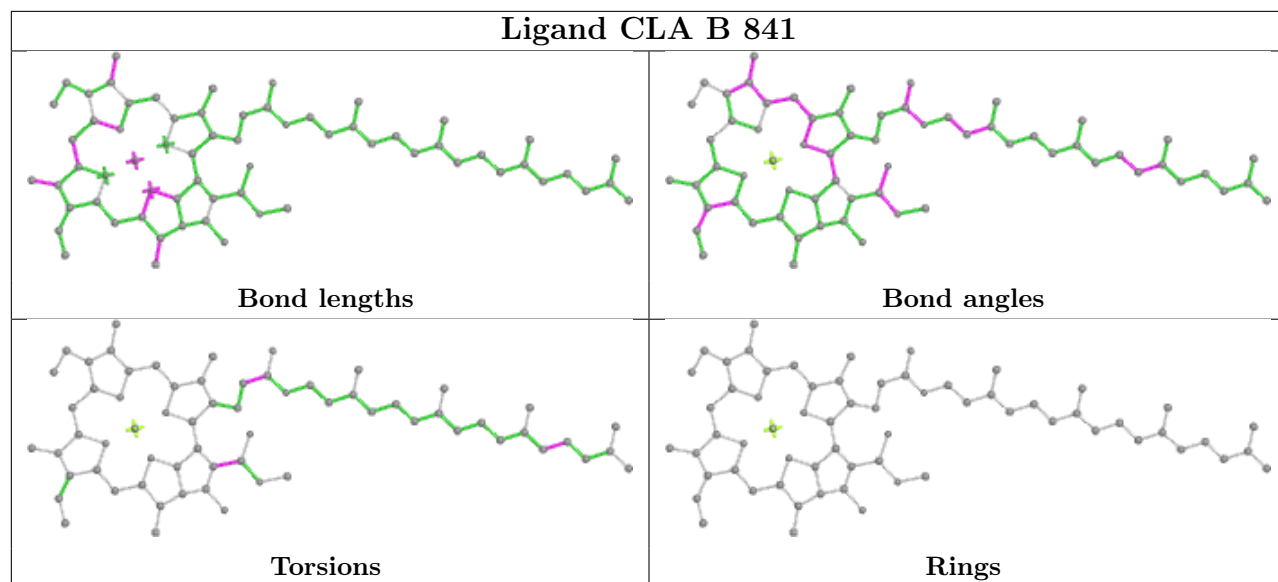


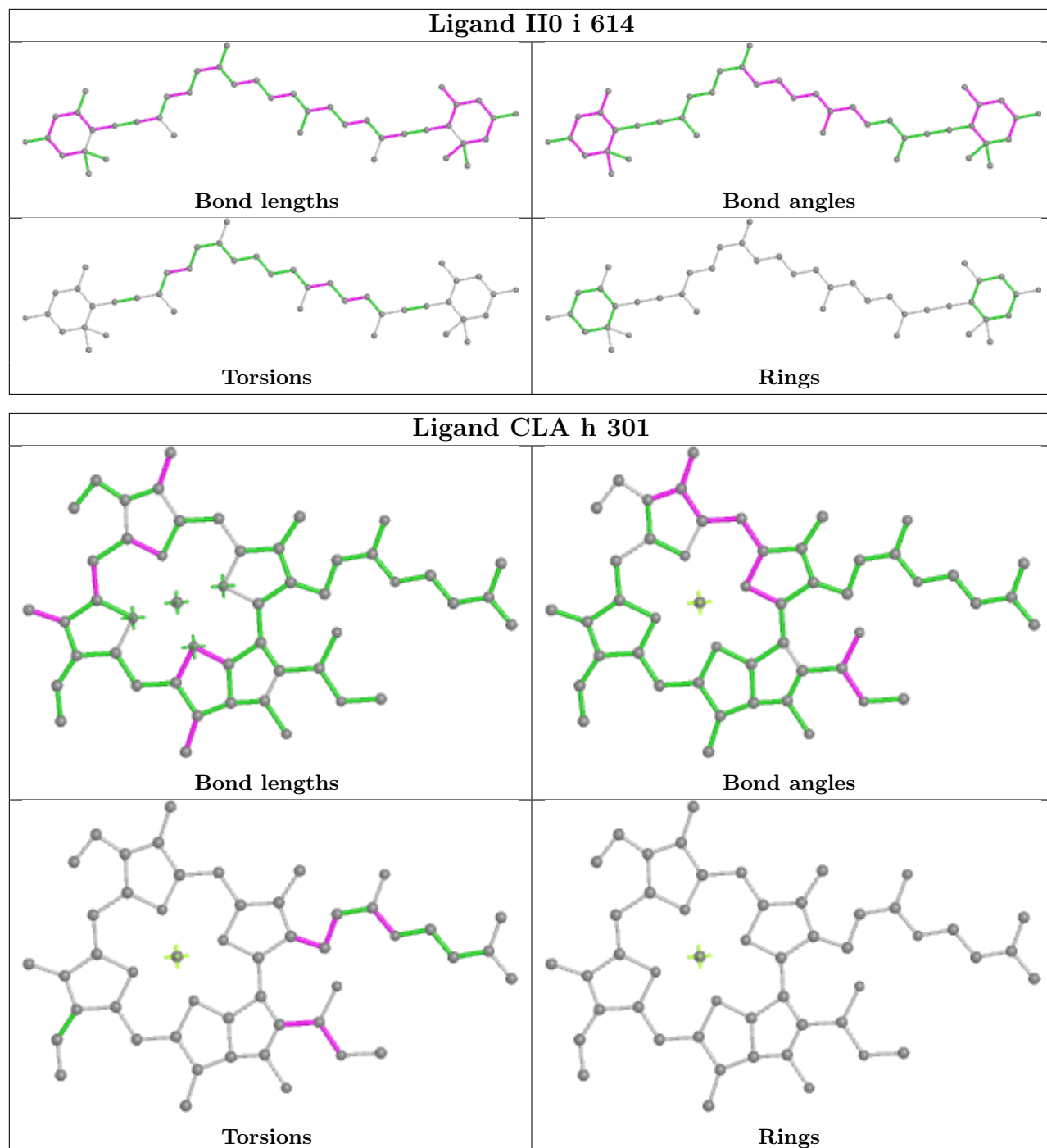


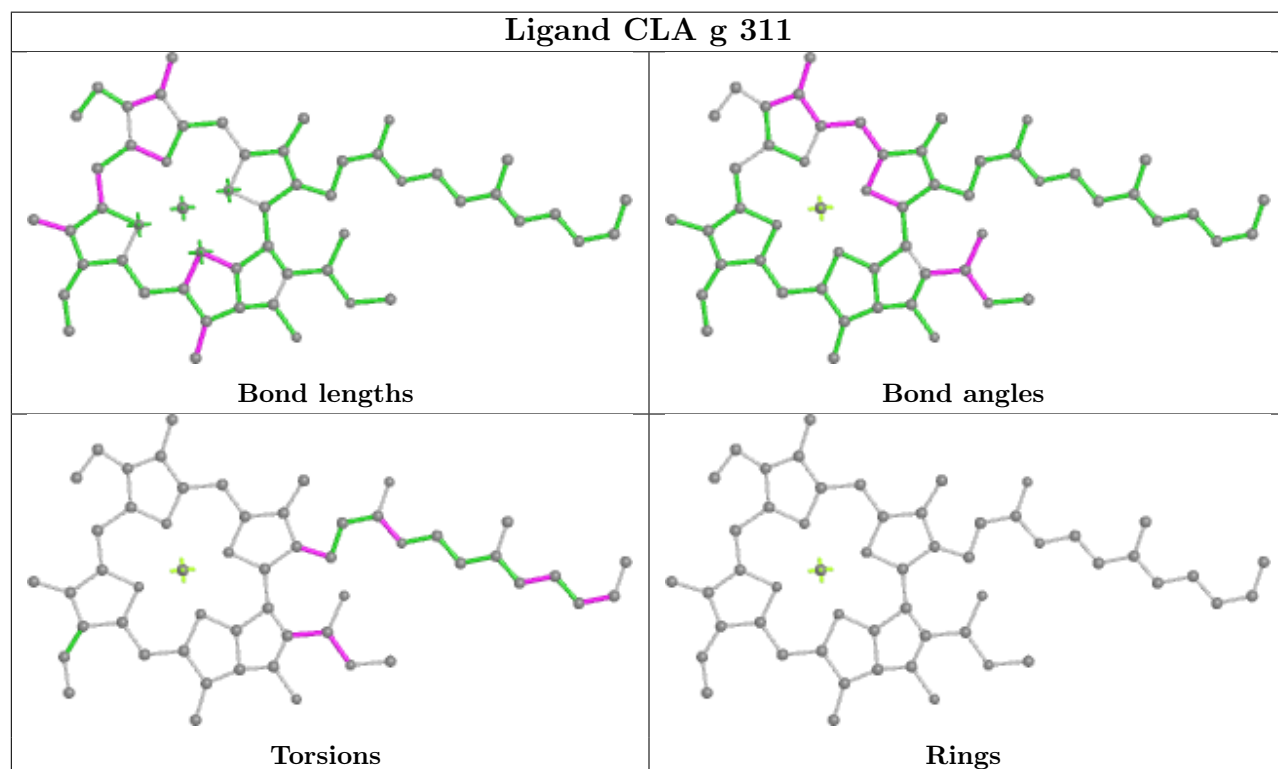
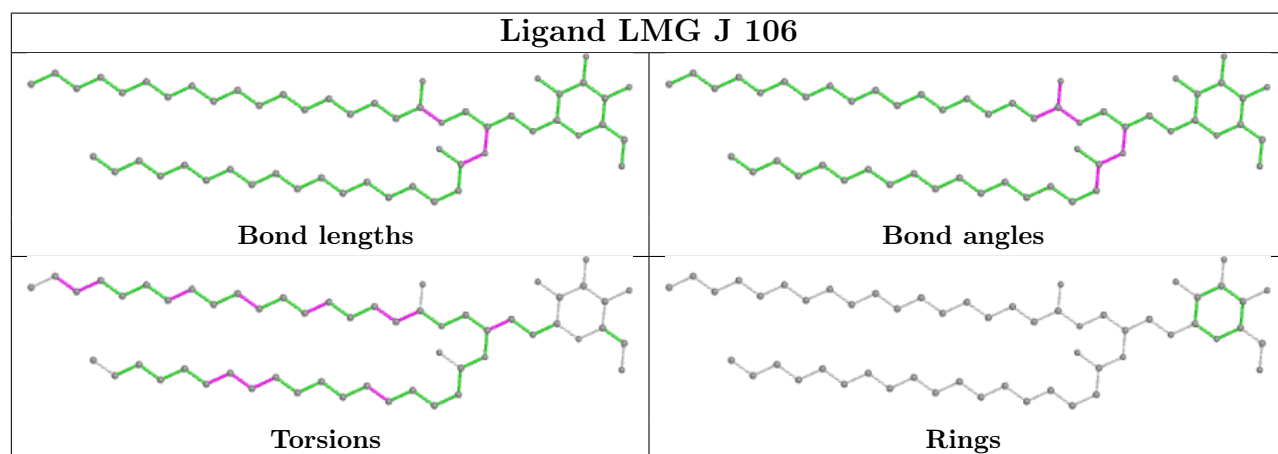
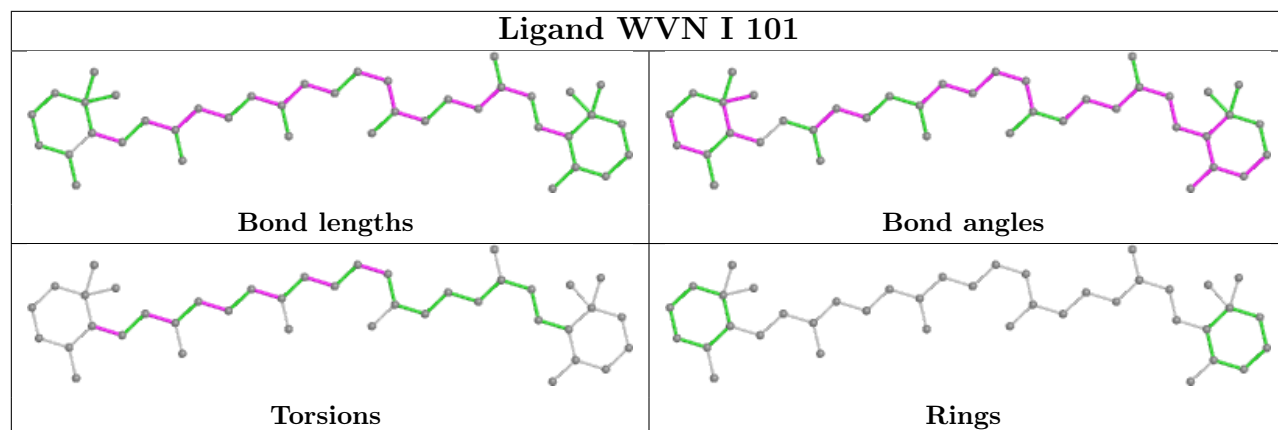


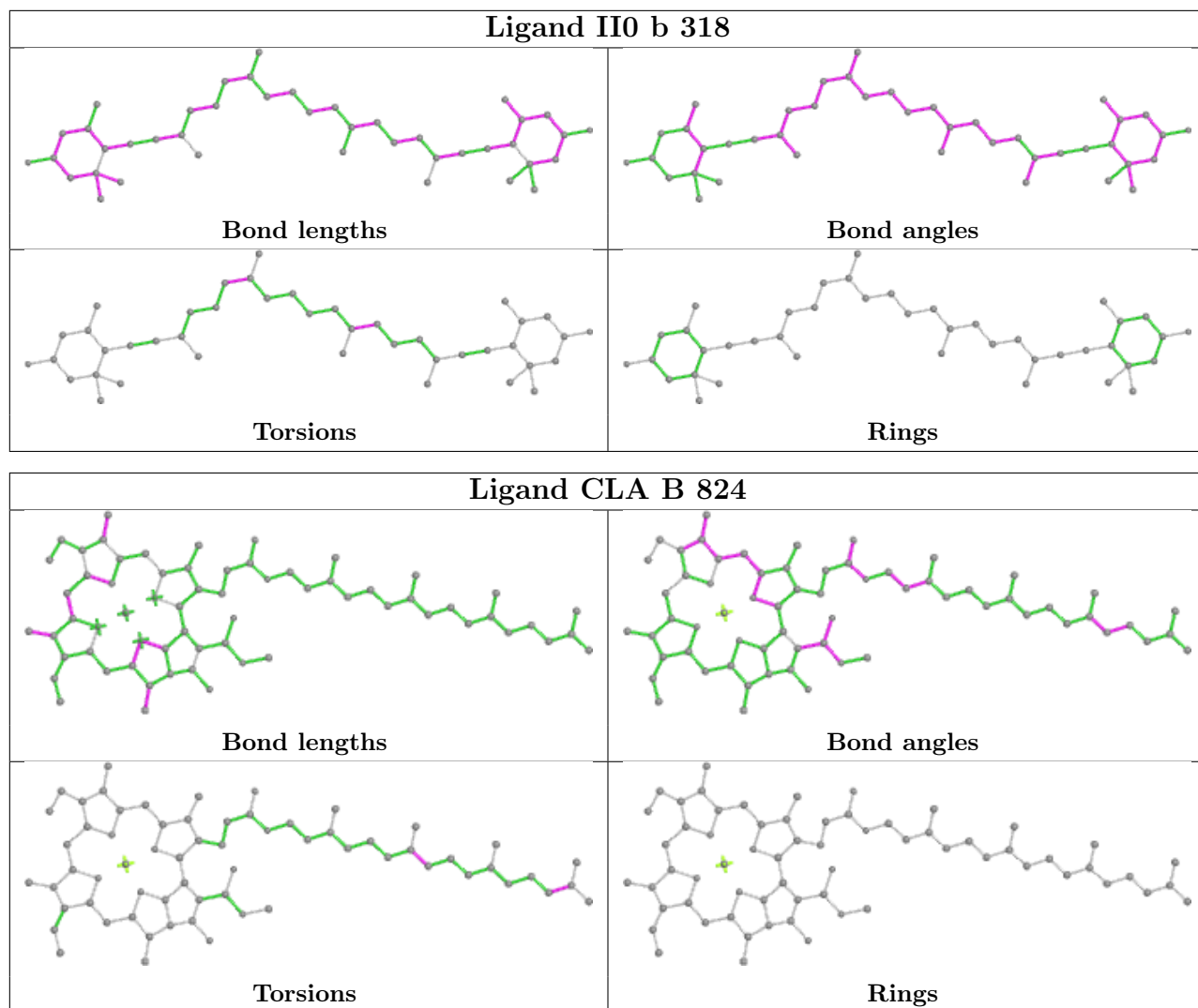


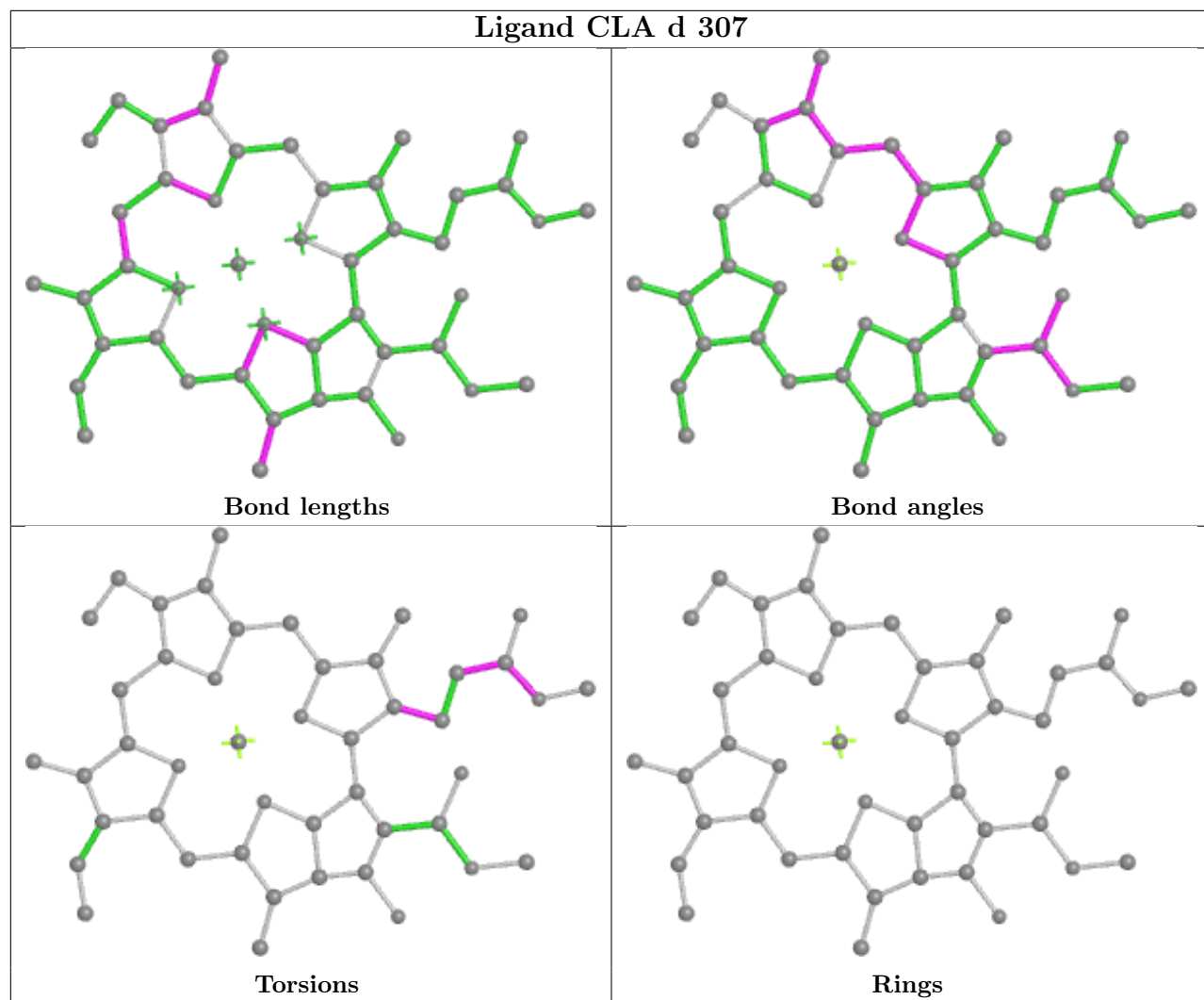


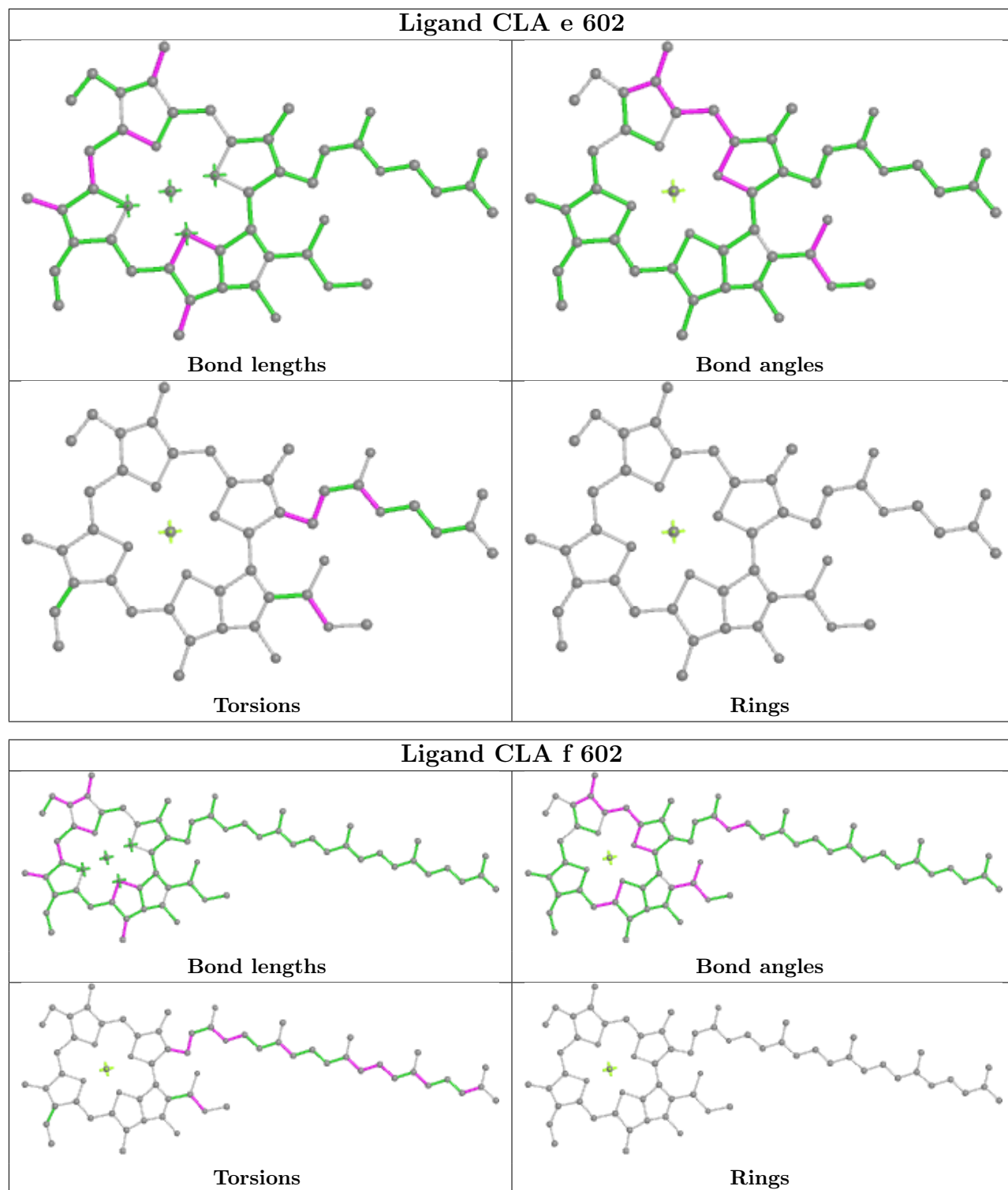


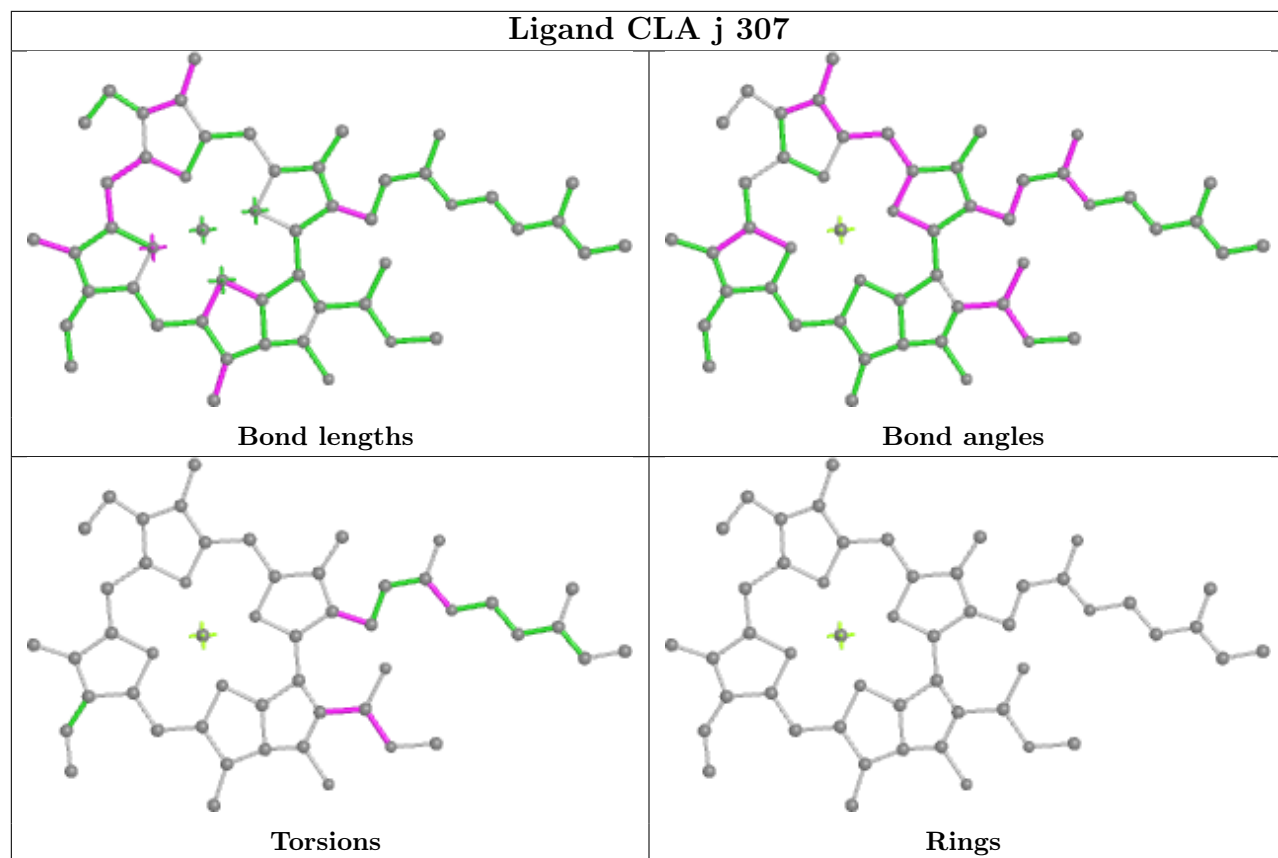


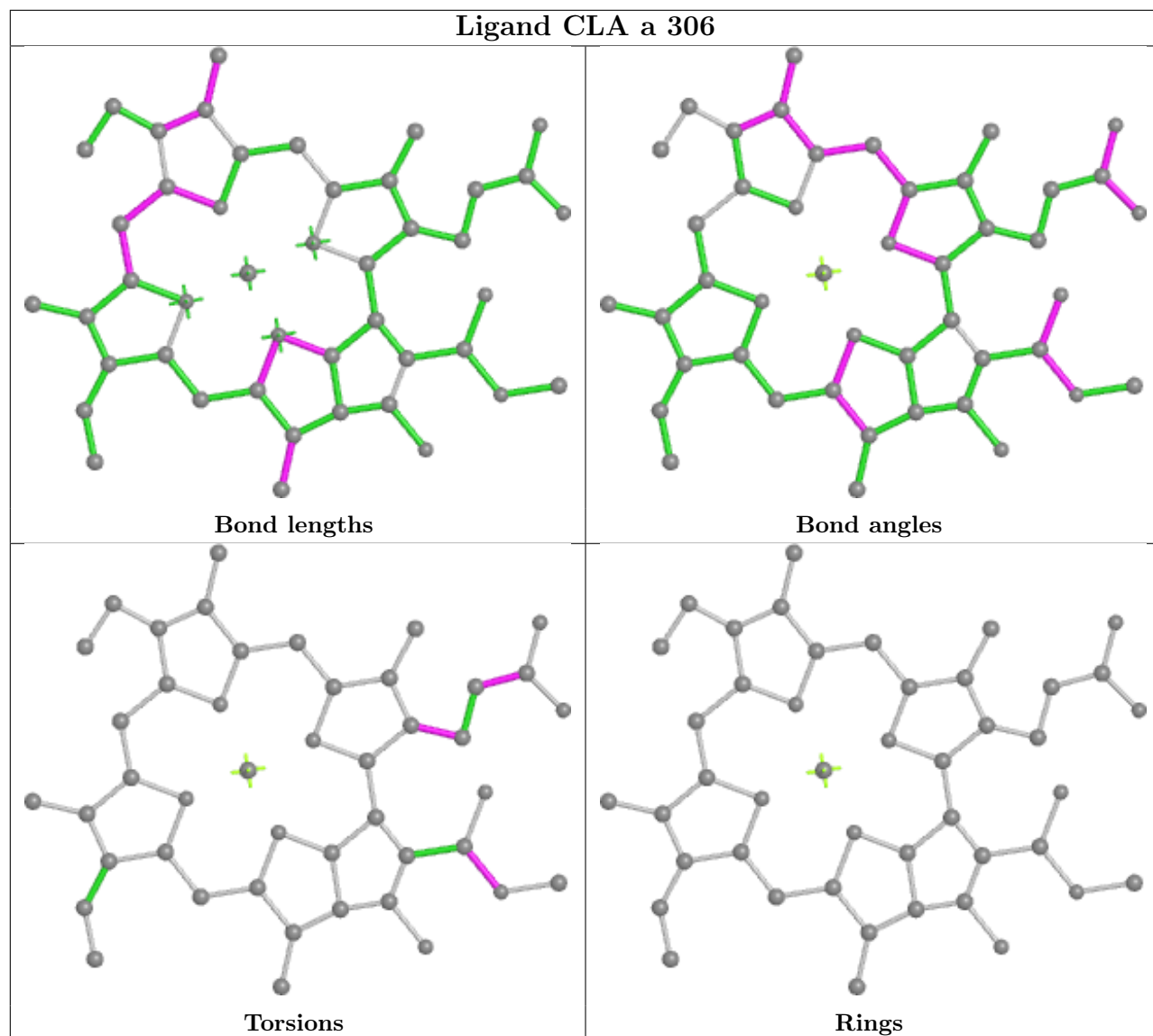


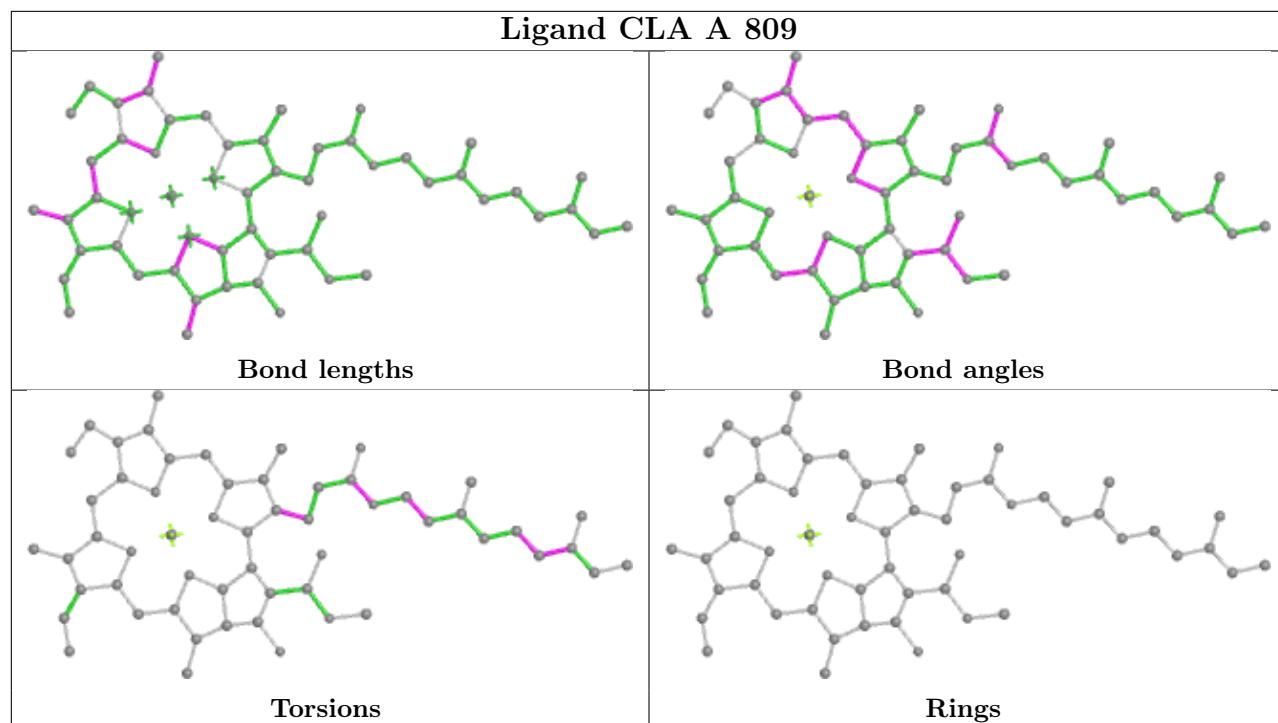


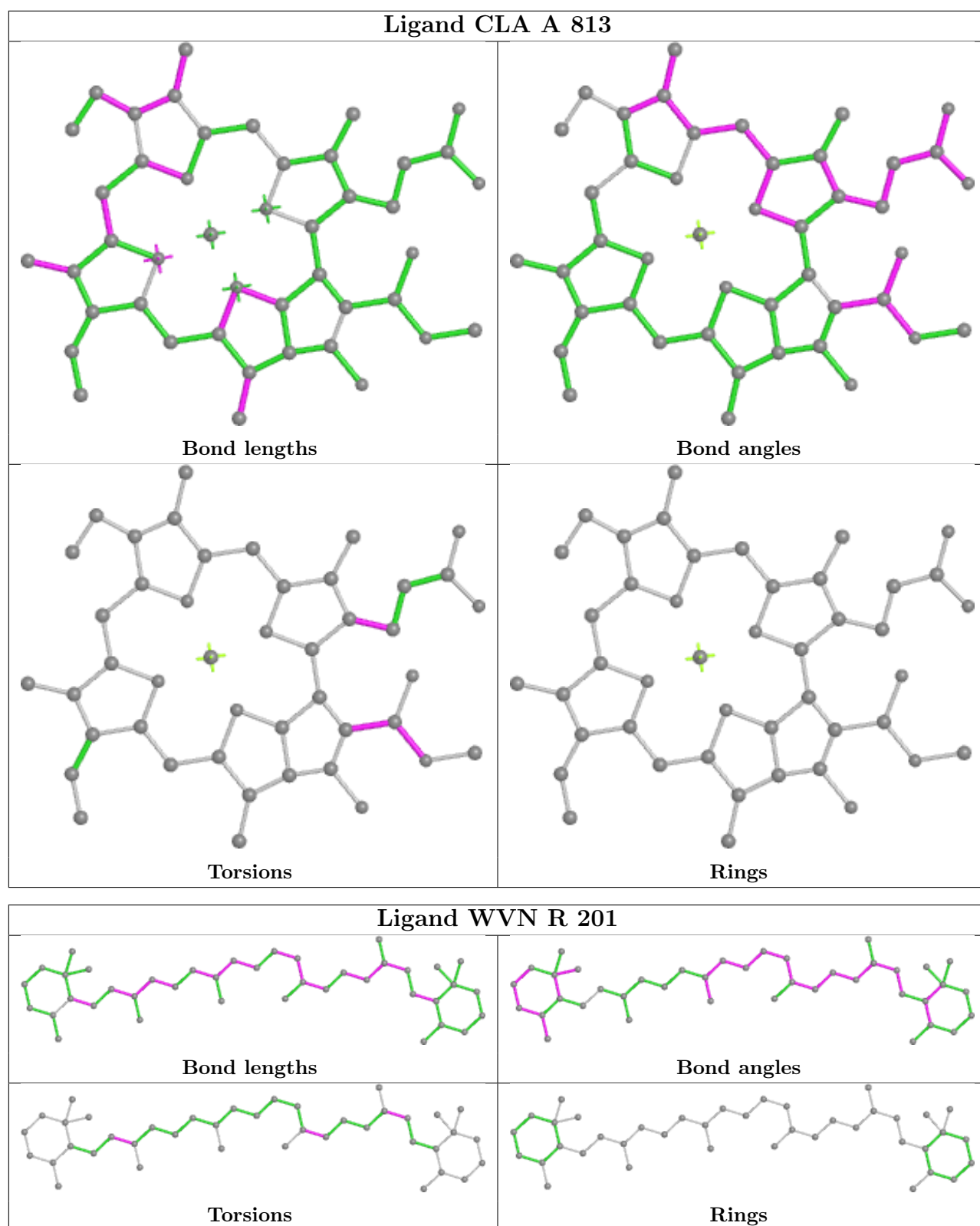


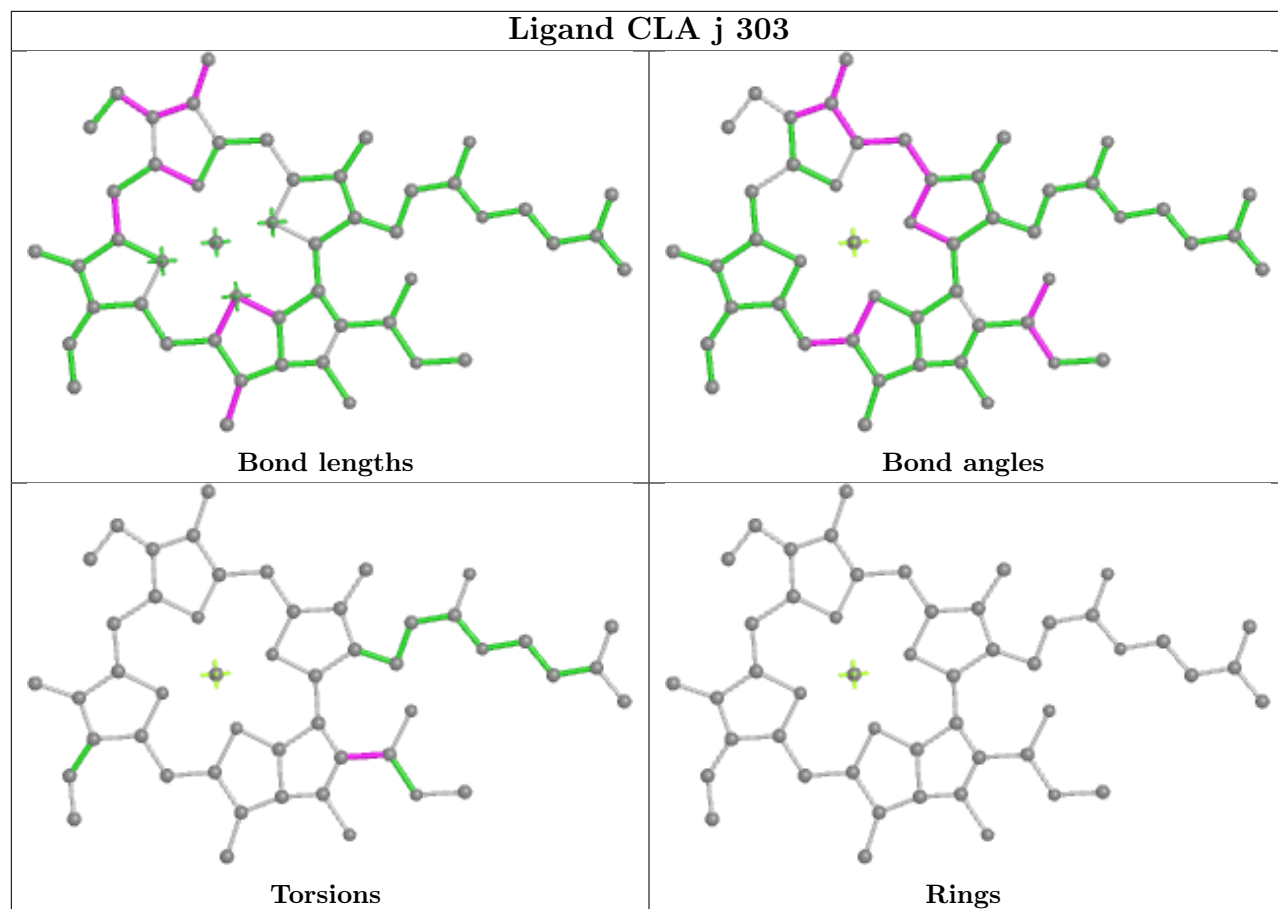


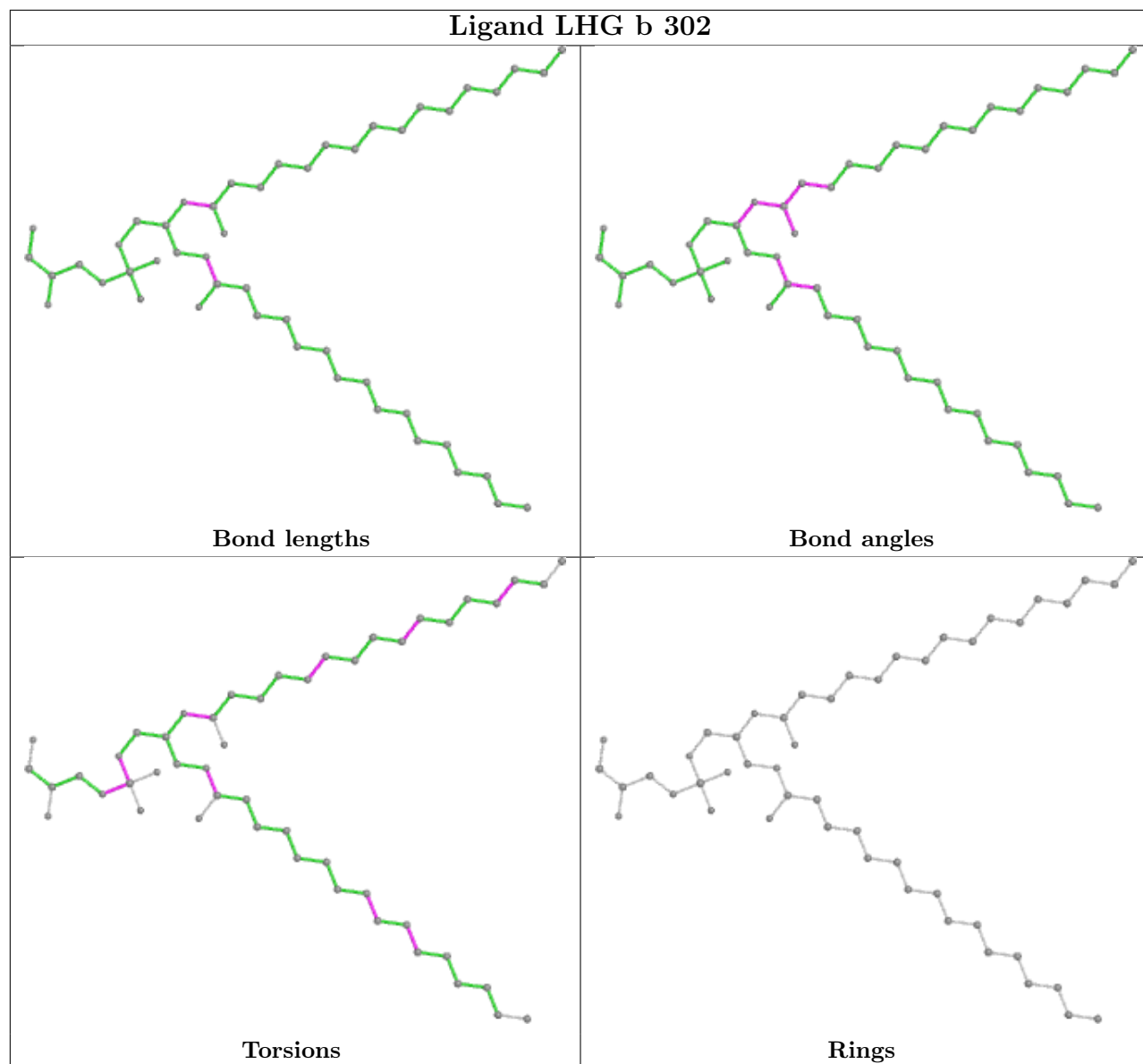


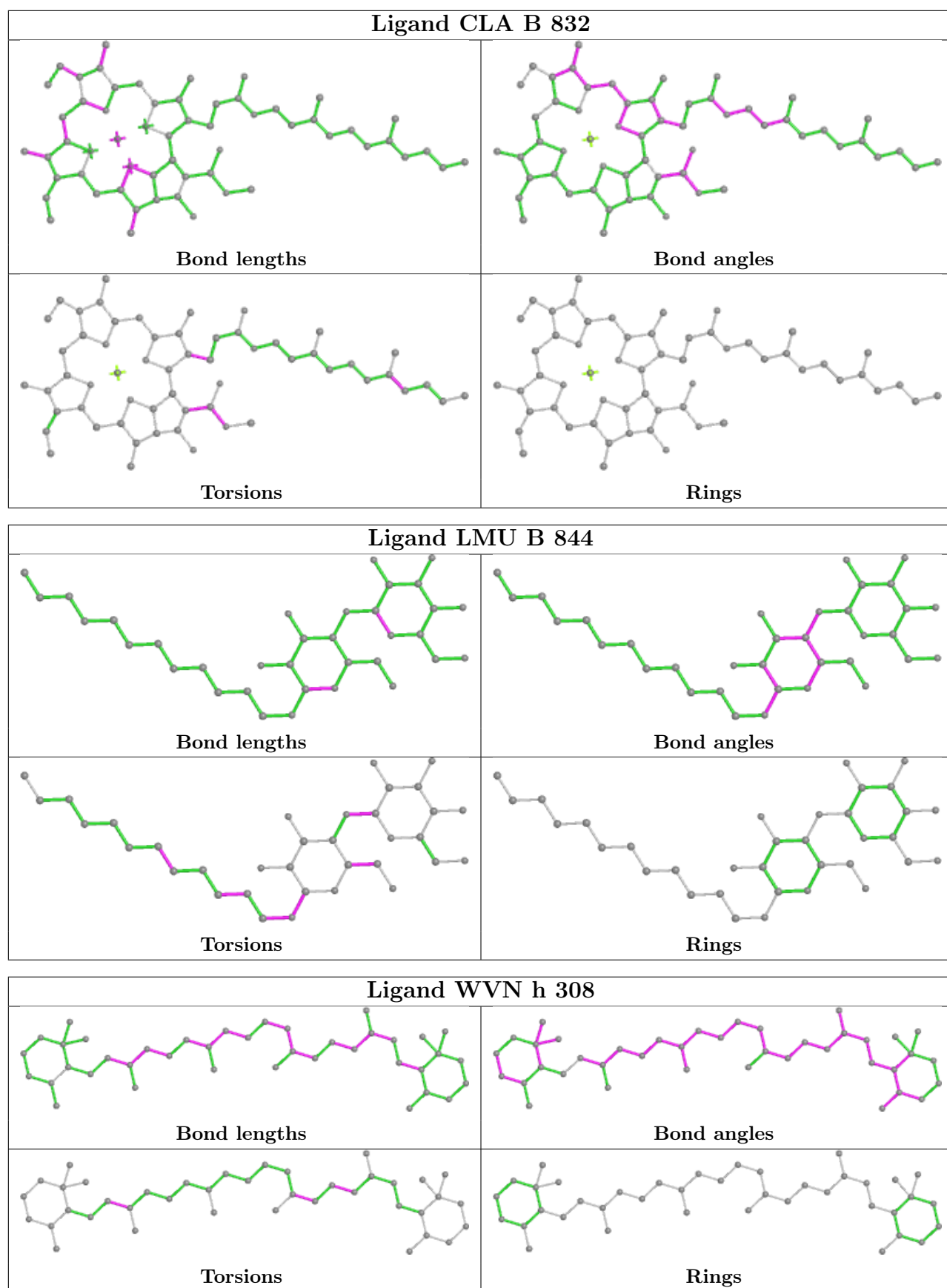


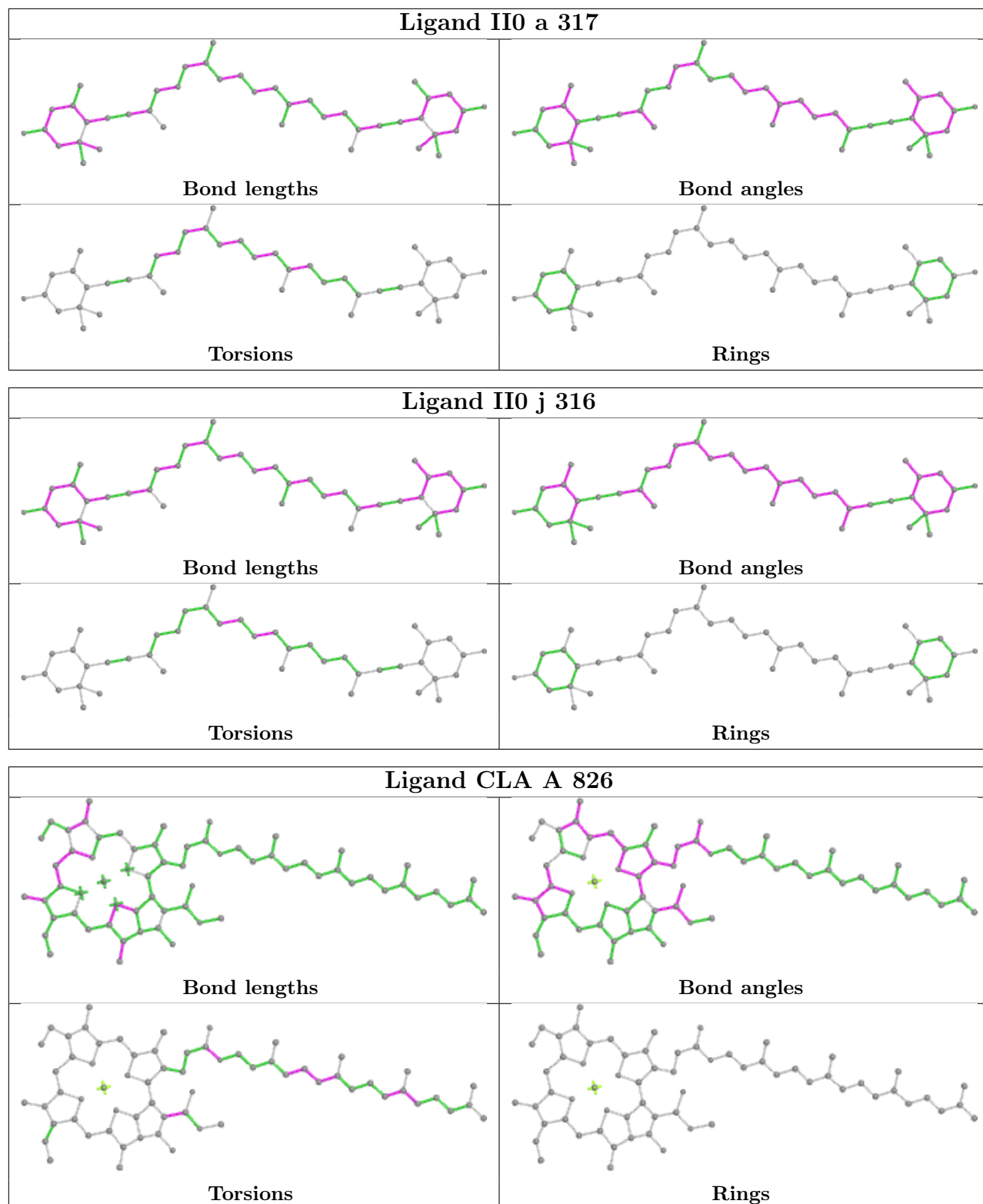


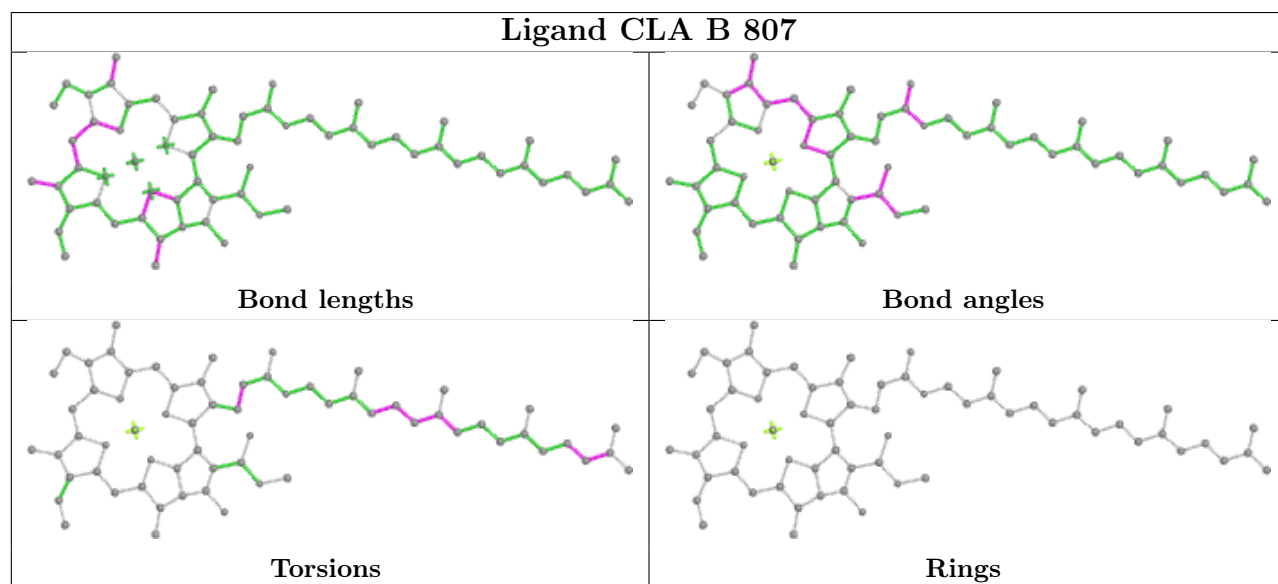
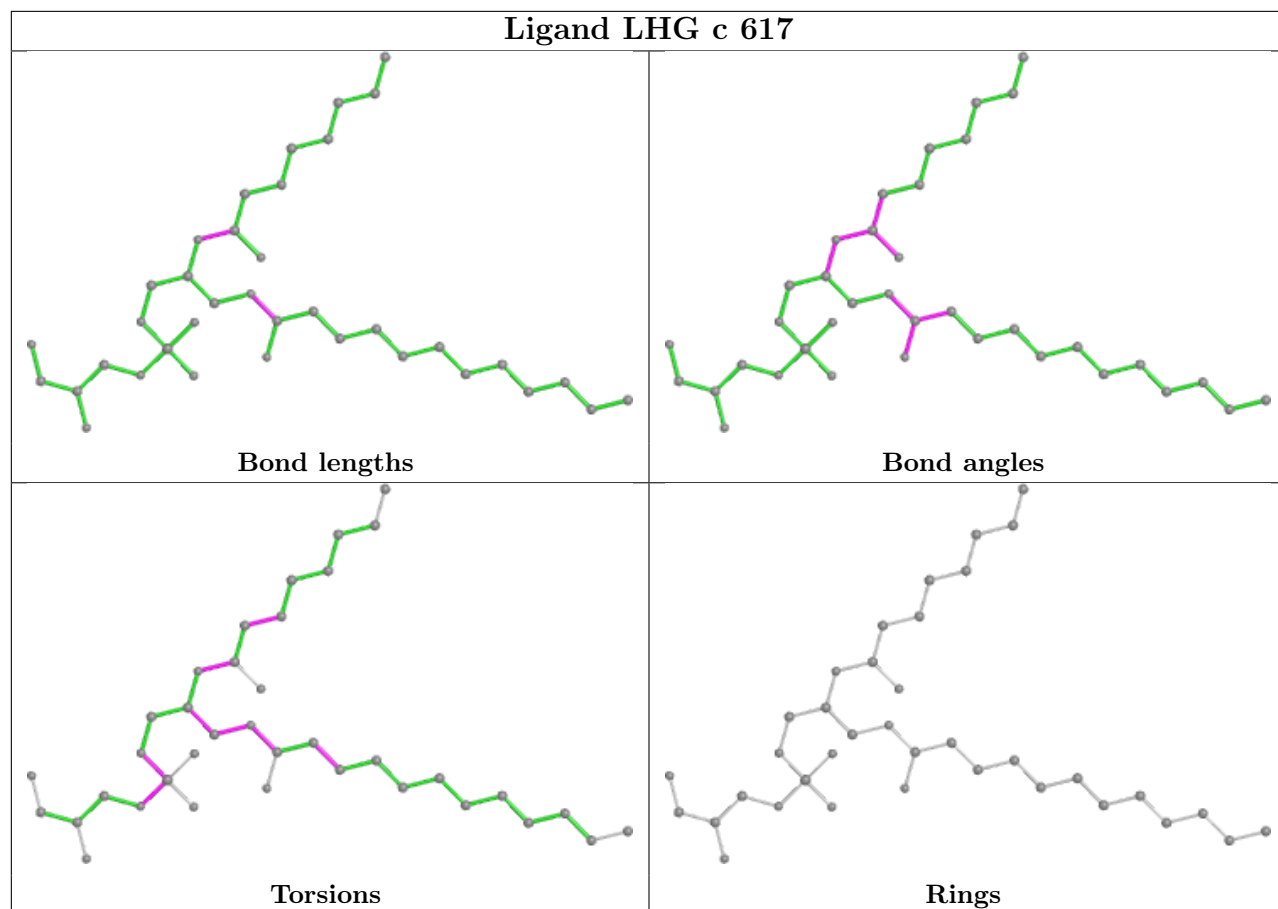


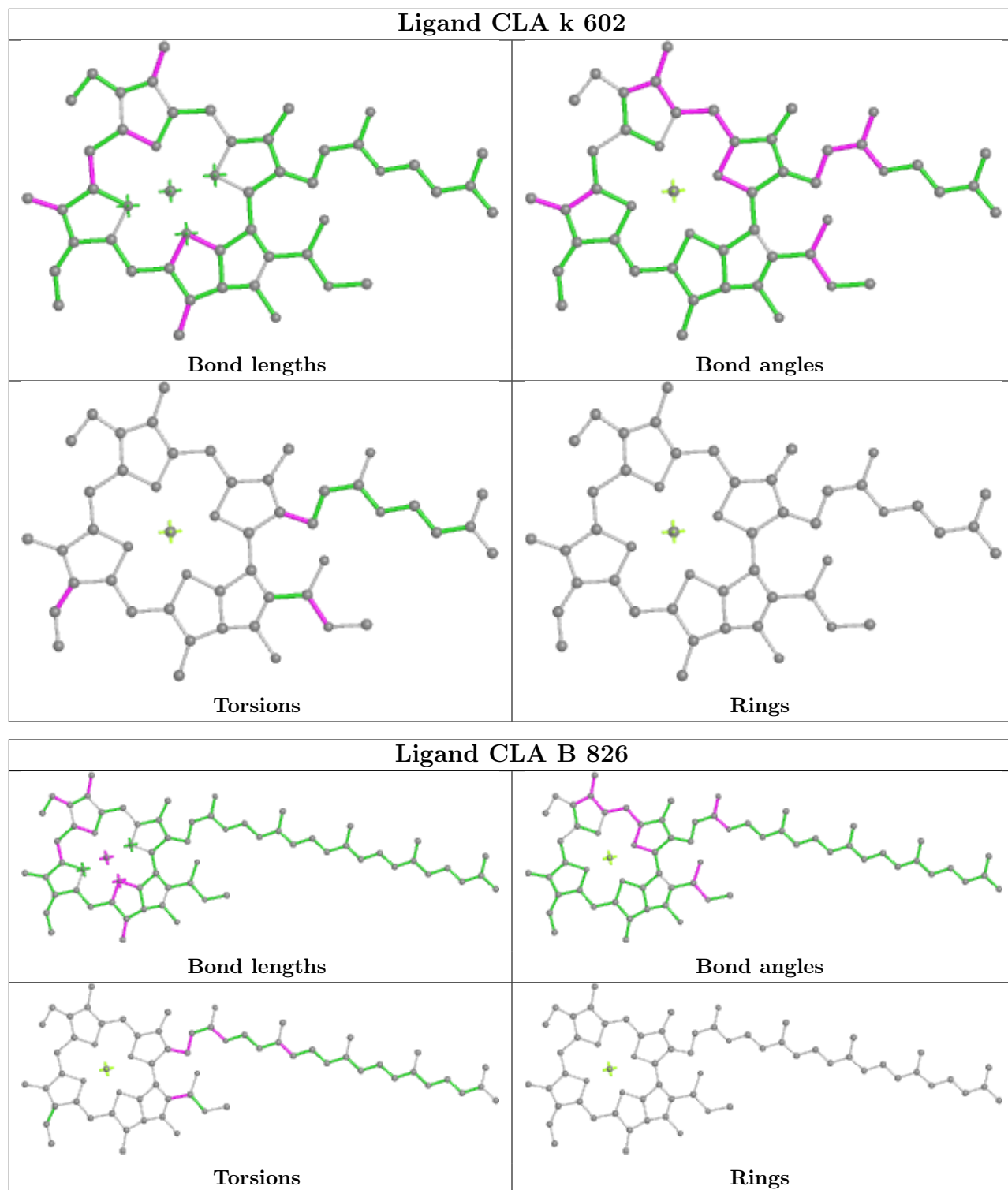


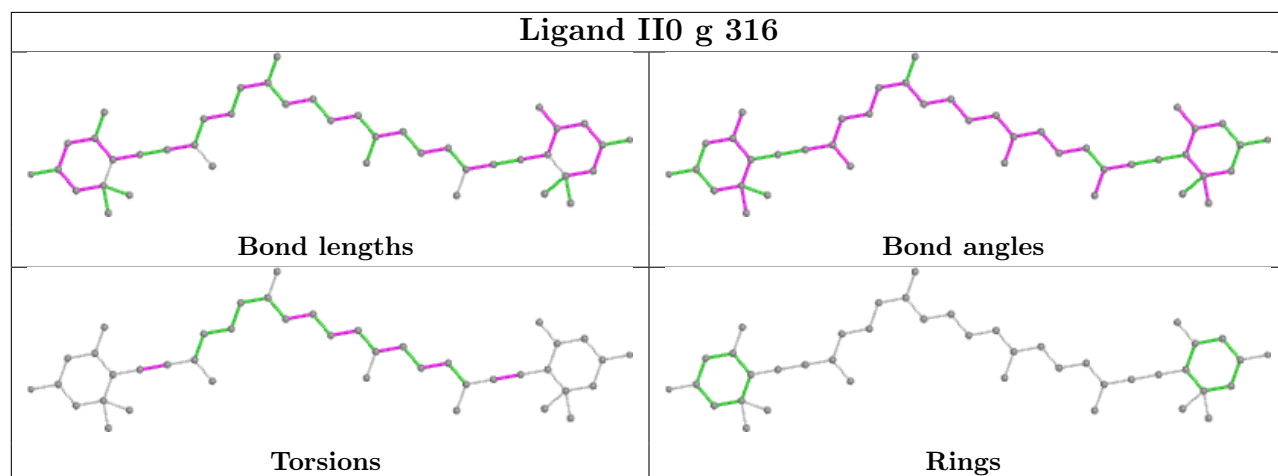
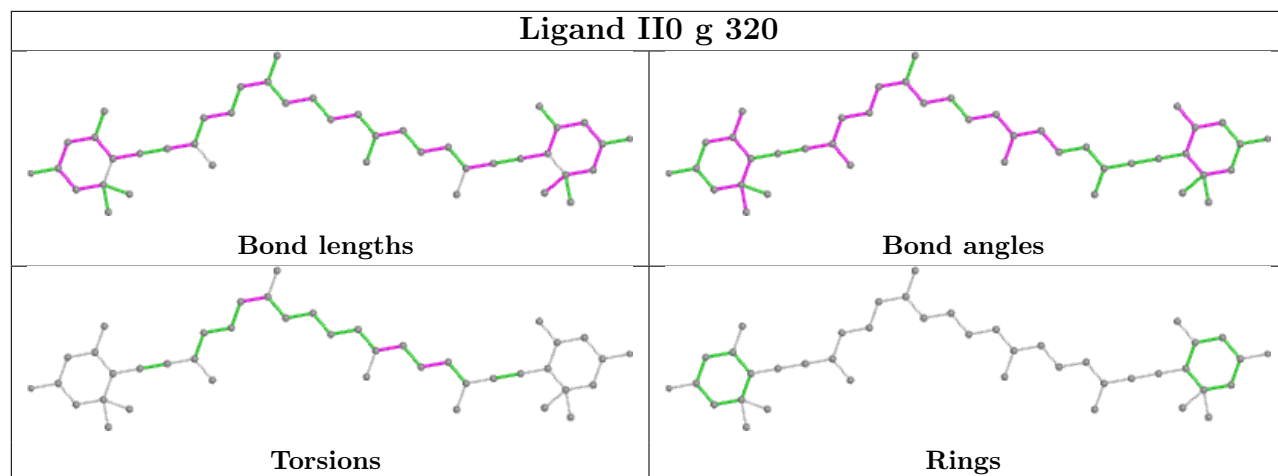


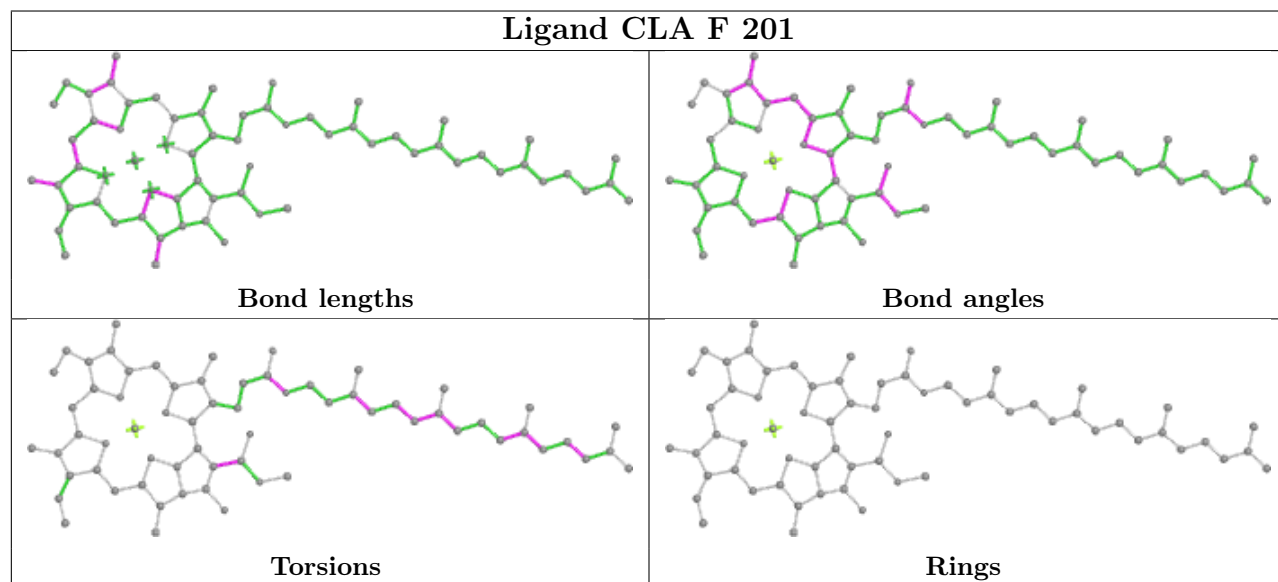
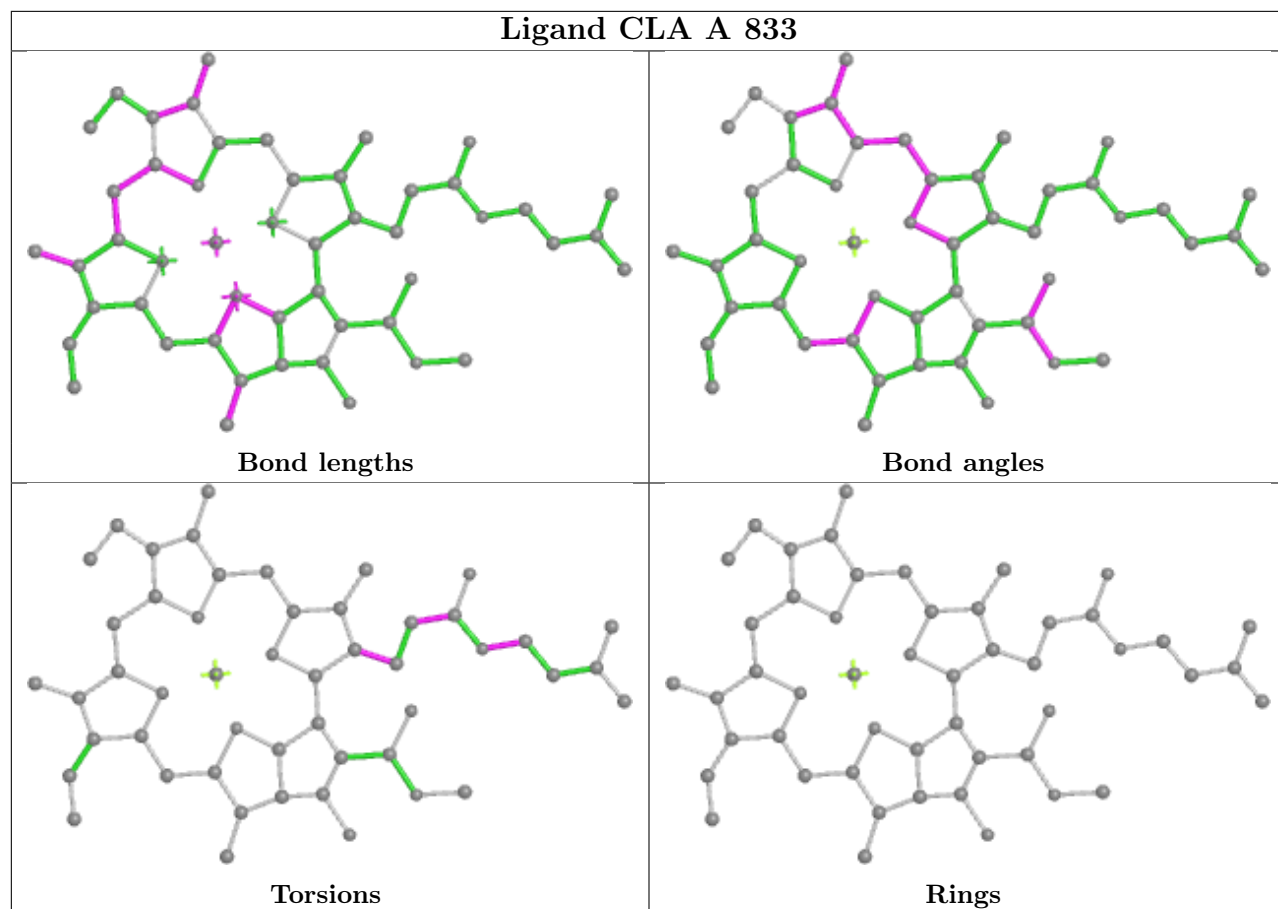


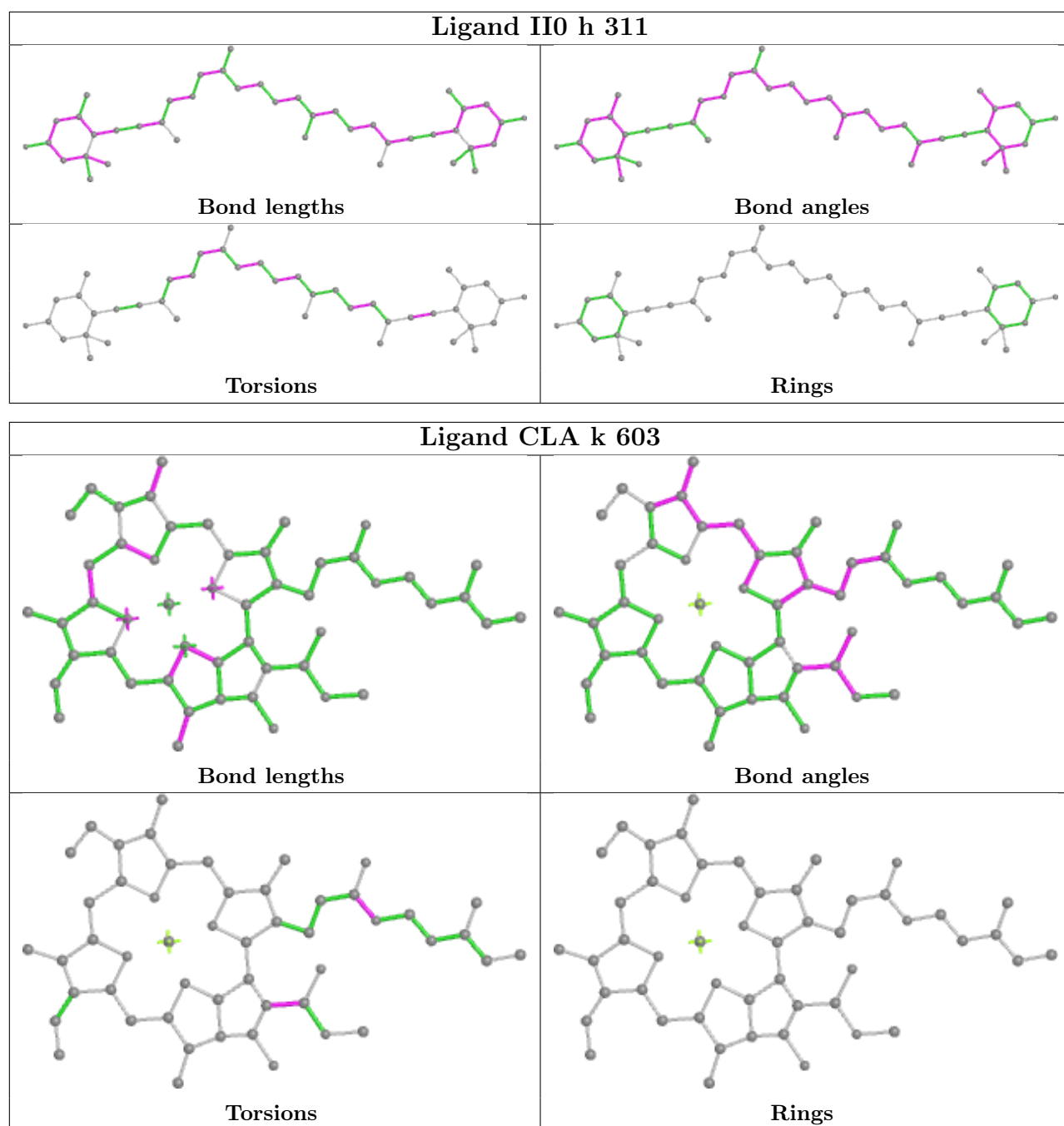


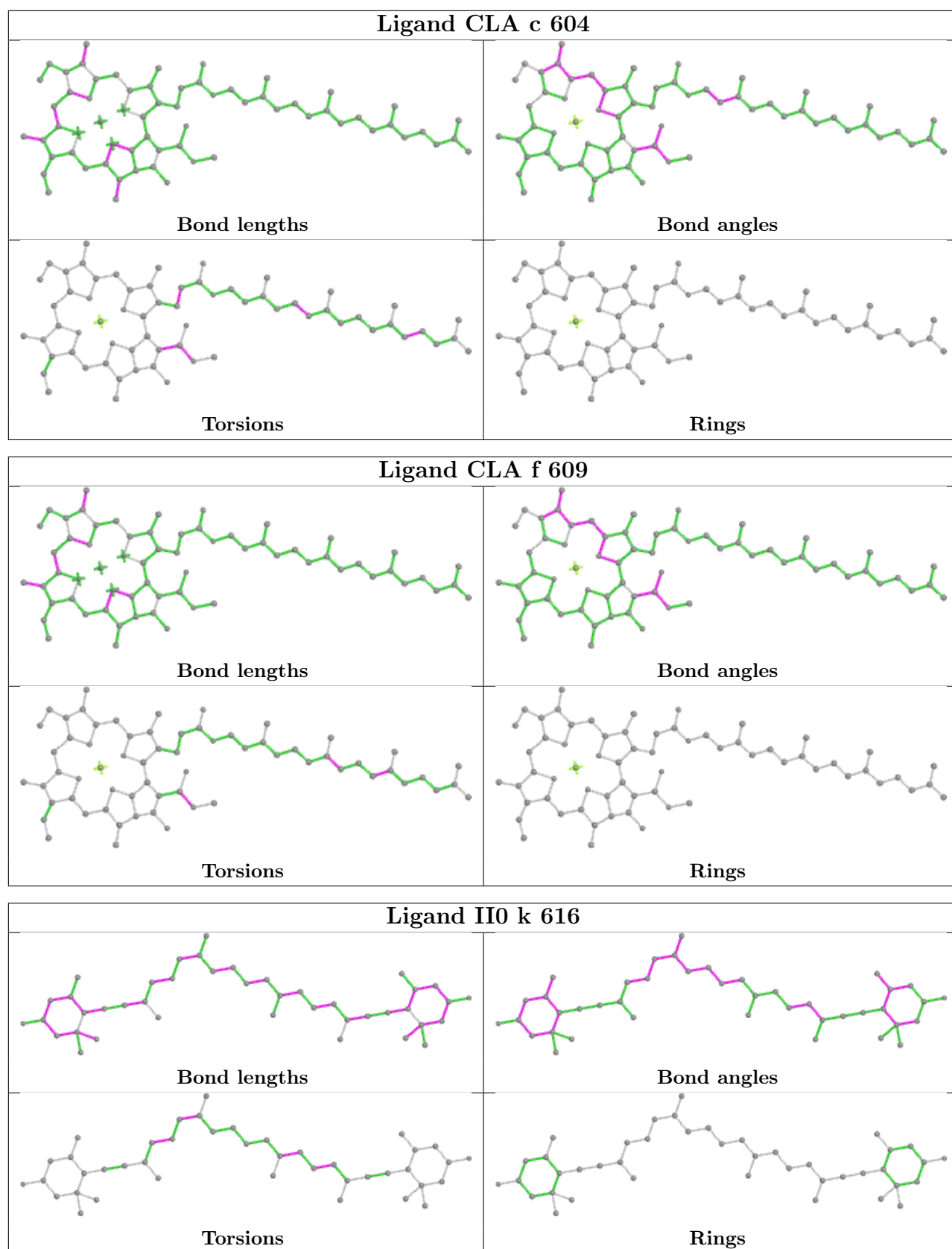


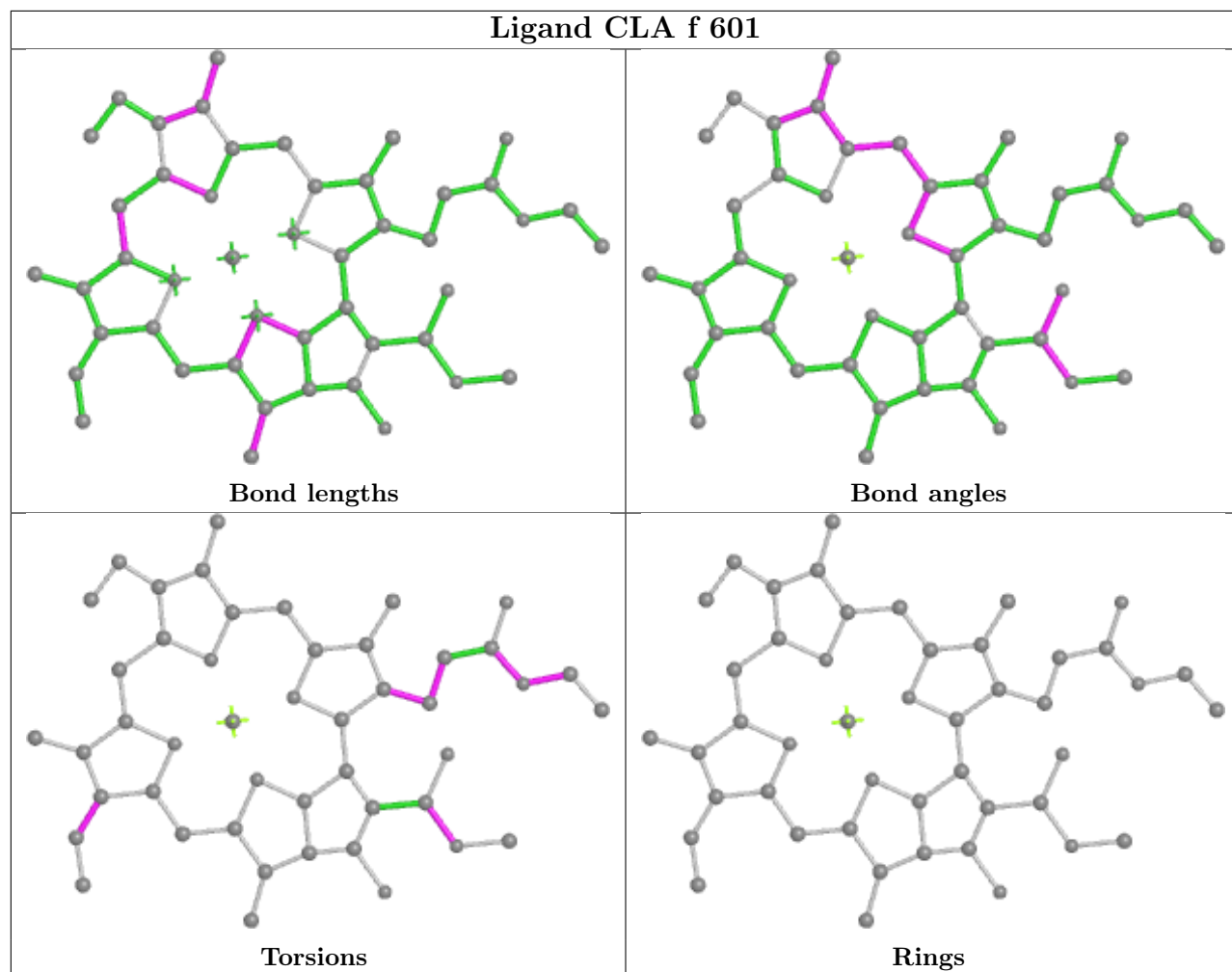


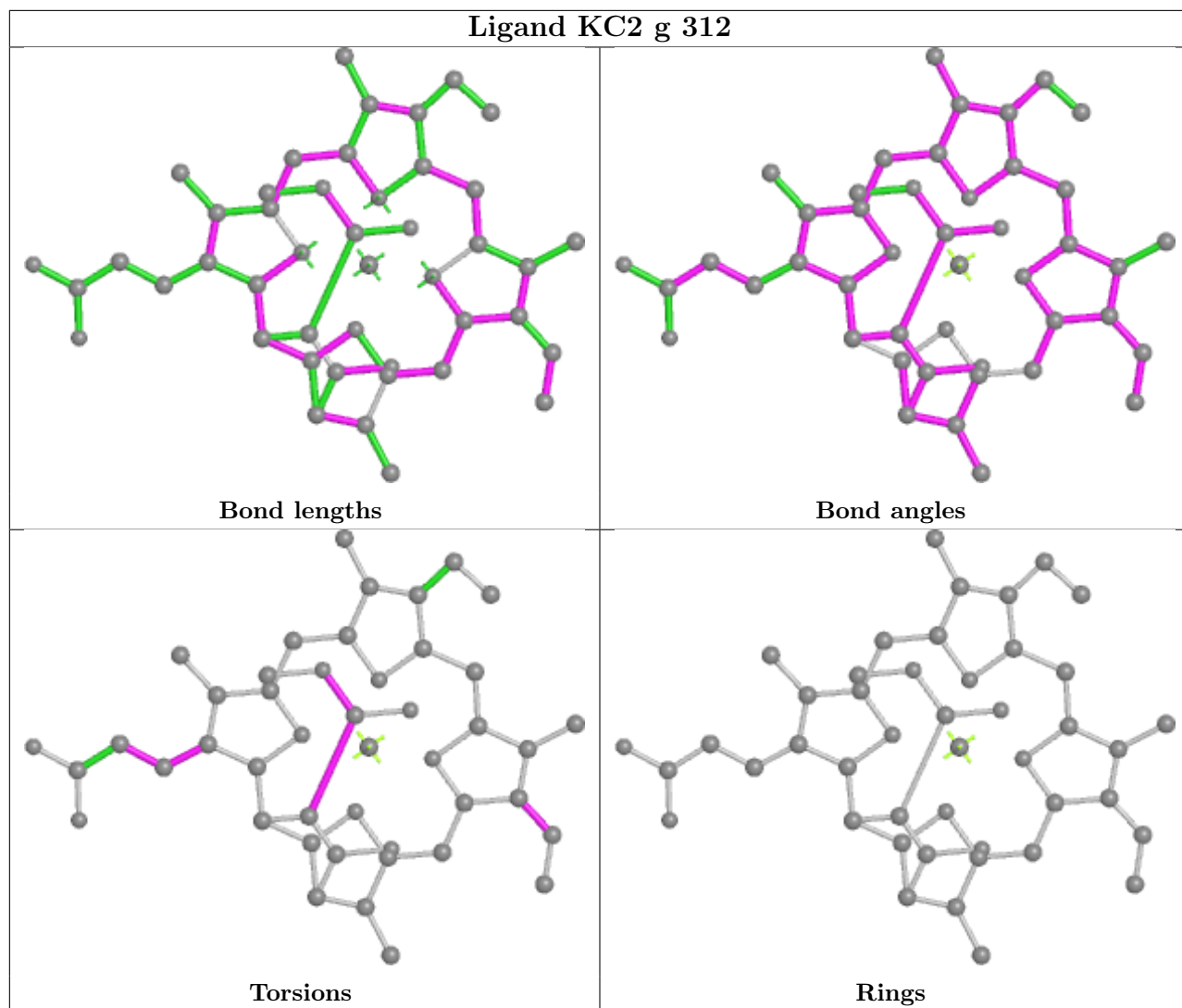


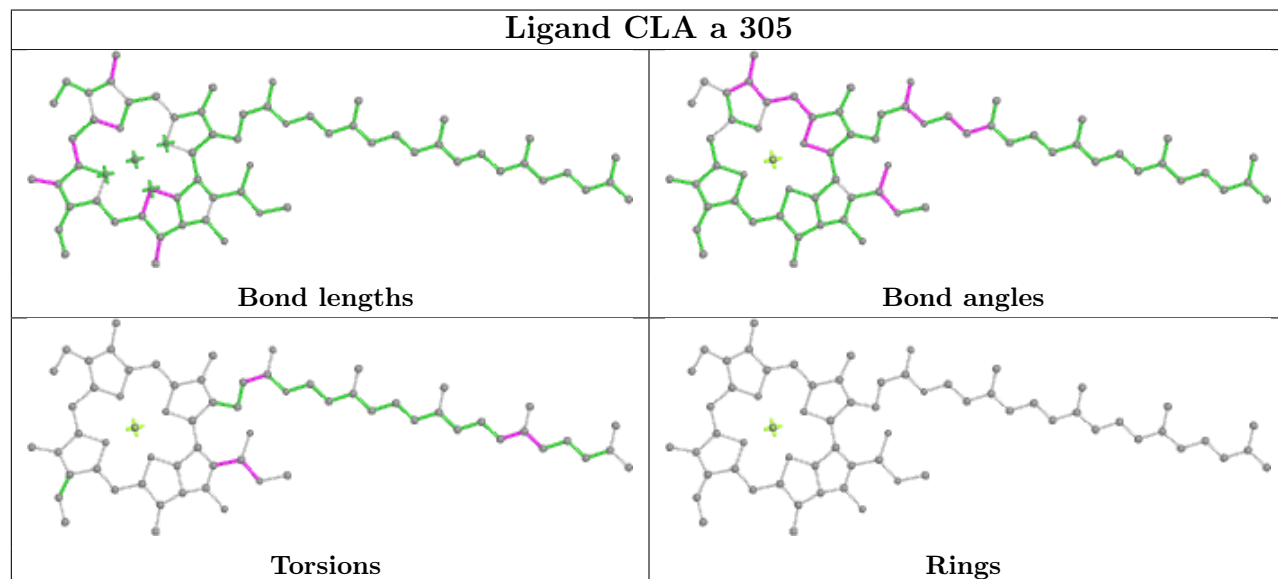
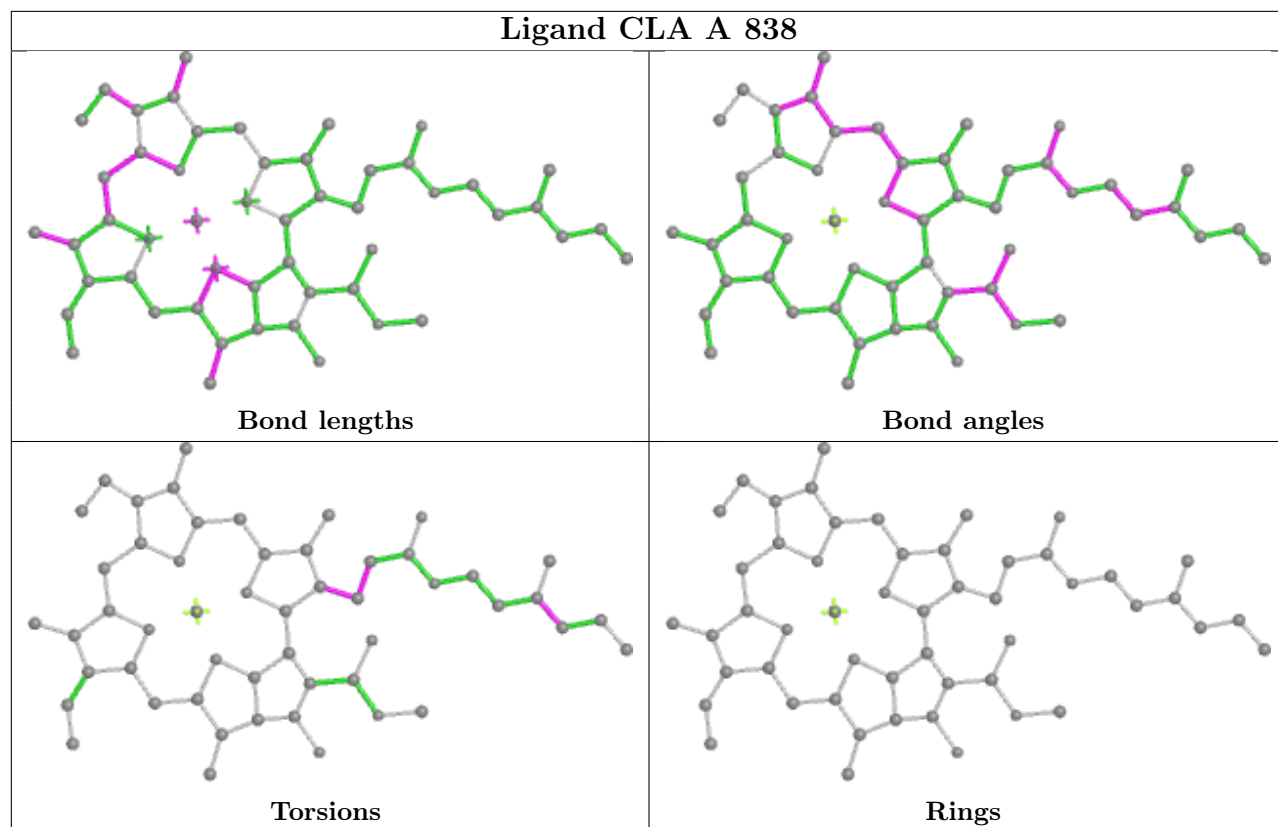


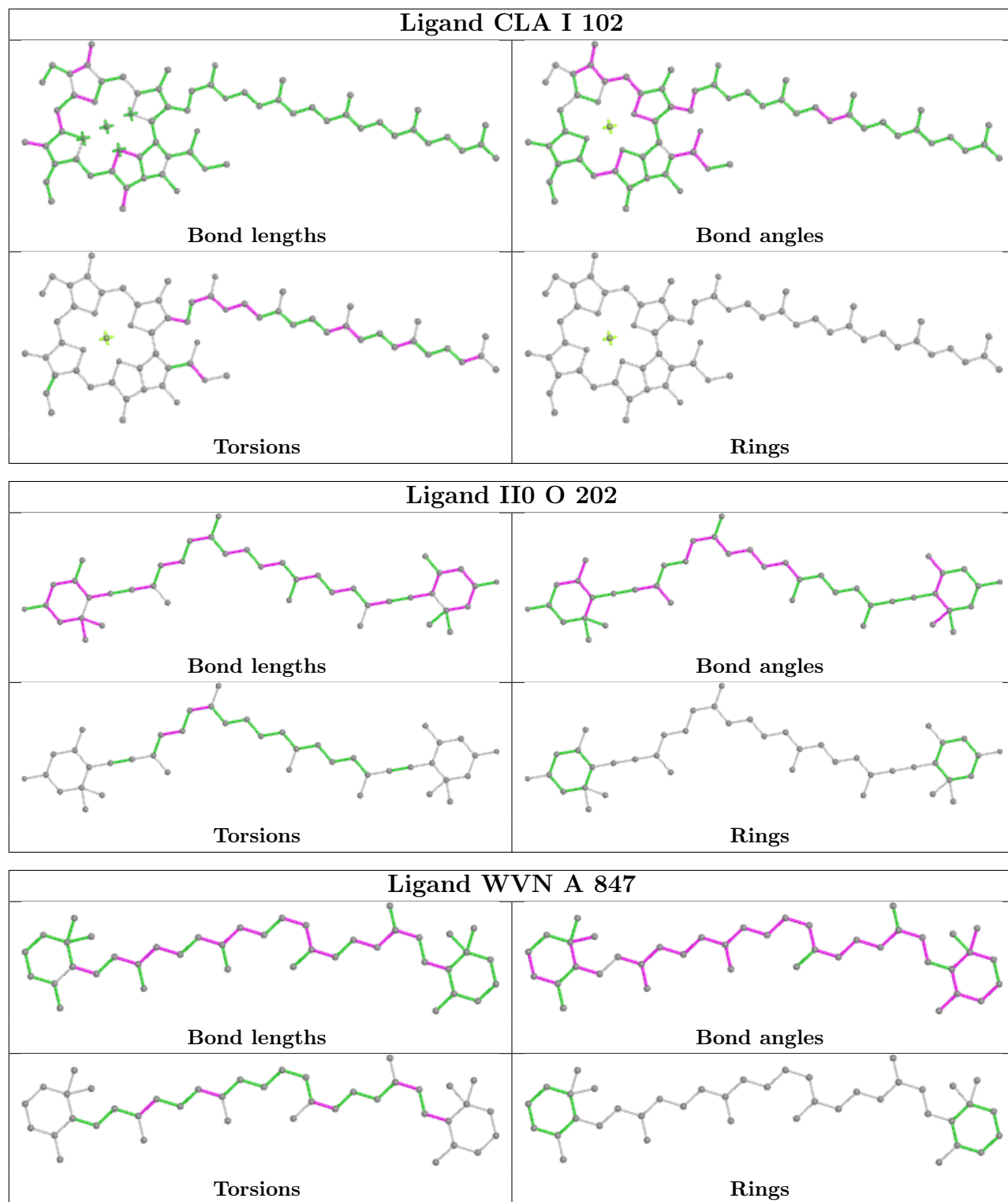


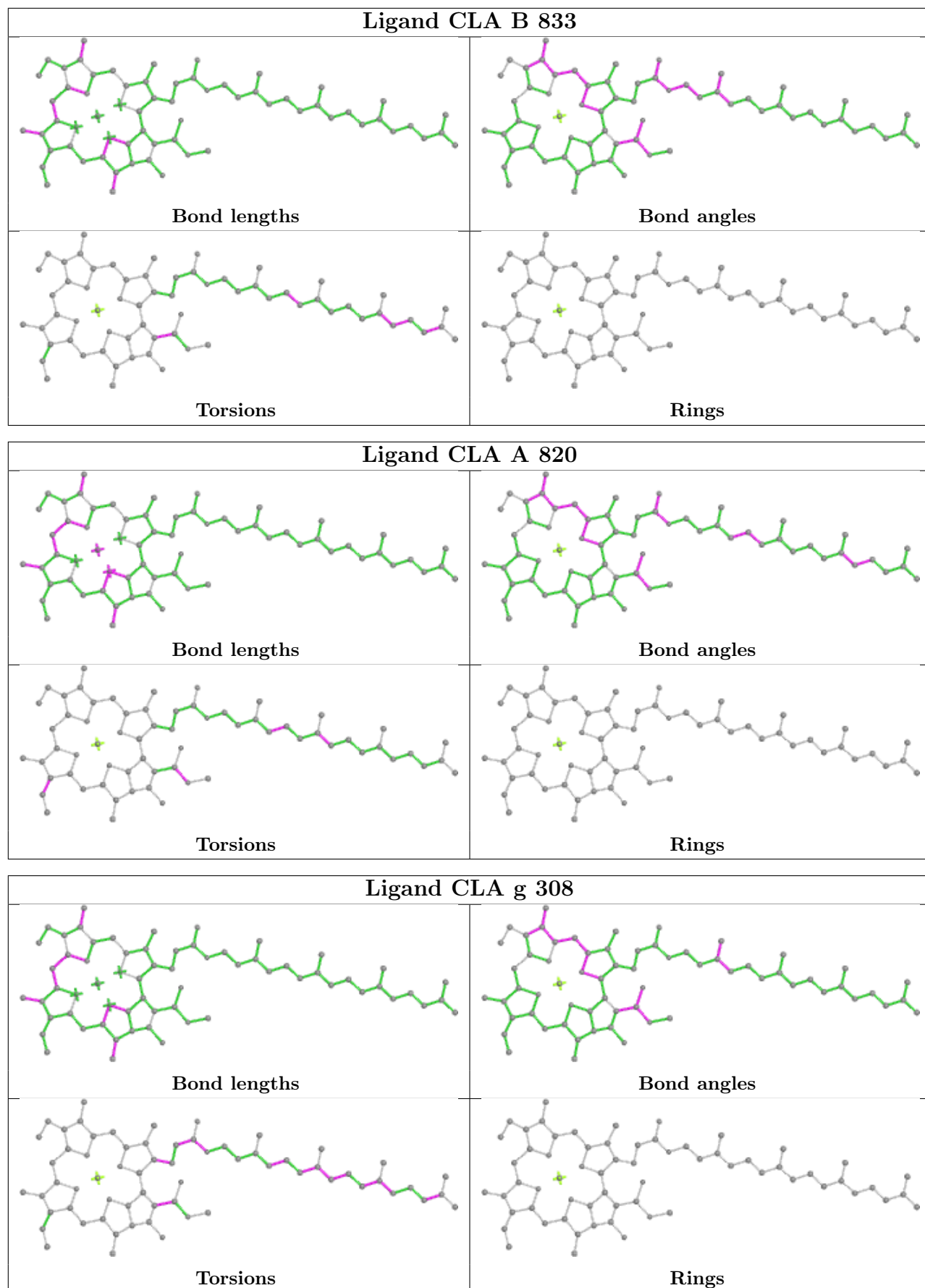


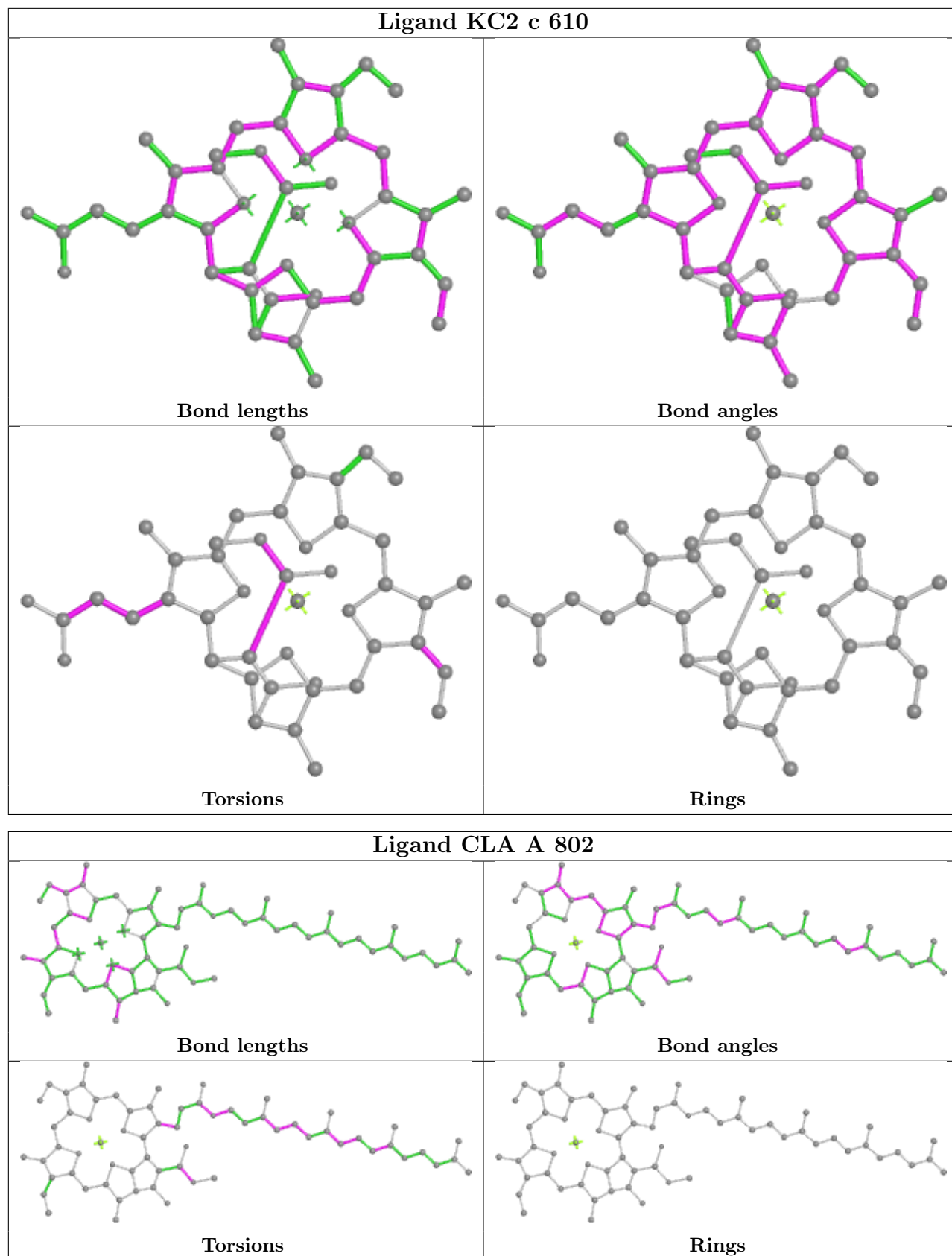


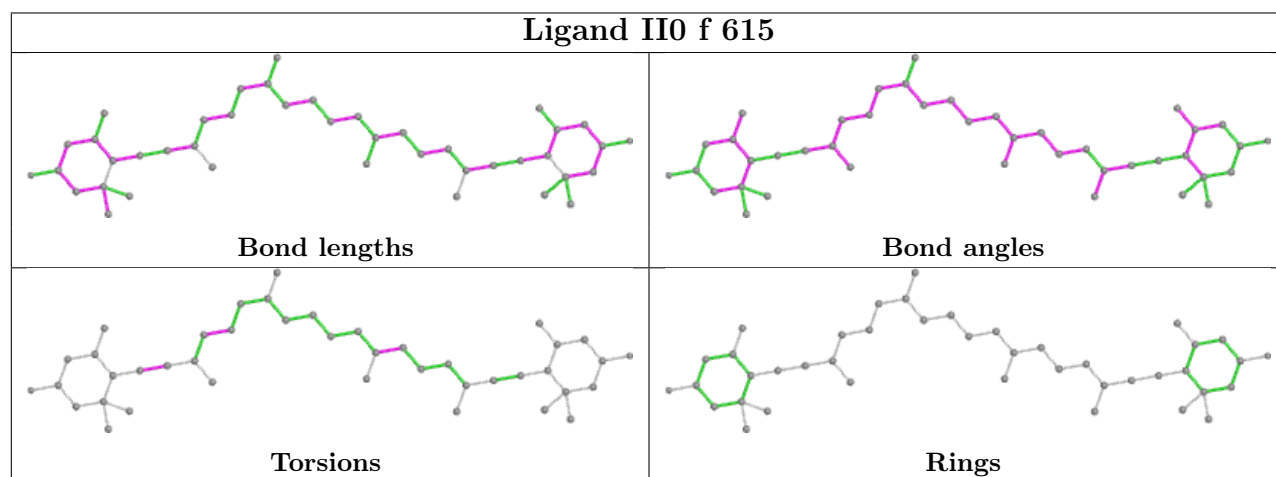
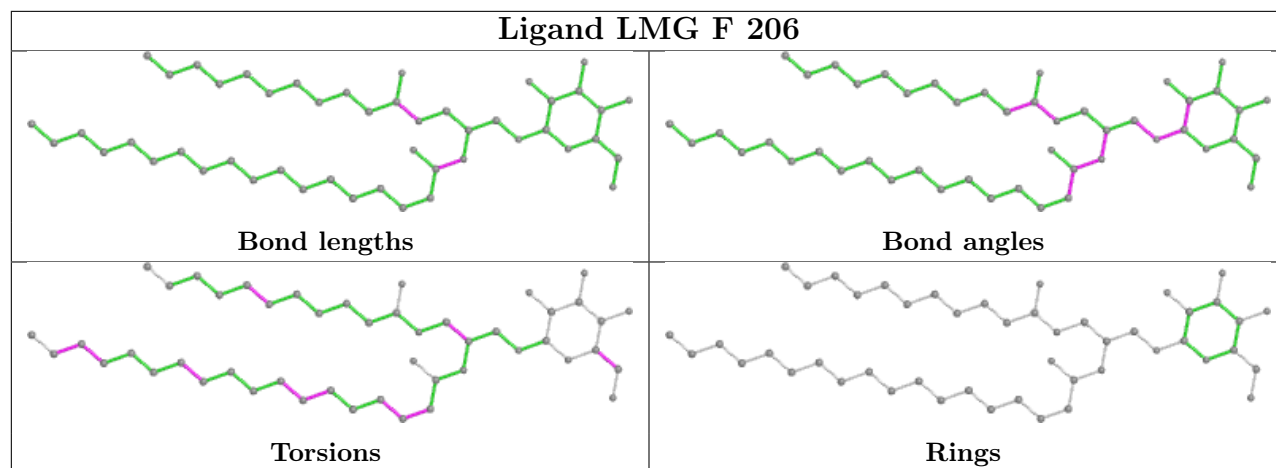


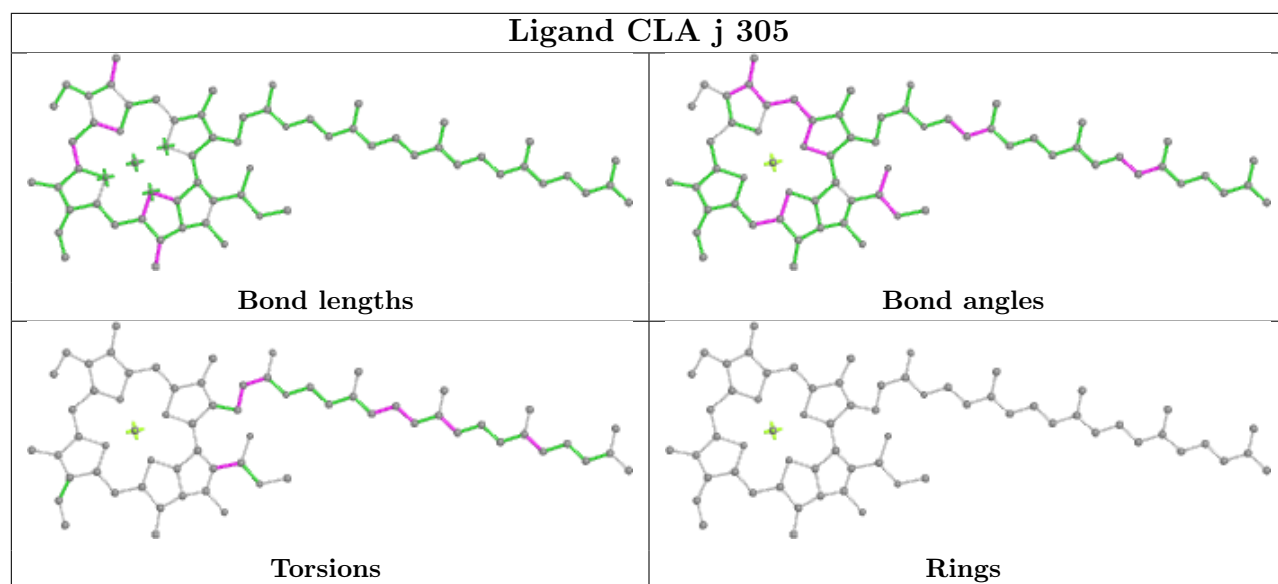
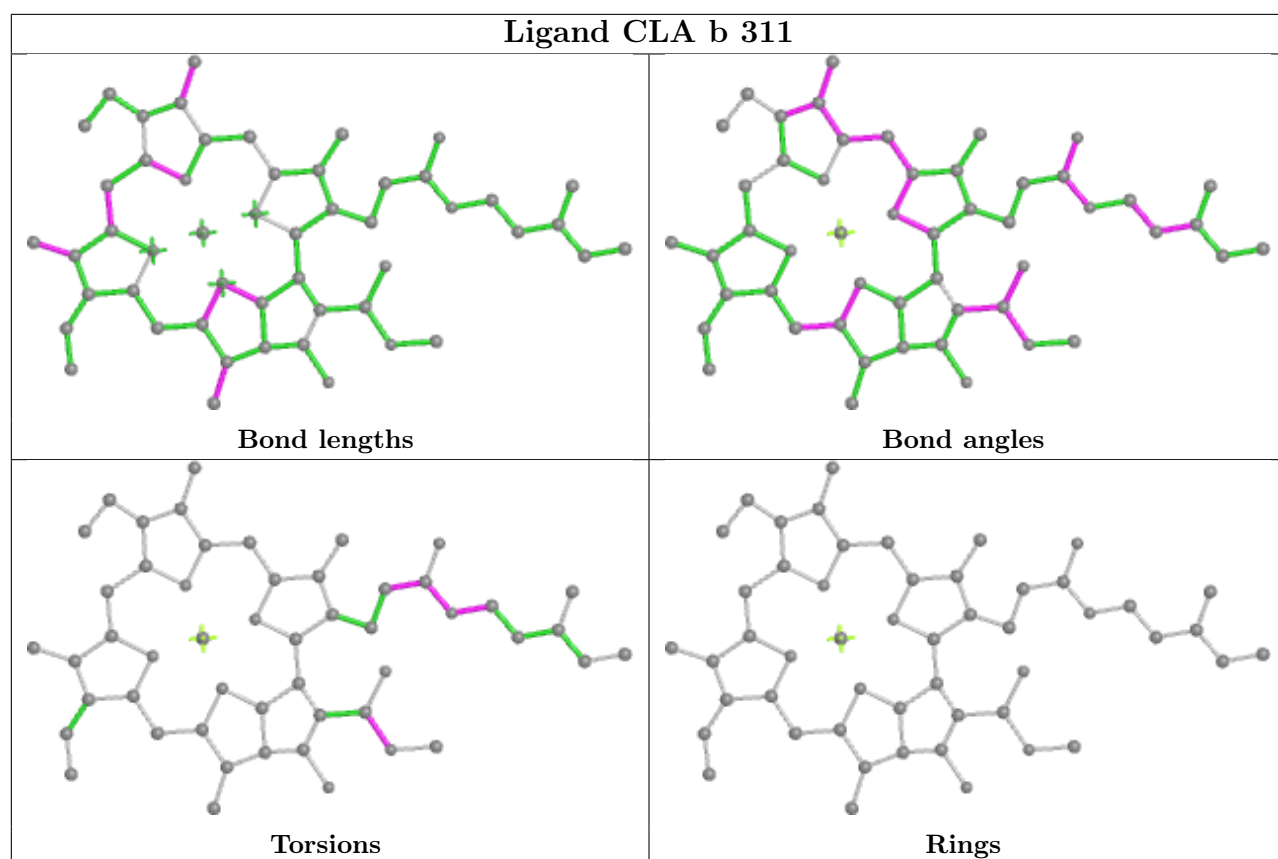


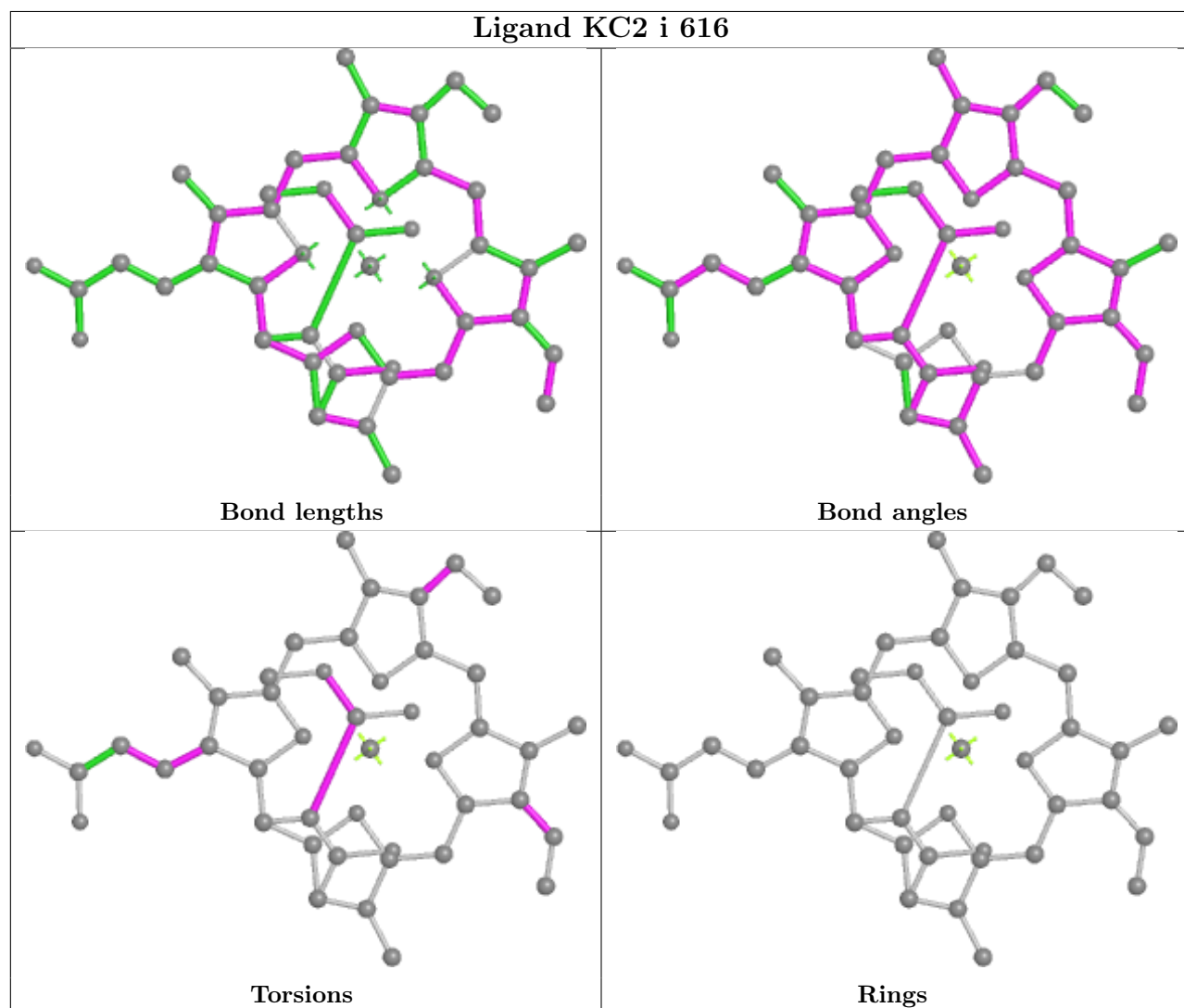
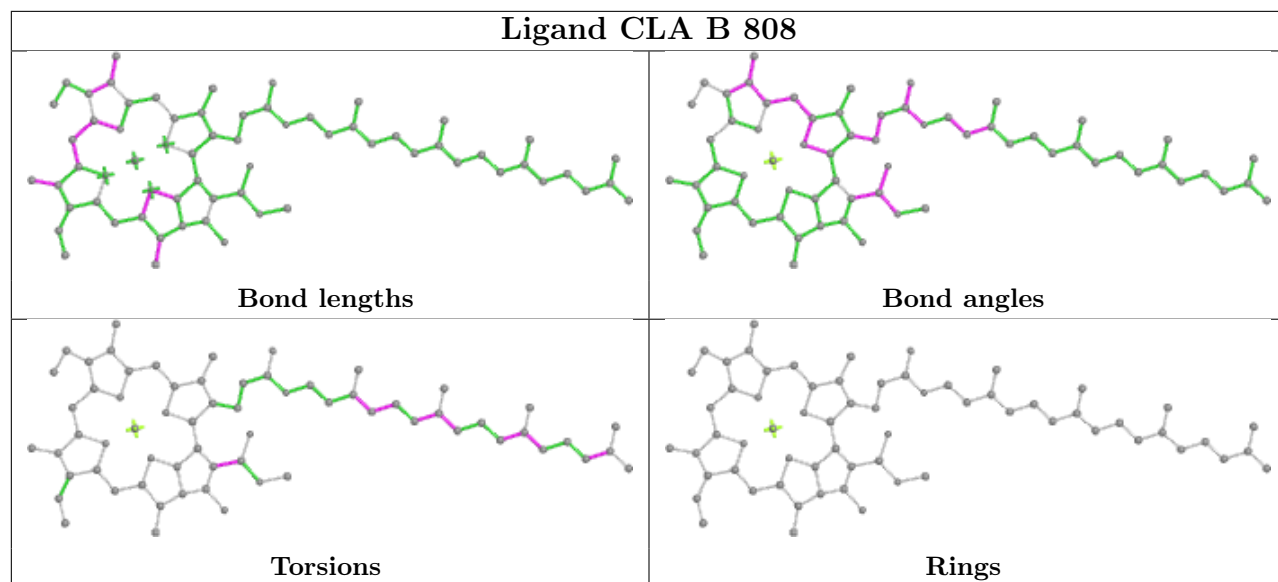


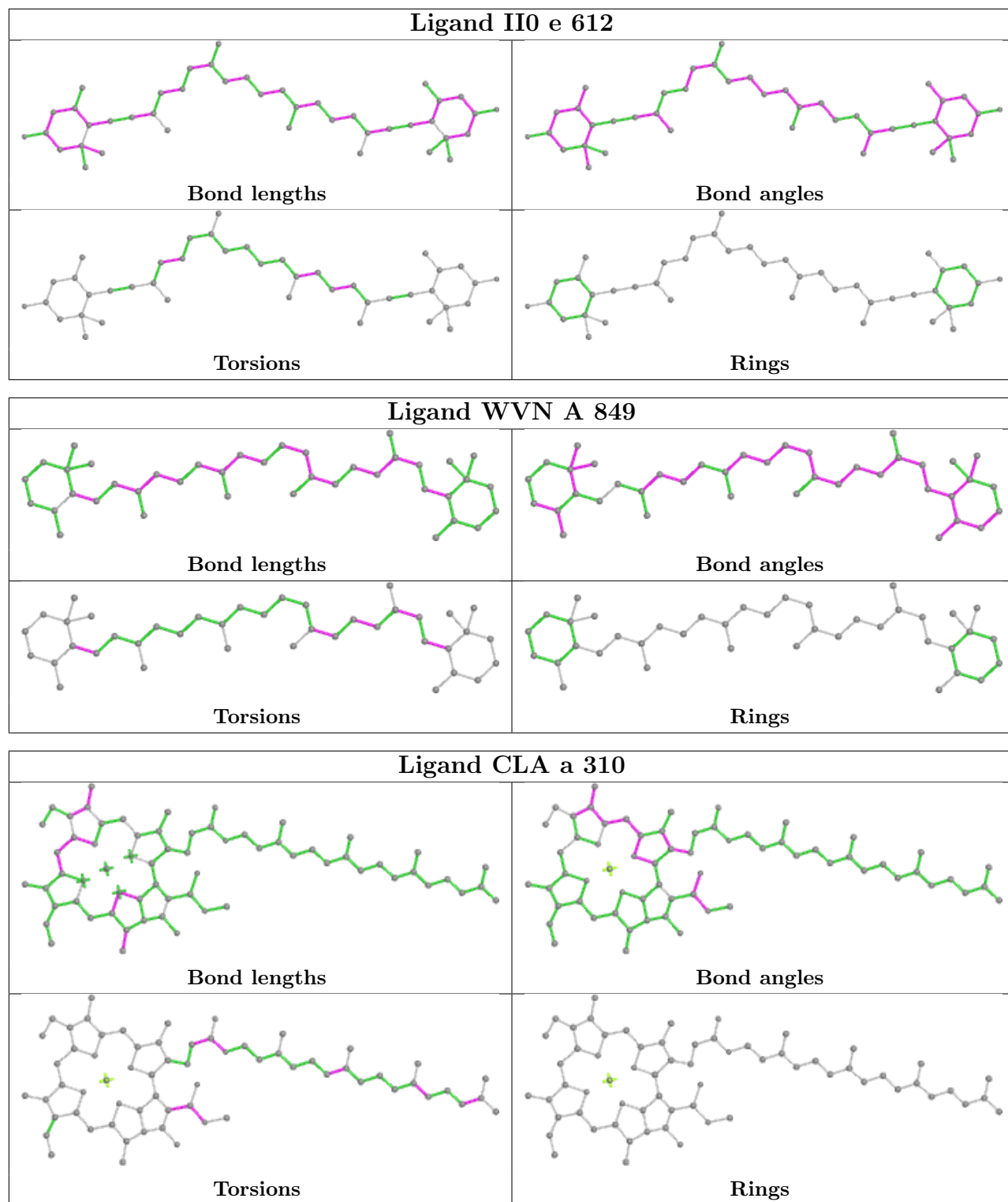


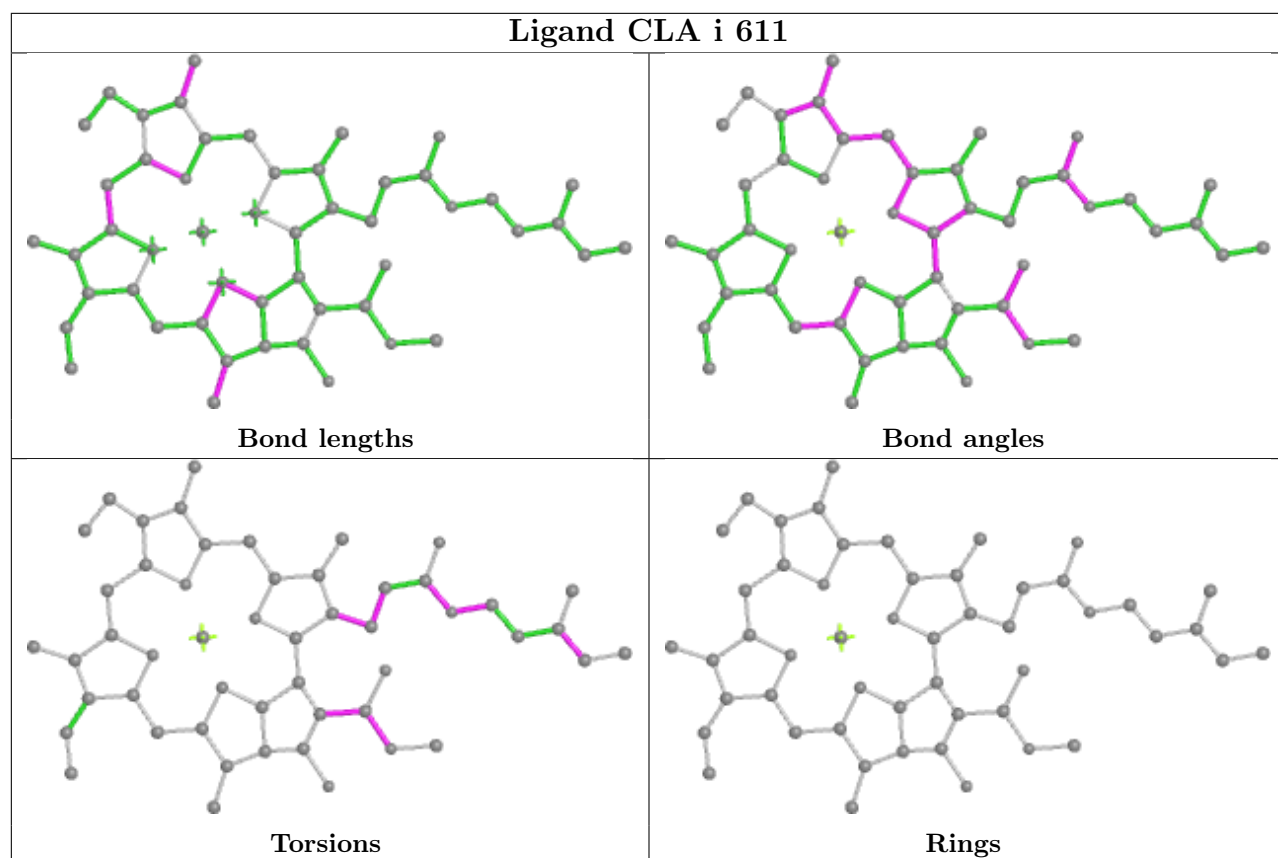
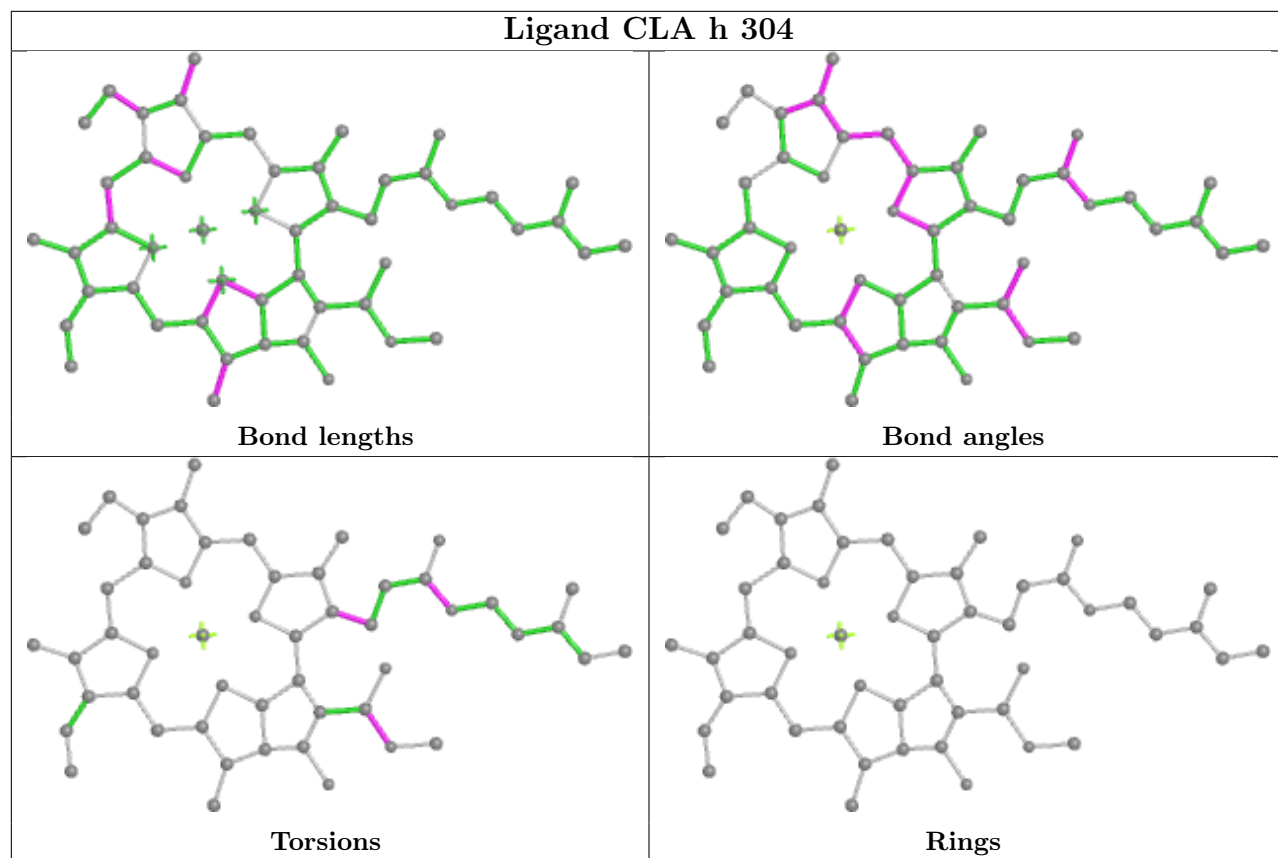


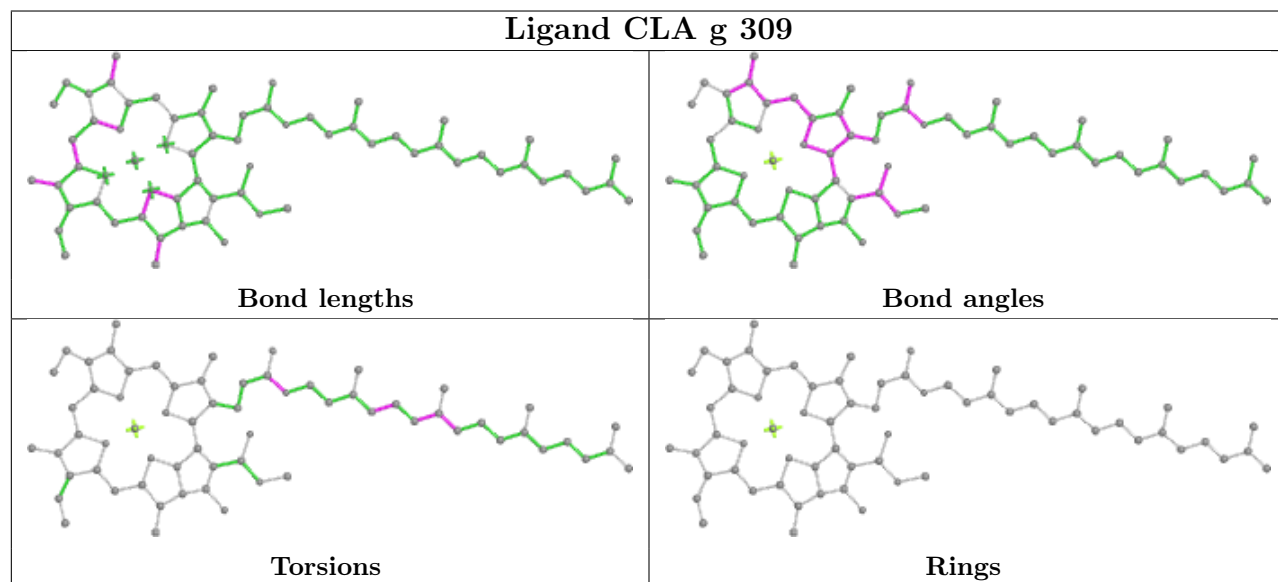
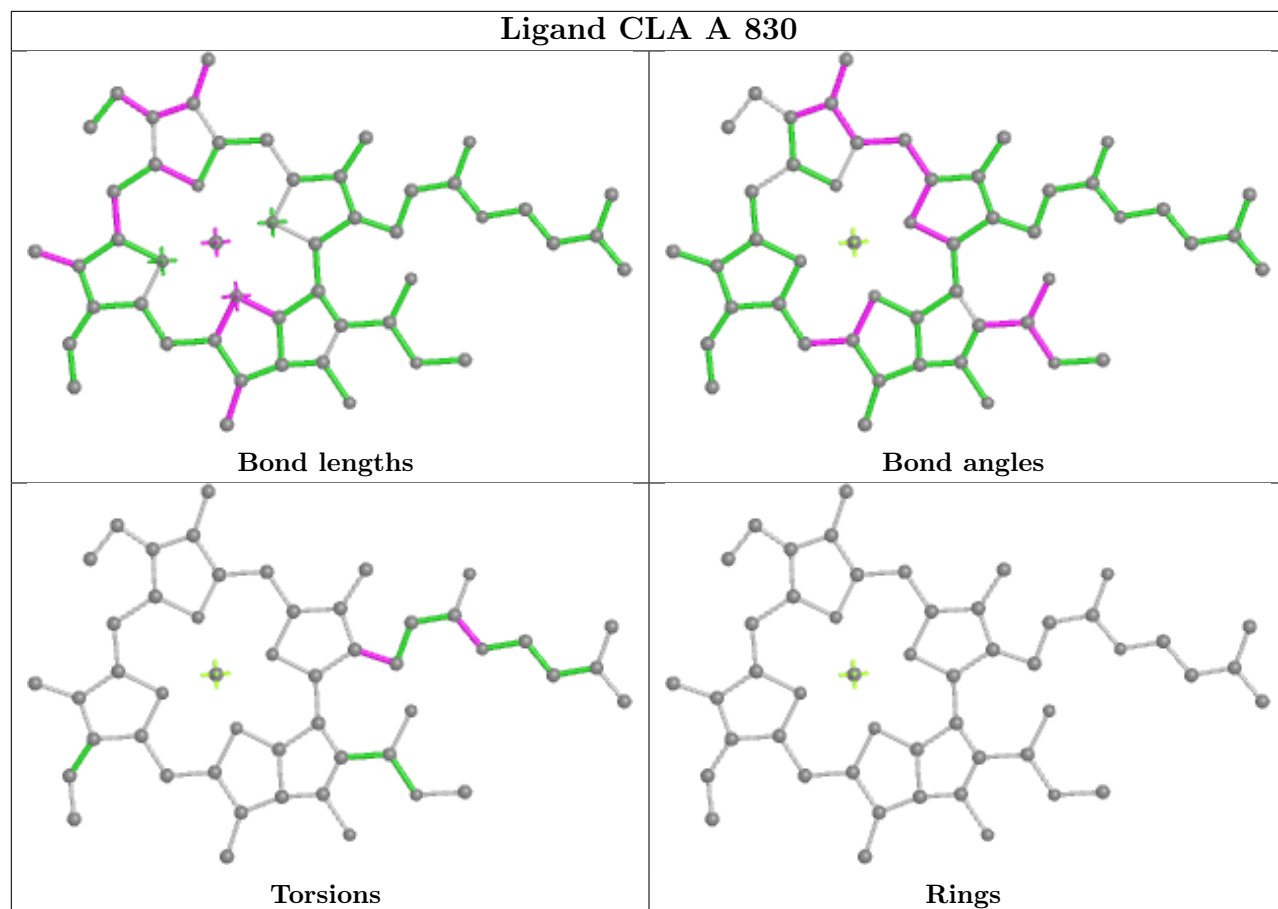


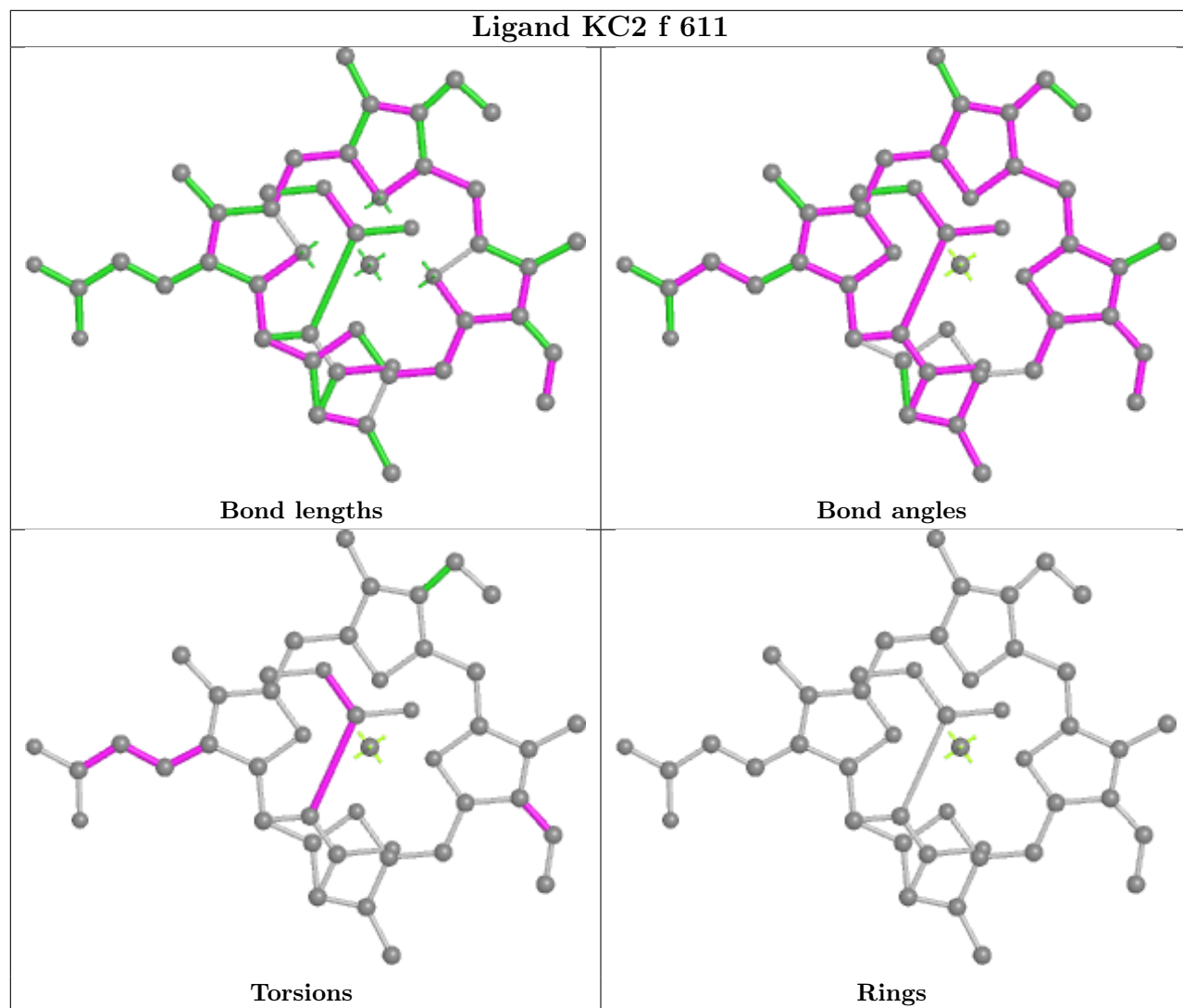


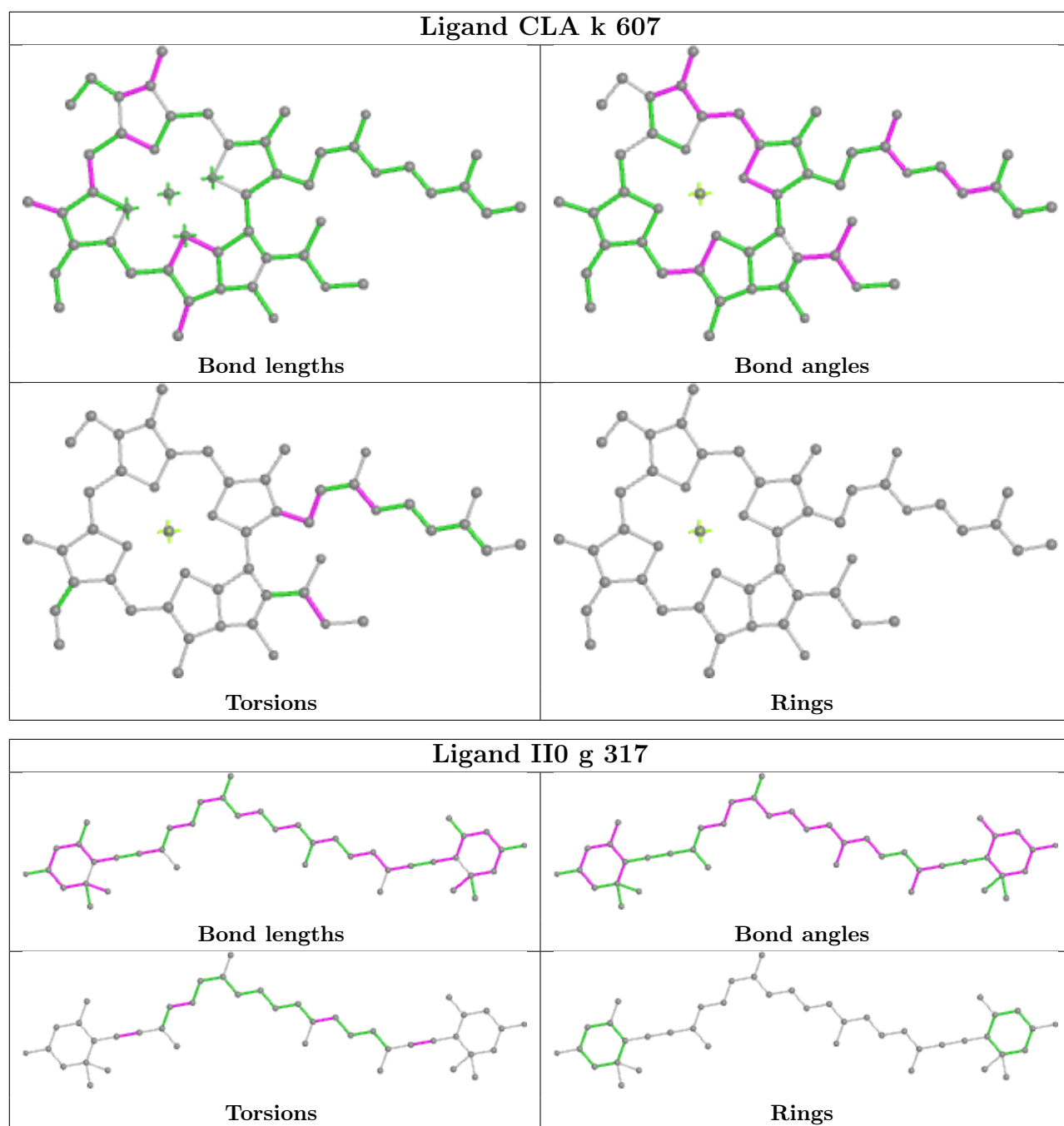


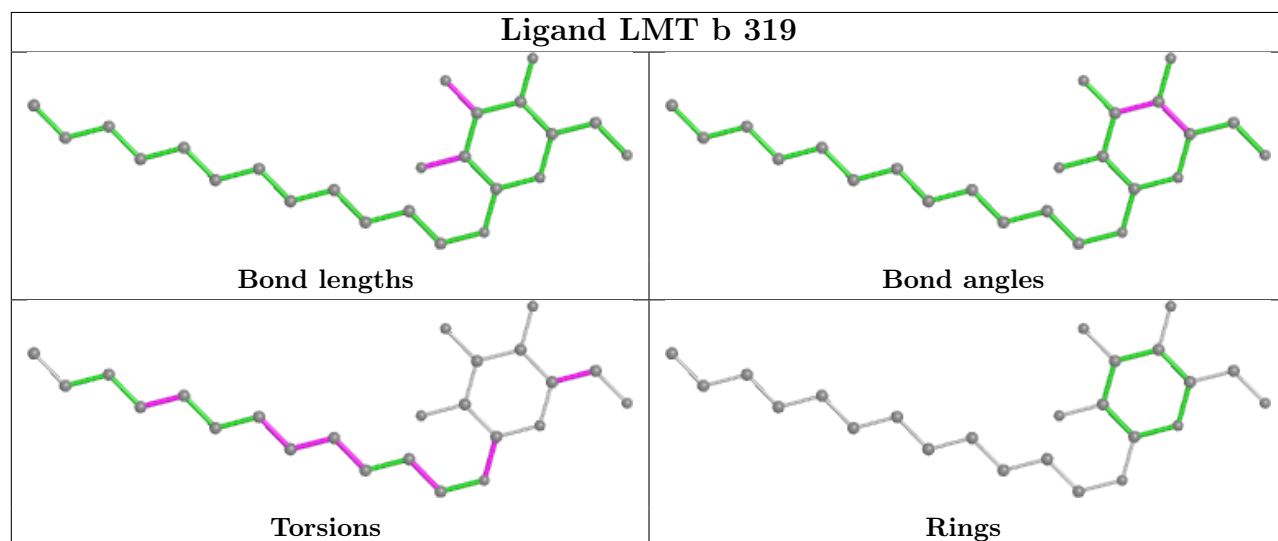
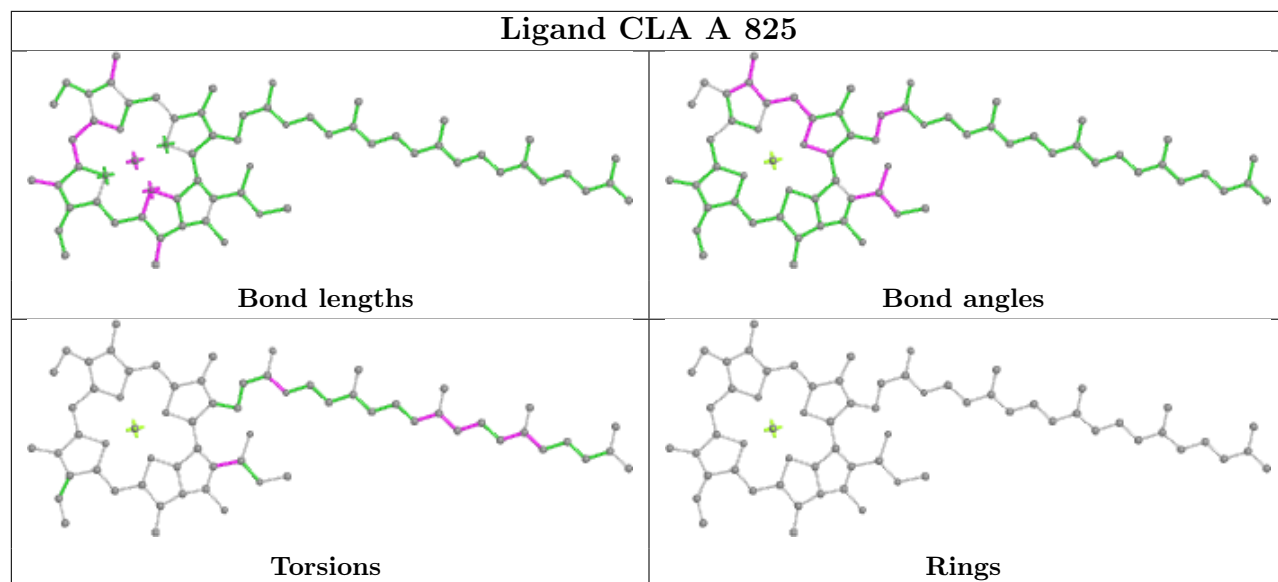


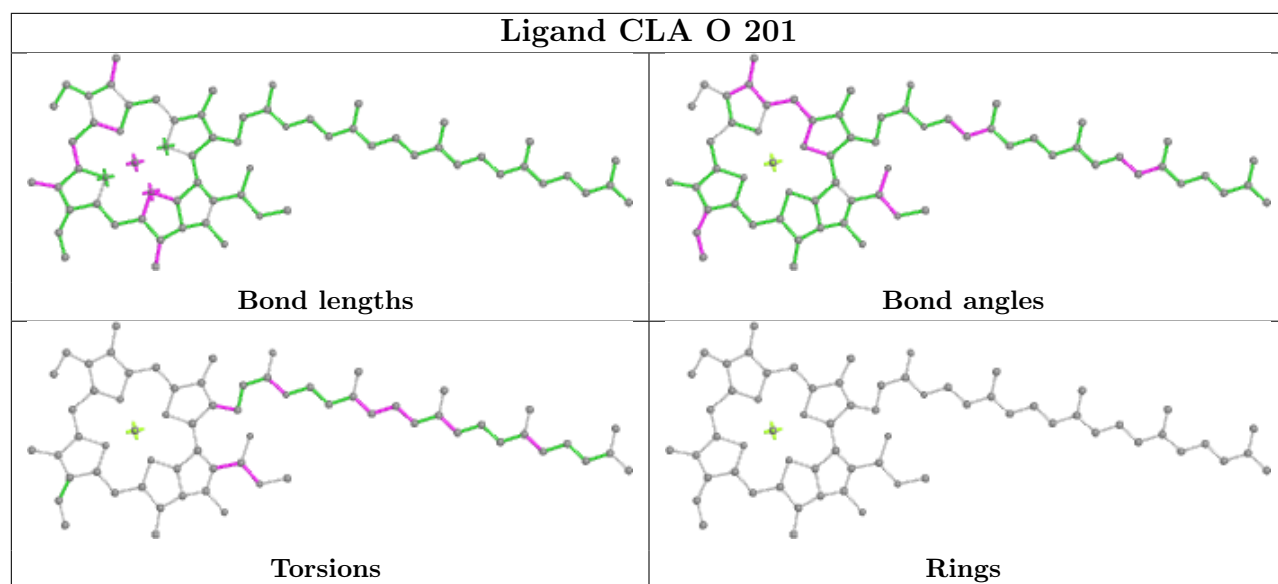
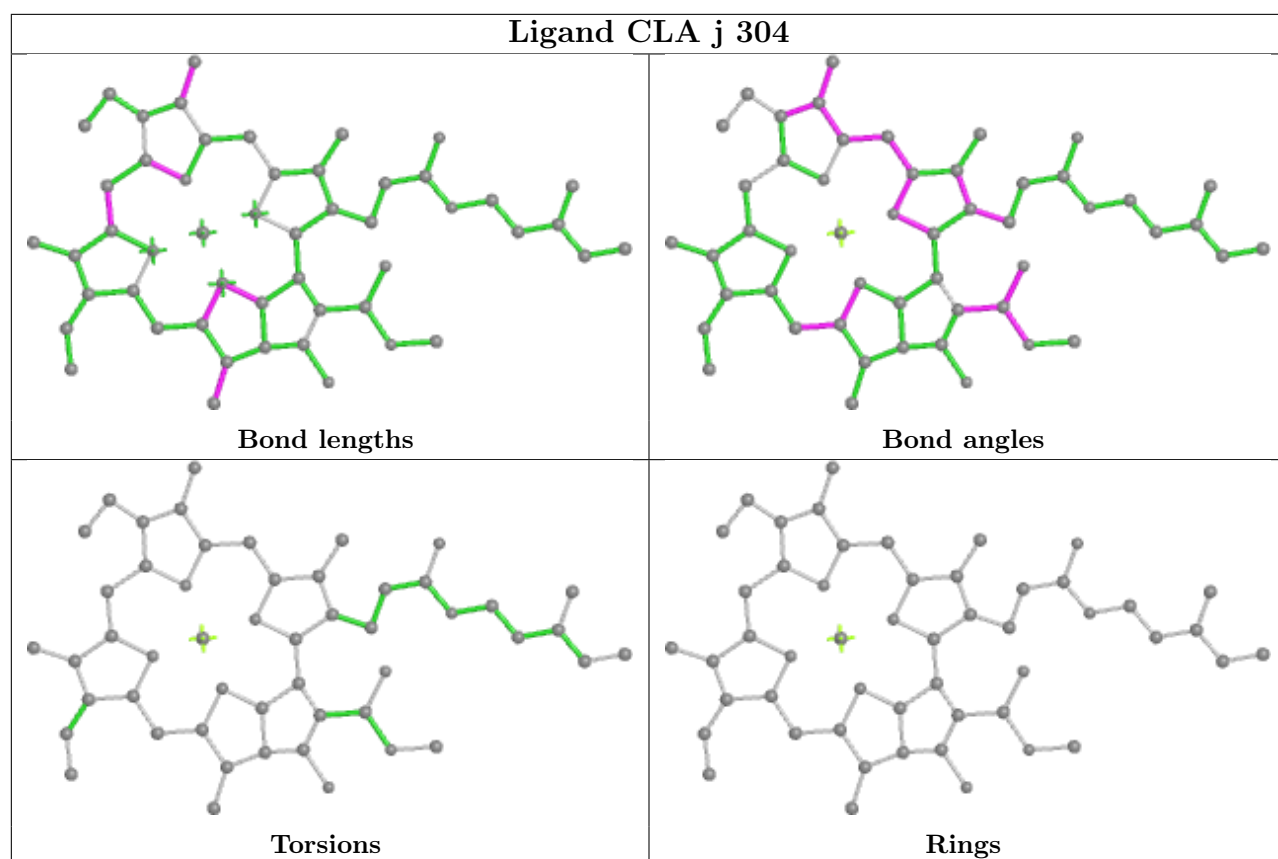


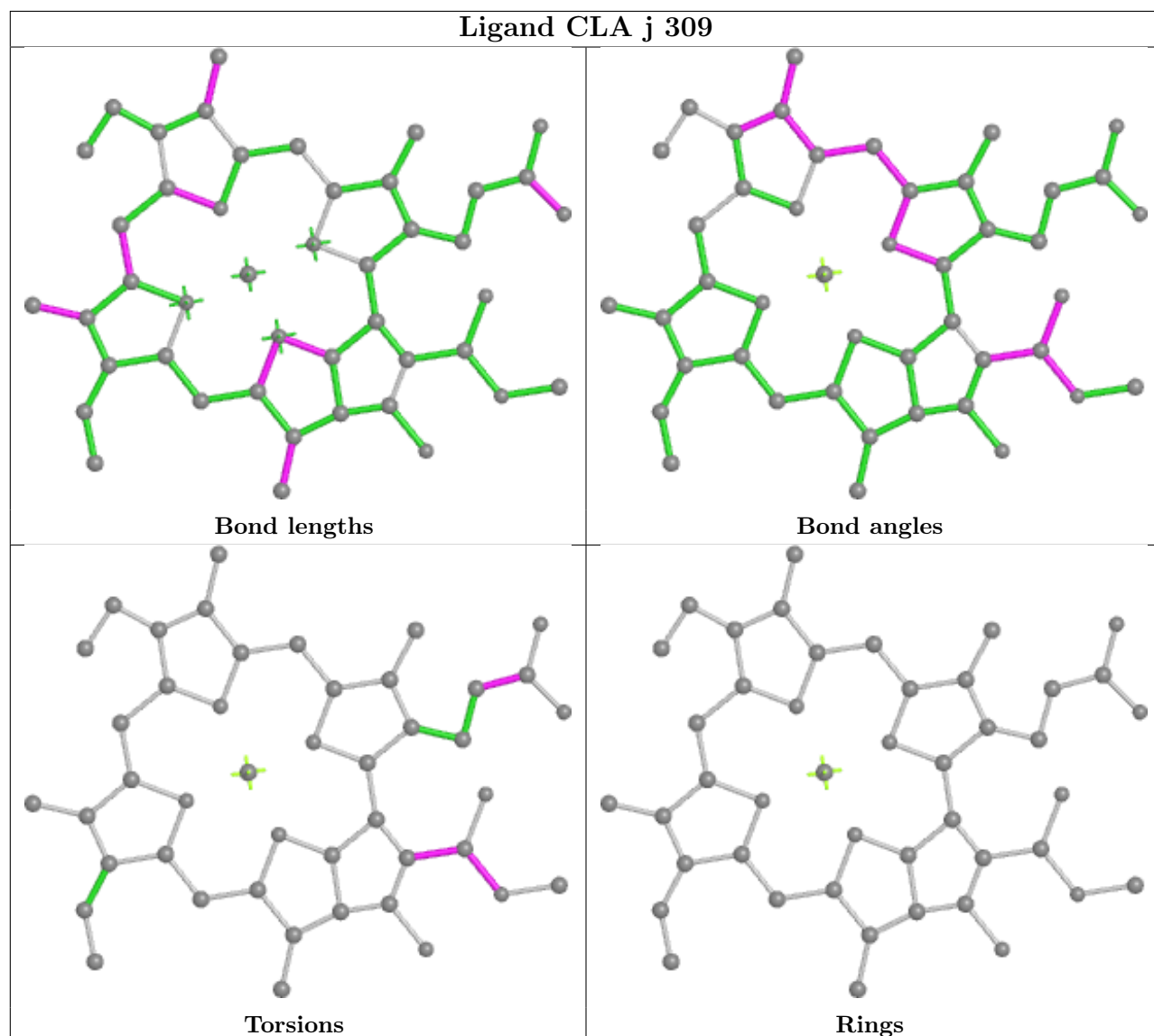
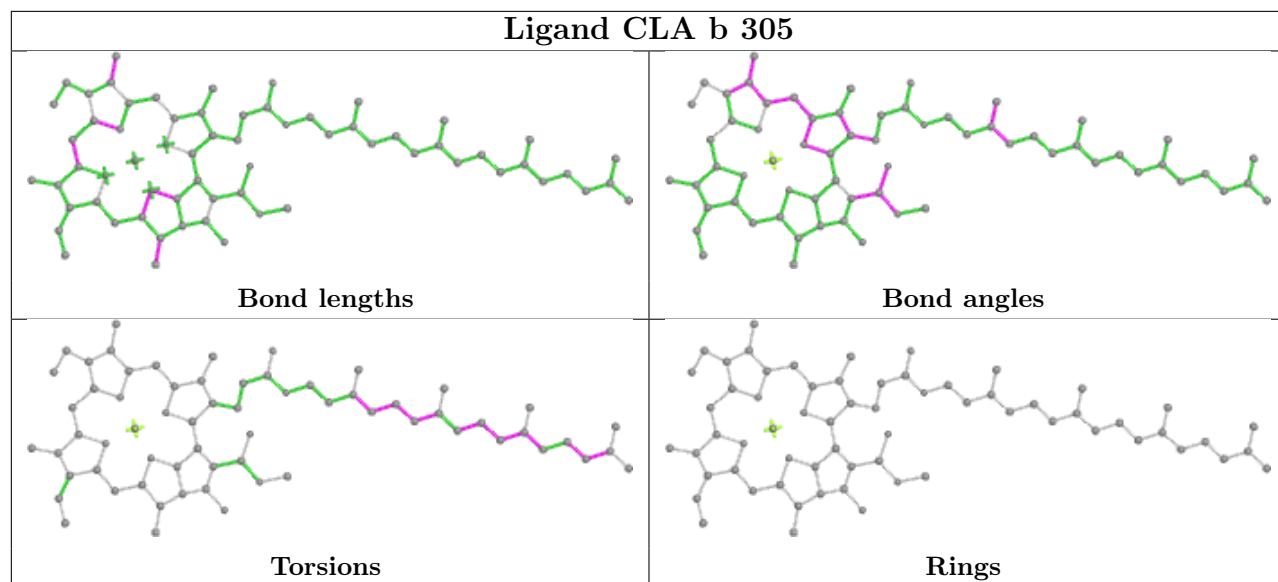


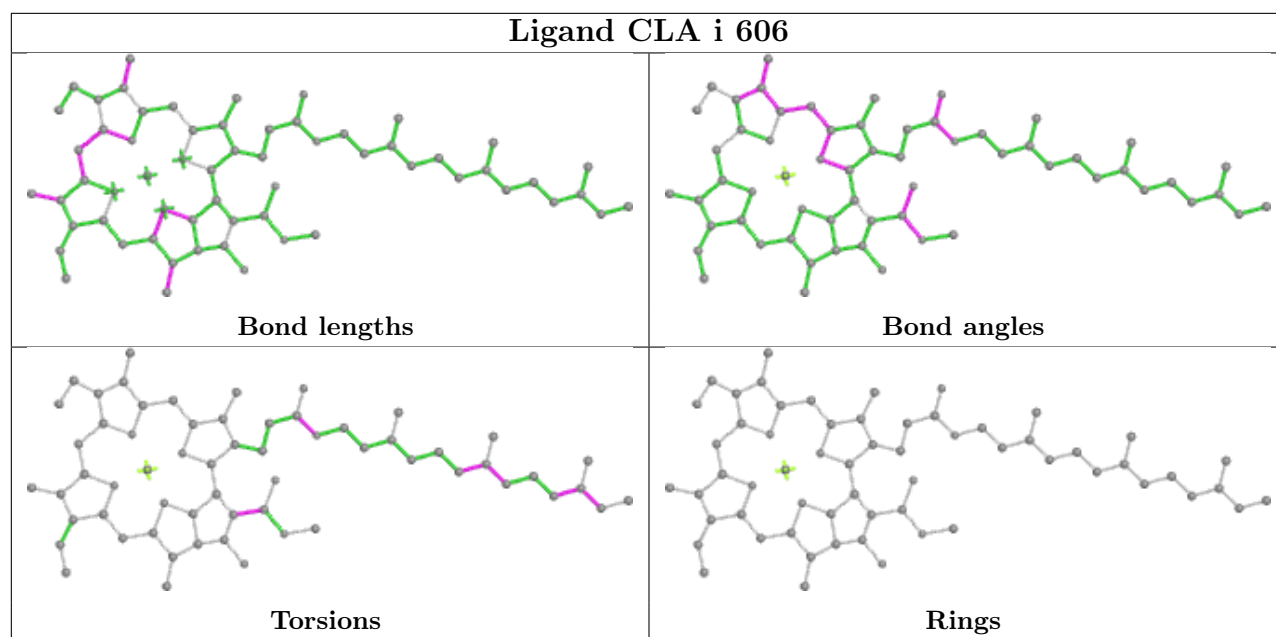
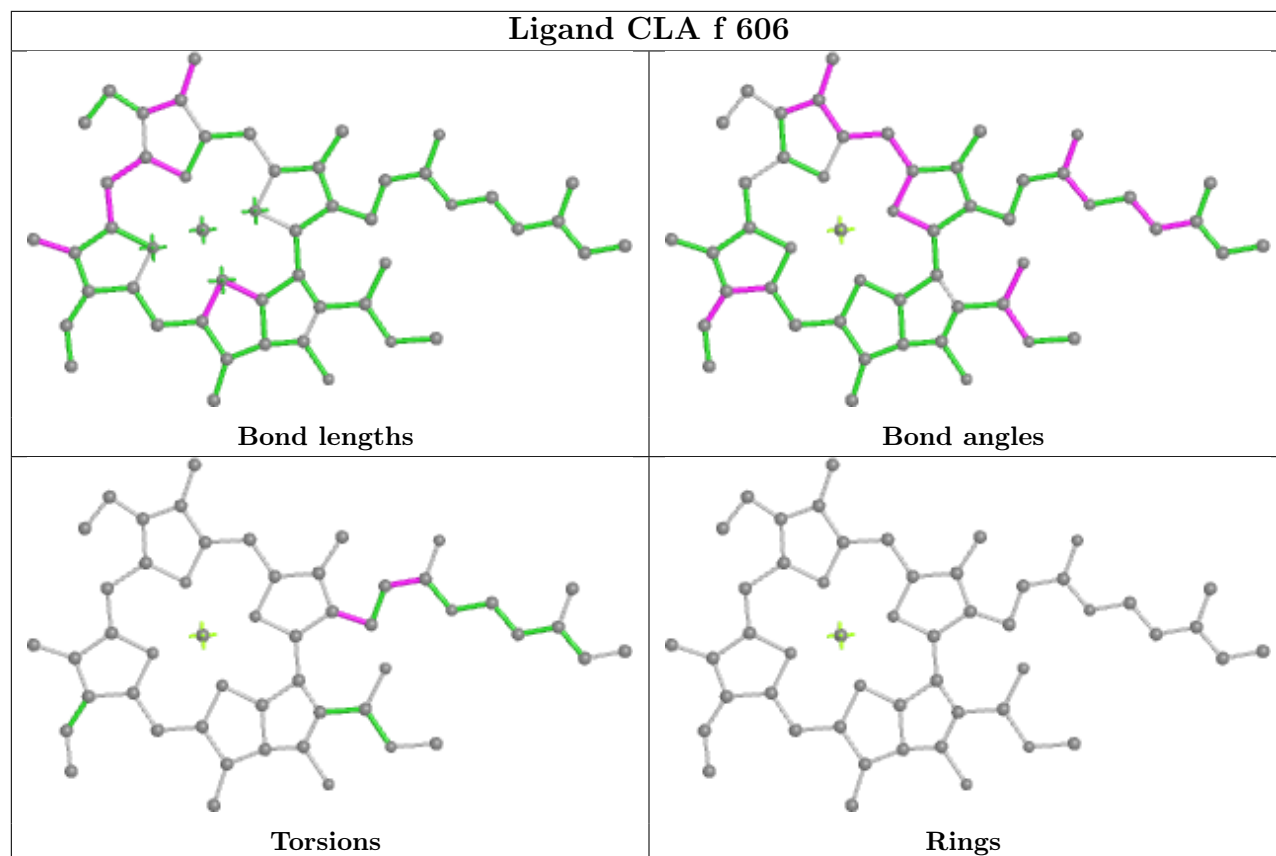


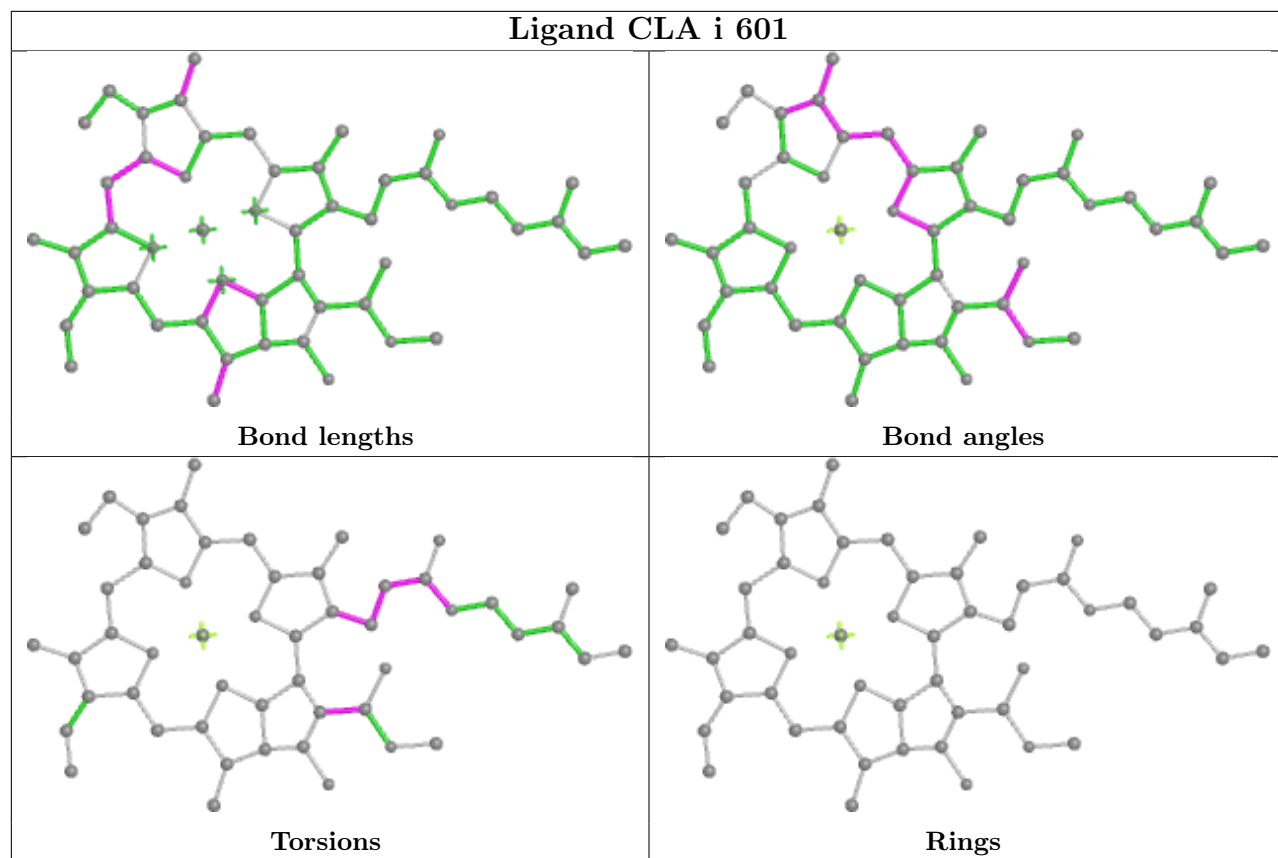


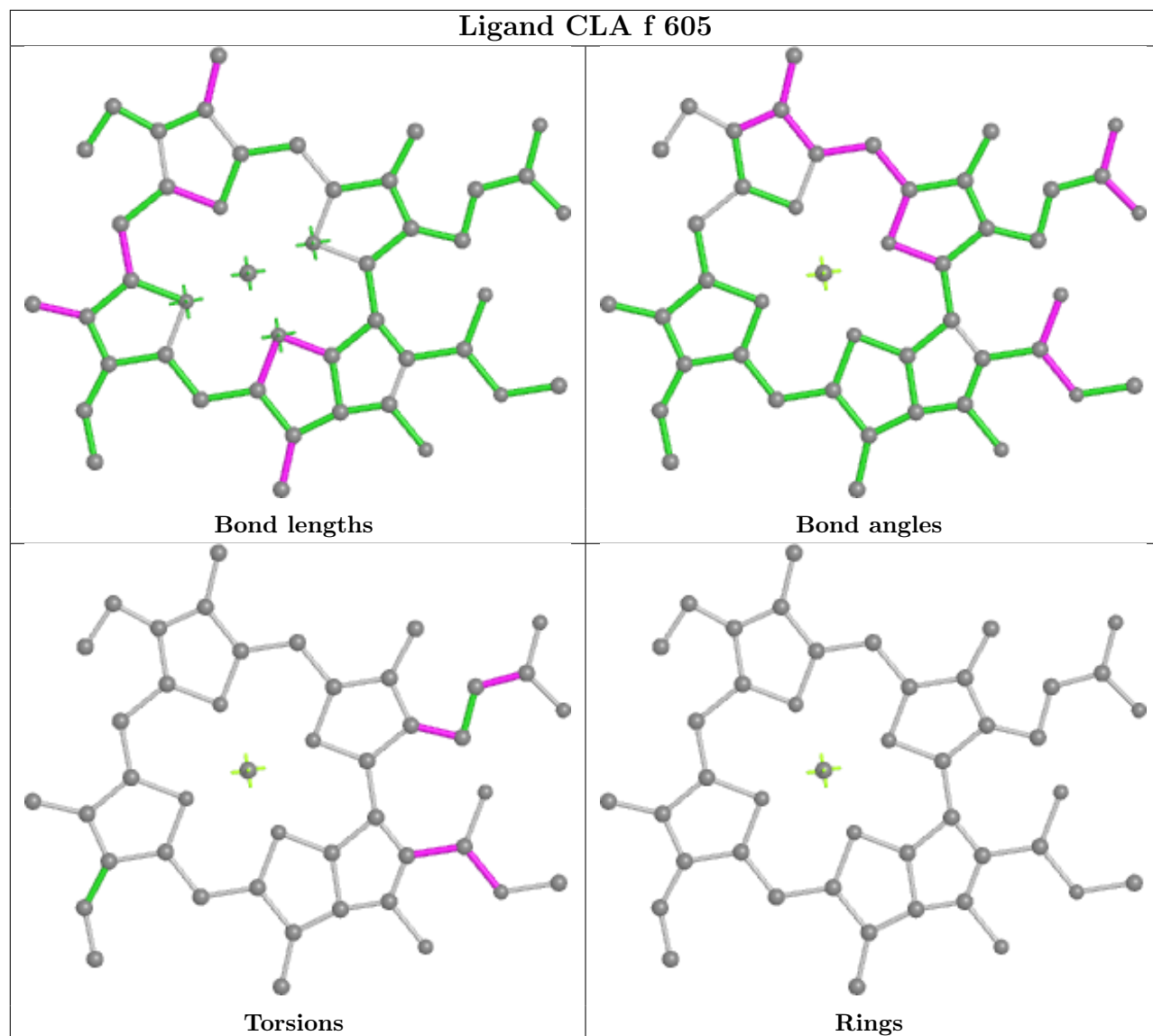


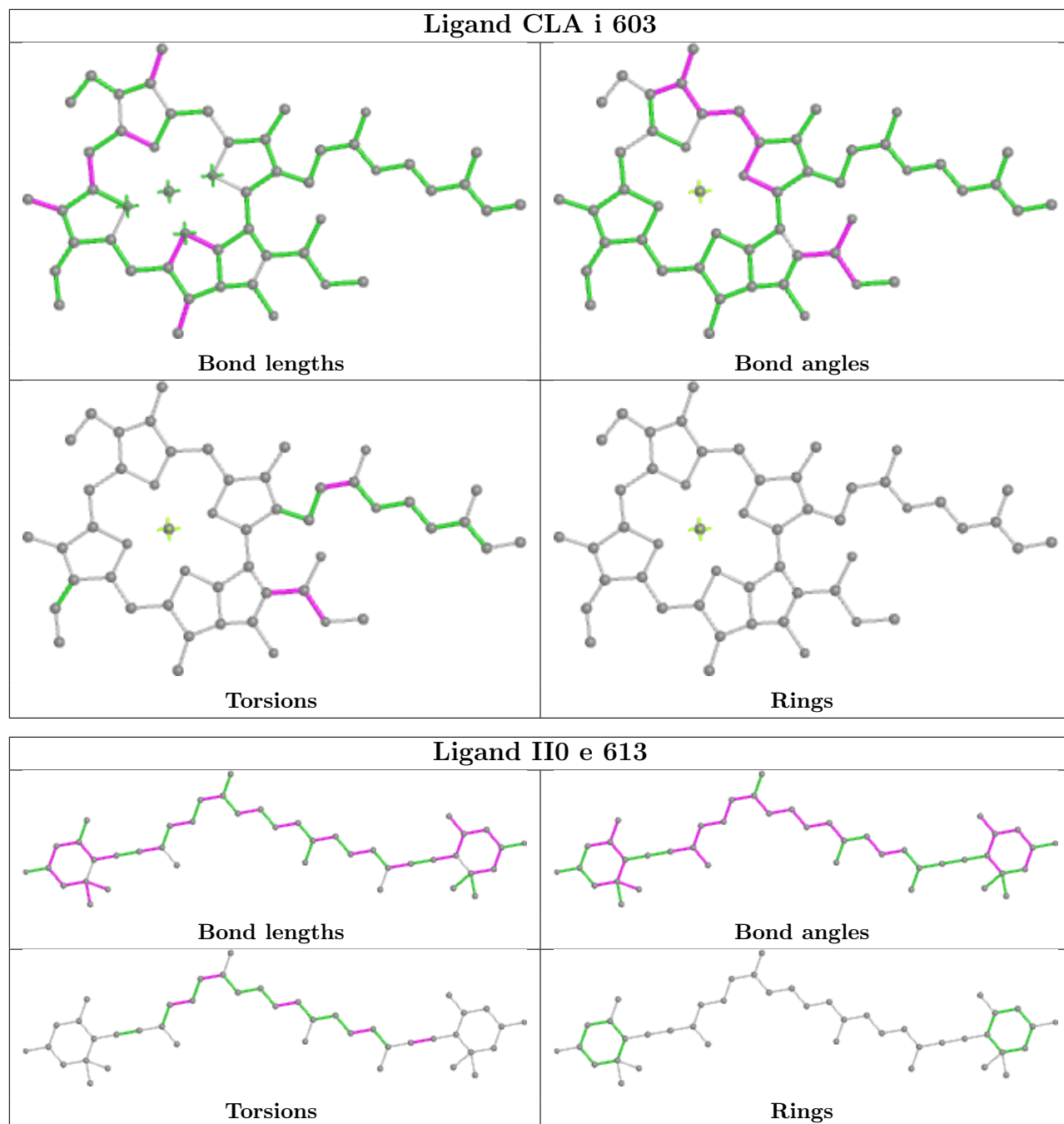


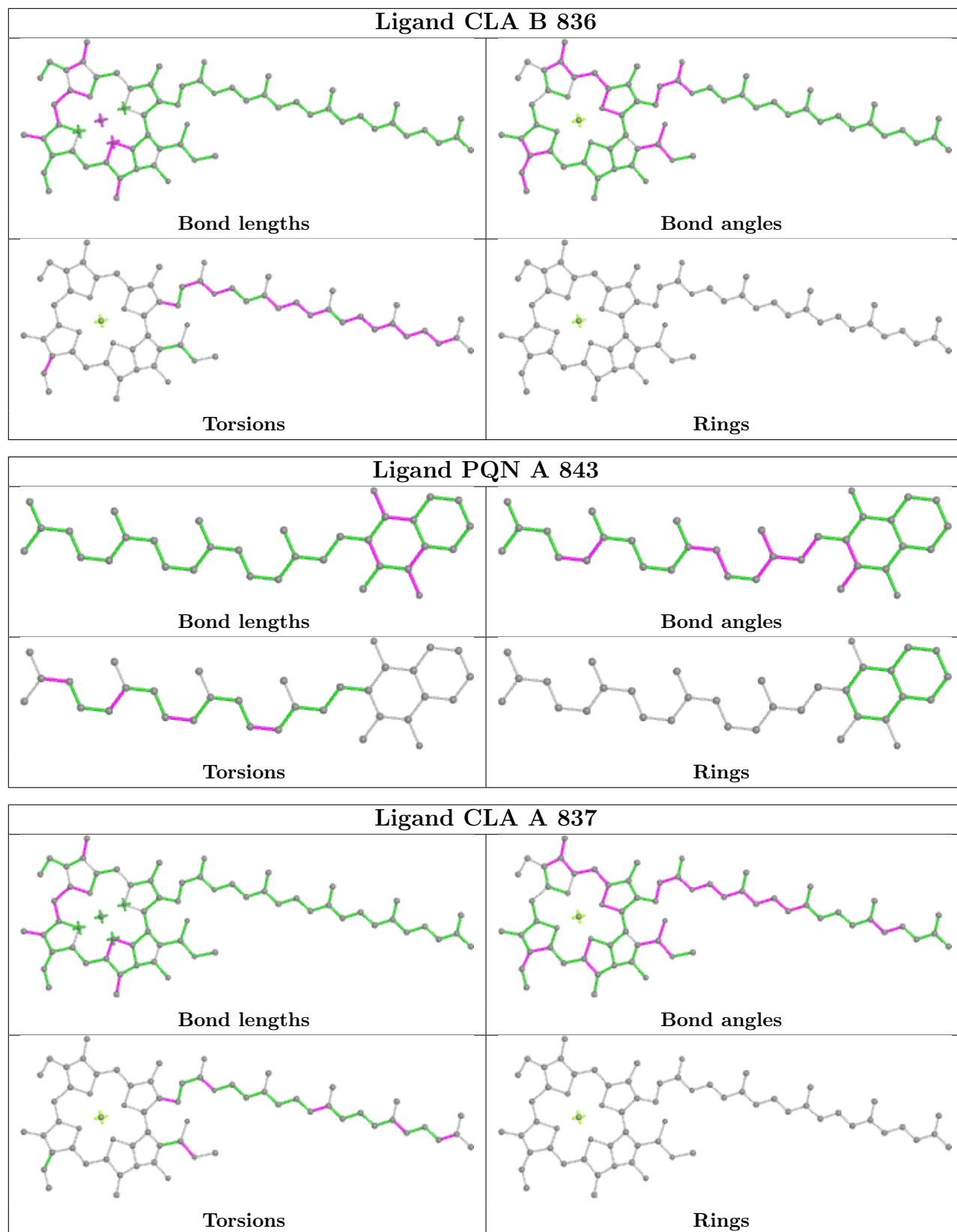


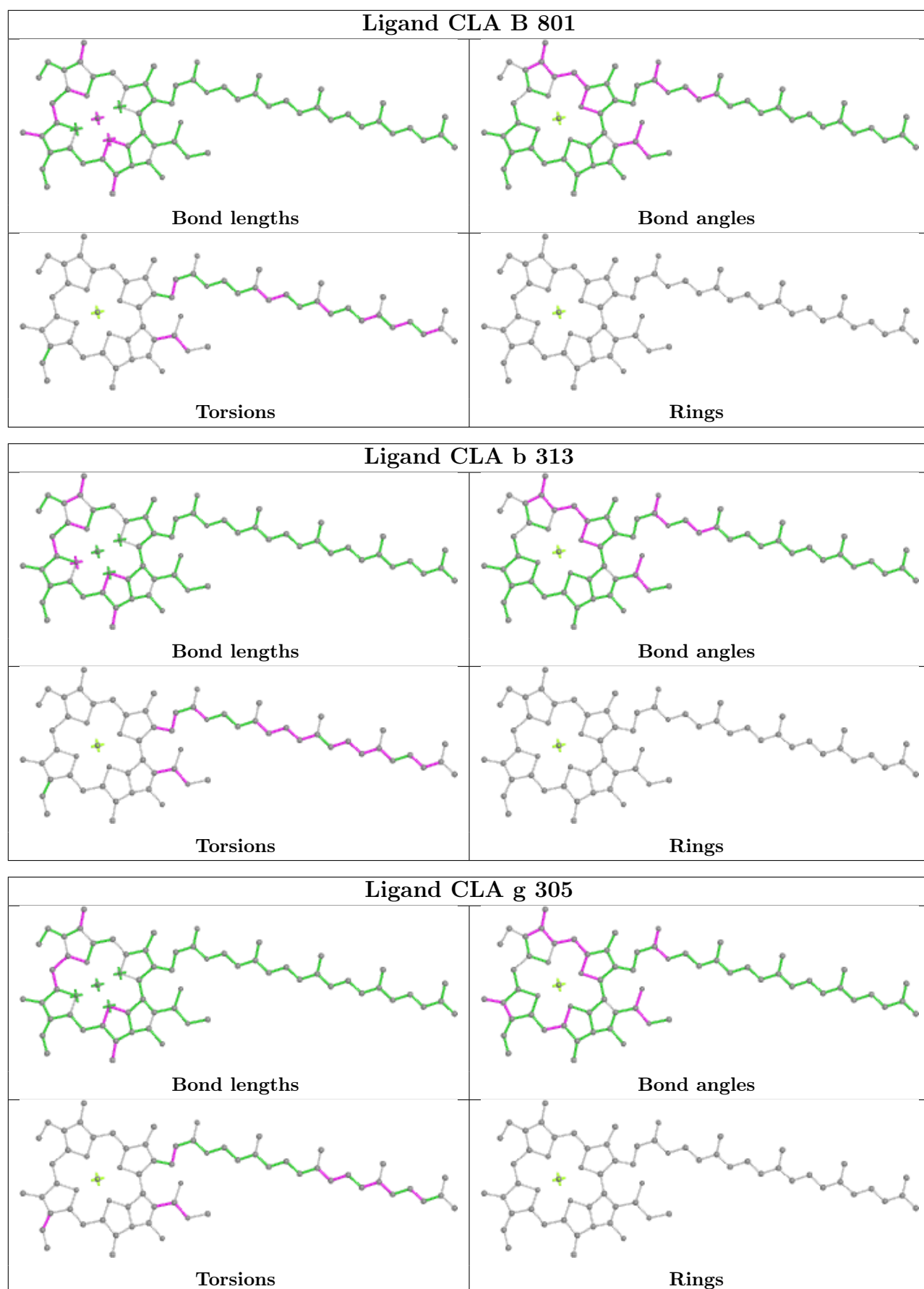


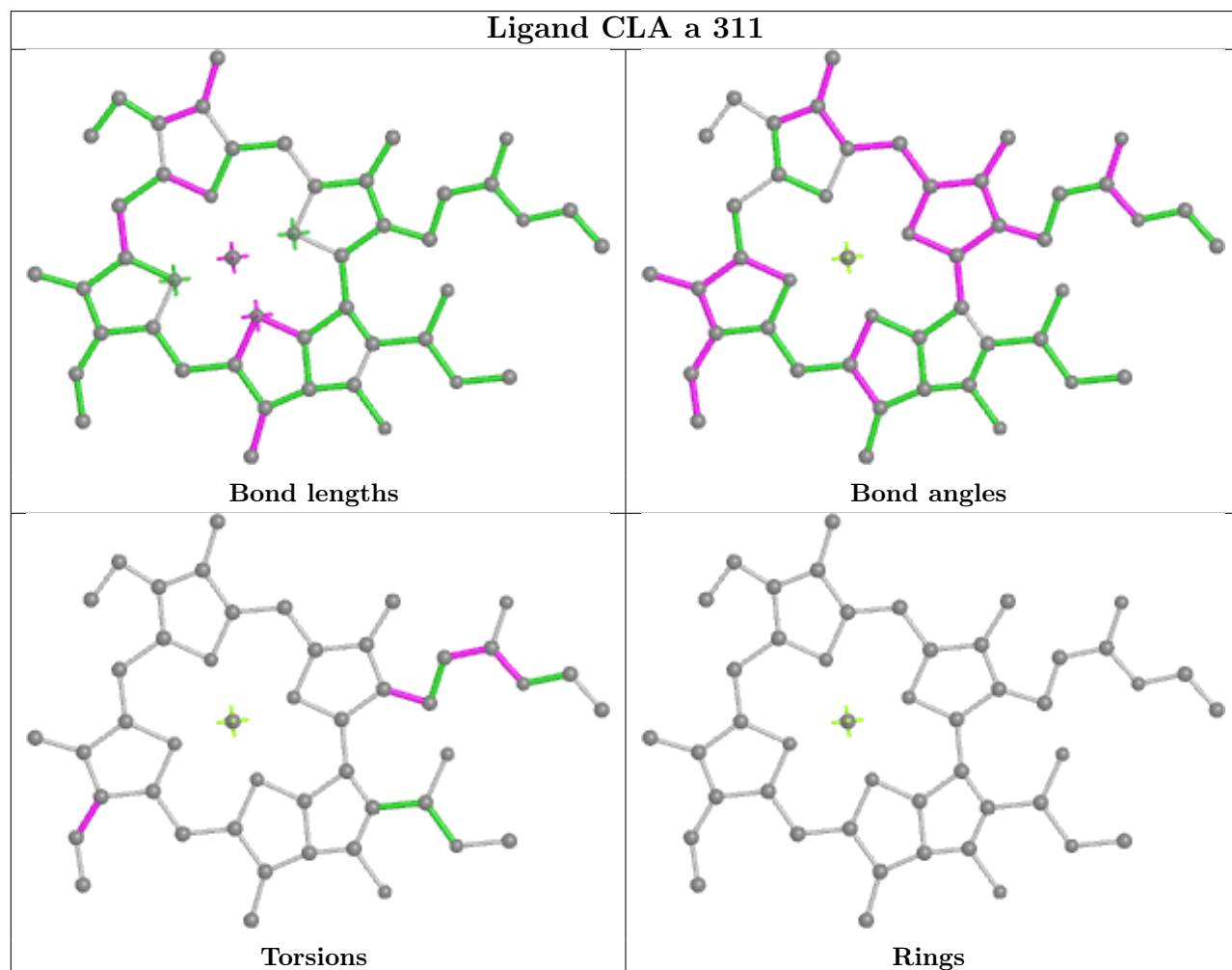
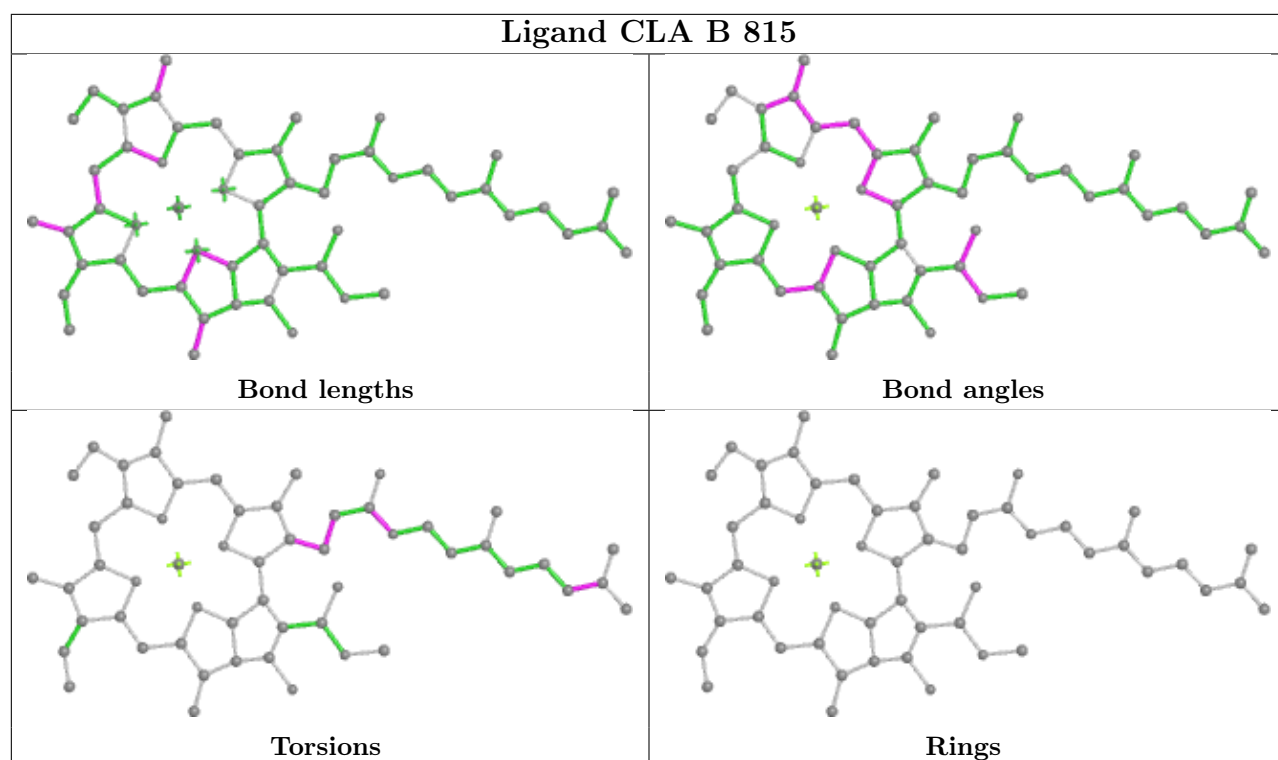


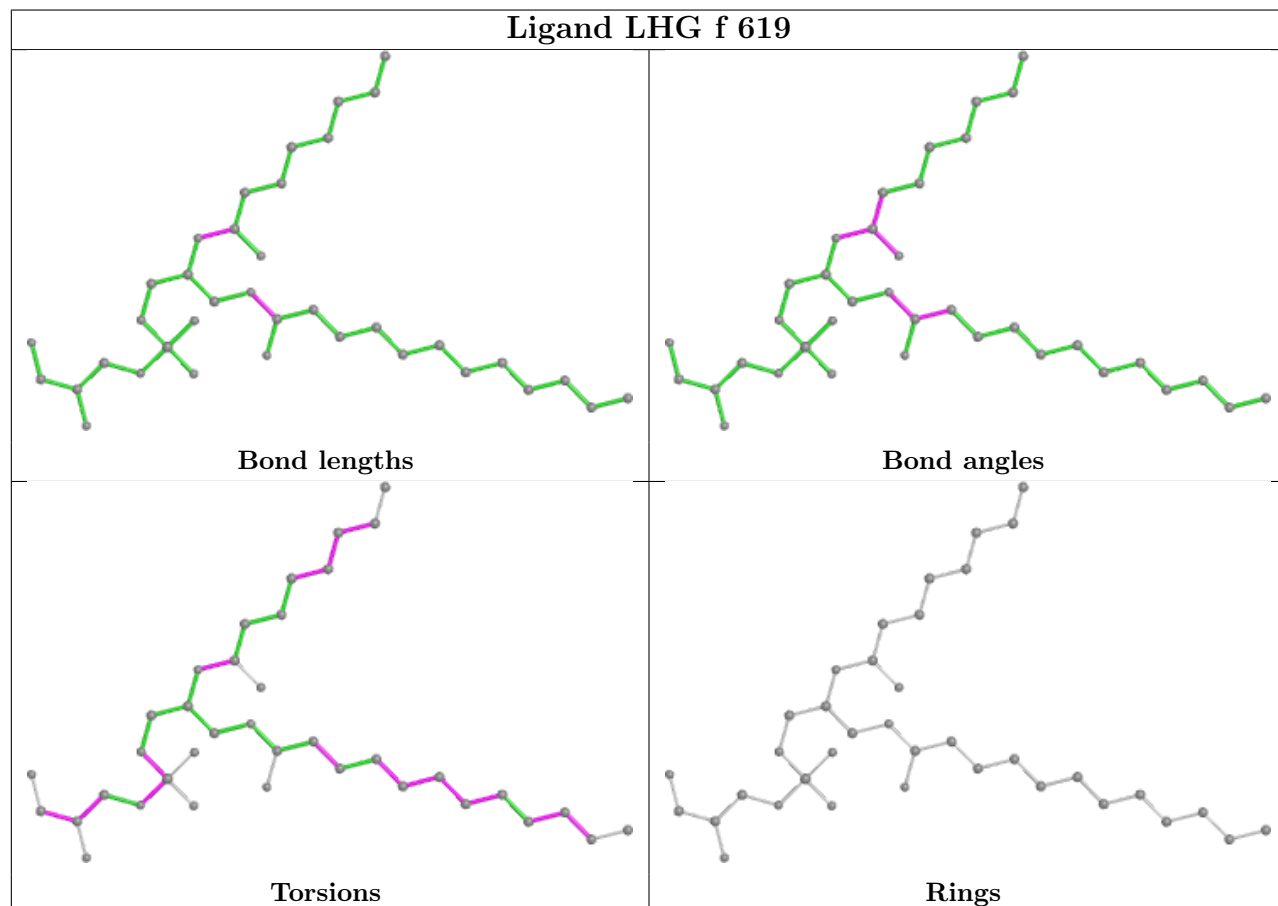
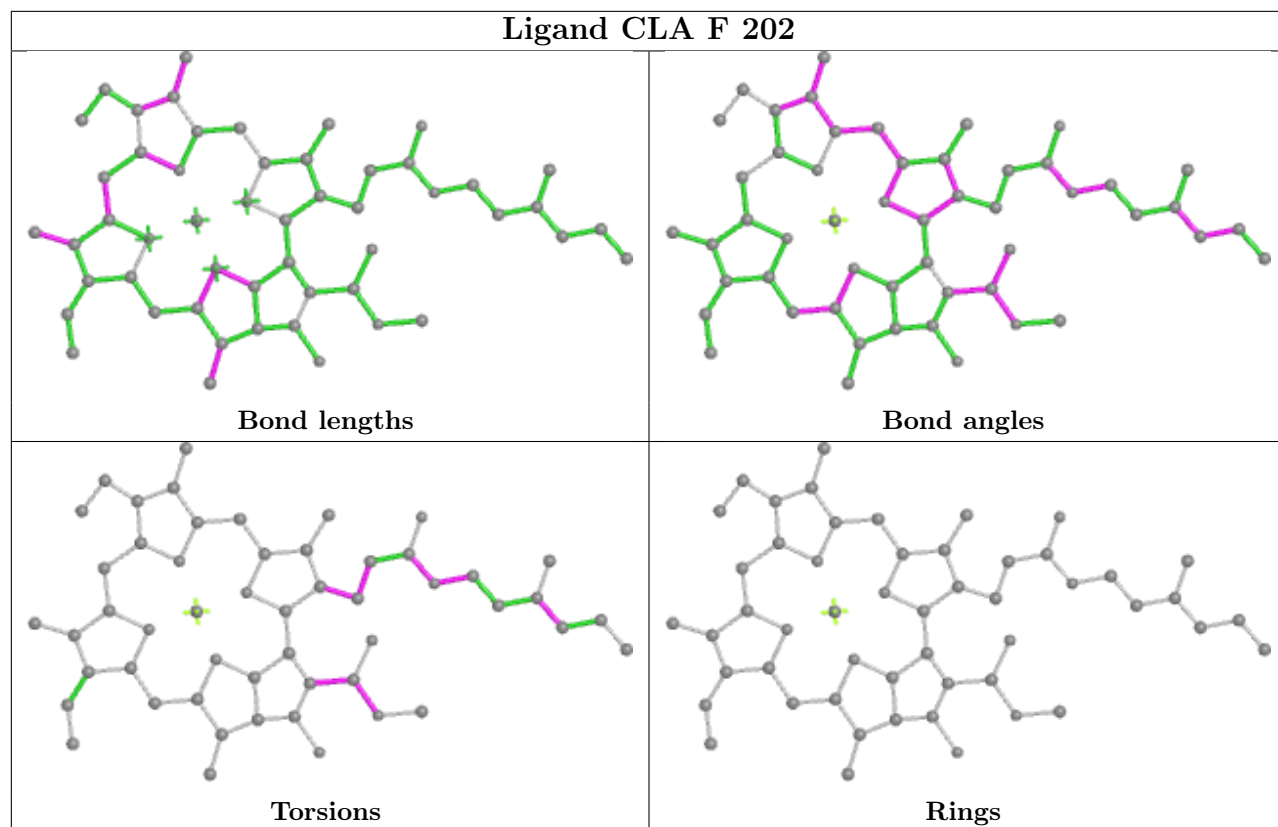


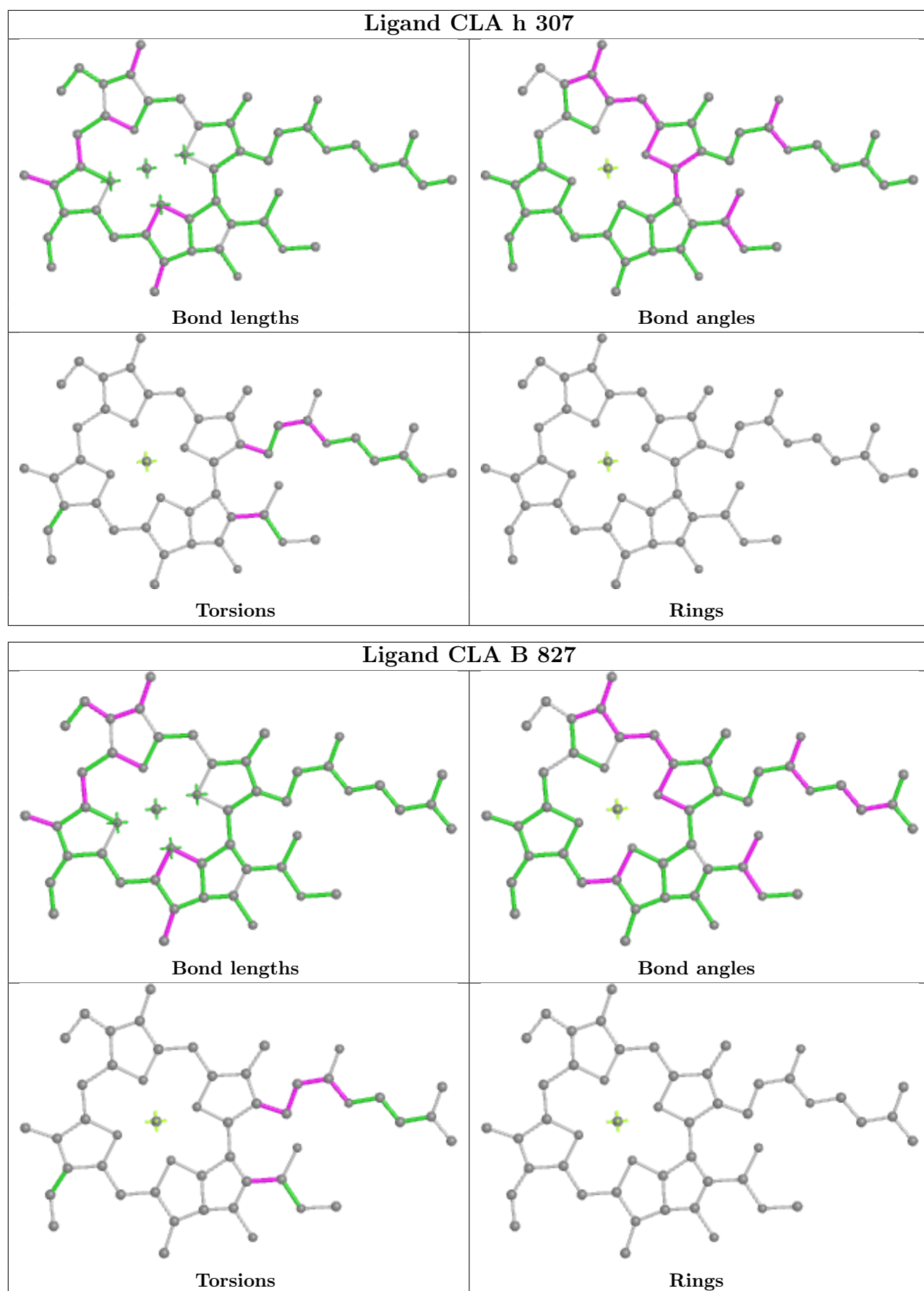


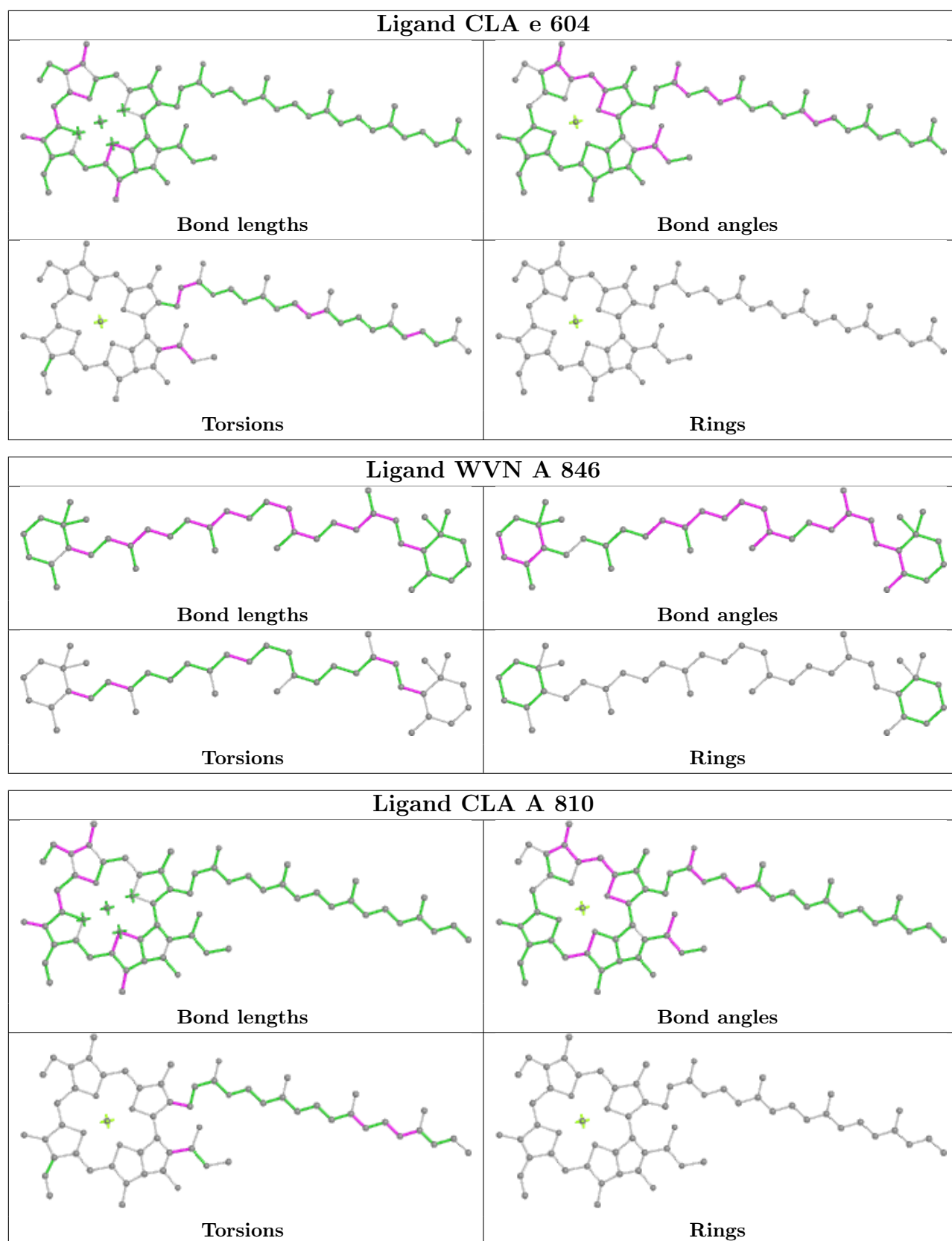


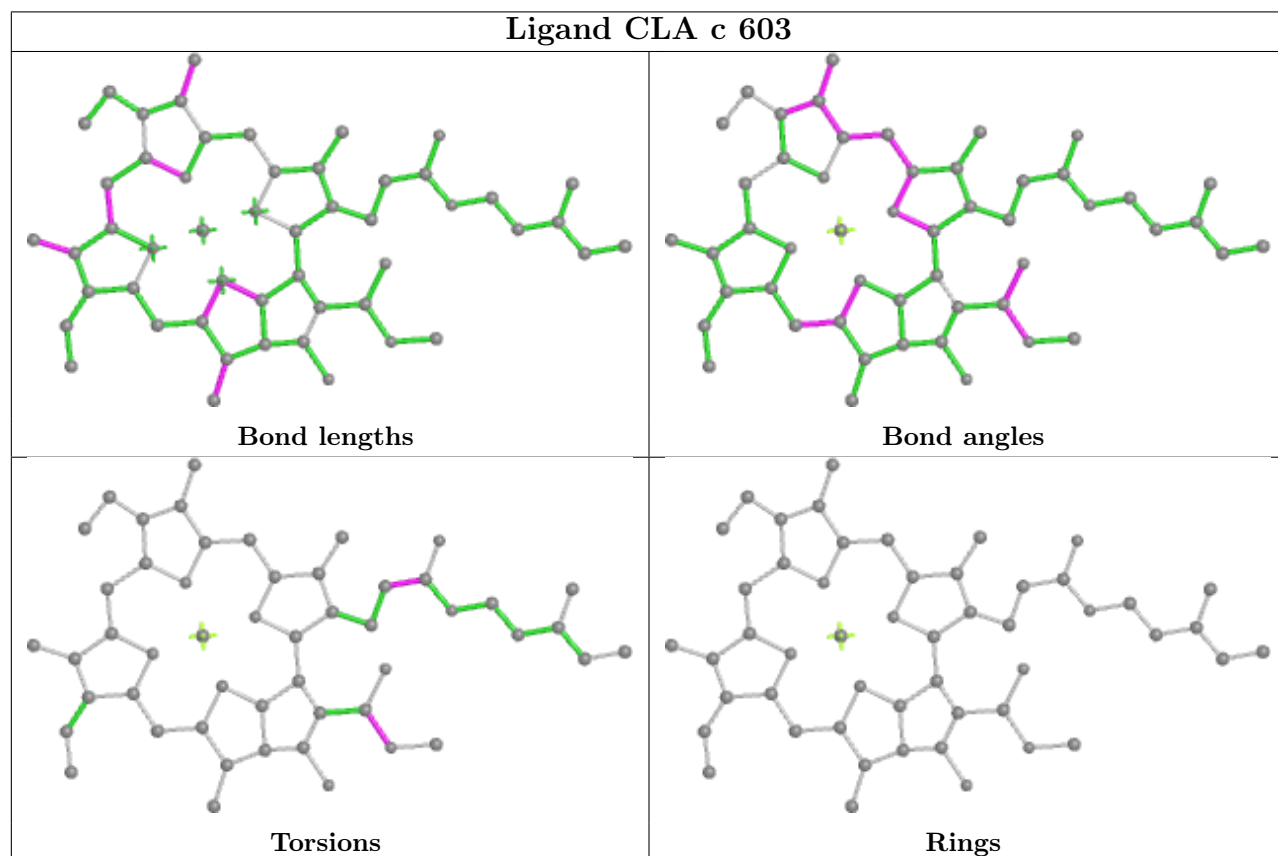
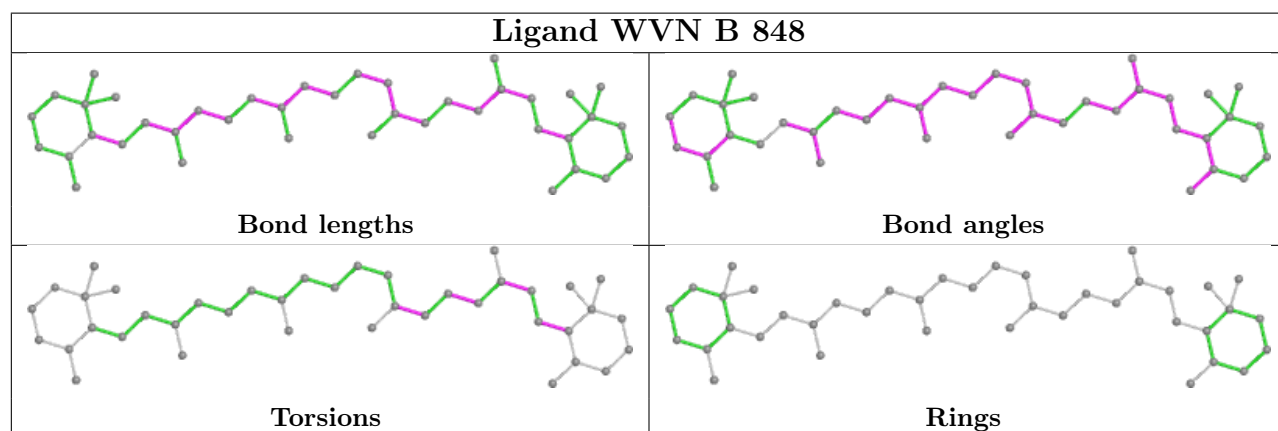
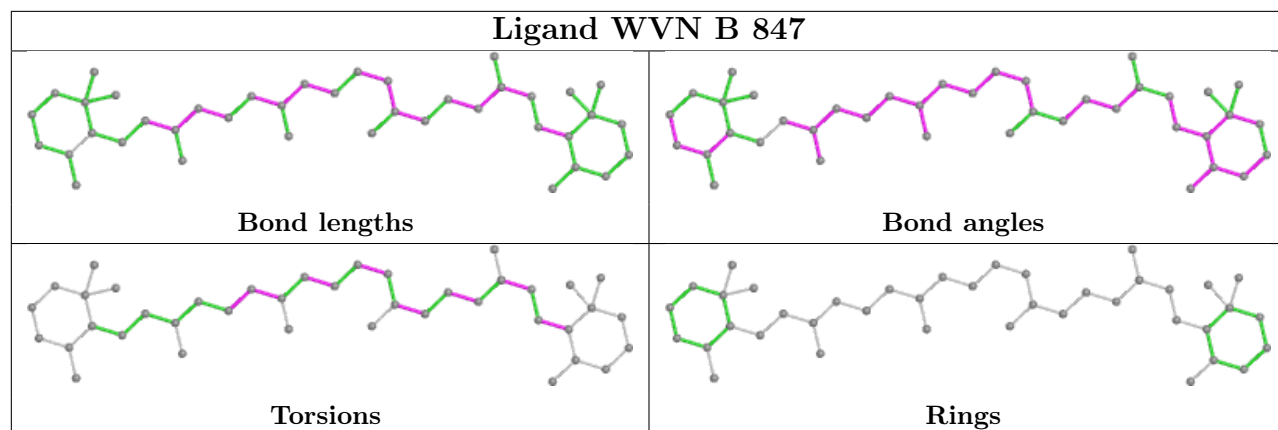


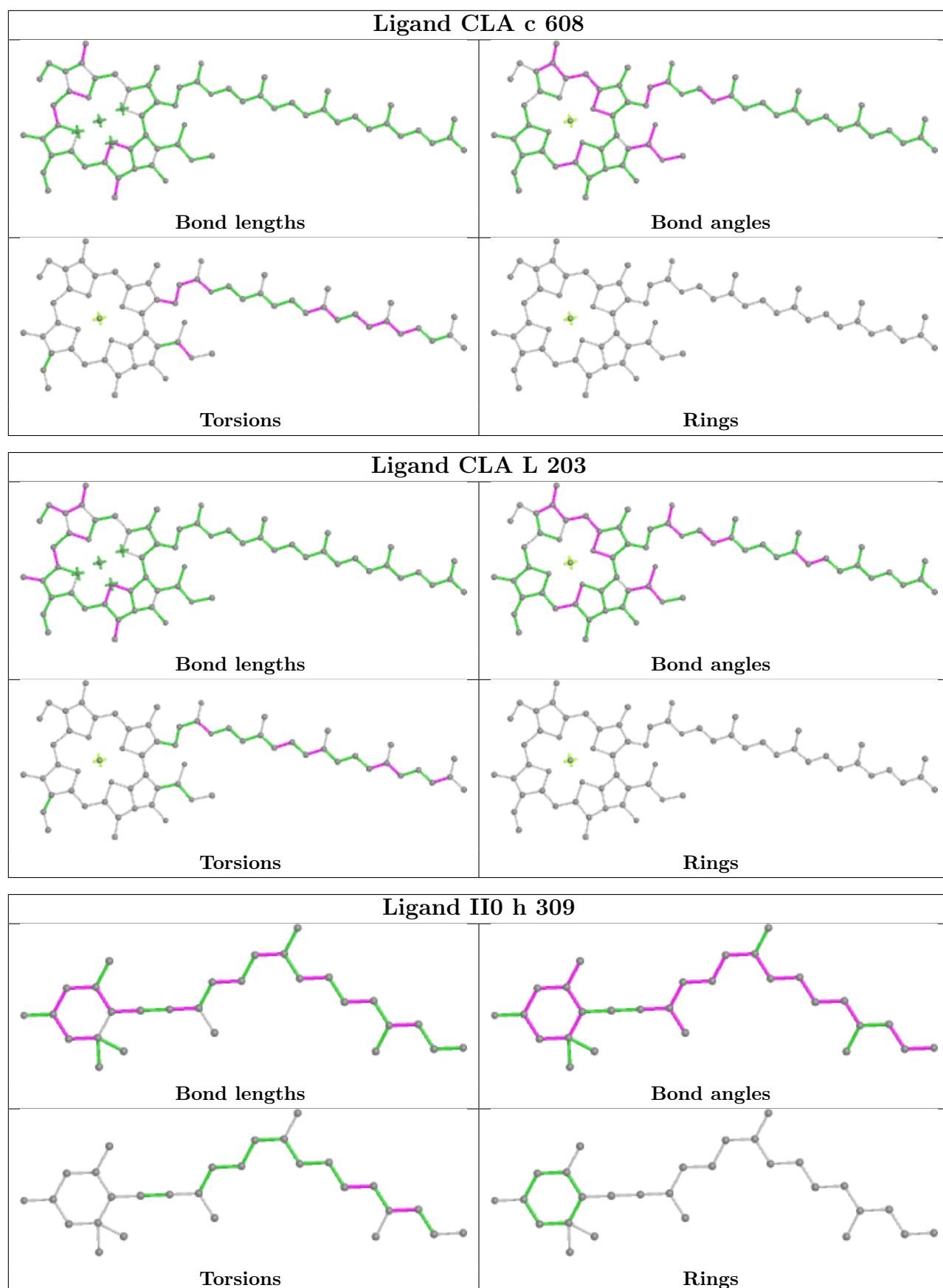


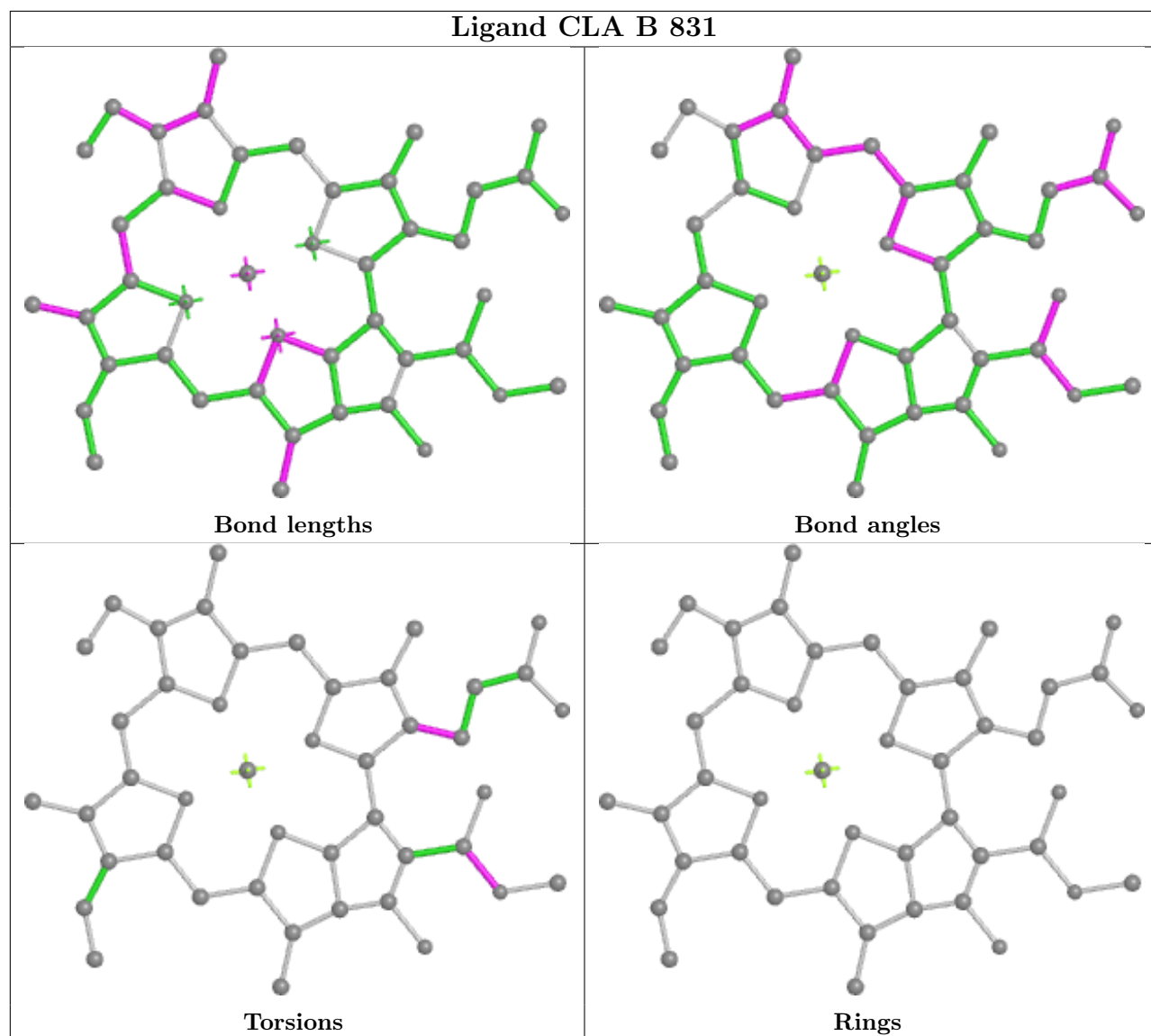
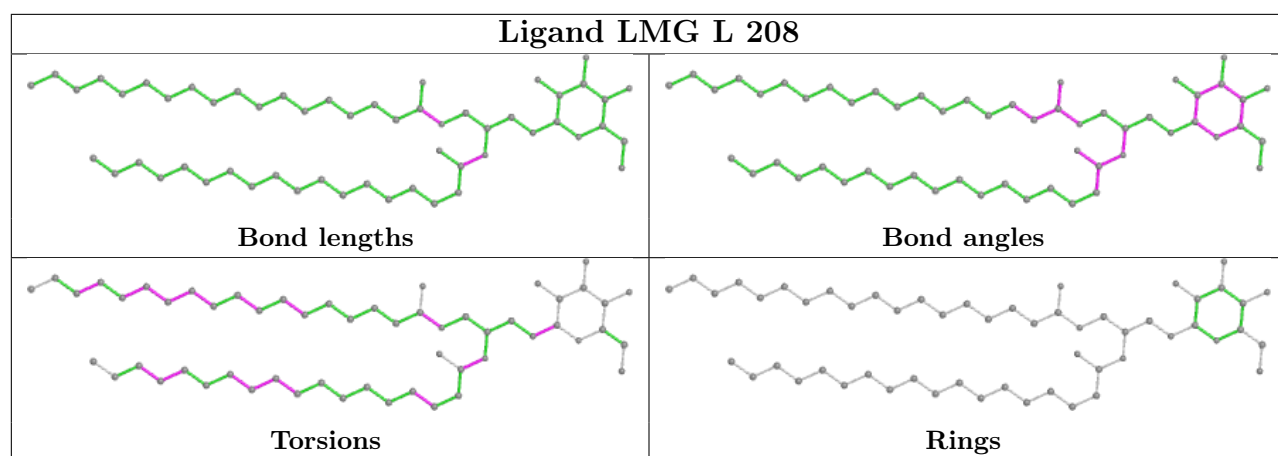


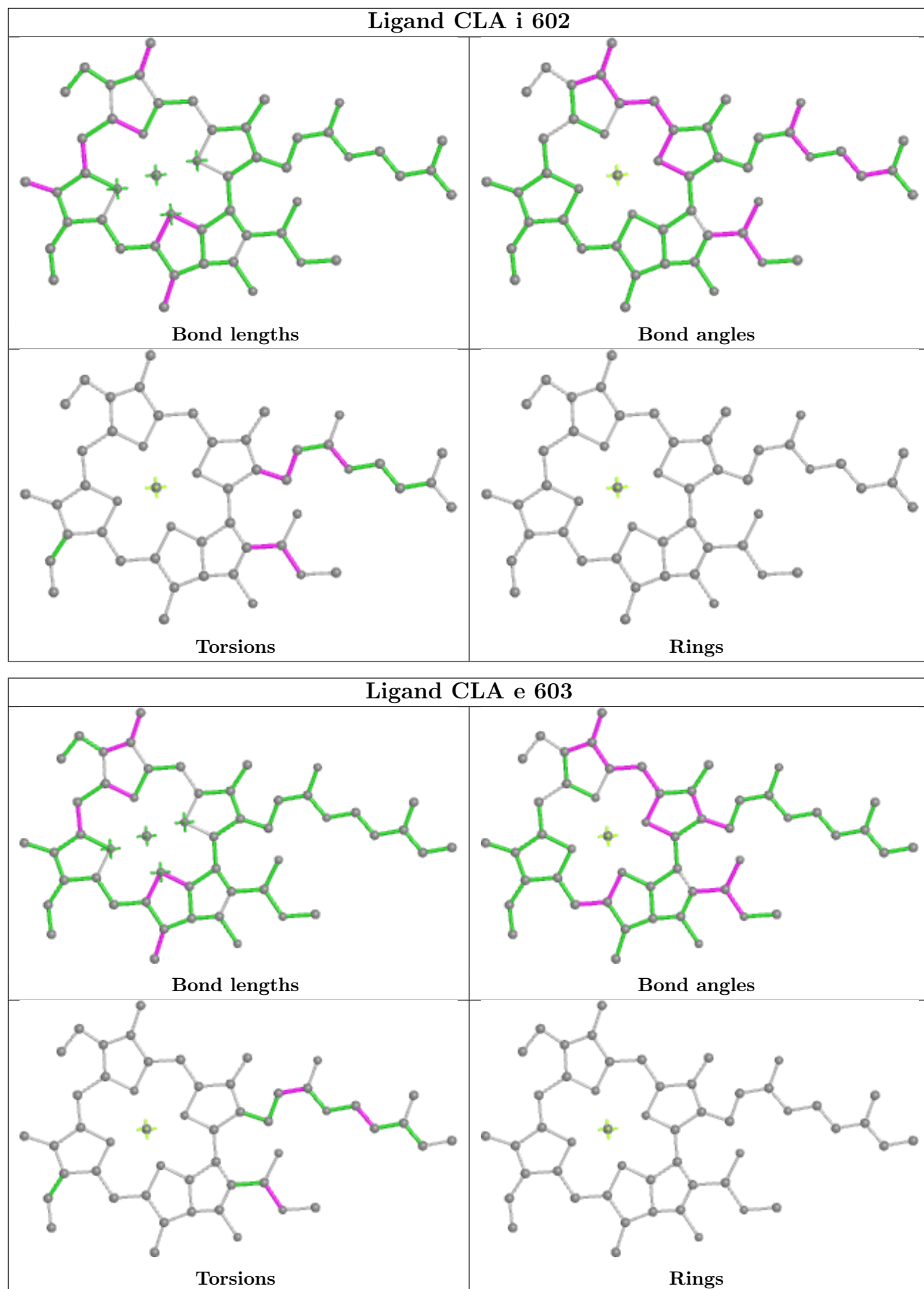


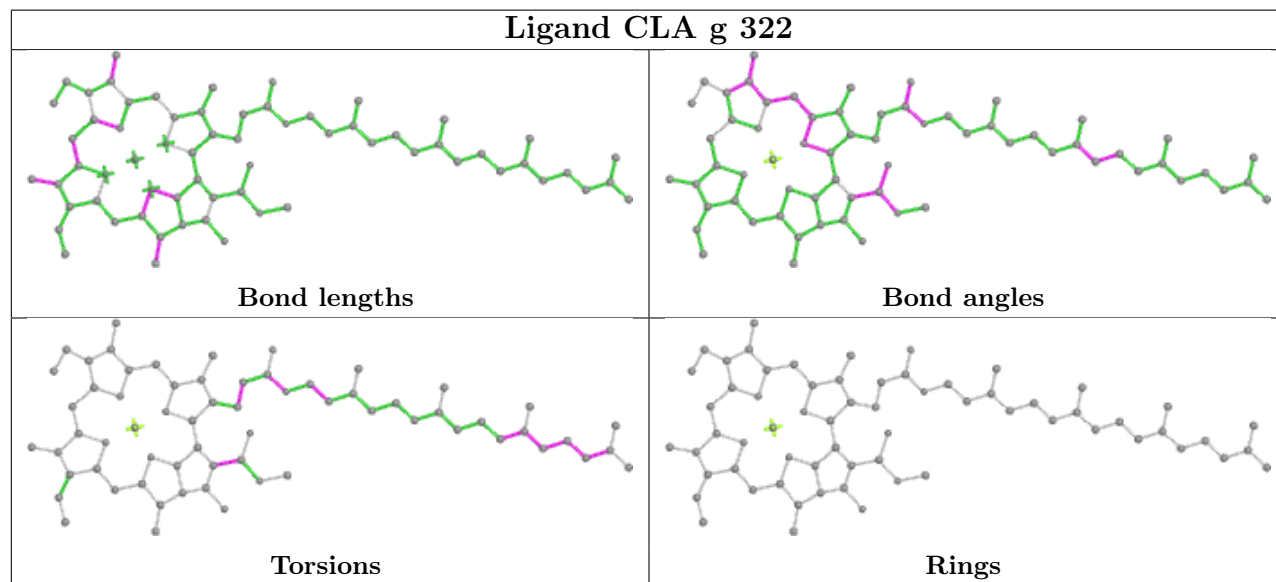
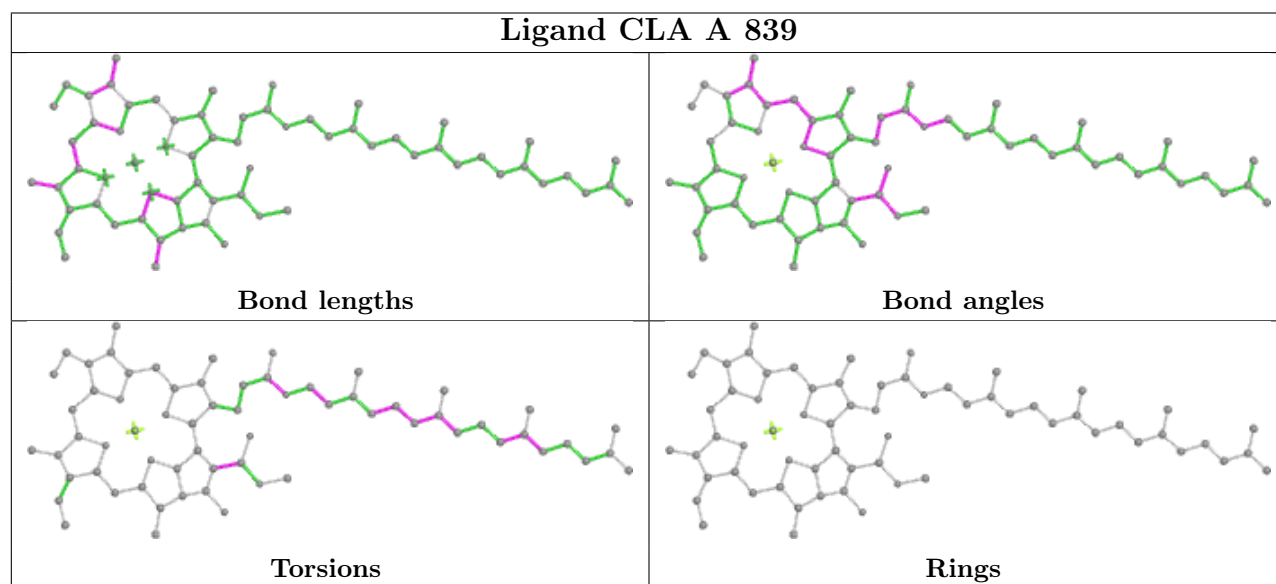
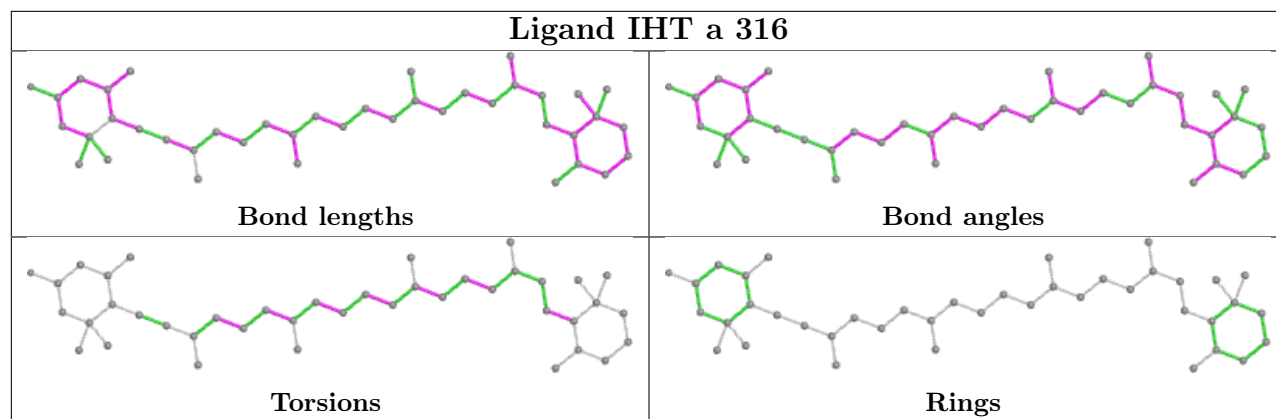


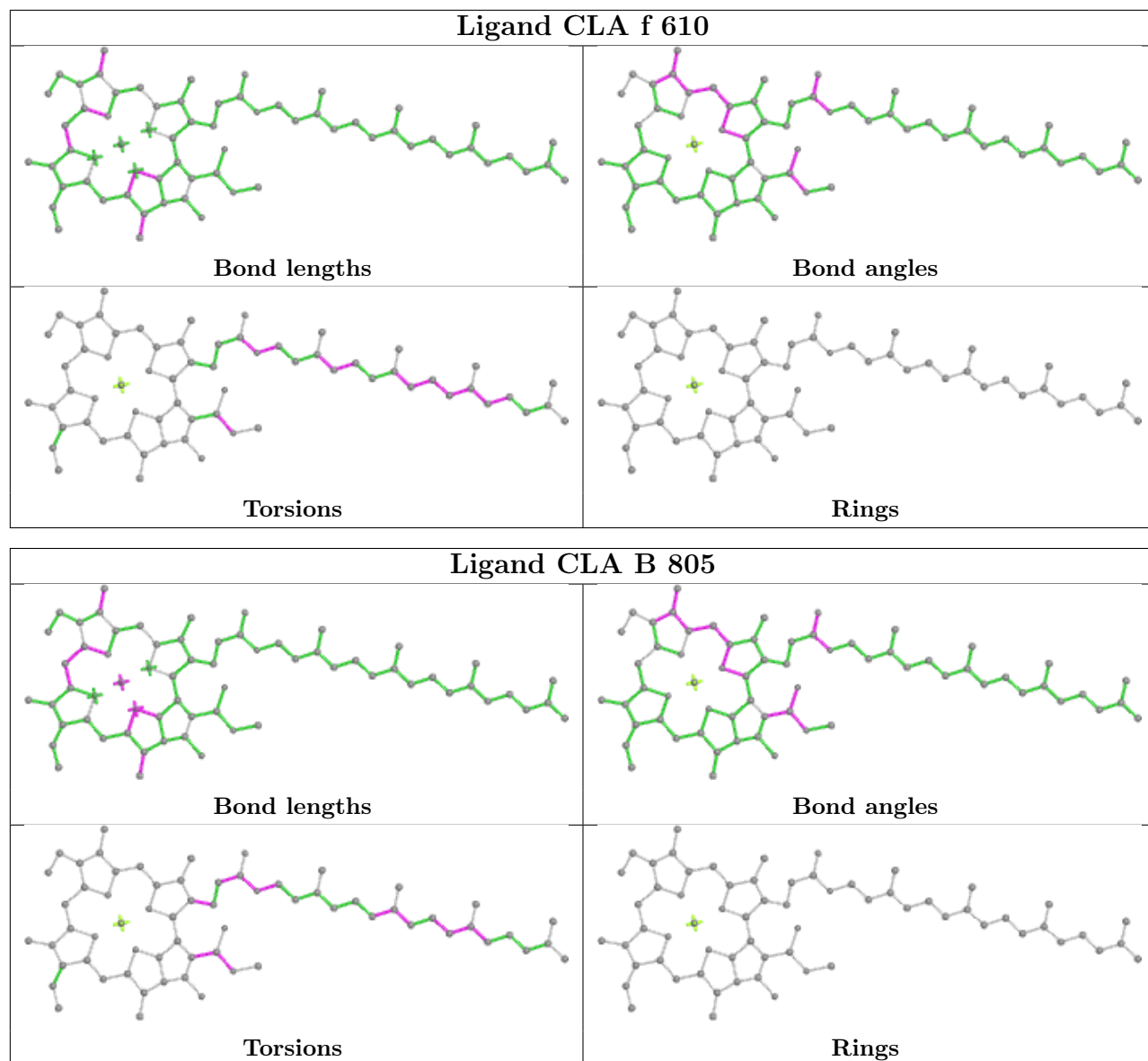


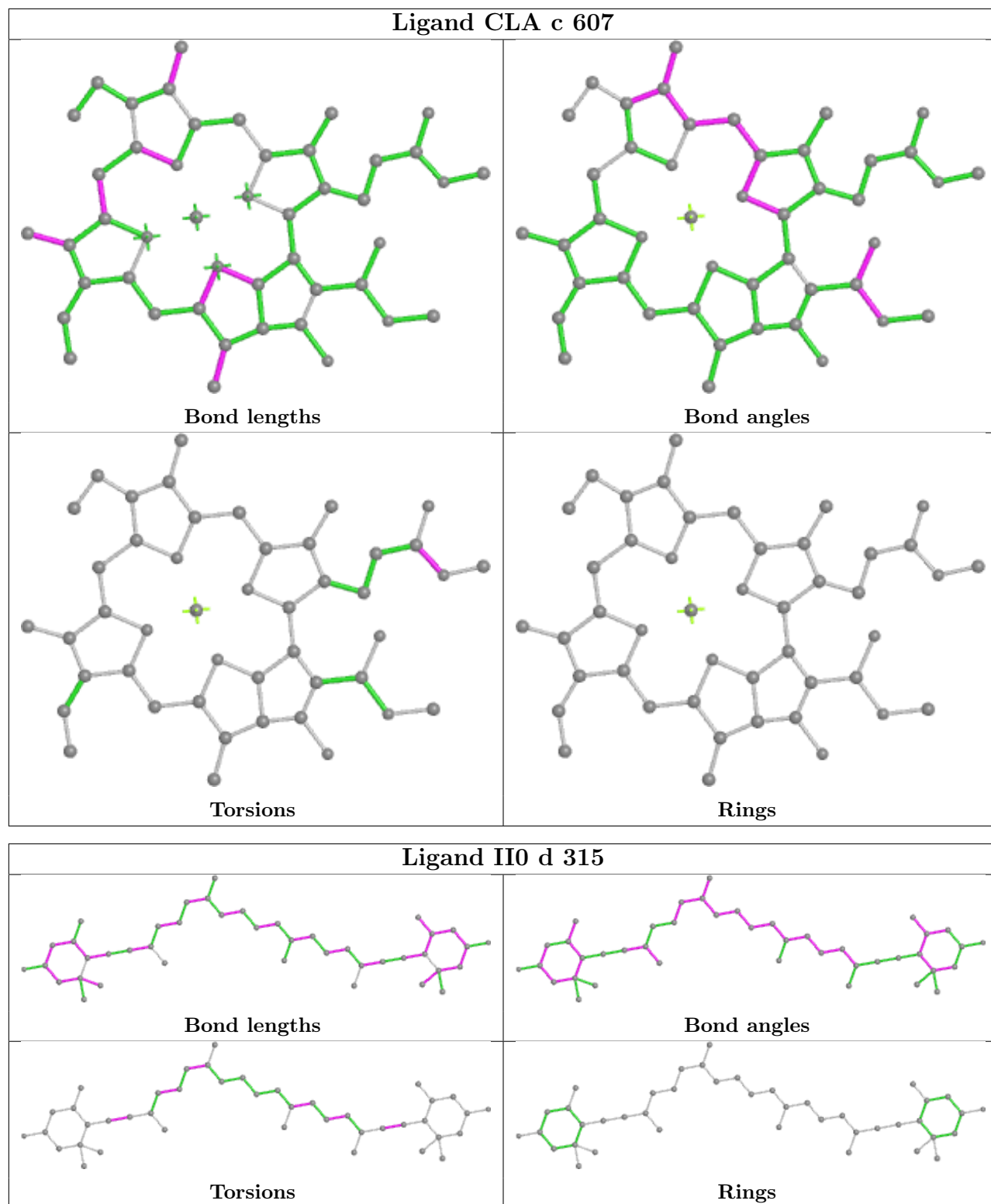


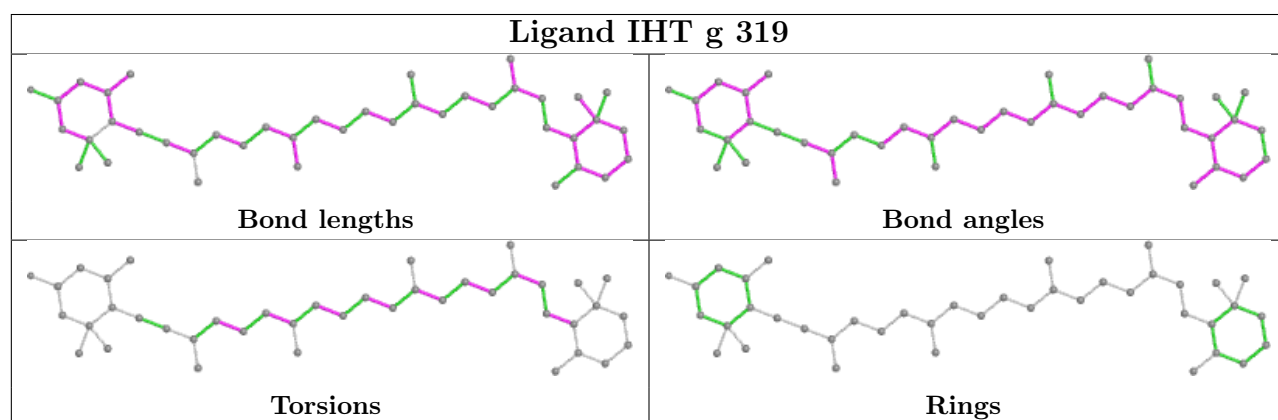
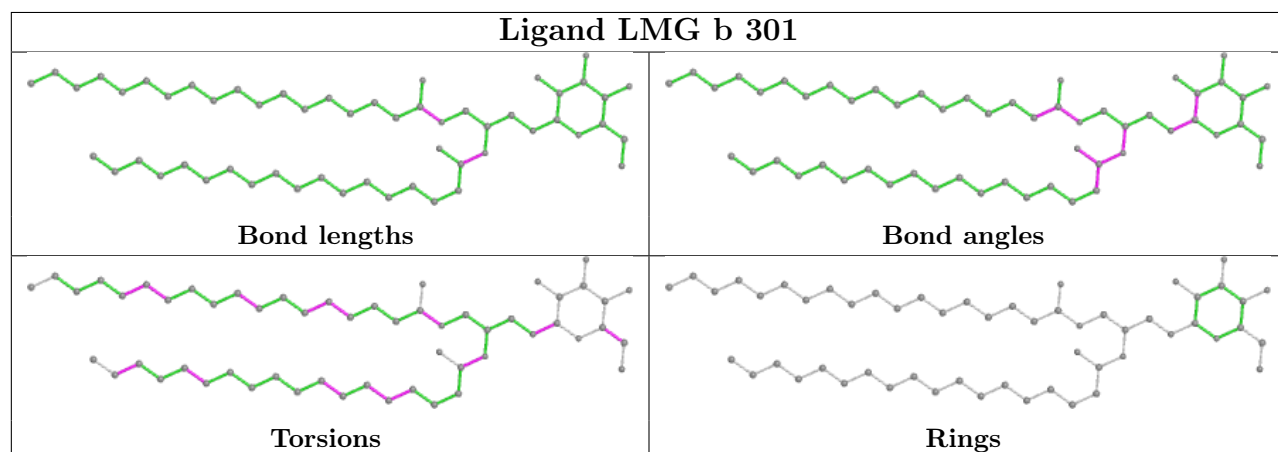
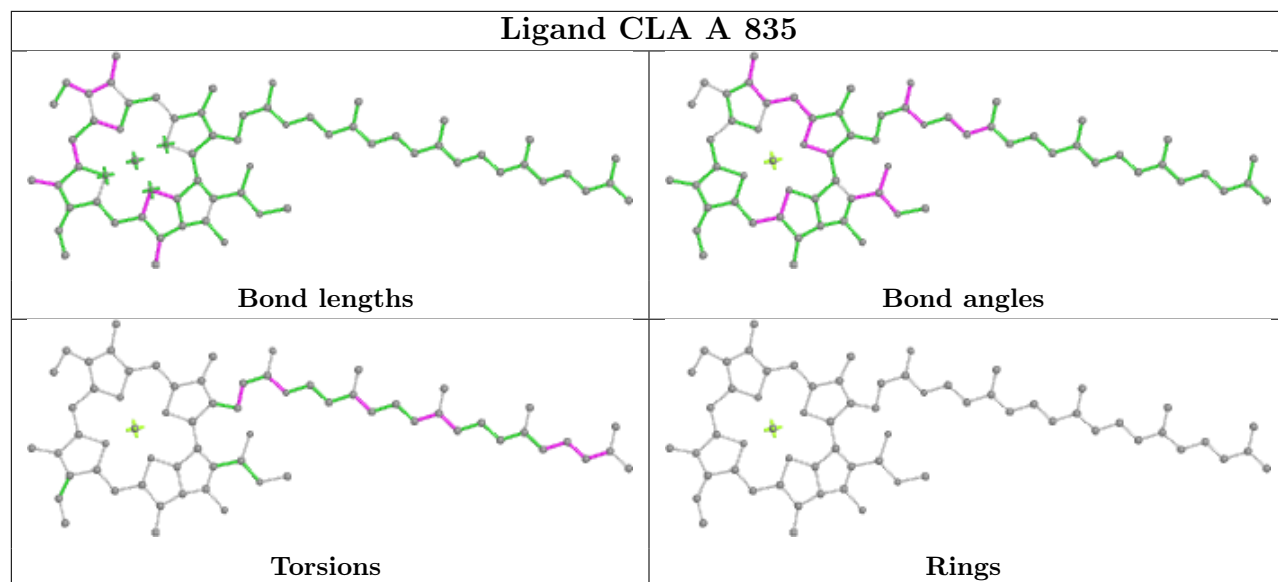


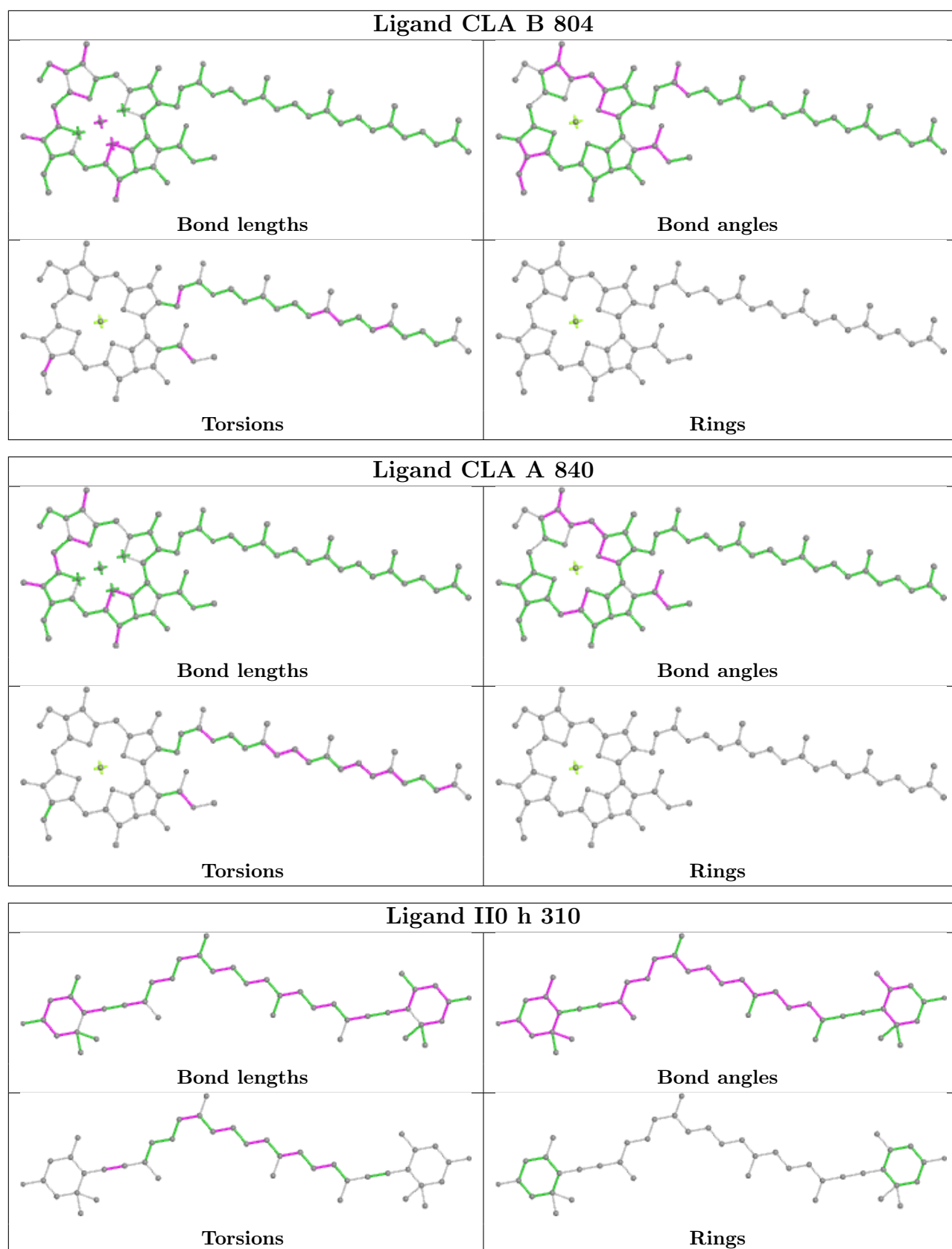


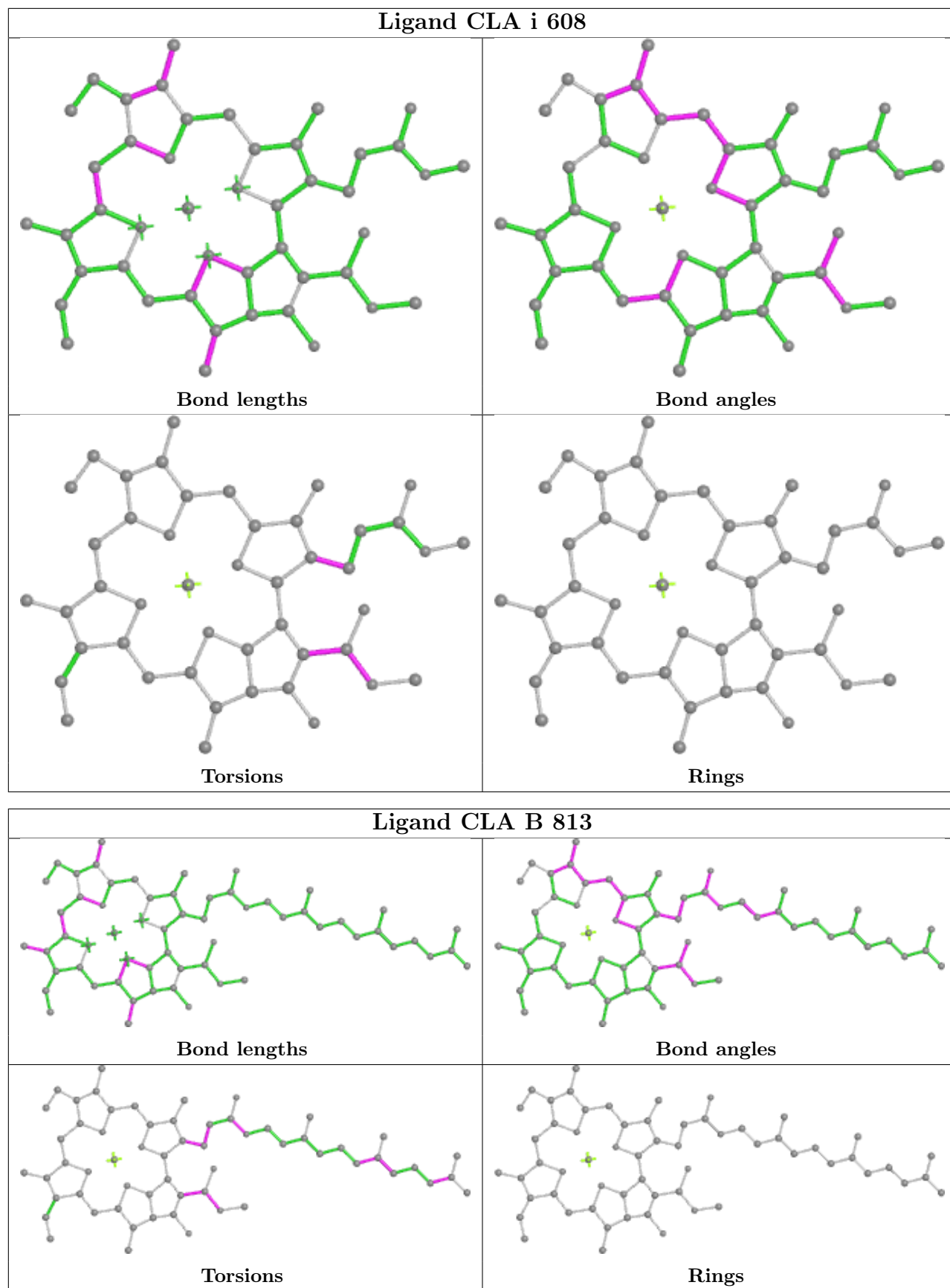


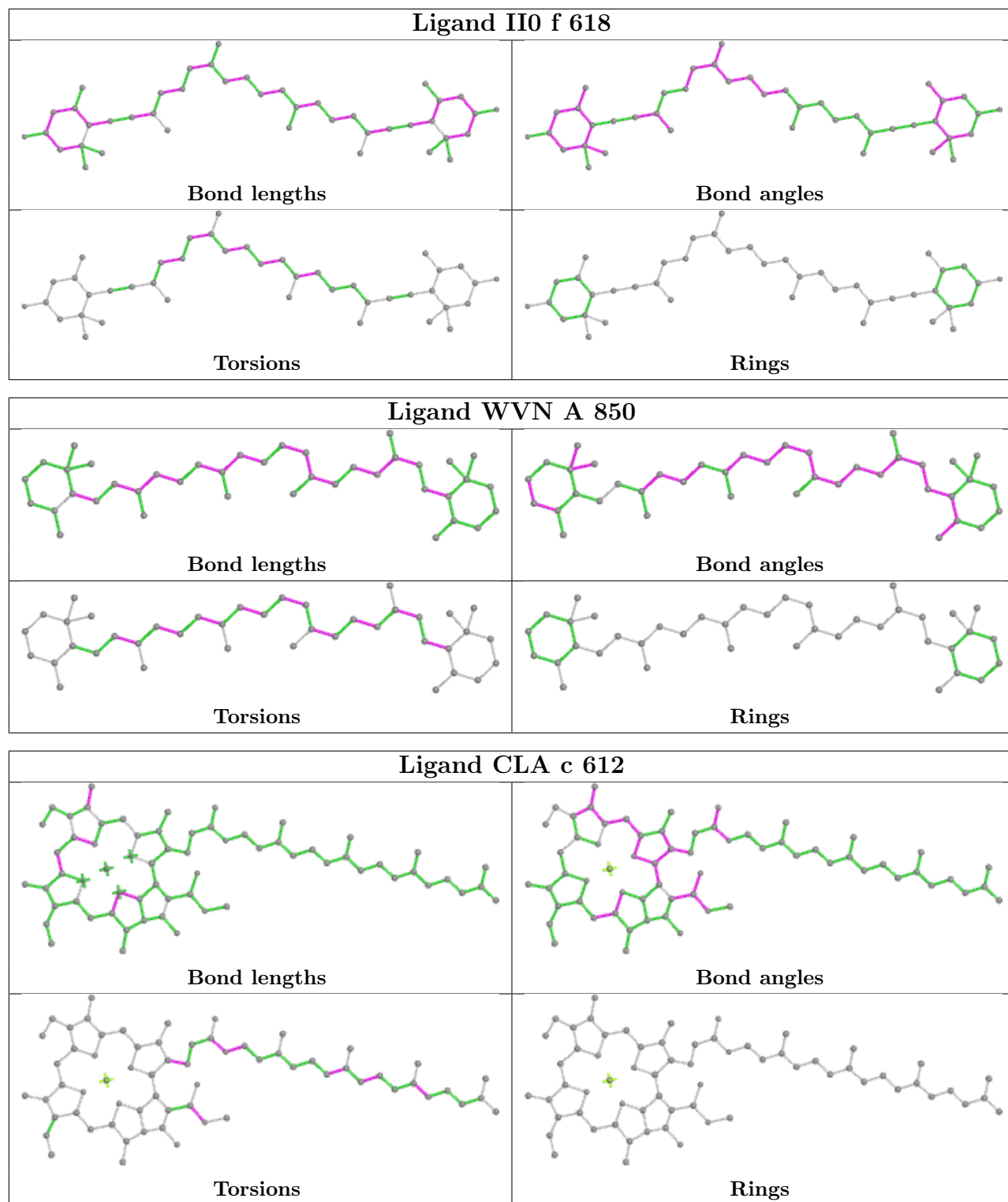


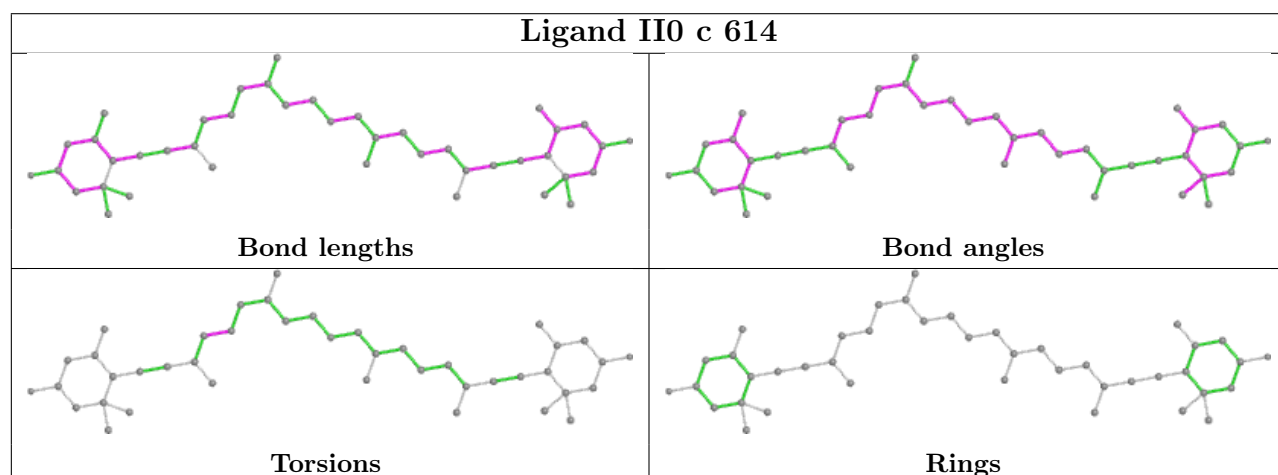
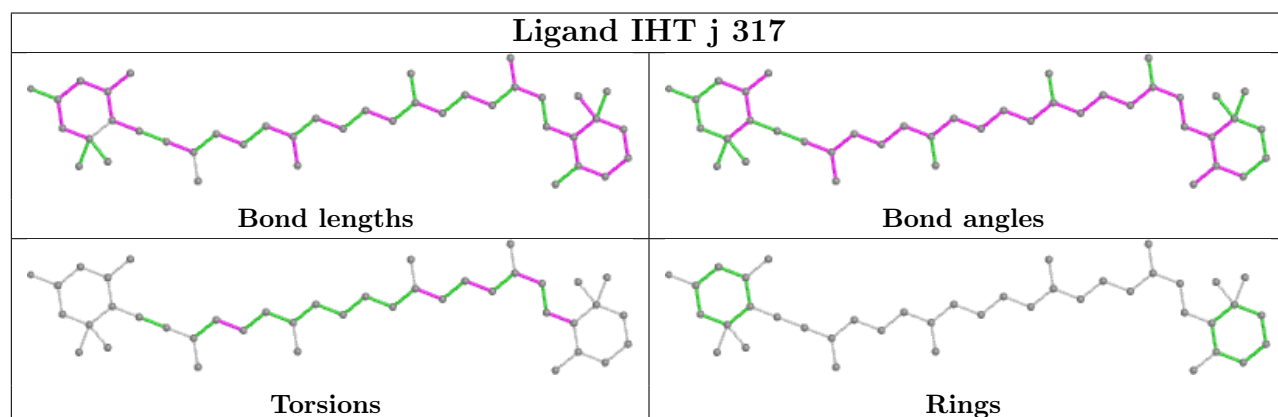
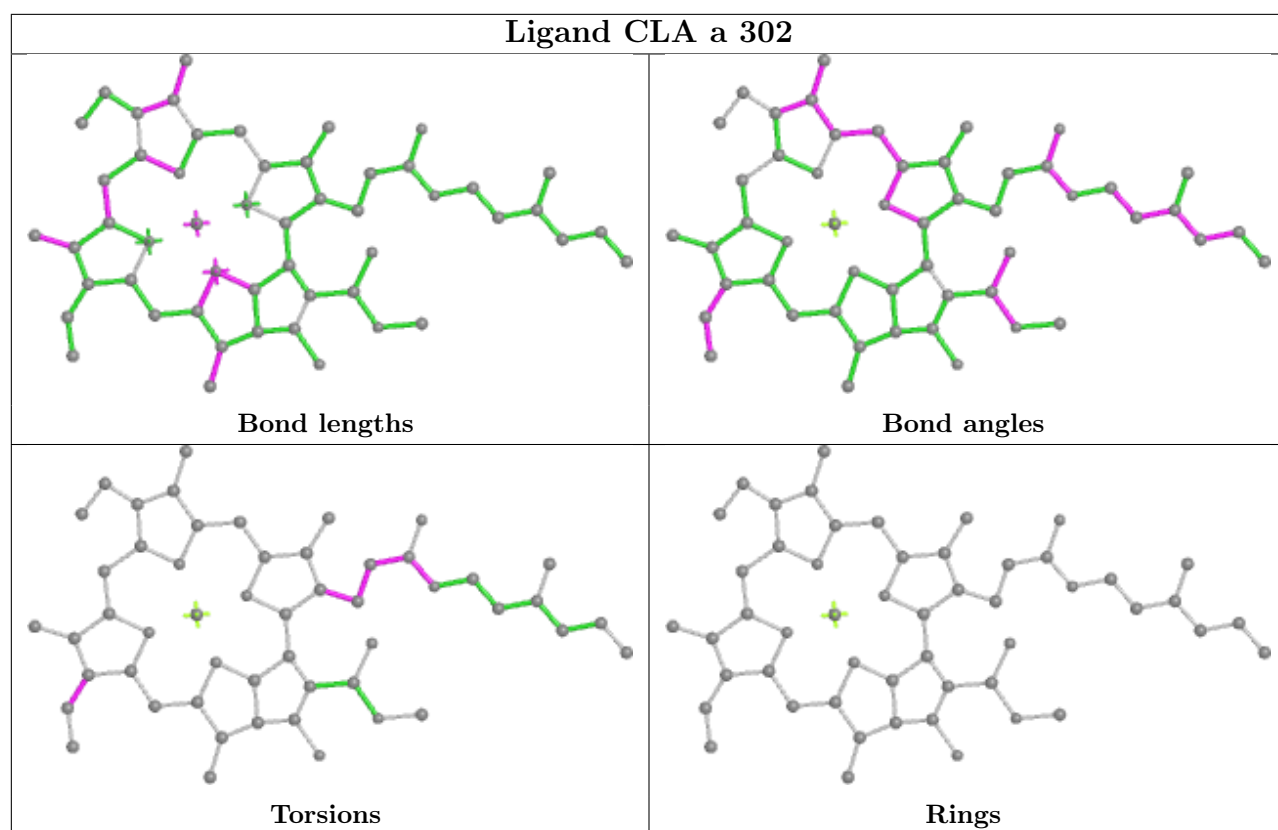


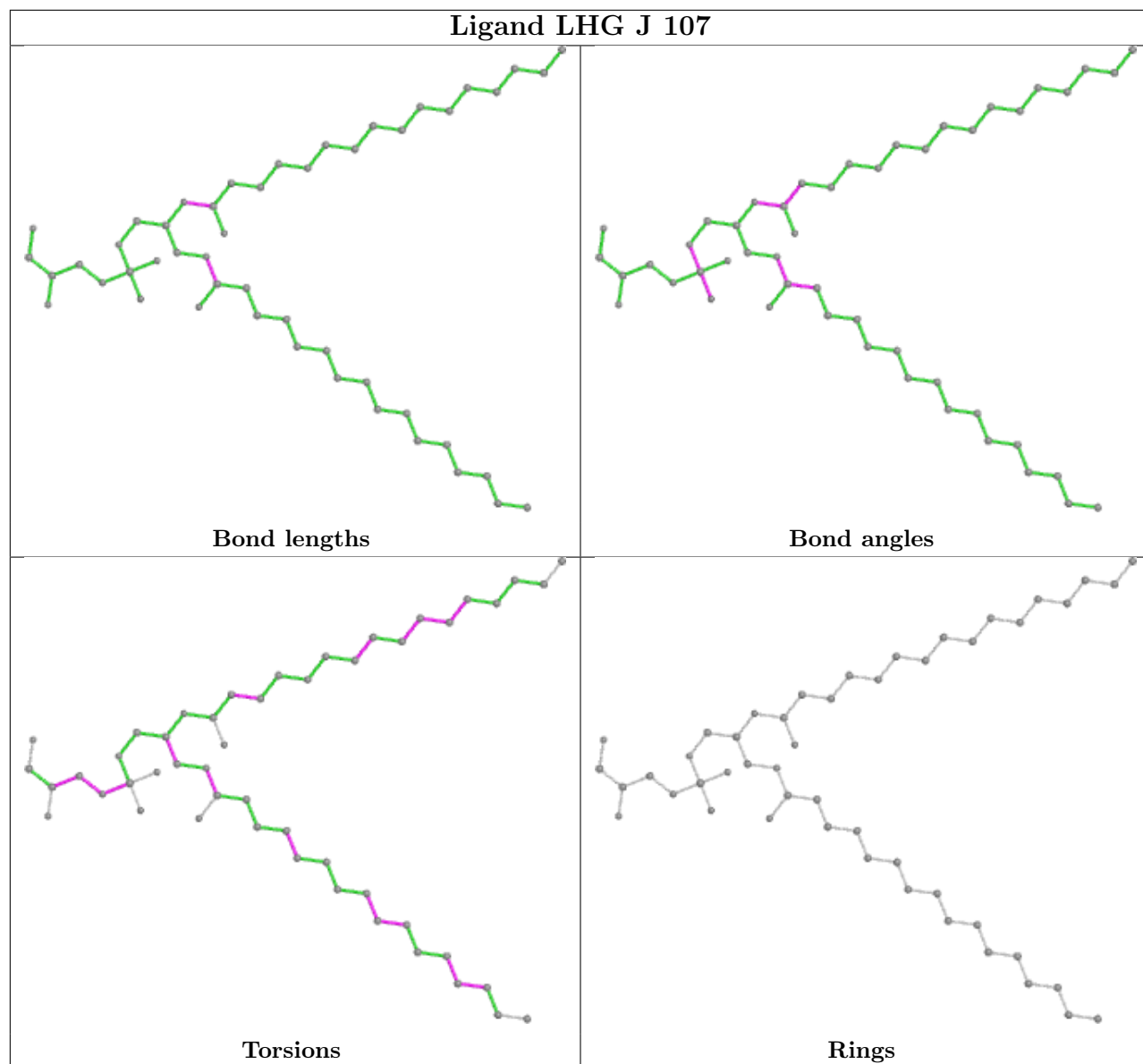


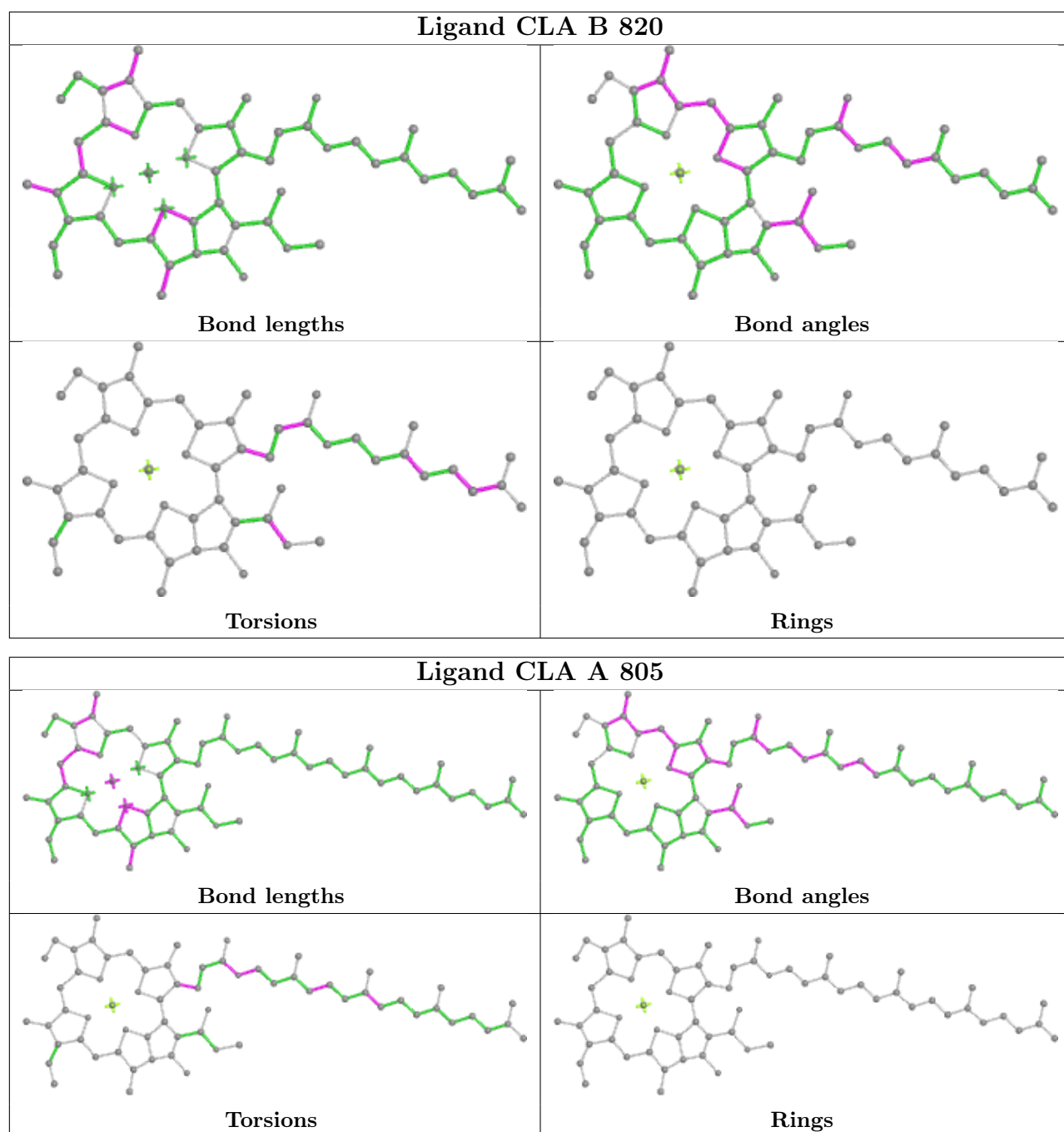


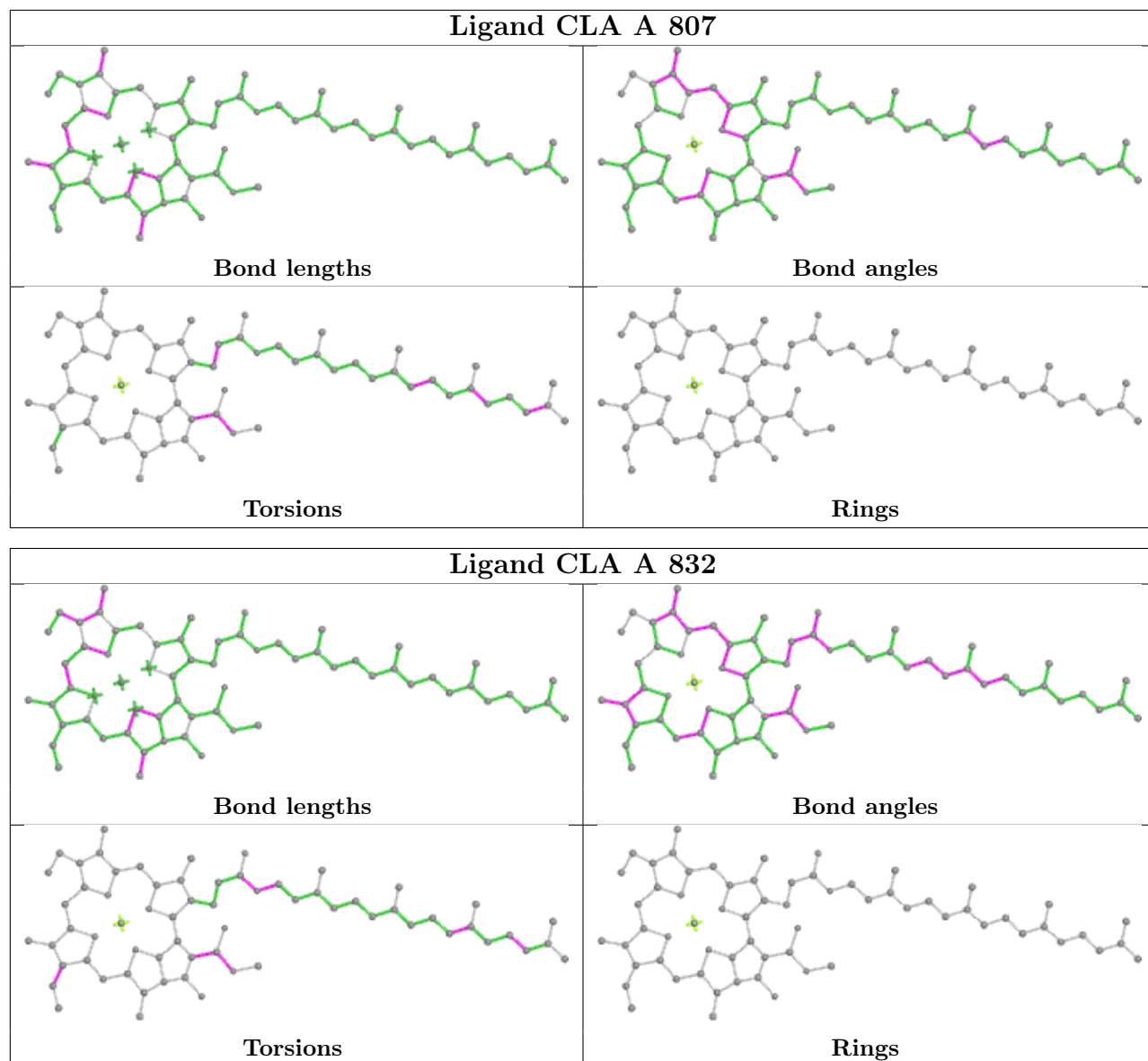


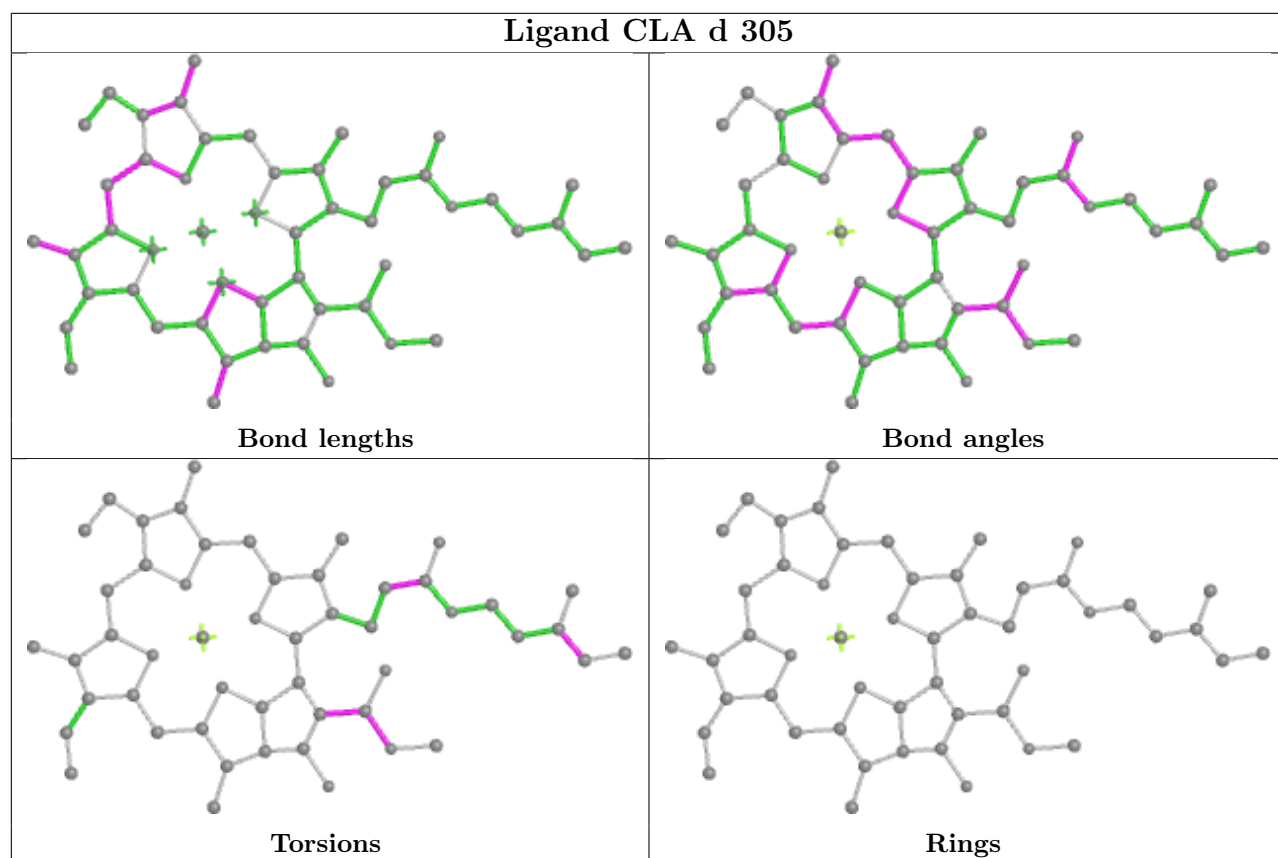
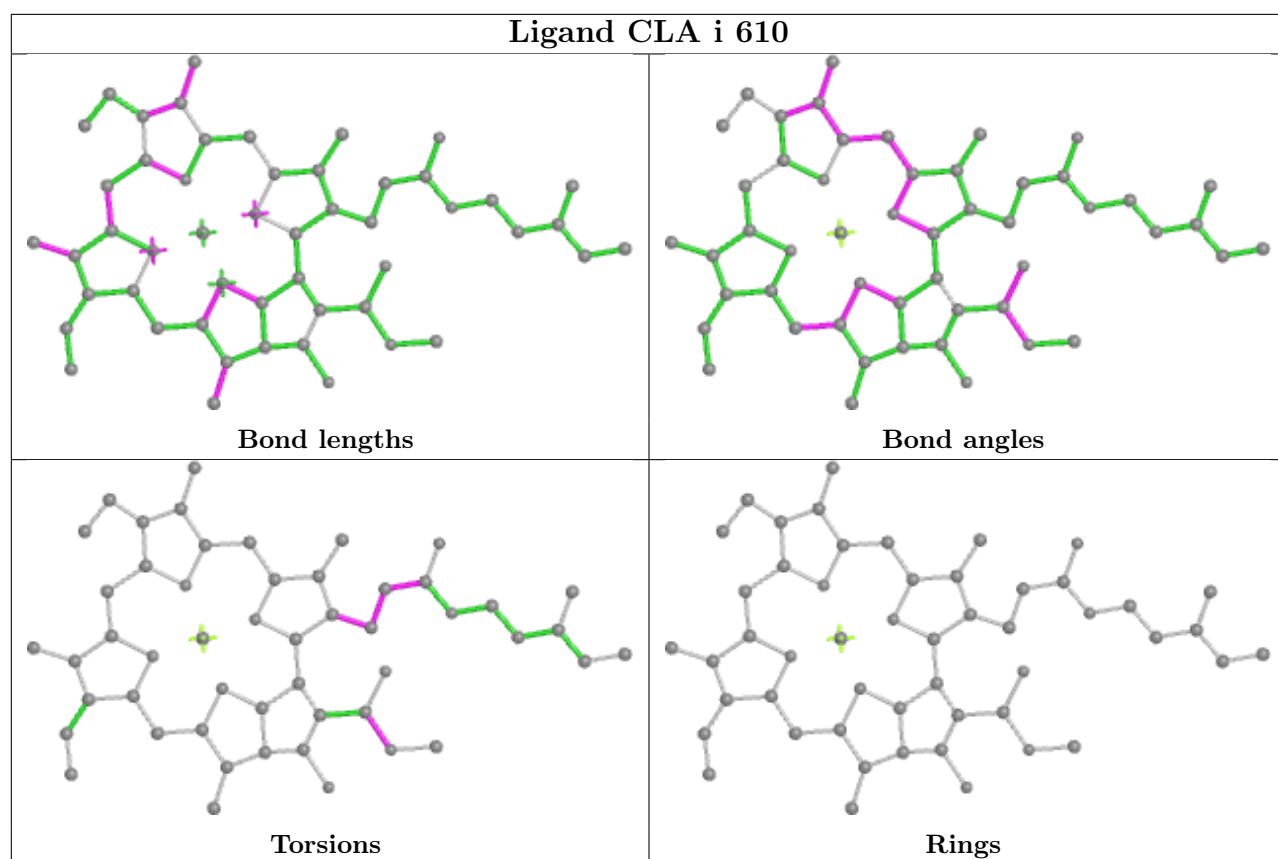


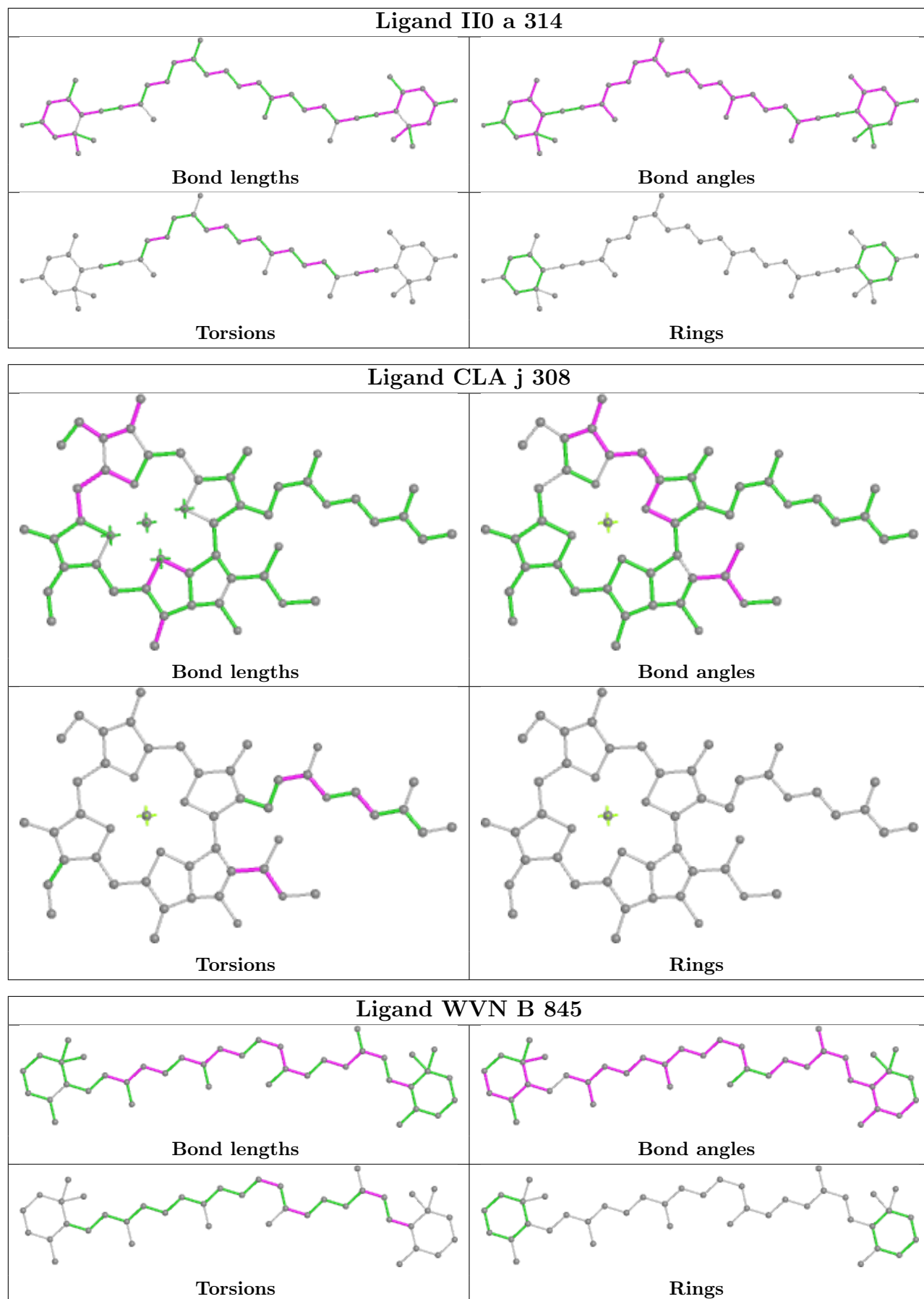


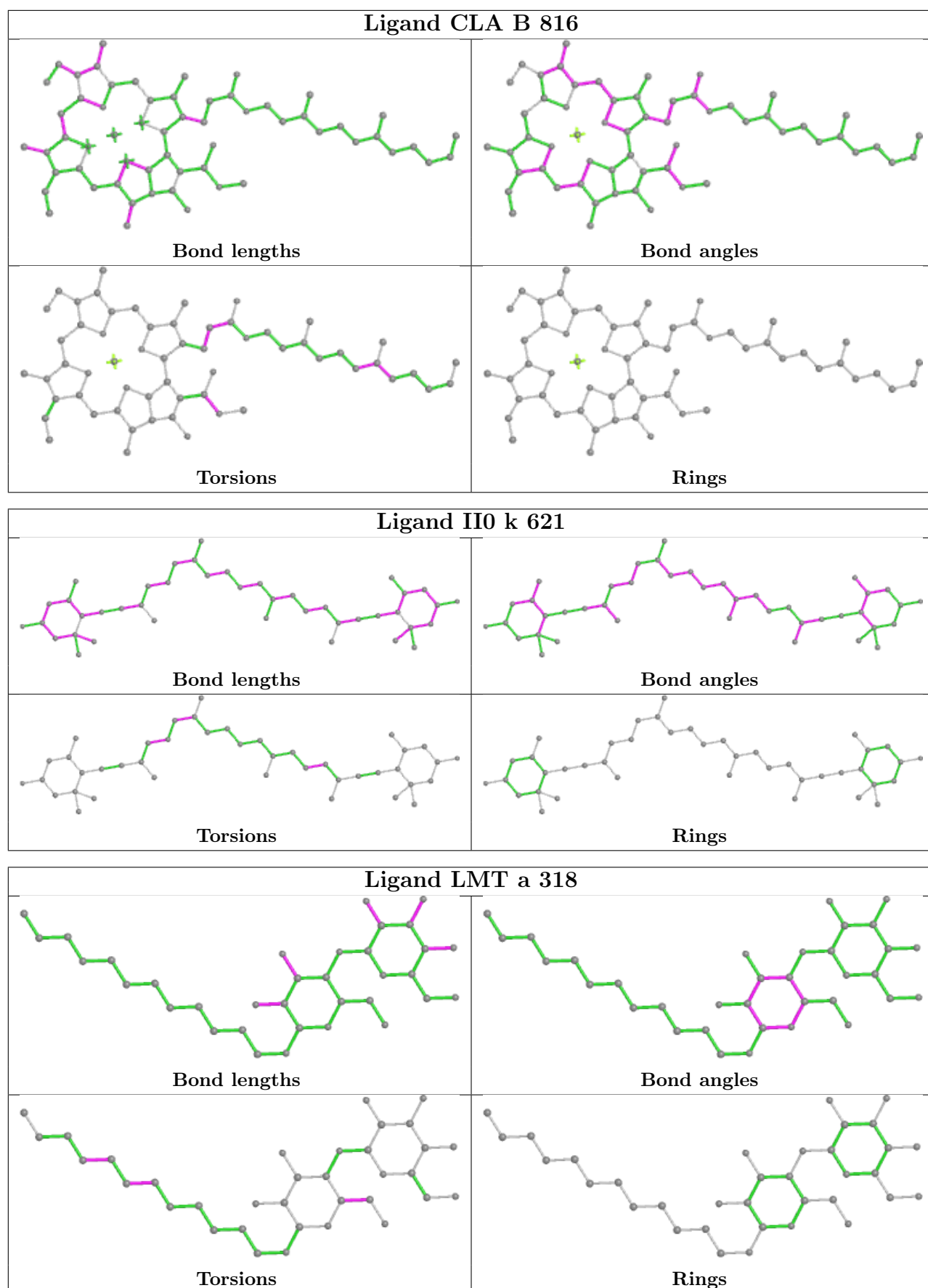


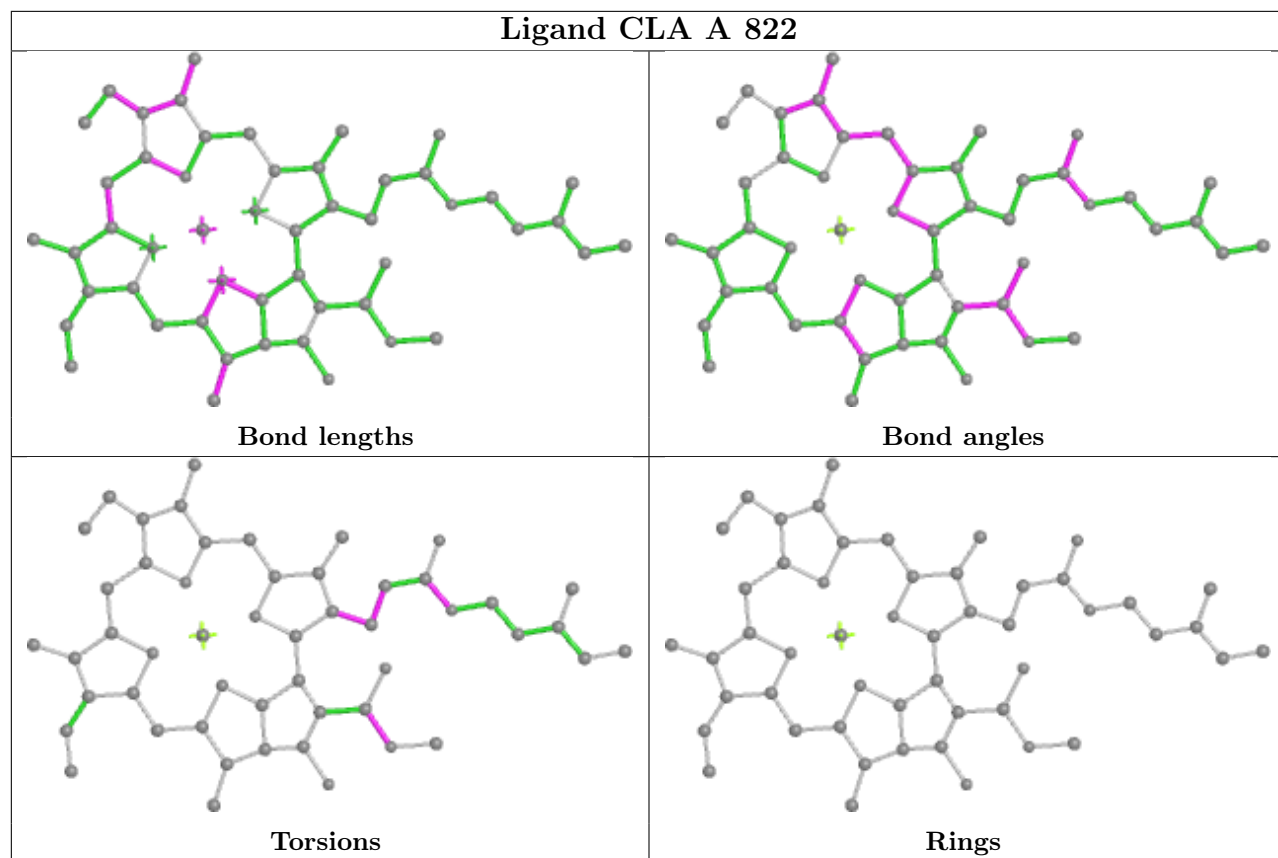


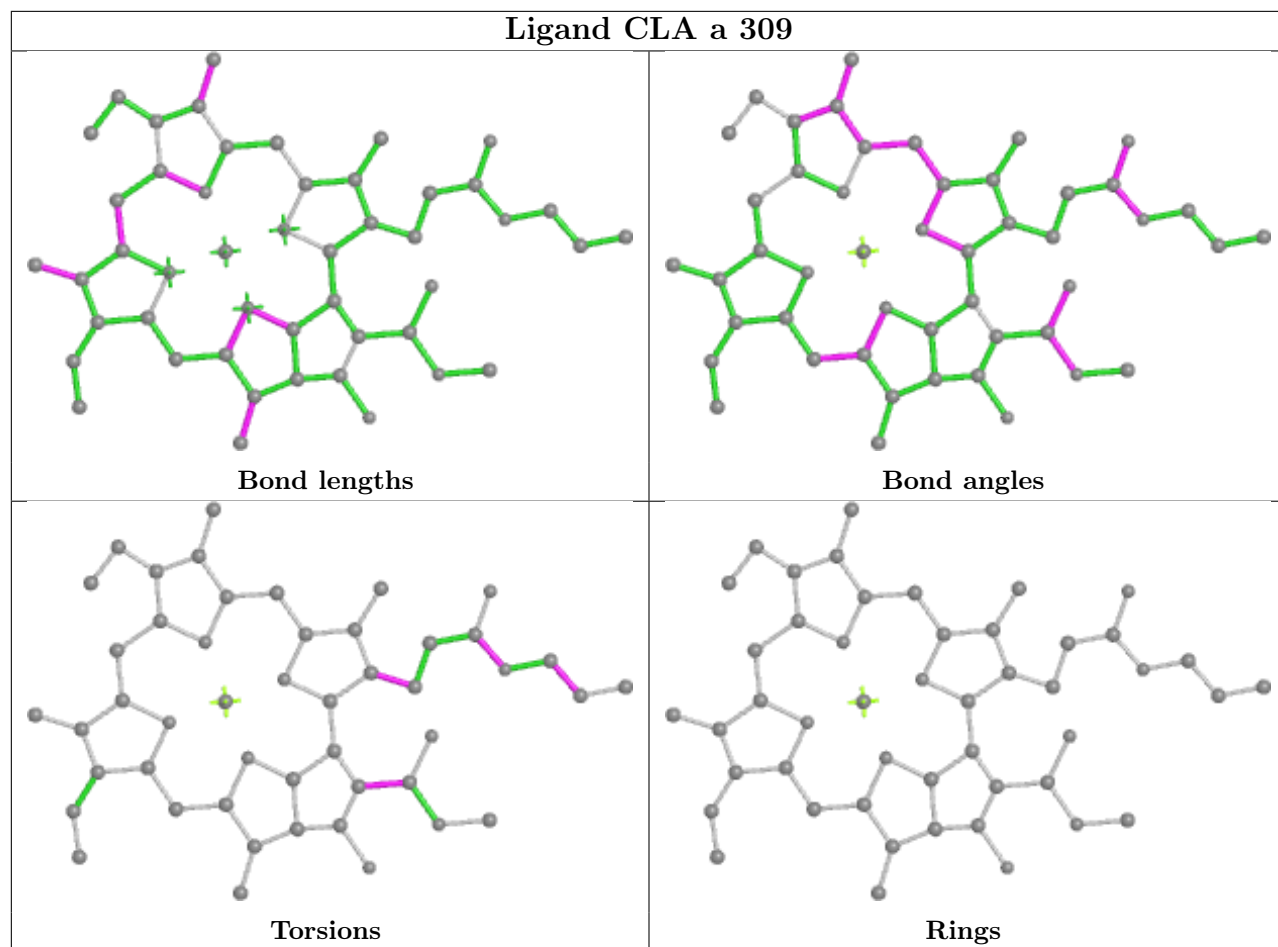


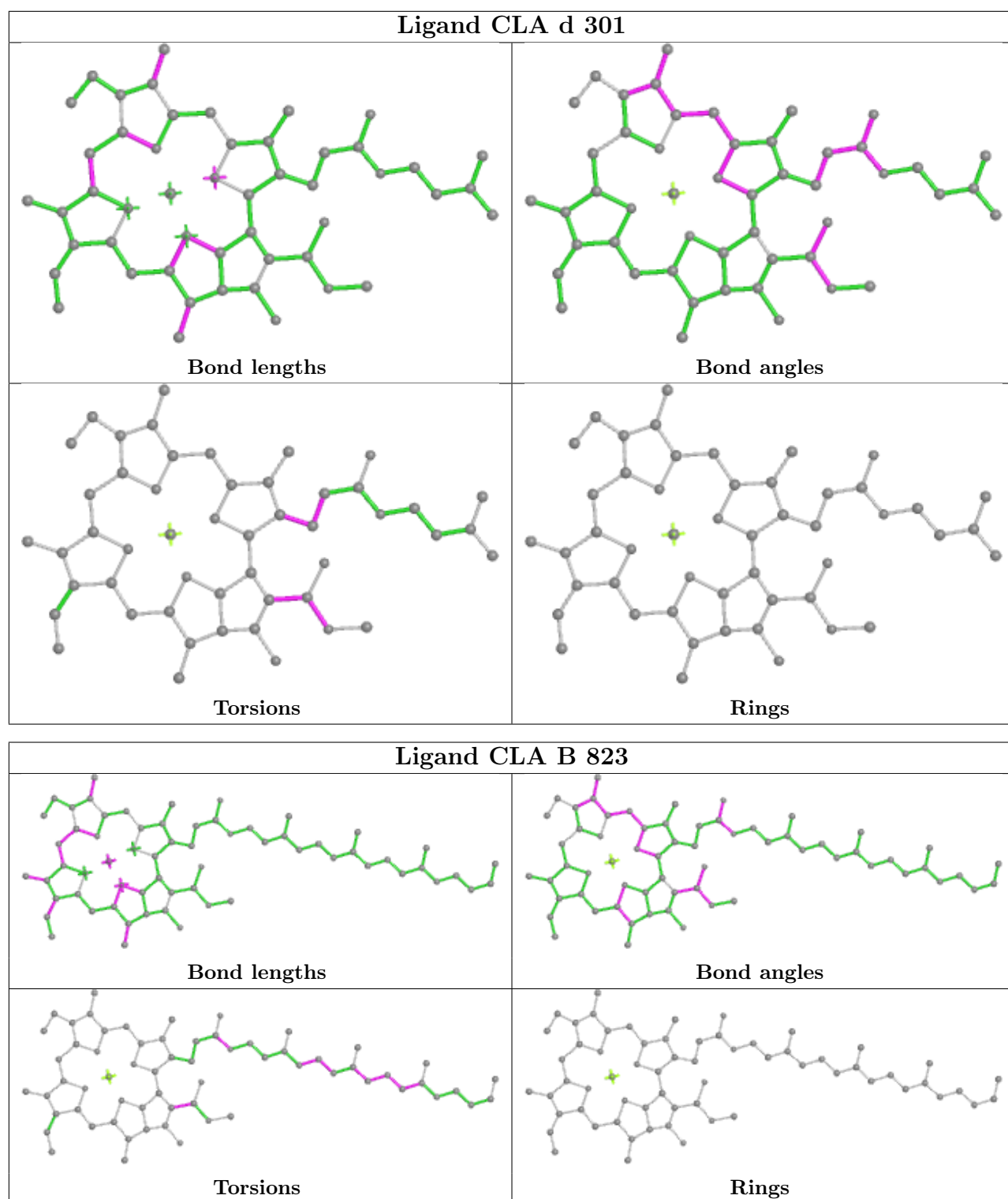


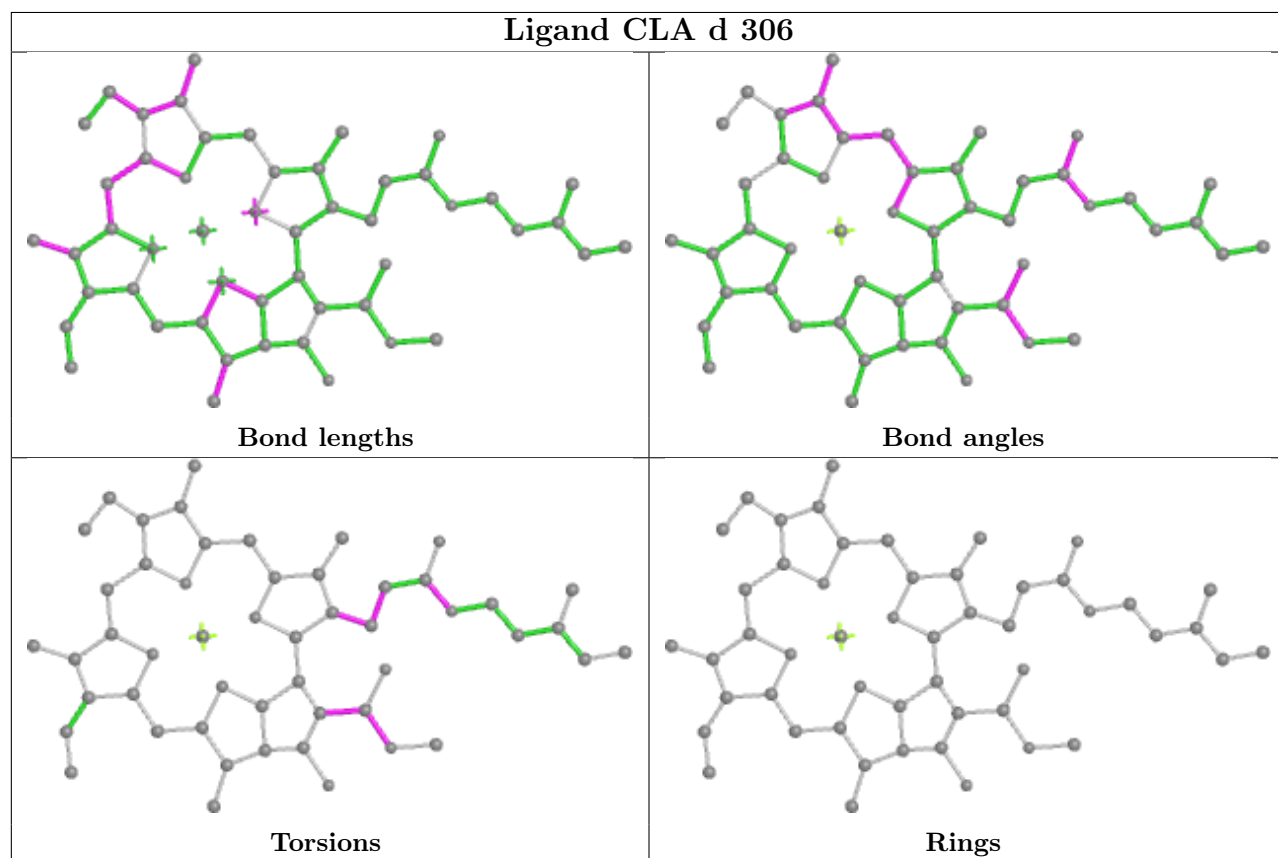
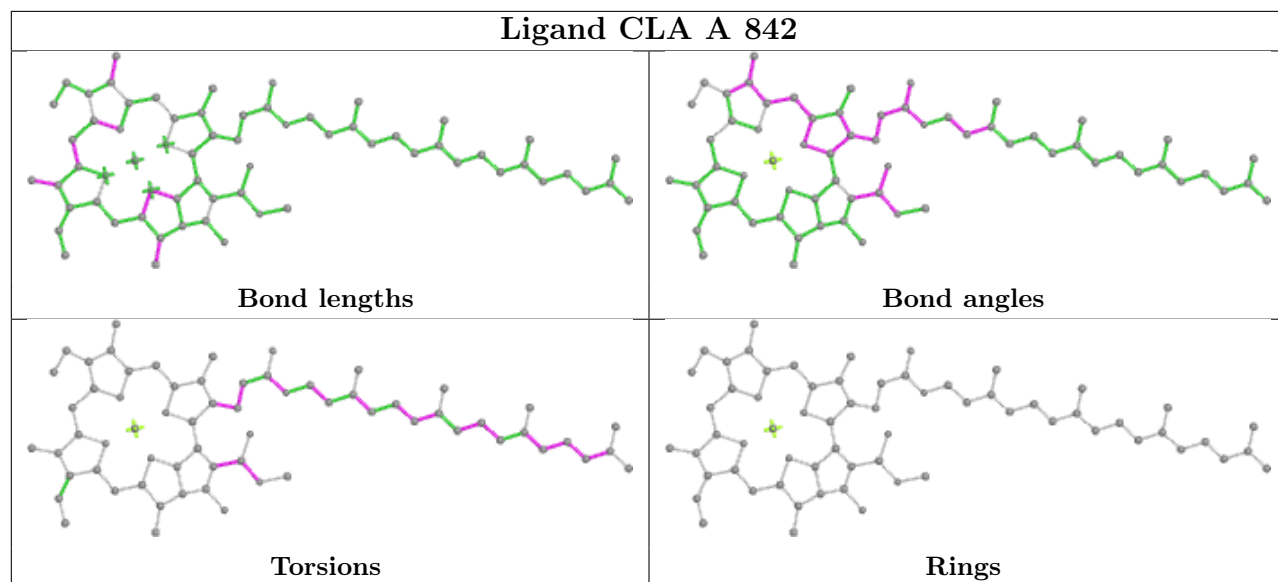


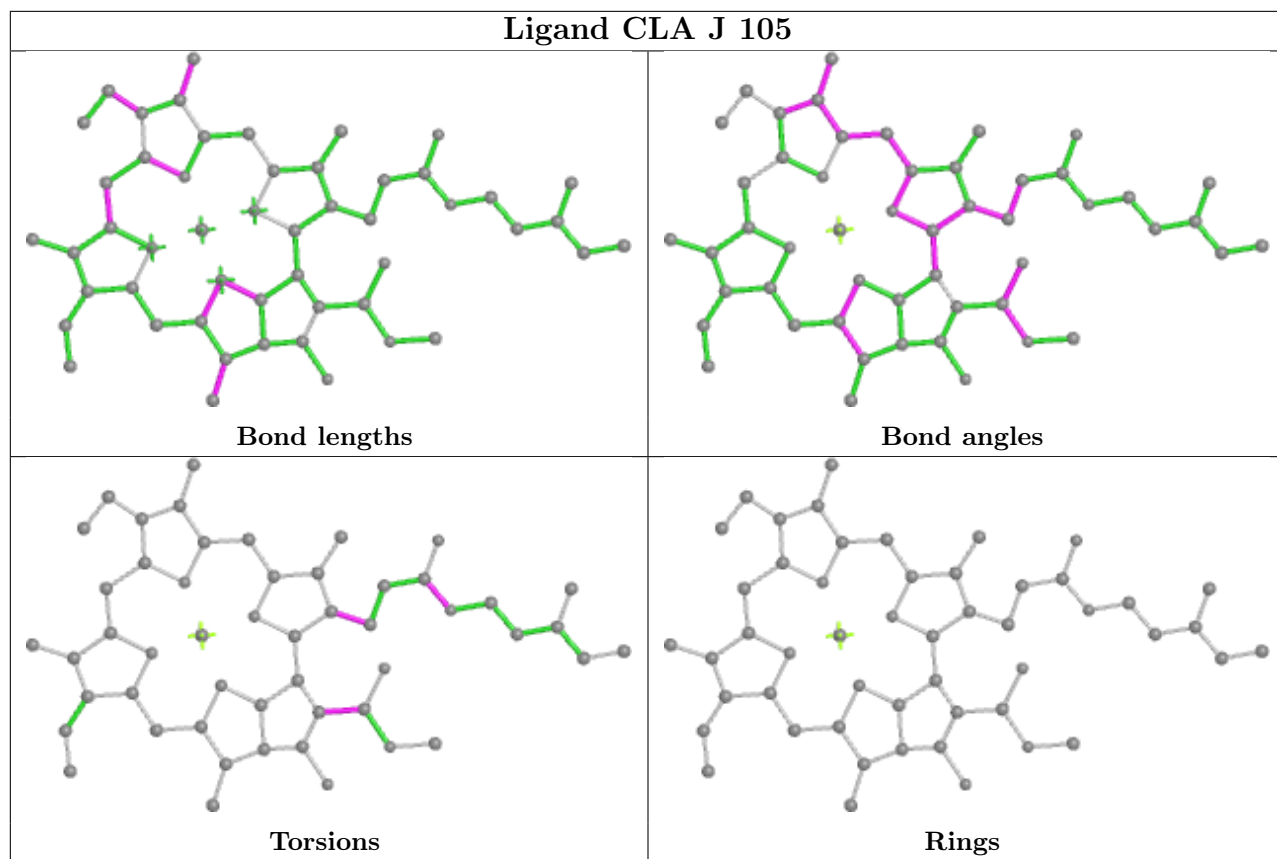
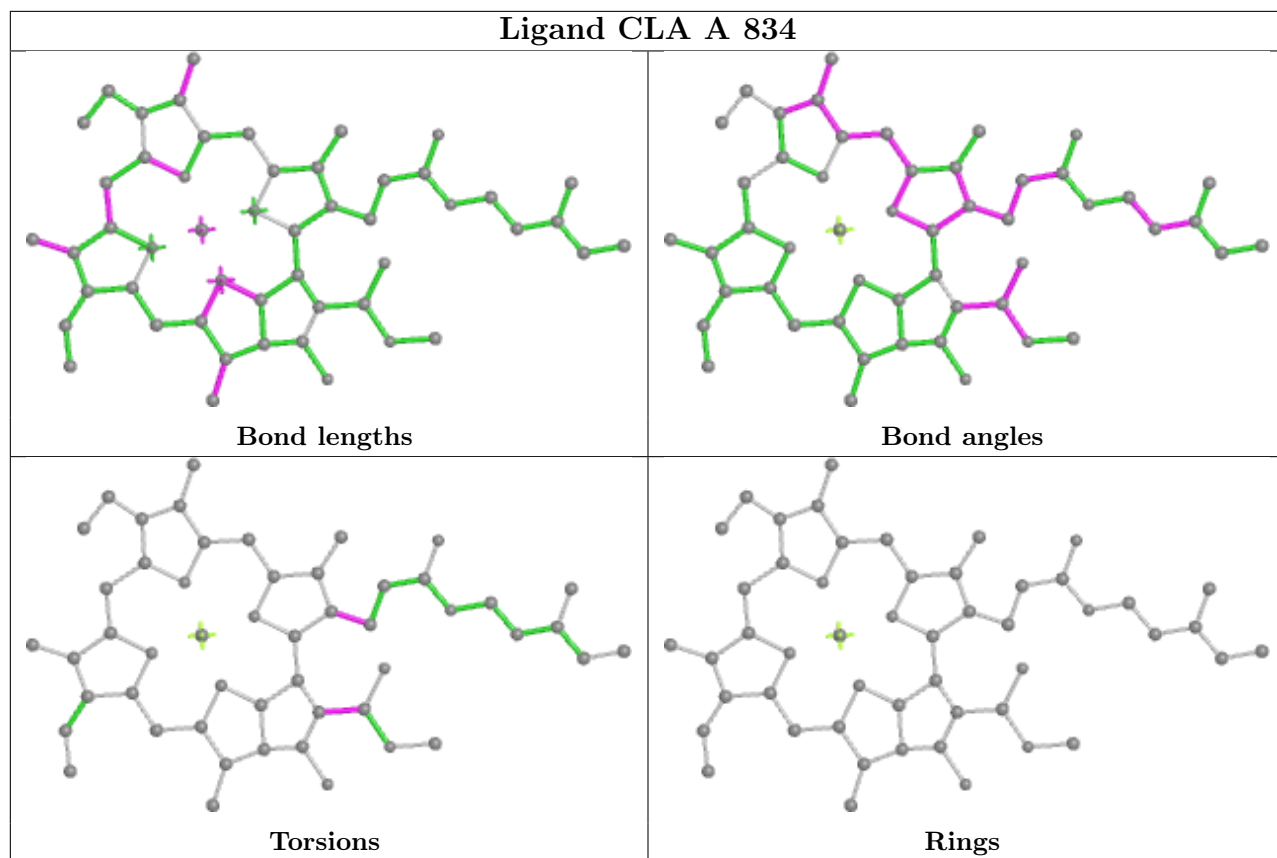


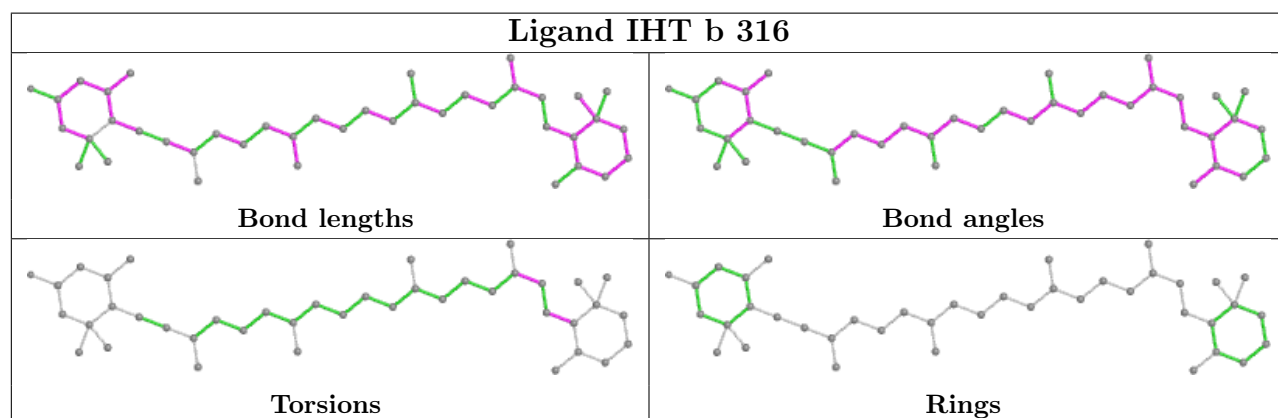
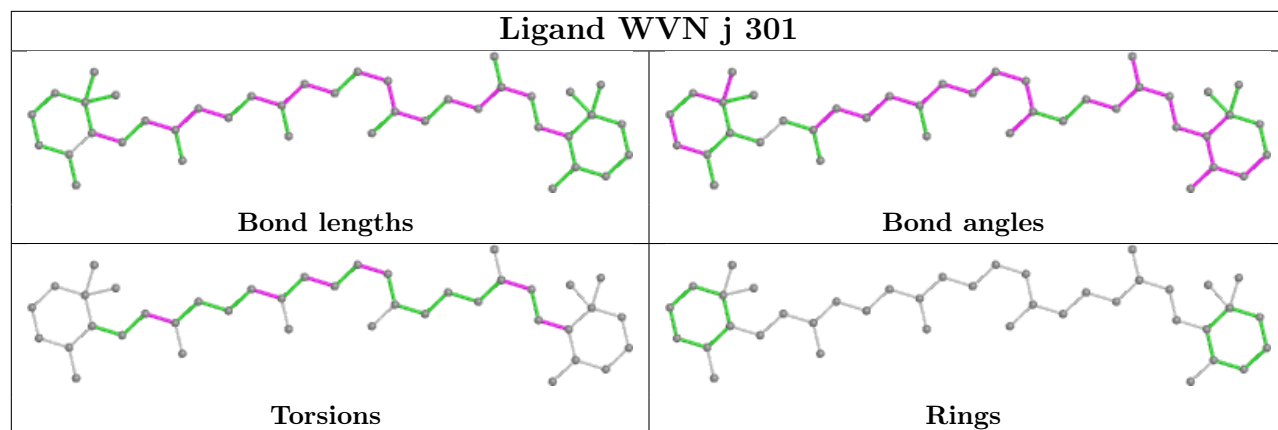


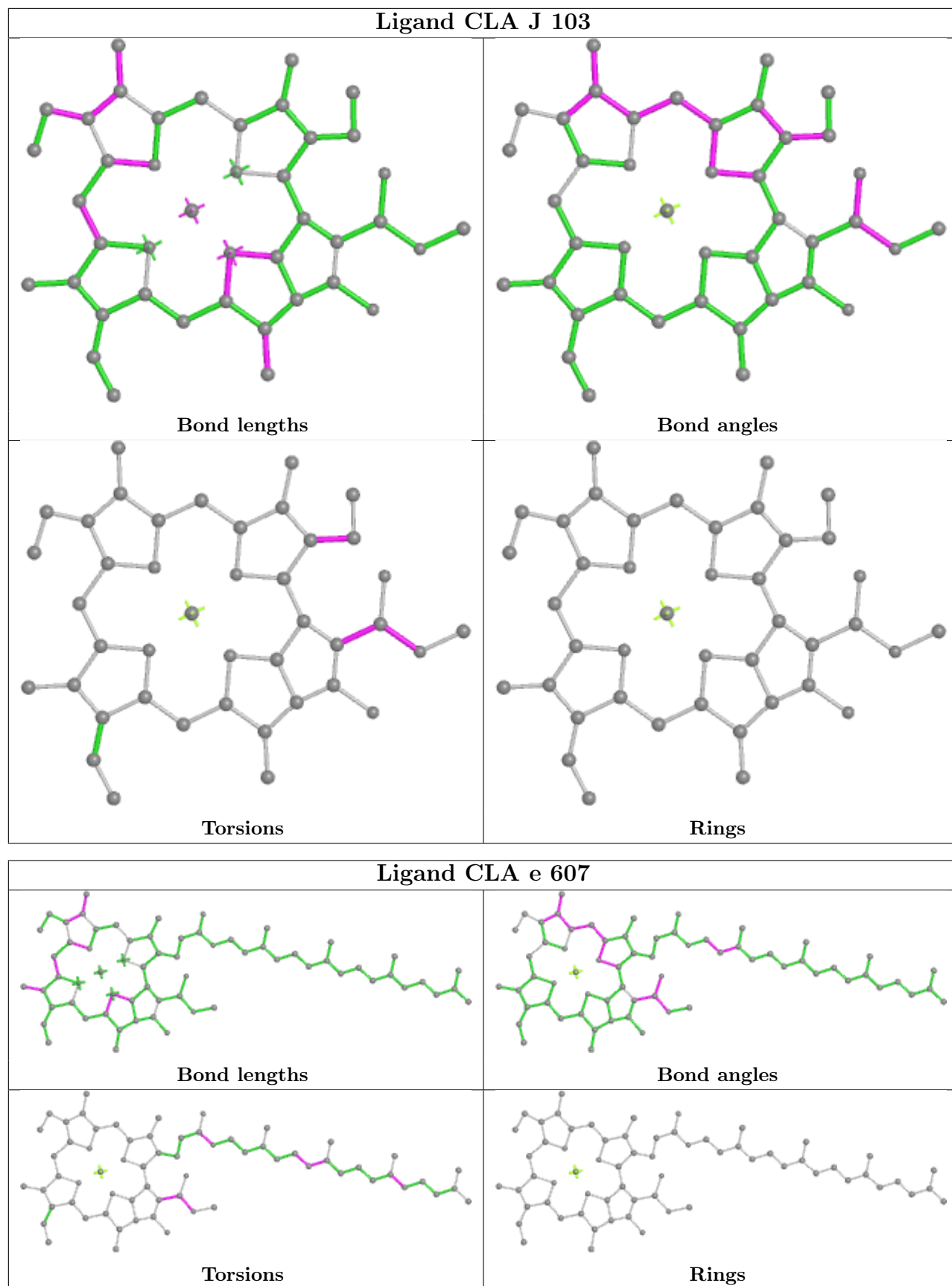


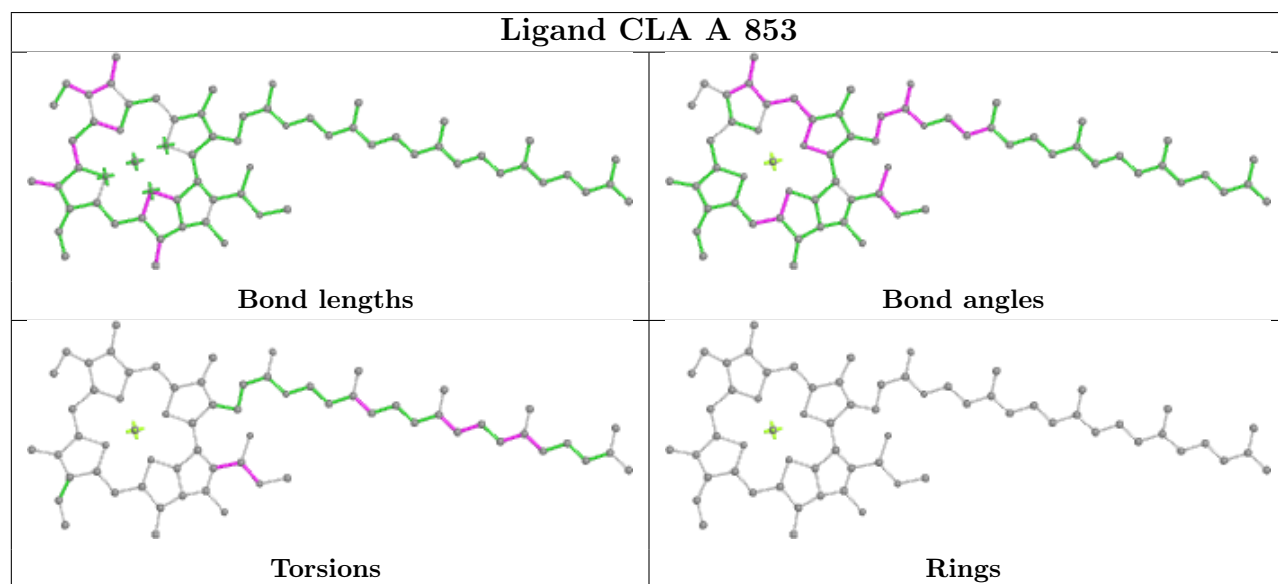
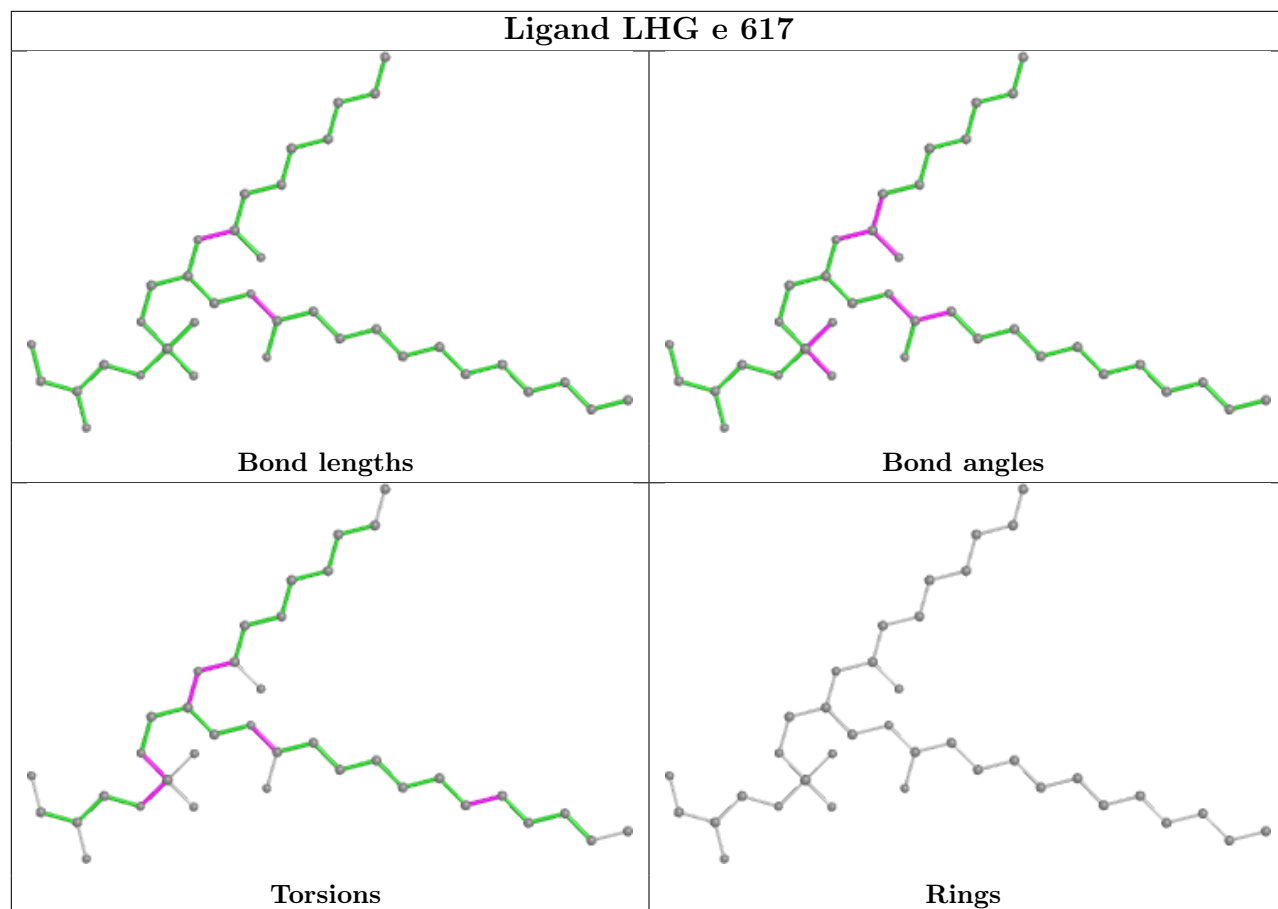


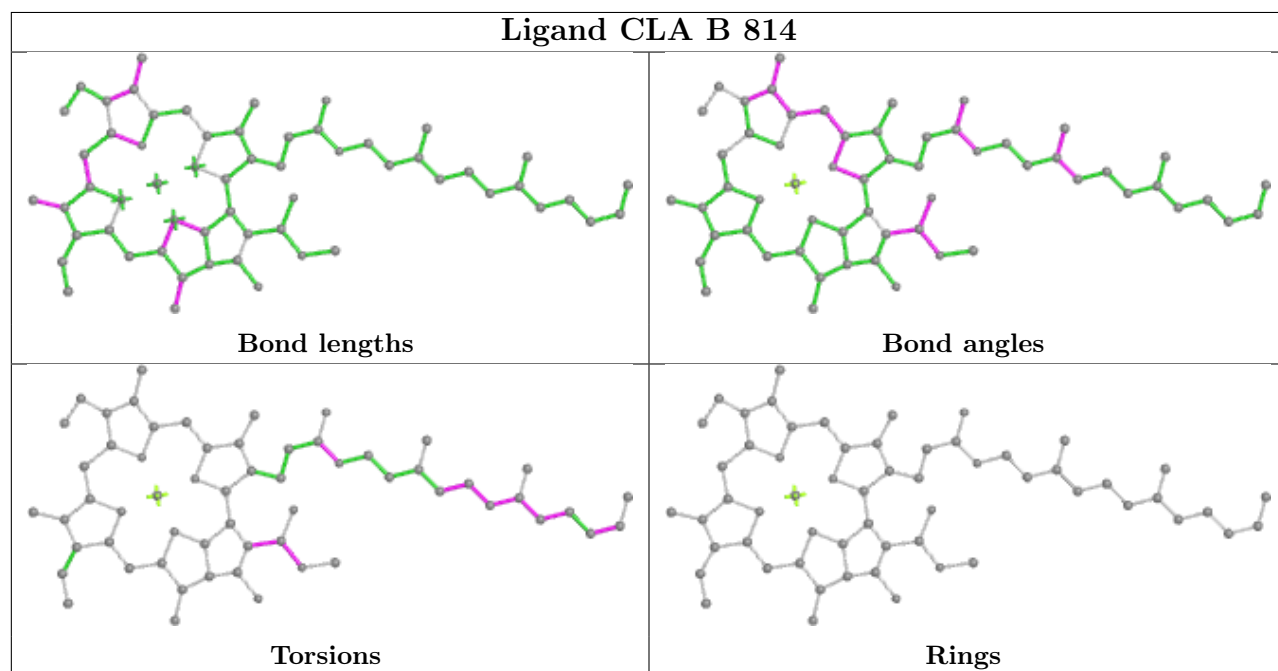
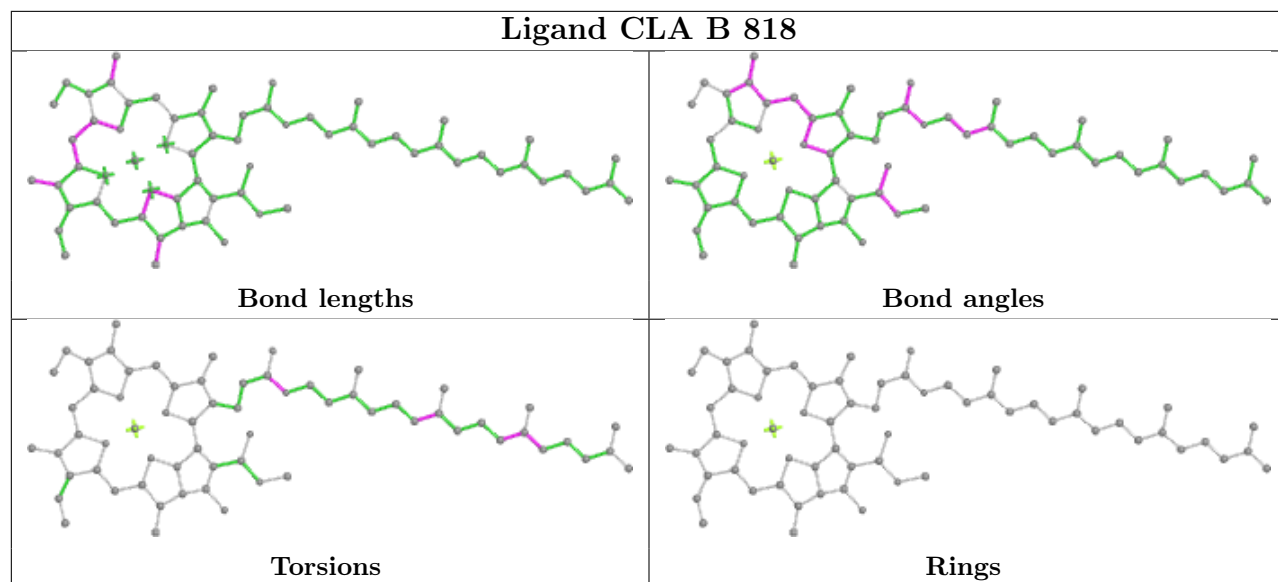


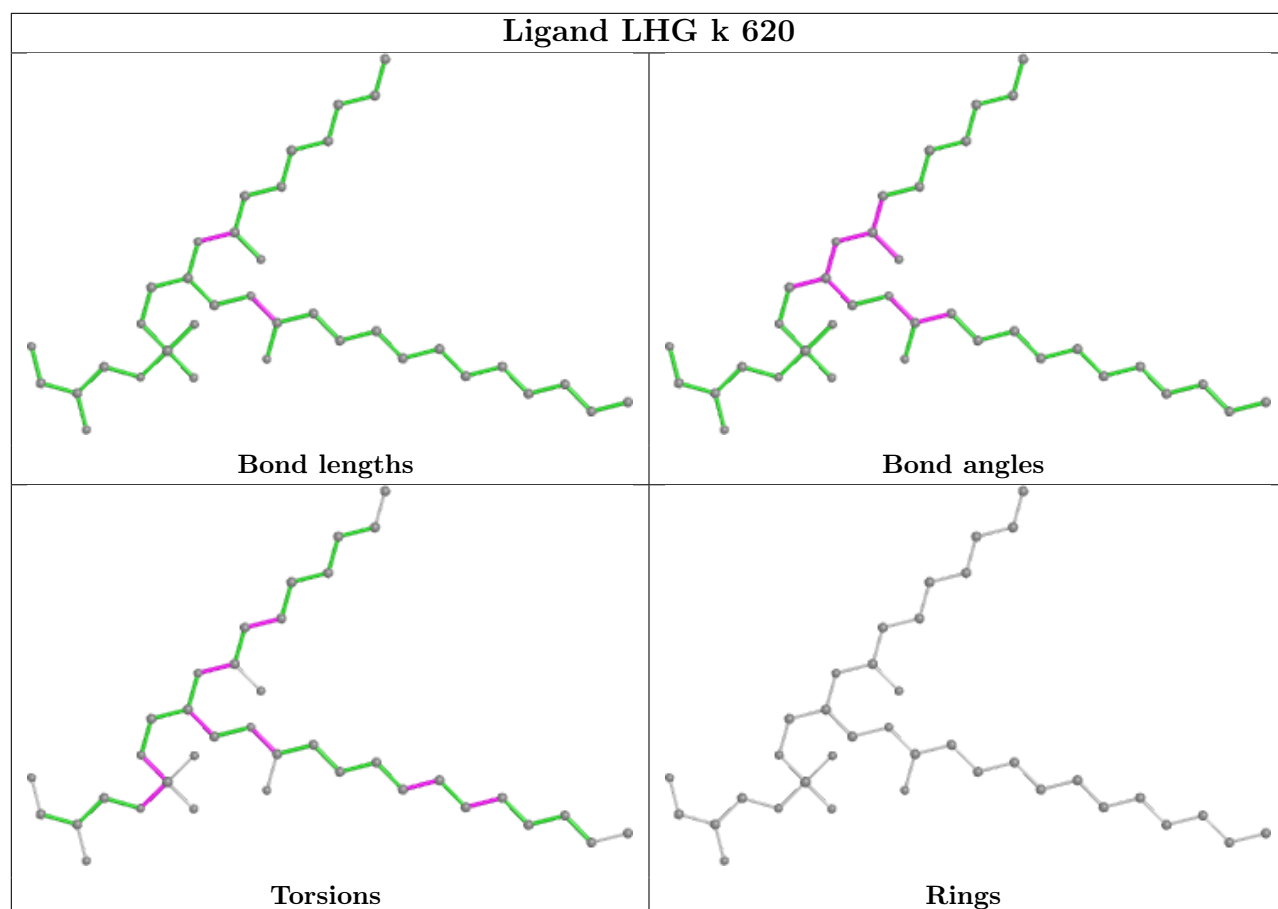
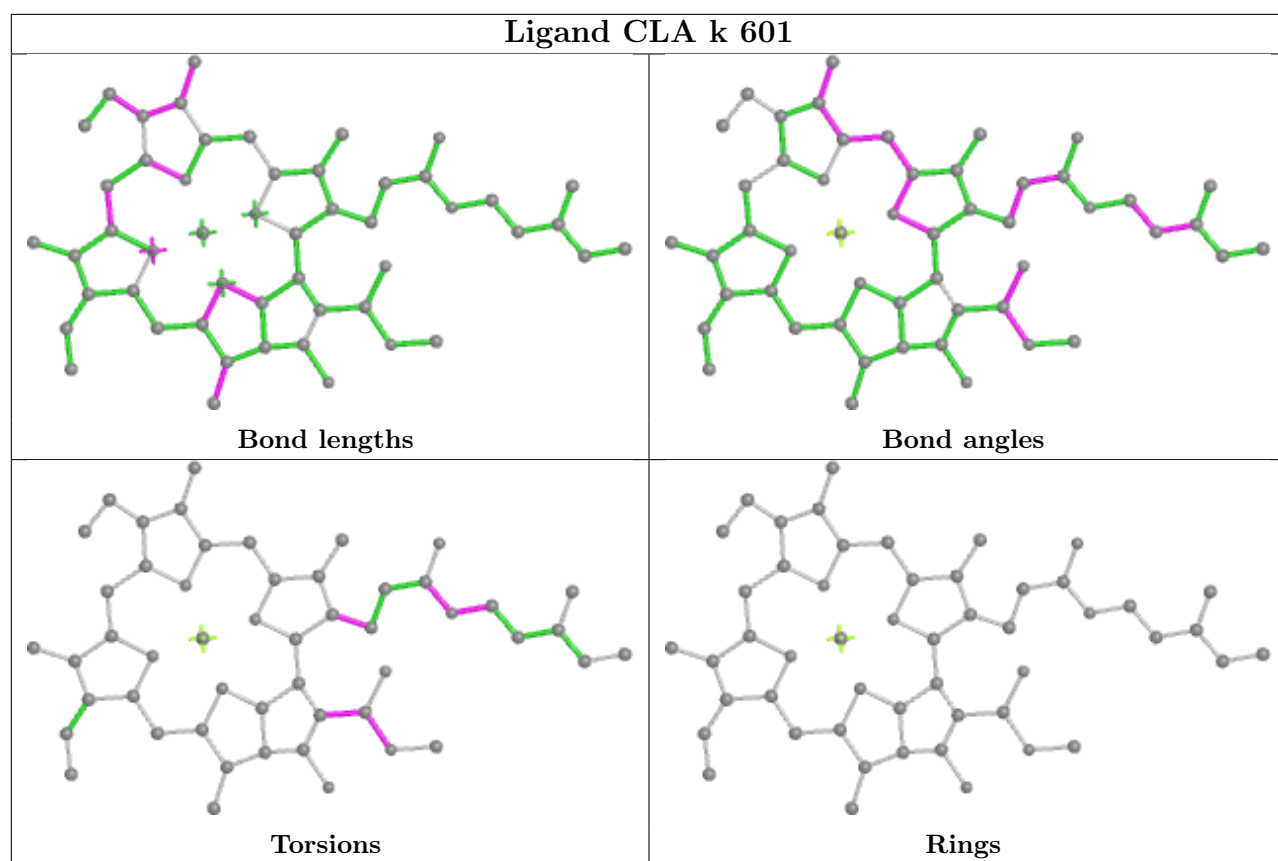


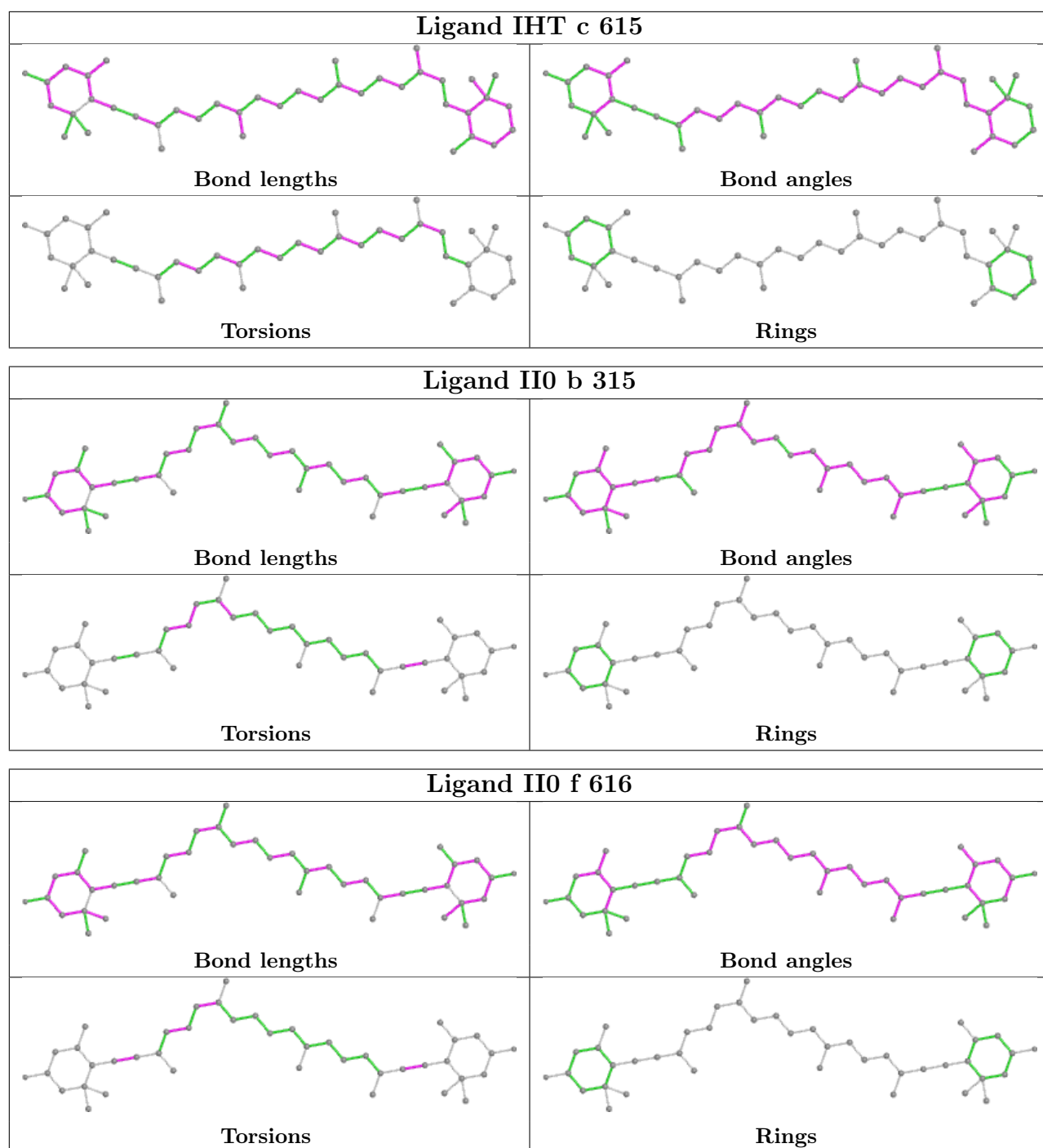


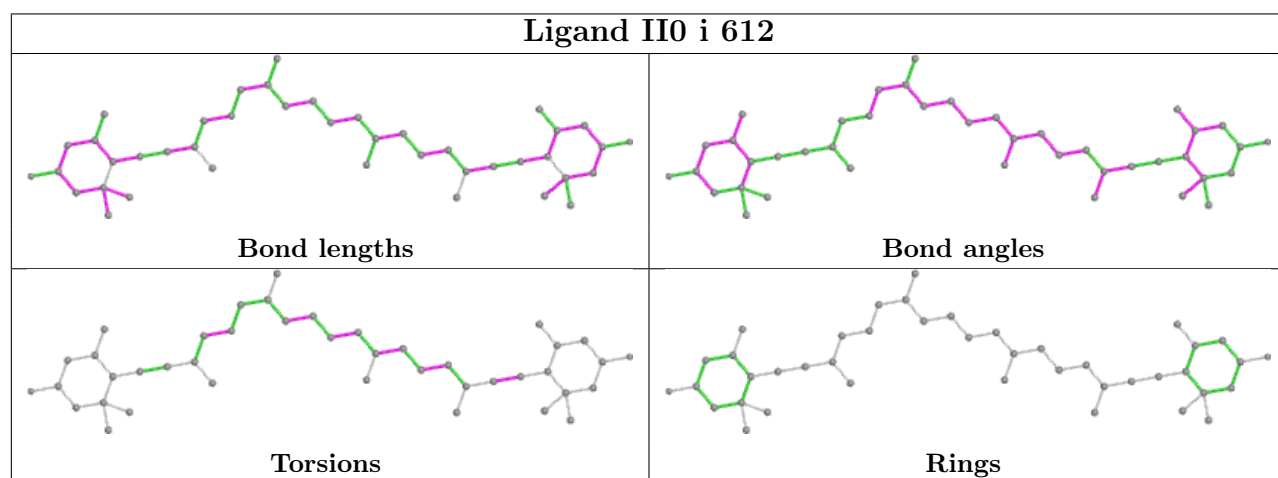
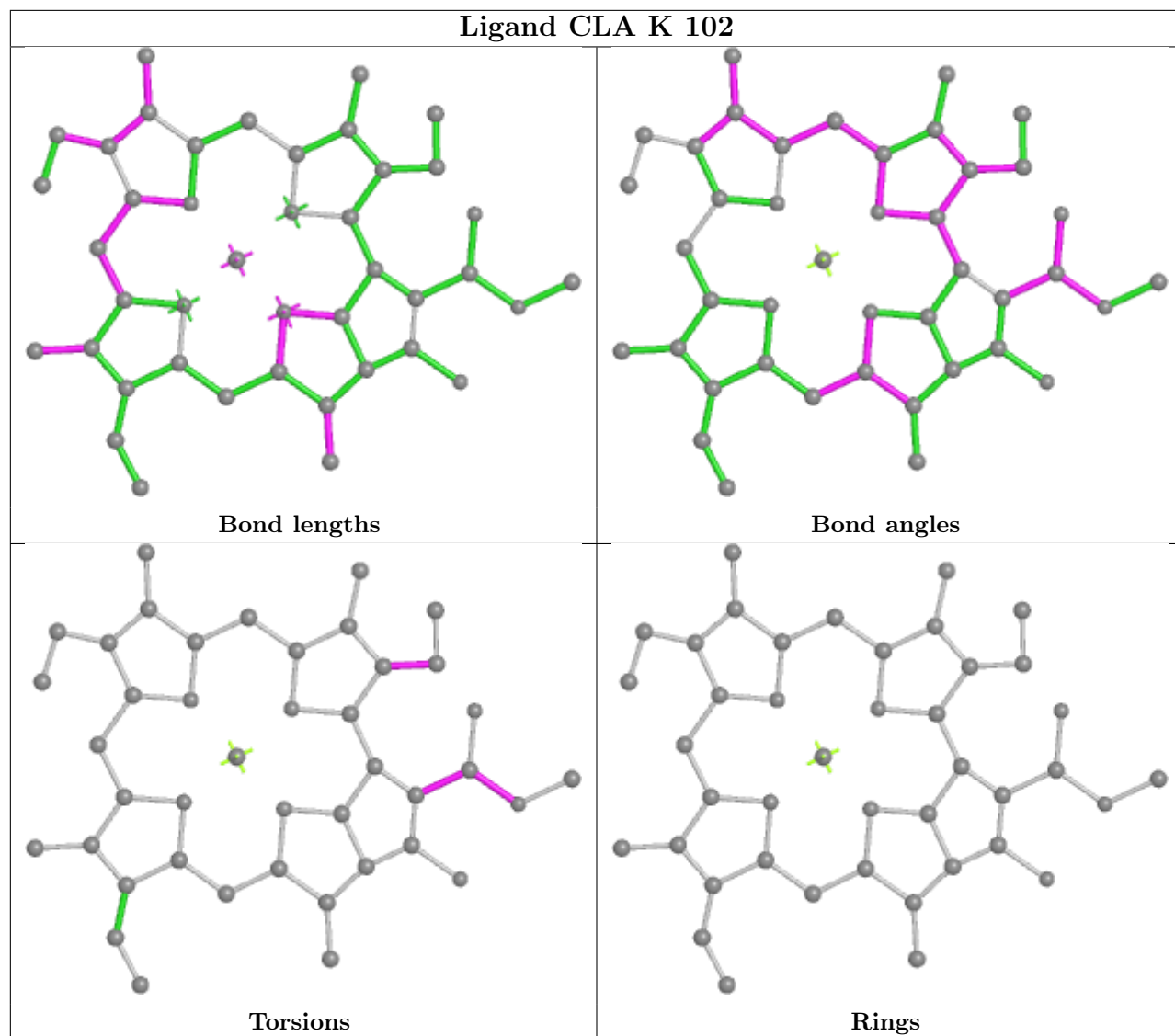


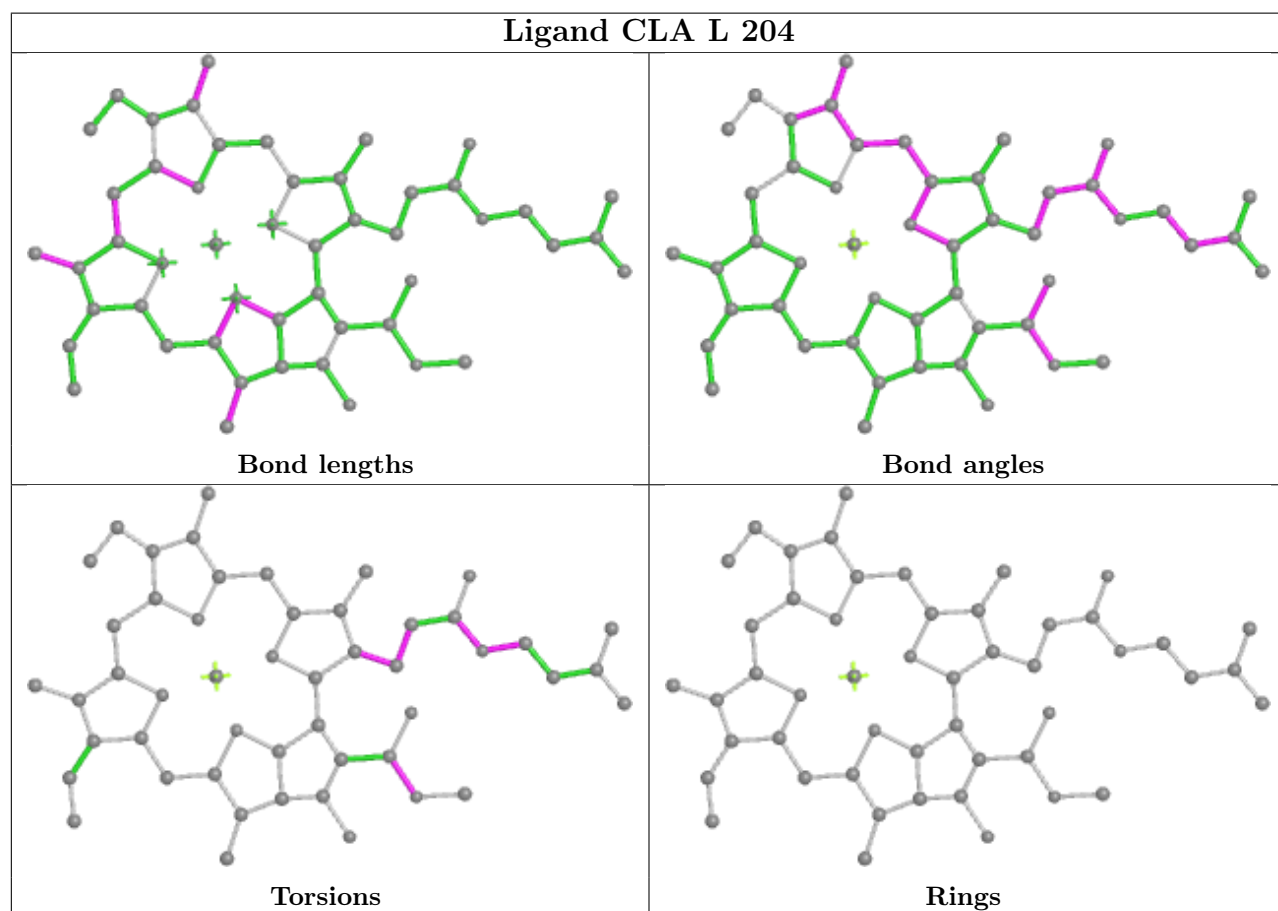
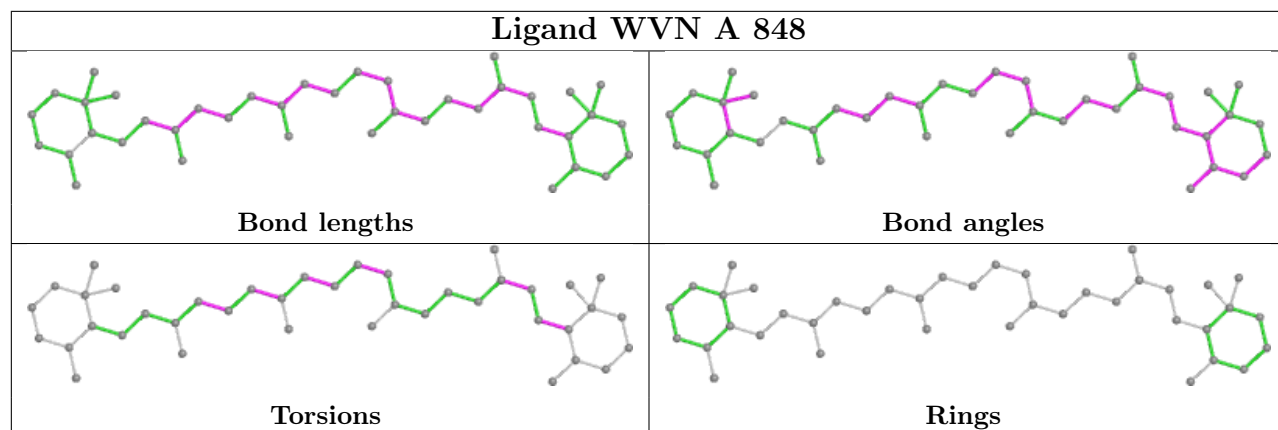


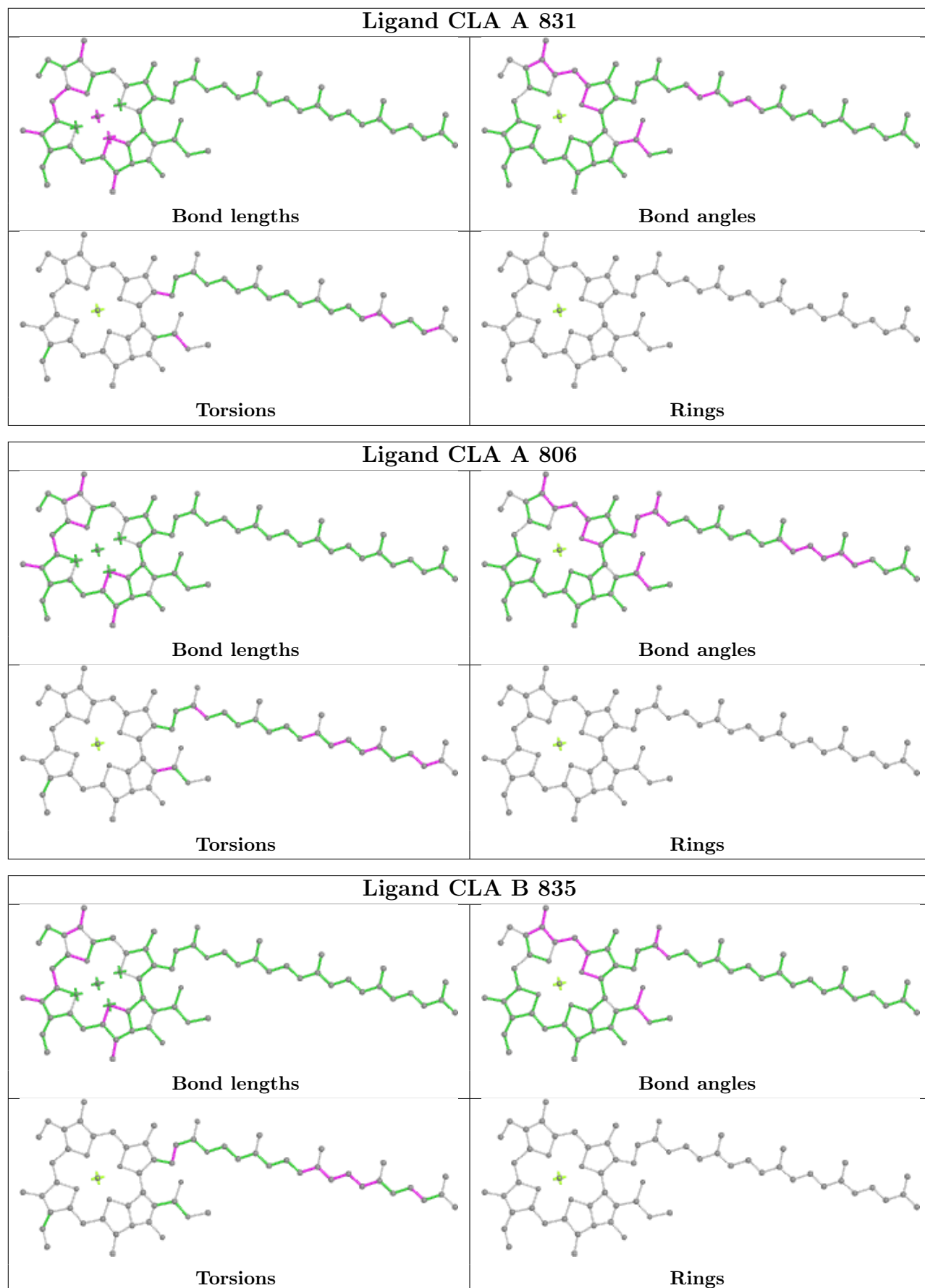


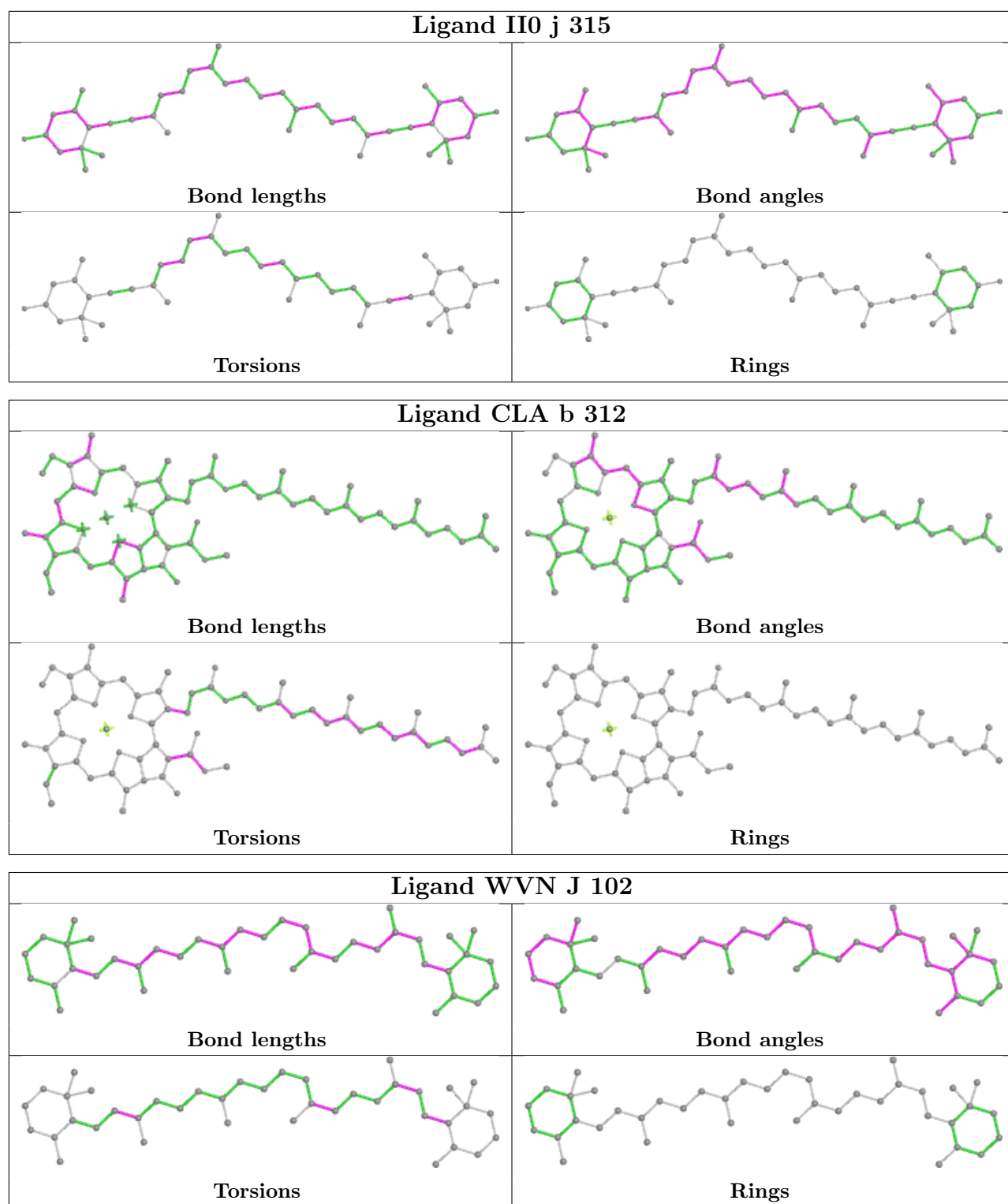


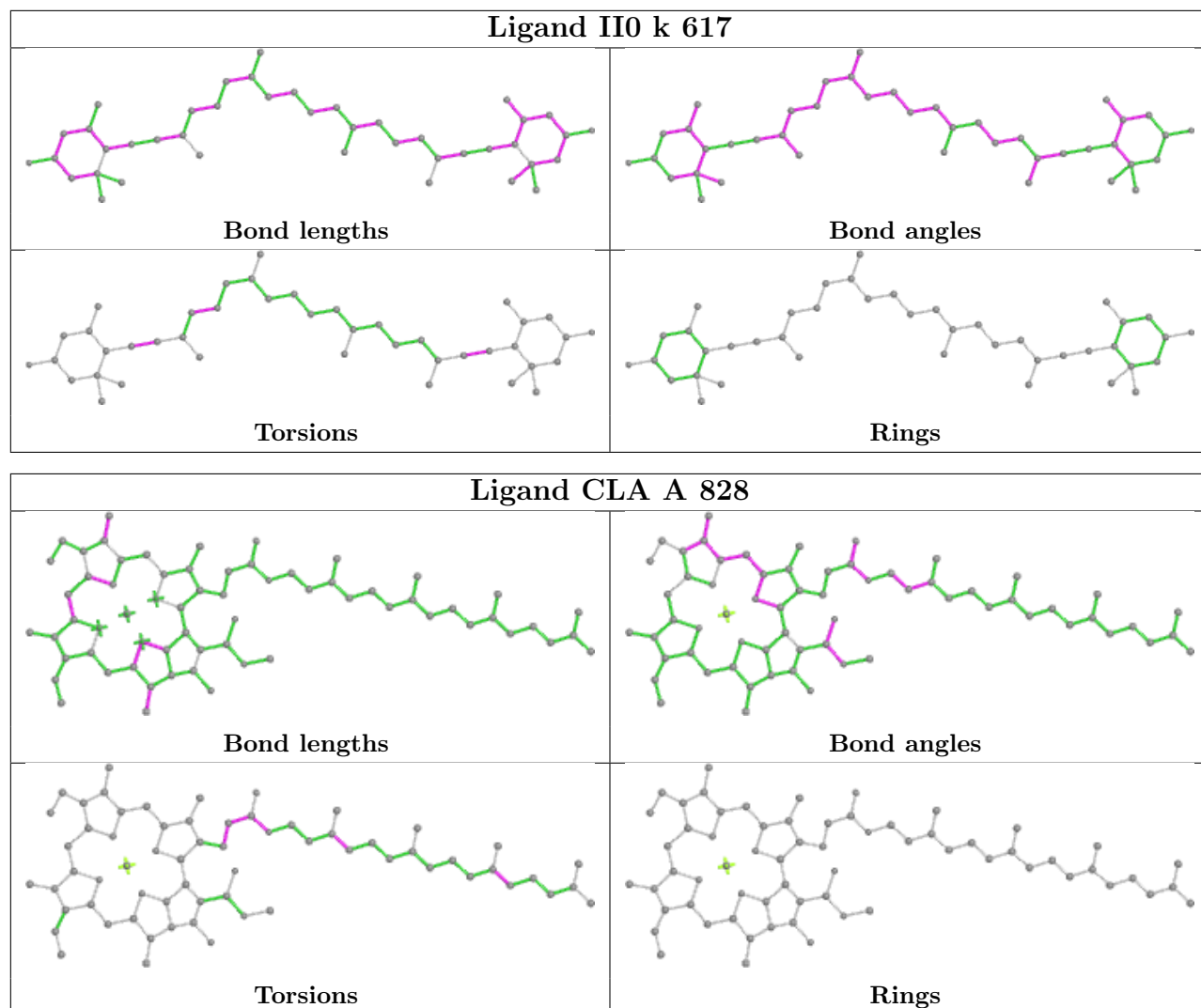


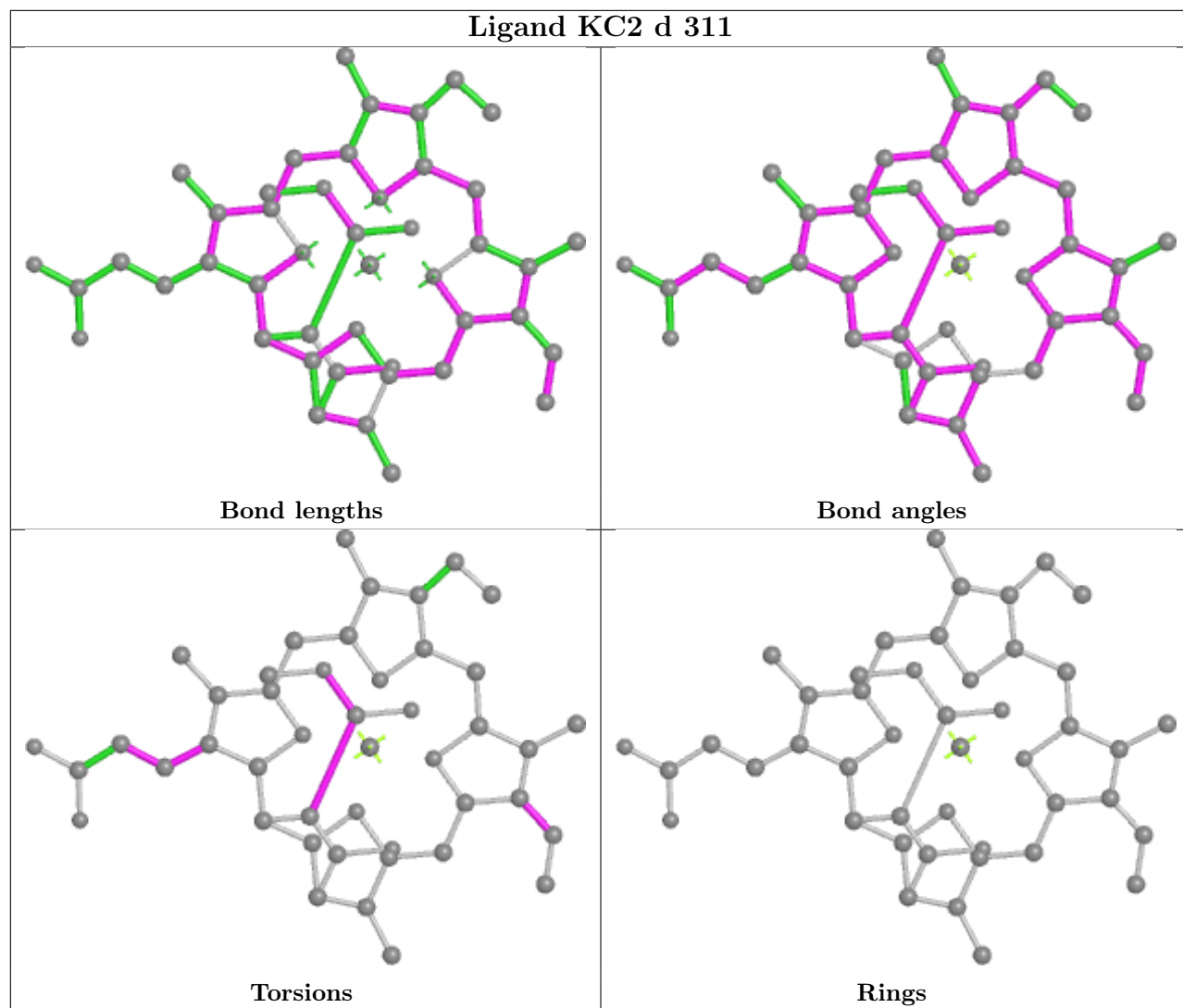


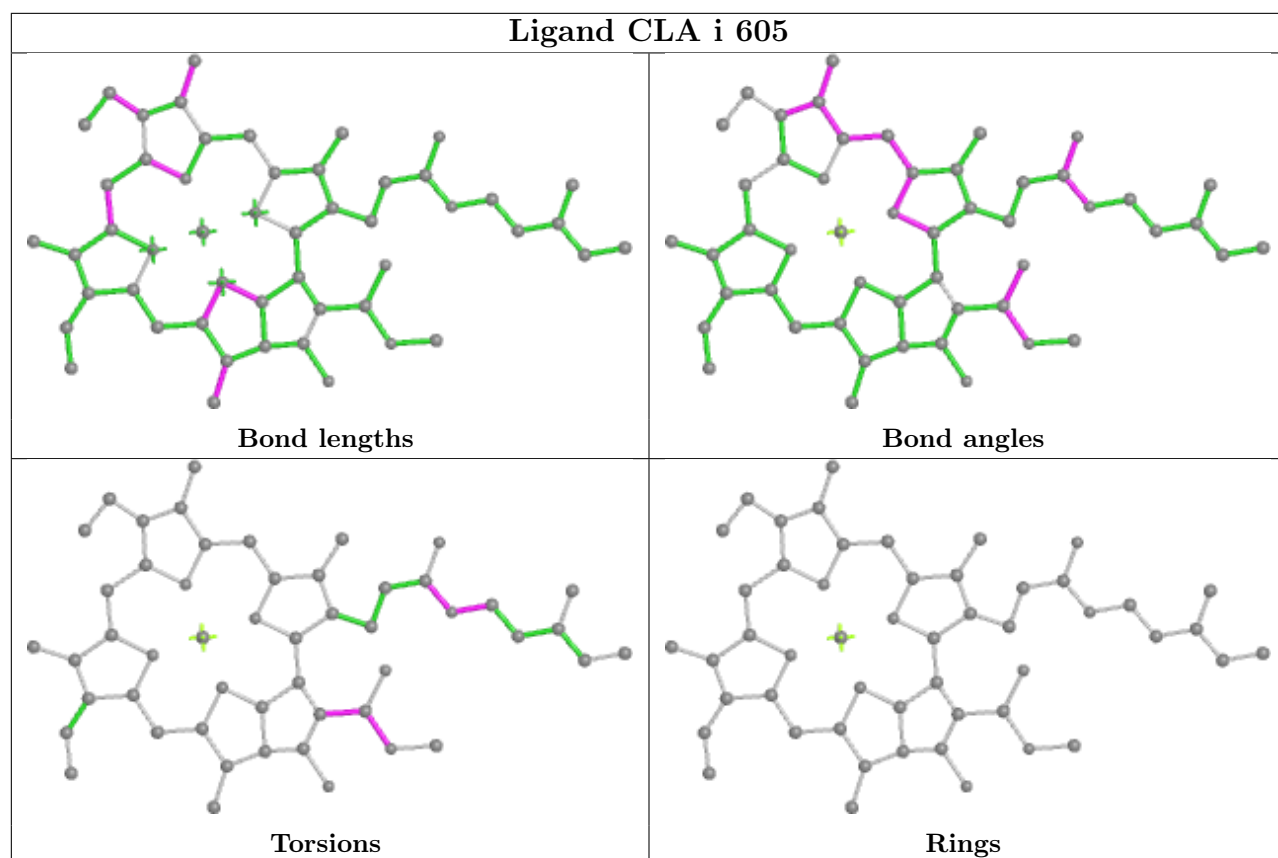
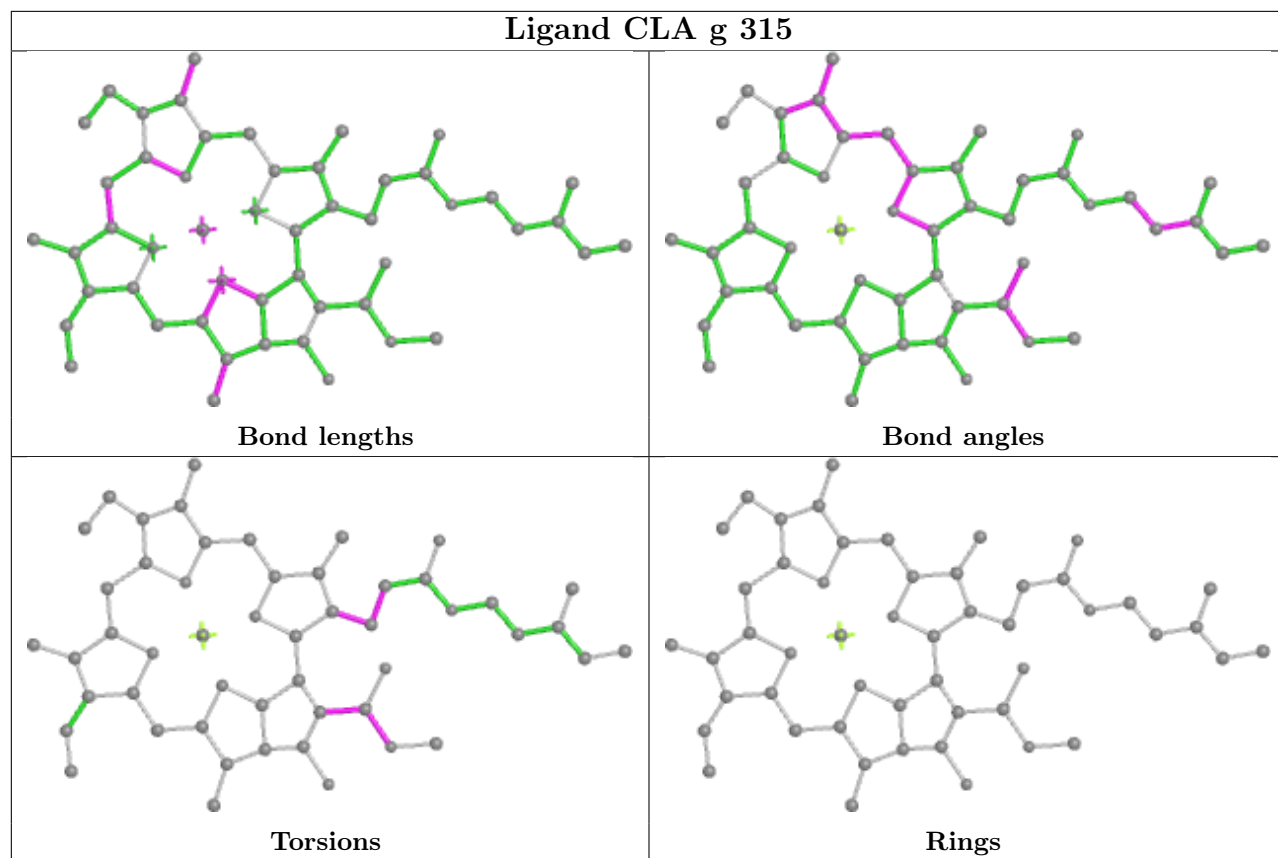


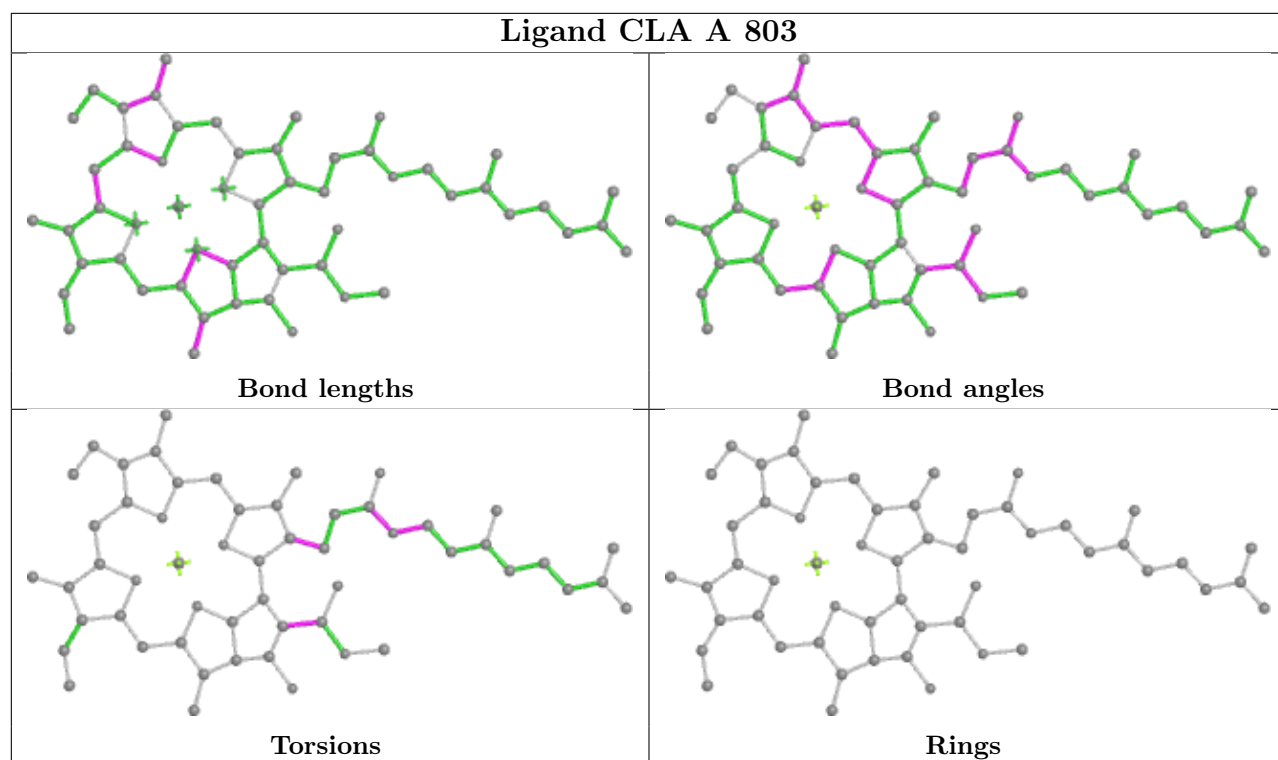
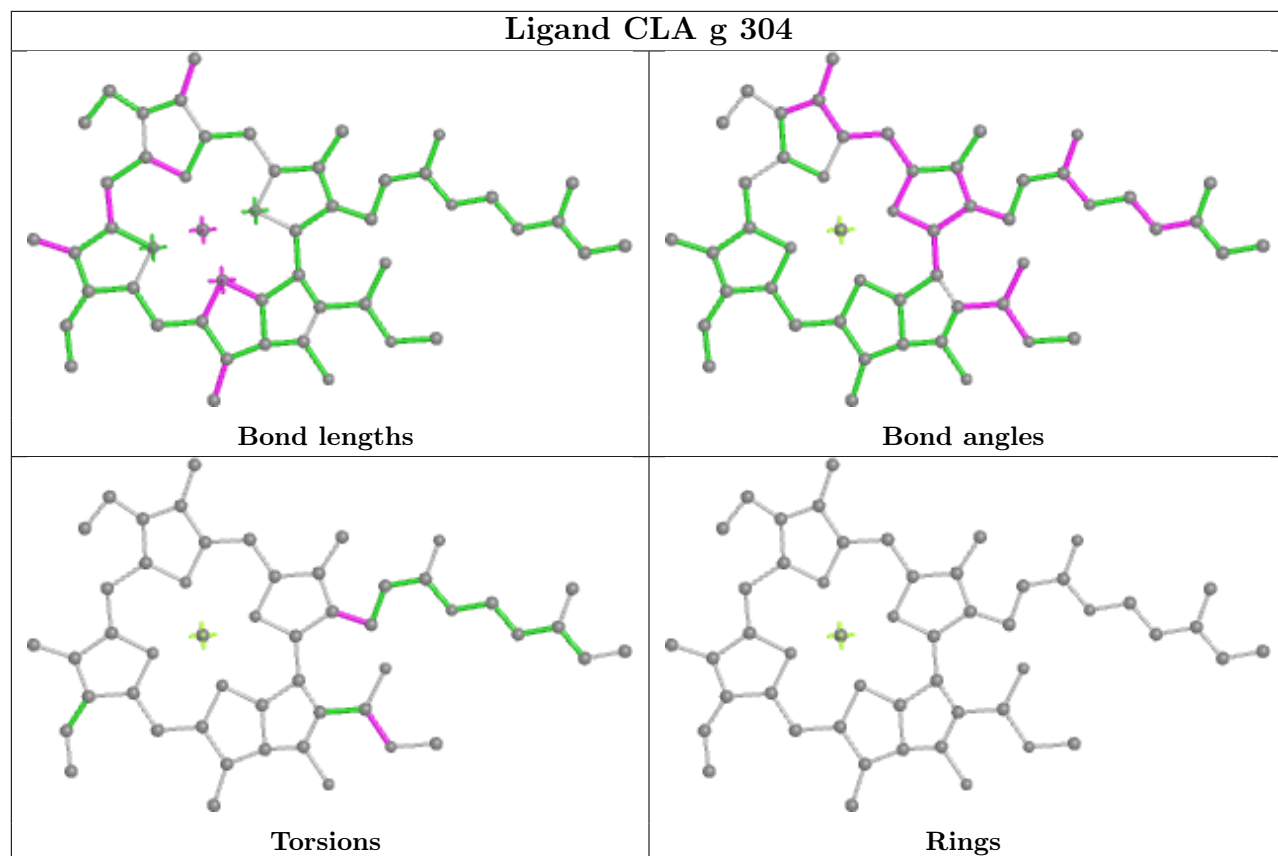


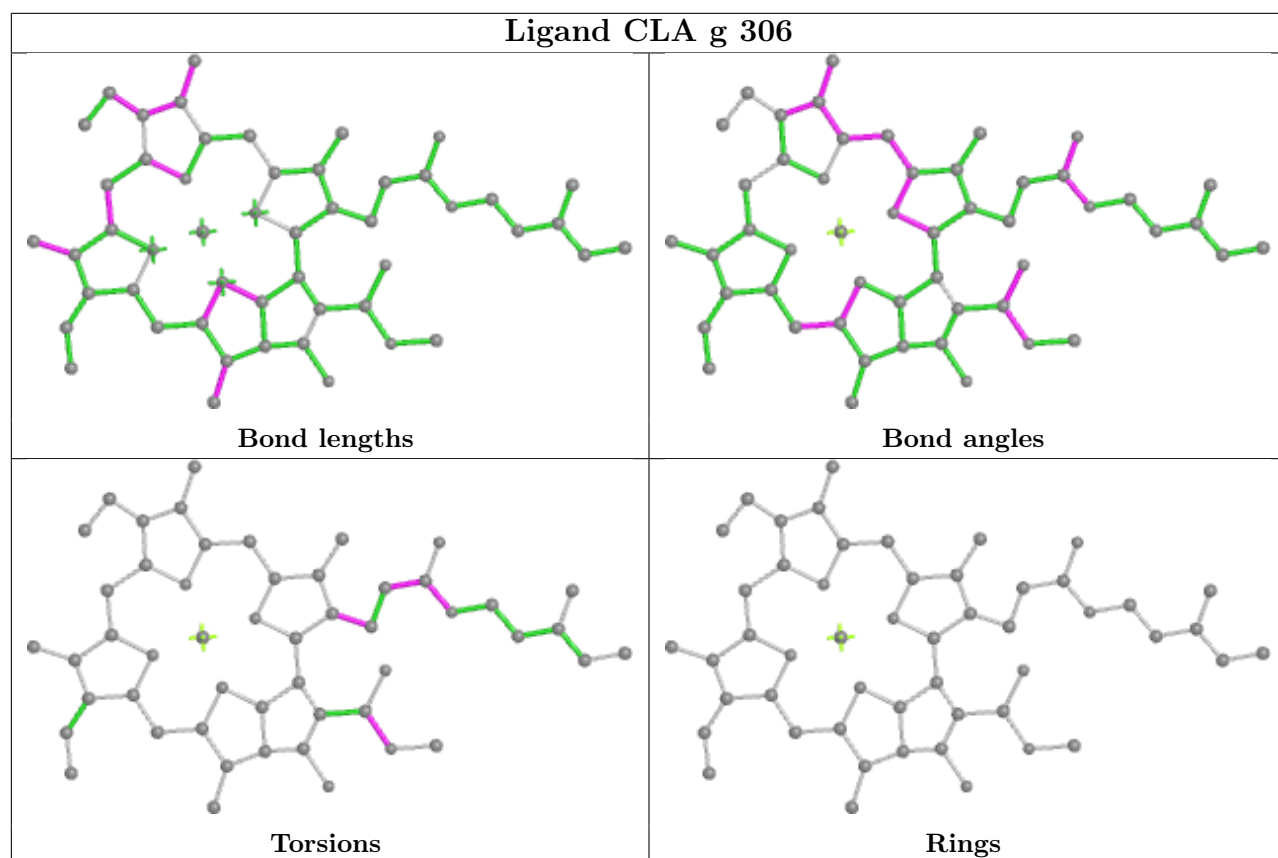
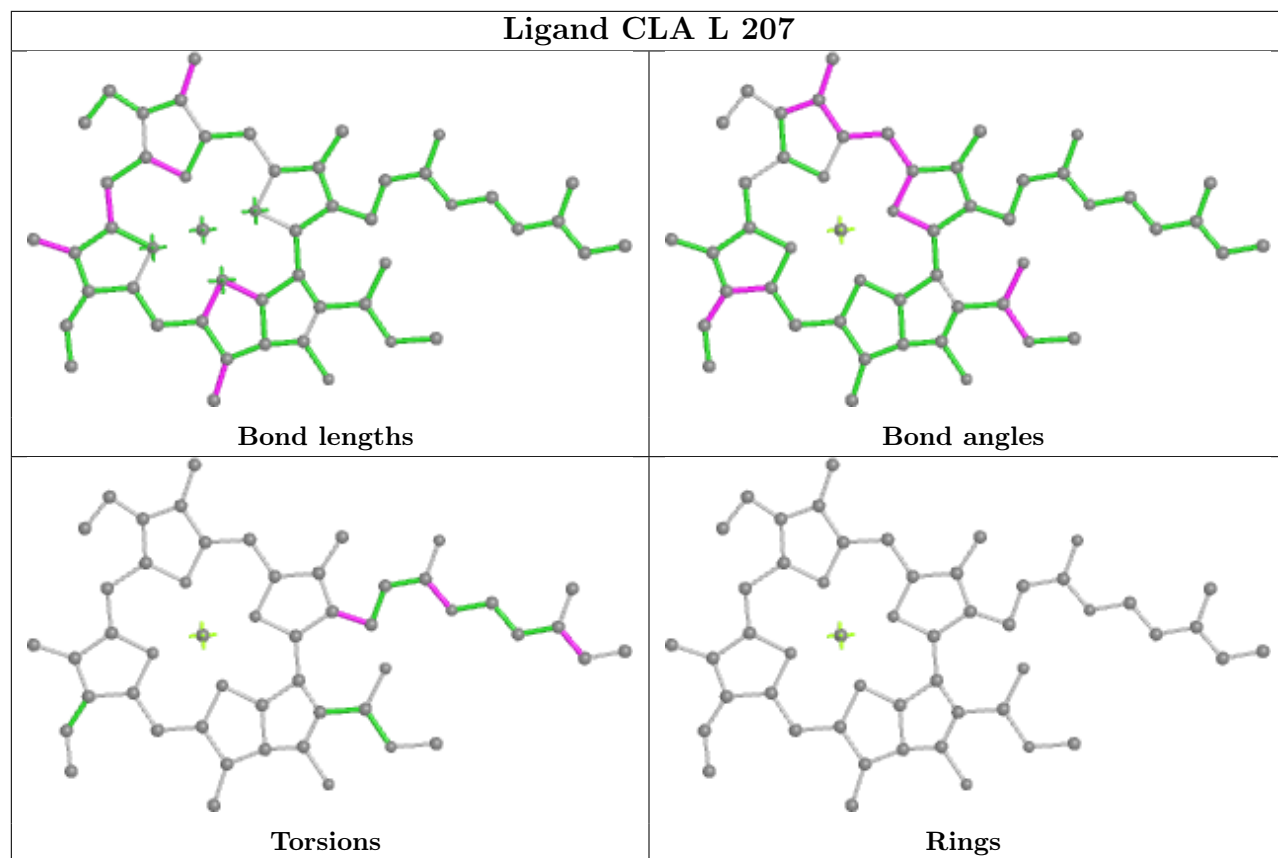


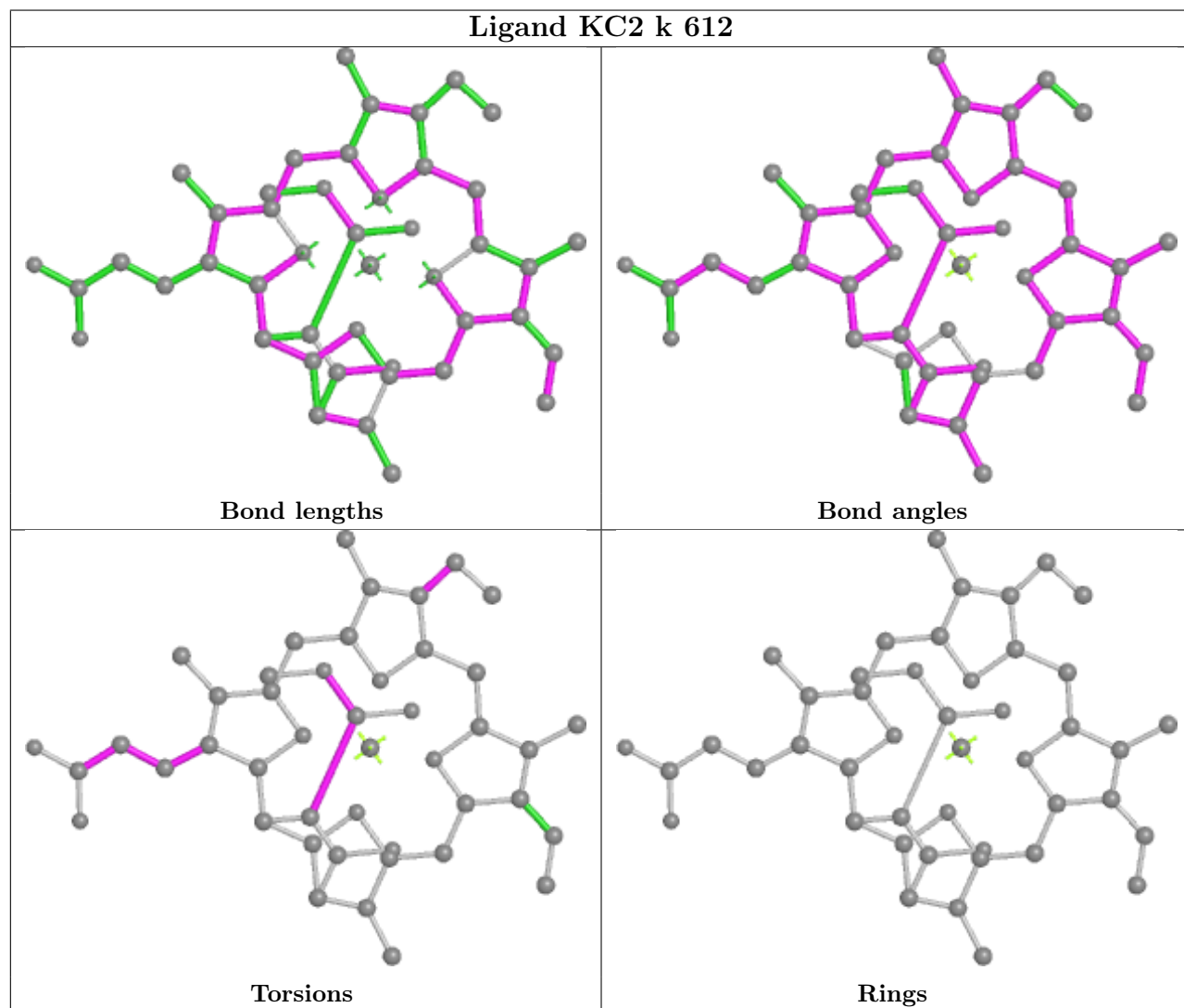
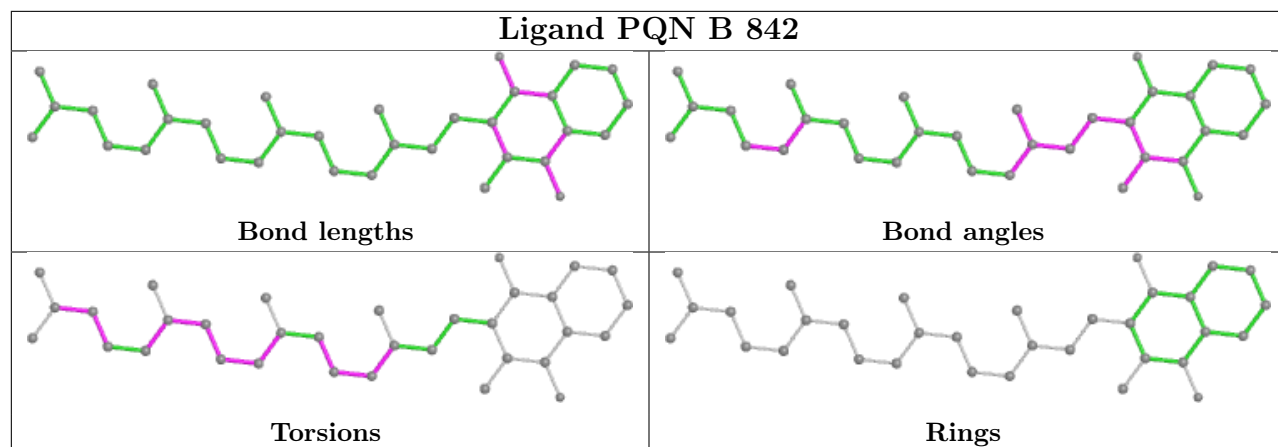


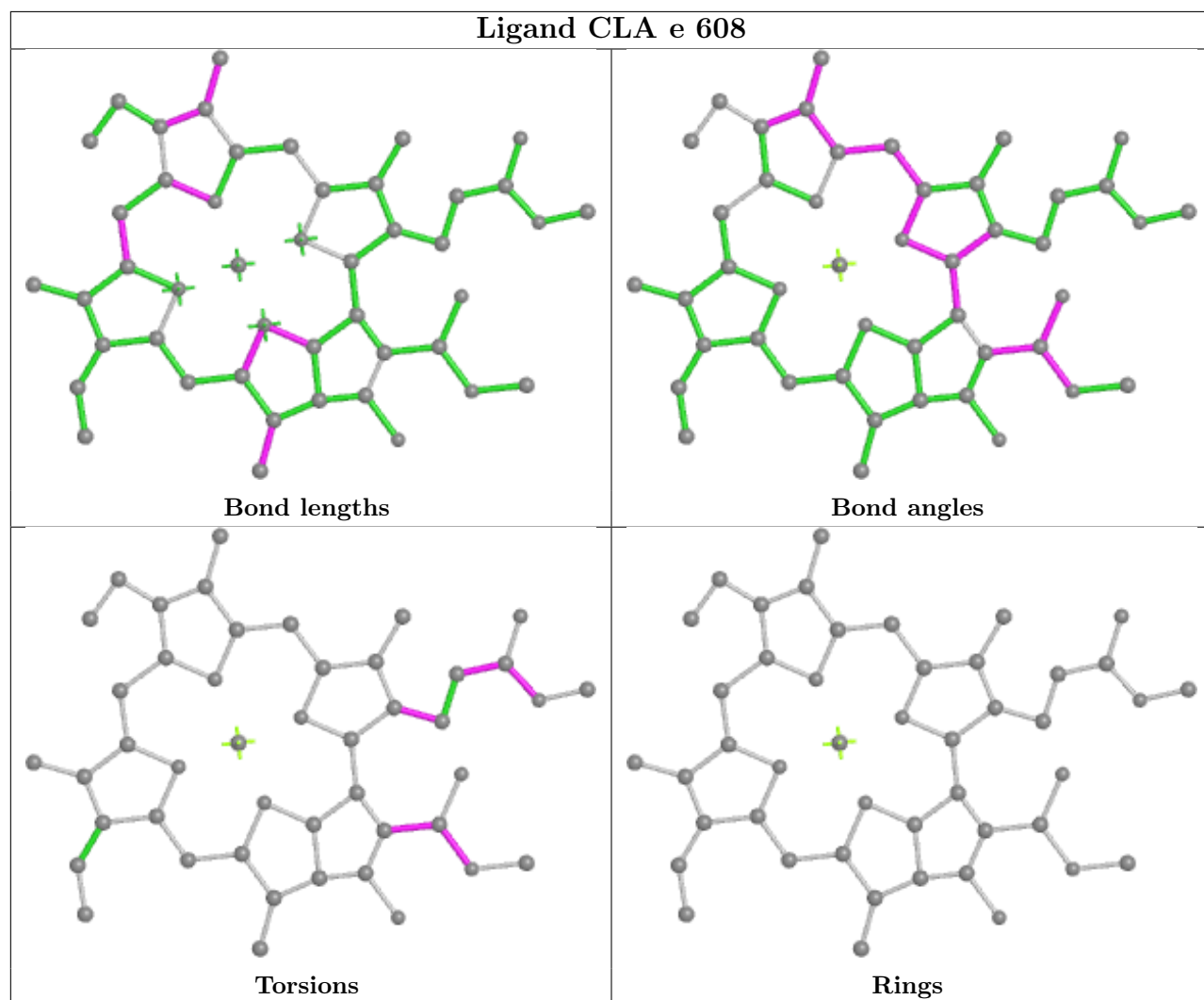
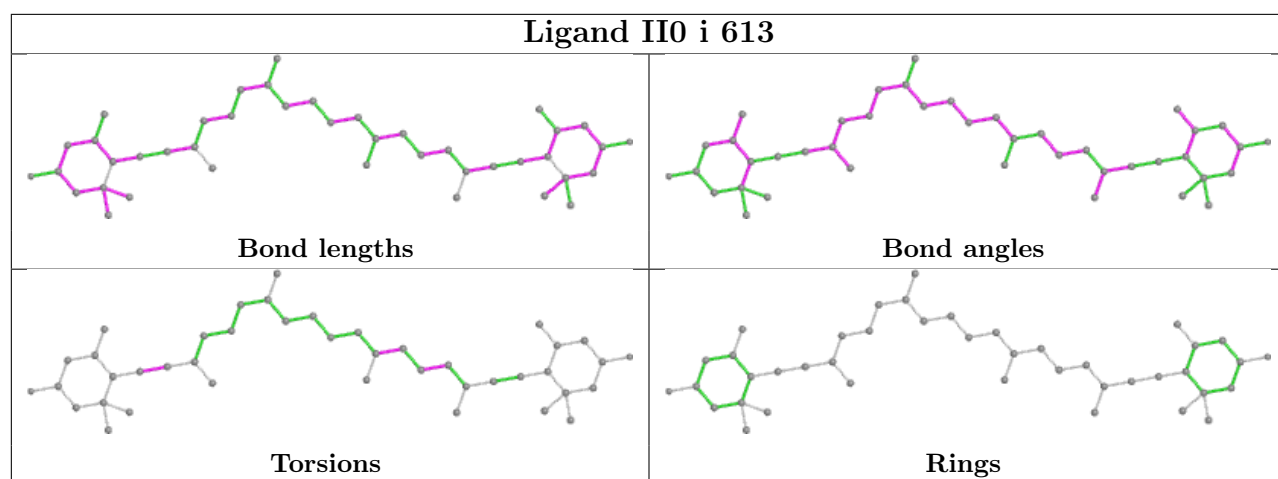


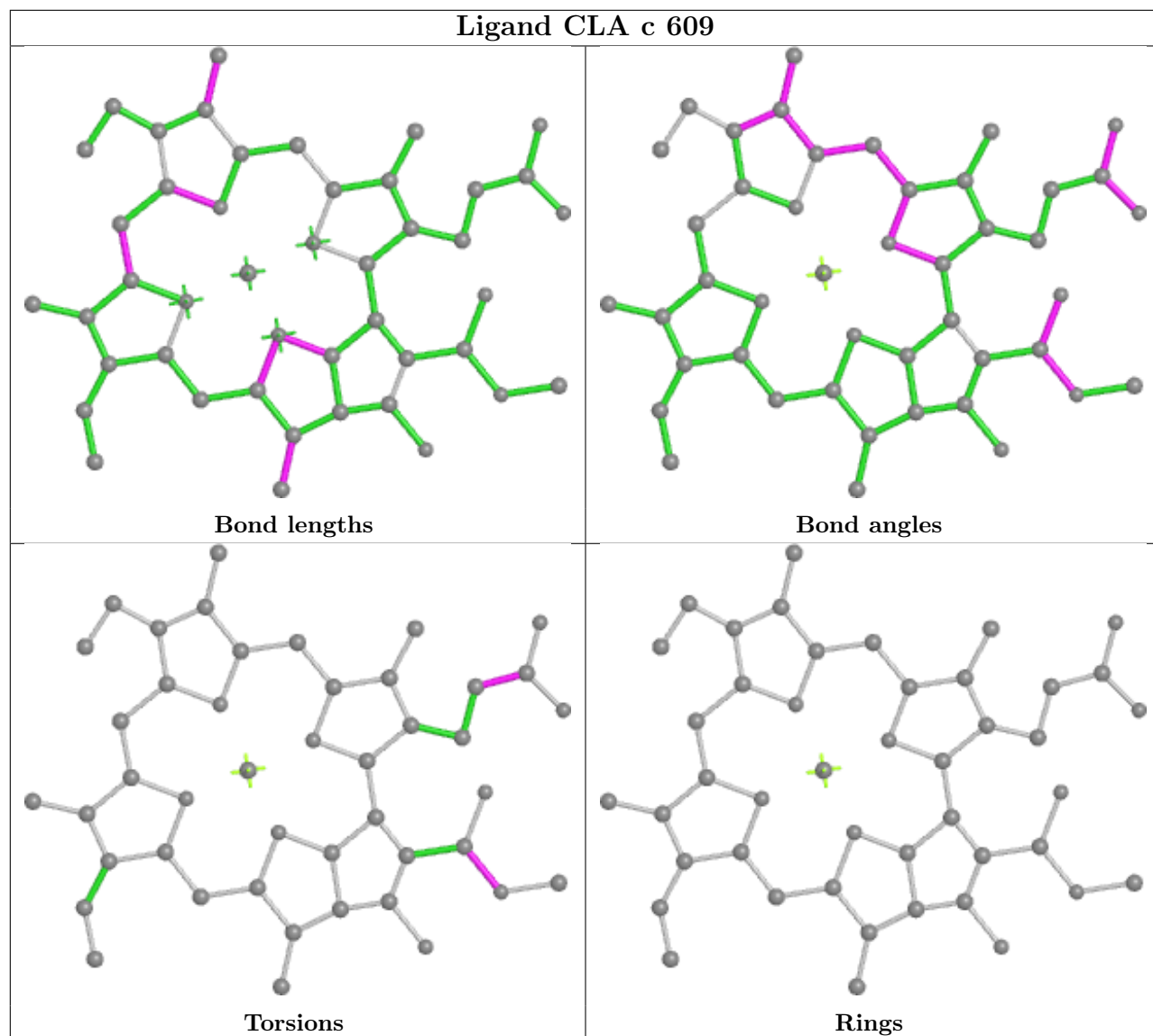


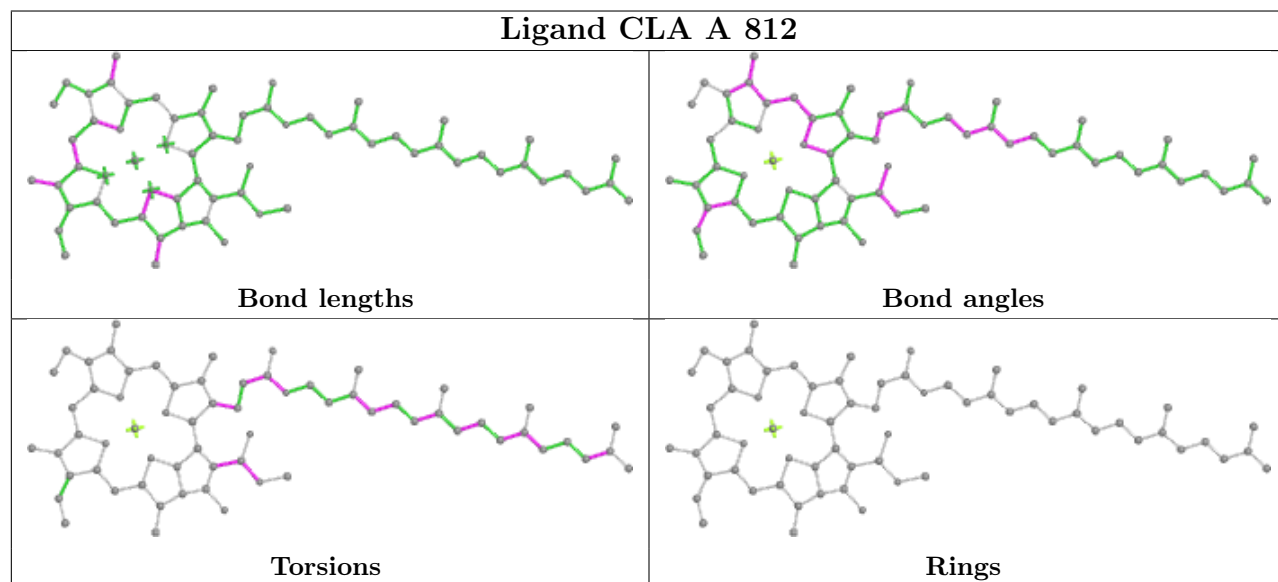
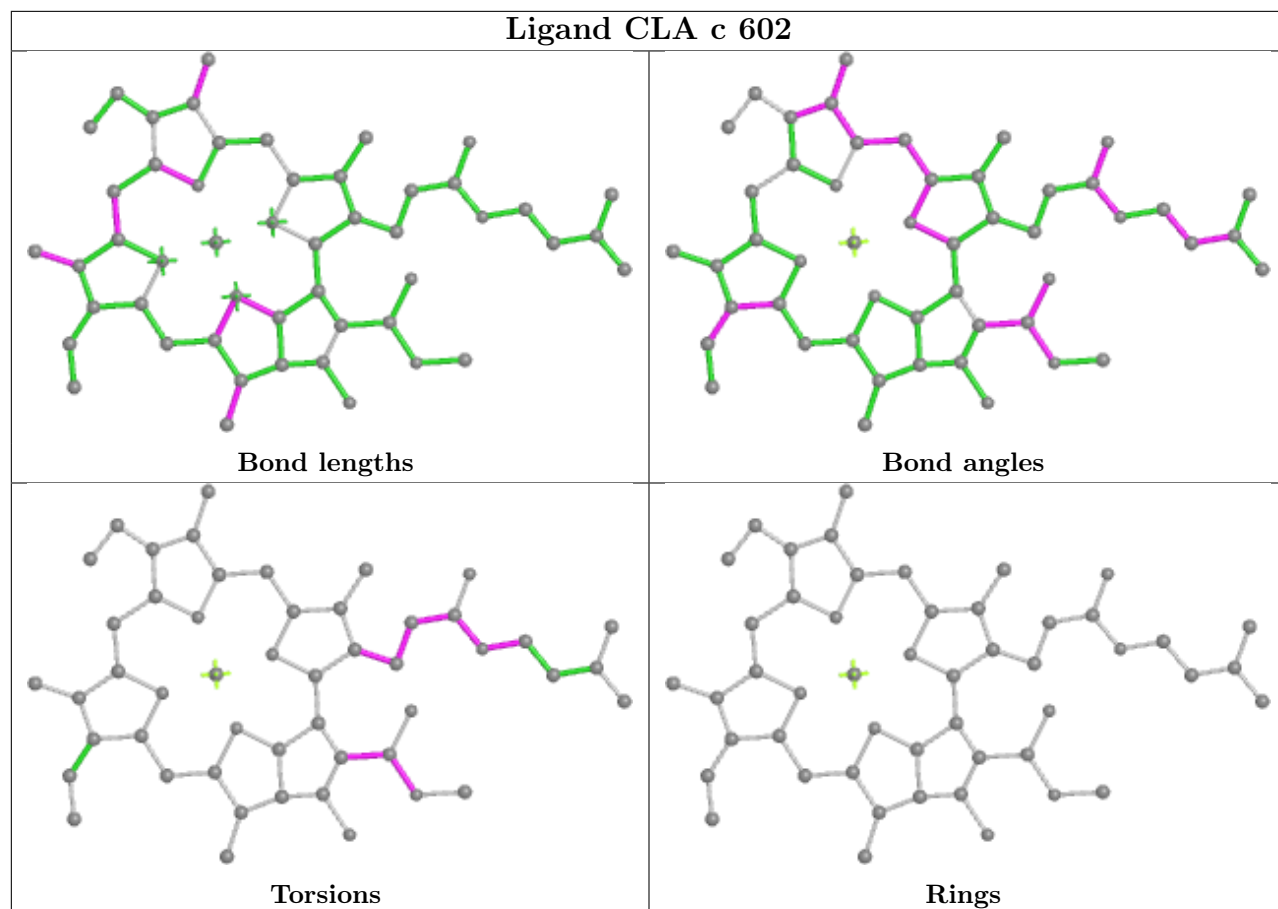


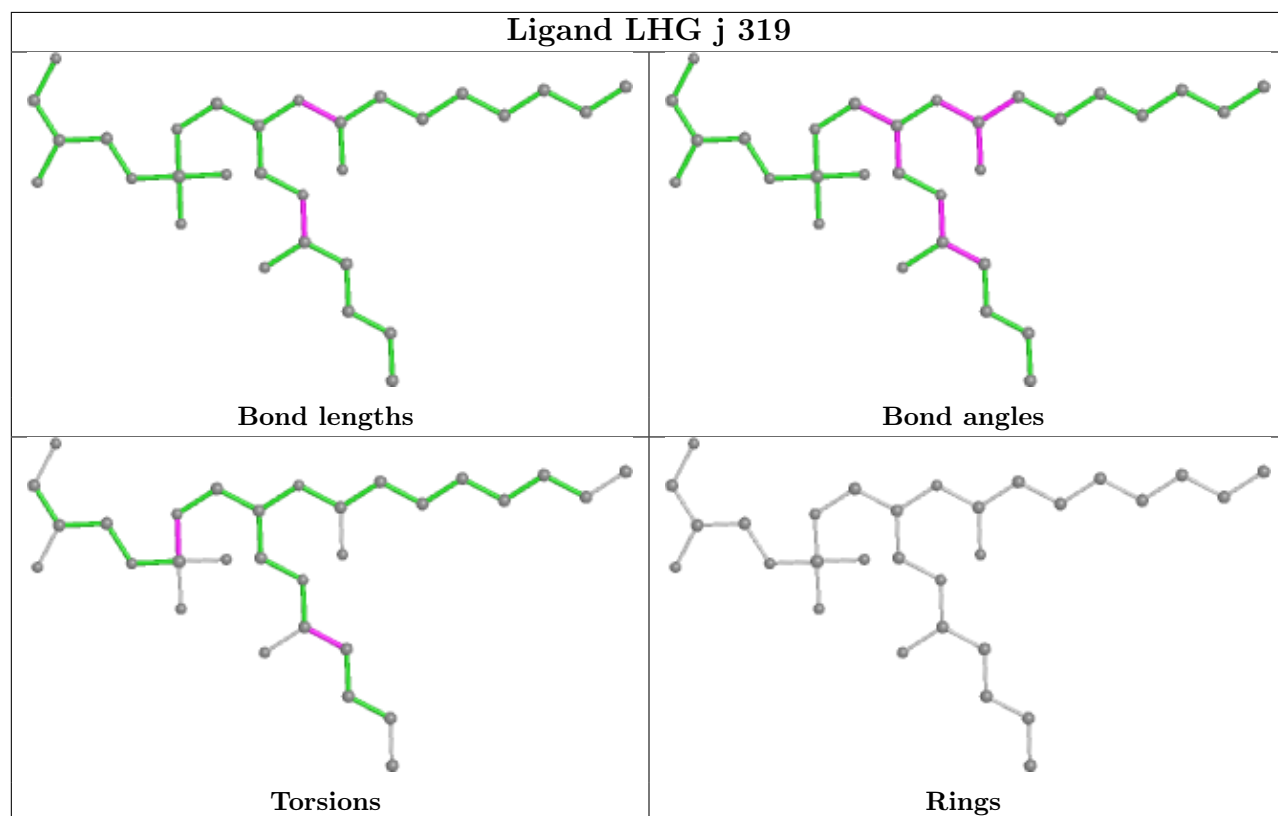
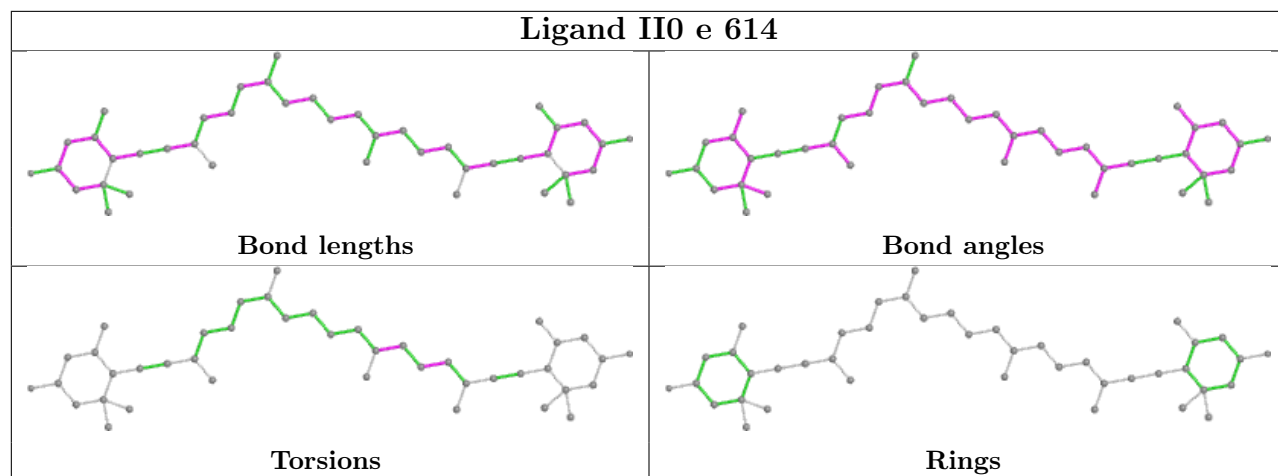


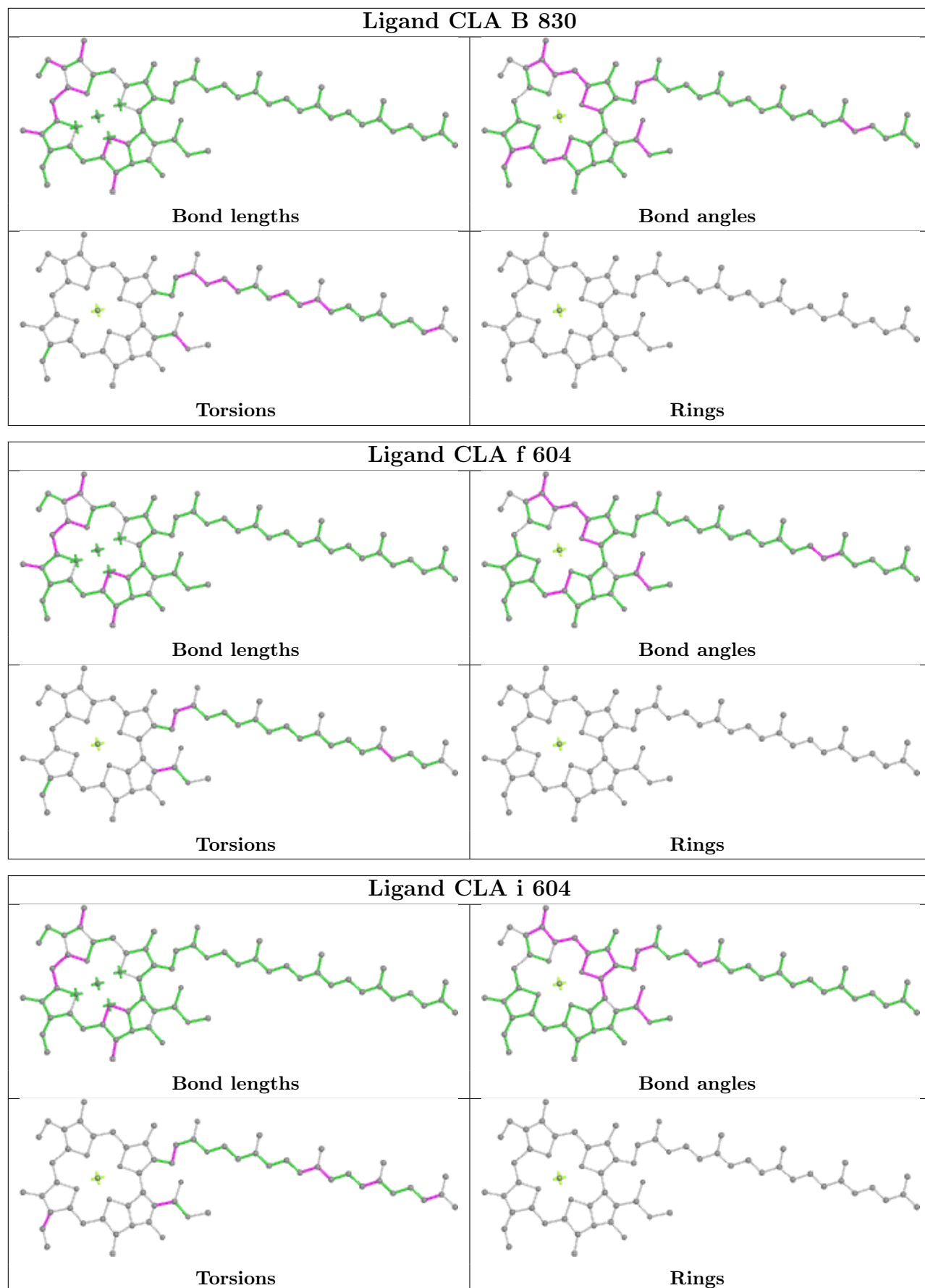


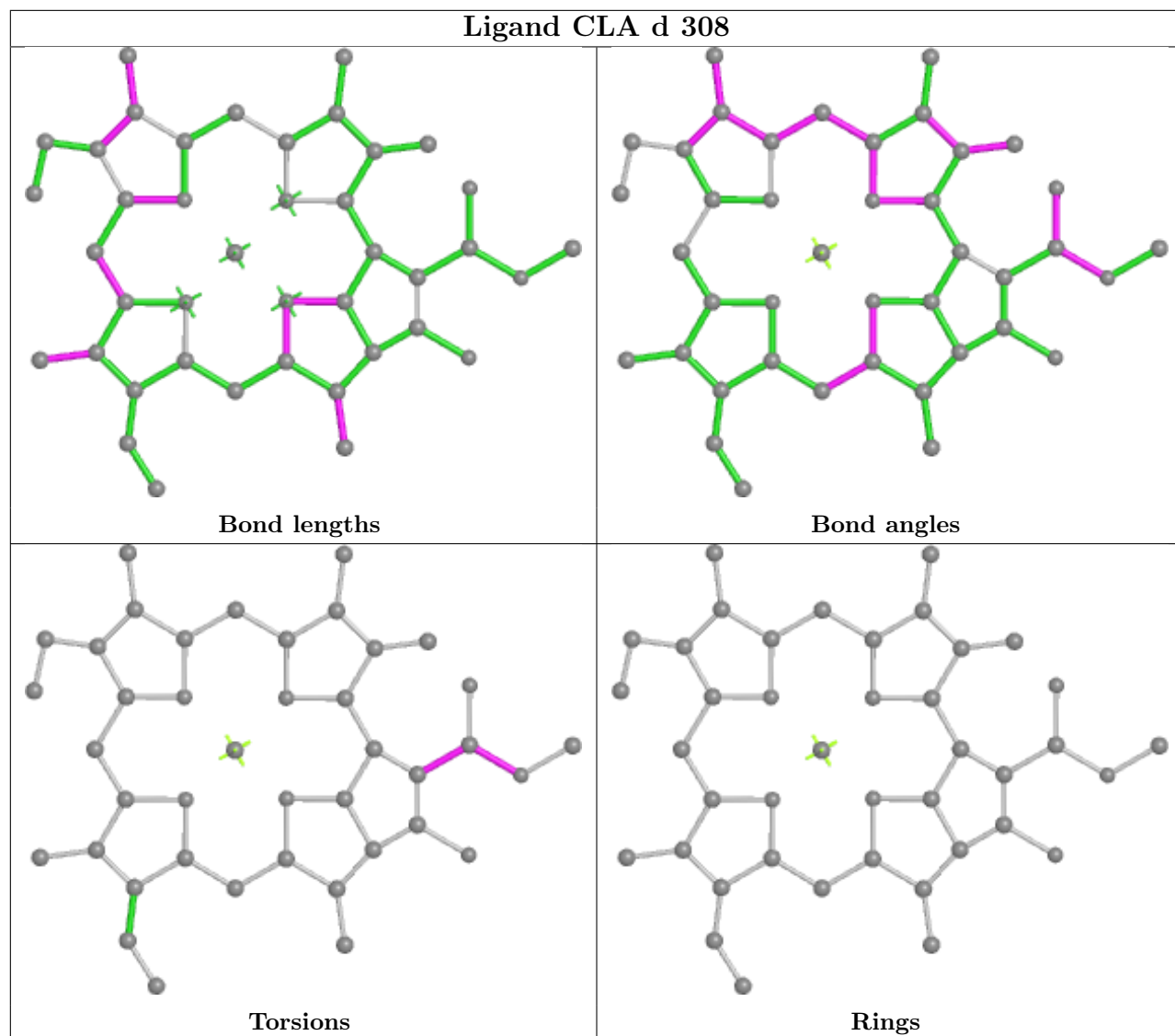


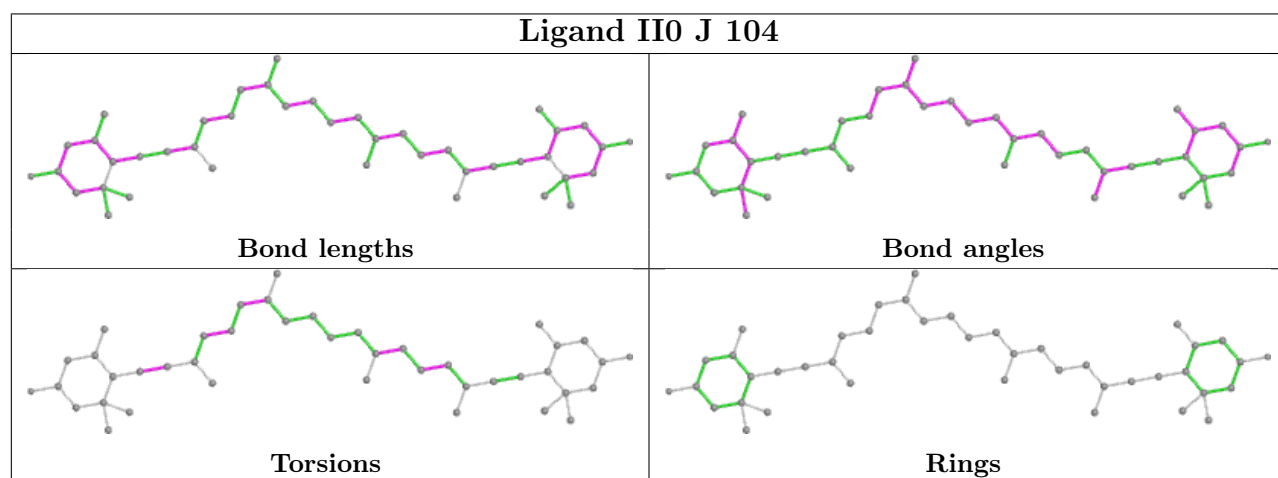
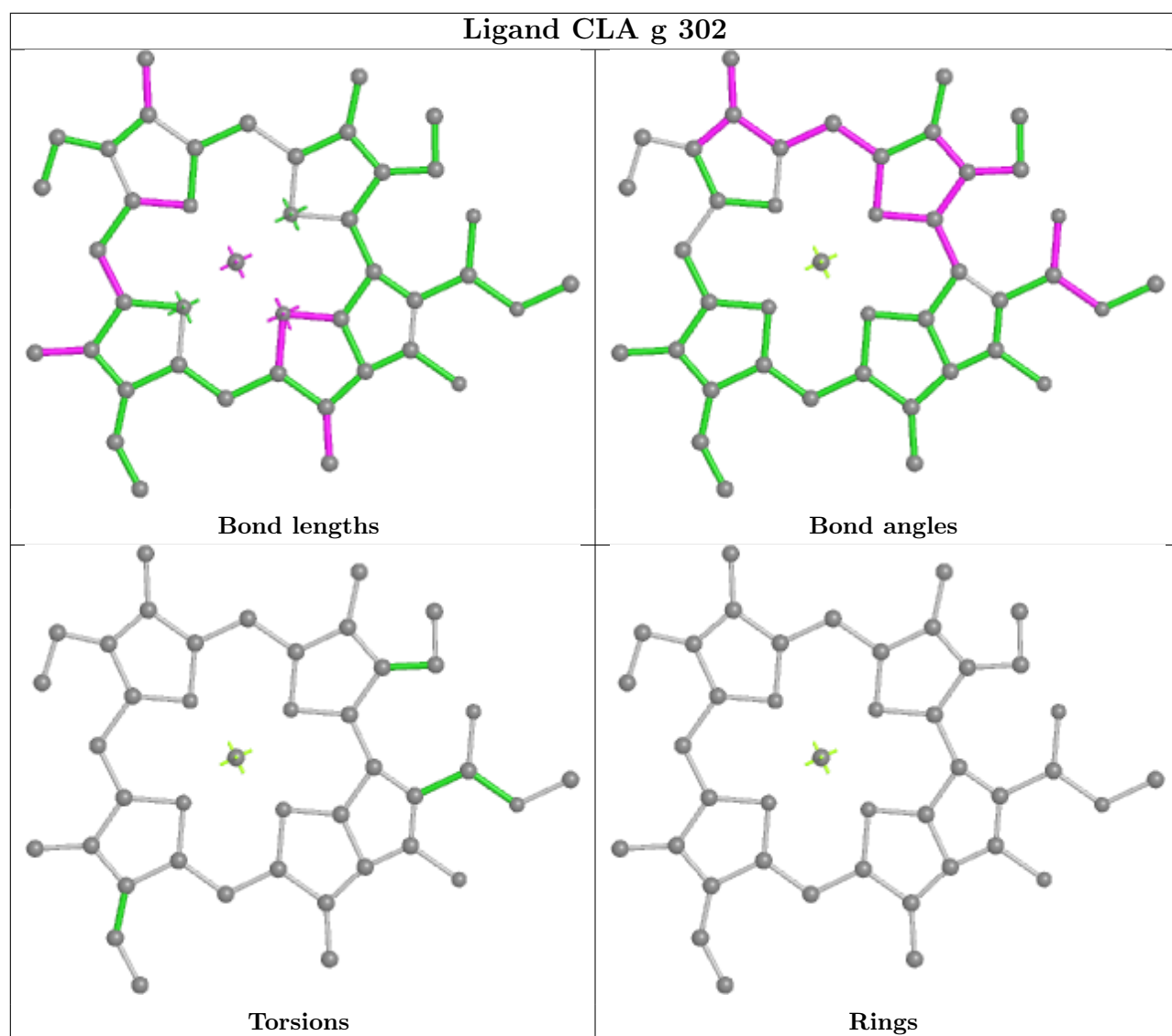


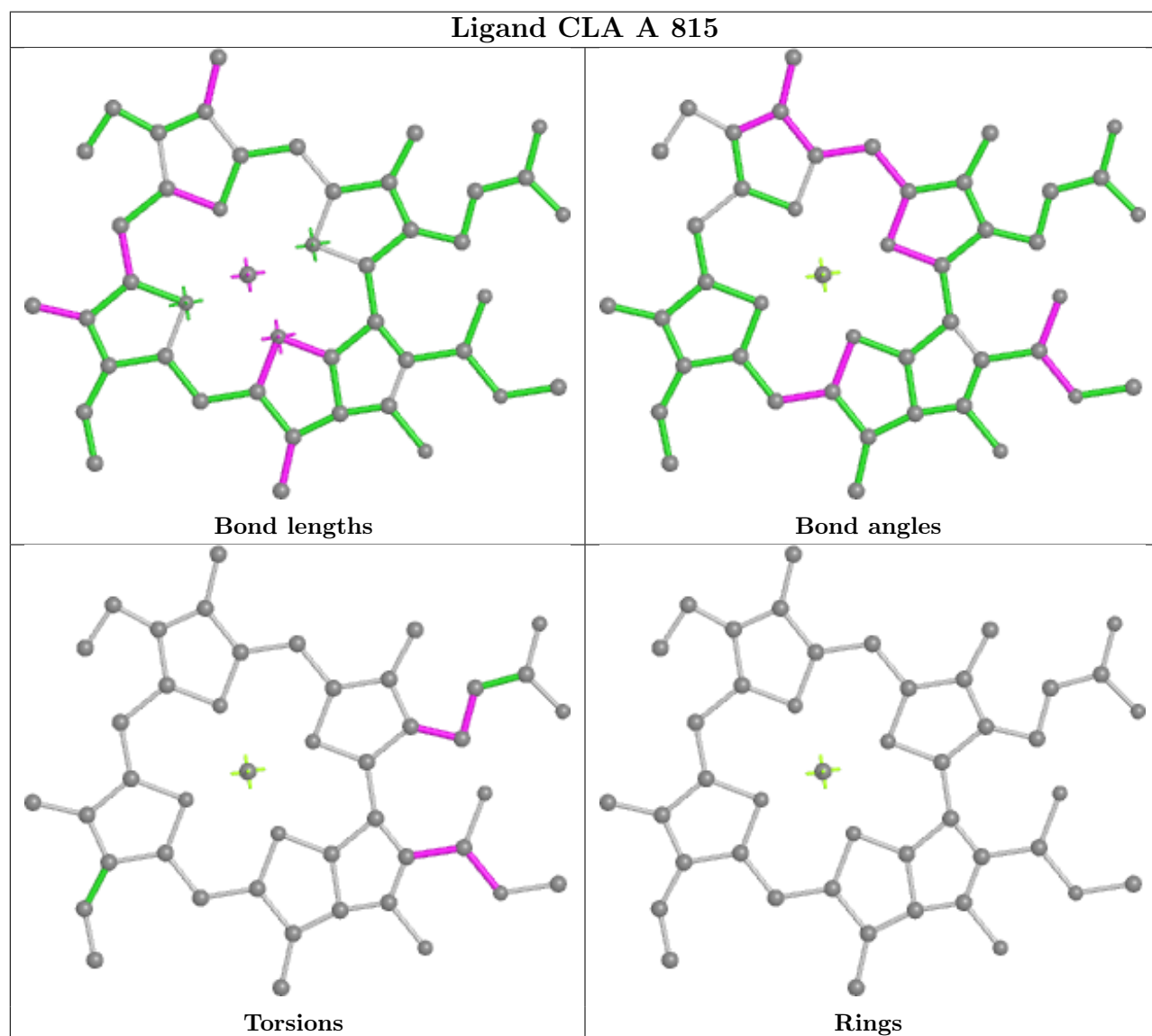
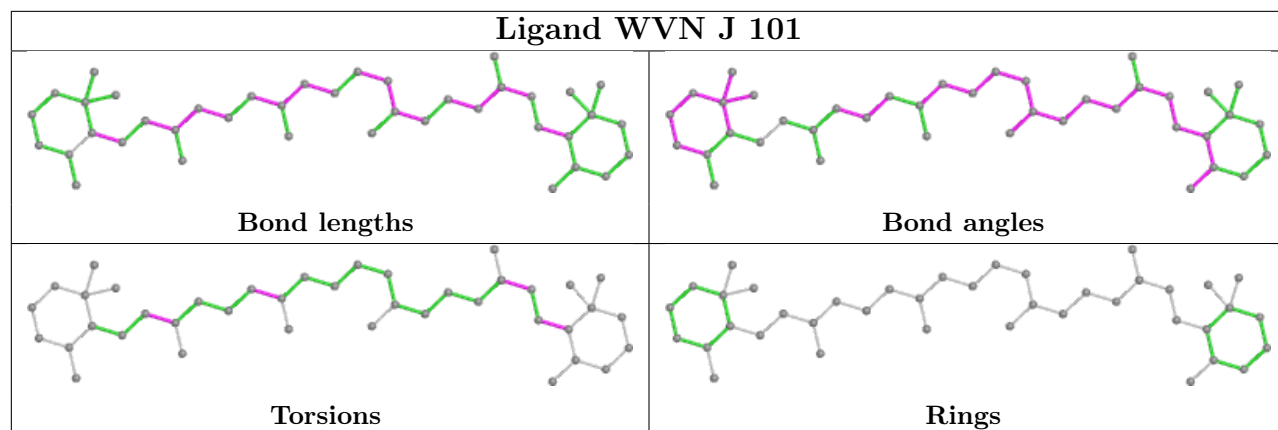


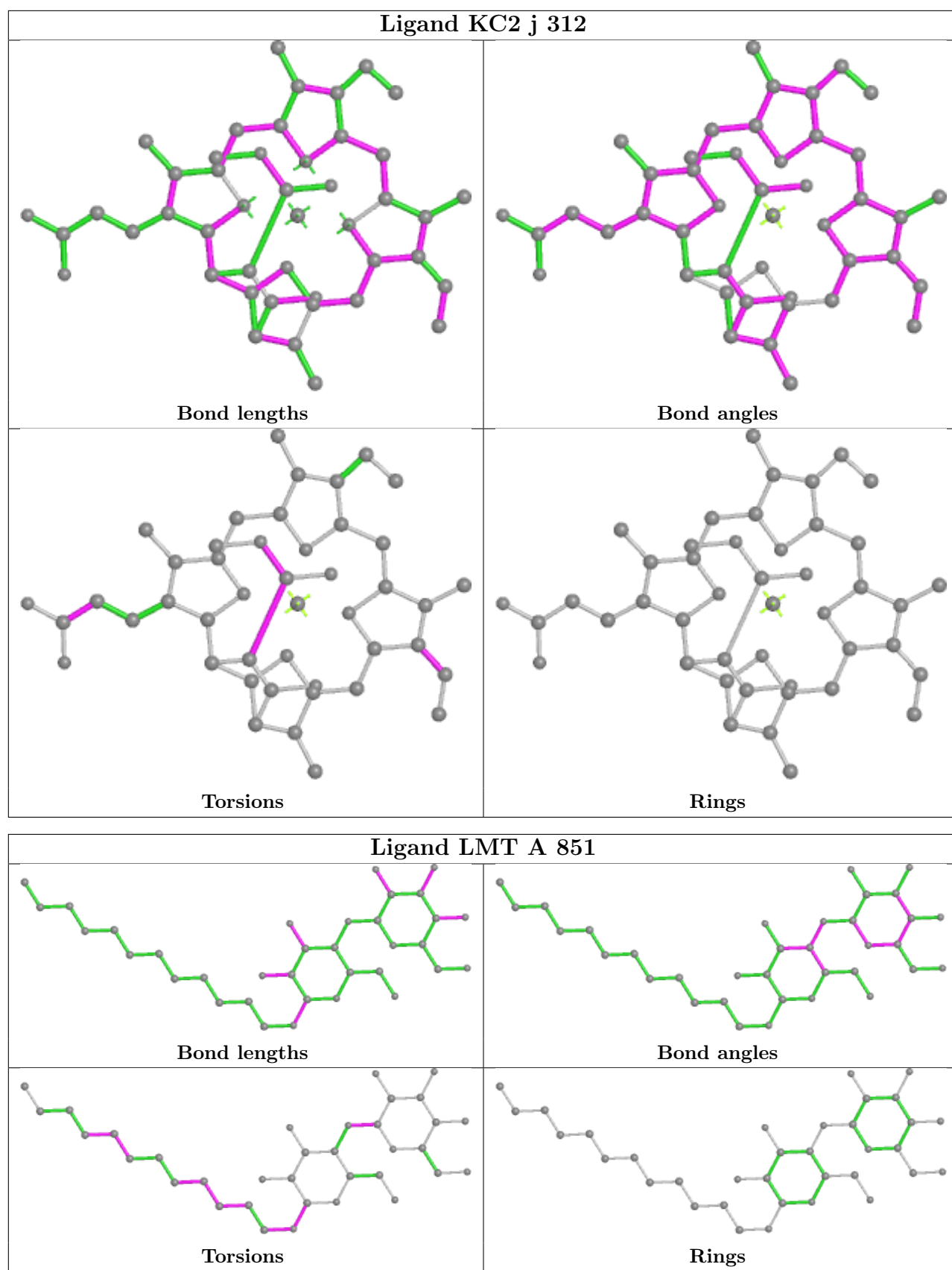












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

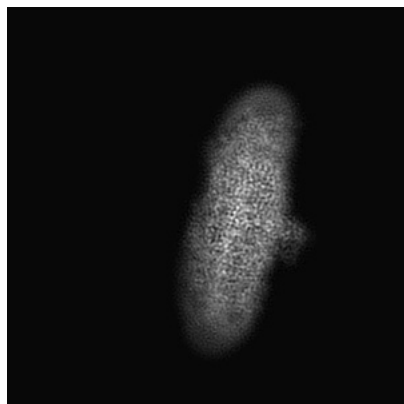
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-37660. These allow visual inspection of the internal detail of the map and identification of artifacts.

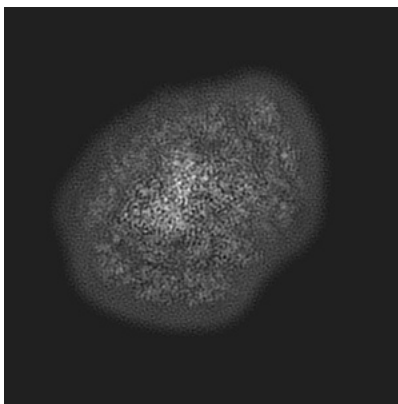
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

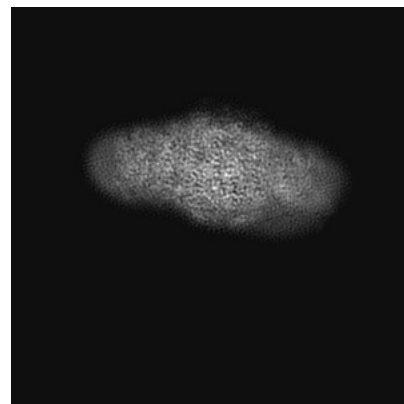
6.1.1 Primary map



X

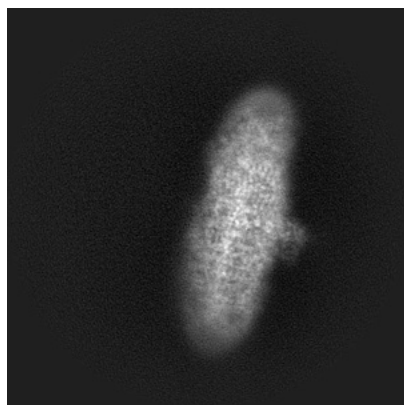


Y

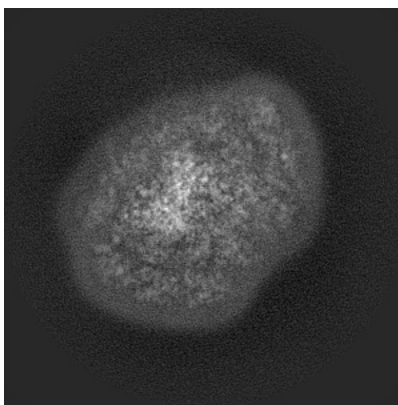


Z

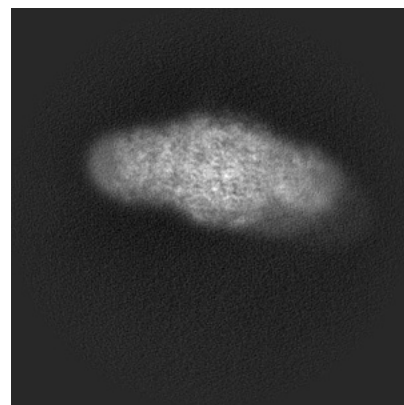
6.1.2 Raw map



X



Y

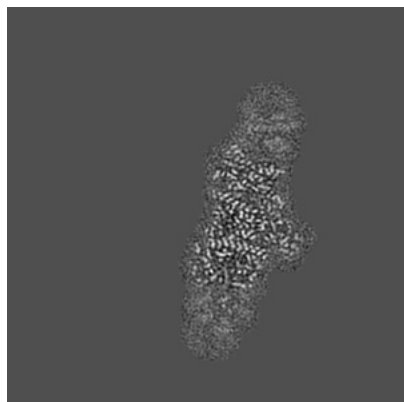


Z

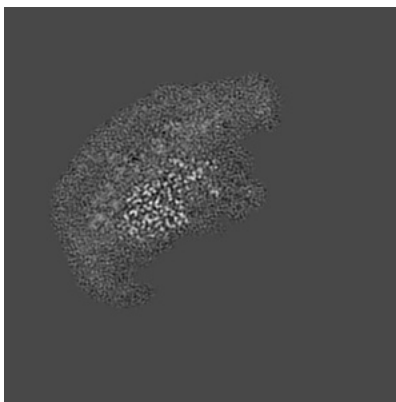
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

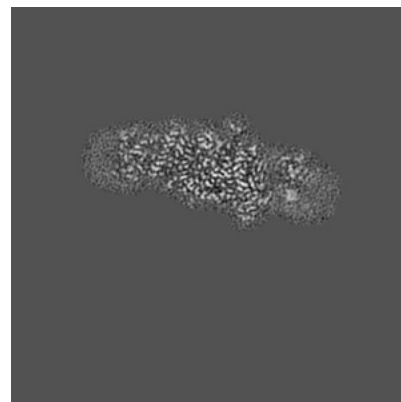
6.2.1 Primary map



X Index: 160

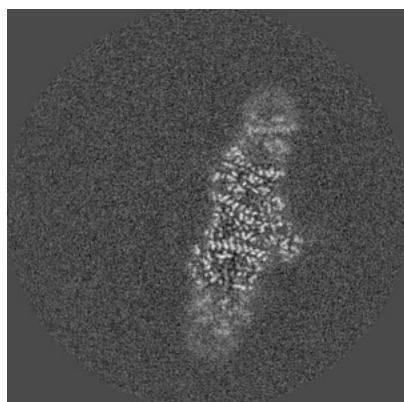


Y Index: 160

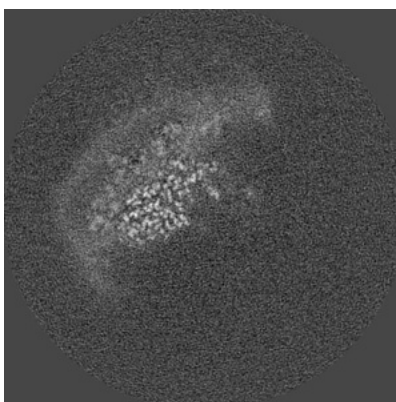


Z Index: 160

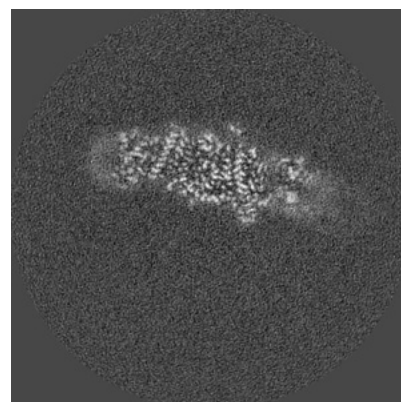
6.2.2 Raw map



X Index: 160



Y Index: 160

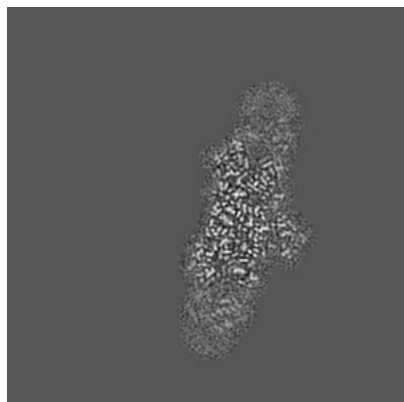


Z Index: 160

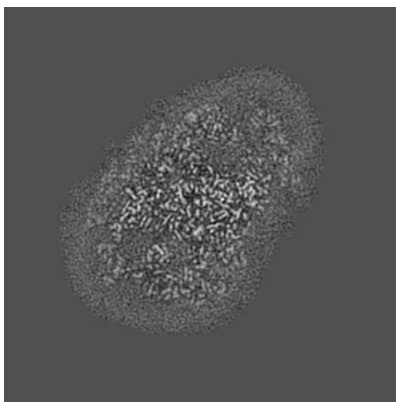
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

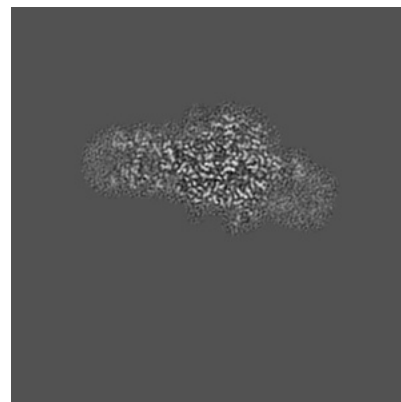
6.3.1 Primary map



X Index: 164

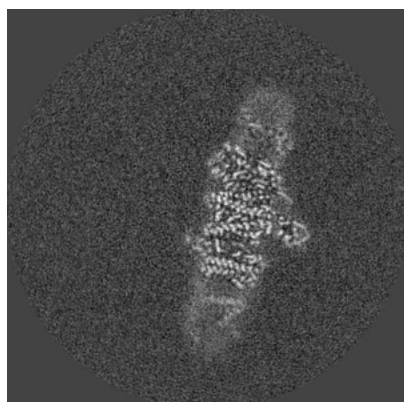


Y Index: 185

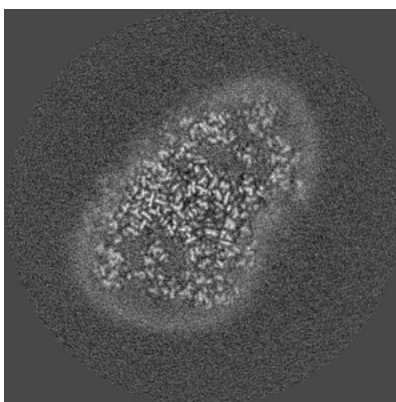


Z Index: 148

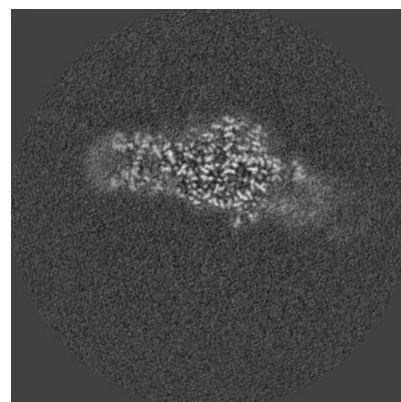
6.3.2 Raw map



X Index: 173



Y Index: 189

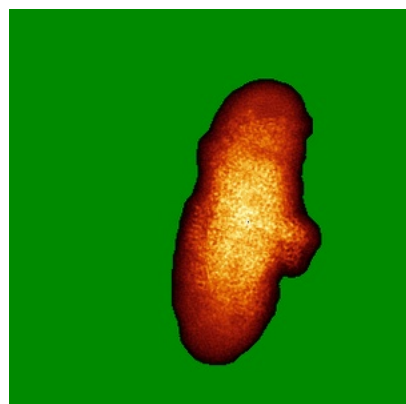


Z Index: 148

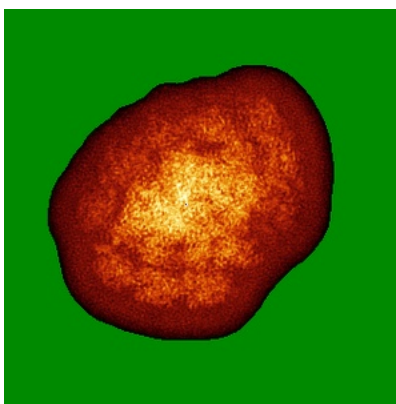
The images above show the largest variance slices of the map in three orthogonal directions.

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

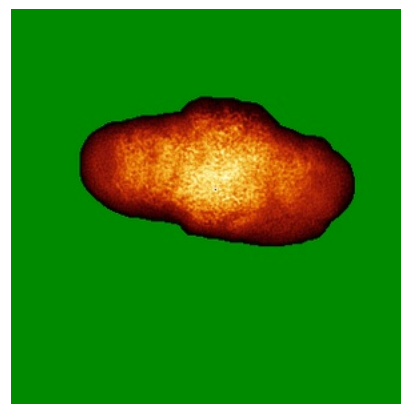
6.4.1 Primary map



X

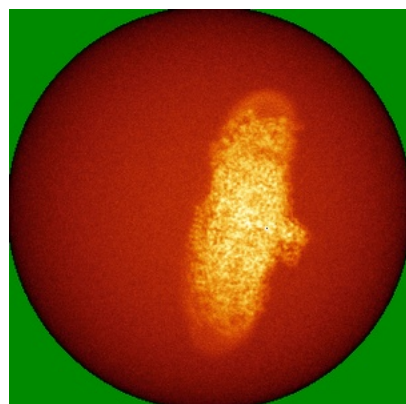


Y

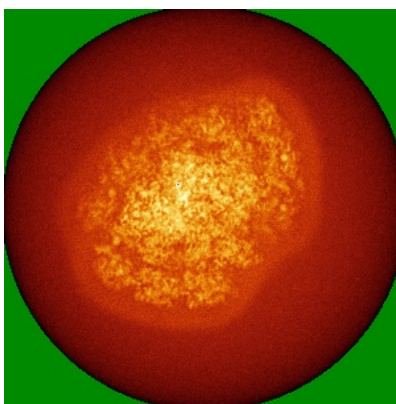


Z

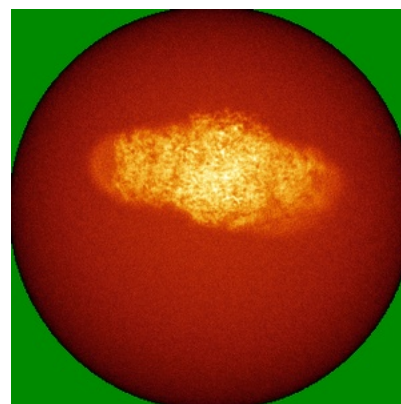
6.4.2 Raw map



X



Y

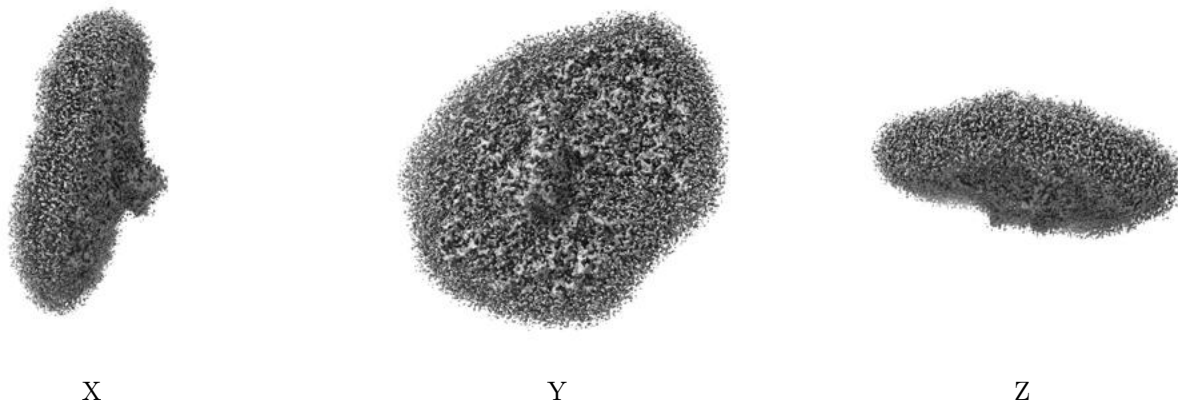


Z

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

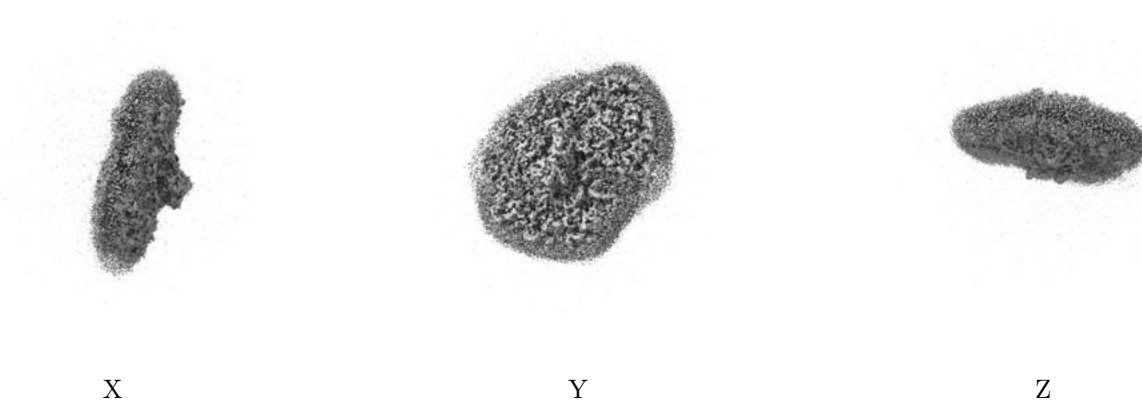
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.018. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



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

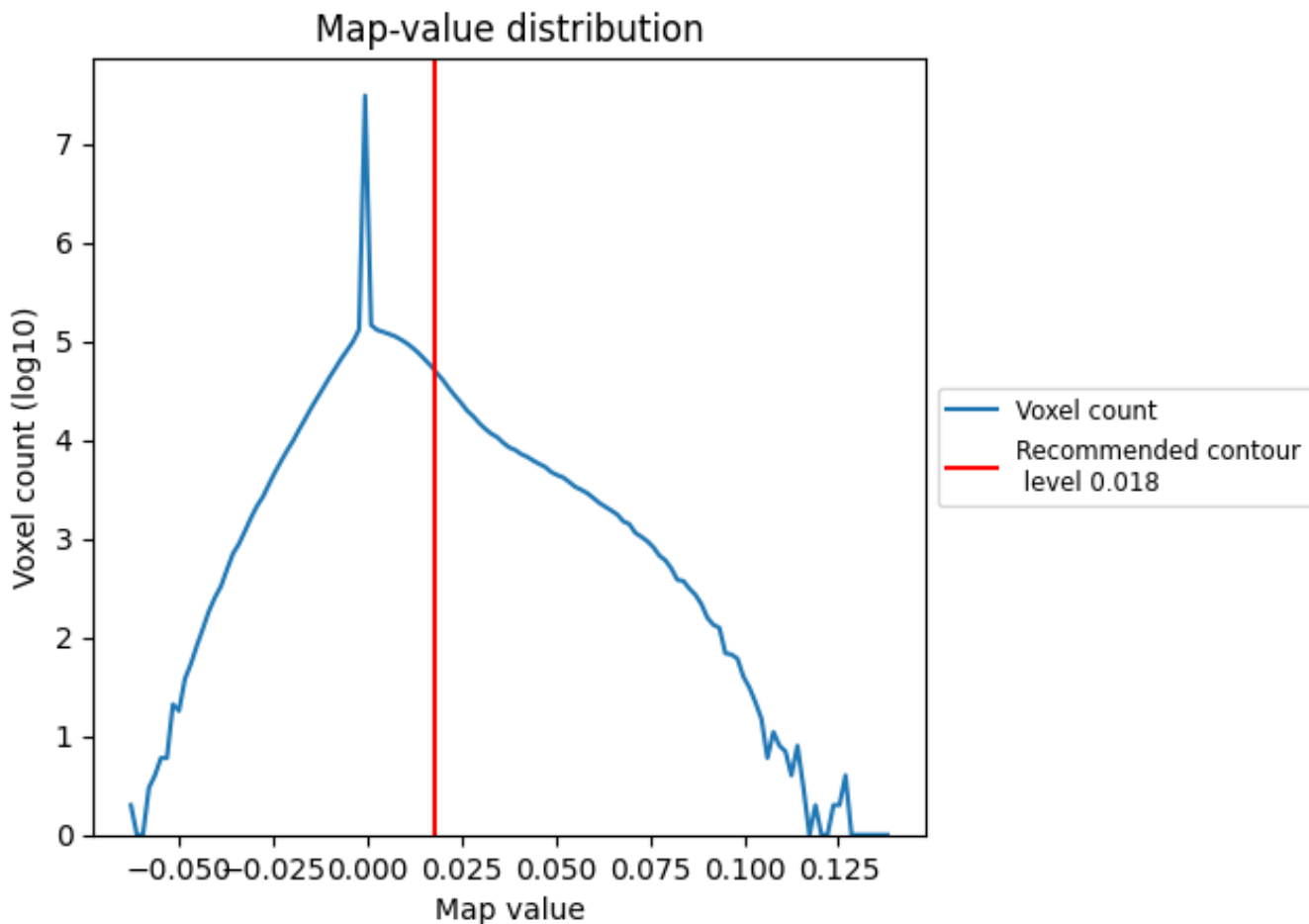
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

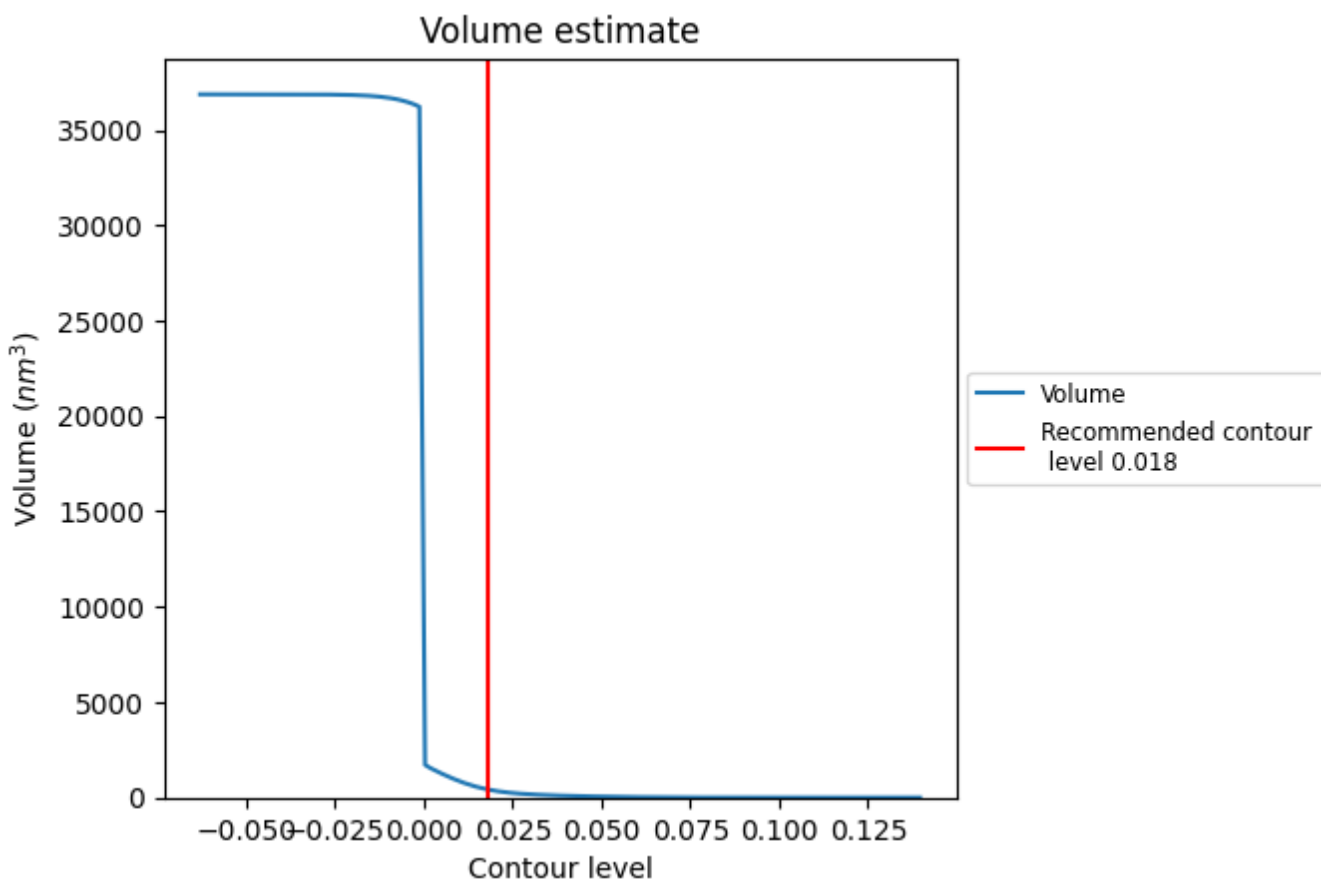
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

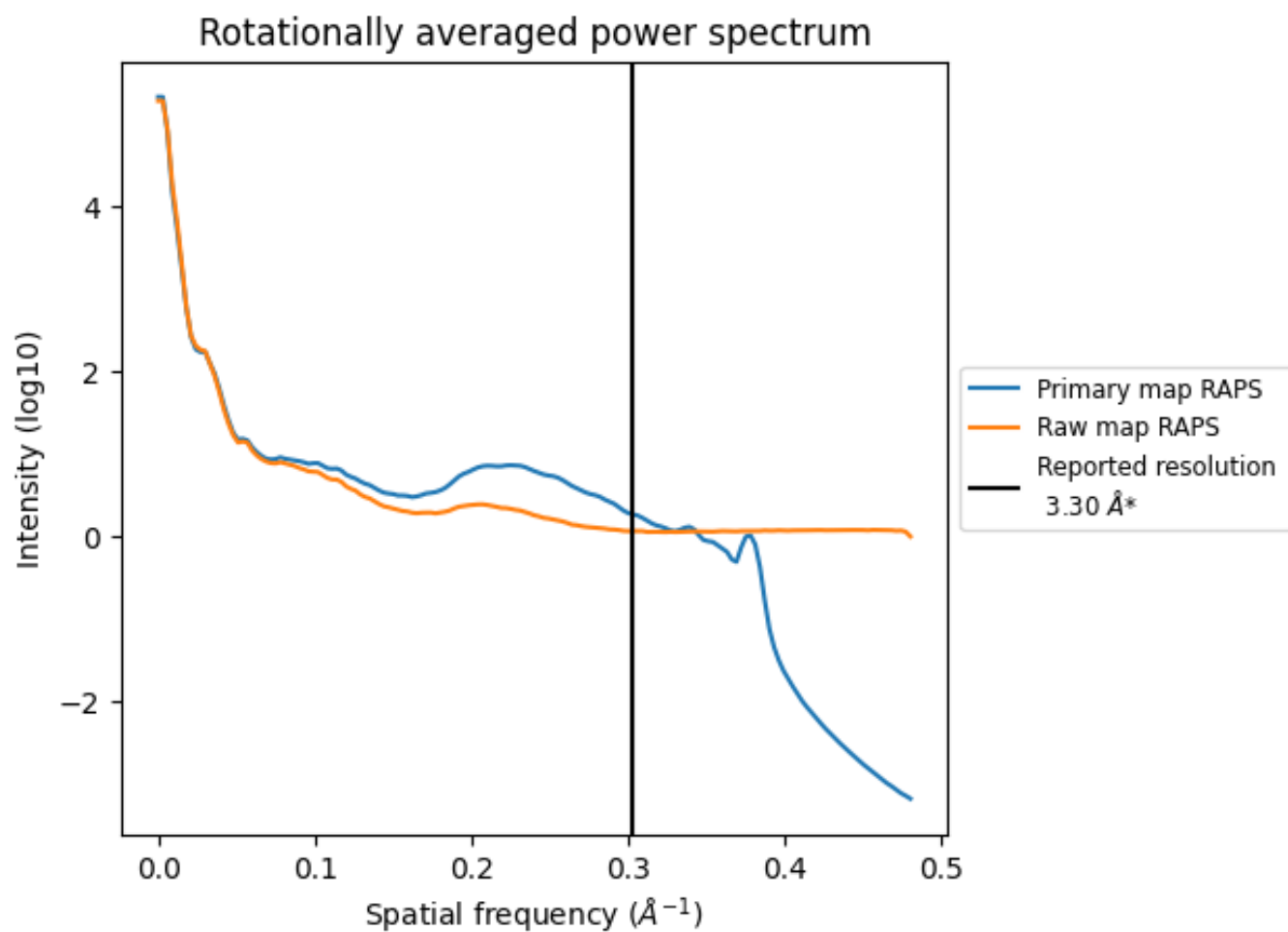
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 425 nm^3 ; this corresponds to an approximate mass of 384 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

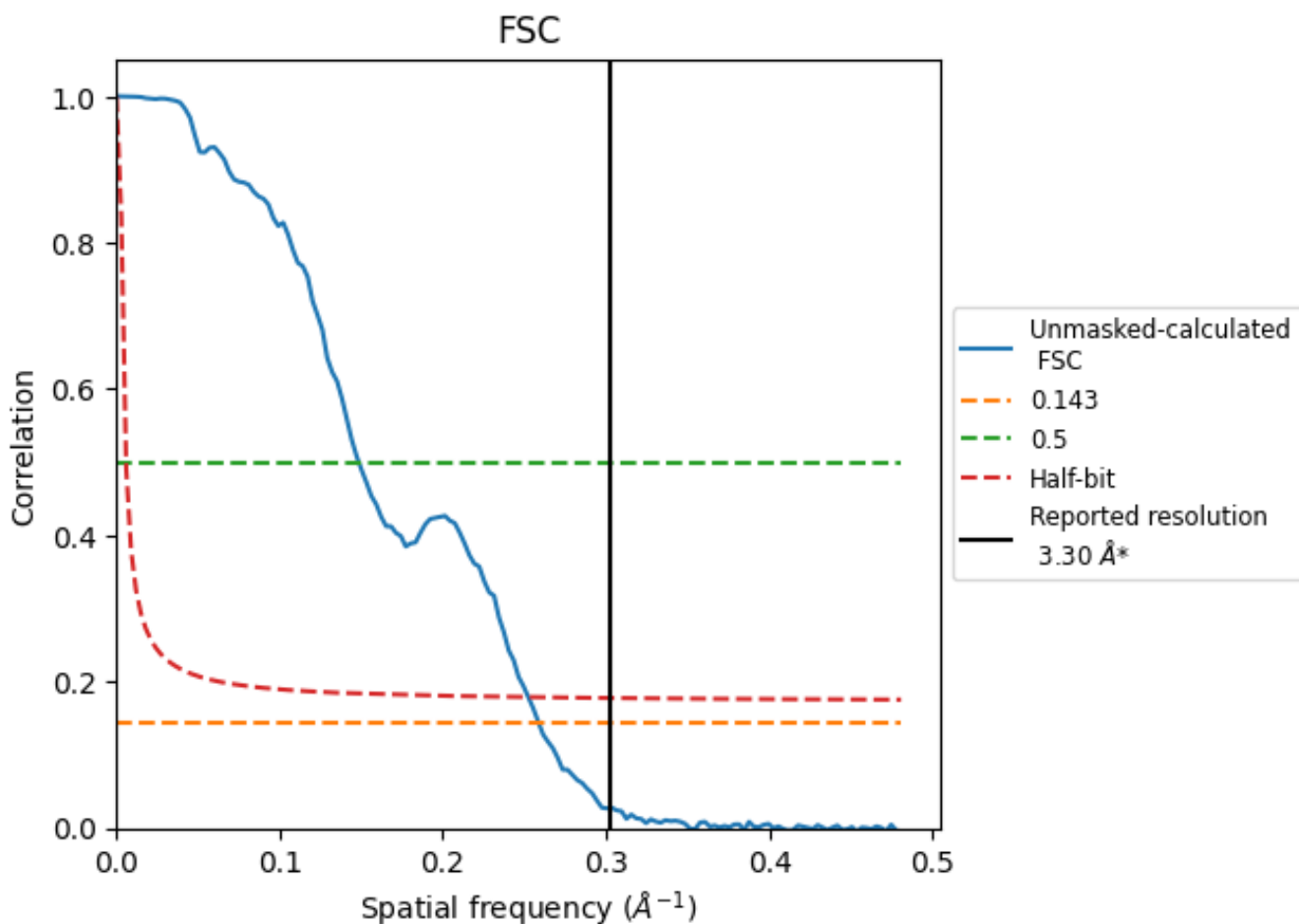


*Reported resolution corresponds to spatial frequency of 0.303 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.303 \AA^{-1}

8.2 Resolution estimates [i](#)

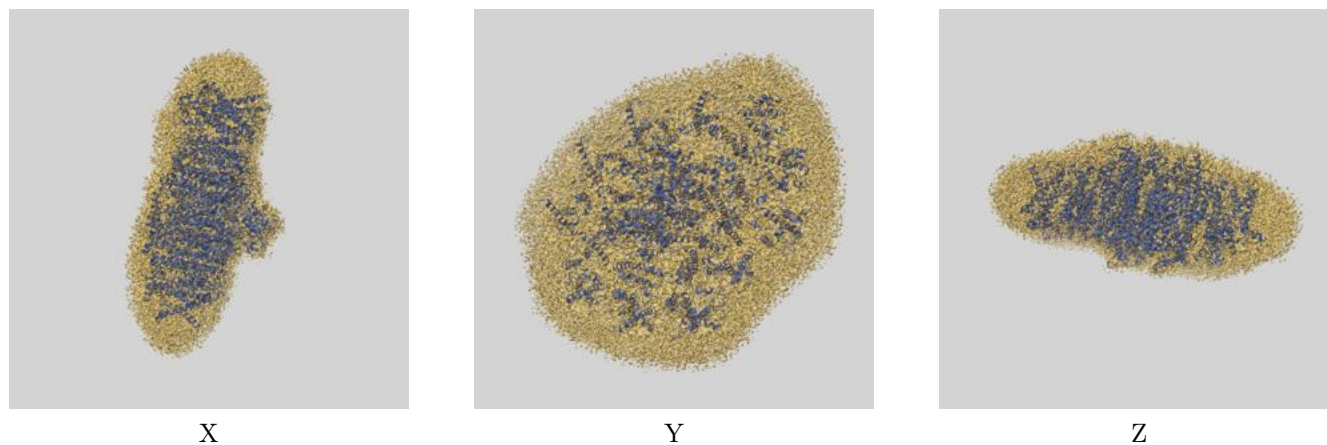
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.30	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.86	6.73	3.96

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.86 differs from the reported value 3.3 by more than 10 %

9 Map-model fit [i](#)

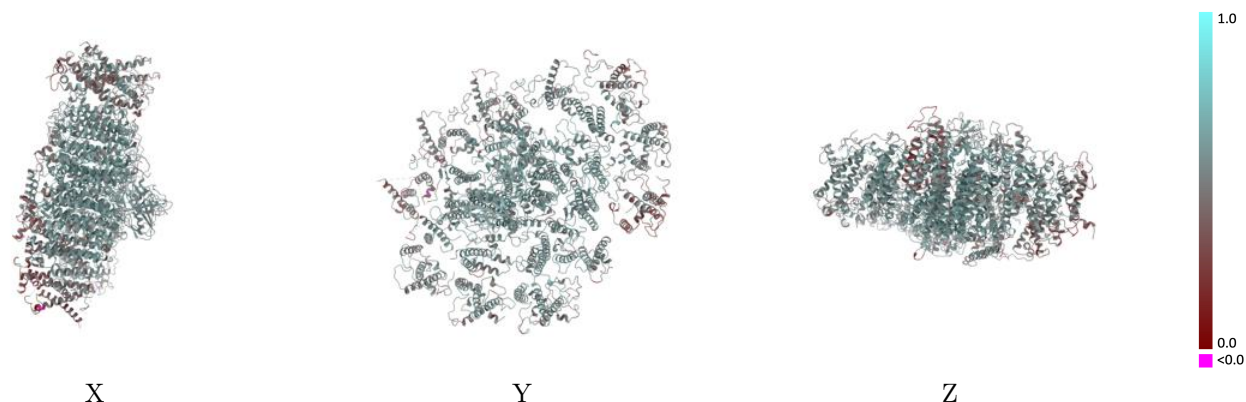
This section contains information regarding the fit between EMDB map EMD-37660 and PDB model 8WMW. Per-residue inclusion information can be found in section [3](#) on page [36](#).

9.1 Map-model overlay [i](#)



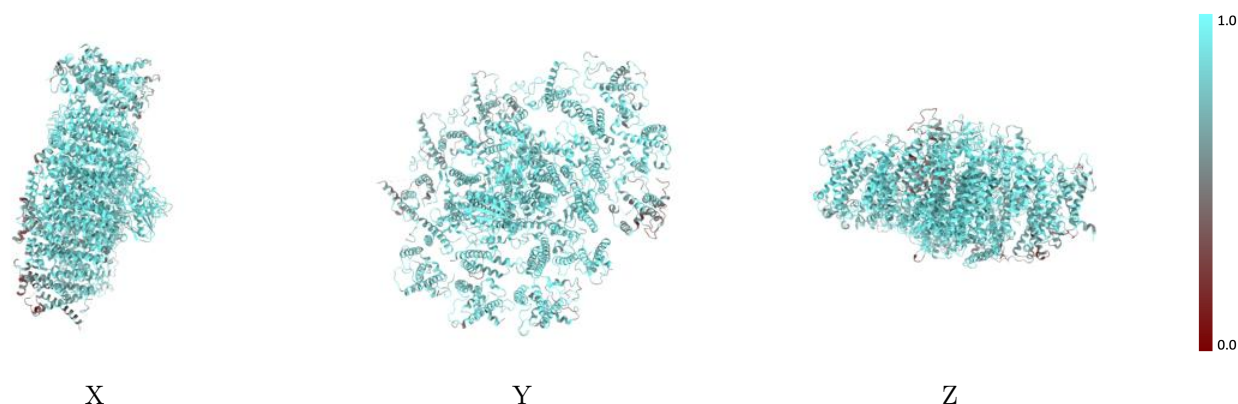
The images above show the 3D surface view of the map at the recommended contour level 0.018 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



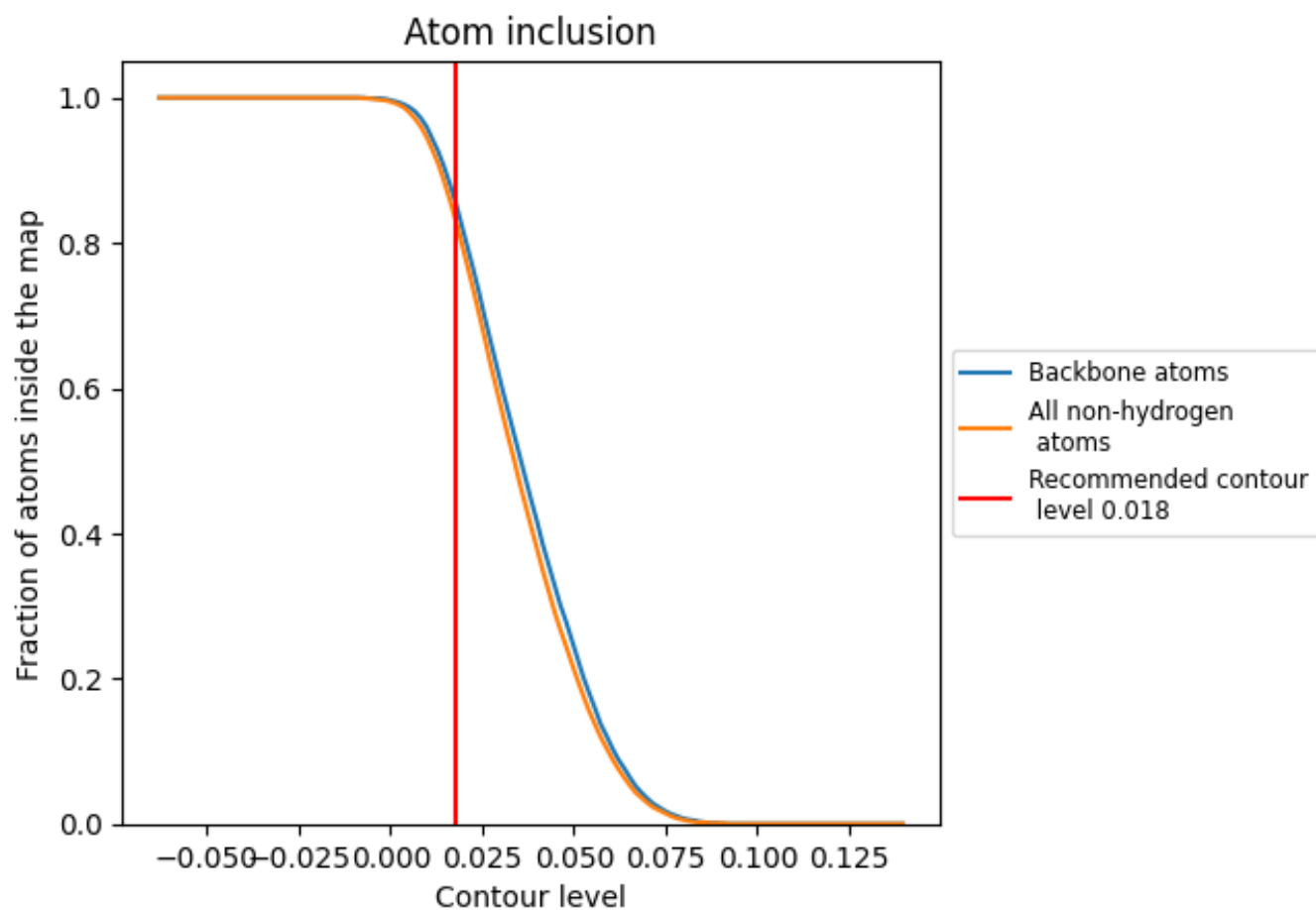
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.018).



















































9.4 Atom inclusion [i](#)



At the recommended contour level, 85% of all backbone atoms, 83% 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 (0.018) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8280	 0.5260
A	 0.9240	 0.5940
B	 0.9400	 0.6010
C	 0.9580	 0.5970
D	 0.8850	 0.5460
E	 0.8530	 0.5280
F	 0.8620	 0.5410
I	 0.9090	 0.5670
J	 0.7980	 0.5290
K	 0.8520	 0.5270
L	 0.8780	 0.5610
M	 0.8990	 0.5650
O	 0.8330	 0.5300
R	 0.8860	 0.5630
a	 0.7950	 0.4970
b	 0.6090	 0.4170
c	 0.6560	 0.4220
d	 0.6030	 0.3760
e	 0.7660	 0.4850
f	 0.8260	 0.5290
g	 0.8100	 0.5240
h	 0.8530	 0.5400
i	 0.6260	 0.3890
j	 0.8120	 0.5130
k	 0.7100	 0.4220

