wwPDB X-ray Structure Validation Summary Report (i)

Aug 9, 2023 – 01:59 PM EDT

PDB ID	:	8F4H
Title	:	RT XFEL structure of Photosystem II 1200 microseconds after the third illumination at 2.10 Angstrom resolution
Authors	:	Bhowmick, A.; Hussein, R.; Bogacz, I.; Simon, P.S.; Ibrahim, M.; Chatterjee, R.; Doyle, M.D.; Cheah, M.H.; Fransson, T.; Chernev, P.; Kim, I.-S.; Makita, H.; Dasgupta, M.; Kaminsky, C.J.; Zhang, M.; Gatcke, J.; Haupt, S.; Nangca, I.I.; Keable, S.M.; Aydin, O.; Tono, K.; Owada, S.; Gee, L.B.; Fuller, F.D.; Batyuk, A.; Alonso-Mori, R.; Holton, J.M.; Paley, D.W.; Moriarty, N.W.; Mamedov, F.; Adams, P.D.; Brewster, A.S.; Dobbek, H.; Sauter, N.K.; Bergmann, U.; Zouni, A.; Messinger, J.; Kern, J.; Yano, J.; Yachandra, V.K.
Deposited on	:	2022-11-10
Resolution	:	2.10 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 (i) 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 (i)) were used in the production of this report:

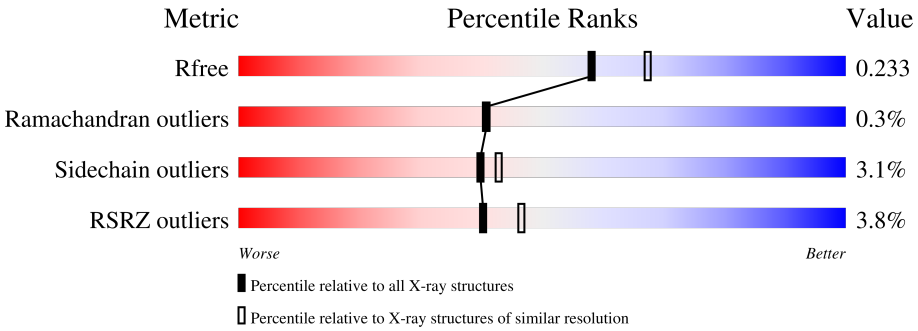
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.35

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.10 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	5197 (2.10-2.10)
Ramachandran outliers	138981	5647 (2.10-2.10)
Sidechain outliers	138945	5648 (2.10-2.10)
RSRZ outliers	127900	5083 (2.10-2.10)

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 <=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	95%
1	a	344	94%

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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)	:	2.35

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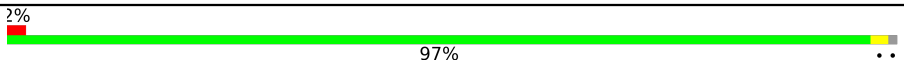
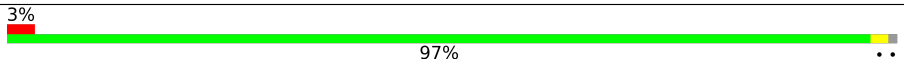
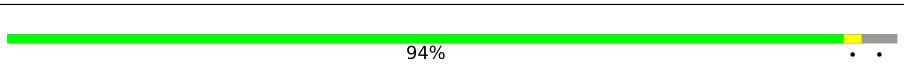
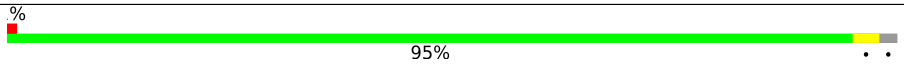
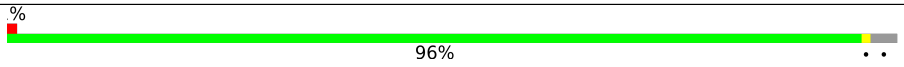
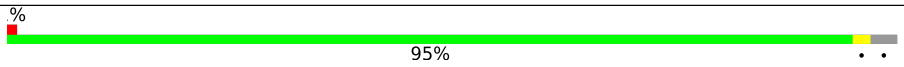
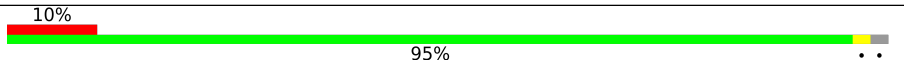
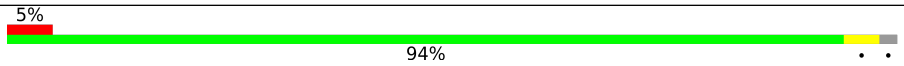
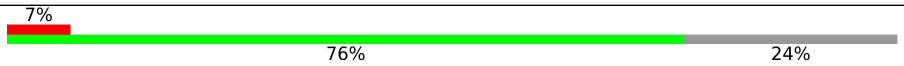
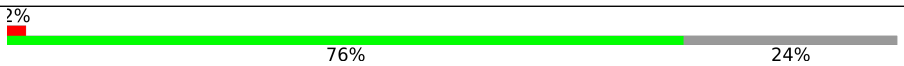
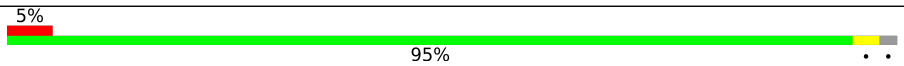
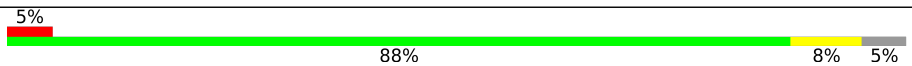
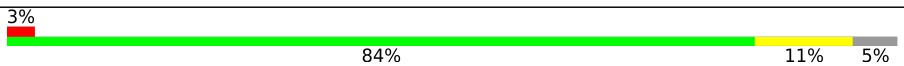
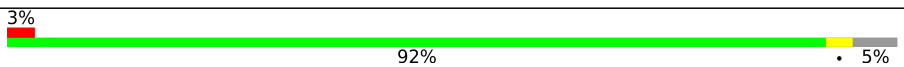
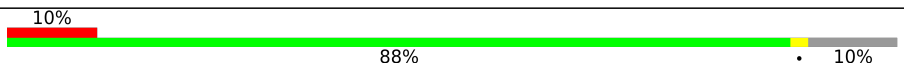
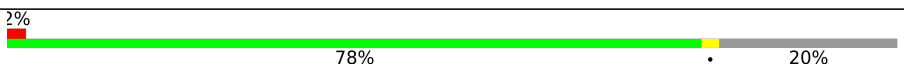
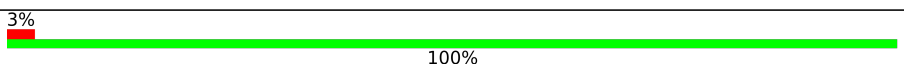
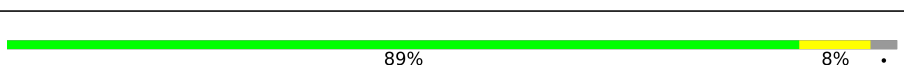
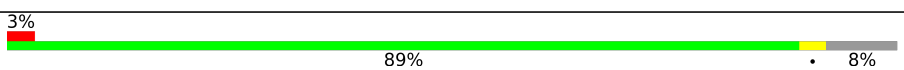
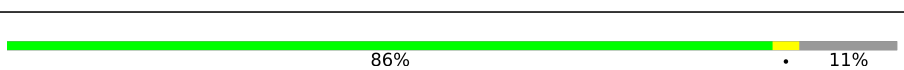
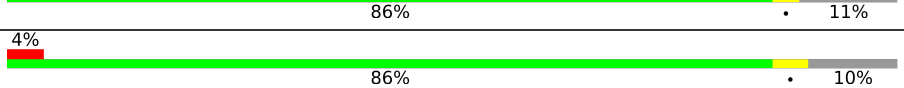
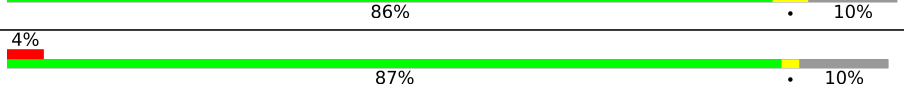
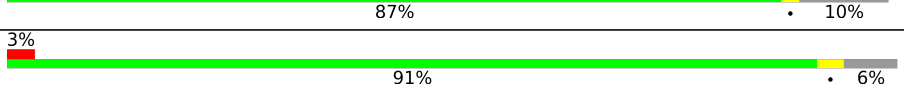
Mol	Chain	Length	Quality of chain
2	B	510	
2	b	510	
3	C	461	
3	c	461	
4	D	352	
4	d	352	
5	E	84	
5	e	84	
6	F	45	
6	f	45	
7	H	66	
7	h	66	
8	I	38	
8	i	38	
9	J	40	
9	j	40	
10	K	46	
10	k	46	
11	L	37	
11	l	37	
12	M	36	
12	m	36	
13	O	272	
13	o	272	
14	T	32	

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Mol	Chain	Length	Quality of chain
14	t	32	6% 91% 6%
15	U	134	% 72% 28%
15	u	134	71% 28%
16	V	163	82% 16%
16	v	163	% 80% 16%
17	Y	46	26% 59% 41%
17	y	46	13% 63% 35%
18	X	41	10% 88% 5% 7%
18	x	41	20% 93% 5%
19	Z	62	21% 89% 10%
19	z	62	26% 94% 6%
20	R	41	34% 76% 7% 17%
20	r	41	49% 63% 12% 24%

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
26	CLA	A	607	X	-	-	-
26	CLA	A	608	X	-	-	-
26	CLA	A	610	X	-	-	-
26	CLA	A	613	X	-	-	-
26	CLA	B	601	X	-	-	-
26	CLA	B	602	X	-	-	-
26	CLA	B	603	X	-	-	-
26	CLA	B	604	X	-	-	-
26	CLA	B	605	X	-	-	-
26	CLA	B	606	X	-	-	-
26	CLA	B	607	X	-	-	-
26	CLA	B	608	X	-	-	-
26	CLA	B	610	X	-	-	-
26	CLA	B	611	X	-	-	-
26	CLA	B	612	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
26	CLA	B	613	X	-	-	-
26	CLA	B	614	X	-	-	-
26	CLA	B	615	X	-	-	-
26	CLA	B	616	X	-	-	-
26	CLA	C	501	X	-	-	-
26	CLA	C	502	X	-	-	-
26	CLA	C	503	X	-	-	-
26	CLA	C	504	X	-	-	-
26	CLA	C	505	X	-	-	-
26	CLA	C	506	X	-	-	-
26	CLA	C	507	X	-	-	-
26	CLA	C	509	X	-	-	-
26	CLA	C	510	X	-	-	-
26	CLA	C	511	X	-	-	-
26	CLA	C	512	X	-	-	-
26	CLA	C	513	X	-	-	-
26	CLA	D	402	X	-	-	-
26	CLA	a	606	X	-	-	-
26	CLA	a	607	X	-	-	-
26	CLA	a	609	X	-	-	-
26	CLA	a	612	X	-	-	-
26	CLA	b	601	X	-	-	-
26	CLA	b	602	X	-	-	-
26	CLA	b	603	X	-	-	-
26	CLA	b	605	X	-	-	-
26	CLA	b	606	X	-	-	-
26	CLA	b	607	X	-	-	-
26	CLA	b	609	X	-	-	-
26	CLA	b	610	X	-	-	-
26	CLA	b	611	X	-	-	-
26	CLA	b	612	X	-	-	-
26	CLA	b	613	X	-	-	-
26	CLA	b	614	X	-	-	-
26	CLA	b	615	X	-	-	-
26	CLA	c	501	X	-	-	-
26	CLA	c	502	X	-	-	-
26	CLA	c	503	X	-	-	-
26	CLA	c	504	X	-	-	-
26	CLA	c	505	X	-	-	-
26	CLA	c	506	X	-	-	-
26	CLA	c	507	X	-	-	-
26	CLA	c	509	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
26	CLA	c	510	X	-	-	-
26	CLA	c	511	X	-	-	-
26	CLA	c	512	X	-	-	-
26	CLA	c	513	X	-	-	-
26	CLA	d	403	X	-	-	-
26	CLA	d	404	X	-	-	-
26	CLA	h	101	X	-	-	-
34	STE	F	103	-	-	-	X

2 Entry composition (i)

There are 37 unique types of molecules in this entry. The entry contains 54161 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 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	334	Total	C	N	O	S	0	64	0
			3604	2343	595	643	23			
1	a	334	Total	C	N	O	S	0	64	0
			3601	2340	595	643	23			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	505	Total	C	N	O	S	0	4	0
			4005	2631	666	695	13			
2	b	505	Total	C	N	O	S	0	0	0
			3978	2610	665	690	13			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	442	Total	C	N	O	S	0	11	0
			3592	2355	601	621	15			
3	c	451	Total	C	N	O	S	0	12	0
			3666	2396	617	638	15			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	D	341	Total	C	N	O	S	0	2	0
			2745	1818	448	467	12			
4	d	341	Total	C	N	O	S	0	3	0
			2751	1822	448	469	12			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
5	E	82	Total 666	C 436	N 107	O 123	0	1	0
5	e	82	Total 664	C 434	N 108	O 122	0	0	0

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	H	65	Total 510	C 341	N 82	O 85	S 2	0	0	0
7	h	63	Total 498	C 333	N 80	O 83	S 2	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	I	36	Total 296	C 200	N 46	O 49	S 1	0	0	0
8	i	36	Total 296	C 200	N 46	O 49	S 1	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	J	36	Total 257	C 174	N 40	O 42	S 1	0	0	0
9	j	36	Total 257	C 174	N 40	O 42	S 1	0	0	0

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

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

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

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
11	L	37	Total C N O S 304 202 48 53 1	0	0	0
11	l	36	Total C N O 296 197 47 52	0	0	0

- 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 256 171 37 47 1	0	0	0
12	m	32	Total C N O S 251 168 36 46 1	0	0	0

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
13	O	244	Total C N O S 1870 1168 313 385 4	0	1	0
13	o	244	Total C N O S 1874 1170 317 383 4	0	0	0

- 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 258 181 36 39 2	0	0	0
14	t	30	Total C N O S 256 180 36 38 2	0	0	0

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
15	U	97	Total C N O 774 491 129 154	0	0	0
15	u	97	Total C N O 774 491 129 154	0	0	0

- 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	0	0
			1064	675	177	208	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 Ycf12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	Y	27	Total	C	N	O	S	0	0	0
			196	128	35	30	3			
17	y	30	Total	C	N	O	S	0	0	0
			218	144	35	36	3			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	X	38	Total	C	N	O	0	0	0
			281	188	45	48			
18	x	39	Total	C	N	O	0	0	0
			286	191	46	49			

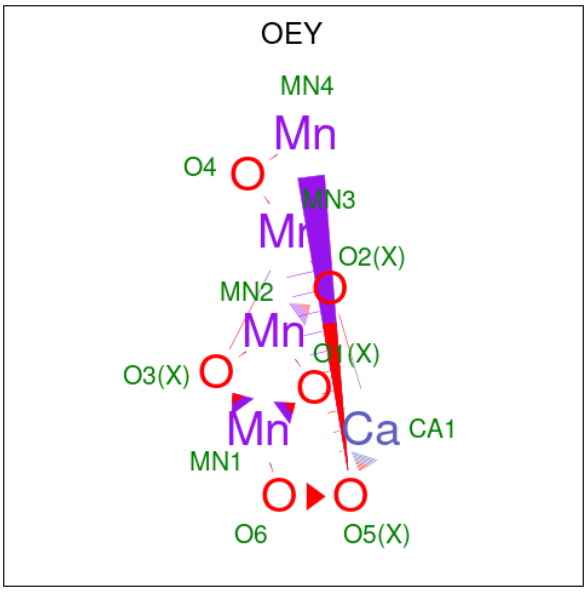
- Molecule 19 is a protein called Photosystem II reaction center protein Z.

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
			477	326	72	77	2			

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

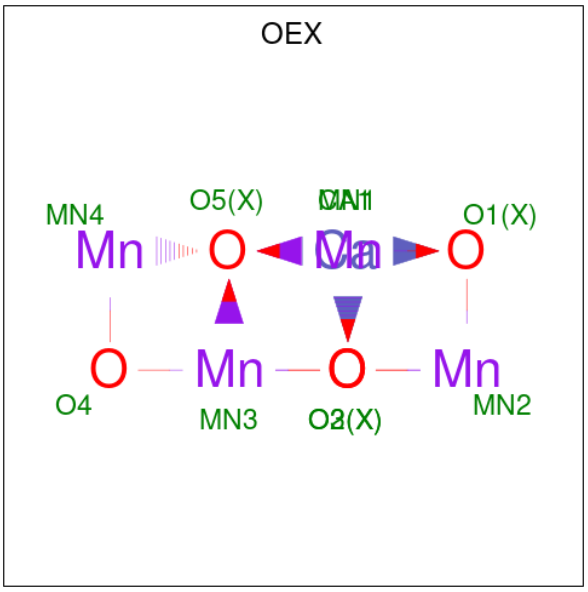
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	R	34	Total	C	N	O	0	0	0
			271	184	47	40			
20	r	31	Total	C	N	O	0	0	0
			246	166	43	37			

- Molecule 21 is CA-MN4-O6 CLUSTER (three-letter code: OEY) (formula: $CaMn_4O_6$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
21	A	1	Total	Ca	Mn	O	0	1
			22	2	8	12		
21	a	1	Total	Ca	Mn	O	0	1
			22	2	8	12		

- Molecule 22 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
22	A	1	Total	Ca	Mn	O	0	1
			10	1	4	5		

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

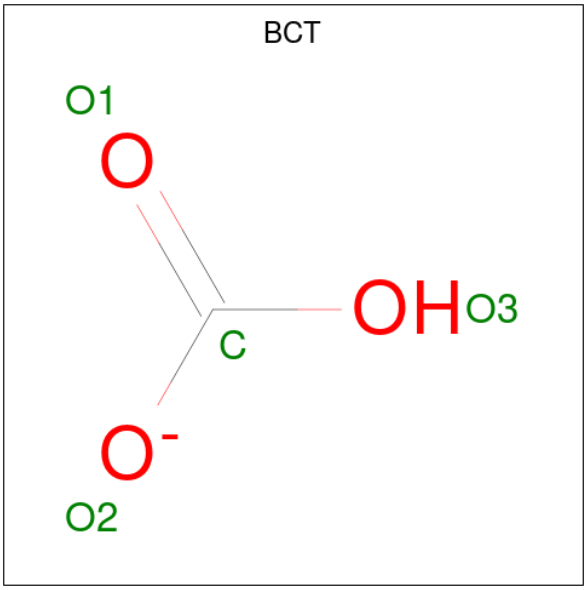
- Molecule 23 is FE (II) ION (three-letter code: FE2) (formula: Fe).

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

- Molecule 24 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

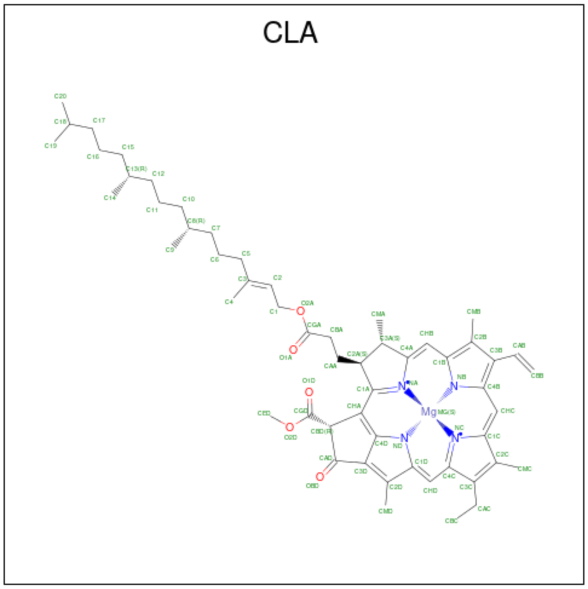
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
24	A	2	Total	Cl	0	0
			2	2		
24	a	2	Total	Cl	0	0
			2	2		

- Molecule 25 is BICARBONATE ION (three-letter code: BCT) (formula: CHO_3).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
25	A	1	Total	C	O	0	0
			4	1	3		
25	d	1	Total	C	O	0	0
			4	1	3		

- Molecule 26 is CHLOROPHYLL A (three-letter code: CLA) (formula: $C_{55}H_{72}MgN_4O_5$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
26	A	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	A	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	A	1	Total 54	C 44	Mg 1	N 4	O 5	0	0
26	A	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	B	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	B	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	B	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	B	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	B	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	B	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	B	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	B	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	B	1	Total 65	C 55	Mg 1	N 4	O 5	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
26	B	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	B	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	B	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	B	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	B	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	B	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	B	1	Total 60	C 50	Mg 1	N 4	O 5	0	0
26	C	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	C	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	C	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	C	1	Total 59	C 49	Mg 1	N 4	O 5	0	0
26	C	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	C	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	C	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	C	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	C	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	C	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	C	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	C	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	C	1	Total 65	C 55	Mg 1	N 4	O 5	0	0
26	D	1	Total 65	C 55	Mg 1	N 4	O 5	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
26	D	1	Total C Mg N O 65 55 1 4 5	0	0
26	a	1	Total C Mg N O 65 55 1 4 5	0	0
26	a	1	Total C Mg N O 65 55 1 4 5	0	0
26	a	1	Total C Mg N O 65 55 1 4 5	0	0
26	a	1	Total C Mg N O 65 55 1 4 5	0	0
26	b	1	Total C Mg N O 65 55 1 4 5	0	0
26	b	1	Total C Mg N O 65 55 1 4 5	0	0
26	b	1	Total C Mg N O 65 55 1 4 5	0	0
26	b	1	Total C Mg N O 65 55 1 4 5	0	0
26	b	1	Total C Mg N O 65 55 1 4 5	0	0
26	b	1	Total C Mg N O 65 55 1 4 5	0	0
26	b	1	Total C Mg N O 65 55 1 4 5	0	0
26	b	1	Total C Mg N O 65 55 1 4 5	0	0
26	b	1	Total C Mg N O 65 55 1 4 5	0	0
26	b	1	Total C Mg N O 65 55 1 4 5	0	0
26	b	1	Total C Mg N O 65 55 1 4 5	0	0
26	b	1	Total C Mg N O 65 55 1 4 5	0	0
26	b	1	Total C Mg N O 65 55 1 4 5	0	0
26	b	1	Total C Mg N O 65 55 1 4 5	0	0
26	b	1	Total C Mg N O 60 50 1 4 5	0	0
26	c	1	Total C Mg N O 65 55 1 4 5	0	0

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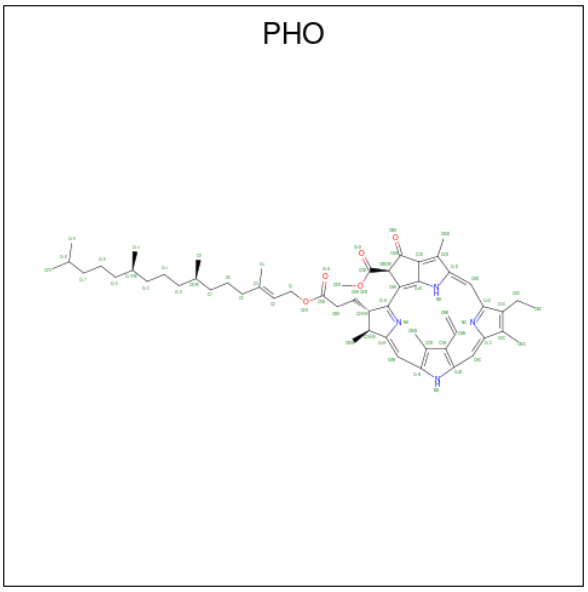
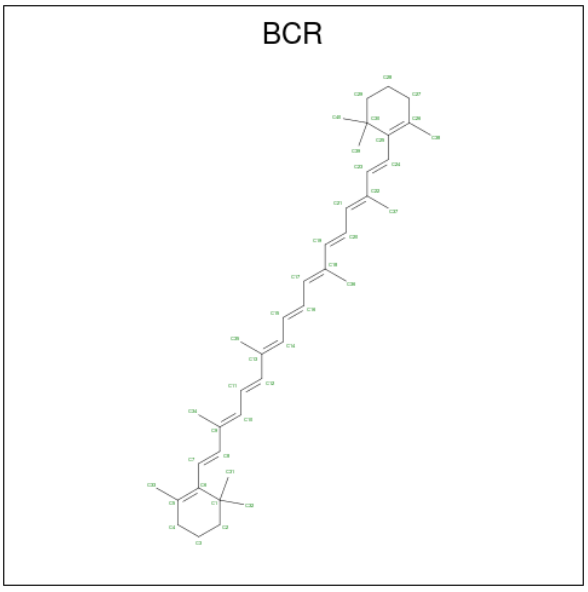
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
26	c	1	Total C Mg N O 65 55 1 4 5	0	0
26	c	1	Total C Mg N O 65 55 1 4 5	0	0
26	c	1	Total C Mg N O 60 50 1 4 5	0	0
26	c	1	Total C Mg N O 65 55 1 4 5	0	0
26	c	1	Total C Mg N O 65 55 1 4 5	0	0
26	c	1	Total C Mg N O 65 55 1 4 5	0	0
26	c	1	Total C Mg N O 64 54 1 4 5	0	0
26	c	1	Total C Mg N O 65 55 1 4 5	0	0
26	c	1	Total C Mg N O 65 55 1 4 5	0	0
26	c	1	Total C Mg N O 65 55 1 4 5	0	0
26	c	1	Total C Mg N O 65 55 1 4 5	0	0
26	c	1	Total C Mg N O 65 55 1 4 5	0	0
26	d	1	Total C Mg N O 65 55 1 4 5	0	0
26	d	1	Total C Mg N O 65 55 1 4 5	0	0
26	h	1	Total C Mg N O 65 55 1 4 5	0	0

- Molecule 27 is PHEOPHYTIN A (three-letter code: PHO) (formula: $C_{55}H_{74}N_4O_5$).



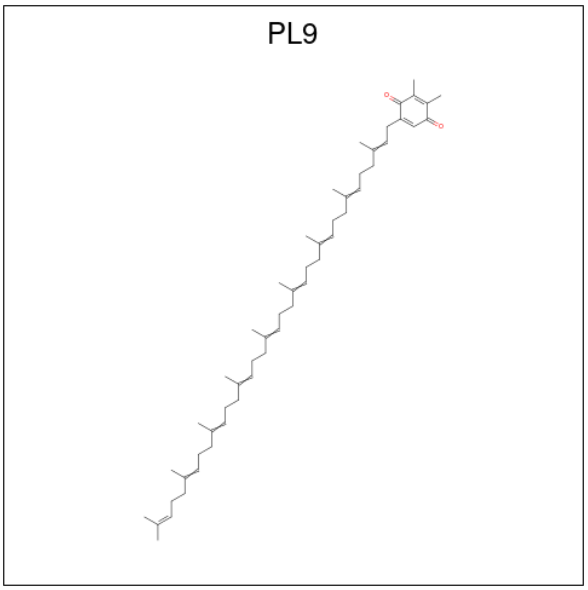
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
27	A	1	Total	C	N	O	0	0
			64	55	4	5		
27	D	1	Total	C	N	O	0	0
			64	55	4	5		
27	a	1	Total	C	N	O	0	0
			64	55	4	5		
27	d	1	Total	C	N	O	0	0
			64	55	4	5		

- Molecule 28 is BETA-CAROTENE (three-letter code: BCR) (formula: $C_{40}H_{56}$).



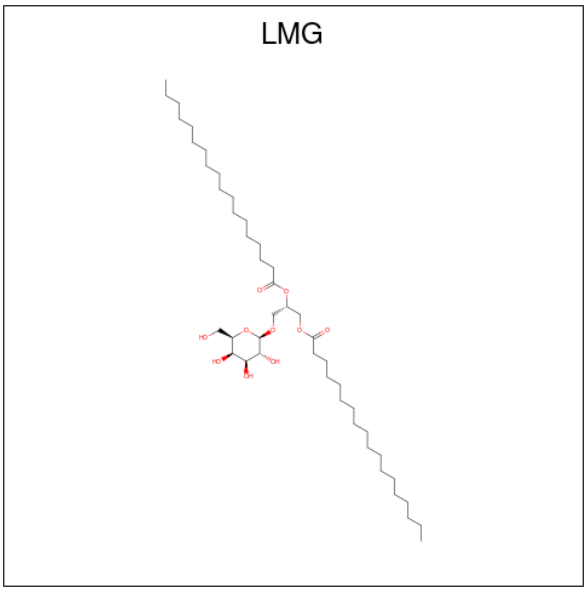
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
28	A	1	Total C 40 40	0	0
28	B	1	Total C 40 40	0	0
28	B	1	Total C 40 40	0	0
28	B	1	Total C 40 40	0	0
28	C	1	Total C 40 40	0	0
28	D	1	Total C 40 40	0	0
28	K	1	Total C 40 40	0	0
28	K	1	Total C 40 40	0	0
28	T	1	Total C 40 40	0	0
28	X	1	Total C 40 40	0	0
28	Z	1	Total C 40 40	0	0
28	a	1	Total C 40 40	0	0
28	b	1	Total C 40 40	0	0
28	b	1	Total C 40 40	0	0
28	b	1	Total C 40 40	0	0
28	c	1	Total C 40 40	0	0
28	c	1	Total C 40 40	0	0
28	c	1	Total C 40 40	0	0
28	d	1	Total C 40 40	0	0
28	h	1	Total C 40 40	0	0
28	k	1	Total C 40 40	0	0
28	t	1	Total C 40 40	0	0

- 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: $C_{53}H_{80}O_2$).



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

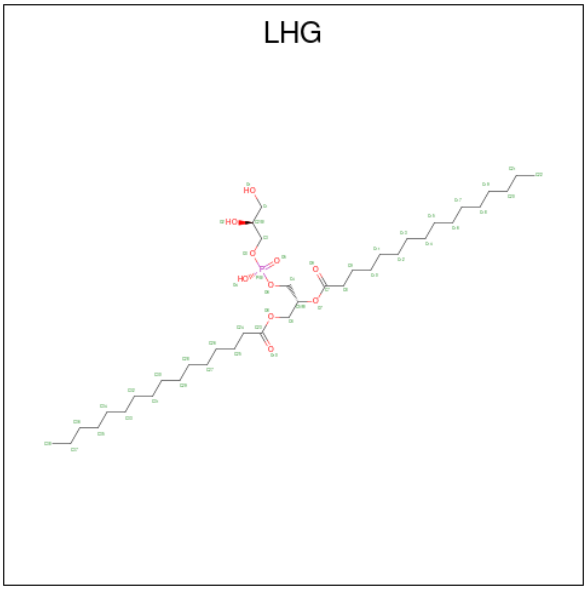
- Molecule 30 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula: $C_{45}H_{86}O_{10}$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
30	A	1	Total C O 48 38 10	0	0
30	B	1	Total C O 28 24 4	0	0
30	C	1	Total C O 48 38 10	0	0
30	D	1	Total C O 51 41 10	0	0
30	D	1	Total C O 33 27 6	0	0
30	M	1	Total C O 51 41 10	0	0
30	b	1	Total C O 55 45 10	0	0
30	c	1	Total C O 37 27 10	0	0
30	c	1	Total C O 48 38 10	0	0
30	c	1	Total C O 49 39 10	0	0
30	d	1	Total C O 23 21 2	0	0
30	d	1	Total C O 44 34 10	0	0
30	m	1	Total C O 51 41 10	0	0

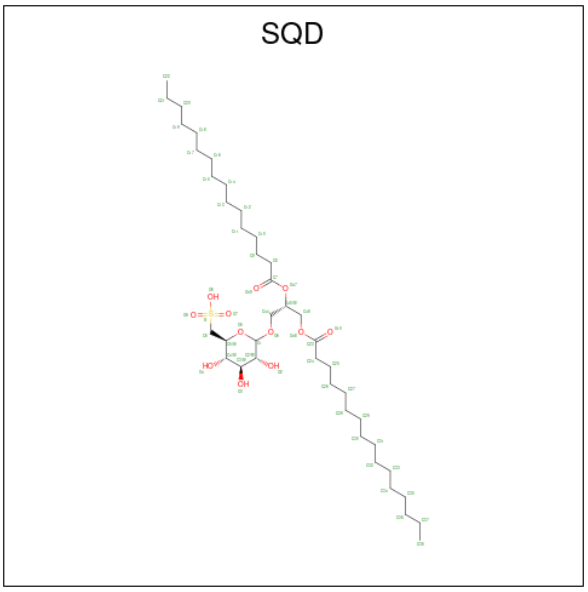
- Molecule 31 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code:

LHG) (formula: $C_{38}H_{75}O_{10}P$).



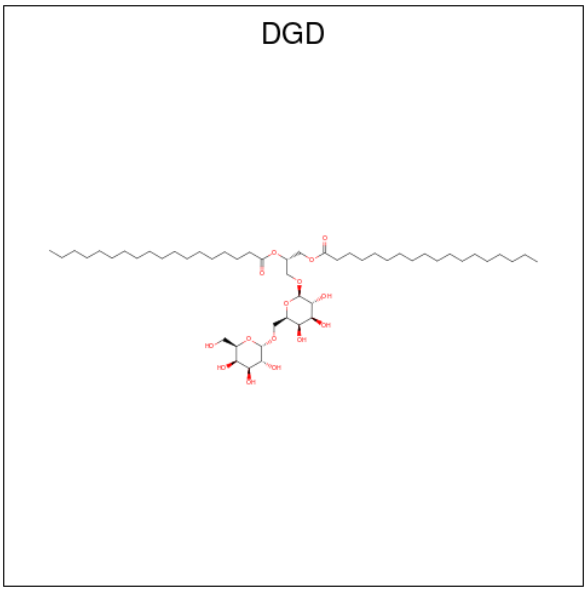
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
31	A	1	Total	C	O	P	0	0
			47	36	10	1		
31	A	1	Total	C	O	P	0	0
			49	38	10	1		
31	D	1	Total	C	O	P	0	0
			49	38	10	1		
31	D	1	Total	C	O	P	0	0
			49	38	10	1		
31	L	1	Total	C	O	P	0	0
			49	38	10	1		
31	d	1	Total	C	O	P	0	0
			49	38	10	1		
31	d	1	Total	C	O	P	0	0
			49	38	10	1		
31	d	1	Total	C	O	P	0	0
			39	28	10	1		
31	e	1	Total	C	O	P	0	0
			42	31	10	1		
31	l	1	Total	C	O	P	0	0
			49	38	10	1		

- Molecule 32 is 1,2-DI-O-ACYL-3-O-[6-DEOXY-6-SULFO-ALPHA-D-GLUCOPYRANOSYL]-SN-GLYCEROL (three-letter code: SQD) (formula: $C_{41}H_{78}O_{12}S$).



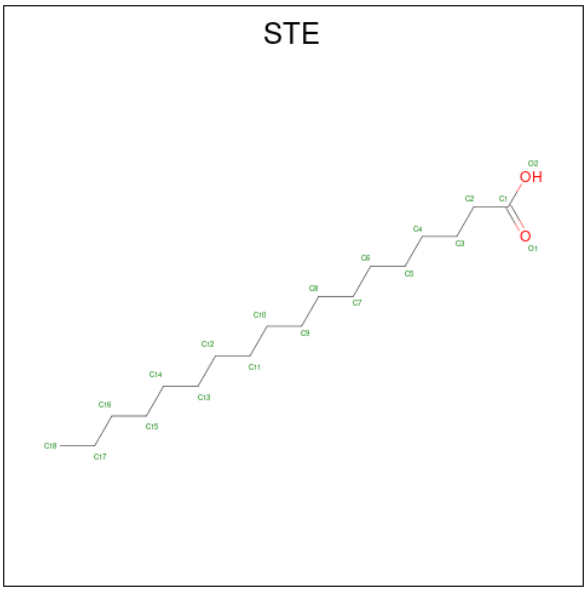
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
32	A	1	Total C O S 52 39 12 1	0	0
32	A	1	Total C O 39 35 4	0	0
32	B	1	Total C O S 54 41 12 1	0	0
32	F	1	Total C O S 36 25 10 1	0	0
32	a	1	Total C O S 54 41 12 1	0	0
32	b	1	Total C O S 49 36 12 1	0	0
32	f	1	Total C O S 41 28 12 1	0	0
32	t	1	Total C O 36 31 5	0	0

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



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
33	A	1	Total C O 66 51 15	0	0
33	C	1	Total C O 62 47 15	0	0
33	C	1	Total C O 62 47 15	0	0
33	C	1	Total C O 62 47 15	0	0
33	H	1	Total C O 62 47 15	0	0
33	a	1	Total C O 44 39 5	0	0
33	c	1	Total C O 62 47 15	0	0
33	c	1	Total C O 62 47 15	0	0
33	c	1	Total C O 62 47 15	0	0
33	h	1	Total C O 62 47 15	0	0

- Molecule 34 is STEARIC ACID (three-letter code: STE) (formula: $C_{18}H_{36}O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
34	B	1	Total C O 17 15 2	0	0
34	B	1	Total C O 12 10 2	0	0
34	B	1	Total C O 12 10 2	0	0
34	B	1	Total C 16 16	0	0
34	C	1	Total C O 12 10 2	0	0
34	C	1	Total C O 12 10 2	0	0
34	C	1	Total C 16 16	0	0
34	F	1	Total C O 12 10 2	0	0
34	H	1	Total C 18 18	0	0
34	I	1	Total C 15 15	0	0
34	J	1	Total C O 12 10 2	0	0
34	L	1	Total C O 12 10 2	0	0
34	M	1	Total C O 15 13 2	0	0
34	M	1	Total C 10 10	0	0

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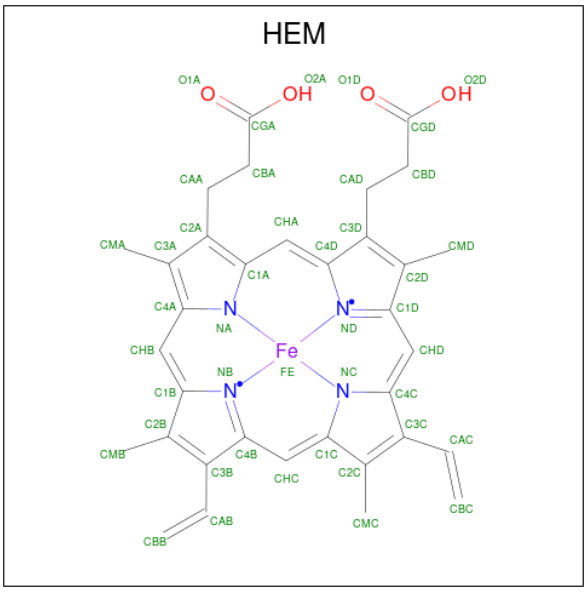
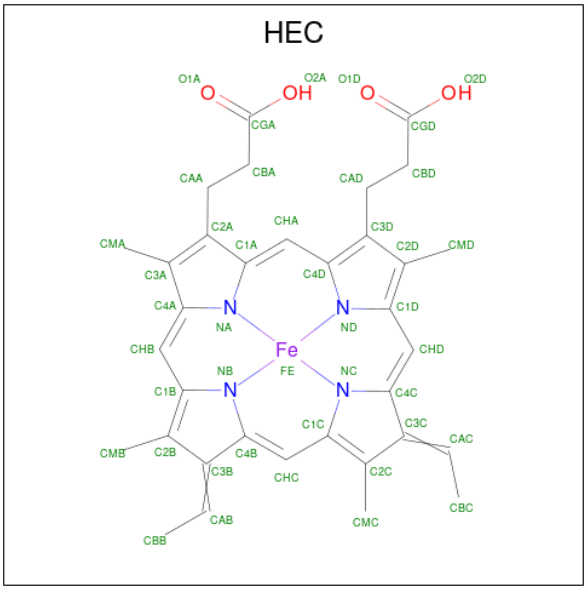
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
34	T	1	Total C 16 16	0	0
34	T	1	Total C 15 15	0	0
34	X	1	Total C O 20 18 2	0	0
34	a	1	Total C O 12 10 2	0	0
34	b	1	Total C O 20 18 2	0	0
34	b	1	Total C O 20 18 2	0	0
34	b	1	Total C 10 10	0	0
34	c	1	Total C O 20 18 2	0	0
34	d	1	Total C O 16 14 2	0	0
34	d	1	Total C O 17 15 2	0	0
34	d	1	Total C O 20 18 2	0	0
34	j	1	Total C O 12 10 2	0	0
34	k	1	Total C O 12 10 2	0	0
34	l	1	Total C 18 18	0	0
34	t	1	Total C O 14 12 2	0	0
34	t	1	Total C 10 10	0	0
34	t	1	Total C O 18 16 2	0	0

- Molecule 35 is PROTOPORPHYRIN IX CONTAINING FE (three-letter code: HEM) (formula: $C_{34}H_{32}FeN_4O_4$).



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

- Molecule 36 is HEME C (three-letter code: HEC) (formula: $C_{34}H_{34}FeN_4O_4$).



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

- Molecule 37 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
37	A	121	Total O 129 129	0	4
37	B	171	Total O 171 171	0	0
37	C	149	Total O 149 149	0	0
37	D	105	Total O 105 105	0	0
37	E	16	Total O 16 16	0	0
37	F	8	Total O 8 8	0	0
37	H	26	Total O 26 26	0	0
37	I	13	Total O 13 13	0	0
37	J	11	Total O 11 11	0	0
37	K	4	Total O 4 4	0	0
37	L	10	Total O 10 10	0	0
37	M	3	Total O 3 3	0	0
37	O	68	Total O 68 68	0	0
37	T	6	Total O 6 6	0	0
37	U	33	Total O 33 33	0	0
37	V	54	Total O 54 54	0	0
37	X	7	Total O 7 7	0	0
37	Z	5	Total O 5 5	0	0
37	a	109	Total O 117 117	0	4
37	b	142	Total O 142 142	0	0
37	c	132	Total O 132 132	0	0

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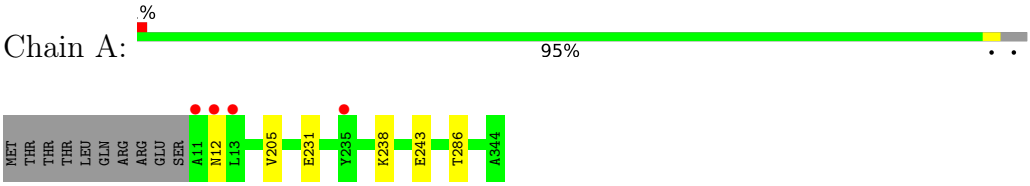
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
37	d	92	Total O 92 92	0	0
37	e	13	Total O 13 13	0	0
37	f	4	Total O 4 4	0	0
37	h	16	Total O 16 16	0	0
37	i	12	Total O 12 12	0	0
37	j	9	Total O 9 9	0	0
37	k	6	Total O 6 6	0	0
37	l	8	Total O 8 8	0	0
37	m	7	Total O 7 7	0	0
37	o	77	Total O 77 77	0	0
37	t	10	Total O 10 10	0	0
37	u	38	Total O 38 38	0	0
37	v	39	Total O 39 39	0	0
37	x	4	Total O 4 4	0	0
37	z	5	Total O 5 5	0	0
37	r	7	Total O 7 7	0	0

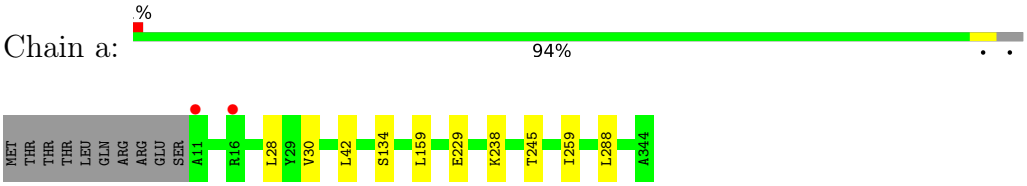
3 Residue-property plots (i)

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

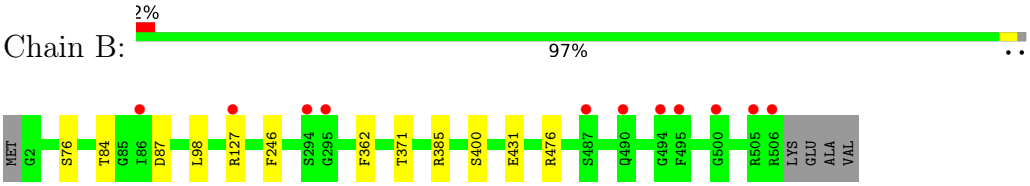
• Molecule 1: Photosystem II protein D1 1



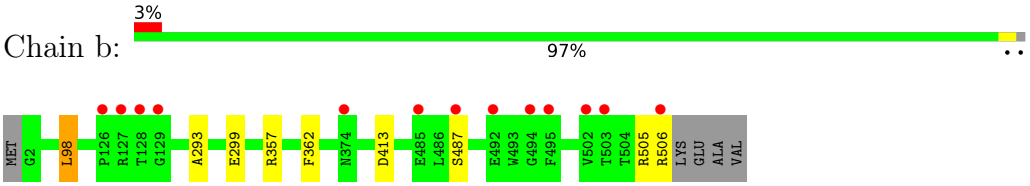
• Molecule 1: Photosystem II protein D1 1



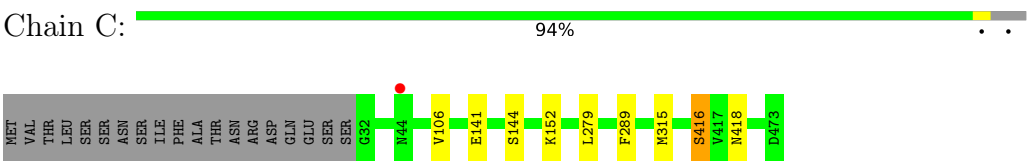
• Molecule 2: Photosystem II CP47 reaction center protein



• Molecule 2: Photosystem II CP47 reaction center protein

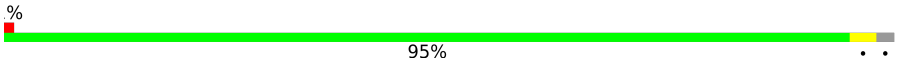


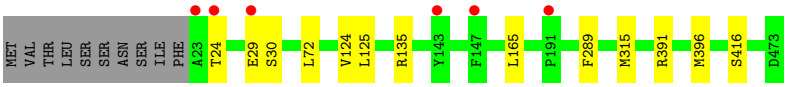
• Molecule 3: Photosystem II CP43 reaction center protein



• Molecule 3: Photosystem II CP43 reaction center protein

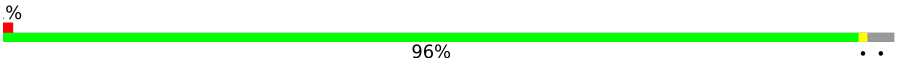
Chain c:

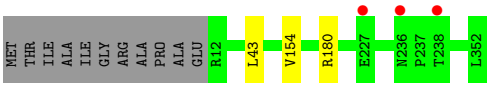




• Molecule 4: Photosystem II D2 protein

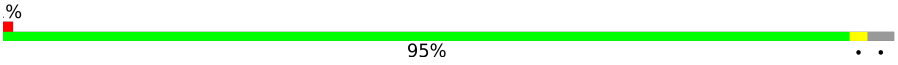
Chain D:

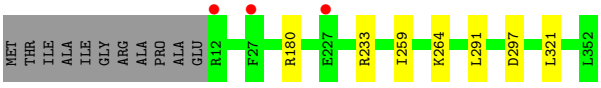




• Molecule 4: Photosystem II D2 protein

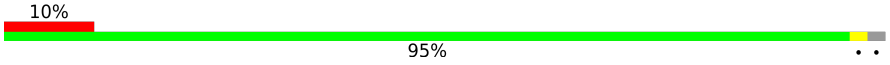
Chain d:

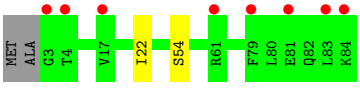




• Molecule 5: Cytochrome b559 subunit alpha

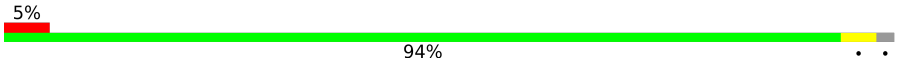
Chain E:

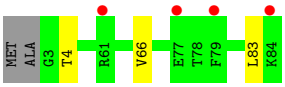




• Molecule 5: Cytochrome b559 subunit alpha

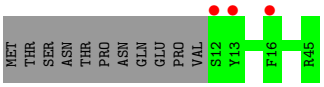
Chain e:





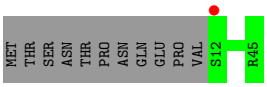
• Molecule 6: Cytochrome b559 subunit beta

Chain F:



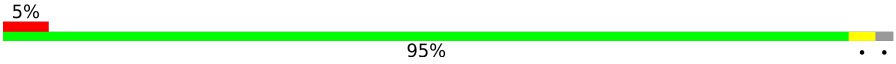
• Molecule 6: Cytochrome b559 subunit beta

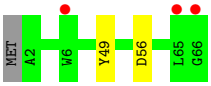
Chain f:



• Molecule 7: Photosystem II reaction center protein H

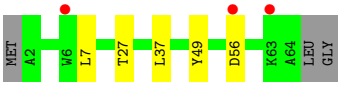
Chain H:





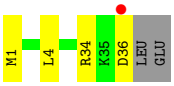
• Molecule 7: Photosystem II reaction center protein H

Chain h:



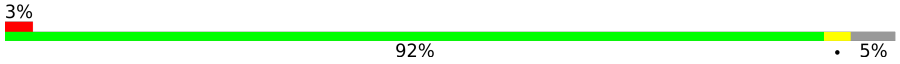
• Molecule 8: Photosystem II reaction center protein I

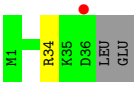
Chain I:



• Molecule 8: Photosystem II reaction center protein I

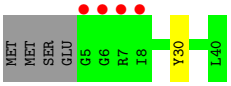
Chain i:





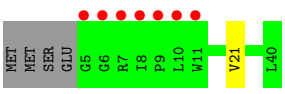
• Molecule 9: Photosystem II reaction center protein J

Chain J:



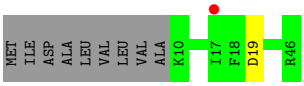
• Molecule 9: Photosystem II reaction center protein J

Chain j:



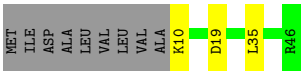
• Molecule 10: Photosystem II reaction center protein K

Chain K:



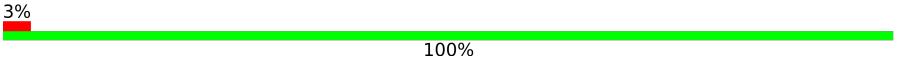
• Molecule 10: Photosystem II reaction center protein K

Chain k:



• Molecule 11: Photosystem II reaction center protein L

Chain L:

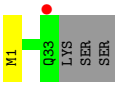


• Molecule 11: Photosystem II reaction center protein L

Chain l:

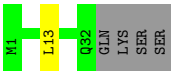
• Molecule 12: Photosystem II reaction center protein M

Chain M:



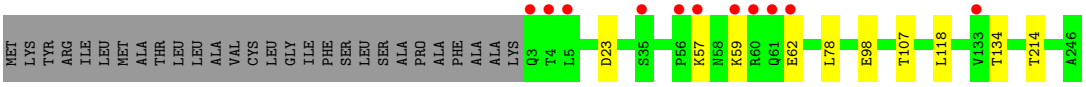
• Molecule 12: Photosystem II reaction center protein M

Chain m:



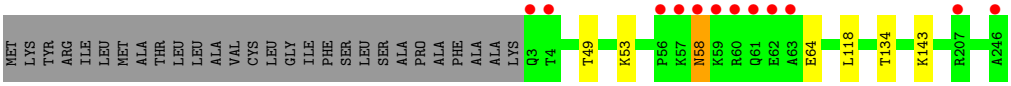
• Molecule 13: Photosystem II manganese-stabilizing polypeptide

Chain O:

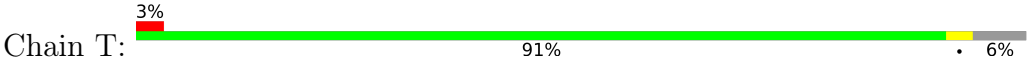


• Molecule 13: Photosystem II manganese-stabilizing polypeptide

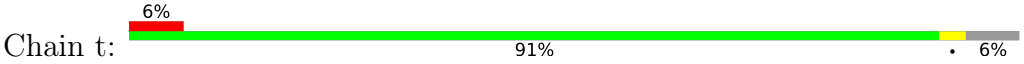
Chain o:

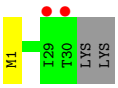


• Molecule 14: Photosystem II reaction center protein T

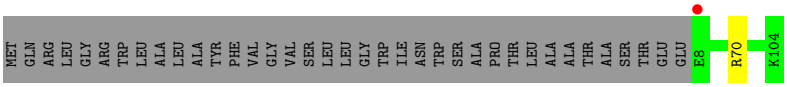


• Molecule 14: Photosystem II reaction center protein T



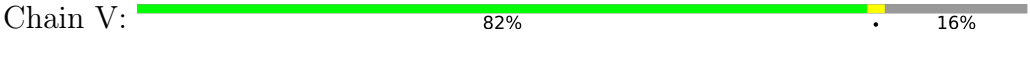


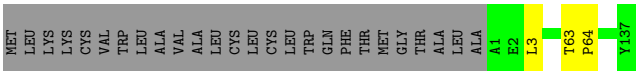
• Molecule 15: Photosystem II 12 kDa extrinsic protein



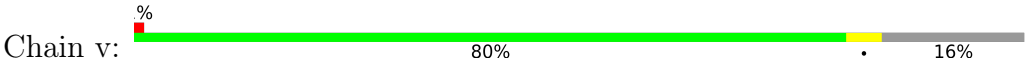
• Molecule 15: Photosystem II 12 kDa extrinsic protein

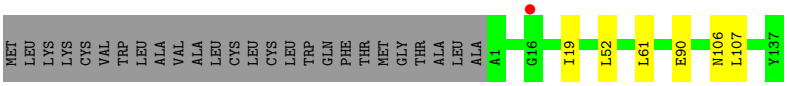
• Molecule 16: Cytochrome c-550





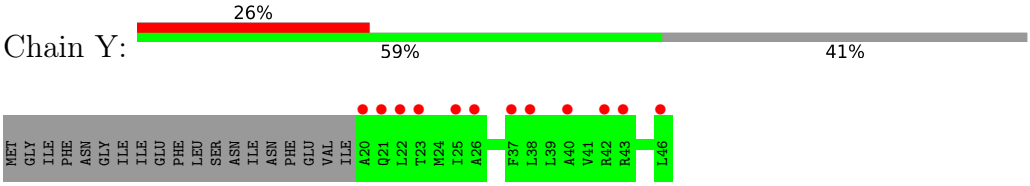
• Molecule 16: Cytochrome c-550





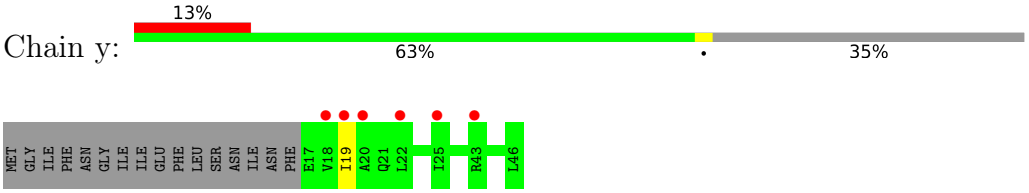
• Molecule 17: Photosystem II reaction center protein Ycf12

Chain Y:



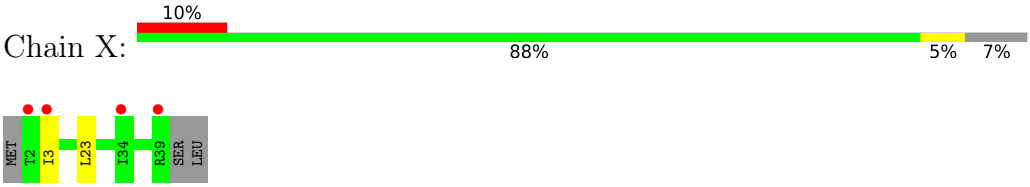
• Molecule 17: Photosystem II reaction center protein Ycf12

Chain y:



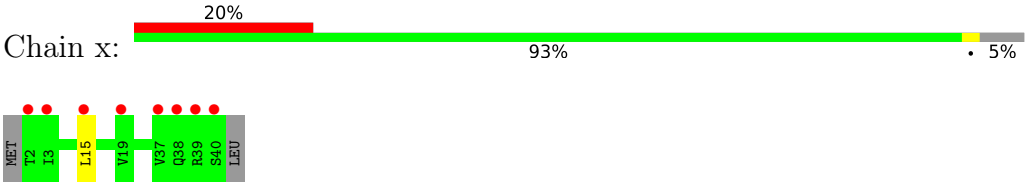
• Molecule 18: Photosystem II reaction center X protein

Chain X:



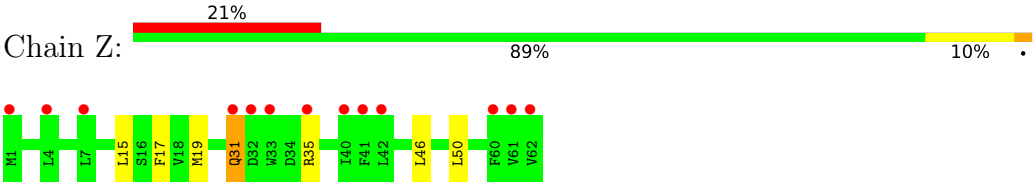
• Molecule 18: Photosystem II reaction center X protein

Chain x:



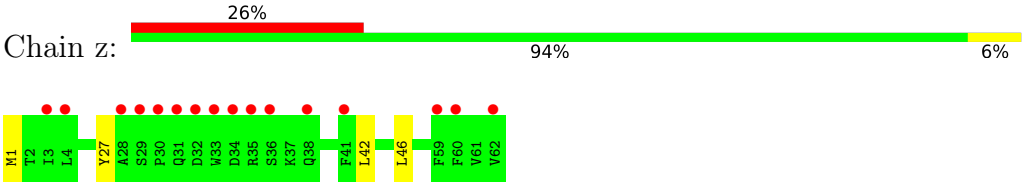
• Molecule 19: Photosystem II reaction center protein Z

Chain Z:



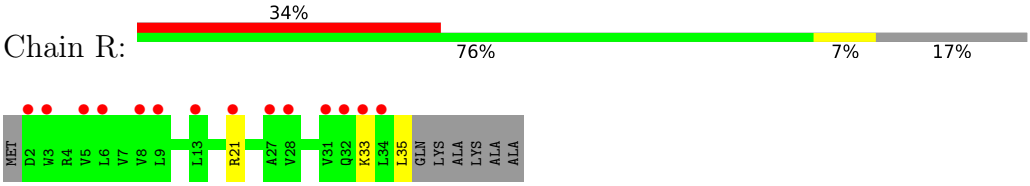
• Molecule 19: Photosystem II reaction center protein Z

Chain z:



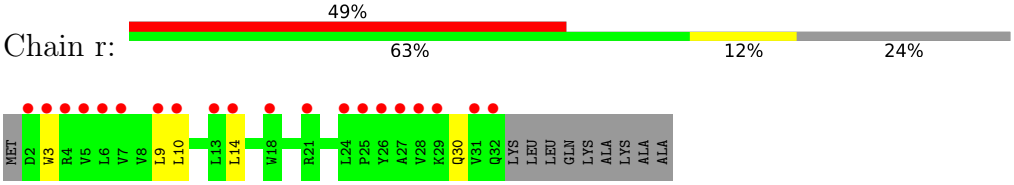
• Molecule 20: Photosystem II protein Y

Chain R:



• Molecule 20: Photosystem II protein Y

Chain r:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	117.56Å 223.17Å 310.26Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.48 – 2.10 29.48 – 2.10	Depositor EDS
% Data completeness (in resolution range)	98.3 (29.48-2.10) 82.7 (29.48-2.10)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	0.34 (at 2.10Å)	Xtriage
Refinement program	PHENIX 1.19.2_4158	Depositor
R, R_{free}	0.188 , 0.232 0.188 , 0.233	Depositor DCC
R_{free} test set	4187 reflections (0.89%)	wwPDB-VP
Wilson B-factor (Å^2)	27.6	Xtriage
Anisotropy	0.226	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 73.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	54161	wwPDB-VP
Average B, all atoms (Å^2)	45.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.68% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: FE2, HEC, PHO, BCT, PL9, DGD, LMG, OEY, STE, CL, BCR, CLA, LHG, HEM, SQD, FME, OEX

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	0.43	0/3717	0.56	0/5060
1	a	0.41	0/3714	0.57	0/5056
2	B	0.40	0/4155	0.57	0/5661
2	b	0.41	0/4118	0.57	1/5611 (0.0%)
3	C	0.40	0/3711	0.57	0/5051
3	c	0.39	0/3791	0.55	0/5158
4	D	0.43	0/2838	0.58	0/3862
4	d	0.42	0/2847	0.58	1/3874 (0.0%)
5	E	0.36	0/688	0.52	0/940
5	e	0.33	0/683	0.54	0/932
6	F	0.36	0/284	0.48	0/387
6	f	0.31	0/284	0.52	0/387
7	H	0.41	0/523	0.57	0/713
7	h	0.38	0/511	0.57	0/697
8	I	0.43	0/293	0.59	0/396
8	i	0.42	0/293	0.55	0/396
9	J	0.39	0/263	0.54	0/356
9	j	0.35	0/263	0.50	0/356
10	K	0.35	0/303	0.53	0/416
10	k	0.32	0/303	0.52	0/416
11	L	0.42	0/311	0.57	0/422
11	l	0.43	0/303	0.57	0/412
12	M	0.37	0/249	0.48	0/341
12	m	0.39	0/244	0.54	0/334
13	O	0.39	0/1904	0.63	0/2585
13	o	0.39	0/1905	0.62	0/2583
14	T	0.49	0/257	0.60	0/349
14	t	0.43	0/255	0.57	0/346
15	U	0.36	0/785	0.56	0/1064
15	u	0.37	0/785	0.58	0/1064
16	V	0.37	0/1085	0.59	0/1473

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
16	v	0.33	0/1085	0.56	0/1473
17	Y	0.27	0/197	0.49	0/264
17	y	0.28	0/219	0.46	0/294
18	X	0.35	0/284	0.49	0/384
18	x	0.32	0/289	0.45	0/391
19	Z	0.33	0/490	0.49	0/669
19	z	0.31	0/488	0.42	0/666
20	R	0.30	0/277	0.49	0/380
20	r	0.32	0/252	0.52	0/347
All	All	0.40	0/45246	0.57	2/61566 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
16	V	0	1

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	b	98	LEU	CA-CB-CG	6.25	129.68	115.30
4	d	297	ASP	CB-CG-OD1	5.34	123.11	118.30

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
16	V	63	THR	Peptide

5.2 Too-close contacts (i)

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

5.3 Torsion angles (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	458/344 (133%)	449 (98%)	9 (2%)	0	100	100
1	a	458/344 (133%)	448 (98%)	8 (2%)	2 (0%)	34	32
2	B	507/510 (99%)	499 (98%)	8 (2%)	0	100	100
2	b	503/510 (99%)	491 (98%)	11 (2%)	1 (0%)	47	49
3	C	461/461 (100%)	451 (98%)	9 (2%)	1 (0%)	47	49
3	c	471/461 (102%)	457 (97%)	13 (3%)	1 (0%)	47	49
4	D	341/352 (97%)	333 (98%)	8 (2%)	0	100	100
4	d	342/352 (97%)	331 (97%)	11 (3%)	0	100	100
5	E	81/84 (96%)	81 (100%)	0	0	100	100
5	e	80/84 (95%)	80 (100%)	0	0	100	100
6	F	32/45 (71%)	32 (100%)	0	0	100	100
6	f	32/45 (71%)	32 (100%)	0	0	100	100
7	H	63/66 (96%)	61 (97%)	2 (3%)	0	100	100
7	h	61/66 (92%)	57 (93%)	4 (7%)	0	100	100
8	I	34/38 (90%)	33 (97%)	1 (3%)	0	100	100
8	i	34/38 (90%)	31 (91%)	3 (9%)	0	100	100
9	J	34/40 (85%)	31 (91%)	3 (9%)	0	100	100
9	j	34/40 (85%)	32 (94%)	2 (6%)	0	100	100
10	K	35/46 (76%)	34 (97%)	1 (3%)	0	100	100
10	k	35/46 (76%)	35 (100%)	0	0	100	100
11	L	35/37 (95%)	35 (100%)	0	0	100	100
11	l	34/37 (92%)	34 (100%)	0	0	100	100
12	M	31/36 (86%)	30 (97%)	1 (3%)	0	100	100
12	m	30/36 (83%)	29 (97%)	1 (3%)	0	100	100
13	O	243/272 (89%)	227 (93%)	12 (5%)	4 (2%)	9	5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
13	o	242/272 (89%)	236 (98%)	5 (2%)	1 (0%)	34 32
14	T	28/32 (88%)	28 (100%)	0	0	100 100
14	t	28/32 (88%)	27 (96%)	1 (4%)	0	100 100
15	U	95/134 (71%)	93 (98%)	2 (2%)	0	100 100
15	u	95/134 (71%)	90 (95%)	4 (4%)	1 (1%)	14 9
16	V	135/163 (83%)	129 (96%)	5 (4%)	1 (1%)	22 18
16	v	135/163 (83%)	130 (96%)	5 (4%)	0	100 100
17	Y	25/46 (54%)	24 (96%)	1 (4%)	0	100 100
17	y	28/46 (61%)	26 (93%)	2 (7%)	0	100 100
18	X	36/41 (88%)	35 (97%)	1 (3%)	0	100 100
18	x	37/41 (90%)	36 (97%)	1 (3%)	0	100 100
19	Z	60/62 (97%)	57 (95%)	2 (3%)	1 (2%)	9 4
19	z	60/62 (97%)	58 (97%)	2 (3%)	0	100 100
20	R	32/41 (78%)	31 (97%)	1 (3%)	0	100 100
20	r	29/41 (71%)	28 (97%)	0	1 (3%)	3 1
All	All	5534/5700 (97%)	5381 (97%)	139 (2%)	14 (0%)	41 41

5 of 14 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
13	O	59	LYS
16	V	64	PRO
13	o	58	ASN
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	374/280 (134%)	368 (98%)	6 (2%)	62 69

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	a	373/280 (133%)	363 (97%)	10 (3%)	44 48
2	B	407/407 (100%)	395 (97%)	12 (3%)	42 46
2	b	402/407 (99%)	394 (98%)	8 (2%)	55 60
3	C	361/362 (100%)	352 (98%)	9 (2%)	47 52
3	c	370/362 (102%)	357 (96%)	13 (4%)	36 38
4	D	278/283 (98%)	275 (99%)	3 (1%)	73 79
4	d	279/283 (99%)	273 (98%)	6 (2%)	52 57
5	E	72/73 (99%)	69 (96%)	3 (4%)	30 30
5	e	71/73 (97%)	68 (96%)	3 (4%)	30 30
6	F	28/39 (72%)	28 (100%)	0	100 100
6	f	28/39 (72%)	28 (100%)	0	100 100
7	H	54/55 (98%)	52 (96%)	2 (4%)	34 35
7	h	53/55 (96%)	48 (91%)	5 (9%)	8 5
8	I	32/34 (94%)	29 (91%)	3 (9%)	8 5
8	i	32/34 (94%)	31 (97%)	1 (3%)	40 43
9	J	24/28 (86%)	23 (96%)	1 (4%)	30 30
9	j	24/28 (86%)	23 (96%)	1 (4%)	30 30
10	K	30/37 (81%)	29 (97%)	1 (3%)	38 40
10	k	30/37 (81%)	27 (90%)	3 (10%)	7 5
11	L	35/35 (100%)	35 (100%)	0	100 100
11	l	34/35 (97%)	31 (91%)	3 (9%)	10 6
12	M	28/32 (88%)	28 (100%)	0	100 100
12	m	28/32 (88%)	27 (96%)	1 (4%)	35 36
13	O	206/228 (90%)	200 (97%)	6 (3%)	42 46
13	o	207/228 (91%)	200 (97%)	7 (3%)	37 39
14	T	26/28 (93%)	26 (100%)	0	100 100
14	t	25/28 (89%)	25 (100%)	0	100 100
15	U	84/112 (75%)	83 (99%)	1 (1%)	71 77
15	u	84/112 (75%)	83 (99%)	1 (1%)	71 77
16	V	117/138 (85%)	116 (99%)	1 (1%)	78 84
16	v	117/138 (85%)	111 (95%)	6 (5%)	24 22

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
17	Y	19/37 (51%)	19 (100%)	0	100 100
17	y	22/37 (60%)	21 (96%)	1 (4%)	27 27
18	X	31/34 (91%)	29 (94%)	2 (6%)	17 14
18	x	31/34 (91%)	30 (97%)	1 (3%)	39 41
19	Z	52/52 (100%)	45 (86%)	7 (14%)	4 2
19	z	51/52 (98%)	47 (92%)	4 (8%)	12 9
20	R	28/33 (85%)	25 (89%)	3 (11%)	6 3
20	r	25/33 (76%)	21 (84%)	4 (16%)	2 1
All	All	4572/4654 (98%)	4434 (97%)	138 (3%)	40 44

5 of 138 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
13	o	53	LYS
13	o	134	THR
19	z	1	MET
18	X	3	ILE
16	V	3	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 19 such sidechains are listed below:

Mol	Chain	Res	Type
12	m	5	GLN
19	z	31	GLN
20	r	30	GLN
18	x	33	GLN
1	a	234	ASN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
14	FME	t	1	14	8,9,10	1.22	1 (12%)	7,9,11	0.71	0
12	FME	m	1	12	8,9,10	0.94	0	7,9,11	0.65	0
8	FME	I	1	8	8,9,10	1.04	1 (12%)	7,9,11	1.44	1 (14%)
14	FME	T	1	14	8,9,10	1.09	1 (12%)	7,9,11	0.85	0
12	FME	M	1	12	8,9,10	1.09	1 (12%)	7,9,11	1.77	1 (14%)
8	FME	i	1	8	8,9,10	1.02	0	7,9,11	0.71	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
14	FME	t	1	14	-	4/7/9/11	-
12	FME	m	1	12	-	1/7/9/11	-
8	FME	I	1	8	-	0/7/9/11	-
14	FME	T	1	14	-	1/7/9/11	-
12	FME	M	1	12	-	1/7/9/11	-
8	FME	i	1	8	-	1/7/9/11	-

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	t	1	FME	CA-N	-2.63	1.42	1.46
14	T	1	FME	CA-N	-2.36	1.43	1.46
12	M	1	FME	CA-N	-2.33	1.43	1.46
8	I	1	FME	CA-N	-2.14	1.43	1.46

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	M	1	FME	CA-N-CN	-3.88	116.86	122.82
8	I	1	FME	CA-N-CN	-3.32	117.71	122.82

There are no chirality outliers.

5 of 8 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
12	M	1	FME	O-C-CA-CB
12	m	1	FME	O-C-CA-CB
14	t	1	FME	N-CA-CB-CG
14	t	1	FME	O-C-CA-CB
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 190 ligands modelled in this entry, 6 are monoatomic - leaving 184 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	DGD	h	103	-	63,63,67	0.96	3 (4%)	77,77,81	1.48	13 (16%)
26	CLA	b	615	-	60,68,73	1.52	6 (10%)	70,107,113	1.63	9 (12%)
26	CLA	C	503	-	65,73,73	1.70	8 (12%)	76,113,113	1.67	14 (18%)
28	BCR	B	619	-	41,41,41	0.93	1 (2%)	56,56,56	1.21	5 (8%)
30	LMG	b	621	-	55,55,55	0.94	5 (9%)	63,63,63	1.32	7 (11%)
26	CLA	C	511	3	65,73,73	1.50	7 (10%)	76,113,113	1.50	7 (9%)
26	CLA	b	602	-	65,73,73	1.67	8 (12%)	76,113,113	1.50	11 (14%)
28	BCR	Z	101	-	41,41,41	1.06	2 (4%)	56,56,56	1.25	7 (12%)
26	CLA	b	610	-	65,73,73	1.52	6 (9%)	76,113,113	1.53	9 (11%)
21	OEY	a	601[A]	1,3,37	0,16,16	-	-	-		
28	BCR	A	611	-	41,41,41	0.97	2 (4%)	56,56,56	1.25	5 (8%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
31	LHG	A	617	-	48,48,48	0.83	3 (6%)	51,54,54	1.18	6 (11%)
26	CLA	B	608	-	65,73,73	1.53	7 (10%)	76,113,113	1.53	9 (11%)
33	DGD	c	519	-	63,63,67	0.90	3 (4%)	77,77,81	1.39	6 (7%)
34	STE	t	103	-	13,13,19	0.64	0	13,13,19	1.23	1 (7%)
26	CLA	c	510	-	65,73,73	1.65	9 (13%)	76,113,113	1.34	8 (10%)
35	HEM	e	101	5,6	41,50,50	1.45	5 (12%)	45,82,82	1.68	9 (20%)
26	CLA	c	505	-	65,73,73	1.49	6 (9%)	76,113,113	1.40	8 (10%)
26	CLA	B	603	-	65,73,73	1.58	7 (10%)	76,113,113	1.49	11 (14%)
26	CLA	B	609	-	65,73,73	1.57	7 (10%)	76,113,113	1.35	8 (10%)
28	BCR	X	101	-	41,41,41	0.93	2 (4%)	56,56,56	1.28	7 (12%)
27	PHO	A	609	-	51,69,69	1.00	3 (5%)	47,99,99	1.17	3 (6%)
26	CLA	B	604	-	65,73,73	1.49	7 (10%)	76,113,113	1.50	10 (13%)
34	STE	M	103	-	9,9,19	0.34	0	8,8,19	0.78	0
32	SQD	F	102	-	35,36,54	1.54	5 (14%)	42,45,65	1.85	10 (23%)
30	LMG	c	520	-	37,37,55	0.97	1 (2%)	45,45,63	1.30	5 (11%)
34	STE	a	615	-	11,11,19	0.79	0	11,11,19	1.03	0
26	CLA	b	604	-	65,73,73	1.68	6 (9%)	76,113,113	1.55	10 (13%)
34	STE	J	101	-	11,11,19	0.69	0	11,11,19	1.31	2 (18%)
27	PHO	d	402	-	51,69,69	0.97	2 (3%)	47,99,99	1.42	7 (14%)
26	CLA	C	508	-	65,73,73	1.56	7 (10%)	76,113,113	1.50	6 (7%)
21	OEY	a	601[C]	1,3,37	0,16,16	-	-	-		
26	CLA	b	608	-	65,73,73	1.60	7 (10%)	76,113,113	1.35	7 (9%)
26	CLA	b	614	-	65,73,73	1.59	9 (13%)	76,113,113	1.35	7 (9%)
26	CLA	b	601	-	65,73,73	1.52	9 (13%)	76,113,113	1.50	10 (13%)
30	LMG	B	621	-	26,26,55	0.61	0	26,26,63	1.20	2 (7%)
28	BCR	d	405	-	41,41,41	0.98	2 (4%)	56,56,56	1.21	7 (12%)
34	STE	M	102	-	14,14,19	0.71	0	14,14,19	1.24	2 (14%)
34	STE	d	414	-	19,19,19	0.61	0	19,19,19	1.02	1 (5%)
26	CLA	c	501	-	65,73,73	1.51	6 (9%)	76,113,113	1.58	9 (11%)
34	STE	B	620	-	16,16,19	0.64	0	16,16,19	1.05	0
32	SQD	A	618	-	38,38,54	1.74	5 (13%)	40,40,65	1.11	2 (5%)
26	CLA	B	607	37	65,73,73	1.43	8 (12%)	76,113,113	1.40	10 (13%)
26	CLA	c	503	-	65,73,73	1.63	7 (10%)	76,113,113	1.55	8 (10%)
30	LMG	m	101	-	51,51,55	0.76	1 (1%)	59,59,63	1.44	8 (13%)
34	STE	B	623	-	11,11,19	0.71	0	11,11,19	1.38	1 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
26	CLA	C	504	37	59,67,73	1.68	7 (11%)	68,105,113	1.45	10 (14%)
30	LMG	M	101	-	51,51,55	0.83	3 (5%)	59,59,63	1.41	7 (11%)
28	BCR	b	616	-	41,41,41	0.98	1 (2%)	56,56,56	1.33	7 (12%)
34	STE	F	103	-	11,11,19	0.74	0	11,11,19	1.17	1 (9%)
34	STE	b	623	-	9,9,19	0.38	0	8,8,19	0.63	0
26	CLA	c	509	-	65,73,73	1.50	6 (9%)	76,113,113	1.55	9 (11%)
33	DGD	C	516	-	63,63,67	1.02	5 (7%)	77,77,81	1.42	9 (11%)
31	LHG	d	408	-	48,48,48	0.59	0	51,54,54	1.26	6 (11%)
28	BCR	B	617	-	41,41,41	0.92	1 (2%)	56,56,56	1.29	6 (10%)
28	BCR	t	101	-	41,41,41	0.91	1 (2%)	56,56,56	1.27	8 (14%)
30	LMG	D	408	-	31,31,55	0.74	2 (6%)	33,33,63	1.18	3 (9%)
26	CLA	C	506	-	65,73,73	1.57	6 (9%)	76,113,113	1.36	5 (6%)
26	CLA	a	607	37	65,73,73	1.56	7 (10%)	76,113,113	1.49	11 (14%)
29	PL9	A	612	-	55,55,55	0.88	2 (3%)	68,69,69	1.44	12 (17%)
33	DGD	H	101	-	63,63,67	1.18	6 (9%)	77,77,81	1.36	10 (12%)
22	OEX	A	602[B]	1,3,37	0,15,15	-	-	-		
26	CLA	d	404	-	65,73,73	1.50	8 (12%)	76,113,113	1.32	8 (10%)
26	CLA	C	512	-	65,73,73	1.52	7 (10%)	76,113,113	1.55	10 (13%)
31	LHG	l	101	-	48,48,48	0.64	0	51,54,54	1.22	9 (17%)
28	BCR	c	514	-	41,41,41	1.04	2 (4%)	56,56,56	1.16	4 (7%)
28	BCR	k	101	-	41,41,41	1.02	3 (7%)	56,56,56	1.08	2 (3%)
34	STE	k	102	-	11,11,19	0.73	0	11,11,19	1.15	0
26	CLA	a	606	-	65,73,73	1.55	9 (13%)	76,113,113	1.36	8 (10%)
26	CLA	b	605	-	65,73,73	1.62	7 (10%)	76,113,113	1.55	8 (10%)
26	CLA	B	611	-	65,73,73	1.56	6 (9%)	76,113,113	1.63	9 (11%)
26	CLA	B	601	37	65,73,73	1.68	7 (10%)	76,113,113	1.38	9 (11%)
33	DGD	a	614	-	43,43,67	0.89	3 (6%)	45,45,81	1.41	6 (13%)
29	PL9	d	406	-	55,55,55	0.99	3 (5%)	68,69,69	1.60	15 (22%)
33	DGD	A	619	-	67,67,67	1.09	5 (7%)	81,81,81	1.33	12 (14%)
28	BCR	c	516	-	41,41,41	1.04	2 (4%)	56,56,56	1.08	2 (3%)
28	BCR	b	618	-	41,41,41	0.93	2 (4%)	56,56,56	1.07	4 (7%)
34	STE	T	103	-	14,14,19	0.31	0	13,13,19	0.97	0
28	BCR	K	101	-	41,41,41	1.03	3 (7%)	56,56,56	1.10	2 (3%)
34	STE	X	102	-	19,19,19	0.60	0	19,19,19	1.14	0
31	LHG	L	101	-	48,48,48	0.72	1 (2%)	51,54,54	1.21	4 (7%)
26	CLA	c	511	3	65,73,73	1.67	8 (12%)	76,113,113	1.65	9 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
34	STE	b	620	-	19,19,19	0.57	0	19,19,19	1.16	0
29	PL9	a	611	-	55,55,55	0.78	2 (3%)	68,69,69	1.48	11 (16%)
26	CLA	b	607	-	65,73,73	1.67	7 (10%)	76,113,113	1.45	10 (13%)
34	STE	T	102	-	15,15,19	0.39	0	14,14,19	0.72	0
26	CLA	C	507	37	65,73,73	1.60	6 (9%)	76,113,113	1.50	8 (10%)
26	CLA	D	402	-	65,73,73	1.58	7 (10%)	76,113,113	1.44	9 (11%)
26	CLA	a	612	37	65,73,73	1.51	8 (12%)	76,113,113	1.45	9 (11%)
26	CLA	A	613	37	65,73,73	1.64	9 (13%)	76,113,113	1.46	10 (13%)
26	CLA	C	501	-	65,73,73	1.50	7 (10%)	76,113,113	1.48	9 (11%)
26	CLA	b	606	37	65,73,73	1.38	5 (7%)	76,113,113	1.38	7 (9%)
34	STE	B	624	-	11,11,19	0.69	0	11,11,19	1.18	0
26	CLA	B	602	-	65,73,73	1.62	6 (9%)	76,113,113	1.50	10 (13%)
25	BCT	d	401	23	2,3,3	1.25	0	2,3,3	2.92	1 (50%)
21	OEY	A	601[A]	1,3,37	0,16,16	-	-	-		
36	HEC	v	201	16	32,50,50	2.06	3 (9%)	24,82,82	1.82	7 (29%)
28	BCR	K	102	-	41,41,41	1.00	2 (4%)	56,56,56	1.10	3 (5%)
27	PHO	D	401	-	51,69,69	0.98	3 (5%)	47,99,99	1.45	7 (14%)
26	CLA	c	506	-	65,73,73	1.62	7 (10%)	76,113,113	1.43	7 (9%)
26	CLA	c	513	-	65,73,73	1.63	7 (10%)	76,113,113	1.32	7 (9%)
32	SQD	b	619	-	48,49,54	1.68	11 (22%)	57,60,65	1.86	13 (22%)
26	CLA	a	609	-	65,73,73	1.45	6 (9%)	76,113,113	1.37	9 (11%)
26	CLA	A	610	-	54,62,73	1.67	6 (11%)	62,99,113	1.56	9 (14%)
26	CLA	c	512	-	65,73,73	1.50	9 (13%)	76,113,113	1.43	10 (13%)
32	SQD	a	613	-	53,54,54	1.54	6 (11%)	62,65,65	1.90	11 (17%)
35	HEM	F	101	5,6	41,50,50	1.52	5 (12%)	45,82,82	1.32	4 (8%)
25	BCT	A	606	23	2,3,3	1.32	0	2,3,3	2.83	1 (50%)
26	CLA	B	614	-	65,73,73	1.63	7 (10%)	76,113,113	1.43	9 (11%)
30	LMG	C	518	-	48,48,55	0.84	2 (4%)	56,56,63	1.34	6 (10%)
33	DGD	c	518	-	63,63,67	0.99	3 (4%)	77,77,81	1.46	12 (15%)
34	STE	d	412	-	15,15,19	0.76	0	15,15,19	0.98	1 (6%)
28	BCR	C	514	-	41,41,41	1.05	3 (7%)	56,56,56	1.06	3 (5%)
28	BCR	T	101	-	41,41,41	1.05	2 (4%)	56,56,56	1.27	7 (12%)
34	STE	t	105	-	17,17,19	0.60	0	17,17,19	1.10	0
34	STE	j	101	-	11,11,19	0.82	0	11,11,19	1.11	2 (18%)
26	CLA	C	510	-	65,73,73	1.65	7 (10%)	76,113,113	1.55	9 (11%)
30	LMG	d	411	-	44,44,55	0.91	2 (4%)	52,52,63	1.30	5 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
34	STE	C	521	-	15,15,19	0.37	0	14,14,19	0.70	0
26	CLA	C	505	-	65,73,73	1.52	7 (10%)	76,113,113	1.44	9 (11%)
21	OEY	A	601[C]	1,3,37	0,16,16	-	-	-		
26	CLA	B	610	37	65,73,73	1.64	8 (12%)	76,113,113	1.45	9 (11%)
28	BCR	h	102	-	41,41,41	0.93	2 (4%)	56,56,56	1.13	4 (7%)
34	STE	L	102	-	11,11,19	0.71	0	11,11,19	1.21	2 (18%)
26	CLA	C	502	-	65,73,73	1.68	8 (12%)	76,113,113	1.33	9 (11%)
31	LHG	d	409	-	38,38,48	0.78	1 (2%)	41,44,54	1.11	3 (7%)
30	LMG	c	522	-	48,48,55	0.91	3 (6%)	56,56,63	1.29	9 (16%)
34	STE	B	625	-	15,15,19	0.38	0	14,14,19	0.75	0
26	CLA	B	605	-	65,73,73	1.48	5 (7%)	76,113,113	1.32	7 (9%)
28	BCR	a	610	-	41,41,41	0.95	3 (7%)	56,56,56	1.17	5 (8%)
26	CLA	B	616	-	60,68,73	1.60	8 (13%)	70,107,113	1.61	11 (15%)
26	CLA	D	403	-	65,73,73	1.51	11 (16%)	76,113,113	1.31	10 (13%)
26	CLA	c	508	-	64,72,73	1.85	10 (15%)	74,111,113	1.57	12 (16%)
36	HEC	V	201	16	32,50,50	2.04	3 (9%)	24,82,82	2.00	6 (25%)
26	CLA	B	612	-	65,73,73	1.46	6 (9%)	76,113,113	1.64	11 (14%)
26	CLA	h	101	37	65,73,73	1.64	9 (13%)	76,113,113	1.51	8 (10%)
34	STE	b	622	-	19,19,19	0.62	0	19,19,19	1.02	1 (5%)
28	BCR	c	515	-	41,41,41	1.08	2 (4%)	56,56,56	1.27	9 (16%)
26	CLA	c	504	37	60,68,73	1.59	5 (8%)	70,107,113	1.50	8 (11%)
33	DGD	C	517	-	63,63,67	0.98	3 (4%)	77,77,81	1.35	7 (9%)
28	BCR	D	404	-	41,41,41	1.03	2 (4%)	56,56,56	1.26	6 (10%)
30	LMG	D	406	-	51,51,55	0.79	0	59,59,63	1.33	8 (13%)
32	SQD	f	101	-	40,41,54	1.66	9 (22%)	49,52,65	1.65	11 (22%)
26	CLA	b	612	-	65,73,73	1.56	7 (10%)	76,113,113	1.52	8 (10%)
26	CLA	C	513	-	65,73,73	1.60	8 (12%)	76,113,113	1.53	9 (11%)
29	PL9	D	405	-	55,55,55	1.06	2 (3%)	68,69,69	1.56	13 (19%)
34	STE	d	413	-	16,16,19	0.62	0	16,16,19	1.12	1 (6%)
31	LHG	A	615	-	46,46,48	0.80	1 (2%)	49,52,54	1.19	4 (8%)
26	CLA	A	608	37	65,73,73	1.59	7 (10%)	76,113,113	1.48	12 (15%)
26	CLA	C	509	-	65,73,73	1.60	8 (12%)	76,113,113	1.60	8 (10%)
33	DGD	c	517	-	63,63,67	0.93	3 (4%)	77,77,81	1.45	12 (15%)
28	BCR	B	618	-	41,41,41	0.98	1 (2%)	56,56,56	1.24	6 (10%)
26	CLA	b	609	37	65,73,73	1.45	7 (10%)	76,113,113	1.46	10 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
34	STE	C	520	-	11,11,19	0.72	0	11,11,19	1.17	1 (9%)
34	STE	t	104	-	9,9,19	0.38	0	8,8,19	0.70	0
32	SQD	B	622	-	53,54,54	1.55	9 (16%)	62,65,65	1.85	13 (20%)
26	CLA	B	615	-	65,73,73	1.65	9 (13%)	76,113,113	1.33	8 (10%)
32	SQD	A	616	-	51,52,54	1.53	8 (15%)	60,63,65	1.89	13 (21%)
30	LMG	A	614	-	48,48,55	0.95	5 (10%)	56,56,63	1.25	5 (8%)
34	STE	c	521	-	19,19,19	0.61	0	19,19,19	0.97	0
26	CLA	c	502	-	65,73,73	1.56	6 (9%)	76,113,113	1.51	9 (11%)
28	BCR	b	617	-	41,41,41	0.98	2 (4%)	56,56,56	1.15	4 (7%)
30	LMG	c	523	-	49,49,55	1.04	4 (8%)	57,57,63	1.27	4 (7%)
31	LHG	d	407	-	48,48,48	0.73	1 (2%)	51,54,54	1.39	7 (13%)
34	STE	H	102	-	17,17,19	0.40	0	16,16,19	0.69	0
31	LHG	D	409	-	48,48,48	0.90	2 (4%)	51,54,54	1.33	7 (13%)
26	CLA	B	606	-	65,73,73	1.77	7 (10%)	76,113,113	1.53	10 (13%)
26	CLA	d	403	-	65,73,73	1.53	8 (12%)	76,113,113	1.34	6 (7%)
32	SQD	t	102	-	35,35,54	1.73	6 (17%)	37,37,65	1.38	4 (10%)
31	LHG	D	407	-	48,48,48	0.71	1 (2%)	51,54,54	1.20	5 (9%)
34	STE	I	101	-	14,14,19	0.38	0	13,13,19	0.79	0
30	LMG	d	410	-	21,21,55	0.52	0	20,20,63	1.15	2 (10%)
31	LHG	e	102	-	41,41,48	0.78	1 (2%)	44,47,54	1.27	6 (13%)
26	CLA	c	507	37	65,73,73	1.66	10 (15%)	76,113,113	1.39	9 (11%)
34	STE	C	519	-	11,11,19	0.60	0	11,11,19	1.86	3 (27%)
26	CLA	B	613	-	65,73,73	1.49	7 (10%)	76,113,113	1.57	12 (15%)
27	PHO	a	608	-	51,69,69	0.99	4 (7%)	47,99,99	1.07	4 (8%)
26	CLA	b	603	-	65,73,73	1.52	6 (9%)	76,113,113	1.65	13 (17%)
34	STE	l	102	-	17,17,19	0.30	0	16,16,19	0.97	0
26	CLA	A	607	-	65,73,73	1.50	7 (10%)	76,113,113	1.40	11 (14%)
33	DGD	C	515	-	63,63,67	1.04	5 (7%)	77,77,81	1.32	9 (11%)
22	OEX	a	602[B]	1,3,37	0,15,15	-	-	-		
26	CLA	b	611	-	65,73,73	1.54	6 (9%)	76,113,113	1.44	11 (14%)
26	CLA	b	613	-	65,73,73	1.63	7 (10%)	76,113,113	1.40	10 (13%)

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	DGD	h	103	-	-	15/51/91/95	0/2/2/2
26	CLA	b	615	-	1/1/14/20	7/31/109/115	-
26	CLA	C	503	-	1/1/15/20	4/37/115/115	-
28	BCR	B	619	-	-	4/29/63/63	0/2/2/2
30	LMG	b	621	-	-	25/50/70/70	0/1/1/1
26	CLA	C	511	3	1/1/15/20	5/37/115/115	-
26	CLA	b	602	-	1/1/15/20	8/37/115/115	-
28	BCR	Z	101	-	-	6/29/63/63	0/2/2/2
26	CLA	b	610	-	1/1/15/20	8/37/115/115	-
28	BCR	A	611	-	-	6/29/63/63	0/2/2/2
31	LHG	A	617	-	-	24/53/53/53	-
26	CLA	B	608	-	1/1/15/20	5/37/115/115	-
33	DGD	c	519	-	-	17/51/91/95	0/2/2/2
34	STE	t	103	-	-	3/11/11/17	-
26	CLA	c	510	-	1/1/15/20	9/37/115/115	-
35	HEM	e	101	5,6	-	3/12/54/54	-
26	CLA	c	505	-	1/1/15/20	10/37/115/115	-
26	CLA	B	603	-	1/1/15/20	17/37/115/115	-
26	CLA	B	609	-	-	6/37/115/115	-
28	BCR	X	101	-	-	8/29/63/63	0/2/2/2
27	PHO	A	609	-	-	4/37/103/103	0/5/6/6
26	CLA	B	604	-	1/1/15/20	15/37/115/115	-
34	STE	M	103	-	-	2/7/7/17	-
32	SQD	F	102	-	-	16/28/48/69	0/1/1/1
30	LMG	c	520	-	-	13/31/51/70	0/1/1/1
34	STE	a	615	-	-	7/9/9/17	-
26	CLA	b	604	-	-	10/37/115/115	-
34	STE	J	101	-	-	6/9/9/17	-
27	PHO	d	402	-	-	5/37/103/103	0/5/6/6
26	CLA	C	508	-	-	8/37/115/115	-
26	CLA	b	608	-	-	9/37/115/115	-
26	CLA	b	614	-	1/1/15/20	9/37/115/115	-
26	CLA	b	601	-	1/1/15/20	10/37/115/115	-
30	LMG	B	621	-	-	8/22/22/70	-
28	BCR	d	405	-	-	4/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
34	STE	M	102	-	-	6/12/12/17	-
34	STE	d	414	-	-	7/17/17/17	-
26	CLA	c	501	-	1/1/15/20	7/37/115/115	-
34	STE	B	620	-	-	7/14/14/17	-
32	SQD	A	618	-	-	17/39/39/69	-
26	CLA	B	607	37	1/1/15/20	19/37/115/115	-
26	CLA	c	503	-	1/1/15/20	9/37/115/115	-
30	LMG	m	101	-	-	20/46/66/70	0/1/1/1
34	STE	B	623	-	-	7/9/9/17	-
26	CLA	C	504	37	1/1/13/20	7/30/108/115	-
30	LMG	M	101	-	-	26/46/66/70	0/1/1/1
28	BCR	b	616	-	-	5/29/63/63	0/2/2/2
34	STE	F	103	-	-	7/9/9/17	-
34	STE	b	623	-	-	6/7/7/17	-
26	CLA	c	509	-	1/1/15/20	10/37/115/115	-
33	DGD	C	516	-	-	20/51/91/95	0/2/2/2
31	LHG	d	408	-	-	24/53/53/53	-
28	BCR	B	617	-	-	6/29/63/63	0/2/2/2
28	BCR	t	101	-	-	5/29/63/63	0/2/2/2
30	LMG	D	408	-	-	18/33/33/70	-
26	CLA	C	506	-	1/1/15/20	11/37/115/115	-
26	CLA	a	607	37	1/1/15/20	10/37/115/115	-
29	PL9	A	612	-	-	23/53/73/73	0/1/1/1
33	DGD	H	101	-	-	18/51/91/95	0/2/2/2
26	CLA	d	404	-	1/1/15/20	10/37/115/115	-
26	CLA	C	512	-	1/1/15/20	13/37/115/115	-
31	LHG	l	101	-	-	15/53/53/53	-
28	BCR	c	514	-	-	3/29/63/63	0/2/2/2
28	BCR	k	101	-	-	6/29/63/63	0/2/2/2
34	STE	k	102	-	-	3/9/9/17	-
26	CLA	a	606	-	1/1/15/20	6/37/115/115	-
26	CLA	b	605	-	1/1/15/20	7/37/115/115	-
26	CLA	B	611	-	1/1/15/20	6/37/115/115	-
26	CLA	B	601	37	1/1/15/20	16/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
33	DGD	a	614	-	-	18/45/45/95	-
29	PL9	d	406	-	-	11/53/73/73	0/1/1/1
33	DGD	A	619	-	-	25/55/95/95	0/2/2/2
28	BCR	c	516	-	-	6/29/63/63	0/2/2/2
28	BCR	b	618	-	-	4/29/63/63	0/2/2/2
34	STE	T	103	-	-	9/12/12/17	-
28	BCR	K	101	-	-	7/29/63/63	0/2/2/2
34	STE	X	102	-	-	11/17/17/17	-
31	LHG	L	101	-	-	21/53/53/53	-
26	CLA	c	511	3	1/1/15/20	6/37/115/115	-
34	STE	b	620	-	-	6/17/17/17	-
29	PL9	a	611	-	-	20/53/73/73	0/1/1/1
26	CLA	b	607	-	1/1/15/20	7/37/115/115	-
34	STE	T	102	-	-	7/13/13/17	-
26	CLA	C	507	37	1/1/15/20	7/37/115/115	-
26	CLA	D	402	-	1/1/15/20	7/37/115/115	-
26	CLA	a	612	37	1/1/15/20	7/37/115/115	-
26	CLA	A	613	37	1/1/15/20	6/37/115/115	-
26	CLA	C	501	-	1/1/15/20	6/37/115/115	-
26	CLA	b	606	37	1/1/15/20	14/37/115/115	-
34	STE	B	624	-	-	1/9/9/17	-
26	CLA	B	602	-	1/1/15/20	7/37/115/115	-
36	HEC	v	201	16	-	2/10/54/54	-
28	BCR	K	102	-	-	4/29/63/63	0/2/2/2
27	PHO	D	401	-	-	4/37/103/103	0/5/6/6
26	CLA	c	506	-	1/1/15/20	14/37/115/115	-
26	CLA	c	513	-	1/1/15/20	14/37/115/115	-
32	SQD	b	619	-	-	24/44/64/69	0/1/1/1
26	CLA	a	609	-	1/1/15/20	11/37/115/115	-
26	CLA	A	610	-	1/1/12/20	5/24/102/115	-
26	CLA	c	512	-	1/1/15/20	17/37/115/115	-
32	SQD	a	613	-	-	27/49/69/69	0/1/1/1
35	HEM	F	101	5,6	-	2/12/54/54	-
33	DGD	c	518	-	-	22/51/91/95	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
26	CLA	B	614	-	1/1/15/20	10/37/115/115	-
30	LMG	C	518	-	-	18/43/63/70	0/1/1/1
34	STE	d	412	-	-	4/13/13/17	-
28	BCR	C	514	-	-	7/29/63/63	0/2/2/2
28	BCR	T	101	-	-	7/29/63/63	0/2/2/2
34	STE	t	105	-	-	8/15/15/17	-
34	STE	j	101	-	-	5/9/9/17	-
26	CLA	C	510	-	1/1/15/20	8/37/115/115	-
30	LMG	d	411	-	-	10/39/59/70	0/1/1/1
34	STE	C	521	-	-	10/13/13/17	-
26	CLA	C	505	-	1/1/15/20	10/37/115/115	-
26	CLA	B	610	37	1/1/15/20	8/37/115/115	-
28	BCR	h	102	-	-	6/29/63/63	0/2/2/2
34	STE	L	102	-	-	7/9/9/17	-
26	CLA	C	502	-	1/1/15/20	9/37/115/115	-
31	LHG	d	409	-	-	9/43/43/53	-
30	LMG	c	522	-	-	22/43/63/70	0/1/1/1
34	STE	B	625	-	-	5/13/13/17	-
26	CLA	B	605	-	1/1/15/20	13/37/115/115	-
28	BCR	a	610	-	-	4/29/63/63	0/2/2/2
26	CLA	B	616	-	1/1/14/20	16/31/109/115	-
26	CLA	D	403	-	-	11/37/115/115	-
26	CLA	c	508	-	-	8/36/114/115	-
36	HEC	V	201	16	-	2/10/54/54	-
26	CLA	B	612	-	1/1/15/20	6/37/115/115	-
26	CLA	h	101	37	1/1/15/20	16/37/115/115	-
34	STE	b	622	-	-	12/17/17/17	-
28	BCR	c	515	-	-	5/29/63/63	0/2/2/2
26	CLA	c	504	37	1/1/14/20	12/31/109/115	-
33	DGD	C	517	-	-	15/51/91/95	0/2/2/2
28	BCR	D	404	-	-	7/29/63/63	0/2/2/2
30	LMG	D	406	-	-	19/46/66/70	0/1/1/1
32	SQD	f	101	-	-	18/36/56/69	0/1/1/1
26	CLA	b	612	-	1/1/15/20	8/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
26	CLA	C	513	-	1/1/15/20	12/37/115/115	-
29	PL9	D	405	-	-	8/53/73/73	0/1/1/1
34	STE	d	413	-	-	8/14/14/17	-
31	LHG	A	615	-	-	24/51/51/53	-
26	CLA	A	608	37	1/1/15/20	8/37/115/115	-
26	CLA	C	509	-	1/1/15/20	10/37/115/115	-
33	DGD	c	517	-	-	25/51/91/95	0/2/2/2
28	BCR	B	618	-	-	4/29/63/63	0/2/2/2
26	CLA	b	609	37	1/1/15/20	9/37/115/115	-
34	STE	C	520	-	-	5/9/9/17	-
34	STE	t	104	-	-	3/7/7/17	-
32	SQD	B	622	-	-	25/49/69/69	0/1/1/1
26	CLA	B	615	-	1/1/15/20	9/37/115/115	-
32	SQD	A	616	-	-	23/47/67/69	0/1/1/1
30	LMG	A	614	-	-	19/43/63/70	0/1/1/1
34	STE	c	521	-	-	8/17/17/17	-
26	CLA	c	502	-	1/1/15/20	9/37/115/115	-
28	BCR	b	617	-	-	2/29/63/63	0/2/2/2
30	LMG	c	523	-	-	22/44/64/70	0/1/1/1
31	LHG	d	407	-	-	18/53/53/53	-
34	STE	H	102	-	-	7/15/15/17	-
31	LHG	D	409	-	-	18/53/53/53	-
26	CLA	B	606	-	1/1/15/20	15/37/115/115	-
26	CLA	d	403	-	1/1/15/20	4/37/115/115	-
32	SQD	t	102	-	-	19/37/37/69	-
31	LHG	D	407	-	-	26/53/53/53	-
34	STE	I	101	-	-	4/12/12/17	-
30	LMG	d	410	-	-	11/17/17/70	-
31	LHG	e	102	-	-	25/46/46/53	-
26	CLA	c	507	37	1/1/15/20	9/37/115/115	-
34	STE	C	519	-	-	4/9/9/17	-
26	CLA	B	613	-	1/1/15/20	8/37/115/115	-
27	PHO	a	608	-	-	3/37/103/103	0/5/6/6
26	CLA	b	603	-	1/1/15/20	7/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
34	STE	l	102	-	-	9/15/15/17	-
26	CLA	A	607	-	1/1/15/20	4/37/115/115	-
33	DGD	C	515	-	-	17/51/91/95	0/2/2/2
26	CLA	b	611	-	1/1/15/20	15/37/115/115	-
26	CLA	b	613	-	1/1/15/20	18/37/115/115	-

The worst 5 of 723 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	B	601	CLA	C4B-NB	8.33	1.42	1.35
26	c	504	CLA	C4B-NB	8.30	1.42	1.35
26	B	606	CLA	MG-NA	8.29	2.26	2.06
26	B	610	CLA	C4B-NB	8.29	1.42	1.35
26	b	604	CLA	C4B-NB	8.29	1.42	1.35

The worst 5 of 1172 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	c	511	CLA	C4A-NA-C1A	10.14	111.27	106.71
26	C	511	CLA	C4A-NA-C1A	8.92	110.72	106.71
26	b	603	CLA	C4A-NA-C1A	8.82	110.67	106.71
26	B	611	CLA	C4A-NA-C1A	8.59	110.57	106.71
26	C	503	CLA	C4A-NA-C1A	8.40	110.48	106.71

5 of 64 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
26	A	607	CLA	ND
26	A	608	CLA	ND
26	A	610	CLA	ND
26	A	613	CLA	ND
26	B	601	CLA	ND

5 of 1864 torsion outliers are listed below:

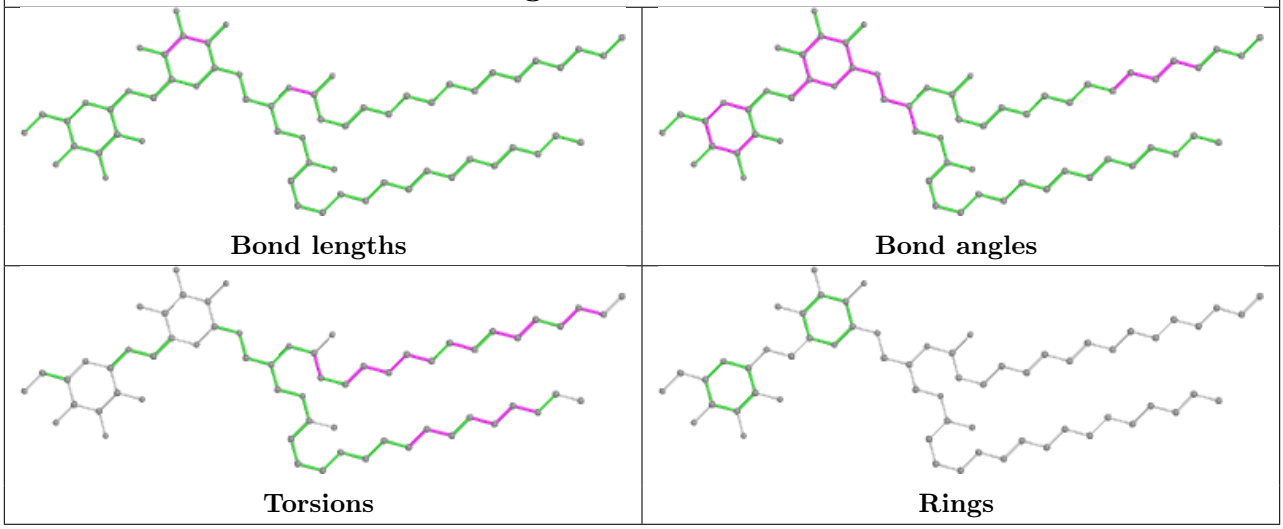
Mol	Chain	Res	Type	Atoms
26	A	613	CLA	CHA-CBD-CGD-O1D
26	A	613	CLA	CHA-CBD-CGD-O2D
26	B	602	CLA	C6-C7-C8-C9
26	B	605	CLA	C2-C3-C5-C6
26	B	605	CLA	C4-C3-C5-C6

There are no ring outliers.

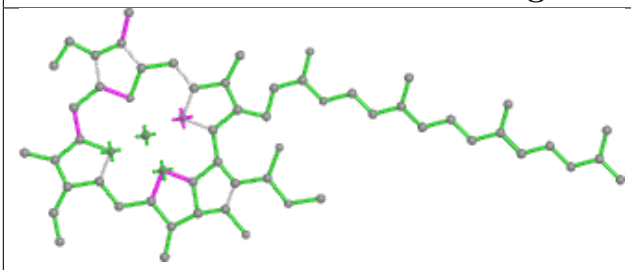
No monomer is involved in short contacts.

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 then 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.

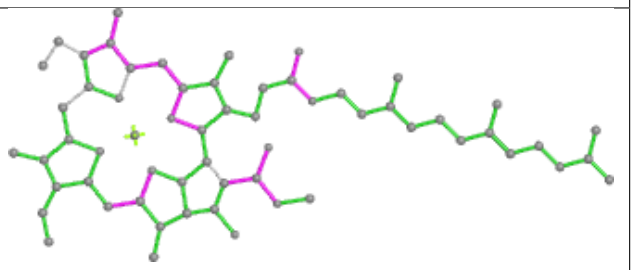
Ligand DGD h 103



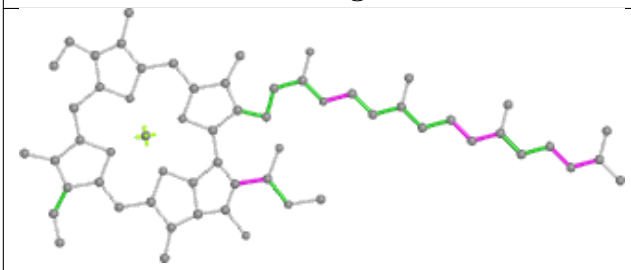
Ligand CLA b 615



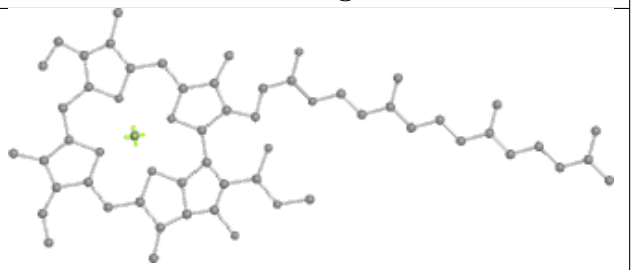
Bond lengths



Bond angles

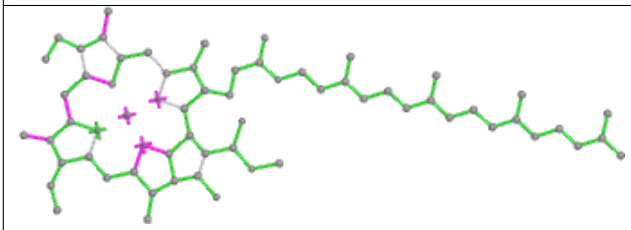


Torsions

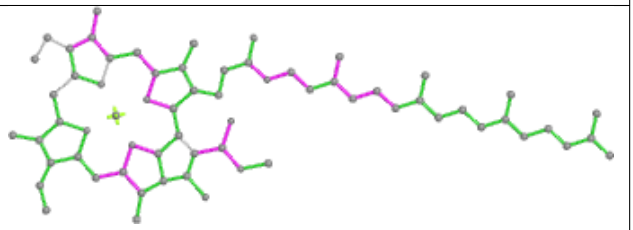


Rings

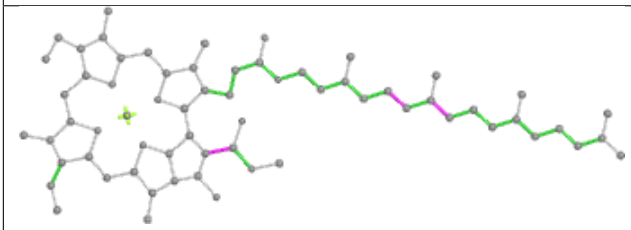
Ligand CLA C 503



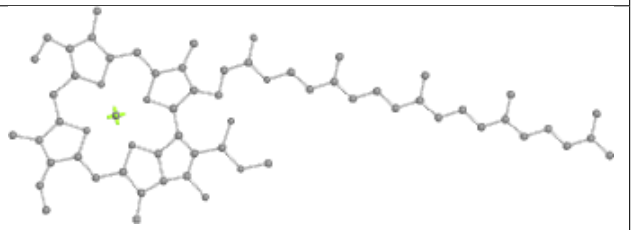
Bond lengths



Bond angles

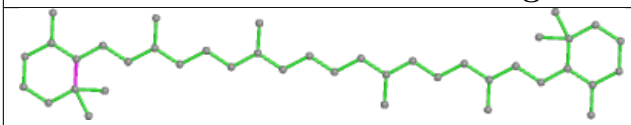


Torsions

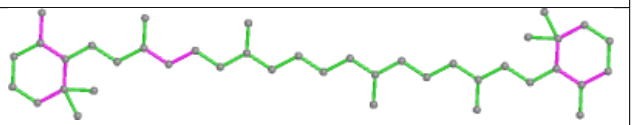


Rings

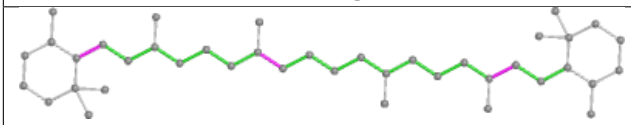
Ligand BCR B 619



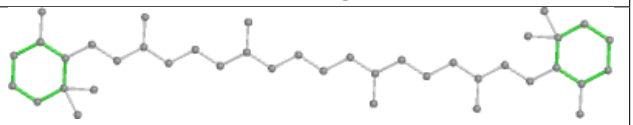
Bond lengths



Bond angles

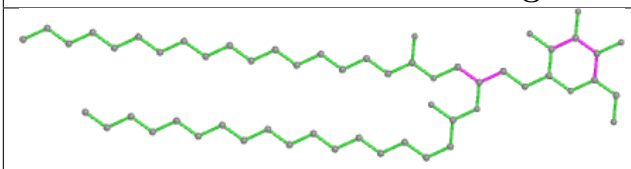


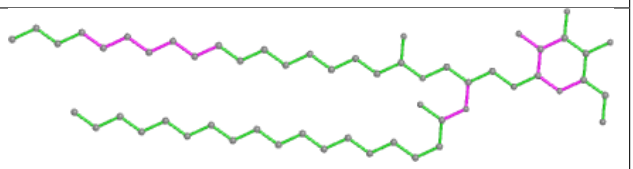
Torsions

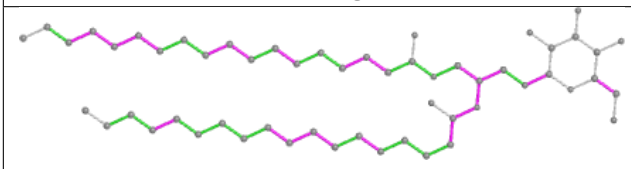


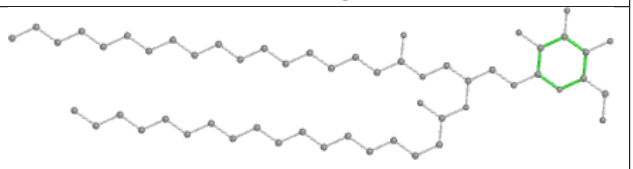
Rings

Ligand LMG b 621

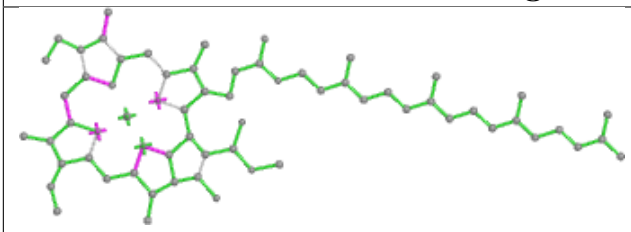

Bond lengths

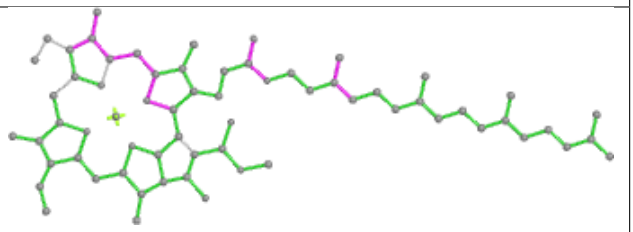

Bond angles

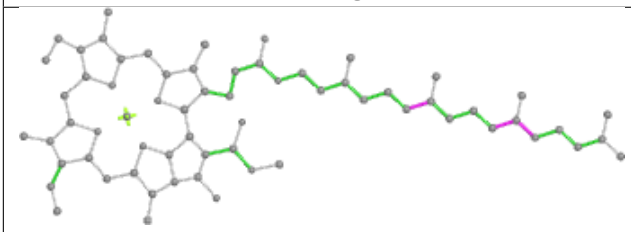

Torsions

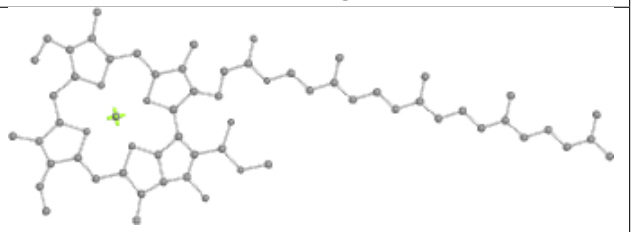

Rings

Ligand CLA C 511

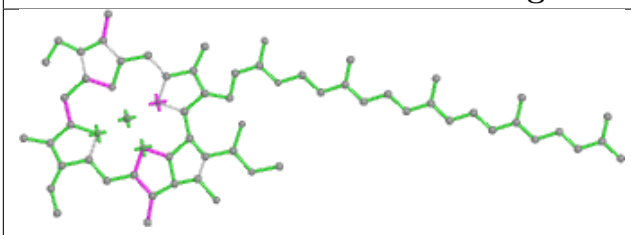

Bond lengths

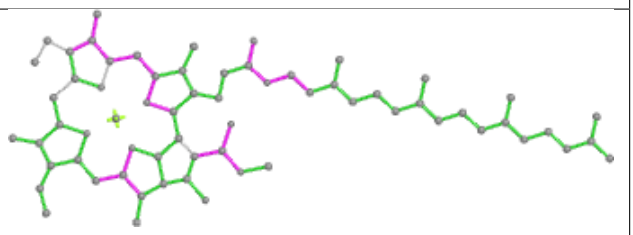

Bond angles

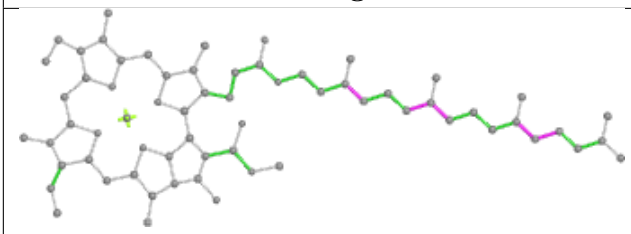

Torsions

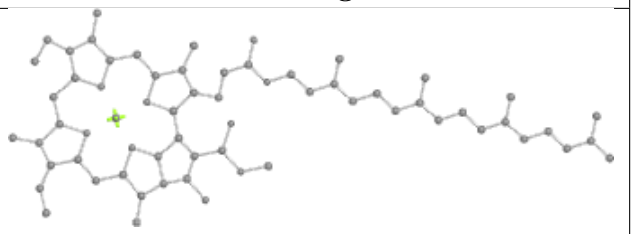

Rings

Ligand CLA b 602

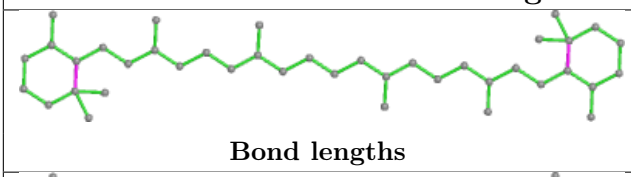

Bond lengths


Bond angles

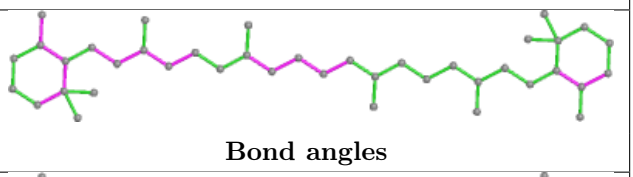

Torsions


Rings

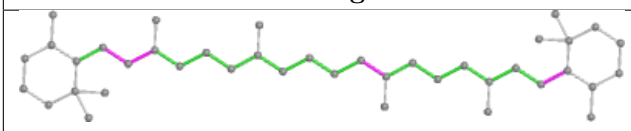
Ligand BCR Z 101



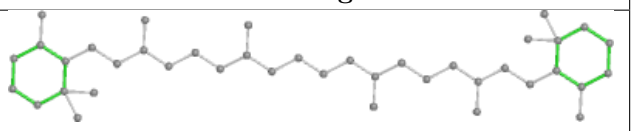
Bond lengths



Bond angles

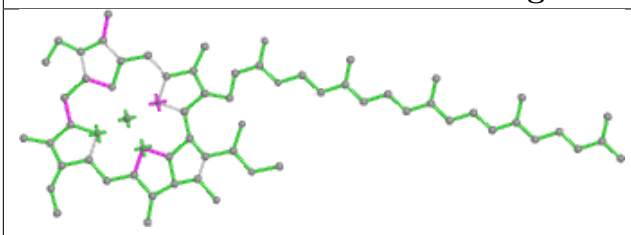


Torsions

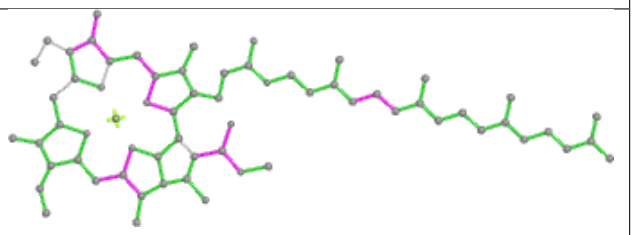


Rings

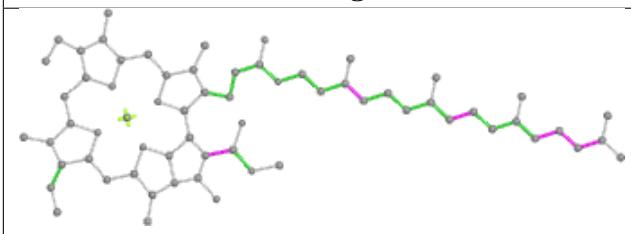
Ligand CLA b 610



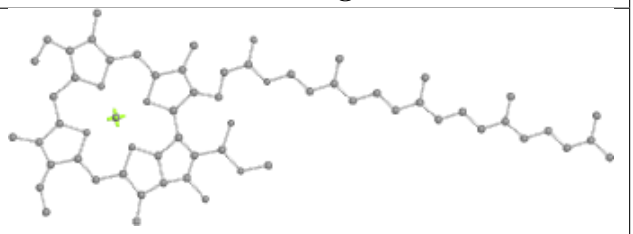
Bond lengths



Bond angles

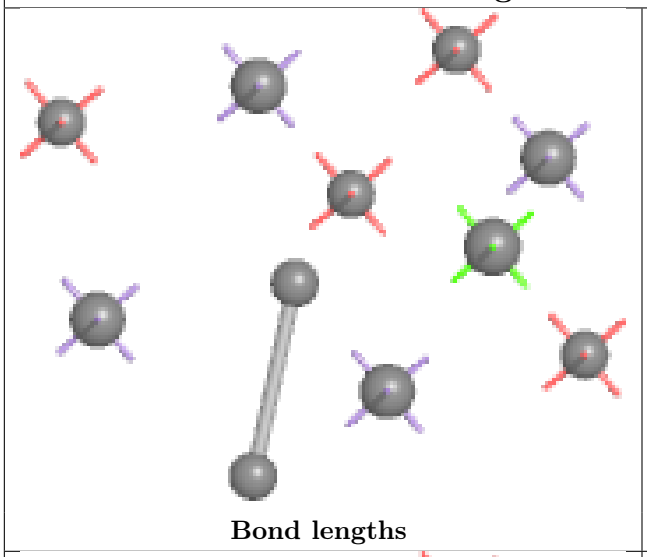


Torsions

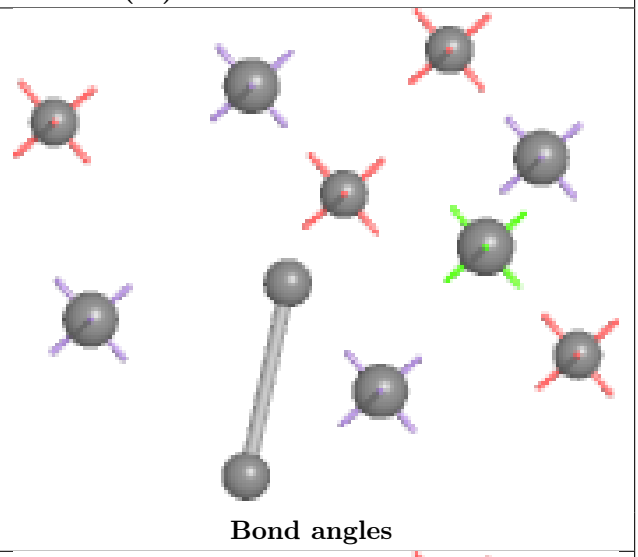


Rings

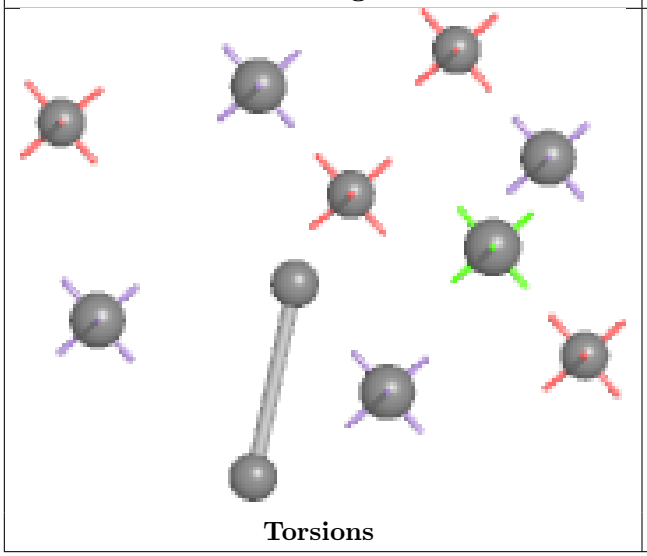
Ligand OEY a 601 (A)



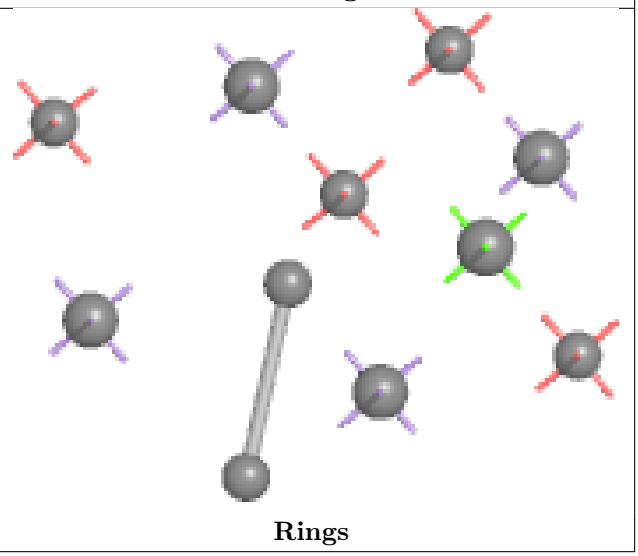
Bond lengths



Bond angles

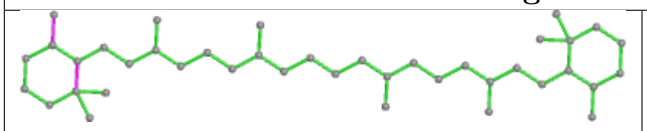


Torsions

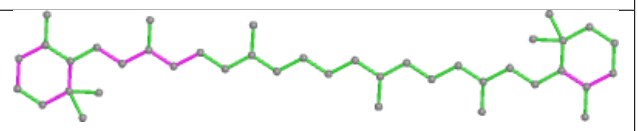


Rings

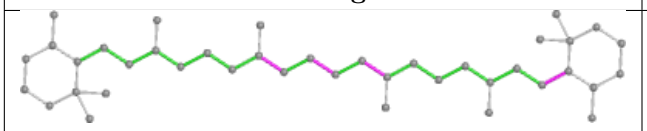
Ligand BCR A 611



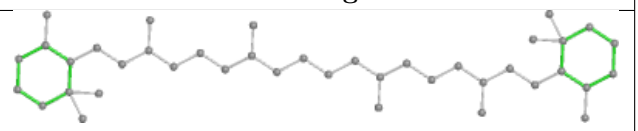
Bond lengths



Bond angles

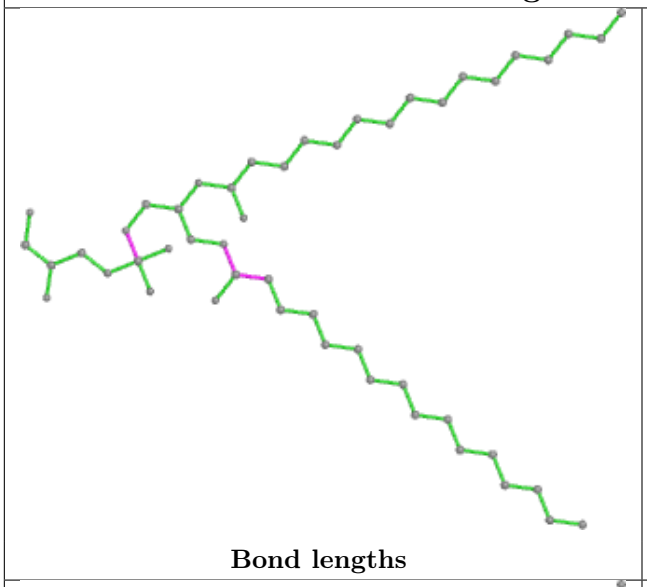


Torsions

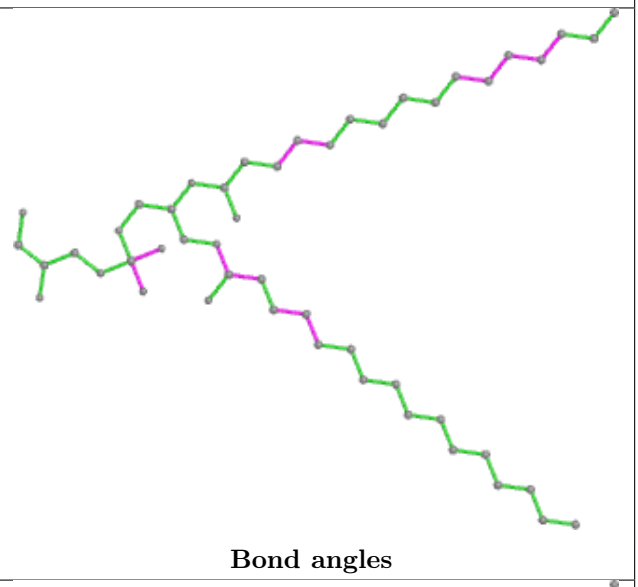


Rings

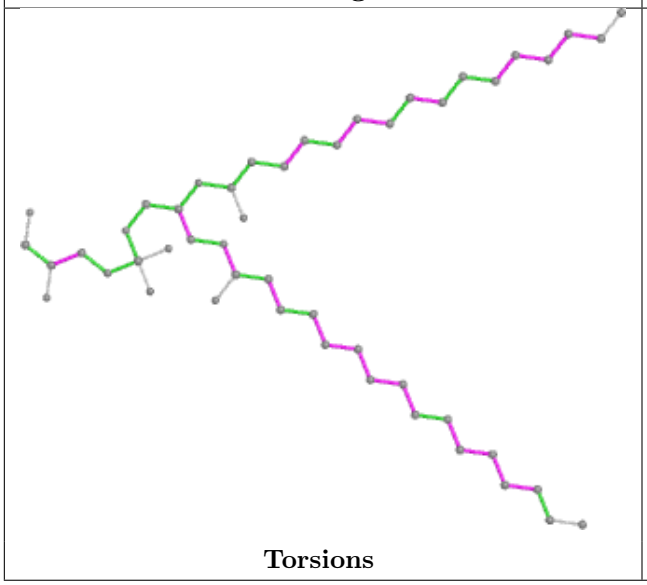
Ligand LHG A 617



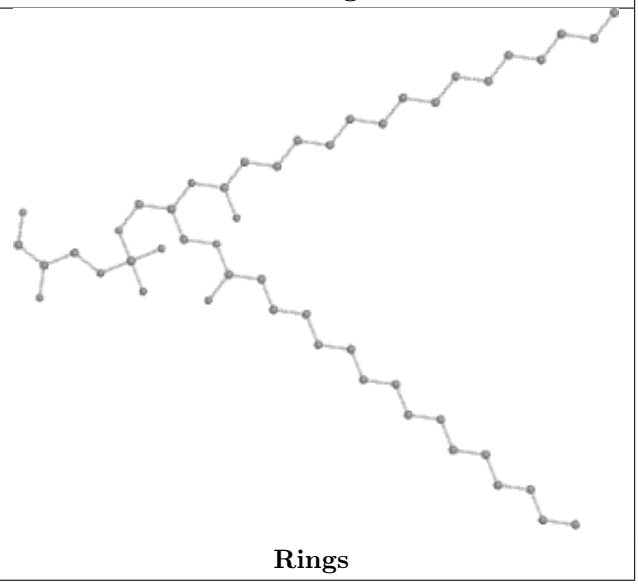
Bond lengths



Bond angles

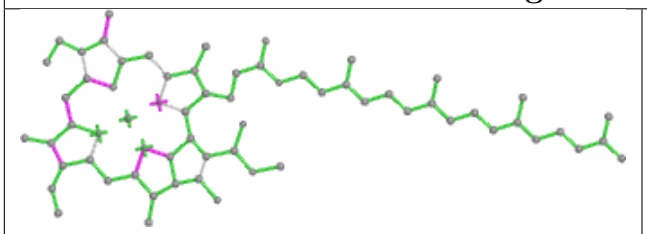


Torsions

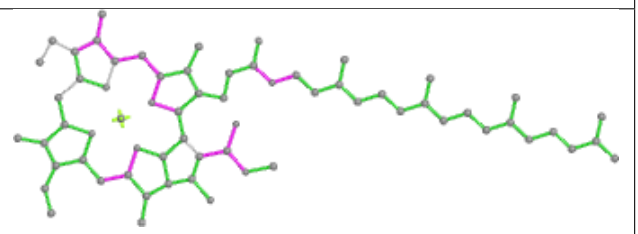


Rings

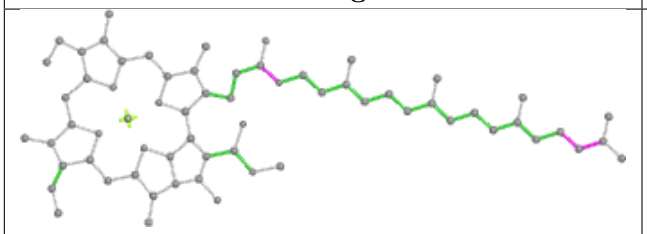
Ligand CLA B 608



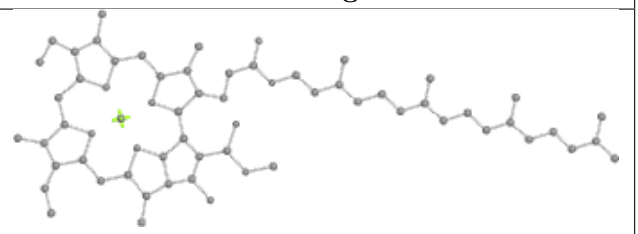
Bond lengths



Bond angles

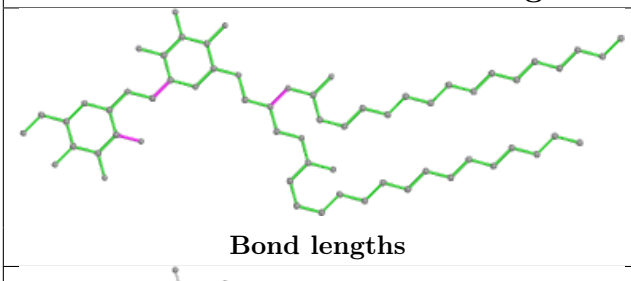


Torsions



Rings

Ligand DGD c 519



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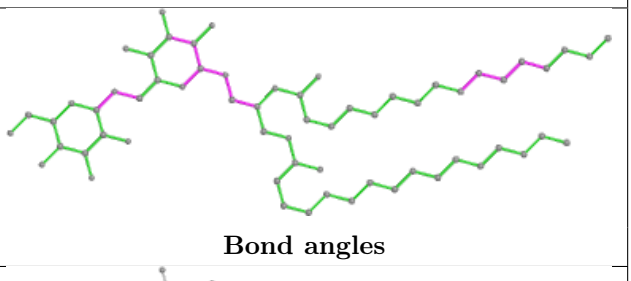
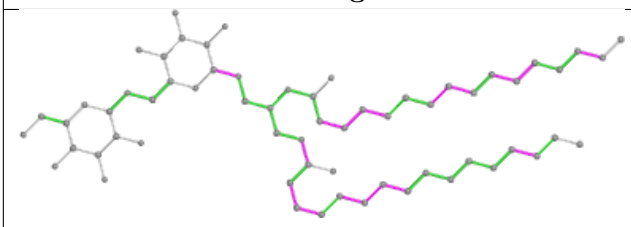
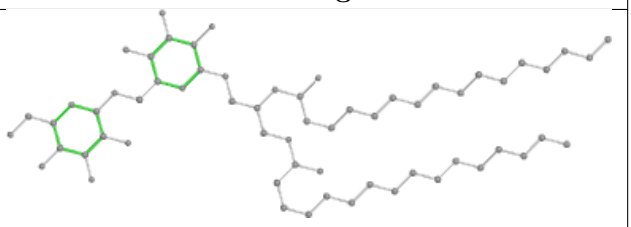


Bond angles

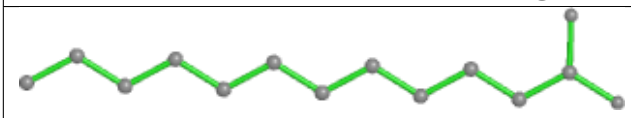


Torsions



Rings

Ligand STE t 103



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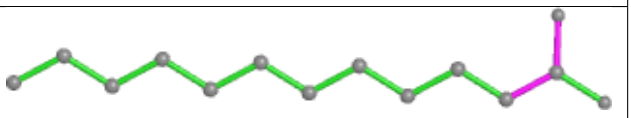
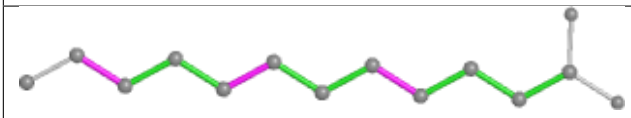
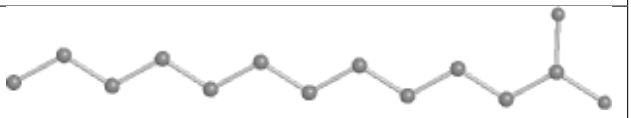


Bond angles

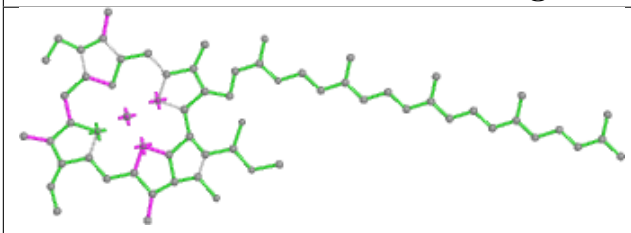


Torsions



Rings

Ligand CLA c 510



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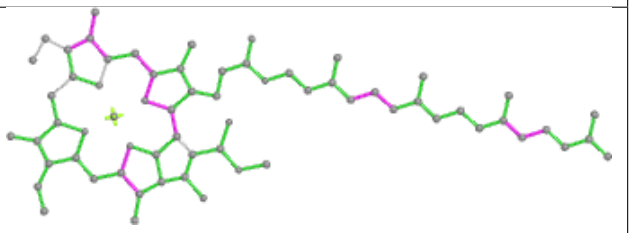
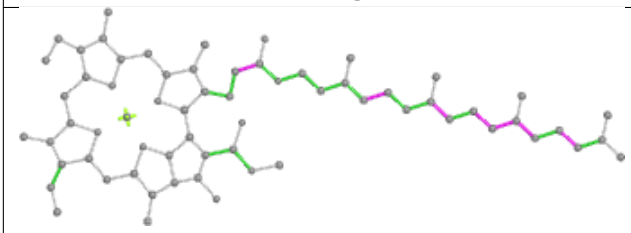


Bond angles



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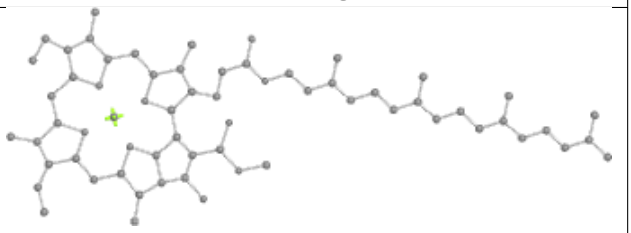
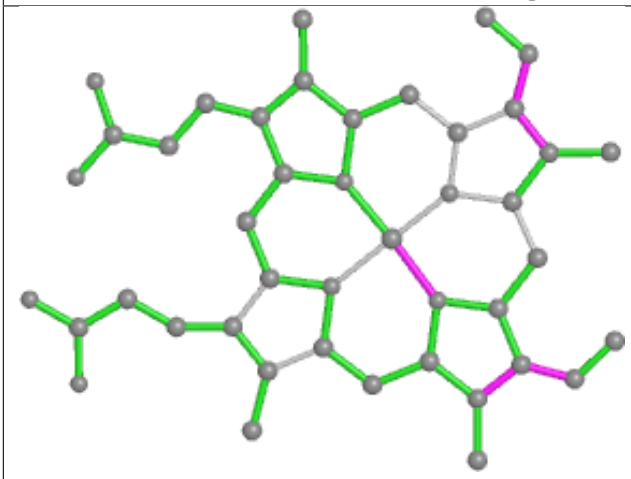


Rings

Ligand HEM e 101



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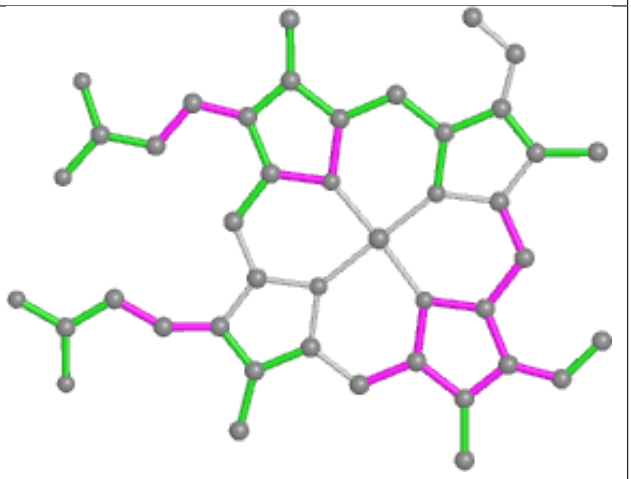
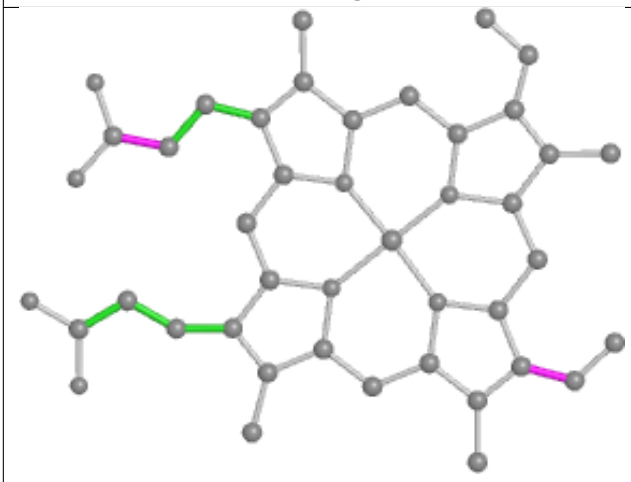
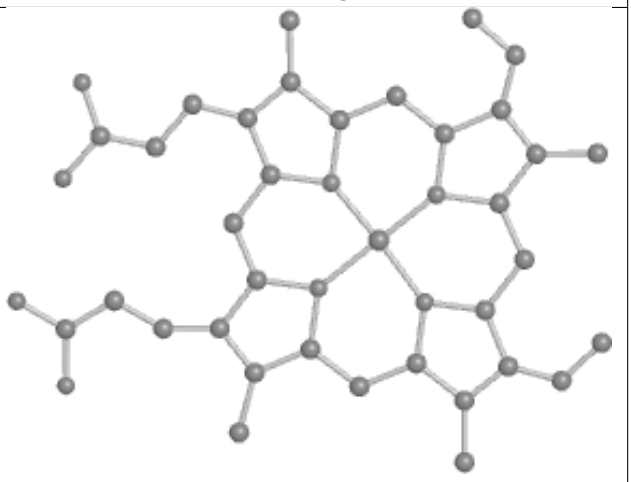


Bond angles

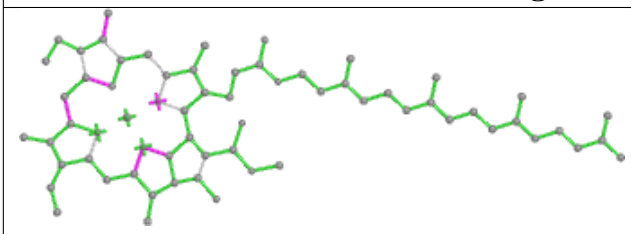


Torsions

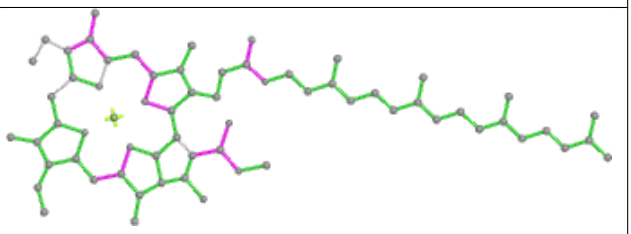


Rings

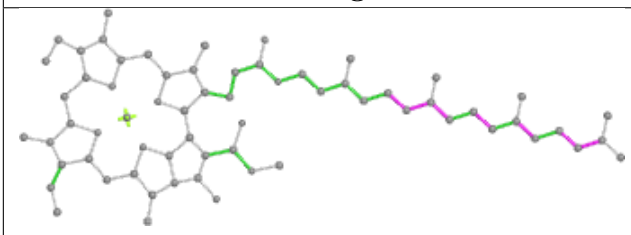
Ligand CLA c 505



Bond lengths



Bond angles



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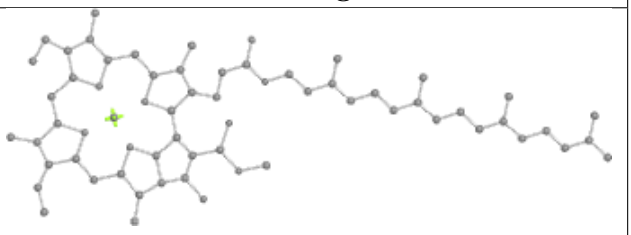
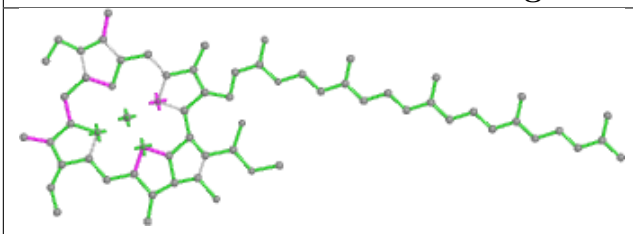
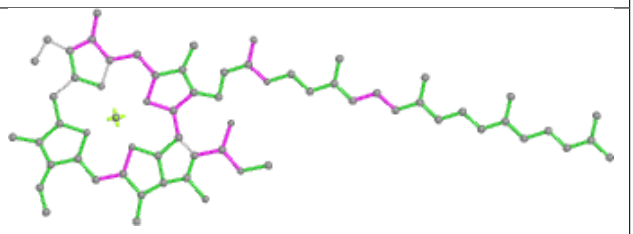


Rings

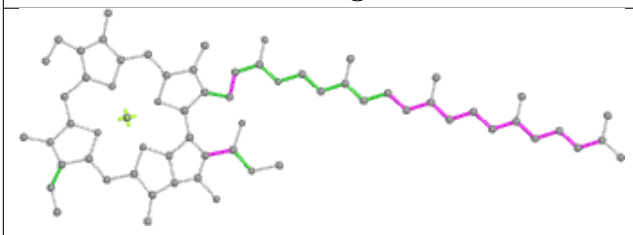
Ligand CLA B 603



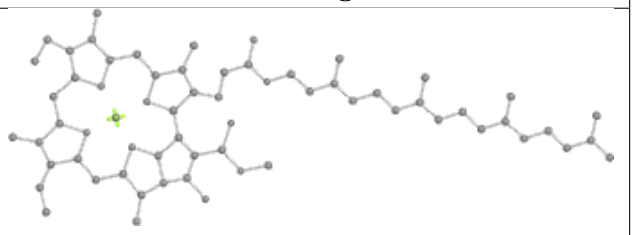
Bond lengths



Bond angles

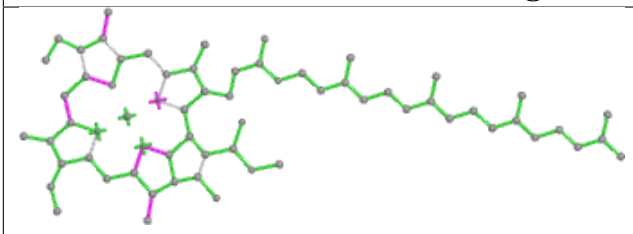


Torsions

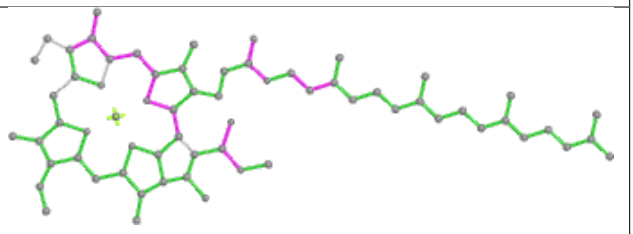


Rings

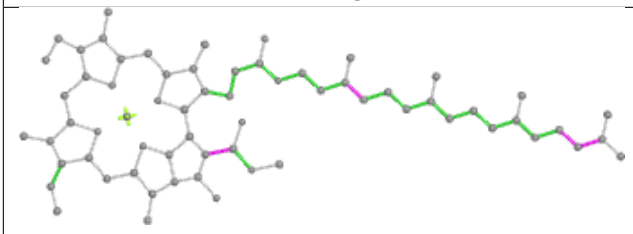
Ligand CLA B 609



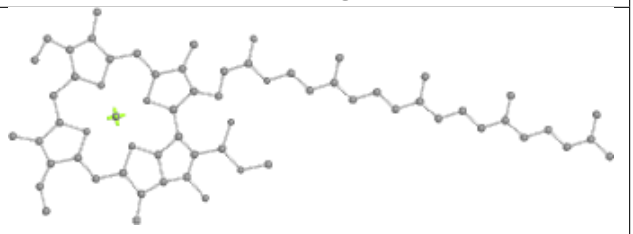
Bond lengths



Bond angles

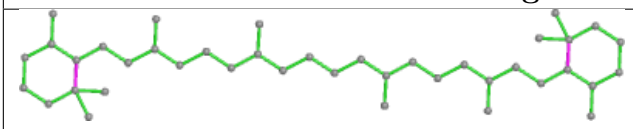


Torsions

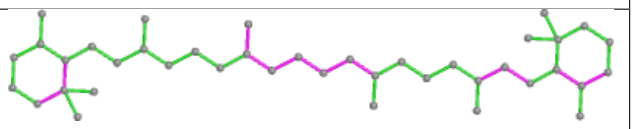


Rings

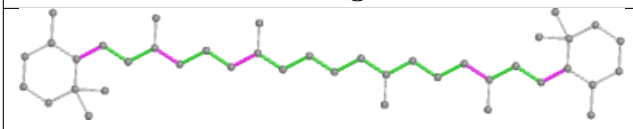
Ligand BCR X 101



Bond lengths



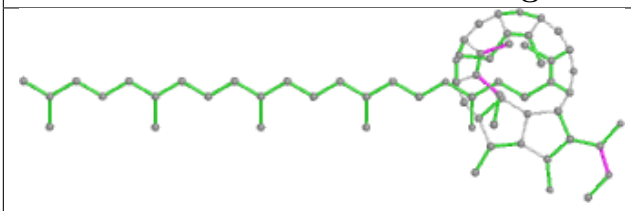
Bond angles



Torsions

Rings

Ligand PHO A 609



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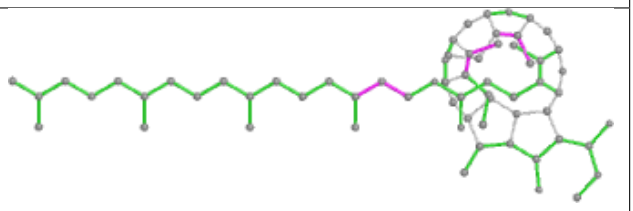
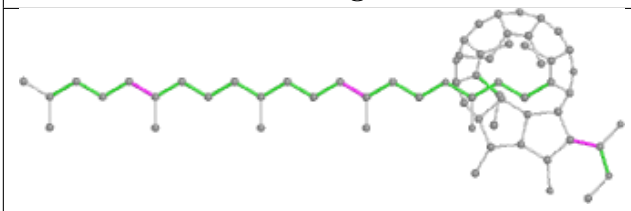
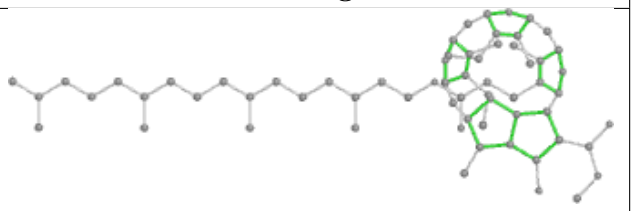


Bond angles

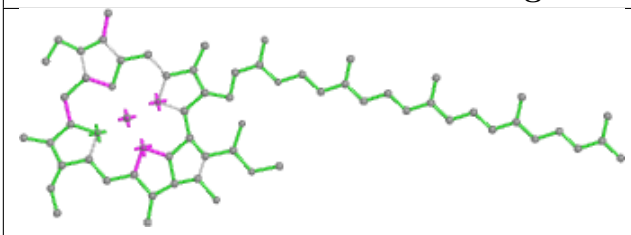


Torsions



Rings

Ligand CLA B 604



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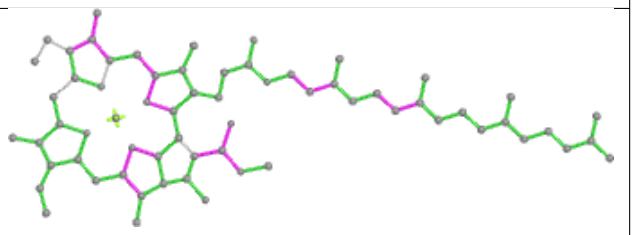
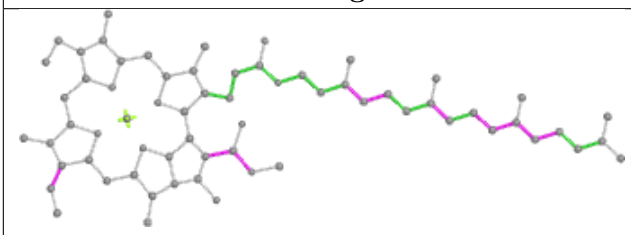
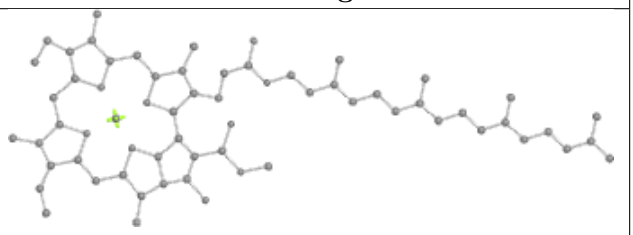


Bond angles

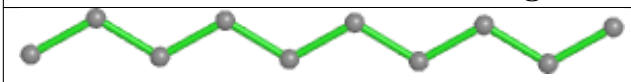


Torsions

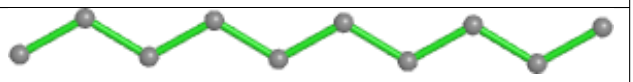


Rings

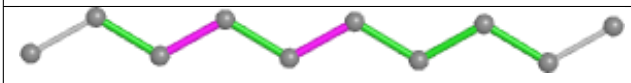
Ligand STE M 103



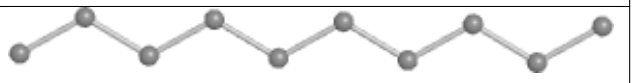
Bond lengths



Bond angles

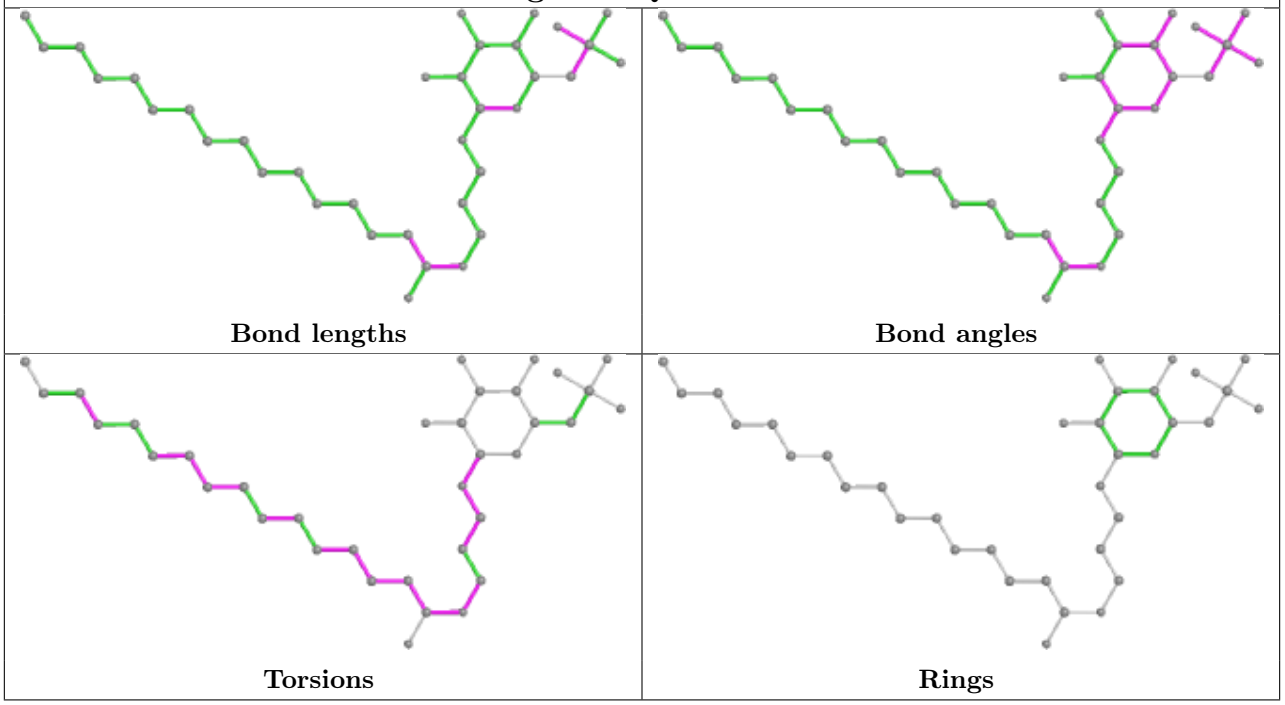


Torsions

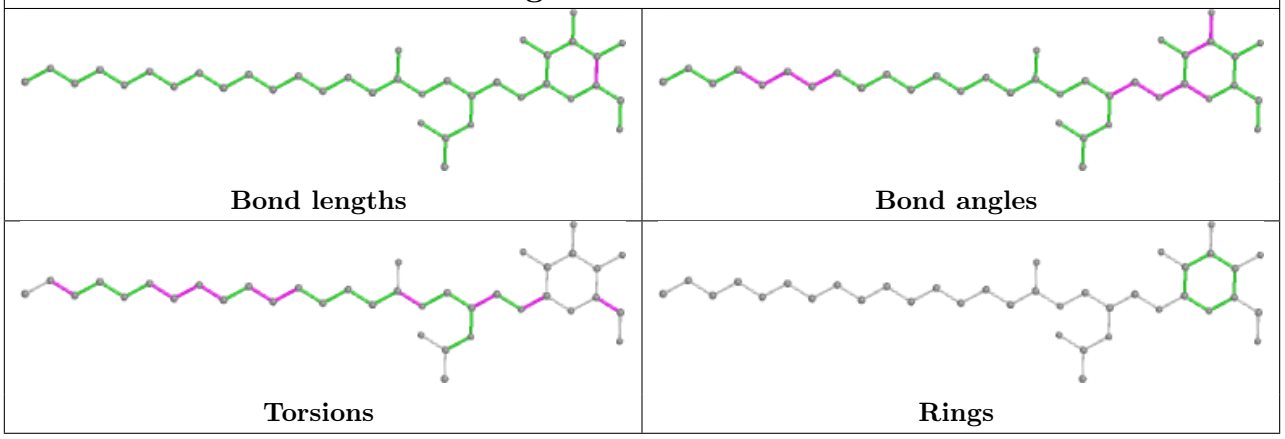


Rings

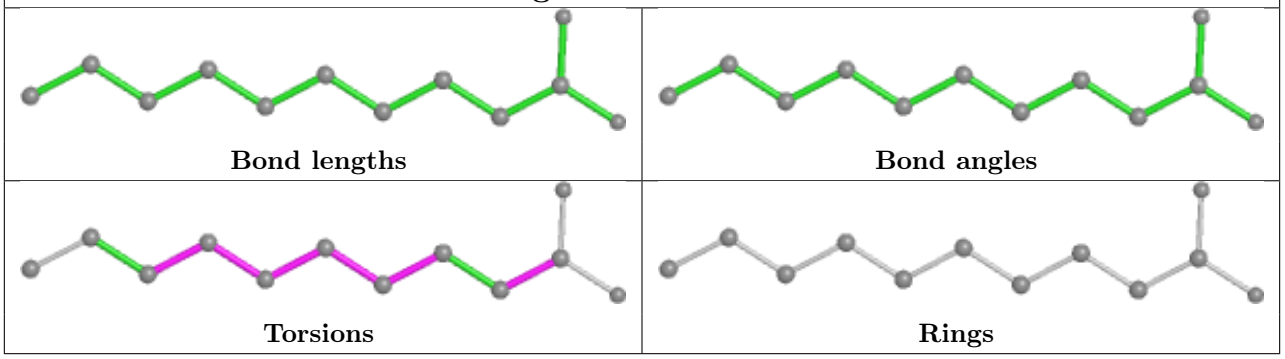
Ligand SQD F 102



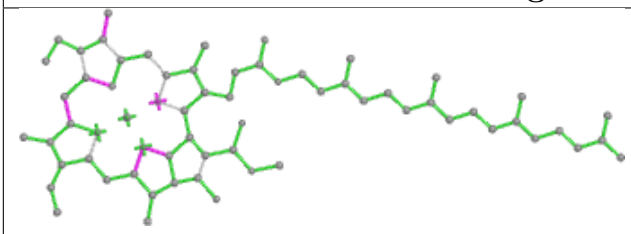
Ligand LMG c 520



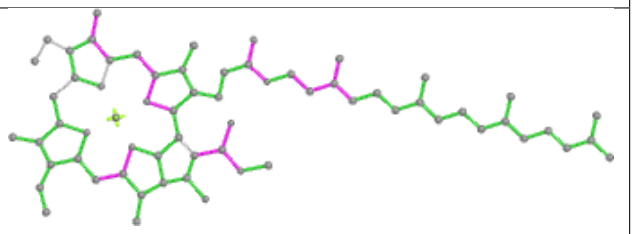
Ligand STE a 615



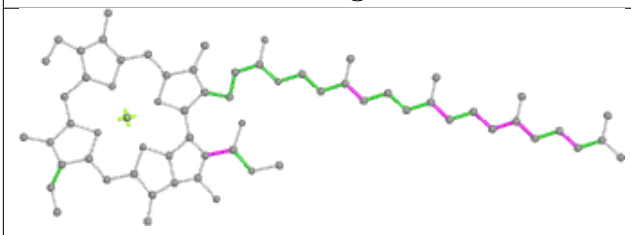
Ligand CLA b 604



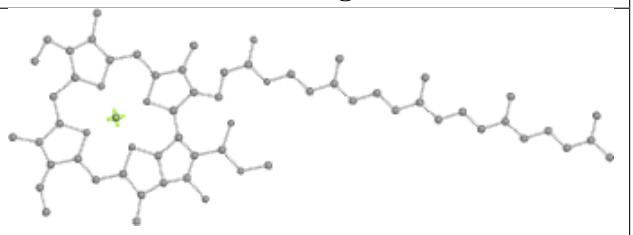
Bond lengths



Bond angles

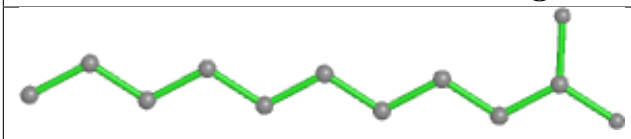


Torsions

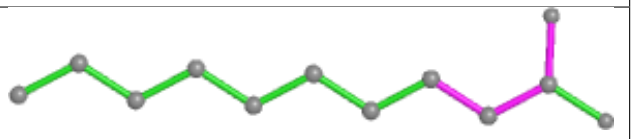


Rings

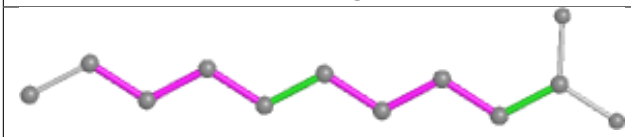
Ligand STE J 101



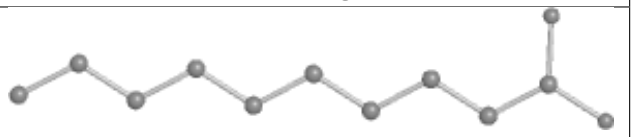
Bond lengths



Bond angles

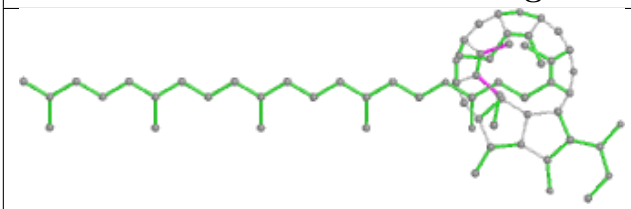


Torsions

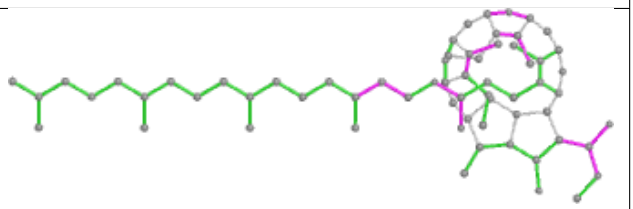


Rings

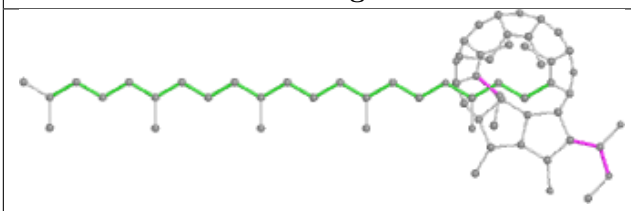
Ligand PHO d 402



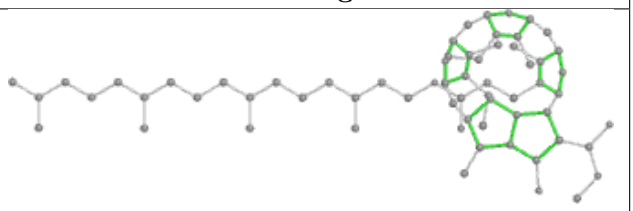
Bond lengths



Bond angles

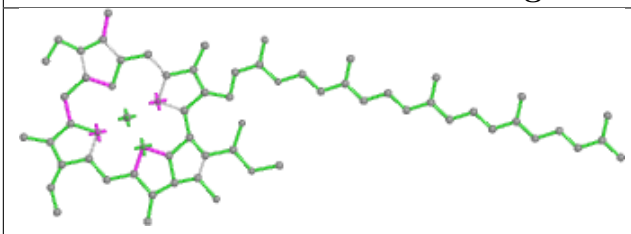


Torsions

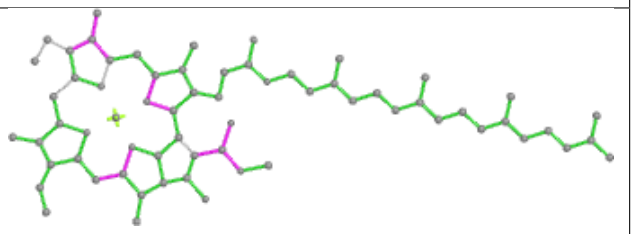


Rings

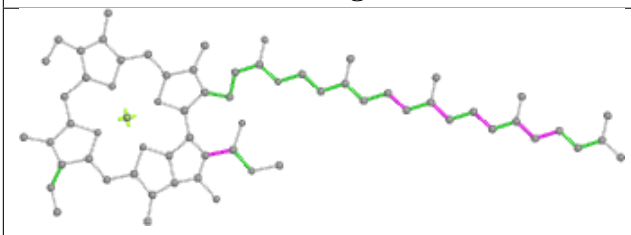
Ligand CLA C 508



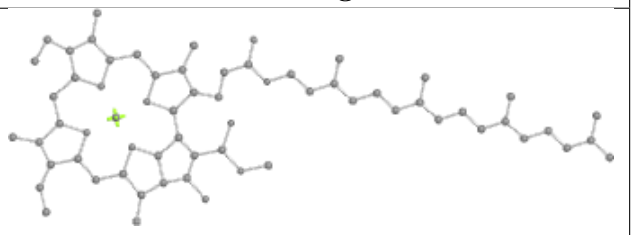
Bond lengths



Bond angles

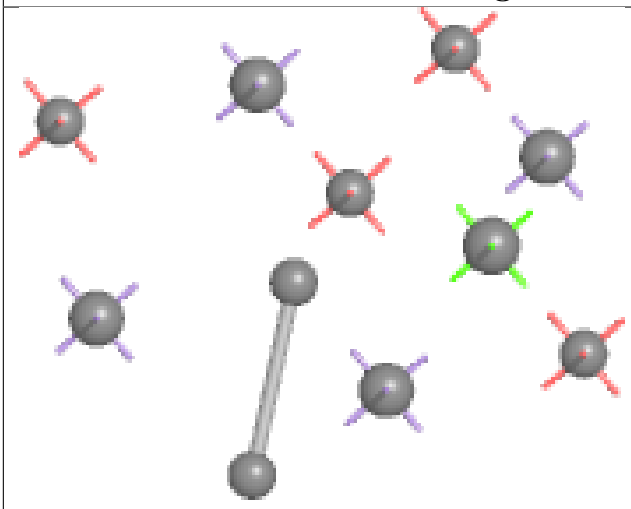


Torsions

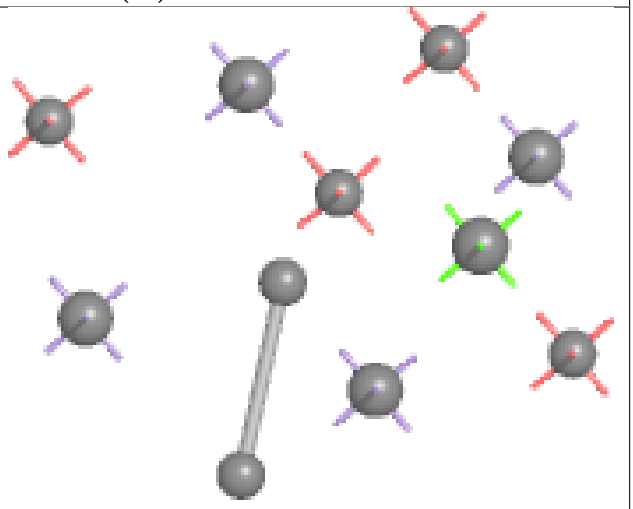


Rings

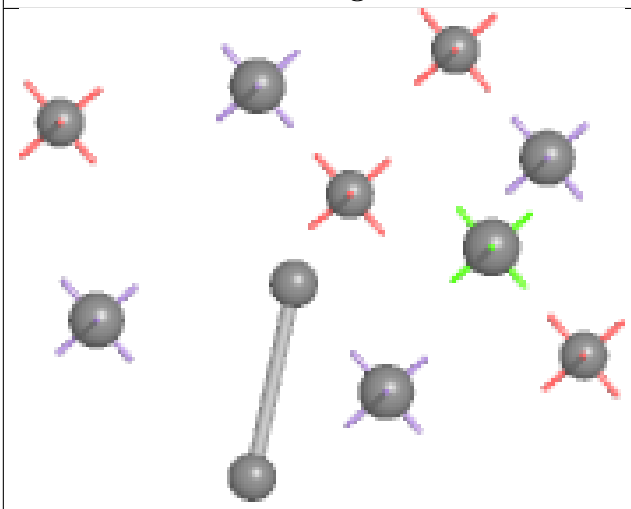
Ligand OEY a 601 (C)



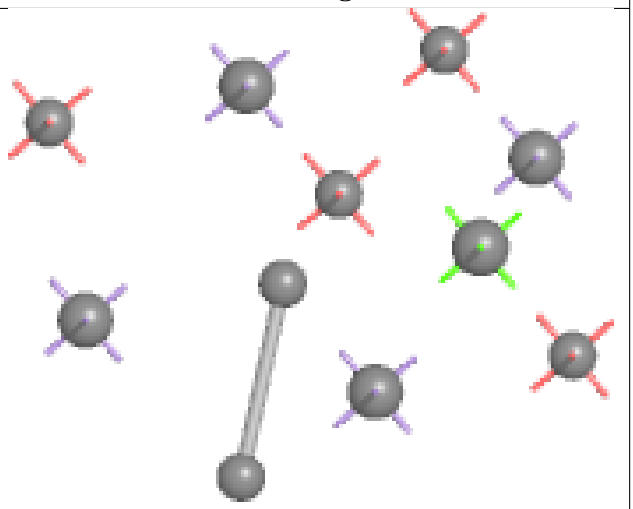
Bond lengths



Bond angles

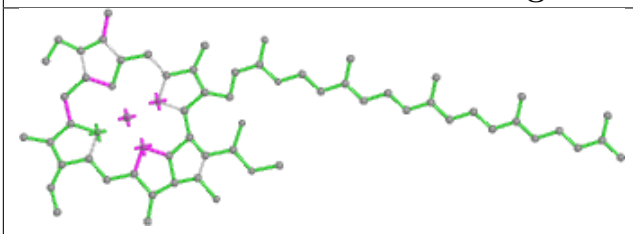


Torsions

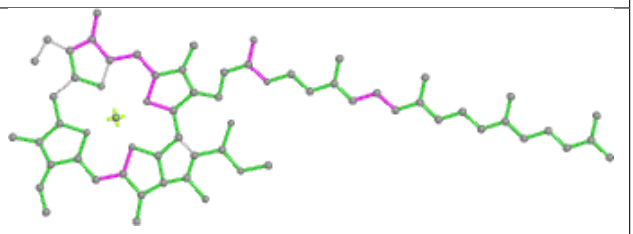


Rings

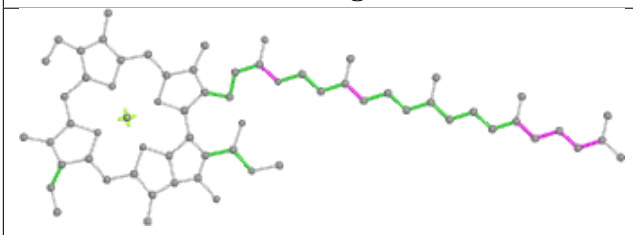
Ligand CLA b 608



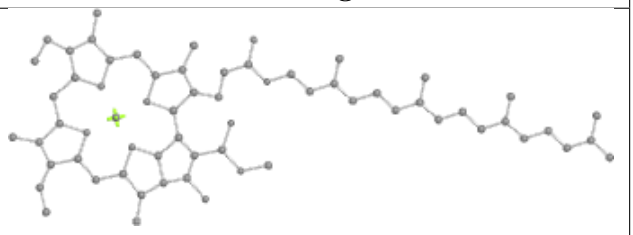
Bond lengths



Bond angles

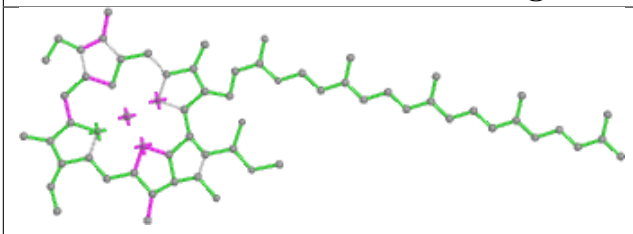


Torsions

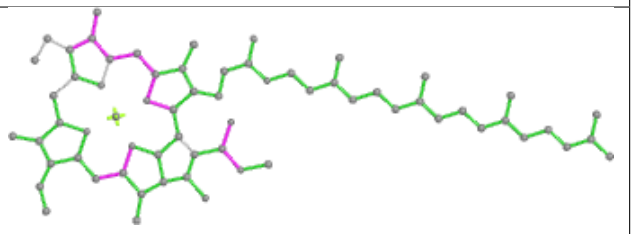


Rings

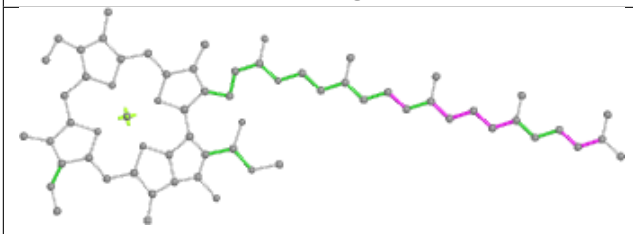
Ligand CLA b 614



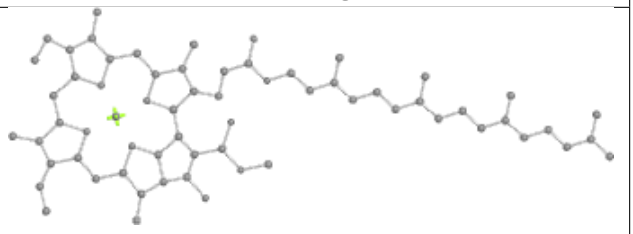
Bond lengths



Bond angles

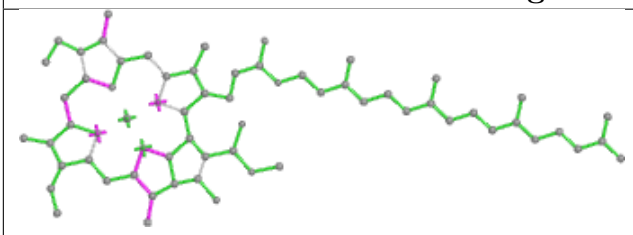


Torsions

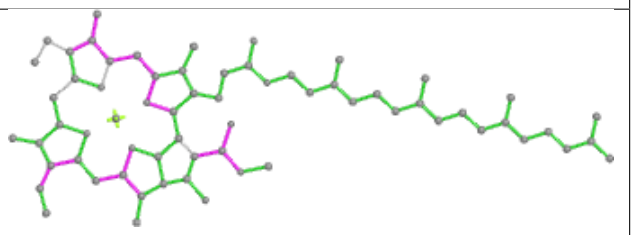


Rings

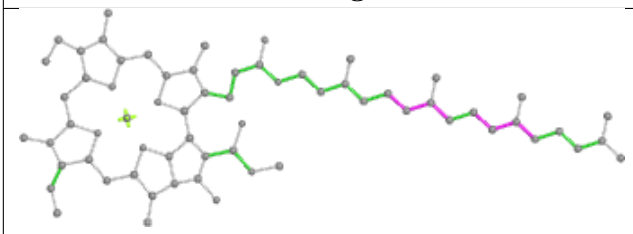
Ligand CLA b 601



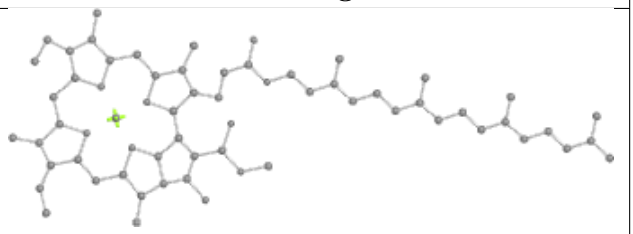
Bond lengths



Bond angles

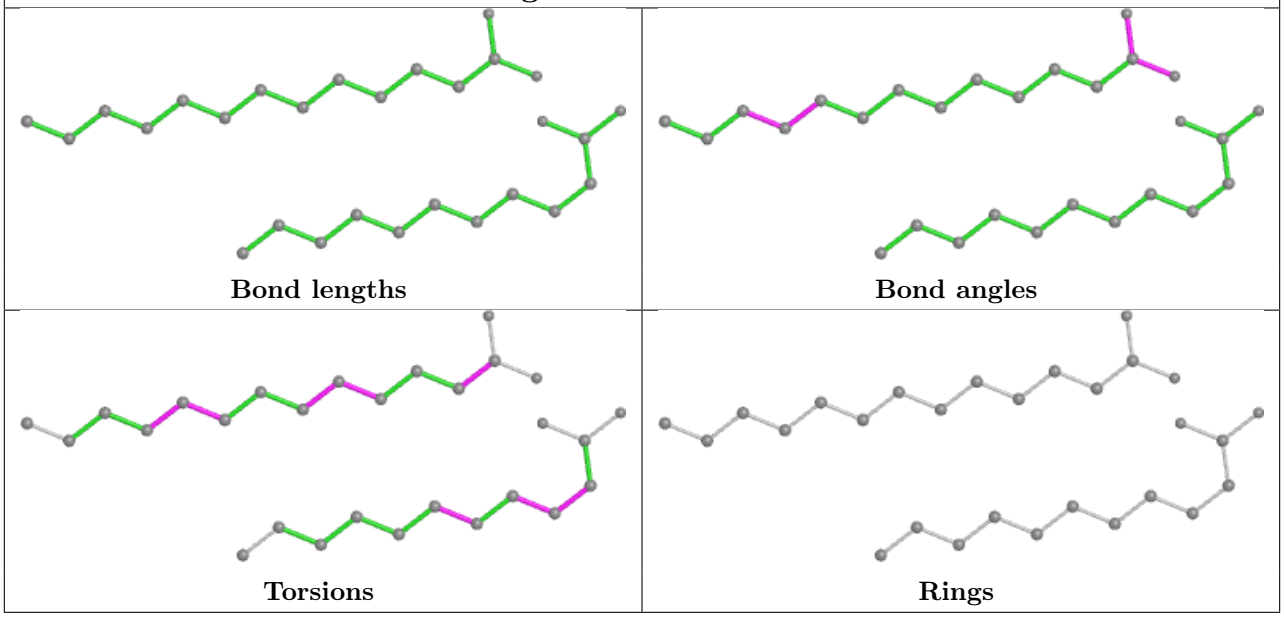


Torsions

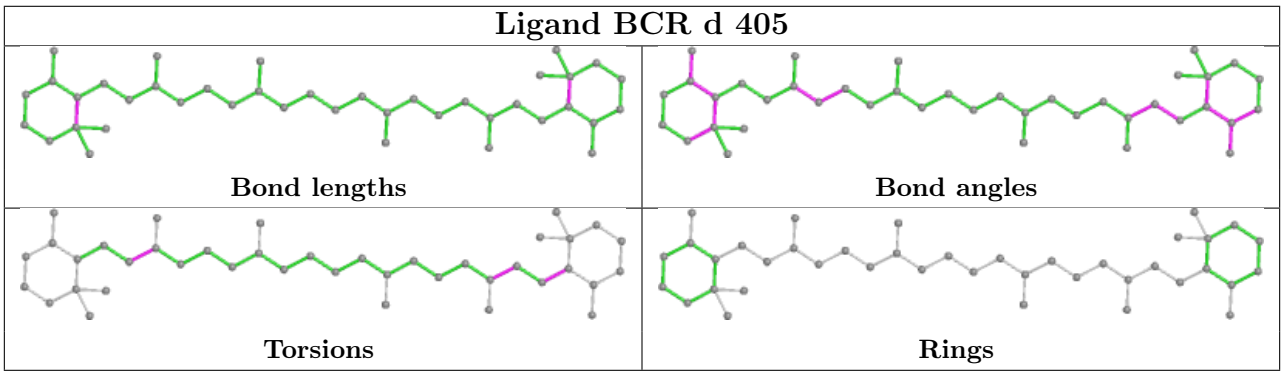


Rings

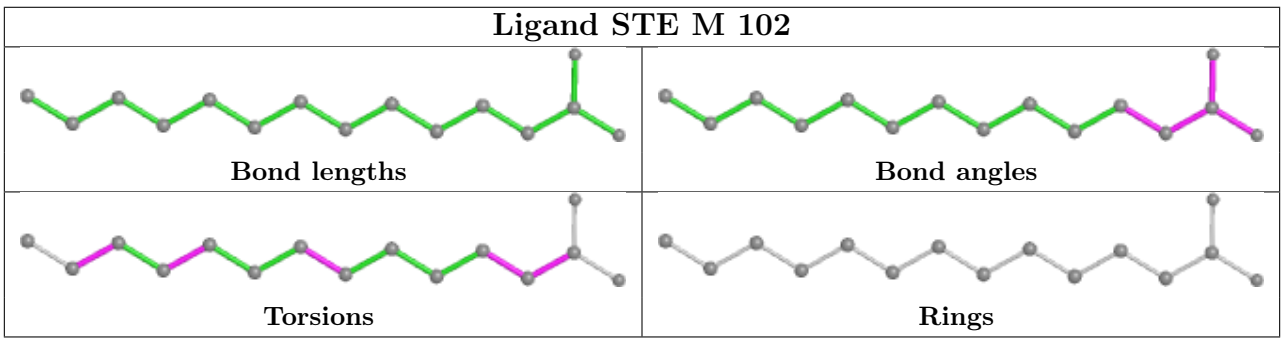
Ligand LMG B 621



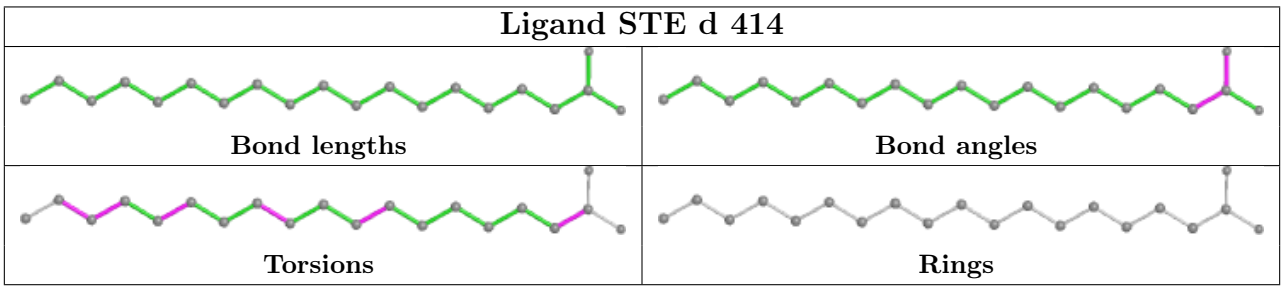
Ligand BCR d 405



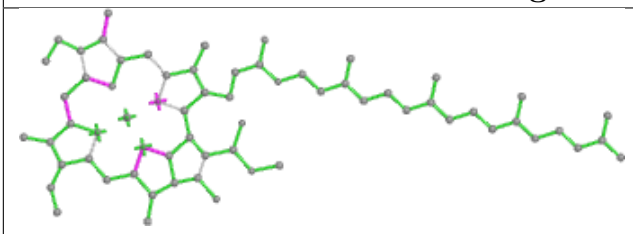
Ligand STE M 102



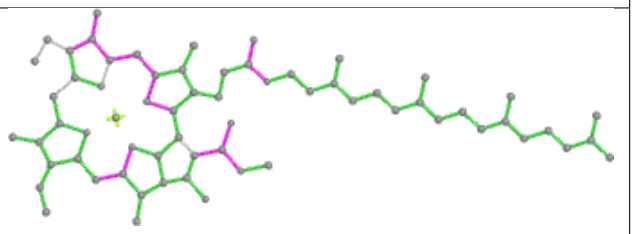
Ligand STE d 414



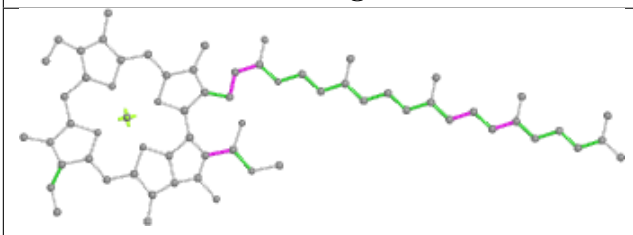
Ligand CLA c 501



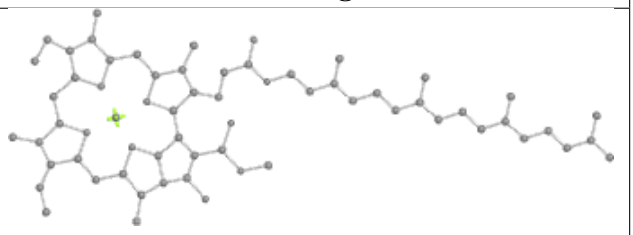
Bond lengths



Bond angles

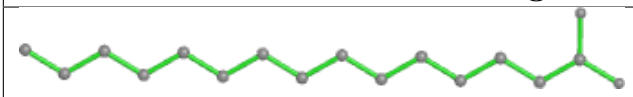


Torsions

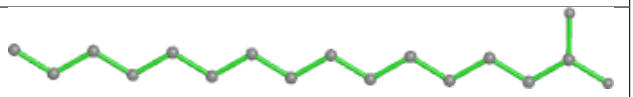


Rings

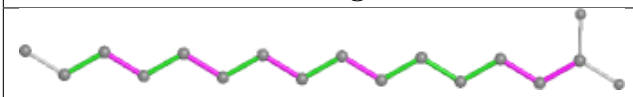
Ligand STE B 620



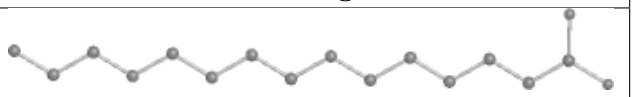
Bond lengths



Bond angles

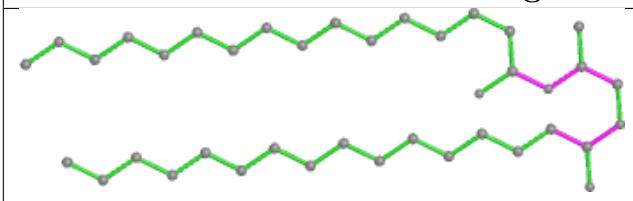


Torsions

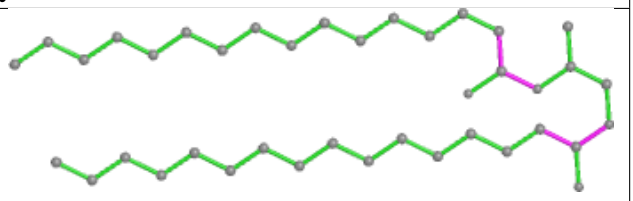


Rings

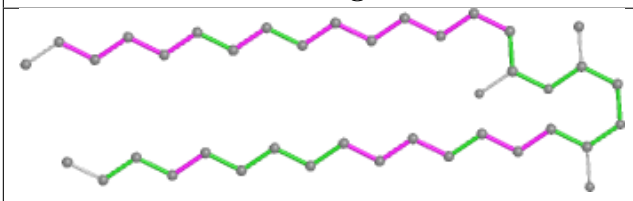
Ligand SQD A 618



Bond lengths



Bond angles



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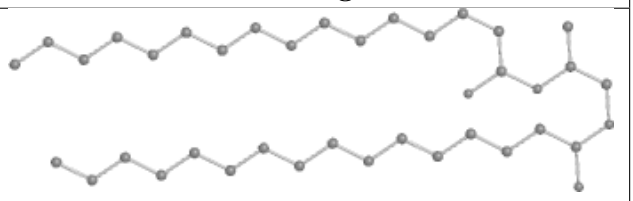
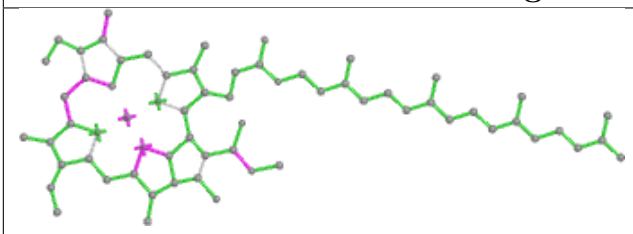
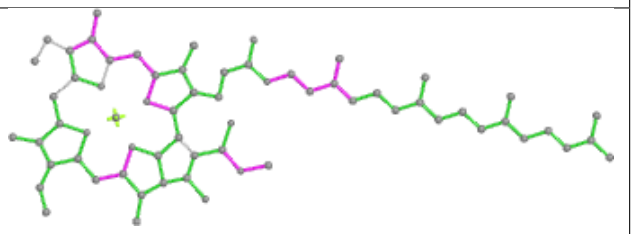


Rings

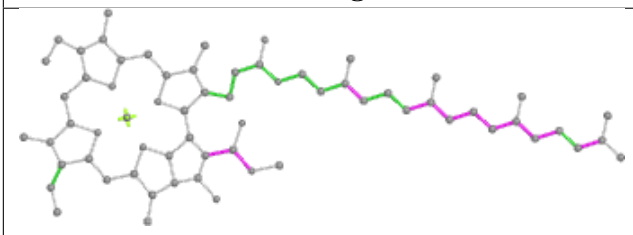
Ligand CLA B 607



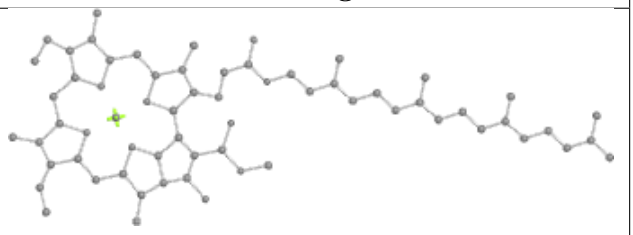
Bond lengths



Bond angles

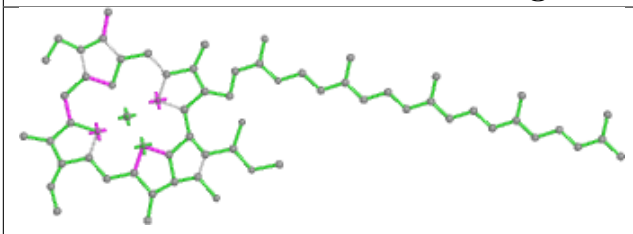


Torsions

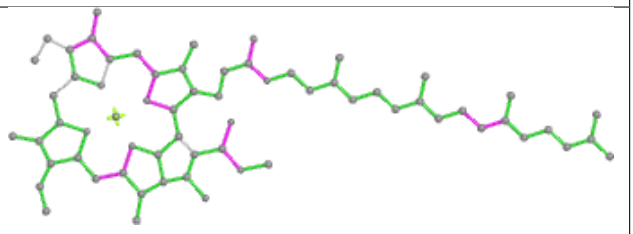


Rings

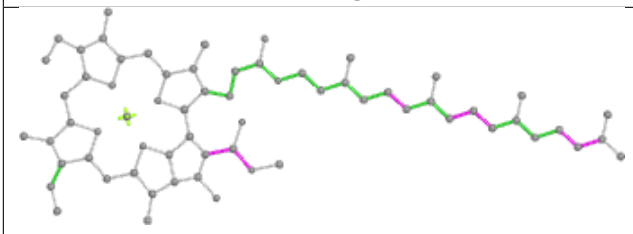
Ligand CLA c 503



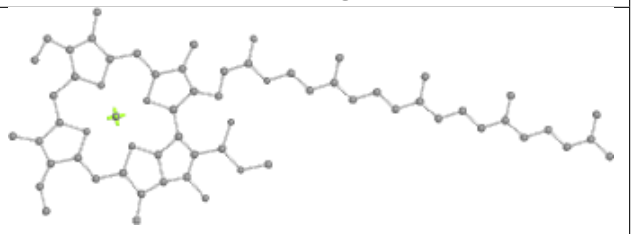
Bond lengths



Bond angles

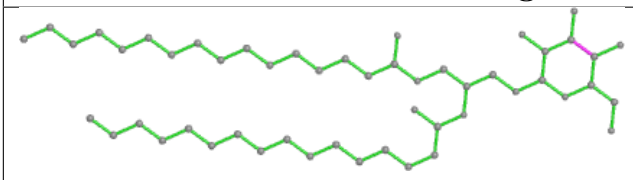


Torsions

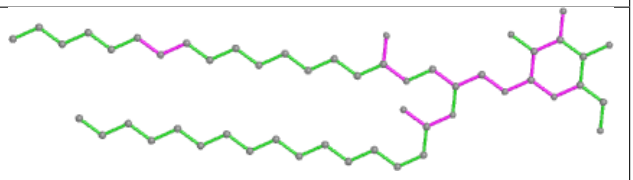


Rings

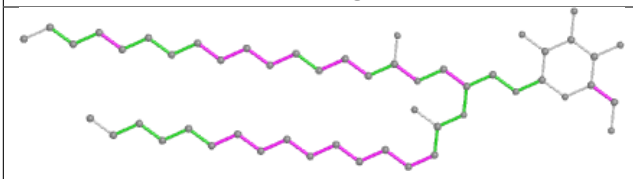
Ligand LMG m 101



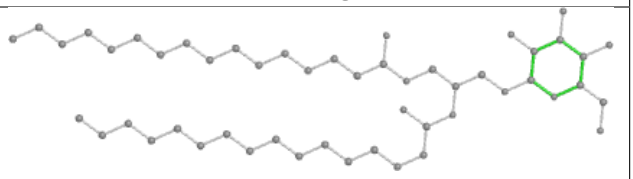
Bond lengths



Bond angles

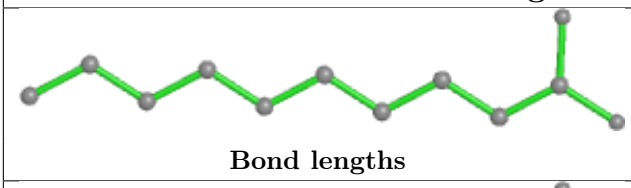


Torsions

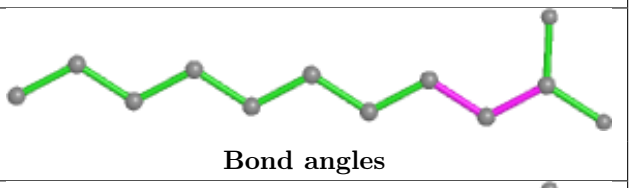


Rings

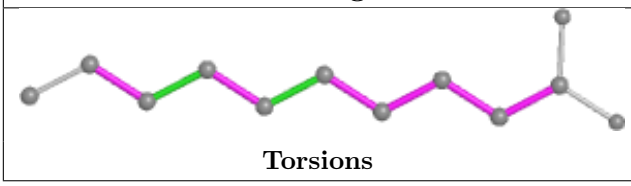
Ligand STE B 623



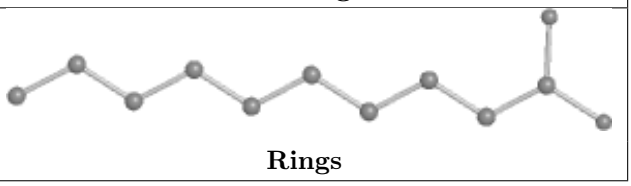
Bond lengths



Bond angles

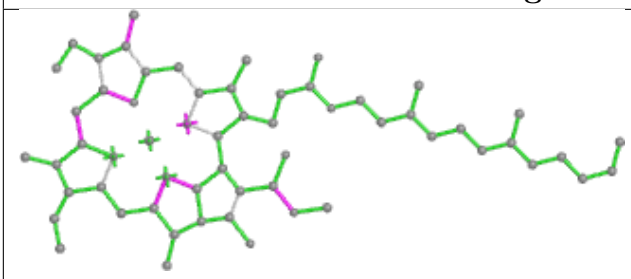


Torsions

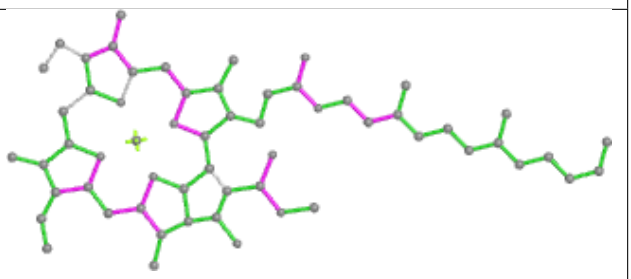


Rings

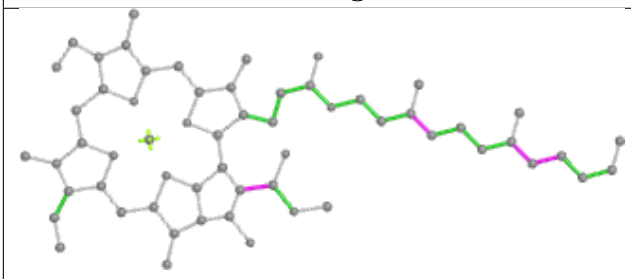
Ligand CLA C 504



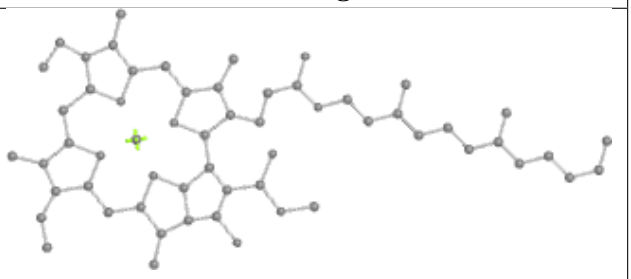
Bond lengths



Bond angles

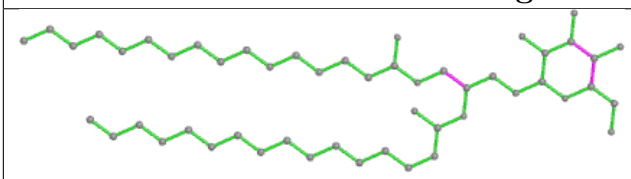


Torsions

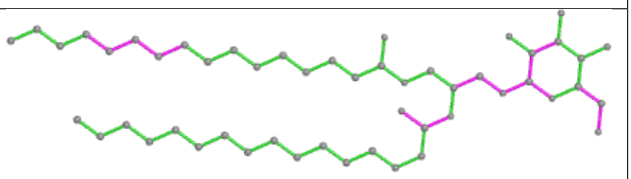


Rings

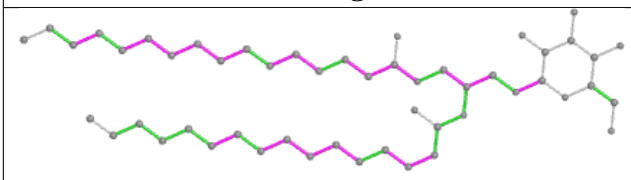
Ligand LMG M 101



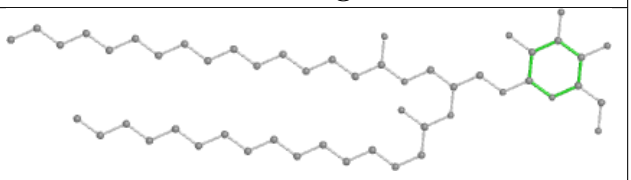
Bond lengths



Bond angles

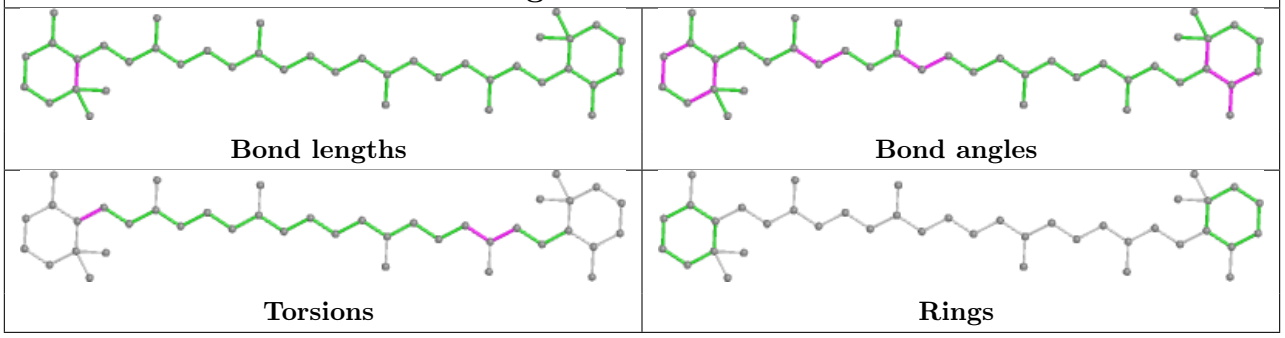


Torsions

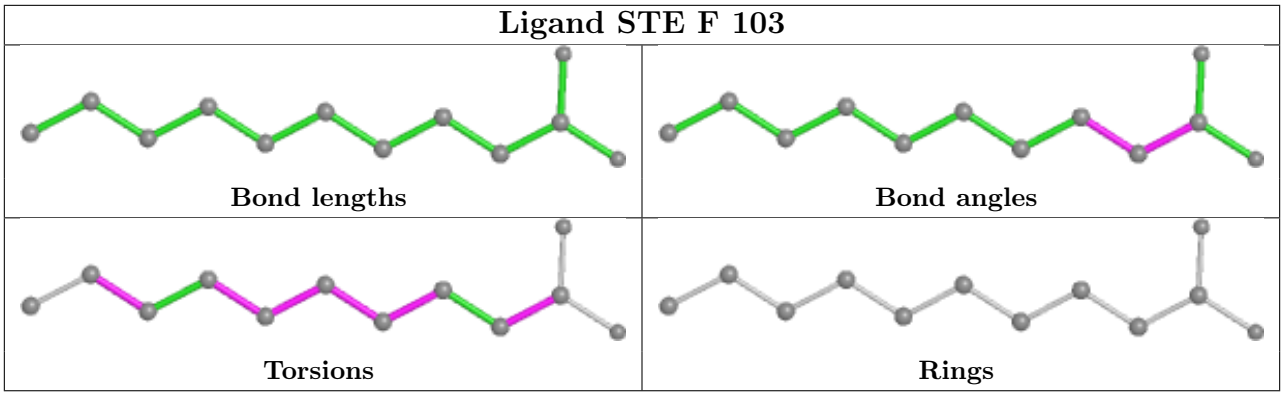


Rings

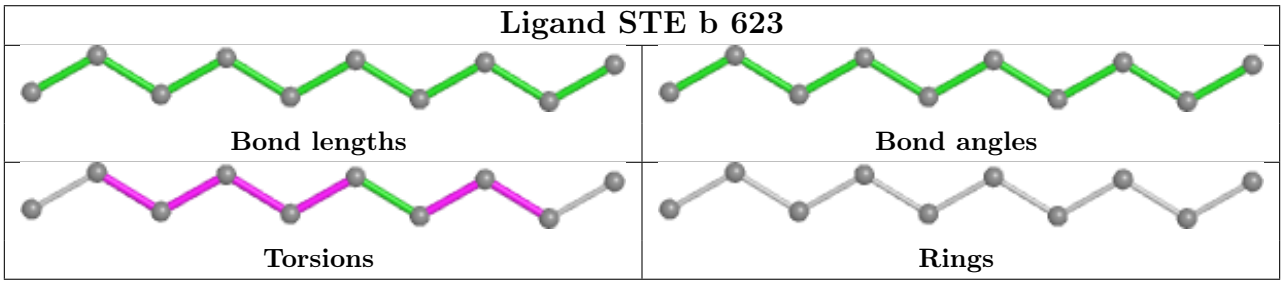
Ligand BCR b 616



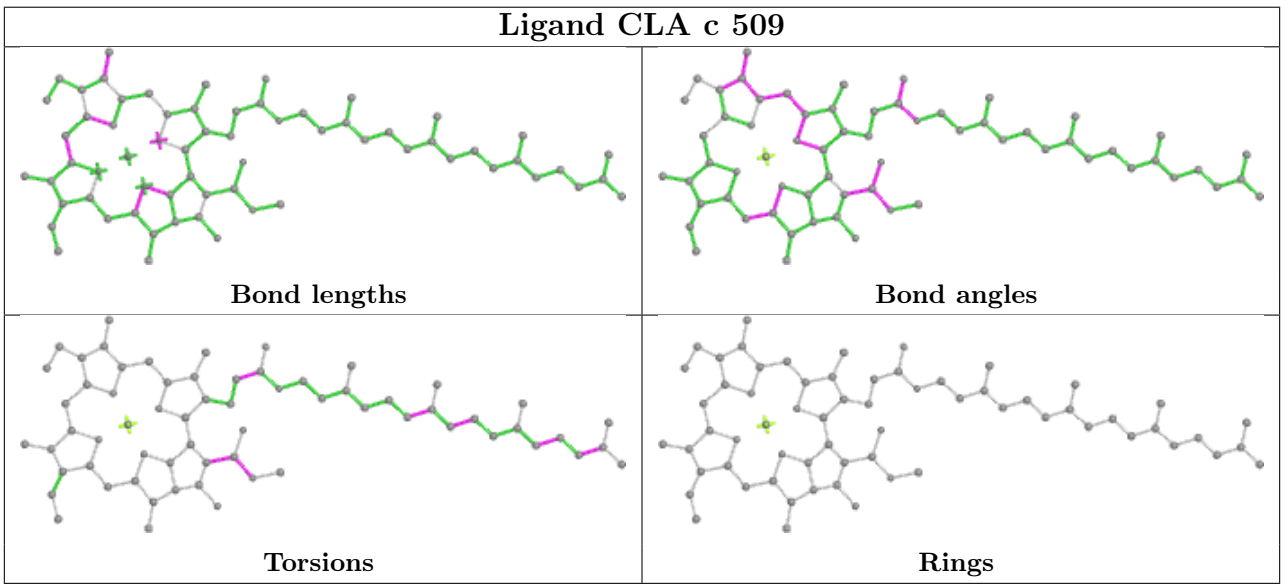
Ligand STE F 103



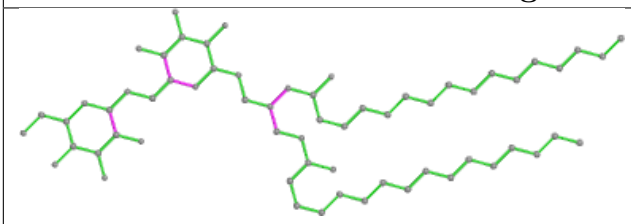
Ligand STE b 623



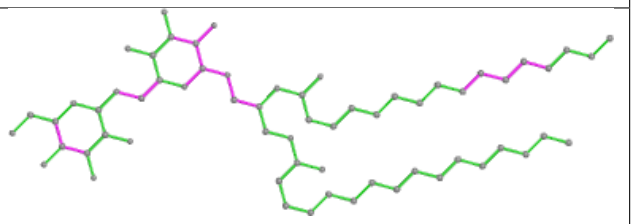
Ligand CLA c 509



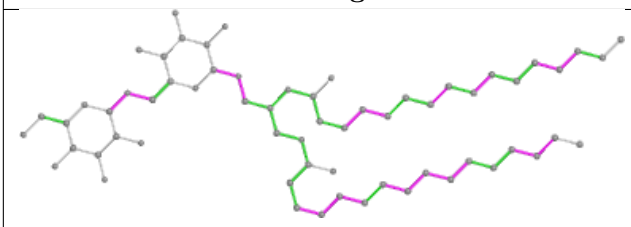
Ligand DGD C 516



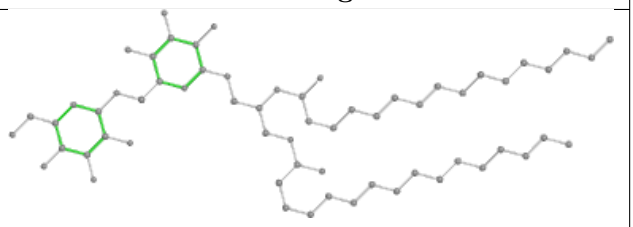
Bond lengths



Bond angles

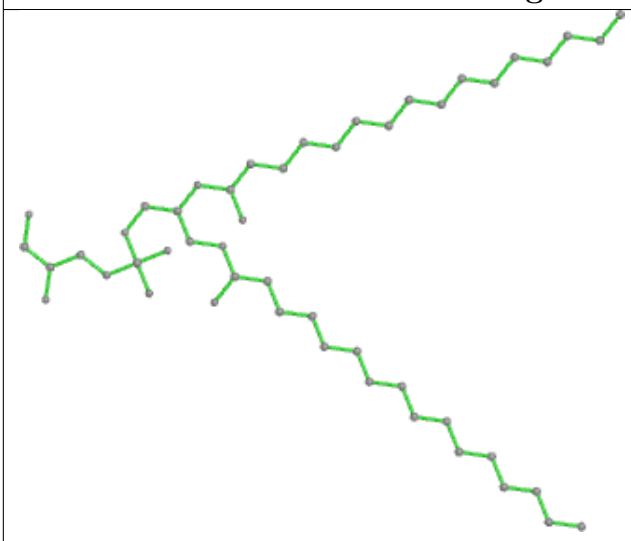


Torsions

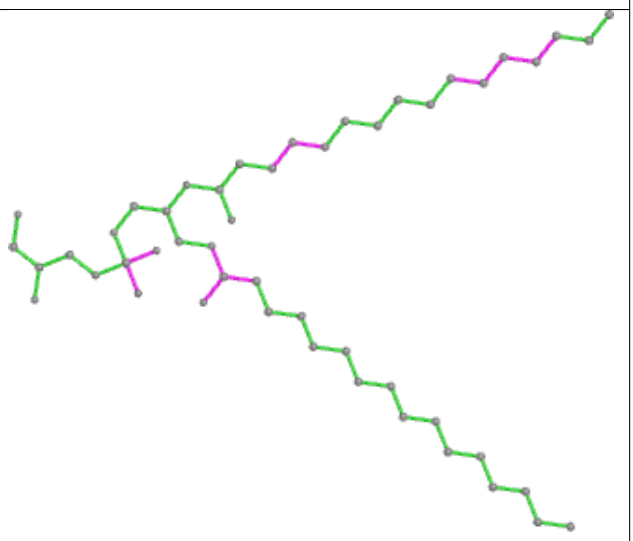


Rings

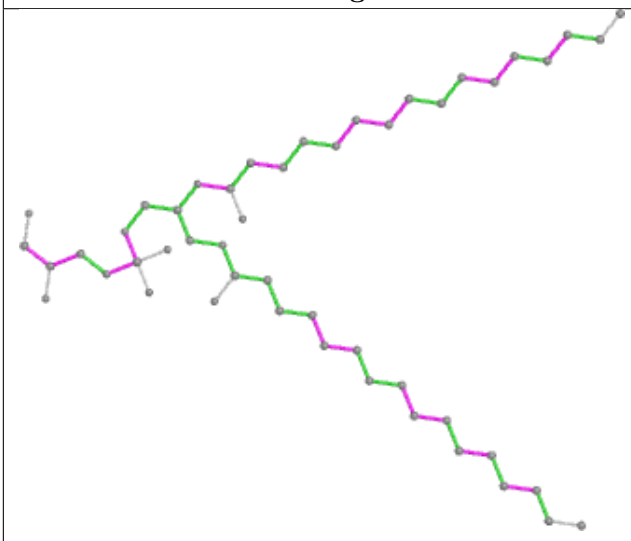
Ligand LHG d 408



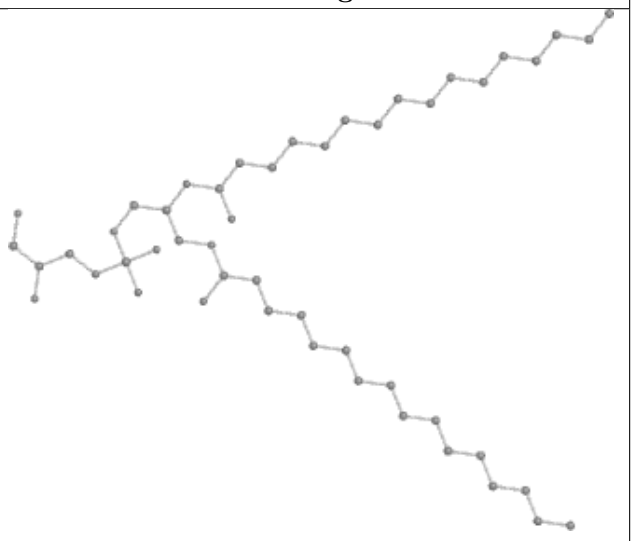
Bond lengths



Bond angles

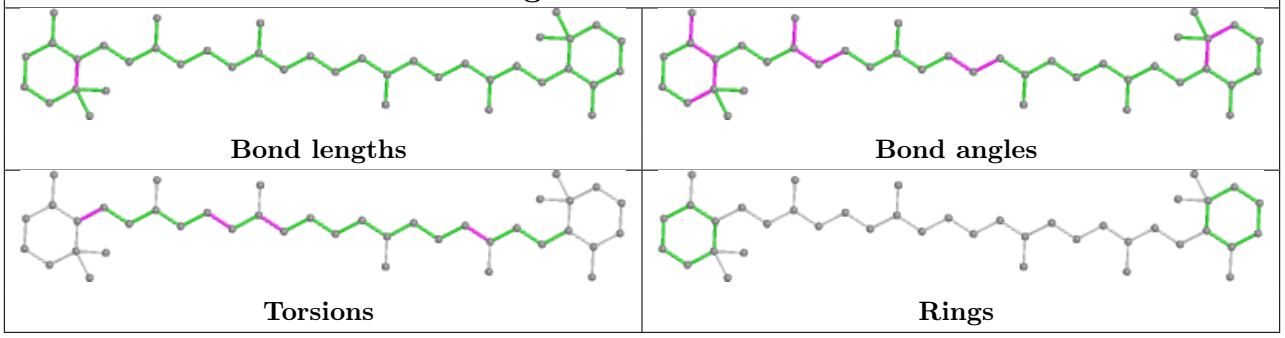


Torsions

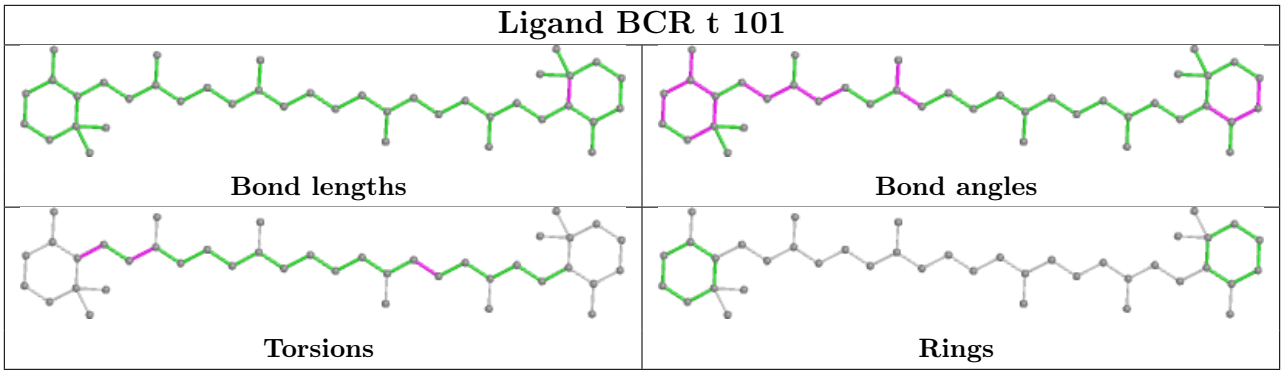


Rings

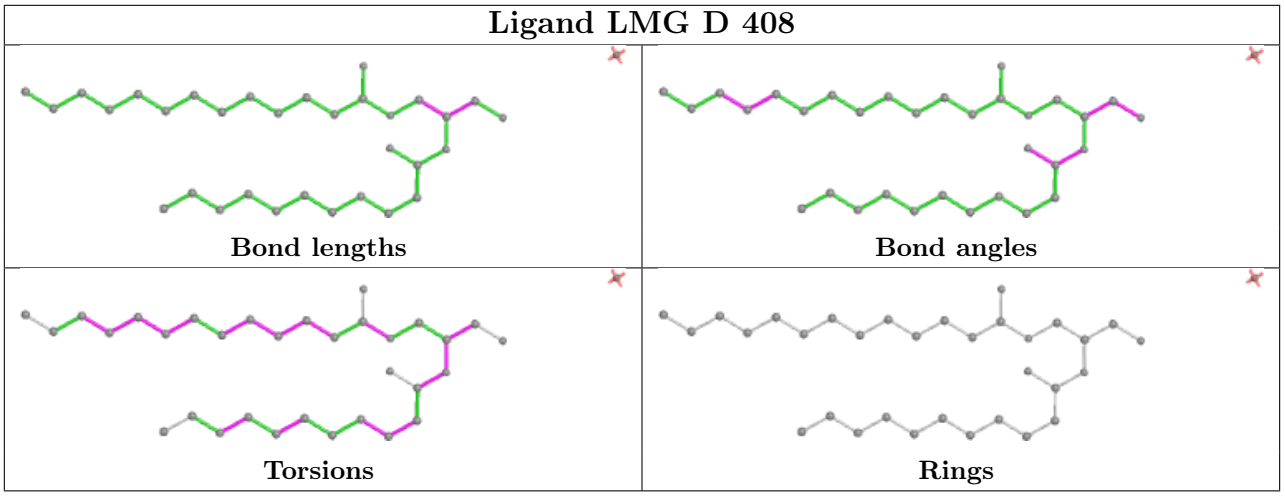
Ligand BCR B 617



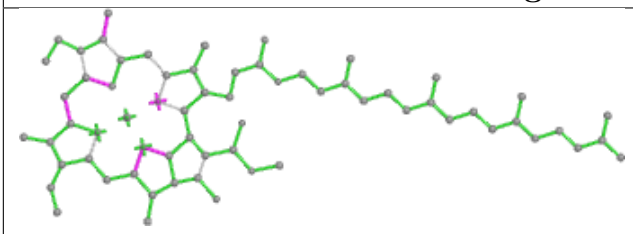
Ligand BCR t 101



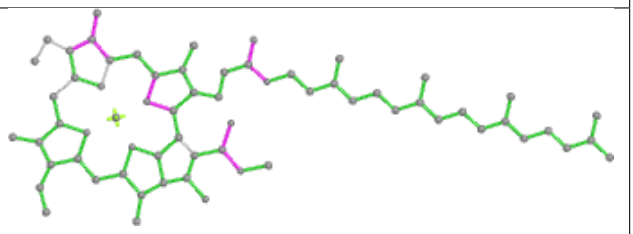
Ligand LMG D 408



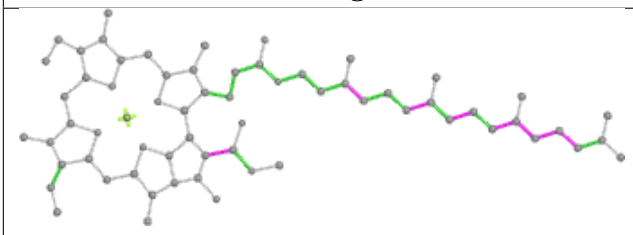
Ligand CLA C 506



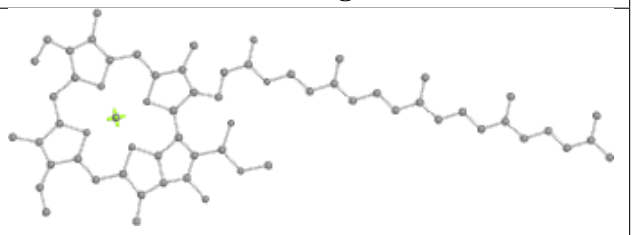
Bond lengths



Bond angles

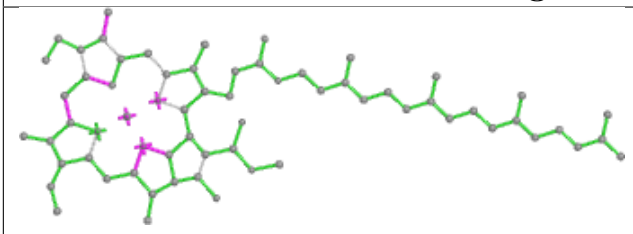


Torsions

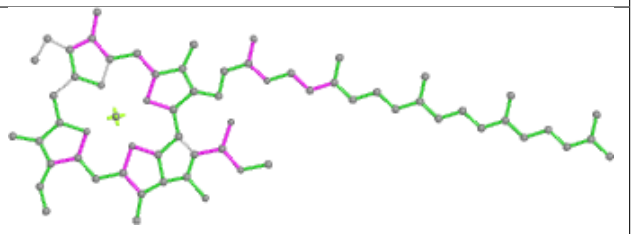


Rings

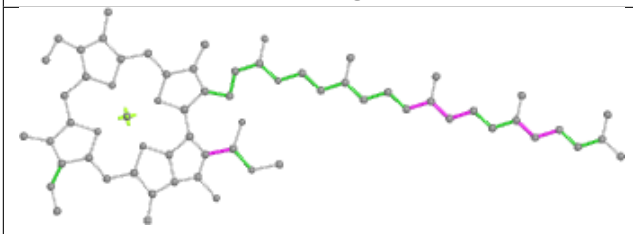
Ligand CLA a 607



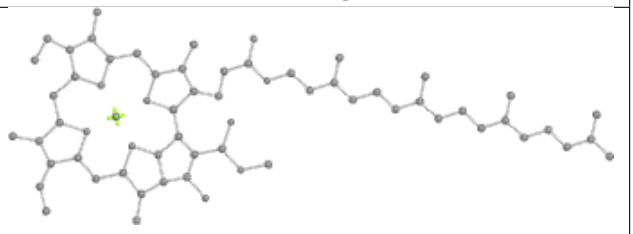
Bond lengths



Bond angles

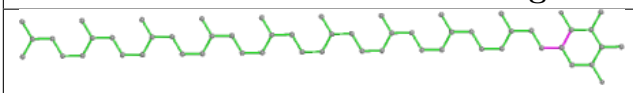


Torsions

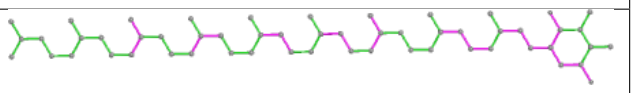


Rings

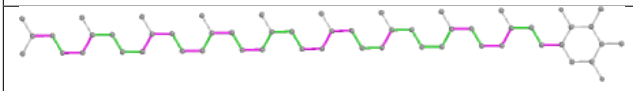
Ligand PL9 A 612



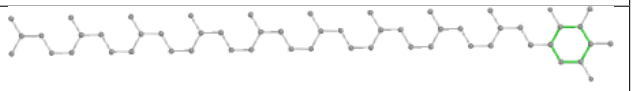
Bond lengths



Bond angles

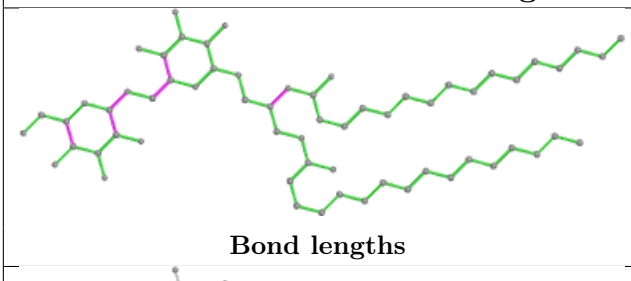


Torsions



Rings

Ligand DGD H 101



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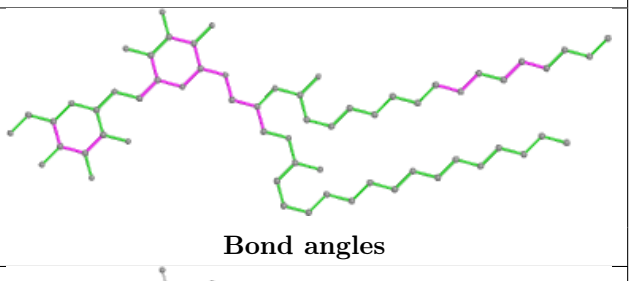
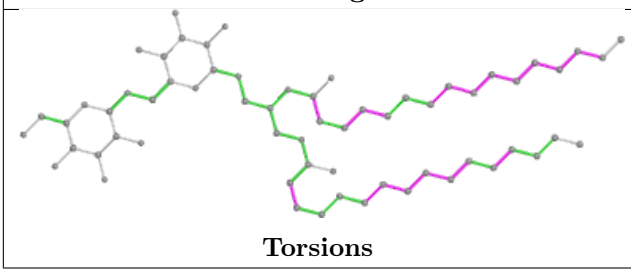
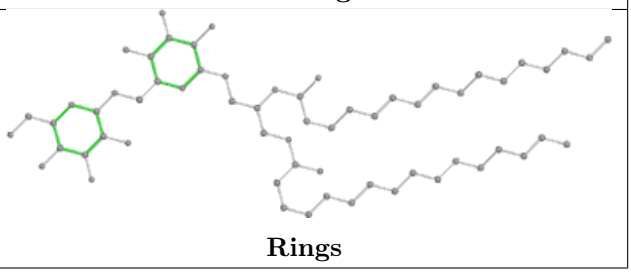


Bond angles

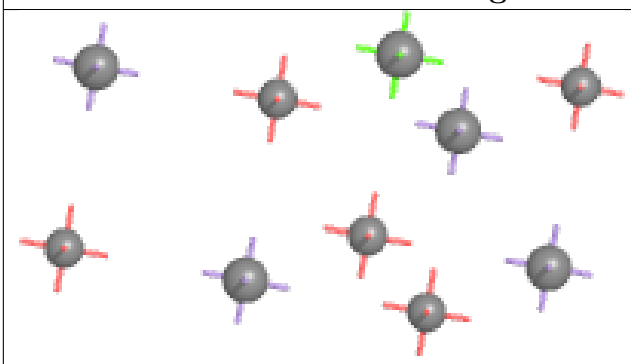


Torsions

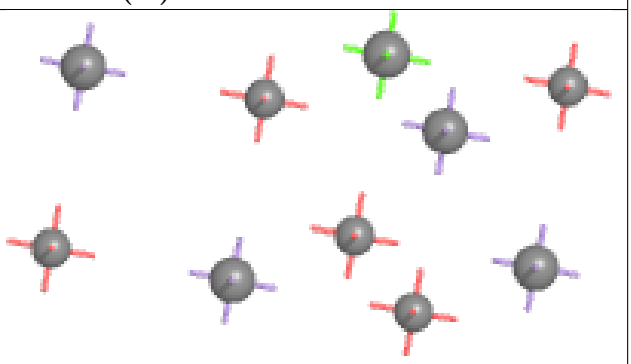


Rings

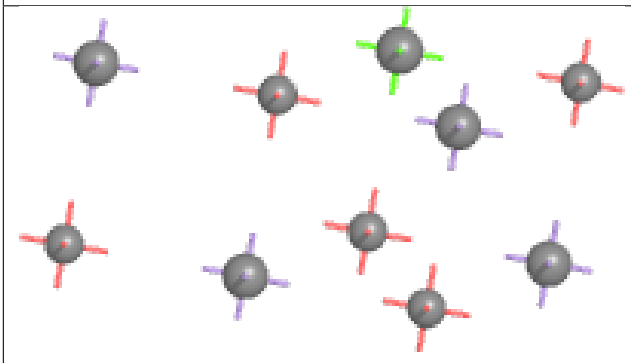
Ligand OEX A 602 (B)



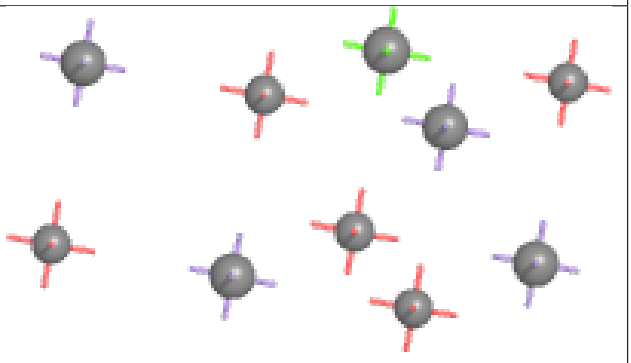
Bond lengths



Bond angles

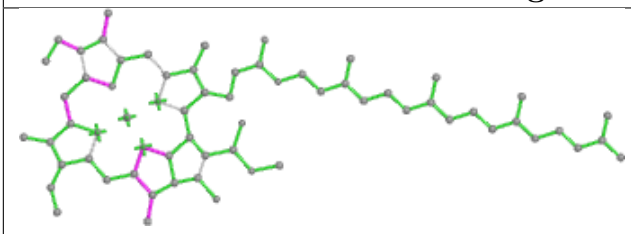


Torsions

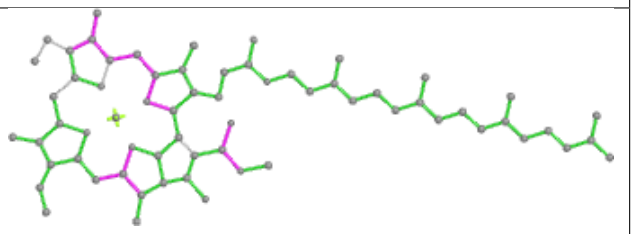


Rings

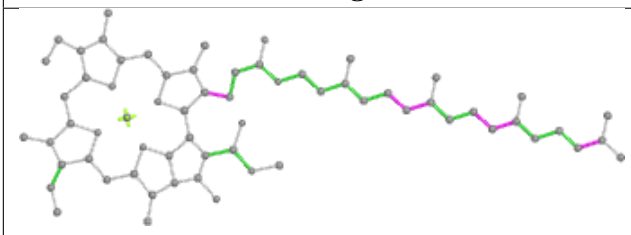
Ligand CLA d 404



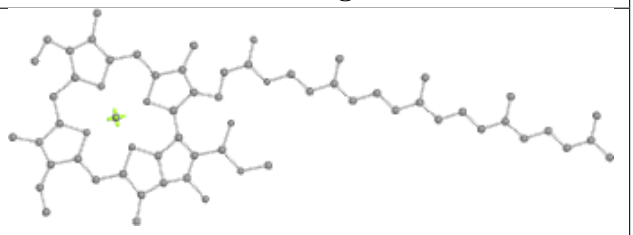
Bond lengths



Bond angles

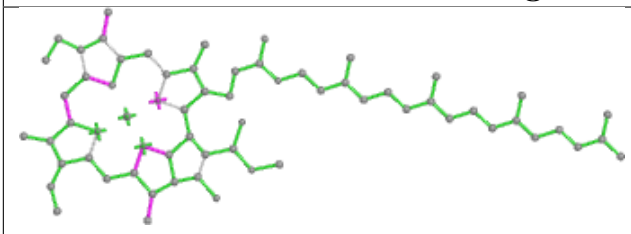


Torsions

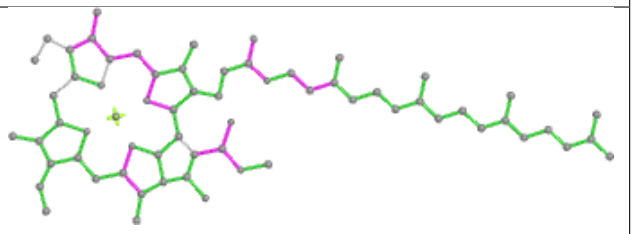


Rings

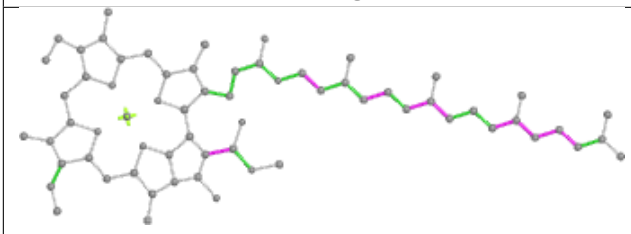
Ligand CLA C 512



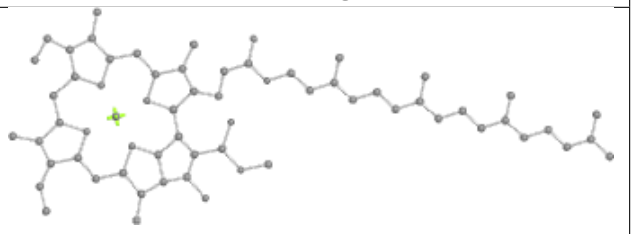
Bond lengths



Bond angles

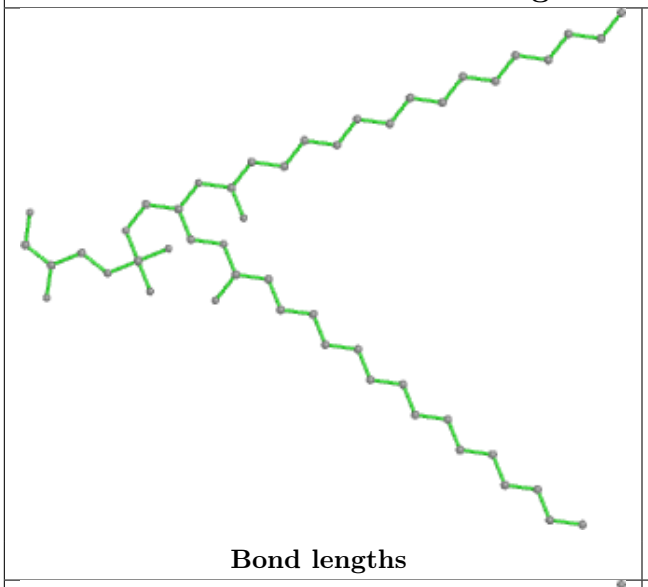


Torsions

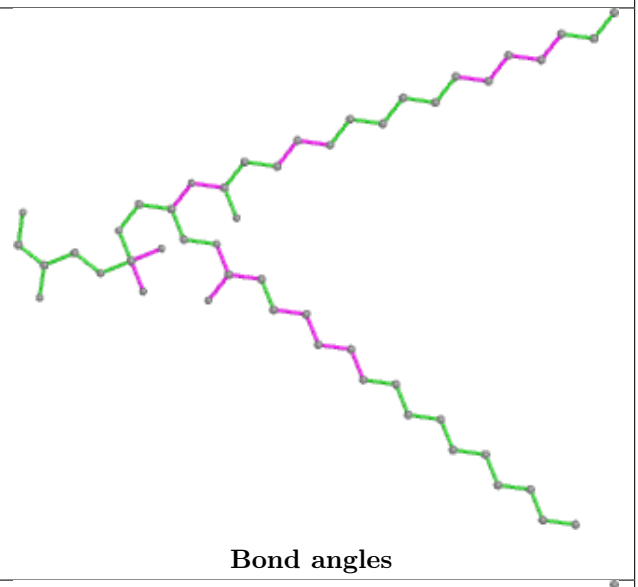


Rings

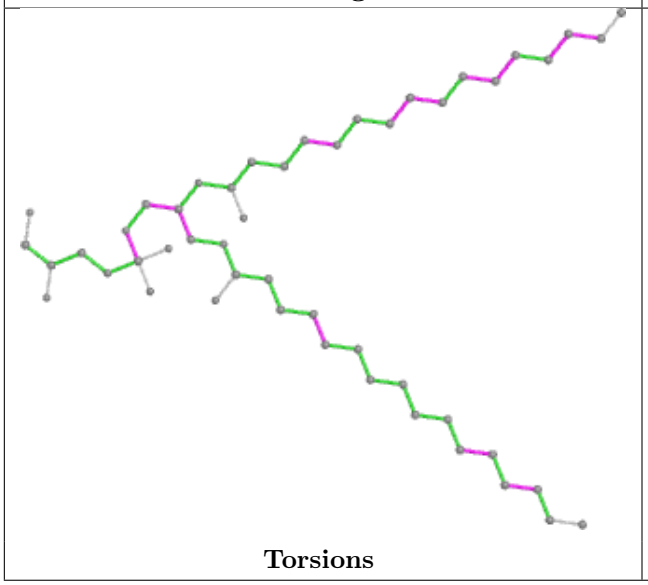
Ligand LHG l 101



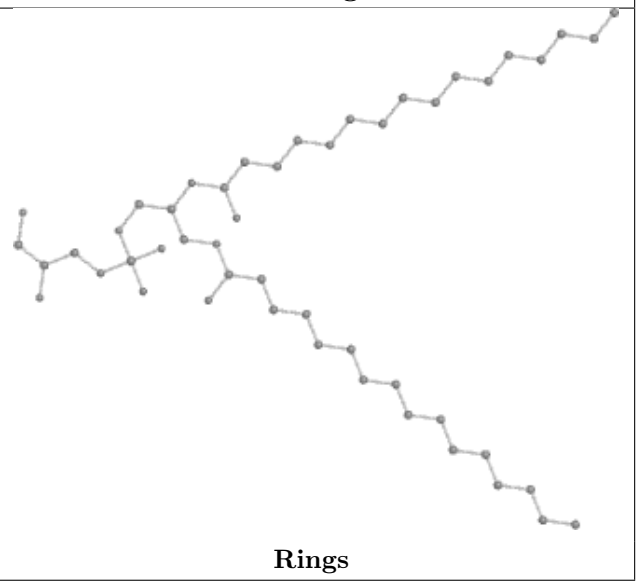
Bond lengths



Bond angles

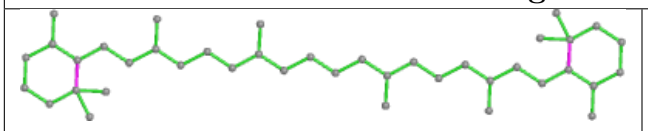


Torsions

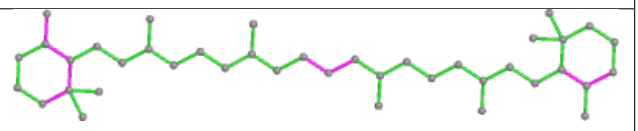


Rings

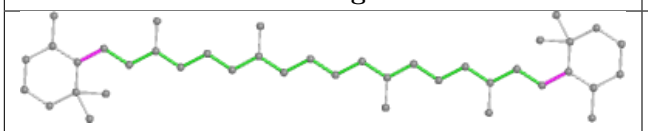
Ligand BCR c 514



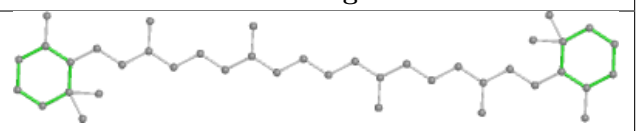
Bond lengths



Bond angles

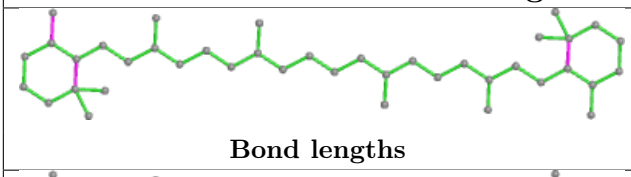


Torsions

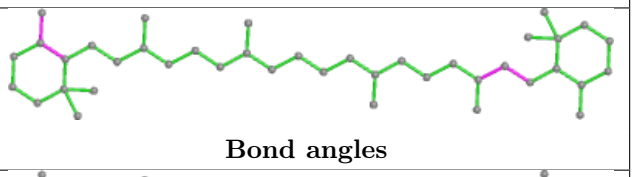


Rings

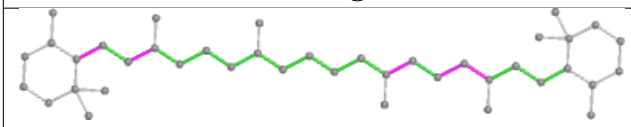
Ligand BCR k 101



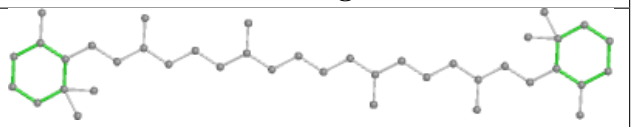
Bond lengths



Bond angles

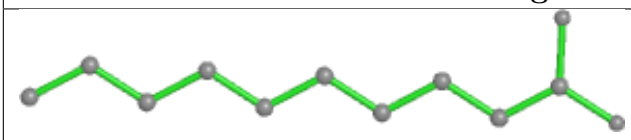


Torsions

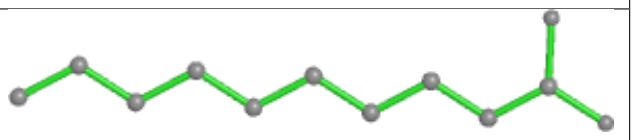


Rings

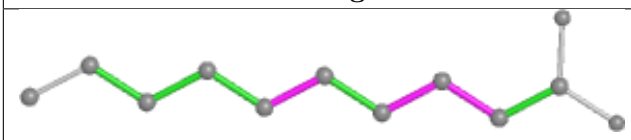
Ligand STE k 102



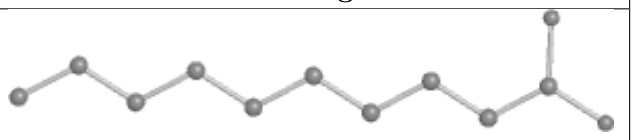
Bond lengths



Bond angles

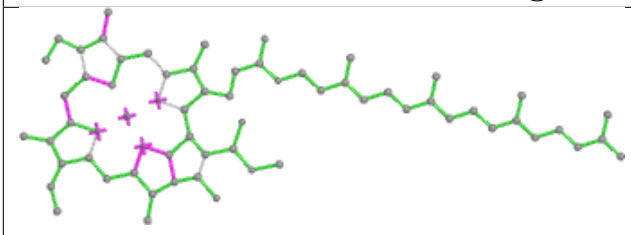


Torsions

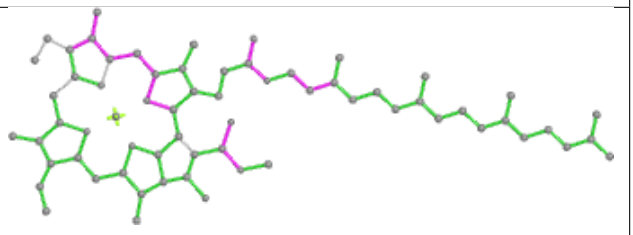


Rings

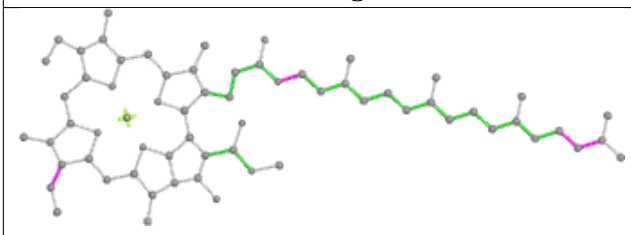
Ligand CLA a 606



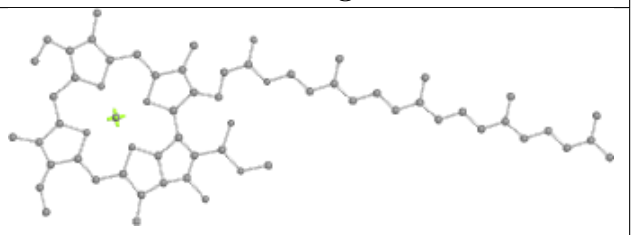
Bond lengths



Bond angles

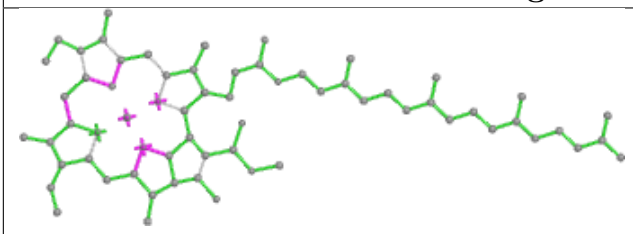


Torsions

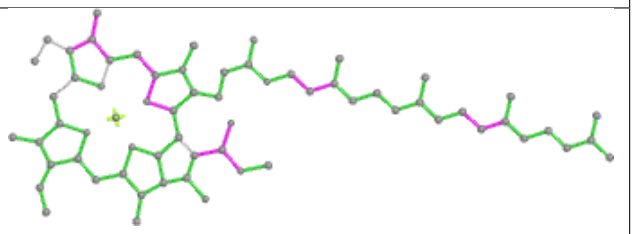


Rings

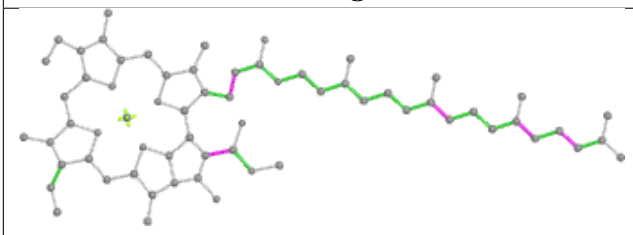
Ligand CLA b 605



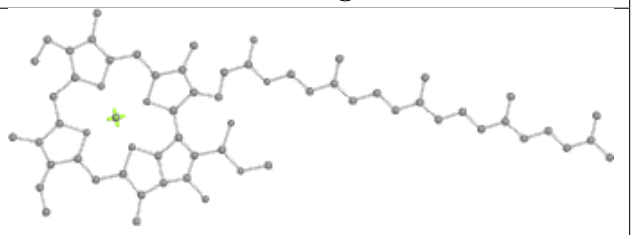
Bond lengths



Bond angles

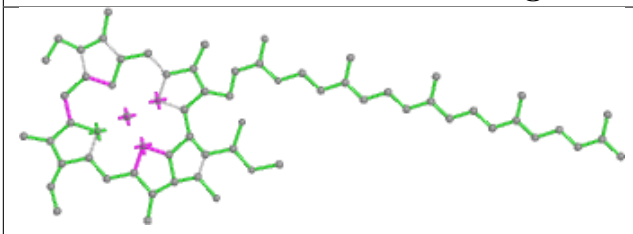


Torsions

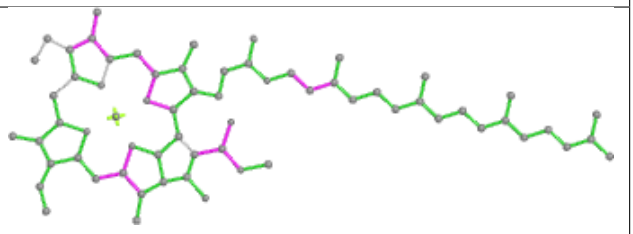


Rings

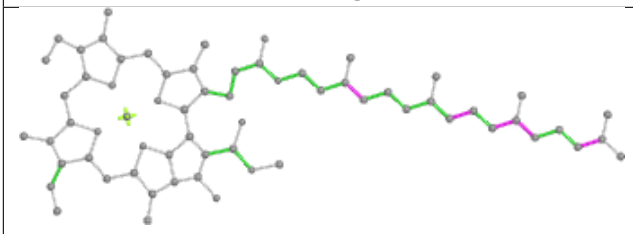
Ligand CLA B 611



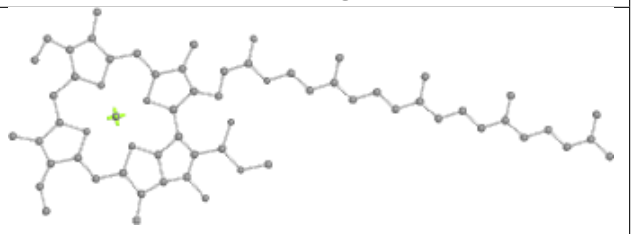
Bond lengths



Bond angles

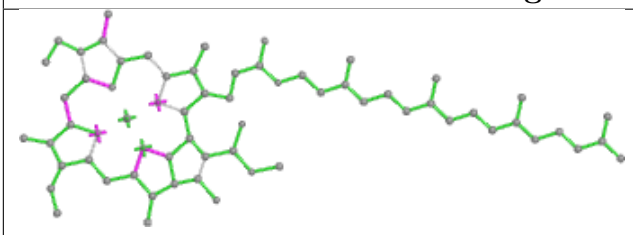


Torsions

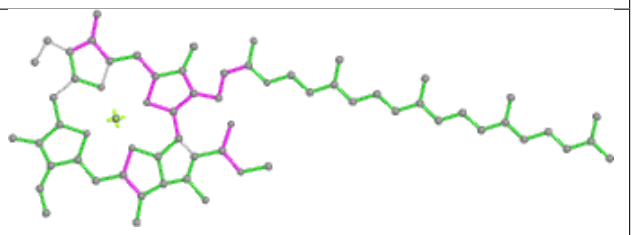


Rings

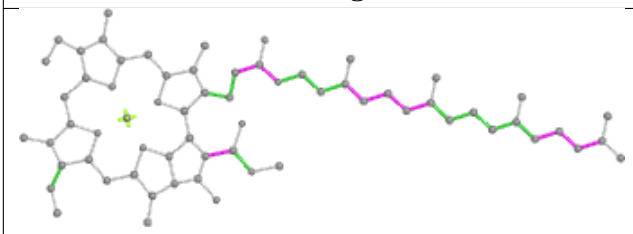
Ligand CLA B 601



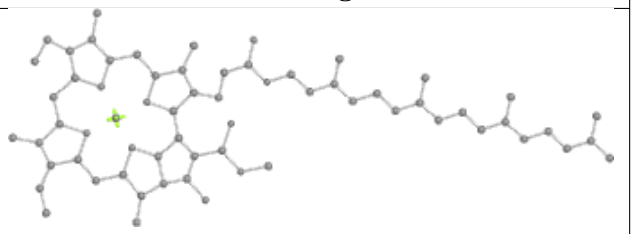
Bond lengths



Bond angles

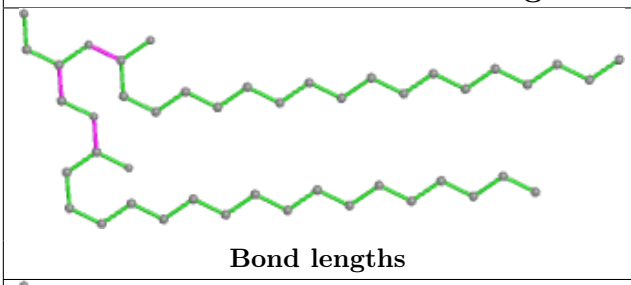


Torsions

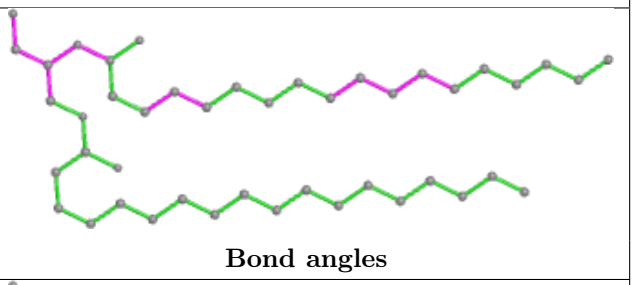


Rings

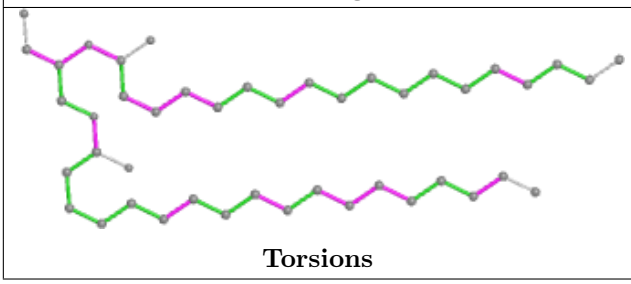
Ligand DGD a 614



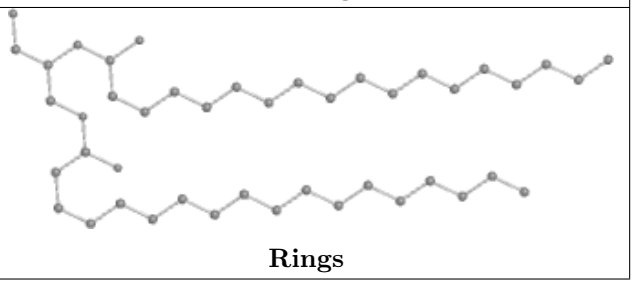
Bond lengths



Bond angles

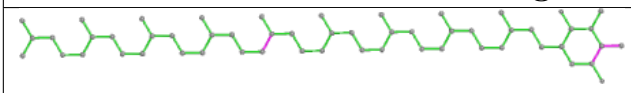


Torsions

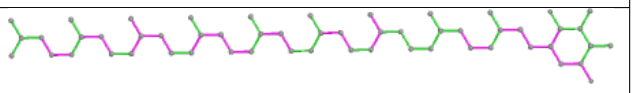


Rings

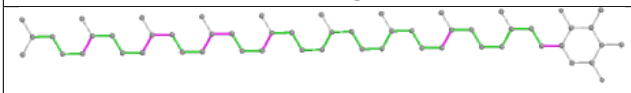
Ligand PL9 d 406



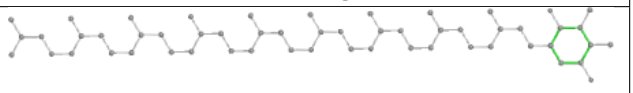
Bond lengths



Bond angles

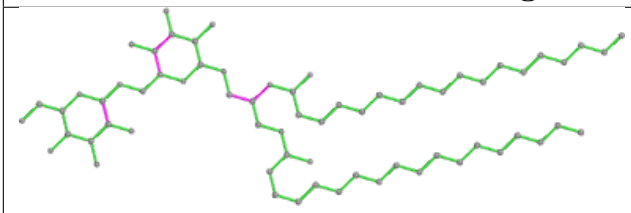


Torsions

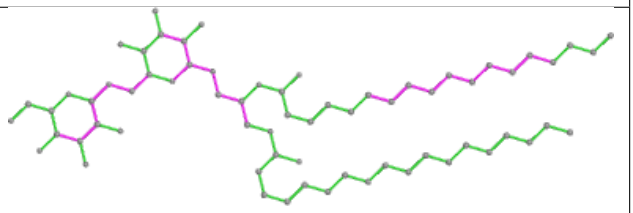


Rings

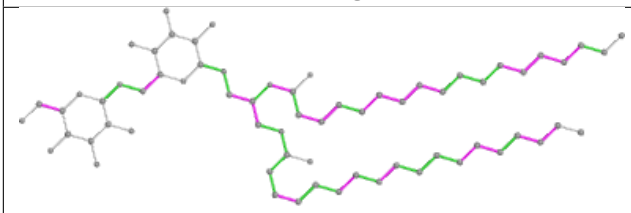
Ligand DGD A 619



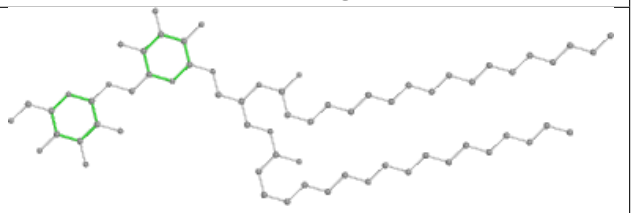
Bond lengths



Bond angles

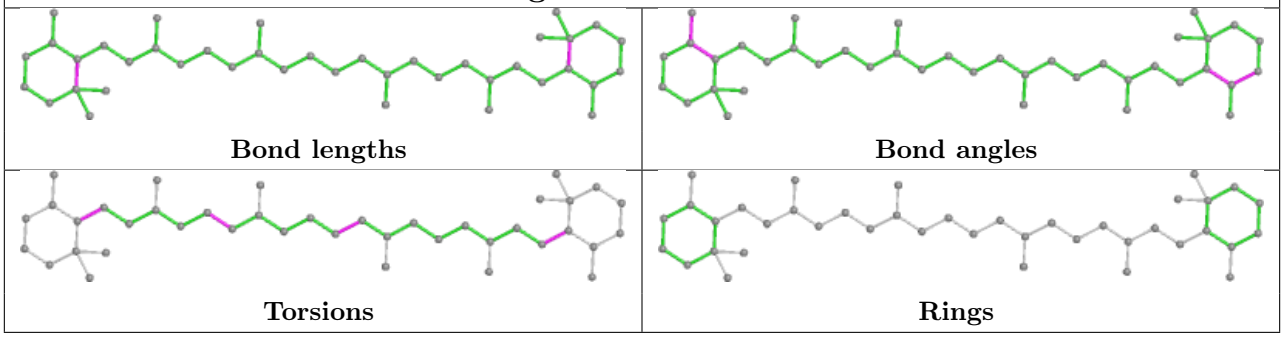


Torsions

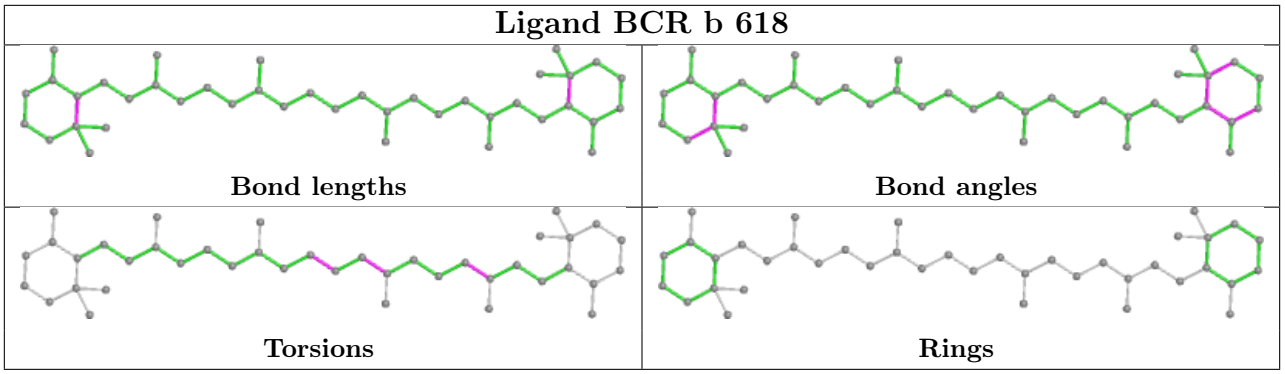


Rings

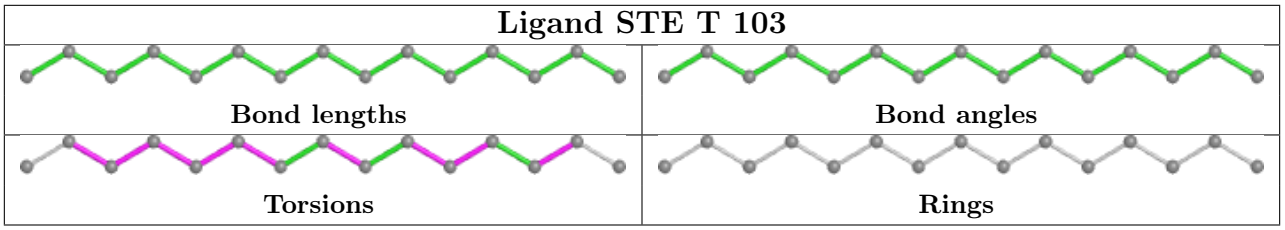
Ligand BCR c 516



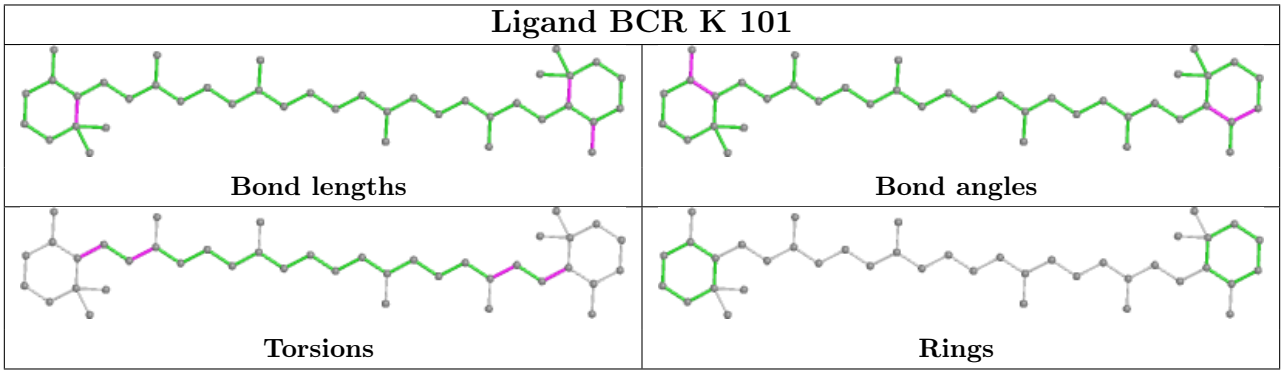
Ligand BCR b 618



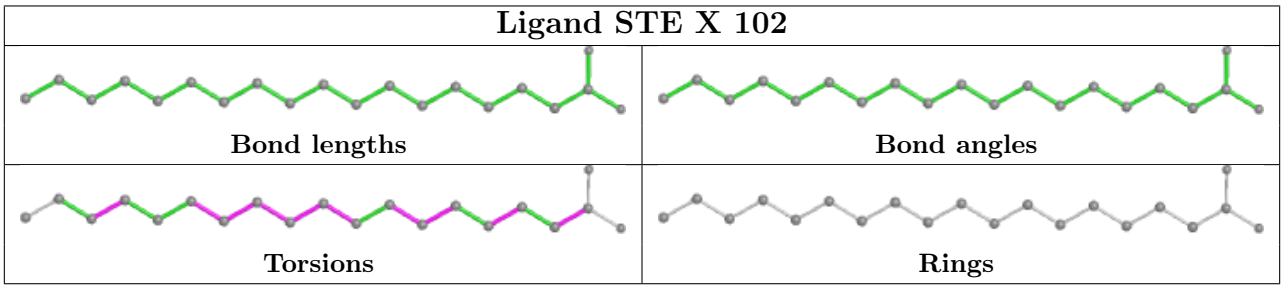
Ligand STE T 103



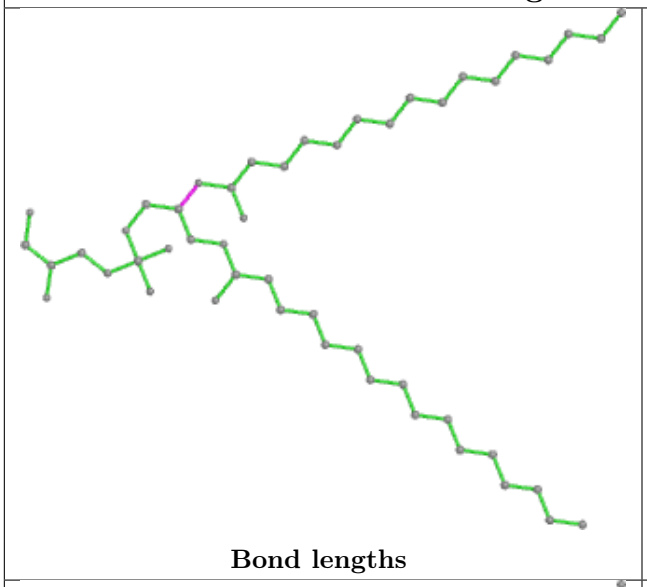
Ligand BCR K 101



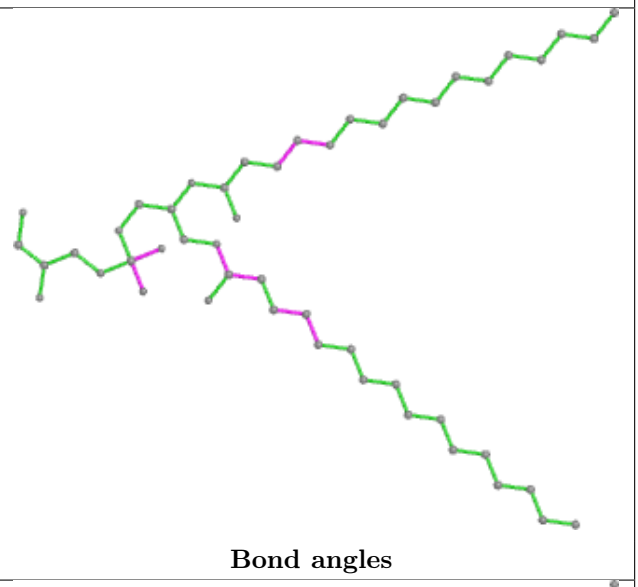
Ligand STE X 102



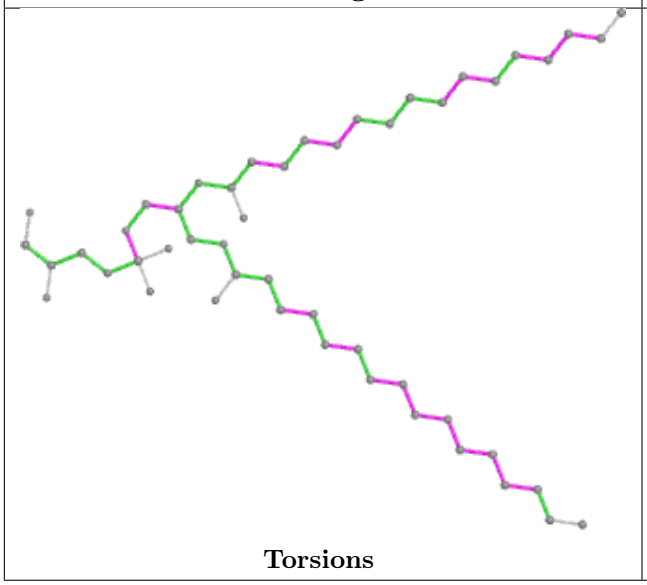
Ligand LHG L 101



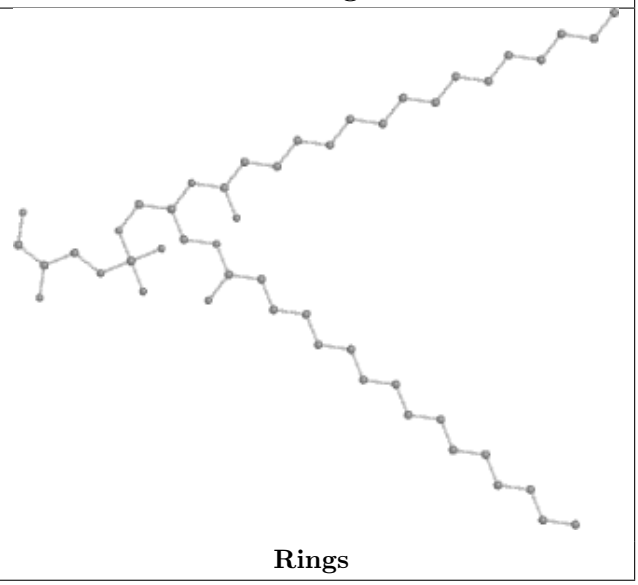
Bond lengths



Bond angles

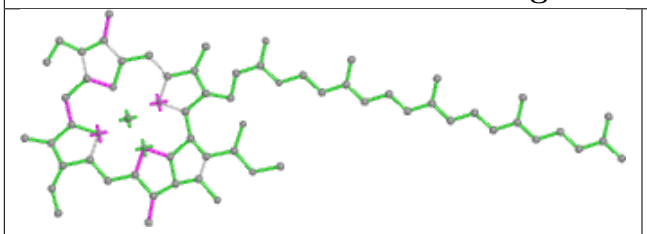


Torsions

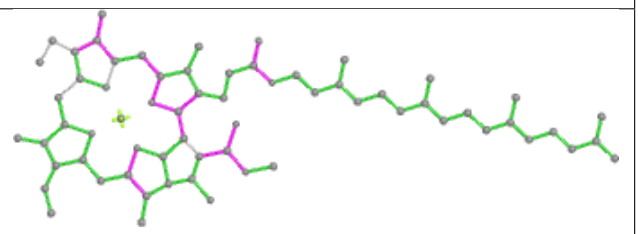


Rings

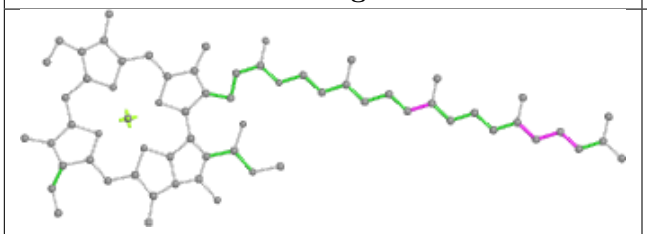
Ligand CLA c 511



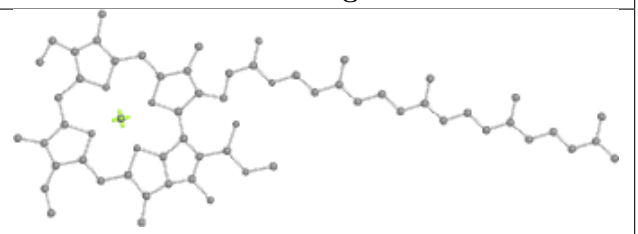
Bond lengths



Bond angles

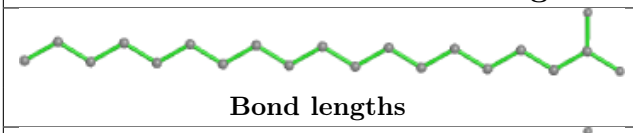


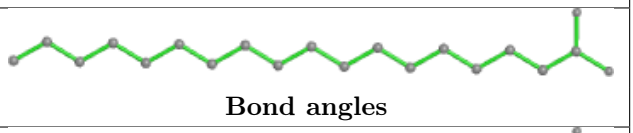
Torsions

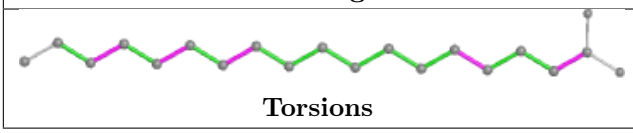


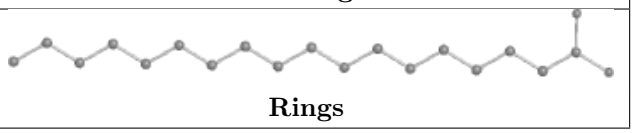
Rings

Ligand STE b 620

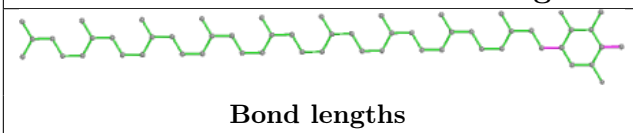

Bond lengths

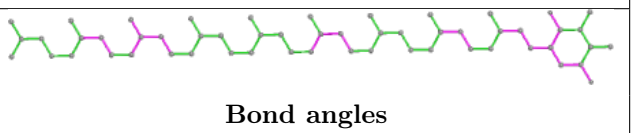

Bond angles

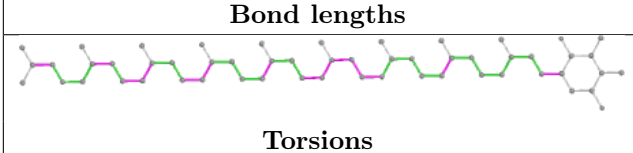

Torsions

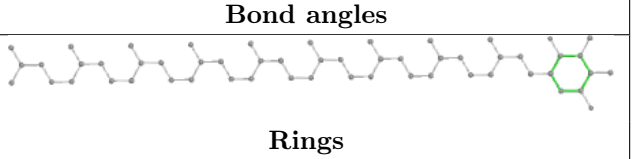

Rings

Ligand PL9 a 611

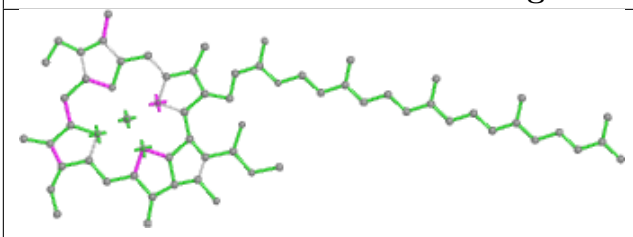

Bond lengths

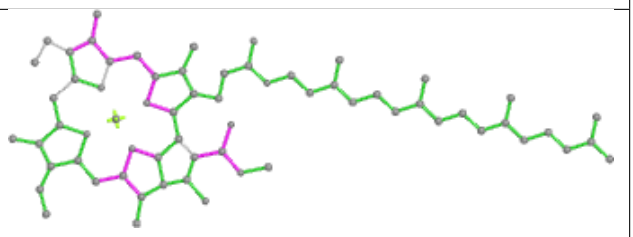

Bond angles

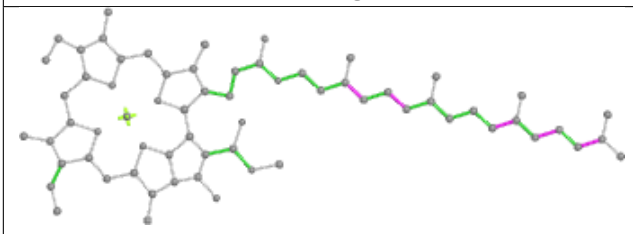

Torsions

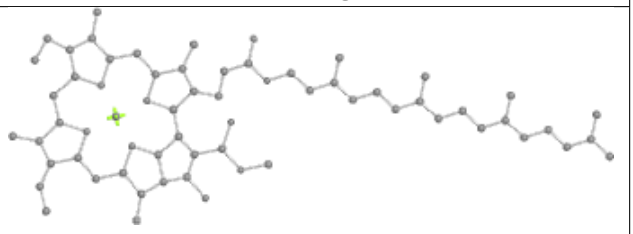

Rings

Ligand CLA b 607


Bond lengths


Bond angles


Torsions

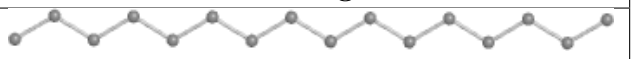

Rings

Ligand STE T 102

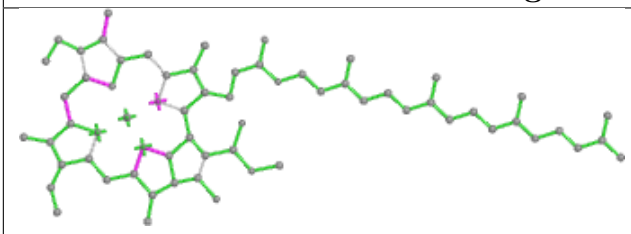

Bond lengths


Bond angles

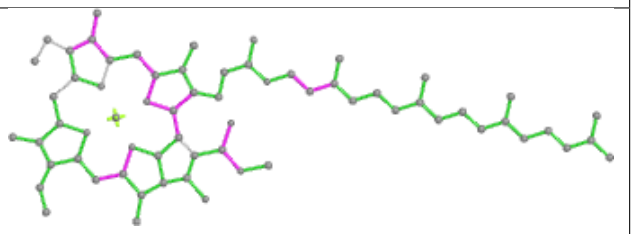

Torsions


Rings

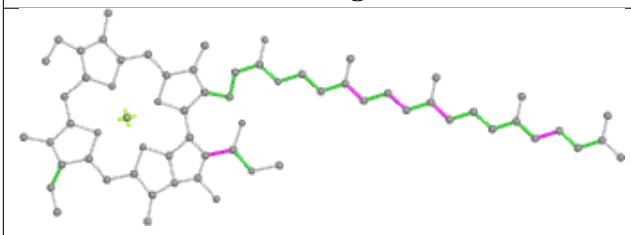
Ligand CLA C 507



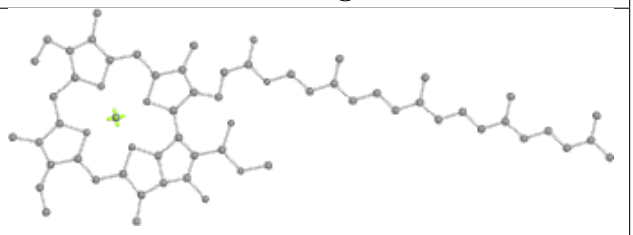
Bond lengths



Bond angles

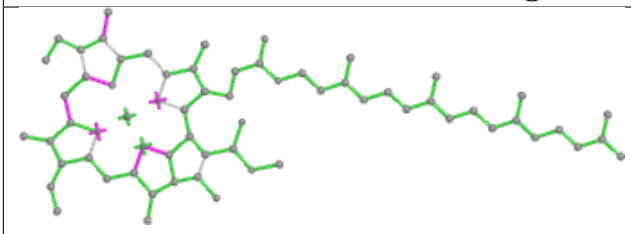


Torsions

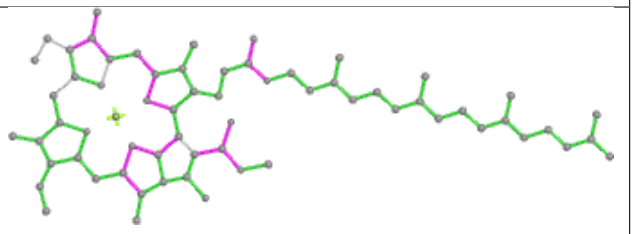


Rings

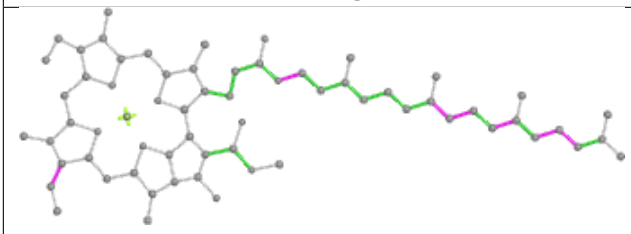
Ligand CLA D 402



Bond lengths



Bond angles



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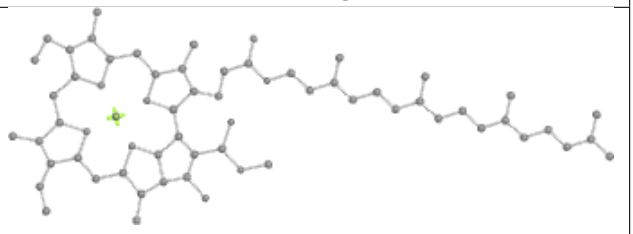
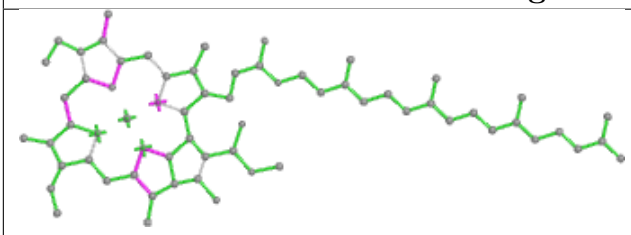
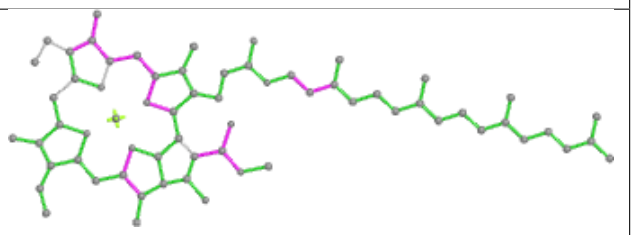


Rings

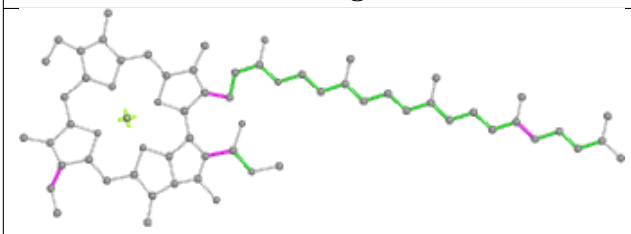
Ligand CLA a 612



Bond lengths



Bond angles



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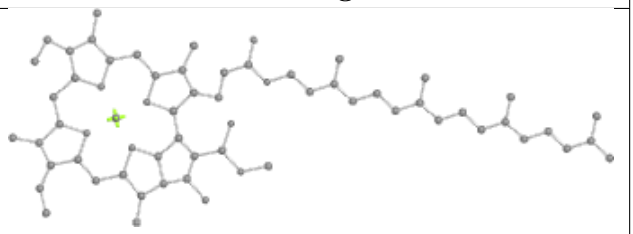
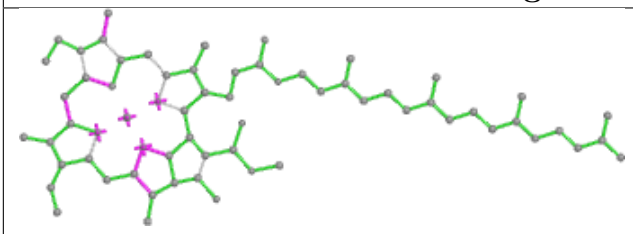
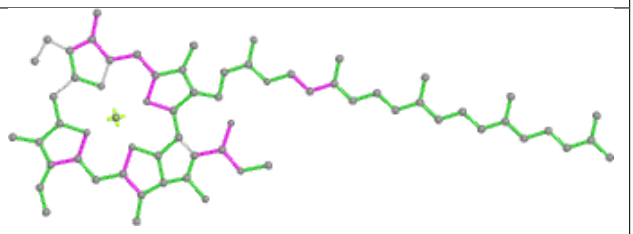


Rings

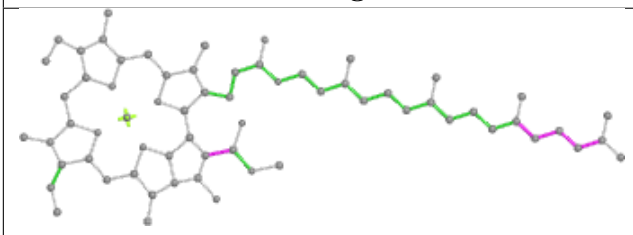
Ligand CLA A 613



Bond lengths



Bond angles



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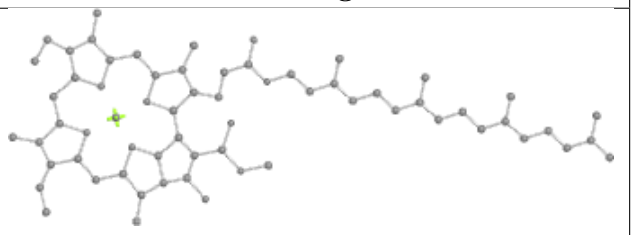
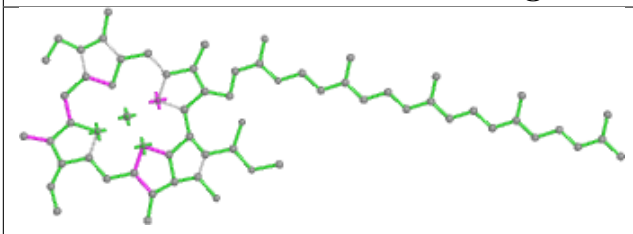
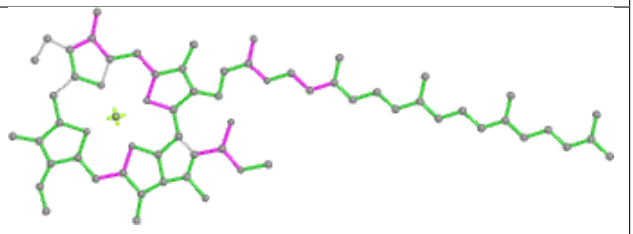


Rings

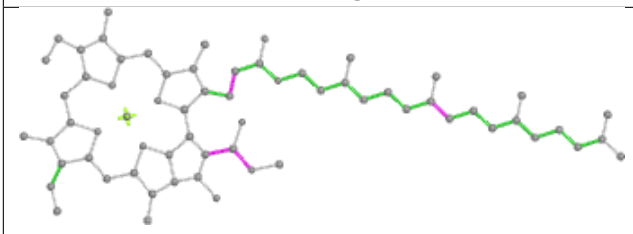
Ligand CLA C 501



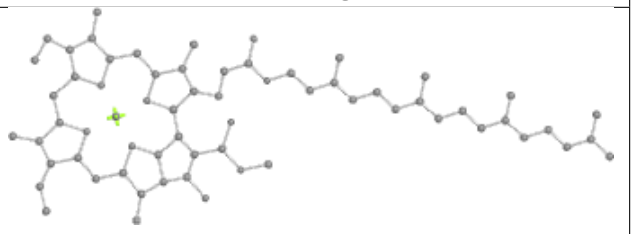
Bond lengths



Bond angles

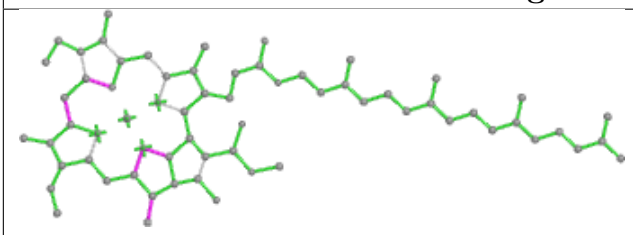


Torsions

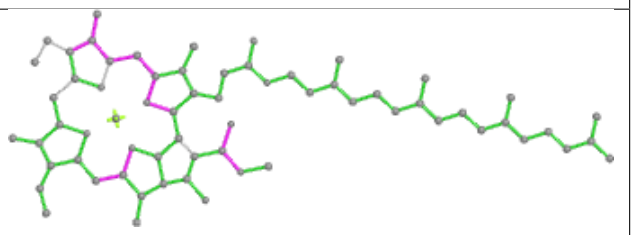


Rings

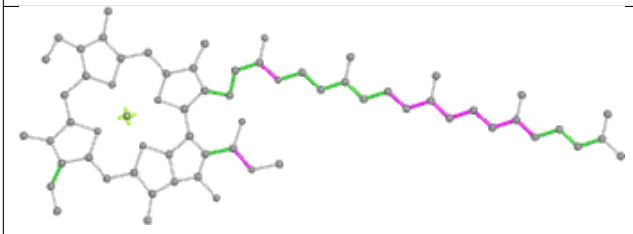
Ligand CLA b 606



Bond lengths



Bond angles



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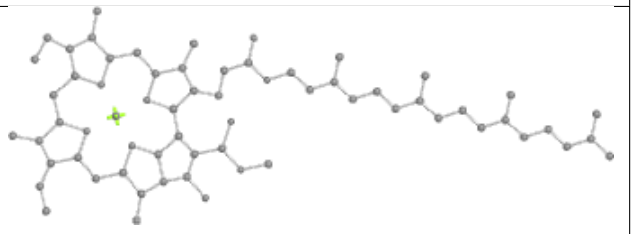
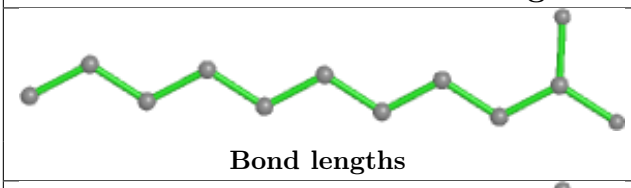
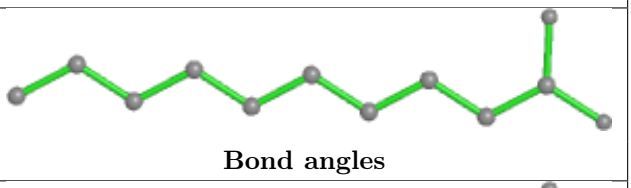


Rings

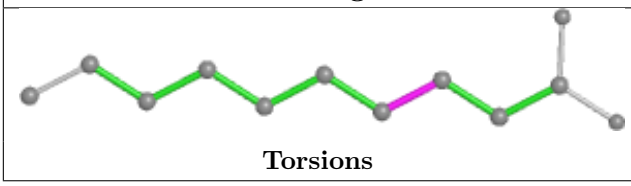
Ligand STE B 624



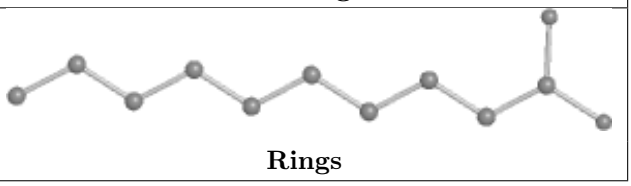
Bond lengths



Bond angles

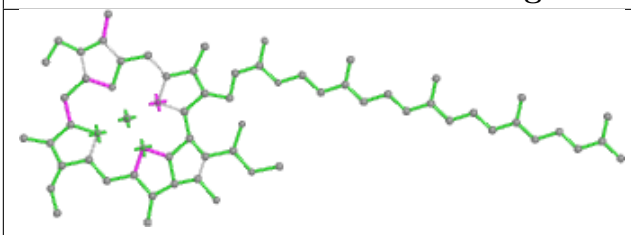


Torsions

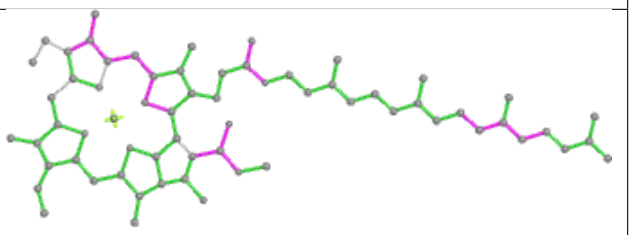


Rings

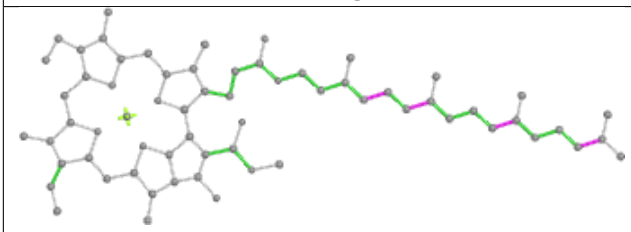
Ligand CLA B 602



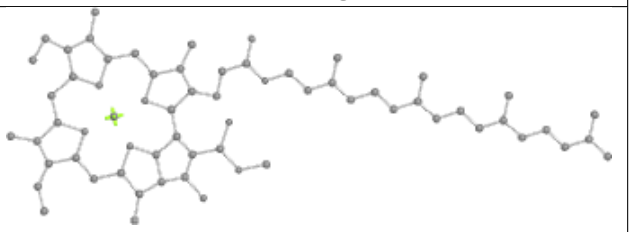
Bond lengths



Bond angles

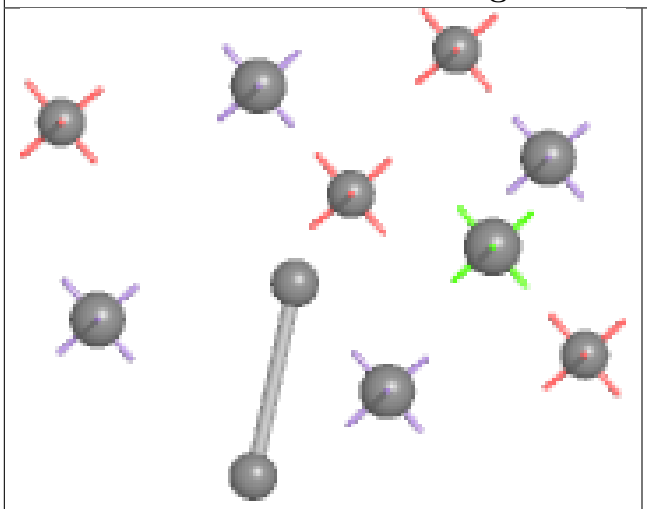


Torsions

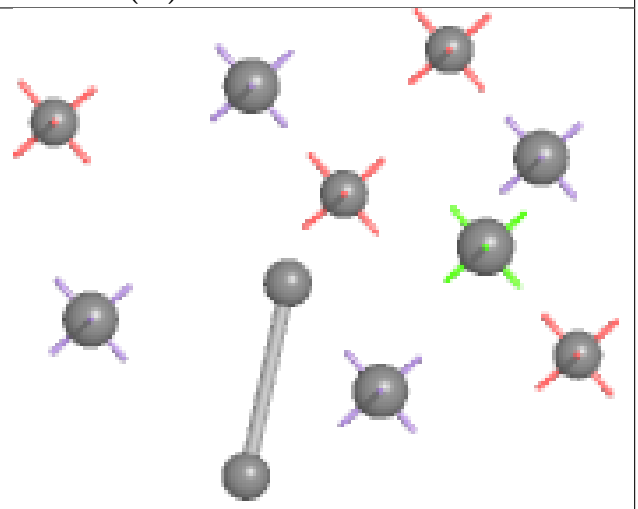


Rings

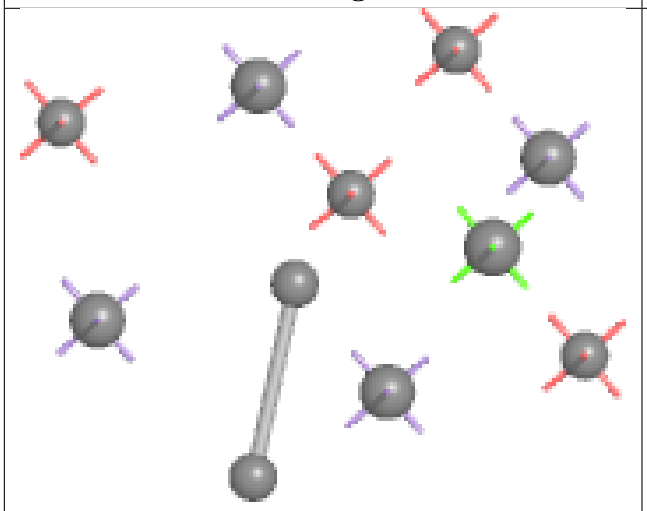
Ligand OEY A 601 (A)



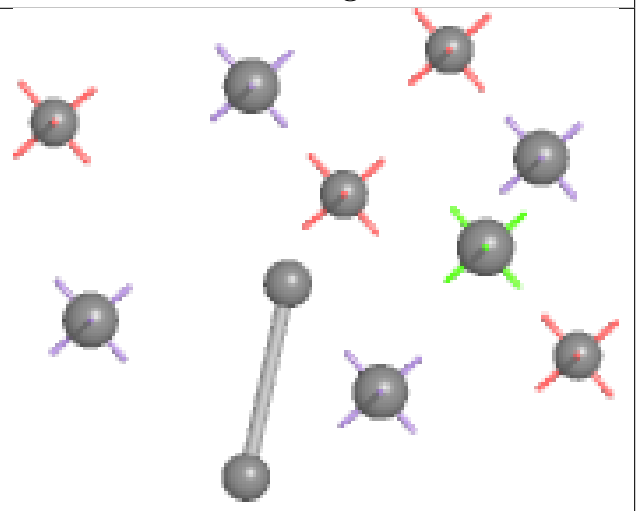
Bond lengths



Bond angles

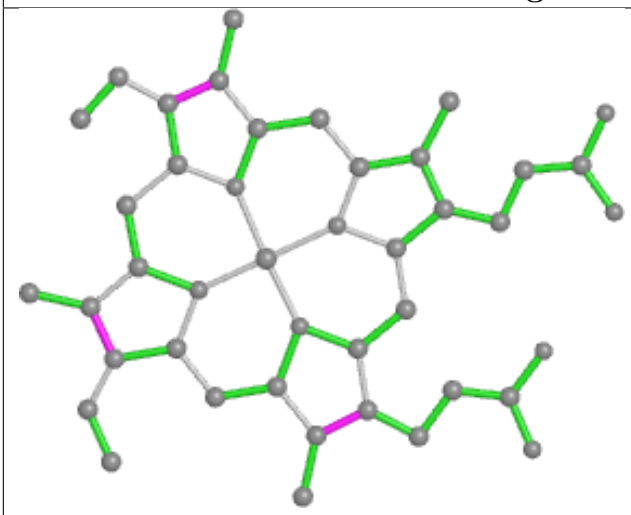


Torsions

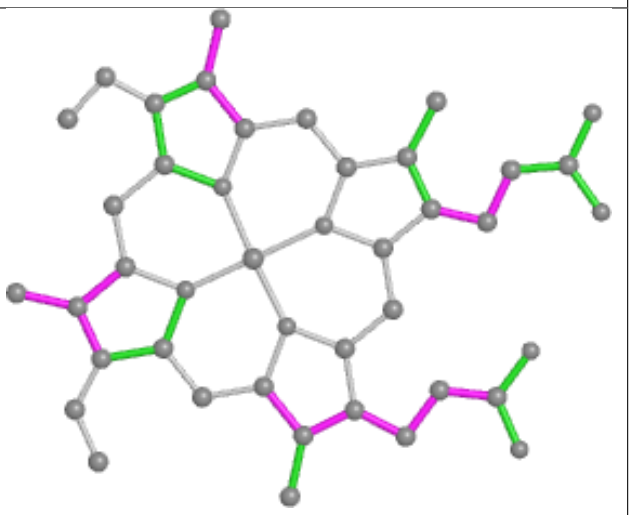


Rings

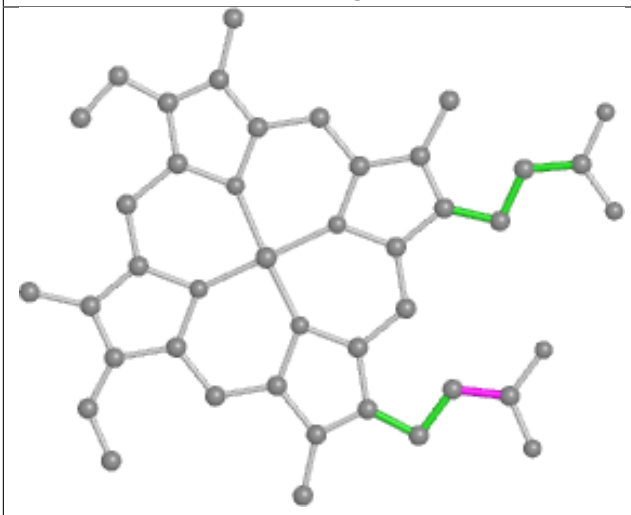
Ligand HEC v 201



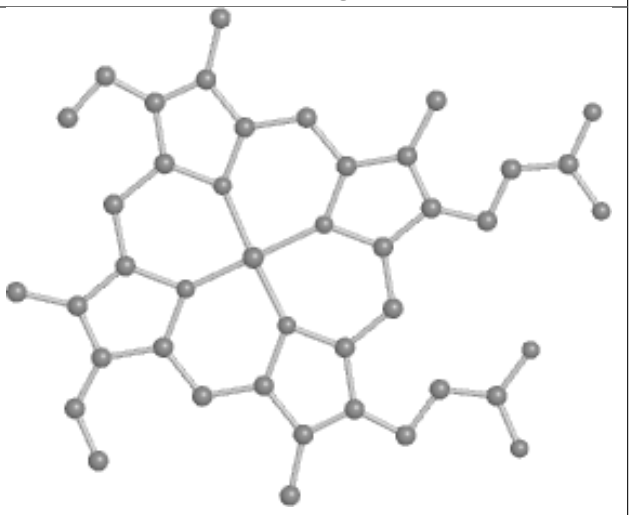
Bond lengths



Bond angles

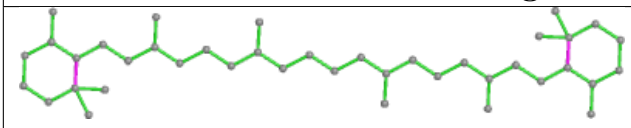


Torsions

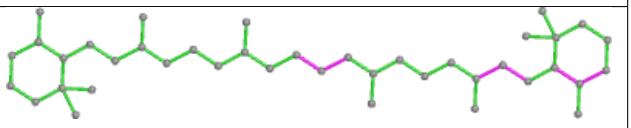


Rings

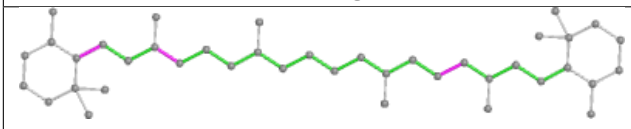
Ligand BCR K 102



Bond lengths



Bond angles



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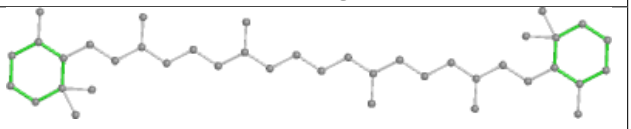
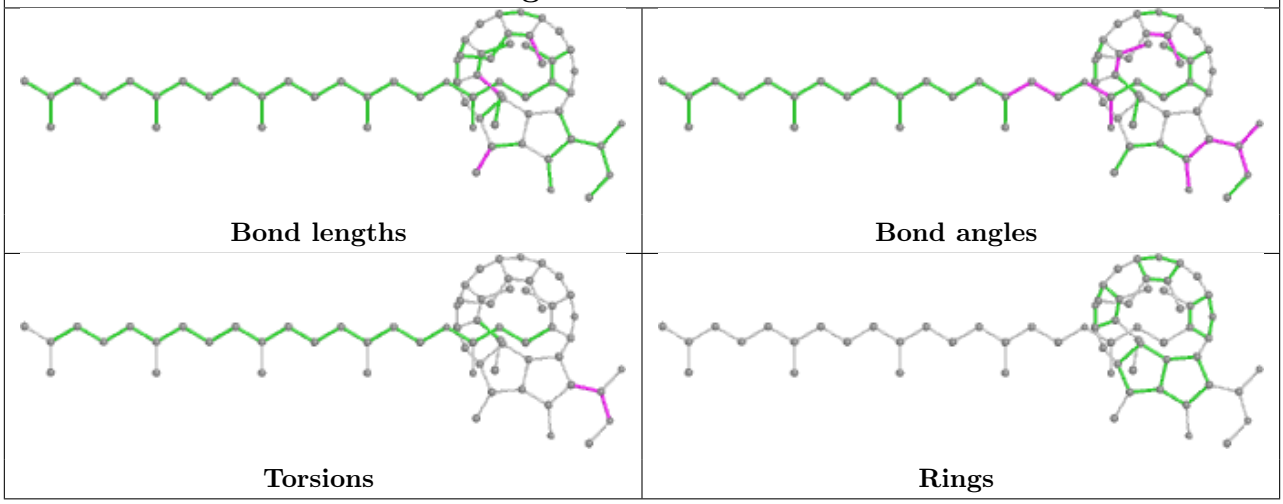
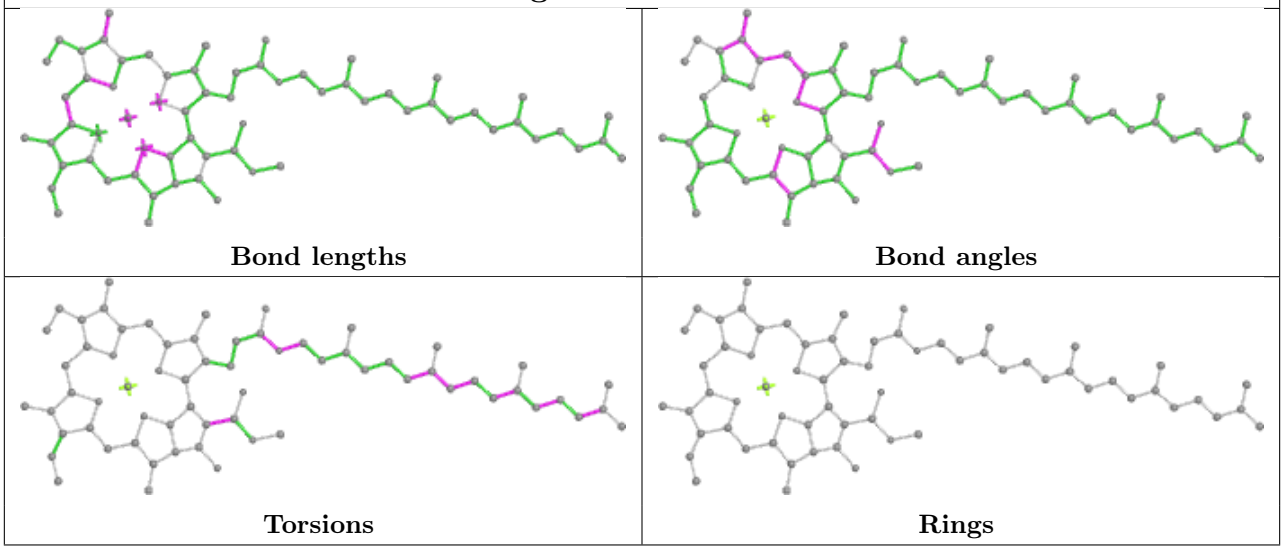


Rings

Ligand PHO D 401



Ligand CLA c 506



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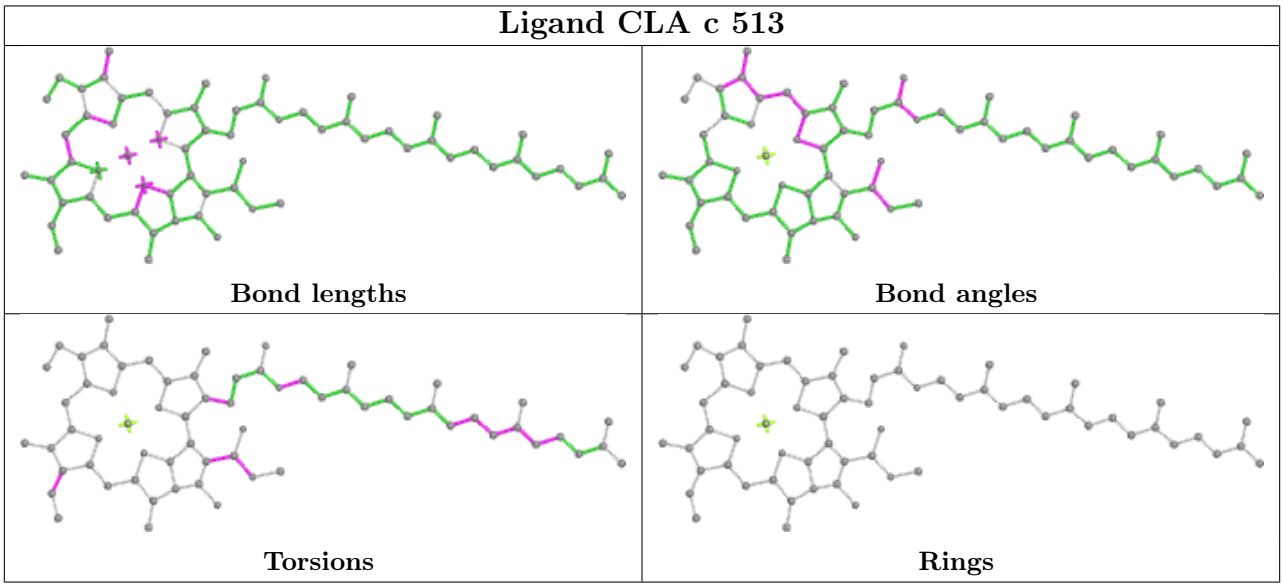
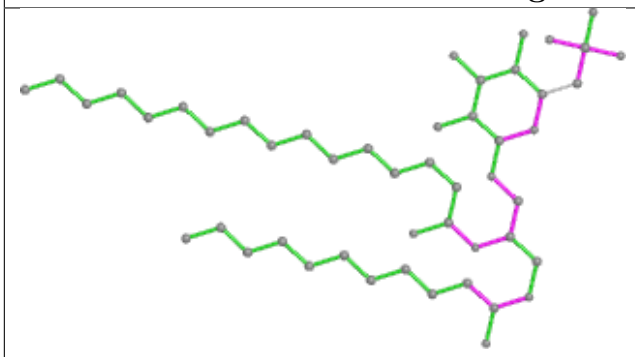
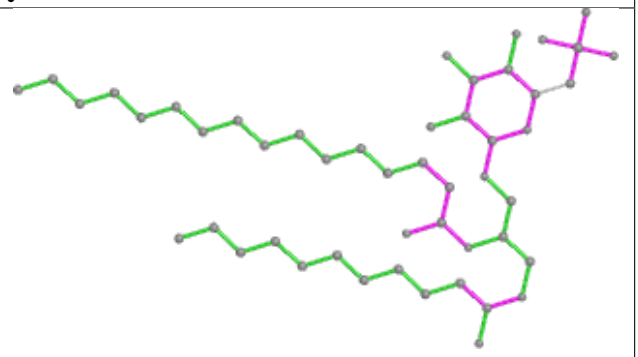


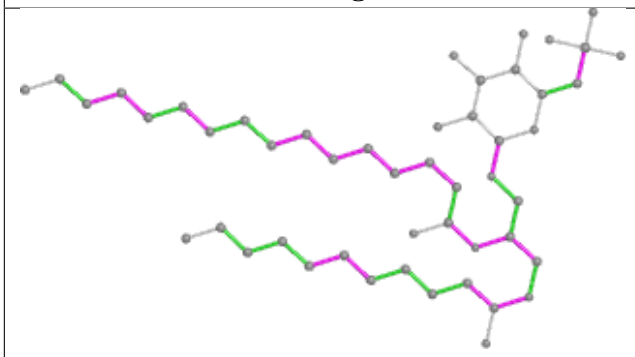
Ligand SQD b 619



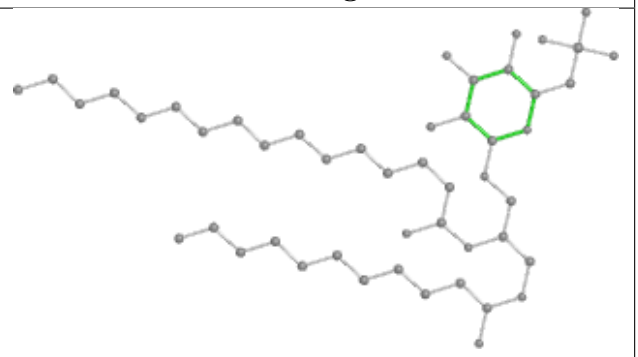
Bond lengths



Bond angles

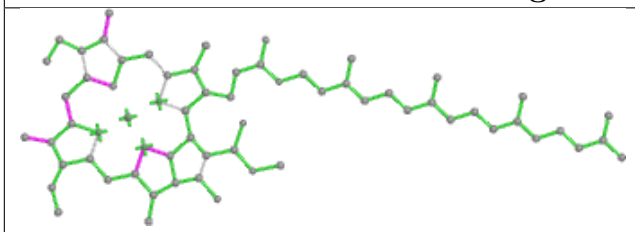


Torsions

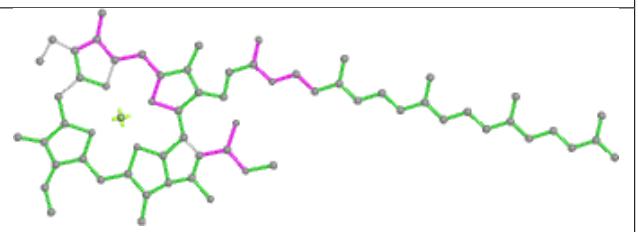


Rings

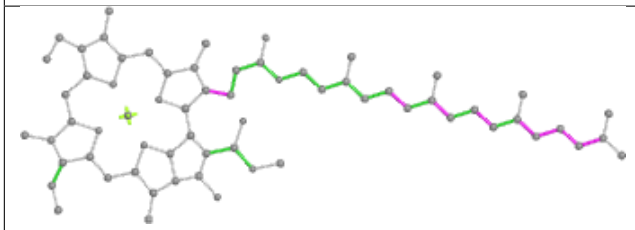
Ligand CLA a 609



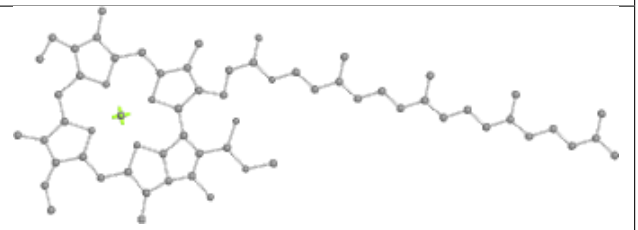
Bond lengths



Bond angles

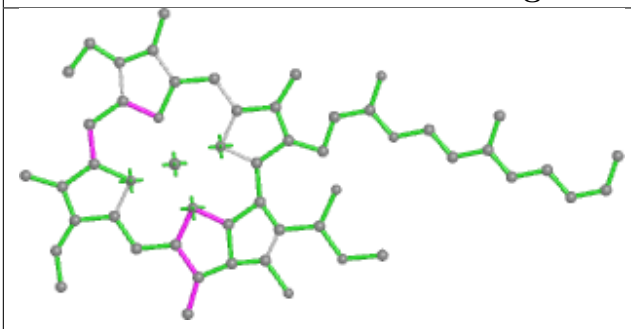


Torsions

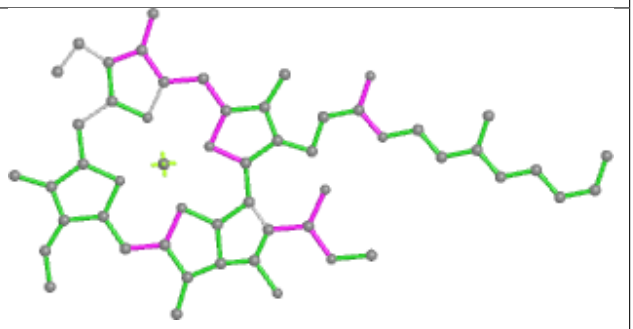


Rings

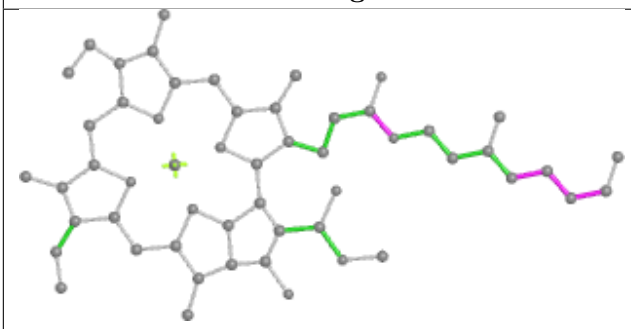
Ligand CLA A 610



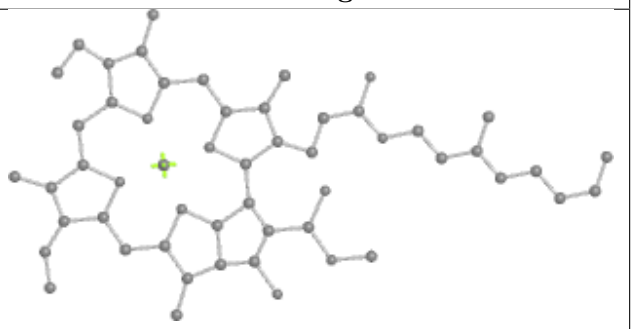
Bond lengths



Bond angles

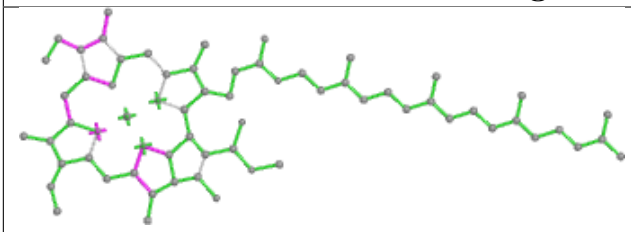


Torsions

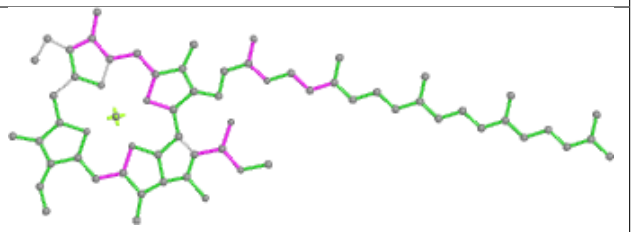


Rings

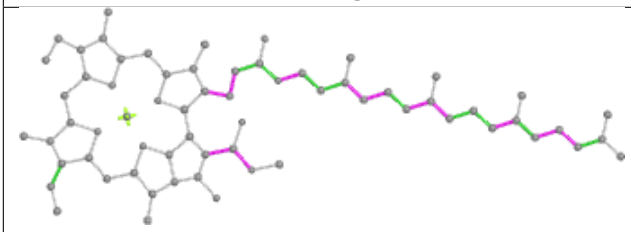
Ligand CLA c 512



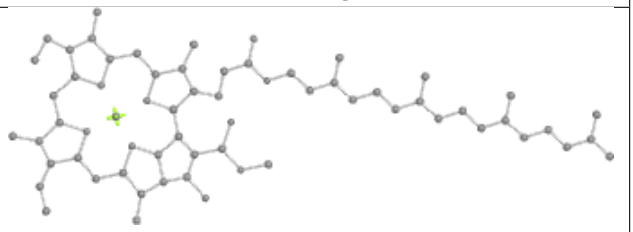
Bond lengths



Bond angles

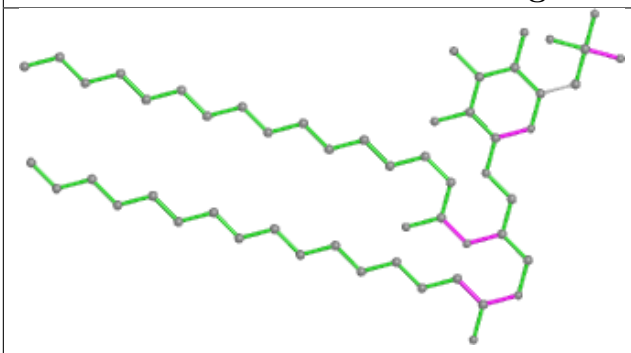


Torsions

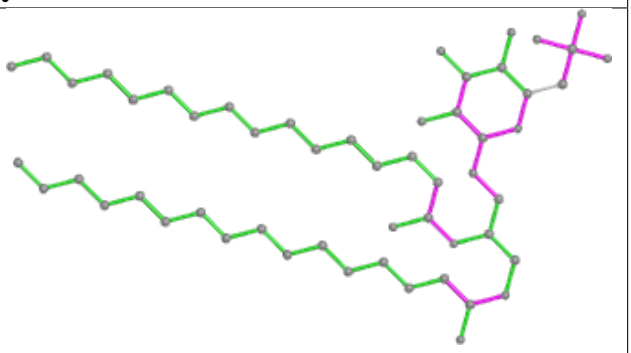


Rings

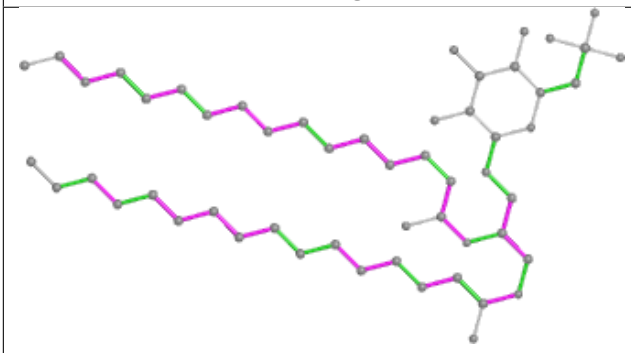
Ligand SQD a 613



Bond lengths



Bond angles



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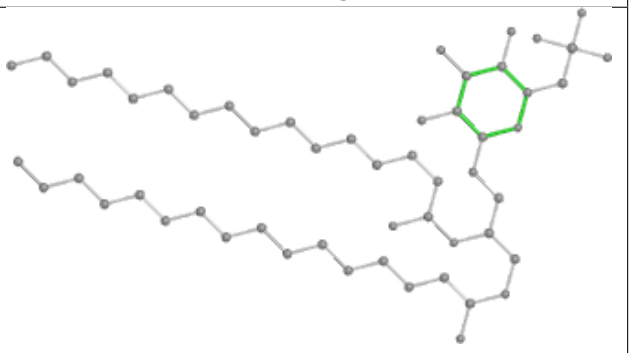
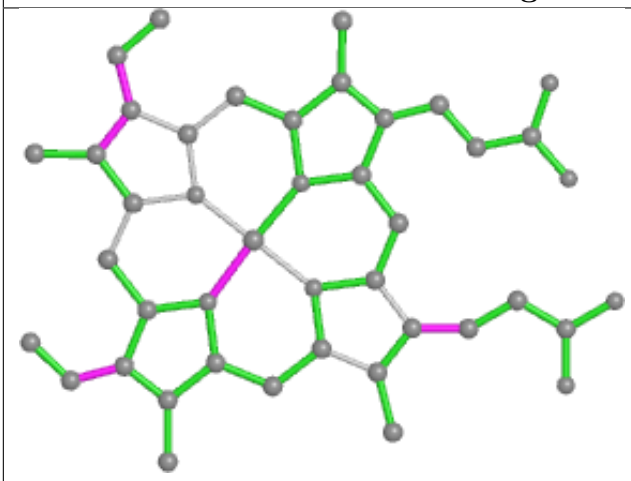


Rings

Ligand HEM F 101



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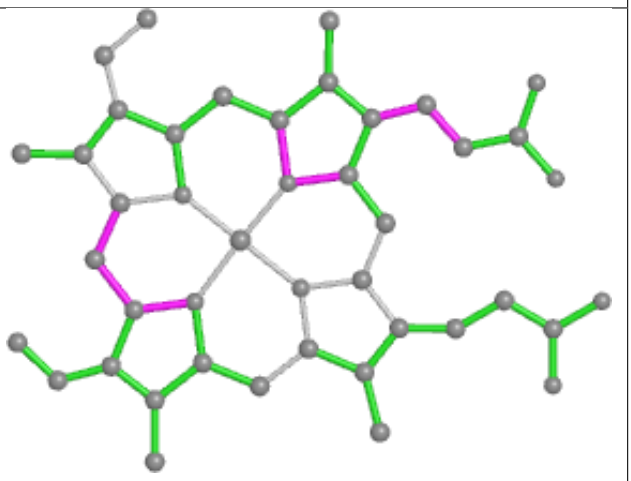
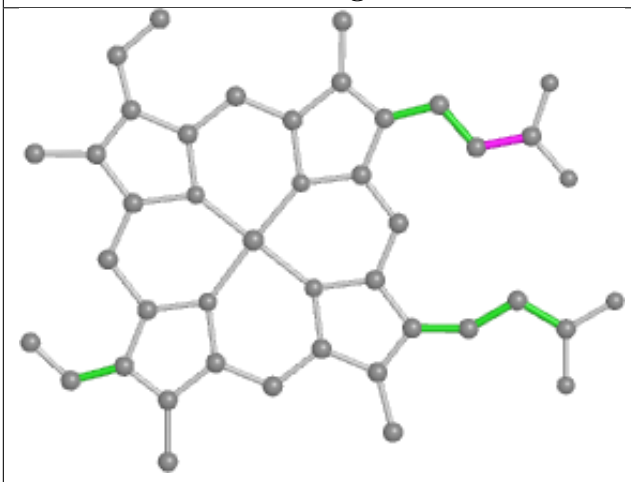
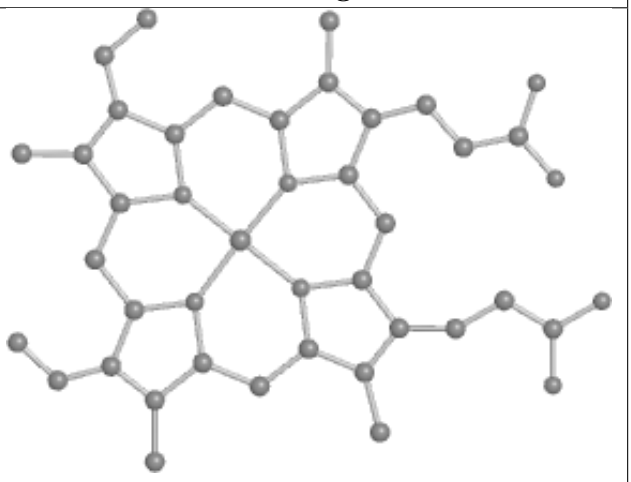


Bond angles

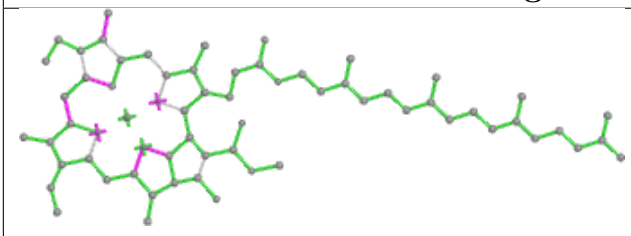


Torsions

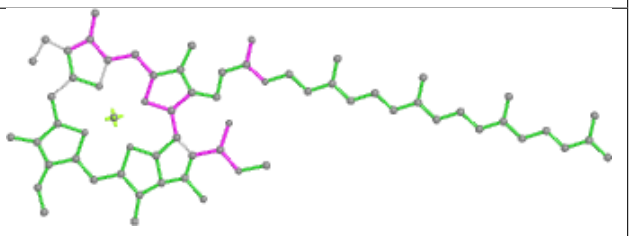


Rings

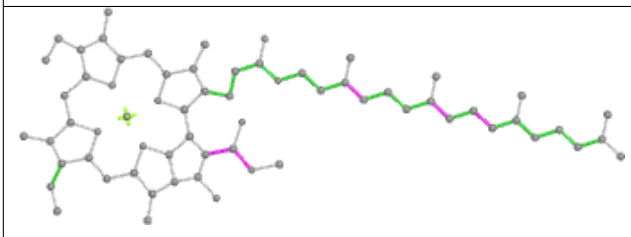
Ligand CLA B 614



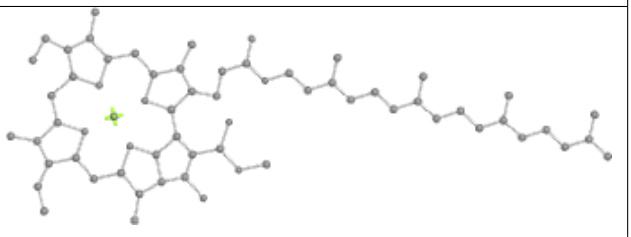
Bond lengths



Bond angles

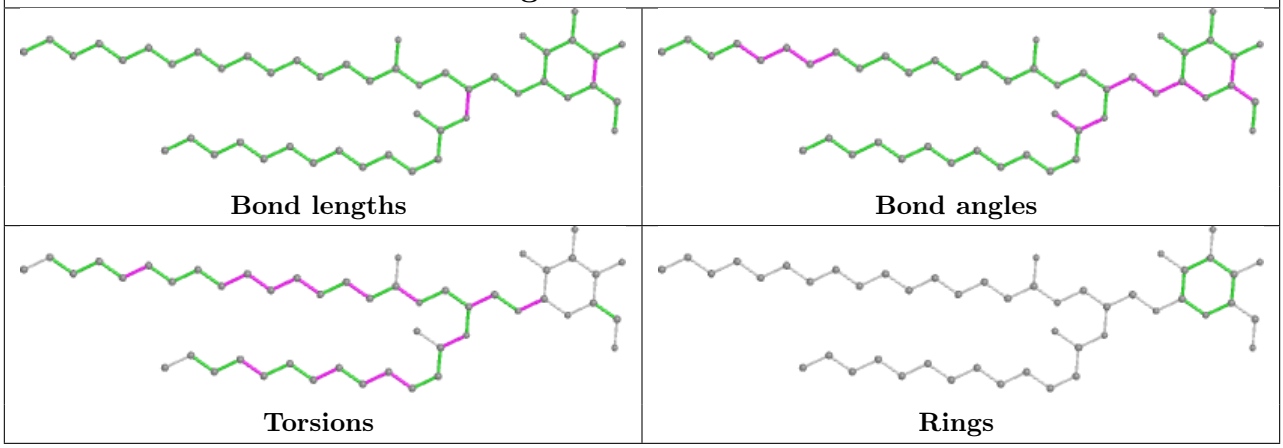


Torsions

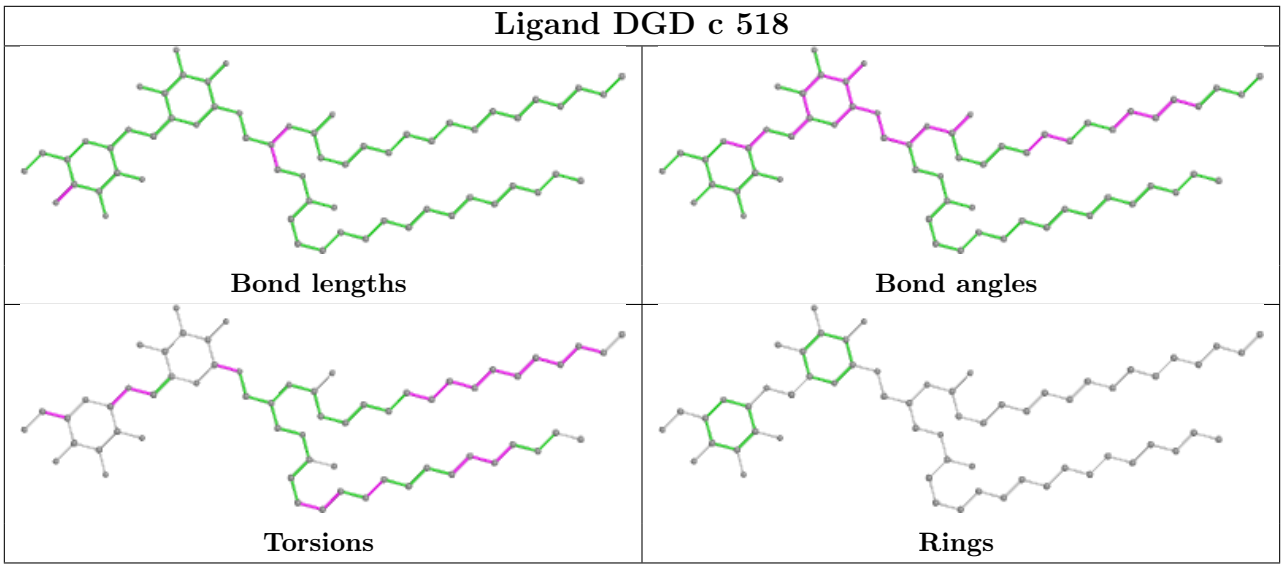


Rings

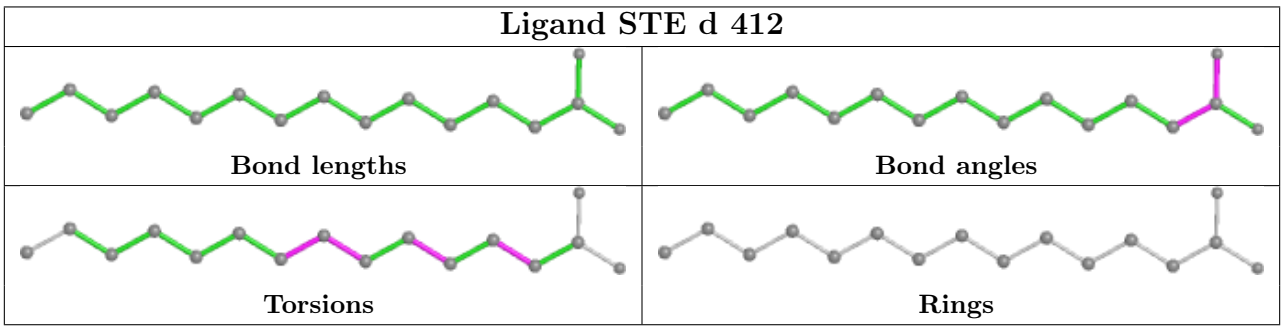
Ligand LMG C 518



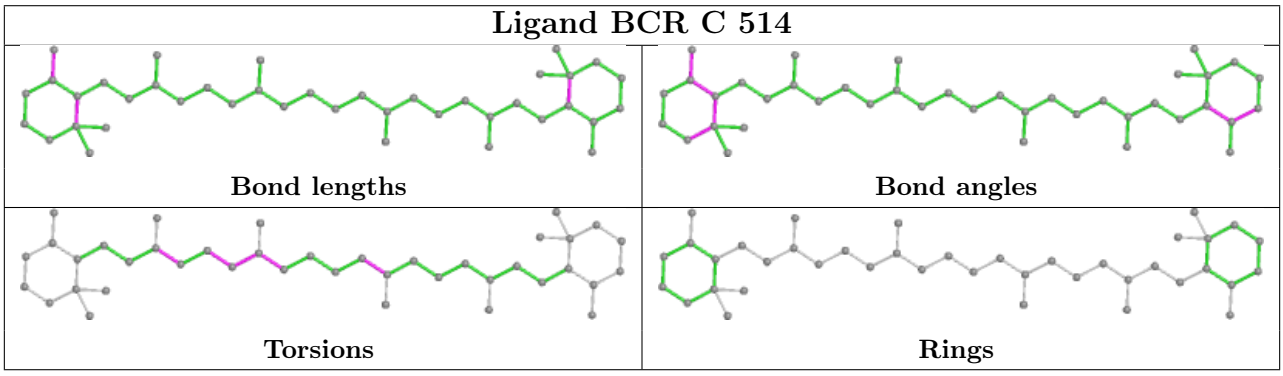
Ligand DGD c 518



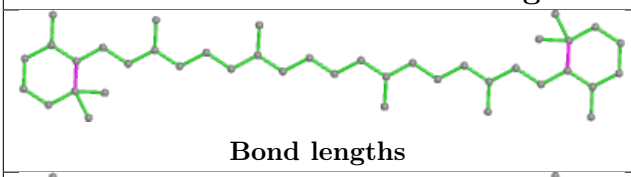
Ligand STE d 412

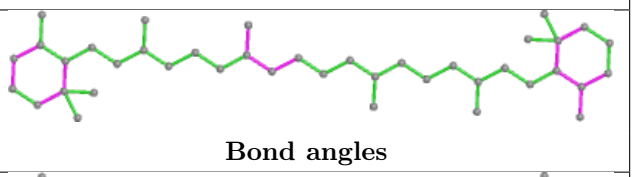


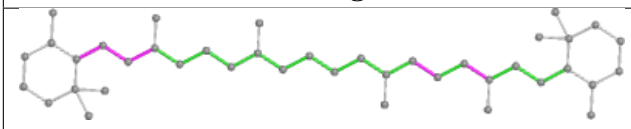
Ligand BCR C 514

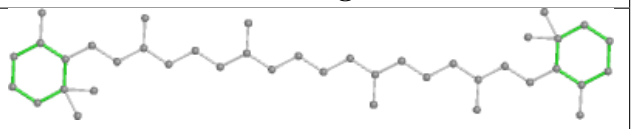


Ligand BCR T 101

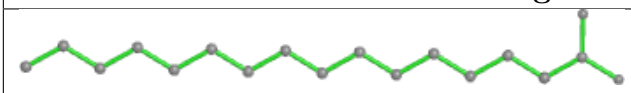

Bond lengths

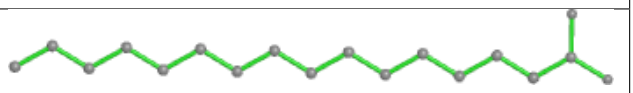

Bond angles


Torsions


Rings

Ligand STE t 105

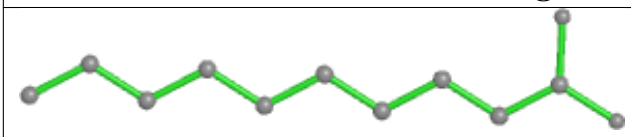

Bond lengths

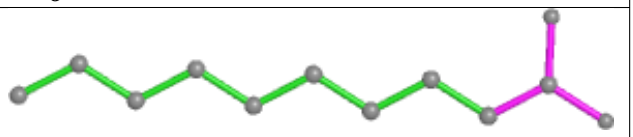

Bond angles

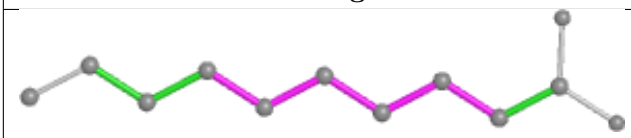

Torsions

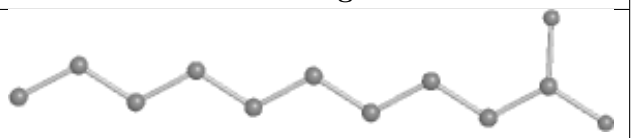

Rings

Ligand STE j 101

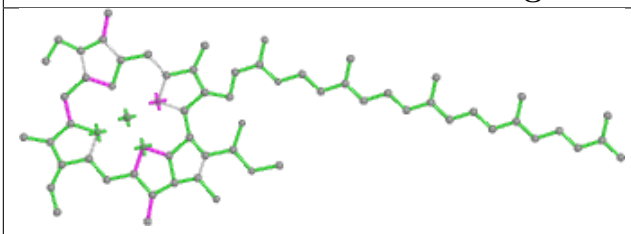

Bond lengths

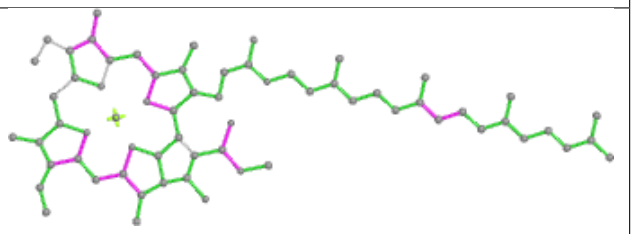

Bond angles


Torsions


Rings

Ligand CLA C 510


Bond lengths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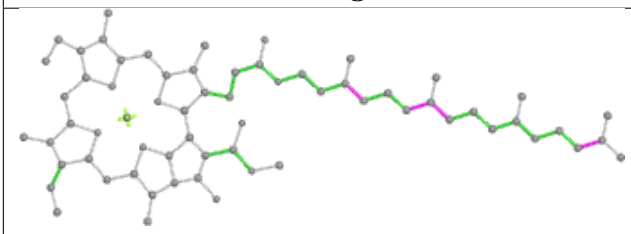
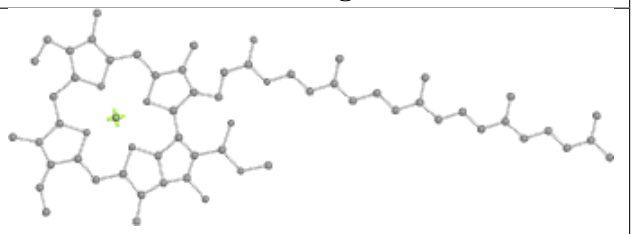
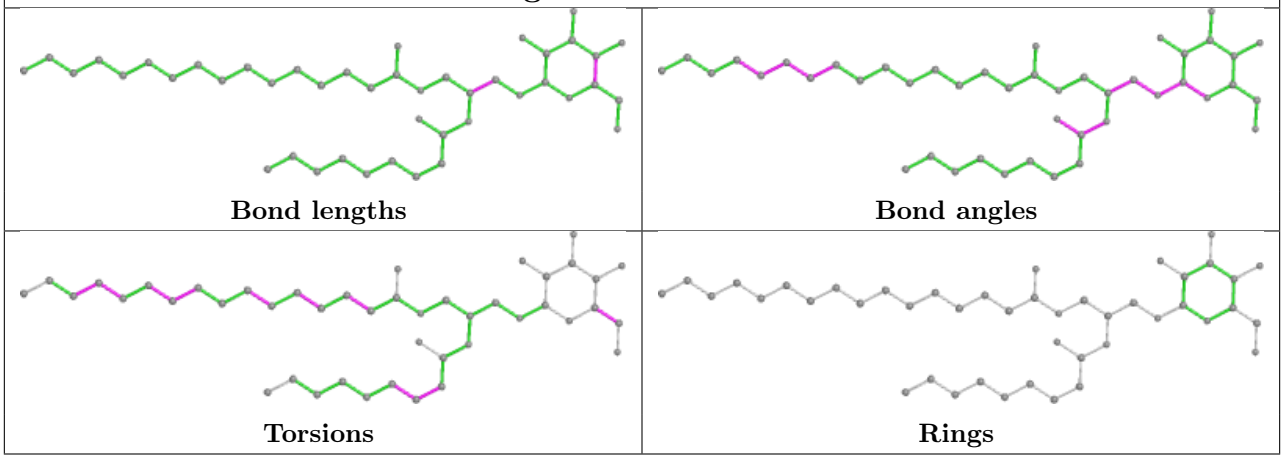
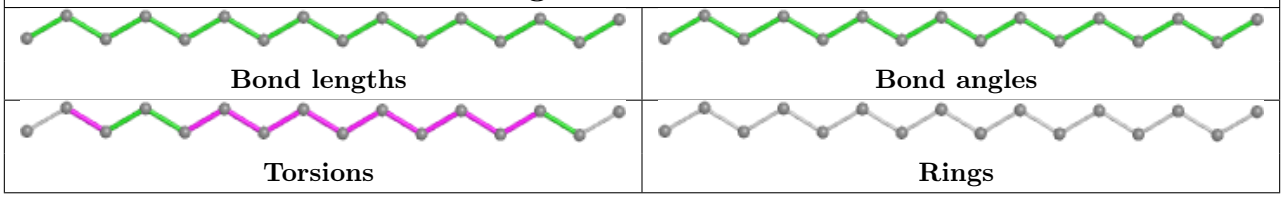

Torsions


Rings

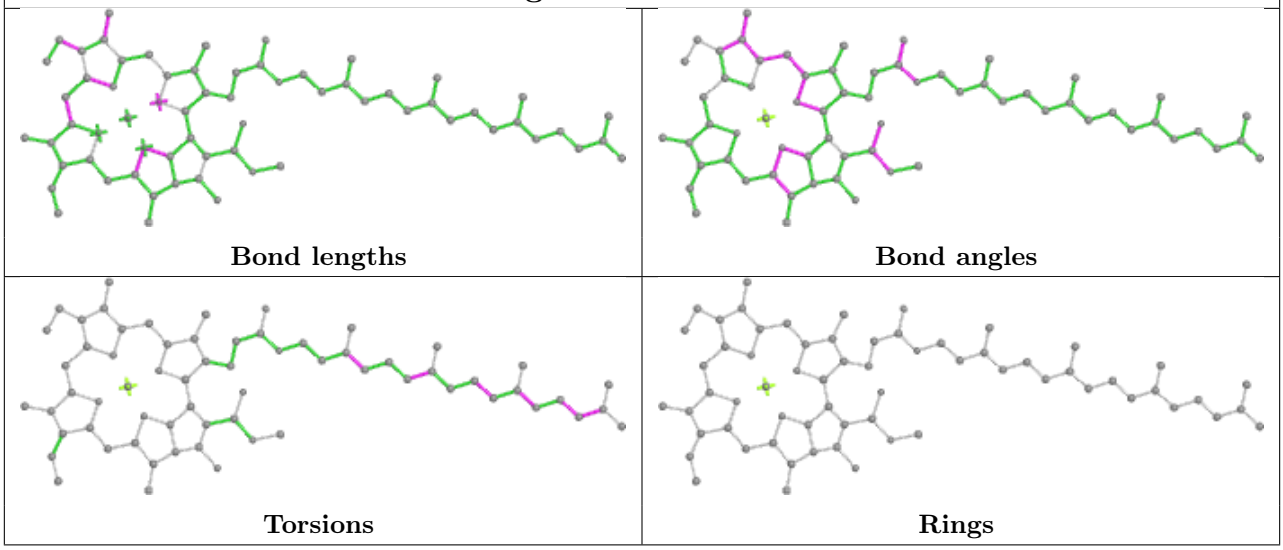
Ligand LMG d 411



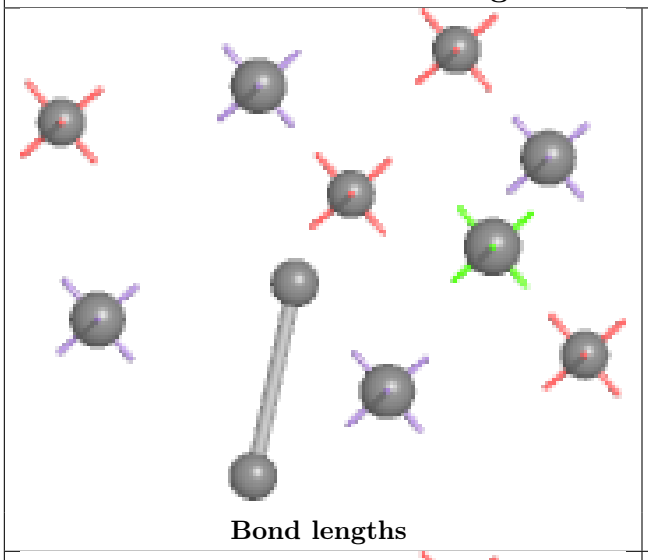
Ligand STE C 521



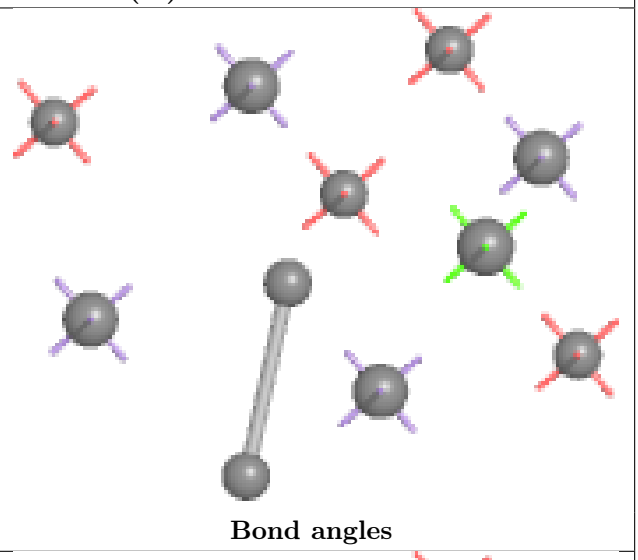
Ligand CLA C 505



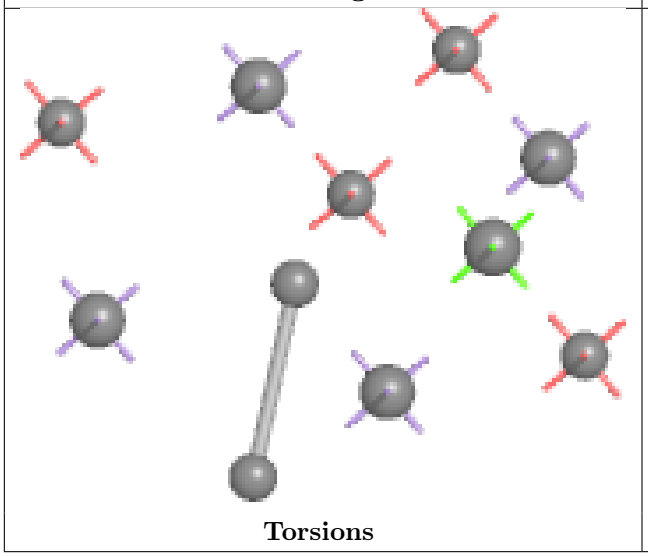
Ligand OEY A 601 (C)



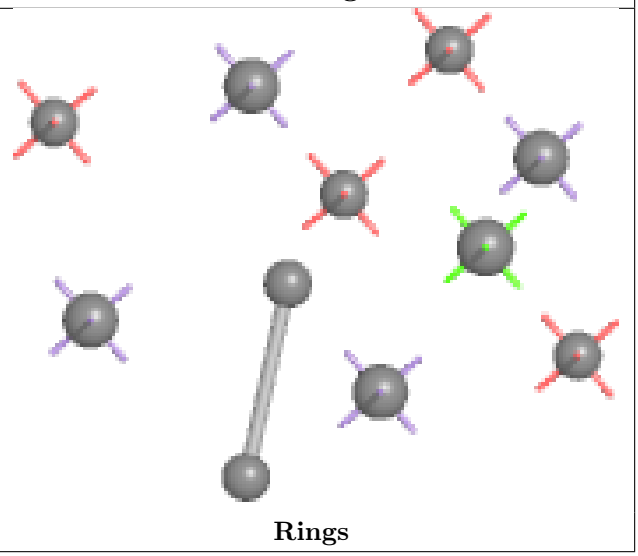
Bond lengths



Bond angles

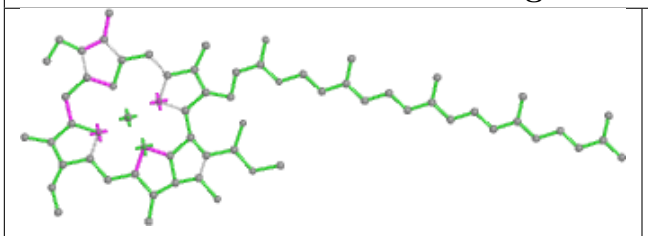


Torsions

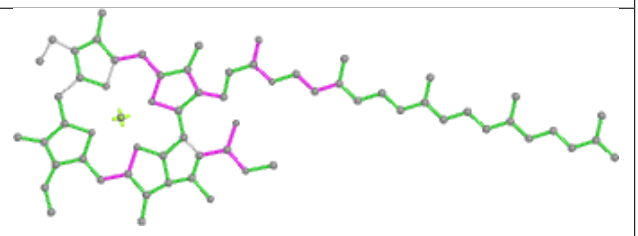


Rings

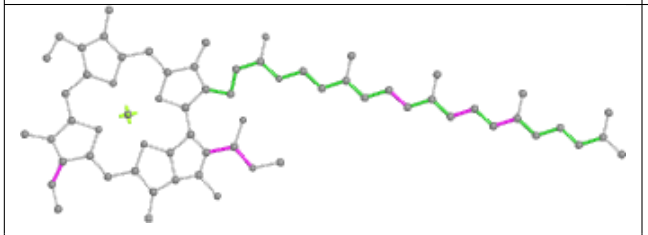
Ligand CLA B 610



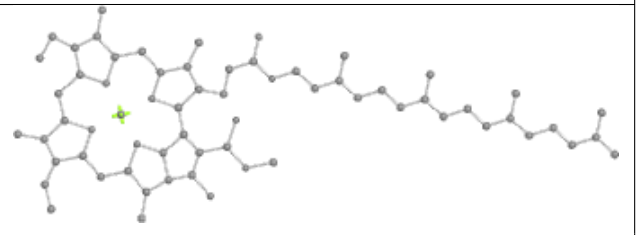
Bond lengths



Bond angles

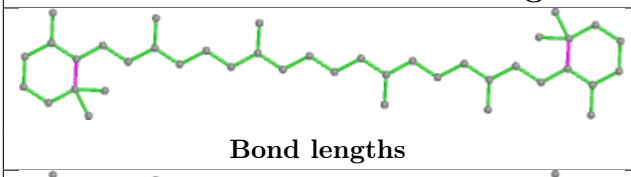


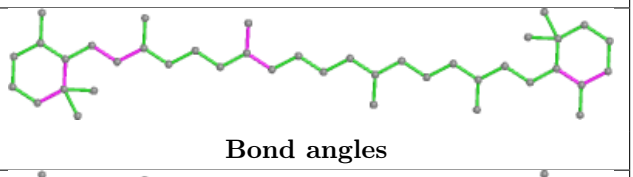
Torsions

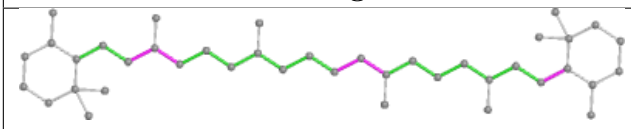


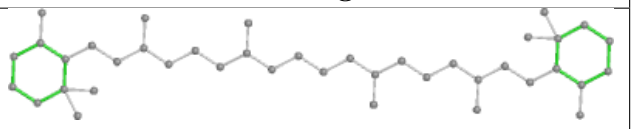
Rings

Ligand BCR h 102

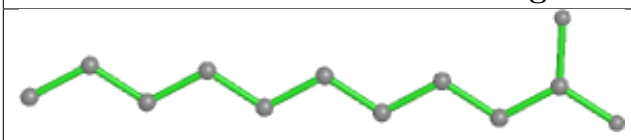

Bond lengths

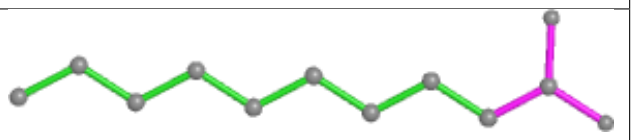

Bond angles

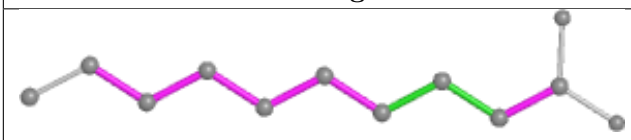

Torsions

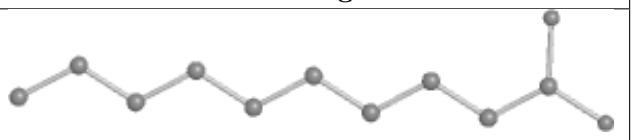

Rings

Ligand STE L 102

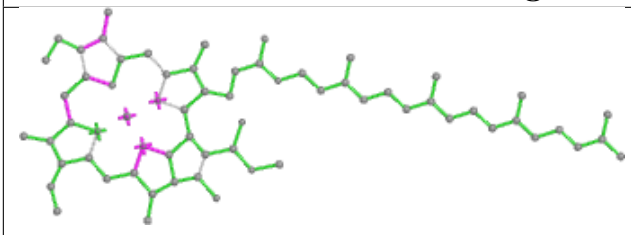

Bond lengths

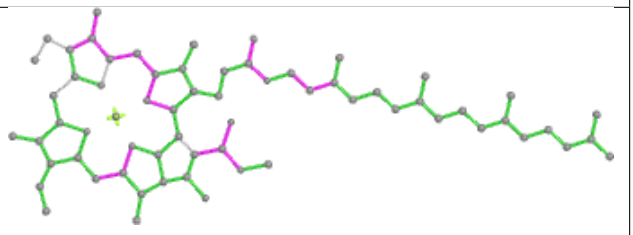

Bond angles

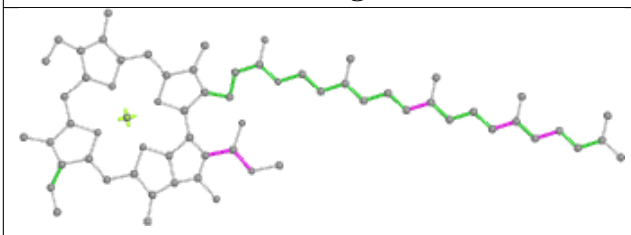

Torsions

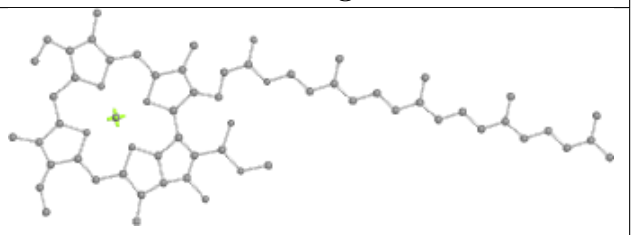

Rings

Ligand CLA C 502

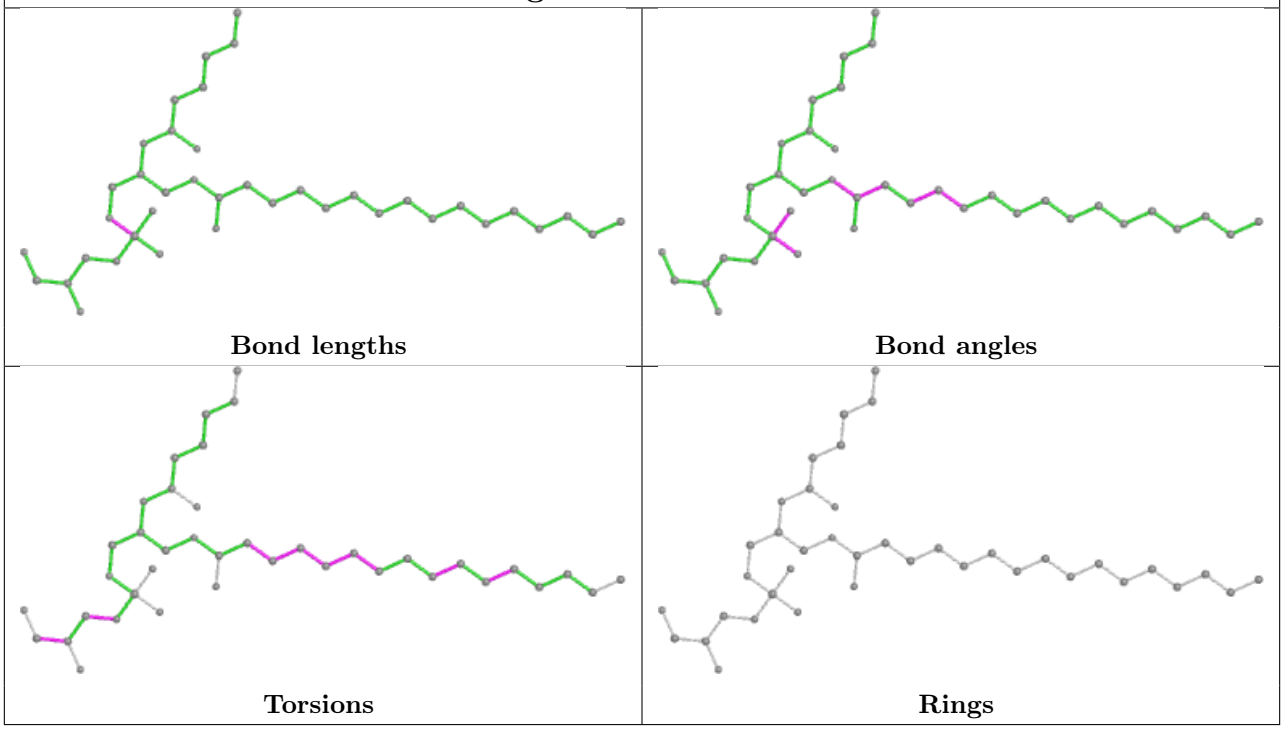

Bond lengths


Bond angles

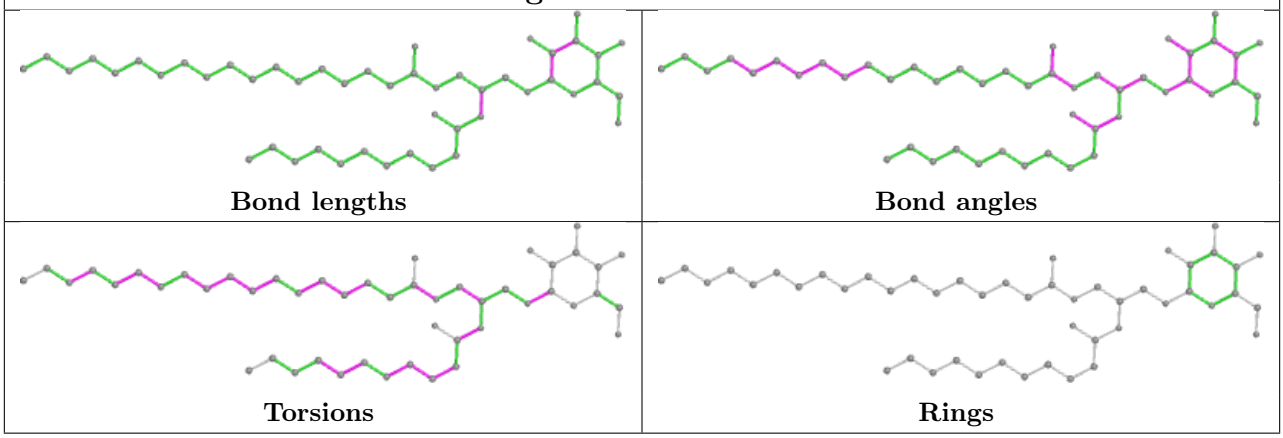

Torsions


Rings

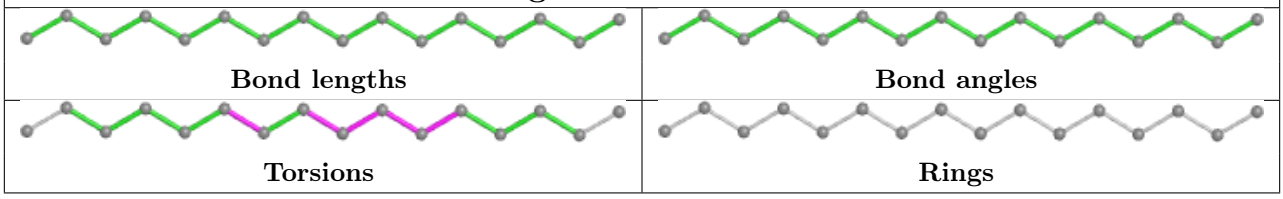
Ligand LHG d 409



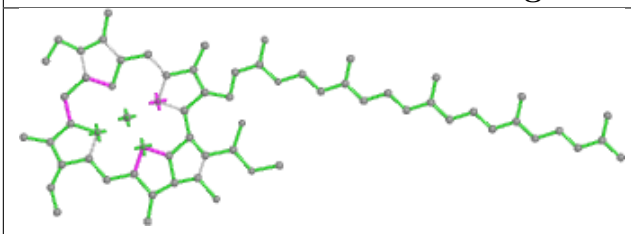
Ligand LMG c 522



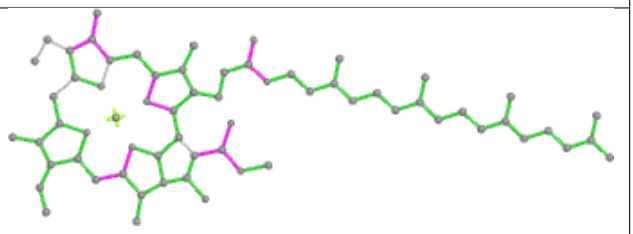
Ligand STE B 625



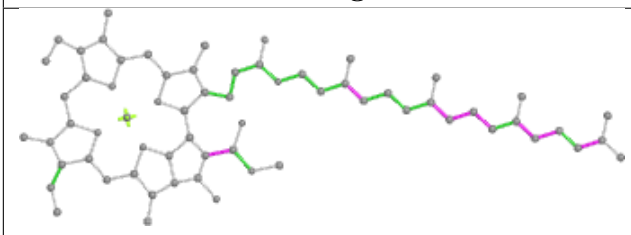
Ligand CLA B 605



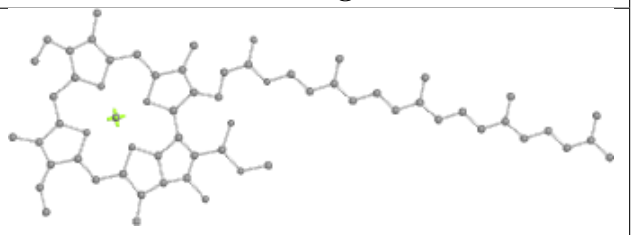
Bond lengths



Bond angles

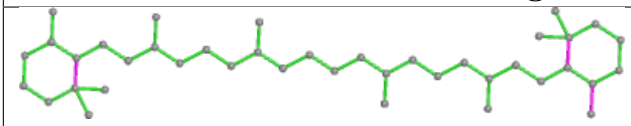


Torsions

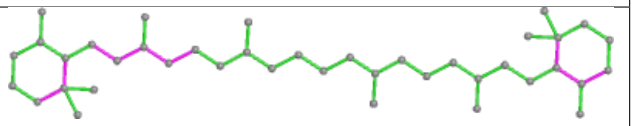


Rings

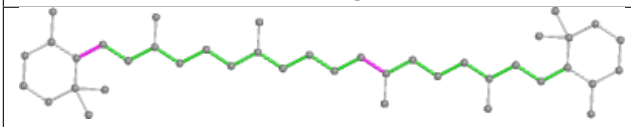
Ligand BCR a 610



Bond lengths



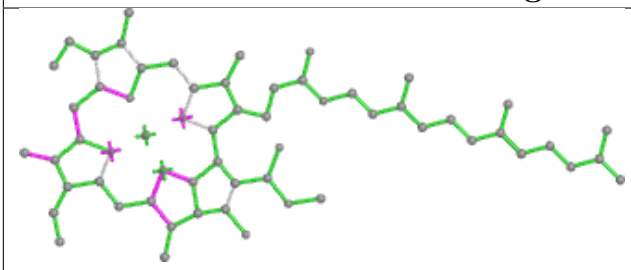
Bond angles



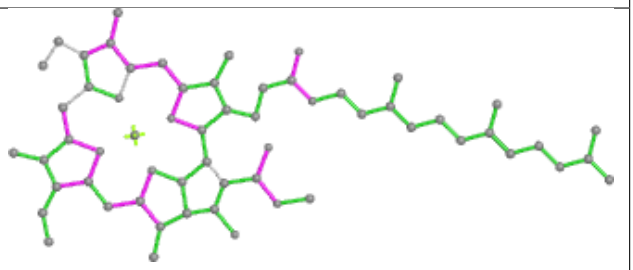
Torsions

Rings

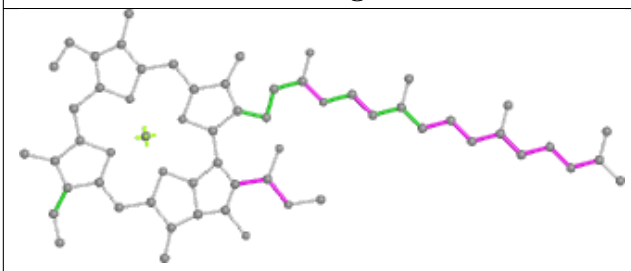
Ligand CLA B 616



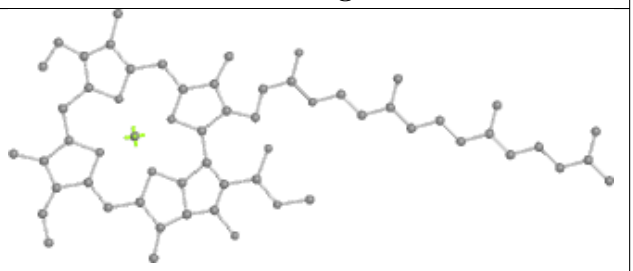
Bond lengths



Bond angles

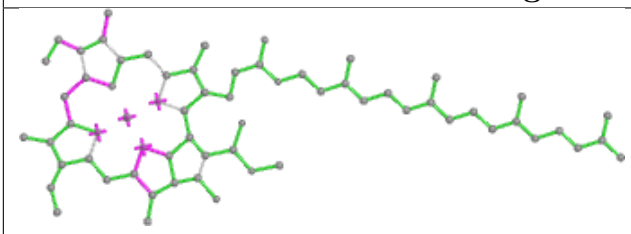


Torsions

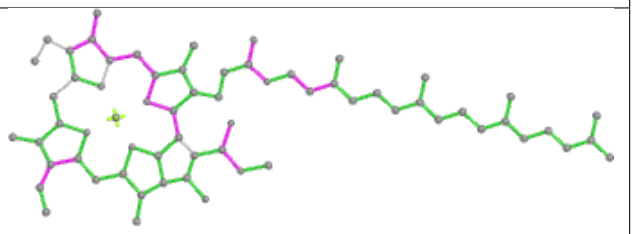


Rings

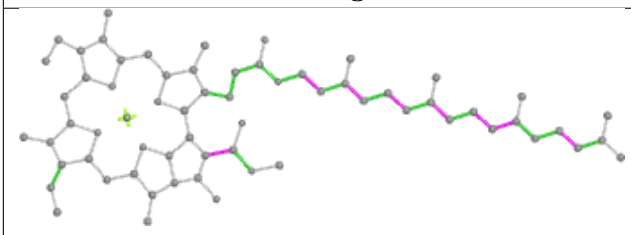
Ligand CLA D 403



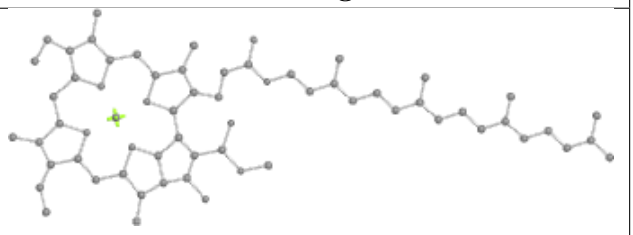
Bond lengths



Bond angles

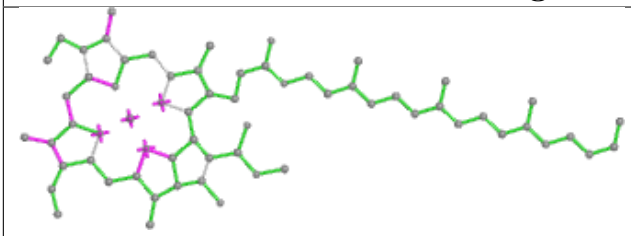


Torsions

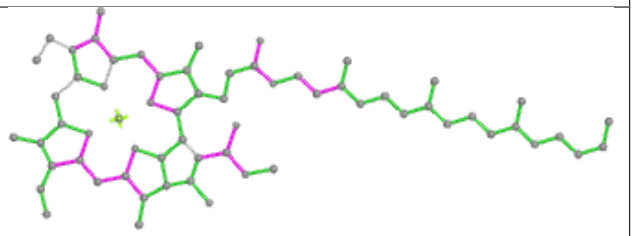


Rings

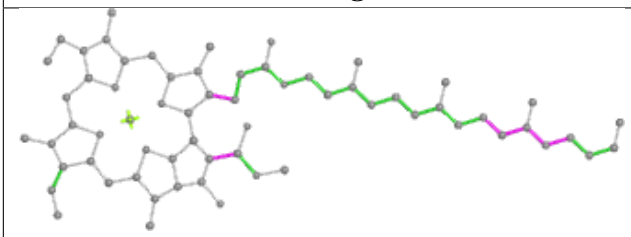
Ligand CLA c 508



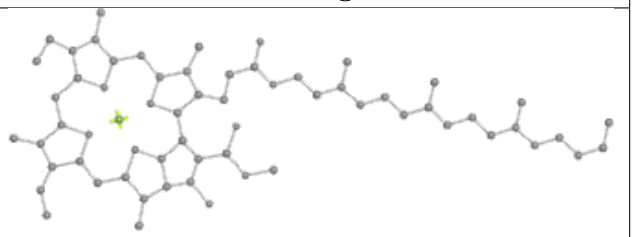
Bond lengths



Bond angles

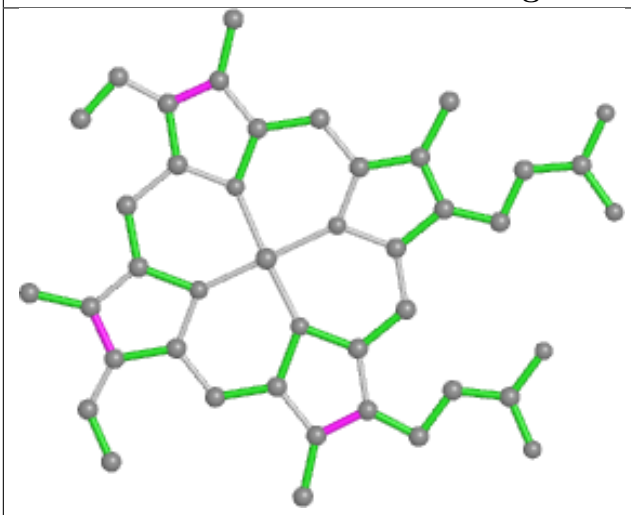


Torsions

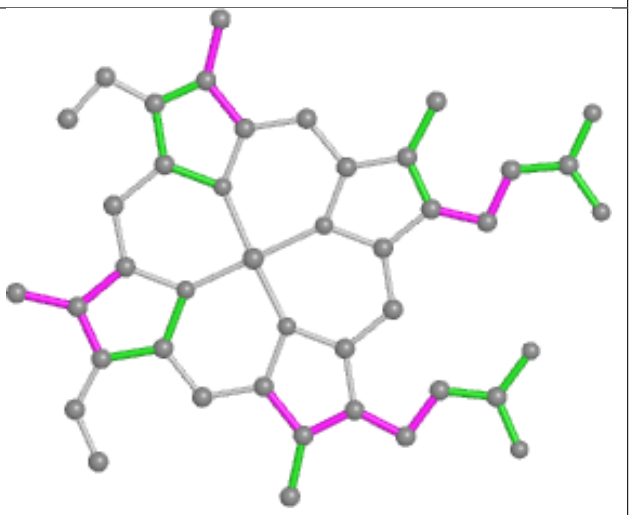


Rings

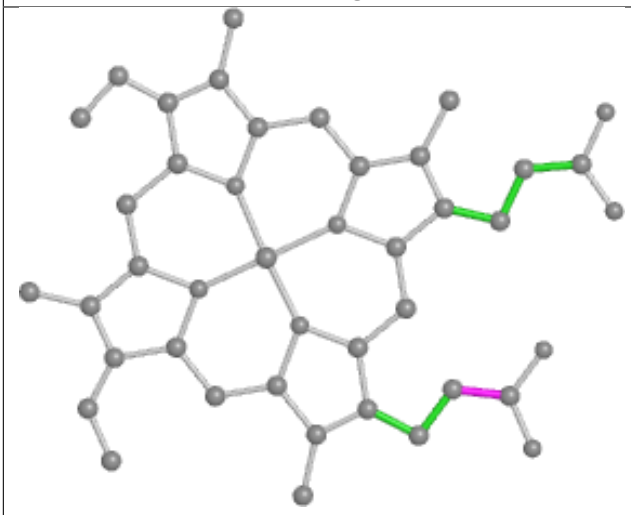
Ligand HEC V 201



Bond lengths



Bond angles



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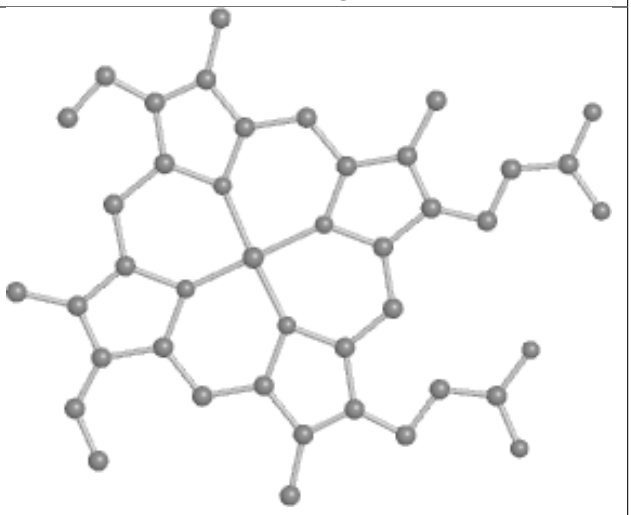
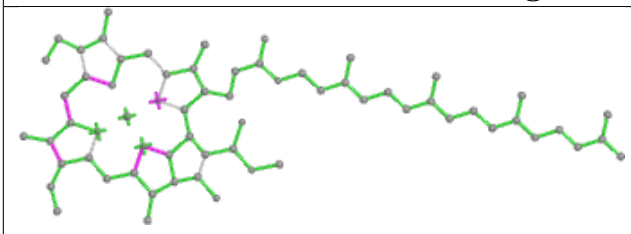
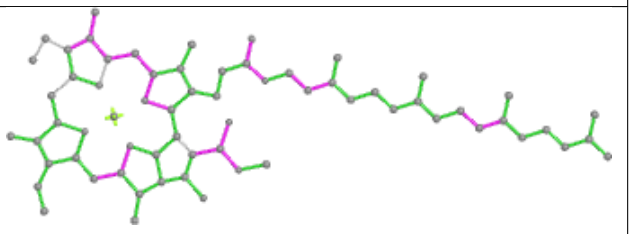


Rings

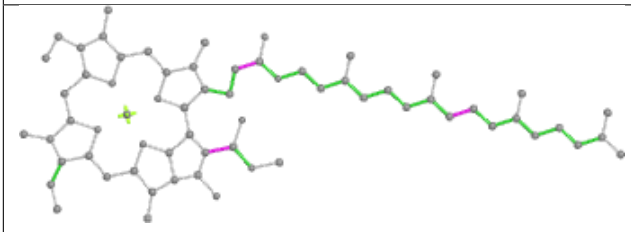
Ligand CLA B 612



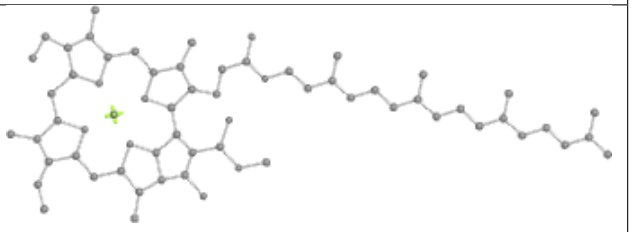
Bond lengths



Bond angles

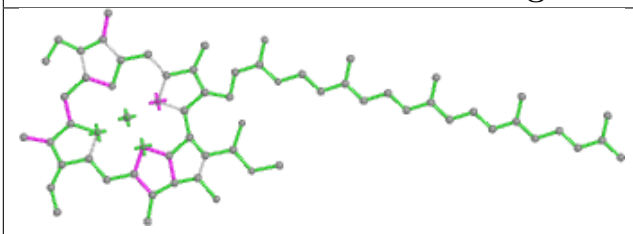


Torsions

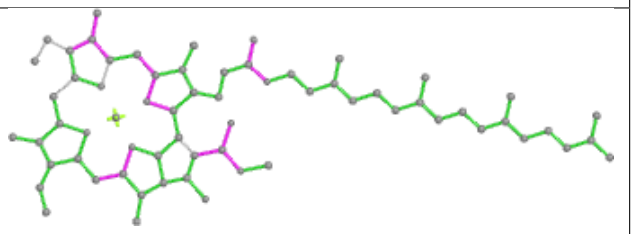


Rings

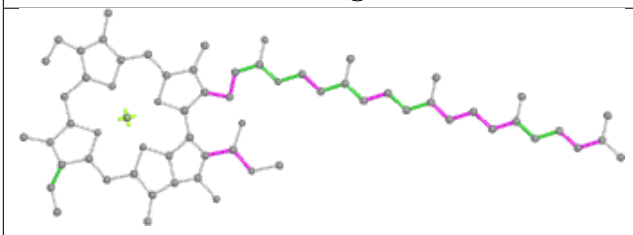
Ligand CLA h 101



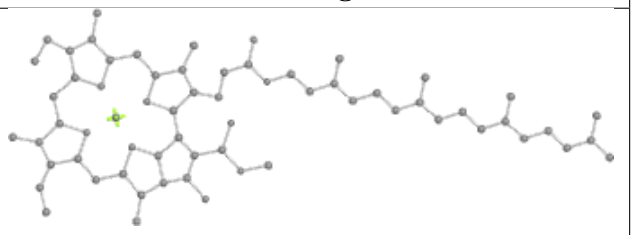
Bond lengths



Bond angles

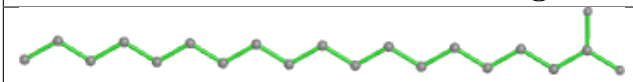


Torsions



Rings

Ligand STE b 622



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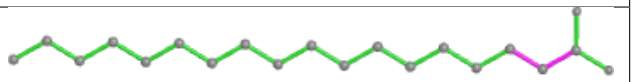
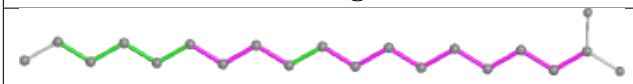
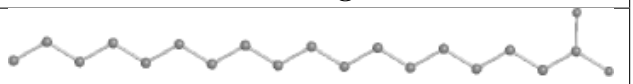


Bond angles

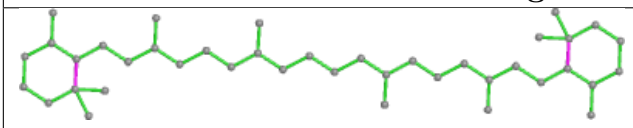


Torsions

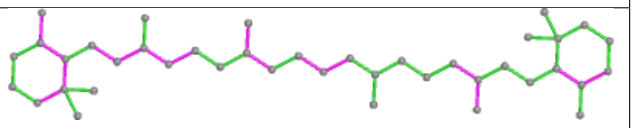


Rings

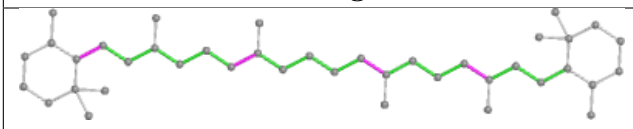
Ligand BCR c 515



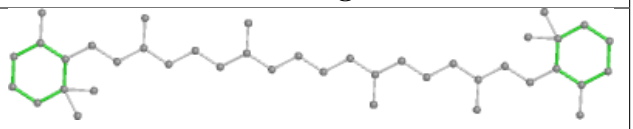
Bond lengths



Bond angles

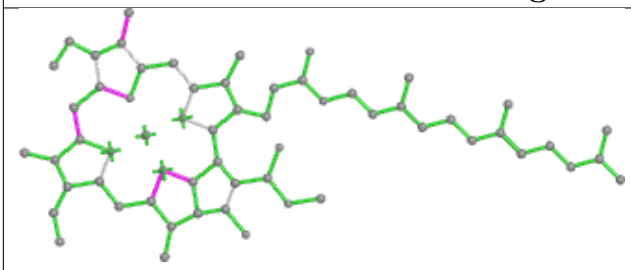


Torsions

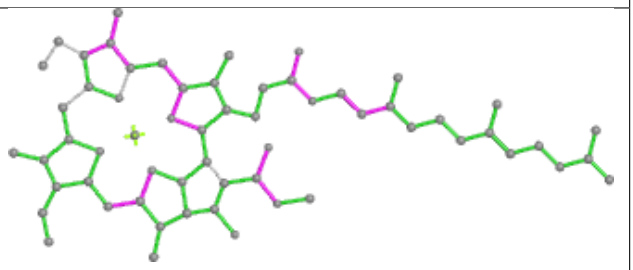


Rings

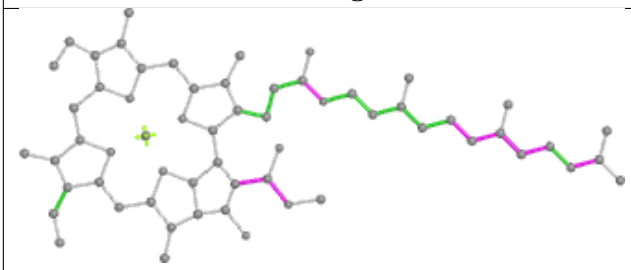
Ligand CLA c 504



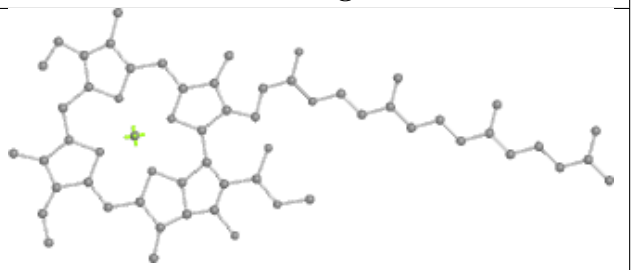
Bond lengths



Bond angles

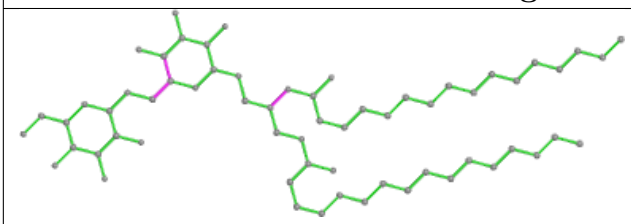


Torsions

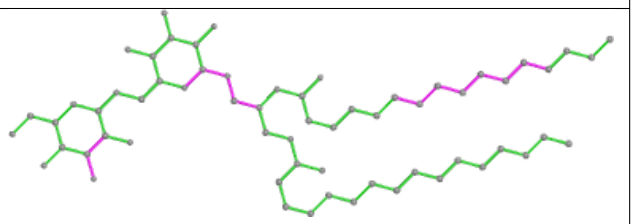


Rings

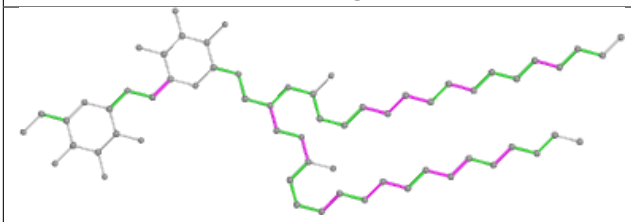
Ligand DGD C 517



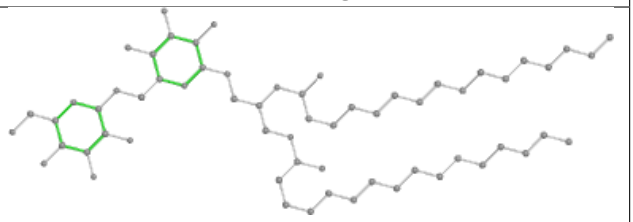
Bond lengths



Bond angles

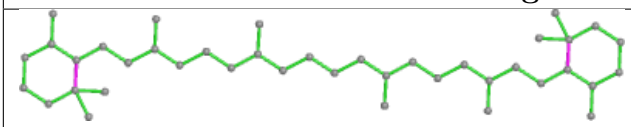


Torsions

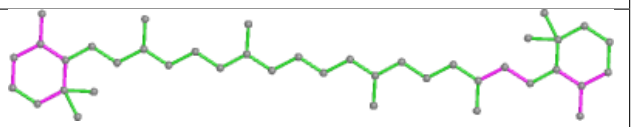


Rings

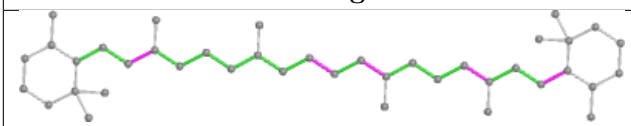
Ligand BCR D 404



Bond lengths



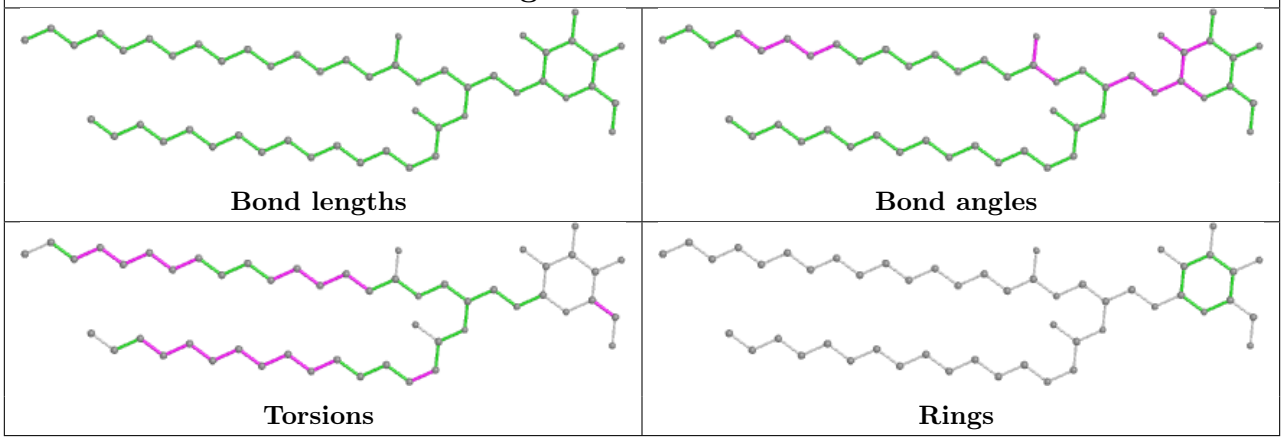
Bond angles



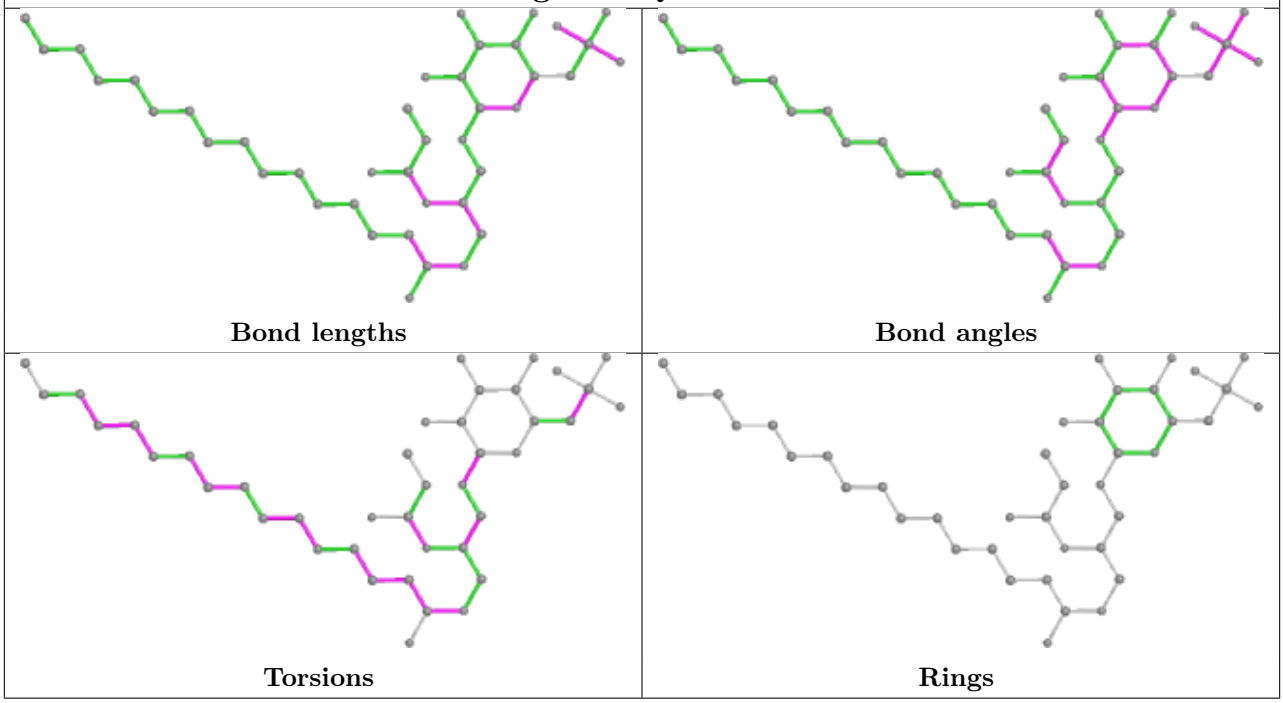
Torsions

Rings

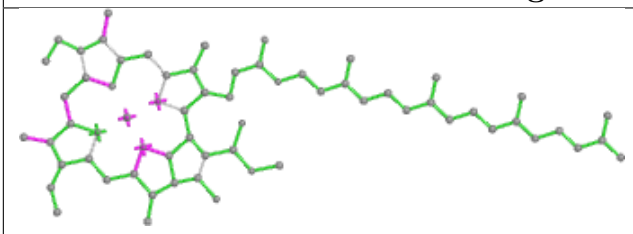
Ligand LMG D 406



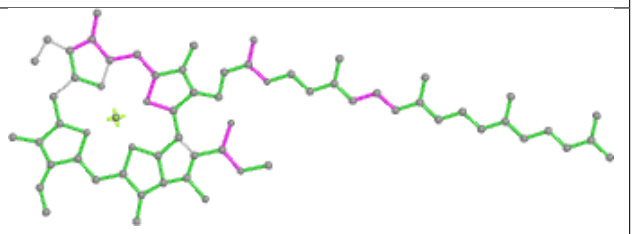
Ligand SQD f 101



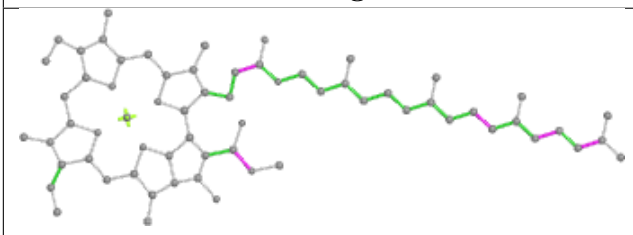
Ligand CLA b 612



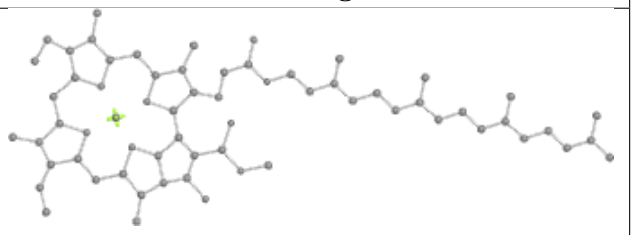
Bond lengths



Bond angles

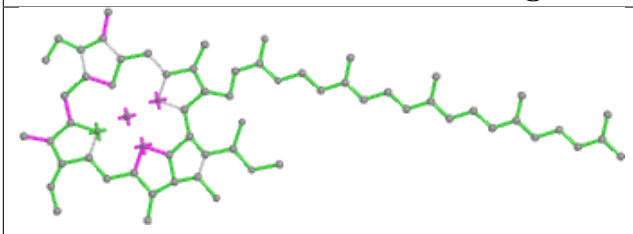


Torsions

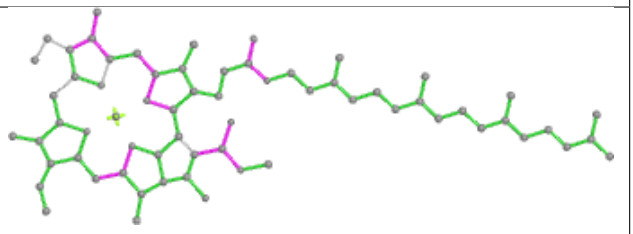


Rings

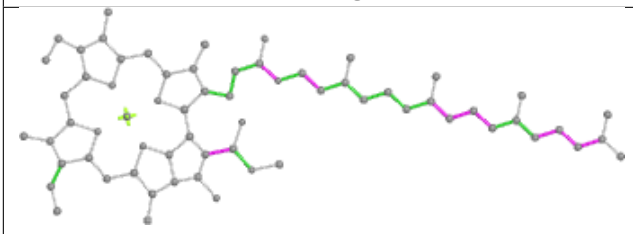
Ligand CLA C 513



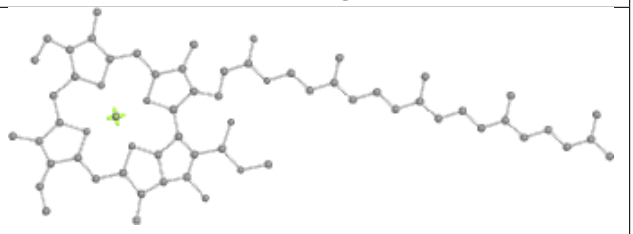
Bond lengths



Bond angles

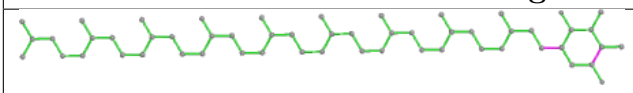


Torsions

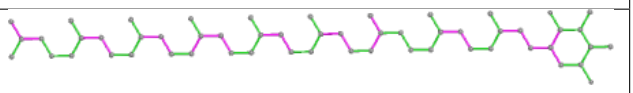


Rings

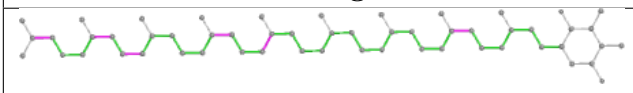
Ligand PL9 D 405



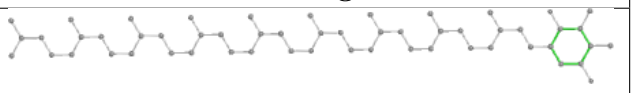
Bond lengths



Bond angles

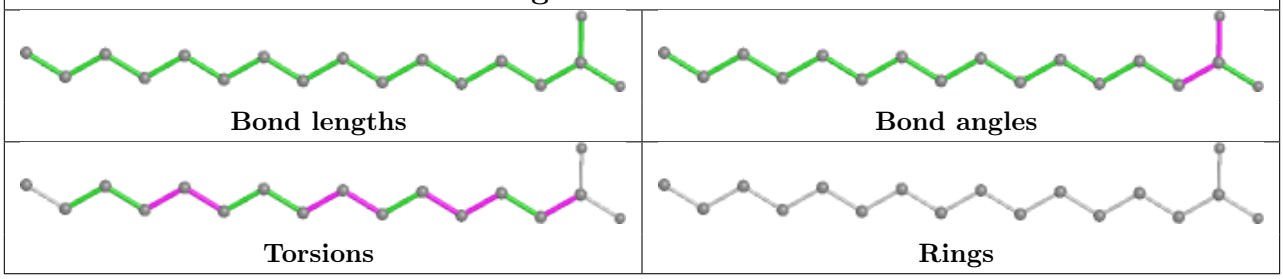


Torsions

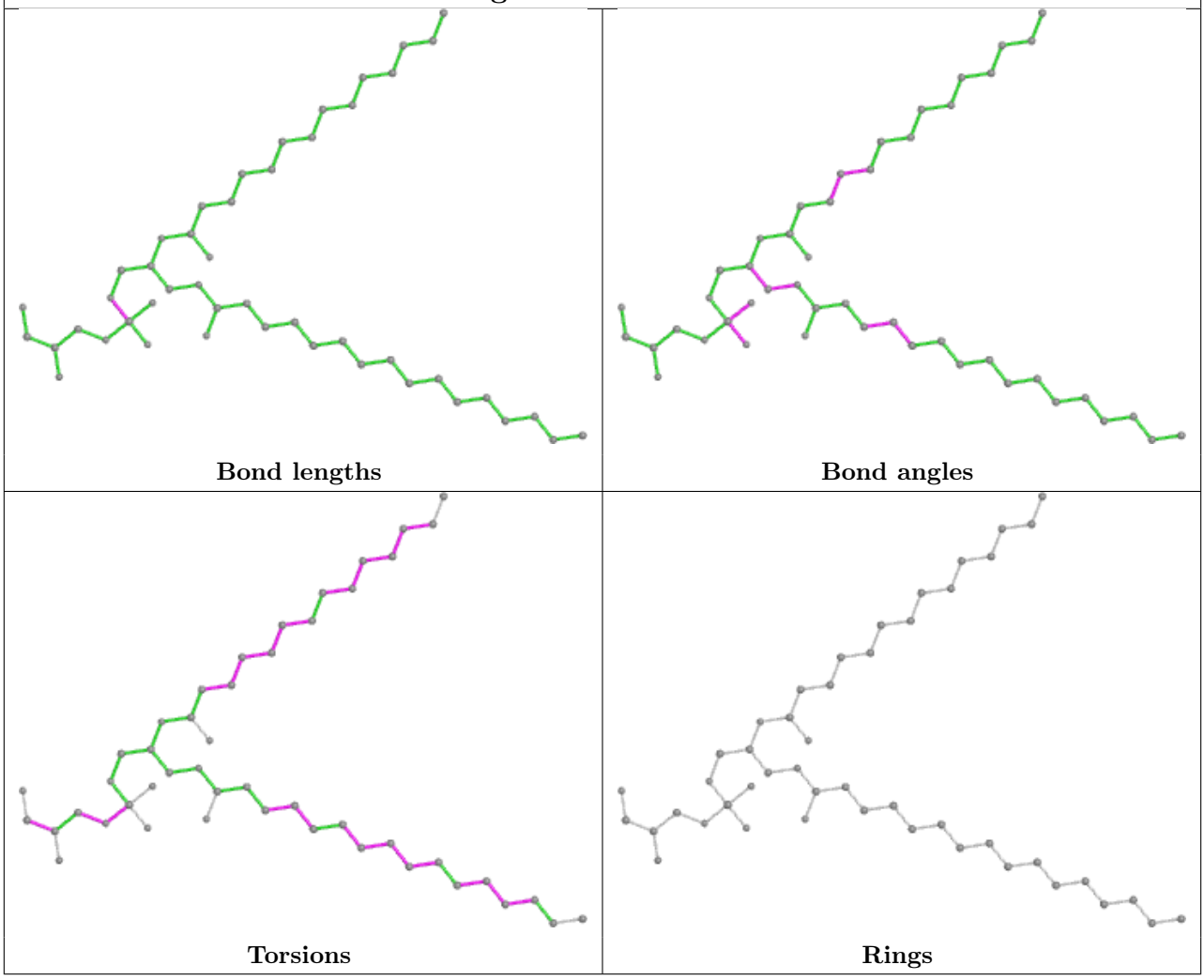


Rings

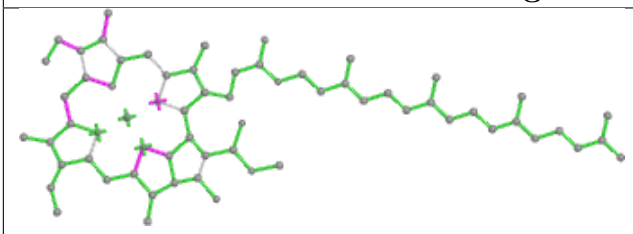
Ligand STE d 413



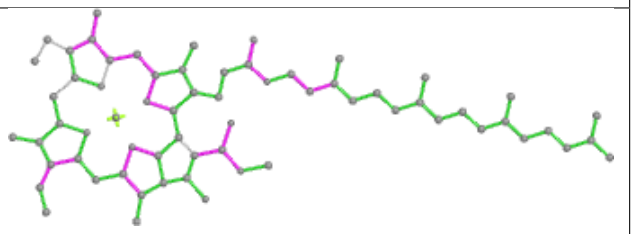
Ligand LHG A 615



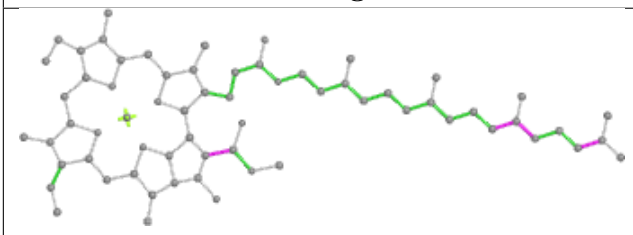
Ligand CLA A 608



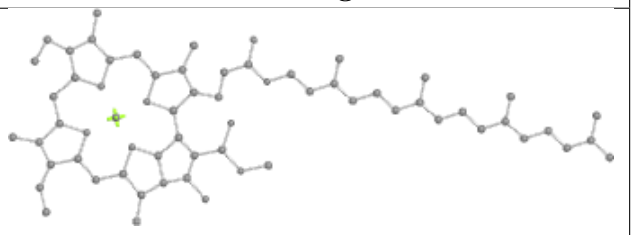
Bond lengths



Bond angles

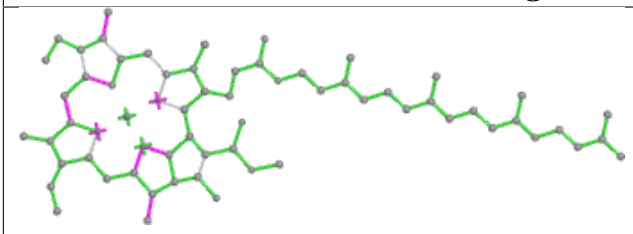


Torsions

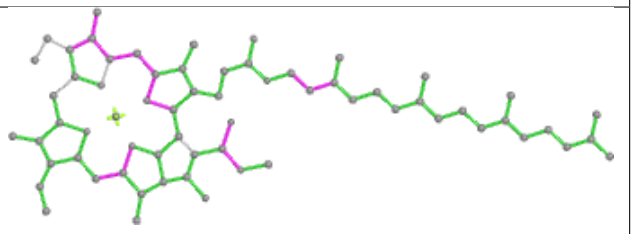


Rings

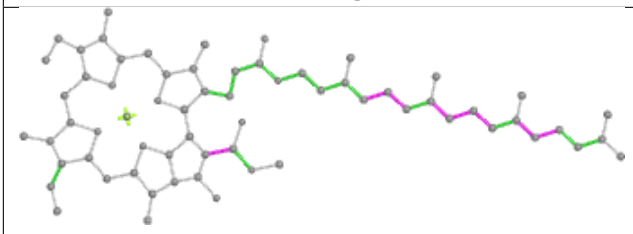
Ligand CLA C 509



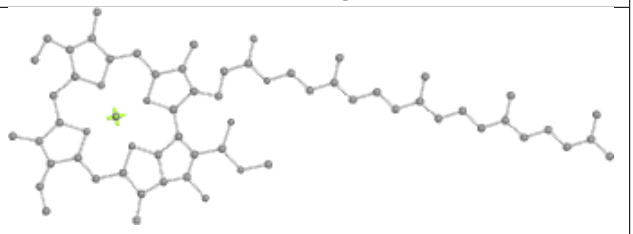
Bond lengths



Bond angles

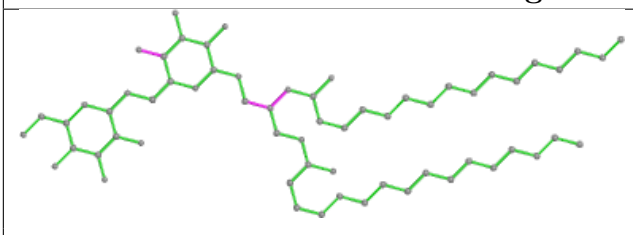


Torsions

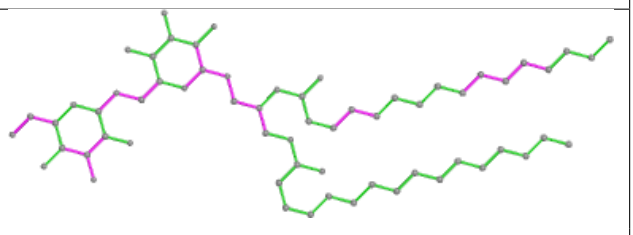


Rings

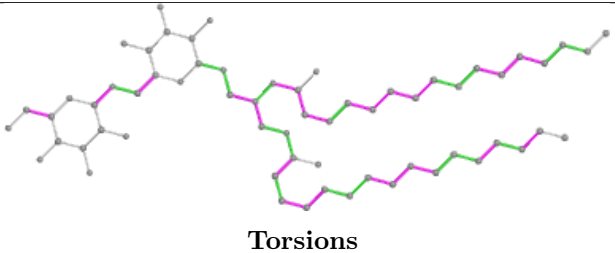
Ligand DGD c 517



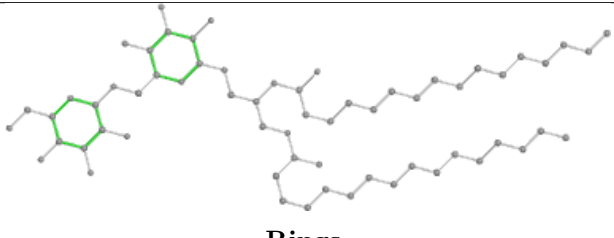
Bond lengths



Bond angles

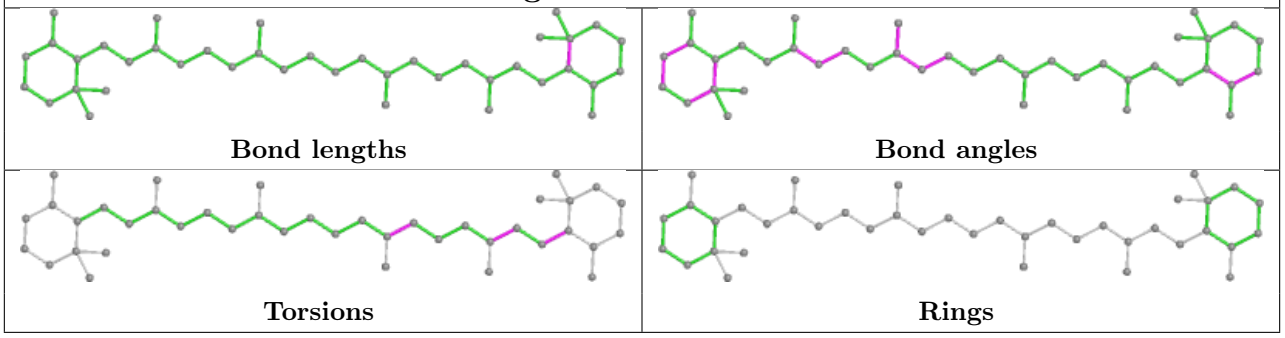


Torsions

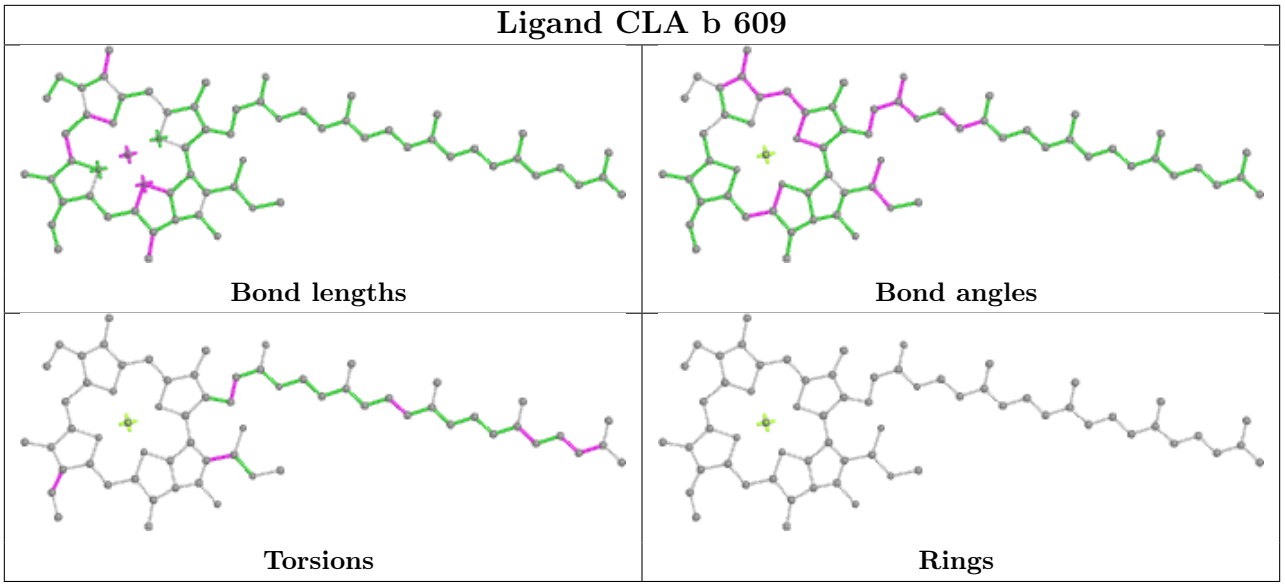


Rings

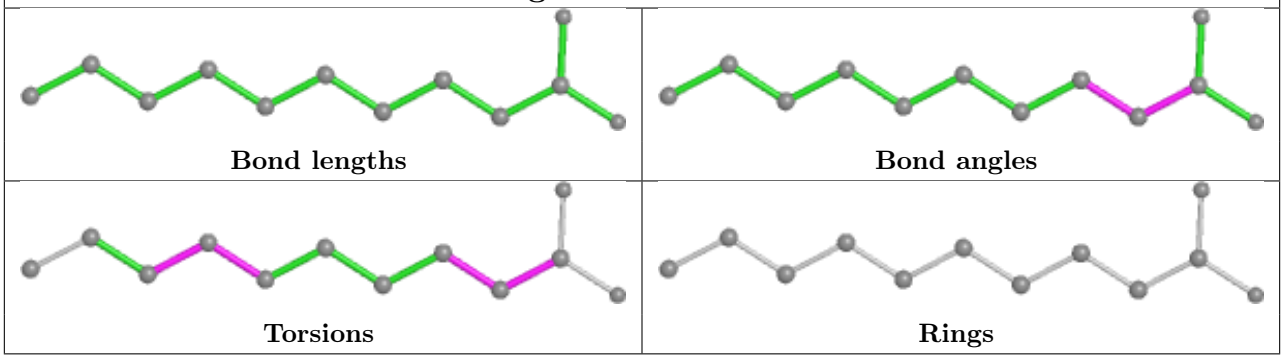
Ligand BCR B 618



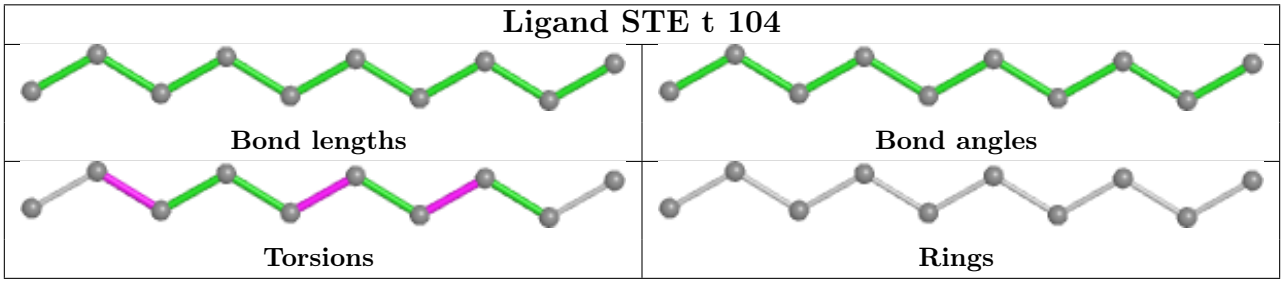
Ligand CLA b 609



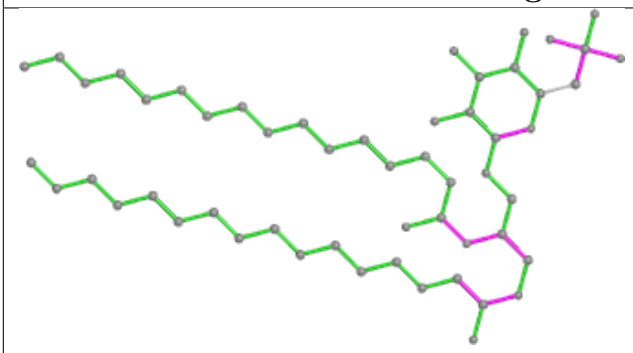
Ligand STE C 520



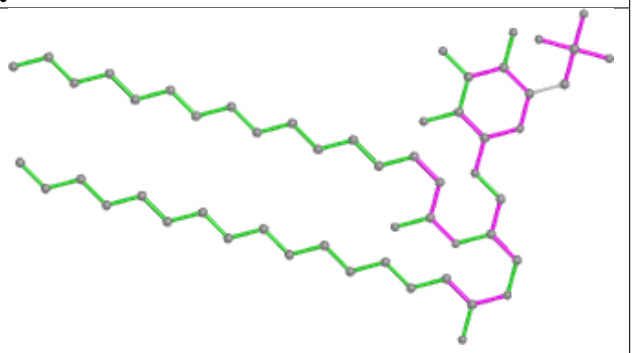
Ligand STE t 104



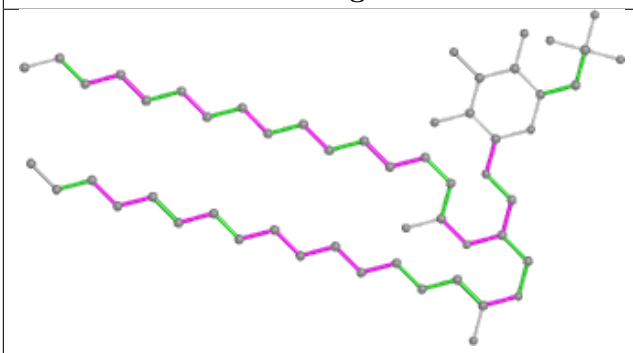
Ligand SQD B 622



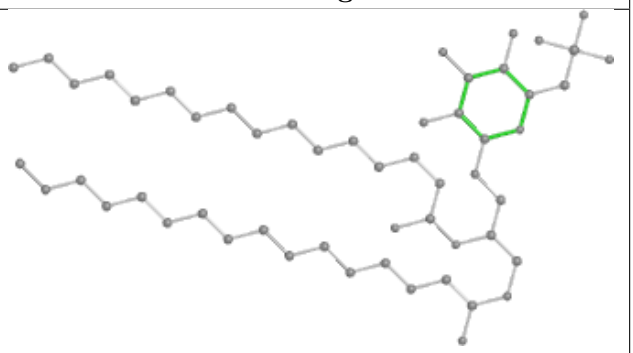
Bond lengths



Bond angles

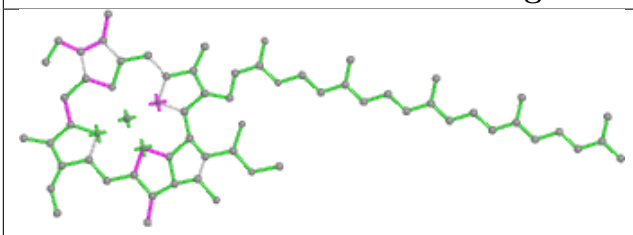


Torsions

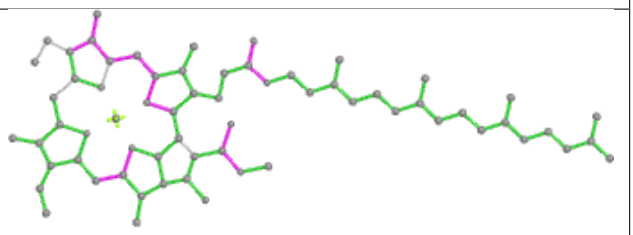


Rings

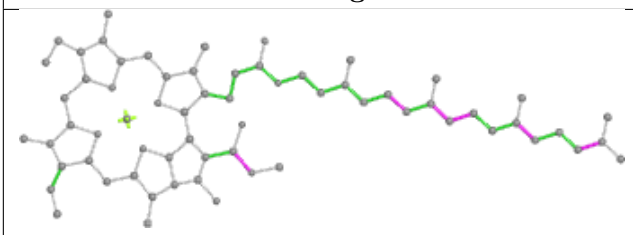
Ligand CLA B 615



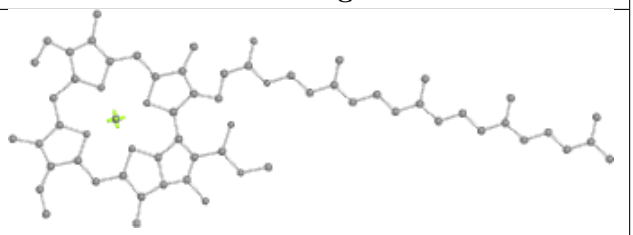
Bond lengths



Bond angles

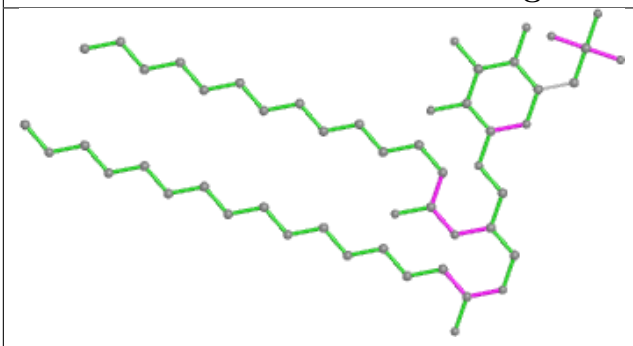


Torsions



Rings

Ligand SQD A 616



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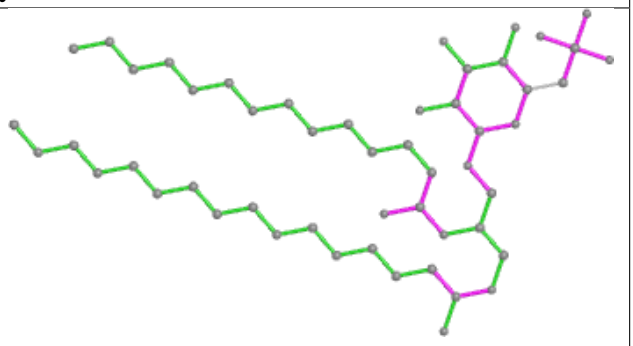
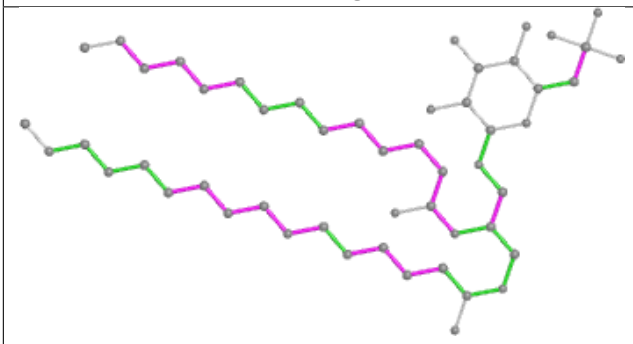
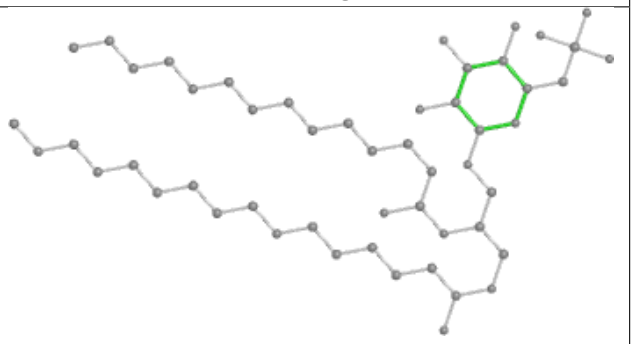


Bond angles

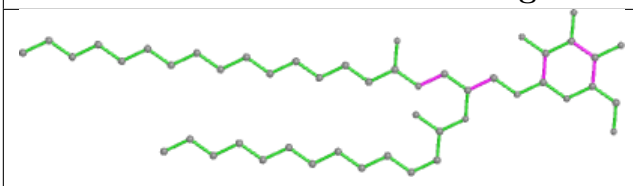


Torsions

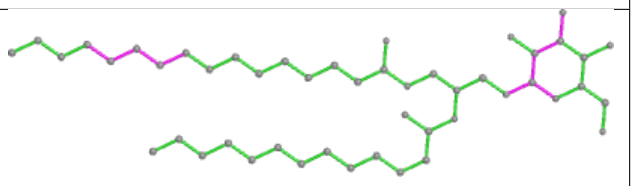


Rings

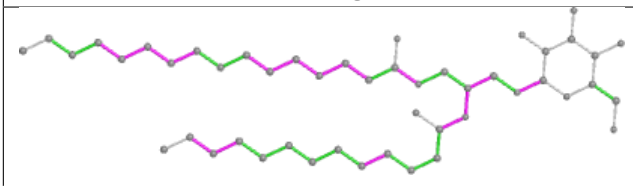
Ligand LMG A 614



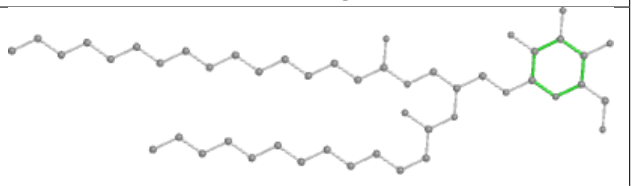
Bond lengths



Bond angles

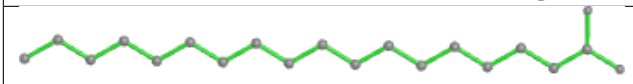


Torsions

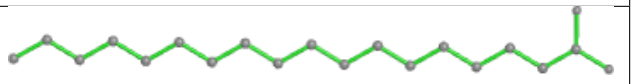


Rings

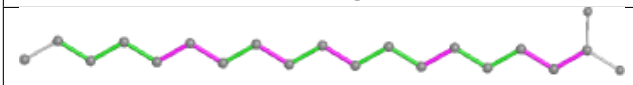
Ligand STE c 521



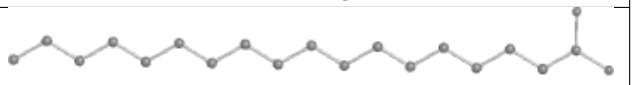
Bond lengths



Bond angles

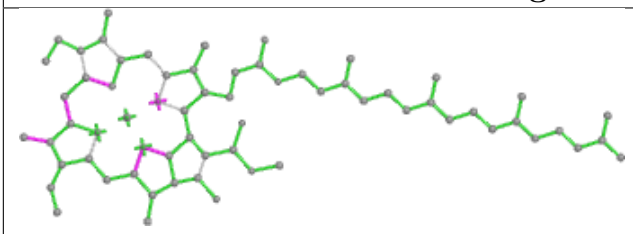


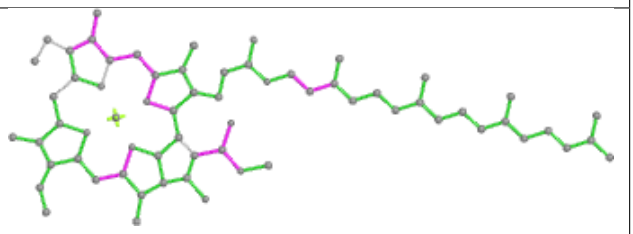
Torsions

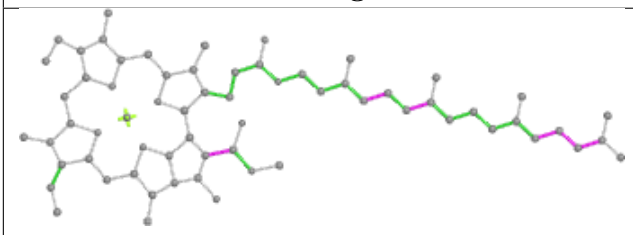


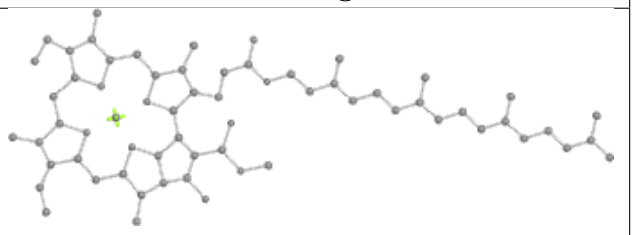
Rings

Ligand CLA c 502

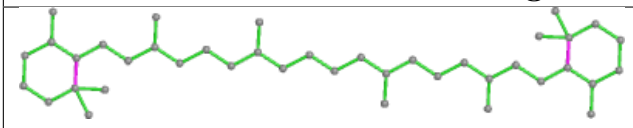

Bond lengths

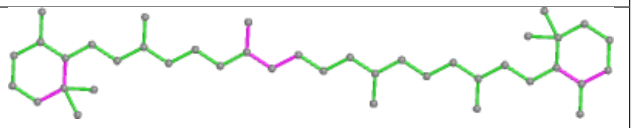

Bond angles

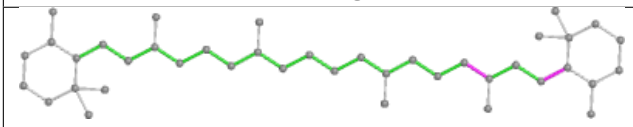

Torsions


Rings

Ligand BCR b 617

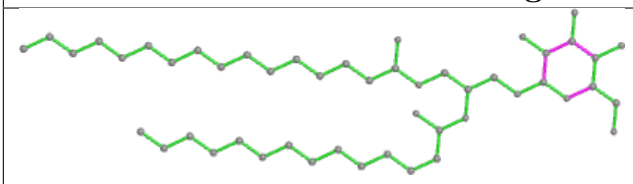

Bond lengths


Bond angles


Torsions


Rings

Ligand LMG c 523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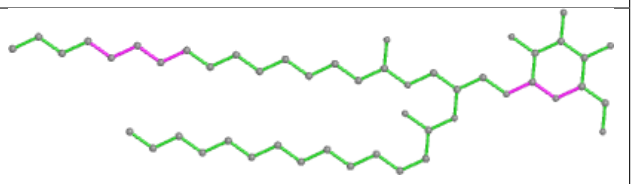
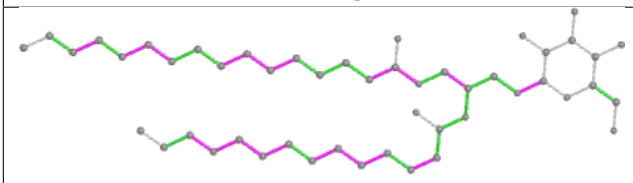
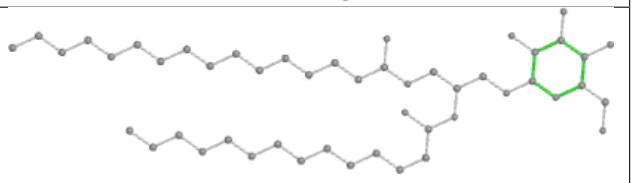
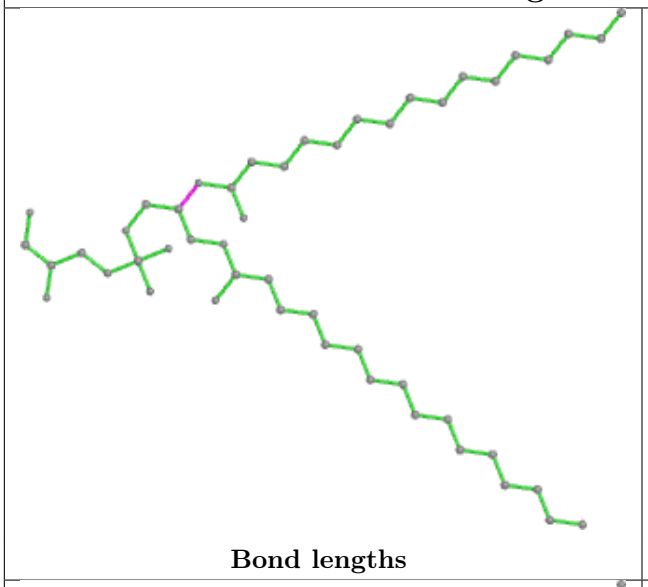

Bond angles

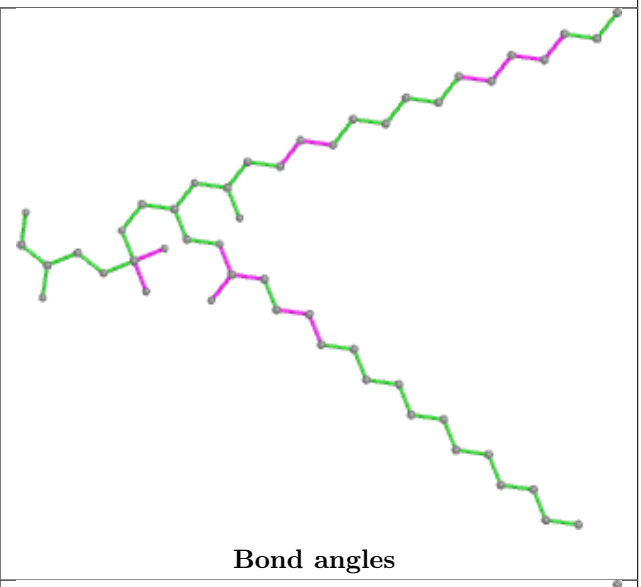

Torsions


Rings

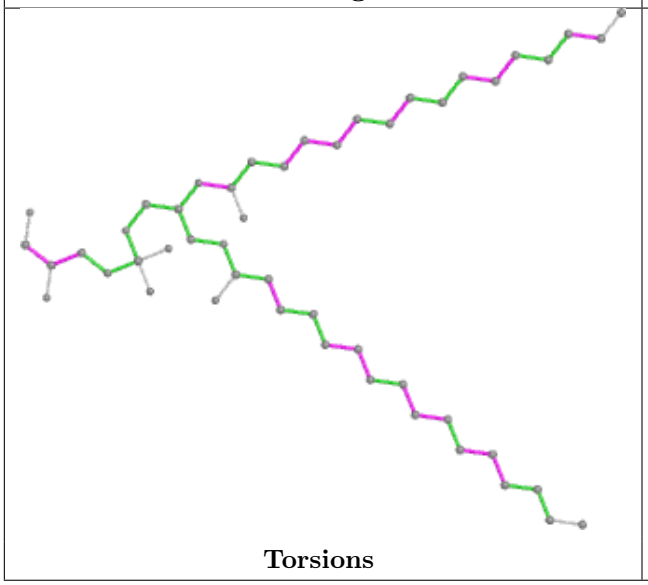
Ligand LHG d 407



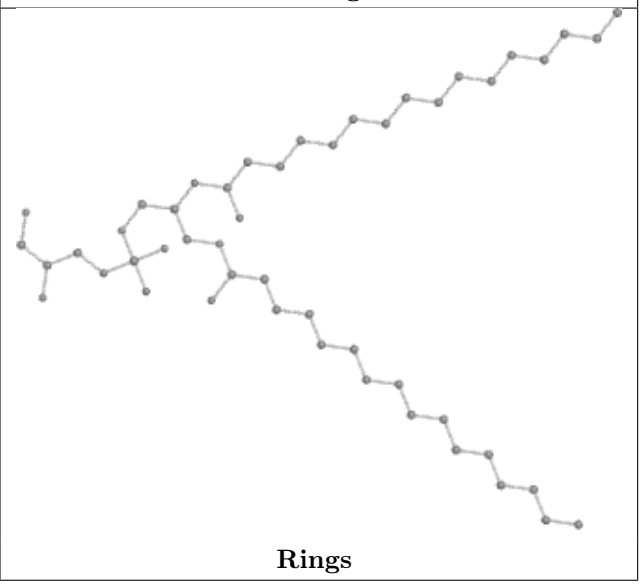
Bond lengths



Bond angles



Torsions

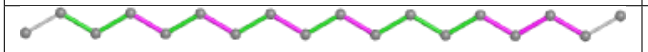


Rings

Ligand STE H 102

Bond lengths

Bond angles



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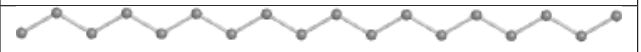
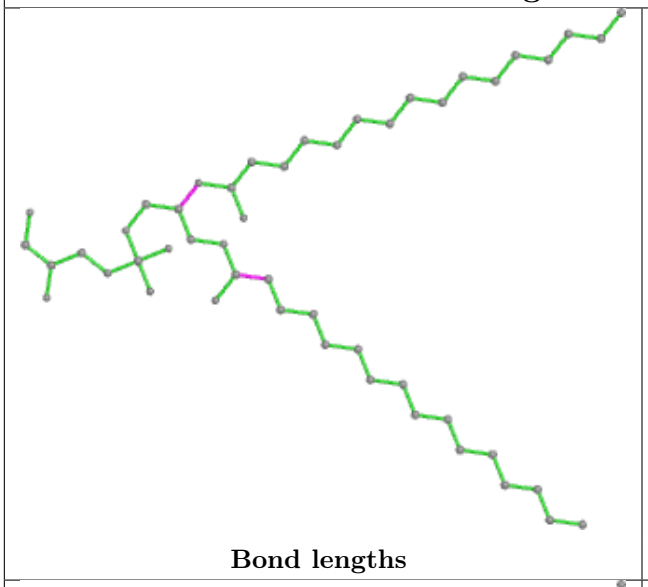


Rings

Ligand LHG D 409



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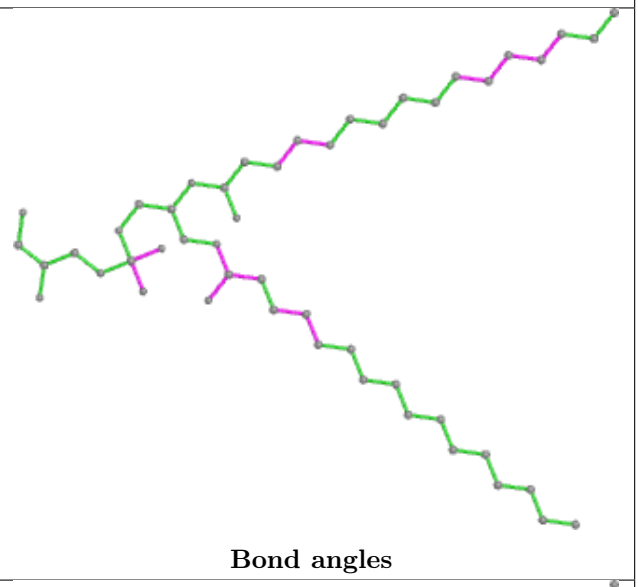
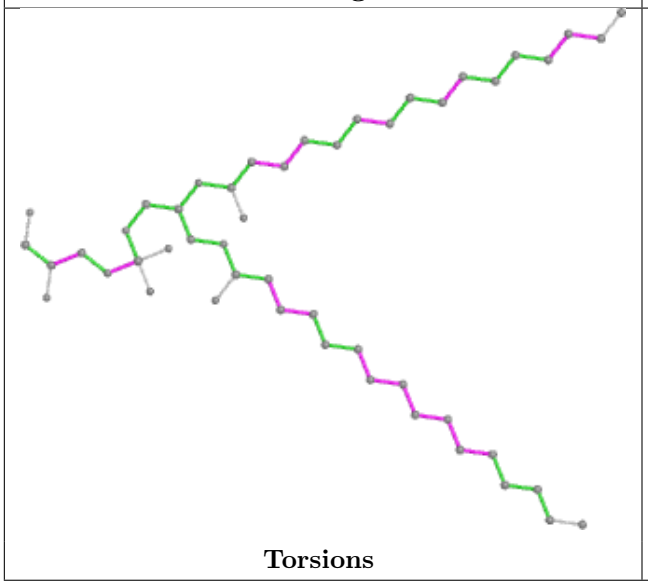
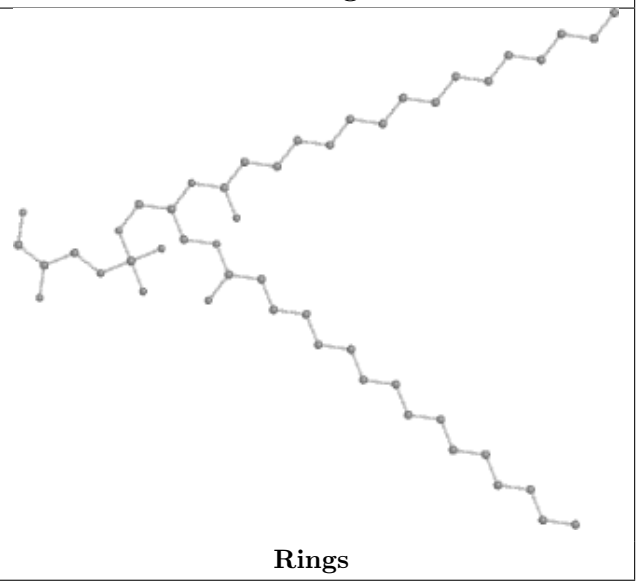


Bond angles

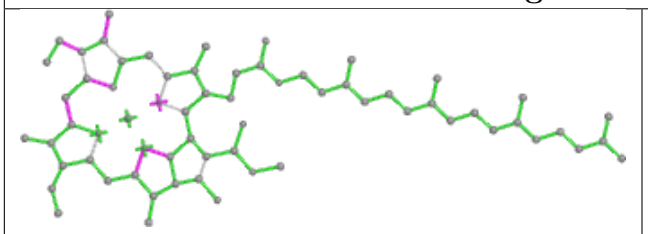


Torsions



Rings

Ligand CLA B 606



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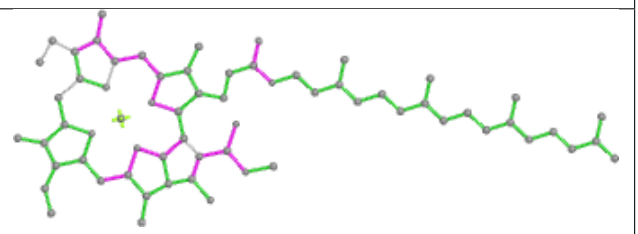
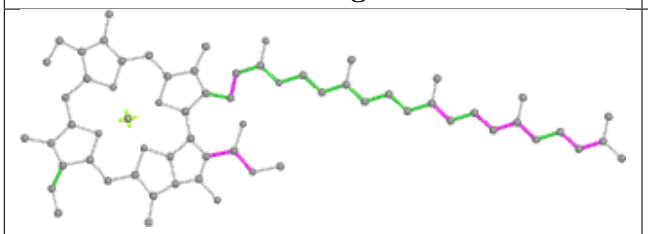


Bond angles



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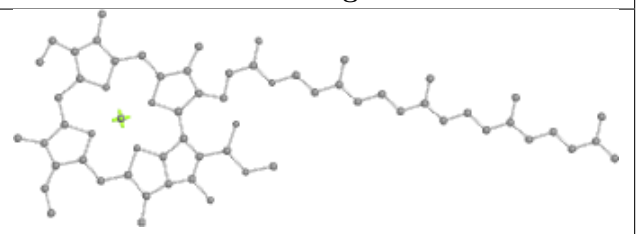
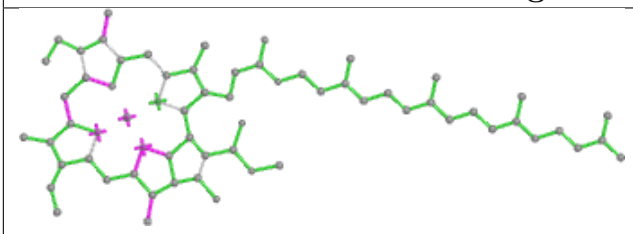


Rings

Ligand CLA d 403



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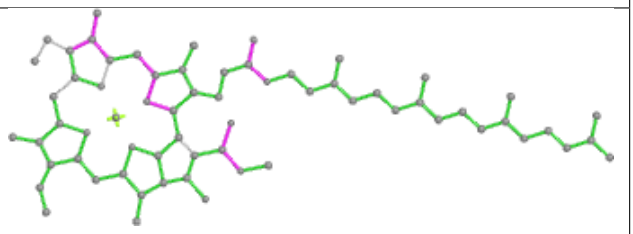
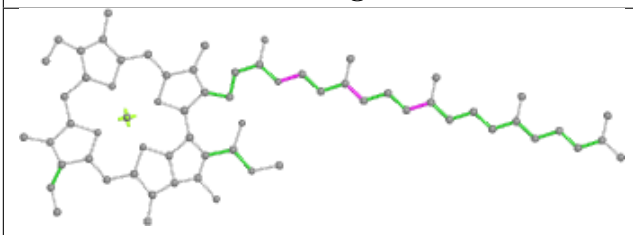
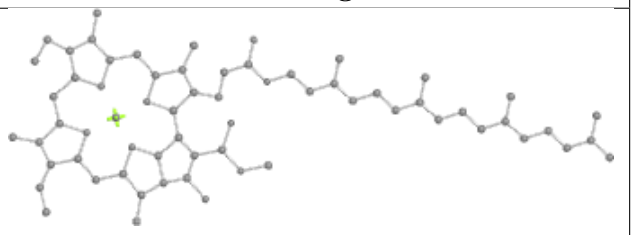


Bond angles

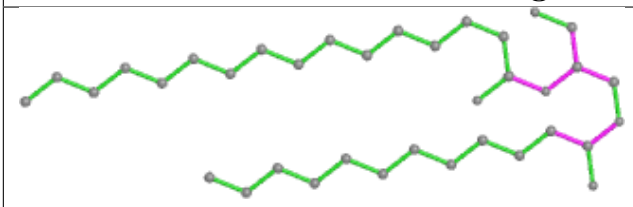


Torsions



Rings

Ligand SQD t 102



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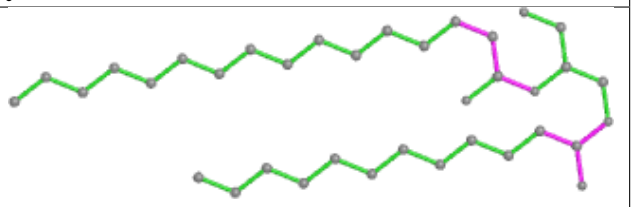
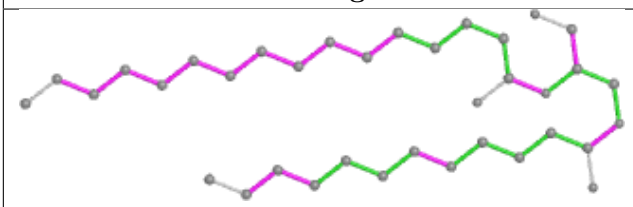
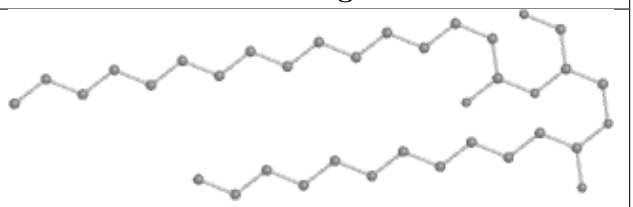


Bond angles

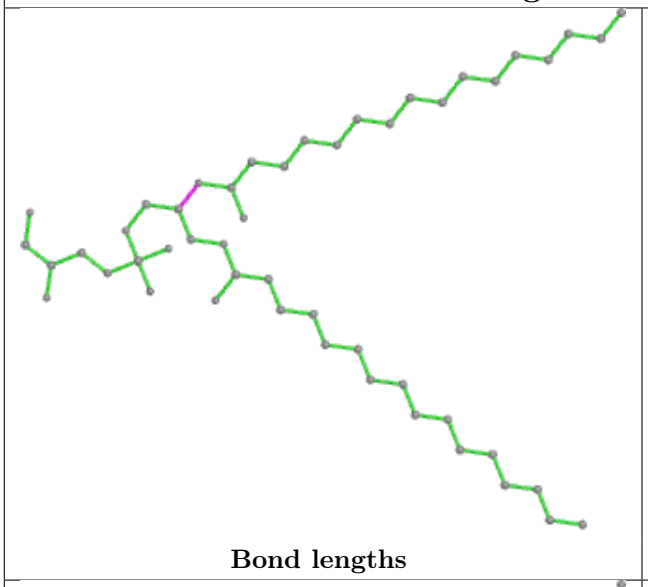


Torsions

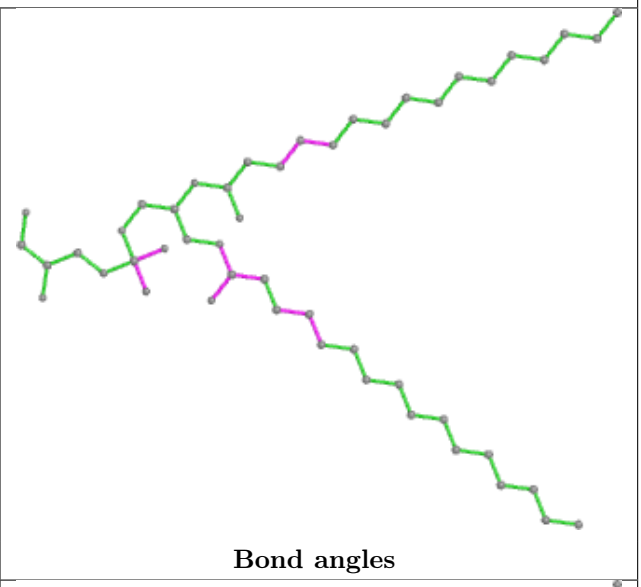


Rings

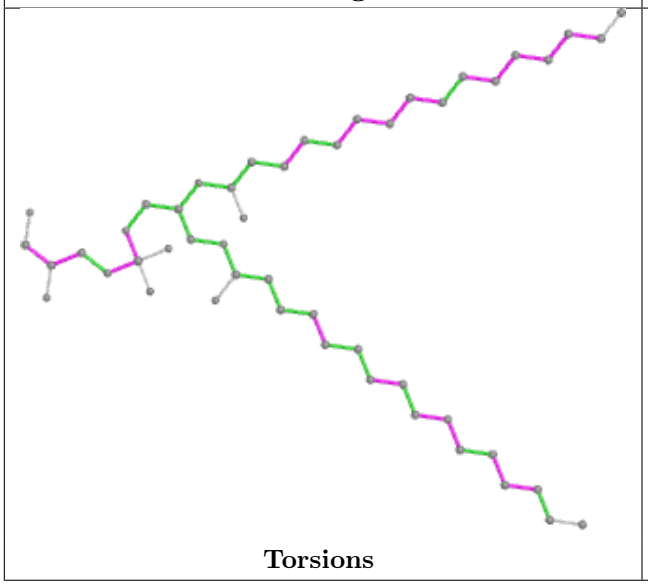
Ligand LHG D 407



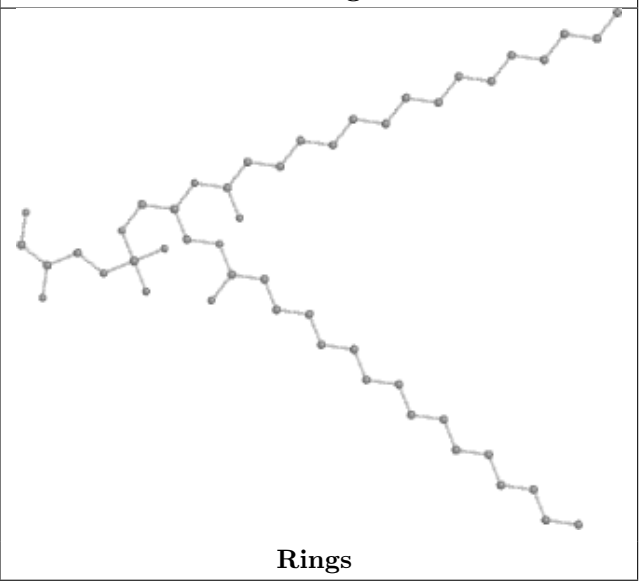
Bond lengths



Bond angles



Torsions



Rings

Ligand STE I 101

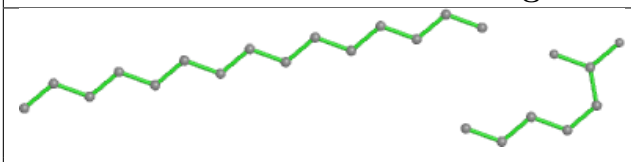
Bond lengths

Bond angles

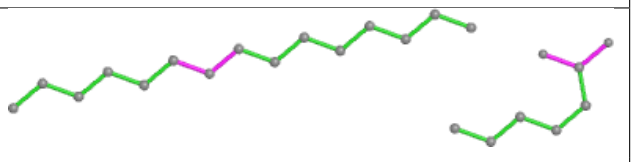
Torsions

Rings

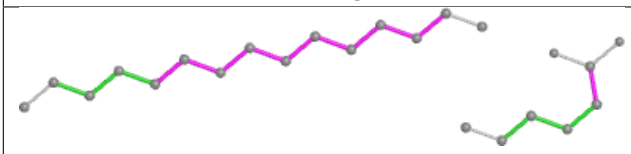
Ligand LMG d 410



Bond lengths



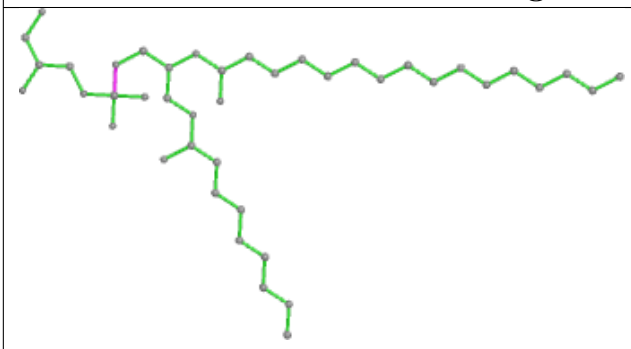
Bond angles



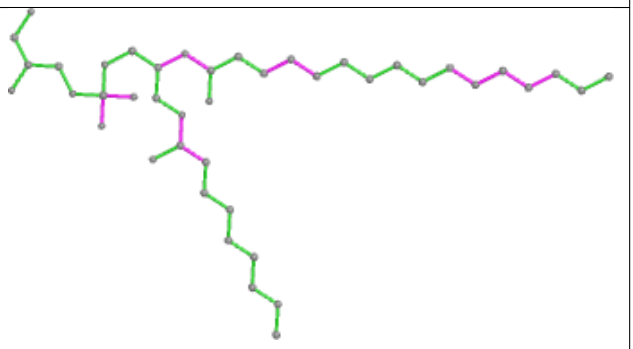
Torsions

Rings

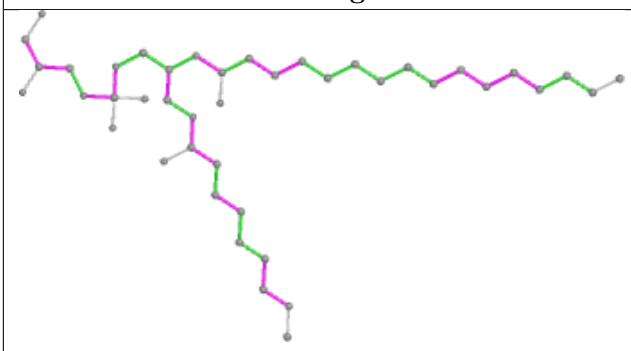
Ligand LHG e 102



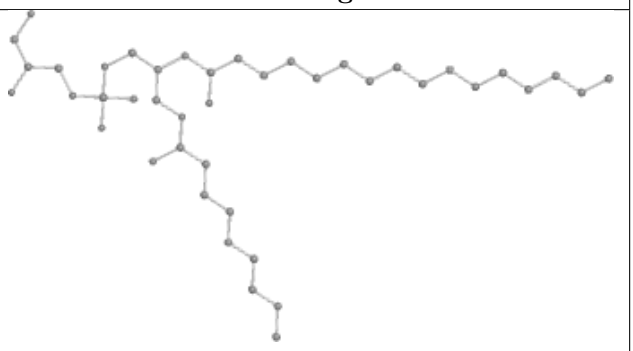
Bond lengths



Bond angles

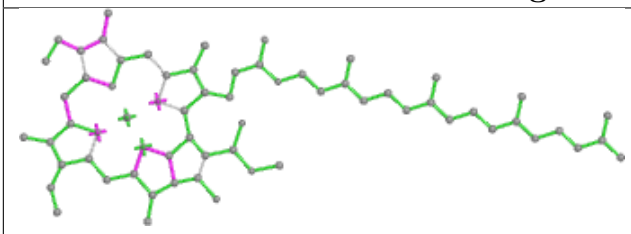


Torsions

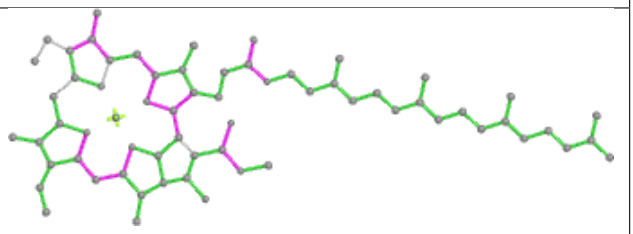


Rings

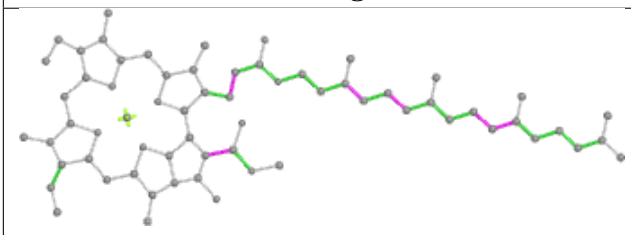
Ligand CLA c 507



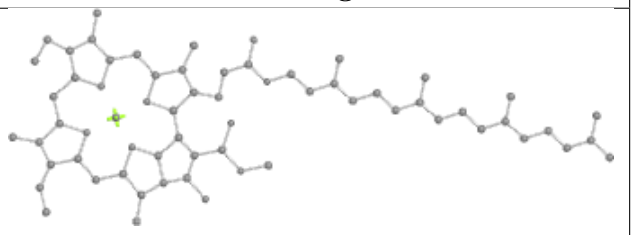
Bond lengths



Bond angles

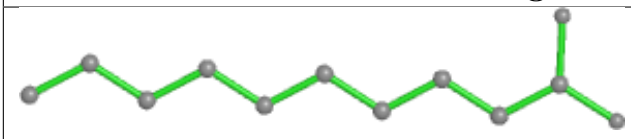


Torsions

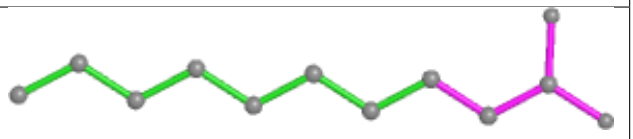


Rings

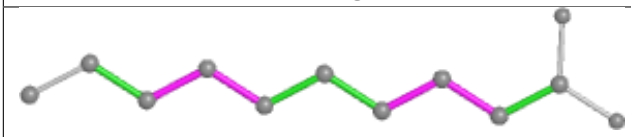
Ligand STE C 519



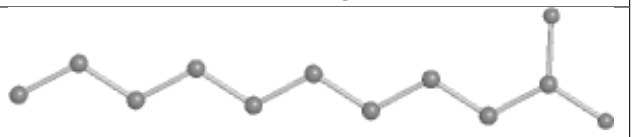
Bond lengths



Bond angles

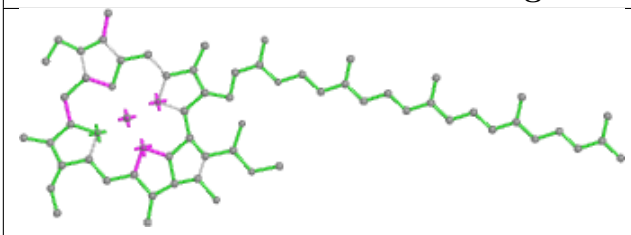


Torsions

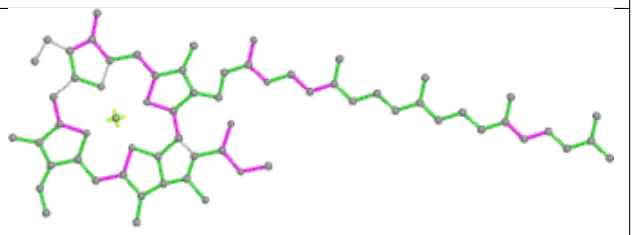


Rings

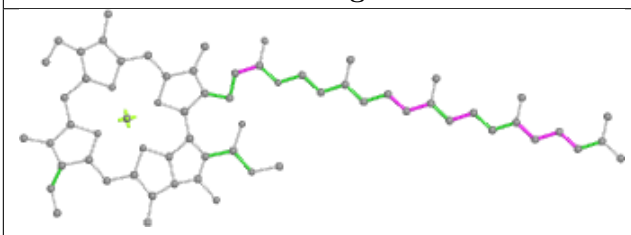
Ligand CLA B 613



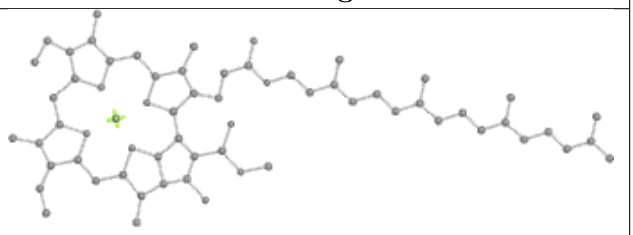
Bond lengths



Bond angles

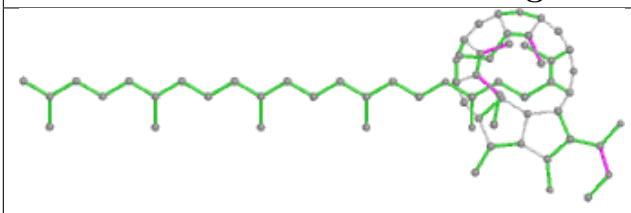


Torsions

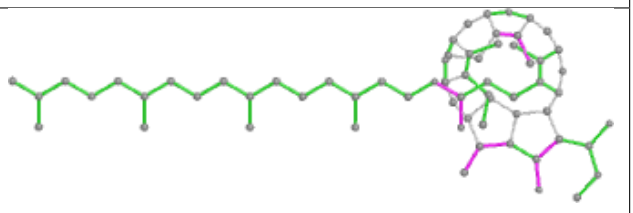


Rings

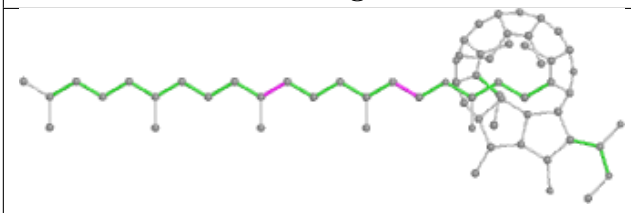
Ligand PHO a 608



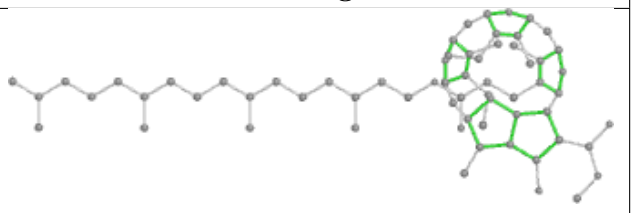
Bond lengths



Bond angles

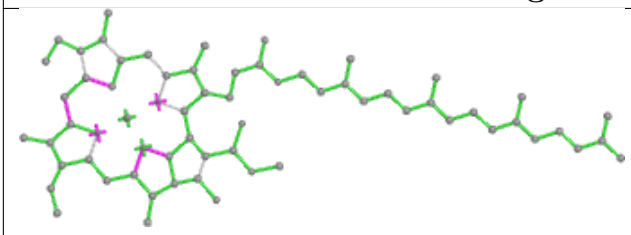


Torsions

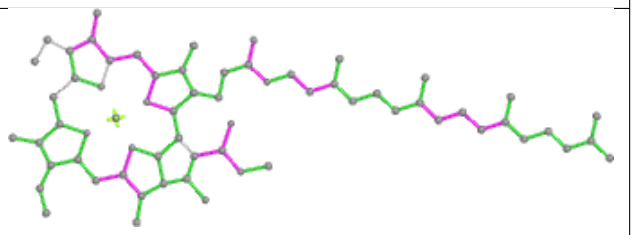


Rings

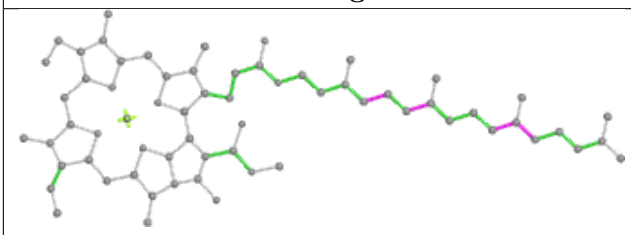
Ligand CLA b 603



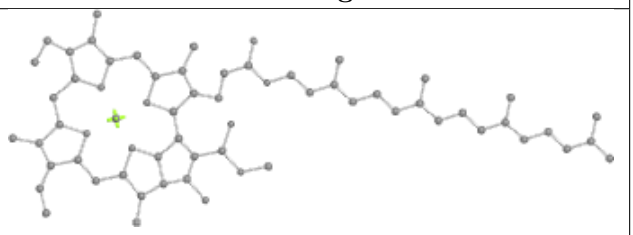
Bond lengths



Bond angles



Torsions



Rings

Ligand STE l 102

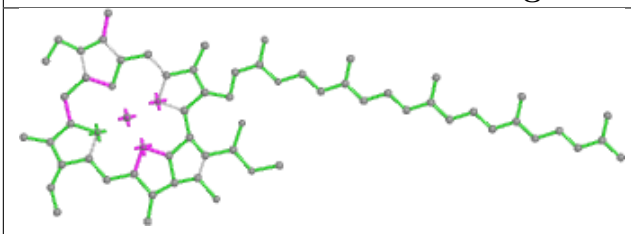
Bond lengths

Bond angles

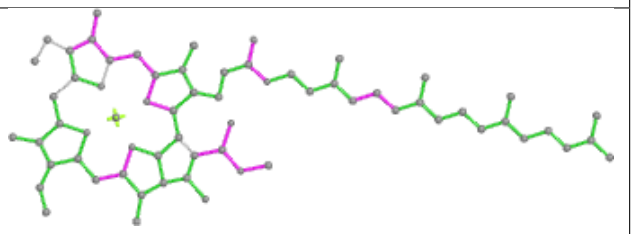
Torsions

Rings

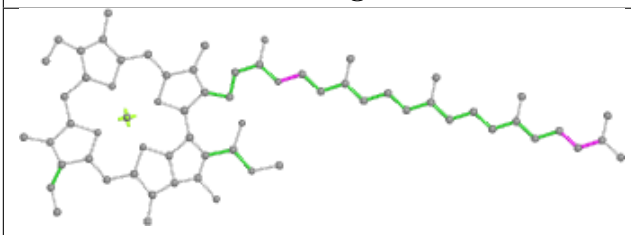
Ligand CLA A 607



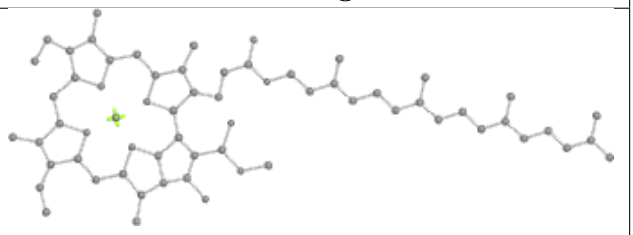
Bond lengths



Bond angles

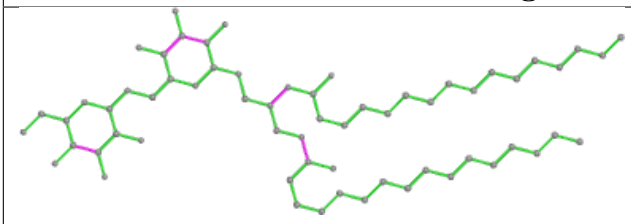


Torsions

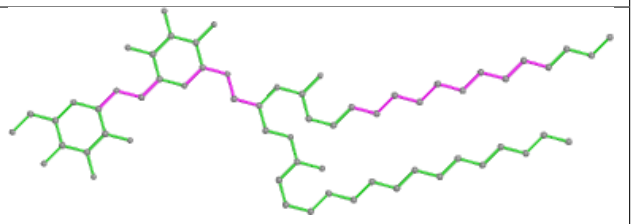


Rings

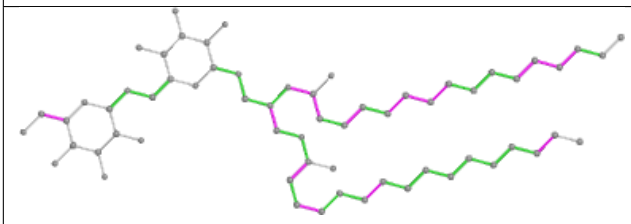
Ligand DGD C 515



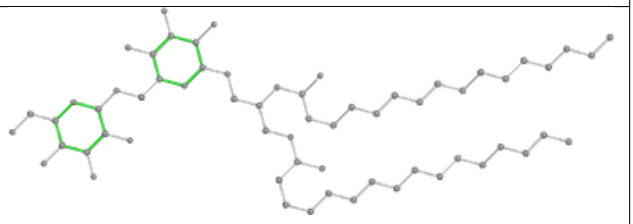
Bond lengths



Bond angles

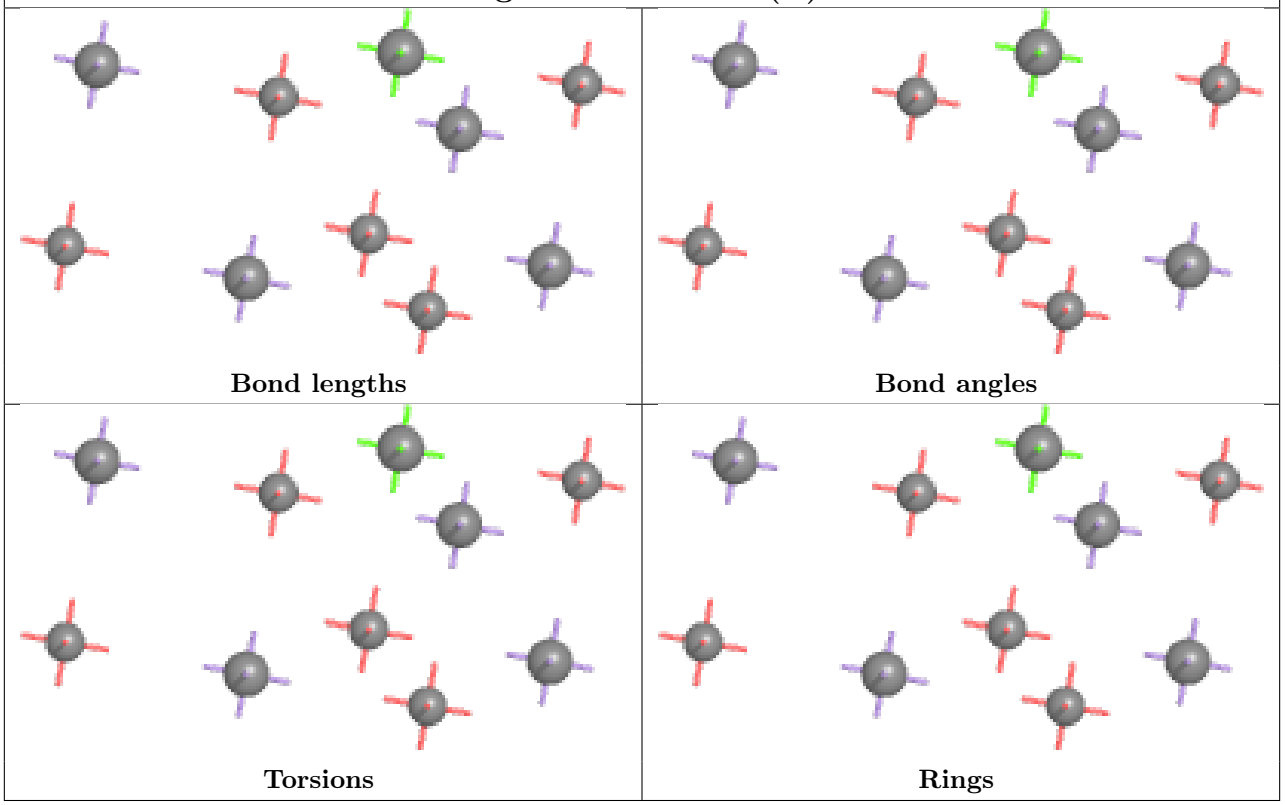


Torsions

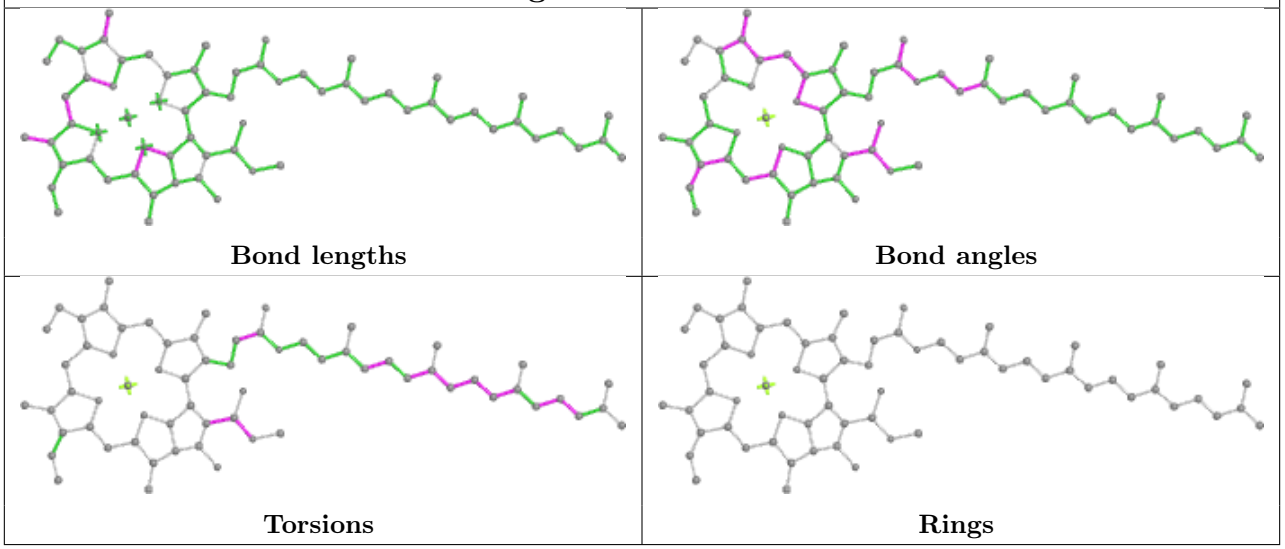


Rings

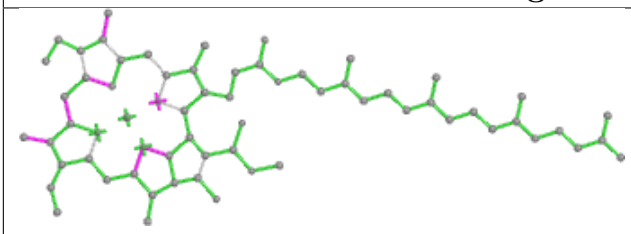
Ligand OEX a 602 (B)



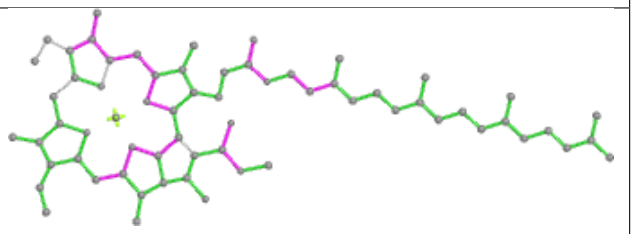
Ligand CLA b 611



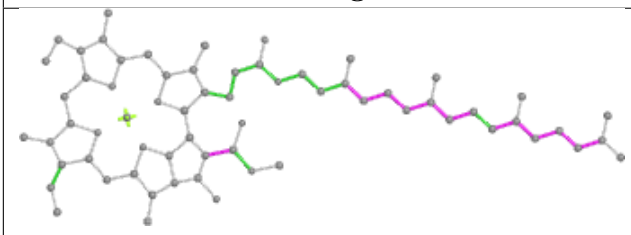
Ligand CLA b 613



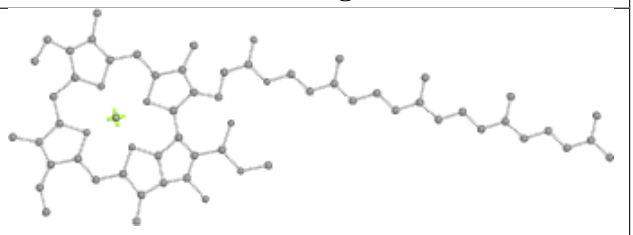
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers

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

6.1 Protein, DNA and RNA chains

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, 95^{th} 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%)	-0.38	4 (1%) 79 82	25, 31, 53, 81	0
1	a	334/344 (97%)	-0.33	2 (0%) 89 91	25, 33, 64, 83	0
2	B	505/510 (99%)	-0.40	11 (2%) 62 66	26, 35, 65, 96	0
2	b	505/510 (99%)	-0.29	13 (2%) 56 61	27, 38, 78, 109	0
3	C	442/461 (95%)	-0.32	1 (0%) 95 95	26, 39, 55, 78	0
3	c	451/461 (97%)	-0.27	6 (1%) 77 80	29, 43, 63, 98	0
4	D	341/352 (96%)	-0.37	3 (0%) 84 86	26, 33, 52, 76	0
4	d	341/352 (96%)	-0.34	3 (0%) 84 86	27, 37, 66, 86	0
5	E	82/84 (97%)	0.27	8 (9%) 7 10	38, 57, 76, 87	0
5	e	82/84 (97%)	0.26	4 (4%) 29 35	41, 65, 86, 97	0
6	F	34/45 (75%)	-0.19	3 (8%) 10 12	41, 49, 67, 88	0
6	f	34/45 (75%)	-0.29	1 (2%) 51 57	46, 55, 89, 108	0
7	H	65/66 (98%)	0.12	3 (4%) 32 38	37, 45, 62, 78	0
7	h	63/66 (95%)	0.24	3 (4%) 30 36	48, 56, 66, 72	0
8	I	35/38 (92%)	-0.35	1 (2%) 51 57	32, 41, 65, 81	0
8	i	35/38 (92%)	-0.23	1 (2%) 51 57	34, 43, 70, 86	0
9	J	36/40 (90%)	0.37	4 (11%) 5 7	40, 54, 84, 95	0
9	j	36/40 (90%)	0.55	7 (19%) 1 1	41, 61, 97, 109	0
10	K	37/46 (80%)	-0.12	1 (2%) 54 60	48, 56, 70, 81	0
10	k	37/46 (80%)	-0.15	0 100 100	53, 60, 77, 83	0
11	L	37/37 (100%)	-0.09	1 (2%) 54 60	27, 32, 63, 71	0
11	l	36/37 (97%)	-0.29	0 100 100	27, 33, 64, 79	0
12	M	32/36 (88%)	-0.20	1 (3%) 49 55	29, 35, 61, 76	0
12	m	31/36 (86%)	-0.18	0 100 100	31, 36, 55, 66	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	O	244/272 (89%)	-0.06	11 (4%) 33 38	28, 44, 79, 137	0
13	o	244/272 (89%)	-0.13	12 (4%) 29 35	28, 42, 78, 122	0
14	T	29/32 (90%)	-0.49	1 (3%) 45 51	28, 33, 58, 77	0
14	t	29/32 (90%)	-0.12	2 (6%) 16 21	29, 35, 75, 90	0
15	U	97/134 (72%)	-0.39	1 (1%) 82 85	35, 45, 68, 90	0
15	u	97/134 (72%)	-0.52	0 100 100	33, 43, 59, 85	0
16	V	137/163 (84%)	-0.55	0 100 100	33, 42, 58, 70	0
16	v	137/163 (84%)	-0.21	1 (0%) 87 89	38, 50, 69, 86	0
17	Y	27/46 (58%)	1.77	12 (44%) 0 0	58, 76, 110, 114	0
17	y	30/46 (65%)	0.91	6 (20%) 1 1	68, 80, 98, 101	0
18	X	38/41 (92%)	0.30	4 (10%) 6 8	47, 59, 77, 83	0
18	x	39/41 (95%)	1.02	8 (20%) 1 1	59, 69, 92, 104	0
19	Z	62/62 (100%)	0.92	13 (20%) 1 0	59, 75, 112, 129	0
19	z	62/62 (100%)	0.84	16 (25%) 0 0	65, 76, 116, 122	0
20	R	34/41 (82%)	1.78	14 (41%) 0 0	68, 74, 87, 93	0
20	r	31/41 (75%)	2.86	20 (64%) 0 0	77, 89, 107, 110	0
All	All	5302/5700 (93%)	-0.18	202 (3%) 40 46	25, 41, 77, 137	0

The worst 5 of 202 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
13	O	60	ARG	7.8
9	j	5	GLY	7.2
3	c	23	ALA	6.7
19	Z	62	VAL	6.6
13	O	3	GLN	6.6

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
14	FME	t	1	10/11	0.89	0.12	33,37,56,68	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	0.93	0.13	37,53,63,64	0
12	FME	m	1	10/11	0.94	0.15	30,49,65,66	0
8	FME	I	1	10/11	0.95	0.14	37,48,53,55	0
14	FME	T	1	10/11	0.96	0.12	33,37,51,70	0
8	FME	i	1	10/11	0.97	0.14	41,49,53,55	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, 95^{th} 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
34	STE	H	102	18/20	0.64	0.30	58,70,75,81	0
34	STE	a	615	12/20	0.68	0.31	54,63,79,81	0
30	LMG	D	408	33/55	0.69	0.24	44,59,81,83	0
30	LMG	d	410	23/55	0.71	0.28	52,65,73,74	0
31	LHG	A	617	49/49	0.71	0.27	55,79,98,109	0
34	STE	c	521	20/20	0.71	0.17	50,56,82,82	0
33	DGD	a	614	44/66	0.72	0.19	38,54,67,71	0
30	LMG	b	621	55/55	0.76	0.33	57,69,86,89	0
34	STE	k	102	12/20	0.76	0.22	60,70,74,75	0
34	STE	d	412	16/20	0.78	0.20	54,63,78,81	0
26	CLA	h	101	65/65	0.78	0.21	55,72,92,97	0
34	STE	F	103	12/20	0.79	0.42	58,75,86,89	0
30	LMG	c	522	48/55	0.79	0.25	60,73,85,89	0
29	PL9	a	611	55/55	0.80	0.27	50,66,78,86	0
32	SQD	t	102	36/54	0.80	0.17	40,59,75,76	0
30	LMG	B	621	28/55	0.80	0.17	40,50,64,67	0
34	STE	C	519	12/20	0.81	0.17	39,47,51,53	0
34	STE	B	625	16/20	0.81	0.23	51,55,66,69	0
34	STE	b	620	20/20	0.81	0.18	42,56,76,78	0
34	STE	B	623	12/20	0.82	0.17	47,58,66,68	0
31	LHG	e	102	42/49	0.82	0.32	60,86,104,113	0
34	STE	L	102	12/20	0.82	0.23	48,60,76,76	0
34	STE	d	414	20/20	0.82	0.18	46,52,62,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
34	STE	B	620	17/20	0.82	0.15	40,51,67,68	0
34	STE	T	103	15/20	0.83	0.22	46,51,67,68	0
34	STE	d	413	17/20	0.83	0.18	43,52,67,69	0
34	STE	b	623	10/20	0.83	0.22	46,56,62,65	0
34	STE	J	101	12/20	0.83	0.17	57,62,72,72	0
34	STE	t	105	18/20	0.83	0.15	44,57,86,87	0
34	STE	B	624	12/20	0.84	0.28	50,52,71,73	0
34	STE	b	622	20/20	0.84	0.23	51,60,67,70	0
34	STE	t	104	10/20	0.84	0.18	46,53,59,60	0
34	STE	T	102	16/20	0.84	0.18	38,48,58,60	0
30	LMG	c	523	49/55	0.85	0.14	41,56,78,83	0
33	DGD	A	619	66/66	0.85	0.19	47,59,67,76	0
34	STE	X	102	20/20	0.85	0.20	37,49,70,73	0
30	LMG	A	614	48/55	0.85	0.18	37,58,68,72	0
29	PL9	A	612	55/55	0.85	0.26	44,63,82,88	0
30	LMG	C	518	48/55	0.85	0.20	48,68,82,86	0
32	SQD	A	618	39/54	0.85	0.20	42,55,78,80	0
32	SQD	f	101	41/54	0.86	0.18	62,81,91,95	0
34	STE	C	520	12/20	0.86	0.16	48,55,59,63	0
34	STE	M	103	10/20	0.87	0.21	44,48,59,61	0
33	DGD	H	101	62/66	0.87	0.14	38,47,56,61	0
30	LMG	M	101	51/55	0.87	0.14	31,48,67,68	0
30	LMG	c	520	37/55	0.87	0.20	52,68,80,83	0
32	SQD	B	622	54/54	0.87	0.16	39,60,80,86	0
26	CLA	c	512	65/65	0.88	0.13	46,58,77,88	0
28	BCR	X	101	40/40	0.88	0.12	39,50,56,63	0
34	STE	I	101	15/20	0.88	0.12	44,52,59,62	0
30	LMG	m	101	51/55	0.88	0.12	33,48,64,66	0
32	SQD	b	619	49/54	0.89	0.14	37,56,72,77	0
28	BCR	K	101	40/40	0.89	0.12	46,55,61,68	0
26	CLA	b	615	60/65	0.89	0.14	31,41,84,91	0
28	BCR	d	405	40/40	0.89	0.11	42,50,79,84	0
28	BCR	k	101	40/40	0.89	0.12	49,61,68,73	0
34	STE	j	101	12/20	0.89	0.14	52,56,64,65	0
26	CLA	B	601	65/65	0.89	0.16	41,63,87,94	0
26	CLA	c	513	65/65	0.89	0.18	53,66,83,88	0
26	CLA	B	616	60/65	0.89	0.14	26,36,76,89	0
26	CLA	C	512	65/65	0.90	0.15	40,51,75,81	0
28	BCR	h	102	40/40	0.90	0.12	42,58,68,68	0
33	DGD	h	103	62/66	0.90	0.15	38,50,59,62	0
34	STE	l	102	18/20	0.90	0.15	36,41,68,73	0
26	CLA	C	513	65/65	0.90	0.15	50,57,77,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
28	BCR	c	516	40/40	0.90	0.18	52,59,63,68	0
34	STE	M	102	15/20	0.91	0.11	37,44,53,64	0
28	BCR	b	618	40/40	0.91	0.10	33,45,59,61	0
28	BCR	c	514	40/40	0.91	0.14	52,61,65,68	0
26	CLA	a	609	65/65	0.91	0.14	24,30,68,76	0
28	BCR	Z	101	40/40	0.91	0.12	50,56,62,64	0
34	STE	C	521	16/20	0.91	0.11	39,49,64,64	0
26	CLA	C	503	65/65	0.92	0.10	36,42,49,54	0
26	CLA	d	404	65/65	0.92	0.14	34,43,83,86	0
26	CLA	C	506	65/65	0.92	0.12	32,42,74,77	0
30	LMG	D	406	51/55	0.92	0.14	36,52,71,74	0
33	DGD	c	518	62/66	0.92	0.10	39,52,76,81	0
32	SQD	F	102	36/54	0.92	0.15	55,72,80,82	0
32	SQD	a	613	54/54	0.92	0.14	45,60,75,81	0
34	STE	t	103	14/20	0.92	0.14	38,49,60,60	0
28	BCR	C	514	40/40	0.92	0.12	31,41,51,54	0
26	CLA	D	403	65/65	0.92	0.13	30,36,90,103	0
33	DGD	C	515	62/66	0.93	0.12	25,36,63,70	0
26	CLA	b	614	65/65	0.93	0.13	31,40,53,58	0
26	CLA	B	615	65/65	0.93	0.13	25,37,51,61	0
26	CLA	c	506	65/65	0.93	0.11	39,46,72,76	0
28	BCR	B	618	40/40	0.93	0.09	26,37,46,48	0
28	BCR	B	619	40/40	0.93	0.09	33,41,54,60	0
26	CLA	c	508	64/65	0.93	0.13	36,43,81,96	0
28	BCR	D	404	40/40	0.93	0.11	37,45,79,85	0
26	CLA	c	511	65/65	0.93	0.12	44,56,70,72	0
28	BCR	K	102	40/40	0.93	0.15	38,51,62,64	0
26	CLA	b	613	65/65	0.93	0.14	28,37,66,71	0
30	LMG	d	411	44/55	0.93	0.11	41,52,72,76	0
26	CLA	b	612	65/65	0.94	0.11	25,32,62,72	0
28	BCR	A	611	40/40	0.94	0.09	25,33,38,41	0
28	BCR	B	617	40/40	0.94	0.10	30,38,48,53	0
26	CLA	C	507	65/65	0.94	0.12	31,38,51,52	0
26	CLA	C	508	65/65	0.94	0.10	34,41,87,91	0
26	CLA	C	511	65/65	0.94	0.11	33,48,60,63	0
26	CLA	c	502	65/65	0.94	0.10	34,41,53,58	0
26	CLA	c	505	65/65	0.94	0.13	33,41,56,64	0
33	DGD	C	516	62/66	0.94	0.11	36,49,88,96	0
26	CLA	C	502	65/65	0.94	0.10	30,39,51,56	0
26	CLA	c	507	65/65	0.94	0.11	33,41,50,53	0
33	DGD	c	517	62/66	0.94	0.11	30,38,60,67	0
26	CLA	B	606	65/65	0.94	0.10	27,35,61,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
33	DGD	c	519	62/66	0.94	0.10	33,48,71,80	0
28	BCR	b	616	40/40	0.94	0.11	30,40,48,48	0
28	BCR	b	617	40/40	0.94	0.09	27,36,46,47	0
26	CLA	c	510	65/65	0.94	0.13	34,44,56,63	0
26	CLA	C	505	65/65	0.94	0.14	24,37,56,59	0
28	BCR	c	515	40/40	0.94	0.12	33,47,53,56	0
26	CLA	a	607	65/65	0.94	0.11	29,37,86,95	0
26	CLA	B	614	65/65	0.94	0.13	23,35,64,75	0
32	SQD	A	616	52/54	0.94	0.15	35,56,80,84	0
26	CLA	b	605	65/65	0.94	0.10	31,39,60,71	0
26	CLA	B	610	65/65	0.95	0.13	24,31,40,42	0
26	CLA	B	612	65/65	0.95	0.13	22,28,35,42	0
26	CLA	B	613	65/65	0.95	0.10	22,29,60,68	0
26	CLA	c	501	65/65	0.95	0.11	28,38,47,53	0
26	CLA	C	509	65/65	0.95	0.13	34,42,57,59	0
26	CLA	c	503	65/65	0.95	0.11	37,45,51,53	0
28	BCR	T	101	40/40	0.95	0.09	33,39,47,52	0
26	CLA	c	504	60/65	0.95	0.10	31,45,69,74	0
26	CLA	A	613	65/65	0.95	0.10	24,29,38,46	0
28	BCR	a	610	40/40	0.95	0.08	20,34,43,45	0
31	LHG	A	615	47/49	0.95	0.11	30,45,70,80	0
26	CLA	A	608	65/65	0.95	0.10	24,33,83,90	0
31	LHG	D	409	49/49	0.95	0.12	29,40,53,59	0
31	LHG	d	407	49/49	0.95	0.11	32,45,61,66	0
31	LHG	d	409	39/49	0.95	0.10	37,43,51,54	0
26	CLA	B	602	65/65	0.95	0.10	28,37,55,57	0
31	LHG	l	101	49/49	0.95	0.11	31,41,48,56	0
26	CLA	C	501	65/65	0.95	0.10	25,35,49,53	0
26	CLA	c	509	65/65	0.95	0.13	38,45,57,61	0
26	CLA	B	604	65/65	0.95	0.11	22,30,65,68	0
26	CLA	A	610	54/65	0.95	0.11	22,28,58,60	0
26	CLA	b	601	65/65	0.95	0.12	34,42,54,60	0
26	CLA	b	603	65/65	0.95	0.12	26,33,66,79	0
26	CLA	d	403	65/65	0.95	0.10	24,32,52,56	0
28	BCR	t	101	40/40	0.95	0.08	29,38,48,51	0
26	CLA	C	504	59/65	0.95	0.10	35,43,75,82	0
29	PL9	D	405	55/55	0.95	0.11	24,31,38,39	0
26	CLA	b	609	65/65	0.95	0.13	30,37,45,49	0
33	DGD	C	517	62/66	0.95	0.09	30,44,69,75	0
29	PL9	d	406	55/55	0.95	0.09	25,33,38,41	0
27	PHO	a	608	64/64	0.95	0.10	24,29,35,40	0
26	CLA	b	611	65/65	0.95	0.14	26,32,40,42	0

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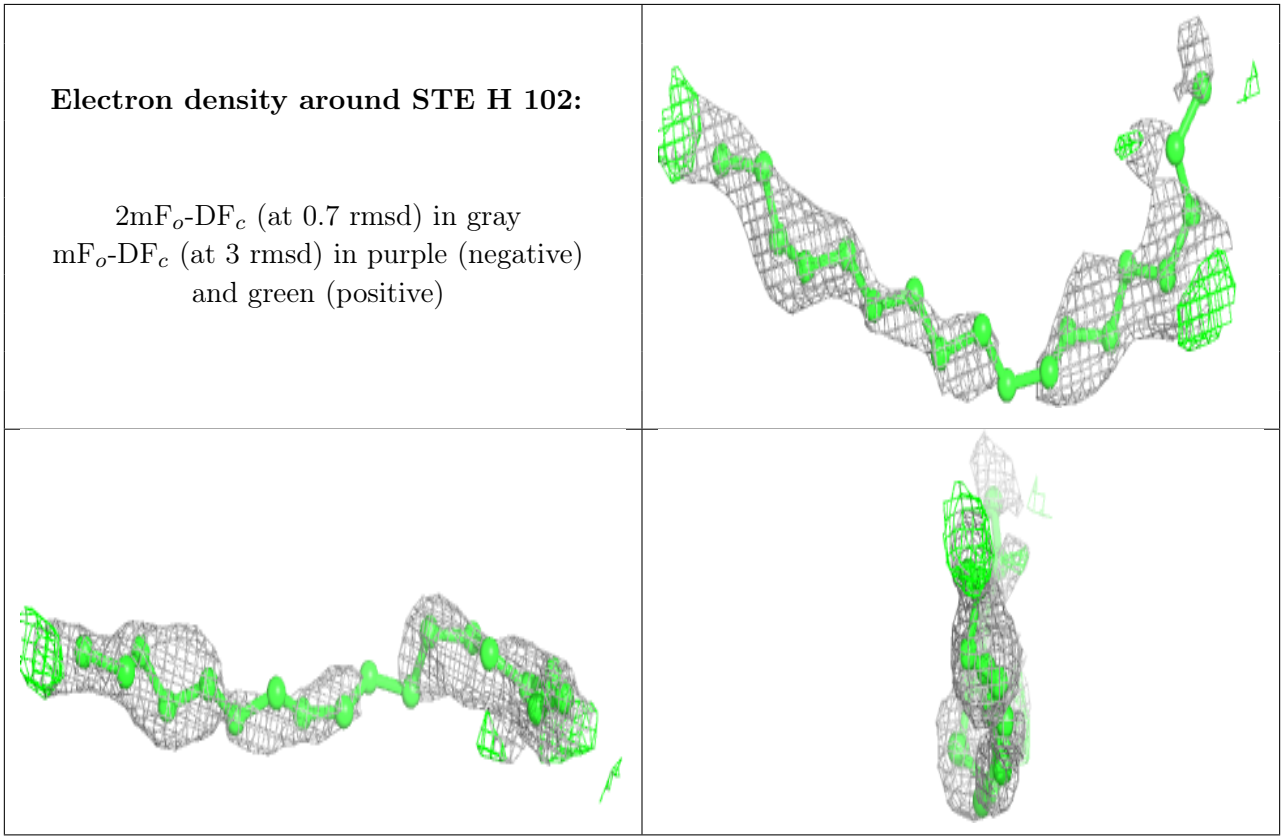
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
26	CLA	B	609	65/65	0.95	0.11	27,40,51,62	0
27	PHO	A	609	64/64	0.96	0.09	23,27,35,38	0
27	PHO	D	401	64/64	0.96	0.09	25,33,38,43	0
26	CLA	a	612	65/65	0.96	0.09	22,30,39,44	0
27	PHO	d	402	64/64	0.96	0.09	30,39,45,49	0
26	CLA	C	510	65/65	0.96	0.11	30,43,57,73	0
26	CLA	b	602	65/65	0.96	0.11	25,34,59,70	0
26	CLA	B	608	65/65	0.96	0.10	25,34,53,56	0
26	CLA	b	604	65/65	0.96	0.10	24,35,44,49	0
31	LHG	L	101	49/49	0.96	0.12	31,38,51,54	0
26	CLA	A	607	65/65	0.96	0.09	21,29,37,41	0
31	LHG	d	408	49/49	0.96	0.12	27,39,48,55	0
26	CLA	b	606	65/65	0.96	0.11	23,30,54,62	0
26	CLA	b	607	65/65	0.96	0.11	33,41,59,66	0
26	CLA	b	608	65/65	0.96	0.10	32,43,63,70	0
26	CLA	B	605	65/65	0.96	0.12	23,31,41,45	0
26	CLA	b	610	65/65	0.96	0.08	25,32,45,53	0
26	CLA	D	402	65/65	0.96	0.08	22,27,47,58	0
26	CLA	B	611	65/65	0.96	0.10	20,30,38,46	0
26	CLA	a	606	65/65	0.96	0.08	23,31,37,47	0
26	CLA	B	603	65/65	0.96	0.10	26,31,54,59	0
26	CLA	B	607	65/65	0.96	0.09	20,29,54,58	0
35	HEM	F	101	43/43	0.96	0.12	45,52,63,72	0
35	HEM	e	101	43/43	0.96	0.13	54,63,79,83	0
36	HEC	v	201	43/43	0.96	0.12	32,38,46,50	0
31	LHG	D	407	49/49	0.97	0.09	26,37,44,54	0
25	BCT	d	401	4/4	0.97	0.15	32,36,43,48	0
25	BCT	A	606	4/4	0.97	0.19	35,35,39,40	0
21	OEY	a	601[A]	11/11	0.98	0.12	31,35,39,39	11
21	OEY	a	601[C]	11/11	0.98	0.12	26,28,35,37	11
22	OEX	A	602[B]	10/10	0.98	0.10	27,31,34,34	10
22	OEX	a	602[B]	10/10	0.98	0.11	26,31,33,33	10
24	CL	a	605	1/1	0.98	0.07	30,30,30,30	0
21	OEY	A	601[A]	11/11	0.98	0.11	31,34,38,38	11
36	HEC	V	201	43/43	0.98	0.09	26,33,40,47	0
21	OEY	A	601[C]	11/11	0.98	0.11	28,30,33,36	11
24	CL	a	604	1/1	0.99	0.03	32,32,32,32	0
23	FE2	a	603	1/1	0.99	0.03	36,36,36,36	0
24	CL	A	604	1/1	0.99	0.03	34,34,34,34	0
24	CL	A	605	1/1	0.99	0.03	35,35,35,35	0
23	FE2	A	603	1/1	1.00	0.04	29,29,29,29	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.

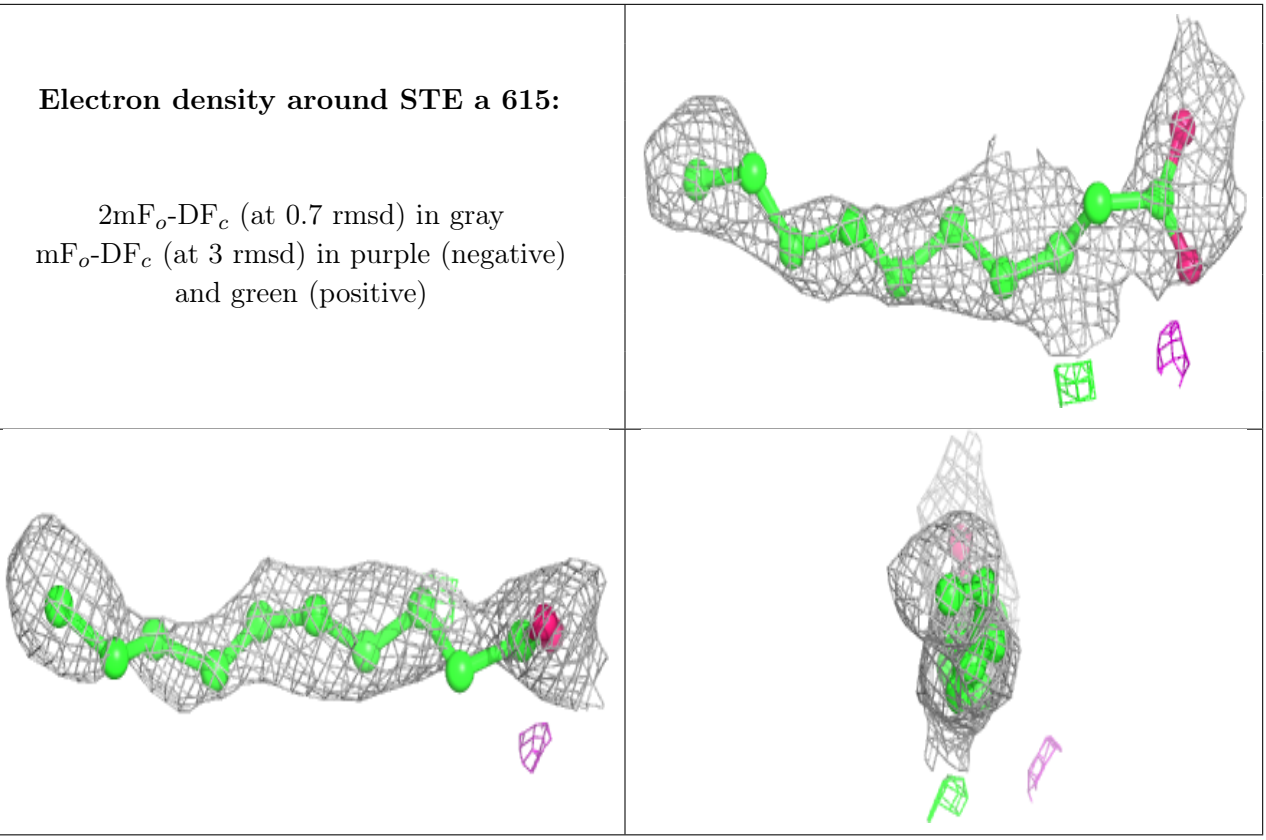
Electron density around STE H 102:

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



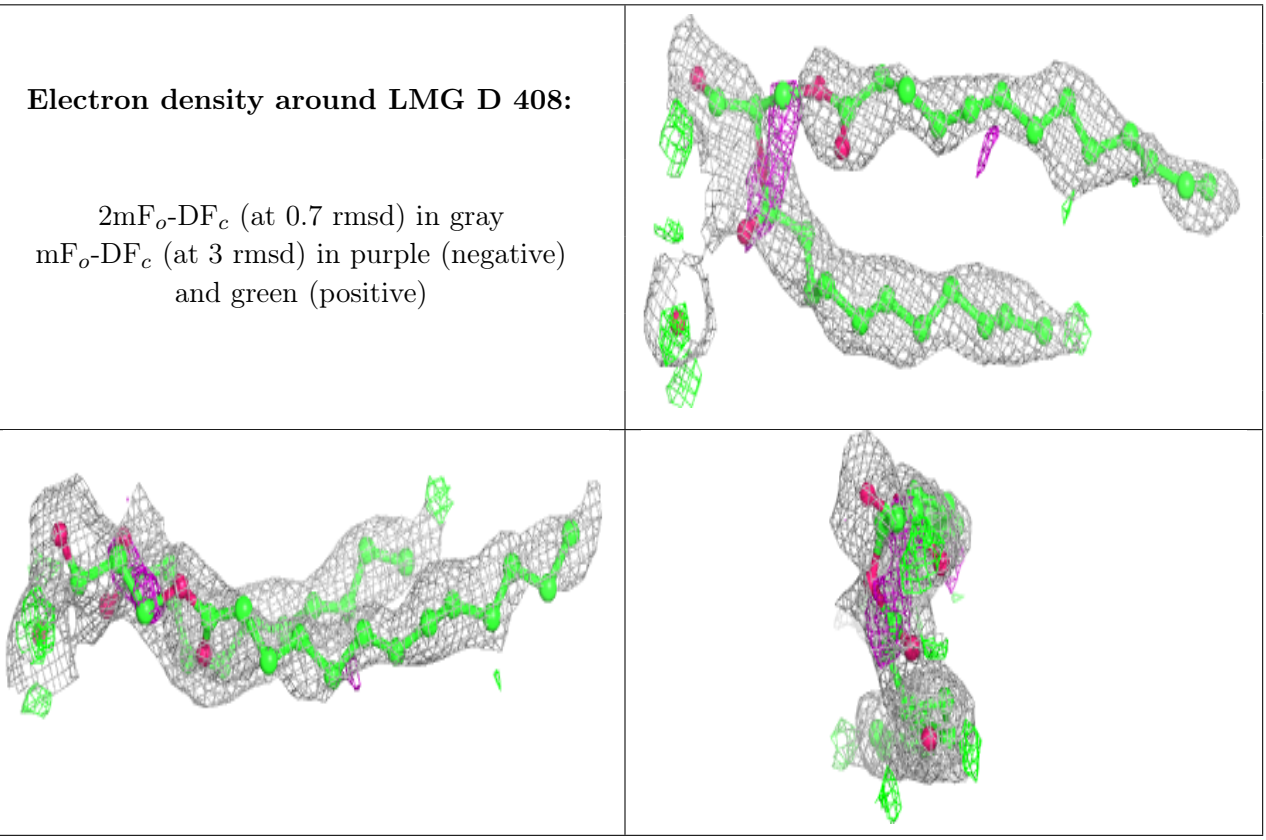
Electron density around STE a 615:

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



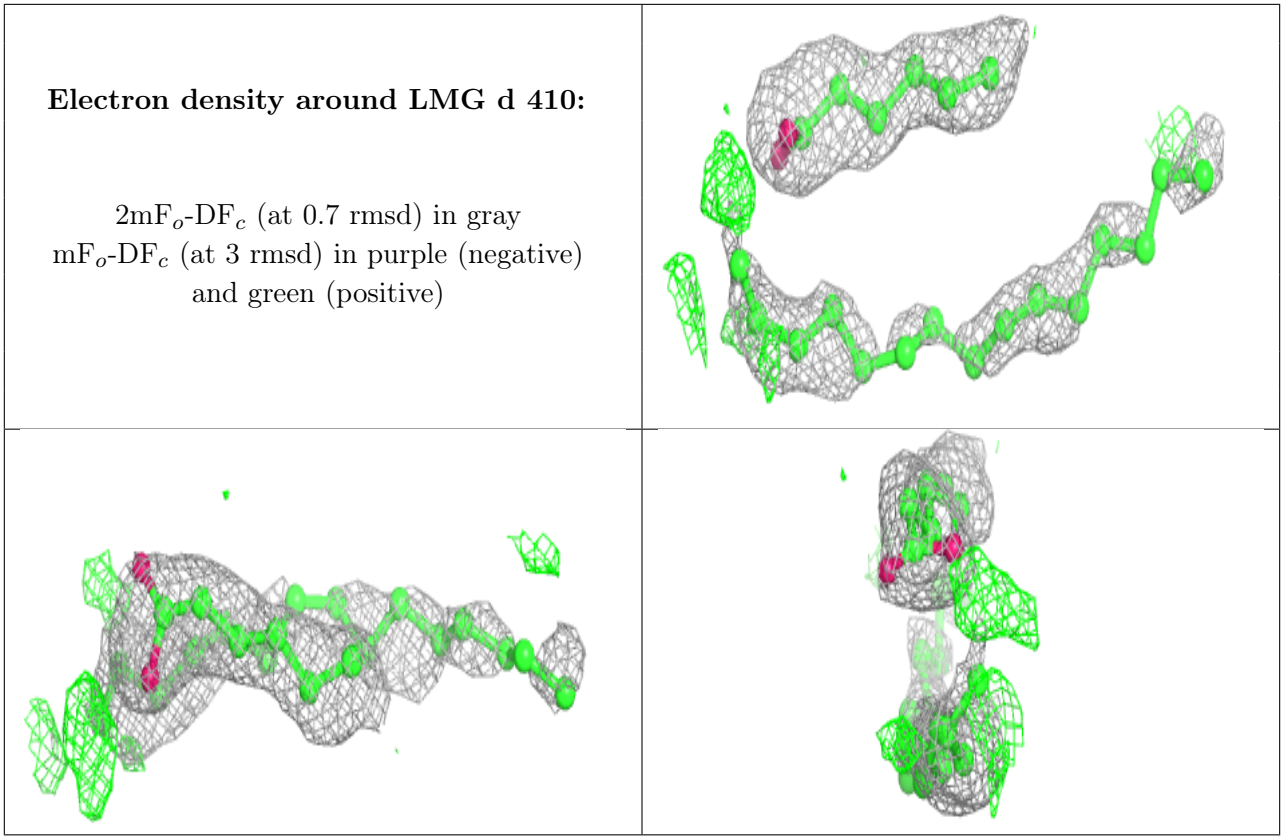
Electron density around LMG D 408:

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



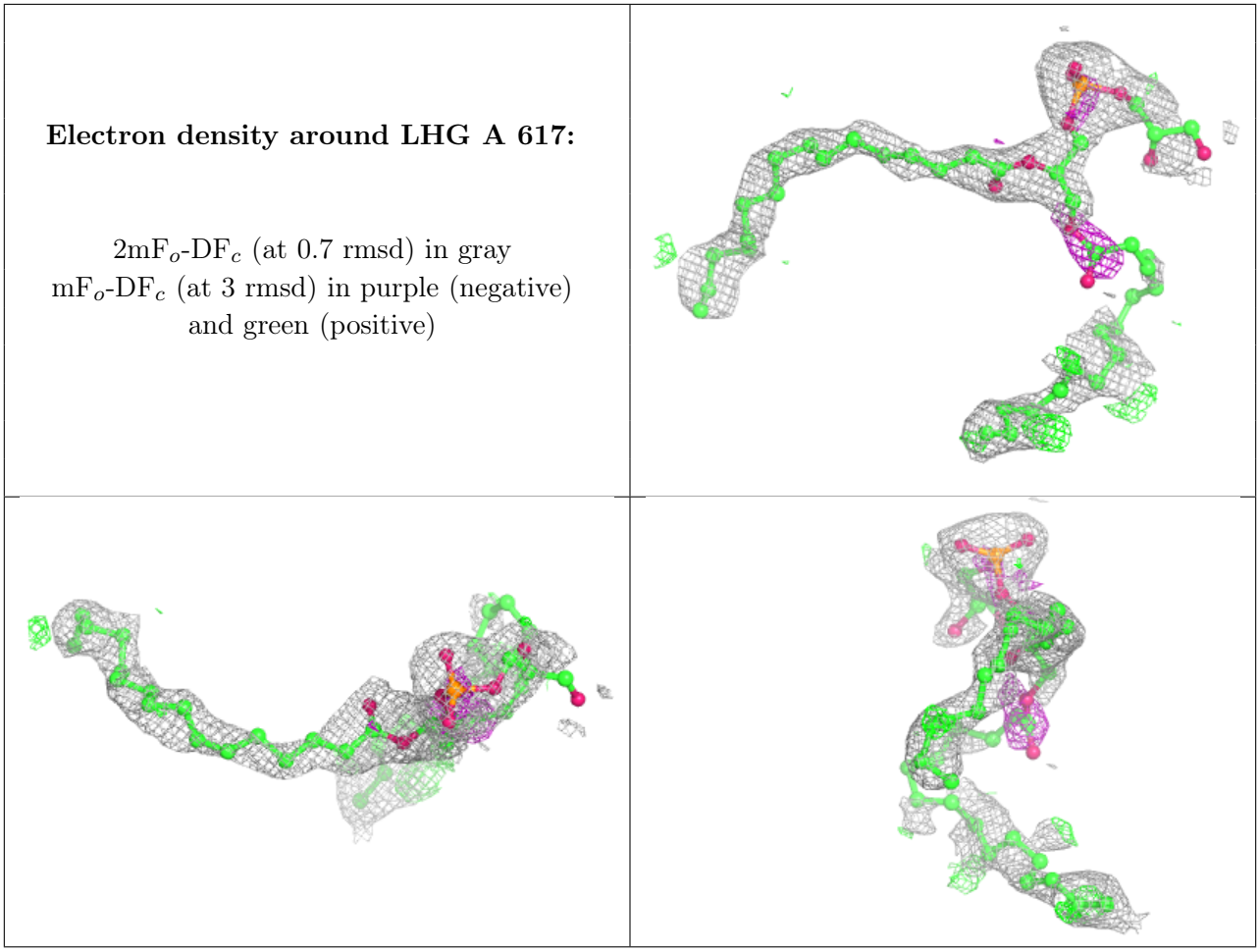
Electron density around LMG d 410:

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



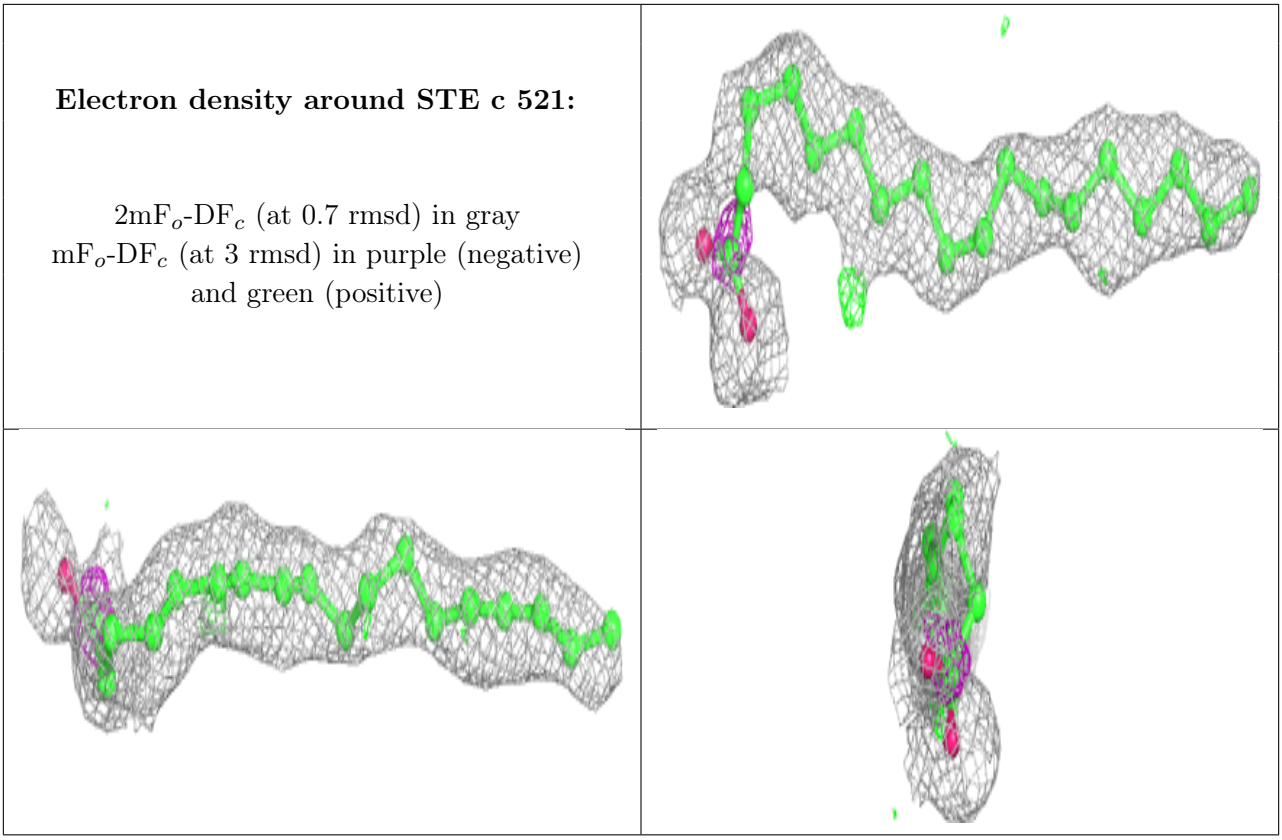
Electron density around LHG A 617:

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



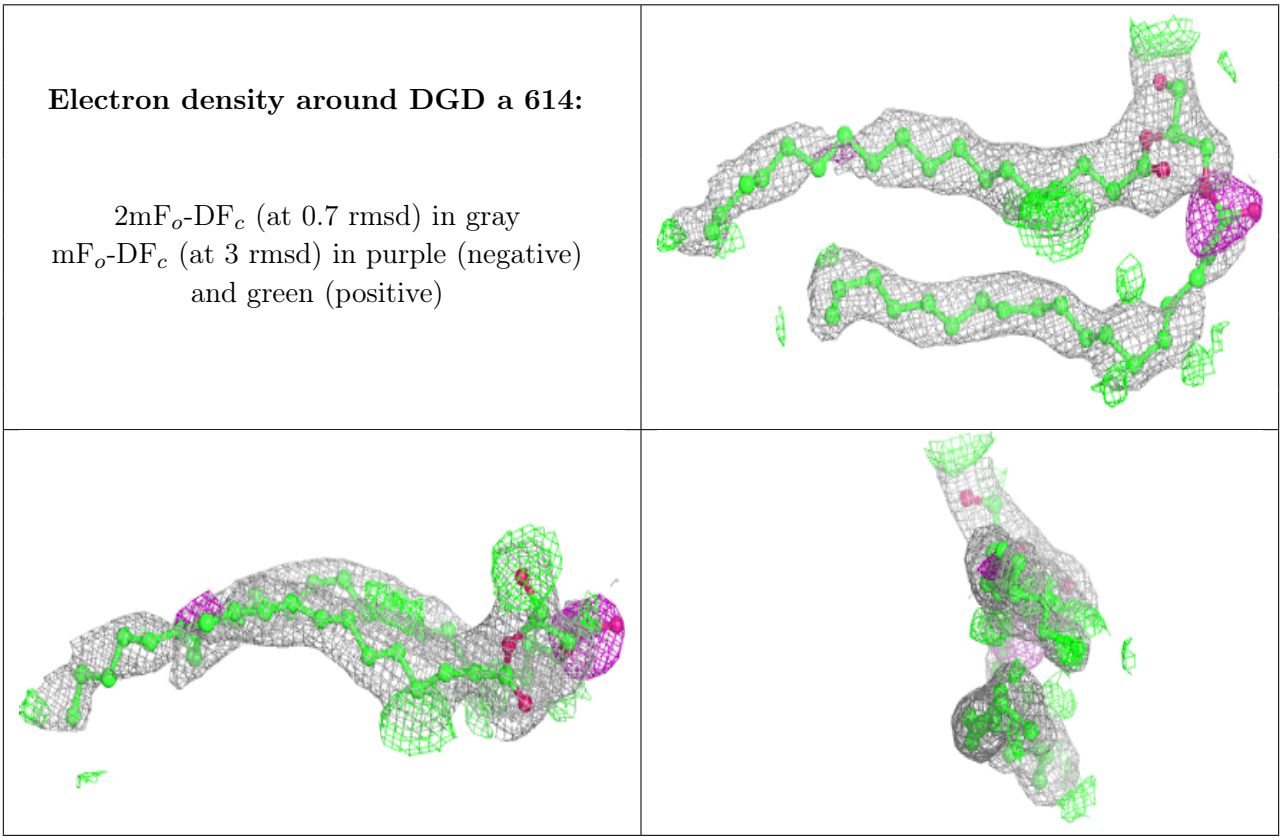
Electron density around STE c 521:

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



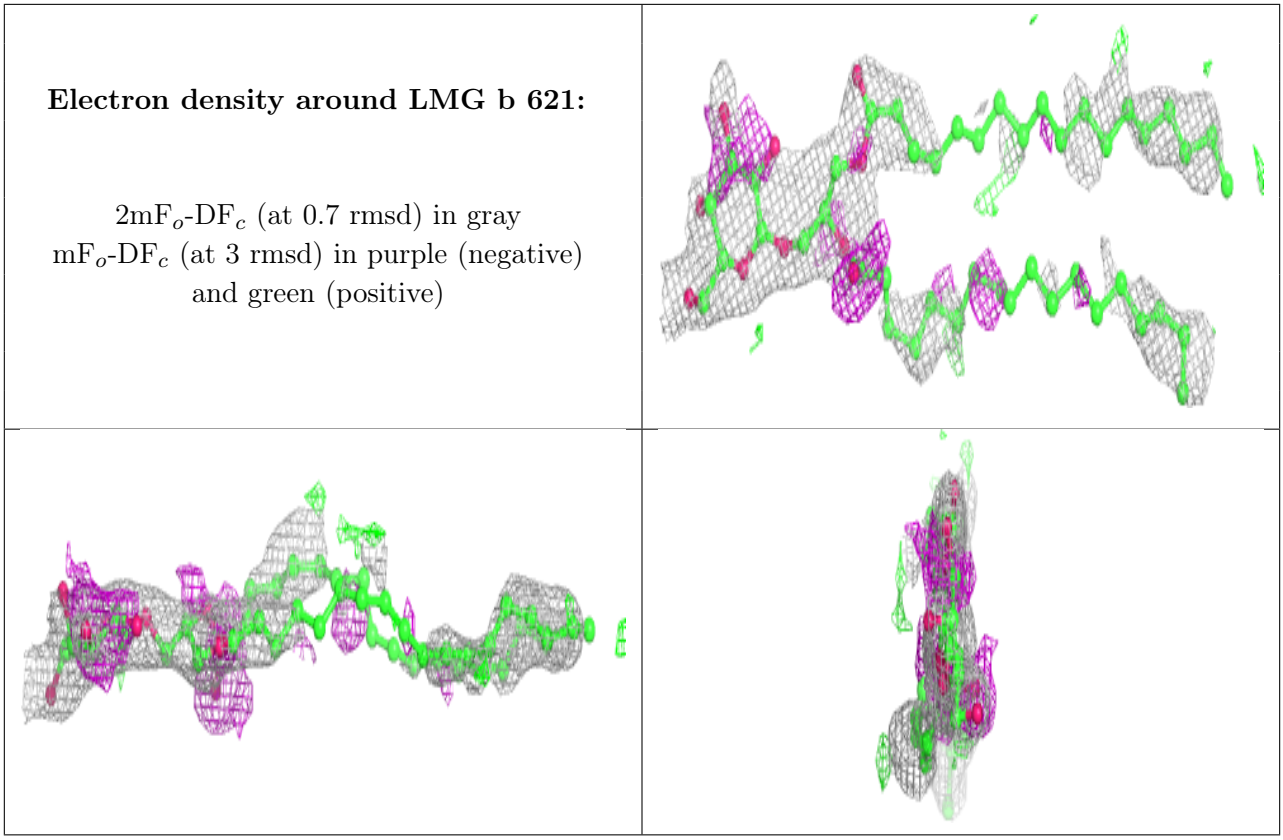
Electron density around DGD a 614:

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



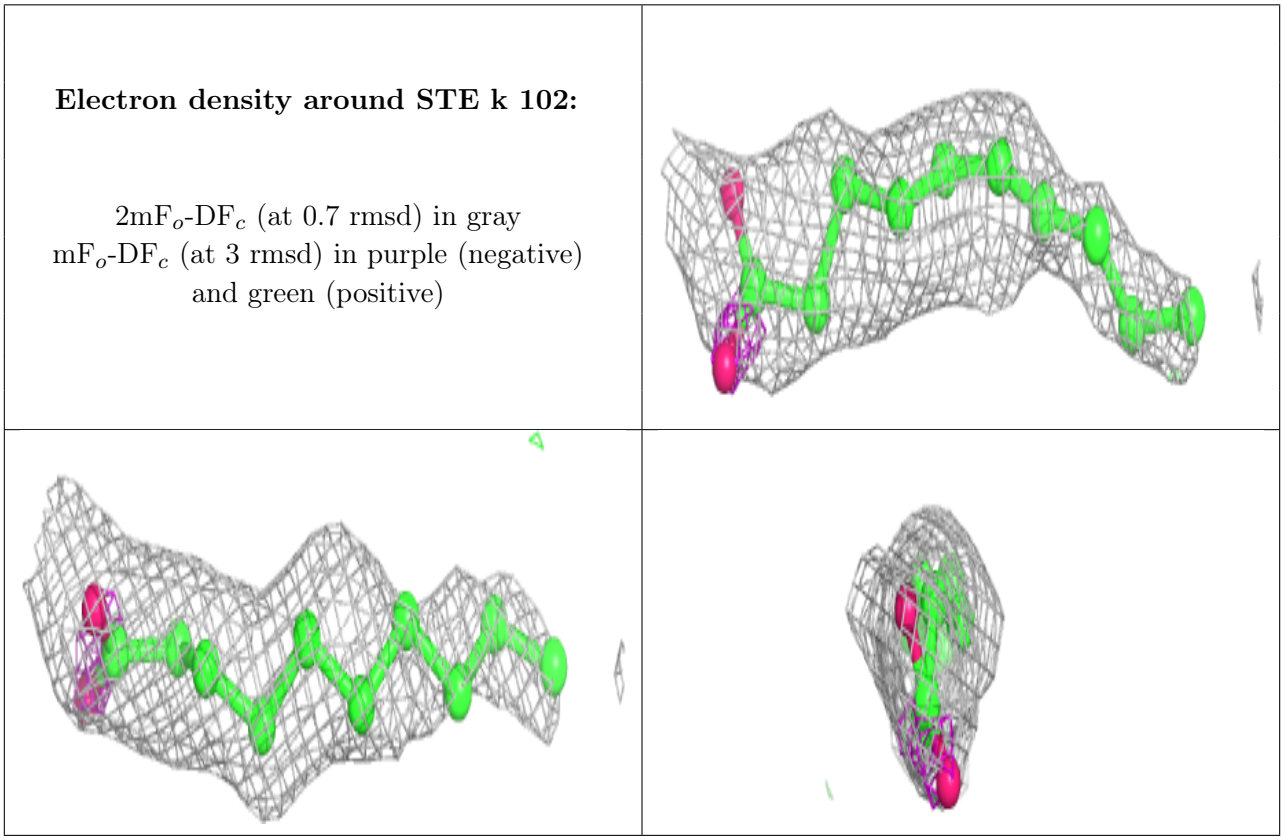
Electron density around LMG b 621:

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



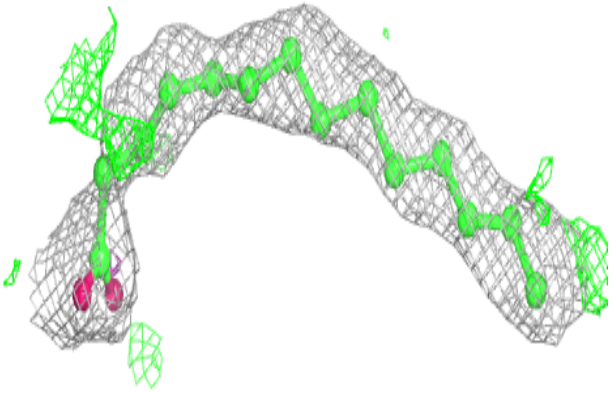
Electron density around STE k 102:

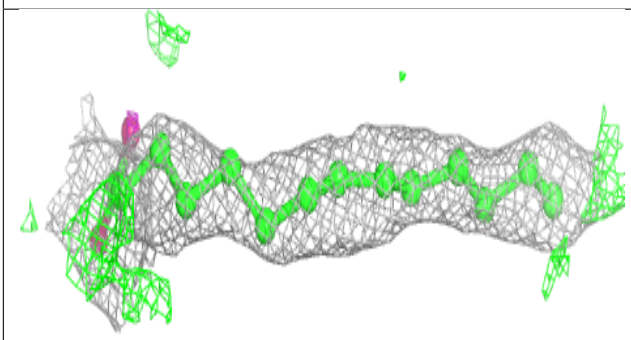
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

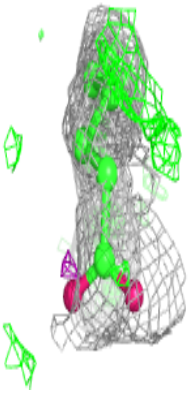


Electron density around STE d 412:

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

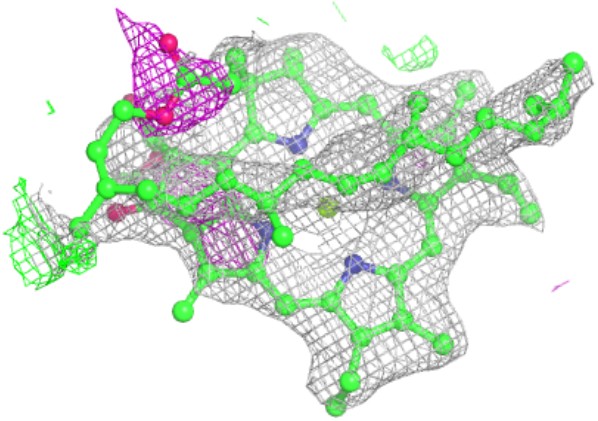


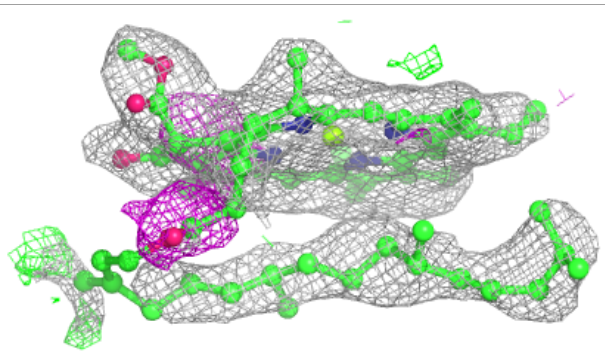


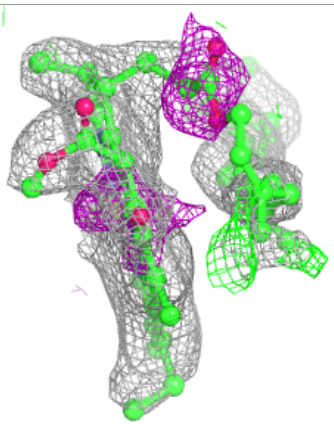


Electron density around CLA h 101:

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

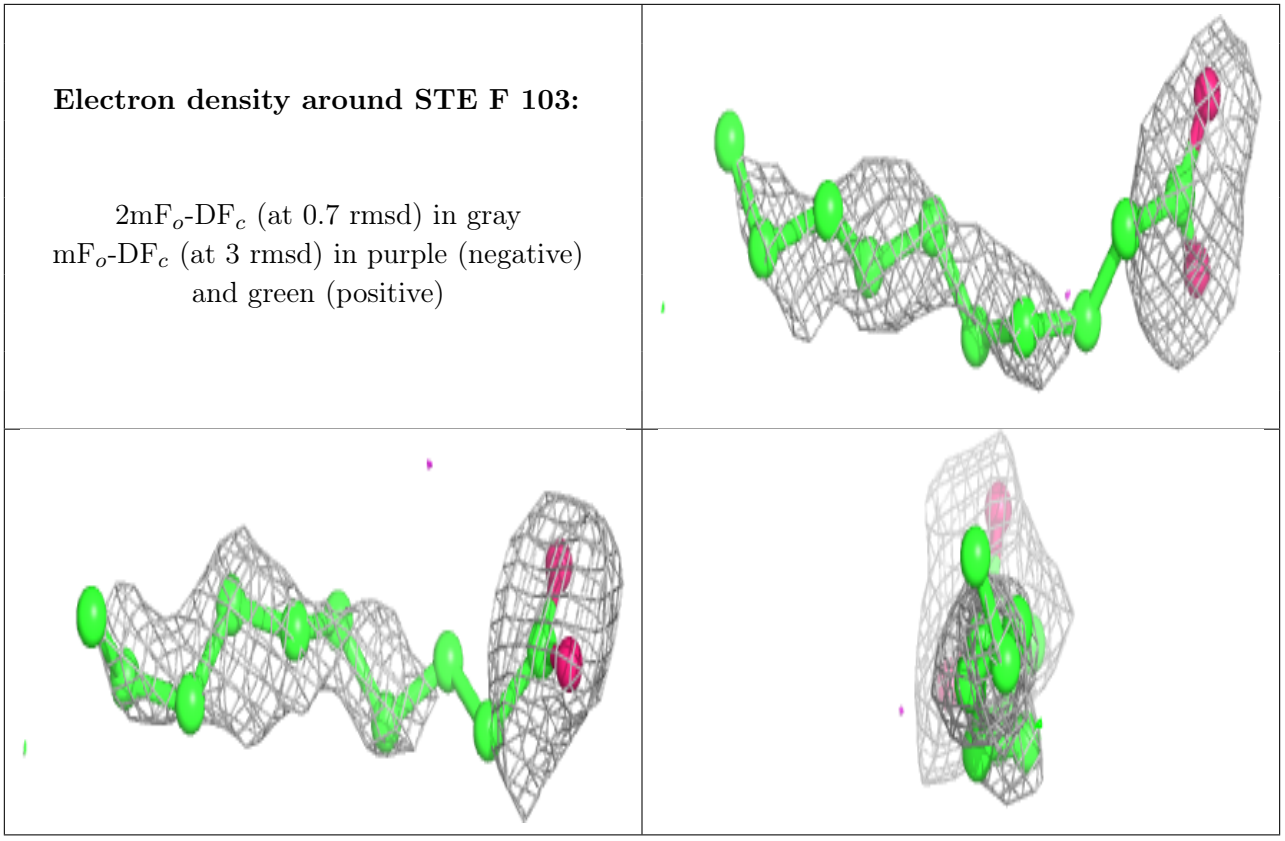






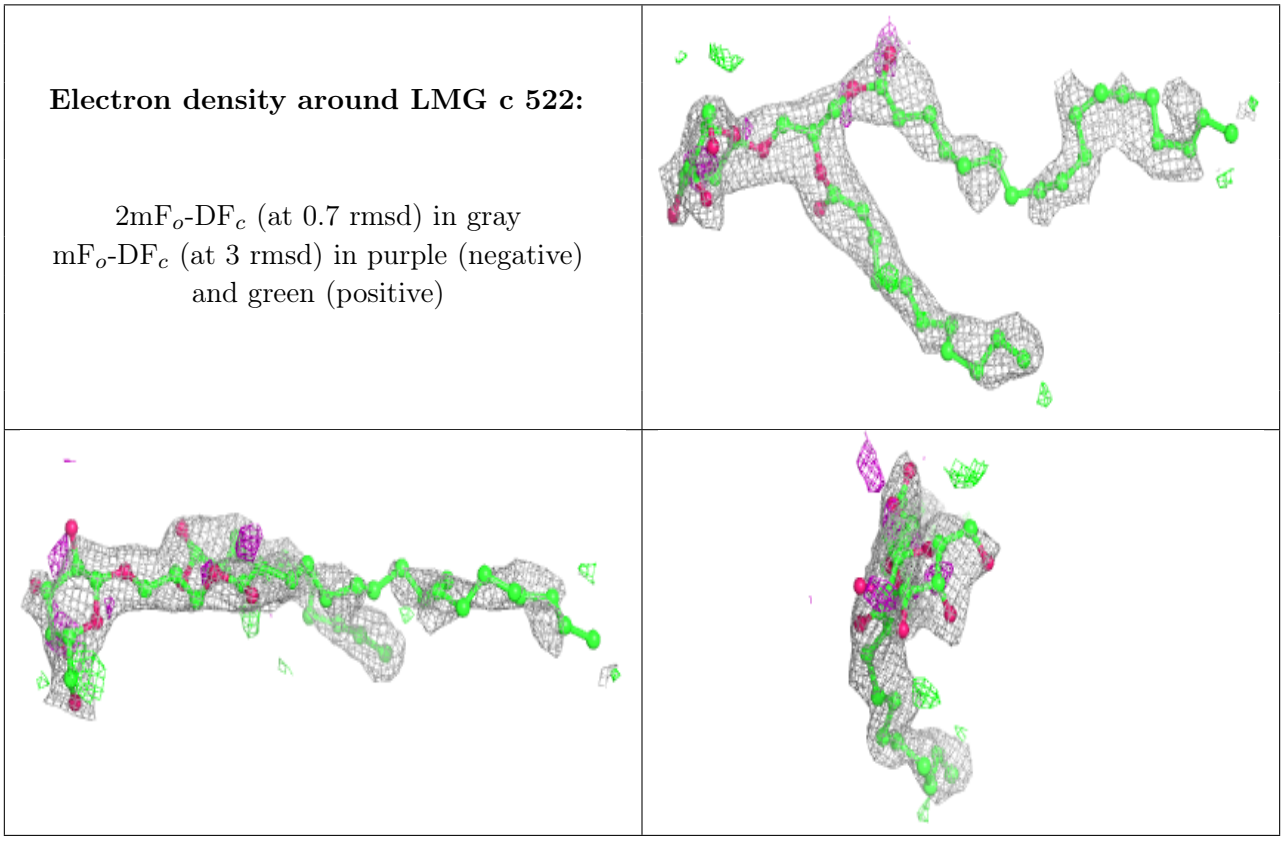
Electron density around STE F 103:

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



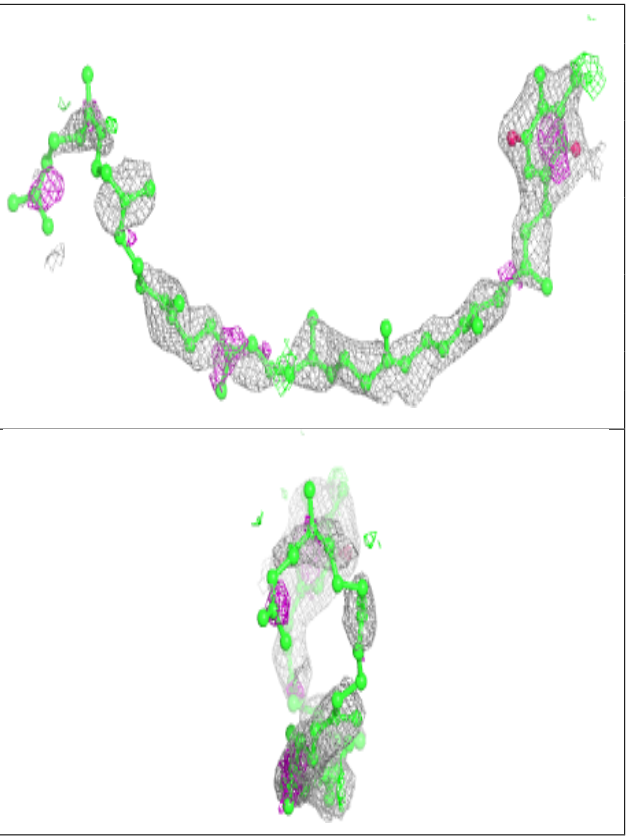
Electron density around LMG c 522:

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



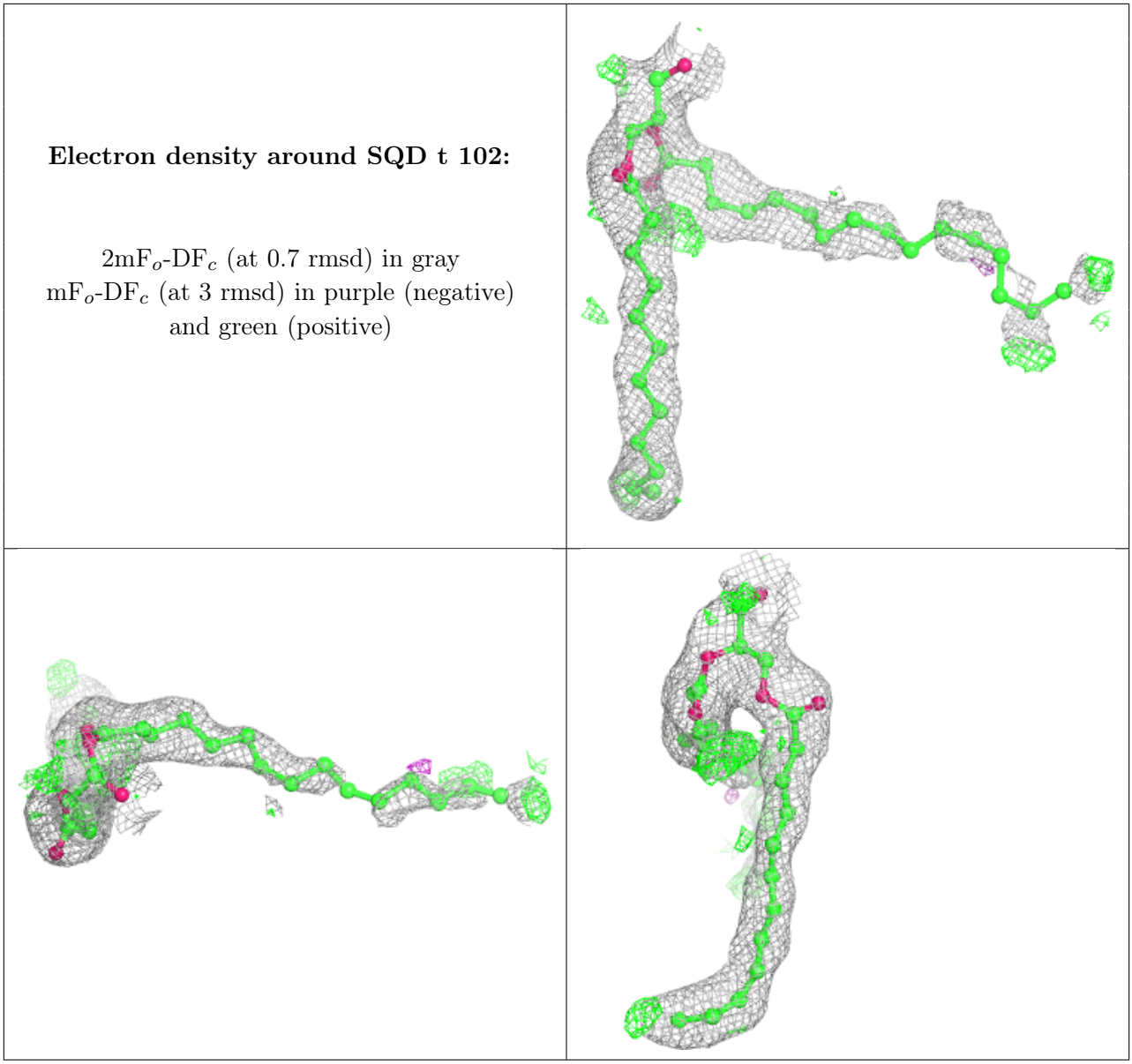
Electron density around PL9 a 611:

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



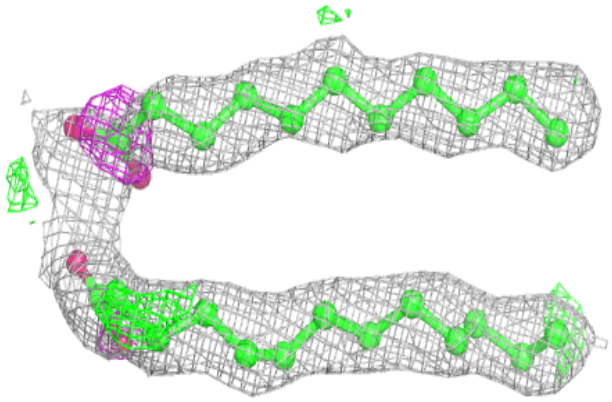
Electron density around SQD t 102:

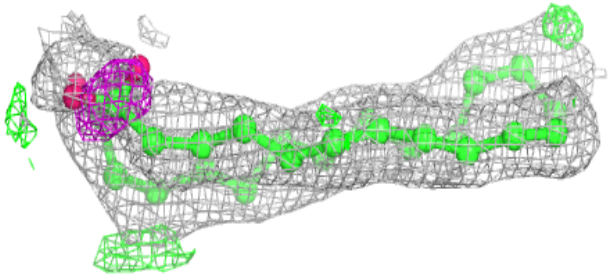
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

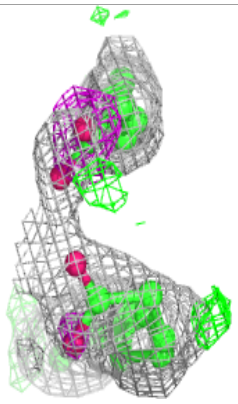


Electron density around LMG B 621:

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

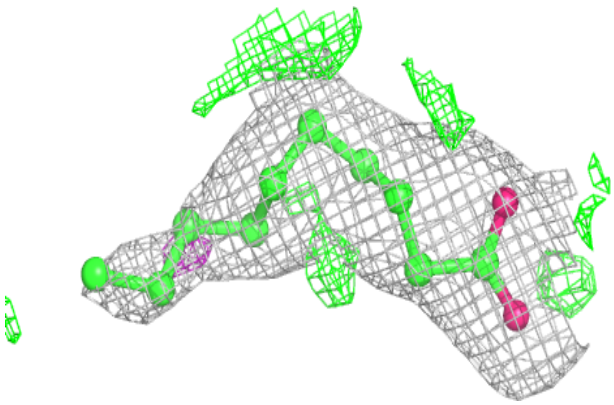


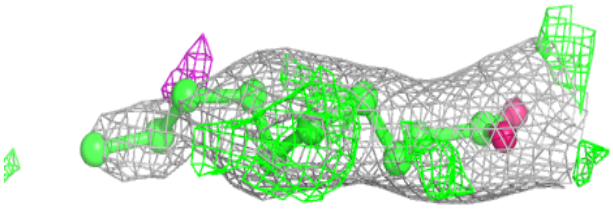


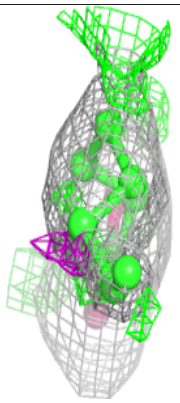


Electron density around STE C 519:

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

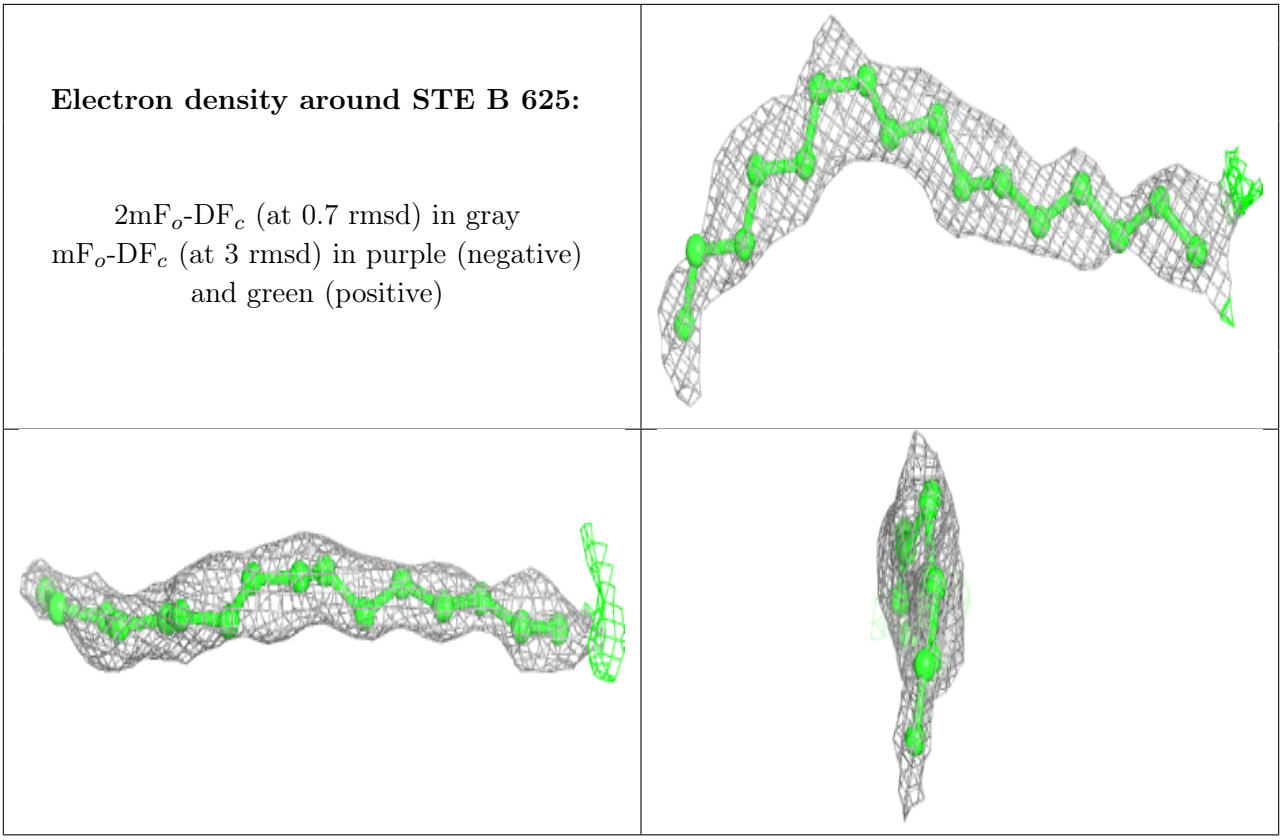






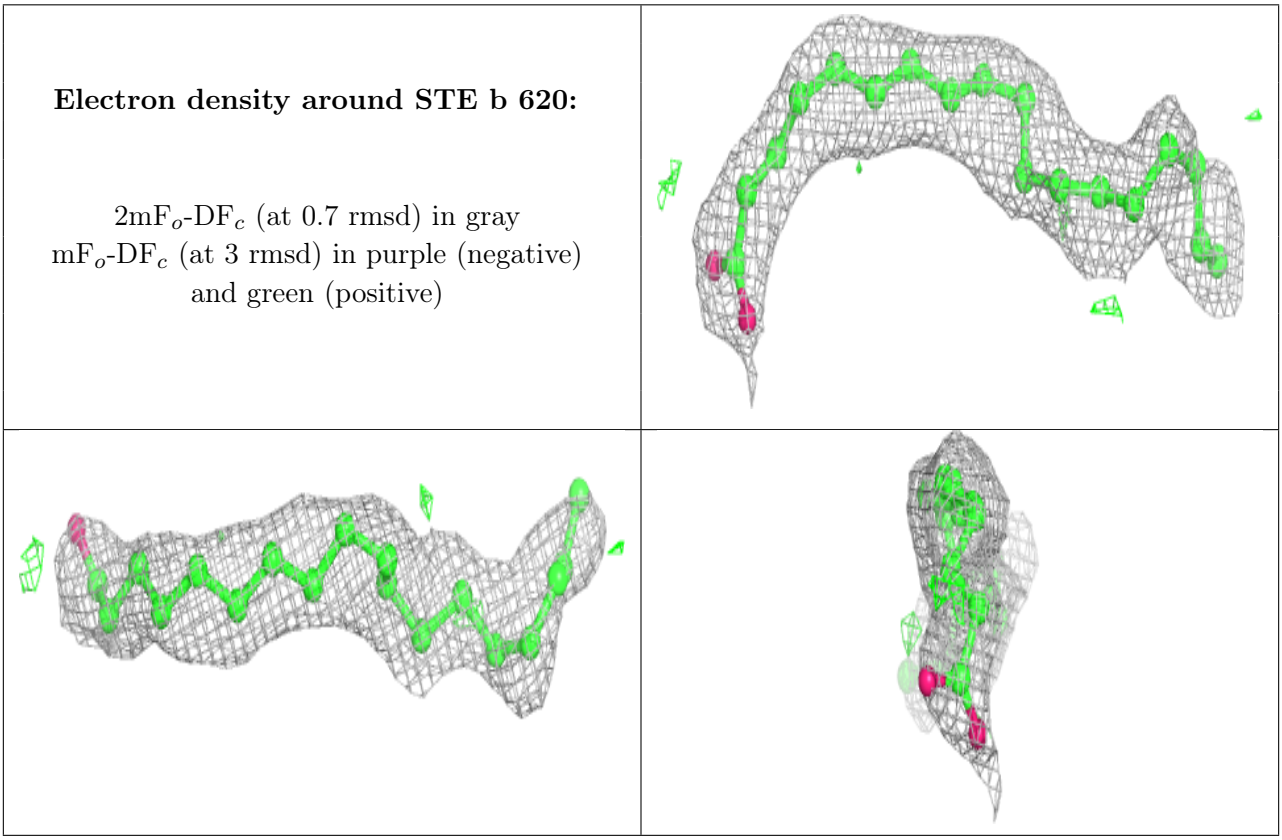
Electron density around STE B 625:

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



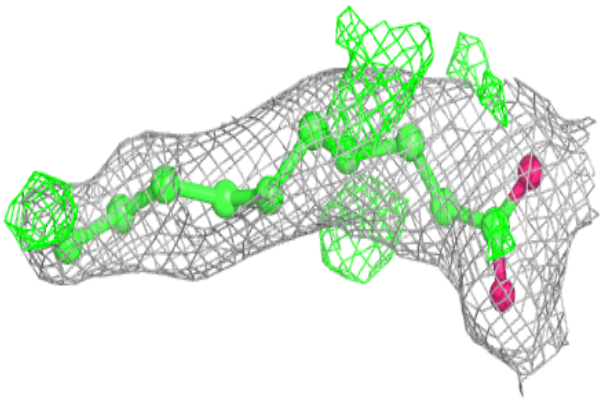
Electron density around STE b 620:

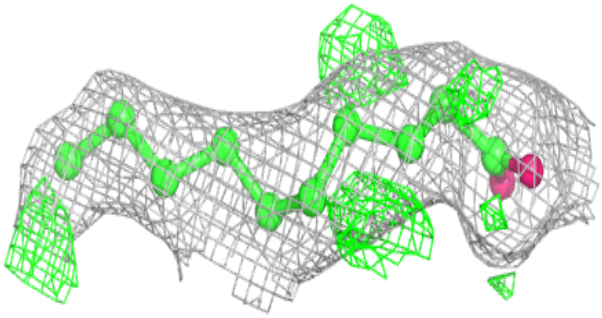
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

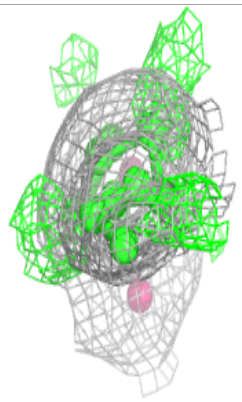


Electron density around STE B 623:

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

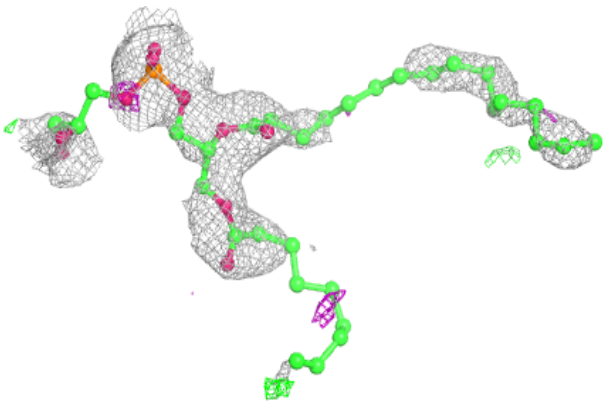


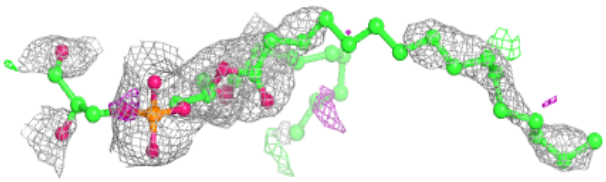


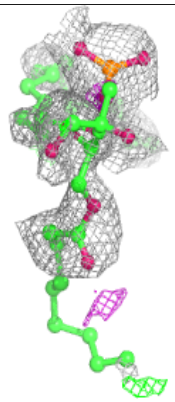


Electron density around LHG e 102:

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

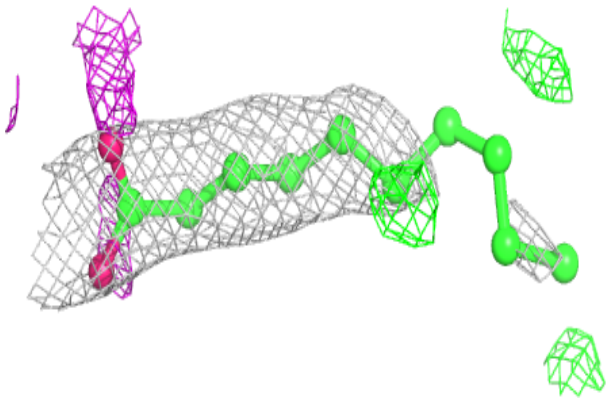


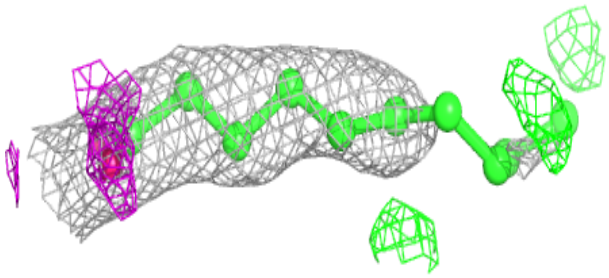


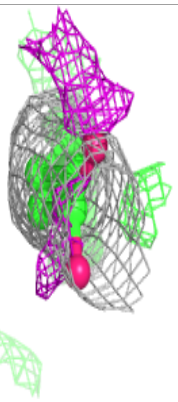


Electron density around STE L 102:

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

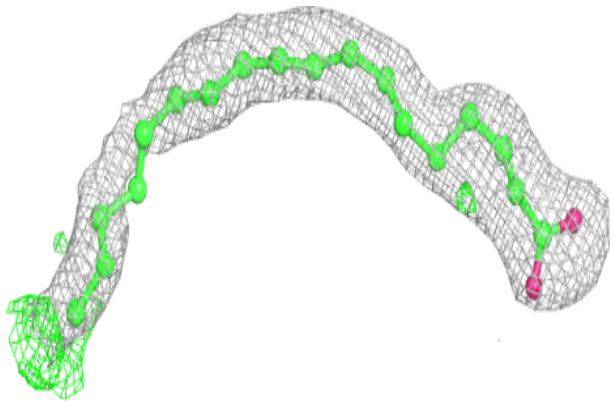


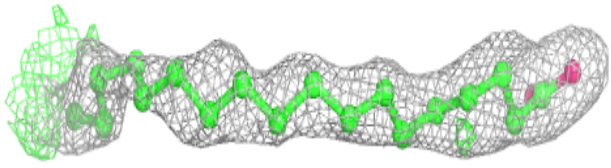


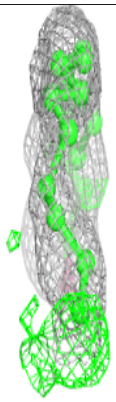


Electron density around STE d 414:

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

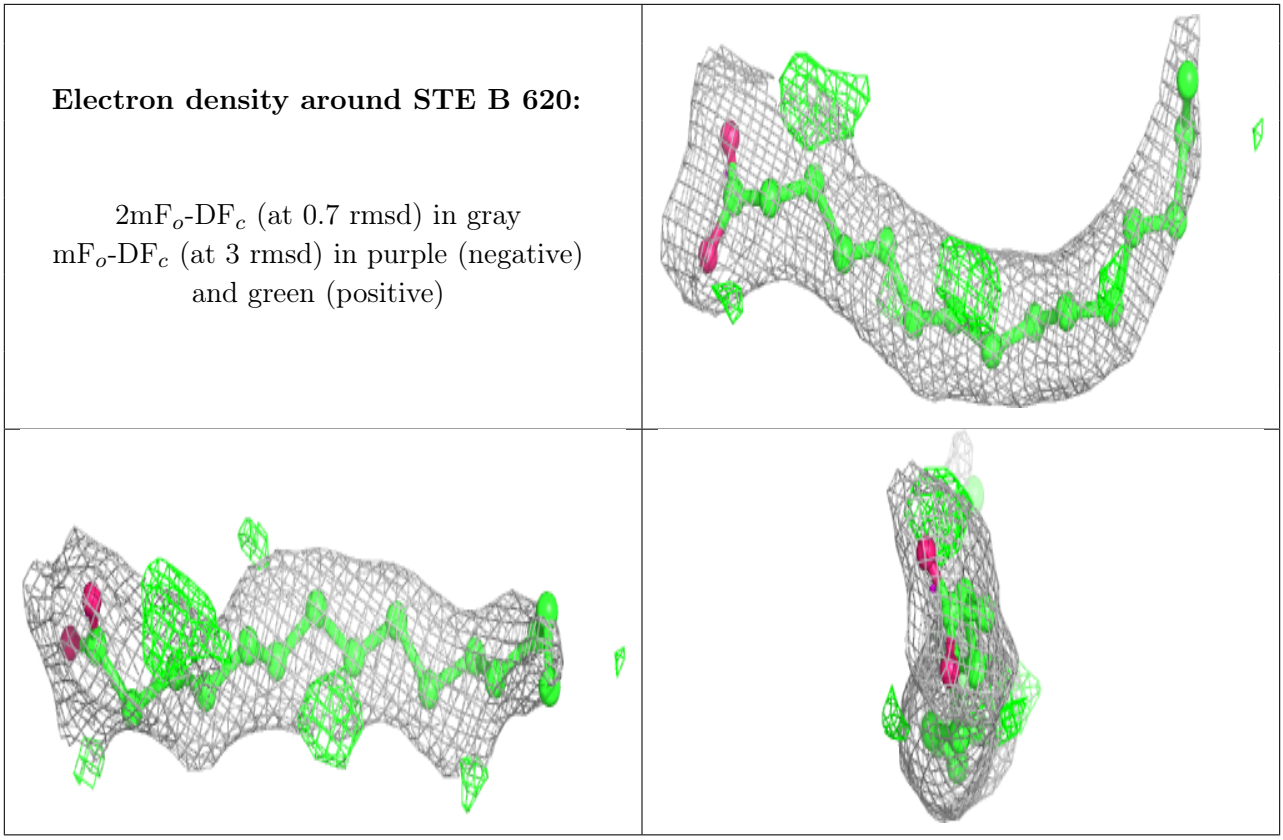






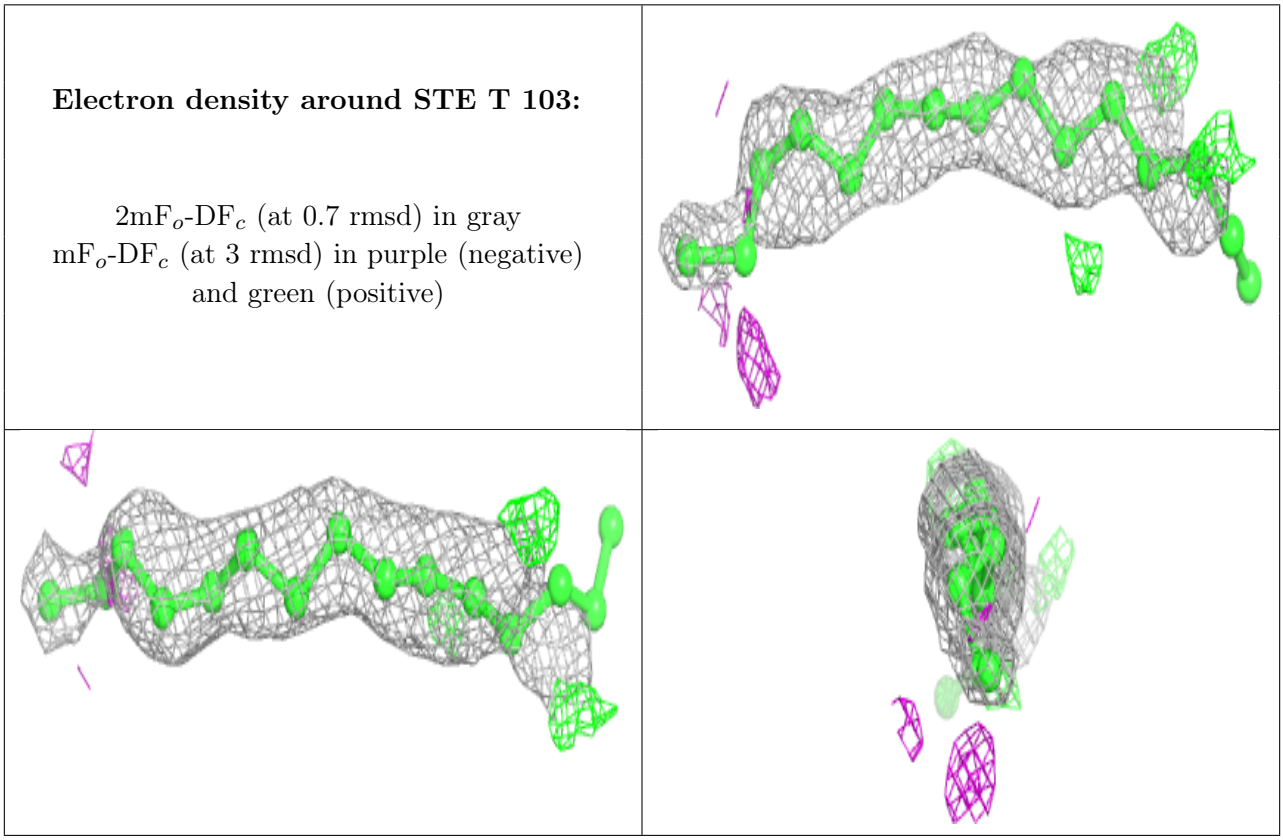
Electron density around STE B 620:

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



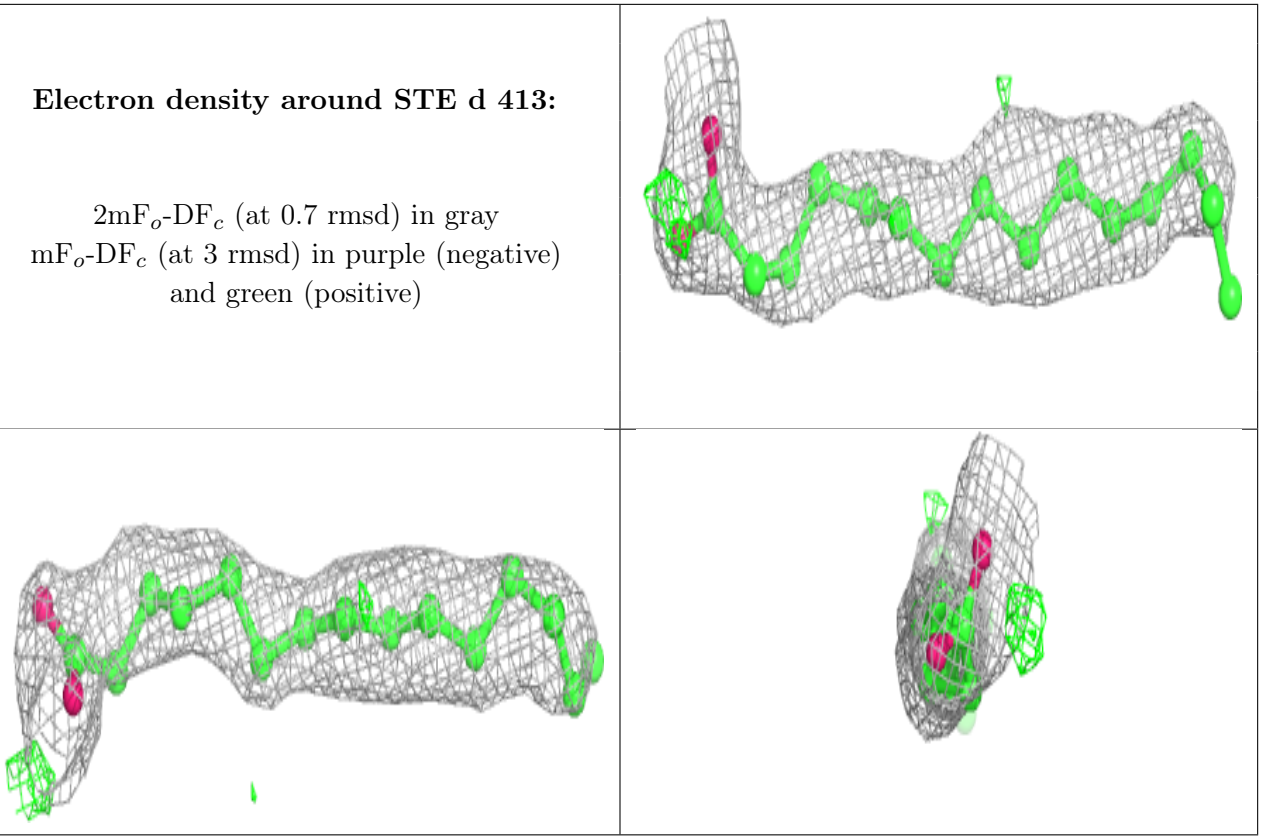
Electron density around STE T 103:

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



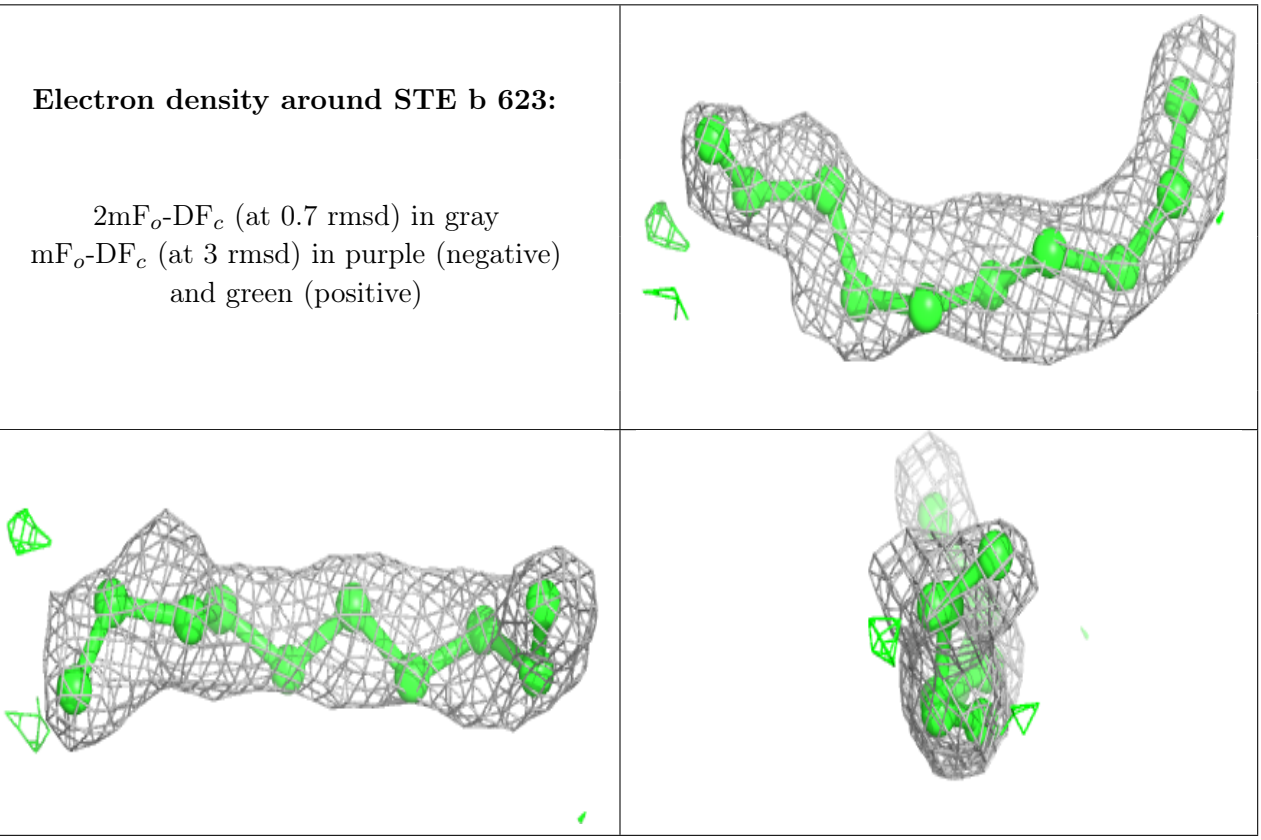
Electron density around STE d 413:

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



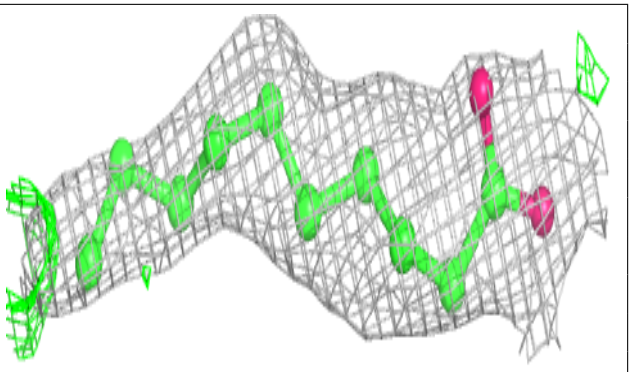
Electron density around STE b 623:

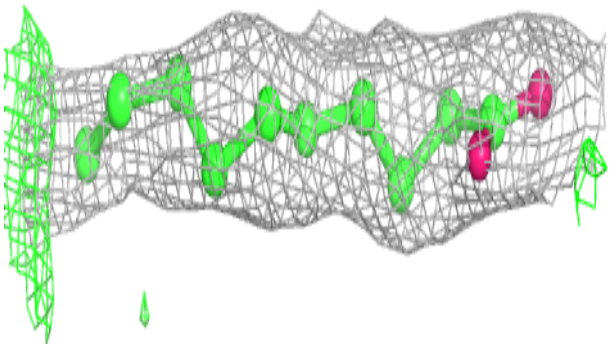
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

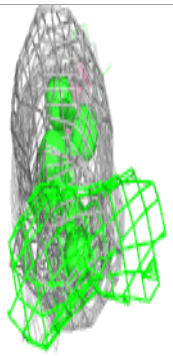


Electron density around STE J 101:

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

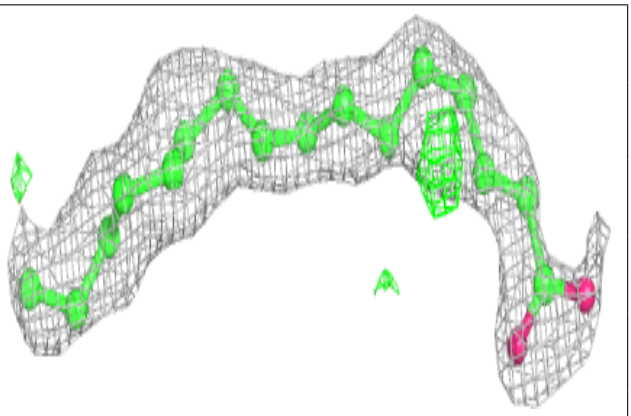


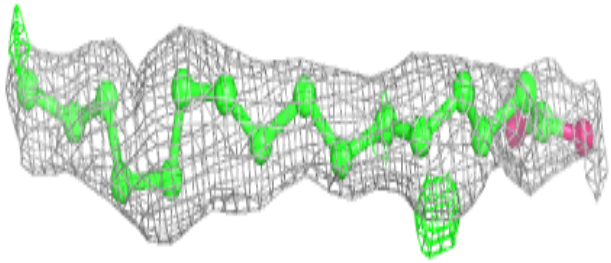


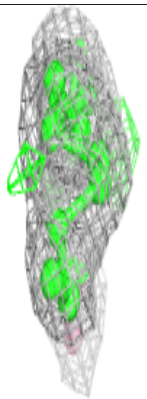


Electron density around STE t 105:

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

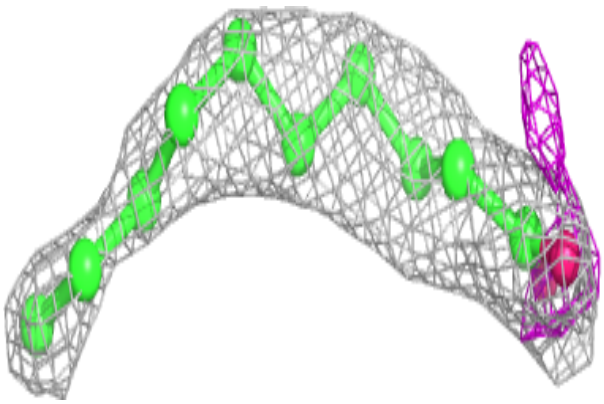


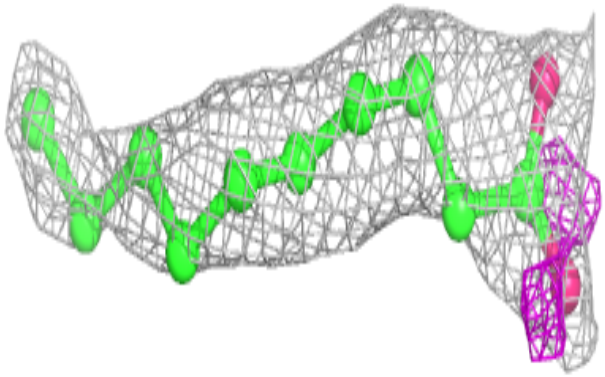


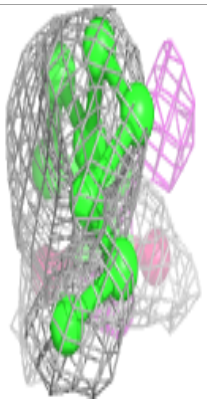


Electron density around STE B 624:

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

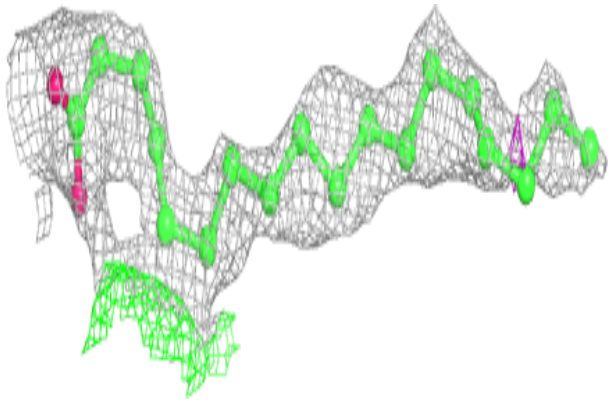


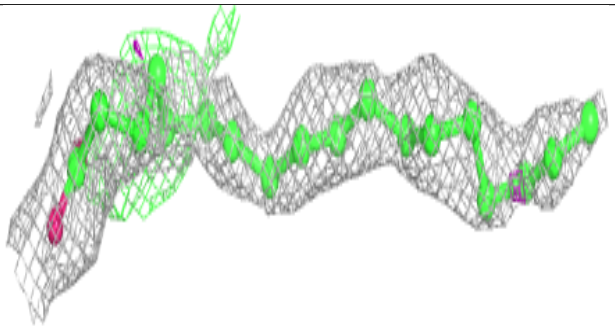


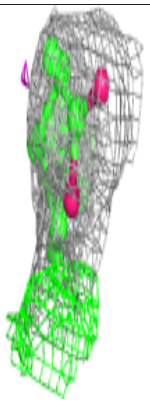


Electron density around STE b 622:

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

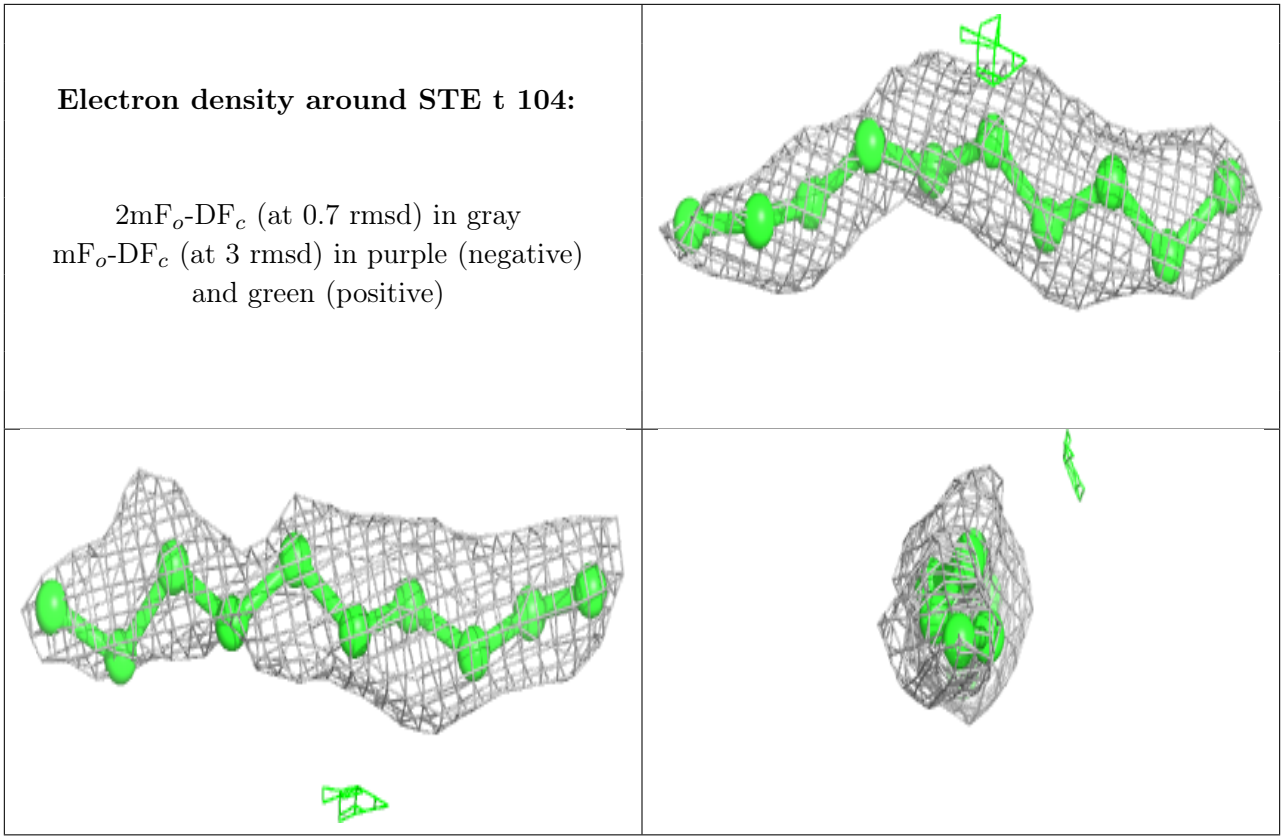






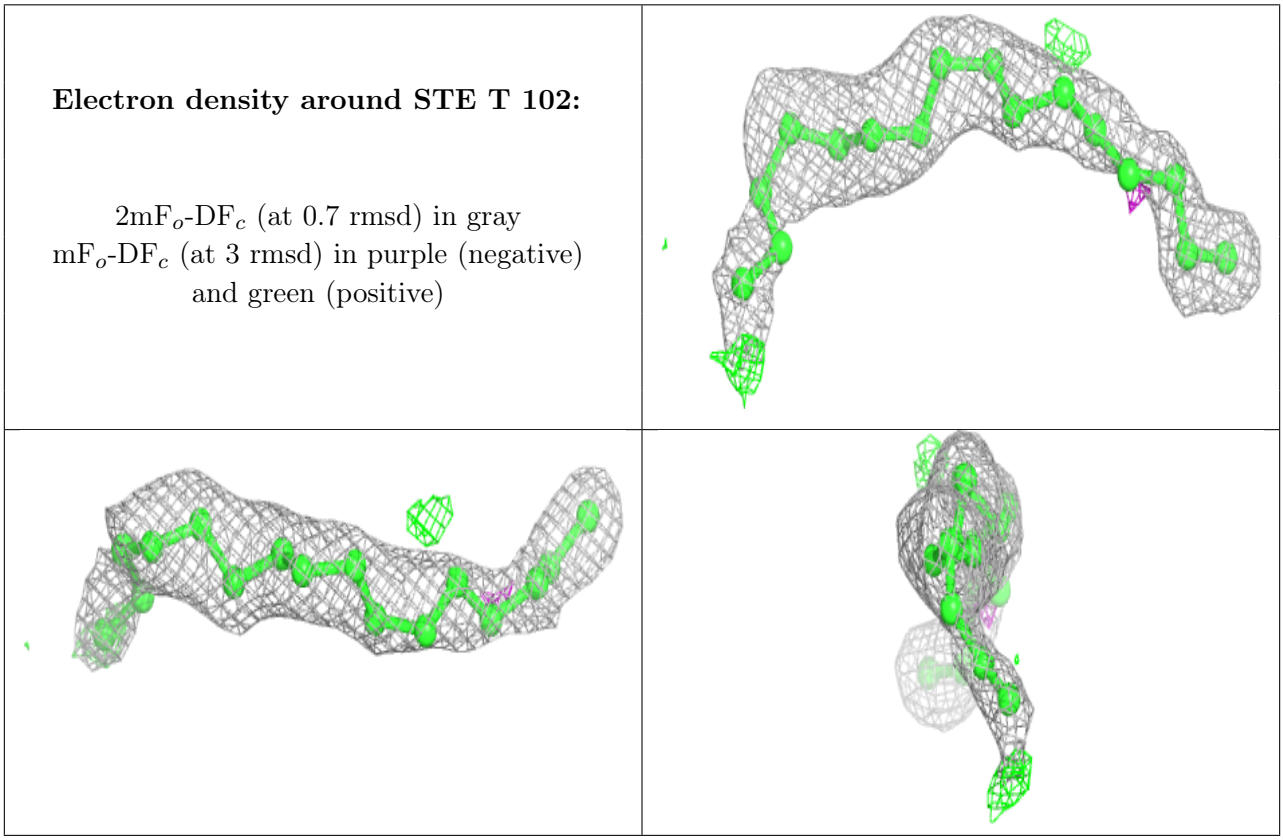
Electron density around STE t 104:

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



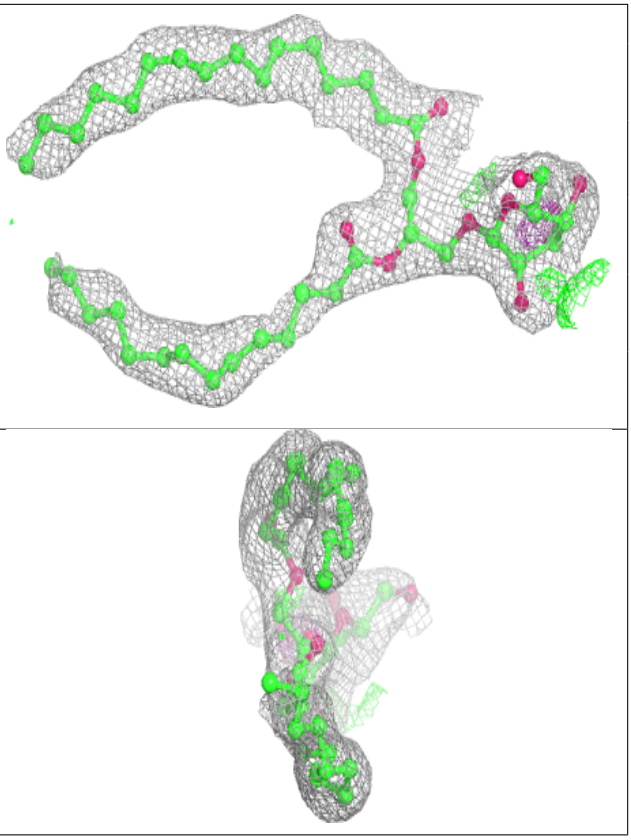
Electron density around STE T 102:

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



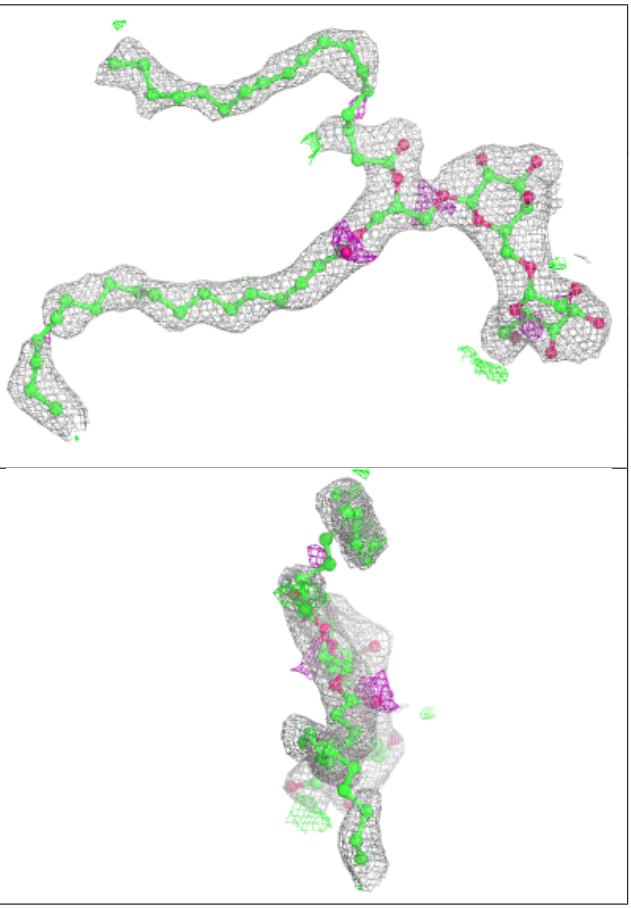
Electron density around LMG c 523:

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



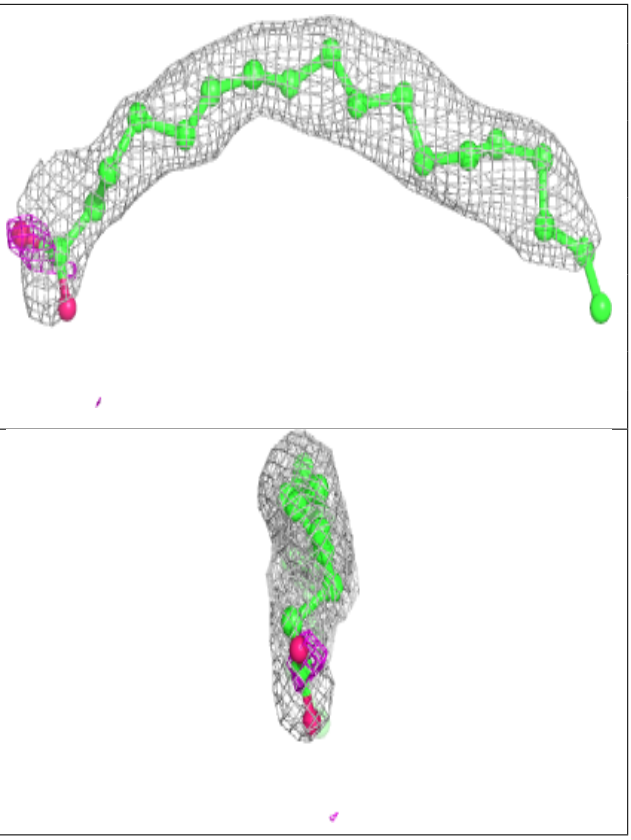
Electron density around DGD A 619:

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



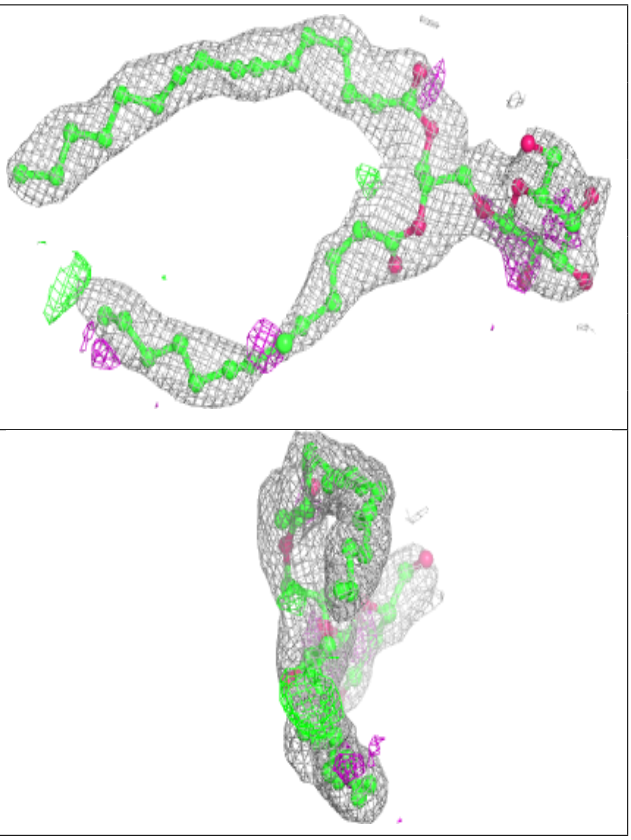
Electron density around STE X 102:

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



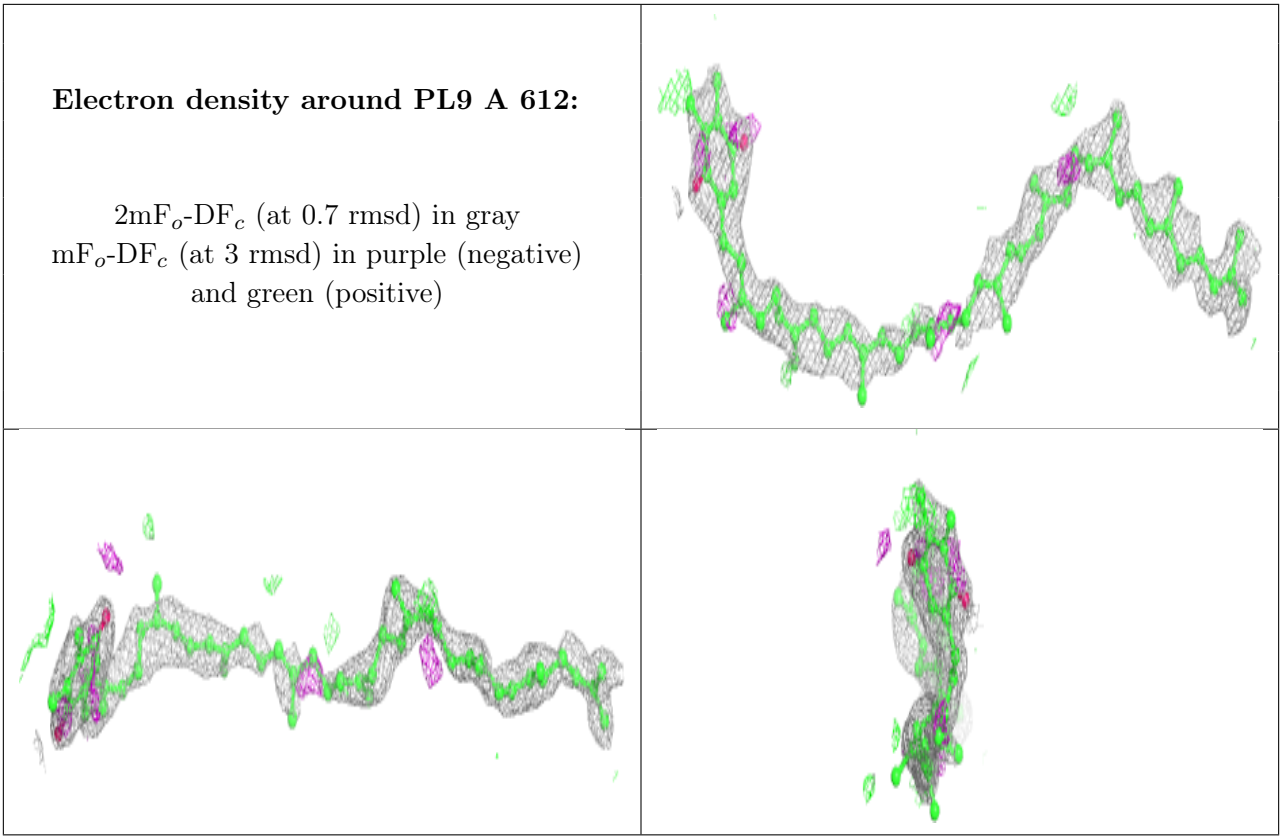
Electron density around LMG A 614:

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



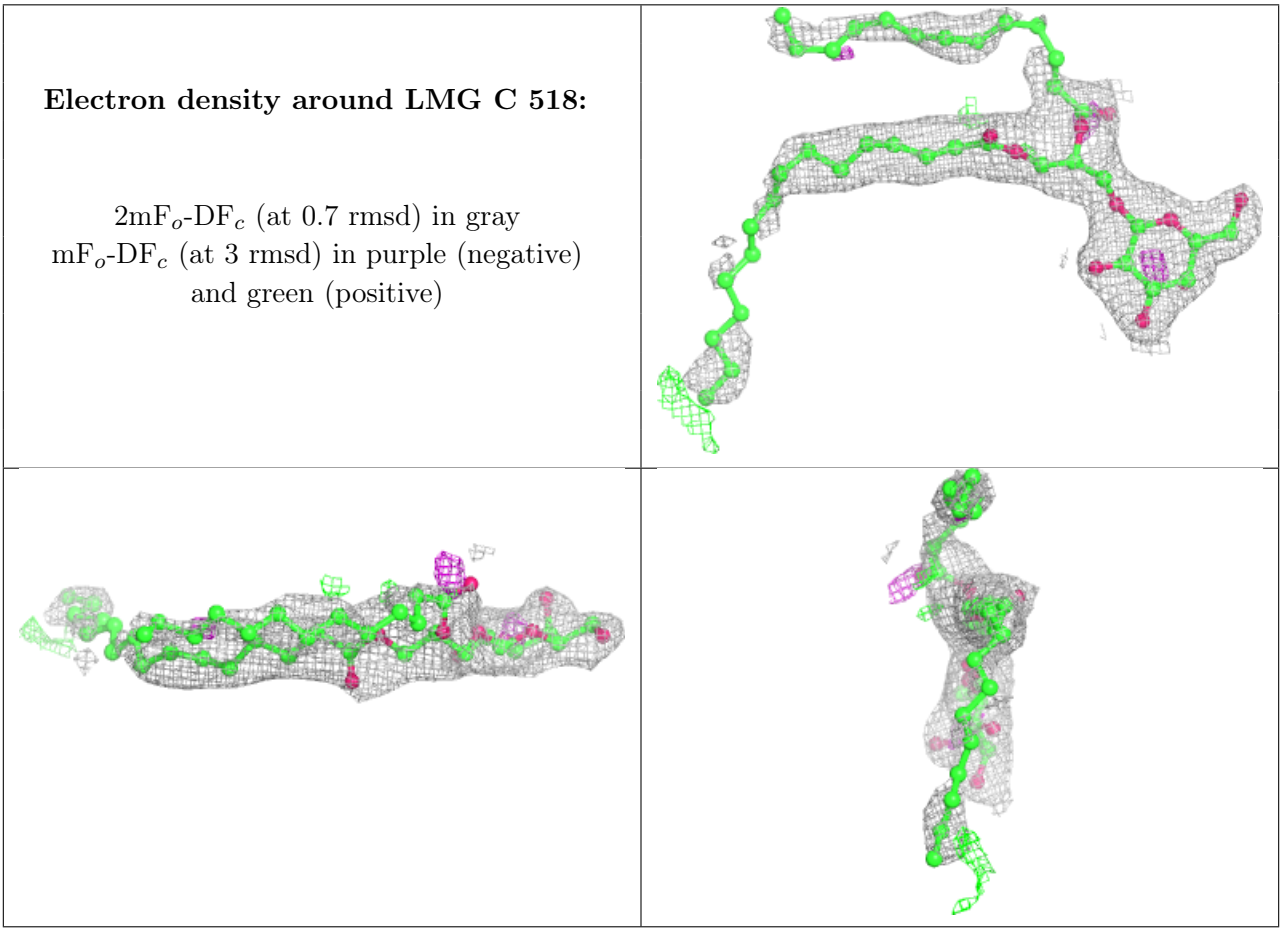
Electron density around PL9 A 612:

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



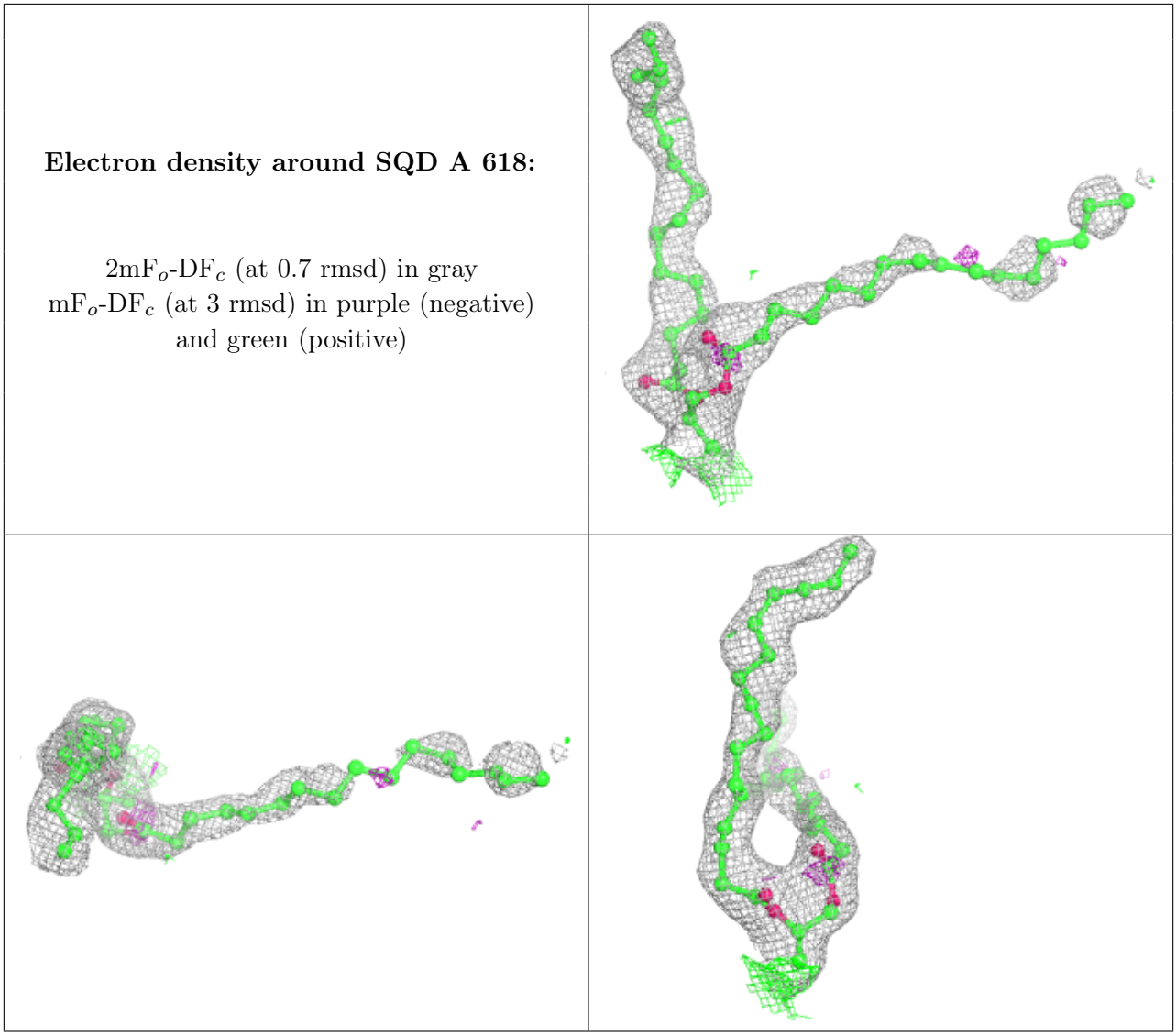
Electron density around LMG C 518:

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



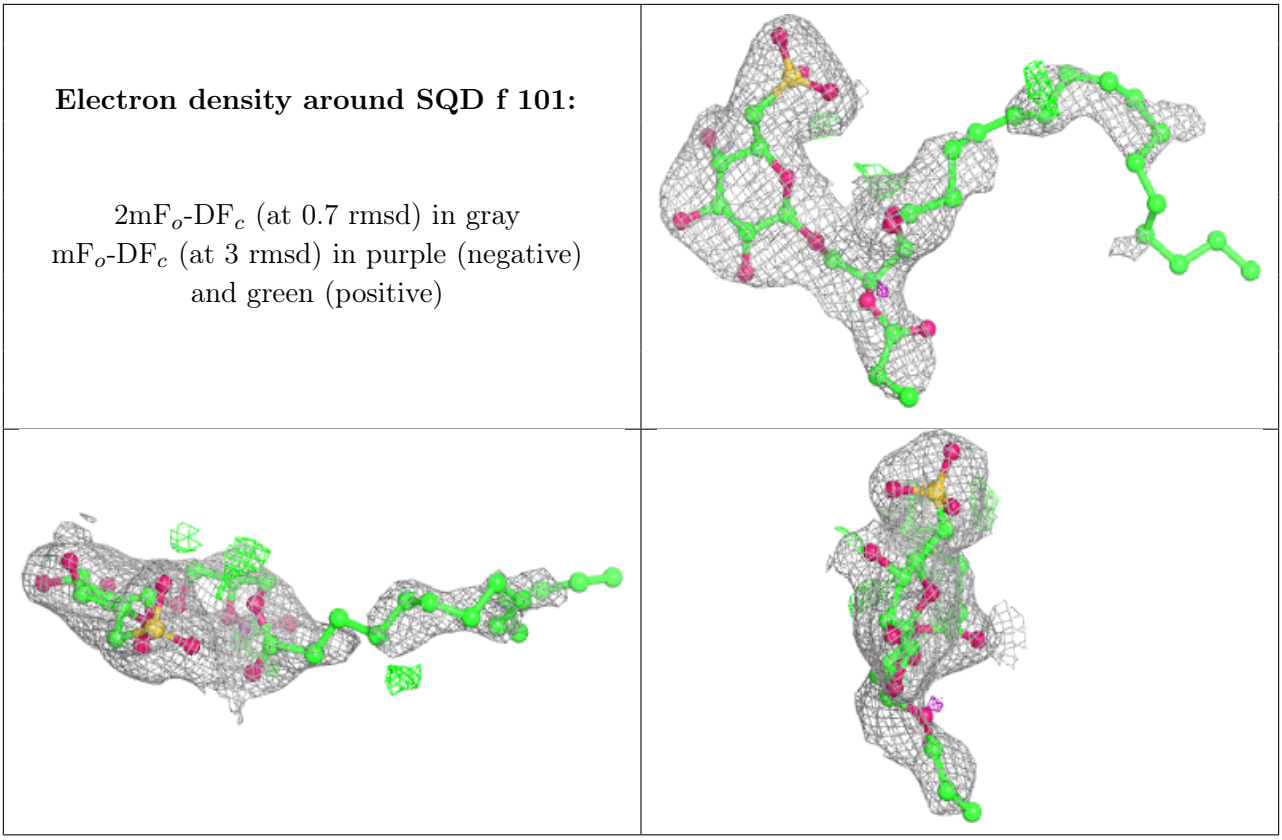
Electron density around SQD A 618:

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



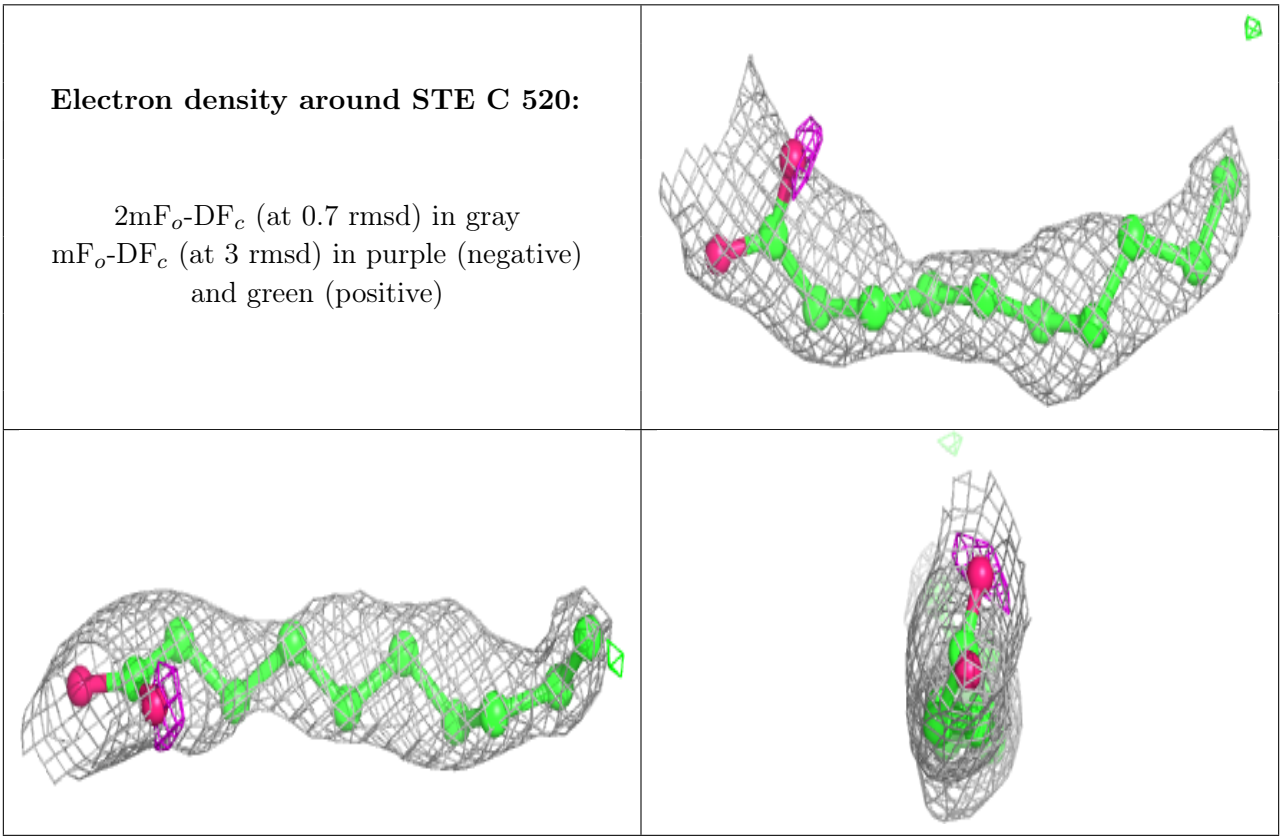
Electron density around SQD f 101:

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



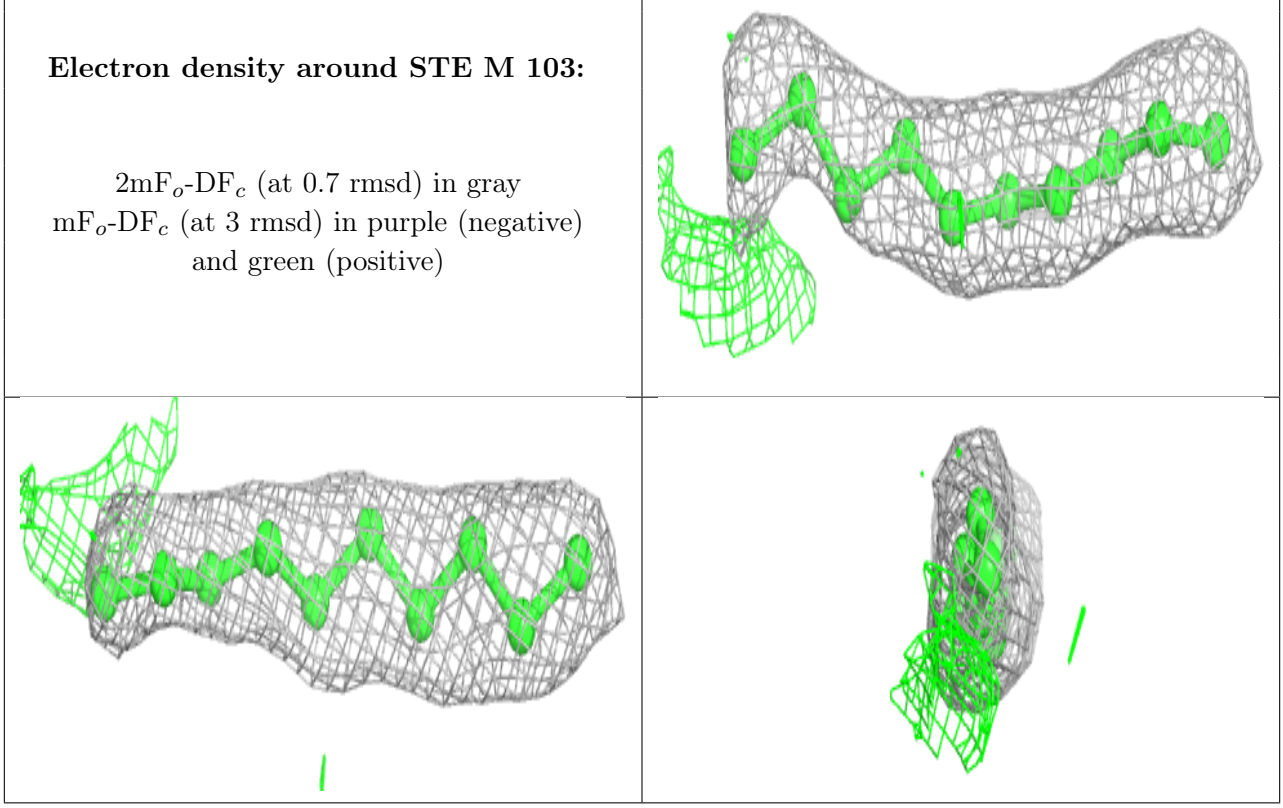
Electron density around STE C 520:

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



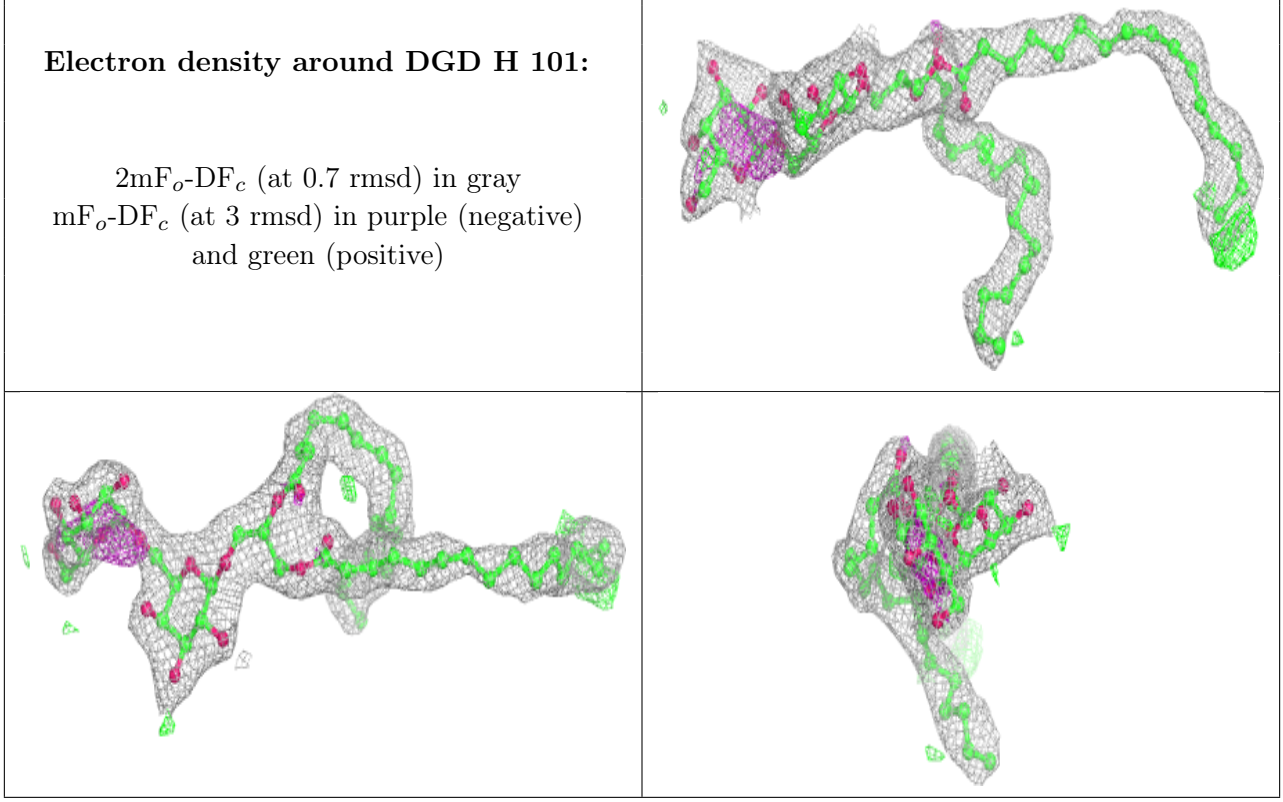
Electron density around STE M 103:

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



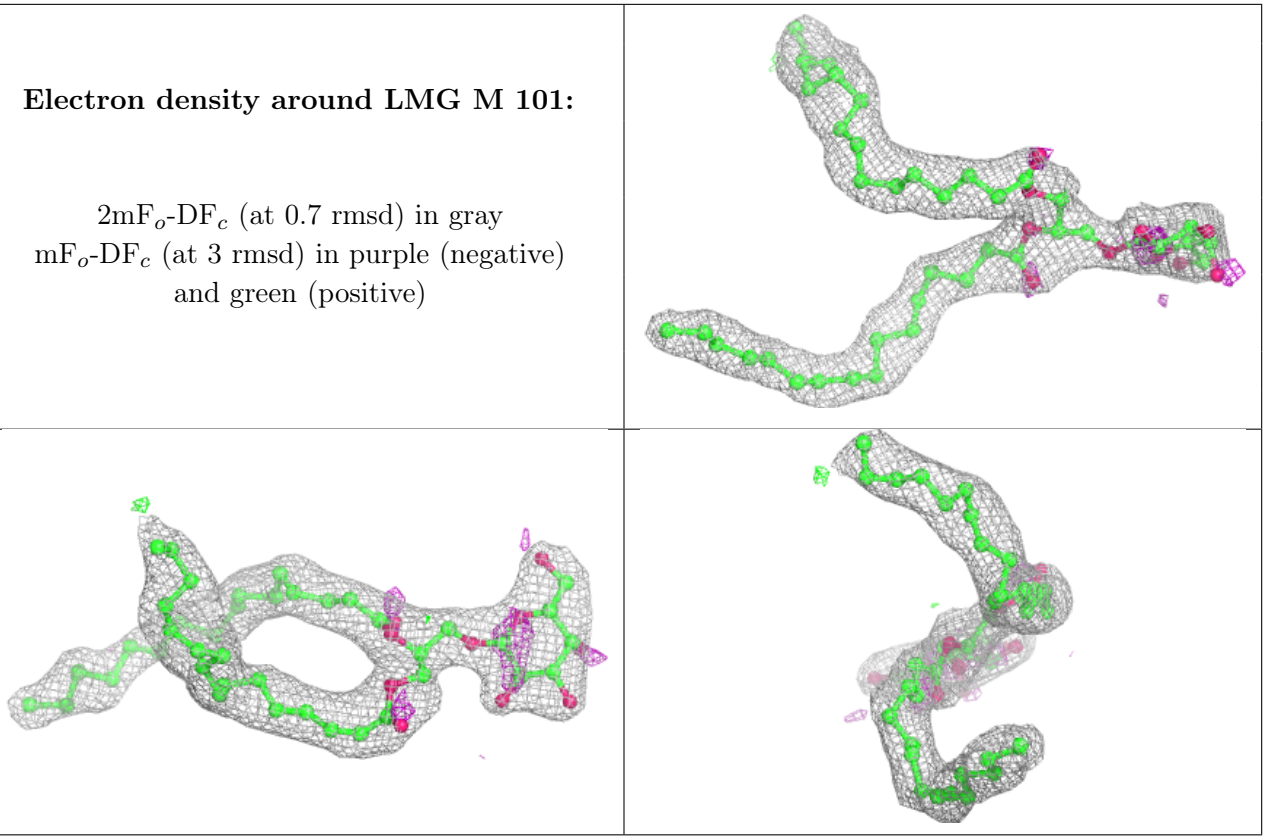
Electron density around DGD H 101:

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



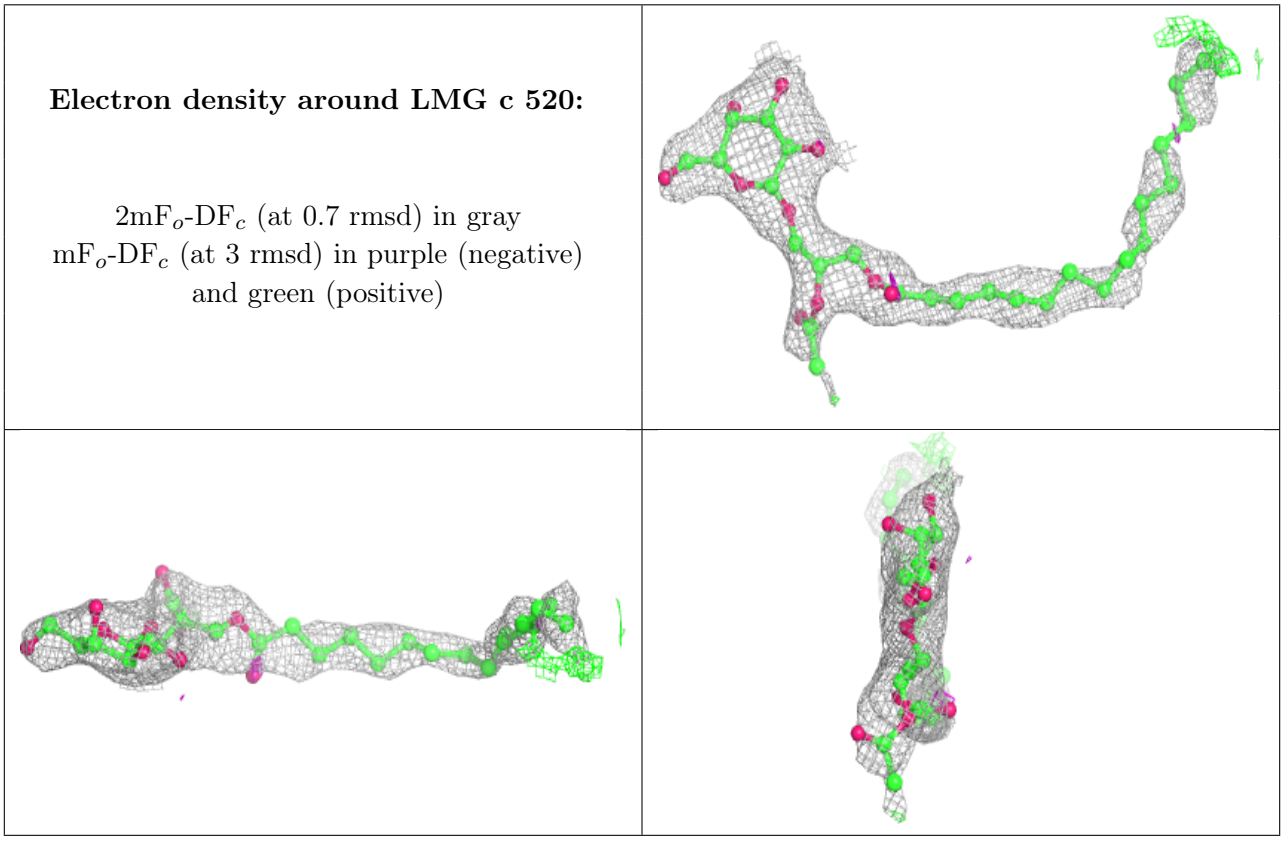
Electron density around LMG M 101:

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



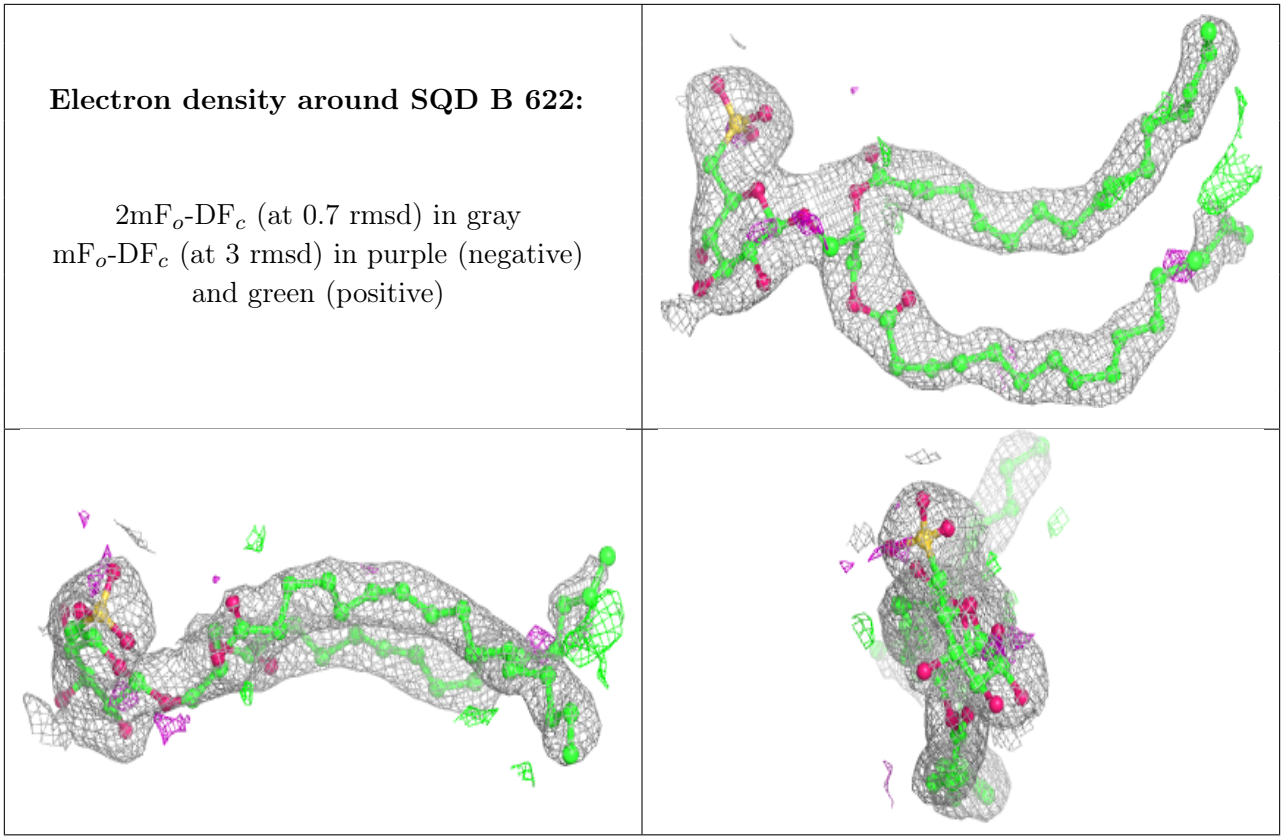
Electron density around LMG c 520:

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



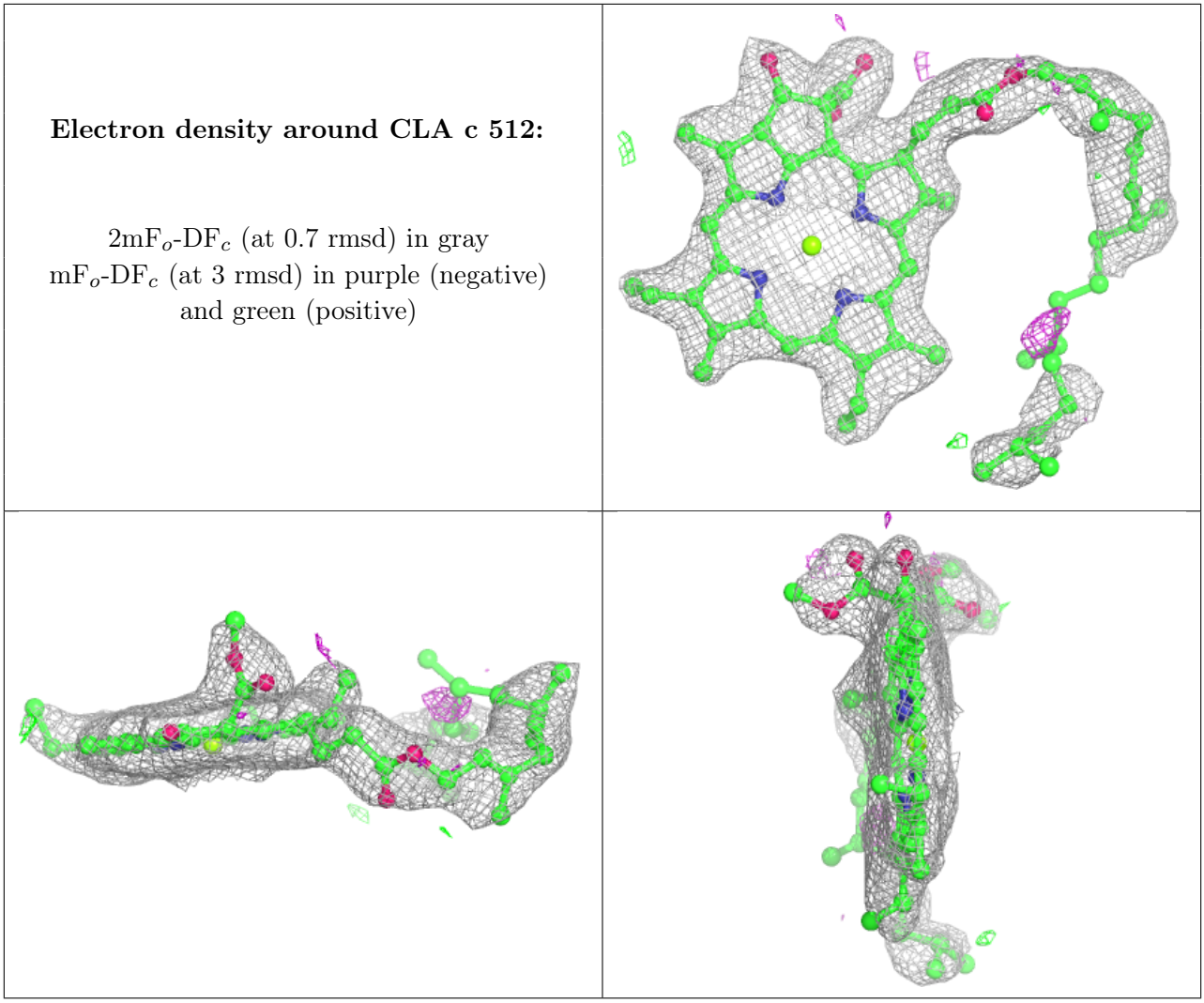
Electron density around SQD B 622:

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



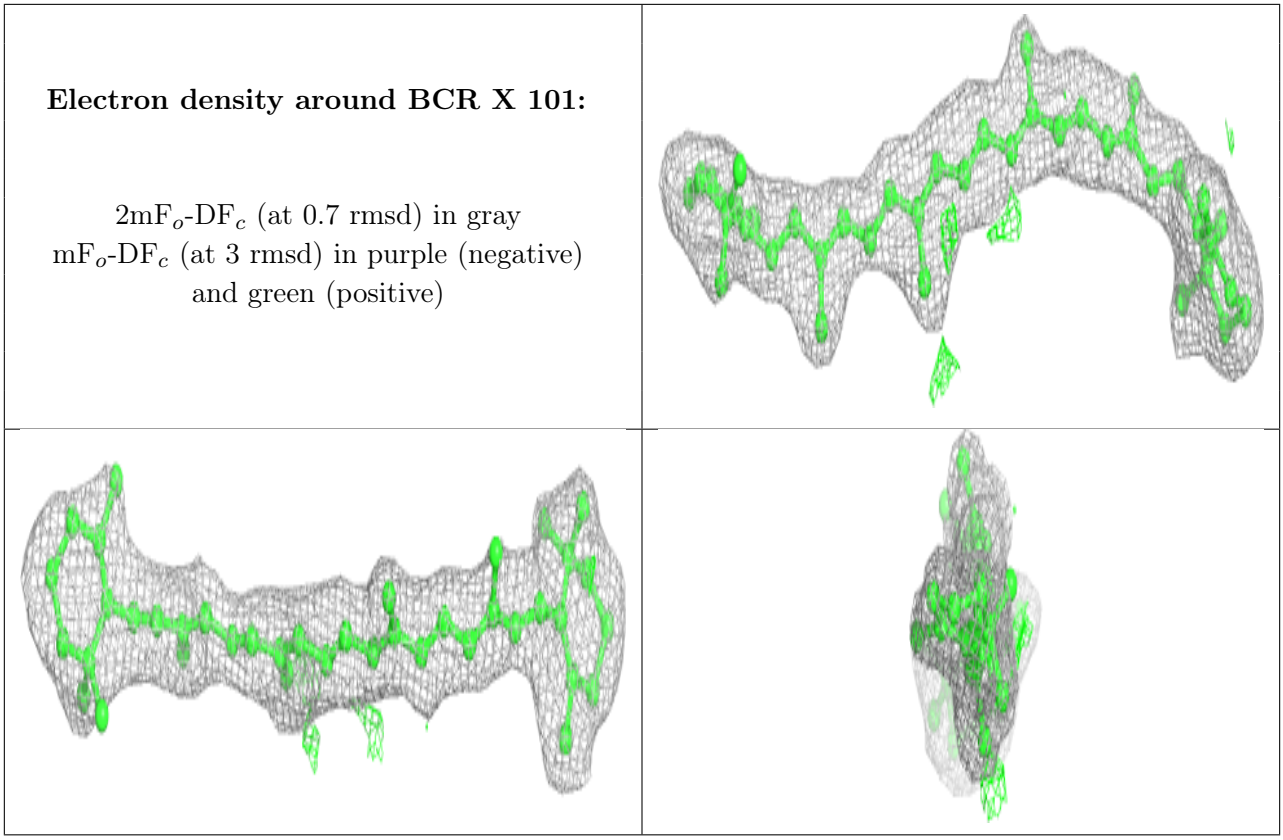
Electron density around CLA c 512:

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



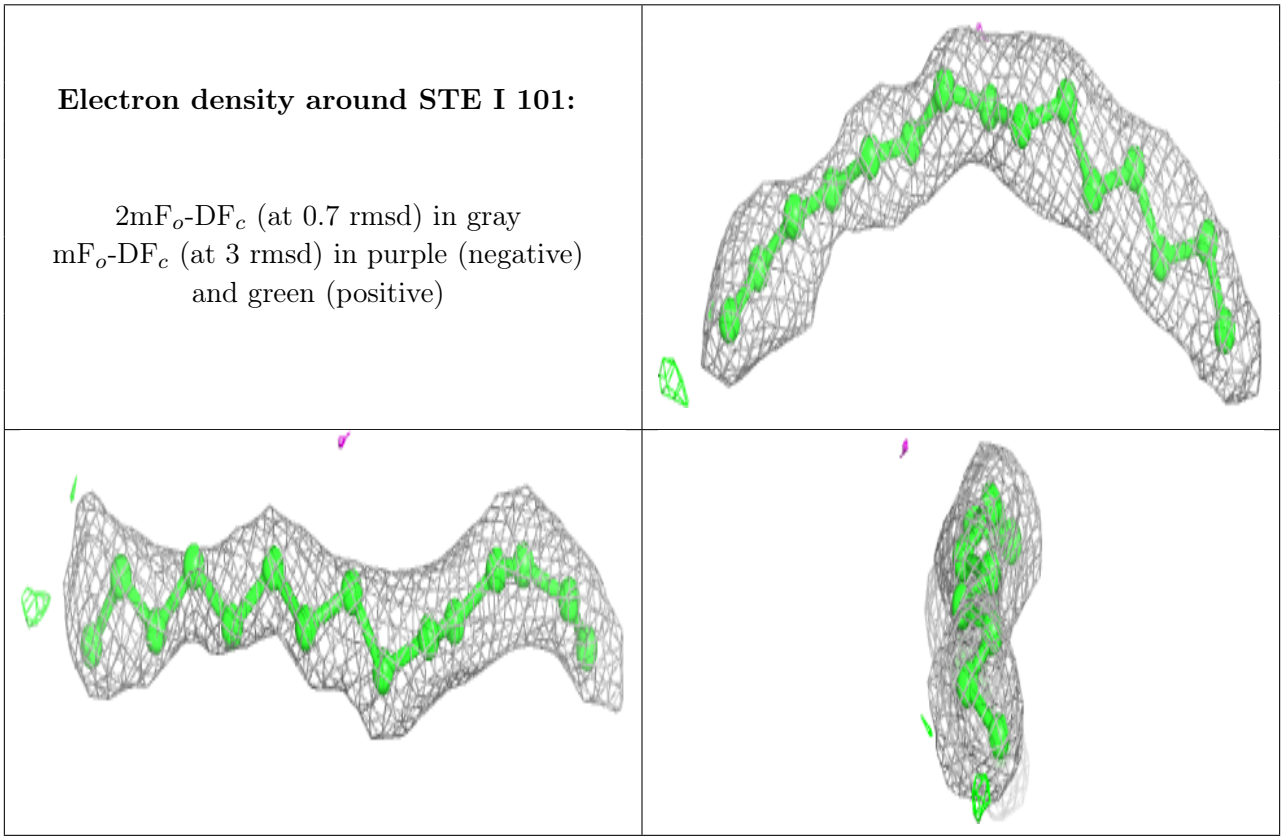
Electron density around BCR X 101:

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



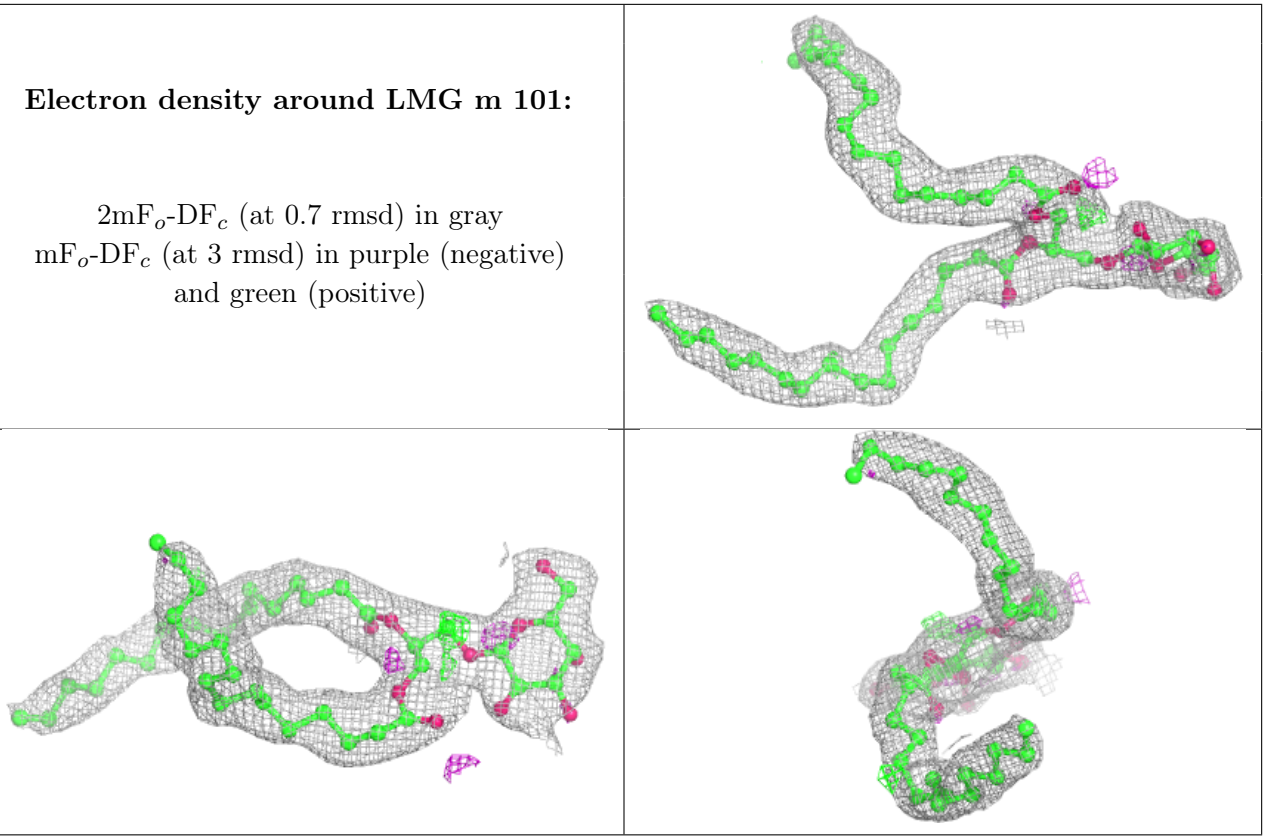
Electron density around STE I 101:

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



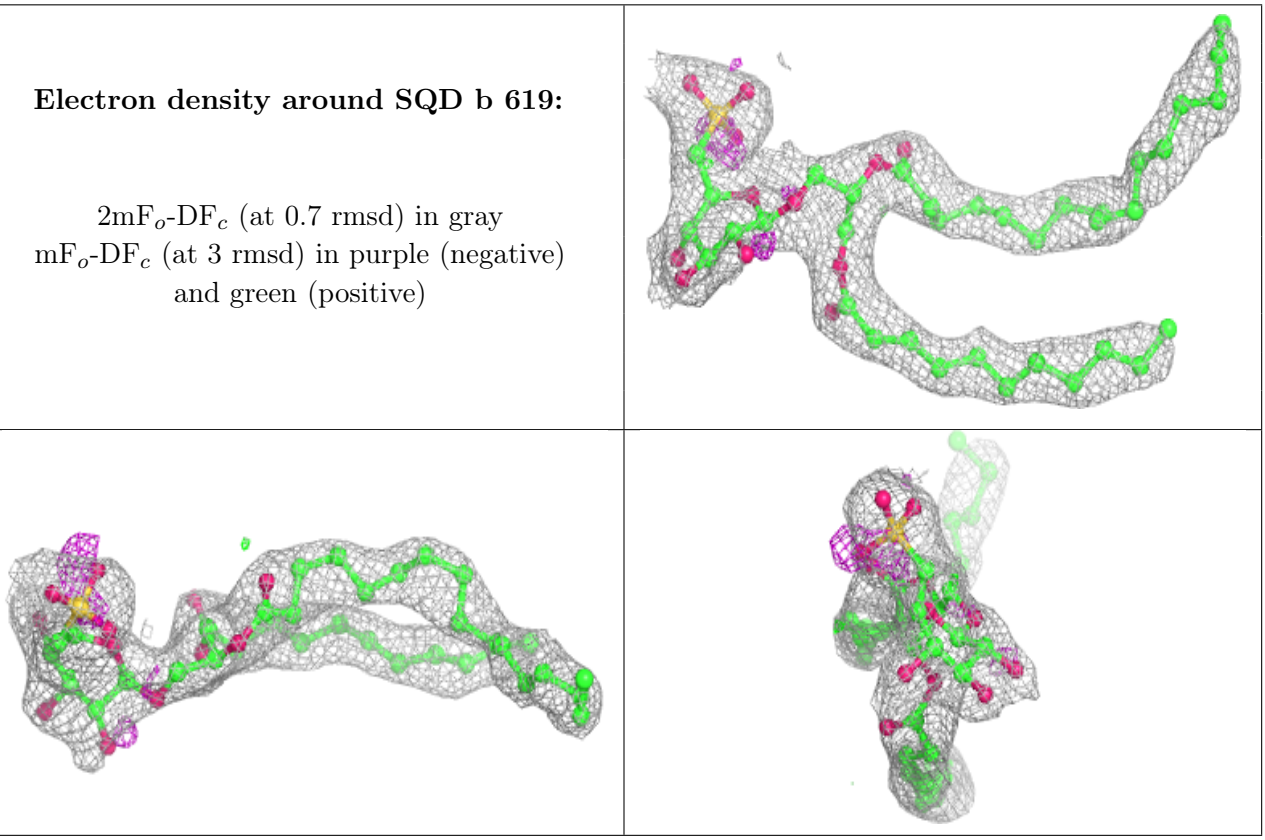
Electron density around LMG m 101:

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



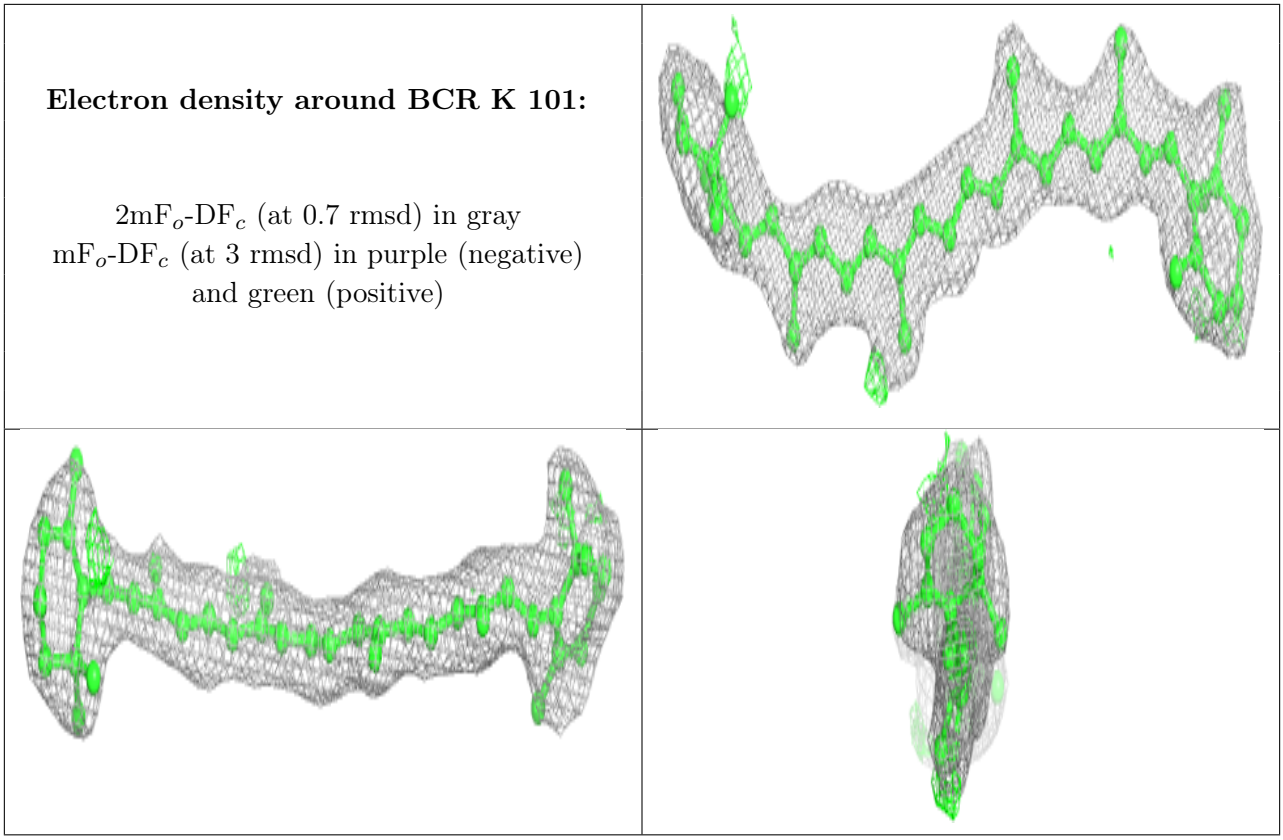
Electron density around SQD b 619:

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



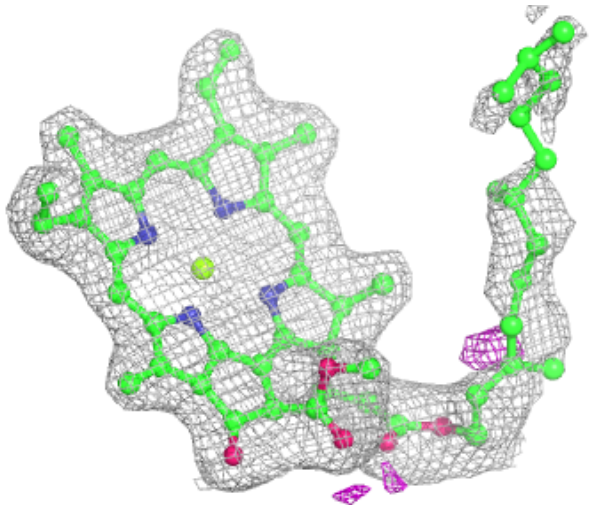
Electron density around BCR K 101:

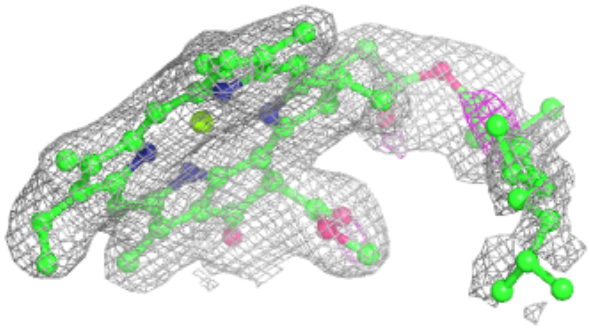
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

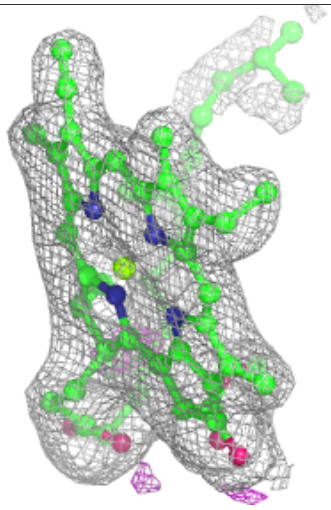


Electron density around CLA b 615:

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

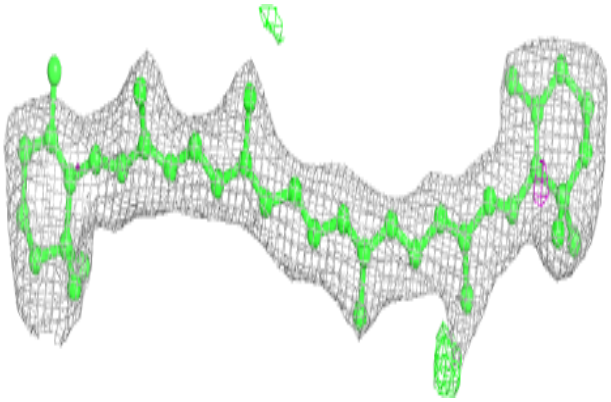


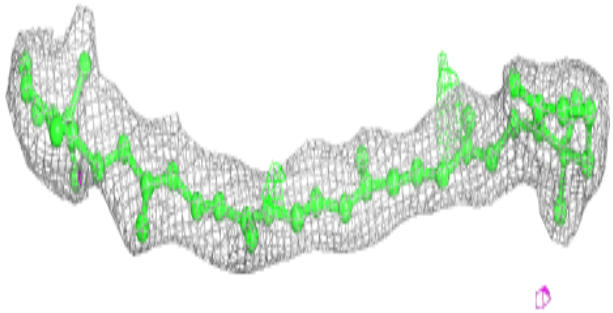


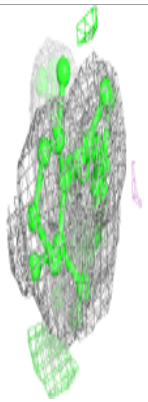


Electron density around BCR d 405:

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

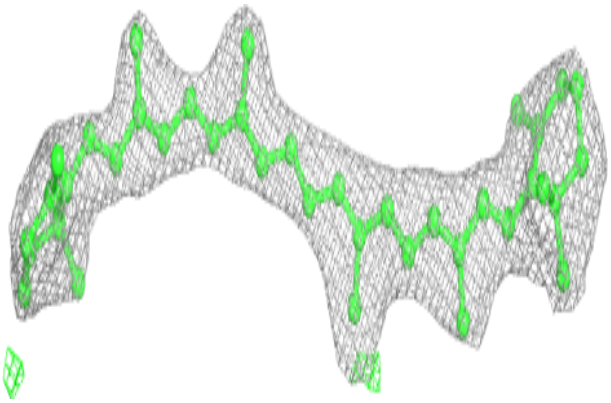


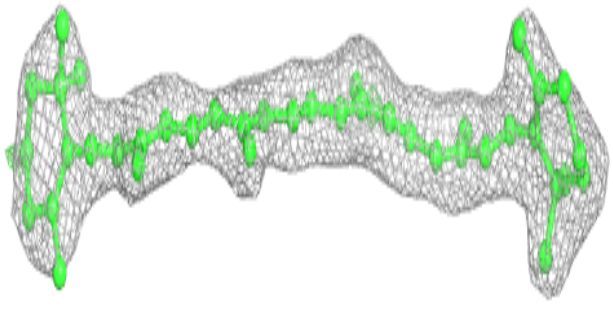


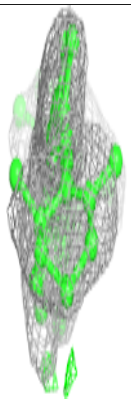


Electron density around BCR k 101:

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

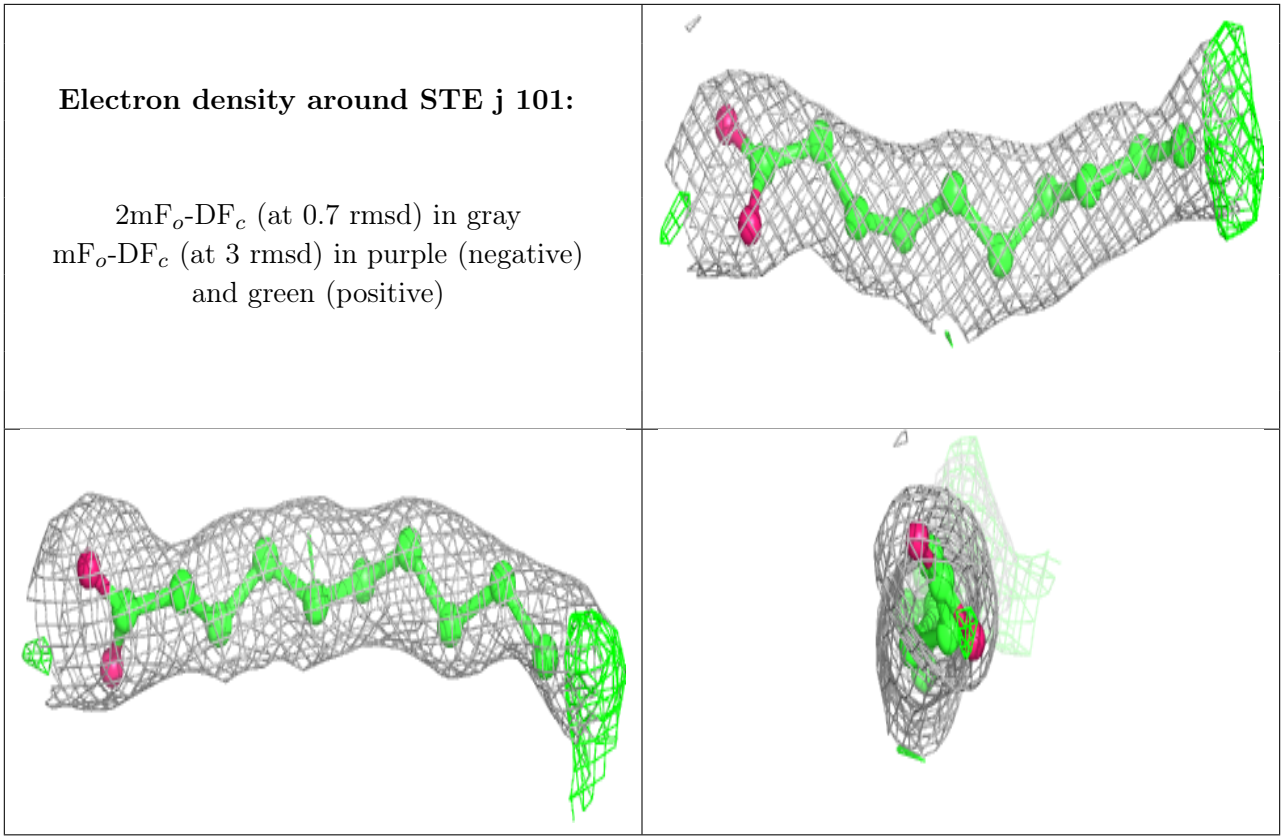






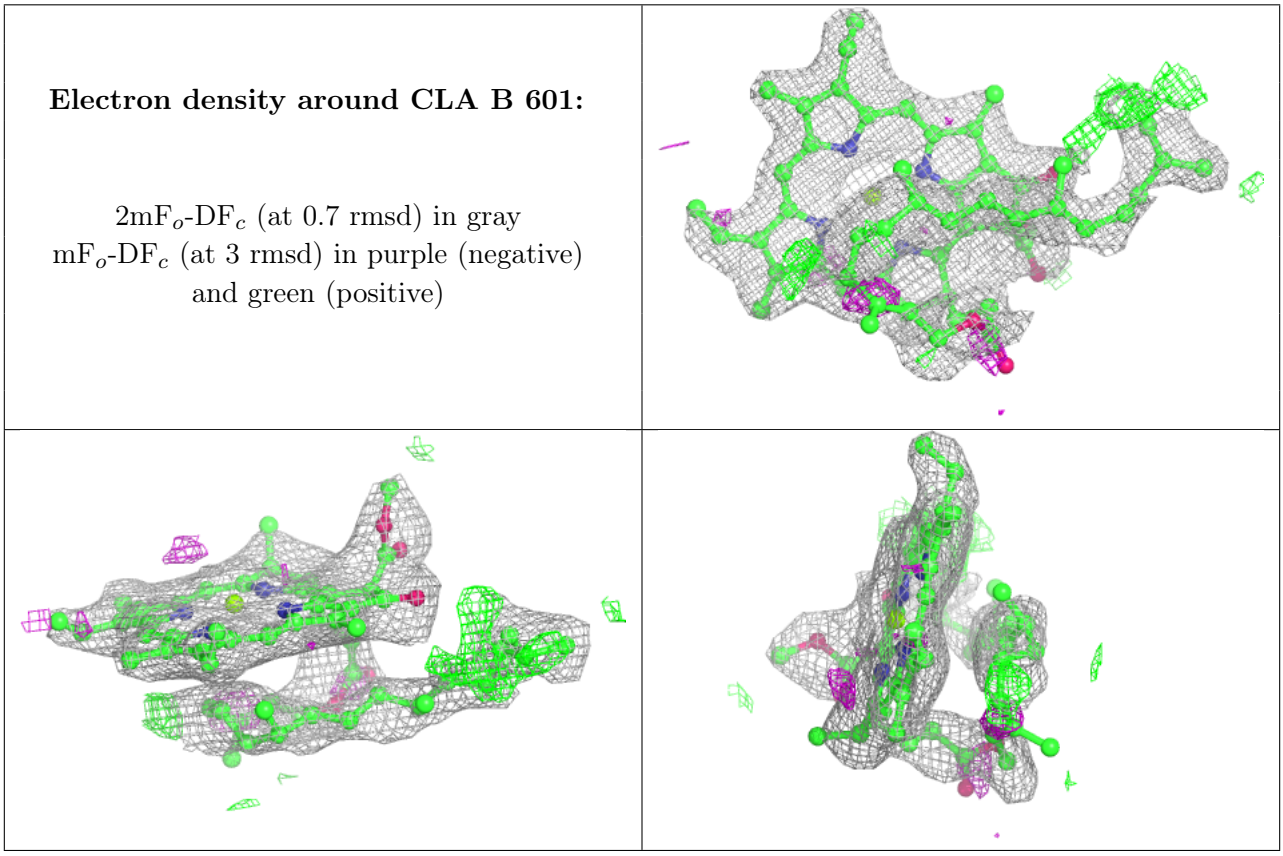
Electron density around STE j 101:

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



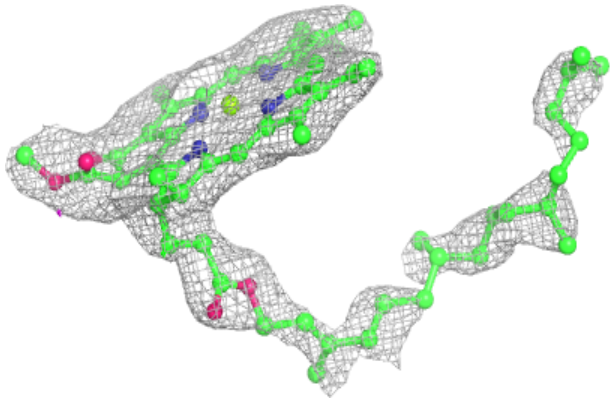
Electron density around CLA B 601:

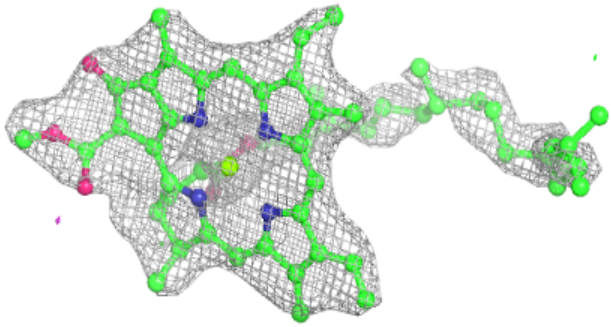
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

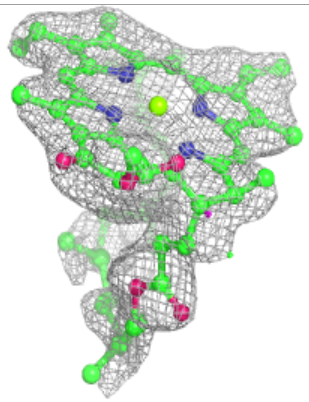


Electron density around CLA c 513:

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

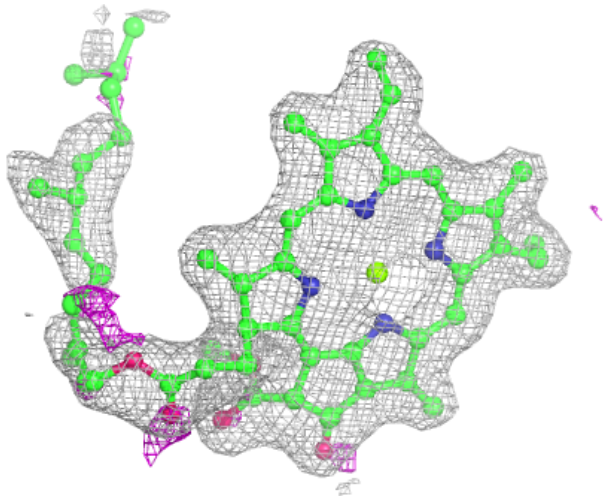


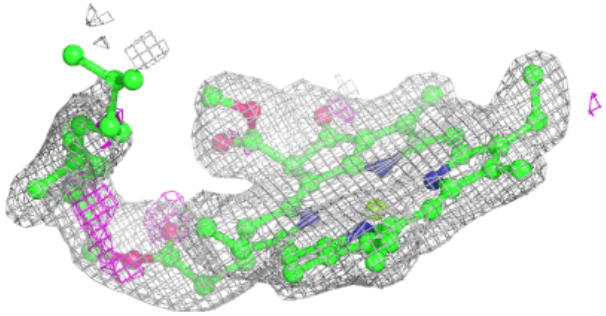


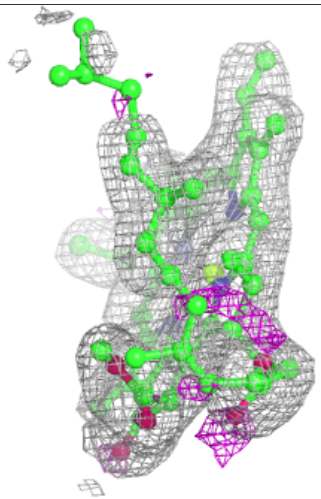


Electron density around CLA B 616:

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

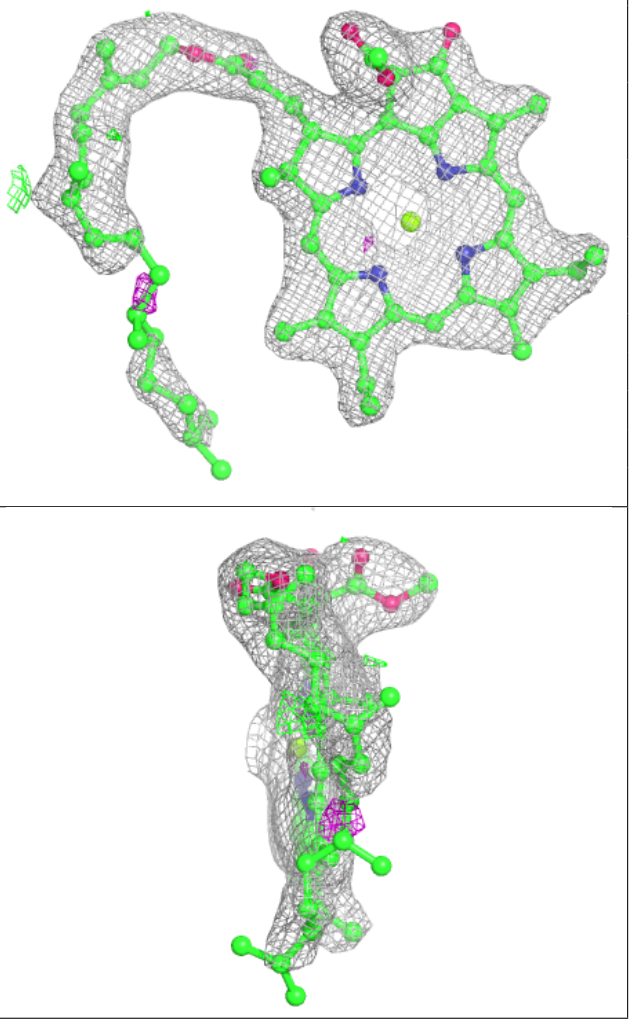


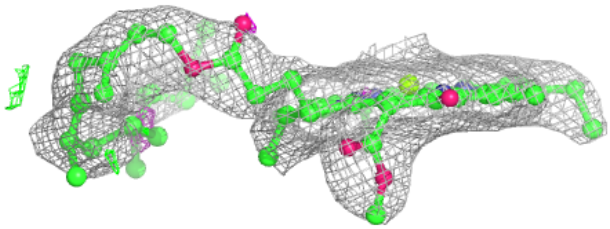




Electron density around CLA C 512:

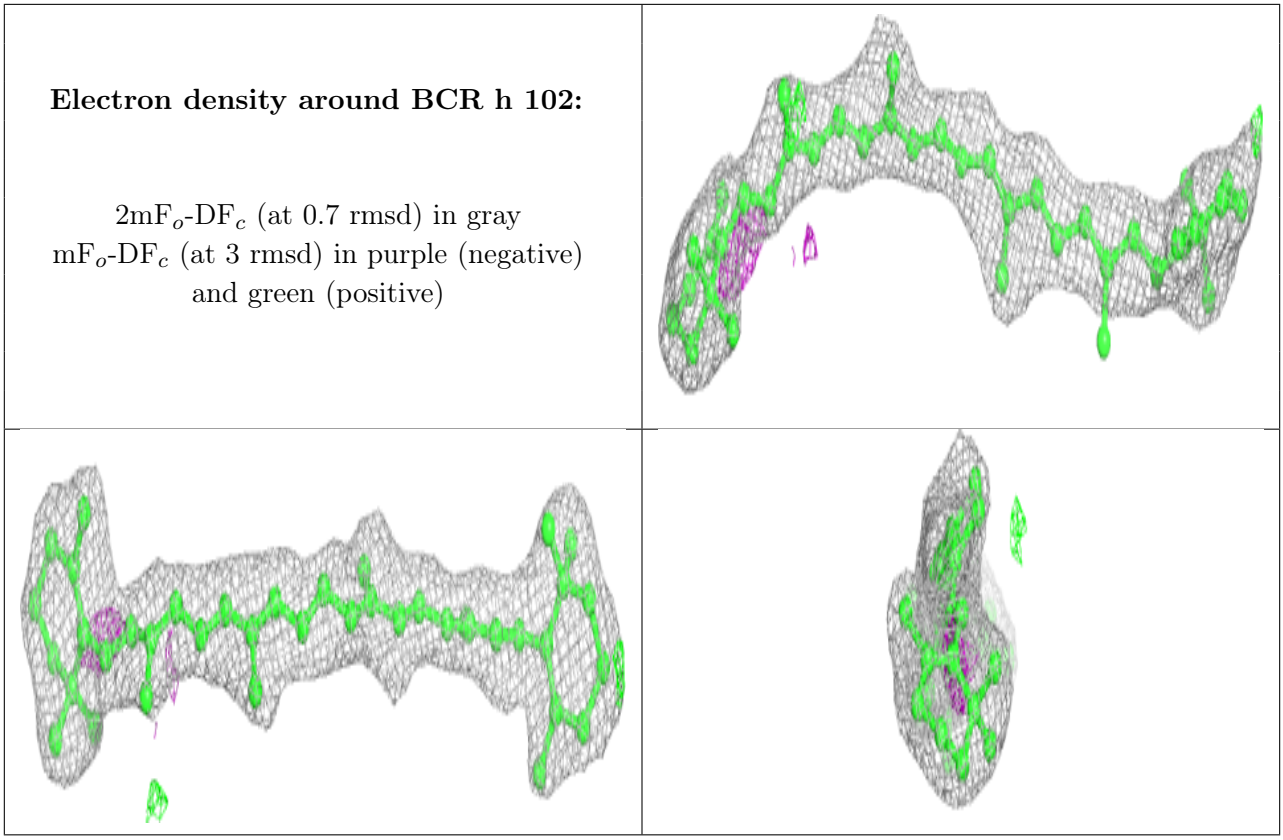
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)





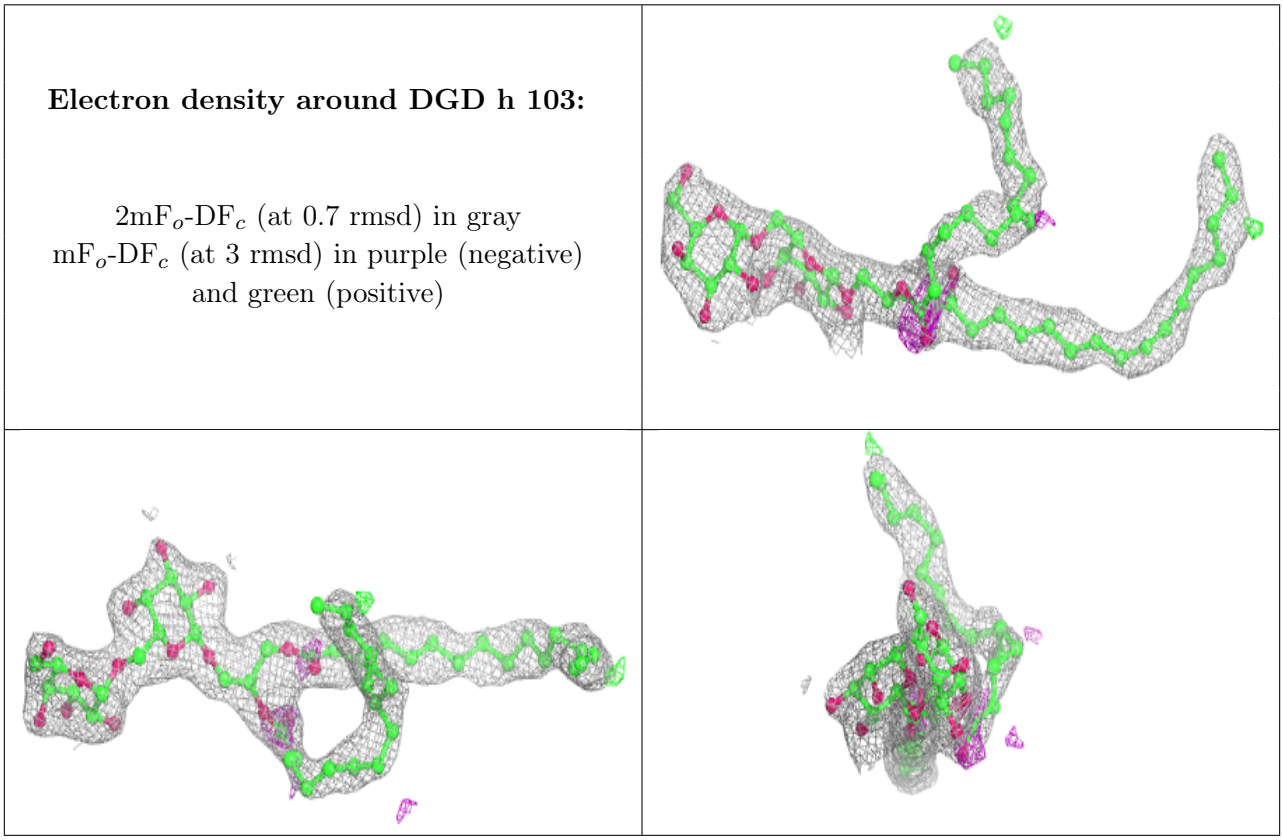
Electron density around BCR h 102:

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



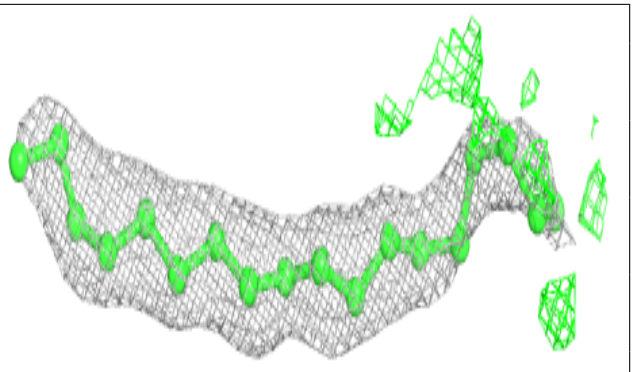
Electron density around DGD h 103:

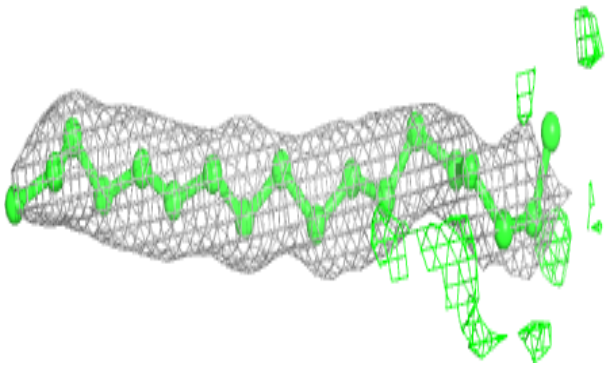
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

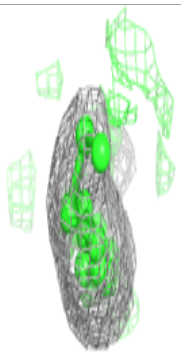


Electron density around STE l 102:

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

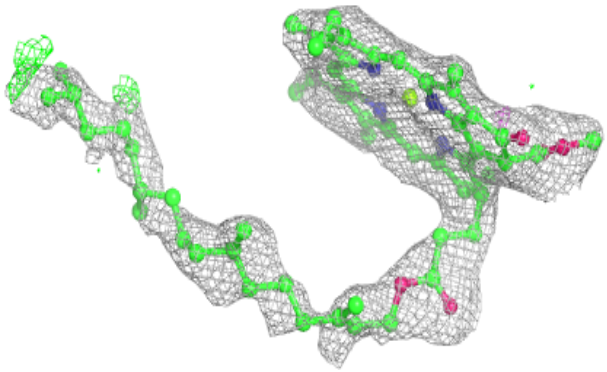


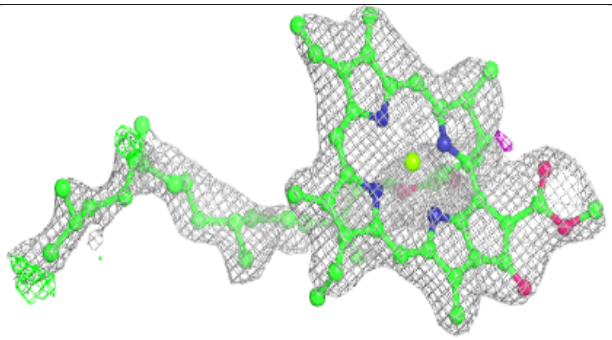


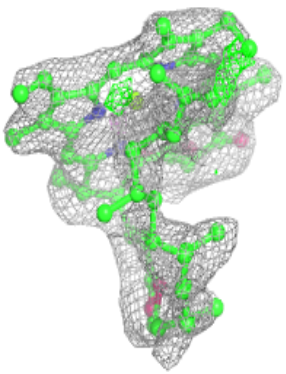


Electron density around CLA C 513:

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

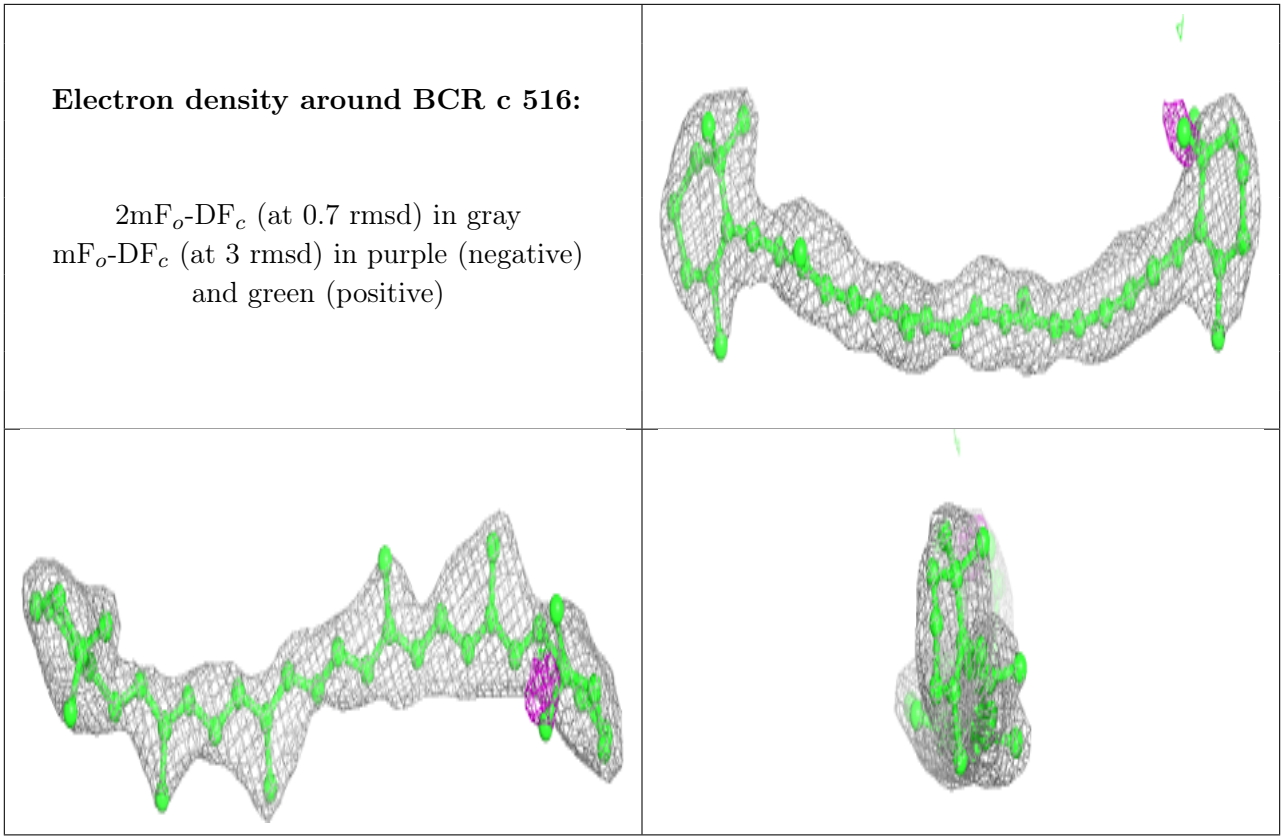






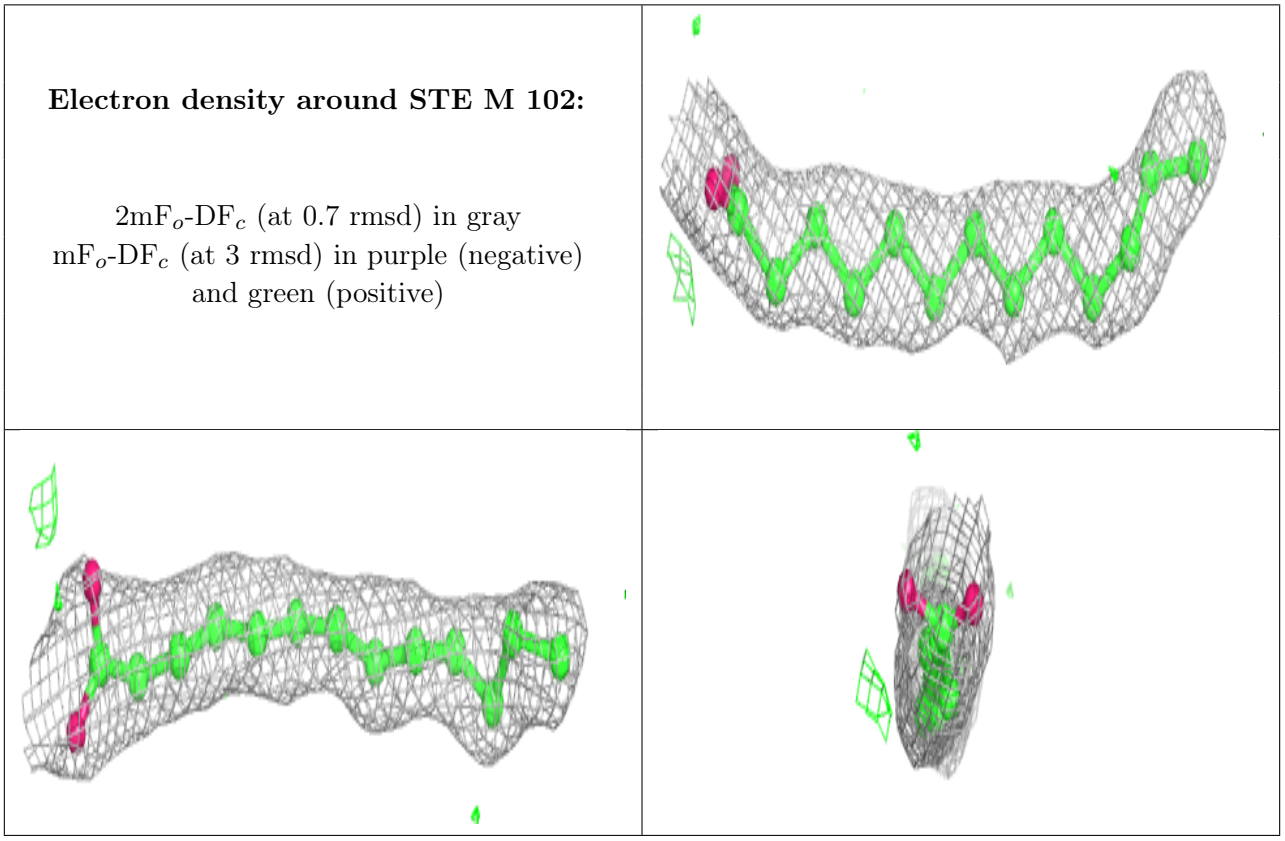
Electron density around BCR c 516:

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



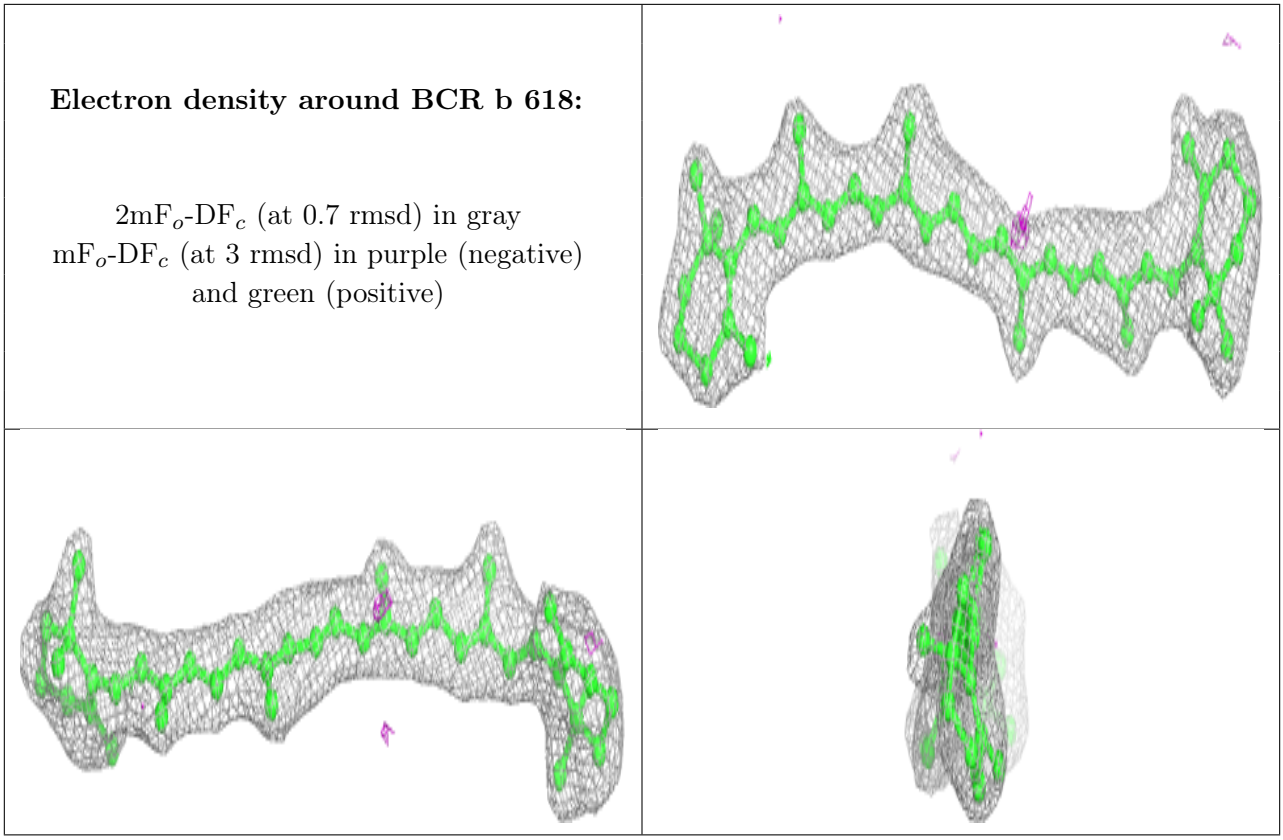
Electron density around STE M 102:

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



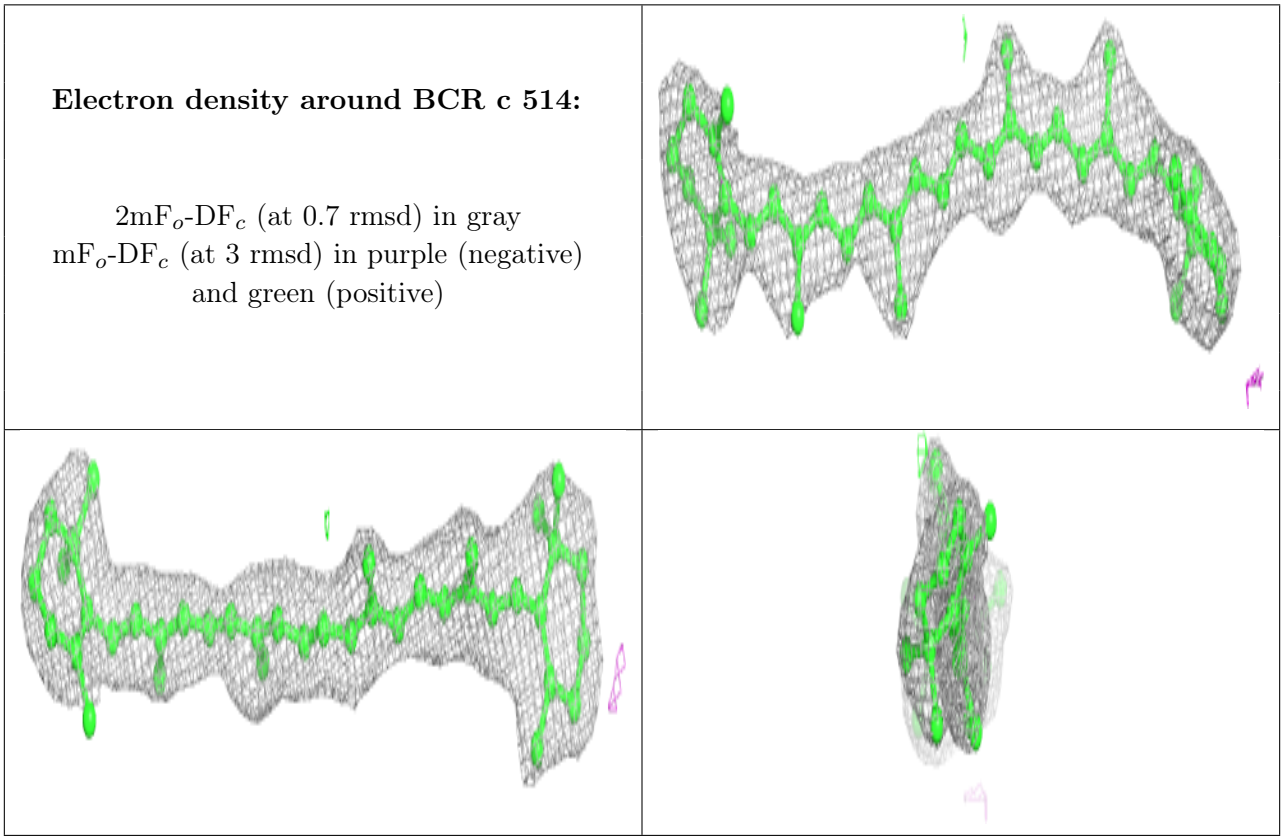
Electron density around BCR b 618:

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



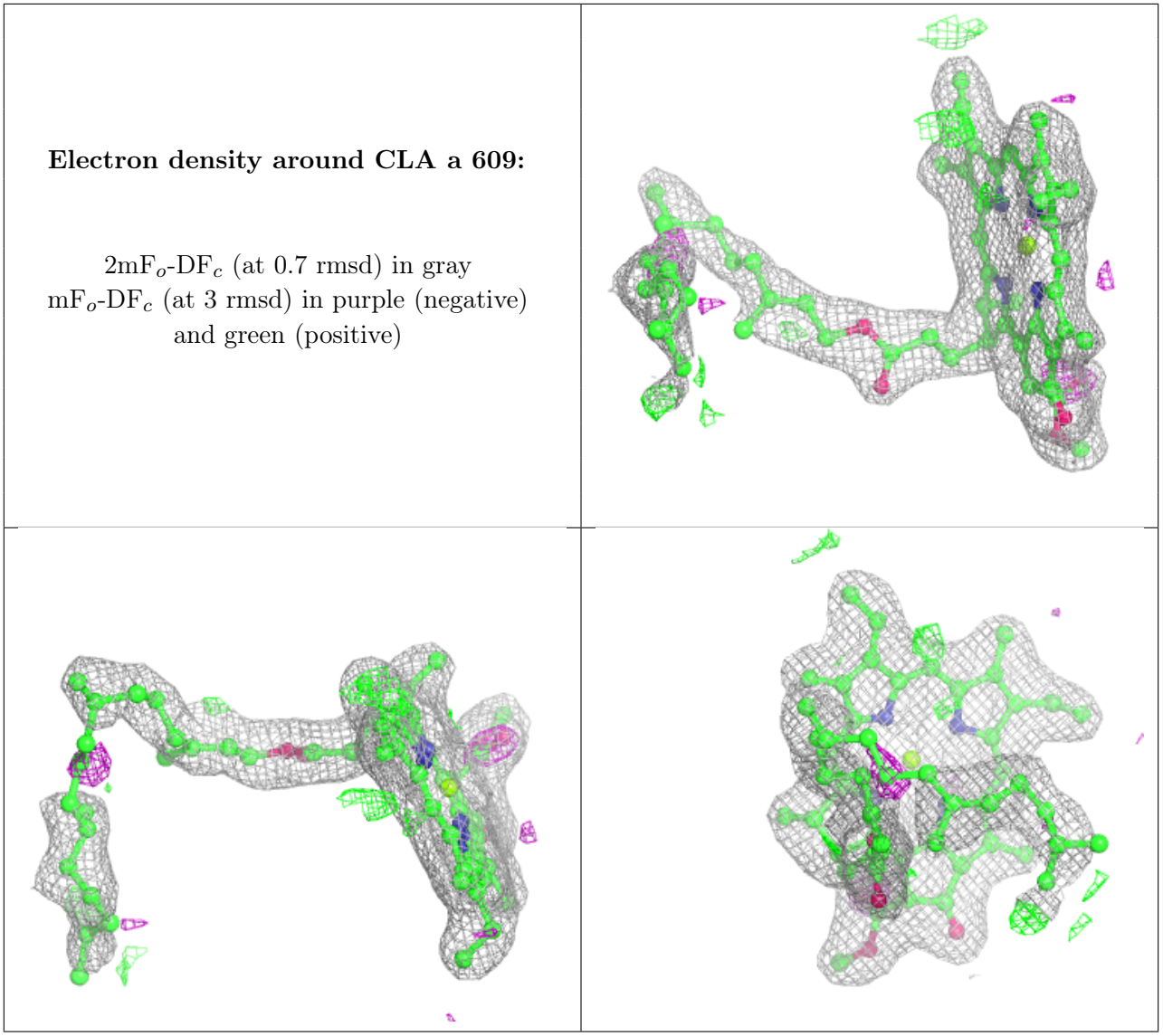
Electron density around BCR c 514:

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



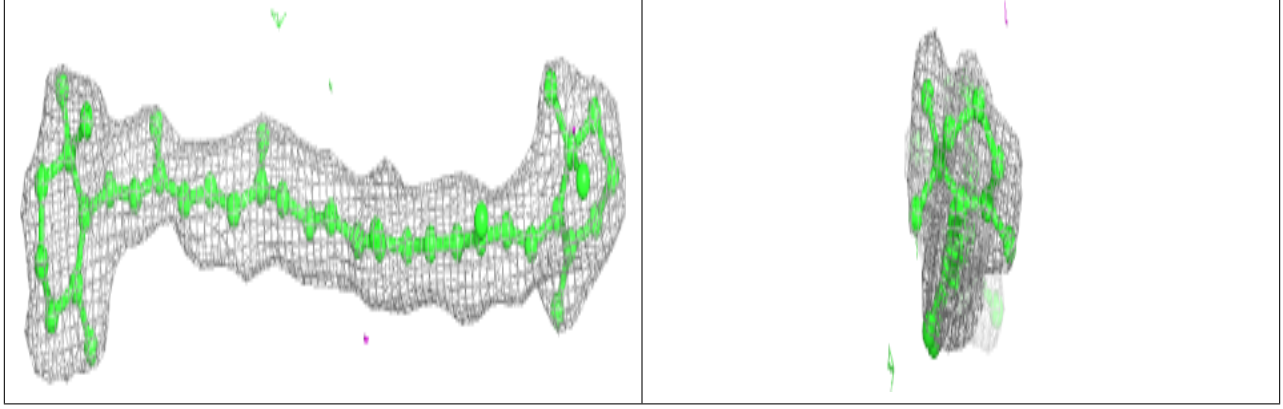
Electron density around CLA a 609:

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



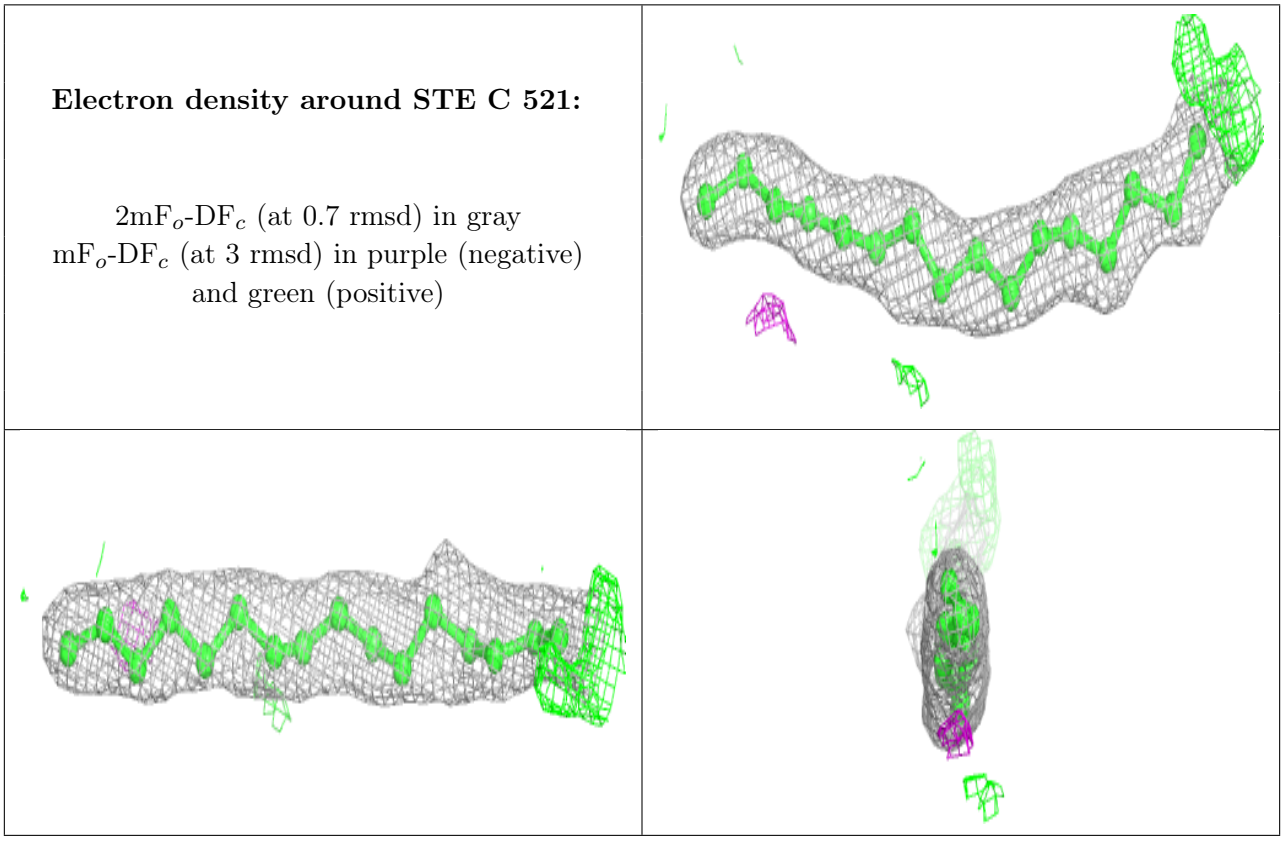
Electron density around BCR Z 101:

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



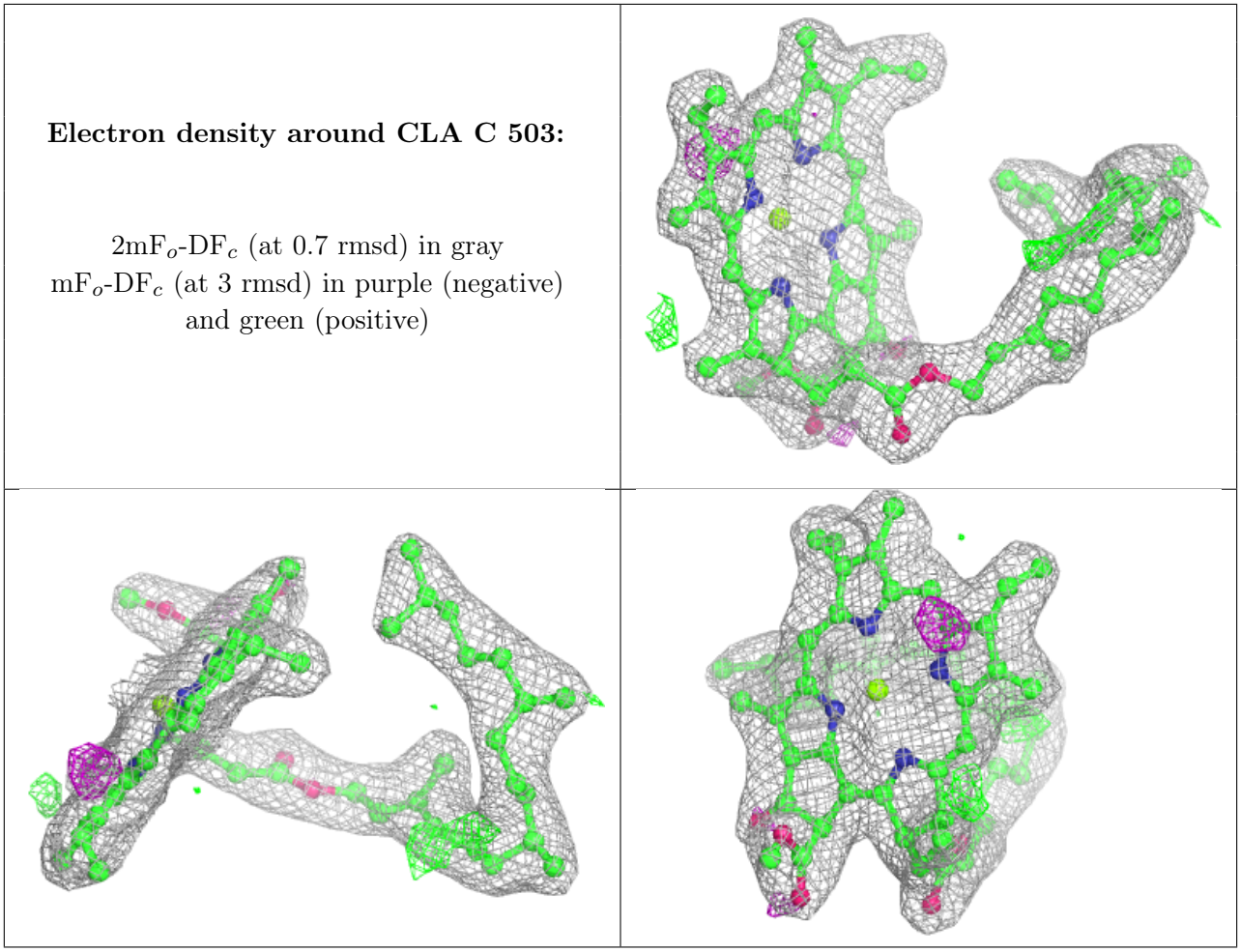
Electron density around STE C 521:

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



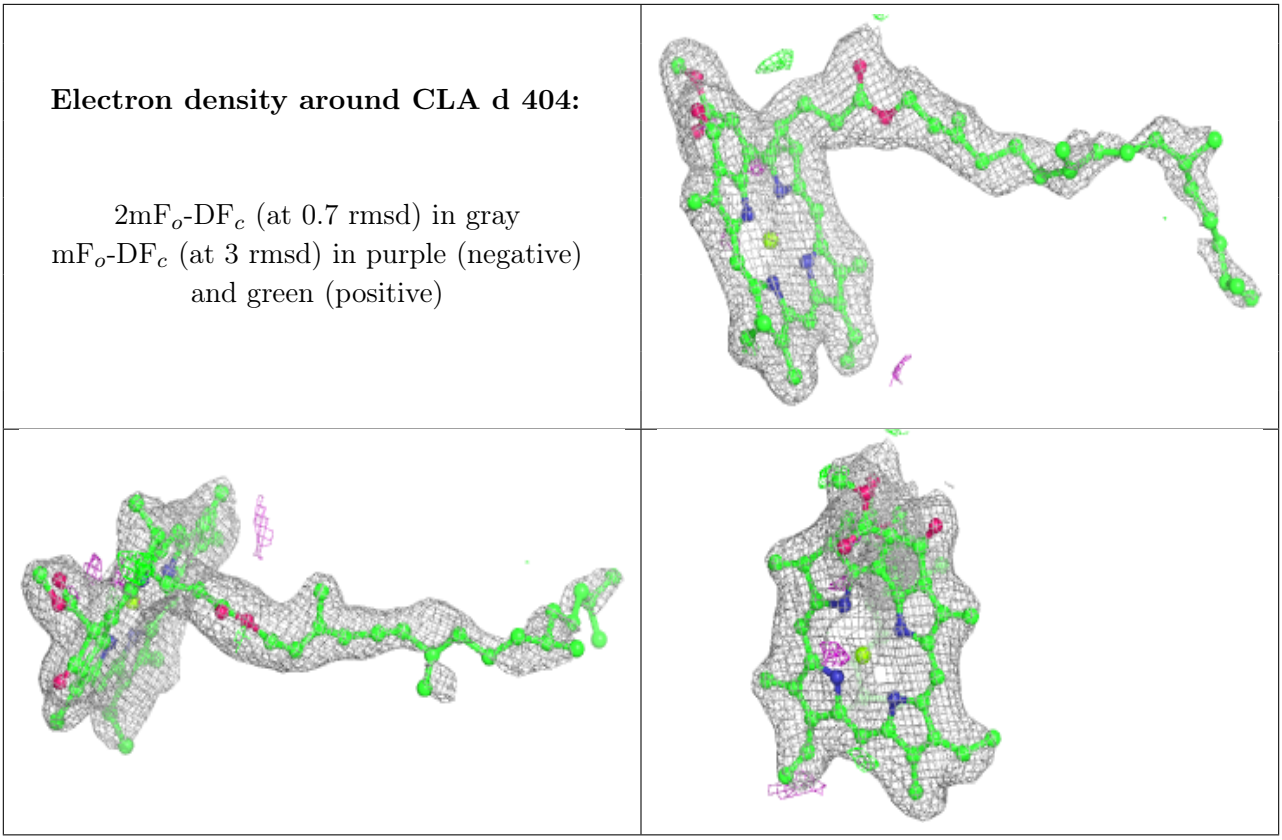
Electron density around CLA C 503:

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



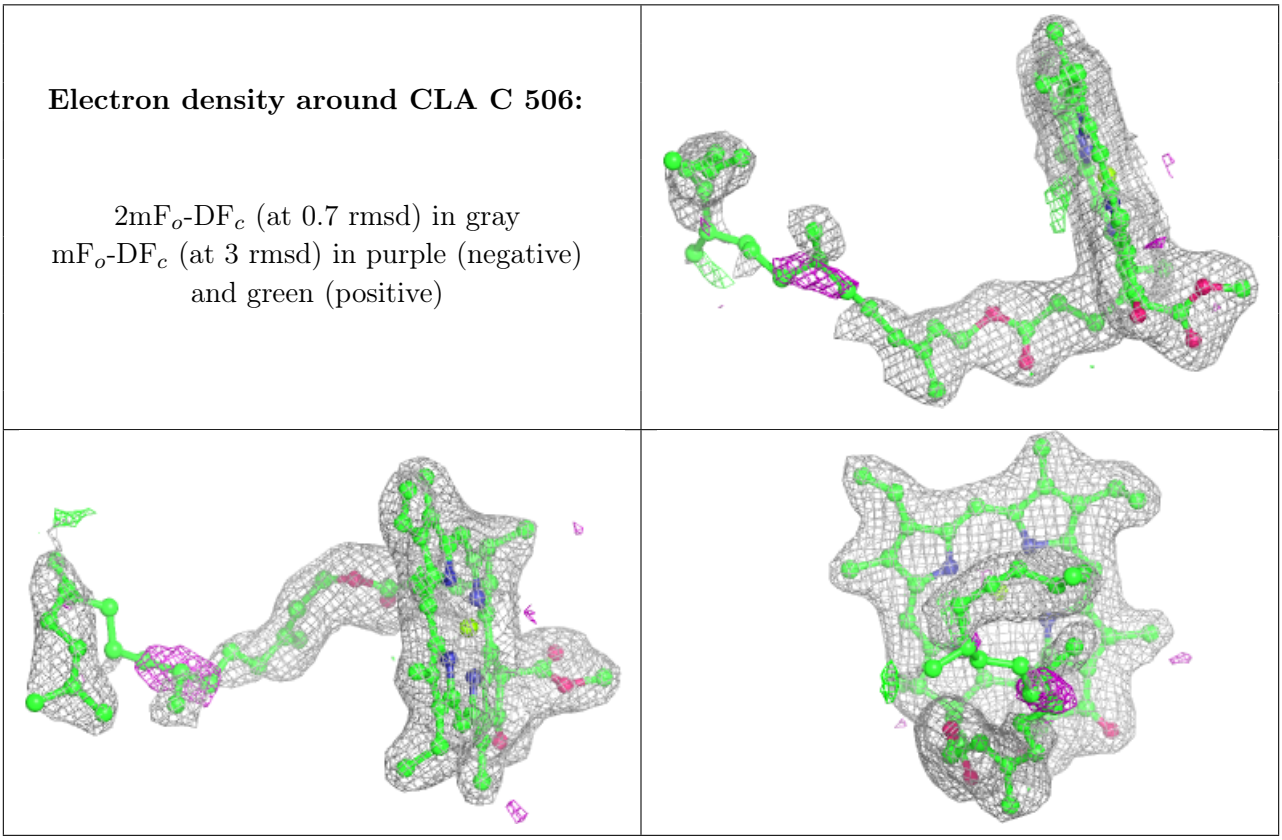
Electron density around CLA d 404:

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



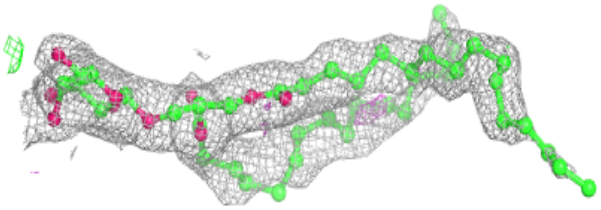
Electron density around CLA C 506:

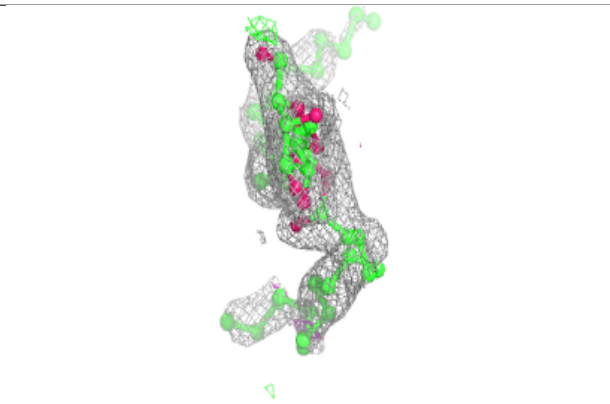
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



Electron density around LMG D 406:

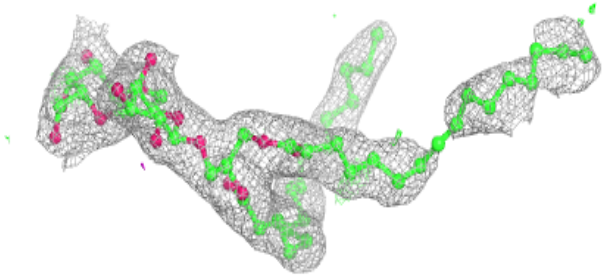
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

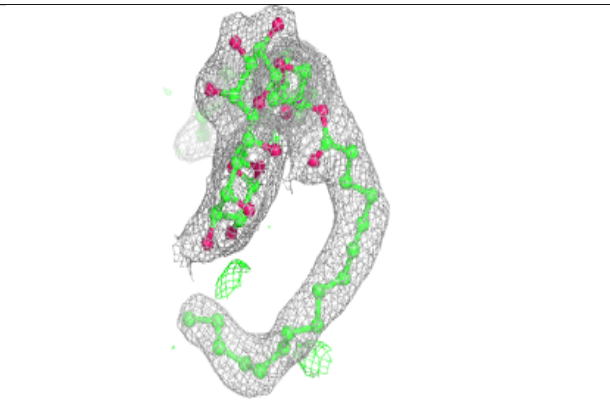




Electron density around DGD c 518:

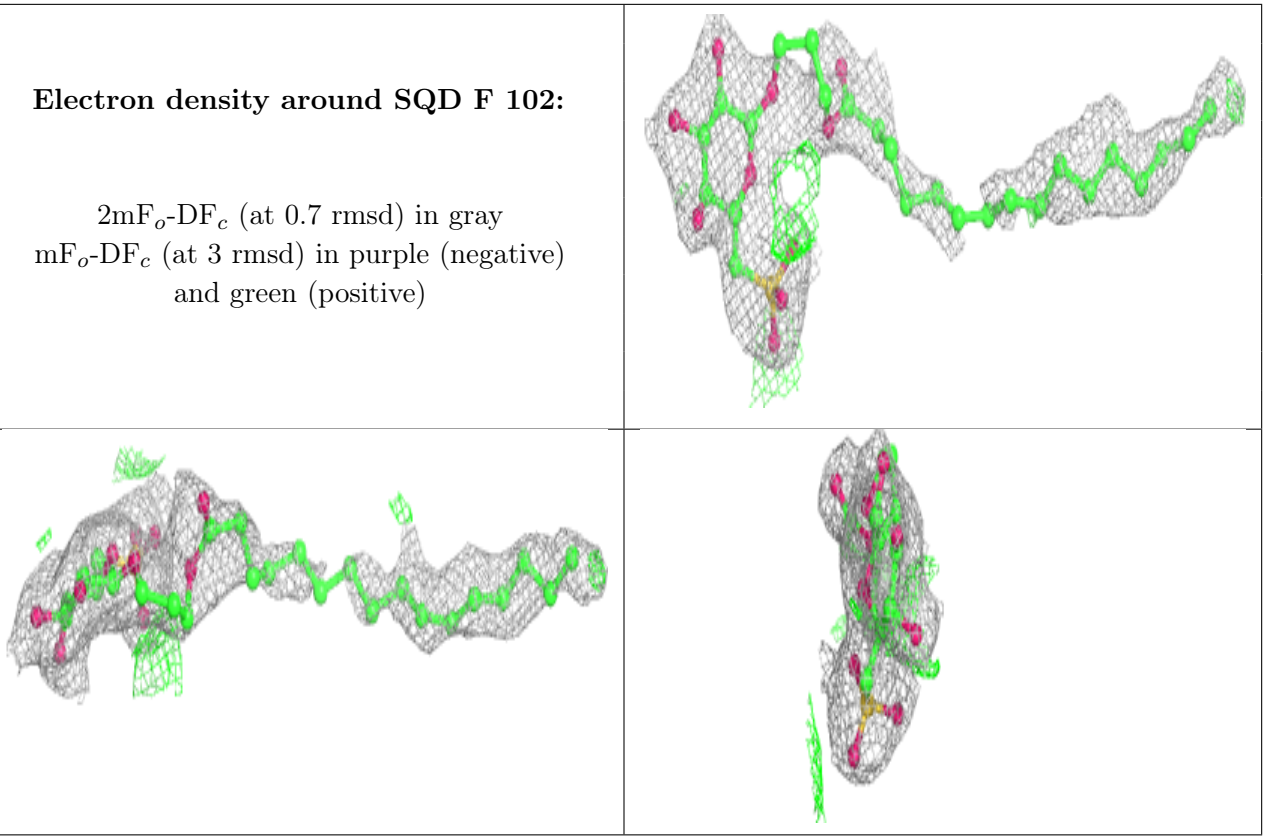
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)





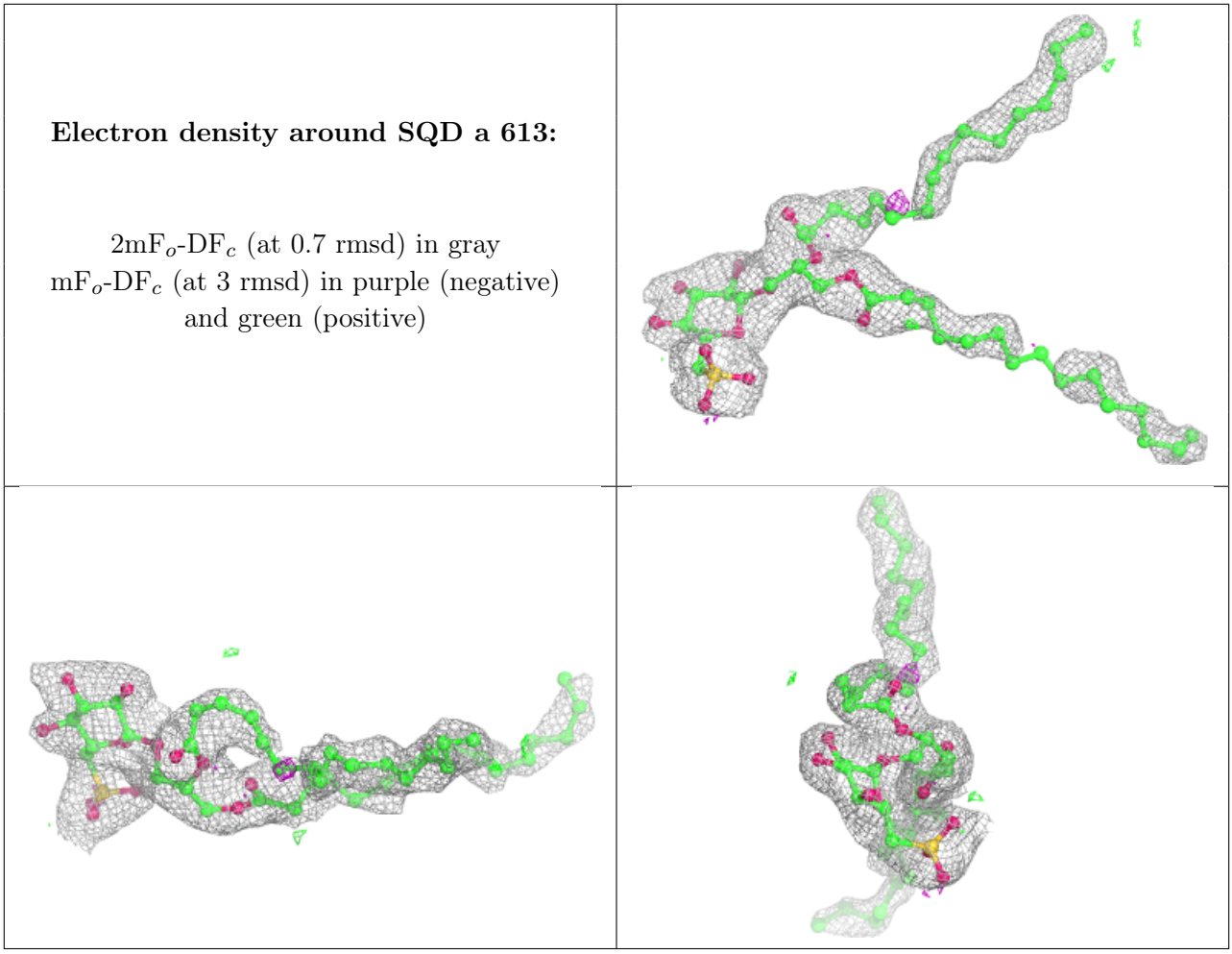
Electron density around SQD F 102:

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



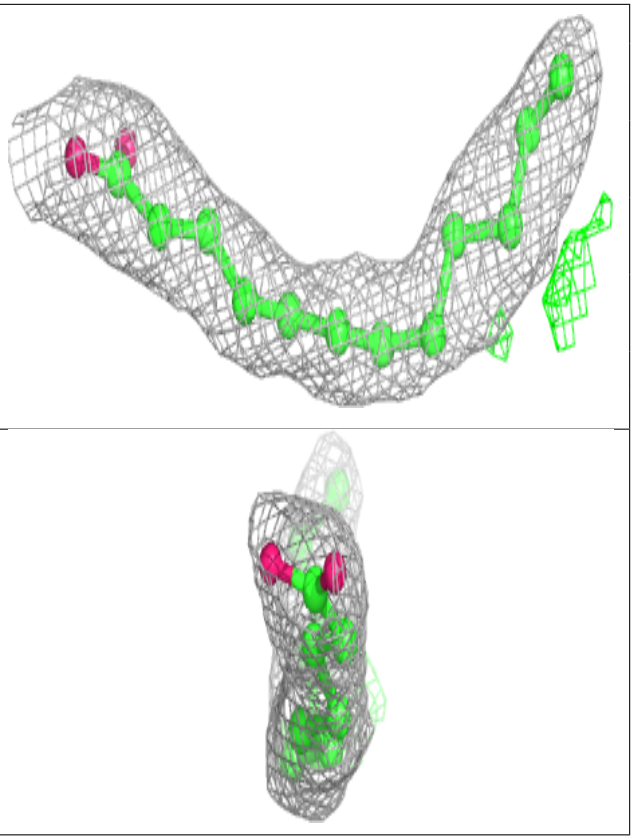
Electron density around SQD a 613:

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



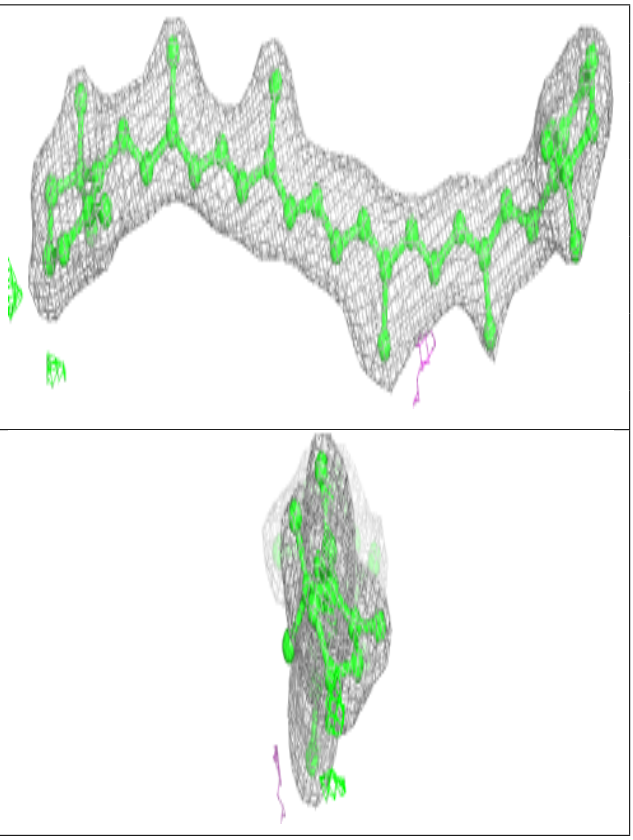
Electron density around STE t 103:

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



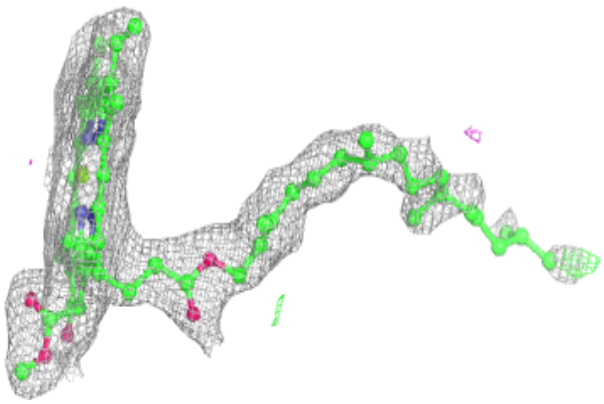
Electron density around BCR C 514:

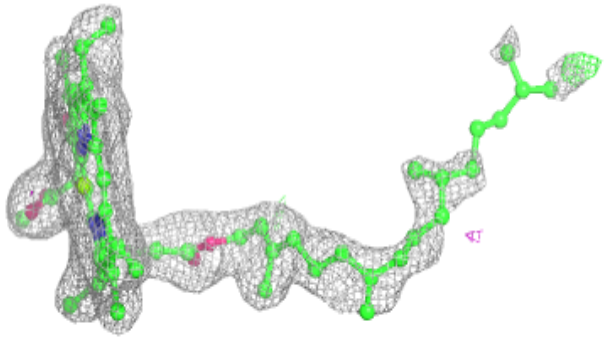
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

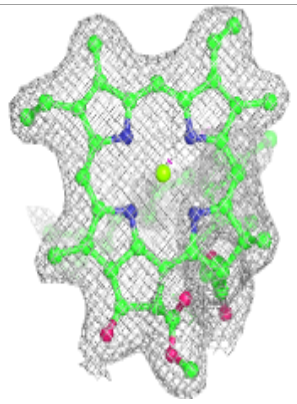


Electron density around CLA D 403:

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

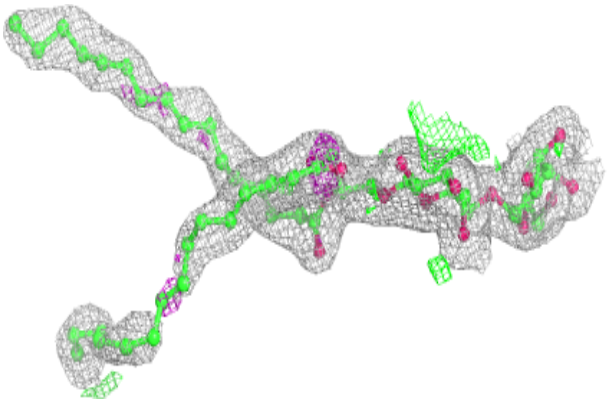


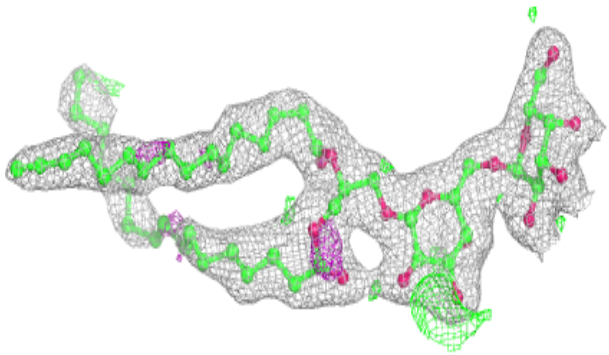


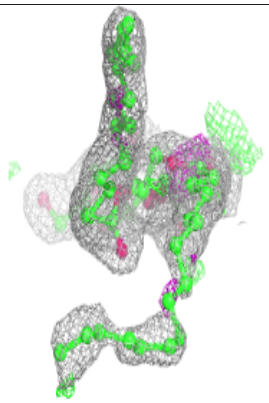


Electron density around DGD C 515:

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

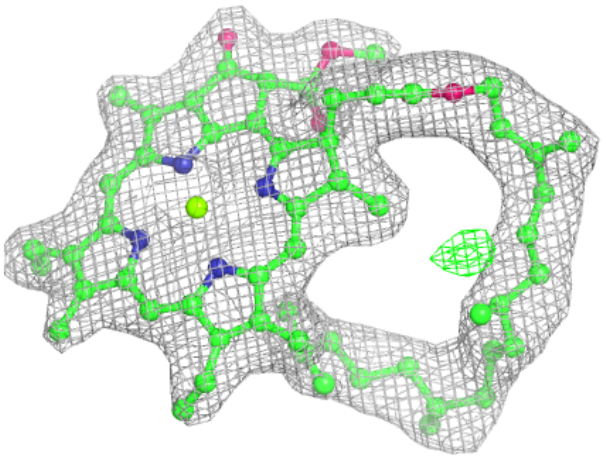


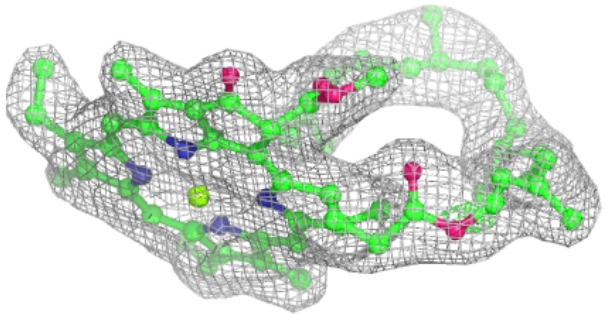


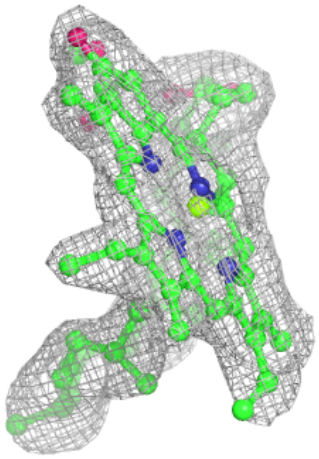


Electron density around CLA b 614:

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

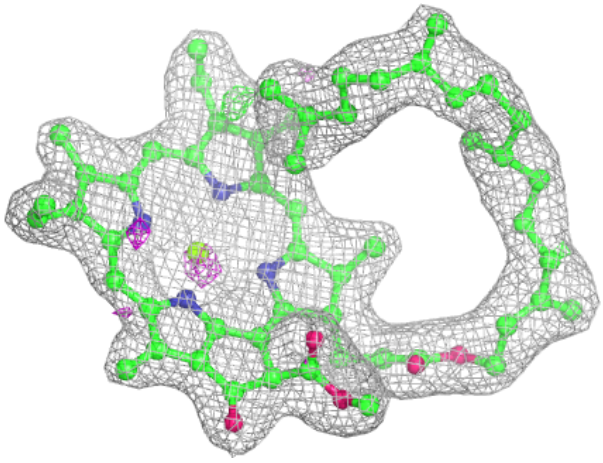


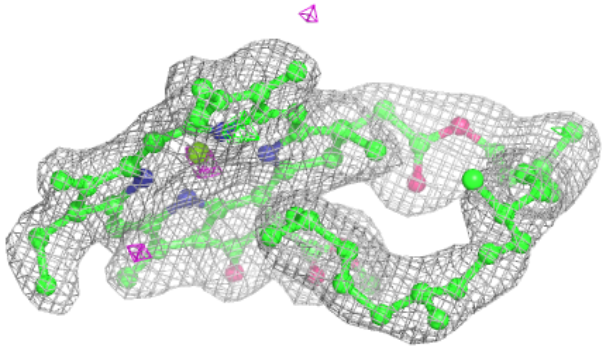


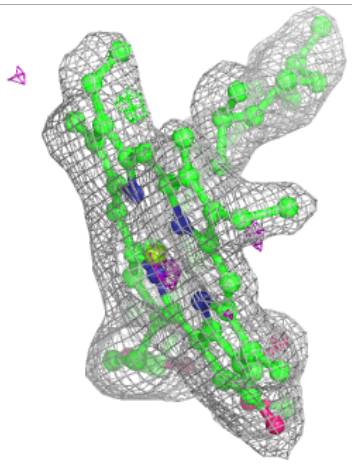


Electron density around CLA B 615:

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

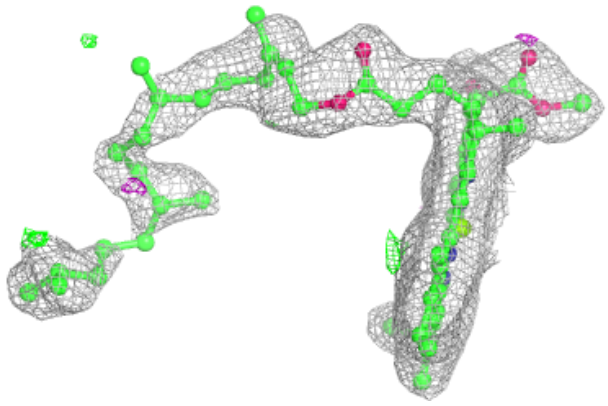


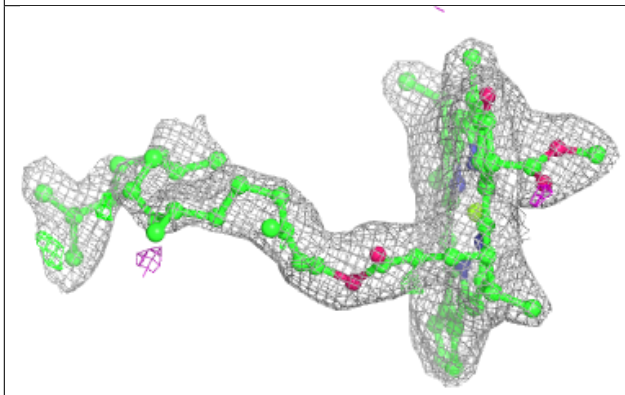


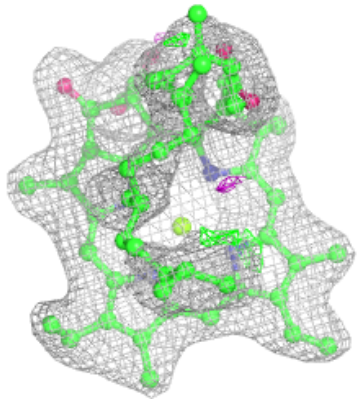


Electron density around CLA c 506:

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

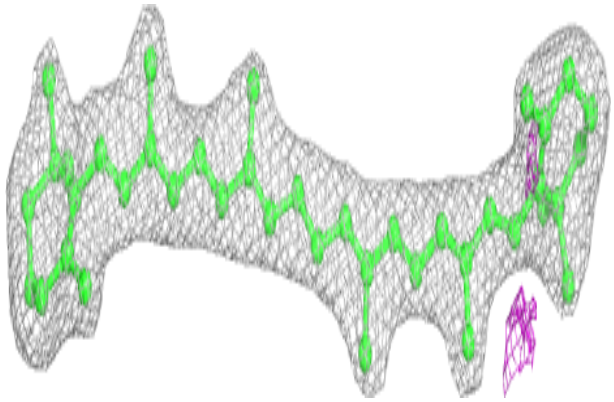


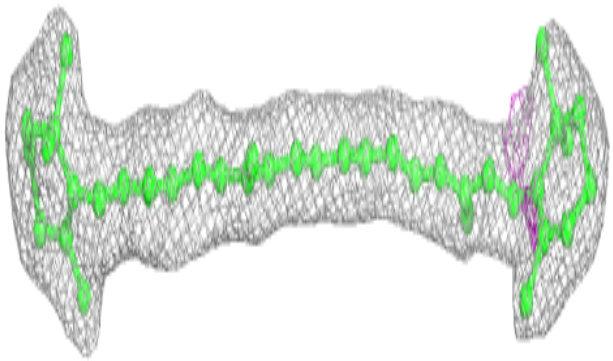


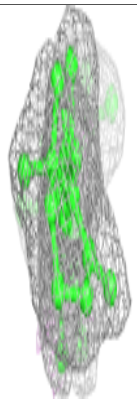


Electron density around BCR B 618:

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

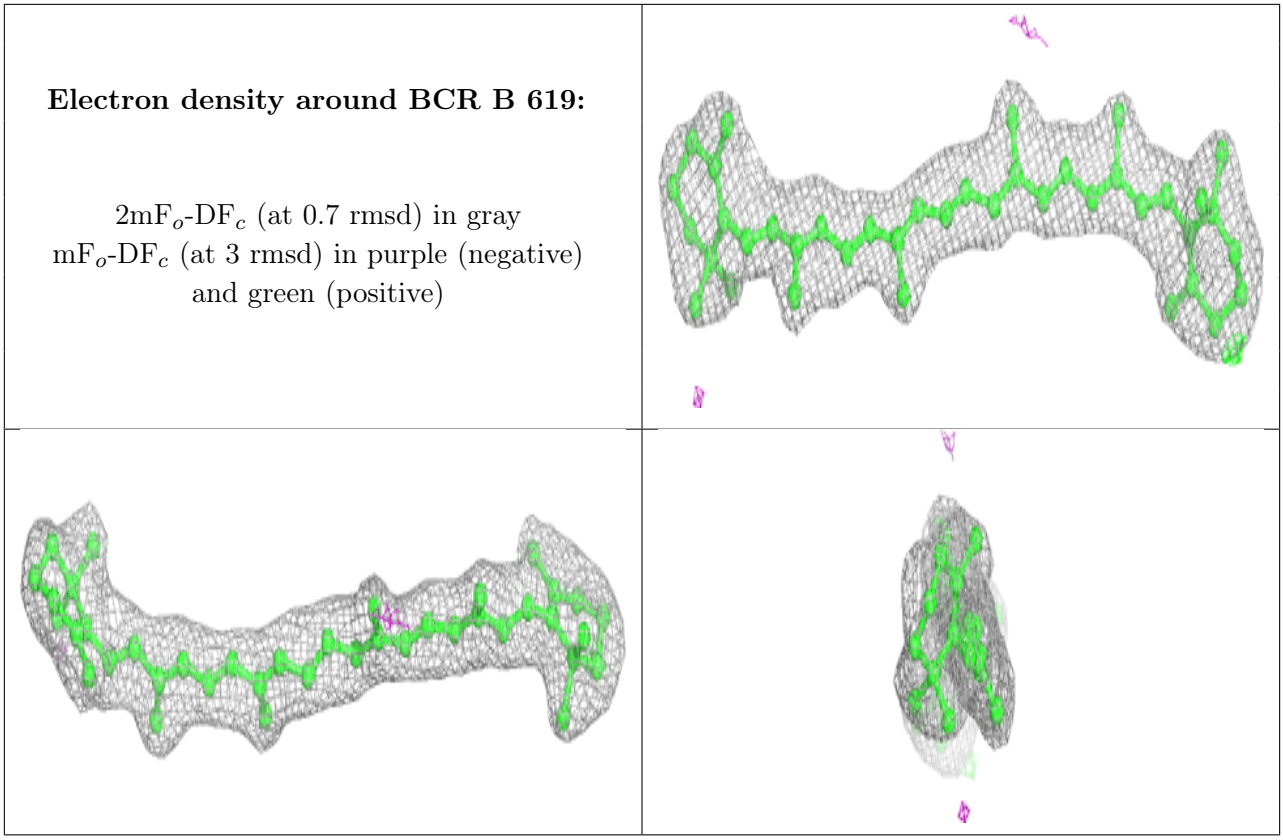






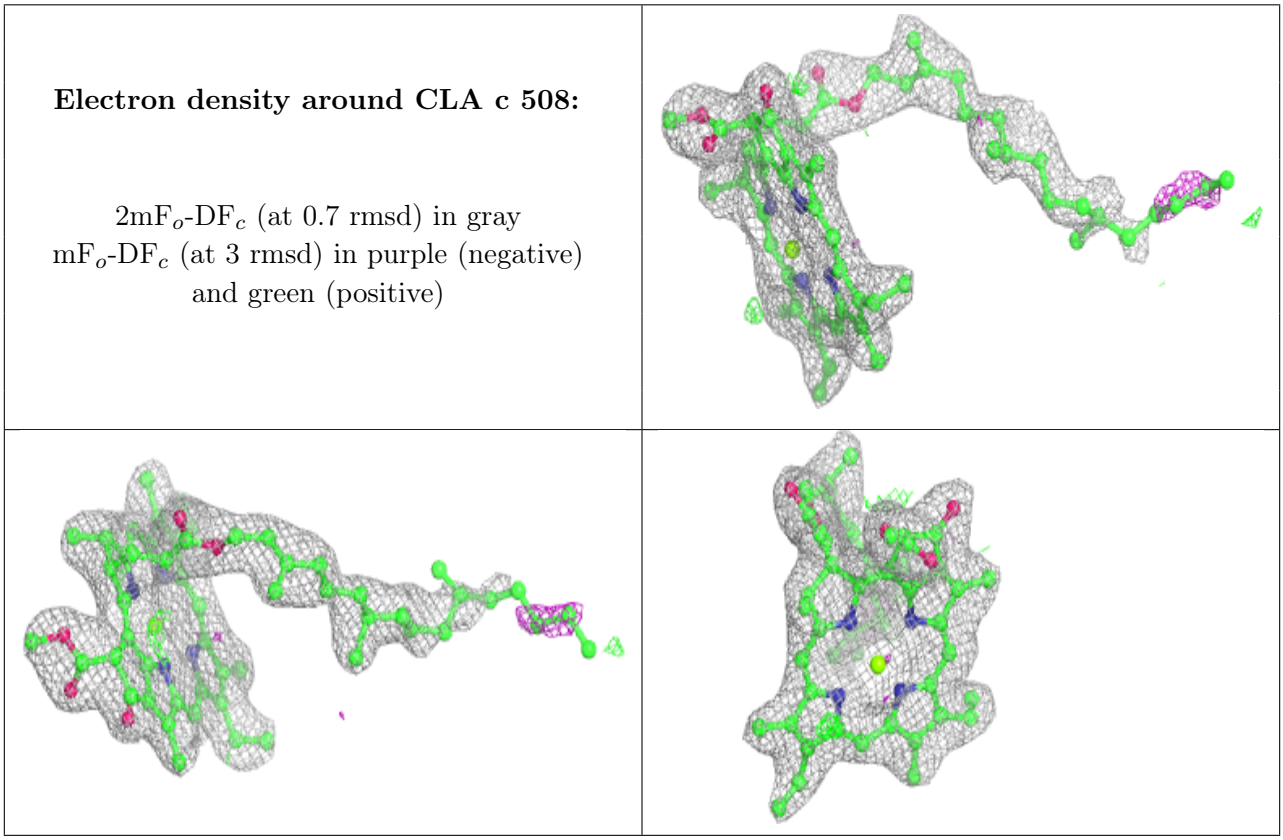
Electron density around BCR B 619:

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



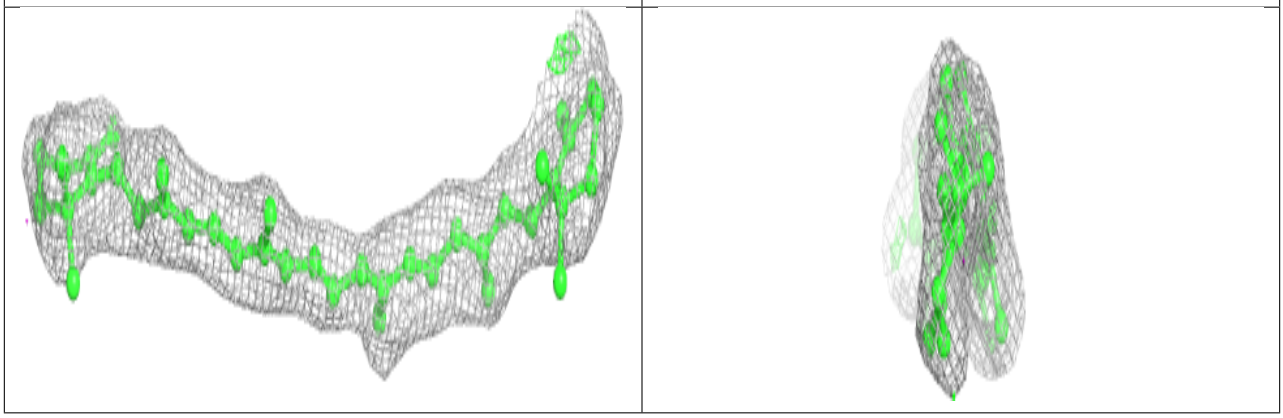
Electron density around CLA c 508:

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



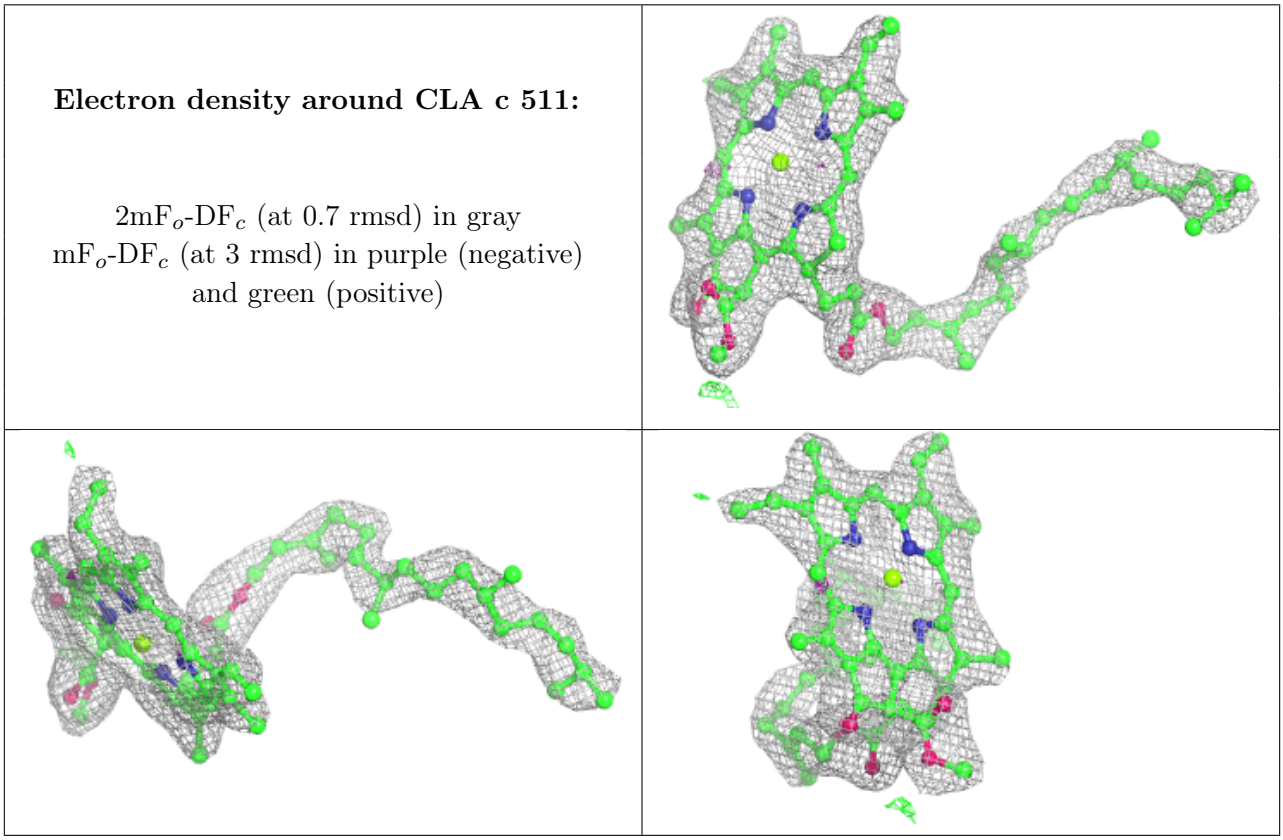
Electron density around BCR D 404:

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



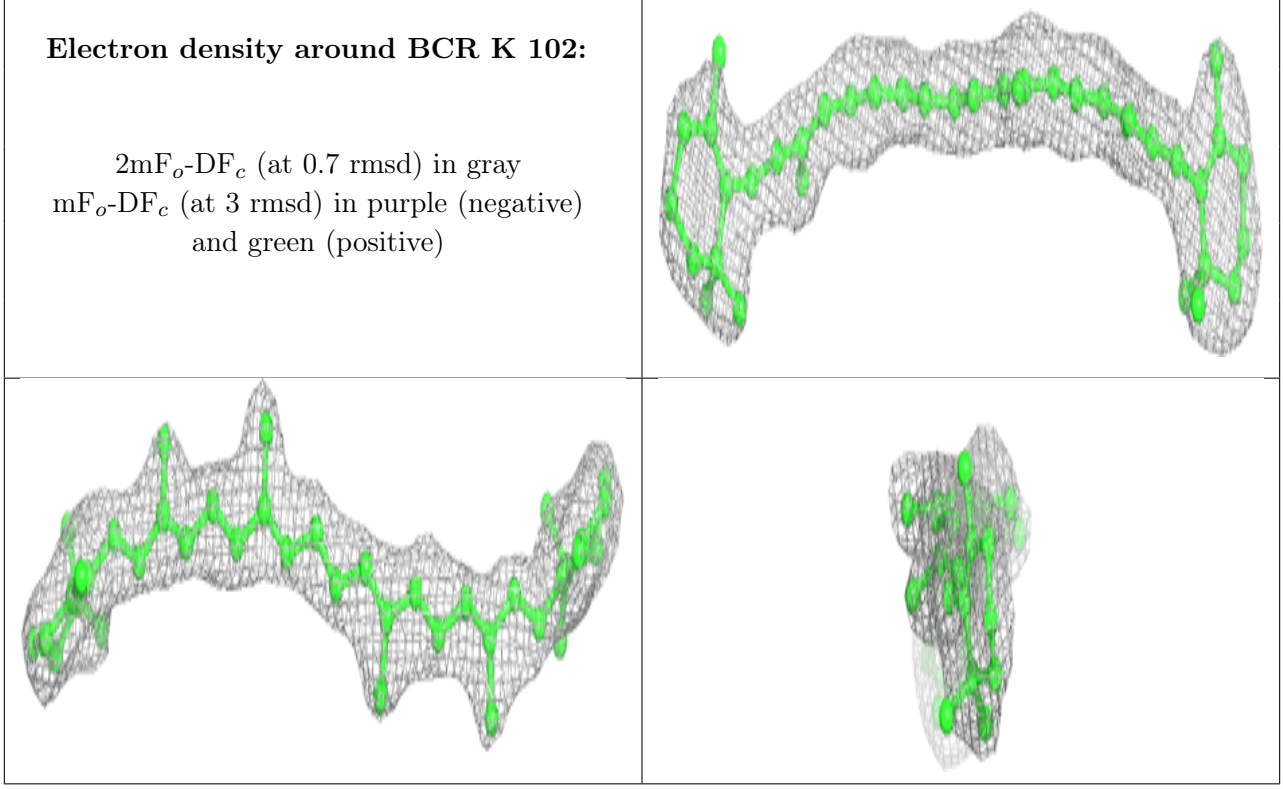
Electron density around CLA c 511:

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



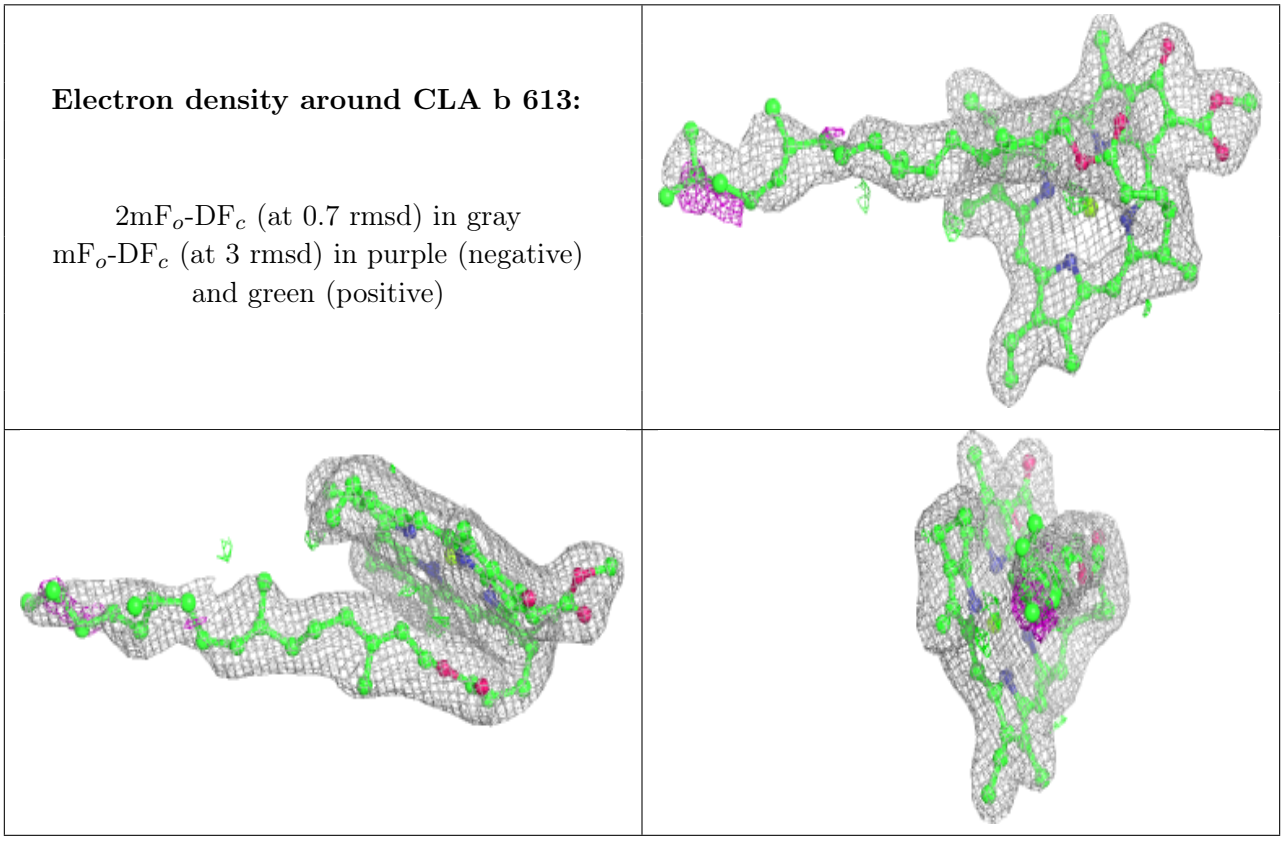
Electron density around BCR K 102:

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



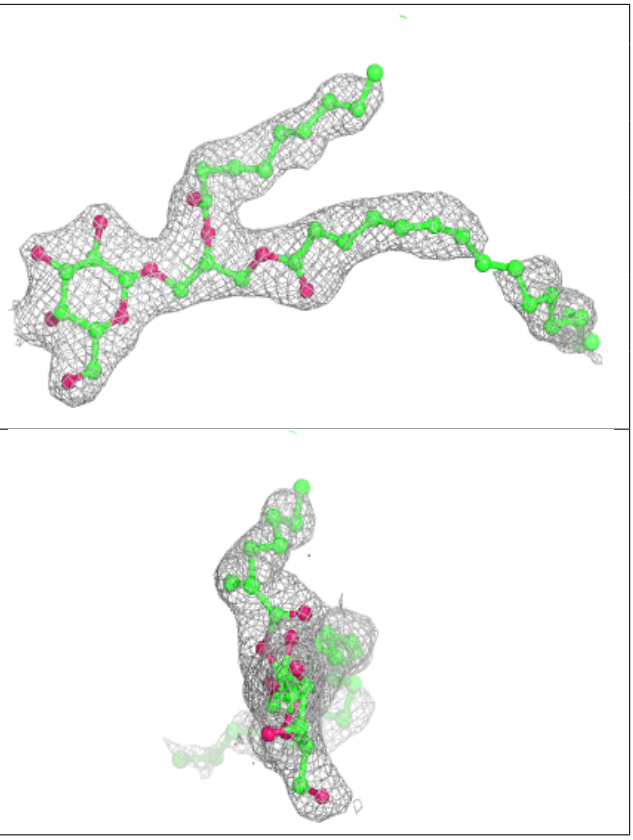
Electron density around CLA b 613:

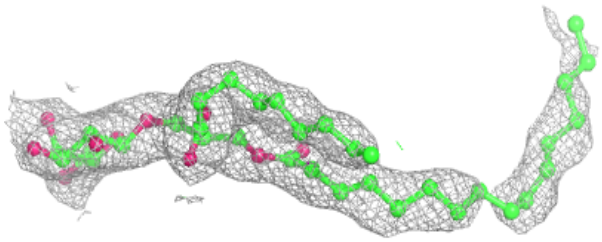
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



Electron density around LMG d 411:

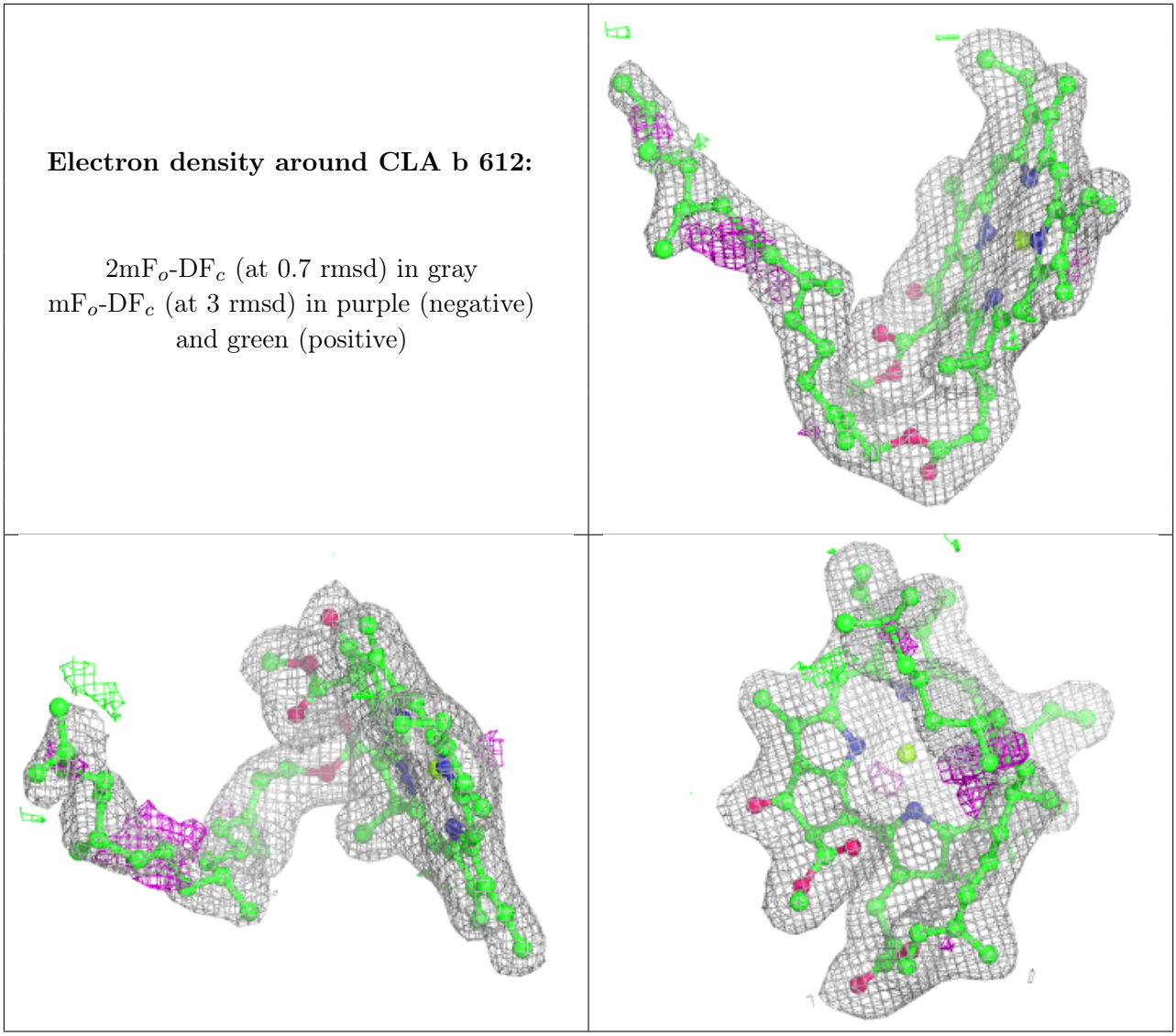
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)





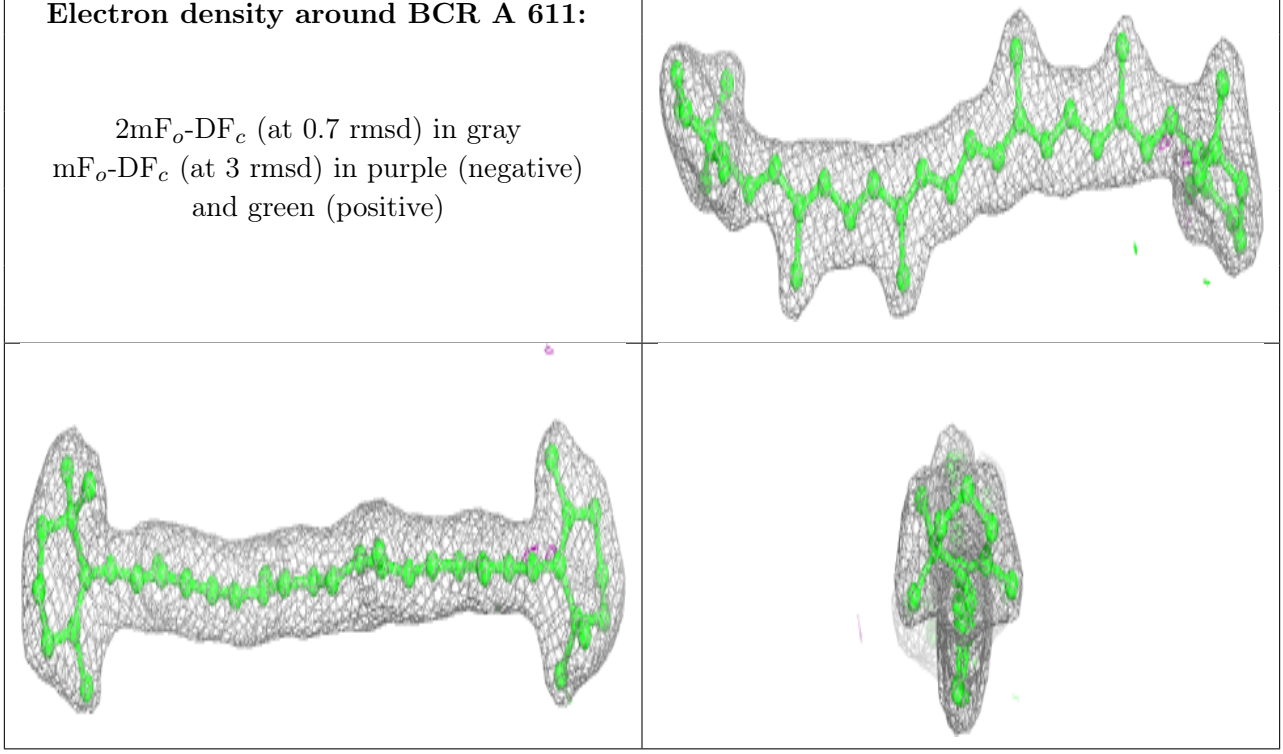
Electron density around CLA b 612:

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



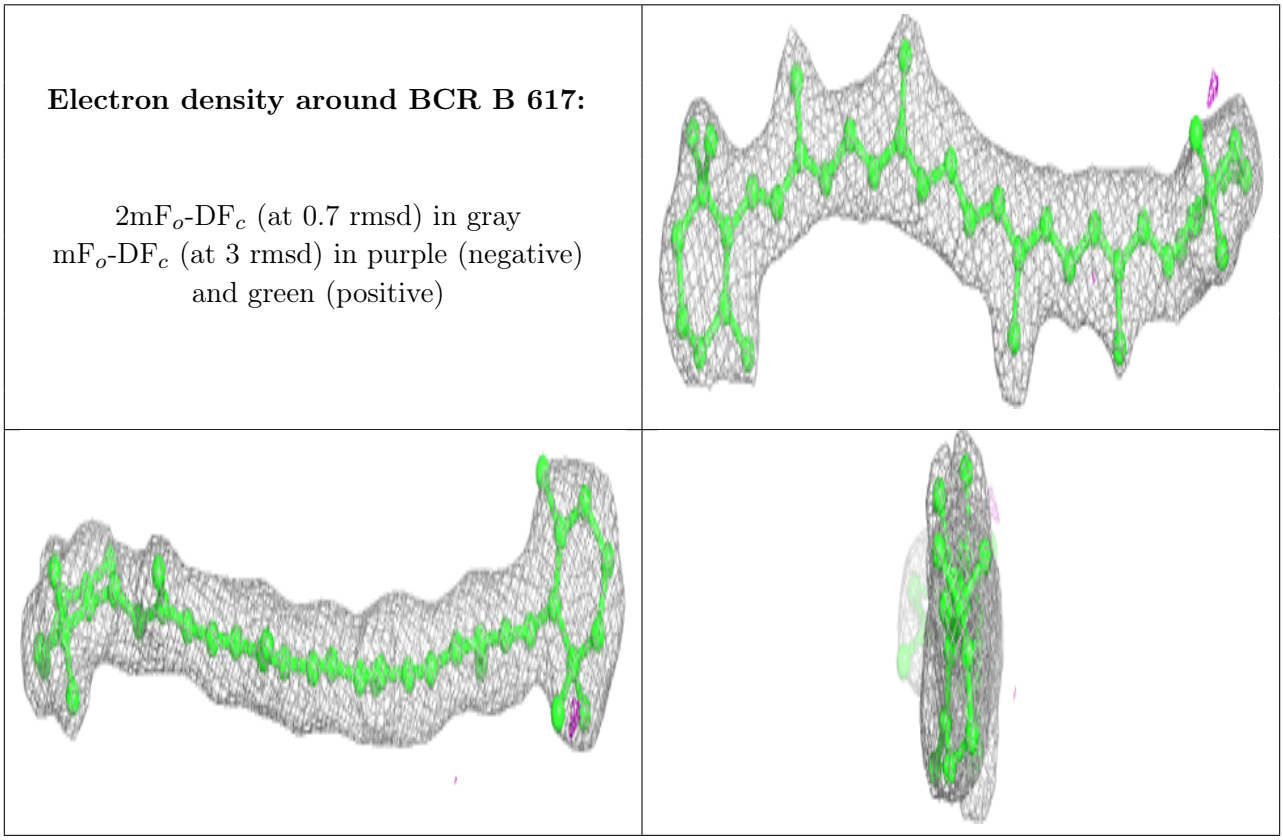
Electron density around BCR A 611:

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



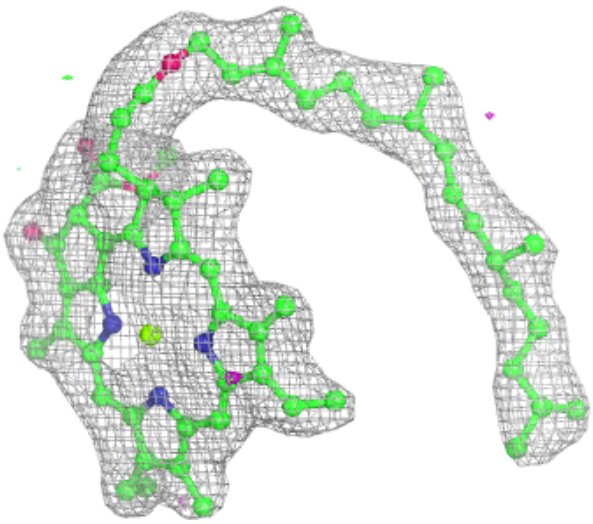
Electron density around BCR B 617:

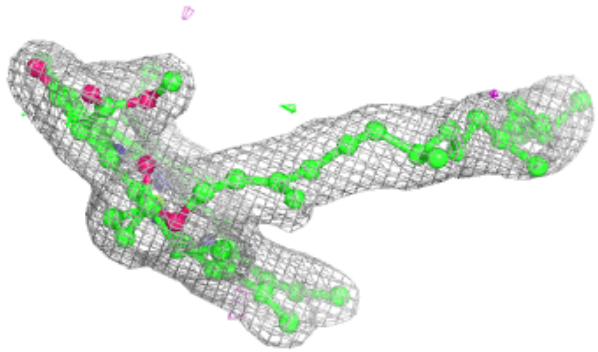
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

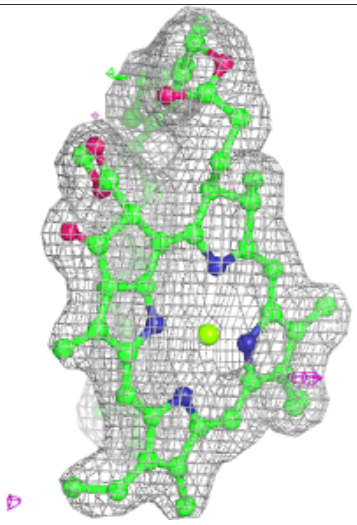


Electron density around CLA C 507:

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

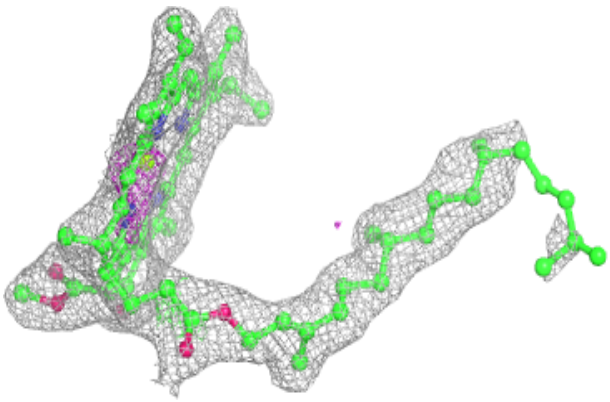


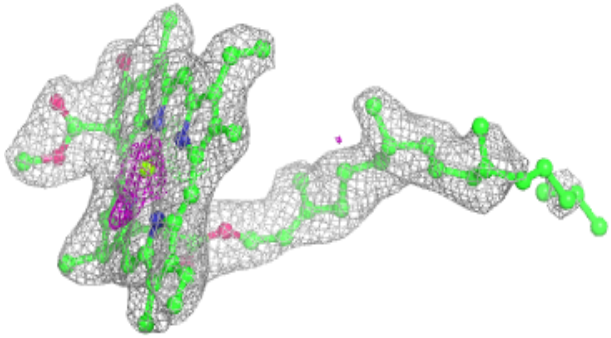


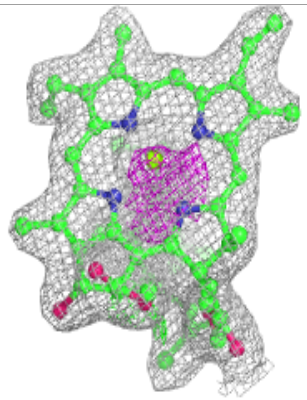


Electron density around CLA C 508:

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

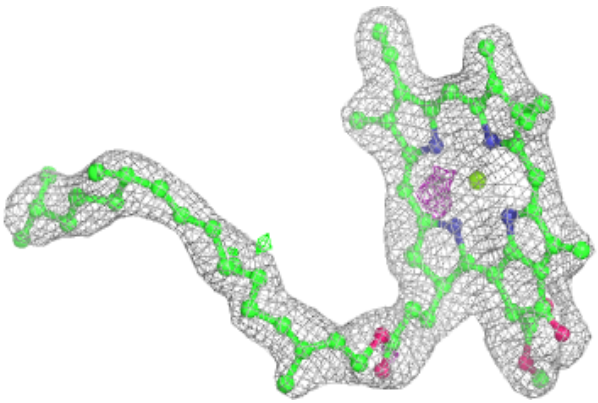


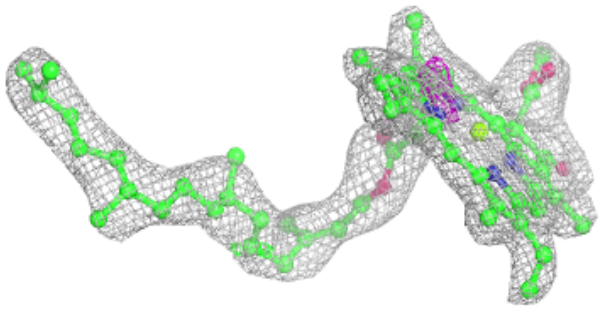


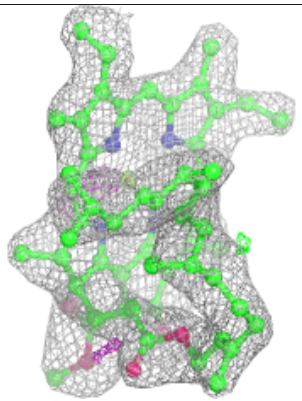


Electron density around CLA C 511:

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

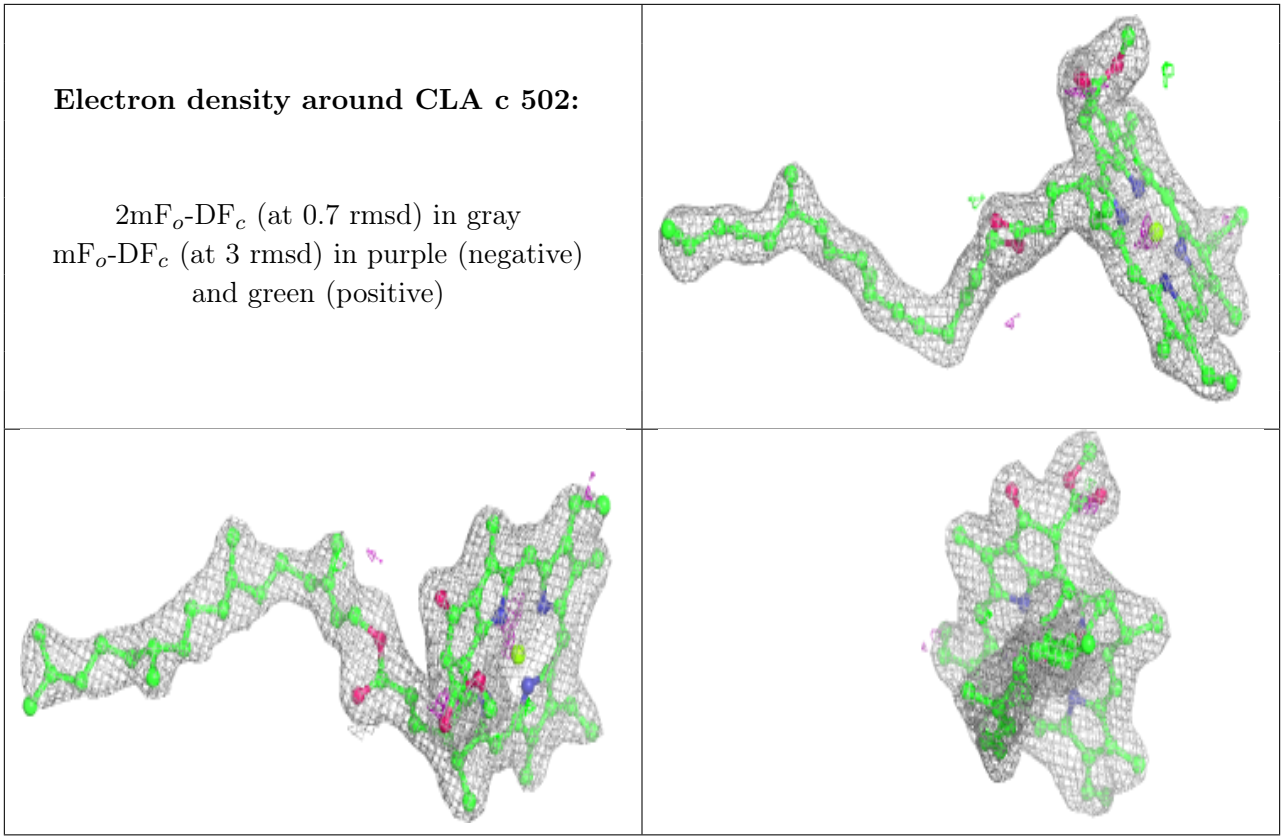






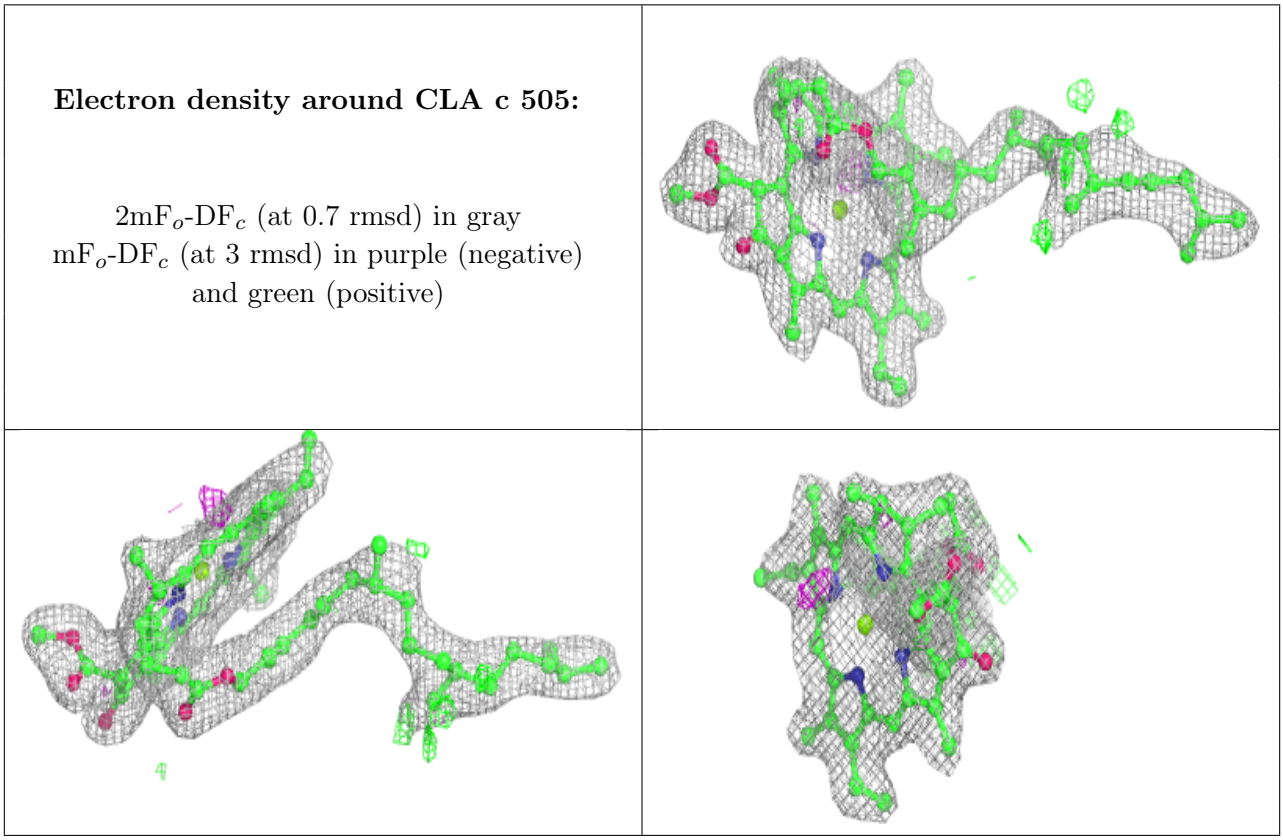
Electron density around CLA c 502:

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



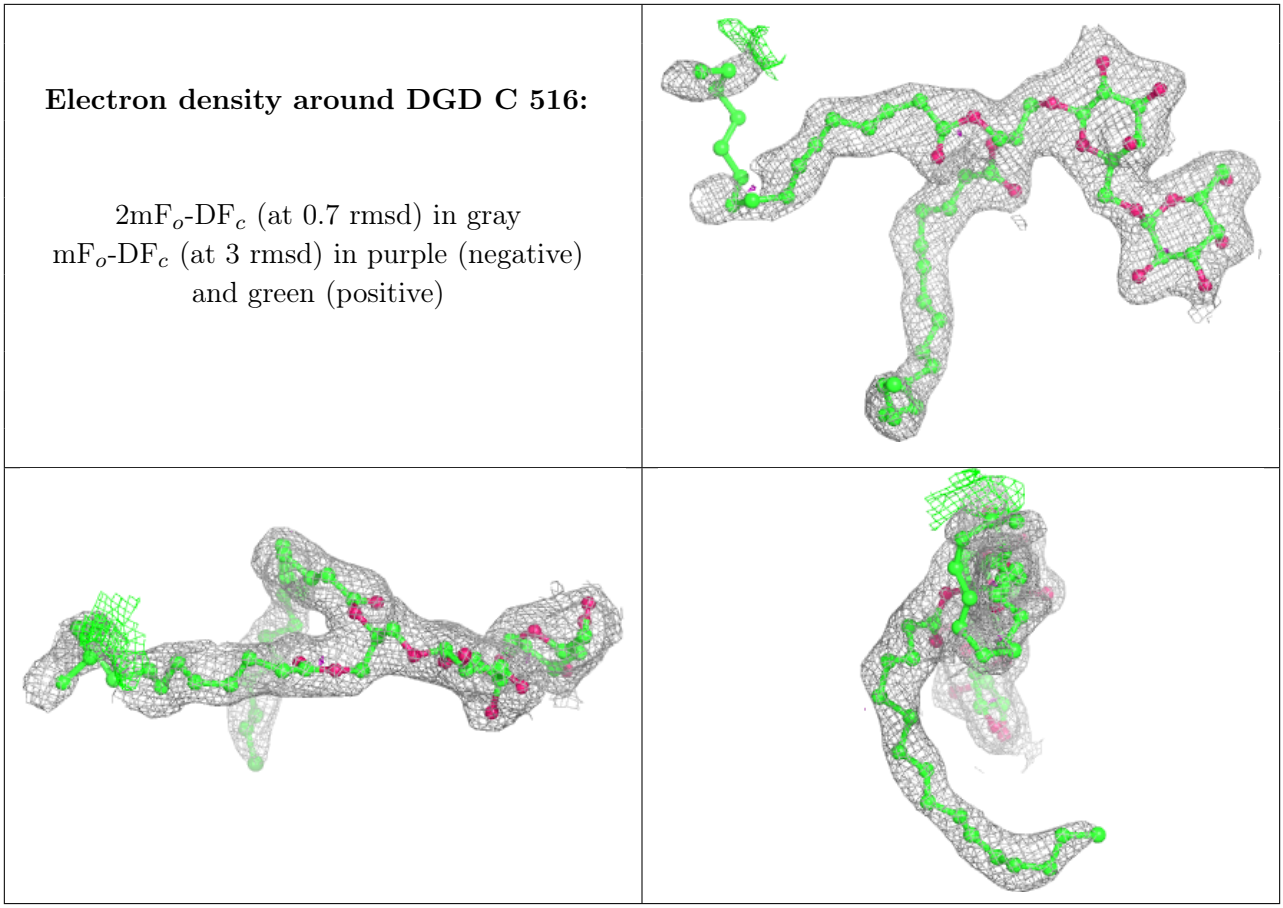
Electron density around CLA c 505:

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



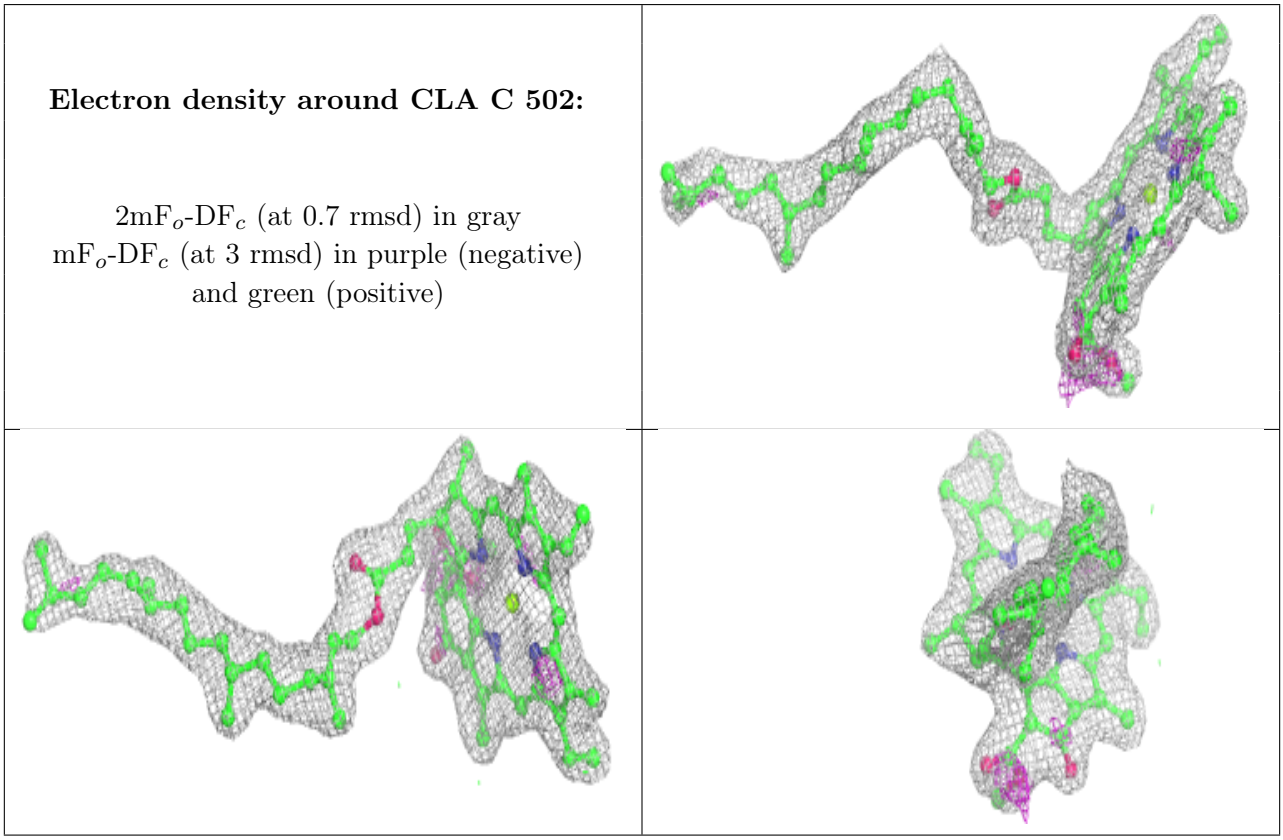
Electron density around DGD C 516:

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



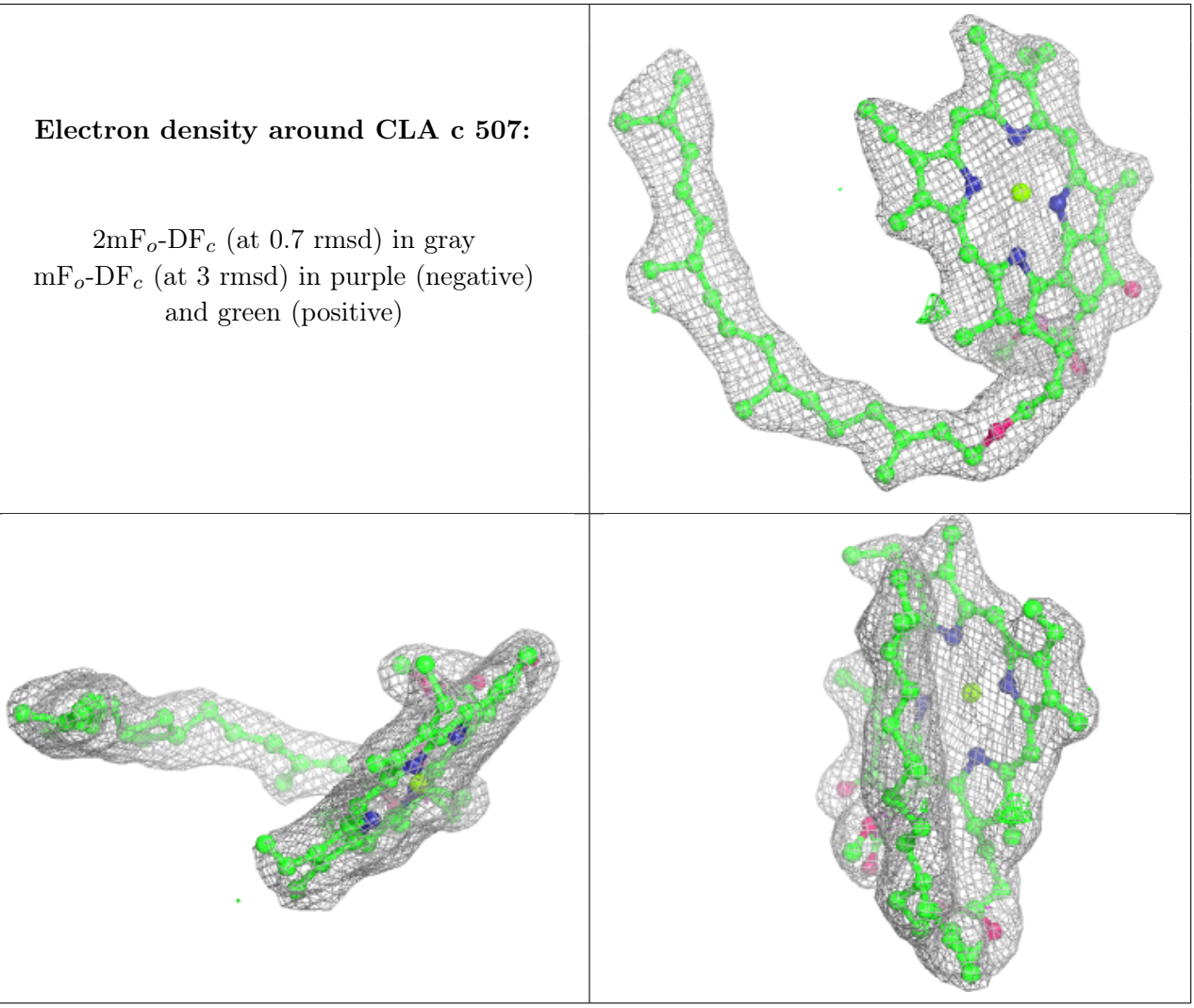
Electron density around CLA C 502:

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



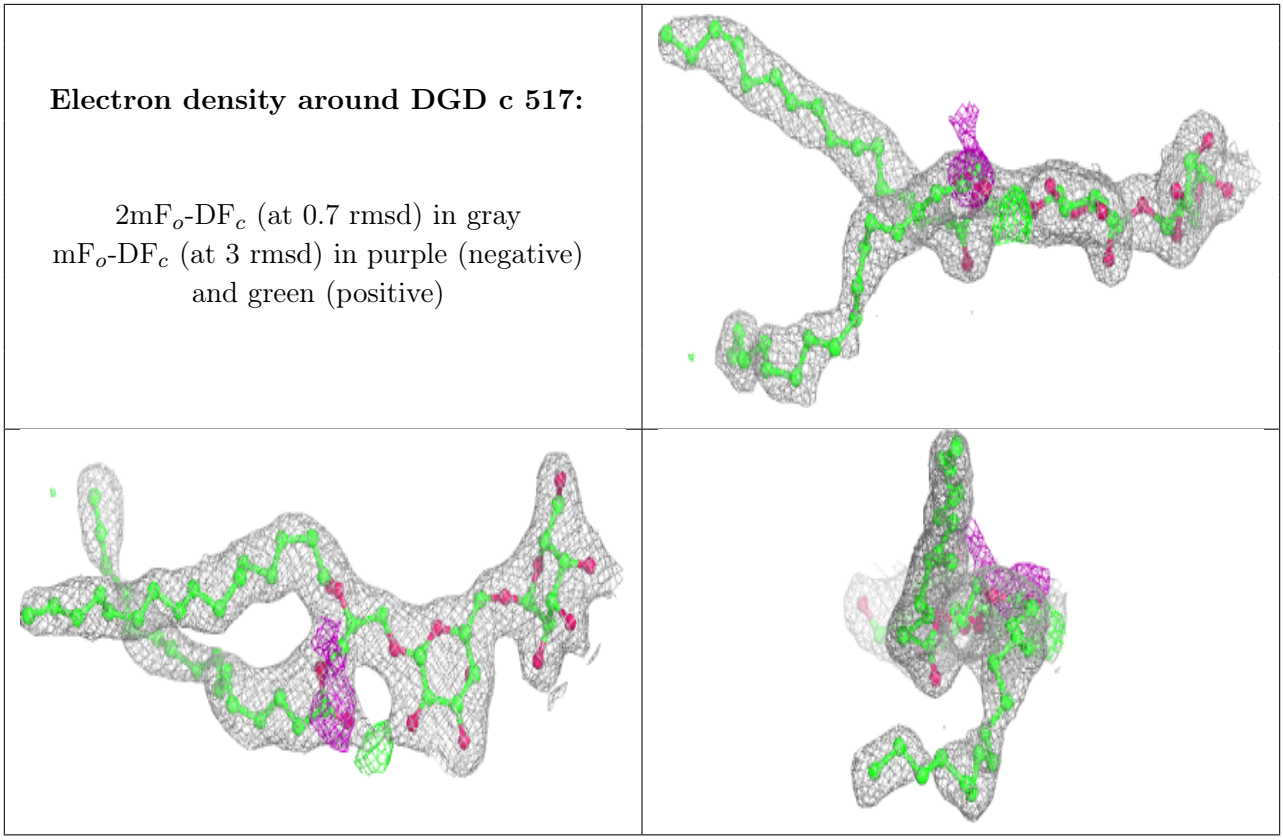
Electron density around CLA c 507:

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



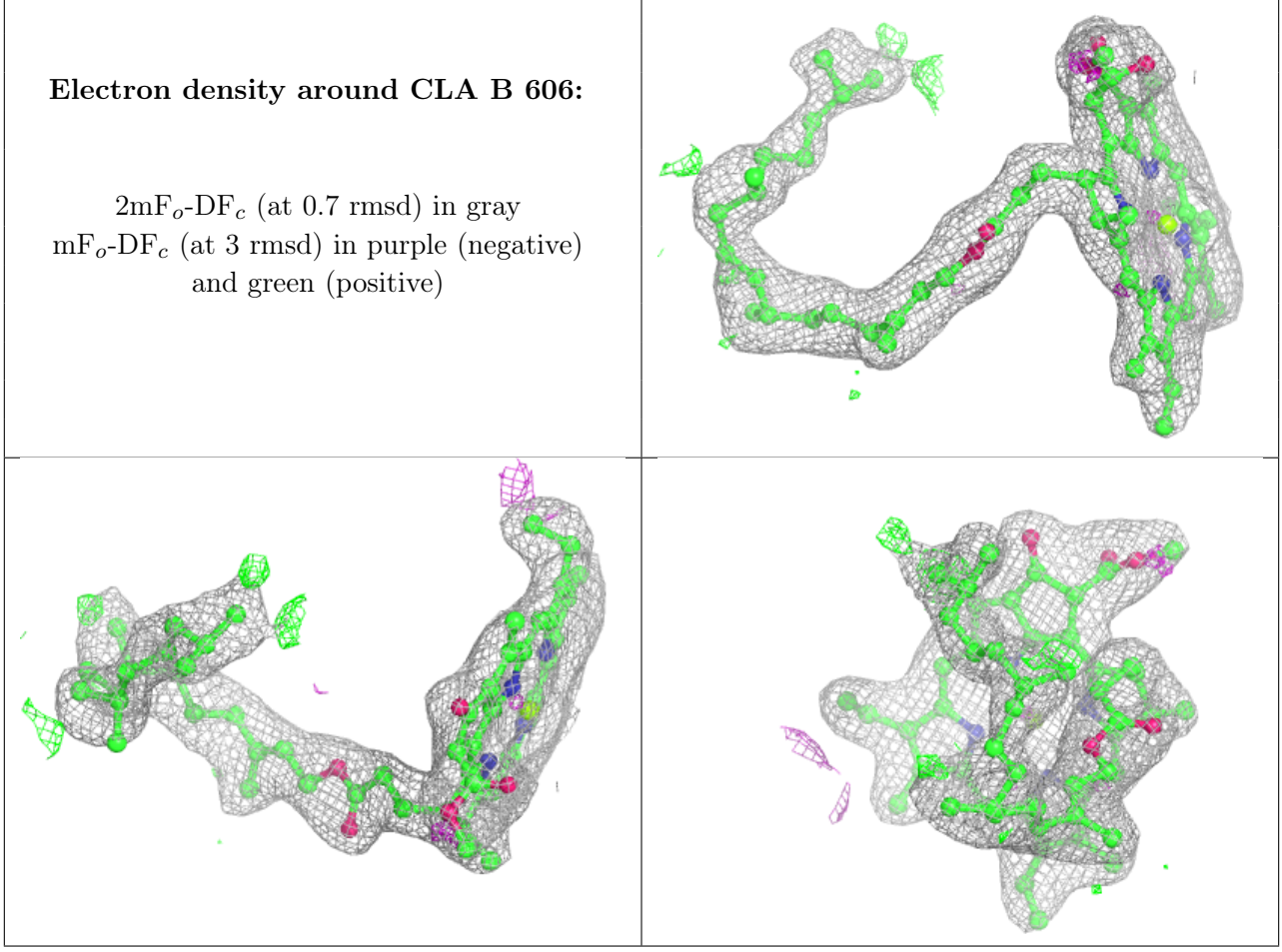
Electron density around DGD c 517:

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



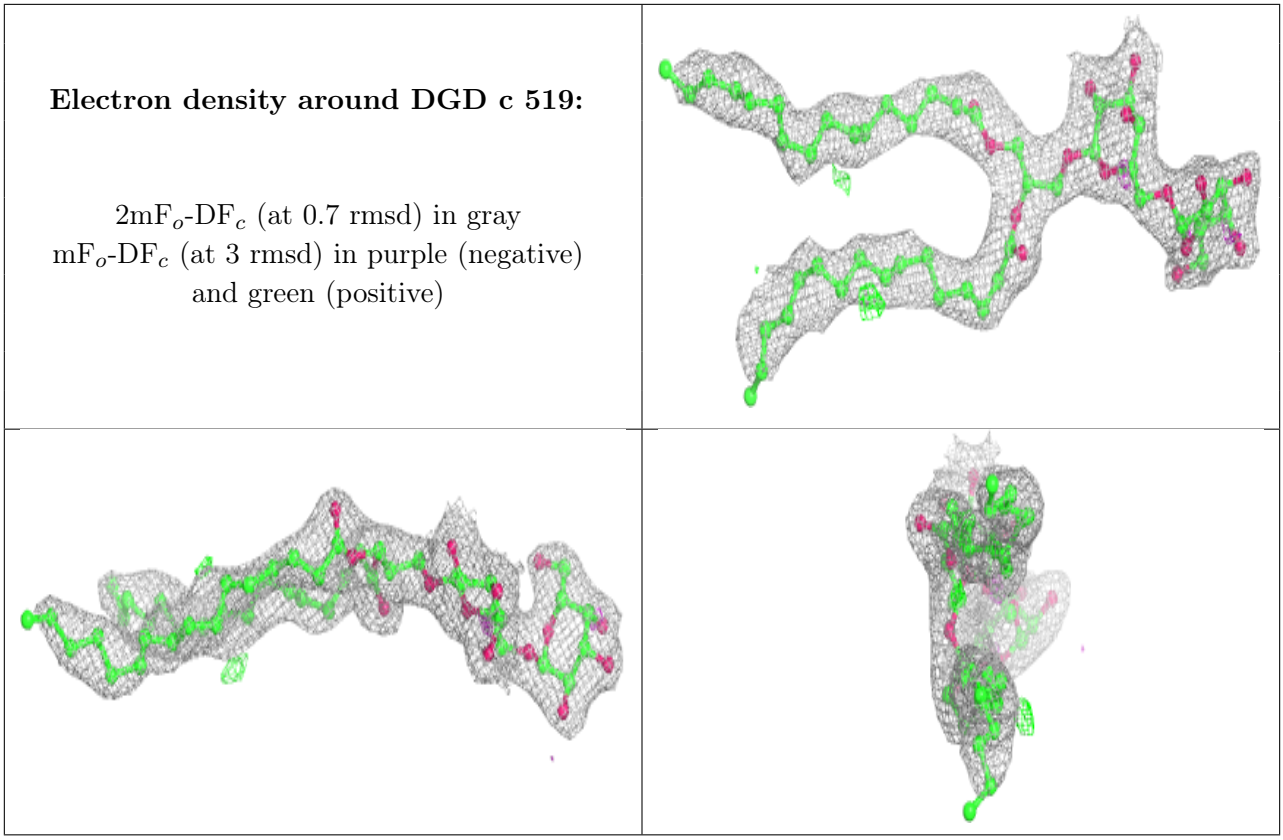
Electron density around CLA B 606:

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



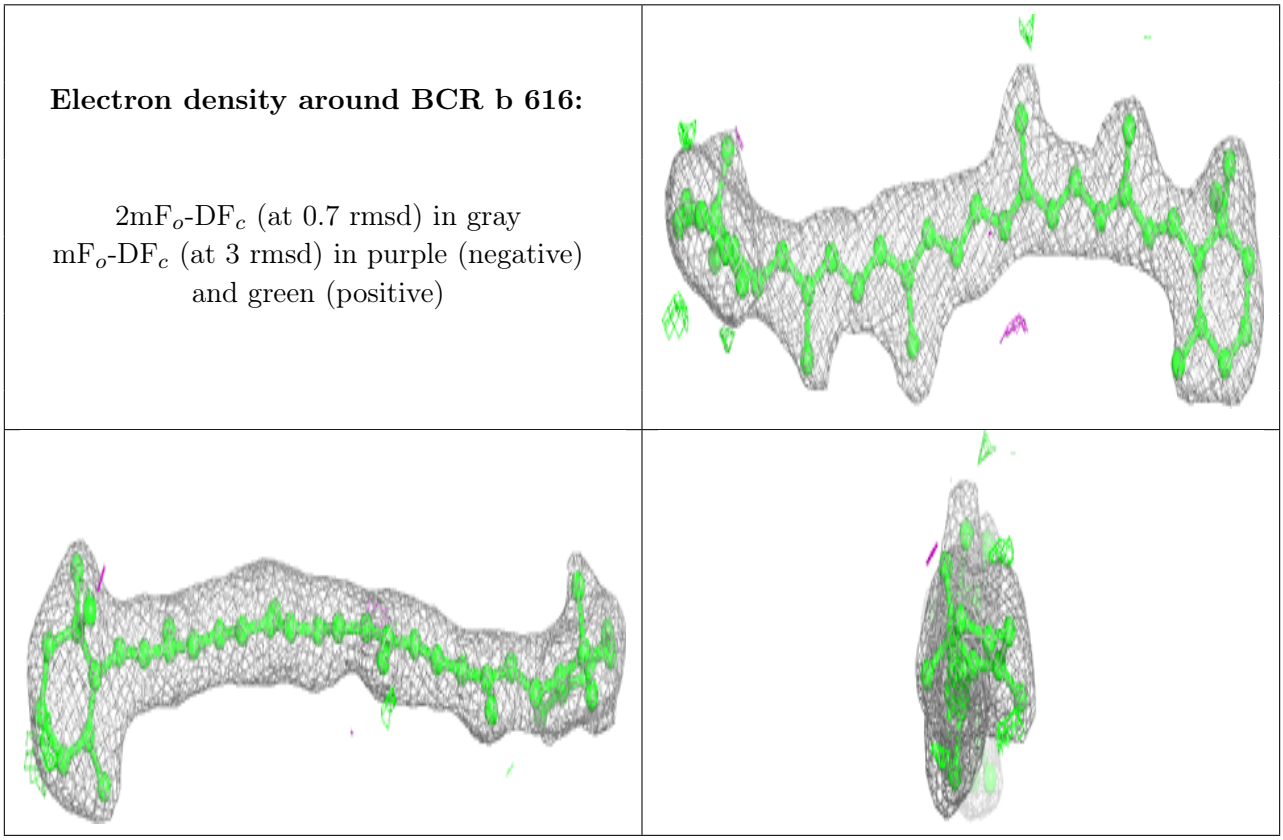
Electron density around DGD c 519:

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



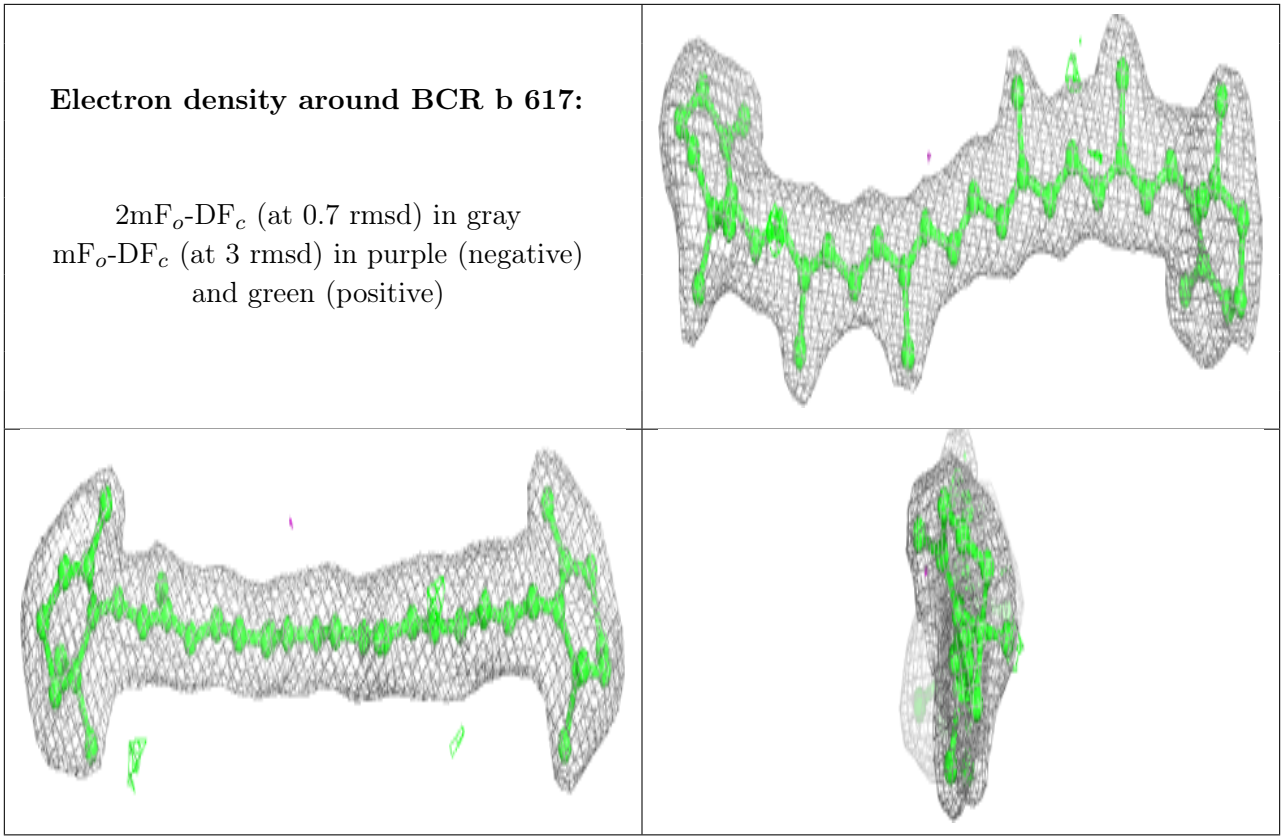
Electron density around BCR b 616:

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



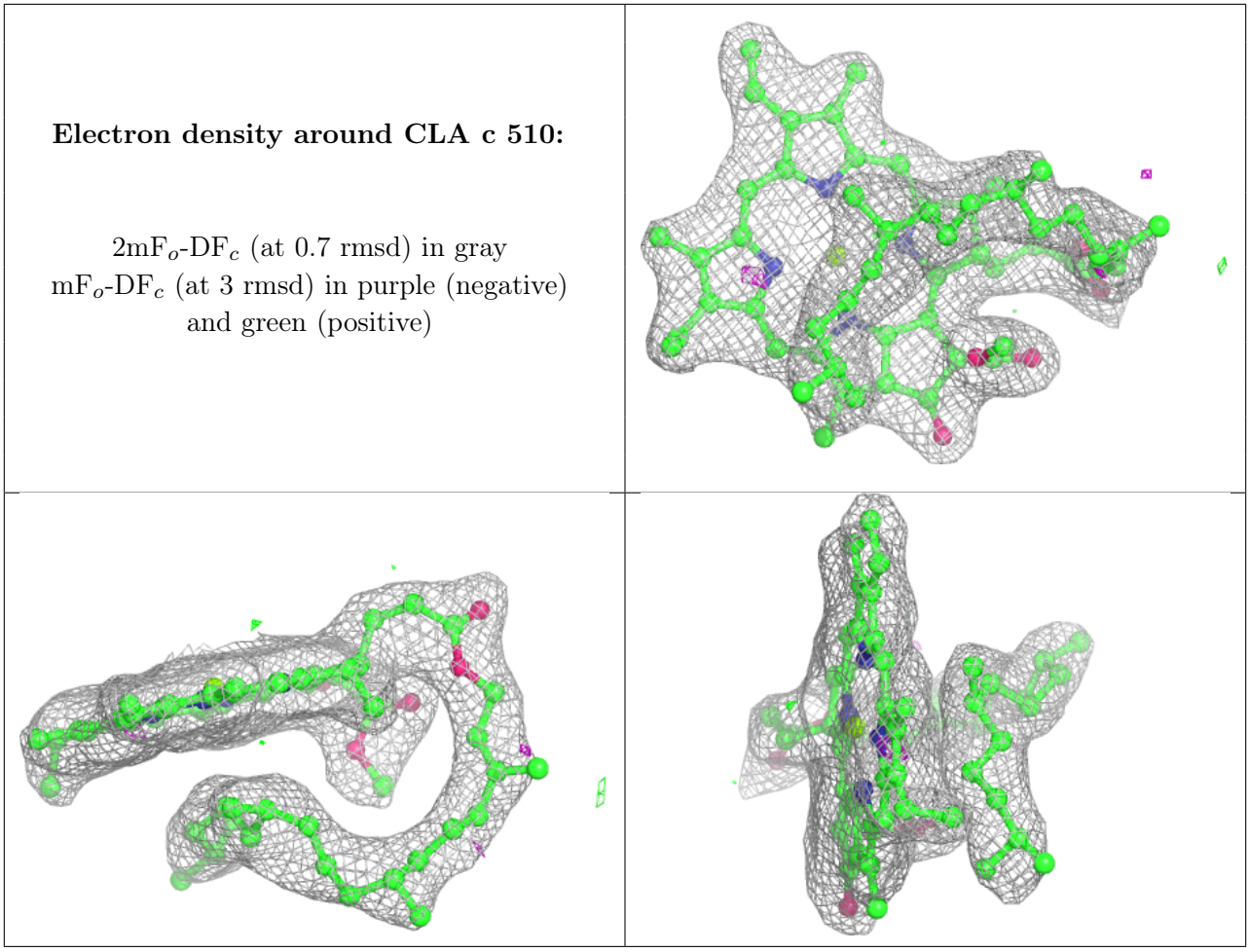
Electron density around BCR b 617:

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



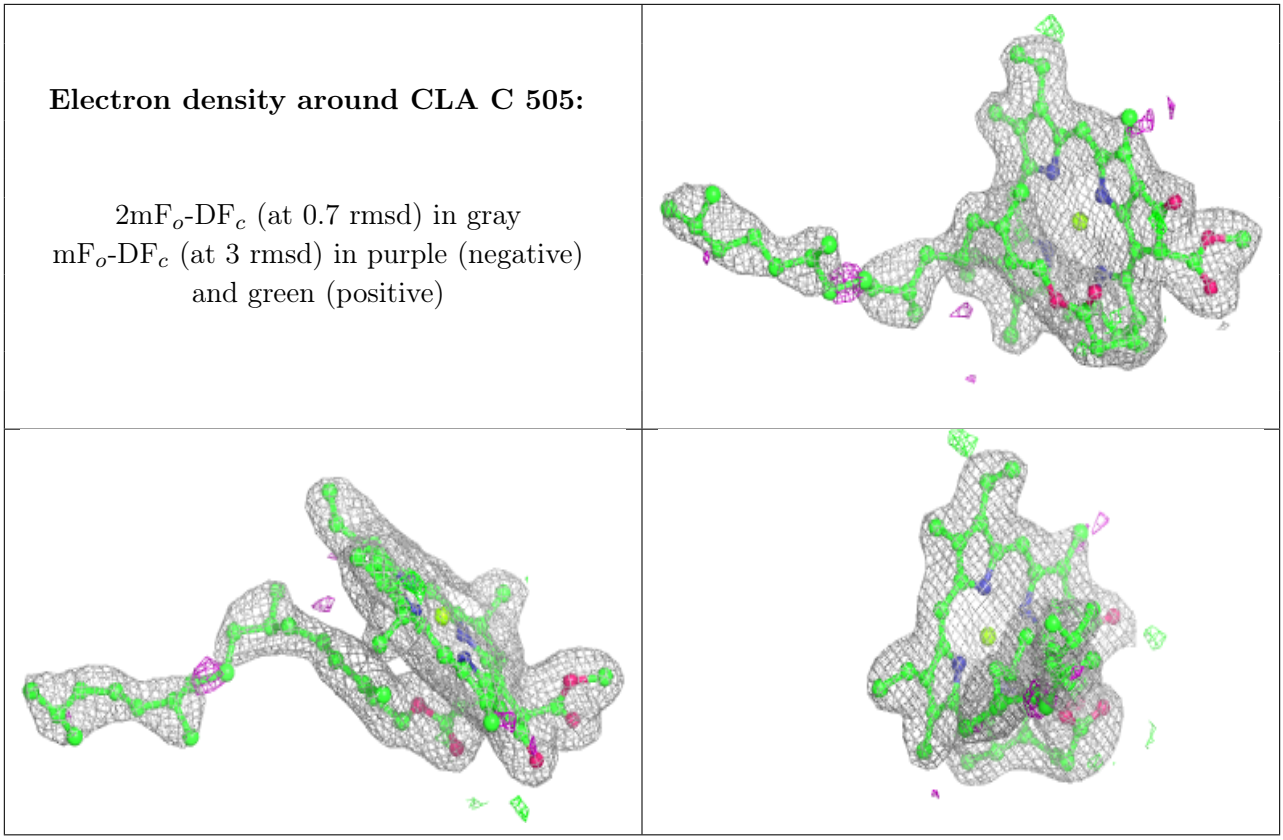
Electron density around CLA c 510:

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



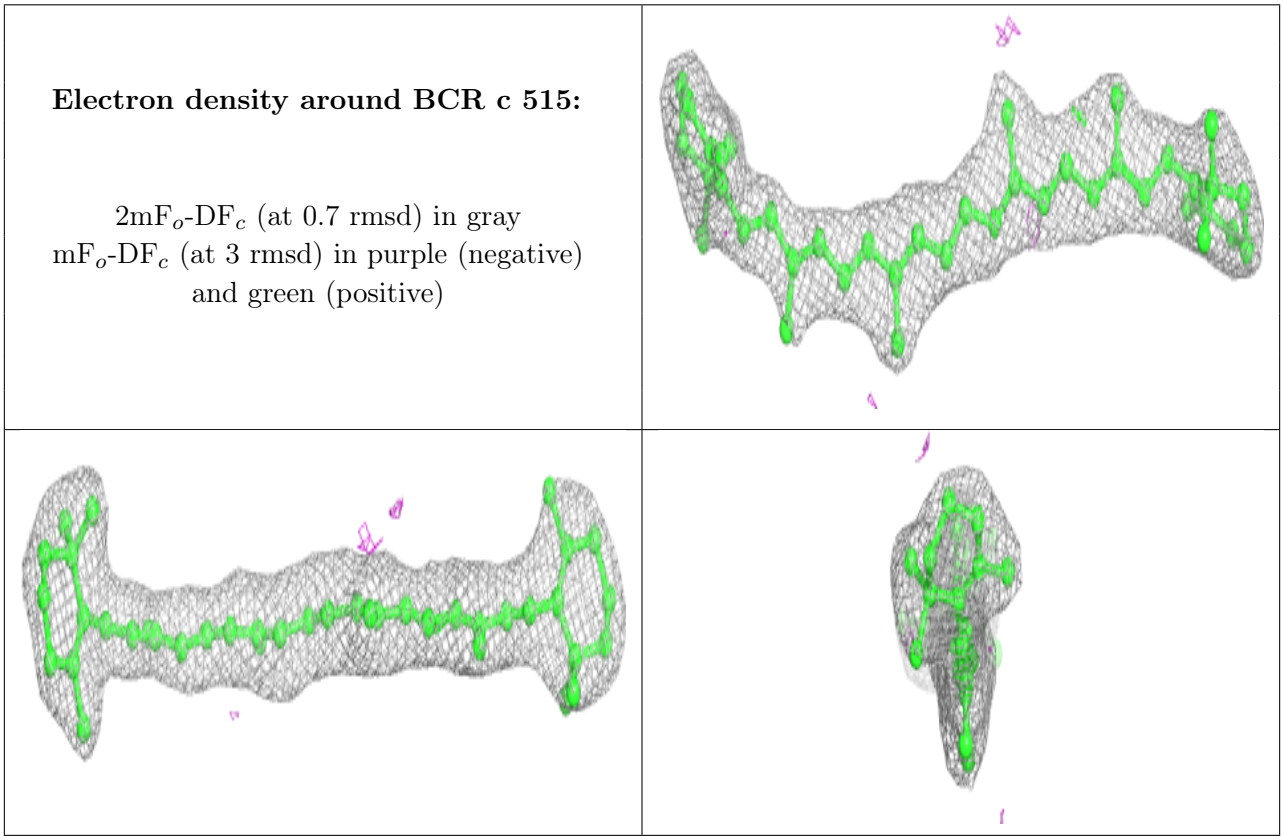
Electron density around CLA C 505:

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



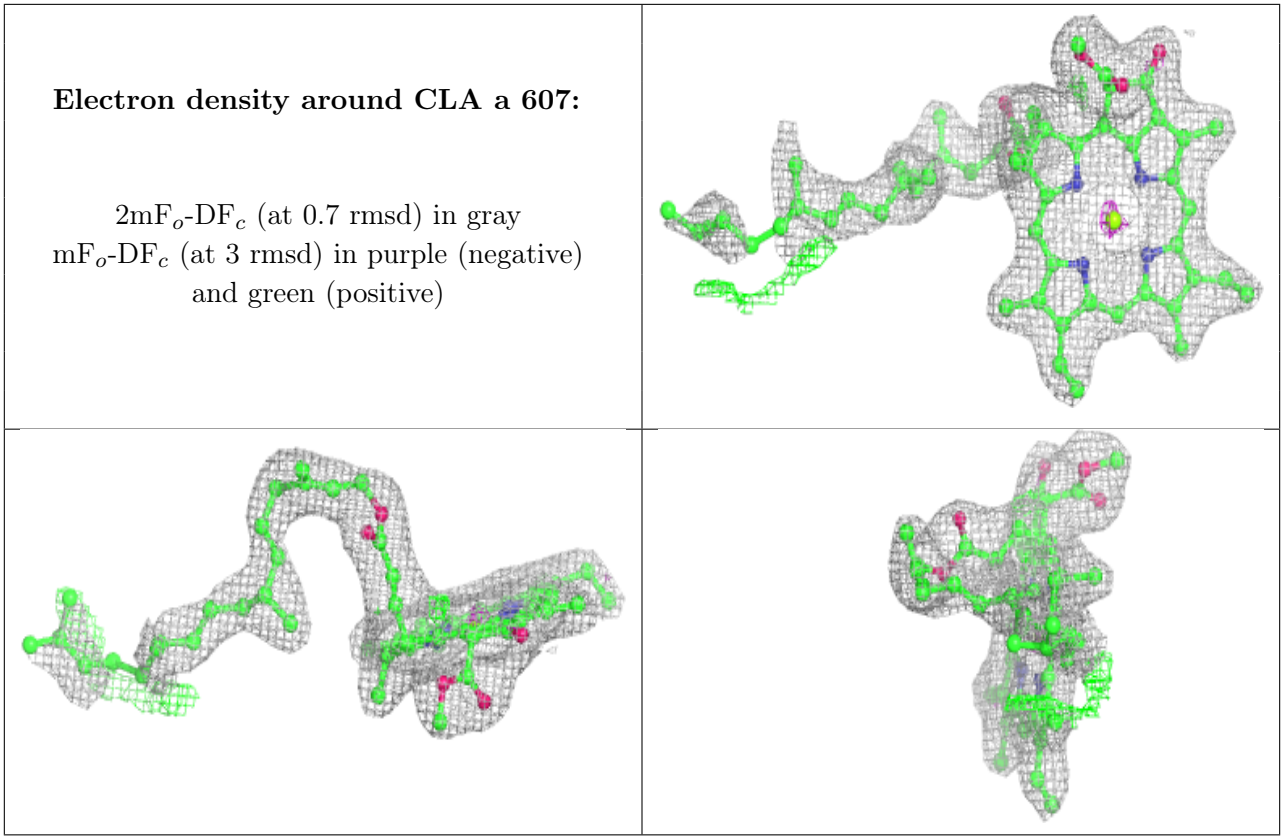
Electron density around BCR c 515:

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



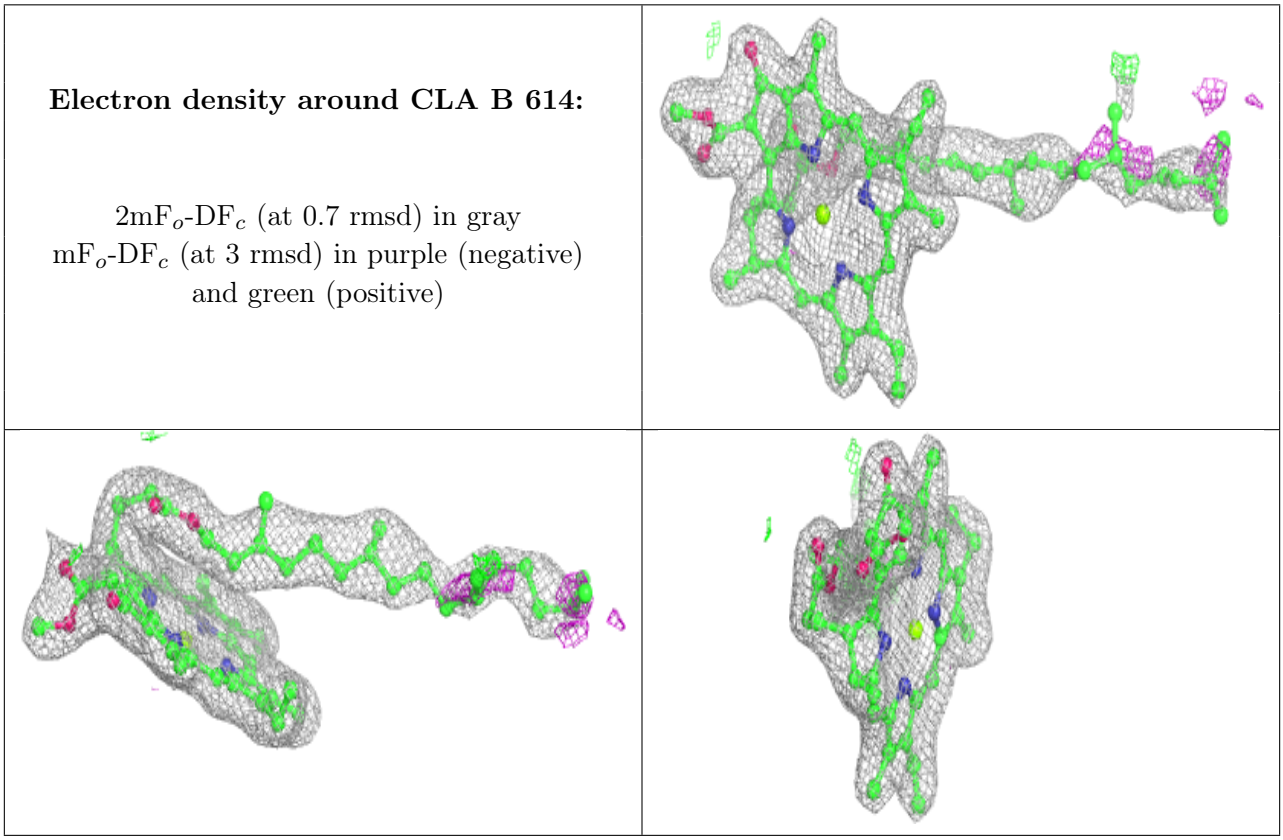
Electron density around CLA a 607:

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



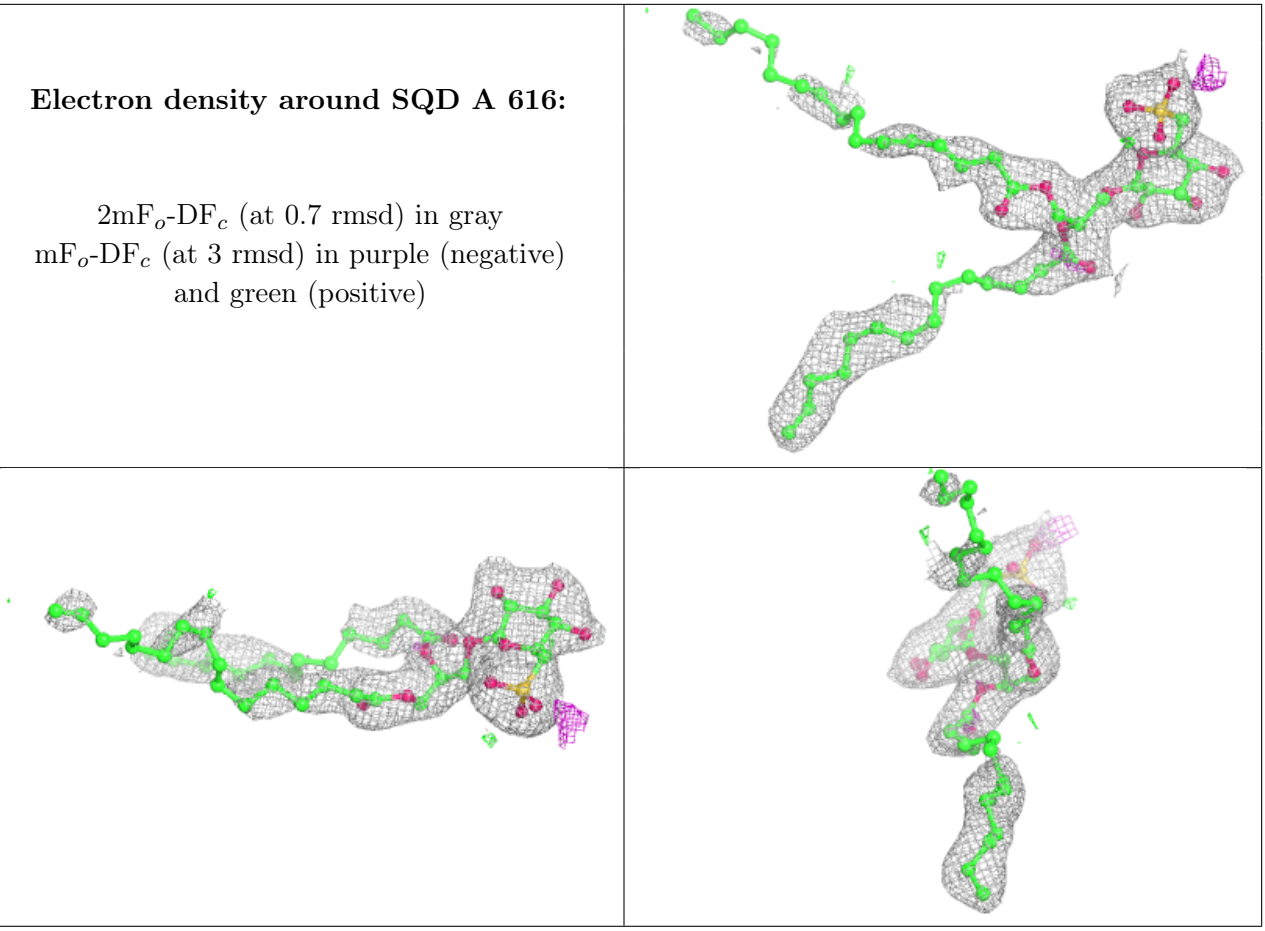
Electron density around CLA B 614:

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



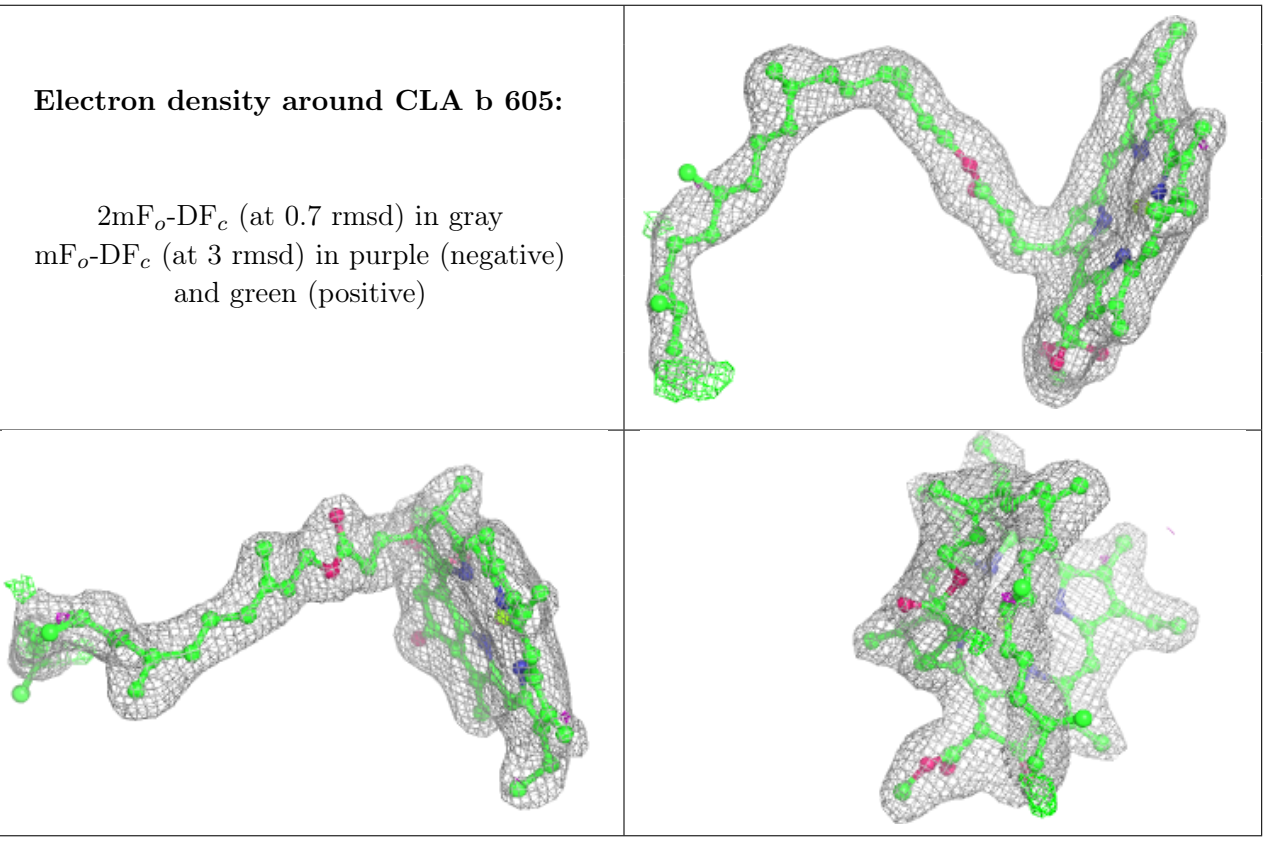
Electron density around SQD A 616:

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



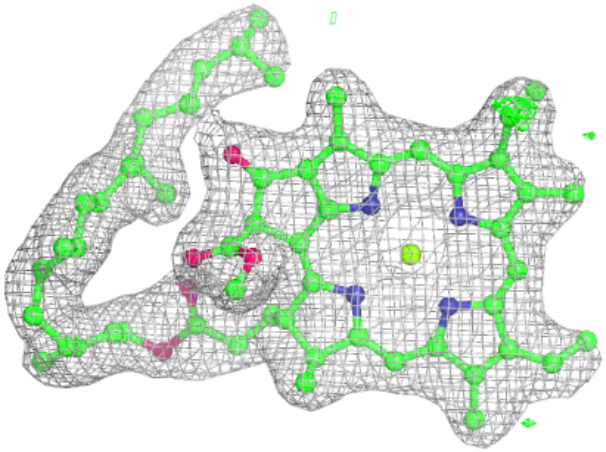
Electron density around CLA b 605:

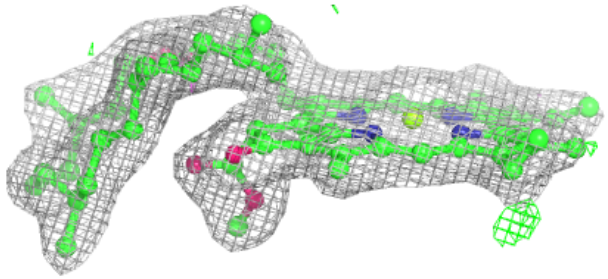
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

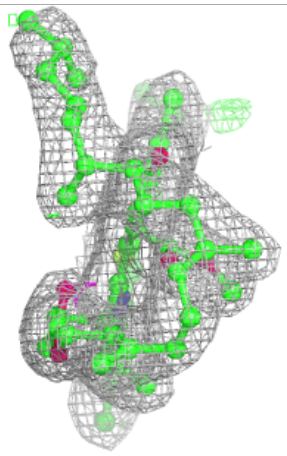


Electron density around CLA B 610:

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

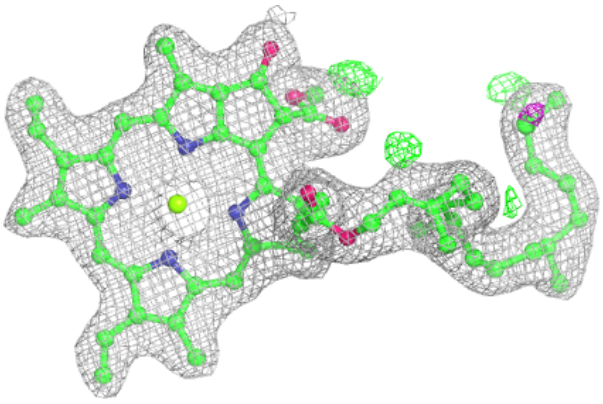


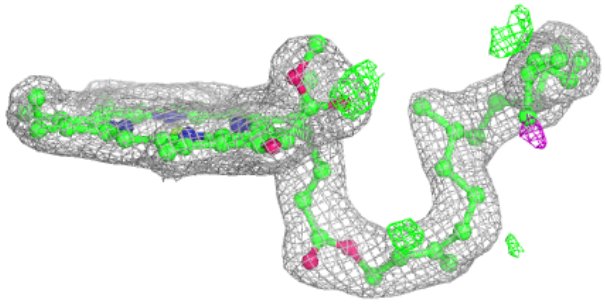


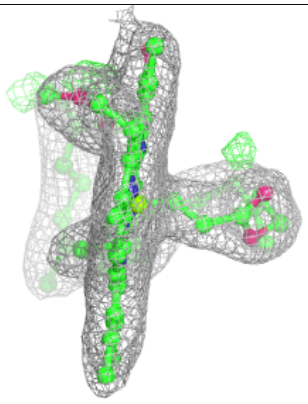


Electron density around CLA B 612:

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

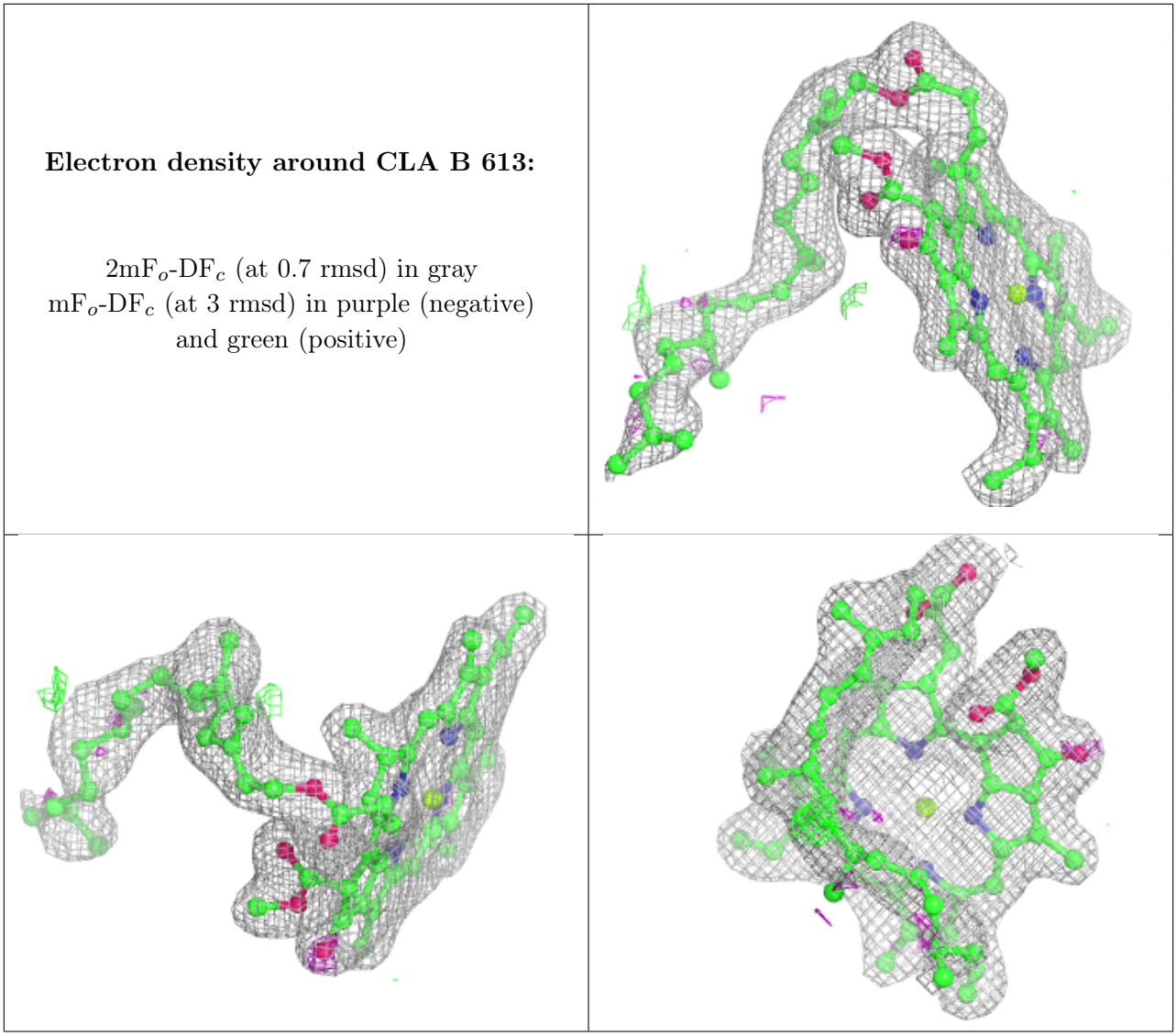






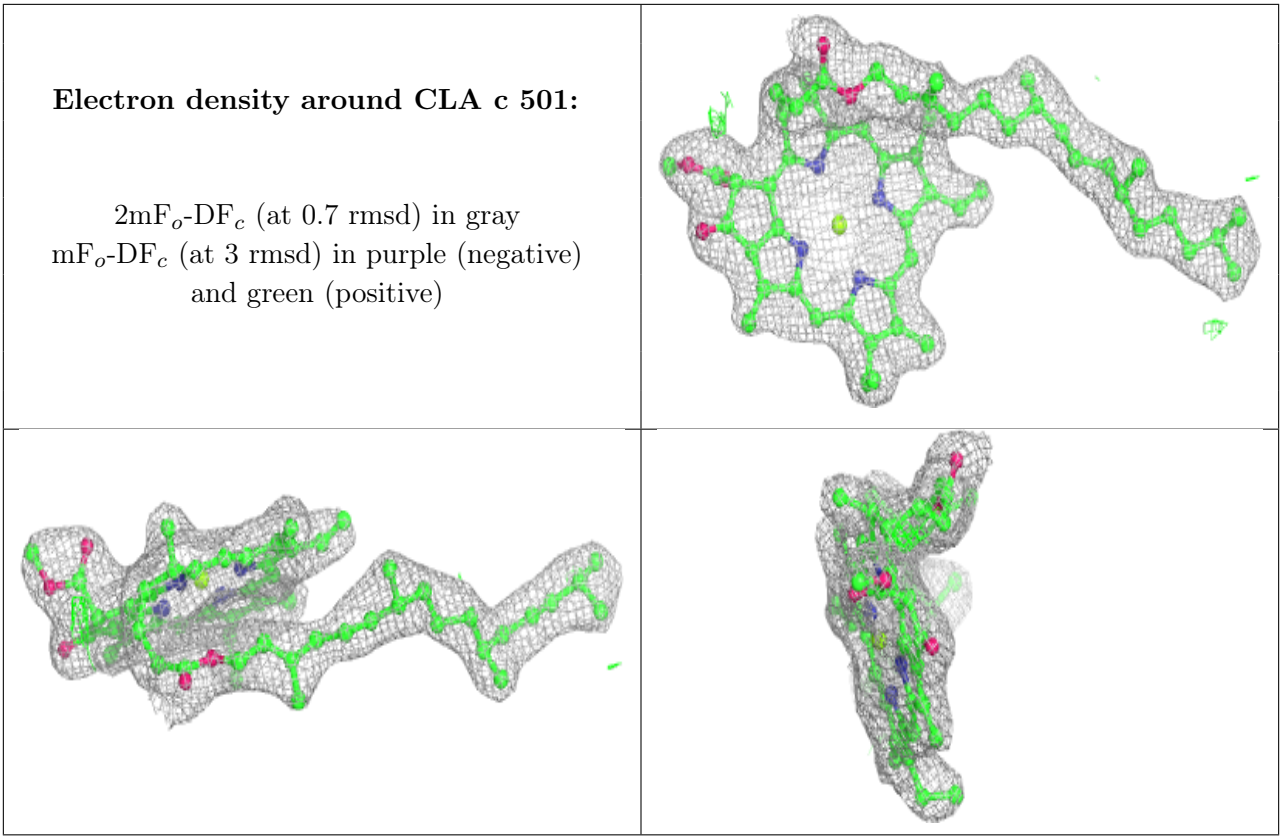
Electron density around CLA B 613:

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



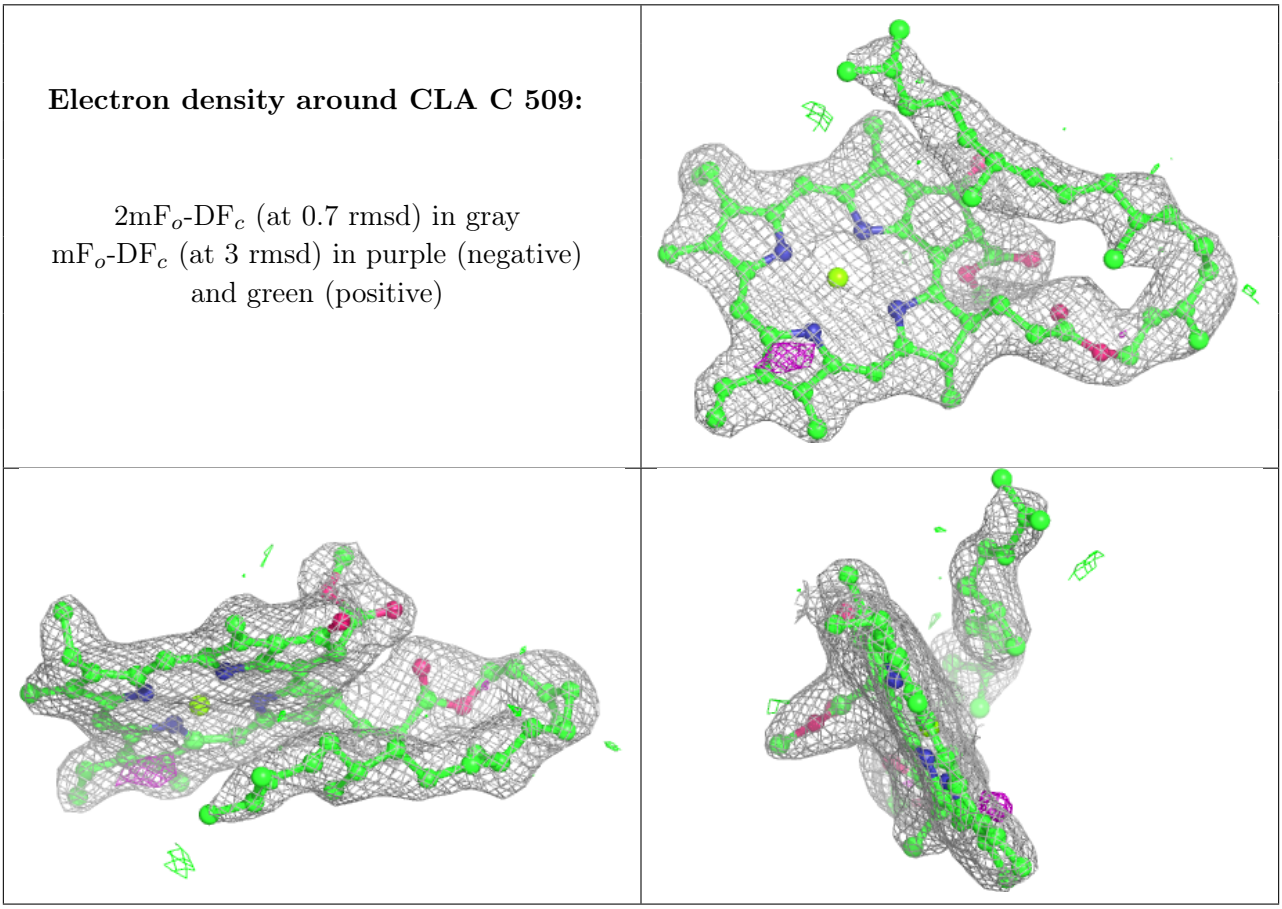
Electron density around CLA c 501:

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



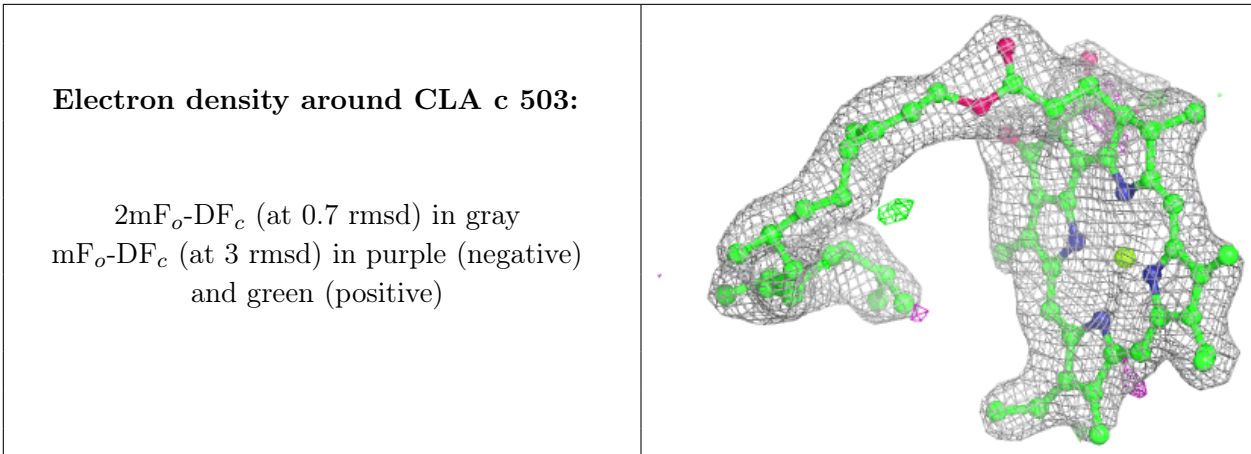
Electron density around CLA C 509:

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



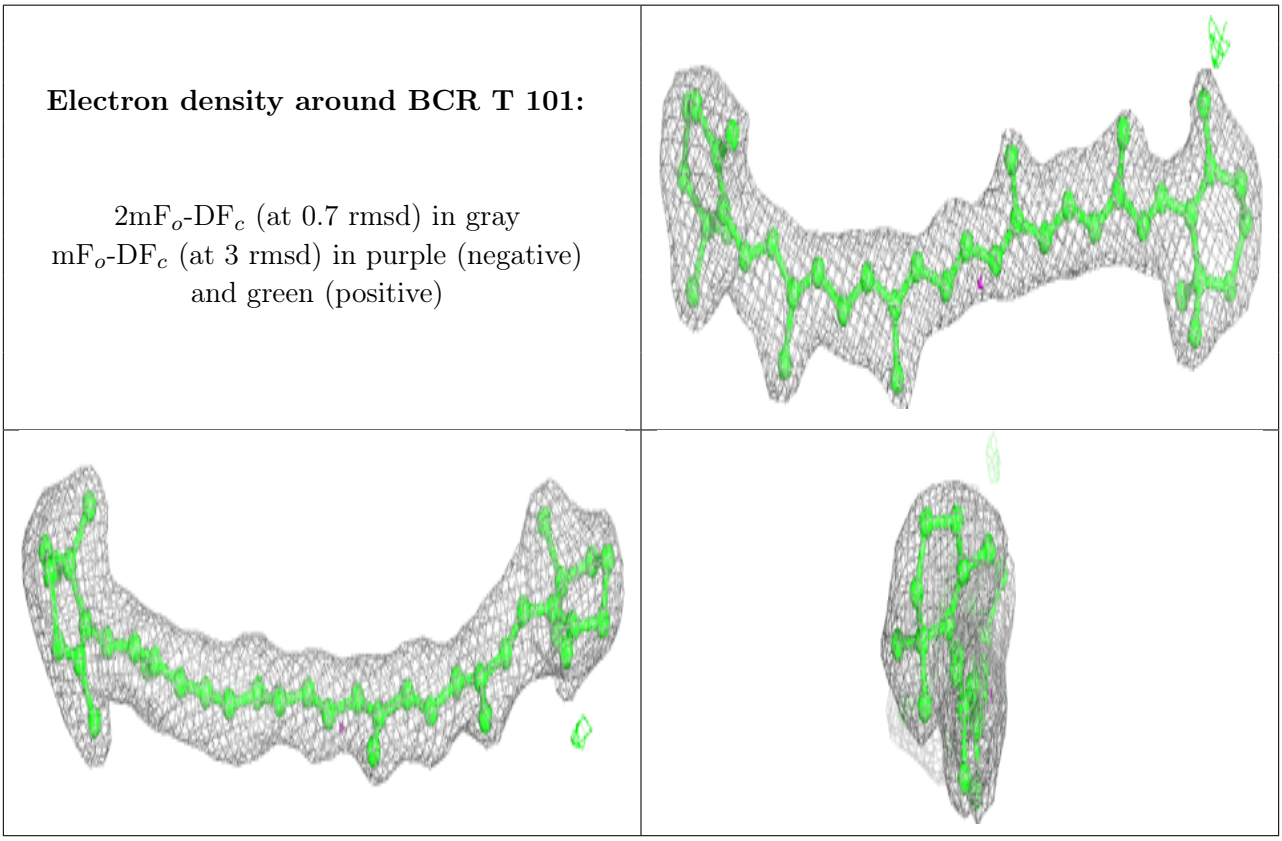
Electron density around CLA c 503:

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



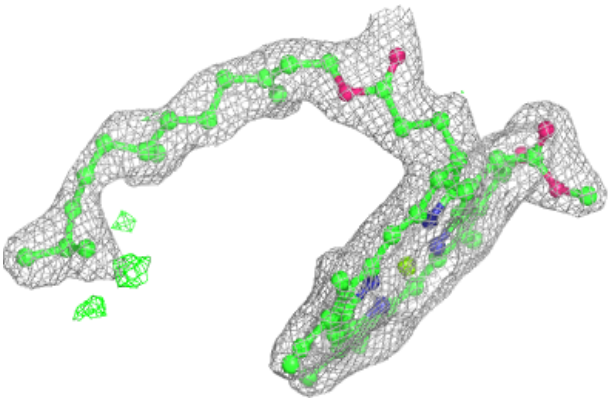
Electron density around BCR T 101:

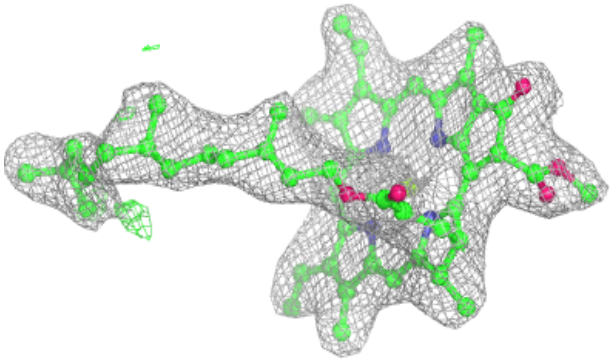
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

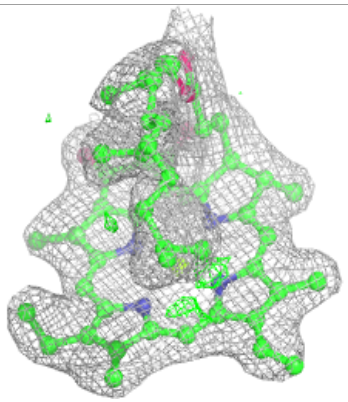


Electron density around CLA c 504:

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

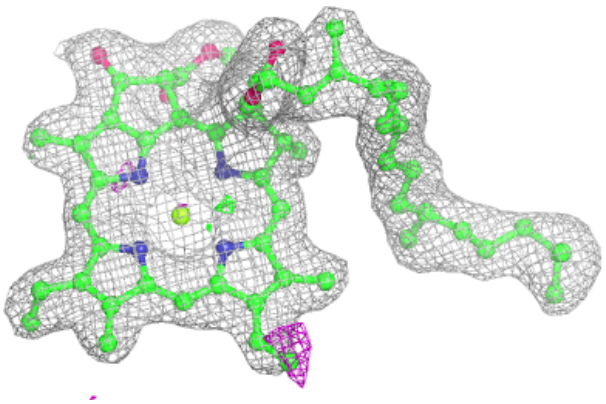


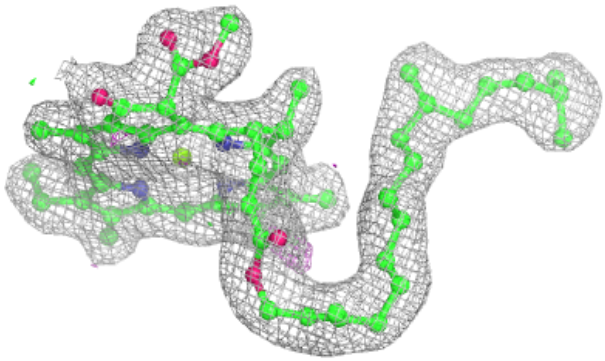


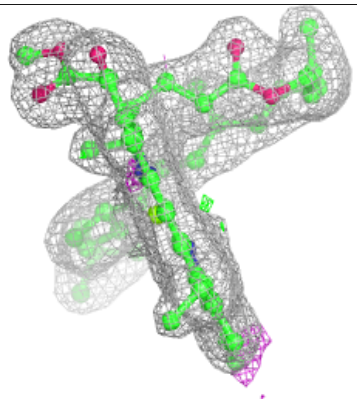


Electron density around CLA A 613:

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

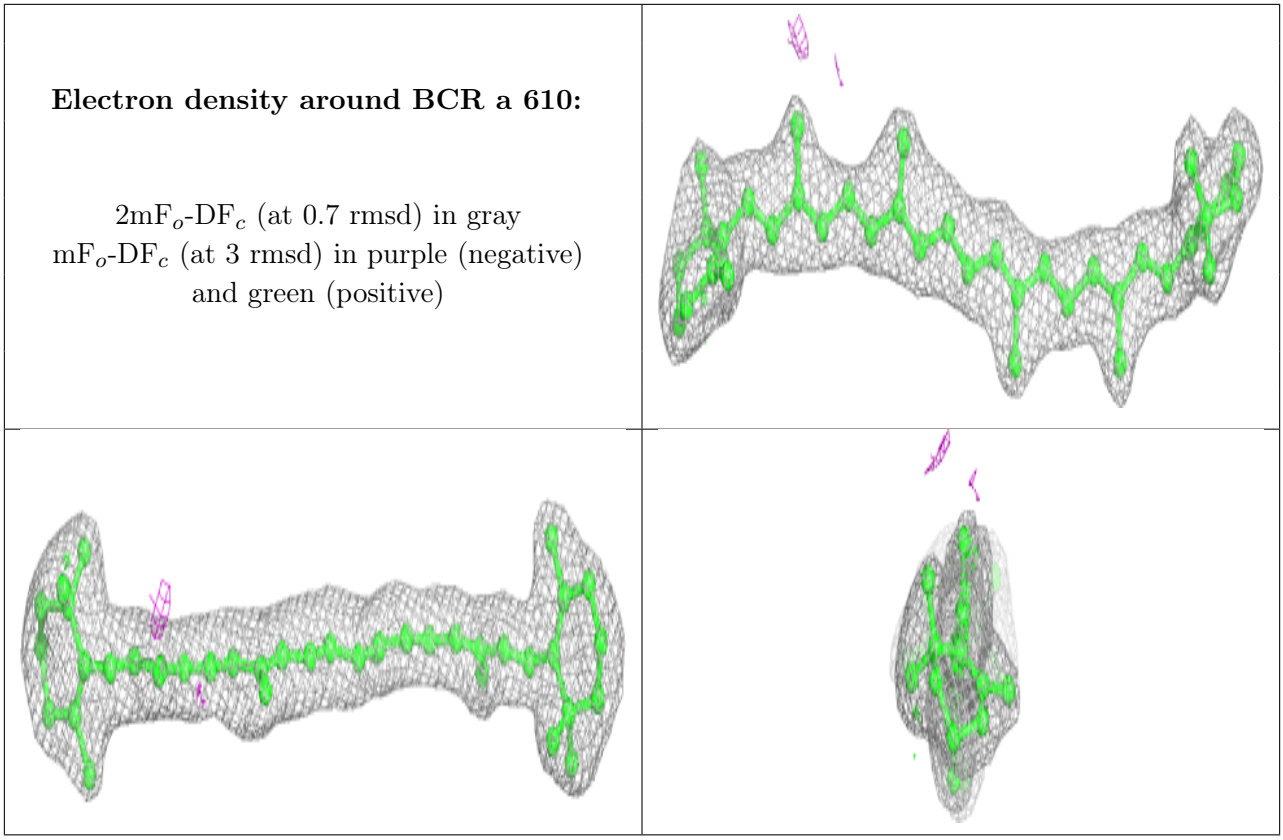






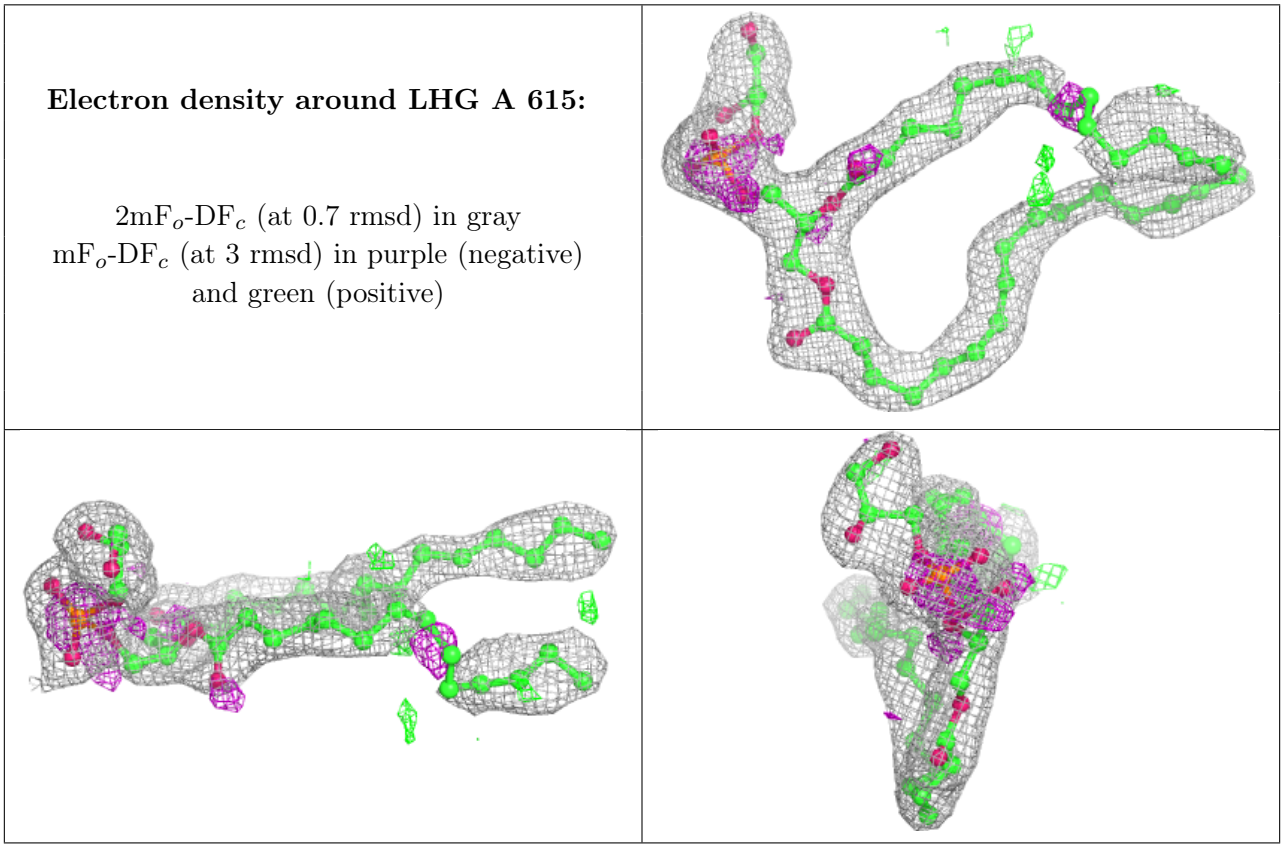
Electron density around BCR a 610:

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



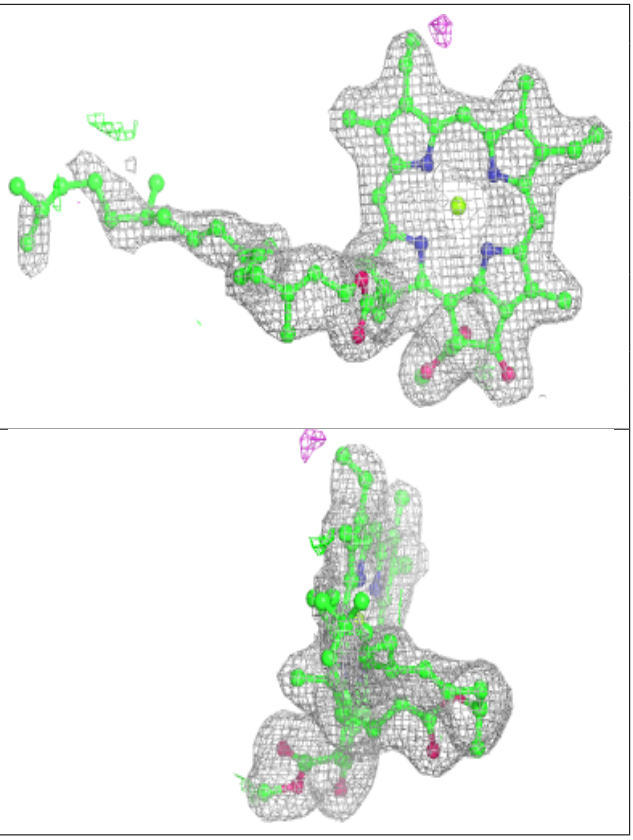
Electron density around LHG A 615:

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



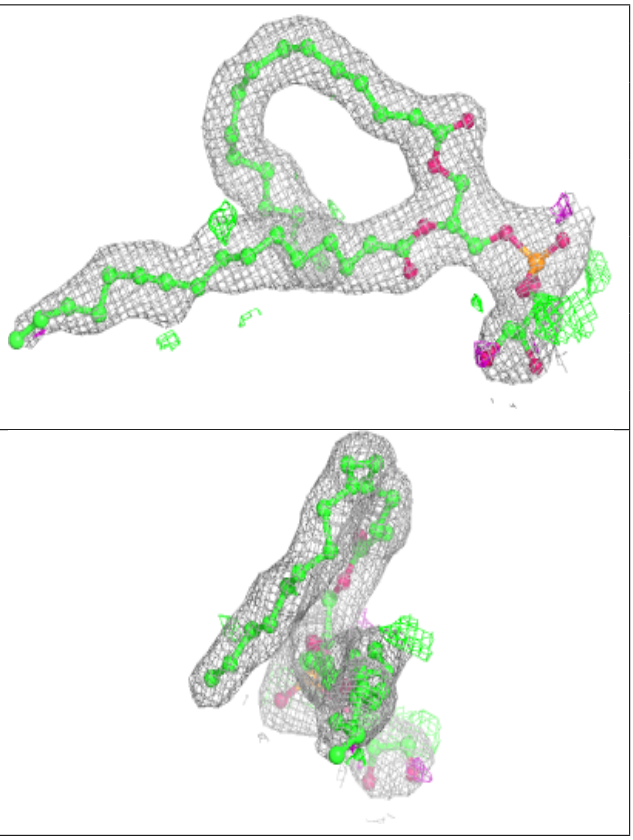
Electron density around CLA A 608:

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



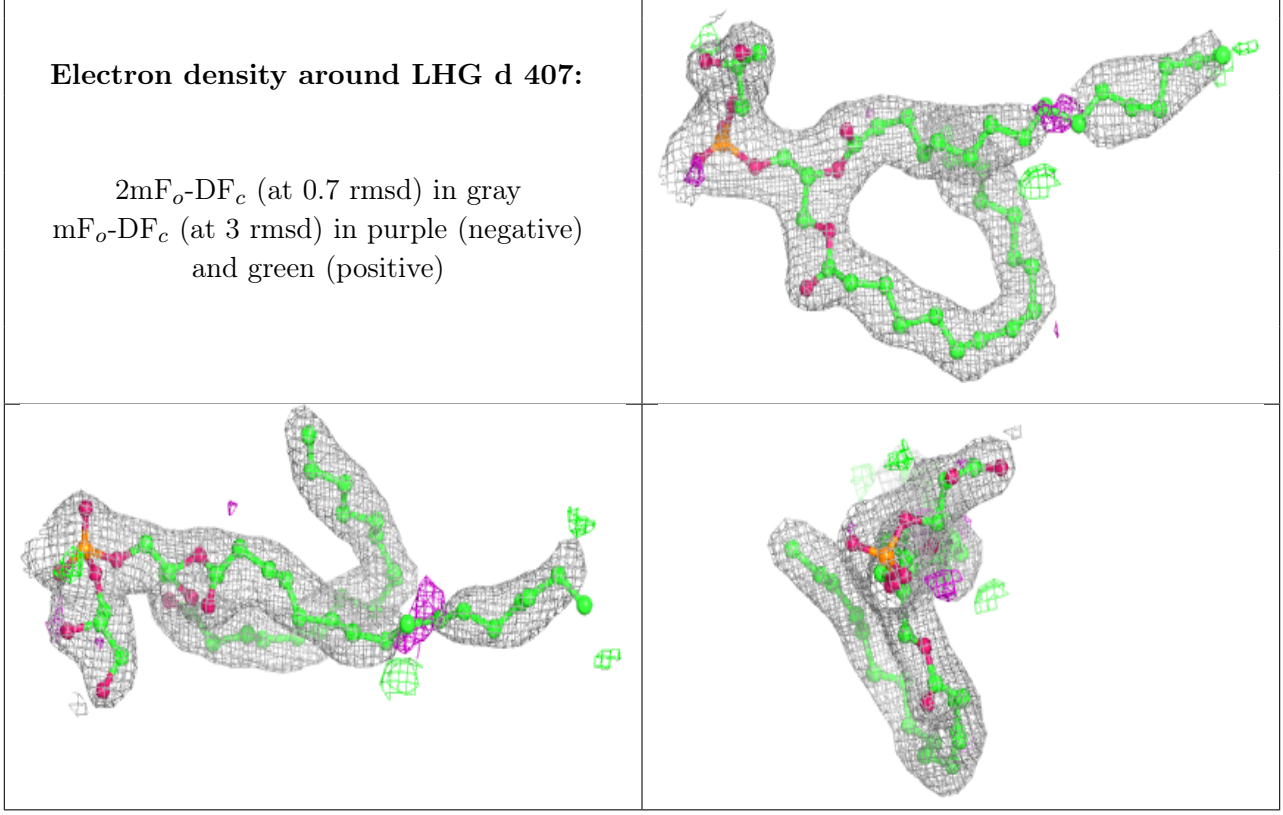
Electron density around LHG D 409:

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



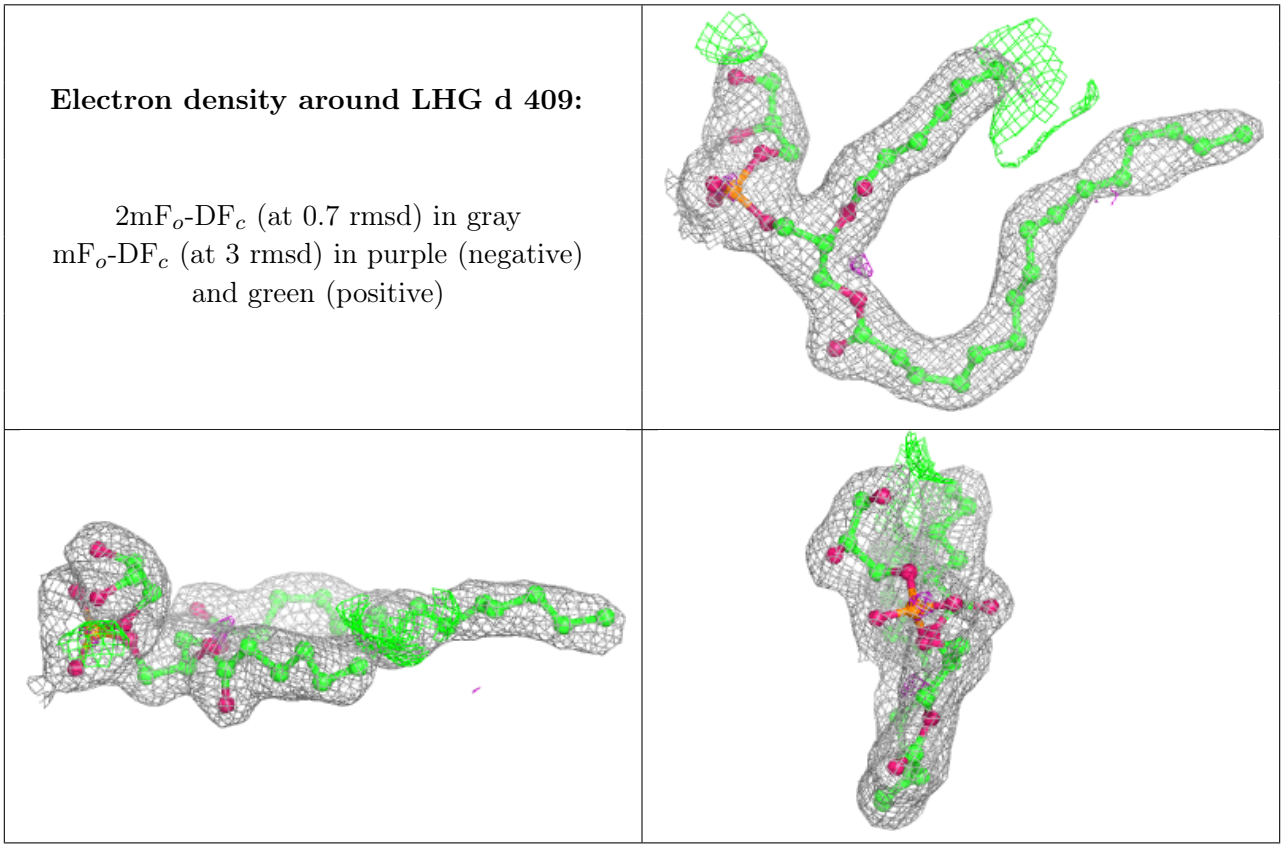
Electron density around LHG d 407:

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



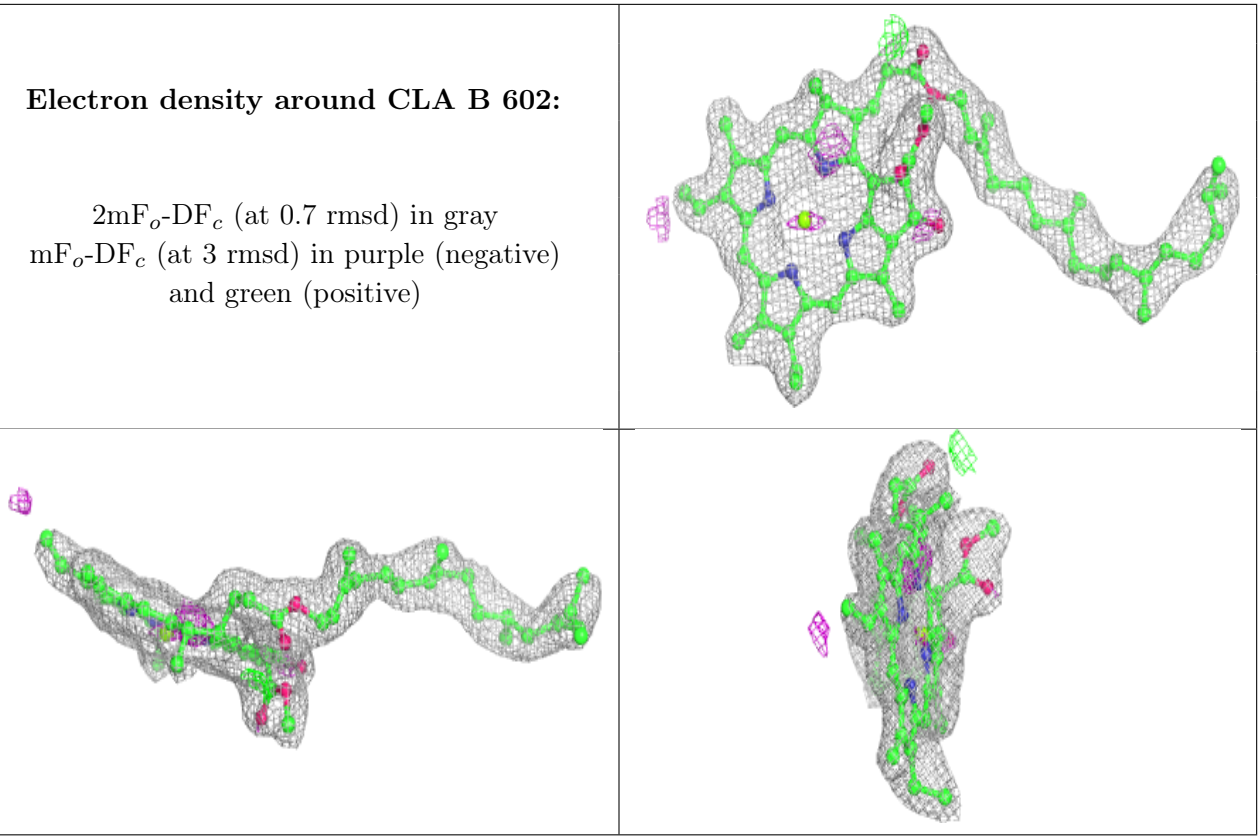
Electron density around LHG d 409:

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



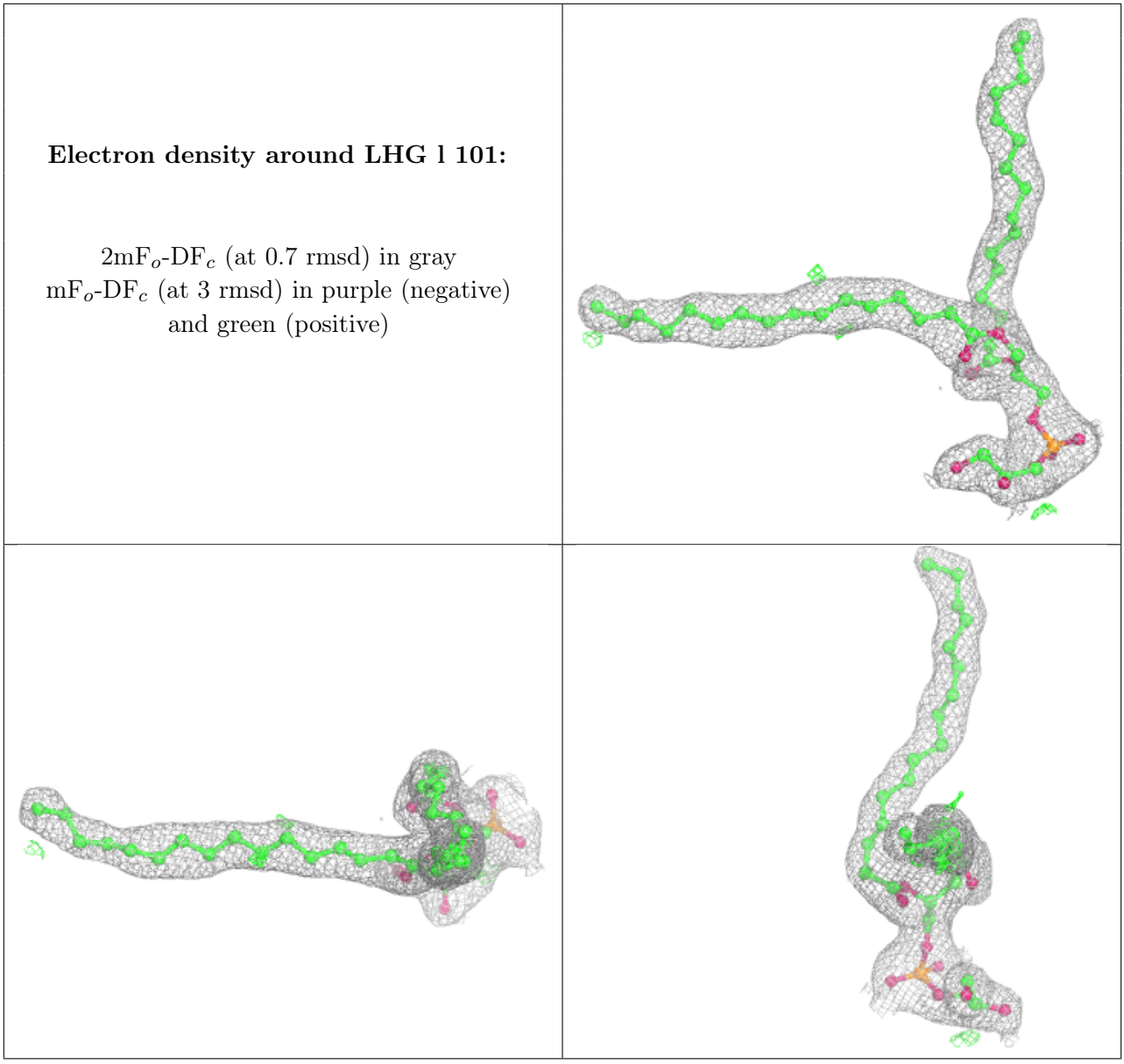
Electron density around CLA B 602:

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



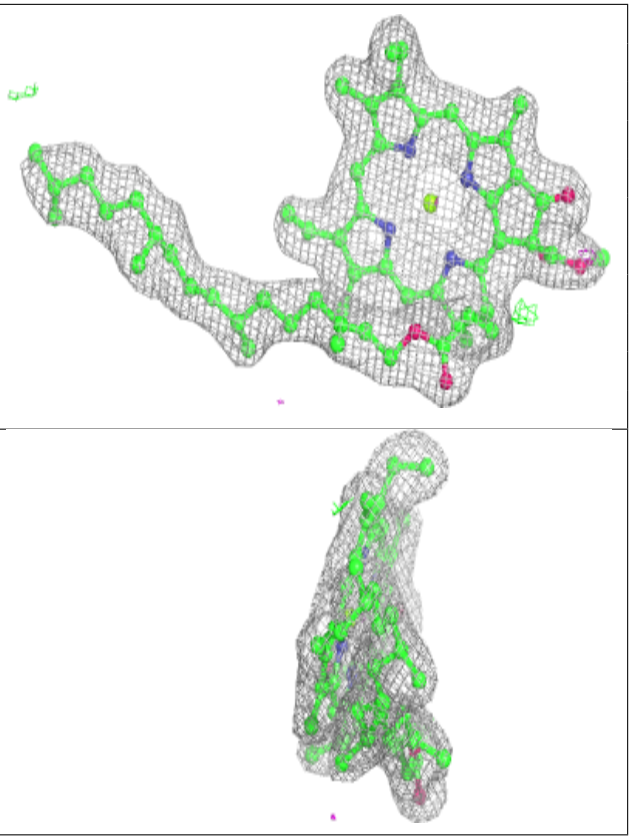
Electron density around LHG l 101:

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



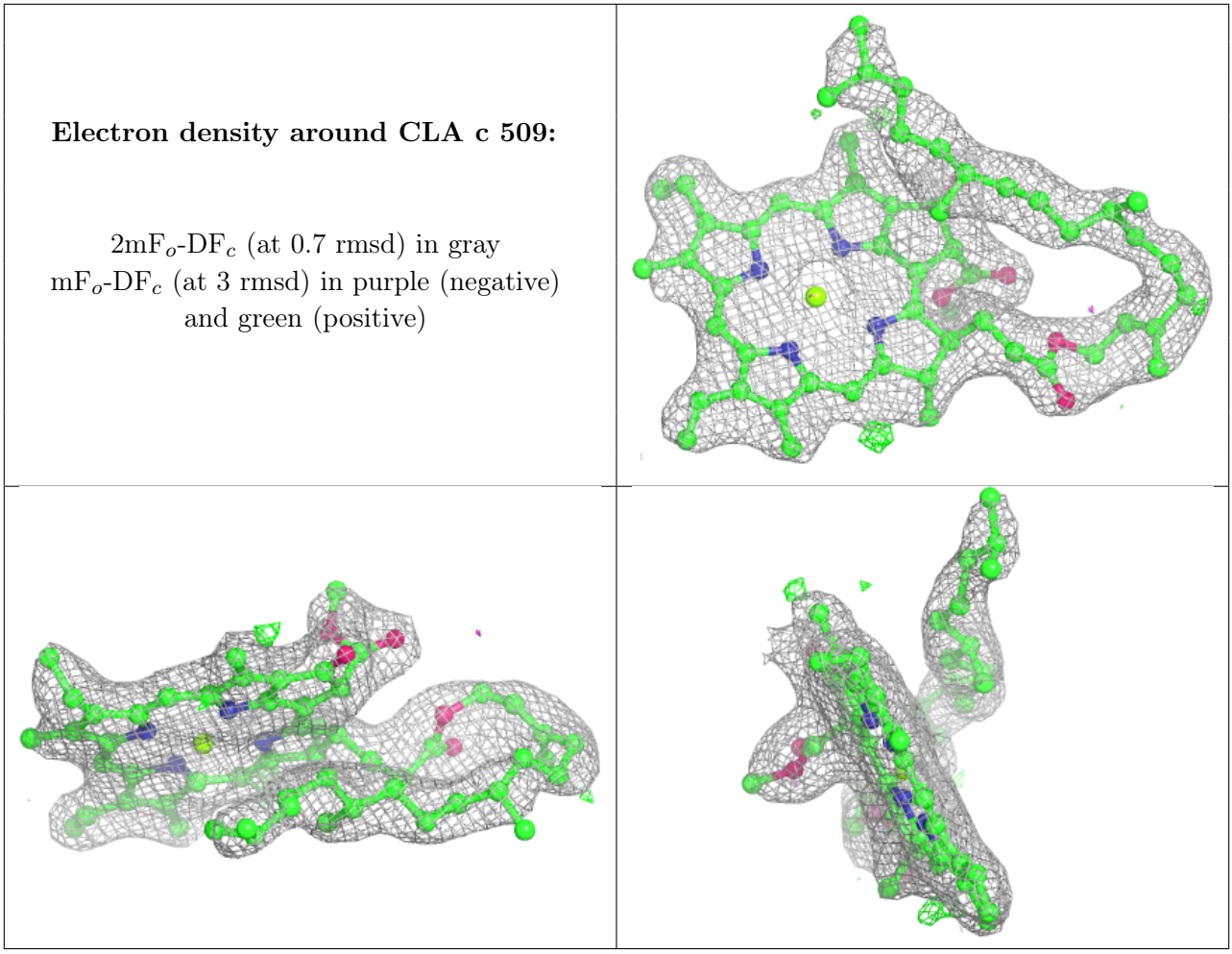
Electron density around CLA C 501:

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



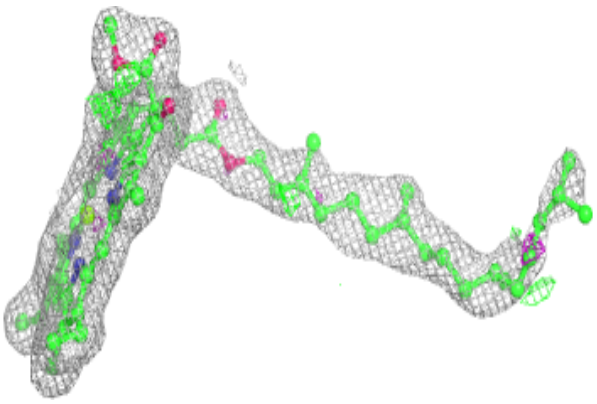
Electron density around CLA c 509:

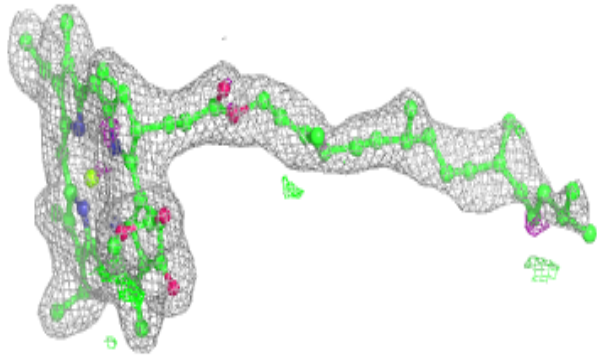
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

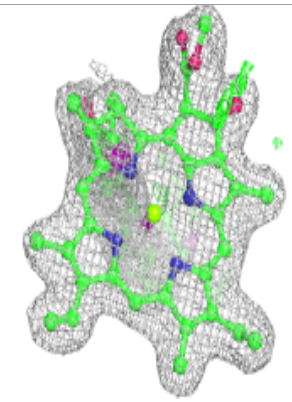


Electron density around CLA B 604:

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

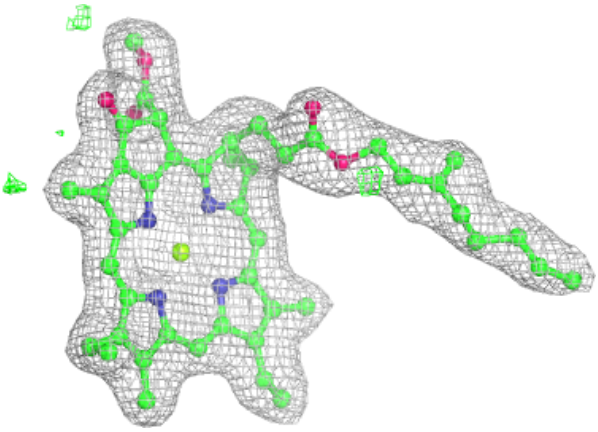


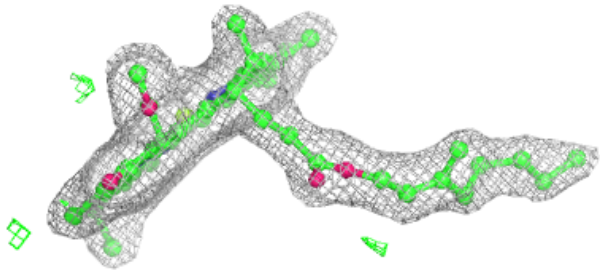


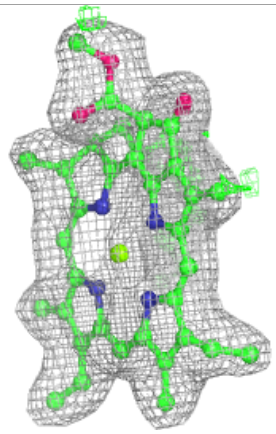


Electron density around CLA A 610:

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

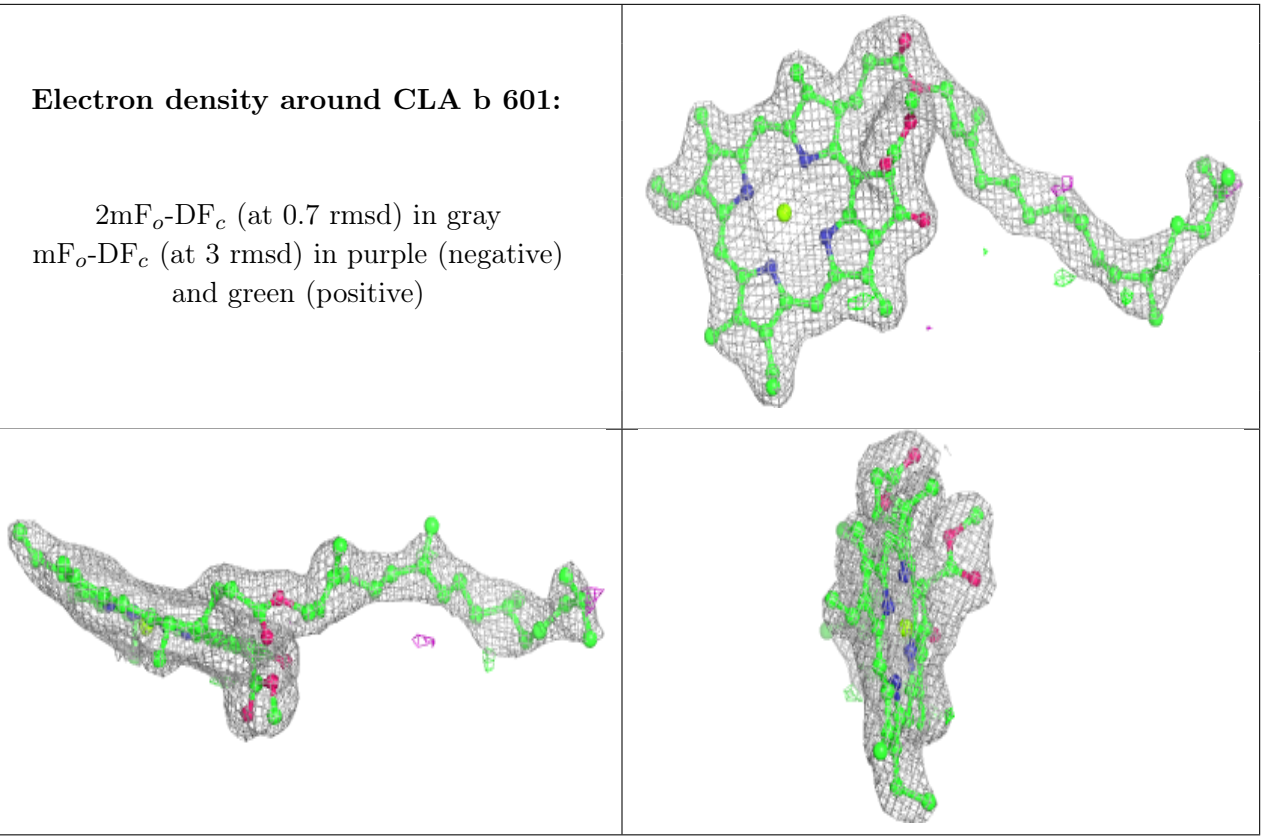






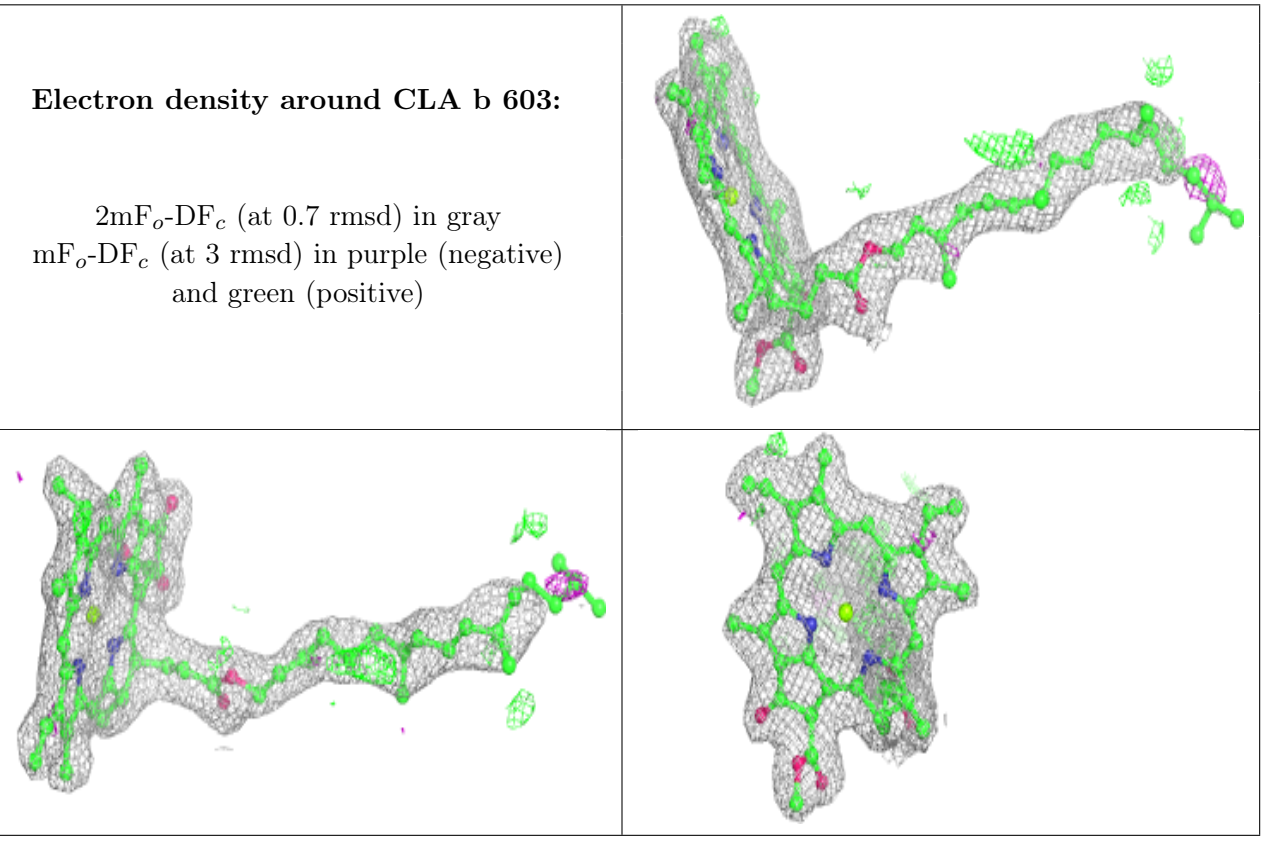
Electron density around CLA b 601:

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



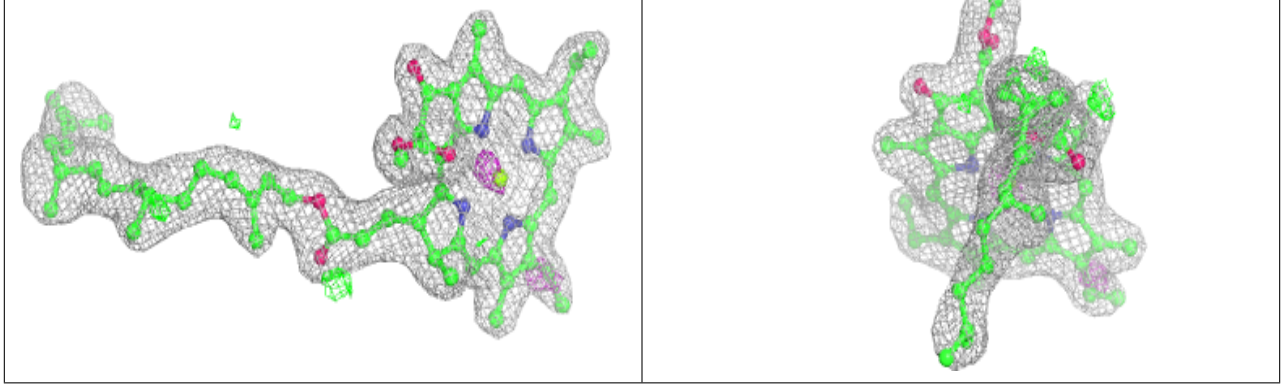
Electron density around CLA b 603:

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



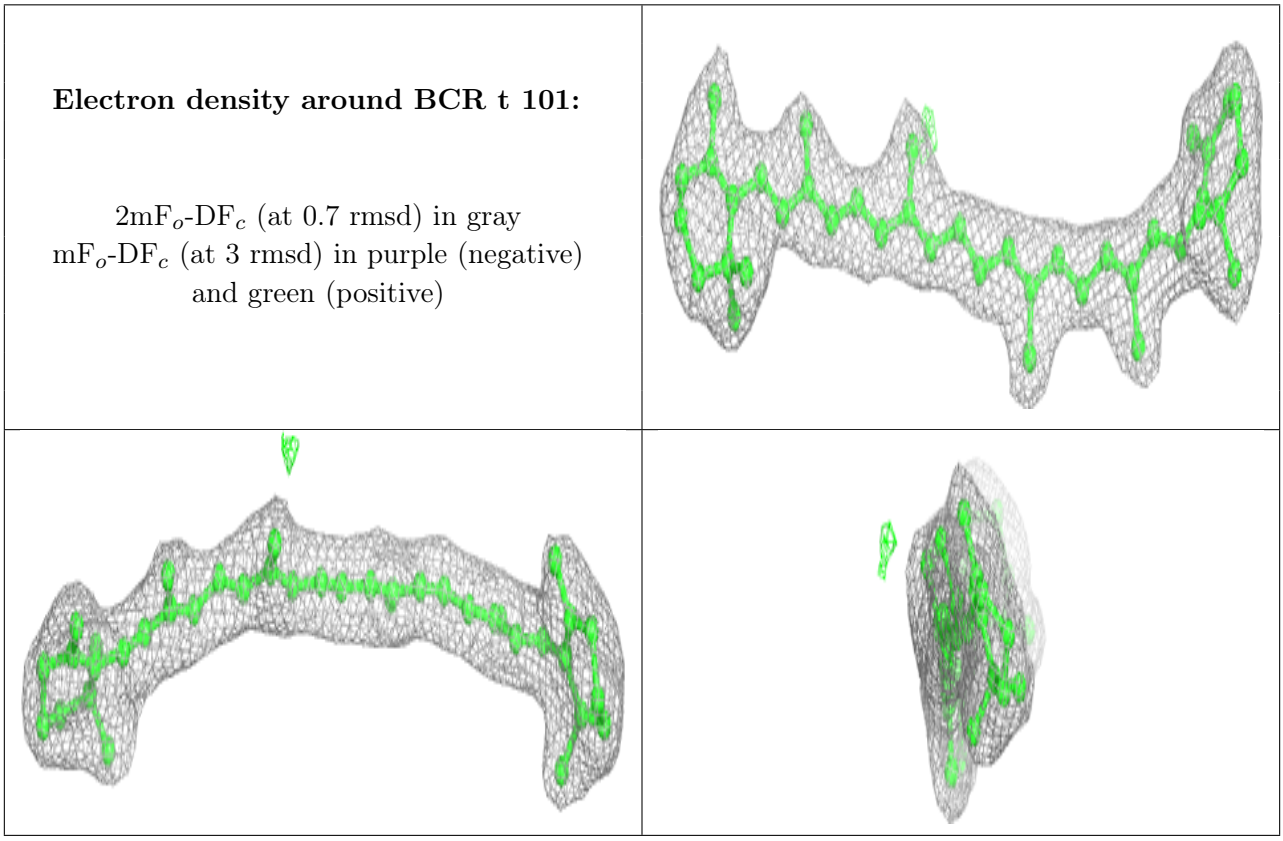
Electron density around CLA d 403:

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



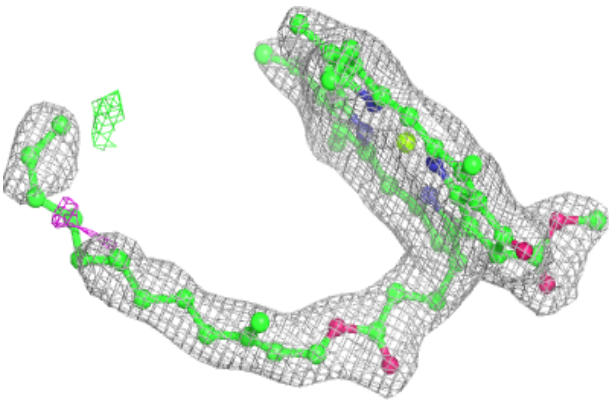
Electron density around BCR t 101:

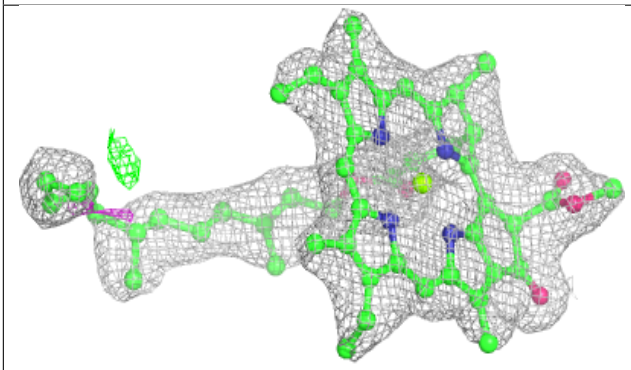
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

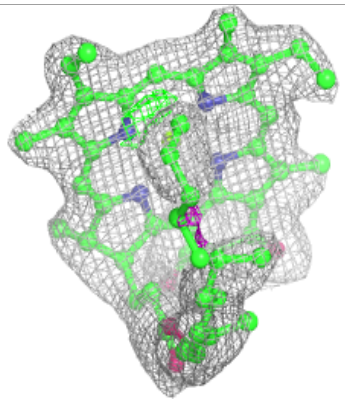


Electron density around CLA C 504:

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

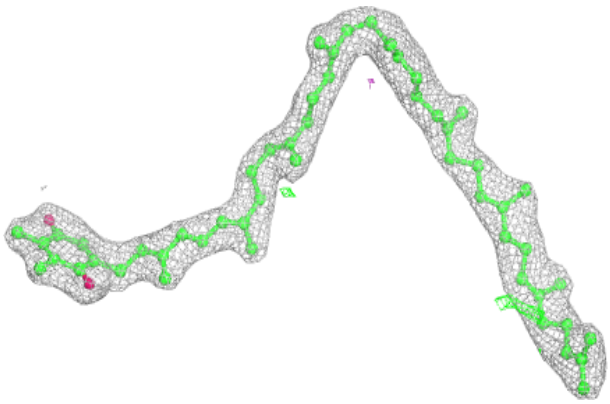


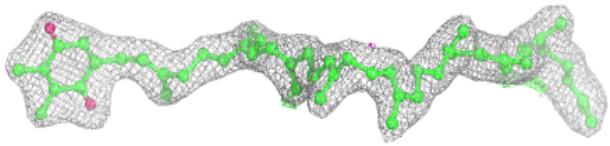




Electron density around PL9 D 405:

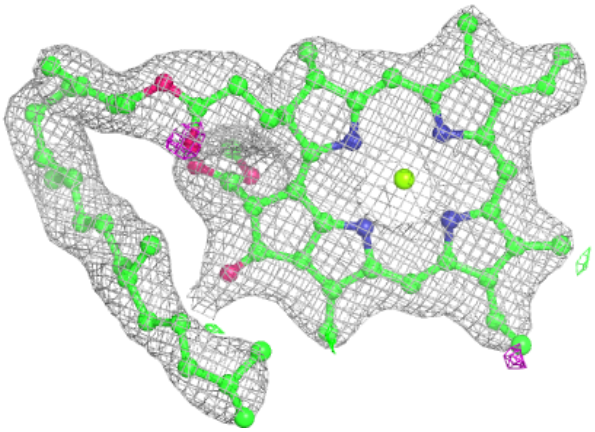
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

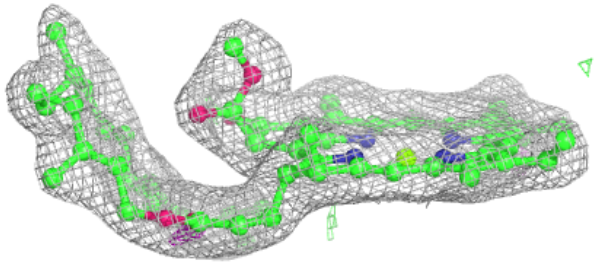


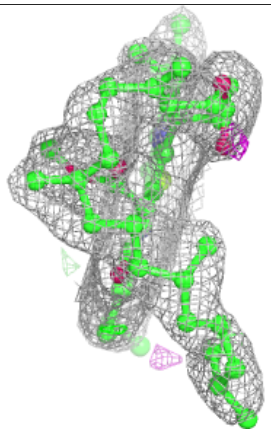


Electron density around CLA b 609:

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

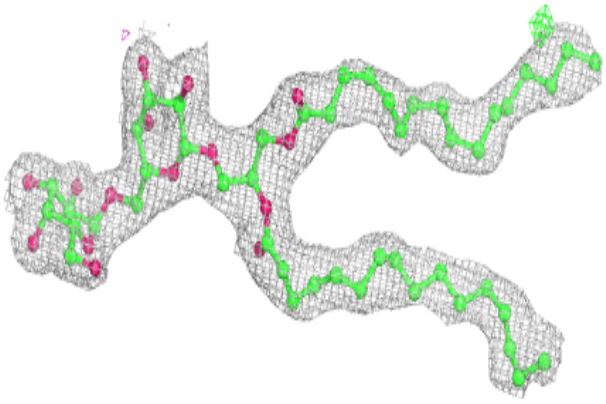


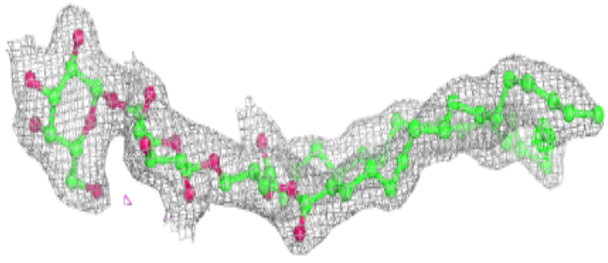


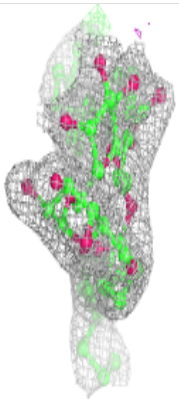


Electron density around DGD C 517:

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

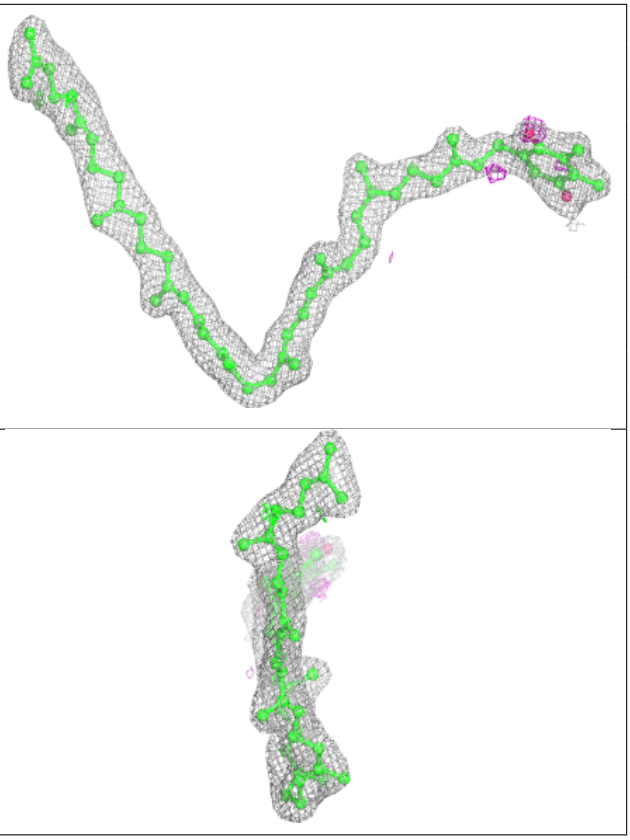






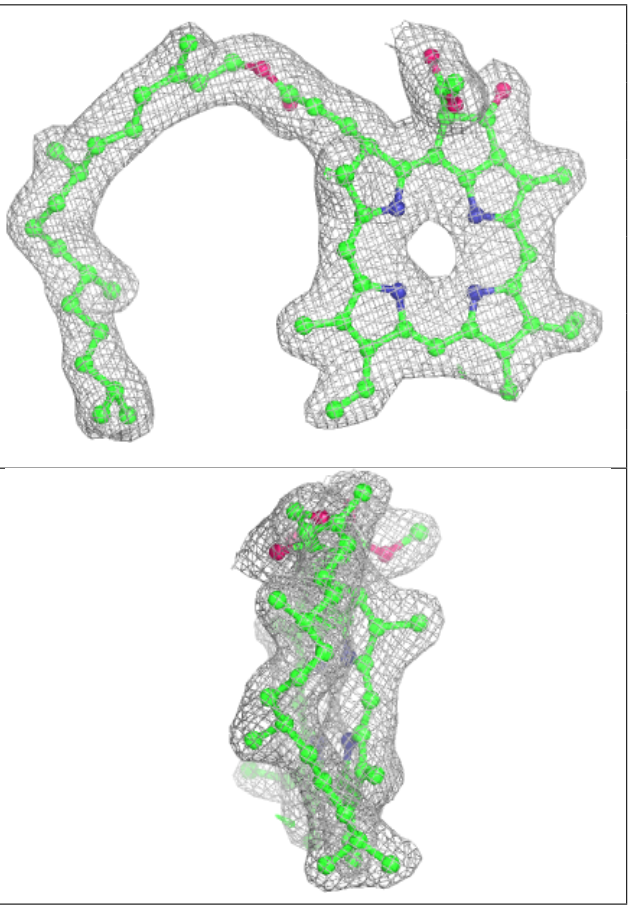
Electron density around PL9 d 406:

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



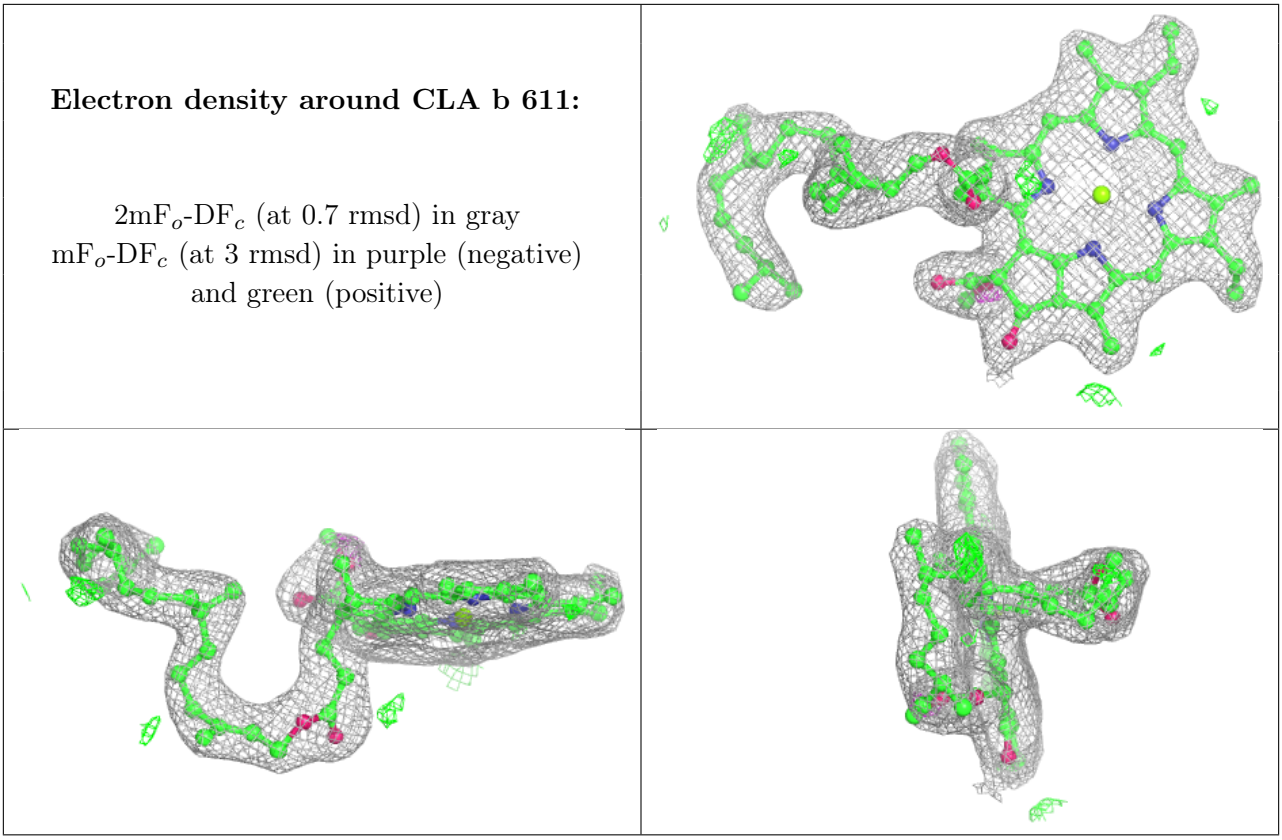
Electron density around PHO a 608:

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



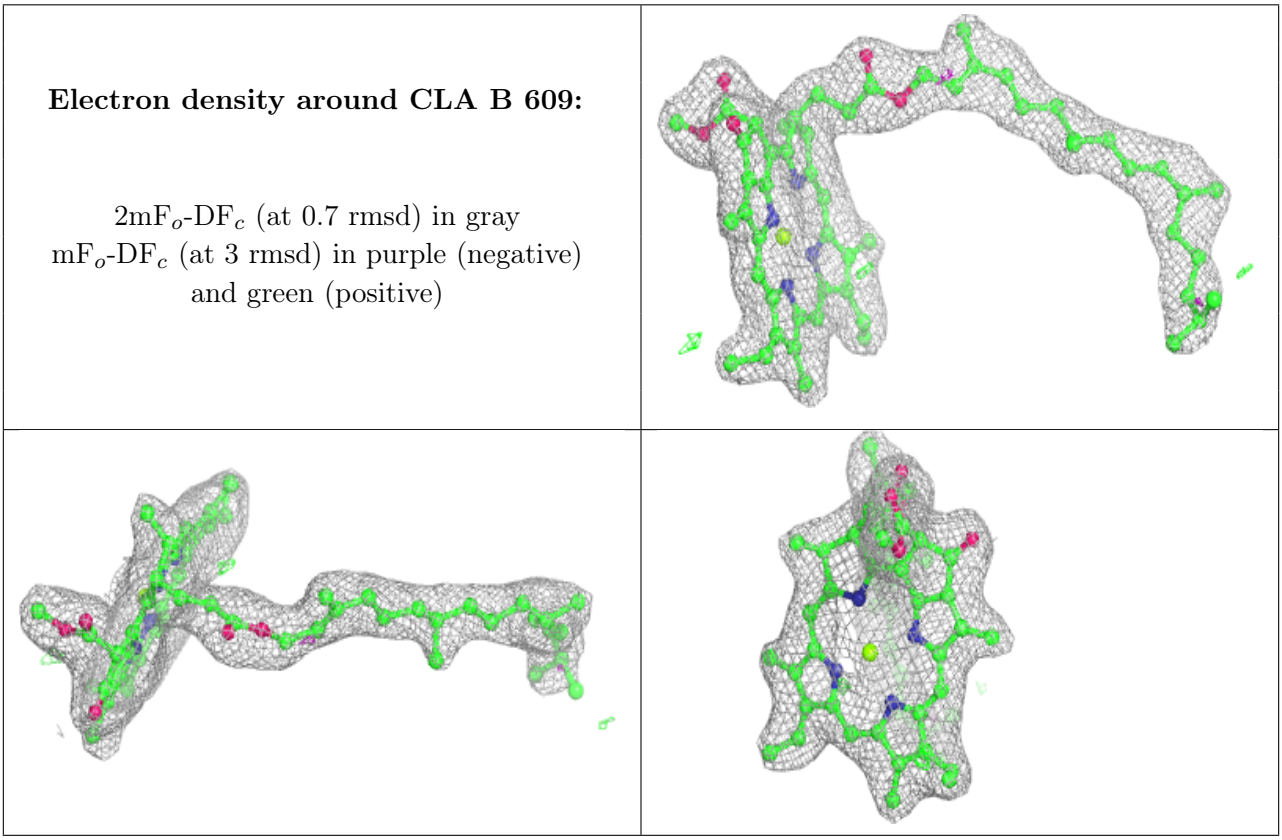
Electron density around CLA b 611:

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



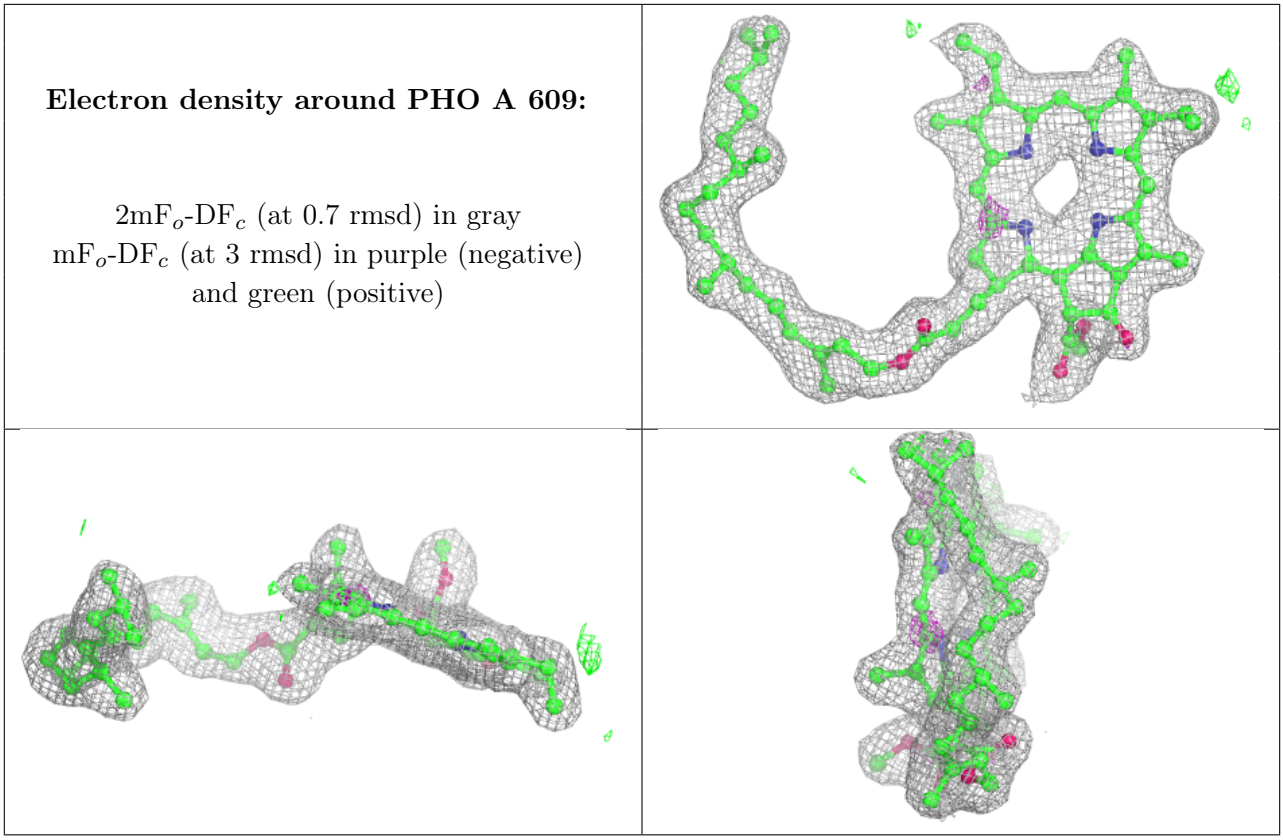
Electron density around CLA B 609:

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



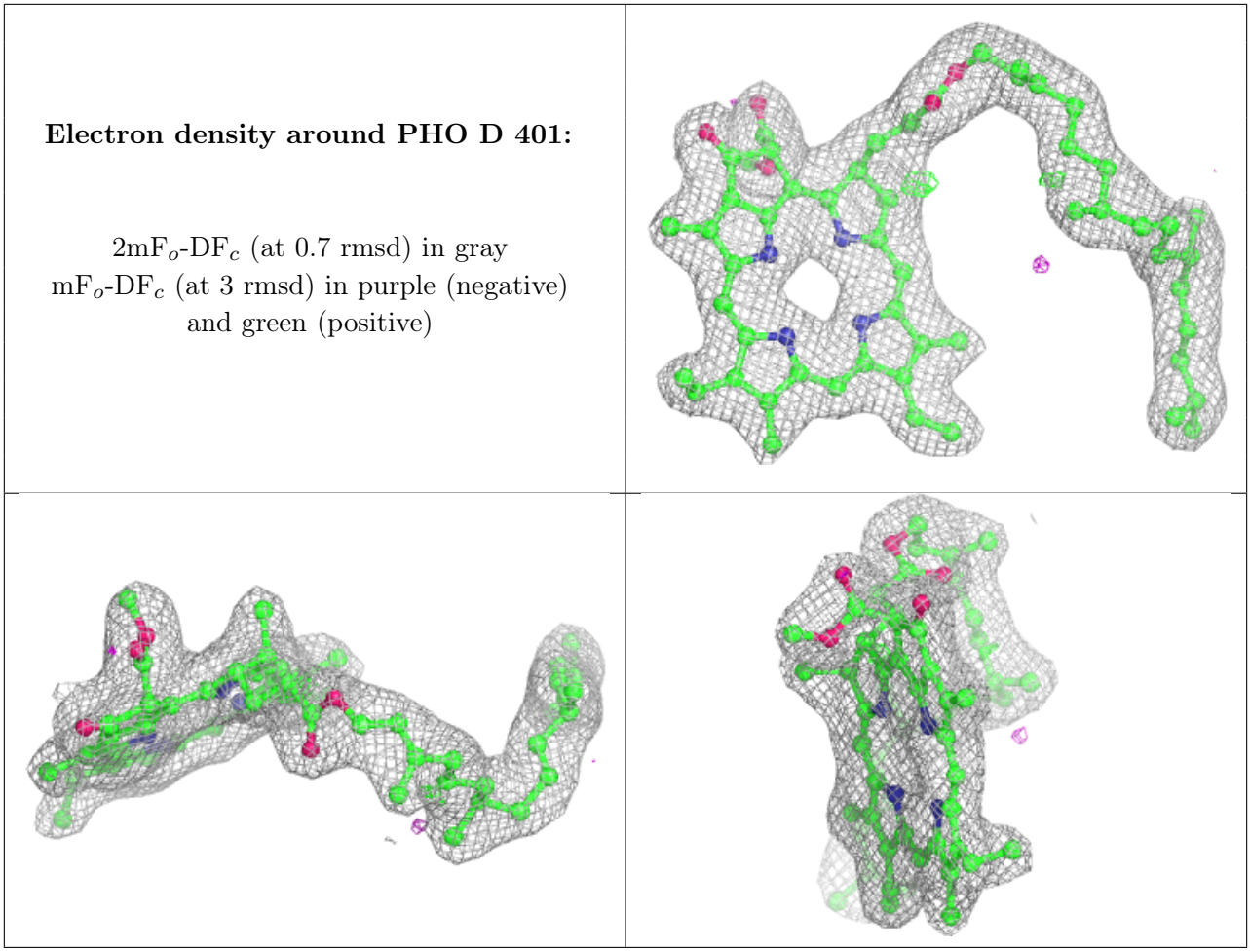
Electron density around PHO A 609:

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



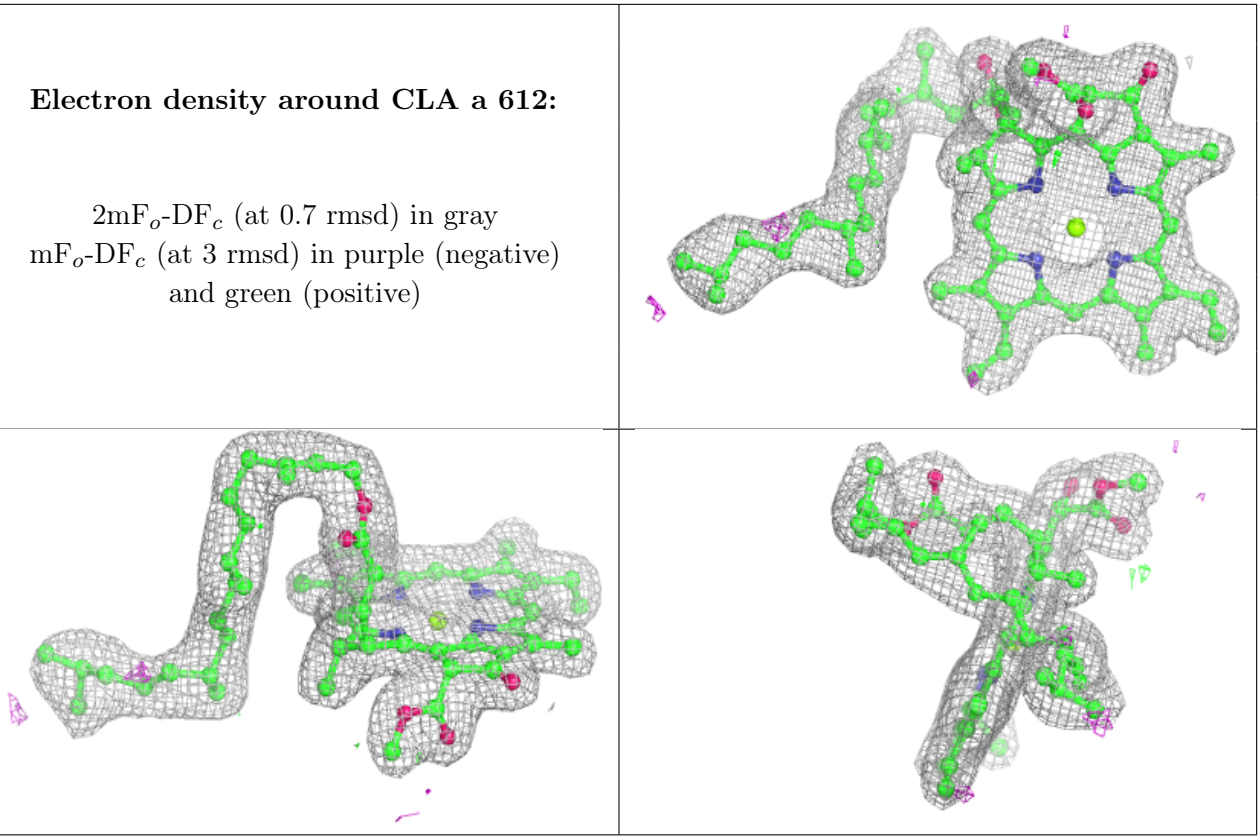
Electron density around PHO D 401:

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



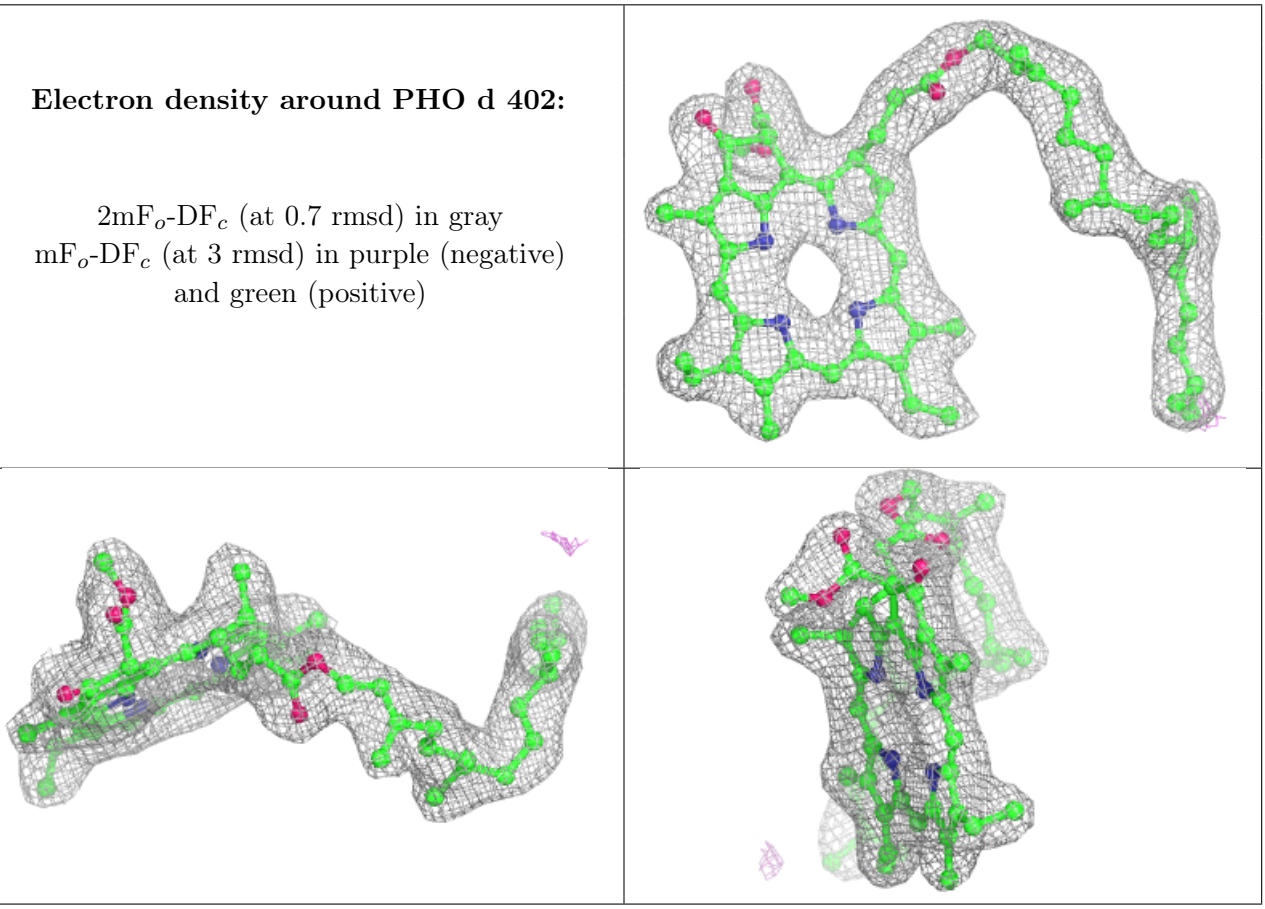
Electron density around CLA a 612:

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



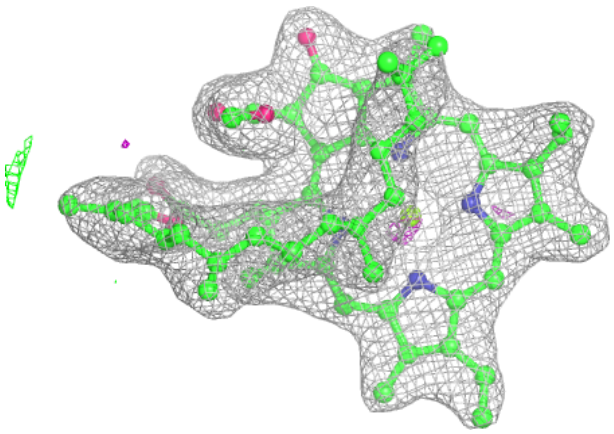
Electron density around PHO d 402:

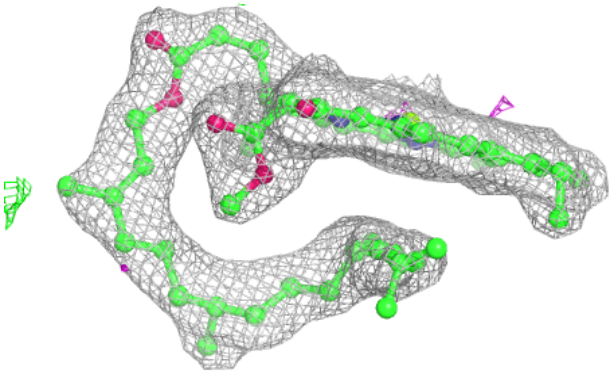
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

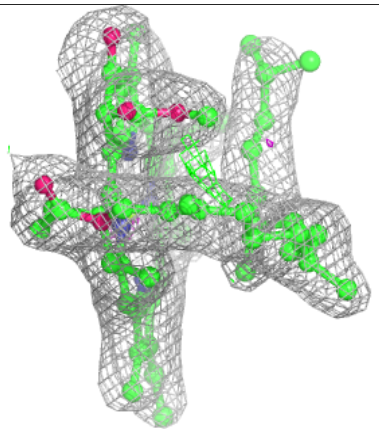


Electron density around CLA C 510:

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

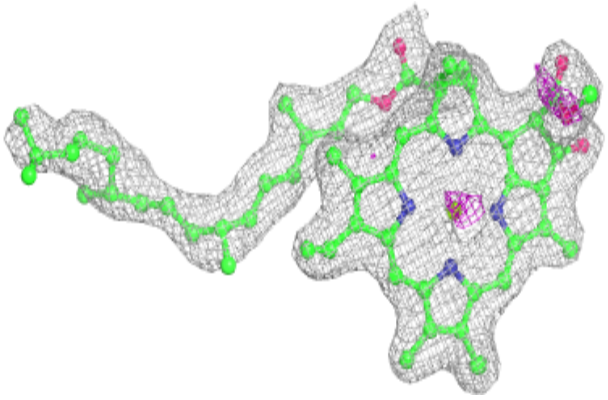


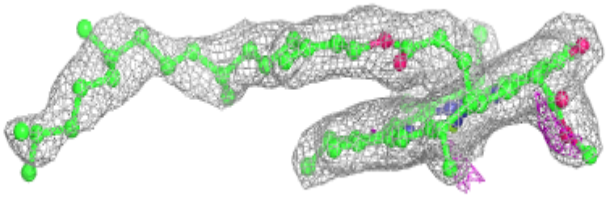




Electron density around CLA b 602:

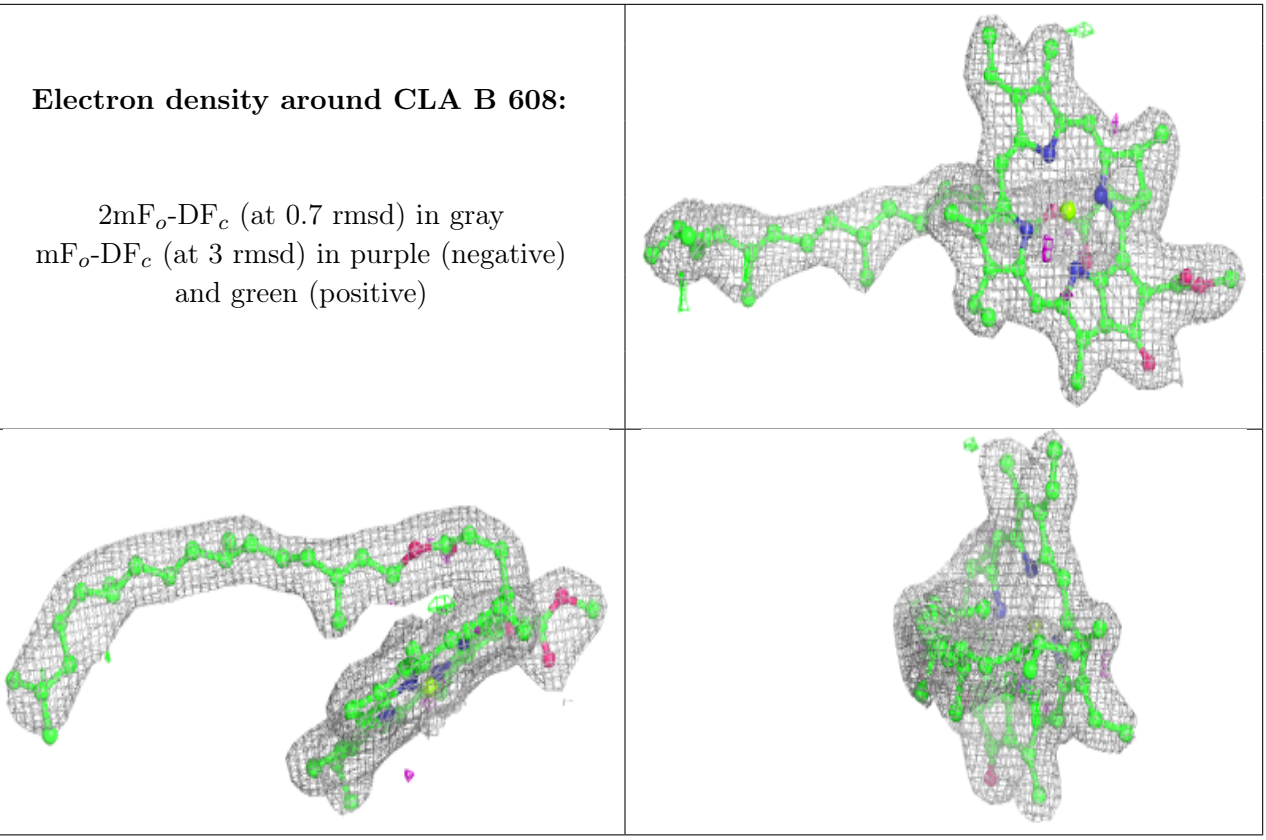
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)





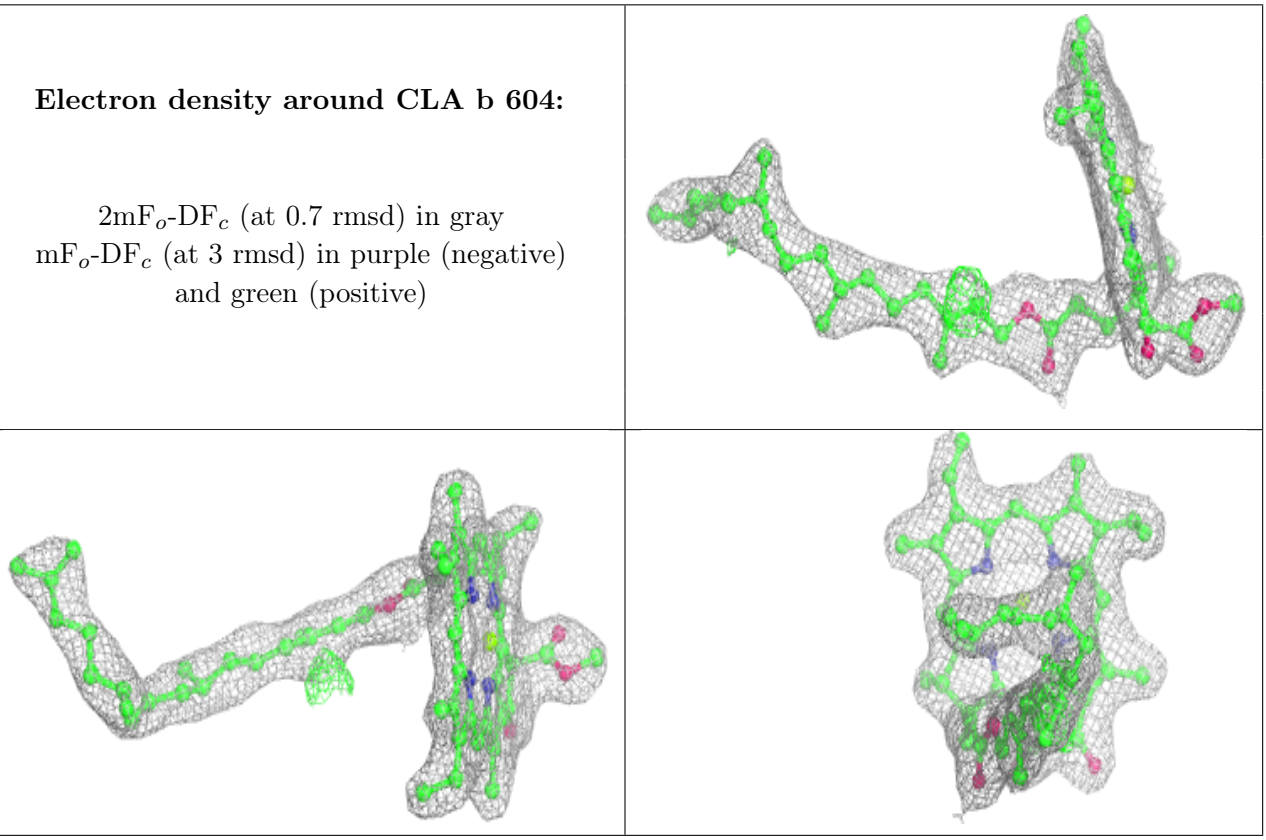
Electron density around CLA B 608:

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



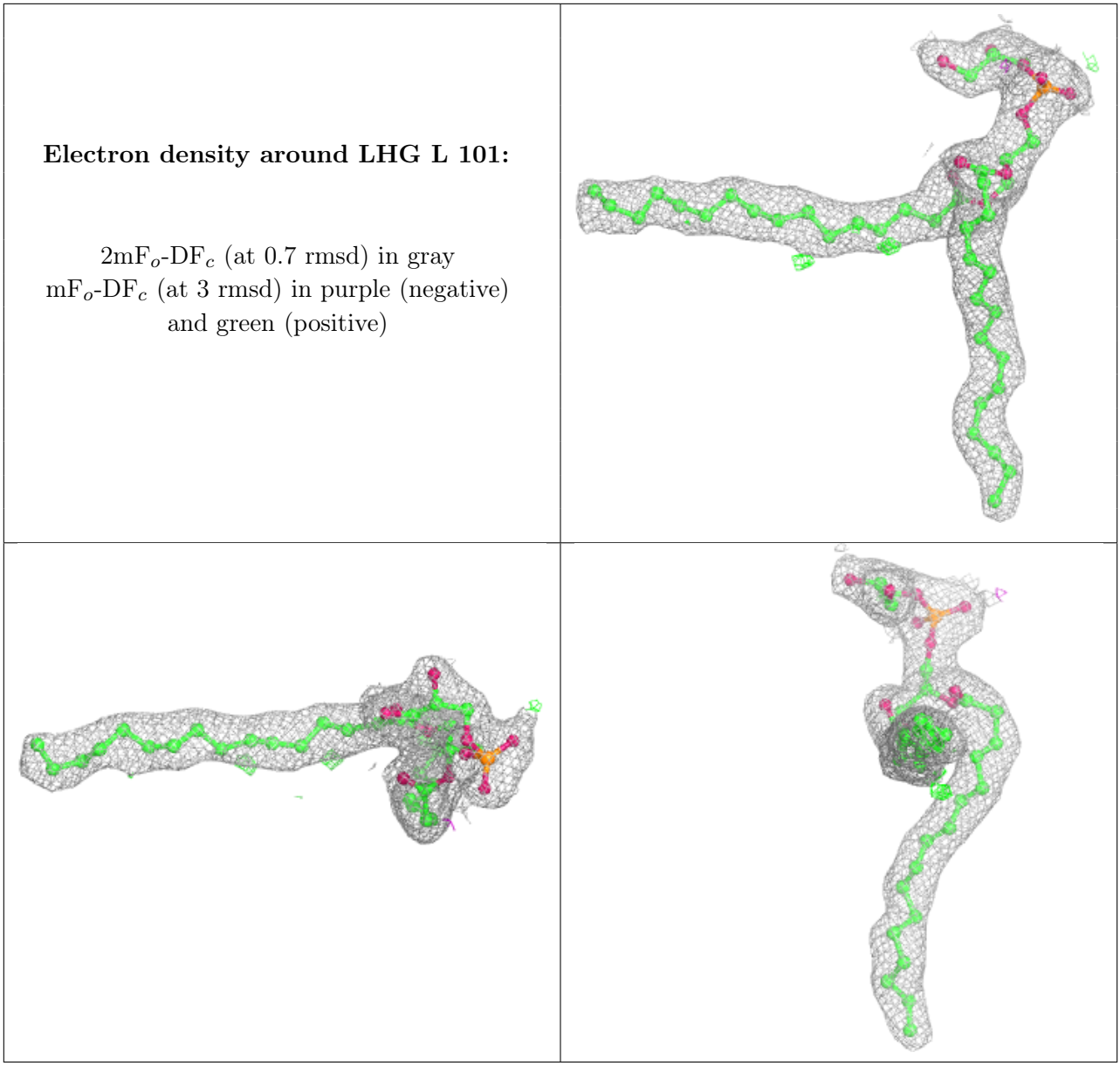
Electron density around CLA b 604:

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



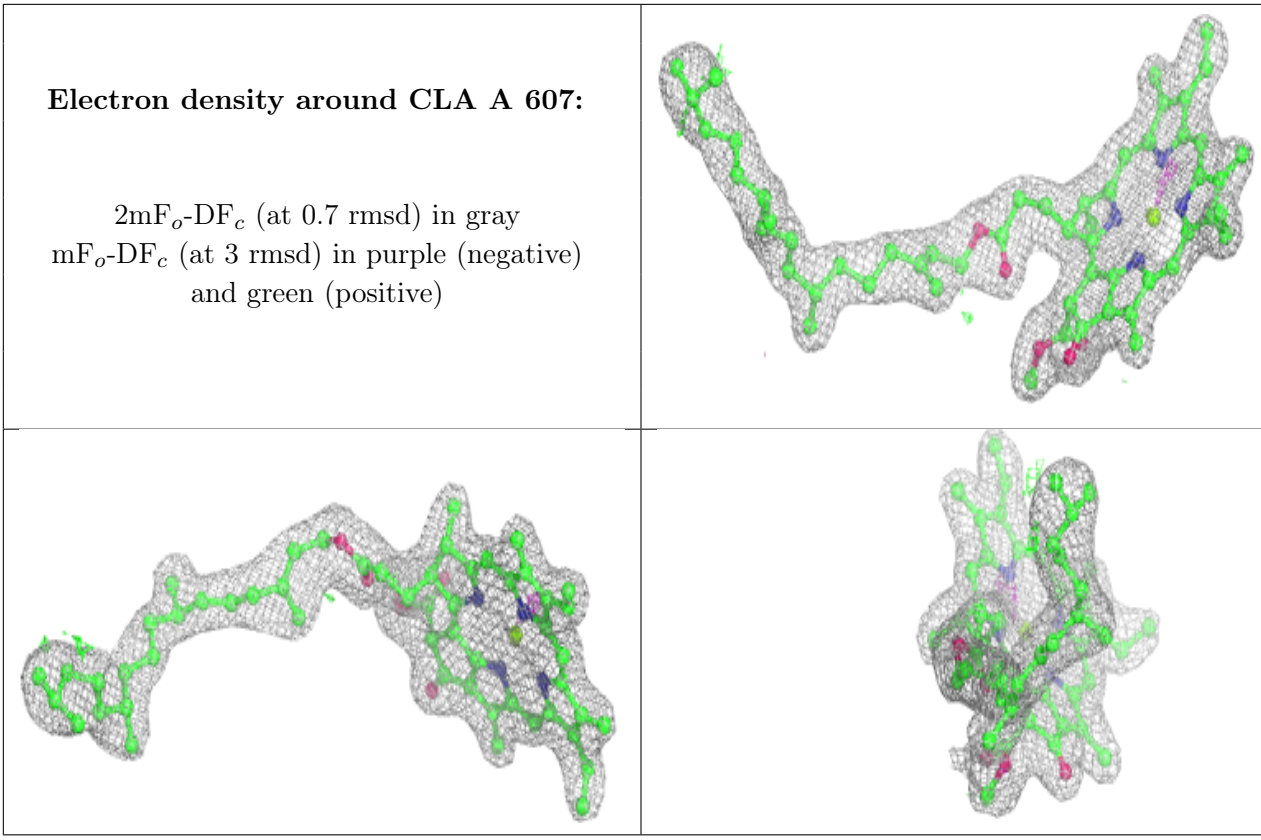
Electron density around LHG L 101:

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



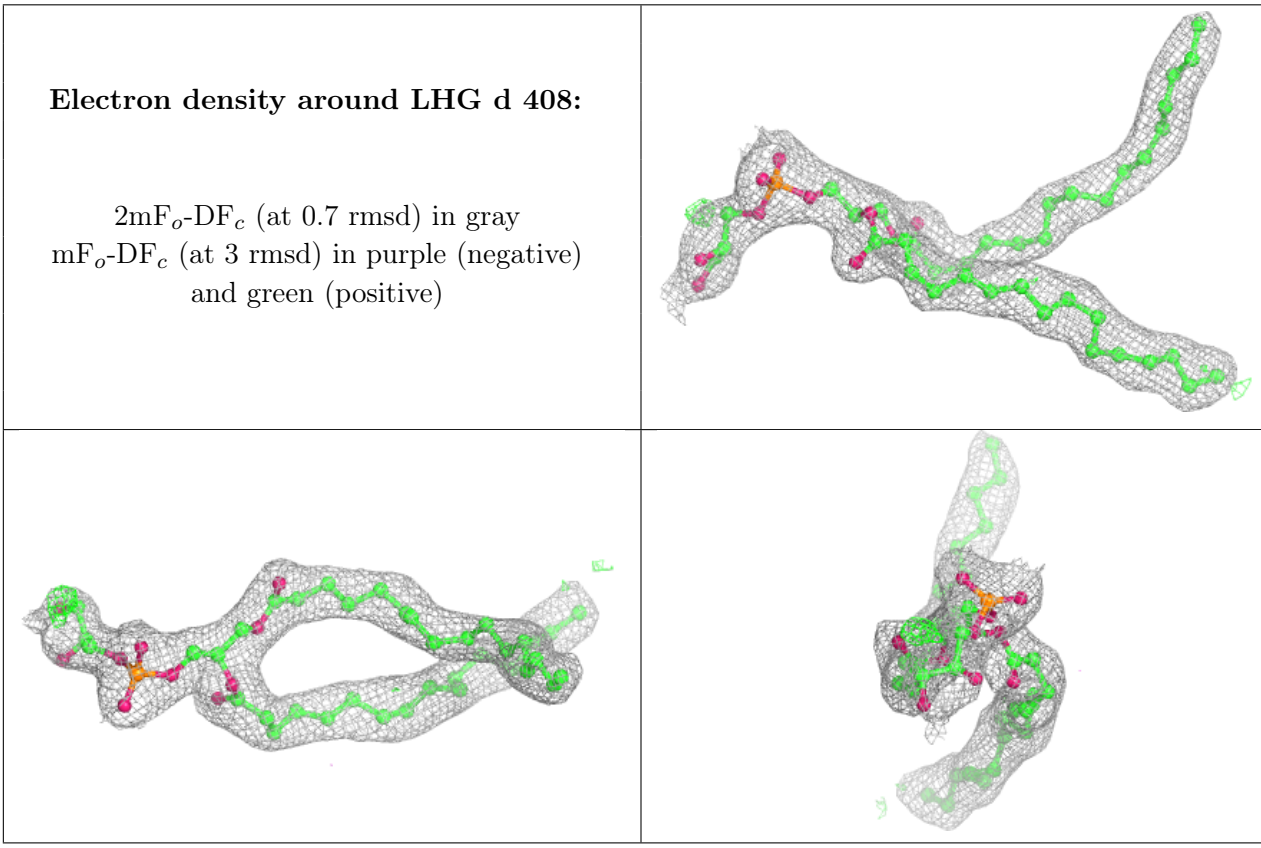
Electron density around CLA A 607:

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



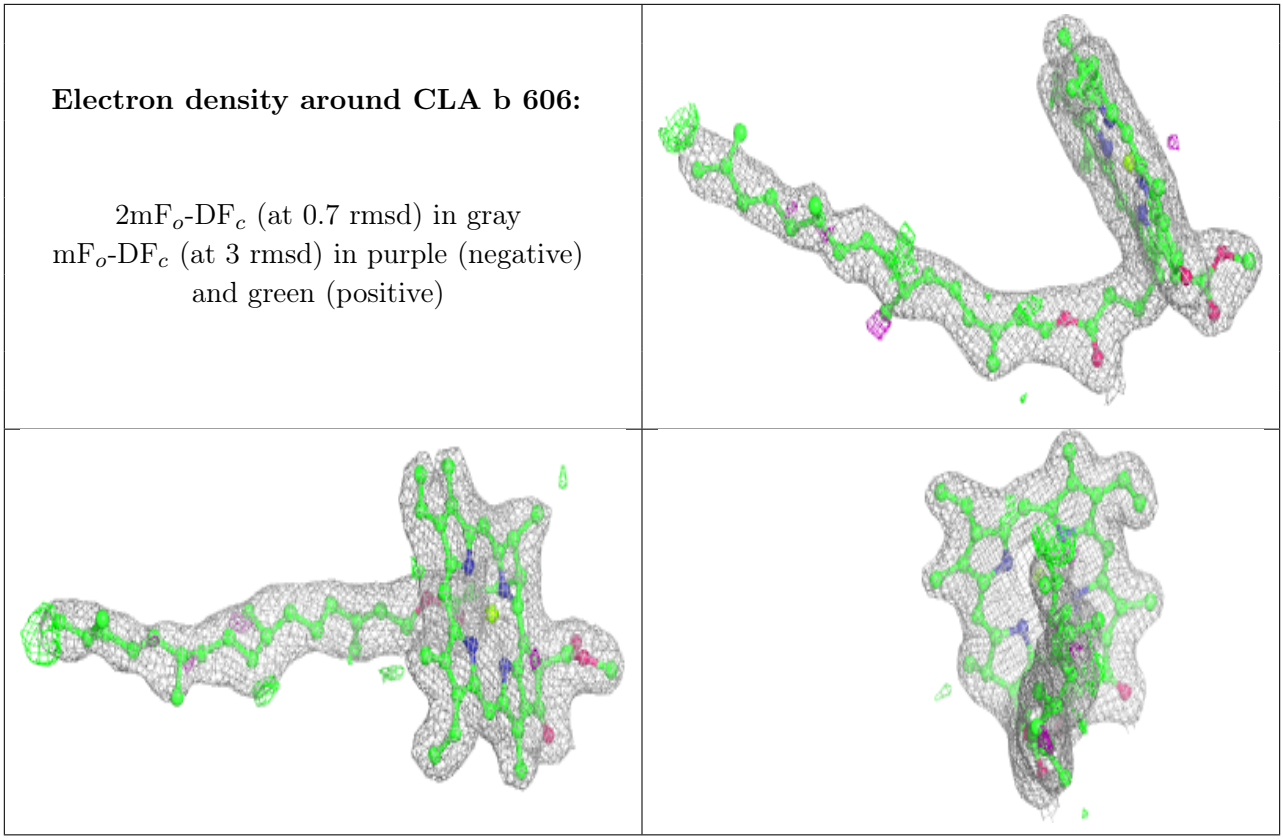
Electron density around LHG d 408:

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



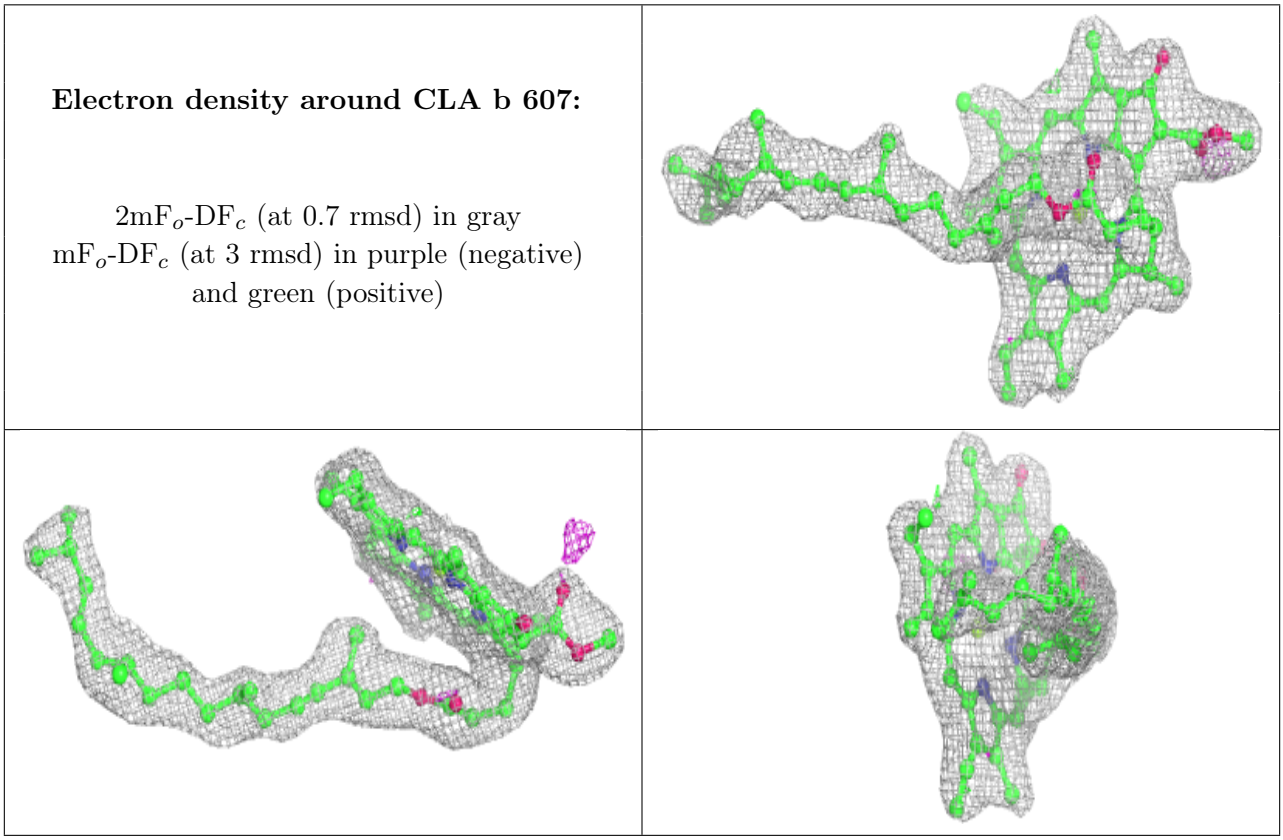
Electron density around CLA b 606:

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



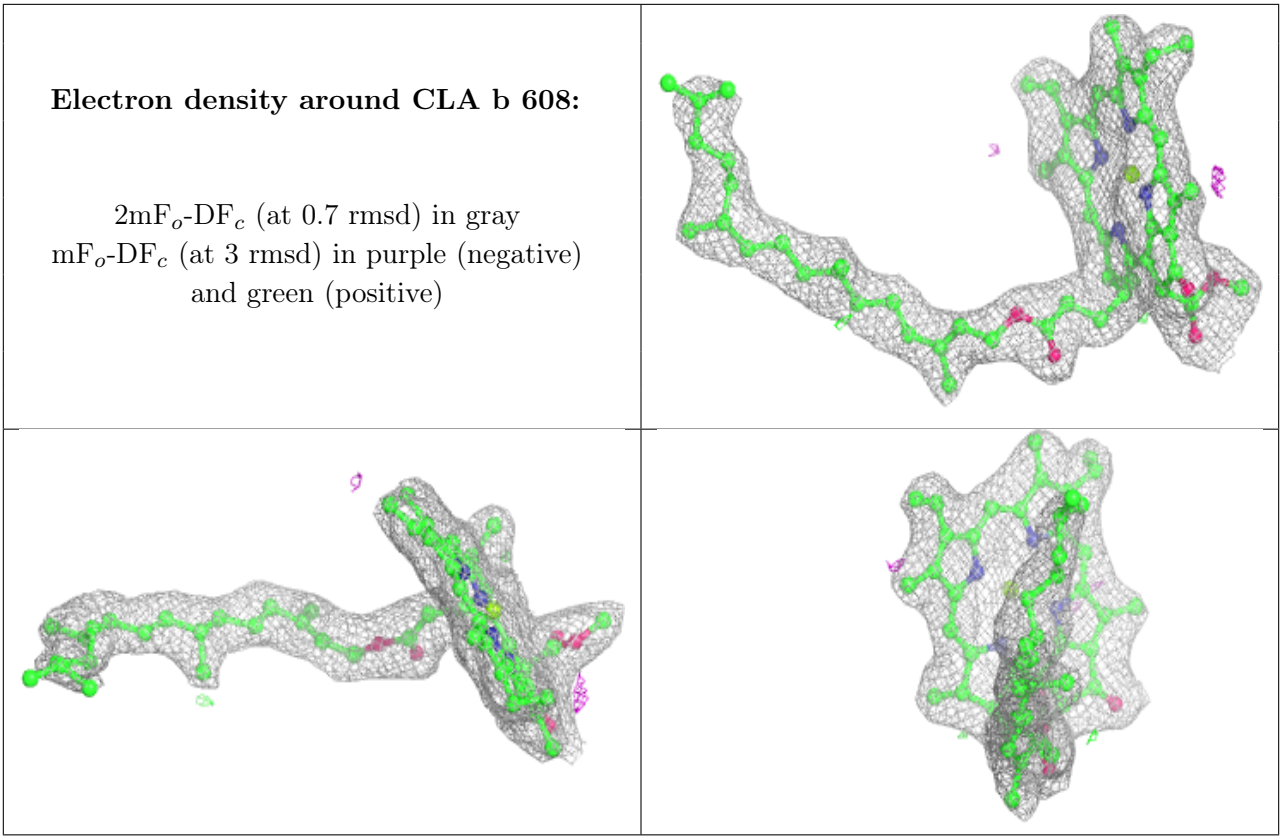
Electron density around CLA b 607:

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



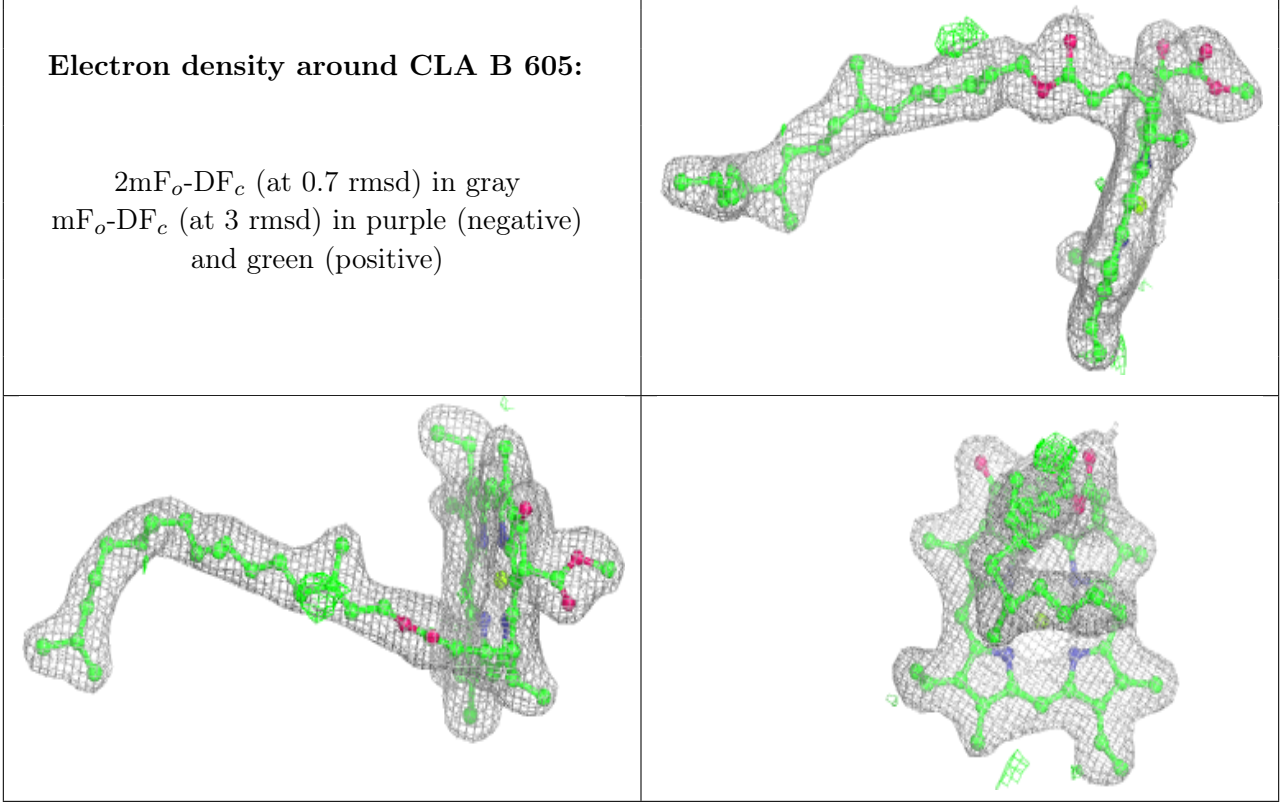
Electron density around CLA b 608:

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



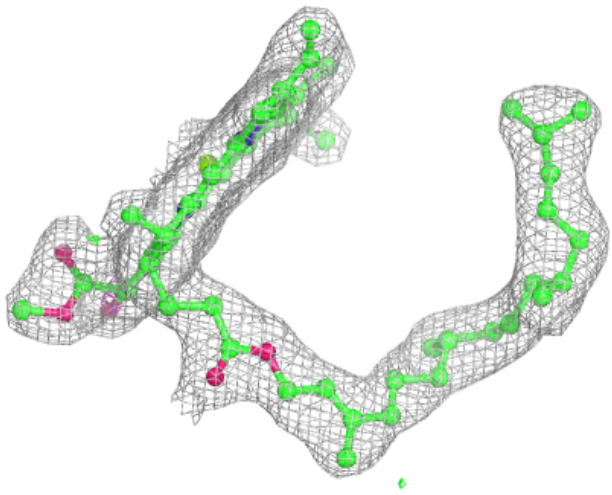
Electron density around CLA B 605:

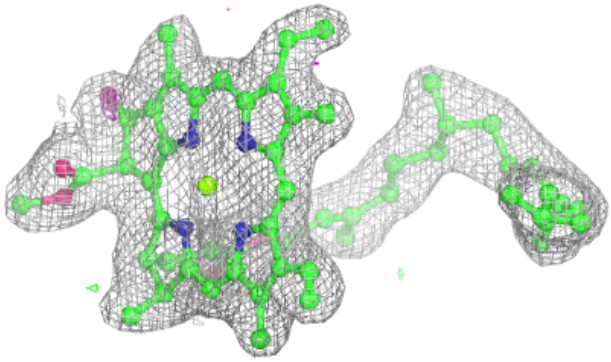
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

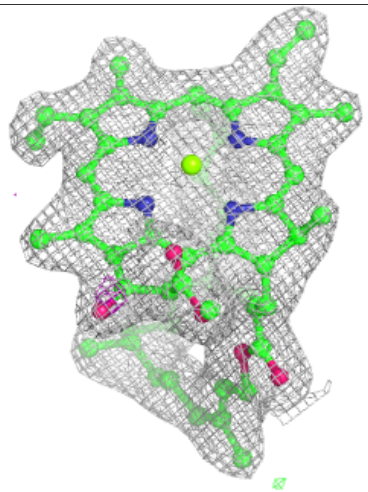


Electron density around CLA b 610:

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

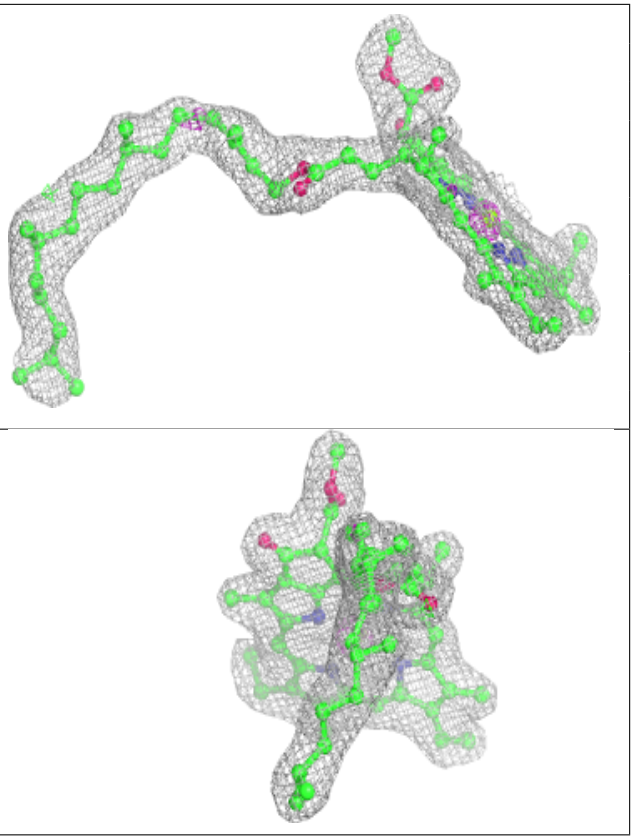






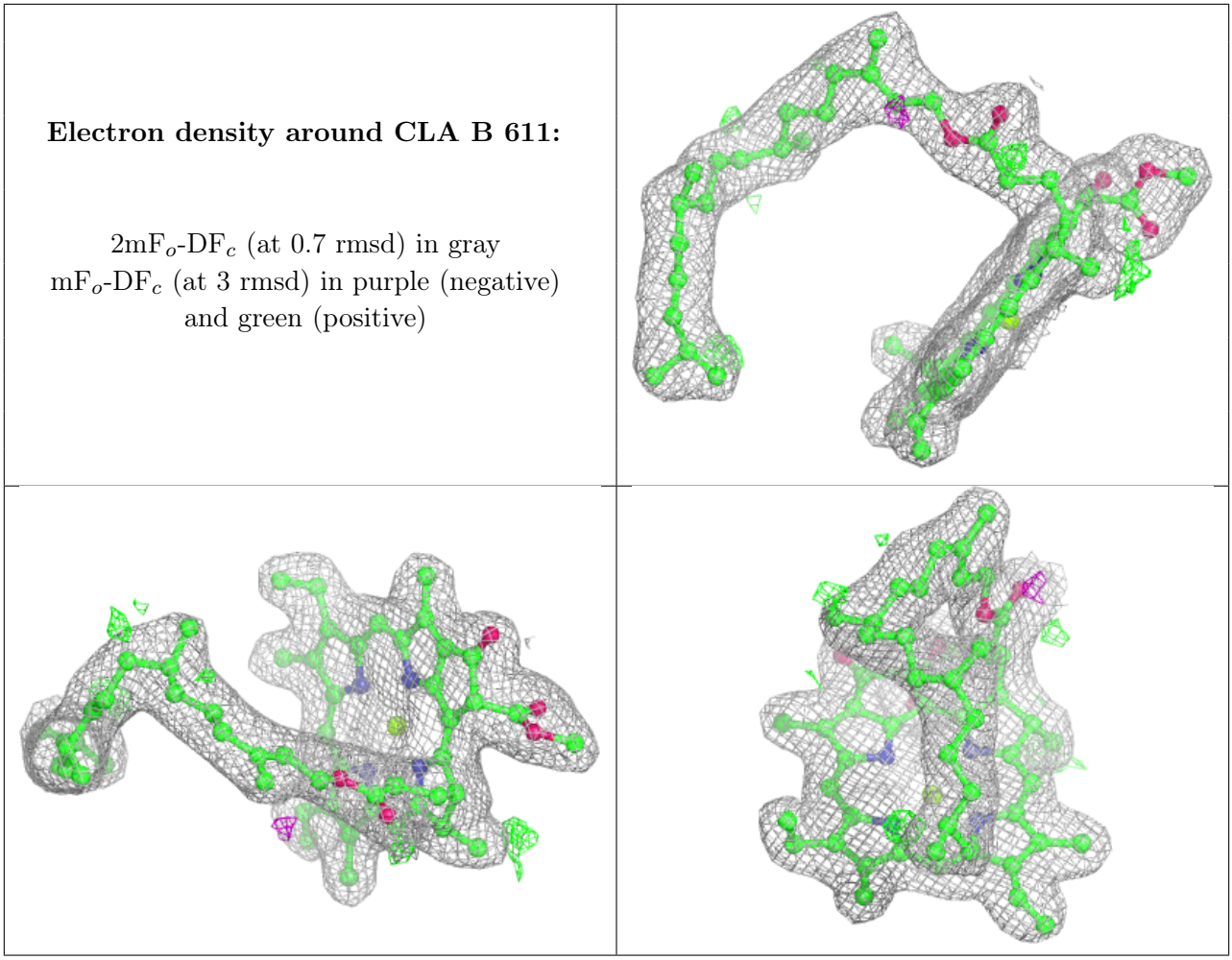
Electron density around CLA D 402:

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



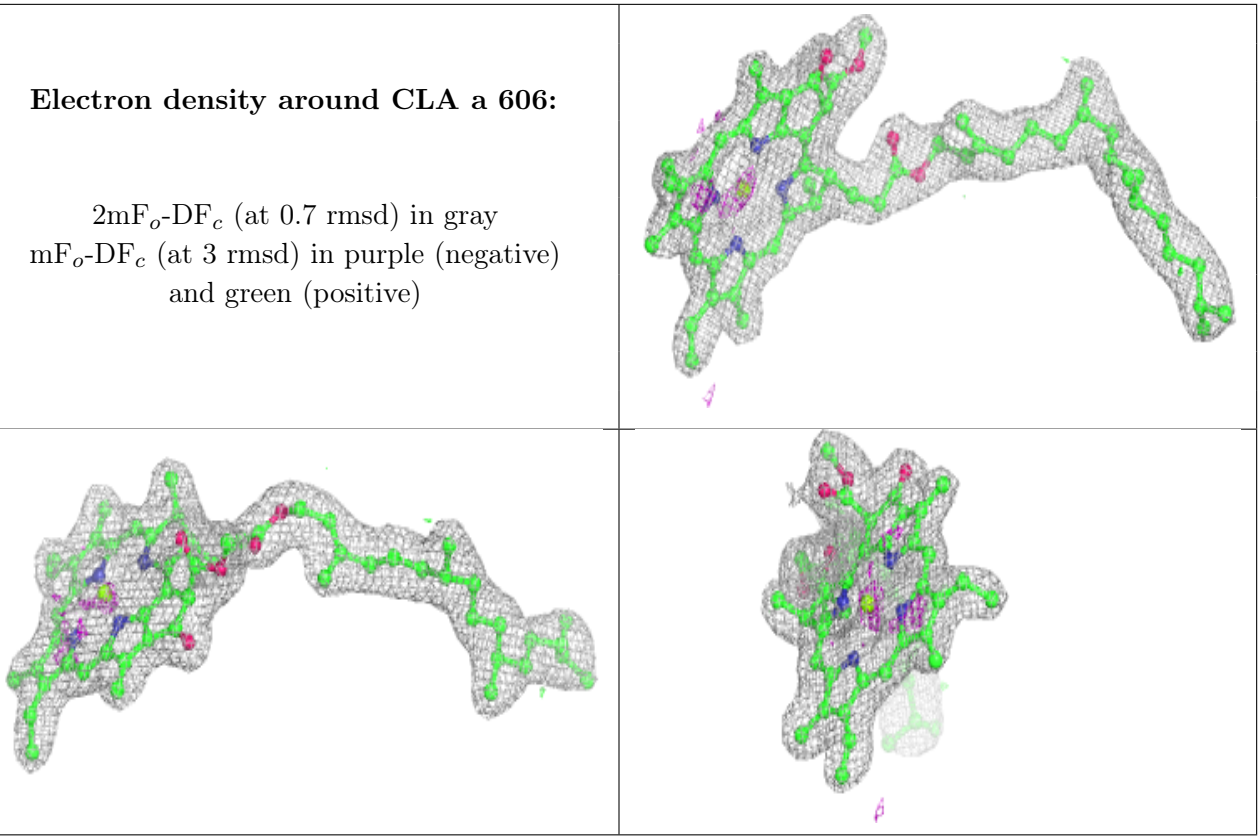
Electron density around CLA B 611:

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



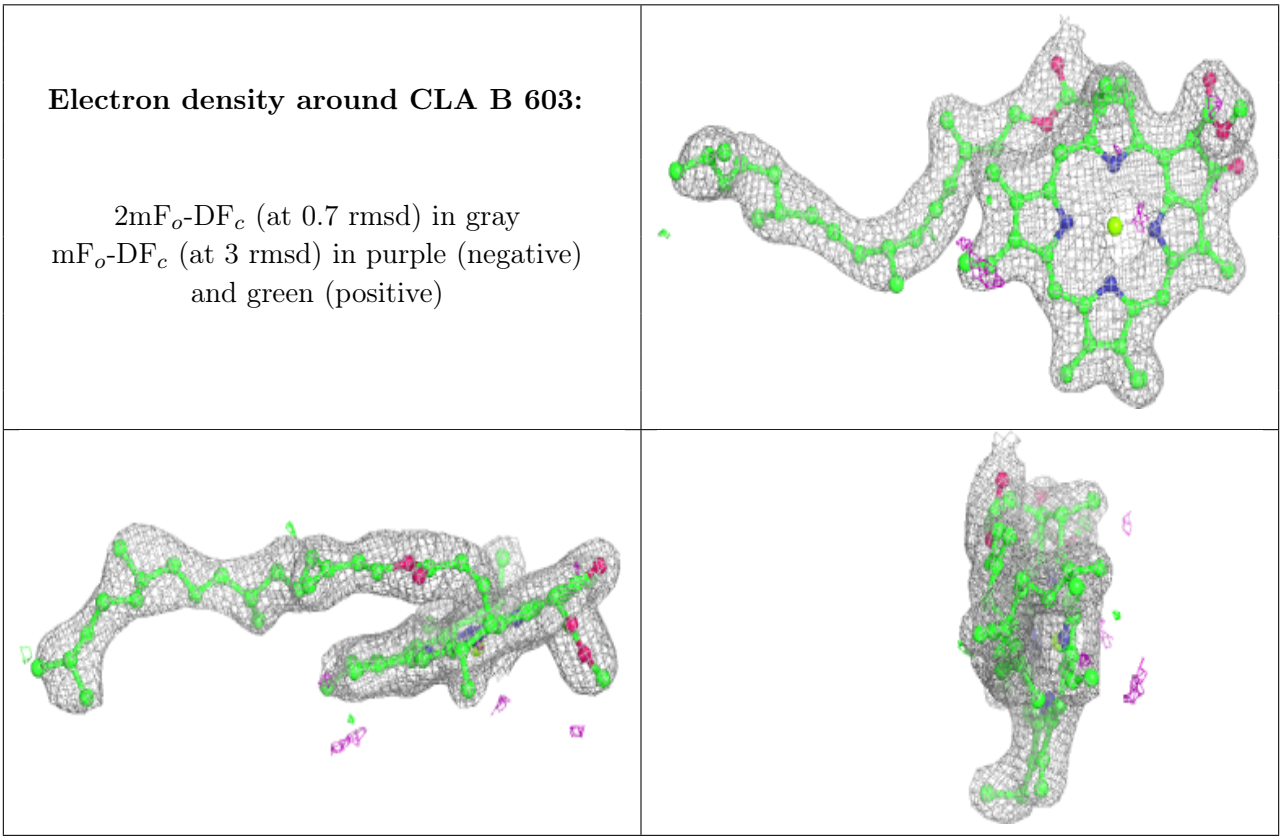
Electron density around CLA a 606:

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



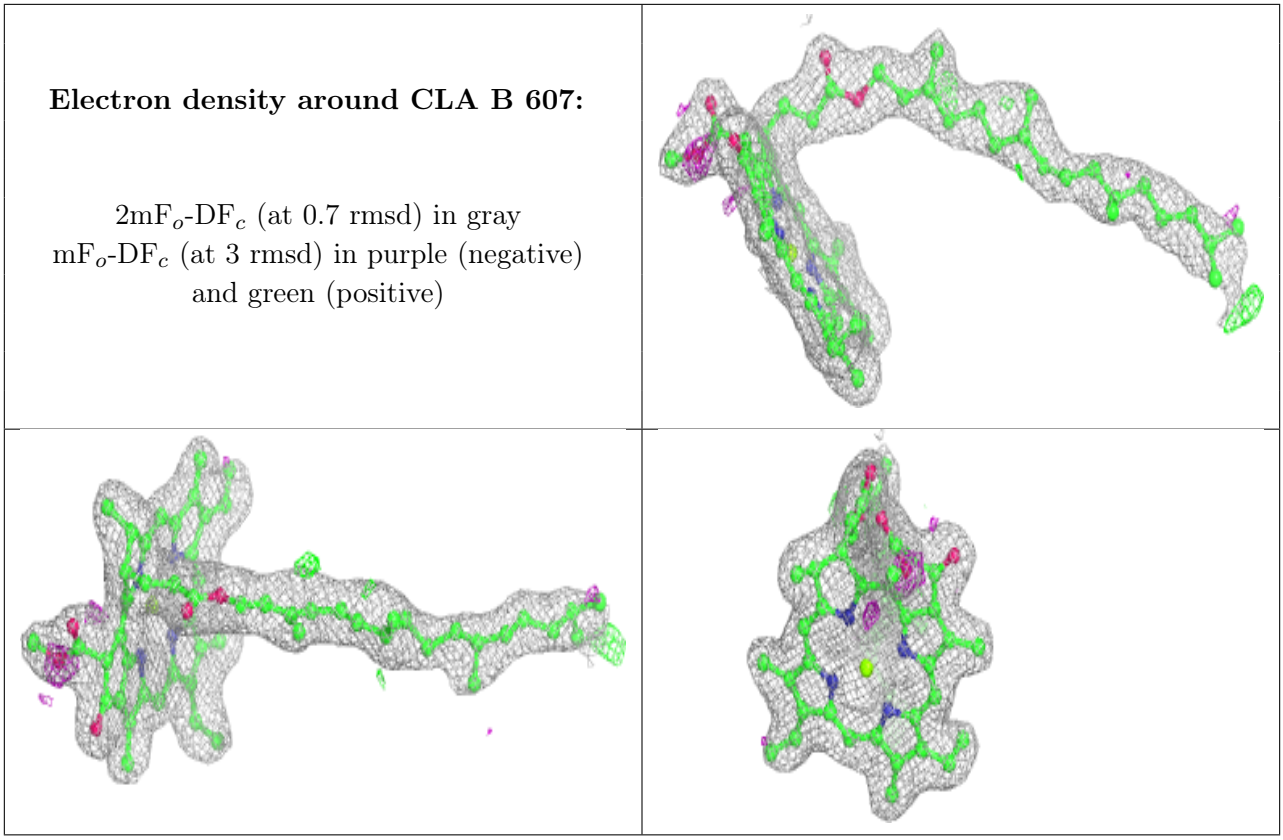
Electron density around CLA B 603:

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



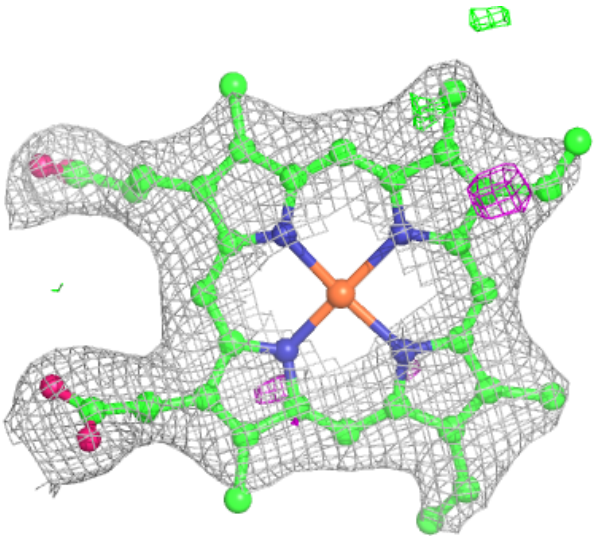
Electron density around CLA B 607:

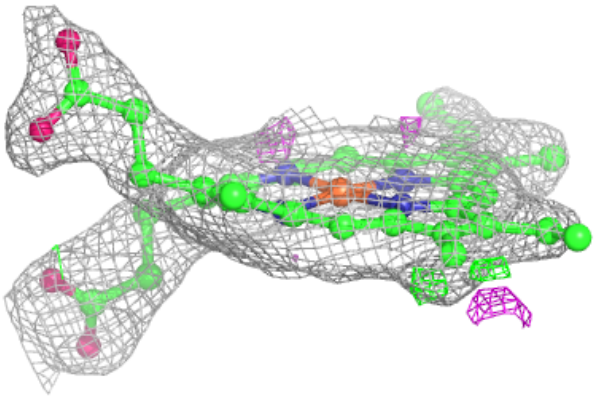
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

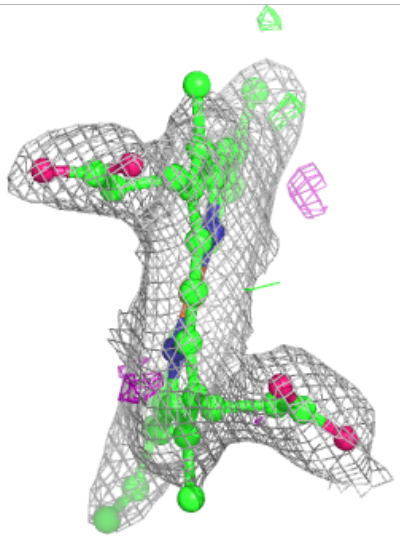


Electron density around HEM F 101:

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

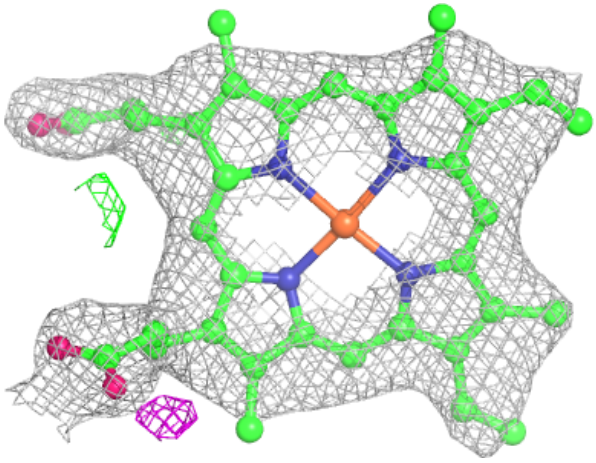


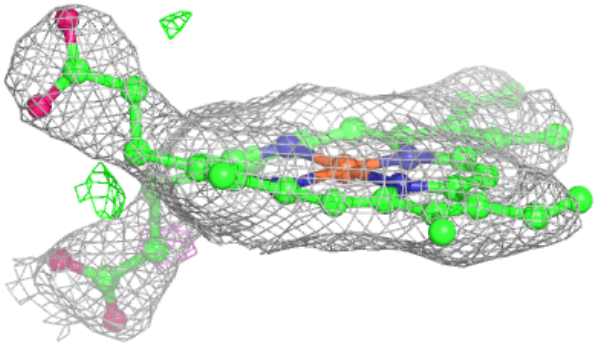


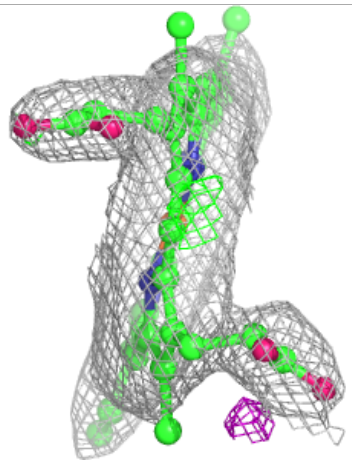


Electron density around HEM e 101:

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

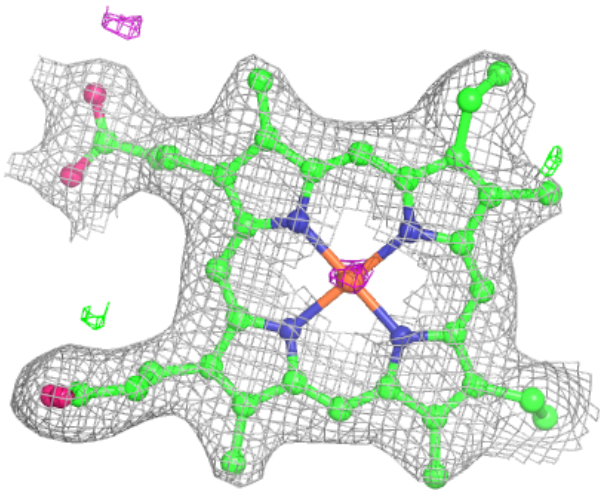


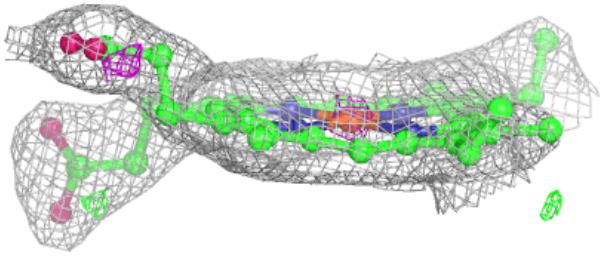


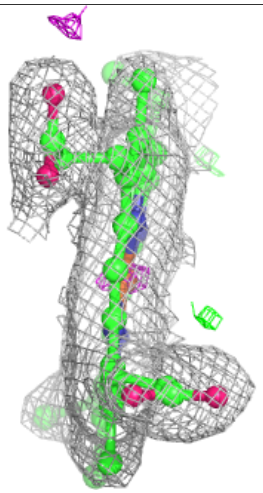


Electron density around HEC v 201:

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

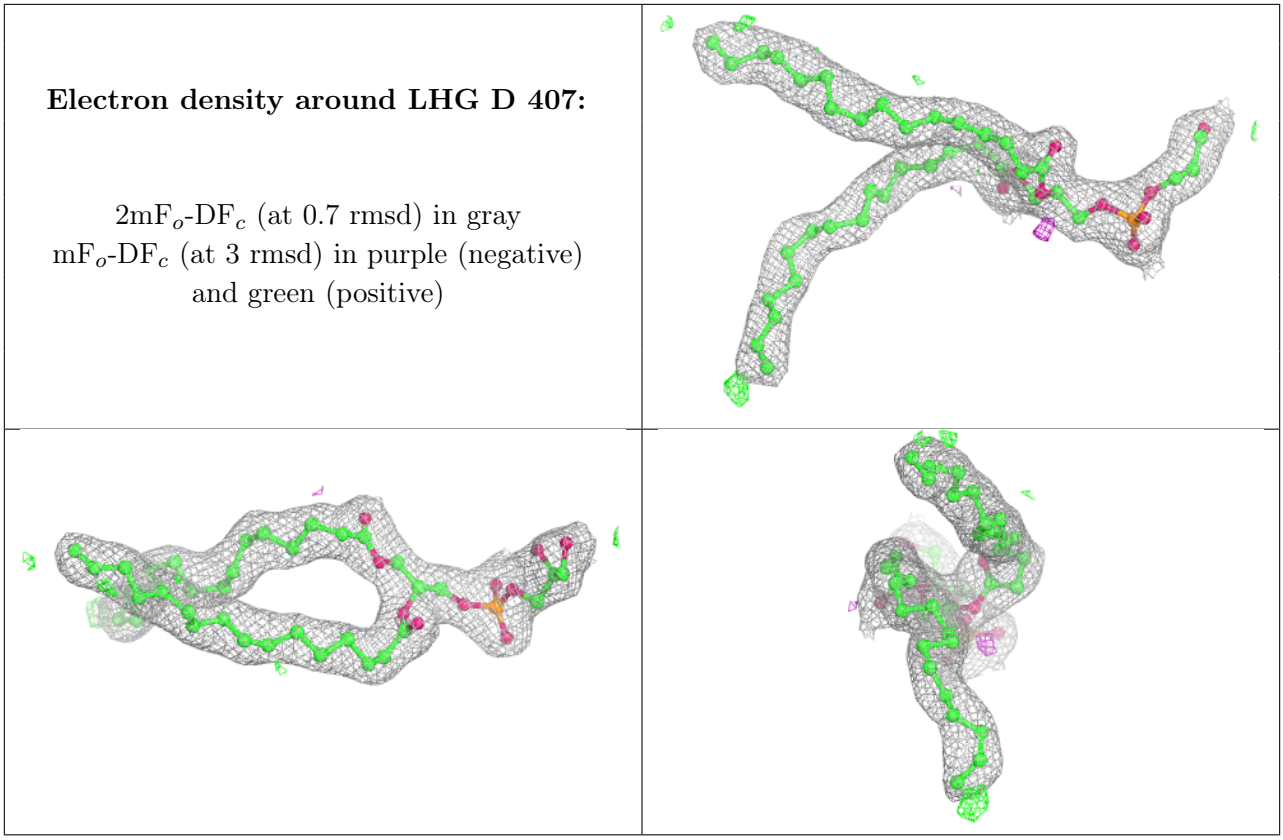






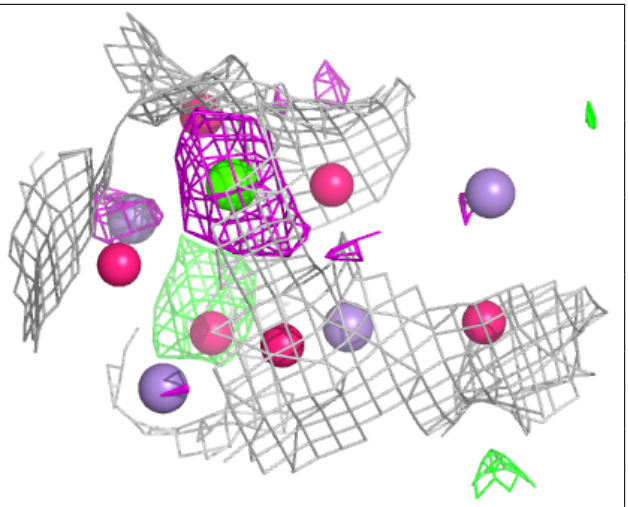
Electron density around LHG D 407:

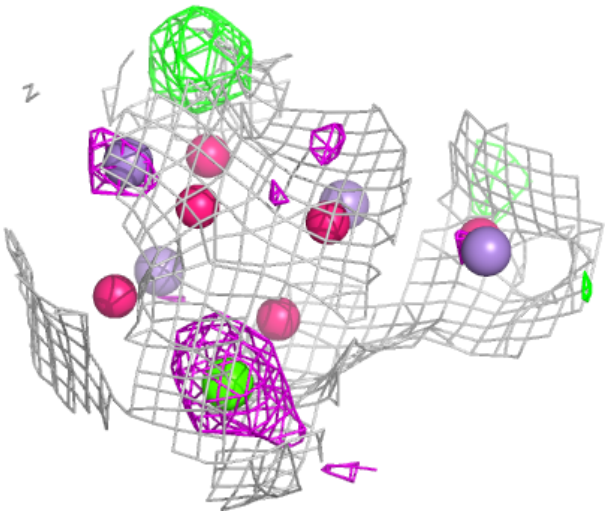
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

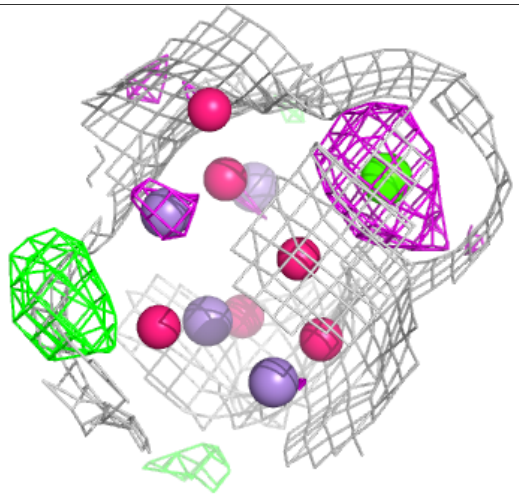


Electron density around OEY a 601 (A):

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

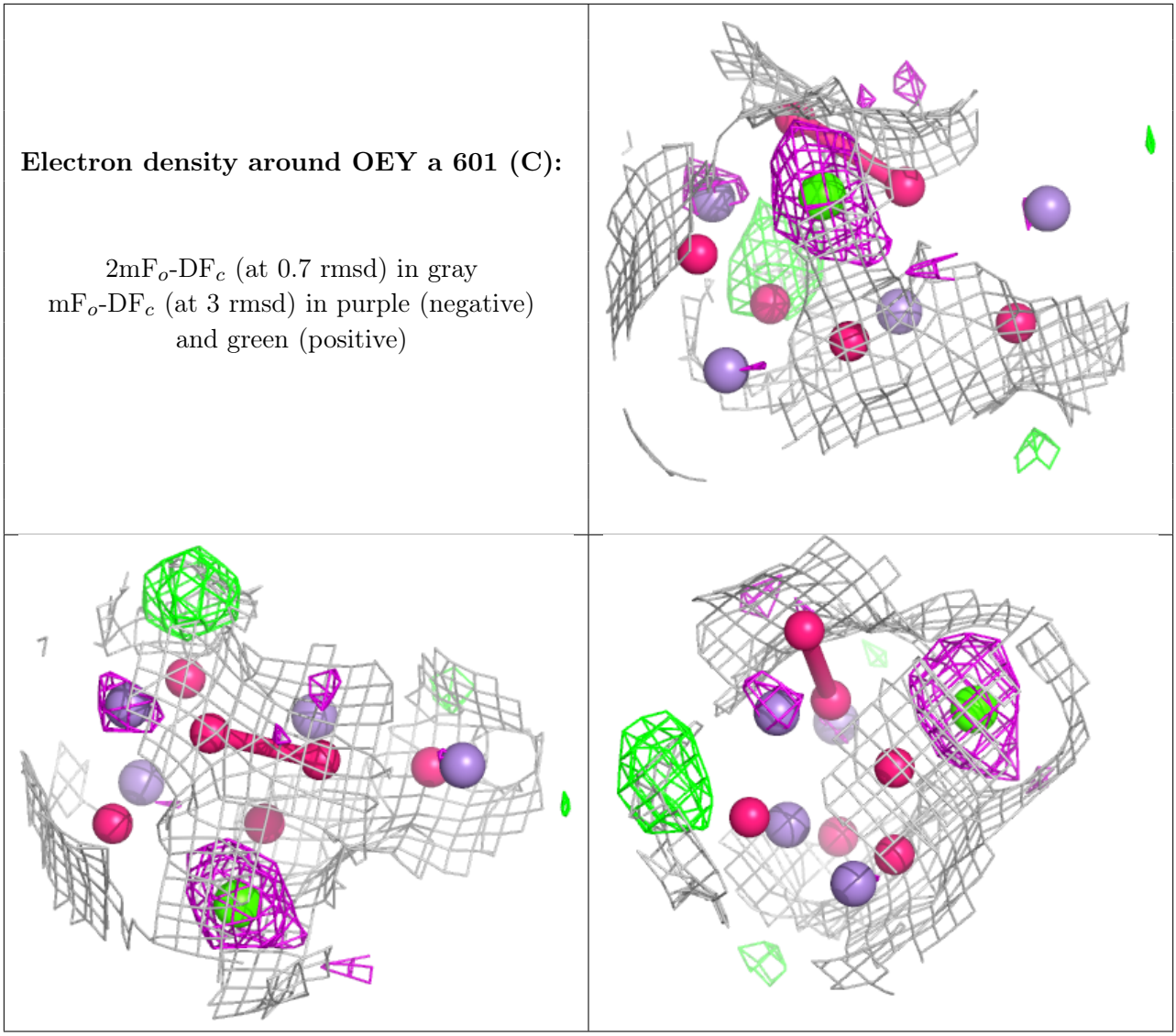






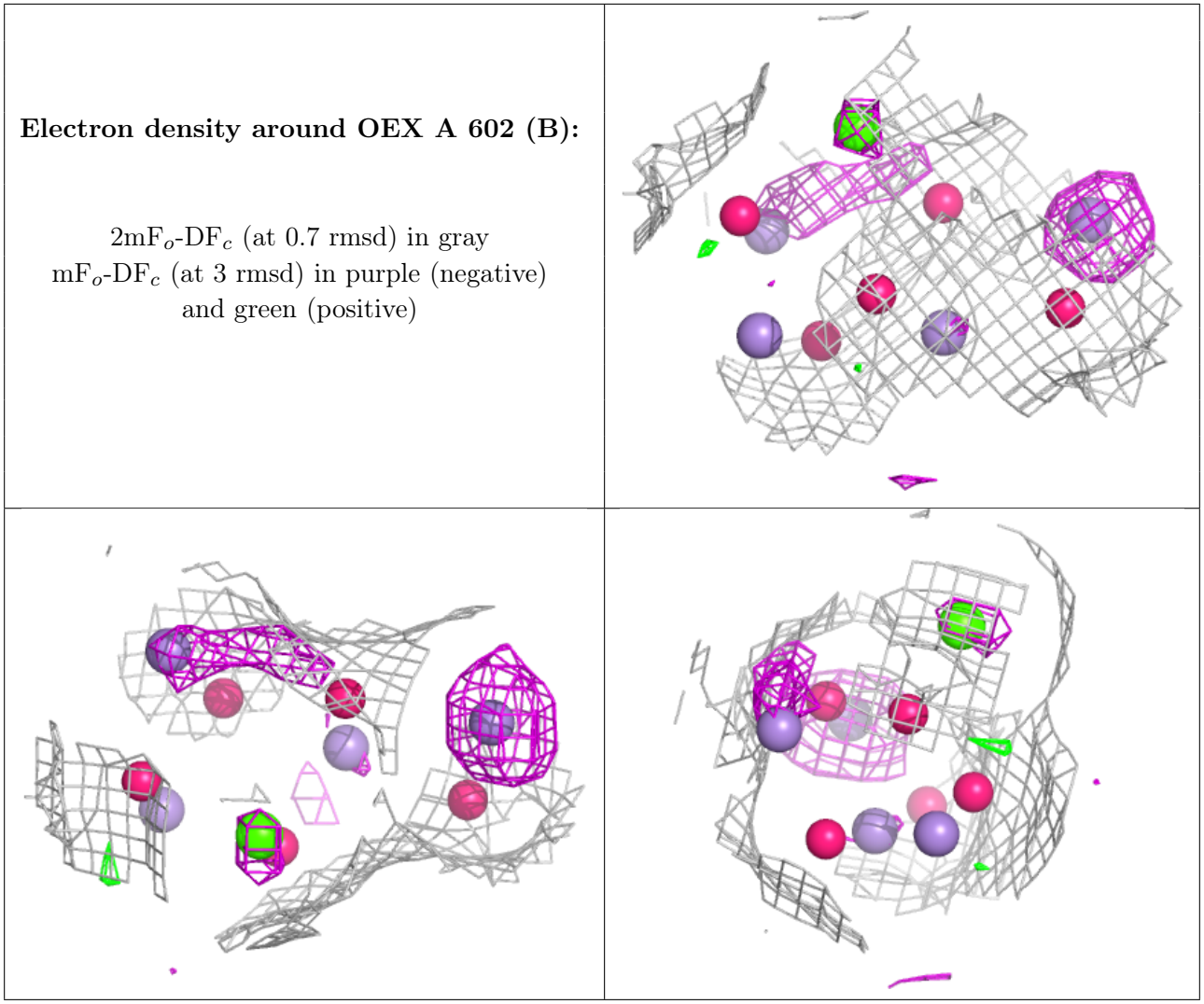
Electron density around OEY a 601 (C):

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



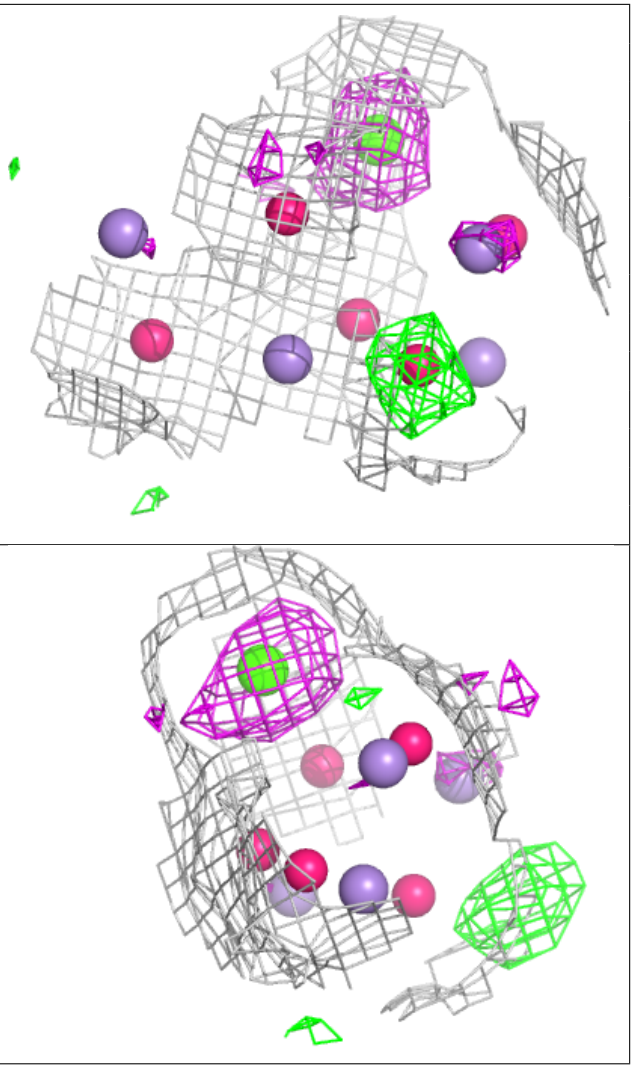
Electron density around OEX A 602 (B):

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



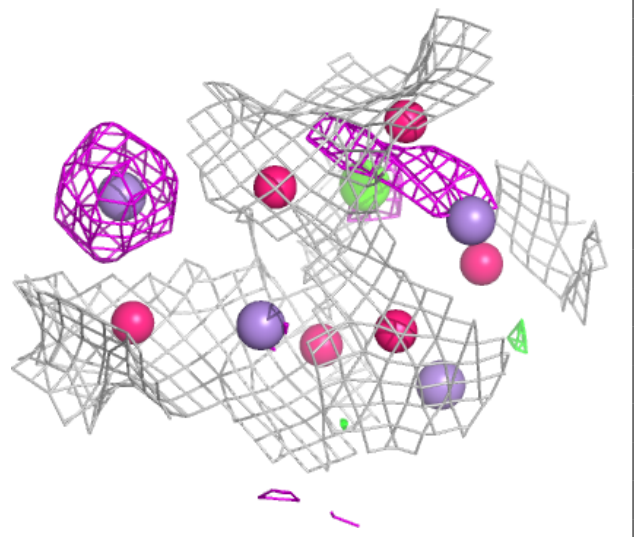
Electron density around OEX a 602 (B):

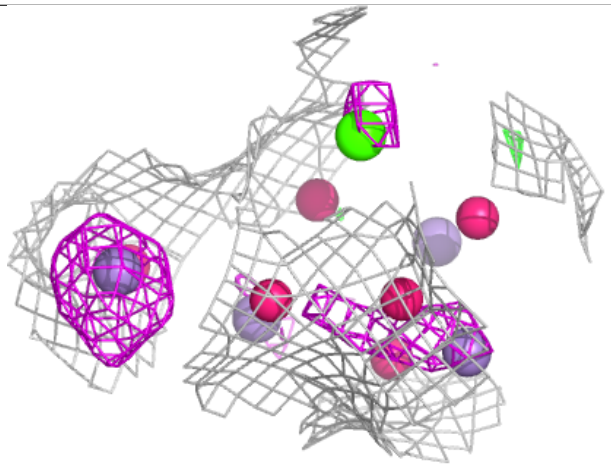
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

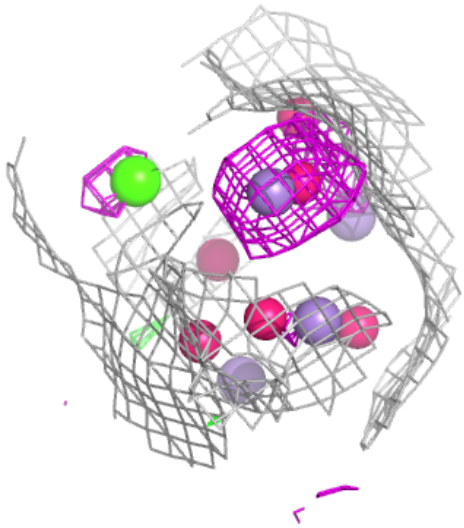


Electron density around OEY A 601 (A):

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

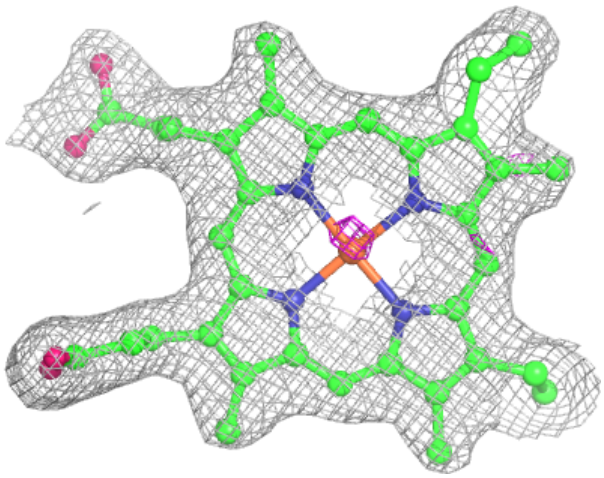


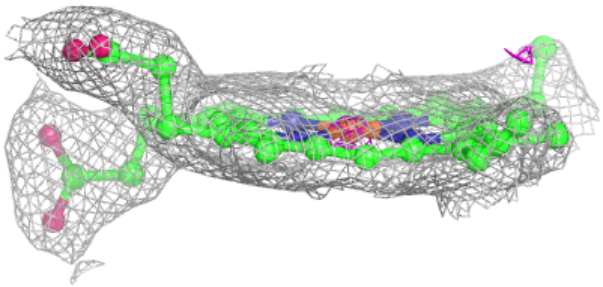


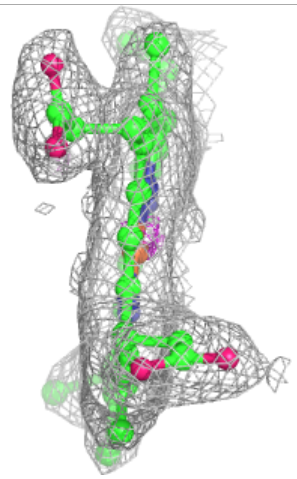


Electron density around HEC V 201:

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

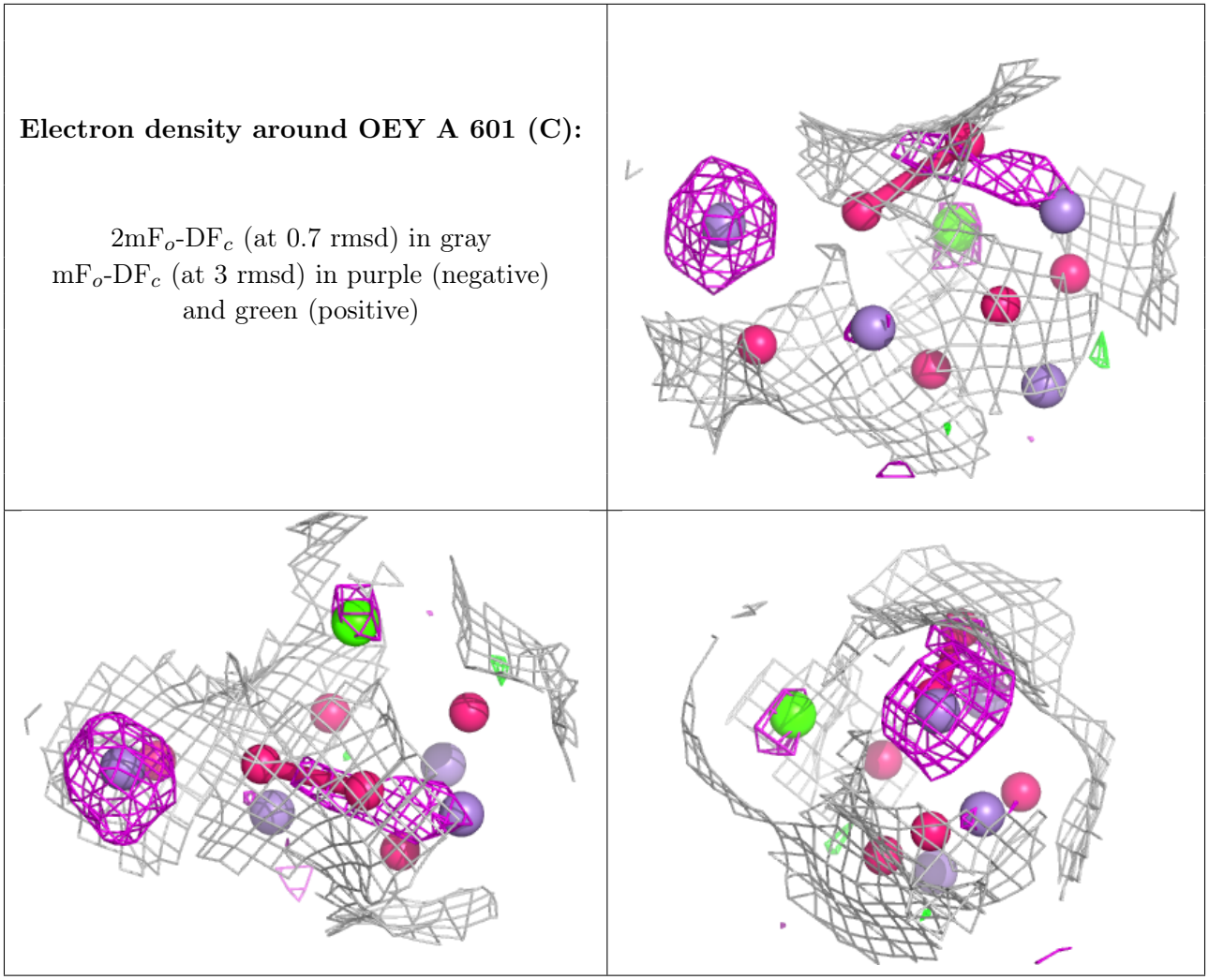






Electron density around OEY A 601 (C):

$2mF_o$-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

There are no such residues in this entry.