



wwPDB EM Validation Summary Report ⓘ

May 22, 2024 – 06:40 PM JST

PDB ID : 8WMV
EMDB ID : EMD-37659
Title : The structure of PSI-14CAC complex at stationary growth phase
Authors : Zhang, S.M.; Si, L.; Li, M.
Deposited on : 2023-10-04
Resolution : 2.94 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:

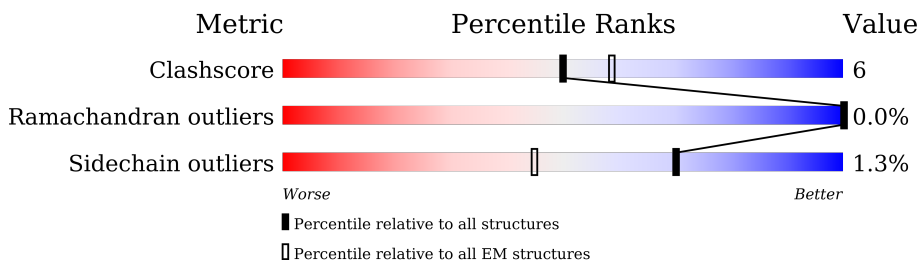
EMDB validation analysis : 0.0.1.dev92
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (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 2.94 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	93% 5% ..
10	M	30	87% 10% .
11	O	146	62% 9% . 29%
12	K	87	74% 6% 21%
13	s	269	57% 43%
14	c	216	78% 21%
15	a	216	81% 19%
16	b	223	85% . 13%
17	h	225	72% 28%
18	f	212	81% . 18%
18	j	212	79% . 19%
18	m	212	79% . 18%
19	e	203	83% 17%
20	l	238	74% 26%
21	k	241	65% . 34%
22	i	218	27% 78% . 20%
23	d	213	10% 59% . 39%
24	g	255	11% 84% . 14%
25	R	129	65% 5% 30%
26	n	219	15% 80% . 17%

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
27	CLA	A	801	X	-	-	-
27	CLA	A	802	X	-	-	-
27	CLA	A	803	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
27	CLA	A	804	X	-	-	-
27	CLA	A	805	X	-	-	-
27	CLA	A	807	X	-	-	-
27	CLA	A	808	X	-	-	-
27	CLA	A	809	X	-	-	-
27	CLA	A	810	X	-	-	-
27	CLA	A	812	X	-	-	-
27	CLA	A	813	X	-	-	-
27	CLA	A	814	X	-	-	-
27	CLA	A	815	X	-	-	-
27	CLA	A	816	X	-	-	-
27	CLA	A	817	X	-	-	-
27	CLA	A	818	X	-	-	-
27	CLA	A	819	X	-	-	-
27	CLA	A	820	X	-	-	-
27	CLA	A	822	X	-	-	-
27	CLA	A	823	X	-	-	-
27	CLA	A	824	X	-	-	-
27	CLA	A	826	X	-	-	-
27	CLA	A	827	X	-	-	-
27	CLA	A	828	X	-	-	-
27	CLA	A	829	X	-	-	-
27	CLA	A	831	X	-	-	-
27	CLA	A	832	X	-	-	-
27	CLA	A	833	X	-	-	-
27	CLA	A	834	X	-	-	-
27	CLA	A	835	X	-	-	-
27	CLA	A	837	X	-	-	-
27	CLA	A	838	X	-	-	-
27	CLA	A	839	X	-	-	-
27	CLA	A	841	X	-	-	-
27	CLA	A	842	X	-	-	-
27	CLA	A	852	X	-	-	-
27	CLA	A	853	X	-	-	-
27	CLA	A	855	X	-	-	-
27	CLA	A	856	X	-	-	-
27	CLA	B	801	X	-	-	-
27	CLA	B	802	X	-	-	-
27	CLA	B	803	X	-	-	-
27	CLA	B	804	X	-	-	-
27	CLA	B	805	X	-	-	-
27	CLA	B	806	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
27	CLA	B	807	X	-	-	-
27	CLA	B	808	X	-	-	-
27	CLA	B	809	X	-	-	-
27	CLA	B	810	X	-	-	-
27	CLA	B	811	X	-	-	-
27	CLA	B	812	X	-	-	-
27	CLA	B	813	X	-	-	-
27	CLA	B	814	X	-	-	-
27	CLA	B	816	X	-	-	-
27	CLA	B	818	X	-	-	-
27	CLA	B	819	X	-	-	-
27	CLA	B	820	X	-	-	-
27	CLA	B	821	X	-	-	-
27	CLA	B	822	X	-	-	-
27	CLA	B	823	X	-	-	-
27	CLA	B	824	X	-	-	-
27	CLA	B	825	X	-	-	-
27	CLA	B	826	X	-	-	-
27	CLA	B	827	X	-	-	-
27	CLA	B	828	X	-	-	-
27	CLA	B	829	X	-	-	-
27	CLA	B	830	X	-	-	-
27	CLA	B	831	X	-	-	-
27	CLA	B	832	X	-	-	-
27	CLA	B	833	X	-	-	-
27	CLA	B	834	X	-	-	-
27	CLA	B	835	X	-	-	-
27	CLA	B	836	X	-	-	-
27	CLA	B	837	X	-	-	-
27	CLA	B	838	X	-	-	-
27	CLA	B	839	X	-	-	-
27	CLA	B	840	X	-	-	-
27	CLA	F	201	X	-	-	-
27	CLA	F	202	X	-	-	-
27	CLA	F	203	X	-	-	-
27	CLA	J	103	X	-	-	-
27	CLA	J	105	X	-	-	-
27	CLA	K	101	X	-	-	-
27	CLA	K	102	X	-	-	-
27	CLA	L	202	X	-	-	-
27	CLA	L	204	X	-	-	-
27	CLA	L	206	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
27	CLA	O	202	X	-	-	-
27	CLA	O	206	X	-	-	-
27	CLA	R	203	X	-	-	-
27	CLA	a	303	X	-	-	-
27	CLA	a	304	X	-	-	-
27	CLA	a	305	X	-	-	-
27	CLA	a	306	X	-	-	-
27	CLA	a	308	X	-	-	-
27	CLA	a	309	X	-	-	-
27	CLA	a	310	X	-	-	-
27	CLA	a	311	X	-	-	-
27	CLA	a	313	X	-	-	-
27	CLA	b	601	X	-	-	-
27	CLA	b	602	X	-	-	-
27	CLA	b	603	X	-	-	-
27	CLA	b	605	X	-	-	-
27	CLA	b	606	X	-	-	-
27	CLA	b	607	X	-	-	-
27	CLA	b	608	X	-	-	-
27	CLA	b	610	X	-	-	-
27	CLA	b	611	X	-	-	-
27	CLA	c	601	X	-	-	-
27	CLA	c	602	X	-	-	-
27	CLA	c	603	X	-	-	-
27	CLA	c	605	X	-	-	-
27	CLA	c	607	X	-	-	-
27	CLA	c	608	X	-	-	-
27	CLA	c	609	X	-	-	-
27	CLA	c	612	X	-	-	-
27	CLA	d	301	X	-	-	-
27	CLA	d	302	X	-	-	-
27	CLA	d	303	X	-	-	-
27	CLA	d	305	X	-	-	-
27	CLA	d	306	X	-	-	-
27	CLA	d	308	X	-	-	-
27	CLA	e	601	X	-	-	-
27	CLA	e	602	X	-	-	-
27	CLA	e	603	X	-	-	-
27	CLA	e	606	X	-	-	-
27	CLA	e	607	X	-	-	-
27	CLA	e	608	X	-	-	-
27	CLA	e	610	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
27	CLA	f	601	X	-	-	-
27	CLA	f	602	X	-	-	-
27	CLA	f	603	X	-	-	-
27	CLA	f	604	X	-	-	-
27	CLA	f	607	X	-	-	-
27	CLA	f	608	X	-	-	-
27	CLA	f	609	X	-	-	-
27	CLA	f	610	X	-	-	-
27	CLA	f	612	X	-	-	-
27	CLA	g	302	X	-	-	-
27	CLA	g	303	X	-	-	-
27	CLA	g	304	X	-	-	-
27	CLA	g	305	X	-	-	-
27	CLA	g	306	X	-	-	-
27	CLA	g	308	X	-	-	-
27	CLA	g	309	X	-	-	-
27	CLA	g	310	X	-	-	-
27	CLA	g	311	X	-	-	-
27	CLA	g	322	X	-	-	-
27	CLA	h	301	X	-	-	-
27	CLA	h	302	X	-	-	-
27	CLA	h	303	X	-	-	-
27	CLA	h	304	X	-	-	-
27	CLA	h	305	X	-	-	-
27	CLA	h	306	X	-	-	-
27	CLA	h	307	X	-	-	-
27	CLA	h	308	X	-	-	-
27	CLA	h	313	X	-	-	-
27	CLA	i	302	X	-	-	-
27	CLA	i	303	X	-	-	-
27	CLA	i	304	X	-	-	-
27	CLA	i	305	X	-	-	-
27	CLA	i	306	X	-	-	-
27	CLA	i	307	X	-	-	-
27	CLA	i	308	X	-	-	-
27	CLA	i	309	X	-	-	-
27	CLA	i	311	X	-	-	-
27	CLA	i	312	X	-	-	-
27	CLA	j	601	X	-	-	-
27	CLA	j	602	X	-	-	-
27	CLA	j	603	X	-	-	-
27	CLA	j	604	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
27	CLA	j	607	X	-	-	-
27	CLA	j	608	X	-	-	-
27	CLA	j	609	X	-	-	-
27	CLA	j	611	X	-	-	-
27	CLA	j	612	X	-	-	-
27	CLA	k	301	X	-	-	-
27	CLA	k	302	X	-	-	-
27	CLA	k	303	X	-	-	-
27	CLA	k	304	X	-	-	-
27	CLA	k	305	X	-	-	-
27	CLA	k	306	X	-	-	-
27	CLA	k	307	X	-	-	-
27	CLA	k	308	X	-	-	-
27	CLA	k	309	X	-	-	-
27	CLA	k	313	X	-	-	-
27	CLA	l	303	X	-	-	-
27	CLA	l	304	X	-	-	-
27	CLA	l	305	X	-	-	-
27	CLA	l	307	X	-	-	-
27	CLA	l	308	X	-	-	-
27	CLA	l	309	X	-	-	-
27	CLA	l	310	X	-	-	-
27	CLA	l	312	X	-	-	-
27	CLA	m	601	X	-	-	-
27	CLA	m	602	X	-	-	-
27	CLA	m	603	X	-	-	-
27	CLA	m	605	X	-	-	-
27	CLA	m	606	X	-	-	-
27	CLA	m	607	X	-	-	-
27	CLA	m	608	X	-	-	-
27	CLA	m	609	X	-	-	-
27	CLA	m	611	X	-	-	-
27	CLA	m	612	X	-	-	-
27	CLA	n	601	X	-	-	-
27	CLA	n	602	X	-	-	-
27	CLA	n	603	X	-	-	-
27	CLA	n	604	X	-	-	-
27	CLA	n	605	X	-	-	-
27	CLA	n	606	X	-	-	-
27	CLA	n	607	X	-	-	-
27	CLA	n	608	X	-	-	-
27	CLA	n	609	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
27	CLA	n	610	X	-	-	-
27	CLA	n	613	X	-	-	-
27	CLA	s	202	X	-	-	-
27	CLA	s	206	X	-	-	-
27	CLA	s	209	X	-	-	-
32	SF4	A	854	-	-	X	-

2 Entry composition [i](#)

There are 39 unique types of molecules in this entry. The entry contains 59342 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	1083	692	186	202	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 chain s.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	s	154	1140	719	195	217	9	0	0

- Molecule 14 is a protein called CAC-c.

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

- Molecule 15 is a protein called CAC-a.

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

- Molecule 16 is a protein called CAC-b.

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

- Molecule 17 is a protein called CAC-h.

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

- Molecule 18 is a protein called CAC-m, CAC-f.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	m	174	1309	846	214	241	8	0	0
18	f	174	1302	842	212	240	8	0	0
18	j	172	1293	834	212	239	8	0	0

- Molecule 19 is a protein called CAC-e.

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

- Molecule 20 is a protein called CAC-l.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
20	l	175	1344	869	230	238	7	0	0

- Molecule 21 is a protein called CAC-k.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	k	160	1196	774	199	213	10	0	0

- Molecule 22 is a protein called CAC-i.

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

- Molecule 23 is a protein called CAC-d.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	d	129	974	624	169	171	10	0	0

- Molecule 24 is a protein called CAC-g.

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

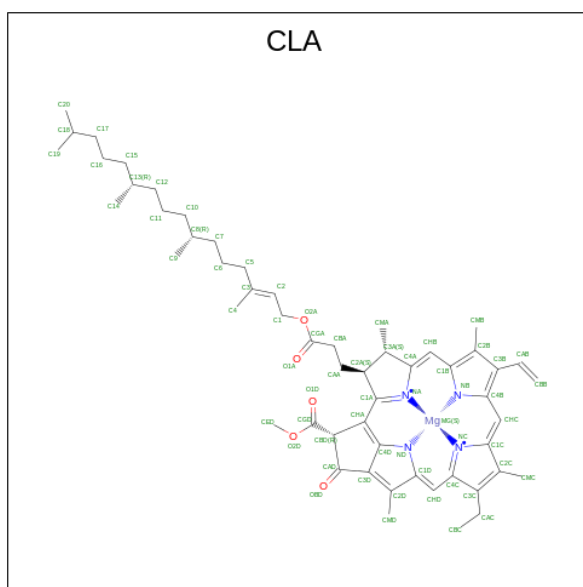
- Molecule 25 is a protein called PsaR.

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

- Molecule 26 is a protein called CAC-n.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
26	n	181	1350	870	228	242	10	0	0

- Molecule 27 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
27	A	1	65	55	1	4	5	0
27	A	1	65	55	1	4	5	0
27	A	1	55	45	1	4	5	0
27	A	1	65	55	1	4	5	0
27	A	1	65	55	1	4	5	0
27	A	1	65	55	1	4	5	0
27	A	1	65	55	1	4	5	0
27	A	1	65	55	1	4	5	0
27	A	1	56	46	1	4	5	0
27	A	1	62	52	1	4	5	0
27	A	1	54	44	1	4	5	0
27	A	1	65	55	1	4	5	0
27	A	1	45	35	1	4	5	0
27	A	1	50	40	1	4	5	0

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

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
27	A	1	65	55	1	4	5	0
27	A	1	65	55	1	4	5	0
27	A	1	52	42	1	4	5	0
27	A	1	65	55	1	4	5	0
27	A	1	65	55	1	4	5	0
27	A	1	65	55	1	4	5	0
27	A	1	65	55	1	4	5	0
27	A	1	65	55	1	4	5	0
27	A	1	65	55	1	4	5	0
27	A	1	65	55	1	4	5	0
27	A	1	41	33	1	4	3	0
27	B	1	65	55	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	54	44	1	4	5	0
27	B	1	55	45	1	4	5	0
27	B	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
27	B	1	60	50	1	4	5	0
27	B	1	59	49	1	4	5	0
27	B	1	55	45	1	4	5	0
27	B	1	59	49	1	4	5	0
27	B	1	57	47	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	46	36	1	4	5	0
27	B	1	55	45	1	4	5	0
27	B	1	53	43	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	64	54	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	51	41	1	4	5	0
27	B	1	50	40	1	4	5	0
27	B	1	49	39	1	4	5	0
27	B	1	50	40	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	45	35	1	4	5	0
27	B	1	58	48	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
27	B	1	65	55	1	4	5	0
27	B	1	47	37	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	57	47	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	65	55	1	4	5	0
27	B	1	51	41	1	4	5	0
27	F	1	65	55	1	4	5	0
27	F	1	65	55	1	4	5	0
27	F	1	52	42	1	4	5	0
27	J	1	42	34	1	4	3	0
27	J	1	51	41	1	4	5	0
27	L	1	49	39	1	4	5	0
27	L	1	65	55	1	4	5	0
27	L	1	50	40	1	4	5	0
27	L	1	51	41	1	4	5	0
27	O	1	65	55	1	4	5	0
27	O	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
27	K	1	51	41	1	4	5	0
27	K	1	42	34	1	4	3	0
27	s	1	65	55	1	4	5	0
27	s	1	65	55	1	4	5	0
27	s	1	65	55	1	4	5	0
27	s	1	51	41	1	4	5	0
27	s	1	51	41	1	4	5	0
27	c	1	51	41	1	4	5	0
27	c	1	50	40	1	4	5	0
27	c	1	51	41	1	4	5	0
27	c	1	65	55	1	4	5	0
27	c	1	51	41	1	4	5	0
27	c	1	52	42	1	4	5	0
27	c	1	46	36	1	4	5	0
27	c	1	65	55	1	4	5	0
27	c	1	45	35	1	4	5	0
27	c	1	45	35	1	4	5	0
27	c	1	65	55	1	4	5	0
27	a	1	52	42	1	4	5	0
27	a	1	50	40	1	4	5	0
27	a	1	51	41	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
27	a	1	65	55	1	4	5	0
27	a	1	45	35	1	4	5	0
27	a	1	65	55	1	4	5	0
27	a	1	65	55	1	4	5	0
27	a	1	48	38	1	4	5	0
27	a	1	65	55	1	4	5	0
27	a	1	65	55	1	4	5	0
27	a	1	48	38	1	4	5	0
27	b	1	51	41	1	4	5	0
27	b	1	55	45	1	4	5	0
27	b	1	65	55	1	4	5	0
27	b	1	65	55	1	4	5	0
27	b	1	65	55	1	4	5	0
27	b	1	61	51	1	4	5	0
27	b	1	65	55	1	4	5	0
27	b	1	65	55	1	4	5	0
27	b	1	51	41	1	4	5	0
27	b	1	65	55	1	4	5	0
27	b	1	65	55	1	4	5	0
27	h	1	65	55	1	4	5	0
27	h	1	50	40	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
27	h	1	50	40	1	4	5	0
27	h	1	51	41	1	4	5	0
27	h	1	51	41	1	4	5	0
27	h	1	65	55	1	4	5	0
27	h	1	57	47	1	4	5	0
27	h	1	51	41	1	4	5	0
27	h	1	65	55	1	4	5	0
27	m	1	42	34	1	4	3	0
27	m	1	56	46	1	4	5	0
27	m	1	65	55	1	4	5	0
27	m	1	65	55	1	4	5	0
27	m	1	42	34	1	4	3	0
27	m	1	65	55	1	4	5	0
27	m	1	65	55	1	4	5	0
27	m	1	51	41	1	4	5	0
27	m	1	55	45	1	4	5	0
27	m	1	51	41	1	4	5	0
27	m	1	43	35	1	4	3	0
27	e	1	45	35	1	4	5	0
27	e	1	50	40	1	4	5	0
27	e	1	51	41	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
27	e	1	65	55	1	4	5	0
27	e	1	65	55	1	4	5	0
27	e	1	65	55	1	4	5	0
27	e	1	65	55	1	4	5	0
27	e	1	46	36	1	4	5	0
27	e	1	65	55	1	4	5	0
27	e	1	65	55	1	4	5	0
27	l	1	47	37	1	4	5	0
27	l	1	65	55	1	4	5	0
27	l	1	51	41	1	4	5	0
27	l	1	65	55	1	4	5	0
27	l	1	65	55	1	4	5	0
27	l	1	65	55	1	4	5	0
27	l	1	51	41	1	4	5	0
27	l	1	61	51	1	4	5	0
27	l	1	65	55	1	4	5	0
27	k	1	50	40	1	4	5	0
27	k	1	51	41	1	4	5	0
27	k	1	65	55	1	4	5	0
27	k	1	45	35	1	4	5	0
27	k	1	51	41	1	4	5	0

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

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

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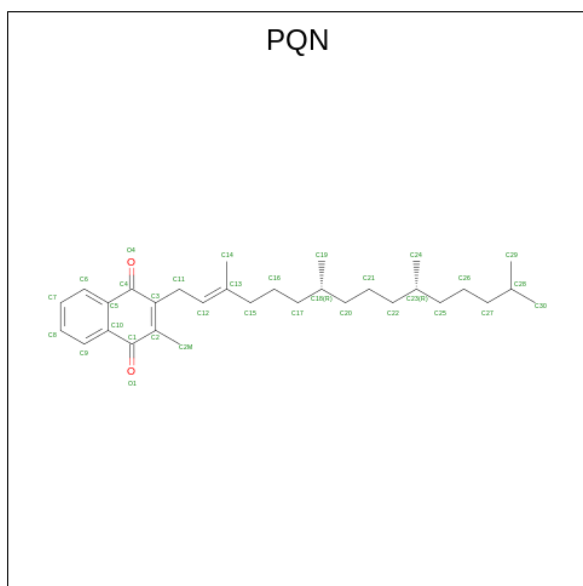
Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
27	d	1	51	41	1	4	5	0
27	d	1	46	36	1	4	5	0
27	d	1	41	33	1	4	3	0
27	d	1	41	33	1	4	3	0
27	d	1	51	41	1	4	5	0
27	g	1	42	34	1	4	3	0
27	g	1	50	40	1	4	5	0
27	g	1	51	41	1	4	5	0
27	g	1	65	55	1	4	5	0
27	g	1	51	41	1	4	5	0
27	g	1	51	41	1	4	5	0
27	g	1	65	55	1	4	5	0
27	g	1	65	55	1	4	5	0
27	g	1	51	41	1	4	5	0
27	g	1	54	44	1	4	5	0
27	g	1	51	41	1	4	5	0
27	g	1	65	55	1	4	5	0
27	R	1	51	41	1	4	5	0
27	n	1	45	35	1	4	5	0
27	n	1	50	40	1	4	5	0
27	n	1	51	41	1	4	5	0

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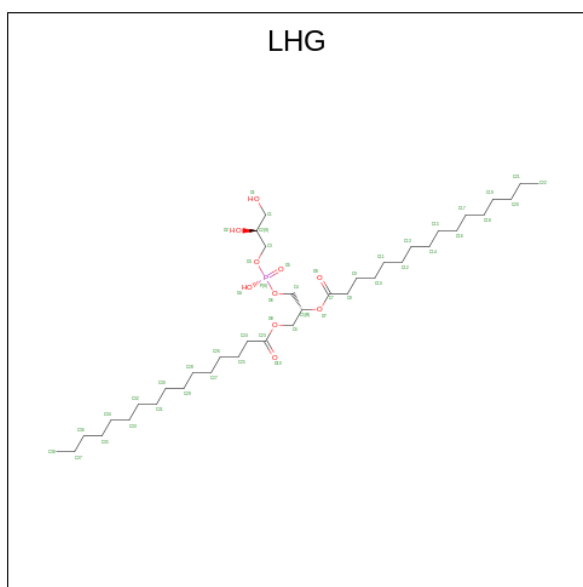
Mol	Chain	Residues	Atoms					AltConf
27	n	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
27	n	1	Total	C	Mg	N	O	0
			51	41	1	4	5	
27	n	1	Total	C	Mg	N	O	0
			51	41	1	4	5	
27	n	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
27	n	1	Total	C	Mg	N	O	0
			51	41	1	4	5	
27	n	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
27	n	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
27	n	1	Total	C	Mg	N	O	0
			51	41	1	4	5	

- Molecule 28 is PHYLLOQUINONE (three-letter code: PQN) (formula: $C_{31}H_{46}O_2$).



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

- Molecule 29 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula: $C_{38}H_{75}O_{10}P$).



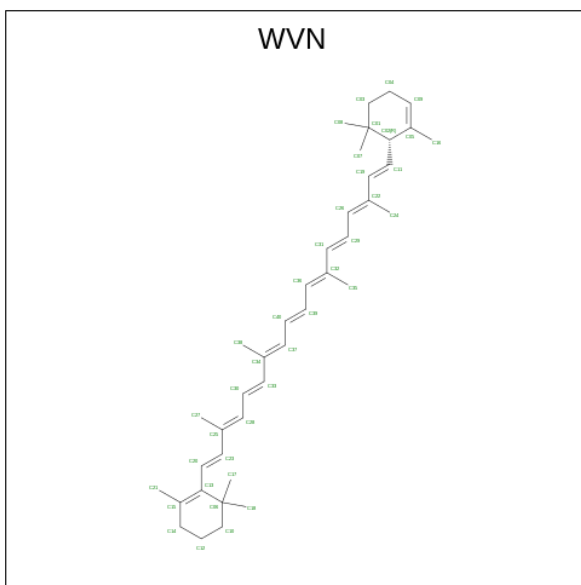
Mol	Chain	Residues	Atoms			AltConf	
			Total	C	O		P
29	A	1	48	37	10	1	0
29	A	1	27	16	10	1	0
29	A	1	38	27	10	1	0
29	J	1	49	38	10	1	0
29	L	1	49	38	10	1	0
29	c	1	37	26	10	1	0
29	c	1	37	26	10	1	0
29	a	1	49	38	10	1	0
29	a	1	49	38	10	1	0
29	b	1	49	38	10	1	0
29	b	1	31	20	10	1	0
29	m	1	37	26	10	1	0
29	e	1	37	26	10	1	0
29	l	1	32	21	10	1	0

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Mol	Chain	Residues	Atoms				AltConf
			Total	C	O	P	
29	k	1	Total 37	C 26	O 10	P 1	0
29	f	1	Total 49	C 38	O 10	P 1	0
29	i	1	Total 37	C 26	O 10	P 1	0
29	j	1	Total 30	C 19	O 10	P 1	0
29	d	1	Total 37	C 26	O 10	P 1	0
29	g	1	Total 37	C 26	O 10	P 1	0
29	g	1	Total 37	C 26	O 10	P 1	0
29	n	1	Total 43	C 32	O 10	P 1	0

- Molecule 30 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) (labeled as "Ligand of Interest" by depositor).



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

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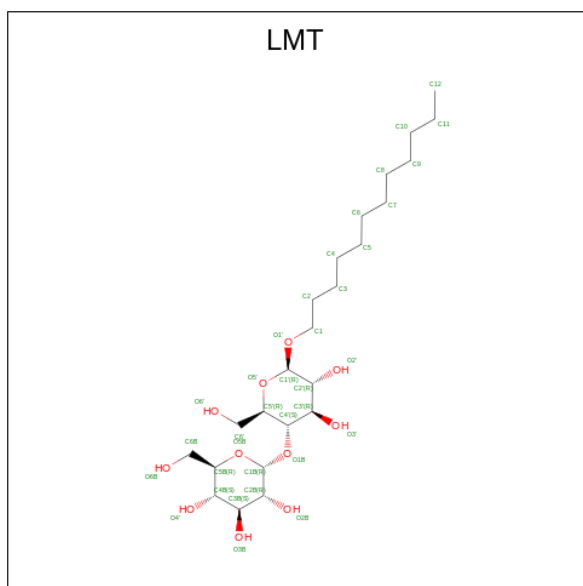
Mol	Chain	Residues	Atoms	AltConf
30	A	1	Total C 40 40	0
30	A	1	Total C 40 40	0
30	B	1	Total C 40 40	0
30	B	1	Total C 40 40	0
30	B	1	Total C 40 40	0
30	B	1	Total C 40 40	0
30	B	1	Total C 40 40	0
30	B	1	Total C 40 40	0
30	F	1	Total C 40 40	0
30	F	1	Total C 40 40	0
30	I	1	Total C 40 40	0
30	J	1	Total C 40 40	0
30	J	1	Total C 40 40	0
30	L	1	Total C 40 40	0
30	L	1	Total C 40 40	0
30	M	1	Total C 40 40	0
30	O	1	Total C 40 40	0
30	K	1	Total C 40 40	0
30	s	1	Total C 40 40	0
30	s	1	Total C 40 40	0
30	h	1	Total C 40 40	0

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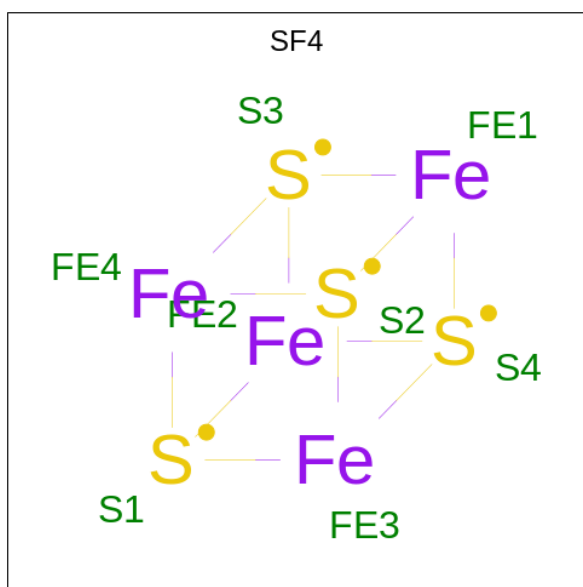
Mol	Chain	Residues	Atoms	AltConf
30	e	1	Total C 40 40	0
30	l	1	Total C 40 40	0
30	l	1	Total C 40 40	0
30	i	1	Total C 40 40	0
30	R	1	Total C 40 40	0
30	R	1	Total C 40 40	0

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



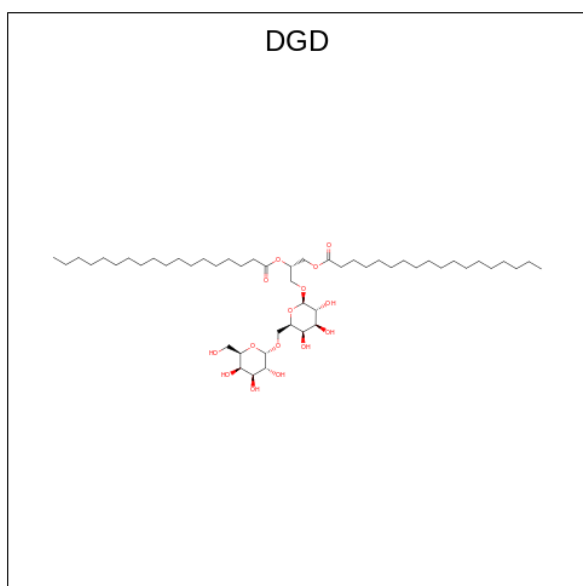
Mol	Chain	Residues	Atoms	AltConf
31	A	1	Total C O 35 24 11	0
31	a	1	Total C O 24 18 6	0
31	a	1	Total C O 35 24 11	0
31	b	1	Total C O 24 18 6	0

- Molecule 32 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe_4S_4).



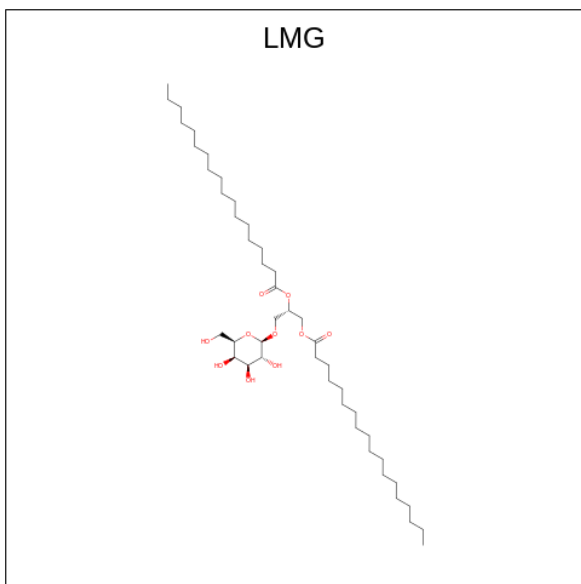
Mol	Chain	Residues	Atoms			AltConf
32	A	1	Total	Fe	S	0
			8	4	4	
32	C	1	Total	Fe	S	0
			8	4	4	
32	C	1	Total	Fe	S	0
			8	4	4	

- Molecule 33 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (three-letter code: DGD) (formula: $C_{51}H_{96}O_{15}$).



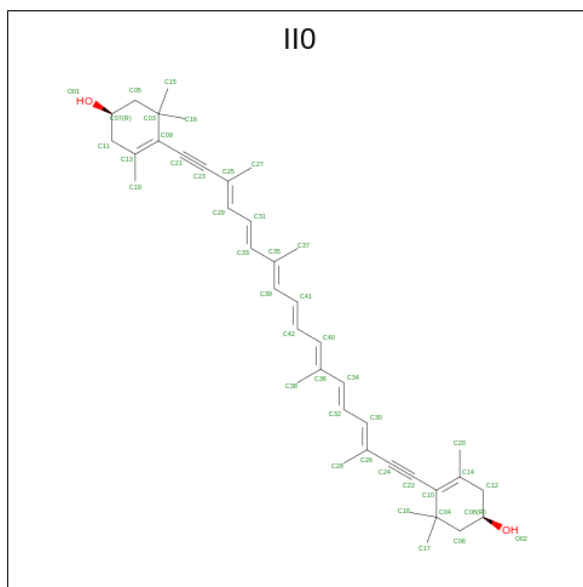
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
33	B	1	60	45	15	0

- Molecule 34 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula: C₄₅H₈₆O₁₀).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
34	F	1	48	38	10	0
34	J	1	55	45	10	0
34	L	1	55	45	10	0
34	O	1	26	16	10	0
34	s	1	55	45	10	0
34	c	1	55	45	10	0
34	b	1	49	39	10	0

- Molecule 35 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]octadec a-3,5,7,9,11,13,15-heptaen-1,17-diynyl]cyclohex-3-en-1-ol (three-letter code: II0) (formula: C₄₀H₅₂O₂).



Mol	Chain	Residues	Atoms			AltConf
35	J	1	Total	C	O	0
			42	40	2	
35	O	1	Total	C	O	0
			42	40	2	
35	c	1	Total	C	O	0
			42	40	2	
35	c	1	Total	C	O	0
			42	40	2	
35	c	1	Total	C	O	0
			42	40	2	
35	c	1	Total	C	O	0
			42	40	2	
35	a	1	Total	C	O	0
			42	40	2	
35	a	1	Total	C	O	0
			42	40	2	
35	a	1	Total	C	O	0
			42	40	2	
35	a	1	Total	C	O	0
			42	40	2	
35	b	1	Total	C	O	0
			42	40	2	
35	b	1	Total	C	O	0
			42	40	2	
35	b	1	Total	C	O	0
			42	40	2	
35	h	1	Total	C	O	0
			28	27	1	

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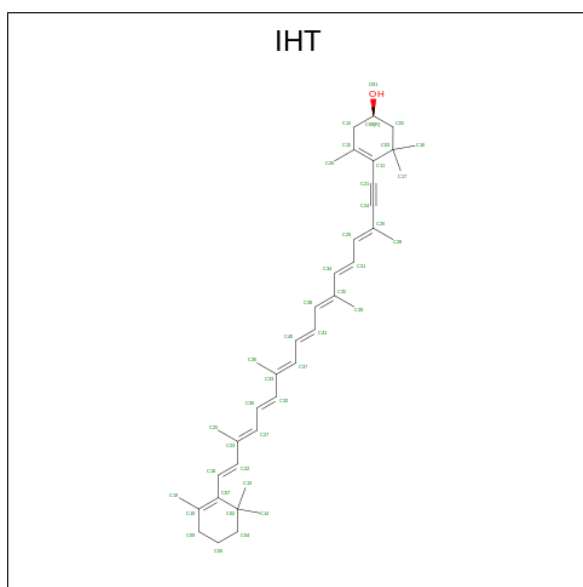
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
35	h	1	42	40	2	0
35	h	1	42	40	2	0
35	m	1	42	40	2	0
35	m	1	42	40	2	0
35	m	1	42	40	2	0
35	e	1	42	40	2	0
35	e	1	42	40	2	0
35	e	1	42	40	2	0
35	e	1	42	40	2	0
35	l	1	42	40	2	0
35	l	1	42	40	2	0
35	l	1	42	40	2	0
35	l	1	42	40	2	0
35	l	1	42	40	2	0
35	k	1	42	40	2	0
35	k	1	42	40	2	0
35	k	1	42	40	2	0
35	k	1	42	40	2	0
35	f	1	42	40	2	0
35	f	1	42	40	2	0
35	f	1	42	40	2	0

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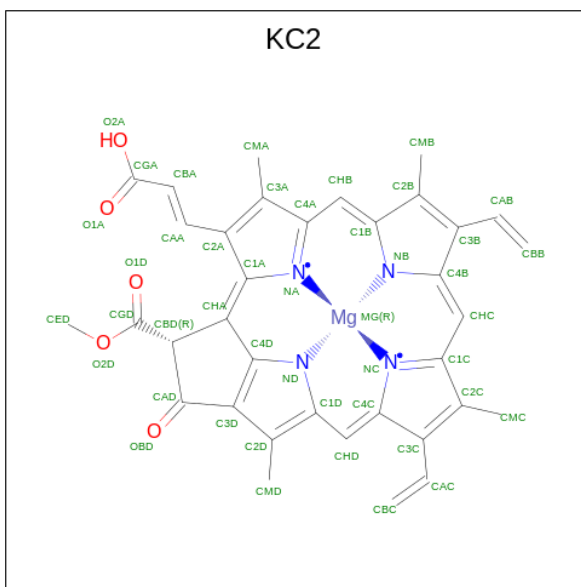
Mol	Chain	Residues	Atoms			AltConf
35	f	1	Total	C	O	0
			42	40	2	
35	i	1	Total	C	O	0
			42	40	2	
35	i	1	Total	C	O	0
			42	40	2	
35	i	1	Total	C	O	0
			42	40	2	
35	j	1	Total	C	O	0
			42	40	2	
35	j	1	Total	C	O	0
			42	40	2	
35	j	1	Total	C	O	0
			42	40	2	
35	d	1	Total	C	O	0
			42	40	2	
35	d	1	Total	C	O	0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

- Molecule 36 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
36	O	1	Total	C	O	0
			41	40	1	
36	c	1	Total	C	O	0
			41	40	1	
36	c	1	Total	C	O	0
			41	40	1	
36	a	1	Total	C	O	0
			41	40	1	
36	b	1	Total	C	O	0
			41	40	1	
36	m	1	Total	C	O	0
			41	40	1	
36	k	1	Total	C	O	0
			41	40	1	
36	f	1	Total	C	O	0
			41	40	1	
36	j	1	Total	C	O	0
			41	40	1	
36	g	1	Total	C	O	0
			41	40	1	
36	R	1	Total	C	O	0
			41	40	1	
36	n	1	Total	C	O	0
			41	40	1	

- Molecule 37 is Chlorophyll c2 (three-letter code: KC2) (formula: C₃₅H₂₈MgN₄O₅).



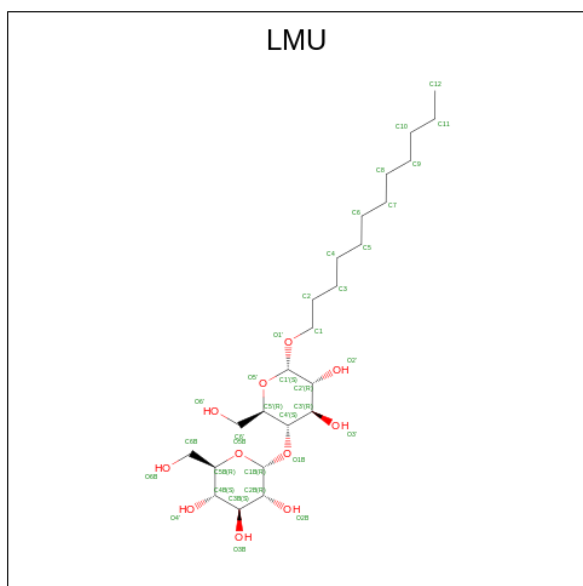
Mol	Chain	Residues	Atoms				AltConf	
37	s	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
37	s	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
37	c	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
37	m	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
37	e	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
37	l	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
37	k	1	Total	C	Mg	N	O	0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

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
37	d	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
37	g	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
37	g	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
37	g	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
37	n	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
37	n	1	Total	C	Mg	N	O	0
			45	35	1	4	5	

- Molecule 38 is DODECYL-ALPHA-D-MALTOSE (three-letter code: LMU) (formula: $C_{24}H_{46}O_{11}$).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
38	i	1	Total	C	O	0
			35	24	11	

- Molecule 39 is water.

Mol	Chain	Residues	Atoms		AltConf
			Total	O	
39	A	49	Total	O	0
			49	49	
39	B	58	Total	O	0
			58	58	

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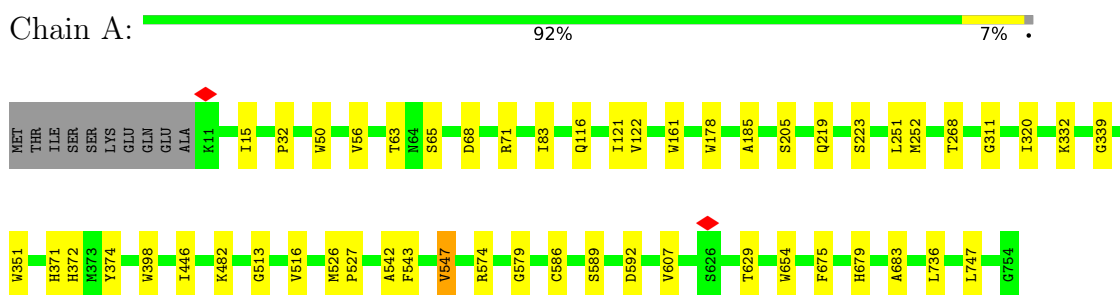
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Mol	Chain	Residues	Atoms		AltConf
39	C	7	Total 7	O 7	0
39	D	1	Total 1	O 1	0
39	F	4	Total 4	O 4	0
39	I	1	Total 1	O 1	0
39	J	1	Total 1	O 1	0
39	L	1	Total 1	O 1	0
39	O	1	Total 1	O 1	0
39	K	1	Total 1	O 1	0
39	a	3	Total 3	O 3	0
39	b	2	Total 2	O 2	0
39	h	1	Total 1	O 1	0
39	m	1	Total 1	O 1	0
39	e	4	Total 4	O 4	0
39	n	2	Total 2	O 2	0

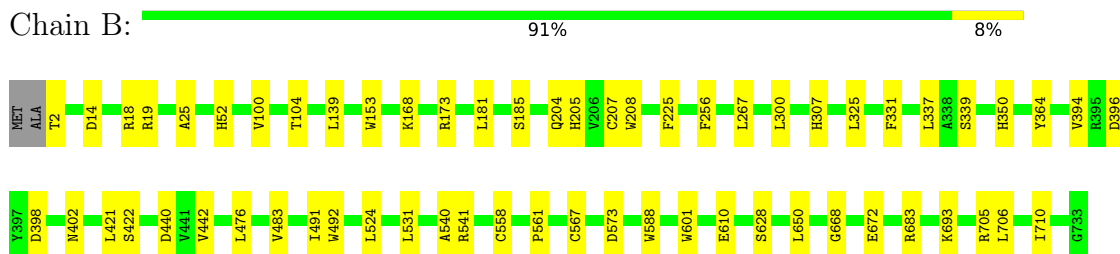
3 Residue-property plots

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

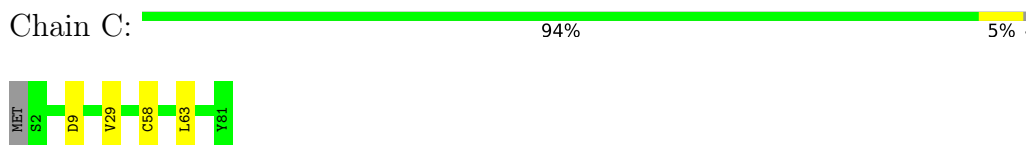
- Molecule 1: Photosystem I P700 chlorophyll a apoprotein A1



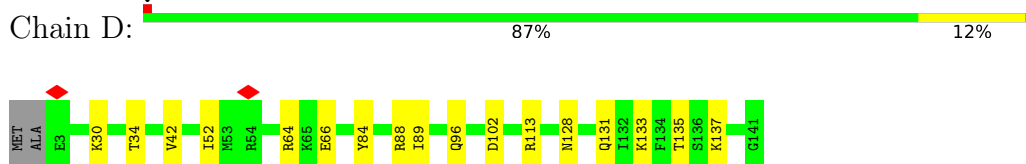
- Molecule 2: Photosystem I P700 chlorophyll a apoprotein A2




- Molecule 3: Photosystem I iron-sulfur center

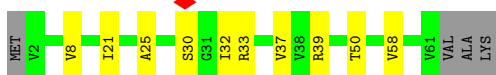


- Molecule 4: Photosystem I reaction center subunit II




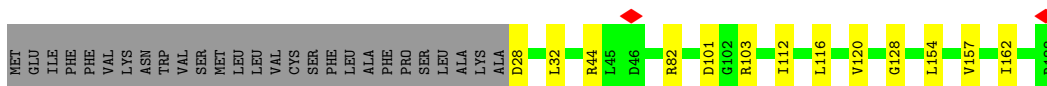
- Molecule 5: Photosystem I reaction center subunit IV

Chain E:  78% 16% 6%



- Molecule 6: Photosystem I reaction center subunit III

Chain F:  79% 7% 14%



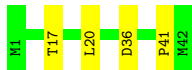
- Molecule 7: Photosystem I reaction center subunit VIII

Chain I:  75% 19% 6%



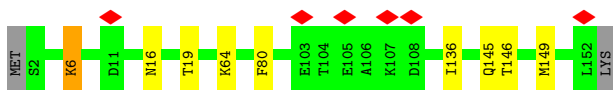
- Molecule 8: Photosystem I reaction center subunit IX

Chain J:  90% 10%



- Molecule 9: Photosystem I reaction center subunit XI

Chain L:  93% 5% ..



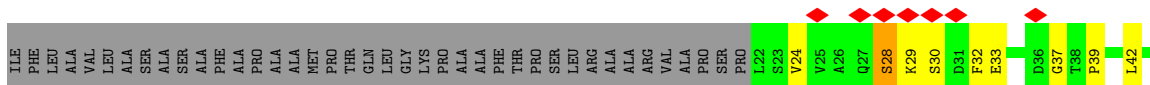
- Molecule 10: Photosystem I reaction center subunit XII

Chain M:  87% 10% .



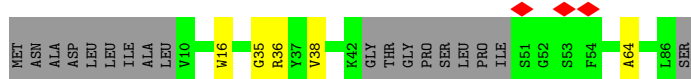
- Molecule 11: PsaO

Chain O:  5% 62% 9% 29%

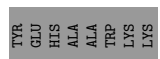
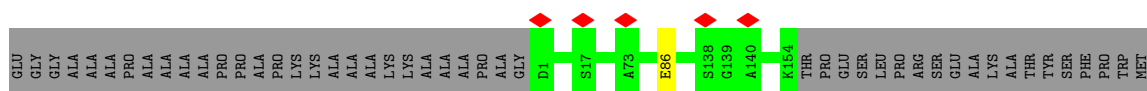




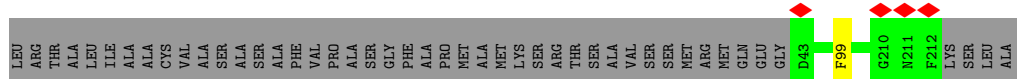
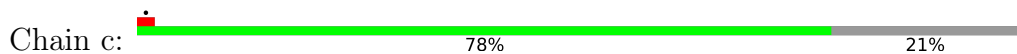
• Molecule 12: Photosystem I reaction center subunit PsaK



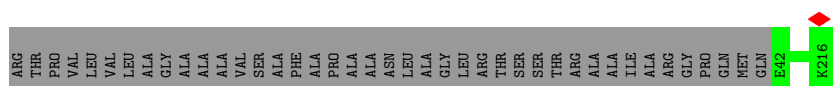
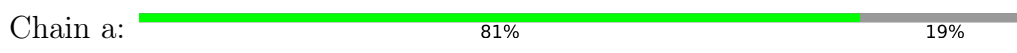
• Molecule 13: chain s



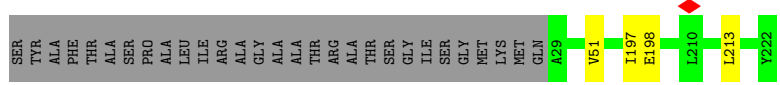
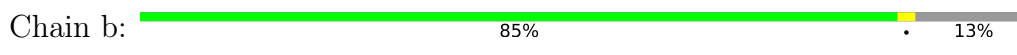
• Molecule 14: CAC-c



• Molecule 15: CAC-a



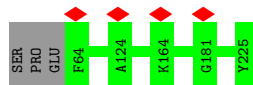
• Molecule 16: CAC-b



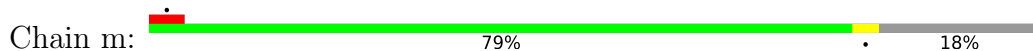
• Molecule 17: CAC-h



SER THR ALA VAL LEU ALA LEU VAL ALA ALA THR GLY ALA THR ALA PHE ALA PRO PRO ALA ALA ALA MET MET GLY PRO PRO GLY LEU LEU SER SER ARG ALA ALA GLN SER GLY ALA ALA GLN PRO PRO ARG ALA ARG ALA ALA GLY LEU SER ALA LEU LEU SER MET ALA ALA ASN PRO MET SER LYS VAL VAL ASP PHE ALA ALA SER



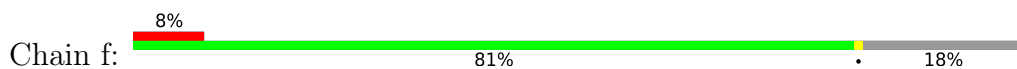
• Molecule 18: CAC-m, CAC-f



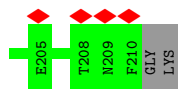
VAL ALA VAL VAL CYS VAL ALA SER ALA ALA PHE ALA PRO SER ALA ALA MET MET GLY VAL LYS THR THR ARG VAL VAL SER SER ILE GLY PRO ARG MET MET ASN E49 V107 V108 G109 T110 Q123 D149 K166 N167 A168 E169 E178 T199 L204



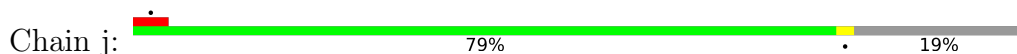
• Molecule 18: CAC-m, CAC-f



VAL ALA VAL VAL CYS VAL ALA SER ALA ALA PHE ALA PRO SER ALA ALA MET MET GLY VAL LYS THR THR ARG VAL VAL SER SER ILE GLY PRO ARG MET MET ASN A37 D52 A70 F99 K106 T110 D149 L162 S165 K166 N167 A168 E169 K172 R173

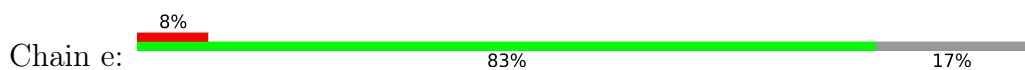


• Molecule 18: CAC-m, CAC-f



VAL ALA VAL VAL CYS VAL ALA SER ALA ALA PHE ALA PRO SER ALA ALA MET MET GLY VAL LYS THR THR ARG VAL VAL SER SER ILE GLY PRO ARG MET MET ALA M38 D52 D87 T100 T110 A111 Q123 K166 M167 A168 E169 M209 PHE GLY LYS

• Molecule 19: CAC-e

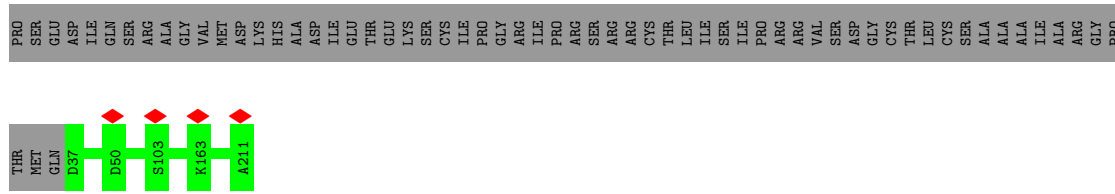


ALA THR LEU LEU VAL CYS VAL ALA SER ALA SER ALA PHE ALA PRO SER ALA LEU LEU PRO GLN ALA VAL ARG ALA ALA LYS THR GLY MET ARG MET MET GLN M35 A43 S50 F95 A102 G103 A104 F131 D144 G145 G146 E151 G155 K156 A157 D158 A192

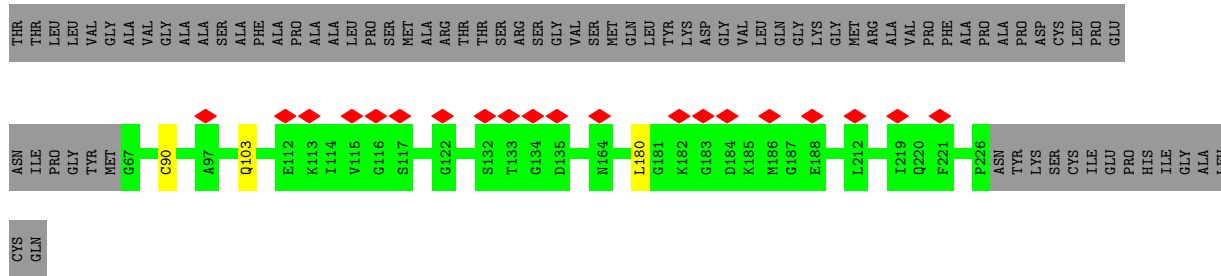


• Molecule 20: CAC-l

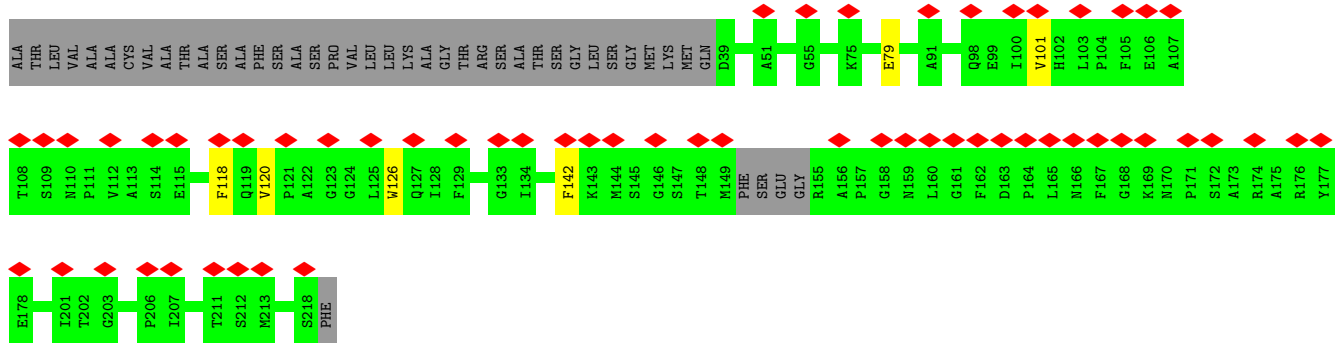
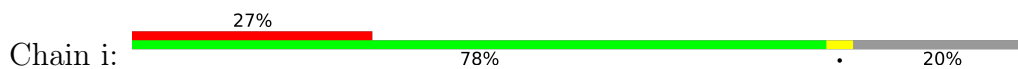




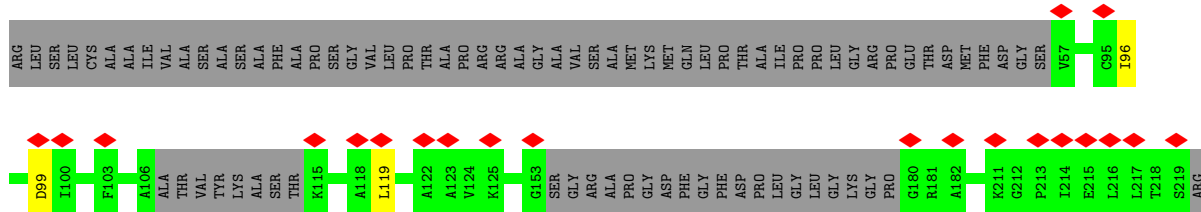
• Molecule 21: CAC-k



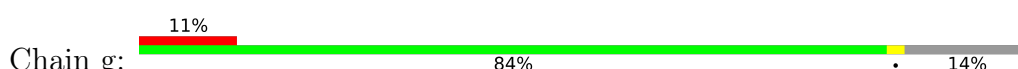
• Molecule 22: CAC-i

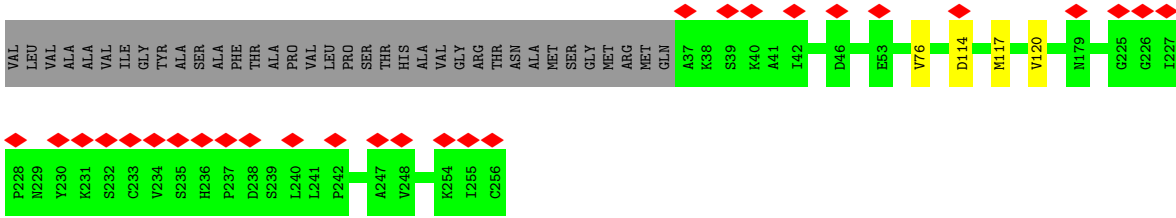


• Molecule 23: CAC-d



• Molecule 24: CAC-g

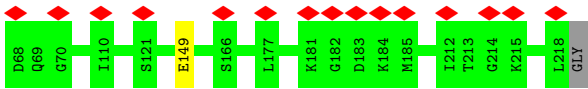
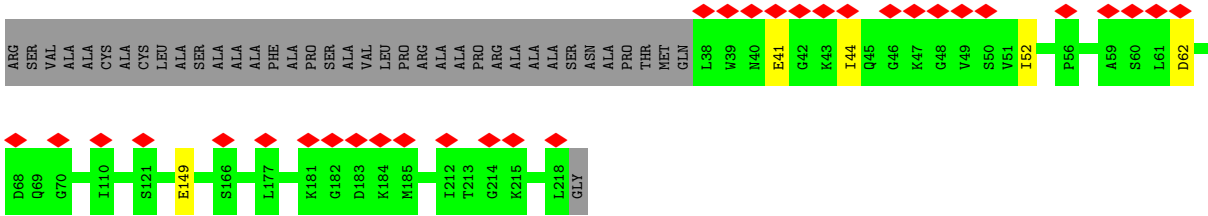
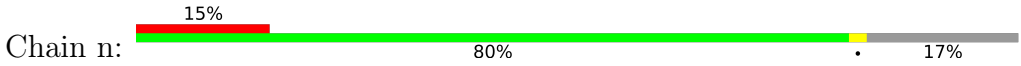




• Molecule 25: PsaR



• Molecule 26: CAC-n



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	42423	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	0.206	Depositor
Minimum map value	-0.100	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.006	Depositor
Recommended contour level	0.023	Depositor
Map size (\AA)	332.8, 332.8, 332.8	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.04, 1.04, 1.04	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

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	0.51	0/6019	0.65	0/8204
2	B	0.53	0/6045	0.67	0/8254
3	C	0.49	0/601	0.73	0/813
4	D	0.51	0/1108	0.71	0/1499
5	E	0.51	0/493	0.70	0/667
6	F	0.53	0/1287	0.74	0/1747
7	I	0.64	0/271	0.80	0/370
8	J	0.51	0/364	0.71	0/495
9	L	0.51	0/1175	0.75	0/1599
10	M	0.50	0/233	0.81	0/315
11	O	0.55	0/799	0.71	0/1094
12	K	0.48	0/495	0.73	0/672
13	s	0.49	0/1170	0.70	0/1580
14	c	0.52	0/1396	0.70	0/1889
15	a	0.55	0/1406	0.70	0/1903
16	b	0.51	0/1469	0.74	0/1983
17	h	0.51	0/1226	0.76	0/1667
18	f	0.49	0/1328	0.73	0/1790
18	j	0.57	0/1318	0.74	0/1775
18	m	0.49	0/1335	0.68	0/1798
19	e	0.51	0/1324	0.72	0/1795
20	l	0.51	0/1379	0.69	0/1863
21	k	0.53	0/1223	0.76	0/1651
22	i	0.50	0/1359	0.77	0/1835
23	d	0.47	0/993	0.74	0/1335
24	g	0.53	0/1673	0.75	0/2264
25	R	0.51	0/686	0.70	0/940
26	n	0.56	0/1383	0.75	0/1867
All	All	0.52	0/39558	0.71	0/53664

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	39	0
2	B	5826	0	5642	52	0
3	C	592	0	567	3	0
4	D	1083	0	1077	11	0
5	E	485	0	489	5	0
6	F	1254	0	1264	12	0
7	I	264	0	276	5	0
8	J	351	0	344	4	0
9	L	1146	0	1160	9	0
10	M	232	0	265	4	0
11	O	773	0	765	10	0
12	K	488	0	516	3	0
13	s	1140	0	1099	0	0
14	c	1357	0	1337	0	0
15	a	1361	0	1305	0	0
16	b	1439	0	1456	0	0
17	h	1200	0	1228	0	0
18	f	1302	0	1320	0	0
18	j	1293	0	1321	0	0
18	m	1309	0	1335	0	0
19	e	1286	0	1262	0	0
20	l	1344	0	1315	0	0
21	k	1196	0	1204	0	0
22	i	1324	0	1297	0	0
23	d	974	0	978	0	0
24	g	1630	0	1644	0	0
25	R	664	0	647	3	0
26	n	1350	0	1348	0	0
27	A	2758	0	2820	85	0
27	B	2440	0	2452	58	0
27	F	182	0	187	5	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
27	J	93	0	72	1	0
27	K	93	0	72	0	0
27	L	215	0	191	3	0
27	O	130	0	144	2	0
27	R	51	0	41	0	0
27	a	619	0	588	0	0
27	b	673	0	696	0	0
27	c	586	0	520	0	0
27	d	447	0	366	0	0
27	e	582	0	578	0	0
27	f	700	0	695	0	0
27	g	661	0	611	0	0
27	h	505	0	470	0	0
27	i	528	0	451	0	0
27	j	586	0	515	0	0
27	k	545	0	493	0	0
27	l	535	0	538	0	0
27	m	600	0	565	0	0
27	n	605	0	552	0	0
27	s	297	0	298	0	0
28	A	33	0	46	2	0
28	B	33	0	46	1	0
29	A	113	0	142	5	0
29	J	49	0	74	6	0
29	L	49	0	74	2	0
29	a	98	0	148	0	0
29	b	80	0	106	0	0
29	c	74	0	88	0	0
29	d	37	0	44	0	0
29	e	37	0	44	0	0
29	f	49	0	74	0	0
29	g	74	0	88	0	0
29	i	37	0	44	0	0
29	j	30	0	30	0	0
29	k	37	0	44	0	0
29	l	32	0	34	0	0
29	m	37	0	44	0	0
29	n	43	0	59	0	0
30	A	160	0	0	0	0
30	B	240	0	0	0	0
30	F	80	0	0	0	0
30	I	40	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
30	J	80	0	0	0	0
30	K	40	0	0	0	0
30	L	80	0	0	0	0
30	M	40	0	0	0	0
30	O	40	0	0	0	0
30	R	80	0	0	0	0
30	e	40	0	0	0	0
30	h	40	0	0	0	0
30	i	40	0	0	0	0
30	l	80	0	0	0	0
30	s	80	0	0	0	0
31	A	35	0	44	1	0
31	a	59	0	79	0	0
31	b	24	0	34	0	0
32	A	8	0	0	5	0
32	C	16	0	0	0	0
33	B	60	0	81	2	0
34	F	48	0	69	1	0
34	J	55	0	86	2	0
34	L	55	0	86	0	0
34	O	26	0	22	0	0
34	b	49	0	71	0	0
34	c	55	0	86	0	0
34	s	55	0	86	0	0
35	J	42	0	0	0	0
35	O	42	0	0	0	0
35	a	168	0	0	0	0
35	b	126	0	0	0	0
35	c	168	0	0	0	0
35	d	126	0	0	0	0
35	e	168	0	0	0	0
35	f	168	0	0	0	0
35	g	168	0	0	0	0
35	h	112	0	0	0	0
35	i	126	0	0	0	0
35	j	126	0	0	0	0
35	k	168	0	0	0	0
35	l	210	0	0	0	0
35	m	126	0	0	0	0
35	n	168	0	0	0	0
36	O	41	0	0	0	0
36	R	41	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
36	a	41	0	0	0	0
36	b	41	0	0	0	0
36	c	82	0	0	0	0
36	f	41	0	0	0	0
36	g	41	0	0	0	0
36	j	41	0	0	0	0
36	k	41	0	0	0	0
36	m	41	0	0	0	0
36	n	41	0	0	0	0
37	c	45	0	0	0	0
37	d	90	0	0	0	0
37	e	45	0	0	0	0
37	f	45	0	0	0	0
37	g	135	0	0	0	0
37	i	90	0	0	0	0
37	j	45	0	0	0	0
37	k	135	0	0	0	0
37	l	45	0	0	0	0
37	m	45	0	0	0	0
37	n	90	0	0	0	0
37	s	90	0	0	0	0
38	i	35	0	46	0	0
39	A	49	0	0	0	0
39	B	58	0	0	1	0
39	C	7	0	0	0	0
39	D	1	0	0	0	0
39	F	4	0	0	0	0
39	I	1	0	0	0	0
39	J	1	0	0	0	0
39	K	1	0	0	0	0
39	L	1	0	0	0	0
39	O	1	0	0	0	0
39	a	3	0	0	0	0
39	b	2	0	0	0	0
39	e	4	0	0	0	0
39	h	1	0	0	0	0
39	m	1	0	0	0	0
39	n	2	0	0	0	0
All	All	59342	0	54073	253	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 6.

The worst 5 of 253 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)
32:A:854:SF4:FE4	2:B:558:CYS:HG	0.80	0.98
32:A:854:SF4:FE1	2:B:567:CYS:HG	0.66	0.94
11:O:24:VAL:HG13	11:O:42:LEU:HB2	1.50	0.92
1:A:586:CYS:HG	32:A:854:SF4:FE2	0.64	0.89
2:B:325:LEU:HD13	2:B:331:PHE:HD2	1.48	0.79

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%)	720 (97%)	20 (3%)	0	100	100
2	B	731/734 (100%)	705 (96%)	26 (4%)	0	100	100
3	C	78/81 (96%)	76 (97%)	2 (3%)	0	100	100
4	D	137/141 (97%)	133 (97%)	4 (3%)	0	100	100
5	E	58/64 (91%)	56 (97%)	2 (3%)	0	100	100
6	F	159/188 (85%)	156 (98%)	3 (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%)	148 (99%)	1 (1%)	0	100	100
10	M	28/30 (93%)	28 (100%)	0	0	100	100
11	O	102/146 (70%)	94 (92%)	8 (8%)	0	100	100
12	K	65/87 (75%)	65 (100%)	0	0	100	100
13	s	152/269 (56%)	145 (95%)	7 (5%)	0	100	100
14	c	168/216 (78%)	162 (96%)	6 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
15	a	173/216 (80%)	166 (96%)	7 (4%)	0	100	100
16	b	192/223 (86%)	188 (98%)	4 (2%)	0	100	100
17	h	160/225 (71%)	156 (98%)	4 (2%)	0	100	100
18	f	172/212 (81%)	166 (96%)	6 (4%)	0	100	100
18	j	170/212 (80%)	163 (96%)	7 (4%)	0	100	100
18	m	172/212 (81%)	164 (95%)	8 (5%)	0	100	100
19	e	167/203 (82%)	164 (98%)	3 (2%)	0	100	100
20	l	173/238 (73%)	169 (98%)	4 (2%)	0	100	100
21	k	158/241 (66%)	151 (96%)	7 (4%)	0	100	100
22	i	171/218 (78%)	161 (94%)	9 (5%)	1 (1%)	25	56
23	d	123/213 (58%)	122 (99%)	1 (1%)	0	100	100
24	g	217/255 (85%)	202 (93%)	15 (7%)	0	100	100
25	R	88/129 (68%)	85 (97%)	3 (3%)	0	100	100
26	n	179/219 (82%)	172 (96%)	7 (4%)	0	100	100
All	All	4954/5955 (83%)	4788 (97%)	165 (3%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
22	i	142	PHE

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	96
2	B	593/593 (100%)	590 (100%)	3 (0%)	88	96
3	C	67/68 (98%)	67 (100%)	0	100	100
4	D	115/117 (98%)	115 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	E	55/58 (95%)	54 (98%)	1 (2%)	59	82
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%)	123 (99%)	1 (1%)	81	93
10	M	25/25 (100%)	24 (96%)	1 (4%)	31	62
11	O	81/110 (74%)	78 (96%)	3 (4%)	34	65
12	K	52/66 (79%)	51 (98%)	1 (2%)	57	81
13	s	116/195 (60%)	115 (99%)	1 (1%)	78	92
14	c	138/171 (81%)	137 (99%)	1 (1%)	84	94
15	a	139/165 (84%)	139 (100%)	0	100	100
16	b	149/168 (89%)	145 (97%)	4 (3%)	44	74
17	h	123/162 (76%)	123 (100%)	0	100	100
18	f	135/161 (84%)	132 (98%)	3 (2%)	52	78
18	j	136/161 (84%)	132 (97%)	4 (3%)	42	73
18	m	137/161 (85%)	131 (96%)	6 (4%)	28	59
19	e	130/155 (84%)	130 (100%)	0	100	100
20	l	137/191 (72%)	137 (100%)	0	100	100
21	k	122/186 (66%)	119 (98%)	3 (2%)	47	76
22	i	138/168 (82%)	133 (96%)	5 (4%)	35	66
23	d	97/157 (62%)	94 (97%)	3 (3%)	40	71
24	g	171/199 (86%)	167 (98%)	4 (2%)	50	78
25	R	69/98 (70%)	68 (99%)	1 (1%)	67	86
26	n	140/163 (86%)	135 (96%)	5 (4%)	35	66
All	All	3996/4665 (86%)	3943 (99%)	53 (1%)	70	88

5 of 53 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
18	f	169	GLU
22	i	126	TRP
26	n	44	ILE
18	f	172	LYS
22	i	101	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (2) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	438	HIS
26	n	129	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](#)

407 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	$\# Z > 2$
29	LHG	a	319	27	48,48,48	0.90	2 (4%)	51,54,54	1.24	5 (9%)
30	WVN	B	844	-	40,41,41	1.85	13 (32%)	50,56,56	2.30	19 (38%)
27	CLA	O	202	-	65,73,73	1.45	7 (10%)	76,113,113	1.41	9 (11%)
27	CLA	g	303	24	50,58,73	1.55	7 (14%)	58,95,113	1.68	9 (15%)
35	II0	l	317	-	39,43,43	6.94	22 (56%)	50,60,60	2.12	17 (34%)
27	CLA	A	823	-	55,63,73	1.64	8 (14%)	64,101,113	1.47	11 (17%)
37	KC2	s	201	13	48,53,53	2.87	21 (43%)	54,89,89	4.51	34 (62%)
27	CLA	B	801	-	65,73,73	1.47	6 (9%)	76,113,113	1.30	9 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
27	CLA	j	609	29	61,69,73	1.52	9 (14%)	71,108,113	1.73	17 (23%)
27	CLA	L	202	9	49,57,73	1.69	6 (12%)	55,93,113	1.63	7 (12%)
35	II0	n	616	-	39,43,43	6.92	21 (53%)	50,60,60	2.09	15 (30%)
37	KC2	d	309	23	48,53,53	3.13	21 (43%)	54,89,89	4.52	33 (61%)
27	CLA	f	613	-	65,73,73	1.54	7 (10%)	76,113,113	1.53	13 (17%)
27	CLA	g	308	-	65,73,73	1.46	7 (10%)	76,113,113	1.74	13 (17%)
27	CLA	B	812	-	59,67,73	1.52	7 (11%)	68,105,113	1.67	8 (11%)
27	CLA	h	305	-	51,59,73	1.62	6 (11%)	59,96,113	1.60	9 (15%)
27	CLA	m	605	18	42,50,73	1.77	9 (21%)	48,85,113	1.69	14 (29%)
35	II0	g	320	-	39,43,43	6.73	23 (58%)	50,60,60	2.07	16 (32%)
27	CLA	A	834	-	51,59,73	1.66	7 (13%)	59,96,113	1.75	11 (18%)
27	CLA	l	305	-	51,59,73	1.64	6 (11%)	59,96,113	1.57	9 (15%)
27	CLA	f	610	29	65,73,73	1.50	8 (12%)	76,113,113	1.39	11 (14%)
27	CLA	A	856	29	41,49,73	1.86	11 (26%)	47,84,113	2.48	14 (29%)
35	II0	n	618	-	39,43,43	6.89	20 (51%)	50,60,60	2.19	18 (36%)
27	CLA	a	309	15	65,73,73	1.41	7 (10%)	76,113,113	1.55	6 (7%)
36	IHT	c	616	-	40,42,42	6.27	25 (62%)	53,58,58	2.56	16 (30%)
27	CLA	g	307	24	51,59,73	1.65	7 (13%)	59,96,113	1.59	8 (13%)
27	CLA	A	822	-	51,59,73	1.70	9 (17%)	59,96,113	1.50	8 (13%)
27	CLA	i	308	22	51,59,73	1.66	6 (11%)	59,96,113	1.86	16 (27%)
27	CLA	B	833	-	47,55,73	1.63	8 (17%)	54,91,113	1.98	9 (16%)
27	CLA	b	608	29	65,73,73	1.46	6 (9%)	76,113,113	1.49	10 (13%)
29	LHG	A	844	-	47,47,48	0.97	2 (4%)	50,53,54	1.15	3 (6%)
27	CLA	A	824	39	65,73,73	1.41	8 (12%)	76,113,113	1.59	12 (15%)
27	CLA	L	206	39	51,59,73	1.65	7 (13%)	59,96,113	1.60	8 (13%)
27	CLA	m	602	18	56,64,73	1.57	9 (16%)	65,102,113	1.58	11 (16%)
30	WVN	B	843	-	40,41,41	1.93	14 (35%)	50,56,56	2.29	19 (38%)
30	WVN	F	204	-	40,41,41	1.88	14 (35%)	50,56,56	2.40	17 (34%)
27	CLA	e	601	19	45,53,73	1.80	8 (17%)	52,89,113	1.85	8 (15%)
36	IHT	c	620	-	40,42,42	6.16	25 (62%)	53,58,58	2.25	22 (41%)
27	CLA	b	611	-	65,73,73	1.50	8 (12%)	76,113,113	1.26	6 (7%)
27	CLA	B	819	-	53,61,73	1.66	9 (16%)	61,98,113	1.41	7 (11%)
35	II0	b	615	-	39,43,43	6.56	21 (53%)	50,60,60	2.53	21 (42%)
33	DGD	B	842	-	61,61,67	0.90	2 (3%)	75,75,81	1.09	3 (4%)
27	CLA	k	306	-	51,59,73	1.72	7 (13%)	59,96,113	1.62	13 (22%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
35	II0	i	318	-	39,43,43	6.62	23 (58%)	50,60,60	2.21	13 (26%)
27	CLA	e	602	19	50,58,73	1.69	9 (18%)	58,95,113	1.79	9 (15%)
37	KC2	m	610	18	48,53,53	3.16	22 (45%)	54,89,89	4.54	31 (57%)
27	CLA	B	835	-	65,73,73	1.47	7 (10%)	76,113,113	1.69	13 (17%)
27	CLA	A	804	-	65,73,73	1.45	7 (10%)	76,113,113	1.76	11 (14%)
30	WVN	i	315	-	40,41,41	1.89	14 (35%)	50,56,56	2.23	16 (32%)
35	II0	d	314	-	39,43,43	6.86	22 (56%)	50,60,60	2.47	15 (30%)
36	IHT	g	319	-	40,42,42	6.15	25 (62%)	53,58,58	2.24	17 (32%)
27	CLA	n	613	-	51,59,73	1.71	6 (11%)	59,96,113	1.39	9 (15%)
29	LHG	c	618	27	36,36,48	1.14	2 (5%)	39,42,54	1.31	3 (7%)
30	WVN	l	301	-	40,41,41	1.84	12 (30%)	50,56,56	2.16	14 (28%)
27	CLA	A	814	-	50,58,73	1.68	7 (14%)	58,95,113	1.61	8 (13%)
27	CLA	m	604	18	65,73,73	1.54	7 (10%)	76,113,113	1.75	14 (18%)
29	LHG	n	619	-	42,42,48	0.96	2 (4%)	45,48,54	1.37	4 (8%)
30	WVN	s	207	-	40,41,41	1.89	14 (35%)	50,56,56	2.33	13 (26%)
27	CLA	f	607	-	65,73,73	1.58	7 (10%)	76,113,113	1.49	11 (14%)
27	CLA	a	305	-	51,59,73	1.64	7 (13%)	59,96,113	1.55	9 (15%)
27	CLA	A	855	39	65,73,73	1.59	9 (13%)	76,113,113	1.71	16 (21%)
27	CLA	k	305	21	51,59,73	1.67	11 (21%)	59,96,113	1.66	11 (18%)
27	CLA	b	609	-	51,59,73	1.64	7 (13%)	59,96,113	1.77	9 (15%)
35	II0	i	314	-	39,43,43	6.70	22 (56%)	50,60,60	2.45	20 (40%)
27	CLA	A	803	-	55,63,73	1.60	7 (12%)	64,101,113	1.72	11 (17%)
27	CLA	k	304	21	45,53,73	1.74	8 (17%)	52,89,113	2.10	18 (34%)
27	CLA	B	834	39	65,73,73	1.52	10 (15%)	76,113,113	1.38	10 (13%)
34	LMG	O	205	-	26,26,55	1.29	2 (7%)	34,34,63	1.33	4 (11%)
27	CLA	n	602	26	50,58,73	1.66	7 (14%)	58,95,113	1.76	11 (18%)
27	CLA	B	811	-	60,68,73	1.53	7 (11%)	70,107,113	1.55	11 (15%)
27	CLA	c	601	14	51,59,73	1.67	8 (15%)	59,96,113	1.56	11 (18%)
27	CLA	j	601	18	51,59,73	1.75	7 (13%)	59,96,113	1.43	8 (13%)
27	CLA	a	312	-	65,73,73	1.52	8 (12%)	76,113,113	1.60	9 (11%)
27	CLA	b	601	16	51,59,73	1.65	7 (13%)	59,96,113	1.60	9 (15%)
27	CLA	B	829	39	65,73,73	1.46	6 (9%)	76,113,113	1.51	13 (17%)
27	CLA	e	604	39	65,73,73	1.47	8 (12%)	76,113,113	1.73	11 (14%)
27	CLA	b	603	-	65,73,73	1.47	7 (10%)	76,113,113	1.51	10 (13%)
27	CLA	c	605	-	51,59,73	1.71	6 (11%)	59,96,113	1.41	10 (16%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
27	CLA	j	605	18	45,53,73	1.75	8 (17%)	52,89,113	1.73	10 (19%)
27	CLA	B	832	-	65,73,73	1.46	7 (10%)	76,113,113	1.62	12 (15%)
27	CLA	a	308	15	65,73,73	1.51	7 (10%)	76,113,113	1.42	12 (15%)
27	CLA	d	305	-	51,59,73	1.68	7 (13%)	59,96,113	1.74	11 (18%)
29	LHG	c	621	27	36,36,48	1.08	2 (5%)	39,42,54	1.25	3 (7%)
27	CLA	L	203	-	65,73,73	1.48	8 (12%)	76,113,113	1.32	9 (11%)
27	CLA	j	606	18	51,59,73	1.69	9 (17%)	59,96,113	1.88	12 (20%)
27	CLA	A	852	-	65,73,73	1.53	6 (9%)	76,113,113	1.30	7 (9%)
27	CLA	g	309	-	65,73,73	1.48	8 (12%)	76,113,113	1.71	11 (14%)
30	WVN	A	848	-	40,41,41	1.91	13 (32%)	50,56,56	2.57	21 (42%)
37	KC2	n	611	26	48,53,53	3.08	22 (45%)	54,89,89	4.66	32 (59%)
35	II0	e	614	-	39,43,43	6.75	20 (51%)	50,60,60	2.31	16 (32%)
35	II0	e	613	-	39,43,43	6.82	22 (56%)	50,60,60	2.09	14 (28%)
27	CLA	c	602	14	50,58,73	1.70	8 (16%)	58,95,113	1.98	12 (20%)
37	KC2	s	204	-	48,53,53	3.05	20 (41%)	54,89,89	4.43	31 (57%)
27	CLA	B	816	2,39	65,73,73	1.56	6 (9%)	76,113,113	1.64	6 (7%)
27	CLA	B	802	-	65,73,73	1.44	6 (9%)	76,113,113	1.96	13 (17%)
32	SF4	C	102	3	0,12,12	-	-	-	-	-
27	CLA	F	201	39	65,73,73	1.45	7 (10%)	76,113,113	1.45	7 (9%)
35	II0	l	302	-	39,43,43	6.85	22 (56%)	50,60,60	2.35	18 (36%)
30	WVN	I	101	-	40,41,41	1.86	14 (35%)	50,56,56	1.96	12 (24%)
27	CLA	l	306	20	65,73,73	1.45	8 (12%)	76,113,113	1.74	15 (19%)
27	CLA	k	313	-	51,59,73	1.78	8 (15%)	59,96,113	1.49	8 (13%)
35	II0	b	613	-	39,43,43	6.68	23 (58%)	50,60,60	2.00	14 (28%)
37	KC2	c	610	-	48,53,53	3.14	21 (43%)	54,89,89	4.45	30 (55%)
35	II0	c	615	-	39,43,43	6.81	20 (51%)	50,60,60	2.55	21 (42%)
27	CLA	d	306	23	46,54,73	1.79	8 (17%)	53,90,113	1.55	7 (13%)
27	CLA	g	322	-	65,73,73	1.50	6 (9%)	76,113,113	1.60	11 (14%)
37	KC2	n	612	-	48,53,53	3.09	20 (41%)	54,89,89	4.58	29 (53%)
27	CLA	c	604	14	65,73,73	1.47	7 (10%)	76,113,113	1.51	6 (7%)
27	CLA	k	301	21	50,58,73	1.70	6 (12%)	58,95,113	1.52	8 (13%)
27	CLA	j	604	18	65,73,73	1.52	8 (12%)	76,113,113	1.81	18 (23%)
29	LHG	m	617	27	36,36,48	1.06	2 (5%)	39,42,54	1.24	4 (10%)
27	CLA	A	836	-	65,73,73	1.47	7 (10%)	76,113,113	1.69	13 (17%)
27	CLA	B	831	-	58,66,73	1.52	7 (12%)	67,104,113	1.68	12 (17%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
27	CLA	B	809	-	55,63,73	1.59	9 (16%)	64,101,113	1.65	12 (18%)
35	II0	a	314	-	39,43,43	6.53	22 (56%)	50,60,60	2.28	23 (46%)
27	CLA	e	606	19	65,73,73	1.46	9 (13%)	76,113,113	1.42	7 (9%)
35	II0	a	315	-	39,43,43	6.79	23 (58%)	50,60,60	1.99	18 (36%)
27	CLA	b	604	-	65,73,73	1.44	7 (10%)	76,113,113	1.47	6 (7%)
37	KC2	g	313	37	48,53,53	3.15	22 (45%)	54,89,89	4.55	32 (59%)
27	CLA	h	301	39	65,73,73	1.50	8 (12%)	76,113,113	1.60	12 (15%)
35	II0	b	612	-	39,43,43	6.49	21 (53%)	50,60,60	2.29	20 (40%)
27	CLA	B	805	-	65,73,73	1.35	7 (10%)	76,113,113	1.63	7 (9%)
30	WVN	L	205	-	40,41,41	1.91	14 (35%)	50,56,56	1.98	14 (28%)
31	LMT	b	616	-	24,24,36	1.14	3 (12%)	29,29,47	1.25	3 (10%)
27	CLA	B	838	-	65,73,73	1.51	6 (9%)	76,113,113	1.52	9 (11%)
27	CLA	A	816	-	65,73,73	1.41	7 (10%)	76,113,113	1.66	17 (22%)
27	CLA	A	811	-	54,62,73	1.67	8 (14%)	62,99,113	1.53	10 (16%)
27	CLA	A	812	-	65,73,73	1.43	7 (10%)	76,113,113	1.70	13 (17%)
27	CLA	B	826	-	50,58,73	1.68	9 (18%)	58,95,113	1.49	8 (13%)
29	LHG	A	850	-	37,37,48	1.05	2 (5%)	40,43,54	1.17	3 (7%)
30	WVN	B	845	-	40,41,41	1.87	14 (35%)	50,56,56	2.31	18 (36%)
27	CLA	h	307	17	57,65,73	1.63	5 (8%)	66,103,113	1.34	7 (10%)
27	CLA	B	839	-	65,73,73	1.57	7 (10%)	76,113,113	1.62	15 (19%)
36	IHT	k	317	-	40,42,42	6.15	26 (65%)	53,58,58	2.19	20 (37%)
37	KC2	k	310	21	48,53,53	3.13	21 (43%)	54,89,89	4.61	33 (61%)
27	CLA	l	312	20	65,73,73	1.52	8 (12%)	76,113,113	1.54	11 (14%)
27	CLA	B	818	-	55,63,73	1.63	9 (16%)	64,101,113	1.52	8 (12%)
27	CLA	f	601	18	47,55,73	1.78	6 (12%)	54,91,113	1.46	8 (14%)
30	WVN	A	847	-	40,41,41	1.84	14 (35%)	50,56,56	2.56	18 (36%)
35	II0	f	618	-	39,43,43	6.76	20 (51%)	50,60,60	2.31	19 (38%)
34	LMG	b	619	-	49,49,55	1.00	3 (6%)	57,57,63	1.16	5 (8%)
27	CLA	c	611	14	45,53,73	1.83	7 (15%)	52,89,113	1.64	8 (15%)
35	II0	k	316	-	39,43,43	6.96	21 (53%)	50,60,60	2.19	15 (30%)
27	CLA	i	302	22	51,59,73	1.71	5 (9%)	59,96,113	1.51	8 (13%)
37	KC2	f	611	18	48,53,53	3.11	21 (43%)	54,89,89	4.53	32 (59%)
27	CLA	j	608	18	51,59,73	1.66	7 (13%)	59,96,113	1.67	9 (15%)
27	CLA	e	610	39	65,73,73	1.52	8 (12%)	76,113,113	1.31	8 (10%)
27	CLA	d	301	23	50,58,73	1.62	7 (14%)	58,95,113	1.64	9 (15%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
27	CLA	c	606	-	52,60,73	1.73	8 (15%)	60,97,113	1.75	12 (20%)
27	CLA	m	606	18	65,73,73	1.50	6 (9%)	76,113,113	1.49	10 (13%)
35	II0	m	615	-	39,43,43	6.73	22 (56%)	50,60,60	1.98	14 (28%)
32	SF4	A	854	2,1	0,12,12	-	-	-	-	-
27	CLA	A	825	39	65,73,73	1.44	7 (10%)	76,113,113	1.42	8 (10%)
38	LMU	i	301	-	36,36,36	1.23	3 (8%)	47,47,47	1.43	8 (17%)
27	CLA	e	611	-	65,73,73	1.51	7 (10%)	76,113,113	1.58	14 (18%)
27	CLA	s	202	13	65,73,73	1.54	10 (15%)	76,113,113	1.53	14 (18%)
27	CLA	R	203	-	51,59,73	1.67	6 (11%)	59,96,113	1.80	12 (20%)
27	CLA	e	608	29	46,54,73	1.73	6 (13%)	53,90,113	1.73	10 (18%)
36	IHT	O	204	-	40,42,42	6.13	26 (65%)	53,58,58	2.37	19 (35%)
35	II0	h	312	-	39,43,43	6.74	22 (56%)	50,60,60	2.42	18 (36%)
27	CLA	c	603	-	51,59,73	1.60	7 (13%)	59,96,113	1.77	10 (16%)
27	CLA	O	206	-	65,73,73	1.49	7 (10%)	76,113,113	1.44	11 (14%)
27	CLA	A	827	-	62,70,73	1.47	7 (11%)	72,109,113	1.52	10 (13%)
27	CLA	i	305	22	65,73,73	1.51	6 (9%)	76,113,113	1.39	7 (9%)
27	CLA	b	610	16	65,73,73	1.51	8 (12%)	76,113,113	1.40	9 (11%)
27	CLA	L	204	39	50,58,73	1.76	8 (16%)	58,95,113	1.61	10 (17%)
27	CLA	l	307	20	65,73,73	1.54	10 (15%)	76,113,113	1.71	16 (21%)
27	CLA	A	837	-	65,73,73	1.39	7 (10%)	76,113,113	1.61	11 (14%)
35	II0	O	203	-	39,43,43	6.76	21 (53%)	50,60,60	2.27	16 (32%)
27	CLA	B	806	-	65,73,73	1.53	8 (12%)	76,113,113	1.36	9 (11%)
29	LHG	i	316	27	36,36,48	1.15	2 (5%)	39,42,54	1.53	6 (15%)
27	CLA	i	312	-	51,59,73	1.67	6 (11%)	59,96,113	1.66	10 (16%)
27	CLA	B	849	-	51,59,73	1.67	8 (15%)	59,96,113	1.62	13 (22%)
27	CLA	m	609	29	55,63,73	1.64	9 (16%)	64,101,113	1.65	13 (20%)
27	CLA	h	313	39	65,73,73	1.49	6 (9%)	76,113,113	1.48	8 (10%)
30	WVN	M	101	-	40,41,41	1.89	15 (37%)	50,56,56	2.26	18 (36%)
34	LMG	L	208	-	55,55,55	0.88	2 (3%)	63,63,63	1.55	10 (15%)
27	CLA	F	202	39	65,73,73	1.52	6 (9%)	76,113,113	1.25	8 (10%)
27	CLA	a	307	15	45,53,73	1.77	10 (22%)	52,89,113	1.92	15 (28%)
27	CLA	d	307	23	41,49,73	1.87	7 (17%)	47,84,113	1.82	10 (21%)
37	KC2	i	310	22	48,53,53	3.13	21 (43%)	54,89,89	4.44	32 (59%)
27	CLA	d	304	-	51,59,73	1.72	8 (15%)	59,96,113	1.47	9 (15%)
27	CLA	i	311	22	51,59,73	1.78	9 (17%)	59,96,113	1.84	12 (20%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
37	KC2	i	317	-	48,53,53	3.23	23 (47%)	54,89,89	3.97	30 (55%)
27	CLA	s	206	-	65,73,73	1.50	7 (10%)	76,113,113	1.54	12 (15%)
27	CLA	d	311	-	51,59,73	1.68	6 (11%)	59,96,113	1.74	10 (16%)
27	CLA	b	605	39,27	65,73,73	1.48	10 (15%)	76,113,113	1.48	8 (10%)
36	IHT	m	616	-	40,42,42	6.19	25 (62%)	53,58,58	2.09	16 (30%)
31	LMT	a	320	-	36,36,36	0.40	0	47,47,47	1.06	3 (6%)
27	CLA	i	303	22	50,58,73	1.68	7 (14%)	58,95,113	1.75	14 (24%)
27	CLA	J	103	8	42,50,73	1.75	7 (16%)	48,85,113	1.79	7 (14%)
27	CLA	b	602	16	55,63,73	1.57	7 (12%)	64,101,113	1.67	12 (18%)
27	CLA	h	302	17	50,58,73	1.60	7 (14%)	58,95,113	1.67	10 (17%)
29	LHG	A	845	27	26,26,48	1.25	2 (7%)	29,32,54	1.55	5 (17%)
27	CLA	n	609	26	65,73,73	1.46	7 (10%)	76,113,113	1.68	13 (17%)
35	II0	j	614	-	39,43,43	6.82	23 (58%)	50,60,60	2.21	17 (34%)
30	WVN	e	615	-	40,41,41	1.86	14 (35%)	50,56,56	2.16	14 (28%)
27	CLA	l	310	29	61,69,73	1.52	6 (9%)	71,108,113	1.40	8 (11%)
27	CLA	n	601	26	45,53,73	1.79	6 (13%)	52,89,113	1.54	7 (13%)
27	CLA	m	603	-	65,73,73	1.42	7 (10%)	76,113,113	1.62	13 (17%)
35	II0	h	311	-	39,43,43	6.55	21 (53%)	50,60,60	2.33	25 (50%)
29	LHG	J	107	27	48,48,48	0.92	2 (4%)	51,54,54	0.91	3 (5%)
27	CLA	K	102	-	42,50,73	1.78	9 (21%)	48,85,113	1.82	12 (25%)
35	II0	g	318	-	39,43,43	6.61	20 (51%)	50,60,60	2.30	18 (36%)
27	CLA	A	840	1	65,73,73	1.56	8 (12%)	76,113,113	1.61	11 (14%)
37	KC2	l	311	20	48,53,53	3.12	22 (45%)	54,89,89	4.62	32 (59%)
27	CLA	A	820	39	65,73,73	1.49	8 (12%)	76,113,113	1.60	9 (11%)
35	II0	m	613	-	39,43,43	6.69	22 (56%)	50,60,60	2.06	16 (32%)
35	II0	l	315	-	39,43,43	6.69	22 (56%)	50,60,60	2.32	18 (36%)
27	CLA	A	818	-	65,73,73	1.49	9 (13%)	76,113,113	1.77	16 (21%)
27	CLA	j	611	-	51,59,73	1.66	6 (11%)	59,96,113	1.59	8 (13%)
27	CLA	n	605	26	51,59,73	1.65	8 (15%)	59,96,113	2.00	16 (27%)
34	LMG	s	210	-	55,55,55	0.87	2 (3%)	63,63,63	0.99	3 (4%)
27	CLA	m	608	18	51,59,73	1.66	7 (13%)	59,96,113	1.56	8 (13%)
31	LMT	A	851	-	36,36,36	1.25	4 (11%)	47,47,47	1.41	7 (14%)
27	CLA	B	817	-	46,54,73	1.72	7 (15%)	53,90,113	1.84	9 (16%)
30	WVN	A	846	-	40,41,41	1.85	14 (35%)	50,56,56	2.31	12 (24%)
35	II0	g	317	-	39,43,43	6.74	24 (61%)	50,60,60	2.45	16 (32%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
34	LMG	c	619	-	55,55,55	0.99	2 (3%)	63,63,63	1.51	11 (17%)
27	CLA	K	101	39	51,59,73	1.69	7 (13%)	59,96,113	1.74	12 (20%)
29	LHG	d	315	27	36,36,48	1.11	2 (5%)	39,42,54	1.08	2 (5%)
35	II0	m	614	-	39,43,43	6.67	22 (56%)	50,60,60	2.16	18 (36%)
27	CLA	A	853	-	65,73,73	1.43	7 (10%)	76,113,113	1.47	11 (14%)
27	CLA	A	805	1	65,73,73	1.42	9 (13%)	76,113,113	1.65	10 (13%)
35	II0	j	615	-	39,43,43	6.87	21 (53%)	50,60,60	2.17	11 (22%)
27	CLA	A	819	-	45,53,73	1.88	9 (20%)	52,89,113	1.89	14 (26%)
30	WVN	B	846	-	40,41,41	1.86	14 (35%)	50,56,56	2.36	18 (36%)
27	CLA	l	309	20	51,59,73	1.69	7 (13%)	59,96,113	1.67	11 (18%)
37	KC2	g	314	37	48,53,53	3.16	21 (43%)	54,89,89	4.50	32 (59%)
27	CLA	i	306	-	51,59,73	1.67	5 (9%)	59,96,113	1.61	9 (15%)
37	KC2	k	311	-	48,53,53	3.12	21 (43%)	54,89,89	4.57	34 (62%)
27	CLA	e	607	19	65,73,73	1.44	10 (15%)	76,113,113	1.43	10 (13%)
34	LMG	F	206	-	48,48,55	0.97	2 (4%)	56,56,63	1.25	5 (8%)
27	CLA	j	612	-	65,73,73	1.48	6 (9%)	76,113,113	1.31	8 (10%)
27	CLA	A	828	-	65,73,73	1.43	7 (10%)	76,113,113	1.54	10 (13%)
27	CLA	h	303	17	50,58,73	1.66	7 (14%)	58,95,113	1.70	11 (18%)
27	CLA	B	807	2	65,73,73	1.46	7 (10%)	76,113,113	1.46	8 (10%)
37	KC2	e	609	19	48,53,53	3.13	21 (43%)	54,89,89	4.54	32 (59%)
27	CLA	B	827	-	49,57,73	1.68	6 (12%)	55,93,113	1.67	7 (12%)
27	CLA	j	607	18	45,53,73	1.83	5 (11%)	52,89,113	1.49	6 (11%)
27	CLA	B	814	-	59,67,73	1.58	8 (13%)	68,105,113	1.47	8 (11%)
27	CLA	A	842	-	65,73,73	1.44	7 (10%)	76,113,113	1.63	11 (14%)
27	CLA	b	607	16	65,73,73	1.55	7 (10%)	76,113,113	1.77	15 (19%)
29	LHG	k	319	27	36,36,48	1.13	2 (5%)	39,42,54	1.16	5 (12%)
27	CLA	A	826	-	65,73,73	1.47	7 (10%)	76,113,113	1.81	15 (19%)
27	CLA	B	823	-	65,73,73	1.44	7 (10%)	76,113,113	1.57	10 (13%)
27	CLA	n	604	26	60,68,73	1.60	9 (15%)	70,107,113	1.54	8 (11%)
35	II0	k	315	-	39,43,43	6.53	23 (58%)	50,60,60	2.39	21 (42%)
35	II0	J	104	-	39,43,43	6.75	22 (56%)	50,60,60	2.13	14 (28%)
27	CLA	s	209	-	51,59,73	1.69	6 (11%)	59,96,113	1.48	8 (13%)
36	IHT	f	617	-	40,42,42	6.19	26 (65%)	53,58,58	2.28	18 (33%)
27	CLA	B	837	-	57,65,73	1.61	8 (14%)	66,103,113	1.58	12 (18%)
29	LHG	L	207	-	48,48,48	0.90	2 (4%)	51,54,54	1.05	2 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
35	II0	f	615	-	39,43,43	6.68	22 (56%)	50,60,60	2.32	18 (36%)
27	CLA	J	105	29	51,59,73	1.68	7 (13%)	59,96,113	1.86	16 (27%)
35	II0	n	614	-	39,43,43	6.76	21 (53%)	50,60,60	2.53	16 (32%)
27	CLA	n	608	26	51,59,73	1.69	9 (17%)	59,96,113	1.50	8 (13%)
27	CLA	A	835	-	65,73,73	1.48	7 (10%)	76,113,113	1.40	12 (15%)
27	CLA	f	605	18	45,53,73	1.82	8 (17%)	52,89,113	1.64	9 (17%)
27	CLA	l	308	20	65,73,73	1.43	6 (9%)	76,113,113	1.49	9 (11%)
27	CLA	j	603	-	51,59,73	1.65	7 (13%)	59,96,113	1.71	10 (16%)
27	CLA	k	309	29	51,59,73	1.77	8 (15%)	59,96,113	2.06	19 (32%)
28	PQN	B	841	-	34,34,34	1.86	5 (14%)	42,45,45	1.29	4 (9%)
27	CLA	f	612	18	51,59,73	1.77	9 (17%)	59,96,113	1.72	13 (22%)
35	II0	l	314	-	39,43,43	6.76	23 (58%)	50,60,60	2.32	17 (34%)
30	WVN	F	205	-	40,41,41	1.95	15 (37%)	50,56,56	2.86	16 (32%)
27	CLA	i	307	22	61,69,73	1.61	7 (11%)	71,108,113	1.46	8 (11%)
27	CLA	c	608	14	65,73,73	1.50	8 (12%)	76,113,113	1.70	12 (15%)
30	WVN	R	202	-	40,41,41	1.87	14 (35%)	50,56,56	2.53	20 (40%)
36	IHT	a	317	-	40,42,42	6.20	25 (62%)	53,58,58	2.12	17 (32%)
27	CLA	k	308	21	65,73,73	1.55	7 (10%)	76,113,113	1.63	14 (18%)
36	IHT	j	616	-	40,42,42	6.19	26 (65%)	53,58,58	2.26	18 (33%)
27	CLA	A	833	-	50,58,73	1.67	9 (18%)	58,95,113	1.51	7 (12%)
27	CLA	A	807	1	65,73,73	1.47	7 (10%)	76,113,113	1.50	7 (9%)
29	LHG	b	618	-	30,30,48	1.22	2 (6%)	33,36,54	1.22	3 (9%)
27	CLA	B	815	-	57,65,73	1.57	6 (10%)	66,103,113	1.54	9 (13%)
27	CLA	B	813	-	55,63,73	1.54	7 (12%)	64,101,113	1.63	9 (14%)
30	WVN	O	201	-	40,41,41	1.78	13 (32%)	50,56,56	1.85	12 (24%)
27	CLA	n	606	26	51,59,73	1.65	8 (15%)	59,96,113	1.69	10 (16%)
27	CLA	k	307	21	65,73,73	1.51	9 (13%)	76,113,113	1.43	9 (11%)
27	CLA	s	208	-	51,59,73	1.70	9 (17%)	59,96,113	1.84	15 (25%)
32	SF4	C	101	3	0,12,12	-	-	-	-	-
27	CLA	A	802	-	65,73,73	1.45	7 (10%)	76,113,113	1.69	12 (15%)
27	CLA	g	311	29	54,62,73	1.64	8 (14%)	62,99,113	1.63	10 (16%)
35	II0	j	613	-	39,43,43	6.75	21 (53%)	50,60,60	2.43	21 (42%)
30	WVN	R	201	-	40,41,41	1.87	13 (32%)	50,56,56	2.04	17 (34%)
34	LMG	J	106	-	55,55,55	0.85	2 (3%)	63,63,63	0.99	3 (4%)
27	CLA	A	808	1	65,73,73	1.42	7 (10%)	76,113,113	1.54	12 (15%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
27	CLA	A	831	-	65,73,73	1.51	9 (13%)	76,113,113	1.36	9 (11%)
27	CLA	a	313	-	48,56,73	1.71	7 (14%)	55,92,113	1.35	8 (14%)
27	CLA	m	611	39	51,59,73	1.68	8 (15%)	59,96,113	1.72	15 (25%)
27	CLA	d	303	23	65,73,73	1.57	7 (10%)	76,113,113	1.35	7 (9%)
27	CLA	A	813	-	45,53,73	1.84	8 (17%)	52,89,113	2.52	12 (23%)
27	CLA	g	305	24	65,73,73	1.50	7 (10%)	76,113,113	1.65	8 (10%)
27	CLA	n	610	39	65,73,73	1.56	8 (12%)	76,113,113	1.37	9 (11%)
27	CLA	h	308	17	51,59,73	1.68	8 (15%)	59,96,113	1.87	12 (20%)
30	WVN	L	201	-	40,41,41	1.93	14 (35%)	50,56,56	2.55	15 (30%)
27	CLA	f	608	18	65,73,73	1.54	6 (9%)	76,113,113	1.30	6 (7%)
28	PQN	A	843	-	34,34,34	1.88	5 (14%)	42,45,45	1.30	7 (16%)
27	CLA	g	310	24	51,59,73	1.68	7 (13%)	59,96,113	1.79	12 (20%)
35	II0	d	313	-	39,43,43	6.93	22 (56%)	50,60,60	1.90	14 (28%)
27	CLA	B	821	39	64,72,73	1.40	7 (10%)	74,111,113	1.48	7 (9%)
35	II0	k	314	-	39,43,43	6.75	21 (53%)	50,60,60	2.09	13 (26%)
35	II0	c	613	-	39,43,43	6.77	23 (58%)	50,60,60	2.28	17 (34%)
27	CLA	B	820	39	65,73,73	1.50	7 (10%)	76,113,113	1.57	11 (14%)
27	CLA	m	601	18	42,50,73	1.88	6 (14%)	48,85,113	1.45	7 (14%)
35	II0	c	614	-	39,43,43	6.72	20 (51%)	50,60,60	2.51	19 (38%)
27	CLA	B	810	-	65,73,73	1.44	7 (10%)	76,113,113	1.67	18 (23%)
36	IHT	n	617	-	40,42,42	6.24	25 (62%)	53,58,58	2.40	20 (37%)
35	II0	h	310	-	26,28,43	6.03	12 (46%)	31,37,60	2.50	13 (41%)
27	CLA	g	304	-	51,59,73	1.67	7 (13%)	59,96,113	1.67	12 (20%)
29	LHG	f	619	-	48,48,48	0.90	2 (4%)	51,54,54	1.03	3 (5%)
31	LMT	a	302	-	24,24,36	1.19	3 (12%)	29,29,47	0.96	0
27	CLA	e	605	19	65,73,73	1.46	9 (13%)	76,113,113	1.56	11 (14%)
27	CLA	A	815	39	45,53,73	1.69	8 (17%)	52,89,113	2.03	7 (13%)
27	CLA	A	829	-	65,73,73	1.50	8 (12%)	76,113,113	1.56	9 (11%)
27	CLA	l	304	20	65,73,73	1.47	9 (13%)	76,113,113	1.59	14 (18%)
27	CLA	B	808	-	54,62,73	1.69	7 (12%)	67,100,113	1.31	8 (11%)
27	CLA	l	303	20	47,55,73	1.75	9 (19%)	54,91,113	1.60	7 (12%)
27	CLA	B	836	-	65,73,73	1.37	6 (9%)	76,113,113	1.69	12 (15%)
35	II0	c	617	-	39,43,43	6.74	21 (53%)	50,60,60	2.46	15 (30%)
37	KC2	g	312	24	48,53,53	3.14	21 (43%)	54,89,89	4.49	31 (57%)
30	WVN	B	848	-	40,41,41	1.85	14 (35%)	50,56,56	2.50	22 (44%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
27	CLA	A	821	-	49,57,73	1.67	7 (14%)	55,93,113	1.79	9 (16%)
30	WVN	J	102	-	40,41,41	1.94	14 (35%)	50,56,56	2.05	15 (30%)
27	CLA	A	809	-	56,64,73	1.59	7 (12%)	65,102,113	1.58	7 (10%)
27	CLA	s	203	13,27	65,73,73	1.43	9 (13%)	76,113,113	1.60	13 (17%)
27	CLA	B	828	-	50,58,73	1.80	9 (18%)	58,95,113	1.65	12 (20%)
27	CLA	A	841	-	65,73,73	1.45	7 (10%)	76,113,113	1.48	9 (11%)
27	CLA	f	609	18	65,73,73	1.46	7 (10%)	76,113,113	1.38	8 (10%)
35	II0	a	316	-	39,43,43	6.82	21 (53%)	50,60,60	2.04	14 (28%)
27	CLA	B	830	39	45,53,73	1.75	10 (22%)	52,89,113	1.75	8 (15%)
27	CLA	d	308	29	41,49,73	1.84	6 (14%)	47,84,113	1.84	11 (23%)
27	CLA	B	822	-	65,73,73	1.49	8 (12%)	76,113,113	1.69	17 (22%)
27	CLA	m	612	-	43,51,73	1.77	8 (18%)	49,86,113	1.85	14 (28%)
27	CLA	f	606	18	51,59,73	1.72	8 (15%)	59,96,113	1.65	11 (18%)
35	II0	n	615	-	39,43,43	6.79	23 (58%)	50,60,60	2.07	15 (30%)
37	KC2	k	312	-	48,53,53	3.15	22 (45%)	54,89,89	4.51	32 (59%)
30	WVN	K	103	-	40,41,41	1.86	14 (35%)	50,56,56	1.86	15 (30%)
27	CLA	A	838	29	52,60,73	1.58	8 (15%)	60,97,113	1.74	9 (15%)
27	CLA	m	607	18	65,73,73	1.50	8 (12%)	76,113,113	1.43	10 (13%)
27	CLA	A	830	-	50,58,73	1.65	9 (18%)	58,95,113	1.72	8 (13%)
27	CLA	a	311	15	65,73,73	1.42	6 (9%)	76,113,113	1.71	10 (13%)
27	CLA	A	839	39	65,73,73	1.50	7 (10%)	76,113,113	1.30	9 (11%)
35	II0	i	313	-	39,43,43	6.82	24 (61%)	50,60,60	2.13	15 (30%)
29	LHG	l	318	27	31,31,48	1.16	2 (6%)	34,37,54	1.25	4 (11%)
27	CLA	i	304	-	51,59,73	1.69	6 (11%)	59,96,113	1.57	7 (11%)
27	CLA	A	810	-	62,70,73	1.54	8 (12%)	72,109,113	1.27	7 (9%)
30	WVN	B	847	-	40,41,41	1.89	14 (35%)	50,56,56	1.87	13 (26%)
27	CLA	B	804	-	65,73,73	1.46	8 (12%)	76,113,113	1.48	9 (11%)
35	II0	g	316	-	39,43,43	6.70	22 (56%)	50,60,60	2.37	17 (34%)
27	CLA	A	832	-	65,73,73	1.44	8 (12%)	76,113,113	1.78	16 (21%)
30	WVN	l	316	-	40,41,41	1.89	14 (35%)	50,56,56	2.40	16 (32%)
35	II0	k	318	-	39,43,43	6.58	20 (51%)	50,60,60	2.45	25 (50%)
36	IHT	R	204	-	40,42,42	6.27	25 (62%)	53,58,58	2.27	19 (35%)
30	WVN	A	849	-	40,41,41	1.86	14 (35%)	50,56,56	1.99	13 (26%)
27	CLA	a	306	39	65,73,73	1.44	7 (10%)	76,113,113	1.61	12 (15%)
27	CLA	k	303	-	65,73,73	1.49	8 (12%)	76,113,113	1.57	9 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
29	LHG	g	301	27	36,36,48	1.14	2 (5%)	39,42,54	1.43	5 (12%)
27	CLA	B	840	29	65,73,73	1.43	6 (9%)	76,113,113	1.51	11 (14%)
27	CLA	a	310	29	48,56,73	1.67	9 (18%)	55,92,113	1.54	9 (16%)
27	CLA	B	825	-	51,59,73	1.68	9 (17%)	59,96,113	1.64	10 (16%)
27	CLA	j	602	18	50,58,73	1.57	9 (18%)	58,95,113	1.80	9 (15%)
27	CLA	c	609	29	45,53,73	1.77	6 (13%)	52,89,113	1.63	10 (19%)
27	CLA	a	303	15	52,60,73	1.68	7 (13%)	60,97,113	1.84	12 (20%)
36	IHT	b	614	-	40,42,42	6.32	26 (65%)	53,58,58	2.31	19 (35%)
27	CLA	g	306	24	51,59,73	1.69	8 (15%)	59,96,113	1.53	10 (16%)
35	II0	f	616	-	39,43,43	6.64	21 (53%)	50,60,60	2.45	18 (36%)
27	CLA	e	603	19	51,59,73	1.67	6 (11%)	59,96,113	1.64	8 (13%)
27	CLA	B	803	-	65,73,73	1.40	7 (10%)	76,113,113	1.66	11 (14%)
27	CLA	f	603	-	51,59,73	1.62	6 (11%)	59,96,113	1.59	10 (16%)
35	II0	d	312	-	39,43,43	6.75	23 (58%)	50,60,60	2.31	20 (40%)
37	KC2	j	610	18	48,53,53	3.11	21 (43%)	54,89,89	4.52	33 (61%)
27	CLA	a	304	15	50,58,73	1.62	7 (14%)	58,95,113	1.66	8 (13%)
27	CLA	n	603	-	51,59,73	1.72	8 (15%)	59,96,113	1.60	10 (16%)
37	KC2	d	310	-	48,53,53	3.05	21 (43%)	54,89,89	4.38	32 (59%)
27	CLA	g	302	24	42,50,73	1.73	7 (16%)	48,85,113	1.99	11 (22%)
27	CLA	A	801	-	65,73,73	1.49	6 (9%)	76,113,113	1.27	10 (13%)
27	CLA	n	607	-	65,73,73	1.47	8 (12%)	76,113,113	1.55	12 (15%)
27	CLA	B	824	-	65,73,73	1.45	7 (10%)	76,113,113	1.51	9 (11%)
27	CLA	f	604	18	65,73,73	1.46	8 (12%)	76,113,113	1.61	9 (11%)
27	CLA	F	203	6	52,60,73	1.65	8 (15%)	60,97,113	1.59	9 (15%)
27	CLA	A	806	-	65,73,73	1.50	8 (12%)	76,113,113	1.49	12 (15%)
27	CLA	g	315	-	51,59,73	1.72	7 (13%)	59,96,113	1.58	10 (16%)
27	CLA	A	817	-	65,73,73	1.52	9 (13%)	76,113,113	1.44	9 (11%)
29	LHG	j	617	27	29,29,48	1.22	2 (6%)	32,35,54	1.50	6 (18%)
27	CLA	h	304	-	51,59,73	1.63	8 (15%)	59,96,113	1.86	12 (20%)
35	II0	f	614	-	39,43,43	6.71	22 (56%)	50,60,60	2.16	17 (34%)
30	WVN	s	205	-	40,41,41	1.91	13 (32%)	50,56,56	2.33	18 (36%)
35	II0	e	612	-	39,43,43	6.76	22 (56%)	50,60,60	2.27	13 (26%)
35	II0	l	313	-	39,43,43	6.71	21 (53%)	50,60,60	2.04	15 (30%)
29	LHG	e	617	27	36,36,48	1.10	2 (5%)	39,42,54	1.41	4 (10%)
29	LHG	g	321	27	36,36,48	1.12	2 (5%)	39,42,54	1.50	7 (17%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
27	CLA	c	612	-	65,73,73	1.46	5 (7%)	76,113,113	1.56	9 (11%)
27	CLA	d	302	-	51,59,73	1.59	6 (11%)	59,96,113	1.54	7 (11%)
35	II0	e	616	-	39,43,43	6.81	22 (56%)	50,60,60	2.03	15 (30%)
27	CLA	f	602	18	65,73,73	1.47	9 (13%)	76,113,113	1.50	13 (17%)
30	WVN	J	101	-	40,41,41	1.84	14 (35%)	50,56,56	2.10	17 (34%)
27	CLA	c	607	14	46,54,73	1.76	6 (13%)	53,90,113	1.47	8 (15%)
27	CLA	h	306	17	65,73,73	1.51	8 (12%)	76,113,113	1.42	9 (11%)
29	LHG	a	301	27	48,48,48	0.91	2 (4%)	51,54,54	1.13	4 (7%)
27	CLA	b	606	16	61,69,73	1.58	9 (14%)	71,108,113	1.47	12 (16%)
35	II0	a	318	-	39,43,43	6.95	22 (56%)	50,60,60	2.62	19 (38%)
27	CLA	k	302	-	51,59,73	1.64	7 (13%)	59,96,113	1.66	11 (18%)
30	WVN	h	309	-	40,41,41	1.86	13 (32%)	50,56,56	2.43	21 (42%)
29	LHG	b	617	27	48,48,48	0.88	4 (8%)	51,54,54	1.19	4 (7%)
27	CLA	i	309	29	46,54,73	1.70	8 (17%)	53,90,113	1.85	13 (24%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '2' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	LHG	a	319	27	-	15/53/53/53	-
30	WVN	B	844	-	-	0/29/63/63	0/2/2/2
27	CLA	O	202	-	1/1/15/20	15/37/115/115	-
27	CLA	g	303	24	1/1/12/20	4/19/97/115	-
35	II0	l	317	-	-	5/21/67/67	0/2/2/2
27	CLA	A	823	-	1/1/13/20	4/25/103/115	-
37	KC2	s	201	13	-	7/15/71/71	-
27	CLA	B	801	-	1/1/15/20	20/37/115/115	-
27	CLA	j	609	29	1/1/14/20	17/33/111/115	-
27	CLA	L	202	9	1/1/11/20	9/18/96/115	-
35	II0	n	616	-	-	4/21/67/67	0/2/2/2
37	KC2	d	309	23	-	6/15/71/71	-
27	CLA	f	613	-	-	21/37/115/115	-
27	CLA	g	308	-	1/1/15/20	17/37/115/115	-
27	CLA	B	812	-	1/1/13/20	12/30/108/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	CLA	h	305	-	1/1/12/20	6/21/99/115	-
27	CLA	m	605	18	1/1/10/20	5/10/88/115	-
35	II0	g	320	-	-	3/21/67/67	0/2/2/2
27	CLA	A	834	-	1/1/12/20	3/21/99/115	-
27	CLA	l	305	-	1/1/12/20	3/21/99/115	-
27	CLA	f	610	29	1/1/15/20	15/37/115/115	-
27	CLA	A	856	29	1/1/10/20	4/8/86/115	-
35	II0	n	618	-	-	6/21/67/67	0/2/2/2
27	CLA	a	309	15	1/1/15/20	11/37/115/115	-
36	IHT	c	616	-	-	9/25/65/65	0/2/2/2
27	CLA	g	307	24	-	6/21/99/115	-
27	CLA	A	822	-	1/1/12/20	6/21/99/115	-
27	CLA	i	308	22	1/1/12/20	3/21/99/115	-
27	CLA	B	833	-	1/1/11/20	0/16/94/115	-
27	CLA	b	608	29	1/1/15/20	13/37/115/115	-
29	LHG	A	844	-	-	6/52/52/53	-
27	CLA	A	824	39	1/1/15/20	12/37/115/115	-
27	CLA	L	206	39	1/1/12/20	5/21/99/115	-
27	CLA	m	602	18	1/1/13/20	8/27/105/115	-
30	WVN	B	843	-	-	10/29/63/63	0/2/2/2
30	WVN	F	204	-	-	9/29/63/63	0/2/2/2
27	CLA	e	601	19	1/1/11/20	5/13/91/115	-
36	IHT	c	620	-	-	11/25/65/65	0/2/2/2
27	CLA	b	611	-	1/1/15/20	21/37/115/115	-
27	CLA	B	819	-	1/1/12/20	6/23/101/115	-
35	II0	b	615	-	-	2/21/67/67	0/2/2/2
33	DGD	B	842	-	-	5/49/89/95	0/2/2/2
27	CLA	k	306	-	1/1/12/20	8/21/99/115	-
35	II0	i	318	-	-	5/21/67/67	0/2/2/2
27	CLA	e	602	19	1/1/12/20	8/19/97/115	-
37	KC2	m	610	18	-	6/15/71/71	-
27	CLA	B	835	-	1/1/15/20	24/37/115/115	-
27	CLA	A	804	-	1/1/15/20	9/37/115/115	-
30	WVN	i	315	-	-	9/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
35	II0	d	314	-	-	6/21/67/67	0/2/2/2
36	IHT	g	319	-	-	6/25/65/65	0/2/2/2
27	CLA	n	613	-	1/1/12/20	10/21/99/115	-
29	LHG	c	618	27	-	14/41/41/53	-
30	WVN	l	301	-	-	3/29/63/63	0/2/2/2
27	CLA	A	814	-	1/1/12/20	9/19/97/115	-
27	CLA	m	604	18	-	16/37/115/115	-
29	LHG	n	619	-	-	16/47/47/53	-
30	WVN	s	207	-	-	6/29/63/63	0/2/2/2
27	CLA	f	607	-	1/1/15/20	18/37/115/115	-
27	CLA	a	305	-	1/1/12/20	4/21/99/115	-
27	CLA	A	855	39	1/1/15/20	16/37/115/115	-
27	CLA	k	305	21	1/1/12/20	10/21/99/115	-
27	CLA	b	609	-	-	5/21/99/115	-
35	II0	i	314	-	-	5/21/67/67	0/2/2/2
27	CLA	A	803	-	1/1/13/20	7/25/103/115	-
27	CLA	k	304	21	1/1/11/20	4/13/91/115	-
27	CLA	B	834	39	1/1/15/20	14/37/115/115	-
34	LMG	O	205	-	-	7/21/41/70	0/1/1/1
27	CLA	n	602	26	1/1/12/20	4/19/97/115	-
27	CLA	B	811	-	1/1/14/20	12/31/109/115	-
27	CLA	c	601	14	1/1/12/20	9/21/99/115	-
27	CLA	j	601	18	1/1/12/20	5/21/99/115	-
27	CLA	a	312	-	-	18/37/115/115	-
27	CLA	b	601	16	1/1/12/20	7/21/99/115	-
27	CLA	B	829	39	1/1/15/20	12/37/115/115	-
27	CLA	e	604	39	-	22/37/115/115	-
27	CLA	b	603	-	1/1/15/20	15/37/115/115	-
27	CLA	c	605	-	1/1/12/20	11/21/99/115	-
27	CLA	j	605	18	-	6/13/91/115	-
27	CLA	B	832	-	1/1/15/20	11/37/115/115	-
27	CLA	a	308	15	1/1/15/20	20/37/115/115	-
27	CLA	d	305	-	1/1/12/20	10/21/99/115	-
29	LHG	c	621	27	-	25/41/41/53	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	CLA	L	203	-	-	12/37/115/115	-
27	CLA	j	606	18	-	10/21/99/115	-
27	CLA	A	852	-	1/1/15/20	7/37/115/115	-
27	CLA	g	309	-	1/1/15/20	9/37/115/115	-
30	WVN	A	848	-	-	8/29/63/63	0/2/2/2
37	KC2	n	611	26	-	4/15/71/71	-
35	II0	e	614	-	-	5/21/67/67	0/2/2/2
35	II0	e	613	-	-	5/21/67/67	0/2/2/2
27	CLA	c	602	14	1/1/12/20	10/19/97/115	-
37	KC2	s	204	-	-	5/15/71/71	-
27	CLA	B	816	2,39	1/1/15/20	9/37/115/115	-
27	CLA	B	802	-	1/1/15/20	7/37/115/115	-
32	SF4	C	102	3	-	-	0/6/5/5
27	CLA	F	201	39	1/1/15/20	19/37/115/115	-
35	II0	l	302	-	-	8/21/67/67	0/2/2/2
30	WVN	I	101	-	-	9/29/63/63	0/2/2/2
27	CLA	l	306	20	-	18/37/115/115	-
27	CLA	k	313	-	1/1/12/20	9/21/99/115	-
35	II0	b	613	-	-	9/21/67/67	0/2/2/2
37	KC2	c	610	-	-	8/15/71/71	-
35	II0	c	615	-	-	2/21/67/67	0/2/2/2
27	CLA	d	306	23	1/1/11/20	3/15/93/115	-
27	CLA	g	322	-	1/1/15/20	17/37/115/115	-
37	KC2	n	612	-	-	7/15/71/71	-
27	CLA	c	604	14	-	7/37/115/115	-
27	CLA	k	301	21	1/1/12/20	5/19/97/115	-
27	CLA	j	604	18	1/1/15/20	17/37/115/115	-
29	LHG	m	617	27	-	18/41/41/53	-
27	CLA	A	836	-	-	9/37/115/115	-
27	CLA	B	831	-	1/1/13/20	8/29/107/115	-
27	CLA	B	809	-	1/1/13/20	5/25/103/115	-
35	II0	a	314	-	-	5/21/67/67	0/2/2/2
27	CLA	e	606	19	1/1/15/20	21/37/115/115	-
35	II0	a	315	-	-	4/21/67/67	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	CLA	b	604	-	-	16/37/115/115	-
37	KC2	g	313	37	-	3/15/71/71	-
27	CLA	h	301	39	1/1/15/20	11/37/115/115	-
35	II0	b	612	-	-	2/21/67/67	0/2/2/2
27	CLA	B	805	-	1/1/15/20	11/37/115/115	-
30	WVN	L	205	-	-	6/29/63/63	0/2/2/2
31	LMT	b	616	-	-	9/15/35/61	0/1/1/2
27	CLA	B	838	-	1/1/15/20	20/37/115/115	-
27	CLA	A	816	-	1/1/15/20	17/37/115/115	-
27	CLA	B	826	-	1/1/12/20	8/19/97/115	-
27	CLA	A	812	-	1/1/15/20	22/37/115/115	-
27	CLA	A	811	-	-	8/24/102/115	-
29	LHG	A	850	-	-	16/42/42/53	-
30	WVN	B	845	-	-	11/29/63/63	0/2/2/2
27	CLA	h	307	17	1/1/13/20	12/28/106/115	-
27	CLA	B	839	-	1/1/15/20	12/37/115/115	-
36	IHT	k	317	-	-	7/25/65/65	0/2/2/2
37	KC2	k	310	21	-	8/15/71/71	-
27	CLA	l	312	20	1/1/15/20	12/37/115/115	-
27	CLA	B	818	-	1/1/13/20	9/25/103/115	-
27	CLA	f	601	18	1/1/11/20	5/16/94/115	-
30	WVN	A	847	-	-	11/29/63/63	0/2/2/2
35	II0	f	618	-	-	7/21/67/67	0/2/2/2
34	LMG	b	619	-	-	16/44/64/70	0/1/1/1
27	CLA	c	611	14	-	7/13/91/115	-
35	II0	k	316	-	-	1/21/67/67	0/2/2/2
27	CLA	i	302	22	1/1/12/20	7/21/99/115	-
37	KC2	f	611	18	-	6/15/71/71	-
27	CLA	j	608	18	1/1/12/20	2/21/99/115	-
27	CLA	e	610	39	1/1/15/20	12/37/115/115	-
27	CLA	d	301	23	1/1/12/20	3/19/97/115	-
27	CLA	c	606	-	-	11/22/100/115	-
27	CLA	m	606	18	1/1/15/20	12/37/115/115	-
35	II0	m	615	-	-	3/21/67/67	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	SF4	A	854	2,1	-	-	0/6/5/5
27	CLA	A	825	39	-	8/37/115/115	-
38	LMU	i	301	-	-	8/21/61/61	0/2/2/2
27	CLA	e	611	-	-	13/37/115/115	-
27	CLA	s	202	13	1/1/15/20	14/37/115/115	-
27	CLA	R	203	-	1/1/12/20	6/21/99/115	-
27	CLA	e	608	29	1/1/11/20	7/15/93/115	-
36	IHT	O	204	-	-	10/25/65/65	0/2/2/2
35	II0	h	312	-	-	5/21/67/67	0/2/2/2
27	CLA	c	603	-	1/1/12/20	5/21/99/115	-
27	CLA	O	206	-	1/1/15/20	15/37/115/115	-
27	CLA	A	827	-	1/1/14/20	10/34/112/115	-
27	CLA	i	305	22	1/1/15/20	11/37/115/115	-
27	CLA	b	610	16	1/1/15/20	19/37/115/115	-
27	CLA	L	204	39	1/1/12/20	6/19/97/115	-
27	CLA	l	307	20	1/1/15/20	14/37/115/115	-
27	CLA	A	837	-	1/1/15/20	11/37/115/115	-
35	II0	O	203	-	-	4/21/67/67	0/2/2/2
27	CLA	B	806	-	1/1/15/20	11/37/115/115	-
29	LHG	i	316	27	-	12/41/41/53	-
27	CLA	i	312	-	1/1/12/20	5/21/99/115	-
27	CLA	B	849	-	-	8/21/99/115	-
27	CLA	m	609	29	1/1/13/20	12/25/103/115	-
27	CLA	h	313	39	1/1/15/20	11/37/115/115	-
30	WVN	M	101	-	-	7/29/63/63	0/2/2/2
34	LMG	L	208	-	-	19/50/70/70	0/1/1/1
27	CLA	F	202	39	1/1/15/20	13/37/115/115	-
27	CLA	a	307	15	-	4/13/91/115	-
27	CLA	d	307	23	-	2/8/86/115	-
37	KC2	i	310	22	-	9/15/71/71	-
27	CLA	d	304	-	-	5/21/99/115	-
27	CLA	i	311	22	1/1/12/20	7/21/99/115	-
37	KC2	i	317	-	-	8/15/71/71	-
27	CLA	s	206	-	1/1/15/20	12/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	CLA	d	311	-	-	8/21/99/115	-
27	CLA	b	605	39,27	1/1/15/20	11/37/115/115	-
36	IHT	m	616	-	-	4/25/65/65	0/2/2/2
31	LMT	a	320	-	-	13/21/61/61	0/2/2/2
27	CLA	i	303	22	1/1/12/20	9/19/97/115	-
27	CLA	J	103	8	1/1/10/20	4/10/88/115	-
27	CLA	b	602	16	1/1/13/20	10/25/103/115	-
27	CLA	h	302	17	1/1/12/20	8/19/97/115	-
29	LHG	A	845	27	-	6/31/31/53	-
27	CLA	n	609	26	1/1/15/20	12/37/115/115	-
35	II0	j	614	-	-	2/21/67/67	0/2/2/2
30	WVN	e	615	-	-	11/29/63/63	0/2/2/2
27	CLA	l	310	29	1/1/14/20	13/33/111/115	-
27	CLA	n	601	26	1/1/11/20	7/13/91/115	-
27	CLA	m	603	-	1/1/15/20	10/37/115/115	-
35	II0	h	311	-	-	8/21/67/67	0/2/2/2
29	LHG	J	107	27	-	28/53/53/53	-
27	CLA	K	102	-	1/1/10/20	5/10/88/115	-
35	II0	g	318	-	-	3/21/67/67	0/2/2/2
27	CLA	A	840	1	-	18/37/115/115	-
37	KC2	l	311	20	-	4/15/71/71	-
27	CLA	A	820	39	1/1/15/20	3/37/115/115	-
35	II0	m	613	-	-	4/21/67/67	0/2/2/2
35	II0	l	315	-	-	5/21/67/67	0/2/2/2
27	CLA	A	818	-	1/1/15/20	18/37/115/115	-
27	CLA	j	611	-	1/1/12/20	7/21/99/115	-
27	CLA	n	605	26	1/1/12/20	8/21/99/115	-
34	LMG	s	210	-	-	11/50/70/70	0/1/1/1
27	CLA	m	608	18	1/1/12/20	5/21/99/115	-
31	LMT	A	851	-	-	13/21/61/61	0/2/2/2
27	CLA	B	817	-	-	5/15/93/115	-
30	WVN	A	846	-	-	7/29/63/63	0/2/2/2
35	II0	g	317	-	-	3/21/67/67	0/2/2/2
34	LMG	c	619	-	-	21/50/70/70	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	CLA	K	101	39	1/1/12/20	7/21/99/115	-
29	LHG	d	315	27	-	15/41/41/53	-
35	II0	m	614	-	-	8/21/67/67	0/2/2/2
27	CLA	A	853	-	1/1/15/20	10/37/115/115	-
27	CLA	A	805	1	1/1/15/20	9/37/115/115	-
35	II0	j	615	-	-	9/21/67/67	0/2/2/2
27	CLA	A	819	-	1/1/11/20	4/13/91/115	-
30	WVN	B	846	-	-	7/29/63/63	0/2/2/2
27	CLA	l	309	20	1/1/12/20	7/21/99/115	-
37	KC2	g	314	37	-	6/15/71/71	-
27	CLA	i	306	-	1/1/12/20	3/21/99/115	-
37	KC2	k	311	-	-	9/15/71/71	-
27	CLA	e	607	19	1/1/15/20	21/37/115/115	-
34	LMG	F	206	-	-	11/43/63/70	0/1/1/1
27	CLA	j	612	-	1/1/15/20	15/37/115/115	-
27	CLA	A	828	-	1/1/15/20	11/37/115/115	-
27	CLA	h	303	17	1/1/12/20	8/19/97/115	-
27	CLA	B	807	2	1/1/15/20	11/37/115/115	-
37	KC2	e	609	19	-	7/15/71/71	-
27	CLA	B	827	-	1/1/11/20	4/18/96/115	-
27	CLA	j	607	18	1/1/11/20	5/13/91/115	-
27	CLA	B	814	-	1/1/13/20	3/30/108/115	-
27	CLA	A	842	-	1/1/15/20	16/37/115/115	-
27	CLA	b	607	16	1/1/15/20	18/37/115/115	-
29	LHG	k	319	27	-	12/41/41/53	-
27	CLA	A	826	-	1/1/15/20	10/37/115/115	-
27	CLA	B	823	-	1/1/15/20	13/37/115/115	-
27	CLA	n	604	26	1/1/14/20	12/31/109/115	-
35	II0	k	315	-	-	8/21/67/67	0/2/2/2
35	II0	J	104	-	-	8/21/67/67	0/2/2/2
27	CLA	s	209	-	1/1/12/20	5/21/99/115	-
36	IHT	f	617	-	-	7/25/65/65	0/2/2/2
27	CLA	B	837	-	1/1/13/20	7/28/106/115	-
29	LHG	L	207	-	-	20/53/53/53	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
35	II0	f	615	-	-	5/21/67/67	0/2/2/2
27	CLA	J	105	29	1/1/12/20	6/21/99/115	-
35	II0	n	614	-	-	1/21/67/67	0/2/2/2
27	CLA	n	608	26	1/1/12/20	5/21/99/115	-
27	CLA	A	835	-	1/1/15/20	14/37/115/115	-
27	CLA	f	605	18	-	4/13/91/115	-
27	CLA	l	308	20	1/1/15/20	11/37/115/115	-
27	CLA	j	603	-	1/1/12/20	4/21/99/115	-
27	CLA	k	309	29	1/1/12/20	12/21/99/115	-
28	PQN	B	841	-	-	10/23/43/43	0/2/2/2
27	CLA	f	612	18	1/1/12/20	8/21/99/115	-
35	II0	l	314	-	-	7/21/67/67	0/2/2/2
30	WVN	F	205	-	-	12/29/63/63	0/2/2/2
27	CLA	i	307	22	1/1/14/20	13/33/111/115	-
27	CLA	c	608	14	1/1/15/20	16/37/115/115	-
30	WVN	R	202	-	-	10/29/63/63	0/2/2/2
36	IHT	a	317	-	-	5/25/65/65	0/2/2/2
27	CLA	k	308	21	1/1/15/20	13/37/115/115	-
36	IHT	j	616	-	-	7/25/65/65	0/2/2/2
27	CLA	A	833	-	1/1/12/20	4/19/97/115	-
27	CLA	A	807	1	1/1/15/20	7/37/115/115	-
29	LHG	b	618	-	-	16/35/35/53	-
27	CLA	B	815	-	-	7/28/106/115	-
27	CLA	B	813	-	1/1/13/20	5/25/103/115	-
30	WVN	O	201	-	-	9/29/63/63	0/2/2/2
27	CLA	n	606	26	1/1/12/20	5/21/99/115	-
27	CLA	k	307	21	1/1/15/20	14/37/115/115	-
27	CLA	s	208	-	-	5/21/99/115	-
32	SF4	C	101	3	-	-	0/6/5/5
27	CLA	A	802	-	1/1/15/20	13/37/115/115	-
27	CLA	g	311	29	1/1/12/20	7/24/102/115	-
35	II0	j	613	-	-	5/21/67/67	0/2/2/2
30	WVN	R	201	-	-	6/29/63/63	0/2/2/2
34	LMG	J	106	-	-	13/50/70/70	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	CLA	A	808	1	1/1/15/20	9/37/115/115	-
27	CLA	A	831	-	1/1/15/20	7/37/115/115	-
27	CLA	a	313	-	1/1/11/20	10/17/95/115	-
27	CLA	m	611	39	1/1/12/20	13/21/99/115	-
27	CLA	d	303	23	1/1/15/20	22/37/115/115	-
27	CLA	A	813	-	1/1/11/20	7/13/91/115	-
27	CLA	g	305	24	1/1/15/20	16/37/115/115	-
27	CLA	n	610	39	1/1/15/20	18/37/115/115	-
27	CLA	h	308	17	1/1/12/20	8/21/99/115	-
30	WVN	L	201	-	-	10/29/63/63	0/2/2/2
27	CLA	f	608	18	1/1/15/20	6/37/115/115	-
28	PQN	A	843	-	-	12/23/43/43	0/2/2/2
27	CLA	g	310	24	1/1/12/20	7/21/99/115	-
35	II0	d	313	-	-	6/21/67/67	0/2/2/2
27	CLA	B	821	39	1/1/14/20	9/36/114/115	-
35	II0	k	314	-	-	3/21/67/67	0/2/2/2
35	II0	c	613	-	-	4/21/67/67	0/2/2/2
27	CLA	B	820	39	1/1/15/20	11/37/115/115	-
27	CLA	m	601	18	1/1/10/20	1/10/88/115	-
35	II0	c	614	-	-	2/21/67/67	0/2/2/2
27	CLA	B	810	-	1/1/15/20	15/37/115/115	-
36	IHT	n	617	-	-	8/25/65/65	0/2/2/2
35	II0	h	310	-	-	4/17/40/67	0/1/1/2
27	CLA	g	304	-	1/1/12/20	3/21/99/115	-
29	LHG	f	619	-	-	36/53/53/53	-
31	LMT	a	302	-	-	6/15/35/61	0/1/1/2
27	CLA	e	605	19	-	14/37/115/115	-
27	CLA	A	815	39	1/1/11/20	5/13/91/115	-
27	CLA	A	829	-	1/1/15/20	15/37/115/115	-
27	CLA	l	304	20	1/1/15/20	19/37/115/115	-
27	CLA	B	808	-	1/1/13/20	3/25/101/115	-
27	CLA	l	303	20	1/1/11/20	3/16/94/115	-
27	CLA	B	836	-	1/1/15/20	11/37/115/115	-
35	II0	c	617	-	-	4/21/67/67	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
37	KC2	g	312	24	-	9/15/71/71	-
30	WVN	B	848	-	-	7/29/63/63	0/2/2/2
27	CLA	A	821	-	-	5/18/96/115	-
30	WVN	J	102	-	-	8/29/63/63	0/2/2/2
27	CLA	A	809	-	1/1/13/20	11/27/105/115	-
27	CLA	s	203	13,27	-	17/37/115/115	-
27	CLA	B	828	-	1/1/12/20	4/19/97/115	-
27	CLA	A	841	-	1/1/15/20	15/37/115/115	-
27	CLA	f	609	18	1/1/15/20	9/37/115/115	-
35	II0	a	316	-	-	2/21/67/67	0/2/2/2
27	CLA	B	830	39	1/1/11/20	4/13/91/115	-
27	CLA	d	308	29	1/1/10/20	2/8/86/115	-
27	CLA	B	822	-	1/1/15/20	4/37/115/115	-
27	CLA	m	612	-	1/1/10/20	6/11/89/115	-
27	CLA	f	606	18	-	5/21/99/115	-
35	II0	n	615	-	-	3/21/67/67	0/2/2/2
37	KC2	k	312	-	-	9/15/71/71	-
30	WVN	K	103	-	-	5/29/63/63	0/2/2/2
27	CLA	A	838	29	1/1/12/20	7/22/100/115	-
27	CLA	m	607	18	1/1/15/20	11/37/115/115	-
27	CLA	A	830	-	-	5/19/97/115	-
27	CLA	a	311	15	1/1/15/20	13/37/115/115	-
27	CLA	A	839	39	1/1/15/20	16/37/115/115	-
35	II0	i	313	-	-	4/21/67/67	0/2/2/2
29	LHG	l	318	27	-	15/36/36/53	-
27	CLA	i	304	-	1/1/12/20	1/21/99/115	-
27	CLA	A	810	-	1/1/14/20	9/34/112/115	-
30	WVN	B	847	-	-	13/29/63/63	0/2/2/2
27	CLA	B	804	-	1/1/15/20	14/37/115/115	-
35	II0	g	316	-	-	4/21/67/67	0/2/2/2
27	CLA	A	832	-	1/1/15/20	10/37/115/115	-
30	WVN	l	316	-	-	9/29/63/63	0/2/2/2
35	II0	k	318	-	-	6/21/67/67	0/2/2/2
36	IHT	R	204	-	-	2/25/65/65	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
30	WVN	A	849	-	-	14/29/63/63	0/2/2/2
27	CLA	a	306	39	1/1/15/20	15/37/115/115	-
27	CLA	k	303	-	1/1/15/20	13/37/115/115	-
29	LHG	g	301	27	-	21/41/41/53	-
27	CLA	B	840	29	1/1/15/20	4/37/115/115	-
27	CLA	a	310	29	1/1/11/20	6/17/95/115	-
27	CLA	B	825	-	1/1/12/20	5/21/99/115	-
27	CLA	j	602	18	1/1/12/20	4/19/97/115	-
27	CLA	c	609	29	1/1/11/20	3/13/91/115	-
27	CLA	a	303	15	1/1/12/20	7/22/100/115	-
36	IHT	b	614	-	-	5/25/65/65	0/2/2/2
27	CLA	g	306	24	1/1/12/20	8/21/99/115	-
35	II0	f	616	-	-	3/21/67/67	0/2/2/2
27	CLA	e	603	19	1/1/12/20	5/21/99/115	-
27	CLA	B	803	-	1/1/15/20	14/37/115/115	-
27	CLA	f	603	-	1/1/12/20	5/21/99/115	-
35	II0	d	312	-	-	5/21/67/67	0/2/2/2
37	KC2	j	610	18	-	5/15/71/71	-
27	CLA	a	304	15	1/1/12/20	3/19/97/115	-
27	CLA	n	603	-	1/1/12/20	8/21/99/115	-
37	KC2	d	310	-	-	5/15/71/71	-
27	CLA	g	302	24	1/1/10/20	2/10/88/115	-
27	CLA	A	801	-	1/1/15/20	8/37/115/115	-
27	CLA	n	607	-	1/1/15/20	13/37/115/115	-
27	CLA	B	824	-	1/1/15/20	9/37/115/115	-
27	CLA	f	604	18	1/1/15/20	11/37/115/115	-
27	CLA	F	203	6	1/1/12/20	11/22/100/115	-
27	CLA	A	806	-	-	10/37/115/115	-
27	CLA	g	315	-	-	8/21/99/115	-
27	CLA	A	817	-	1/1/15/20	13/37/115/115	-
29	LHG	j	617	27	-	5/34/34/53	-
27	CLA	h	304	-	1/1/12/20	4/21/99/115	-
35	II0	f	614	-	-	5/21/67/67	0/2/2/2
30	WVN	s	205	-	-	5/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
35	II0	e	612	-	-	5/21/67/67	0/2/2/2
35	II0	l	313	-	-	3/21/67/67	0/2/2/2
29	LHG	e	617	27	-	25/41/41/53	-
29	LHG	g	321	27	-	13/41/41/53	-
27	CLA	c	612	-	1/1/15/20	15/37/115/115	-
27	CLA	d	302	-	1/1/12/20	6/21/99/115	-
35	II0	e	616	-	-	4/21/67/67	0/2/2/2
27	CLA	f	602	18	1/1/15/20	16/37/115/115	-
30	WVN	J	101	-	-	8/29/63/63	0/2/2/2
27	CLA	c	607	14	1/1/11/20	7/15/93/115	-
27	CLA	h	306	17	1/1/15/20	20/37/115/115	-
29	LHG	a	301	27	-	12/53/53/53	-
27	CLA	b	606	16	1/1/14/20	13/33/111/115	-
35	II0	a	318	-	-	8/21/67/67	0/2/2/2
27	CLA	k	302	-	1/1/12/20	2/21/99/115	-
30	WVN	h	309	-	-	8/29/63/63	0/2/2/2
29	LHG	b	617	27	-	21/53/53/53	-
27	CLA	i	309	29	1/1/11/20	5/15/93/115	-

The worst 5 of 4239 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	R	204	IHT	C15-C11	25.50	1.63	1.34
36	c	616	IHT	C15-C11	25.29	1.63	1.34
36	n	617	IHT	C15-C11	25.13	1.62	1.34
36	j	616	IHT	C15-C11	24.97	1.62	1.34
36	m	616	IHT	C15-C11	24.94	1.62	1.34

The worst 5 of 5023 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	A	813	CLA	C4A-NA-C1A	13.48	112.77	106.71
37	n	612	KC2	C1A-NA-C4A	-12.68	101.01	106.71
37	l	311	KC2	C1A-NA-C4A	-12.26	101.20	106.71
37	n	611	KC2	C1A-NA-C4A	-12.00	101.31	106.71
37	m	610	KC2	C1A-NA-C4A	-11.88	101.36	106.71

5 of 218 chirality outliers are listed below:

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

5 of 3667 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
27	A	801	CLA	CBD-CGD-O2D-CED
27	A	802	CLA	C1A-C2A-CAA-CBA
27	A	802	CLA	CBA-CGA-O2A-C1
27	A	802	CLA	O1A-CGA-O2A-C1
27	A	803	CLA	C1A-C2A-CAA-CBA

There are no ring outliers.

87 monomers are involved in 167 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
27	O	202	CLA	2	0
27	A	823	CLA	1	0
27	B	801	CLA	4	0
27	L	202	CLA	1	0
27	B	812	CLA	1	0
27	A	856	CLA	1	0
27	A	822	CLA	1	0
27	B	833	CLA	1	0
29	A	844	LHG	1	0
27	A	824	CLA	3	0
33	B	842	DGD	2	0
27	B	835	CLA	5	0
27	A	804	CLA	2	0
27	A	814	CLA	1	0
27	A	855	CLA	5	0
27	A	803	CLA	1	0
27	B	834	CLA	4	0
27	B	829	CLA	3	0
27	L	203	CLA	2	0
27	A	852	CLA	5	0
27	B	816	CLA	3	0
27	B	802	CLA	3	0
27	F	201	CLA	1	0
27	A	836	CLA	2	0

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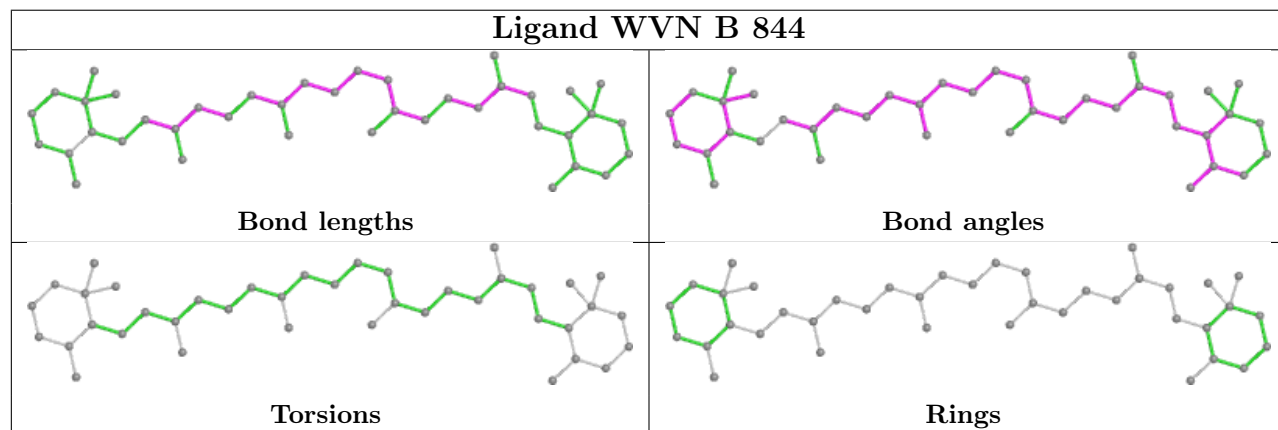
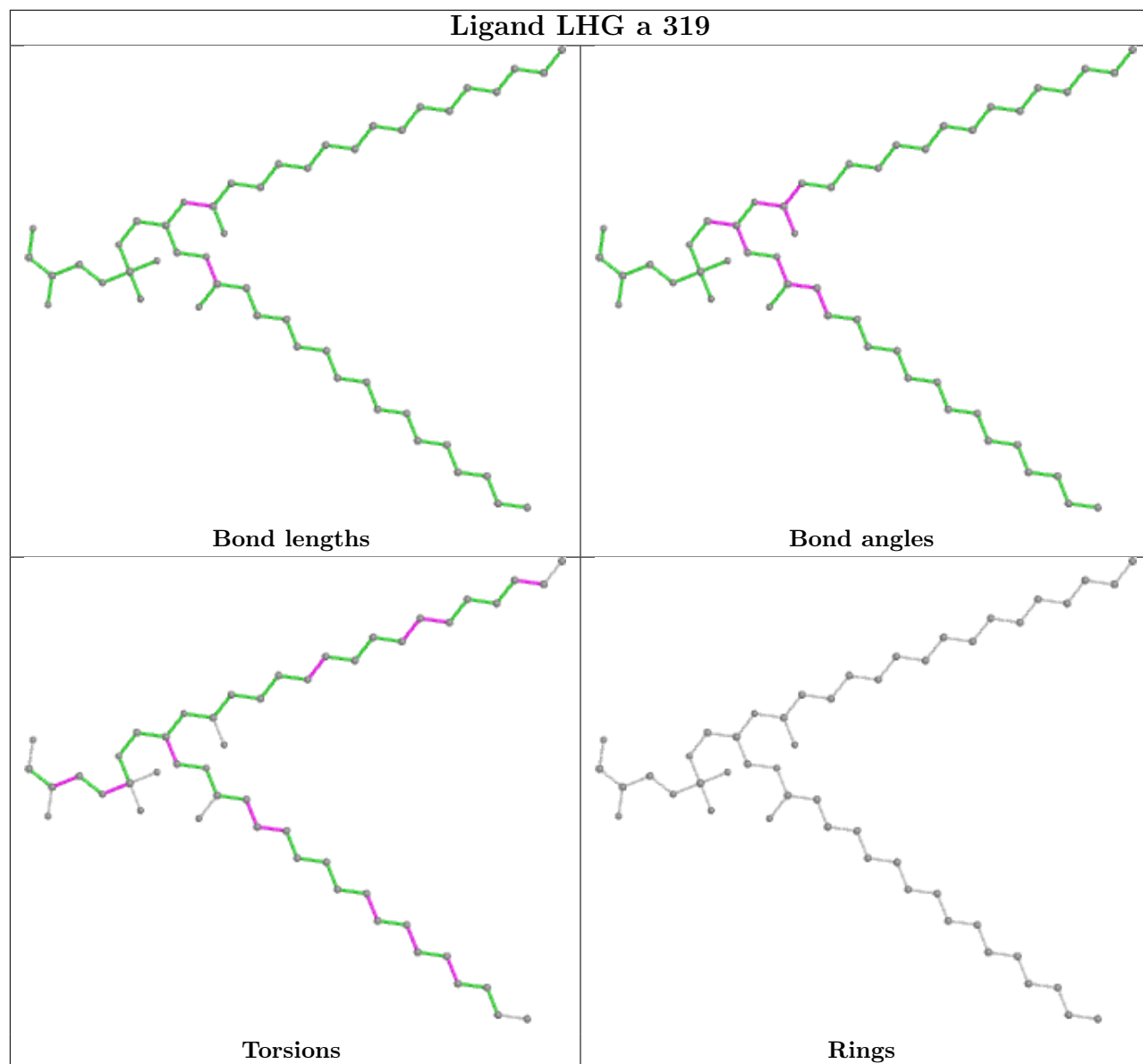
Mol	Chain	Res	Type	Clashes	Symm-Clashes
27	B	831	CLA	2	0
27	B	809	CLA	2	0
27	B	805	CLA	1	0
27	B	838	CLA	5	0
27	A	816	CLA	1	0
27	A	811	CLA	2	0
27	A	812	CLA	1	0
27	B	826	CLA	1	0
29	A	850	LHG	4	0
32	A	854	SF4	5	0
27	A	827	CLA	3	0
27	A	837	CLA	5	0
27	B	849	CLA	1	0
27	F	202	CLA	3	0
29	J	107	LHG	6	0
27	A	840	CLA	2	0
27	A	820	CLA	3	0
27	A	818	CLA	3	0
31	A	851	LMT	1	0
27	A	853	CLA	2	0
27	A	805	CLA	2	0
34	F	206	LMG	1	0
27	A	828	CLA	2	0
27	B	814	CLA	3	0
27	A	842	CLA	5	0
27	A	826	CLA	2	0
27	B	837	CLA	1	0
29	L	207	LHG	2	0
27	J	105	CLA	1	0
27	A	835	CLA	2	0
28	B	841	PQN	1	0
27	A	807	CLA	2	0
27	B	815	CLA	1	0
27	A	802	CLA	6	0
34	J	106	LMG	2	0
27	A	808	CLA	3	0
27	A	831	CLA	2	0
28	A	843	PQN	2	0
27	B	821	CLA	2	0
27	B	820	CLA	5	0
27	B	810	CLA	1	0
27	A	815	CLA	1	0

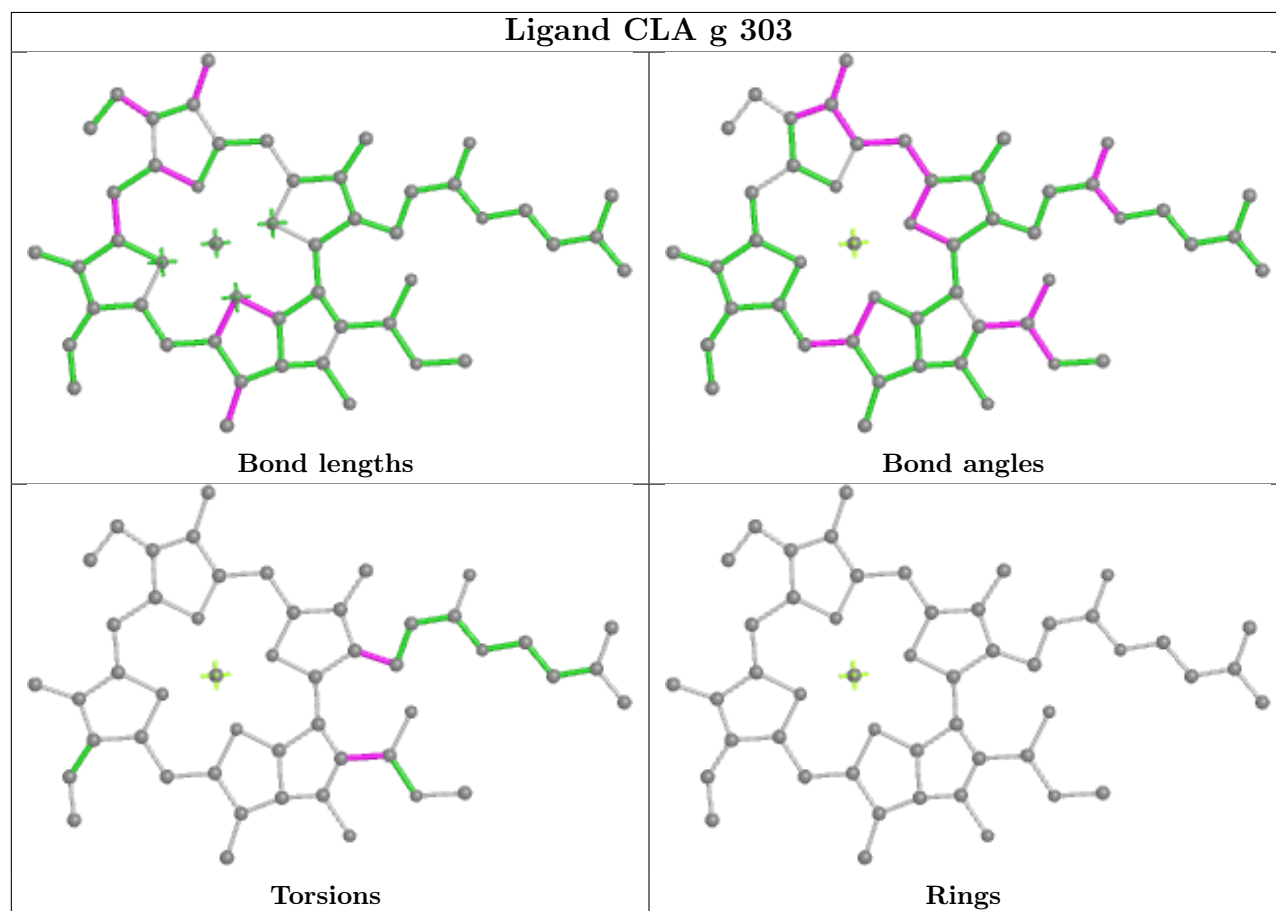
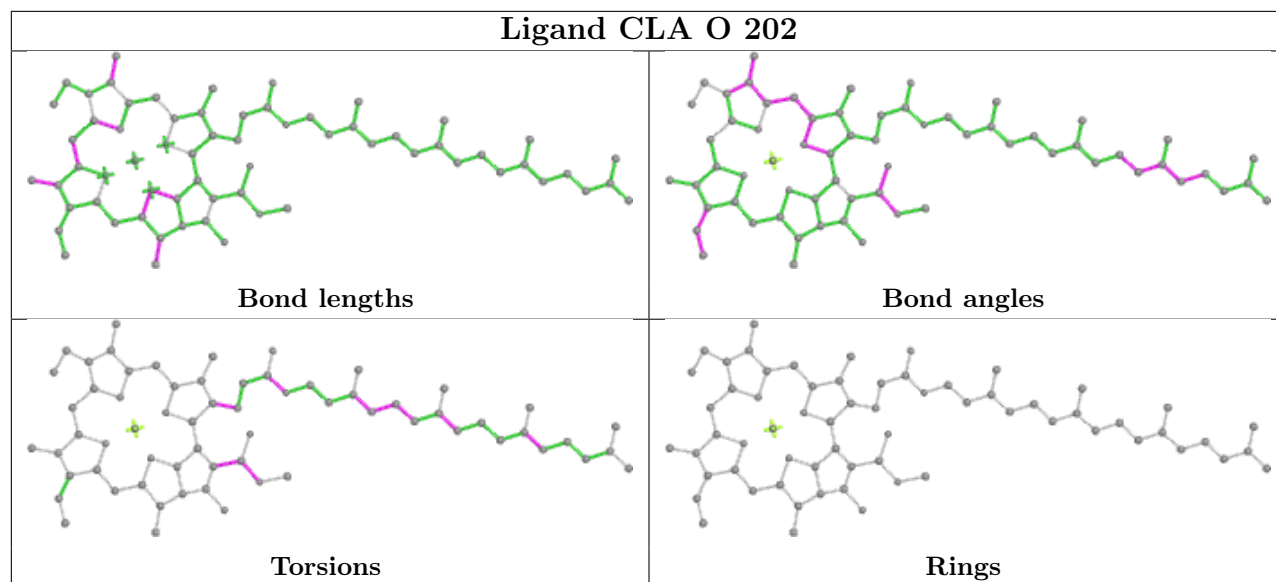
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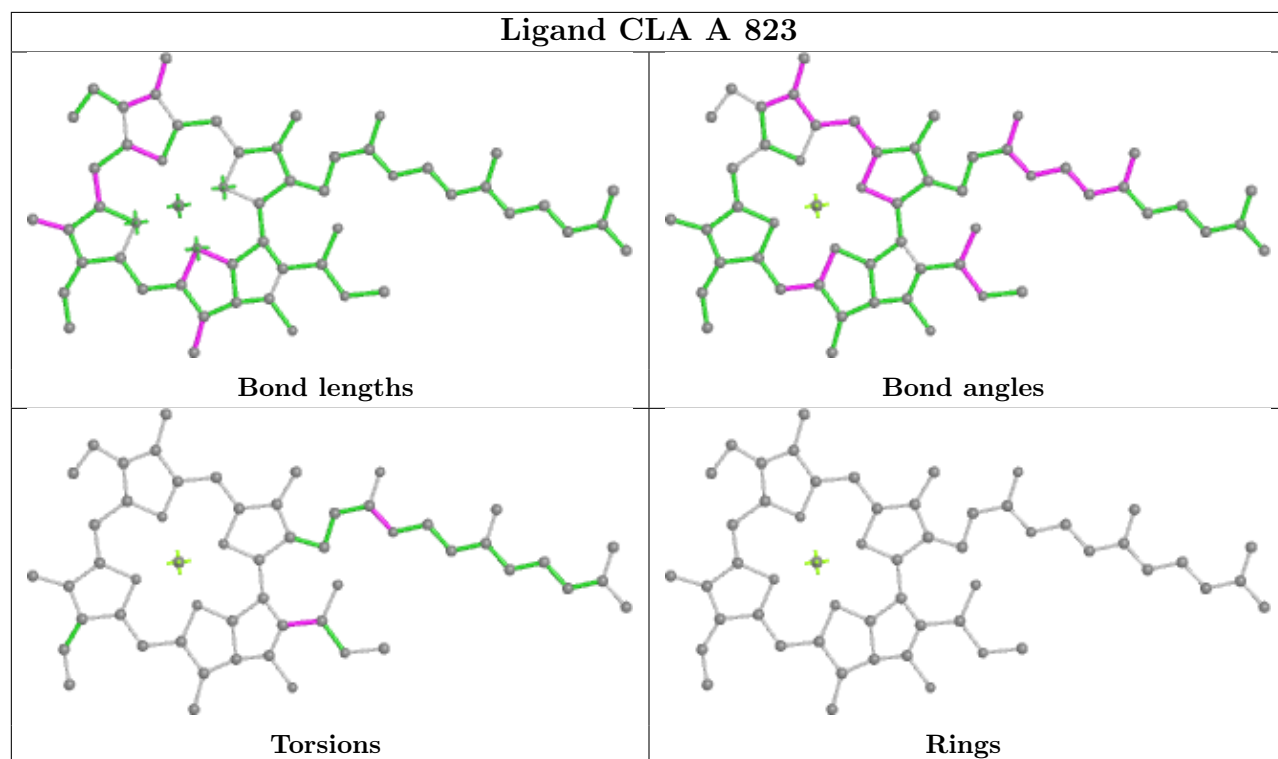
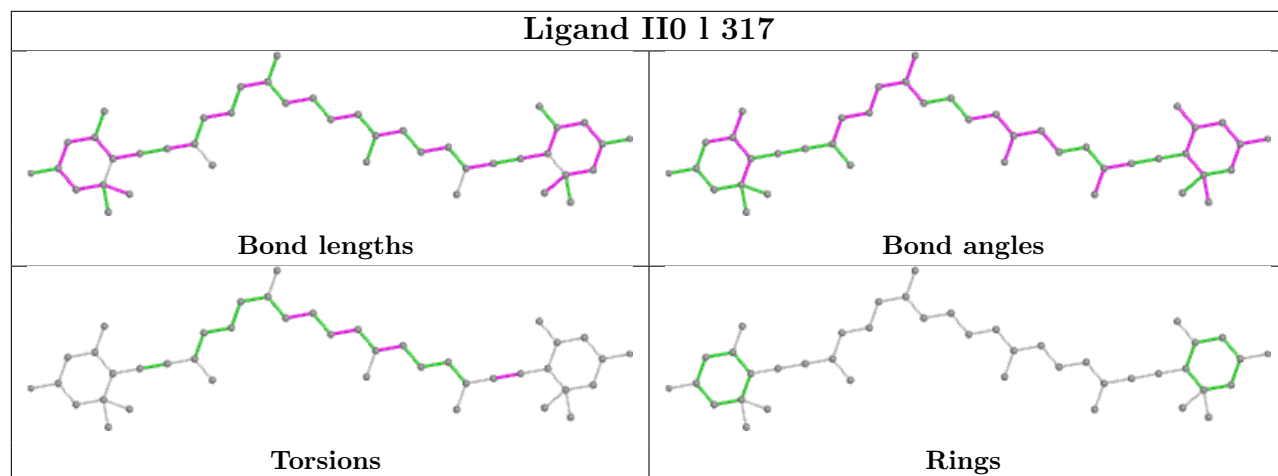
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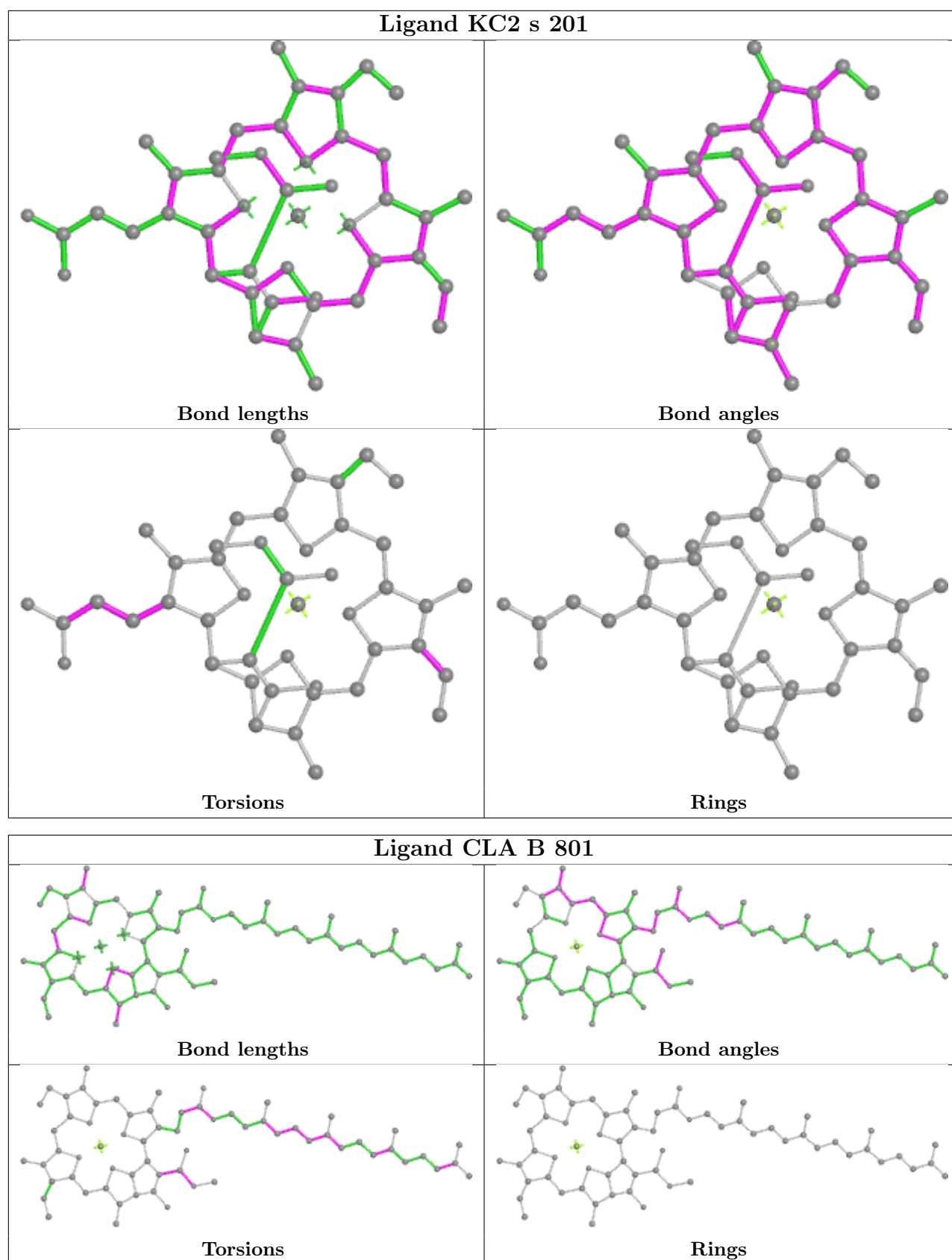
Mol	Chain	Res	Type	Clashes	Symm-Clashes
27	A	829	CLA	4	0
27	B	836	CLA	4	0
27	A	821	CLA	1	0
27	A	809	CLA	3	0
27	A	841	CLA	1	0
27	B	830	CLA	3	0
27	B	822	CLA	2	0
27	A	838	CLA	2	0
27	A	830	CLA	2	0
27	A	839	CLA	9	0
27	A	810	CLA	1	0
27	B	804	CLA	3	0
27	A	832	CLA	1	0
27	B	840	CLA	2	0
27	B	825	CLA	1	0
27	B	803	CLA	3	0
27	A	801	CLA	4	0
27	B	824	CLA	1	0
27	F	203	CLA	1	0
27	A	806	CLA	1	0
27	A	817	CLA	2	0

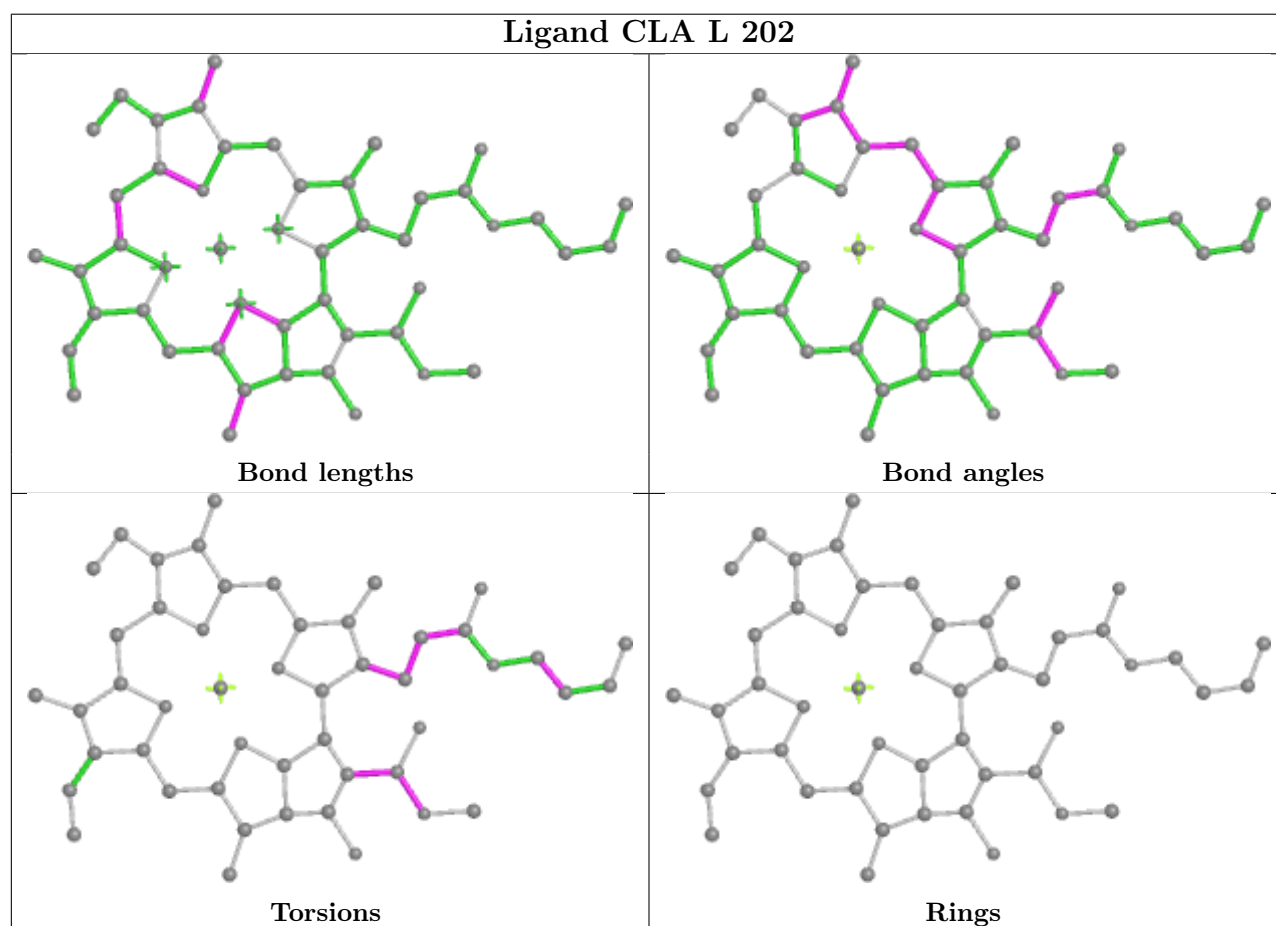
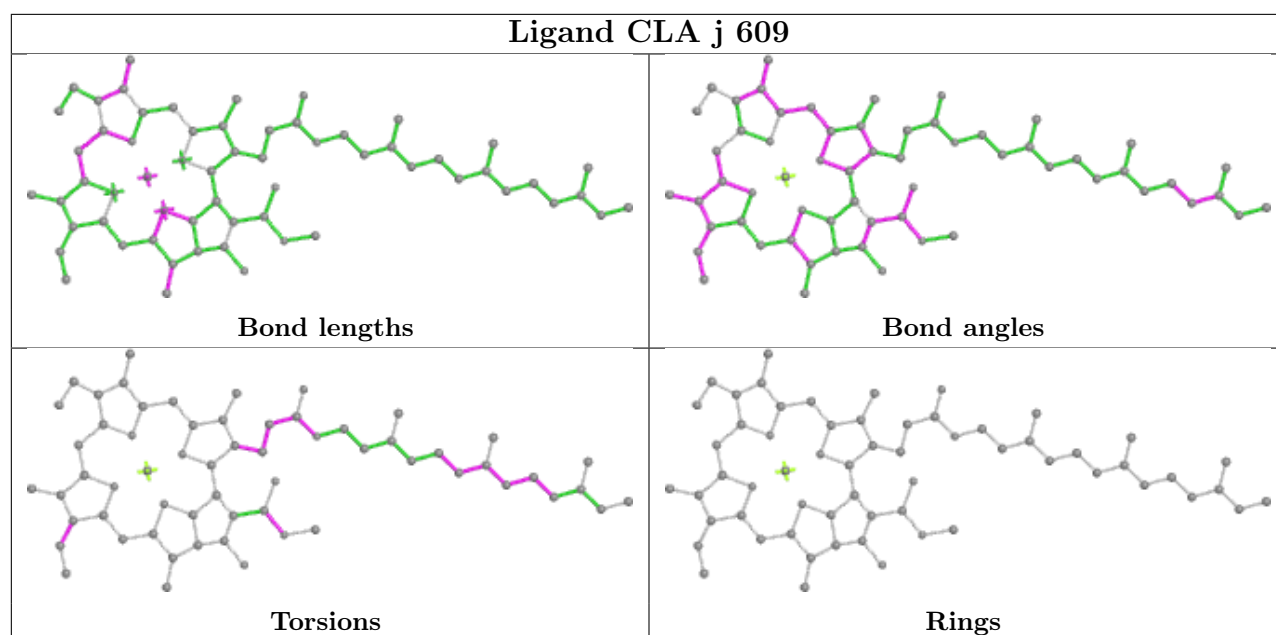
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

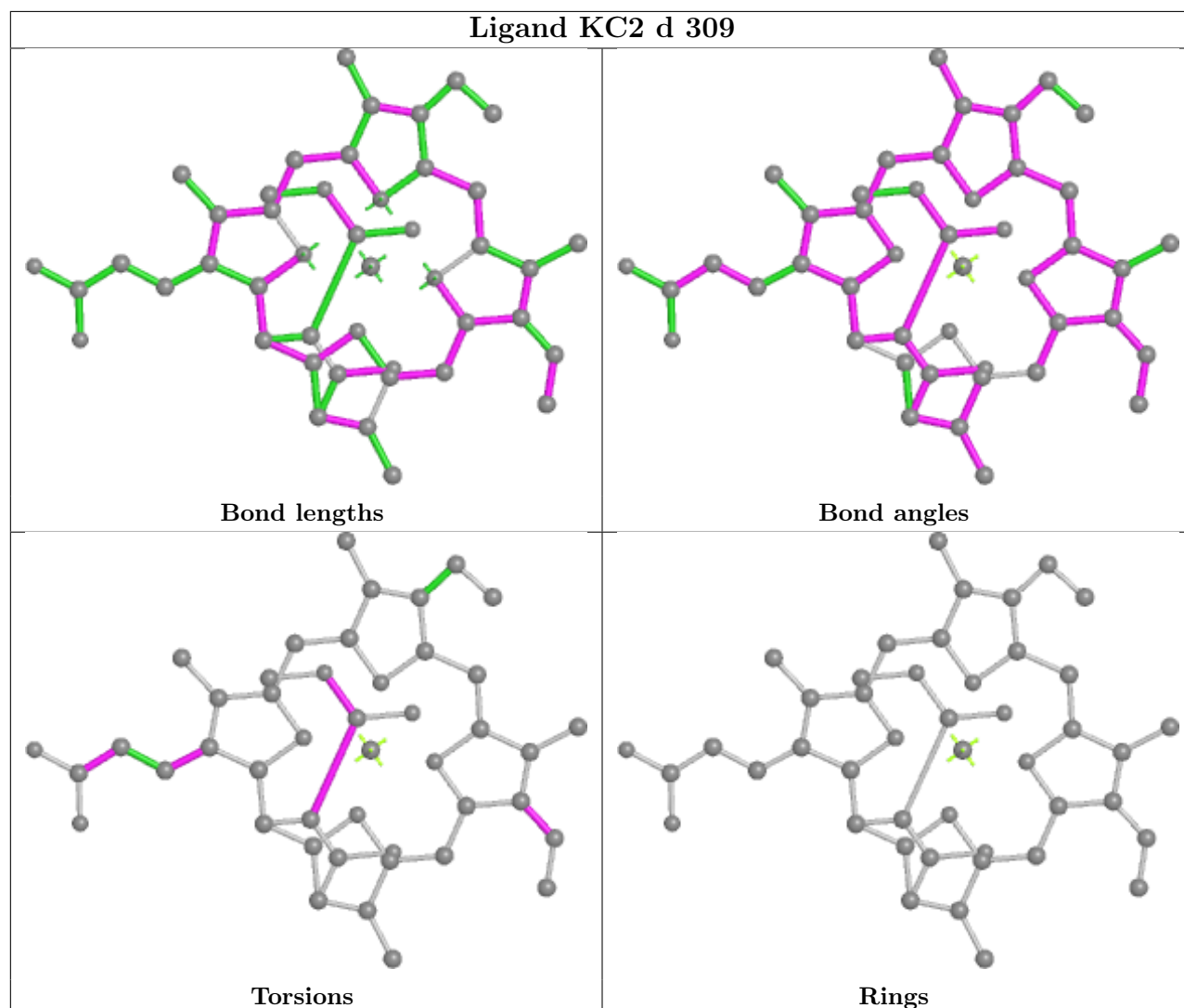
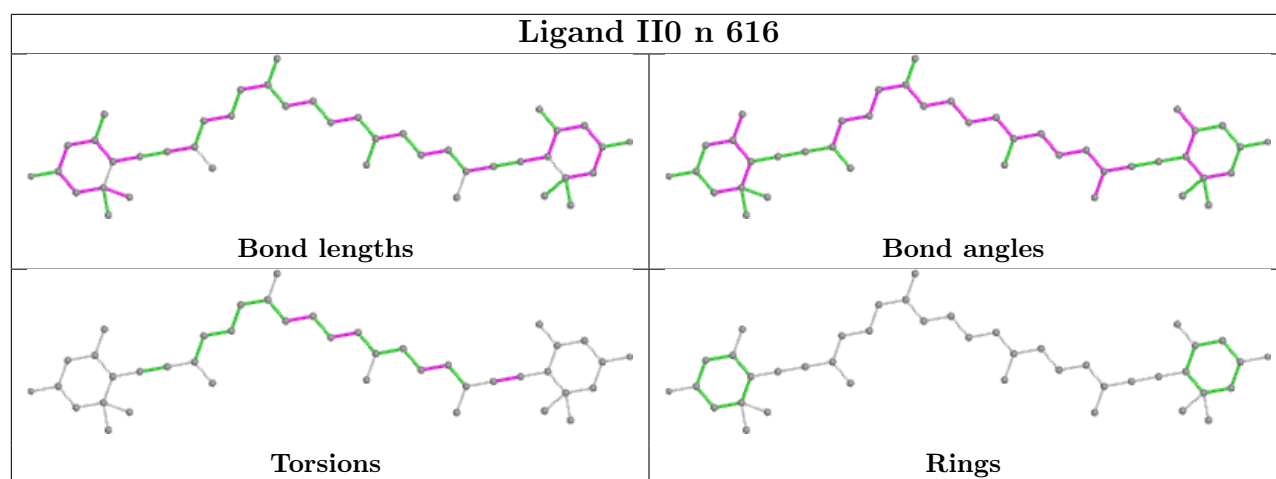


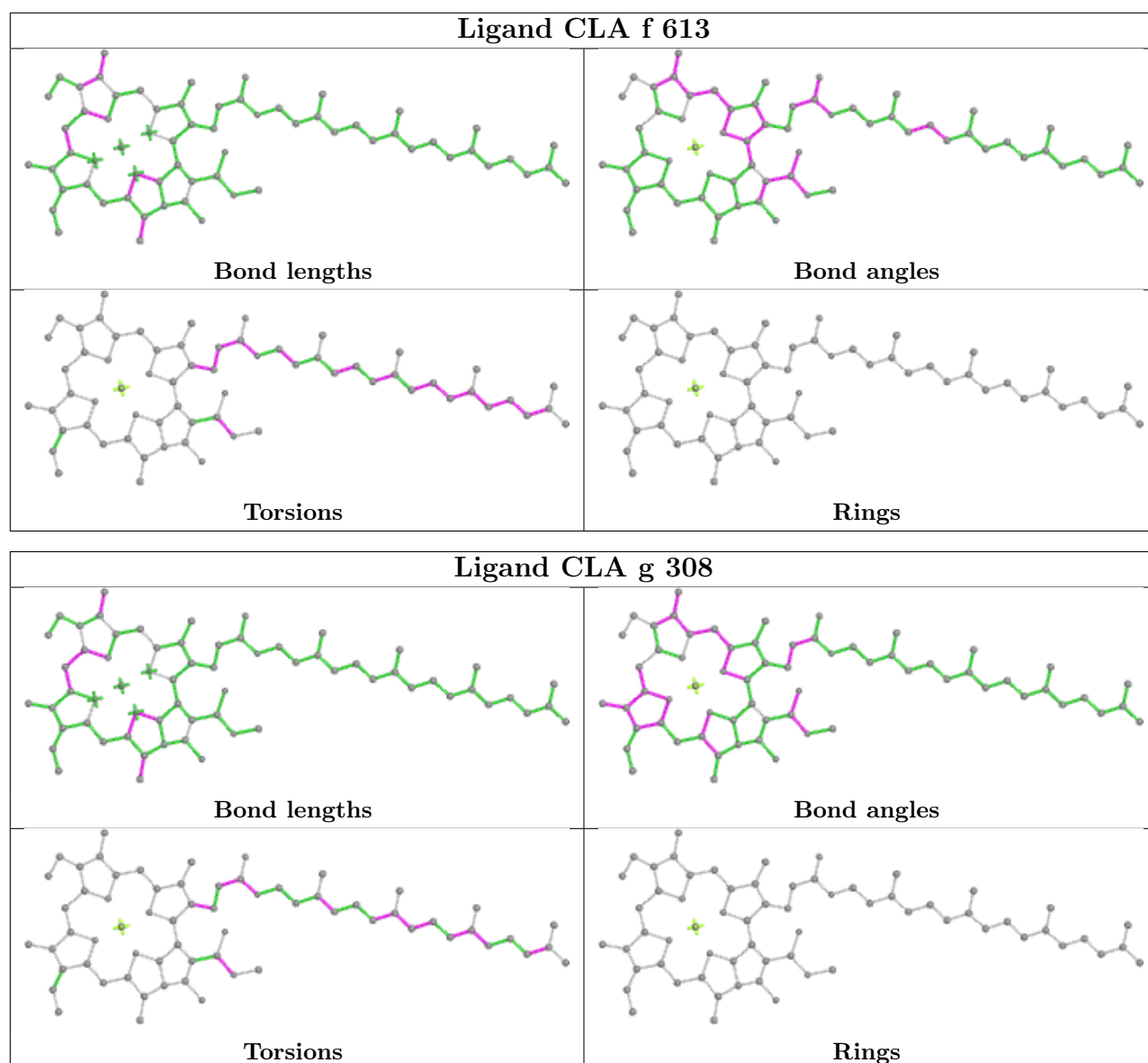


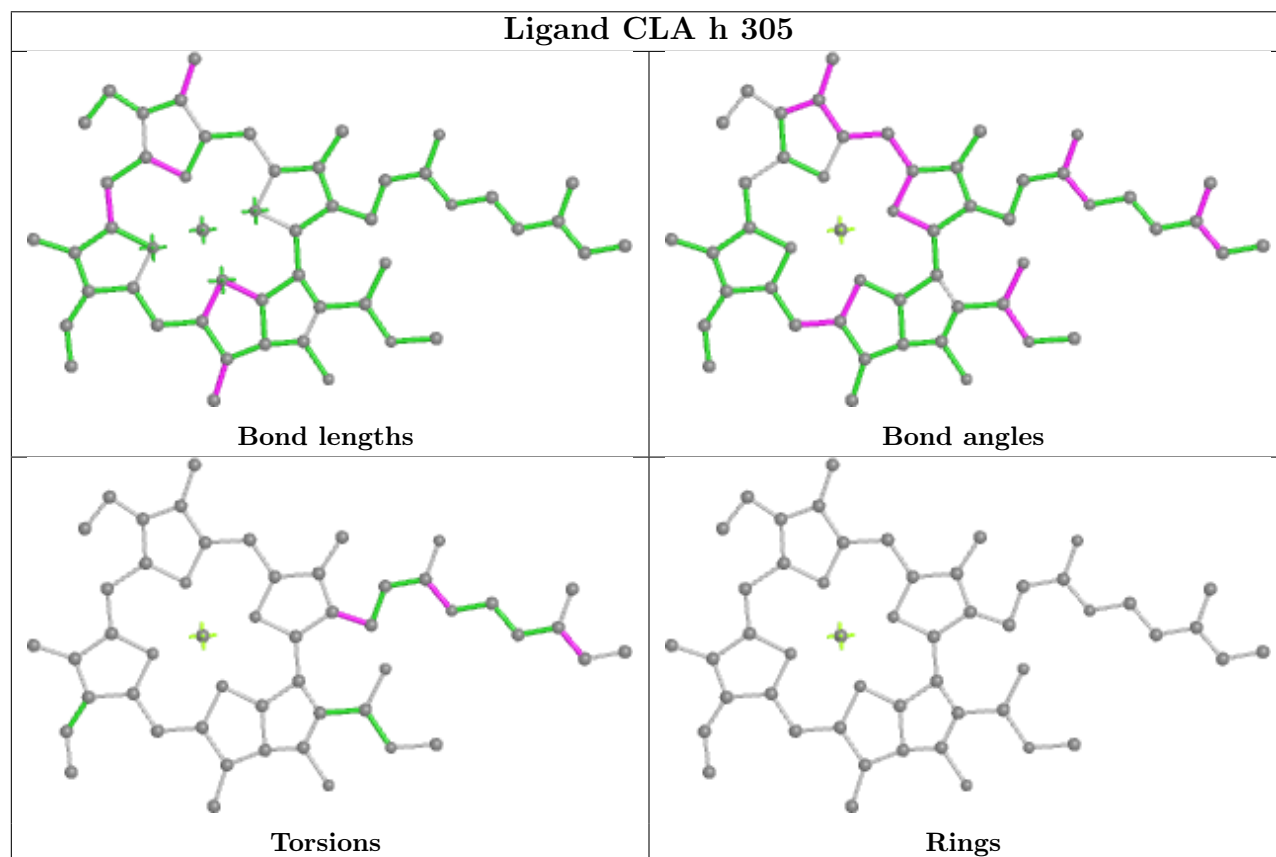
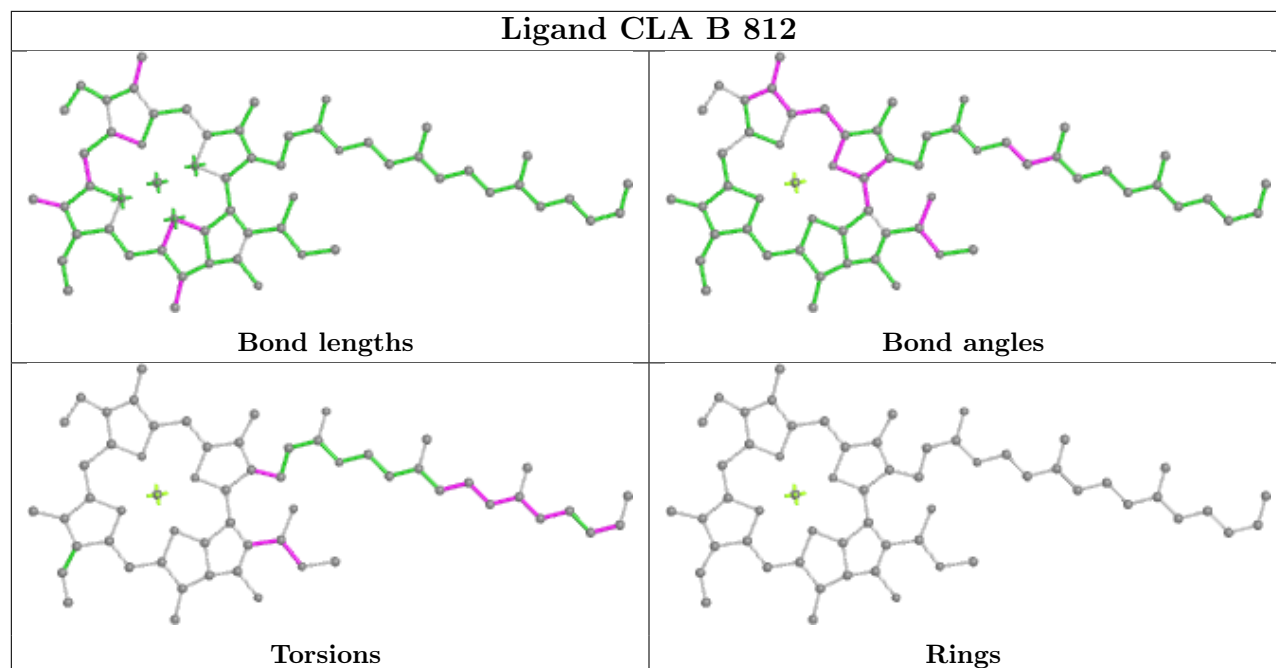


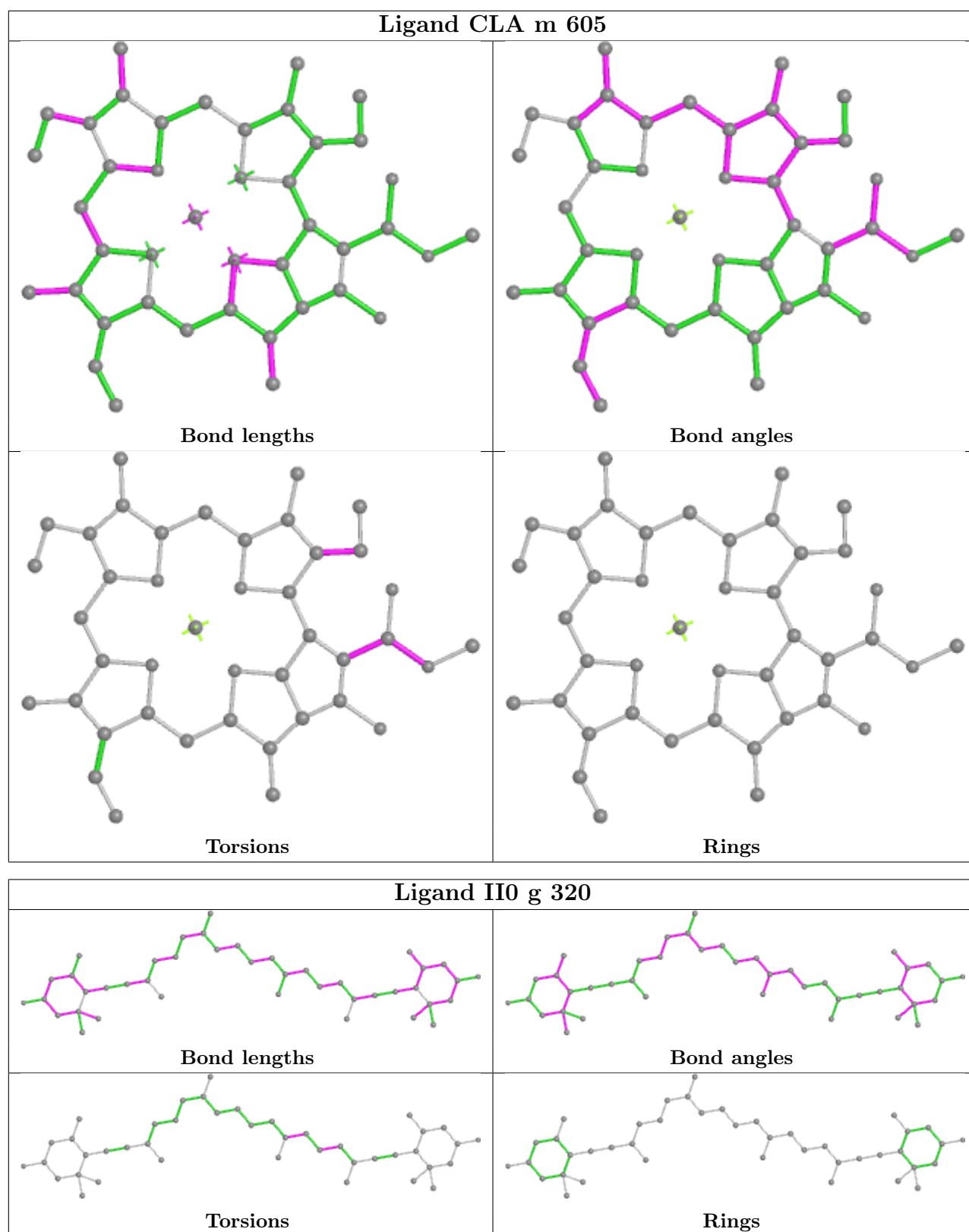


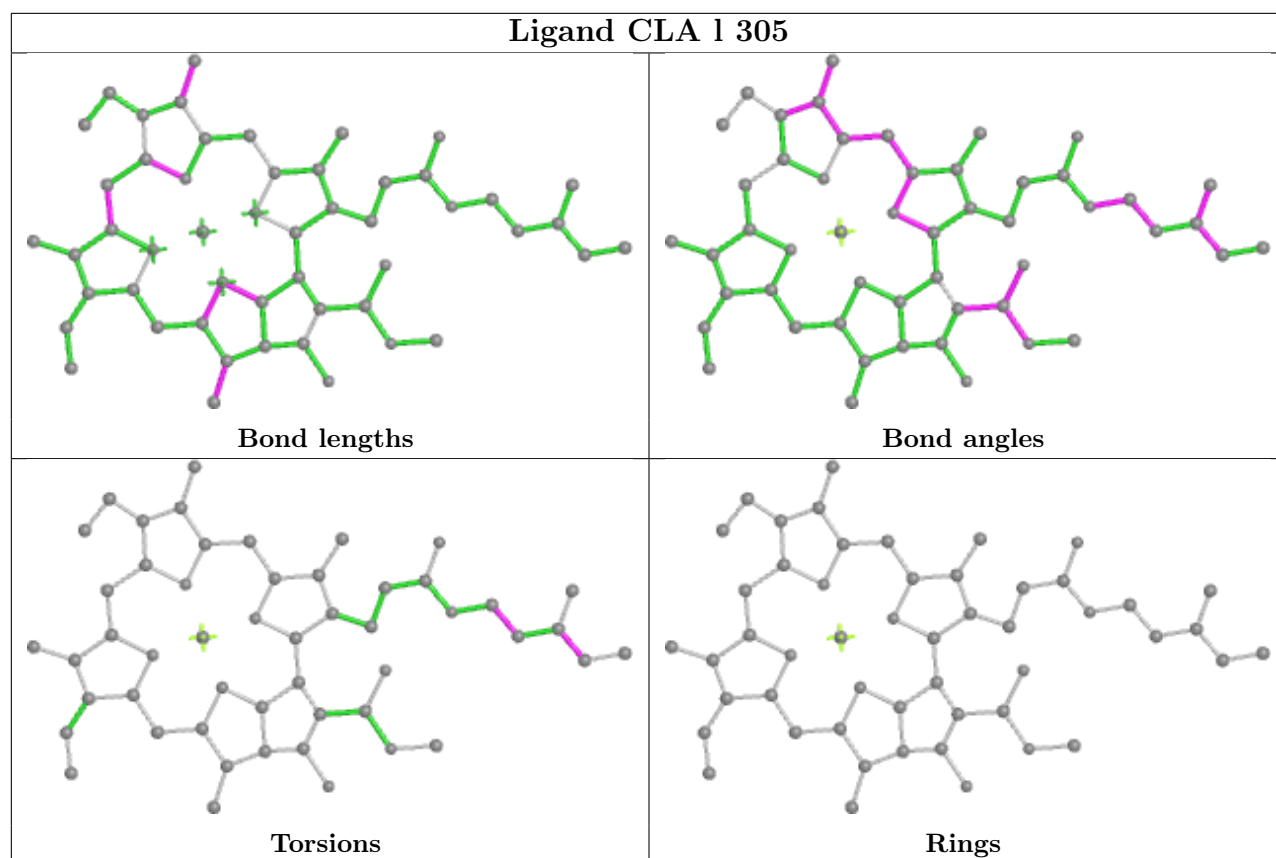
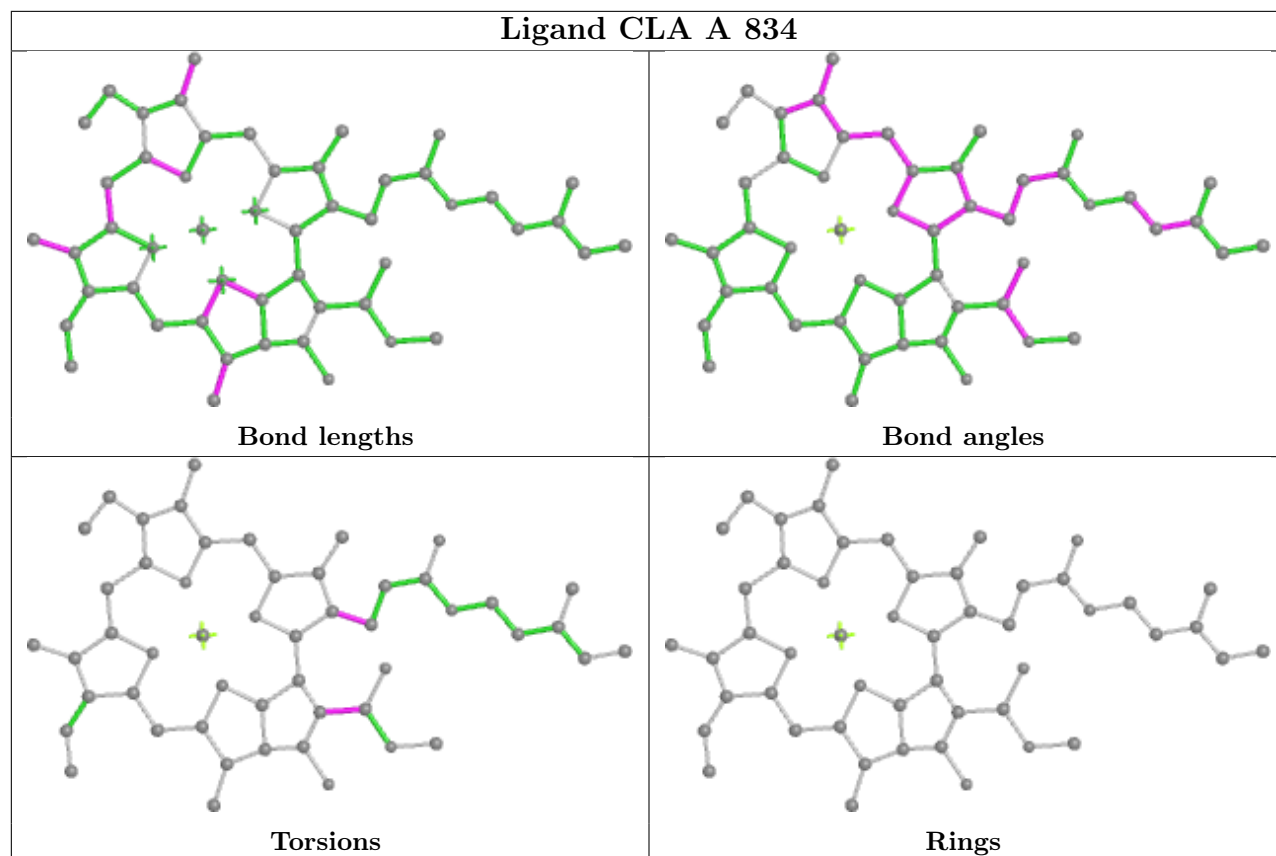


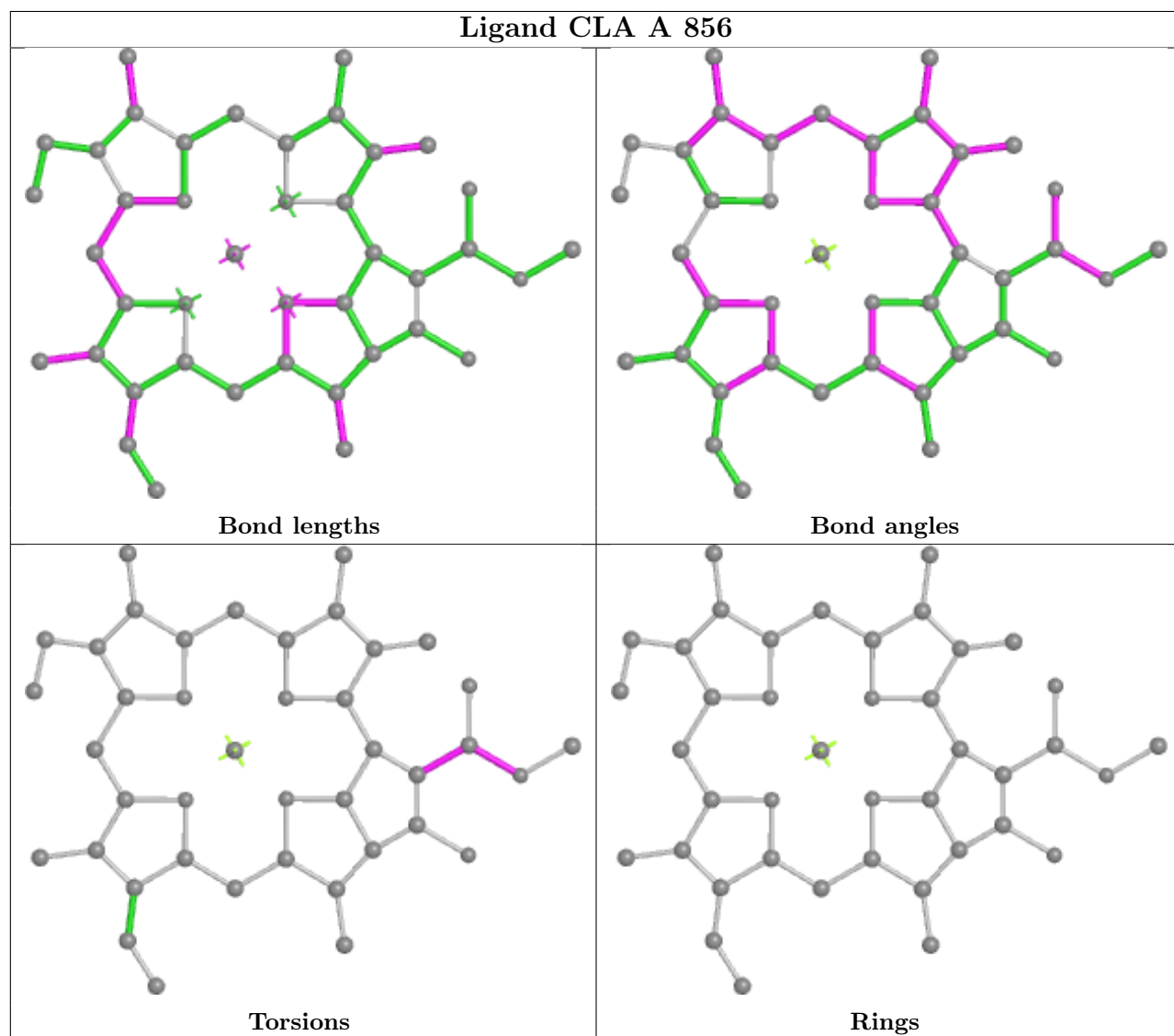
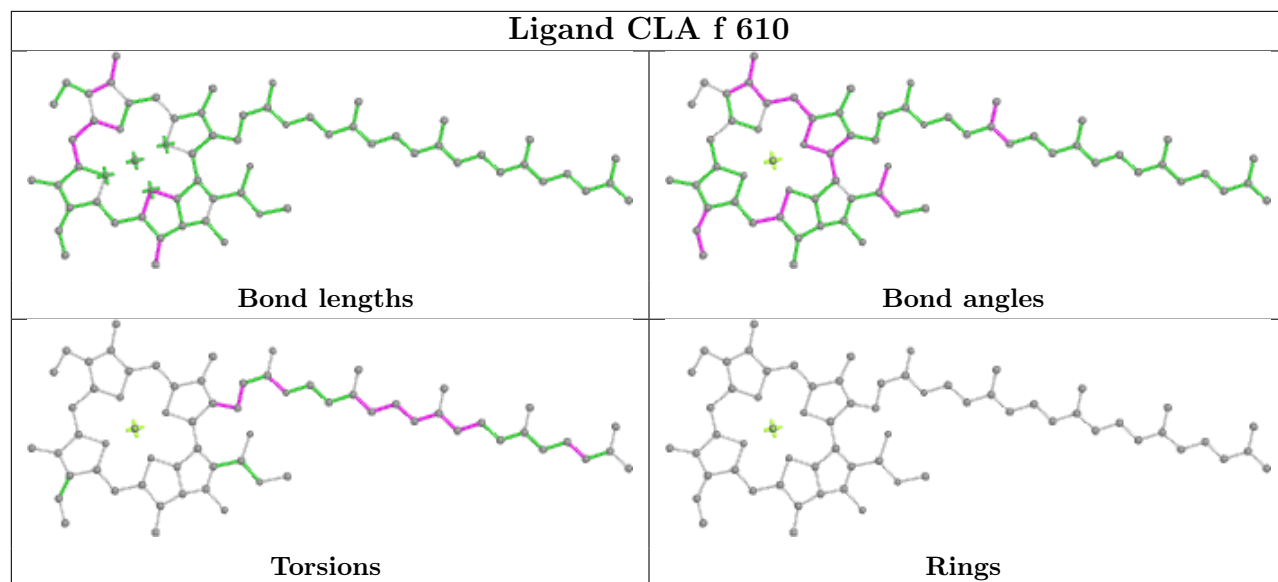


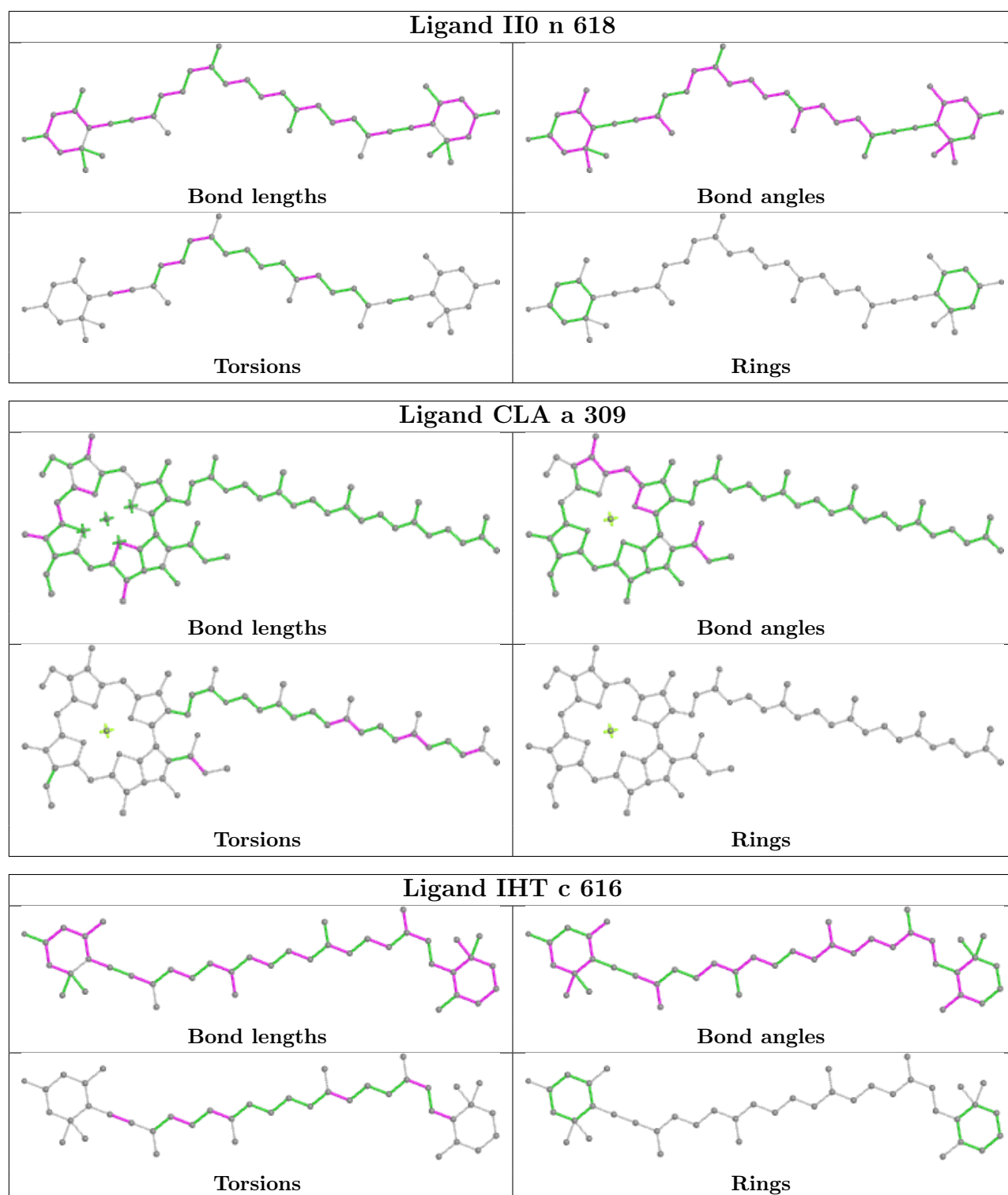


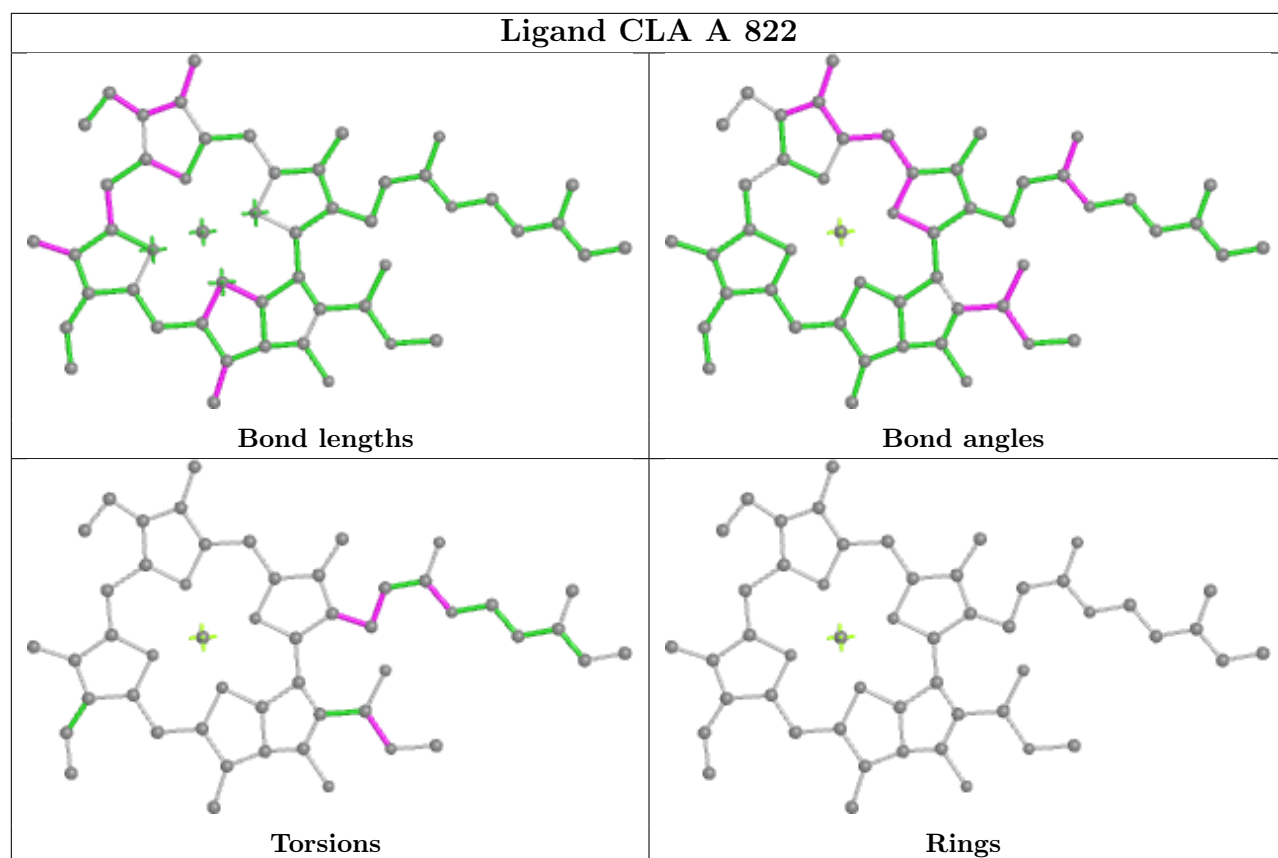
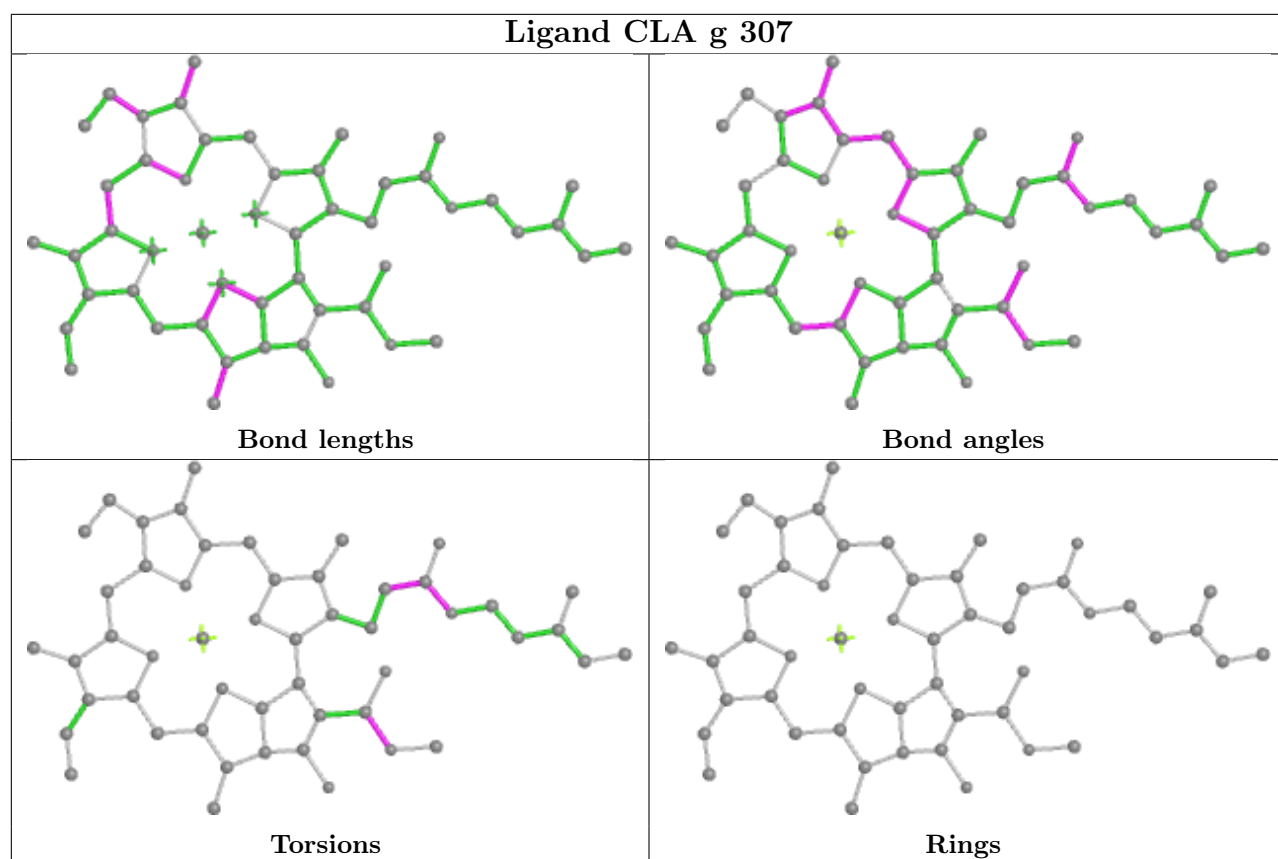


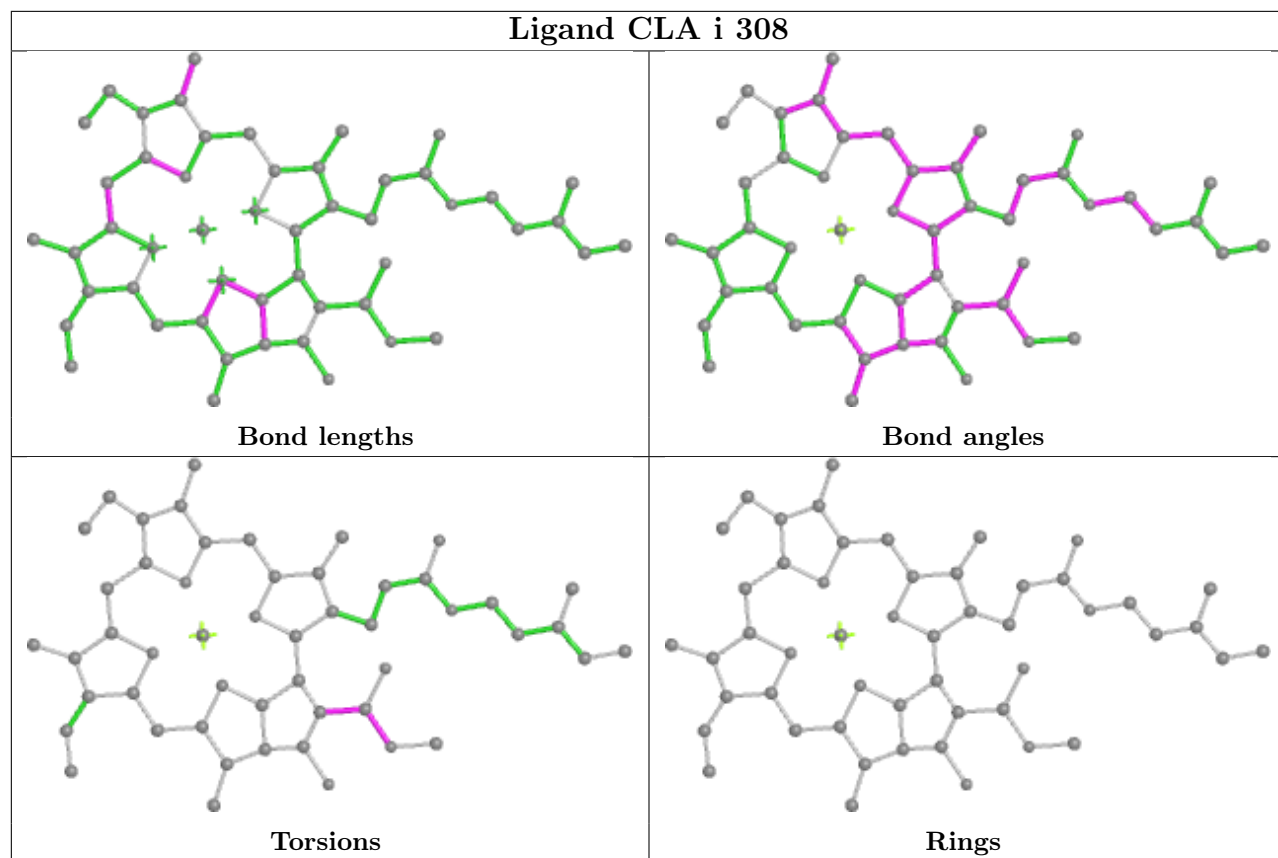


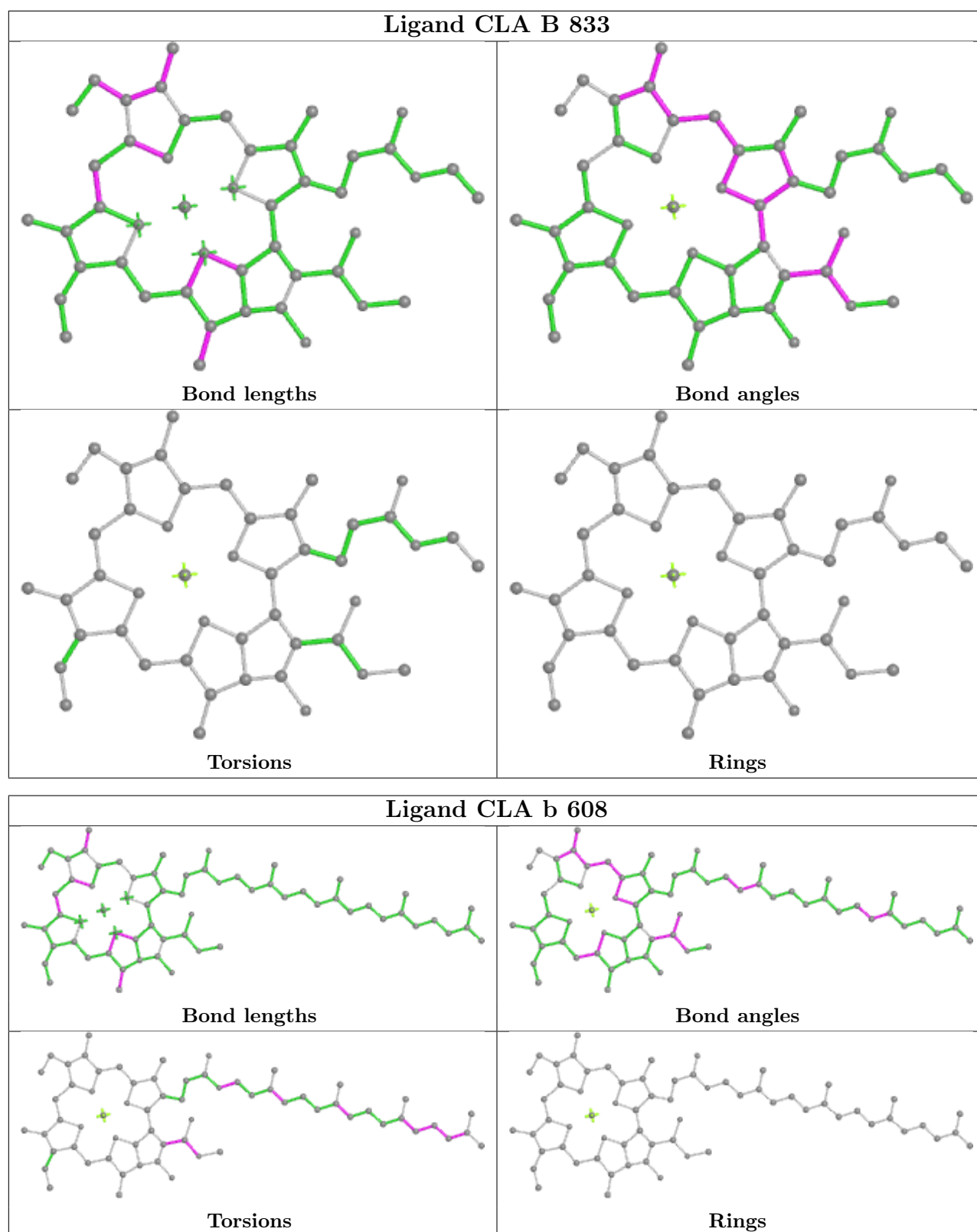


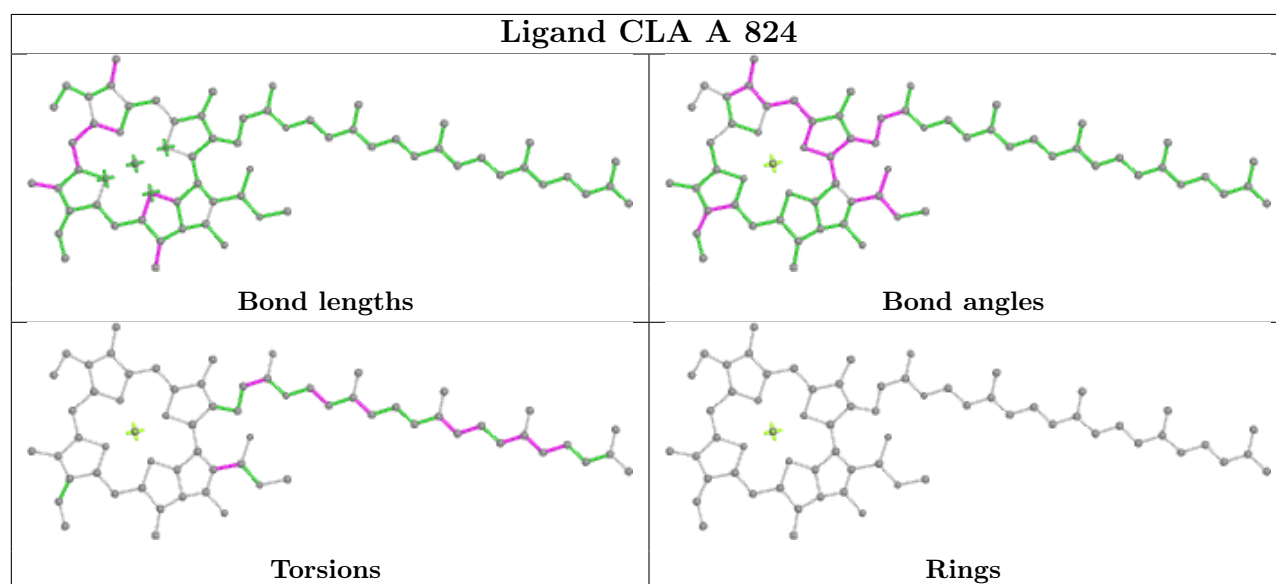
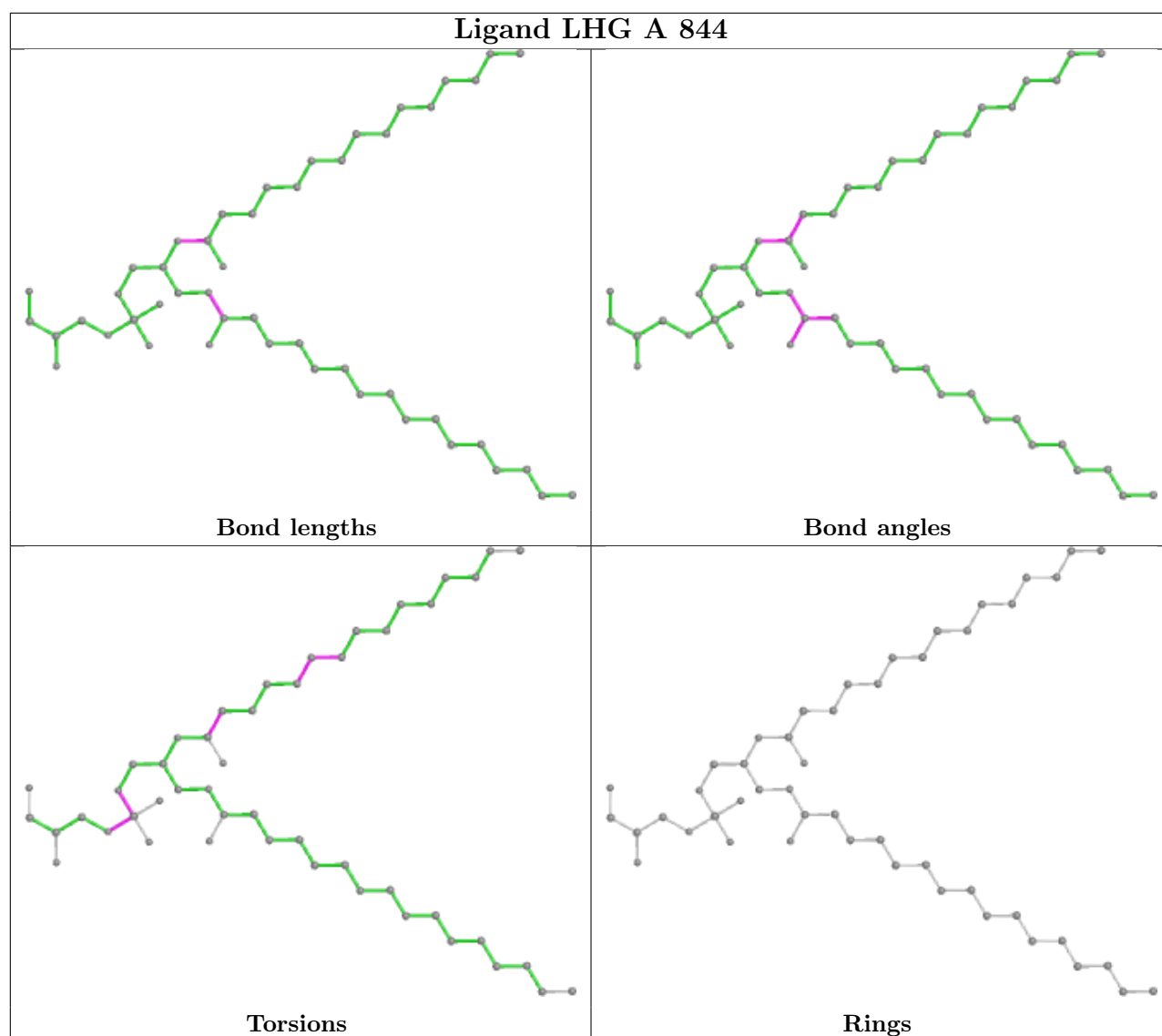


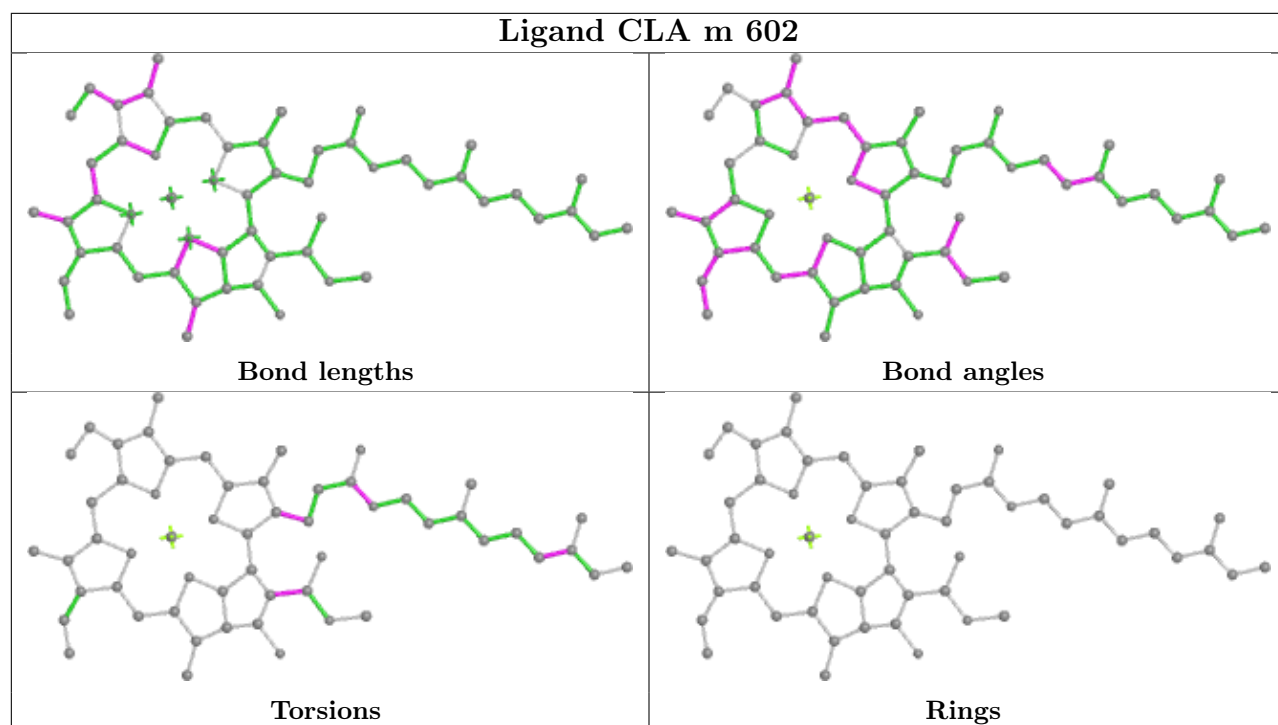
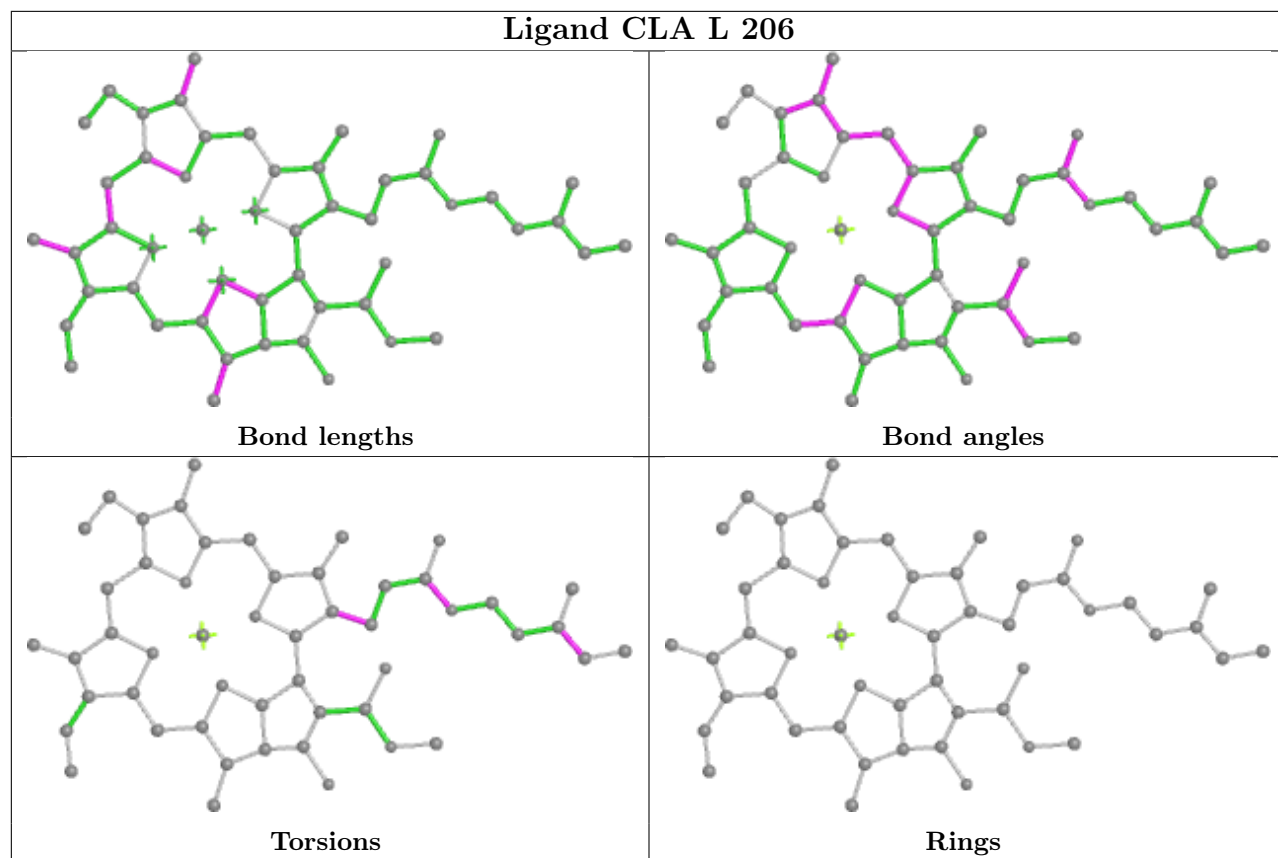


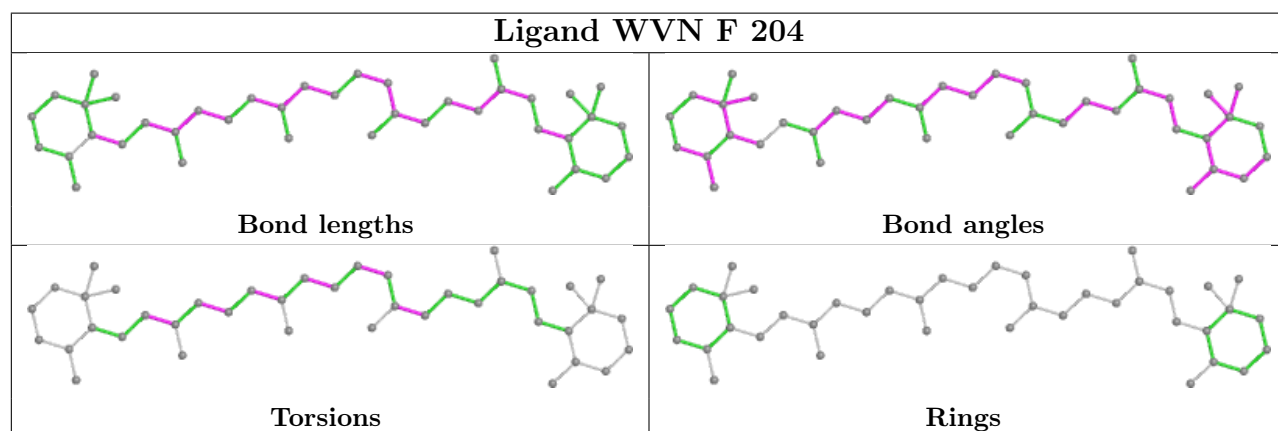
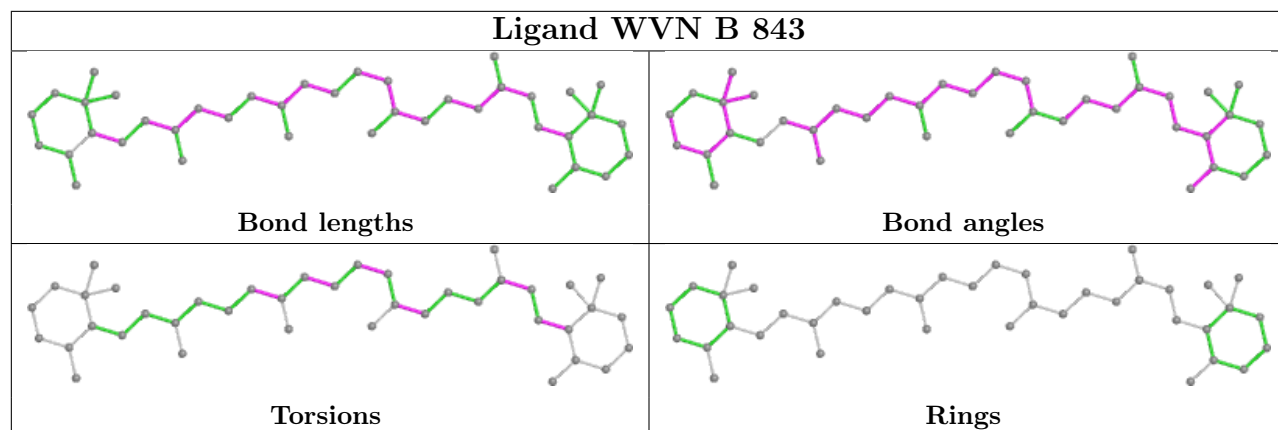


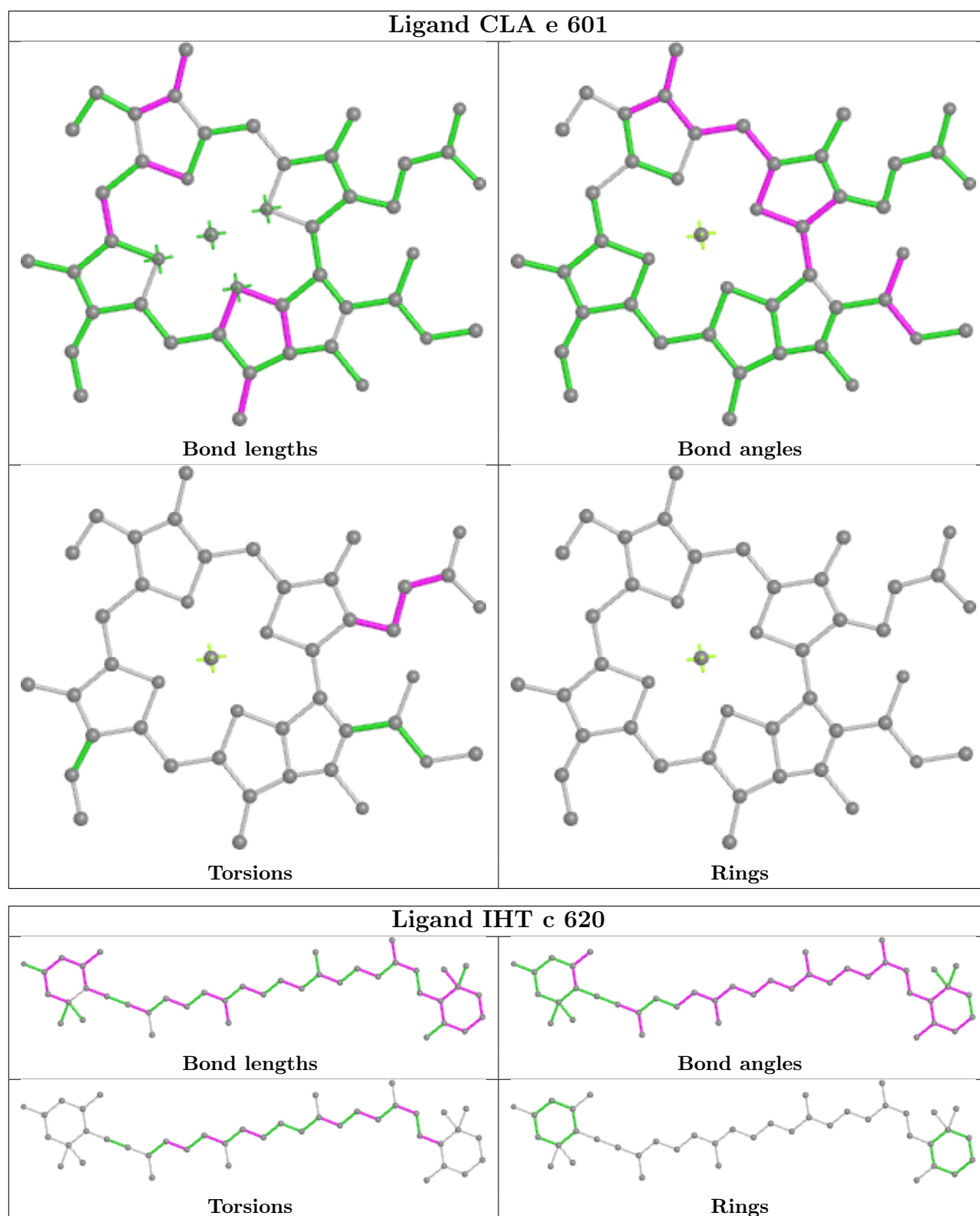


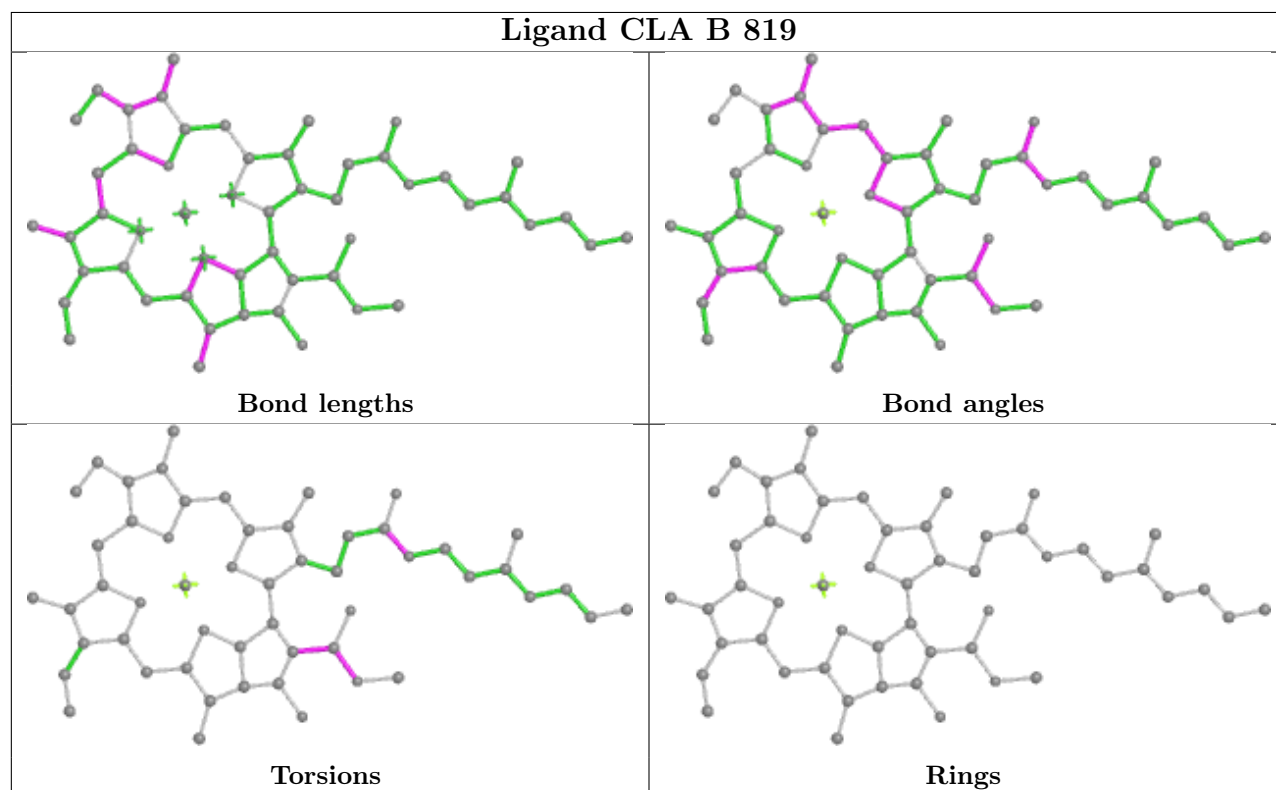
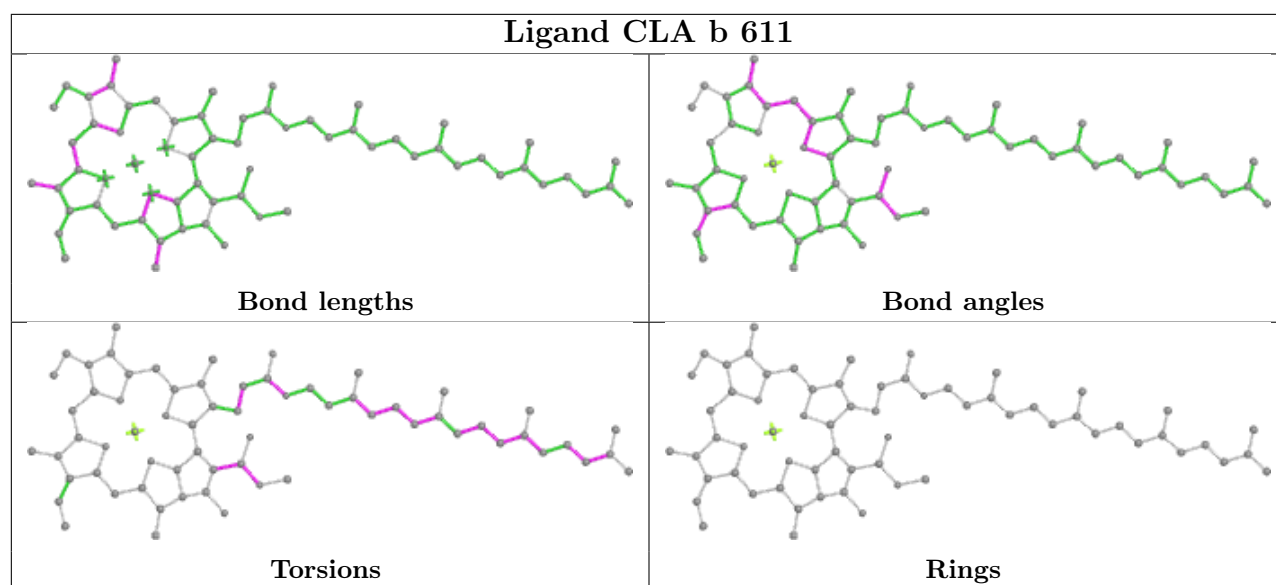


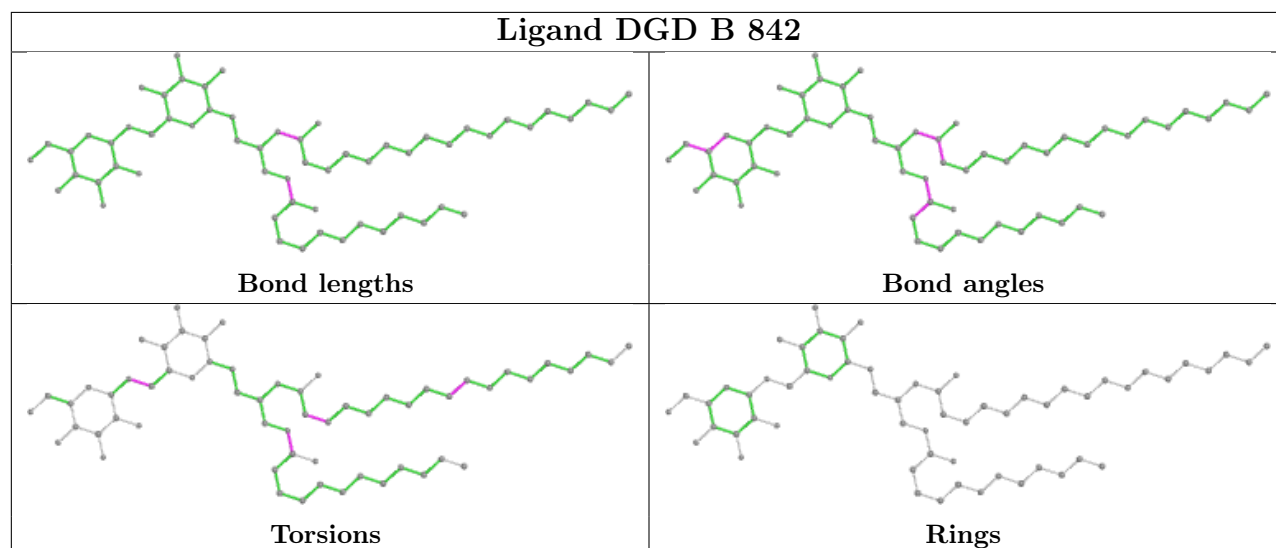
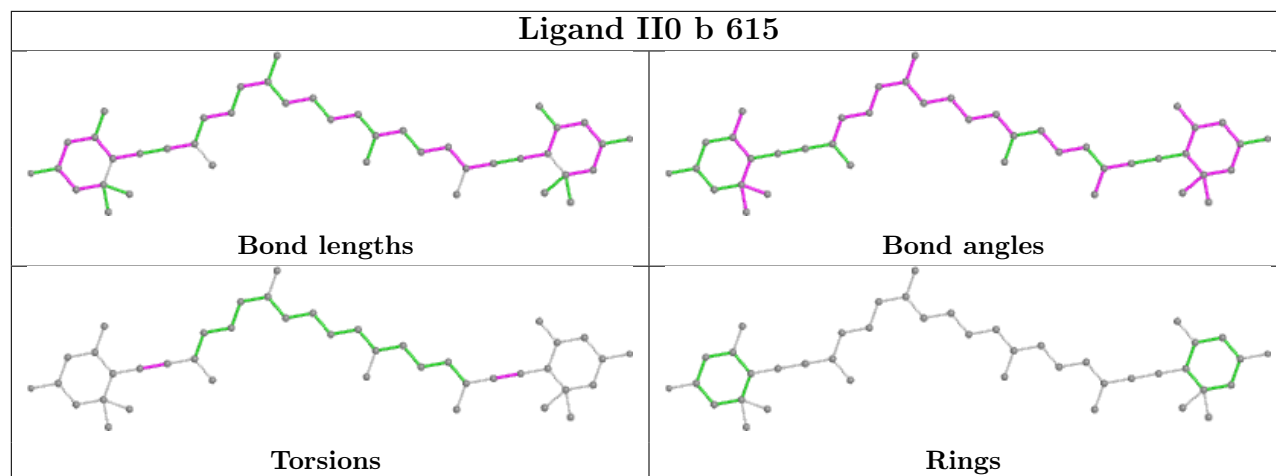


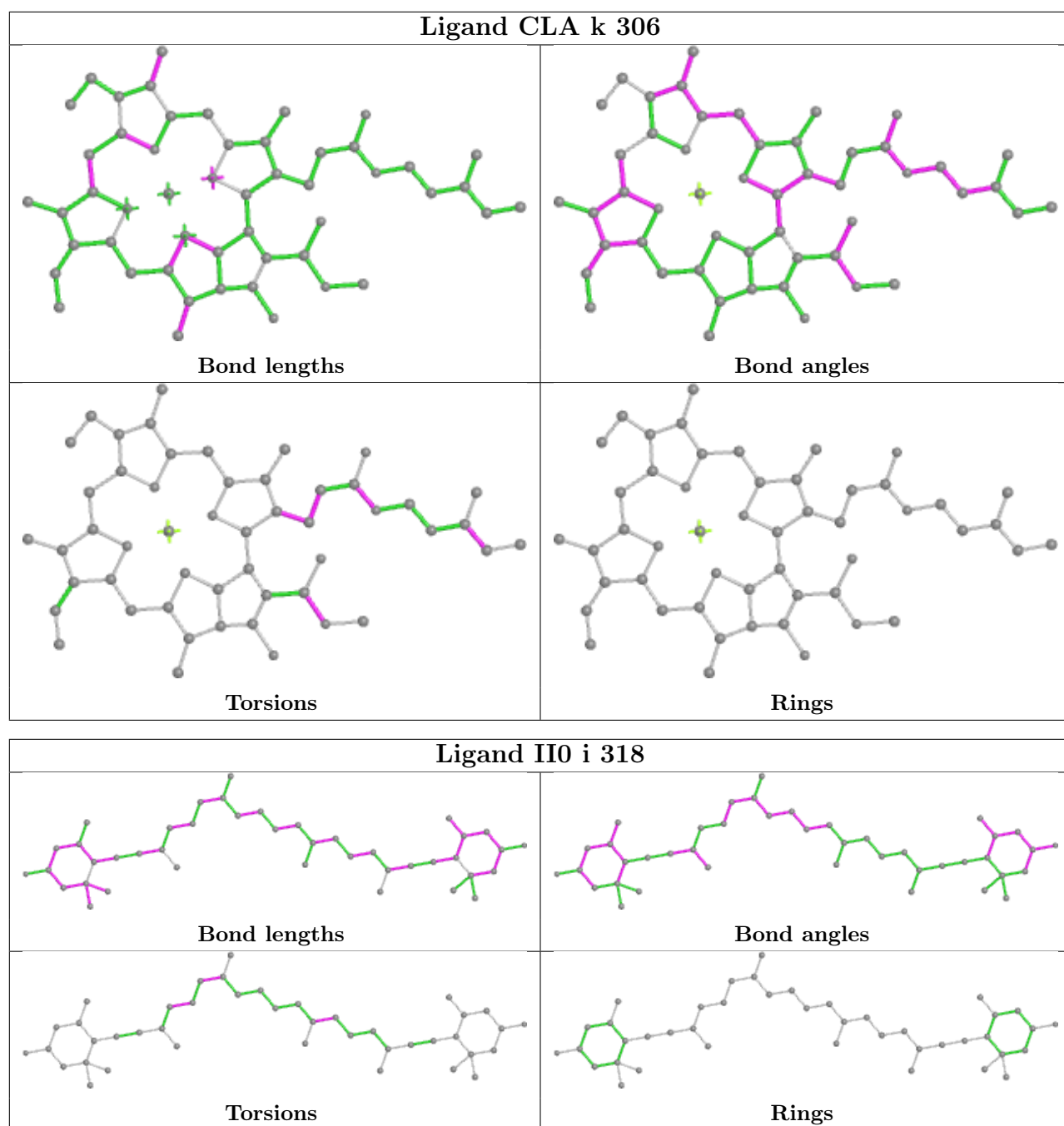


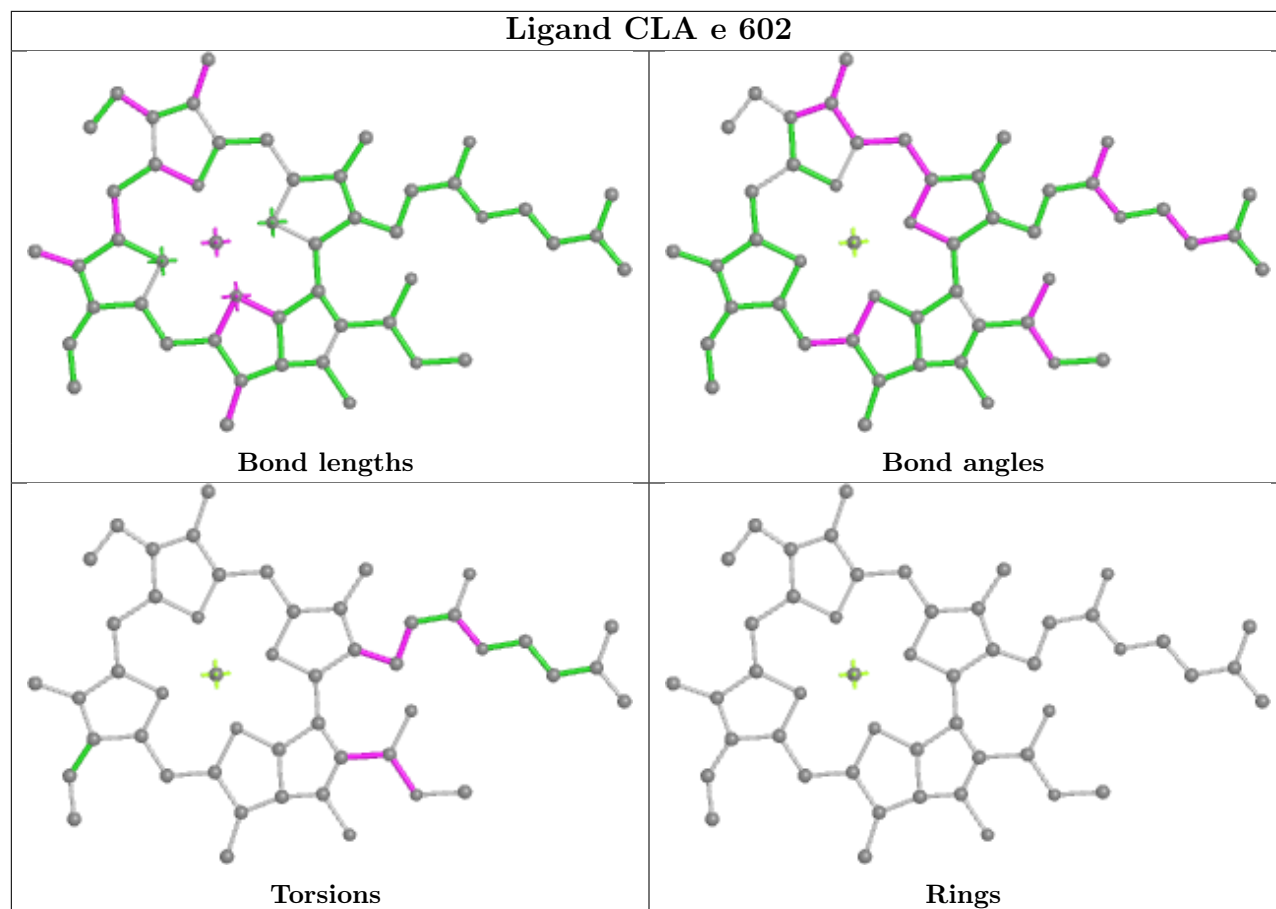


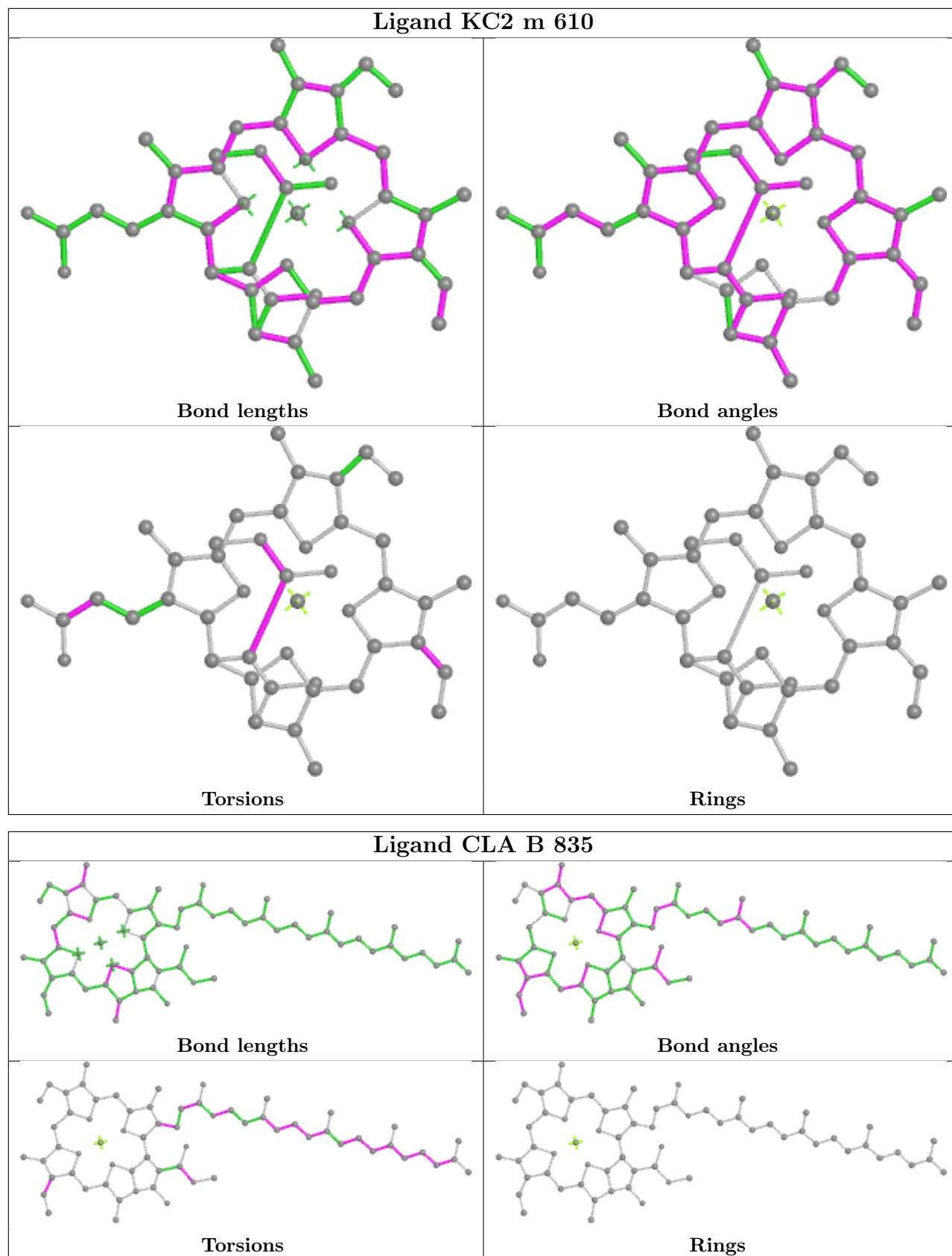


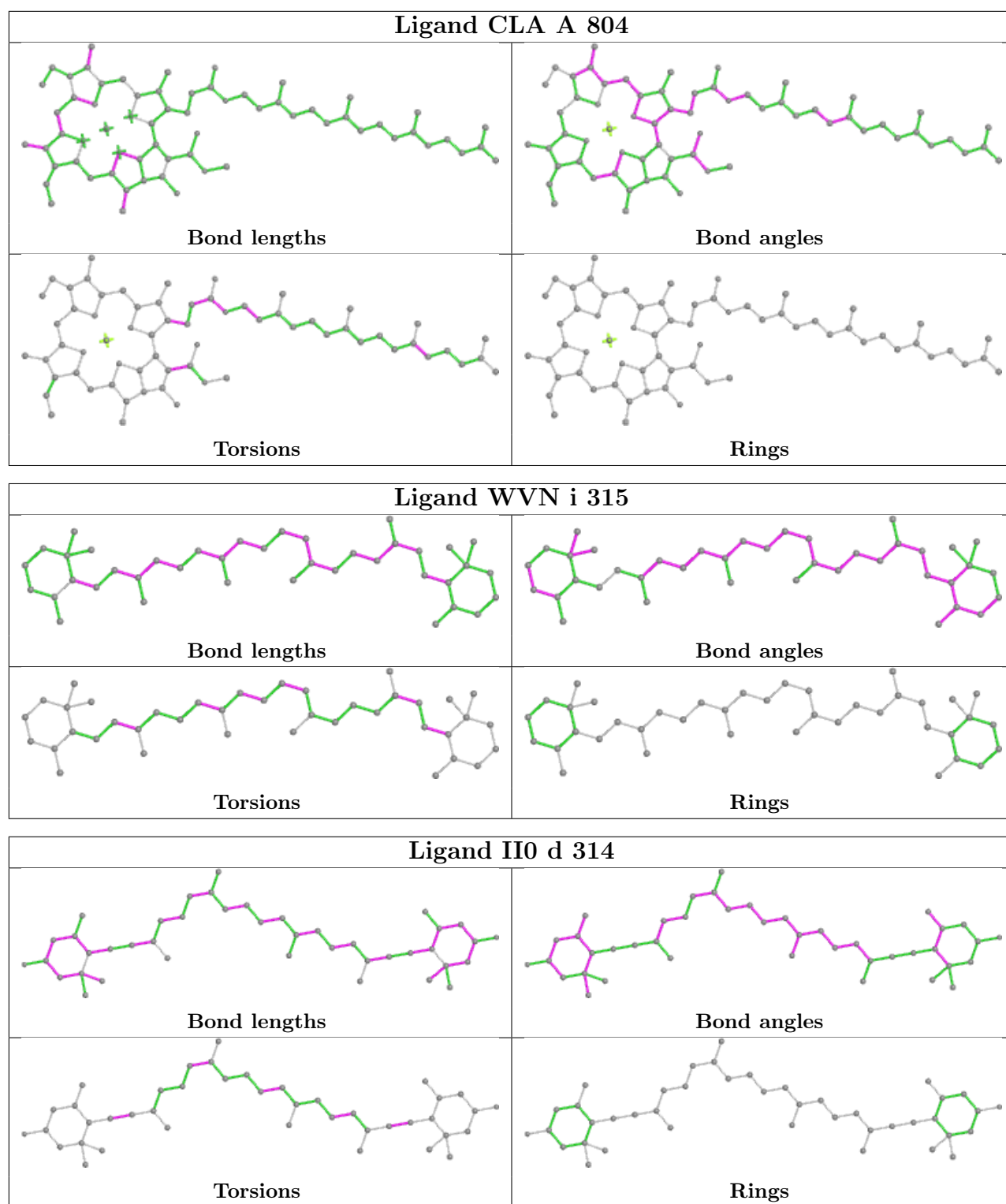


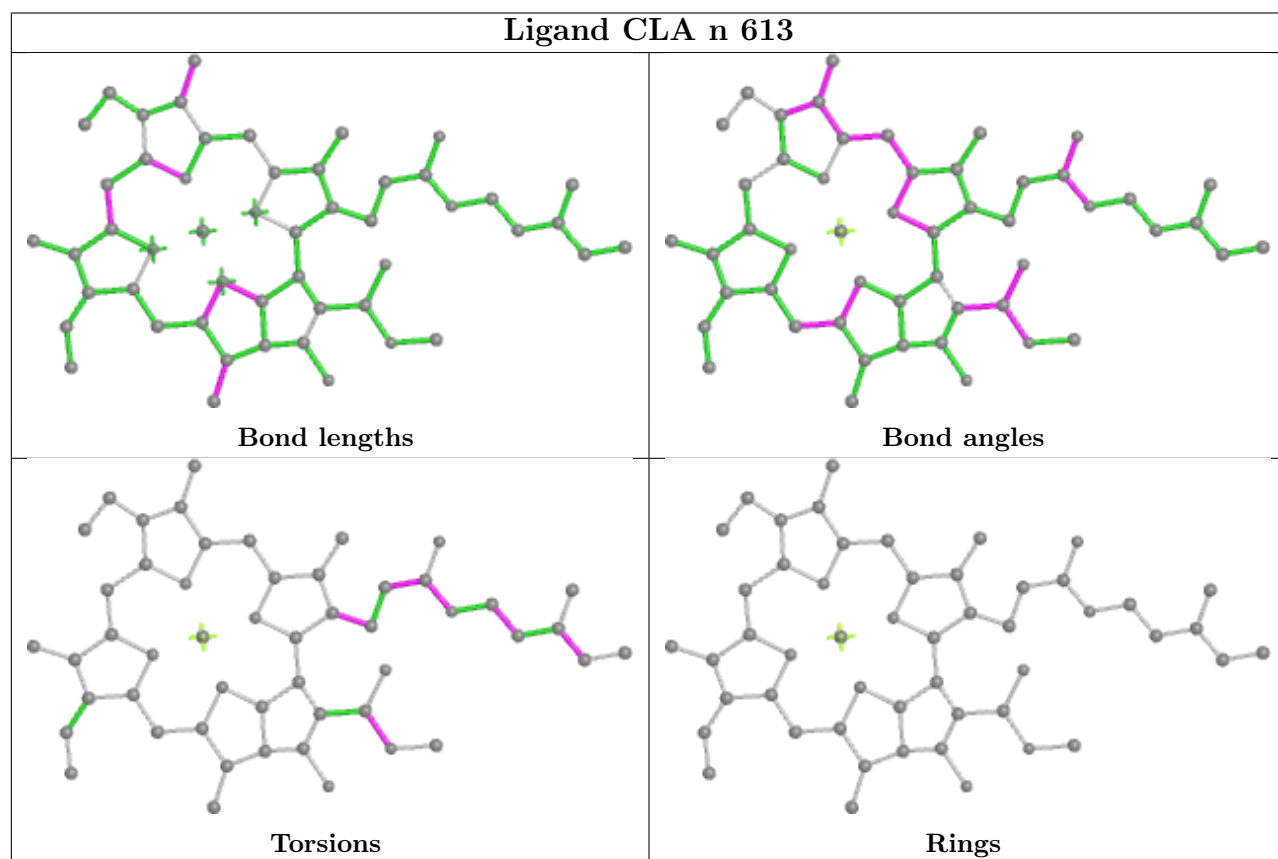
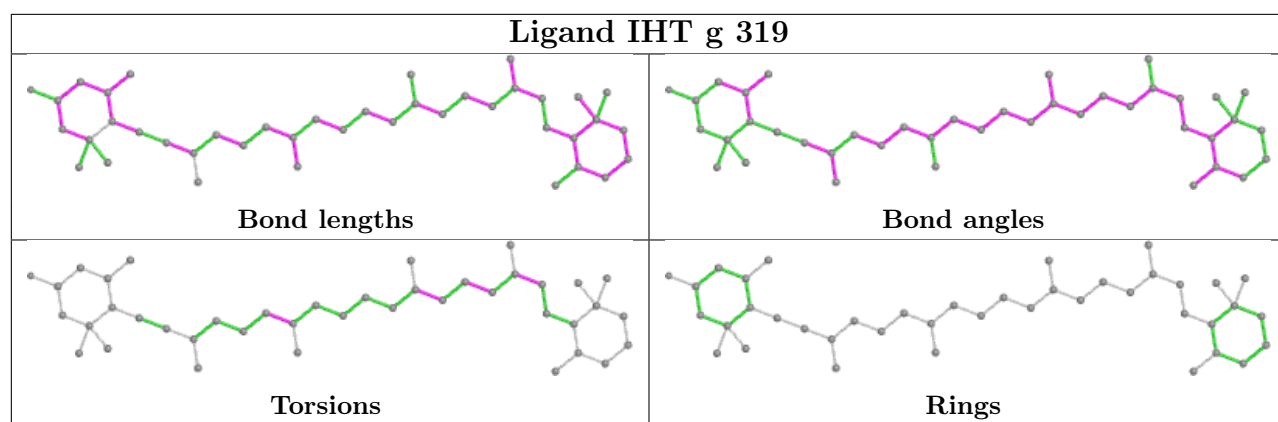


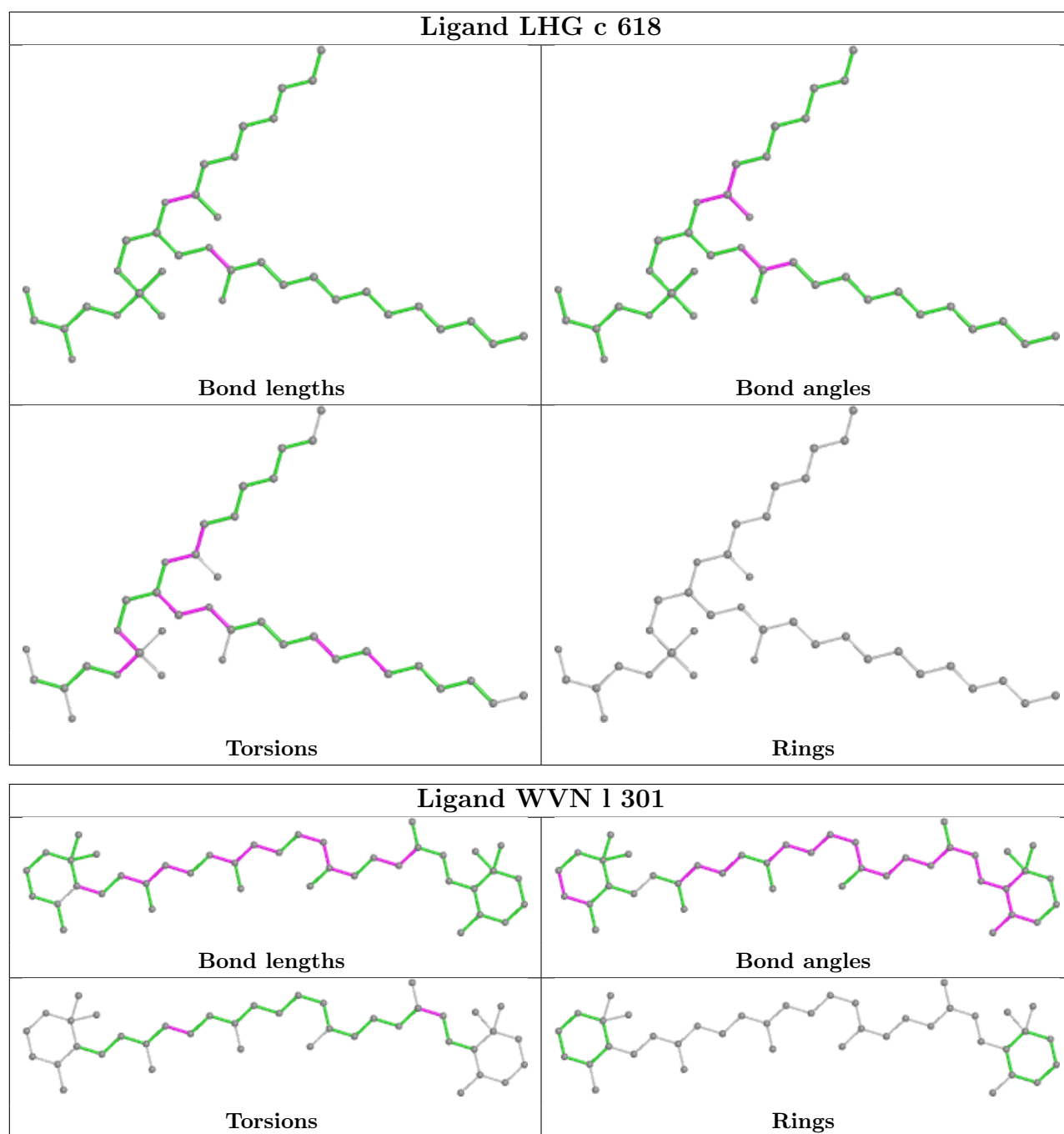


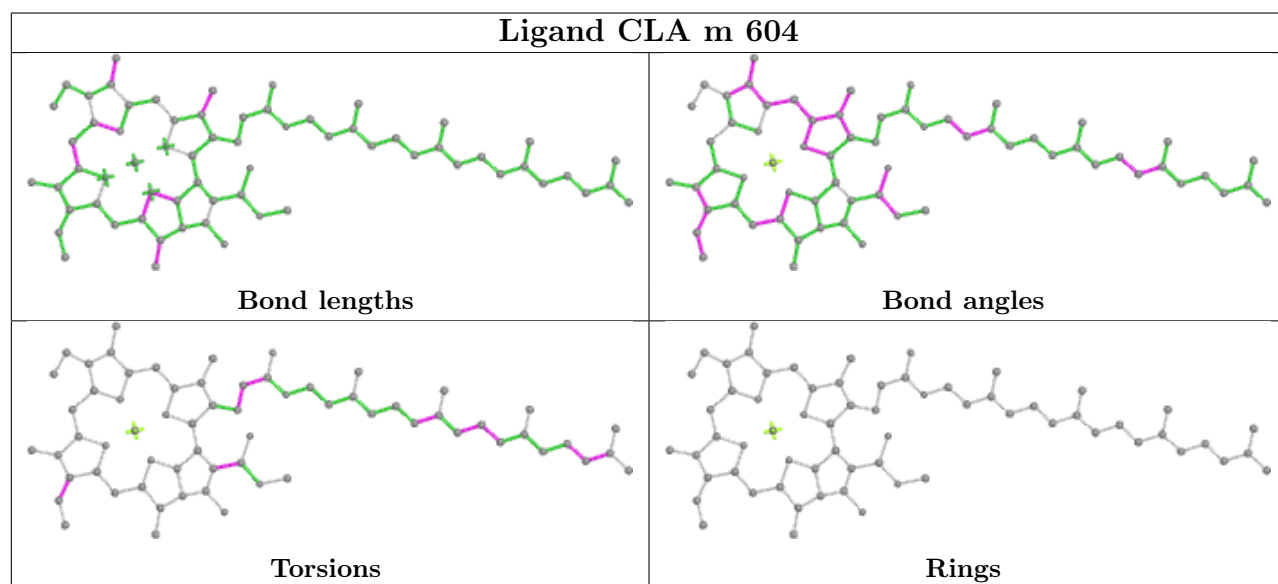
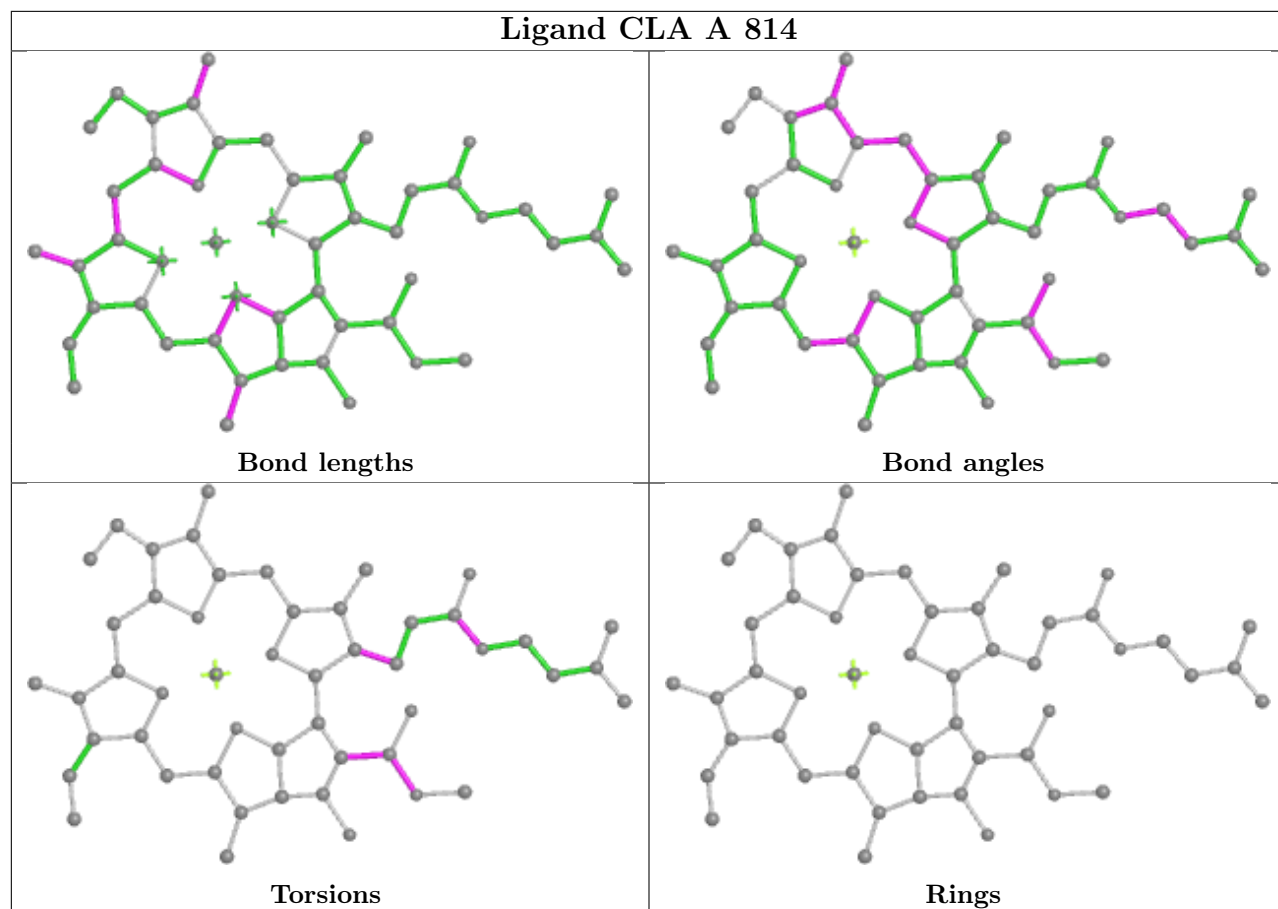


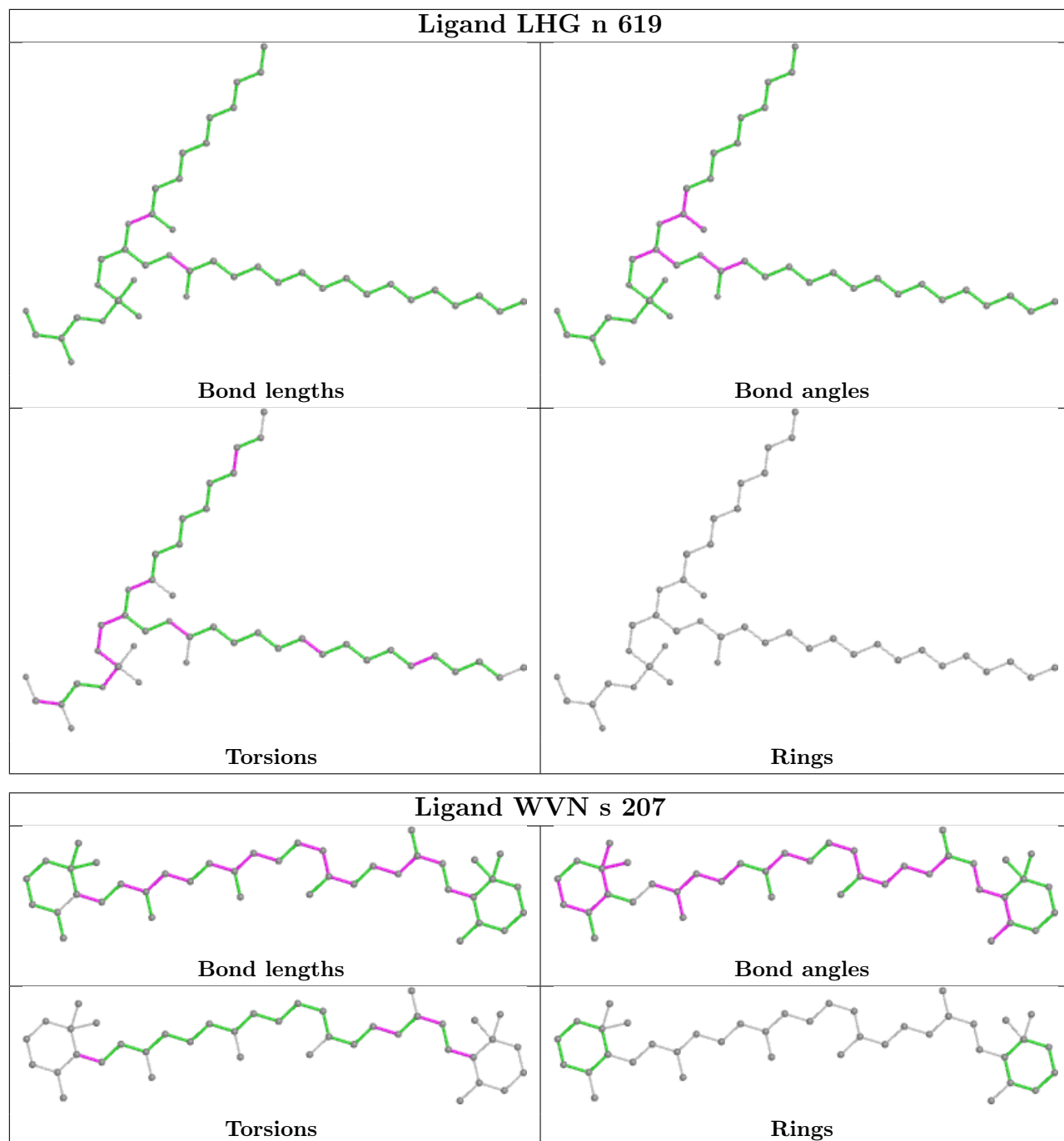


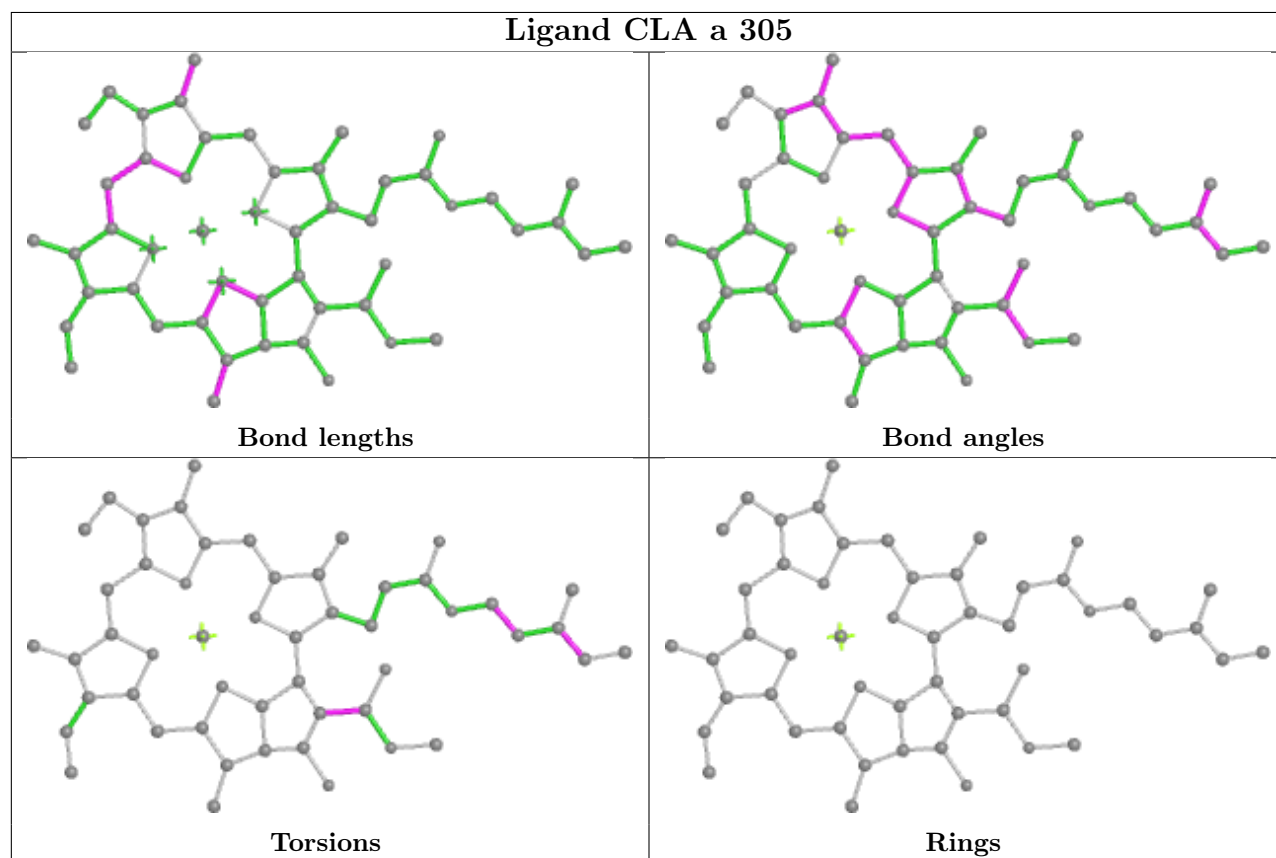
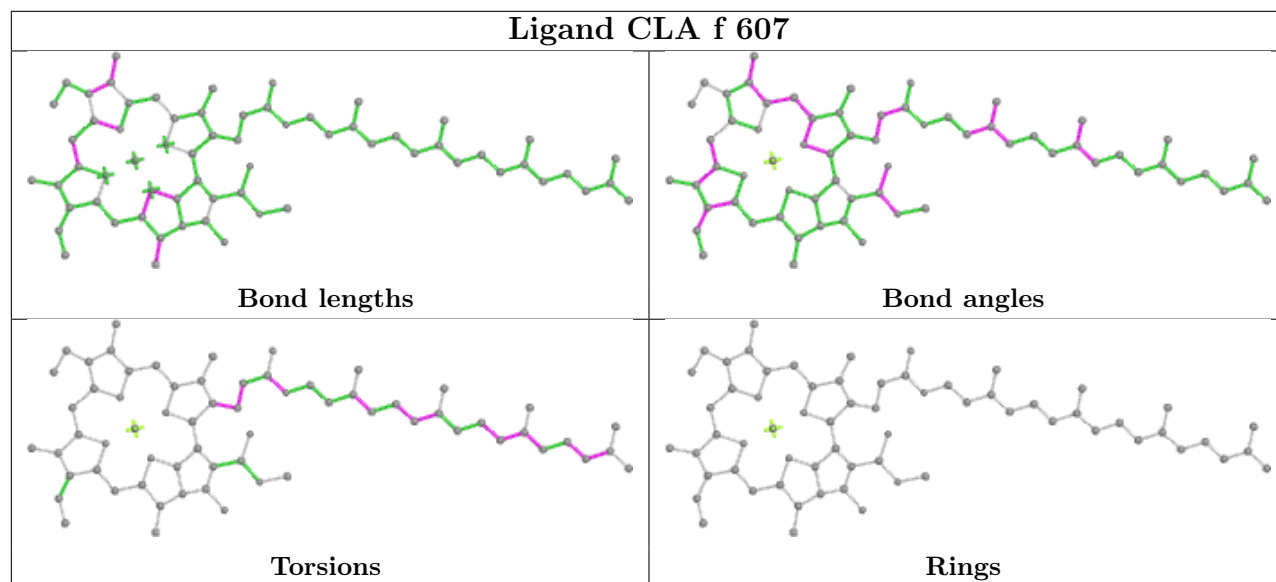


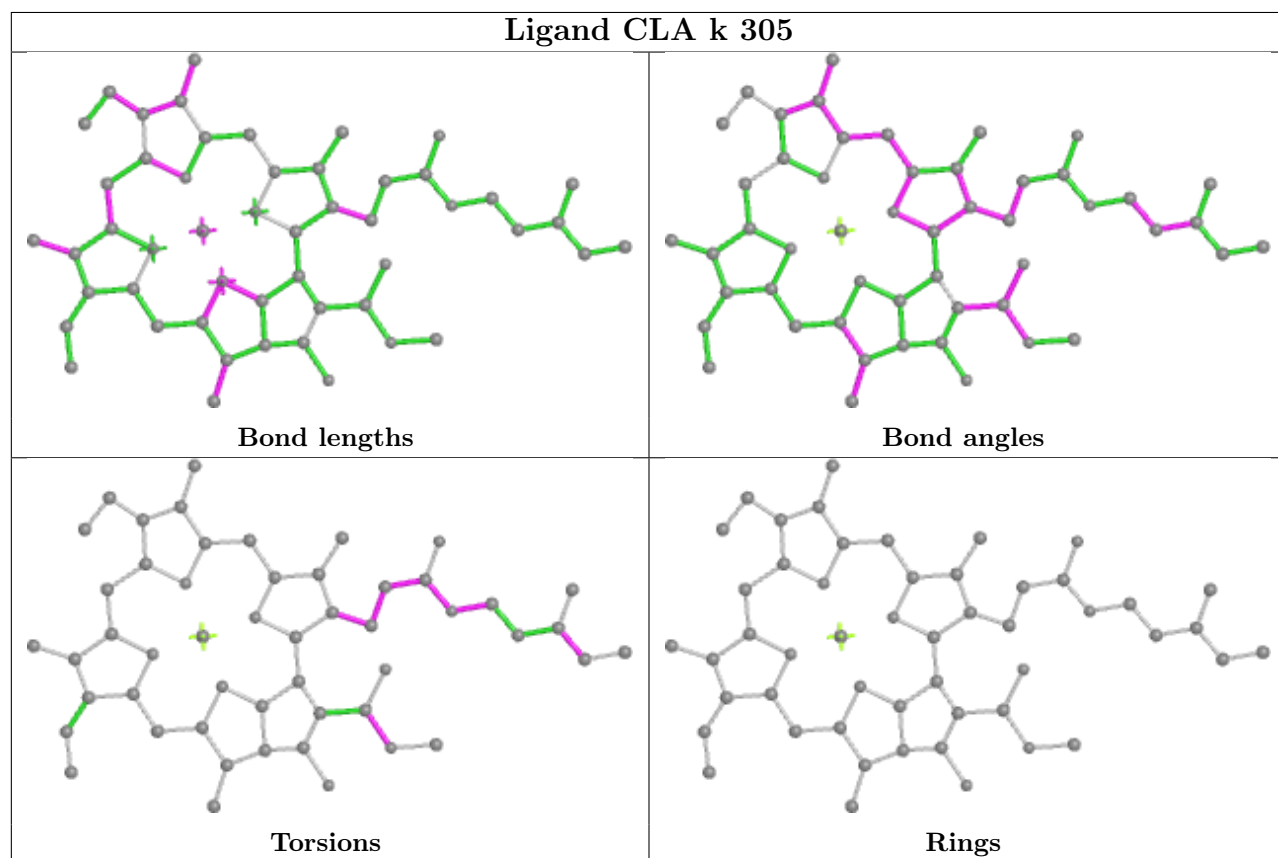
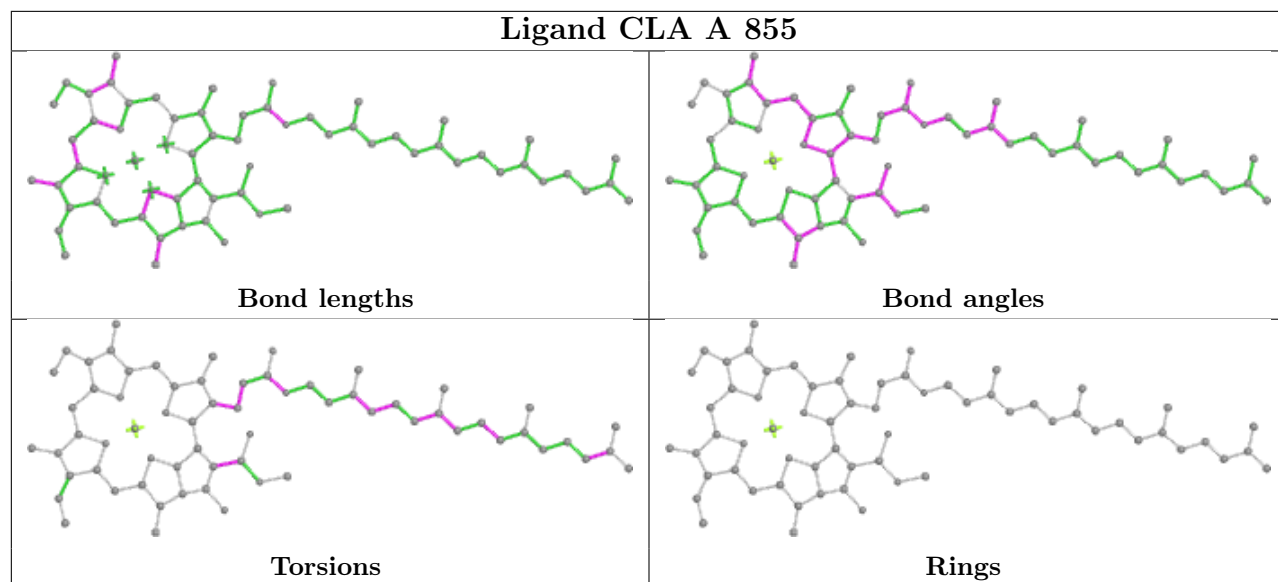


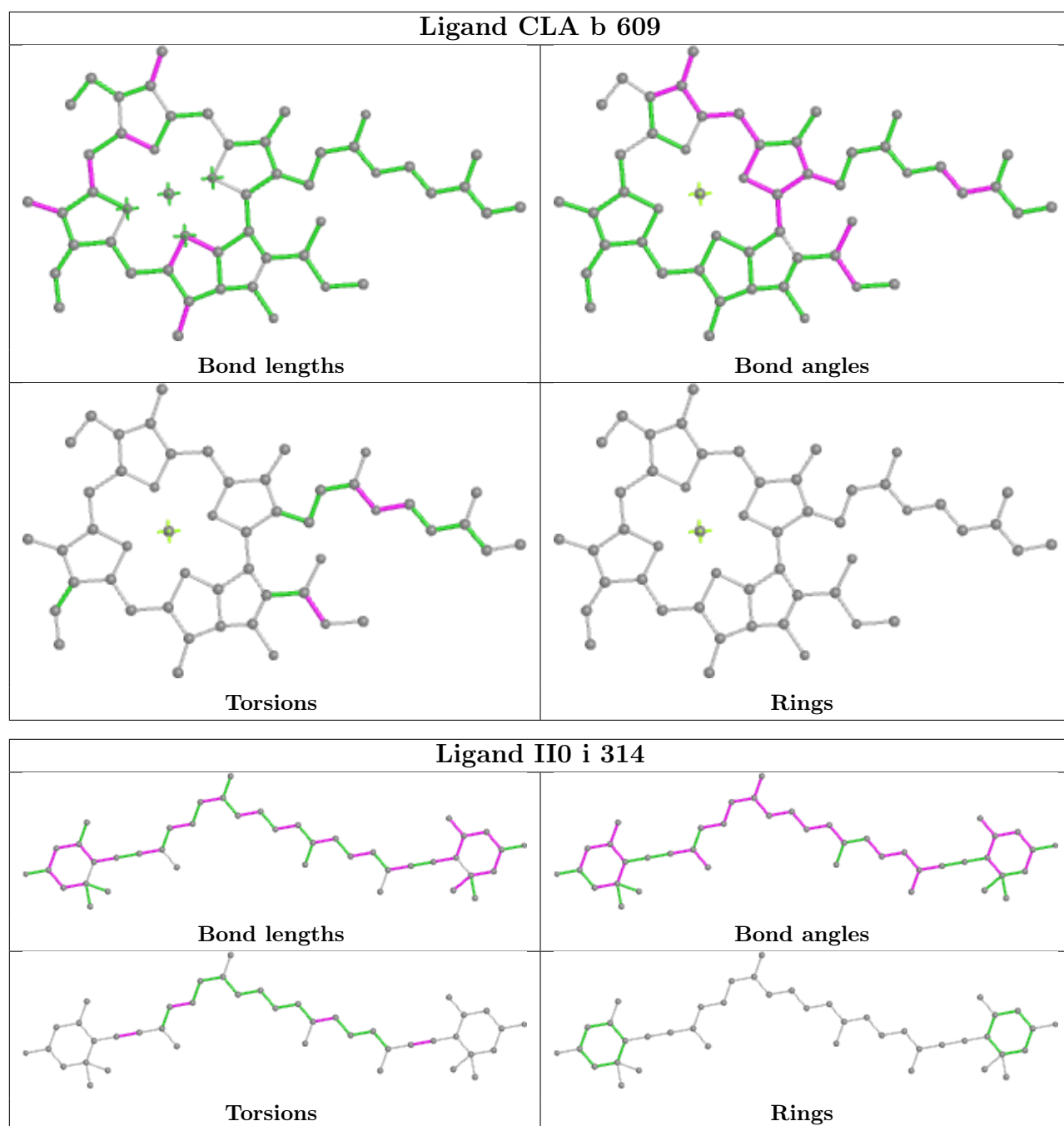


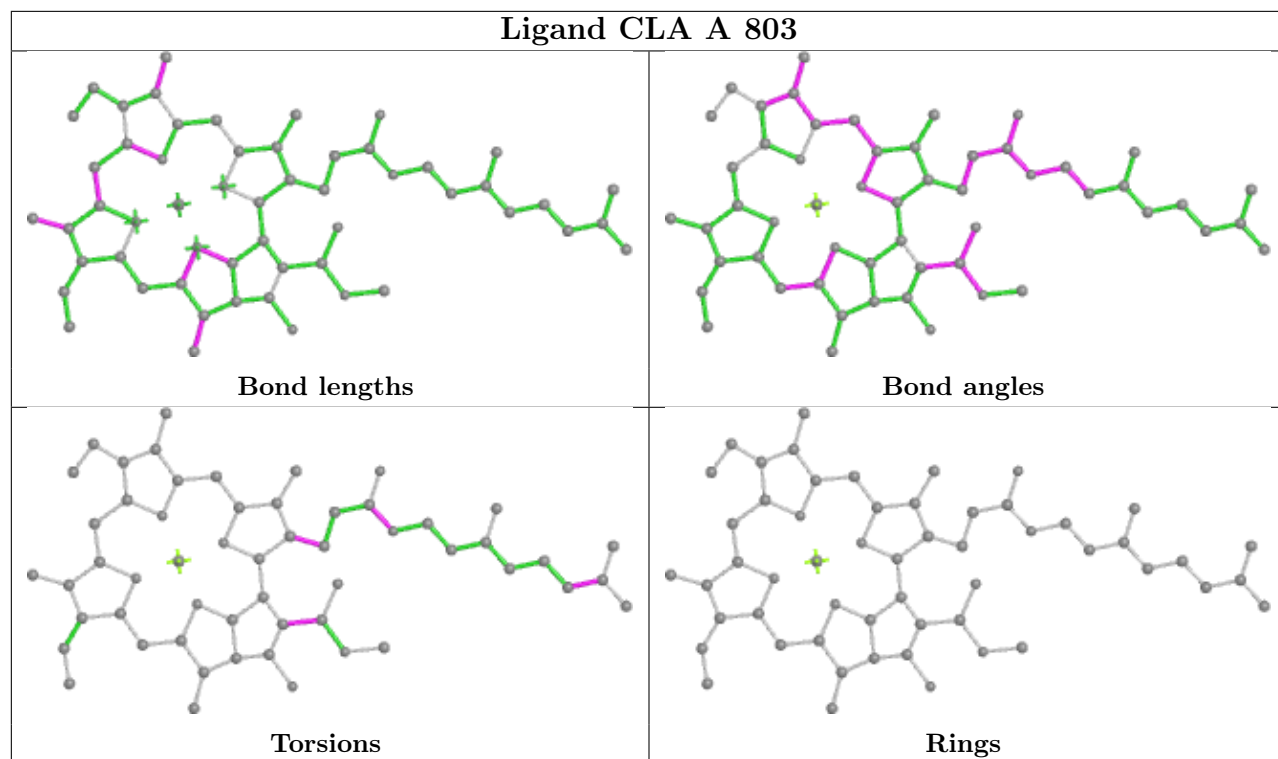


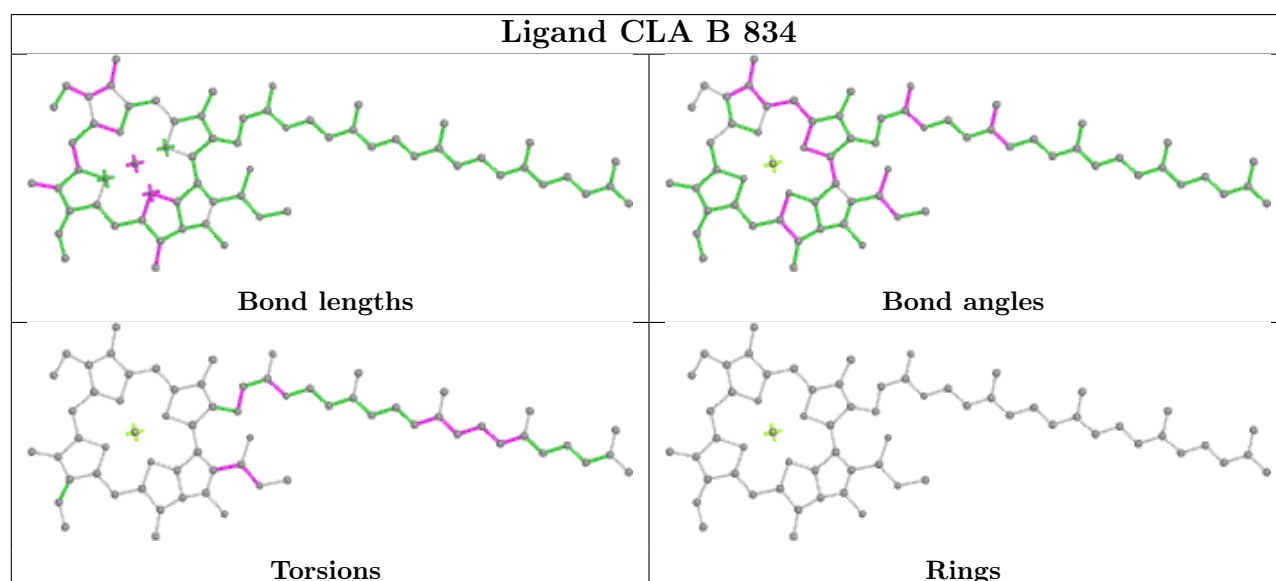
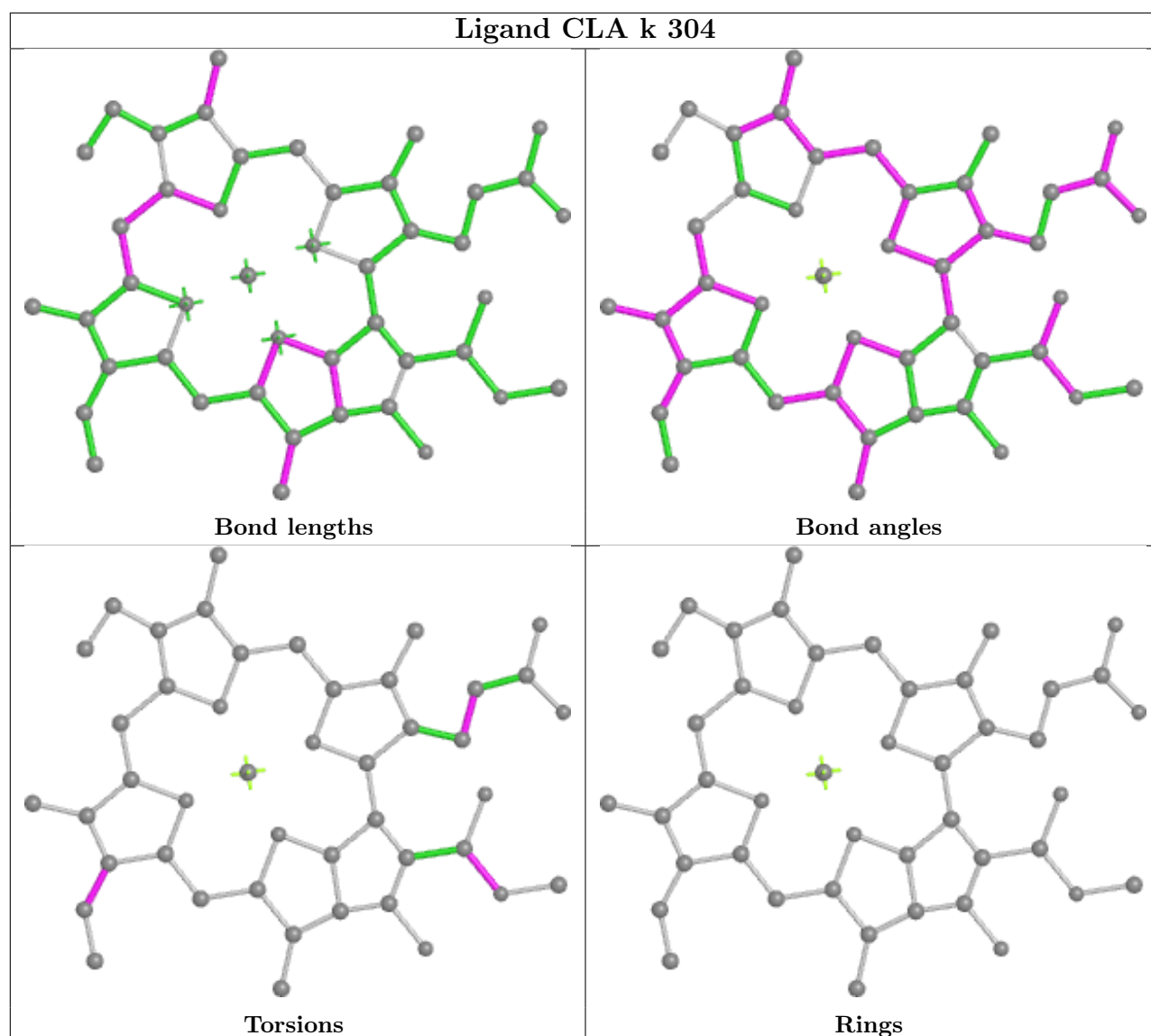


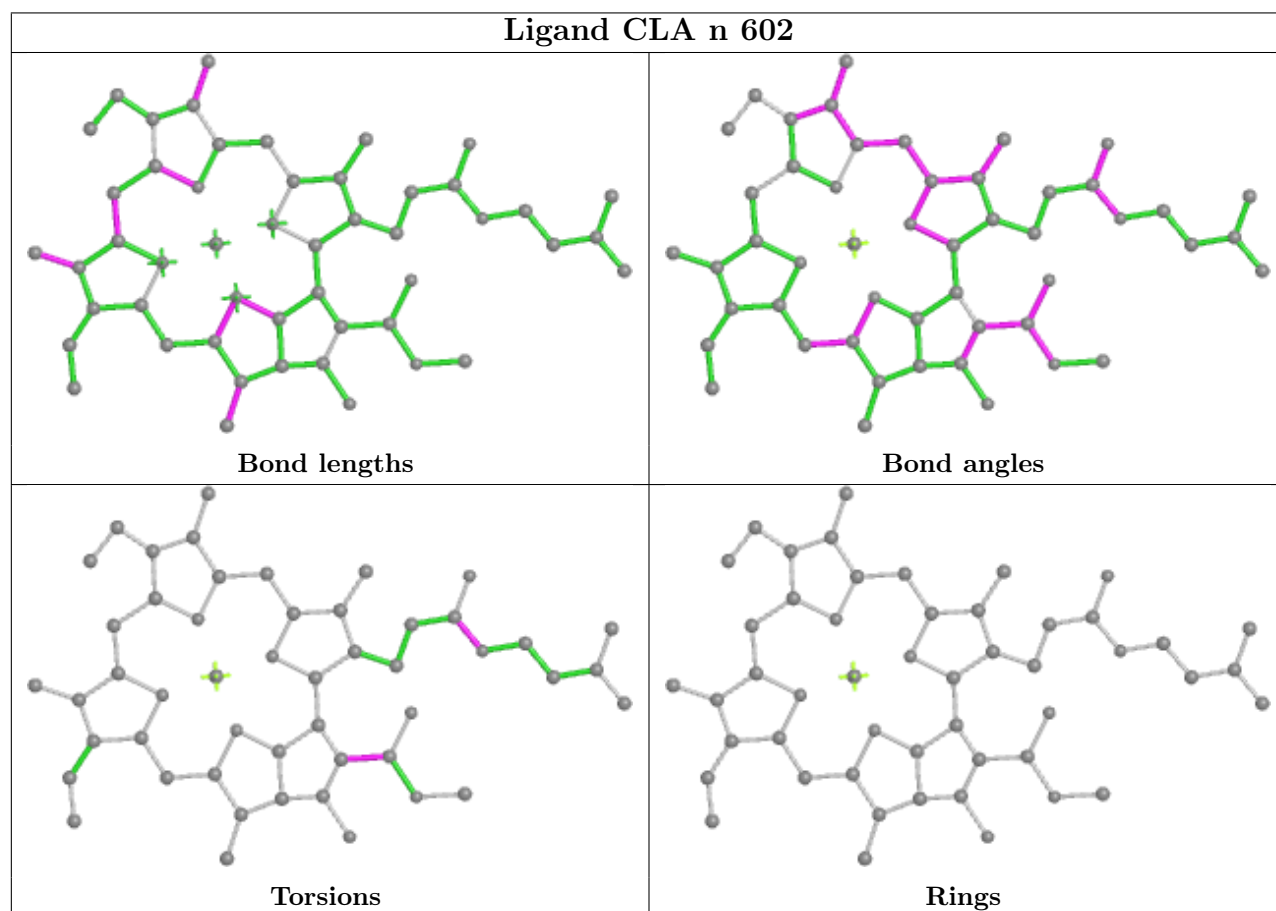
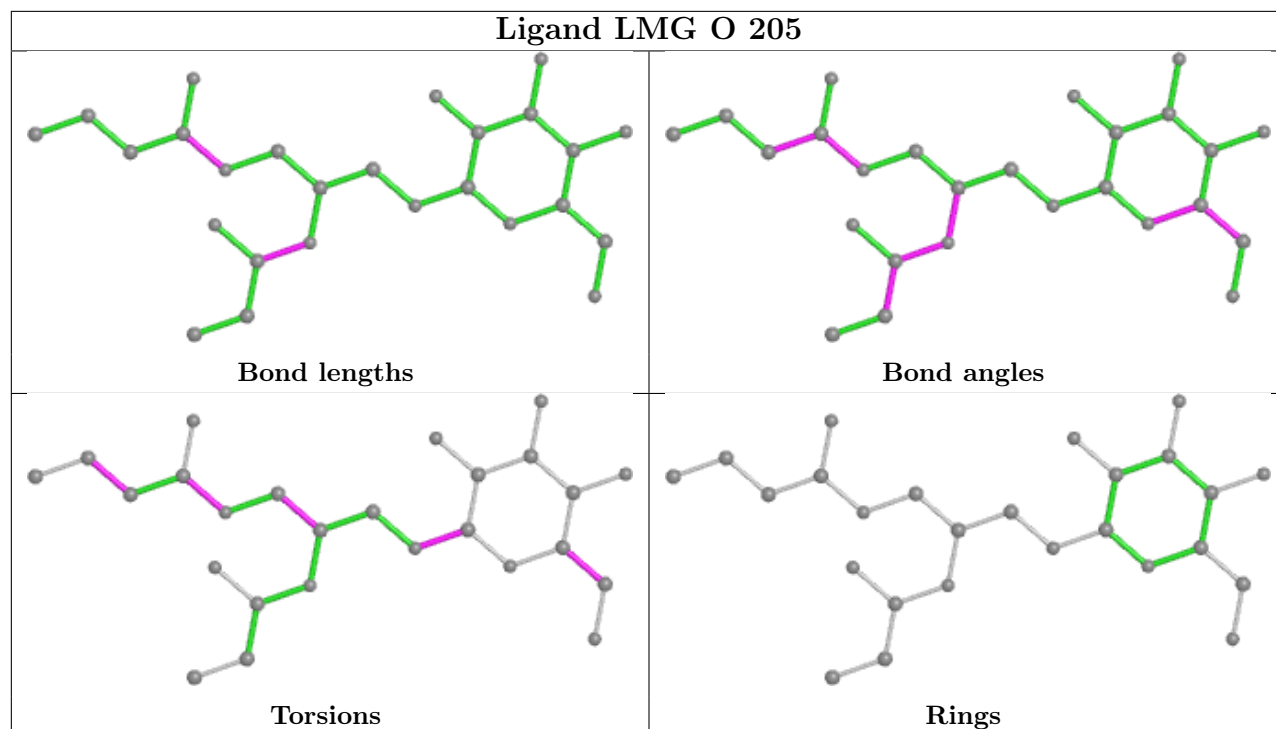


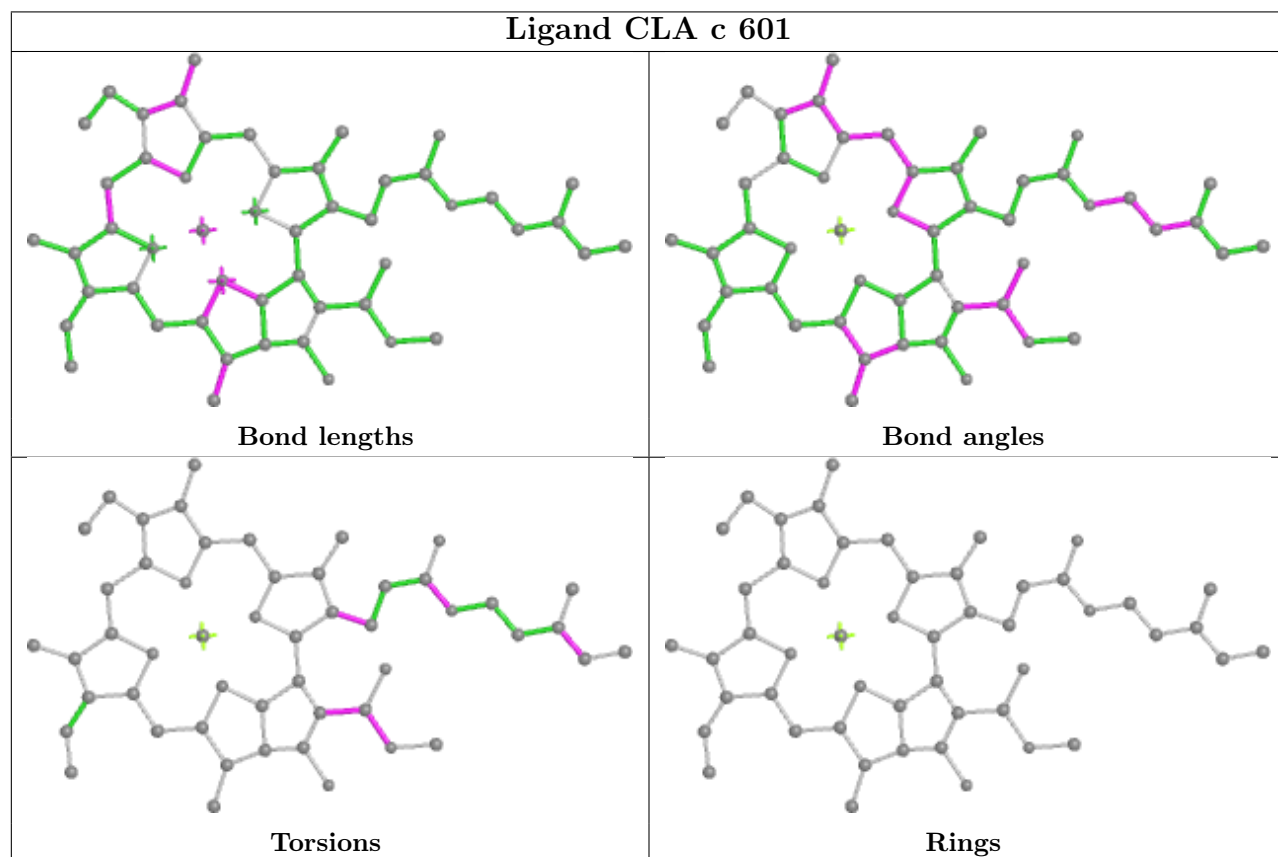
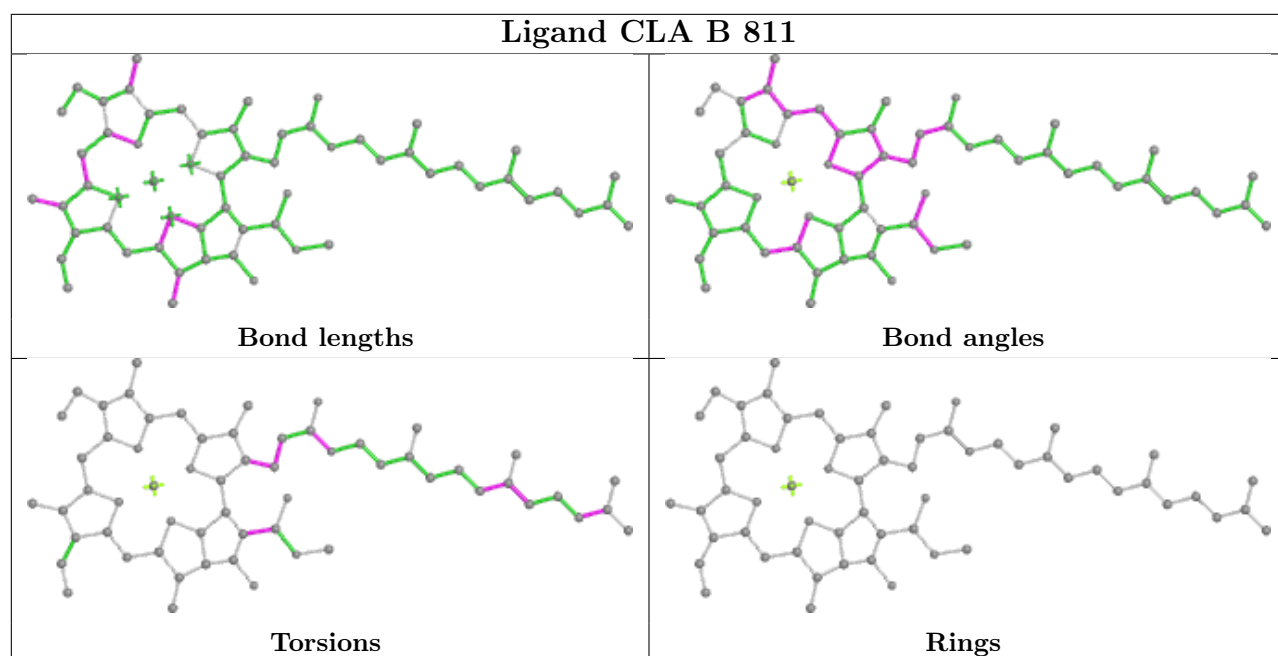


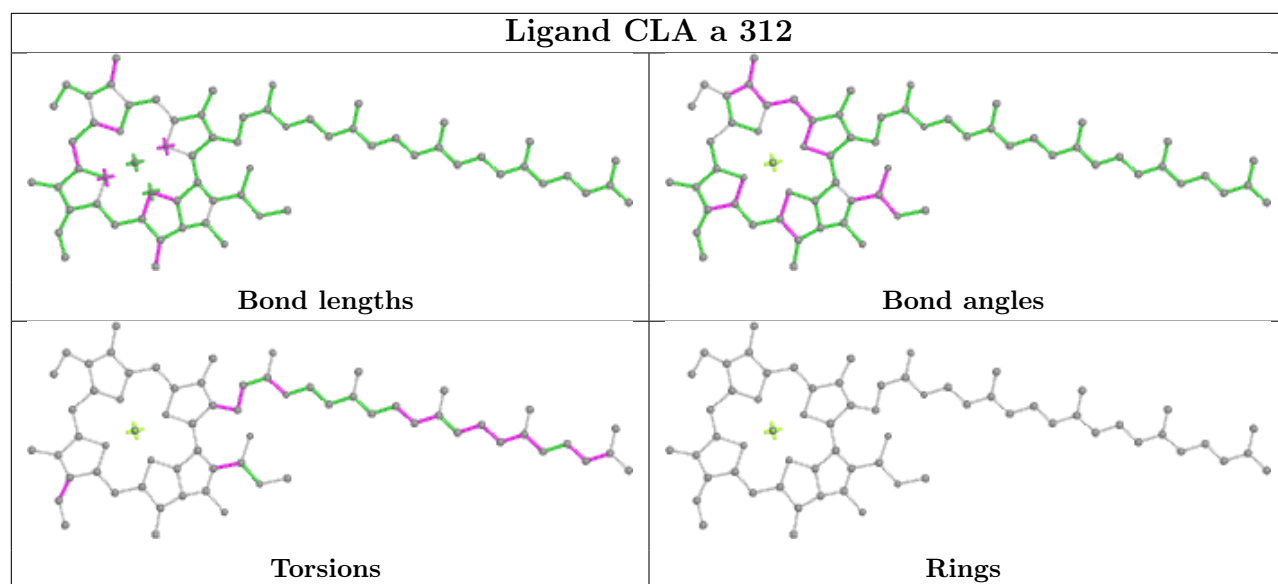
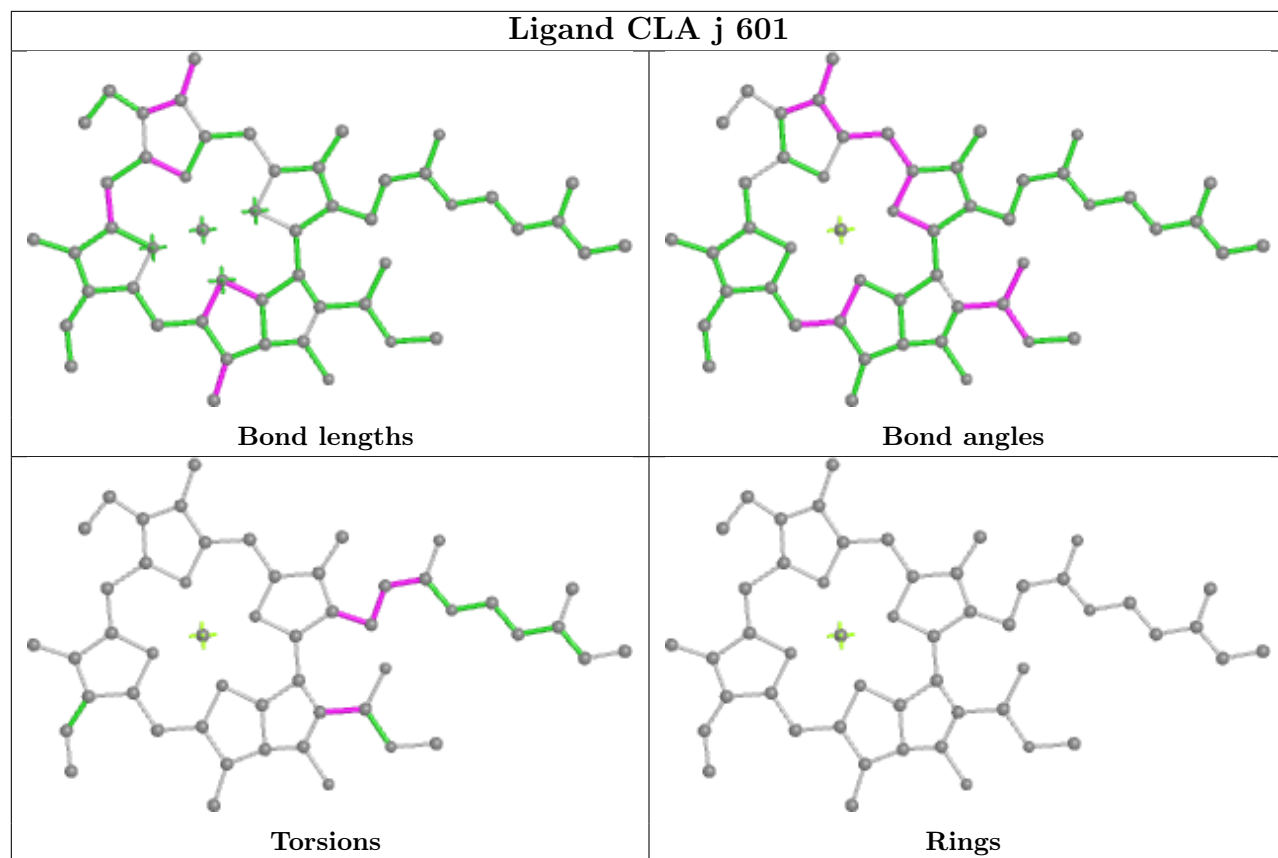


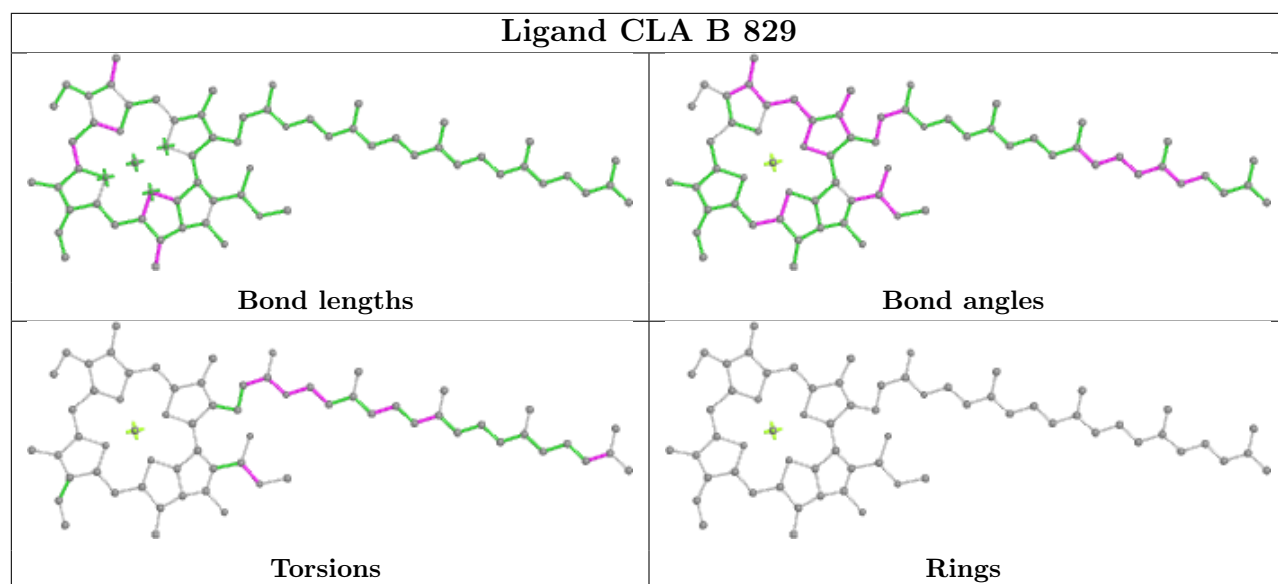
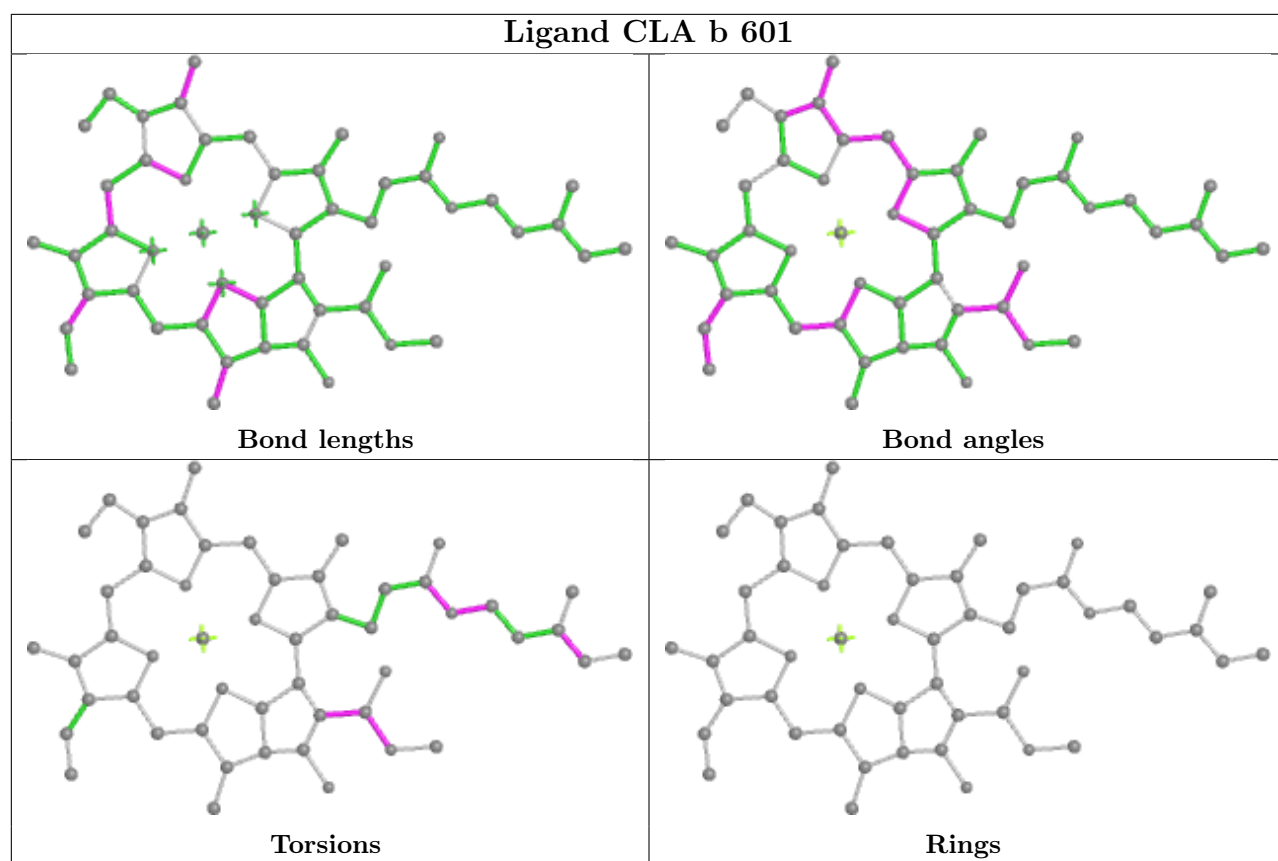


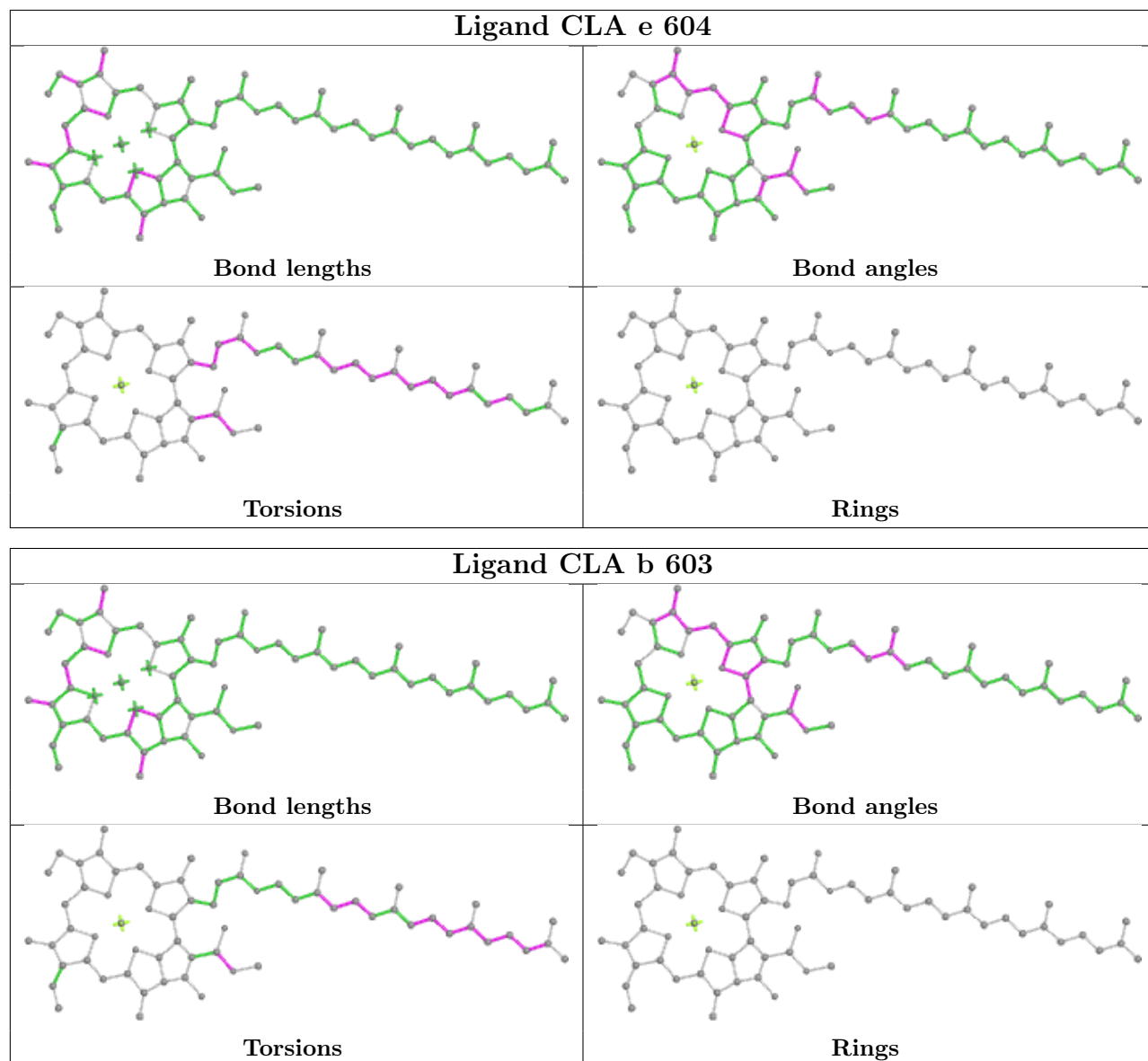


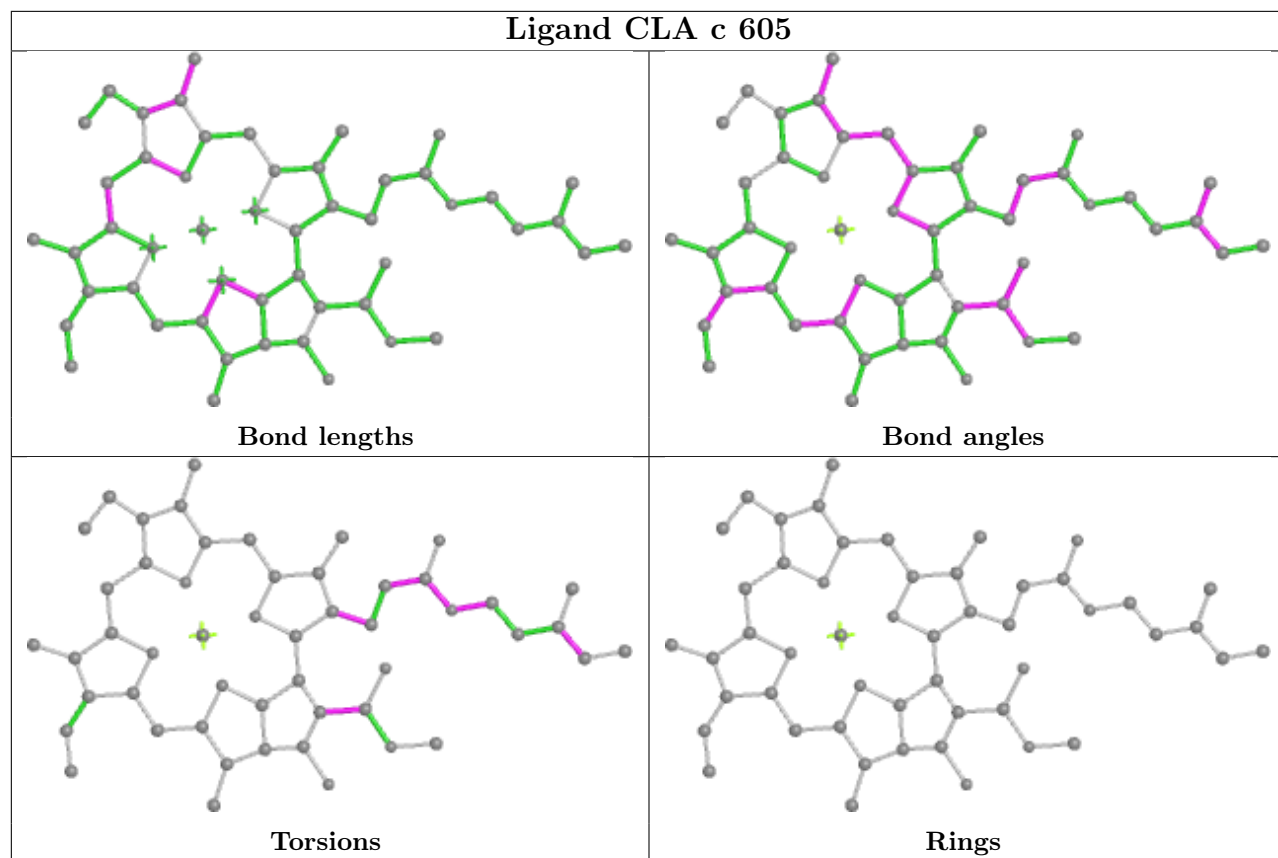


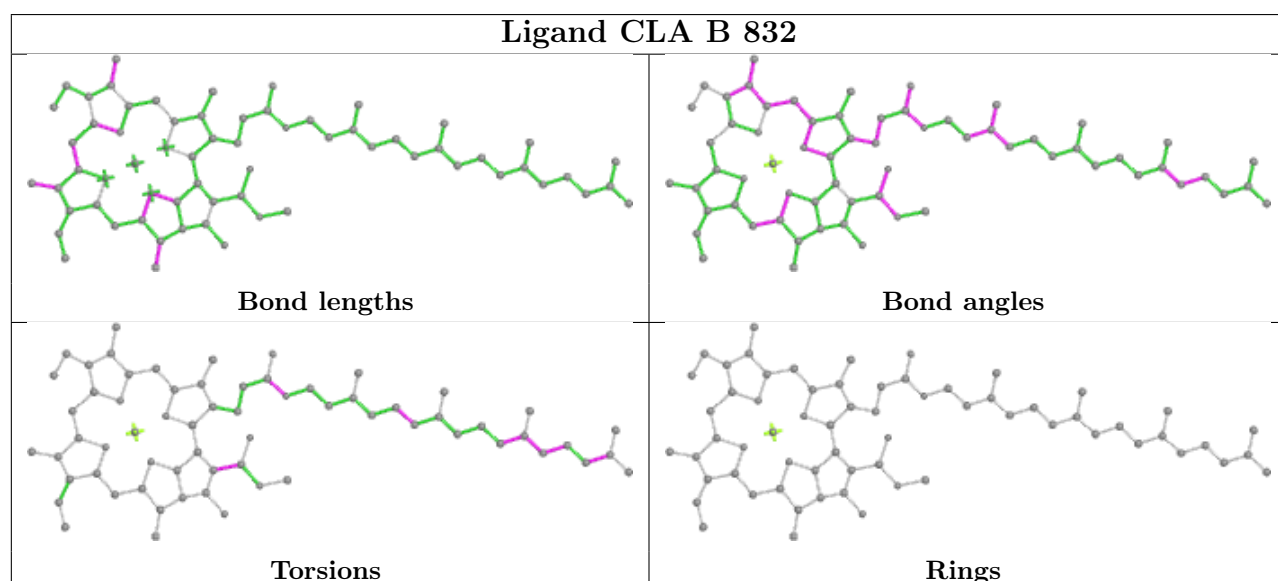
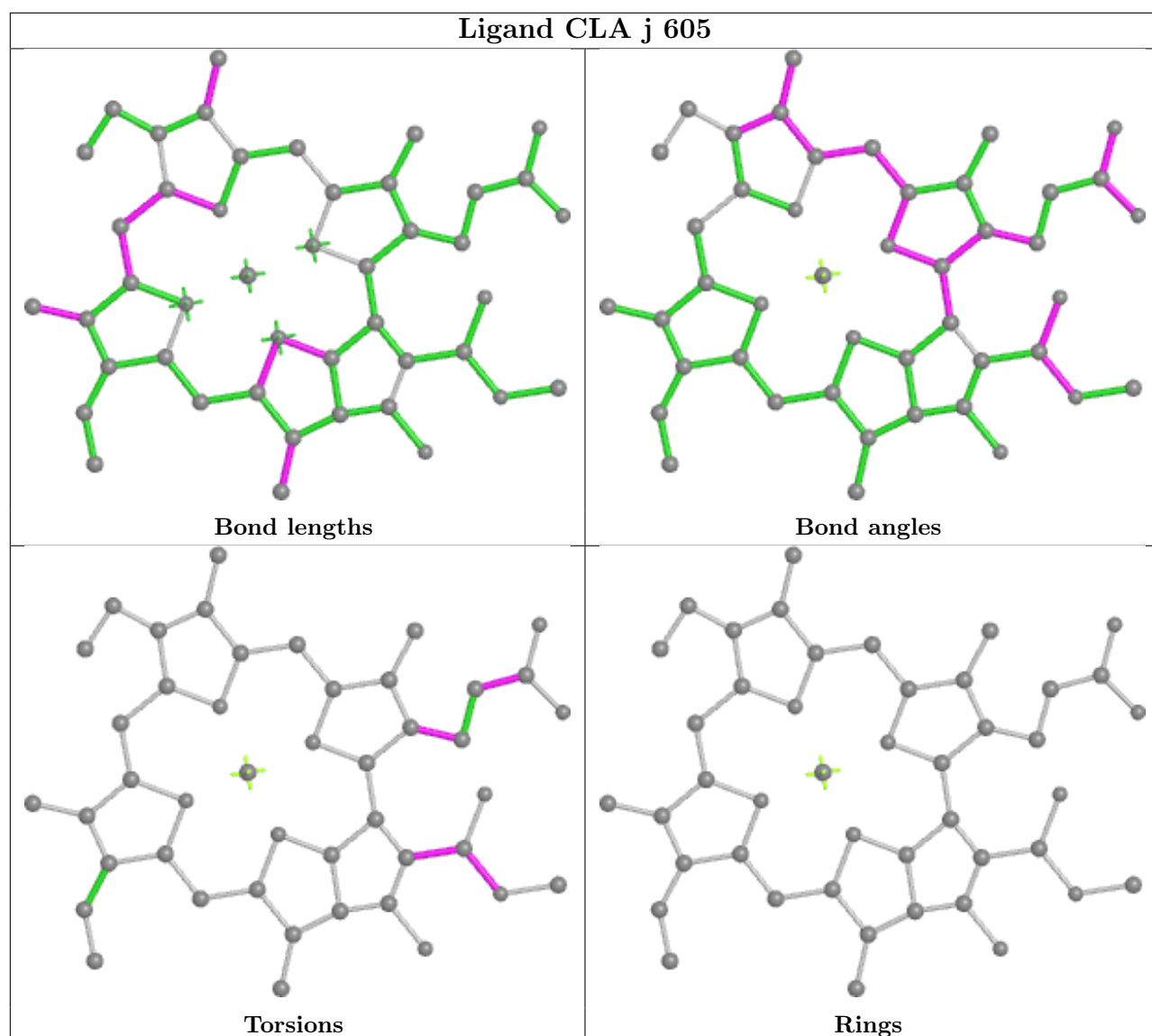


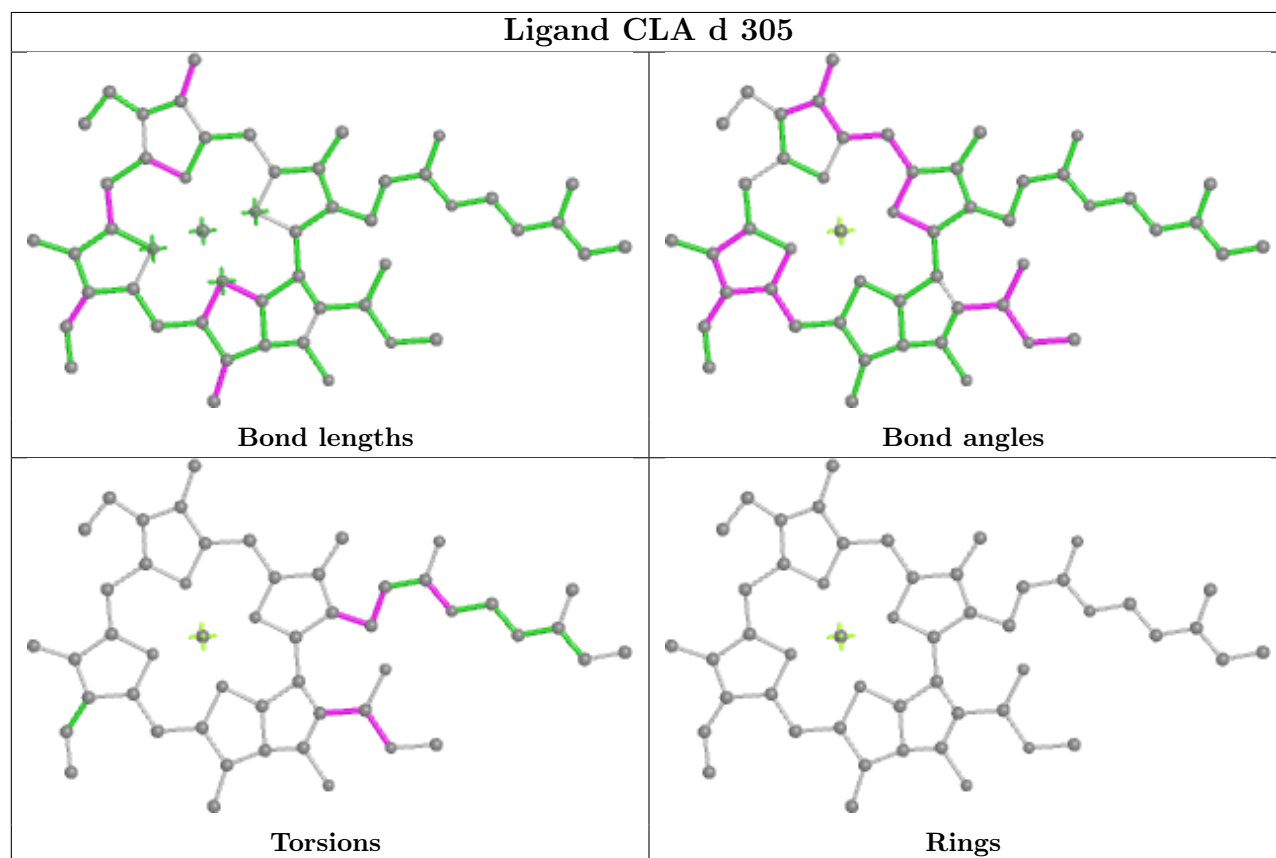
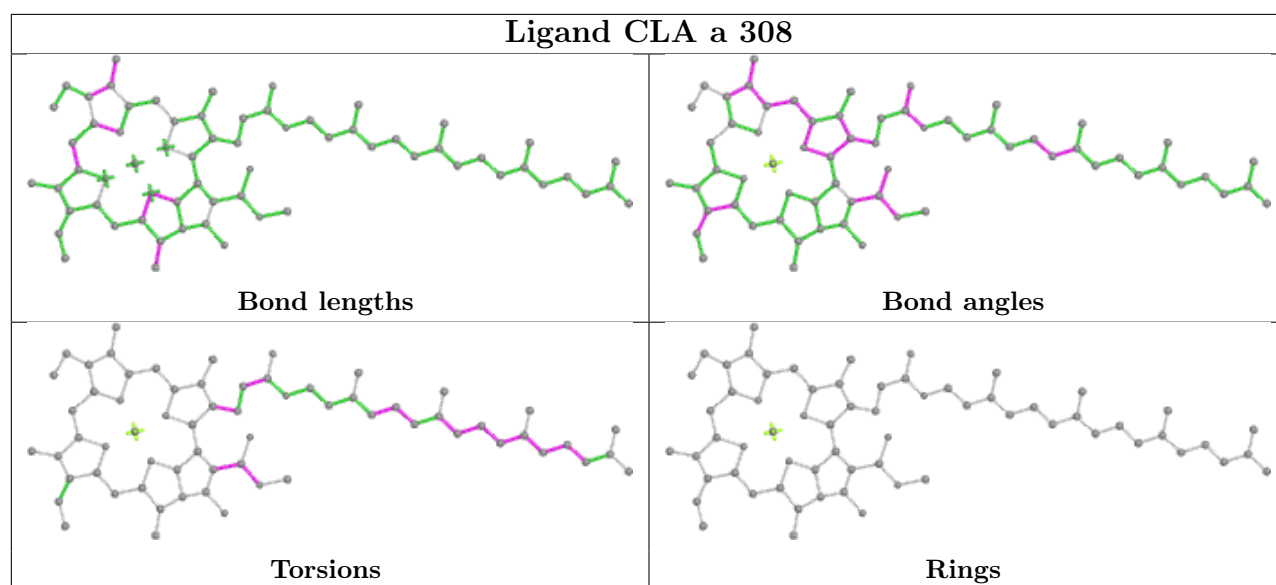


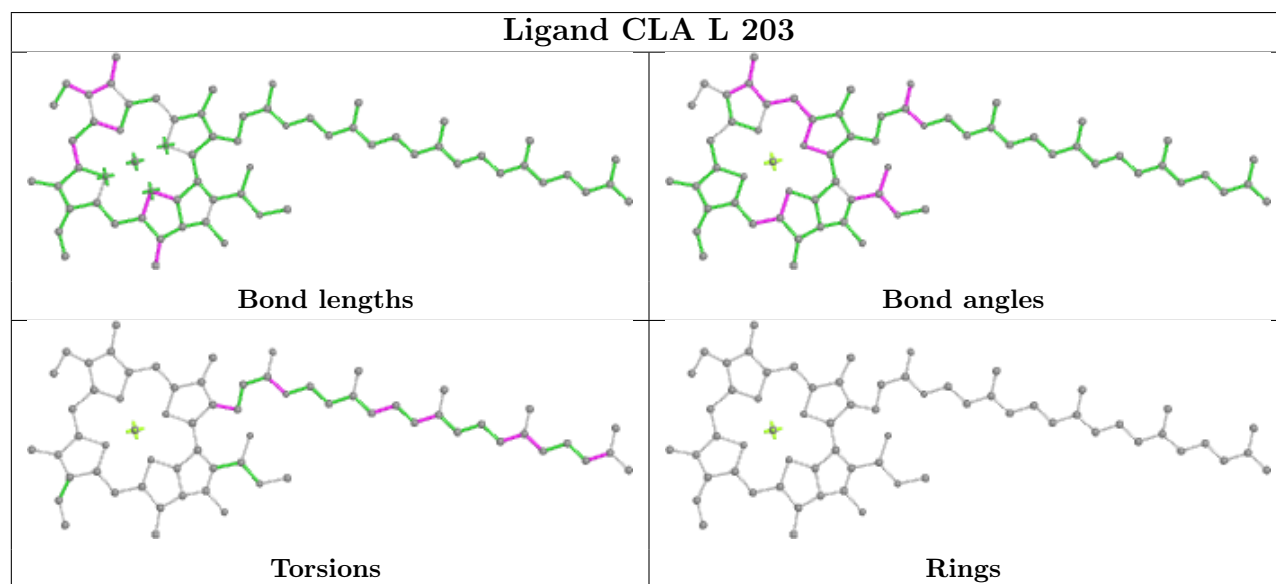
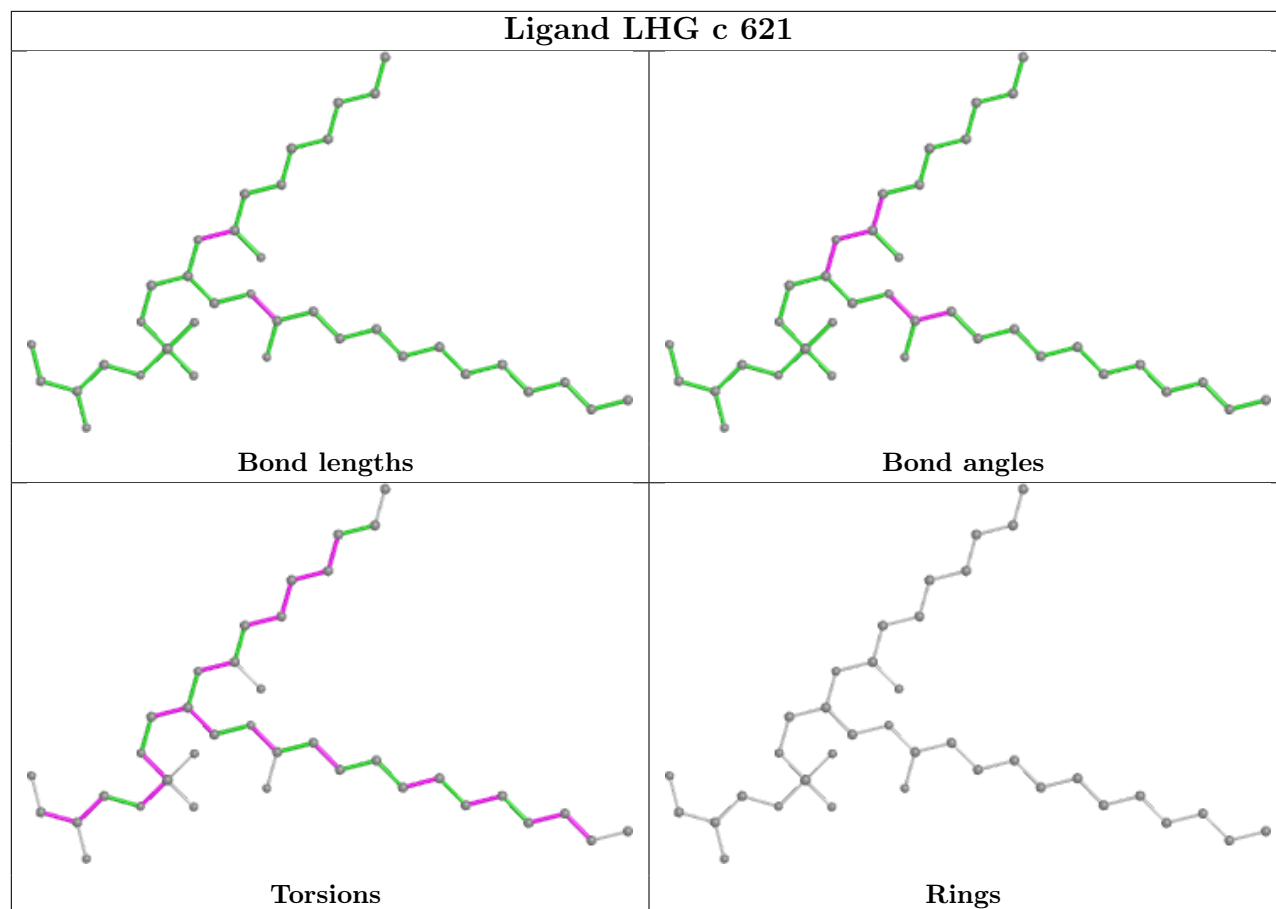


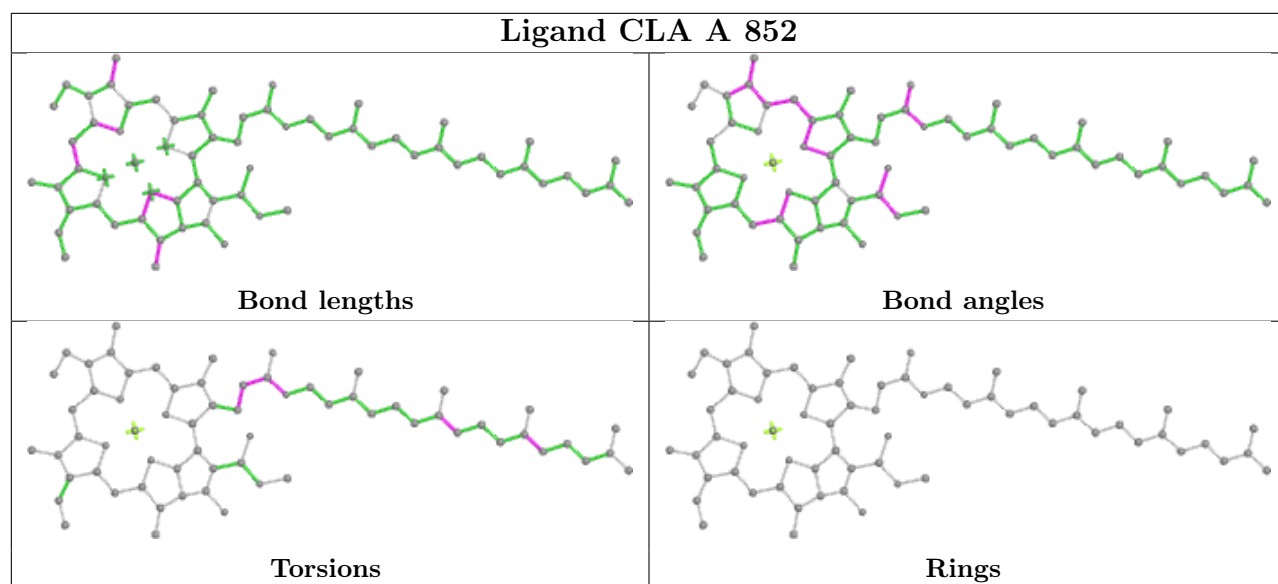
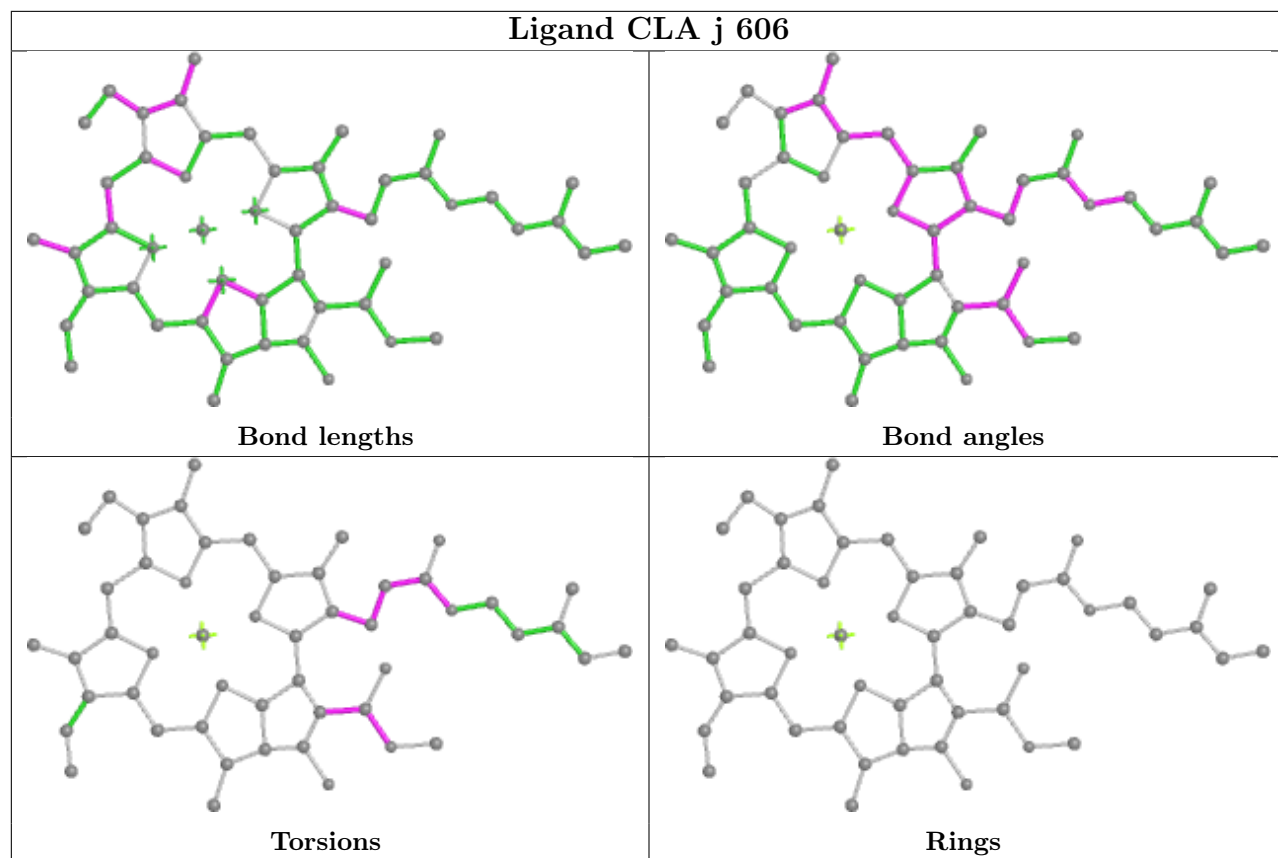


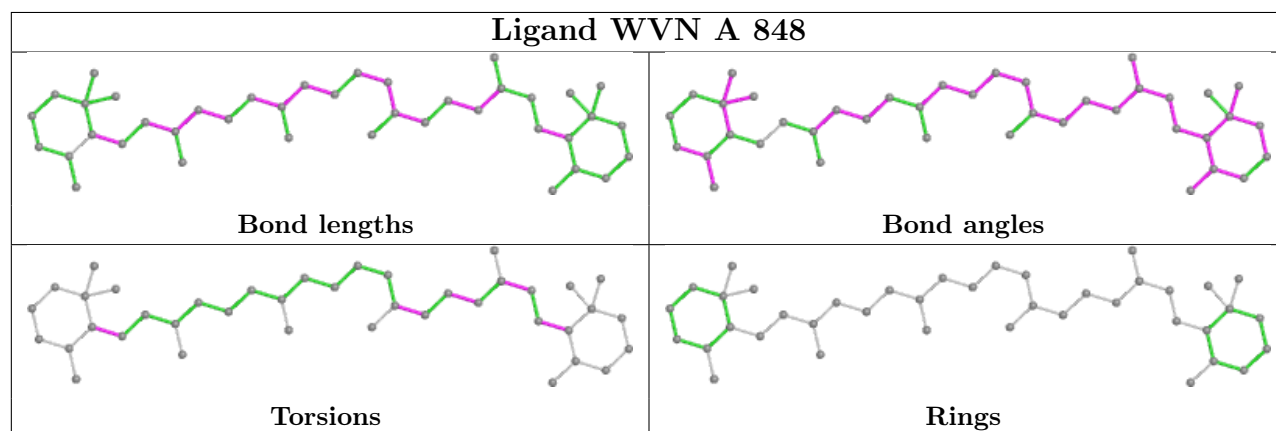
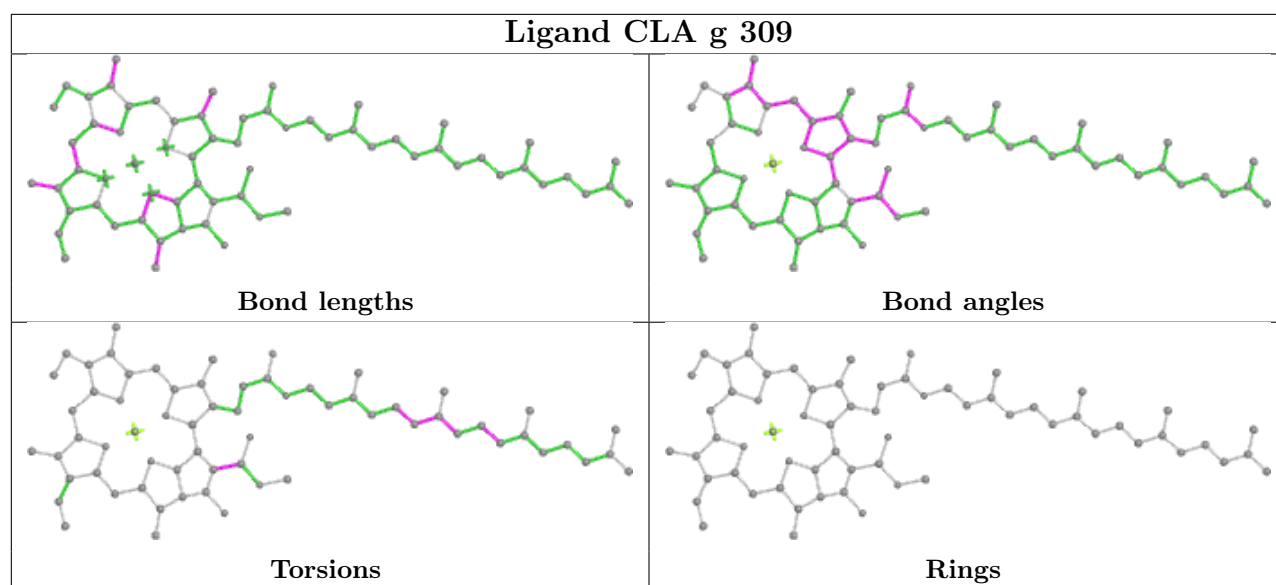


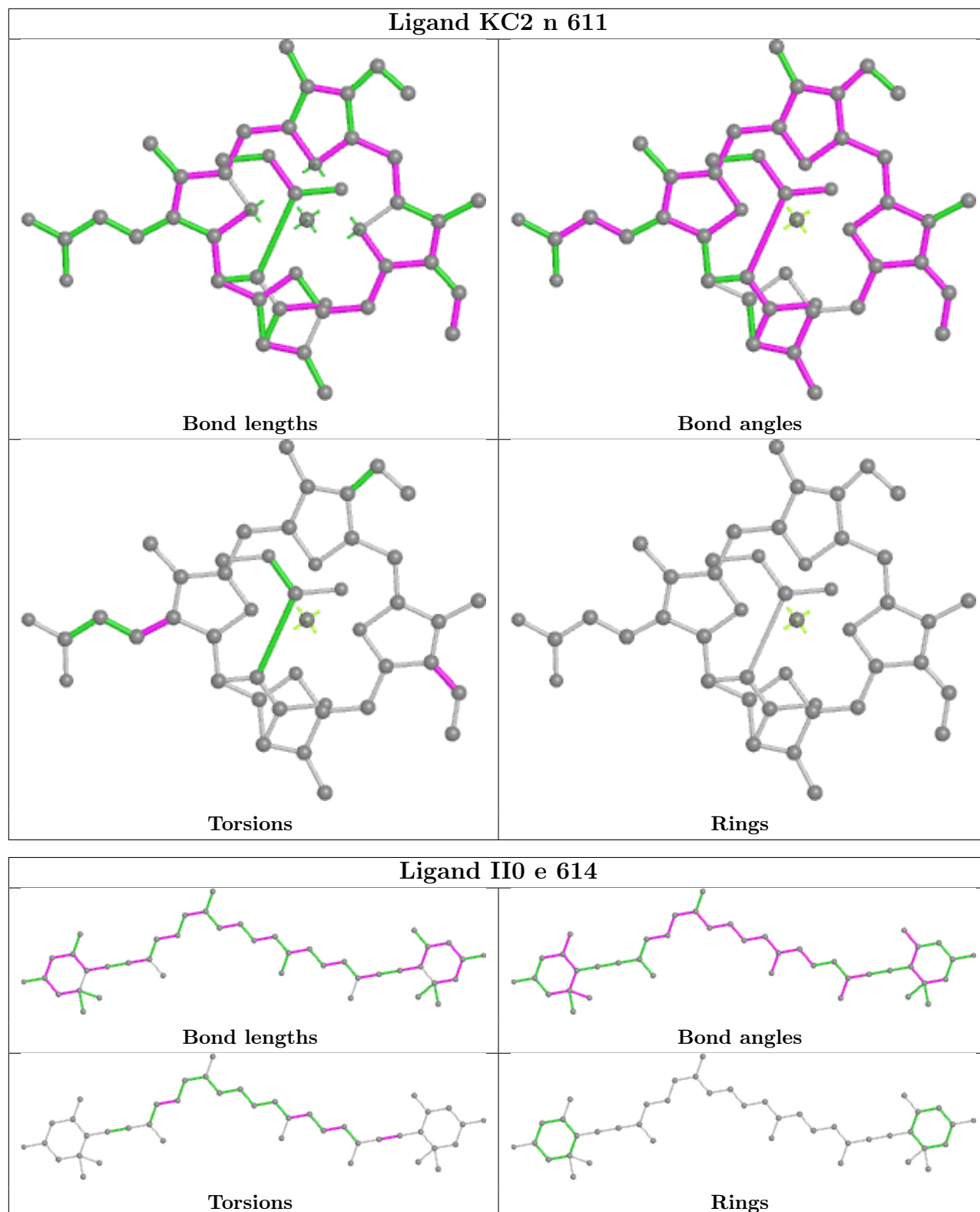


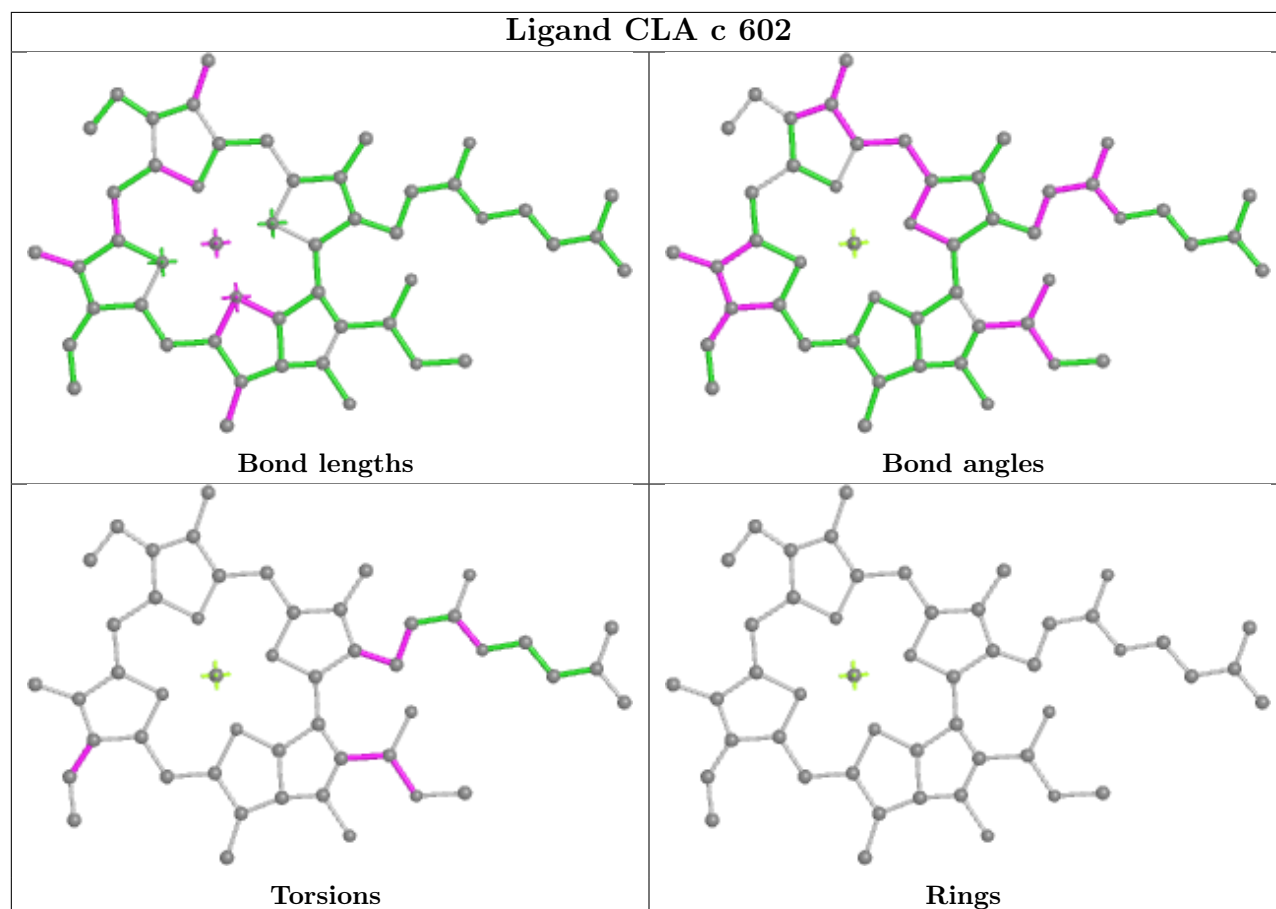
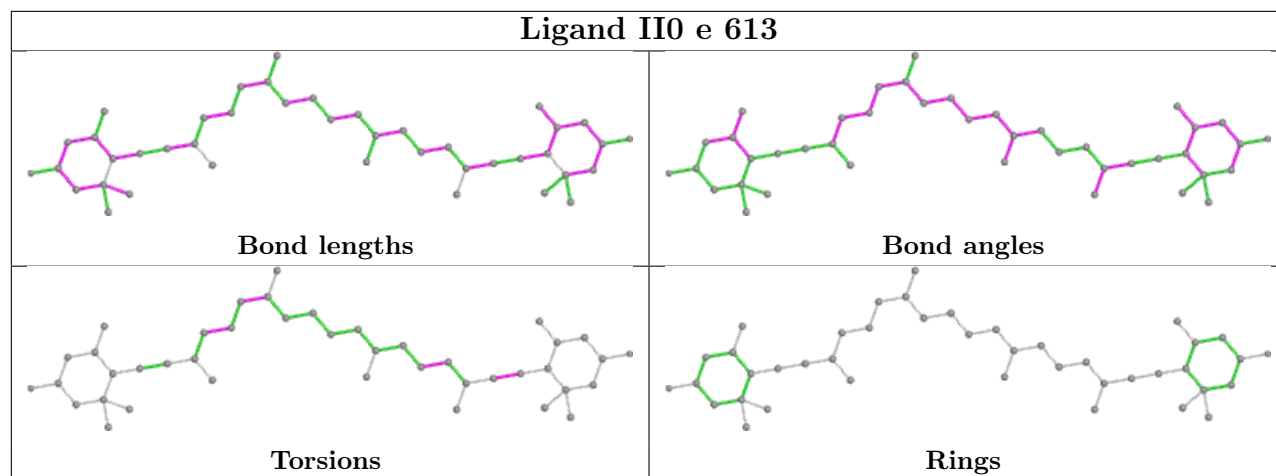


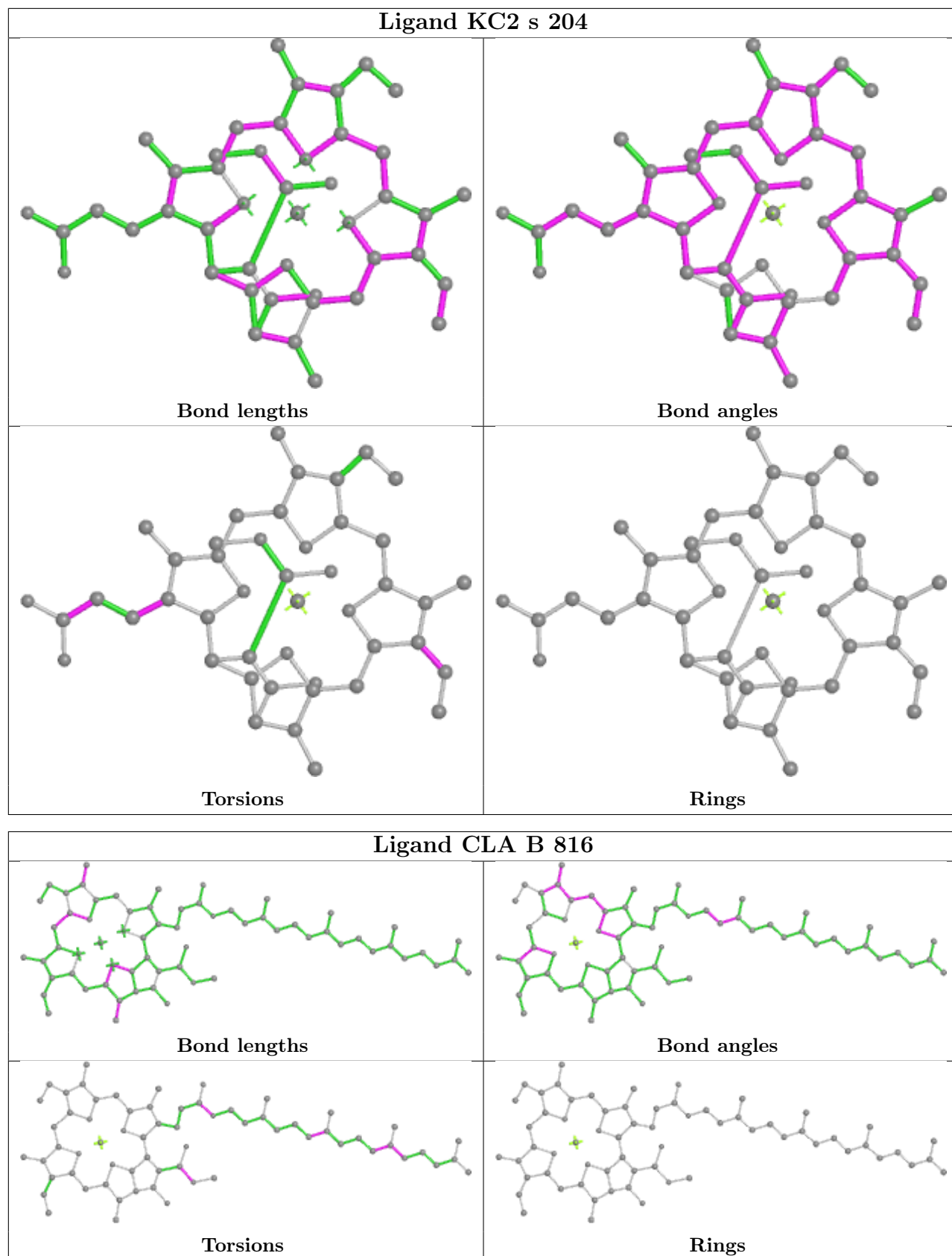


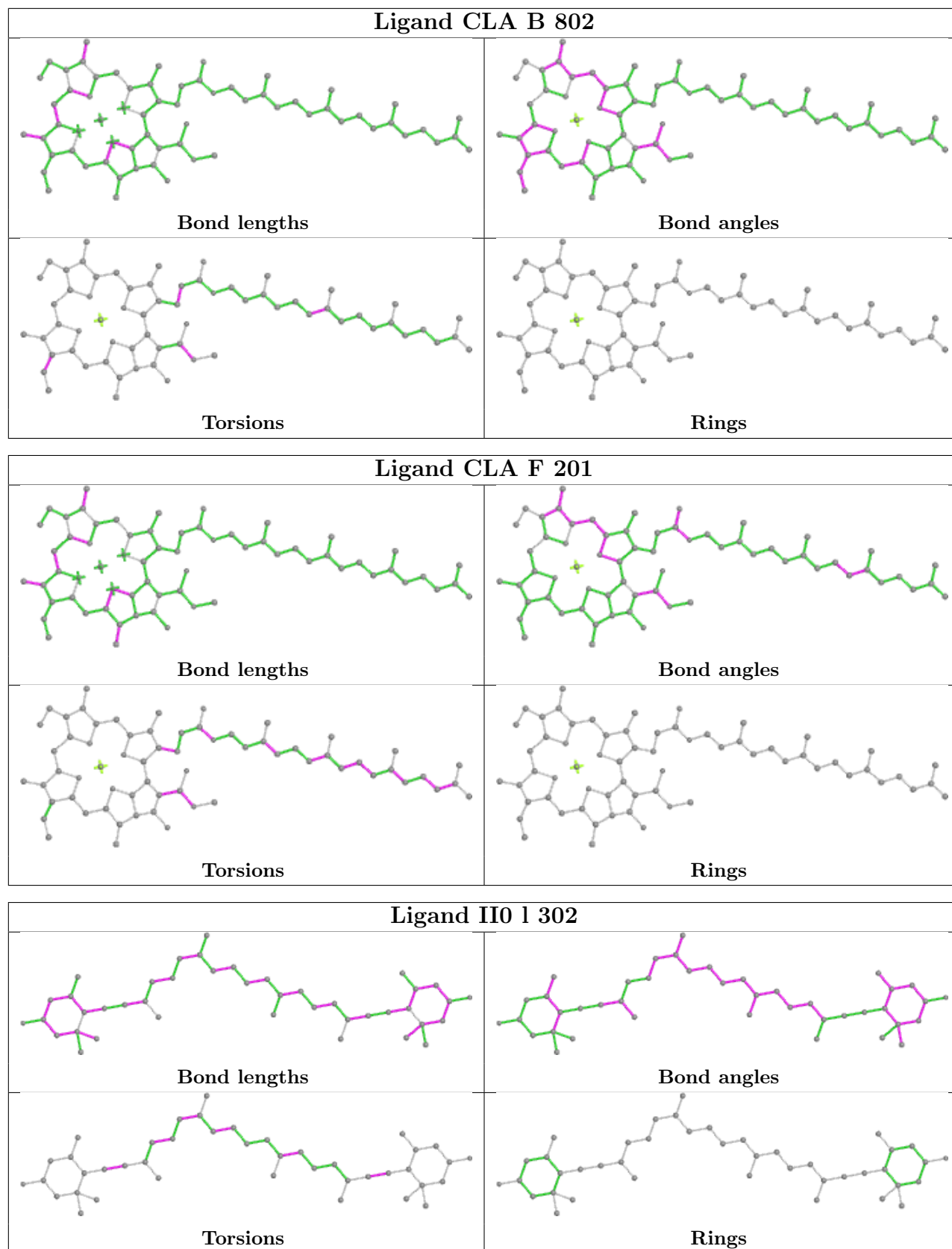


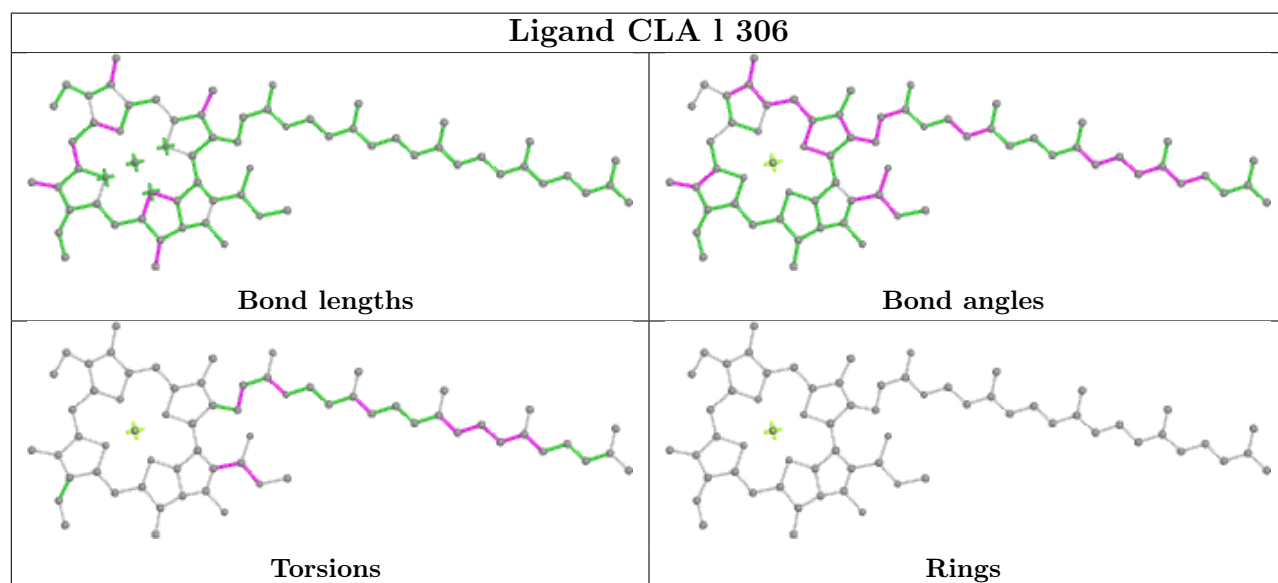
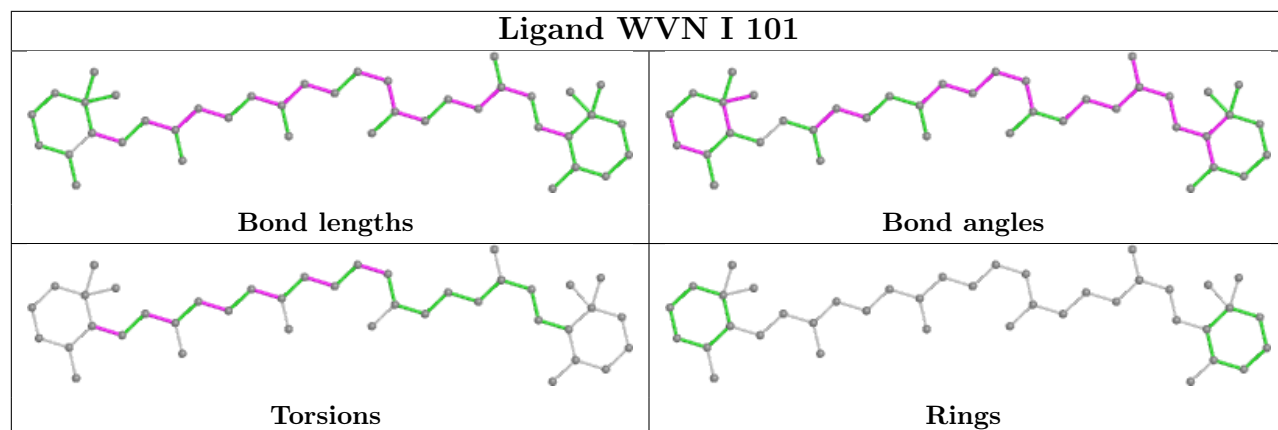


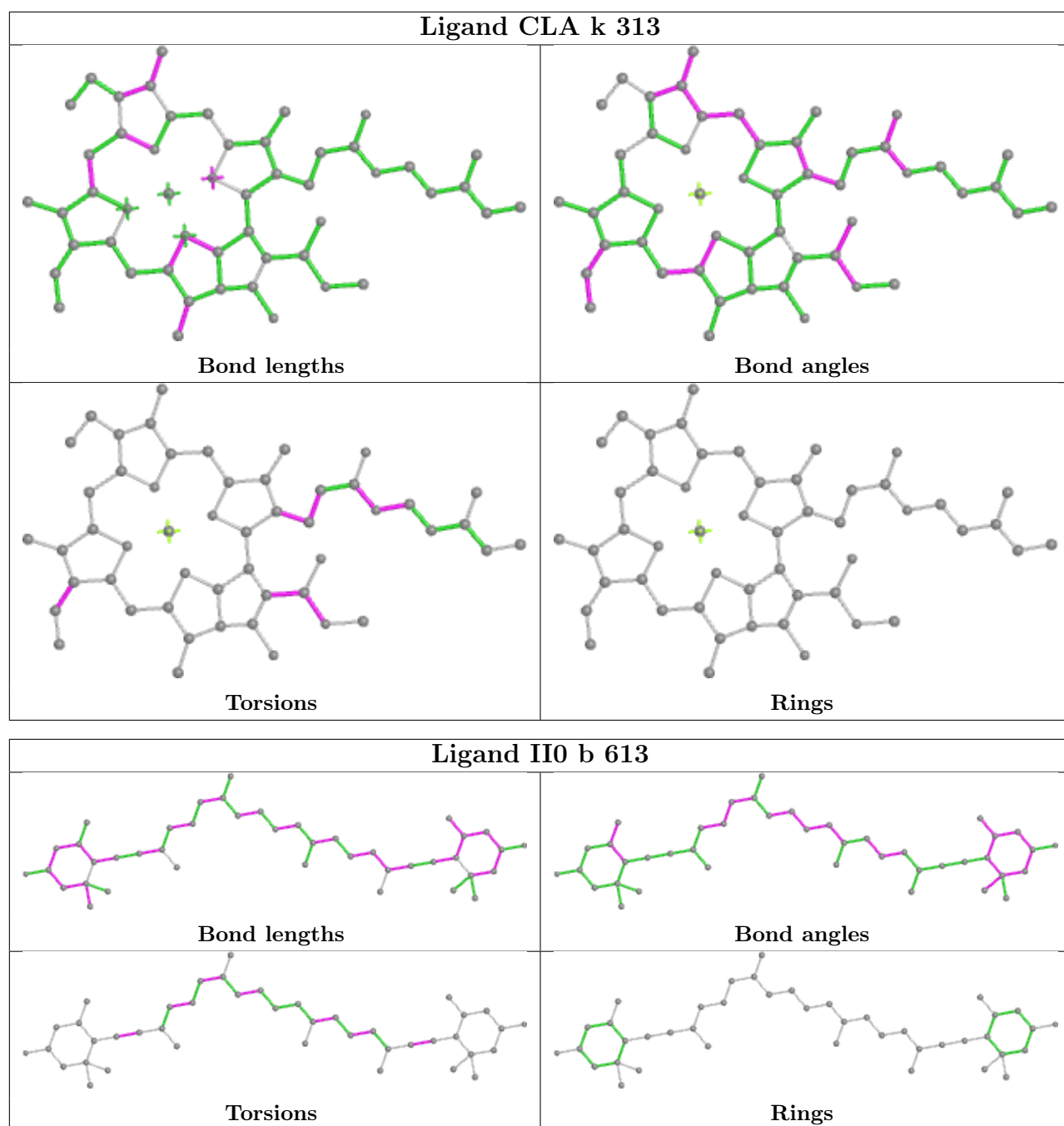


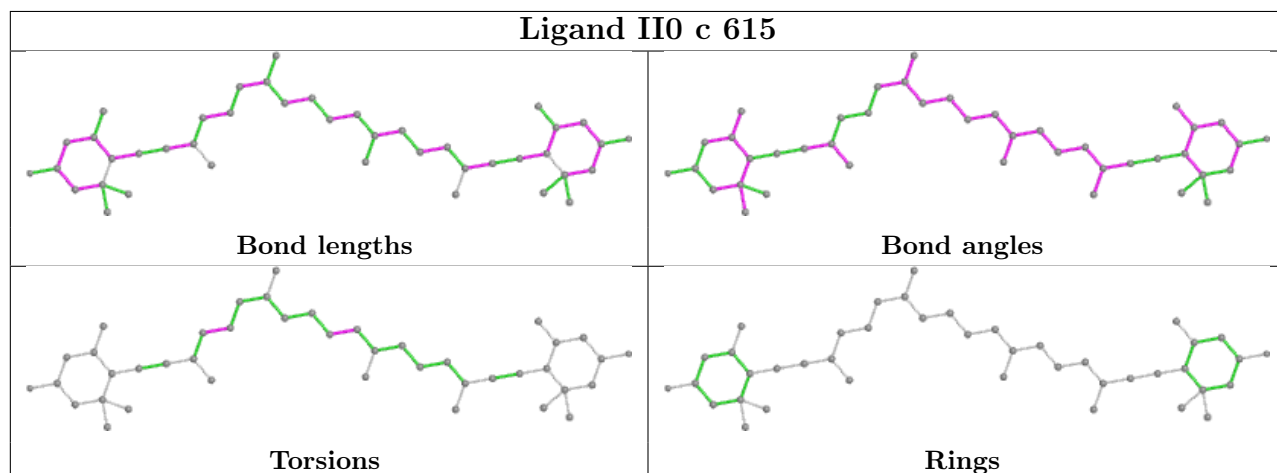
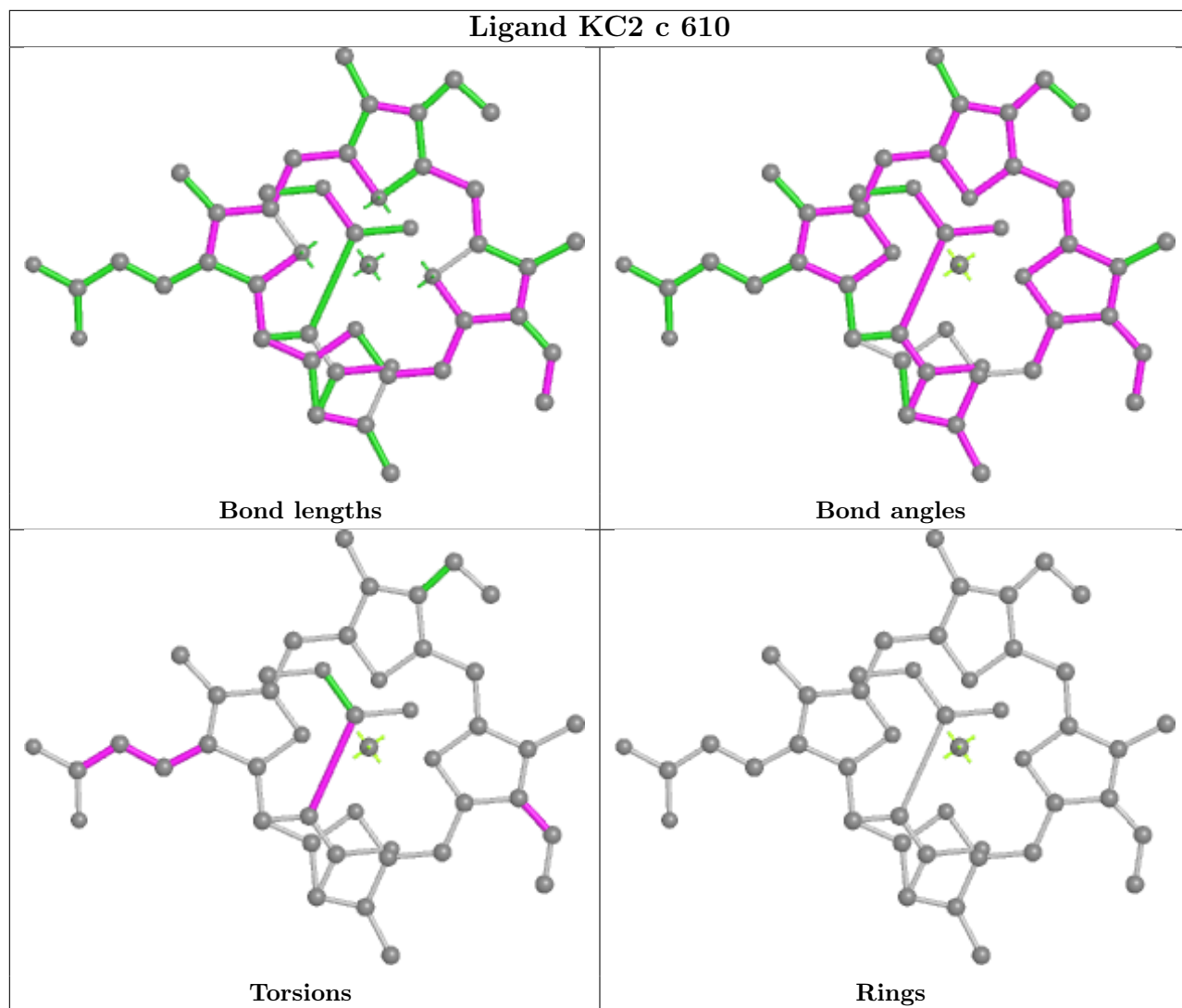


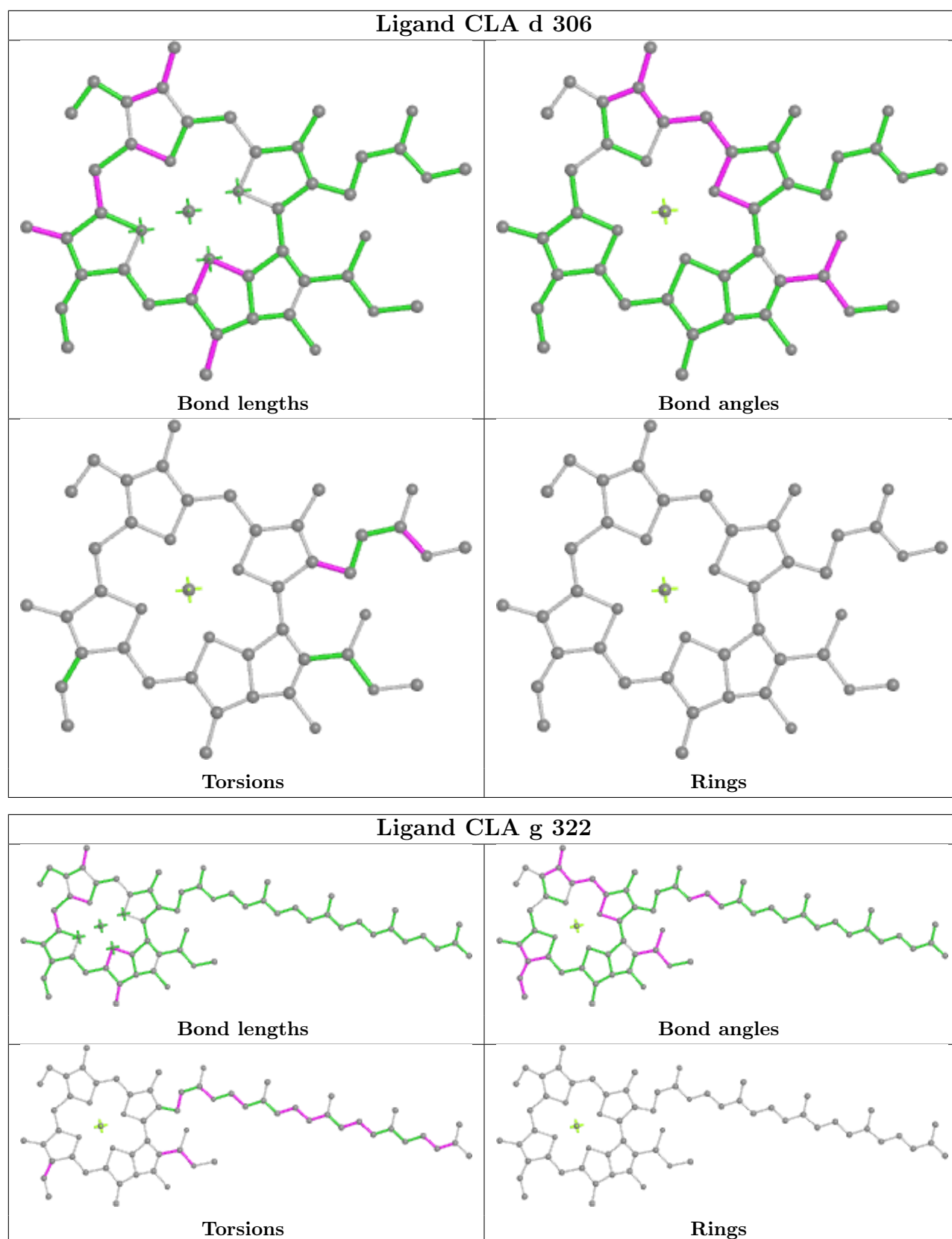


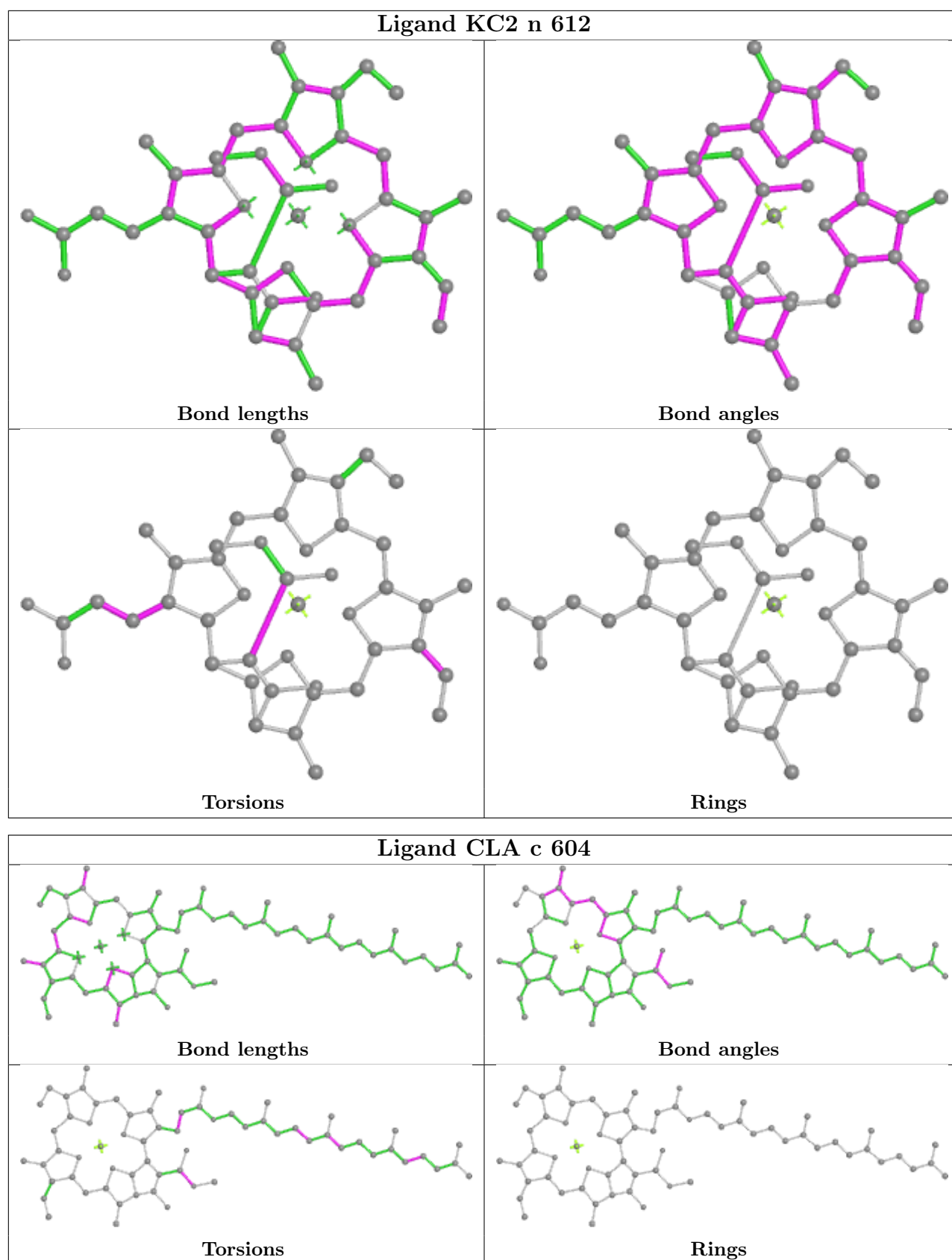


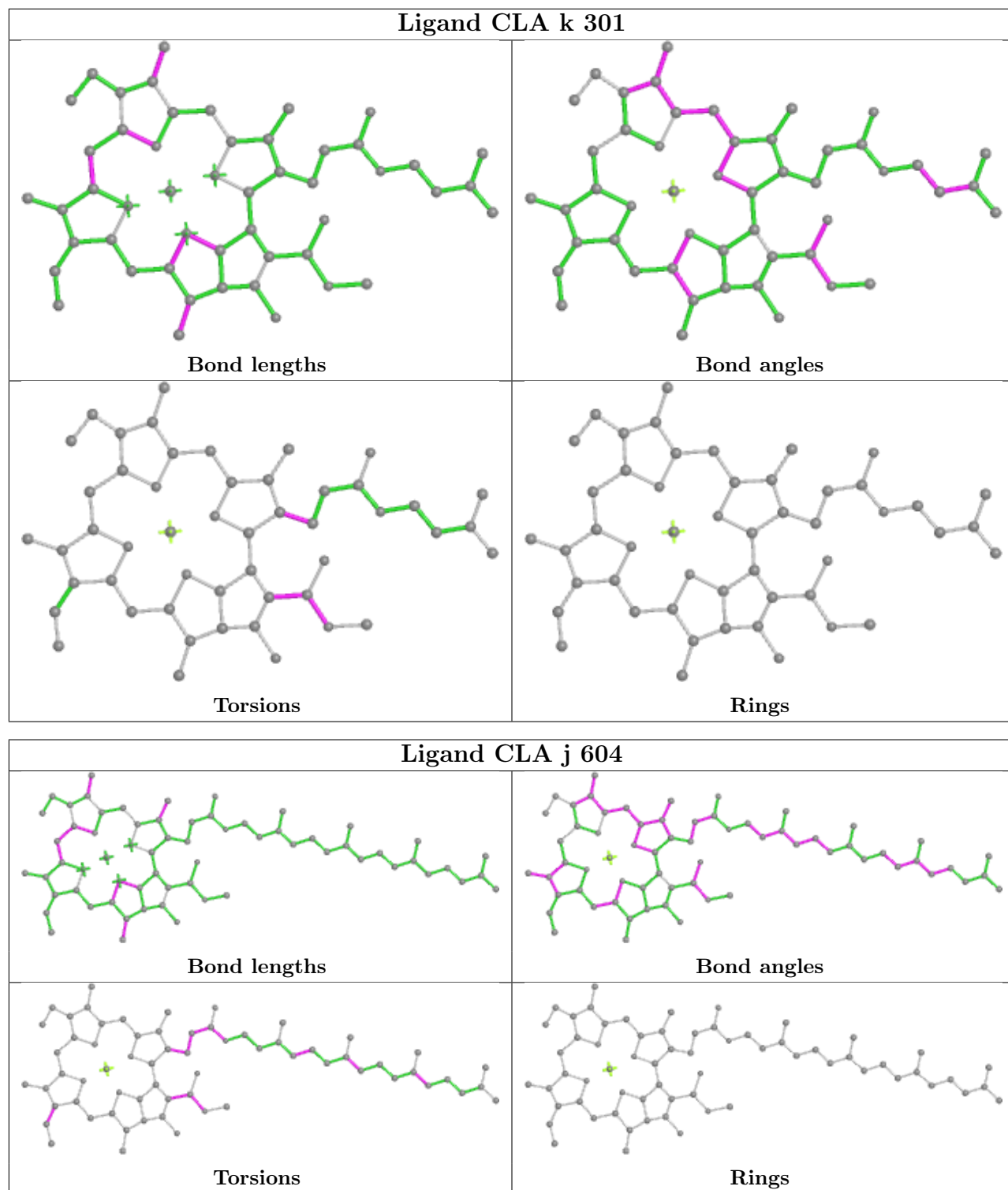


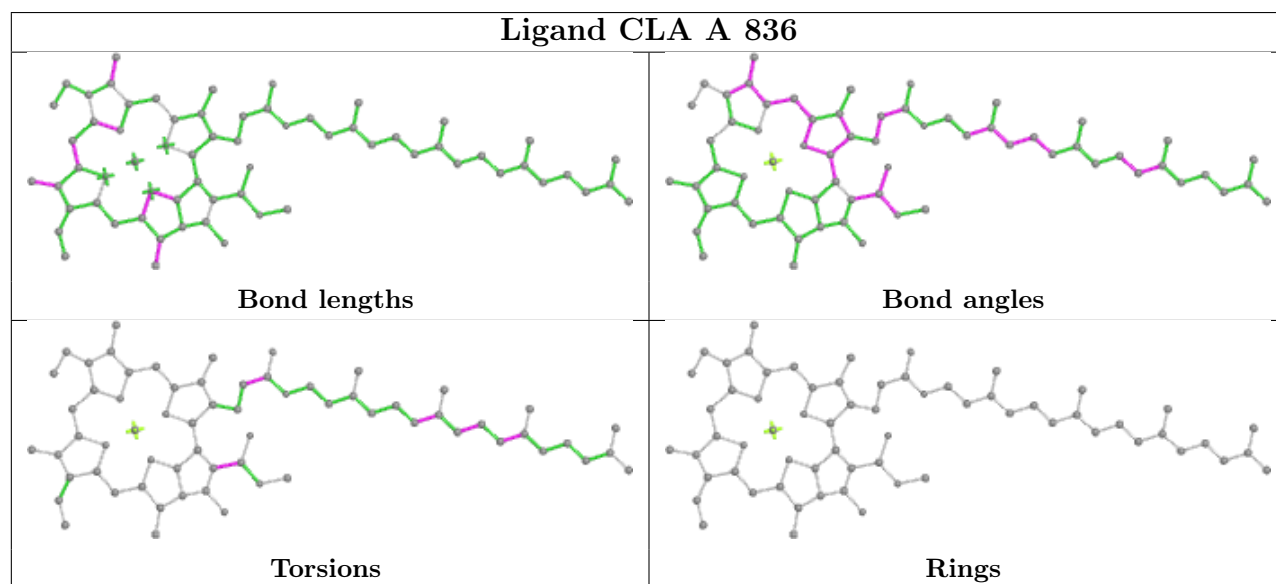
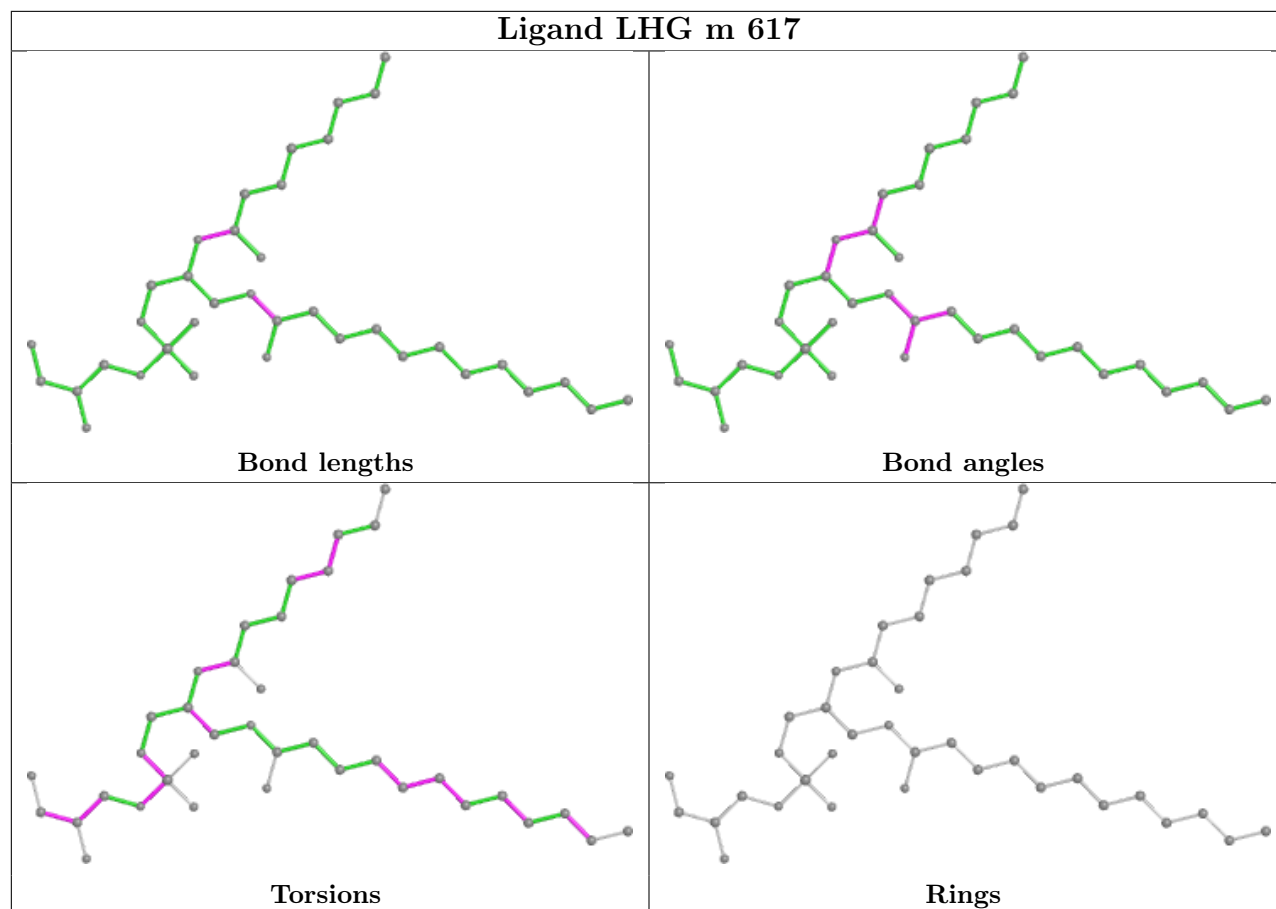


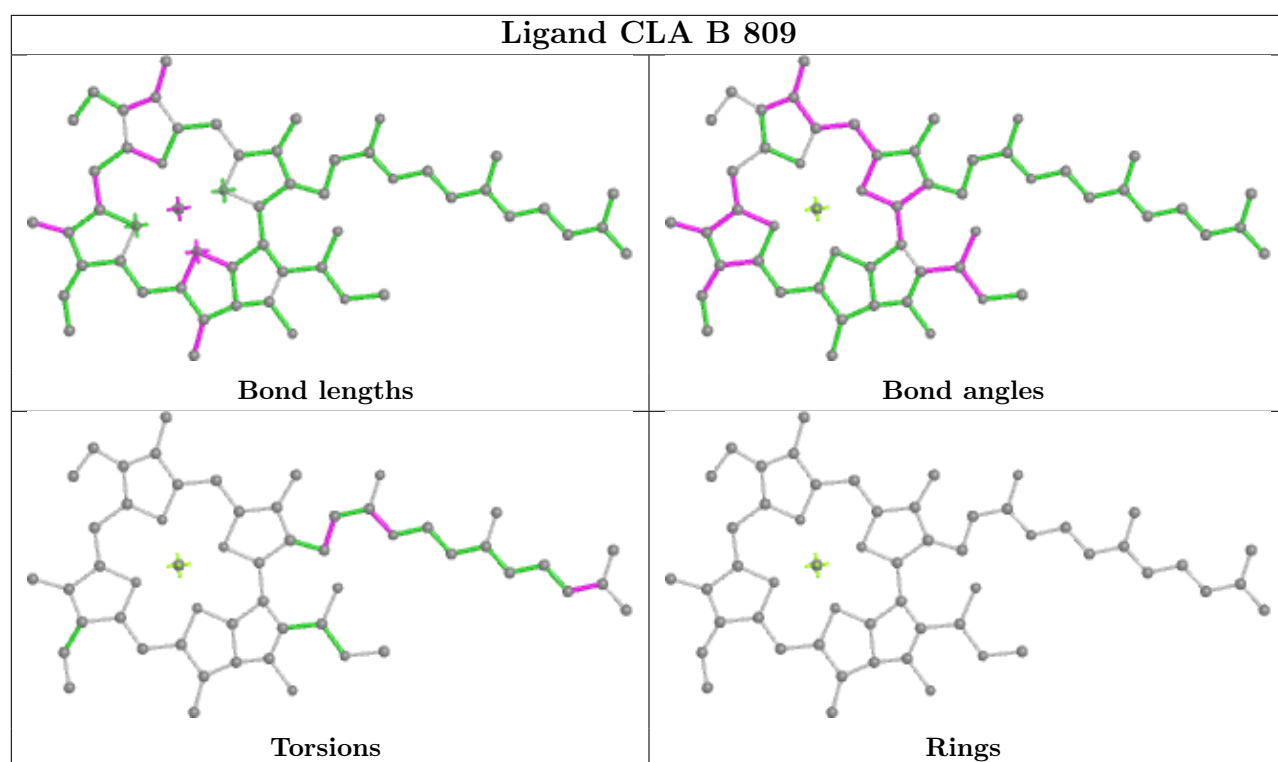
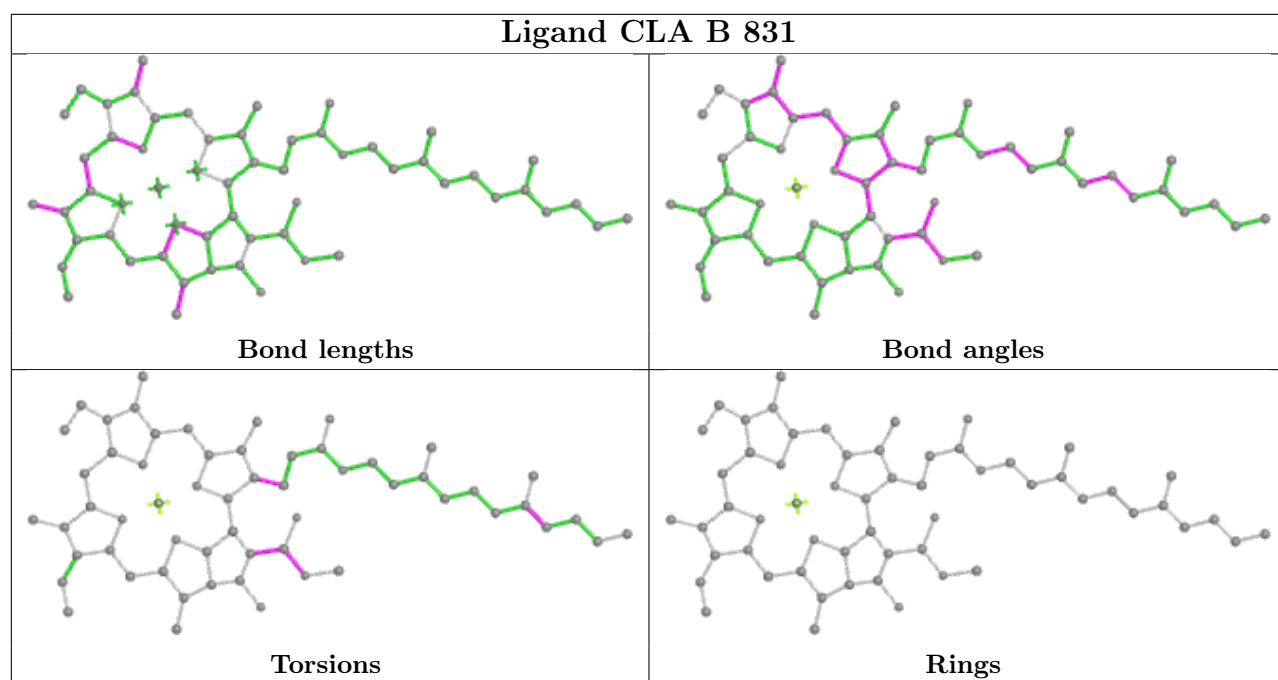


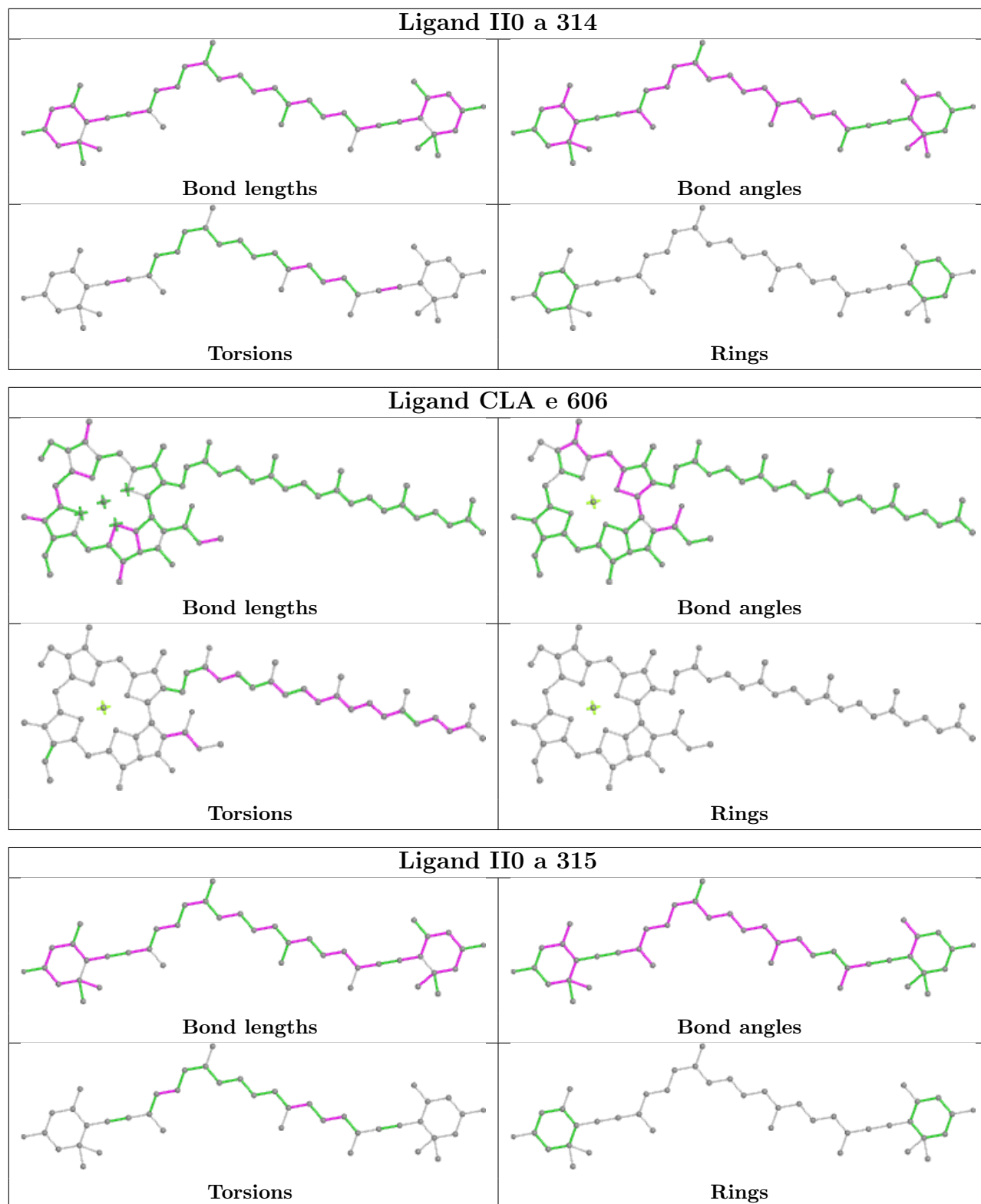


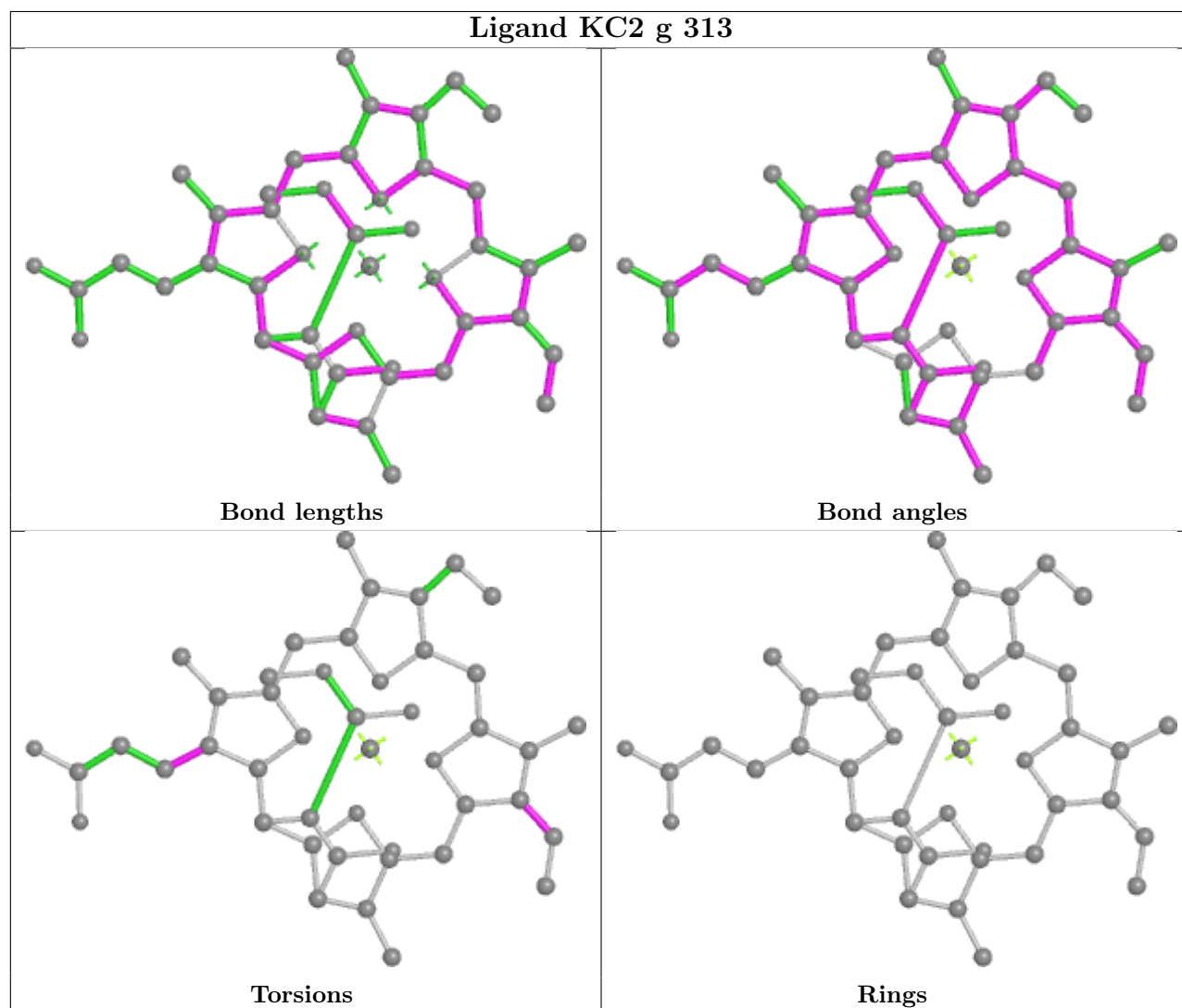
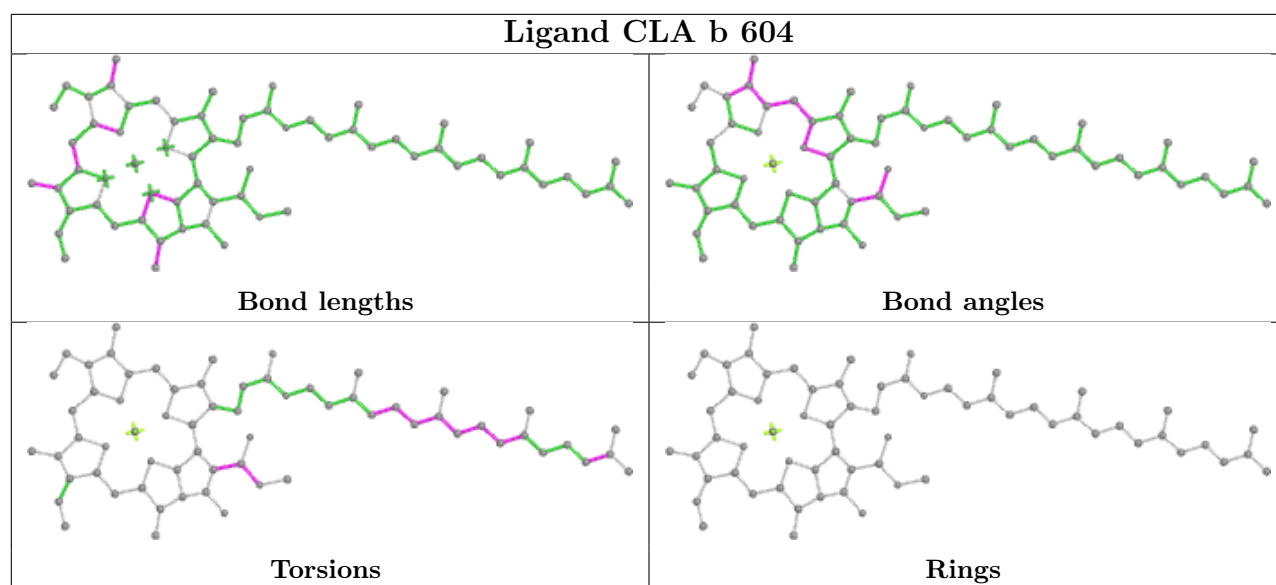


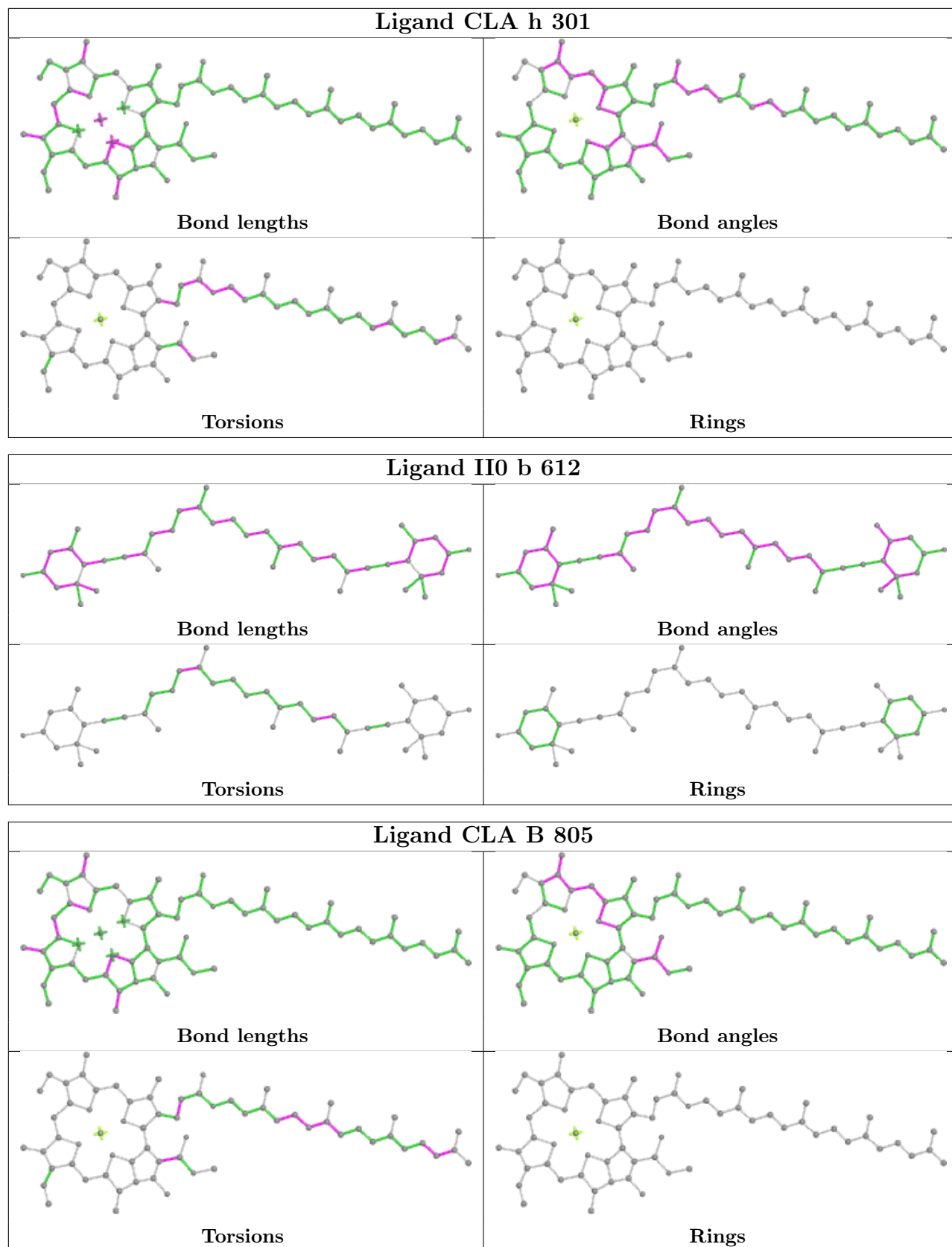


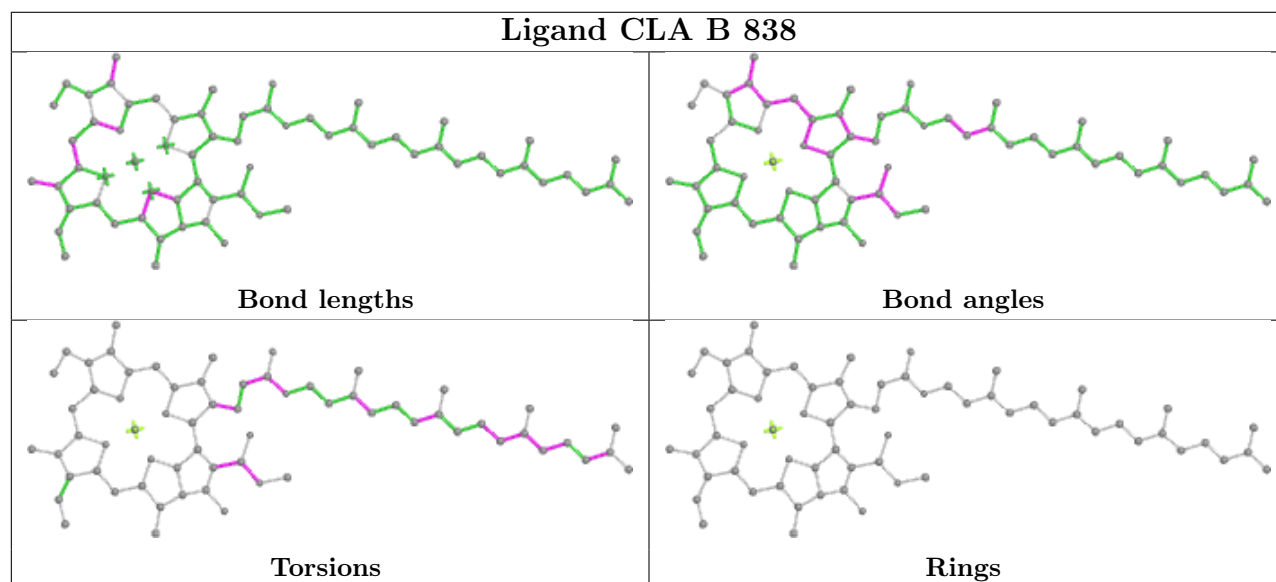
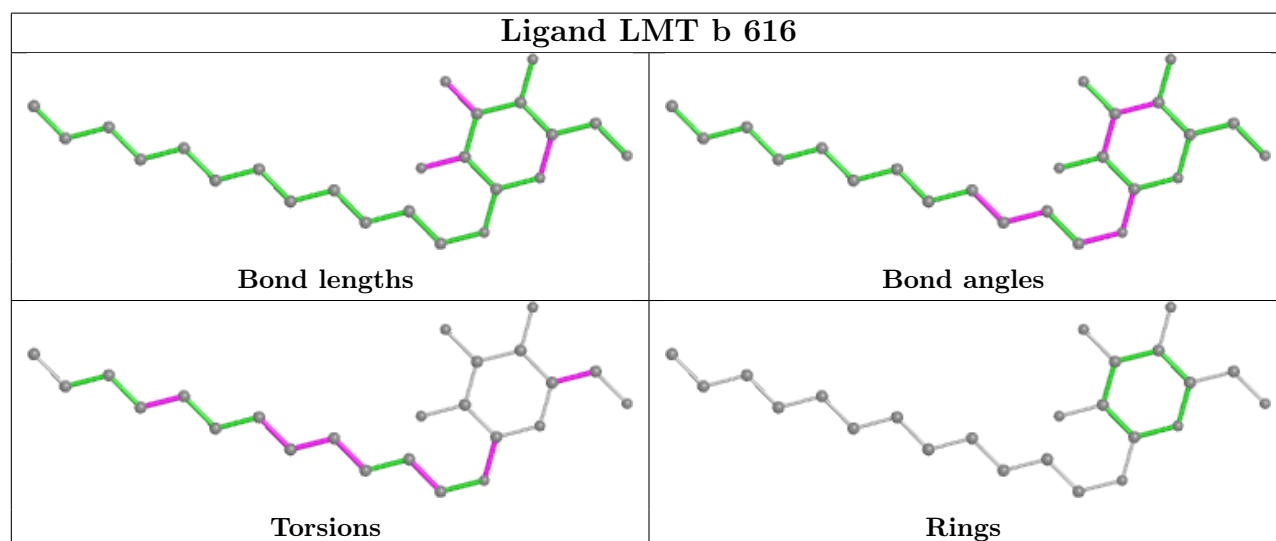
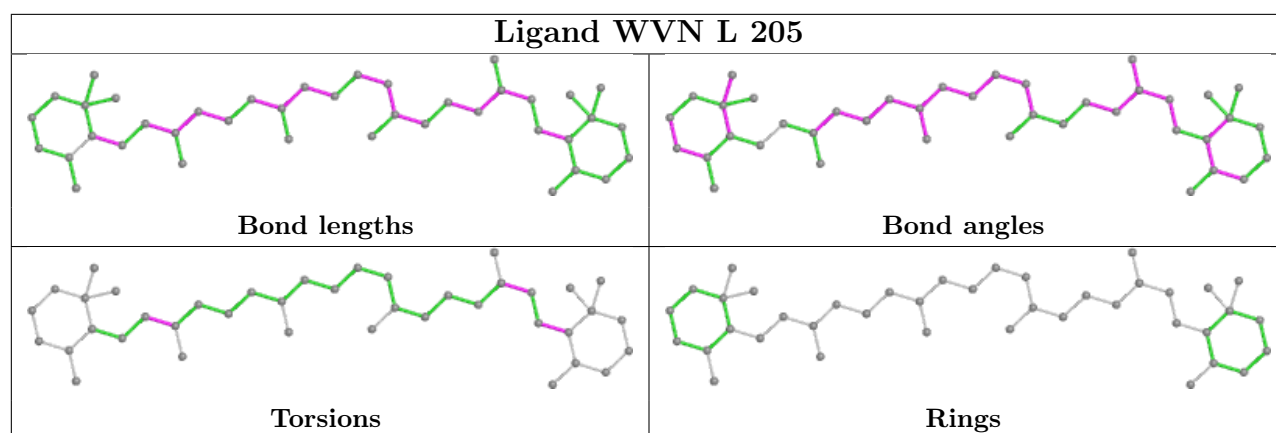


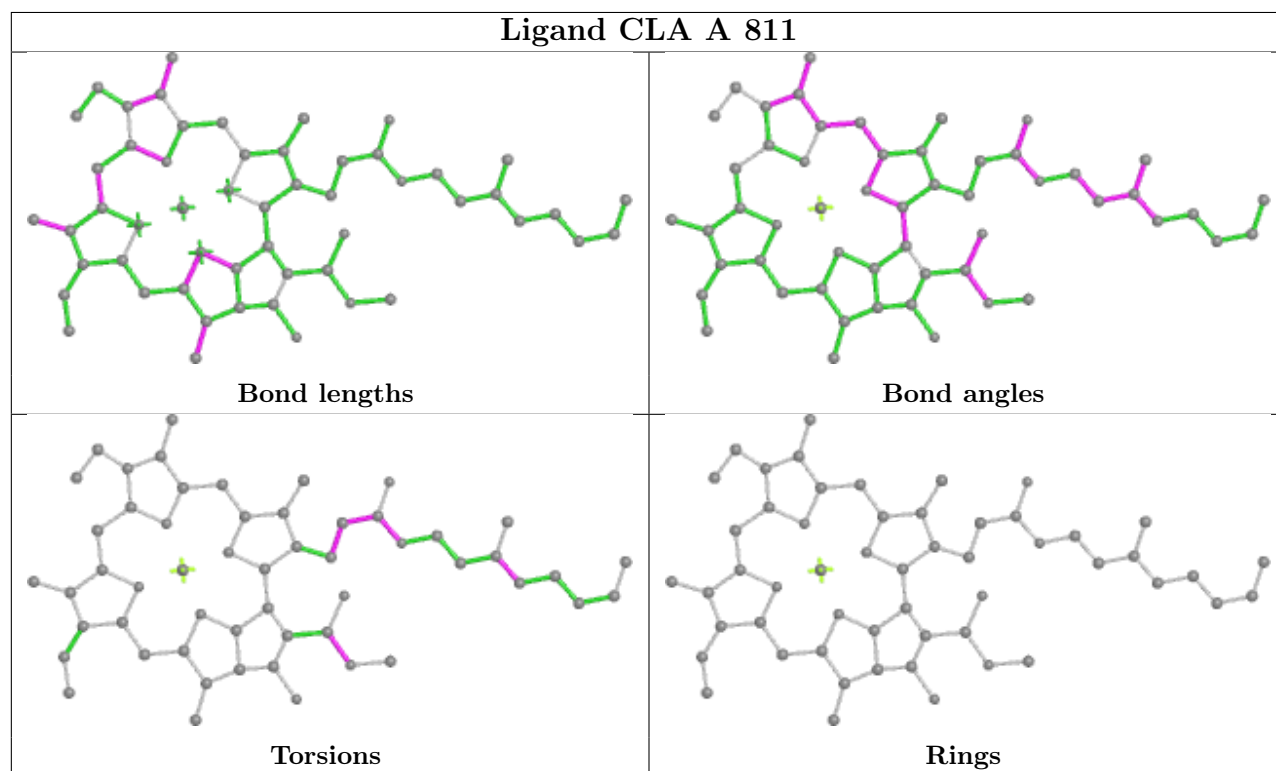
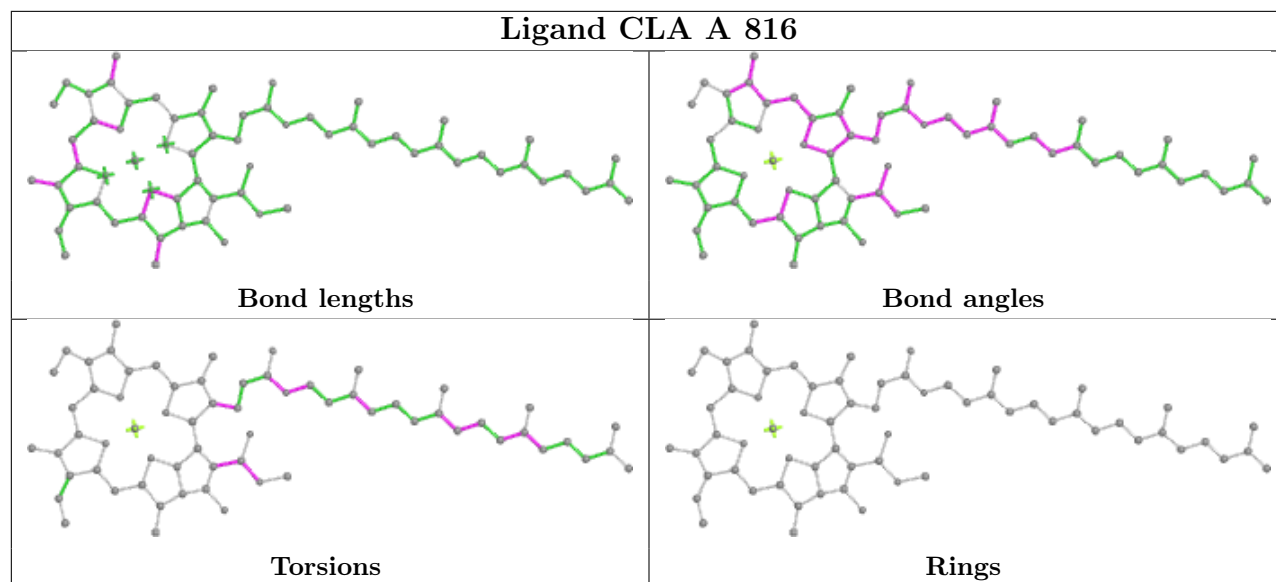


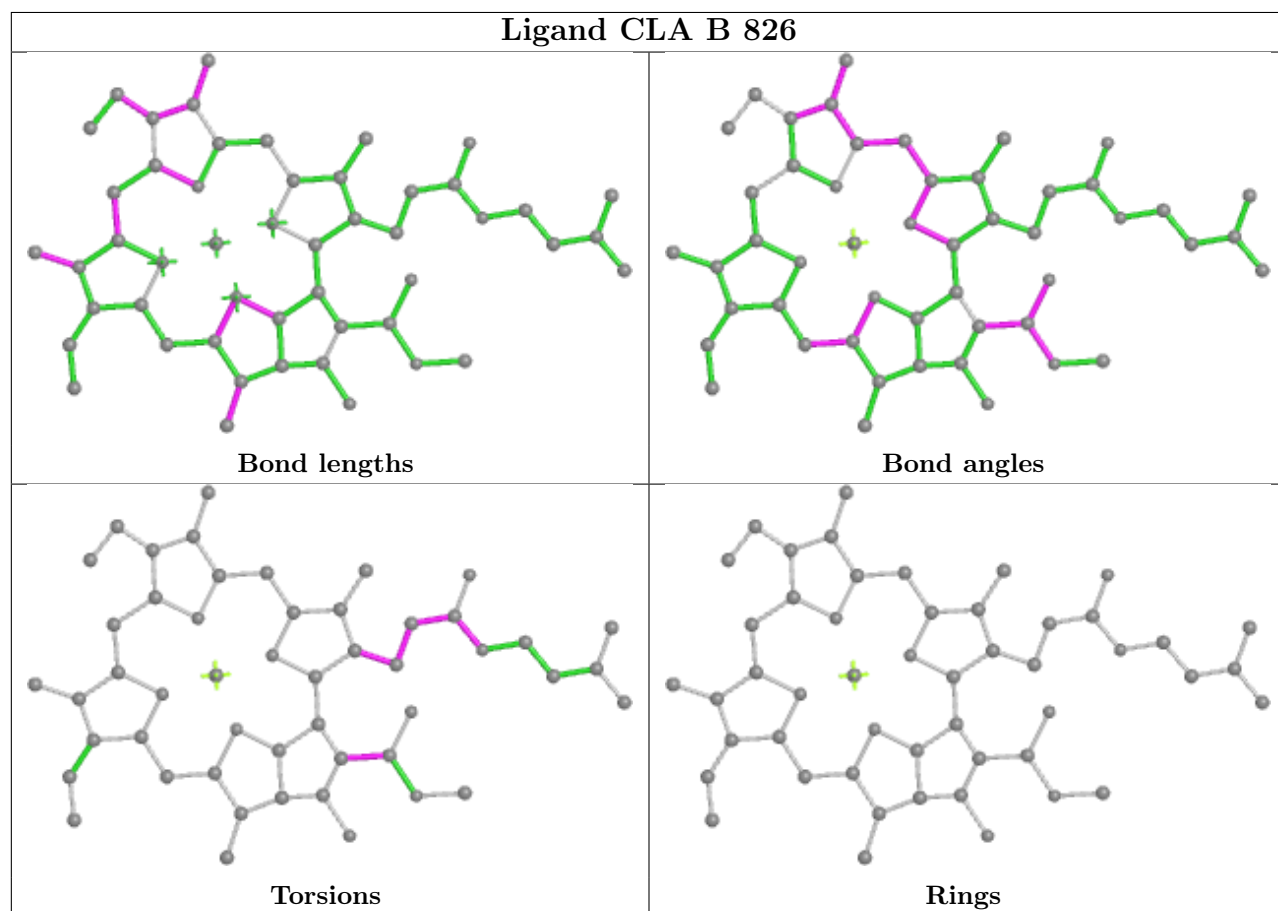
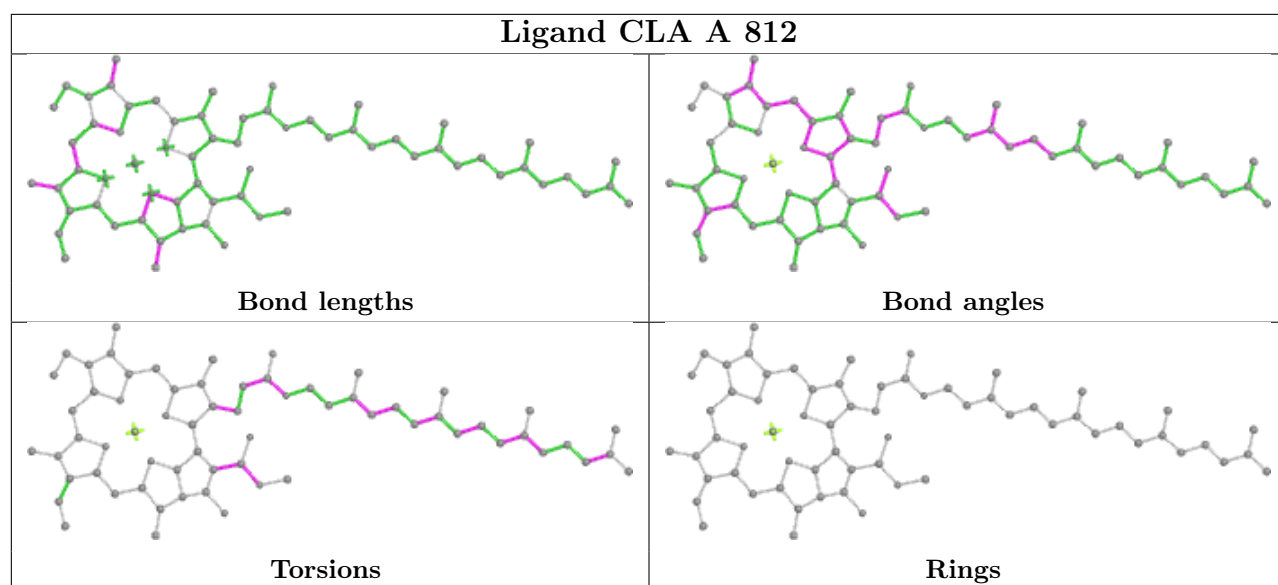


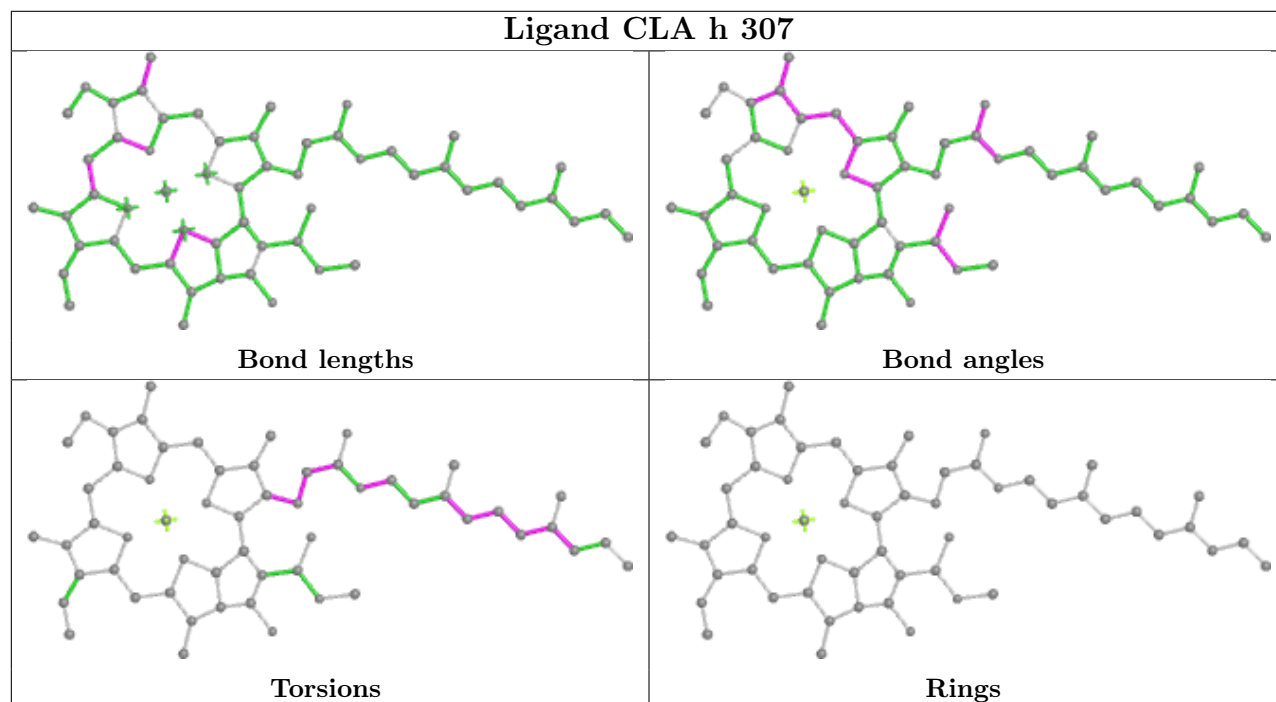
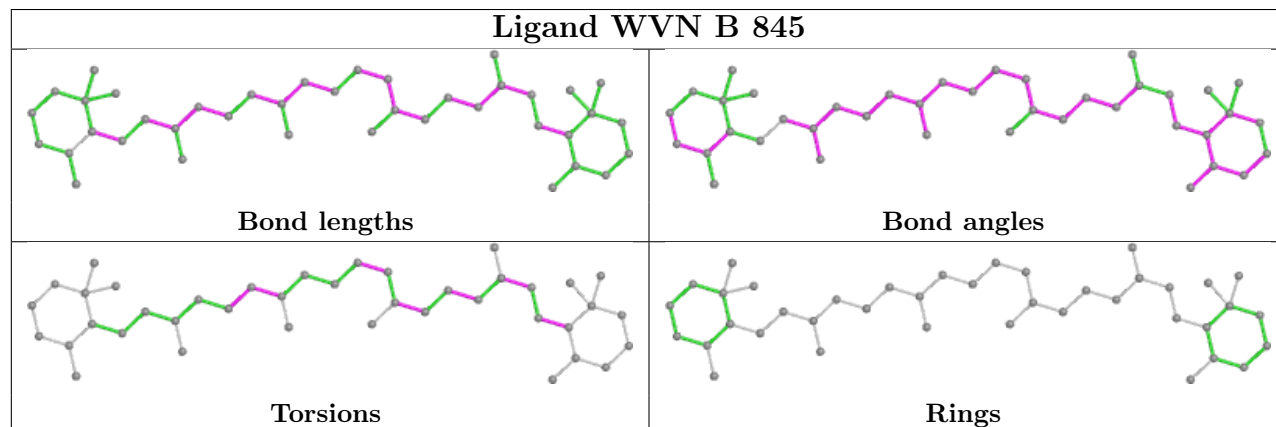
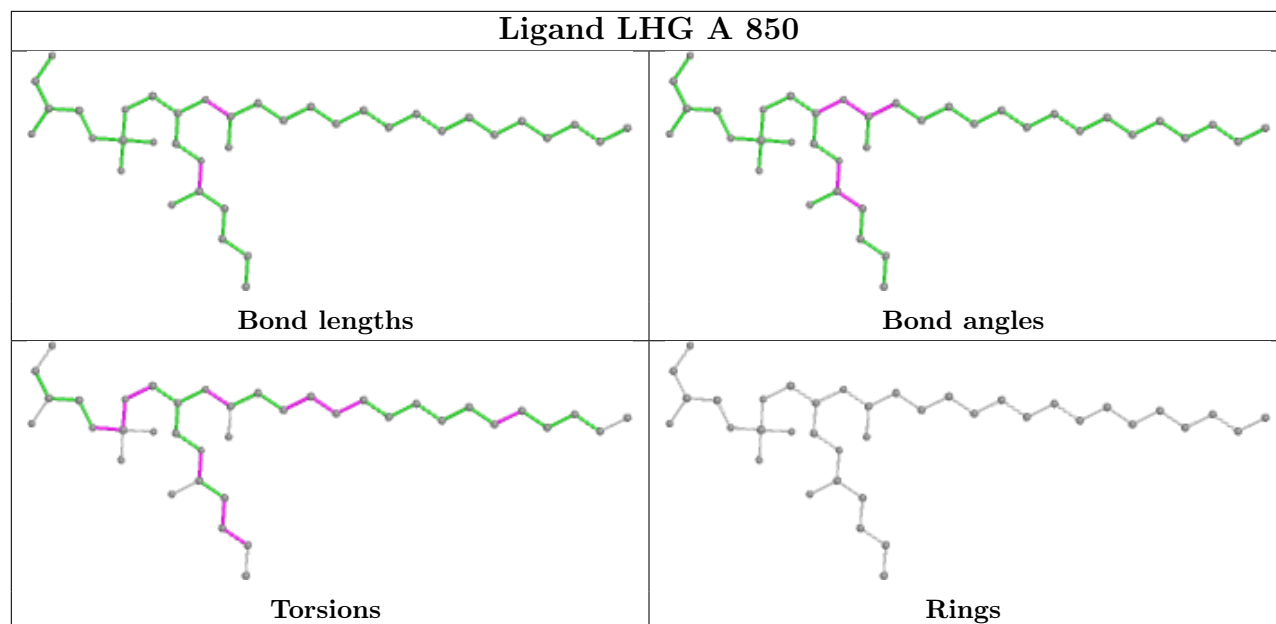


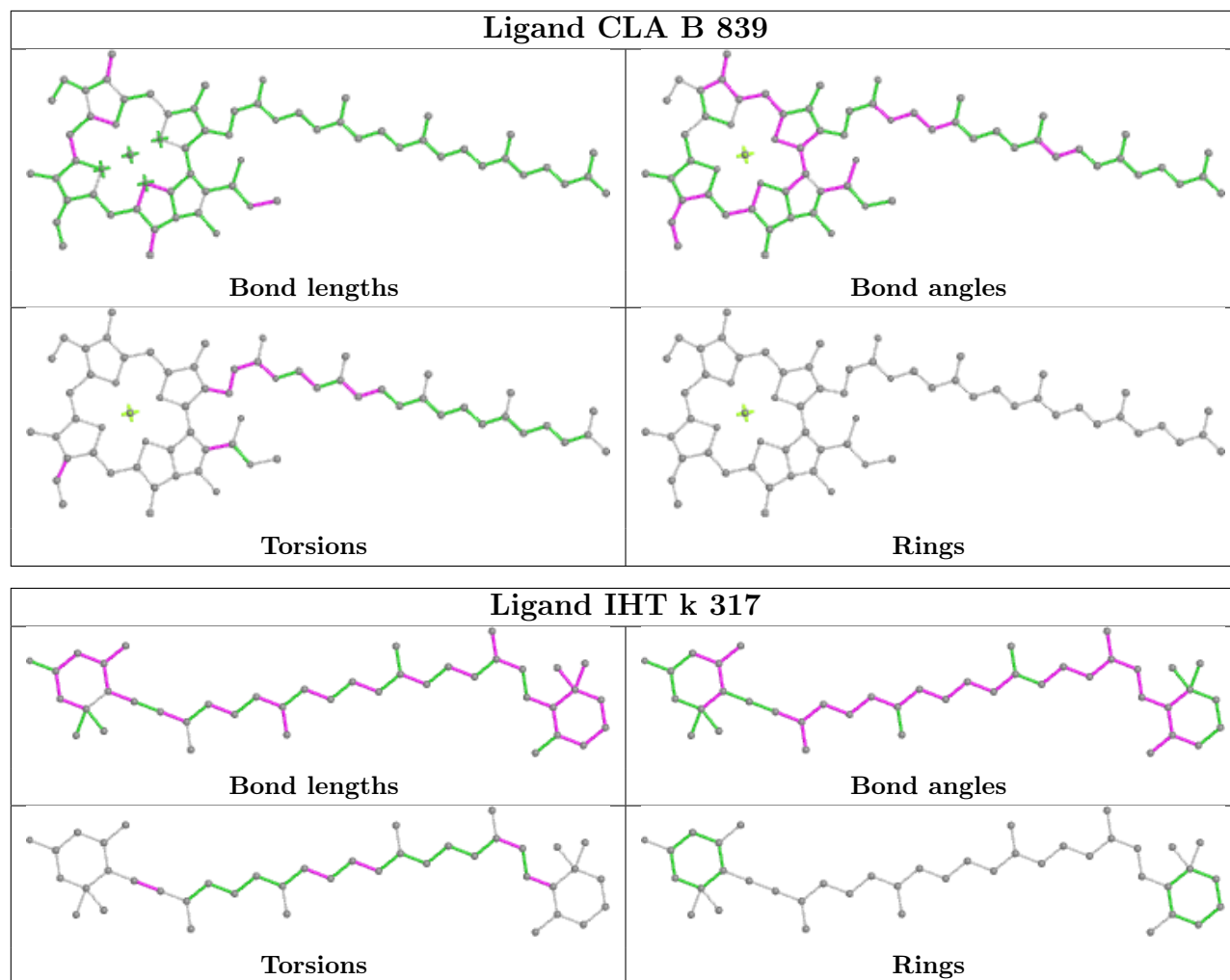


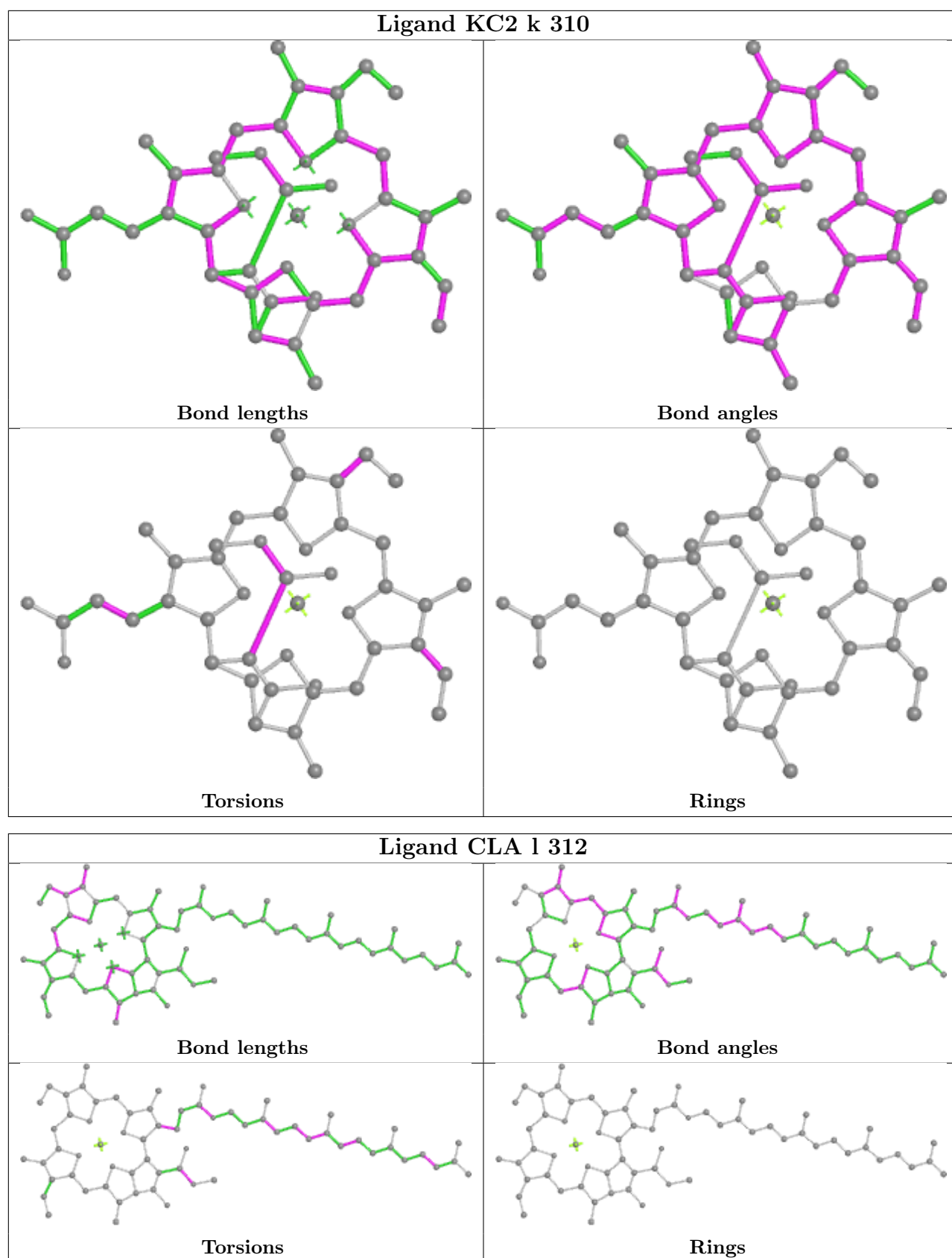


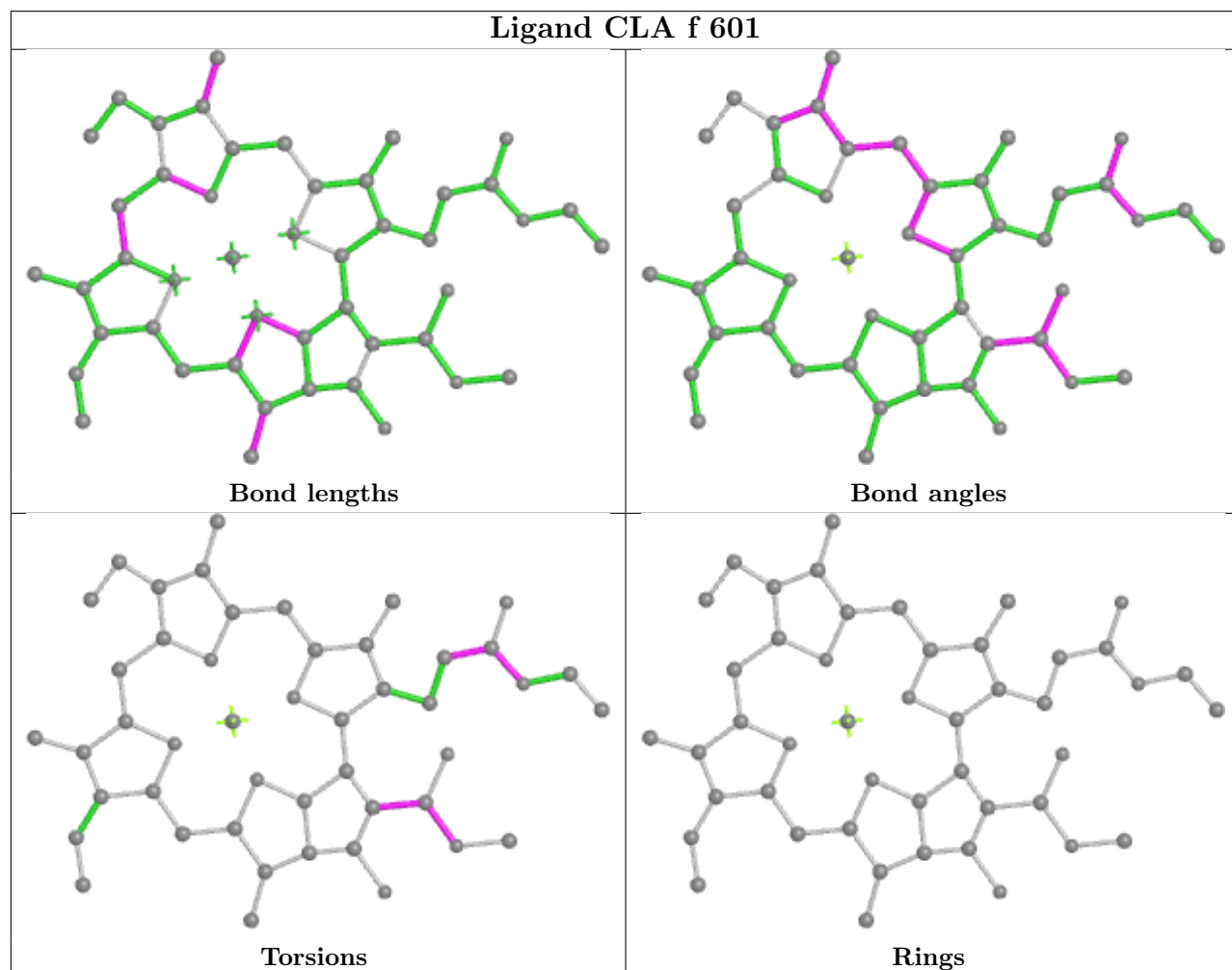
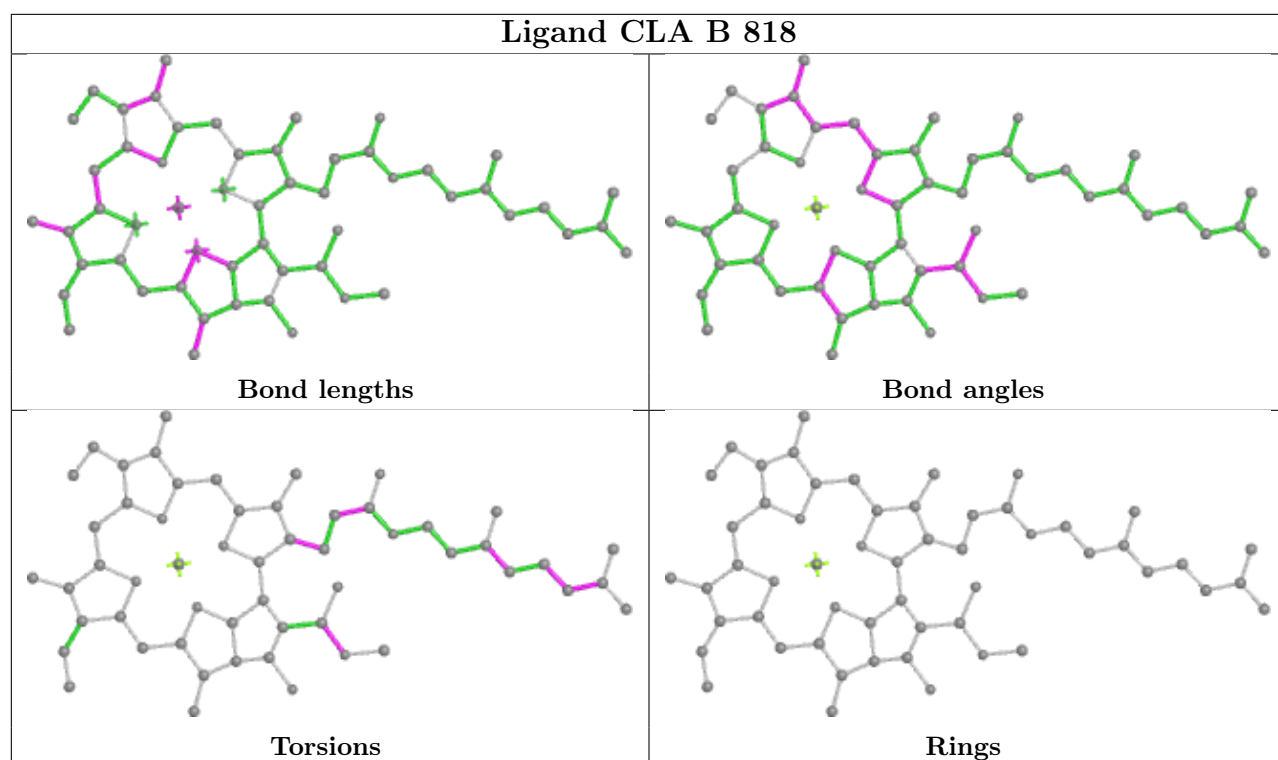


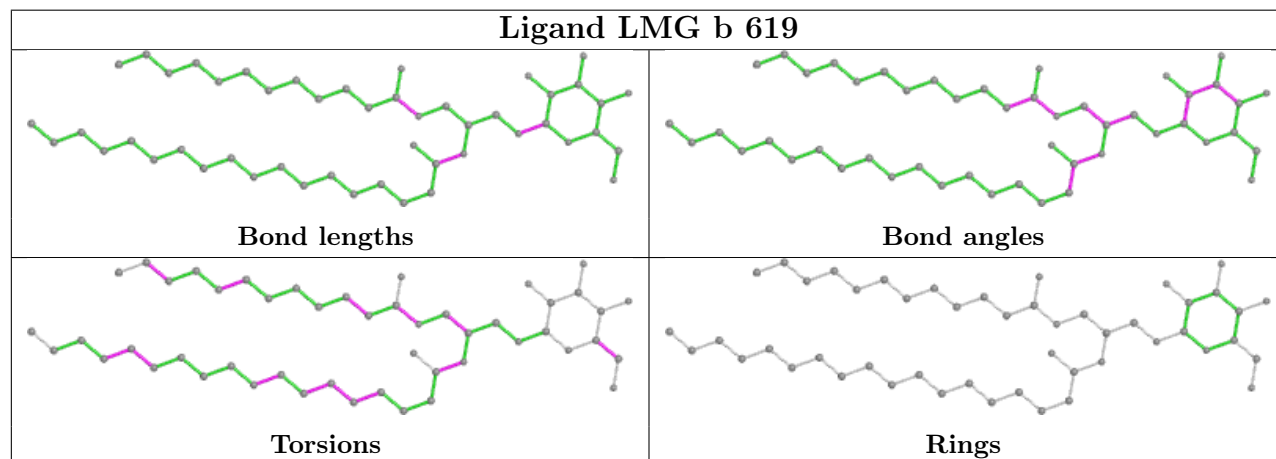
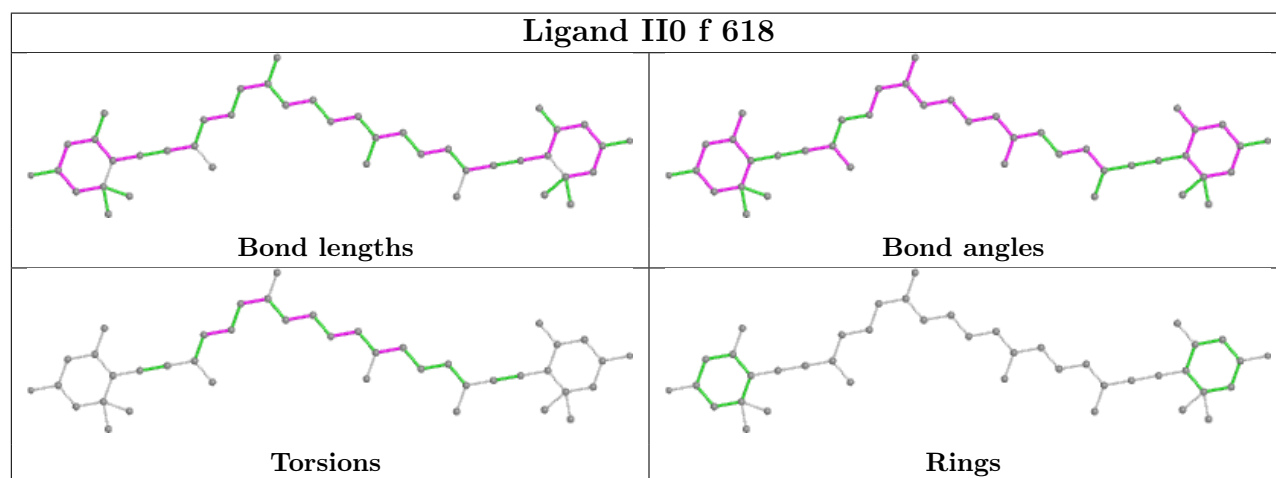
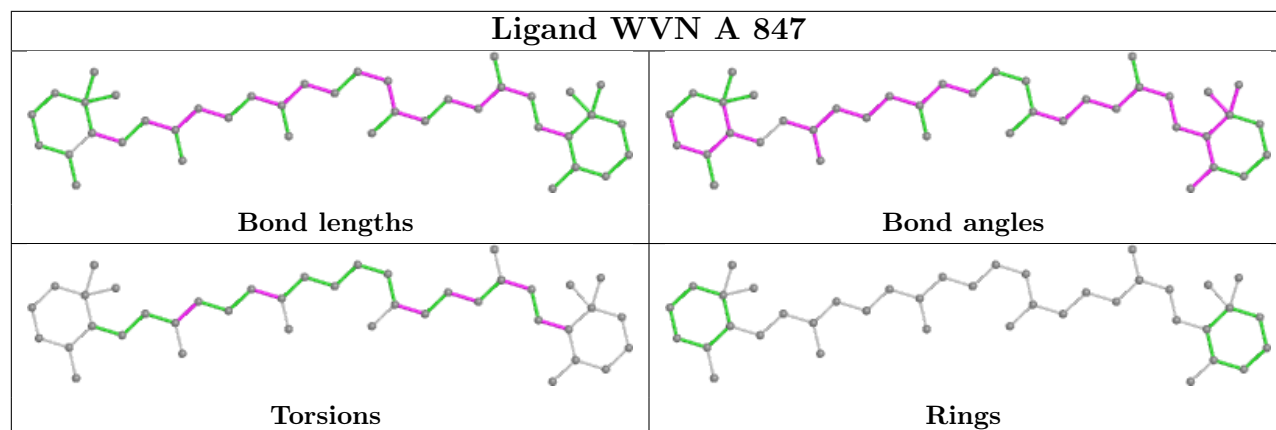


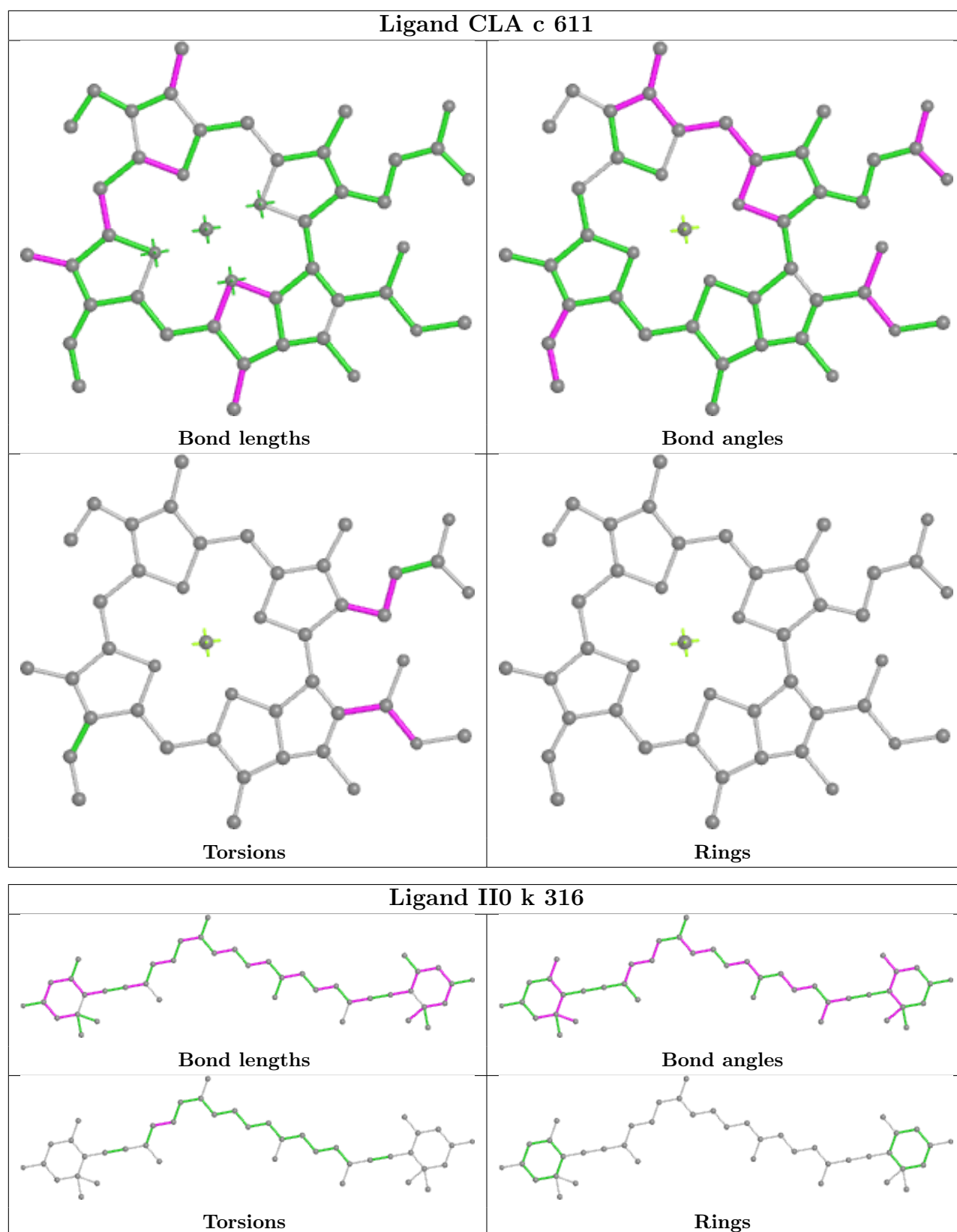


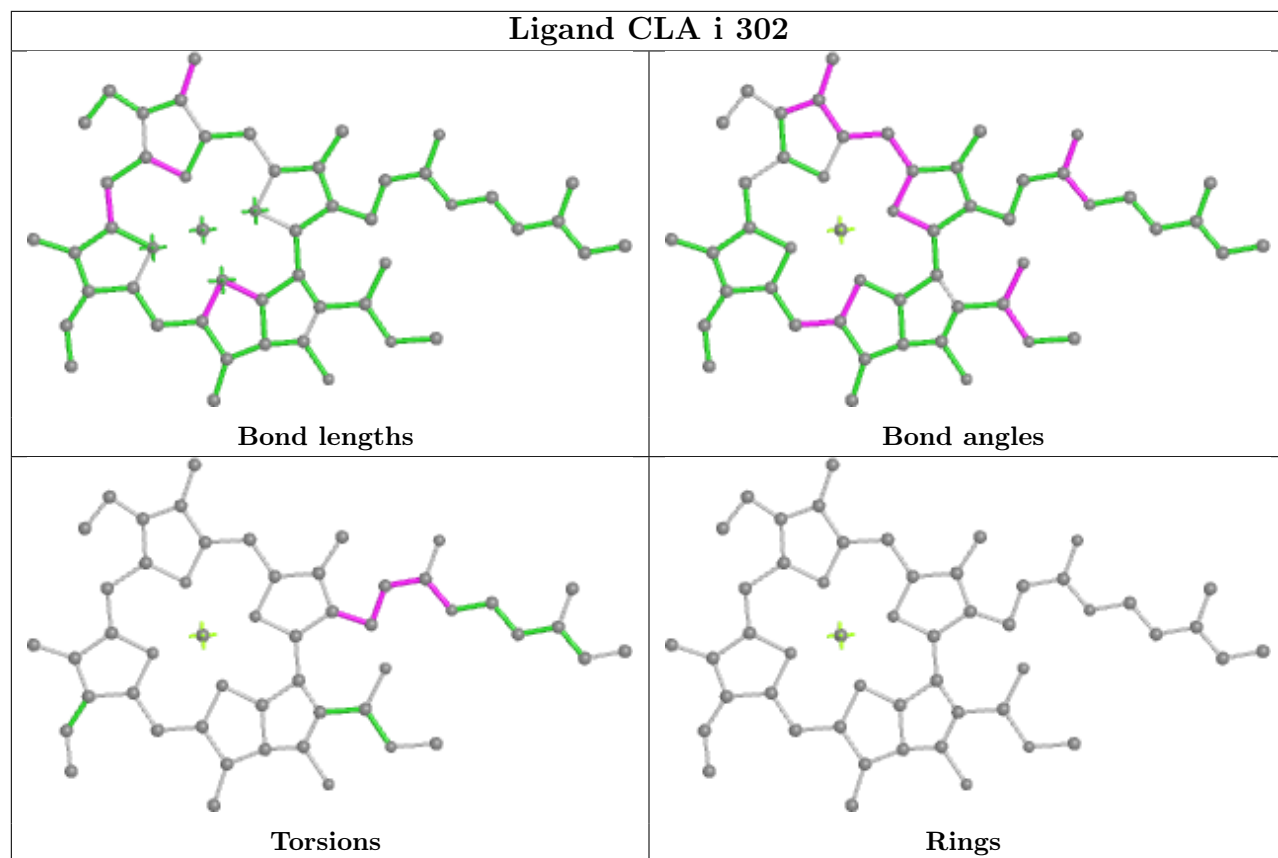


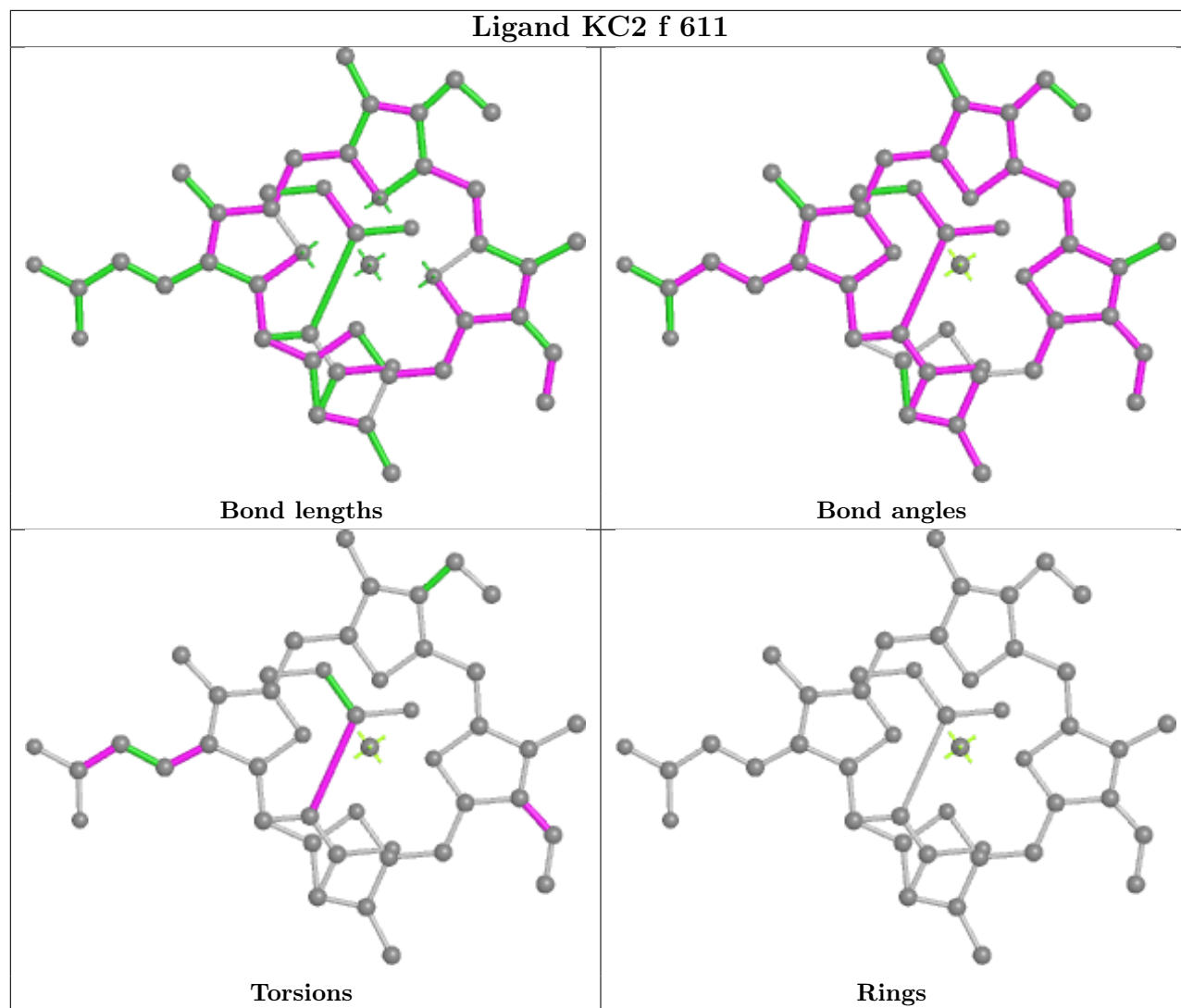


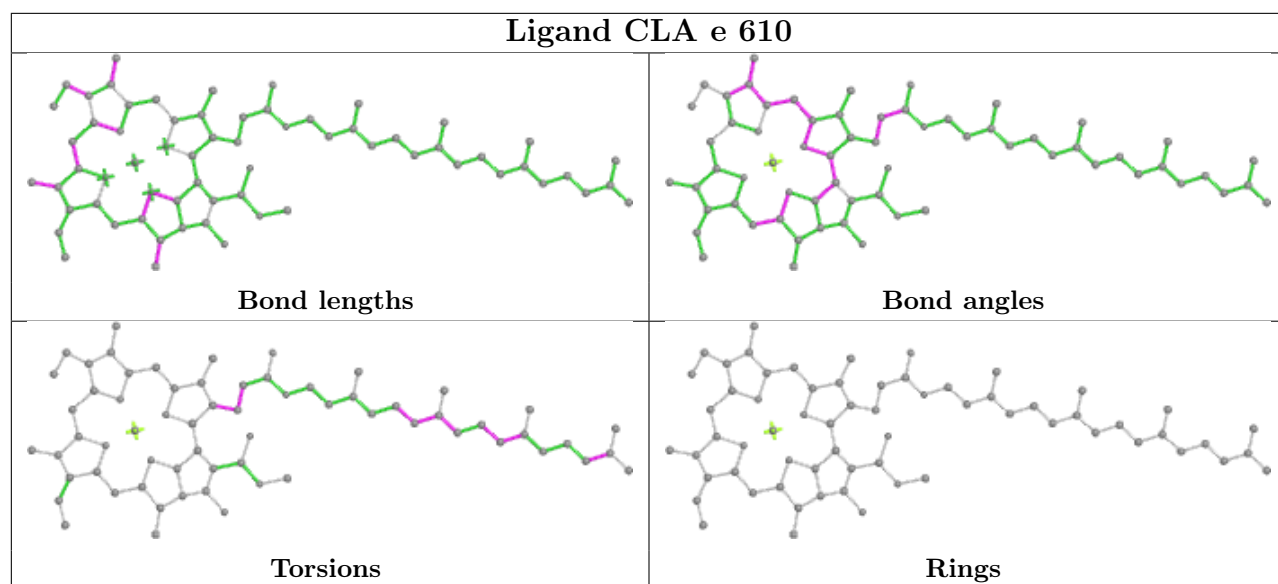
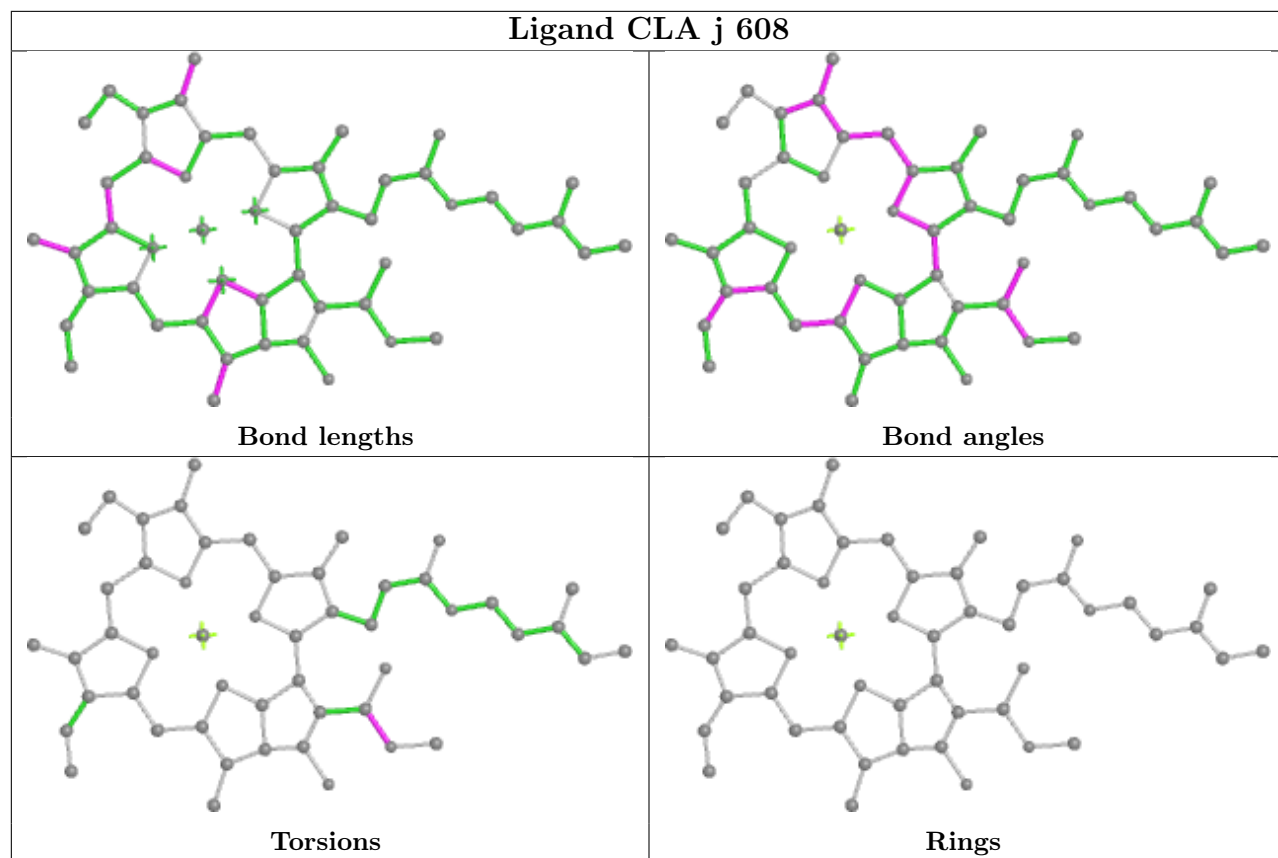


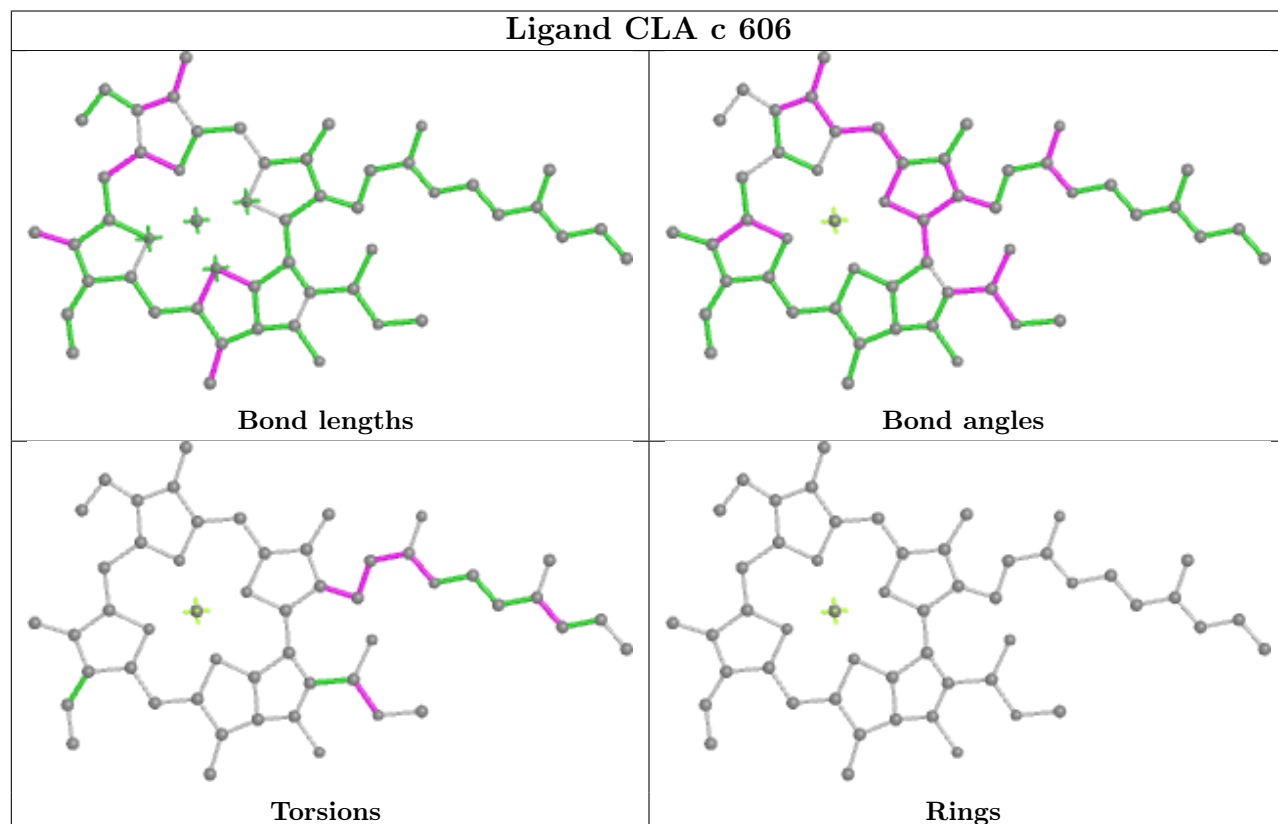
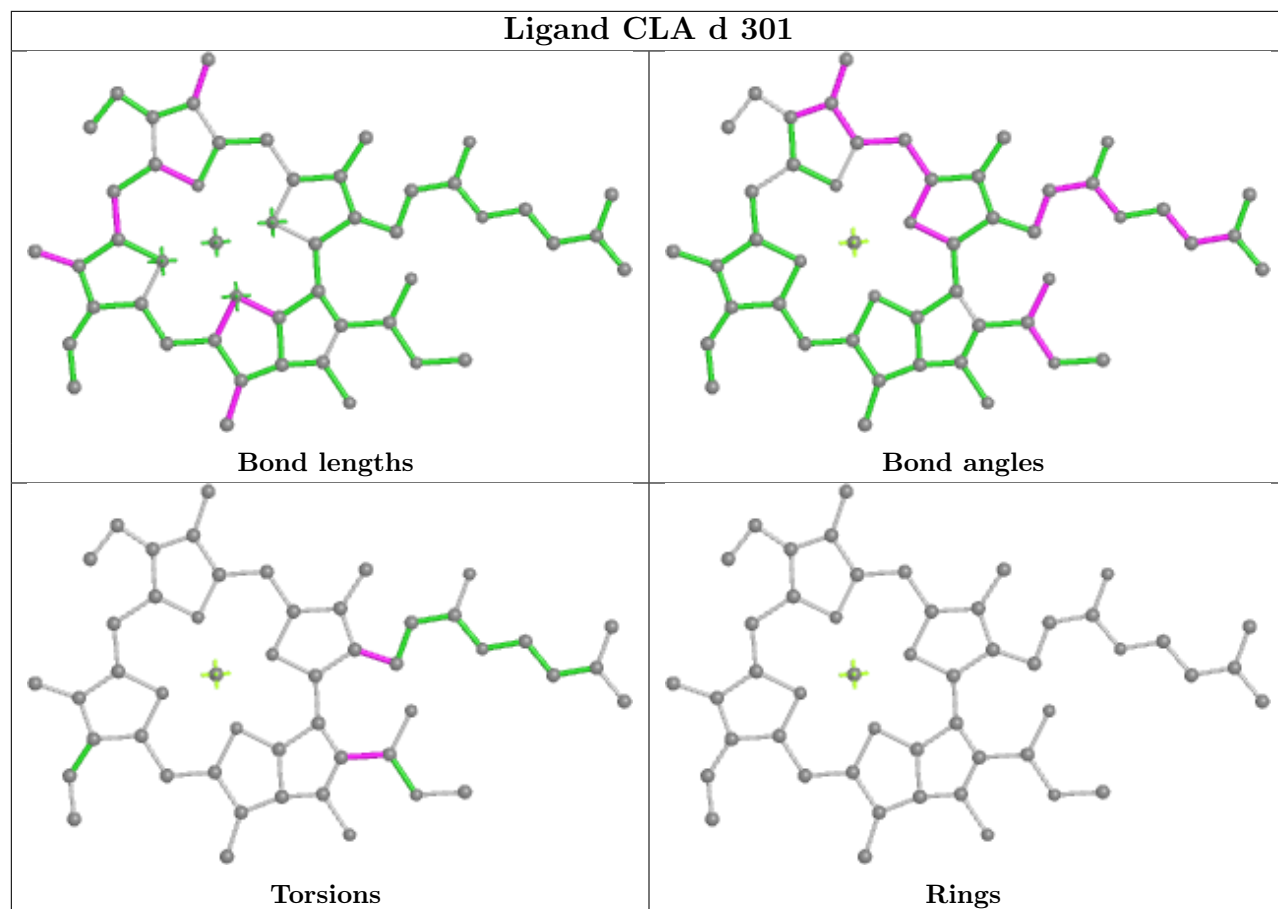


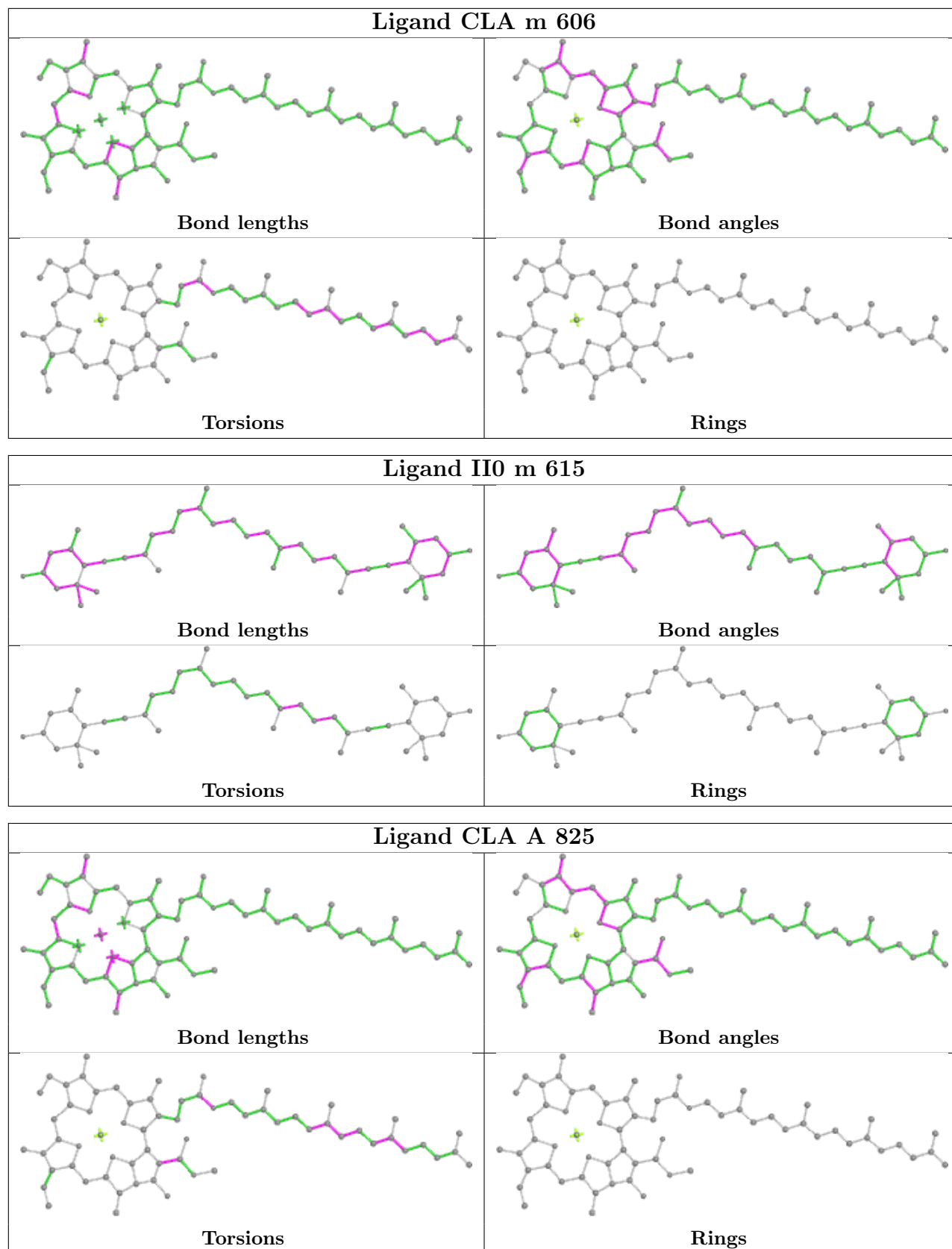


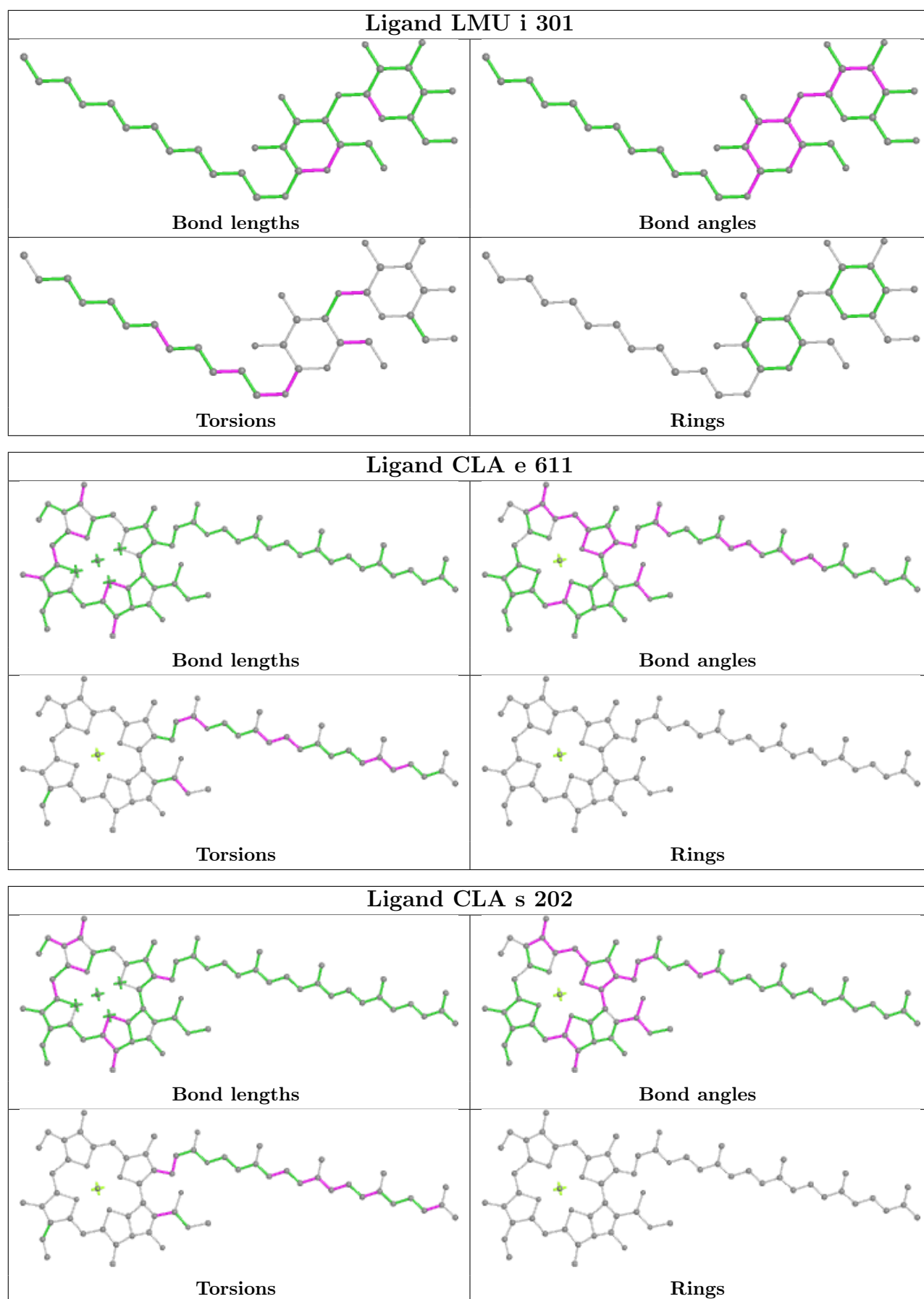


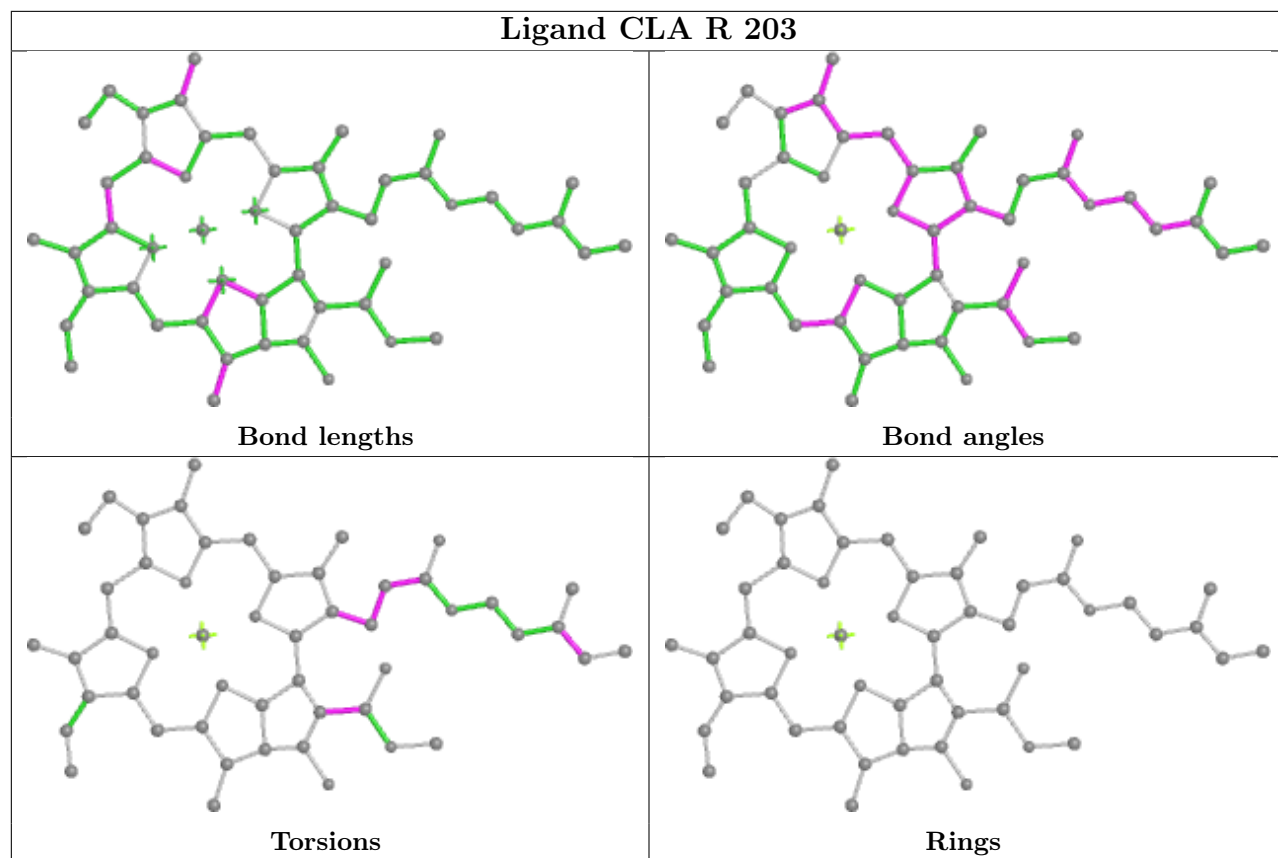


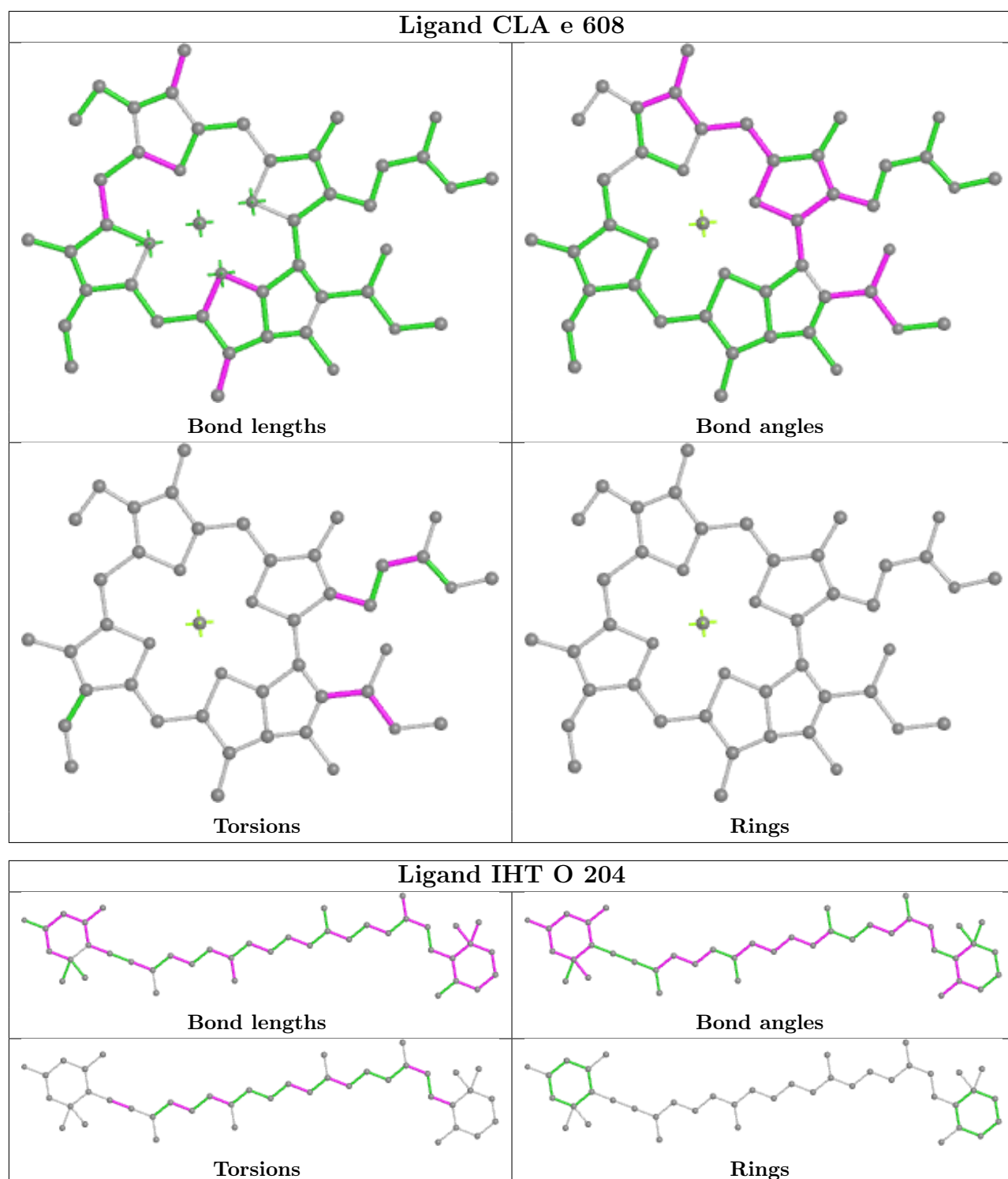


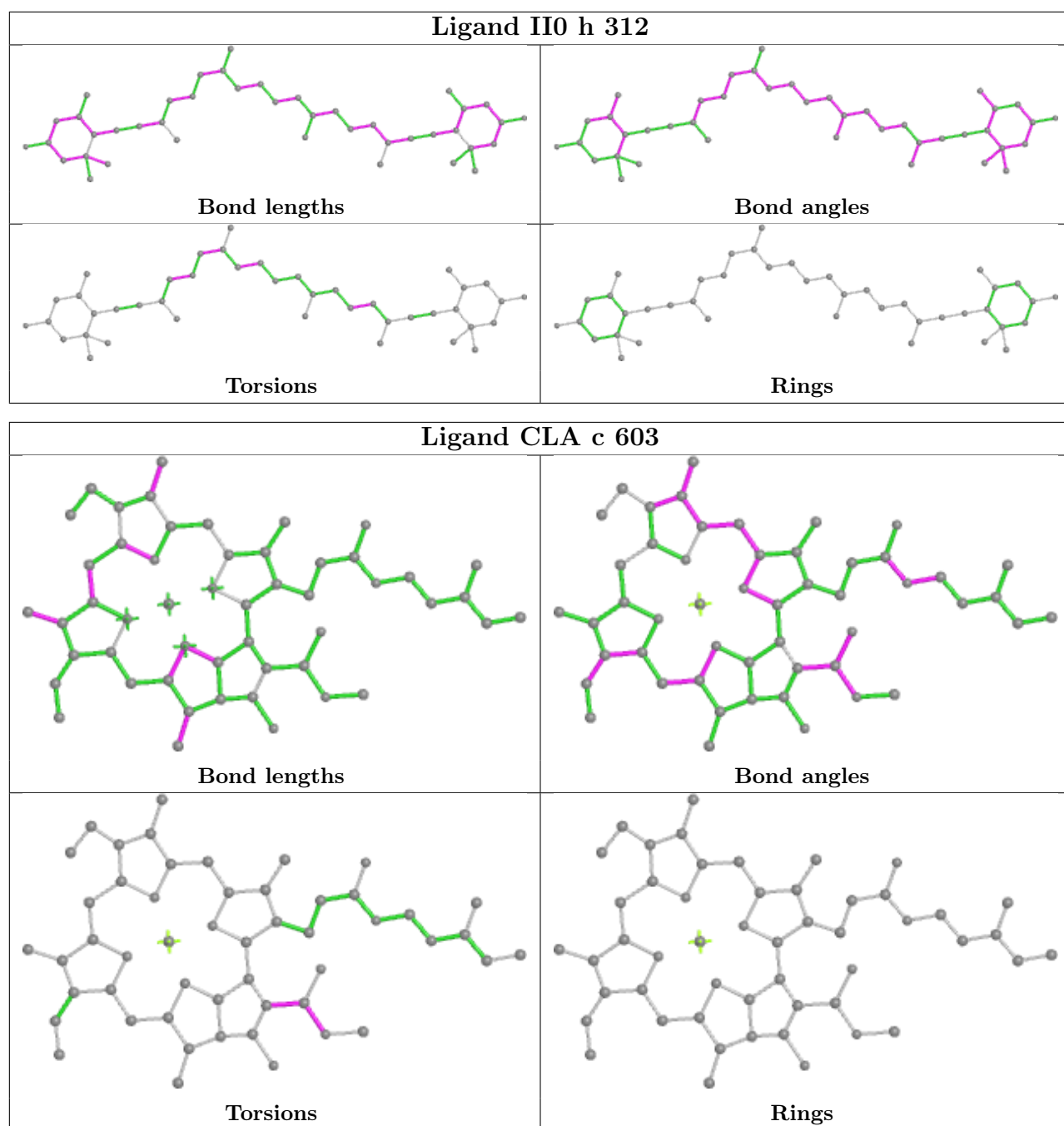


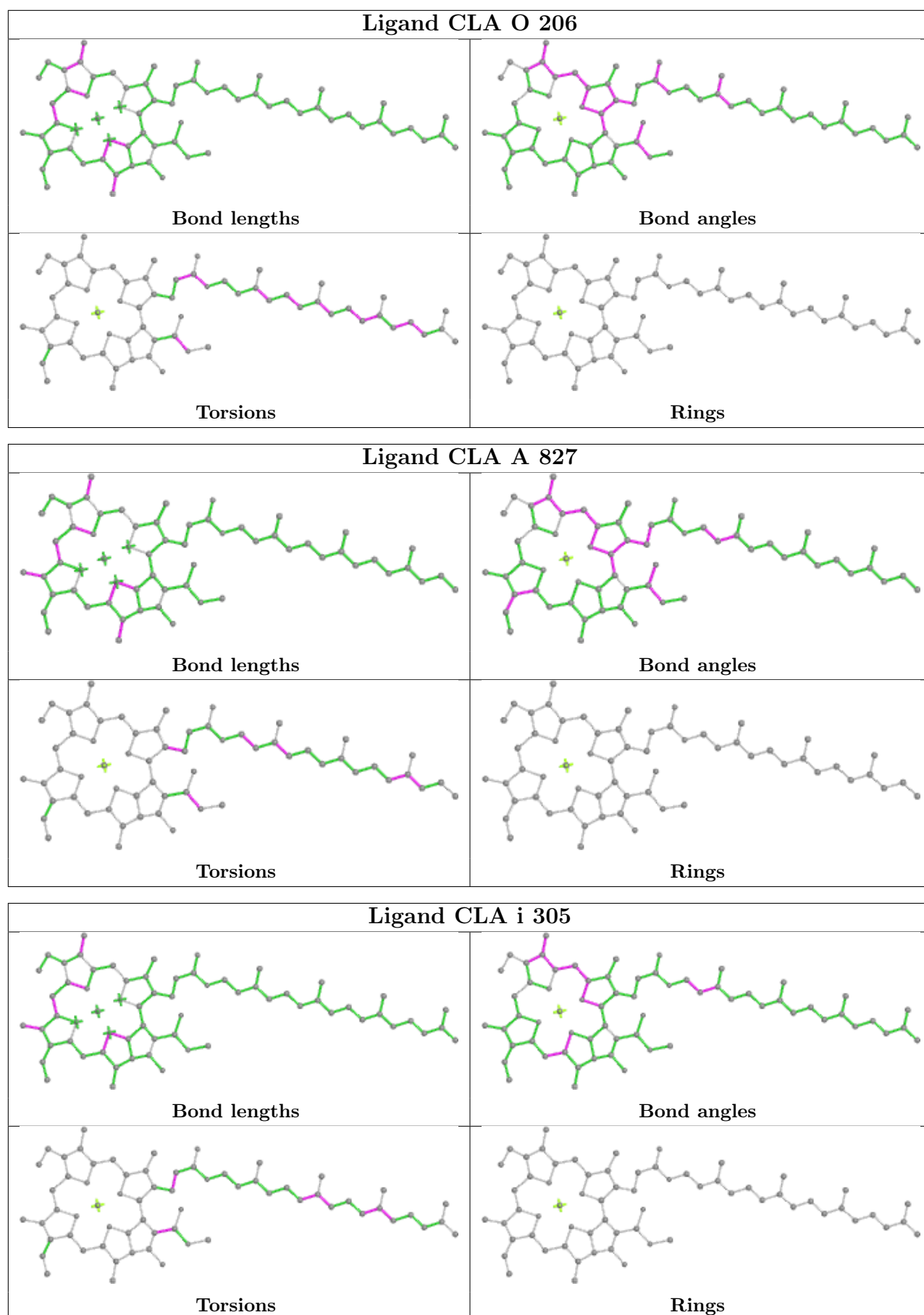


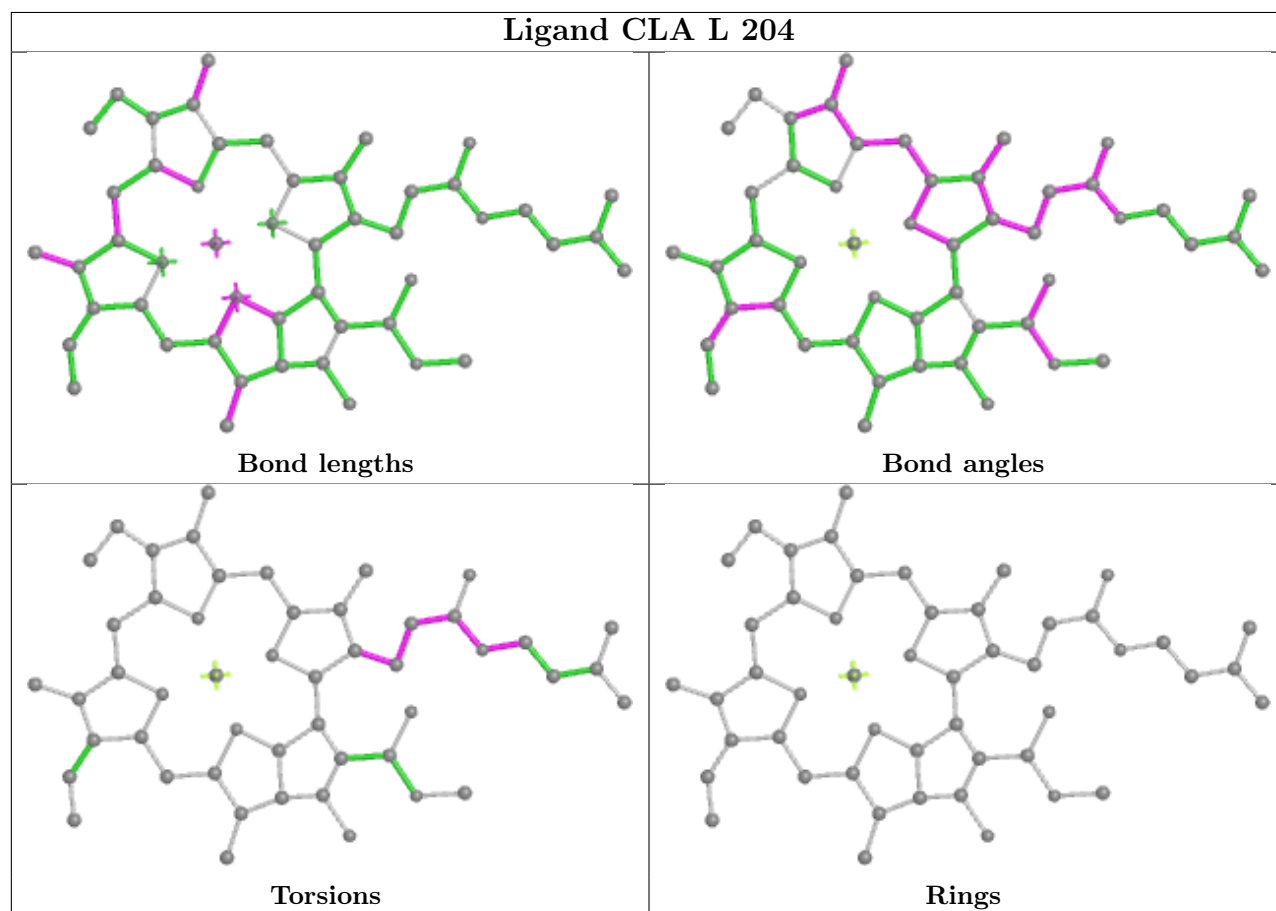
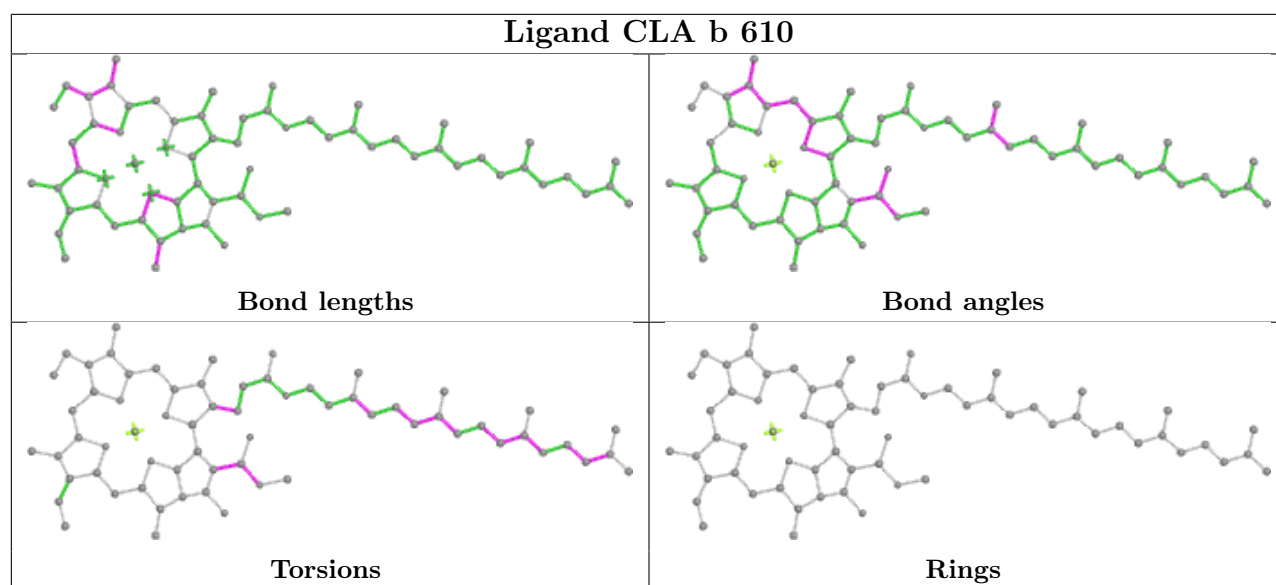


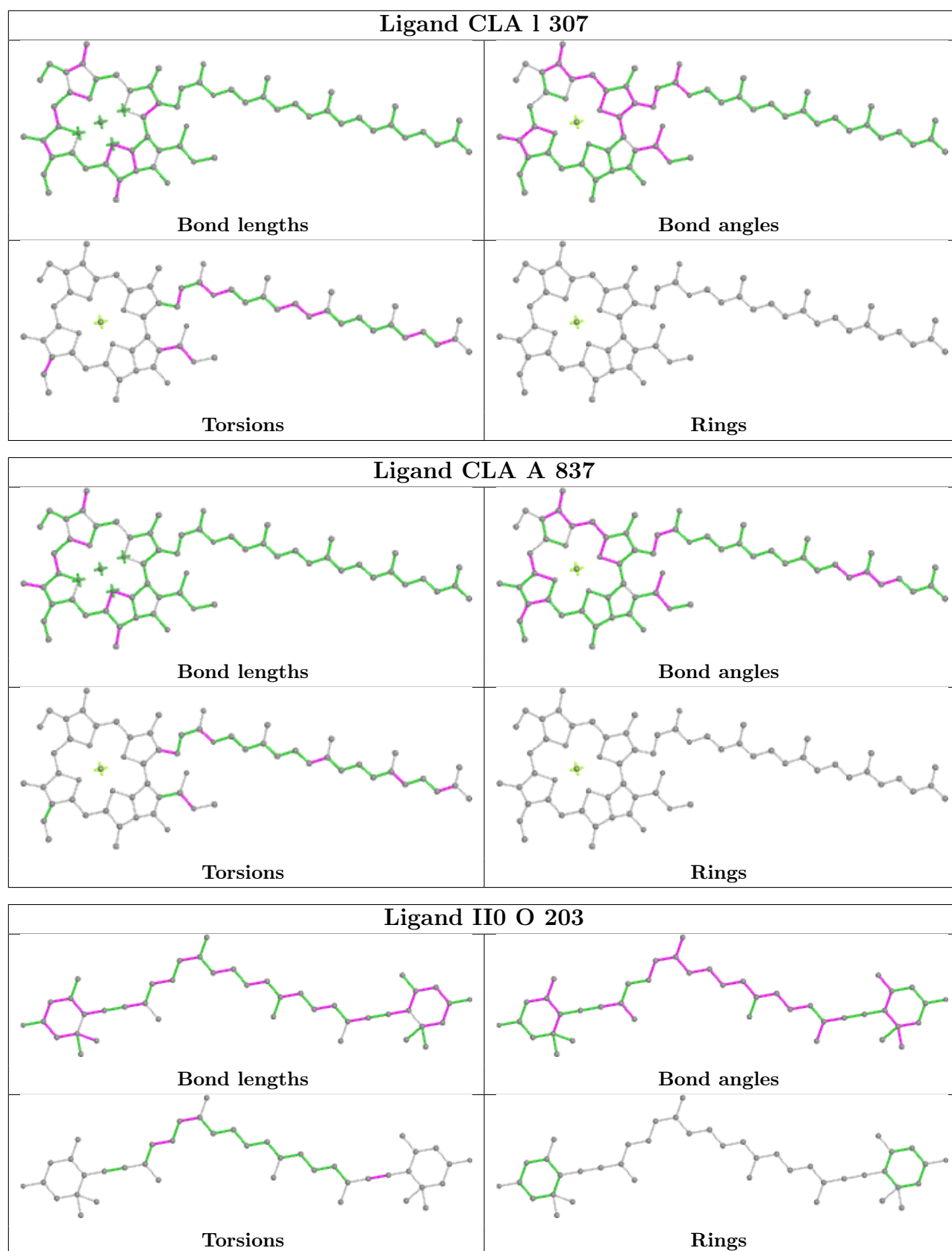


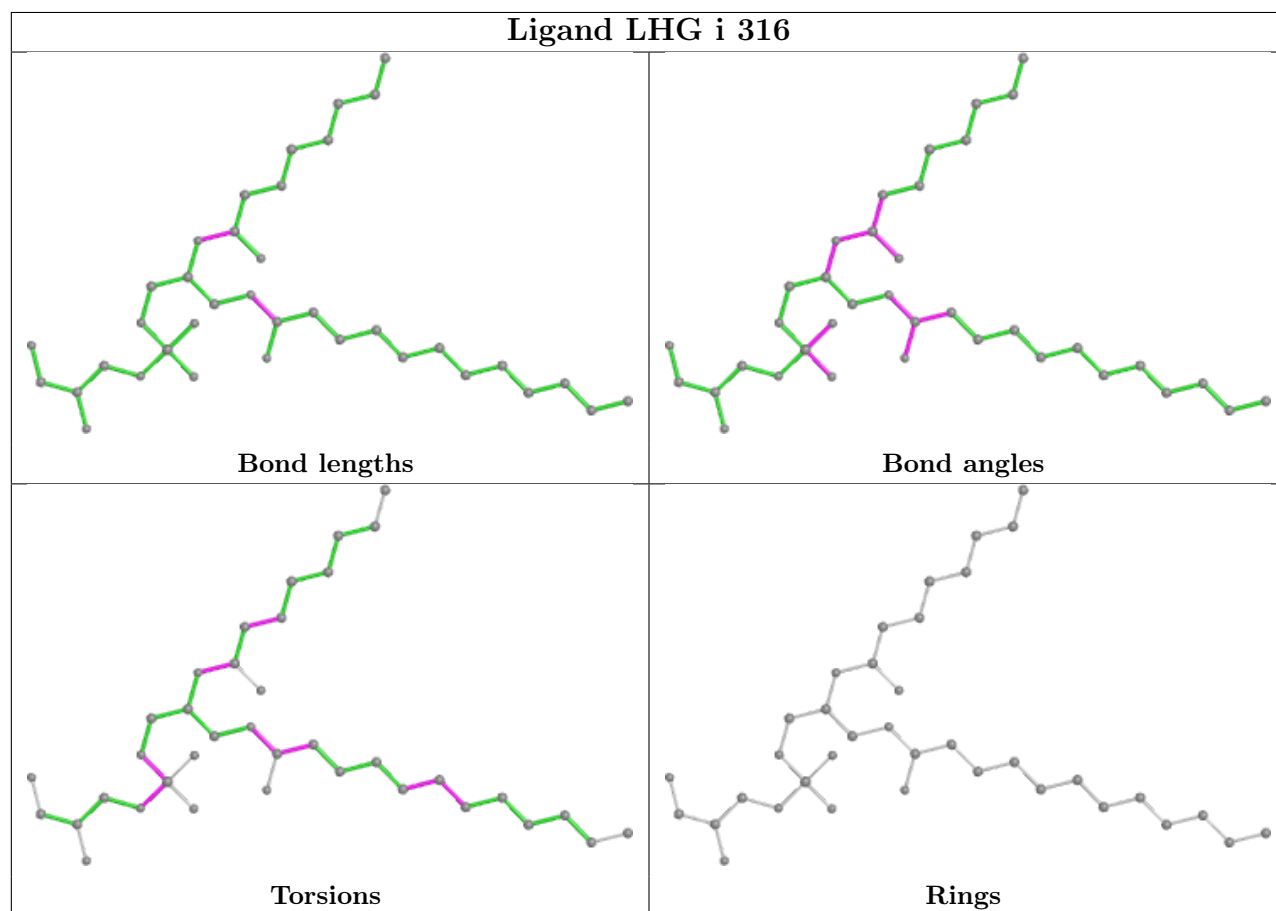
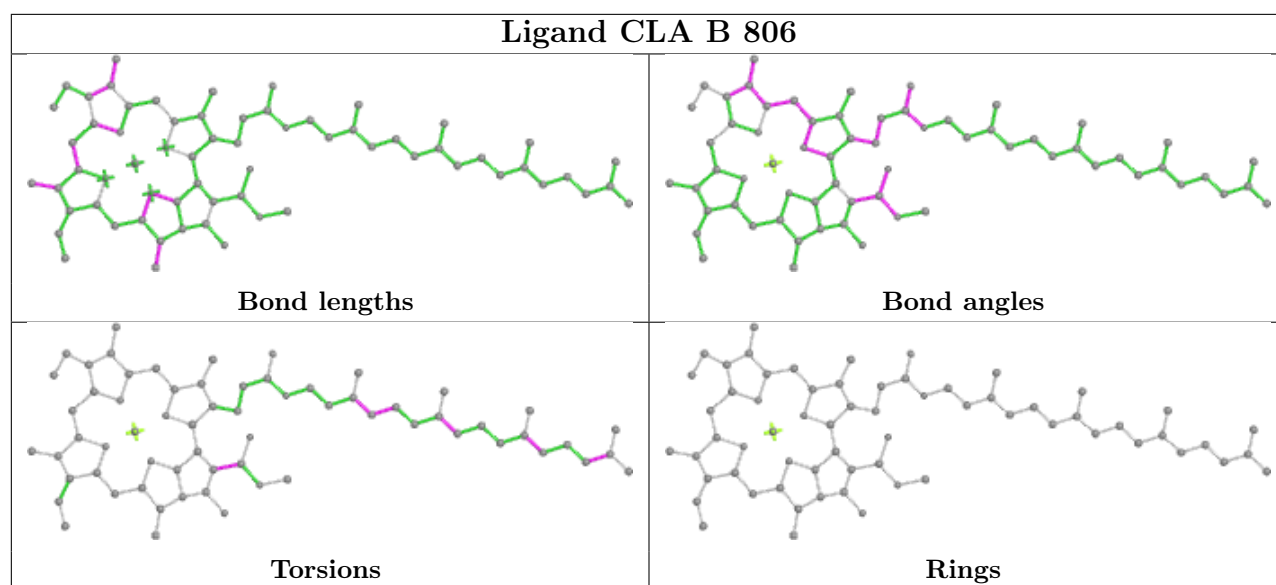


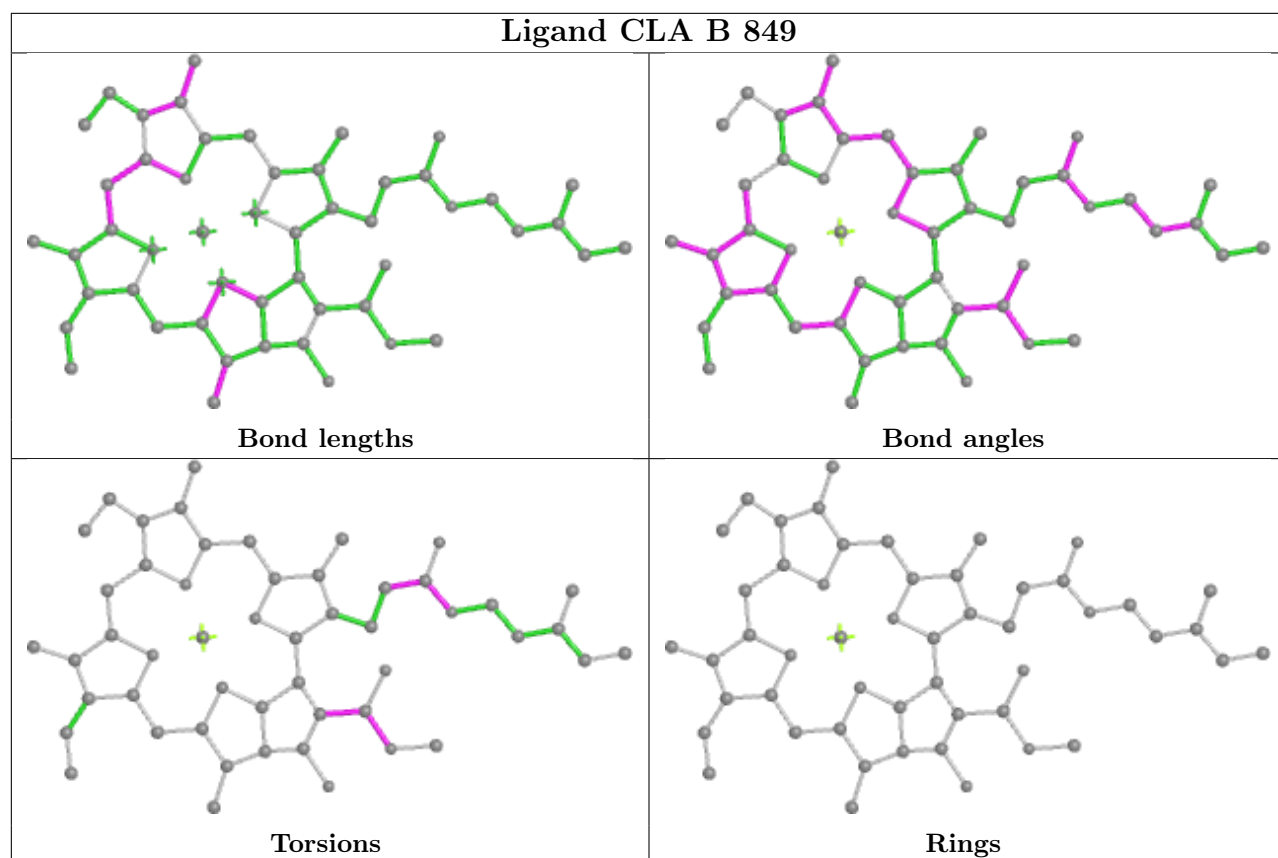
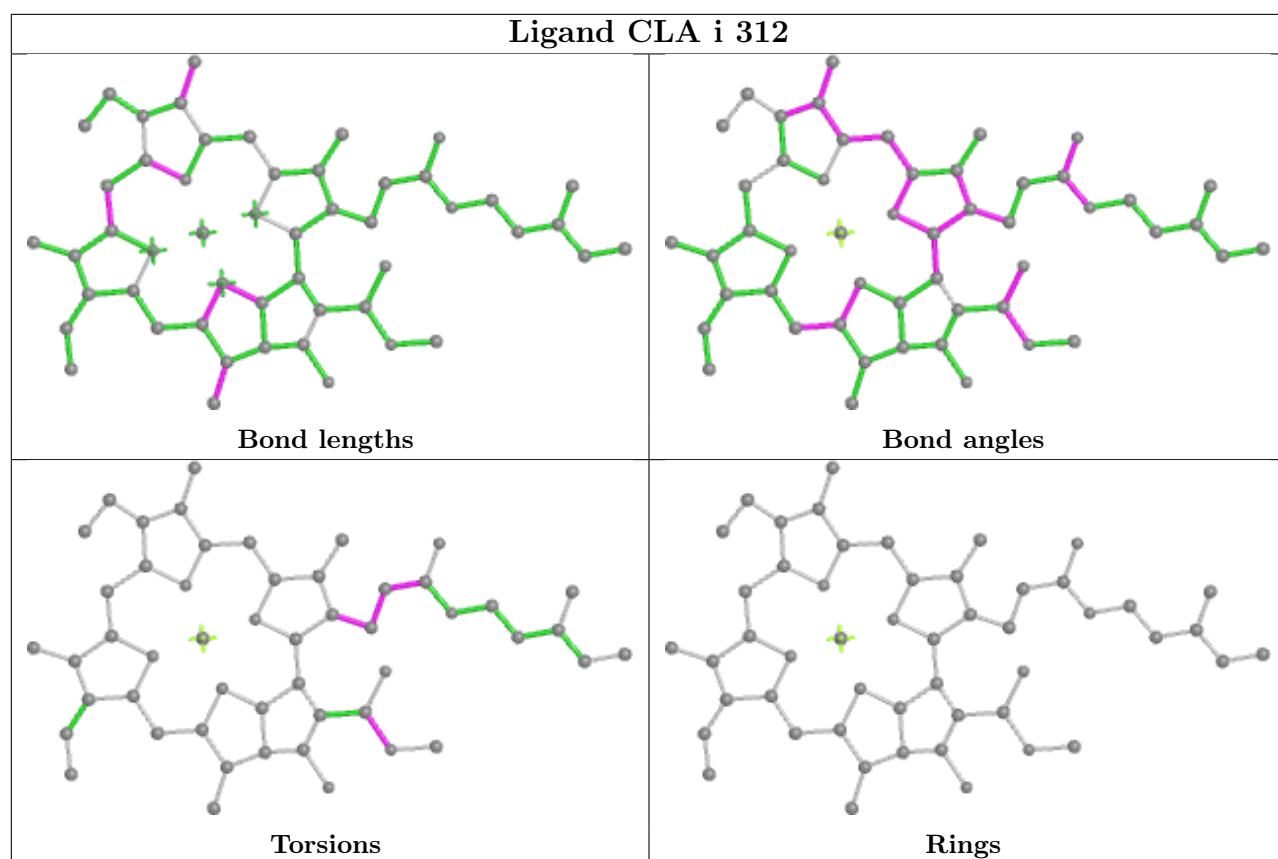


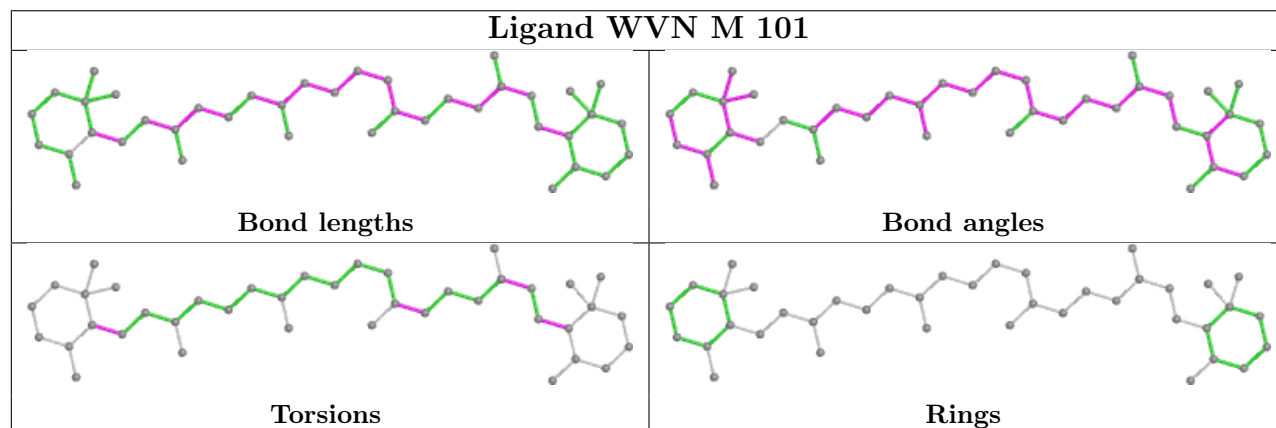
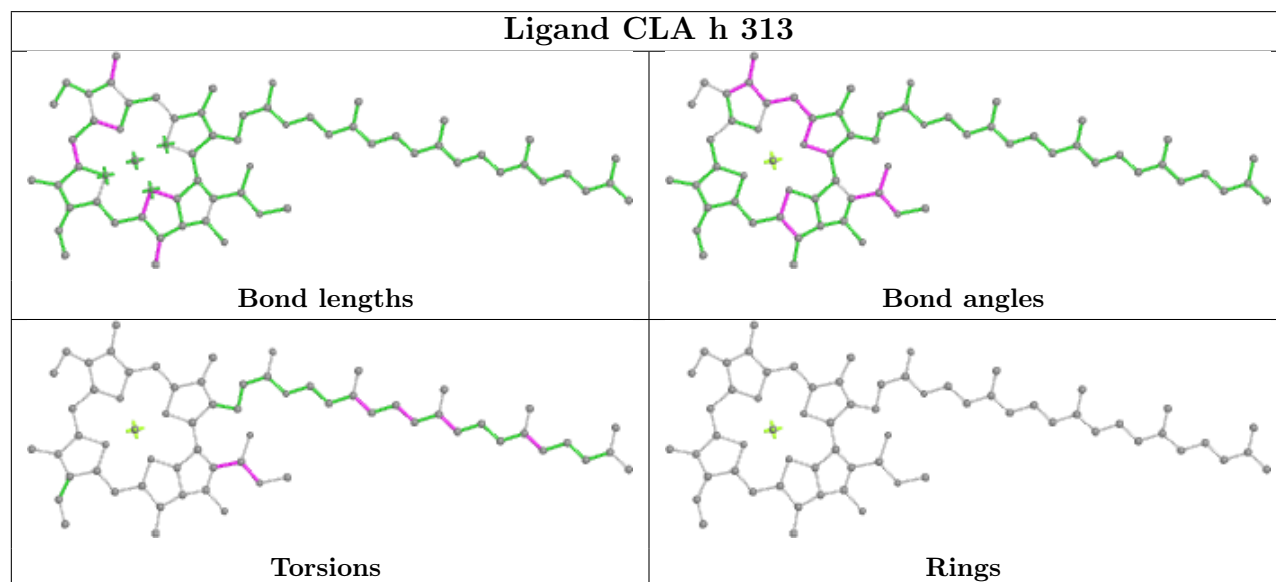
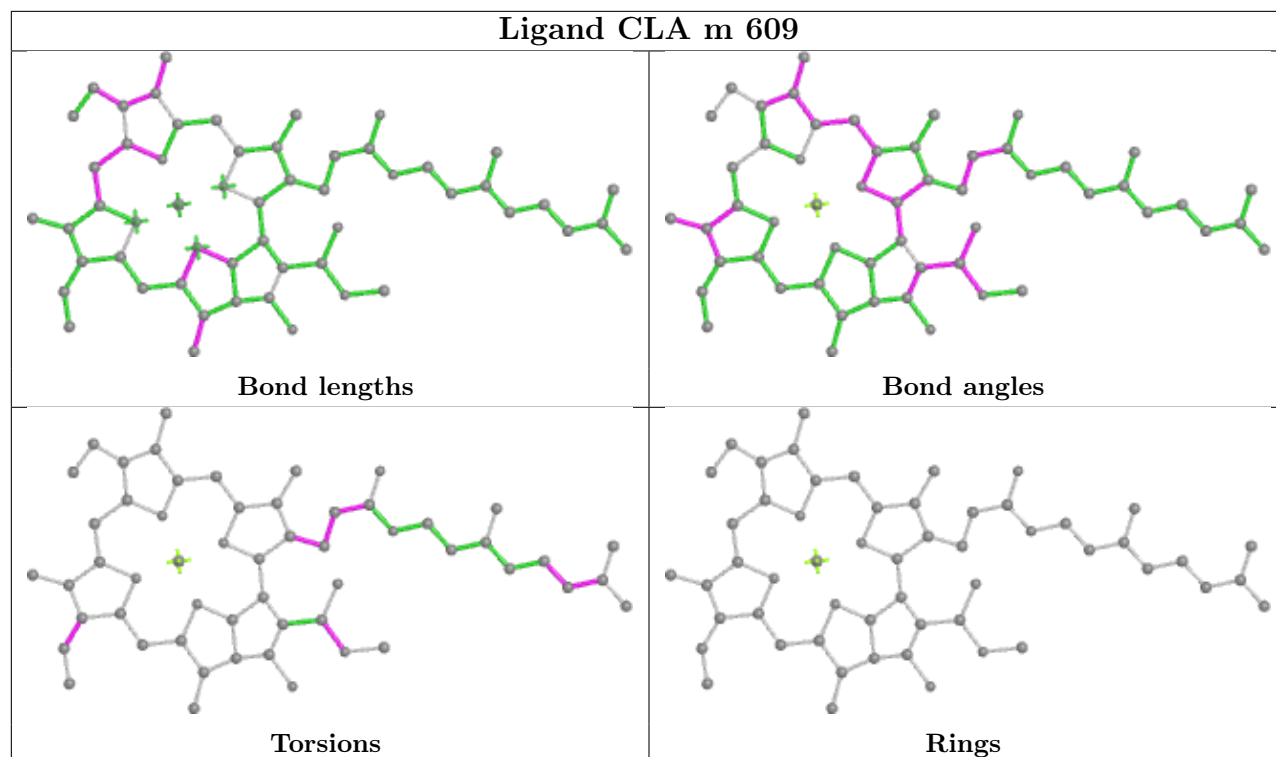


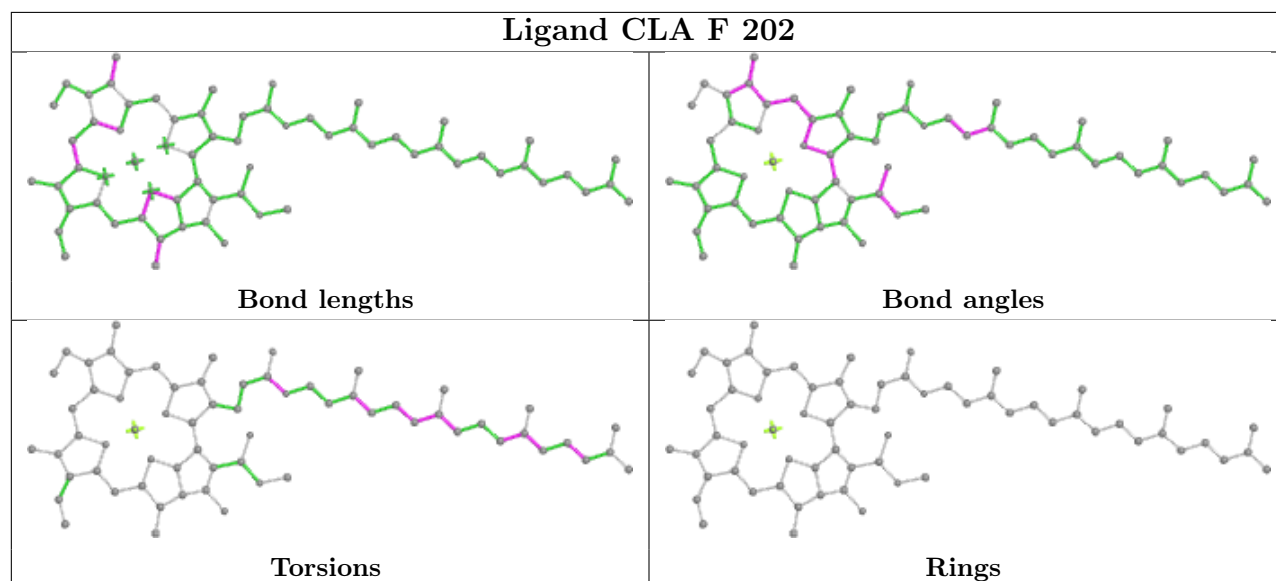
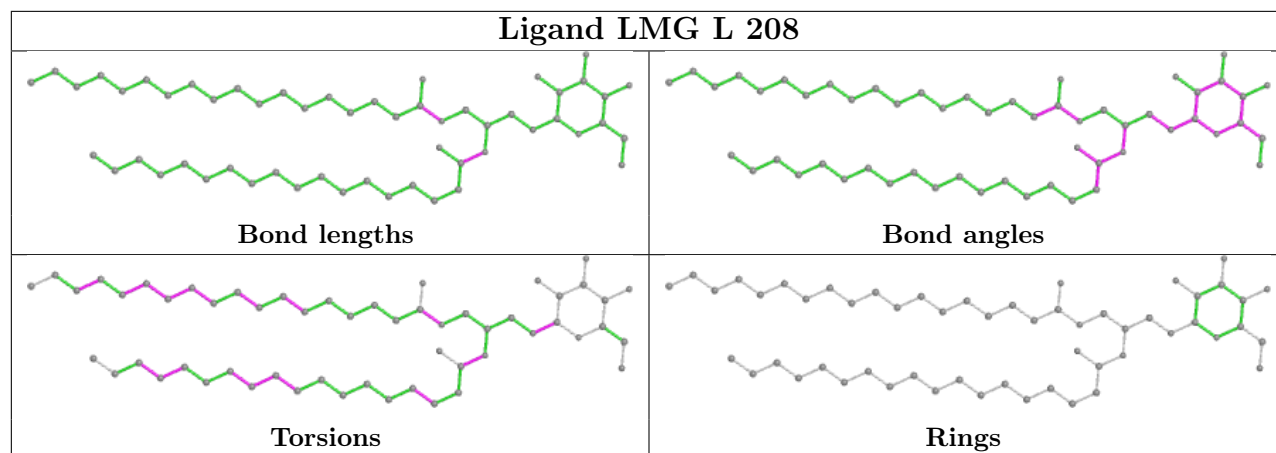


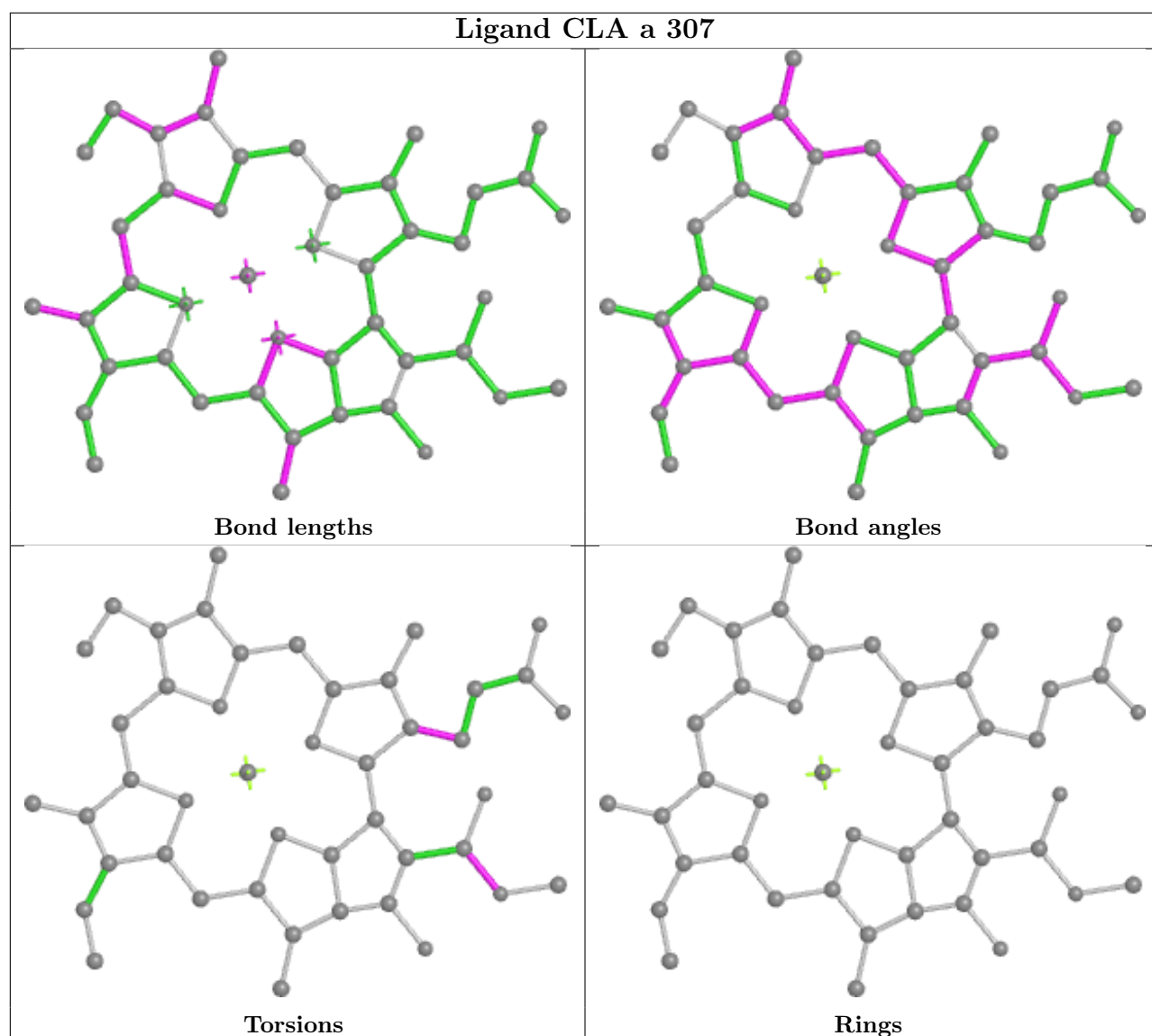


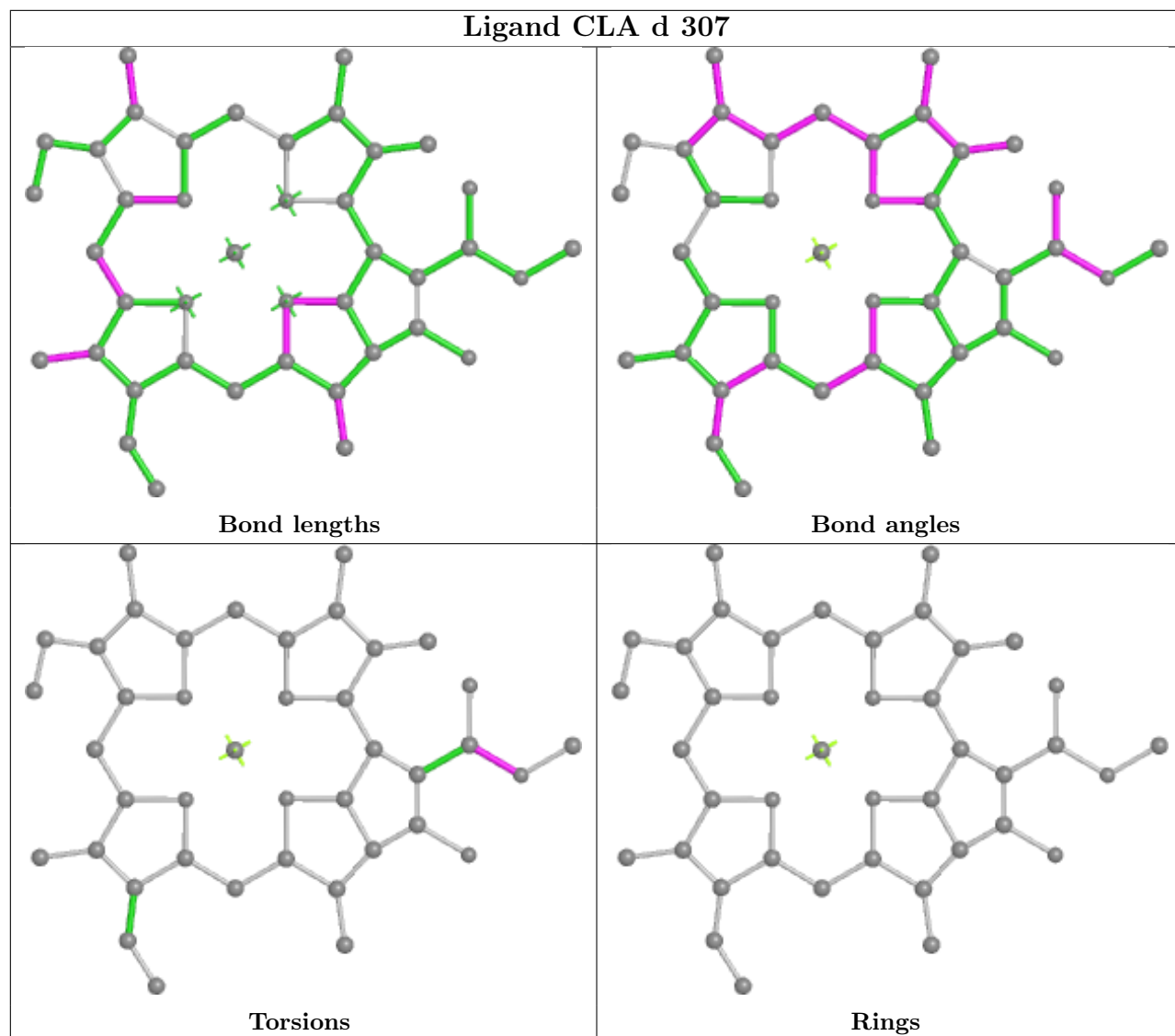


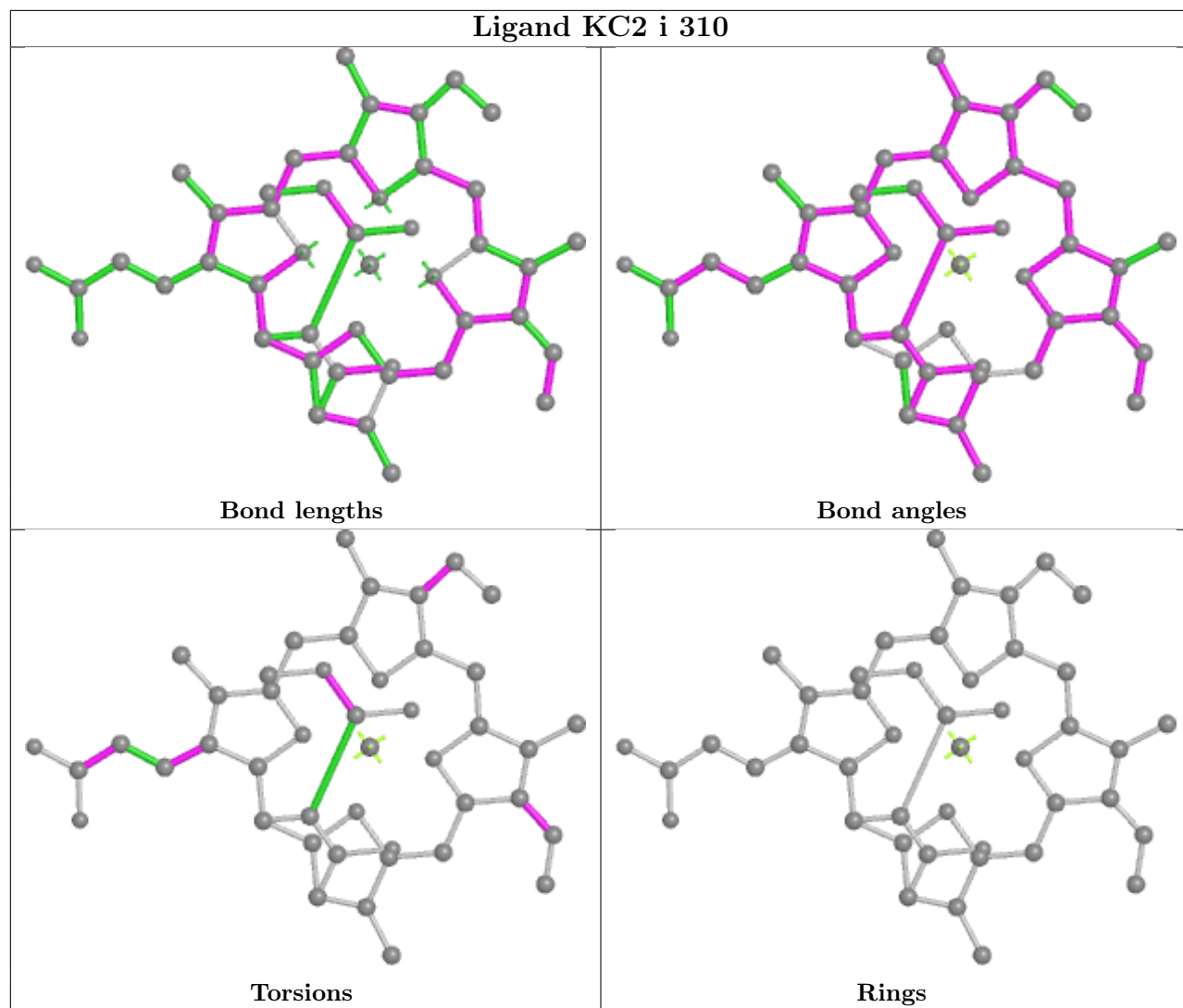


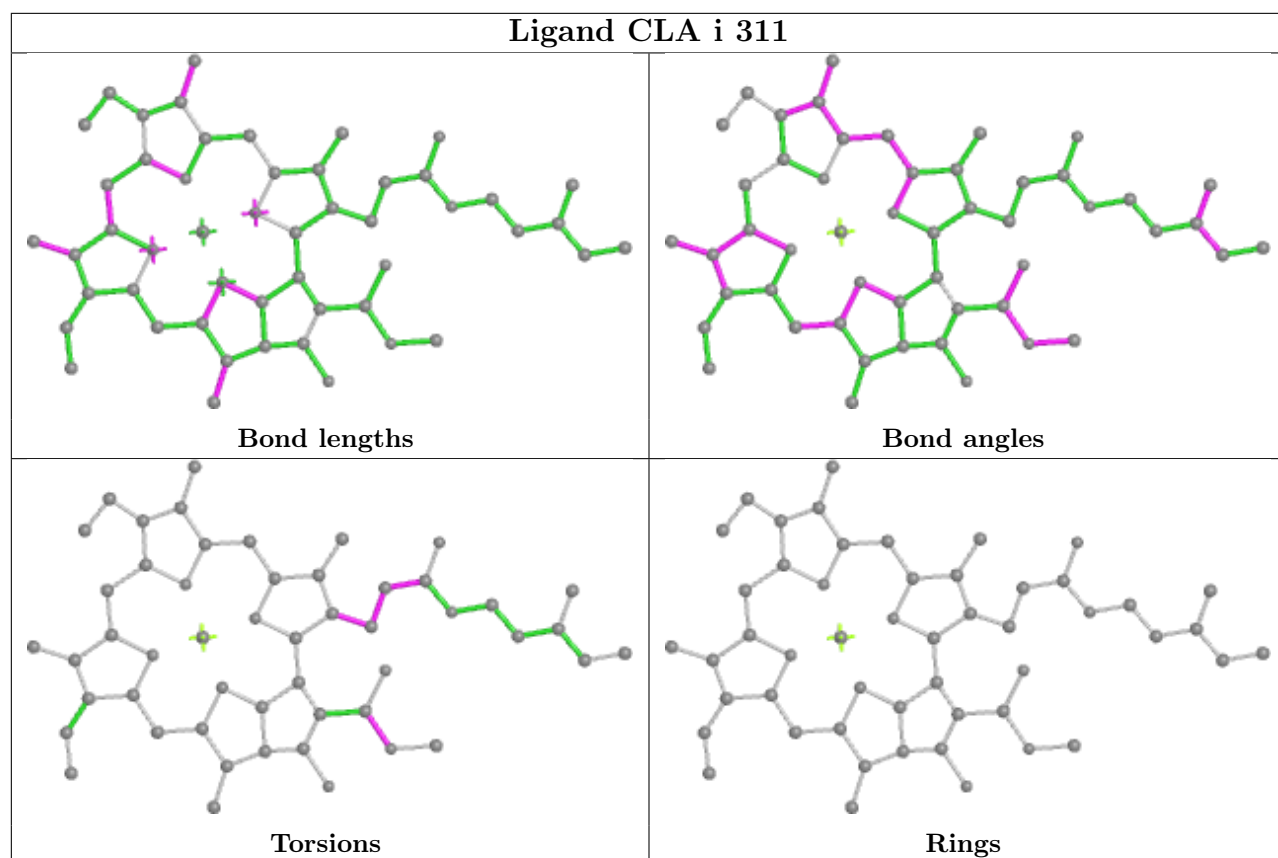
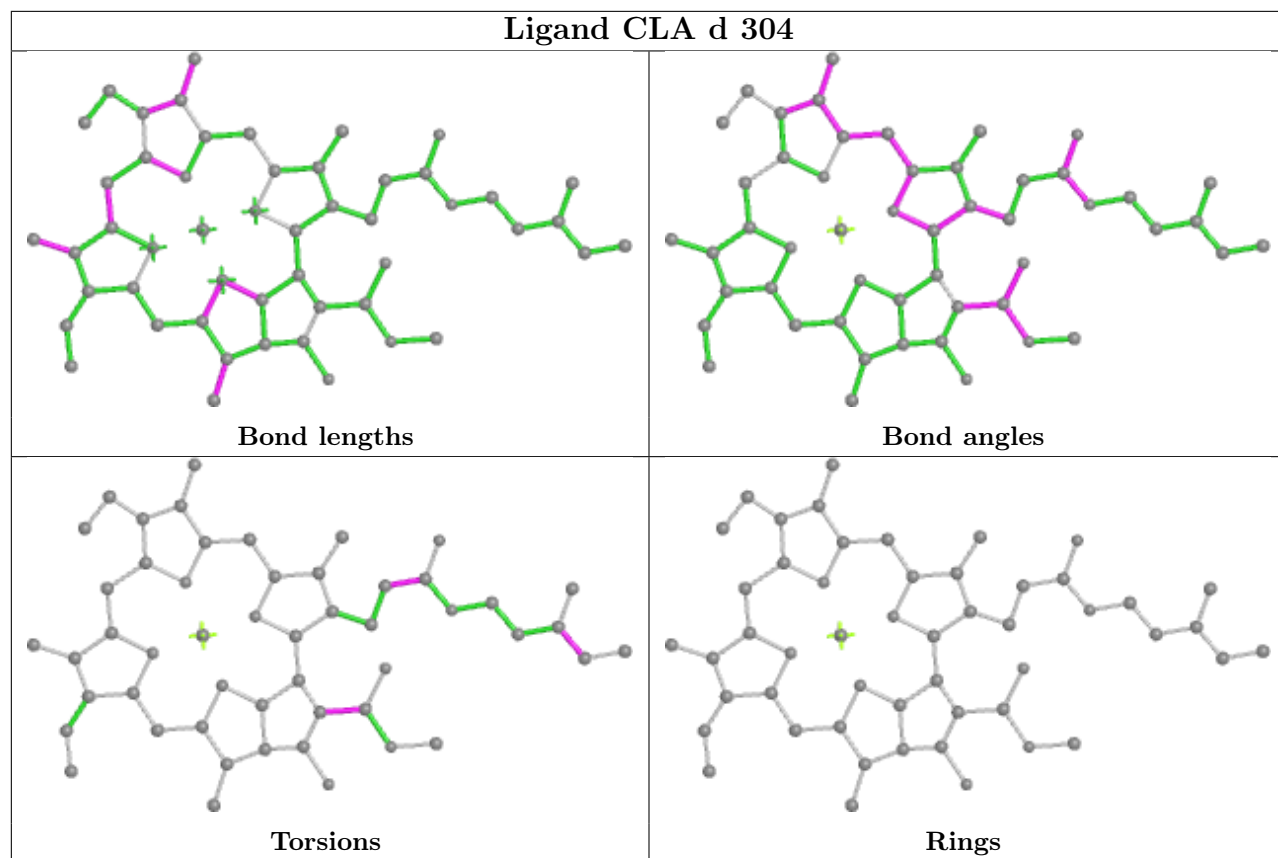


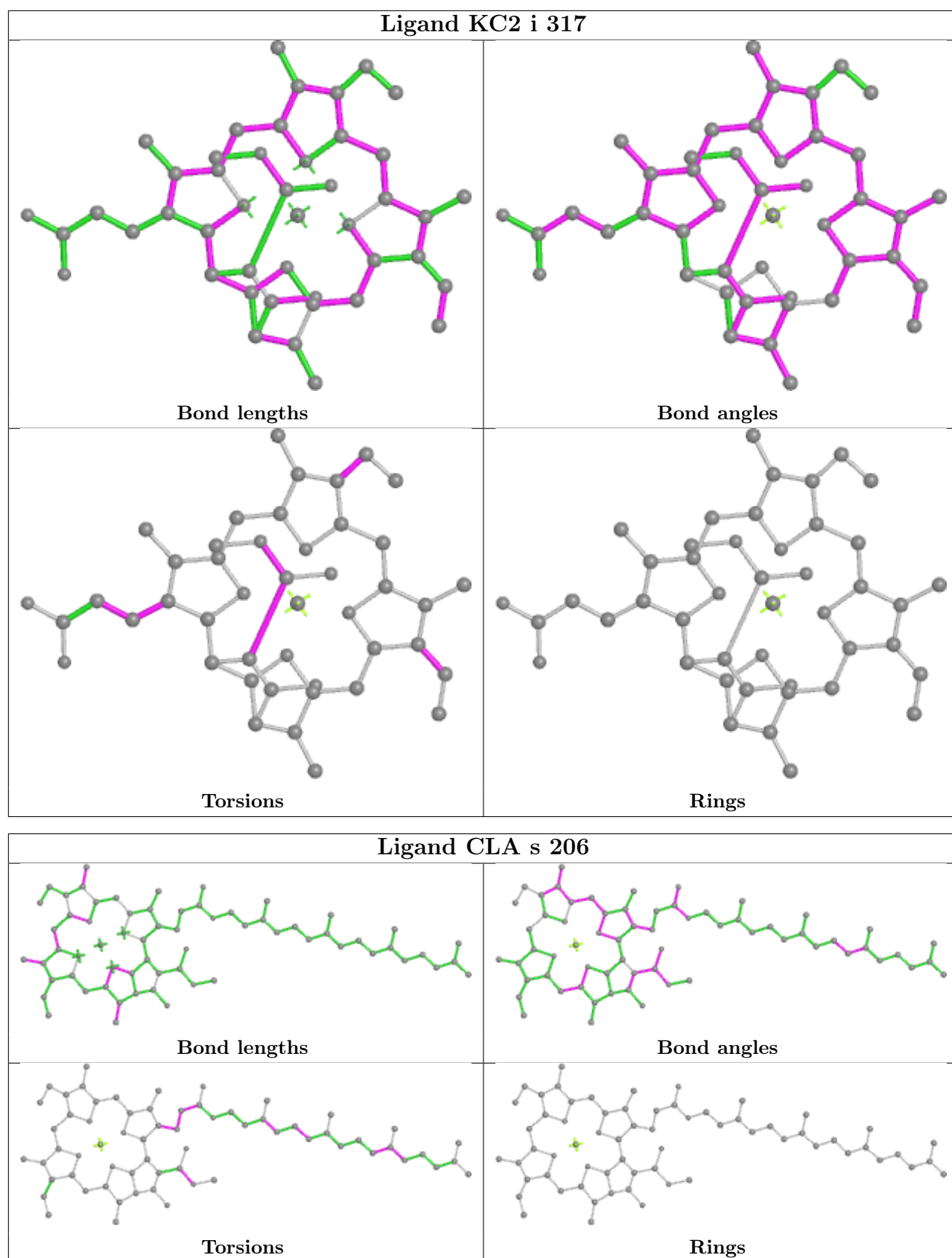


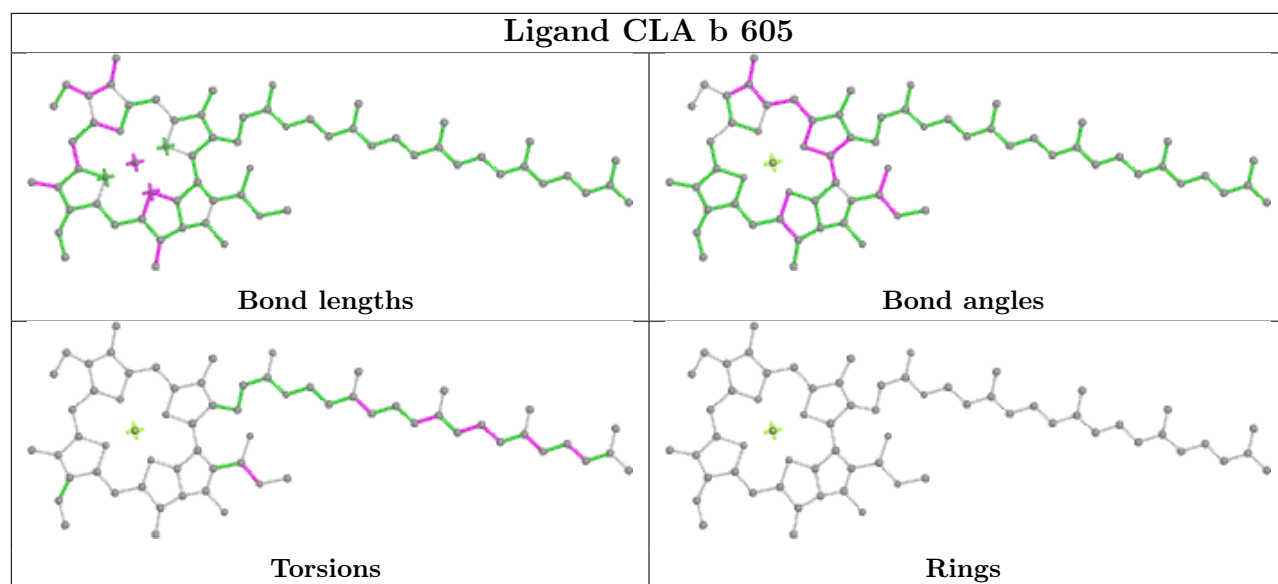
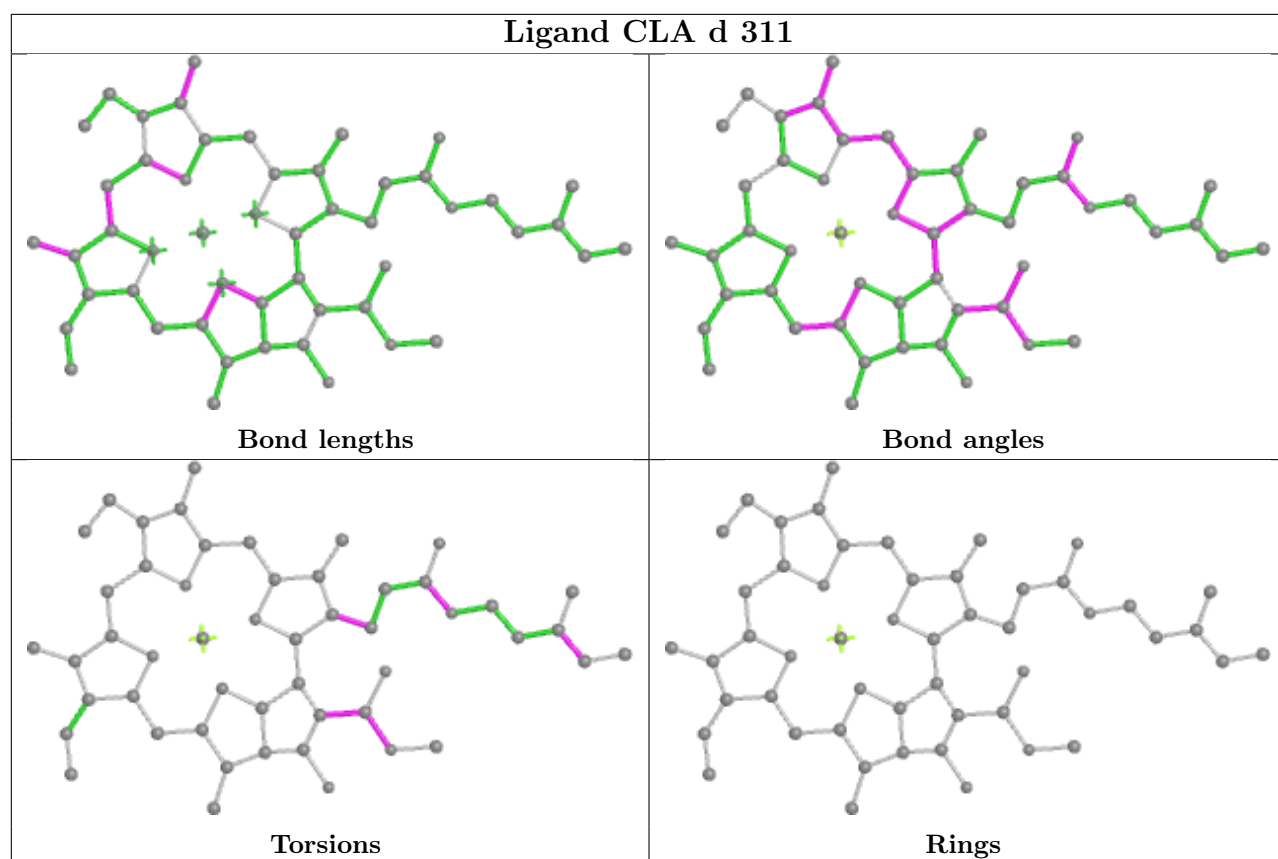


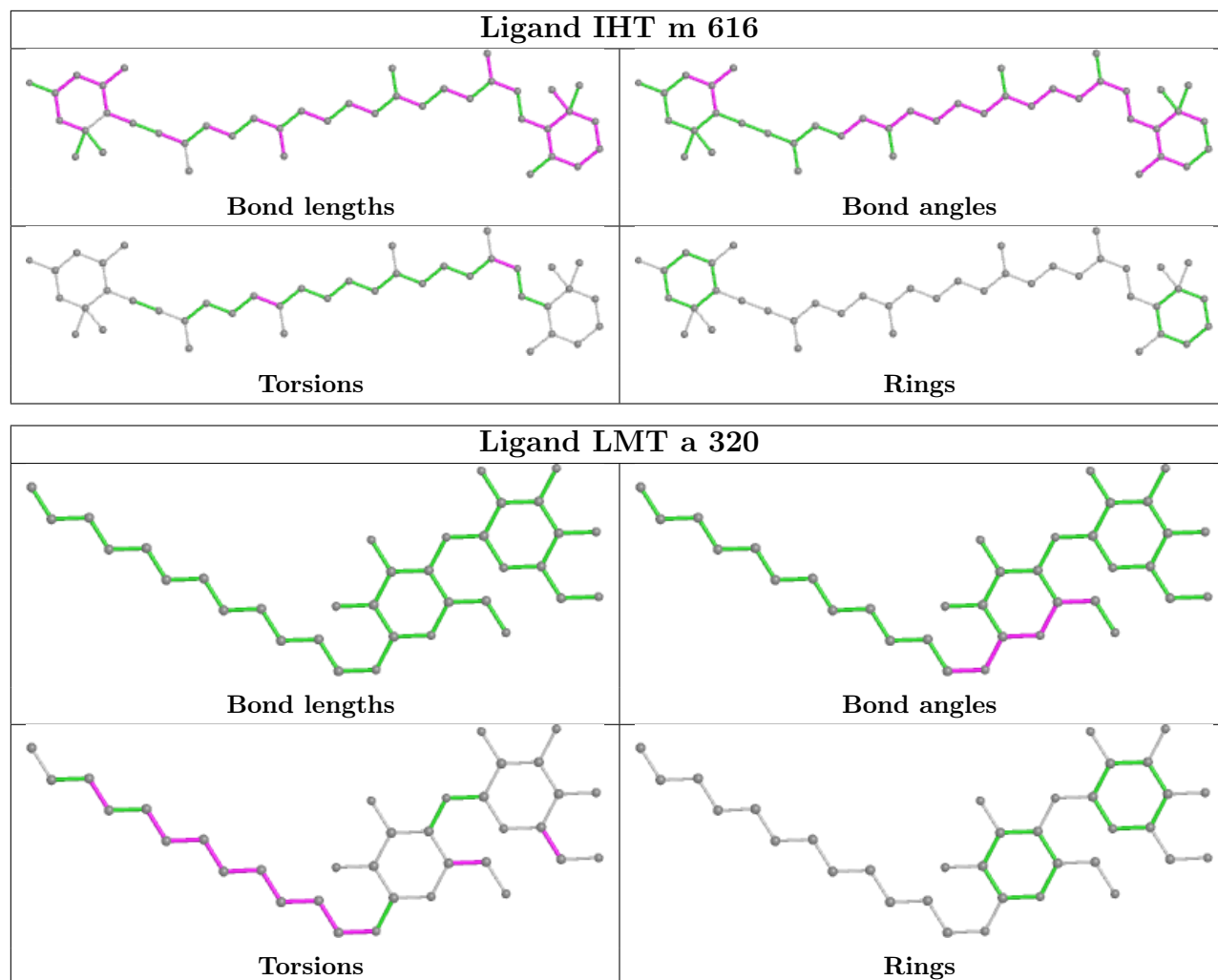


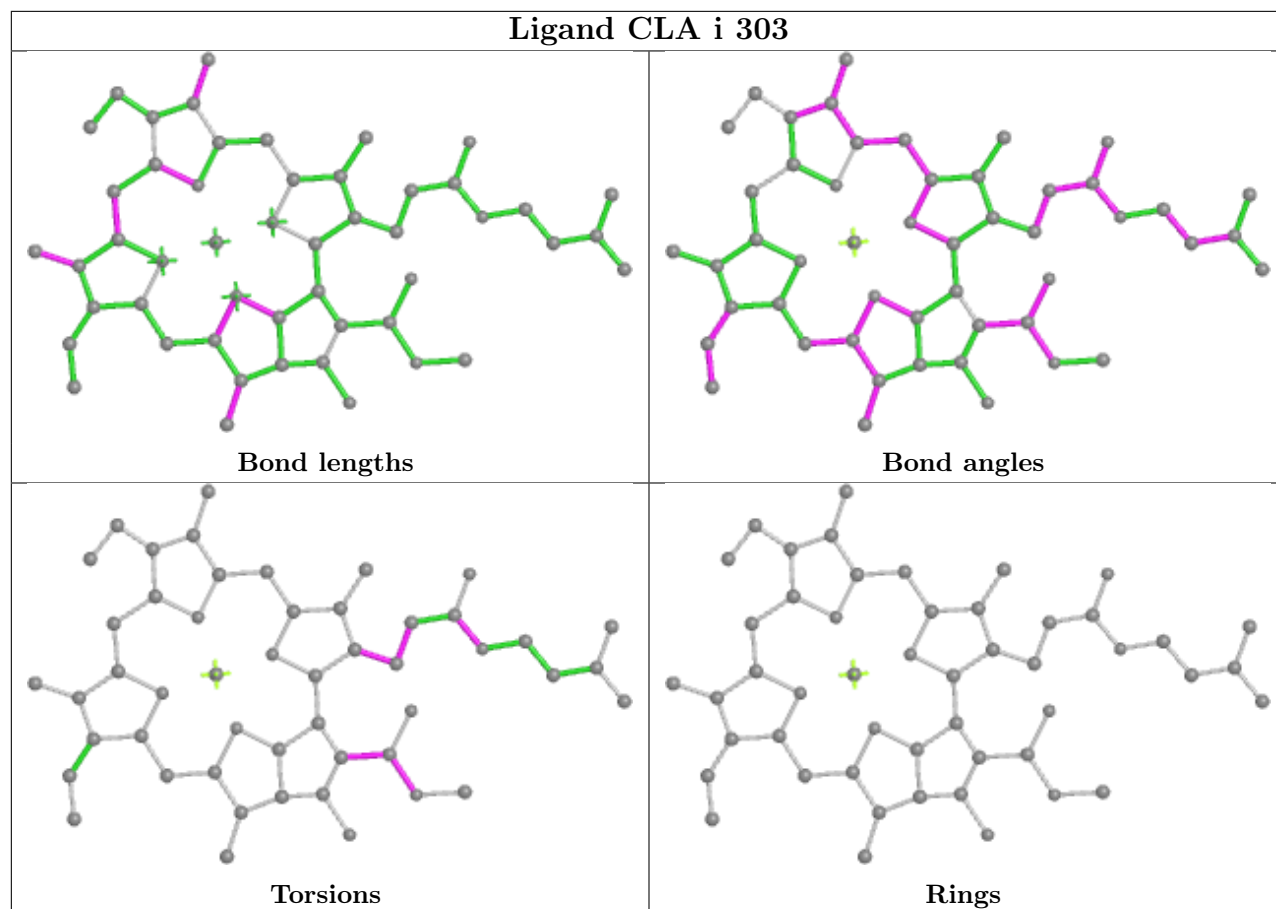




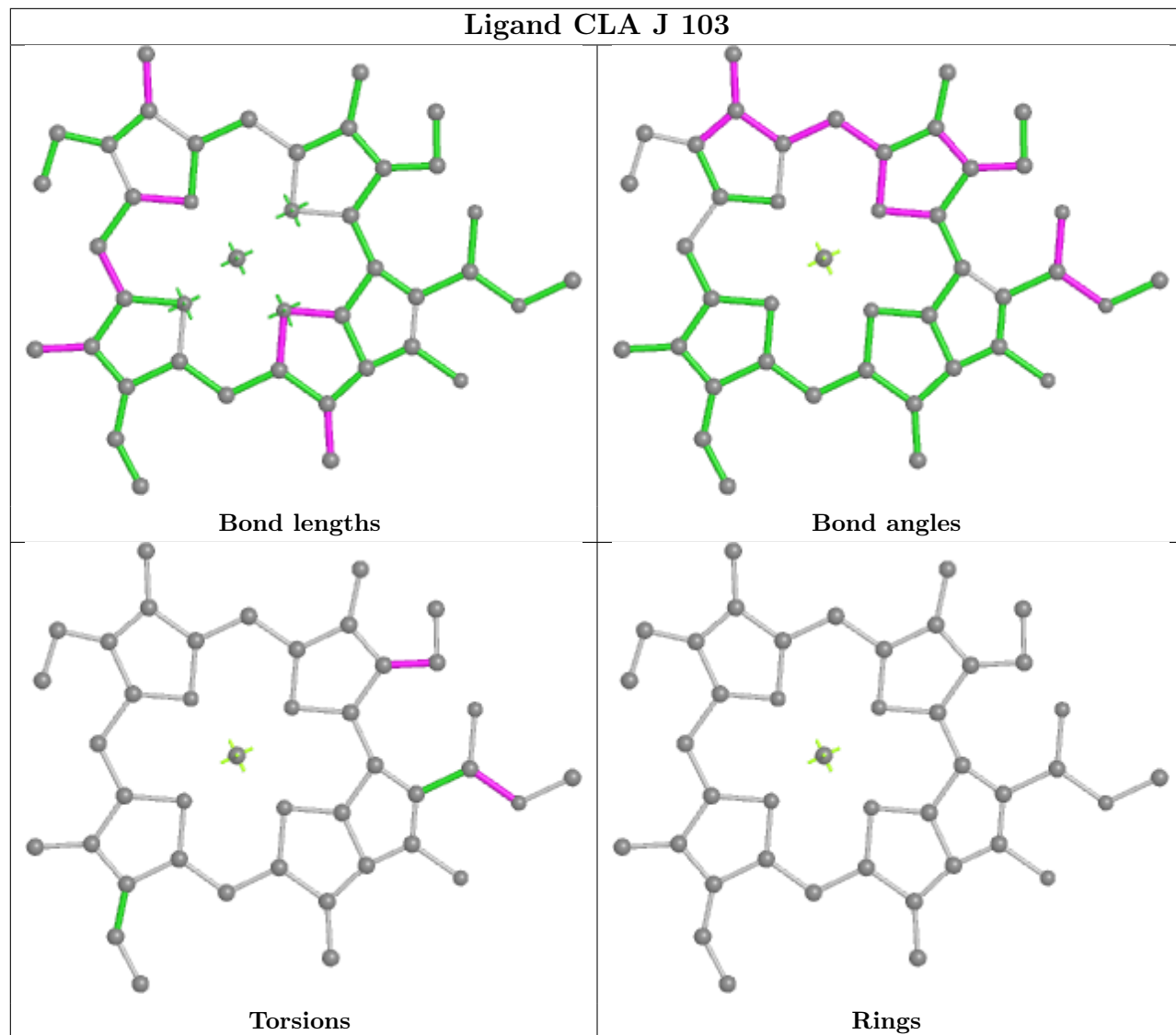




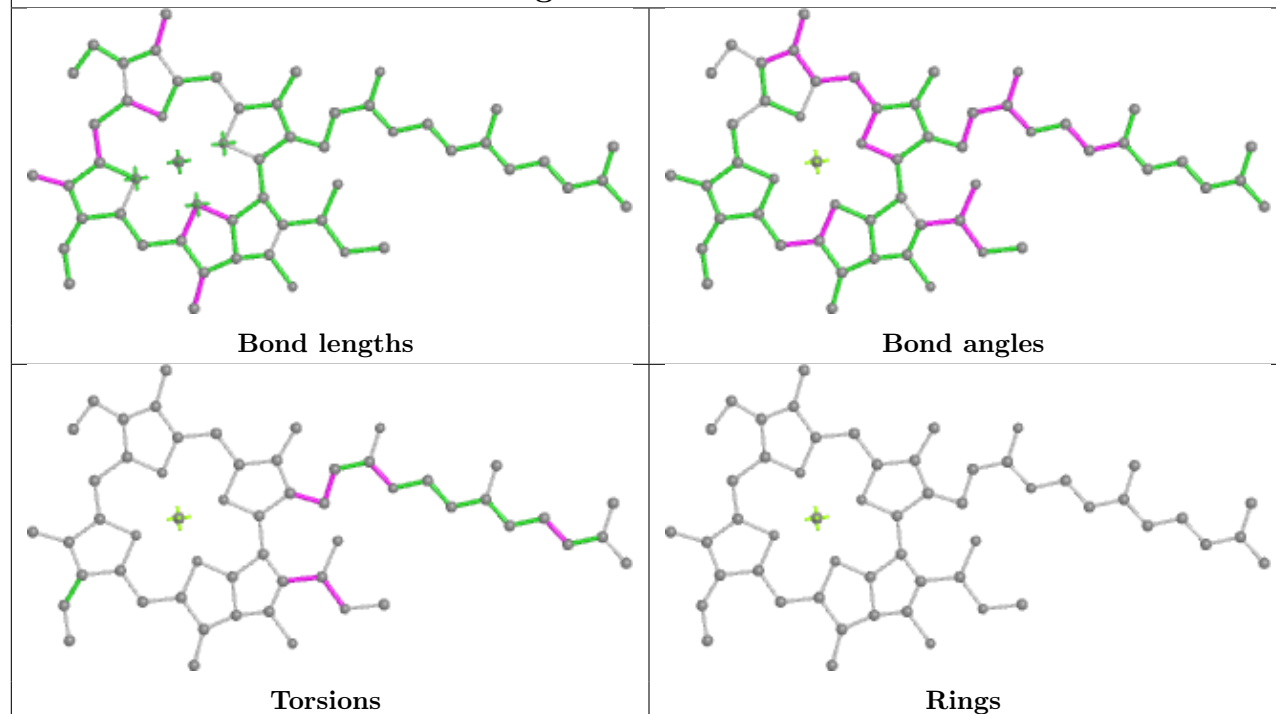




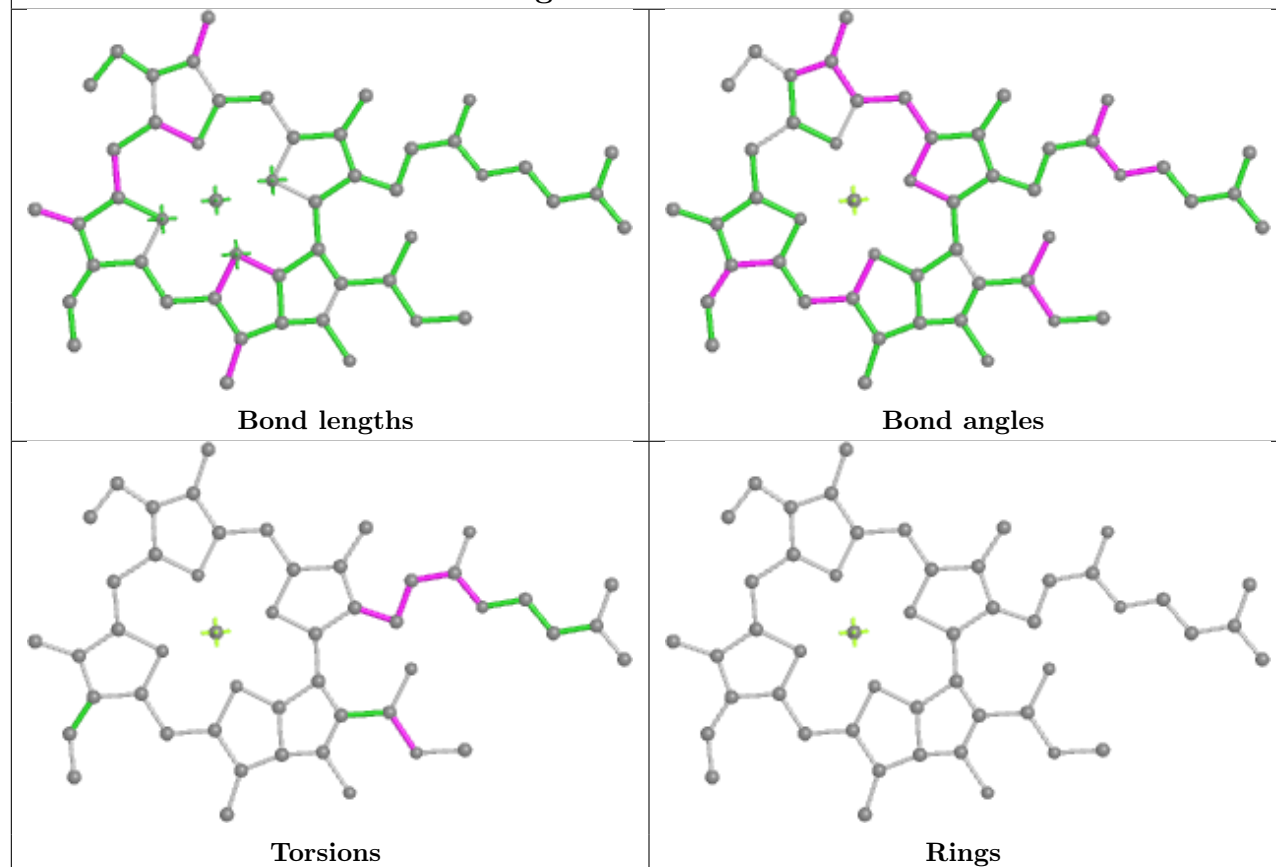
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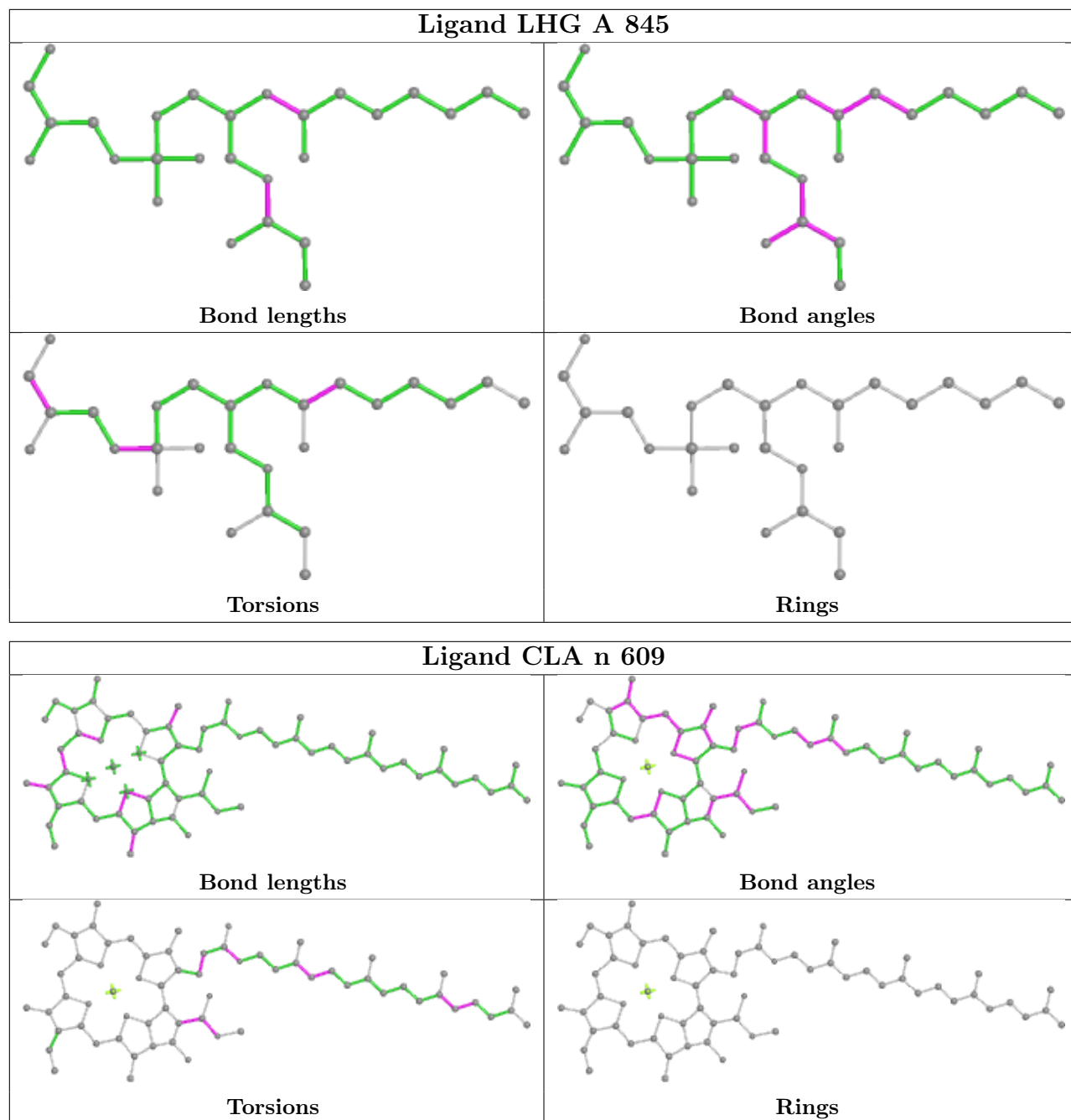


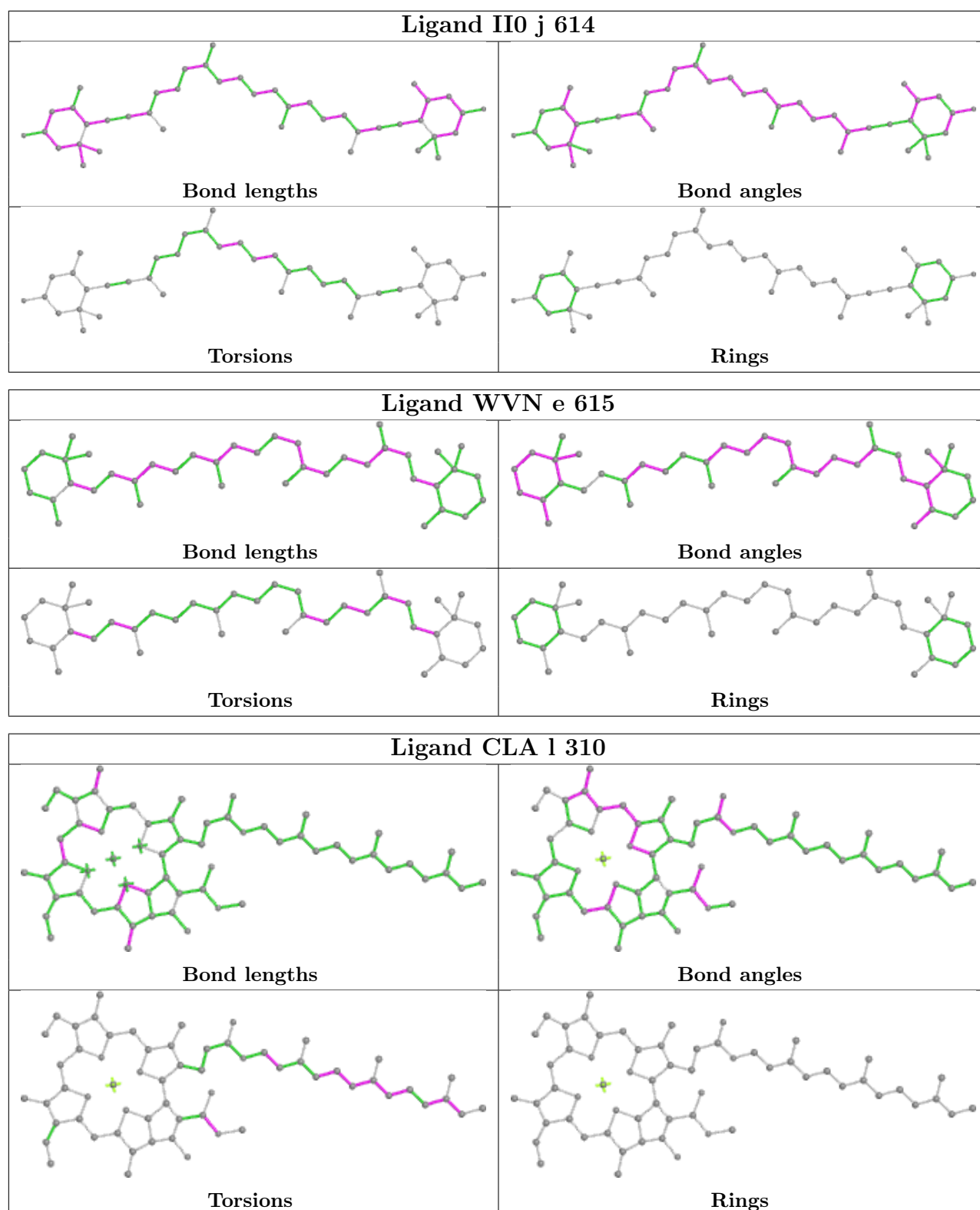
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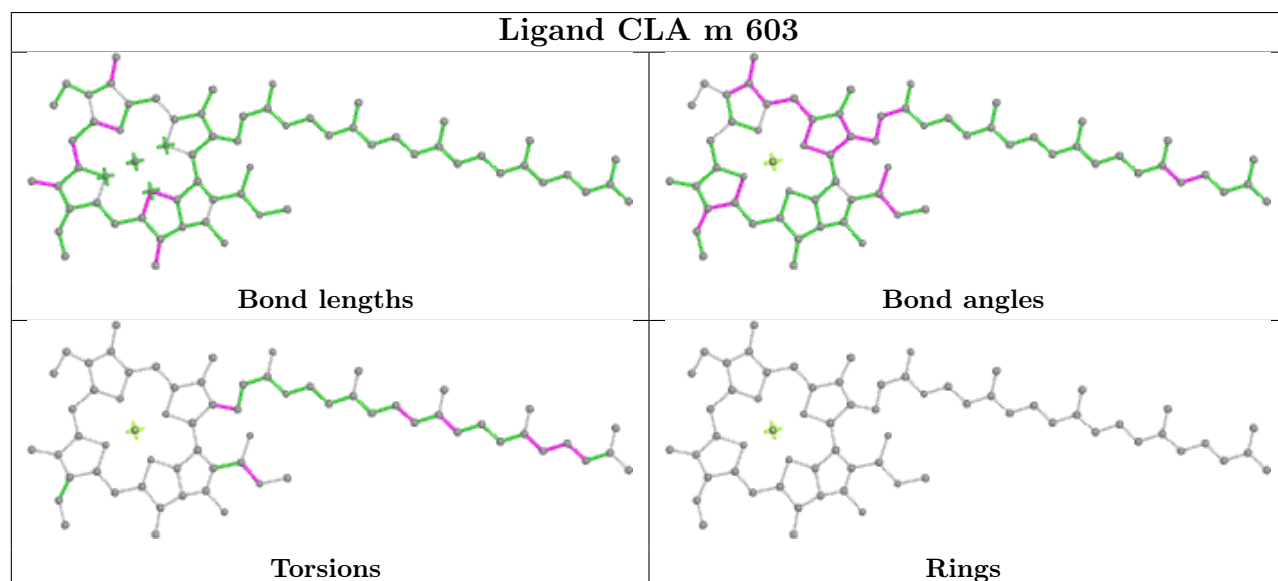
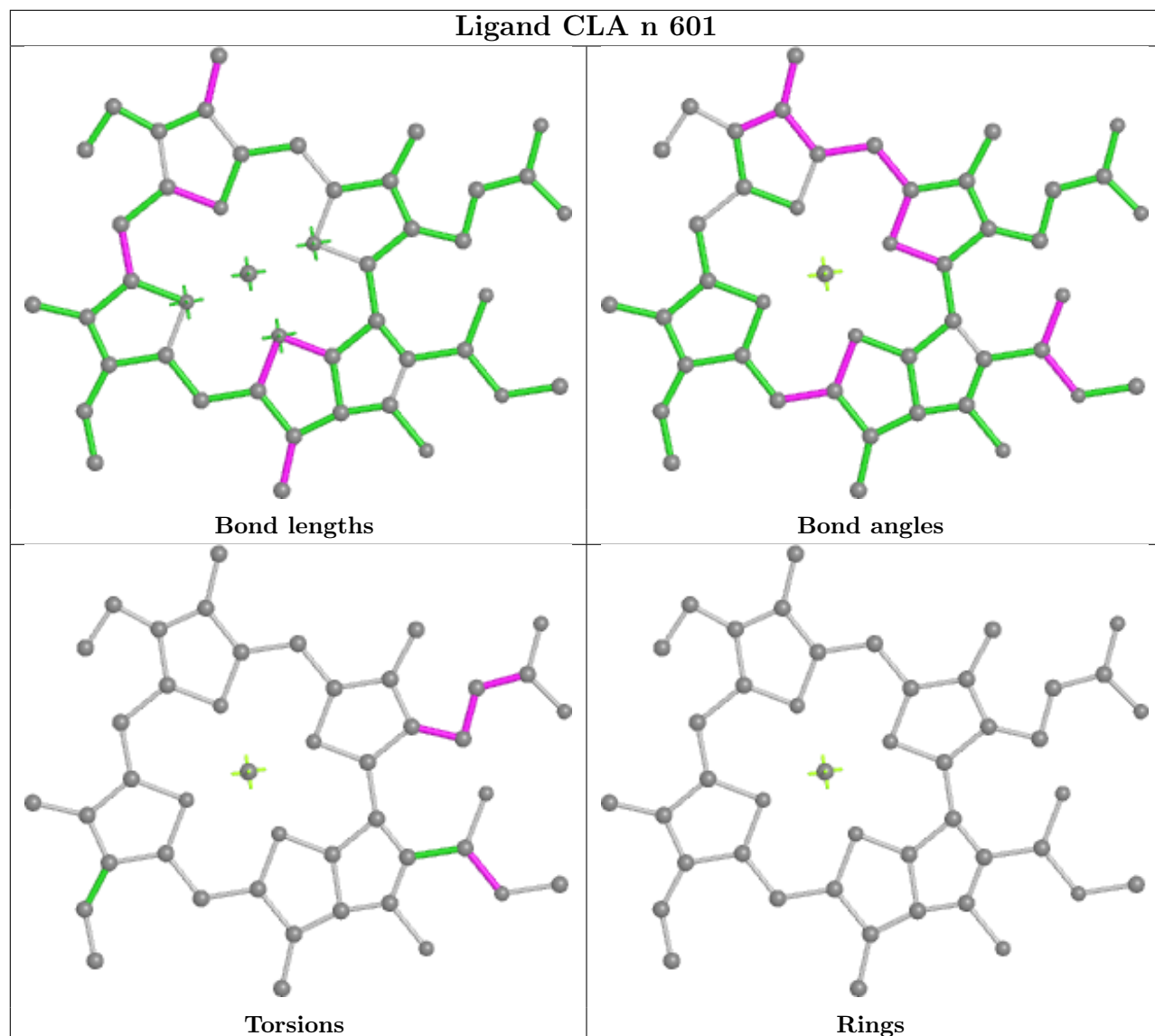


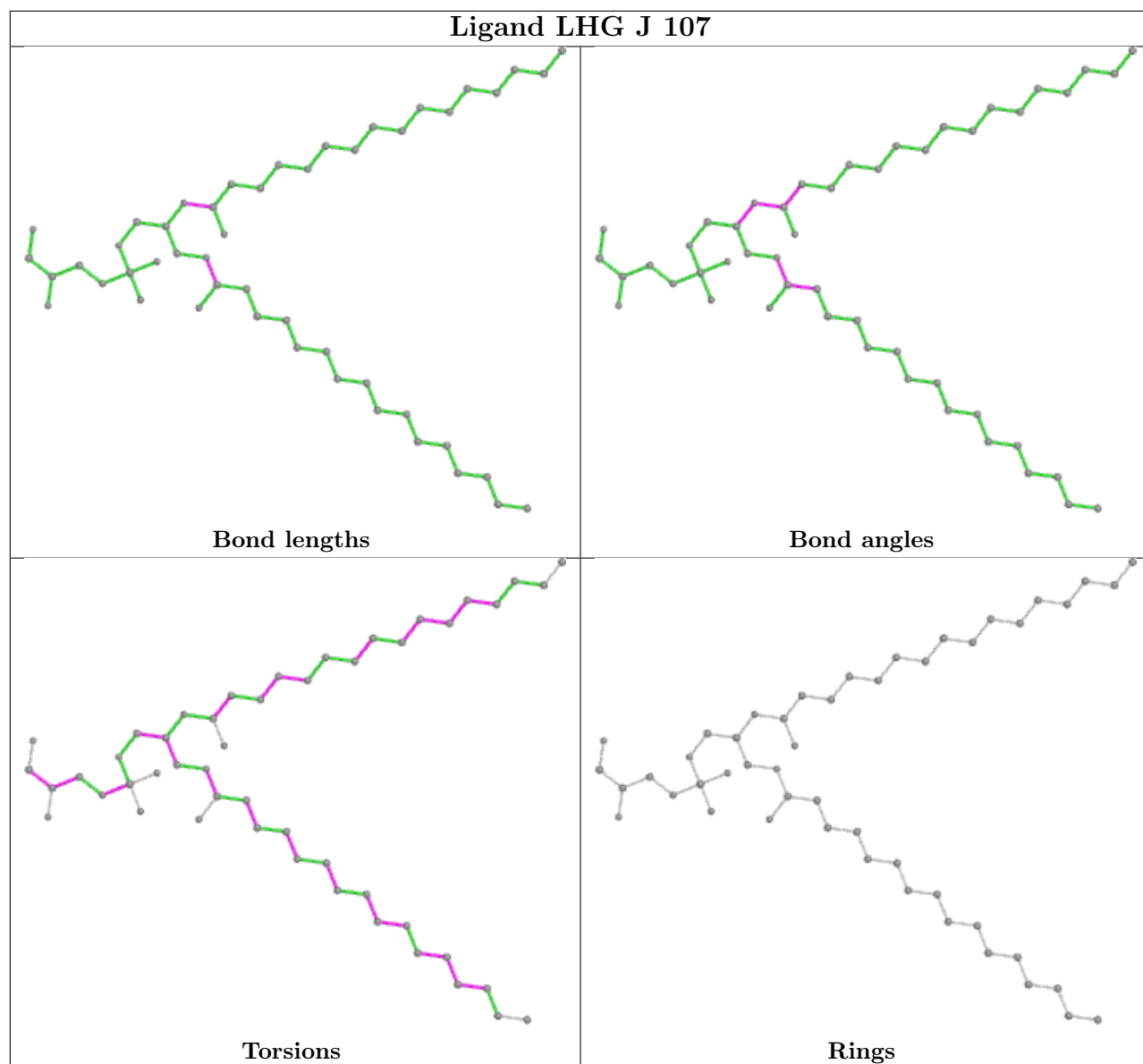
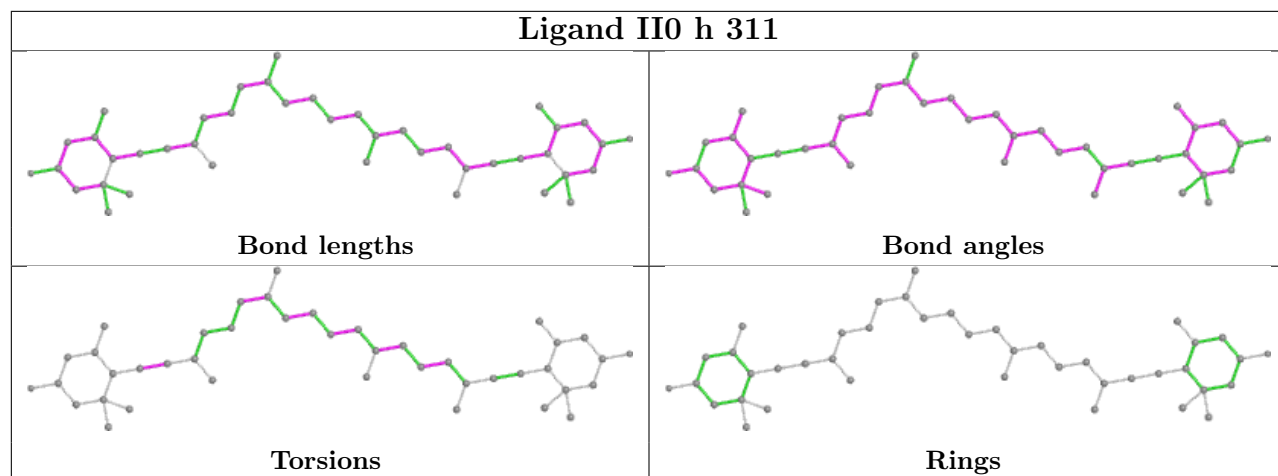
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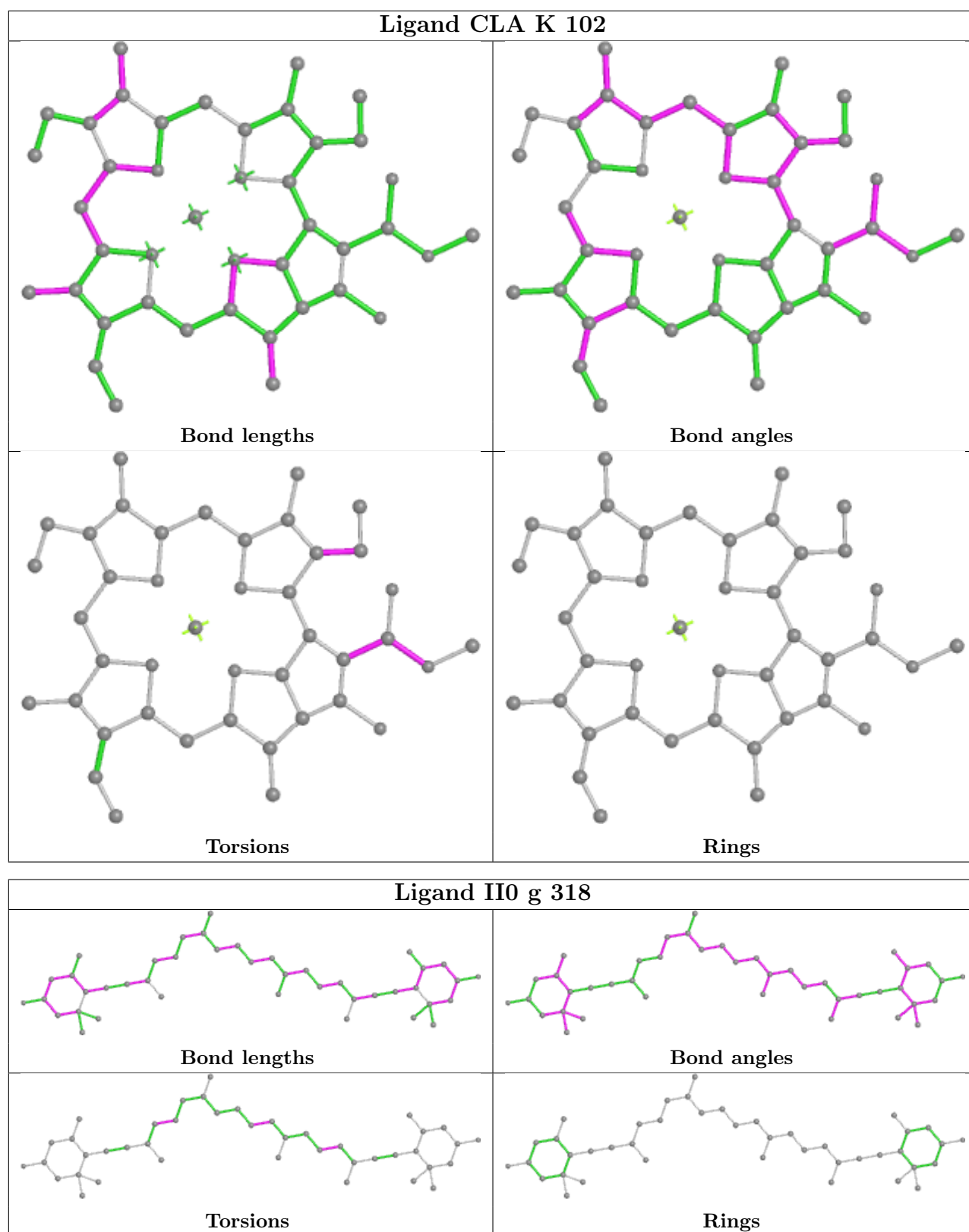


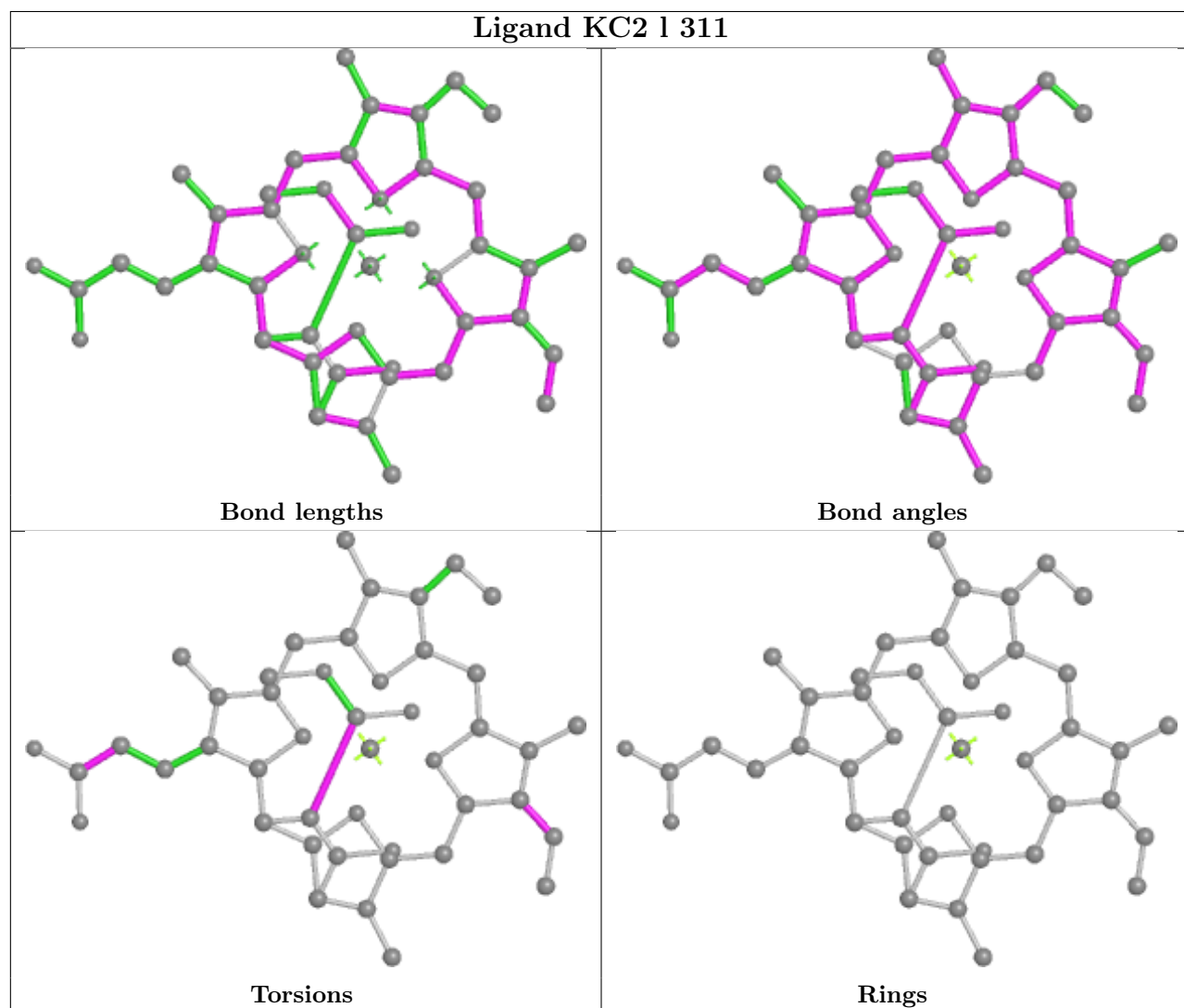
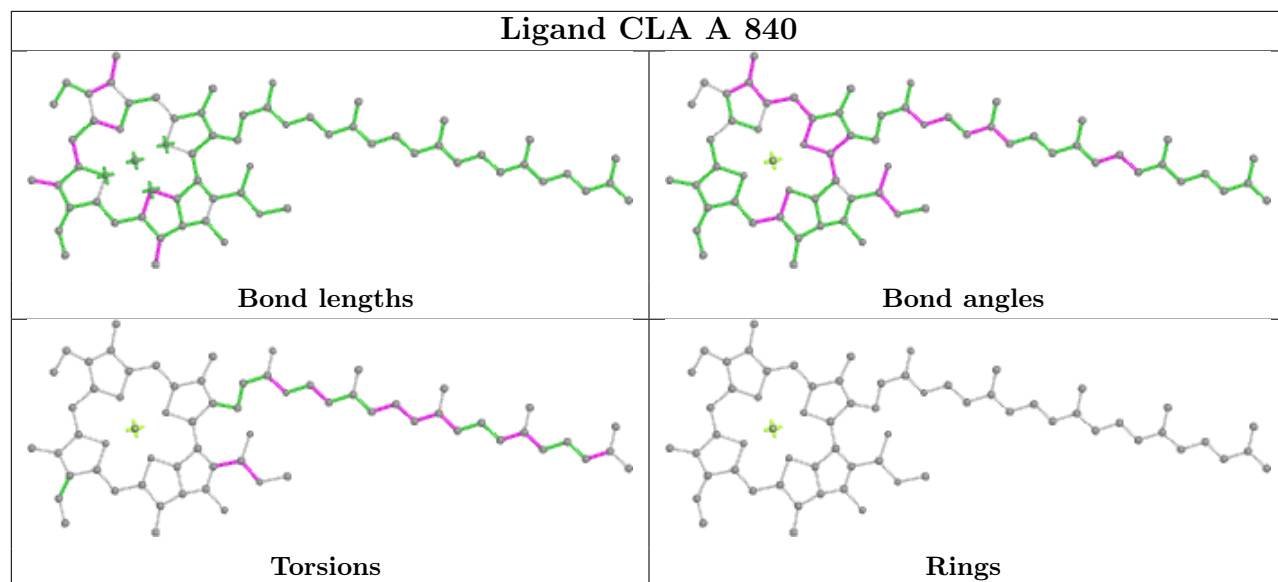


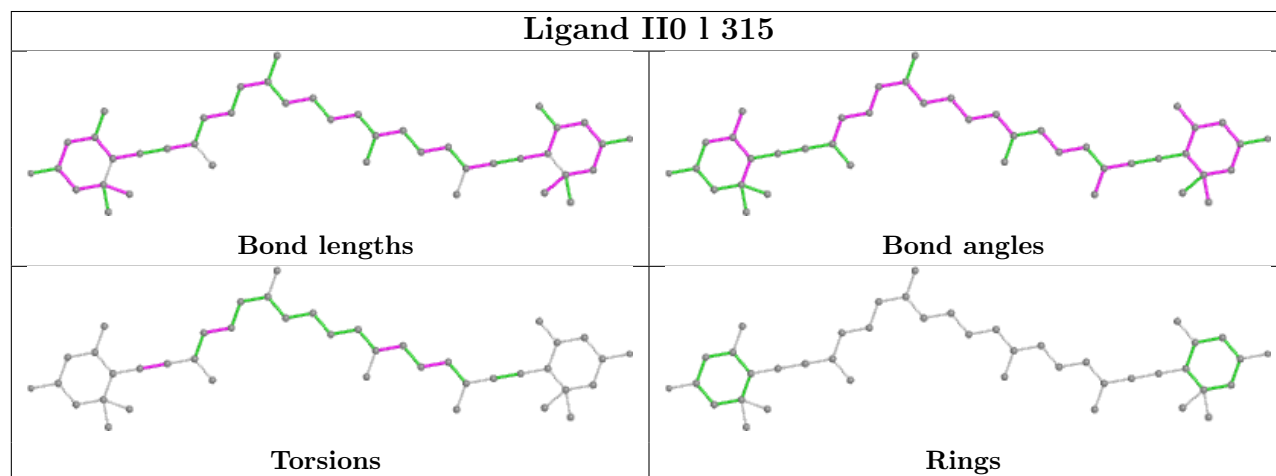
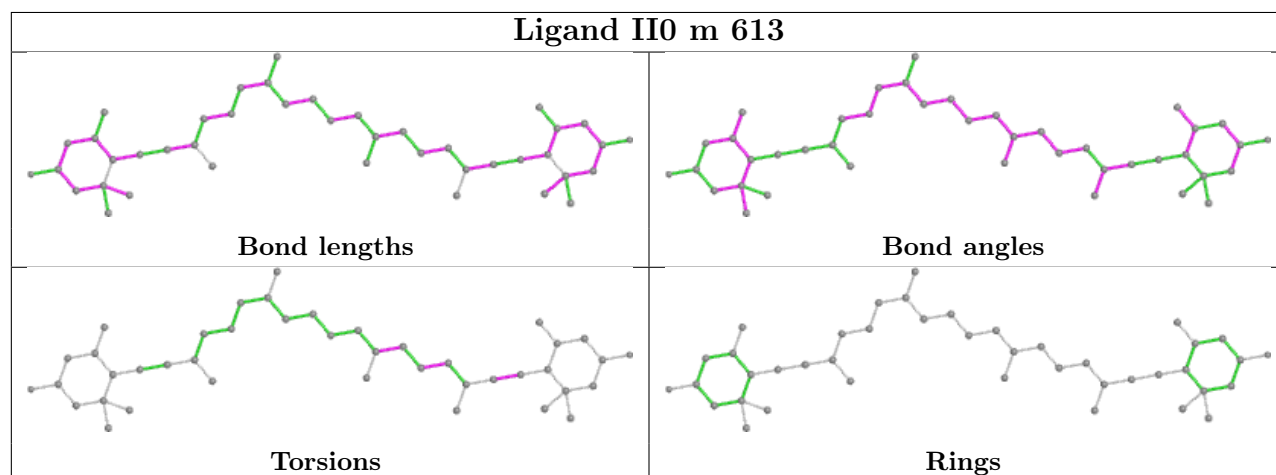
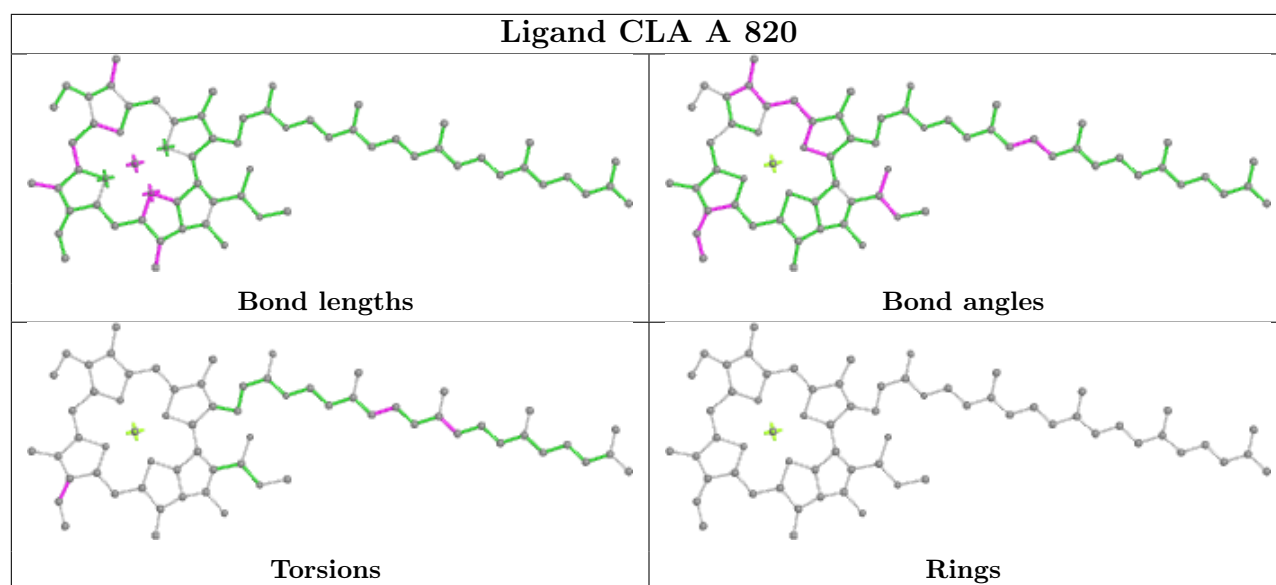


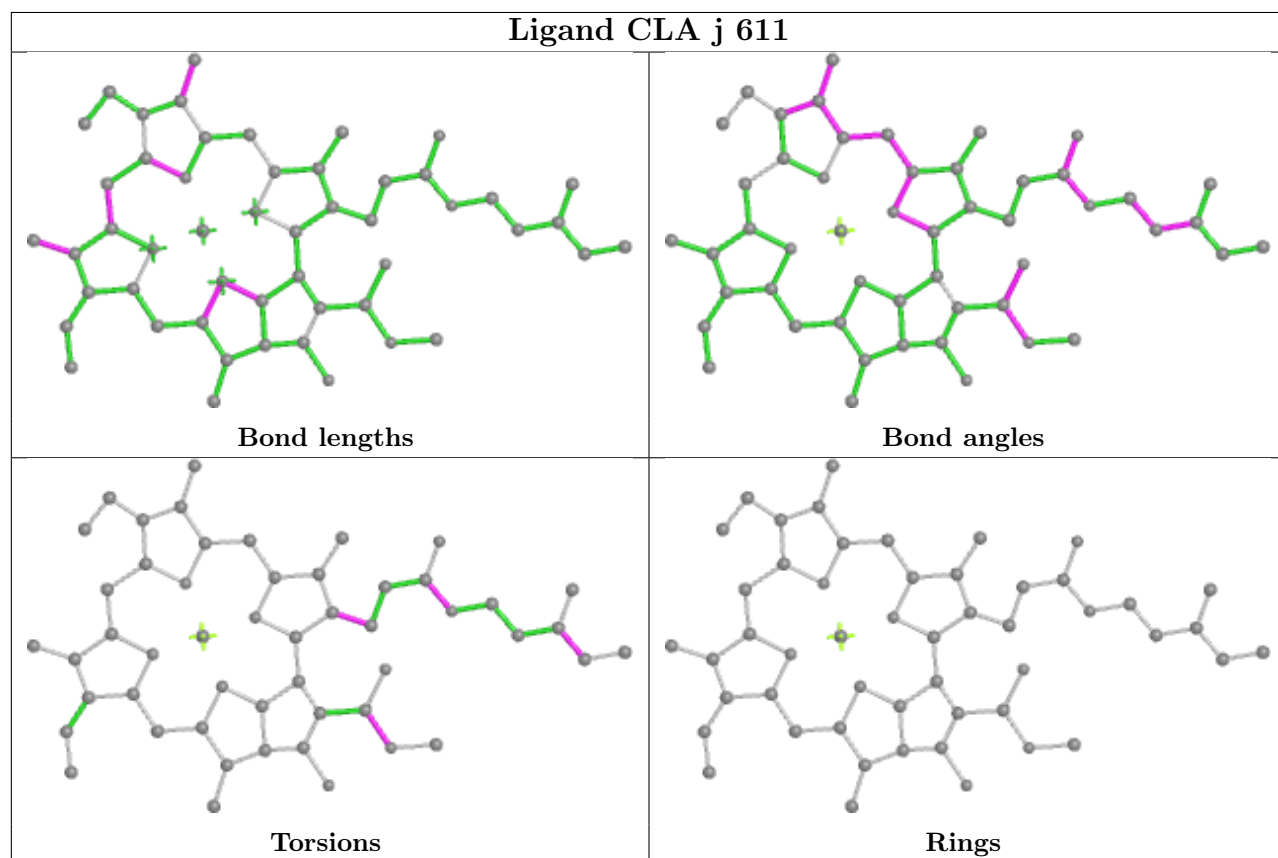
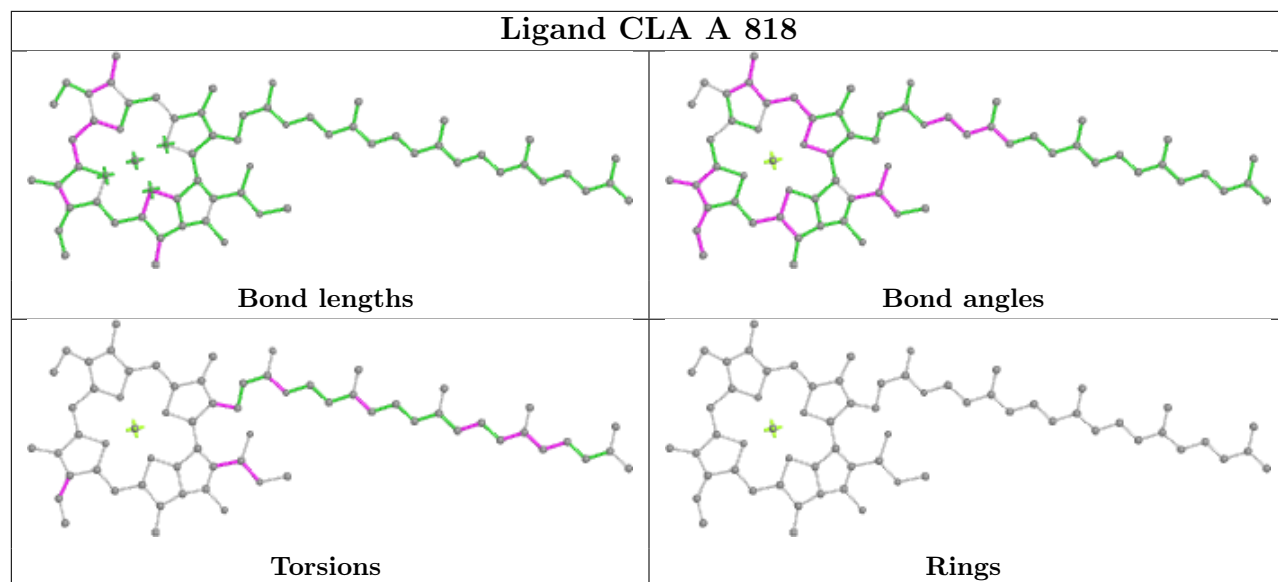


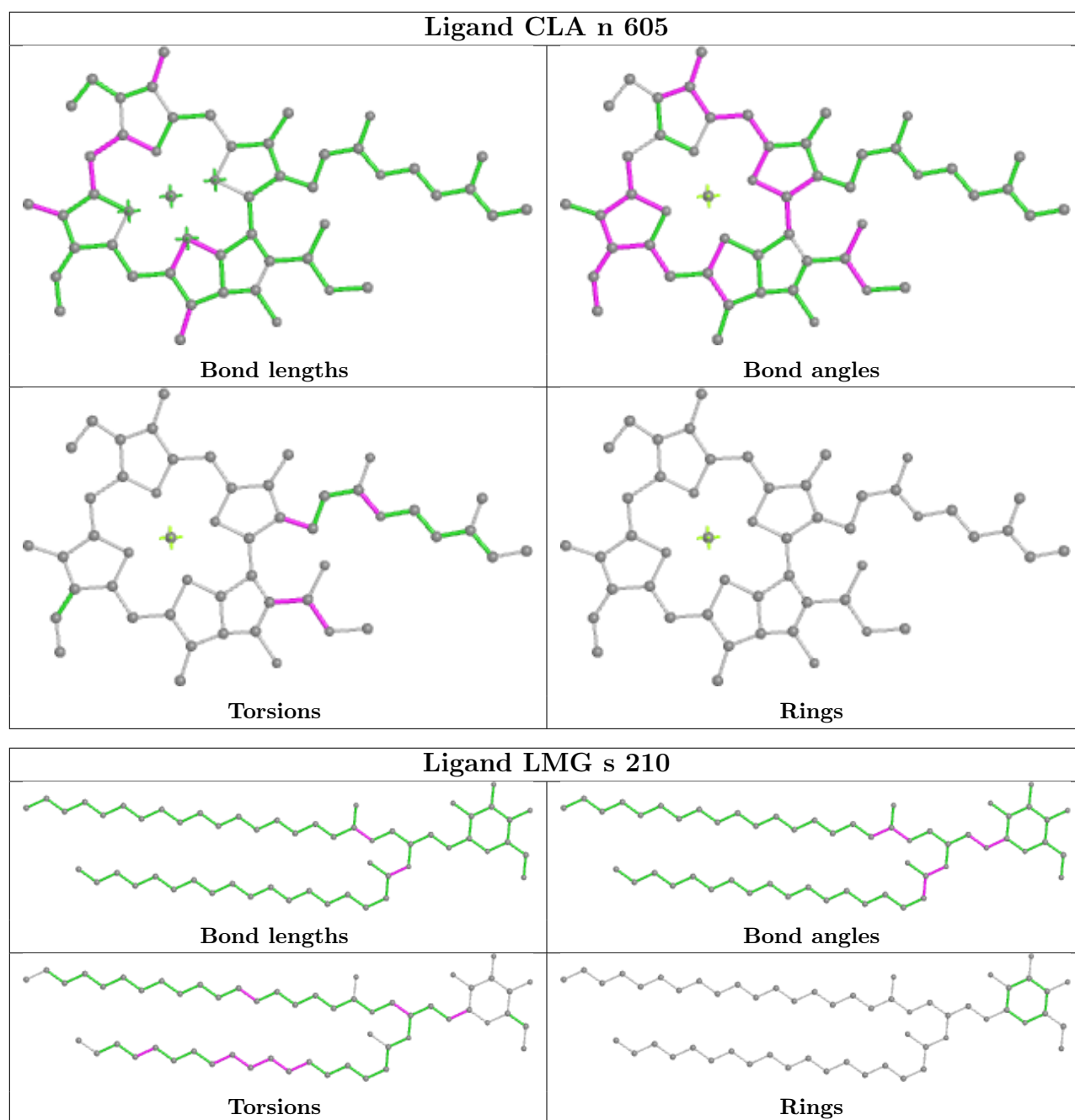


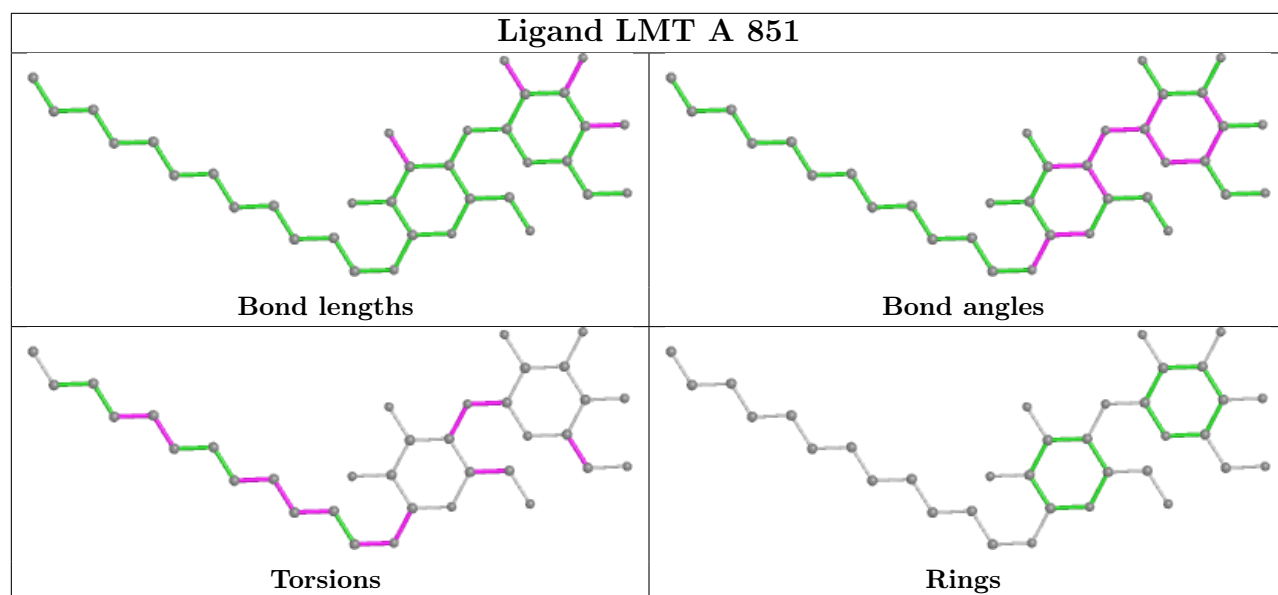
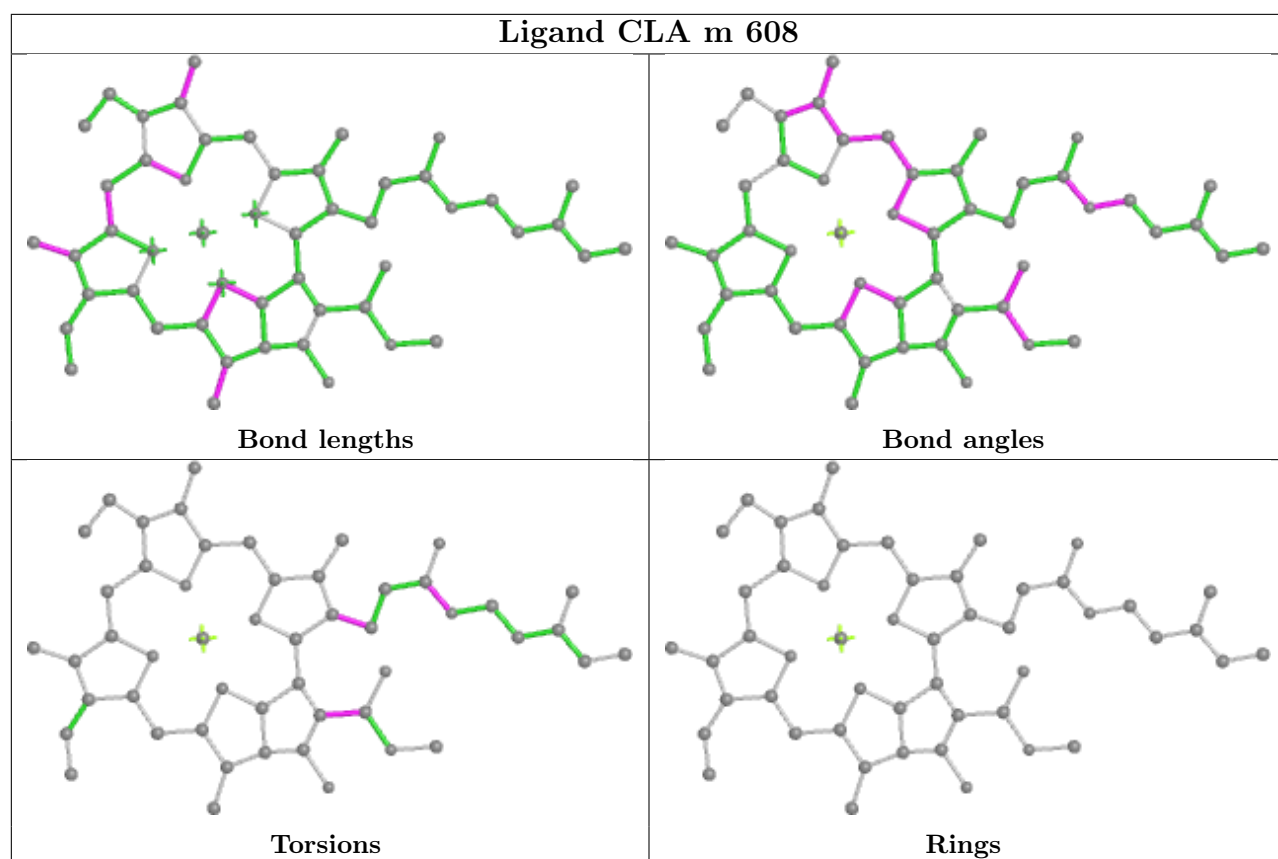


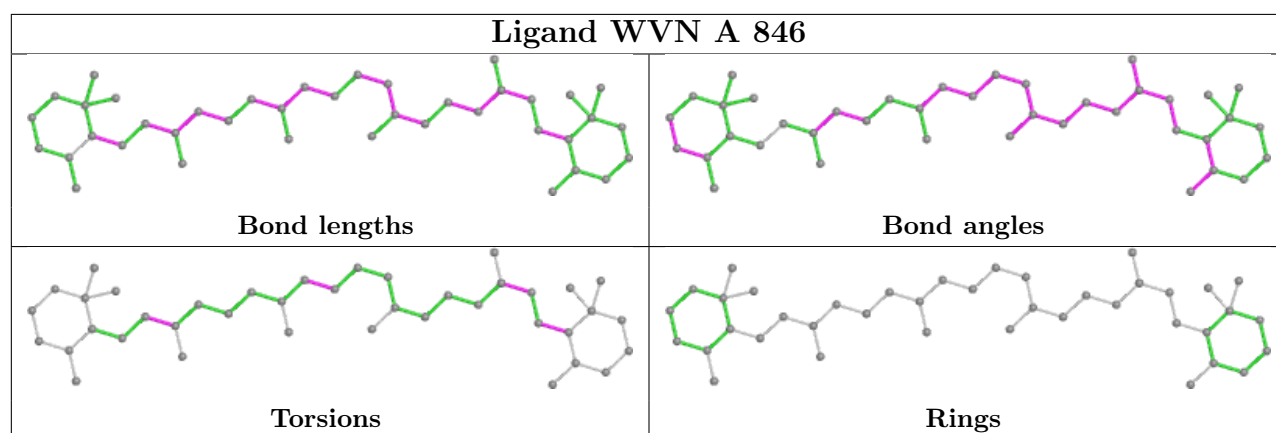
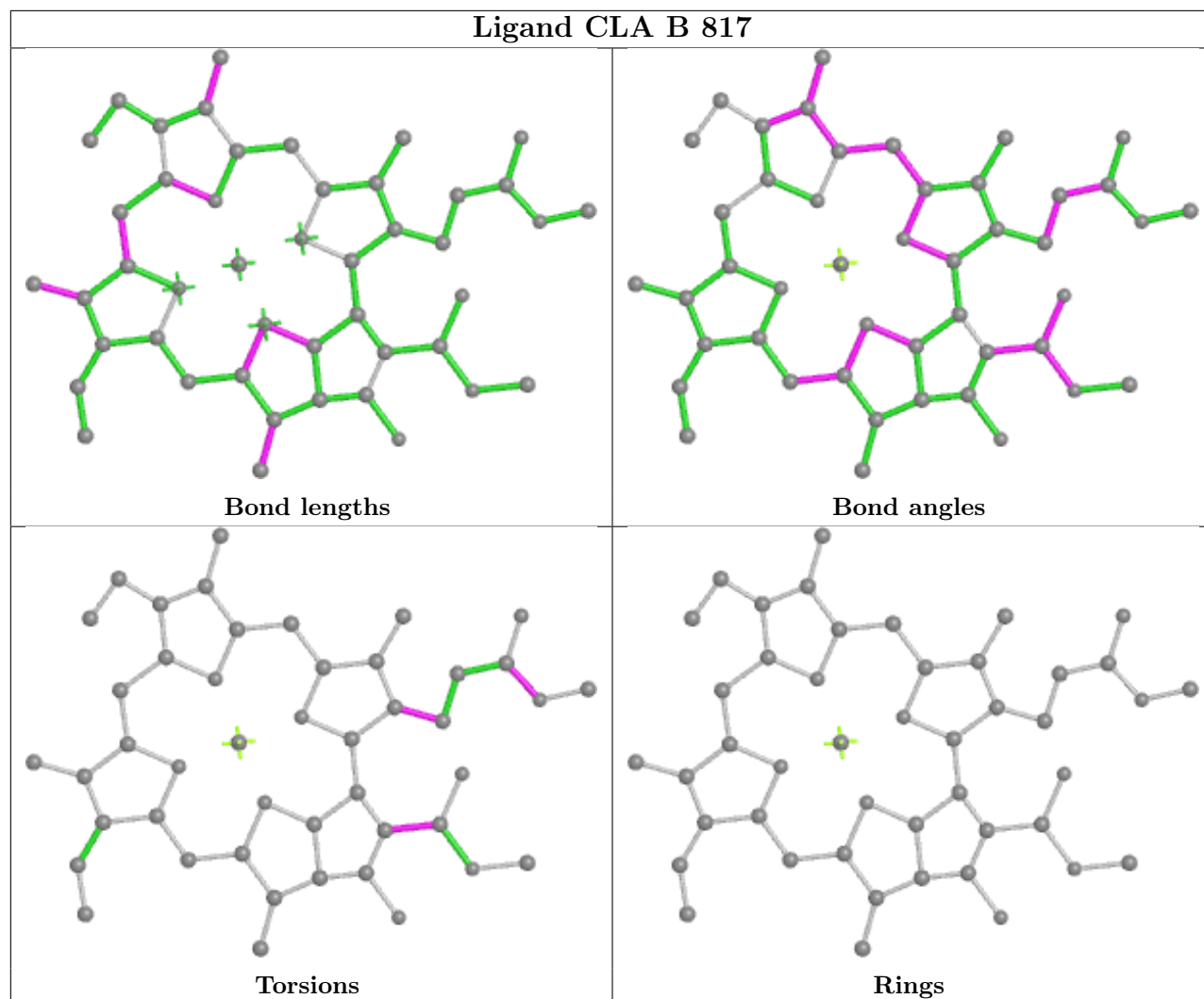


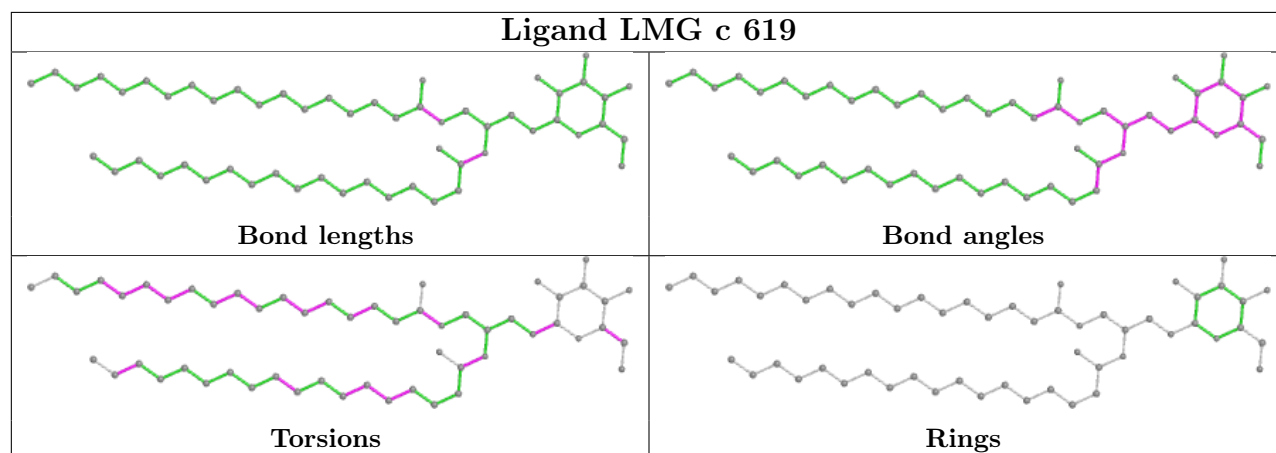
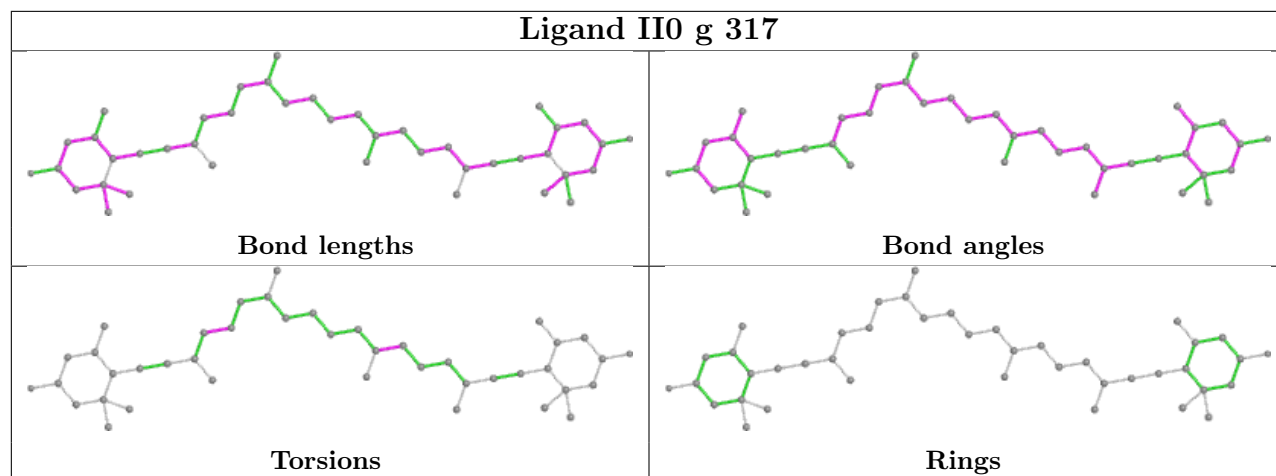


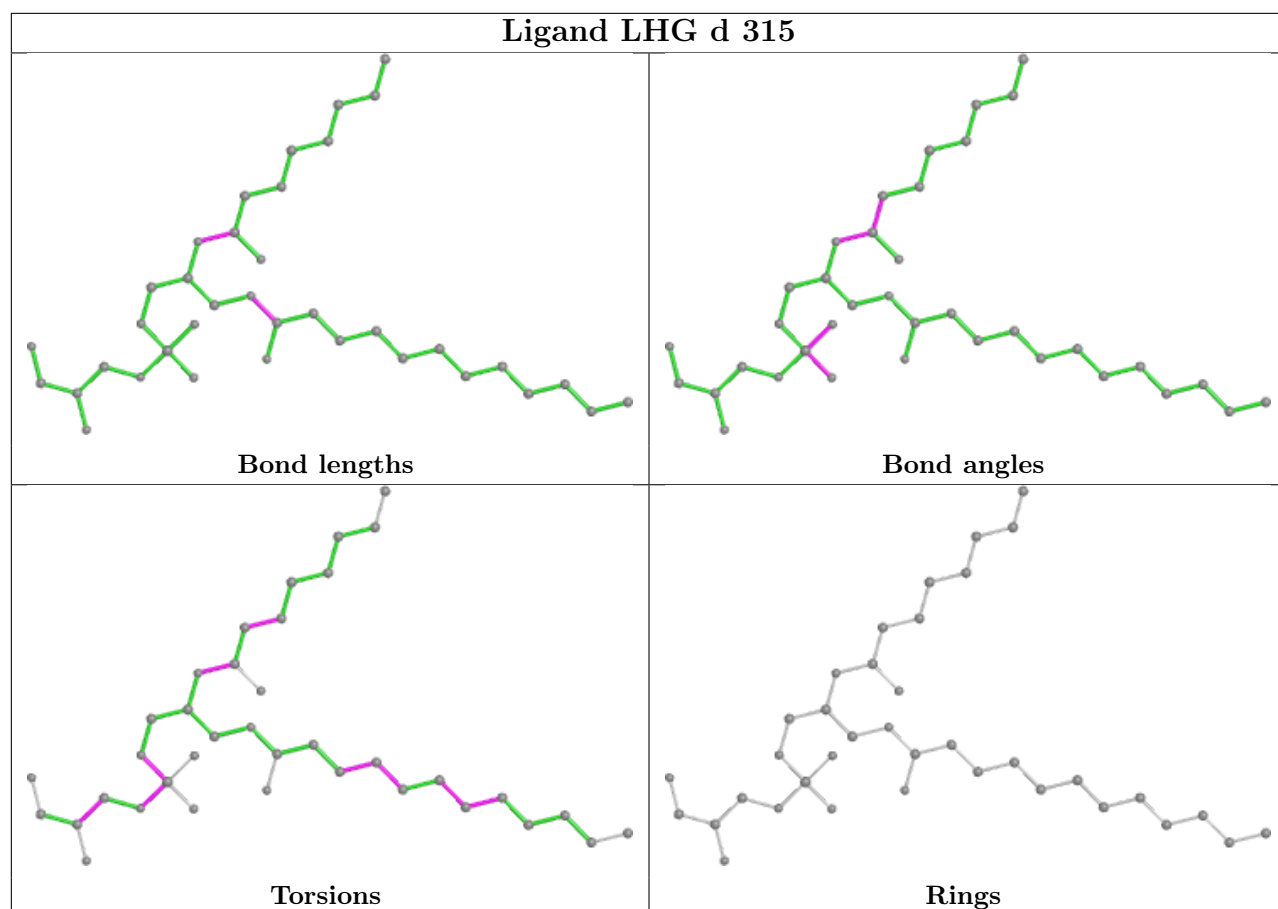
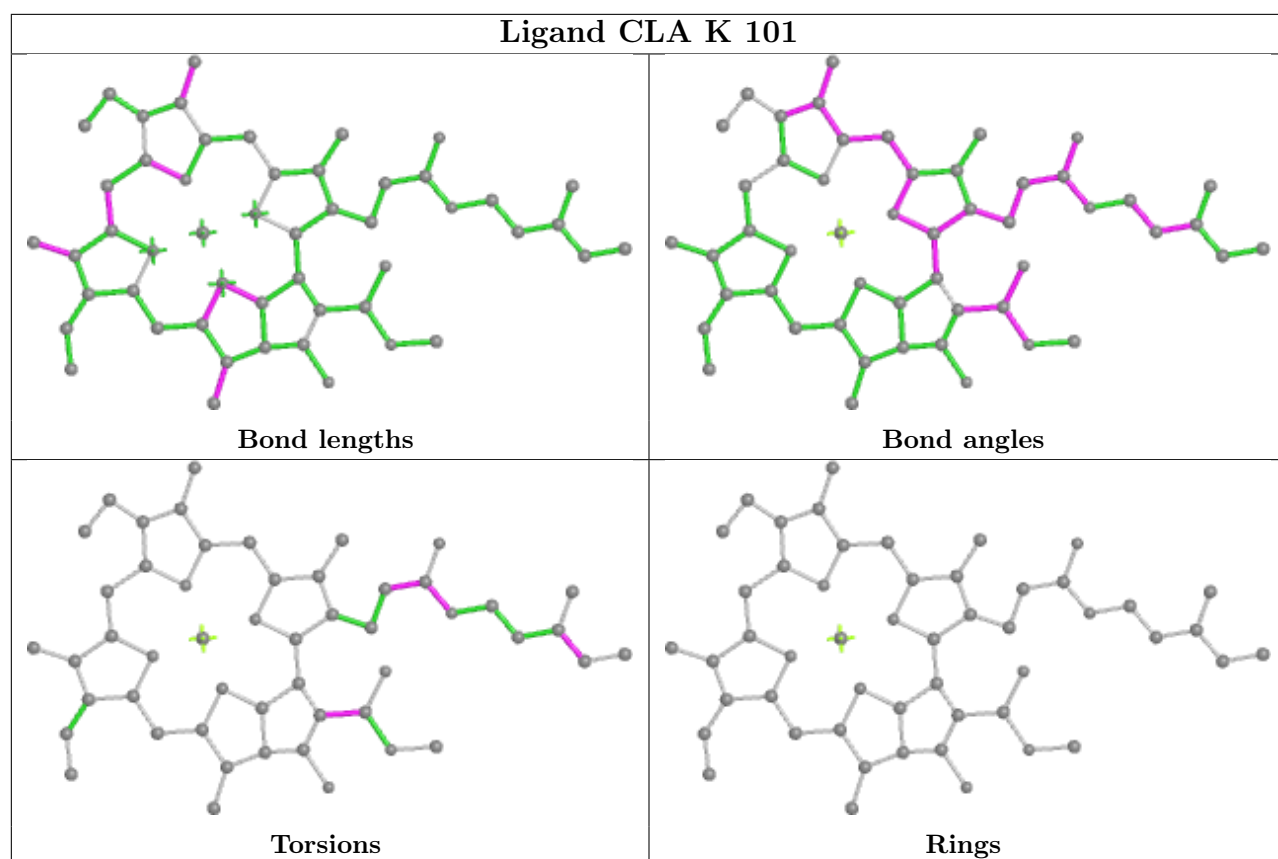


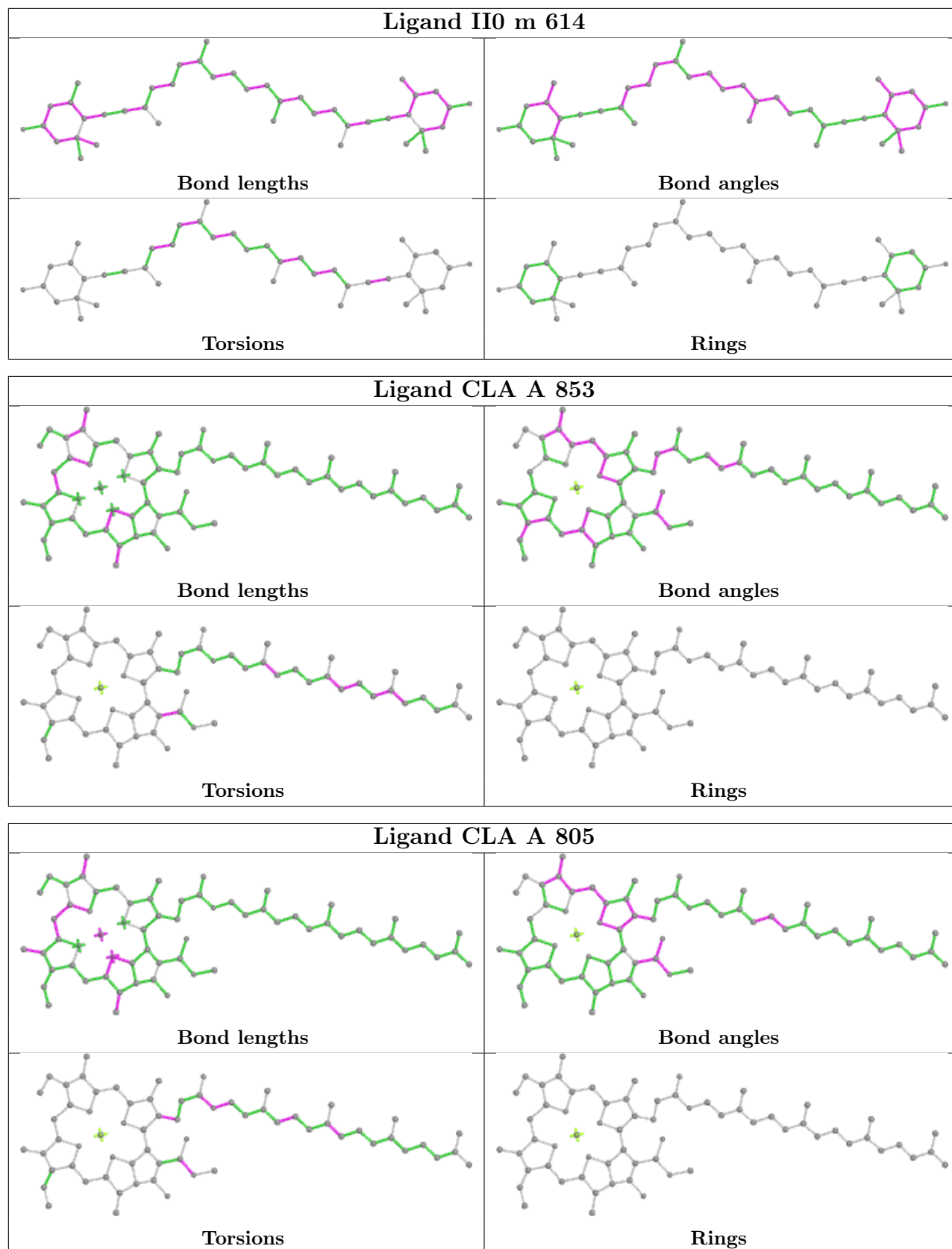


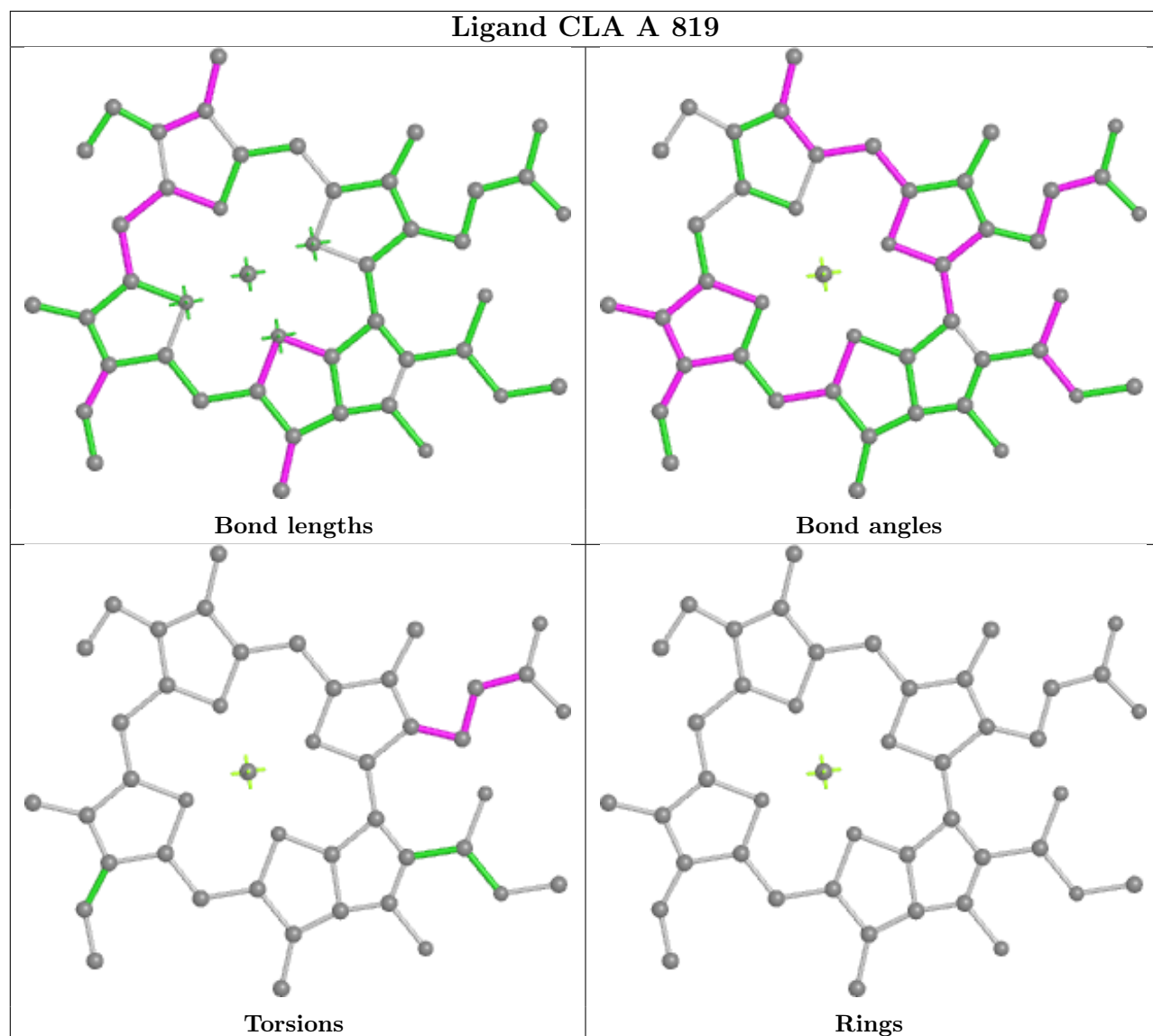
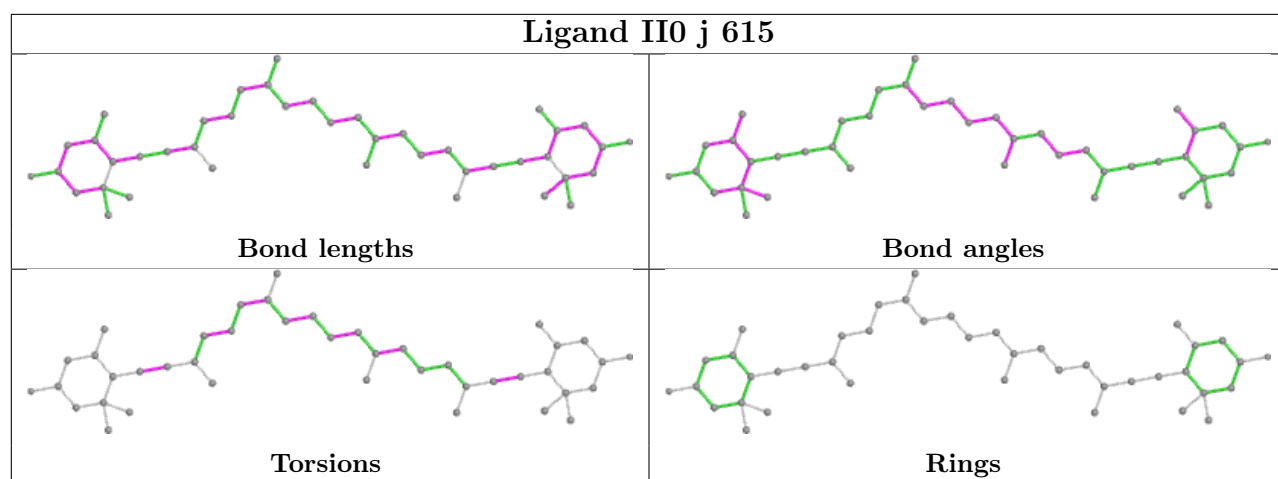


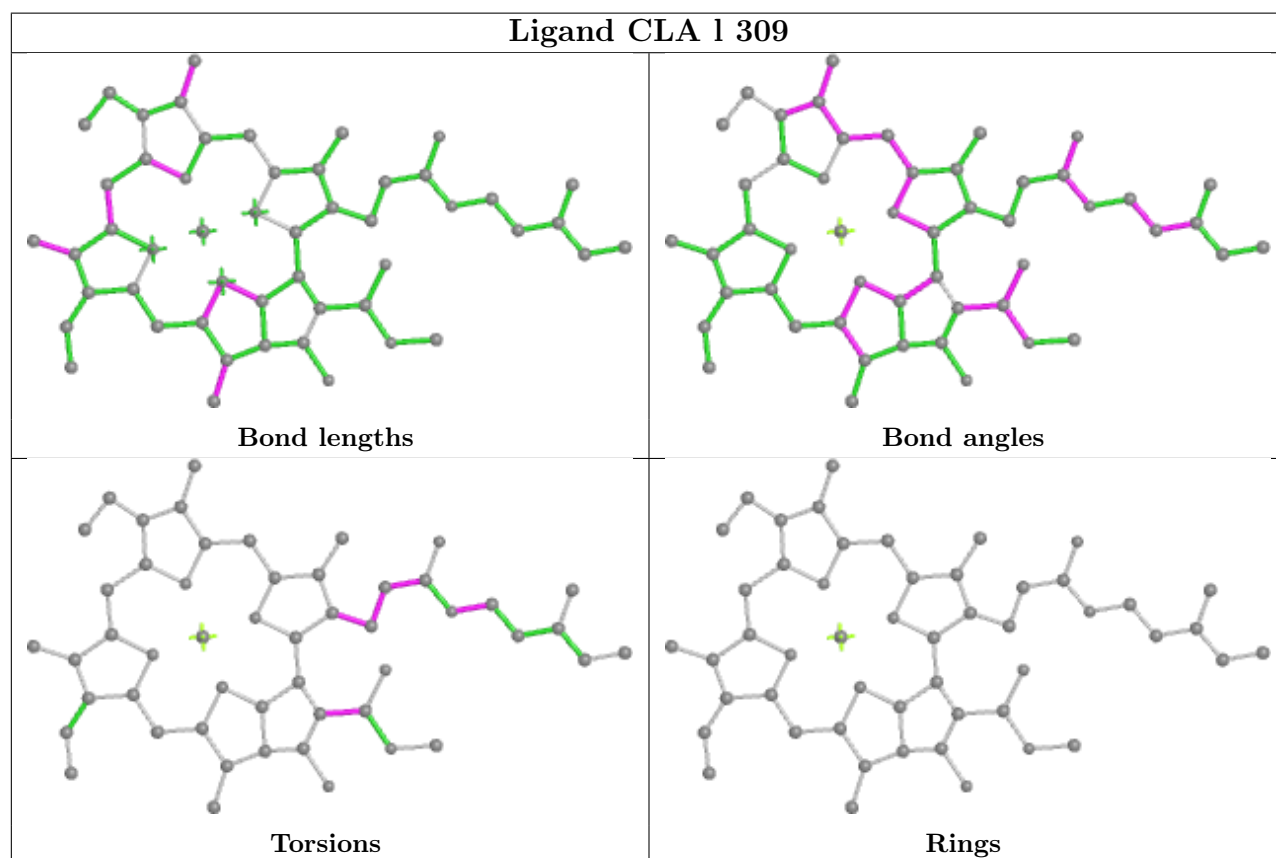
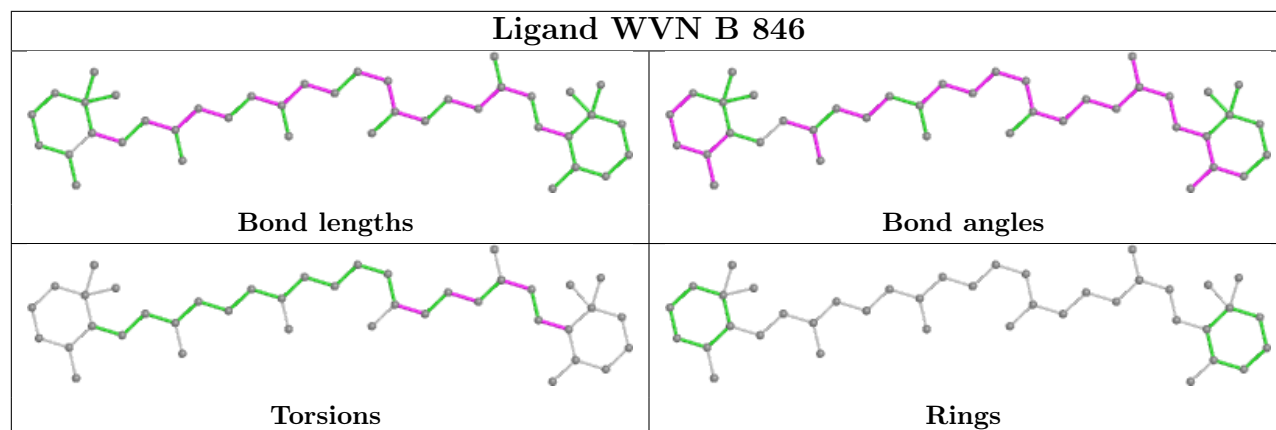


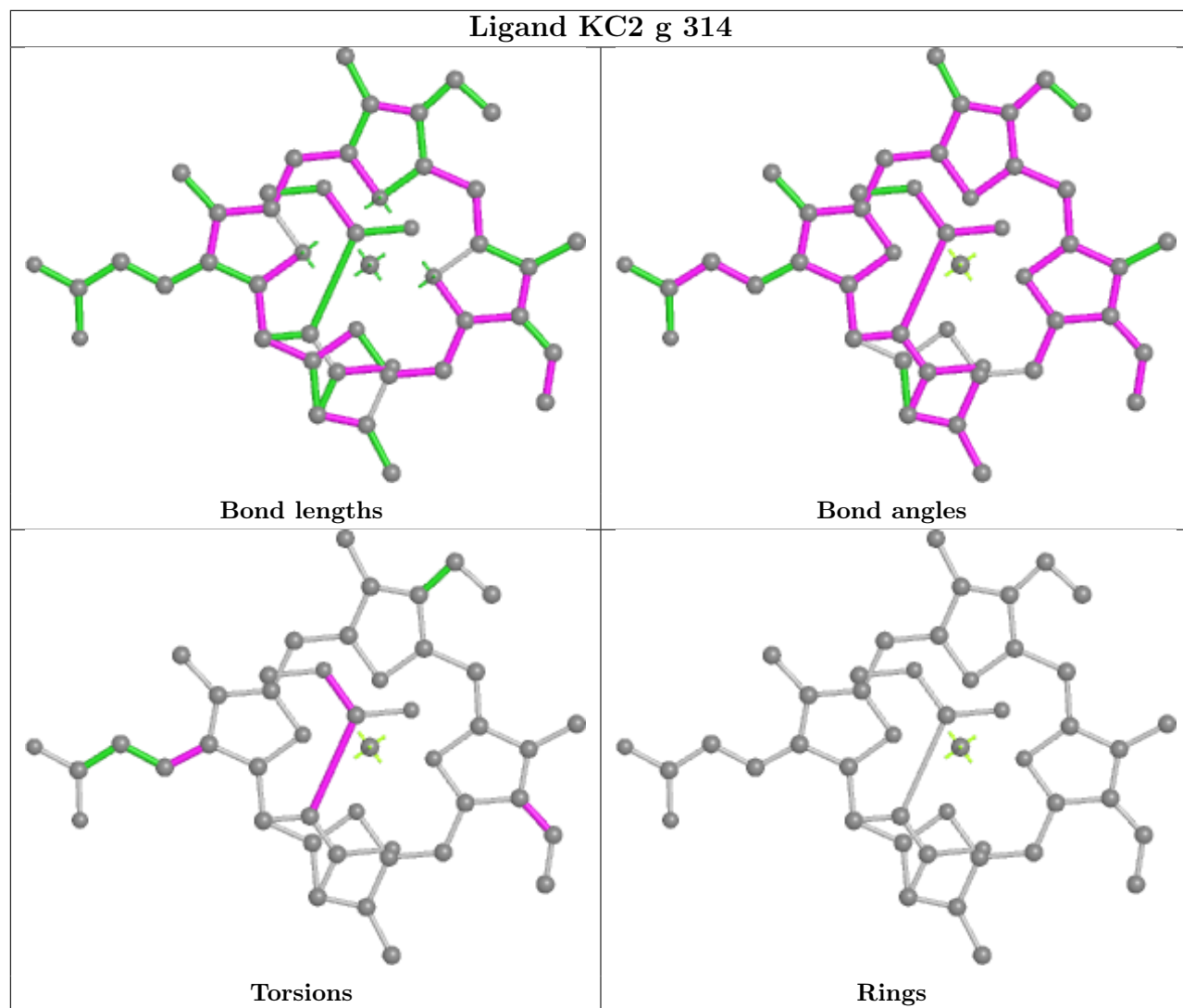


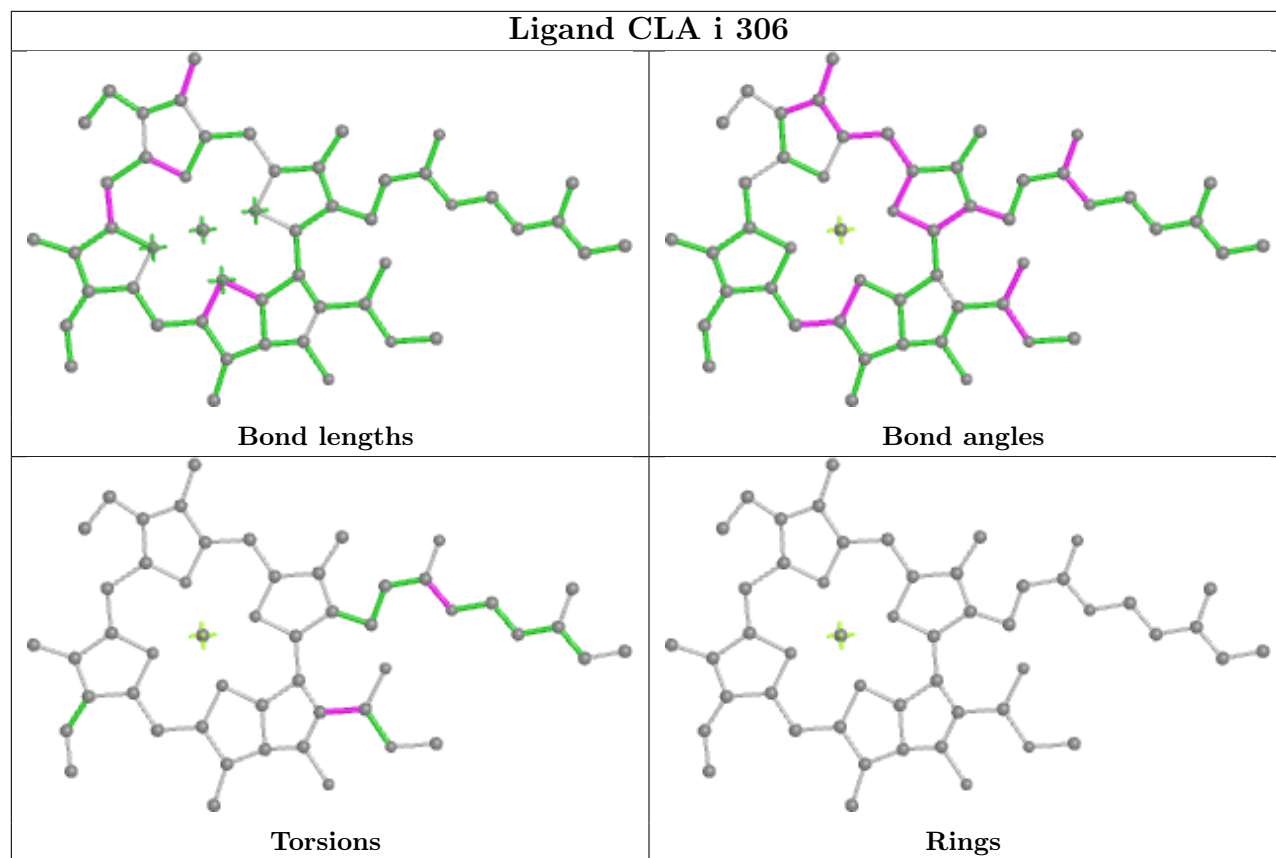


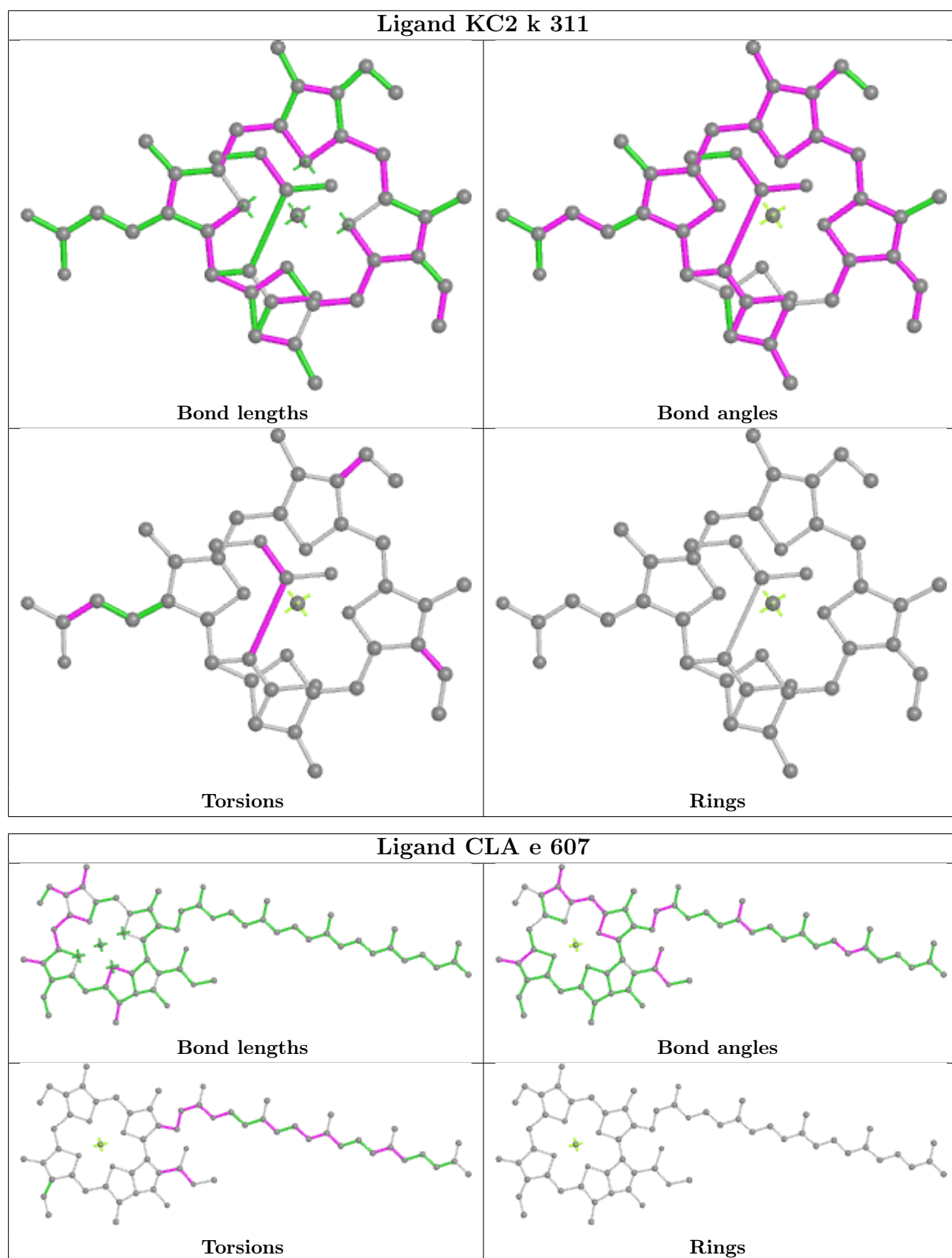


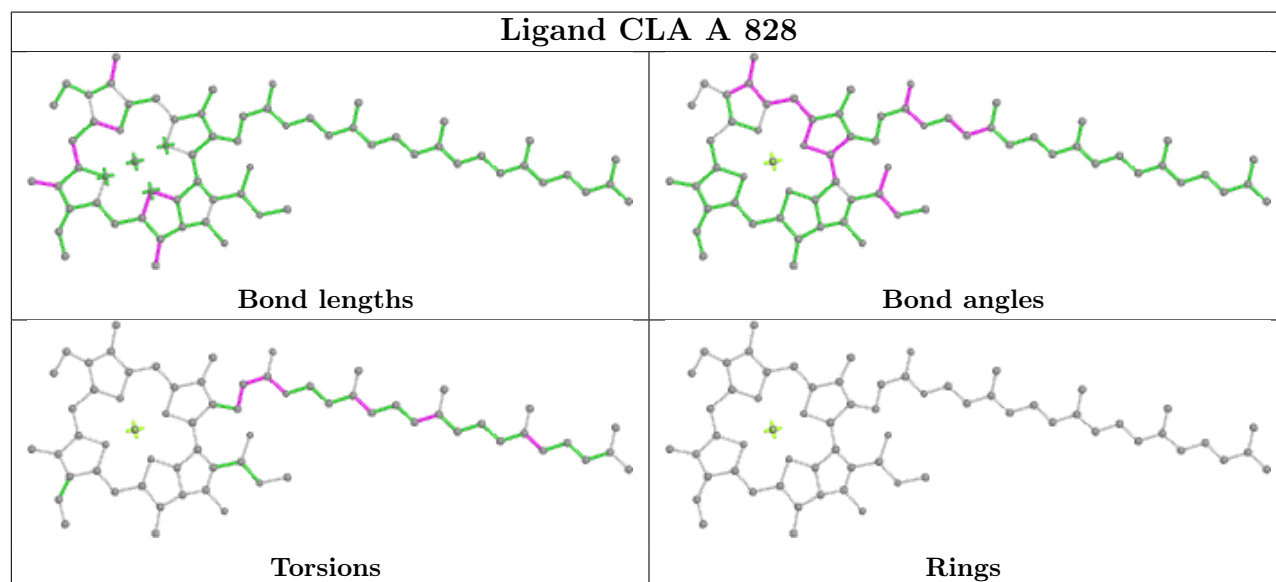
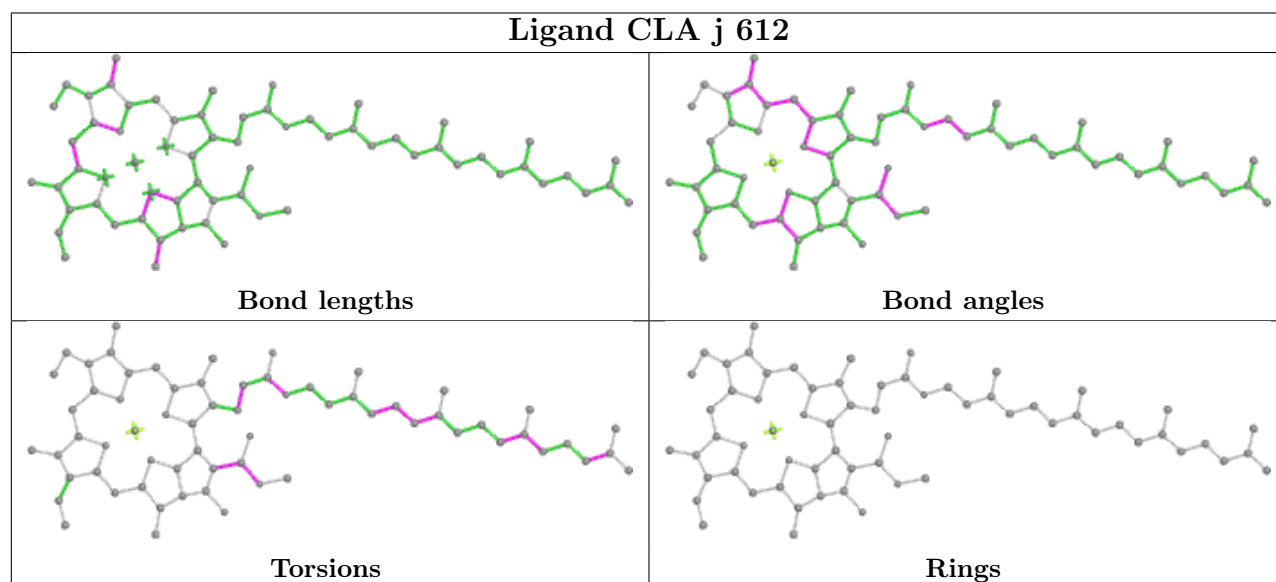
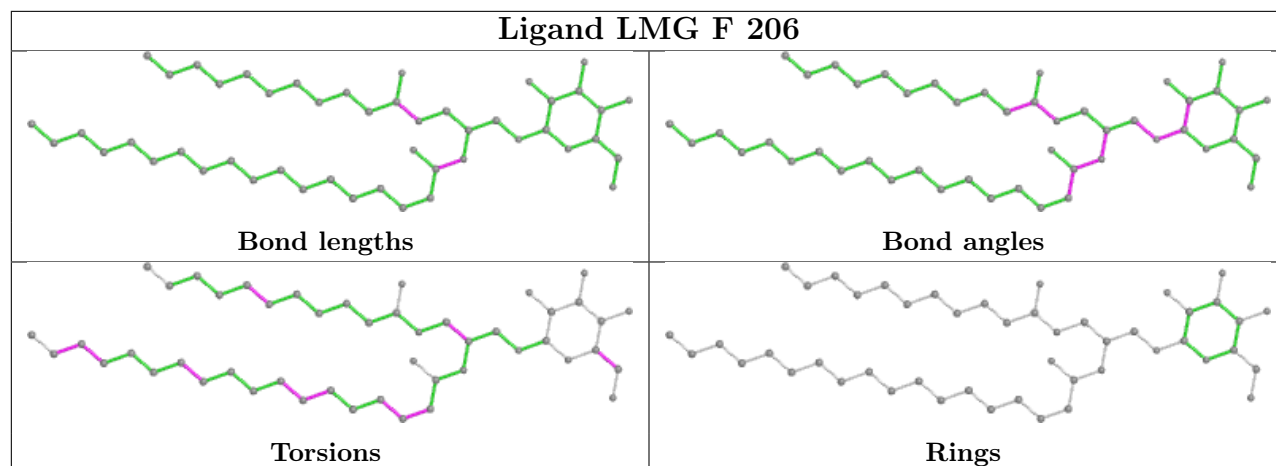


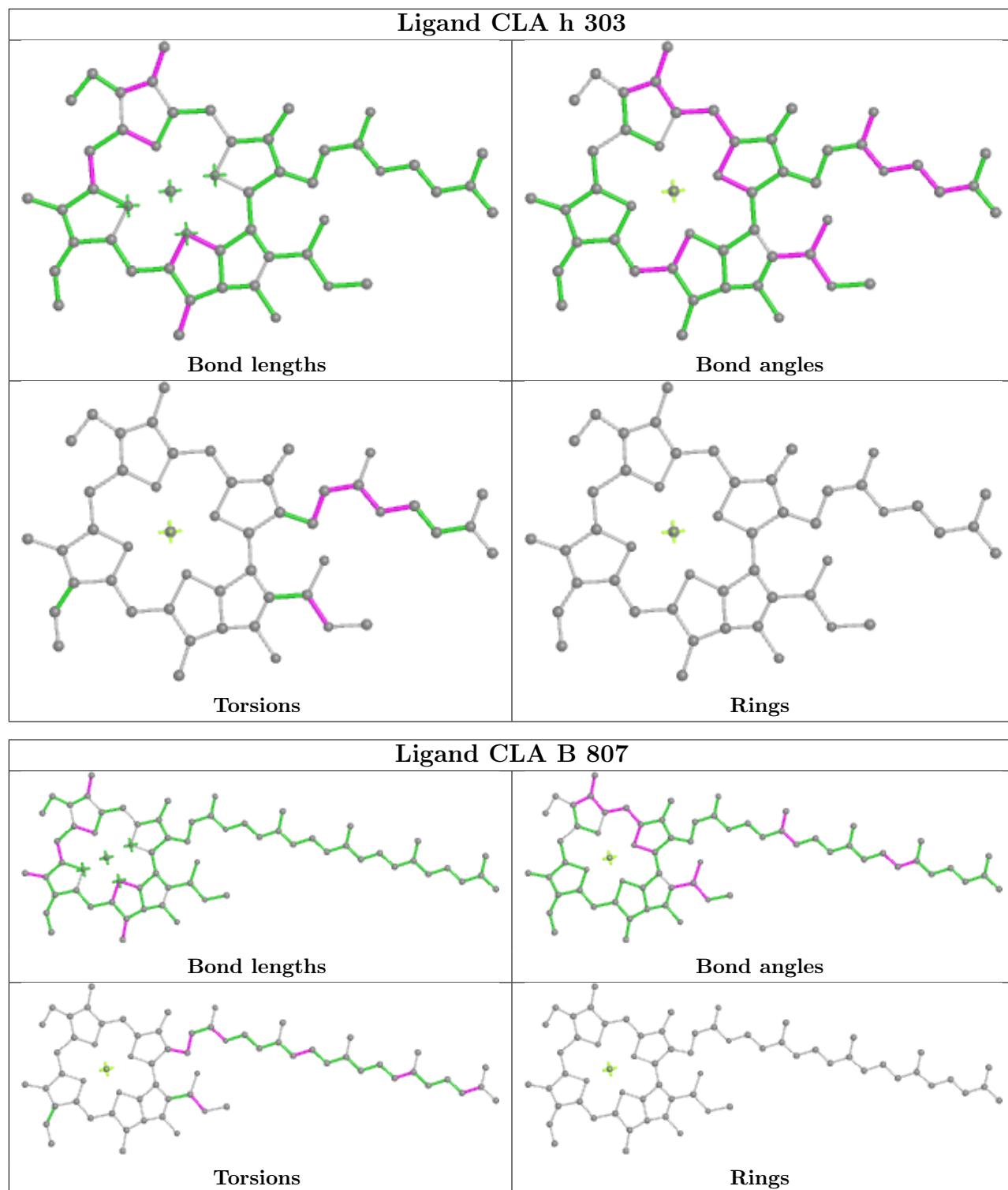


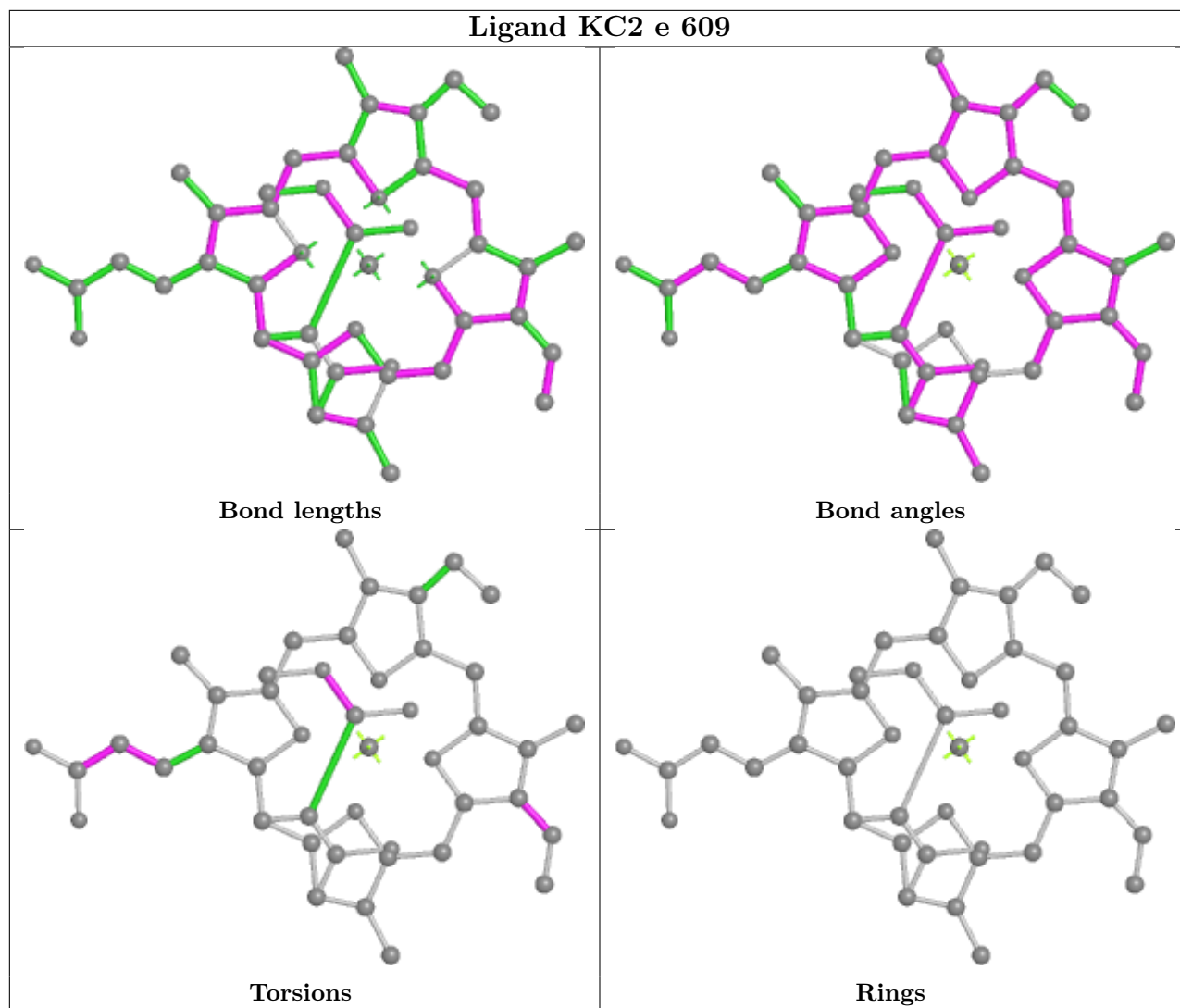


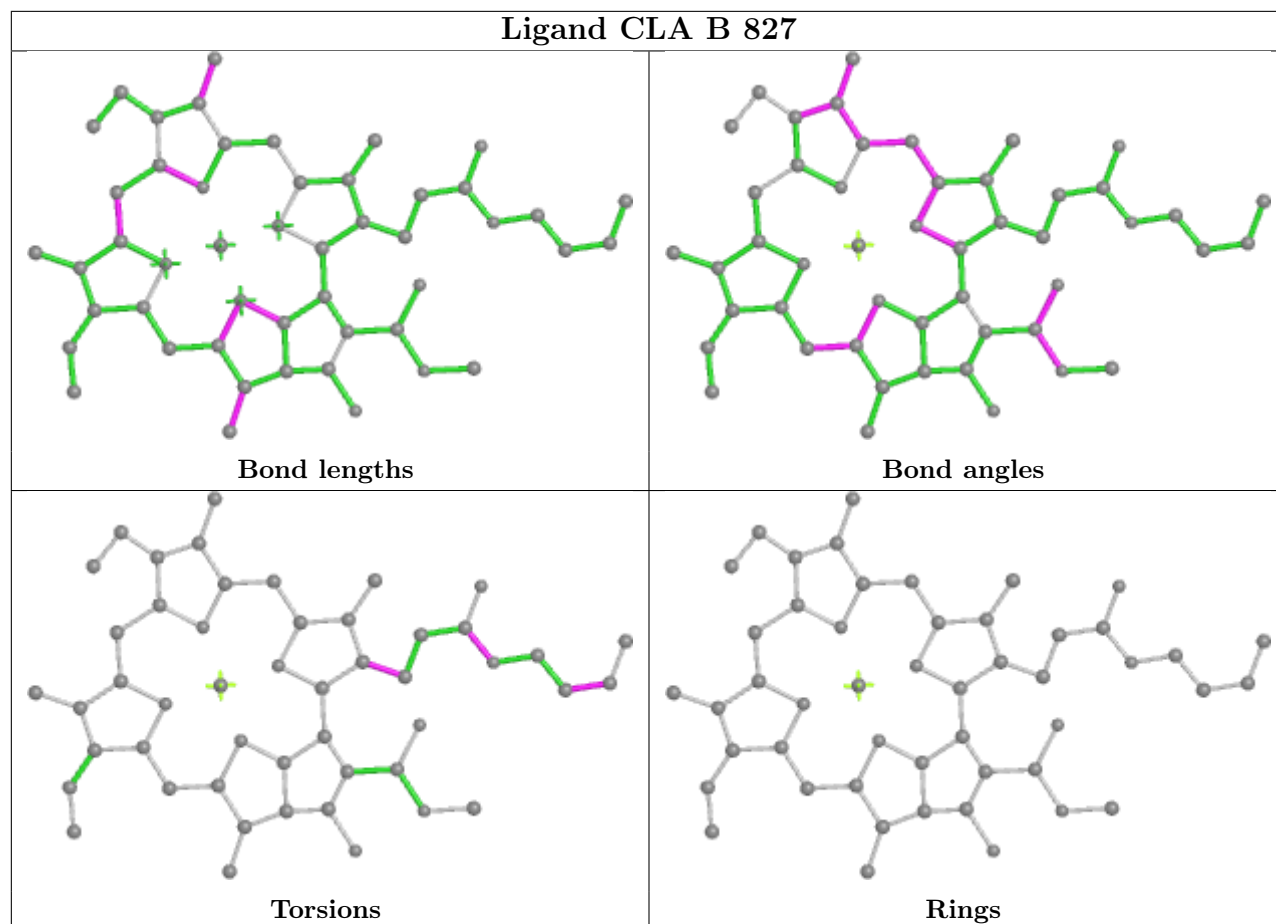


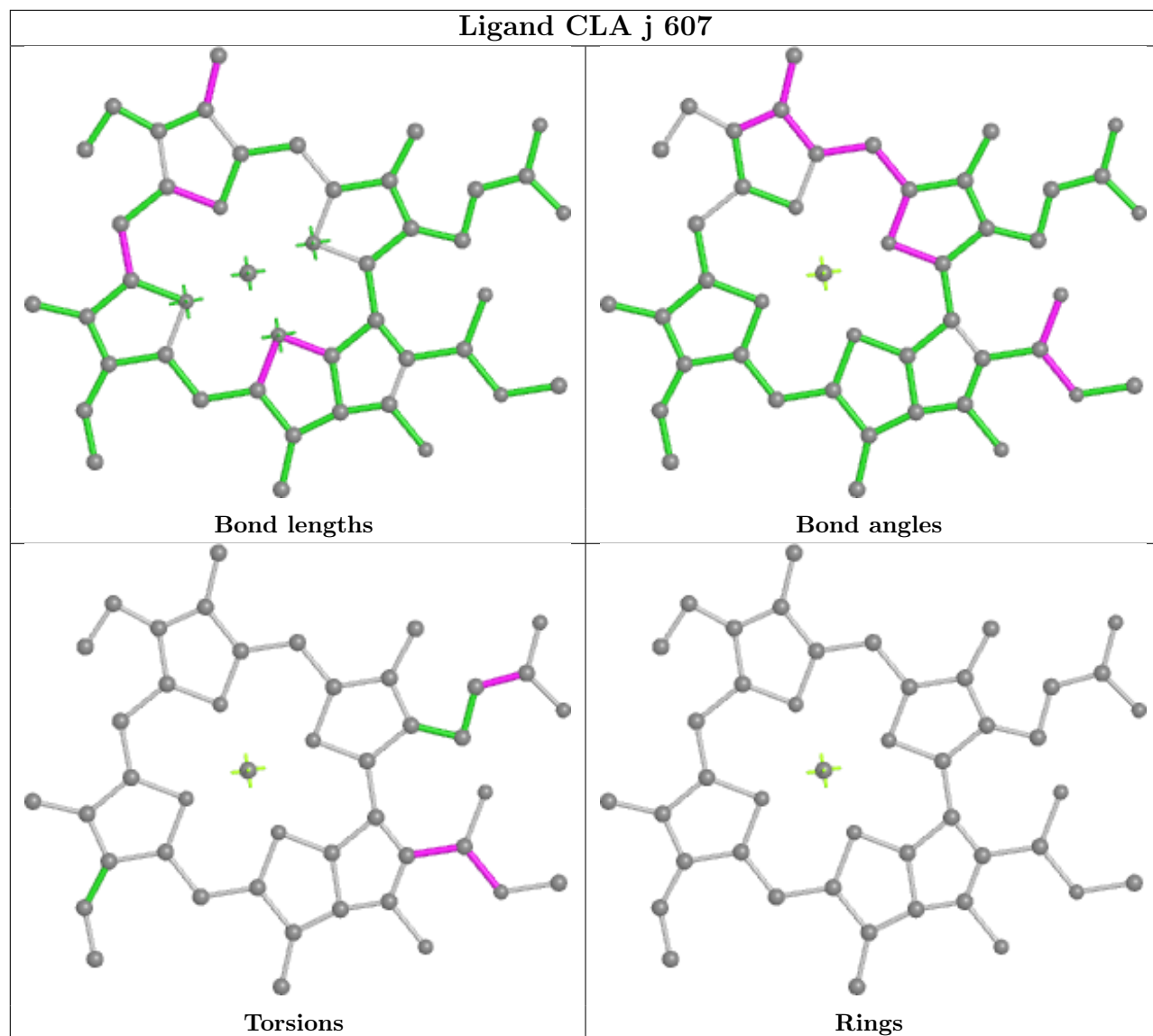


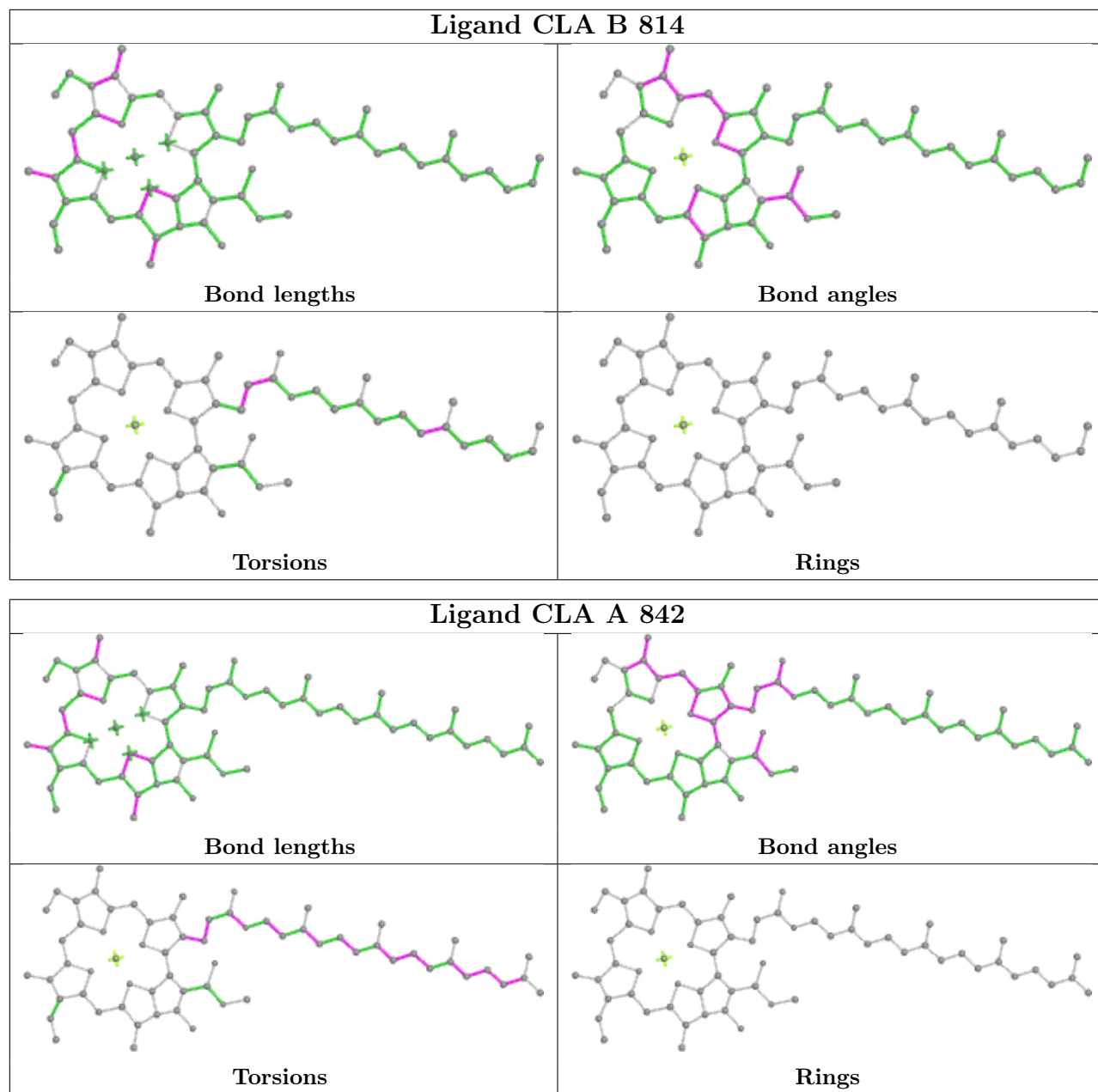


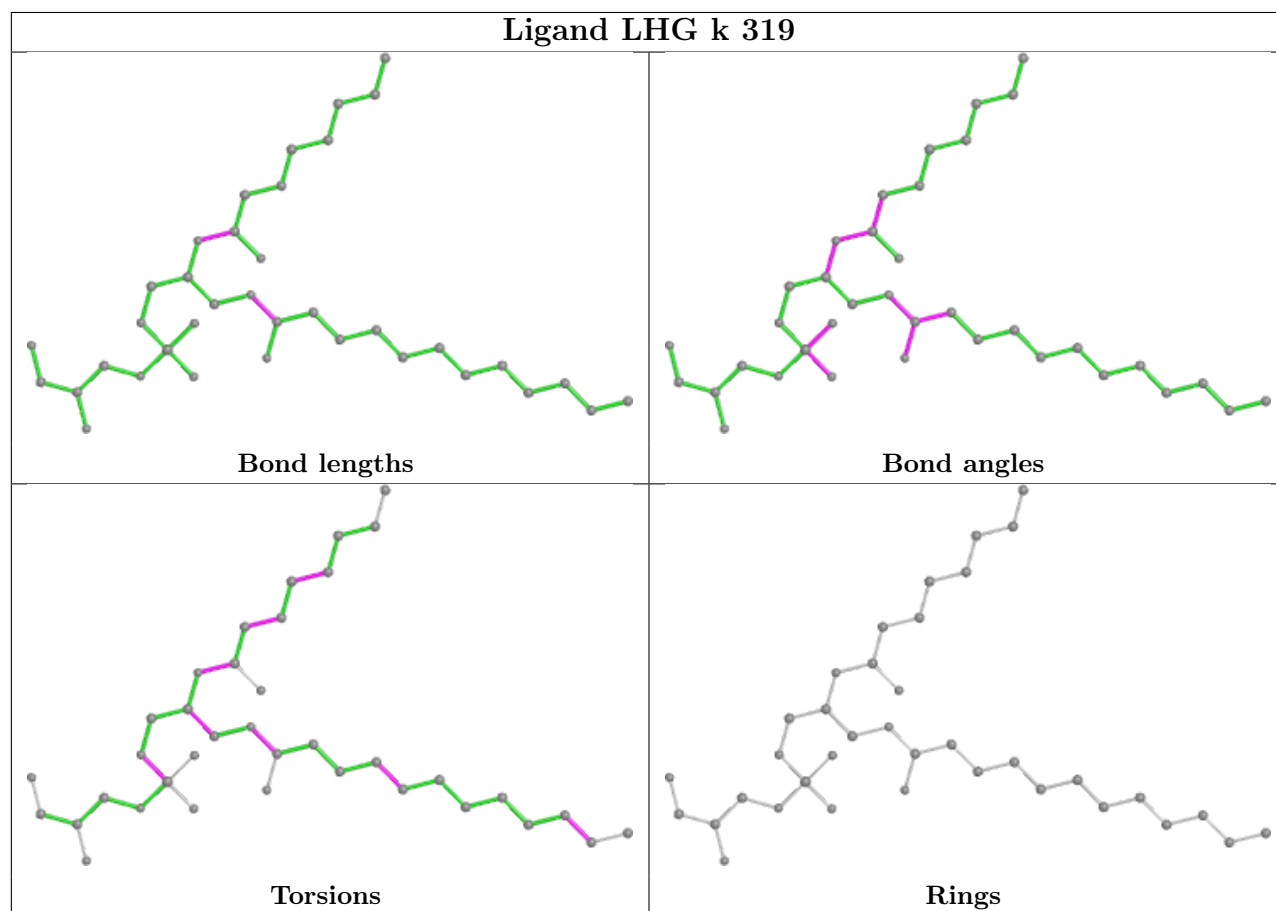
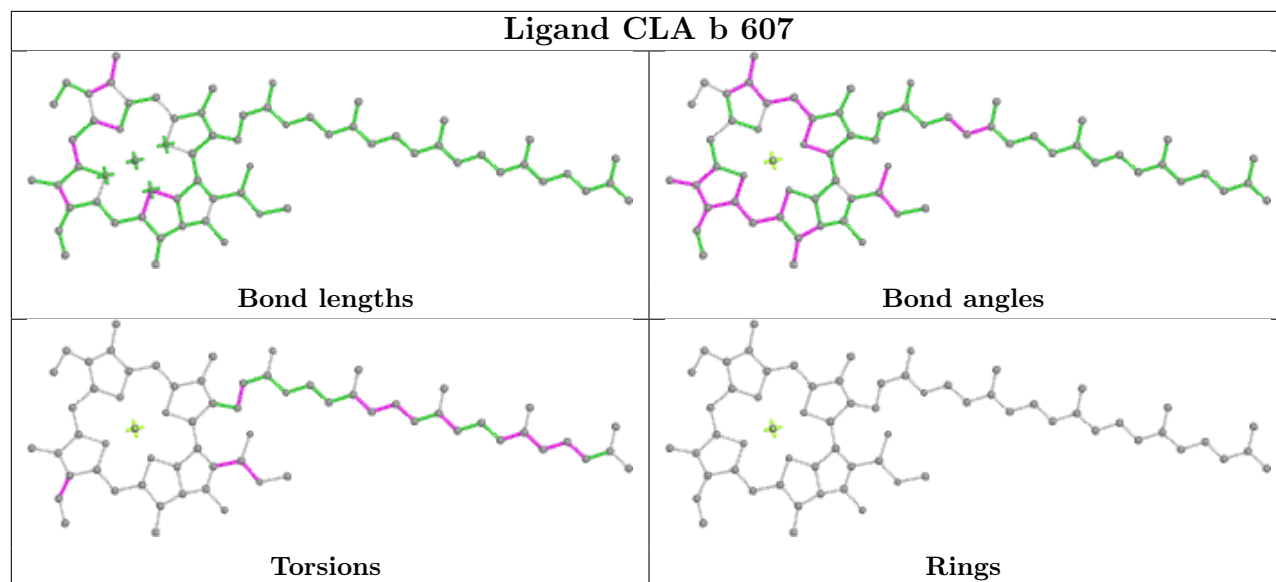


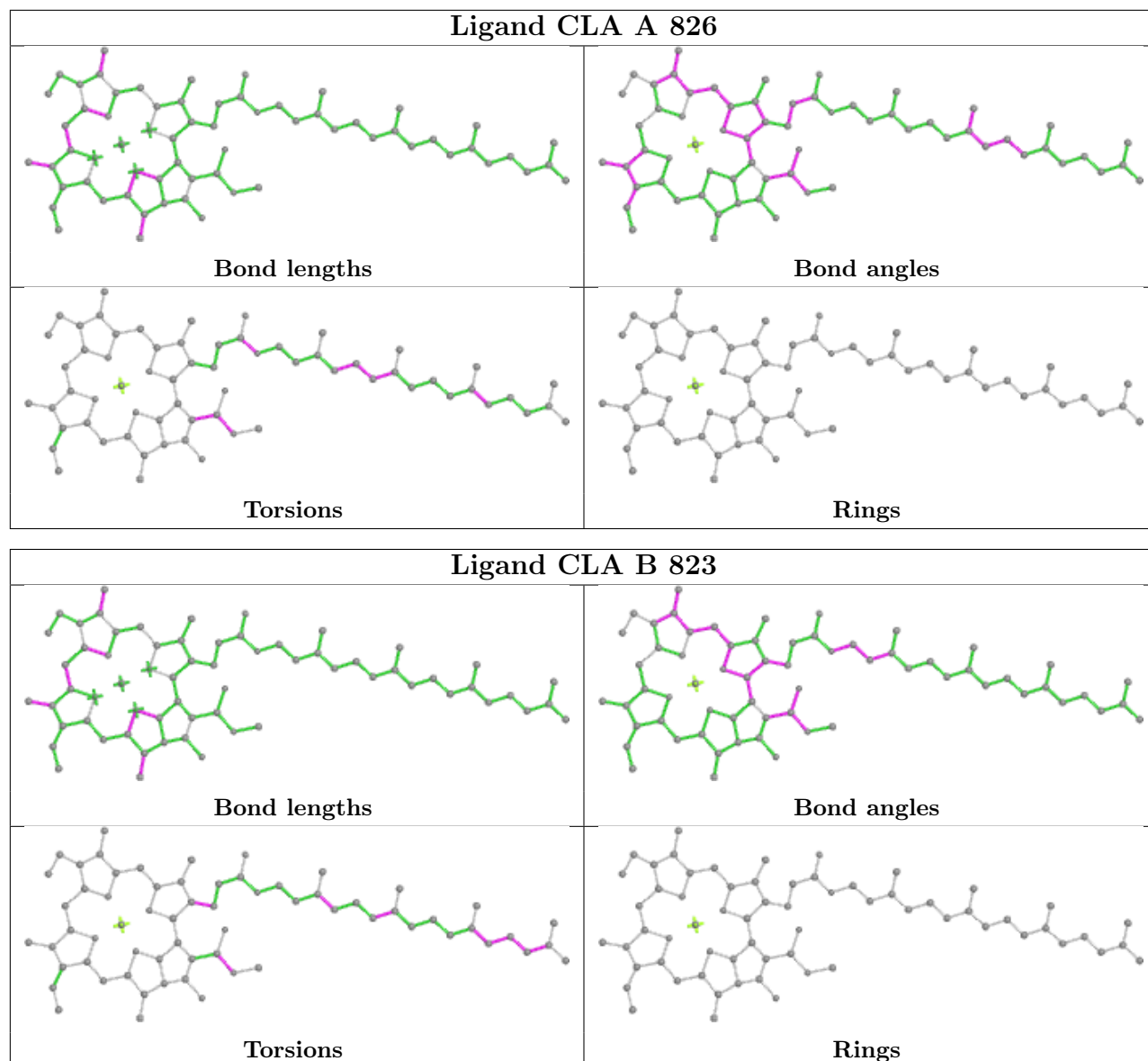


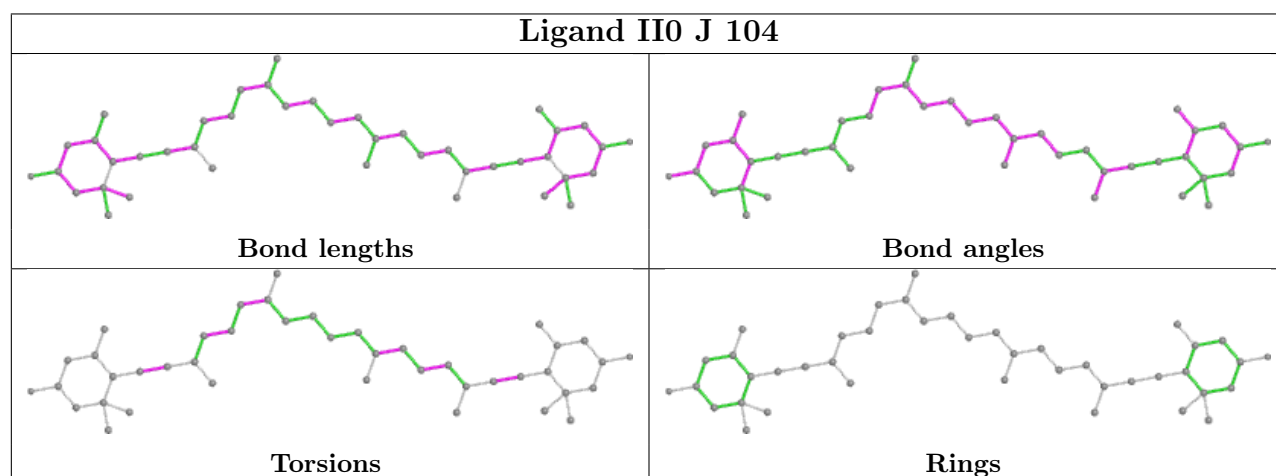
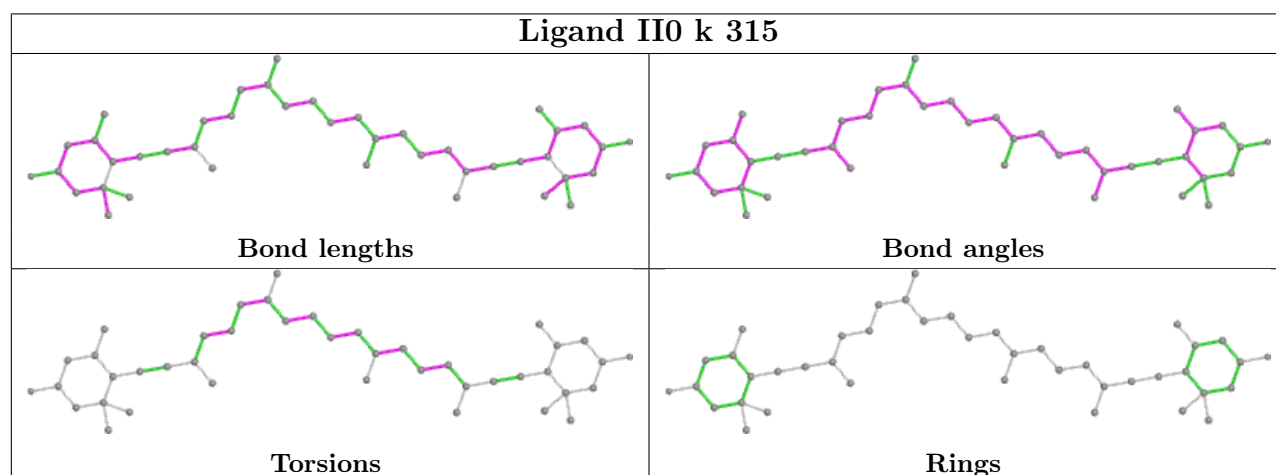
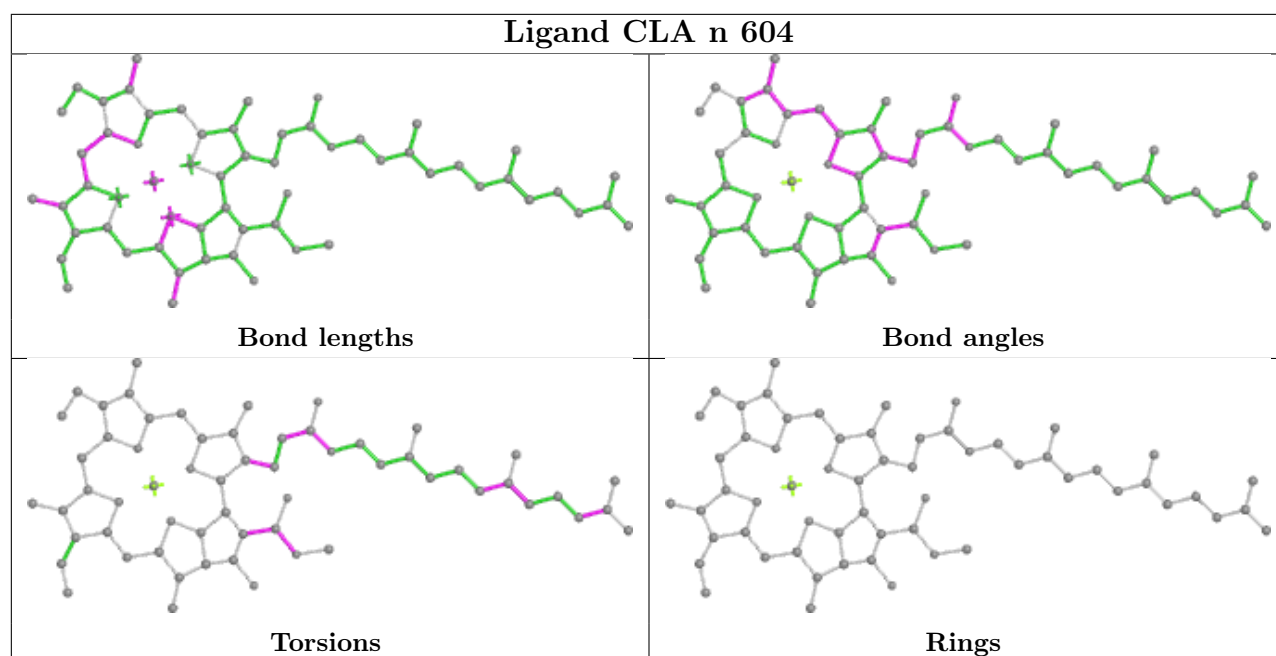


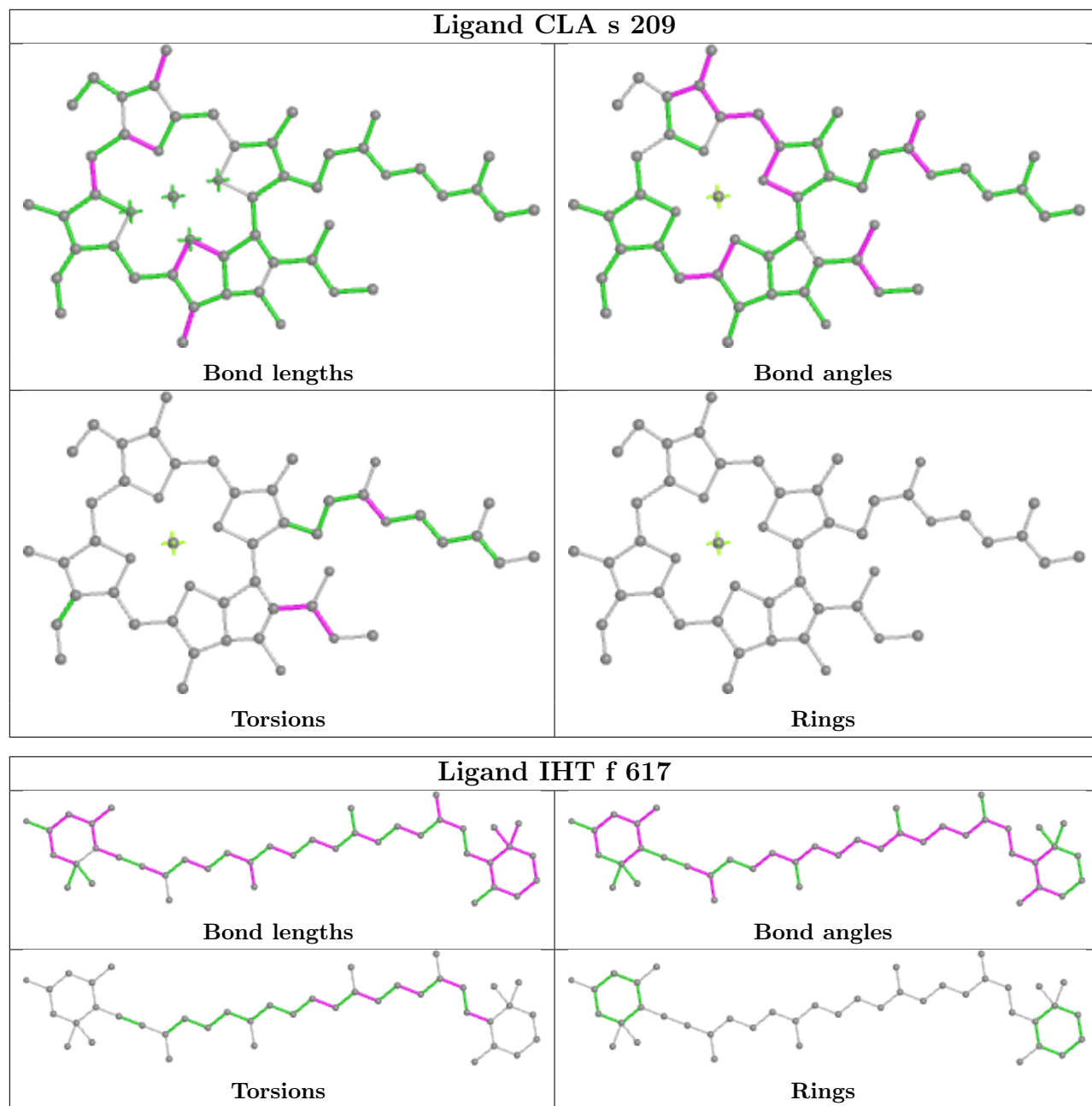


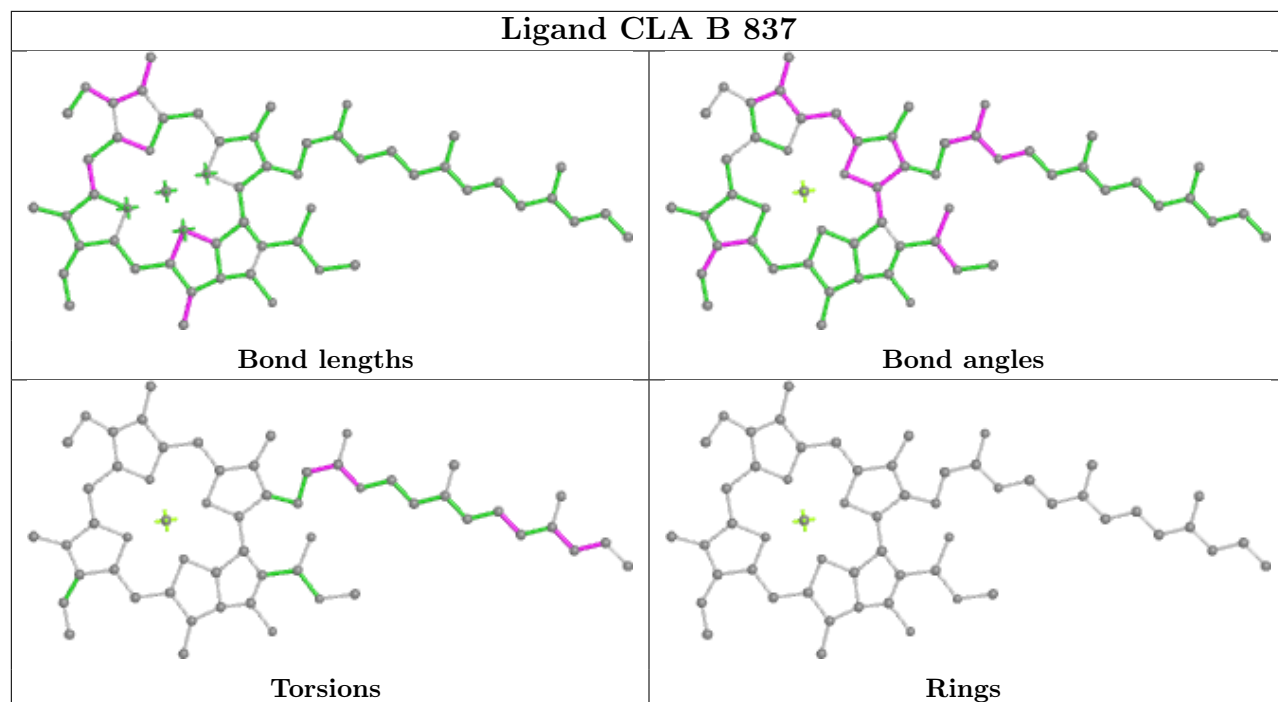


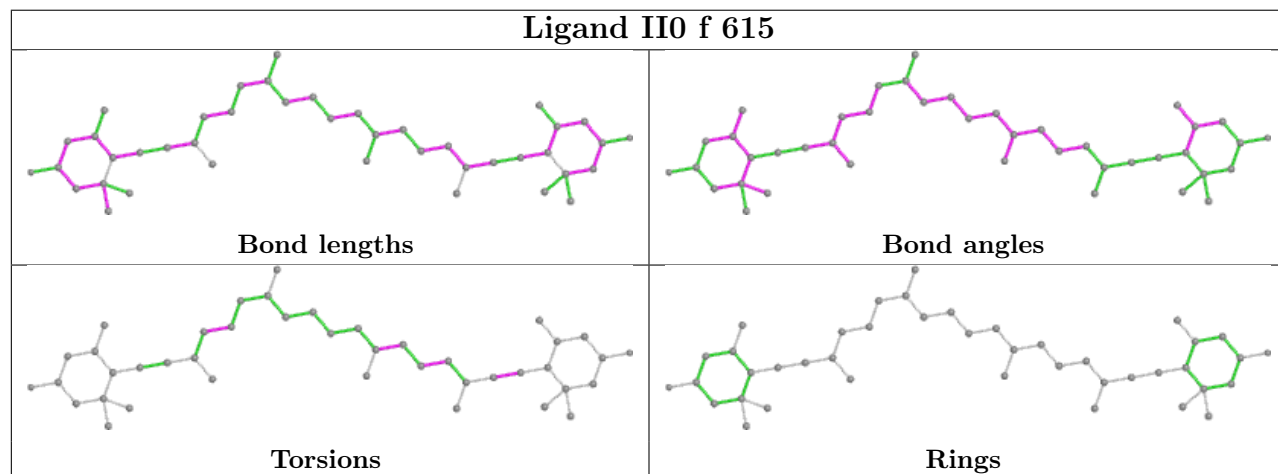
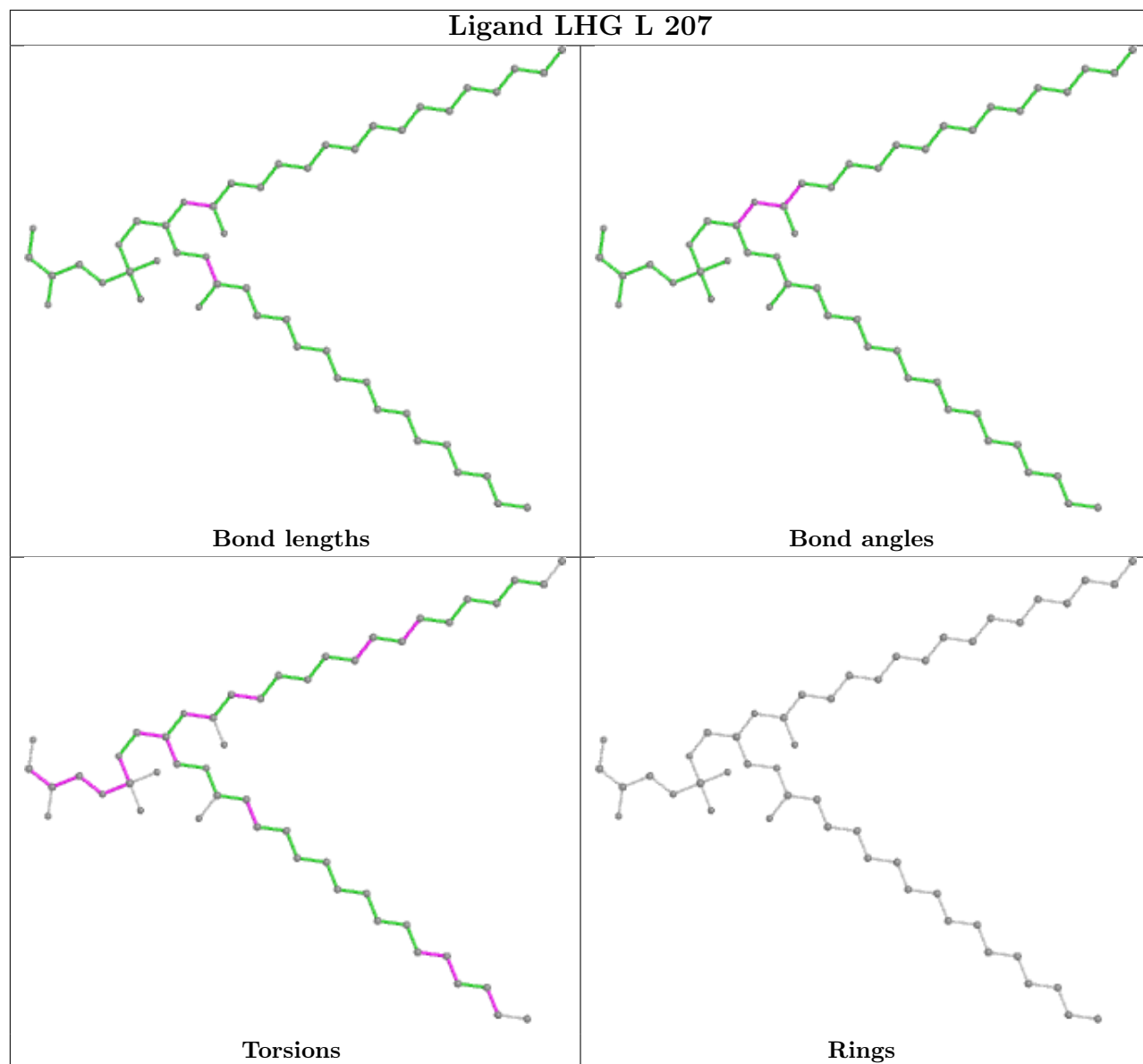


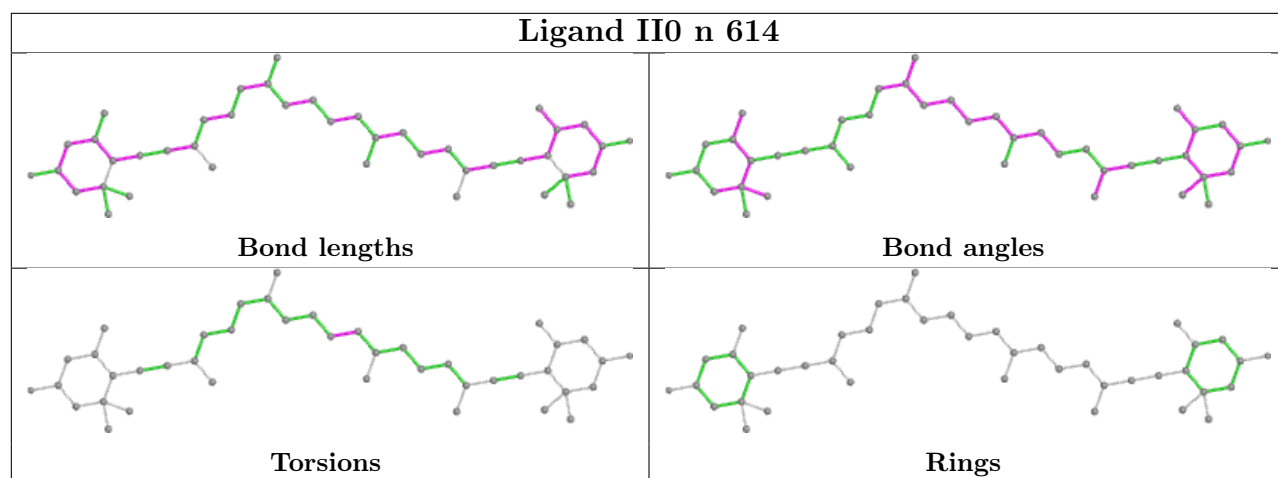
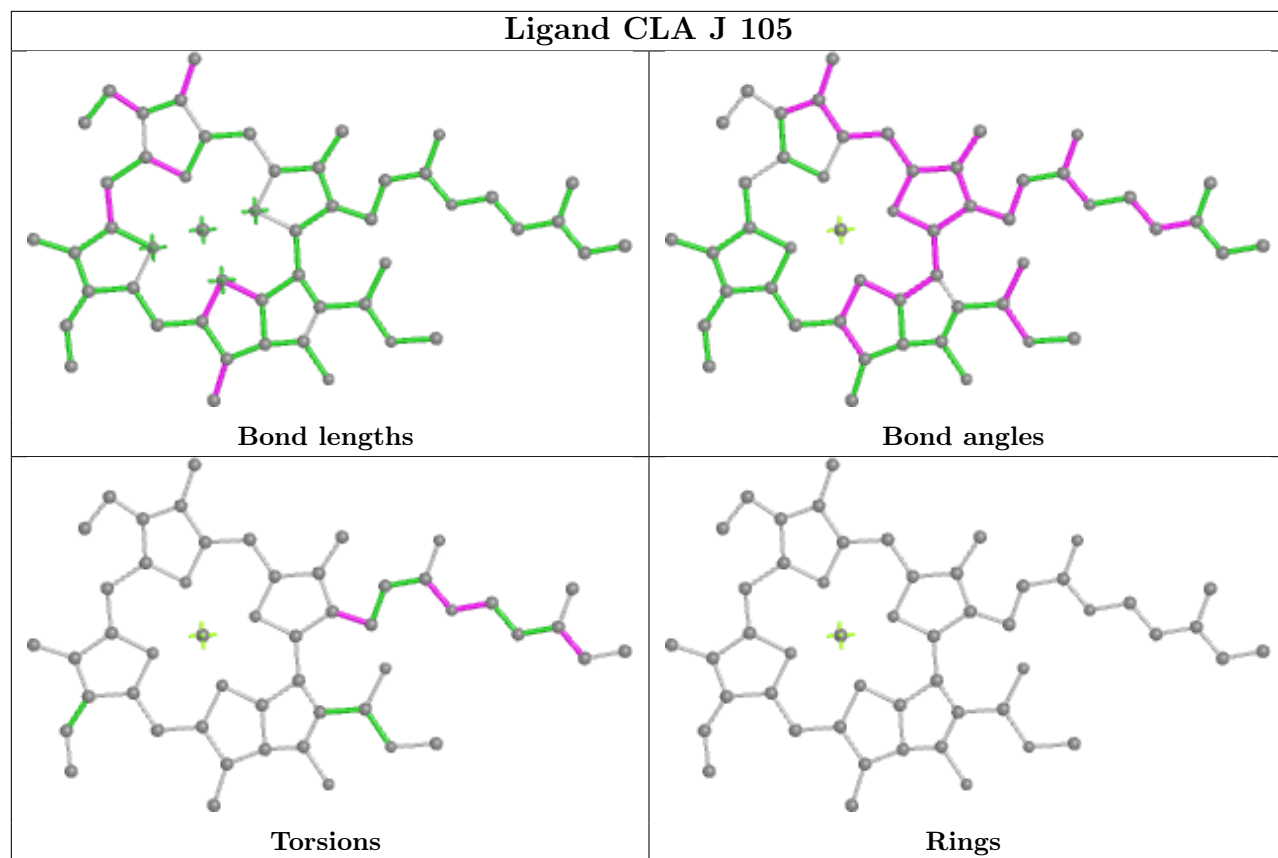


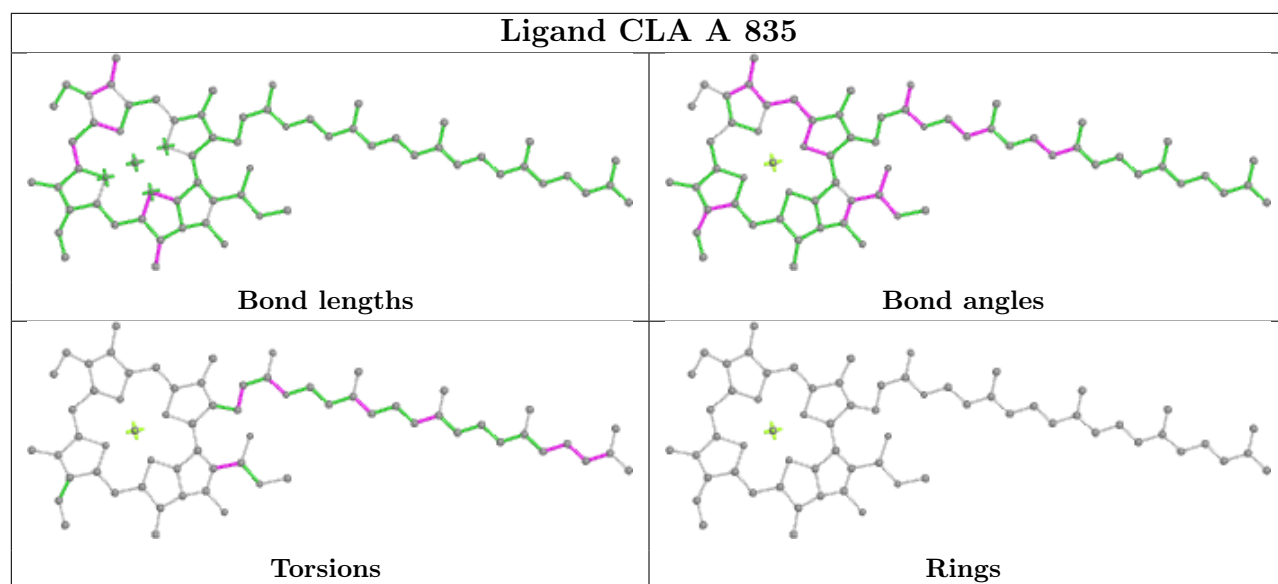
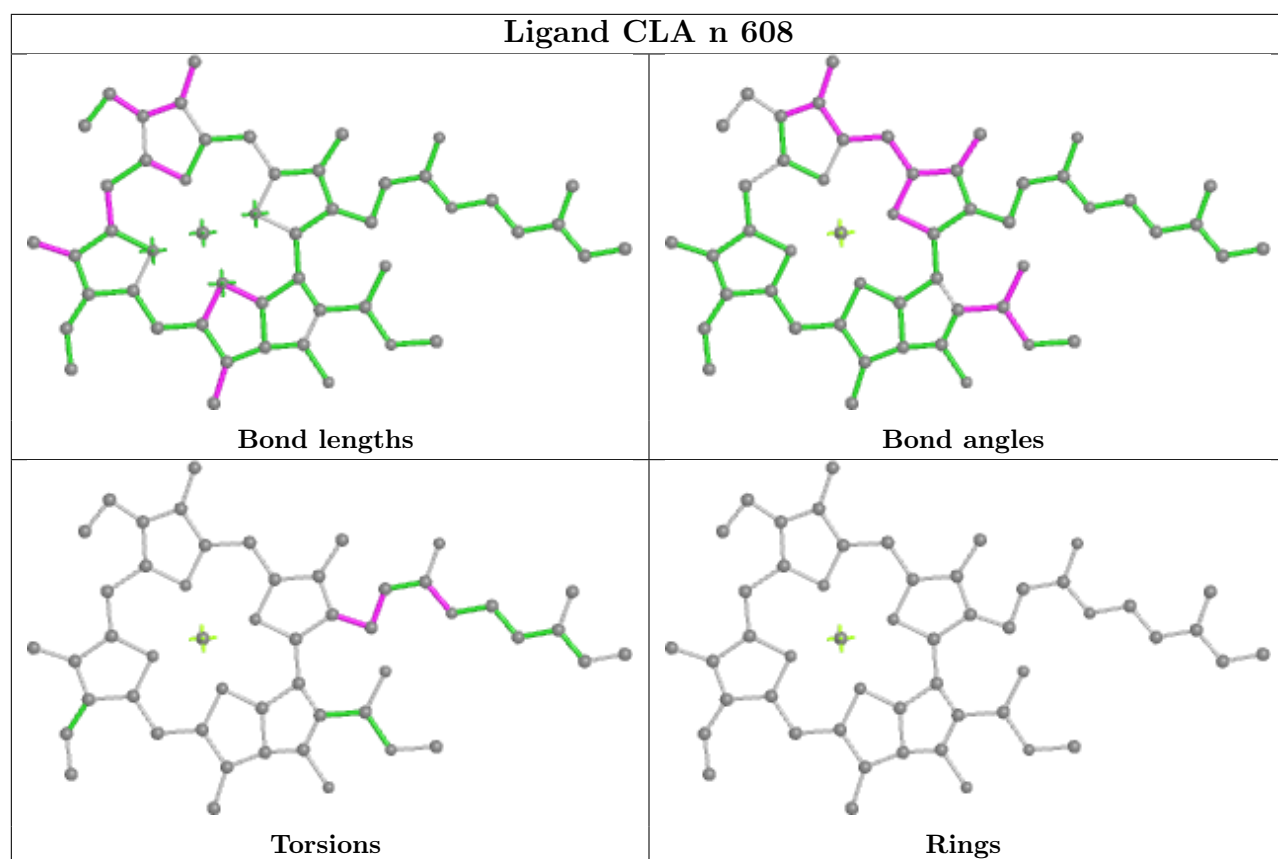


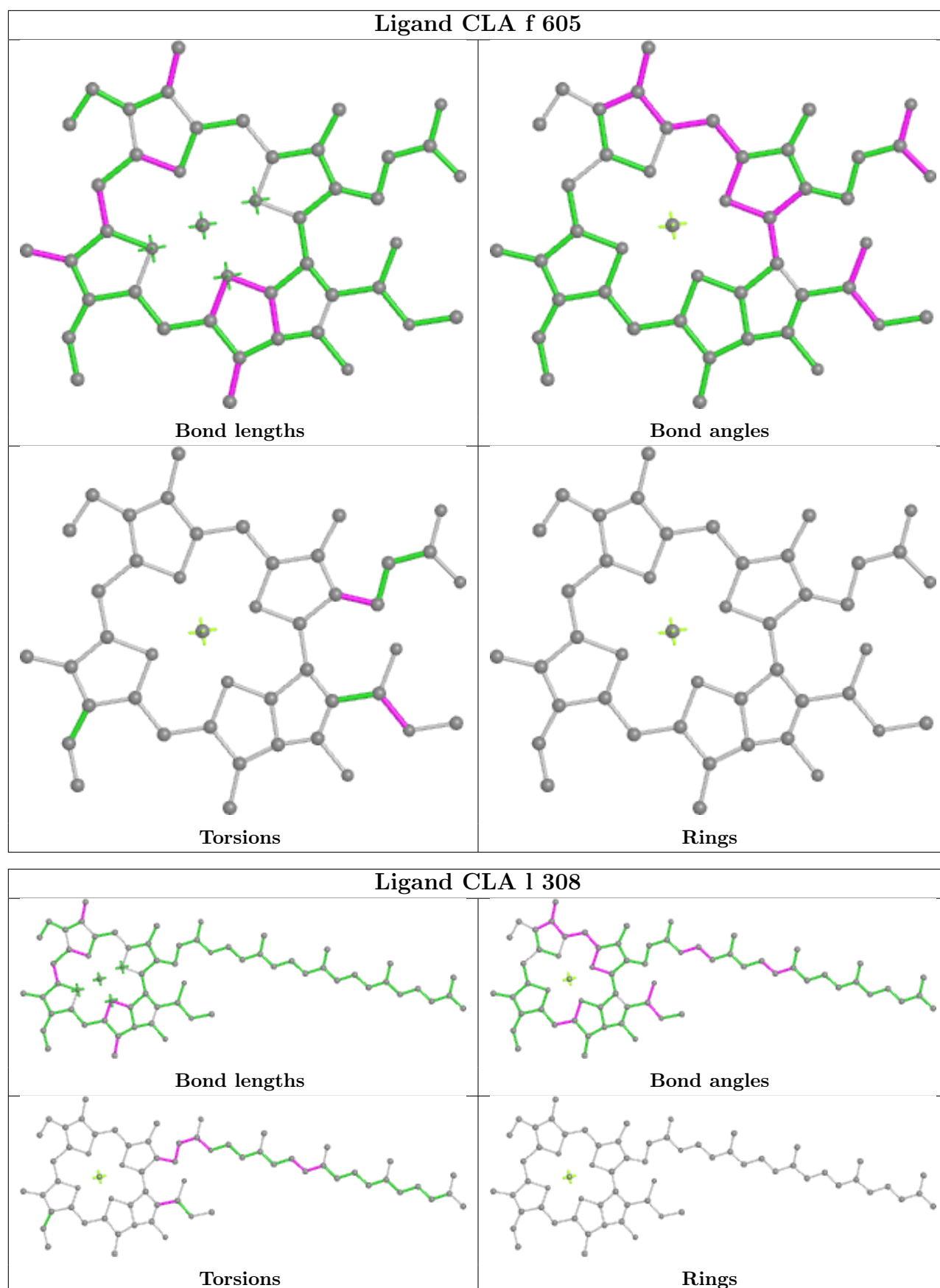


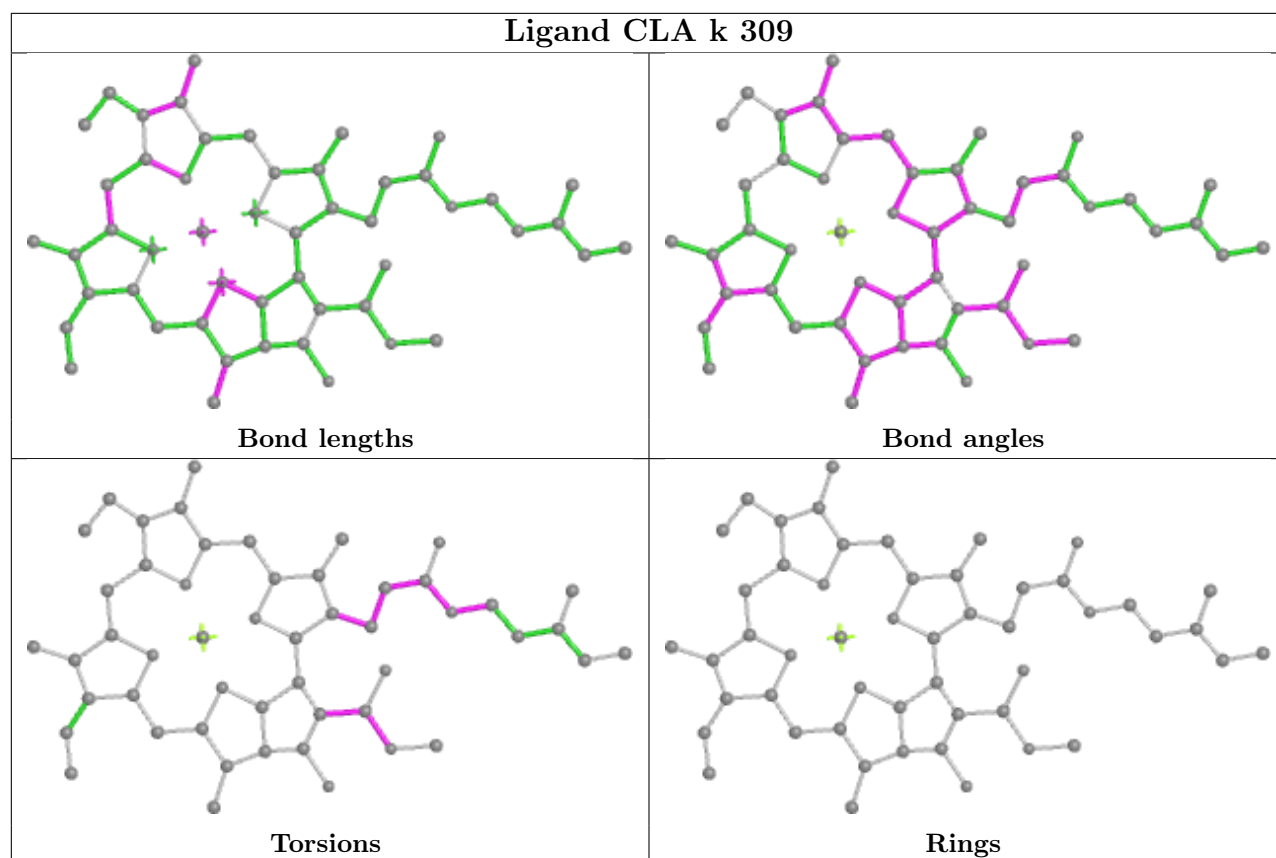
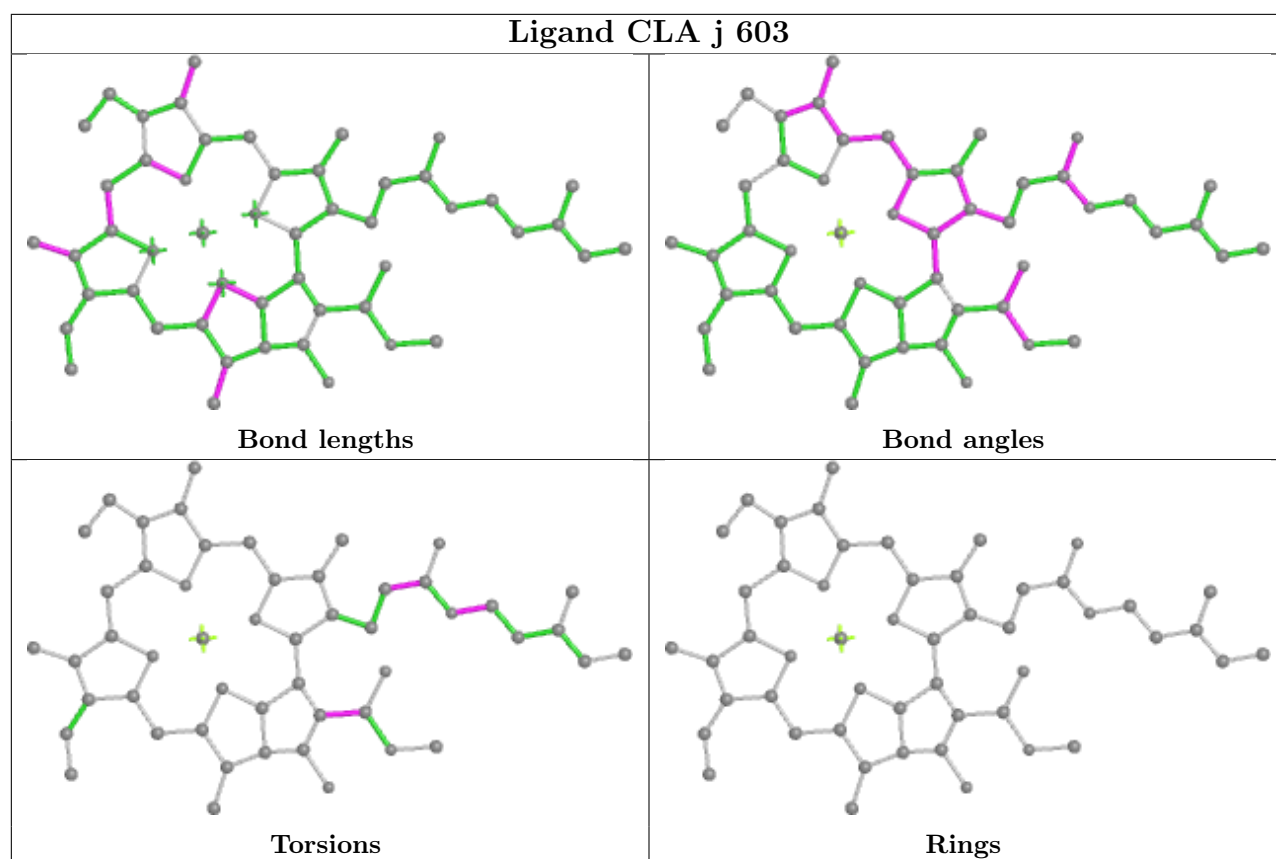


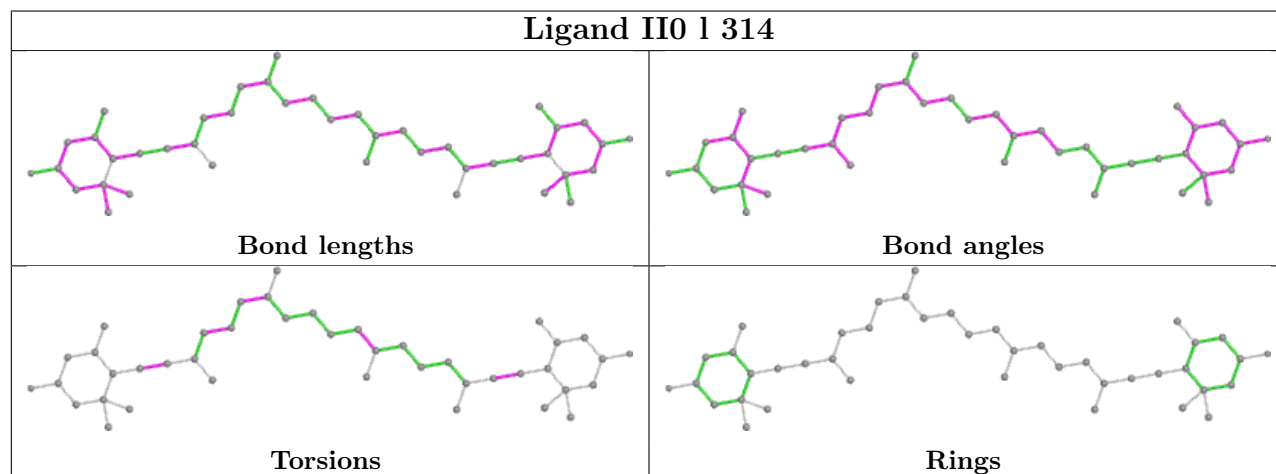
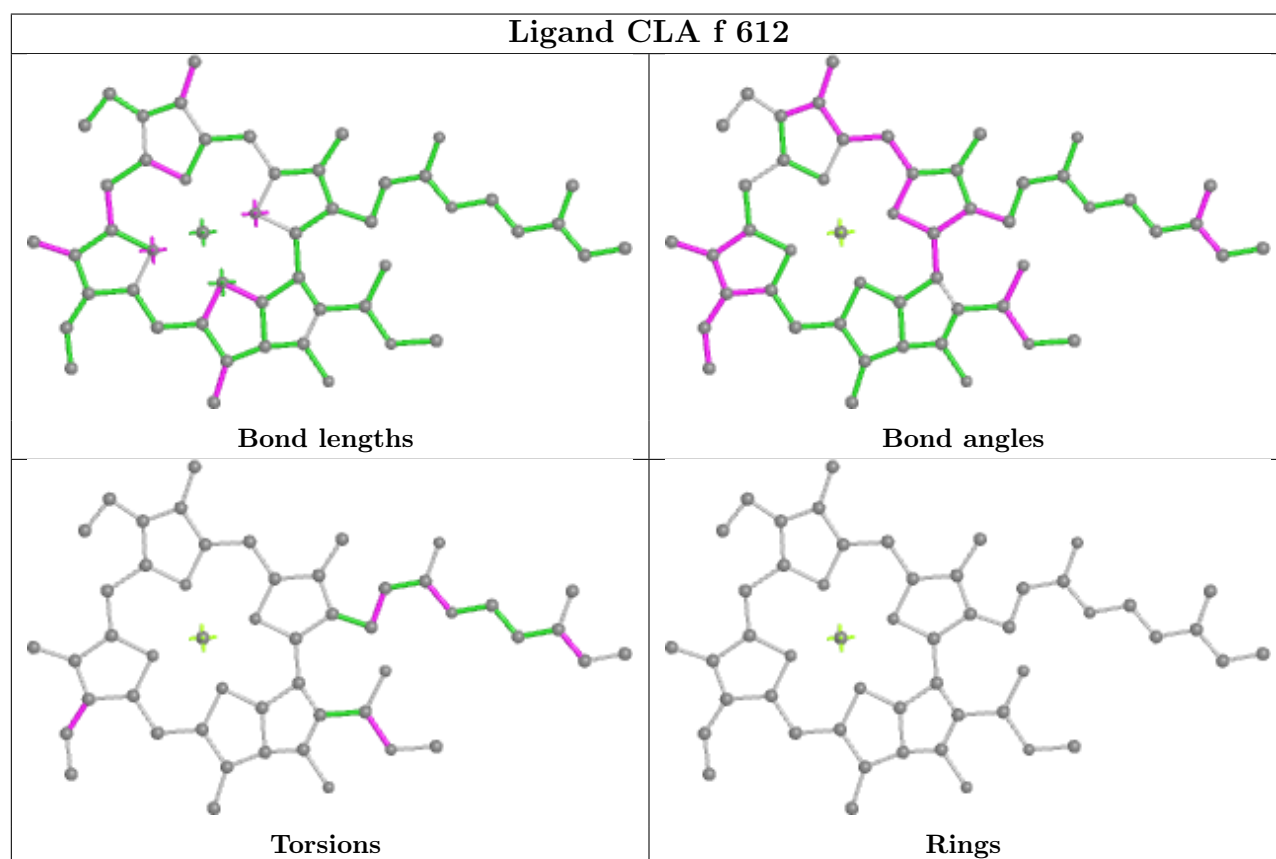
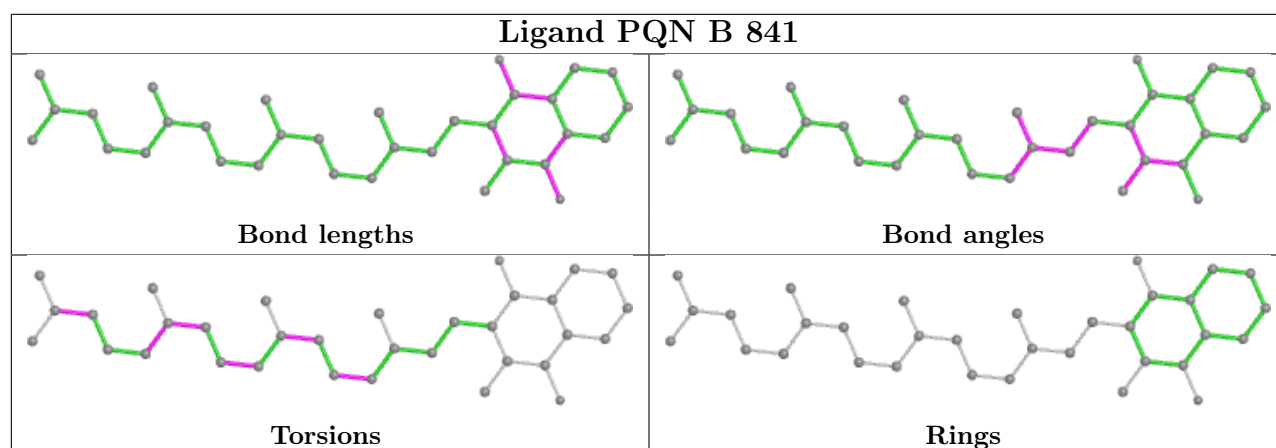


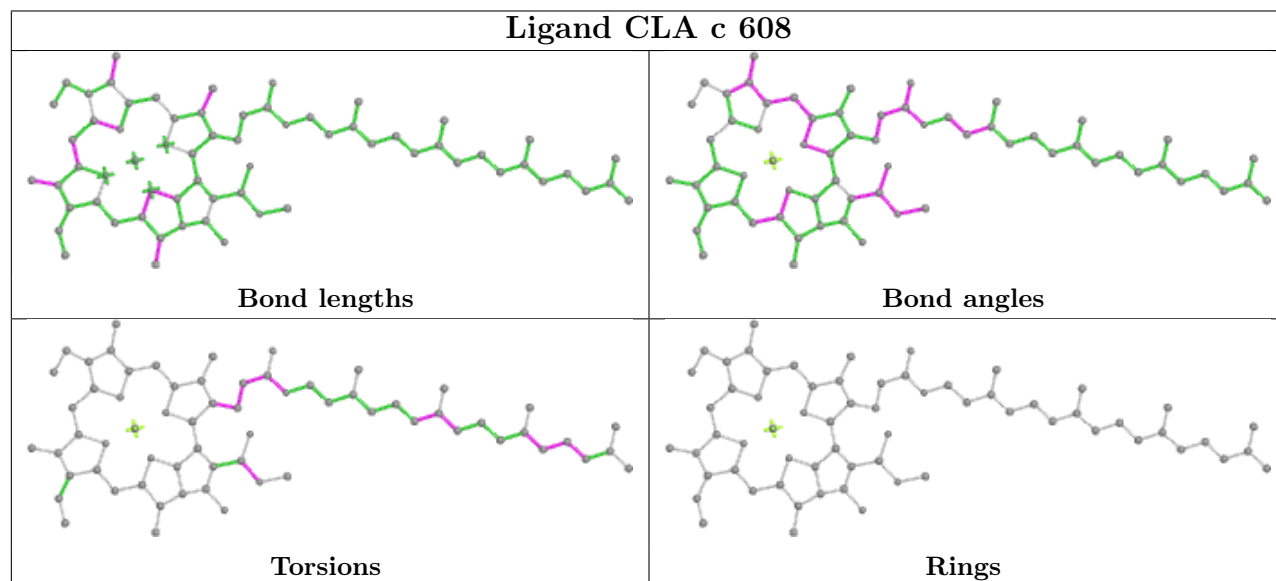
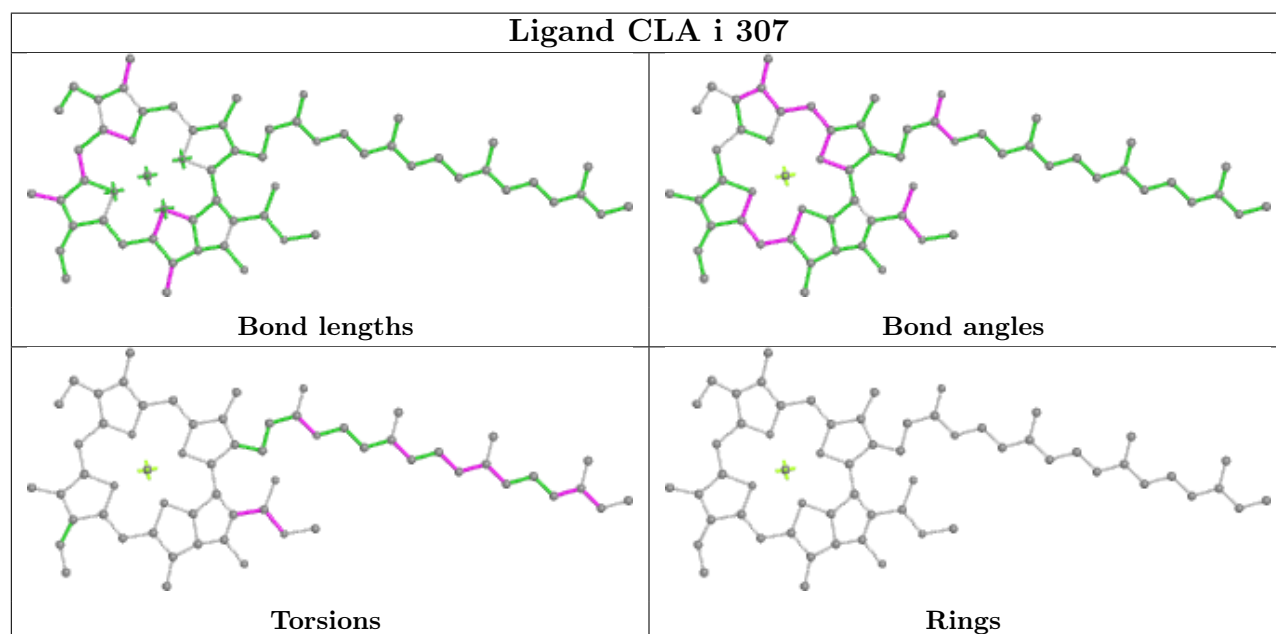
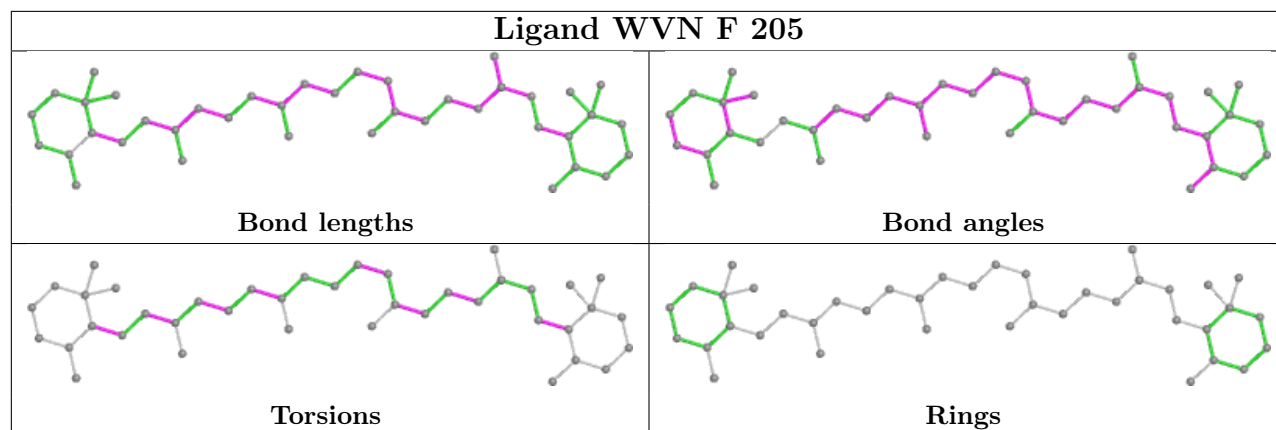


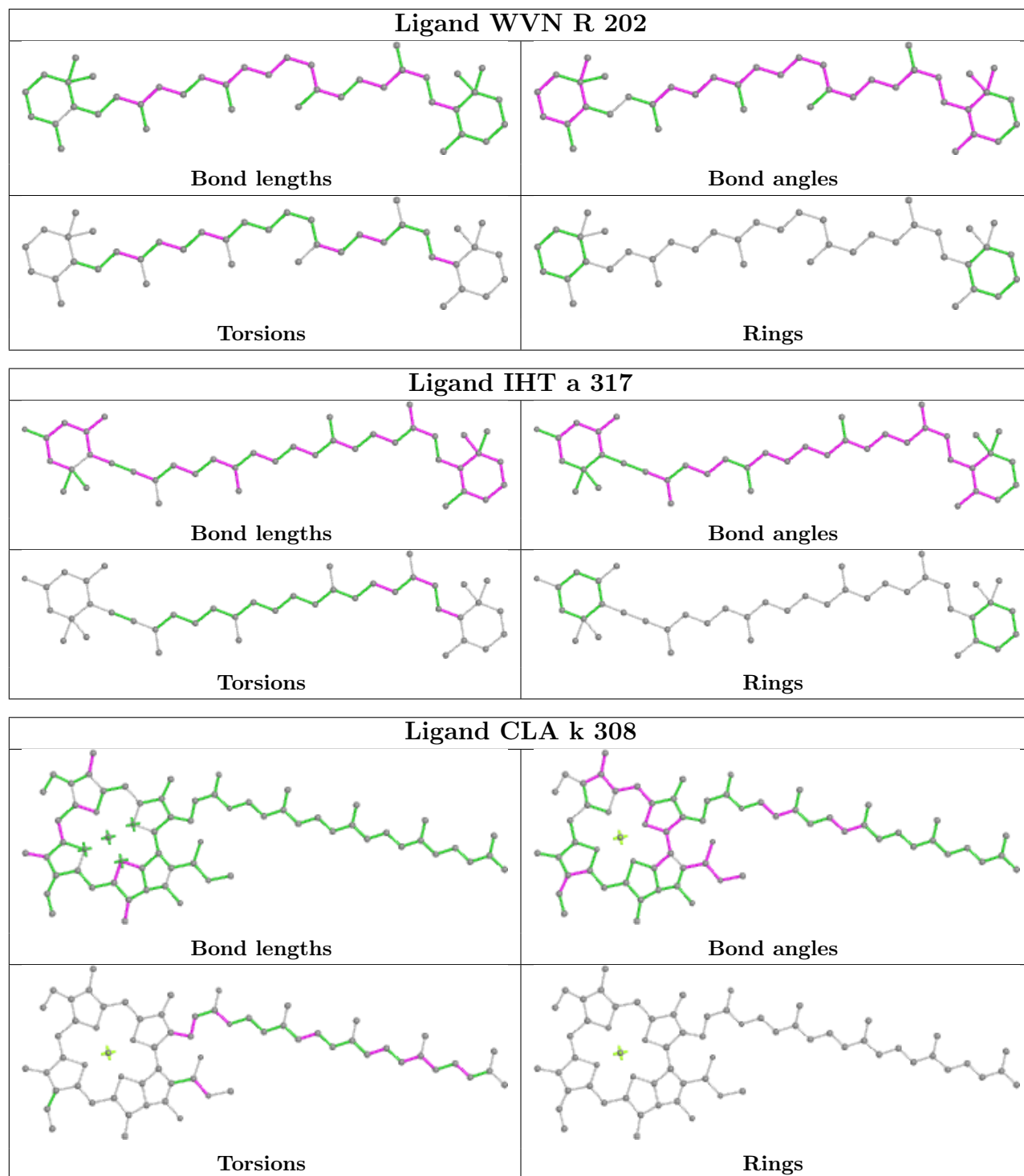


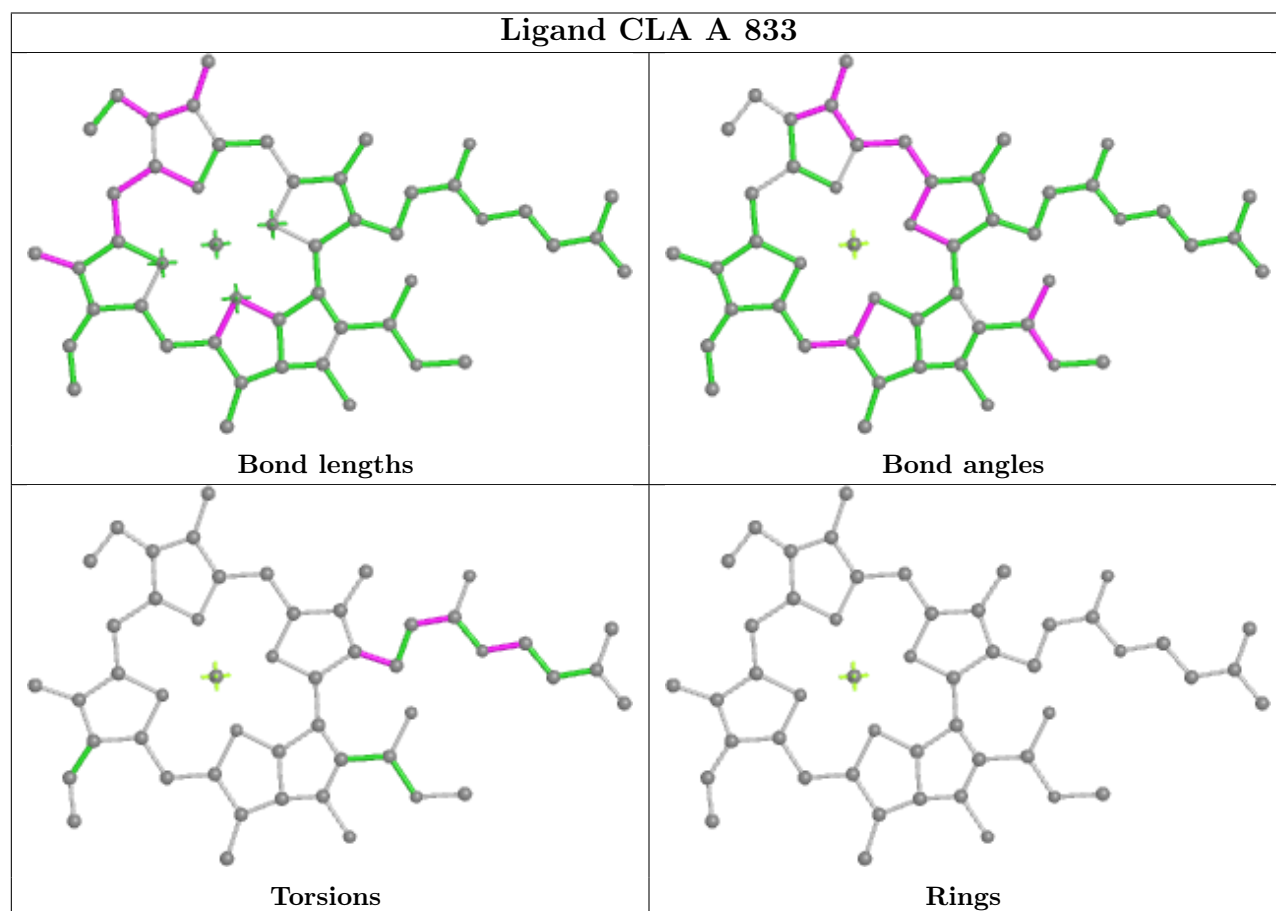
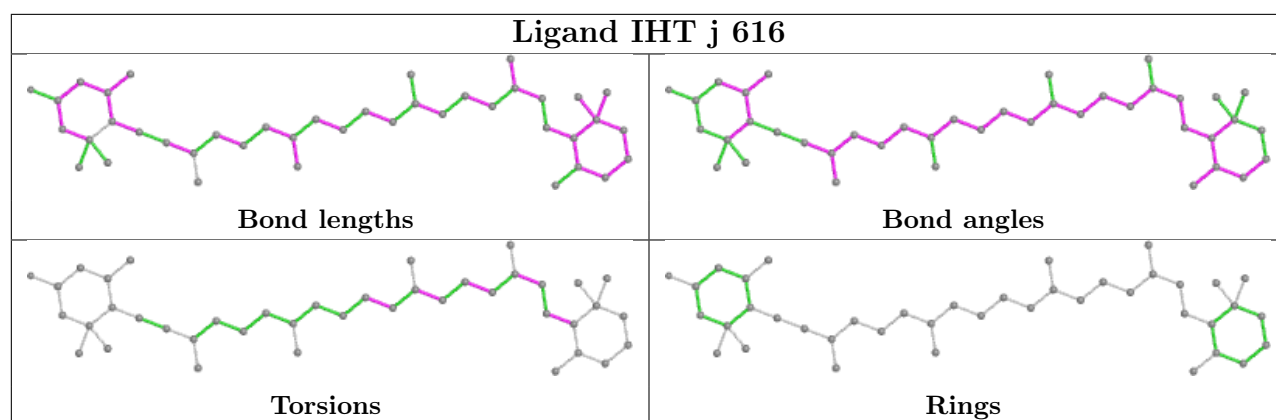


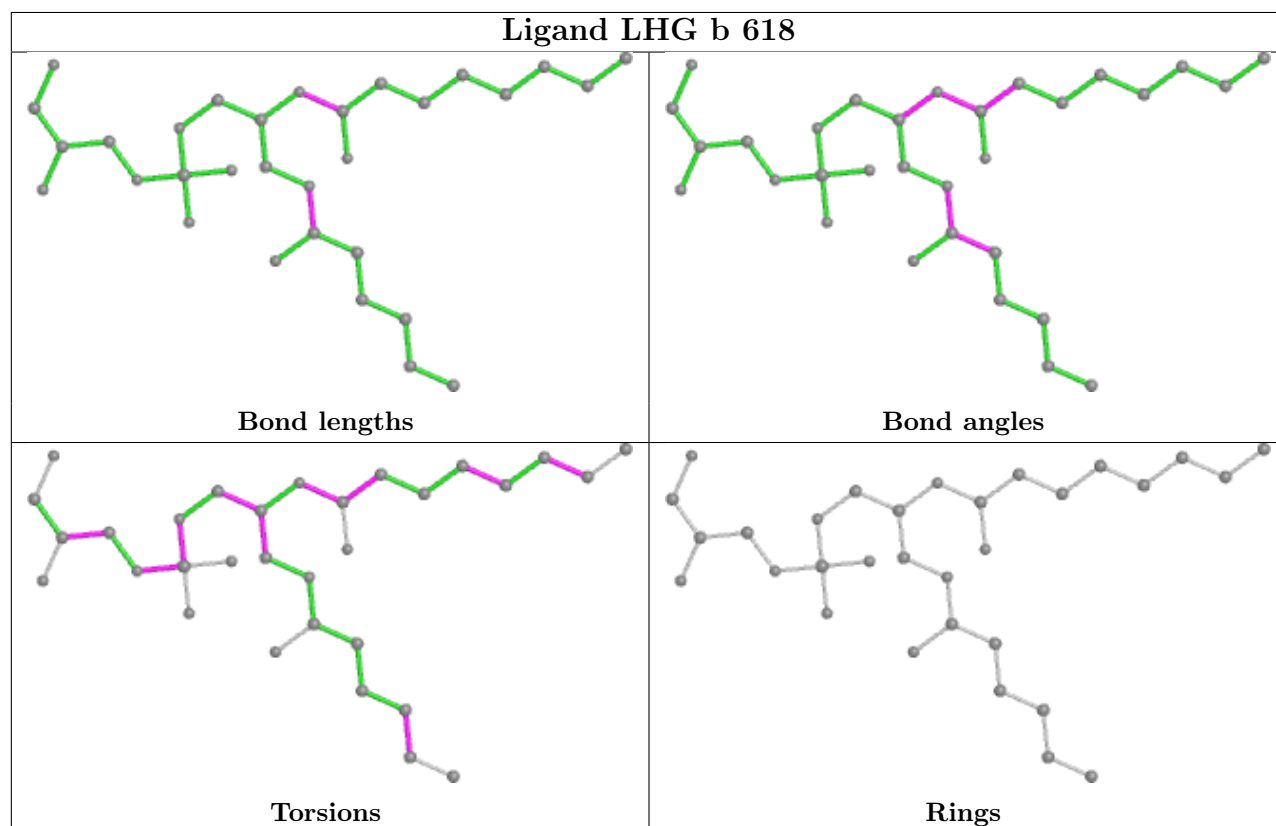
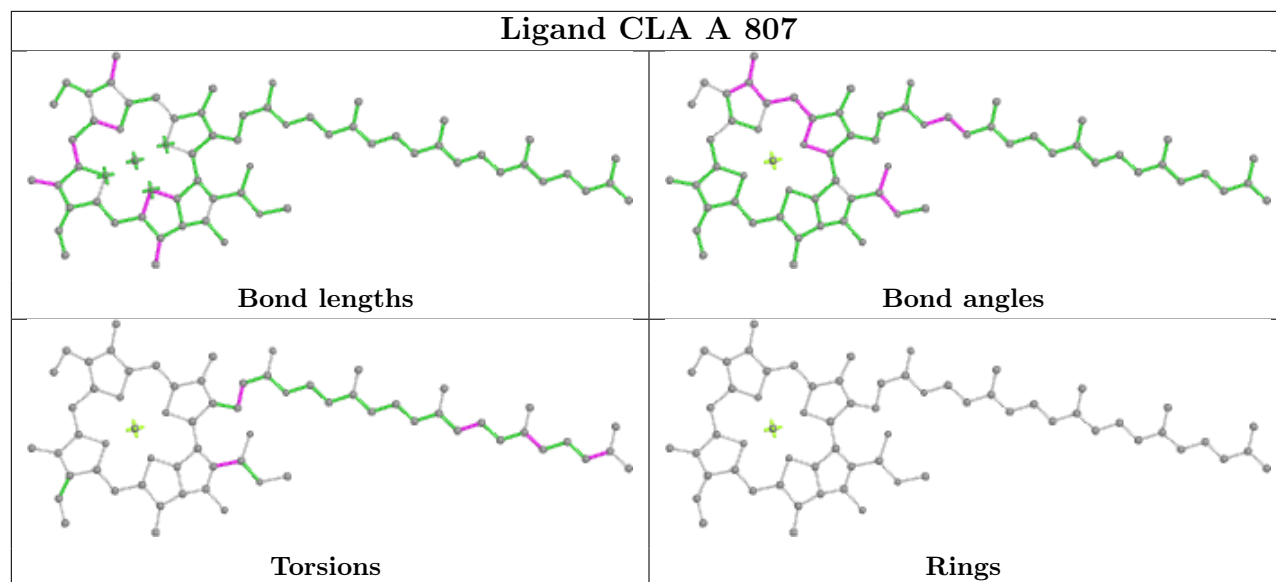


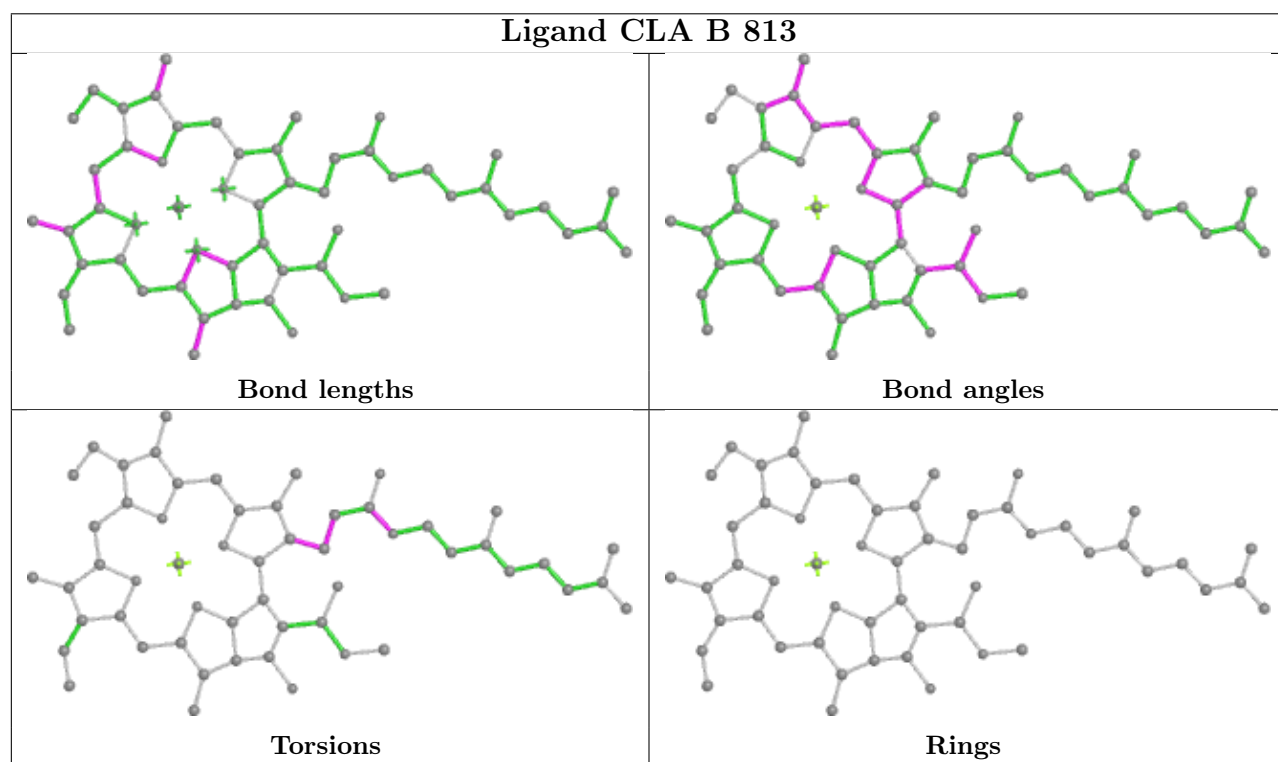
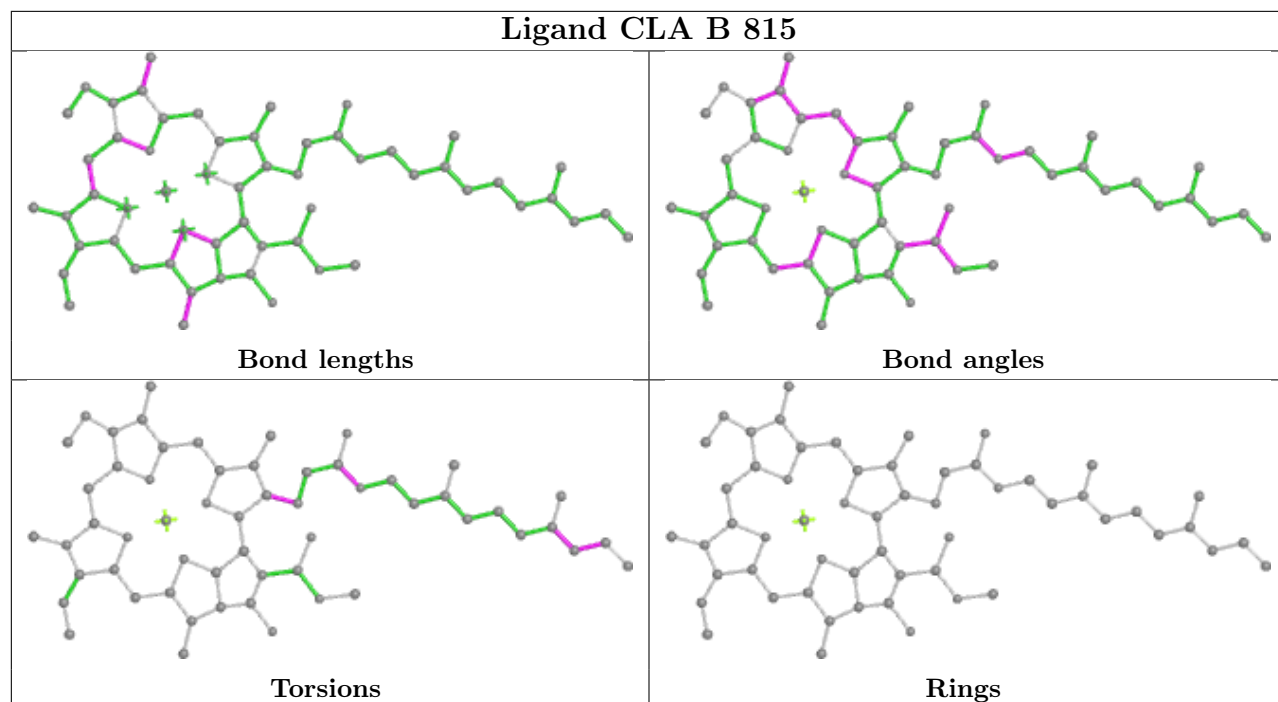


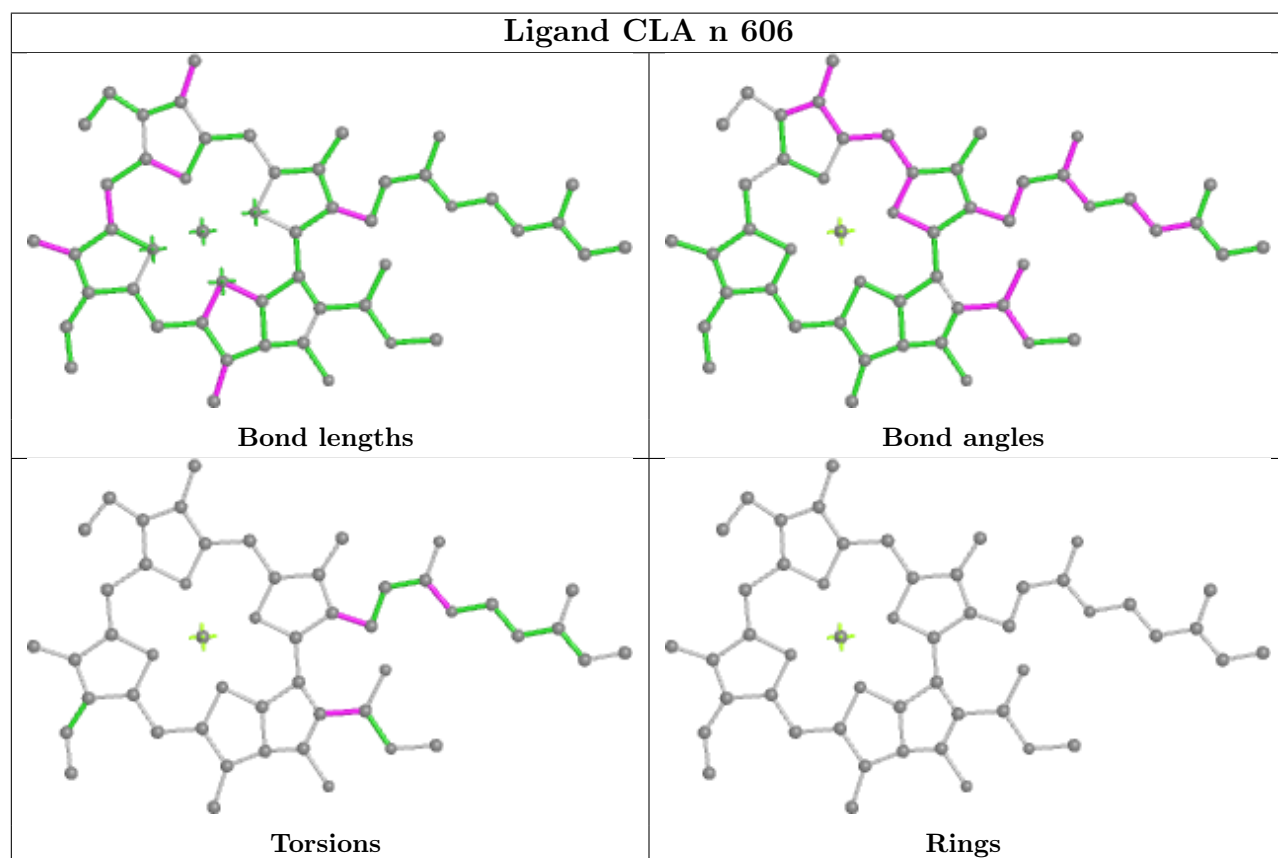
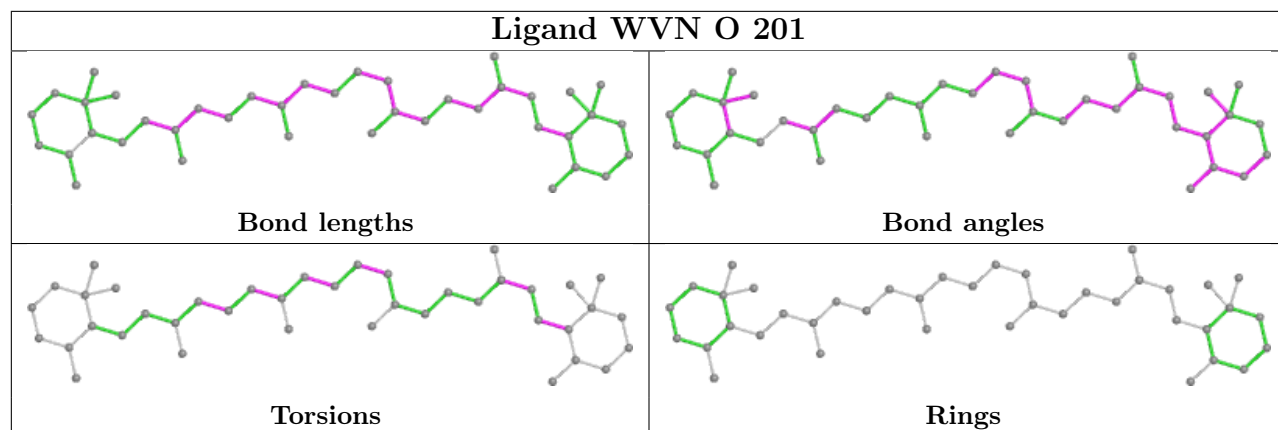


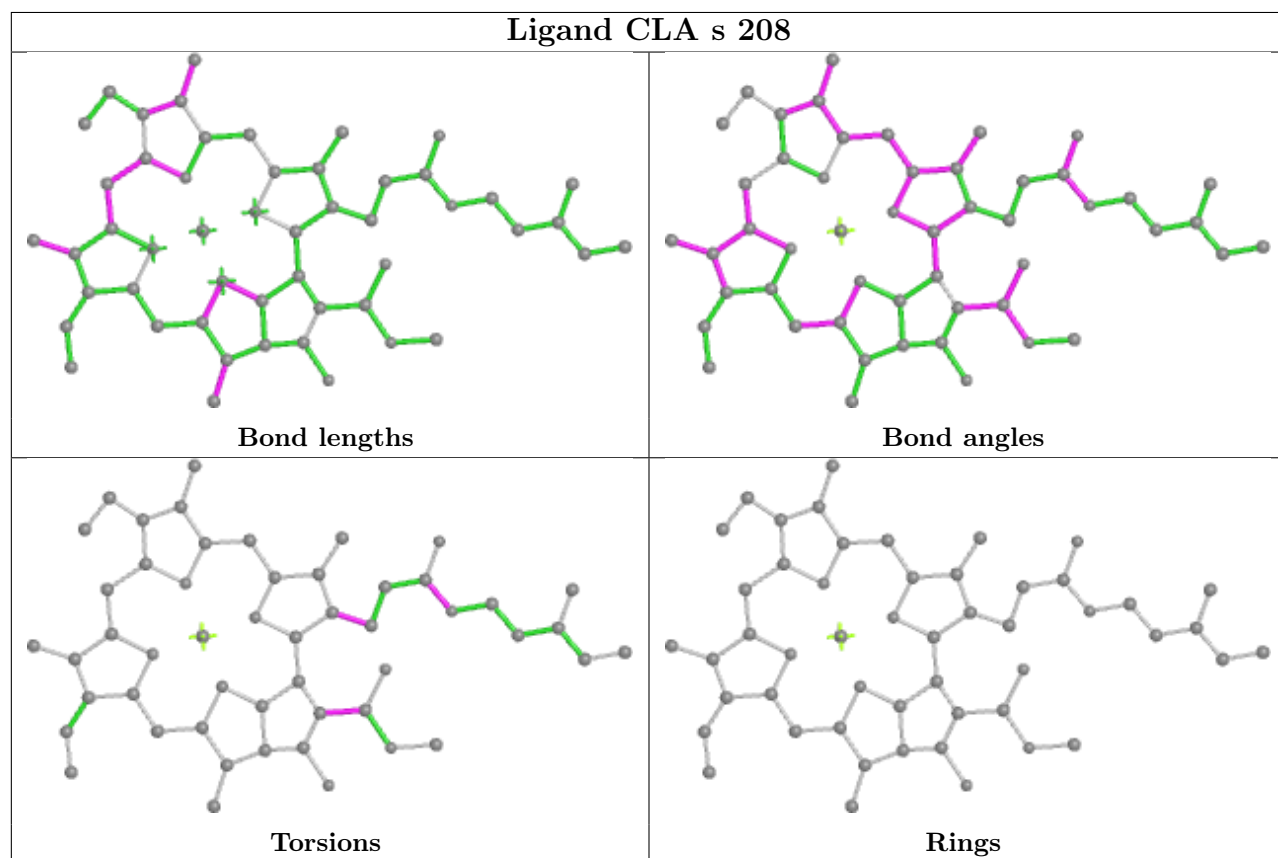
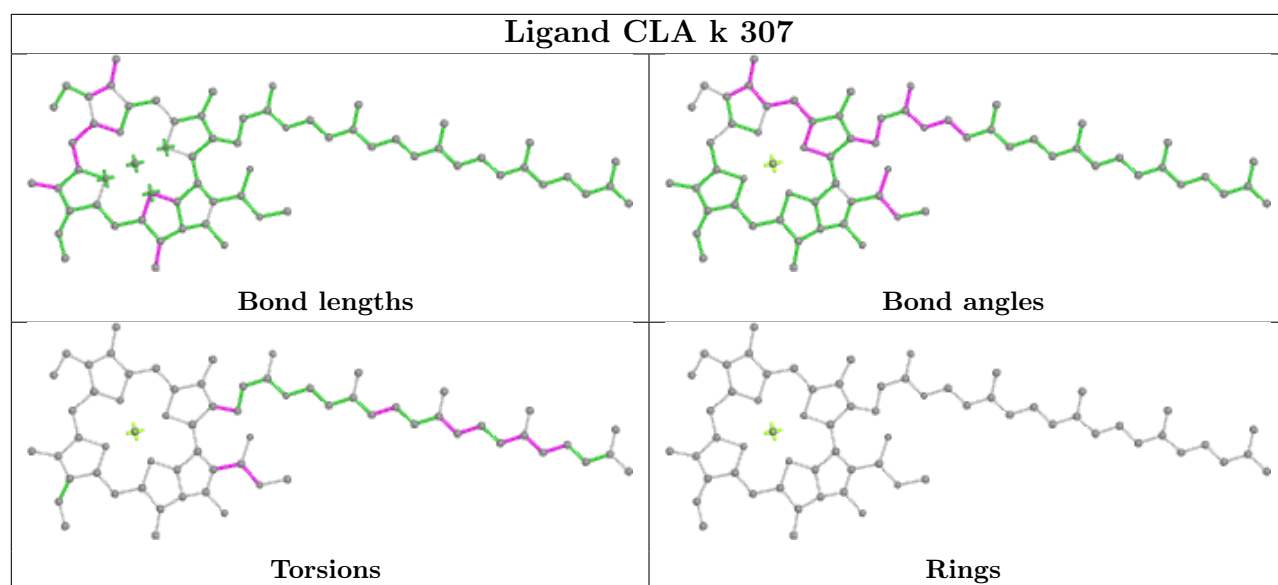


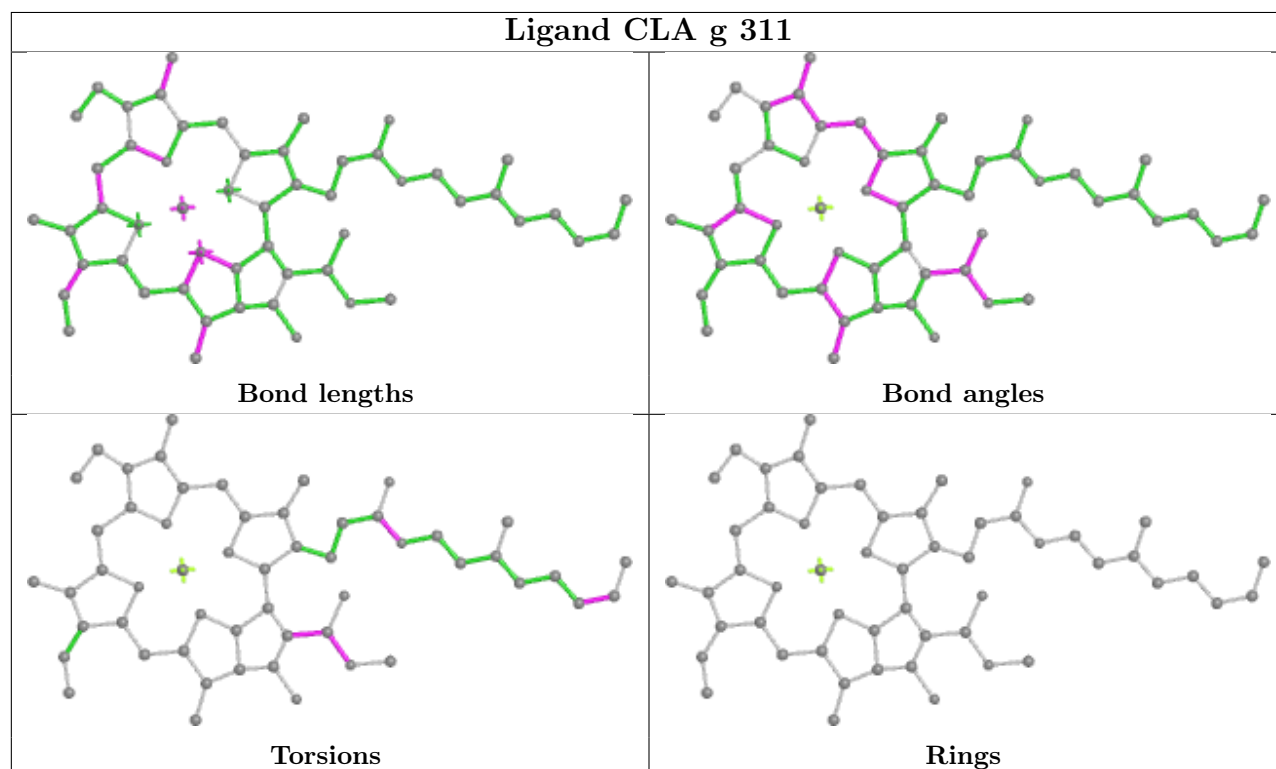
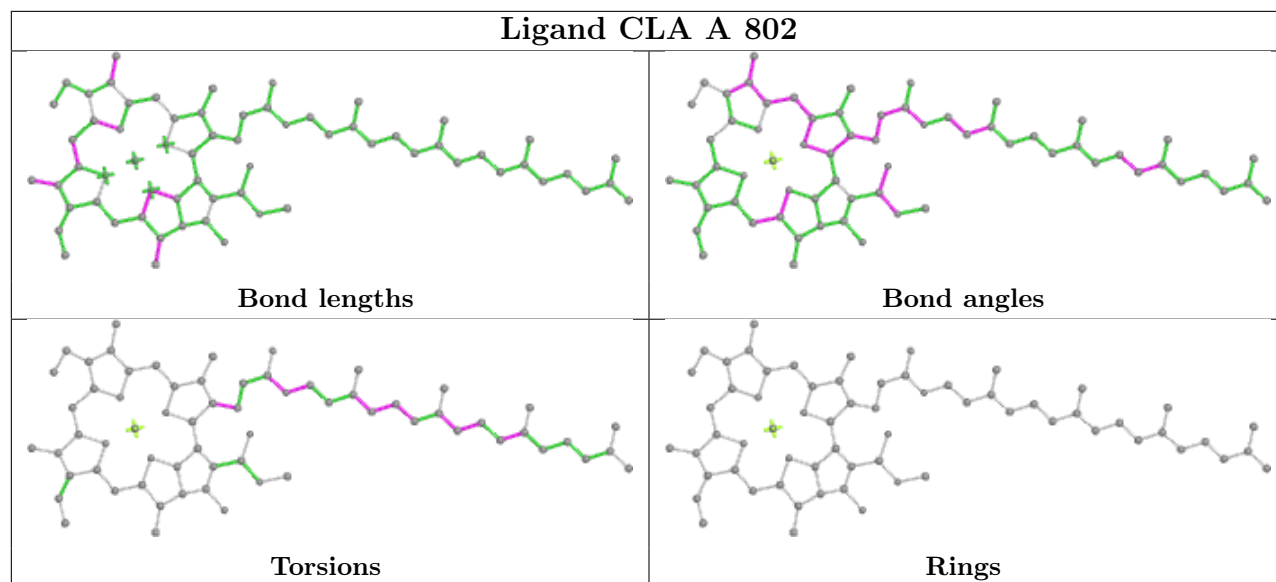


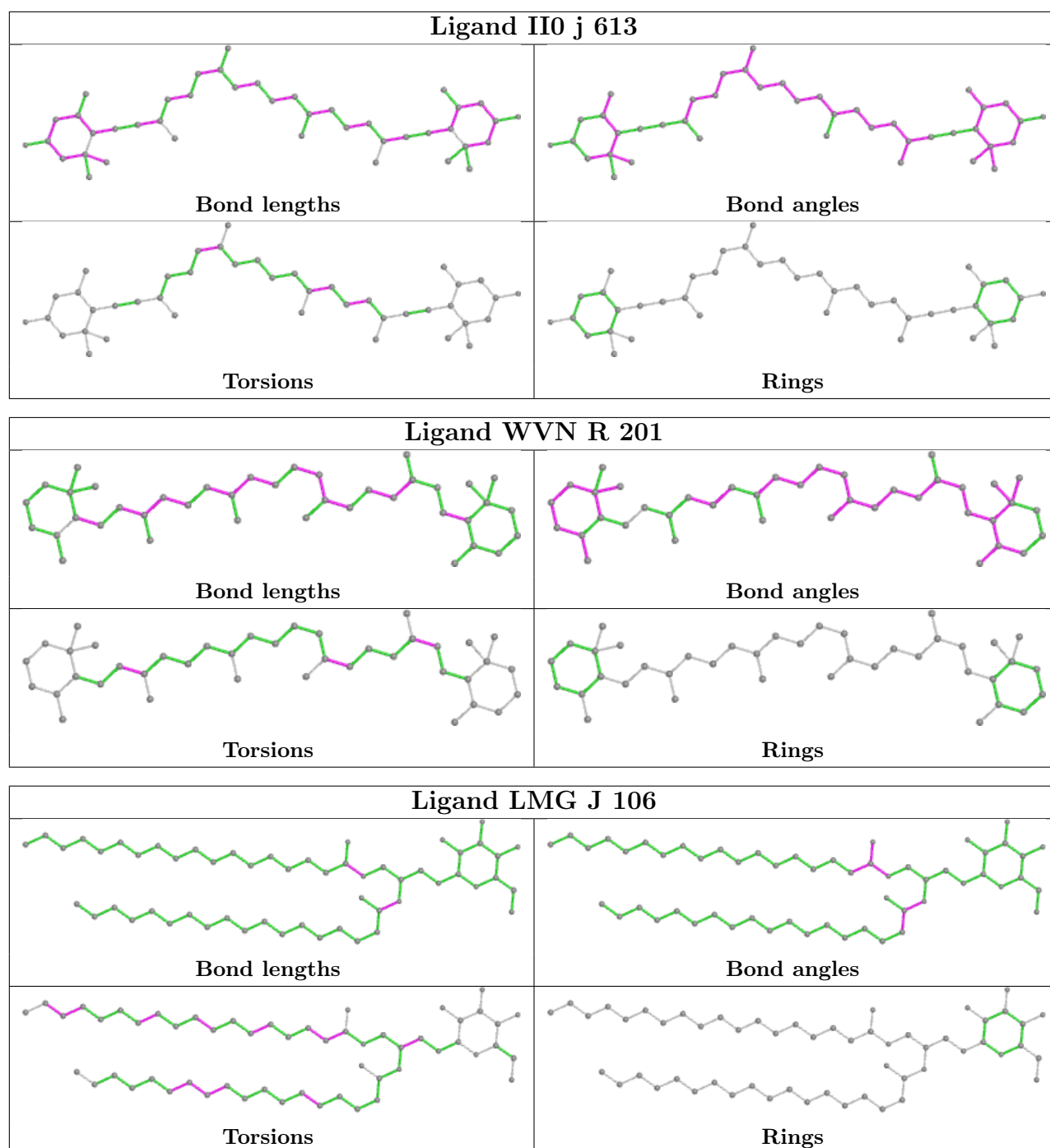


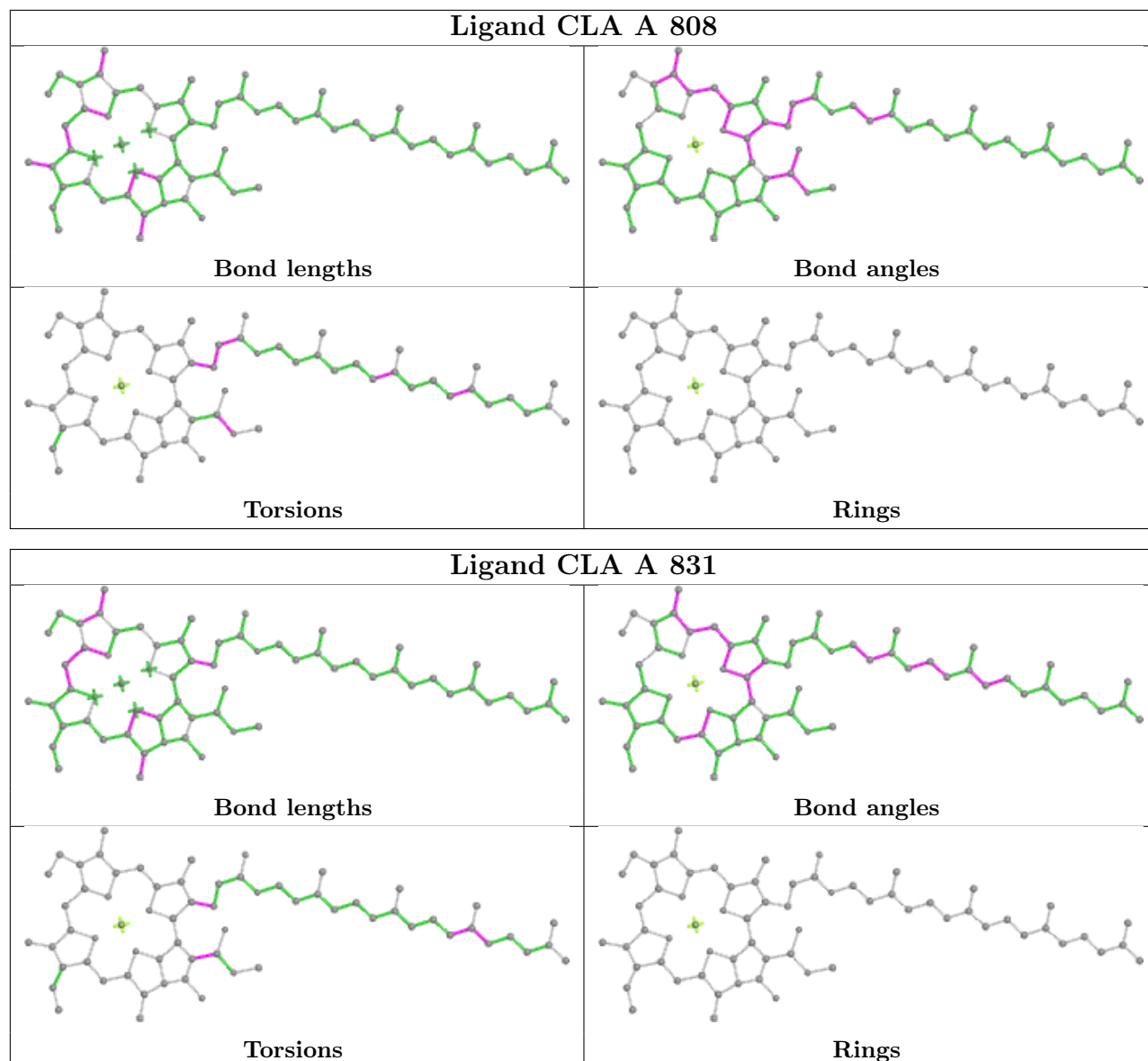


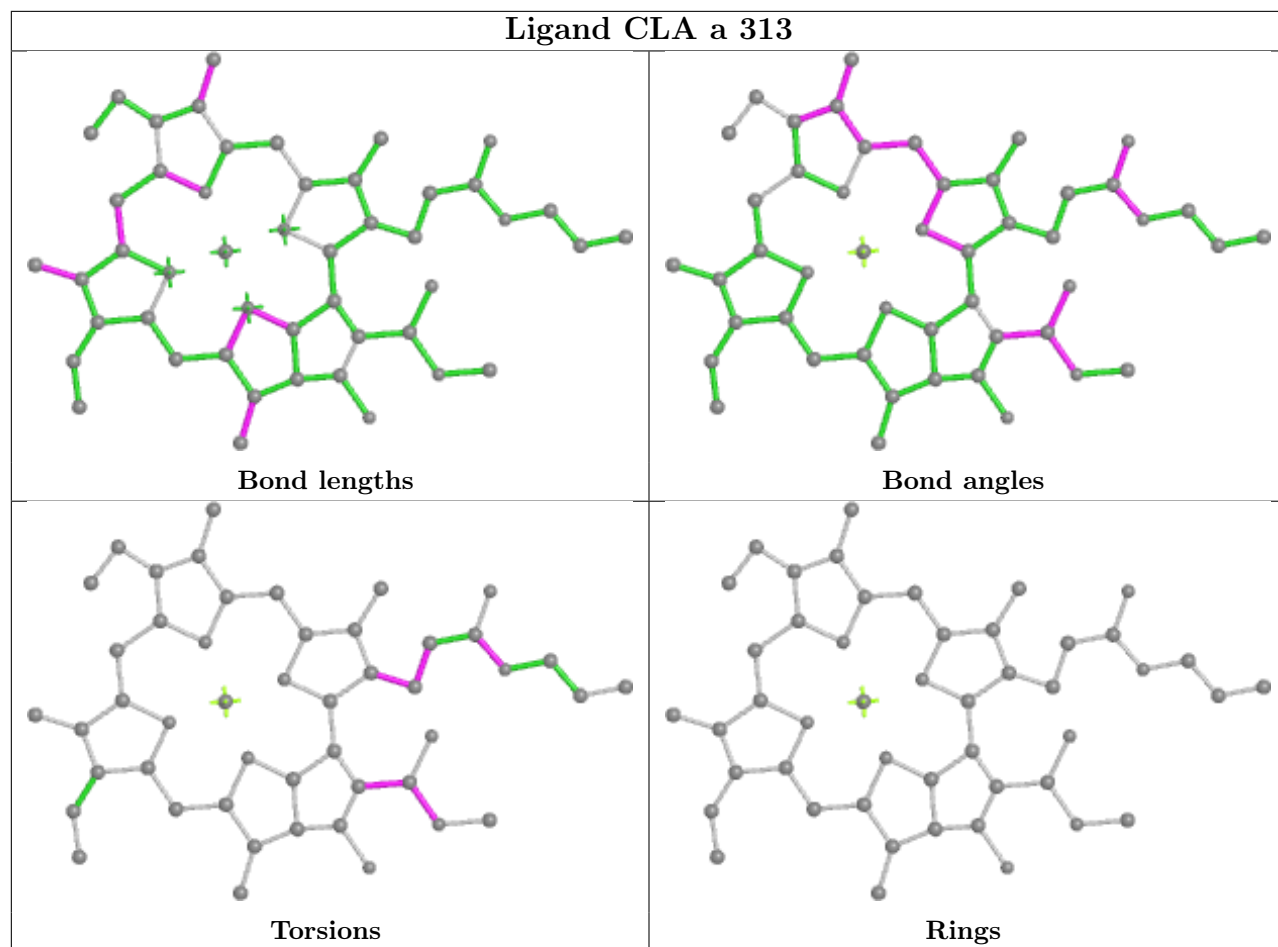


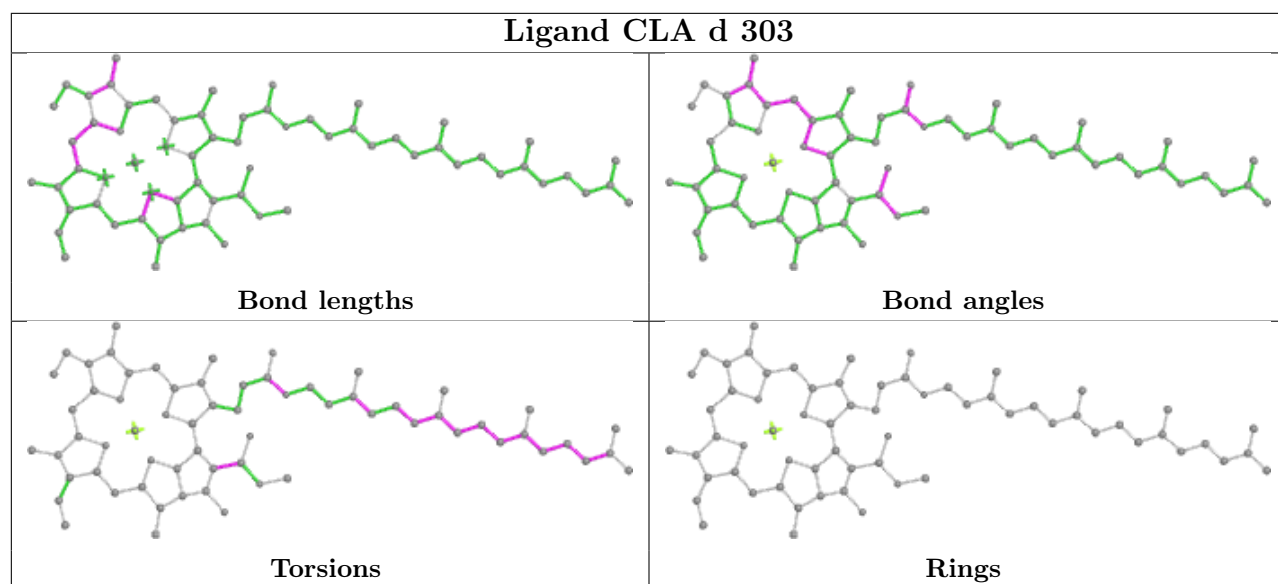
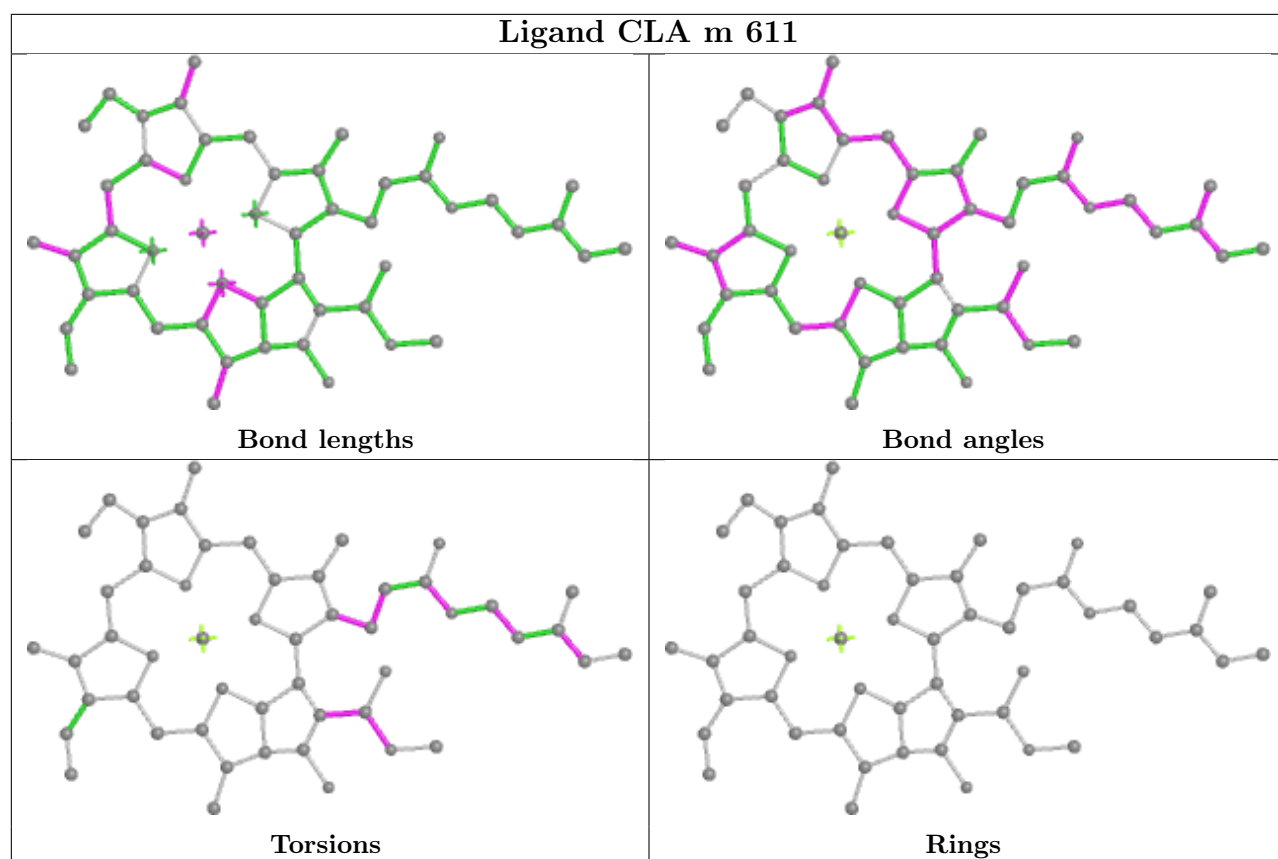


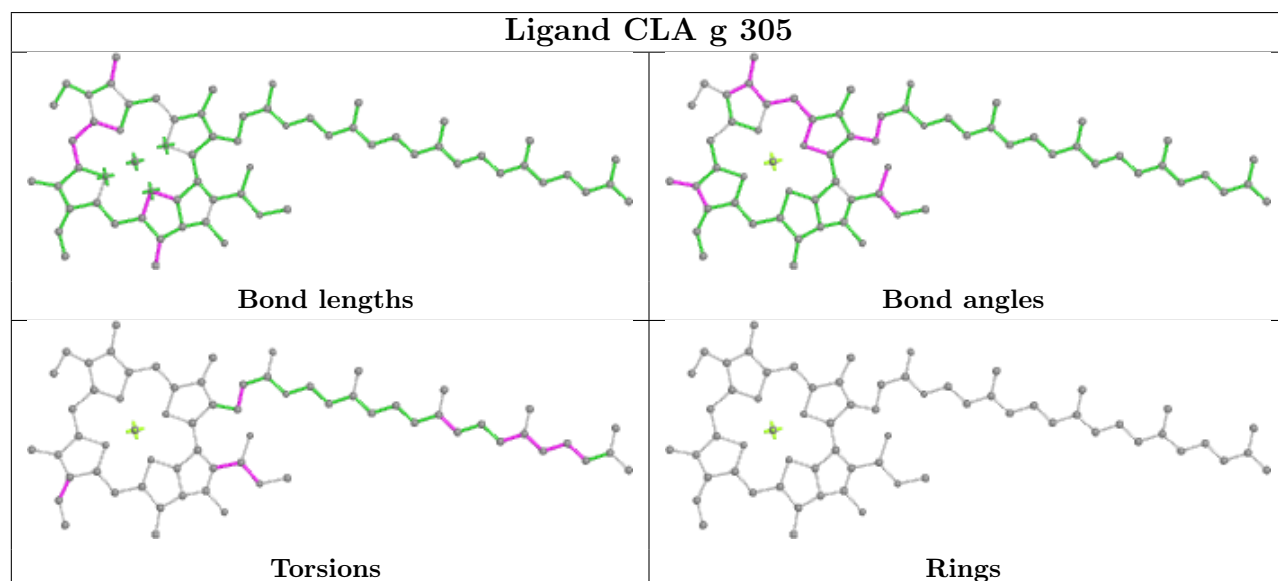
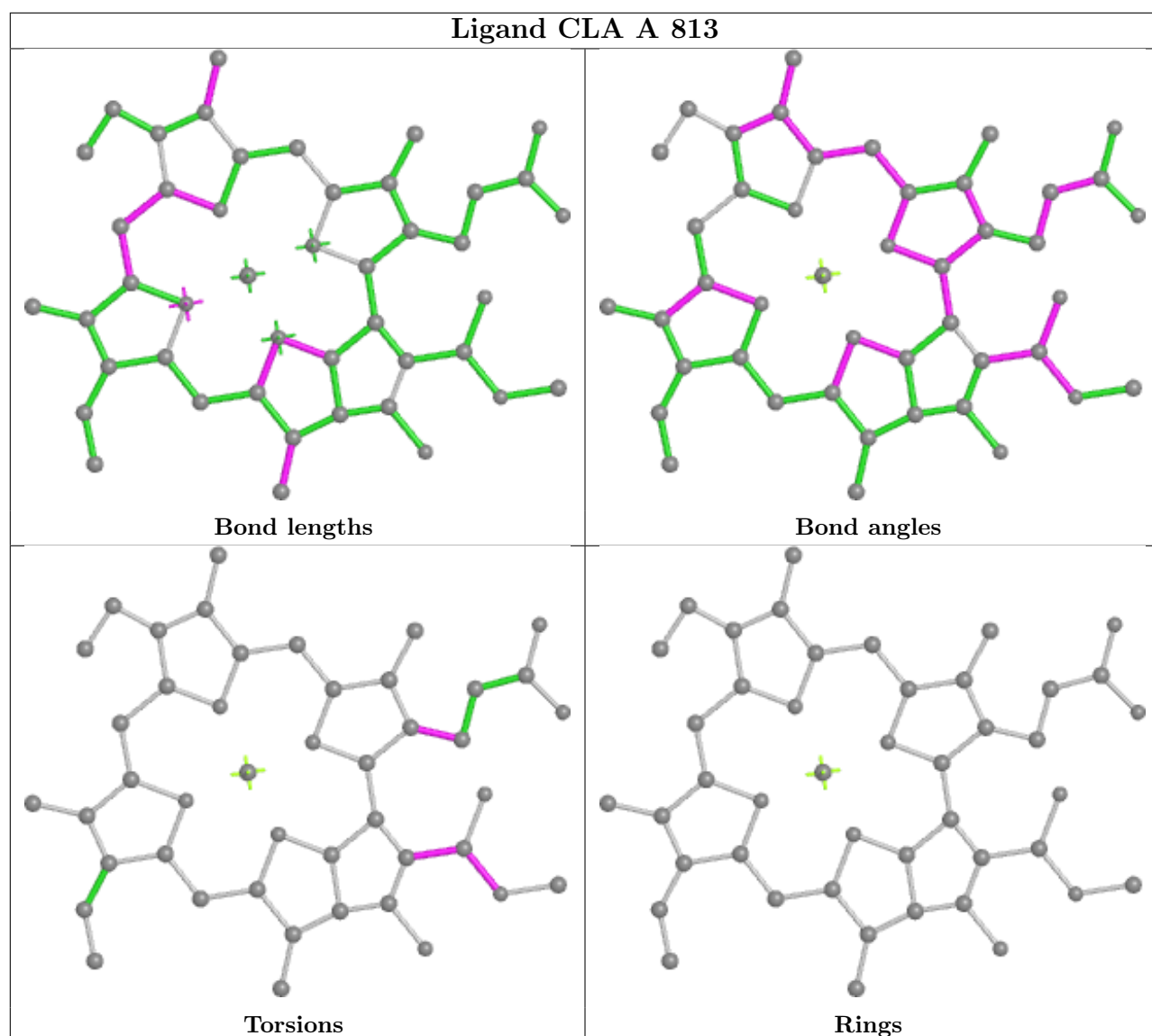


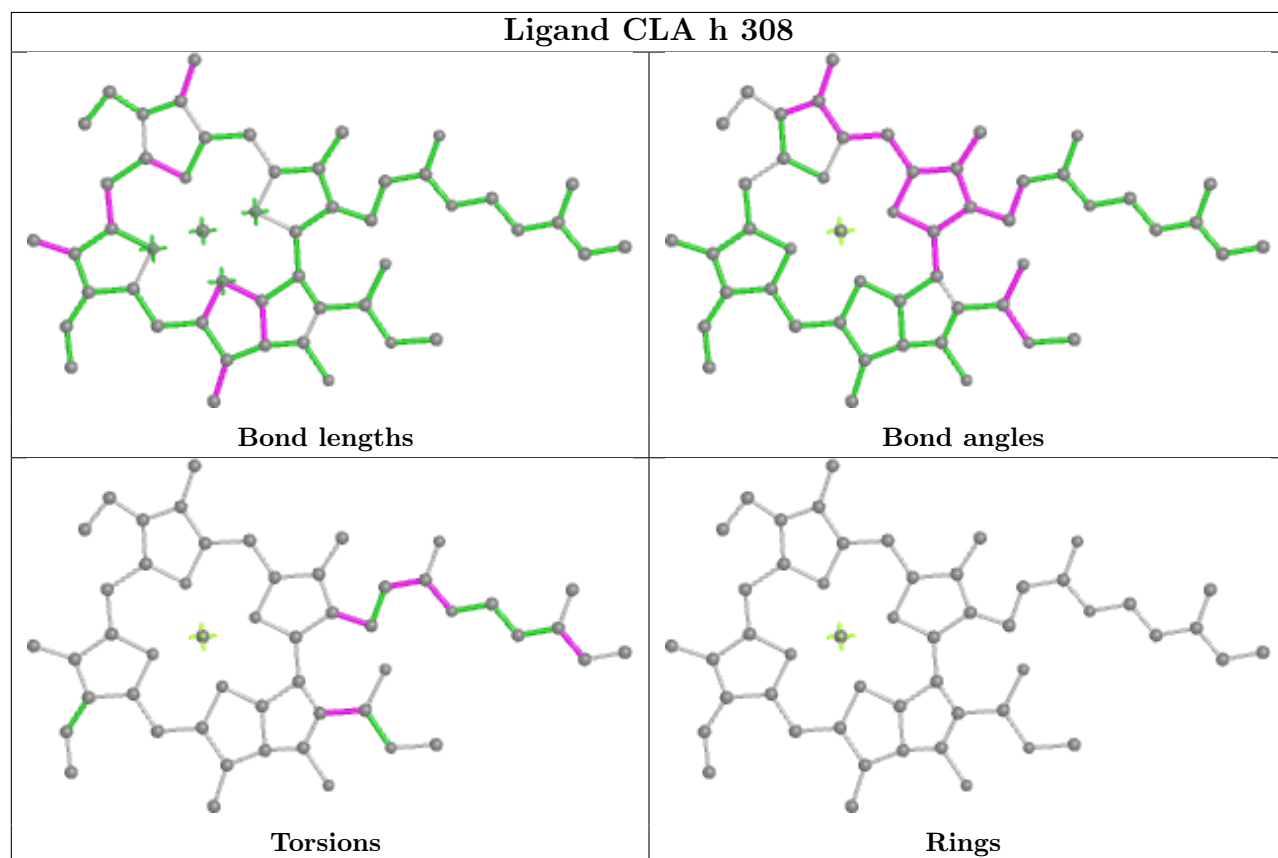
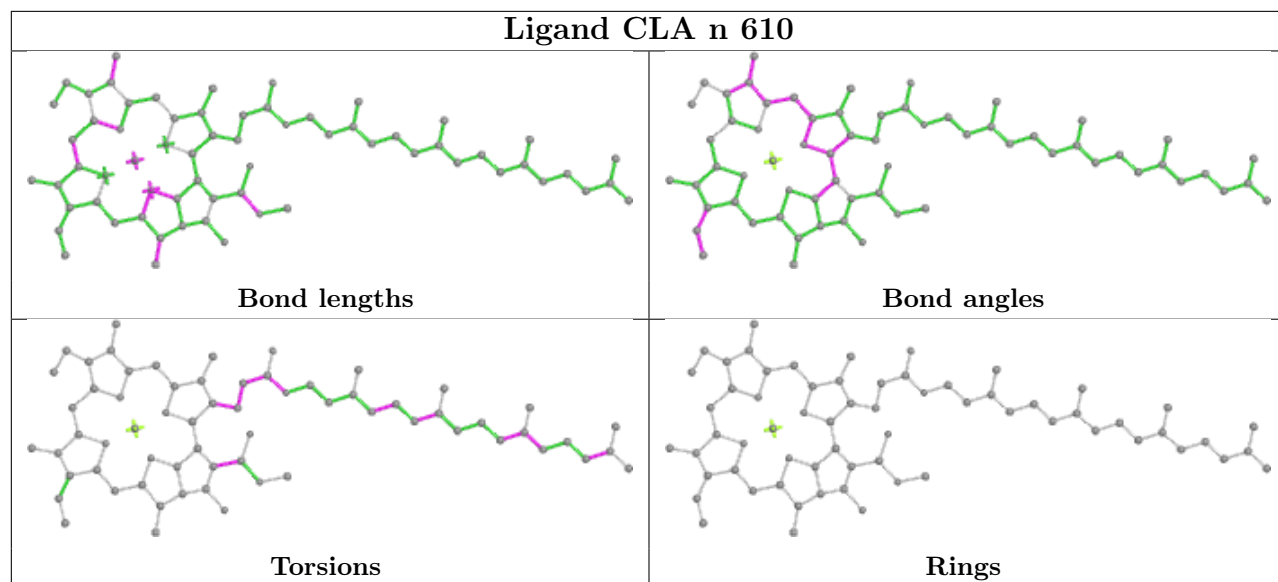


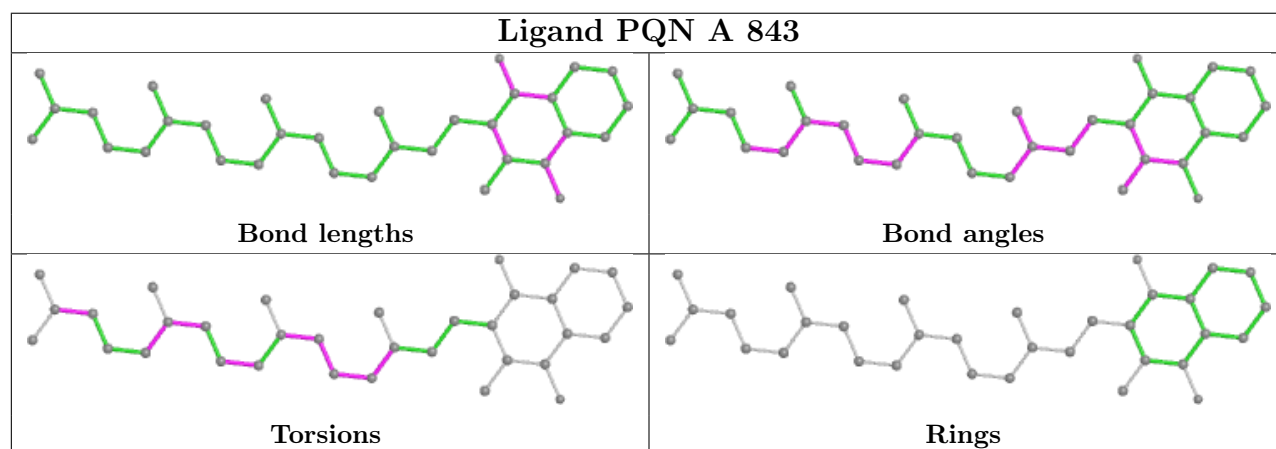
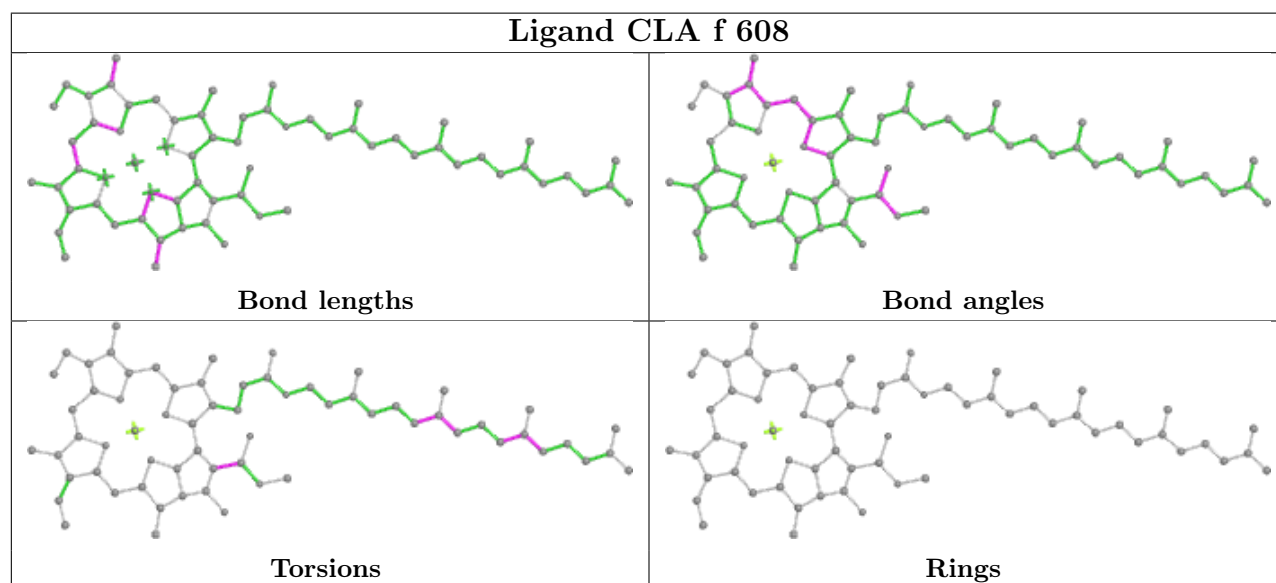
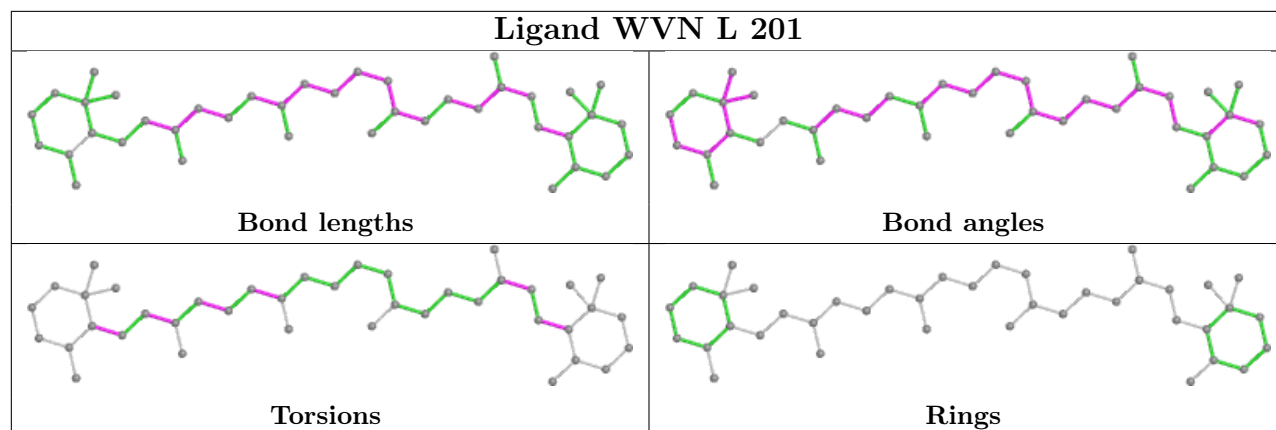


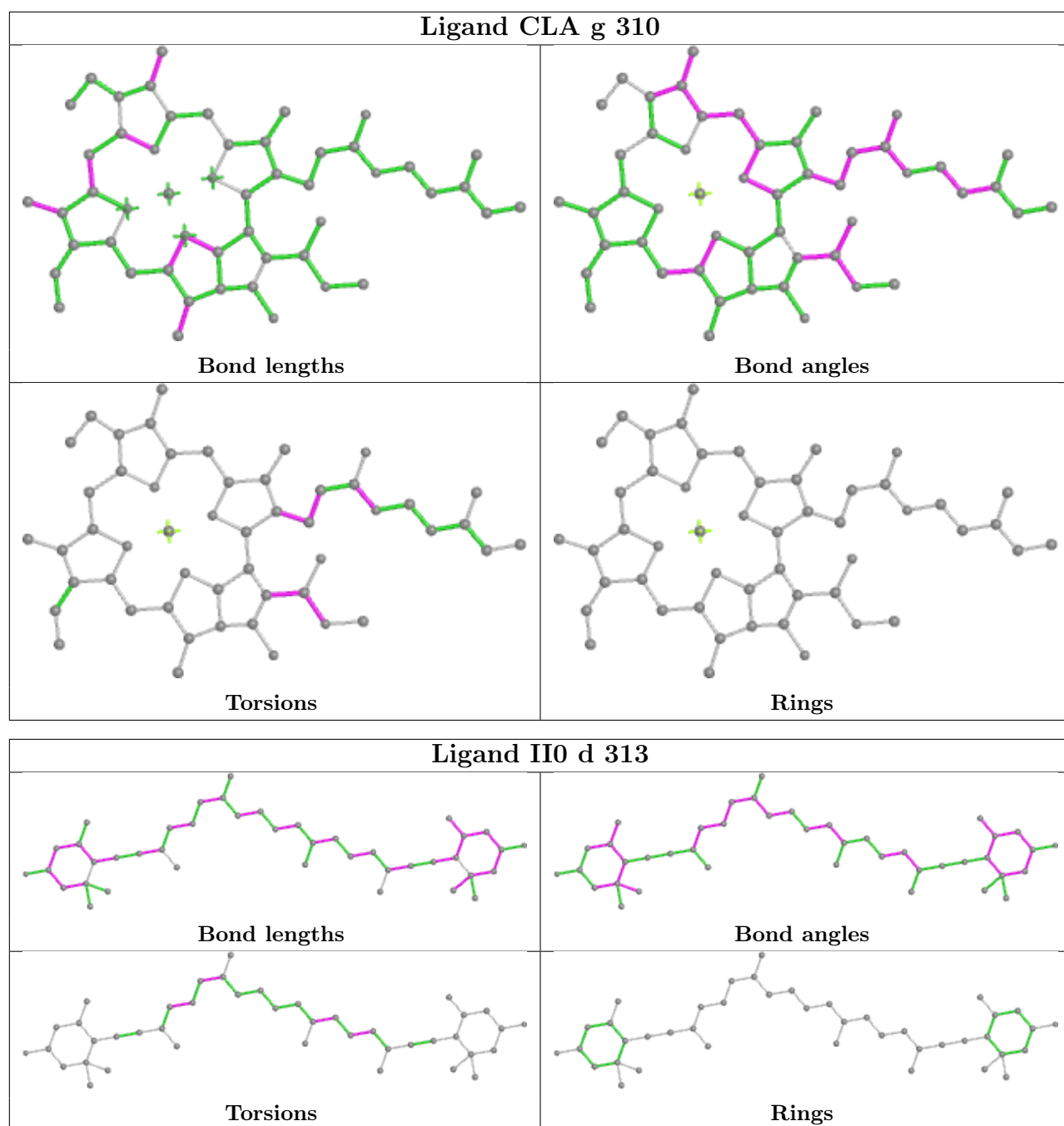


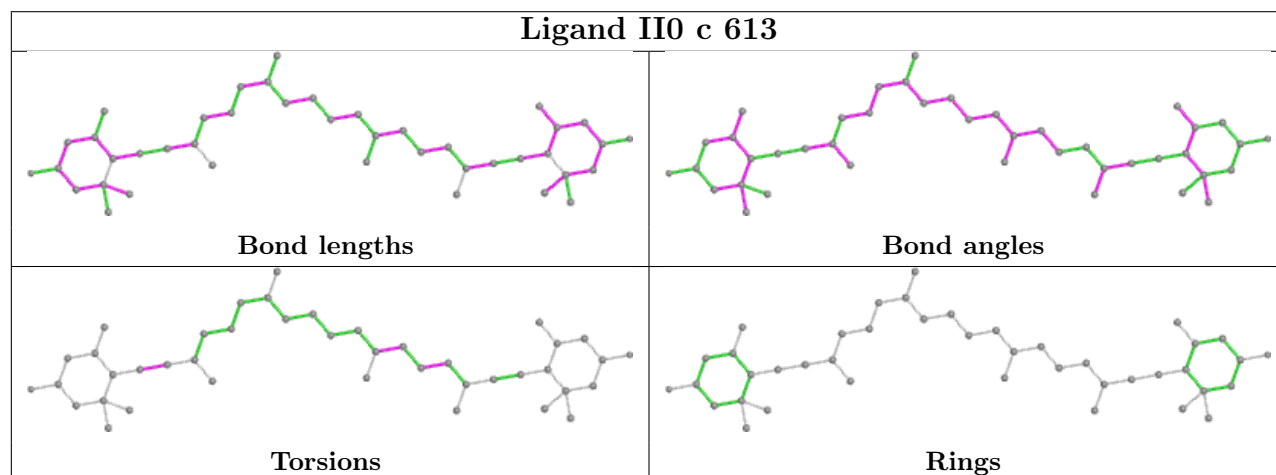
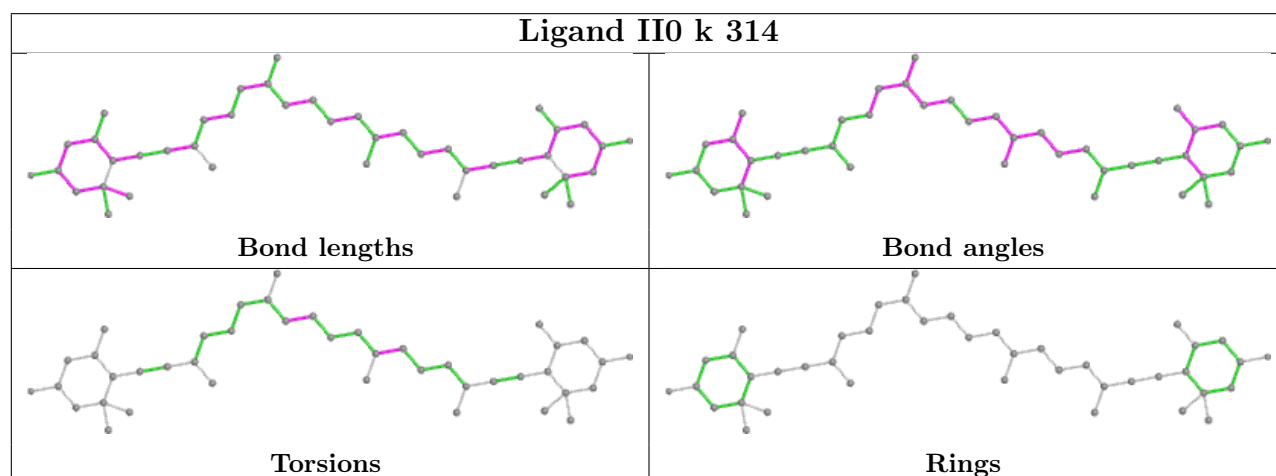
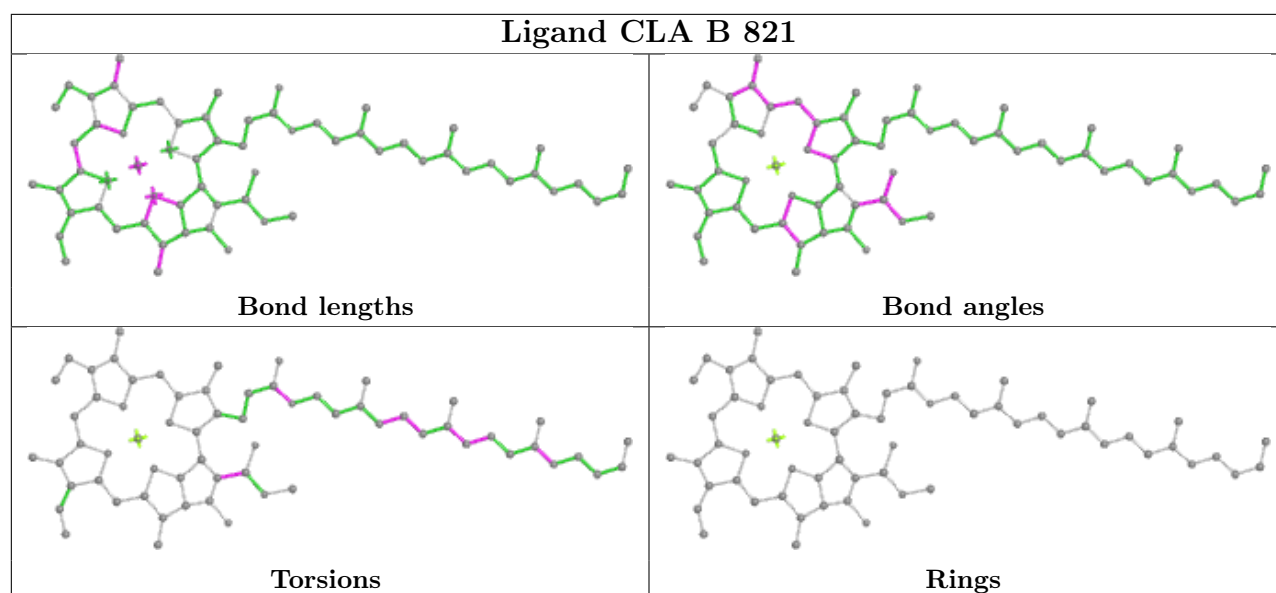


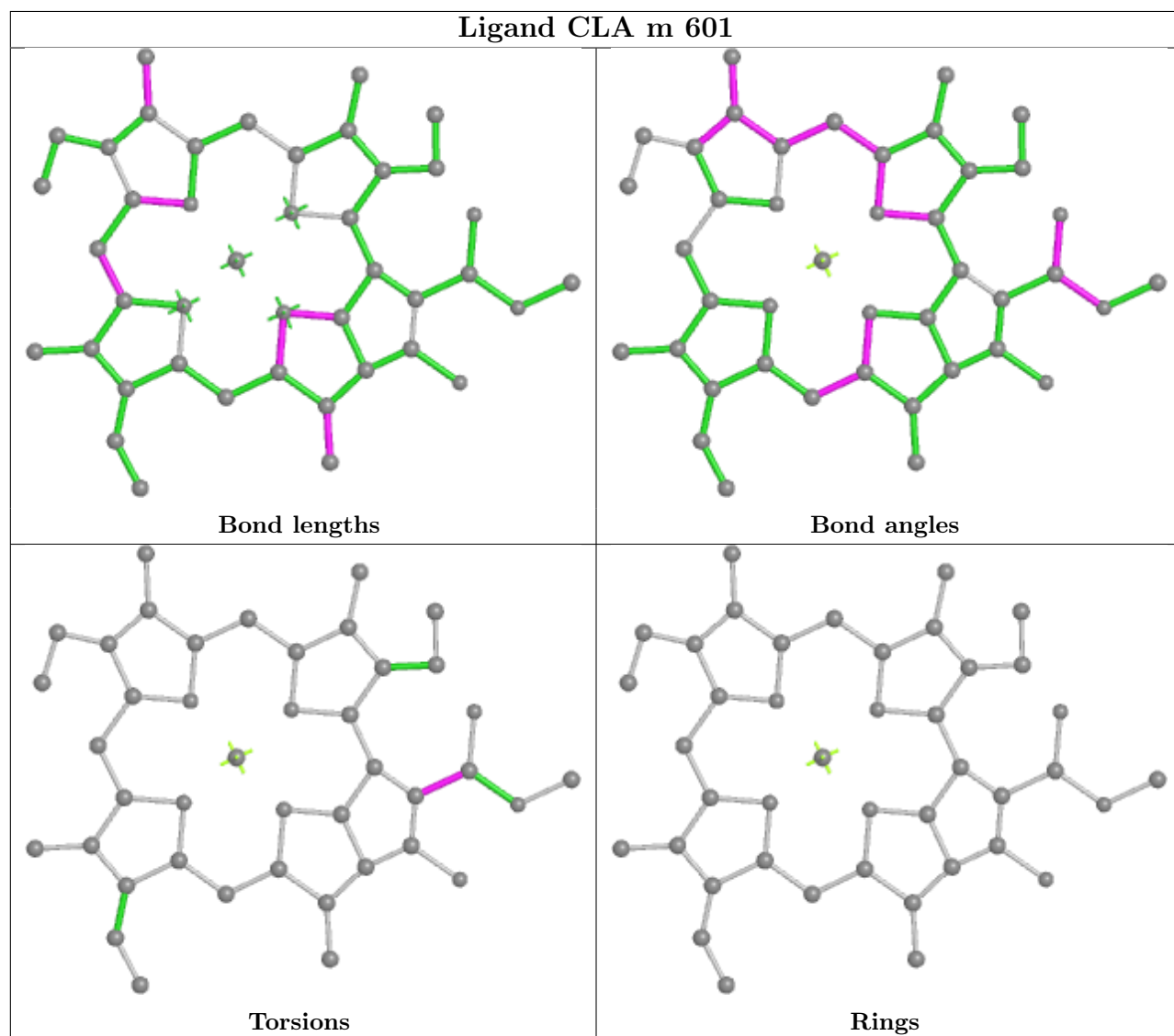
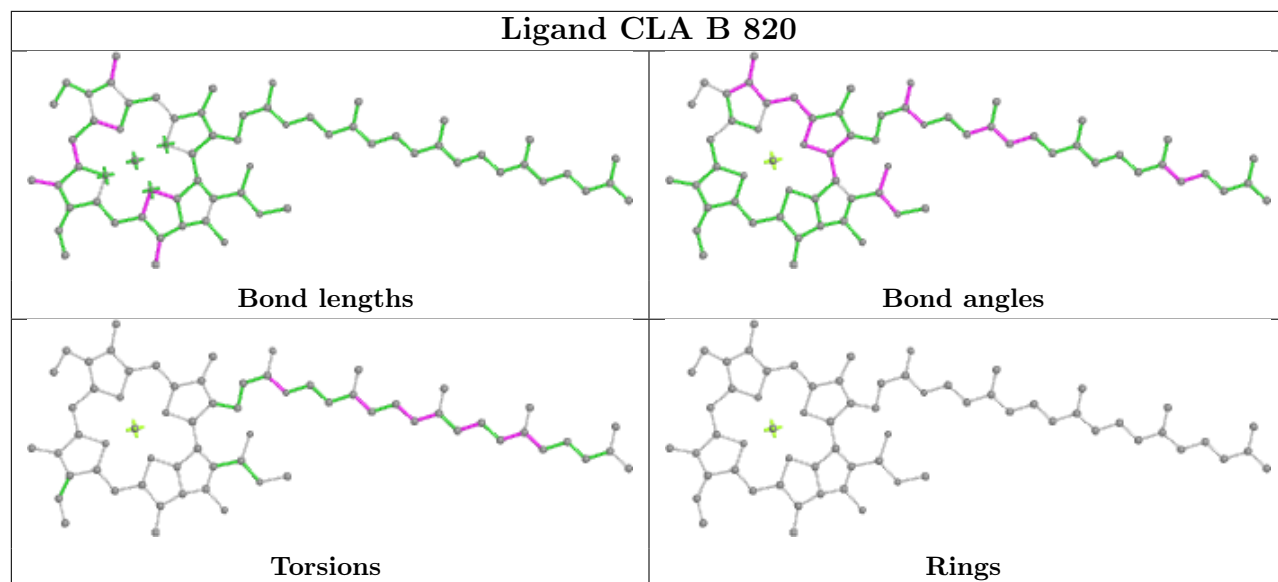


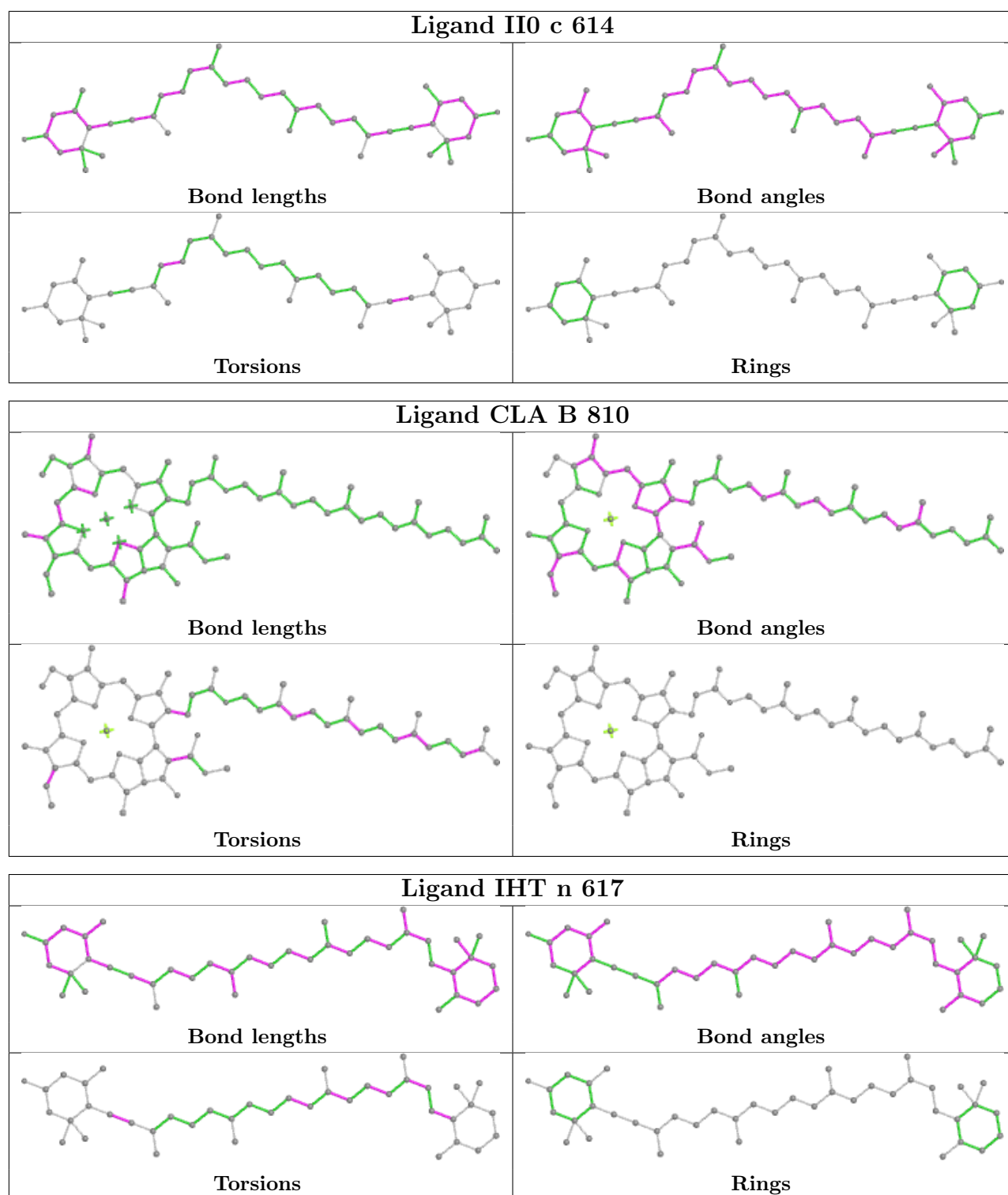


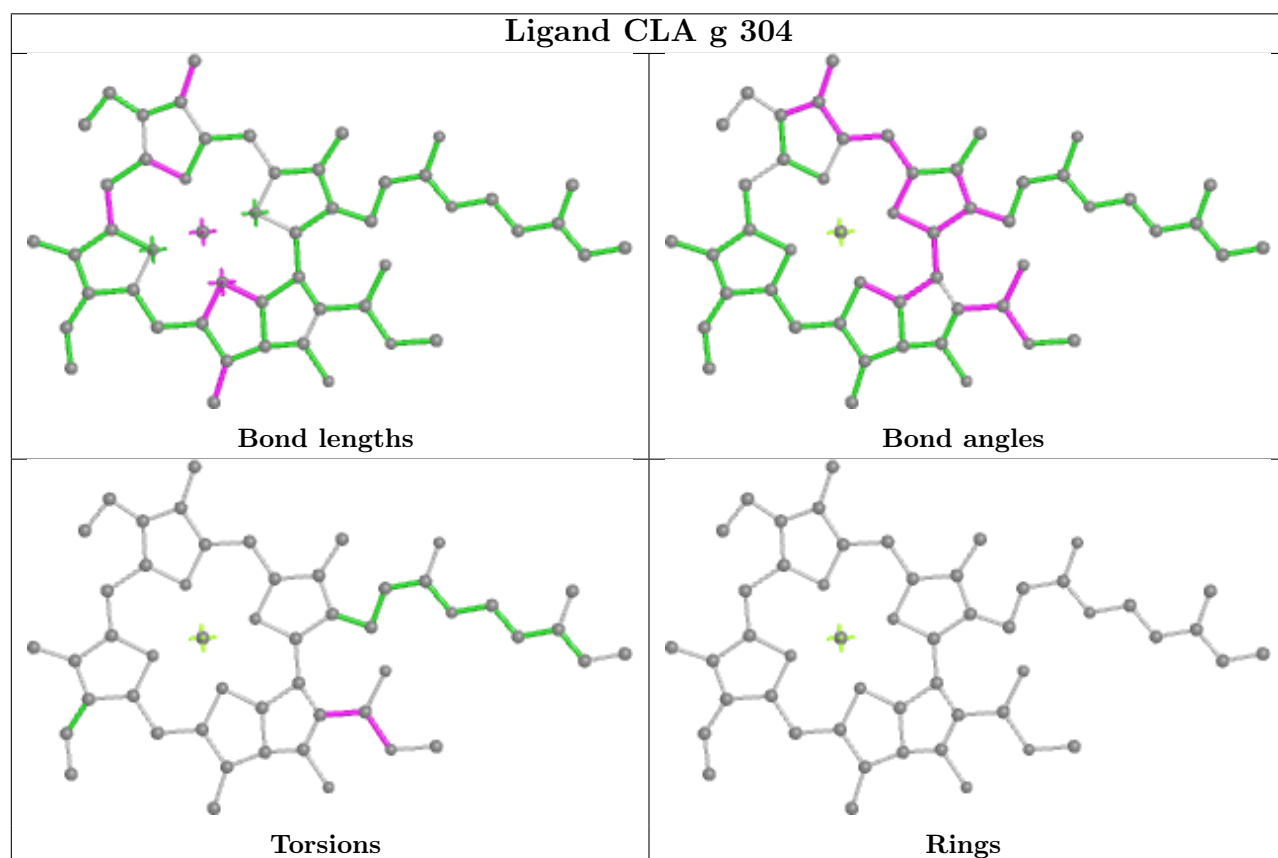
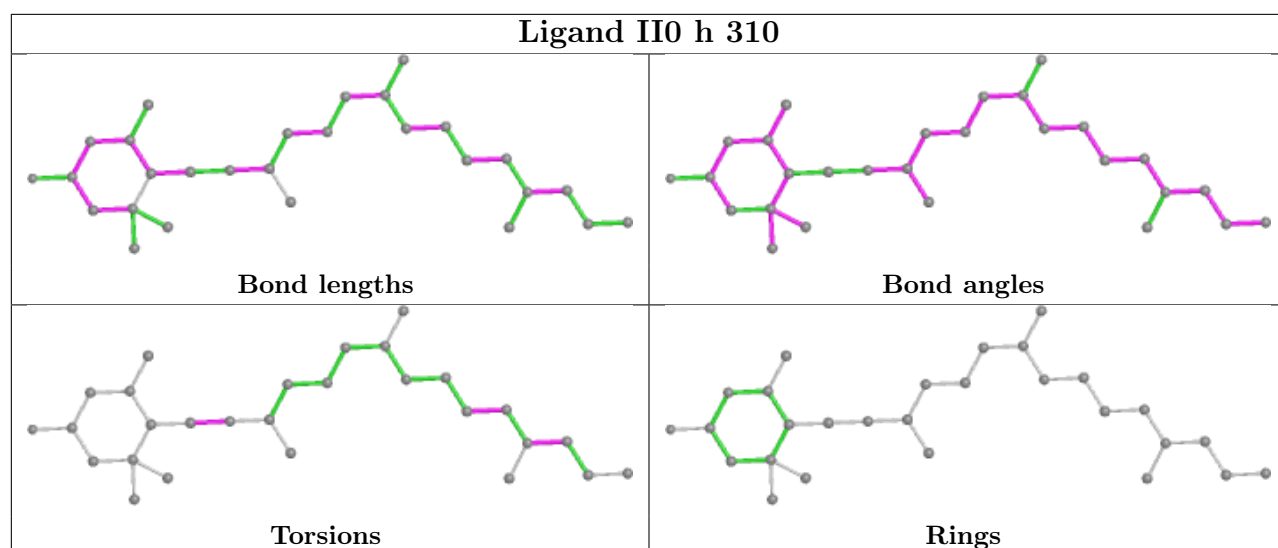


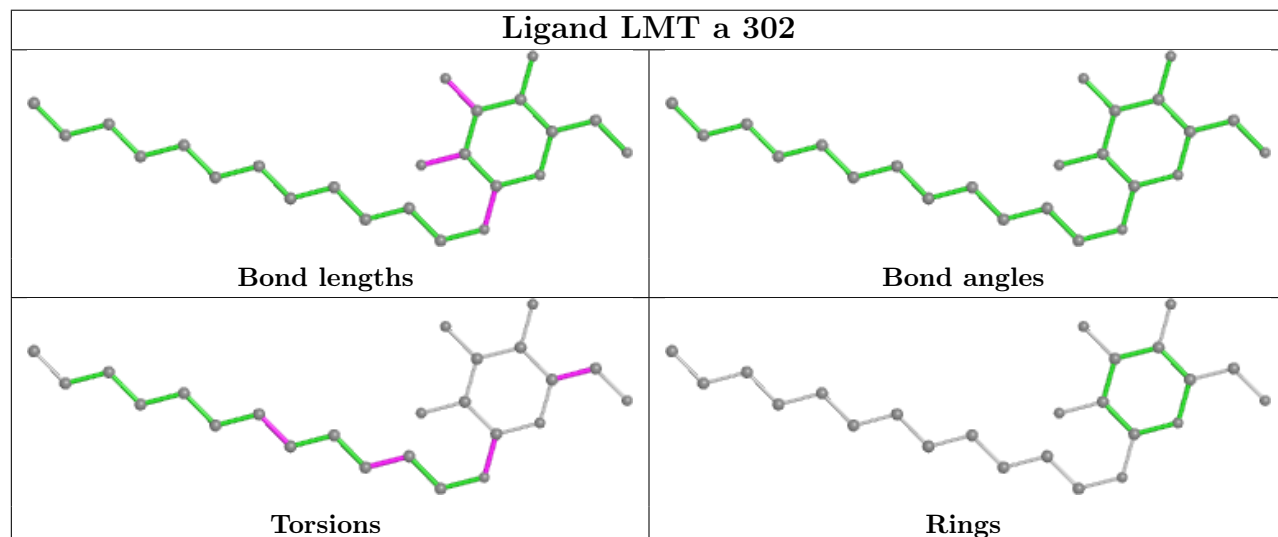
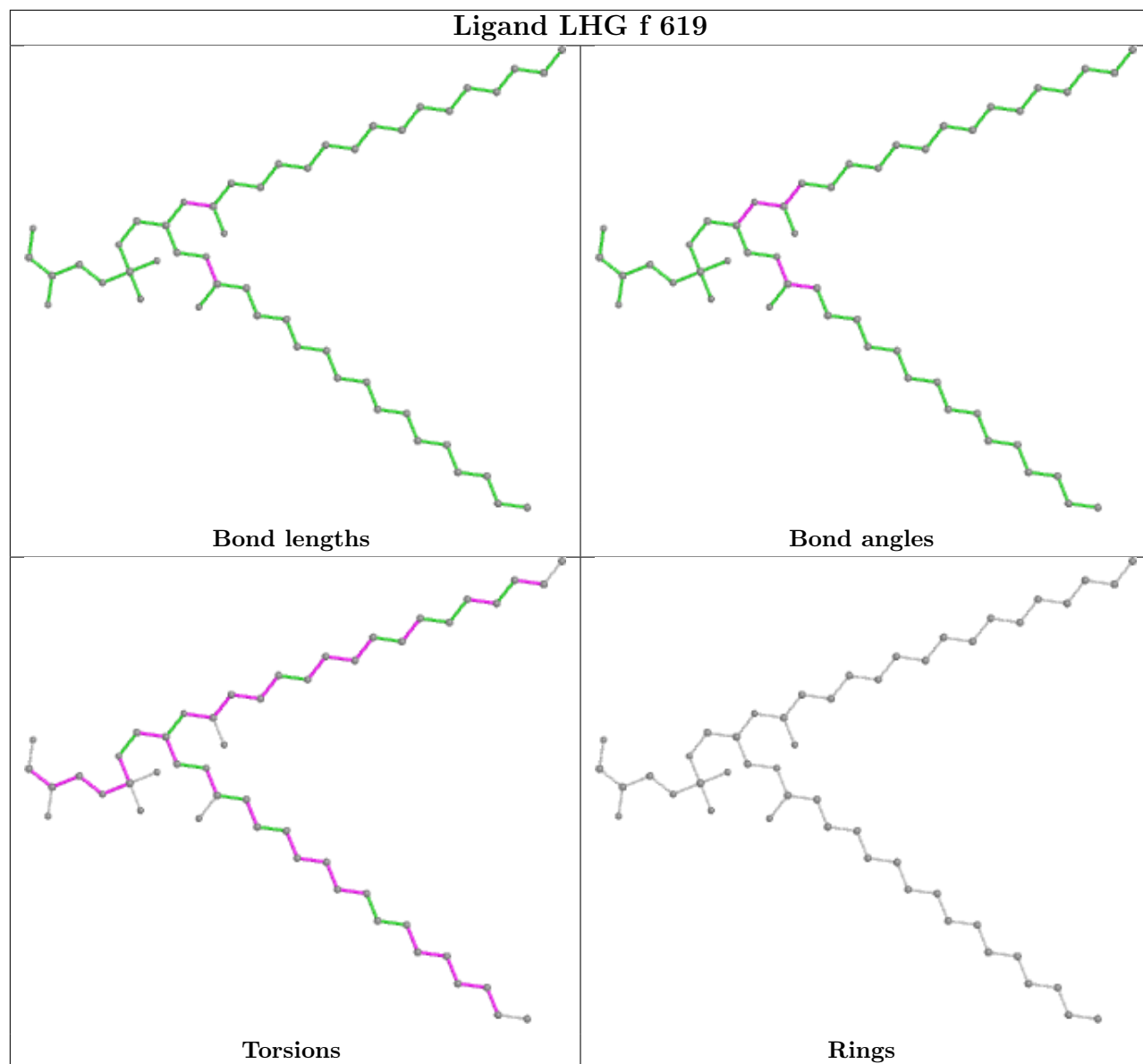


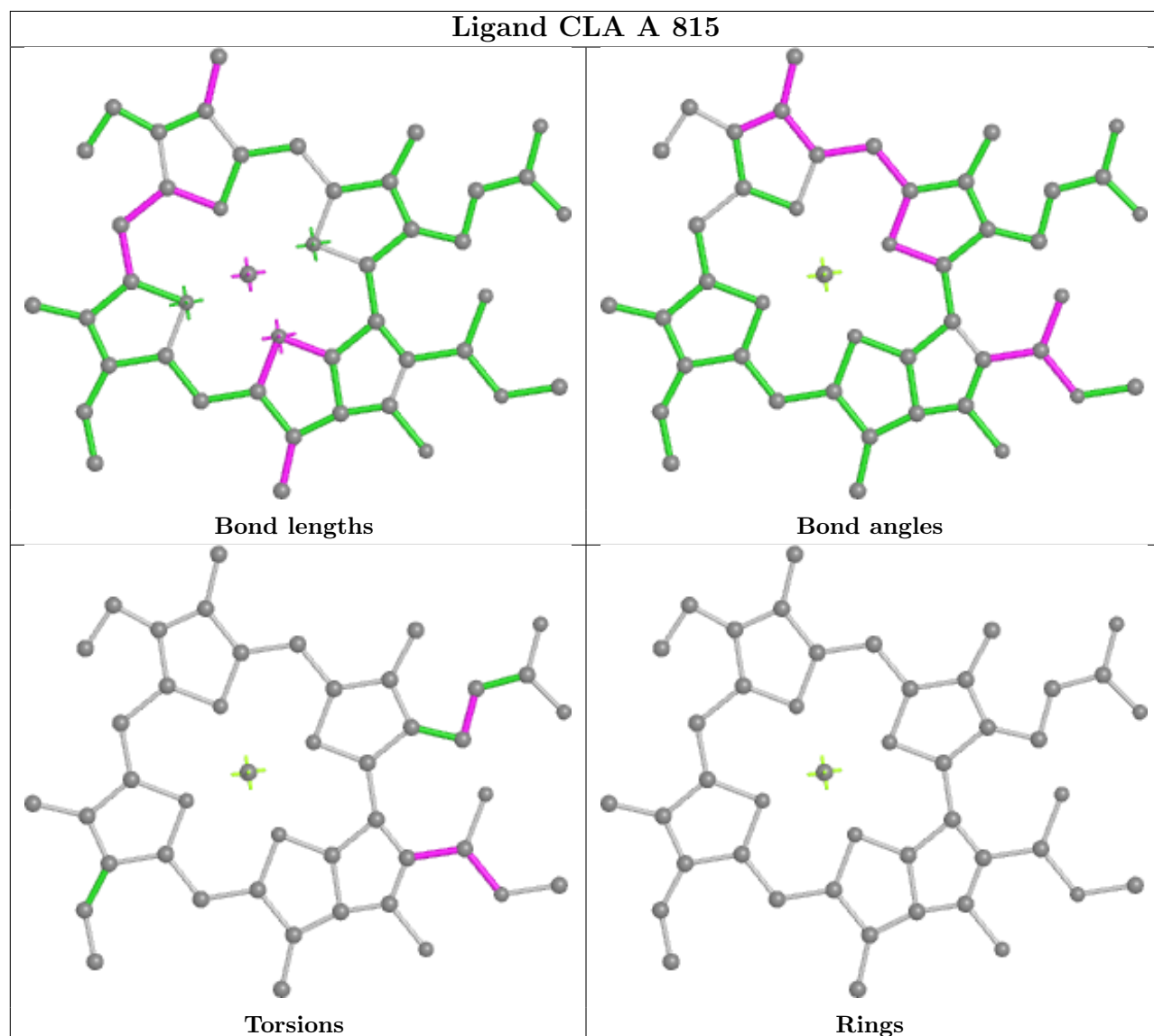
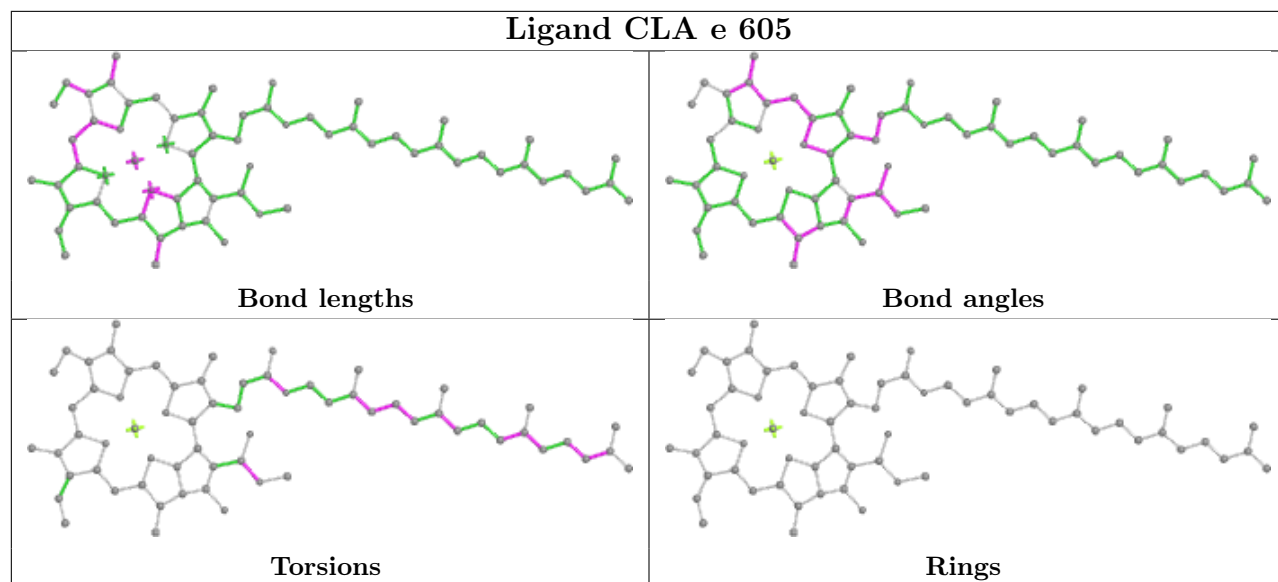


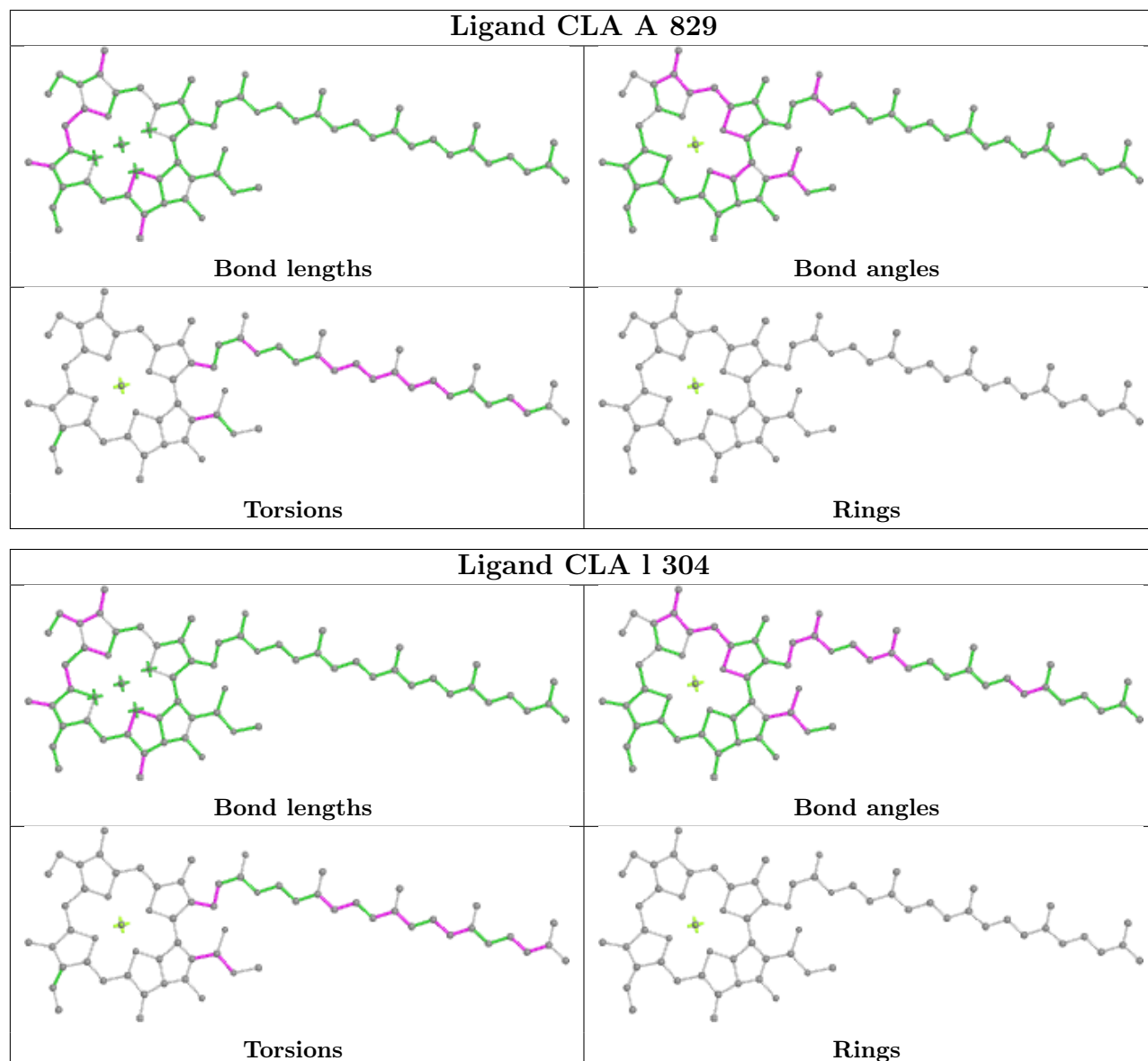


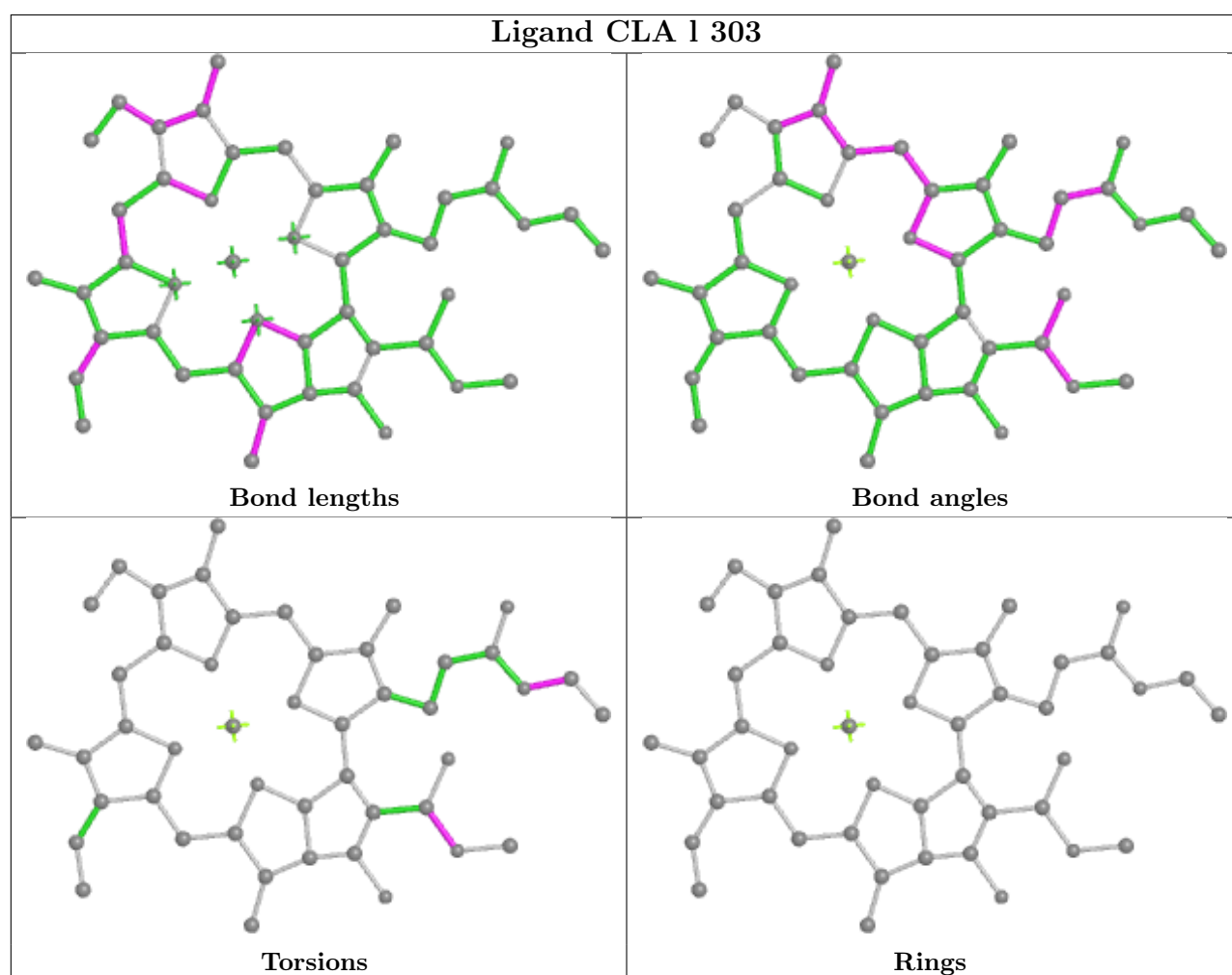
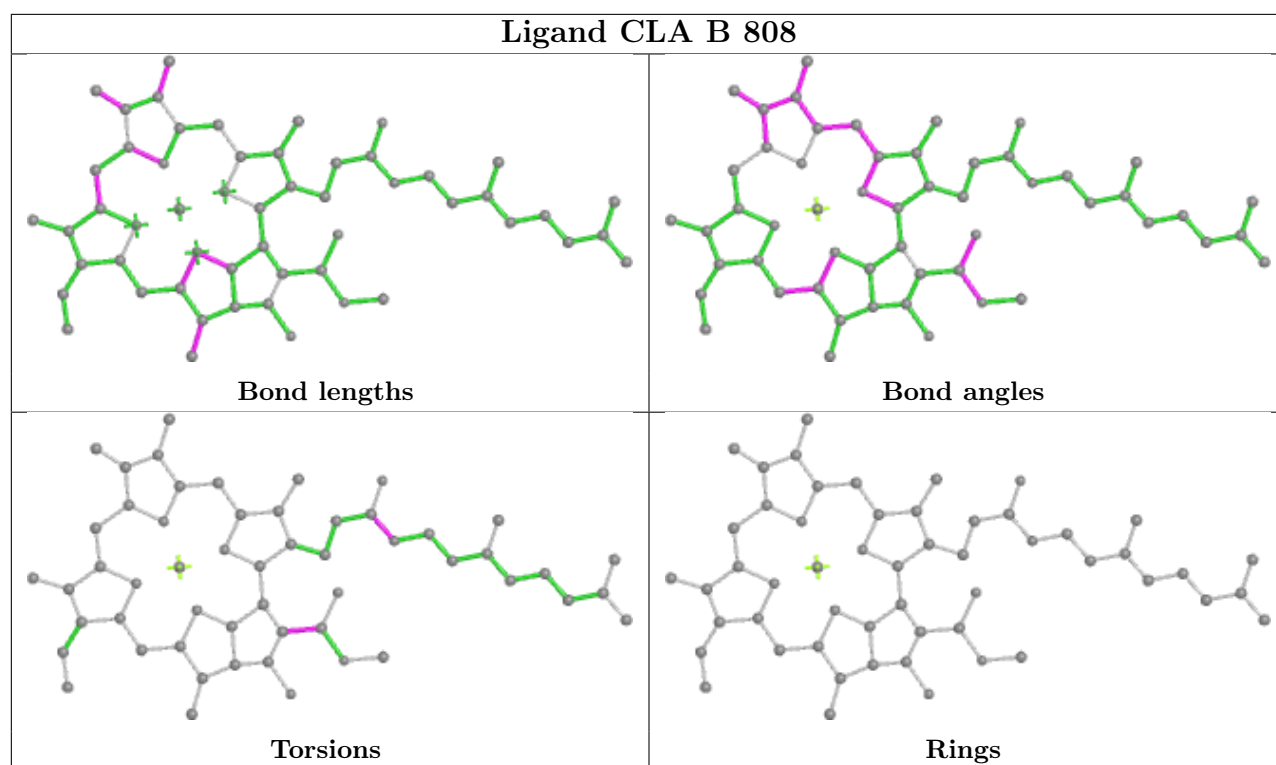


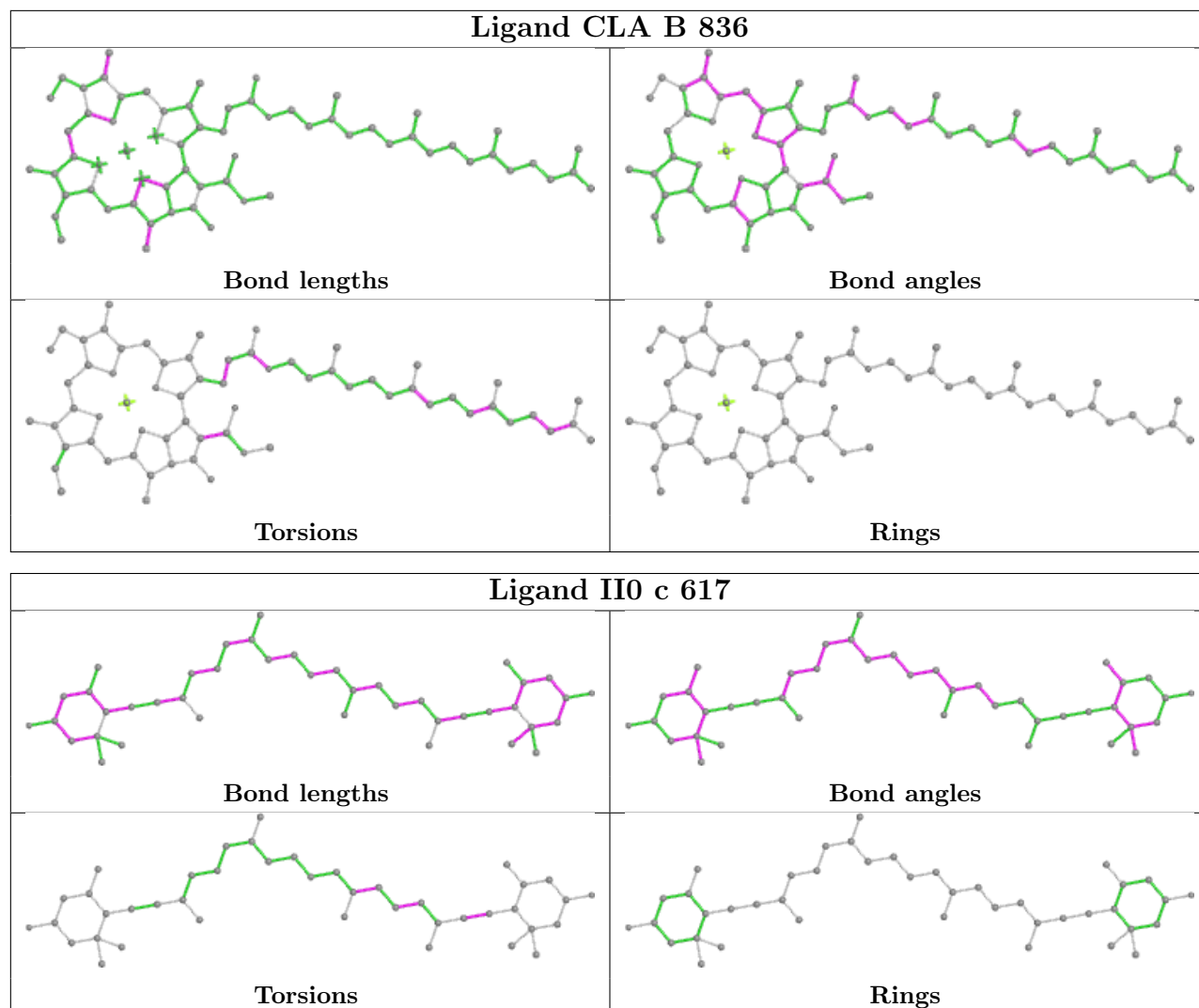


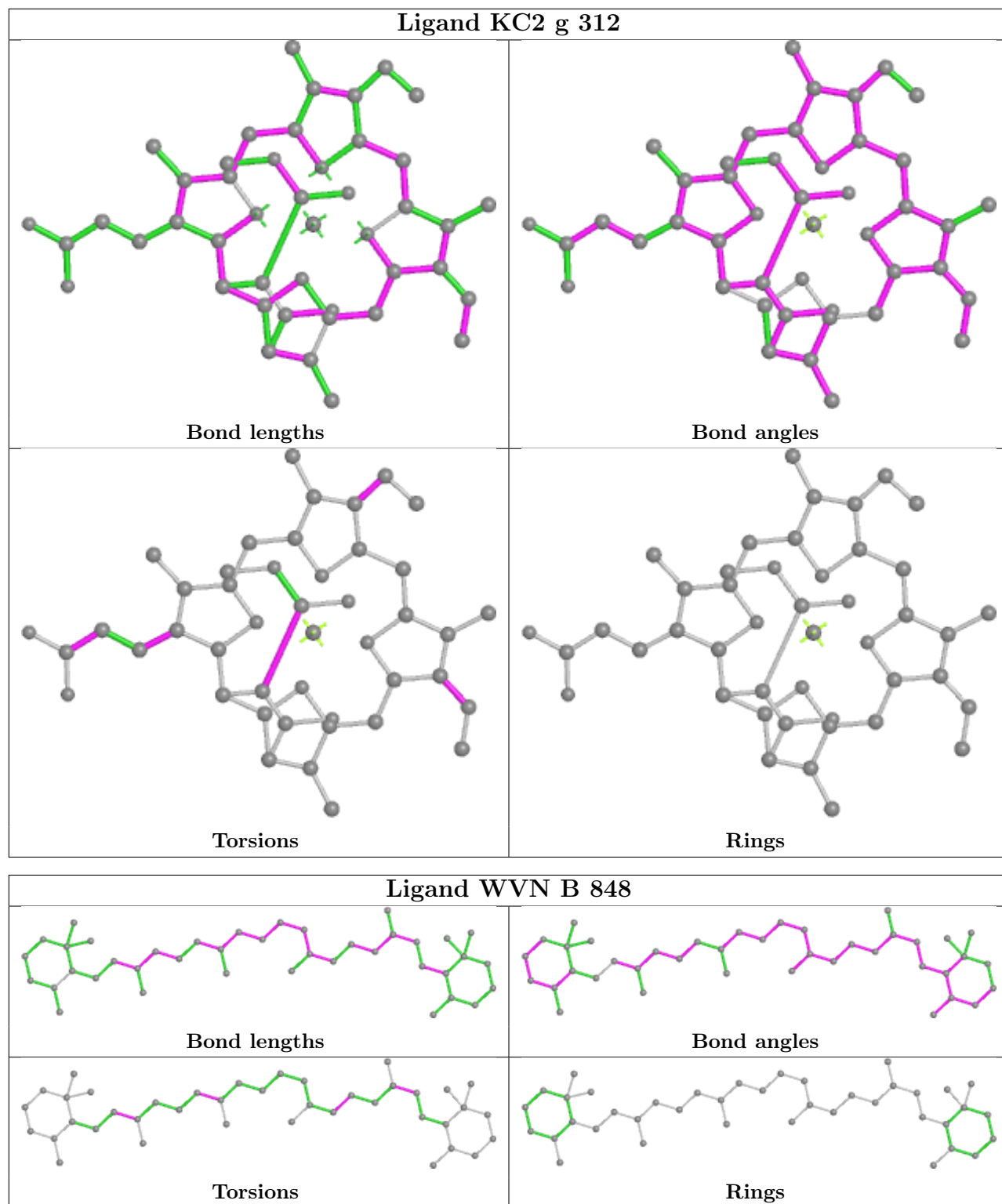


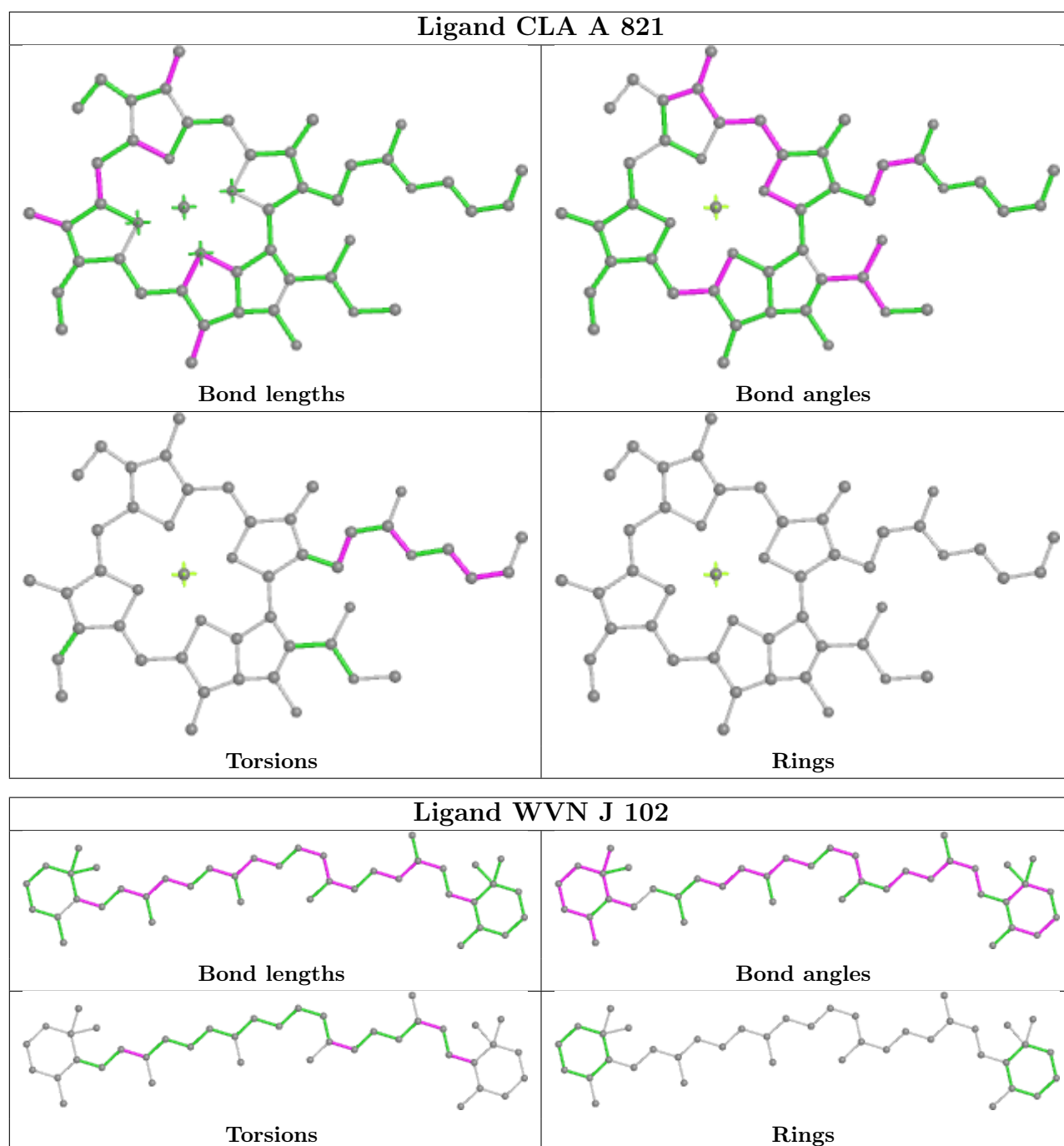


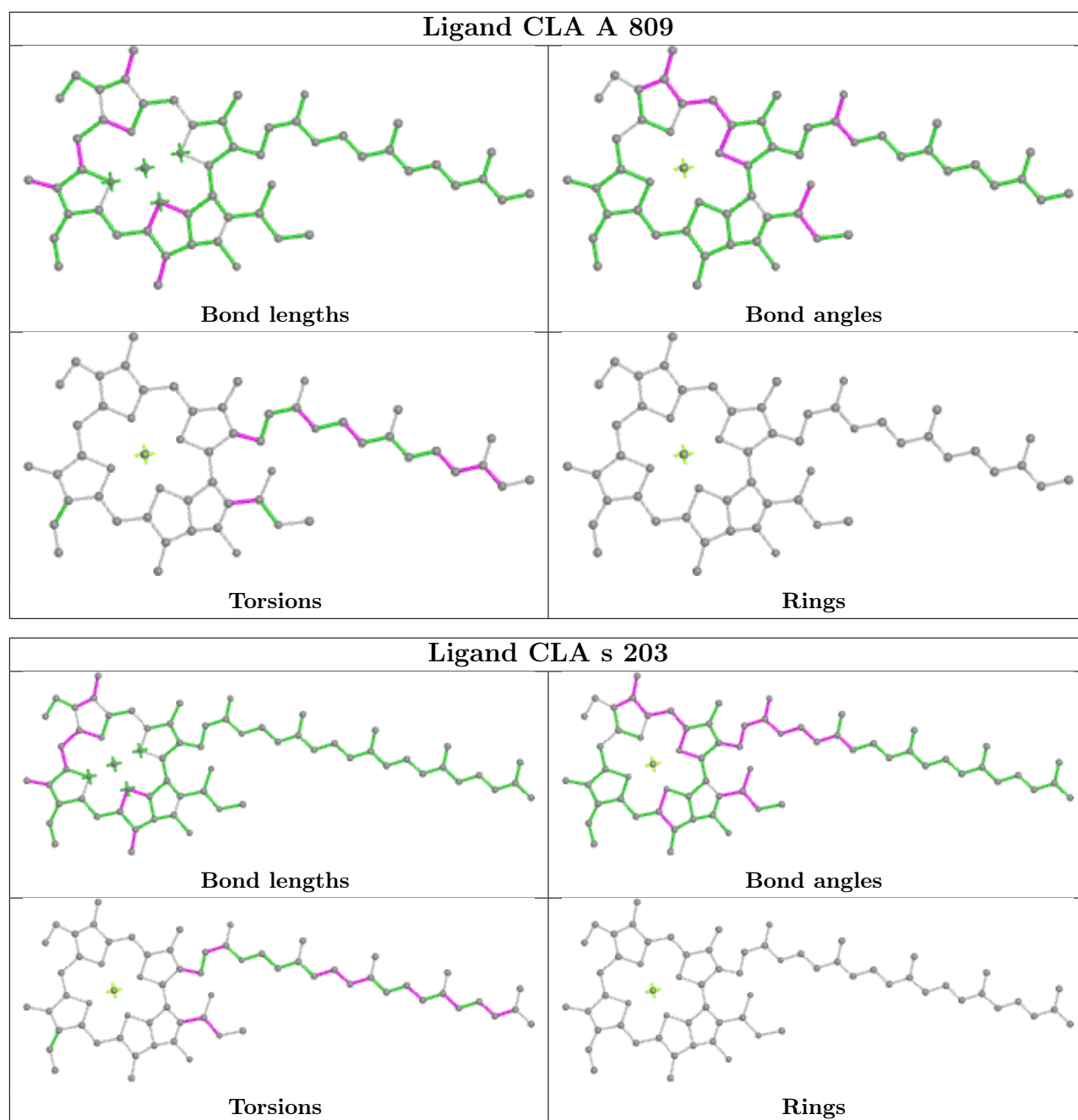


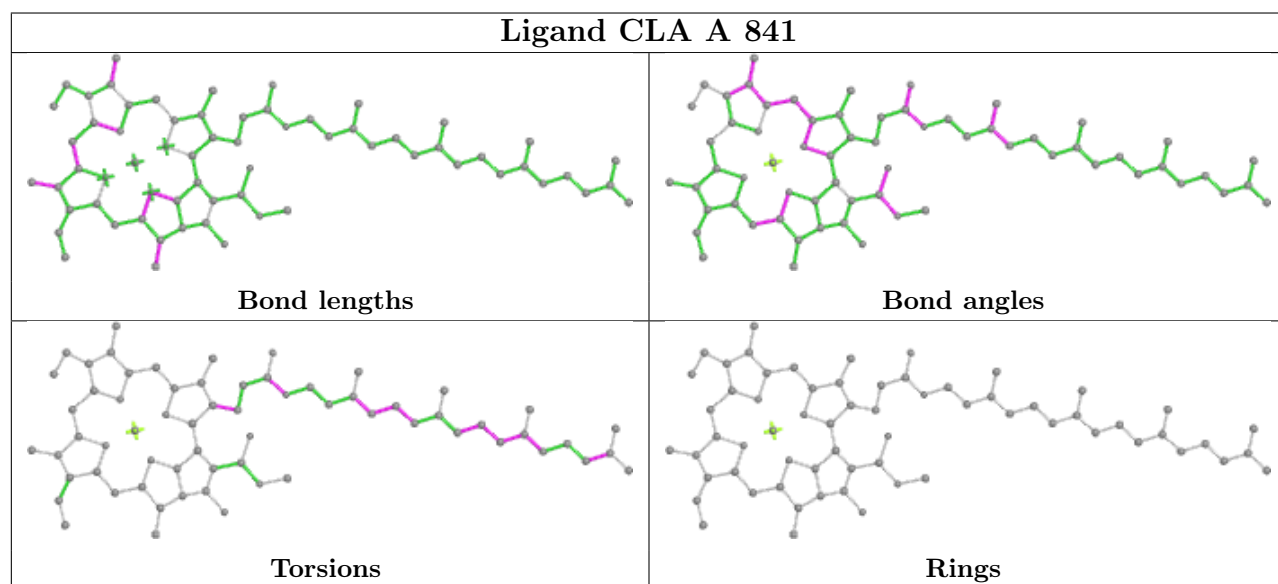
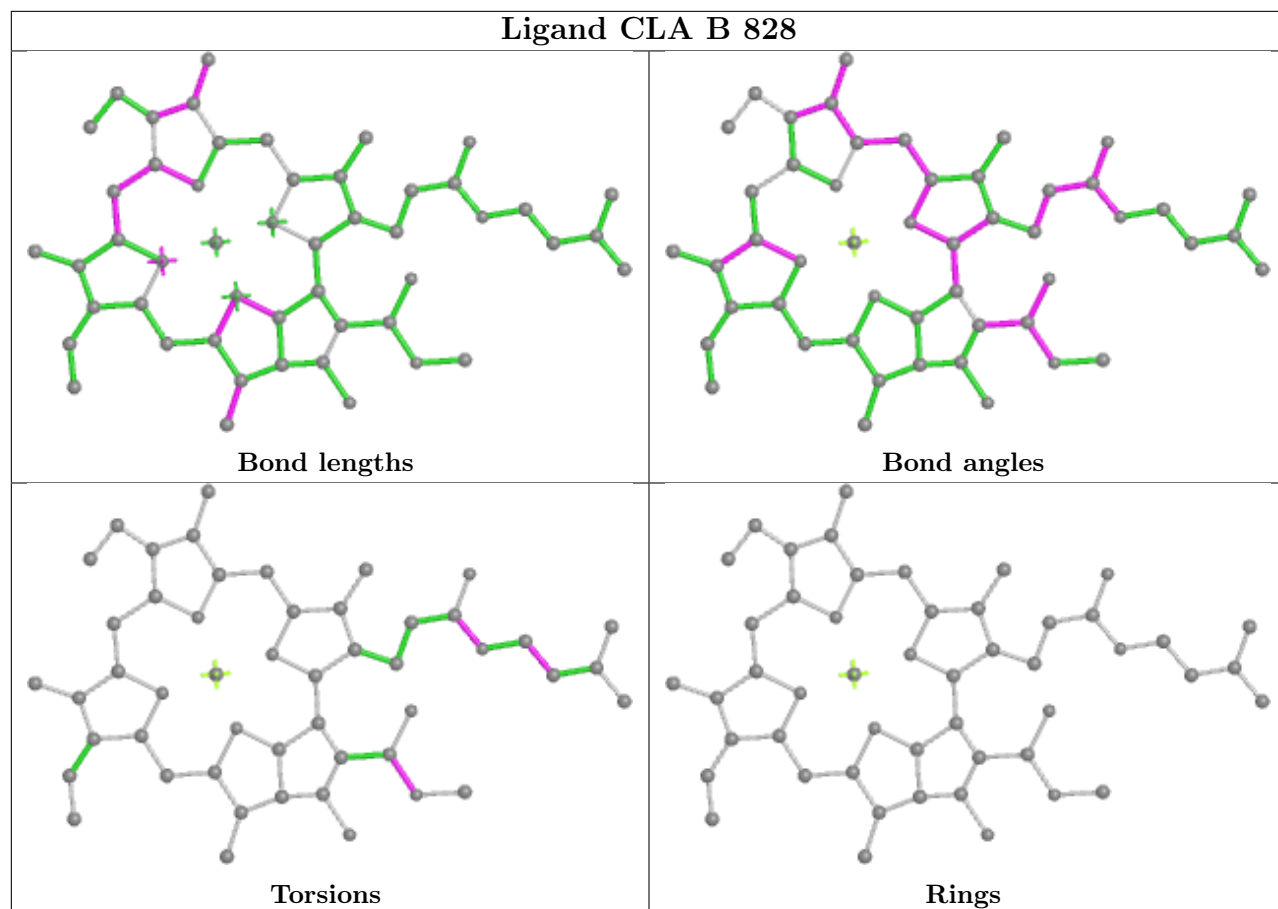


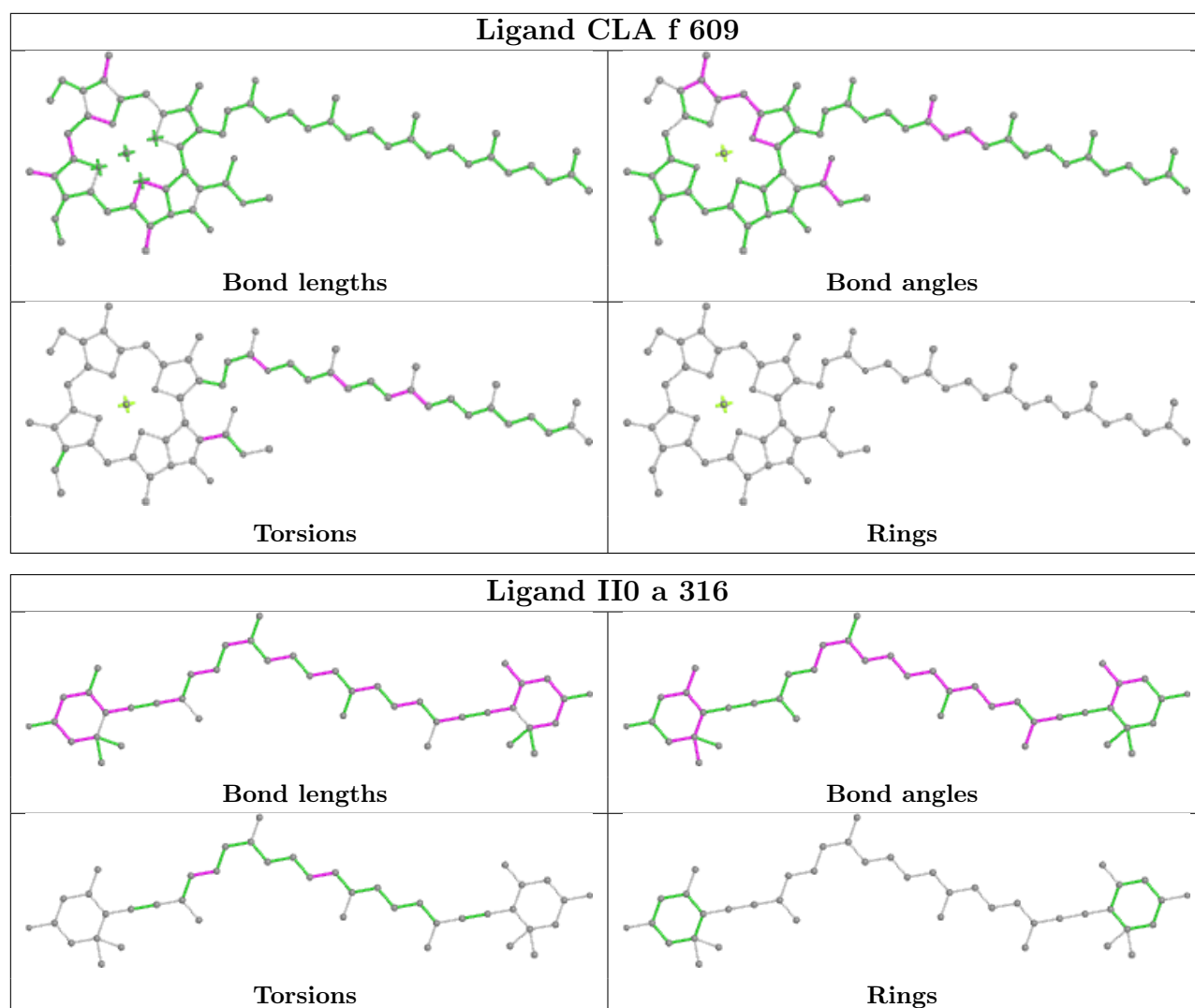


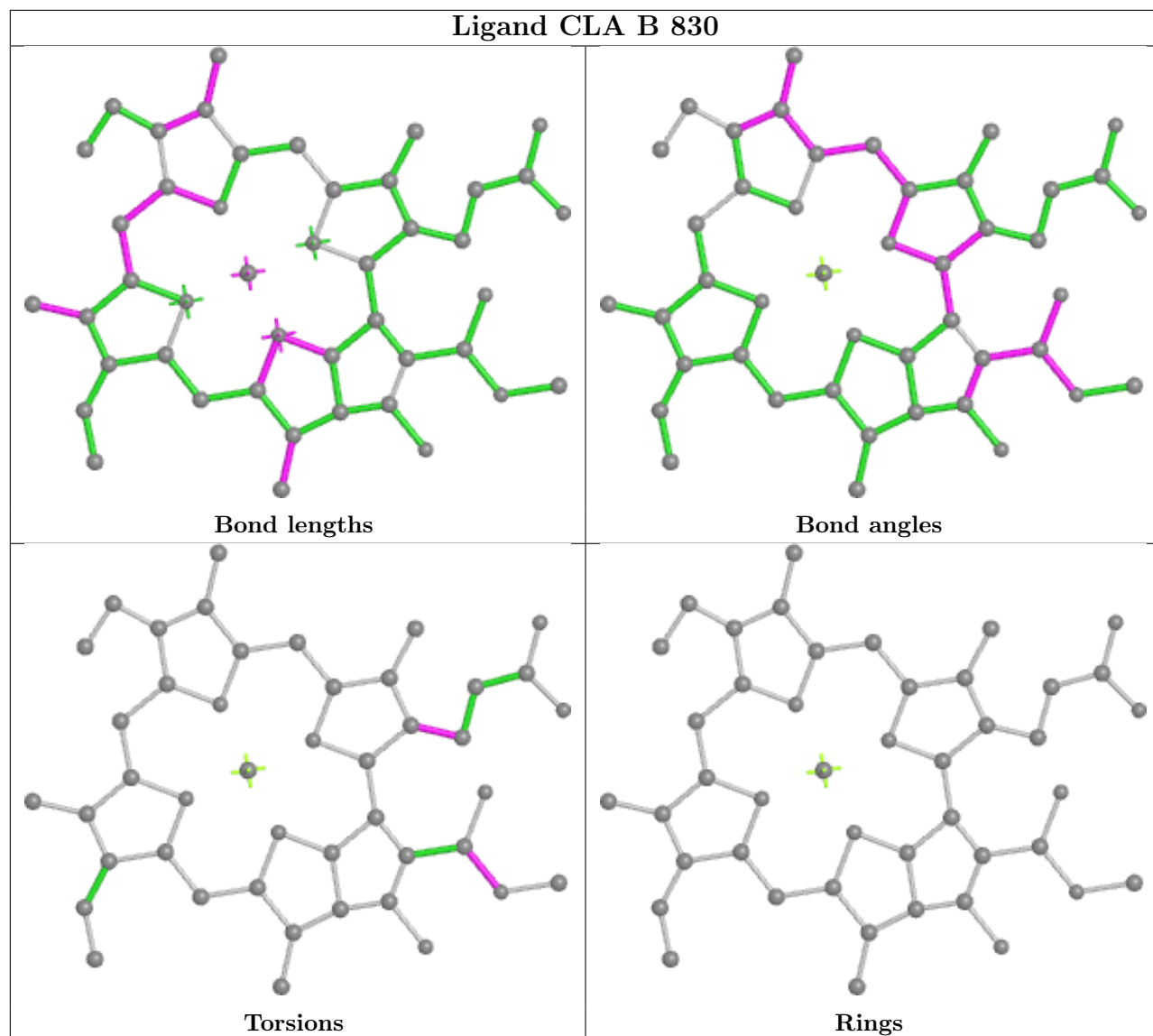


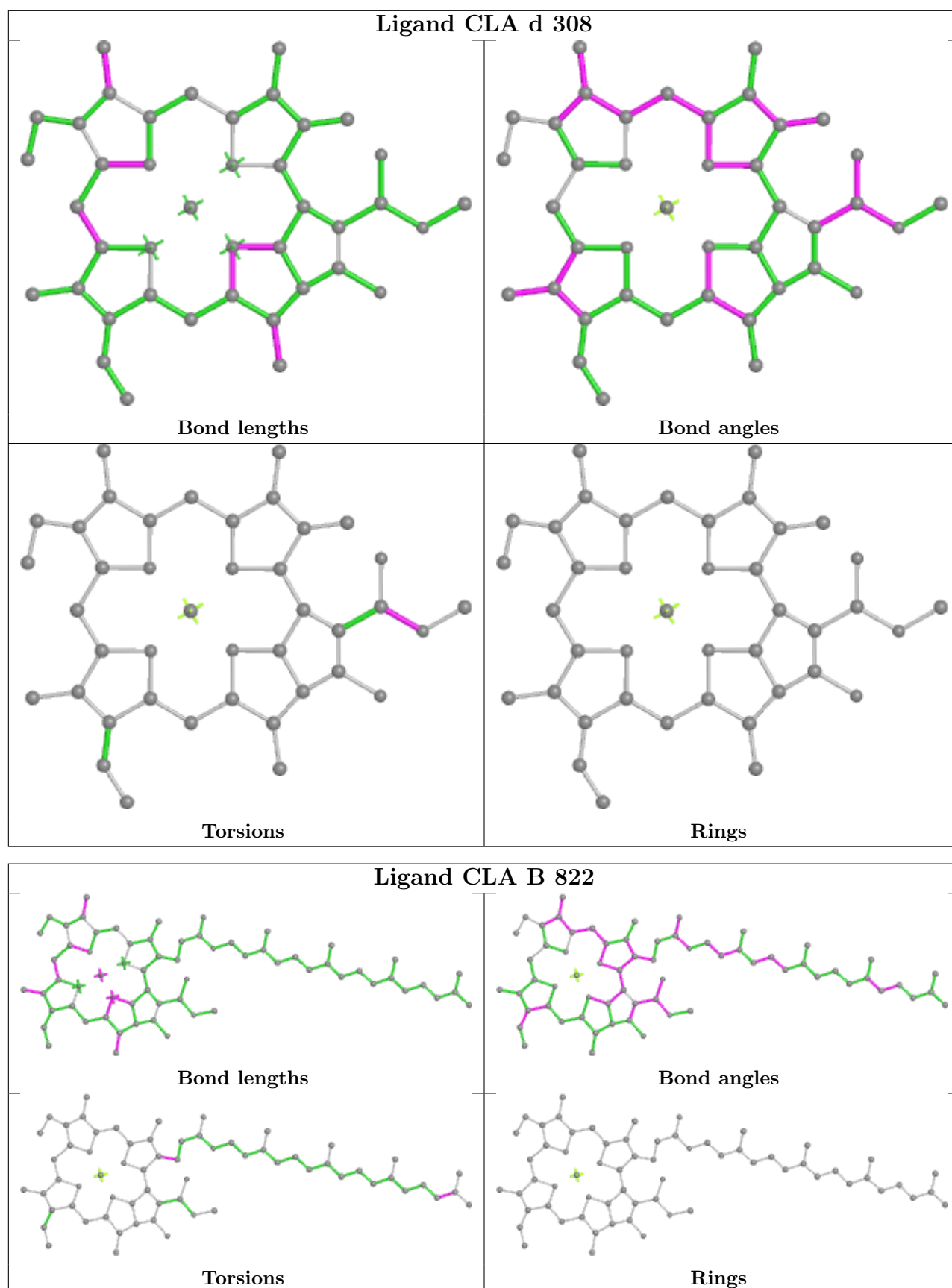


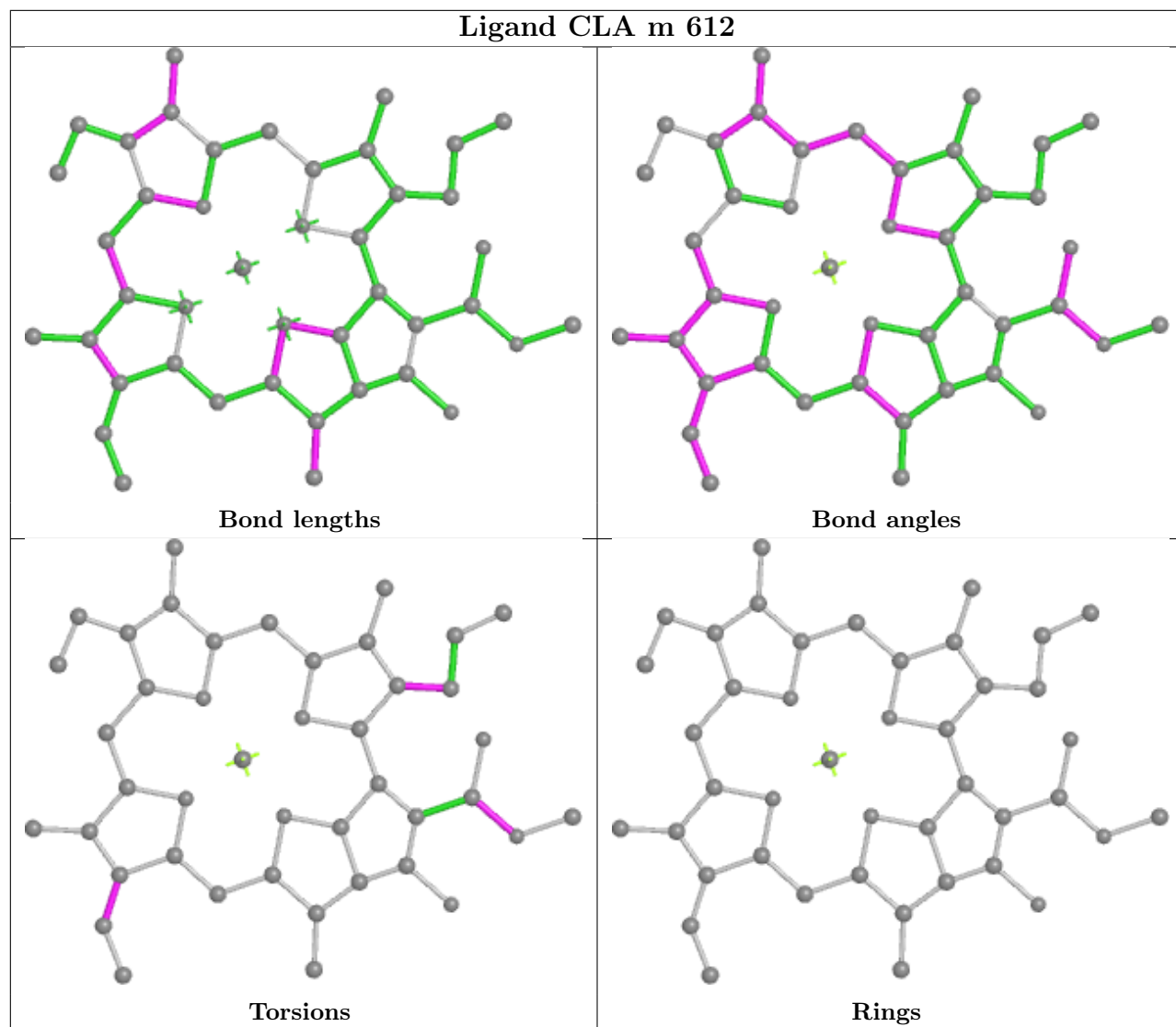


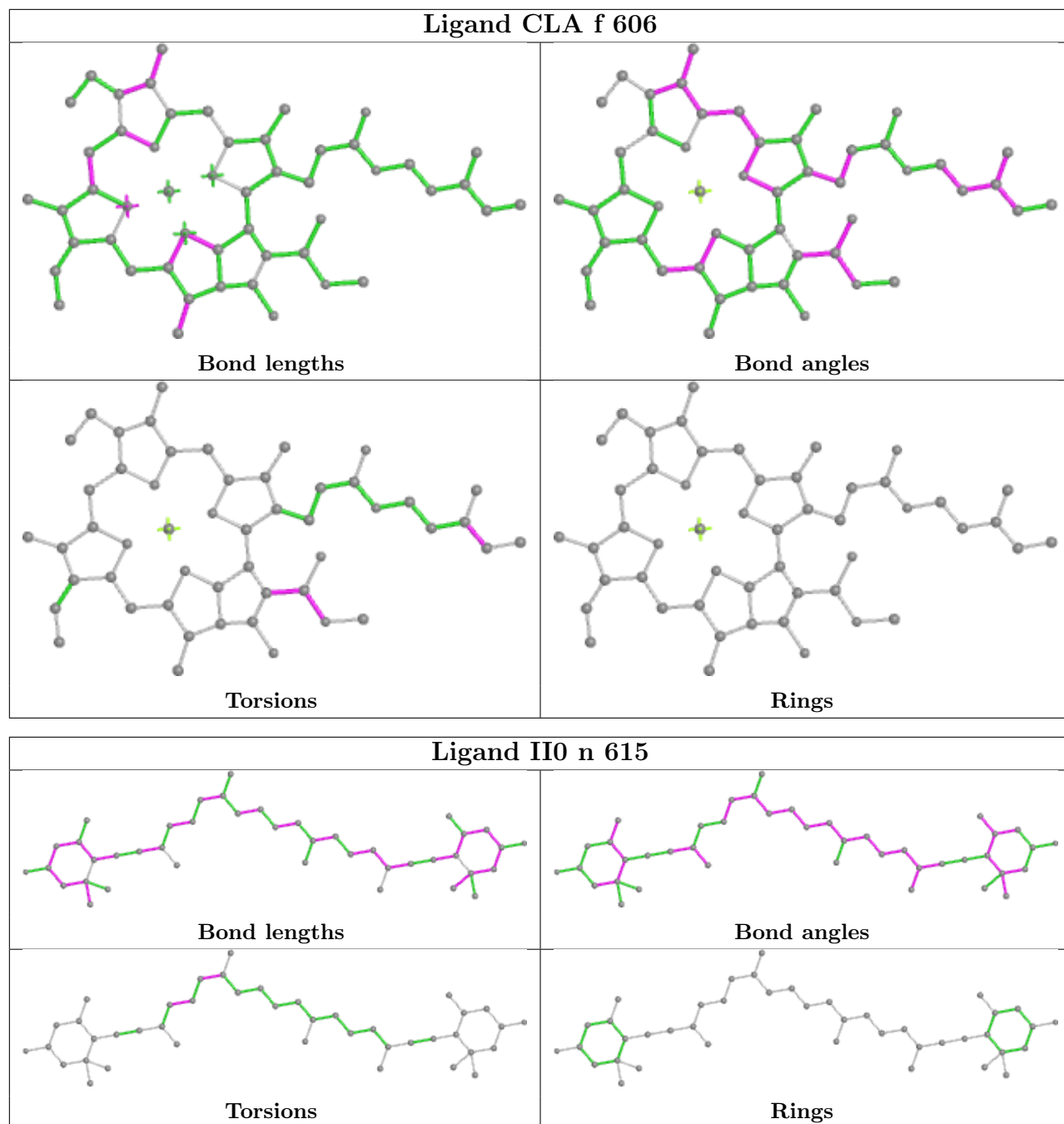


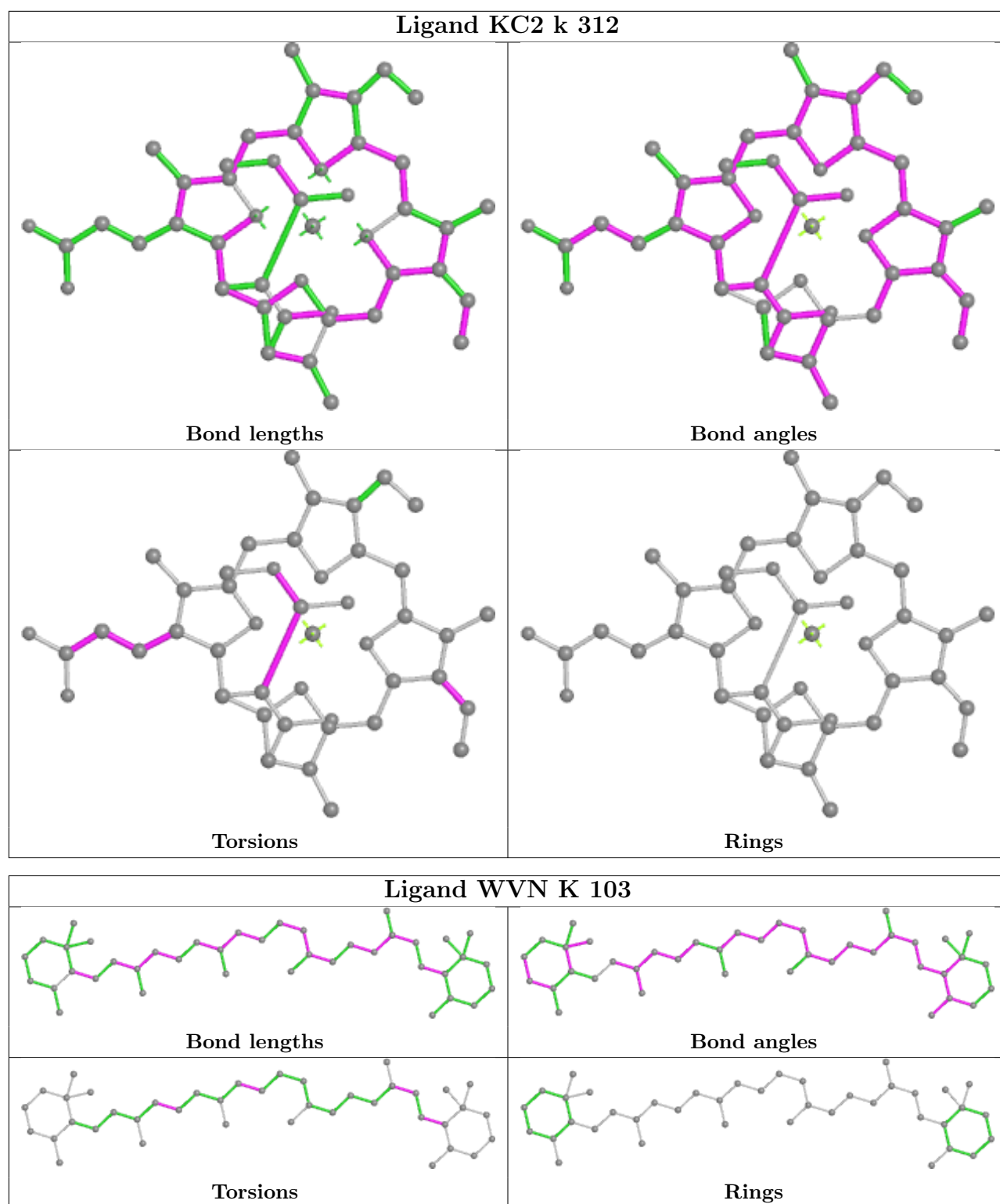


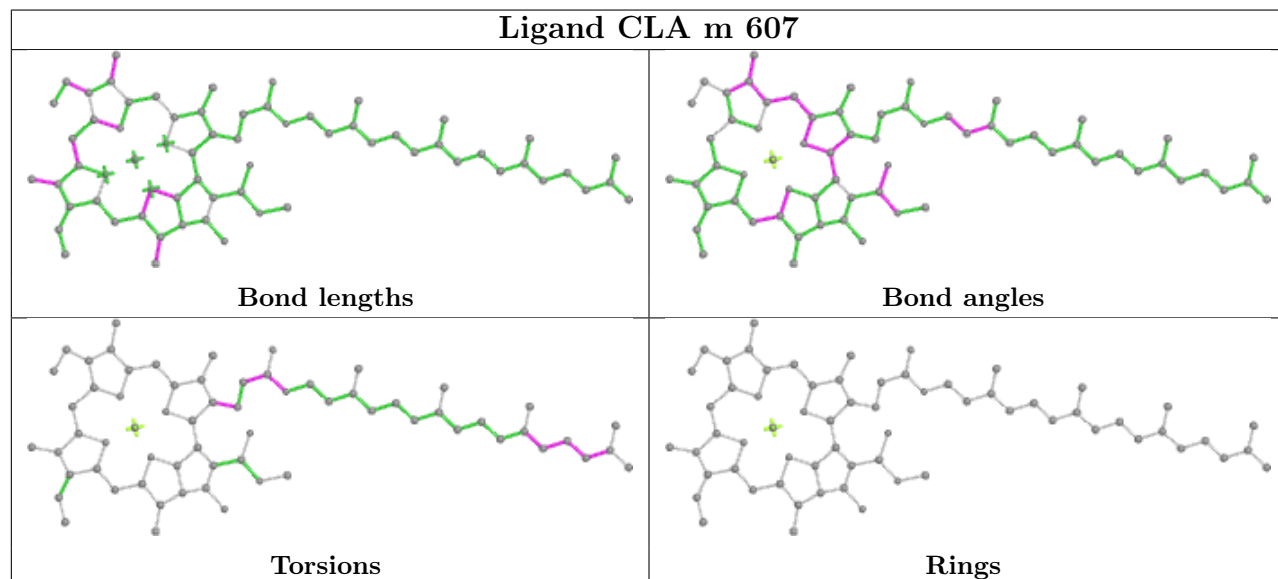
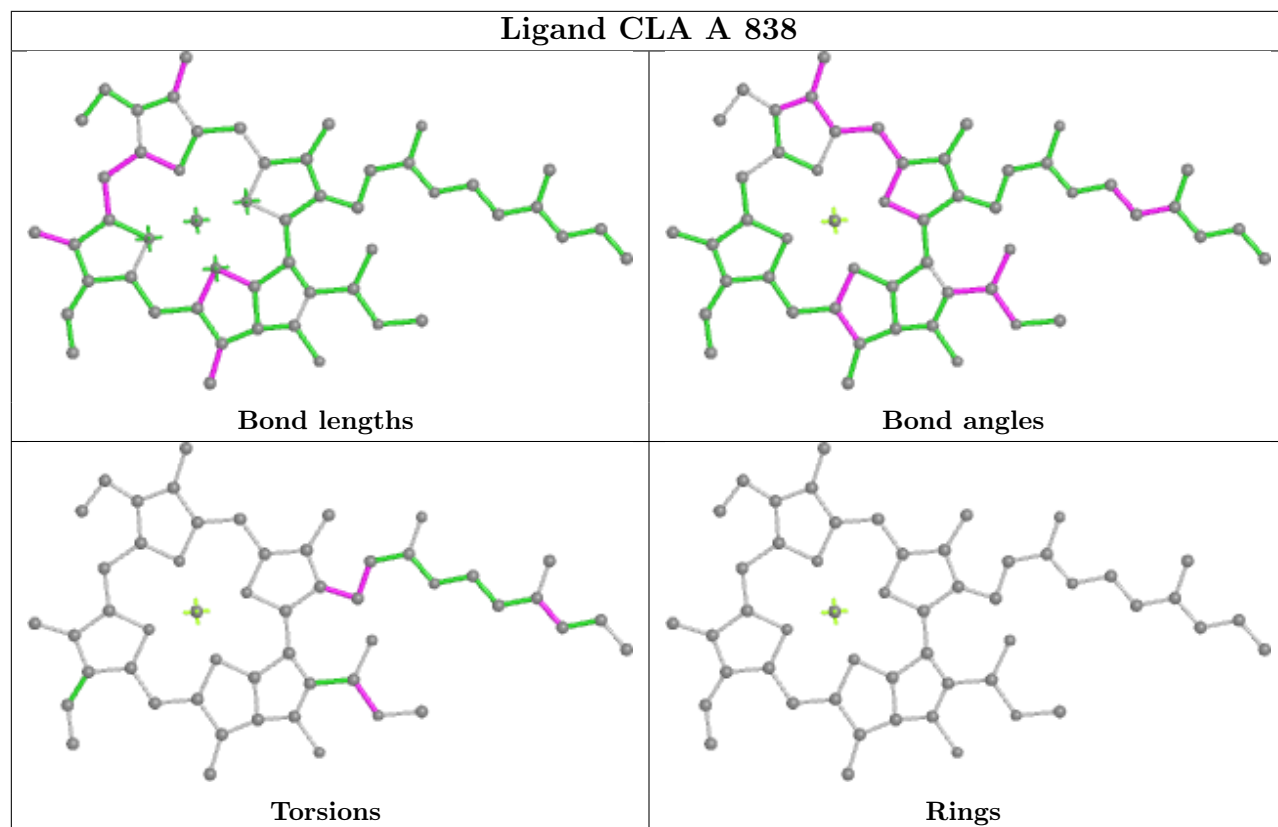


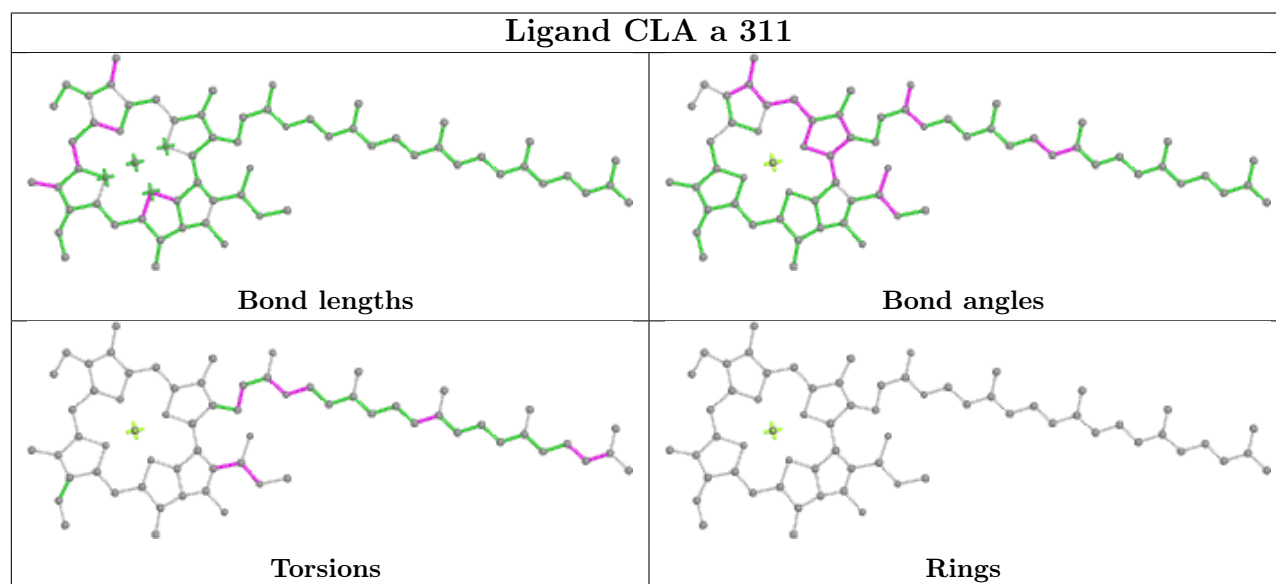
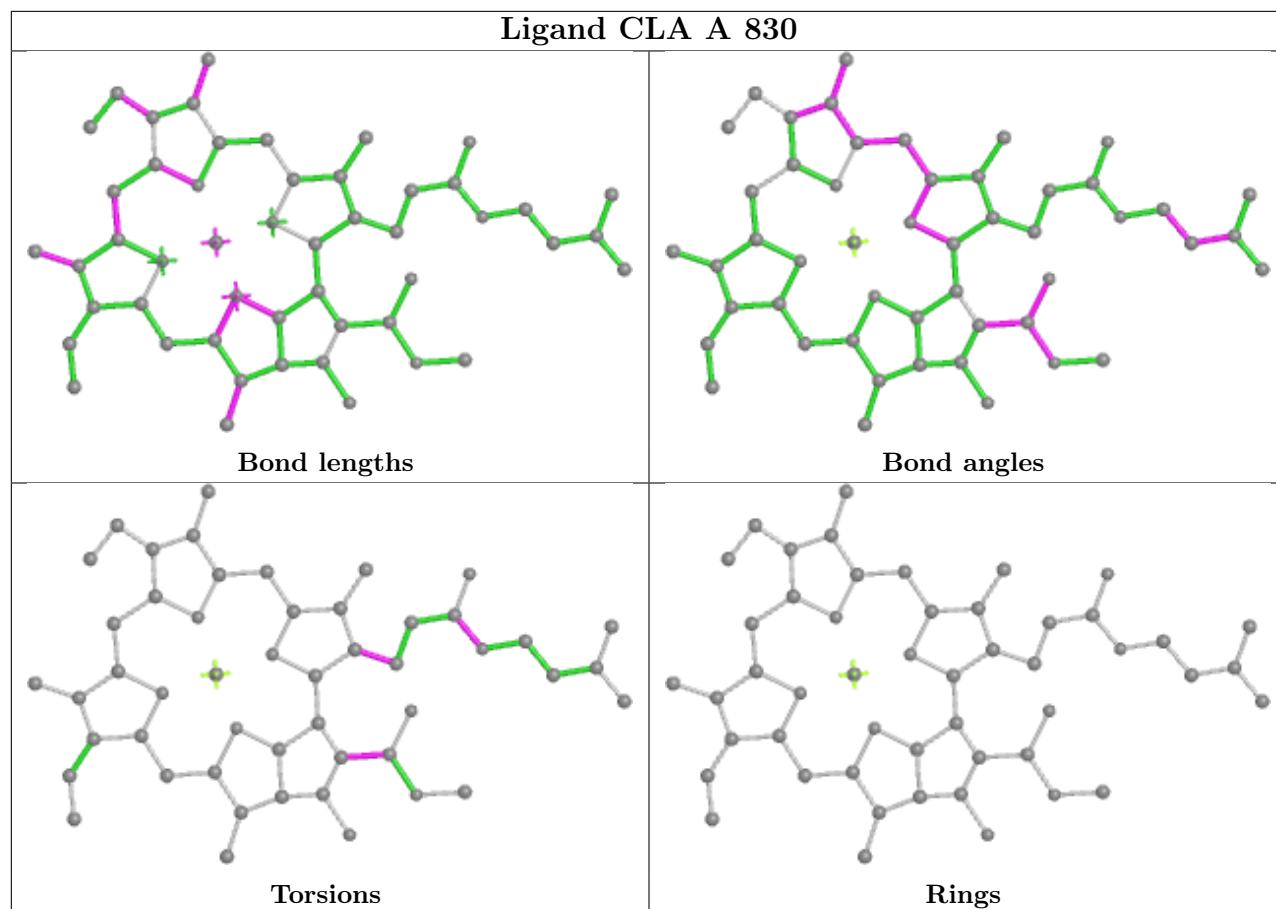


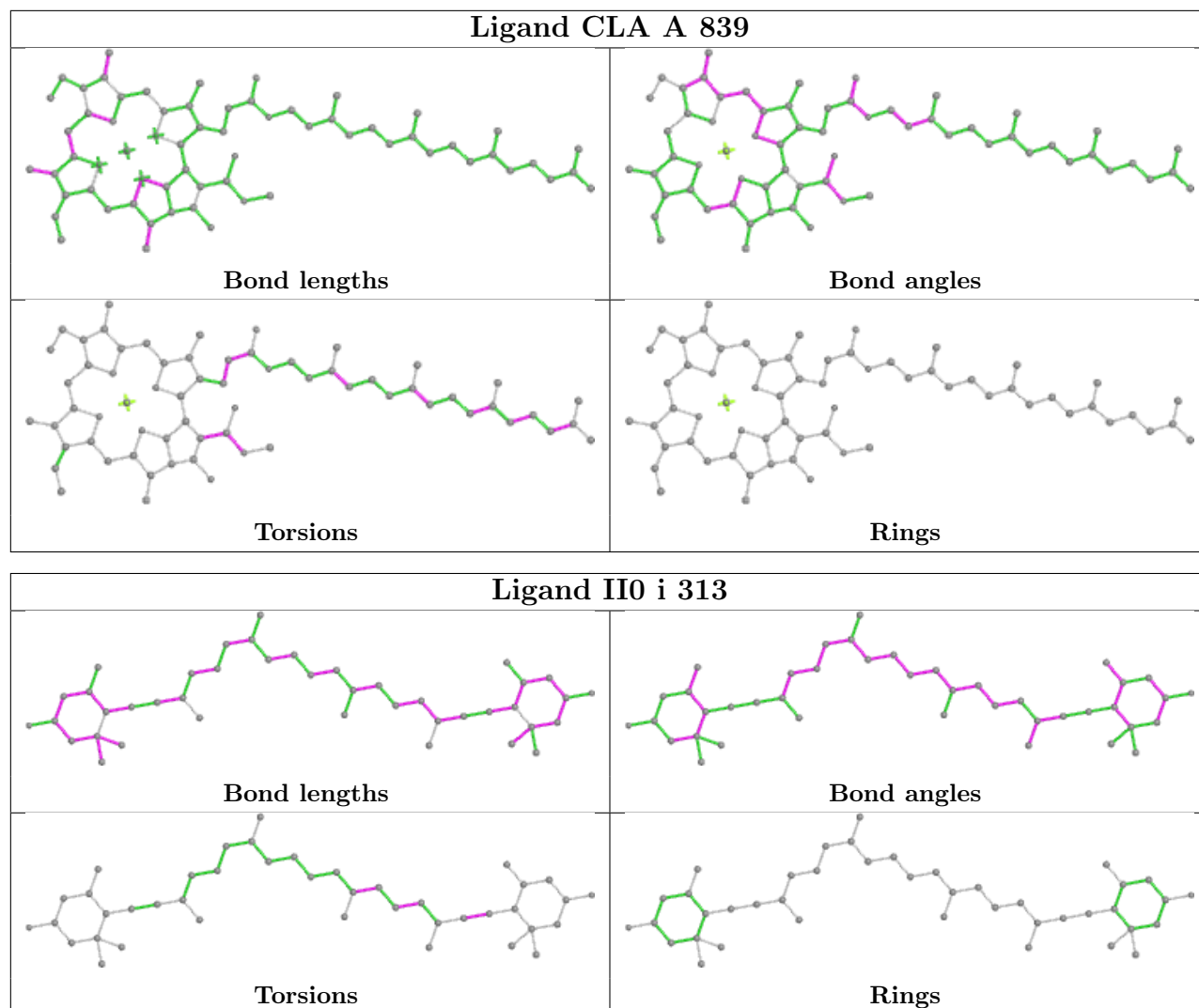


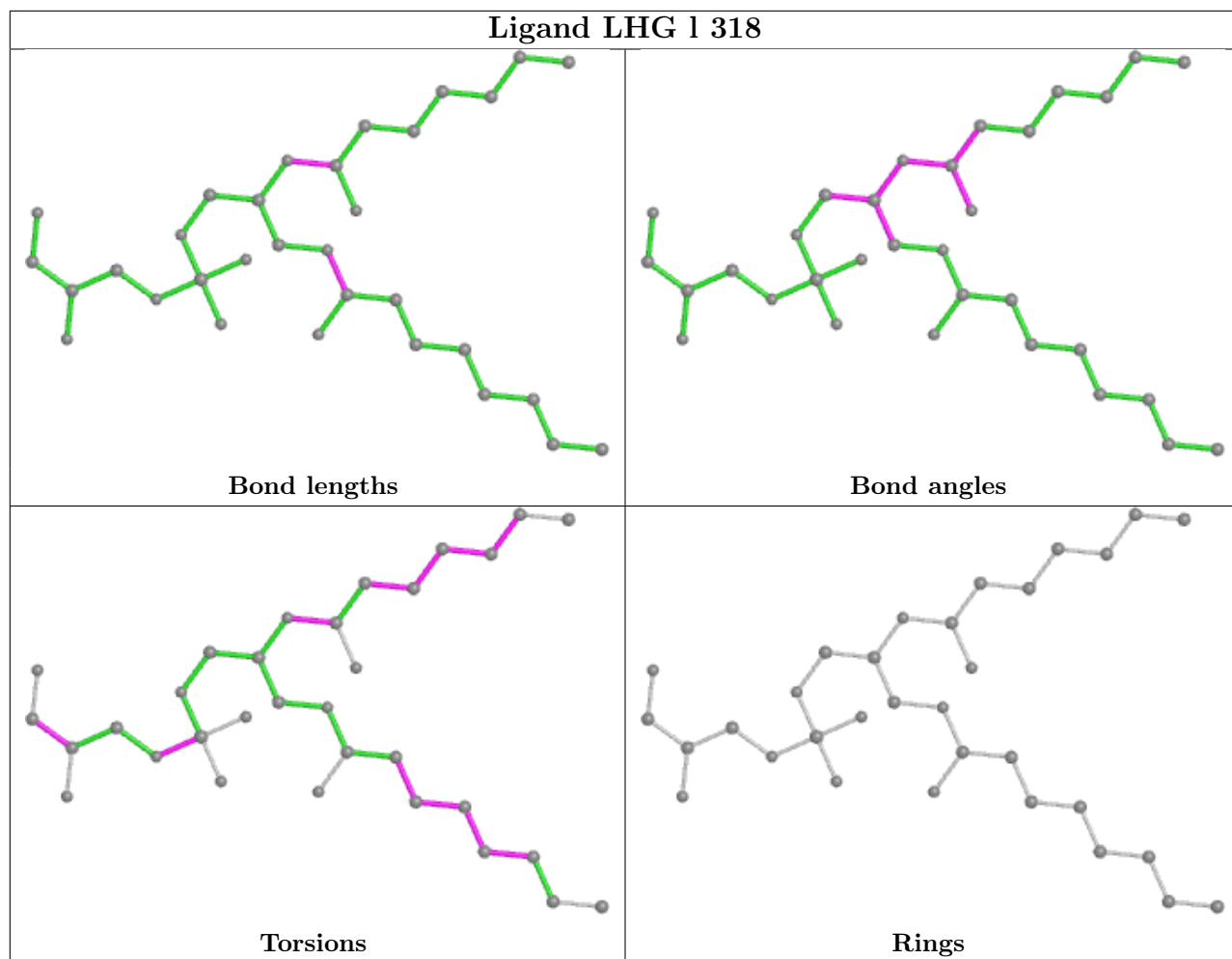


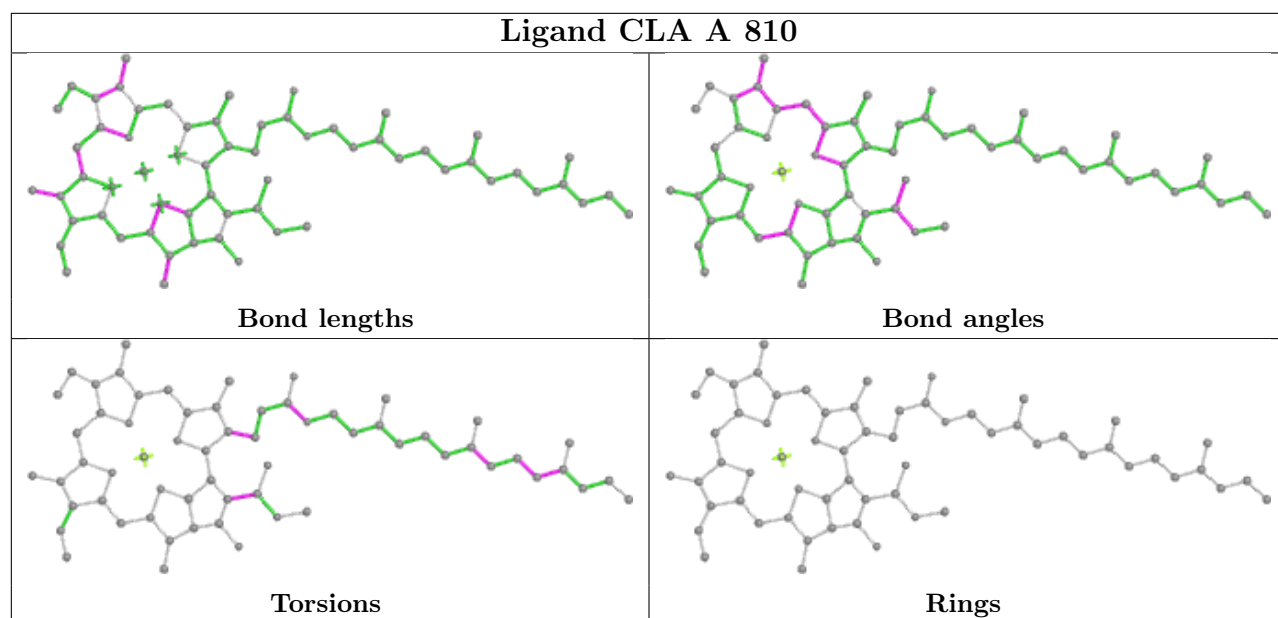
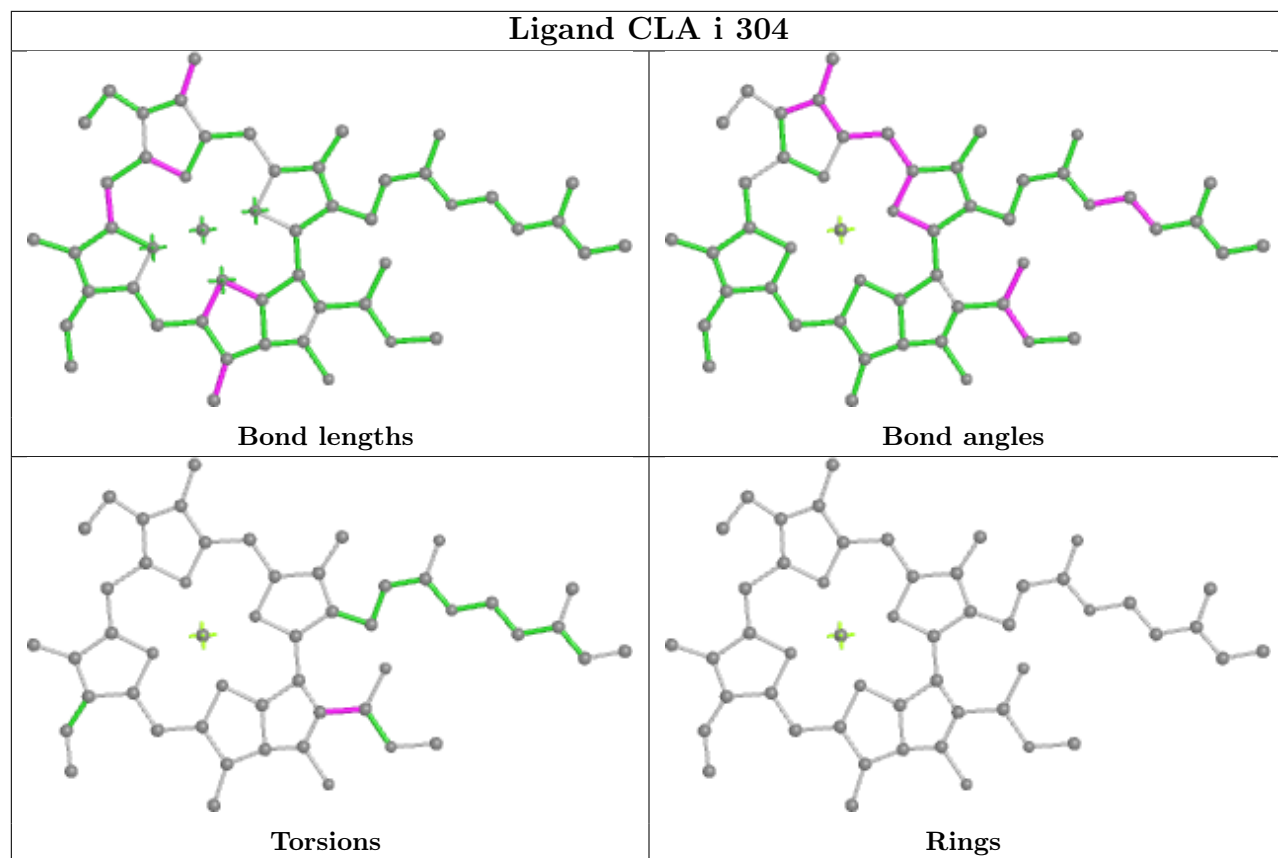


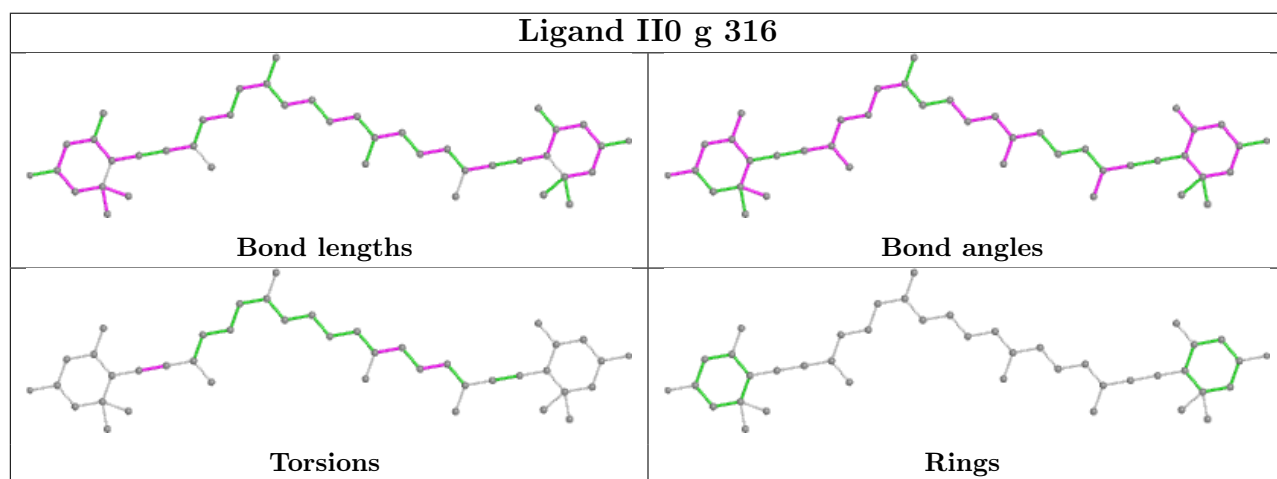
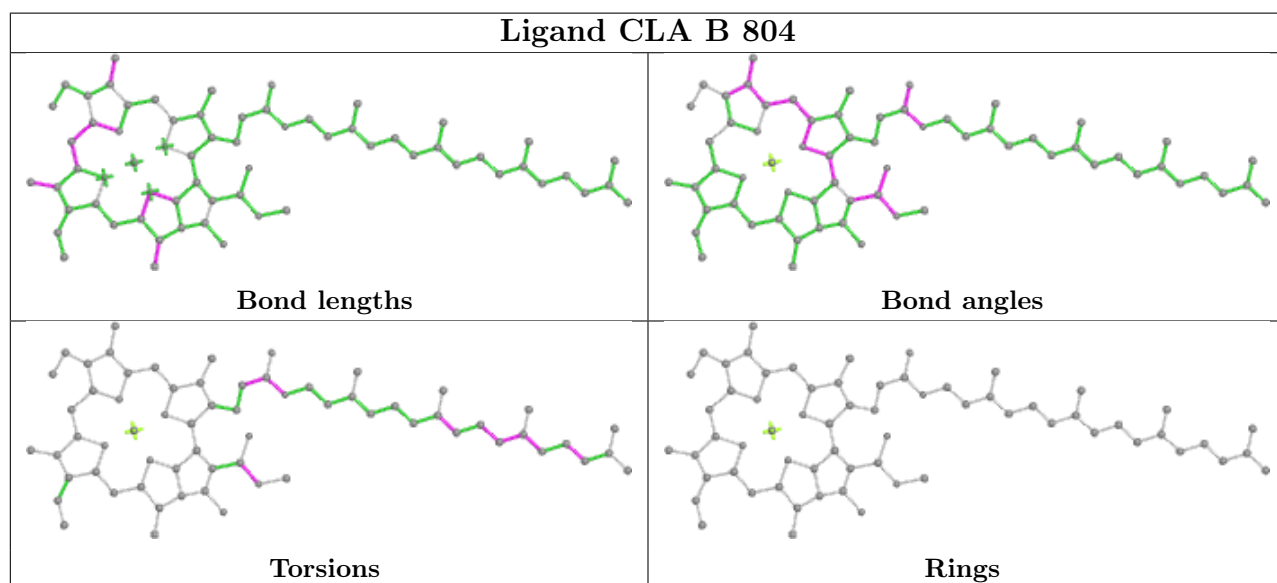
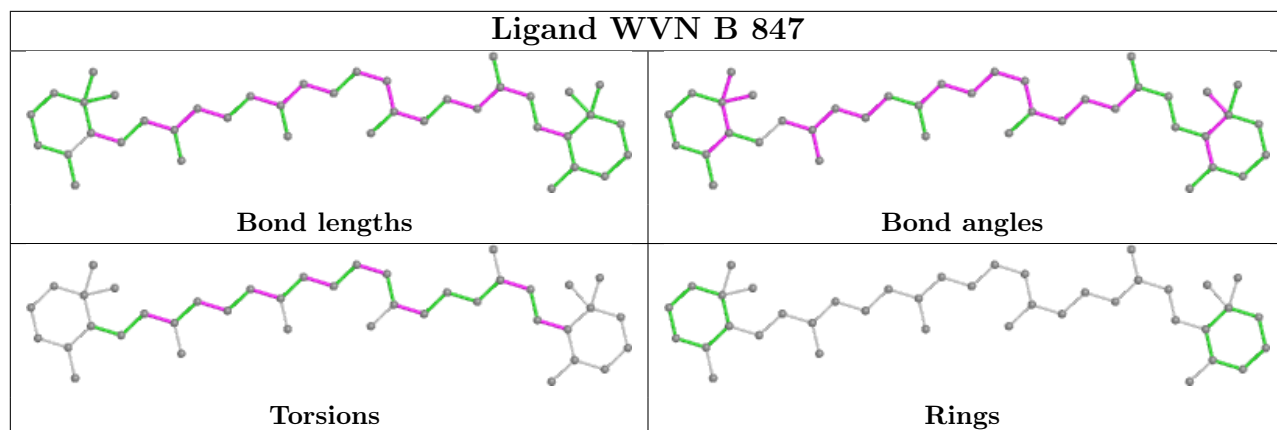


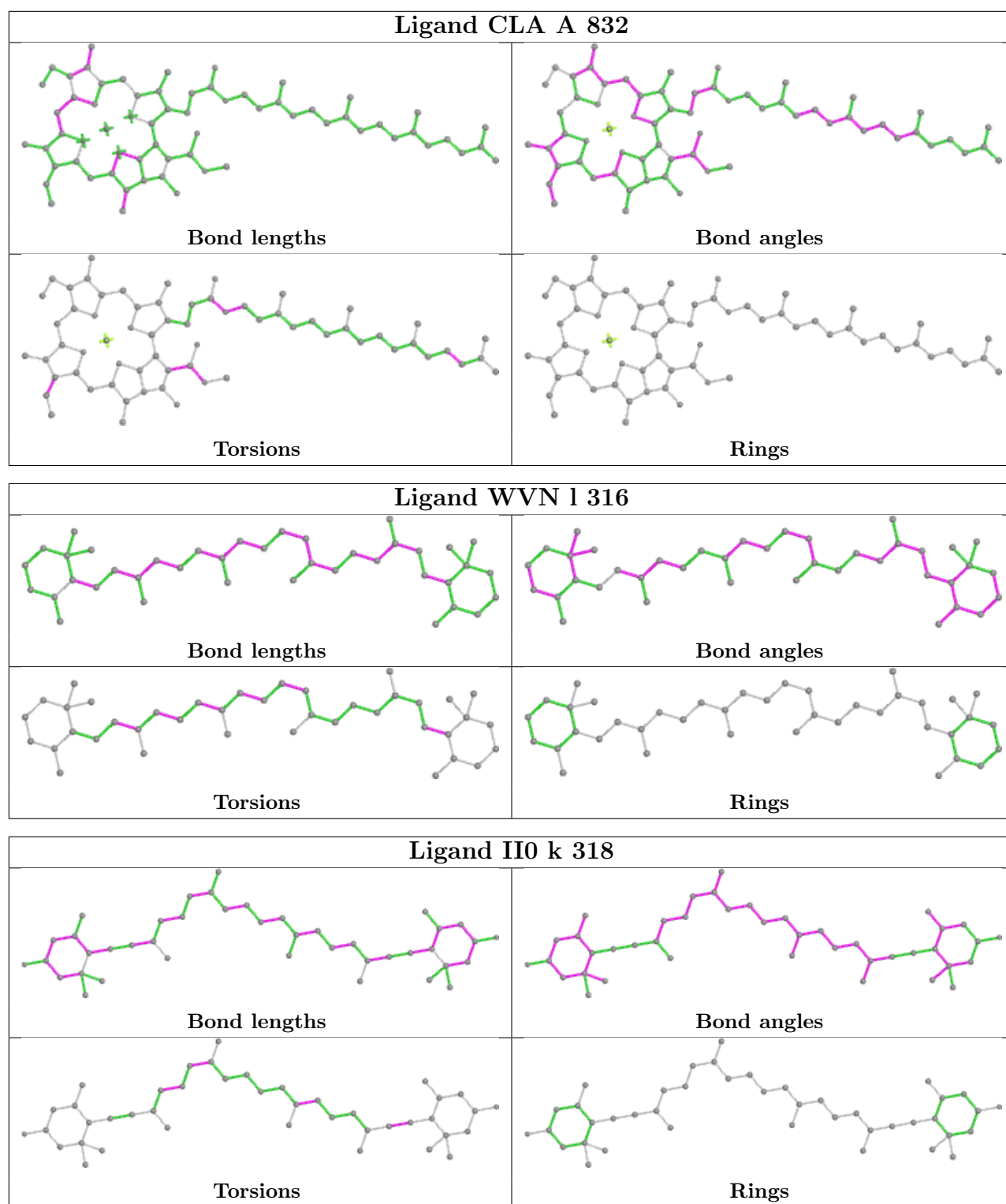


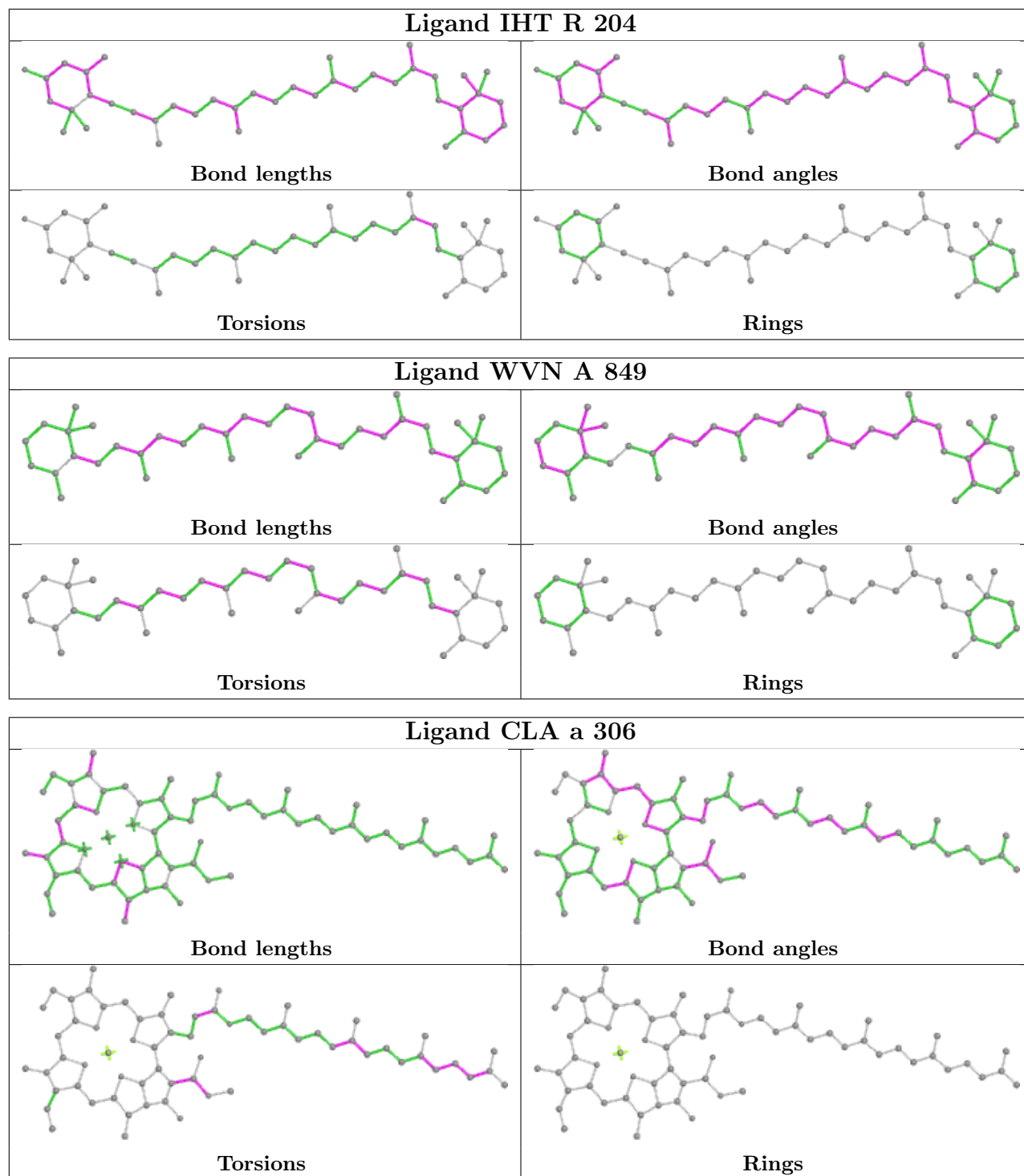


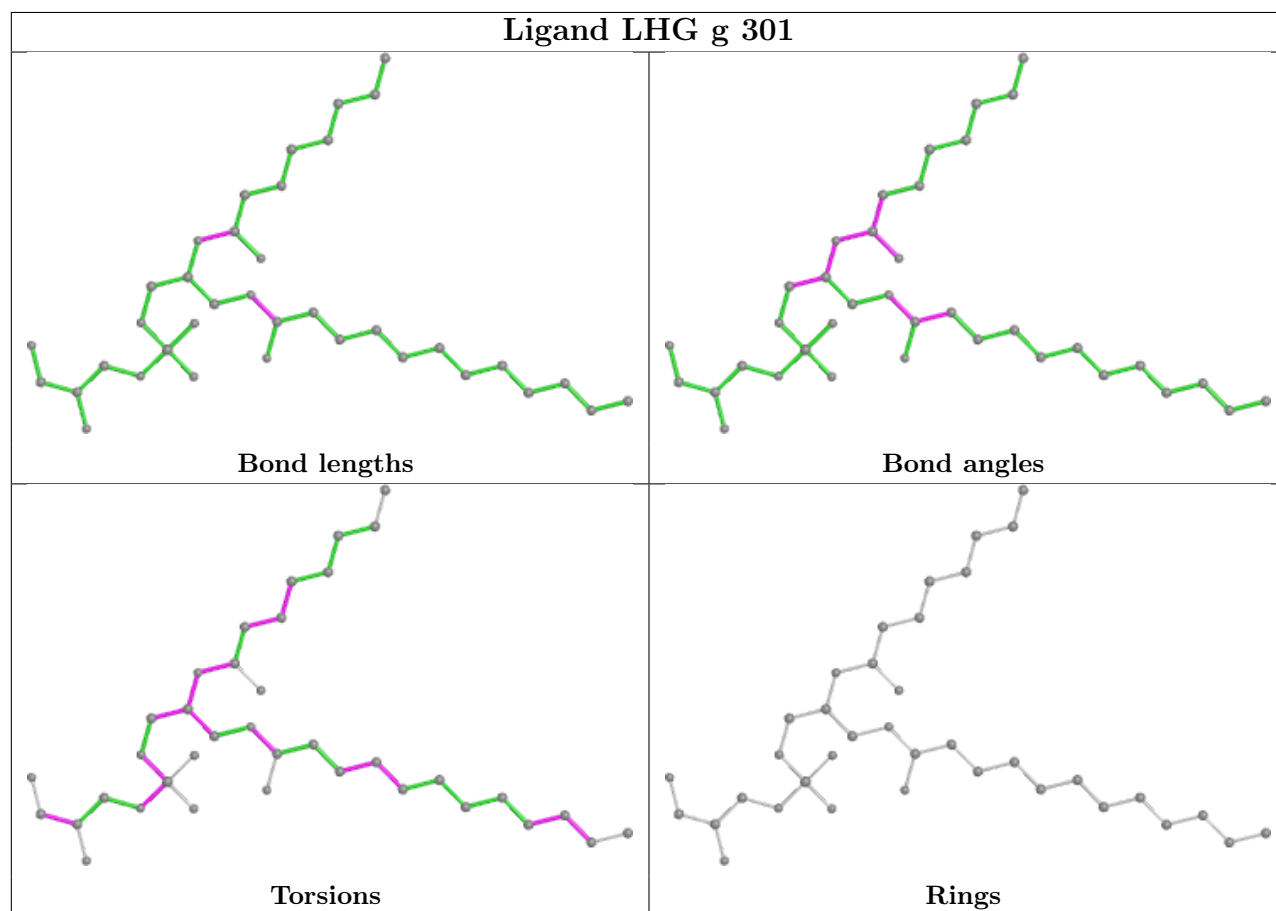
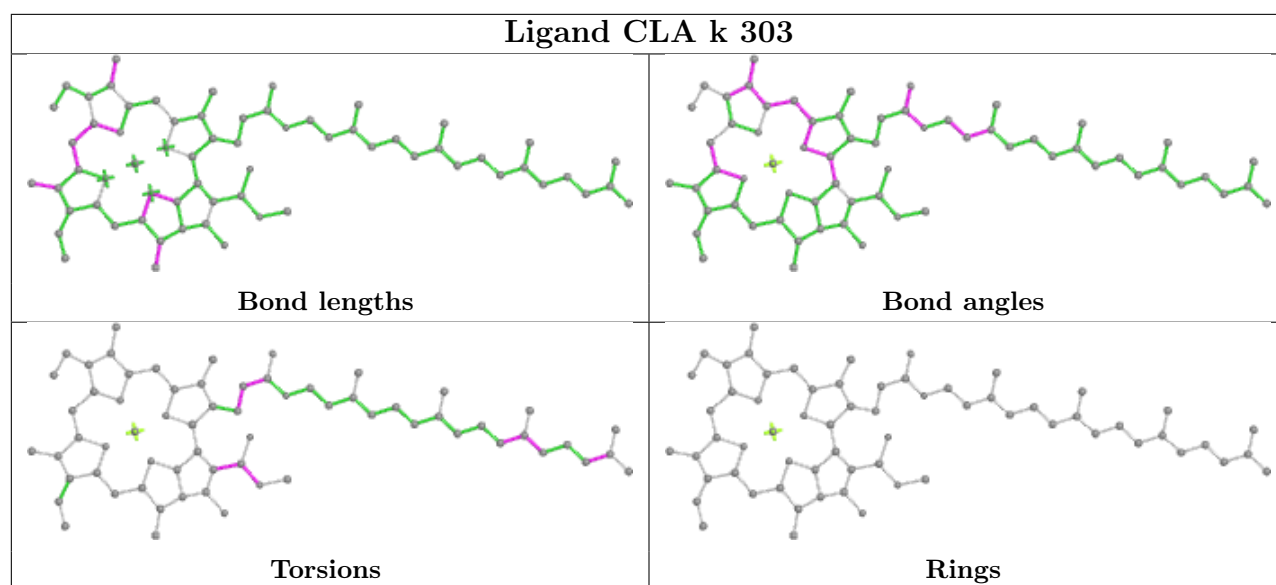


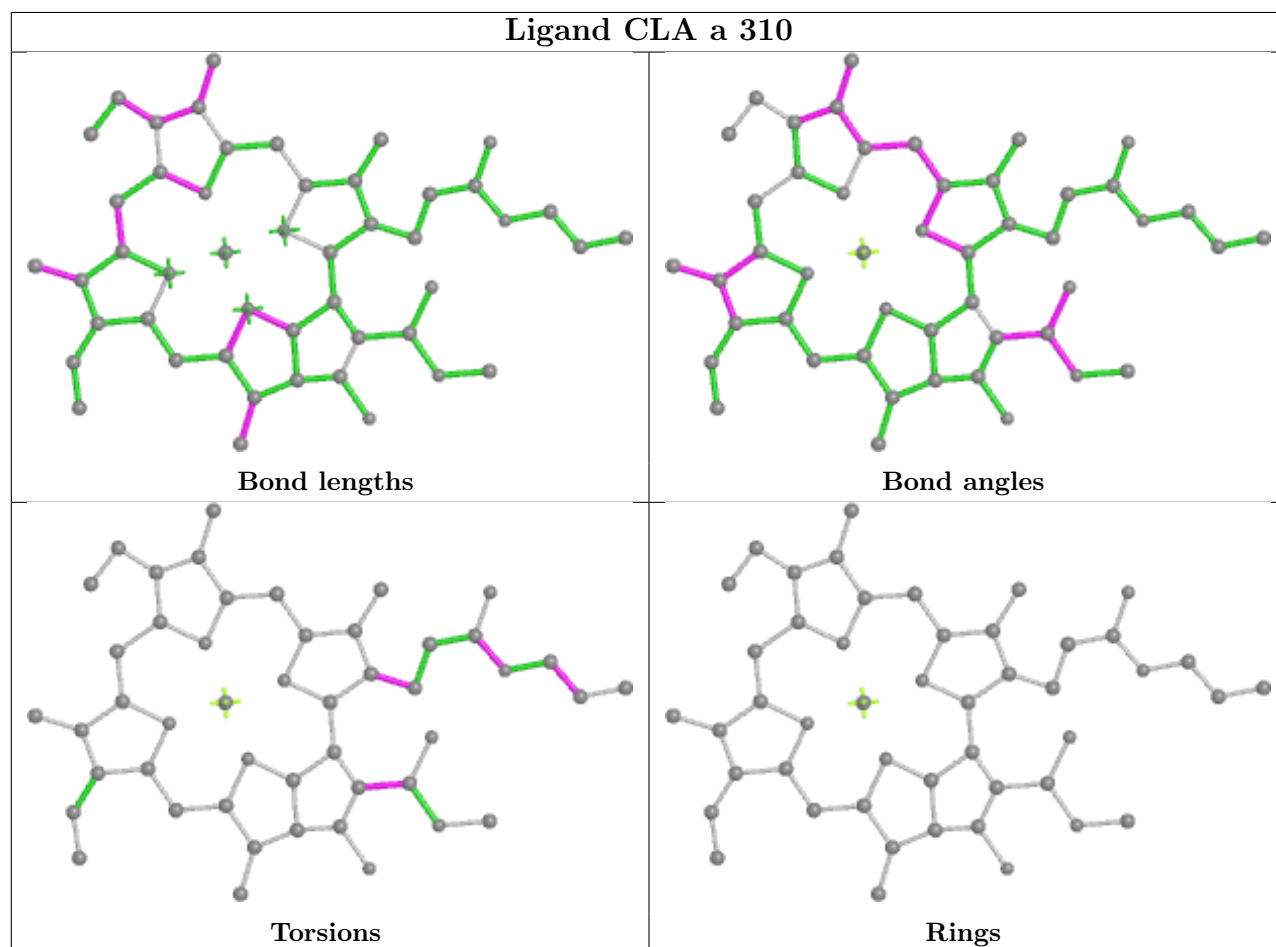
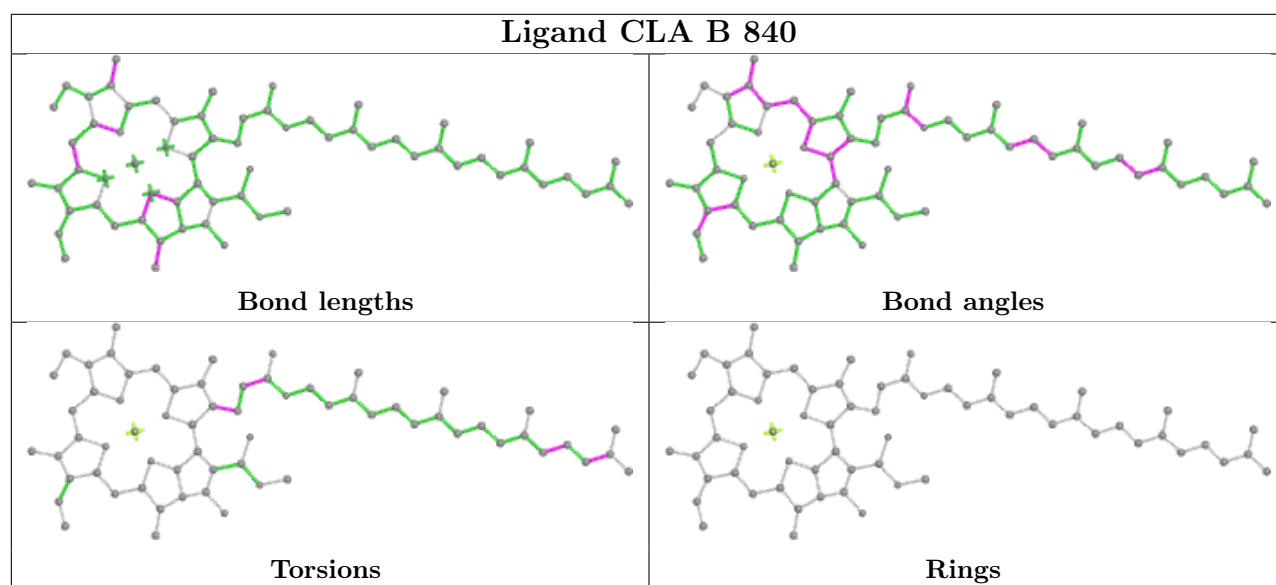


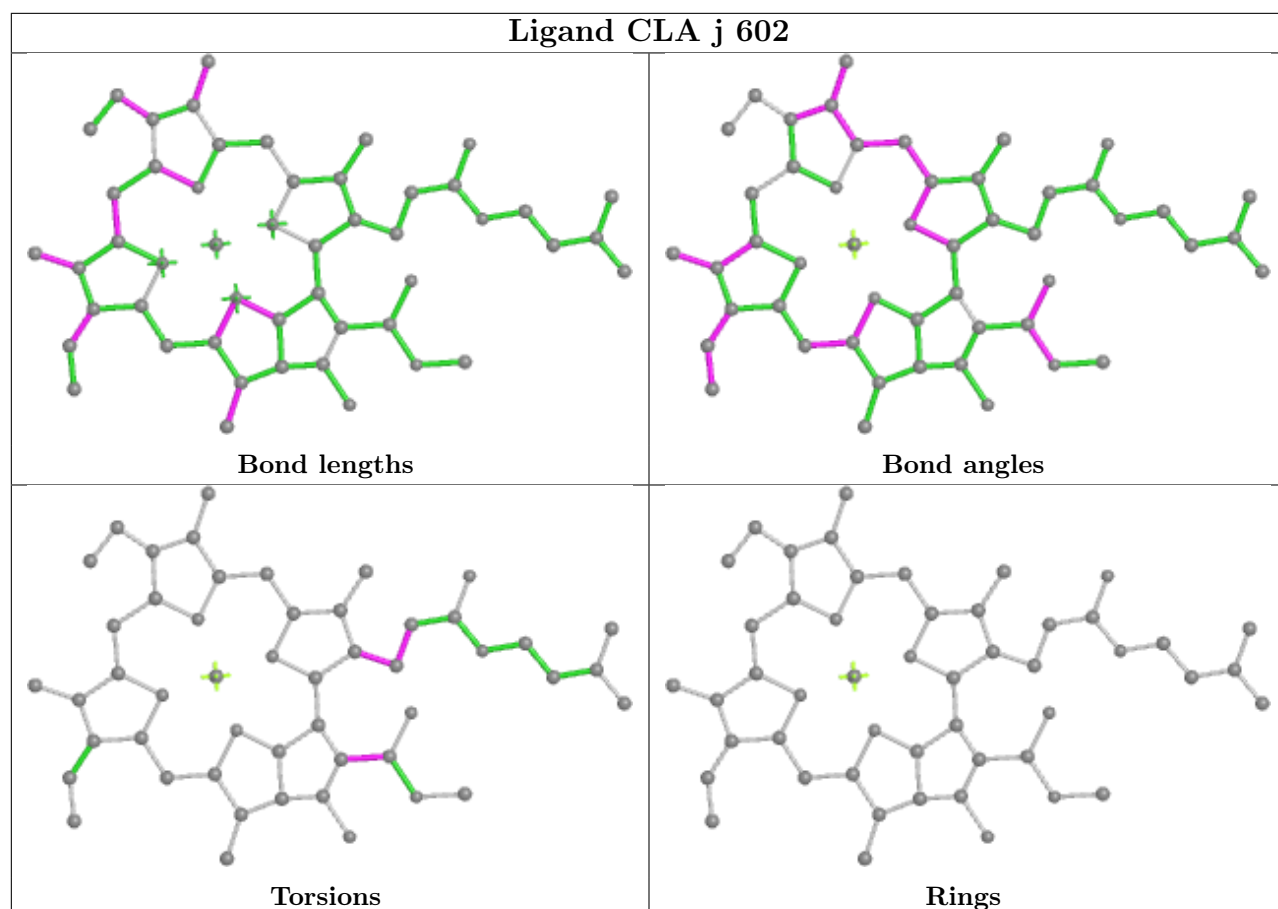
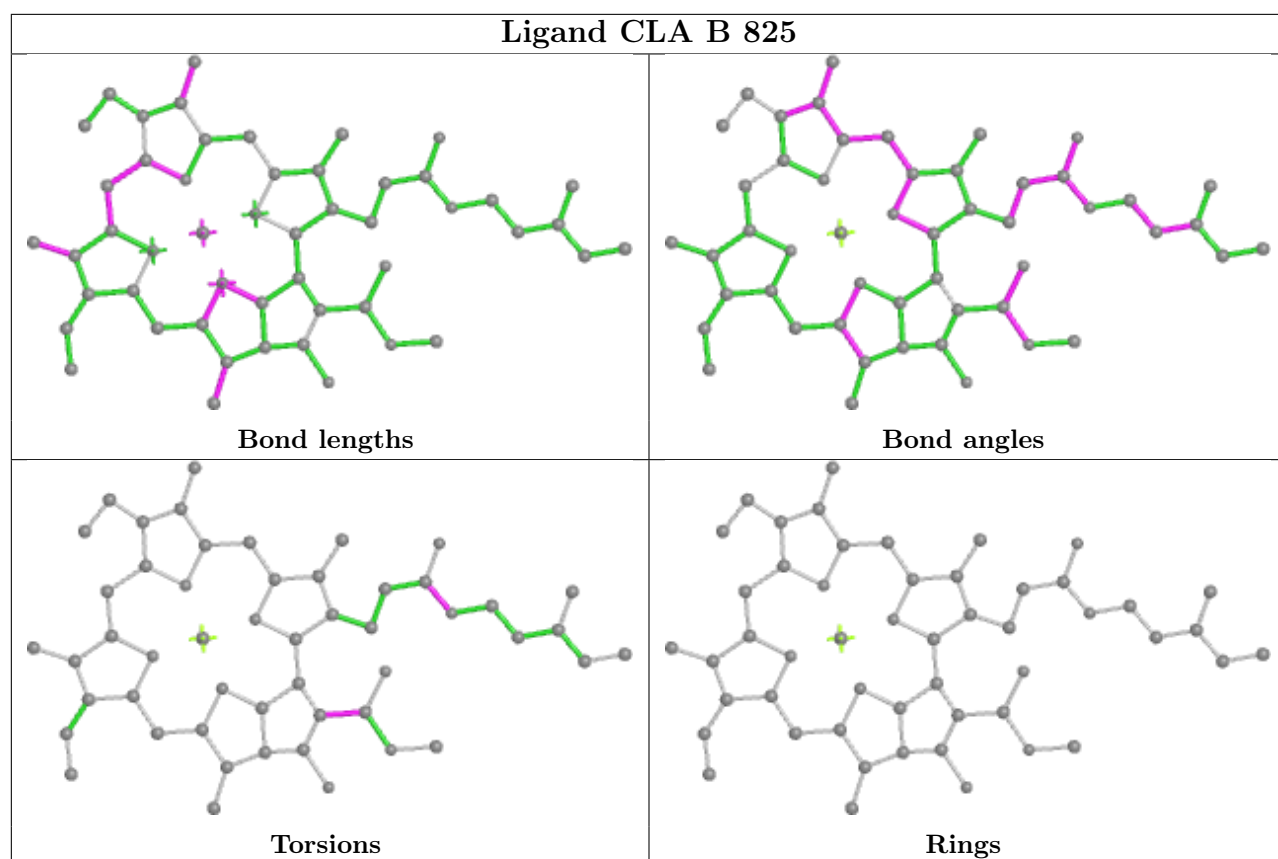


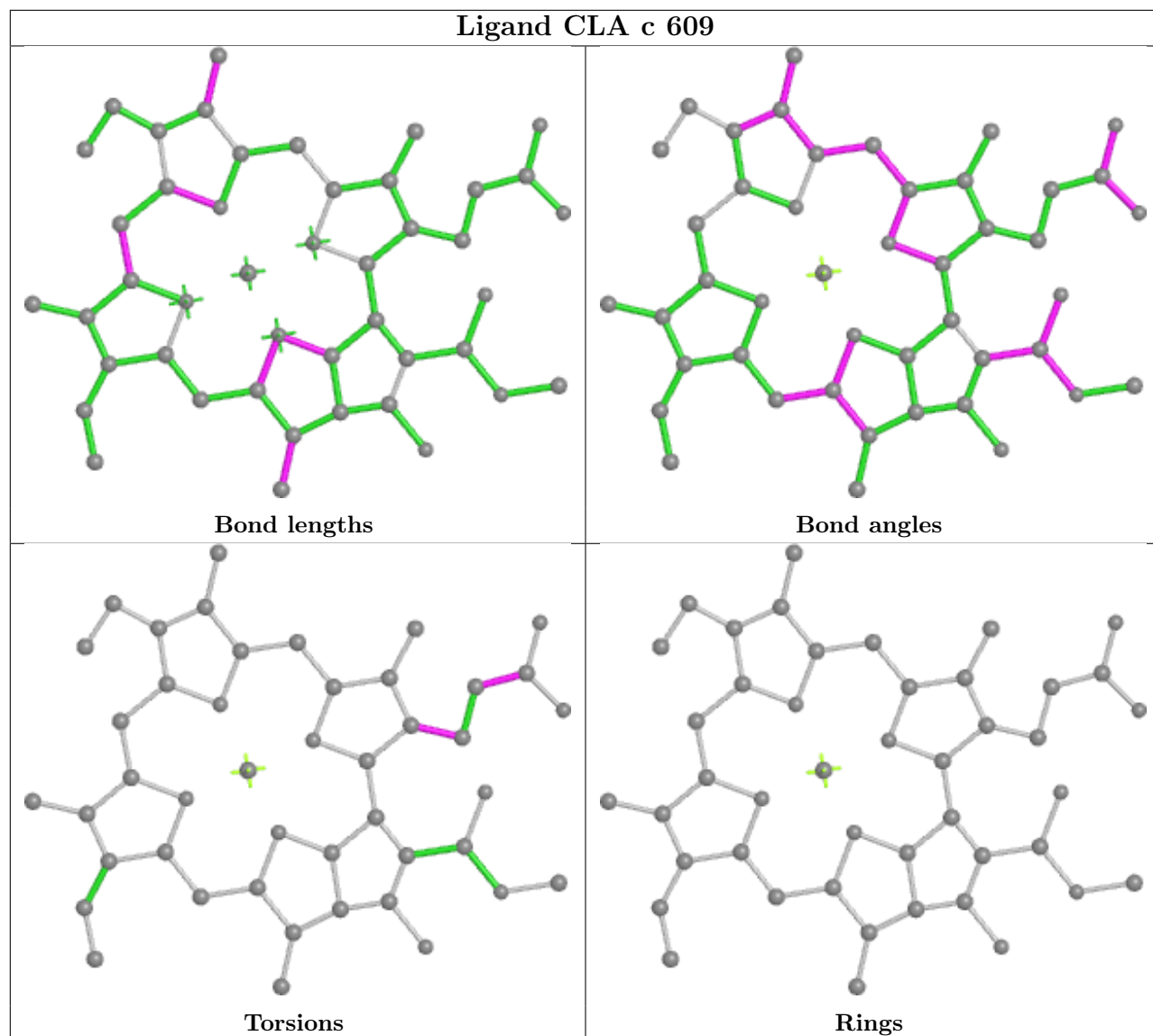


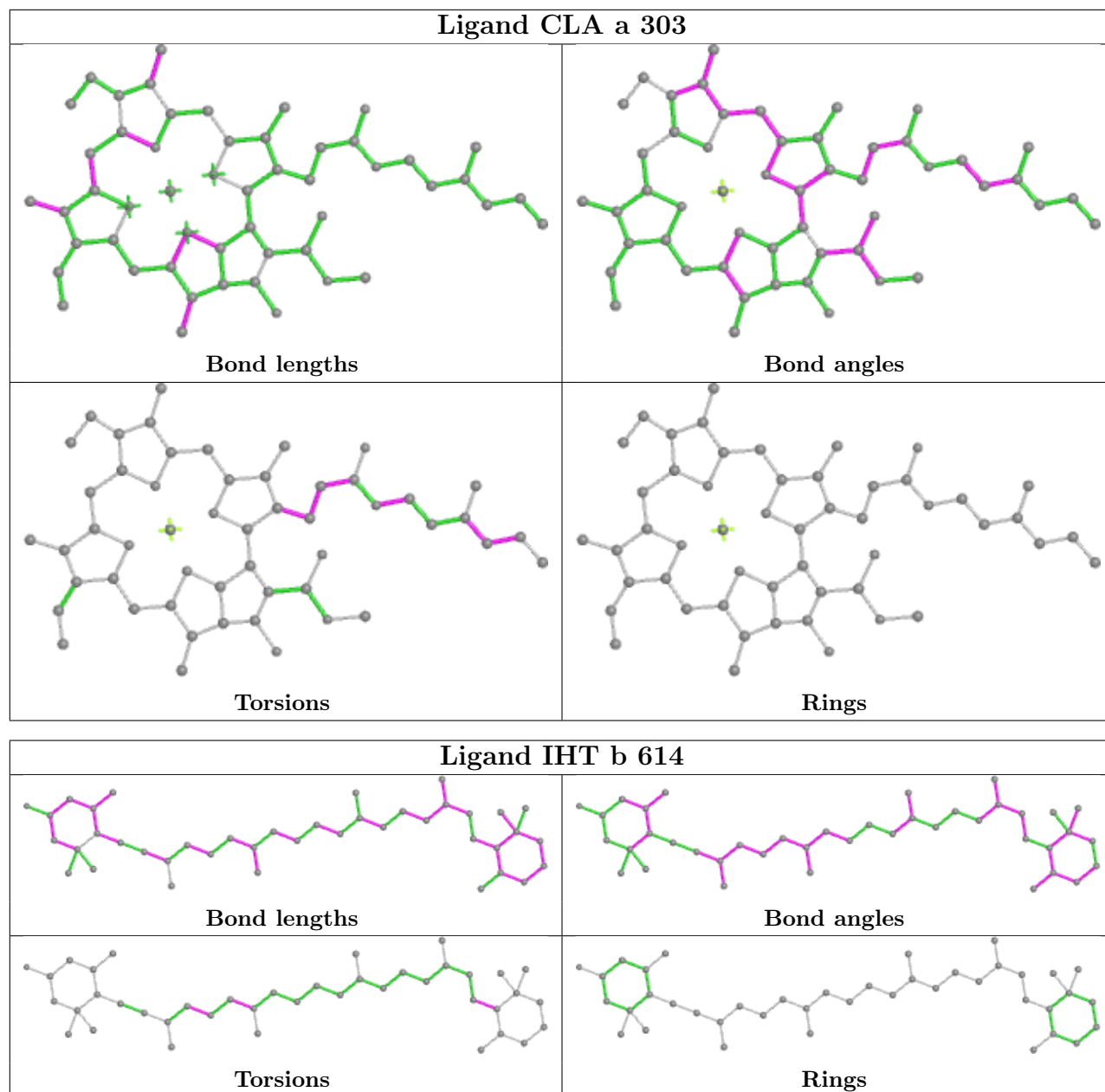


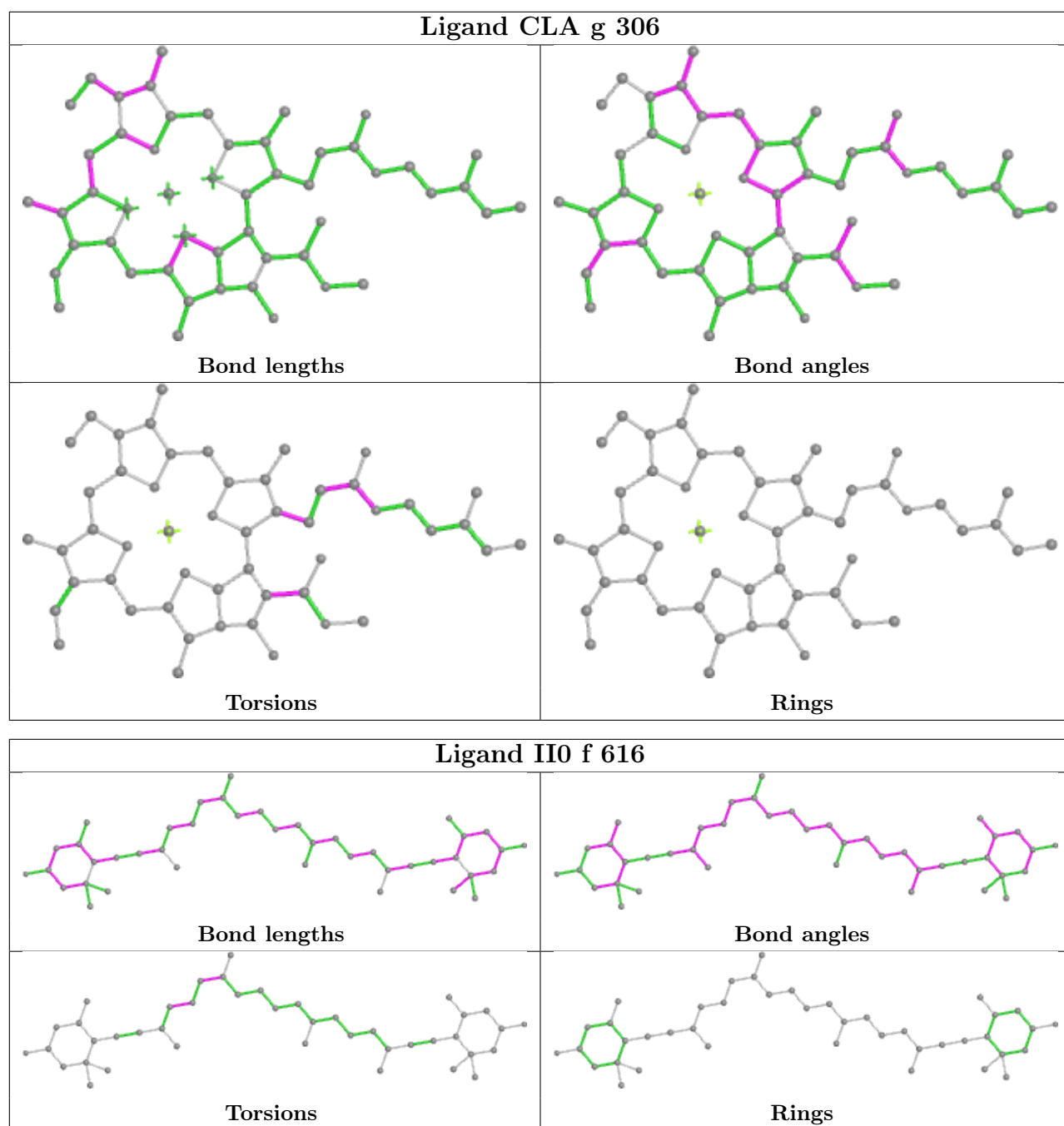


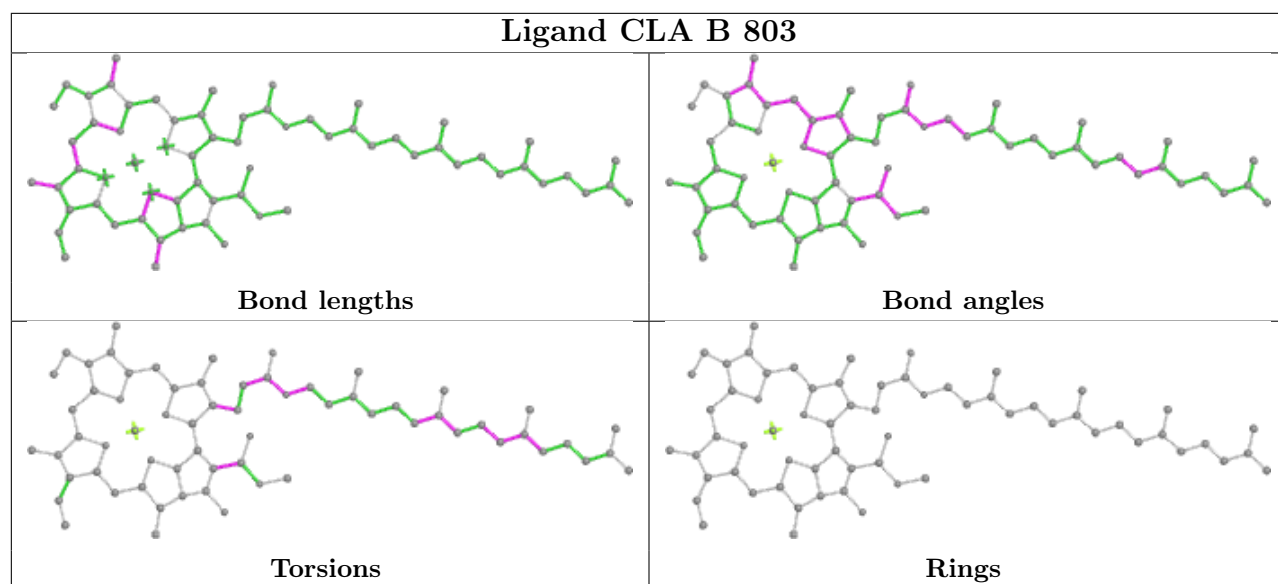
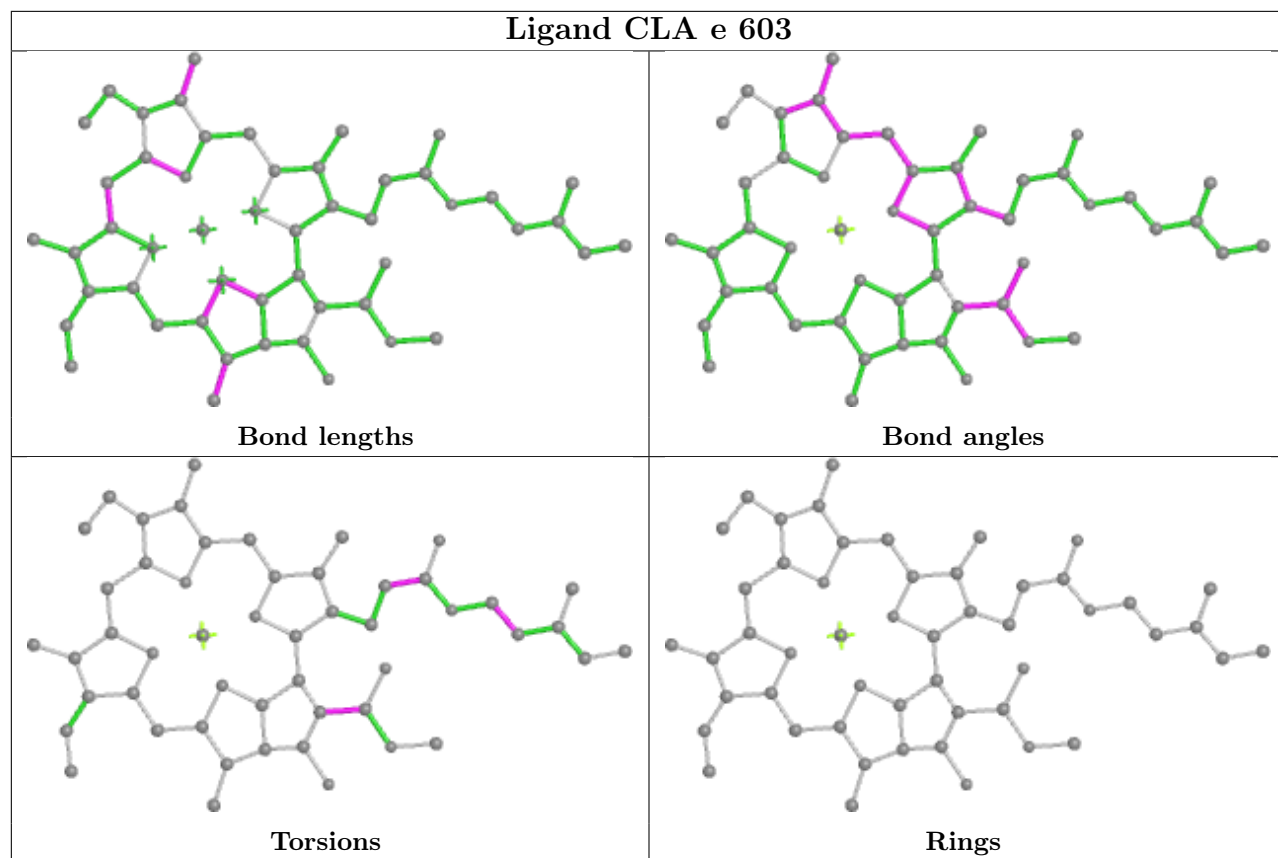


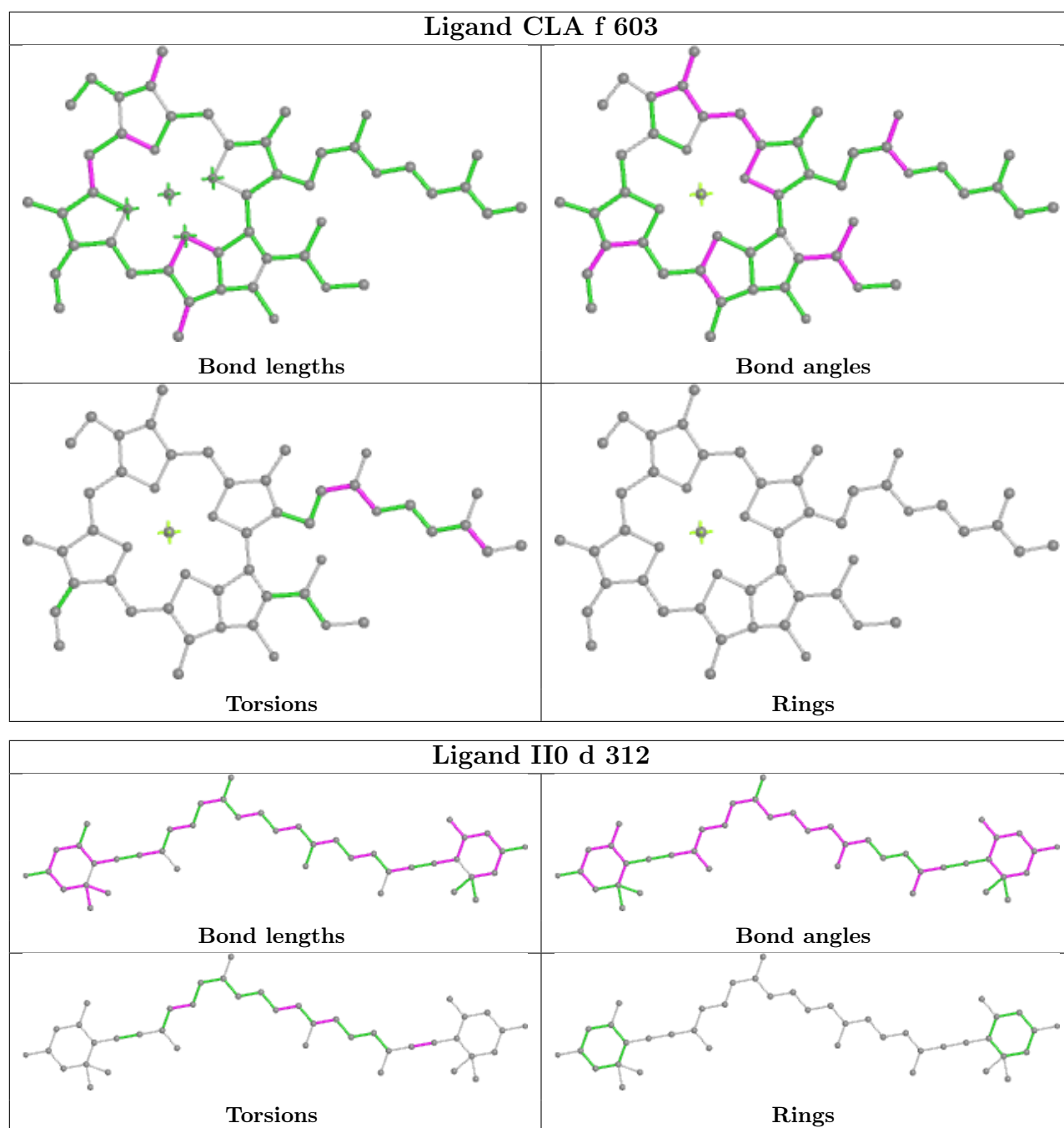


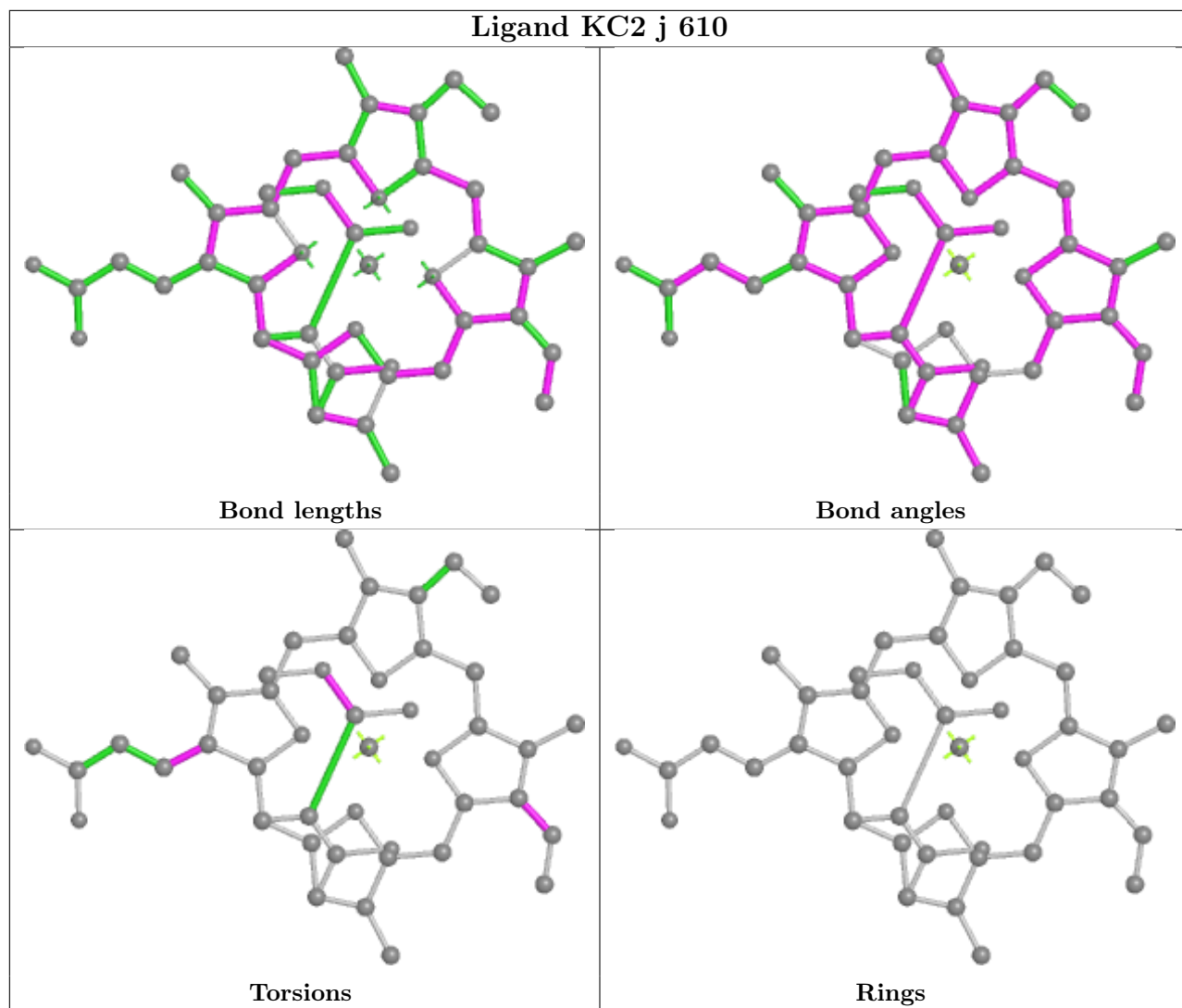


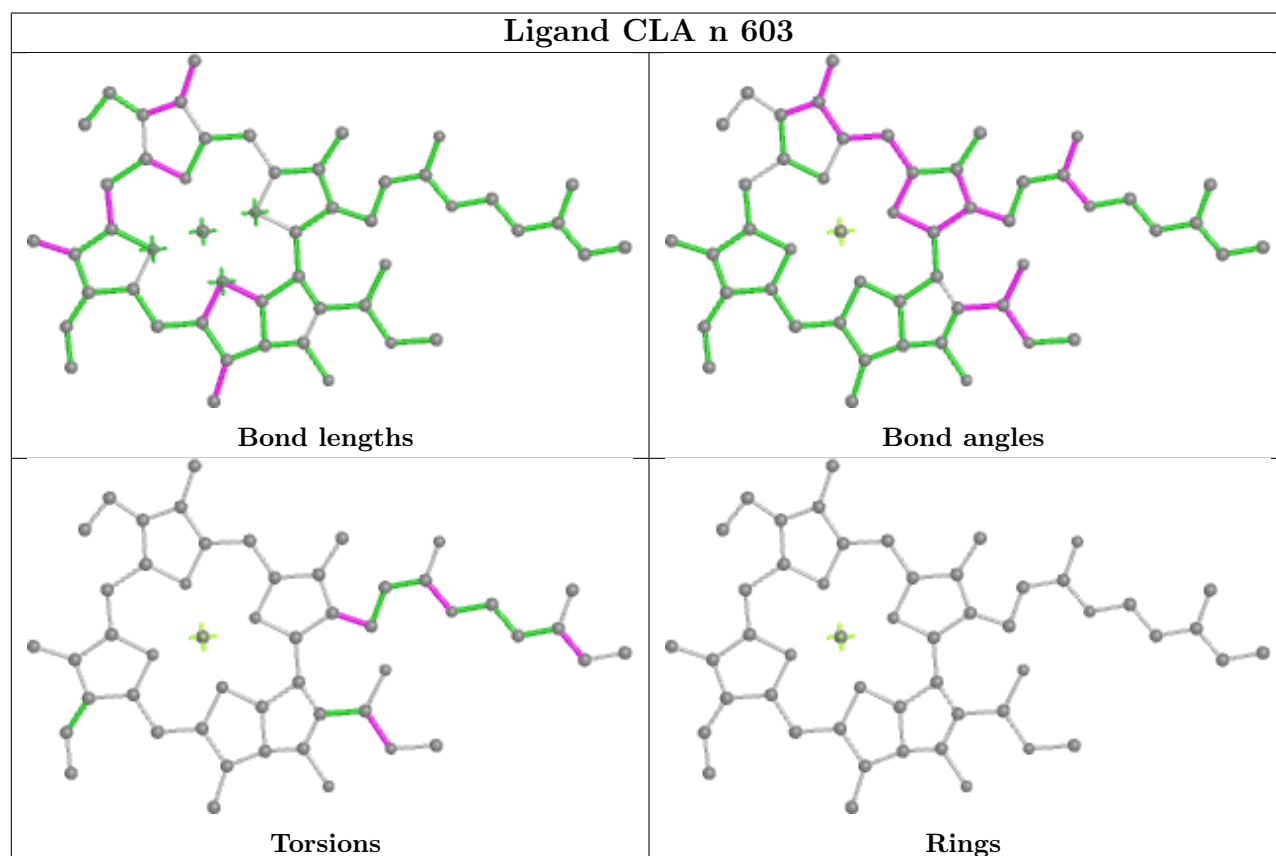
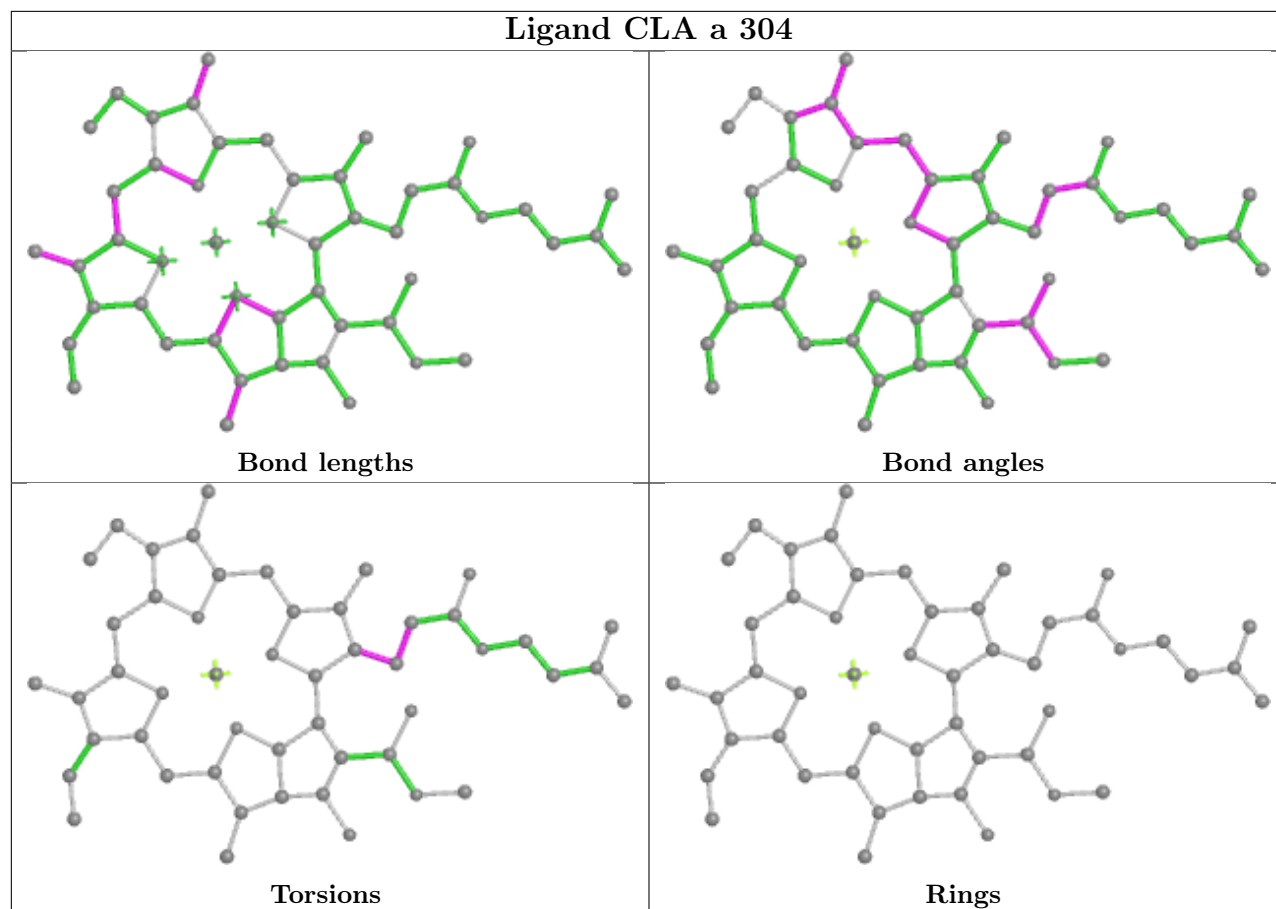


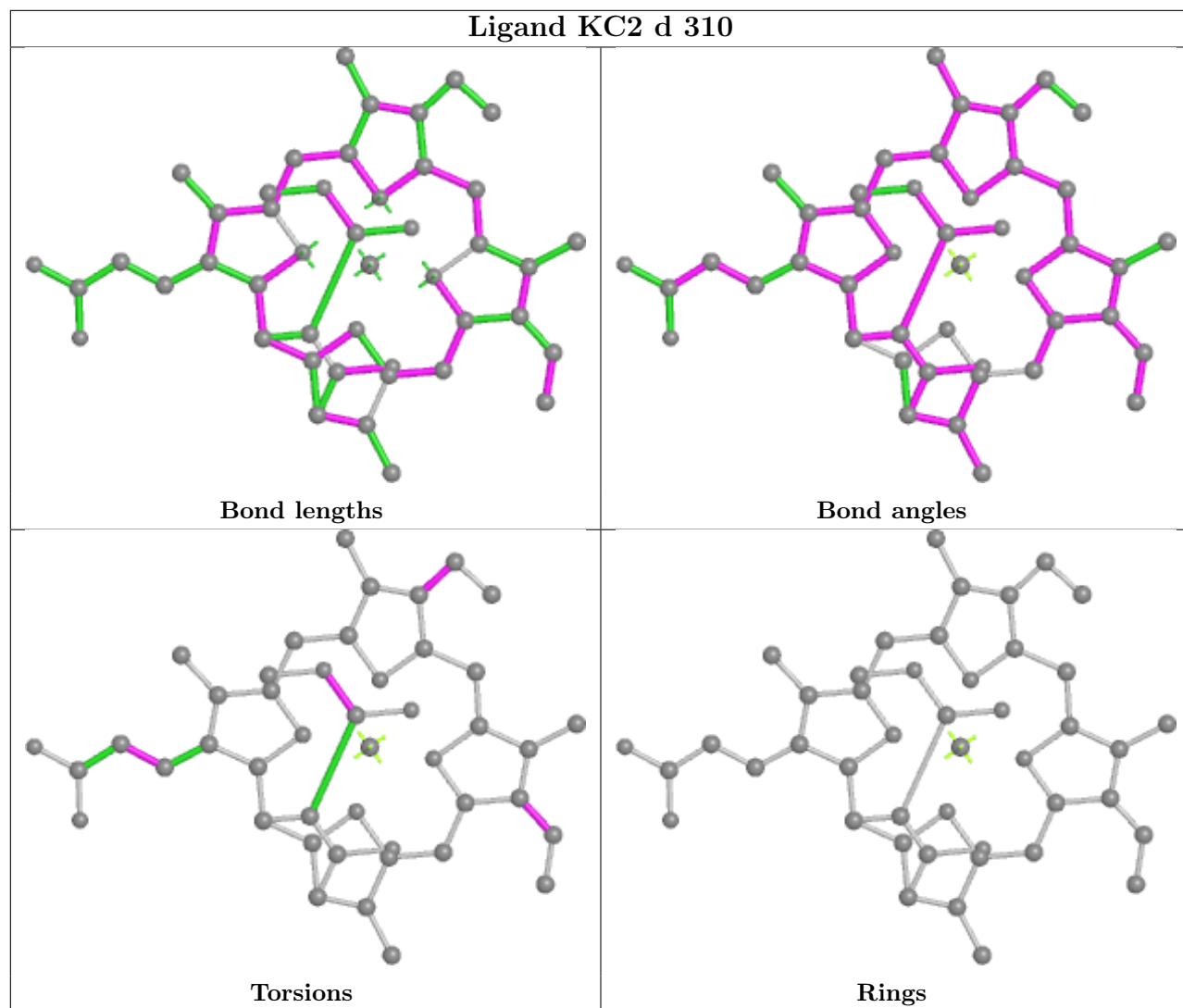


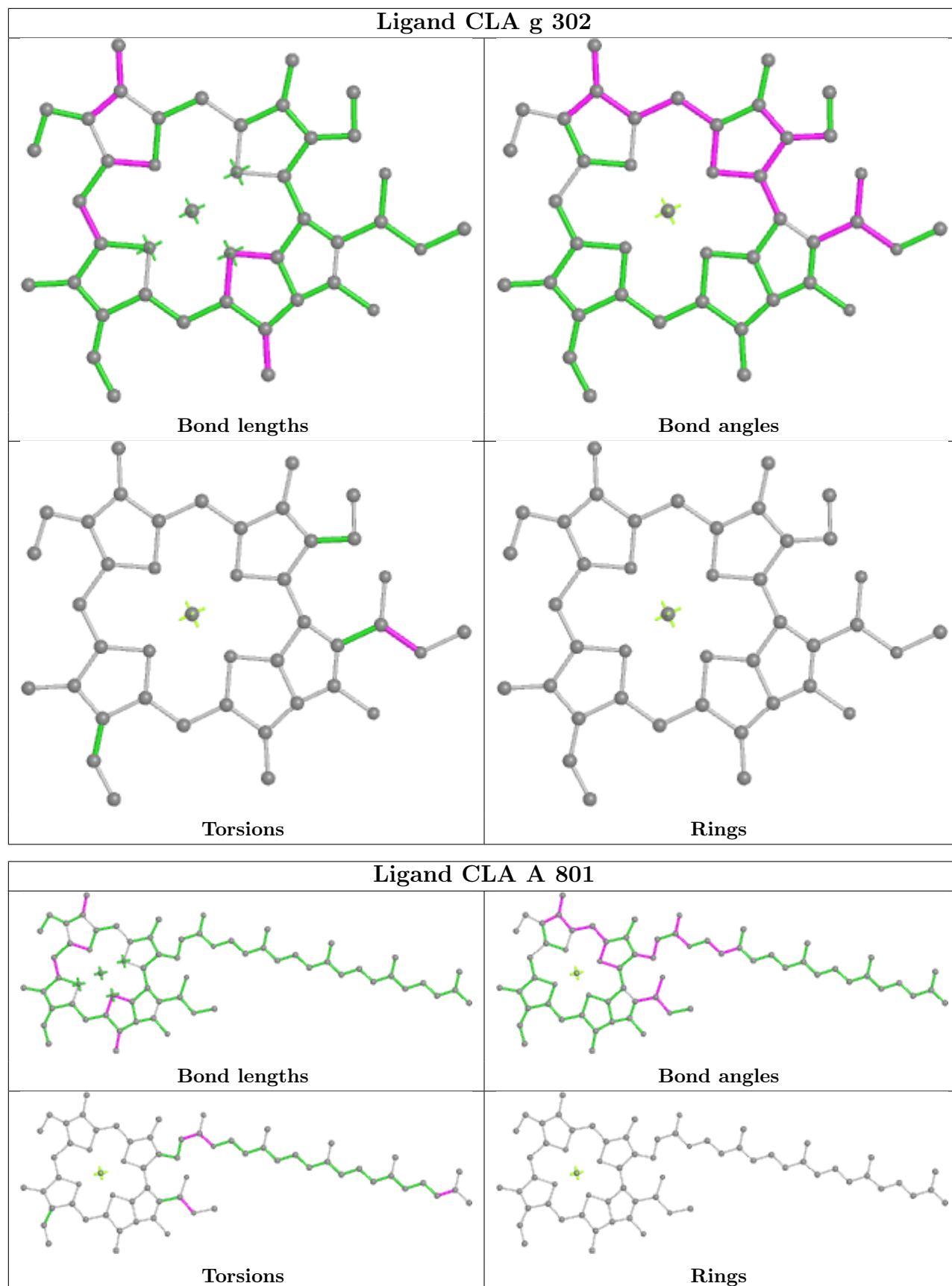


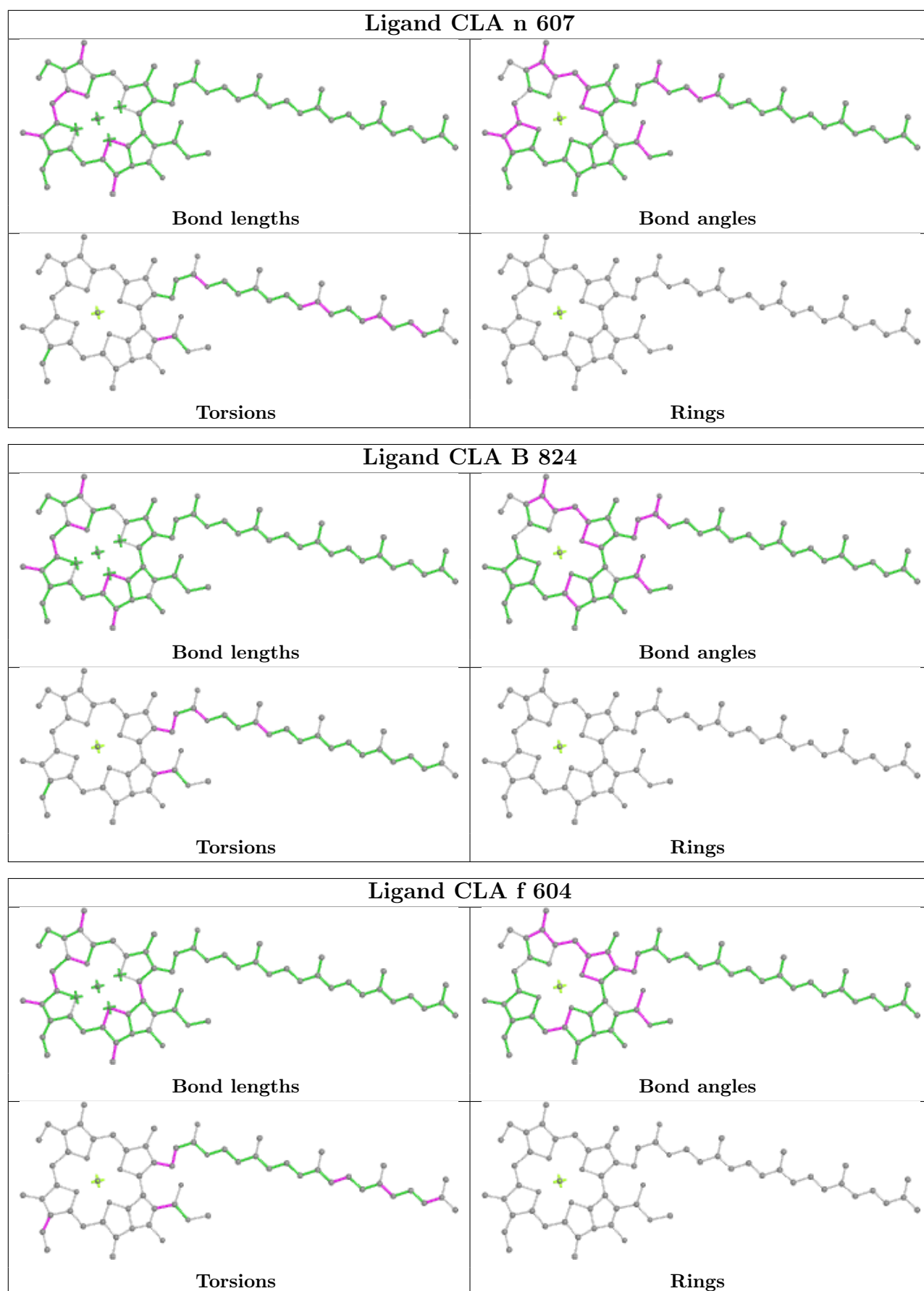


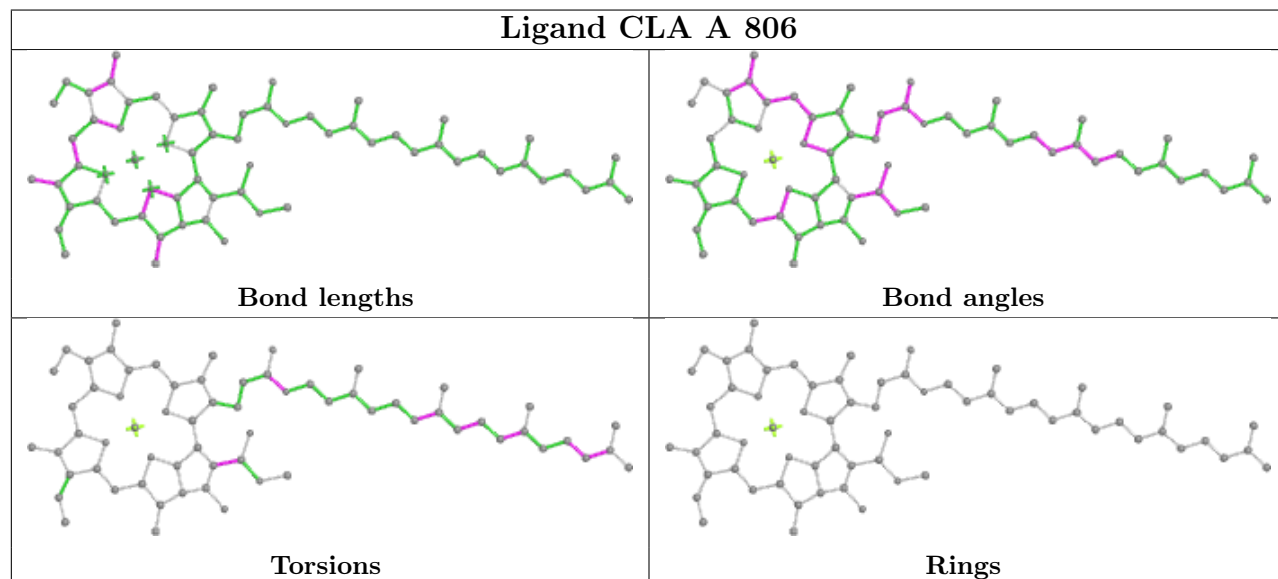
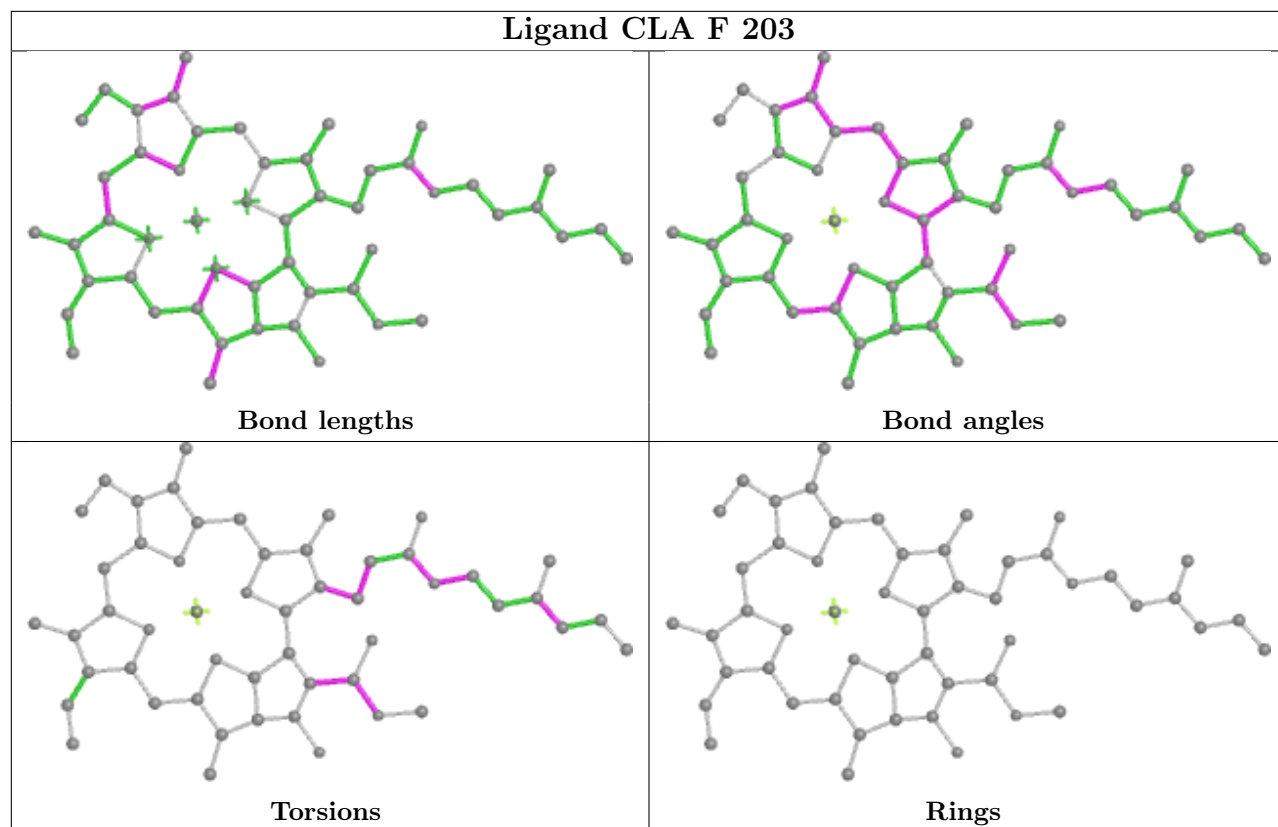


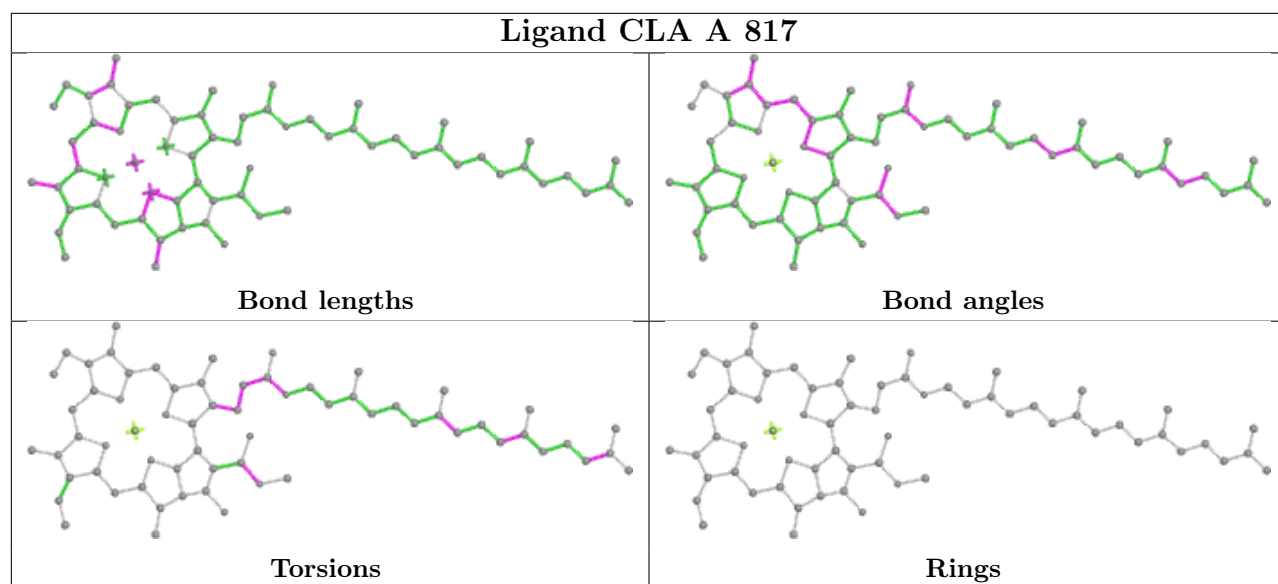
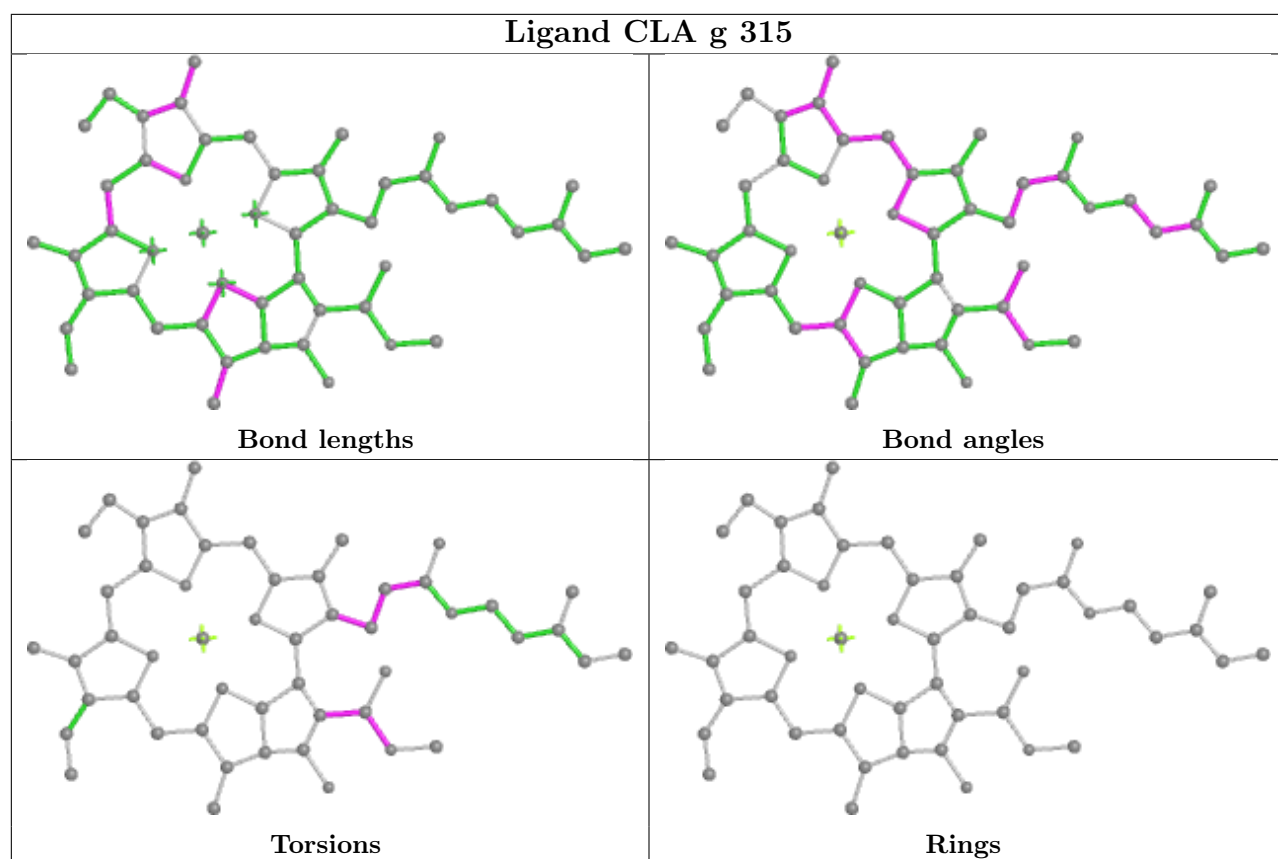


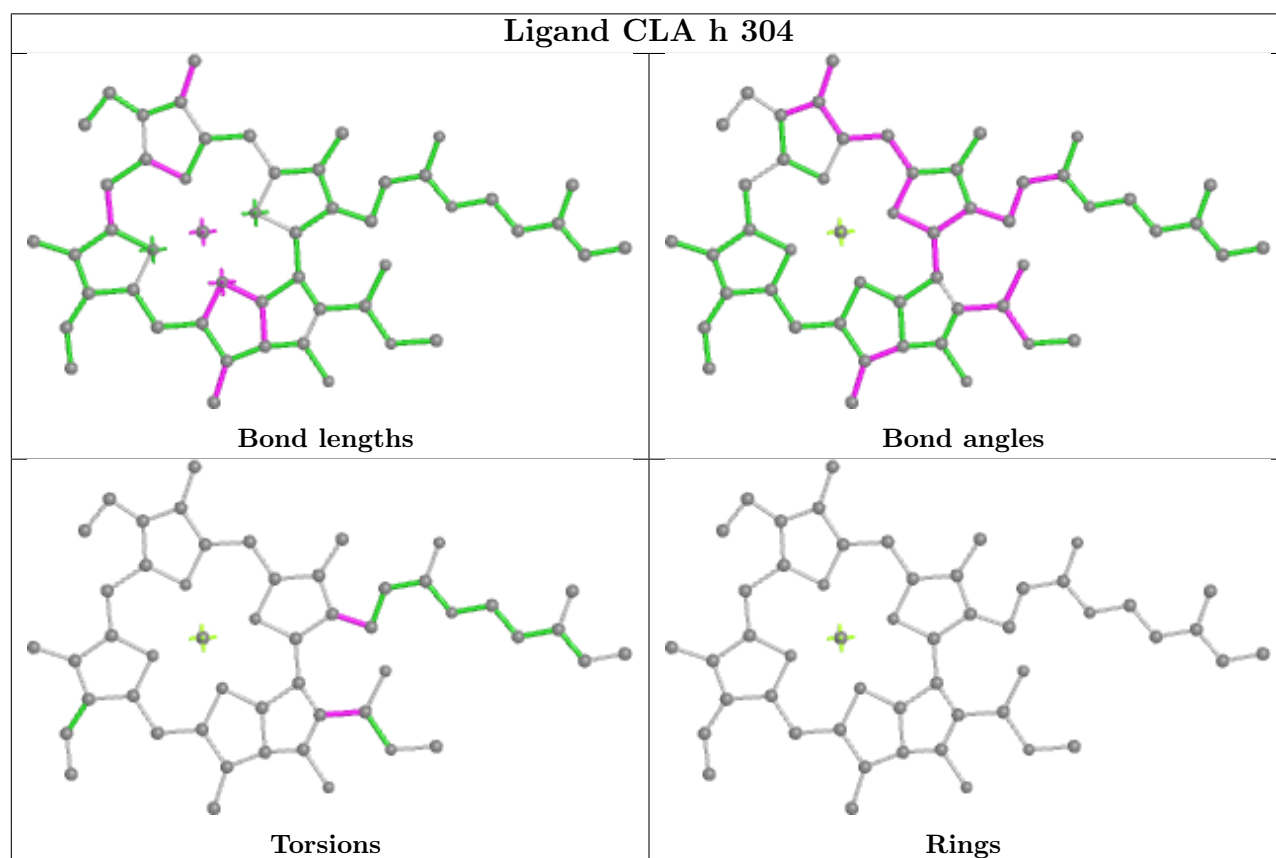
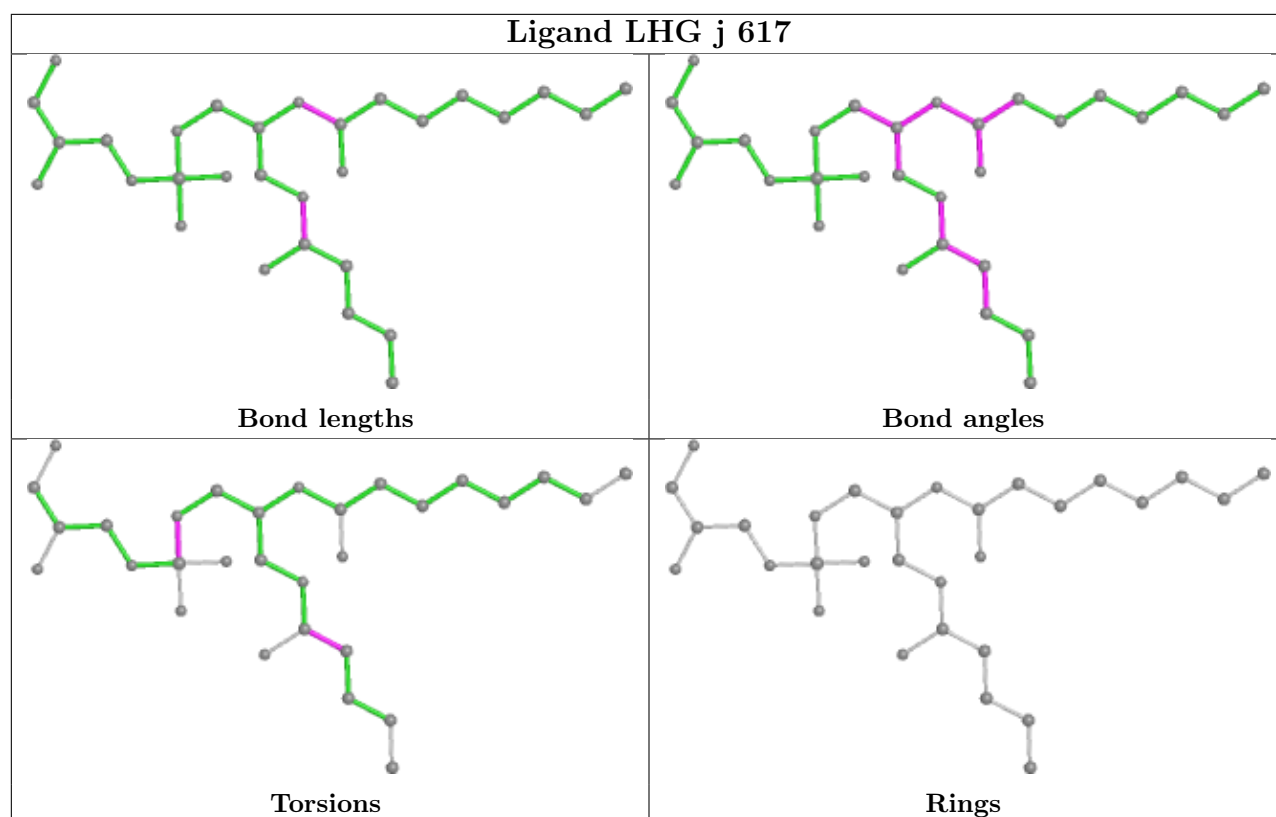


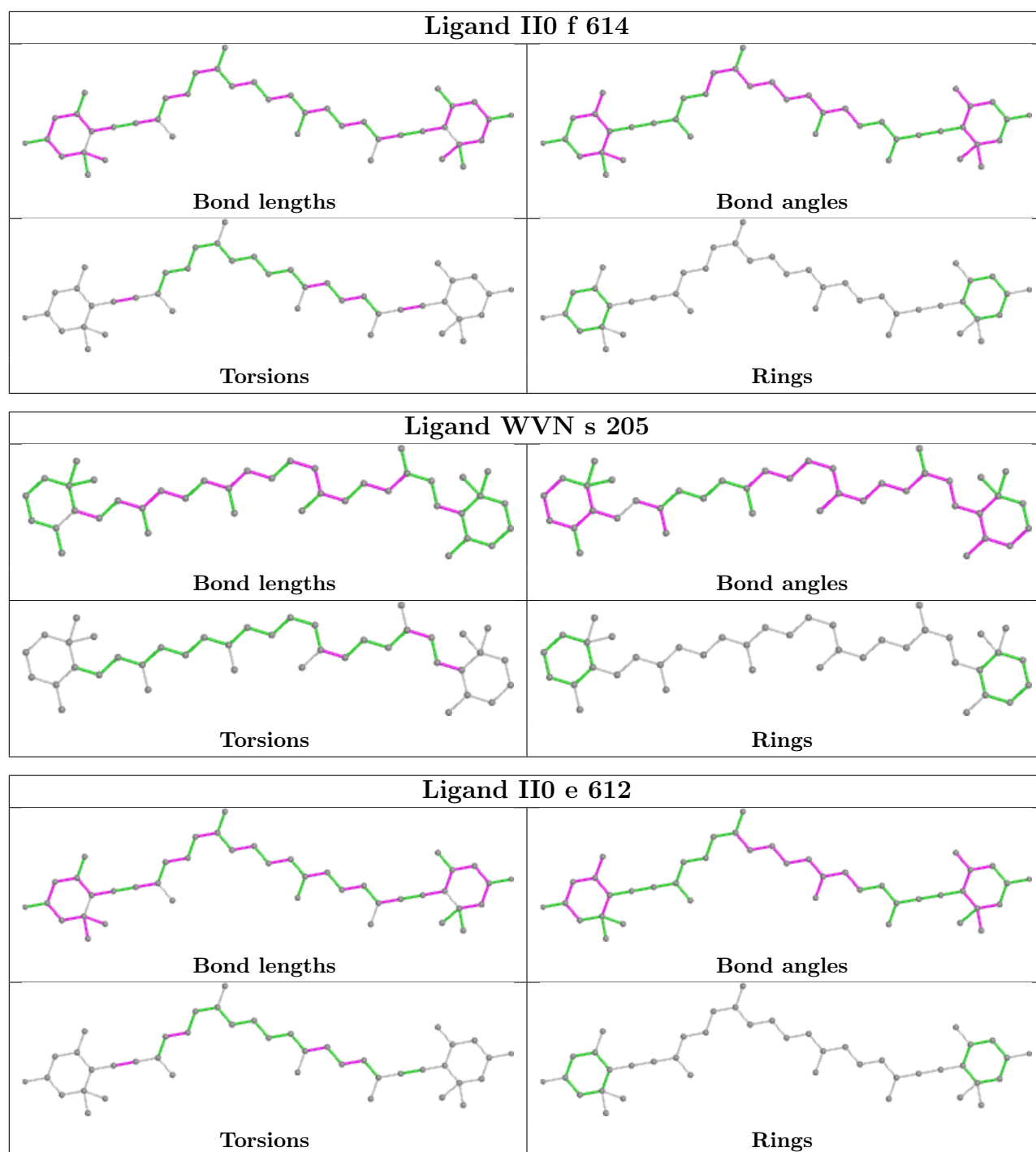


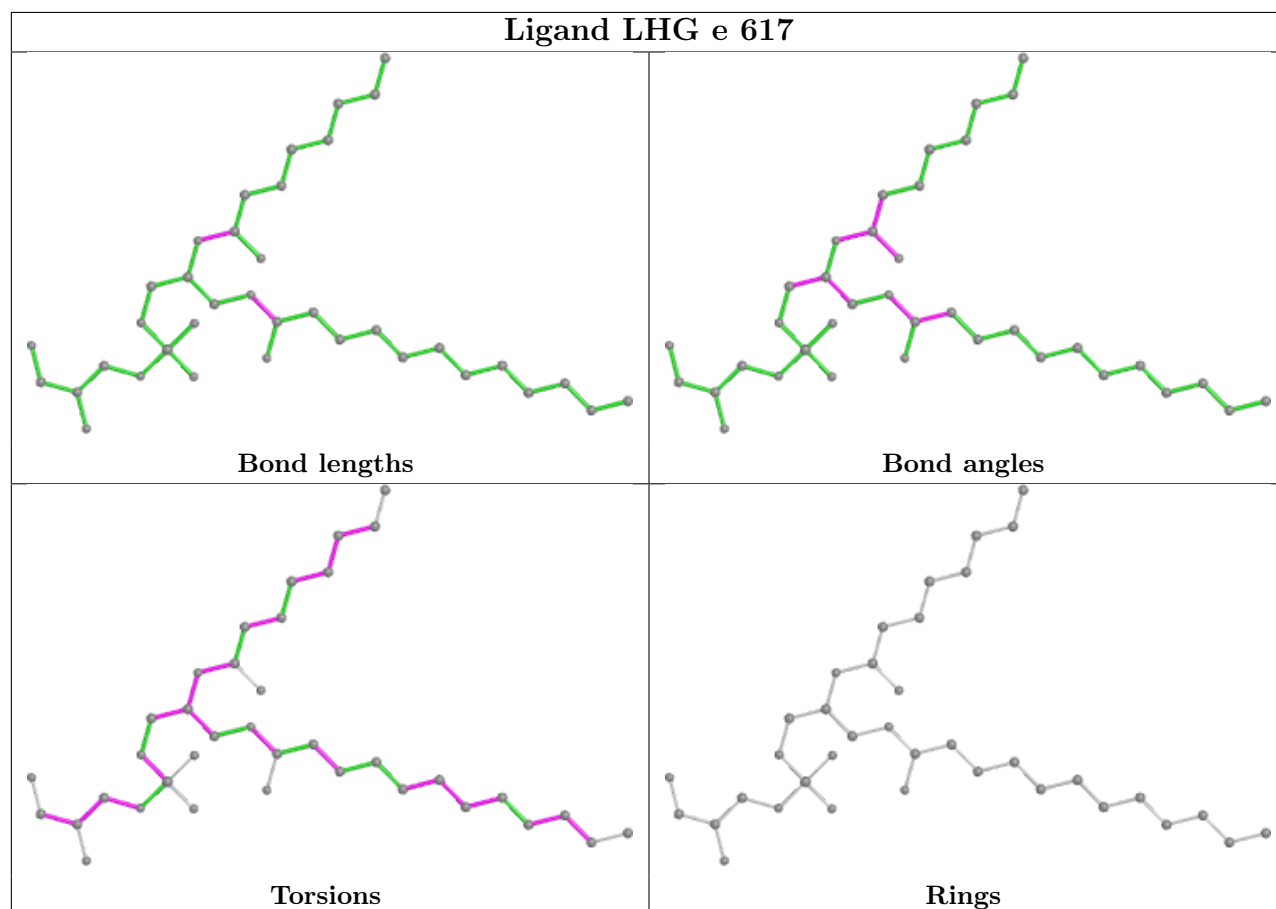
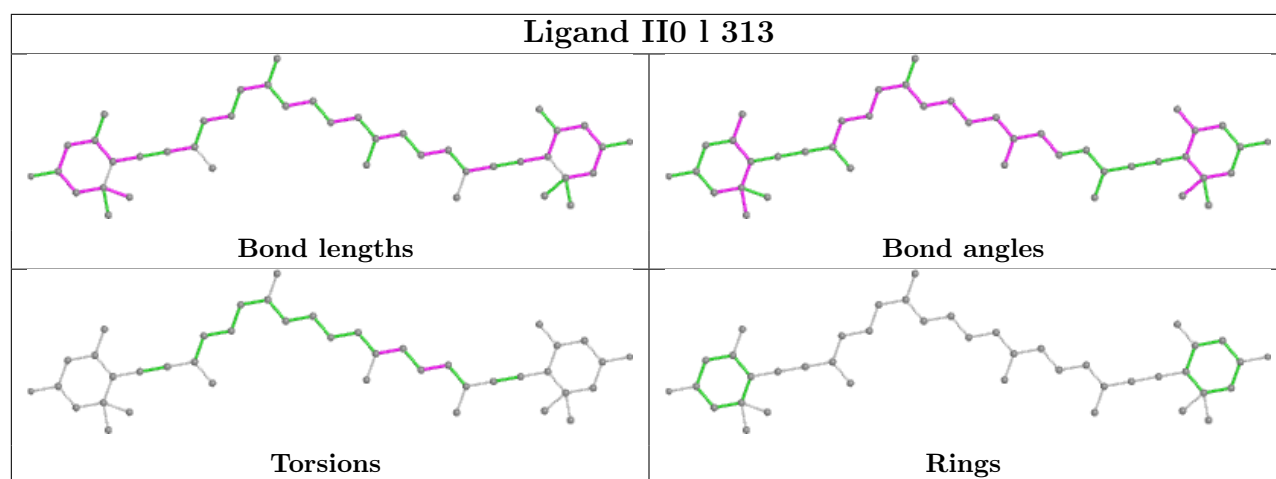


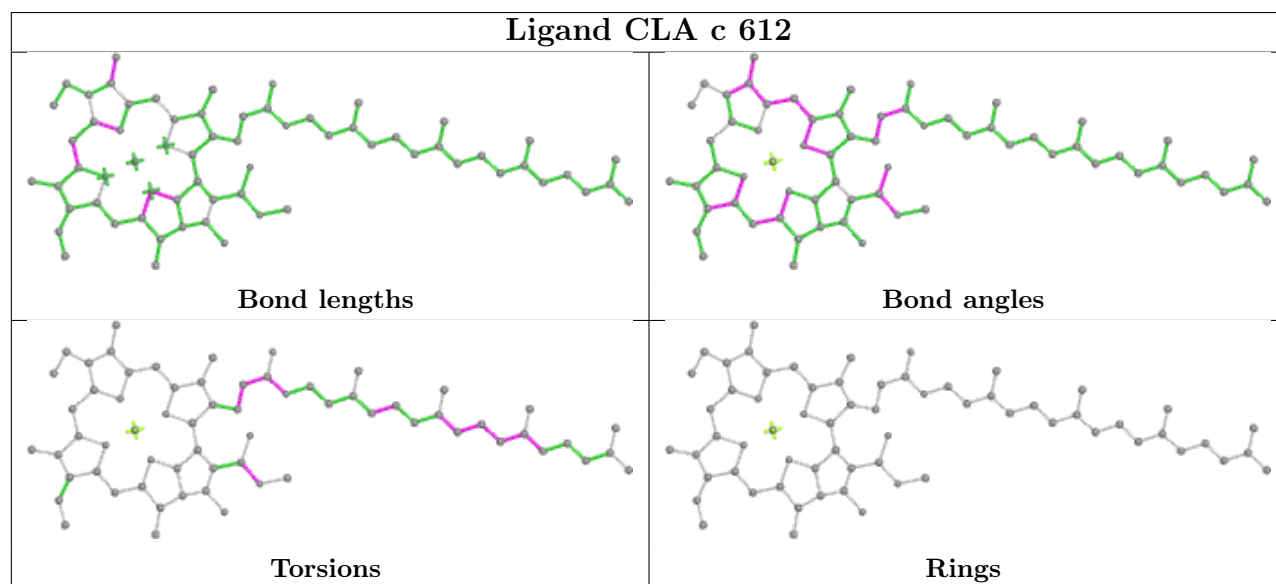
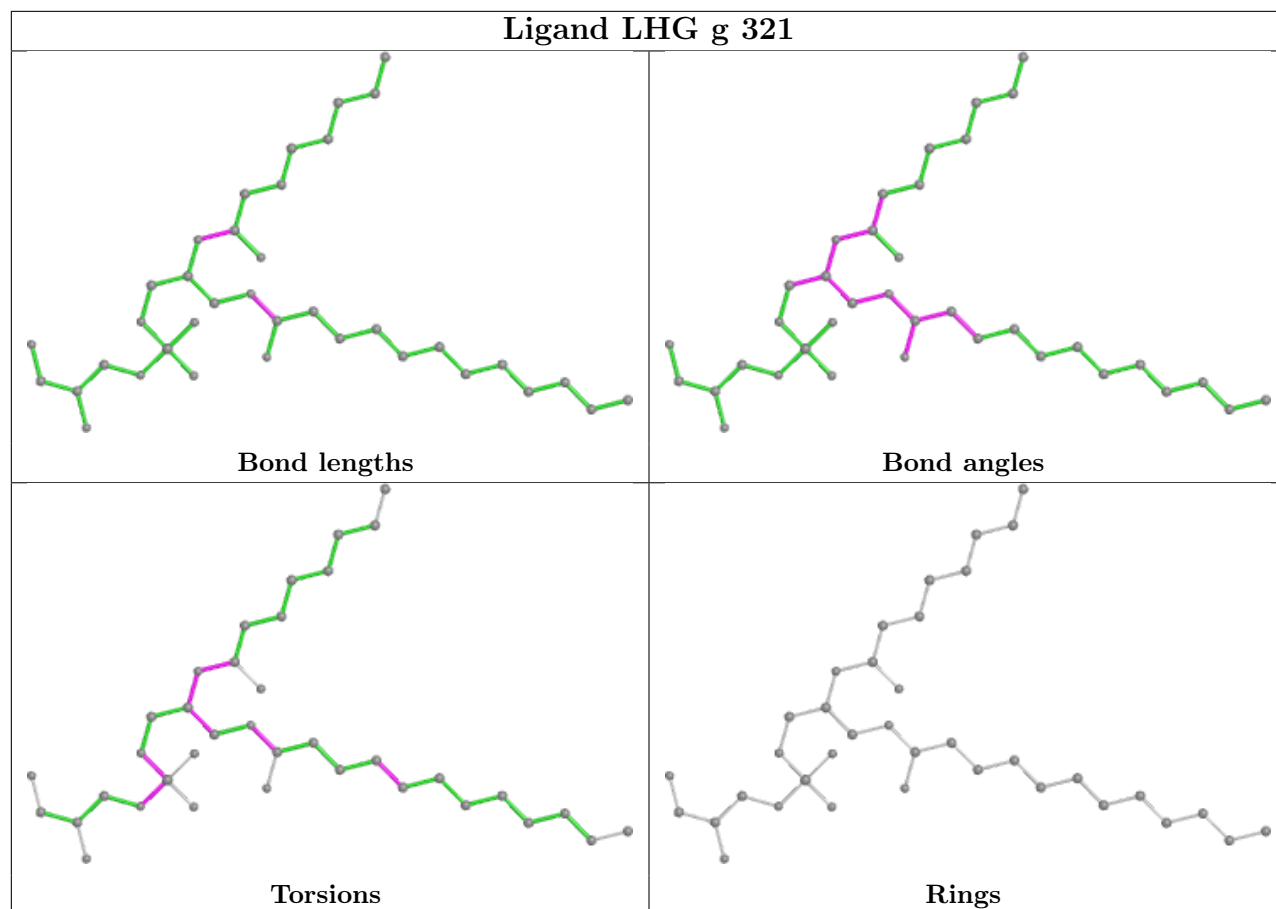


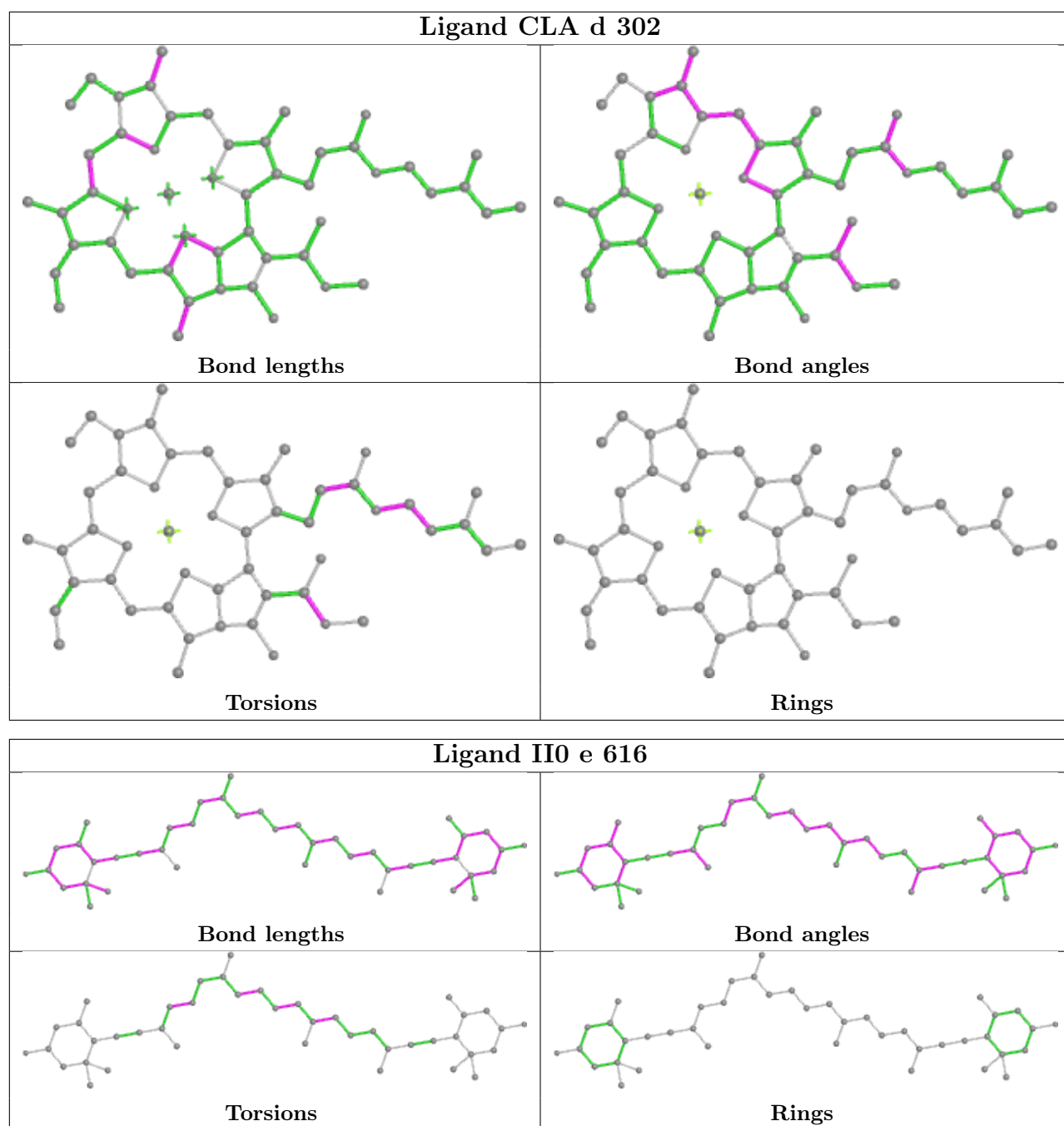


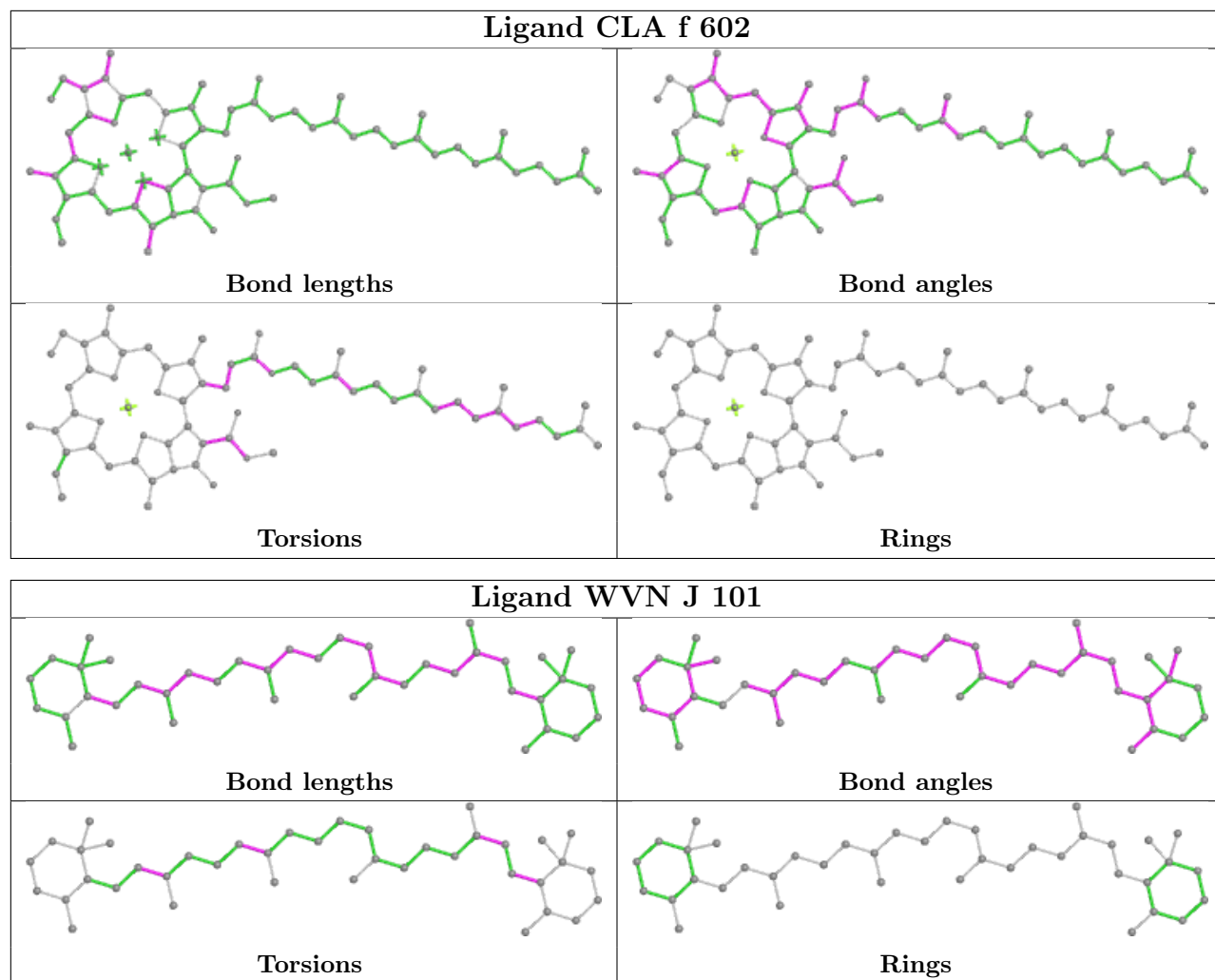


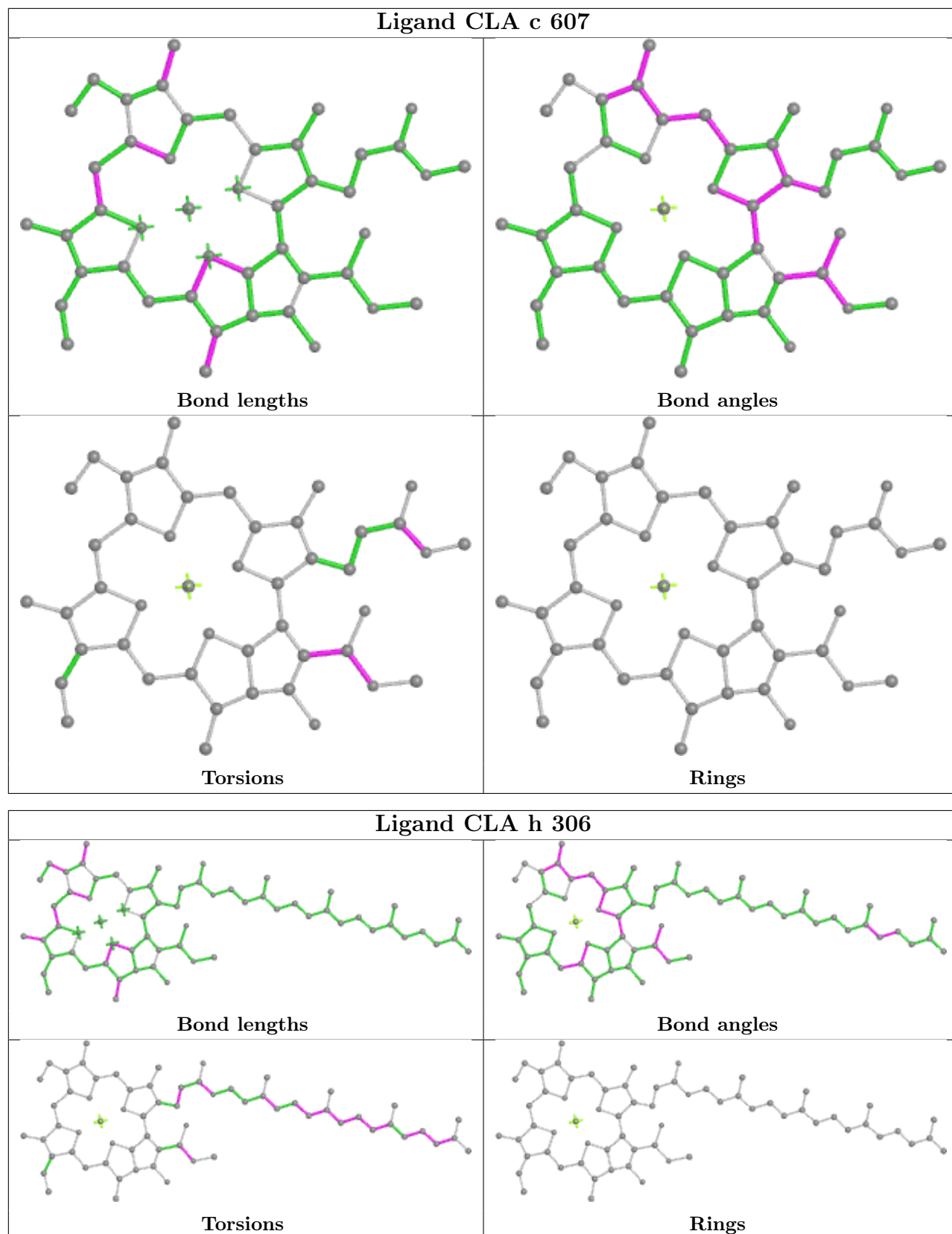


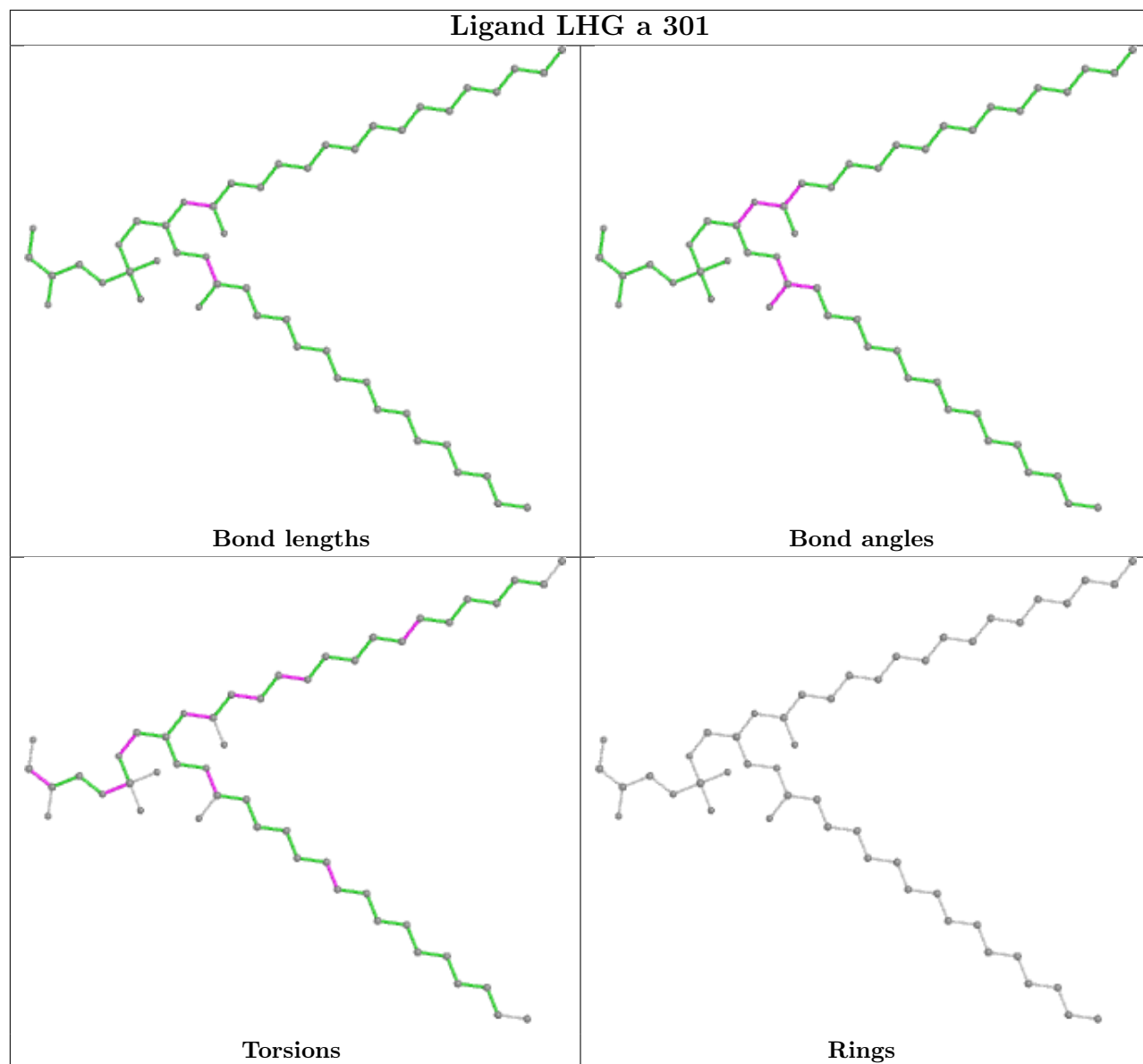


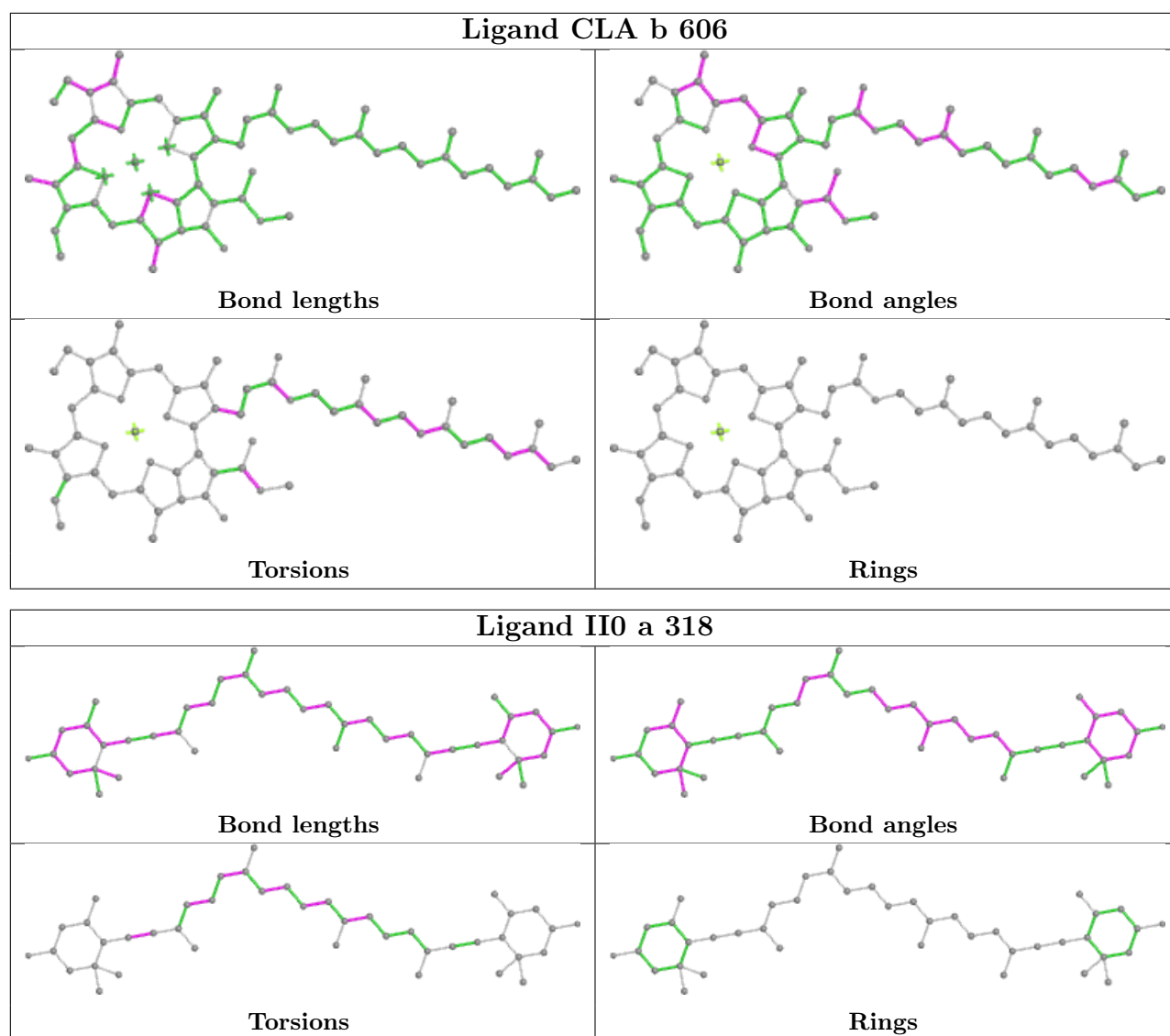


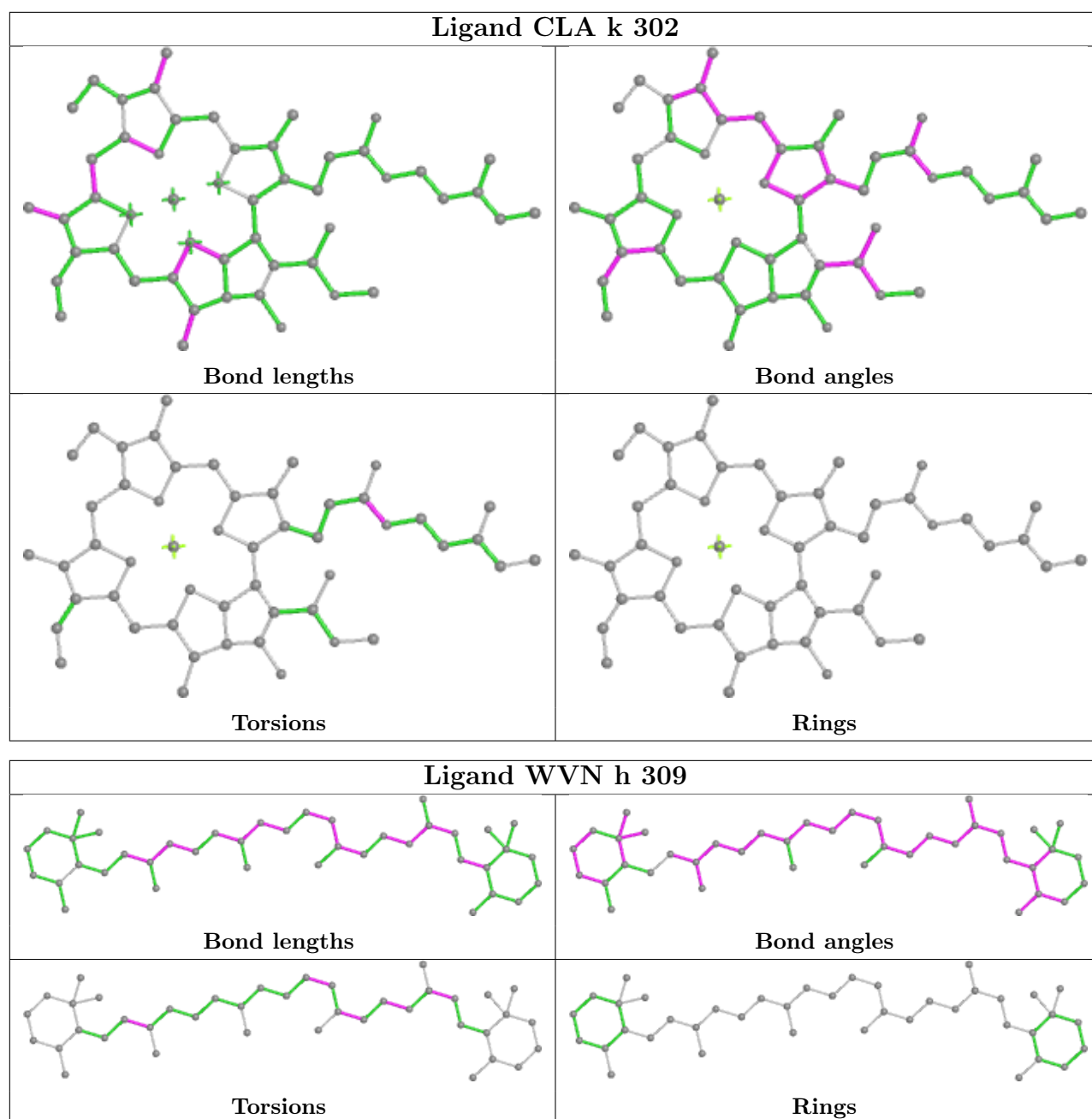


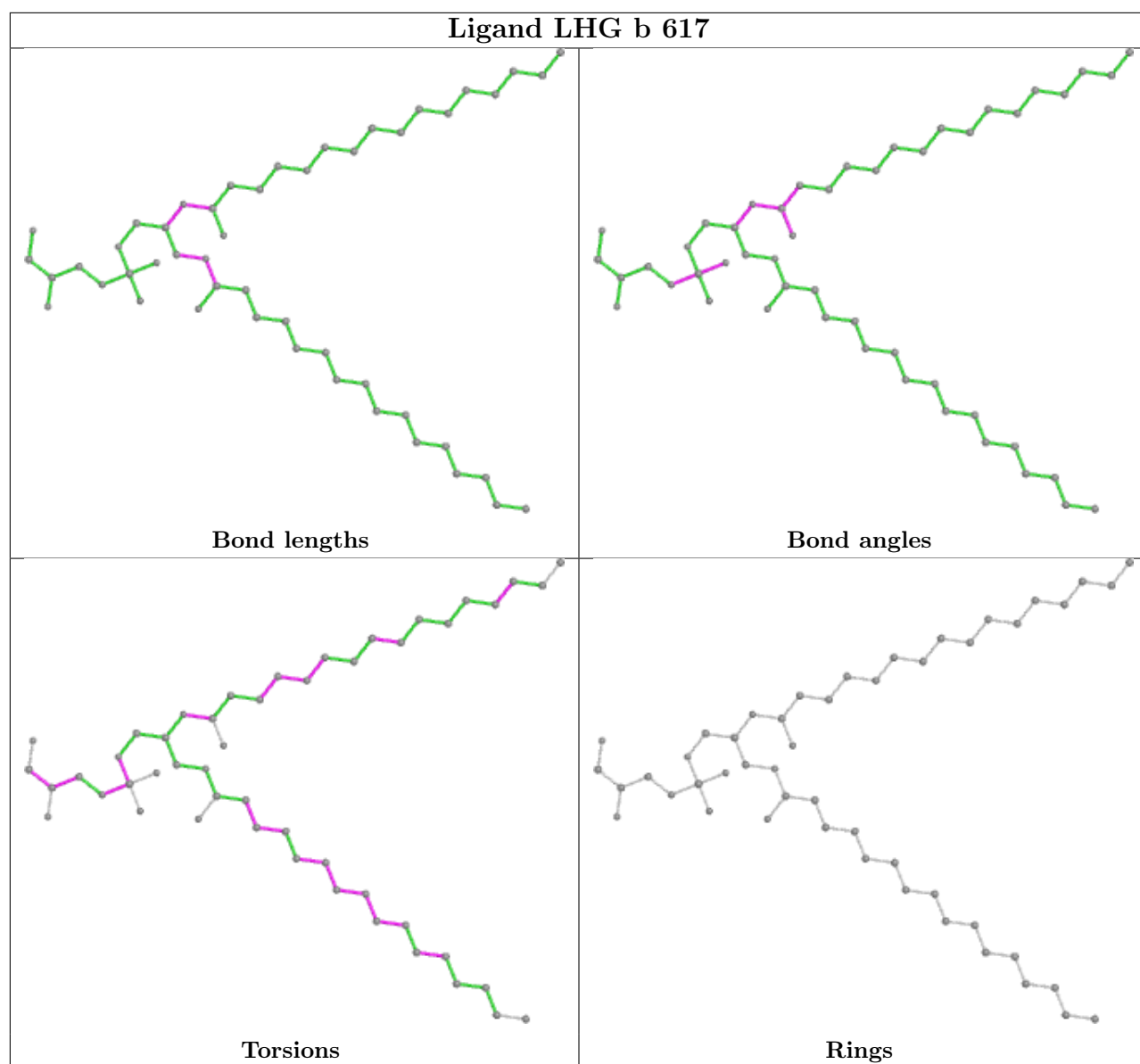


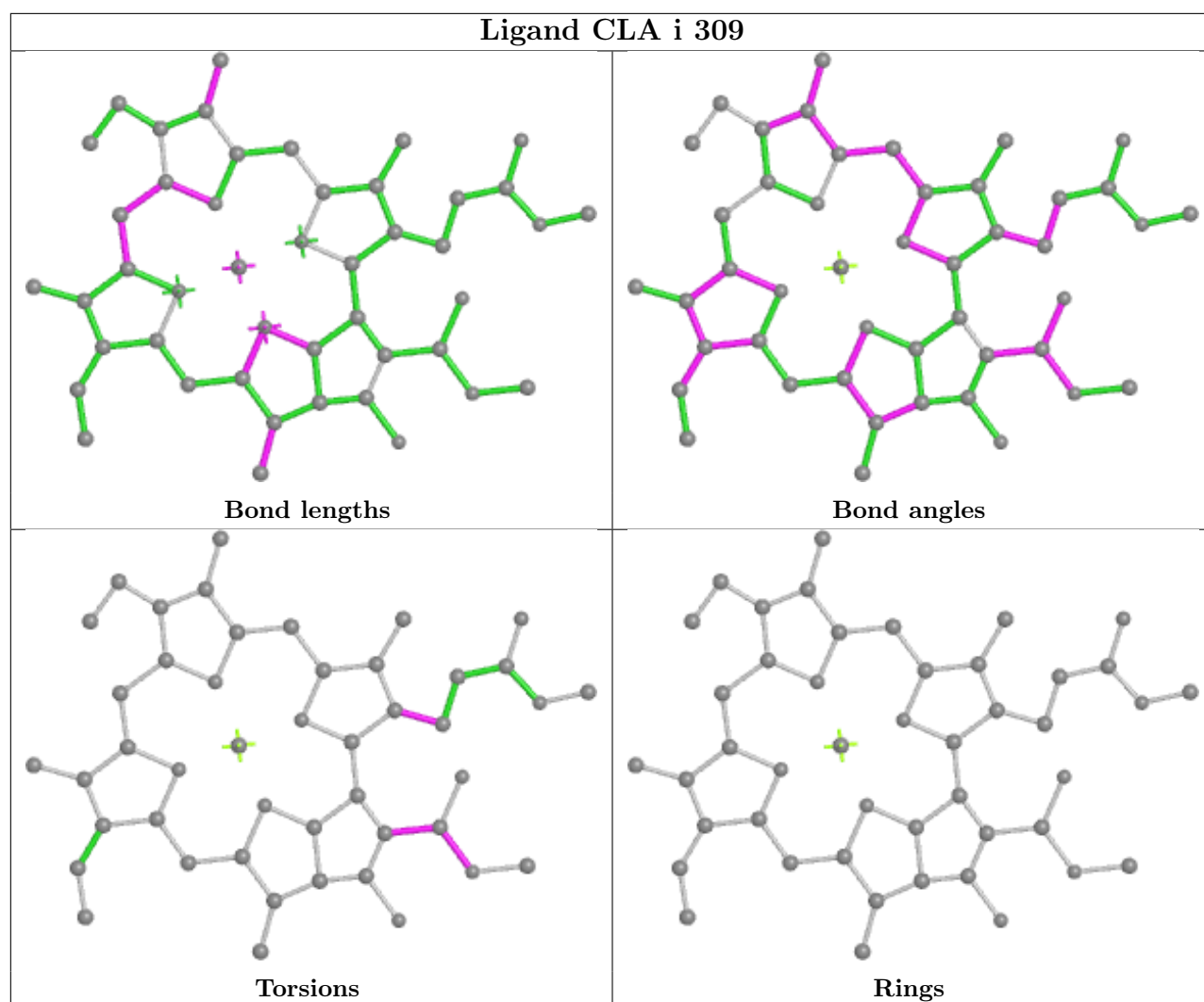












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

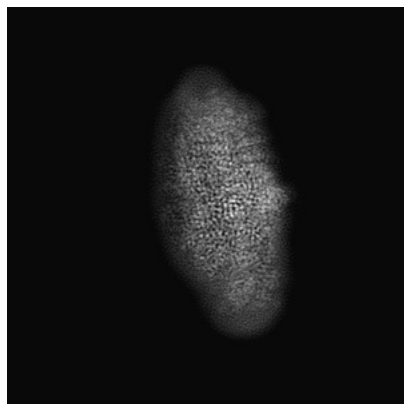
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-37659. These allow visual inspection of the internal detail of the map and identification of artifacts.

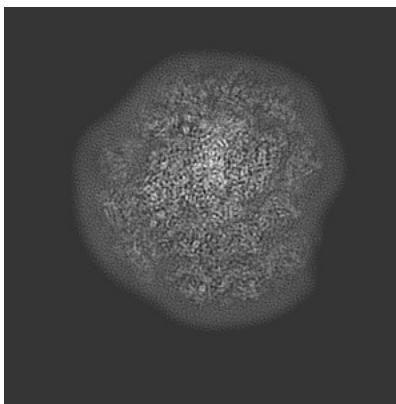
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

6.1.1 Primary map



X

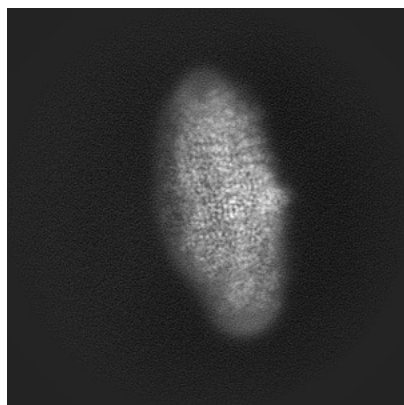


Y

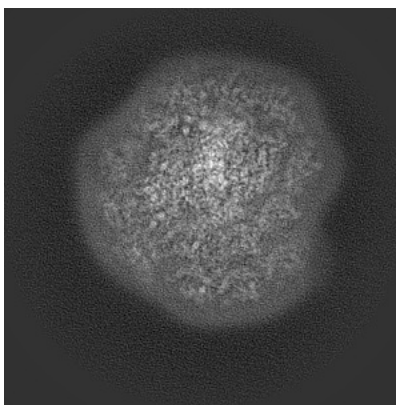


Z

6.1.2 Raw map



X



Y

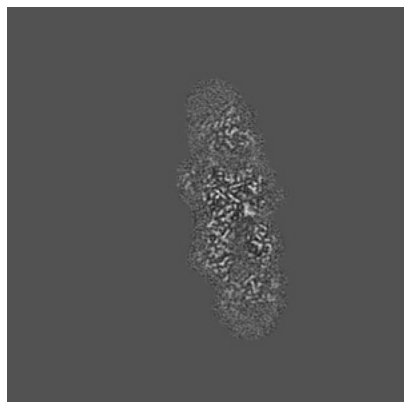


Z

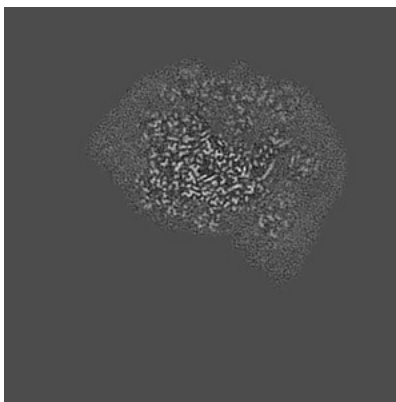
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

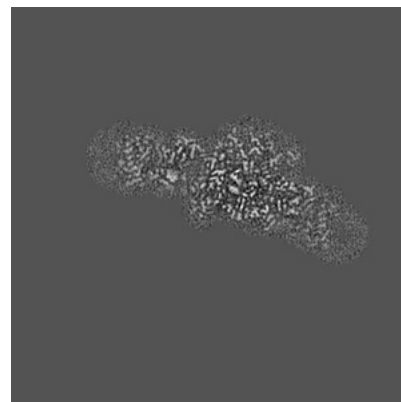
6.2.1 Primary map



X Index: 160

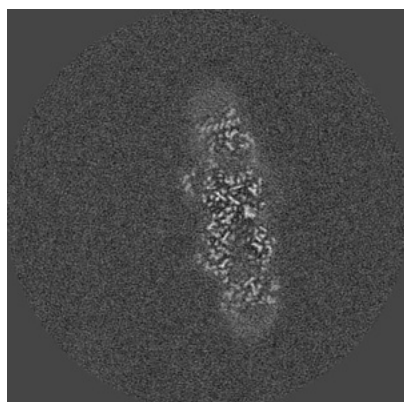


Y Index: 160

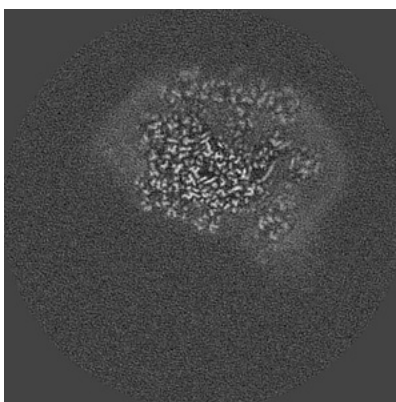


Z Index: 160

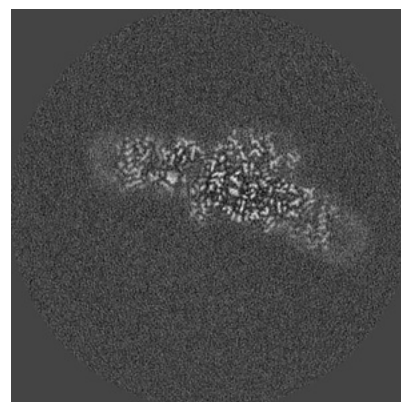
6.2.2 Raw map



X Index: 160



Y Index: 160

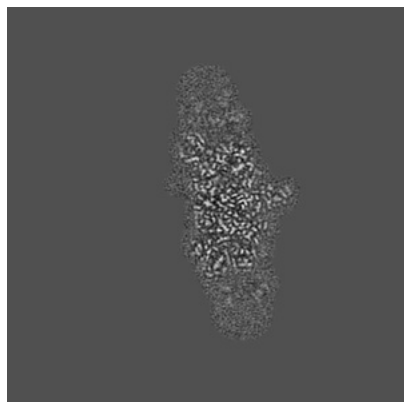


Z Index: 160

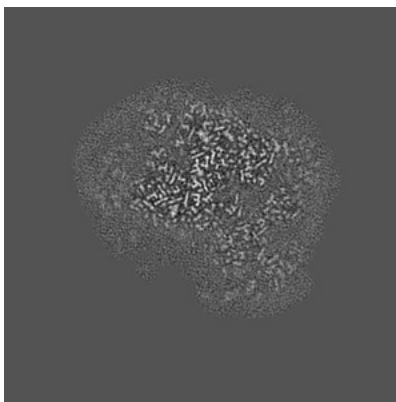
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

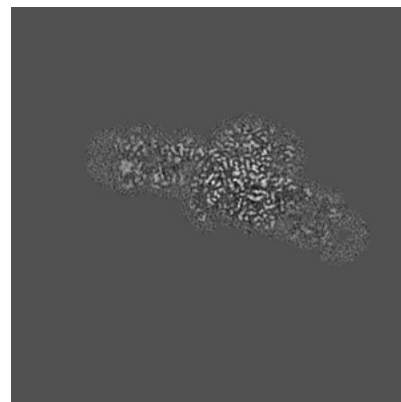
6.3.1 Primary map



X Index: 181

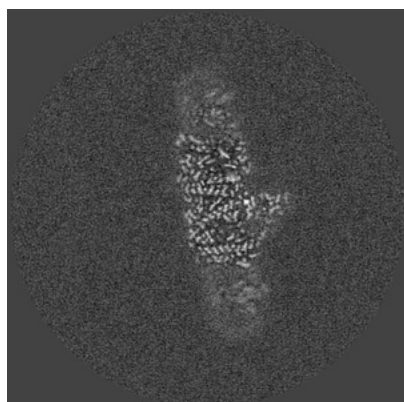


Y Index: 174

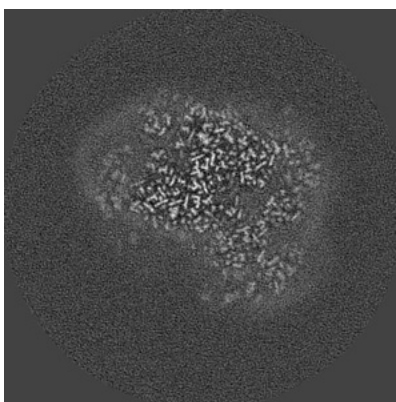


Z Index: 164

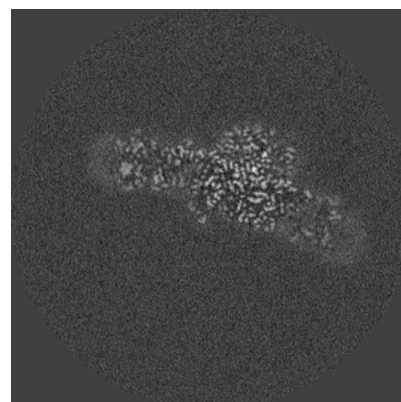
6.3.2 Raw map



X Index: 193



Y Index: 174

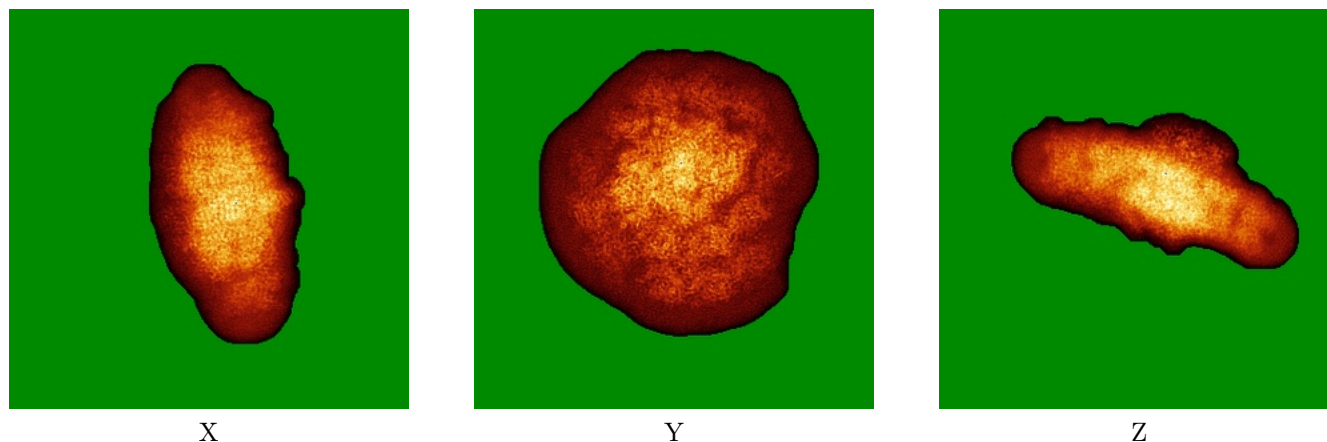


Z Index: 164

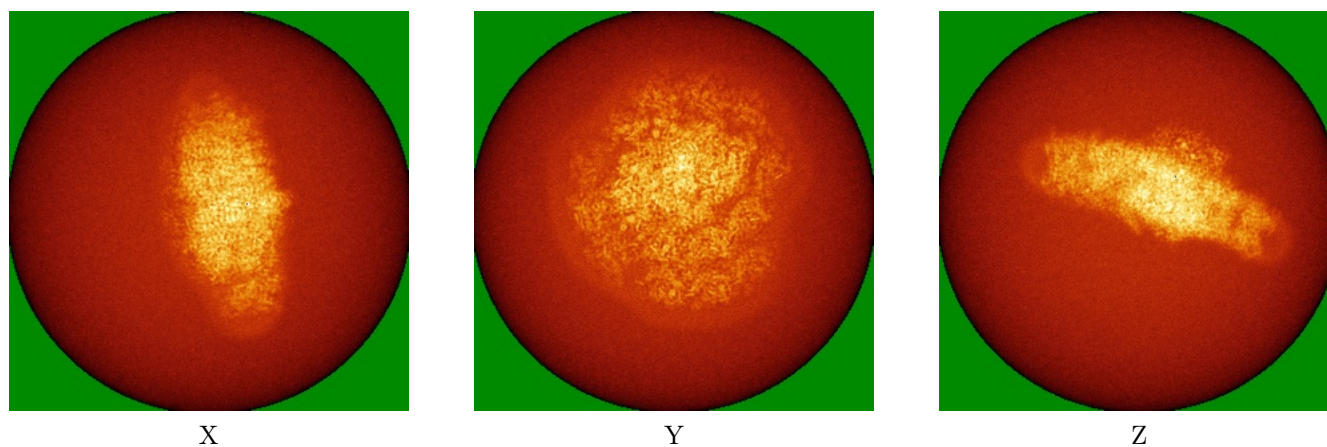
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1 Primary map



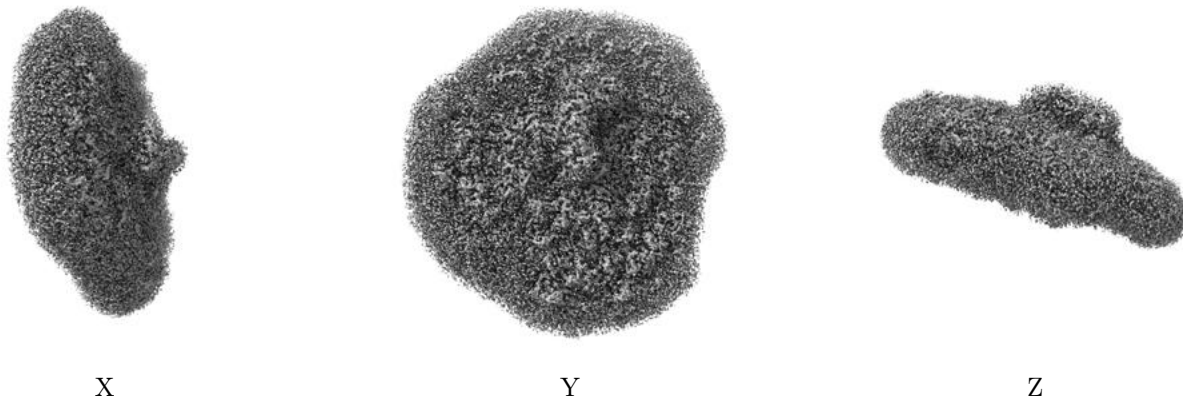
6.4.2 Raw map



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.

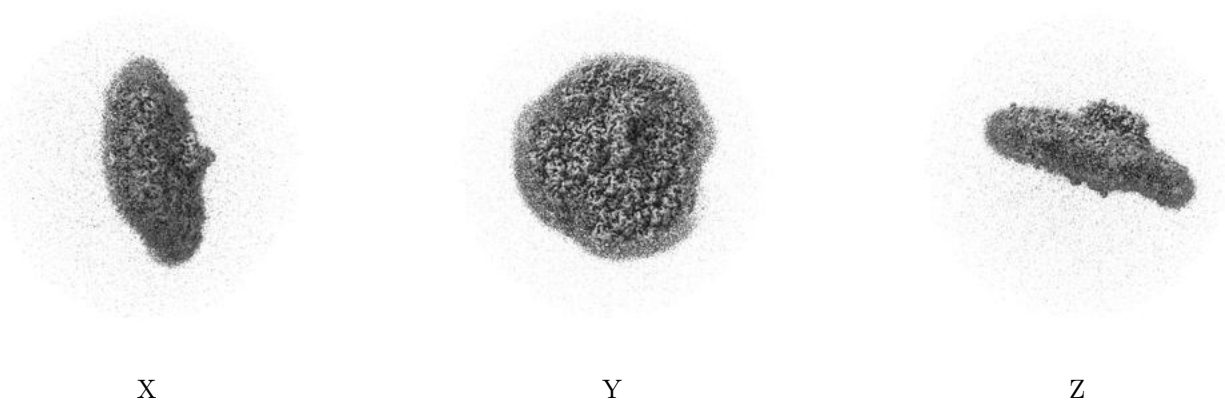
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.023. 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.

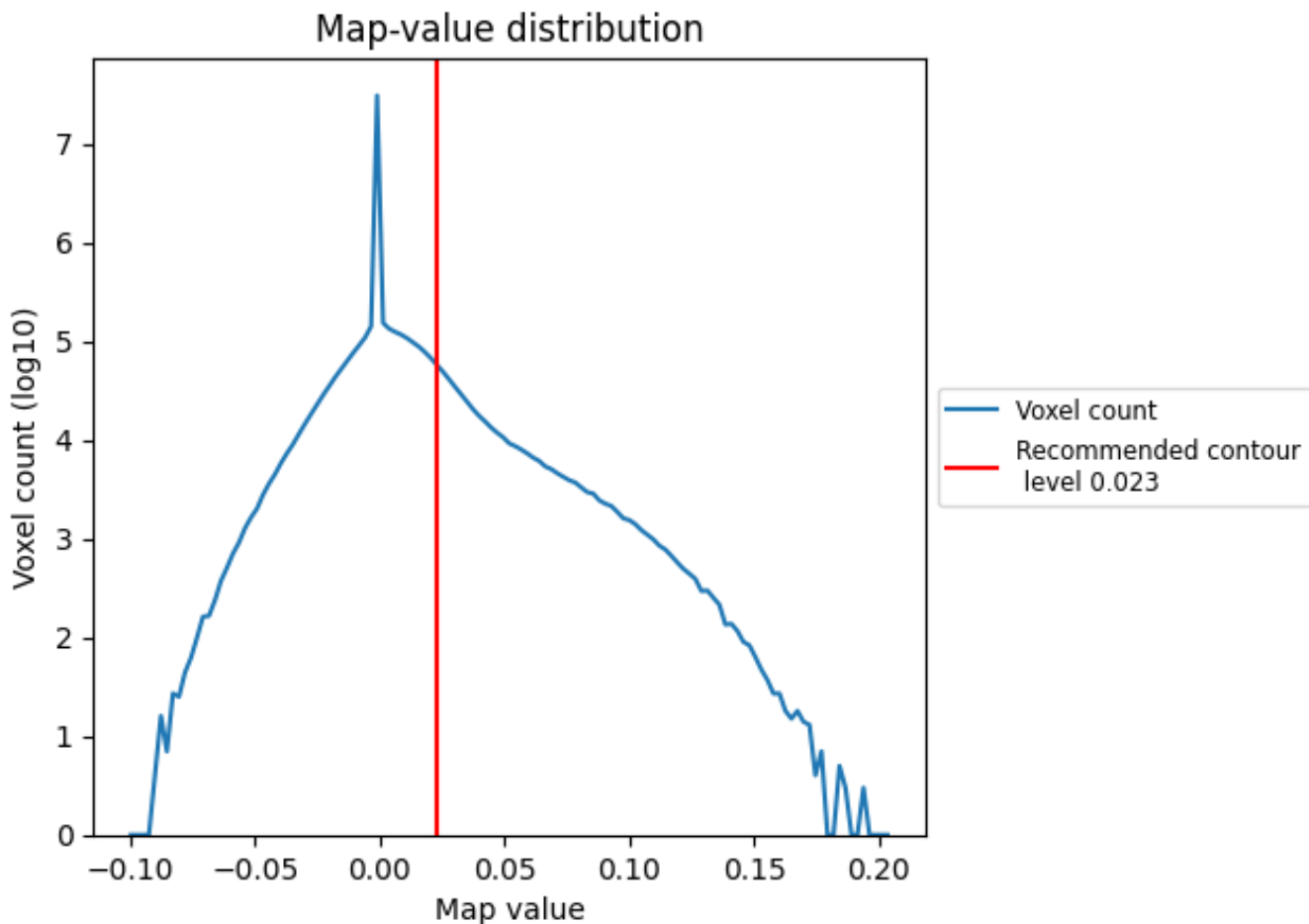
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

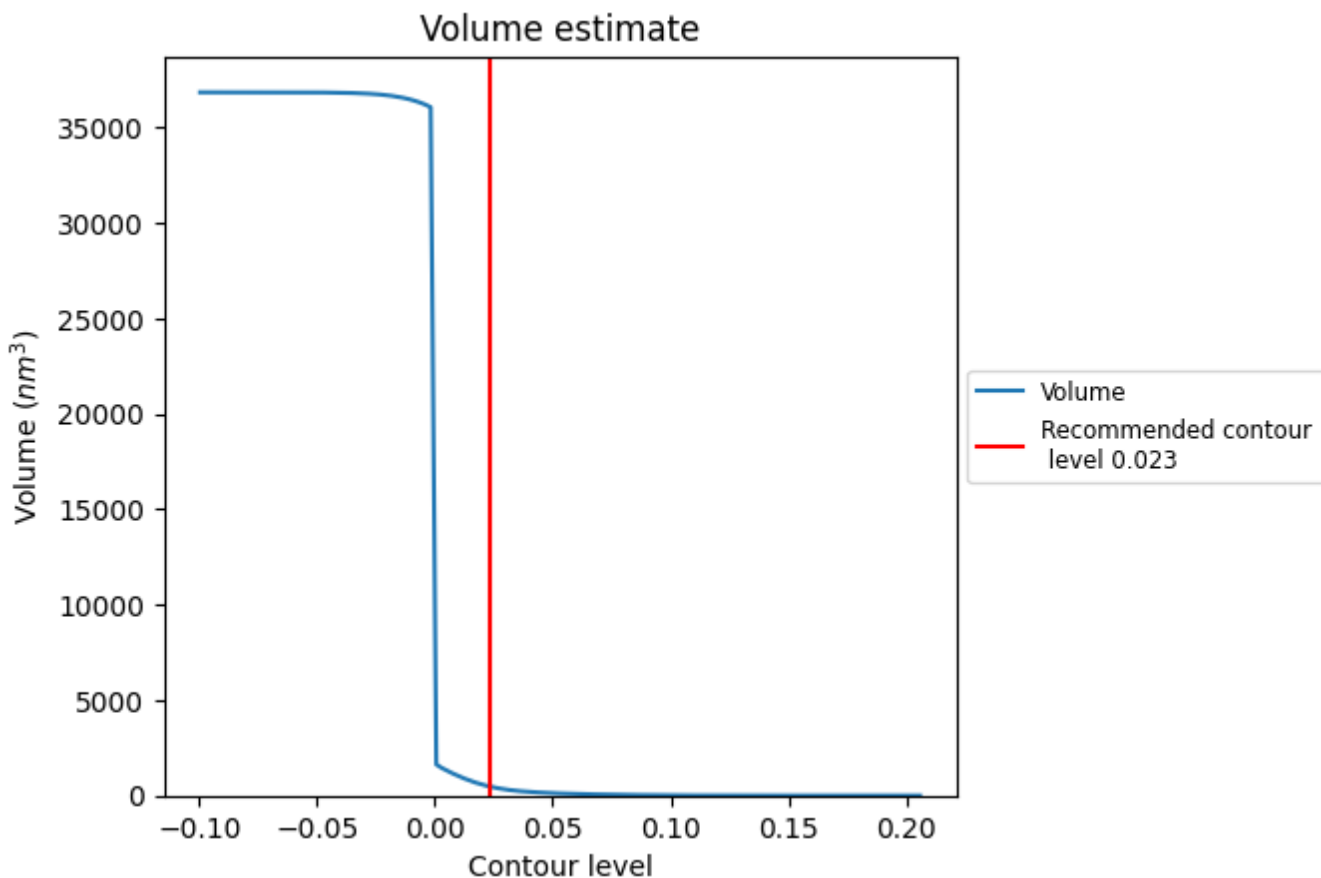
This section contains the results of statistical analysis of the map.

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.

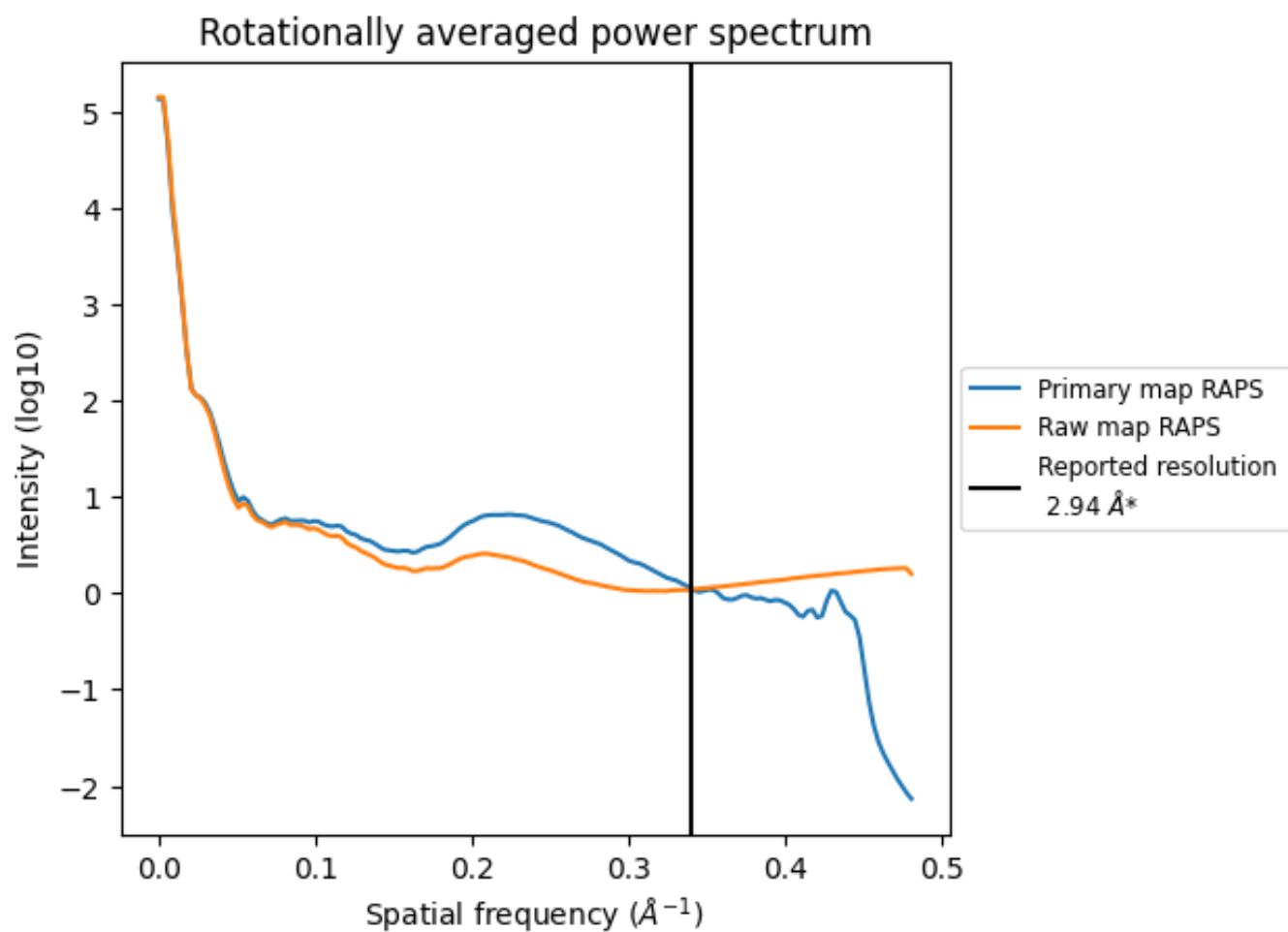
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 484 nm³; this corresponds to an approximate mass of 437 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

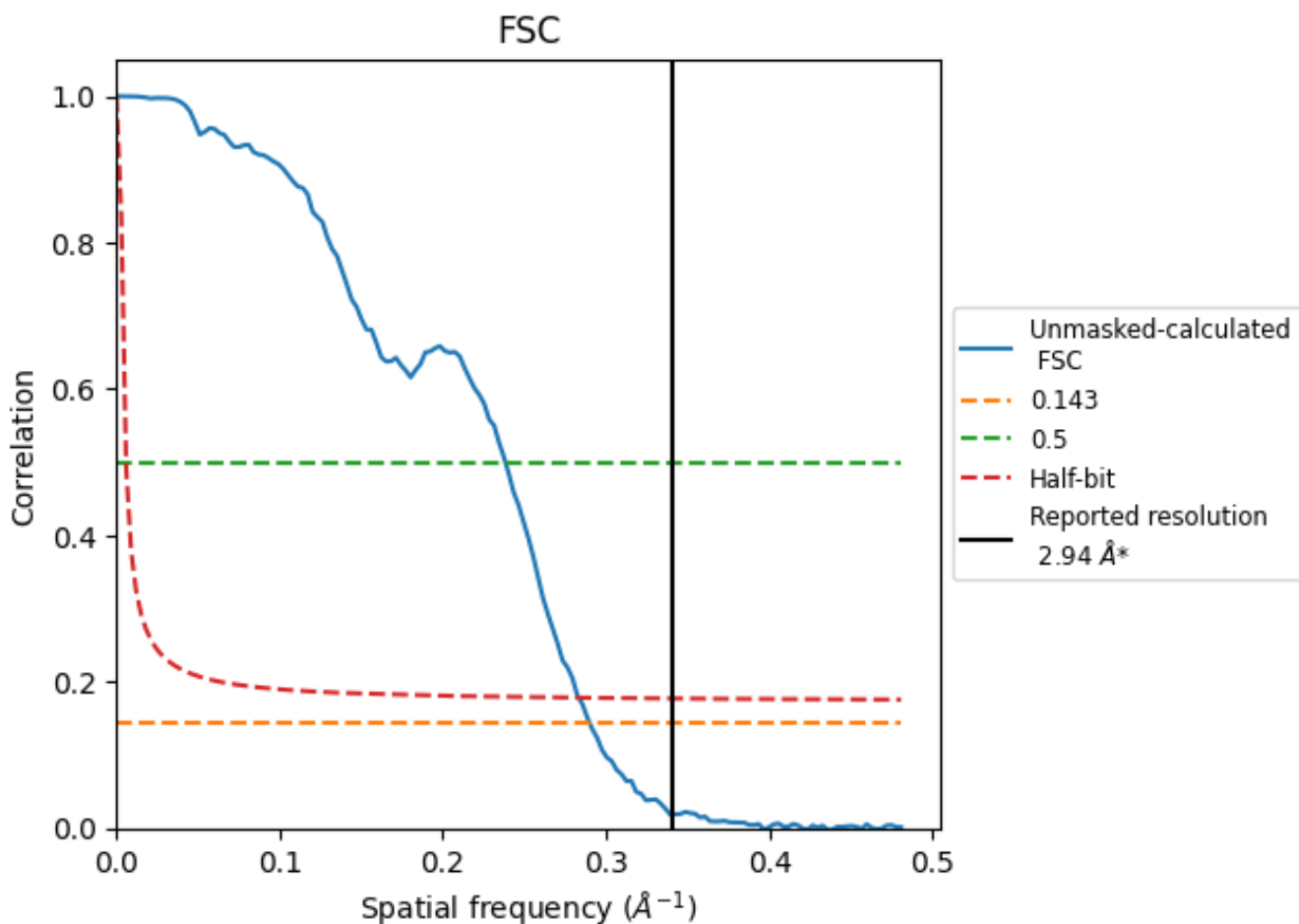


*Reported resolution corresponds to spatial frequency of 0.340 Å⁻¹

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 0.340 Å⁻¹

8.2 Resolution estimates [i](#)

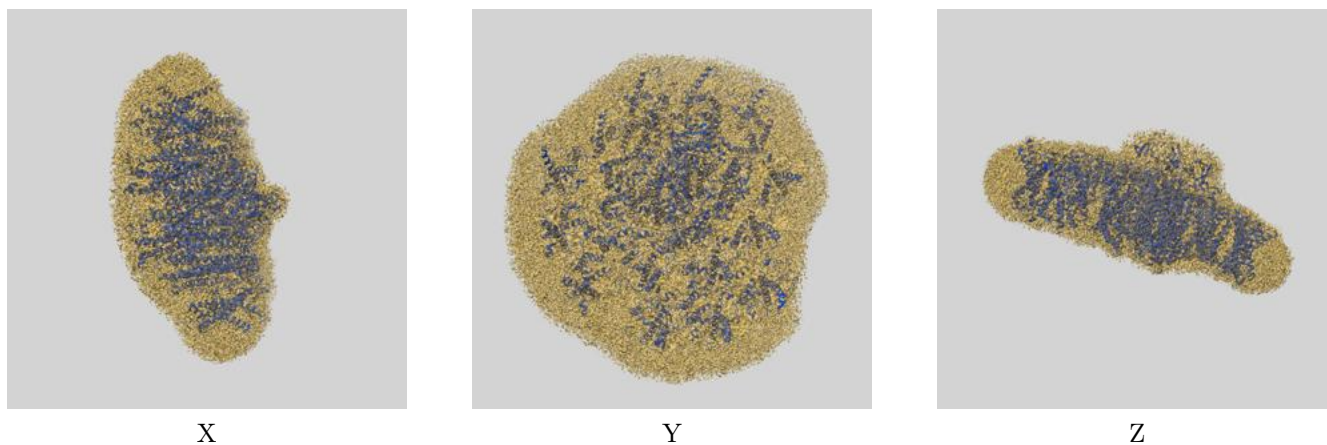
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.94	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.45	4.20	3.53

*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 3.45 differs from the reported value 2.94 by more than 10 %

9 Map-model fit [i](#)

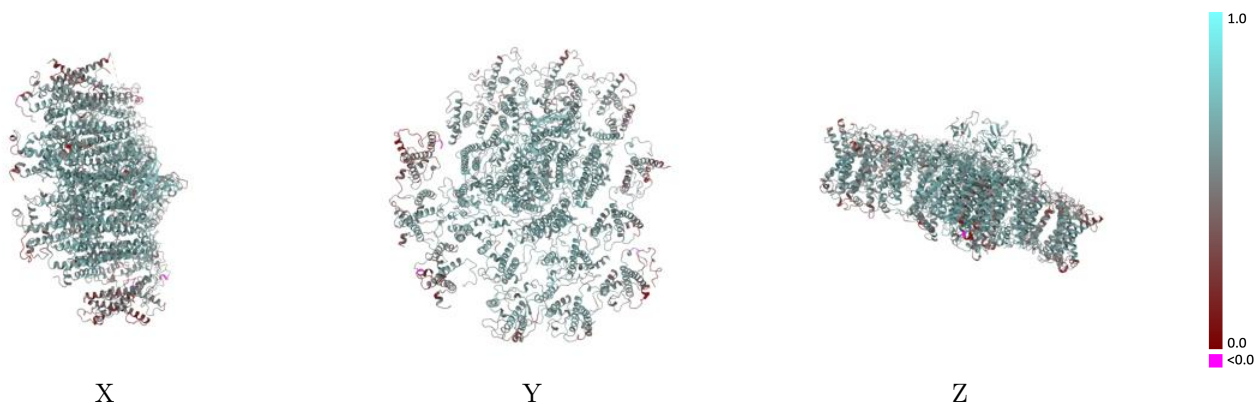
This section contains information regarding the fit between EMDB map EMD-37659 and PDB model 8WMV. Per-residue inclusion information can be found in section 3 on page 40.

9.1 Map-model overlay [i](#)



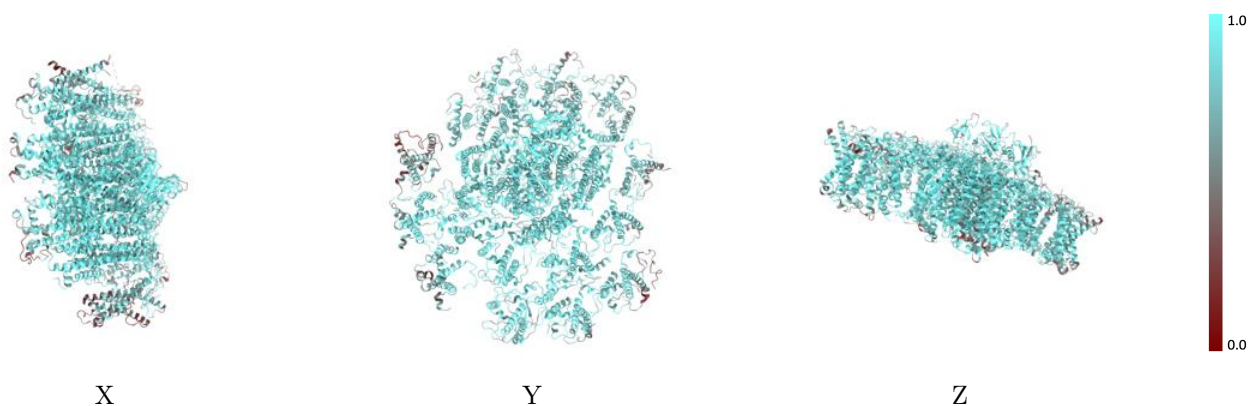
The images above show the 3D surface view of the map at the recommended contour level 0.023 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



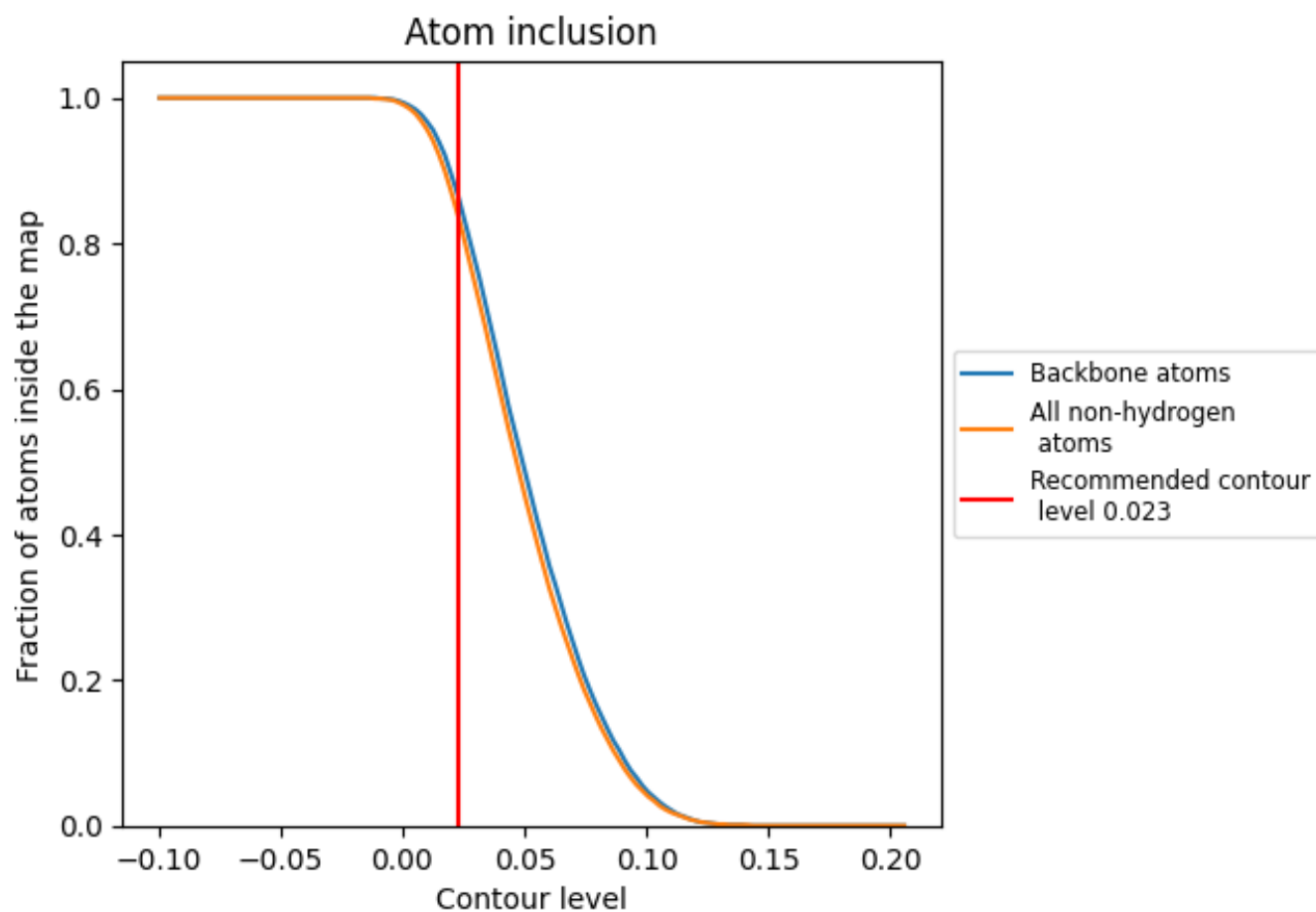
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.023).



























































9.4 Atom inclusion [i](#)



At the recommended contour level, 86% of all backbone atoms, 84% 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 (0.023) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8360	 0.5550
A	 0.9490	 0.6430
B	 0.9550	 0.6440
C	 0.9700	 0.6420
D	 0.8900	 0.5820
E	 0.8700	 0.5730
F	 0.9040	 0.6050
I	 0.9170	 0.5980
J	 0.9030	 0.6120
K	 0.8540	 0.5580
L	 0.8580	 0.5780
M	 0.8990	 0.5790
O	 0.8390	 0.5640
R	 0.9040	 0.5990
a	 0.9020	 0.5930
b	 0.8810	 0.5900
c	 0.8250	 0.5370
d	 0.6560	 0.4160
e	 0.6940	 0.4670
f	 0.7600	 0.5150
g	 0.6950	 0.4750
h	 0.8320	 0.5430
i	 0.5180	 0.3390
j	 0.7880	 0.5030
k	 0.6630	 0.4110
l	 0.8050	 0.5130
m	 0.8210	 0.5450
n	 0.6470	 0.4390
s	 0.8520	 0.5650

