



wwPDB X-ray Structure Validation Summary Report ⓘ

Mar 12, 2024 – 01:04 PM JST

PDB ID : 8IRC
Title : XFEL structure of cyanobacterial photosystem II following one flash (1F) with a 5-millisecond delay (Single conformation)
Authors : Li, H.; Suga, M.; Shen, J.R.
Deposited on : 2023-03-17
Resolution : 2.25 Å (reported)

This is a wwPDB X-ray Structure 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/XrayValidationReportHelp>

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:

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

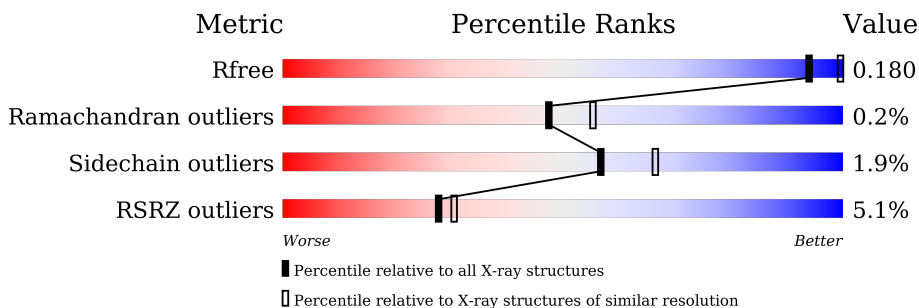
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.25 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.



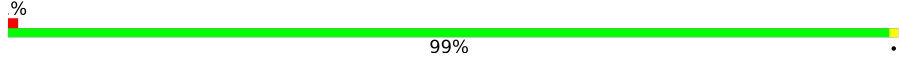
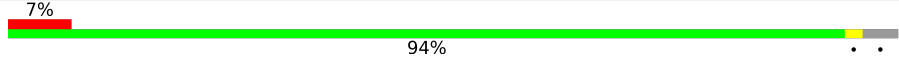


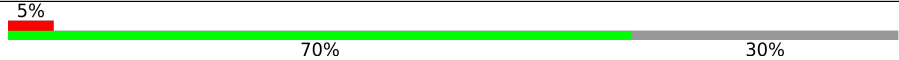
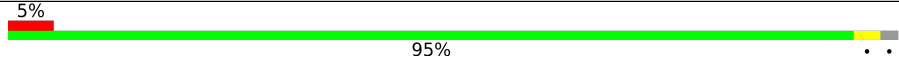
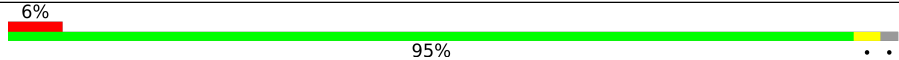
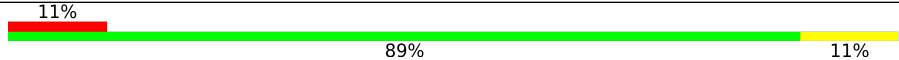
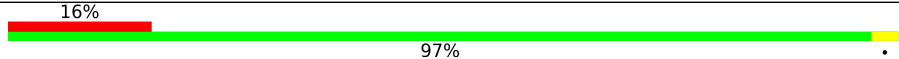
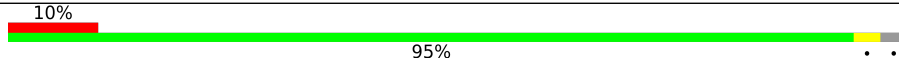
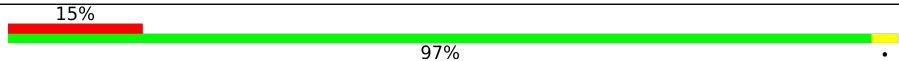
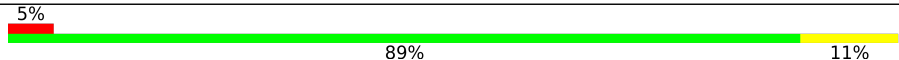
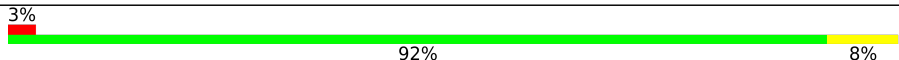
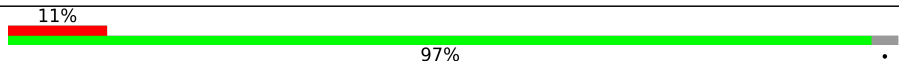
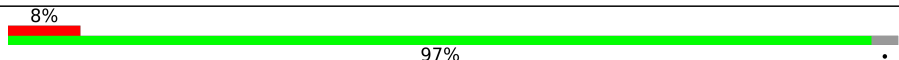
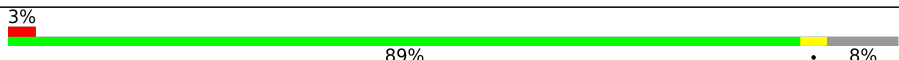
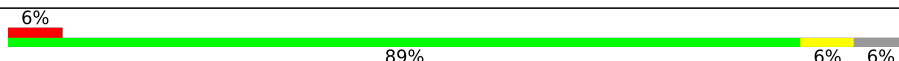
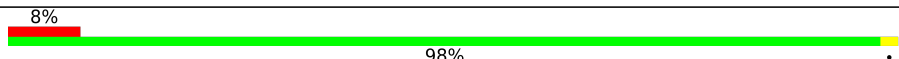
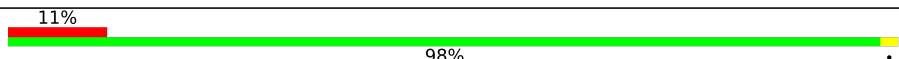

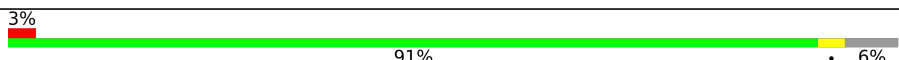
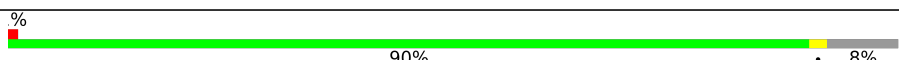
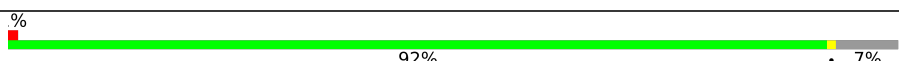
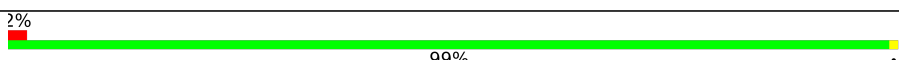
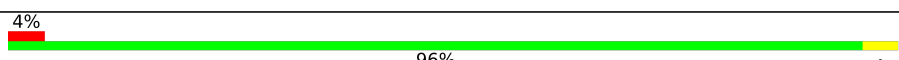
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1377 (2.26-2.26)
Ramachandran outliers	138981	1449 (2.26-2.26)
Sidechain outliers	138945	1450 (2.26-2.26)
RSRZ outliers	127900	1356 (2.26-2.26)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	344	 2% 97% ..
1	a	344	 2% 97% ..
2	B	505	 2% 99% .
2	b	505	 7% 99% .
3	C	455	 2% 98% ..
3	c	455	 4% 99% .
4	D	342	 % 99% .

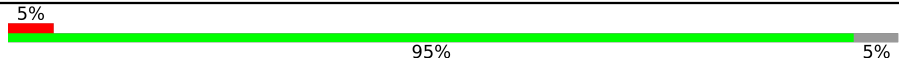
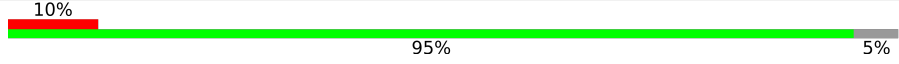
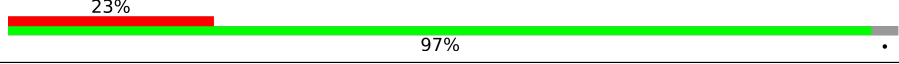
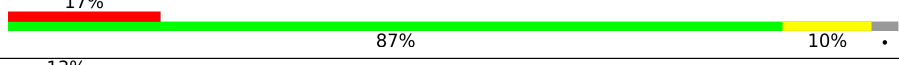
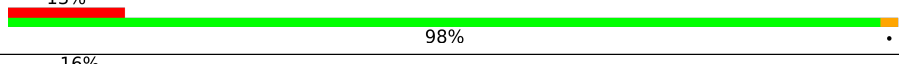
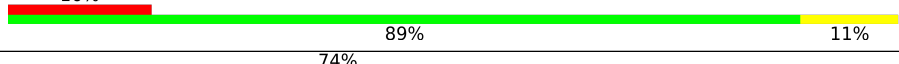
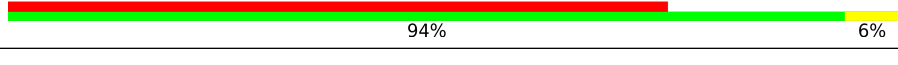
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Mol	Chain	Length	Quality of chain
4	d	342	 % 99%
5	E	84	 7% 94%
5	e	84	 12% 90% 6%
6	F	44	 5% 77% 23%
6	f	44	 5% 70% 30%
7	H	65	 5% 95%
7	h	65	 6% 95%
8	I	38	 11% 89% 11%
8	i	38	 16% 97%
9	J	39	 10% 95%
9	j	39	 15% 97%
10	K	37	 5% 89% 11%
10	k	37	 3% 92% 8%
11	L	37	 11% 97%
11	l	37	 8% 97%
12	M	36	 3% 89% 8%
12	m	36	 6% 89% 6% 6%
13	O	244	 8% 98%
13	o	244	 11% 98%
14	T	32	 6% 88% 6% 6%
14	t	32	 3% 91% 6%
15	U	104	 % 90% 8%
15	u	104	 % 92% 7%
16	V	137	 2% 99%
16	v	137	 4% 96%

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Mol	Chain	Length	Quality of chain
17	X	40	
17	x	40	
18	Y	30	
18	y	30	
19	Z	62	
19	z	62	
20	R	34	

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
23	CLA	A	404	X	-	-	-
23	CLA	A	405	X	-	-	-
23	CLA	A	408	X	-	-	-
23	CLA	B	601	X	-	-	-
23	CLA	B	602	X	-	-	-
23	CLA	B	603	X	-	-	-
23	CLA	B	604	X	-	-	-
23	CLA	B	605	X	-	-	-
23	CLA	B	606	X	-	-	-
23	CLA	B	607	X	-	-	-
23	CLA	B	609	X	-	-	-
23	CLA	B	610	X	-	-	-
23	CLA	B	611	X	-	-	-
23	CLA	B	612	X	-	-	-
23	CLA	B	613	X	-	-	-
23	CLA	B	614	X	-	-	-
23	CLA	B	615	X	-	-	-
23	CLA	B	616	X	-	-	-
23	CLA	C	502	X	-	-	-
23	CLA	C	503	X	-	-	-
23	CLA	C	504	X	-	-	-
23	CLA	C	505	X	-	-	-
23	CLA	C	506	X	-	-	-
23	CLA	C	507	X	-	-	-
23	CLA	C	508	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
23	CLA	C	509	X	-	-	-
23	CLA	C	510	X	-	-	-
23	CLA	C	511	X	-	-	-
23	CLA	C	512	X	-	-	-
23	CLA	C	513	X	-	-	-
23	CLA	C	514	X	-	-	-
23	CLA	D	405	X	-	-	-
23	CLA	D	406	X	-	-	-
23	CLA	a	405	X	-	-	-
23	CLA	a	406	X	-	-	-
23	CLA	a	409	X	-	-	-
23	CLA	b	601	X	-	-	-
23	CLA	b	602	X	-	-	-
23	CLA	b	603	X	-	-	-
23	CLA	b	604	X	-	-	-
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23	CLA	b	614	X	-	-	-
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23	CLA	b	616	X	-	-	-
23	CLA	c	502	X	-	-	-
23	CLA	c	503	X	-	-	-
23	CLA	c	504	X	-	-	-
23	CLA	c	505	X	-	-	-
23	CLA	c	506	X	-	-	-
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23	CLA	c	508	X	-	-	-
23	CLA	c	509	X	-	-	-
23	CLA	c	510	X	-	-	-
23	CLA	c	511	X	-	-	-
23	CLA	c	512	X	-	-	-
23	CLA	c	513	X	-	-	-
23	CLA	c	514	X	-	-	-
23	CLA	d	402	X	-	-	-
23	CLA	d	403	X	-	-	-
27	GOL	a	701	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
30	UNL	A	415	-	-	-	X
30	UNL	a	417	-	-	-	X
30	UNL	b	626	-	-	-	X
30	UNL	c	525	-	-	-	X
32	LMT	E	102	-	-	-	X
32	LMT	I	101	-	-	-	X
32	LMT	a	420	-	-	-	X
32	LMT	e	102	-	-	-	X
34	HTG	b	623	-	-	-	X
37	LHG	e	101	-	-	-	X

2 Entry composition [i](#)

There are 41 unique types of molecules in this entry. The entry contains 52977 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 II protein D1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	334	2628	1722	432	459	15	0	1	0
1	a	334	2629	1721	432	461	15	0	2	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	279	PRO	ARG	conflict	UNP P51765
a	279	PRO	ARG	conflict	UNP P51765

- Molecule 2 is a protein called Photosystem II CP47 reaction center protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	504	4029	2639	674	703	13	0	7	0
2	b	504	4017	2636	669	699	13	0	6	0

- Molecule 3 is a protein called Photosystem II CP43 reaction center protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	C	451	3497	2287	588	609	13	0	1	0
3	c	455	3555	2327	595	620	13	0	5	0

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	19	ASN	-	expression tag	UNP D0VWR7
C	20	SER	-	expression tag	UNP D0VWR7

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Chain	Residue	Modelled	Actual	Comment	Reference
C	21	ILE	-	expression tag	UNP D0VWR7
C	22	PHE	-	expression tag	UNP D0VWR7
c	19	ASN	-	expression tag	UNP D0VWR7
c	20	SER	-	expression tag	UNP D0VWR7
c	21	ILE	-	expression tag	UNP D0VWR7
c	22	PHE	-	expression tag	UNP D0VWR7

- Molecule 4 is a protein called Photosystem II D2 protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	D	342	Total	C	N	O	S	0	1	0
			2732	1808	446	466	12			
4	d	341	Total	C	N	O	S	0	2	0
			2732	1808	447	465	12			

- Molecule 5 is a protein called Cytochrome b559 subunit alpha.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	E	81	Total	C	N	O		0	0	0
			662	432	107	123				
5	e	79	Total	C	N	O		0	2	0
			670	439	110	121				

- Molecule 6 is a protein called Cytochrome b559 subunit beta.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	F	34	Total	C	N	O	S	0	0	0
			275	187	45	42	1			
6	f	31	Total	C	N	O	S	0	1	0
			261	179	43	38	1			

- Molecule 7 is a protein called Photosystem II reaction center protein H.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	H	64	Total	C	N	O	S	0	0	0
			506	339	81	84	2			
7	h	64	Total	C	N	O	S	0	1	0
			517	345	85	85	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	I	38	Total	C	N	O	S	0	0	0
			314	211	48	54	1			
8	i	38	Total	C	N	O	S	0	0	0
			314	211	48	54	1			

- Molecule 9 is a protein called Photosystem II reaction center protein J.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	J	38	Total	C	N	O	S	0	0	0
			272	182	42	47	1			
9	j	39	Total	C	N	O	S	0	0	0
			277	185	43	48	1			

- Molecule 10 is a protein called Photosystem II reaction center protein K.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
10	K	37	Total	C	N	O	0	0	0
			293	204	43	46			
10	k	37	Total	C	N	O	0	0	0
			293	204	43	46			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
K	33	LEU	PHE	conflict	UNP P19054
K	39	TRP	VAL	conflict	UNP P19054
k	33	LEU	PHE	conflict	UNP P19054
k	39	TRP	VAL	conflict	UNP P19054

- Molecule 11 is a protein called Photosystem II reaction center protein L.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
11	L	36	Total	C	N	O	0	0	0
			296	197	47	52			
11	l	36	Total	C	N	O	0	0	0
			296	197	47	52			

- Molecule 12 is a protein called Photosystem II reaction center protein M.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	M	33	Total	C	N	O	S	0	1	0
			268	179	39	49	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	m	34	Total	C	N	O	S	0	2	0
			286	190	43	52	1			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
M	8	LEU	PHE	conflict	UNP P12312
m	8	LEU	PHE	conflict	UNP P12312

- Molecule 13 is a protein called Photosystem II manganese-stabilizing polypeptide.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	O	243	Total	C	N	O	S	0	3	0
			1894	1181	321	388	4			
13	o	243	Total	C	N	O	S	0	0	0
			1865	1165	315	381	4			

- Molecule 14 is a protein called Photosystem II reaction center protein T.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	T	30	Total	C	N	O	S	0	1	0
			267	186	37	42	2			
14	t	30	Total	C	N	O	S	0	0	0
			258	181	36	39	2			

- Molecule 15 is a protein called Photosystem II 12 kDa extrinsic protein.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
15	U	96	Total	C	N	O	0	1	0
			774	491	129	154			
15	u	97	Total	C	N	O	0	1	0
			781	496	130	155			

- Molecule 16 is a protein called Cytochrome c-550.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	V	137	Total	C	N	O	S	0	2	0
			1082	685	179	214	4			
16	v	137	Total	C	N	O	S	0	0	0
			1064	675	177	208	4			

- Molecule 17 is a protein called Photosystem II reaction center protein X.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	X	38	Total	C	N	O	0	1	0
			289	194	46	49			
17	x	38	Total	C	N	O	0	0	0
			281	188	45	48			

- Molecule 18 is a protein called Photosystem II reaction center protein Ycf12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	Y	29	Total	C	N	O	S	0	0	0
			215	142	37	33	3			
18	y	29	Total	C	N	O	S	0	0	0
			215	142	37	33	3			

- Molecule 19 is a protein called Photosystem II reaction center protein Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	Z	62	Total	C	N	O	S	0	0	0
			479	328	72	77	2			
19	z	62	Total	C	N	O	S	0	0	0
			479	328	72	77	2			

- Molecule 20 is a protein called Photosystem II protein Y.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	R	34	Total	C	N	O	0	0	0
			273	186	47	40			

- Molecule 21 is FE (II) ION (three-letter code: FE2) (formula: Fe) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
21	A	1	Total	Fe	0	0
			1	1		
21	a	1	Total	Fe	0	0
			1	1		

- Molecule 22 is CHLORIDE ION (three-letter code: CL) (formula: Cl) (labeled as "Ligand of Interest" by depositor).

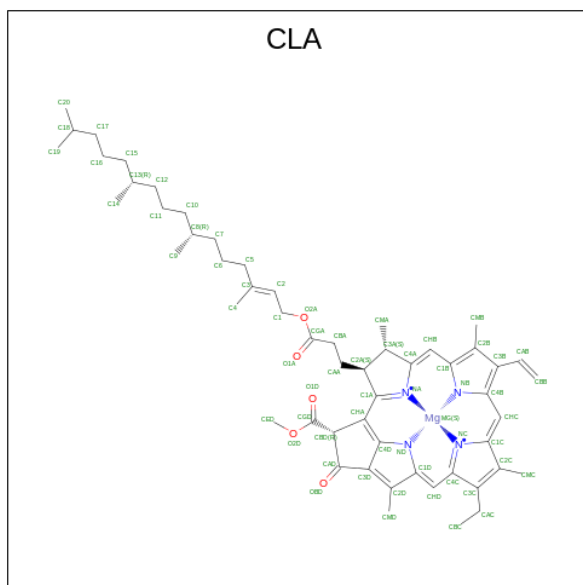
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
22	A	2	Total	Cl	0	0
			2	2		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
22	a	2	Total Cl 2 2	0	0

- Molecule 23 is CHLOROPHYLL A (three-letter code: CLA) (formula: $C_{55}H_{72}MgN_4O_5$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
23	A	1	Total C Mg N O 65 55 1 4 5	0	0
23	A	1	Total C Mg N O 65 55 1 4 5	0	0
23	A	1	Total C Mg N O 65 55 1 4 5	0	0
23	A	1	Total C Mg N O 65 55 1 4 5	0	0
23	B	1	Total C Mg N O 65 55 1 4 5	0	0
23	B	1	Total C Mg N O 65 55 1 4 5	0	0
23	B	1	Total C Mg N O 65 55 1 4 5	0	0
23	B	1	Total C Mg N O 65 55 1 4 5	0	0
23	B	1	Total C Mg N O 65 55 1 4 5	0	0
23	B	1	Total C Mg N O 65 55 1 4 5	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
23	B	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	B	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	B	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	B	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	B	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	B	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	B	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	B	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	C	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	C	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	C	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	C	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	C	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	C	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	C	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	C	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	C	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		

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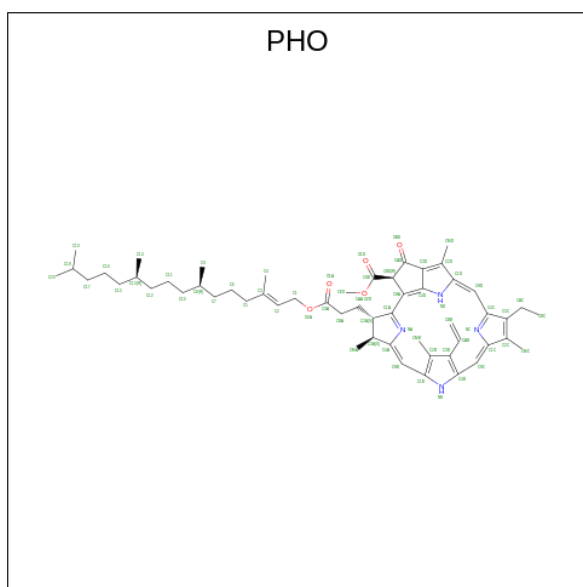
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
23	C	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	C	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	D	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	D	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	a	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	a	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	a	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	a	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	b	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	b	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	b	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	b	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	b	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	b	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	b	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	b	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	b	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	b	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		

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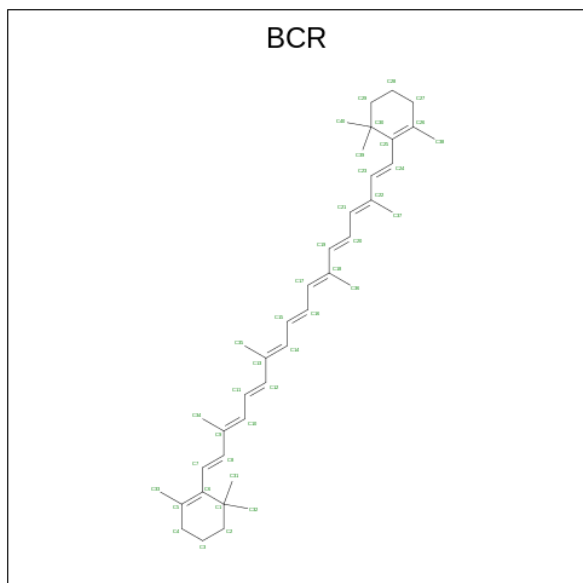
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
23	b	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	b	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	b	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	c	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	c	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	c	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	c	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	c	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	c	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	c	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	c	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	c	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	c	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	d	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
23	d	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		

- Molecule 24 is PHEOPHYTIN A (three-letter code: PHO) (formula: $C_{55}H_{74}N_4O_5$).



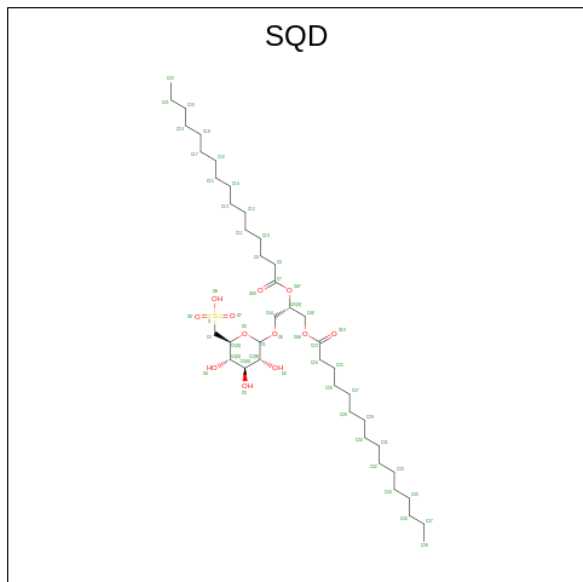
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
24	A	1	64	55	4	5	0	0
24	A	1	64	55	4	5	0	0
24	a	1	64	55	4	5	0	0
24	a	1	64	55	4	5	0	0

- Molecule 25 is BETA-CAROTENE (three-letter code: BCR) (formula: $C_{40}H_{56}$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
25	A	1	Total C 40 40	0	0
25	B	1	Total C 40 40	0	0
25	B	1	Total C 40 40	0	0
25	B	1	Total C 40 40	0	0
25	C	1	Total C 40 40	0	0
25	C	1	Total C 40 40	0	0
25	D	1	Total C 40 40	0	0
25	H	1	Total C 40 40	0	0
25	K	1	Total C 40 40	0	0
25	T	1	Total C 40 40	0	0
25	Y	1	Total C 40 40	0	0
25	a	1	Total C 40 40	0	0
25	b	1	Total C 40 40	0	0
25	b	1	Total C 40 40	0	0
25	b	1	Total C 40 40	0	0
25	c	1	Total C 40 40	0	0
25	c	1	Total C 40 40	0	0
25	d	1	Total C 40 40	0	0
25	h	1	Total C 40 40	0	0
25	k	1	Total C 40 40	0	0
25	t	1	Total C 40 40	0	0
25	y	1	Total C 40 40	0	0

- Molecule 26 is 1,2-DI-O-ACYL-3-O-[6-DEOXY-6-SULFO-ALPHA-D-GLUCOPYRANOSYL]-SN-GLYCEROL (three-letter code: SQD) (formula: $C_{41}H_{78}O_{12}S$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	O	S		
26	A	1	54	41	12	1	0	0
26	A	1	54	41	12	1	0	0
26	B	1	54	41	12	1	0	0
26	F	1	43	30	12	1	0	0
26	a	1	54	41	12	1	0	0
26	a	1	54	41	12	1	0	0
26	b	1	54	41	12	1	0	0
26	f	1	43	30	12	1	0	0

- Molecule 27 is GLYCEROL (three-letter code: GOL) (formula: $C_3H_8O_3$).



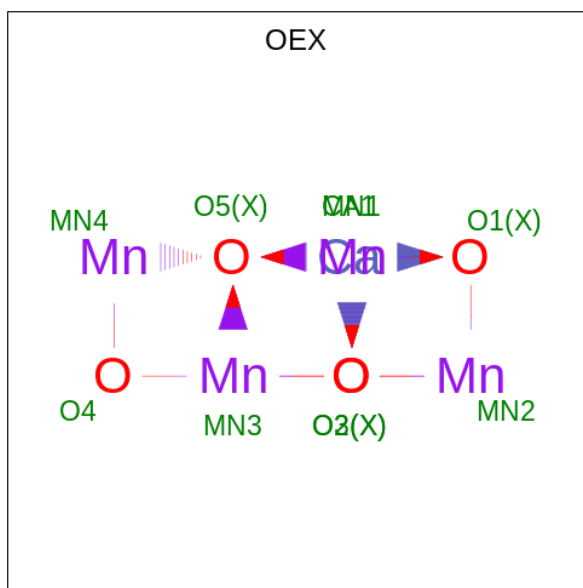
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
27	A	1	Total C O 6 3 3	0	0
27	A	1	Total C O 6 3 3	0	0
27	B	1	Total C O 6 3 3	0	0
27	B	1	Total C O 6 3 3	0	0
27	C	1	Total C O 6 3 3	0	0
27	D	1	Total C O 6 3 3	0	0
27	O	1	Total C O 6 3 3	0	0
27	O	1	Total C O 6 3 3	0	0
27	V	1	Total C O 6 3 3	0	0
27	a	1	Total C O 6 3 3	0	0
27	a	1	Total C O 6 3 3	0	0
27	a	1	Total C O 6 3 3	0	0
27	b	1	Total C O 6 3 3	0	0
27	b	1	Total C O 6 3 3	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
27	c	1	Total	C	O	0	0
			6	3	3		
27	c	1	Total	C	O	0	0
			6	3	3		
27	d	1	Total	C	O	0	0
			6	3	3		
27	d	1	Total	C	O	0	0
			6	3	3		
27	o	1	Total	C	O	0	0
			6	3	3		
27	o	1	Total	C	O	0	0
			6	3	3		
27	v	1	Total	C	O	0	0
			6	3	3		

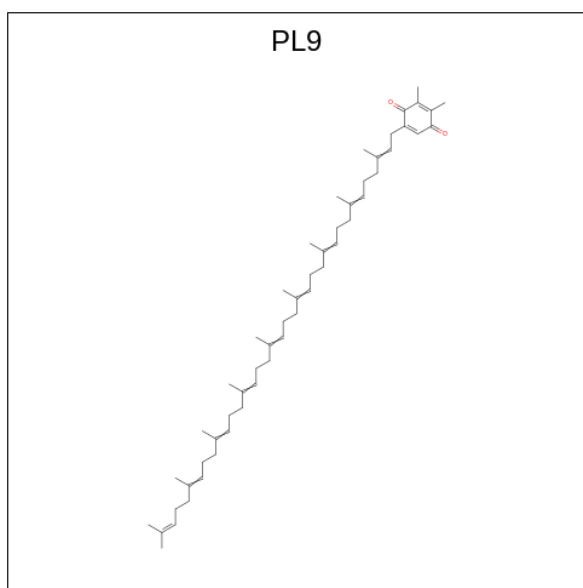
- Molecule 28 is CA-MN4-O5 CLUSTER (three-letter code: OEX) (formula: CaMn_4O_5) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
28	A	1	Total	Ca	Mn	O	0	0
			10	1	4	5		
28	a	1	Total	Ca	Mn	O	0	0
			10	1	4	5		

- Molecule 29 is 2,3-DIMETHYL-5-(3,7,11,15,19,23,27,31,35-NONAMETHYL-2,6,10,14,18,22,26,30,34-HEXATRIACONTANONAENYL-2,5-CYCLOHEXADIENE-1,4-DIONE-2,3-DIMETHYL-5-SOLANESYL-1,4-BENZOQUINONE (three-letter code: PL9) (formula:

C₅₃H₈₀O₂) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
29	A	1	Total	C	O	0	0
			55	53	2		
29	D	1	Total	C	O	0	0
			55	53	2		
29	a	1	Total	C	O	0	0
			55	53	2		
29	d	1	Total	C	O	0	0
			55	53	2		

- Molecule 30 is UNKNOWN LIGAND (three-letter code: UNL) (formula:).

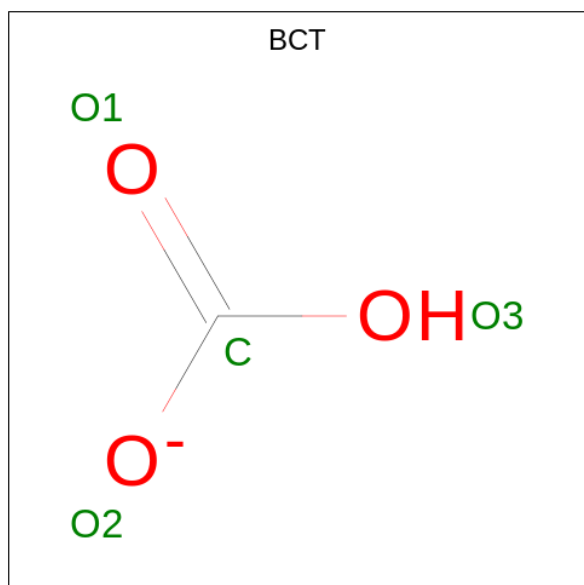
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
30	A	1	Total	C	O	0	0
			28	23	5		
30	B	1	Total	C	O	0	0
			33	28	5		
30	D	2	Total	C	O	0	0
			57	51	6		
30	I	1	Total	C	O	0	0
			40	35	5		
30	J	1	Total	C		0	0
			10	10			
30	K	1	Total	C	O	0	0
			34	29	5		
30	M	1	Total	C		0	0
			10	10			

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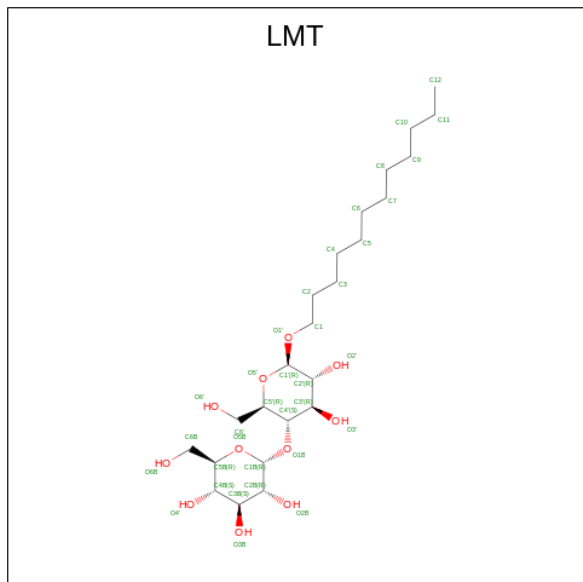
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
30	X	1	Total	C	O	0	0
			18	16	2		
30	a	1	Total	C	O	0	0
			30	25	5		
30	b	1	Total	C	O	0	0
			33	28	5		
30	c	1	Total	C	O	0	0
			32	27	5		
30	d	2	Total	C	O	0	0
			53	47	6		
30	i	1	Total	C	O	0	0
			40	35	5		
30	j	1	Total	C		0	0
			10	10			
30	m	1	Total	C		0	0
			10	10			
30	x	1	Total	C	O	0	0
			18	16	2		

- Molecule 31 is BICARBONATE ION (three-letter code: BCT) (formula: CHO_3) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
31	A	1	Total	C	O	0	0
			4	1	3		
31	a	1	Total	C	O	0	0
			4	1	3		

- Molecule 32 is DODECYL-BETA-D-MALTOSE (three-letter code: LMT) (formula: $C_{24}H_{46}O_{11}$).



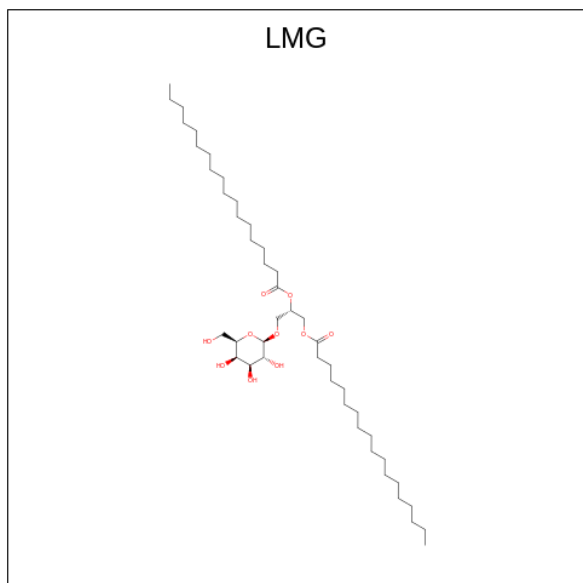
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
32	A	1	Total C O 35 24 11	0	0
32	D	1	Total C O 35 24 11	0	0
32	E	1	Total C O 35 24 11	0	0
32	I	1	Total C O 35 24 11	0	0
32	M	1	Total C O 35 24 11	0	0
32	M	1	Total C O 35 24 11	0	0
32	a	1	Total C O 35 24 11	0	0
32	a	1	Total C O 35 24 11	0	0
32	b	1	Total C O 25 19 6	0	0
32	b	1	Total C O 25 19 6	0	0
32	e	1	Total C O 35 24 11	0	0
32	m	1	Total C O 35 24 11	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
32	t	1	Total	C	O	0	0
			25	19	6		
32	t	1	Total	C	O	0	0
			26	19	7		

- Molecule 33 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula: C₄₅H₈₆O₁₀).



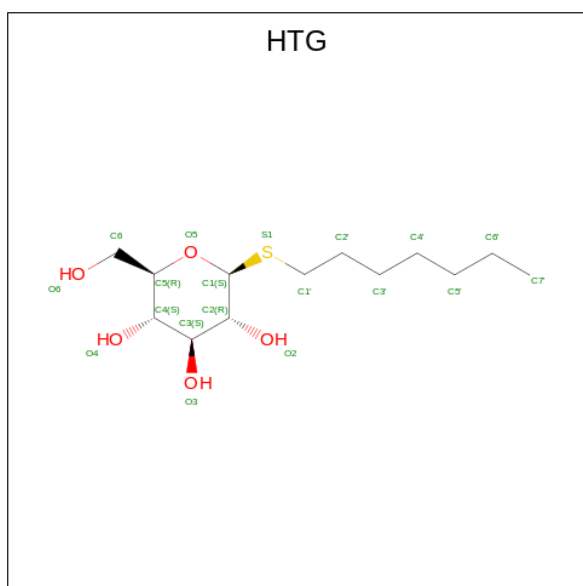
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
33	B	1	Total	C	O	0	0
			51	41	10		
33	C	1	Total	C	O	0	0
			51	41	10		
33	C	1	Total	C	O	0	0
			51	41	10		
33	C	1	Total	C	O	0	0
			51	41	10		
33	D	1	Total	C	O	0	0
			51	41	10		
33	a	1	Total	C	O	0	0
			51	41	10		
33	c	1	Total	C	O	0	0
			51	41	10		
33	c	1	Total	C	O	0	0
			51	41	10		
33	d	1	Total	C	O	0	0
			51	41	10		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
33	m	1	Total	C	O	0	0
			51	41	10		
33	Z	1	Total	C	O	0	0
			37	27	10		
33	z	1	Total	C	O	0	0
			39	29	10		

- Molecule 34 is heptyl 1-thio-beta-D-glucopyranoside (three-letter code: HTG) (formula: $C_{13}H_{26}O_5S$).



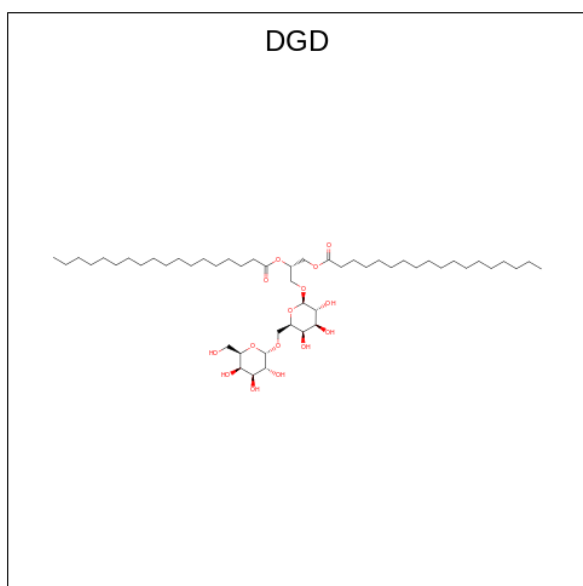
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
34	B	1	Total	C	O	S	0	0
			19	13	5	1		
34	B	1	Total	C	O	S	0	0
			19	13	5	1		
34	B	1	Total	C	O	S	0	0
			19	13	5	1		
34	C	1	Total	C	O	S	0	0
			19	13	5	1		
34	D	1	Total	C	O	S	0	0
			16	10	5	1		
34	V	1	Total	C	O		0	0
			11	6	5			
34	b	1	Total	C	O	S	0	0
			19	13	5	1		
34	b	1	Total	C	O	S	0	0
			19	13	5	1		

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
34	b	1	Total	C	O	S	0	0
			19	13	5	1		
34	c	1	Total	C	O	S	0	0
			19	13	5	1		
34	d	1	Total	C	O	S	0	0
			16	10	5	1		

- Molecule 35 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (three-letter code: DGD) (formula: $C_{51}H_{96}O_{15}$).

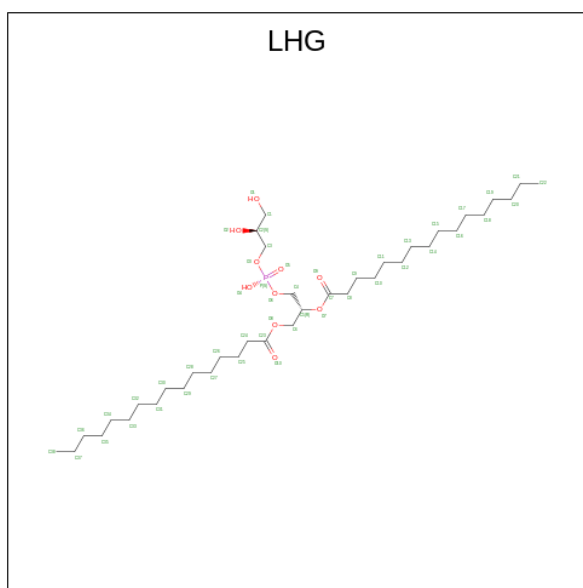


Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
35	C	1	Total	C	O	0	0
			62	47	15		
35	C	1	Total	C	O	0	0
			62	47	15		
35	C	1	Total	C	O	0	0
			62	47	15		
35	H	1	Total	C	O	0	0
			62	47	15		
35	c	1	Total	C	O	0	0
			62	47	15		
35	c	1	Total	C	O	0	0
			62	47	15		
35	c	1	Total	C	O	0	0
			62	47	15		
35	h	1	Total	C	O	0	0
			62	47	15		

- Molecule 36 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
36	C	1	Total Ca 1 1	0	0
36	F	1	Total Ca 1 1	0	0
36	O	1	Total Ca 1 1	0	0
36	c	2	Total Ca 2 2	0	0
36	f	1	Total Ca 1 1	0	0
36	o	1	Total Ca 1 1	0	0

- Molecule 37 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula: C₃₈H₇₅O₁₀P).



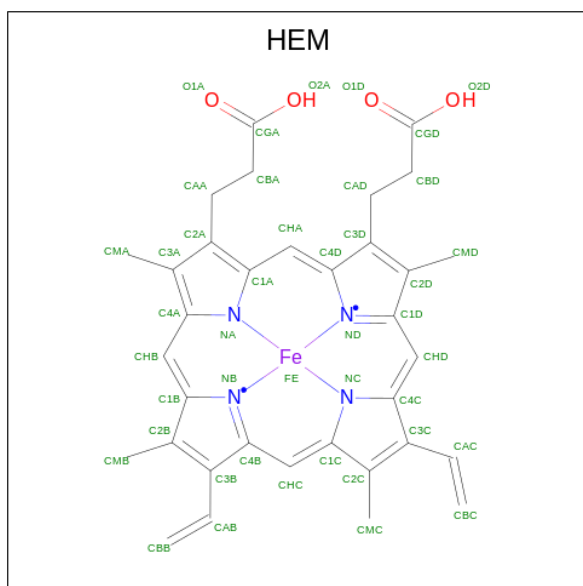
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
37	D	1	Total C O P 49 38 10 1	0	0
37	D	1	Total C O P 49 38 10 1	0	0
37	D	1	Total C O P 49 38 10 1	0	0
37	E	1	Total C O P 42 31 10 1	0	0

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
37	L	1	Total	C	O	P	0	0
			49	38	10	1		
37	d	1	Total	C	O	P	0	0
			49	38	10	1		
37	d	1	Total	C	O	P	0	0
			49	38	10	1		
37	d	1	Total	C	O	P	0	0
			49	38	10	1		
37	e	1	Total	C	O	P	0	0
			42	31	10	1		
37	l	1	Total	C	O	P	0	0
			49	38	10	1		

- Molecule 38 is PROTOPORPHYRIN IX CONTAINING FE (three-letter code: HEM) (formula: $C_{34}H_{32}FeN_4O_4$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
38	E	1	Total	C	Fe	N	O	0	0
			43	34	1	4	4		
38	e	1	Total	C	Fe	N	O	0	0
			43	34	1	4	4		

- Molecule 39 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

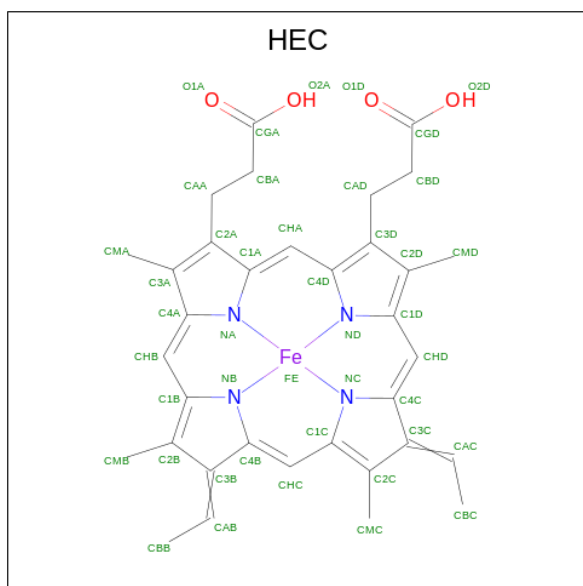
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
39	J	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
39	j	1	Total Mg 1 1	0	0

- Molecule 40 is HEME C (three-letter code: HEC) (formula: $C_{34}H_{34}FeN_4O_4$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
40	V	1	Total C Fe N O 43 34 1 4 4	0	0
40	v	1	Total C Fe N O 43 34 1 4 4	0	0

- Molecule 41 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
41	A	126	Total O 127 127	0	1
41	B	164	Total O 164 164	0	0
41	C	141	Total O 141 141	0	0
41	D	118	Total O 118 118	0	0
41	E	14	Total O 14 14	0	0
41	F	3	Total O 3 3	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
41	H	17	Total O 17 17	0	0
41	I	6	Total O 6 6	0	0
41	J	5	Total O 5 5	0	0
41	K	5	Total O 5 5	0	0
41	L	3	Total O 3 3	0	0
41	M	5	Total O 5 5	0	0
41	O	70	Total O 70 70	0	0
41	T	8	Total O 8 8	0	0
41	U	32	Total O 32 32	0	0
41	V	65	Total O 65 65	0	0
41	X	1	Total O 1 1	0	0
41	a	128	Total O 128 128	0	0
41	b	182	Total O 182 182	0	0
41	c	133	Total O 133 133	0	0
41	d	109	Total O 109 109	0	0
41	e	8	Total O 8 8	0	0
41	f	3	Total O 3 3	0	0
41	h	15	Total O 15 15	0	0
41	i	3	Total O 3 3	0	0
41	j	2	Total O 2 2	0	0
41	k	3	Total O 3 3	0	0

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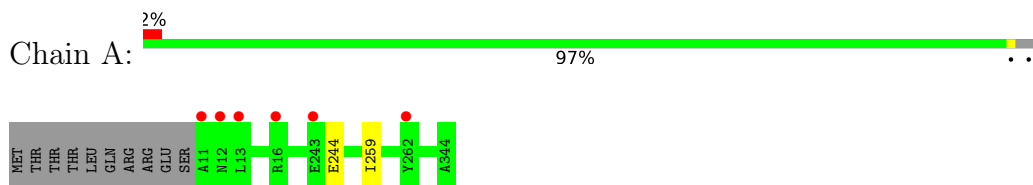
Continued from previous page...

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
41	l	4	Total 4	O 4	0	0
41	m	14	Total 14	O 14	0	0
41	o	76	Total 76	O 76	0	0
41	t	6	Total 6	O 6	0	0
41	u	47	Total 47	O 47	0	0
41	v	41	Total 41	O 41	0	0
41	x	2	Total 2	O 2	0	0
41	y	1	Total 1	O 1	0	0
41	G	264	Total 264	O 264	0	1

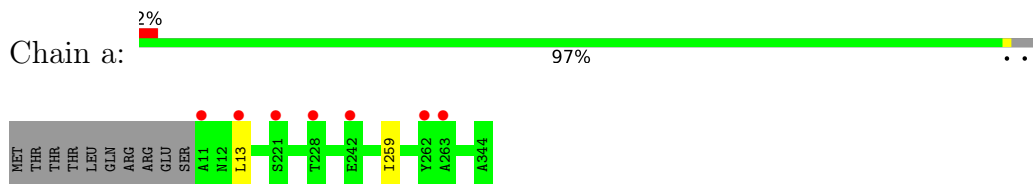
3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron 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 dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). 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.

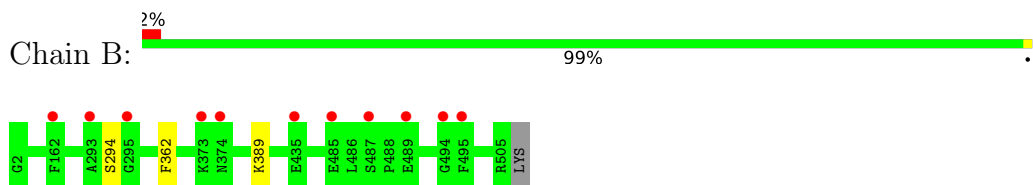
- Molecule 1: Photosystem II protein D1



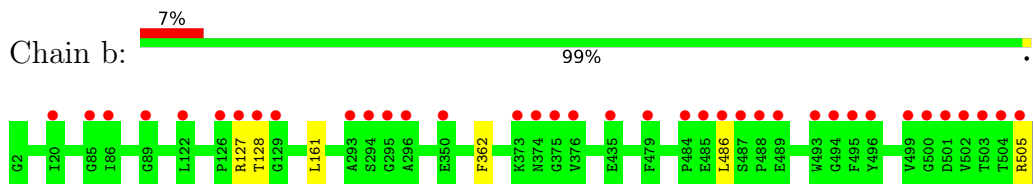
- Molecule 1: Photosystem II protein D1



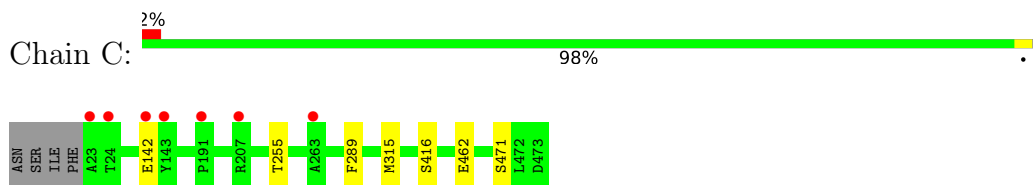
- Molecule 2: Photosystem II CP47 reaction center protein



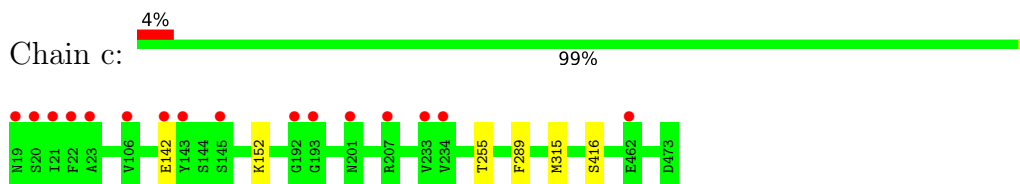
- Molecule 2: Photosystem II CP47 reaction center protein



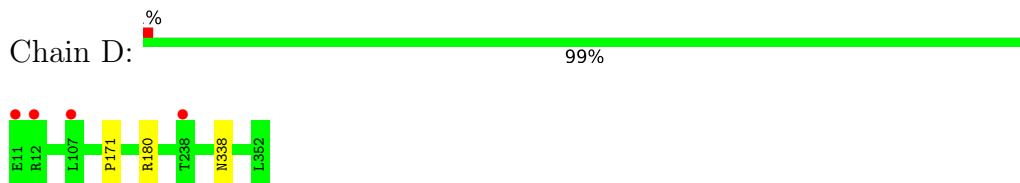
- Molecule 3: Photosystem II CP43 reaction center protein



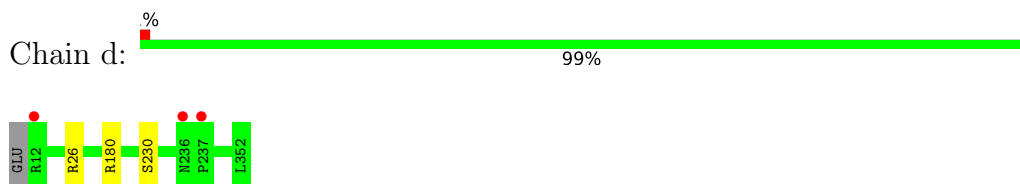
- Molecule 3: Photosystem II CP43 reaction center protein



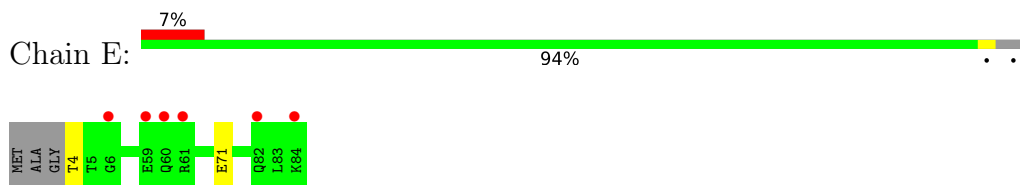
- Molecule 4: Photosystem II D2 protein



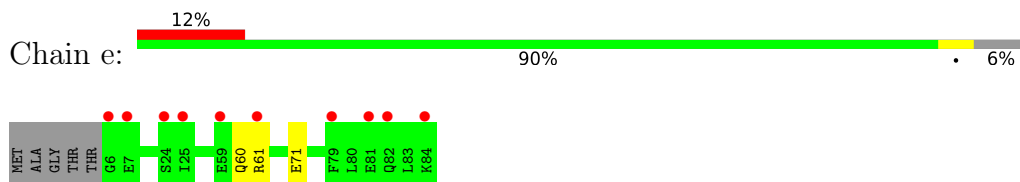
- Molecule 4: Photosystem II D2 protein



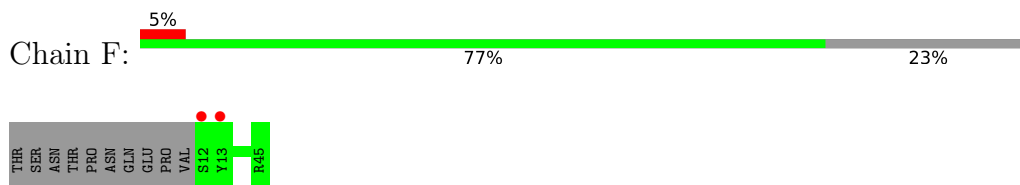
- Molecule 5: Cytochrome b559 subunit alpha



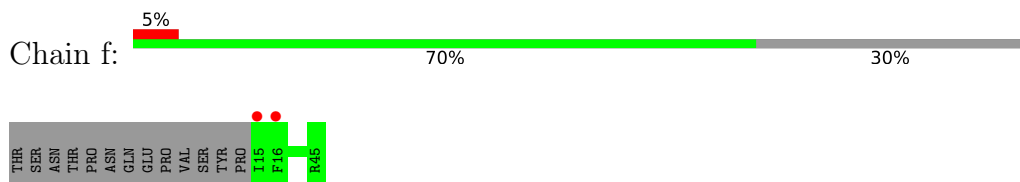
- Molecule 5: Cytochrome b559 subunit alpha



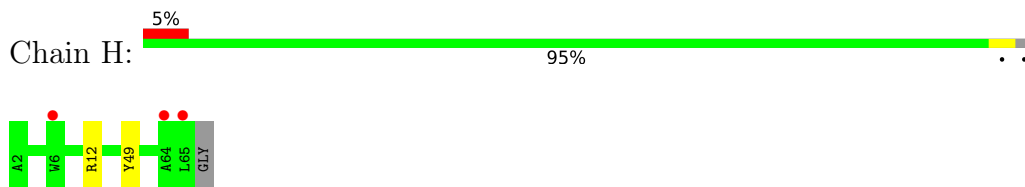
- Molecule 6: Cytochrome b559 subunit beta



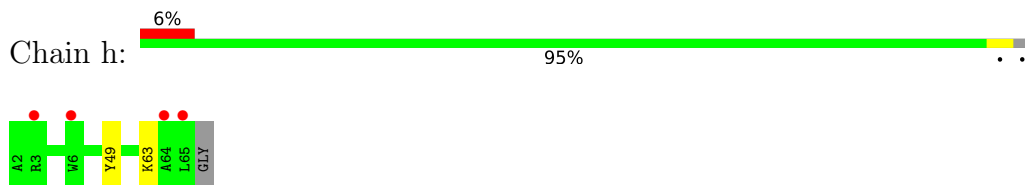
- Molecule 6: Cytochrome b559 subunit beta



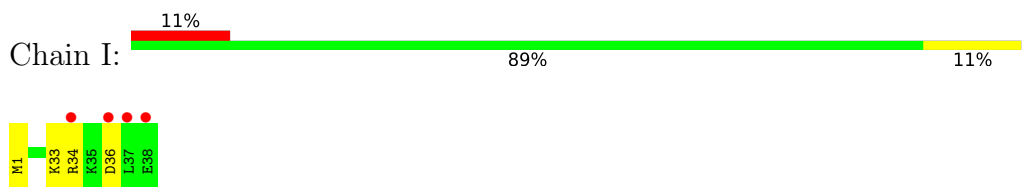
- Molecule 7: Photosystem II reaction center protein H



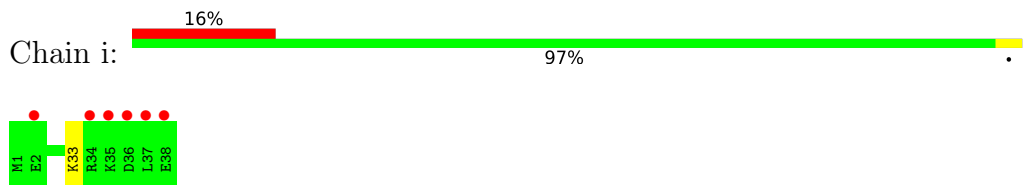
- Molecule 7: Photosystem II reaction center protein H



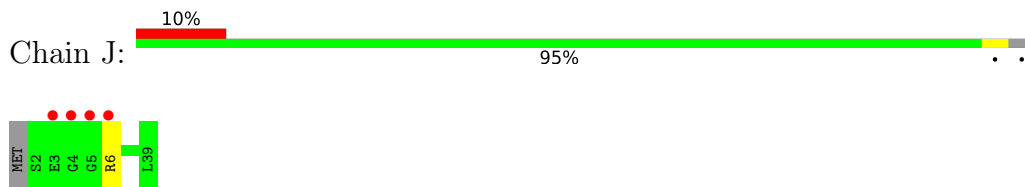
- Molecule 8: Photosystem II reaction center protein I



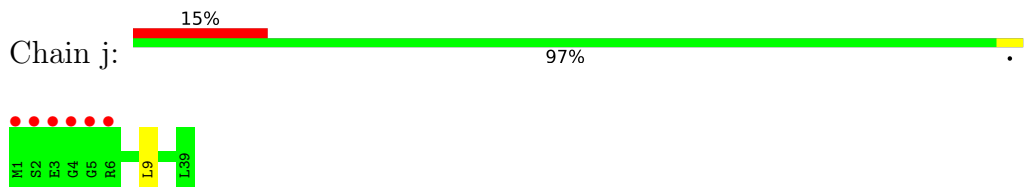
- Molecule 8: Photosystem II reaction center protein I



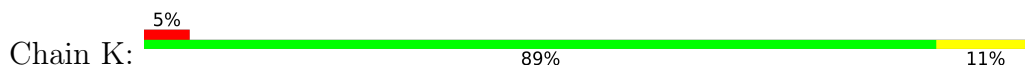
- Molecule 9: Photosystem II reaction center protein J



- Molecule 9: Photosystem II reaction center protein J

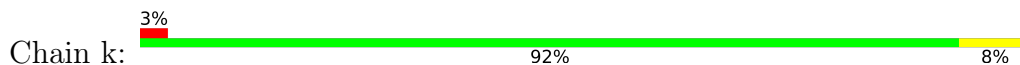


- Molecule 10: Photosystem II reaction center protein K

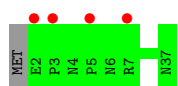




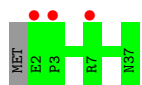
- Molecule 10: Photosystem II reaction center protein K



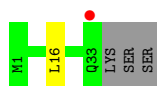
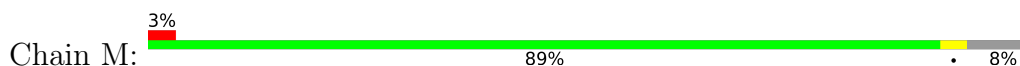
- Molecule 11: Photosystem II reaction center protein L



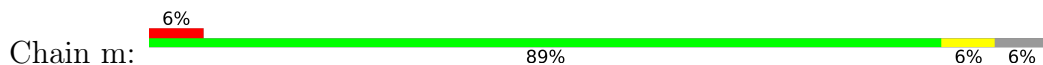
- Molecule 11: Photosystem II reaction center protein L



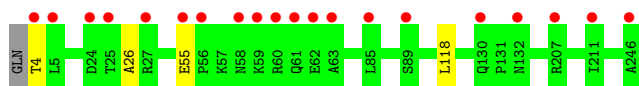
- Molecule 12: Photosystem II reaction center protein M



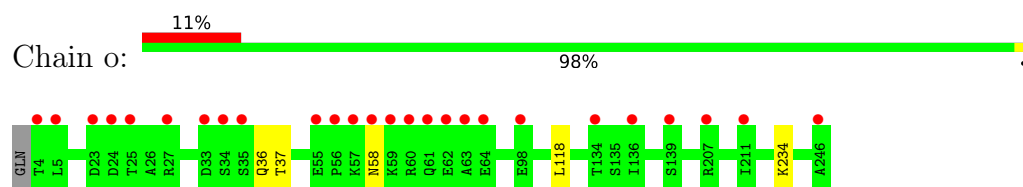
- Molecule 12: Photosystem II reaction center protein M



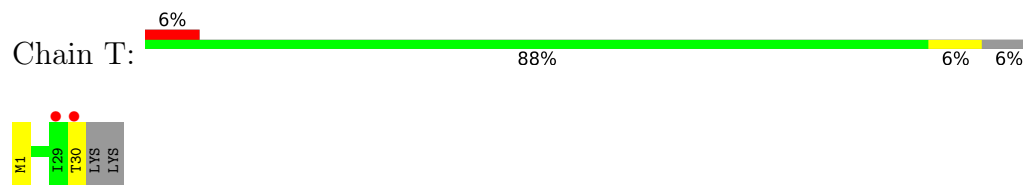
- Molecule 13: Photosystem II manganese-stabilizing polypeptide



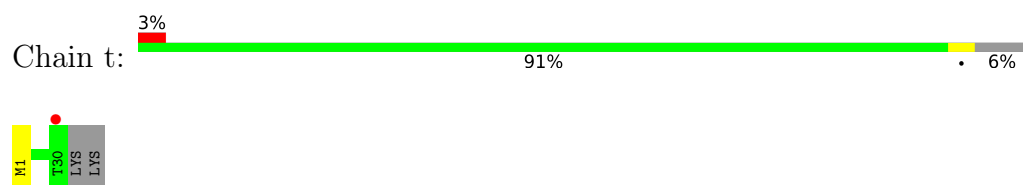
- Molecule 13: Photosystem II manganese-stabilizing polypeptide



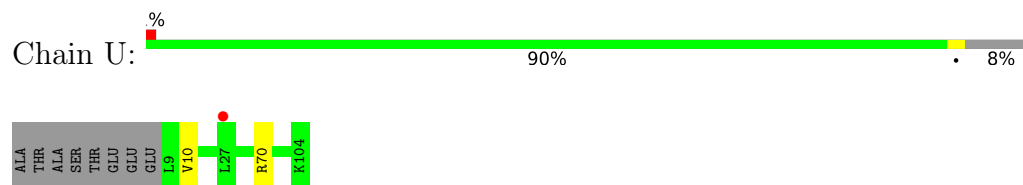
- Molecule 14: Photosystem II reaction center protein T



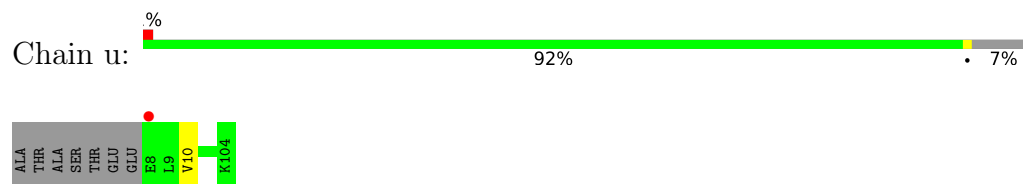
- Molecule 14: Photosystem II reaction center protein T



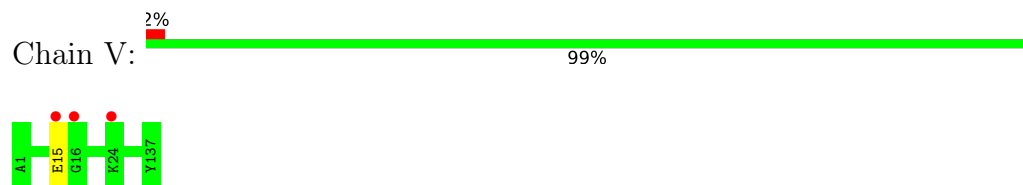
- Molecule 15: Photosystem II 12 kDa extrinsic protein



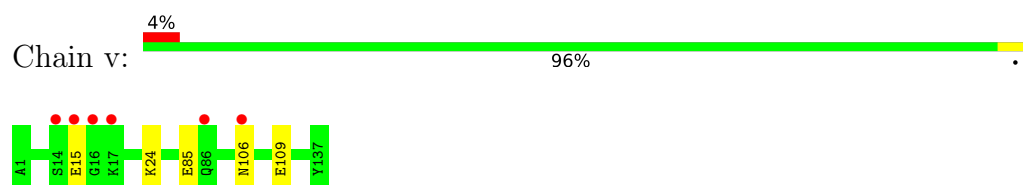
- Molecule 15: Photosystem II 12 kDa extrinsic protein



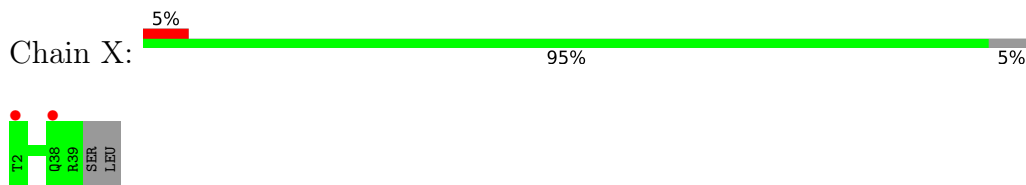
- Molecule 16: Cytochrome c-550



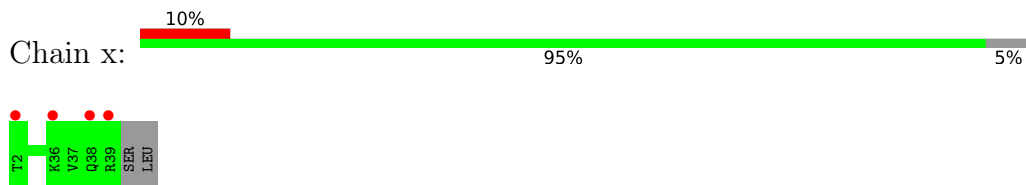
- Molecule 16: Cytochrome c-550



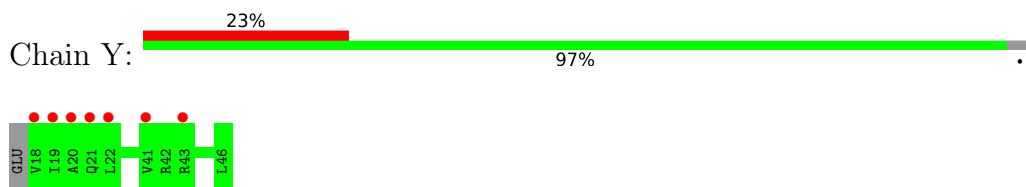
- Molecule 17: Photosystem II reaction center protein X



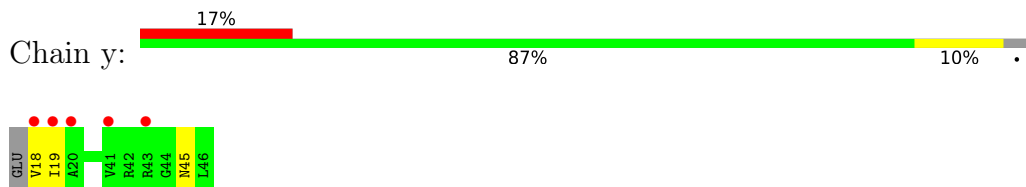
- Molecule 17: Photosystem II reaction center protein X



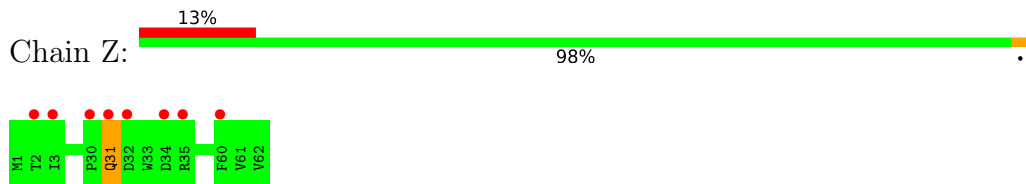
- Molecule 18: Photosystem II reaction center protein Ycf12



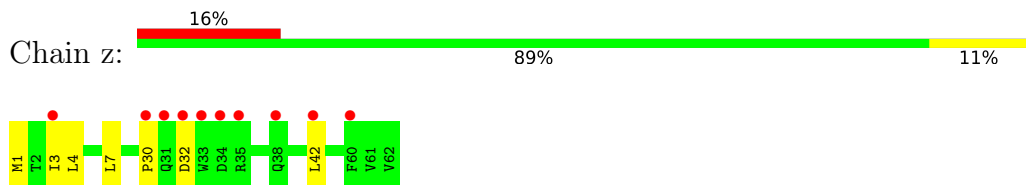
- Molecule 18: Photosystem II reaction center protein Ycf12



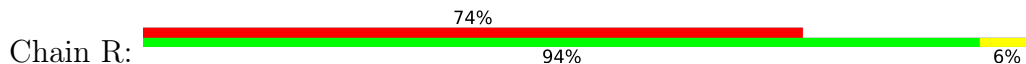
- Molecule 19: Photosystem II reaction center protein Z

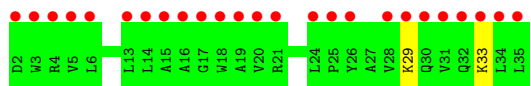


- Molecule 19: Photosystem II reaction center protein Z



- Molecule 20: Photosystem II protein Y





4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	125.77Å 231.76Å 288.58Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	19.99 – 2.25 19.99 – 2.25	Depositor EDS
% Data completeness (in resolution range)	100.0 (19.99-2.25) 100.0 (19.99-2.25)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.70 (at 2.26Å)	Xtrriage
Refinement program	PHENIX (1.19.2_4158: ???)	Depositor
R, R_{free}	0.145 , 0.180 0.145 , 0.180	Depositor DCC
R_{free} test set	19876 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å ²)	50.9	Xtrriage
Anisotropy	0.487	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.36 , 84.4	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.98	EDS
Total number of atoms	52977	wwPDB-VP
Average B, all atoms (Å ²)	63.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.68% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

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: MG, PL9, HTG, UNL, OEX, HEM, FE2, GOL, CL, BCT, DGD, CLA, LHG, CA, PHO, LMG, LMT, HEC, FME, BCR, SQD

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	0.42	0/2713	0.57	0/3700
1	a	0.41	0/2717	0.55	0/3705
2	B	0.41	0/4169	0.57	0/5679
2	b	0.39	0/4161	0.56	0/5669
3	C	0.38	0/3610	0.54	0/4914
3	c	0.36	0/3675	0.53	0/5002
4	D	0.45	0/2827	0.59	0/3852
4	d	0.43	0/2827	0.56	0/3852
5	E	0.37	0/681	0.55	0/928
5	e	0.36	0/690	0.53	0/939
6	F	0.42	0/284	0.54	0/387
6	f	0.34	0/269	0.50	0/365
7	H	0.37	0/519	0.59	0/708
7	h	0.34	0/530	0.56	0/722
8	I	0.37	0/311	0.53	0/419
8	i	0.39	0/311	0.55	0/419
9	J	0.35	0/278	0.50	0/376
9	j	0.35	0/283	0.53	0/383
10	K	0.36	0/303	0.52	0/416
10	k	0.38	0/303	0.50	0/416
11	L	0.37	0/303	0.55	0/412
11	l	0.41	0/303	0.53	0/412
12	M	0.39	0/261	0.48	0/357
12	m	0.39	0/279	0.49	0/380
13	O	0.38	0/1925	0.60	0/2609
13	o	0.36	0/1896	0.62	0/2571
14	T	0.45	0/266	0.57	0/362
14	t	0.42	0/257	0.52	0/349
15	U	0.40	0/785	0.60	0/1064
15	u	0.39	0/792	0.60	0/1074
16	V	0.37	0/1103	0.55	0/1497

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
16	v	0.32	0/1085	0.55	0/1473
17	X	0.32	0/292	0.48	0/395
17	x	0.31	0/284	0.46	0/384
18	Y	0.31	0/216	0.51	0/289
18	y	0.29	0/216	0.50	0/289
19	Z	0.31	0/490	0.44	0/669
19	z	0.31	0/490	0.42	0/669
20	R	0.29	0/279	0.50	0/383
All	All	0.39	0/42983	0.56	0/58489

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](#)

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

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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	333/344 (97%)	328 (98%)	4 (1%)	1 (0%)	41	46
1	a	334/344 (97%)	327 (98%)	6 (2%)	1 (0%)	41	46
2	B	509/505 (101%)	501 (98%)	8 (2%)	0	100	100
2	b	508/505 (101%)	497 (98%)	11 (2%)	0	100	100
3	C	450/455 (99%)	441 (98%)	8 (2%)	1 (0%)	47	55
3	c	458/455 (101%)	450 (98%)	7 (2%)	1 (0%)	47	55

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	D	341/342 (100%)	328 (96%)	13 (4%)	0	100	100
4	d	341/342 (100%)	332 (97%)	9 (3%)	0	100	100
5	E	79/84 (94%)	78 (99%)	1 (1%)	0	100	100
5	e	79/84 (94%)	79 (100%)	0	0	100	100
6	F	32/44 (73%)	32 (100%)	0	0	100	100
6	f	30/44 (68%)	30 (100%)	0	0	100	100
7	H	62/65 (95%)	60 (97%)	2 (3%)	0	100	100
7	h	63/65 (97%)	59 (94%)	3 (5%)	1 (2%)	9	5
8	I	36/38 (95%)	34 (94%)	1 (3%)	1 (3%)	5	2
8	i	36/38 (95%)	32 (89%)	4 (11%)	0	100	100
9	J	36/39 (92%)	36 (100%)	0	0	100	100
9	j	37/39 (95%)	37 (100%)	0	0	100	100
10	K	35/37 (95%)	35 (100%)	0	0	100	100
10	k	35/37 (95%)	35 (100%)	0	0	100	100
11	L	34/37 (92%)	34 (100%)	0	0	100	100
11	l	34/37 (92%)	34 (100%)	0	0	100	100
12	M	32/36 (89%)	32 (100%)	0	0	100	100
12	m	34/36 (94%)	34 (100%)	0	0	100	100
13	O	244/244 (100%)	236 (97%)	7 (3%)	1 (0%)	34	37
13	o	241/244 (99%)	236 (98%)	5 (2%)	0	100	100
14	T	29/32 (91%)	29 (100%)	0	0	100	100
14	t	28/32 (88%)	28 (100%)	0	0	100	100
15	U	95/104 (91%)	92 (97%)	3 (3%)	0	100	100
15	u	96/104 (92%)	93 (97%)	3 (3%)	0	100	100
16	V	137/137 (100%)	133 (97%)	4 (3%)	0	100	100
16	v	135/137 (98%)	131 (97%)	4 (3%)	0	100	100
17	X	37/40 (92%)	36 (97%)	1 (3%)	0	100	100
17	x	36/40 (90%)	36 (100%)	0	0	100	100
18	Y	27/30 (90%)	25 (93%)	2 (7%)	0	100	100
18	y	27/30 (90%)	27 (100%)	0	0	100	100
19	Z	60/62 (97%)	58 (97%)	1 (2%)	1 (2%)	9	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
19	z	60/62 (97%)	59 (98%)	0	1 (2%)	9	4
20	R	32/34 (94%)	31 (97%)	1 (3%)	0	100	100
All	All	5252/5384 (98%)	5135 (98%)	108 (2%)	9 (0%)	47	55

5 of 9 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	C	416	SER
8	I	36	ASP
13	O	26	ALA
3	c	416	SER
19	Z	31	GLN

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 X-ray entries followed by that with respect to entries of similar resolution.

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	270/279 (97%)	269 (100%)	1 (0%)	91	94
1	a	271/279 (97%)	270 (100%)	1 (0%)	91	94
2	B	409/403 (102%)	406 (99%)	3 (1%)	84	90
2	b	408/403 (101%)	402 (98%)	6 (2%)	65	75
3	C	353/356 (99%)	347 (98%)	6 (2%)	60	71
3	c	361/356 (101%)	356 (99%)	5 (1%)	67	76
4	D	278/277 (100%)	275 (99%)	3 (1%)	73	82
4	d	278/277 (100%)	275 (99%)	3 (1%)	73	82
5	E	72/73 (99%)	70 (97%)	2 (3%)	43	52
5	e	72/73 (99%)	69 (96%)	3 (4%)	30	34
6	F	28/38 (74%)	28 (100%)	0	100	100
6	f	26/38 (68%)	26 (100%)	0	100	100
7	H	54/54 (100%)	52 (96%)	2 (4%)	34	40
7	h	55/54 (102%)	54 (98%)	1 (2%)	59	68

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	I	34/34 (100%)	32 (94%)	2 (6%)	19	19
8	i	34/34 (100%)	33 (97%)	1 (3%)	42	51
9	J	26/27 (96%)	25 (96%)	1 (4%)	33	39
9	j	26/27 (96%)	25 (96%)	1 (4%)	33	39
10	K	30/30 (100%)	26 (87%)	4 (13%)	4	2
10	k	30/30 (100%)	27 (90%)	3 (10%)	7	5
11	L	34/35 (97%)	34 (100%)	0	100	100
11	l	34/35 (97%)	34 (100%)	0	100	100
12	M	30/32 (94%)	28 (93%)	2 (7%)	16	15
12	m	32/32 (100%)	30 (94%)	2 (6%)	18	17
13	O	209/207 (101%)	206 (99%)	3 (1%)	67	76
13	o	206/207 (100%)	201 (98%)	5 (2%)	49	58
14	T	27/28 (96%)	26 (96%)	1 (4%)	34	40
14	t	26/28 (93%)	26 (100%)	0	100	100
15	U	84/89 (94%)	82 (98%)	2 (2%)	49	58
15	u	85/89 (96%)	83 (98%)	2 (2%)	49	58
16	V	119/117 (102%)	118 (99%)	1 (1%)	81	88
16	v	117/117 (100%)	112 (96%)	5 (4%)	29	33
17	X	32/33 (97%)	32 (100%)	0	100	100
17	x	31/33 (94%)	31 (100%)	0	100	100
18	Y	22/23 (96%)	22 (100%)	0	100	100
18	y	22/23 (96%)	19 (86%)	3 (14%)	3	2
19	Z	52/52 (100%)	51 (98%)	1 (2%)	57	66
19	z	52/52 (100%)	46 (88%)	6 (12%)	5	3
20	R	29/29 (100%)	27 (93%)	2 (7%)	15	14
All	All	4358/4403 (99%)	4275 (98%)	83 (2%)	57	66

5 of 83 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
12	m	16[A]	LEU
18	y	18	VAL
13	o	36	GLN

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Mol	Chain	Res	Type
15	u	10[B]	VAL
20	R	29	LYS

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

Mol	Chain	Res	Type
5	E	60	GLN
13	o	58	ASN
16	v	86	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

6 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
14	FME	t	1	-	8,9,10	0.75	0	7,9,11	1.49	1 (14%)
14	FME	T	1	-	8,9,10	0.69	0	7,9,11	2.01	2 (28%)
12	FME	M	1	-	8,9,10	0.62	0	7,9,11	1.13	0
8	FME	i	1	-	8,9,10	0.65	0	7,9,11	1.19	0
8	FME	I	1	-	8,9,10	0.60	0	7,9,11	1.40	2 (28%)
12	FME	m	1	-	8,9,10	0.56	0	7,9,11	1.33	2 (28%)

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
14	FME	t	1	-	-	1/7/9/11	-
14	FME	T	1	-	-	1/7/9/11	-
12	FME	M	1	-	-	1/7/9/11	-
8	FME	i	1	-	-	0/7/9/11	-
8	FME	I	1	-	-	0/7/9/11	-
12	FME	m	1	-	-	1/7/9/11	-

There are no bond length outliers.

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

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	T	1	FME	CA-N-CN	3.40	128.05	122.82
14	T	1	FME	C-CA-N	2.80	114.79	109.73
14	t	1	FME	O-C-CA	-2.44	118.39	124.78
8	I	1	FME	O-C-CA	-2.29	118.78	124.78
12	m	1	FME	O1-CN-N	-2.14	119.63	125.27

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
12	M	1	FME	O1-CN-N-CA
12	m	1	FME	O-C-CA-CB
14	t	1	FME	O1-CN-N-CA
14	T	1	FME	CB-CG-SD-CE

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 225 ligands modelled in this entry, 15 are monoatomic and 18 are unknown - leaving 192 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The

Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
33	LMG	c	521	-	51,51,55	1.00	2 (3%)	59,59,63	1.36	7 (11%)
34	HTG	b	622	-	19,19,19	1.15	2 (10%)	23,24,24	1.91	7 (30%)
25	BCR	B	617	-	41,41,41	1.07	1 (2%)	56,56,56	1.36	9 (16%)
25	BCR	B	619	-	41,41,41	1.06	1 (2%)	56,56,56	1.35	9 (16%)
25	BCR	b	619	-	41,41,41	1.09	1 (2%)	56,56,56	1.39	6 (10%)
34	HTG	b	625	-	19,19,19	1.00	2 (10%)	23,24,24	1.59	3 (13%)
23	CLA	d	403	-	65,73,73	2.04	16 (24%)	76,113,113	2.77	26 (34%)
35	DGD	H	102	-	63,63,67	0.84	3 (4%)	77,77,81	1.02	5 (6%)
29	PL9	d	405	-	55,55,55	0.70	1 (1%)	68,69,69	1.63	18 (26%)
34	HTG	D	414	-	16,16,19	1.04	2 (12%)	20,21,24	1.40	1 (5%)
37	LHG	e	101	-	41,41,48	1.06	2 (4%)	44,47,54	0.92	2 (4%)
38	HEM	E	103	-	41,50,50	1.30	6 (14%)	45,82,82	2.06	10 (22%)
23	CLA	C	510	-	65,73,73	2.11	18 (27%)	76,113,113	2.79	28 (36%)
25	BCR	H	101	-	41,41,41	1.02	1 (2%)	56,56,56	1.43	10 (17%)
23	CLA	c	510	-	65,73,73	2.08	15 (23%)	76,113,113	2.80	28 (36%)
23	CLA	D	406	-	65,73,73	2.07	16 (24%)	76,113,113	2.72	27 (35%)
23	CLA	d	402	-	65,73,73	1.96	16 (24%)	76,113,113	2.74	29 (38%)
23	CLA	c	503	-	65,73,73	2.05	14 (21%)	76,113,113	2.74	25 (32%)
32	LMT	A	359	-	36,36,36	0.94	3 (8%)	47,47,47	1.01	1 (2%)
23	CLA	B	603	-	65,73,73	2.04	16 (24%)	76,113,113	2.92	28 (36%)
34	HTG	B	626	-	19,19,19	1.03	2 (10%)	23,24,24	1.35	4 (17%)
23	CLA	b	616	-	65,73,73	2.03	14 (21%)	76,113,113	2.88	25 (32%)
25	BCR	C	515	-	41,41,41	1.03	1 (2%)	56,56,56	1.39	5 (8%)
25	BCR	c	515	-	41,41,41	0.99	1 (2%)	56,56,56	1.60	11 (19%)
32	LMT	t	102	-	26,26,36	0.91	2 (7%)	31,31,47	1.30	2 (6%)
23	CLA	c	514	-	65,73,73	2.12	17 (26%)	76,113,113	2.81	29 (38%)
34	HTG	d	411	-	16,16,19	0.99	1 (6%)	20,21,24	1.50	1 (5%)
27	GOL	A	411	-	5,5,5	1.05	0	5,5,5	0.72	0
29	PL9	A	414	-	55,55,55	0.69	2 (3%)	68,69,69	2.01	24 (35%)
33	LMG	D	415	-	51,51,55	0.81	2 (3%)	59,59,63	1.05	3 (5%)
32	LMT	b	621	-	25,25,36	0.96	2 (8%)	30,30,47	1.16	2 (6%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
23	CLA	B	605	-	65,73,73	1.99	16 (24%)	76,113,113	2.85	26 (34%)
26	SQD	a	413	-	53,54,54	1.07	4 (7%)	62,65,65	1.17	7 (11%)
33	LMG	c	520	-	51,51,55	0.90	2 (3%)	59,59,63	1.09	5 (8%)
23	CLA	C	504	-	65,73,73	1.99	16 (24%)	76,113,113	2.76	26 (34%)
25	BCR	b	618	-	41,41,41	1.01	1 (2%)	56,56,56	1.24	6 (10%)
23	CLA	c	504	-	65,73,73	2.03	16 (24%)	76,113,113	2.78	26 (34%)
23	CLA	D	405	-	65,73,73	2.04	16 (24%)	76,113,113	2.87	31 (40%)
26	SQD	a	411	-	53,54,54	0.96	3 (5%)	62,65,65	1.83	13 (20%)
27	GOL	a	801	-	5,5,5	1.13	0	5,5,5	0.98	0
24	PHO	a	408	-	51,69,69	1.83	8 (15%)	47,99,99	1.87	9 (19%)
23	CLA	b	610	-	65,73,73	2.00	16 (24%)	76,113,113	2.84	31 (40%)
25	BCR	Y	101	-	41,41,41	0.98	1 (2%)	56,56,56	1.73	13 (23%)
35	DGD	C	517	-	63,63,67	0.83	2 (3%)	77,77,81	1.20	8 (10%)
27	GOL	d	801	-	5,5,5	0.93	0	5,5,5	0.98	0
23	CLA	B	604	-	65,73,73	2.05	16 (24%)	76,113,113	2.60	27 (35%)
23	CLA	c	502	-	65,73,73	2.02	17 (26%)	76,113,113	2.80	25 (32%)
25	BCR	d	404	-	41,41,41	1.11	2 (4%)	56,56,56	1.88	15 (26%)
26	SQD	B	620	-	53,54,54	1.07	4 (7%)	62,65,65	1.78	10 (16%)
23	CLA	A	405	-	65,73,73	1.99	15 (23%)	76,113,113	2.79	30 (39%)
23	CLA	B	601	-	65,73,73	2.09	15 (23%)	76,113,113	2.84	27 (35%)
27	GOL	b	901	-	5,5,5	0.43	0	5,5,5	1.48	1 (20%)
23	CLA	C	513	-	65,73,73	2.04	15 (23%)	76,113,113	2.81	32 (42%)
27	GOL	o	501	-	5,5,5	0.99	0	5,5,5	0.96	0
23	CLA	c	513	-	65,73,73	2.07	16 (24%)	76,113,113	2.67	29 (38%)
32	LMT	D	404	-	36,36,36	1.17	4 (11%)	47,47,47	1.31	5 (10%)
23	CLA	a	409	-	65,73,73	1.97	15 (23%)	76,113,113	2.89	28 (36%)
33	LMG	a	419	-	51,51,55	0.92	2 (3%)	59,59,63	1.20	6 (10%)
25	BCR	t	103	-	41,41,41	1.00	1 (2%)	56,56,56	1.48	9 (16%)
23	CLA	C	506	-	65,73,73	2.00	16 (24%)	76,113,113	2.75	28 (36%)
25	BCR	C	516	-	41,41,41	1.04	1 (2%)	56,56,56	1.32	7 (12%)
23	CLA	c	506	-	65,73,73	2.01	16 (24%)	76,113,113	2.79	25 (32%)
34	HTG	B	622	-	19,19,19	1.02	2 (10%)	23,24,24	1.70	6 (26%)
27	GOL	v	401	-	5,5,5	1.20	0	5,5,5	0.82	0
23	CLA	A	406	-	65,73,73	1.98	17 (26%)	76,113,113	2.76	30 (39%)
23	CLA	b	604	-	65,73,73	2.02	16 (24%)	76,113,113	2.76	26 (34%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
23	CLA	c	512	-	65,73,73	2.10	15 (23%)	76,113,113	2.71	28 (36%)
23	CLA	b	603	-	65,73,73	1.98	15 (23%)	76,113,113	2.86	31 (40%)
32	LMT	b	627	-	25,25,36	0.90	0	30,30,47	1.10	3 (10%)
34	HTG	b	623	-	19,19,19	1.04	1 (5%)	23,24,24	1.80	2 (8%)
24	PHO	a	353	-	51,69,69	1.88	8 (15%)	47,99,99	1.99	12 (25%)
35	DGD	C	519	-	63,63,67	0.87	3 (4%)	77,77,81	1.00	3 (3%)
23	CLA	C	507	-	65,73,73	2.04	16 (24%)	76,113,113	2.76	30 (39%)
23	CLA	C	503	-	65,73,73	2.03	16 (24%)	76,113,113	2.66	25 (32%)
23	CLA	C	508	-	65,73,73	2.00	17 (26%)	76,113,113	2.84	28 (36%)
25	BCR	T	101	-	41,41,41	1.01	1 (2%)	56,56,56	1.57	13 (23%)
27	GOL	B	624	-	5,5,5	0.86	0	5,5,5	1.18	1 (20%)
23	CLA	b	602	-	65,73,73	2.05	16 (24%)	76,113,113	2.88	34 (44%)
32	LMT	a	414	-	36,36,36	1.01	3 (8%)	47,47,47	1.12	3 (6%)
27	GOL	C	523	-	5,5,5	1.11	0	5,5,5	0.88	0
37	LHG	d	408	-	48,48,48	0.92	2 (4%)	51,54,54	1.01	3 (5%)
37	LHG	D	410	-	48,48,48	0.87	2 (4%)	51,54,54	1.01	3 (5%)
23	CLA	b	615	-	65,73,73	1.99	17 (26%)	76,113,113	2.77	28 (36%)
23	CLA	B	610	-	65,73,73	2.02	16 (24%)	76,113,113	2.89	29 (38%)
23	CLA	C	509	-	65,73,73	2.11	16 (24%)	76,113,113	2.73	26 (34%)
23	CLA	B	607	-	65,73,73	1.95	17 (26%)	76,113,113	2.76	29 (38%)
23	CLA	b	605	-	65,73,73	1.99	16 (24%)	76,113,113	2.90	28 (36%)
26	SQD	F	101	-	42,43,54	1.20	4 (9%)	51,54,65	2.06	10 (19%)
33	LMG	Z	101	-	37,37,55	1.00	2 (5%)	45,45,63	1.43	5 (11%)
34	HTG	c	522	-	19,19,19	0.93	2 (10%)	23,24,24	1.63	2 (8%)
23	CLA	C	514	-	65,73,73	2.06	15 (23%)	76,113,113	2.81	28 (36%)
27	GOL	d	701	-	5,5,5	1.05	0	5,5,5	0.93	0
32	LMT	e	102	-	36,36,36	1.02	4 (11%)	47,47,47	0.99	1 (2%)
23	CLA	C	505	-	65,73,73	2.00	16 (24%)	76,113,113	2.78	27 (35%)
27	GOL	c	742	-	5,5,5	1.00	0	5,5,5	0.98	0
25	BCR	y	101	-	41,41,41	1.04	1 (2%)	56,56,56	1.62	11 (19%)
34	HTG	C	522	-	19,19,19	0.89	1 (5%)	23,24,24	1.46	2 (8%)
35	DGD	c	519	-	63,63,67	0.87	3 (4%)	77,77,81	0.98	4 (5%)
23	CLA	B	612	-	65,73,73	1.99	18 (27%)	76,113,113	2.81	28 (36%)
25	BCR	A	409	-	41,41,41	0.99	1 (2%)	56,56,56	1.41	11 (19%)
33	LMG	C	520	-	51,51,55	0.94	2 (3%)	59,59,63	1.09	4 (6%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
35	DGD	c	517	-	63,63,67	0.85	2 (3%)	77,77,81	1.10	7 (9%)
23	CLA	A	404	-	65,73,73	2.02	16 (24%)	76,113,113	2.85	30 (39%)
27	GOL	a	701	-	5,5,5	1.03	0	5,5,5	1.02	0
23	CLA	A	408	-	65,73,73	1.99	17 (26%)	76,113,113	2.90	32 (42%)
29	PL9	a	416	-	55,55,55	0.65	2 (3%)	68,69,69	2.01	22 (32%)
24	PHO	A	407	-	51,69,69	1.77	8 (15%)	47,99,99	1.69	10 (21%)
25	BCR	b	617	-	41,41,41	1.04	1 (2%)	56,56,56	1.34	6 (10%)
23	CLA	C	502	-	65,73,73	2.01	16 (24%)	76,113,113	2.82	28 (36%)
37	LHG	D	409	-	48,48,48	0.87	2 (4%)	51,54,54	1.27	6 (11%)
25	BCR	k	101	-	41,41,41	1.04	1 (2%)	56,56,56	1.42	9 (16%)
37	LHG	d	407	-	48,48,48	0.87	2 (4%)	51,54,54	1.04	4 (7%)
23	CLA	c	508	-	65,73,73	2.01	16 (24%)	76,113,113	2.83	27 (35%)
25	BCR	c	516	-	41,41,41	1.03	1 (2%)	56,56,56	1.38	10 (17%)
38	HEM	e	87	-	41,50,50	1.29	5 (12%)	45,82,82	1.83	11 (24%)
23	CLA	C	511	-	65,73,73	2.05	16 (24%)	76,113,113	2.84	30 (39%)
25	BCR	K	102	-	41,41,41	1.04	1 (2%)	56,56,56	1.45	12 (21%)
25	BCR	B	618	-	41,41,41	0.96	1 (2%)	56,56,56	1.39	9 (16%)
23	CLA	b	607	-	65,73,73	1.99	18 (27%)	76,113,113	2.85	28 (36%)
27	GOL	O	501	-	5,5,5	0.92	0	5,5,5	0.95	0
28	OEX	A	413	-	0,15,15	-	-	-	-	-
23	CLA	b	606	-	65,73,73	2.02	15 (23%)	76,113,113	2.80	27 (35%)
23	CLA	a	406	-	65,73,73	2.02	15 (23%)	76,113,113	2.80	29 (38%)
35	DGD	C	518	-	63,63,67	0.90	3 (4%)	77,77,81	1.03	5 (6%)
35	DGD	c	518	-	63,63,67	0.85	3 (4%)	77,77,81	0.97	3 (3%)
23	CLA	B	614	-	65,73,73	2.01	17 (26%)	76,113,113	2.99	30 (39%)
23	CLA	B	608	-	65,73,73	1.96	16 (24%)	76,113,113	2.78	32 (42%)
23	CLA	a	407	-	65,73,73	1.98	16 (24%)	76,113,113	2.77	27 (35%)
32	LMT	t	101	-	25,25,36	0.89	2 (8%)	30,30,47	1.12	3 (10%)
26	SQD	b	620	-	53,54,54	1.05	3 (5%)	62,65,65	1.61	10 (16%)
37	LHG	E	101	-	41,41,48	1.08	2 (4%)	44,47,54	1.10	3 (6%)
37	LHG	l	101	-	48,48,48	0.83	2 (4%)	51,54,54	1.04	4 (7%)
33	LMG	C	501	-	51,51,55	0.92	2 (3%)	59,59,63	1.39	7 (11%)
32	LMT	M	101	-	36,36,36	1.14	3 (8%)	47,47,47	1.19	4 (8%)
23	CLA	B	616	-	65,73,73	2.01	16 (24%)	76,113,113	2.85	25 (32%)
37	LHG	d	711	-	48,48,48	0.89	2 (4%)	51,54,54	1.11	4 (7%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
40	HEC	V	202	-	32,50,50	2.01	3 (9%)	24,82,82	2.05	7 (29%)
23	CLA	c	509	-	65,73,73	2.16	16 (24%)	76,113,113	2.67	26 (34%)
23	CLA	b	601	-	65,73,73	2.10	16 (24%)	76,113,113	2.79	27 (35%)
27	GOL	D	701	-	5,5,5	1.33	1 (20%)	5,5,5	0.91	0
23	CLA	b	609	-	65,73,73	1.99	16 (24%)	76,113,113	2.78	28 (36%)
27	GOL	b	624	-	5,5,5	1.14	1 (20%)	5,5,5	0.78	0
32	LMT	I	101	-	36,36,36	1.05	3 (8%)	47,47,47	1.15	4 (8%)
25	BCR	D	407	-	41,41,41	1.11	1 (2%)	56,56,56	1.79	15 (26%)
23	CLA	b	613	-	65,73,73	2.01	17 (26%)	76,113,113	2.79	29 (38%)
27	GOL	a	412	-	5,5,5	0.88	0	5,5,5	1.10	0
23	CLA	b	614	-	65,73,73	1.99	16 (24%)	76,113,113	2.84	27 (35%)
28	OEX	a	415	-	0,15,15	-	-	-	-	-
31	BCT	a	404	-	2,3,3	0.59	0	2,3,3	1.49	0
32	LMT	a	420	-	36,36,36	1.02	1 (2%)	47,47,47	1.03	1 (2%)
34	HTG	B	623	-	19,19,19	0.78	1 (5%)	23,24,24	1.33	1 (4%)
27	GOL	A	701	-	5,5,5	1.40	2 (40%)	5,5,5	1.04	1 (20%)
23	CLA	B	611	-	65,73,73	2.58	19 (29%)	76,113,113	3.16	28 (36%)
26	SQD	f	102	-	42,43,54	1.18	3 (7%)	51,54,65	1.57	11 (21%)
40	HEC	v	202	-	32,50,50	2.08	3 (9%)	24,82,82	1.94	6 (25%)
37	LHG	L	101	-	48,48,48	0.88	2 (4%)	51,54,54	1.15	4 (7%)
27	GOL	c	743	-	5,5,5	1.16	0	5,5,5	0.89	0
33	LMG	z	101	-	39,39,55	1.08	2 (5%)	47,47,63	1.09	4 (8%)
23	CLA	c	507	-	65,73,73	2.06	16 (24%)	76,113,113	2.75	27 (35%)
25	BCR	h	101	-	41,41,41	1.02	1 (2%)	56,56,56	1.35	11 (19%)
32	LMT	m	103	-	36,36,36	1.05	3 (8%)	47,47,47	1.10	2 (4%)
27	GOL	o	601	-	5,5,5	1.10	1 (20%)	5,5,5	1.02	0
37	LHG	D	411	-	48,48,48	0.93	2 (4%)	51,54,54	1.02	3 (5%)
23	CLA	B	602	-	65,73,73	2.05	17 (26%)	76,113,113	2.81	29 (38%)
23	CLA	C	512	-	65,73,73	2.09	18 (27%)	76,113,113	2.65	25 (32%)
26	SQD	A	410	-	53,54,54	0.93	3 (5%)	62,65,65	1.88	10 (16%)
23	CLA	B	613	-	65,73,73	2.06	16 (24%)	76,113,113	2.72	27 (35%)
33	LMG	m	101	-	51,51,55	0.88	2 (3%)	59,59,63	1.24	5 (8%)
29	PL9	D	408	-	55,55,55	0.63	1 (1%)	68,69,69	1.61	17 (25%)
23	CLA	B	615	-	65,73,73	2.01	17 (26%)	76,113,113	2.79	27 (35%)
26	SQD	A	412	-	53,54,54	1.02	3 (5%)	62,65,65	1.19	6 (9%)
31	BCT	A	348	-	2,3,3	0.64	0	2,3,3	1.30	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
23	CLA	B	606	-	65,73,73	2.03	15 (23%)	76,113,113	2.99	28 (36%)
23	CLA	b	612	-	65,73,73	2.03	15 (23%)	76,113,113	2.78	27 (35%)
23	CLA	b	611	-	65,73,73	1.96	15 (23%)	76,113,113	2.96	28 (36%)
27	GOL	V	401	-	5,5,5	1.34	0	5,5,5	0.80	0
23	CLA	a	405	-	65,73,73	2.01	16 (24%)	76,113,113	2.86	32 (42%)
23	CLA	b	608	-	65,73,73	2.02	17 (26%)	76,113,113	2.78	30 (39%)
32	LMT	E	102	-	36,36,36	1.05	1 (2%)	47,47,47	1.03	3 (6%)
24	PHO	A	353	-	51,69,69	1.92	8 (15%)	47,99,99	1.85	9 (19%)
33	LMG	d	412	-	51,51,55	0.89	2 (3%)	59,59,63	1.09	4 (6%)
32	LMT	M	103	-	36,36,36	1.06	3 (8%)	47,47,47	1.06	2 (4%)
27	GOL	O	601	-	5,5,5	0.95	0	5,5,5	1.14	1 (20%)
23	CLA	c	505	-	65,73,73	2.06	17 (26%)	76,113,113	2.73	29 (38%)
35	DGD	h	102	-	63,63,67	0.85	3 (4%)	77,77,81	1.09	5 (6%)
33	LMG	C	521	-	51,51,55	1.06	3 (5%)	59,59,63	1.32	6 (10%)
25	BCR	a	410	-	41,41,41	1.03	1 (2%)	56,56,56	1.30	8 (14%)
27	GOL	B	901	-	5,5,5	1.05	0	5,5,5	0.96	0
23	CLA	B	609	-	65,73,73	2.00	16 (24%)	76,113,113	2.75	26 (34%)
33	LMG	B	621	-	51,51,55	0.93	2 (3%)	59,59,63	1.26	4 (6%)
34	HTG	V	203	-	11,11,19	0.28	0	15,15,24	1.13	1 (6%)
23	CLA	c	511	-	65,73,73	2.00	16 (24%)	76,113,113	2.80	30 (39%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
33	LMG	c	521	-	-	11/46/66/70	0/1/1/1
34	HTG	b	622	-	-	6/10/30/30	0/1/1/1
25	BCR	B	617	-	-	2/29/63/63	0/2/2/2
25	BCR	B	619	-	-	0/29/63/63	0/2/2/2
25	BCR	b	619	-	-	4/29/63/63	0/2/2/2
34	HTG	b	625	-	-	3/10/30/30	0/1/1/1
23	CLA	d	403	-	1/1/15/20	8/37/115/115	-
35	DGD	H	102	-	-	11/51/91/95	0/2/2/2
29	PL9	d	405	-	-	7/53/73/73	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
34	HTG	D	414	-	-	3/7/27/30	0/1/1/1
37	LHG	e	101	-	-	16/46/46/53	-
38	HEM	E	103	-	-	4/12/54/54	-
23	CLA	C	510	-	1/1/15/20	6/37/115/115	-
25	BCR	H	101	-	-	3/29/63/63	0/2/2/2
23	CLA	c	510	-	1/1/15/20	13/37/115/115	-
23	CLA	D	406	-	1/1/15/20	13/37/115/115	-
23	CLA	d	402	-	1/1/15/20	4/37/115/115	-
23	CLA	c	503	-	1/1/15/20	6/37/115/115	-
32	LMT	A	359	-	-	7/21/61/61	0/2/2/2
23	CLA	B	603	-	1/1/15/20	7/37/115/115	-
34	HTG	B	626	-	-	5/10/30/30	0/1/1/1
23	CLA	b	616	-	1/1/15/20	9/37/115/115	-
25	BCR	C	515	-	-	0/29/63/63	0/2/2/2
25	BCR	c	515	-	-	2/29/63/63	0/2/2/2
32	LMT	t	102	-	-	9/17/38/61	0/1/1/2
23	CLA	c	514	-	1/1/15/20	8/37/115/115	-
34	HTG	d	411	-	-	1/7/27/30	0/1/1/1
27	GOL	A	411	-	-	2/4/4/4	-
29	PL9	A	414	-	-	15/53/73/73	0/1/1/1
33	LMG	D	415	-	-	9/46/66/70	0/1/1/1
32	LMT	b	621	-	-	8/17/37/61	0/1/1/2
23	CLA	B	605	-	1/1/15/20	6/37/115/115	-
26	SQD	a	413	-	-	12/49/69/69	0/1/1/1
33	LMG	c	520	-	-	11/46/66/70	0/1/1/1
23	CLA	C	504	-	1/1/15/20	2/37/115/115	-
25	BCR	b	618	-	-	0/29/63/63	0/2/2/2
23	CLA	c	504	-	1/1/15/20	1/37/115/115	-
23	CLA	D	405	-	1/1/15/20	0/37/115/115	-
26	SQD	a	411	-	-	9/49/69/69	0/1/1/1
27	GOL	a	801	-	-	1/4/4/4	-
24	PHO	a	408	-	-	6/37/103/103	0/5/6/6
23	CLA	b	610	-	1/1/15/20	7/37/115/115	-
25	BCR	Y	101	-	-	4/29/63/63	0/2/2/2
35	DGD	C	517	-	-	14/51/91/95	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	GOL	d	801	-	-	1/4/4/4	-
23	CLA	B	604	-	1/1/15/20	2/37/115/115	-
23	CLA	c	502	-	1/1/15/20	2/37/115/115	-
25	BCR	d	404	-	-	6/29/63/63	0/2/2/2
26	SQD	B	620	-	-	13/49/69/69	0/1/1/1
23	CLA	A	405	-	1/1/15/20	3/37/115/115	-
23	CLA	B	601	-	1/1/15/20	13/37/115/115	-
27	GOL	b	901	-	-	0/4/4/4	-
23	CLA	C	513	-	1/1/15/20	8/37/115/115	-
27	GOL	o	501	-	-	2/4/4/4	-
23	CLA	c	513	-	1/1/15/20	12/37/115/115	-
32	LMT	D	404	-	-	12/21/61/61	0/2/2/2
23	CLA	a	409	-	1/1/15/20	9/37/115/115	-
33	LMG	a	419	-	-	13/46/66/70	0/1/1/1
25	BCR	t	103	-	-	0/29/63/63	0/2/2/2
23	CLA	C	506	-	1/1/15/20	6/37/115/115	-
25	BCR	C	516	-	-	0/29/63/63	0/2/2/2
23	CLA	c	506	-	1/1/15/20	8/37/115/115	-
34	HTG	B	622	-	-	4/10/30/30	0/1/1/1
27	GOL	v	401	-	-	2/4/4/4	-
23	CLA	b	604	-	1/1/15/20	10/37/115/115	-
23	CLA	c	512	-	1/1/15/20	5/37/115/115	-
23	CLA	A	406	-	-	5/37/115/115	-
23	CLA	b	603	-	1/1/15/20	6/37/115/115	-
32	LMT	b	627	-	-	11/17/37/61	0/1/1/2
34	HTG	b	623	-	-	4/10/30/30	0/1/1/1
24	PHO	a	353	-	-	1/37/103/103	0/5/6/6
35	DGD	C	519	-	-	16/51/91/95	0/2/2/2
23	CLA	C	507	-	1/1/15/20	14/37/115/115	-
23	CLA	C	503	-	1/1/15/20	10/37/115/115	-
23	CLA	C	508	-	1/1/15/20	9/37/115/115	-
25	BCR	T	101	-	-	1/29/63/63	0/2/2/2
27	GOL	B	624	-	-	4/4/4/4	-
23	CLA	b	602	-	1/1/15/20	4/37/115/115	-
32	LMT	a	414	-	-	10/21/61/61	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	GOL	C	523	-	-	0/4/4/4	-
37	LHG	d	408	-	-	13/53/53/53	-
37	LHG	D	410	-	-	17/53/53/53	-
23	CLA	b	615	-	1/1/15/20	7/37/115/115	-
23	CLA	B	610	-	1/1/15/20	7/37/115/115	-
23	CLA	C	509	-	1/1/15/20	4/37/115/115	-
23	CLA	B	607	-	1/1/15/20	3/37/115/115	-
23	CLA	b	605	-	1/1/15/20	6/37/115/115	-
26	SQD	F	101	-	-	15/38/58/69	0/1/1/1
33	LMG	Z	101	-	-	9/31/51/70	0/1/1/1
34	HTG	c	522	-	-	1/10/30/30	0/1/1/1
23	CLA	C	514	-	1/1/15/20	7/37/115/115	-
27	GOL	d	701	-	-	2/4/4/4	-
32	LMT	e	102	-	-	15/21/61/61	0/2/2/2
23	CLA	C	505	-	1/1/15/20	6/37/115/115	-
27	GOL	c	742	-	-	0/4/4/4	-
25	BCR	y	101	-	-	4/29/63/63	0/2/2/2
34	HTG	C	522	-	-	0/10/30/30	0/1/1/1
35	DGD	c	519	-	-	11/51/91/95	0/2/2/2
23	CLA	B	612	-	1/1/15/20	5/37/115/115	-
25	BCR	A	409	-	-	0/29/63/63	0/2/2/2
33	LMG	C	520	-	-	9/46/66/70	0/1/1/1
35	DGD	c	517	-	-	18/51/91/95	0/2/2/2
23	CLA	A	404	-	1/1/15/20	3/37/115/115	-
27	GOL	a	701	-	-	2/4/4/4	-
23	CLA	A	408	-	1/1/15/20	9/37/115/115	-
29	PL9	a	416	-	-	14/53/73/73	0/1/1/1
24	PHO	A	407	-	-	3/37/103/103	0/5/6/6
25	BCR	b	617	-	-	2/29/63/63	0/2/2/2
23	CLA	C	502	-	1/1/15/20	4/37/115/115	-
37	LHG	D	409	-	-	14/53/53/53	-
25	BCR	k	101	-	-	0/29/63/63	0/2/2/2
37	LHG	d	407	-	-	13/53/53/53	-
23	CLA	c	508	-	1/1/15/20	5/37/115/115	-
25	BCR	c	516	-	-	2/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
38	HEM	e	87	-	-	4/12/54/54	-
23	CLA	C	511	-	1/1/15/20	13/37/115/115	-
25	BCR	K	102	-	-	2/29/63/63	0/2/2/2
25	BCR	B	618	-	-	0/29/63/63	0/2/2/2
23	CLA	b	607	-	1/1/15/20	2/37/115/115	-
27	GOL	O	501	-	-	2/4/4/4	-
23	CLA	b	606	-	1/1/15/20	12/37/115/115	-
23	CLA	a	406	-	1/1/15/20	8/37/115/115	-
35	DGD	C	518	-	-	13/51/91/95	0/2/2/2
35	DGD	c	518	-	-	16/51/91/95	0/2/2/2
23	CLA	B	614	-	1/1/15/20	13/37/115/115	-
23	CLA	B	608	-	-	4/37/115/115	-
23	CLA	a	407	-	-	6/37/115/115	-
32	LMT	t	101	-	-	11/17/37/61	0/1/1/2
26	SQD	b	620	-	-	16/49/69/69	0/1/1/1
37	LHG	E	101	-	-	22/46/46/53	-
37	LHG	l	101	-	-	14/53/53/53	-
33	LMG	C	501	-	-	14/46/66/70	0/1/1/1
32	LMT	M	101	-	-	5/21/61/61	0/2/2/2
23	CLA	B	616	-	1/1/15/20	6/37/115/115	-
37	LHG	d	711	-	-	17/53/53/53	-
40	HEC	V	202	-	-	2/10/54/54	-
23	CLA	c	509	-	1/1/15/20	5/37/115/115	-
23	CLA	b	601	-	1/1/15/20	17/37/115/115	-
27	GOL	D	701	-	-	4/4/4/4	-
23	CLA	b	609	-	1/1/15/20	3/37/115/115	-
27	GOL	b	624	-	-	2/4/4/4	-
32	LMT	I	101	-	-	16/21/61/61	0/2/2/2
25	BCR	D	407	-	-	4/29/63/63	0/2/2/2
23	CLA	b	613	-	1/1/15/20	6/37/115/115	-
27	GOL	a	412	-	-	4/4/4/4	-
23	CLA	b	614	-	1/1/15/20	15/37/115/115	-
34	HTG	B	623	-	-	2/10/30/30	0/1/1/1
32	LMT	a	420	-	-	11/21/61/61	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	GOL	A	701	-	-	1/4/4/4	-
23	CLA	B	611	-	1/1/15/20	2/37/115/115	-
26	SQD	f	102	-	-	9/38/58/69	0/1/1/1
40	HEC	v	202	-	-	2/10/54/54	-
37	LHG	L	101	-	-	20/53/53/53	-
27	GOL	c	743	-	-	3/4/4/4	-
33	LMG	z	101	-	-	9/34/54/70	0/1/1/1
23	CLA	c	507	-	1/1/15/20	8/37/115/115	-
25	BCR	h	101	-	-	2/29/63/63	0/2/2/2
32	LMT	m	103	-	-	7/21/61/61	0/2/2/2
27	GOL	o	601	-	-	4/4/4/4	-
37	LHG	D	411	-	-	14/53/53/53	-
23	CLA	B	602	-	1/1/15/20	8/37/115/115	-
23	CLA	C	512	-	1/1/15/20	5/37/115/115	-
26	SQD	A	410	-	-	12/49/69/69	0/1/1/1
23	CLA	B	613	-	1/1/15/20	9/37/115/115	-
33	LMG	m	101	-	-	12/46/66/70	0/1/1/1
29	PL9	D	408	-	-	6/53/73/73	0/1/1/1
23	CLA	B	615	-	1/1/15/20	6/37/115/115	-
26	SQD	A	412	-	-	14/49/69/69	0/1/1/1
23	CLA	B	606	-	1/1/15/20	10/37/115/115	-
23	CLA	b	612	-	1/1/15/20	5/37/115/115	-
23	CLA	b	611	-	1/1/15/20	2/37/115/115	-
27	GOL	V	401	-	-	2/4/4/4	-
23	CLA	a	405	-	1/1/15/20	4/37/115/115	-
23	CLA	b	608	-	-	6/37/115/115	-
32	LMT	E	102	-	-	8/21/61/61	0/2/2/2
24	PHO	A	353	-	-	1/37/103/103	0/5/6/6
33	LMG	d	412	-	-	10/46/66/70	0/1/1/1
32	LMT	M	103	-	-	7/21/61/61	0/2/2/2
27	GOL	O	601	-	-	2/4/4/4	-
23	CLA	c	505	-	1/1/15/20	5/37/115/115	-
35	DGD	h	102	-	-	13/51/91/95	0/2/2/2
33	LMG	C	521	-	-	12/46/66/70	0/1/1/1
25	BCR	a	410	-	-	1/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	GOL	B	901	-	-	2/4/4/4	-
23	CLA	B	609	-	1/1/15/20	2/37/115/115	-
33	LMG	B	621	-	-	20/46/66/70	0/1/1/1
34	HTG	V	203	-	-	0/2/19/30	0/1/1/1
23	CLA	c	511	-	1/1/15/20	10/37/115/115	-

The worst 5 of 1354 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	B	611	CLA	C3B-C2B	10.40	1.54	1.40
23	C	509	CLA	C3B-C2B	6.84	1.49	1.40
23	B	616	CLA	C3B-C2B	6.71	1.49	1.40
23	C	512	CLA	C3B-C2B	6.64	1.49	1.40
23	B	611	CLA	C1D-ND	6.63	1.45	1.37

The worst 5 of 2619 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	B	611	CLA	C1D-ND-C4D	-11.74	97.99	106.33
23	B	612	CLA	C1D-ND-C4D	-10.65	98.77	106.33
23	a	409	CLA	C1D-ND-C4D	-10.54	98.85	106.33
23	B	601	CLA	C1D-ND-C4D	-10.12	99.15	106.33
23	C	514	CLA	C1D-ND-C4D	-9.95	99.27	106.33

5 of 66 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
23	A	404	CLA	ND
23	A	405	CLA	ND
23	A	408	CLA	ND
23	B	601	CLA	ND
23	B	602	CLA	ND

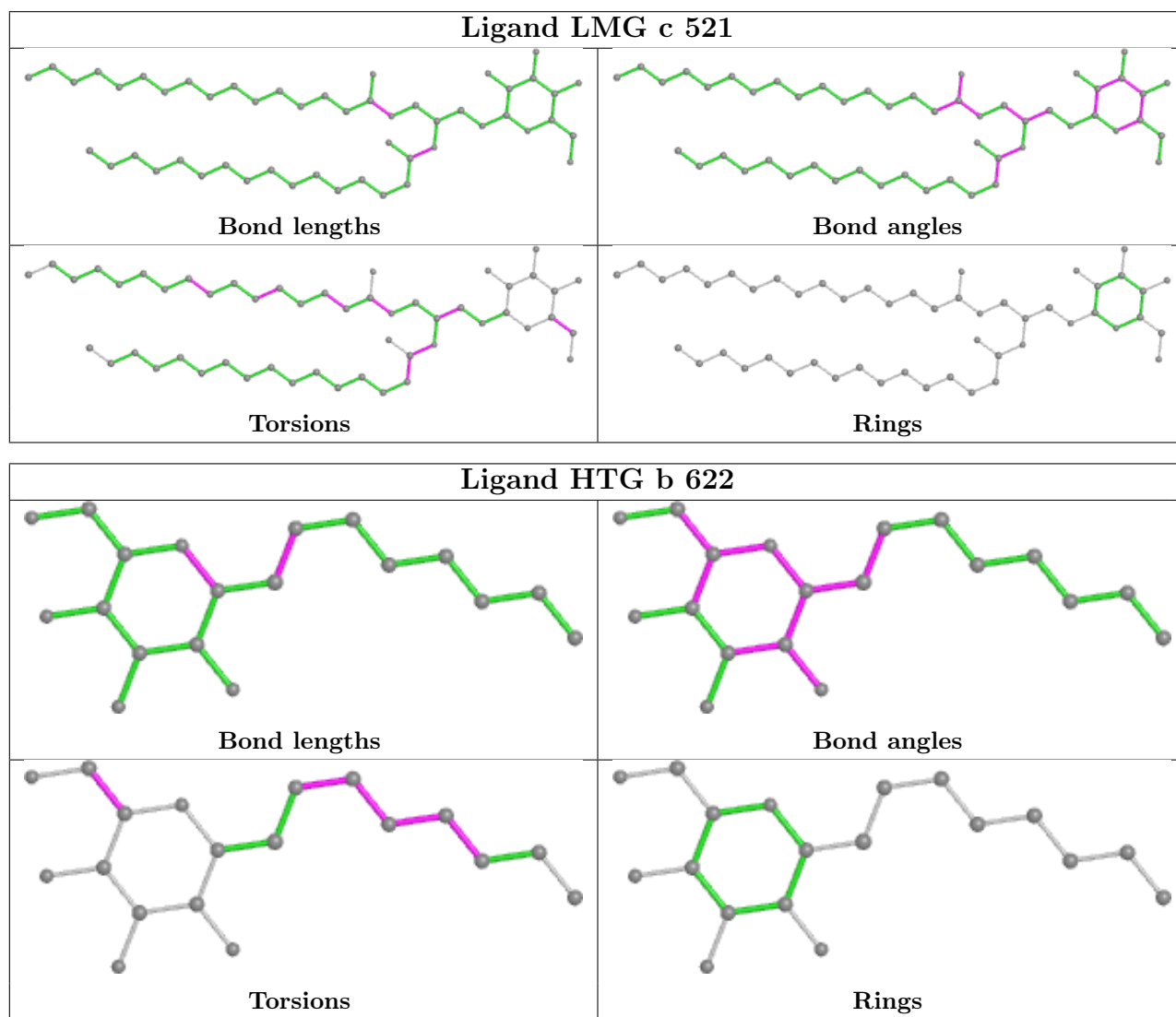
5 of 1297 torsion outliers are listed below:

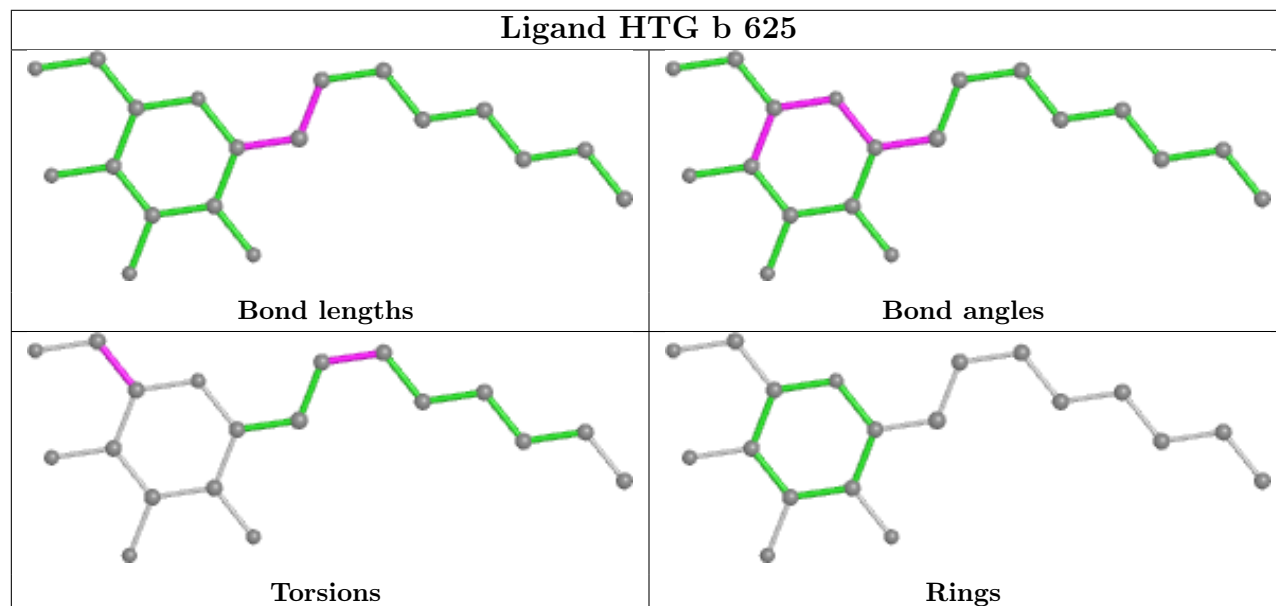
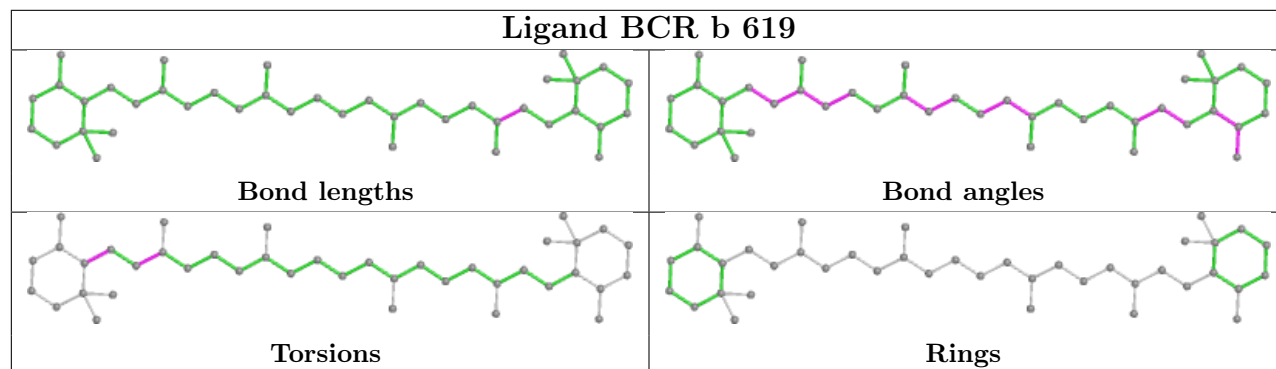
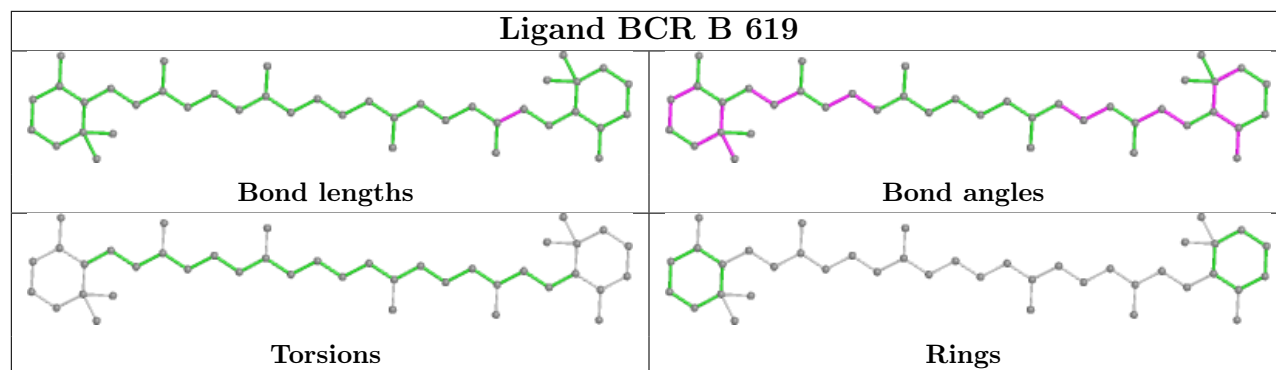
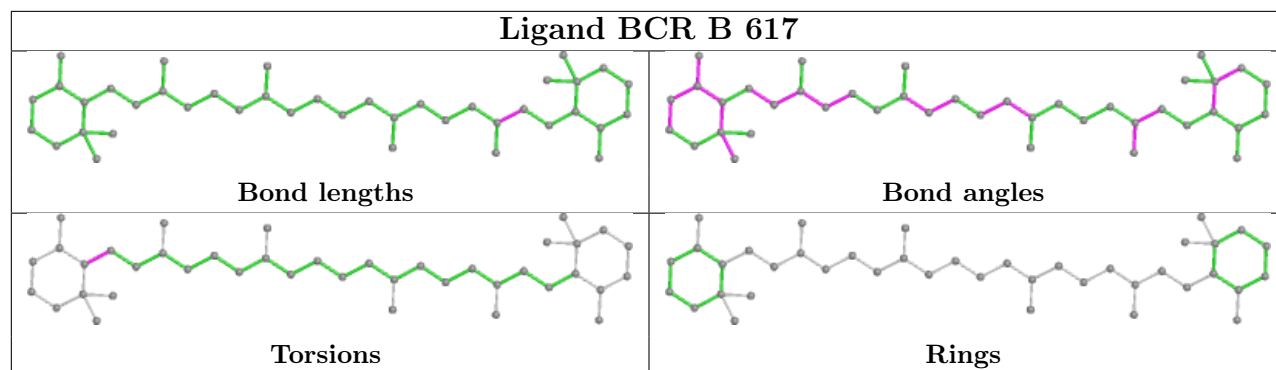
Mol	Chain	Res	Type	Atoms
23	A	408	CLA	C2-C3-C5-C6
23	A	408	CLA	C4-C3-C5-C6
23	B	603	CLA	C2-C3-C5-C6
23	B	603	CLA	C4-C3-C5-C6
23	B	606	CLA	CHA-CBD-CGD-O1D

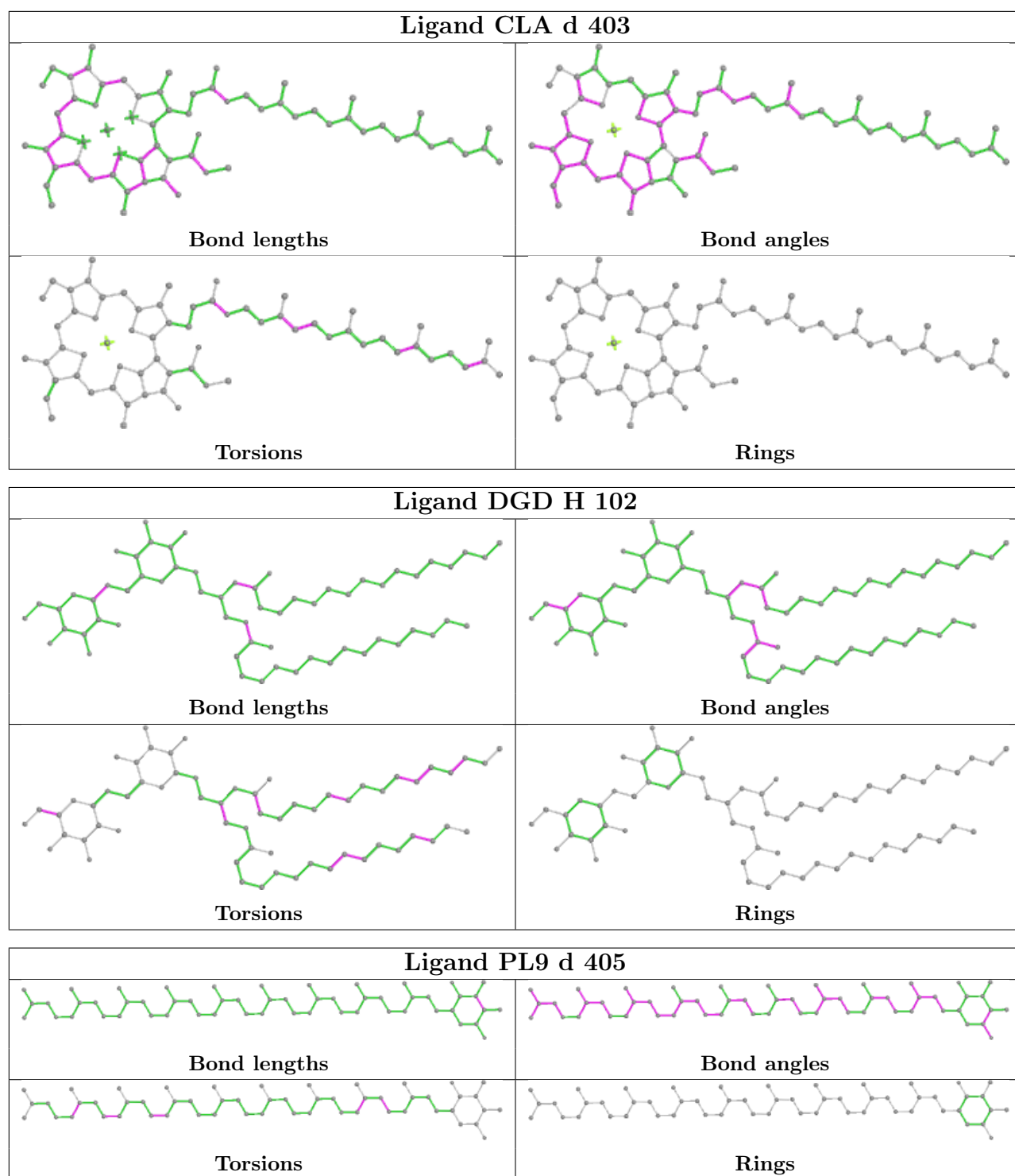
There are no ring outliers.

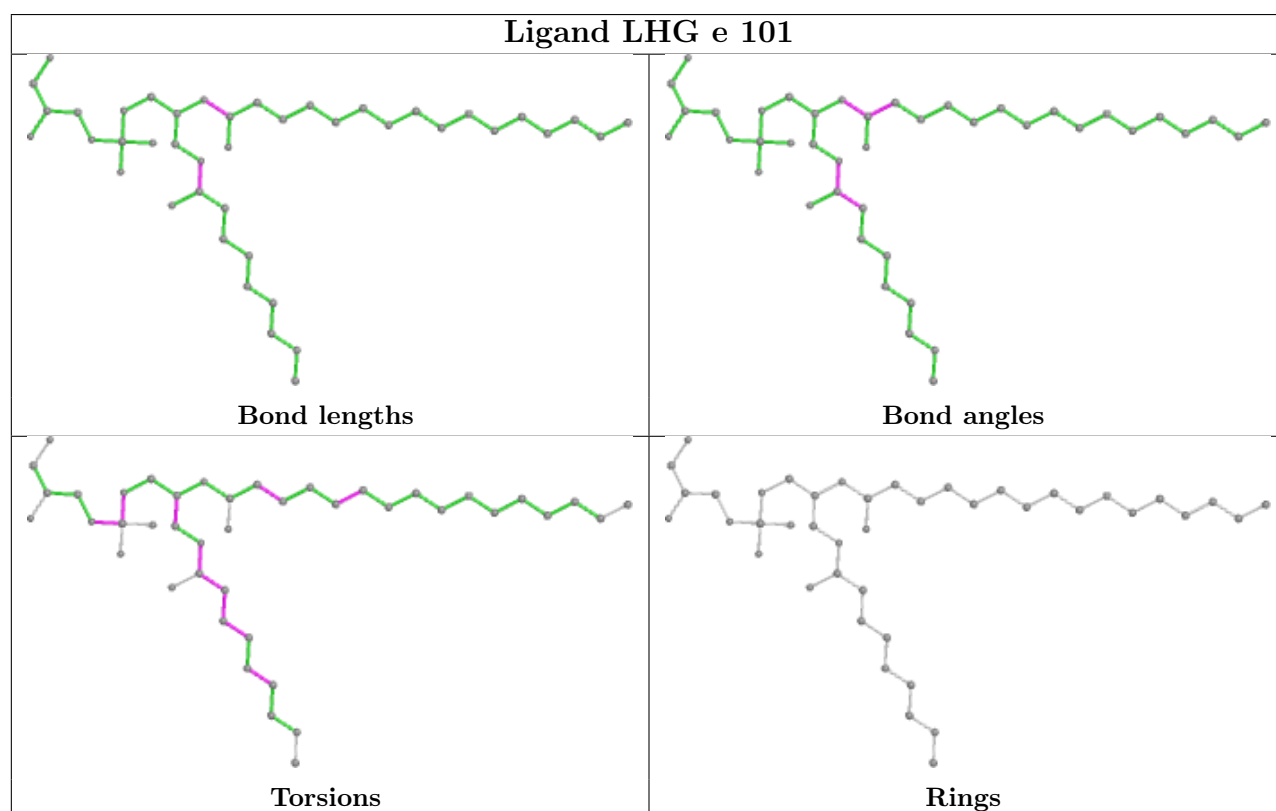
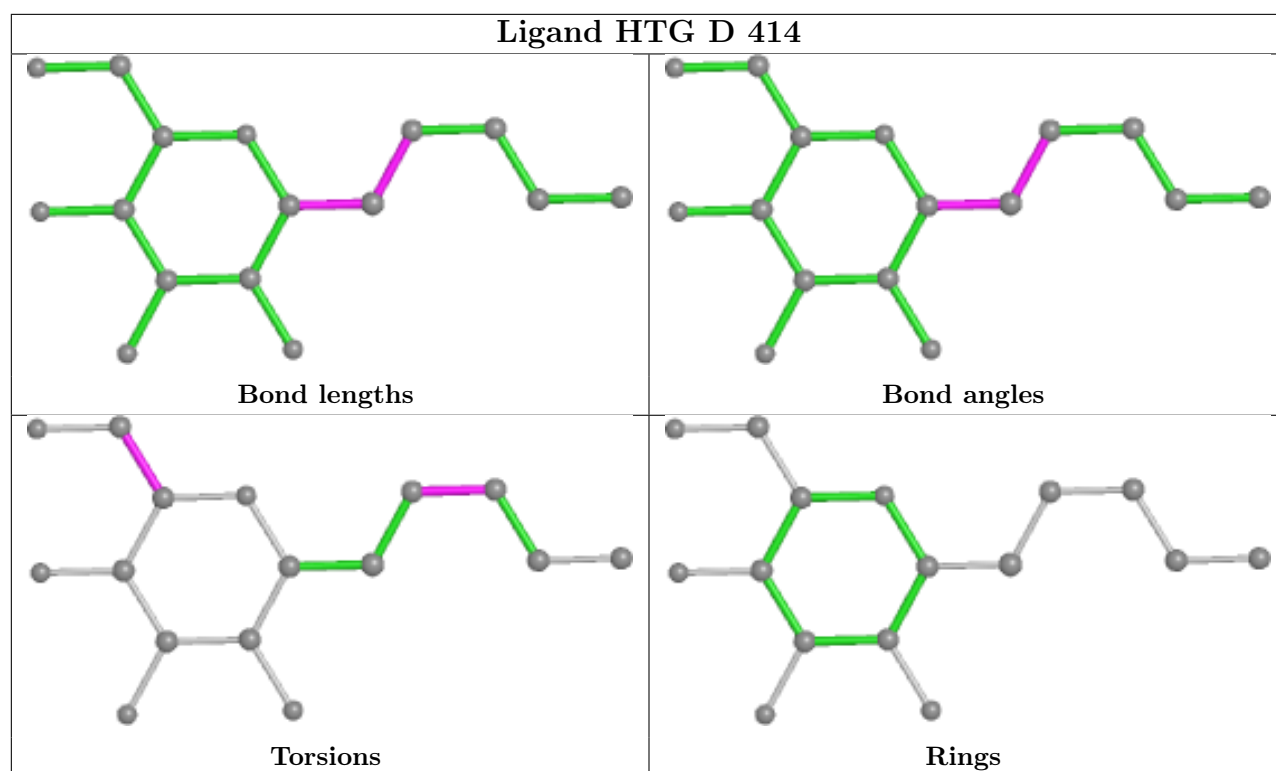
No monomer is involved in short contacts.

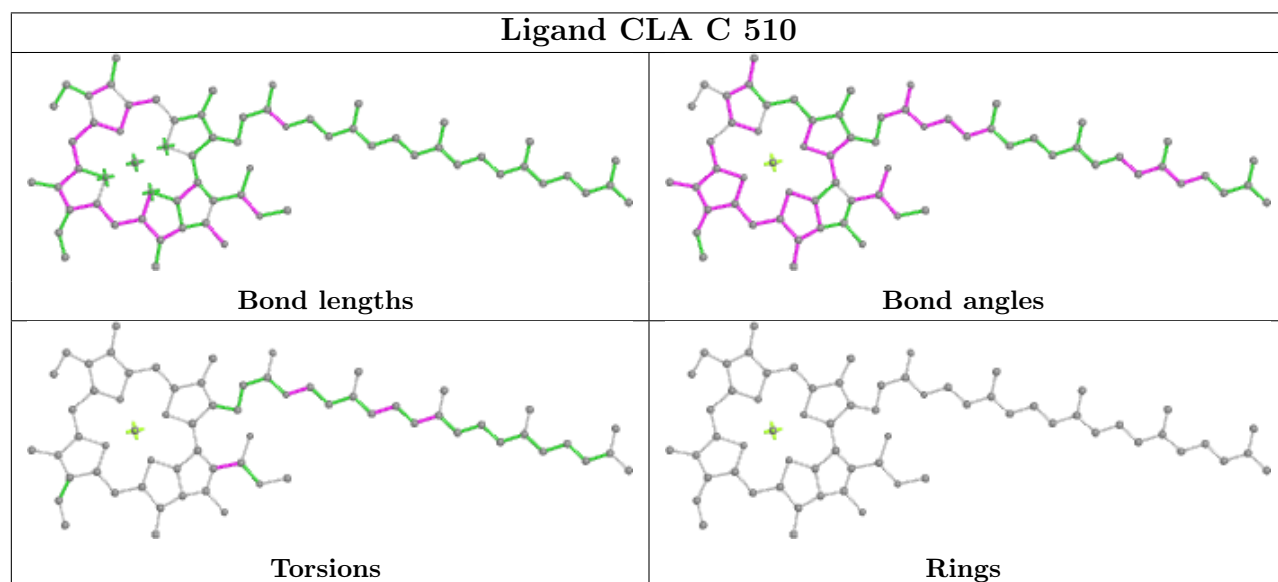
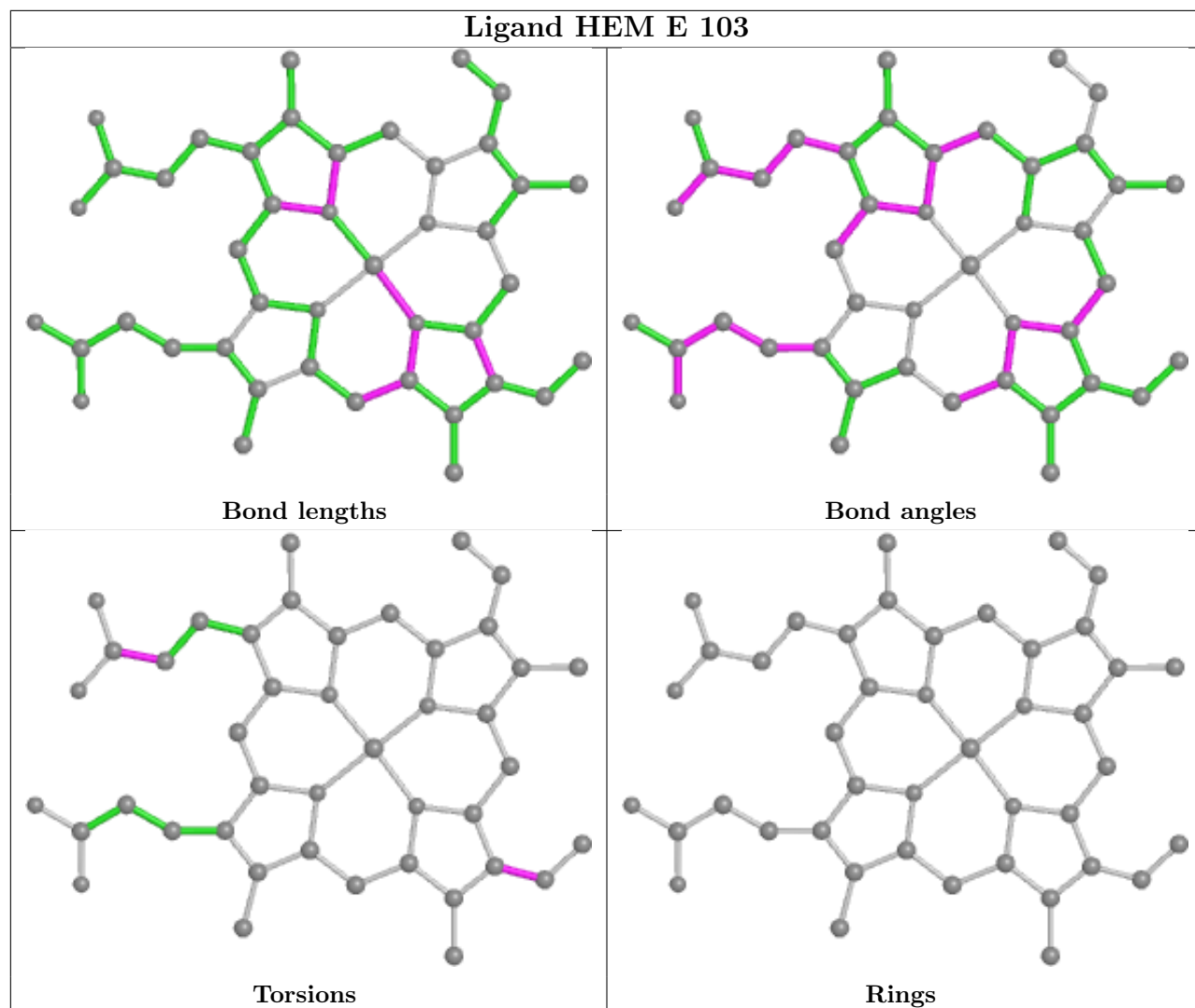
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

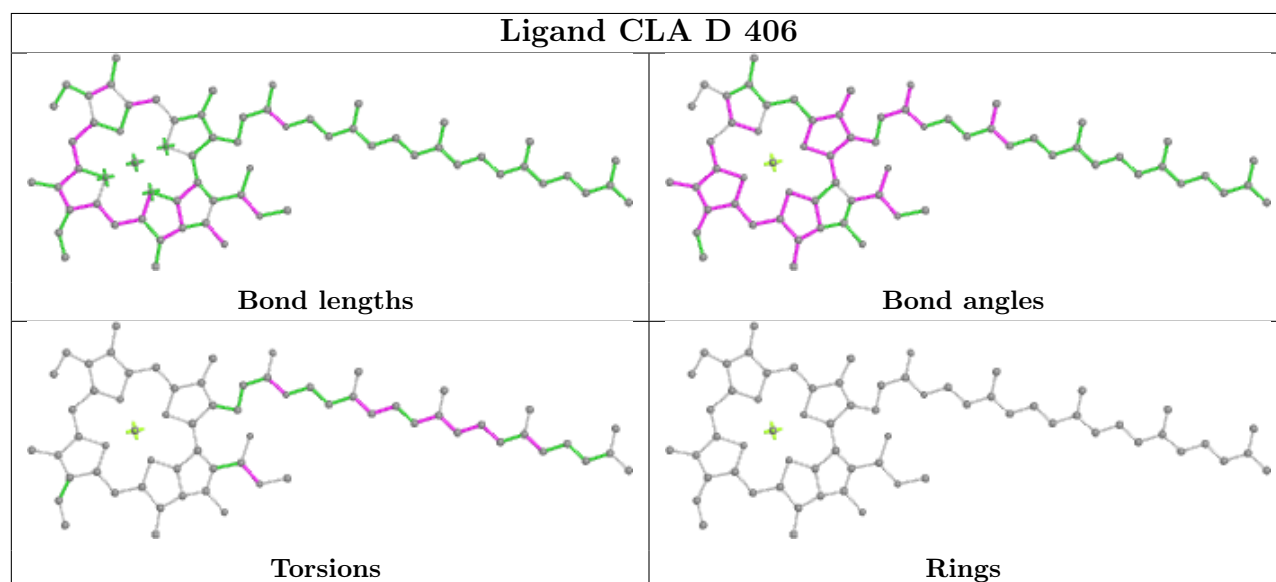
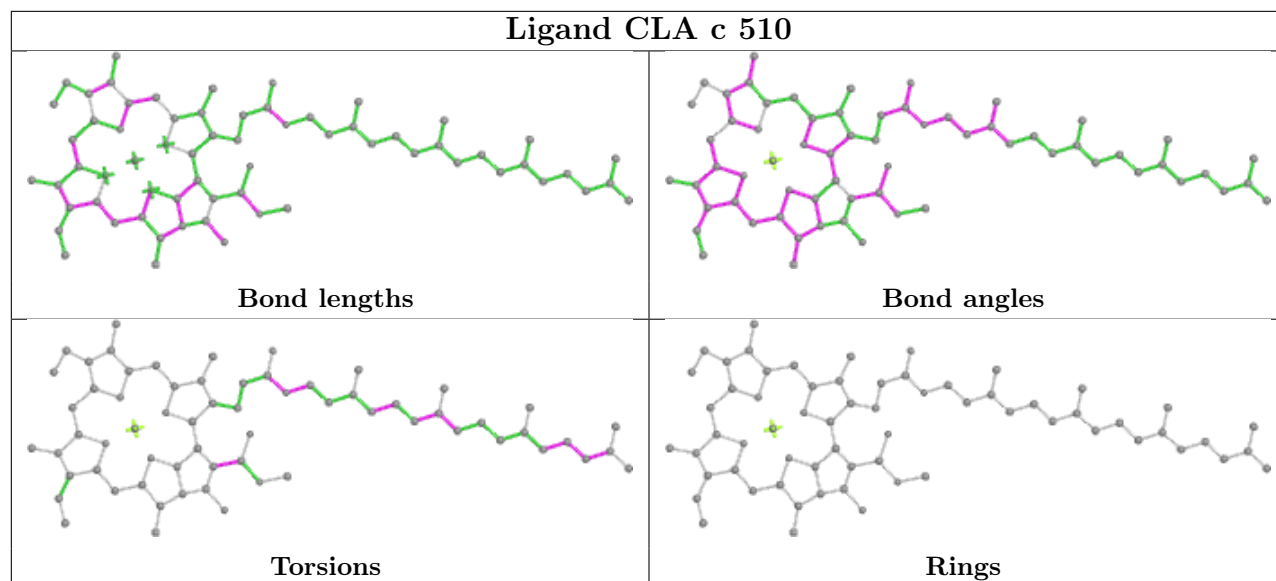
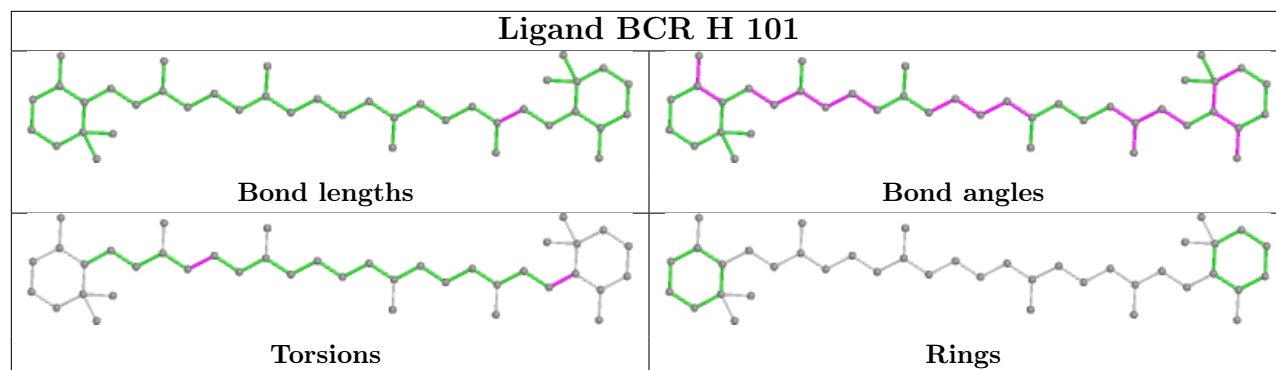


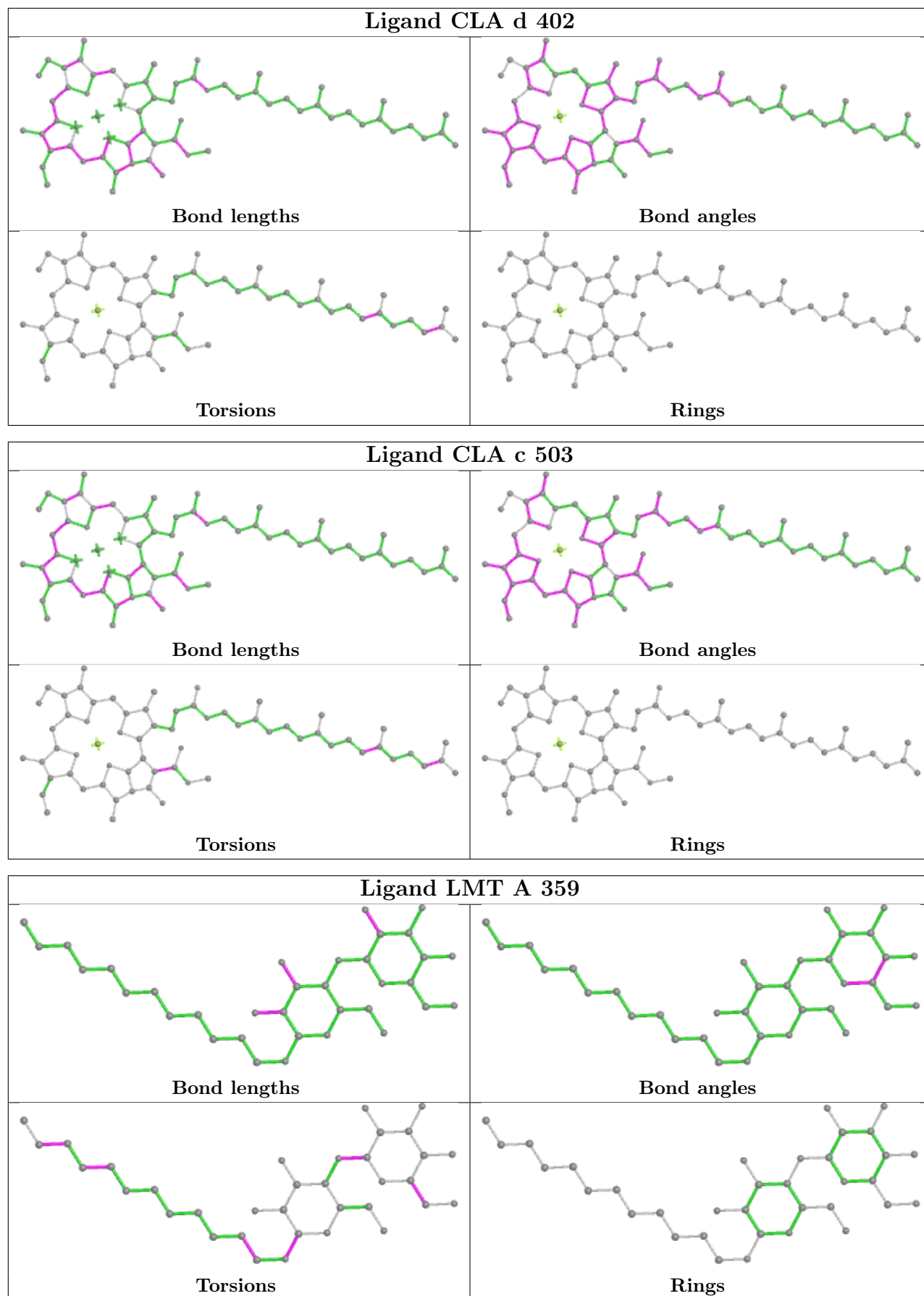


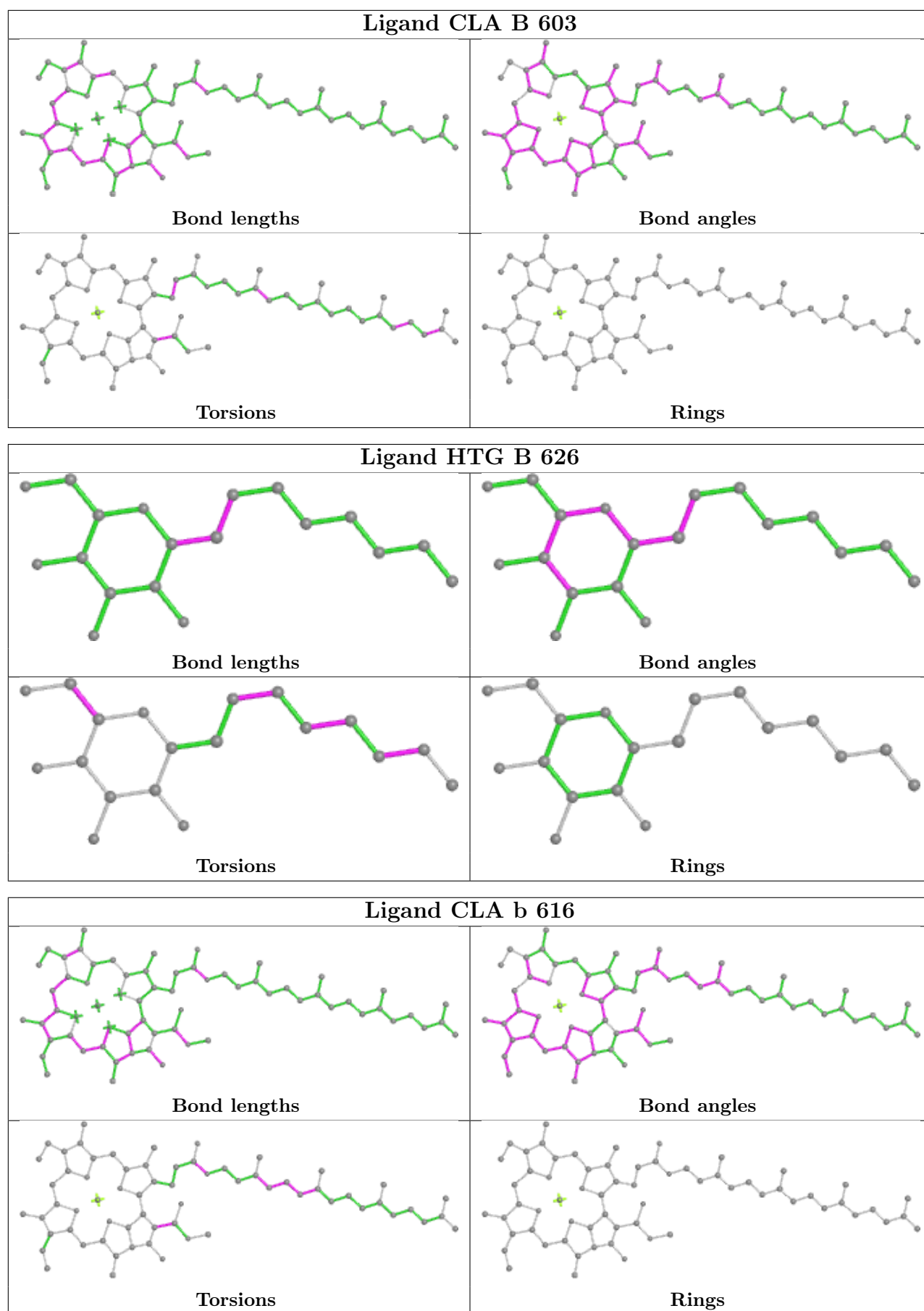


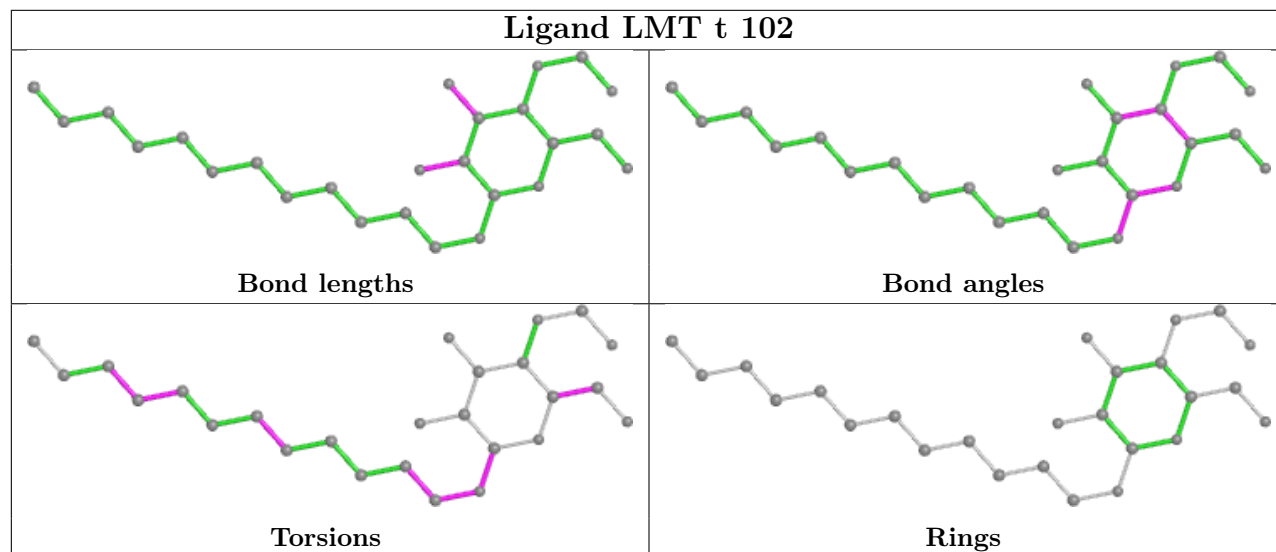
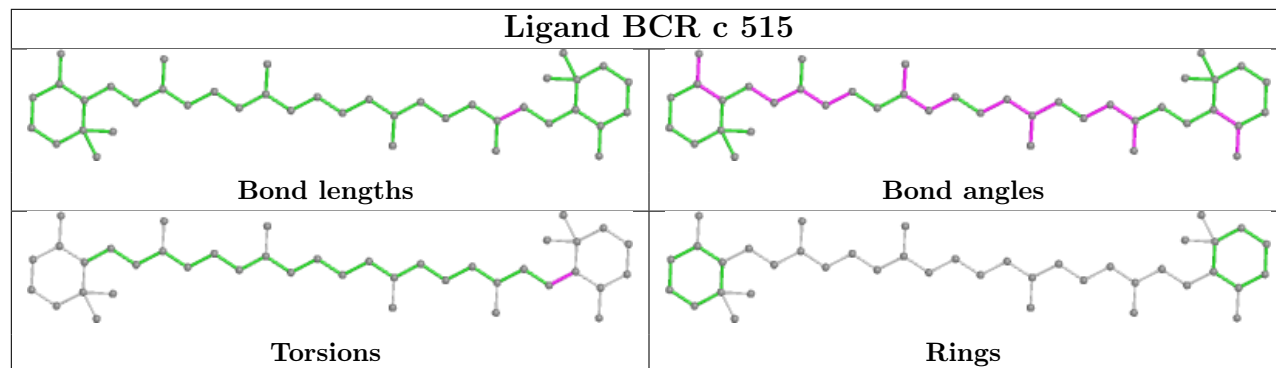
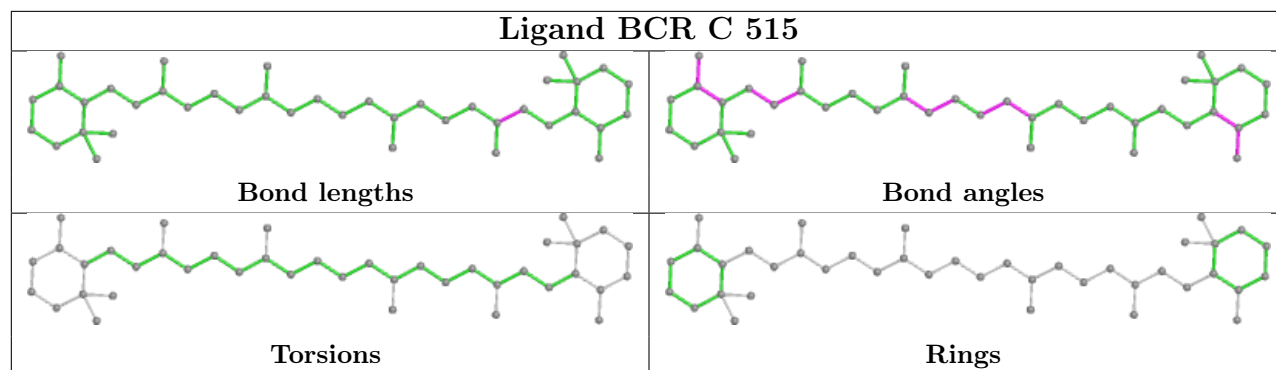


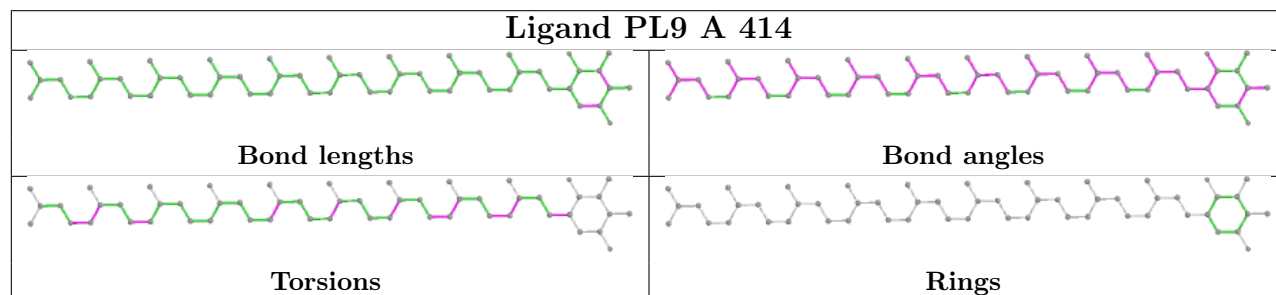
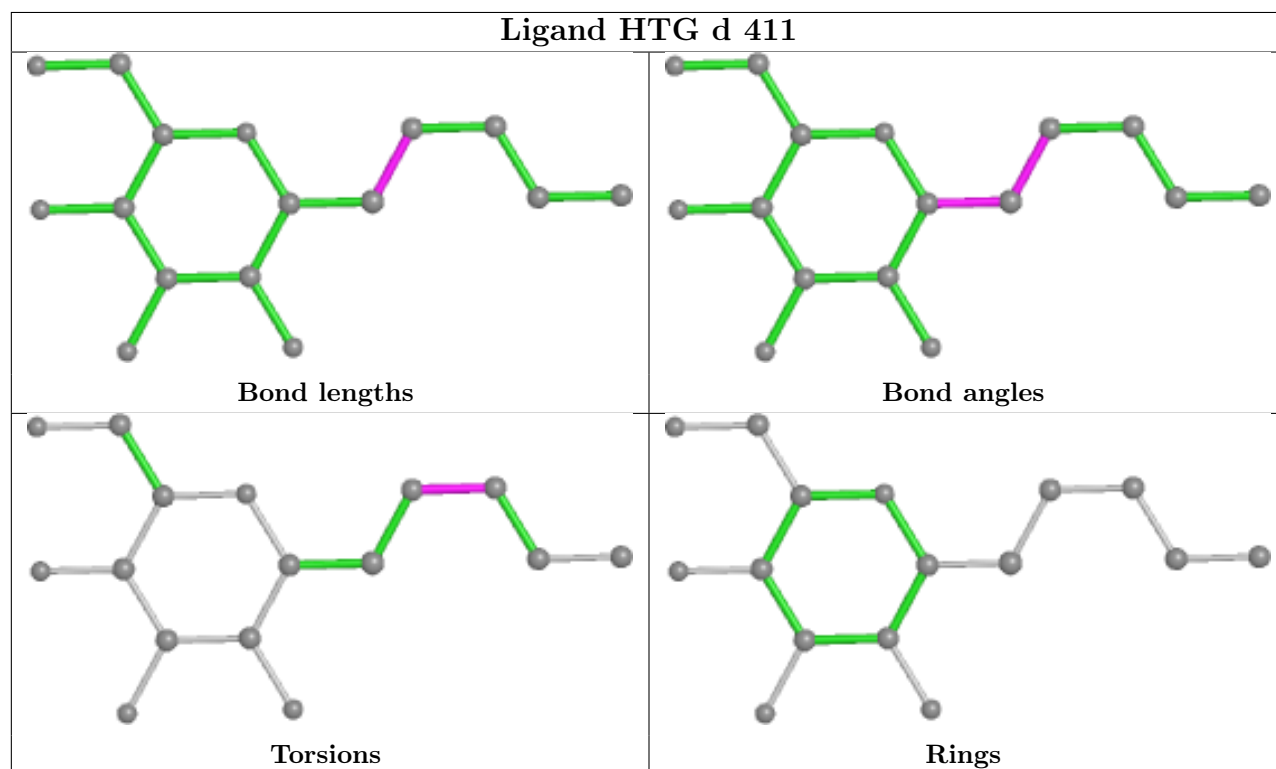
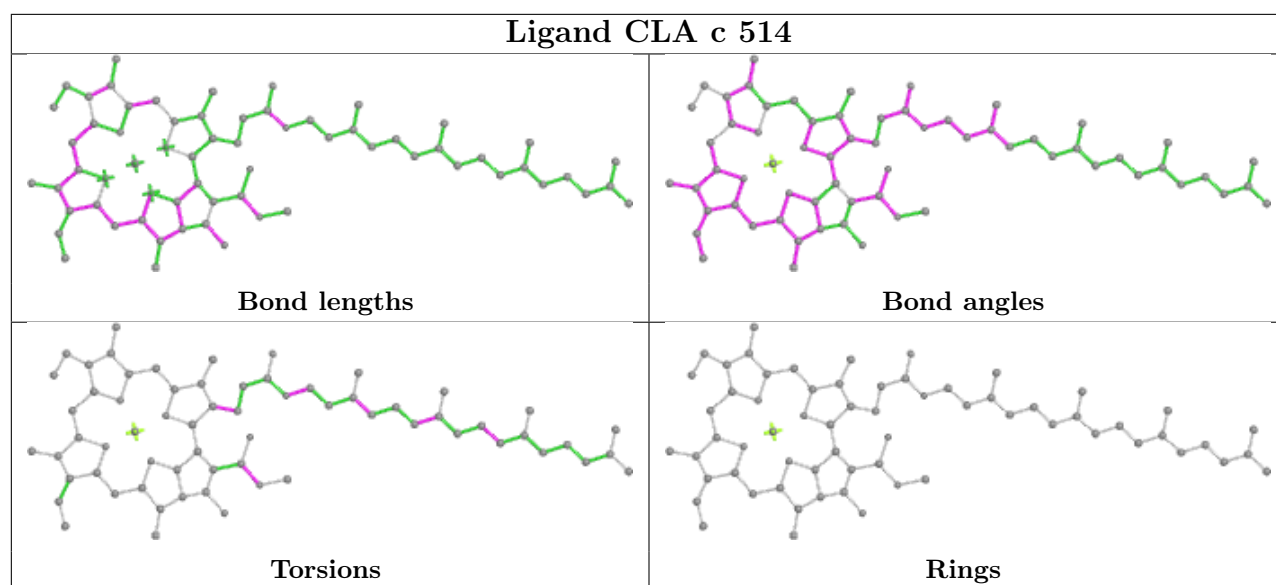


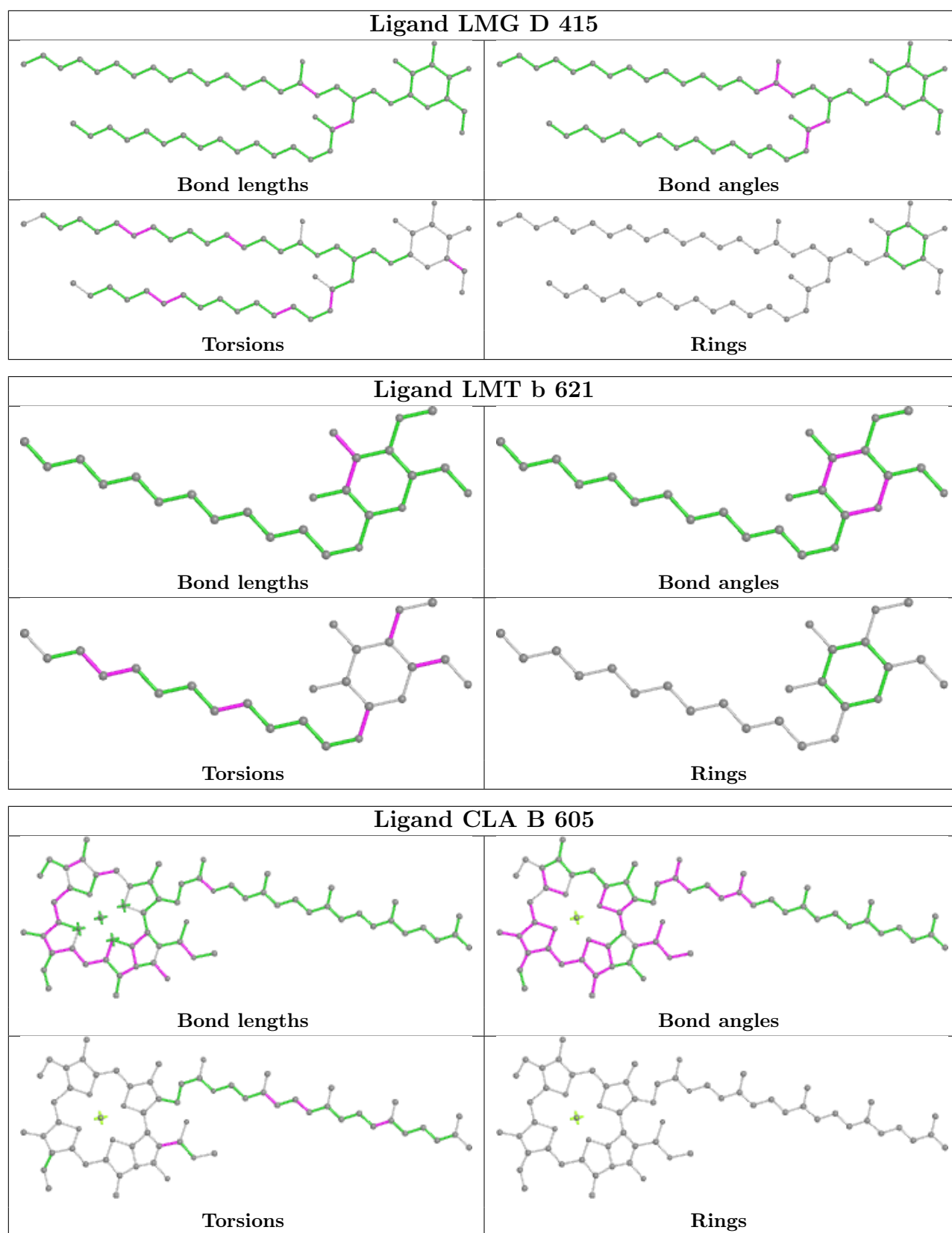


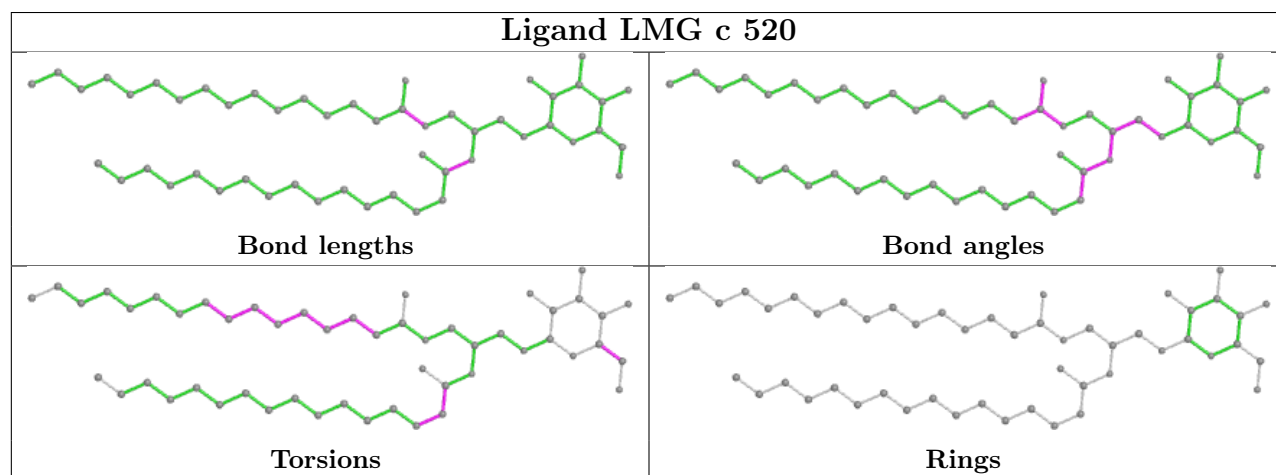
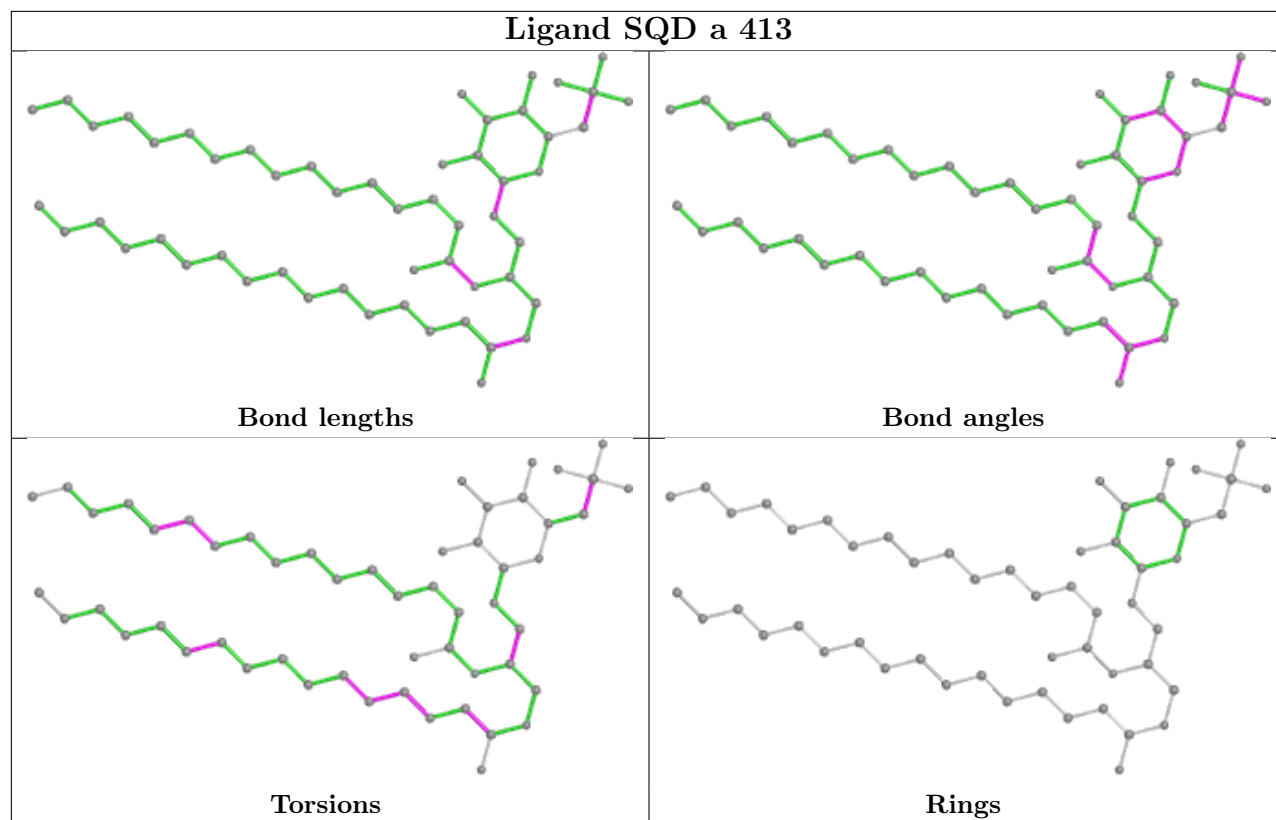


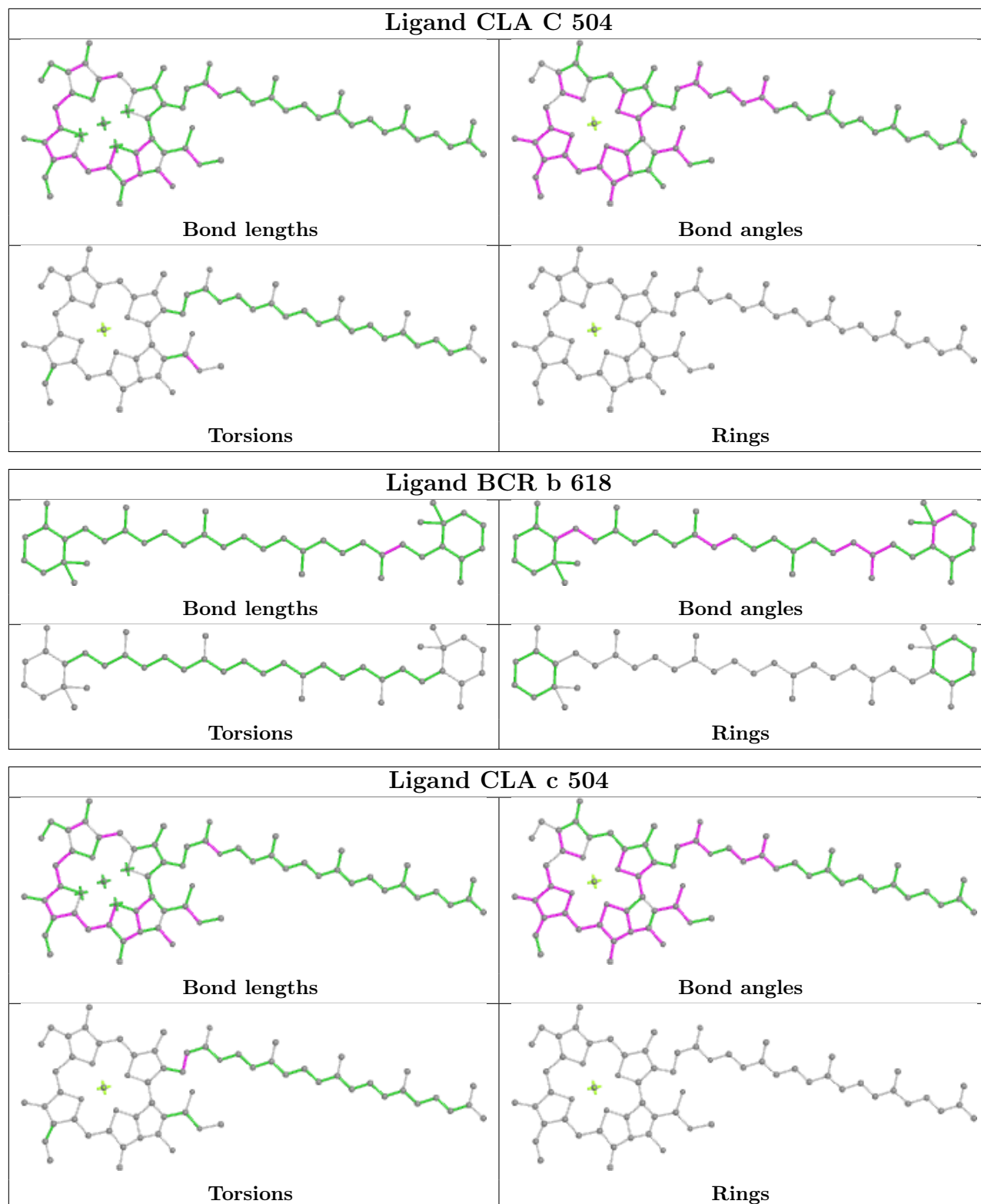


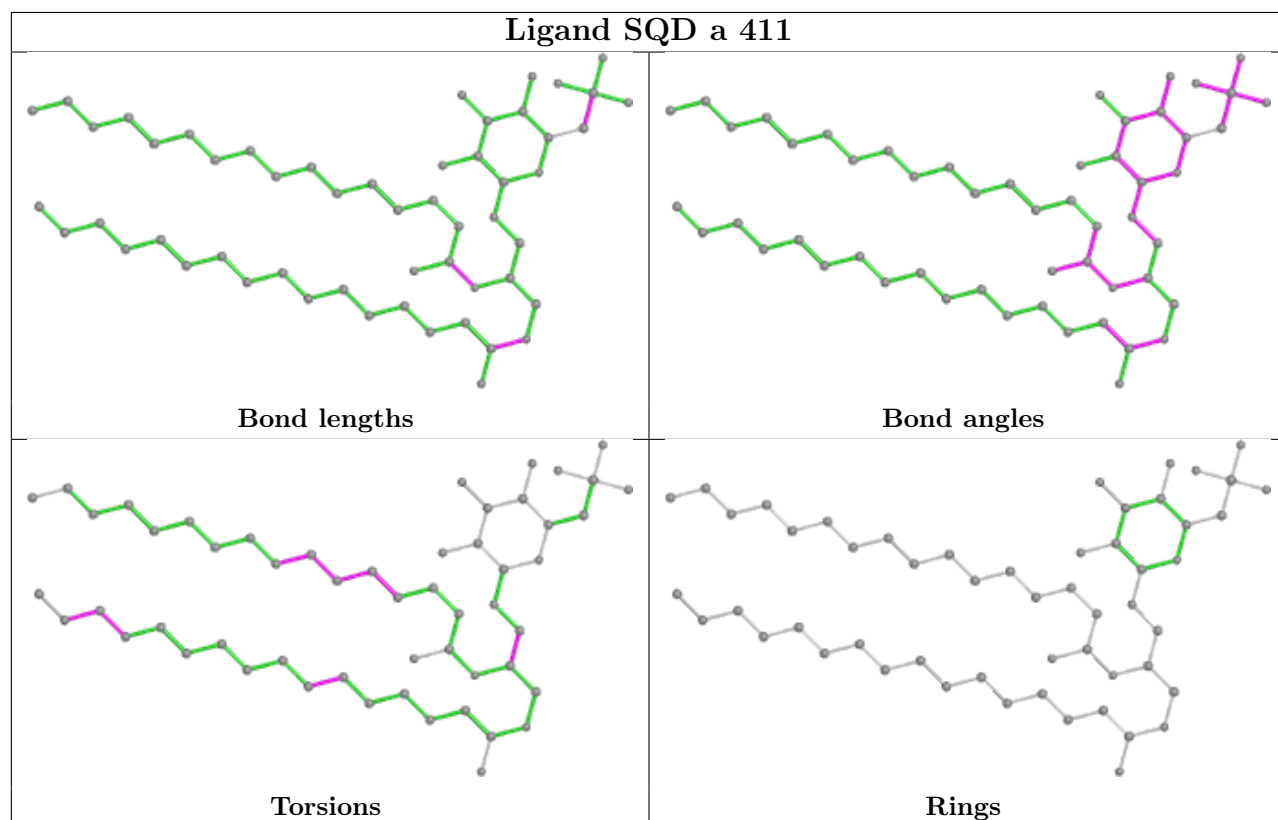
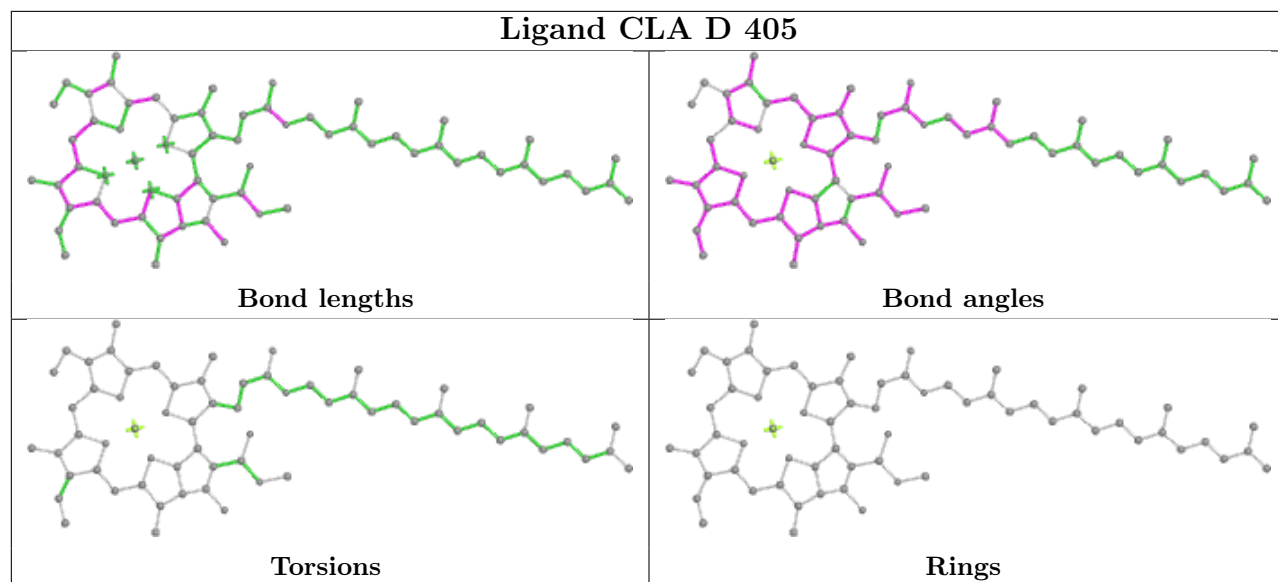


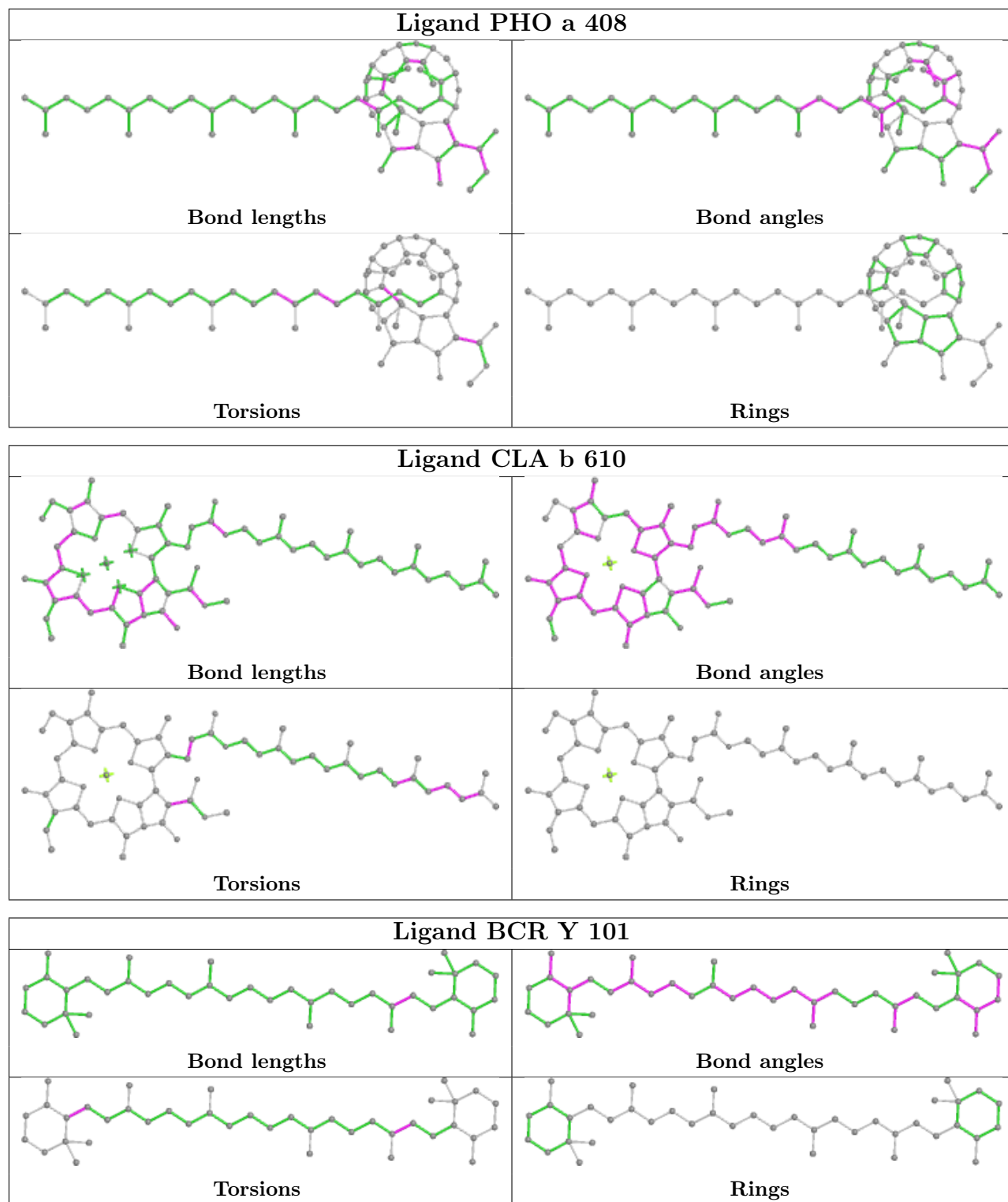


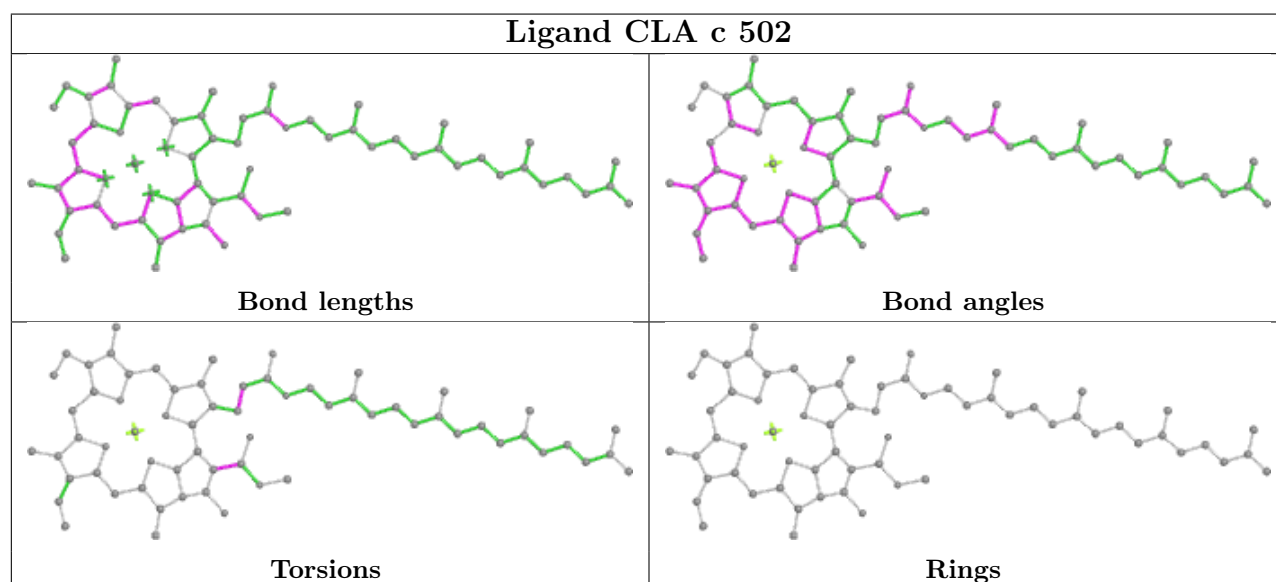
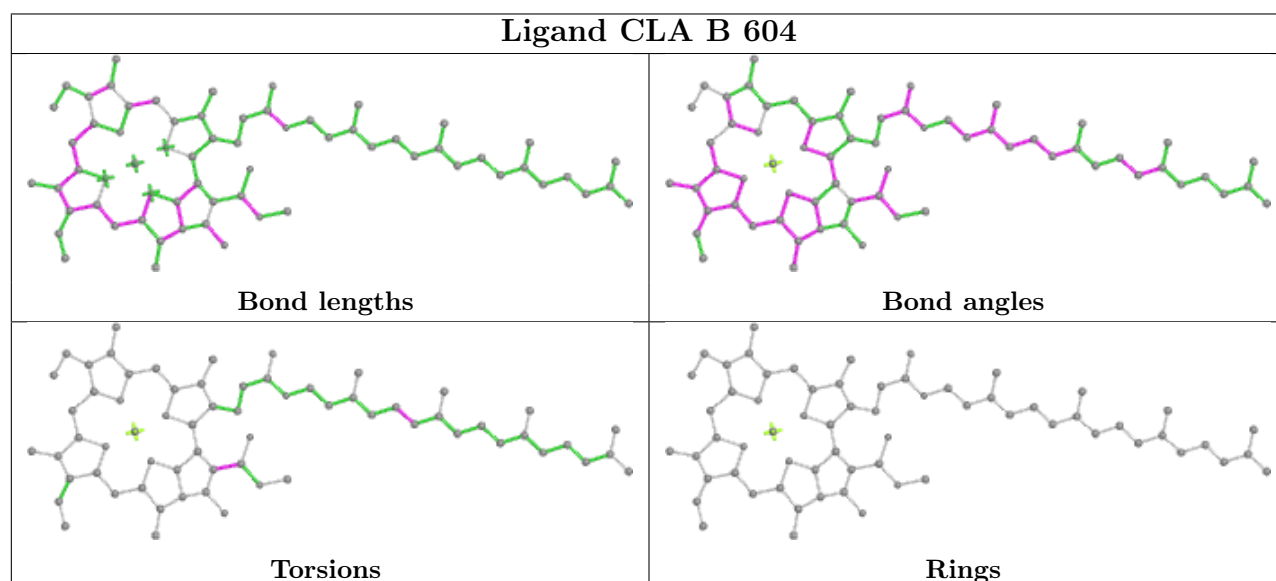
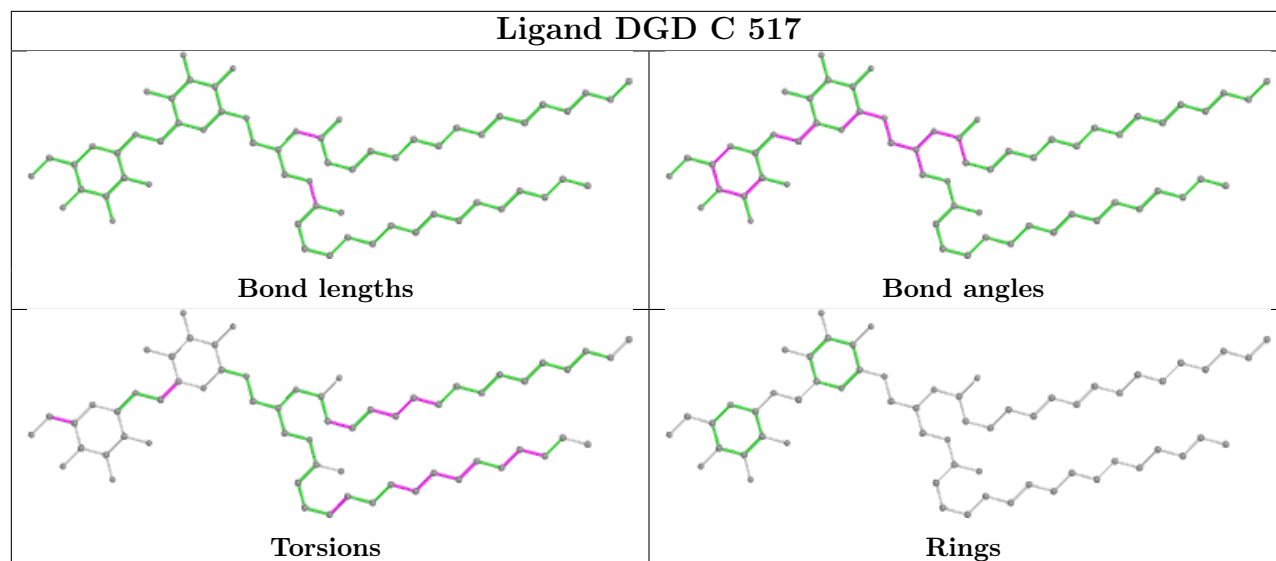


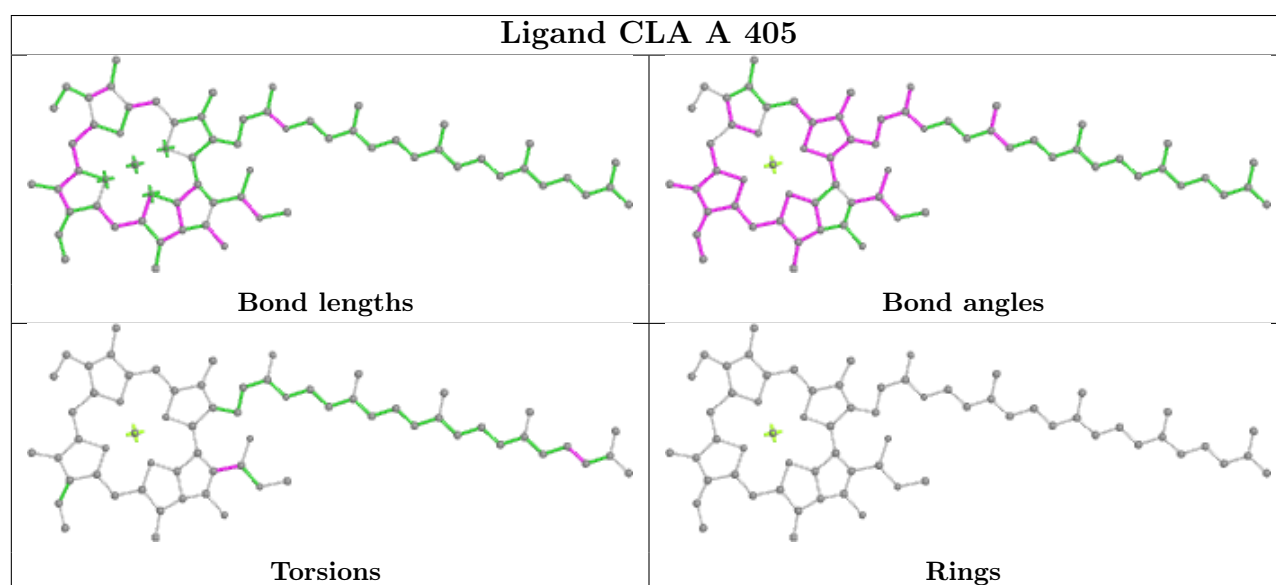
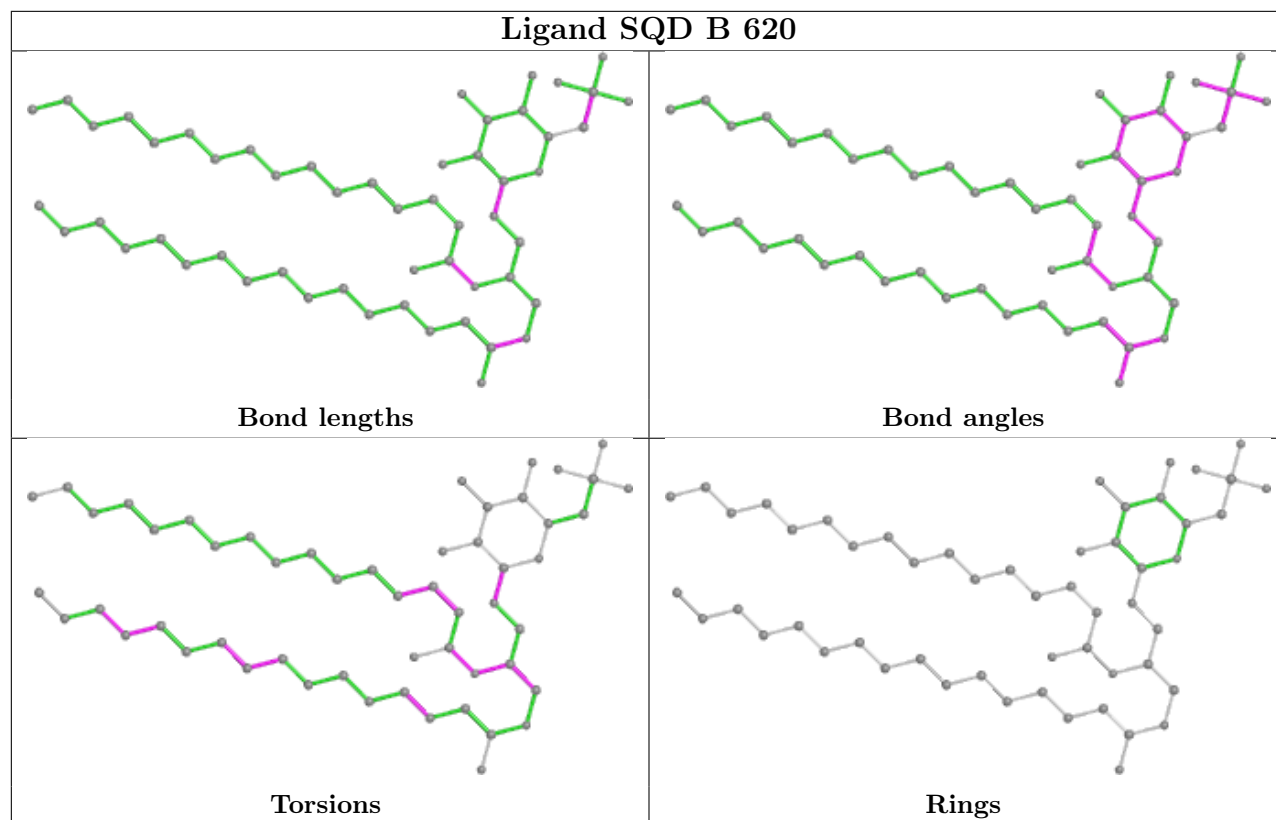
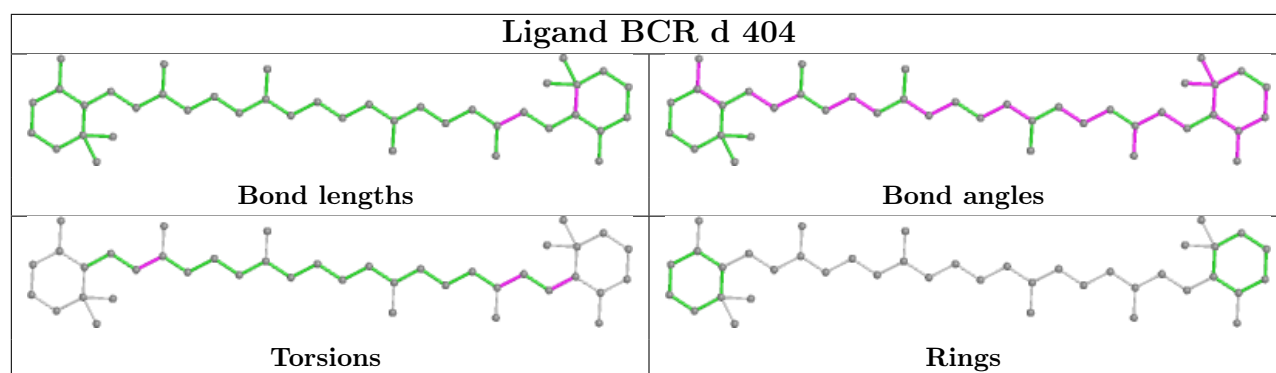


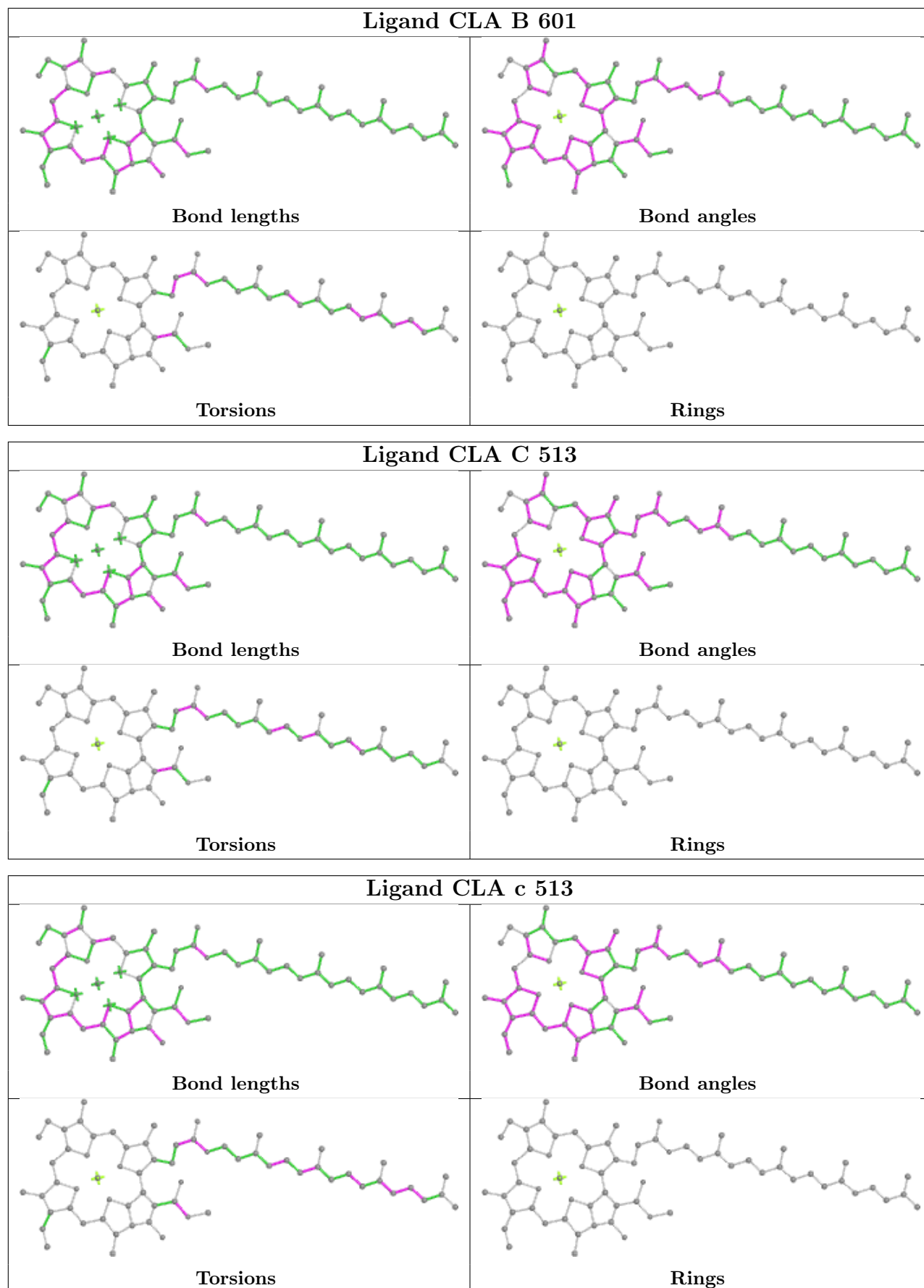


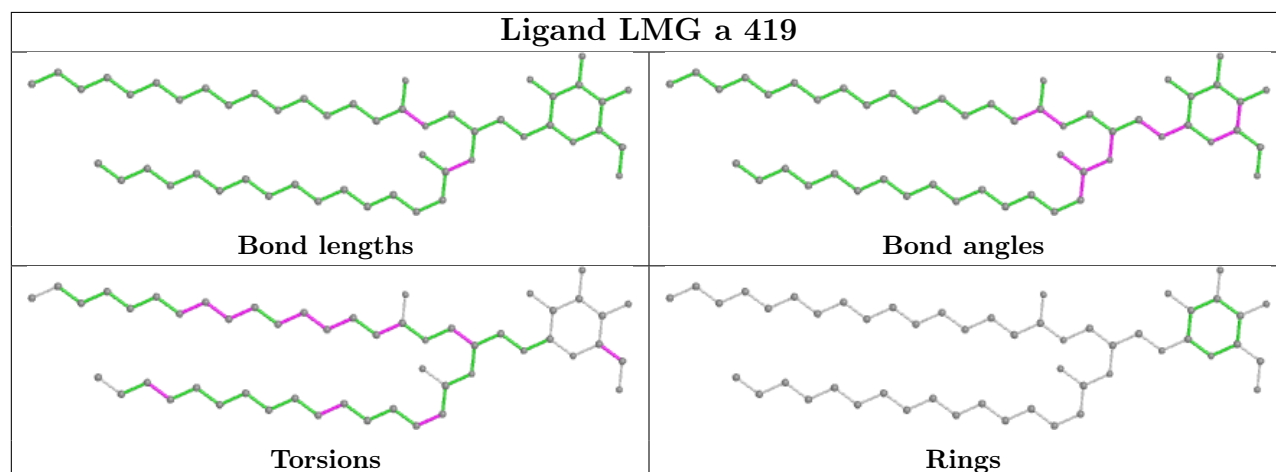
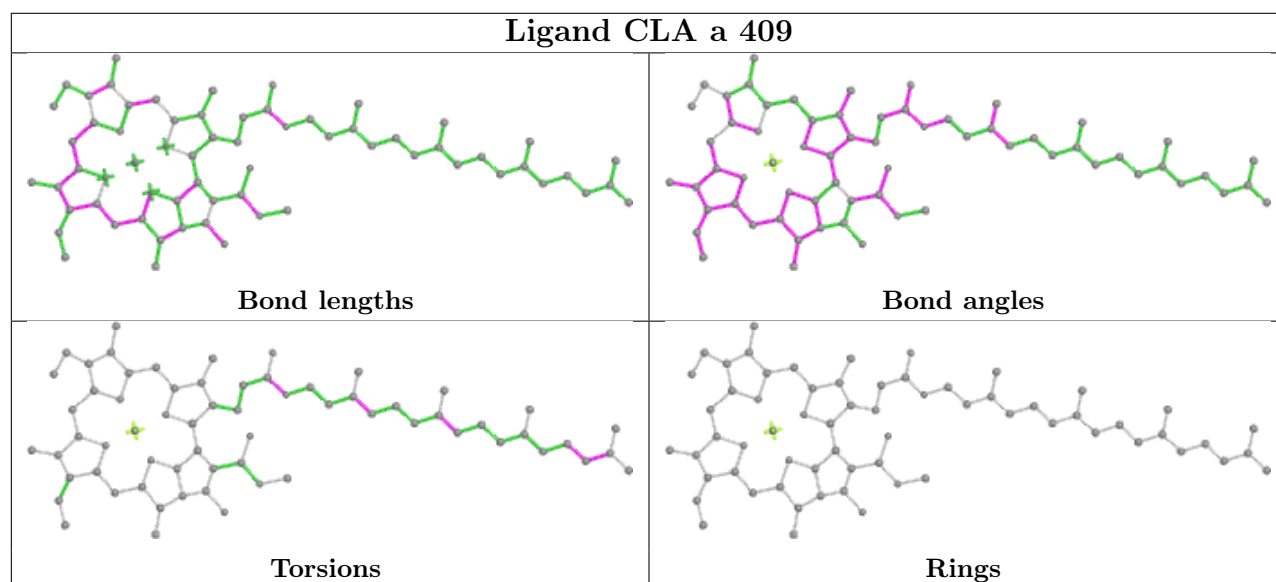
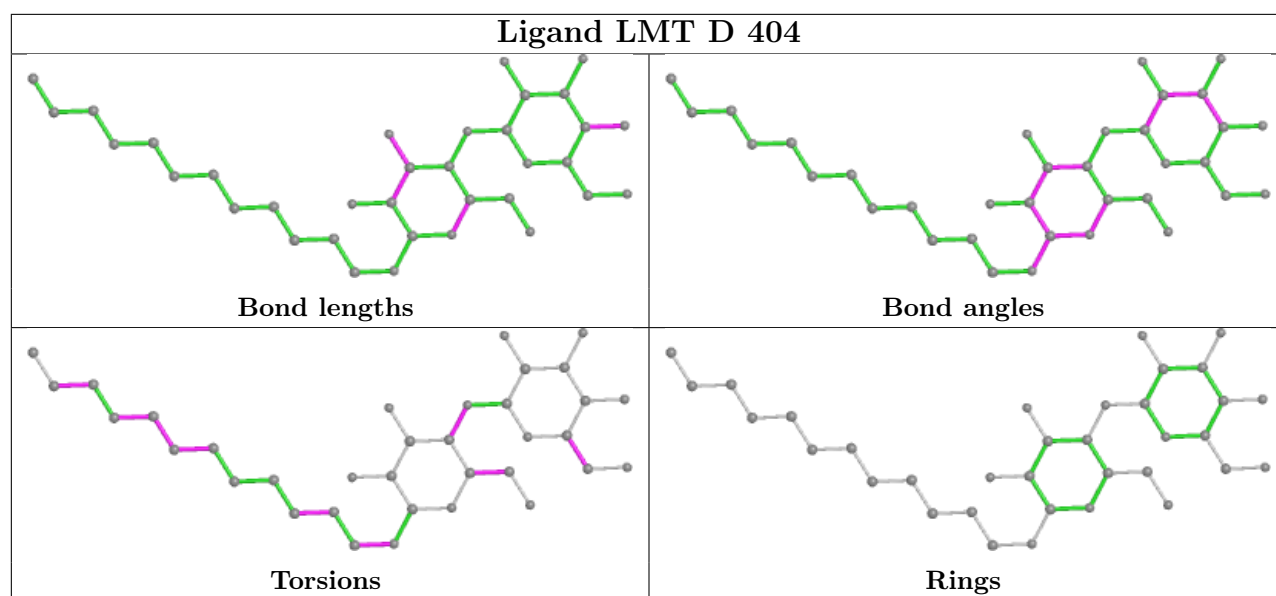


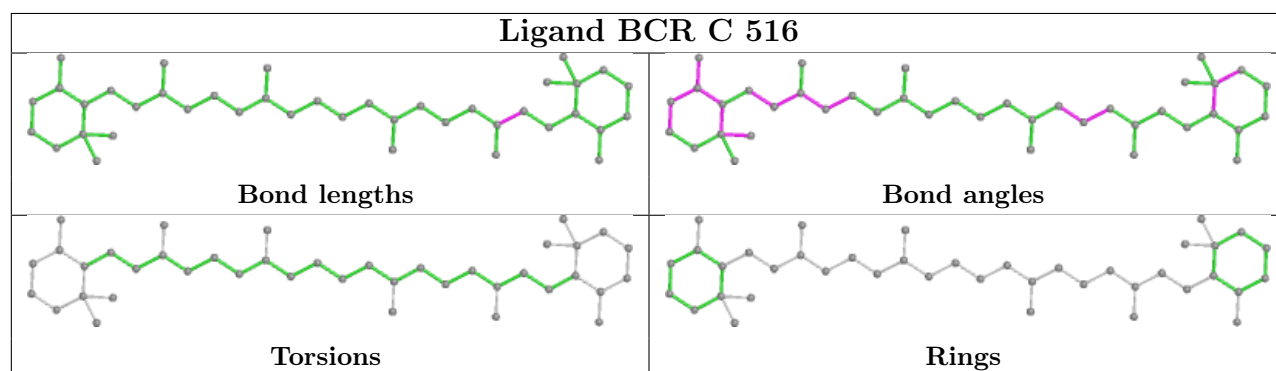
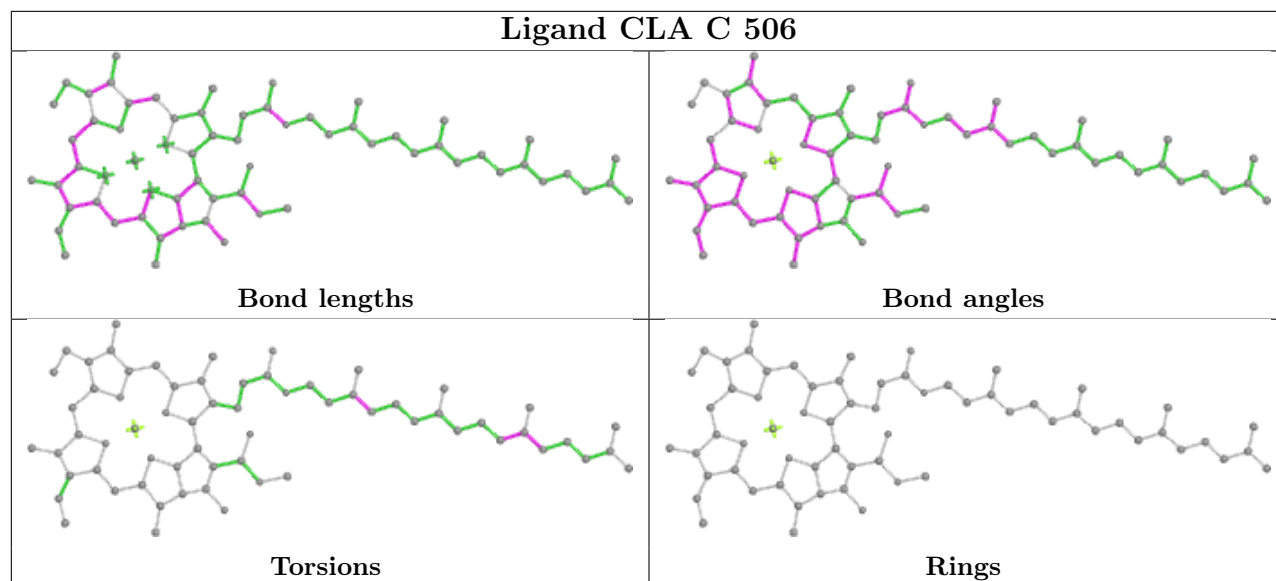
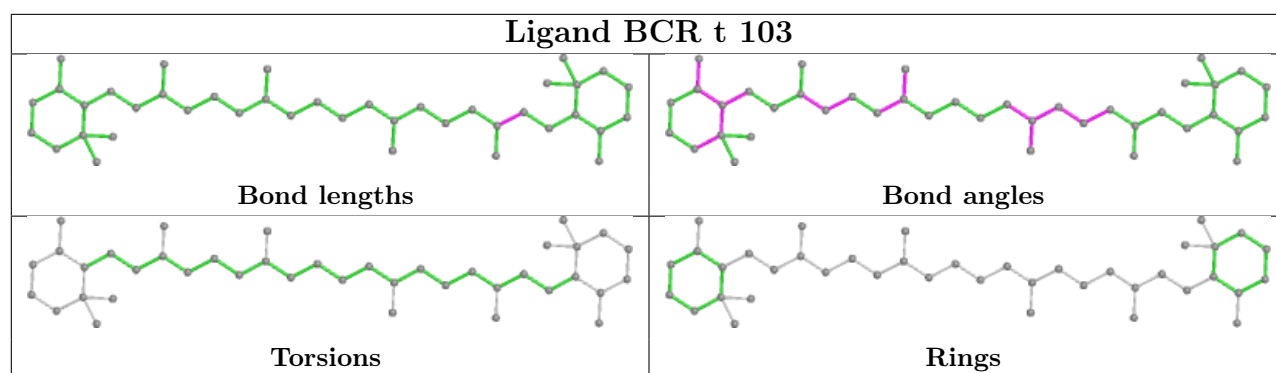


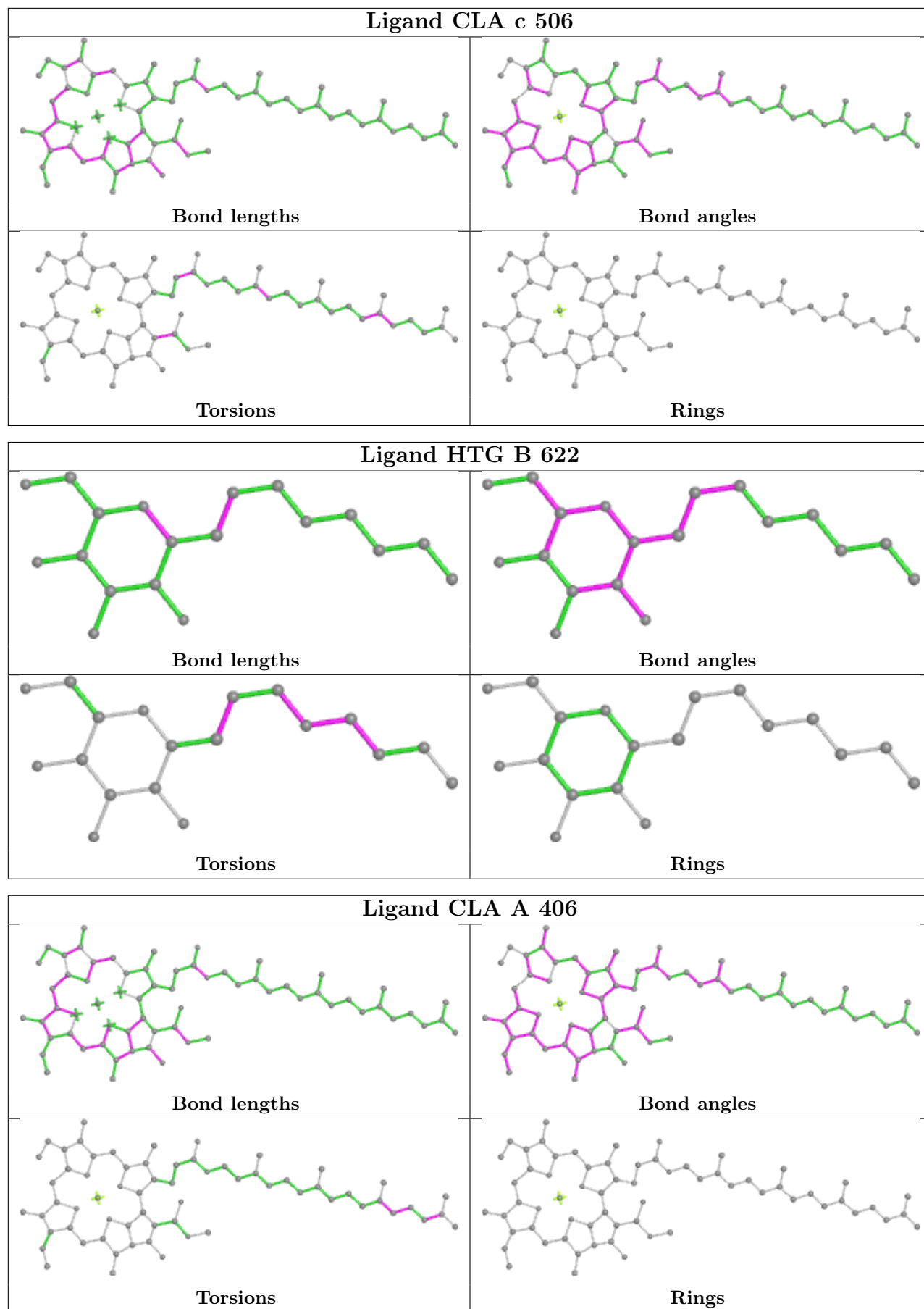


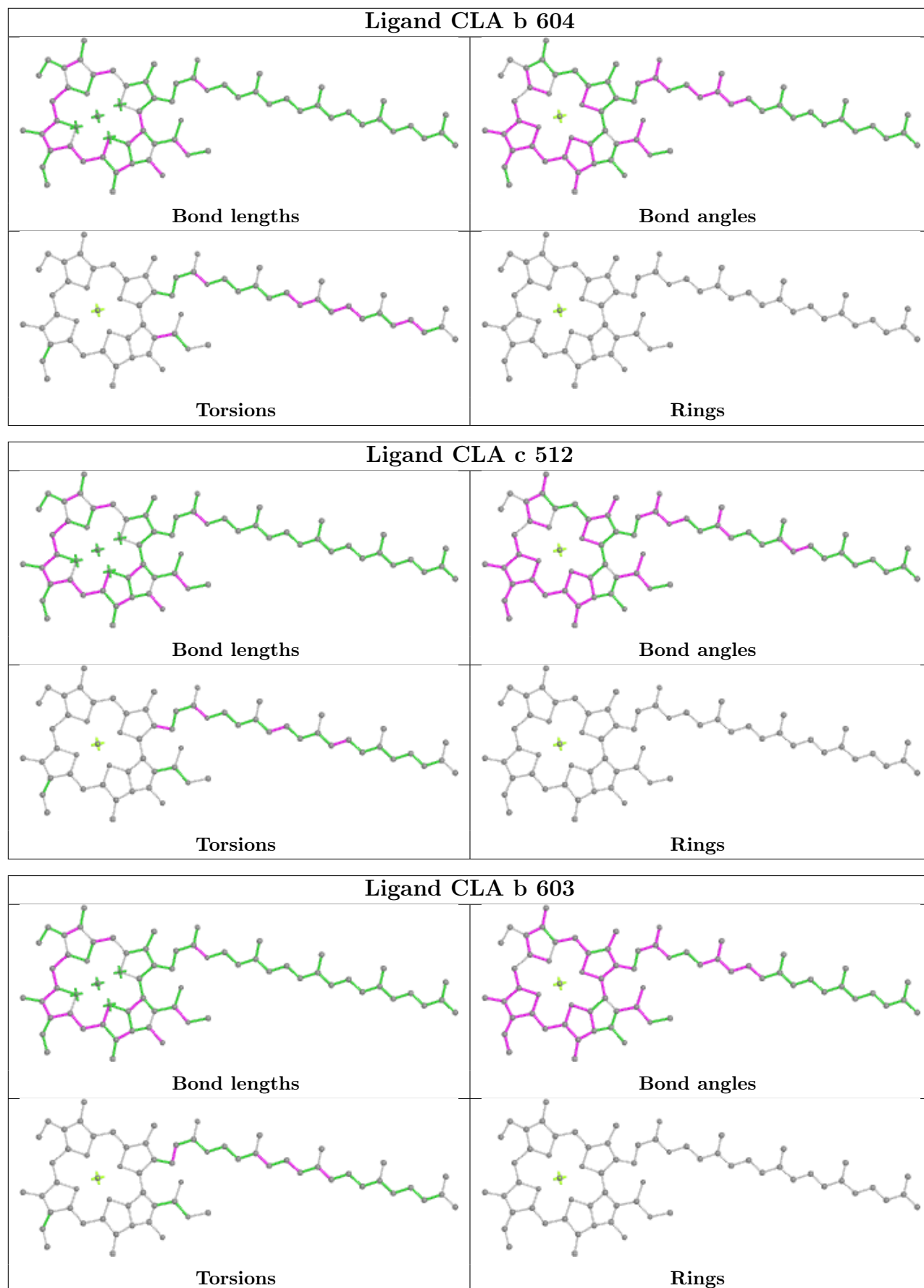


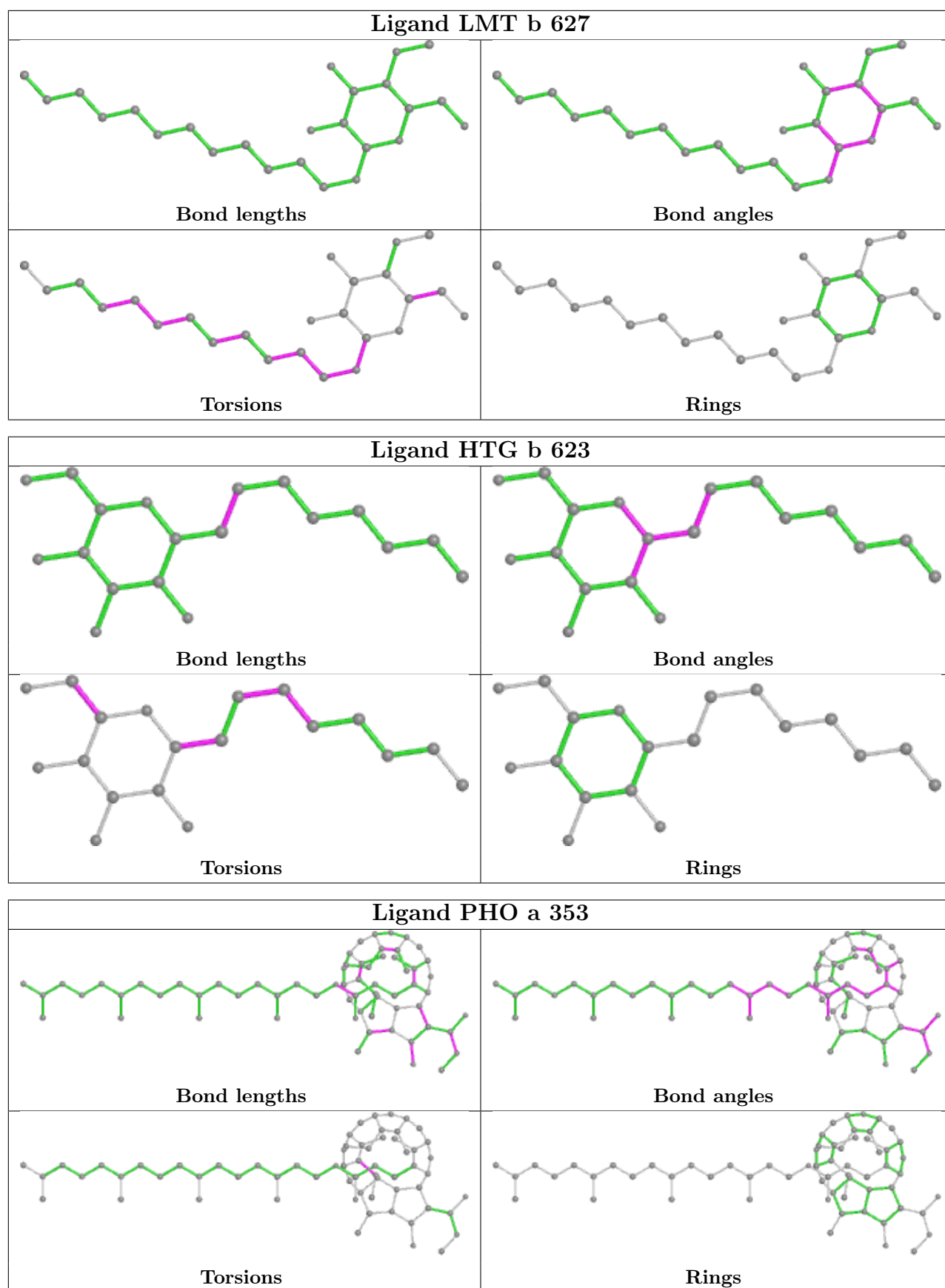


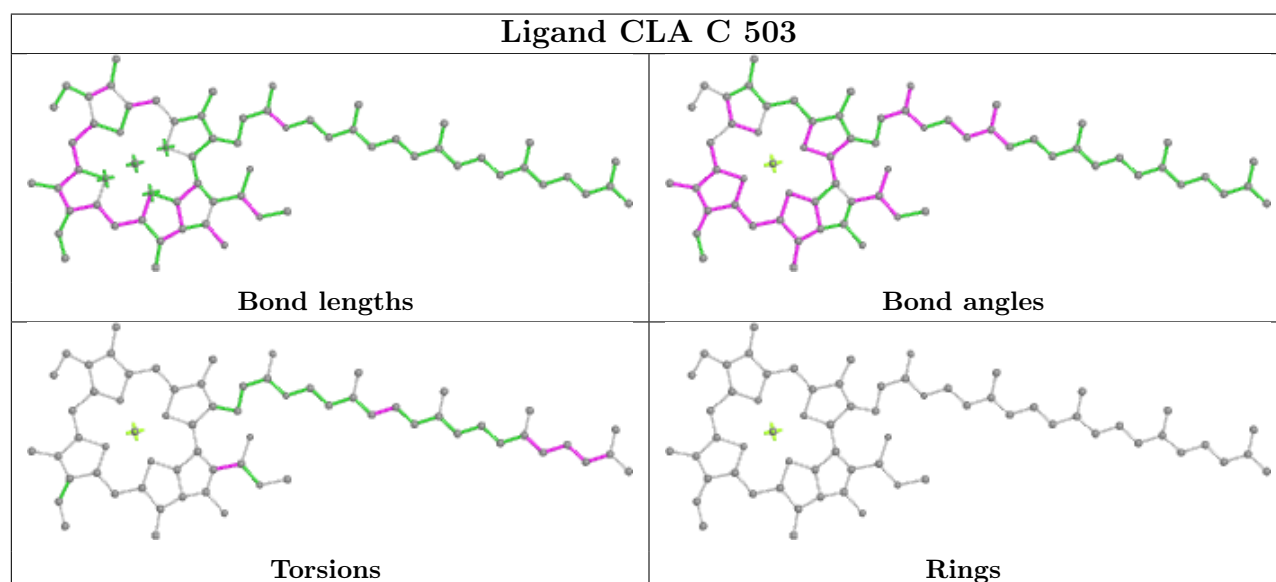
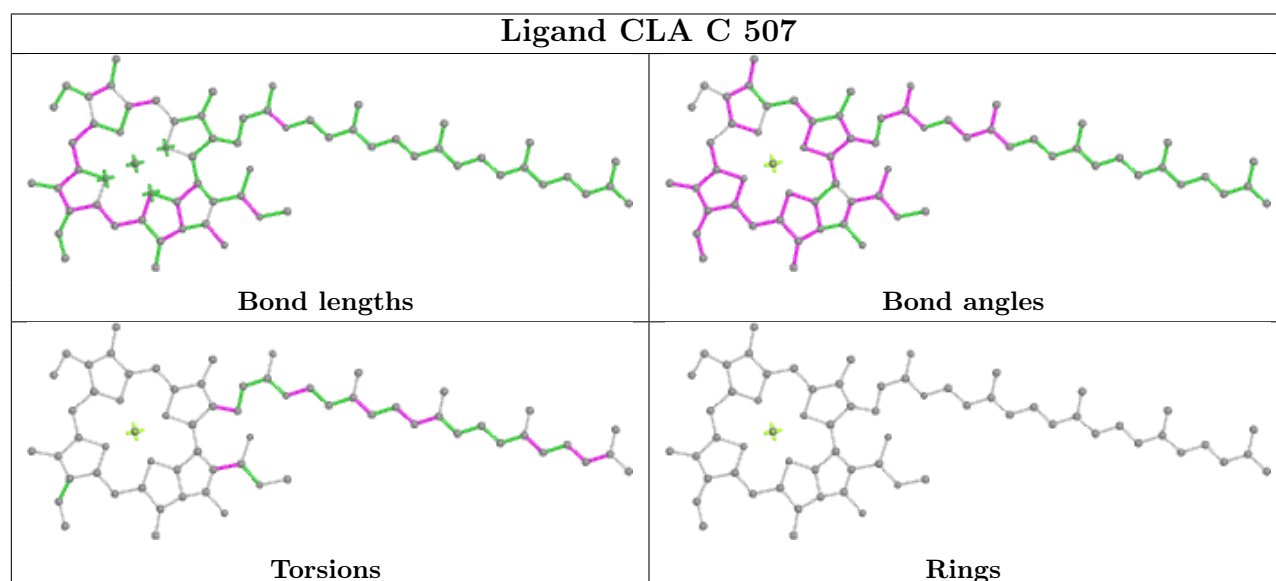
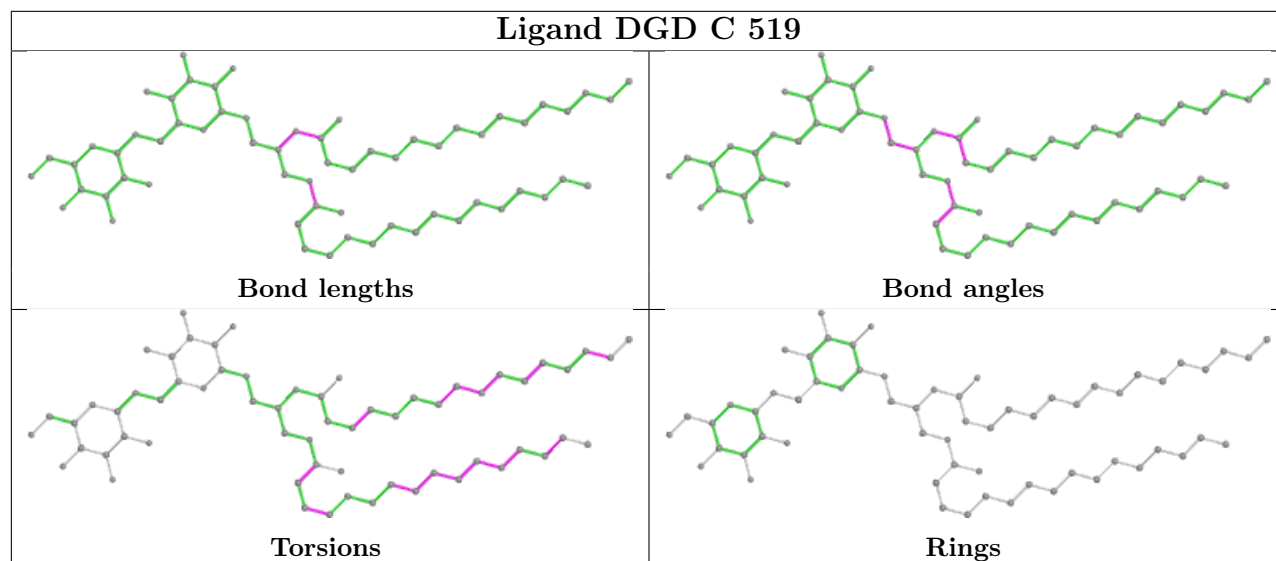


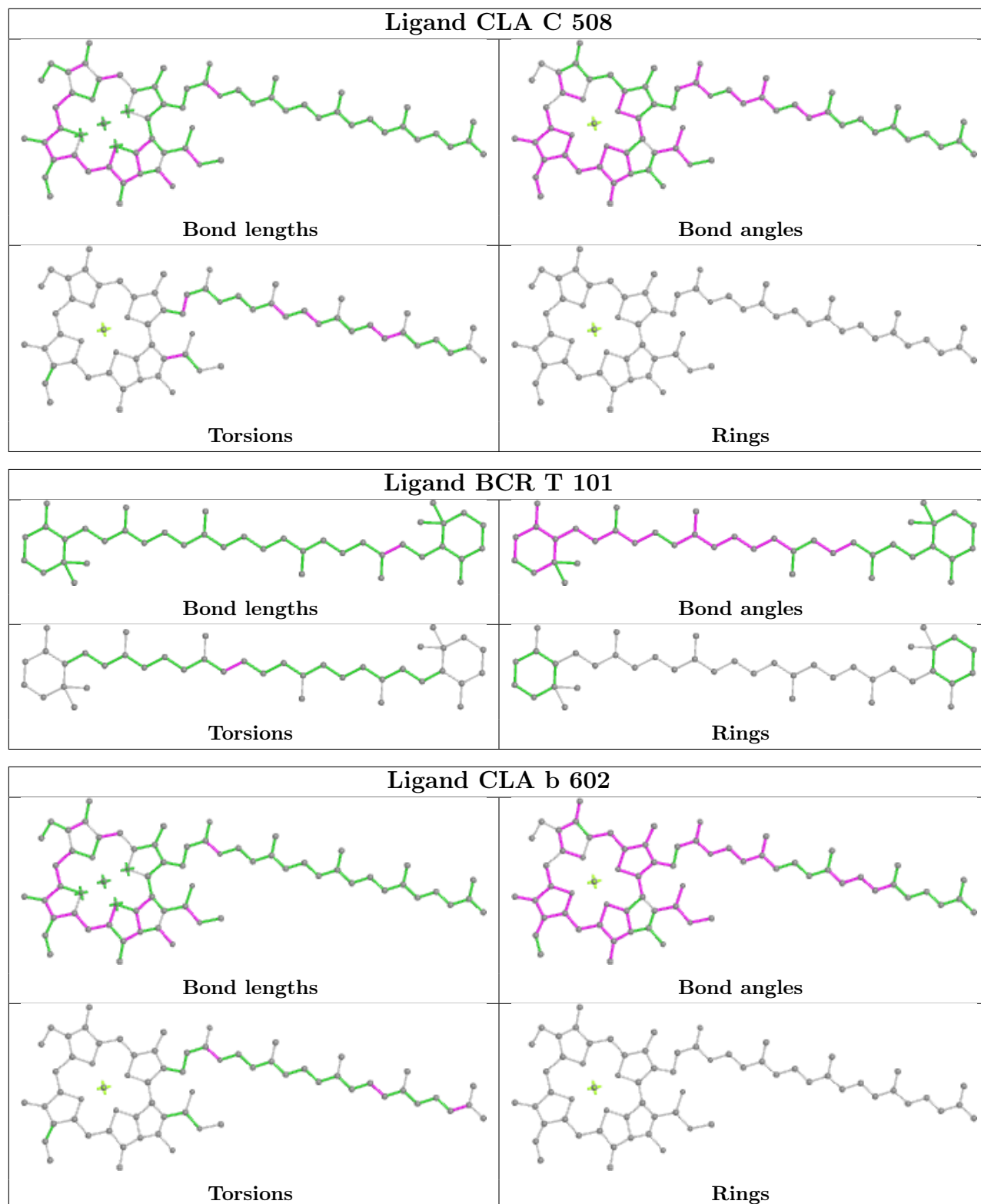


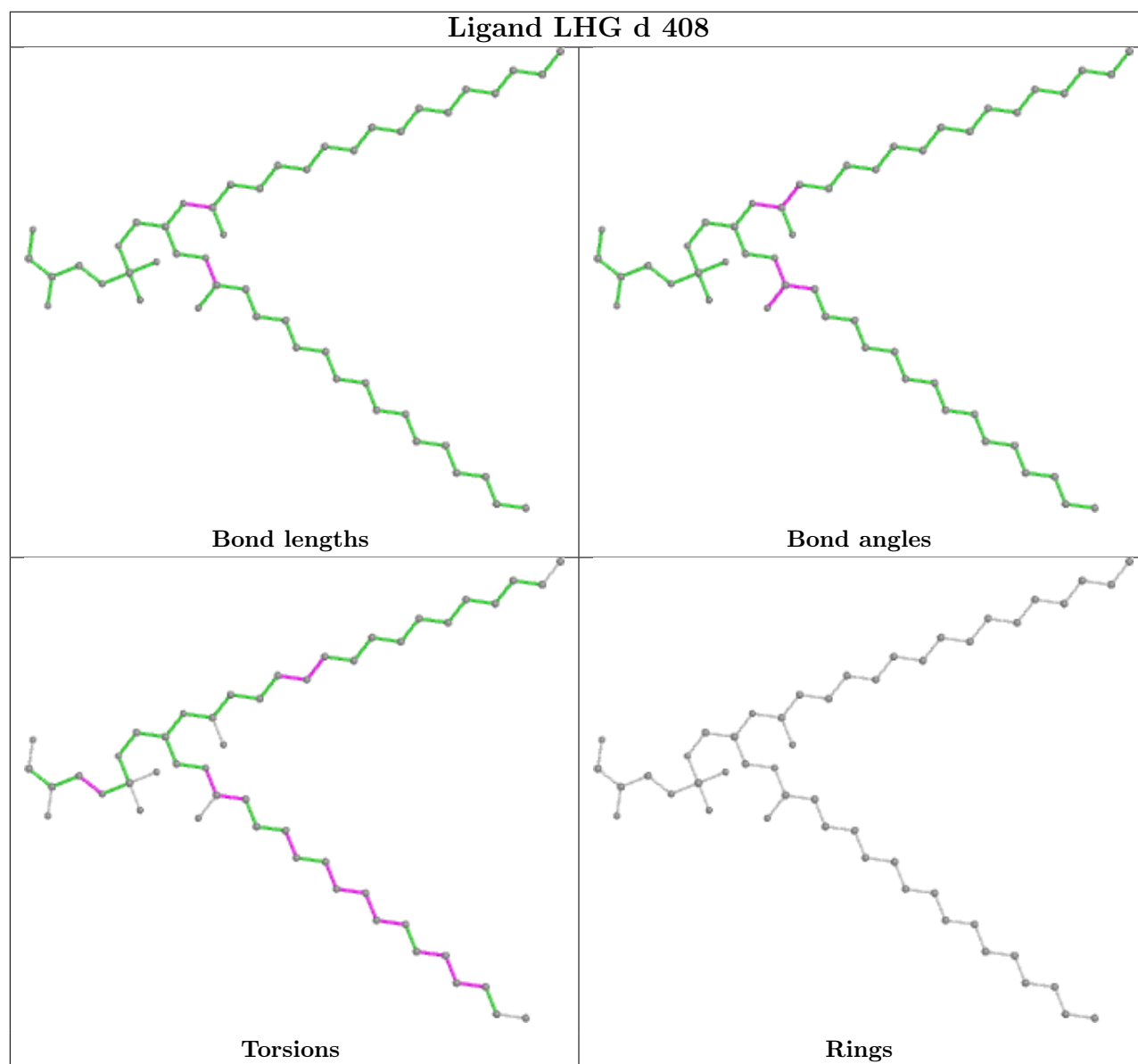
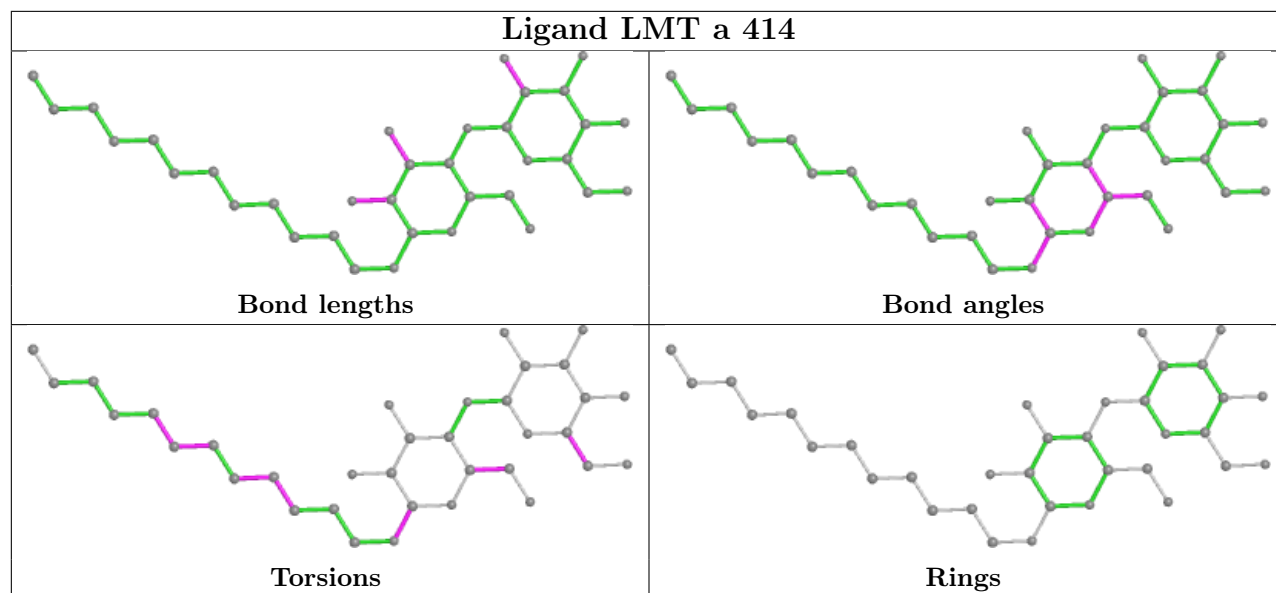


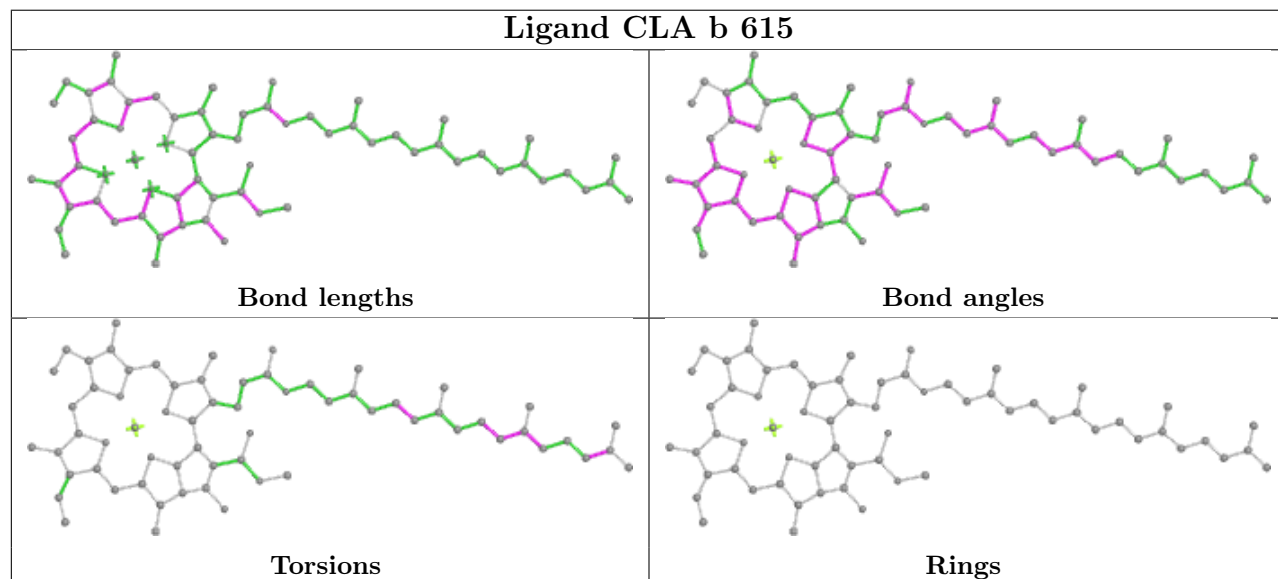
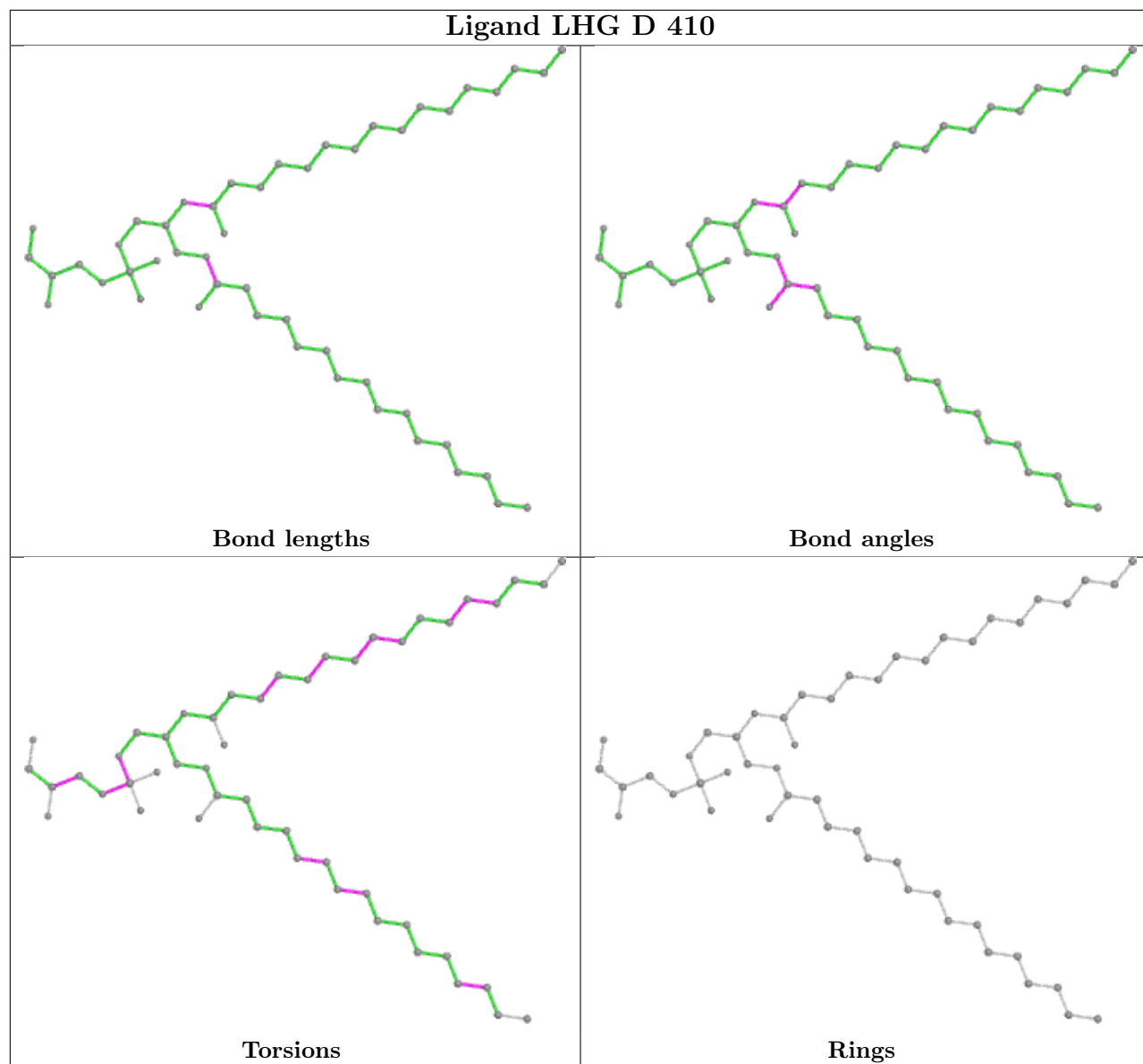


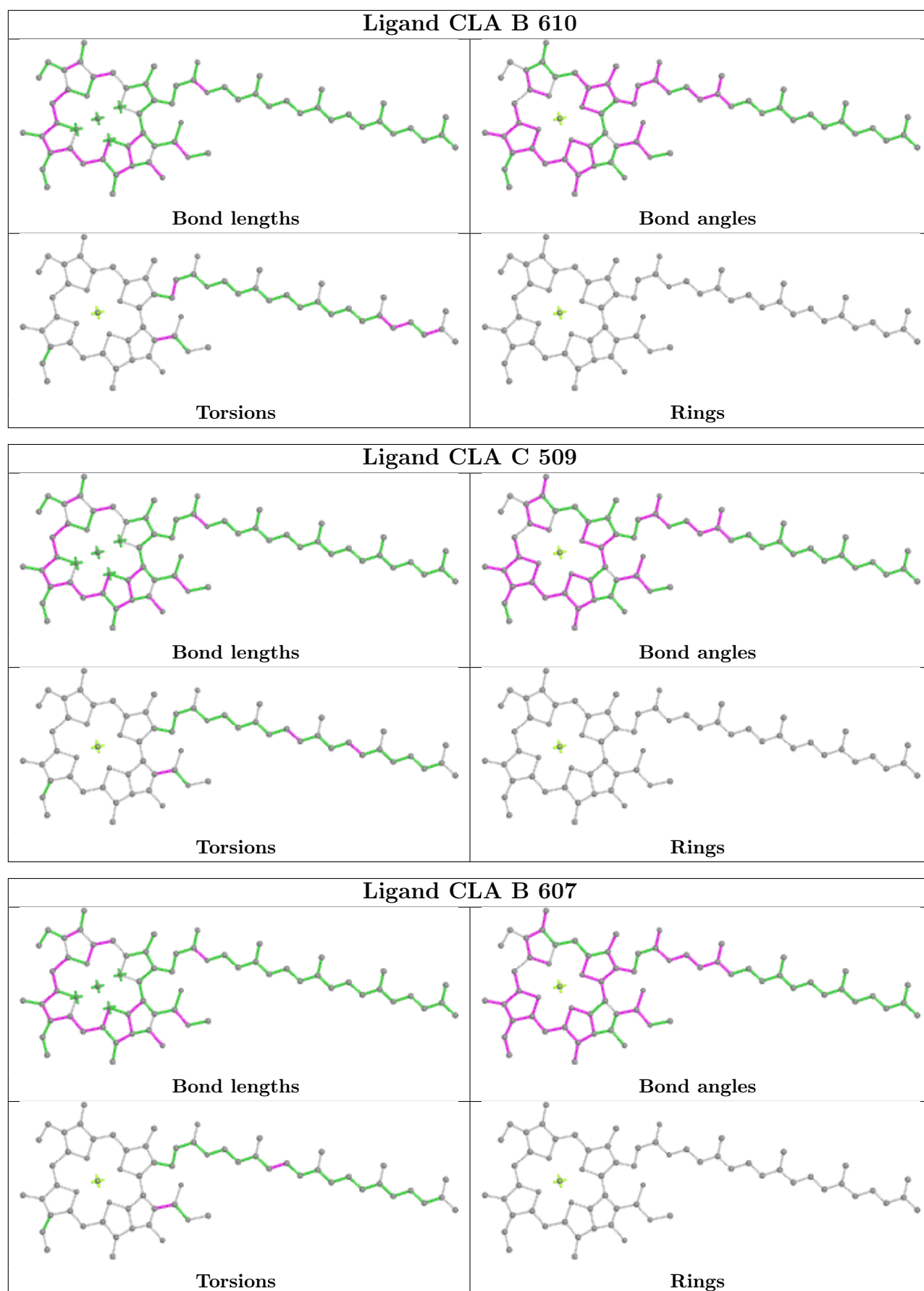


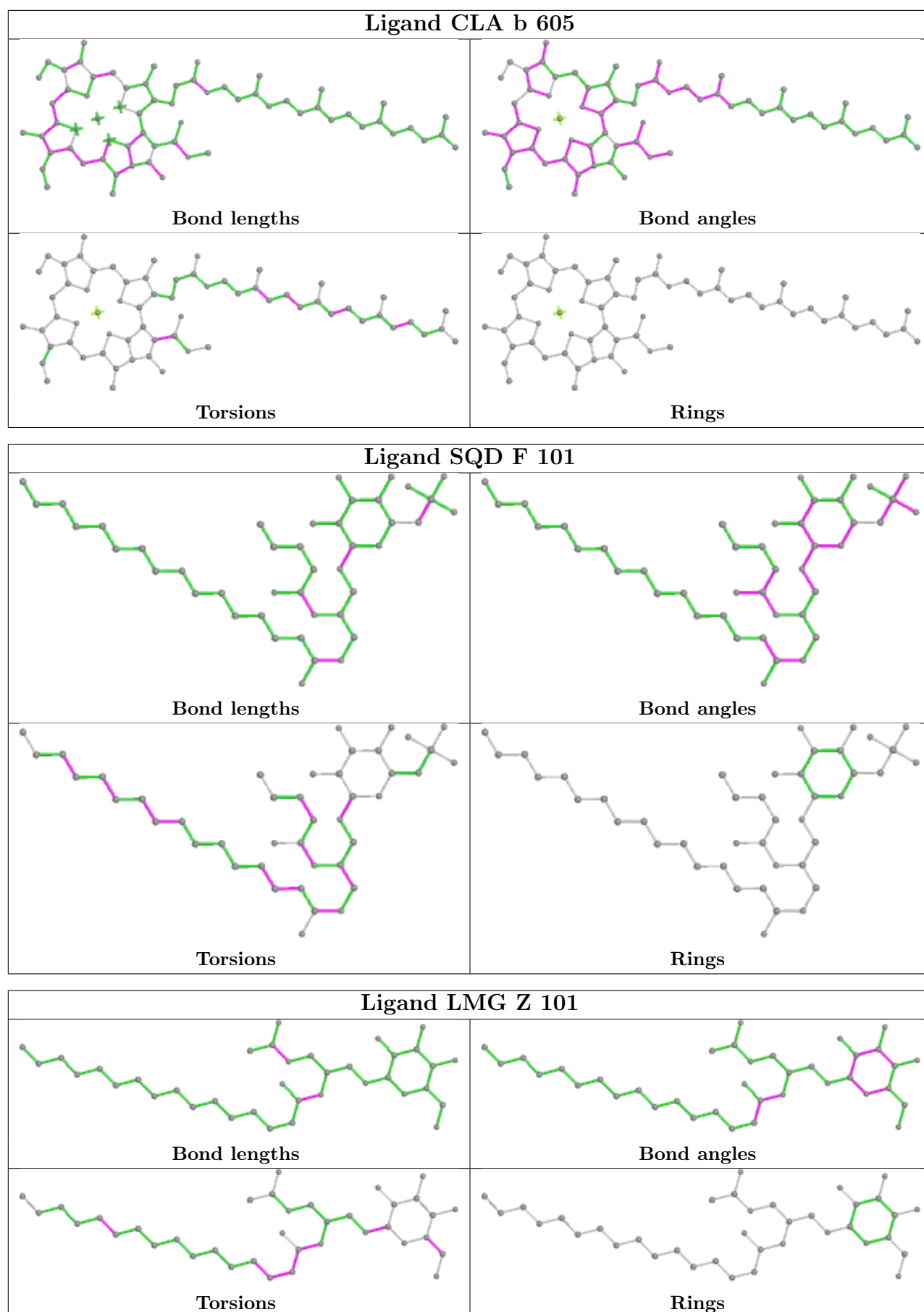


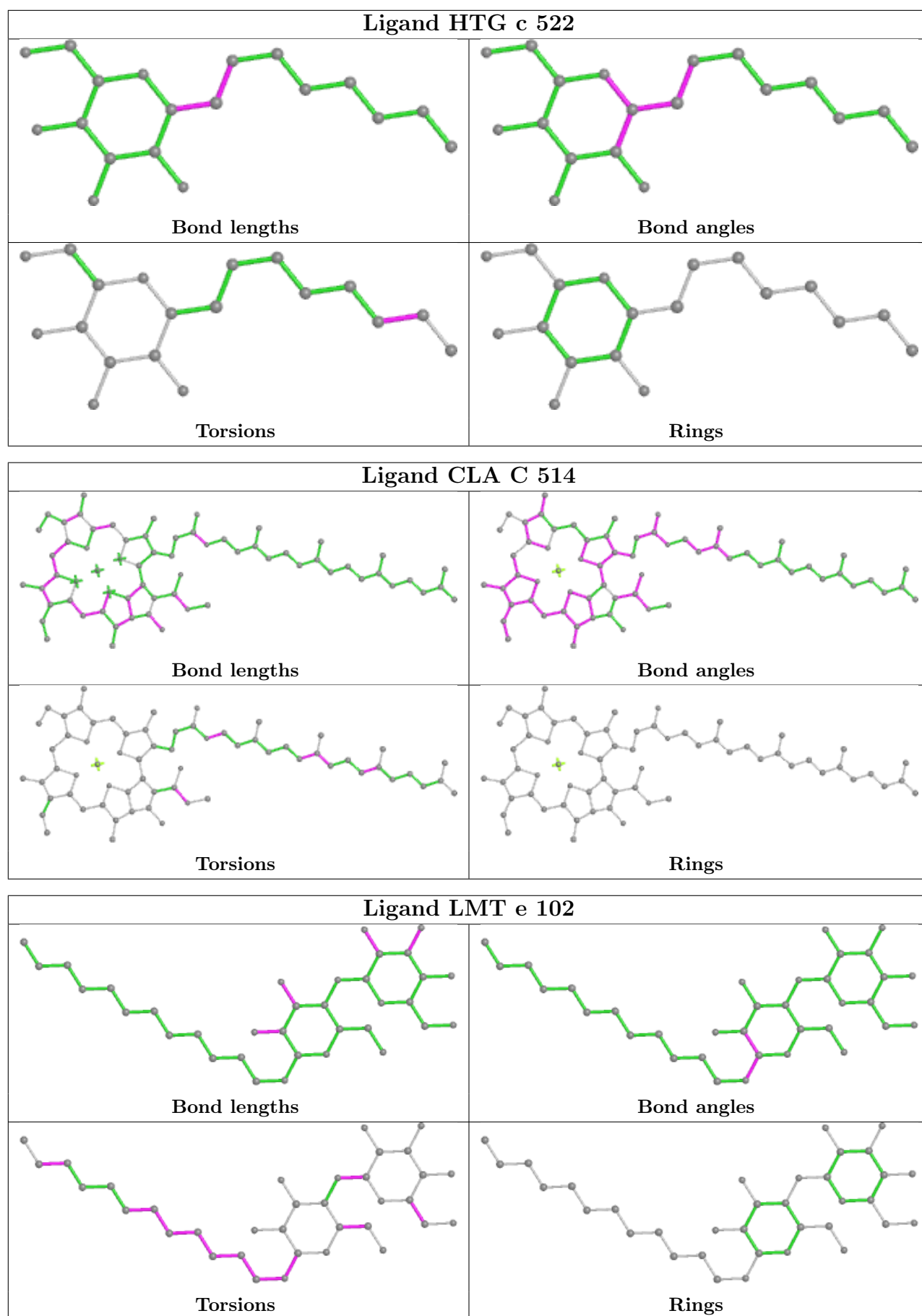


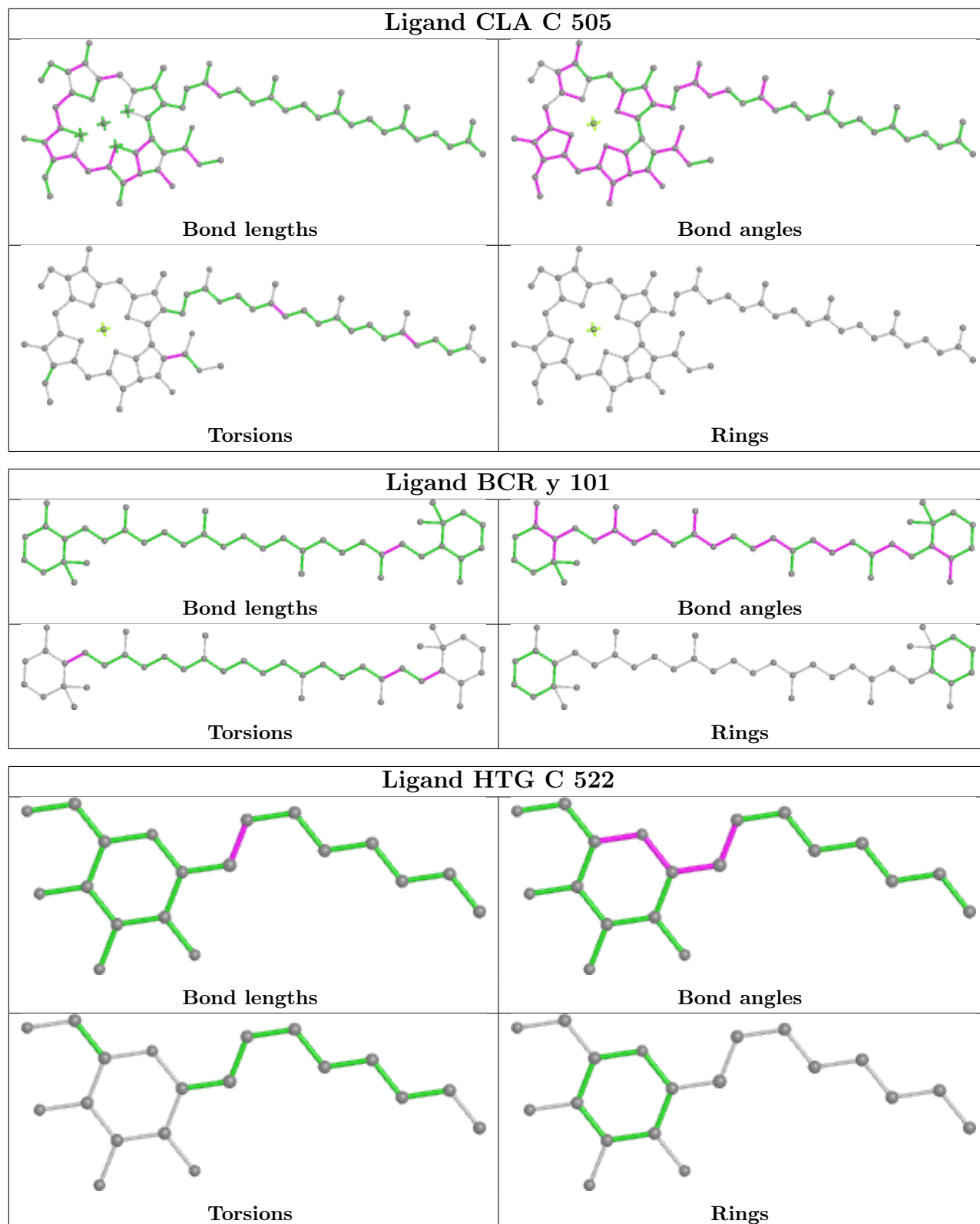


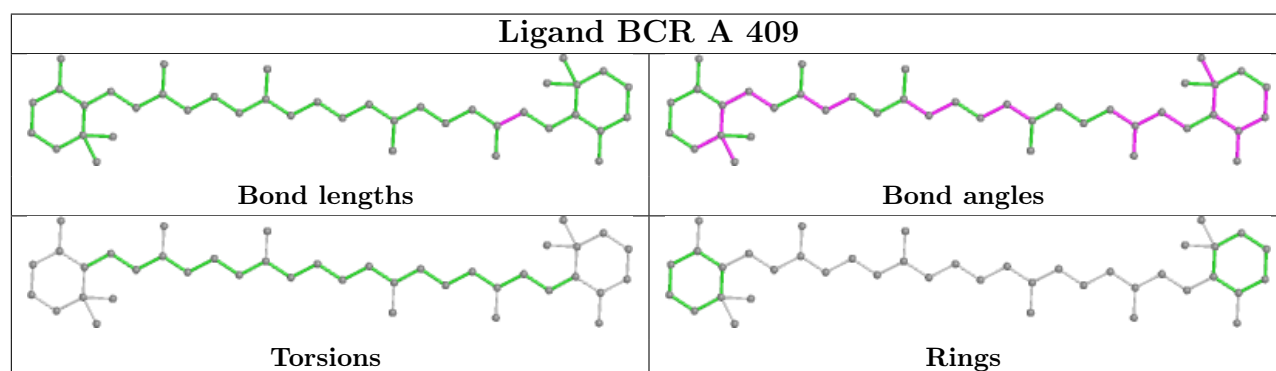
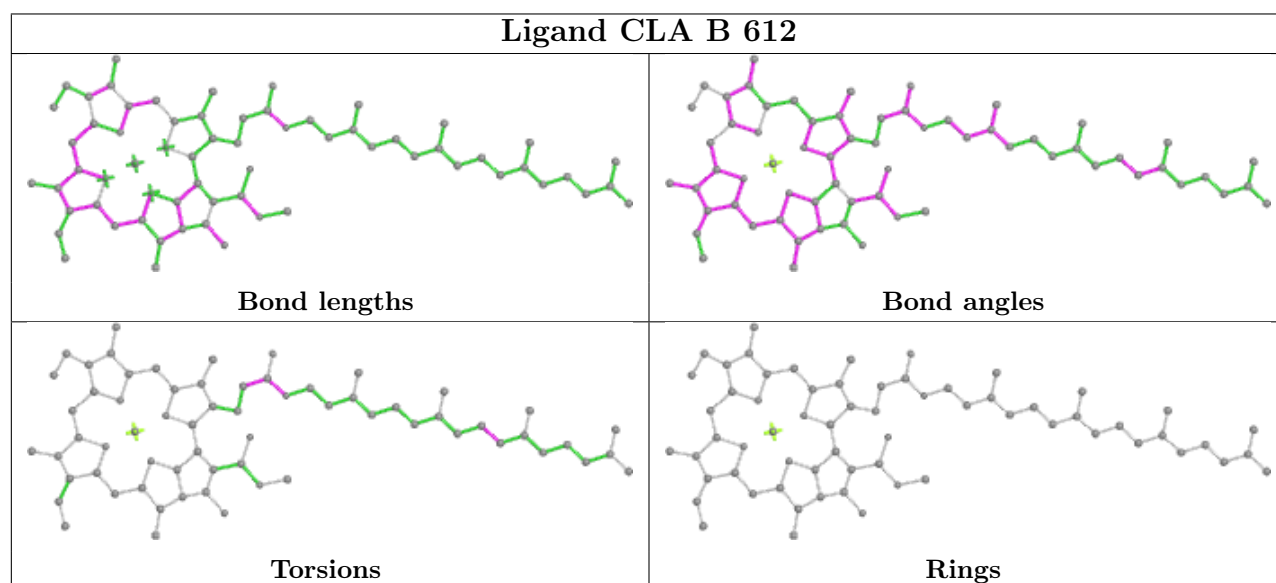
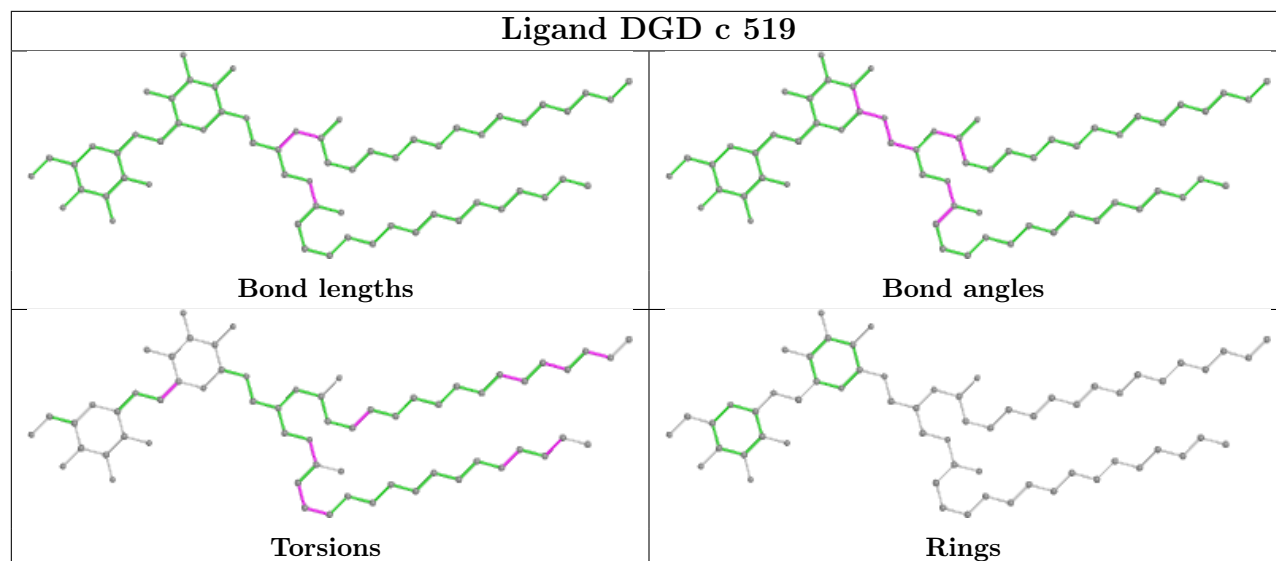


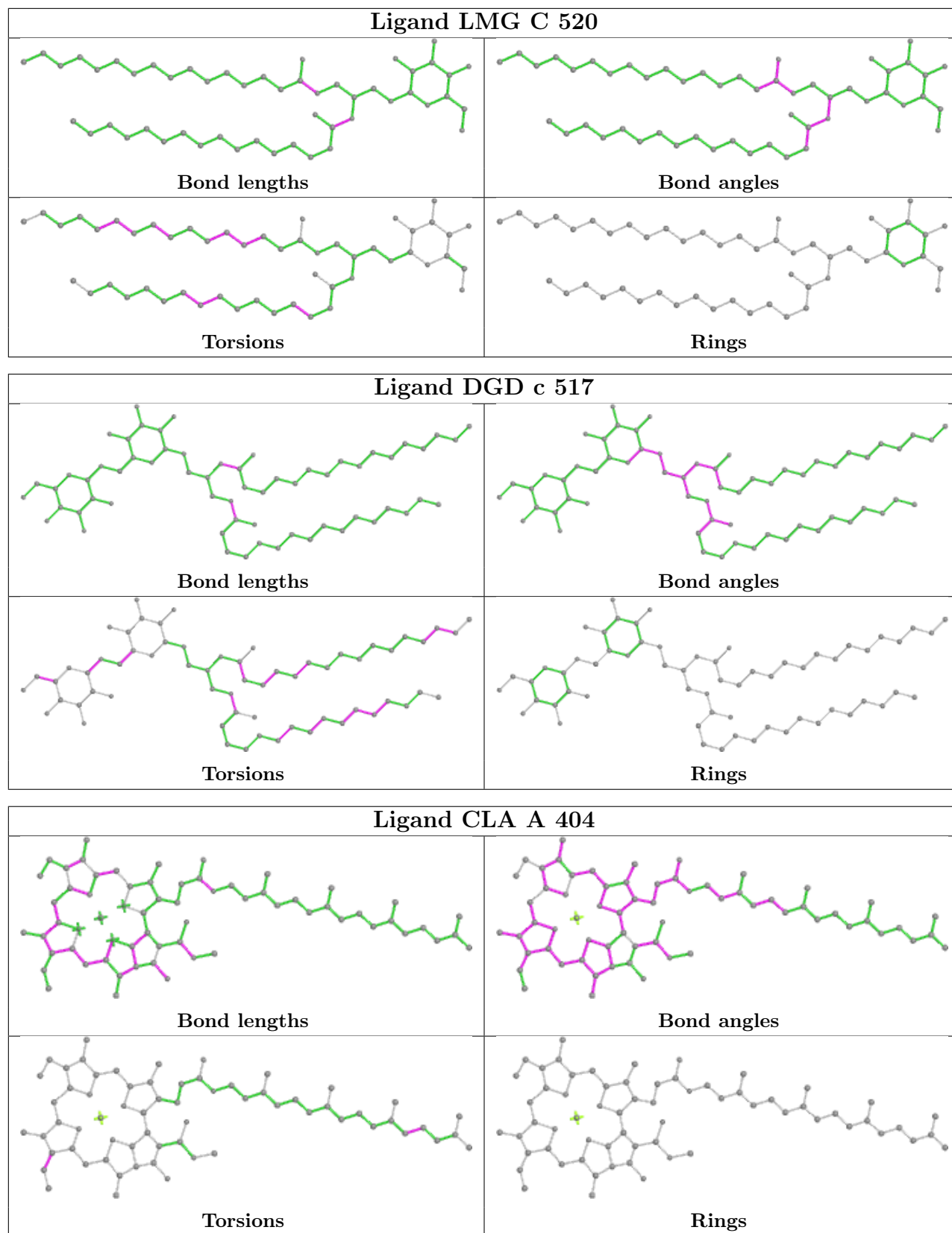


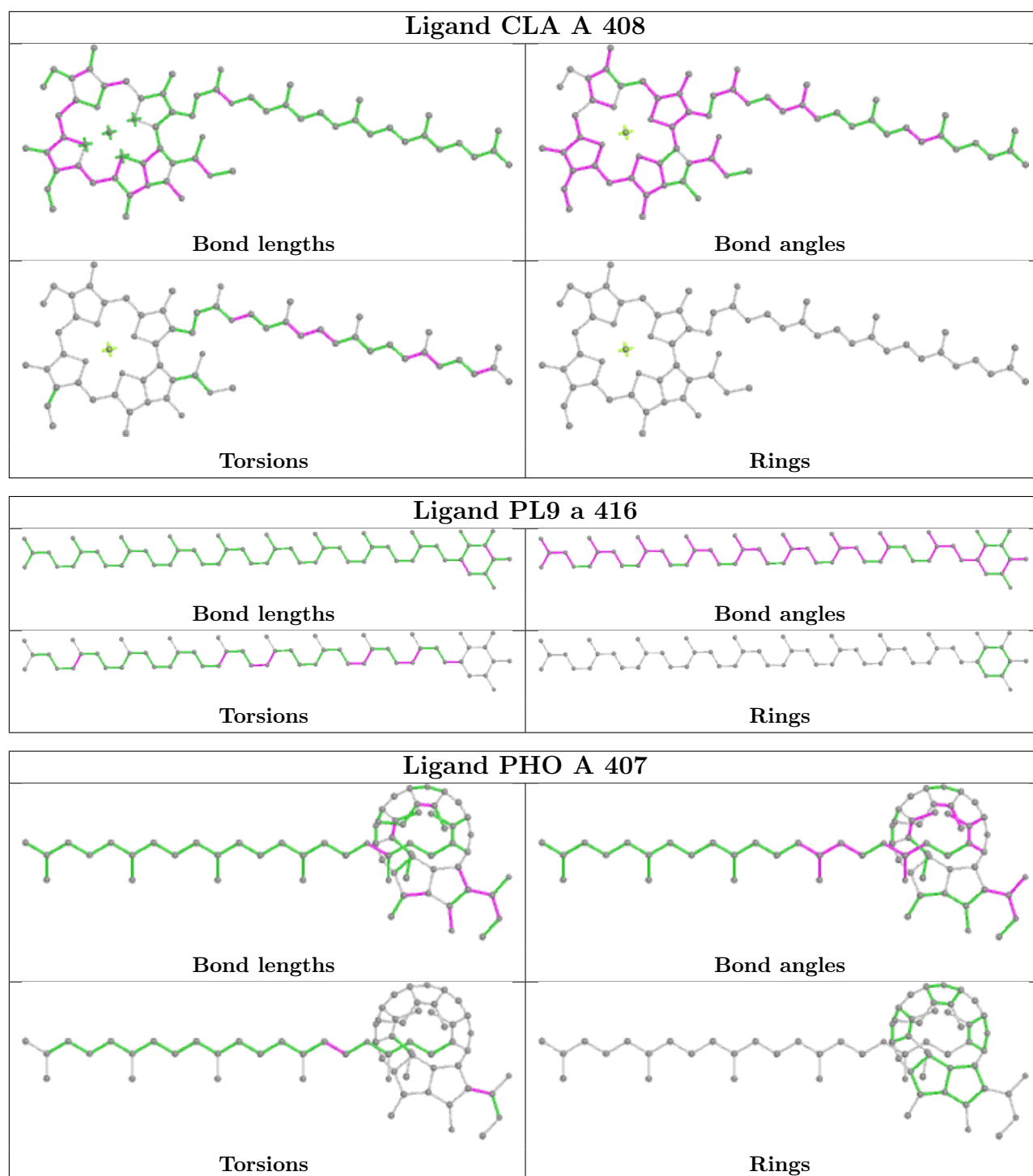


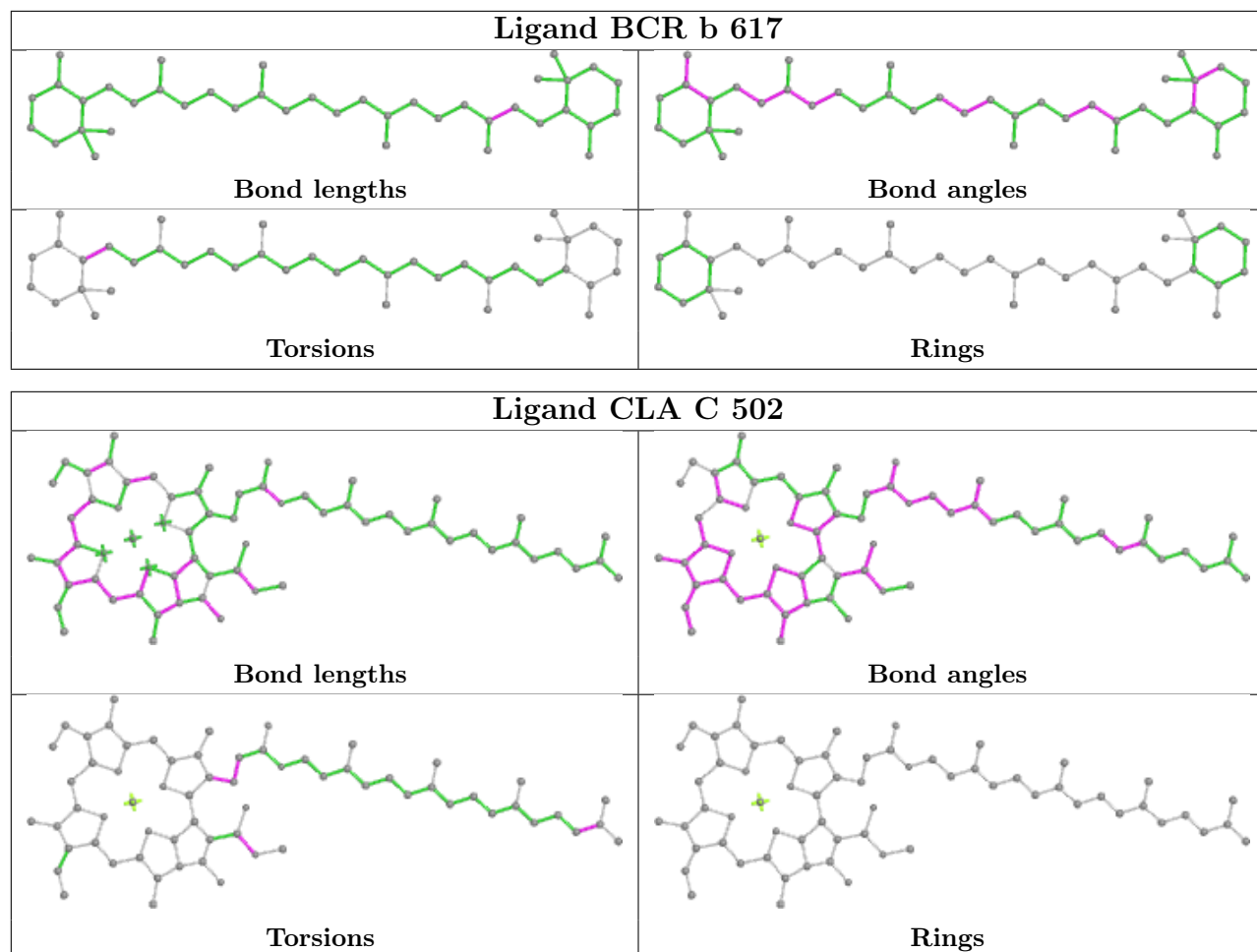


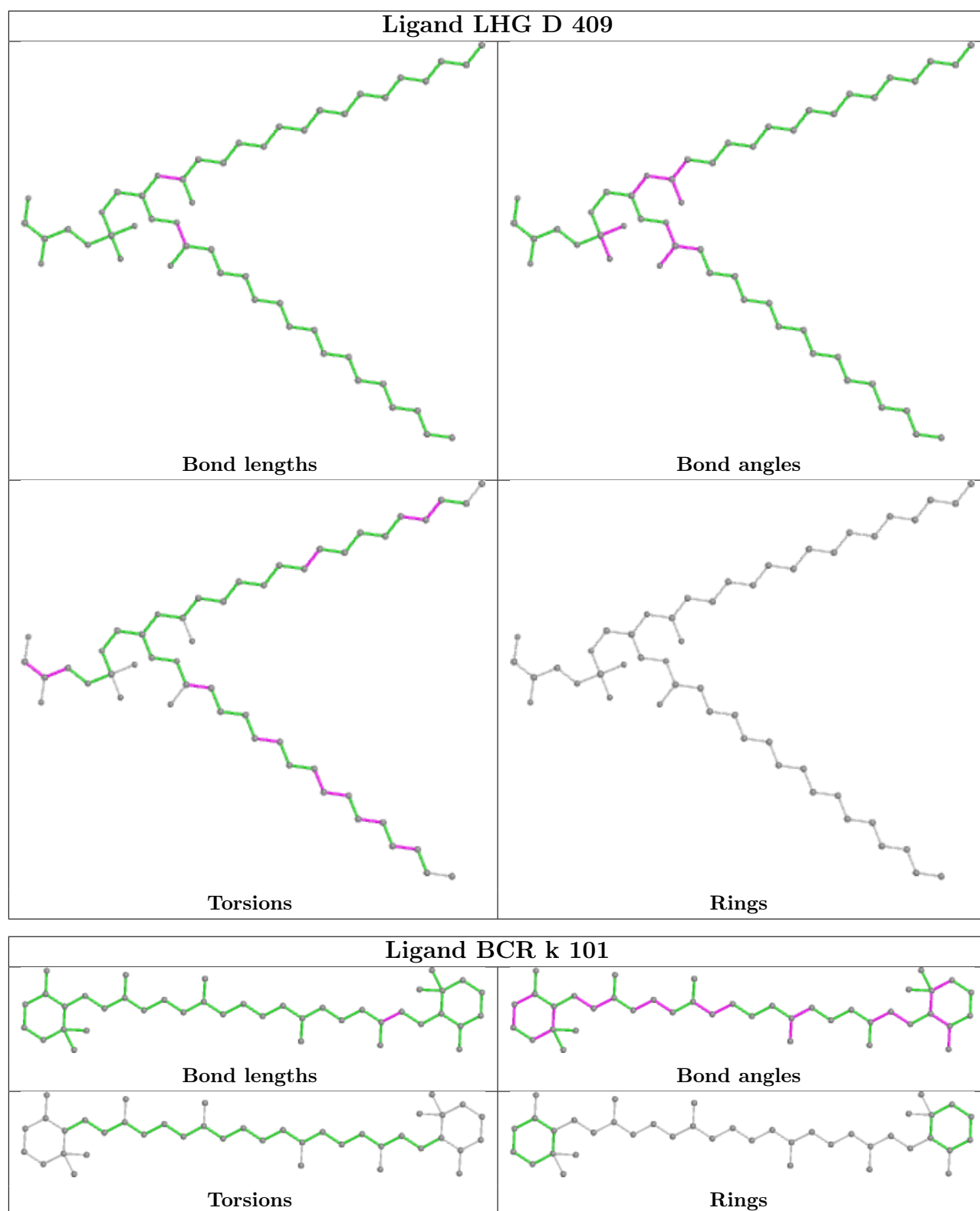


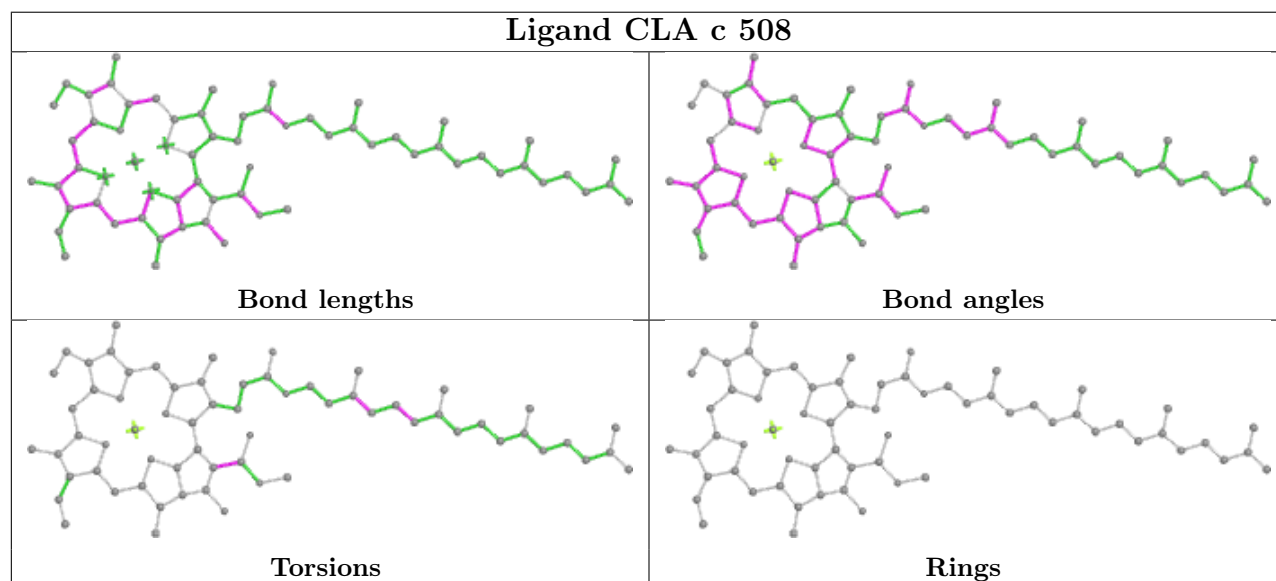
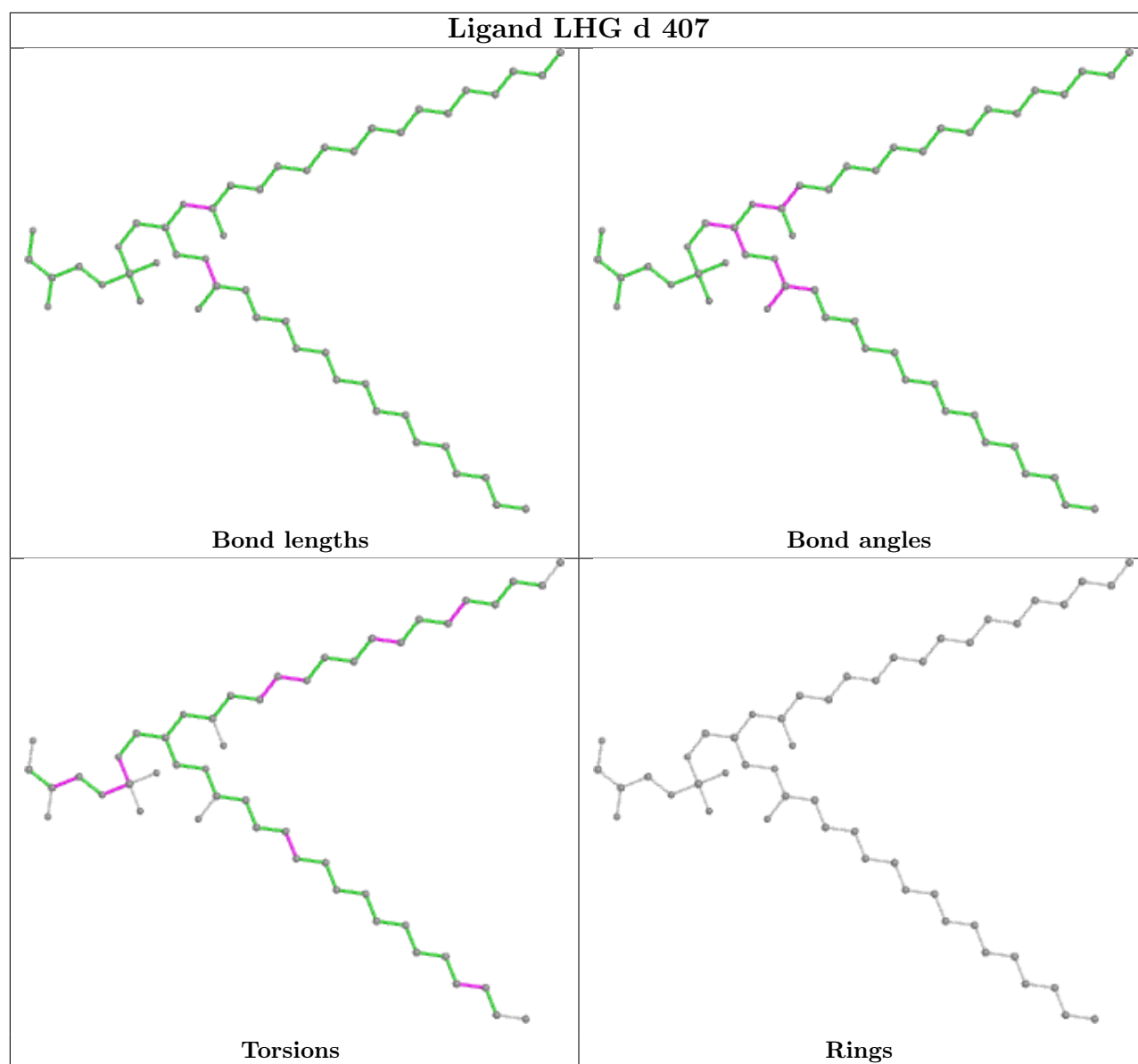


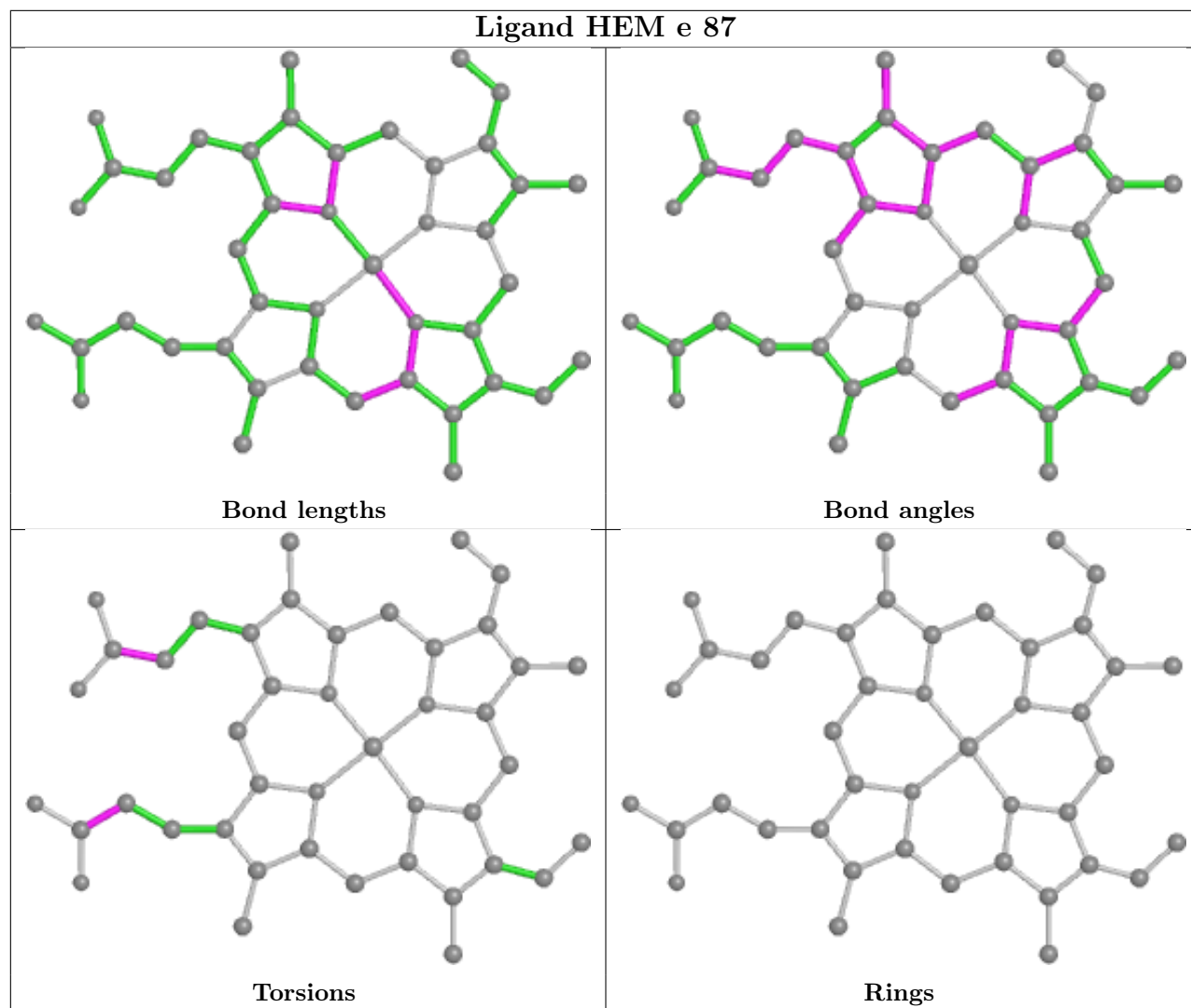
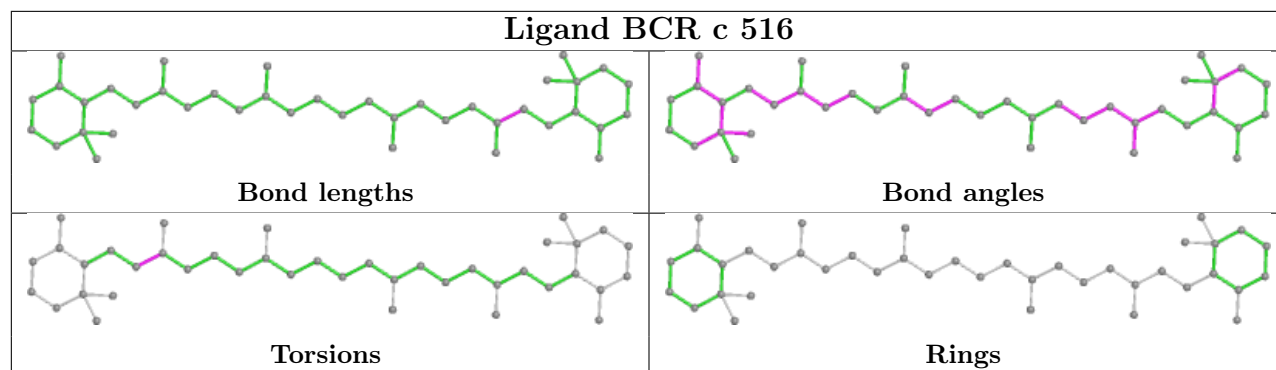


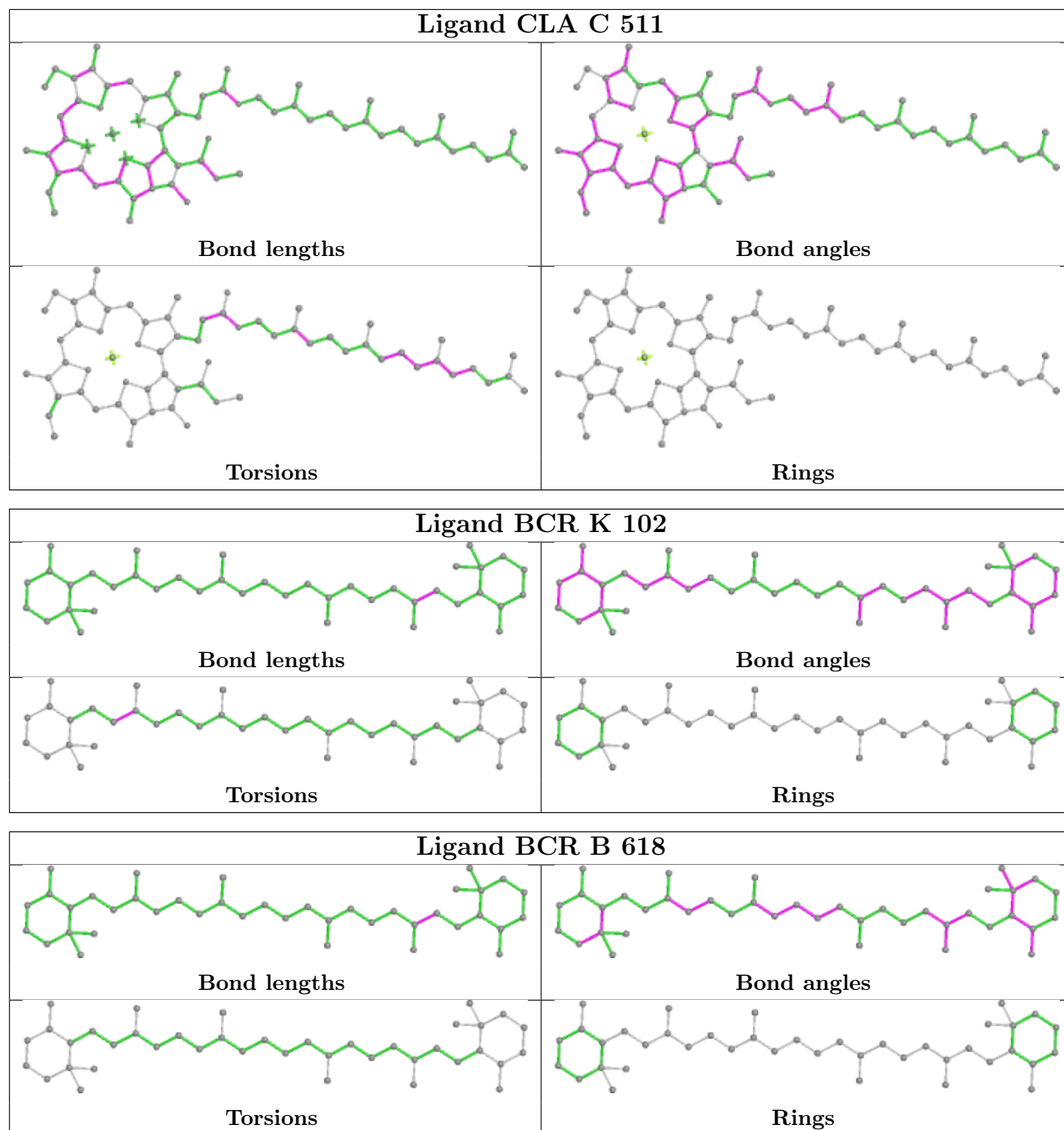


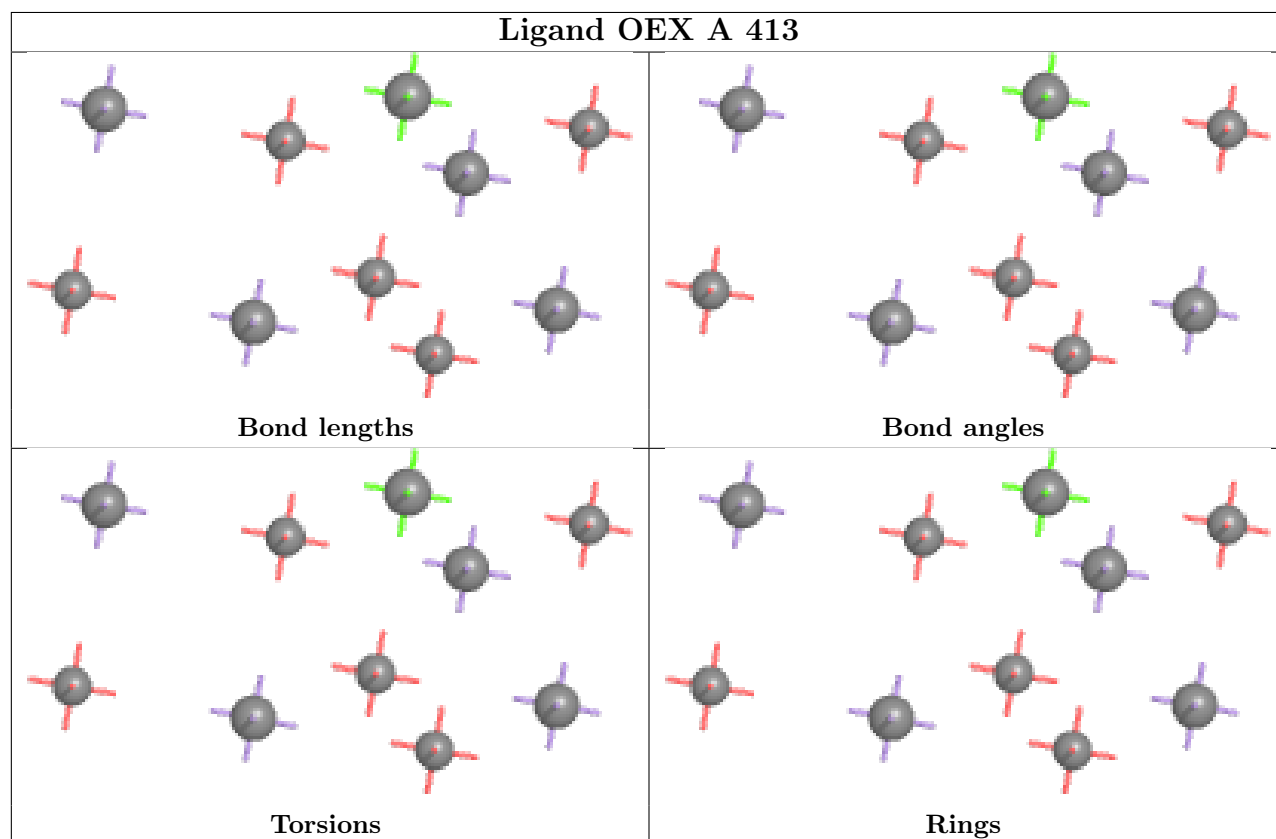
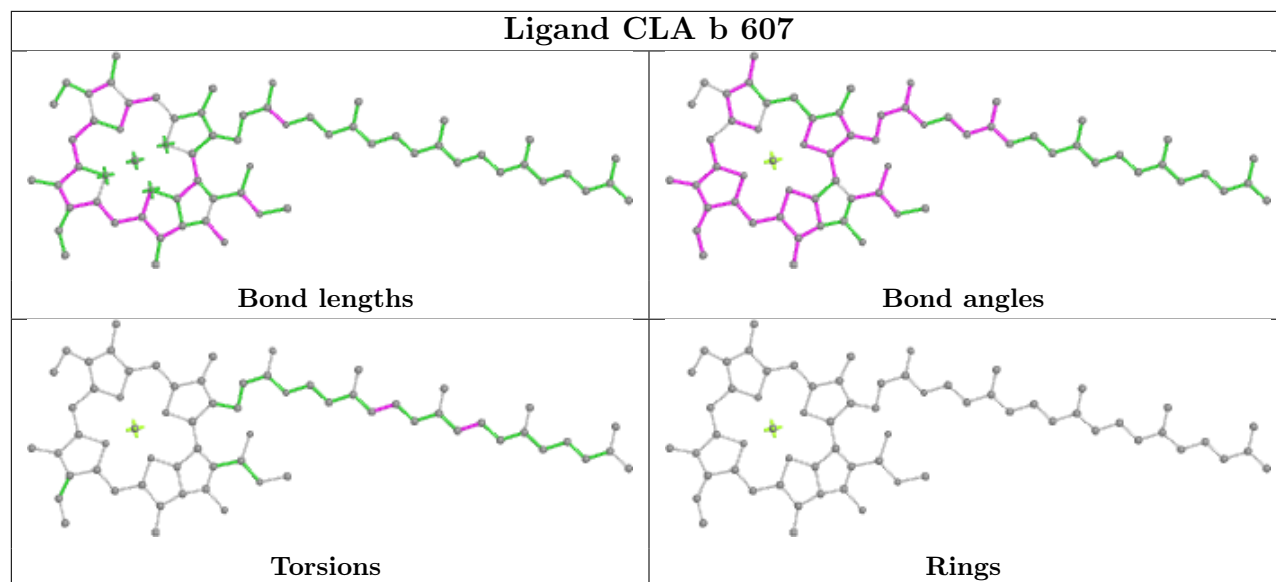


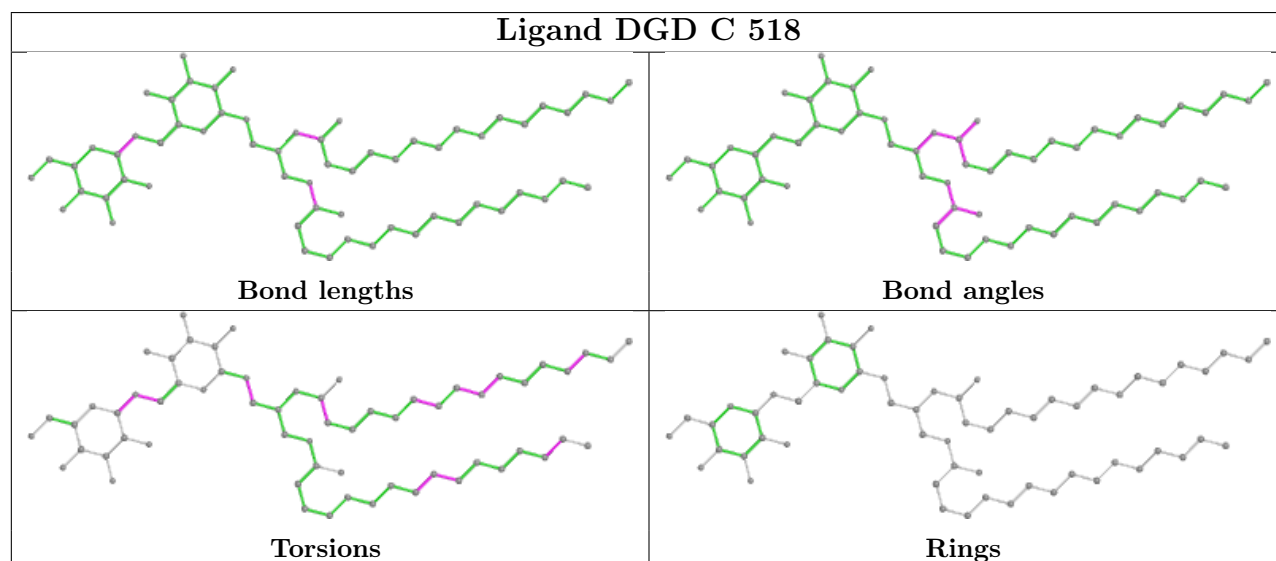
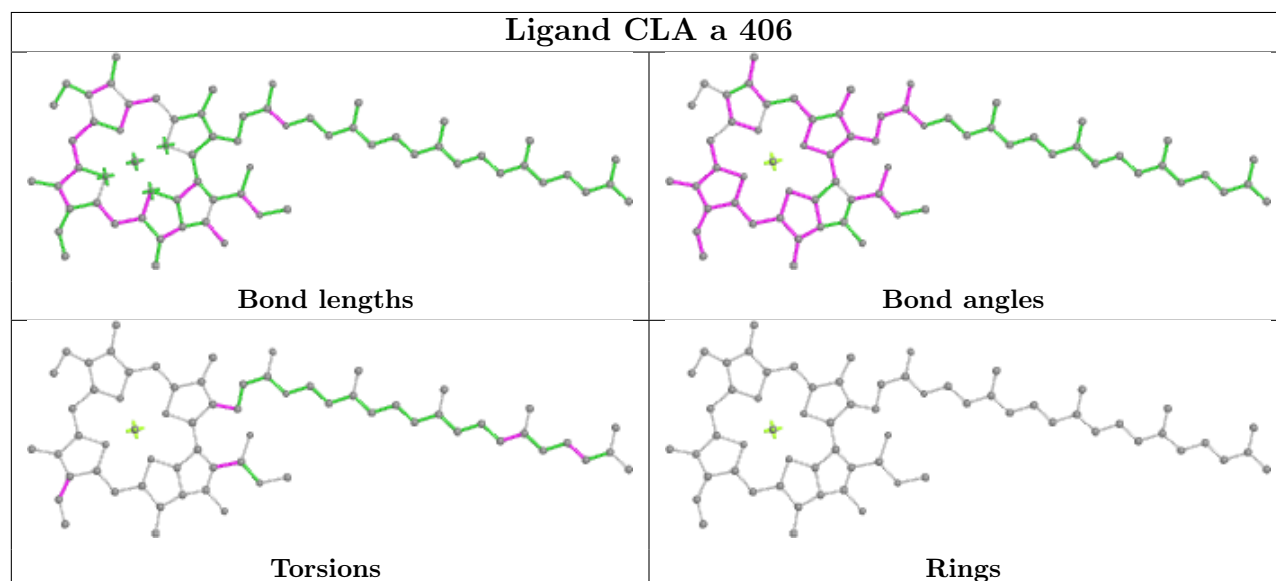
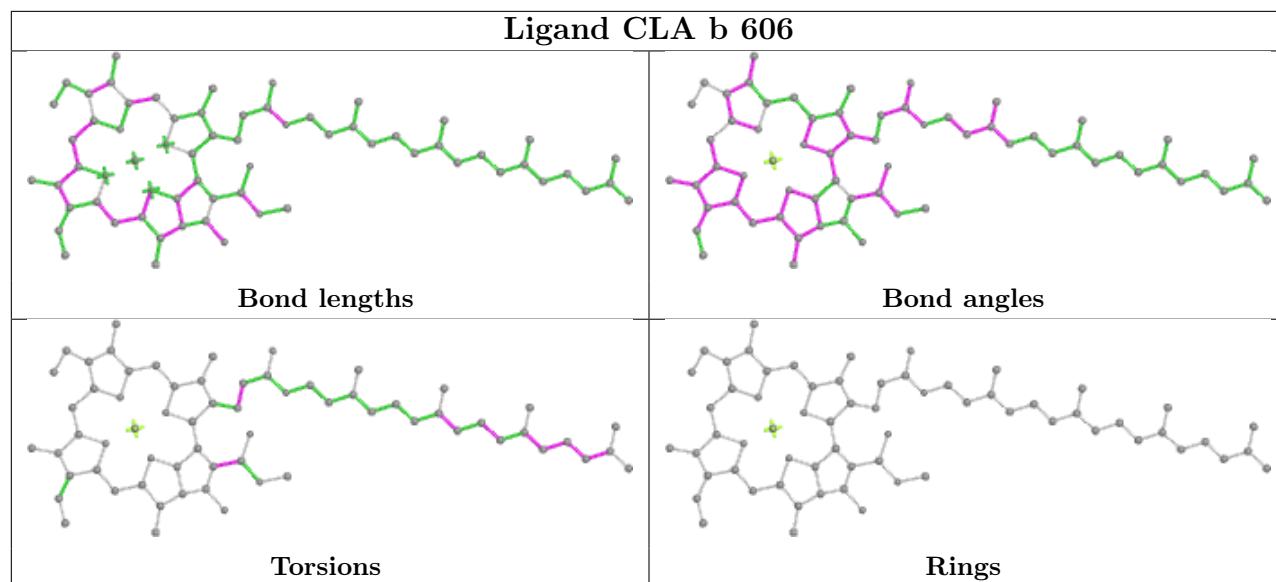


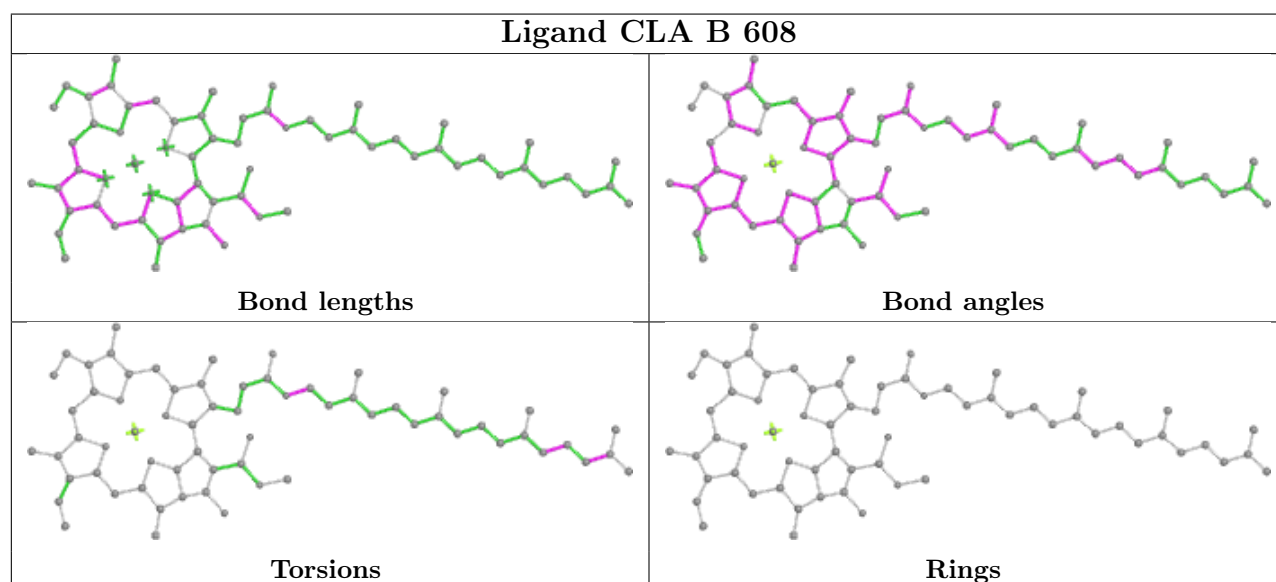
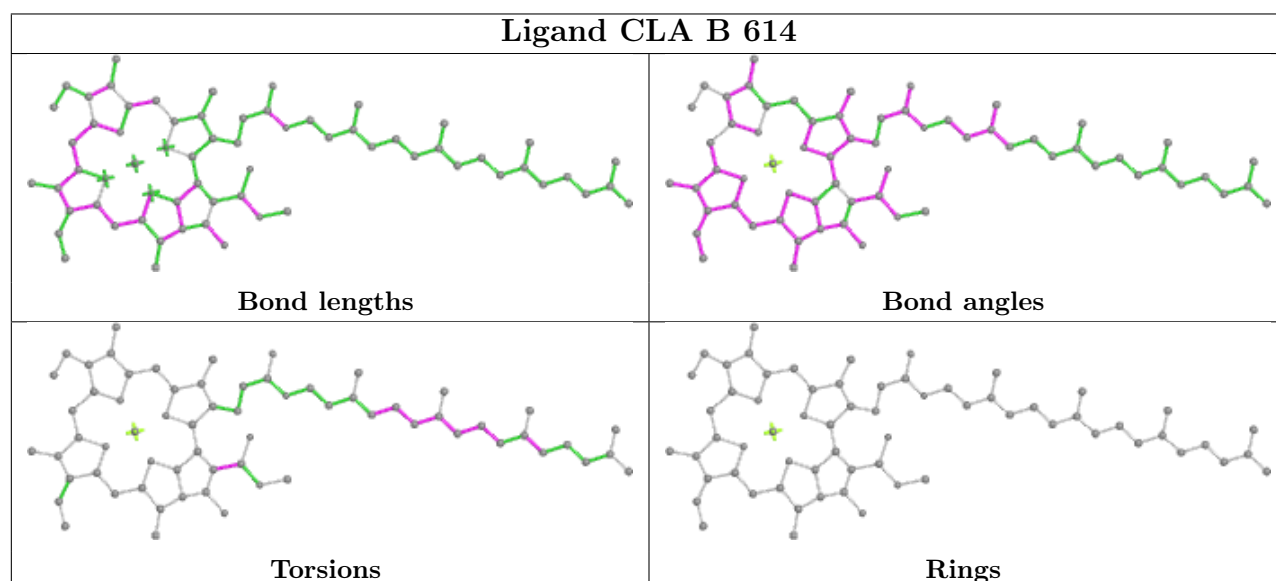
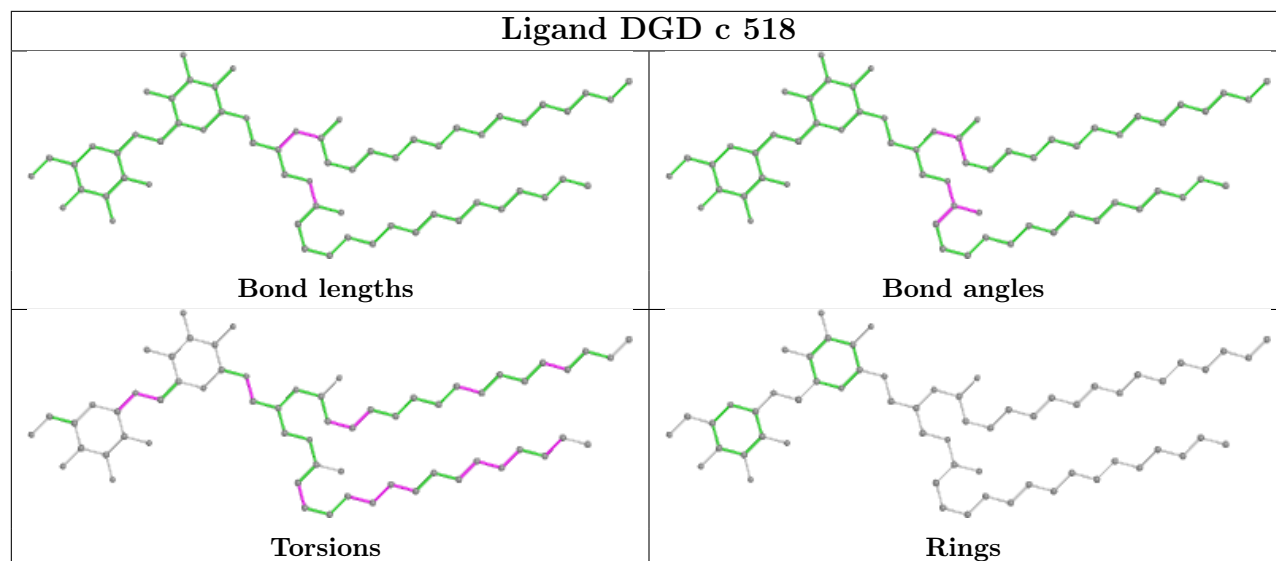


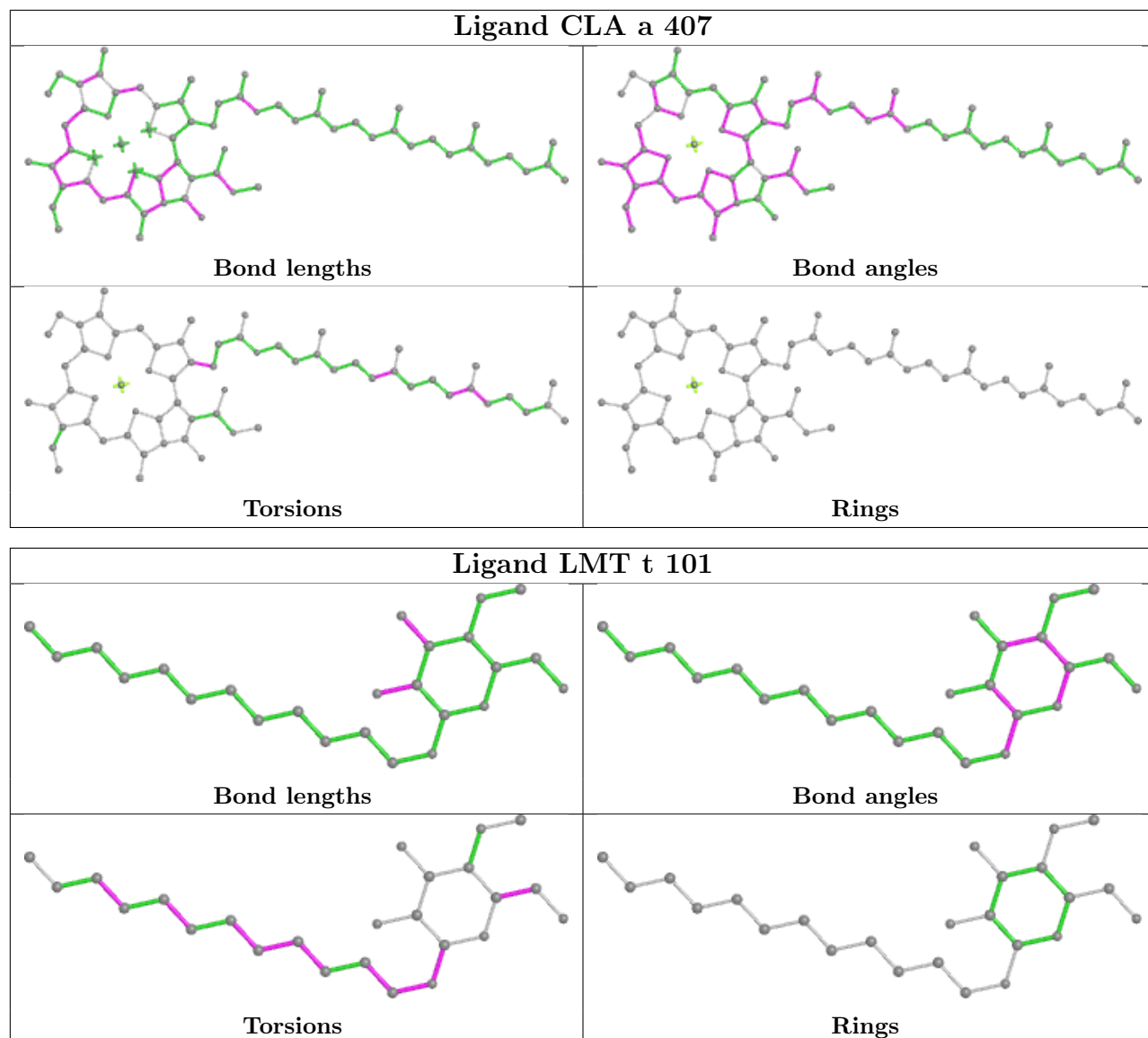


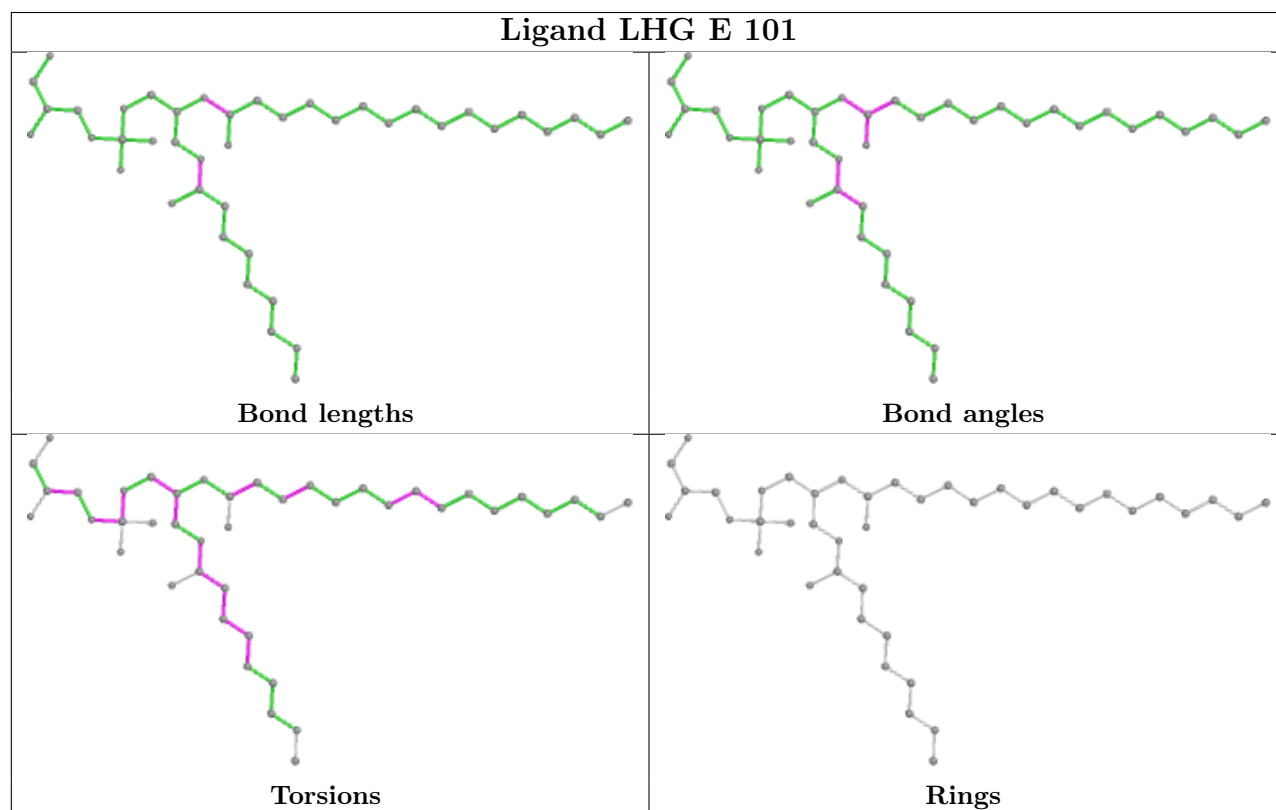
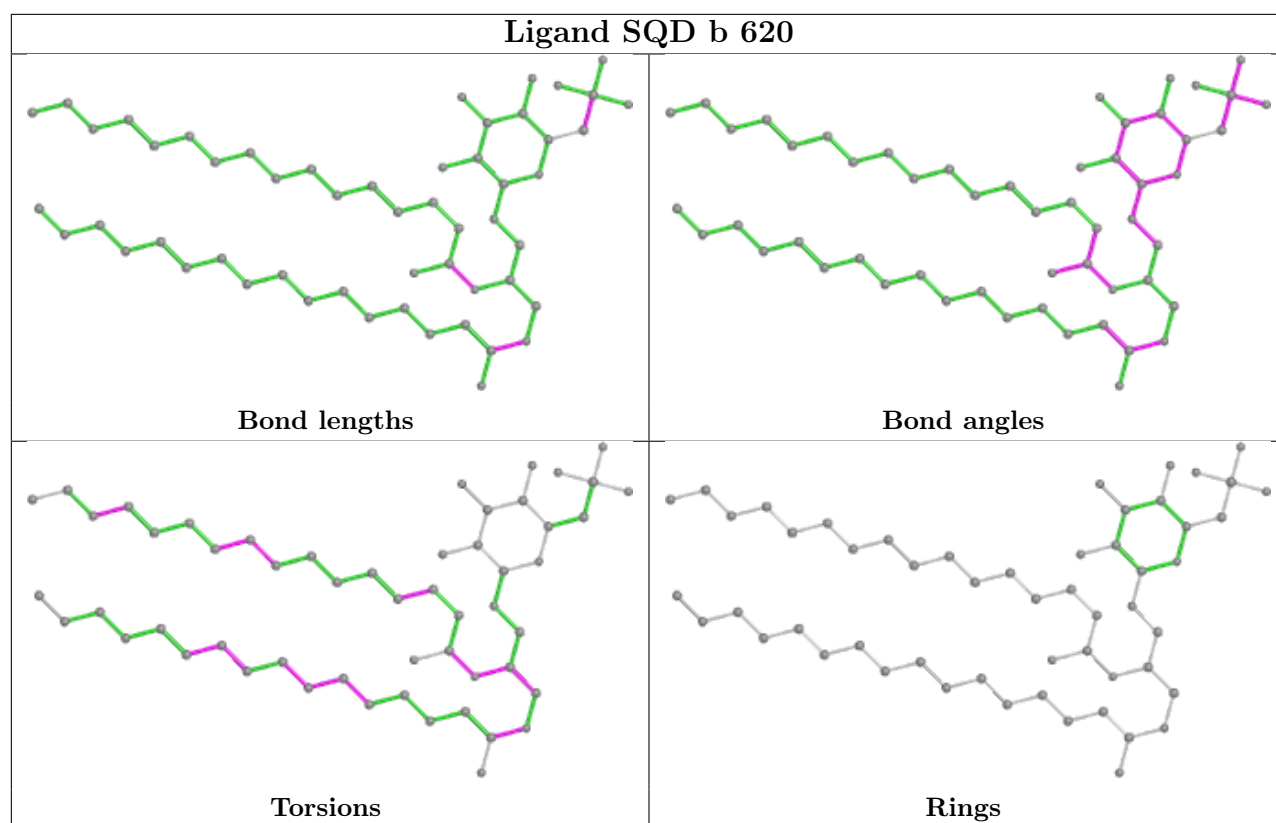


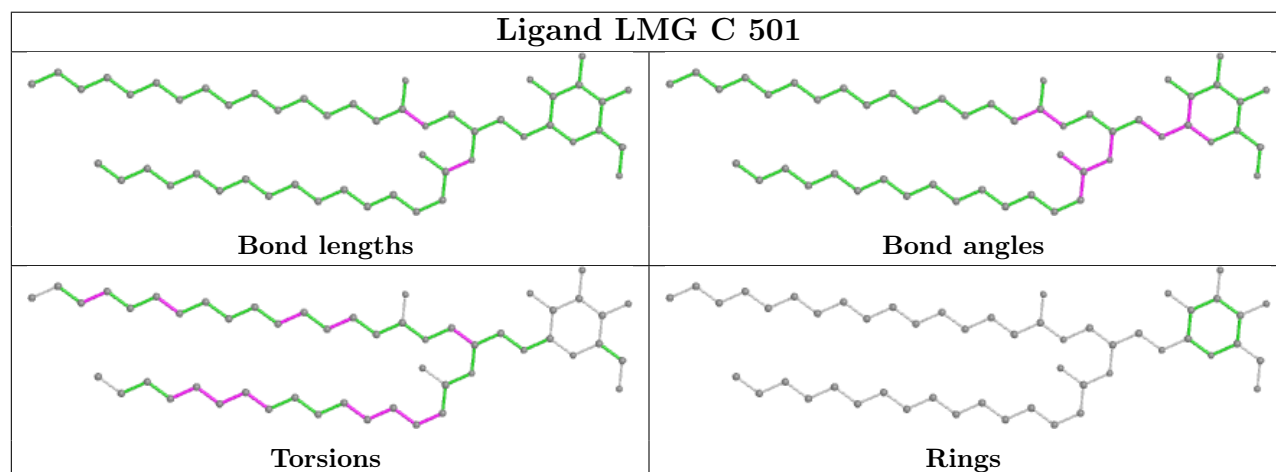
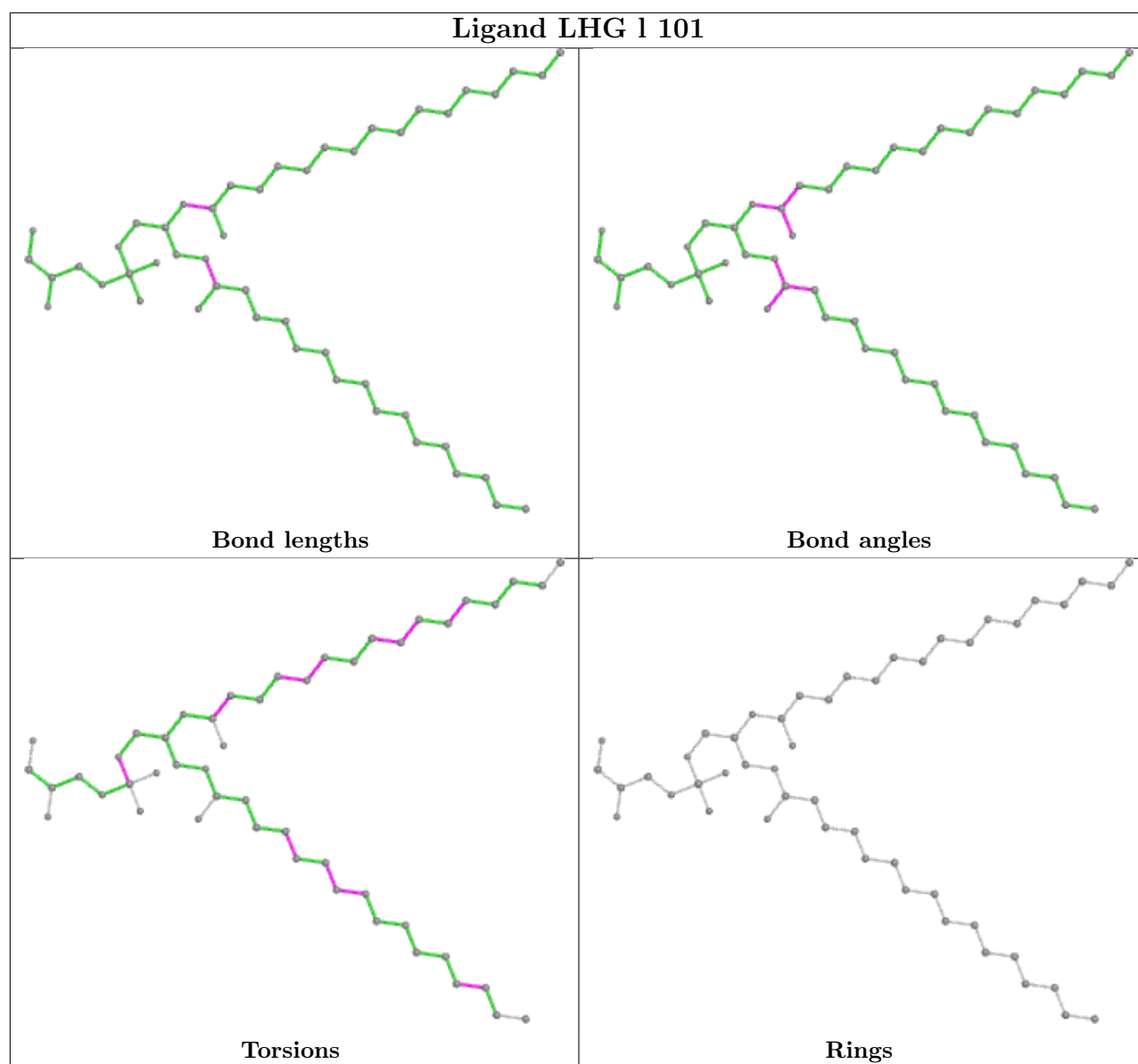


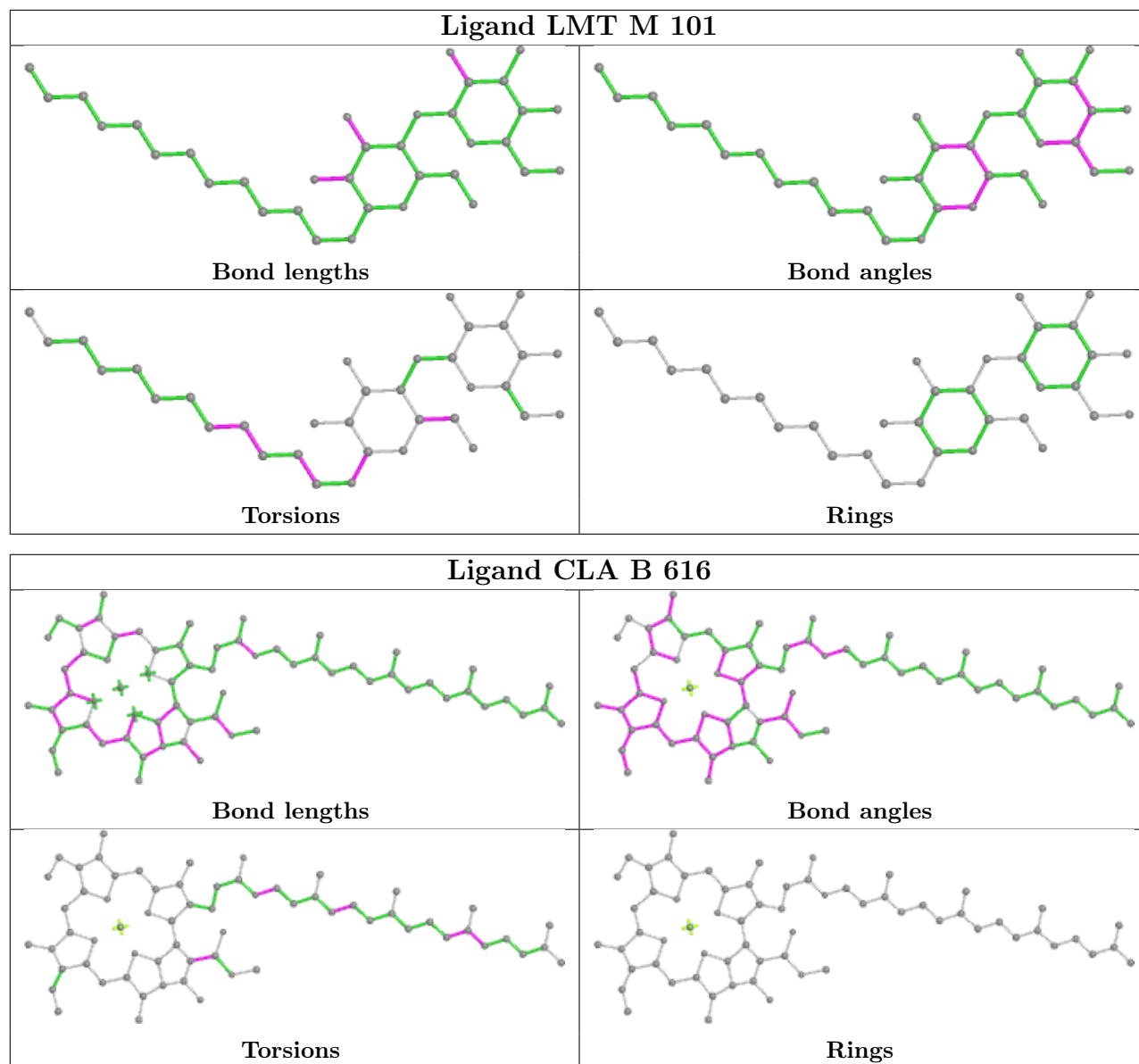


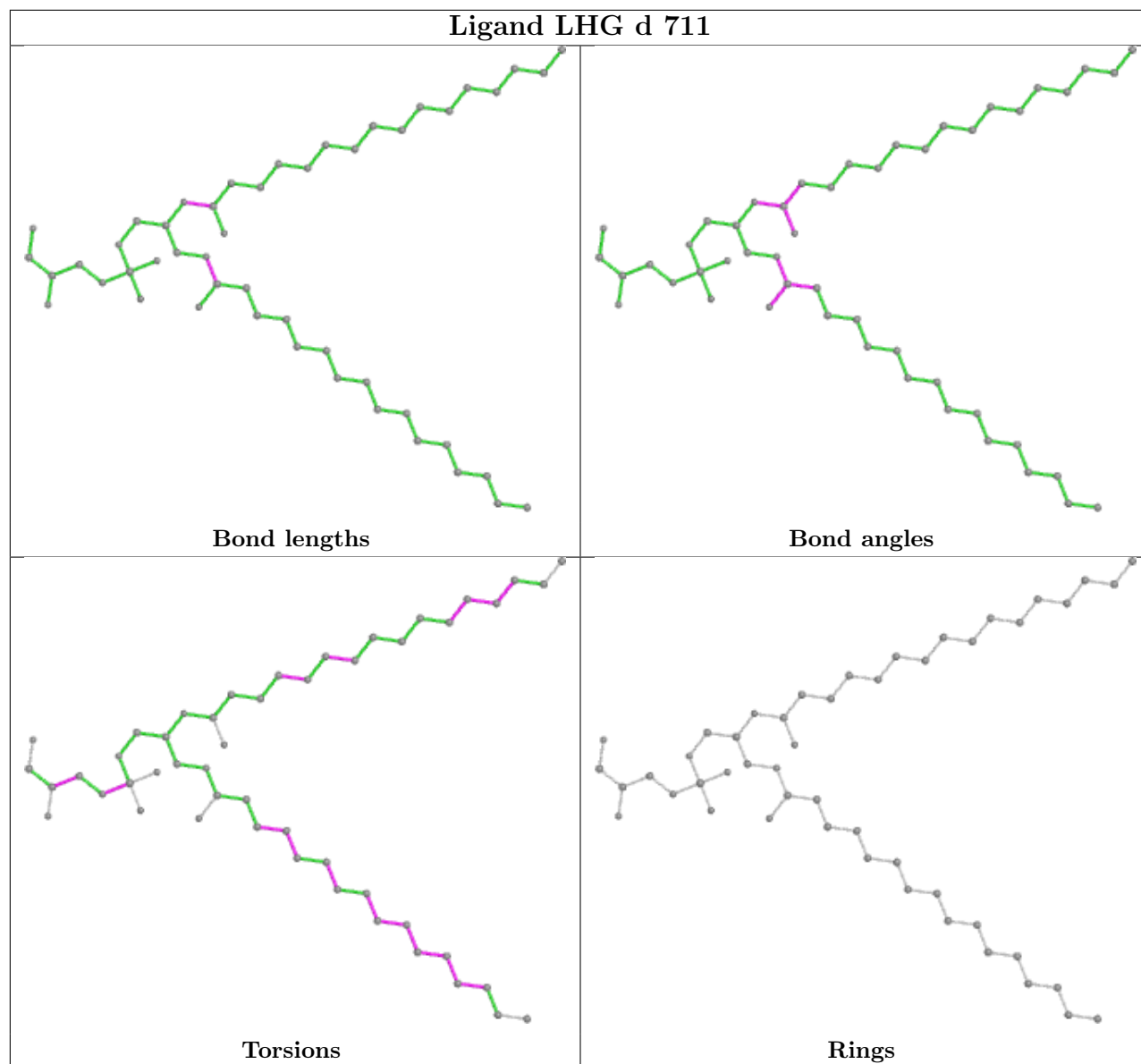


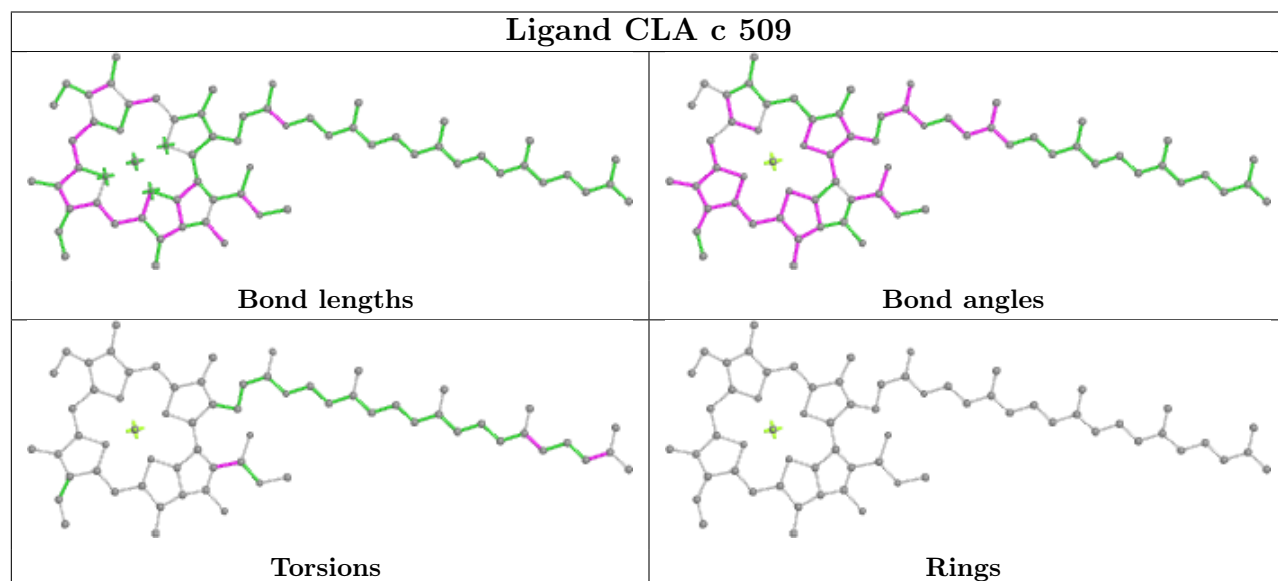
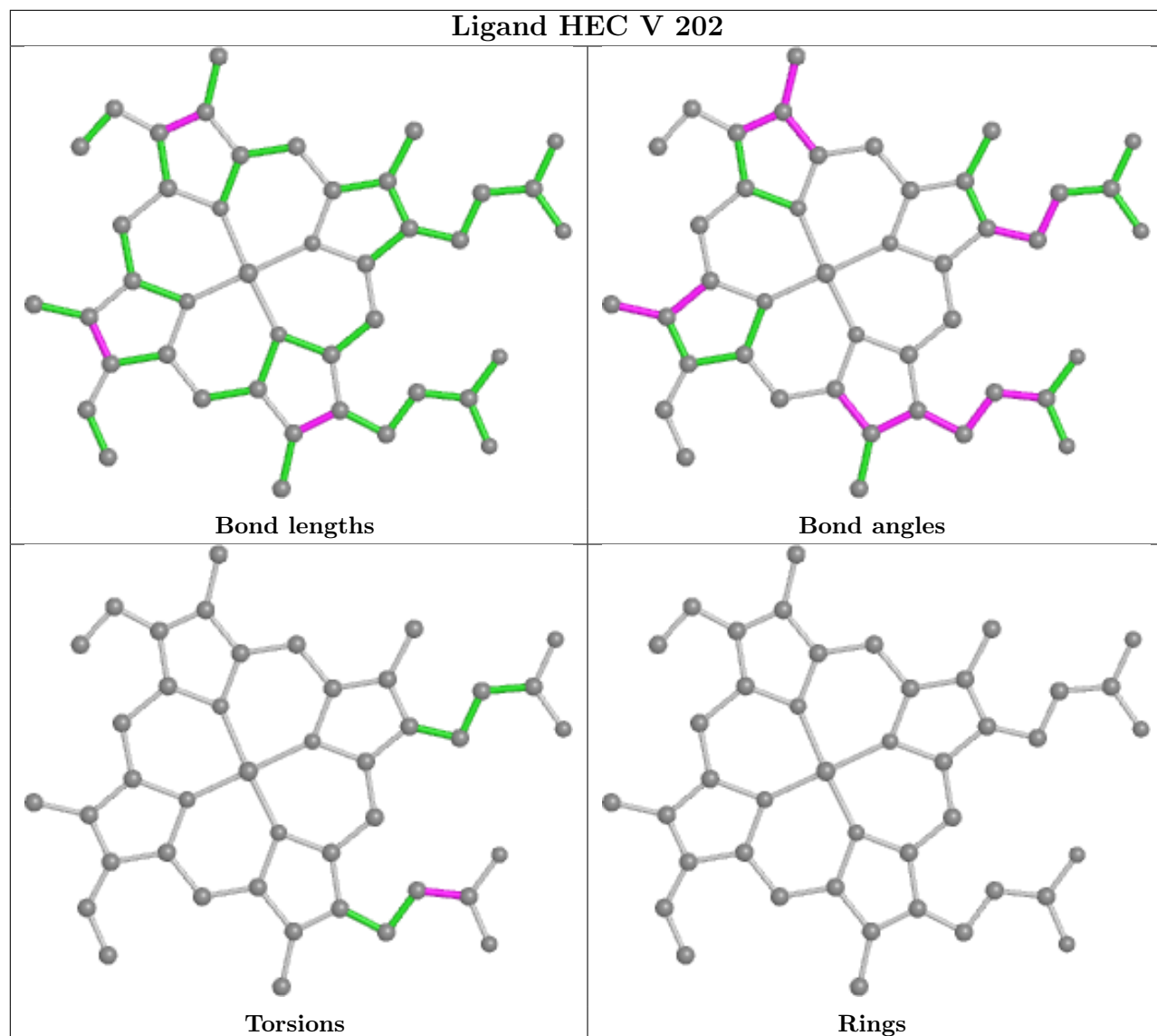


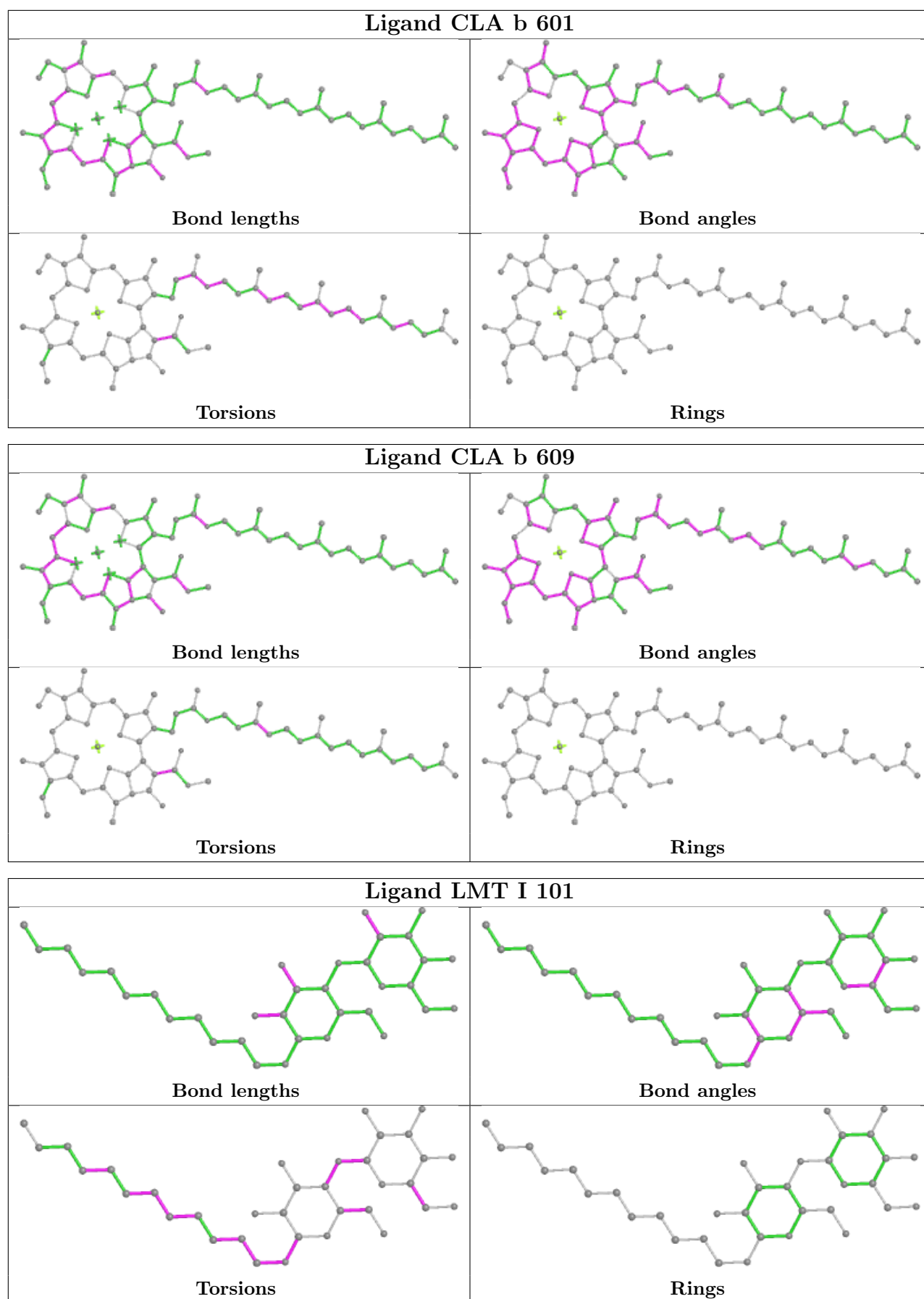


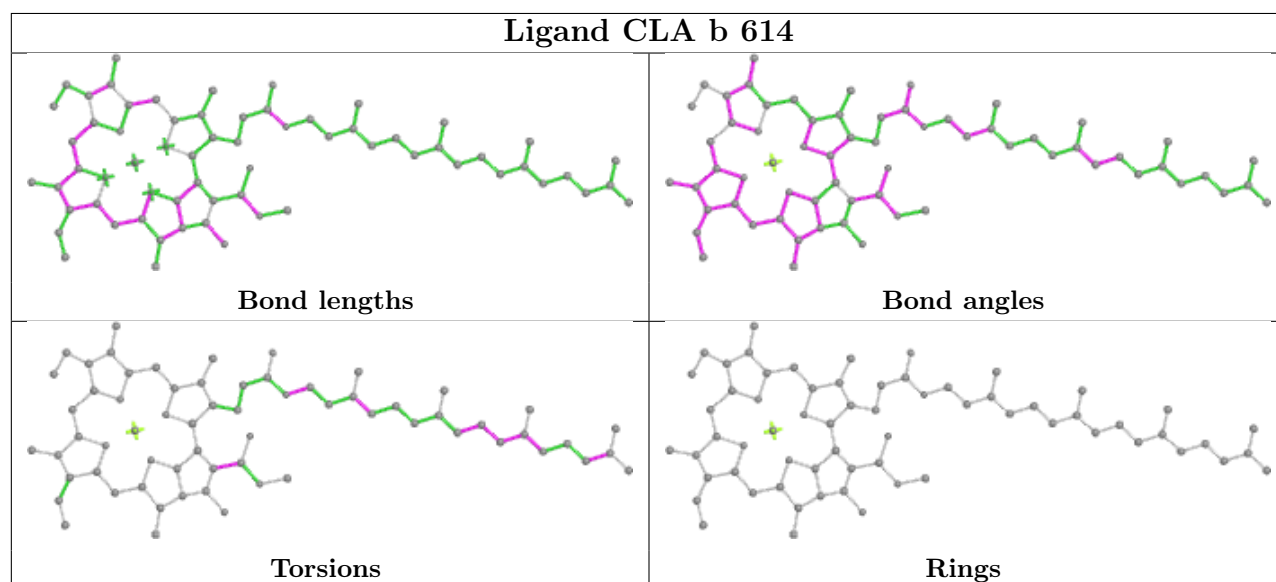
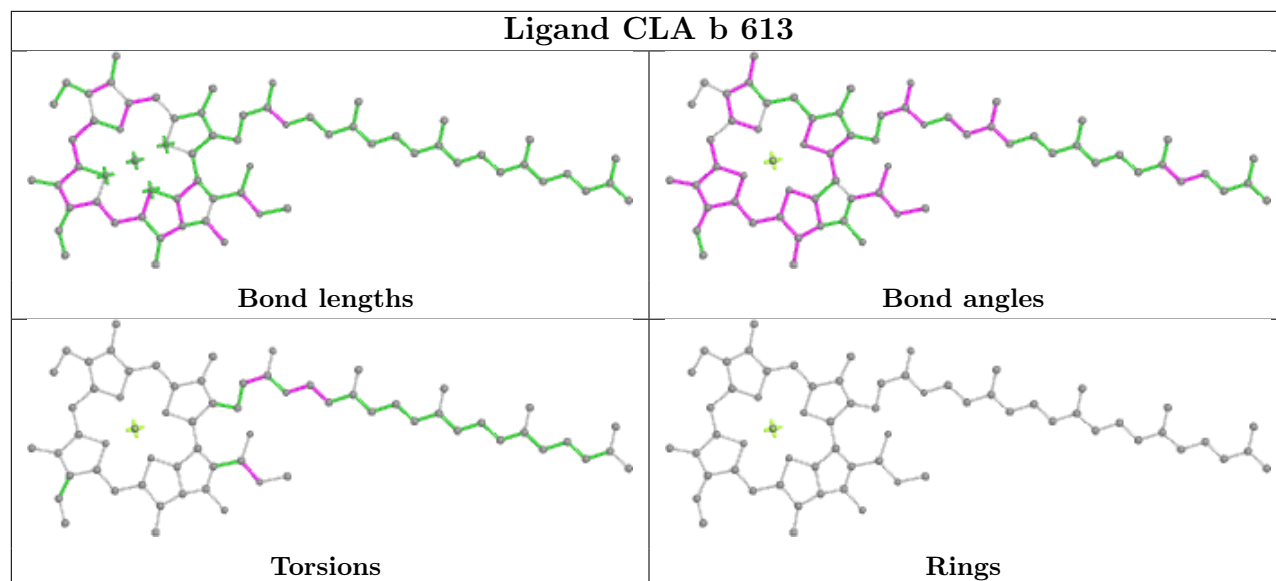
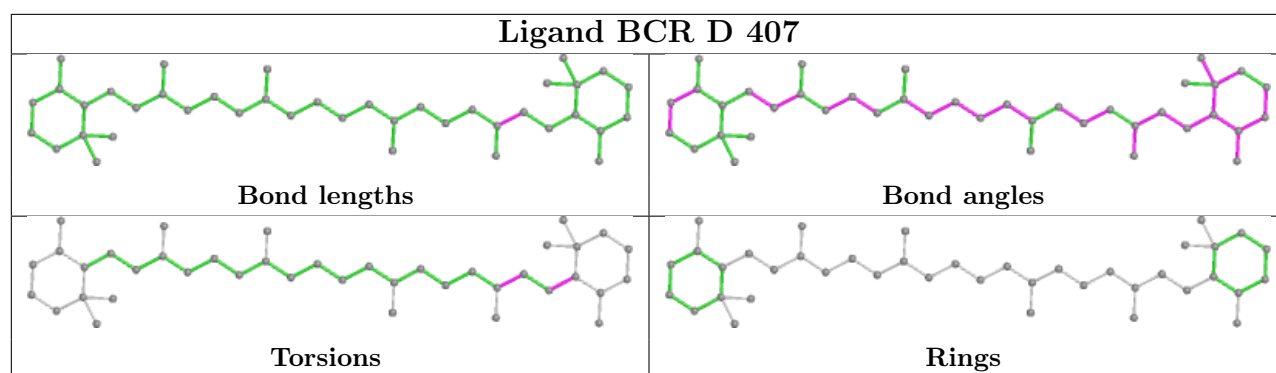


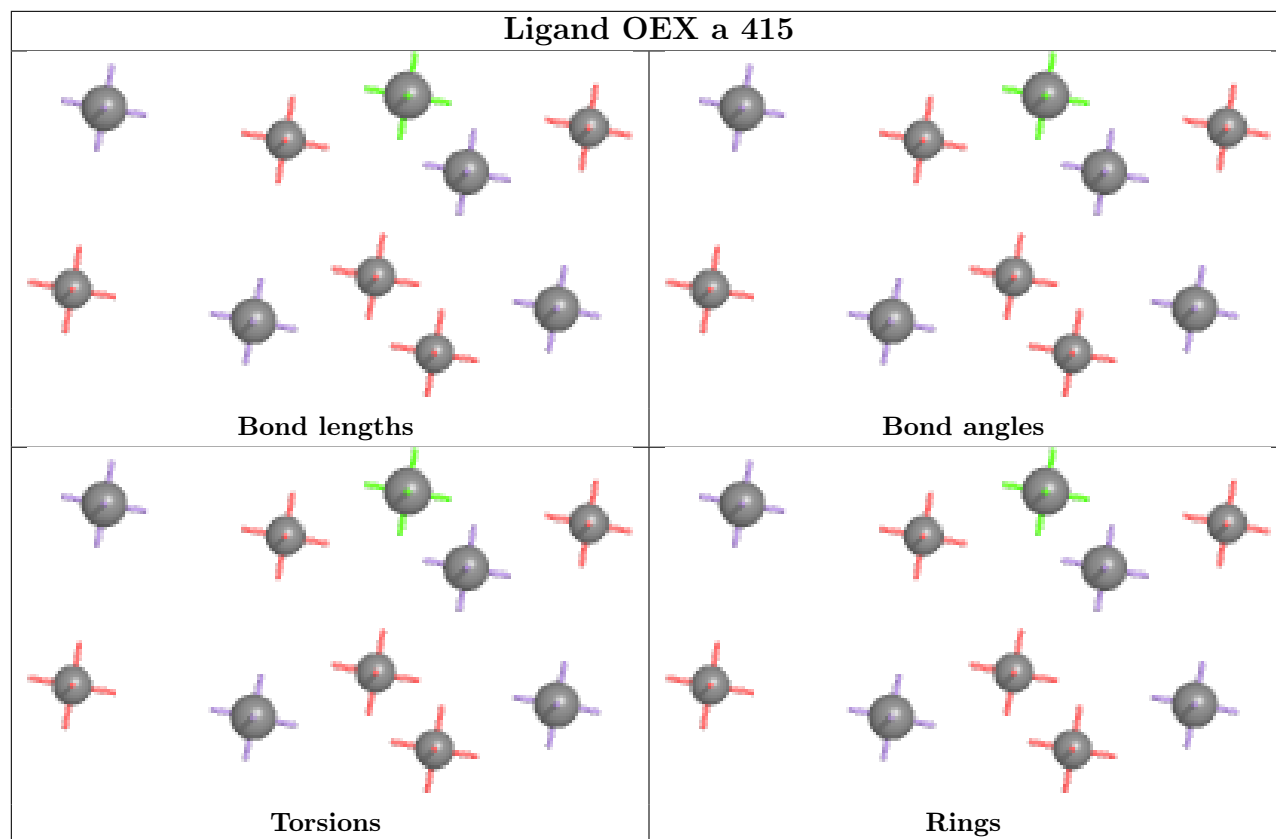


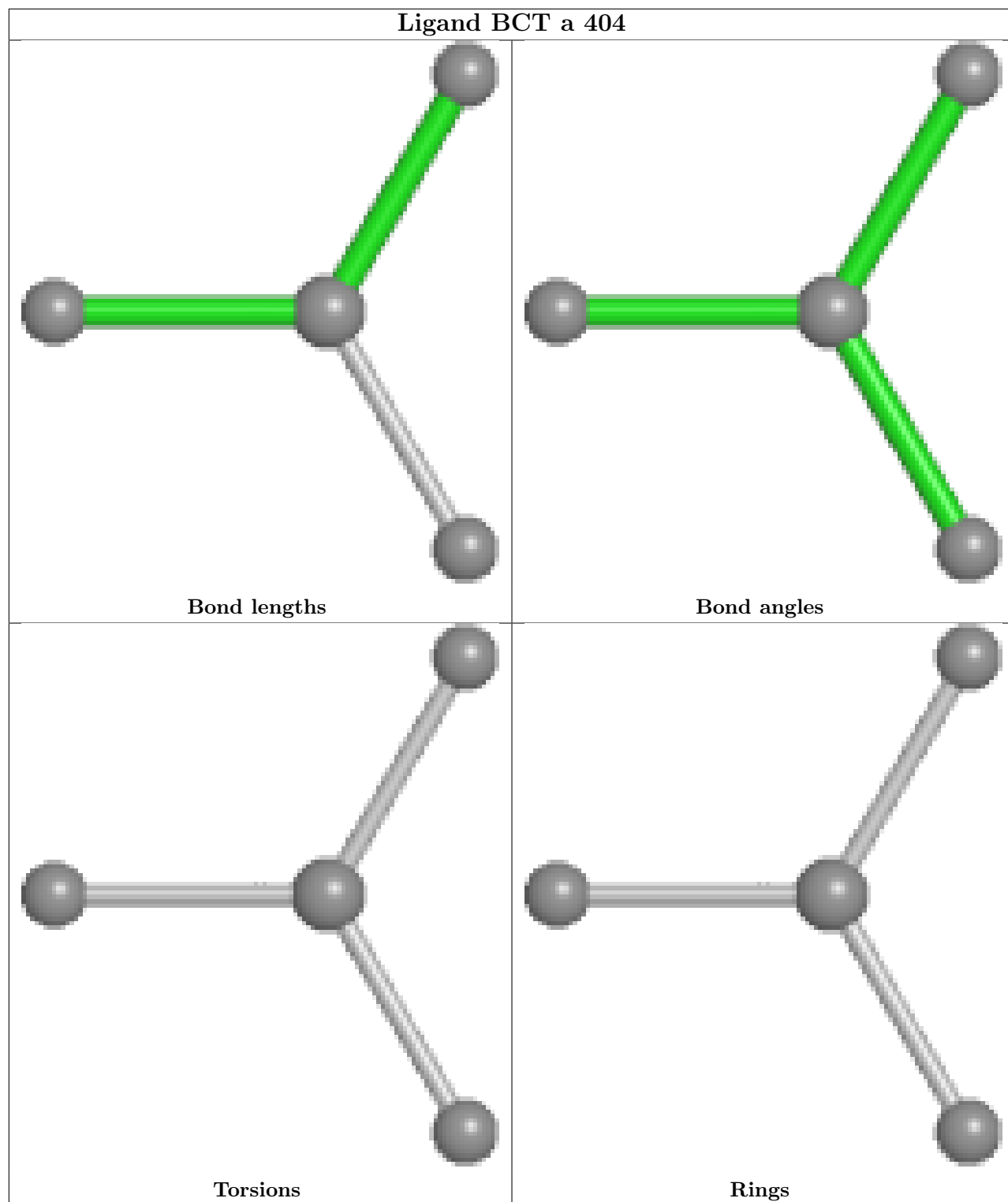


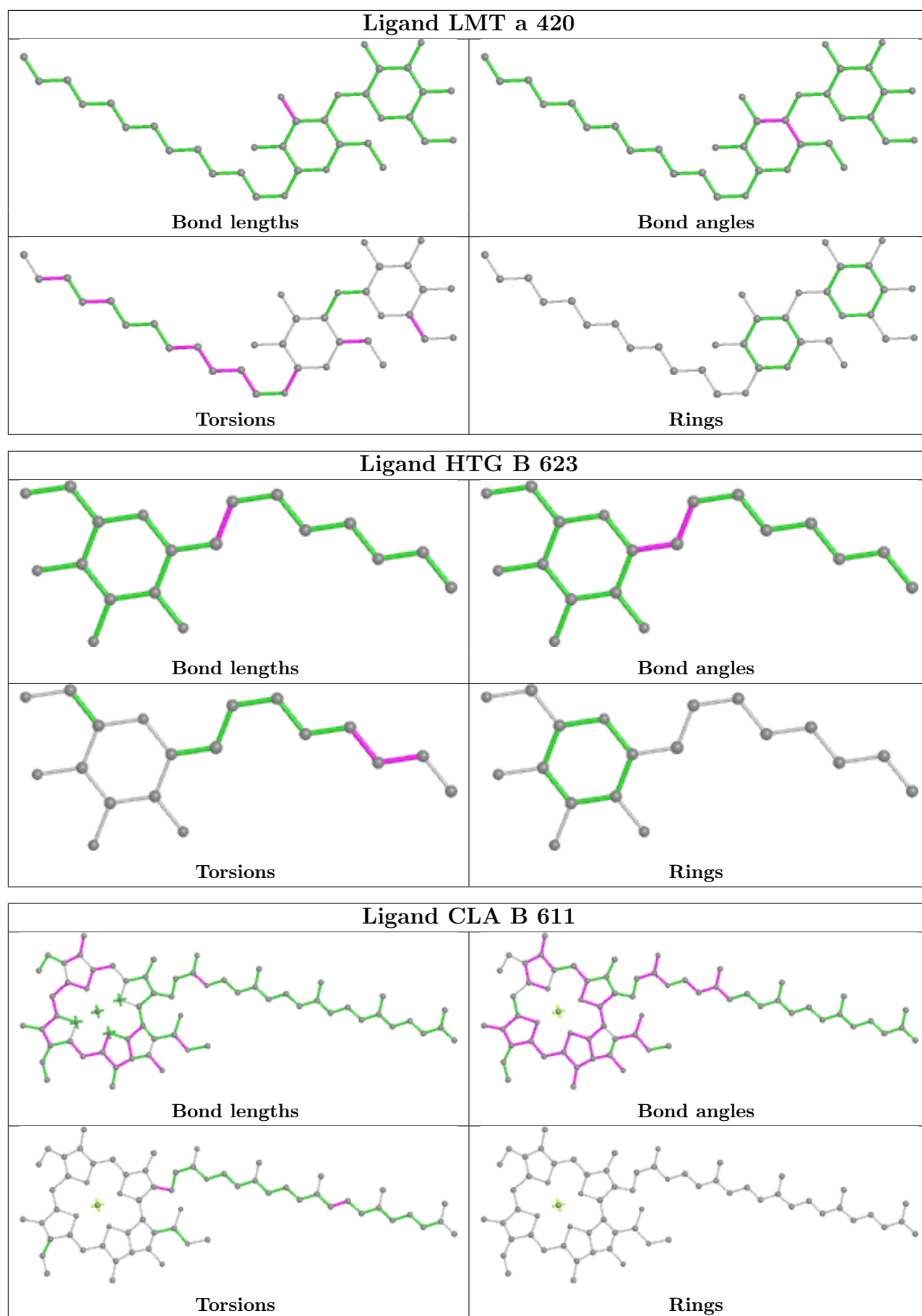


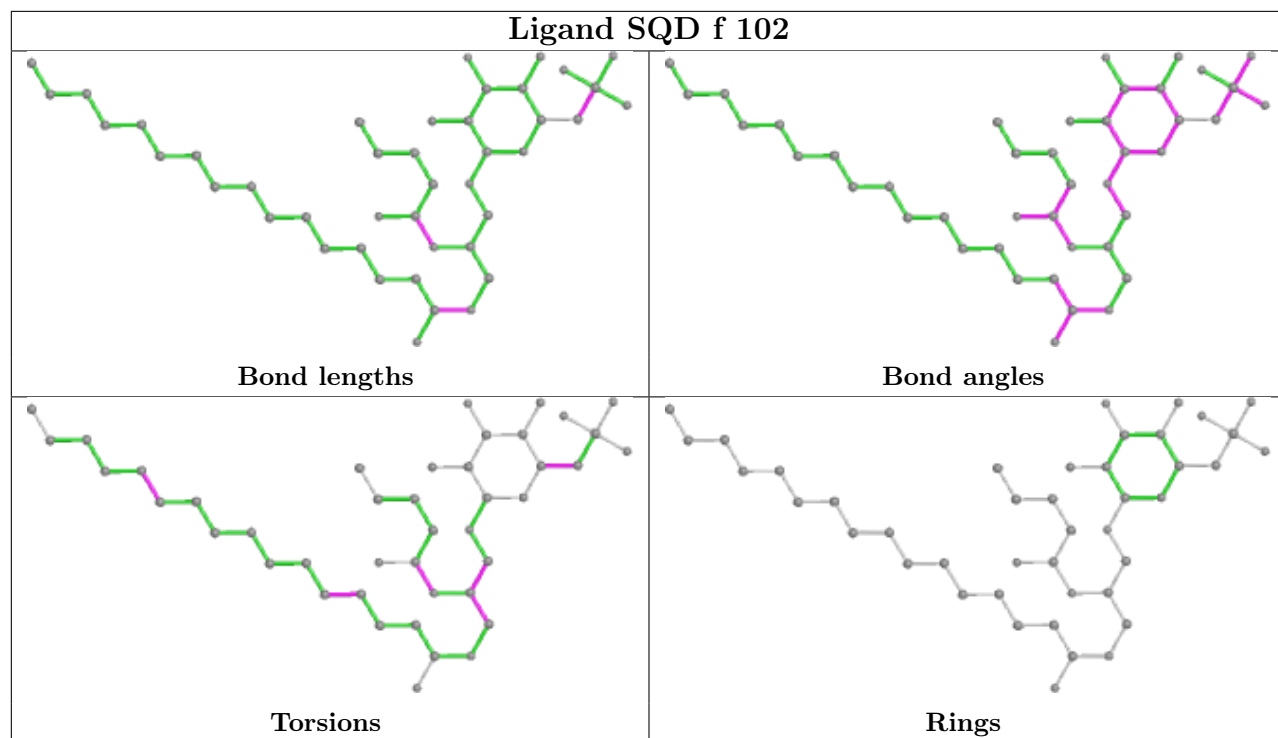


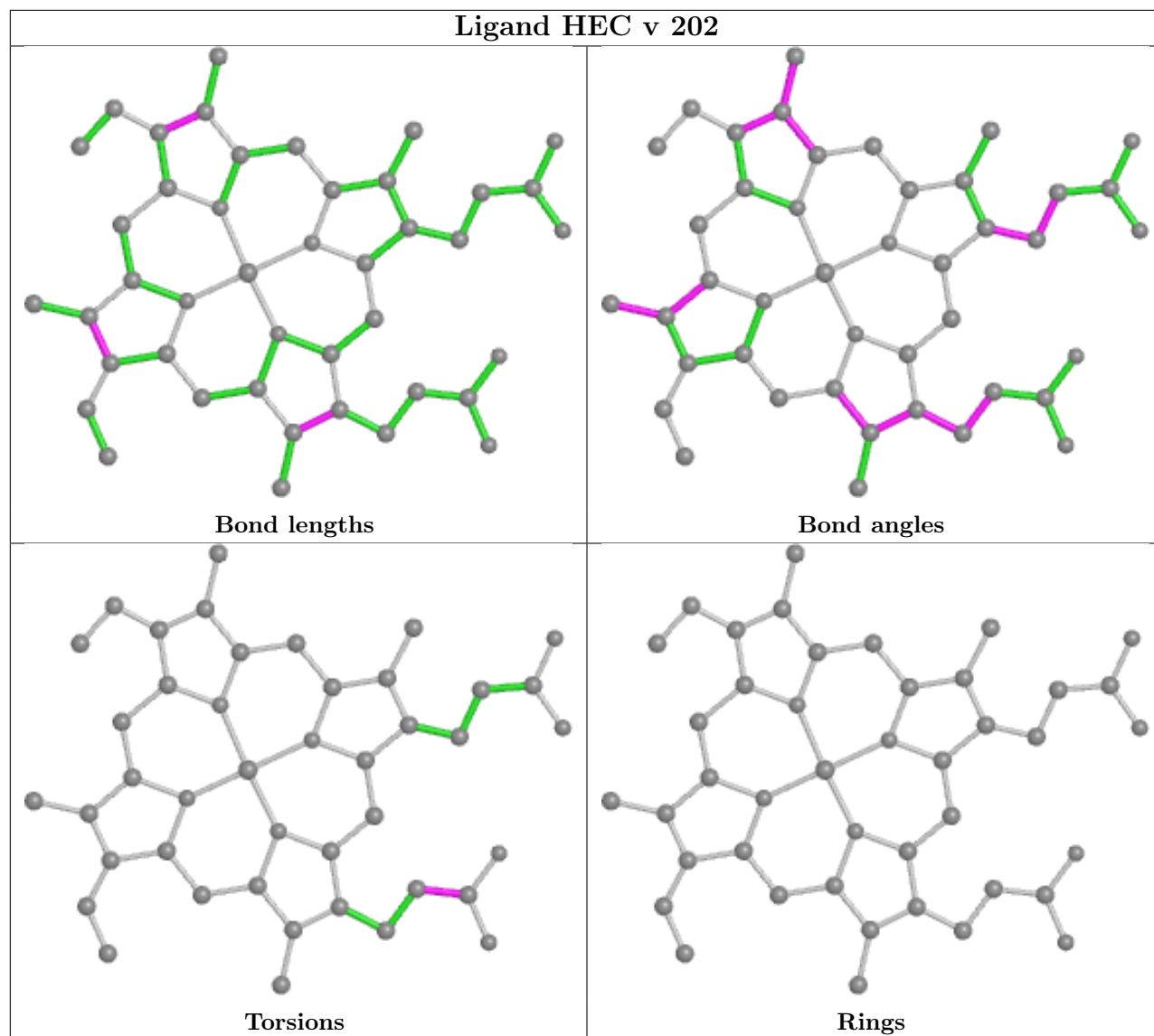


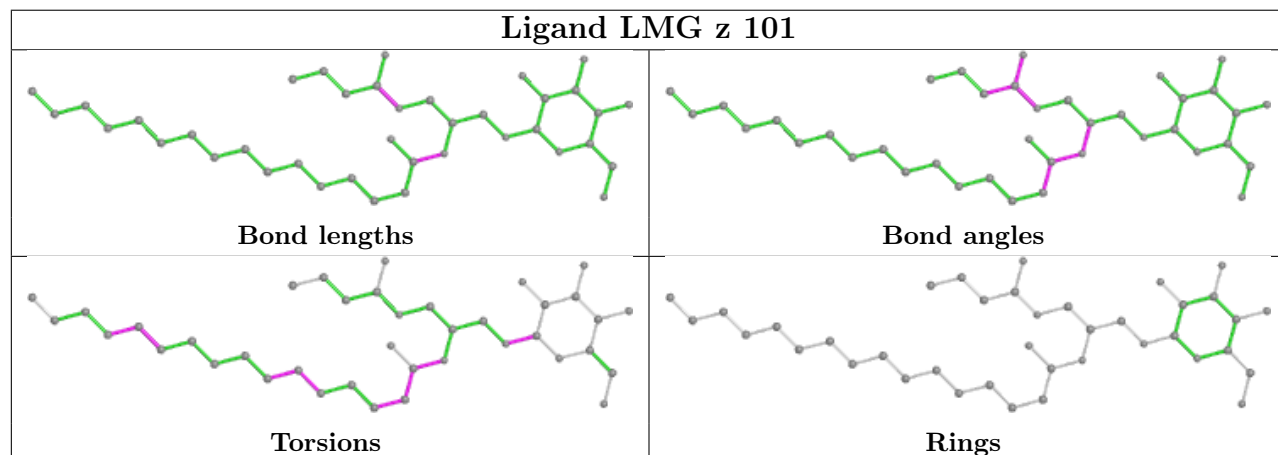
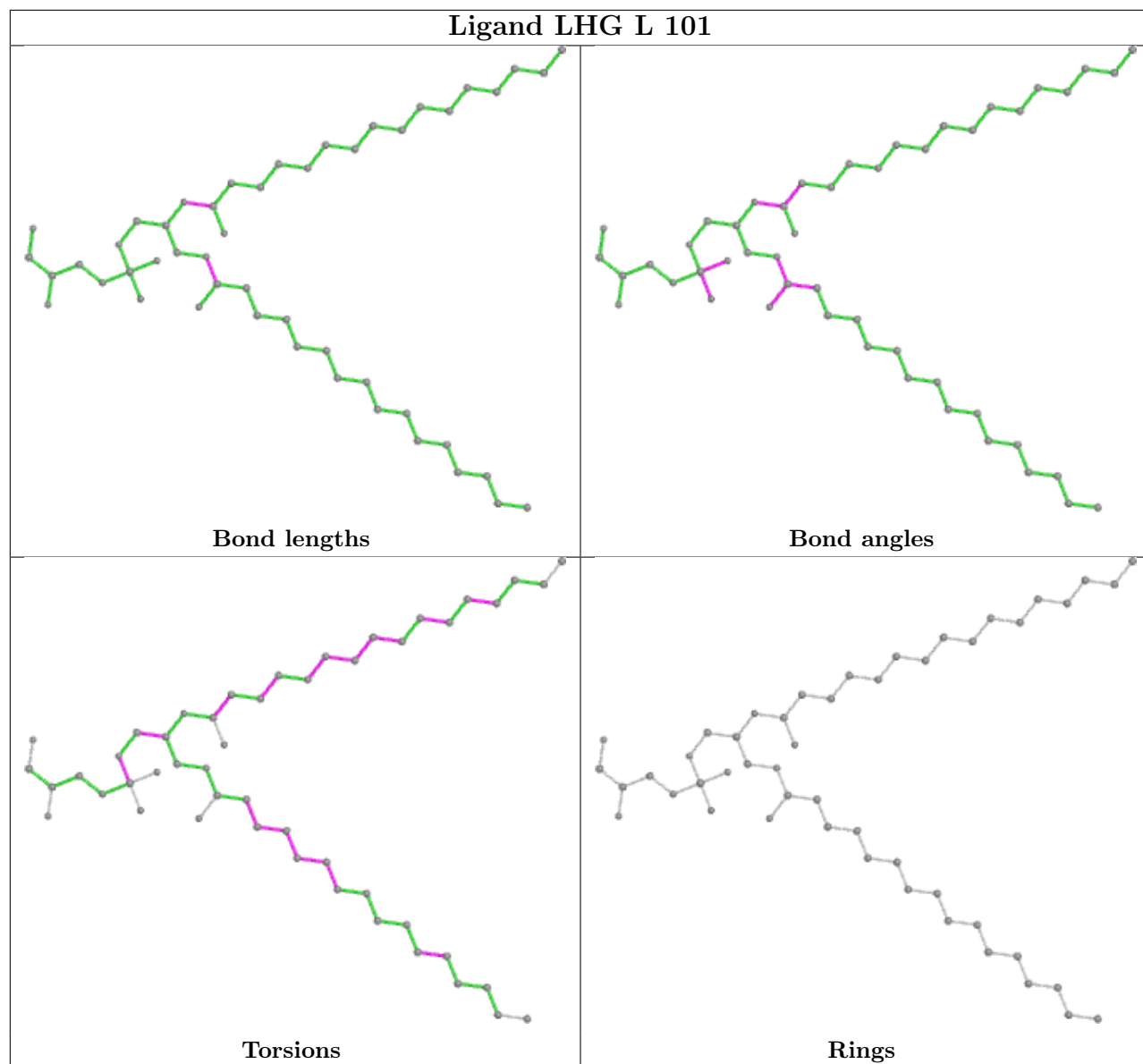


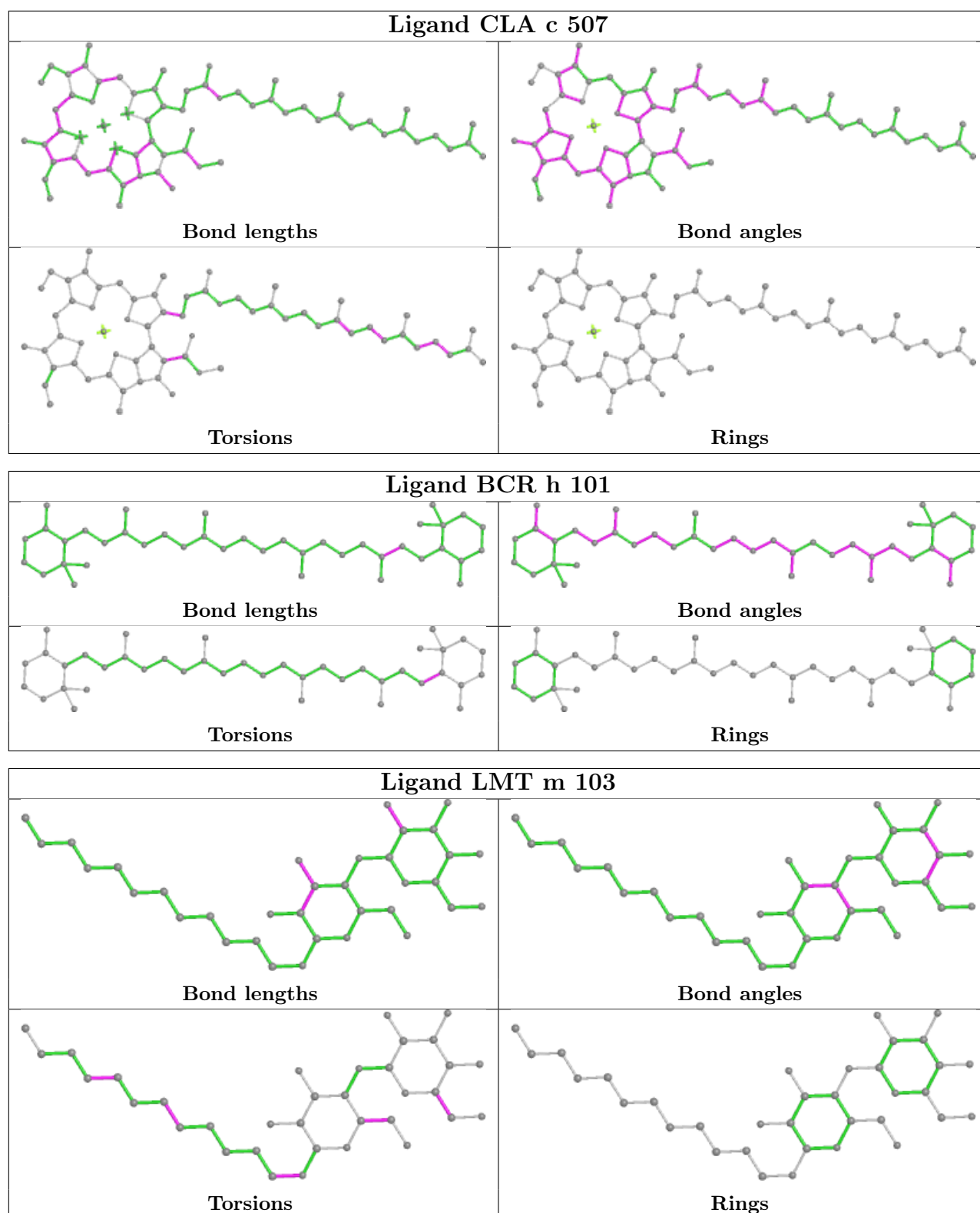


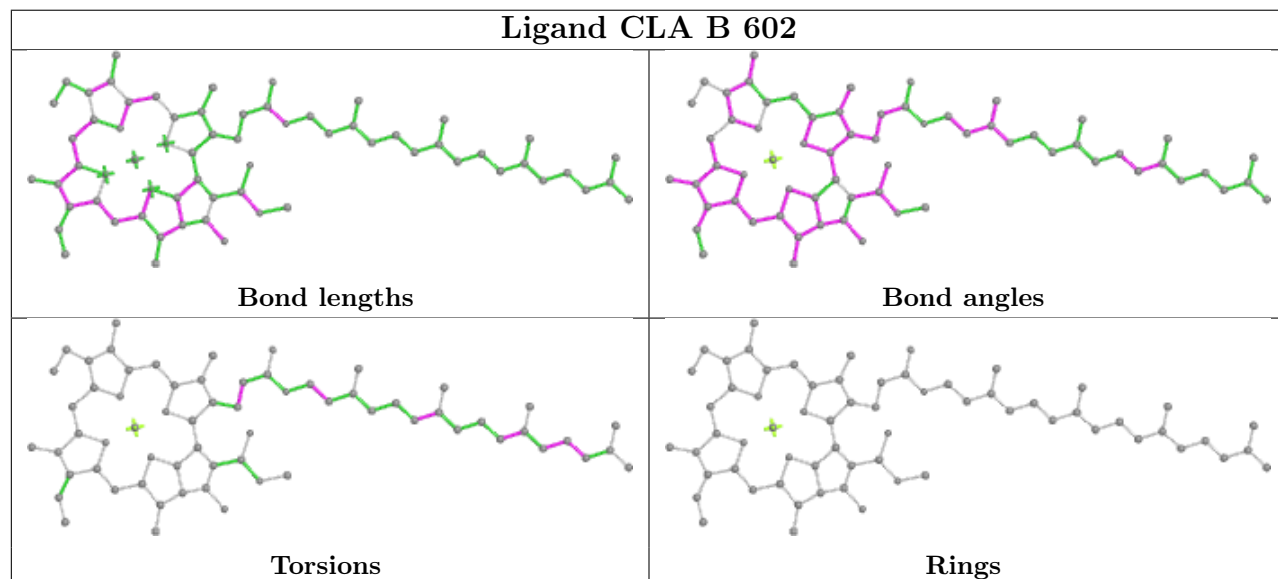
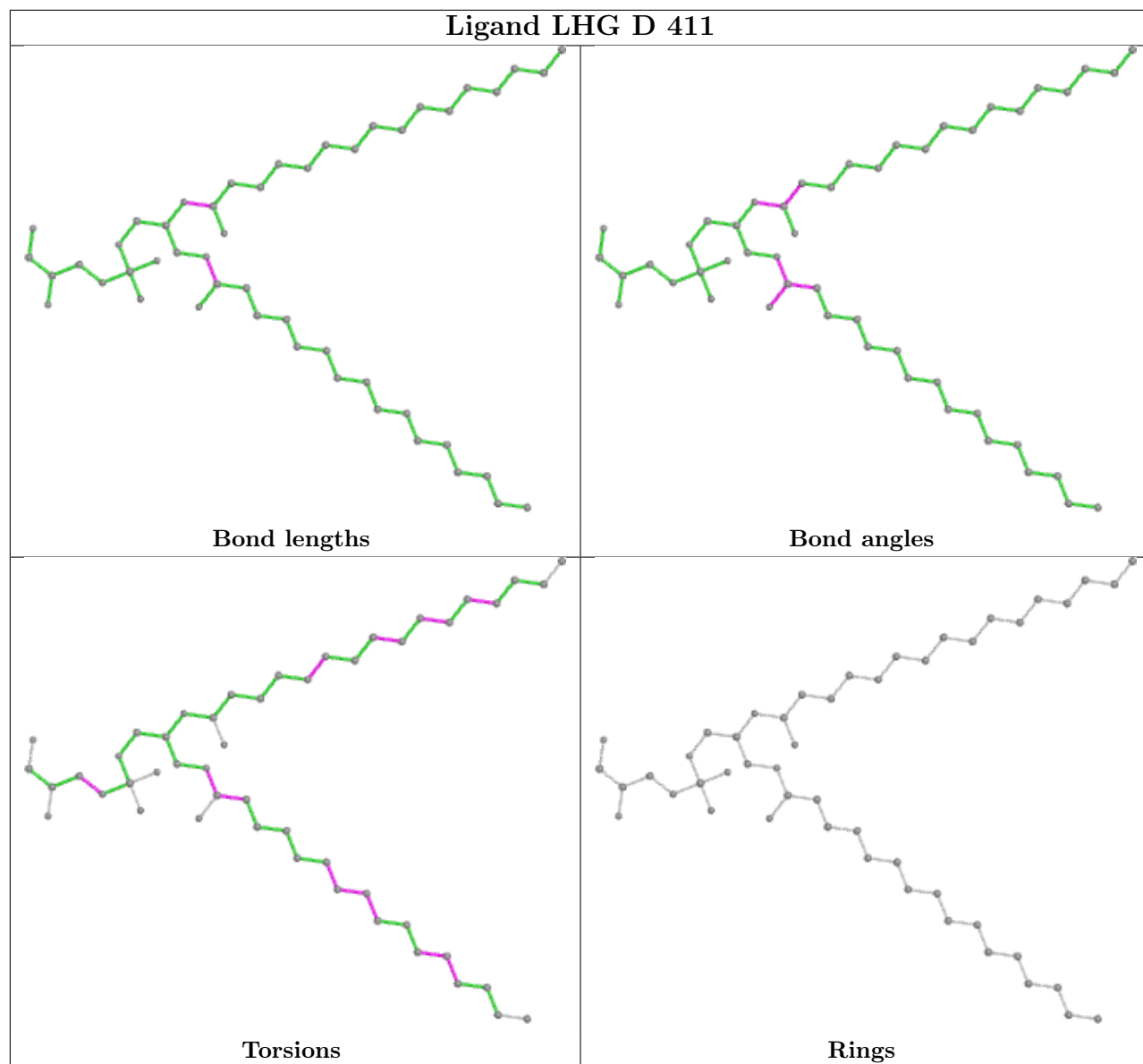


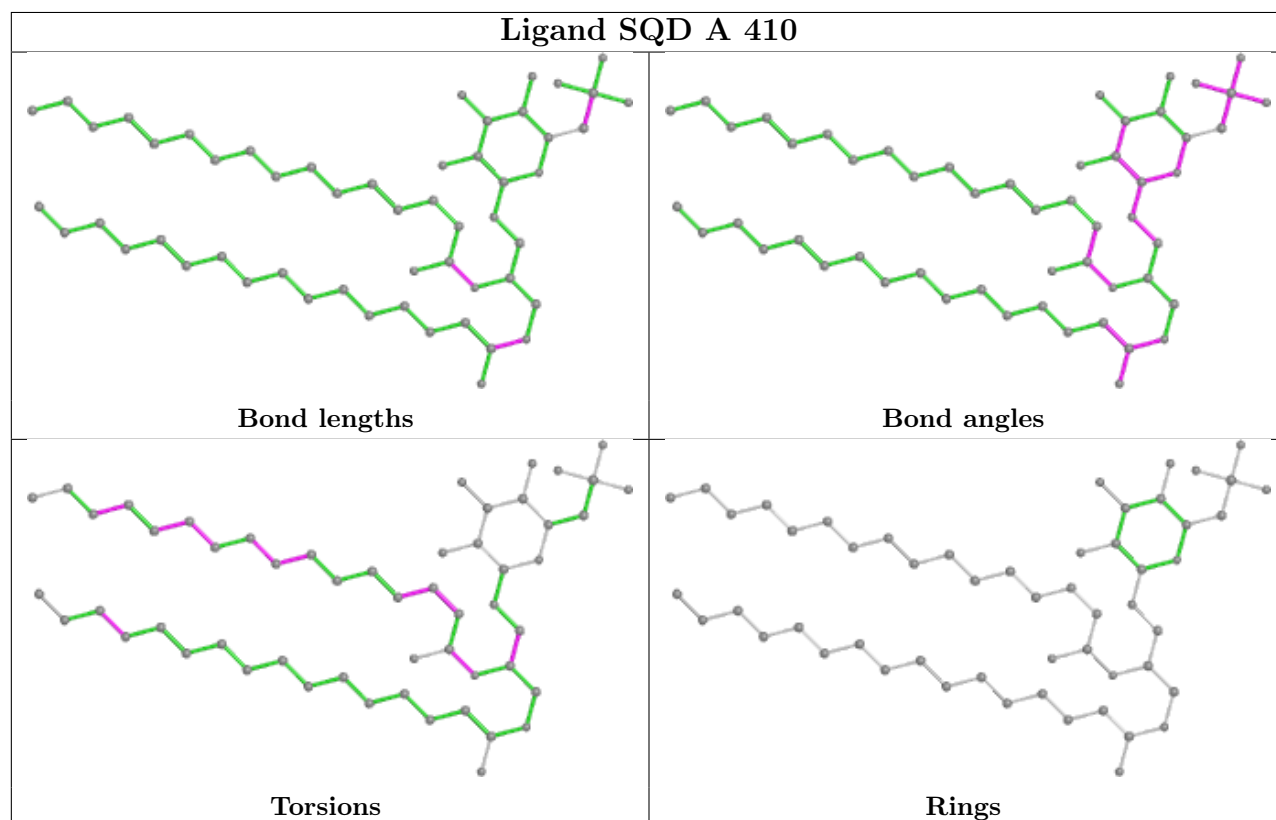
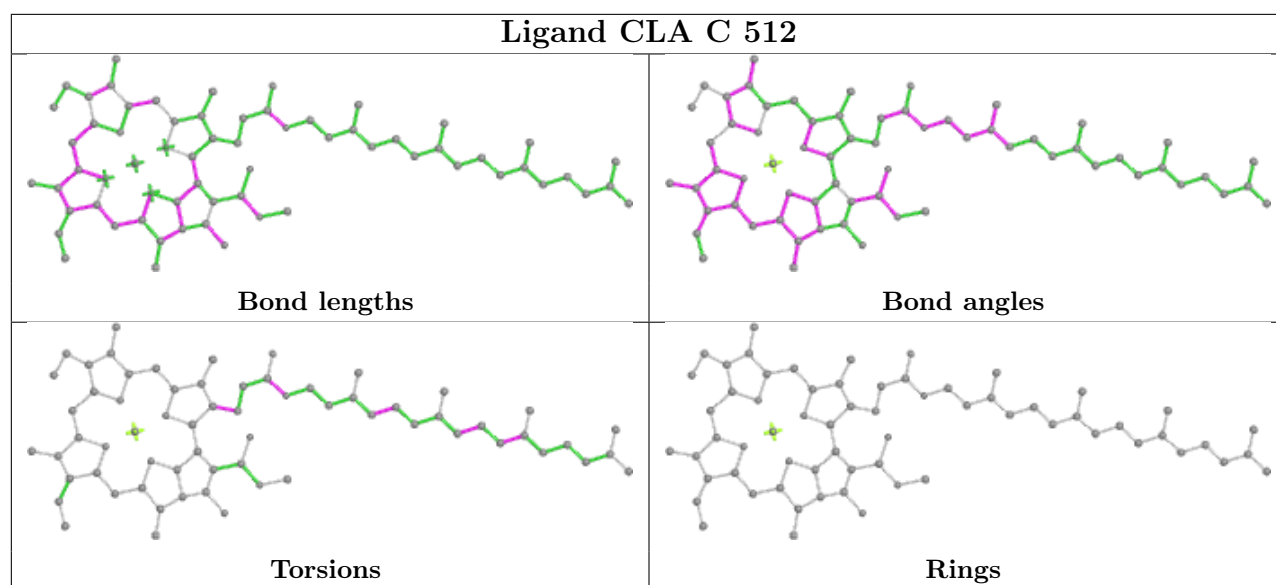


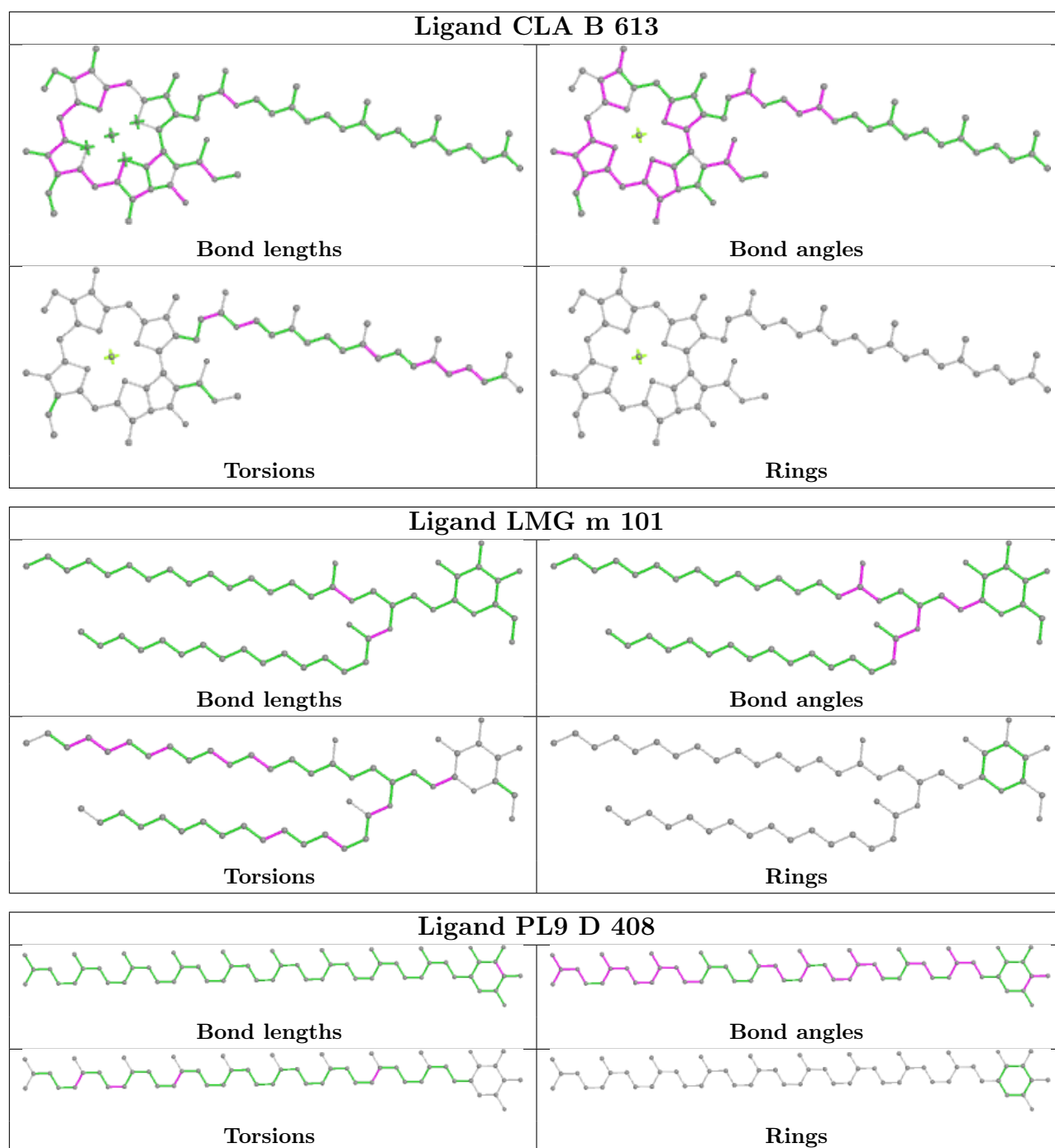


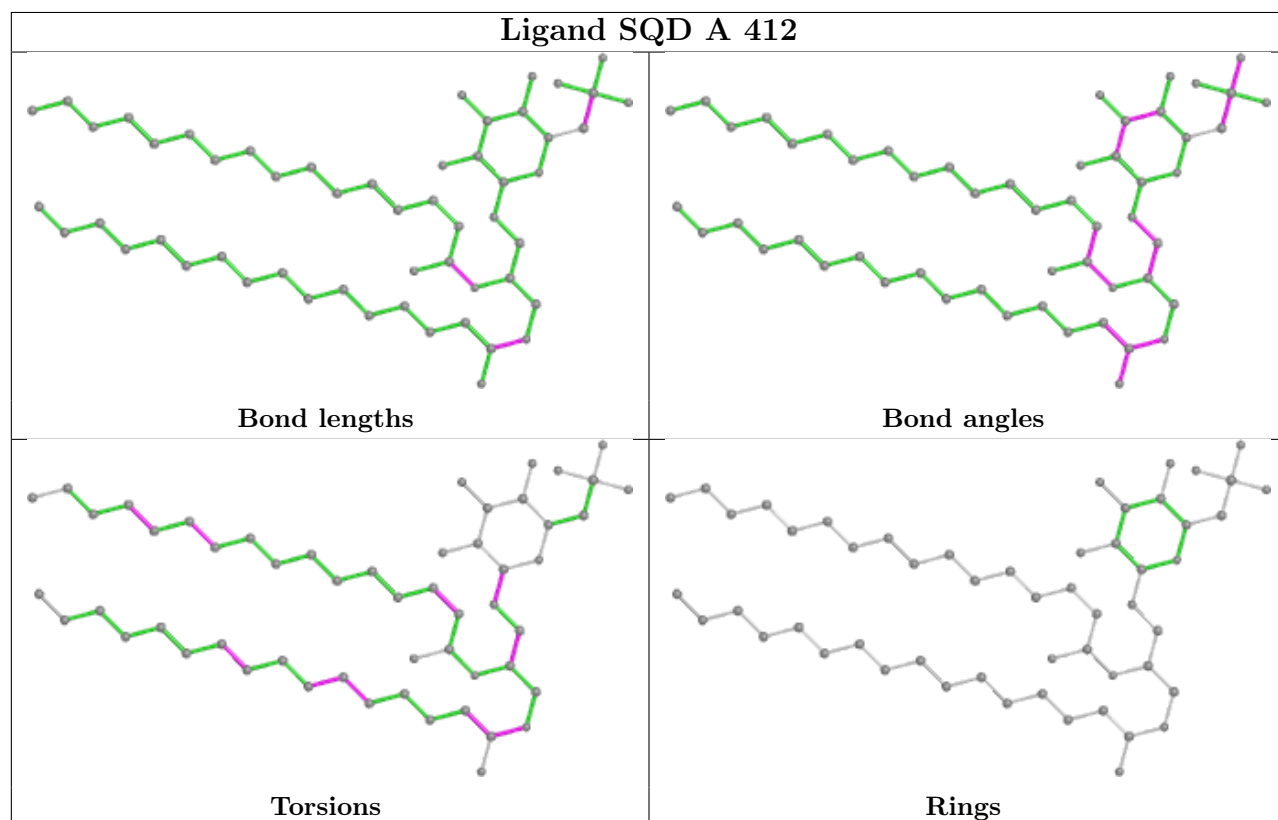
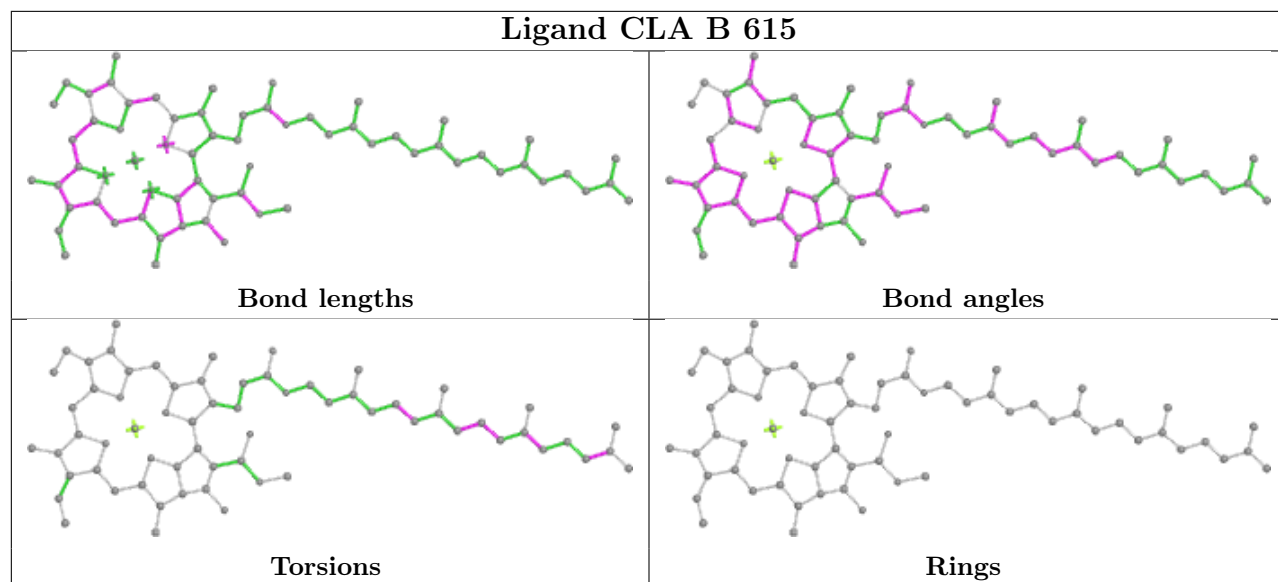


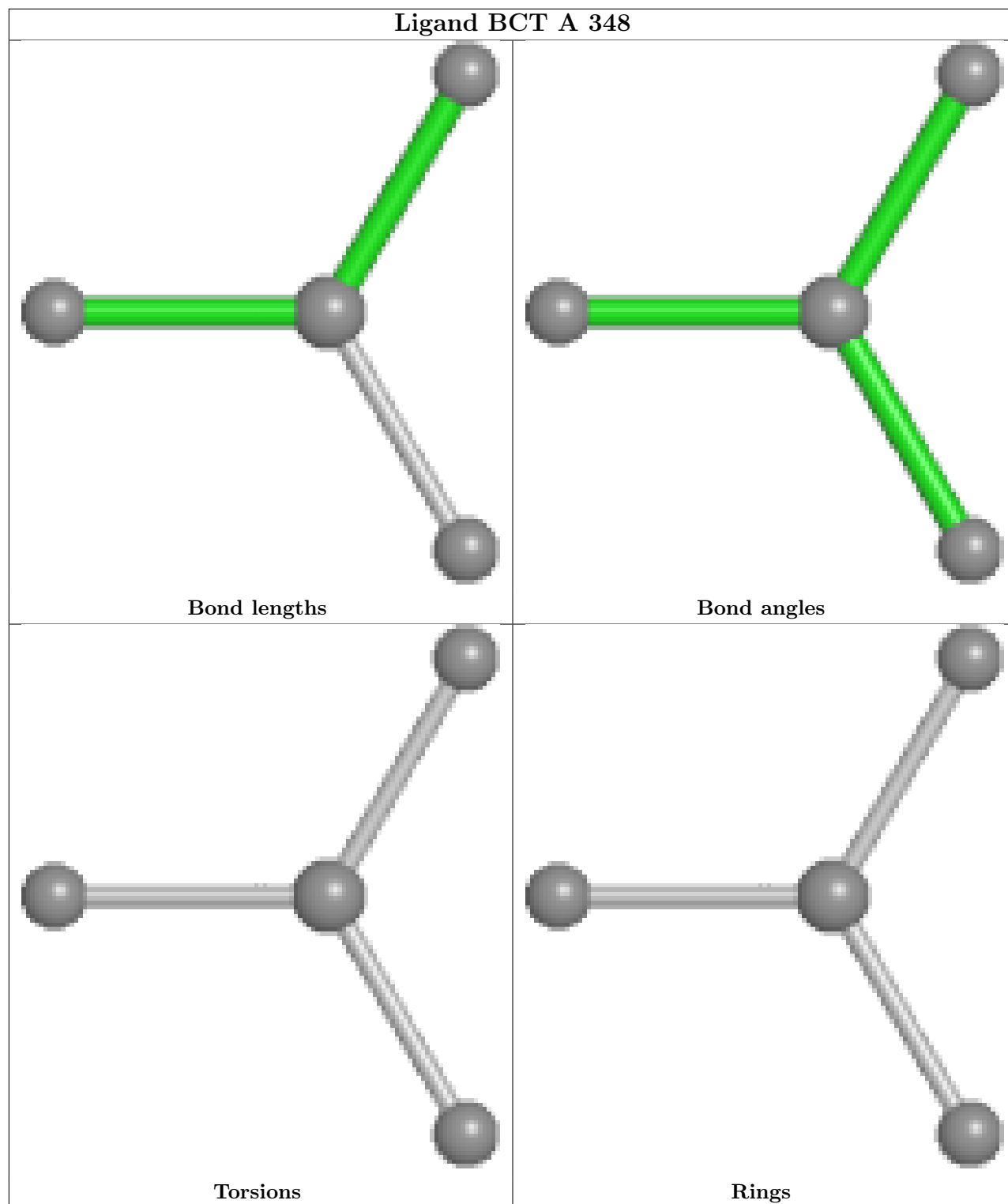


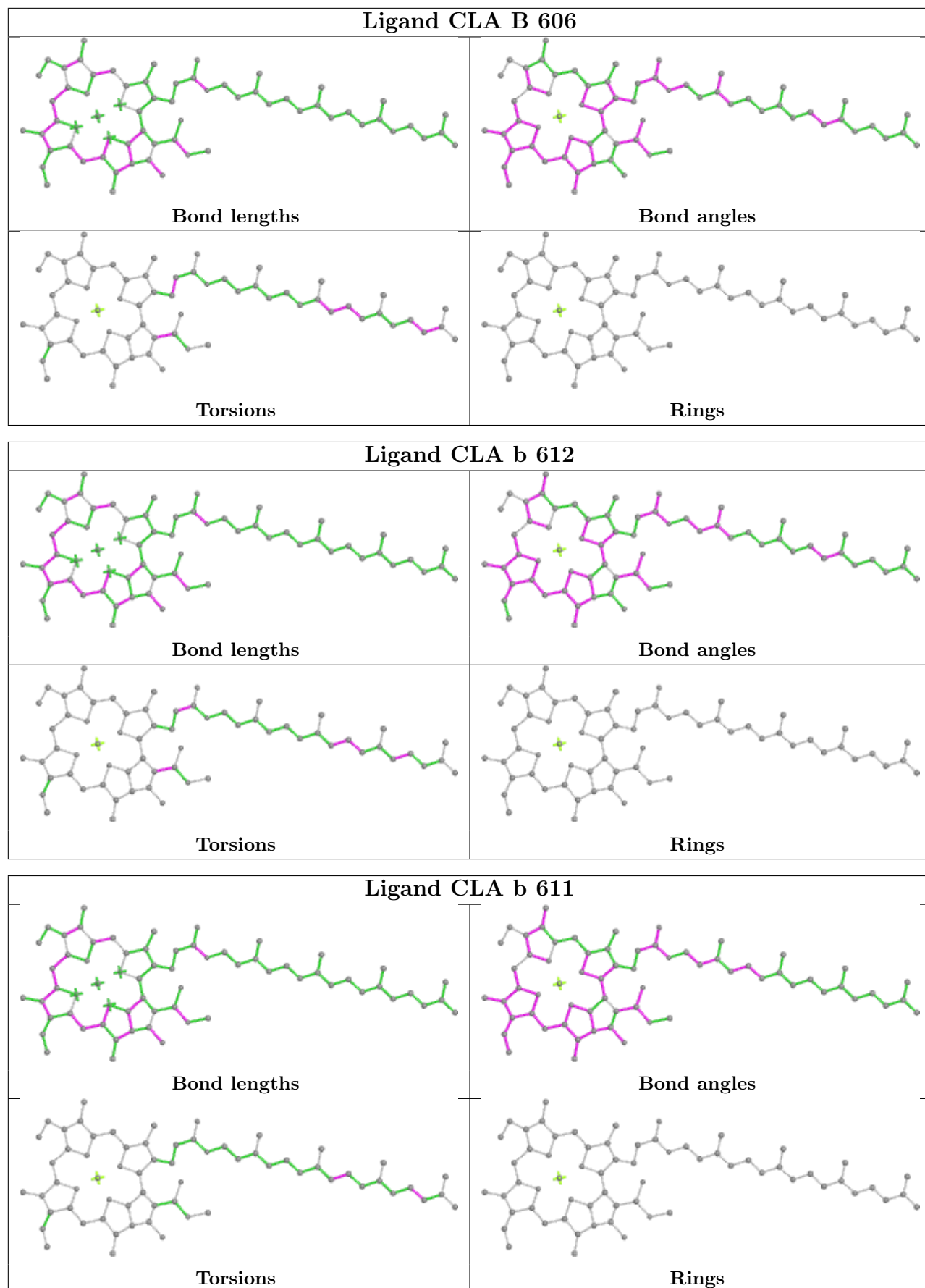


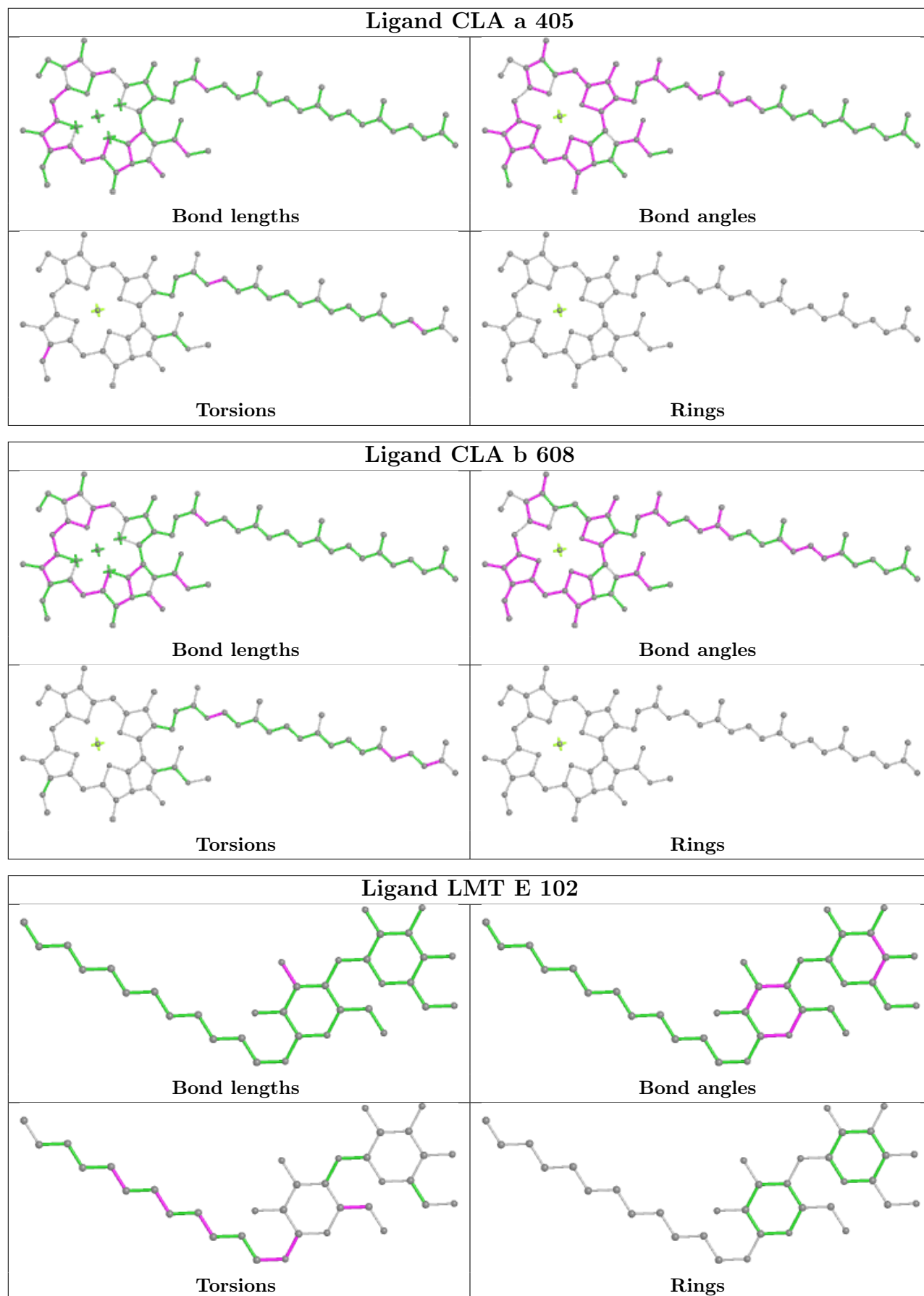


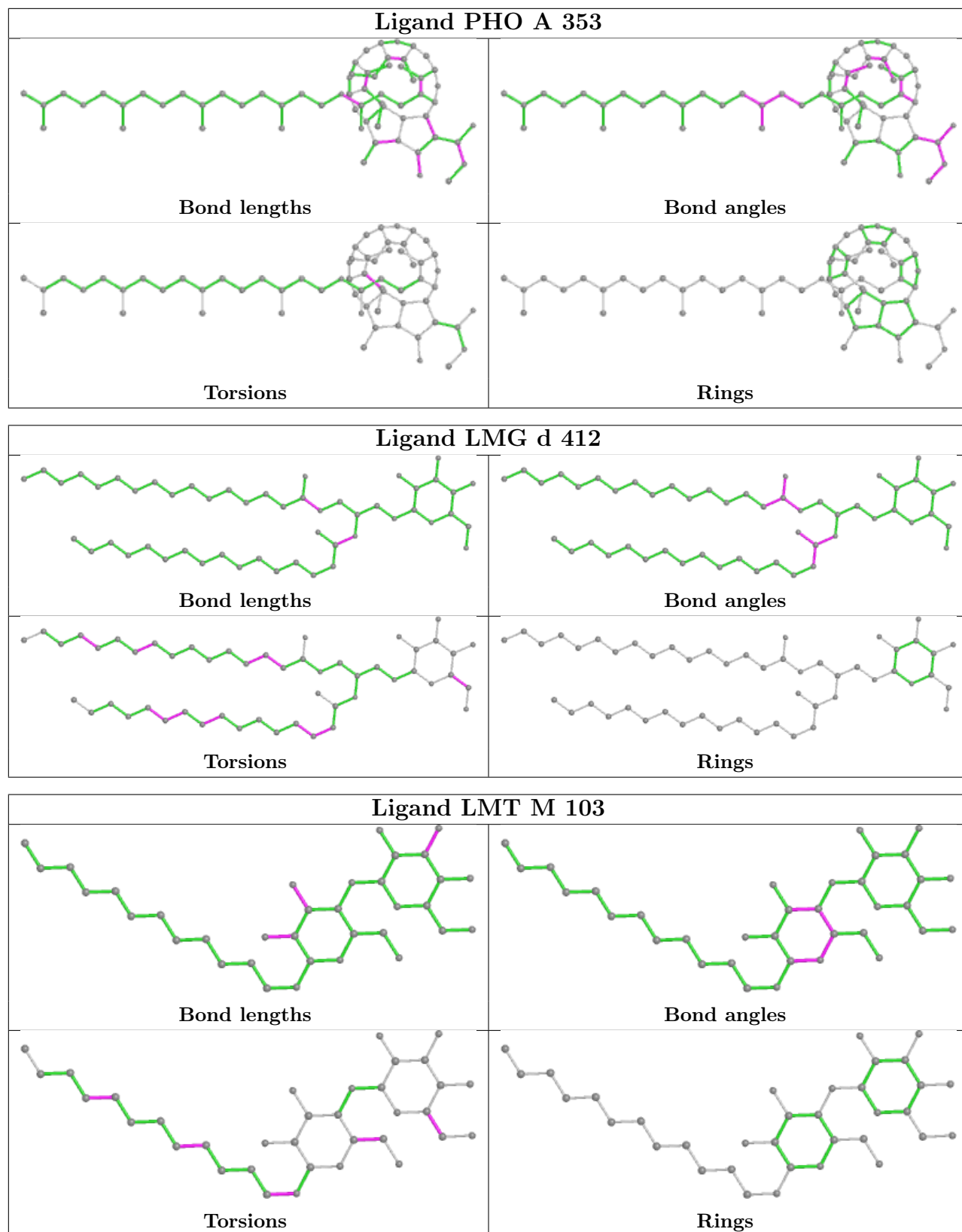


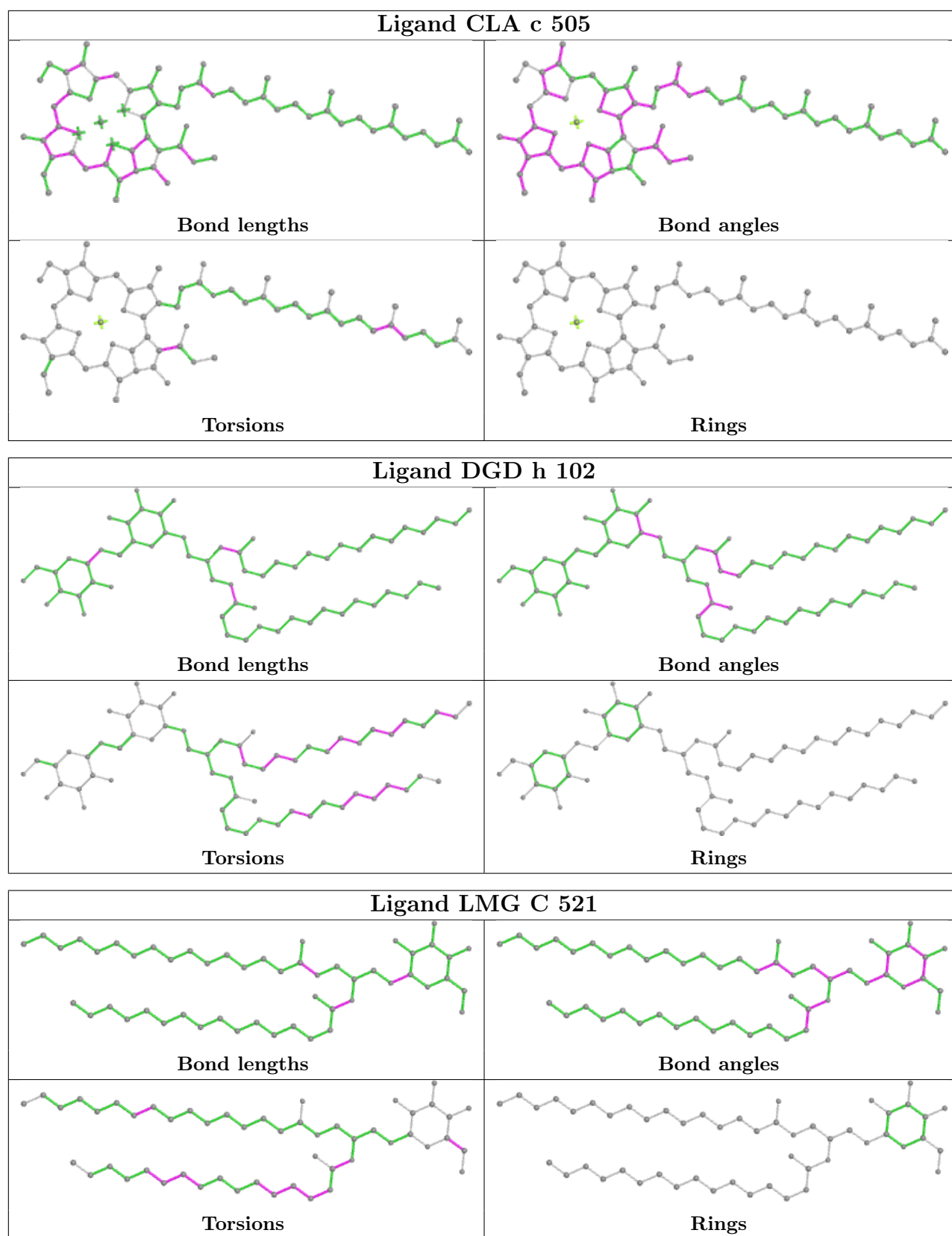


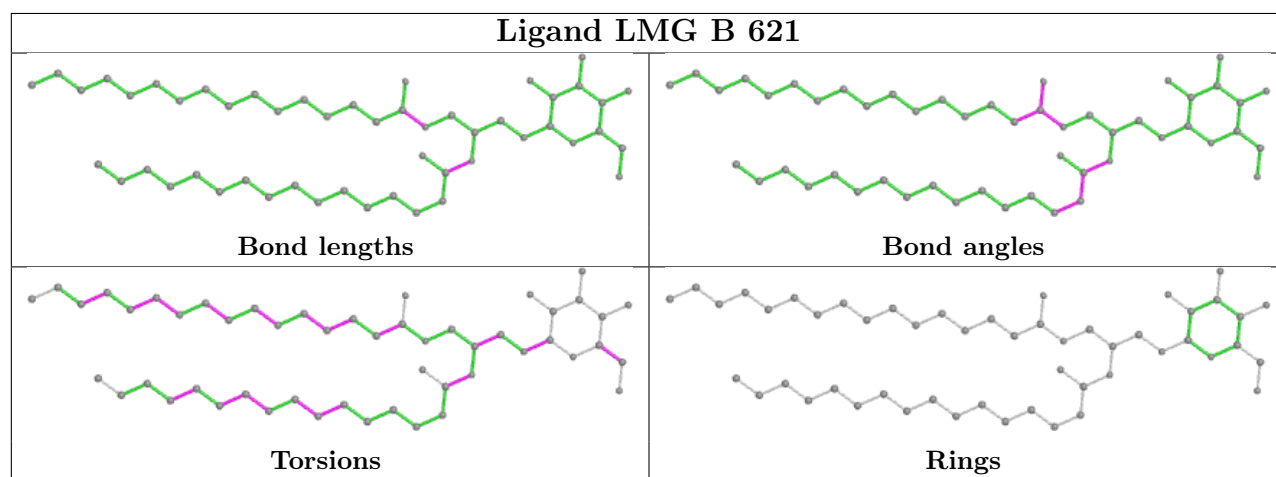
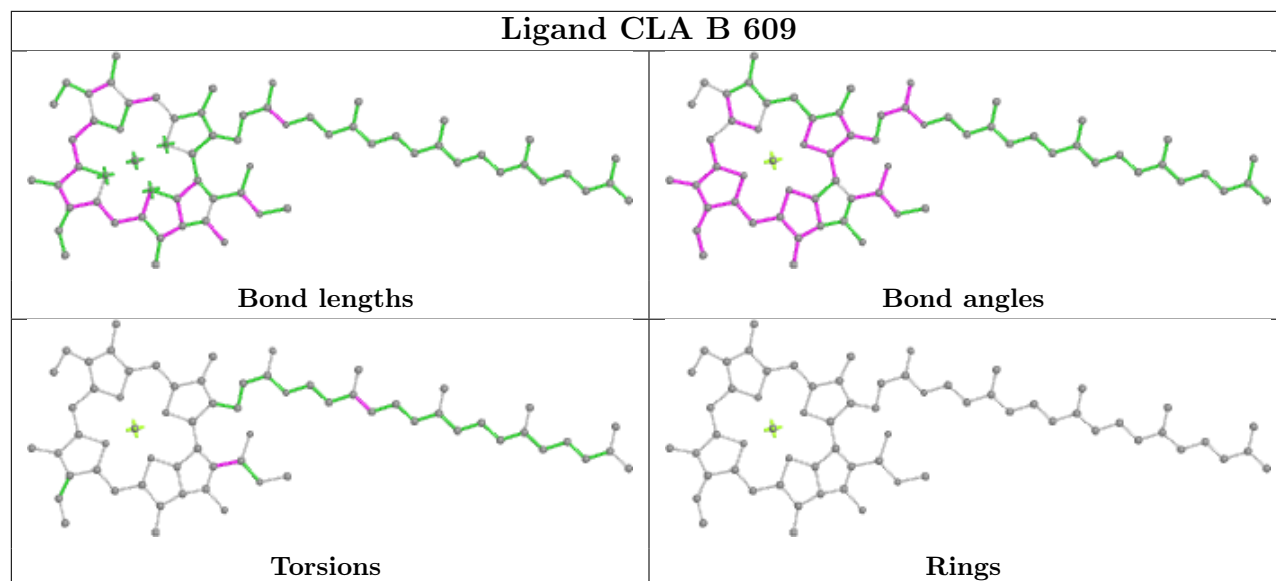
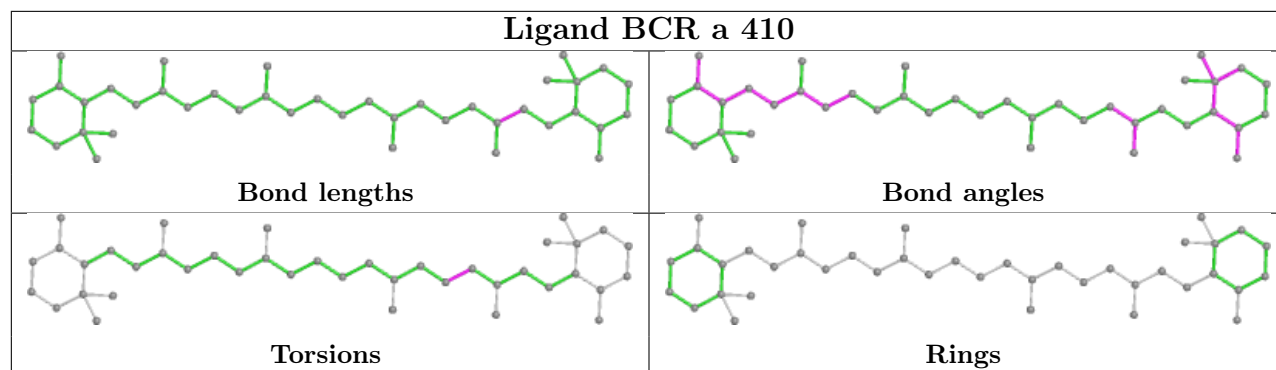


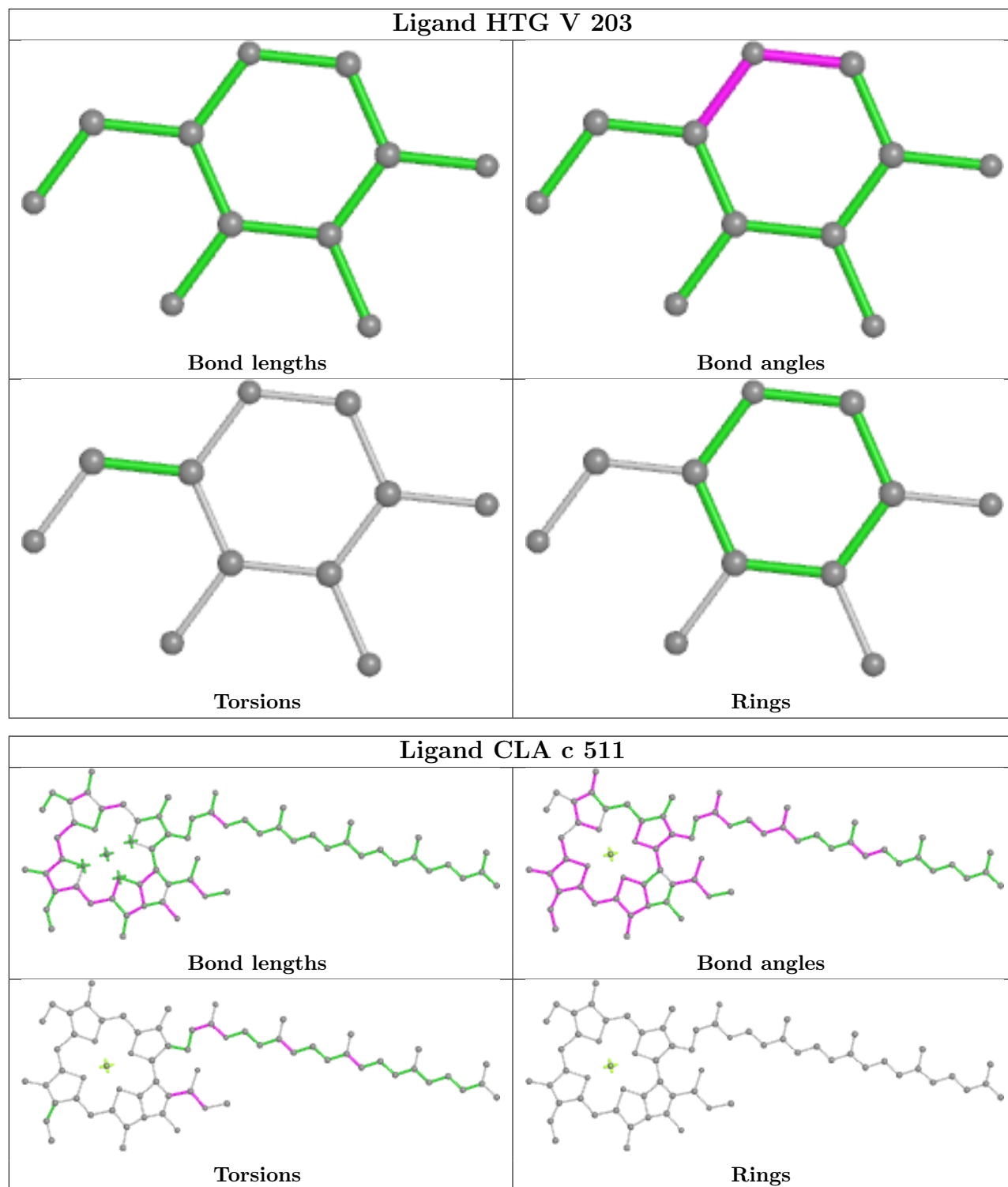












5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	334/344 (97%)	-0.80	6 (1%) 68 71	38, 46, 67, 111	0
1	a	334/344 (97%)	-0.69	7 (2%) 63 66	39, 50, 77, 114	1 (0%)
2	B	504/505 (99%)	-0.50	11 (2%) 62 65	40, 53, 79, 105	0
2	b	504/505 (99%)	-0.25	37 (7%) 15 15	42, 58, 95, 136	1 (0%)
3	C	451/455 (99%)	-0.54	7 (1%) 72 74	43, 59, 80, 116	0
3	c	455/455 (100%)	-0.42	16 (3%) 44 46	48, 65, 86, 118	2 (0%)
4	D	342/342 (100%)	-0.72	4 (1%) 79 81	37, 48, 66, 117	0
4	d	341/342 (99%)	-0.68	3 (0%) 84 85	41, 53, 78, 114	0
5	E	81/84 (96%)	-0.03	6 (7%) 14 15	53, 68, 89, 140	0
5	e	79/84 (94%)	0.25	10 (12%) 3 3	61, 75, 107, 128	0
6	F	34/44 (77%)	-0.38	2 (5%) 22 24	52, 61, 86, 106	0
6	f	31/44 (70%)	-0.25	2 (6%) 18 20	60, 69, 97, 125	0
7	H	64/65 (98%)	-0.27	3 (4%) 31 34	52, 63, 80, 92	0
7	h	64/65 (98%)	-0.22	4 (6%) 20 22	57, 73, 87, 91	0
8	I	37/38 (97%)	0.03	4 (10%) 5 5	56, 64, 104, 127	0
8	i	37/38 (97%)	0.14	6 (16%) 1 1	56, 65, 103, 117	0
9	J	38/39 (97%)	-0.13	4 (10%) 6 6	50, 68, 108, 135	0
9	j	39/39 (100%)	0.37	6 (15%) 2 2	58, 77, 115, 133	0
10	K	37/37 (100%)	-0.62	2 (5%) 25 28	56, 66, 82, 95	0
10	k	37/37 (100%)	-0.44	1 (2%) 54 57	65, 73, 91, 101	0
11	L	36/37 (97%)	-0.32	4 (11%) 5 5	38, 44, 87, 107	0
11	l	36/37 (97%)	-0.39	3 (8%) 11 12	40, 46, 90, 95	0
12	M	32/36 (88%)	-0.68	1 (3%) 49 52	42, 47, 68, 107	0
12	m	33/36 (91%)	-0.42	2 (6%) 21 23	41, 47, 68, 123	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	O	243/244 (99%)	0.01	20 (8%) 11 12	42, 64, 108, 147	0
13	o	243/244 (99%)	0.10	26 (10%) 6 5	43, 67, 114, 143	0
14	T	29/32 (90%)	-0.67	2 (6%) 16 18	42, 47, 72, 93	0
14	t	29/32 (90%)	-0.61	1 (3%) 45 47	43, 49, 75, 100	0
15	U	96/104 (92%)	-0.37	1 (1%) 82 84	47, 56, 82, 90	0
15	u	97/104 (93%)	-0.37	1 (1%) 82 84	51, 61, 77, 106	0
16	V	137/137 (100%)	-0.58	3 (2%) 62 65	46, 56, 75, 96	0
16	v	137/137 (100%)	-0.12	6 (4%) 34 37	51, 70, 93, 116	0
17	X	38/40 (95%)	-0.29	2 (5%) 26 29	62, 72, 92, 102	0
17	x	38/40 (95%)	0.15	4 (10%) 6 6	69, 80, 120, 138	0
18	Y	29/30 (96%)	1.03	7 (24%) 0 0	66, 82, 111, 113	0
18	y	29/30 (96%)	0.52	5 (17%) 1 1	77, 89, 105, 106	0
19	Z	62/62 (100%)	0.15	8 (12%) 3 3	69, 79, 123, 135	0
19	z	62/62 (100%)	0.52	10 (16%) 1 1	81, 93, 129, 151	0
20	R	34/34 (100%)	2.90	25 (73%) 0 0	89, 106, 127, 134	0
All	All	5283/5384 (98%)	-0.36	272 (5%) 28 30	37, 59, 95, 151	4 (0%)

The worst 5 of 272 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	a	11	ALA	8.6
5	E	84	LYS	8.4
3	C	23	ALA	8.3
13	O	60	ARG	7.6
13	o	4	THR	7.4

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
8	FME	i	1	10/11	0.92	0.17	60,69,80,82	0
14	FME	T	1	10/11	0.95	0.08	42,50,60,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
12	FME	M	1	10/11	0.96	0.15	45,57,82,83	0
8	FME	I	1	10/11	0.97	0.07	62,71,80,84	0
12	FME	m	1	10/11	0.97	0.14	47,59,81,89	0
14	FME	t	1	10/11	0.97	0.09	43,48,58,71	0

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
30	UNL	I	102	40/-	0.38	0.34	73,93,117,117	0
30	UNL	b	626	33/-	0.38	0.40	68,91,132,133	0
30	UNL	B	627	33/-	0.41	0.37	56,95,117,120	0
32	LMT	b	621	25/35	0.47	0.32	78,101,125,128	0
30	UNL	i	101	40/-	0.50	0.33	73,92,119,122	0
33	LMG	C	521	51/55	0.51	0.34	62,105,124,128	0
32	LMT	M	103	35/35	0.53	0.32	63,100,125,128	0
32	LMT	a	414	35/35	0.56	0.39	63,88,104,110	0
32	LMT	b	627	25/35	0.60	0.27	56,78,111,117	0
32	LMT	t	101	25/35	0.60	0.27	57,76,105,116	0
30	UNL	A	415	28/-	0.60	0.42	85,97,103,113	0
33	LMG	Z	101	37/55	0.60	0.33	71,110,125,133	0
32	LMT	M	101	35/35	0.61	0.27	58,81,89,94	0
32	LMT	E	102	35/35	0.62	0.55	91,110,128,136	0
34	HTG	b	623	19/19	0.62	0.53	82,117,123,124	0
27	GOL	O	501	6/6	0.64	0.27	80,89,94,96	0
30	UNL	j	101	10/-	0.64	0.24	73,86,89,91	0
30	UNL	d	410	36/-	0.65	0.23	68,87,107,111	0
33	LMG	c	521	51/55	0.66	0.32	74,112,132,135	0
30	UNL	x	101	18/-	0.67	0.25	66,77,110,116	0
27	GOL	a	701	6/6	0.67	0.63	67,76,80,87	0
32	LMT	D	404	35/35	0.68	0.30	67,94,113,116	0
34	HTG	D	414	16/19	0.69	0.32	85,93,108,117	0
30	UNL	a	417	30/-	0.69	0.40	83,97,111,115	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
32	LMT	A	359	35/35	0.70	0.35	62,87,99,103	0
30	UNL	K	101	34/-	0.70	0.38	70,94,106,109	0
32	LMT	m	103	35/35	0.70	0.27	60,77,86,90	0
30	UNL	c	525	32/-	0.71	0.41	84,98,109,116	0
32	LMT	e	102	35/35	0.71	0.57	100,117,141,148	0
30	UNL	D	413	40/-	0.71	0.21	66,84,105,112	0
37	LHG	e	101	42/49	0.72	0.41	77,123,136,141	0
32	LMT	t	102	26/35	0.73	0.25	65,87,107,111	0
33	LMG	z	101	39/55	0.74	0.25	78,116,128,136	0
34	HTG	d	411	16/19	0.75	0.33	92,107,116,125	0
27	GOL	b	624	6/6	0.76	0.20	78,85,87,93	0
32	LMT	I	101	35/35	0.77	0.41	95,106,125,127	0
26	SQD	f	102	43/54	0.77	0.38	95,111,133,137	0
30	UNL	m	102	10/-	0.77	0.31	66,69,81,84	0
30	UNL	X	101	18/-	0.78	0.18	59,73,95,100	0
27	GOL	B	901	6/6	0.80	0.27	62,69,78,92	0
32	LMT	a	420	35/35	0.80	0.46	98,106,117,123	0
26	SQD	b	620	54/54	0.80	0.20	58,83,99,104	0
34	HTG	C	522	19/19	0.80	0.37	101,105,118,120	0
26	SQD	B	620	54/54	0.81	0.17	61,81,106,110	0
37	LHG	E	101	42/49	0.81	0.27	70,93,106,111	0
33	LMG	a	419	51/55	0.81	0.18	68,85,93,101	0
26	SQD	a	413	54/54	0.82	0.23	65,85,111,118	0
34	HTG	b	622	19/19	0.82	0.19	57,74,82,89	0
30	UNL	J	101	10/-	0.82	0.16	62,76,78,81	0
26	SQD	A	412	54/54	0.82	0.19	63,79,104,118	0
33	LMG	C	501	51/55	0.82	0.17	66,82,94,99	0
30	UNL	M	102	10/-	0.82	0.23	61,69,82,85	0
34	HTG	c	522	19/19	0.83	0.28	106,114,122,125	0
27	GOL	A	411	6/6	0.83	0.16	61,70,75,76	0
36	CA	f	103	1/1	0.83	0.10	116,116,116,116	0
27	GOL	c	743	6/6	0.83	0.26	84,89,90,93	0
23	CLA	b	601	65/65	0.83	0.18	68,87,110,121	0
27	GOL	o	501	6/6	0.84	0.25	78,88,93,93	0
33	LMG	D	415	51/55	0.84	0.19	48,63,100,106	0
34	HTG	B	622	19/19	0.84	0.18	63,76,85,85	0
33	LMG	d	412	51/55	0.84	0.19	54,69,102,107	0
27	GOL	a	801	6/6	0.85	0.38	54,61,68,69	0
27	GOL	o	601	6/6	0.85	0.24	69,76,81,81	0
23	CLA	c	514	65/65	0.86	0.19	75,91,113,123	0
29	PL9	A	414	55/55	0.86	0.18	58,81,99,103	0
34	HTG	B	623	19/19	0.86	0.26	62,74,92,96	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
29	PL9	a	416	55/55	0.86	0.20	71,90,100,107	0
25	BCR	C	515	40/40	0.86	0.15	61,76,85,88	0
23	CLA	b	616	65/65	0.86	0.17	55,63,116,123	0
23	CLA	B	601	65/65	0.87	0.15	59,77,99,112	0
23	CLA	d	403	65/65	0.87	0.16	56,65,110,122	0
27	GOL	D	701	6/6	0.88	0.22	46,57,60,63	0
27	GOL	d	801	6/6	0.88	0.60	56,86,90,90	0
23	CLA	C	514	65/65	0.88	0.15	68,84,105,108	0
23	CLA	c	513	65/65	0.88	0.17	65,80,111,115	0
36	CA	F	102	1/1	0.88	0.18	114,114,114,114	0
27	GOL	v	401	6/6	0.88	0.14	62,73,75,76	0
27	GOL	A	701	6/6	0.88	0.39	48,61,63,69	0
23	CLA	B	616	65/65	0.88	0.18	46,57,106,111	0
27	GOL	V	401	6/6	0.89	0.15	54,62,68,69	0
34	HTG	V	203	11/19	0.89	0.45	79,95,104,104	0
30	UNL	d	409	17/-	0.89	0.14	64,75,90,92	0
25	BCR	d	404	40/40	0.89	0.12	50,65,89,95	0
25	BCR	h	101	40/40	0.89	0.15	60,70,88,89	0
33	LMG	c	520	51/55	0.90	0.18	61,86,110,121	0
23	CLA	c	507	65/65	0.90	0.15	56,68,100,106	0
25	BCR	Y	101	40/40	0.90	0.14	55,63,76,77	0
23	CLA	C	513	65/65	0.90	0.14	60,74,100,108	0
23	CLA	b	606	65/65	0.90	0.14	47,61,100,110	0
27	GOL	d	701	6/6	0.90	0.24	51,59,69,72	0
23	CLA	C	507	65/65	0.90	0.15	59,69,104,107	0
30	UNL	D	412	17/-	0.90	0.14	57,70,92,98	0
27	GOL	a	412	6/6	0.90	0.21	69,72,83,84	0
33	LMG	C	520	51/55	0.91	0.16	55,80,98,108	0
25	BCR	K	102	40/40	0.91	0.16	59,65,71,72	0
33	LMG	m	101	51/55	0.91	0.11	52,68,81,90	0
23	CLA	B	606	65/65	0.91	0.15	46,56,97,106	0
33	LMG	B	621	51/55	0.91	0.12	53,66,78,88	0
26	SQD	F	101	43/54	0.91	0.19	71,94,114,123	0
27	GOL	O	601	6/6	0.92	0.27	67,71,76,78	0
25	BCR	k	101	40/40	0.92	0.16	63,74,82,85	0
35	DGD	c	518	62/66	0.92	0.12	55,65,110,121	0
23	CLA	a	409	65/65	0.92	0.18	46,55,108,116	0
25	BCR	D	407	40/40	0.92	0.11	44,58,89,91	0
23	CLA	D	406	65/65	0.92	0.14	49,58,102,105	0
34	HTG	b	625	19/19	0.92	0.11	62,72,85,90	0
35	DGD	C	519	62/66	0.93	0.11	43,58,88,95	0
35	DGD	H	102	62/66	0.93	0.12	47,58,67,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
25	BCR	c	515	40/40	0.93	0.12	77,84,90,91	0
35	DGD	c	519	62/66	0.93	0.12	50,64,98,115	0
35	DGD	h	102	62/66	0.93	0.12	53,63,72,76	0
23	CLA	C	509	65/65	0.93	0.11	50,55,107,116	0
36	CA	O	301	1/1	0.93	0.10	98,98,98,98	0
23	CLA	A	408	65/65	0.93	0.14	42,51,108,112	0
36	CA	o	301	1/1	0.93	0.05	107,107,107,107	0
34	HTG	B	626	19/19	0.93	0.11	64,77,86,89	0
35	DGD	C	518	62/66	0.93	0.12	48,61,103,107	0
23	CLA	B	609	65/65	0.94	0.15	46,59,67,73	0
23	CLA	c	509	65/65	0.94	0.13	50,61,118,124	0
25	BCR	B	618	40/40	0.94	0.09	41,51,62,66	0
26	SQD	A	410	54/54	0.94	0.13	55,77,101,104	0
25	BCR	b	618	40/40	0.94	0.10	42,55,72,76	0
23	CLA	a	407	65/65	0.94	0.11	41,52,112,121	0
23	CLA	c	512	65/65	0.95	0.11	60,67,81,87	0
25	BCR	C	516	40/40	0.95	0.14	55,65,73,76	0
23	CLA	C	505	65/65	0.95	0.10	44,55,89,101	0
36	CA	c	523	1/1	0.95	0.04	79,79,79,79	0
23	CLA	c	505	65/65	0.95	0.10	52,61,95,101	0
25	BCR	y	101	40/40	0.95	0.10	62,71,80,85	0
37	LHG	D	411	49/49	0.95	0.15	47,59,99,106	0
23	CLA	B	611	65/65	0.95	0.10	37,43,61,67	0
37	LHG	d	408	49/49	0.95	0.15	50,61,105,116	0
23	CLA	b	609	65/65	0.95	0.16	55,65,76,82	0
37	LHG	l	101	49/49	0.95	0.12	48,56,68,82	0
38	HEM	e	87	43/43	0.95	0.15	72,84,98,110	0
25	BCR	A	409	40/40	0.96	0.10	40,52,62,66	0
23	CLA	b	612	65/65	0.96	0.09	44,53,63,68	0
26	SQD	a	411	54/54	0.96	0.12	58,77,107,109	0
29	PL9	D	408	55/55	0.96	0.10	37,46,55,66	0
23	CLA	b	614	65/65	0.96	0.09	41,51,84,86	0
29	PL9	d	405	55/55	0.96	0.10	39,49,57,67	0
23	CLA	b	615	65/65	0.96	0.11	49,60,75,78	0
23	CLA	C	508	65/65	0.96	0.13	54,63,76,83	0
25	BCR	H	101	40/40	0.96	0.09	53,66,84,85	0
23	CLA	c	502	65/65	0.96	0.11	58,68,75,81	0
27	GOL	B	624	6/6	0.96	0.23	62,64,69,71	0
25	BCR	T	101	40/40	0.96	0.08	44,57,65,66	0
35	DGD	c	517	62/66	0.96	0.11	48,62,95,101	0
27	GOL	C	523	6/6	0.96	0.13	56,58,59,62	0
23	CLA	C	502	65/65	0.96	0.09	52,60,68,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
23	CLA	c	506	65/65	0.96	0.10	52,63,84,87	0
36	CA	C	524	1/1	0.96	0.04	77,77,77,77	0
25	BCR	b	619	40/40	0.96	0.08	53,62,80,85	0
23	CLA	C	510	65/65	0.96	0.11	50,58,76,79	0
25	BCR	c	516	40/40	0.96	0.12	58,66,76,78	0
23	CLA	c	508	65/65	0.96	0.11	58,67,78,80	0
23	CLA	C	512	65/65	0.96	0.13	54,63,76,79	0
37	LHG	D	409	49/49	0.96	0.10	47,59,75,81	0
23	CLA	b	602	65/65	0.96	0.14	49,61,74,81	0
27	GOL	b	901	6/6	0.96	0.22	67,70,76,77	0
37	LHG	d	407	49/49	0.96	0.14	44,54,66,72	0
25	BCR	t	103	40/40	0.96	0.08	46,55,69,73	0
37	LHG	d	711	49/49	0.96	0.12	49,63,75,77	0
23	CLA	b	604	65/65	0.96	0.12	41,52,88,93	0
23	CLA	B	614	65/65	0.96	0.10	37,47,82,91	0
23	CLA	A	406	65/65	0.96	0.08	36,45,103,112	0
23	CLA	b	605	65/65	0.97	0.11	41,50,68,74	0
23	CLA	B	610	65/65	0.97	0.12	42,53,60,72	0
24	PHO	a	353	64/64	0.97	0.11	45,55,61,66	0
23	CLA	b	607	65/65	0.97	0.08	40,47,70,76	0
23	CLA	B	603	65/65	0.97	0.10	45,52,68,73	0
35	DGD	C	517	62/66	0.97	0.10	47,56,94,100	0
25	BCR	B	619	40/40	0.97	0.08	49,59,83,89	0
23	CLA	b	610	65/65	0.97	0.09	50,59,66,68	0
23	CLA	b	611	65/65	0.97	0.09	40,48,66,77	0
23	CLA	B	612	65/65	0.97	0.08	36,47,56,61	0
23	CLA	b	613	65/65	0.97	0.08	41,49,79,86	0
23	CLA	C	511	65/65	0.97	0.09	49,57,71,75	0
23	CLA	B	613	65/65	0.97	0.08	37,44,82,88	0
23	CLA	B	604	65/65	0.97	0.09	37,44,95,101	0
25	BCR	a	410	40/40	0.97	0.08	44,54,62,63	0
25	BCR	b	617	40/40	0.97	0.08	46,54,61,64	0
23	CLA	B	615	65/65	0.97	0.10	42,52,74,78	0
23	CLA	c	504	65/65	0.97	0.09	51,69,78,83	0
23	CLA	B	605	65/65	0.97	0.11	40,48,63,69	0
23	CLA	A	404	65/65	0.97	0.11	36,41,59,64	0
23	CLA	C	504	65/65	0.97	0.09	51,61,67,75	0
27	GOL	c	742	6/6	0.97	0.25	63,64,69,69	0
23	CLA	B	607	65/65	0.97	0.09	37,45,67,73	0
23	CLA	C	506	65/65	0.97	0.10	52,59,85,91	0
23	CLA	c	510	65/65	0.97	0.10	50,61,80,82	0
23	CLA	c	511	65/65	0.97	0.10	53,61,72,82	0

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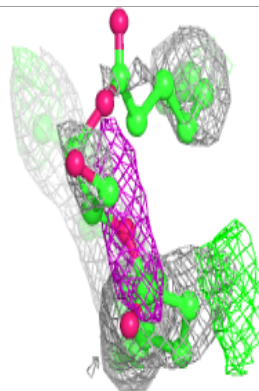
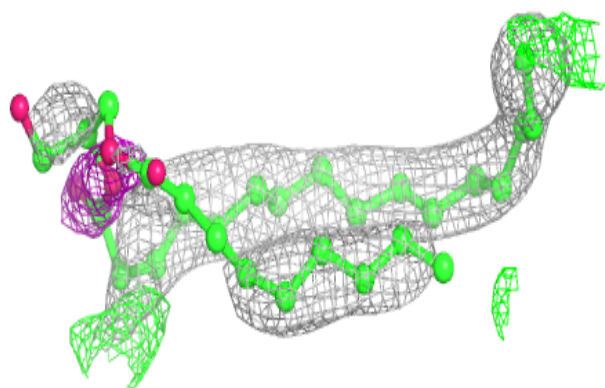
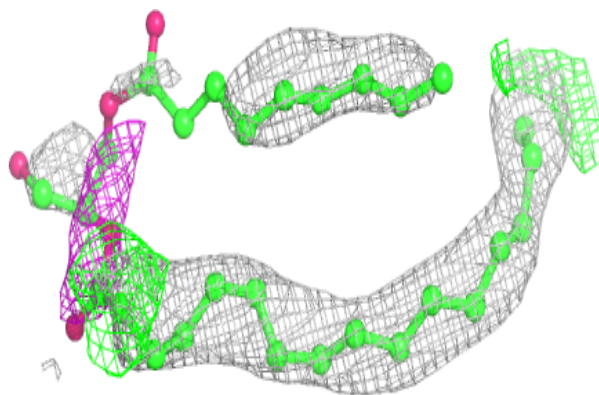
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
23	CLA	b	603	65/65	0.97	0.08	49,56,77,82	0
38	HEM	E	103	43/43	0.97	0.11	57,69,77,88	0
23	CLA	B	602	65/65	0.97	0.12	49,57,70,80	0
39	MG	j	102	1/1	0.97	0.05	61,61,61,61	0
40	HEC	v	202	43/43	0.97	0.12	54,61,68,70	0
23	CLA	a	405	65/65	0.98	0.12	38,45,61,69	0
23	CLA	c	503	65/65	0.98	0.08	46,58,84,98	0
23	CLA	a	406	65/65	0.98	0.07	37,43,61,69	0
37	LHG	D	410	49/49	0.98	0.12	45,52,63,70	0
23	CLA	B	608	65/65	0.98	0.08	38,48,64,71	0
23	CLA	A	405	65/65	0.98	0.07	35,41,52,64	0
37	LHG	L	101	49/49	0.98	0.09	46,52,67,81	0
23	CLA	d	402	65/65	0.98	0.11	39,46,72,86	0
31	BCT	a	404	4/4	0.98	0.07	53,58,65,74	0
23	CLA	D	405	65/65	0.98	0.11	33,42,67,73	0
24	PHO	A	407	64/64	0.98	0.09	36,44,50,56	0
24	PHO	A	353	64/64	0.98	0.09	38,47,53,57	0
24	PHO	a	408	64/64	0.98	0.08	40,47,51,54	0
23	CLA	b	608	65/65	0.98	0.09	44,56,76,86	0
23	CLA	C	503	65/65	0.98	0.09	48,53,77,83	0
40	HEC	V	202	43/43	0.98	0.14	42,50,54,56	0
25	BCR	B	617	40/40	0.98	0.09	42,51,59,61	0
36	CA	c	524	1/1	0.99	0.07	76,76,76,76	0
28	OEX	A	413	10/10	0.99	0.05	38,44,47,47	0
28	OEX	a	415	10/10	0.99	0.05	45,48,51,54	0
39	MG	J	102	1/1	0.99	0.03	57,57,57,57	0
22	CL	a	402	1/1	0.99	0.03	47,47,47,47	0
22	CL	A	402	1/1	0.99	0.02	40,40,40,40	0
31	BCT	A	348	4/4	0.99	0.10	53,54,58,67	0
22	CL	a	403	1/1	1.00	0.02	54,54,54,54	0
21	FE2	A	401	1/1	1.00	0.06	49,49,49,49	0
22	CL	A	403	1/1	1.00	0.04	44,44,44,44	0
21	FE2	a	401	1/1	1.00	0.04	52,52,52,52	0

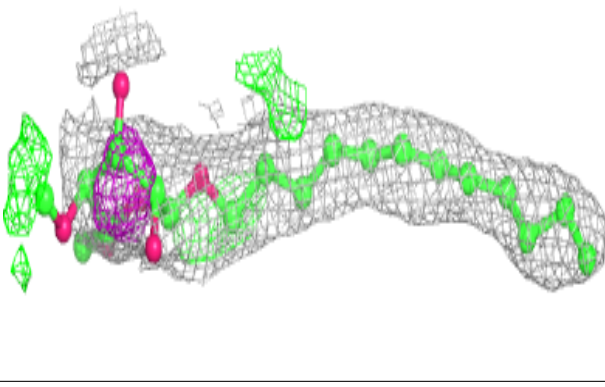
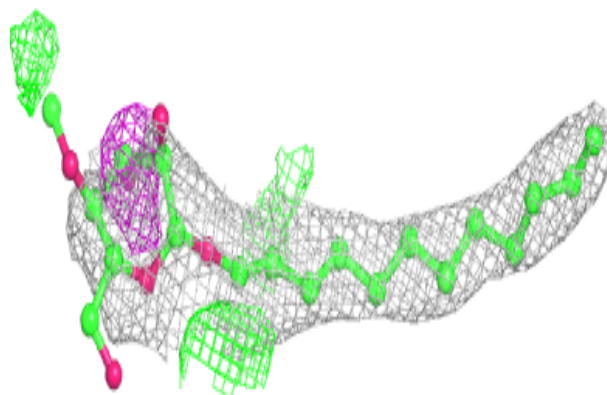
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around UNL b 626:

$2mF_o-DF_c$ (at 0.7 rnsd) in gray
 mF_o-DF_c (at 3 rnsd) in purple (negative)
and green (positive)

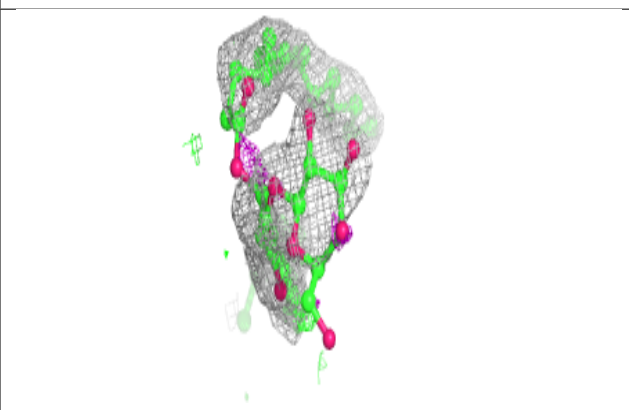
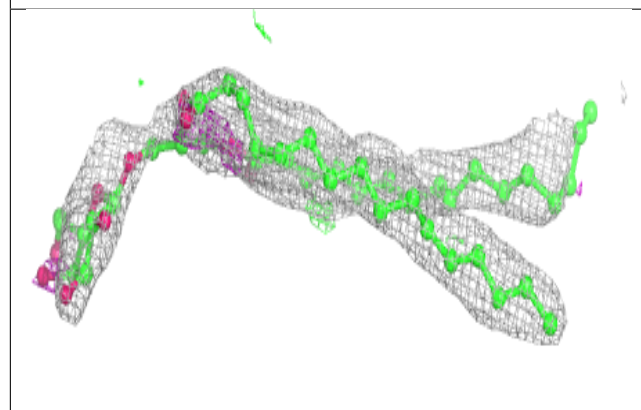
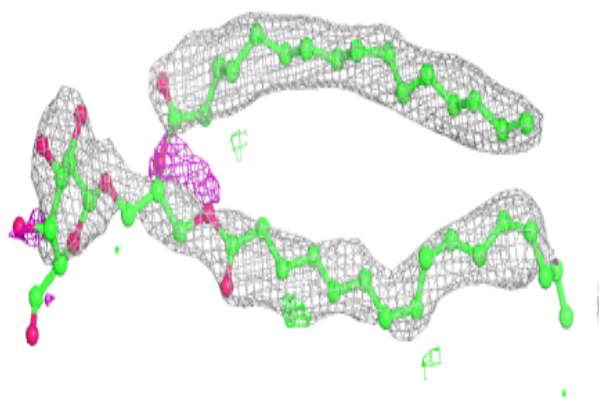
**Electron density around LMT b 621:**

$2mF_o-DF_c$ (at 0.7 rnsd) in gray
 mF_o-DF_c (at 3 rnsd) in purple (negative)
and green (positive)

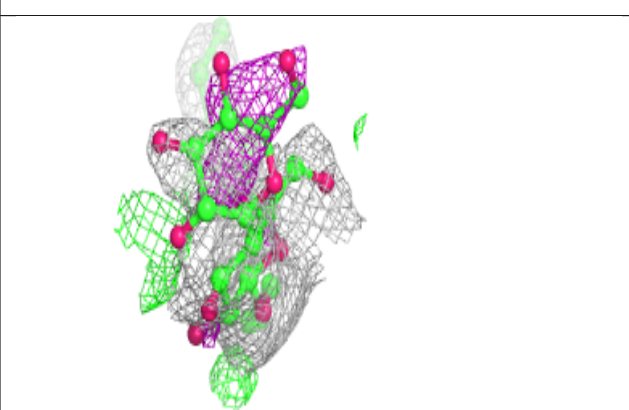
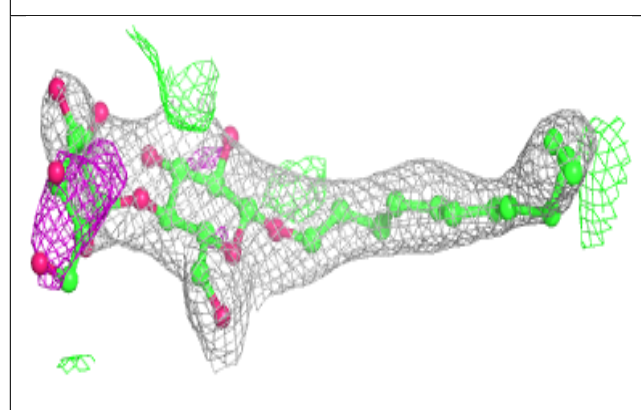
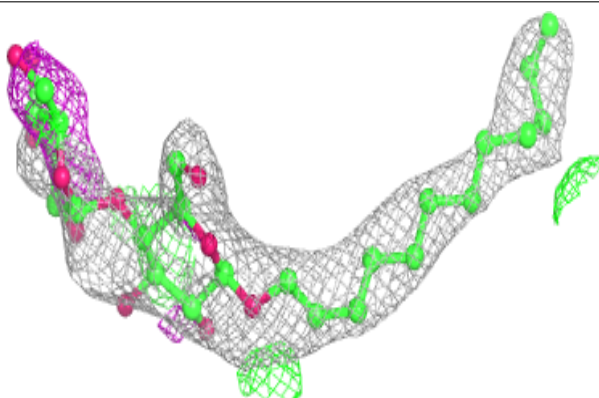


Electron density around LMG C 521:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

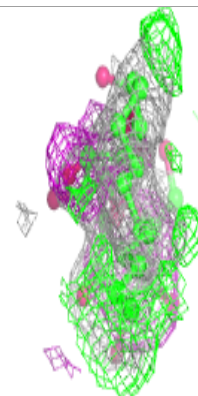
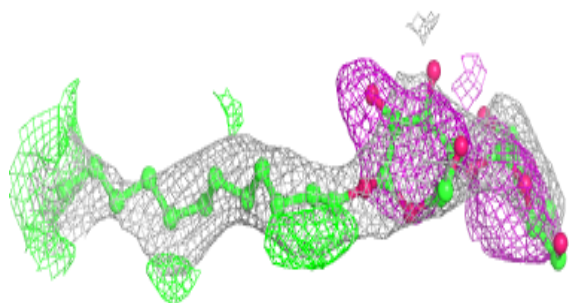
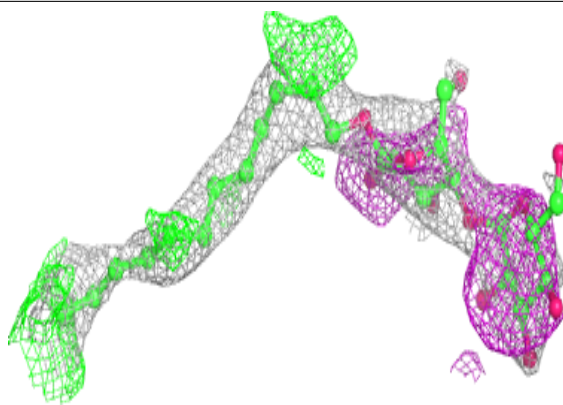
**Electron density around LMT M 103:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

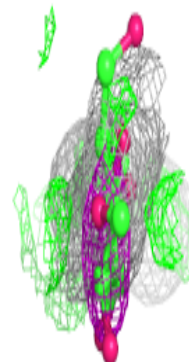
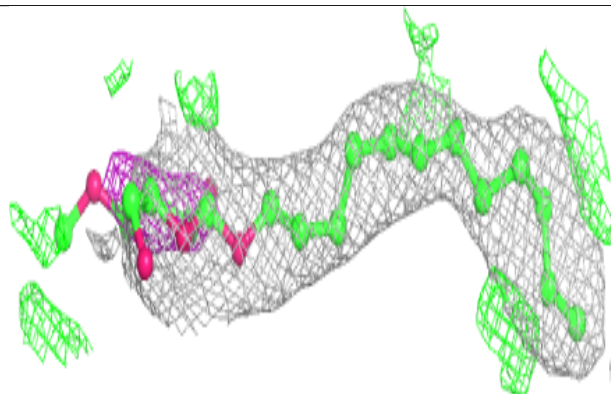
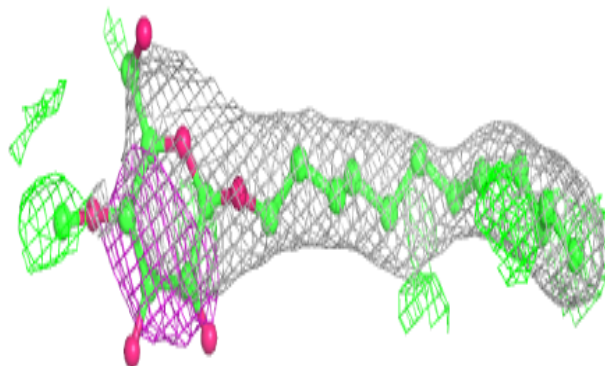


Electron density around LMT a 414:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

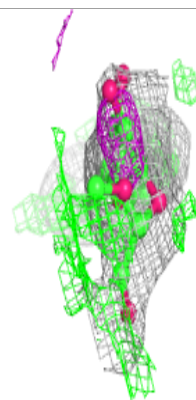
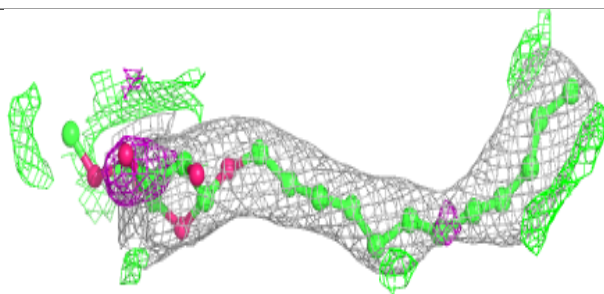
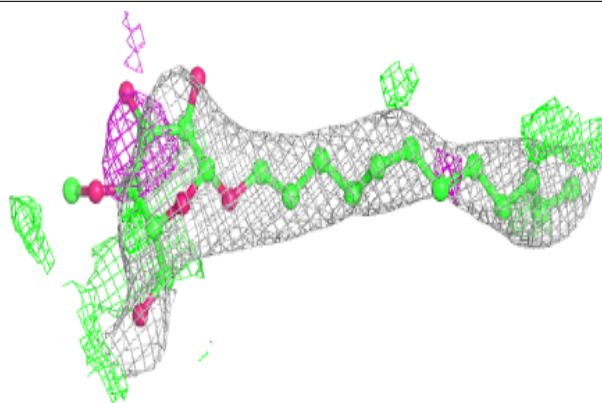
**Electron density around LMT b 627:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

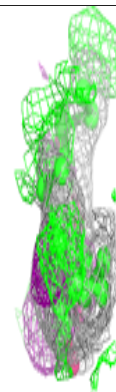
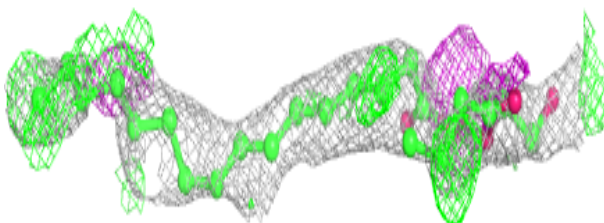
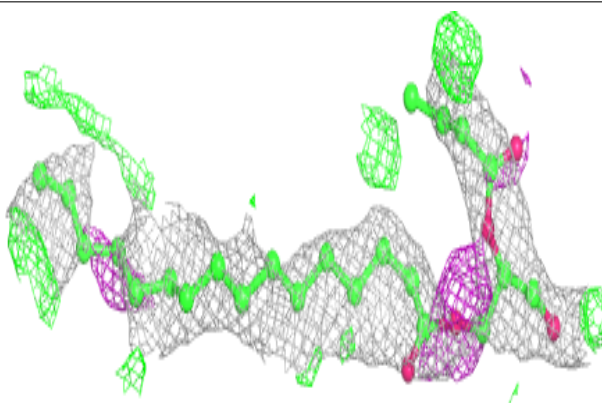


Electron density around LMT t 101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

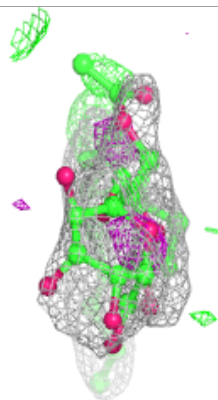
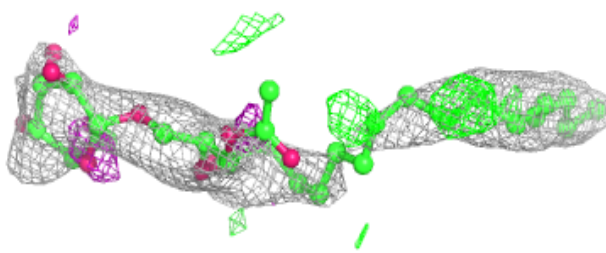
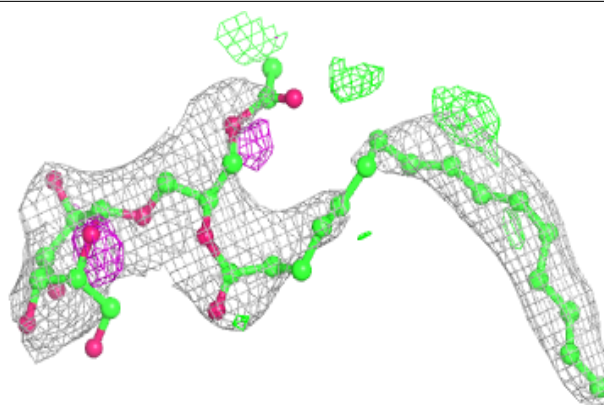
**Electron density around UNL A 415:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

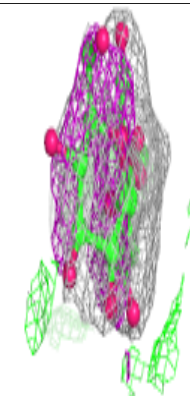
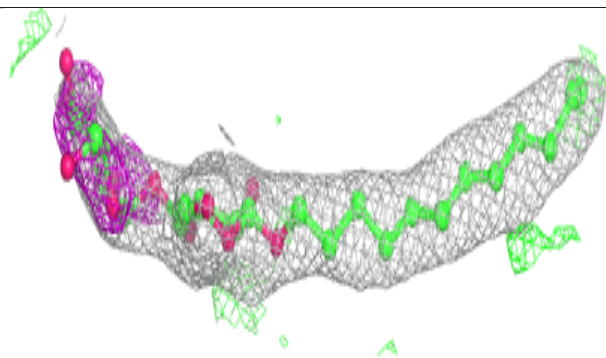
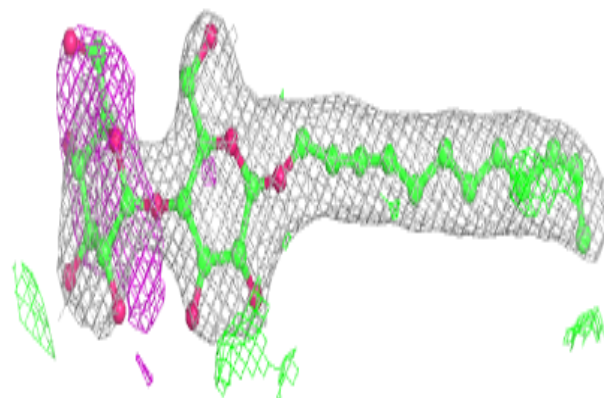


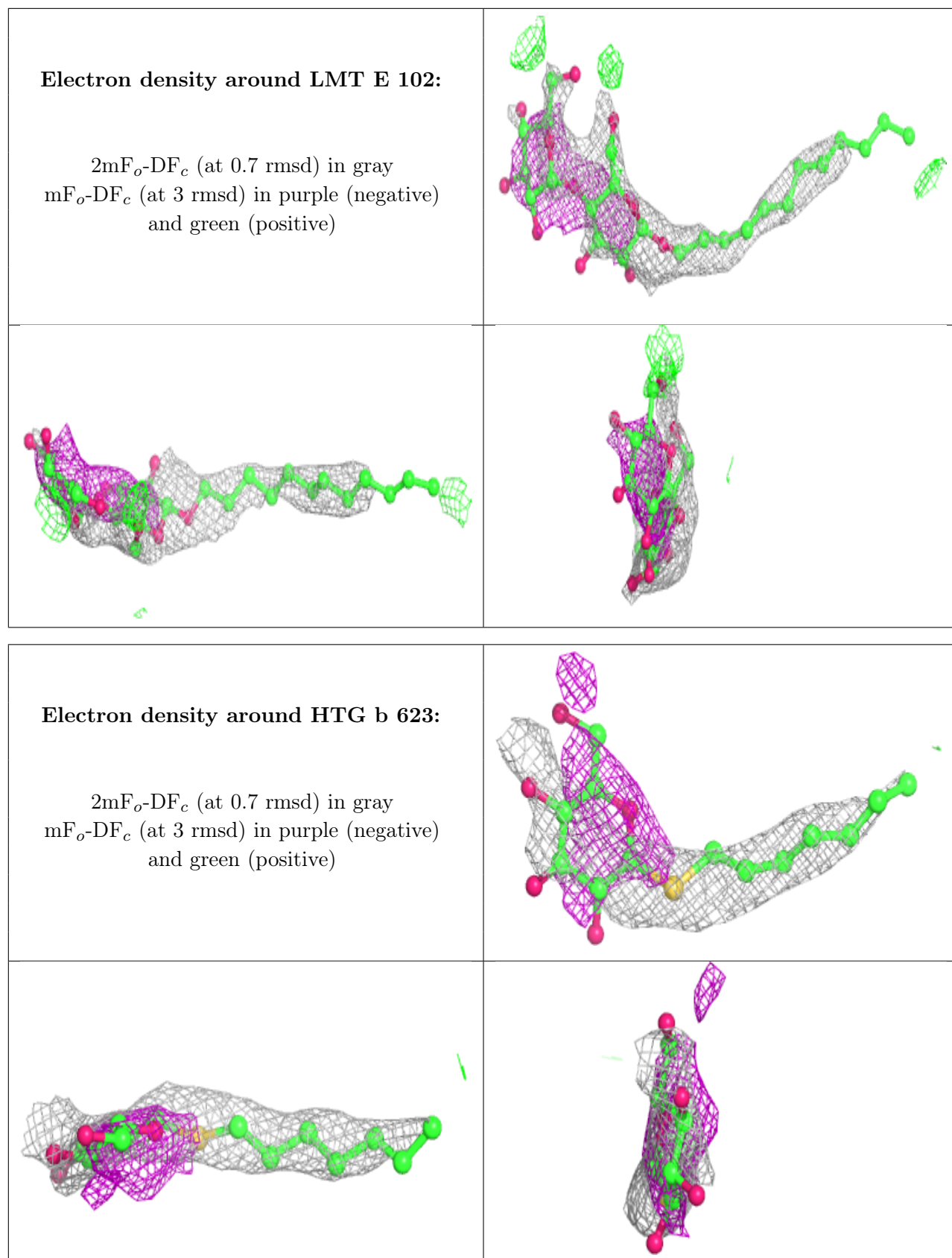
Electron density around LMG Z 101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around LMT M 101:**

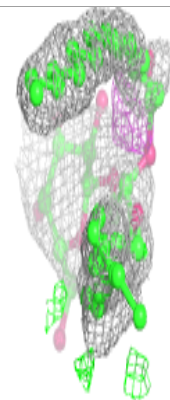
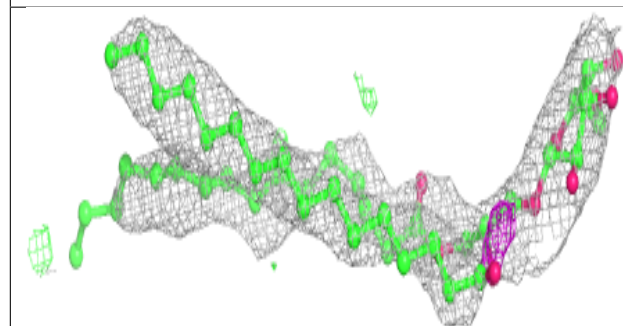
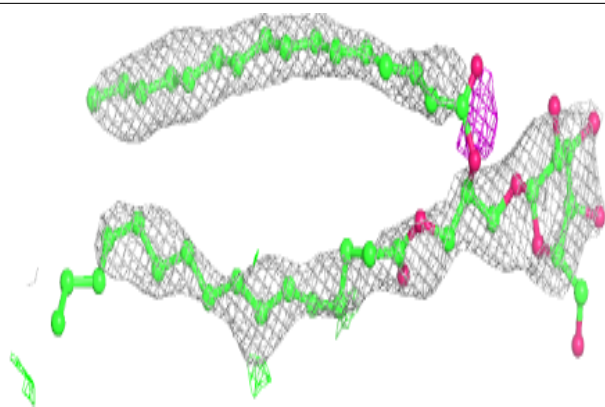
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



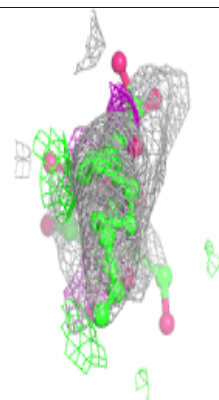
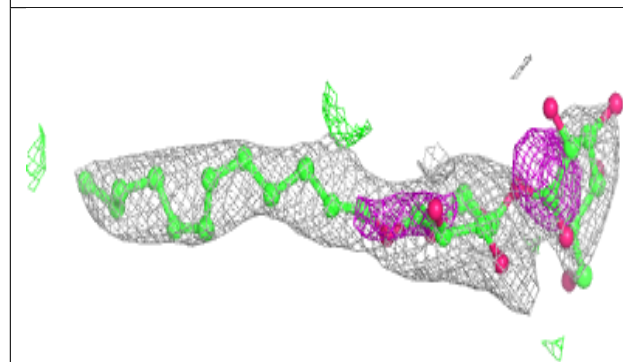
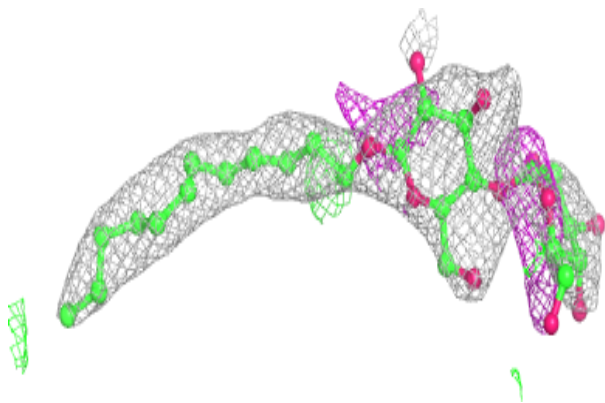


Electron density around LMG c 521:

$2mF_o-DF_c$ (at 0.7 rnsd) in gray
 mF_o-DF_c (at 3 rnsd) in purple (negative)
and green (positive)

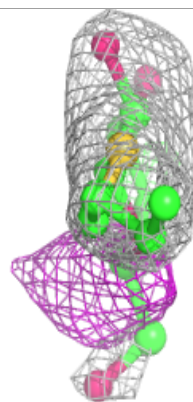
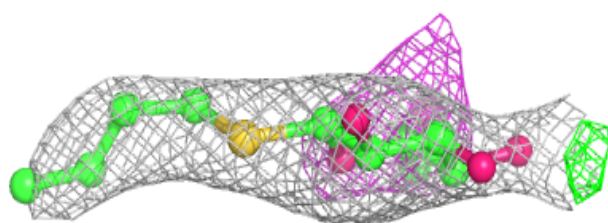
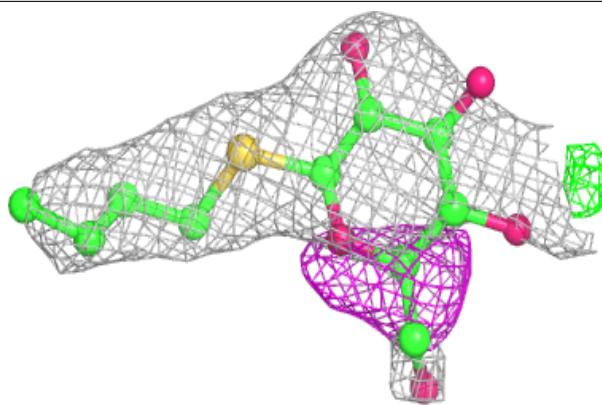
**Electron density around LMT D 404:**

$2mF_o-DF_c$ (at 0.7 rnsd) in gray
 mF_o-DF_c (at 3 rnsd) in purple (negative)
and green (positive)

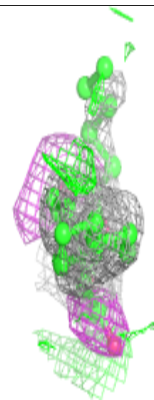
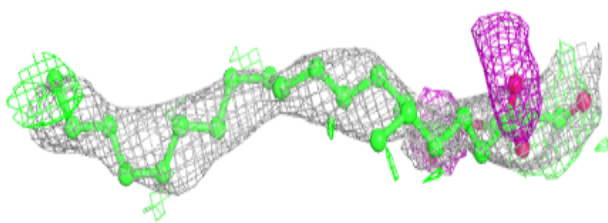
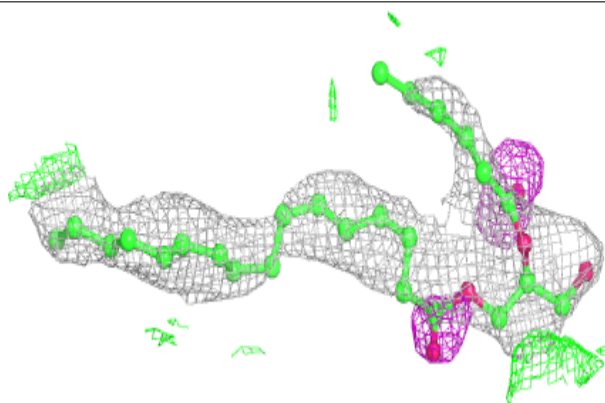


Electron density around HTG D 414:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

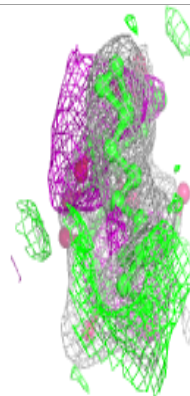
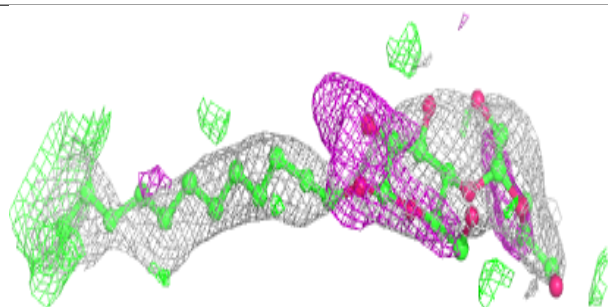
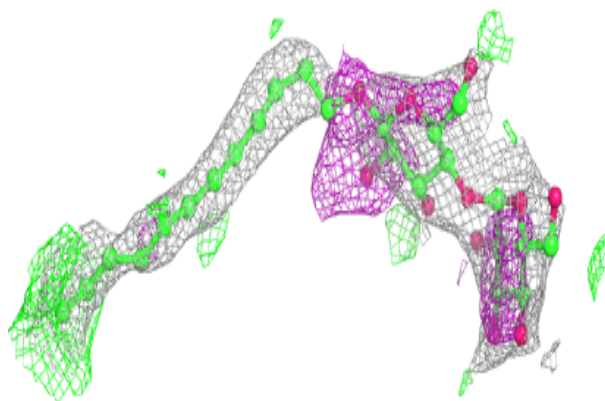
**Electron density around UNL a 417:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

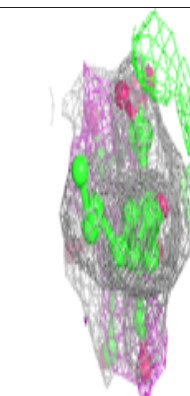
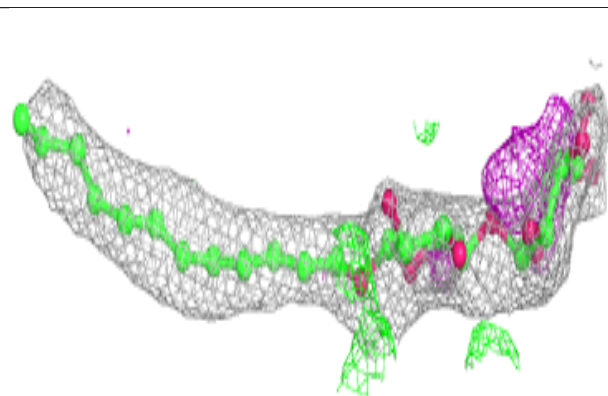
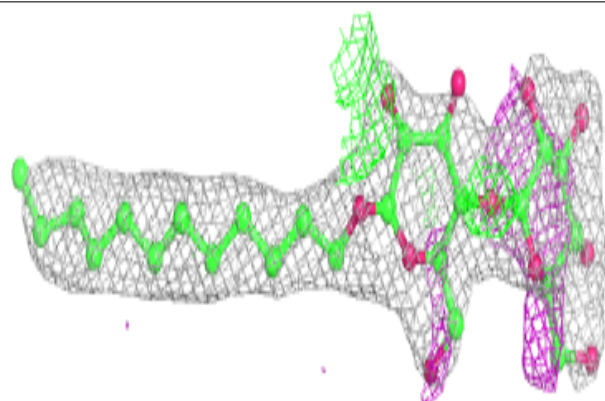


Electron density around LMT A 359:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

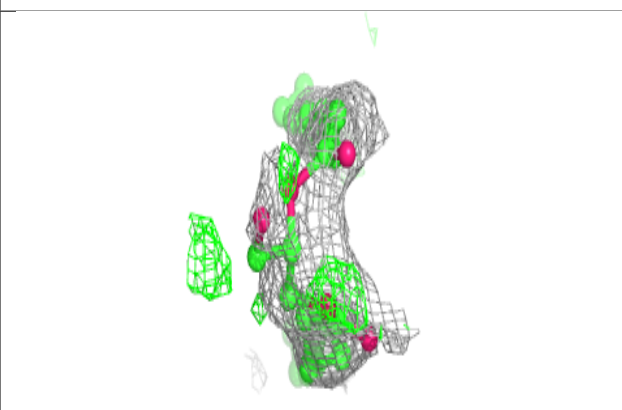
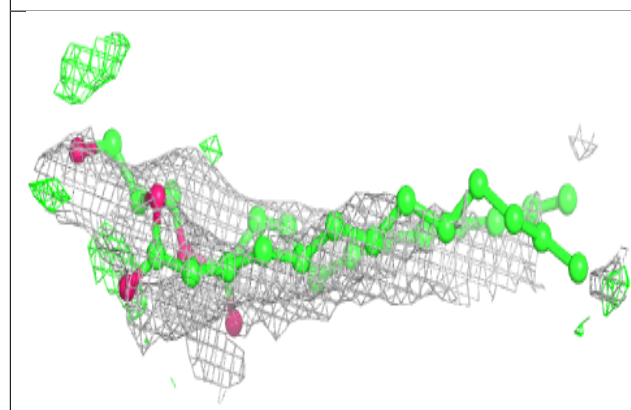
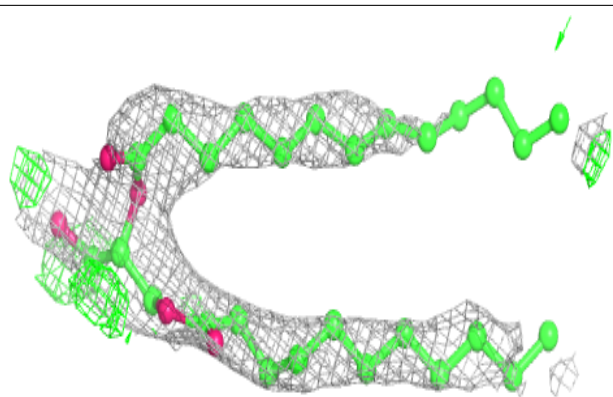
**Electron density around LMT m 103:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

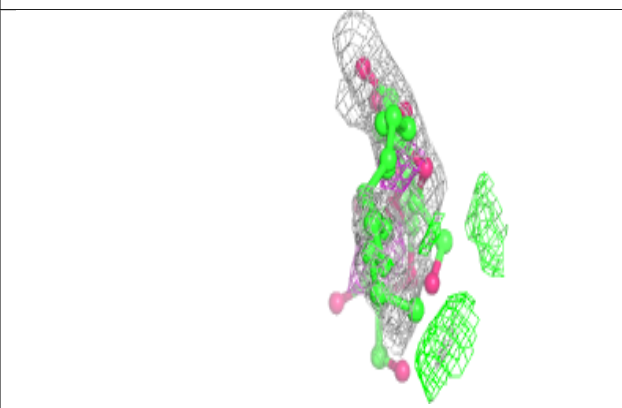
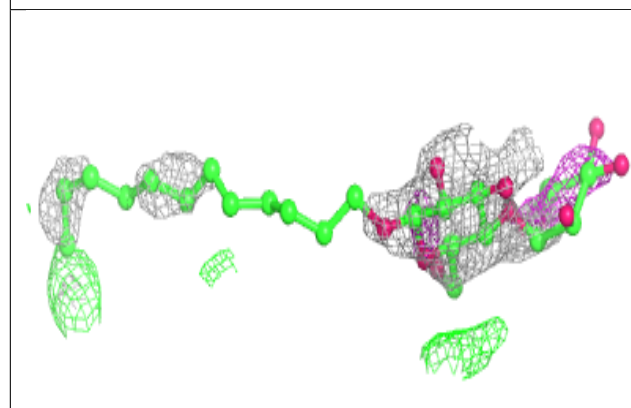
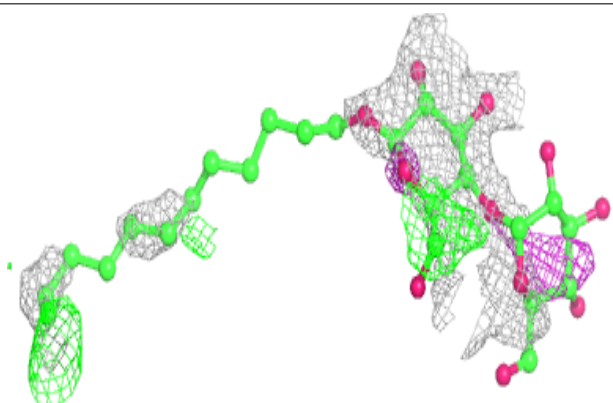


Electron density around UNL c 525:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

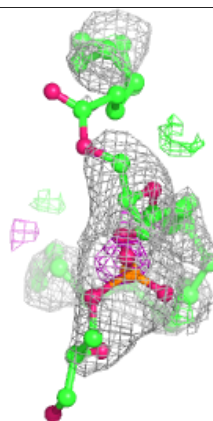
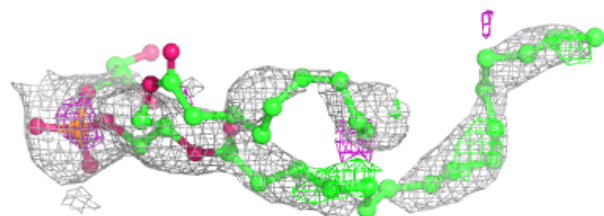
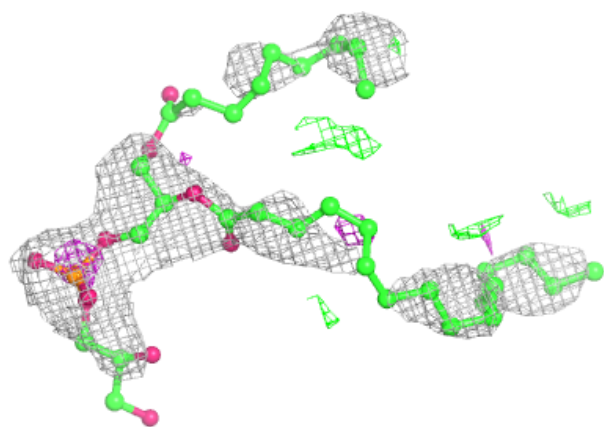
**Electron density around LMT e 102:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

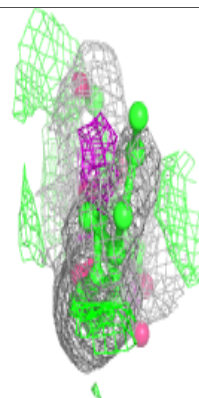
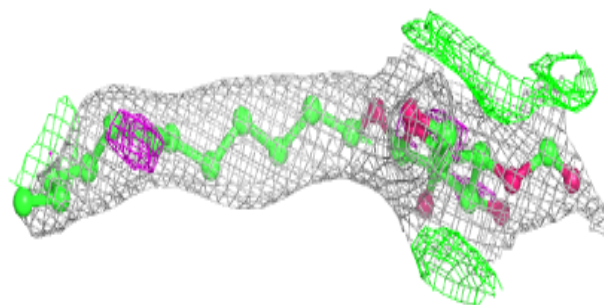
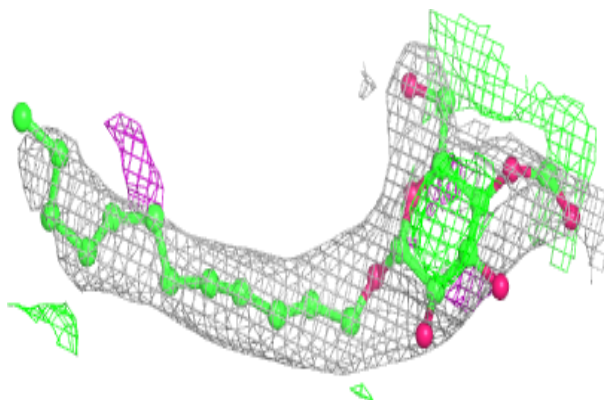


Electron density around LHG e 101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

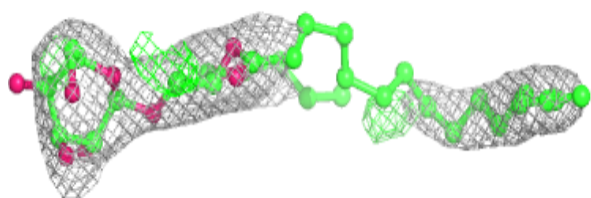
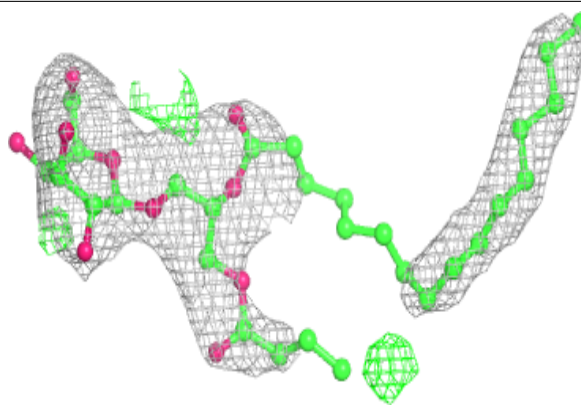
**Electron density around LMT t 102:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

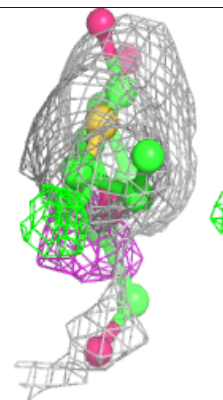
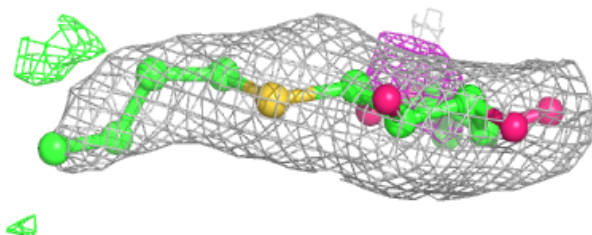
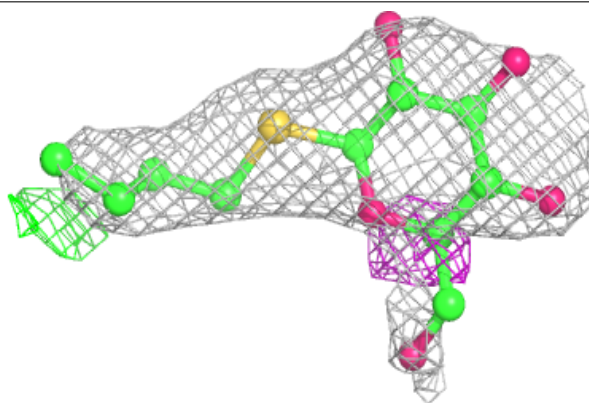


Electron density around LMG z 101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

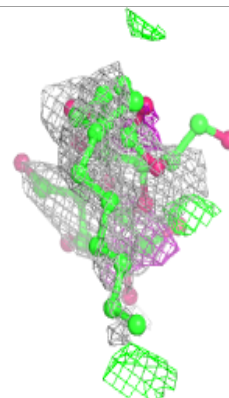
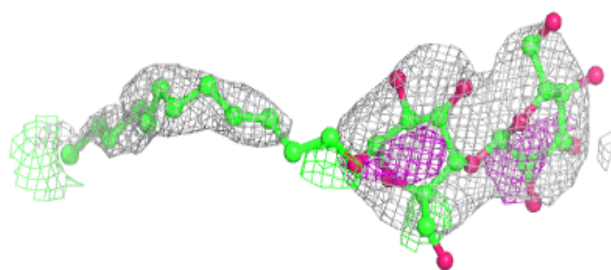
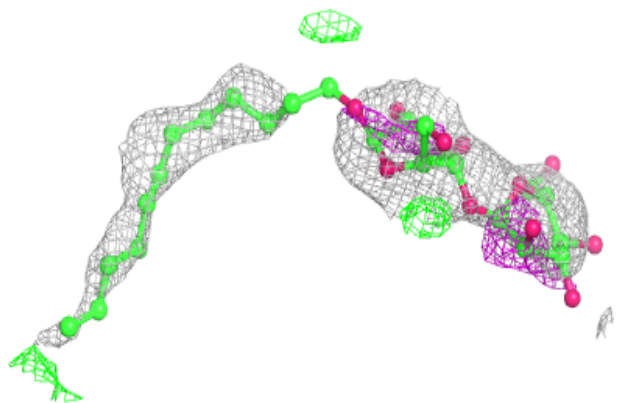
**Electron density around HTG d 411:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

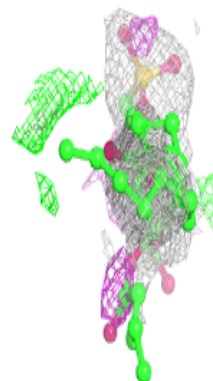
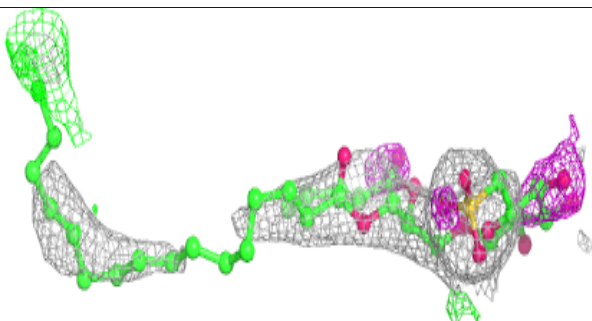
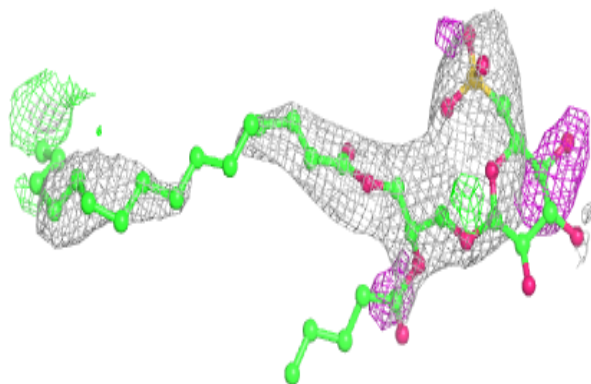


Electron density around LMT I 101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

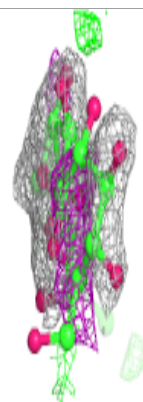
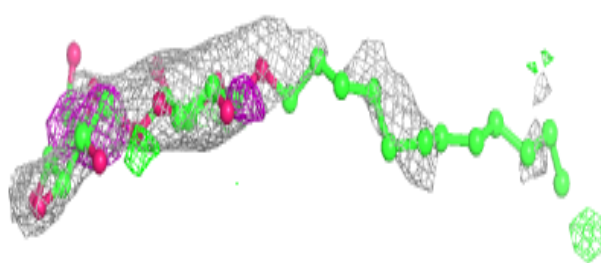
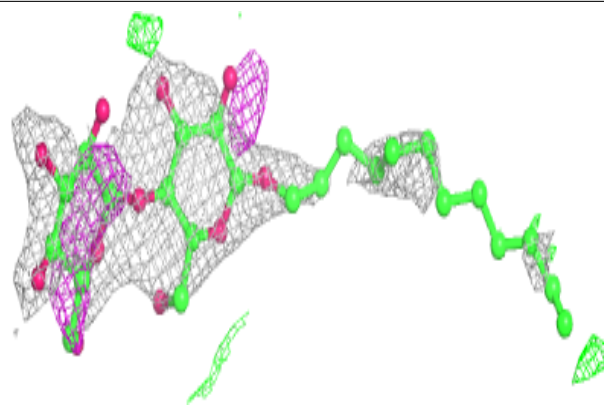
**Electron density around SQD f 102:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

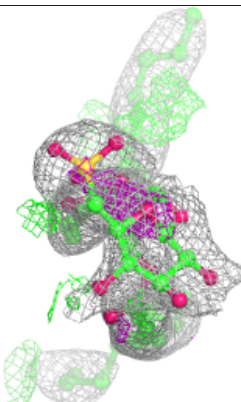
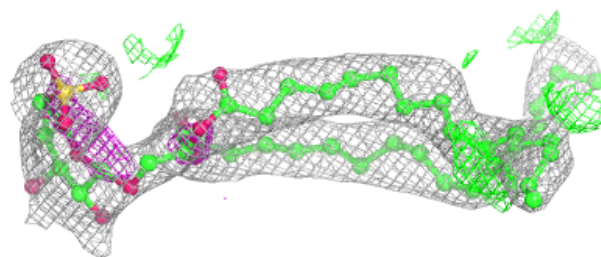
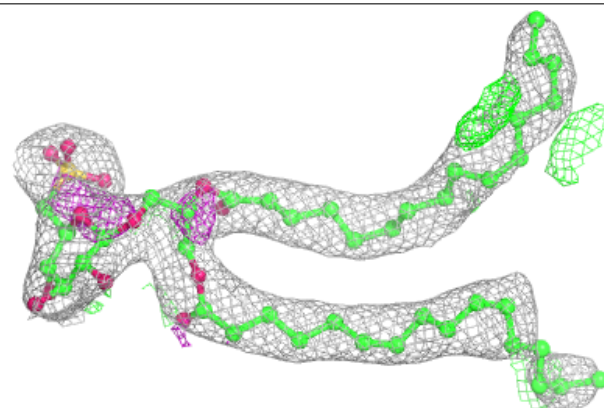


Electron density around LMT a 420:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

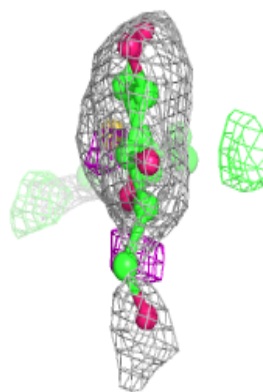
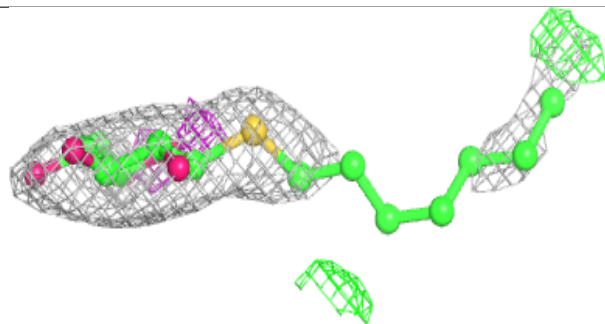
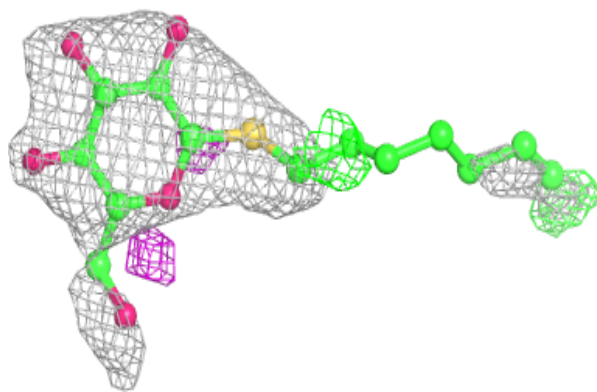
**Electron density around SQD b 620:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

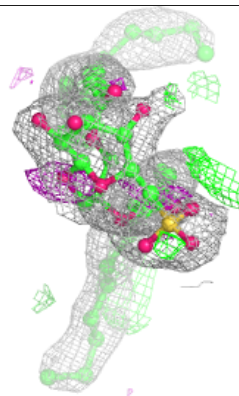
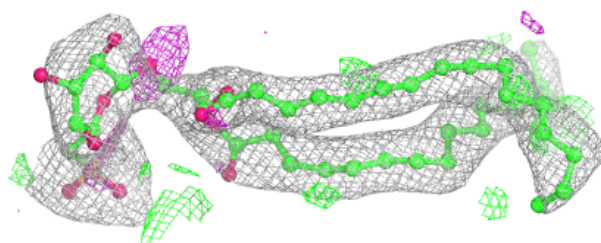
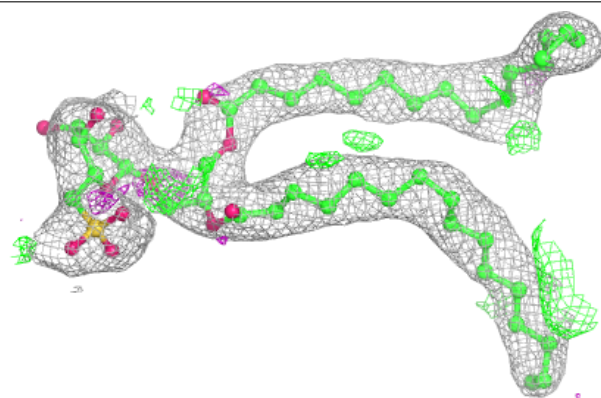


Electron density around HTG C 522:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

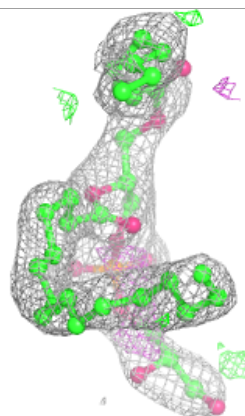
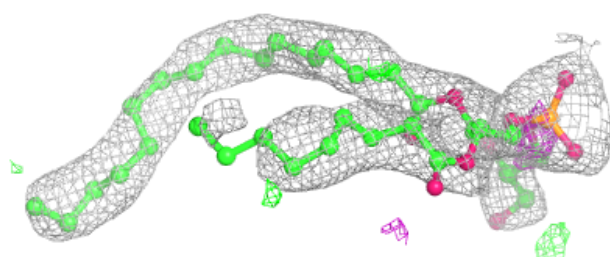
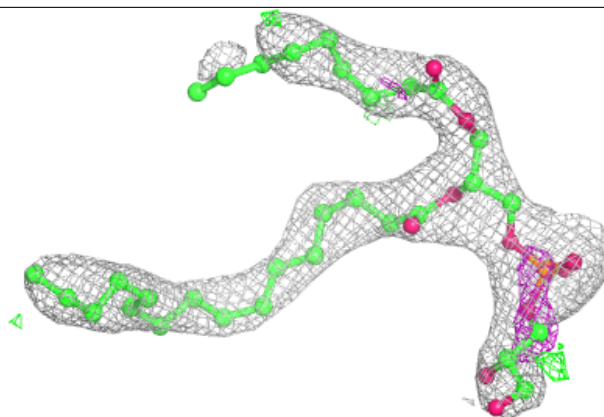
**Electron density around SQD B 620:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

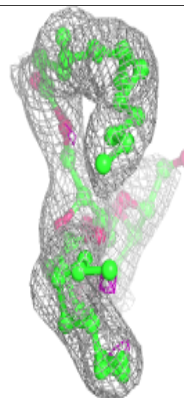
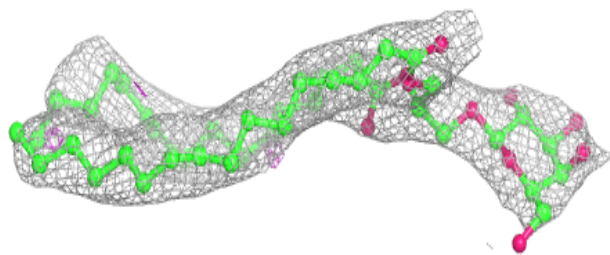
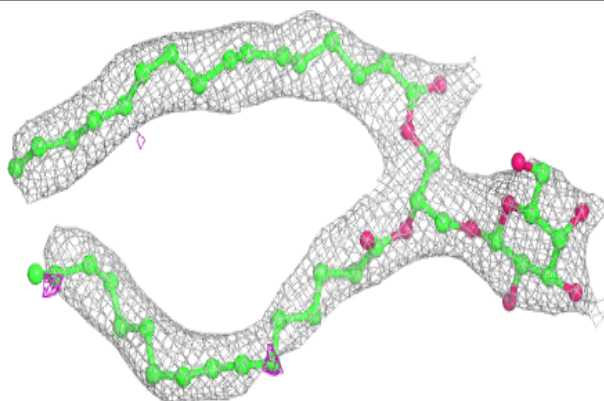


Electron density around LHG E 101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

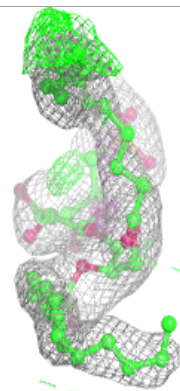
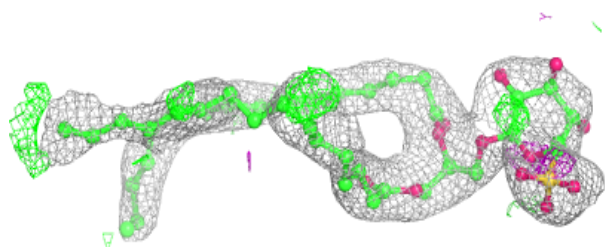
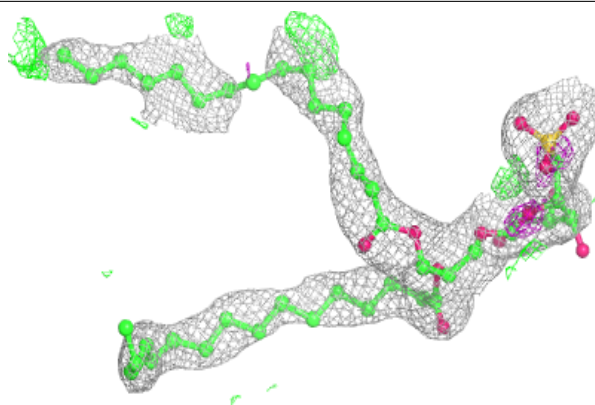
**Electron density around LMG a 419:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

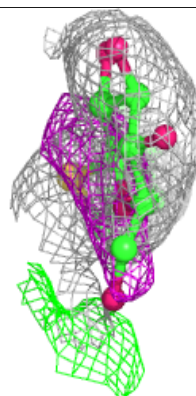
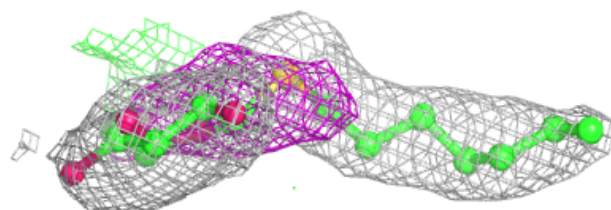
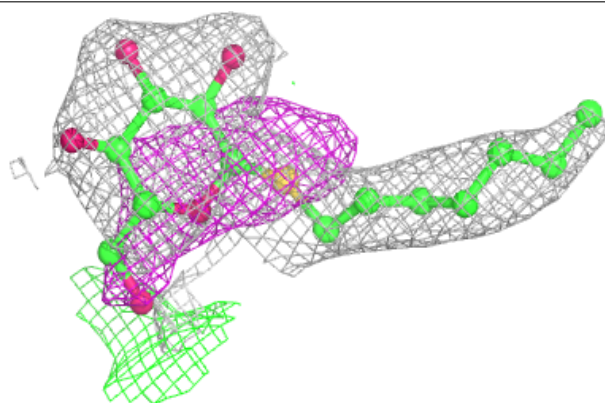


Electron density around SQD a 413:

$2mF_o-DF_c$ (at 0.7 rnsd) in gray
 mF_o-DF_c (at 3 rnsd) in purple (negative)
and green (positive)

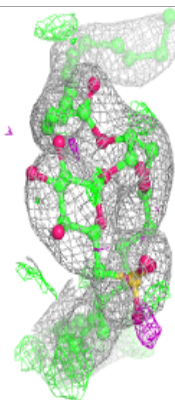
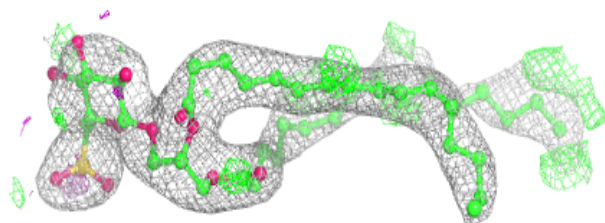
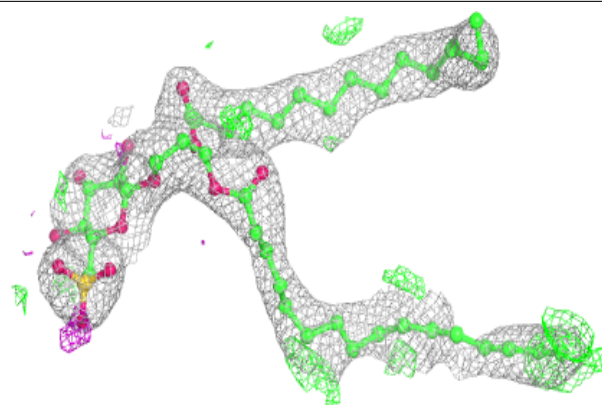
**Electron density around HTG b 622:**

$2mF_o-DF_c$ (at 0.7 rnsd) in gray
 mF_o-DF_c (at 3 rnsd) in purple (negative)
and green (positive)

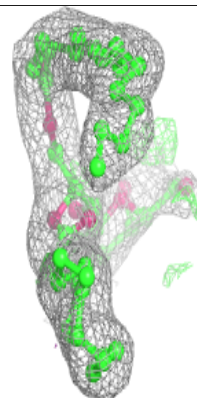
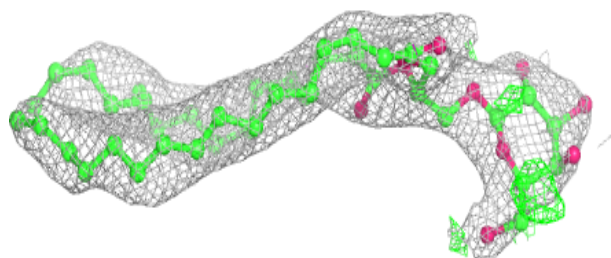
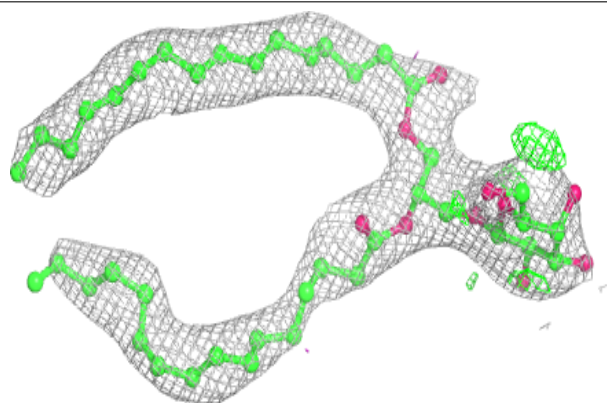


Electron density around SQD A 412:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

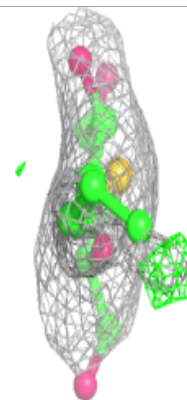
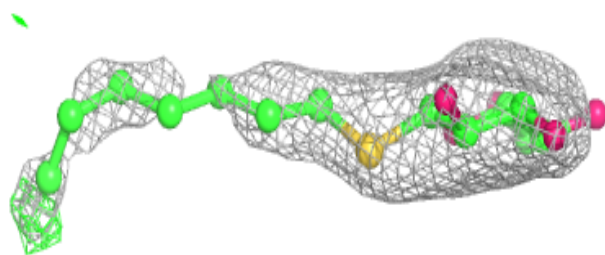
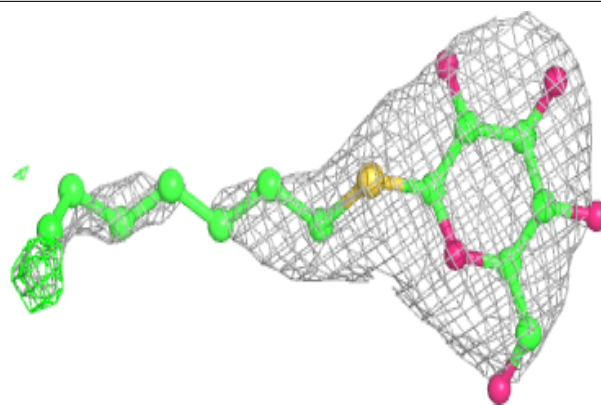
**Electron density around LMG C 501:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



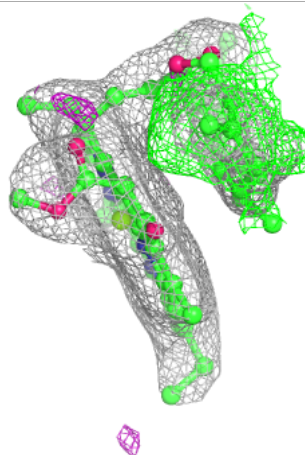
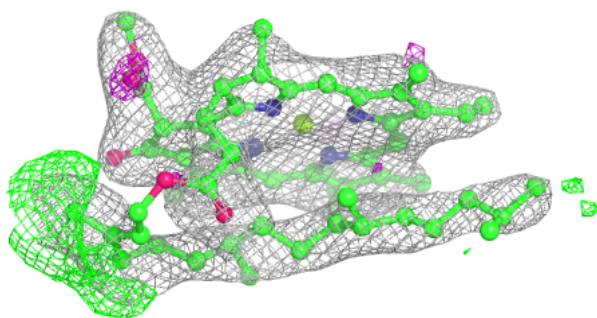
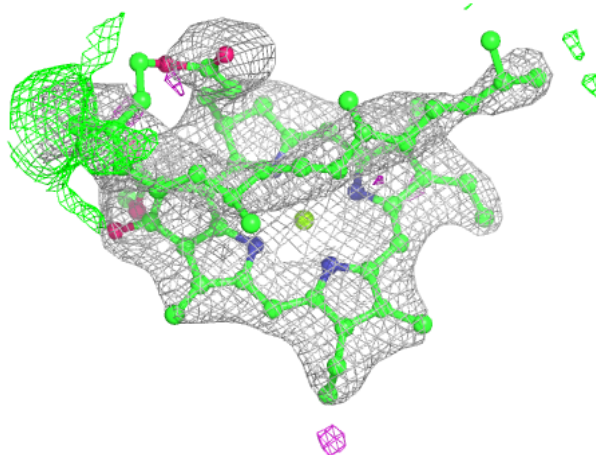
Electron density around HTG c 522:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



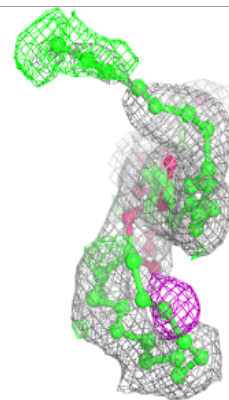
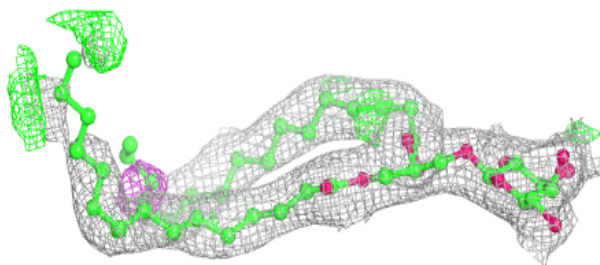
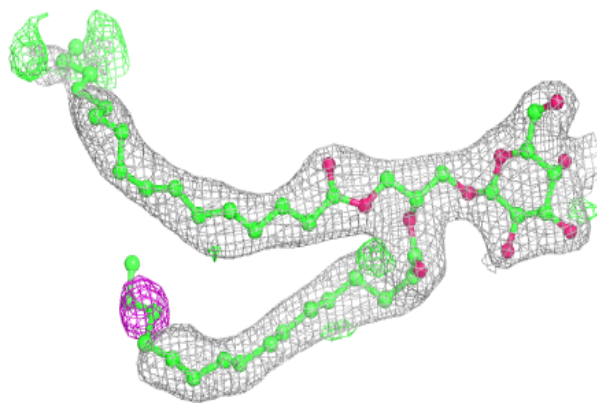
Electron density around CLA b 601:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

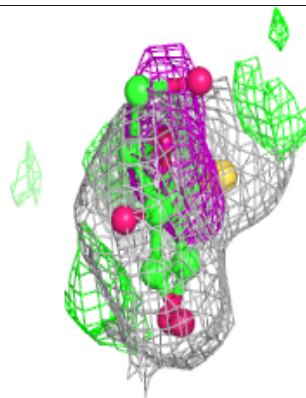
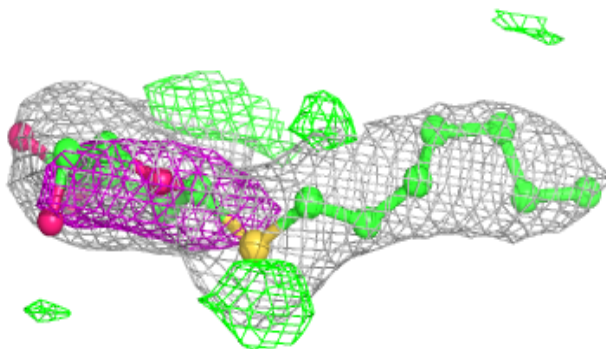
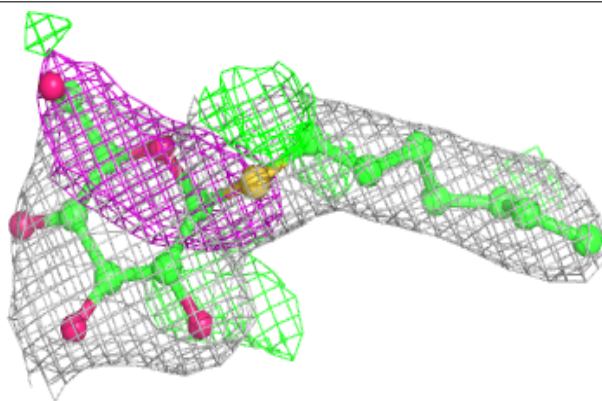


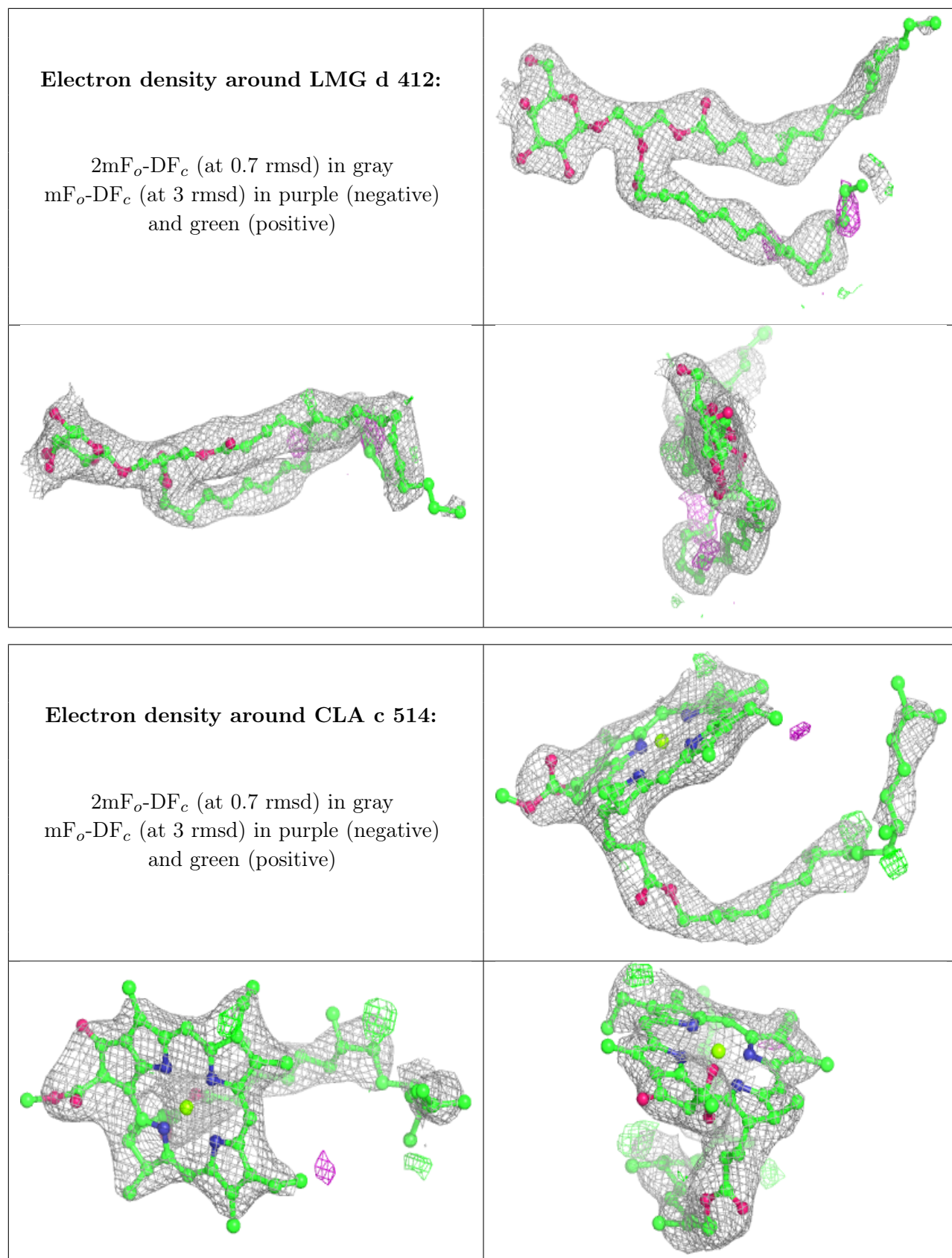
Electron density around LMG D 415:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around HTG B 622:**

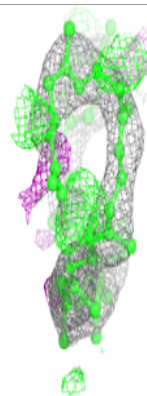
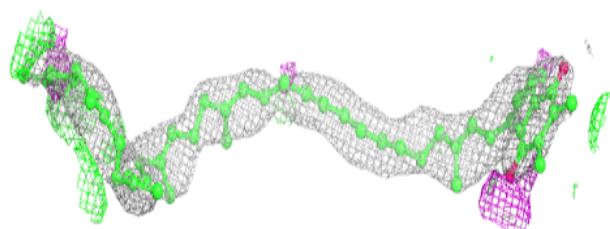
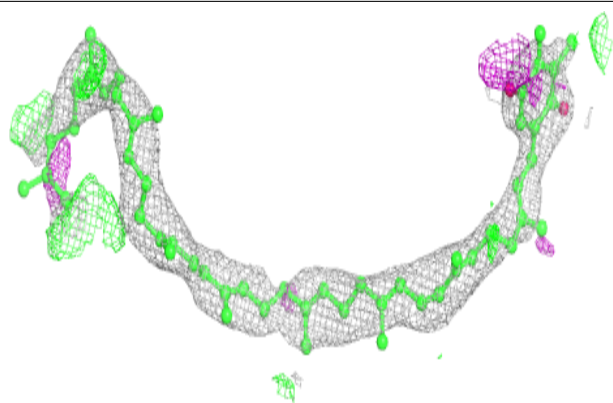
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



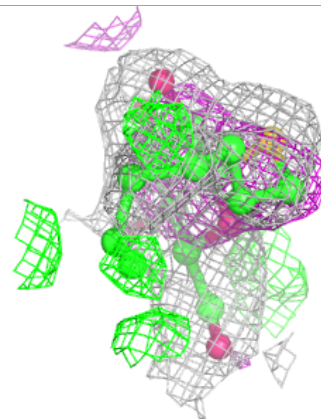
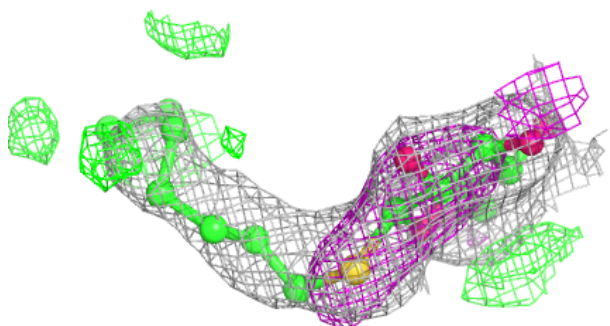
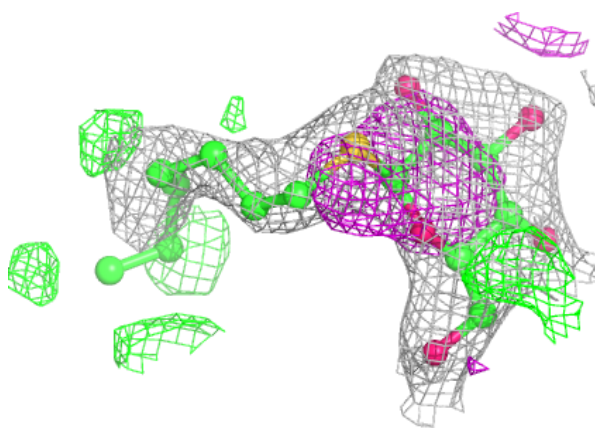


Electron density around PL9 A 414:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

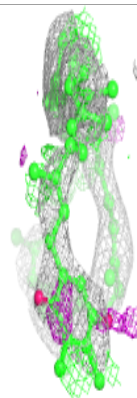
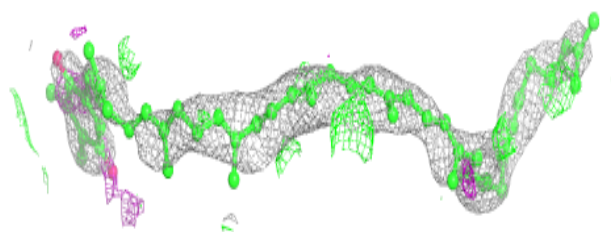
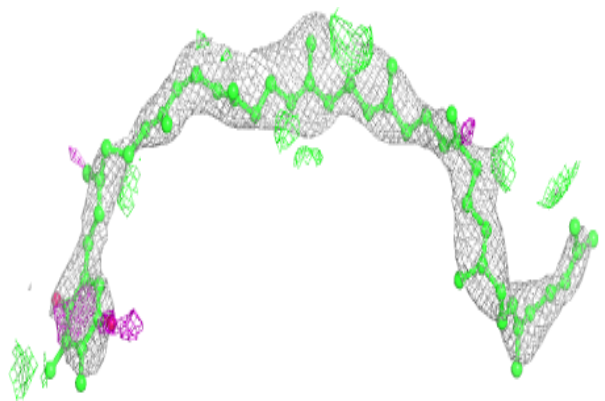
**Electron density around HTG B 623:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

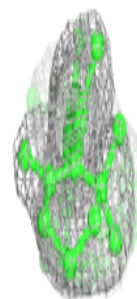
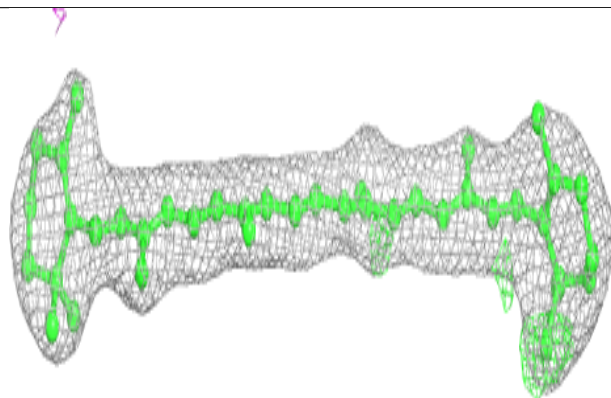
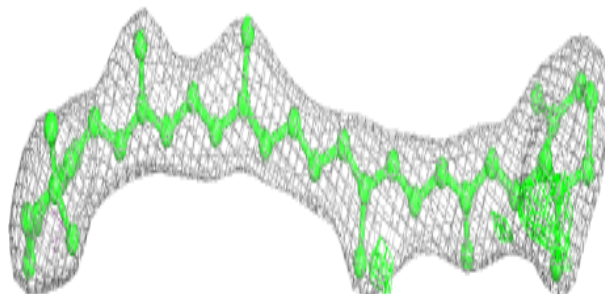


Electron density around PL9 a 416:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

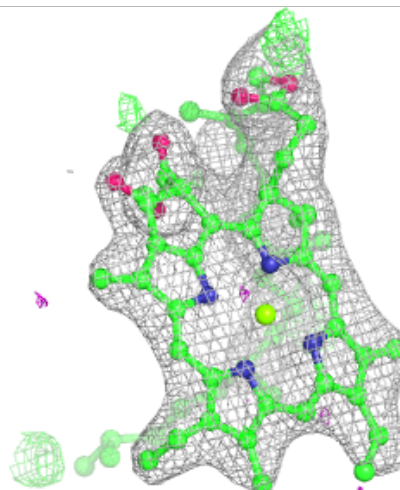
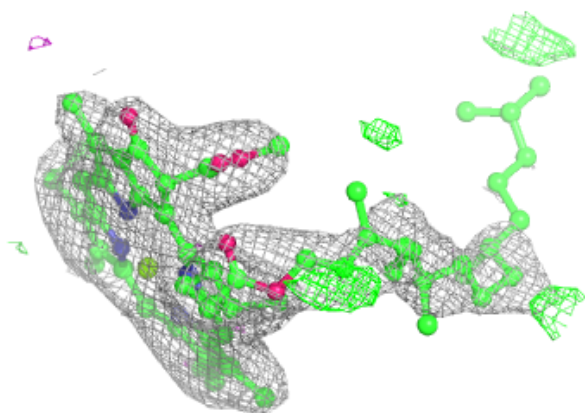
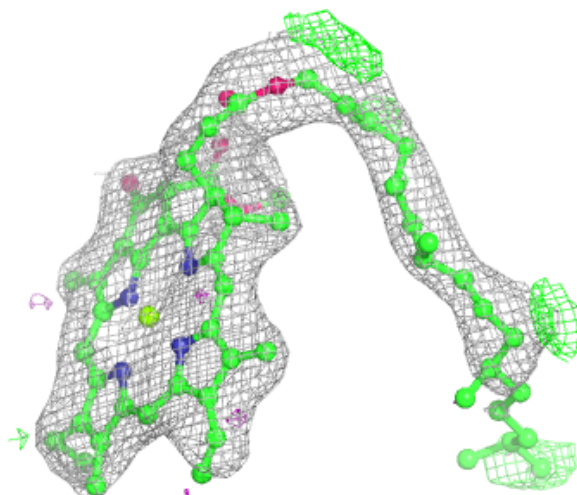
**Electron density around BCR C 515:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



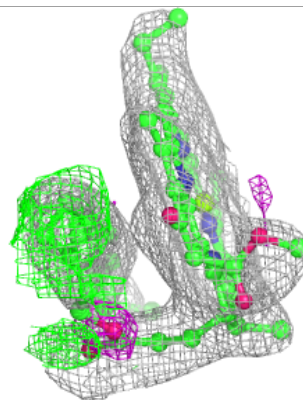
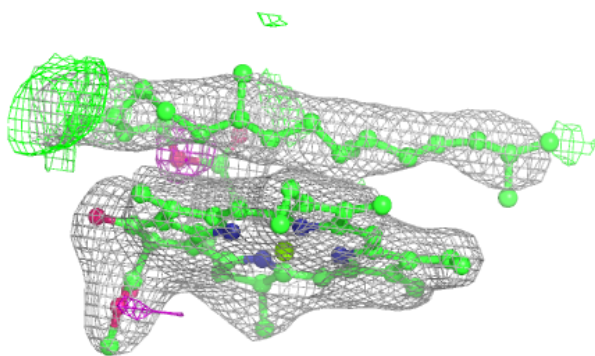
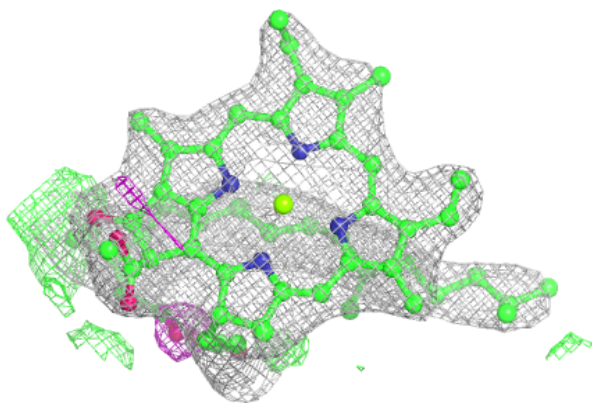
Electron density around CLA b 616:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

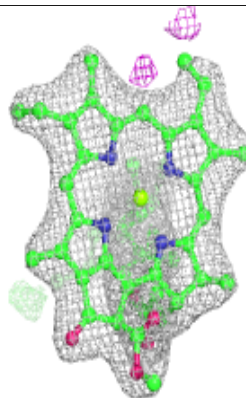
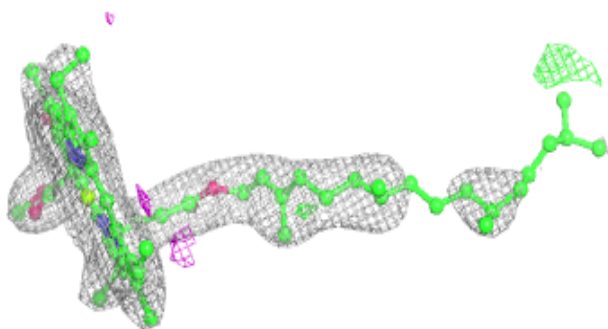
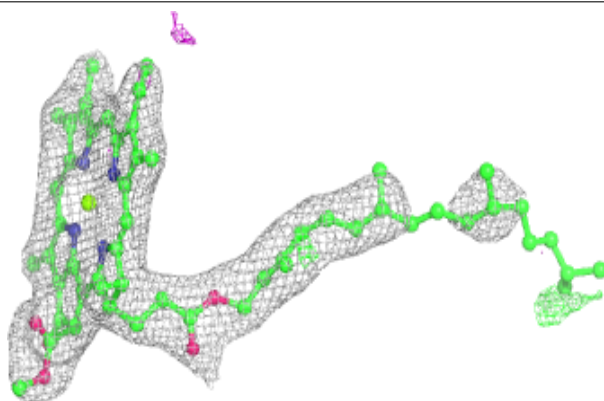


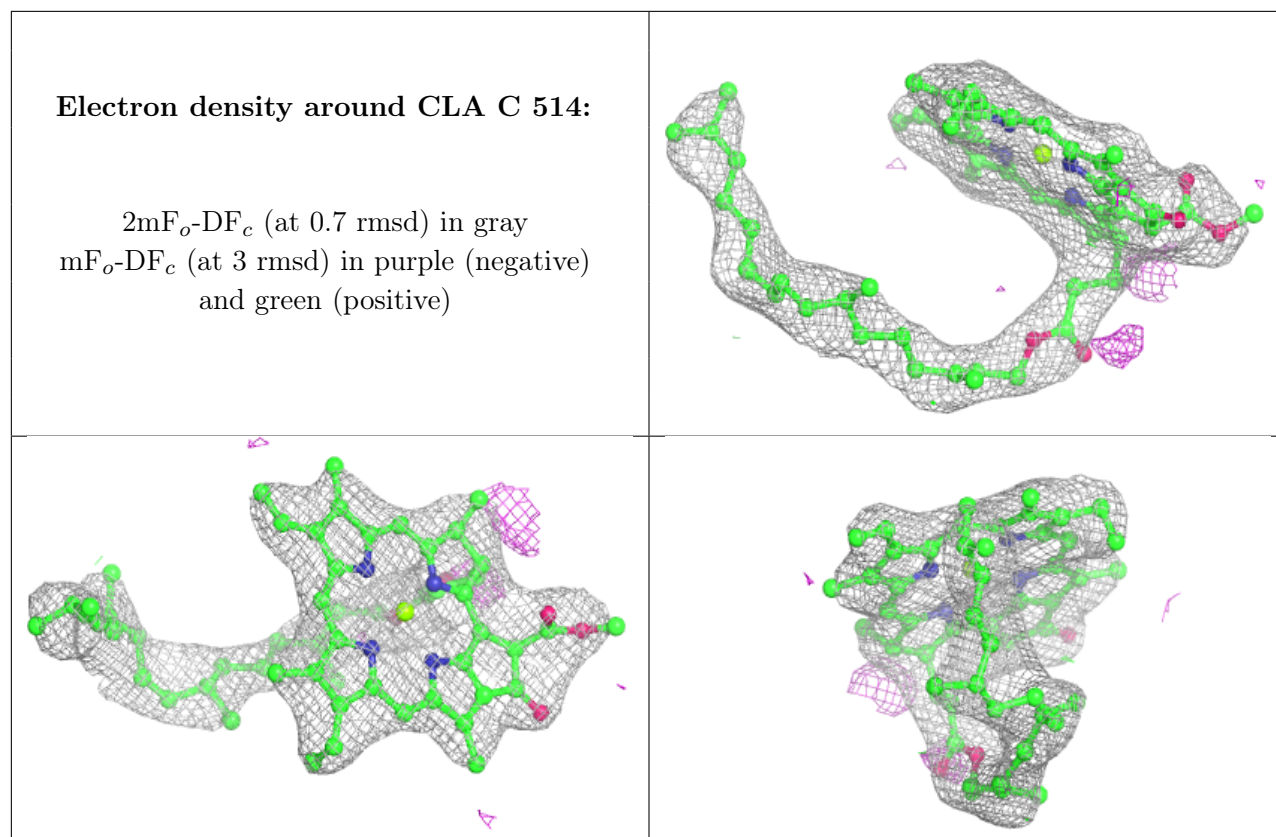
Electron density around CLA B 601:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around CLA d 403:**

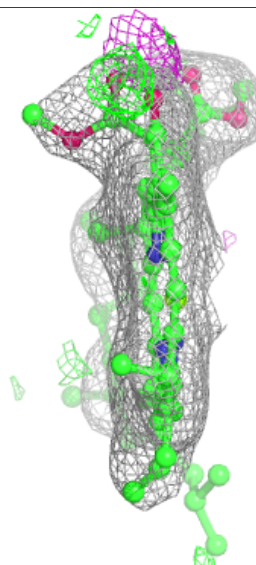
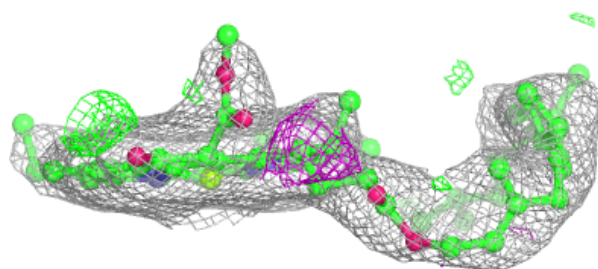
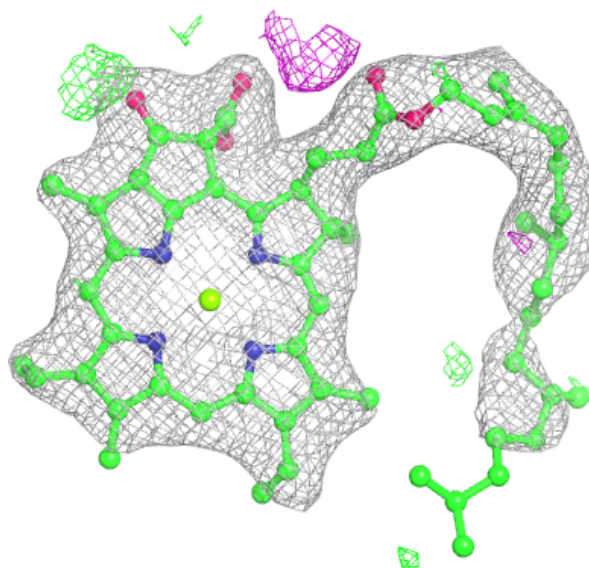
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





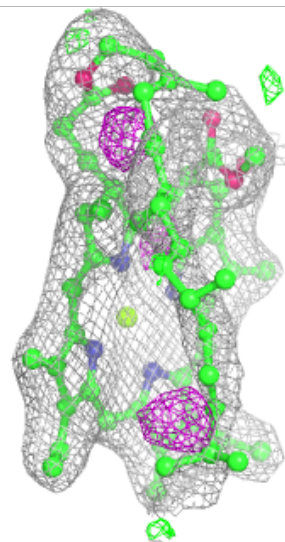
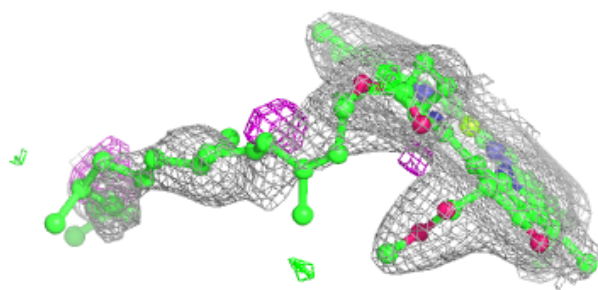
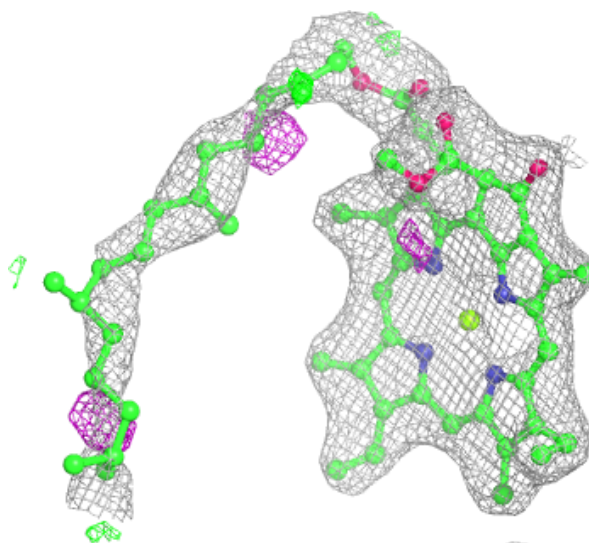
Electron density around CLA c 513:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



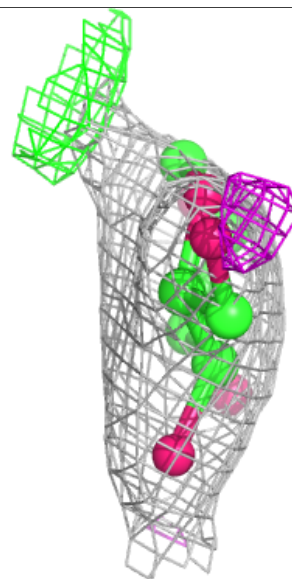
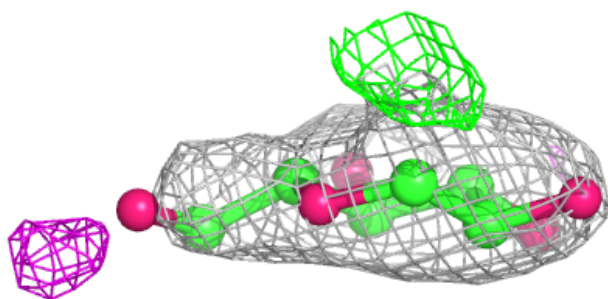
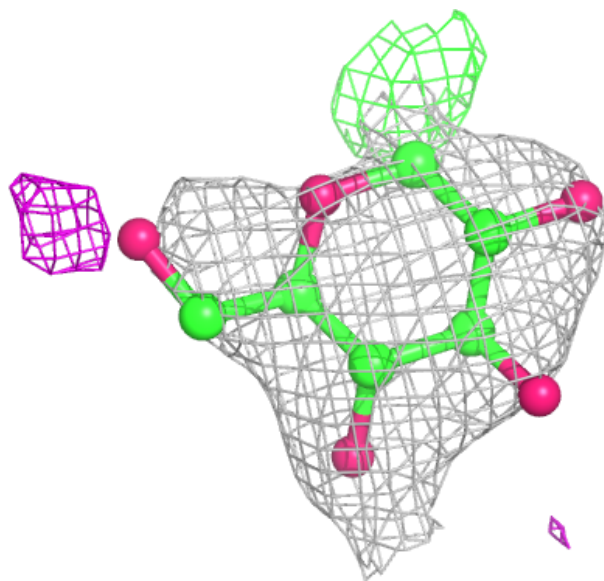
Electron density around CLA B 616:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



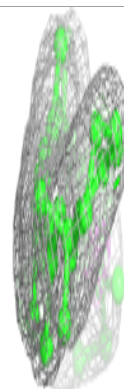
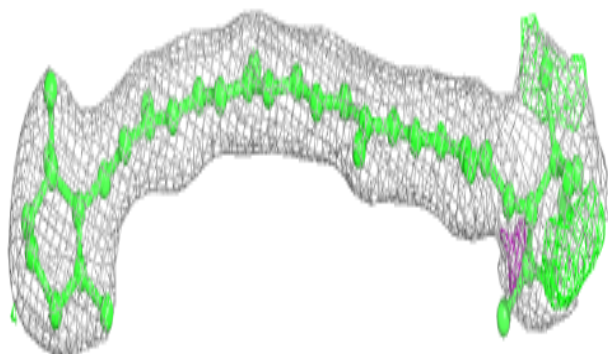
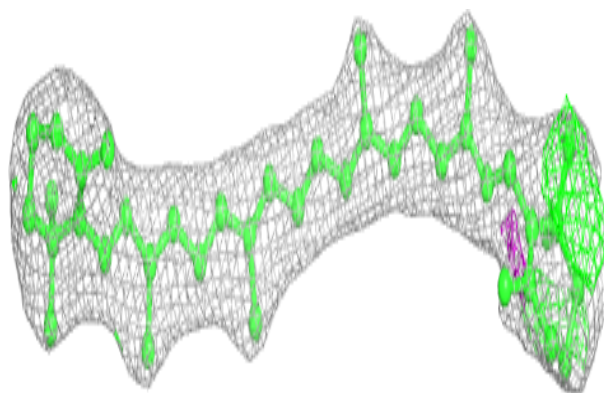
Electron density around HTG V 203:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

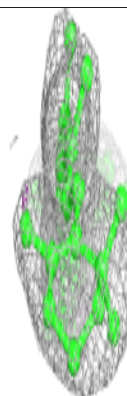
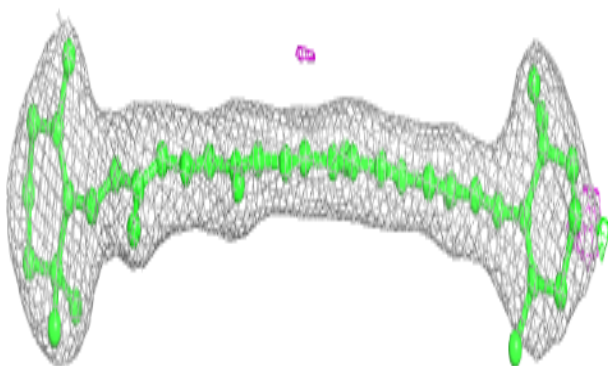
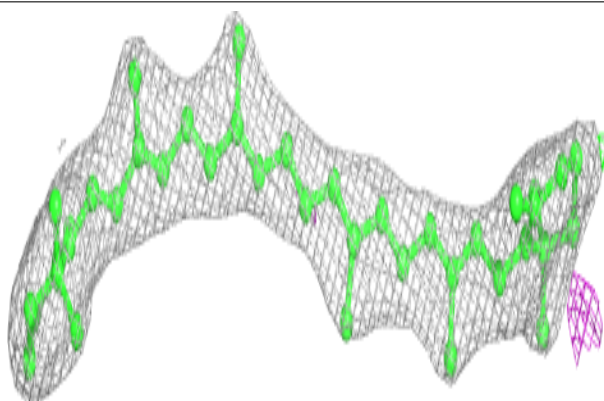


Electron density around BCR d 404:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

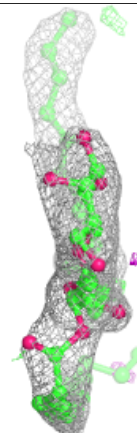
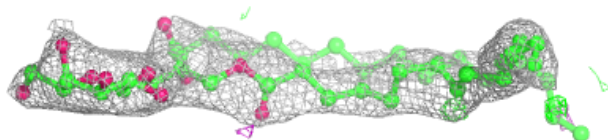
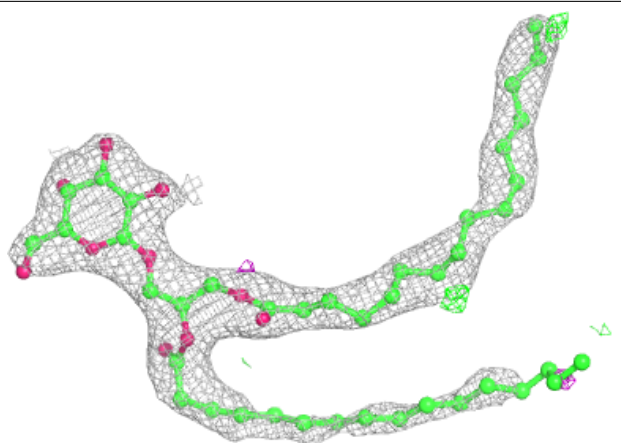
**Electron density around BCR h 101:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



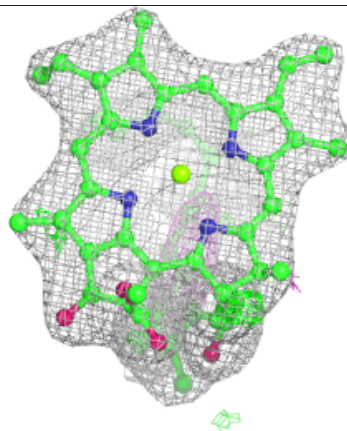
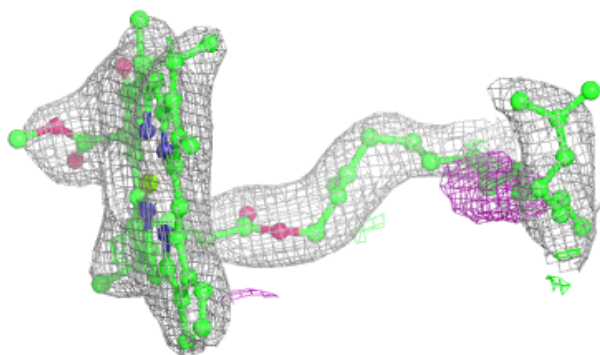
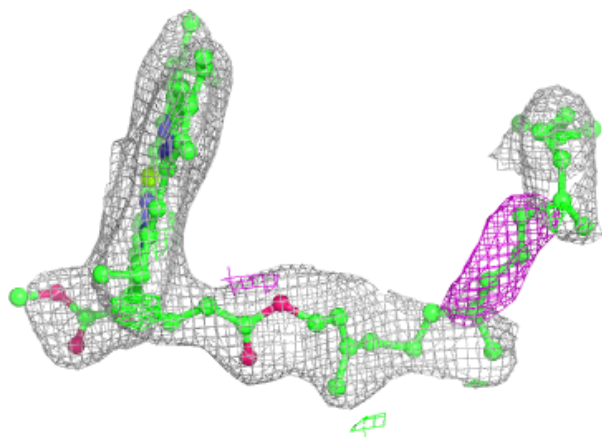
Electron density around LMG c 520:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

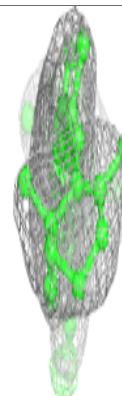
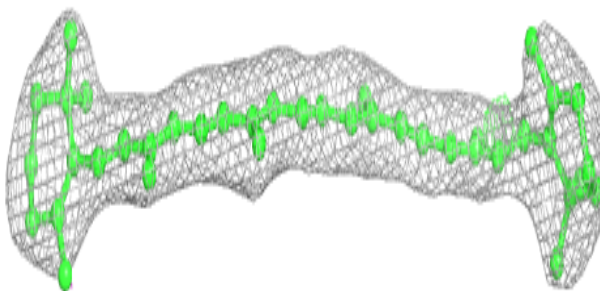
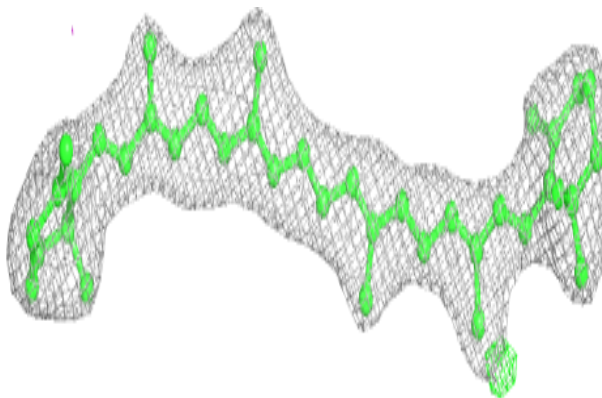


Electron density around CLA c 507:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

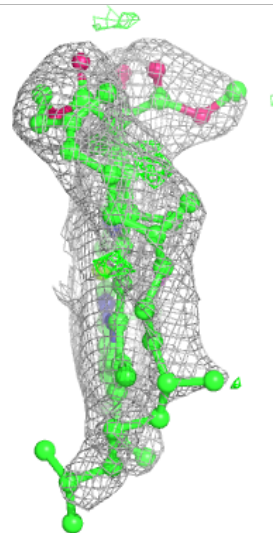
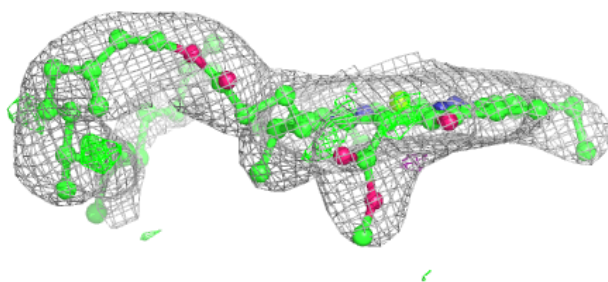
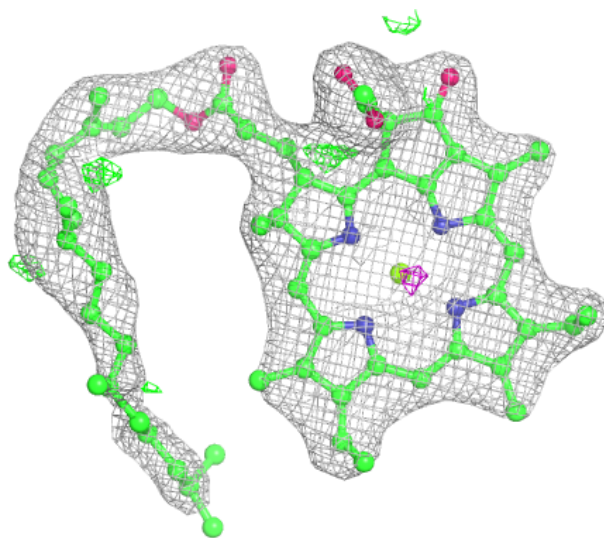
**Electron density around BCR Y 101:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



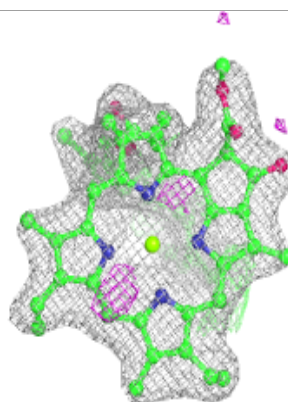
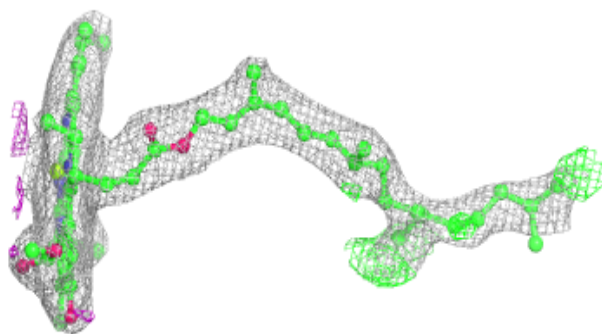
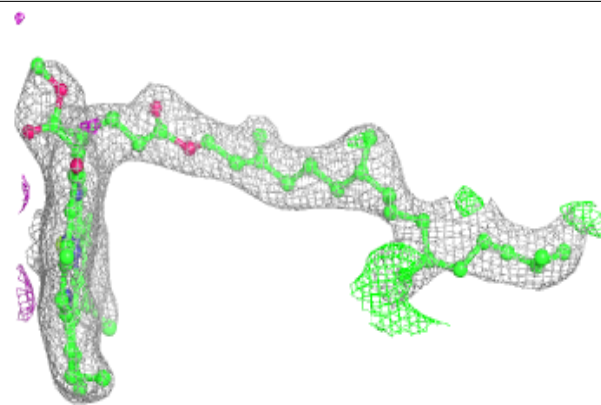
Electron density around CLA C 513:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

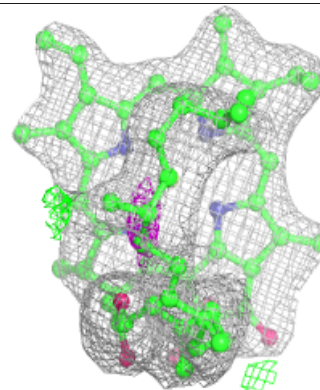
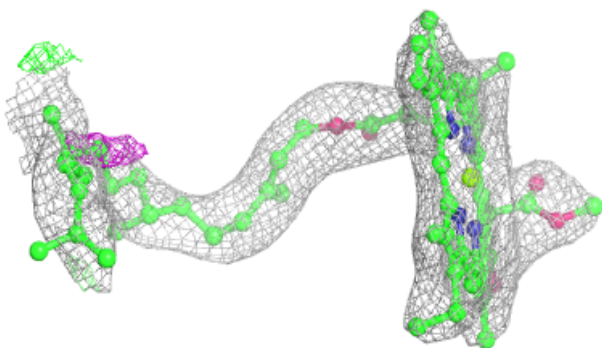
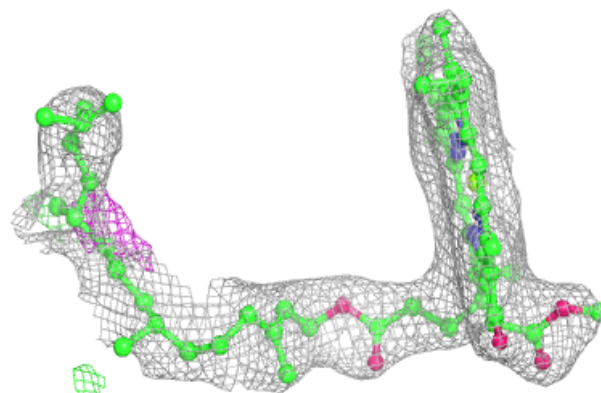


Electron density around CLA b 606:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

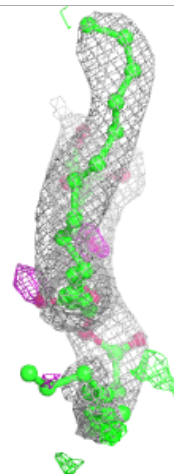
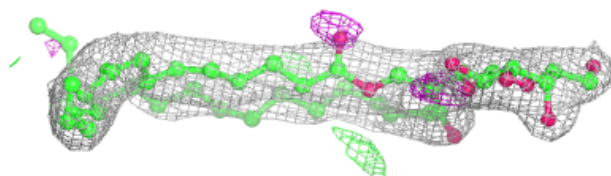
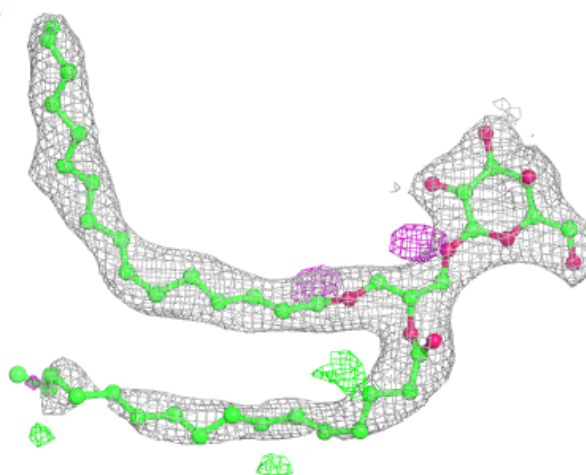
**Electron density around CLA C 507:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



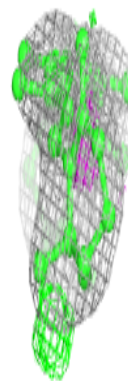
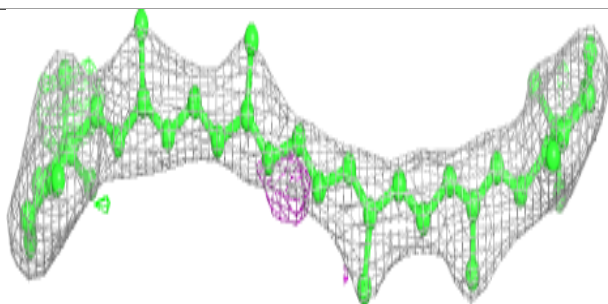
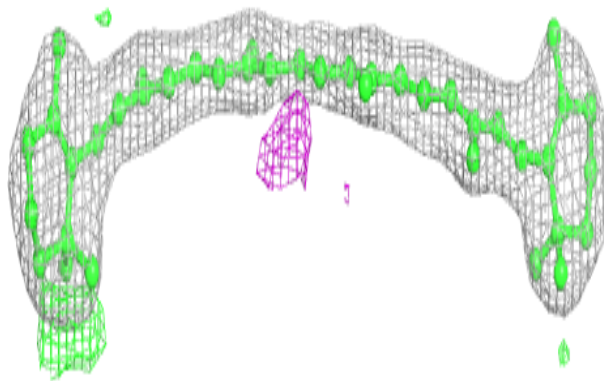
Electron density around LMG C 520:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

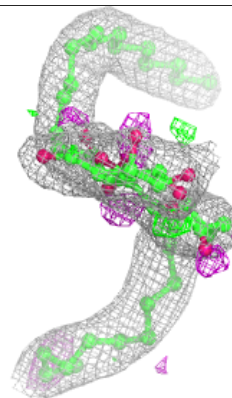
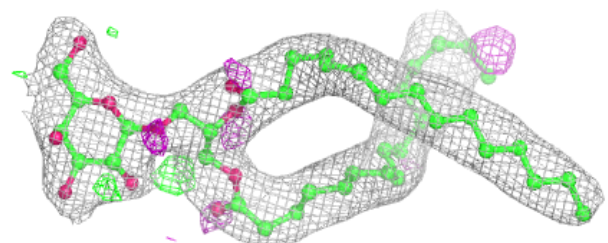
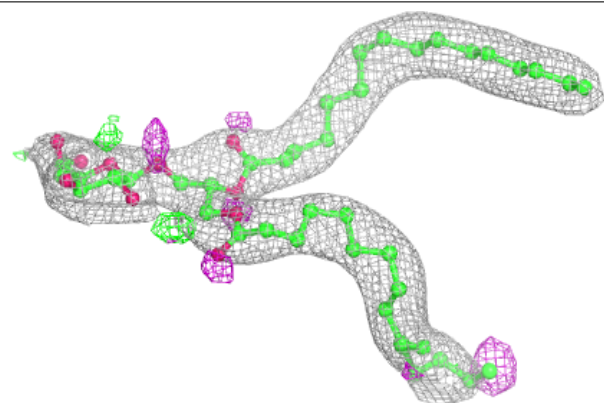


Electron density around BCR K 102:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

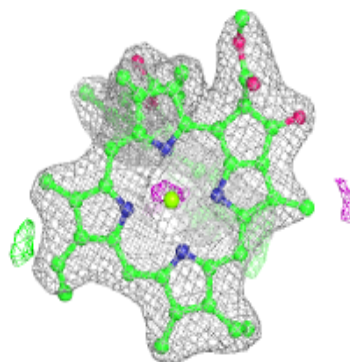
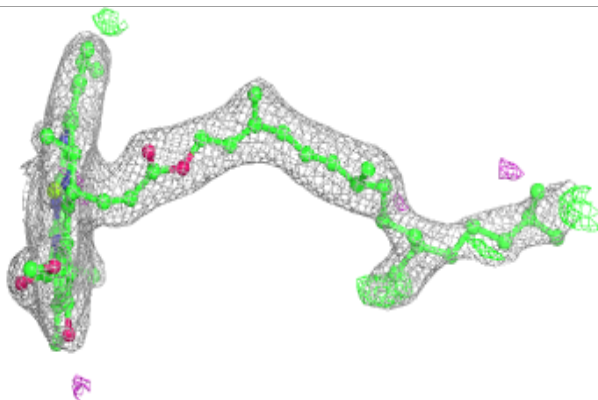
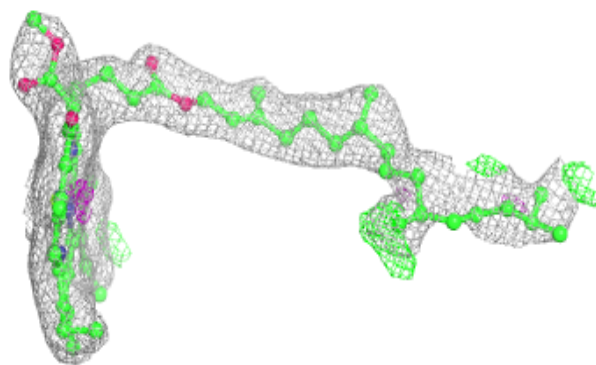
**Electron density around LMG m 101:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

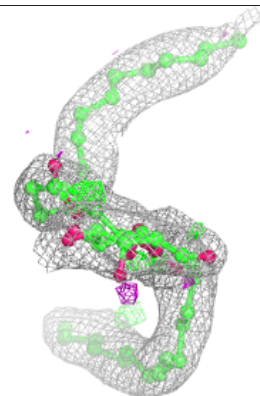
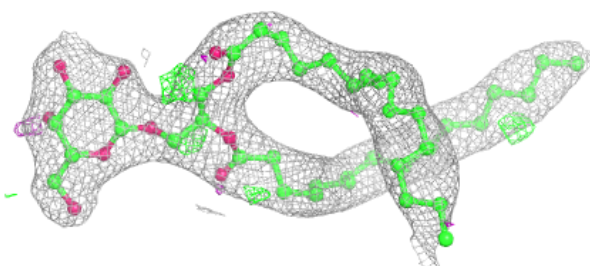
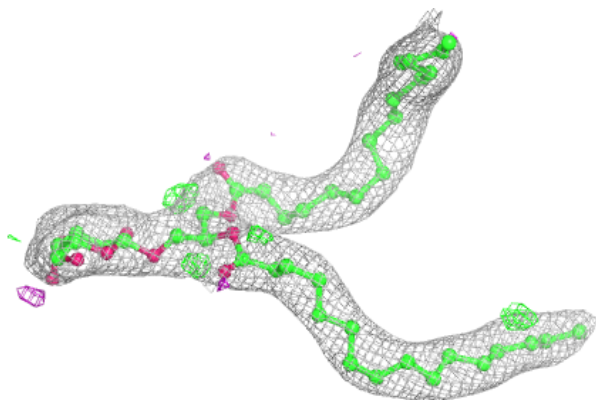


Electron density around CLA B 606:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

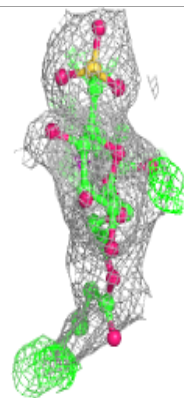
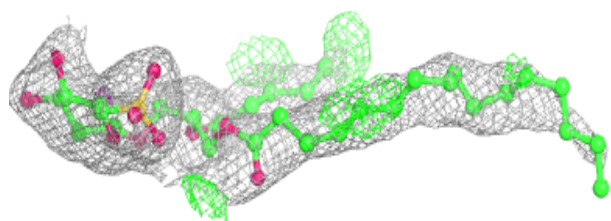
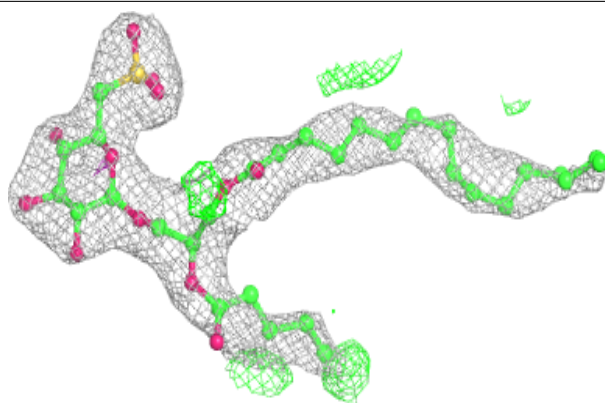
**Electron density around LMG B 621:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

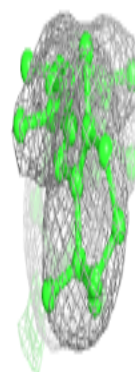
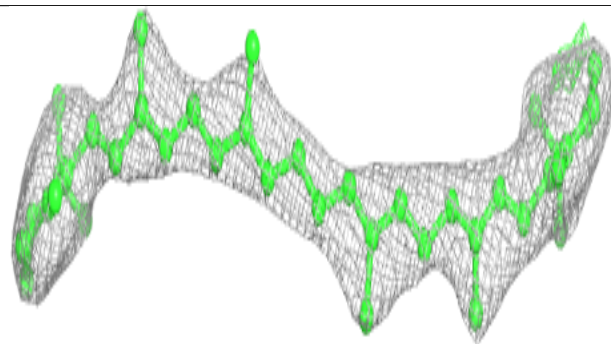
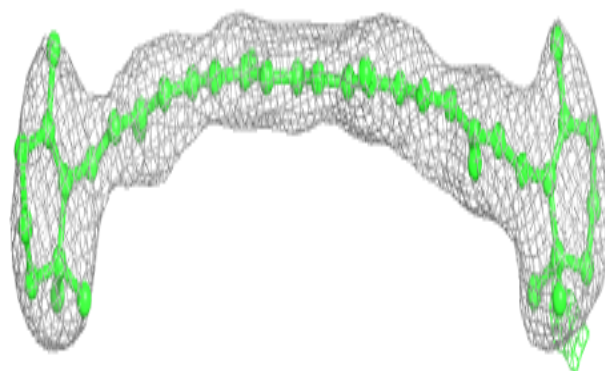


Electron density around SQD F 101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

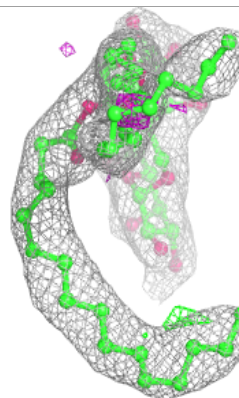
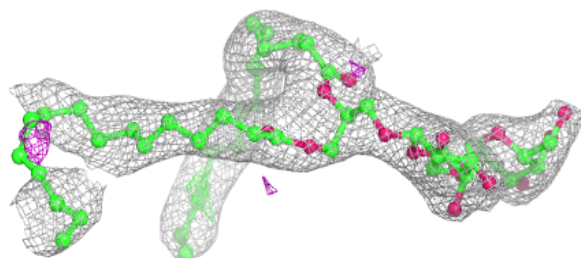
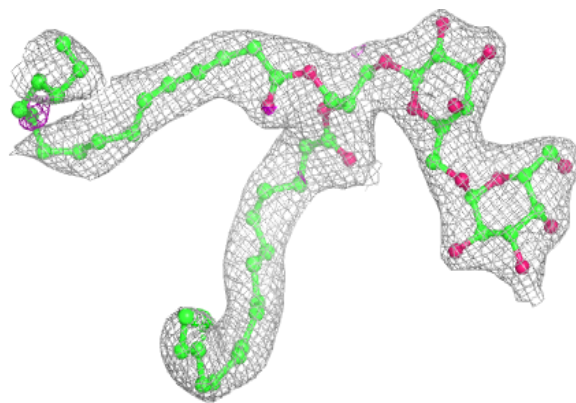
**Electron density around BCR k 101:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

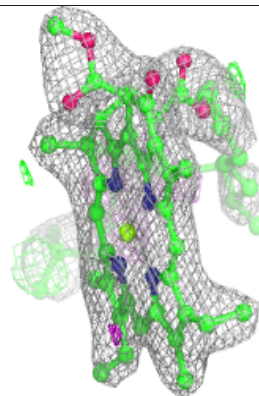
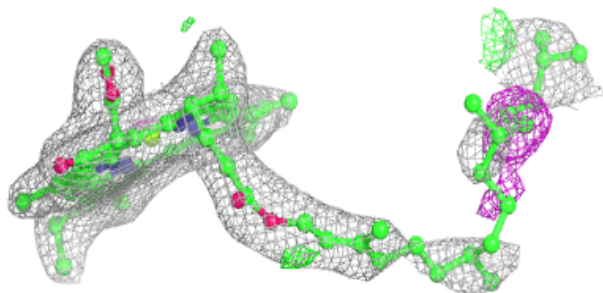
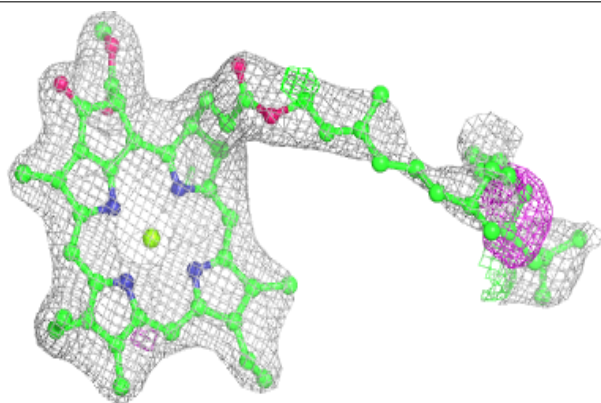


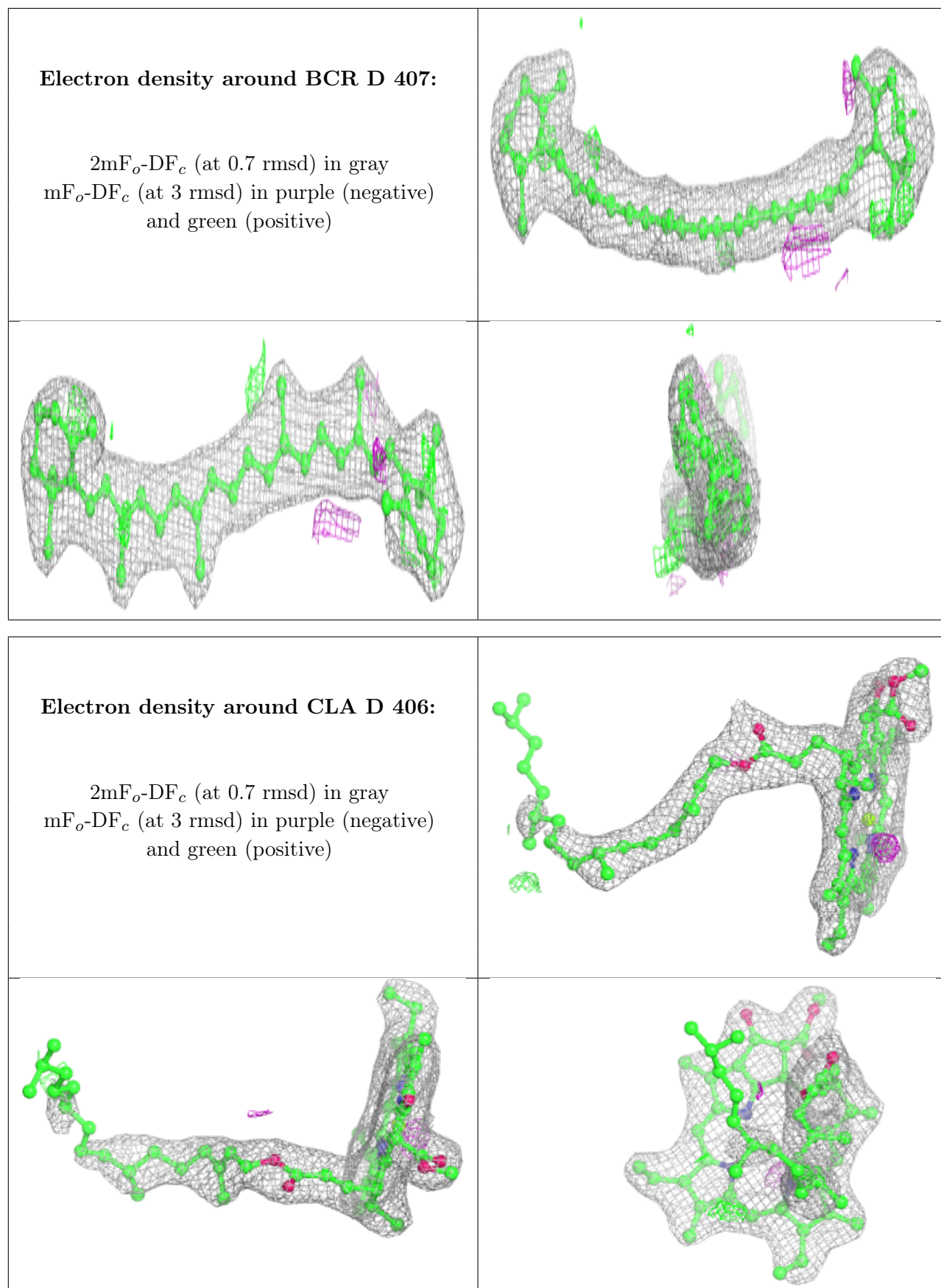
Electron density around DGD c 518:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around CLA a 409:**

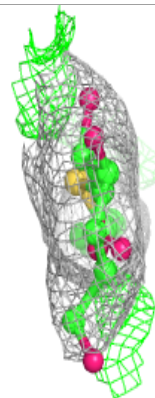
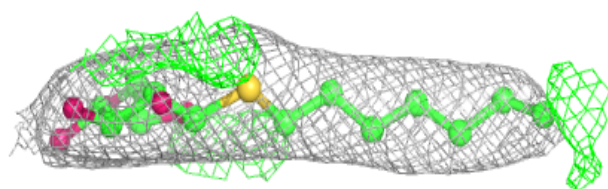
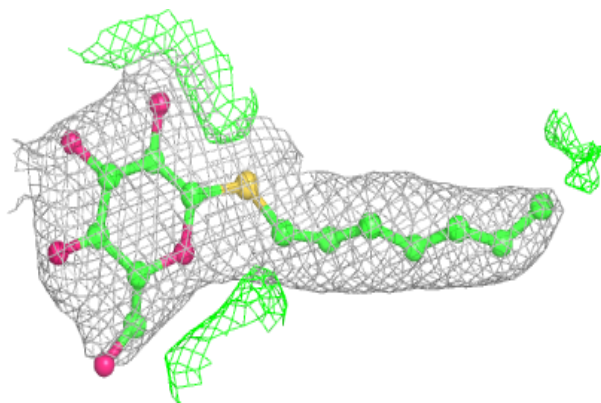
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



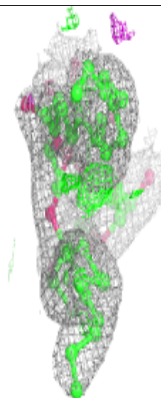
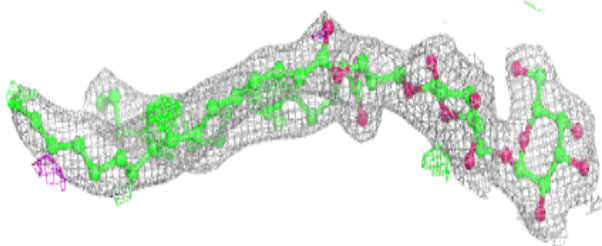
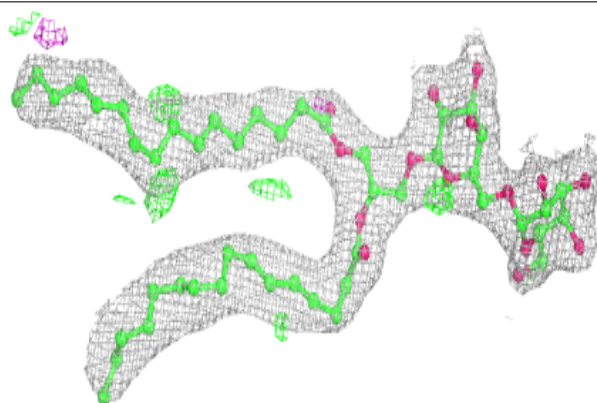


Electron density around HTG b 625:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

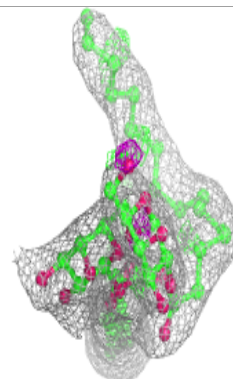
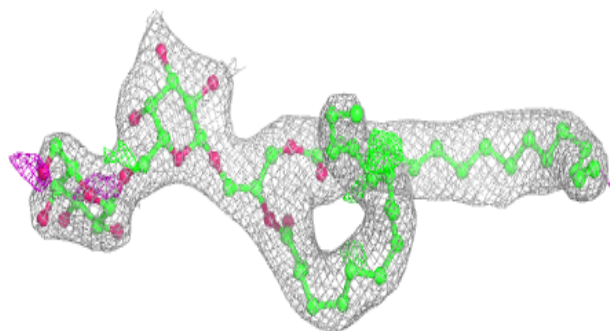
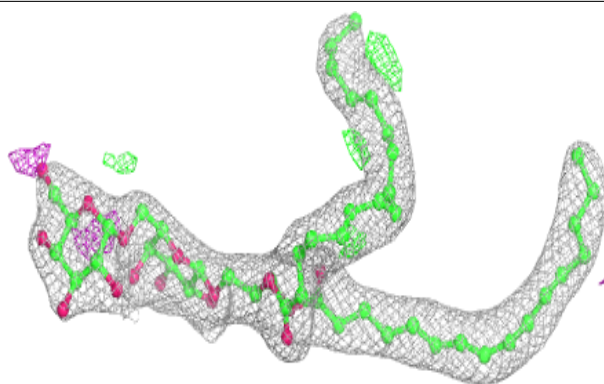
**Electron density around DGD C 519:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

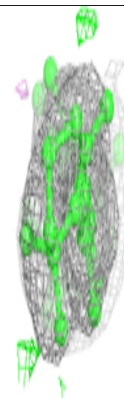
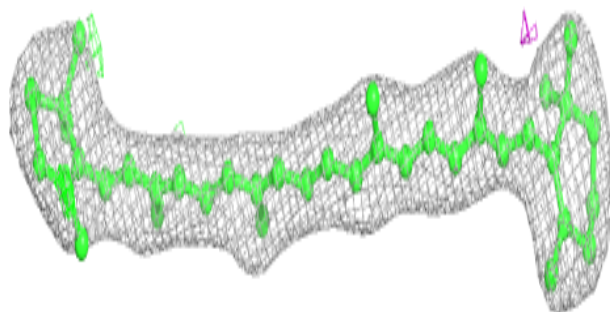
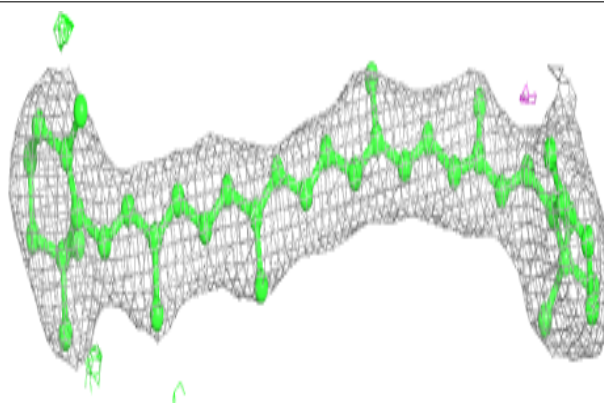


Electron density around DGD H 102:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

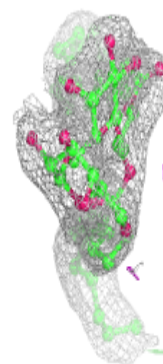
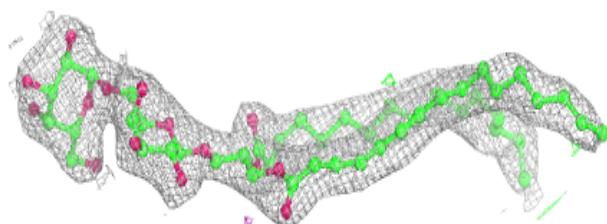
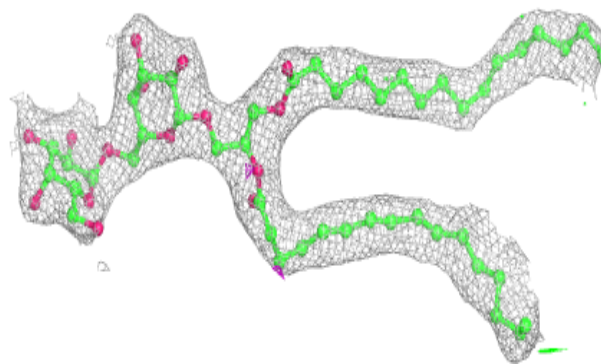
**Electron density around BCR c 515:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

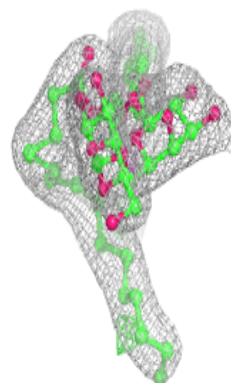
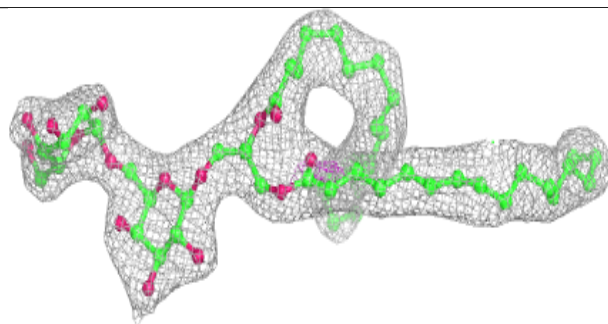
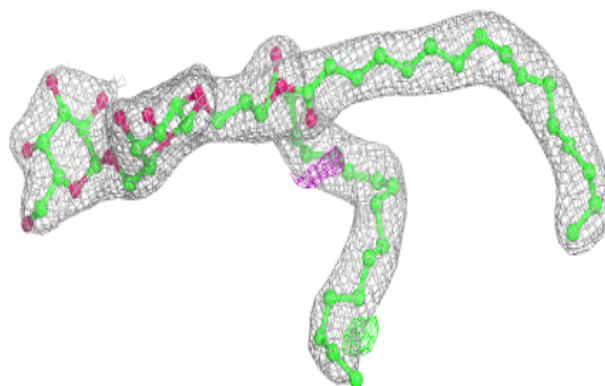


Electron density around DGD c 519:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

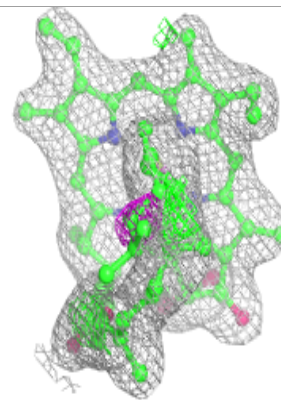
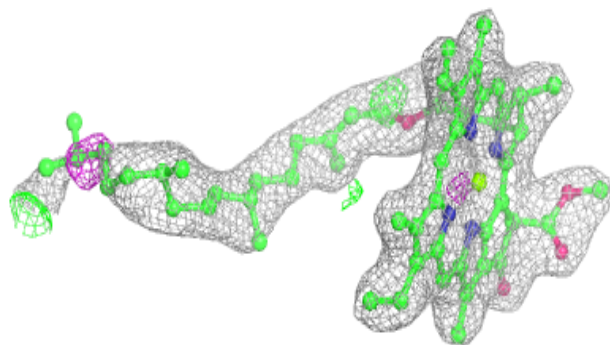
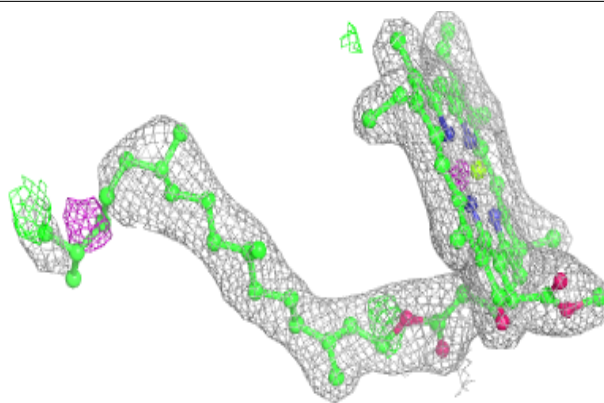
**Electron density around DGD h 102:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

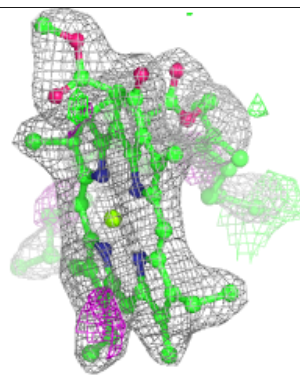
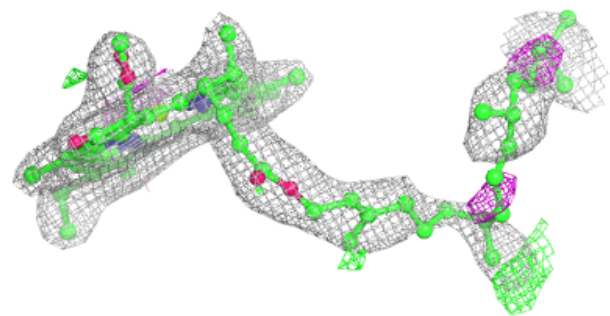
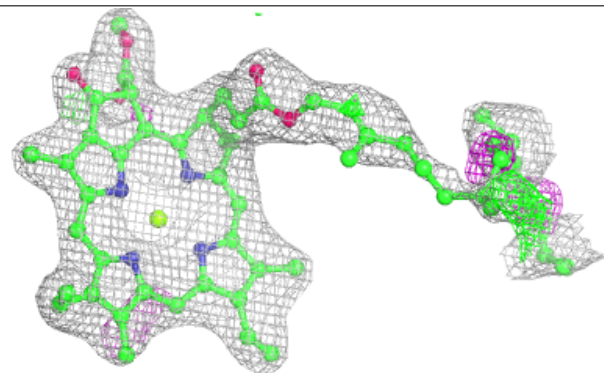


Electron density around CLA C 509:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

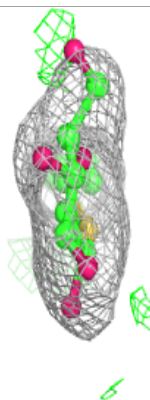
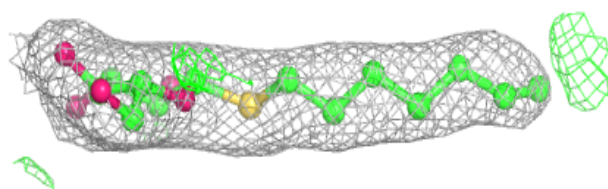
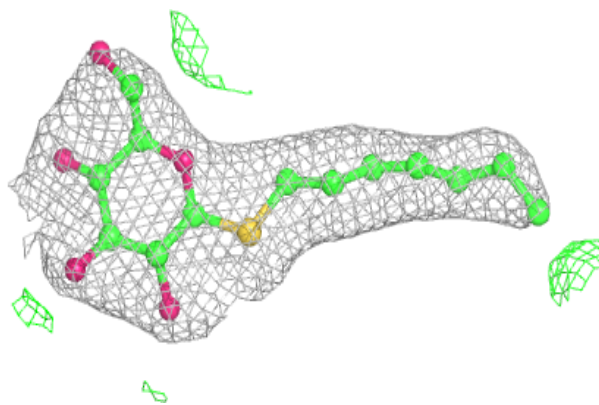
**Electron density around CLA A 408:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

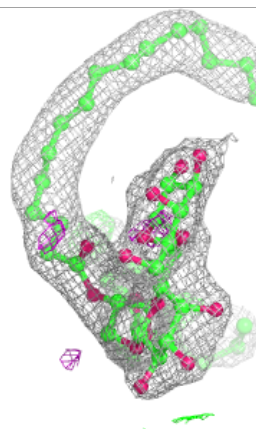
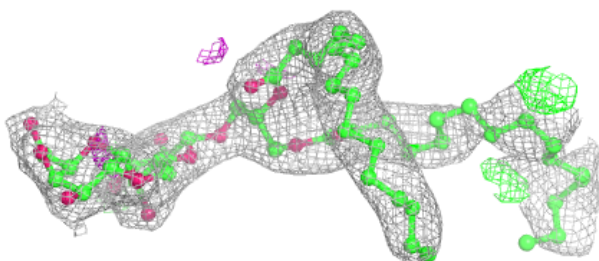
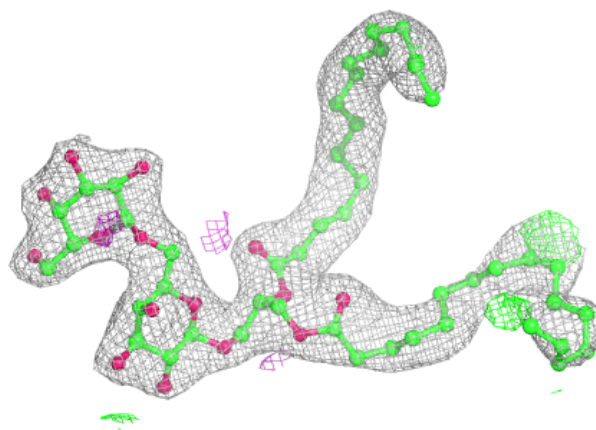


Electron density around HTG B 626:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

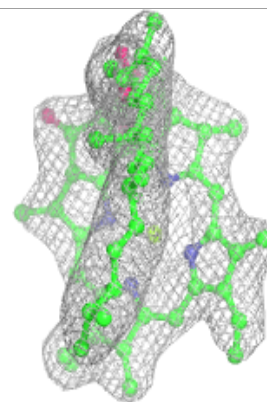
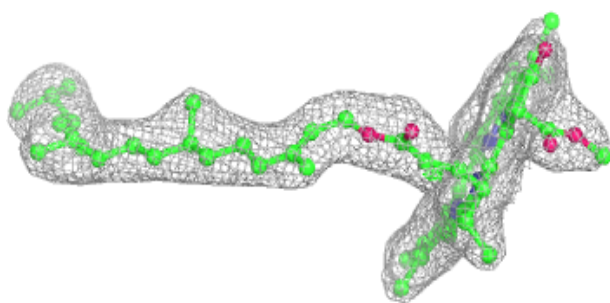
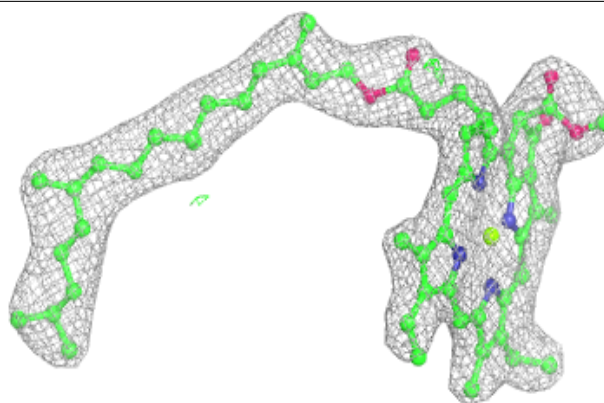
**Electron density around DGD C 518:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

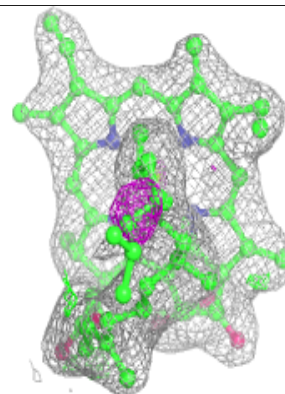
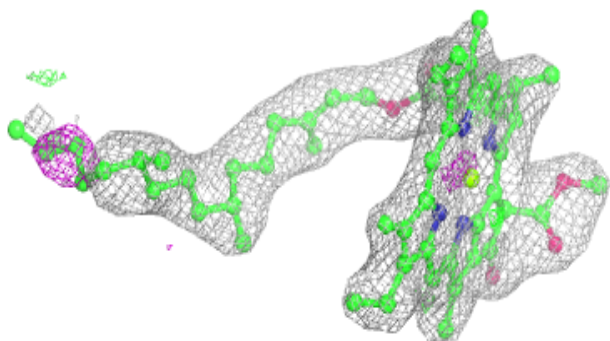
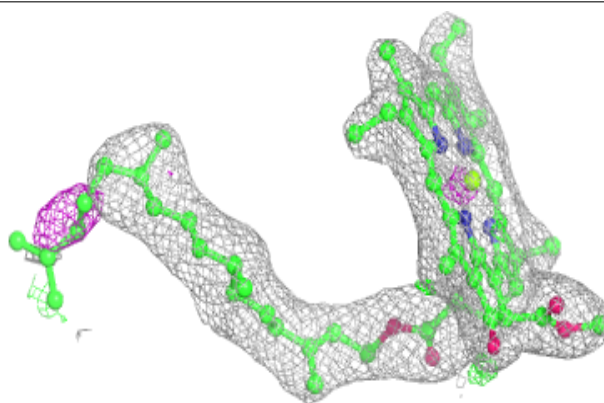


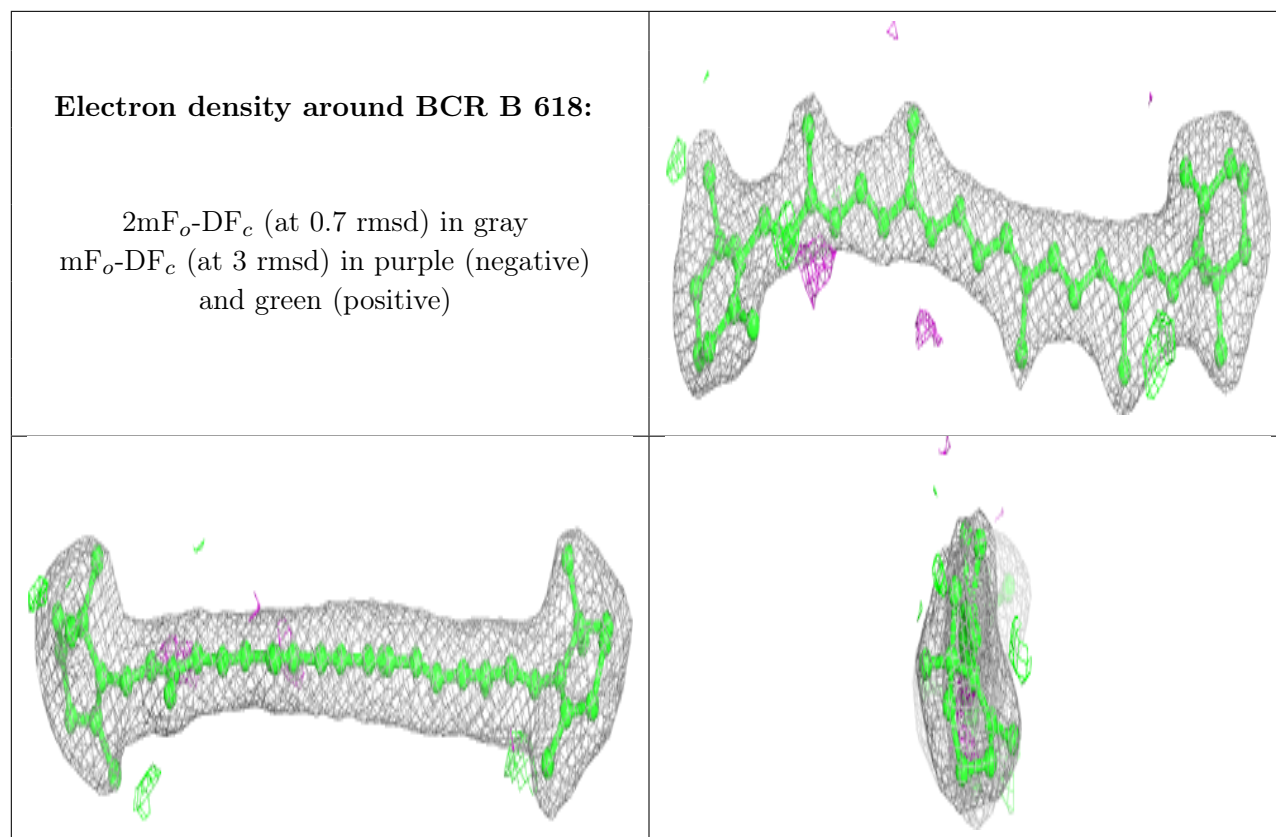
Electron density around CLA B 609:

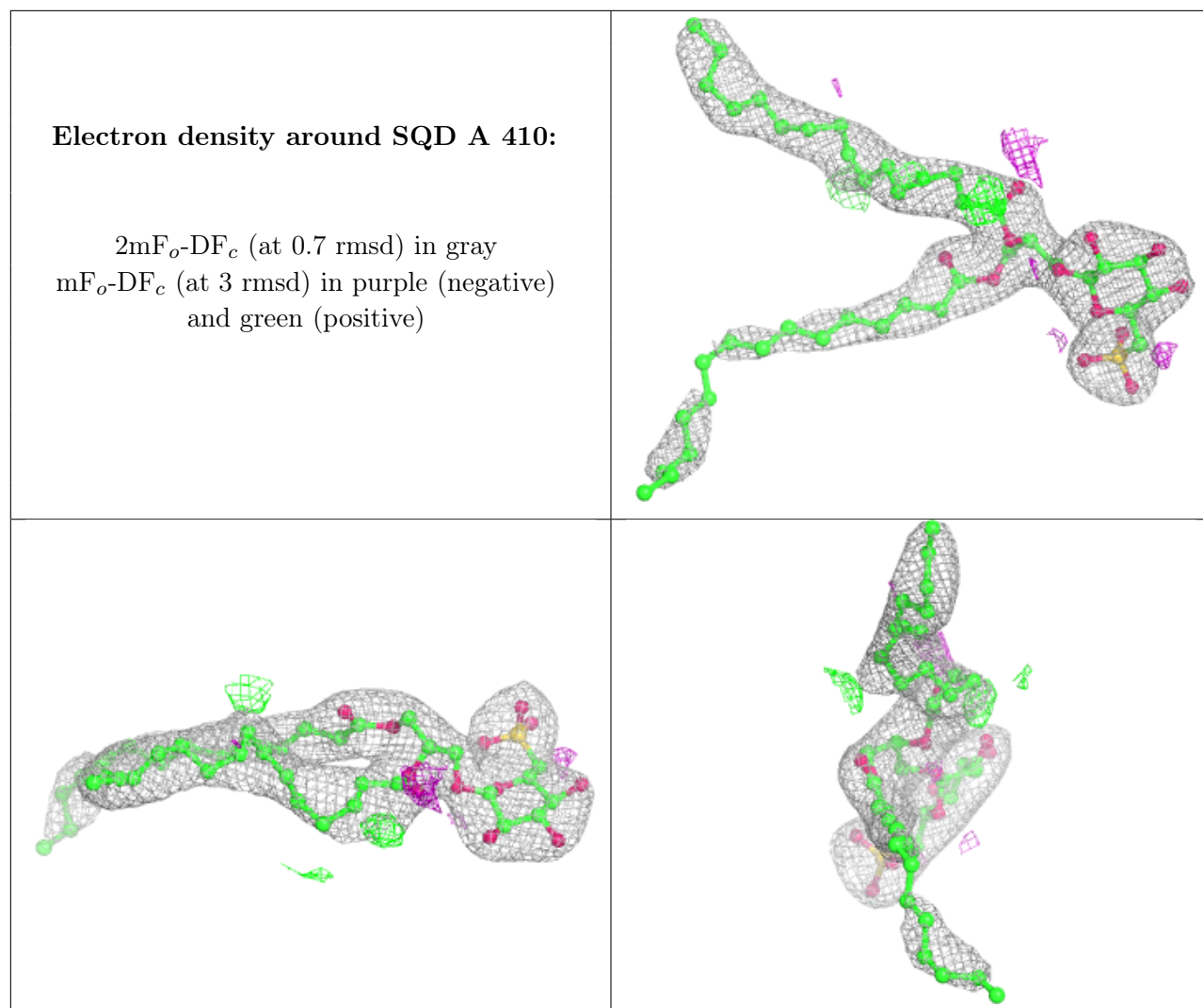
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around CLA c 509:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

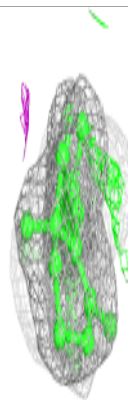
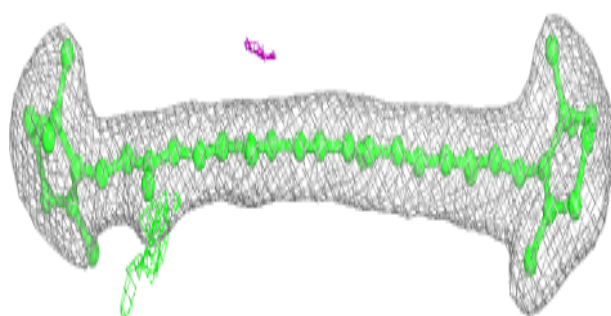
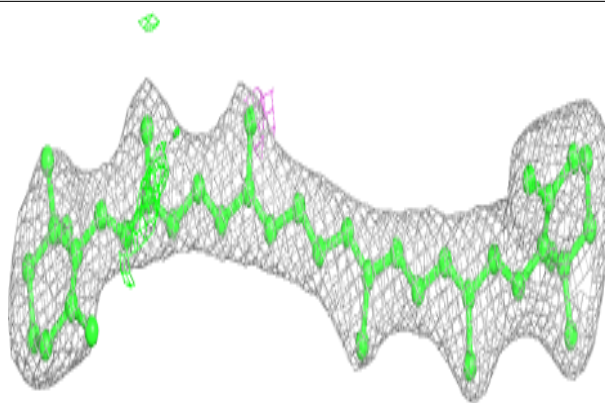




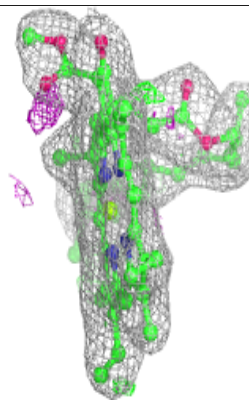
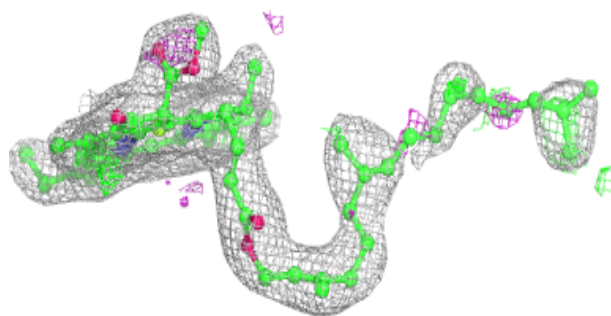
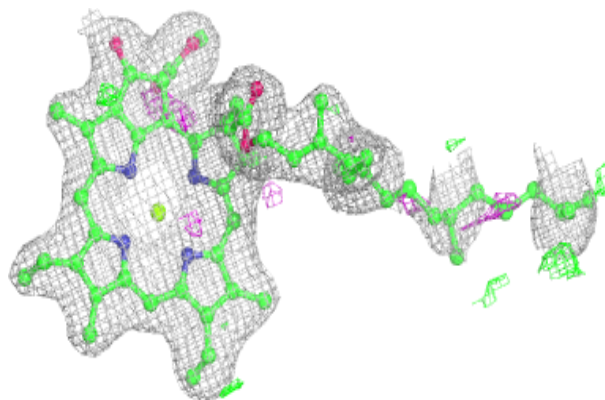


Electron density around BCR b 618:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

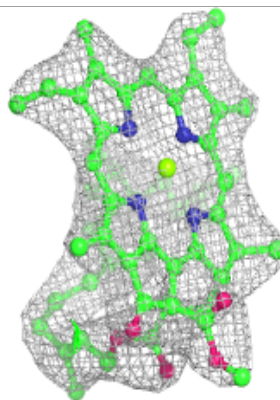
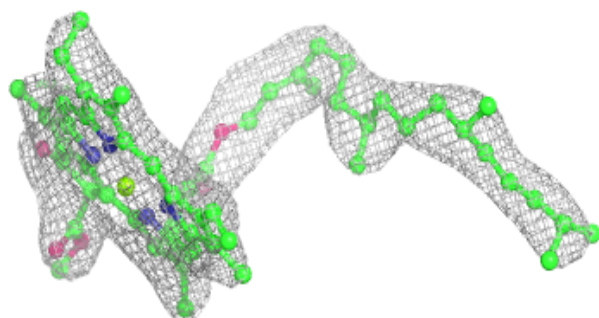
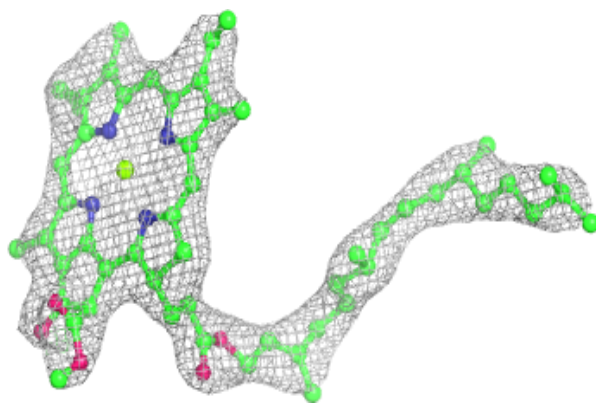
**Electron density around CLA a 407:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

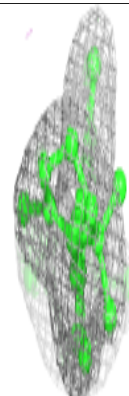
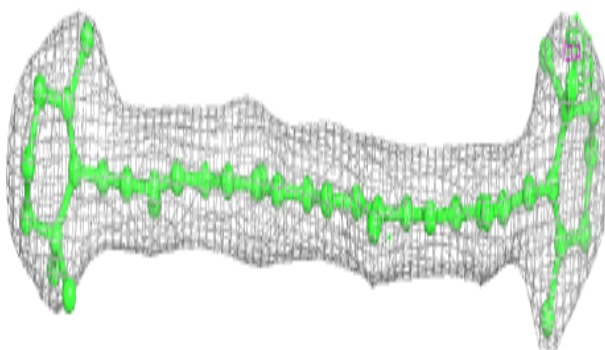
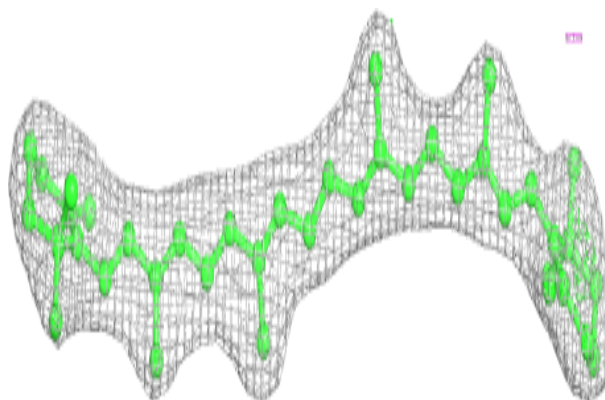


Electron density around CLA c 512:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

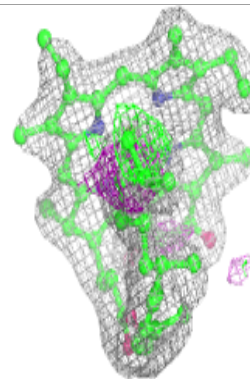
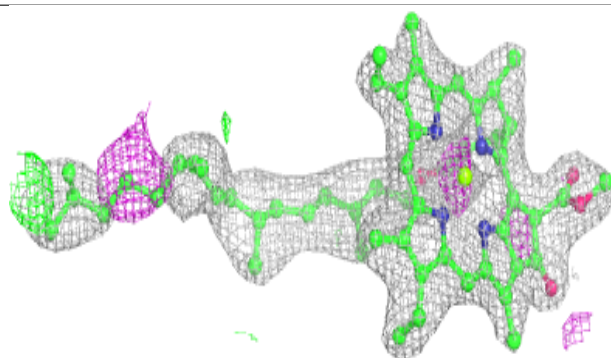
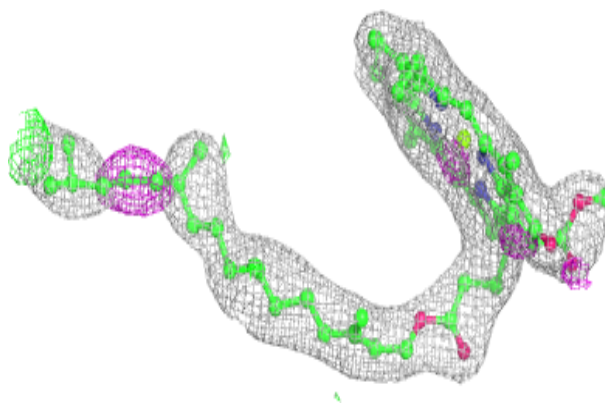
**Electron density around BCR C 516:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

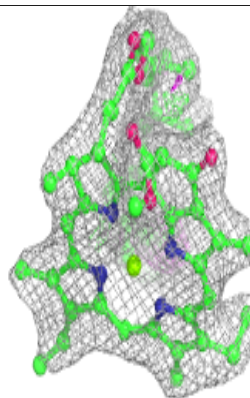
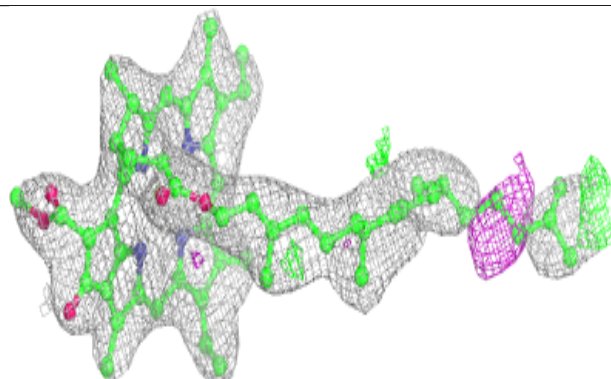
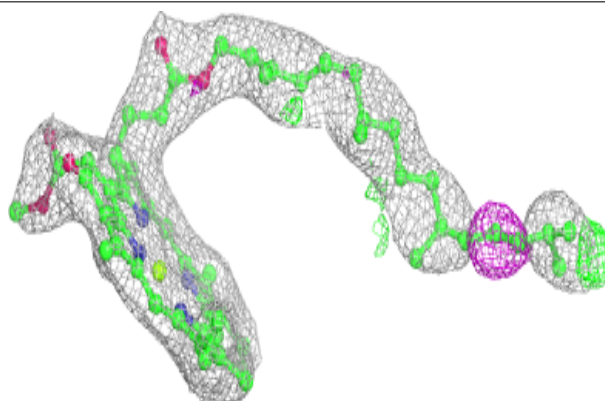


Electron density around CLA C 505:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

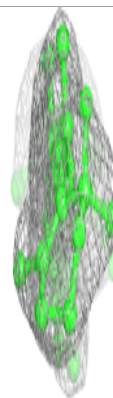
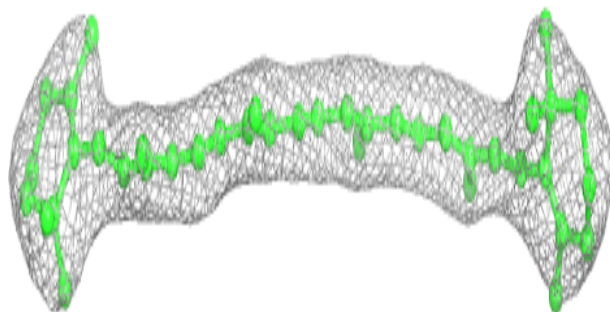
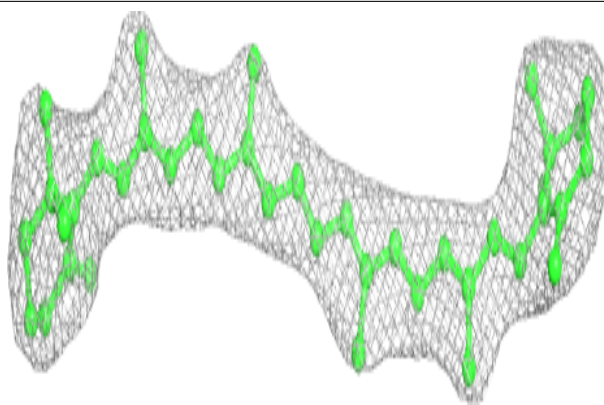
**Electron density around CLA c 505:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

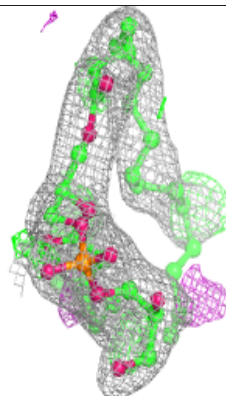
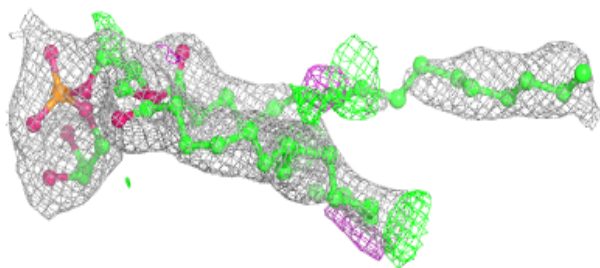
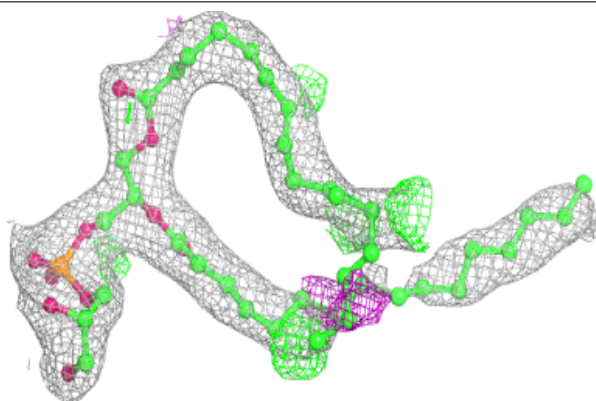


Electron density around BCR y 101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

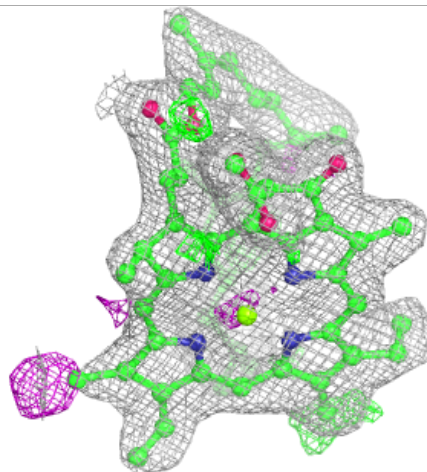
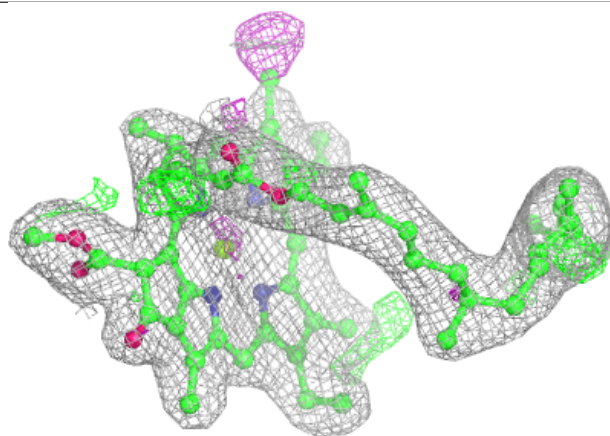
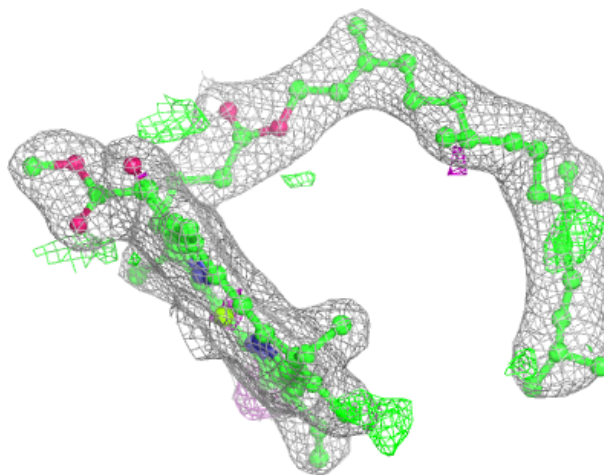
**Electron density around LHG D 411:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



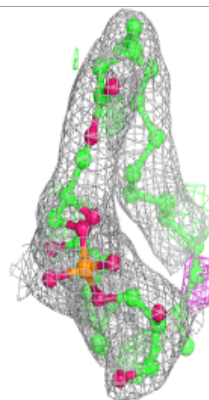
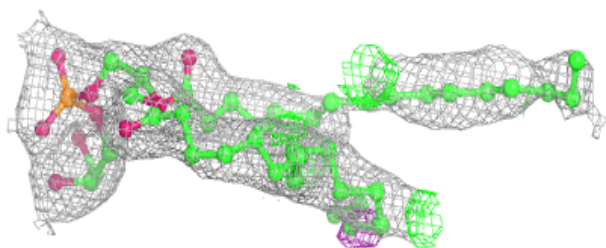
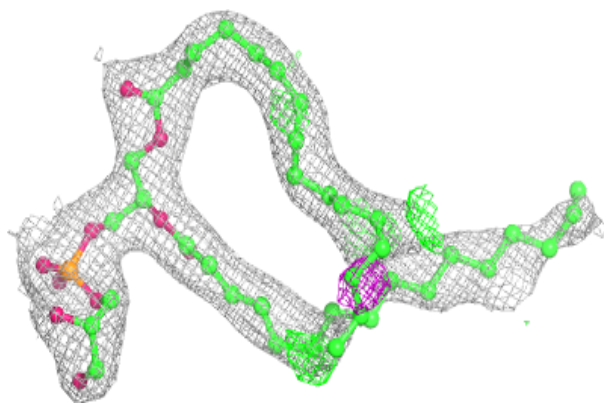
Electron density around CLA B 611:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

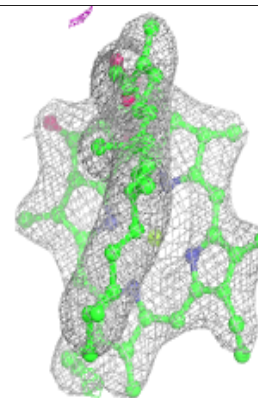
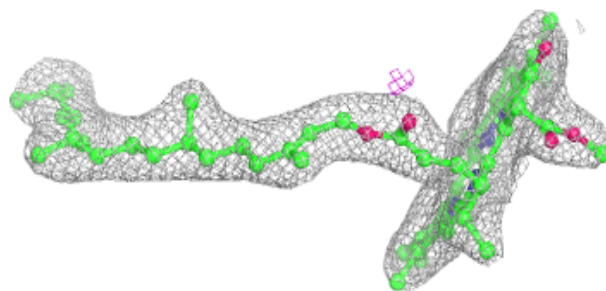
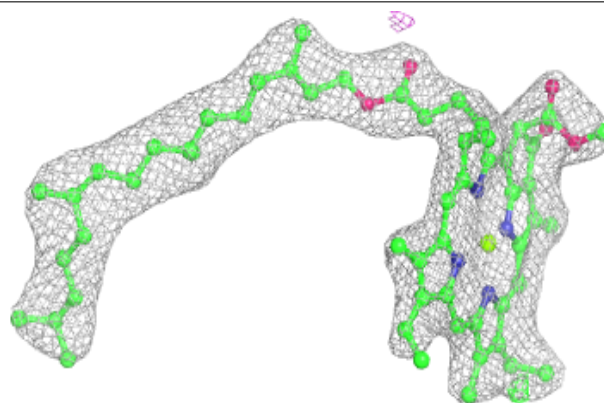


Electron density around LHG d 408:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

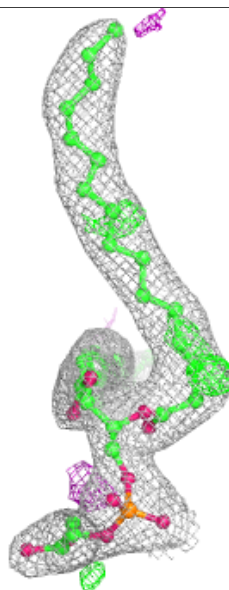
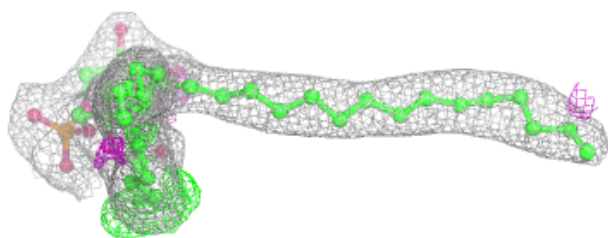
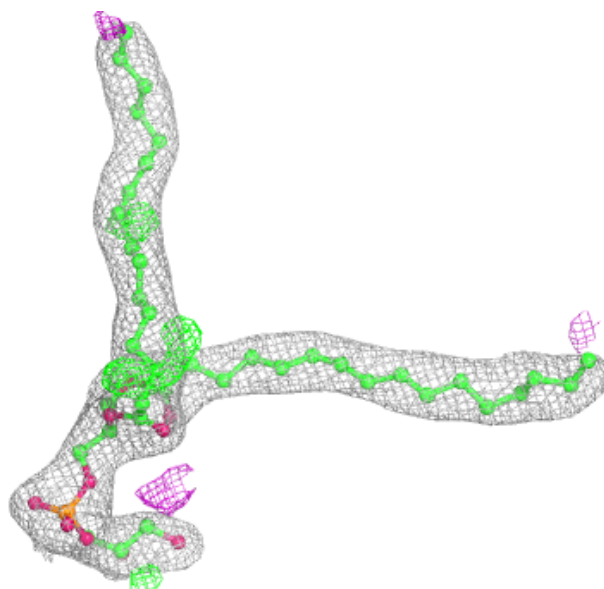
**Electron density around CLA b 609:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



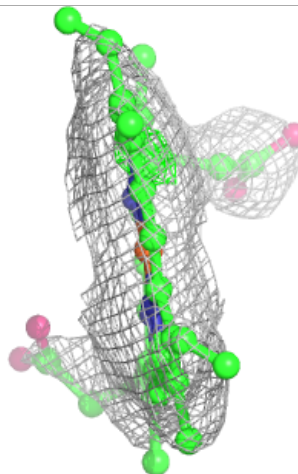
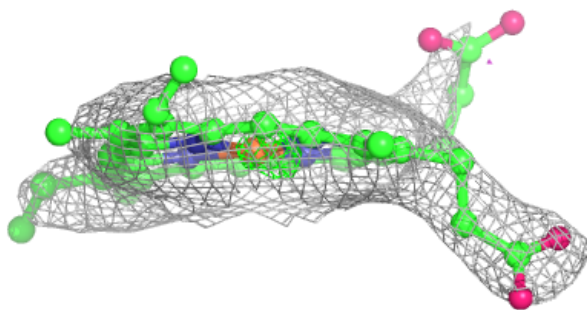
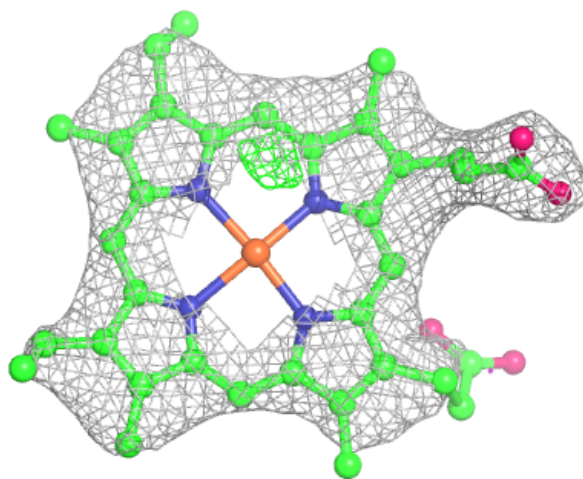
Electron density around LHG 1 101:

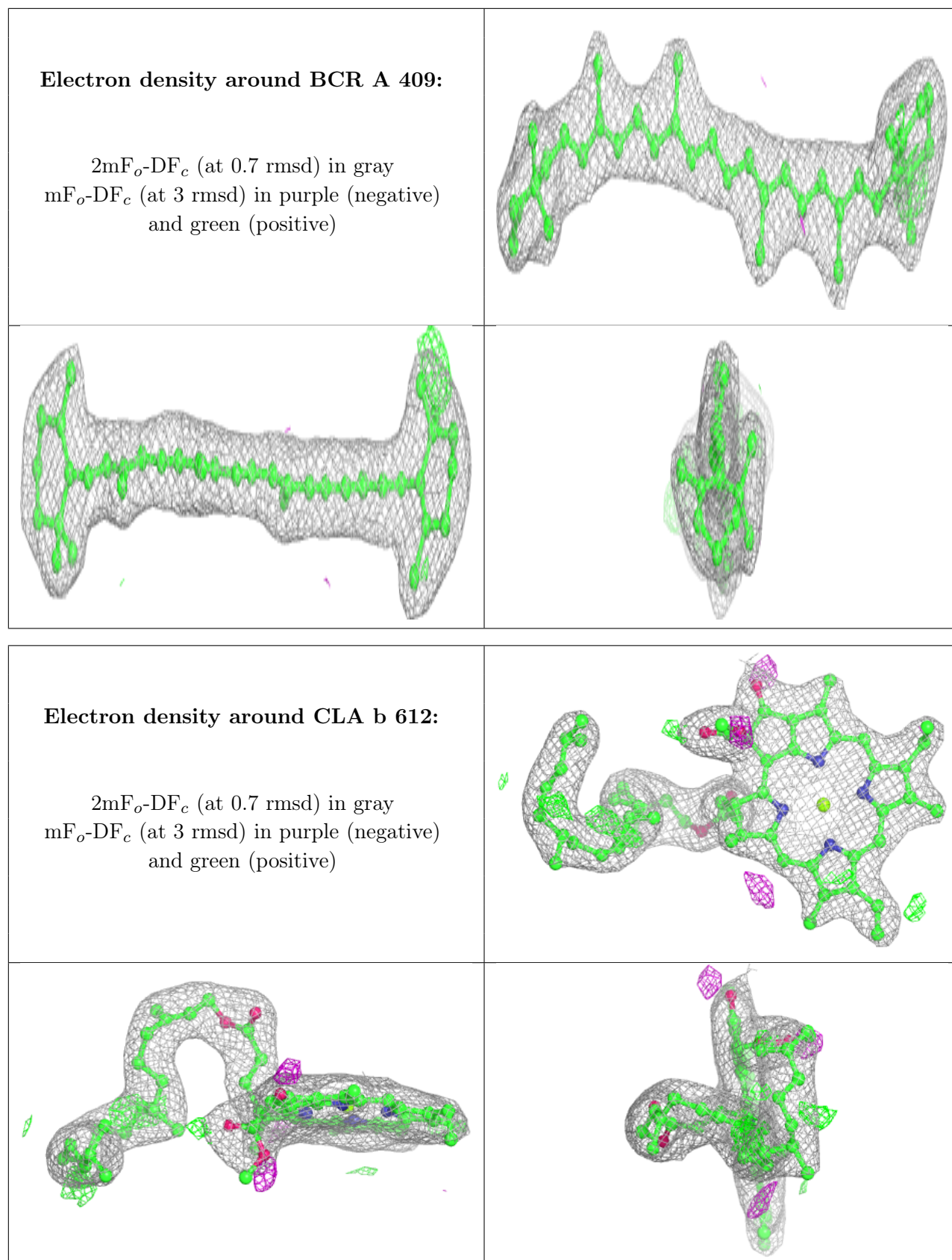
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around HEM e 87:

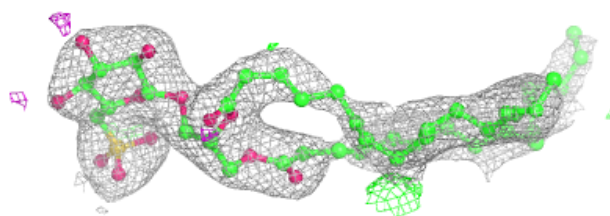
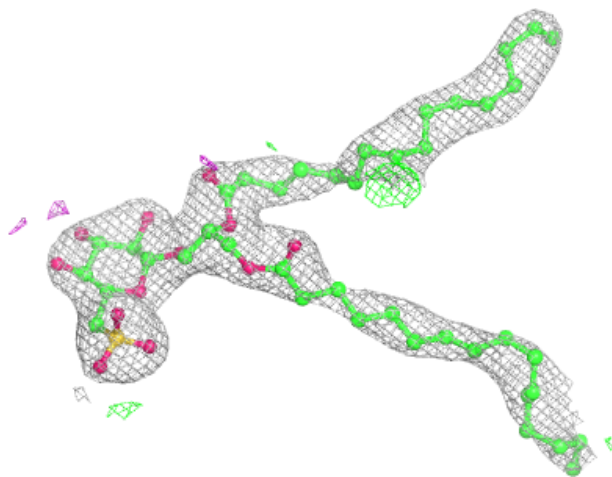
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





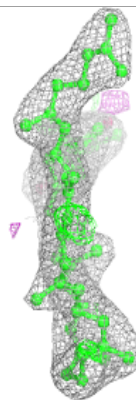
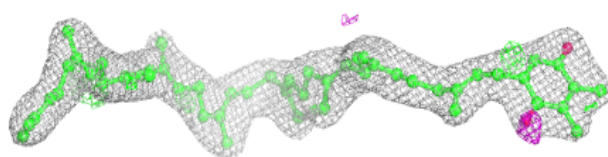
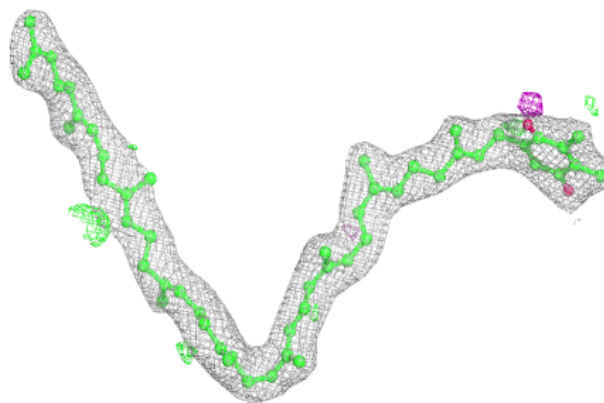
Electron density around SQD a 411:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

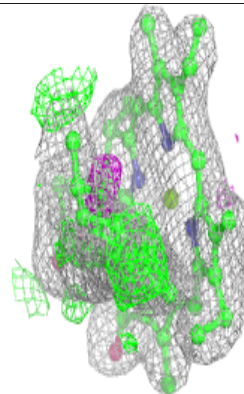
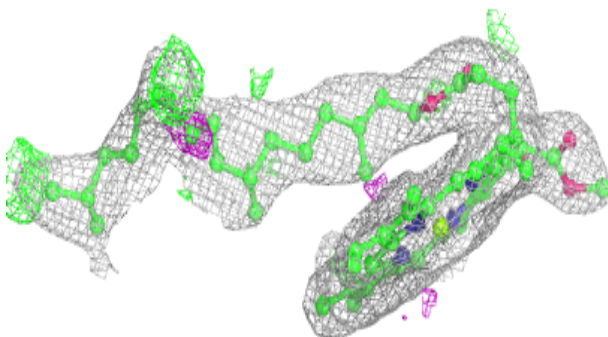
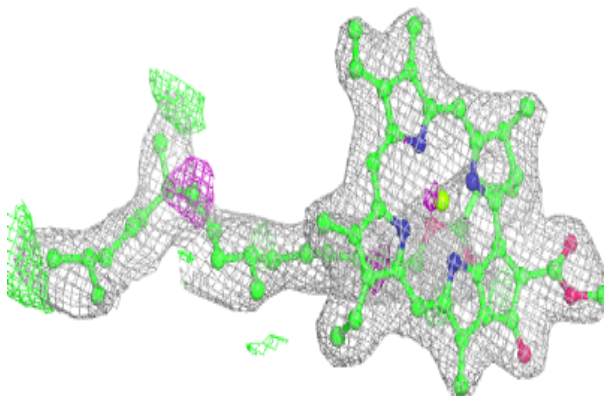


Electron density around PL9 D 408:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

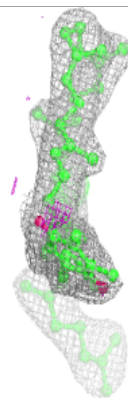
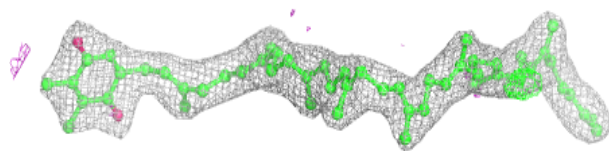
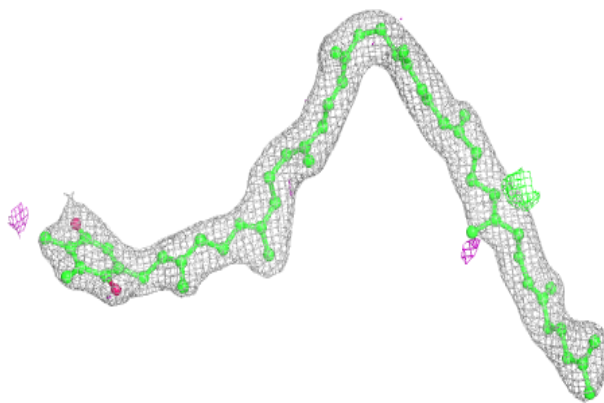
**Electron density around CLA b 614:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



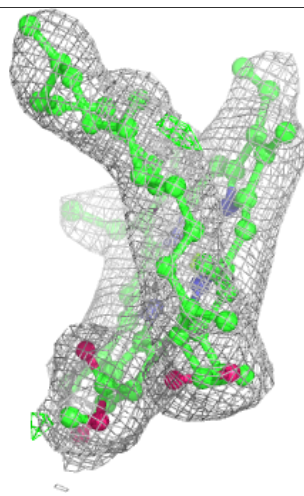
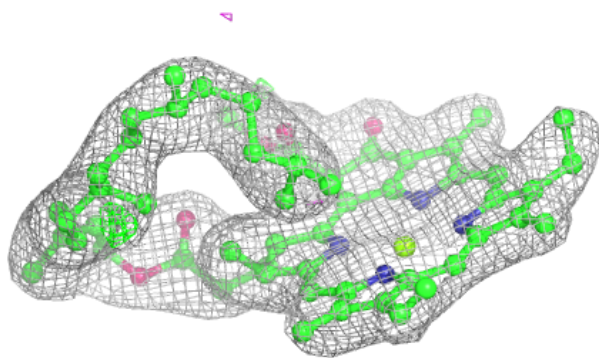
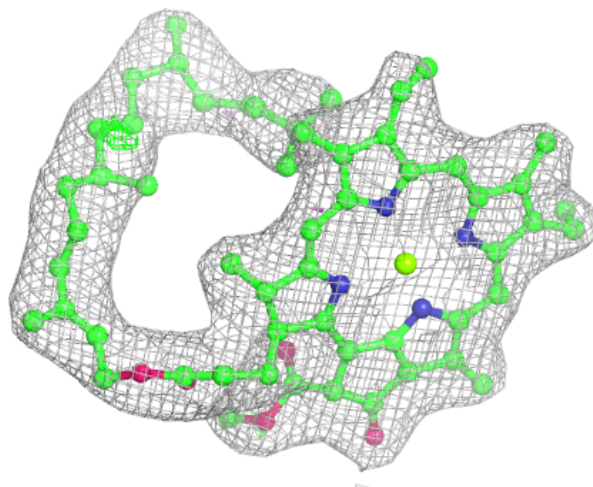
Electron density around PL9 d 405:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



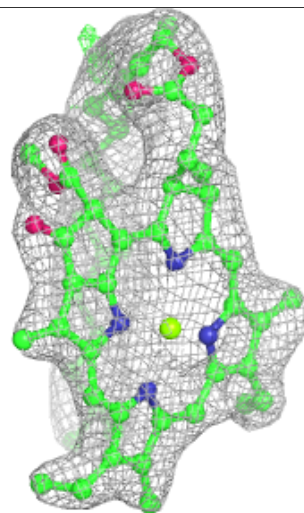
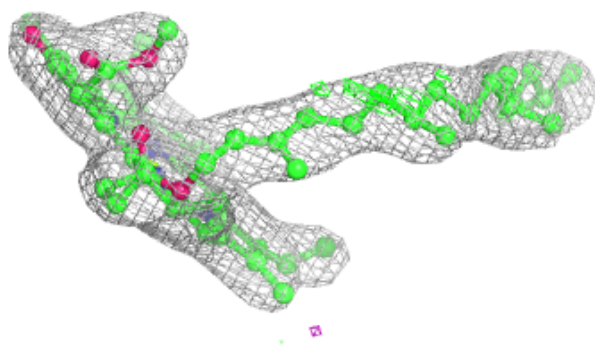
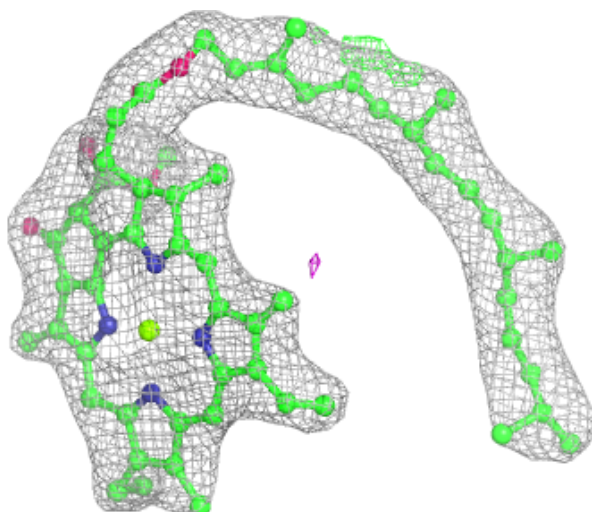
Electron density around CLA b 615:

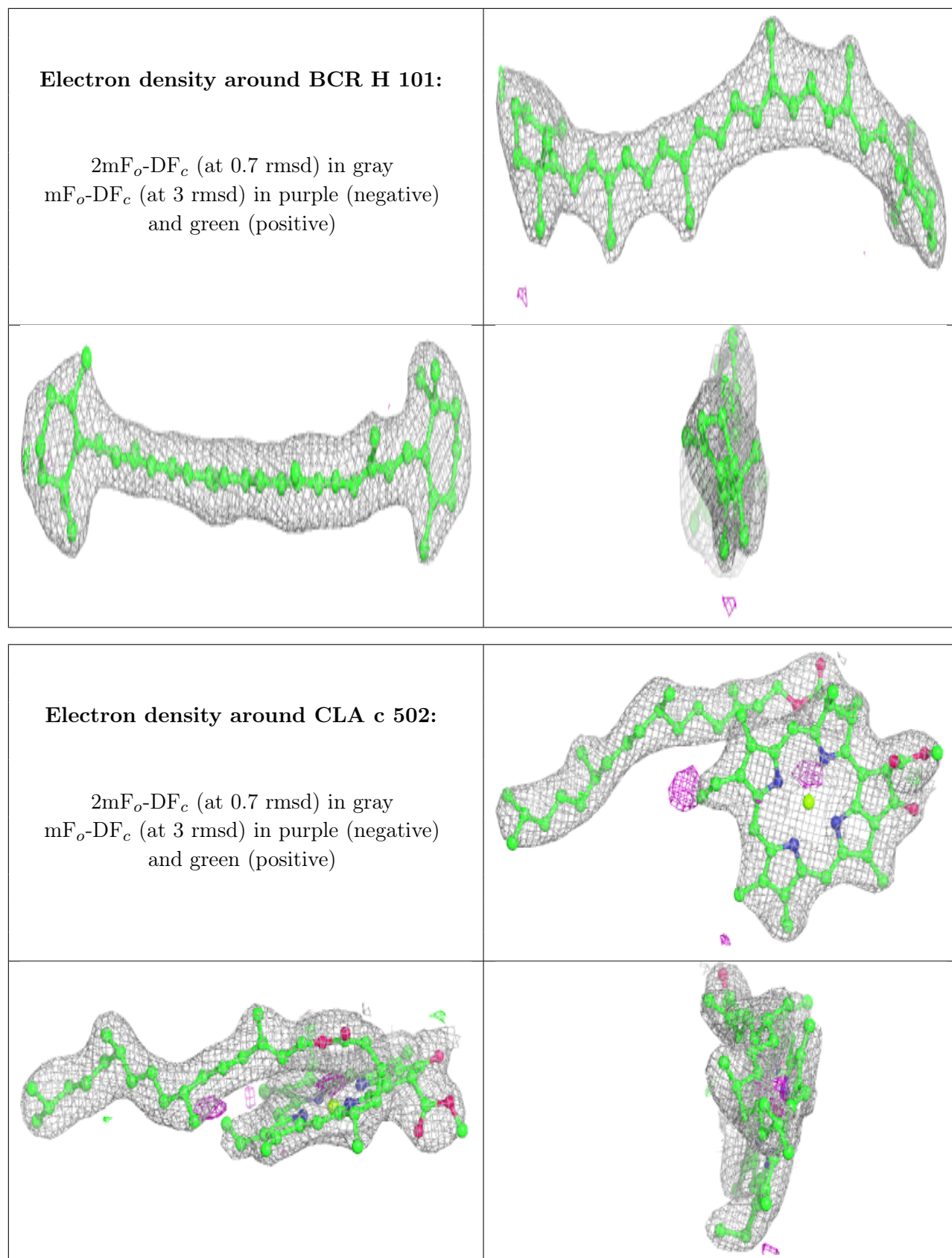
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

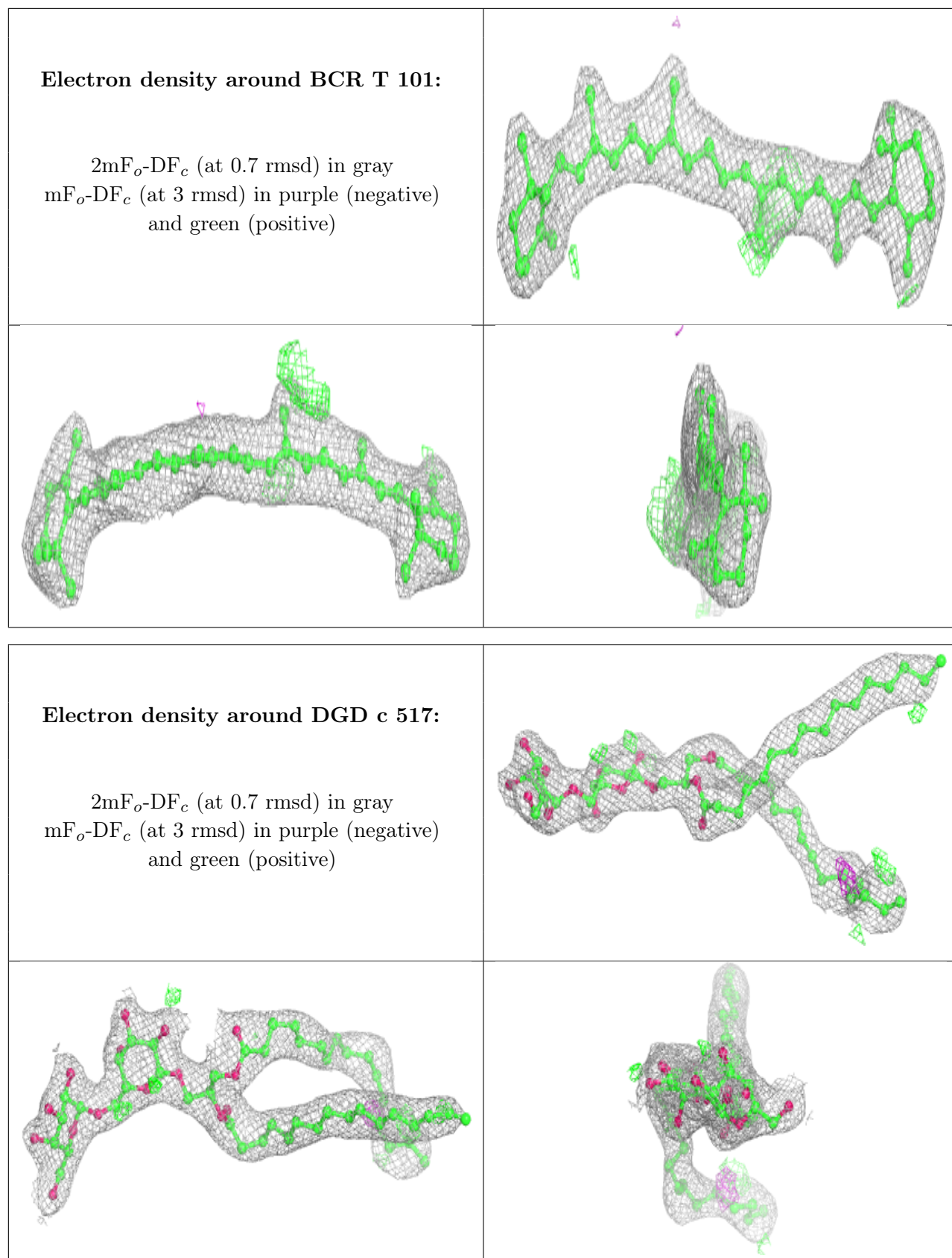


Electron density around CLA C 508:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

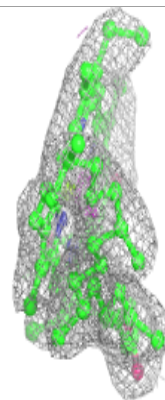
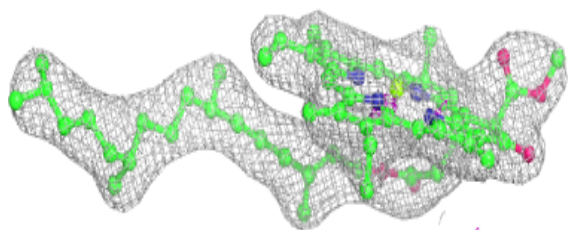
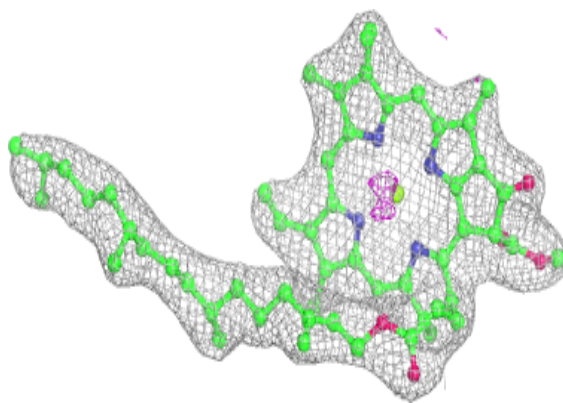




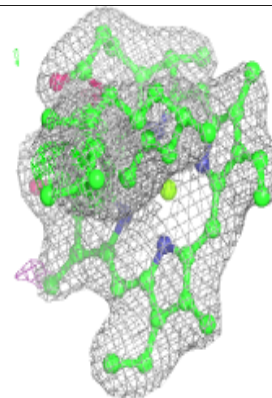
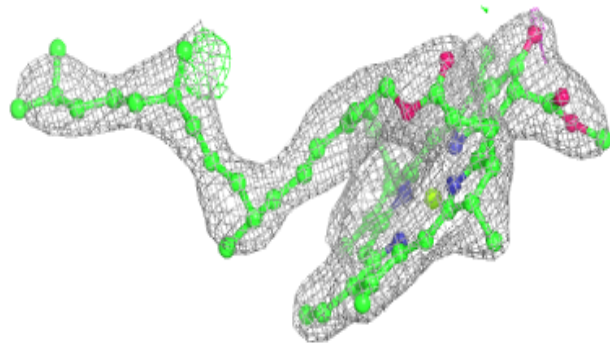
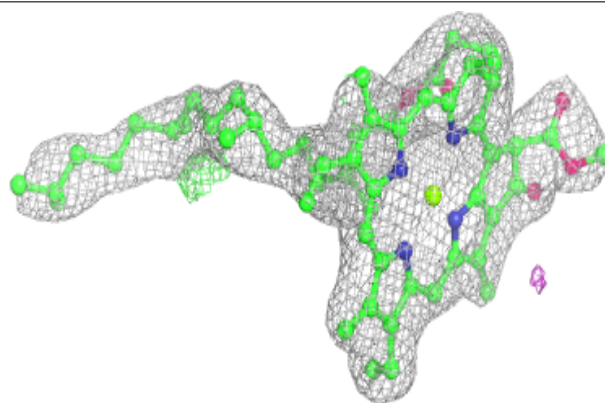


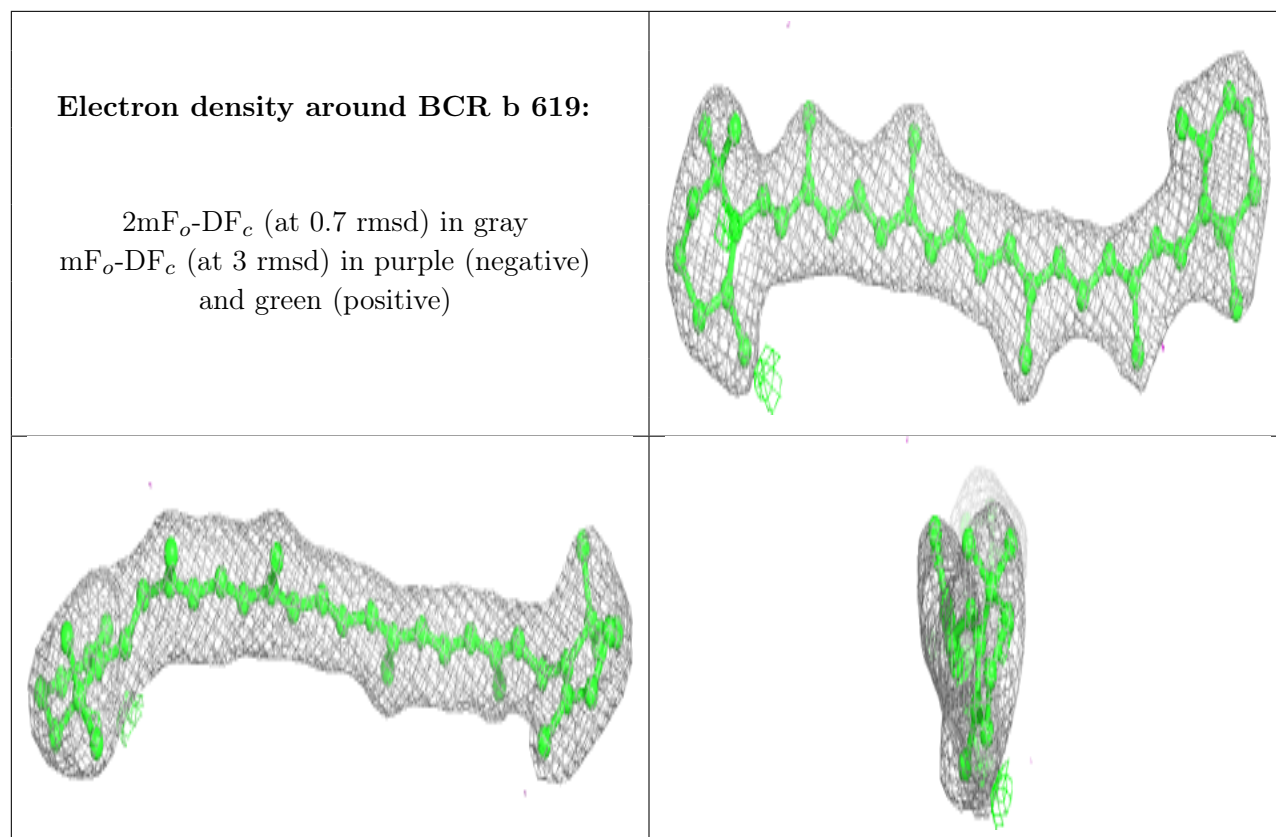
Electron density around CLA C 502:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around CLA c 506:**

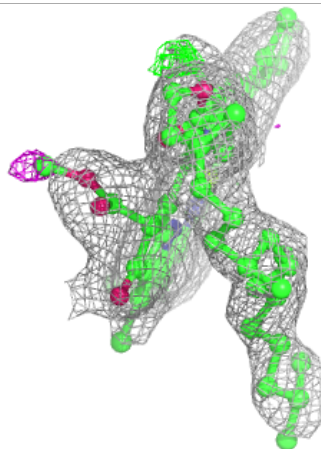
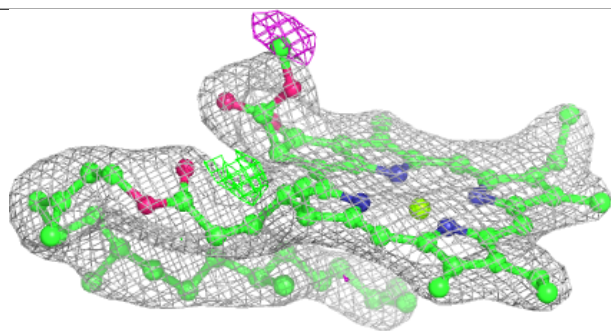
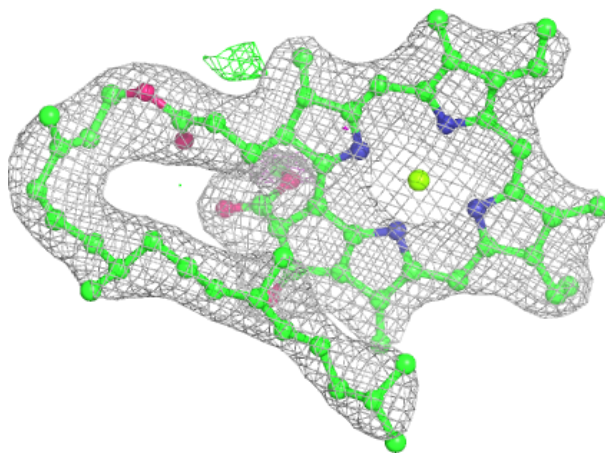
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





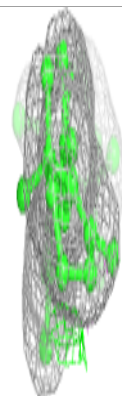
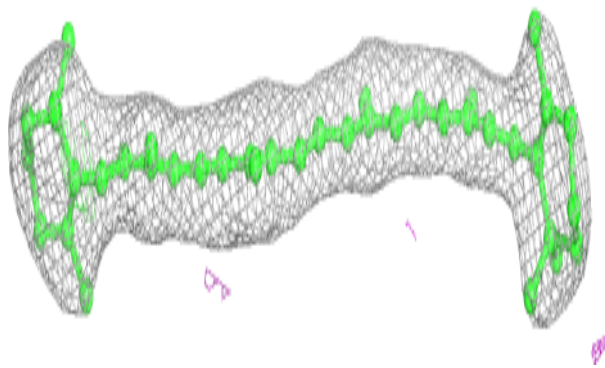
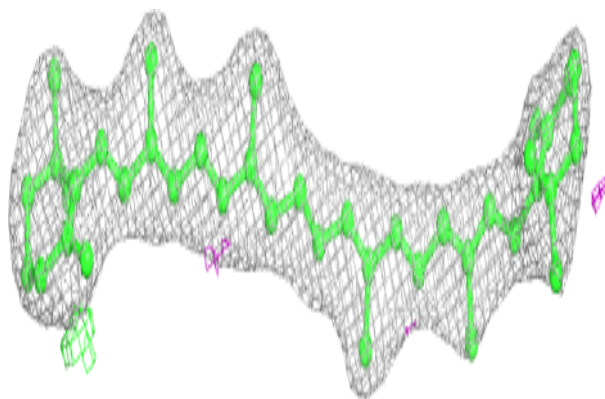
Electron density around CLA C 510:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



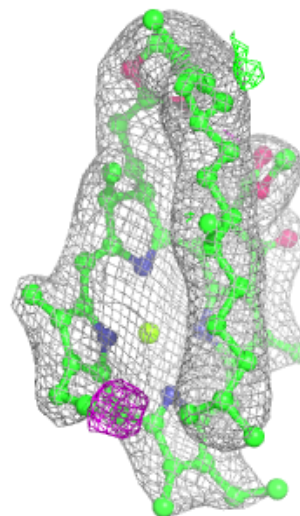
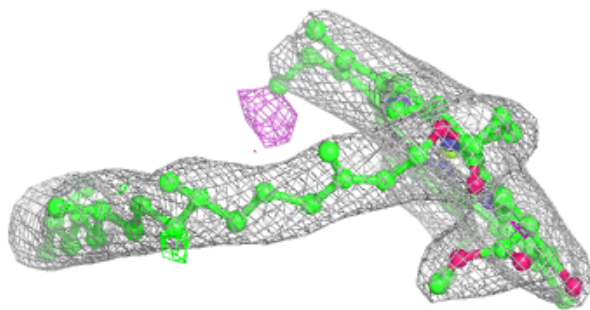
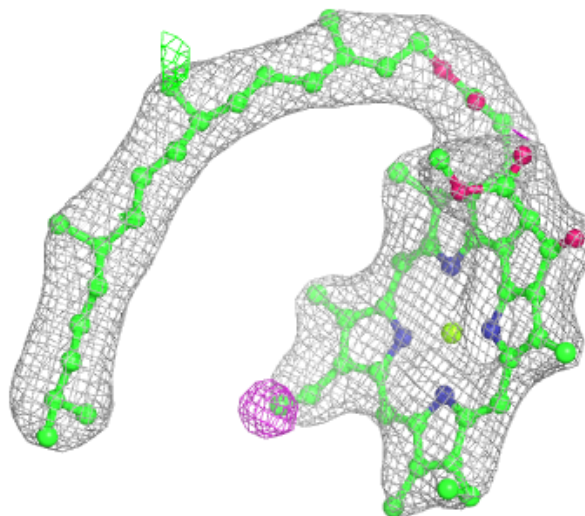
Electron density around BCR c 516:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



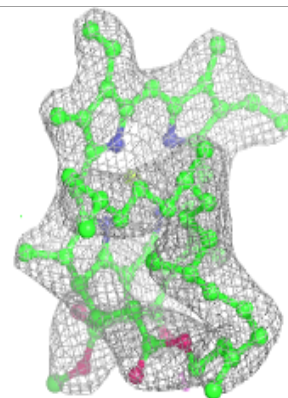
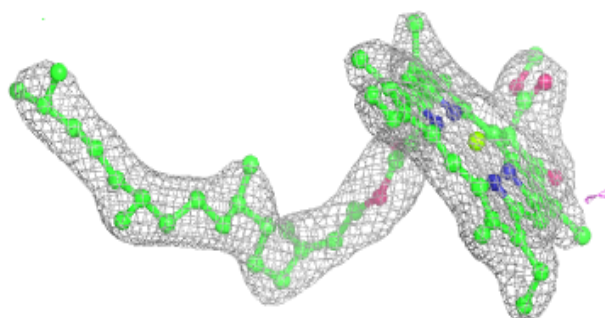
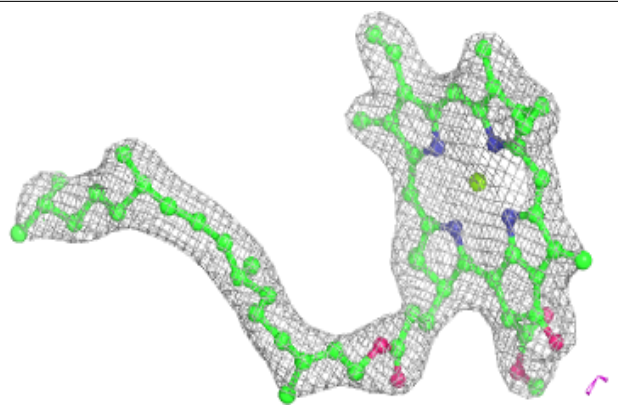
Electron density around CLA c 508:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

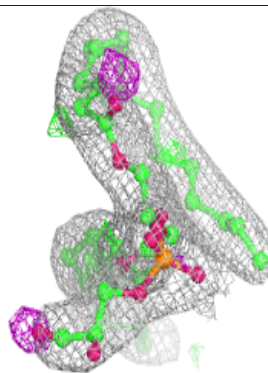
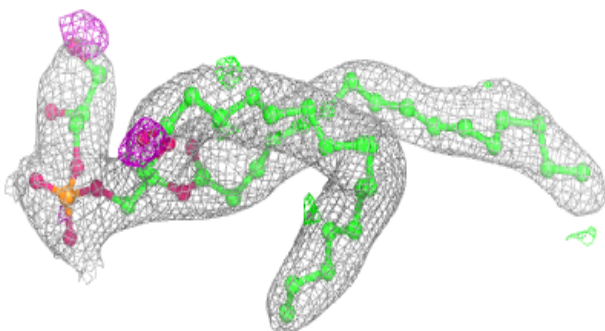
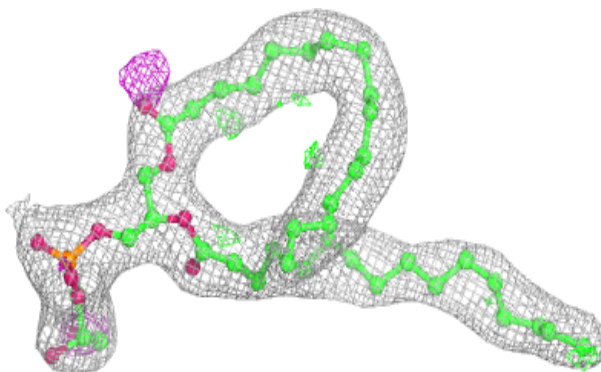


Electron density around CLA C 512:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

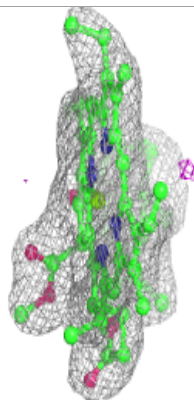
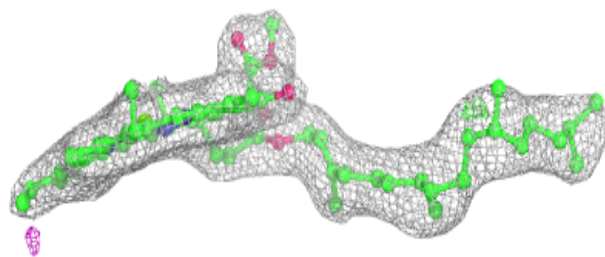
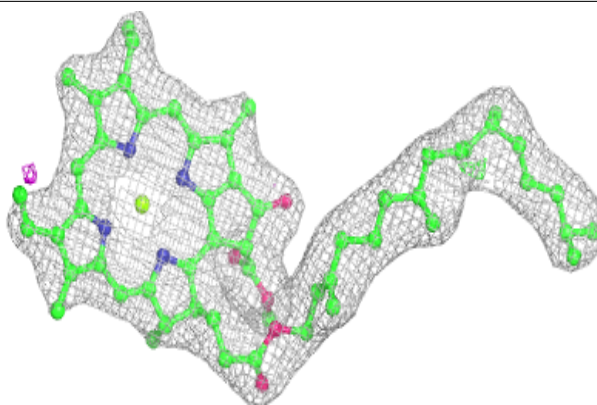
**Electron density around LHG D 409:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

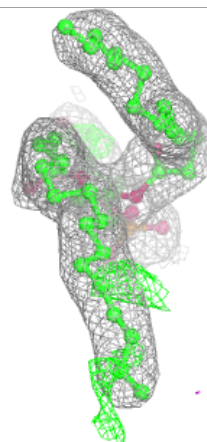
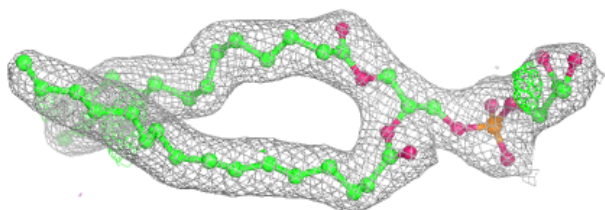
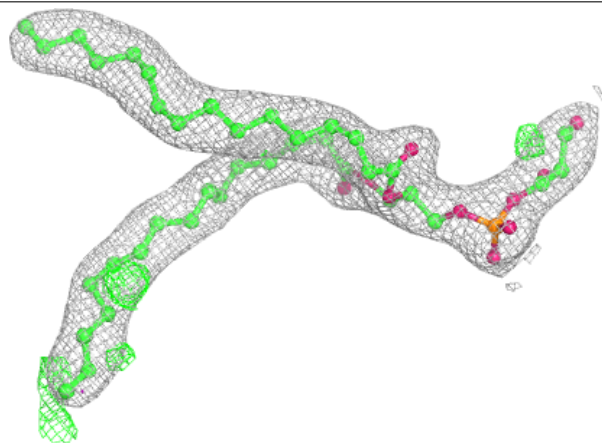


Electron density around CLA b 602:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

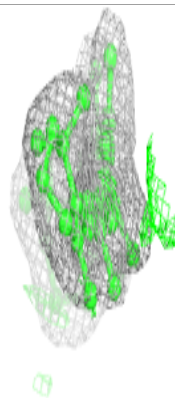
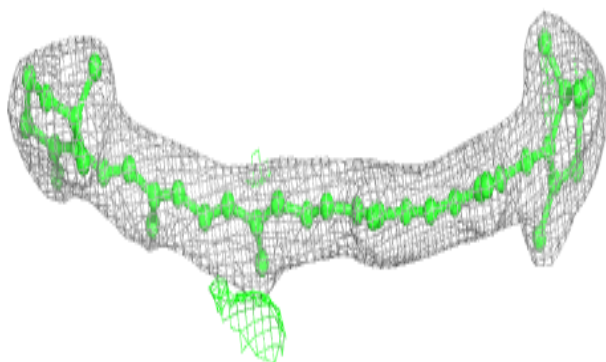
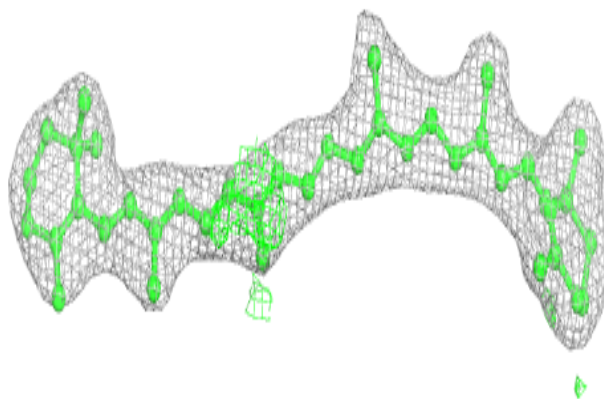
**Electron density around LHG d 407:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

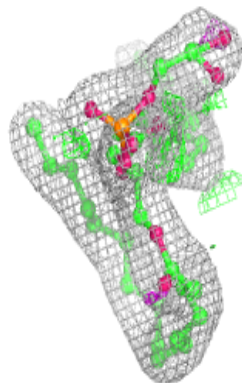
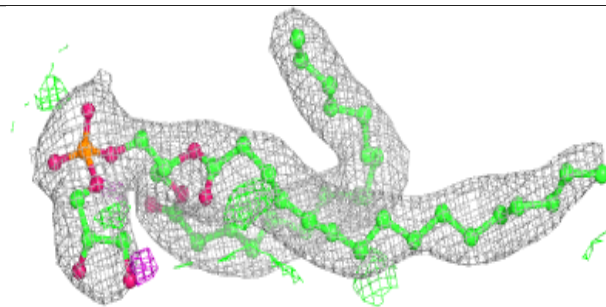
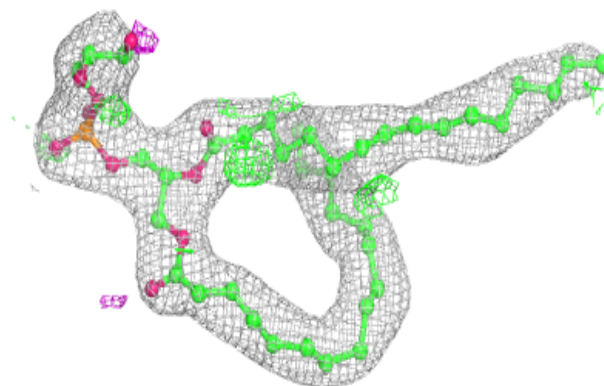


Electron density around BCR t 103:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

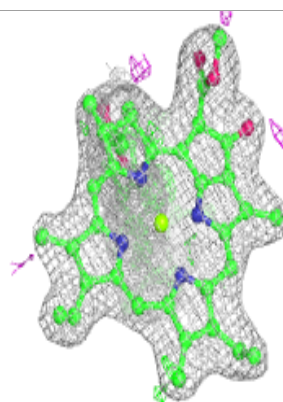
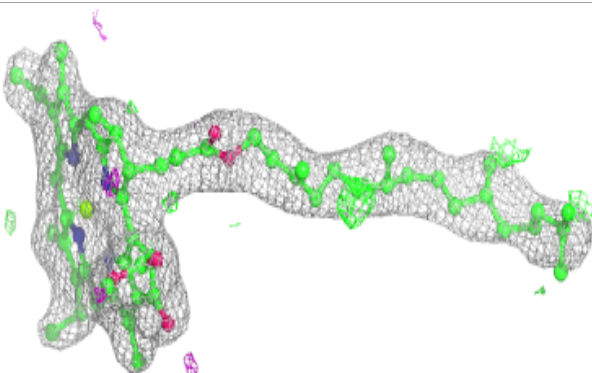
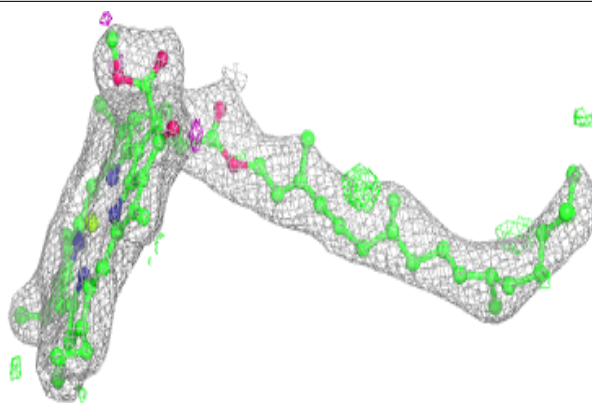
**Electron density around LHG d 711:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

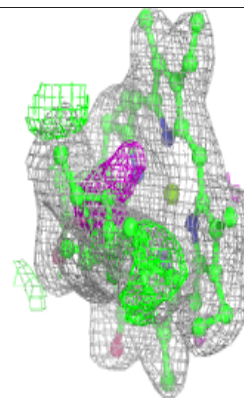
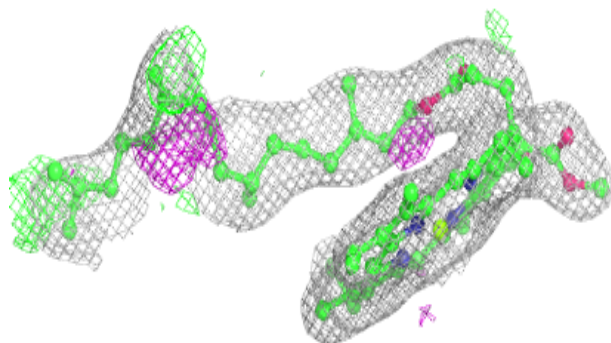
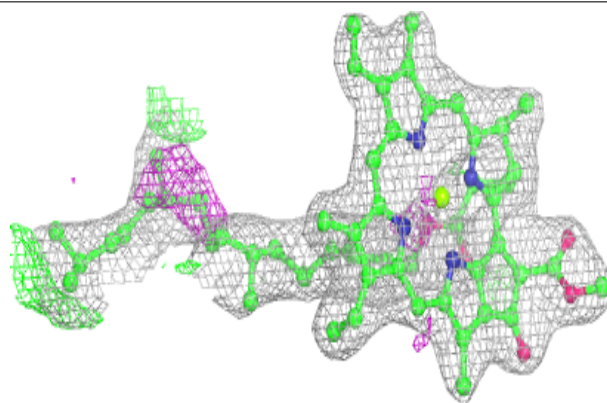


Electron density around CLA b 604:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

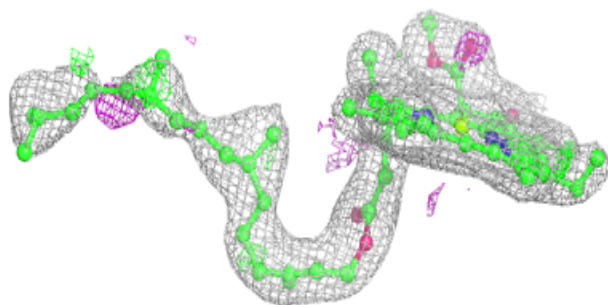
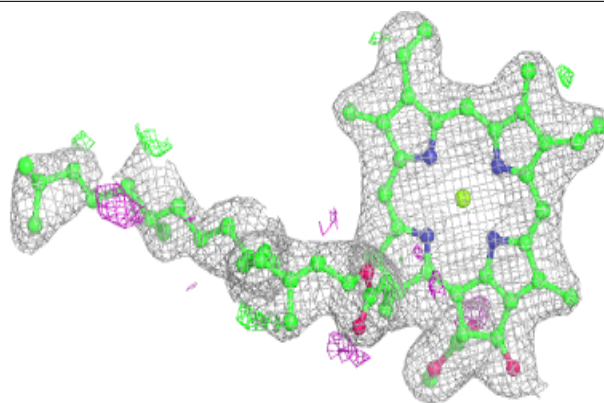
**Electron density around CLA B 614:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

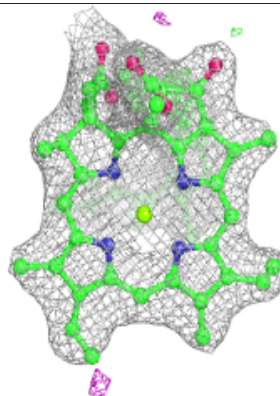
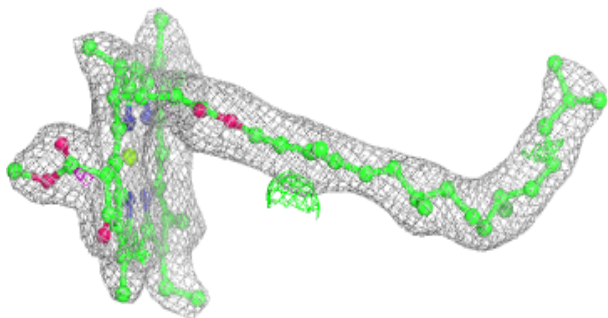
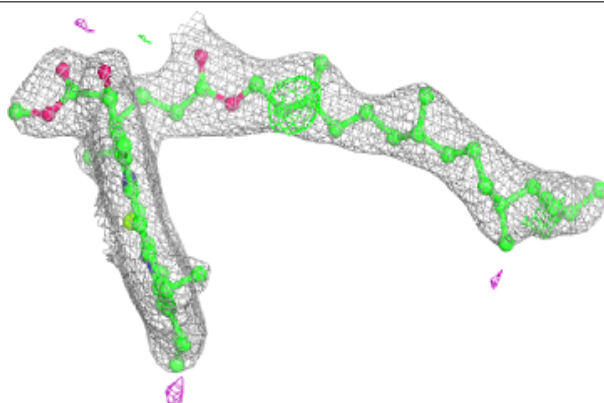


Electron density around CLA A 406:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

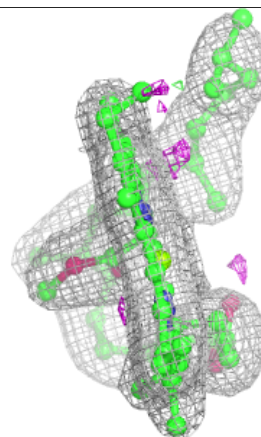
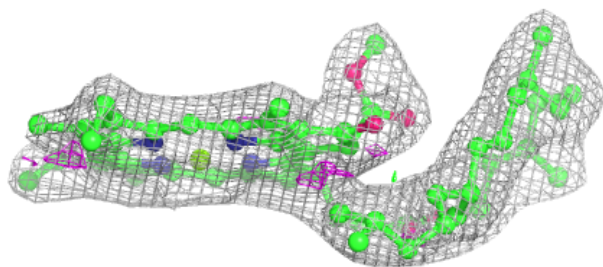
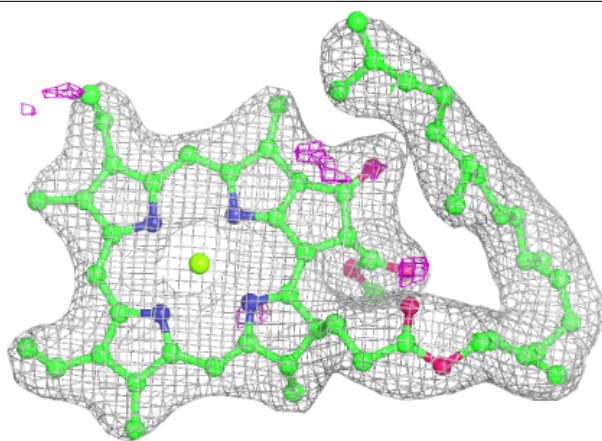
**Electron density around CLA b 605:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



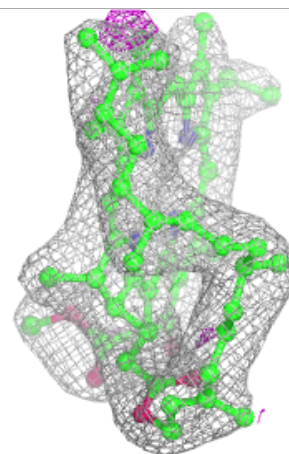
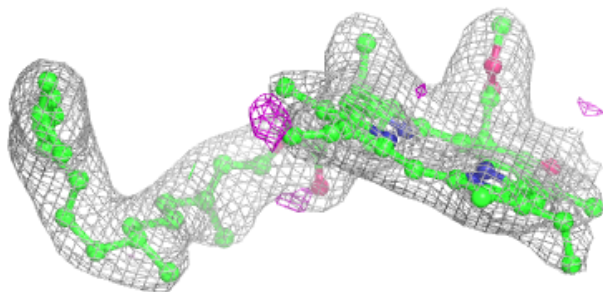
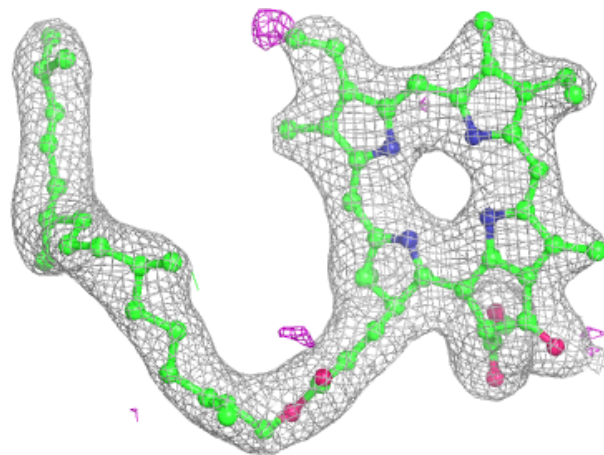
Electron density around CLA B 610:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



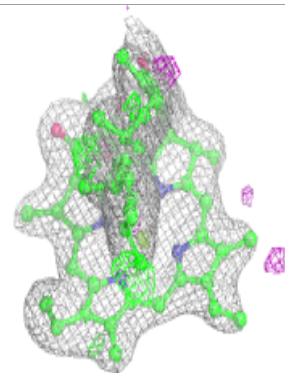
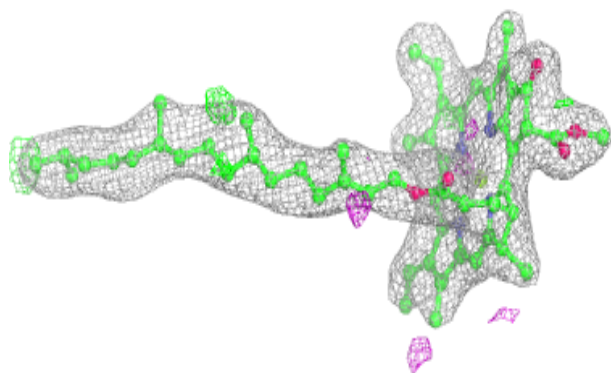
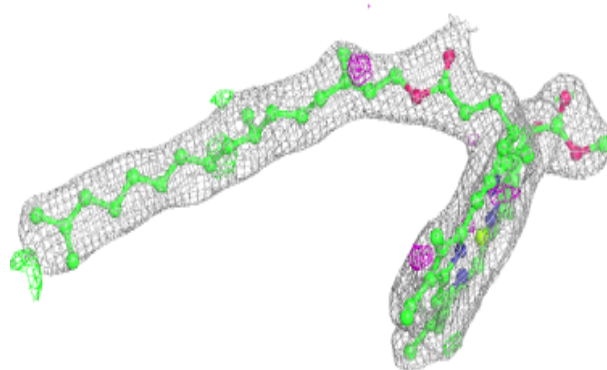
Electron density around PHO a 353:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

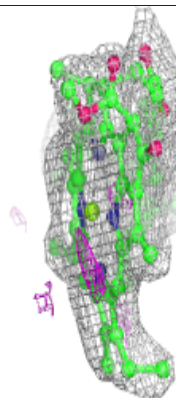
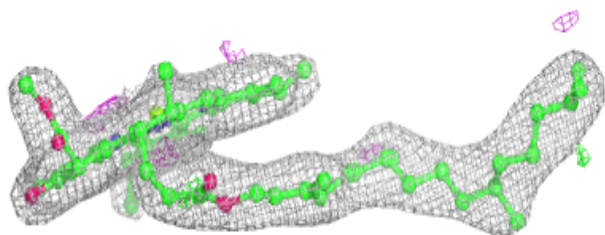
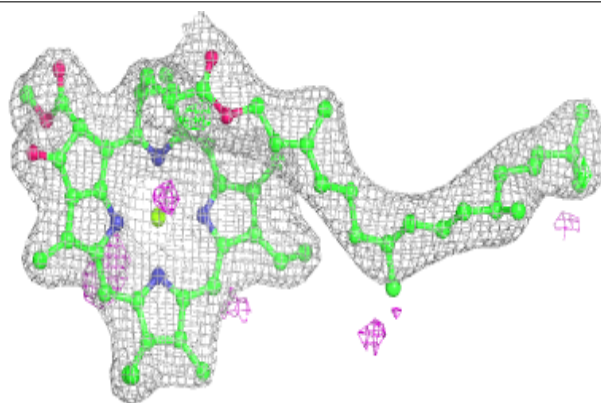


Electron density around CLA b 607:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

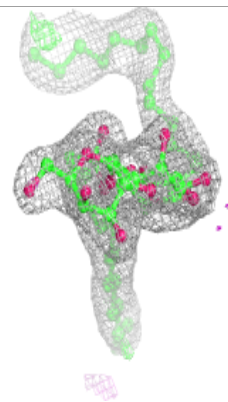
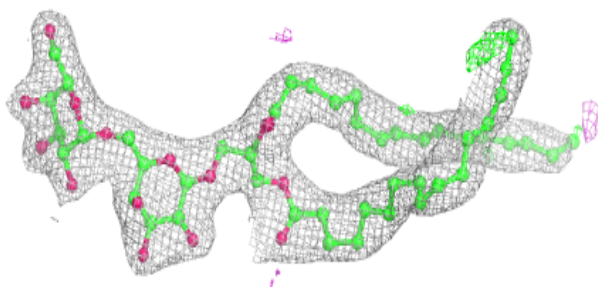
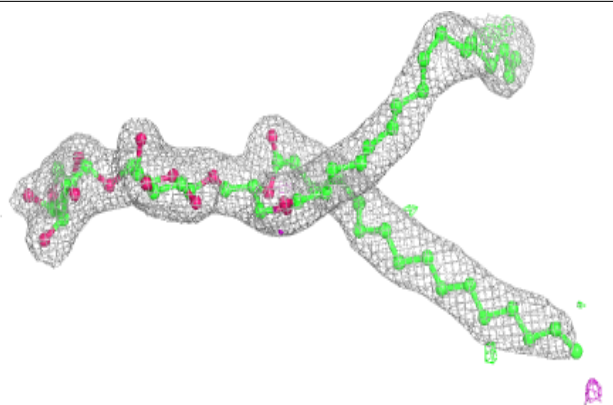
**Electron density around CLA B 603:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

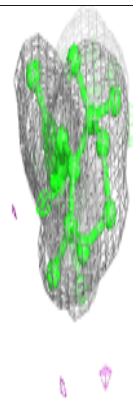
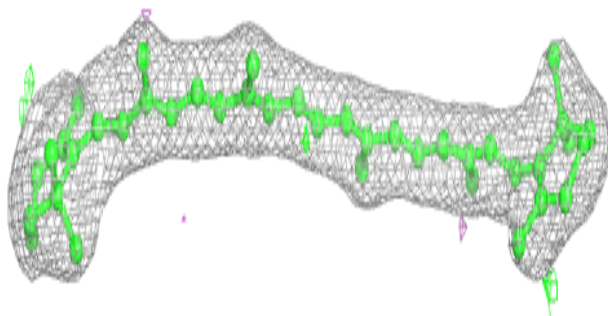
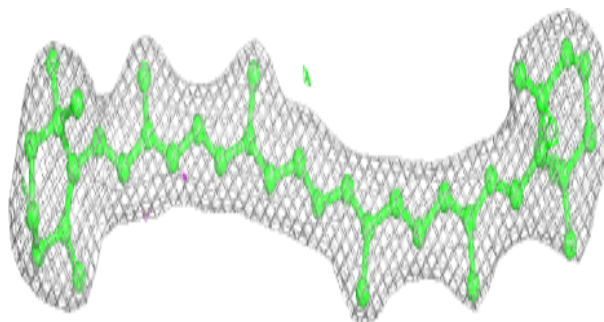


Electron density around DGD C 517:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

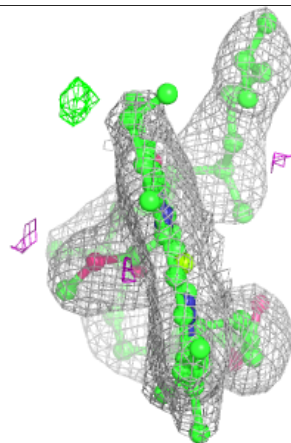
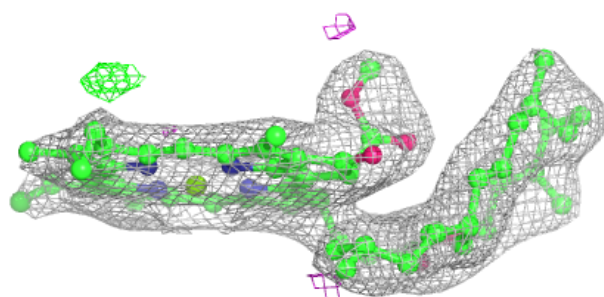
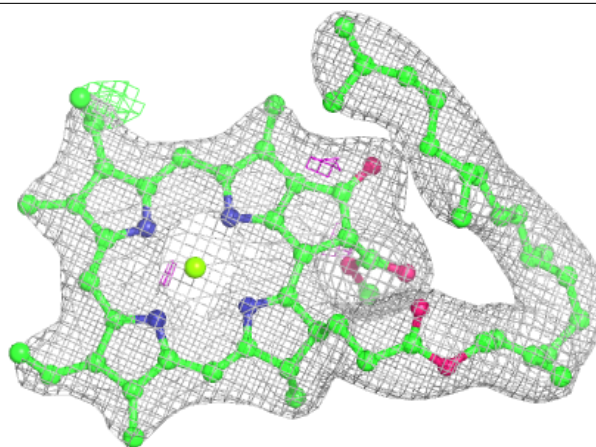
**Electron density around BCR B 619:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



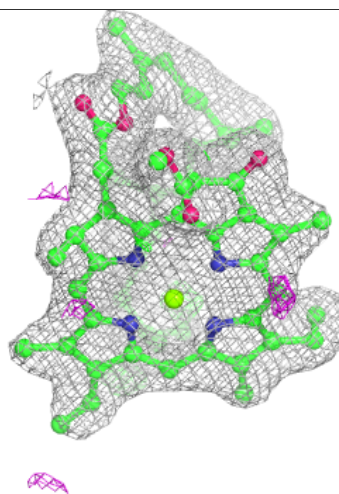
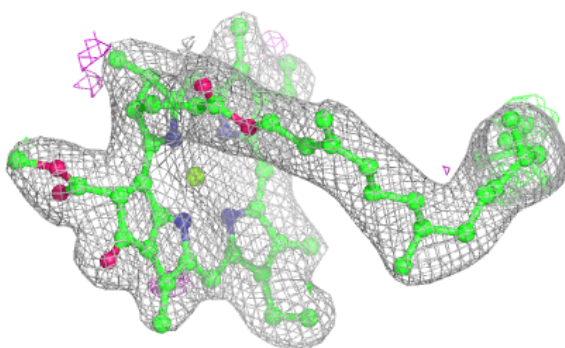
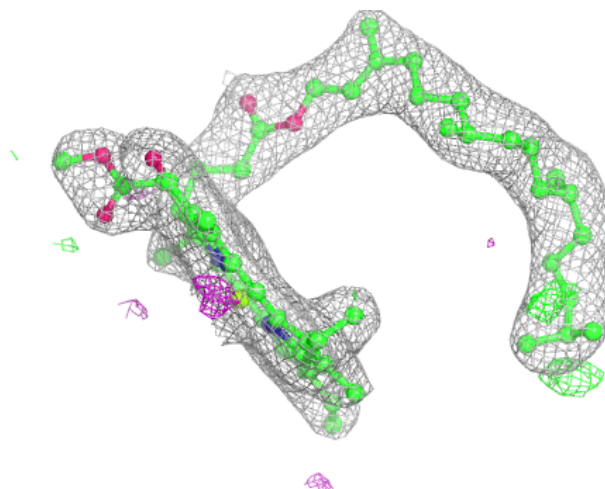
Electron density around CLA b 610:

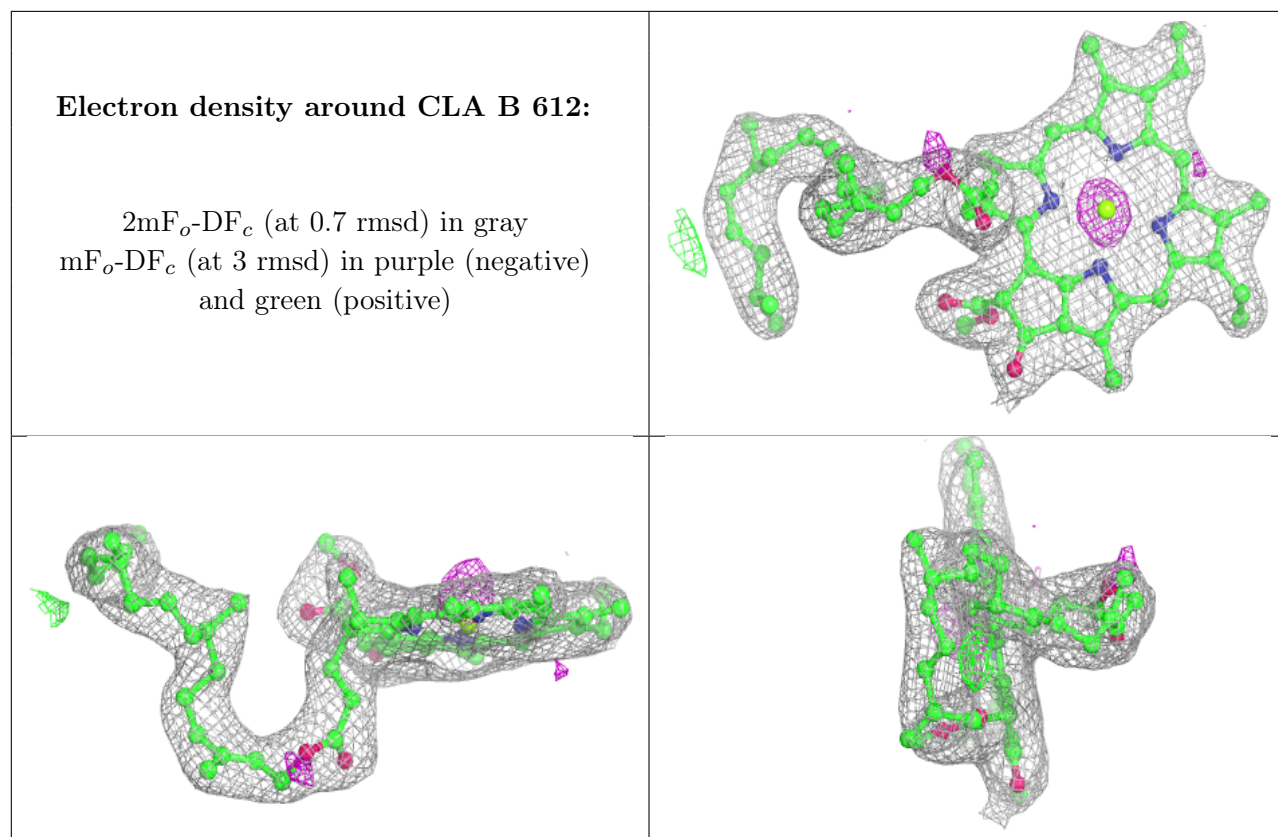
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around CLA b 611:

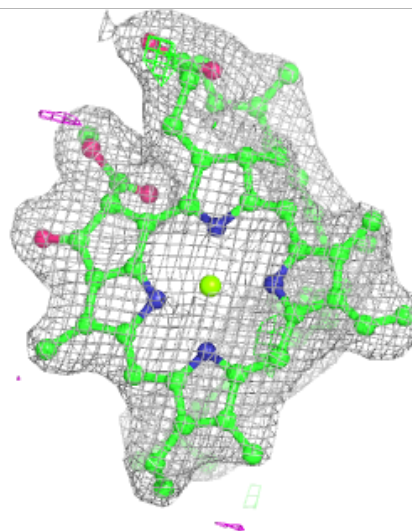
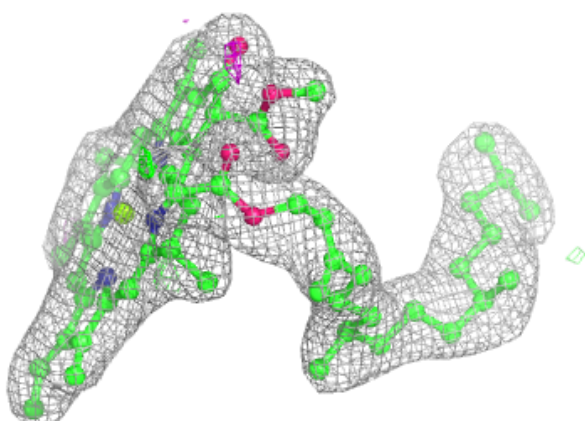
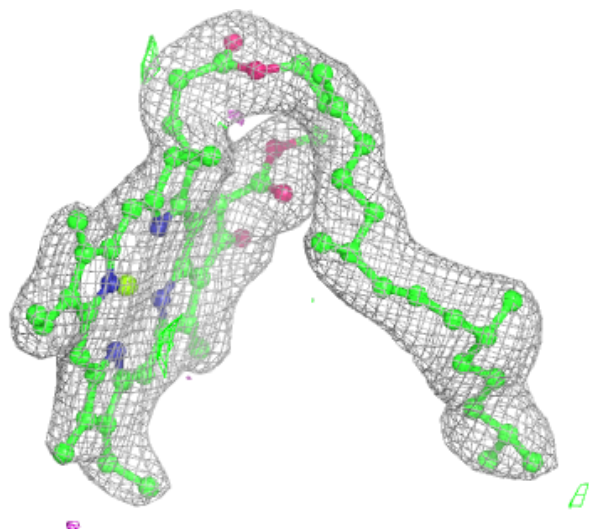
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





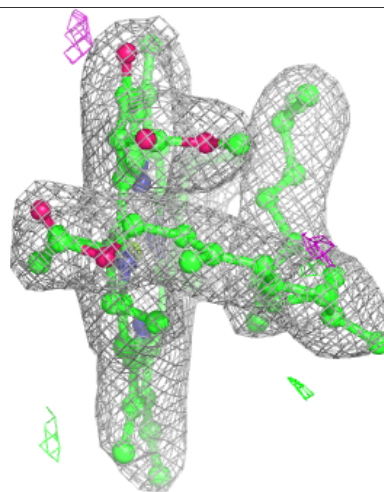
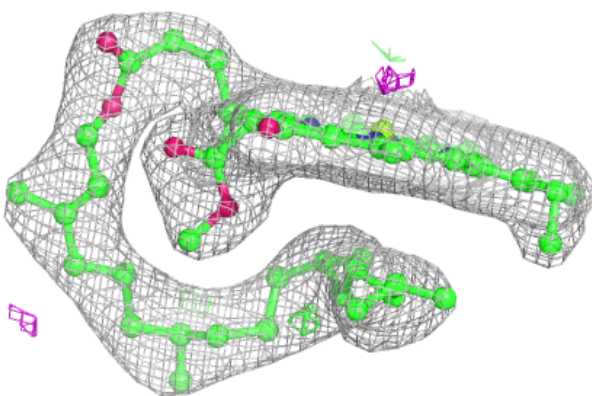
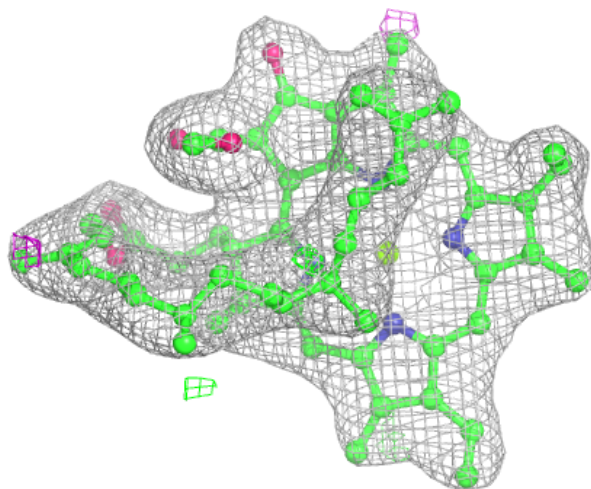
Electron density around CLA b 613:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



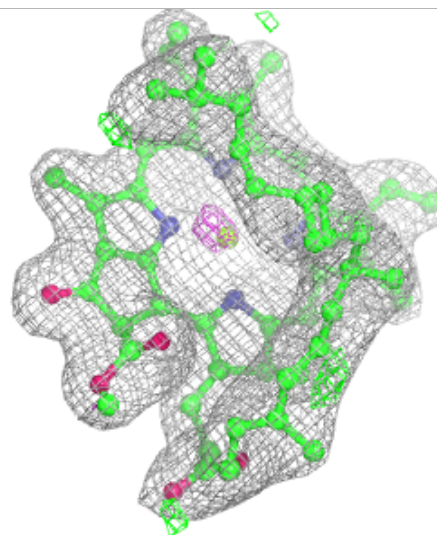
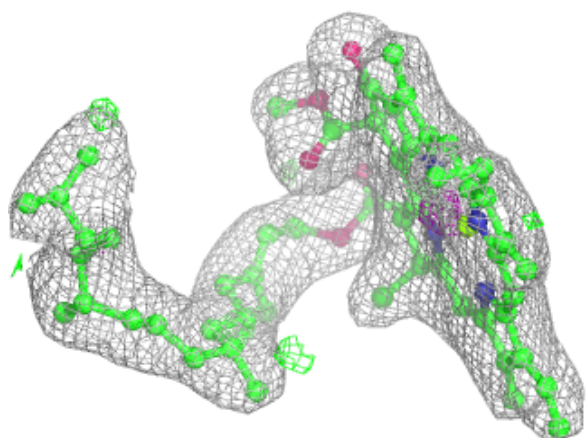
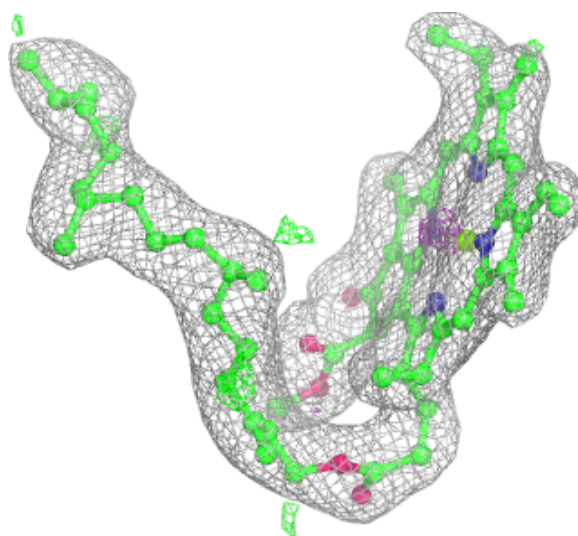
Electron density around CLA C 511:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



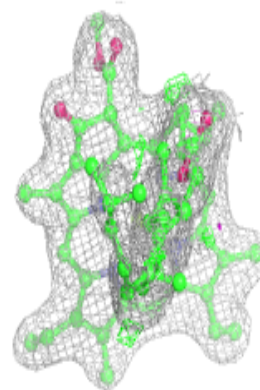
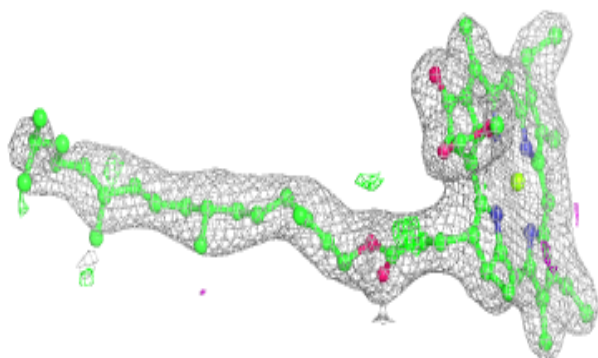
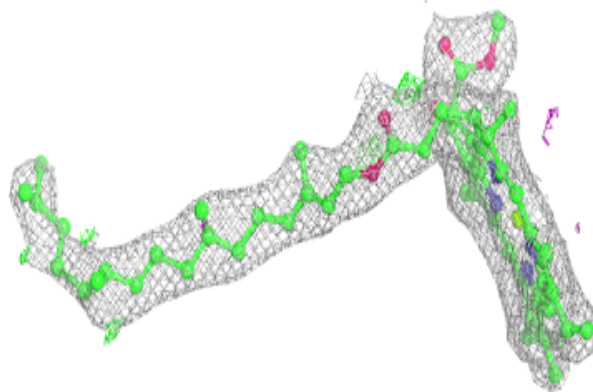
Electron density around CLA B 613:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

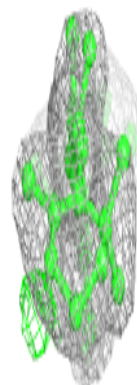
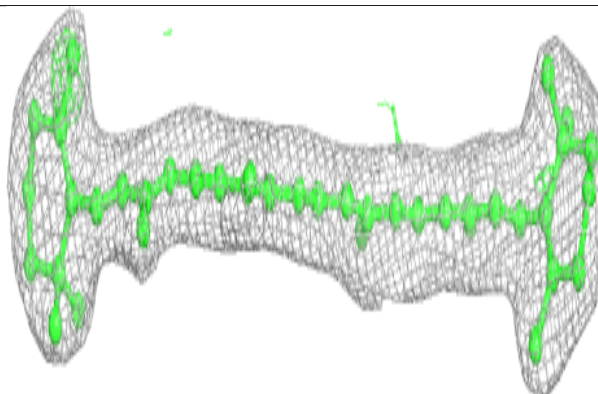
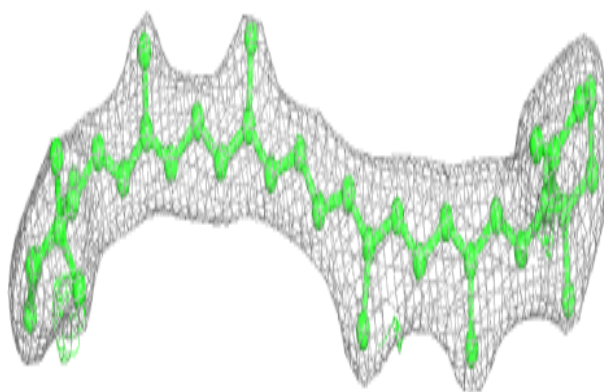


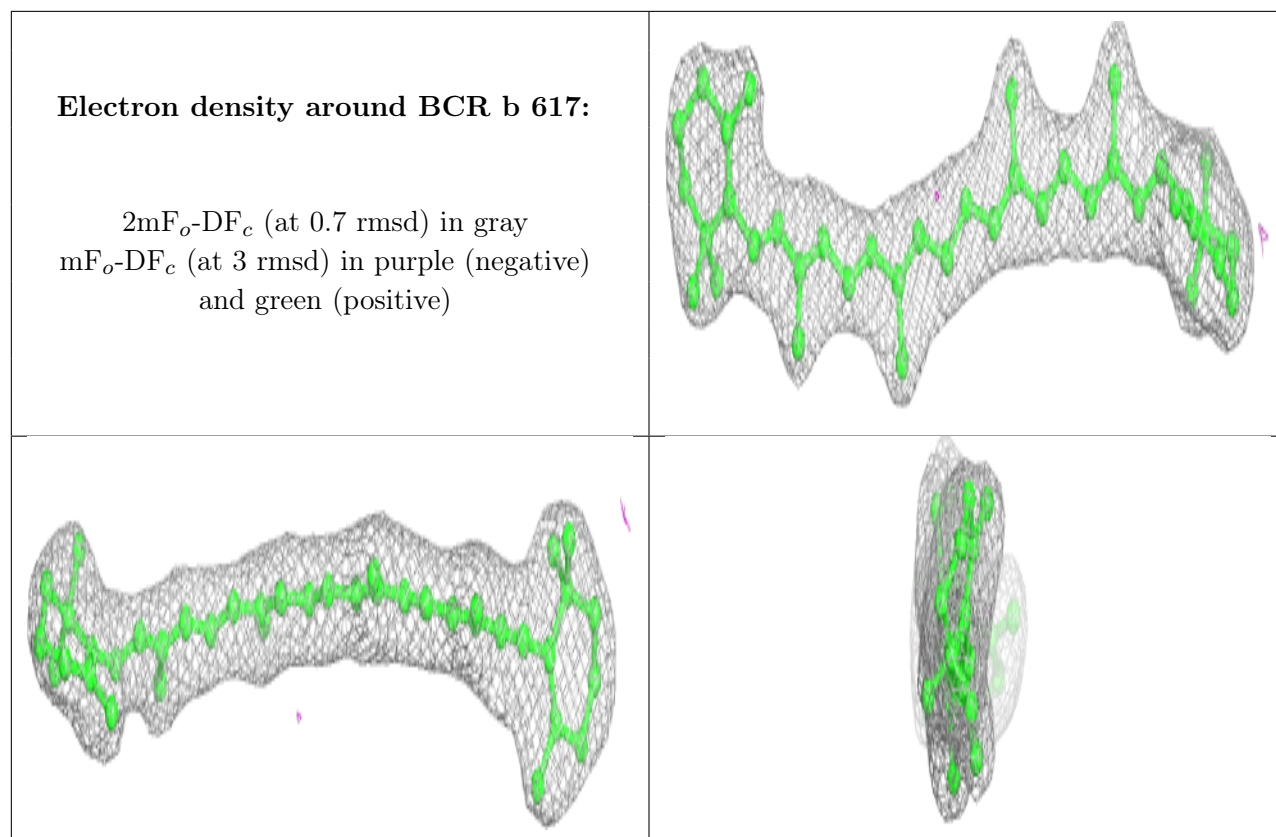
Electron density around CLA B 604:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around BCR a 410:**

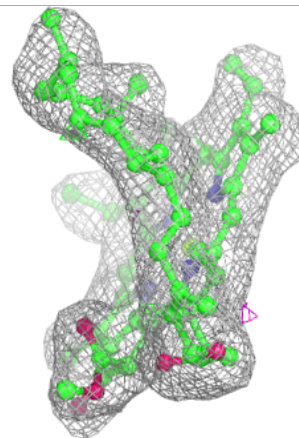
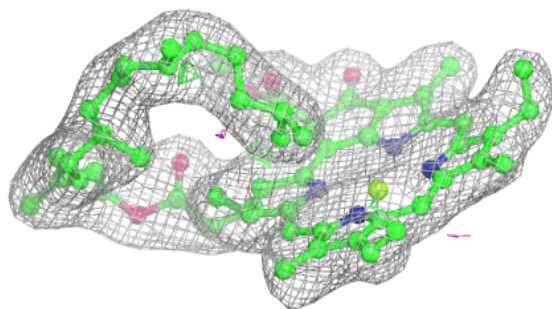
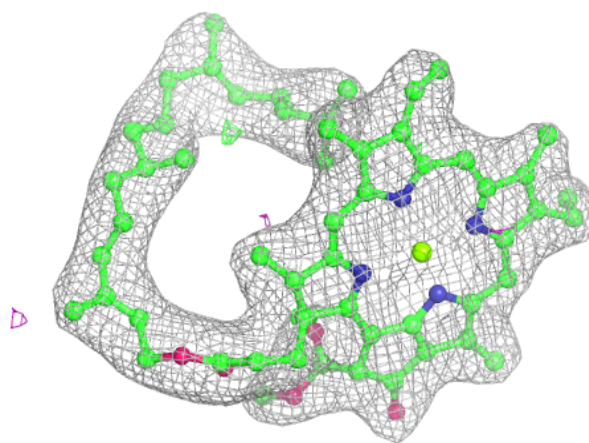
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





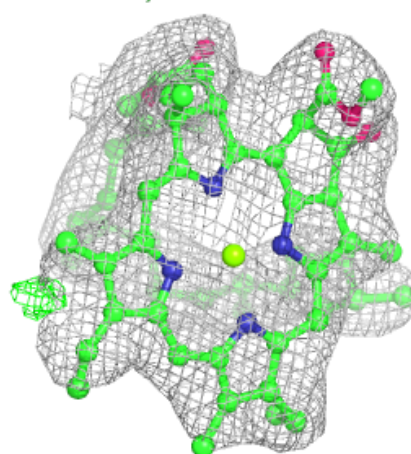
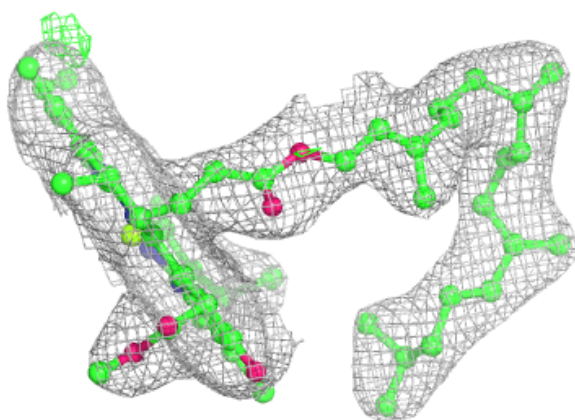
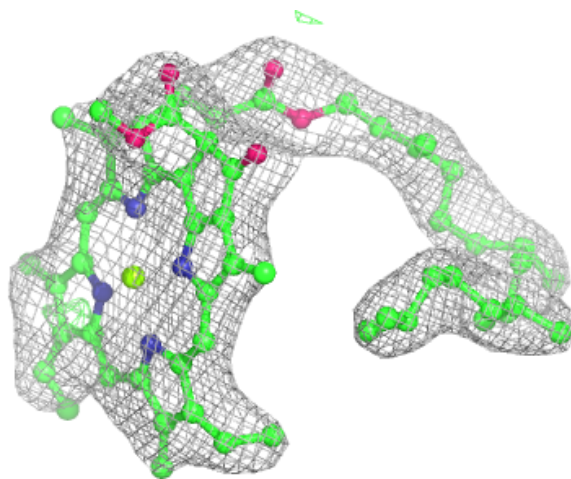
Electron density around CLA B 615:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



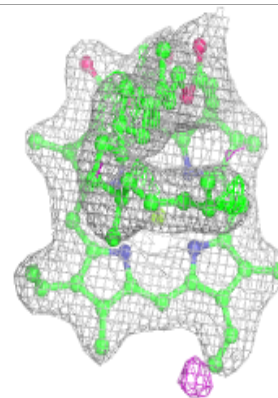
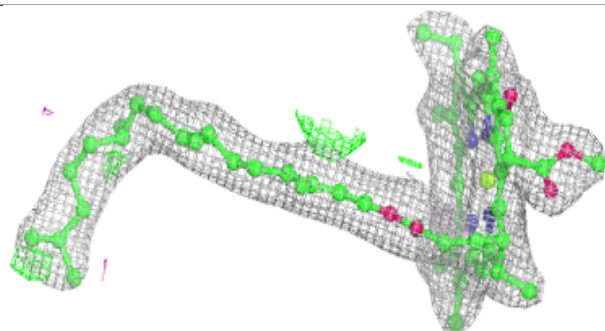
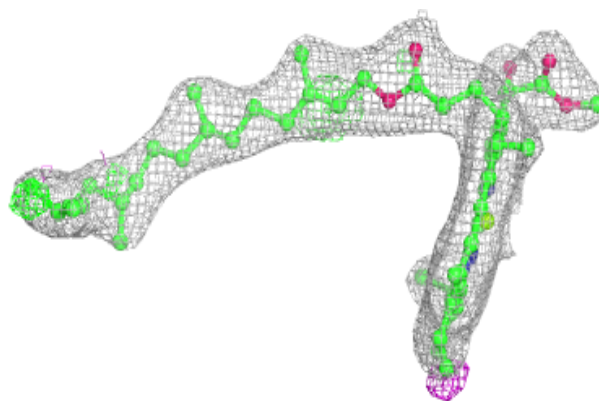
Electron density around CLA c 504:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

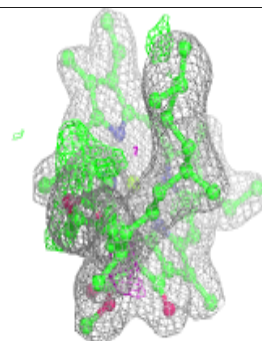
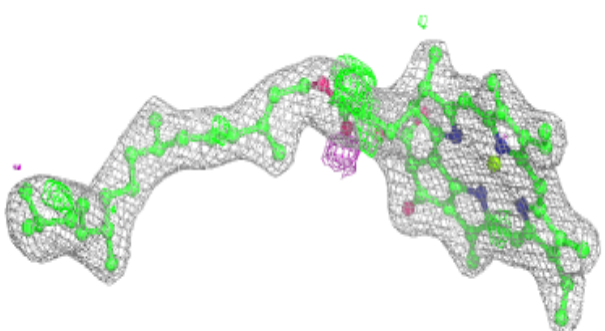
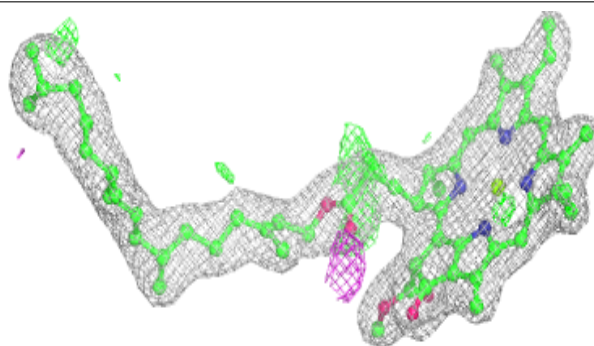


Electron density around CLA B 605:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

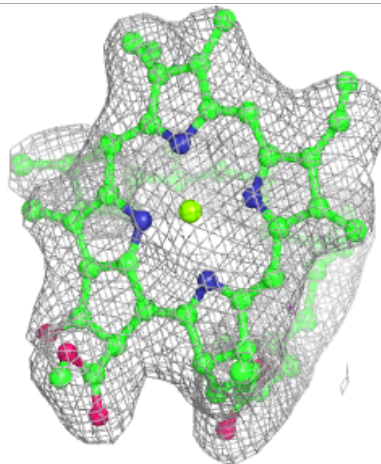
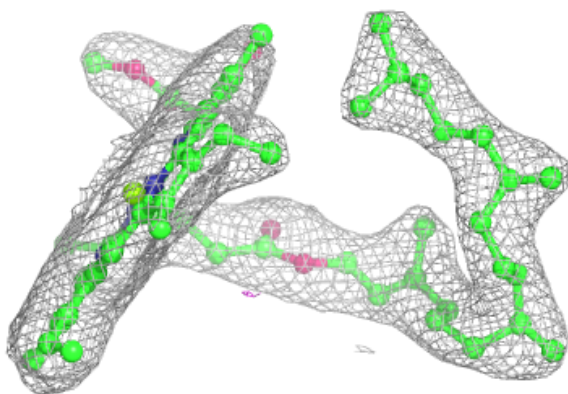
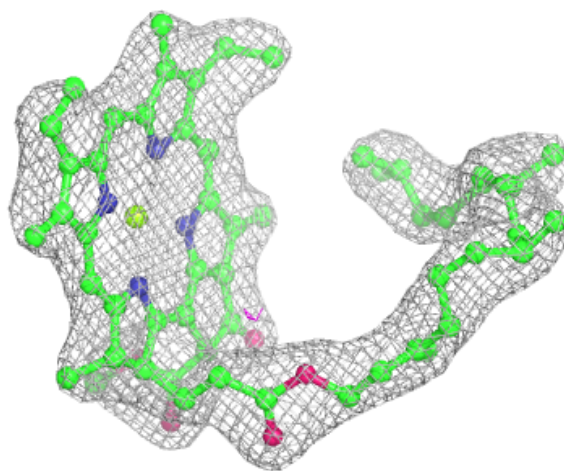
**Electron density around CLA A 404:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



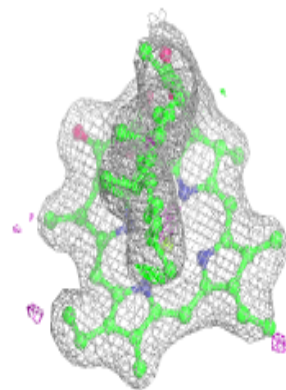
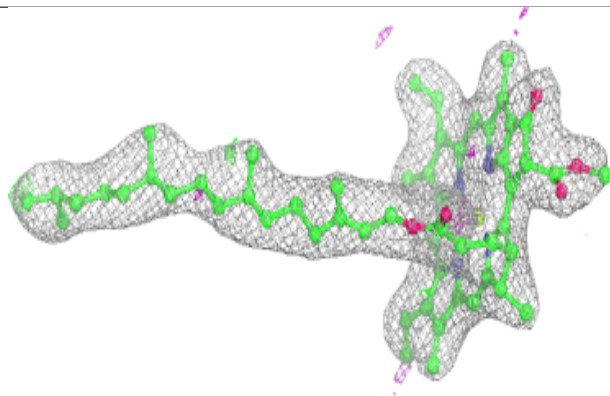
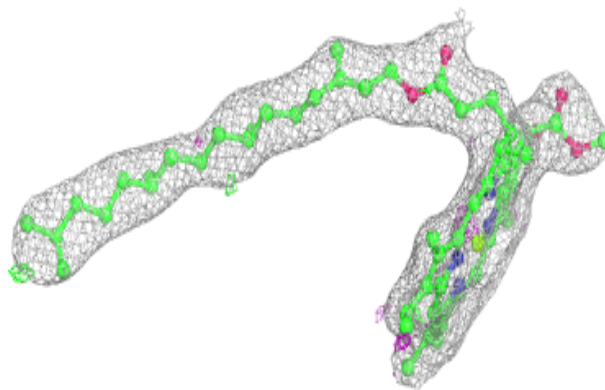
Electron density around CLA C 504:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

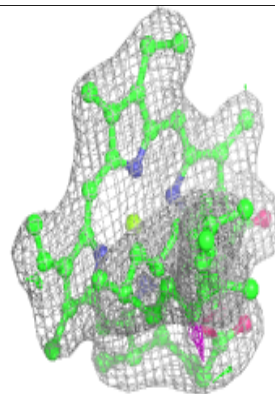
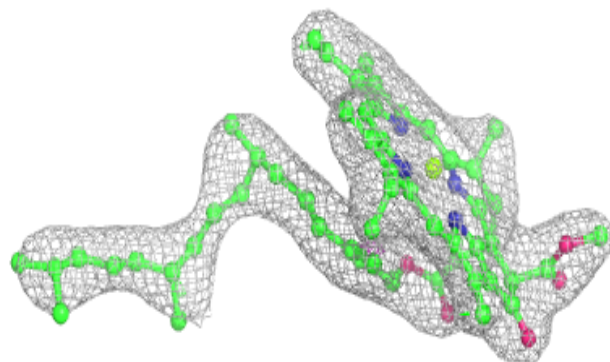
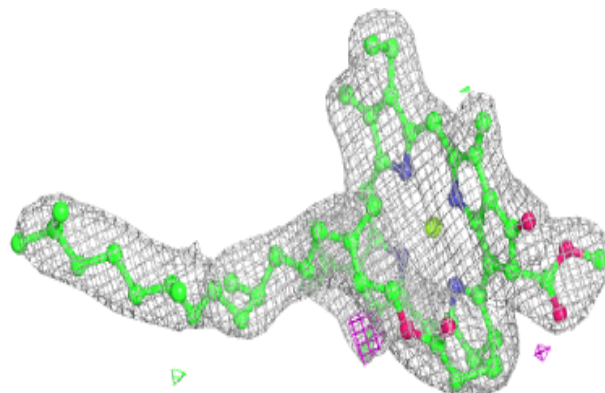


Electron density around CLA B 607:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

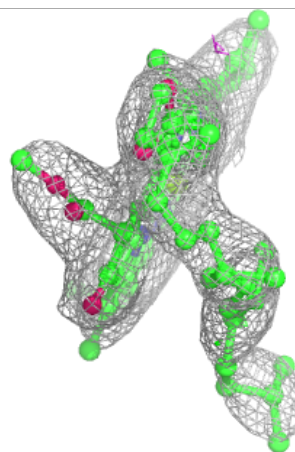
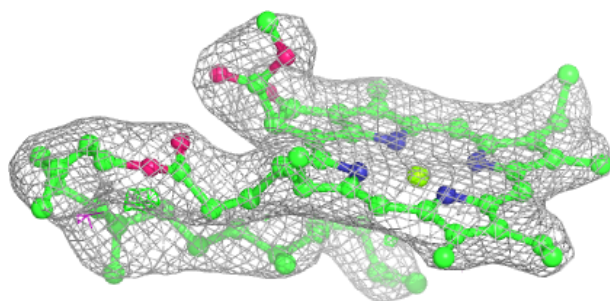
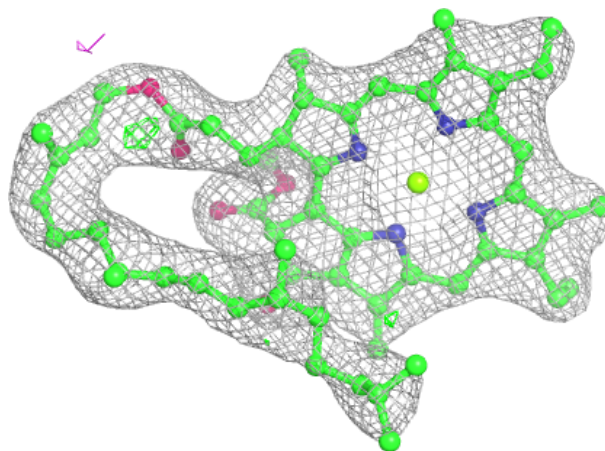
**Electron density around CLA C 506:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



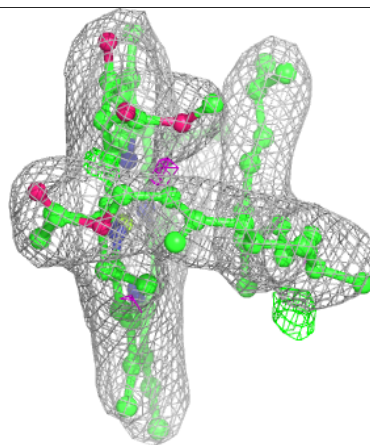
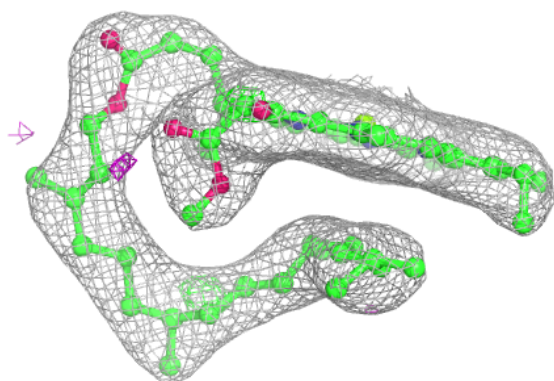
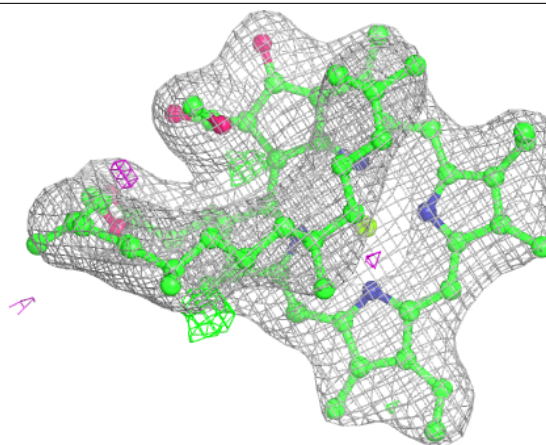
Electron density around CLA c 510:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

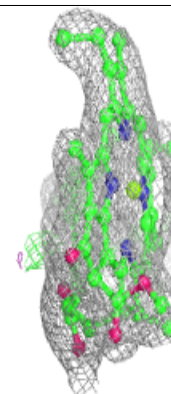
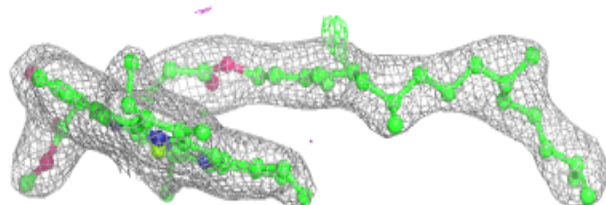
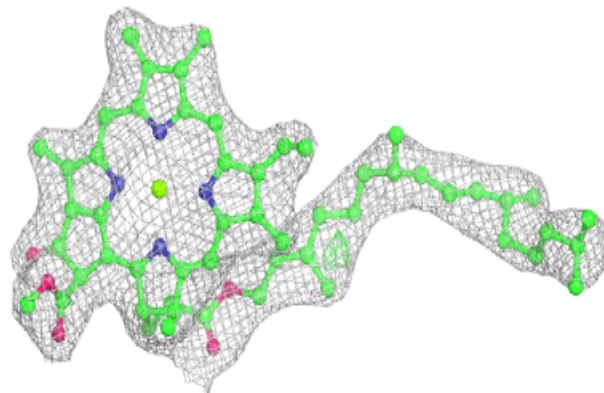


Electron density around CLA c 511:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

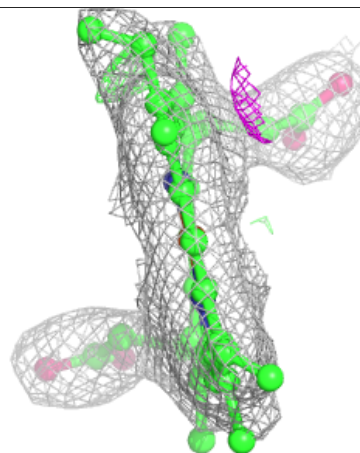
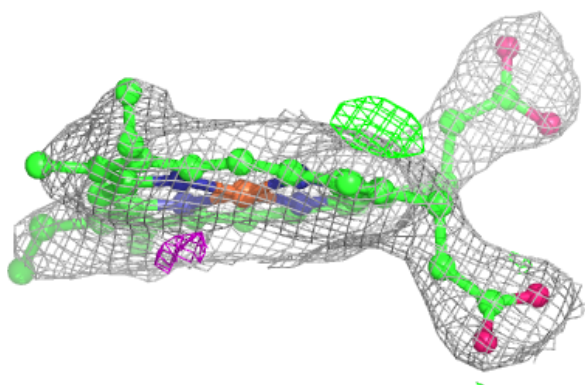
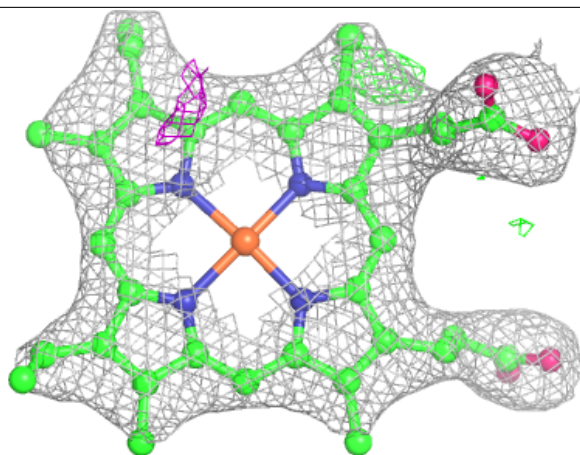
**Electron density around CLA b 603:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

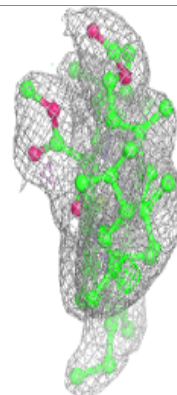
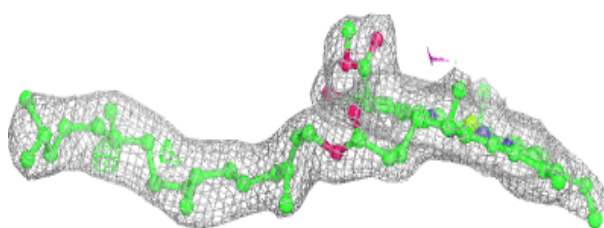
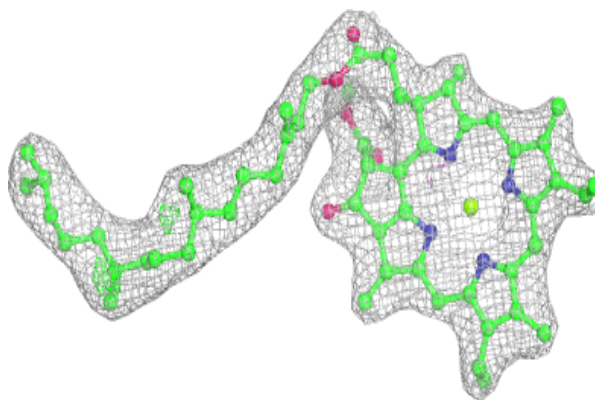


Electron density around HEM E 103:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

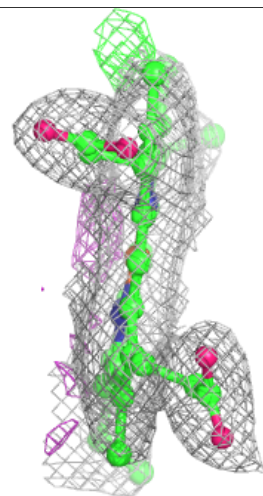
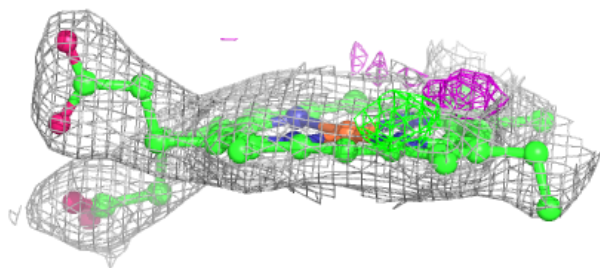
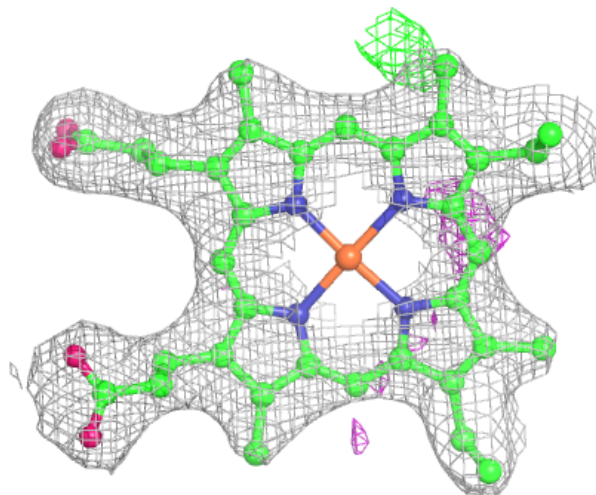
**Electron density around CLA B 602:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



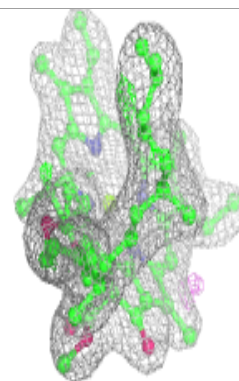
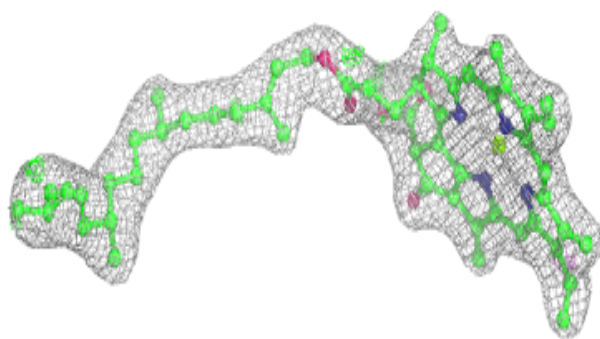
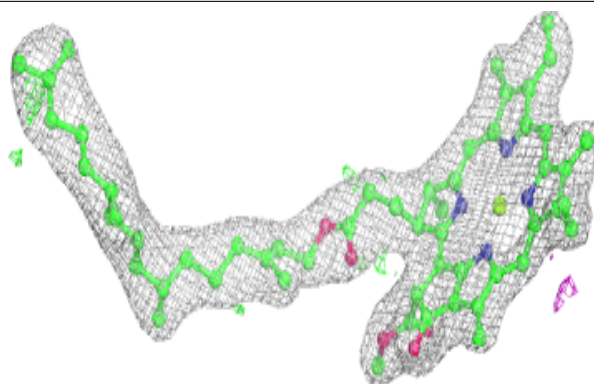
Electron density around HEC v 202:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

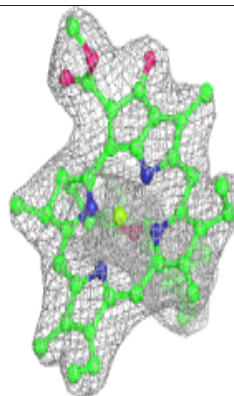
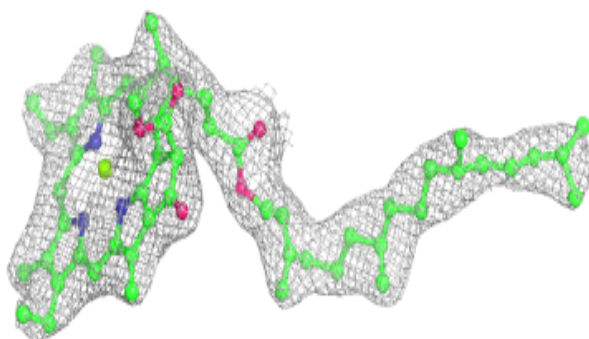
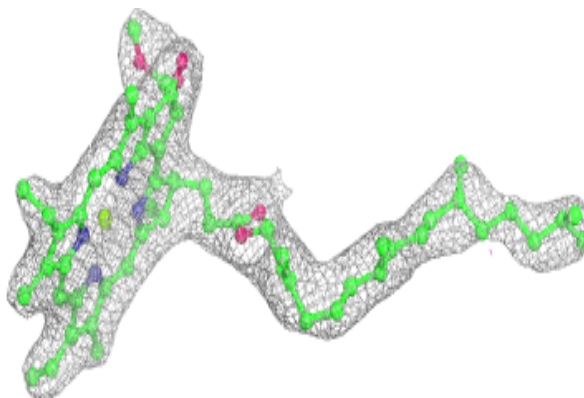


Electron density around CLA a 405:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

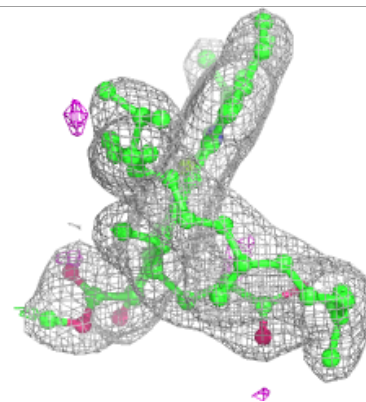
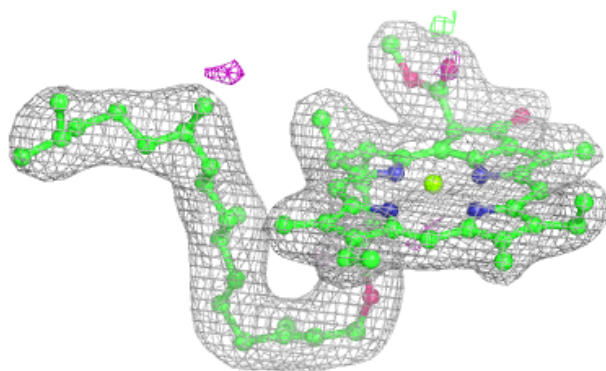
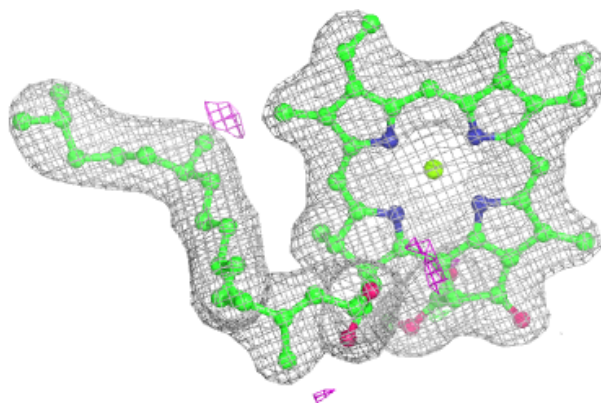
**Electron density around CLA c 503:**

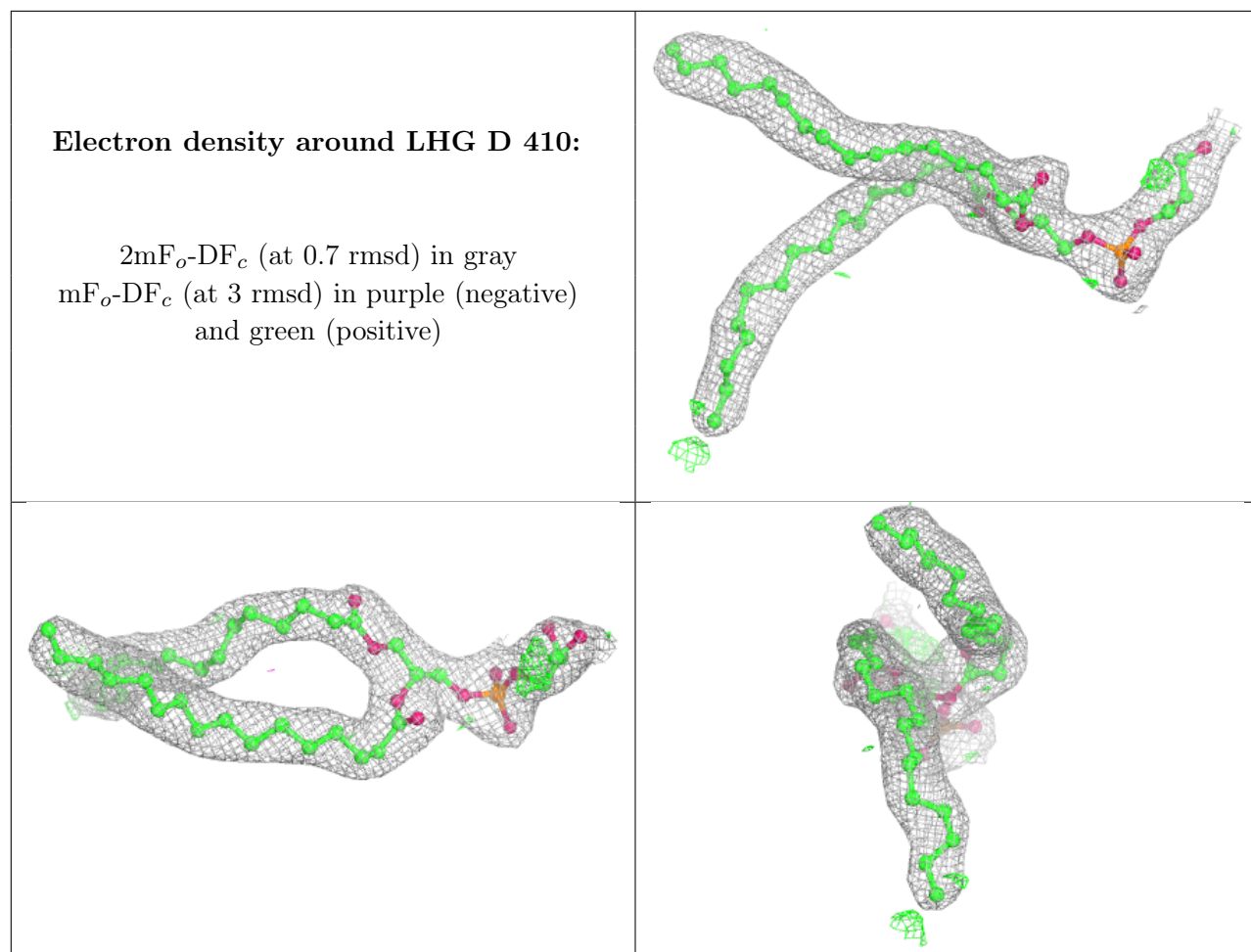
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around CLA a 406:

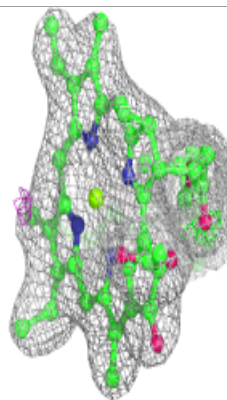
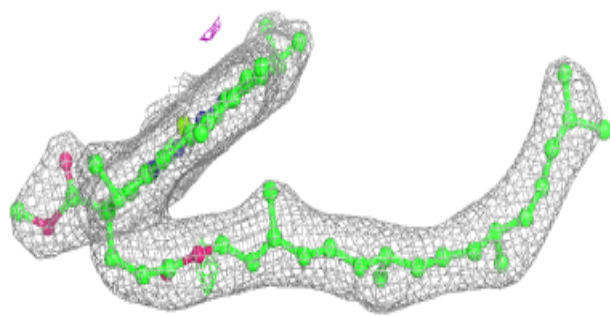
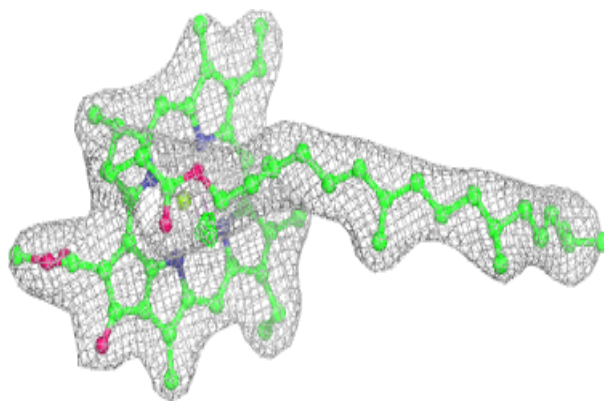
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



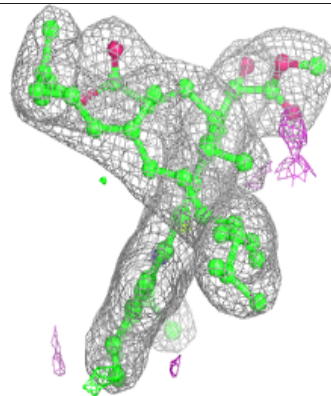
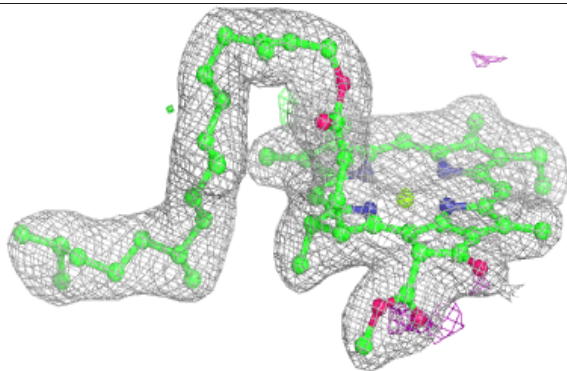
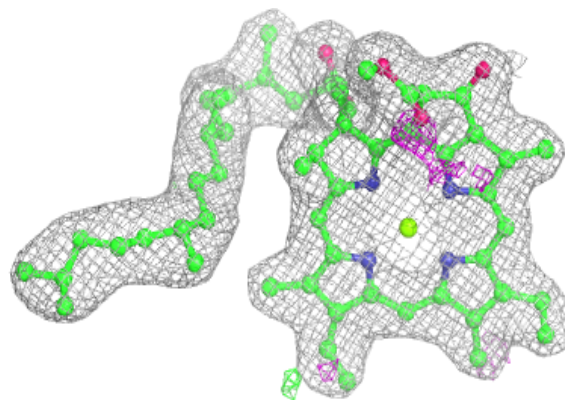


Electron density around CLA B 608:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

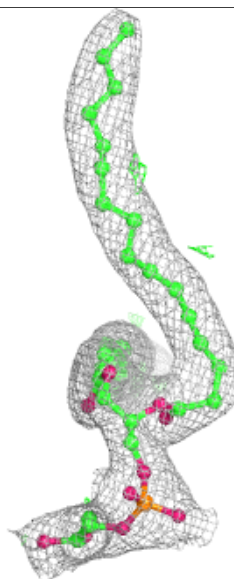
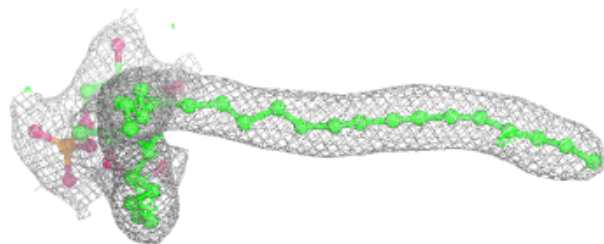
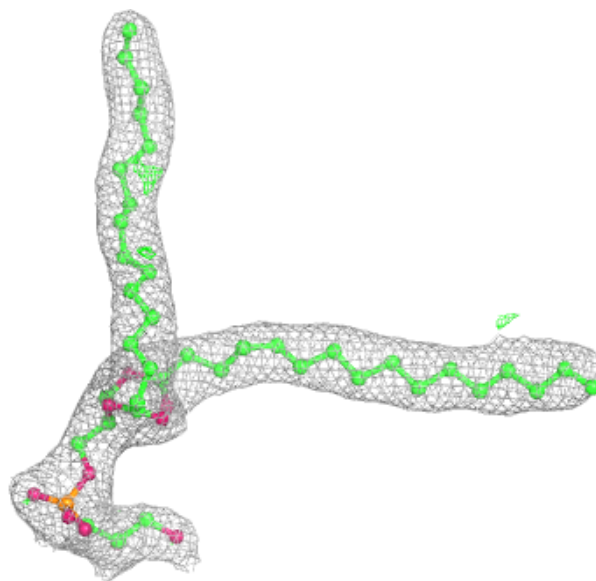
**Electron density around CLA A 405:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



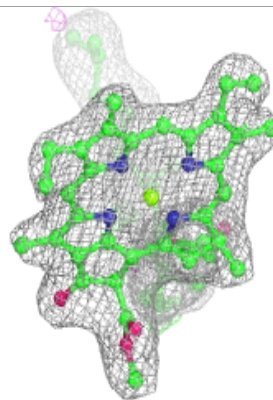
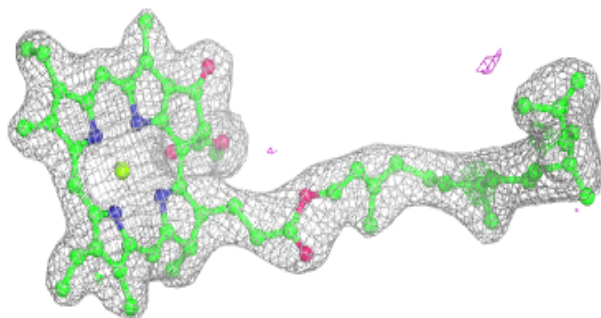
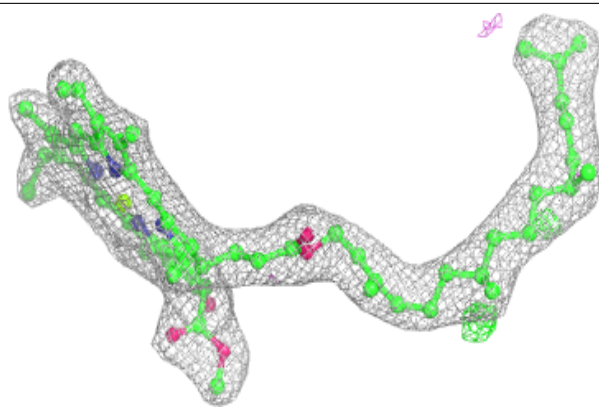
Electron density around LHG L 101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



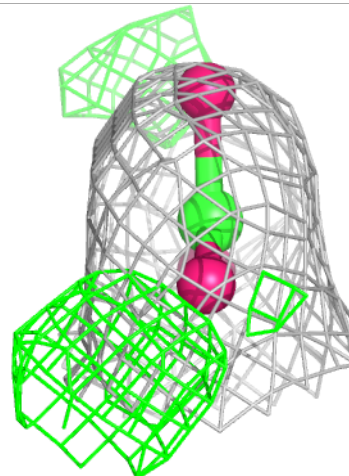
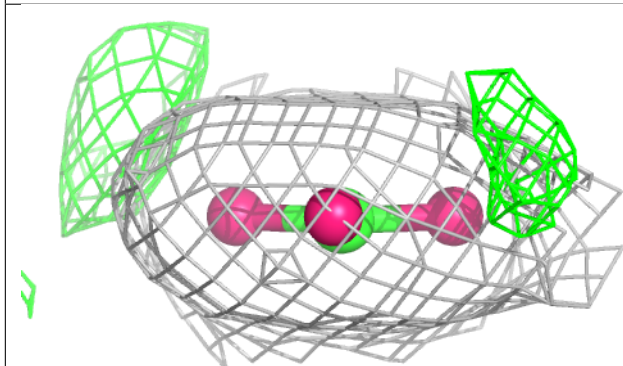
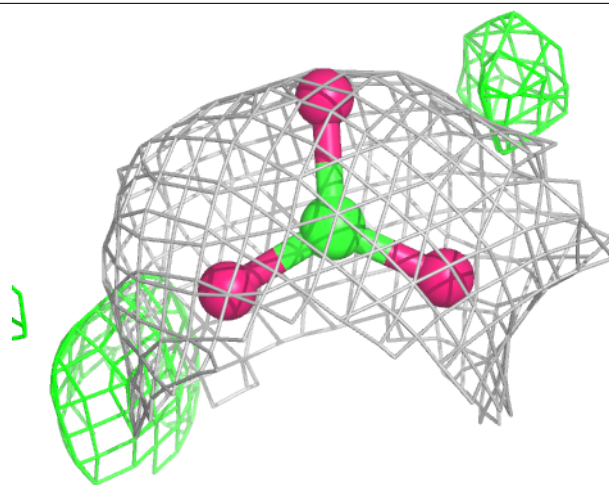
Electron density around CLA d 402:

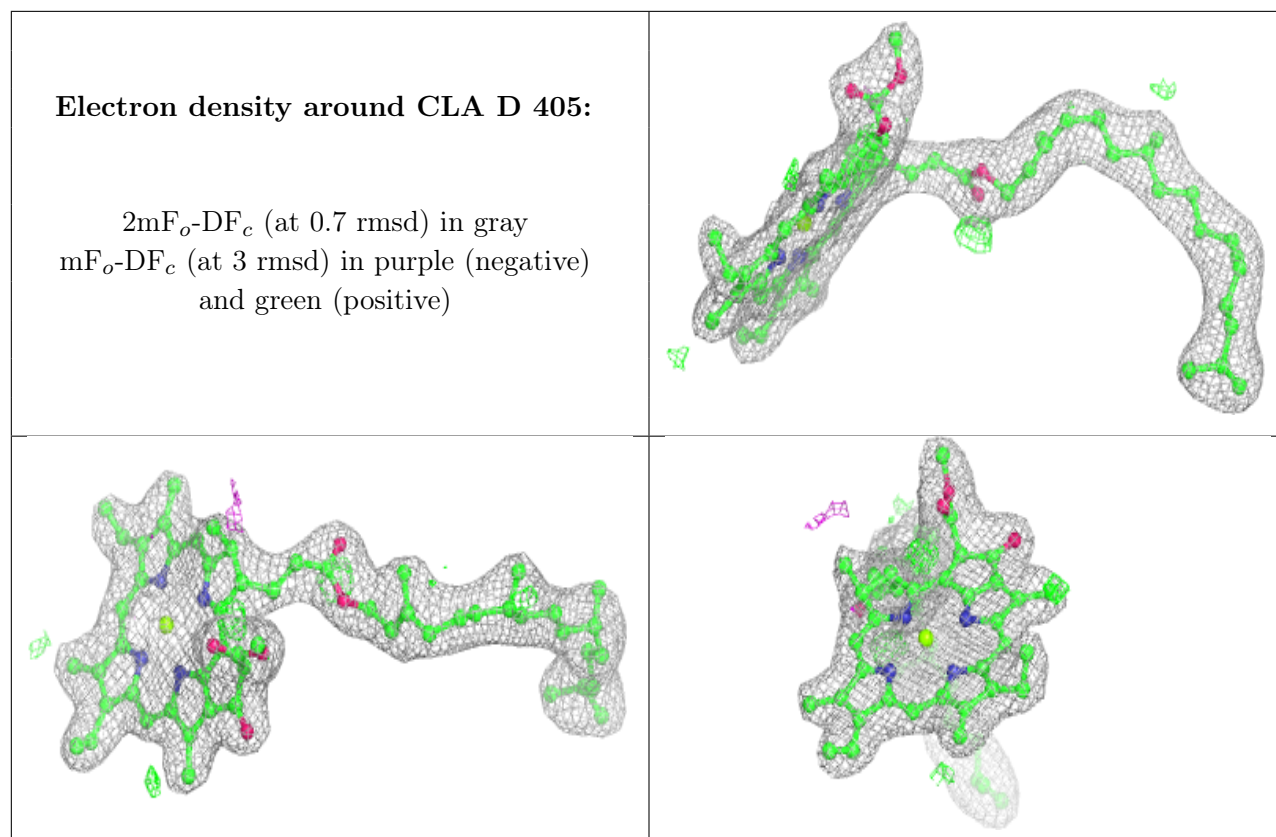
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around BCT a 404:

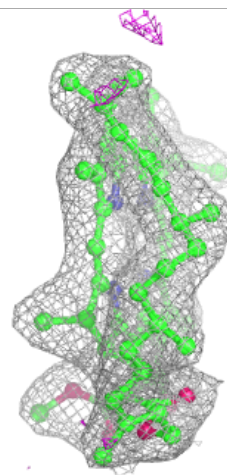
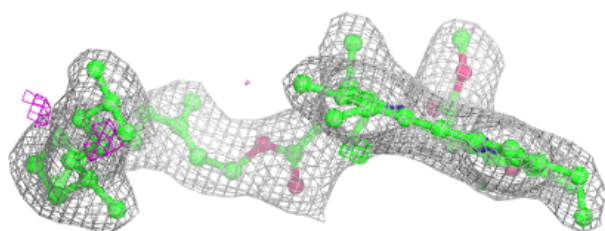
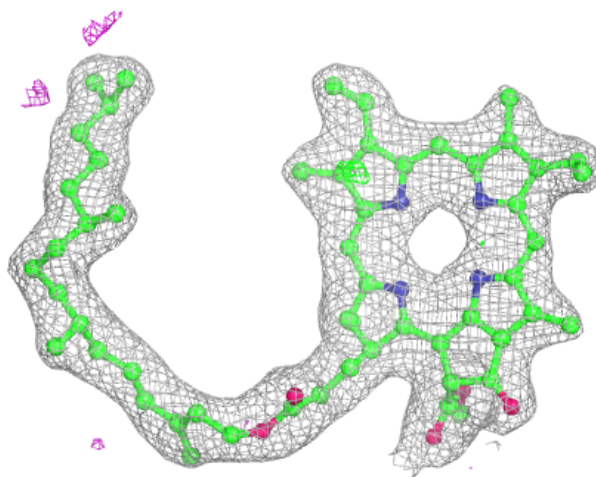
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





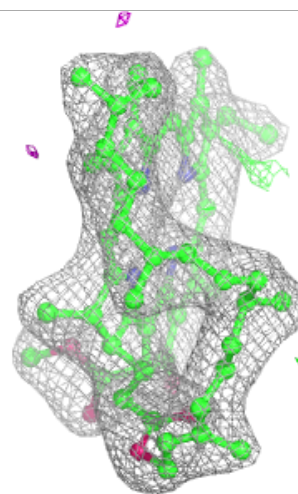
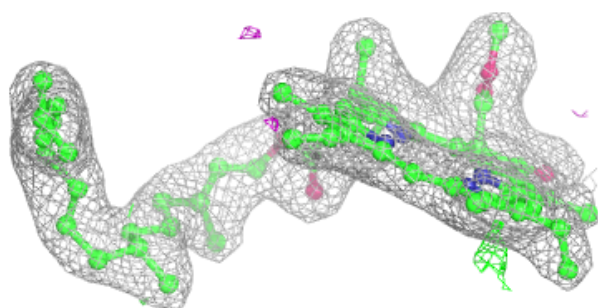
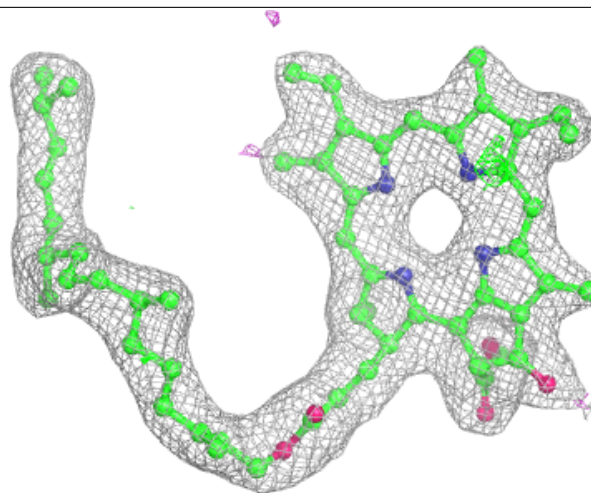
Electron density around PHO A 407:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



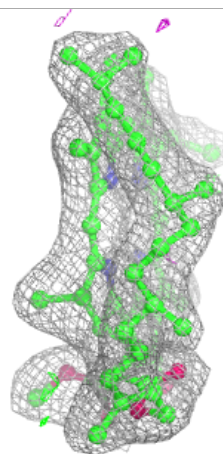
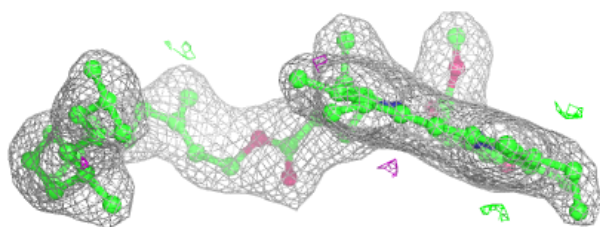
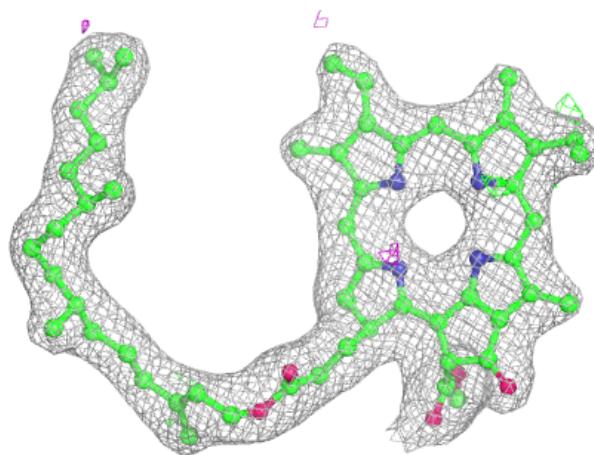
Electron density around PHO A 353:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



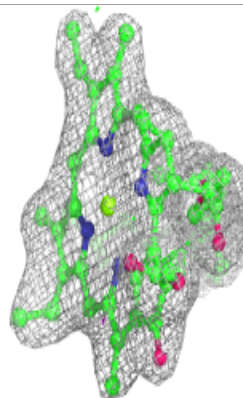
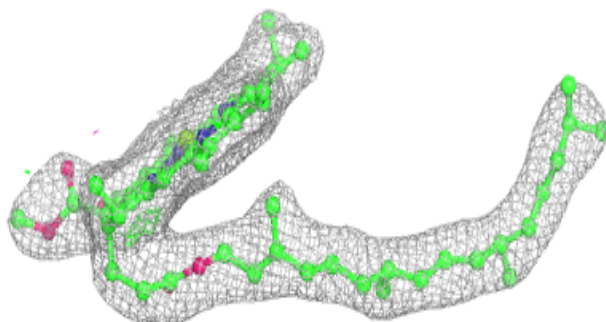
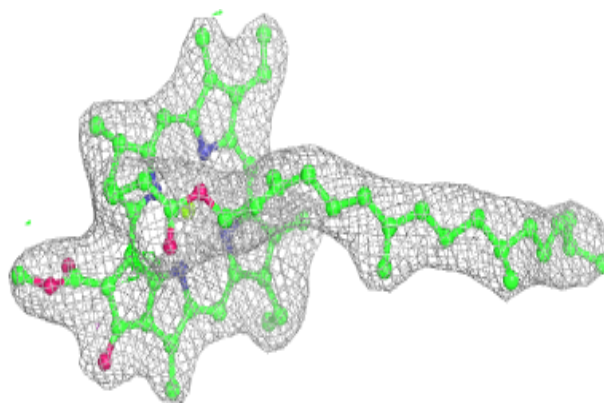
Electron density around PHO a 408:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

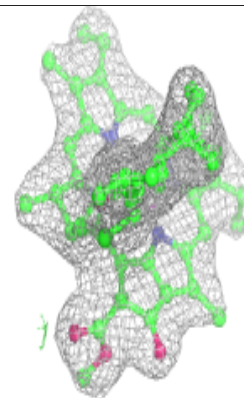
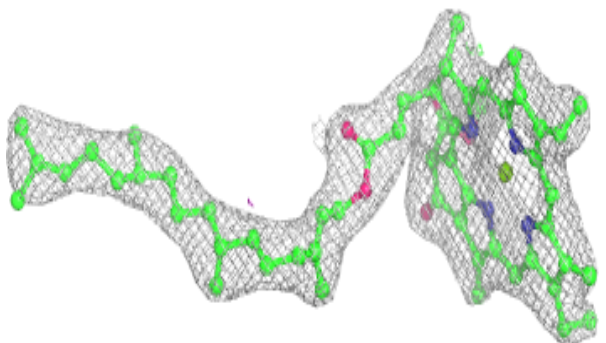
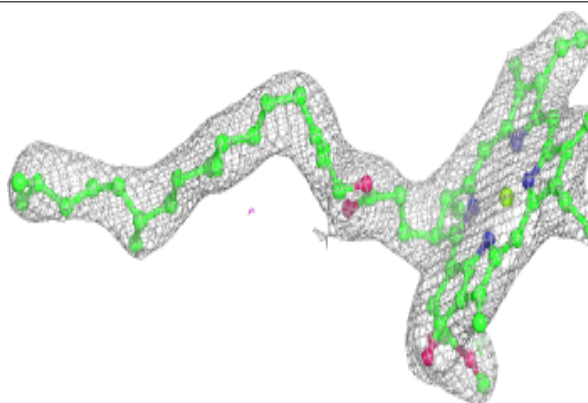


Electron density around CLA b 608:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

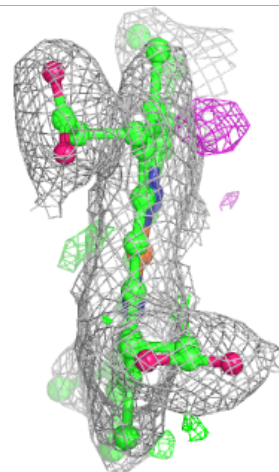
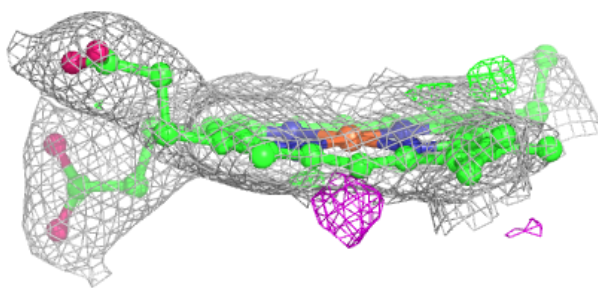
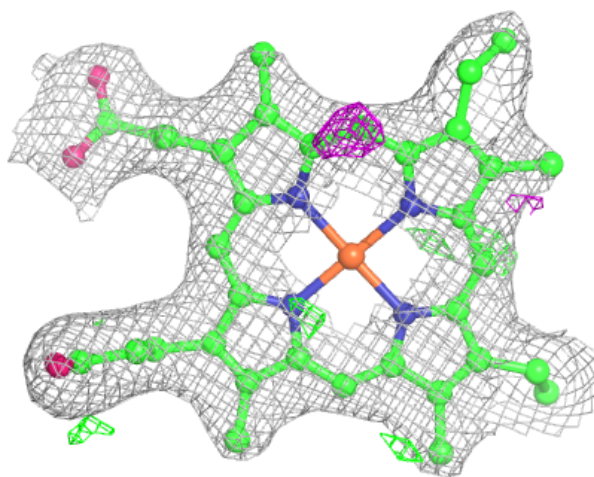
**Electron density around CLA C 503:**

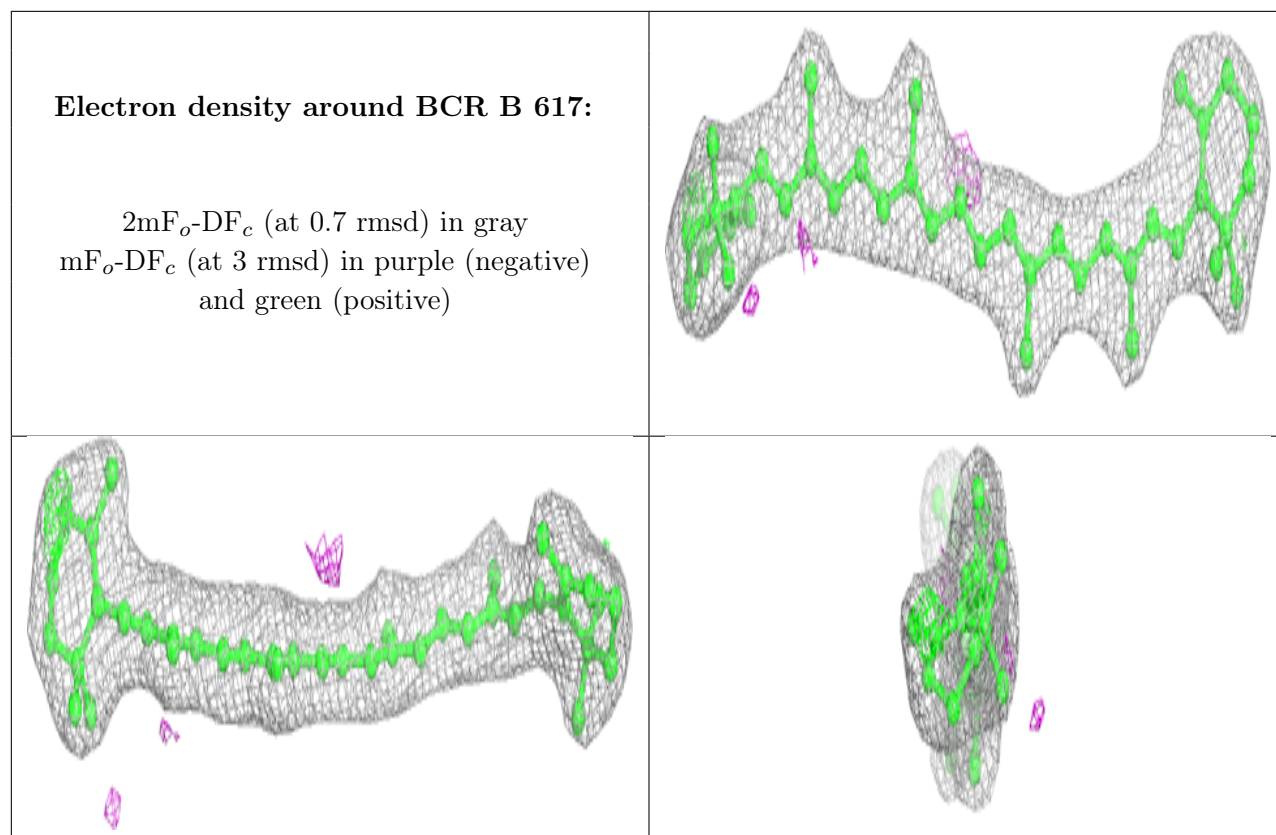
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around HEC V 202:

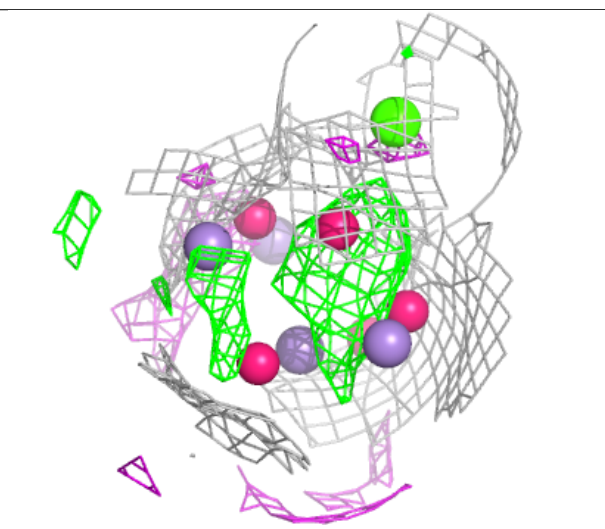
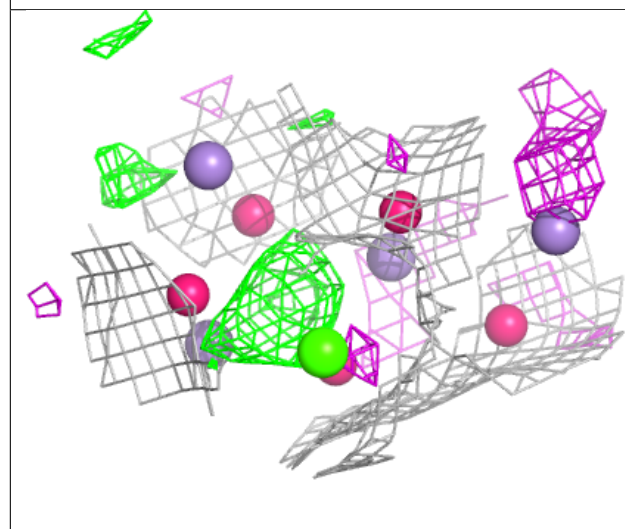
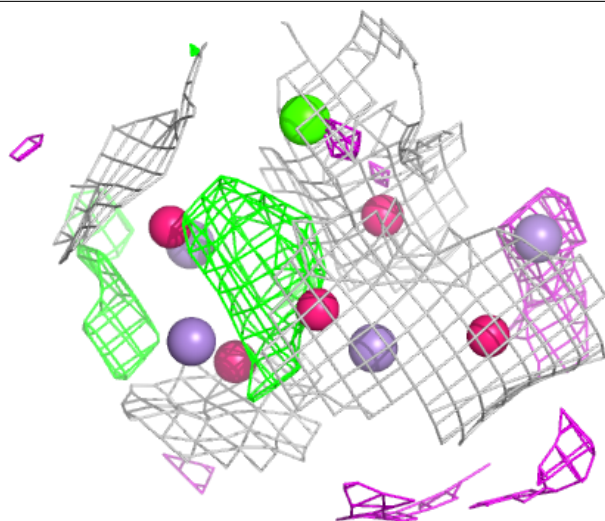
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





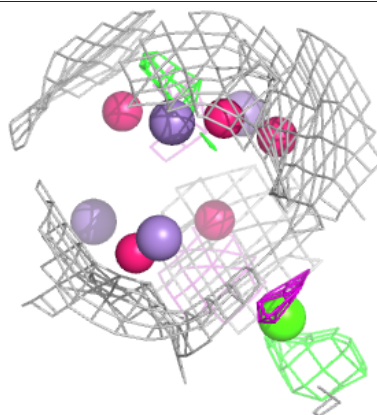
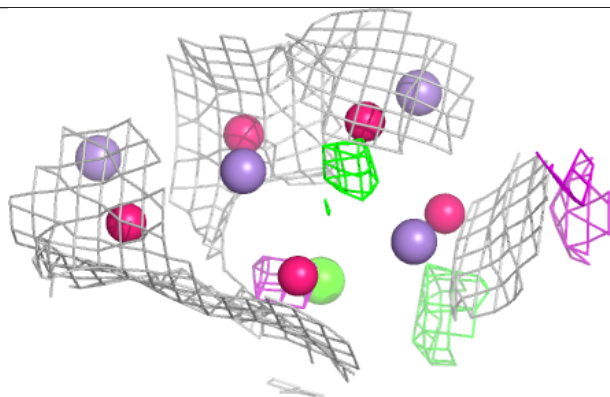
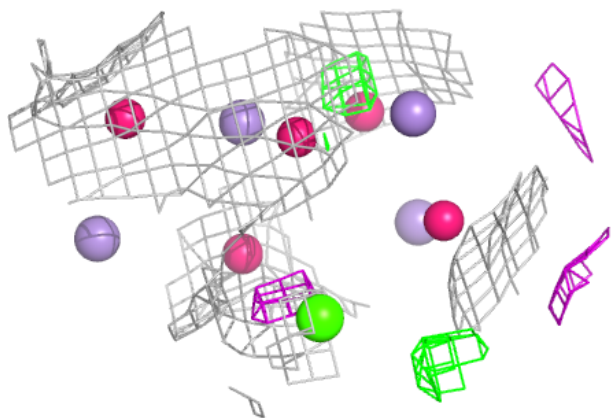
Electron density around OEX A 413:

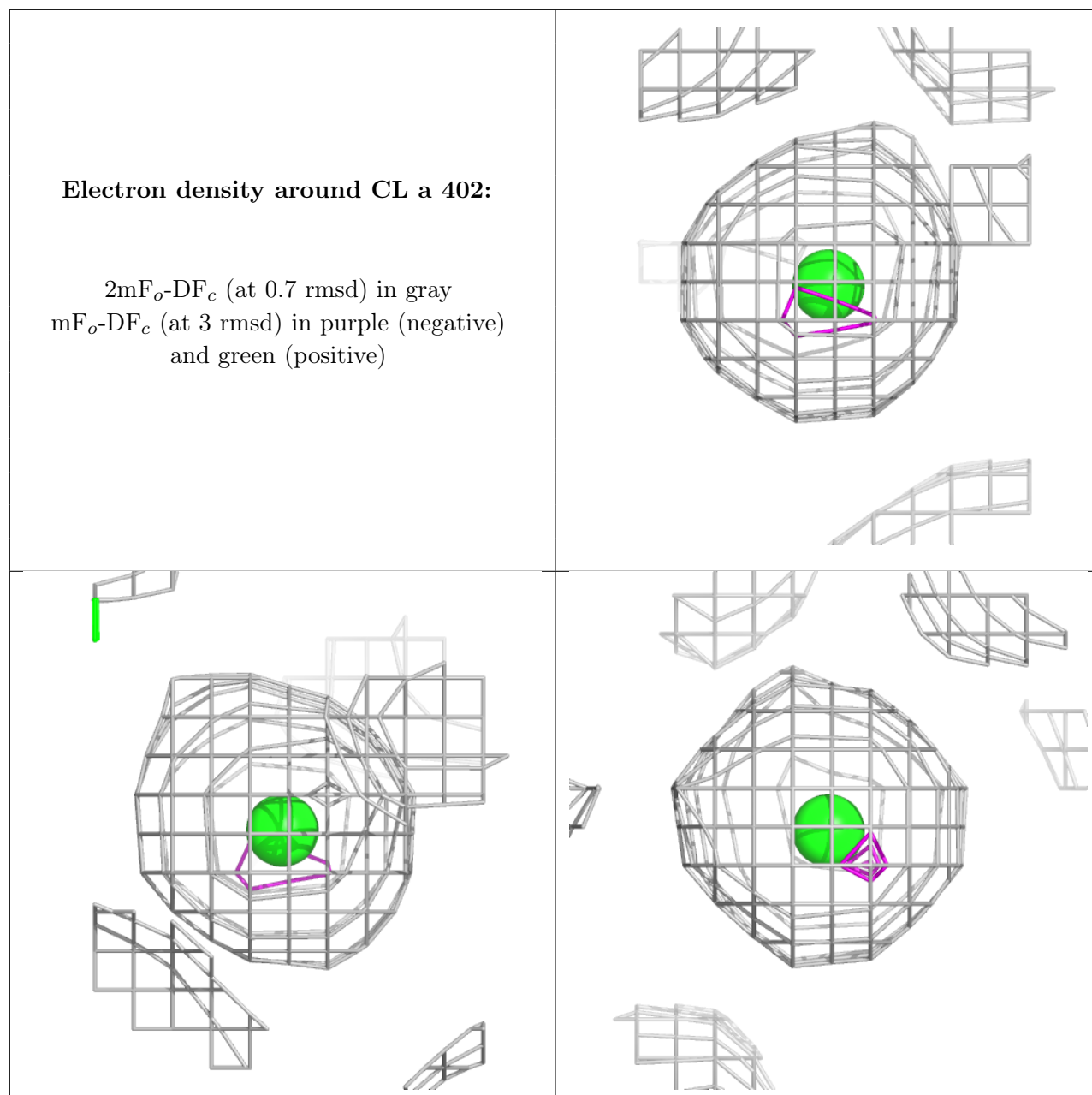
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around OEX a 415:

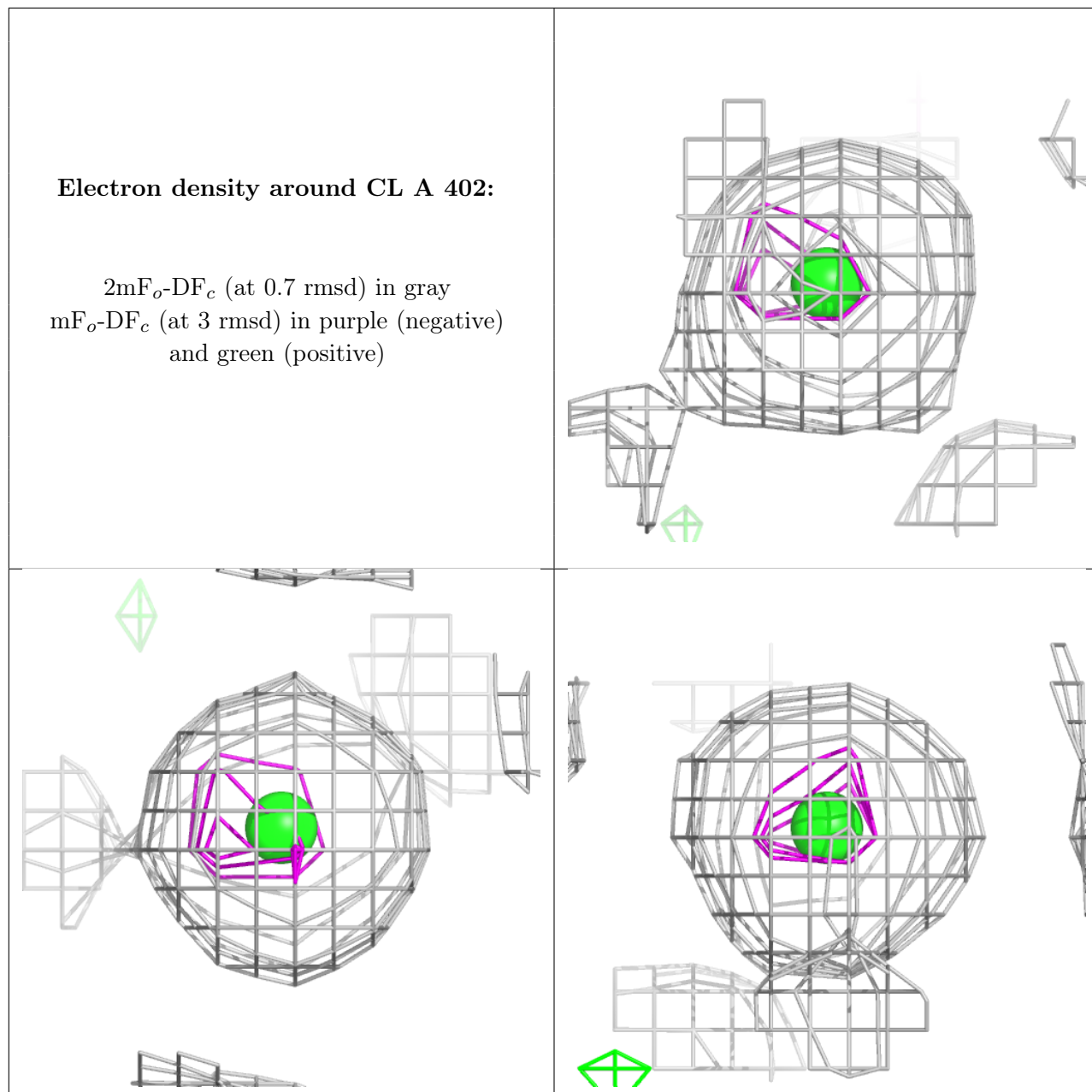
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

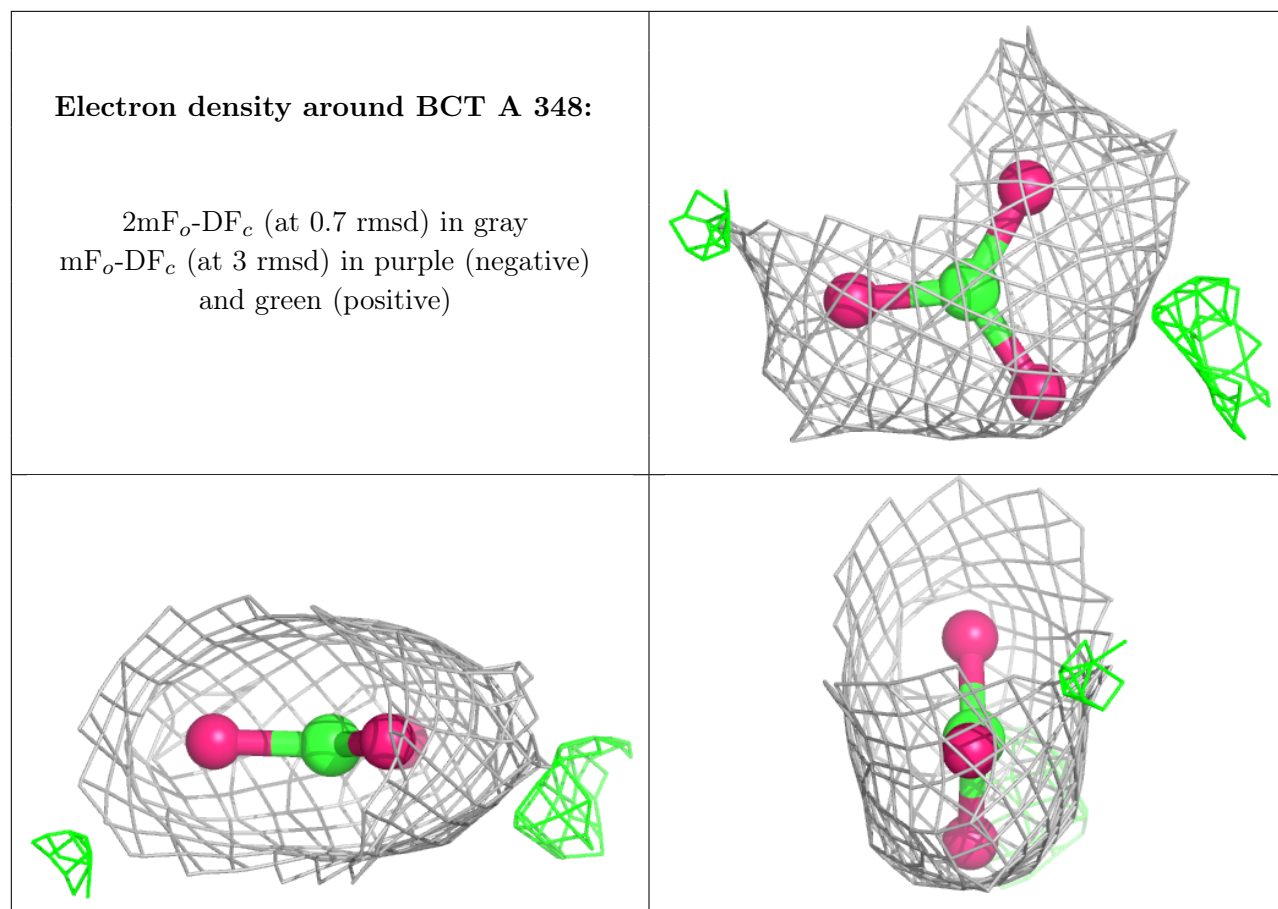




Electron density around CL A 402:

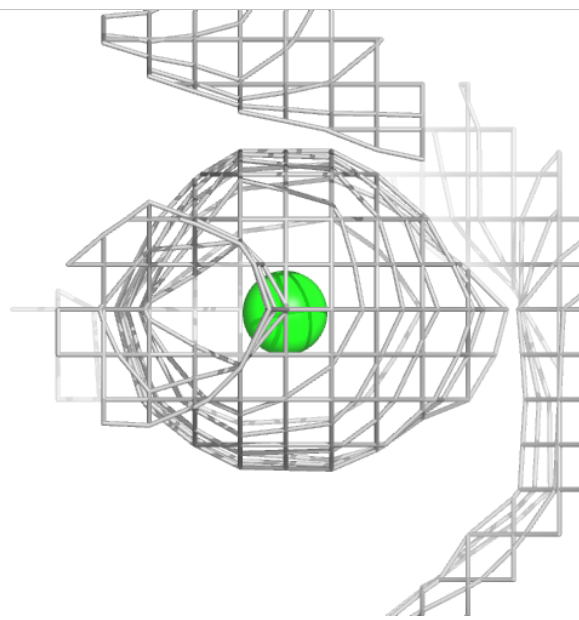
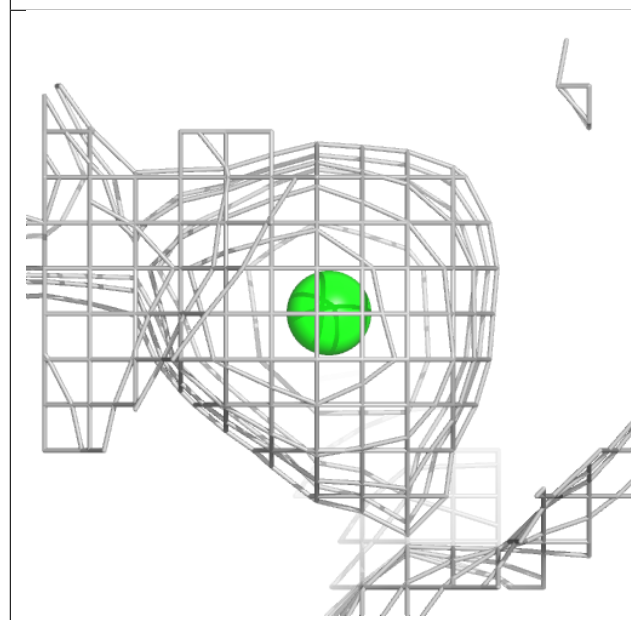
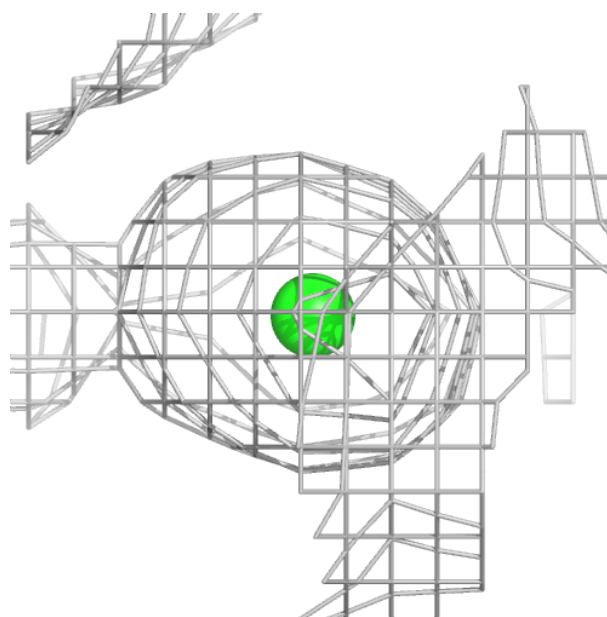
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





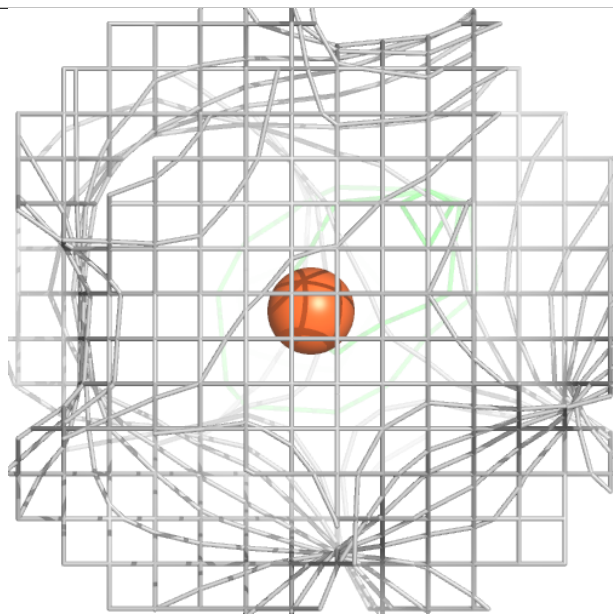
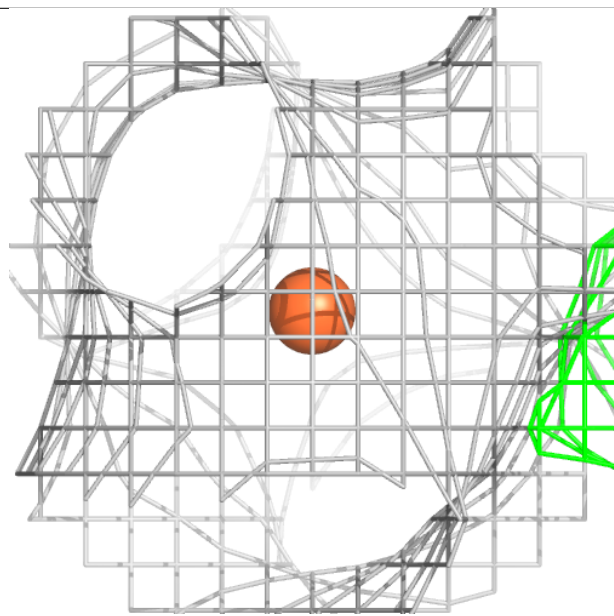
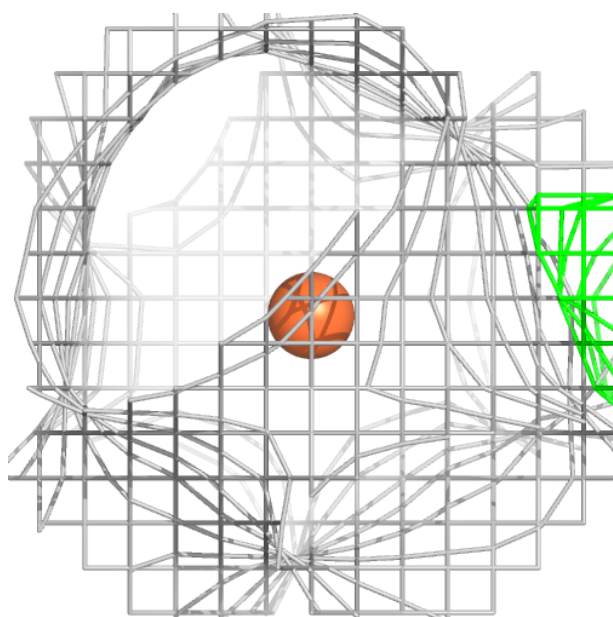
Electron density around CL a 403:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



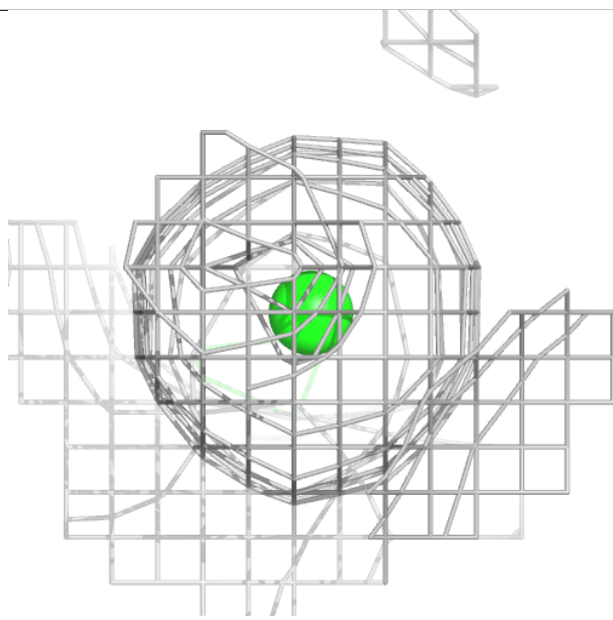
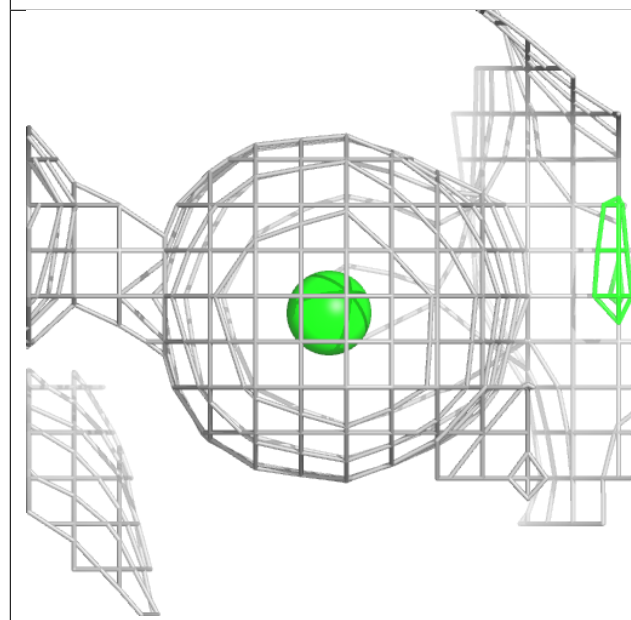
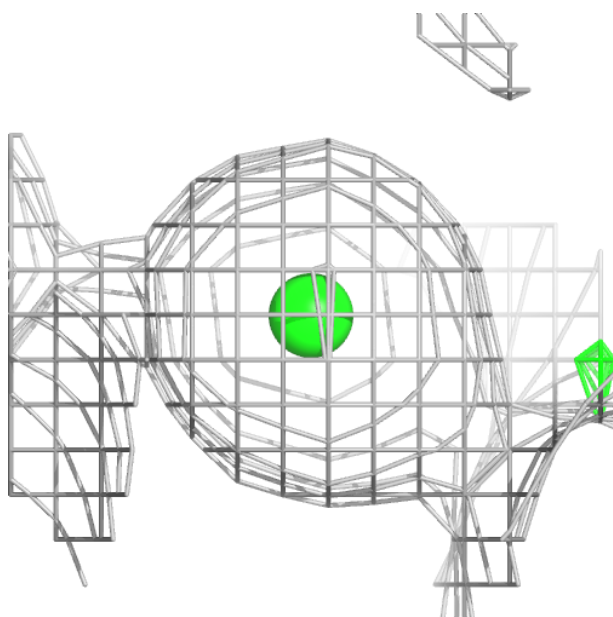
Electron density around FE2 A 401:

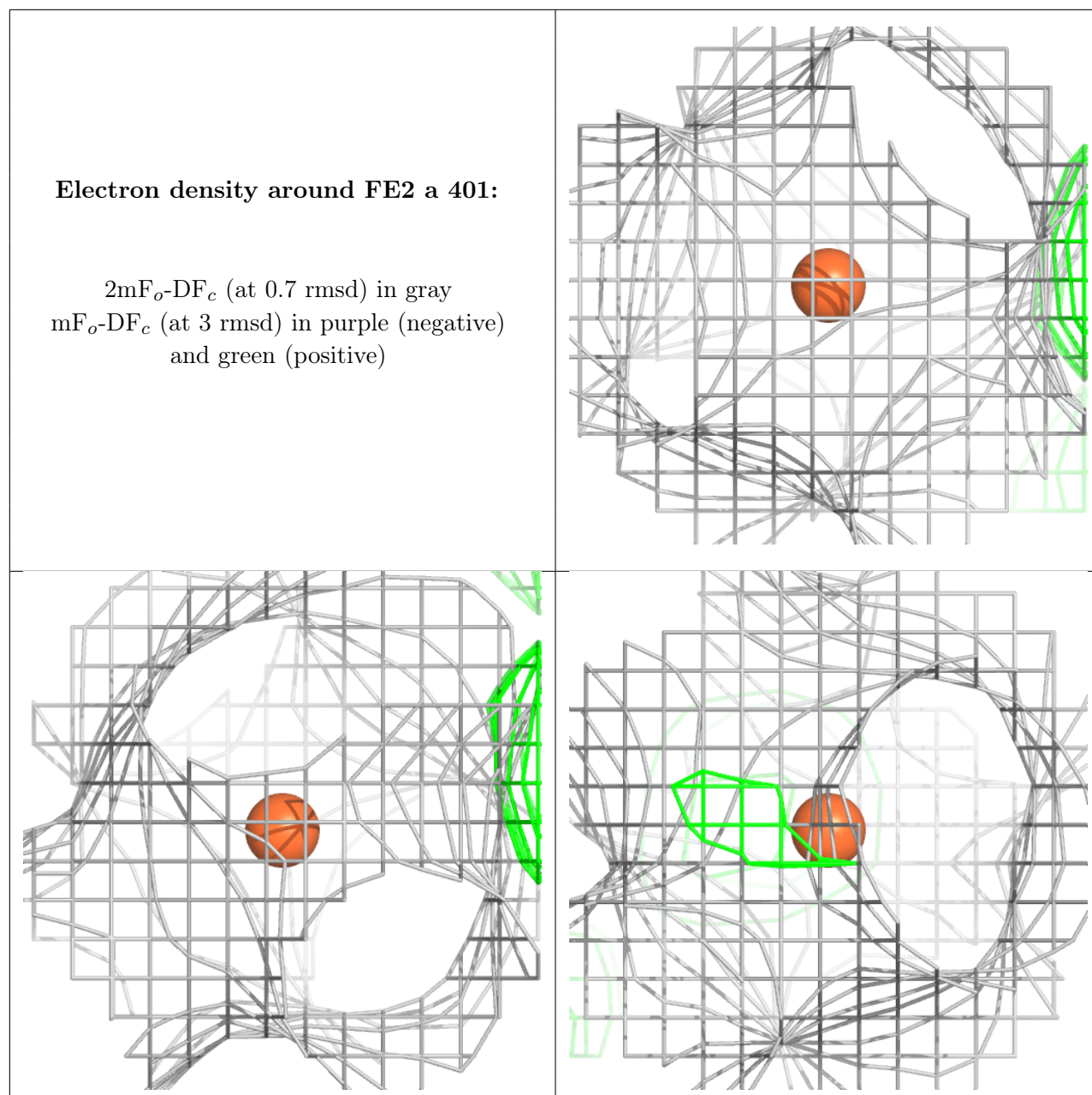
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around CL A 403:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





6.5 Other polymers [i](#)

There are no such residues in this entry.