Full wwPDB X-ray Structure Validation Report (i)

Mar 5, 2024 – 11:34 AM EST

PDB ID	:	2PNO
Title	:	Crystal structure of human leukotriene C4 synthase
Authors	:	Ago, H.; Kanaoka, Y.; Irikura, D.; Lam, B.K.; Shimamura, T.; Austen, K.F.; Miyano, M.
Deposited on	:	2007-04-24
Resolution	:	3.30 Å(reported)

This is a Full wwPDB X-ray Structure Validation 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:

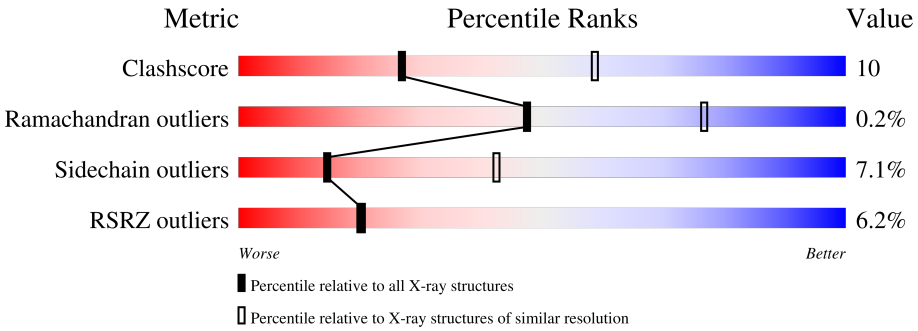
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber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

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.30 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	1205 (3.34-3.26)
Ramachandran outliers	138981	1183 (3.34-3.26)
Sidechain outliers	138945	1182 (3.34-3.26)
RSRZ outliers	127900	1115 (3.34-3.26)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=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	156	3% 76% 16% • 6%
1	B	156	3% 77% 14% • 6%
1	C	156	8% 74% 17% • 6%
1	D	156	10% 65% 26% • 6%
1	E	156	3% 72% 19% • 6%
1	F	156	2% 68% 24% • 6%

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Mol	Chain	Length	Quality of chain
1	G	156	4% 74% 18% • 6%
1	H	156	3% 74% 19% • 6%
1	I	156	14% 76% 17% • 6%
1	J	156	5% 74% 17% • 6%
1	K	156	9% 65% 26% • 6%
1	L	156	4% 77% 15% • 6%

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
3	LMT	A	256	-	-	-	X
3	LMT	A	262	-	-	-	X
3	LMT	B	213	-	-	-	X
3	LMT	B	218	-	-	-	X
3	LMT	B	227	-	-	-	X
3	LMT	B	242	-	-	-	X
3	LMT	B	260	-	-	-	X
3	LMT	C	214	-	-	-	X
3	LMT	C	216	-	-	-	X
3	LMT	C	237	-	-	-	X
3	LMT	D	238	-	-	-	X
3	LMT	E	230	-	-	-	X
3	LMT	E	231	-	-	-	X
3	LMT	E	263	-	-	-	X
3	LMT	E	266	-	-	-	X
3	LMT	E	269	-	-	-	X
3	LMT	F	233	-	-	-	X
3	LMT	F	241	-	-	-	X
3	LMT	G	235	-	-	-	X
3	LMT	G	251	-	-	-	X
3	LMT	G	267	-	-	-	X
3	LMT	H	234	-	-	-	X
3	LMT	H	250	-	-	-	X
3	LMT	I	240	-	-	-	X
3	LMT	J	239	-	-	-	X
3	LMT	K	225	-	-	-	X
3	LMT	L	226	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	LMT	L	265	-	-	-	X

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 14603 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 Leukotriene C4 synthase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	146	Total	C	N	O	S	0	0	0
			1115	743	189	181	2			
1	B	146	Total	C	N	O	S	0	1	0
			1129	757	189	181	2			
1	C	146	Total	C	N	O	S	0	0	0
			1129	750	195	182	2			
1	D	146	Total	C	N	O	S	0	1	0
			1123	754	186	181	2			
1	E	146	Total	C	N	O	S	0	1	0
			1131	758	189	182	2			
1	F	146	Total	C	N	O	S	0	1	0
			1121	753	186	180	2			
1	G	146	Total	C	N	O	S	0	1	0
			1102	742	177	181	2			
1	H	146	Total	C	N	O	S	0	1	0
			1122	752	186	182	2			
1	I	146	Total	C	N	O	S	0	1	0
			1123	754	186	181	2			
1	J	146	Total	C	N	O	S	0	1	0
			1110	746	180	182	2			
1	K	146	Total	C	N	O	S	0	1	0
			1114	748	183	181	2			
1	L	146	Total	C	N	O	S	0	1	0
			1114	745	186	181	2			

There are 72 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	151	HIS	-	expression tag	UNP Q16873
A	152	HIS	-	expression tag	UNP Q16873
A	153	HIS	-	expression tag	UNP Q16873
A	154	HIS	-	expression tag	UNP Q16873
A	155	HIS	-	expression tag	UNP Q16873

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Chain	Residue	Modelled	Actual	Comment	Reference
A	156	HIS	-	expression tag	UNP Q16873
B	151	HIS	-	expression tag	UNP Q16873
B	152	HIS	-	expression tag	UNP Q16873
B	153	HIS	-	expression tag	UNP Q16873
B	154	HIS	-	expression tag	UNP Q16873
B	155	HIS	-	expression tag	UNP Q16873
B	156	HIS	-	expression tag	UNP Q16873
C	151	HIS	-	expression tag	UNP Q16873
C	152	HIS	-	expression tag	UNP Q16873
C	153	HIS	-	expression tag	UNP Q16873
C	154	HIS	-	expression tag	UNP Q16873
C	155	HIS	-	expression tag	UNP Q16873
C	156	HIS	-	expression tag	UNP Q16873
D	151	HIS	-	expression tag	UNP Q16873
D	152	HIS	-	expression tag	UNP Q16873
D	153	HIS	-	expression tag	UNP Q16873
D	154	HIS	-	expression tag	UNP Q16873
D	155	HIS	-	expression tag	UNP Q16873
D	156	HIS	-	expression tag	UNP Q16873
E	151	HIS	-	expression tag	UNP Q16873
E	152	HIS	-	expression tag	UNP Q16873
E	153	HIS	-	expression tag	UNP Q16873
E	154	HIS	-	expression tag	UNP Q16873
E	155	HIS	-	expression tag	UNP Q16873
E	156	HIS	-	expression tag	UNP Q16873
F	151	HIS	-	expression tag	UNP Q16873
F	152	HIS	-	expression tag	UNP Q16873
F	153	HIS	-	expression tag	UNP Q16873
F	154	HIS	-	expression tag	UNP Q16873
F	155	HIS	-	expression tag	UNP Q16873
F	156	HIS	-	expression tag	UNP Q16873
G	151	HIS	-	expression tag	UNP Q16873
G	152	HIS	-	expression tag	UNP Q16873
G	153	HIS	-	expression tag	UNP Q16873
G	154	HIS	-	expression tag	UNP Q16873
G	155	HIS	-	expression tag	UNP Q16873
G	156	HIS	-	expression tag	UNP Q16873
H	151	HIS	-	expression tag	UNP Q16873
H	152	HIS	-	expression tag	UNP Q16873
H	153	HIS	-	expression tag	UNP Q16873
H	154	HIS	-	expression tag	UNP Q16873
H	155	HIS	-	expression tag	UNP Q16873

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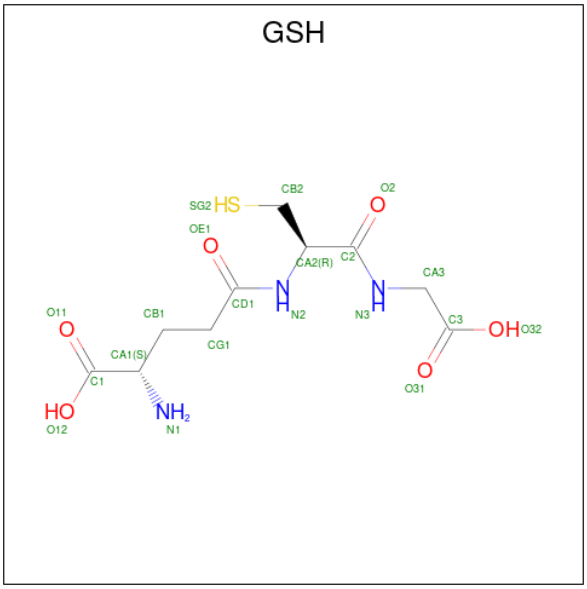
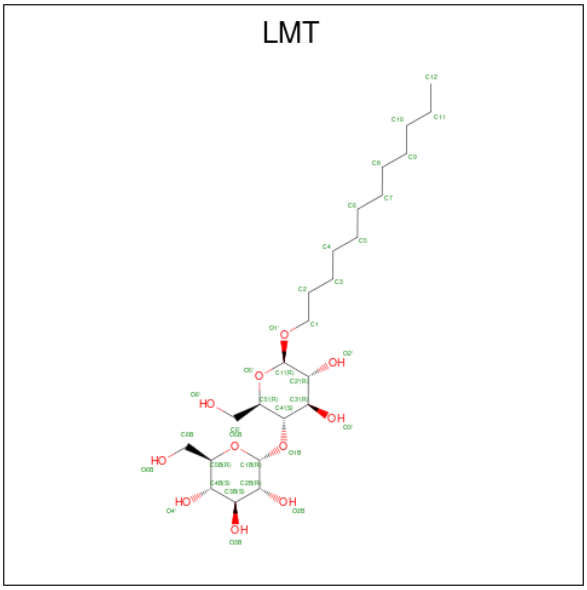
Chain	Residue	Modelled	Actual	Comment	Reference
H	156	HIS	-	expression tag	UNP Q16873
I	151	HIS	-	expression tag	UNP Q16873
I	152	HIS	-	expression tag	UNP Q16873
I	153	HIS	-	expression tag	UNP Q16873
I	154	HIS	-	expression tag	UNP Q16873
I	155	HIS	-	expression tag	UNP Q16873
I	156	HIS	-	expression tag	UNP Q16873
J	151	HIS	-	expression tag	UNP Q16873
J	152	HIS	-	expression tag	UNP Q16873
J	153	HIS	-	expression tag	UNP Q16873
J	154	HIS	-	expression tag	UNP Q16873
J	155	HIS	-	expression tag	UNP Q16873
J	156	HIS	-	expression tag	UNP Q16873
K	151	HIS	-	expression tag	UNP Q16873
K	152	HIS	-	expression tag	UNP Q16873
K	153	HIS	-	expression tag	UNP Q16873
K	154	HIS	-	expression tag	UNP Q16873
K	155	HIS	-	expression tag	UNP Q16873
K	156	HIS	-	expression tag	UNP Q16873
L	151	HIS	-	expression tag	UNP Q16873
L	152	HIS	-	expression tag	UNP Q16873
L	153	HIS	-	expression tag	UNP Q16873
L	154	HIS	-	expression tag	UNP Q16873
L	155	HIS	-	expression tag	UNP Q16873
L	156	HIS	-	expression tag	UNP Q16873

- Molecule 2 is GLUTATHIONE (three-letter code: GSH) (formula: $C_{10}H_{17}N_3O_6S$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	N	O	S	0	0
			20	10	3	6	1		
2	B	1	Total	C	N	O	S	0	0
			20	10	3	6	1		
2	C	1	Total	C	N	O	S	0	0
			20	10	3	6	1		
2	D	1	Total	C	N	O	S	0	0
			20	10	3	6	1		
2	E	1	Total	C	N	O	S	0	0
			20	10	3	6	1		
2	F	1	Total	C	N	O	S	0	0
			20	10	3	6	1		
2	G	1	Total	C	N	O	S	0	0
			20	10	3	6	1		
2	H	1	Total	C	N	O	S	0	0
			20	10	3	6	1		
2	I	1	Total	C	N	O	S	0	0
			20	10	3	6	1		
2	J	1	Total	C	N	O	S	0	0
			20	10	3	6	1		
2	K	1	Total	C	N	O	S	0	0
			20	10	3	6	1		
2	L	1	Total	C	N	O	S	0	0
			20	10	3	6	1		

- Molecule 3 is DODECYL-BETA-D-MALTOSIDE (three-letter code: LMT) (formula: $C_{24}H_{46}O_{11}$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total C O 35 24 11	0	0
3	A	1	Total C 7 7	0	0
3	A	1	Total C O 23 18 5	0	0
3	A	1	Total C 9 9	0	0
3	A	1	Total C 9 9	0	0
3	A	1	Total C 9 9	0	0
3	A	1	Total C O 18 13 5	0	0
3	A	1	Total C 9 9	0	0
3	B	1	Total C O 23 18 5	0	0
3	B	1	Total C O 23 18 5	0	0
3	B	1	Total C O 23 18 5	0	0
3	B	1	Total C O 18 13 5	0	0
3	B	1	Total C 12 12	0	0
3	B	1	Total C 9 9	0	0
3	B	1	Total C 9 9	0	0
3	C	1	Total C O 35 24 11	0	0
3	C	1	Total C O 35 24 11	0	0
3	C	1	Total C O 35 24 11	0	0
3	C	1	Total C 9 9	0	0
3	C	1	Total C 9 9	0	0
3	D	1	Total C 9 9	0	0
3	D	1	Total C O 35 24 11	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	D	1	Total C 9 9	0	0
3	E	1	Total C 10 10	0	0
3	E	1	Total C O 35 24 11	0	0
3	E	1	Total C O 23 18 5	0	0
3	E	1	Total C 6 6	0	0
3	E	1	Total C O 35 24 11	0	0
3	E	1	Total C 9 9	0	0
3	E	1	Total C 9 9	0	0
3	E	1	Total C 9 9	0	0
3	E	1	Total C O 35 24 11	0	0
3	E	1	Total C O 35 24 11	0	0
3	F	1	Total C 9 9	0	0
3	F	1	Total C O 23 18 5	0	0
3	F	1	Total C O 18 13 5	0	0
3	F	1	Total C 9 9	0	0
3	G	1	Total C 9 9	0	0
3	G	1	Total C O 23 18 5	0	0
3	G	1	Total C 9 9	0	0
3	G	1	Total C 9 9	0	0
3	G	1	Total C 9 9	0	0
3	H	1	Total C O 23 18 5	0	0

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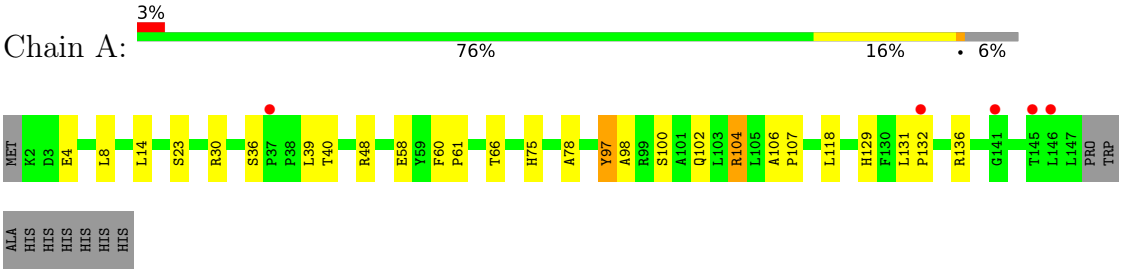
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	H	1	Total C 9 9	0	0
3	I	1	Total C O 18 13 5	0	0
3	I	1	Total C 9 9	0	0
3	I	1	Total C 9 9	0	0
3	I	1	Total C 9 9	0	0
3	J	1	Total C O 35 24 11	0	0
3	J	1	Total C 9 9	0	0
3	K	1	Total C 7 7	0	0
3	K	1	Total C O 23 18 5	0	0
3	L	1	Total C 9 9	0	0
3	L	1	Total C 9 9	0	0
3	L	1	Total C 9 9	0	0
3	L	1	Total C 9 9	0	0
3	L	1	Total C 7 7	0	0

3 Residue-property plots

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

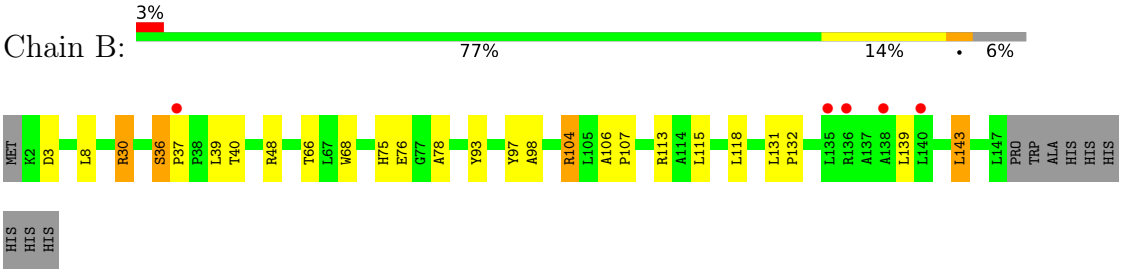
• Molecule 1: Leukotriene C4 synthase

Chain A:



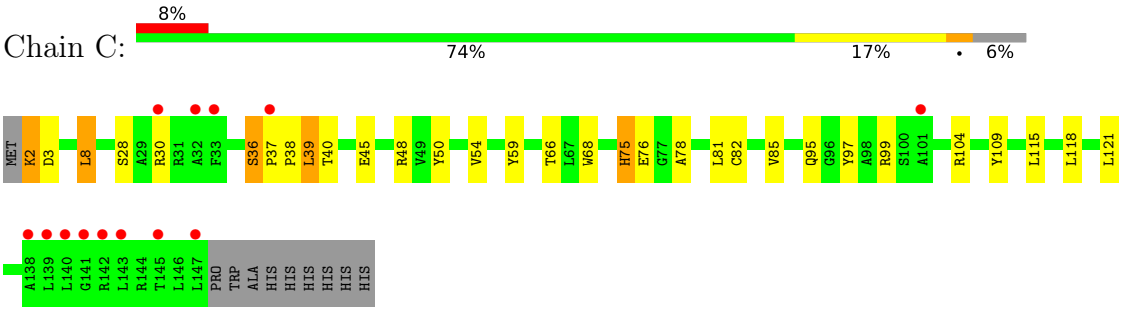
• Molecule 1: Leukotriene C4 synthase

Chain B:



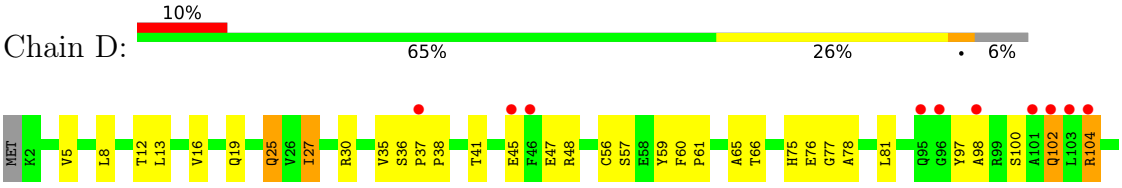
• Molecule 1: Leukotriene C4 synthase

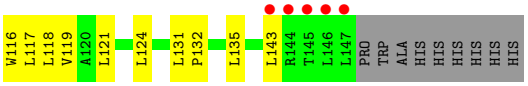
Chain C:



• Molecule 1: Leukotriene C4 synthase

Chain D:





• Molecule 1: Leukotriene C4 synthase

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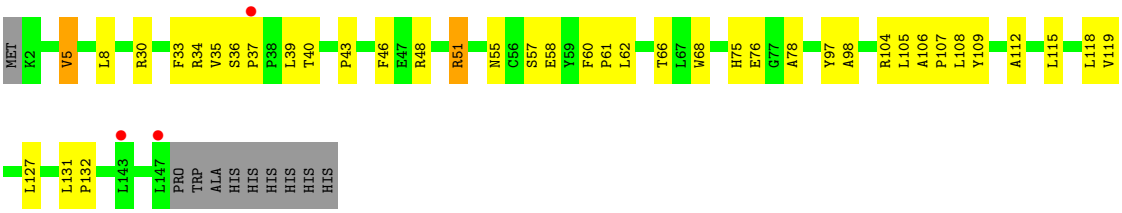
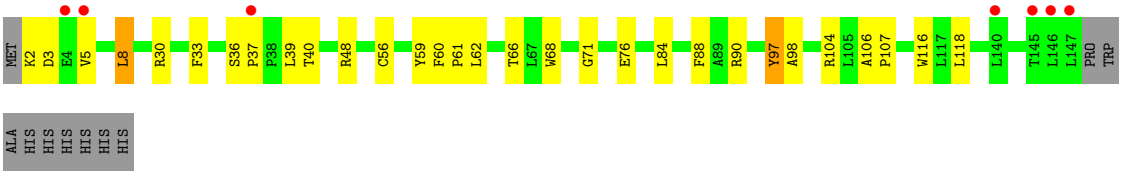
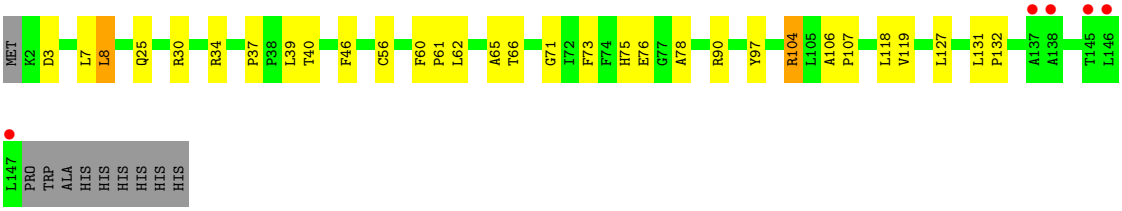


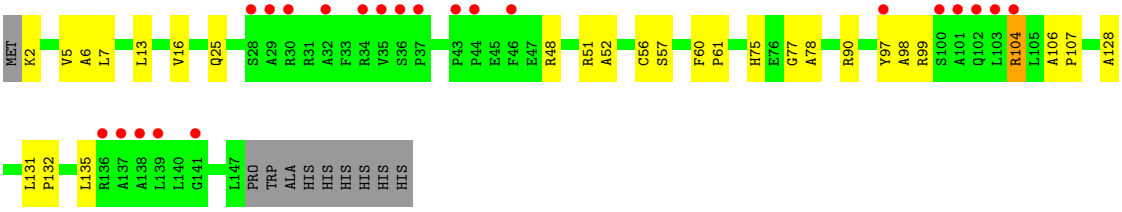
• Molecule 1: Leukotriene C4 synthase



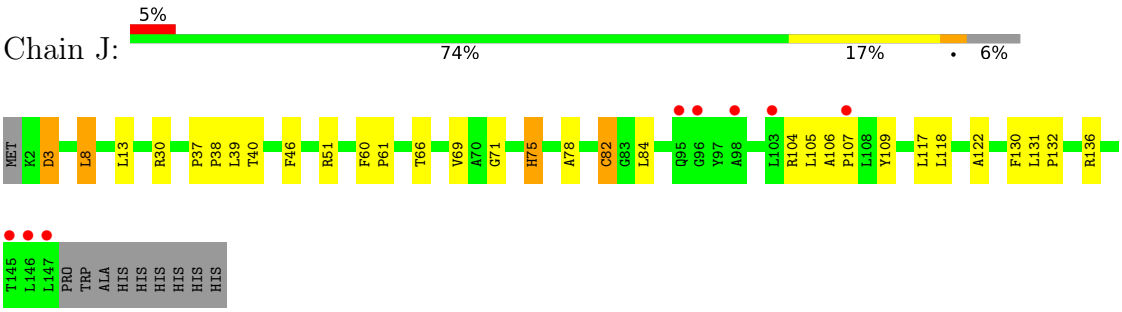
• Molecule 1: Leukotriene C4 synthase



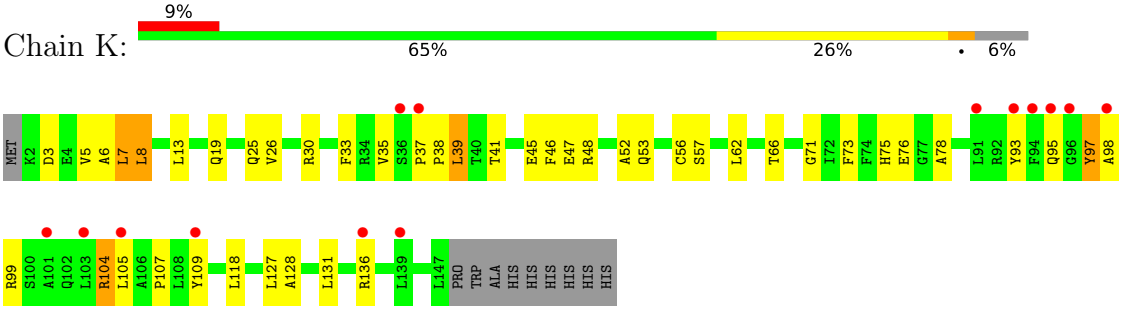
• Molecule 1: Leukotriene C4 synthase



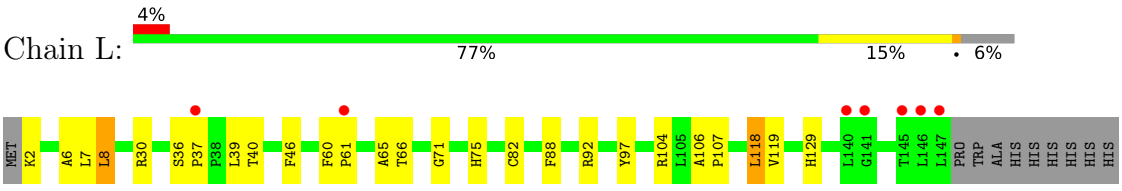
• Molecule 1: Leukotriene C4 synthase



• Molecule 1: Leukotriene C4 synthase



• Molecule 1: Leukotriene C4 synthase



4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	117.50Å 293.90Å 206.50Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	15.00 – 3.30 48.98 – 3.30	Depositor EDS
% Data completeness (in resolution range)	100.0 (15.00-3.30) 100.0 (48.98-3.30)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	3.78 (at 3.33Å)	Xtriage
Refinement program	REFMAC 5.2.0019	Depositor
R, R_{free}	0.221 , 0.255 0.234 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	wwPDB-VP
Wilson B-factor (Å^2)	86.6	Xtriage
Anisotropy	0.136	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.35 , 65.9	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.90	EDS
Total number of atoms	14603	wwPDB-VP
Average B, all atoms (Å^2)	71.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 17.06% 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: LMT, GSH

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	0.34	0/1144	0.46	0/1563
1	B	0.35	0/1162	0.47	0/1587
1	C	0.33	0/1158	0.46	0/1580
1	D	0.35	0/1156	0.47	0/1580
1	E	0.34	0/1164	0.45	0/1590
1	F	0.34	0/1154	0.45	0/1578
1	G	0.31	0/1135	0.44	0/1555
1	H	0.33	0/1155	0.45	0/1579
1	I	0.33	0/1156	0.46	0/1580
1	J	0.35	0/1143	0.46	0/1565
1	K	0.35	0/1147	0.47	0/1569
1	L	0.33	0/1147	0.45	0/1568
All	All	0.34	0/13821	0.46	0/18894

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1115	0	1139	22	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	B	1129	0	1166	26	0
1	C	1129	0	1166	24	0
1	D	1123	0	1155	37	0
1	E	1131	0	1171	29	0
1	F	1121	0	1156	35	1
1	G	1102	0	1113	22	1
1	H	1122	0	1151	24	0
1	I	1123	0	1155	20	0
1	J	1110	0	1129	27	0
1	K	1114	0	1135	40	0
1	L	1114	0	1128	22	0
2	A	20	0	15	2	0
2	B	20	0	15	1	0
2	C	20	0	15	1	0
2	D	20	0	15	0	0
2	E	20	0	15	0	0
2	F	20	0	15	2	0
2	G	20	0	15	0	0
2	H	20	0	15	1	0
2	I	20	0	15	1	0
2	J	20	0	15	2	0
2	K	20	0	15	0	0
2	L	20	0	15	2	0
3	A	119	0	182	3	0
3	B	117	0	180	3	0
3	C	123	0	172	8	0
3	D	53	0	80	6	0
3	E	206	0	299	11	0
3	F	59	0	89	4	0
3	G	59	0	102	3	0
3	H	32	0	51	0	0
3	I	45	0	72	5	0
3	J	44	0	63	1	0
3	K	30	0	47	0	0
3	L	43	0	81	1	0
All	All	14603	0	15362	304	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 10.

All (304) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:30:ARG:NH1	1:E:37:PRO:HA	1.73	1.04
1:B:75:HIS:HD2	1:B:78:ALA:H	1.12	0.96
1:K:75:HIS:HD2	1:K:78:ALA:H	1.05	0.96
1:H:66:THR:CG2	1:H:118:LEU:HB3	1.95	0.95
1:A:75:HIS:HD2	1:A:78:ALA:H	1.18	0.91
1:E:30:ARG:HH12	1:E:37:PRO:HA	1.32	0.90
1:J:75:HIS:HD2	1:J:78:ALA:H	1.17	0.89
2:C:203:GSH:HSG	3:C:216:LMT:H6'	1.19	0.88
1:G:66:THR:CG2	1:G:118:LEU:HB3	2.04	0.88
1:H:75:HIS:HD2	1:H:78:ALA:H	1.14	0.88
1:D:75:HIS:HD2	1:D:78:ALA:H	1.16	0.87
1:K:66:THR:CG2	1:K:118:LEU:HB3	2.05	0.86
1:A:104:ARG:NH2	1:B:37:PRO:HG2	1.92	0.85
1:B:66:THR:CG2	1:B:118:LEU:HB3	2.05	0.85
1:J:3:ASP:HB3	1:L:129:HIS:HE1	1.42	0.85
1:K:75:HIS:CD2	1:K:78:ALA:H	1.93	0.85
1:F:66:THR:HG22	1:F:118:LEU:HB3	1.58	0.84
1:K:104:ARG:HH22	1:L:37:PRO:HG3	1.40	0.83
1:F:66:THR:CG2	1:F:118:LEU:HB3	2.09	0.82
1:B:113:ARG:HH12	3:B:218:LMT:H6D	1.44	0.81
1:I:128:ALA:HB2	3:I:258:LMT:H62	1.63	0.81
1:H:75:HIS:CD2	1:H:78:ALA:H	1.98	0.80
1:H:66:THR:HG21	1:H:118:LEU:HB3	1.61	0.80
1:J:30:ARG:NH2	1:J:39:LEU:O	2.14	0.80
1:F:106:ALA:HB3	1:F:107:PRO:HD3	1.64	0.79
1:F:75:HIS:HD2	1:F:78:ALA:H	1.31	0.79
1:D:25:GLN:HE21	1:D:25:GLN:HA	1.46	0.78
1:B:75:HIS:CD2	1:B:78:ALA:H	2.02	0.76
1:J:75:HIS:CD2	1:J:78:ALA:H	2.01	0.76
1:K:66:THR:HG22	1:K:118:LEU:HB3	1.68	0.76
1:J:106:ALA:HB3	1:J:107:PRO:HD3	1.68	0.75
1:H:66:THR:HG22	1:H:118:LEU:HB3	1.69	0.74
1:A:75:HIS:CD2	1:A:78:ALA:H	2.03	0.74
1:F:51:ARG:HG3	2:F:206:GSH:O32	1.86	0.74
1:B:66:THR:HG22	1:B:118:LEU:HB3	1.69	0.74
1:D:37:PRO:HG2	1:D:38:PRO:HD3	1.68	0.74
1:H:106:ALA:HB3	1:H:107:PRO:HD3	1.68	0.73
1:J:66:THR:HG22	1:J:118:LEU:HB3	1.70	0.73
3:A:244:LMT:H62	3:A:245:LMT:H61	1.70	0.73
1:G:37:PRO:HB3	1:I:104:ARG:NH1	2.04	0.73
1:B:30:ARG:NH2	1:B:39:LEU:O	2.22	0.72
1:J:66:THR:CG2	1:J:118:LEU:HB3	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2:LYS:HE3	1:C:2:LYS:N	2.06	0.71
1:E:106:ALA:HB3	1:E:107:PRO:HD3	1.73	0.70
1:D:75:HIS:CD2	1:D:78:ALA:H	2.05	0.70
1:I:52:ALA:HB2	1:I:97:TYR:HD2	1.56	0.69
1:E:66:THR:HG22	1:E:118:LEU:HB3	1.75	0.69
1:C:75:HIS:HD2	1:C:78:ALA:H	1.41	0.69
1:A:30:ARG:NH2	1:A:39:LEU:O	2.26	0.69
1:F:75:HIS:CD2	1:F:78:ALA:H	2.10	0.68
1:K:75:HIS:HD2	1:K:78:ALA:N	1.86	0.68
1:B:75:HIS:HD2	1:B:78:ALA:N	1.90	0.68
1:E:104:ARG:NH2	1:F:37:PRO:HG2	2.09	0.68
1:C:48:ARG:NH1	1:C:99:ARG:O	2.26	0.68
1:D:97:TYR:HB2	1:D:104:ARG:HB3	1.76	0.68
1:E:41:THR:HG22	1:E:47:GLU:OE2	1.94	0.68
1:C:75:HIS:CD2	1:C:78:ALA:H	2.12	0.67
1:A:48:ARG:NH1	1:A:98:ALA:O	2.27	0.67
1:E:66:THR:CG2	1:E:118:LEU:HB3	2.24	0.67
1:K:104:ARG:HH22	1:L:37:PRO:CG	2.08	0.67
1:B:48:ARG:NH1	1:B:98:ALA:O	2.28	0.66
1:H:75:HIS:HD2	1:H:78:ALA:N	1.92	0.66
1:A:66:THR:HG22	1:A:118:LEU:HB3	1.78	0.66
1:A:66:THR:CG2	1:A:118:LEU:HB3	2.27	0.65
1:K:25:GLN:OE1	1:K:25:GLN:HA	1.97	0.65
1:C:66:THR:CG2	1:C:118:LEU:HB3	2.28	0.64
1:D:75:HIS:HD2	1:D:78:ALA:N	1.91	0.64
1:F:5:VAL:HG22	1:F:68:TRP:CZ3	2.32	0.64
1:I:106:ALA:HB3	1:I:107:PRO:HD3	1.79	0.63
1:D:119:VAL:HG13	1:E:13:LEU:HD11	1.80	0.63
1:K:66:THR:HG21	1:K:118:LEU:HB3	1.82	0.62
1:J:8:LEU:HD21	1:J:71:GLY:HA3	1.81	0.62
1:E:52:ALA:HB2	1:E:97:TYR:HD2	1.65	0.61
1:L:106:ALA:HB3	1:L:107:PRO:HD3	1.82	0.61
1:D:25:GLN:HA	1:D:25:GLN:NE2	2.15	0.61
1:A:75:HIS:HD2	1:A:78:ALA:N	1.95	0.61
1:D:41:THR:OG1	1:D:47:GLU:OE2	2.06	0.61
1:B:106:ALA:HB3	1:B:107:PRO:HD3	1.83	0.60
3:I:240:LMT:H62	1:K:128:ALA:HB2	1.81	0.60
1:H:104:ARG:NH1	2:H:208:GSH:SG2	2.74	0.60
1:B:8:LEU:HD13	1:B:76:GLU:HG3	1.82	0.60
1:D:27:ILE:HD11	2:F:206:GSH:HB22	1.83	0.60
1:L:66:THR:CG2	1:L:118:LEU:HB3	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:48:ARG:NH1	1:G:98:ALA:O	2.36	0.59
1:G:104:ARG:HH21	1:H:37:PRO:HG3	1.68	0.59
1:A:106:ALA:HB3	1:A:107:PRO:HD3	1.85	0.59
1:H:30:ARG:HG3	1:H:46:PHE:HE1	1.66	0.59
1:K:104:ARG:HD2	1:K:104:ARG:C	2.24	0.58
1:F:60:PHE:HB3	1:F:61:PRO:HD3	1.85	0.58
1:D:116:TRP:CE2	3:D:220:LMT:H121	2.38	0.58
1:E:25:GLN:NE2	3:E:243:LMT:O4'	2.36	0.58
1:G:59:TYR:HE2	3:G:222:LMT:H91	1.69	0.58
1:A:58:GLU:OE2	2:A:201:GSH:N1	2.36	0.58
1:G:66:THR:HG21	1:G:118:LEU:HB3	1.87	0.57
1:I:75:HIS:CD2	1:I:78:ALA:H	2.21	0.57
1:C:37:PRO:HG2	1:C:38:PRO:HD3	1.85	0.57
1:E:52:ALA:HB2	1:E:97:TYR:CD2	2.40	0.57
1:K:104:ARG:NH2	1:L:37:PRO:HG3	2.17	0.57
1:J:130:PHE:HE1	1:K:6:ALA:HB1	1.68	0.56
1:C:59:TYR:HE2	3:C:216:LMT:H91	1.71	0.56
1:C:66:THR:HG22	1:C:118:LEU:HB3	1.87	0.56
1:D:66:THR:CG2	1:D:118:LEU:HB3	2.36	0.56
1:K:8:LEU:HD13	1:K:76:GLU:HG2	1.86	0.56
1:A:60:PHE:HB3	1:A:61:PRO:HD3	1.88	0.56
1:L:66:THR:HG22	1:L:118:LEU:HB3	1.88	0.55
1:A:97:TYR:HB2	1:A:104:ARG:HB3	1.88	0.55
1:K:104:ARG:NH2	1:L:37:PRO:CG	2.69	0.55
1:D:8:LEU:HG	1:D:76:GLU:HG3	1.89	0.55
2:J:210:GSH:HB12	1:K:26:VAL:HG11	1.89	0.55
1:D:59:TYR:HE2	3:D:220:LMT:H91	1.72	0.55
1:D:48:ARG:NH1	1:D:98:ALA:O	2.40	0.54
1:A:129:HIS:HE1	1:B:3:ASP:HB2	1.72	0.54
1:K:19:GLN:HE22	1:K:56:CYS:HB3	1.72	0.54
1:E:30:ARG:NH2	1:E:39:LEU:O	2.40	0.54
1:I:131:LEU:N	1:I:132:PRO:HD2	2.23	0.54
1:B:131:LEU:N	1:B:132:PRO:HD2	2.23	0.54
1:H:65:ALA:HA	3:I:252:LMT:H112	1.90	0.54
1:I:48:ARG:NH1	1:I:98:ALA:O	2.41	0.54
1:J:75:HIS:HD2	1:J:78:ALA:N	1.97	0.54
1:C:66:THR:HG21	1:C:118:LEU:HB3	1.91	0.53
1:J:60:PHE:HB3	1:J:61:PRO:HD3	1.90	0.53
1:E:95:GLN:HE22	3:E:268:LMT:C1	2.21	0.53
1:A:104:ARG:HH22	1:B:37:PRO:HG2	1.72	0.53
2:A:201:GSH:O12	1:B:30:ARG:NH1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:30:ARG:HG2	1:K:35:VAL:O	2.09	0.53
1:K:127:LEU:HD22	1:K:131:LEU:HD22	1.91	0.53
1:H:25:GLN:HA	1:H:25:GLN:NE2	2.24	0.53
1:B:66:THR:HG21	1:B:118:LEU:HB3	1.89	0.53
1:F:115:LEU:O	1:F:119:VAL:HG23	2.08	0.53
1:J:69:VAL:HG12	1:J:122:ALA:HB1	1.90	0.52
1:B:93:TYR:OH	2:B:202:GSH:O2	2.24	0.52
1:E:30:ARG:HG2	1:E:46:PHE:HE1	1.73	0.52
1:E:95:GLN:HE22	3:E:268:LMT:H11	1.73	0.52
1:K:105:LEU:O	1:K:109:TYR:CD1	2.62	0.52
1:I:128:ALA:CB	3:I:258:LMT:H62	2.36	0.52
1:C:30:ARG:NH2	1:C:39:LEU:O	2.42	0.52
1:F:30:ARG:HG2	1:F:35:VAL:O	2.10	0.51
1:C:109:TYR:CE2	3:C:216:LMT:H31	2.45	0.51
1:K:48:ARG:NH1	1:K:98:ALA:O	2.43	0.51
1:G:66:THR:HG22	1:G:118:LEU:HB3	1.88	0.51
1:C:75:HIS:HD2	1:C:78:ALA:N	2.07	0.51
1:F:5:VAL:HG22	1:F:68:TRP:HZ3	1.73	0.51
1:I:48:ARG:NH1	1:I:99:ARG:O	2.43	0.51
1:I:75:HIS:HD2	1:I:78:ALA:H	1.57	0.51
1:J:3:ASP:CB	1:L:129:HIS:HE1	2.18	0.51
3:A:244:LMT:H101	1:B:68:TRP:CE2	2.44	0.51
1:D:66:THR:HG22	1:D:118:LEU:HB3	1.92	0.51
1:K:73:PHE:CZ	1:L:6:ALA:HA	2.45	0.51
1:F:33:PHE:HD1	1:F:46:PHE:HB2	1.75	0.51
1:J:3:ASP:HB3	1:L:129:HIS:CE1	2.33	0.51
1:F:5:VAL:CG2	1:F:68:TRP:HZ3	2.24	0.51
1:F:66:THR:HG21	1:F:118:LEU:HB3	1.90	0.51
1:I:56:CYS:HA	1:I:90:ARG:NH1	2.26	0.50
1:D:104:ARG:NH2	1:E:37:PRO:HG3	2.26	0.50
1:C:95:GLN:HE22	3:C:214:LMT:H1'	1.76	0.50
1:C:115:LEU:HD23	3:C:216:LMT:H112	1.93	0.50
1:J:30:ARG:HG2	1:J:46:PHE:CE1	2.46	0.50
1:J:131:LEU:N	1:J:132:PRO:HD2	2.27	0.50
1:F:30:ARG:NH2	1:F:39:LEU:O	2.45	0.49
1:F:30:ARG:HG3	1:F:46:PHE:CE1	2.47	0.49
1:K:8:LEU:HD21	1:K:71:GLY:HA3	1.93	0.49
1:L:30:ARG:HH21	1:L:37:PRO:HA	1.75	0.49
1:F:127:LEU:HD22	1:F:131:LEU:HD22	1.94	0.49
1:J:30:ARG:HG2	1:J:46:PHE:HE1	1.77	0.49
1:F:48:ARG:NH1	1:F:98:ALA:O	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:30:ARG:HE	1:K:37:PRO:HA	1.77	0.49
1:B:139:LEU:O	1:B:143:LEU:HB2	2.13	0.49
3:D:247:LMT:H101	3:E:249:LMT:H101	1.95	0.49
1:G:8:LEU:HD21	1:G:71:GLY:HA3	1.93	0.48
1:G:30:ARG:NH2	1:G:39:LEU:O	2.46	0.48
1:B:113:ARG:HH12	3:B:218:LMT:C6'	2.19	0.48
1:E:59:TYR:HE2	3:E:221:LMT:H91	1.77	0.48
1:D:13:LEU:HD11	1:F:119:VAL:HG13	1.95	0.48
1:K:33:PHE:CE2	1:K:45:GLU:HB2	2.49	0.48
1:F:112:ALA:HB2	3:F:219:LMT:H71	1.96	0.48
1:J:37:PRO:HG2	1:J:38:PRO:HD3	1.96	0.47
1:K:41:THR:OG1	1:K:47:GLU:OE2	2.22	0.47
1:D:97:TYR:CB	1:D:104:ARG:HB3	2.43	0.47
3:E:249:LMT:H52	3:F:248:LMT:H62	1.97	0.47
1:D:65:ALA:HA	3:E:249:LMT:H122	1.96	0.47
1:F:30:ARG:HE	1:F:37:PRO:HA	1.80	0.47
3:J:239:LMT:H5B	3:J:239:LMT:H6D	1.95	0.47
1:L:88[B]:PHE:CE2	1:L:92:ARG:HD2	2.49	0.46
1:A:131:LEU:N	1:A:132:PRO:HD2	2.30	0.46
1:D:16:VAL:HG13	1:F:62:LEU:HD22	1.97	0.46
1:E:84:LEU:HD11	3:E:231:LMT:H102	1.98	0.46
1:J:51:ARG:HB3	2:J:210:GSH:O32	2.16	0.46
1:G:84:LEU:O	1:G:88[A]:PHE:HD1	1.98	0.46
1:F:33:PHE:HB3	1:F:43:PRO:HG2	1.97	0.46
1:C:45:GLU:HA	1:C:48:ARG:HH21	1.80	0.46
1:F:30:ARG:HG3	1:F:46:PHE:HE1	1.81	0.46
1:J:30:ARG:NH1	2:L:212:GSH:O11	2.49	0.46
1:A:100:SER:C	1:A:102:GLN:H	2.17	0.46
1:C:81:LEU:HD22	1:D:143:LEU:HD22	1.97	0.46
1:D:37:PRO:CG	1:D:38:PRO:HD3	2.41	0.46
1:F:108:LEU:HD21	3:F:219:LMT:H61	1.98	0.46
1:H:131:LEU:N	1:H:132:PRO:HD2	2.31	0.46
1:F:131:LEU:N	1:F:132:PRO:HD2	2.31	0.46
1:K:30:ARG:NH2	1:K:39:LEU:O	2.49	0.46
1:A:14:LEU:HD13	3:A:228:LMT:H121	1.98	0.45
1:F:115:LEU:HD23	3:F:219:LMT:H112	1.99	0.45
1:H:30:ARG:HG3	1:H:46:PHE:CE1	2.50	0.45
1:A:66:THR:HG21	1:A:118:LEU:HB3	1.99	0.45
1:E:26:VAL:O	1:E:30:ARG:HG3	2.16	0.45
3:I:258:LMT:H52	1:K:136:ARG:HB2	1.97	0.45
1:L:8:LEU:HD21	1:L:71:GLY:HA3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:8:LEU:HD13	1:C:76:GLU:HG3	1.98	0.45
1:C:36:SER:CB	1:C:37:PRO:HD2	2.46	0.45
1:C:121:LEU:HD21	1:D:135:LEU:HD21	1.97	0.45
3:C:214:LMT:H1B	3:C:214:LMT:O3'	2.16	0.45
1:G:5:VAL:HB	1:G:68:TRP:HZ3	1.82	0.45
1:J:30:ARG:NH1	2:L:212:GSH:O12	2.50	0.45
1:G:106:ALA:HB3	1:G:107:PRO:CD	2.47	0.45
1:J:13:LEU:HD11	1:L:119:VAL:HG13	1.99	0.45
1:D:59:TYR:CE2	3:D:220:LMT:H91	2.51	0.45
1:E:52:ALA:CB	1:E:97:TYR:HD2	2.29	0.45
1:E:115:LEU:HD23	3:E:221:LMT:H112	1.99	0.45
1:L:60:PHE:HB3	1:L:61:PRO:HD3	1.99	0.45
3:C:216:LMT:H1B	3:C:216:LMT:H3'	1.69	0.45
1:G:116:TRP:CD2	3:G:222:LMT:H121	2.52	0.45
1:D:12:THR:O	1:D:16:VAL:HG23	2.17	0.44
1:D:60:PHE:HB3	1:D:61:PRO:HD3	1.98	0.44
1:D:117:LEU:O	1:D:121:LEU:HG	2.17	0.44
1:F:36:SER:HA	1:F:37:PRO:HD3	1.82	0.44
1:C:50:TYR:O	1:C:54:VAL:HG23	2.16	0.44
1:E:60:PHE:HB3	1:E:61:PRO:HD3	1.99	0.44
1:K:37:PRO:HG2	1:K:38:PRO:HD3	1.99	0.44
1:I:51:ARG:HB3	2:I:209:GSH:O32	2.17	0.44
1:K:52:ALA:HB2	1:K:97:TYR:CD2	2.52	0.44
1:D:19:GLN:HE22	1:D:56:CYS:HB3	1.82	0.44
1:I:75:HIS:HD2	1:I:77:GLY:N	2.16	0.44
3:C:237:LMT:H62	3:D:238:LMT:H61	2.00	0.44
1:D:77:GLY:O	1:D:81:LEU:HG	2.17	0.44
1:F:55:ASN:HA	1:F:58:GLU:OE2	2.17	0.44
1:D:102:GLN:HE21	1:D:102:GLN:HB3	1.60	0.44
1:E:66:THR:HG21	1:E:118:LEU:HB3	1.98	0.44
1:E:97:TYR:HB2	1:E:104:ARG:HB3	1.99	0.43
1:G:8:LEU:HD13	1:G:76:GLU:HG2	1.99	0.43
1:C:8:LEU:HD23	1:C:68:TRP:CE3	2.54	0.43
1:G:104:ARG:NH2	1:H:37:PRO:HB3	2.33	0.43
1:H:60:PHE:HB3	1:H:61:PRO:HD3	2.00	0.43
1:L:36:SER:O	1:L:39:LEU:HB2	2.18	0.43
1:G:116:TRP:CE2	3:G:222:LMT:H121	2.53	0.43
1:K:104:ARG:HH12	1:L:37:PRO:HB3	1.83	0.43
1:G:56:CYS:SG	1:G:90:ARG:HD2	2.59	0.43
1:G:97:TYR:CD1	1:G:104:ARG:HD3	2.53	0.43
1:H:56:CYS:SG	1:H:90:ARG:HD2	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:82:CYS:HB3	1:C:118:LEU:HG	2.01	0.43
1:A:129:HIS:HE1	1:B:3:ASP:CB	2.30	0.42
1:H:119:VAL:HG13	1:I:13:LEU:HD11	2.00	0.42
1:K:95:GLN:O	1:K:99:ARG:HG3	2.19	0.42
1:D:100:SER:C	1:D:102:GLN:H	2.21	0.42
1:K:48:ARG:HD2	1:K:97:TYR:O	2.18	0.42
1:A:104:ARG:NH2	1:B:37:PRO:CG	2.74	0.42
1:D:30:ARG:HG2	1:D:35:VAL:O	2.20	0.42
1:K:45:GLU:HG3	1:K:48:ARG:HH22	1.84	0.42
1:G:8:LEU:HD23	1:G:68:TRP:CE3	2.55	0.42
1:B:115:LEU:HD23	3:B:218:LMT:H112	2.00	0.42
1:F:5:VAL:CG2	1:F:68:TRP:CZ3	3.01	0.42
1:G:37:PRO:HB3	1:I:104:ARG:HH12	1.81	0.42
1:G:37:PRO:HB3	1:I:104:ARG:CZ	2.49	0.42
1:H:30:ARG:NH2	1:H:39:LEU:O	2.53	0.42
1:J:105:LEU:O	1:J:109:TYR:CD1	2.73	0.42
1:F:51:ARG:HD2	1:F:51:ARG:HA	1.45	0.42
1:E:95:GLN:NE2	3:E:268:LMT:H11	2.33	0.42
1:L:66:THR:HG21	1:L:118:LEU:HB3	2.01	0.42
1:B:8:LEU:HD23	1:B:68:TRP:CE3	2.55	0.41
1:C:81:LEU:O	1:C:85:VAL:HG23	2.20	0.41
1:B:36:SER:HA	1:B:37:PRO:HD3	1.82	0.41
1:D:45:GLU:HG3	1:D:48:ARG:HH22	1.85	0.41
1:E:25:GLN:NE2	1:E:25:GLN:HA	2.35	0.41
1:B:104:ARG:HH21	1:C:37:PRO:HG3	1.84	0.41
1:F:33:PHE:CD1	1:F:46:PHE:HB2	2.55	0.41
1:J:66:THR:HG21	1:J:118:LEU:HB3	2.02	0.41
1:K:13:LEU:HD12	1:K:13:LEU:HA	1.87	0.41
1:K:33:PHE:CZ	1:K:45:GLU:HB2	2.55	0.41
1:A:36:SER:O	1:A:39:LEU:HB2	2.20	0.41
3:E:268:LMT:H62	3:E:268:LMT:H92	1.84	0.41
1:J:82:CYS:SG	1:J:117:LEU:HD23	2.60	0.41
1:F:8:LEU:HG	1:F:76:GLU:HG3	2.02	0.41
1:H:8:LEU:HD21	1:H:71:GLY:HA3	2.02	0.41
1:E:37:PRO:HB2	1:E:38:PRO:HD3	2.02	0.41
1:E:131:LEU:N	1:E:132:PRO:HD2	2.36	0.41
1:J:130:PHE:CE1	1:K:6:ALA:HB1	2.52	0.41
1:H:62:LEU:HD22	1:I:16:VAL:HG13	2.02	0.41
1:D:66:THR:HG21	1:D:118:LEU:HB3	2.01	0.41
1:E:100:SER:C	1:E:102:GLN:H	2.24	0.41
1:L:30:ARG:HG3	1:L:46:PHE:HE1	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:124:LEU:HD22	3:D:238:LMT:H62	2.02	0.41
1:G:60:PHE:HB3	1:G:61:PRO:HD3	2.02	0.41
1:I:25:GLN:HA	1:I:25:GLN:HE21	1.85	0.41
1:K:7:LEU:HB2	1:K:76:GLU:OE2	2.21	0.41
1:L:65:ALA:HA	3:L:254:LMT:H112	2.02	0.41
1:H:73:PHE:CZ	1:I:6:ALA:HA	2.56	0.40
1:H:75:HIS:CD2	1:H:78:ALA:N	2.75	0.40
1:I:60:PHE:HB3	1:I:61:PRO:HD3	2.03	0.40
1:L:36:SER:HA	1:L:37:PRO:HD3	1.91	0.40
1:A:100:SER:C	1:A:102:GLN:N	2.75	0.40
1:D:131:LEU:HB3	1:D:132:PRO:HD3	2.03	0.40
1:K:93:TYR:HA	1:K:107:PRO:HG2	2.03	0.40
1:F:105:LEU:O	1:F:109:TYR:CD1	2.74	0.40
1:H:8:LEU:HD13	1:H:76:GLU:HG3	2.02	0.40
1:J:84:LEU:HD23	1:J:84:LEU:HA	1.97	0.40
1:K:30:ARG:NH1	1:K:46:PHE:HZ	2.19	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:34:ARG:NH1	1:G:33:PHE:O[8_545]	2.12	0.08

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	144/156 (92%)	137 (95%)	7 (5%)	0	100	100
1	B	145/156 (93%)	136 (94%)	9 (6%)	0	100	100
1	C	144/156 (92%)	138 (96%)	5 (4%)	1 (1%)	22	54
1	D	145/156 (93%)	140 (97%)	5 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	E	145/156 (93%)	137 (94%)	7 (5%)	1 (1%)	22 54
1	F	145/156 (93%)	139 (96%)	6 (4%)	0	100 100
1	G	145/156 (93%)	138 (95%)	7 (5%)	0	100 100
1	H	145/156 (93%)	138 (95%)	7 (5%)	0	100 100
1	I	145/156 (93%)	138 (95%)	7 (5%)	0	100 100
1	J	145/156 (93%)	138 (95%)	6 (4%)	1 (1%)	22 54
1	K	145/156 (93%)	137 (94%)	8 (6%)	0	100 100
1	L	145/156 (93%)	139 (96%)	5 (3%)	1 (1%)	22 54
All	All	1738/1872 (93%)	1655 (95%)	79 (4%)	4 (0%)	47 77

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	L	75	HIS
1	C	75	HIS
1	E	37	PRO
1	J	75	HIS

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	105/120 (88%)	98 (93%)	7 (7%)	16 45
1	B	108/120 (90%)	102 (94%)	6 (6%)	21 52
1	C	108/120 (90%)	99 (92%)	9 (8%)	11 36
1	D	107/120 (89%)	100 (94%)	7 (6%)	17 46
1	E	109/120 (91%)	99 (91%)	10 (9%)	9 31
1	F	107/120 (89%)	101 (94%)	6 (6%)	21 52
1	G	103/120 (86%)	96 (93%)	7 (7%)	16 44
1	H	107/120 (89%)	99 (92%)	8 (8%)	13 39

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	I	107/120 (89%)	101 (94%)	6 (6%)	21 52
1	J	105/120 (88%)	99 (94%)	6 (6%)	20 51
1	K	105/120 (88%)	95 (90%)	10 (10%)	8 29
1	L	104/120 (87%)	96 (92%)	8 (8%)	13 38
All	All	1275/1440 (88%)	1185 (93%)	90 (7%)	14 42

All (90) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	4	GLU
1	A	8	LEU
1	A	23	SER
1	A	40	THR
1	A	97	TYR
1	A	104	ARG
1	A	136	ARG
1	B	30	ARG
1	B	36	SER
1	B	40	THR
1	B	97	TYR
1	B	104	ARG
1	B	143	LEU
1	C	2	LYS
1	C	3	ASP
1	C	8	LEU
1	C	28	SER
1	C	36	SER
1	C	39	LEU
1	C	40	THR
1	C	97	TYR
1	C	104	ARG
1	D	5	VAL
1	D	25	GLN
1	D	27	ILE
1	D	36	SER
1	D	57	SER
1	D	102	GLN
1	D	104	ARG
1	E	3	ASP
1	E	5	VAL
1	E	23	SER

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Mol	Chain	Res	Type
1	E	39	LEU
1	E	40	THR
1	E	41	THR
1	E	53	GLN
1	E	104	ARG
1	E	136	ARG
1	E	146	LEU
1	F	5	VAL
1	F	40	THR
1	F	51	ARG
1	F	57	SER
1	F	97	TYR
1	F	104	ARG
1	G	2	LYS
1	G	3	ASP
1	G	8	LEU
1	G	36	SER
1	G	40	THR
1	G	62	LEU
1	G	97	TYR
1	H	3	ASP
1	H	7	LEU
1	H	8	LEU
1	H	34	ARG
1	H	40	THR
1	H	97	TYR
1	H	104	ARG
1	H	127	LEU
1	I	2	LYS
1	I	5	VAL
1	I	7	LEU
1	I	57	SER
1	I	104	ARG
1	I	135	LEU
1	J	3	ASP
1	J	8	LEU
1	J	40	THR
1	J	82	CYS
1	J	104	ARG
1	J	136	ARG
1	K	3	ASP
1	K	5	VAL

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Mol	Chain	Res	Type
1	K	7	LEU
1	K	8	LEU
1	K	39	LEU
1	K	53	GLN
1	K	57	SER
1	K	62	LEU
1	K	97	TYR
1	K	104	ARG
1	L	2	LYS
1	L	7	LEU
1	L	8	LEU
1	L	40	THR
1	L	82	CYS
1	L	97	TYR
1	L	104	ARG
1	L	118	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (28) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	25	GLN
1	A	75	HIS
1	A	129	HIS
1	B	75	HIS
1	B	129	HIS
1	C	75	HIS
1	C	95	GLN
1	D	19	GLN
1	D	25	GLN
1	D	75	HIS
1	D	102	GLN
1	D	129	HIS
1	E	25	GLN
1	E	95	GLN
1	E	129	HIS
1	F	75	HIS
1	H	19	GLN
1	H	25	GLN
1	H	75	HIS
1	H	129	HIS
1	I	75	HIS
1	I	129	HIS

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Mol	Chain	Res	Type
1	J	75	HIS
1	J	129	HIS
1	K	19	GLN
1	K	53	GLN
1	K	75	HIS
1	L	129	HIS

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

69 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
3	LMT	C	214	-	36,36,36	0.52	1 (2%)	47,47,47	0.81	1 (2%)
3	LMT	D	247	-	8,8,36	0.28	0	7,7,47	0.43	0
3	LMT	E	232	-	5,5,36	0.30	0	4,4,47	0.32	0
3	LMT	B	242	-	11,11,36	0.28	0	10,10,47	0.48	0
3	LMT	B	227	-	23,23,36	0.59	1 (4%)	26,27,47	0.78	1 (3%)
3	LMT	A	215	-	36,36,36	0.50	0	47,47,47	0.65	0
3	LMT	I	257	-	8,8,36	0.28	0	7,7,47	0.44	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
3	LMT	B	213	-	23,23,36	0.57	1 (4%)	26,27,47	0.73	1 (3%)
3	LMT	E	221	-	9,9,36	0.23	0	8,8,47	0.53	0
3	LMT	A	262	-	8,8,36	0.30	0	7,7,47	0.45	0
2	GSH	L	212	-	18,19,19	3.11	2 (11%)	23,24,24	1.30	5 (21%)
3	LMT	C	237	-	36,36,36	0.48	0	47,47,47	0.72	0
2	GSH	A	201	-	18,19,19	3.04	2 (11%)	23,24,24	1.28	5 (21%)
3	LMT	E	249	-	8,8,36	0.28	0	7,7,47	0.45	0
3	LMT	L	226	-	8,8,36	0.28	0	7,7,47	0.45	0
2	GSH	B	202	-	18,19,19	3.03	2 (11%)	23,24,24	1.38	4 (17%)
3	LMT	F	219	-	8,8,36	0.29	0	7,7,47	0.41	0
3	LMT	L	255	-	8,8,36	0.26	0	7,7,47	0.46	0
3	LMT	F	233	-	23,23,36	0.60	1 (4%)	26,27,47	0.76	1 (3%)
2	GSH	D	204	-	18,19,19	3.05	2 (11%)	23,24,24	1.41	4 (17%)
2	GSH	C	203	-	18,19,19	3.04	2 (11%)	23,24,24	1.22	5 (21%)
3	LMT	A	256	-	18,18,36	0.63	1 (5%)	21,22,47	0.70	0
3	LMT	D	238	-	36,36,36	0.45	0	47,47,47	0.73	0
3	LMT	G	222	-	8,8,36	0.24	0	7,7,47	0.54	0
3	LMT	G	235	-	23,23,36	0.52	0	26,27,47	0.63	0
3	LMT	I	252	-	8,8,36	0.27	0	7,7,47	0.46	0
2	GSH	F	206	-	18,19,19	3.09	2 (11%)	23,24,24	1.41	4 (17%)
3	LMT	G	267	-	8,8,36	0.31	0	7,7,47	0.41	0
3	LMT	K	225	-	23,23,36	0.57	1 (4%)	26,27,47	0.79	1 (3%)
3	LMT	F	241	-	18,18,36	0.65	1 (5%)	21,22,47	1.16	2 (9%)
3	LMT	A	244	-	8,8,36	0.28	0	7,7,47	0.43	0
3	LMT	A	217	-	6,6,36	0.31	0	5,5,47	0.36	0
2	GSH	E	205	-	18,19,19	3.03	2 (11%)	23,24,24	1.21	4 (17%)
3	LMT	C	261	-	8,8,36	0.33	0	7,7,47	0.49	0
3	LMT	L	223	-	8,8,36	0.25	0	7,7,47	0.48	0
3	LMT	B	236	-	18,18,36	0.70	1 (5%)	21,22,47	1.08	2 (9%)
3	LMT	H	250	-	8,8,36	0.29	0	7,7,47	0.41	0
3	LMT	E	268	-	36,36,36	0.54	1 (2%)	47,47,47	0.82	1 (2%)
3	LMT	E	243	-	36,36,36	0.45	0	47,47,47	0.60	0
3	LMT	E	269	-	36,36,36	0.49	1 (2%)	47,47,47	0.69	0
3	LMT	G	251	-	8,8,36	0.30	0	7,7,47	0.41	0
3	LMT	L	254	-	8,8,36	0.25	0	7,7,47	0.52	0
2	GSH	I	209	-	18,19,19	3.09	2 (11%)	23,24,24	1.35	4 (17%)
3	LMT	E	231	-	23,23,36	0.57	0	26,27,47	0.73	0
3	LMT	J	239	-	36,36,36	0.45	0	47,47,47	0.77	1 (2%)
3	LMT	D	220	-	8,8,36	0.28	0	7,7,47	0.39	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
3	LMT	H	234	-	23,23,36	0.57	1 (4%)	26,27,47	0.79	1 (3%)
2	GSH	G	207	-	18,19,19	3.03	2 (11%)	23,24,24	1.33	5 (21%)
3	LMT	B	260	-	8,8,36	0.29	0	7,7,47	0.41	0
3	LMT	I	258	-	8,8,36	0.29	0	7,7,47	0.42	0
2	GSH	J	210	-	18,19,19	3.11	2 (11%)	23,24,24	1.27	4 (17%)
3	LMT	C	246	-	8,8,36	0.27	0	7,7,47	0.45	0
3	LMT	L	265	-	6,6,36	0.32	0	5,5,47	0.34	0
3	LMT	E	266	-	8,8,36	0.29	0	7,7,47	0.40	0
2	GSH	H	208	-	18,19,19	3.07	2 (11%)	23,24,24	1.36	4 (17%)
3	LMT	A	229	-	8,8,36	0.27	0	7,7,47	0.49	0
3	LMT	A	245	-	8,8,36	0.30	0	7,7,47	0.42	0
3	LMT	B	259	-	8,8,36	0.26	0	7,7,47	0.48	0
3	LMT	B	218	-	23,23,36	0.60	1 (4%)	26,27,47	0.98	2 (7%)
3	LMT	F	248	-	8,8,36	0.27	0	7,7,47	0.47	0
3	LMT	E	263	-	8,8,36	0.31	0	7,7,47	0.33	0
3	LMT	G	264	-	8,8,36	0.29	0	7,7,47	0.42	0
3	LMT	I	240	-	18,18,36	0.61	1 (5%)	21,22,47	0.82	0
3	LMT	A	228	-	23,23,36	0.54	0	26,27,47	0.58	0
3	LMT	C	216	-	36,36,36	0.50	0	47,47,47	0.77	1 (2%)
3	LMT	E	230	-	36,36,36	0.52	0	47,47,47	0.99	2 (4%)
3	LMT	K	224	-	6,6,36	0.30	0	5,5,47	0.35	0
2	GSH	K	211	-	18,19,19	3.06	2 (11%)	23,24,24	1.44	5 (21%)
3	LMT	J	253	-	8,8,36	0.25	0	7,7,47	0.51	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
3	LMT	C	214	-	-	14/21/61/61	0/2/2/2
3	LMT	D	247	-	-	1/6/6/61	-
3	LMT	E	232	-	-	0/3/3/61	-
3	LMT	B	242	-	-	4/9/9/61	-
3	LMT	B	227	-	-	7/15/31/61	0/1/1/2
3	LMT	A	215	-	-	9/21/61/61	0/2/2/2
3	LMT	I	257	-	-	3/6/6/61	-
3	LMT	B	213	-	-	7/15/31/61	0/1/1/2
3	LMT	E	221	-	-	3/7/7/61	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	LMT	A	262	-	-	3/6/6/61	-
2	GSH	L	212	-	-	2/24/24/24	-
3	LMT	C	237	-	-	10/21/61/61	0/2/2/2
2	GSH	A	201	-	-	2/24/24/24	-
3	LMT	E	249	-	-	4/6/6/61	-
3	LMT	L	226	-	-	4/6/6/61	-
2	GSH	B	202	-	-	2/24/24/24	-
3	LMT	F	219	-	-	4/6/6/61	-
3	LMT	L	255	-	-	2/6/6/61	-
3	LMT	F	233	-	-	6/15/31/61	0/1/1/2
2	GSH	D	204	-	-	2/24/24/24	-
2	GSH	C	203	-	-	2/24/24/24	-
3	LMT	A	256	-	-	10/10/26/61	0/1/1/2
3	LMT	D	238	-	-	10/21/61/61	0/2/2/2
3	LMT	G	222	-	-	3/6/6/61	-
3	LMT	G	235	-	-	7/15/31/61	0/1/1/2
3	LMT	I	252	-	-	3/6/6/61	-
2	GSH	F	206	-	-	2/24/24/24	-
3	LMT	G	267	-	-	1/6/6/61	-
3	LMT	K	225	-	-	12/15/31/61	0/1/1/2
3	LMT	F	241	-	-	4/10/26/61	0/1/1/2
3	LMT	A	244	-	-	4/6/6/61	-
3	LMT	A	217	-	-	2/4/4/61	-
2	GSH	E	205	-	-	1/24/24/24	-
3	LMT	C	261	-	-	0/6/6/61	-
3	LMT	L	223	-	-	5/6/6/61	-
3	LMT	B	236	-	-	9/10/26/61	0/1/1/2
3	LMT	H	250	-	-	3/6/6/61	-
3	LMT	E	268	-	-	6/21/61/61	0/2/2/2
3	LMT	E	243	-	-	9/21/61/61	0/2/2/2
3	LMT	E	269	-	-	9/21/61/61	0/2/2/2
3	LMT	G	251	-	-	2/6/6/61	-
3	LMT	L	254	-	-	3/6/6/61	-
2	GSH	I	209	-	-	2/24/24/24	-
3	LMT	E	231	-	-	9/15/31/61	0/1/1/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	LMT	J	239	-	-	8/21/61/61	0/2/2/2
3	LMT	D	220	-	-	2/6/6/61	-
3	LMT	H	234	-	-	7/15/31/61	0/1/1/2
2	GSH	G	207	-	-	2/24/24/24	-
3	LMT	B	260	-	-	5/6/6/61	-
3	LMT	I	258	-	-	2/6/6/61	-
2	GSH	J	210	-	-	2/24/24/24	-
3	LMT	C	246	-	-	4/6/6/61	-
3	LMT	L	265	-	-	1/4/4/61	-
3	LMT	E	266	-	-	4/6/6/61	-
2	GSH	H	208	-	-	2/24/24/24	-
3	LMT	A	229	-	-	3/6/6/61	-
3	LMT	A	245	-	-	4/6/6/61	-
3	LMT	B	259	-	-	4/6/6/61	-
3	LMT	B	218	-	-	6/15/31/61	0/1/1/2
3	LMT	F	248	-	-	1/6/6/61	-
3	LMT	E	263	-	-	4/6/6/61	-
3	LMT	G	264	-	-	2/6/6/61	-
3	LMT	I	240	-	-	7/10/26/61	0/1/1/2
3	LMT	A	228	-	-	7/15/31/61	0/1/1/2
3	LMT	C	216	-	-	10/21/61/61	0/2/2/2
3	LMT	E	230	-	-	9/21/61/61	0/2/2/2
3	LMT	K	224	-	-	2/4/4/61	-
2	GSH	K	211	-	-	2/24/24/24	-
3	LMT	J	253	-	-	2/6/6/61	-

All (37) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	204	GSH	O2-C2	9.33	1.41	1.23
2	L	212	GSH	O2-C2	9.23	1.41	1.23
2	F	206	GSH	O2-C2	9.12	1.41	1.23
2	C	203	GSH	O2-C2	9.12	1.41	1.23
2	J	210	GSH	O2-C2	9.10	1.41	1.23
2	H	208	GSH	O2-C2	9.09	1.41	1.23
2	I	209	GSH	O2-C2	9.08	1.41	1.23
2	J	210	GSH	OE1-CD1	9.04	1.41	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	202	GSH	O2-C2	9.04	1.41	1.23
2	K	211	GSH	O2-C2	9.03	1.41	1.23
2	I	209	GSH	OE1-CD1	8.99	1.41	1.23
2	A	201	GSH	OE1-CD1	8.98	1.41	1.23
2	E	205	GSH	O2-C2	8.93	1.41	1.23
2	G	207	GSH	OE1-CD1	8.89	1.41	1.23
2	L	212	GSH	OE1-CD1	8.89	1.41	1.23
2	F	206	GSH	OE1-CD1	8.86	1.41	1.23
2	K	211	GSH	OE1-CD1	8.81	1.41	1.23
2	G	207	GSH	O2-C2	8.78	1.40	1.23
2	E	205	GSH	OE1-CD1	8.76	1.41	1.23
2	H	208	GSH	OE1-CD1	8.76	1.41	1.23
2	A	201	GSH	O2-C2	8.64	1.40	1.23
2	B	202	GSH	OE1-CD1	8.63	1.40	1.23
2	C	203	GSH	OE1-CD1	8.59	1.40	1.23
2	D	204	GSH	OE1-CD1	8.47	1.40	1.23
3	B	236	LMT	O1'-C1'	2.31	1.44	1.40
3	E	268	LMT	O1'-C1'	2.18	1.43	1.40
3	F	233	LMT	O1'-C1'	2.14	1.43	1.40
3	B	227	LMT	O1'-C1'	2.11	1.43	1.40
3	B	218	LMT	O1'-C1'	2.07	1.43	1.40
3	I	240	LMT	O1'-C1'	2.07	1.43	1.40
3	C	214	LMT	O1'-C1'	2.06	1.43	1.40
3	H	234	LMT	O1'-C1'	2.06	1.43	1.40
3	F	241	LMT	O1'-C1'	2.05	1.43	1.40
3	A	256	LMT	O1'-C1'	2.04	1.43	1.40
3	E	269	LMT	O1'-C1'	2.04	1.43	1.40
3	K	225	LMT	O1'-C1'	2.03	1.43	1.40
3	B	213	LMT	O1'-C1'	2.01	1.43	1.40

All (70) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	K	211	GSH	CA2-CB2-SG2	-4.49	109.15	114.19
2	F	206	GSH	CA2-CB2-SG2	-4.05	109.64	114.19
2	D	204	GSH	CA2-CB2-SG2	-3.94	109.76	114.19
2	I	209	GSH	CA2-CB2-SG2	-3.89	109.82	114.19
2	H	208	GSH	CA2-CB2-SG2	-3.86	109.86	114.19
2	B	202	GSH	CA2-CB2-SG2	-3.36	110.42	114.19
2	J	210	GSH	CA2-CB2-SG2	-3.26	110.53	114.19
2	B	202	GSH	CB2-CA2-N2	-3.25	106.65	111.28
2	L	212	GSH	CA2-CB2-SG2	-3.20	110.59	114.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	G	207	GSH	CA2-CB2-SG2	-3.20	110.60	114.19
3	B	236	LMT	O5'-C5'-C6'	3.03	111.69	106.83
3	E	230	LMT	C1B-C2B-C3B	2.91	116.05	110.00
2	E	205	GSH	CA2-CB2-SG2	-2.88	110.96	114.19
3	B	218	LMT	O1'-C1'-C2'	2.79	112.66	108.30
2	C	203	GSH	CA2-CB2-SG2	-2.78	111.07	114.19
2	F	206	GSH	CB2-CA2-N2	-2.75	107.36	111.28
2	F	206	GSH	O12-C1-O11	-2.74	117.87	124.09
3	F	241	LMT	C1'-O5'-C5'	-2.72	110.12	113.13
2	A	201	GSH	CA2-CB2-SG2	-2.68	111.19	114.19
3	H	234	LMT	O5'-C5'-C6'	2.63	111.05	106.83
3	E	230	LMT	O5B-C1B-C2B	2.59	115.82	110.35
2	D	204	GSH	O12-C1-O11	-2.54	118.32	124.09
3	K	225	LMT	O5'-C5'-C6'	2.52	110.87	106.83
2	A	201	GSH	O12-C1-O11	-2.52	118.37	124.09
2	D	204	GSH	O12-C1-CA1	2.47	121.80	113.38
3	B	227	LMT	O5'-C5'-C6'	2.47	110.79	106.83
2	I	209	GSH	O12-C1-CA1	2.46	121.76	113.38
2	G	207	GSH	CB2-CA2-N2	-2.44	107.81	111.28
2	A	201	GSH	CB2-CA2-N2	-2.40	107.86	111.28
2	F	206	GSH	O12-C1-CA1	2.39	121.53	113.38
3	C	216	LMT	O1B-C4'-C3'	2.39	113.63	107.28
2	B	202	GSH	O12-C1-CA1	2.37	121.46	113.38
2	G	207	GSH	O12-C1-CA1	2.36	121.44	113.38
2	A	201	GSH	O32-C3-CA3	2.36	120.94	112.74
3	B	218	LMT	C1'-O5'-C5'	-2.36	110.52	113.13
2	H	208	GSH	O12-C1-CA1	2.35	121.38	113.38
2	L	212	GSH	O12-C1-CA1	2.34	121.37	113.38
3	B	236	LMT	O1'-C1'-C2'	2.34	111.95	108.30
2	A	201	GSH	O12-C1-CA1	2.33	121.31	113.38
2	L	212	GSH	O32-C3-CA3	2.33	120.83	112.74
2	I	209	GSH	O12-C1-O11	-2.32	118.82	124.09
2	G	207	GSH	O32-C3-CA3	2.30	120.74	112.74
2	L	212	GSH	O12-C1-O11	-2.30	118.86	124.09
2	K	211	GSH	O12-C1-CA1	2.26	121.10	113.38
2	K	211	GSH	O12-C1-O11	-2.26	118.96	124.09
2	E	205	GSH	O32-C3-CA3	2.26	120.58	112.74
2	C	203	GSH	O12-C1-O11	-2.25	118.97	124.09
2	E	205	GSH	O12-C1-CA1	2.25	121.05	113.38
2	C	203	GSH	O12-C1-CA1	2.24	121.03	113.38
2	C	203	GSH	O32-C3-CA3	2.23	120.50	112.74
2	H	208	GSH	O32-C3-CA3	2.22	120.47	112.74

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	J	210	GSH	O12-C1-CA1	2.22	120.95	113.38
2	B	202	GSH	O12-C1-O11	-2.22	119.05	124.09
2	G	207	GSH	O12-C1-O11	-2.21	119.08	124.09
2	J	210	GSH	O12-C1-O11	-2.19	119.11	124.09
3	B	213	LMT	O5'-C5'-C6'	2.17	110.31	106.83
2	K	211	GSH	CB2-CA2-N2	-2.17	108.20	111.28
2	D	204	GSH	CB2-CA2-N2	-2.16	108.21	111.28
3	F	233	LMT	O5'-C5'-C6'	2.16	110.29	106.83
2	I	209	GSH	O32-C3-CA3	2.16	120.23	112.74
3	F	241	LMT	O5'-C5'-C6'	2.14	110.25	106.83
2	H	208	GSH	O12-C1-O11	-2.13	119.24	124.09
2	J	210	GSH	O32-C3-CA3	2.10	120.05	112.74
3	E	268	LMT	C1'-C2'-C3'	2.09	114.35	110.00
3	J	239	LMT	C1B-O1B-C4'	-2.08	112.82	117.96
2	L	212	GSH	CB2-CA2-N2	-2.07	108.33	111.28
2	C	203	GSH	CB2-CA2-N2	-2.07	108.33	111.28
2	K	211	GSH	O32-C3-CA3	2.06	119.91	112.74
2	E	205	GSH	O12-C1-O11	-2.04	119.46	124.09
3	C	214	LMT	C2'-C3'-C4'	2.03	114.31	109.68

There are no chirality outliers.

All (309) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	228	LMT	C4'-C5'-C6'-O6'
3	A	228	LMT	C2-C1-O1'-C1'
3	A	256	LMT	C4'-C5'-C6'-O6'
3	A	256	LMT	O5'-C5'-C6'-O6'
3	B	218	LMT	C4'-C5'-C6'-O6'
3	B	218	LMT	O5'-C5'-C6'-O6'
3	B	227	LMT	C2'-C1'-O1'-C1
3	B	227	LMT	O5'-C1'-O1'-C1
3	B	236	LMT	C2'-C1'-O1'-C1
3	B	236	LMT	O5'-C1'-O1'-C1
3	B	236	LMT	C4'-C5'-C6'-O6'
3	B	236	LMT	O5'-C5'-C6'-O6'
3	C	214	LMT	C2'-C1'-O1'-C1
3	C	214	LMT	O5'-C1'-O1'-C1
3	C	214	LMT	C2-C1-O1'-C1'
3	C	237	LMT	C2'-C1'-O1'-C1
3	C	237	LMT	O5'-C1'-O1'-C1
3	D	238	LMT	C2'-C1'-O1'-C1

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Mol	Chain	Res	Type	Atoms
3	D	238	LMT	O5'-C1'-O1'-C1
3	E	231	LMT	C2'-C1'-O1'-C1
3	E	231	LMT	O5'-C1'-O1'-C1
3	E	268	LMT	C2-C1-O1'-C1'
3	E	269	LMT	C2'-C1'-O1'-C1
3	E	269	LMT	O5'-C1'-O1'-C1
3	F	233	LMT	C2'-C1'-O1'-C1
3	F	233	LMT	O5'-C1'-O1'-C1
3	F	233	LMT	C2-C1-O1'-C1'
3	G	235	LMT	C2'-C1'-O1'-C1
3	G	235	LMT	O5'-C1'-O1'-C1
3	H	234	LMT	C2'-C1'-O1'-C1
3	H	234	LMT	C2-C1-O1'-C1'
3	I	240	LMT	C2'-C1'-O1'-C1
3	I	240	LMT	O5'-C1'-O1'-C1
3	I	240	LMT	O5'-C5'-C6'-O6'
3	K	225	LMT	C4'-C5'-C6'-O6'
3	K	225	LMT	O5'-C5'-C6'-O6'
3	C	216	LMT	C3'-C4'-O1B-C1B
3	E	230	LMT	O5B-C5B-C6B-O6B
3	A	215	LMT	O5B-C5B-C6B-O6B
3	E	230	LMT	O5'-C5'-C6'-O6'
3	E	243	LMT	C4B-C5B-C6B-O6B
3	E	268	LMT	C6-C7-C8-C9
3	C	216	LMT	O5B-C5B-C6B-O6B
3	E	230	LMT	C4'-C5'-C6'-O6'
3	C	216	LMT	O5'-C5'-C6'-O6'
3	C	237	LMT	O5'-C5'-C6'-O6'
3	J	239	LMT	O5B-C5B-C6B-O6B
3	C	237	LMT	C4B-C5B-C6B-O6B
3	A	215	LMT	O5'-C5'-C6'-O6'
3	C	214	LMT	O5'-C5'-C6'-O6'
3	E	243	LMT	O5B-C5B-C6B-O6B
3	E	230	LMT	C4B-C5B-C6B-O6B
3	H	234	LMT	O5'-C1'-O1'-C1
2	A	201	GSH	CA1-CB1-CG1-CD1
2	F	206	GSH	CA1-CB1-CG1-CD1
2	J	210	GSH	CA1-CB1-CG1-CD1
3	A	215	LMT	C4B-C5B-C6B-O6B
3	C	216	LMT	C4B-C5B-C6B-O6B
3	C	216	LMT	C4'-C5'-C6'-O6'
3	A	215	LMT	C4'-C5'-C6'-O6'

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Mol	Chain	Res	Type	Atoms
3	J	239	LMT	C4B-C5B-C6B-O6B
3	E	268	LMT	C2'-C1'-O1'-C1
3	C	237	LMT	O5B-C5B-C6B-O6B
3	C	214	LMT	C4'-C5'-C6'-O6'
3	C	237	LMT	C4'-C5'-C6'-O6'
3	D	238	LMT	O5'-C5'-C6'-O6'
3	F	241	LMT	O1'-C1-C2-C3
3	B	218	LMT	O1'-C1-C2-C3
3	A	256	LMT	O5'-C1'-O1'-C1
3	J	239	LMT	O1'-C1-C2-C3
3	A	228	LMT	O1'-C1-C2-C3
3	C	214	LMT	O1'-C1-C2-C3
3	E	269	LMT	O1'-C1-C2-C3
3	J	253	LMT	C7-C8-C9-C10
3	A	256	LMT	C2-C3-C4-C5
3	B	236	LMT	C3-C4-C5-C6
3	B	260	LMT	C7-C8-C9-C10
3	E	243	LMT	C2-C3-C4-C5
3	J	239	LMT	C4-C5-C6-C7
3	K	225	LMT	C3-C4-C5-C6
3	A	262	LMT	C6-C7-C8-C9
3	C	214	LMT	C5'-C4'-O1B-C1B
3	C	237	LMT	C5-C6-C7-C8
3	B	218	LMT	C6-C7-C8-C9
3	C	216	LMT	O1'-C1-C2-C3
3	E	221	LMT	C7-C8-C9-C10
3	L	254	LMT	C11-C10-C9-C8
3	B	213	LMT	C2-C3-C4-C5
3	B	242	LMT	C2-C3-C4-C5
3	C	214	LMT	C6-C7-C8-C9
3	C	216	LMT	C6-C7-C8-C9
3	D	238	LMT	O1'-C1-C2-C3
3	G	235	LMT	C4-C5-C6-C7
3	G	235	LMT	C6-C7-C8-C9
3	L	223	LMT	C7-C8-C9-C10
3	A	256	LMT	C2'-C1'-O1'-C1
3	E	243	LMT	C2'-C1'-O1'-C1
3	K	225	LMT	C2'-C1'-O1'-C1
3	B	218	LMT	C3-C4-C5-C6
3	J	239	LMT	C5-C6-C7-C8
3	L	265	LMT	C7-C8-C9-C10
3	B	242	LMT	C3-C4-C5-C6

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Mol	Chain	Res	Type	Atoms
3	G	235	LMT	C2-C3-C4-C5
3	B	227	LMT	C3-C4-C5-C6
3	B	259	LMT	C5-C6-C7-C8
3	C	214	LMT	C4-C5-C6-C7
3	I	257	LMT	C7-C8-C9-C10
3	A	217	LMT	C11-C10-C9-C8
3	E	266	LMT	C7-C8-C9-C10
3	E	269	LMT	C1-C2-C3-C4
3	B	260	LMT	C11-C10-C9-C8
3	I	258	LMT	C11-C10-C9-C8
3	J	239	LMT	C7-C8-C9-C10
3	L	226	LMT	C6-C7-C8-C9
3	L	255	LMT	C11-C10-C9-C8
3	E	243	LMT	O5'-C1'-O1'-C1
3	K	225	LMT	O5'-C1'-O1'-C1
3	B	259	LMT	C11-C10-C9-C8
3	C	214	LMT	C3'-C4'-O1B-C1B
3	K	224	LMT	C11-C10-C9-C8
3	G	264	LMT	C11-C10-C9-C8
3	I	240	LMT	C2-C3-C4-C5
3	G	222	LMT	C7-C8-C9-C10
3	K	225	LMT	C7-C8-C9-C10
3	L	254	LMT	C6-C7-C8-C9
3	A	228	LMT	C6-C7-C8-C9
3	D	220	LMT	C7-C8-C9-C10
3	A	228	LMT	C1-C2-C3-C4
3	B	213	LMT	C3-C4-C5-C6
3	B	213	LMT	C4-C5-C6-C7
3	E	231	LMT	O1'-C1-C2-C3
3	C	246	LMT	C11-C10-C9-C8
3	F	241	LMT	C3-C4-C5-C6
3	L	223	LMT	C11-C10-C9-C8
3	F	233	LMT	C1-C2-C3-C4
3	C	214	LMT	C5-C6-C7-C8
3	L	226	LMT	C11-C10-C9-C8
3	A	215	LMT	C3-C4-C5-C6
3	E	243	LMT	C1-C2-C3-C4
3	E	268	LMT	C1-C2-C3-C4
3	B	227	LMT	C5-C6-C7-C8
3	C	214	LMT	C2-C3-C4-C5
3	A	215	LMT	C11-C10-C9-C8
3	K	225	LMT	C1-C2-C3-C4

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Mol	Chain	Res	Type	Atoms
3	A	215	LMT	C1-C2-C3-C4
3	F	241	LMT	C1-C2-C3-C4
3	I	252	LMT	C5-C6-C7-C8
3	E	263	LMT	C6-C7-C8-C9
3	H	234	LMT	C1-C2-C3-C4
3	E	230	LMT	O5'-C1'-O1'-C1
3	I	240	LMT	C3-C4-C5-C6
3	G	235	LMT	C3-C4-C5-C6
3	D	238	LMT	O5B-C5B-C6B-O6B
3	K	225	LMT	O1'-C1-C2-C3
3	E	230	LMT	C2'-C1'-O1'-C1
3	C	214	LMT	C3-C4-C5-C6
3	A	229	LMT	C6-C7-C8-C9
3	C	237	LMT	C1-C2-C3-C4
3	E	243	LMT	C3-C4-C5-C6
3	B	213	LMT	C6-C7-C8-C9
3	F	219	LMT	C5-C6-C7-C8
3	B	213	LMT	O1'-C1-C2-C3
3	G	235	LMT	C5-C6-C7-C8
3	A	262	LMT	C5-C6-C7-C8
3	E	268	LMT	C7-C8-C9-C10
3	G	222	LMT	C6-C7-C8-C9
3	J	253	LMT	C5-C6-C7-C8
3	A	245	LMT	C5-C6-C7-C8
3	E	230	LMT	C2-C3-C4-C5
3	E	221	LMT	C6-C7-C8-C9
3	I	257	LMT	C9-C10-C11-C12
3	F	219	LMT	C4-C5-C6-C7
3	E	221	LMT	C9-C10-C11-C12
3	A	215	LMT	O1'-C1-C2-C3
3	F	241	LMT	C4-C5-C6-C7
3	A	244	LMT	C7-C8-C9-C10
3	B	236	LMT	C4-C5-C6-C7
3	C	216	LMT	C2-C3-C4-C5
3	C	216	LMT	C9-C10-C11-C12
2	B	202	GSH	CA1-CB1-CG1-CD1
2	C	203	GSH	CA1-CB1-CG1-CD1
2	H	208	GSH	CA1-CB1-CG1-CD1
2	K	211	GSH	CA1-CB1-CG1-CD1
2	L	212	GSH	CA1-CB1-CG1-CD1
3	E	263	LMT	C9-C10-C11-C12
3	I	258	LMT	C9-C10-C11-C12

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Mol	Chain	Res	Type	Atoms
3	K	225	LMT	C11-C10-C9-C8
3	C	237	LMT	C3-C4-C5-C6
3	I	240	LMT	C4-C5-C6-C7
3	F	219	LMT	C11-C10-C9-C8
3	F	233	LMT	C5-C6-C7-C8
3	E	263	LMT	C4-C5-C6-C7
3	L	226	LMT	C7-C8-C9-C10
3	A	244	LMT	C9-C10-C11-C12
3	B	259	LMT	C4-C5-C6-C7
3	G	222	LMT	C11-C10-C9-C8
3	L	223	LMT	C4-C5-C6-C7
3	A	228	LMT	O5'-C5'-C6'-O6'
3	B	227	LMT	O5'-C5'-C6'-O6'
3	E	263	LMT	C5-C6-C7-C8
3	C	216	LMT	C3-C4-C5-C6
2	D	204	GSH	CA1-CB1-CG1-CD1
2	I	209	GSH	CA1-CB1-CG1-CD1
3	A	256	LMT	C2-C1-O1'-C1'
3	E	230	LMT	C2-C1-O1'-C1'
3	A	215	LMT	C2-C3-C4-C5
3	B	236	LMT	O1'-C1-C2-C3
3	B	259	LMT	C9-C10-C11-C12
3	C	246	LMT	C5-C6-C7-C8
3	I	252	LMT	C9-C10-C11-C12
3	H	250	LMT	C4-C5-C6-C7
3	A	245	LMT	C6-C7-C8-C9
3	E	231	LMT	C4-C5-C6-C7
3	E	249	LMT	C4-C5-C6-C7
3	E	269	LMT	C2-C3-C4-C5
3	E	231	LMT	C1-C2-C3-C4
3	B	236	LMT	C2-C3-C4-C5
3	E	266	LMT	C5-C6-C7-C8
3	K	225	LMT	C2-C3-C4-C5
3	H	234	LMT	C5-C6-C7-C8
3	E	249	LMT	C5-C6-C7-C8
3	E	243	LMT	C11-C10-C9-C8
3	J	239	LMT	C2-C3-C4-C5
3	L	223	LMT	C5-C6-C7-C8
3	A	256	LMT	C4-C5-C6-C7
3	H	250	LMT	C11-C10-C9-C8
2	E	205	GSH	CA1-CB1-CG1-CD1
2	G	207	GSH	CA1-CB1-CG1-CD1

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Mol	Chain	Res	Type	Atoms
3	A	245	LMT	C7-C8-C9-C10
3	A	256	LMT	O1'-C1-C2-C3
3	G	251	LMT	C6-C7-C8-C9
3	G	264	LMT	C9-C10-C11-C12
3	H	234	LMT	C7-C8-C9-C10
3	A	228	LMT	C2-C3-C4-C5
3	I	257	LMT	C5-C6-C7-C8
3	B	260	LMT	C4-C5-C6-C7
3	B	227	LMT	C4'-C5'-C6'-O6'
3	I	240	LMT	C4'-C5'-C6'-O6'
3	E	249	LMT	C11-C10-C9-C8
3	L	226	LMT	C9-C10-C11-C12
3	A	262	LMT	C4-C5-C6-C7
3	I	252	LMT	C11-C10-C9-C8
3	E	269	LMT	C7-C8-C9-C10
3	L	223	LMT	C9-C10-C11-C12
3	F	219	LMT	C7-C8-C9-C10
3	C	237	LMT	O1'-C1-C2-C3
3	J	239	LMT	C3-C4-C5-C6
3	B	242	LMT	C11-C10-C9-C8
3	B	227	LMT	O1'-C1-C2-C3
3	E	266	LMT	C9-C10-C11-C12
3	H	234	LMT	C6-C7-C8-C9
3	B	236	LMT	C1-C2-C3-C4
3	D	247	LMT	C5-C6-C7-C8
3	B	218	LMT	C7-C8-C9-C10
3	E	231	LMT	C11-C10-C9-C8
3	K	224	LMT	C7-C8-C9-C10
3	B	260	LMT	C9-C10-C11-C12
3	E	231	LMT	C5-C6-C7-C8
3	B	260	LMT	C5-C6-C7-C8
3	E	230	LMT	C7-C8-C9-C10
3	E	243	LMT	O1'-C1-C2-C3
3	A	217	LMT	C7-C8-C9-C10
3	A	256	LMT	C1-C2-C3-C4
3	K	225	LMT	C6-C7-C8-C9
3	E	269	LMT	C11-C10-C9-C8
3	F	233	LMT	C4-C5-C6-C7
3	A	244	LMT	C6-C7-C8-C9
3	A	229	LMT	C11-C10-C9-C8
3	L	255	LMT	C4-C5-C6-C7
3	A	245	LMT	C9-C10-C11-C12

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Mol	Chain	Res	Type	Atoms
3	D	238	LMT	C3'-C4'-O1B-C1B
3	A	244	LMT	C4-C5-C6-C7
3	L	254	LMT	C9-C10-C11-C12
3	D	238	LMT	C7-C8-C9-C10
3	B	242	LMT	C9-C10-C11-C12
3	D	238	LMT	C4'-C5'-C6'-O6'
3	E	266	LMT	C4-C5-C6-C7
3	D	220	LMT	C11-C10-C9-C8
3	C	214	LMT	C9-C10-C11-C12
3	A	256	LMT	C3-C4-C5-C6
3	E	249	LMT	C7-C8-C9-C10
3	E	269	LMT	C4-C5-C6-C7
2	H	208	GSH	C3-CA3-N3-C2
3	H	250	LMT	C5-C6-C7-C8
3	C	246	LMT	C6-C7-C8-C9
2	G	207	GSH	C3-CA3-N3-C2
2	K	211	GSH	C3-CA3-N3-C2
3	D	238	LMT	C5'-C4'-O1B-C1B
3	E	231	LMT	C3-C4-C5-C6
2	B	202	GSH	C3-CA3-N3-C2
2	C	203	GSH	C3-CA3-N3-C2
2	I	209	GSH	C3-CA3-N3-C2
2	J	210	GSH	C3-CA3-N3-C2
2	L	212	GSH	C3-CA3-N3-C2
3	F	248	LMT	C5-C6-C7-C8
3	D	238	LMT	C5-C6-C7-C8
3	G	251	LMT	C7-C8-C9-C10
2	D	204	GSH	C3-CA3-N3-C2
3	B	213	LMT	C4'-C5'-C6'-O6'
3	B	213	LMT	O5'-C5'-C6'-O6'
2	F	206	GSH	C3-CA3-N3-C2
3	G	267	LMT	C4-C5-C6-C7
3	E	268	LMT	C4B-C5B-C6B-O6B
3	C	246	LMT	C9-C10-C11-C12
3	E	269	LMT	C3-C4-C5-C6
2	A	201	GSH	C3-CA3-N3-C2
3	A	229	LMT	C4-C5-C6-C7
3	E	231	LMT	C2-C1-O1'-C1'
3	K	225	LMT	C2-C1-O1'-C1'

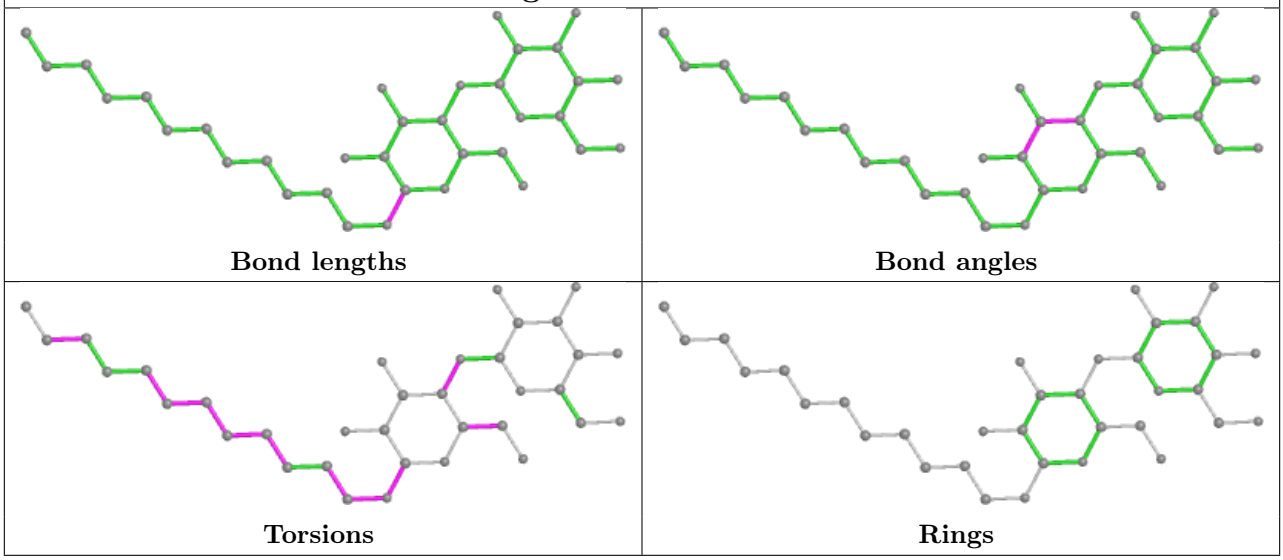
There are no ring outliers.

31 monomers are involved in 53 short contacts:

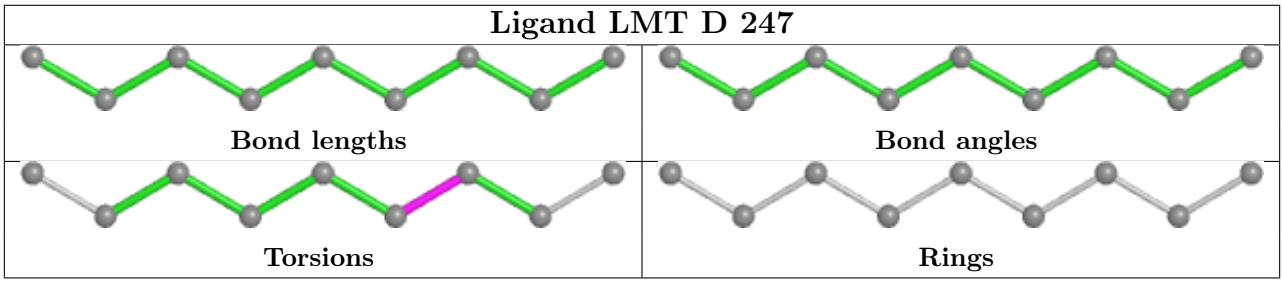
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	C	214	LMT	2	0
3	D	247	LMT	1	0
3	E	221	LMT	2	0
2	L	212	GSH	2	0
3	C	237	LMT	1	0
2	A	201	GSH	2	0
3	E	249	LMT	3	0
2	B	202	GSH	1	0
3	F	219	LMT	3	0
2	C	203	GSH	1	0
3	D	238	LMT	2	0
3	G	222	LMT	3	0
3	I	252	LMT	1	0
2	F	206	GSH	2	0
3	A	244	LMT	2	0
3	E	268	LMT	4	0
3	E	243	LMT	1	0
3	L	254	LMT	1	0
2	I	209	GSH	1	0
3	E	231	LMT	1	0
3	J	239	LMT	1	0
3	D	220	LMT	3	0
3	I	258	LMT	3	0
2	J	210	GSH	2	0
2	H	208	GSH	1	0
3	A	245	LMT	1	0
3	B	218	LMT	3	0
3	F	248	LMT	1	0
3	I	240	LMT	1	0
3	A	228	LMT	1	0
3	C	216	LMT	5	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less 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.

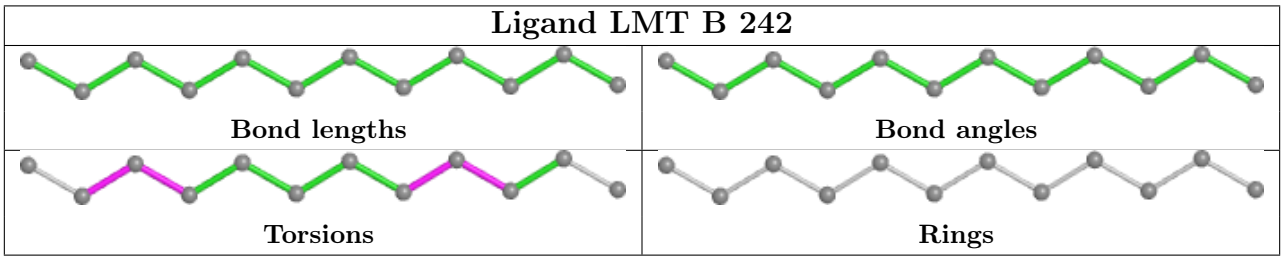
Ligand LMT C 214



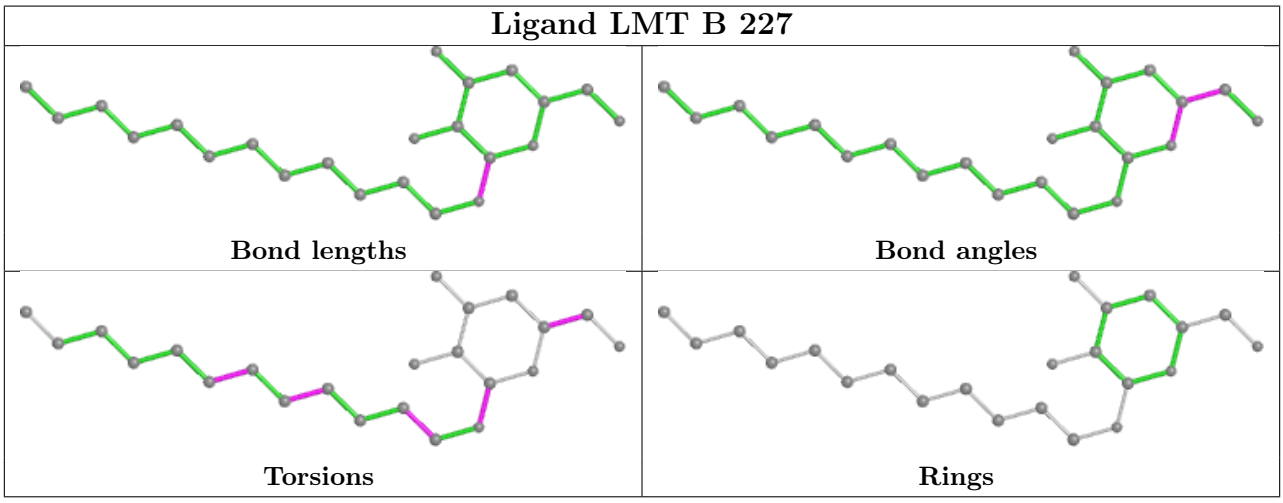
Ligand LMT D 247



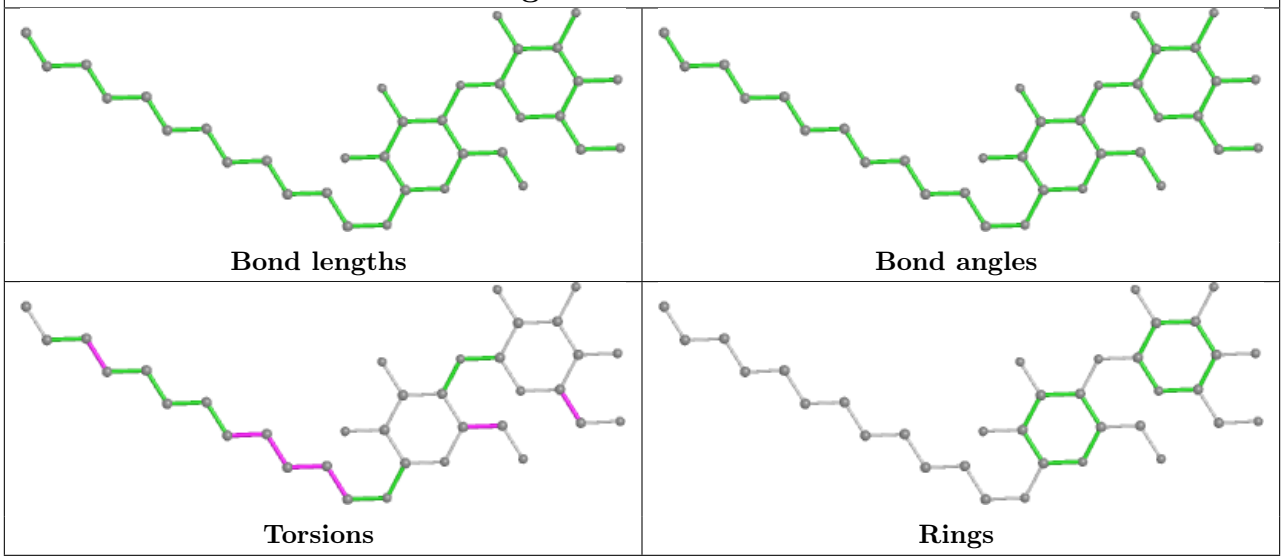
Ligand LMT B 242



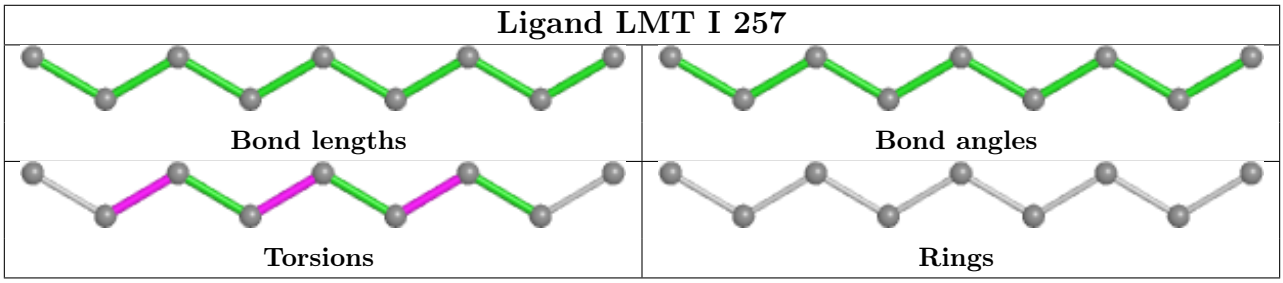
Ligand LMT B 227



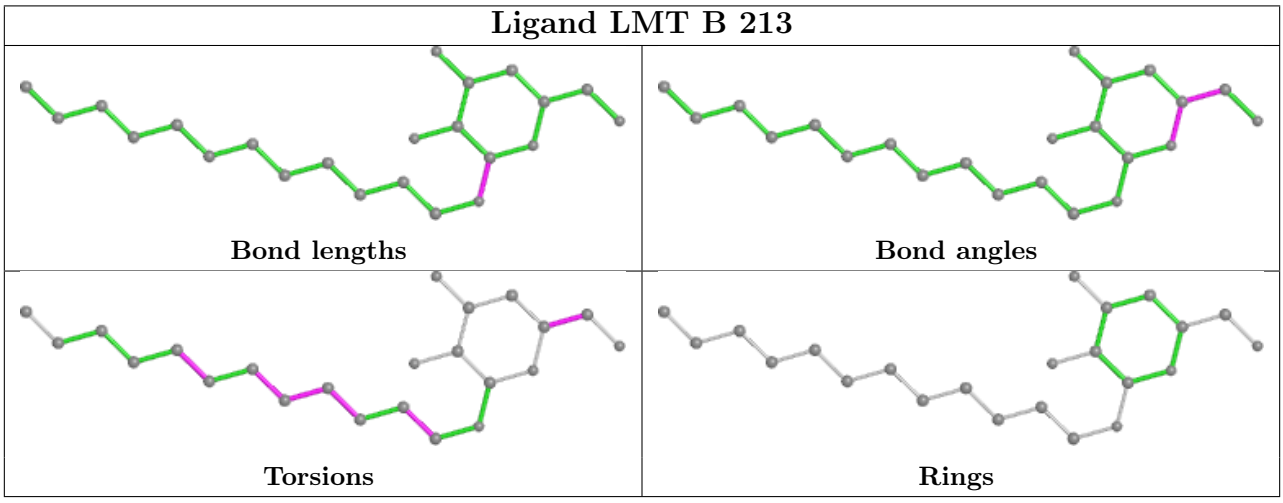
Ligand LMT A 215



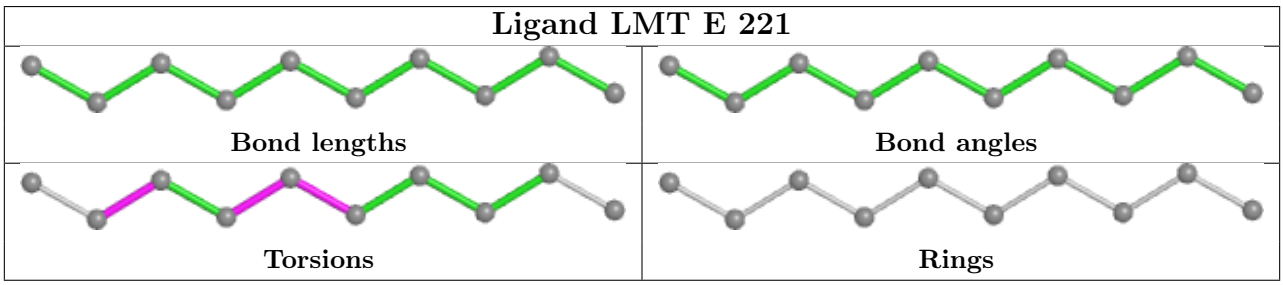
Ligand LMT I 257



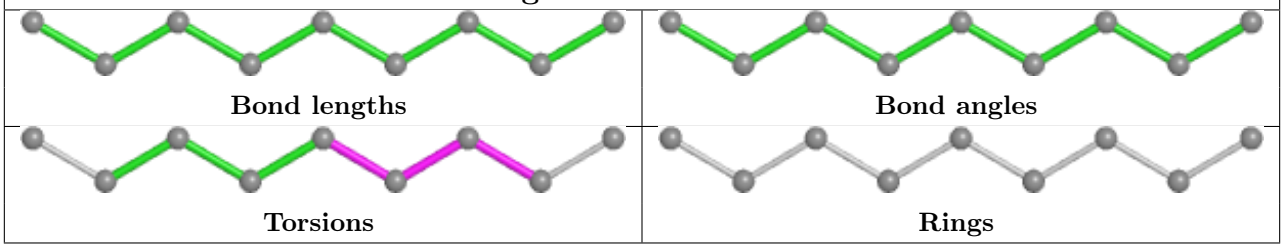
Ligand LMT B 213



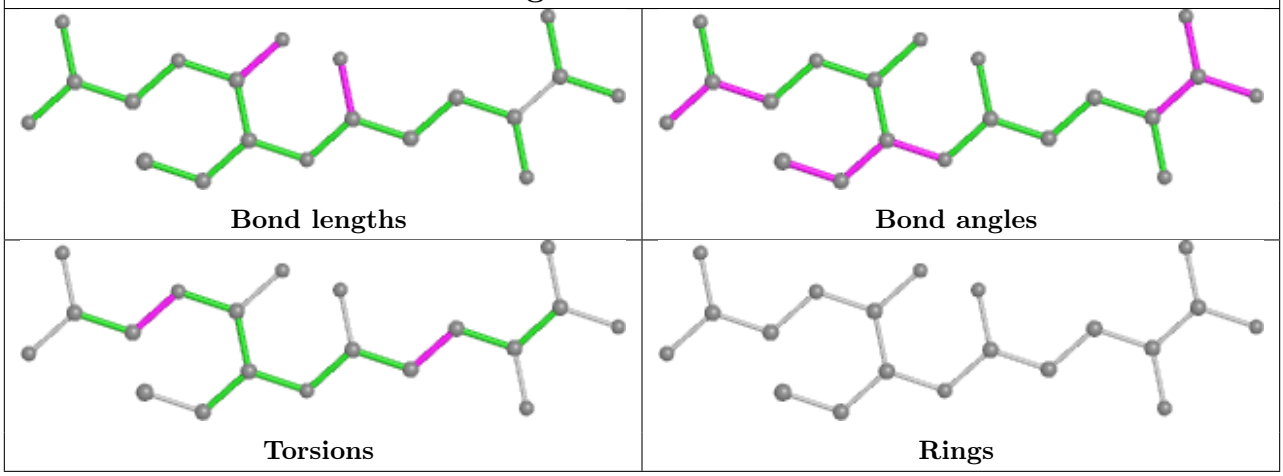
Ligand LMT E 221



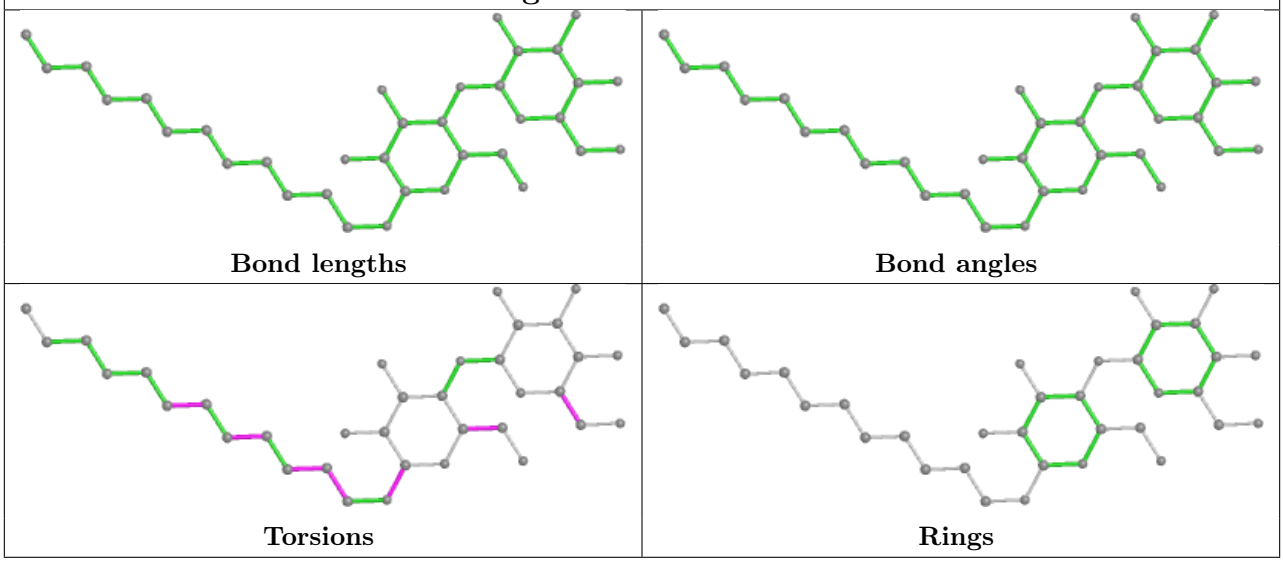
Ligand LMT A 262



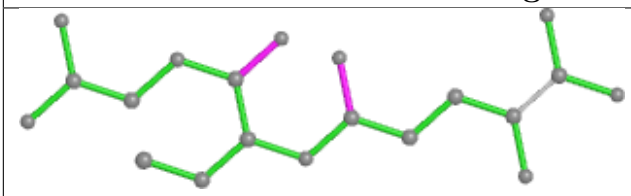
Ligand GSH L 212

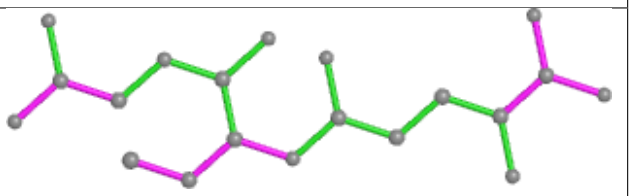


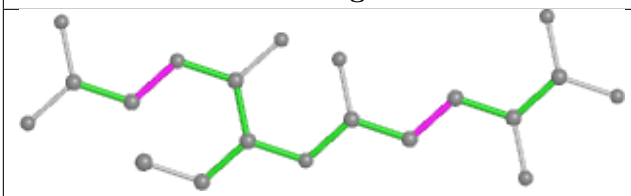
Ligand LMT C 237

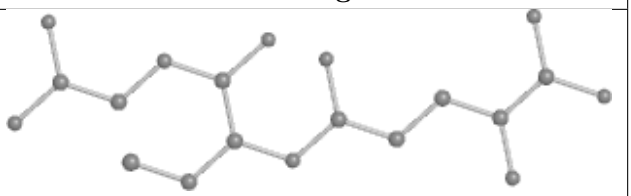


Ligand GSH A 201

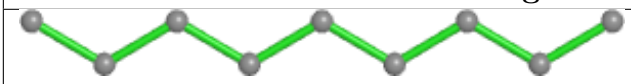

Bond lengths

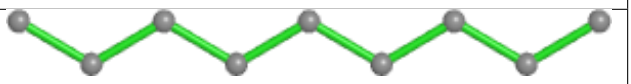

Bond angles

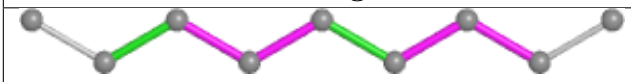

Torsions

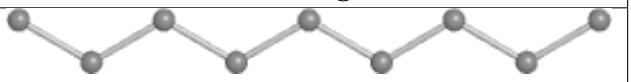

Rings

Ligand LMT E 249

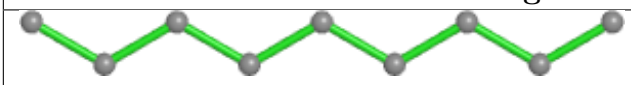

Bond lengths

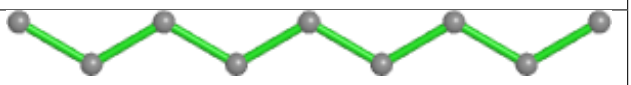

Bond angles

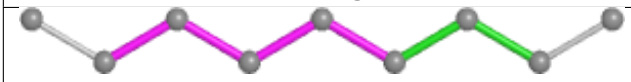

Torsions

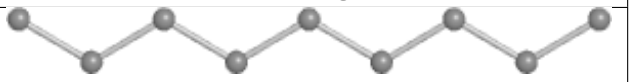

Rings

Ligand LMT L 226

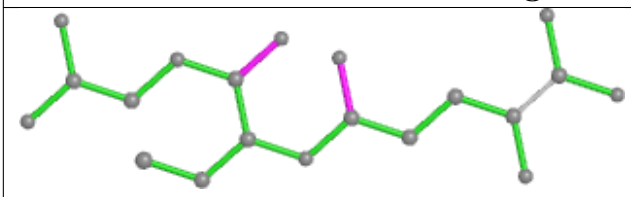

Bond lengths

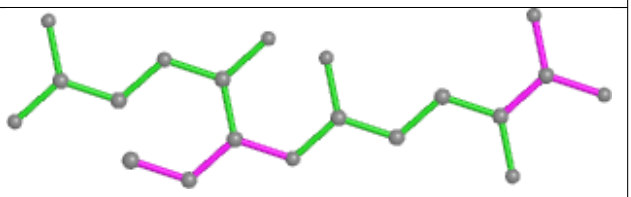

Bond angles

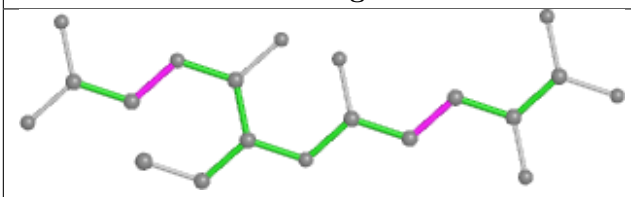

Torsions

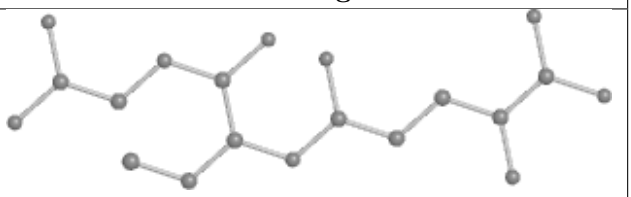

Rings

Ligand GSH B 202

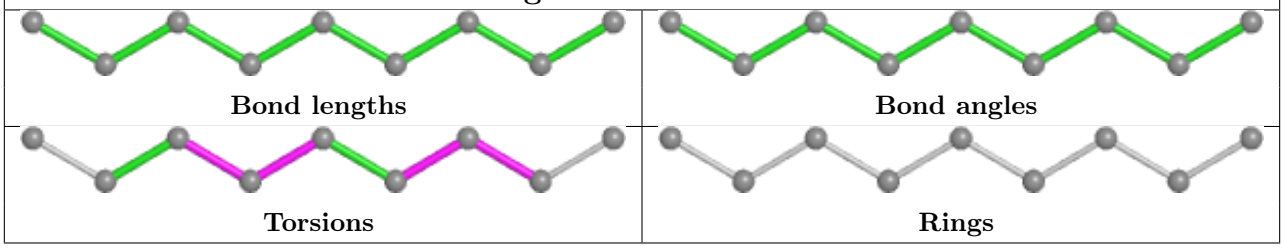

Bond lengths


Bond angles

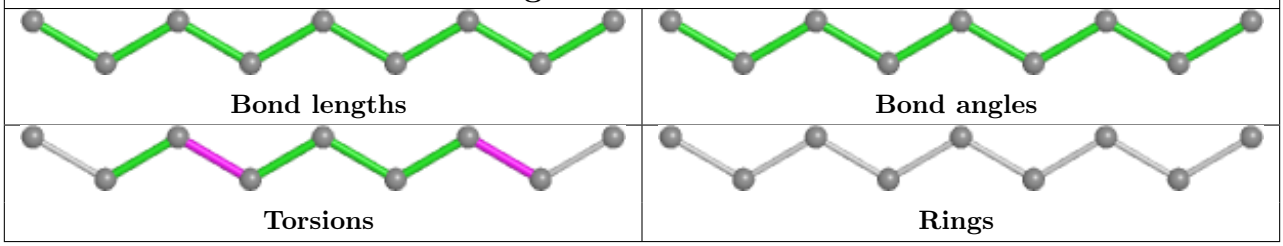

Torsions


Rings

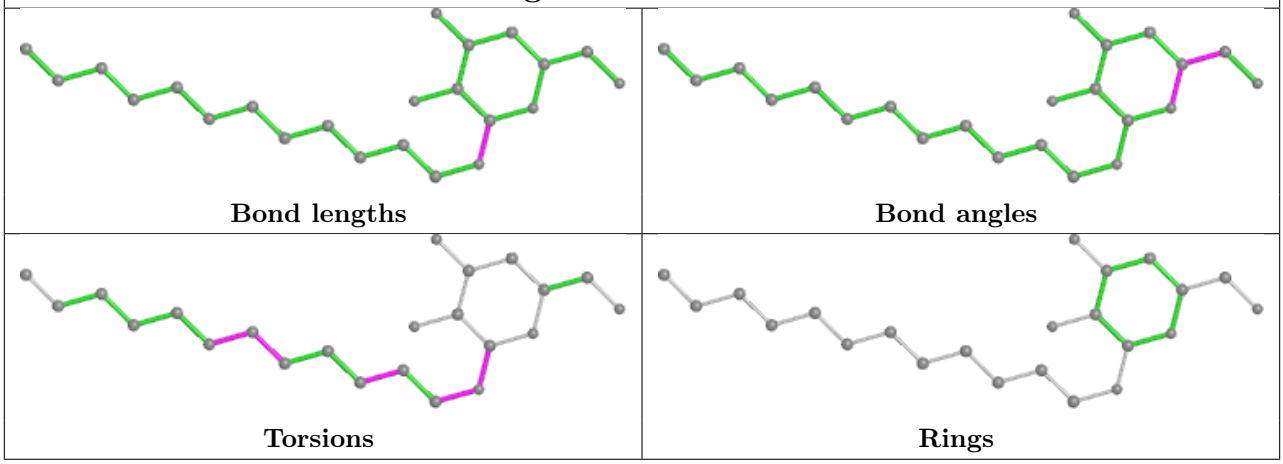
Ligand LMT F 219



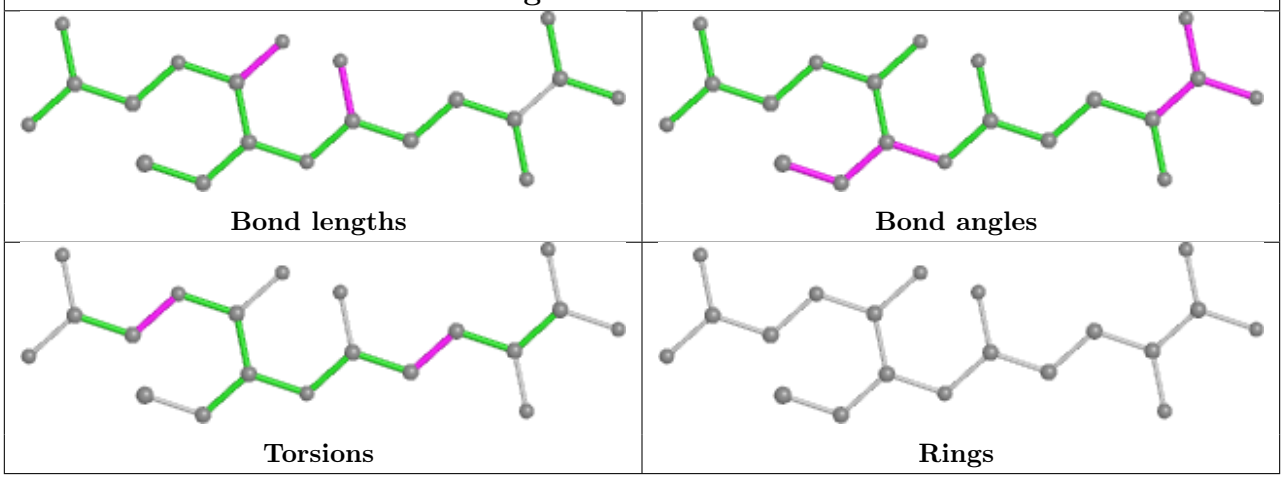
Ligand LMT L 255



Ligand LMT F 233

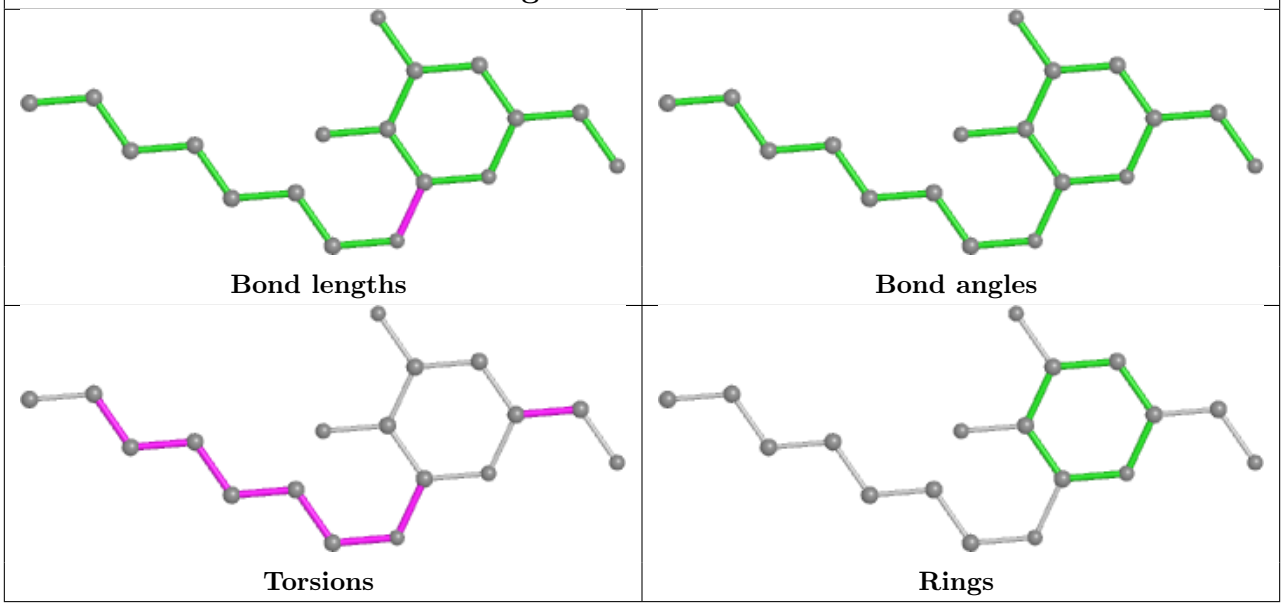


Ligand GSH D 204

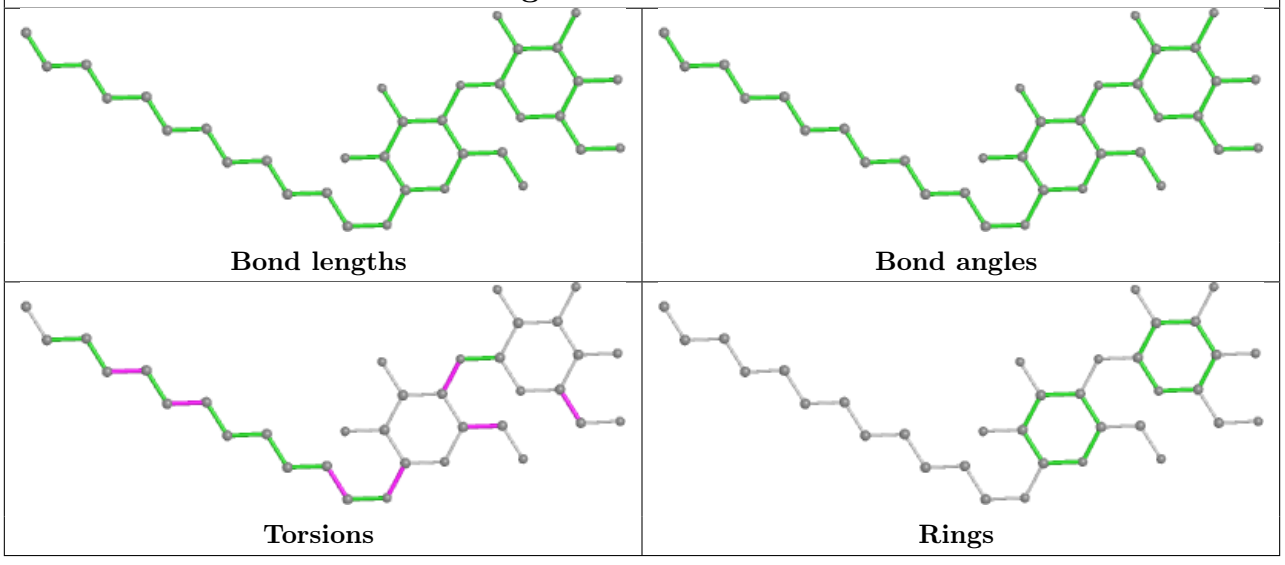


Ligand GSH C 203

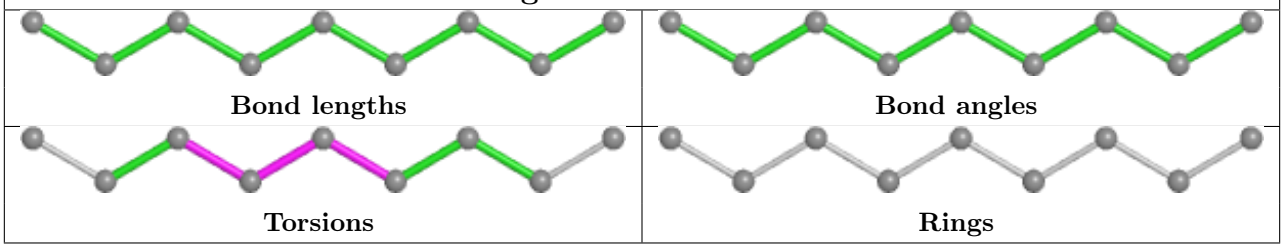
Ligand LMT A 256



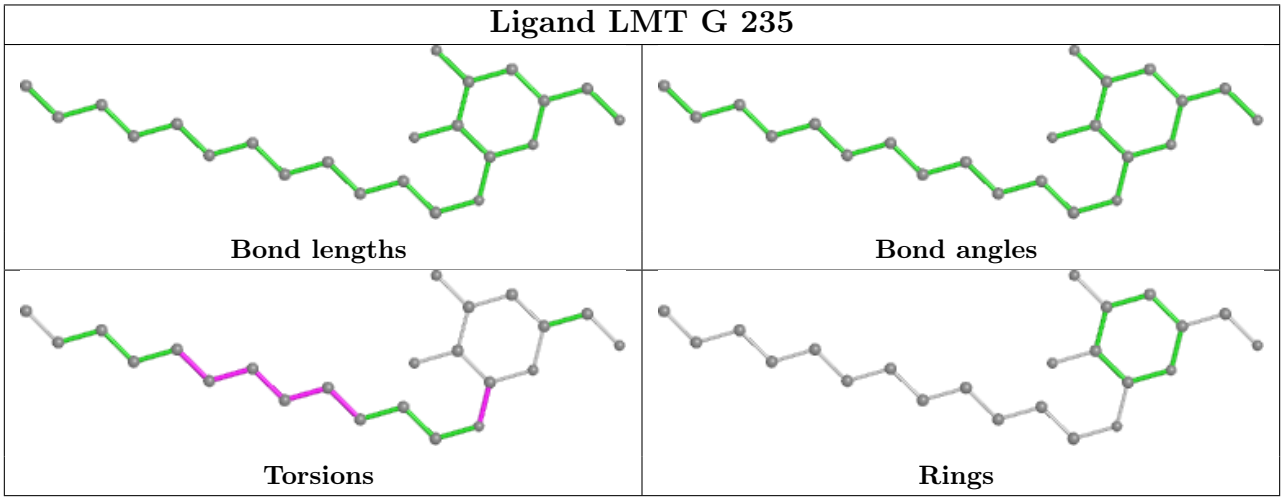
Ligand LMT D 238



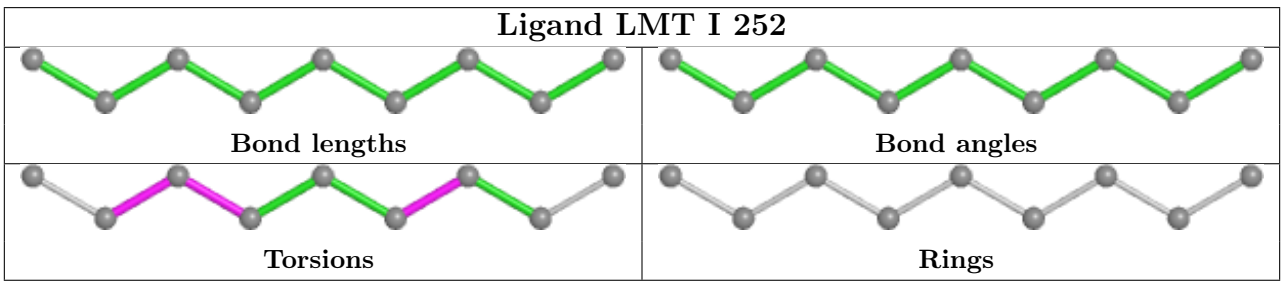
Ligand LMT G 222



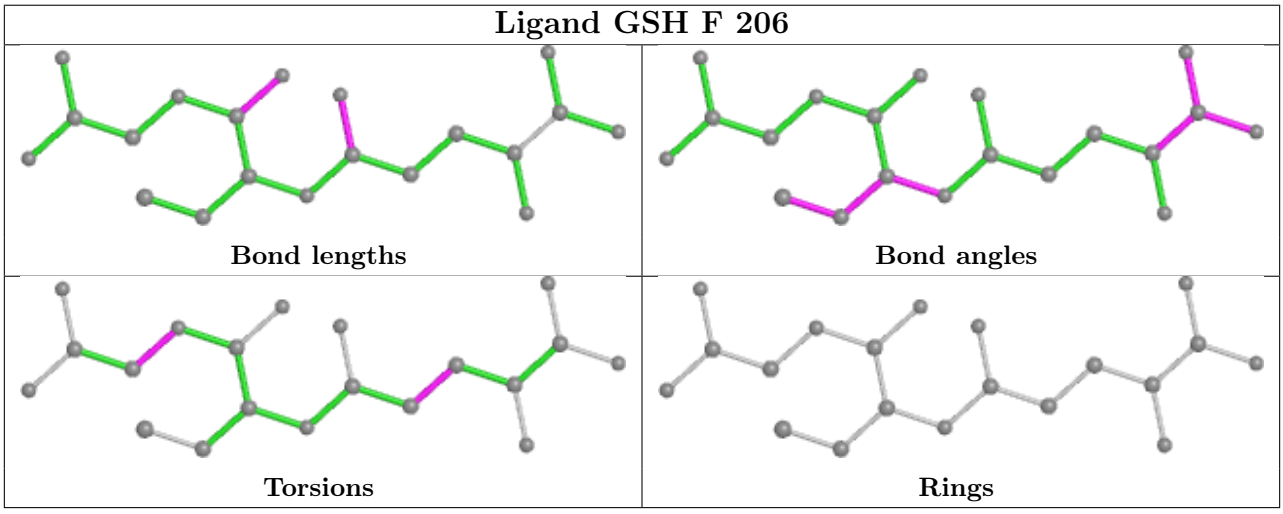
Ligand LMT G 235



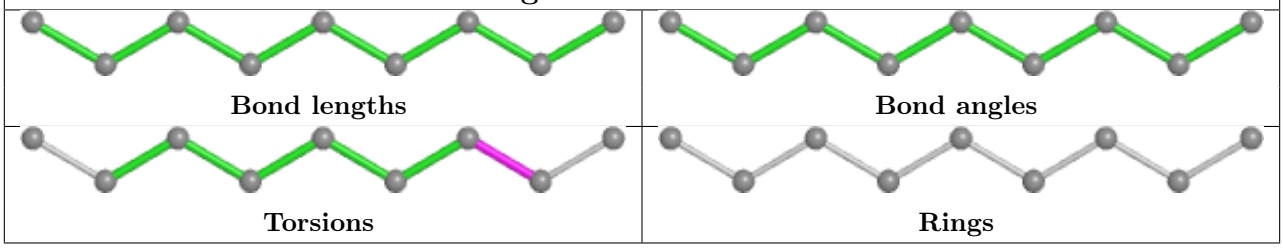
Ligand LMT I 252



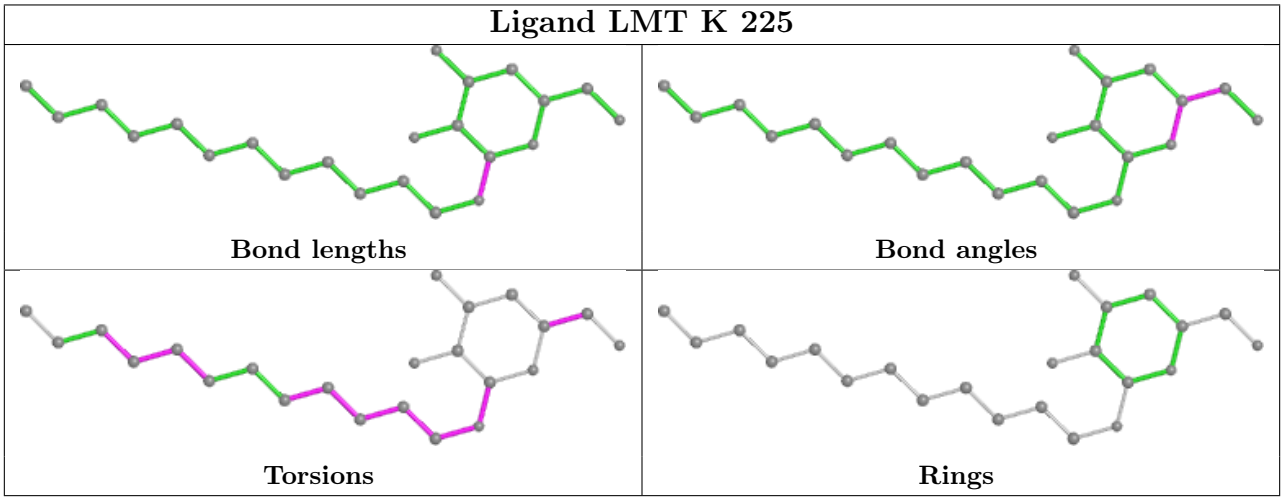
Ligand GSH F 206



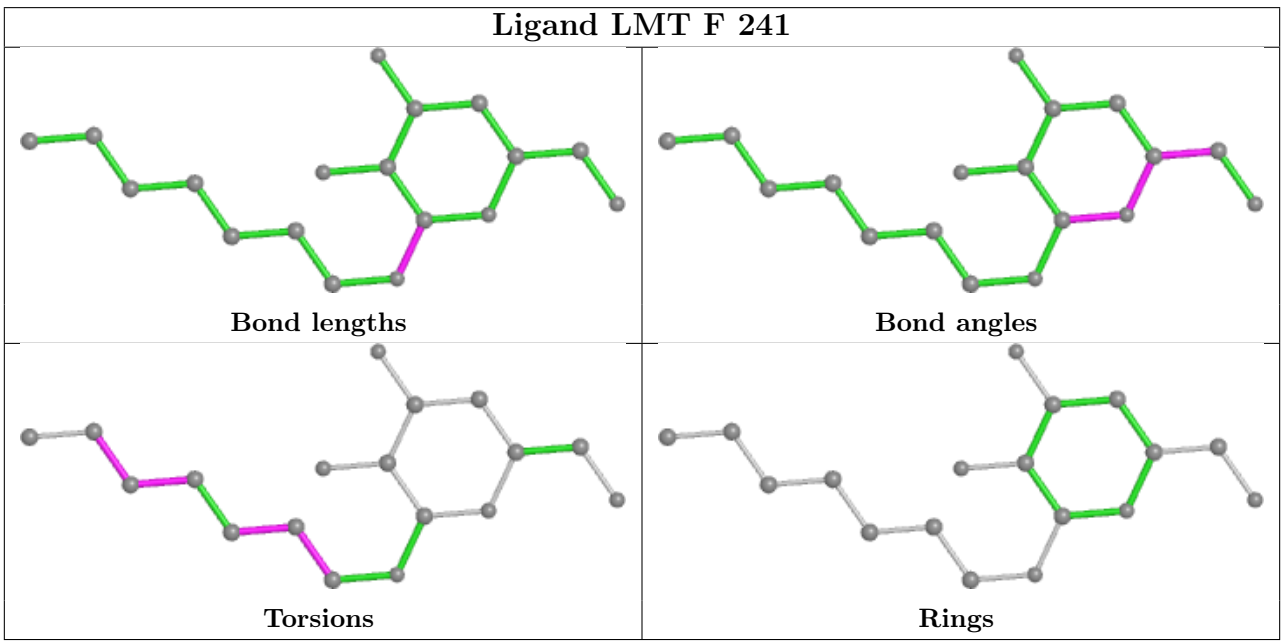
Ligand LMT G 267



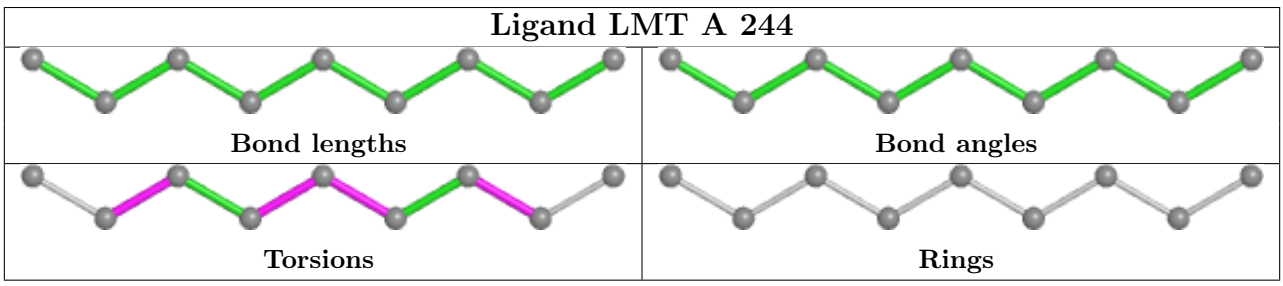
Ligand LMT K 225



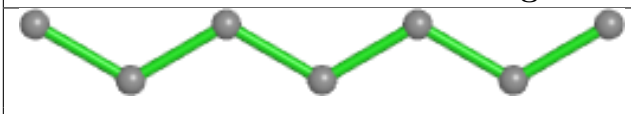
Ligand LMT F 241

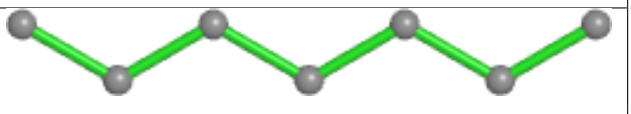


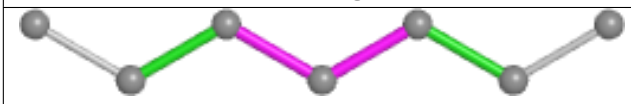
Ligand LMT A 244



Ligand LMT A 217

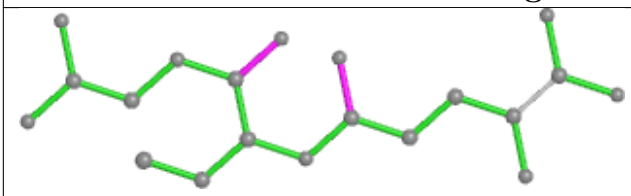

Bond lengths

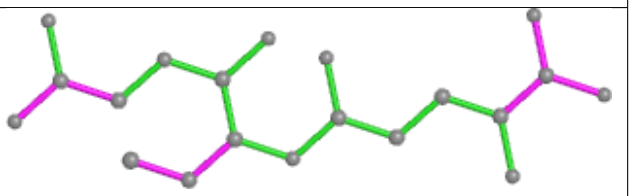

Bond angles

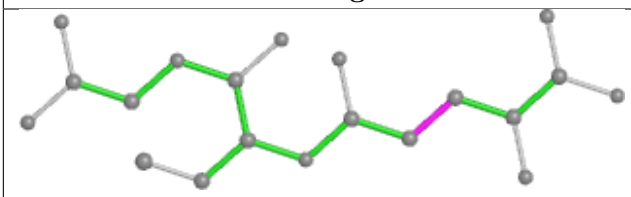

Torsions

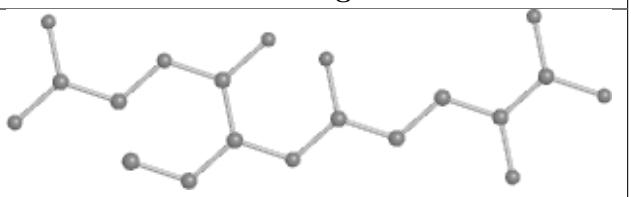

Rings

Ligand GSH E 205

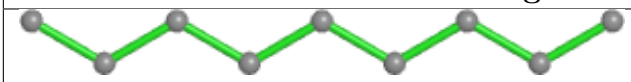

Bond lengths

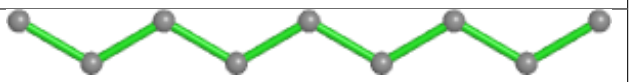

Bond angles

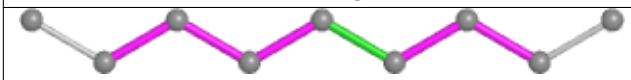

Torsions

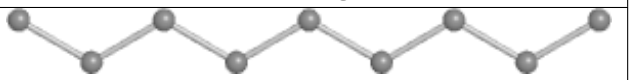

Rings

Ligand LMT L 223

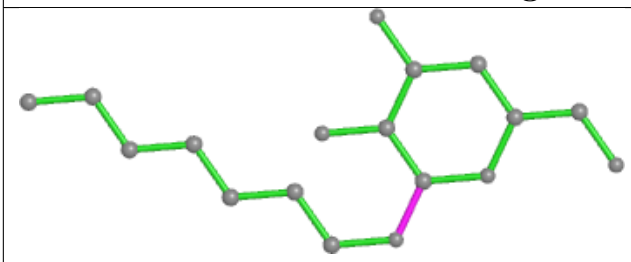

Bond lengths

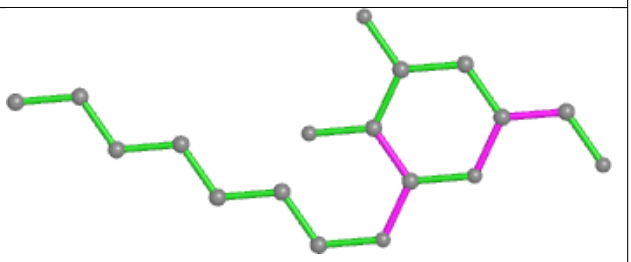

Bond angles

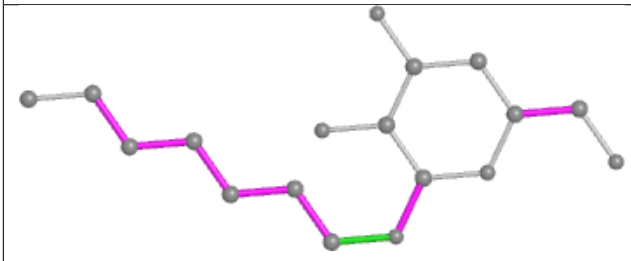

Torsions

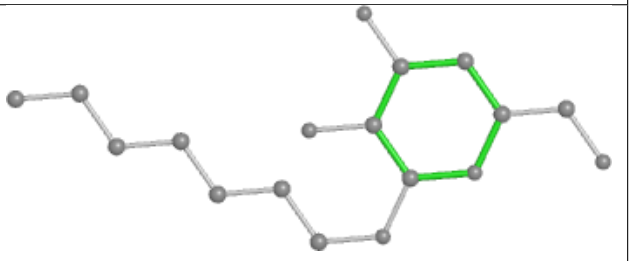

Rings

Ligand LMT B 236

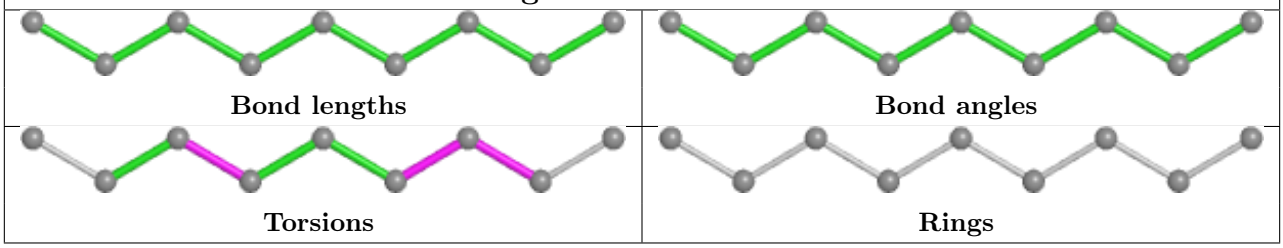

Bond lengths


Bond angles

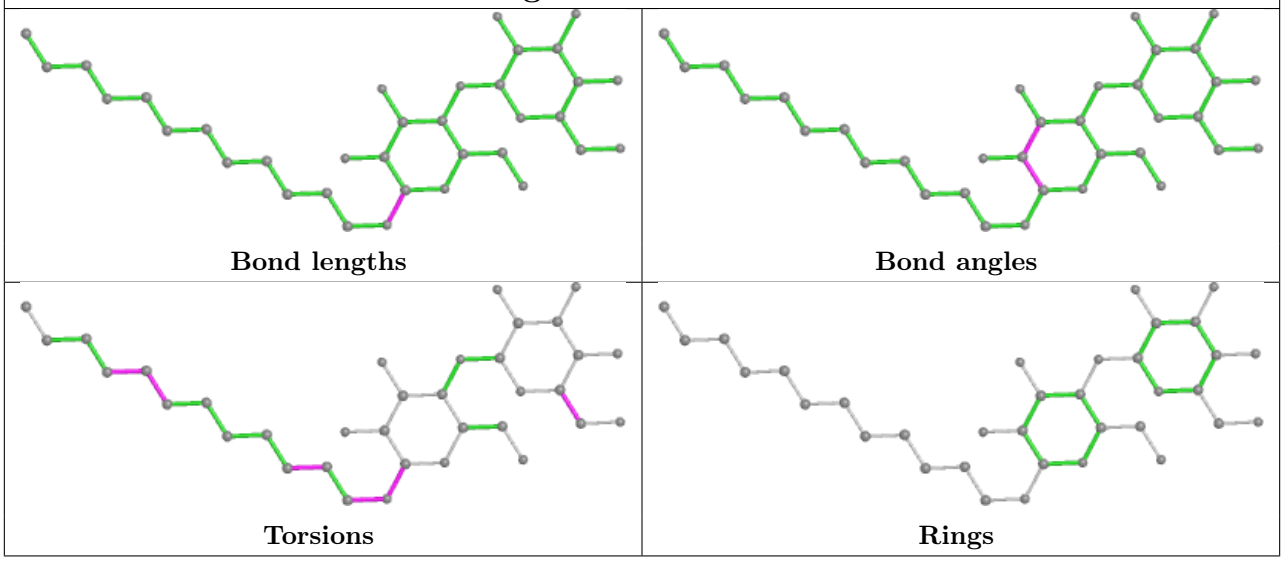

Torsions


Rings

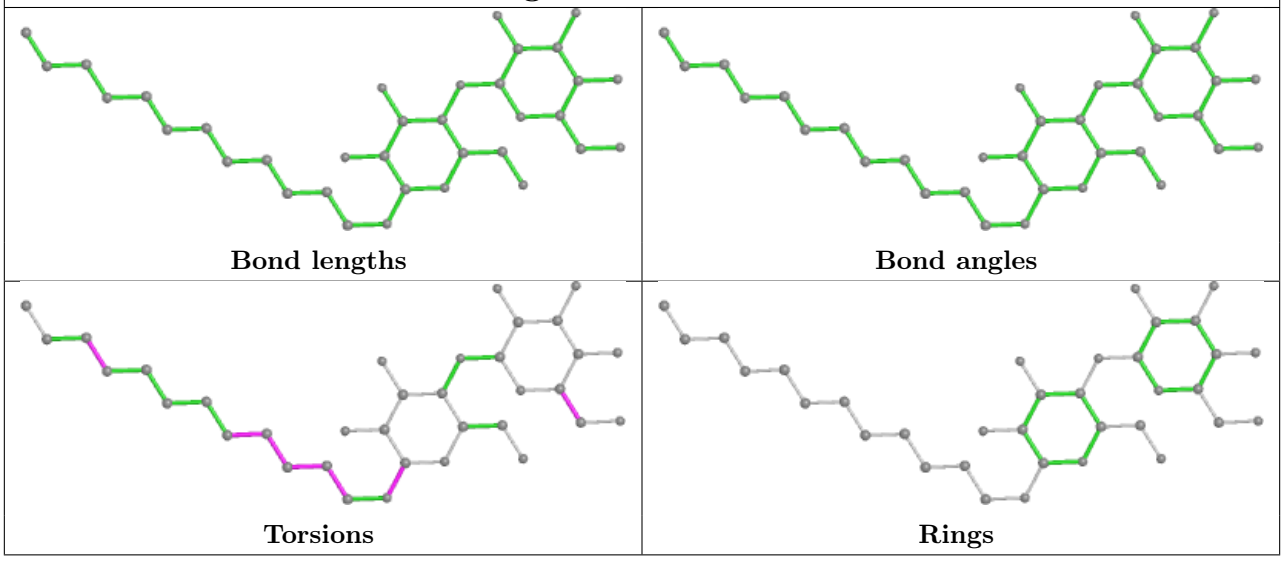
Ligand LMT H 250



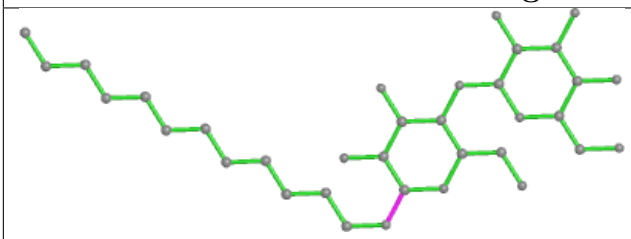
Ligand LMT E 268

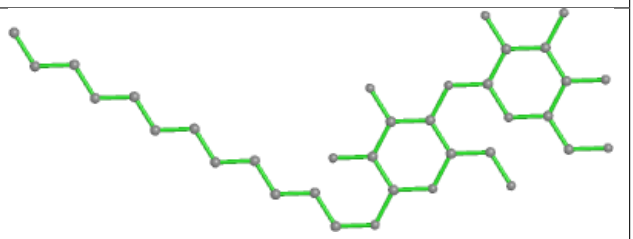


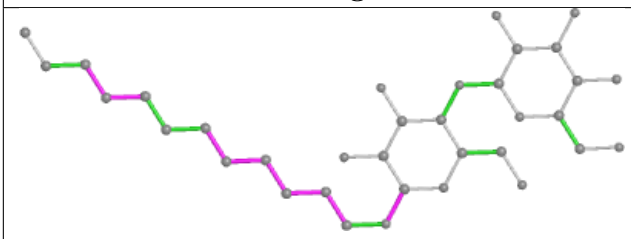
Ligand LMT E 243

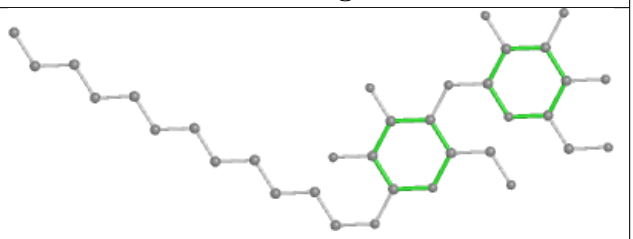


Ligand LMT E 269

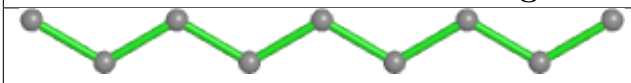

Bond lengths

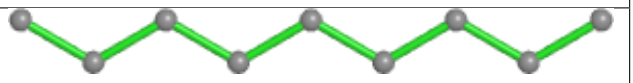

Bond angles


Torsions

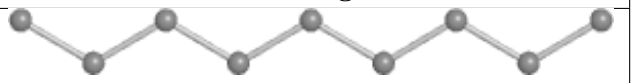

Rings

Ligand LMT G 251

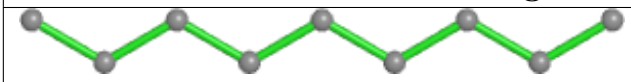

Bond lengths

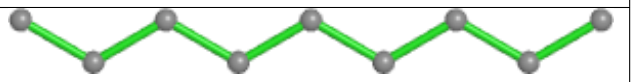

Bond angles

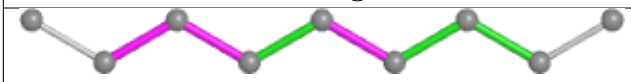

Torsions

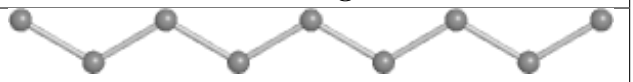

Rings

Ligand LMT L 254

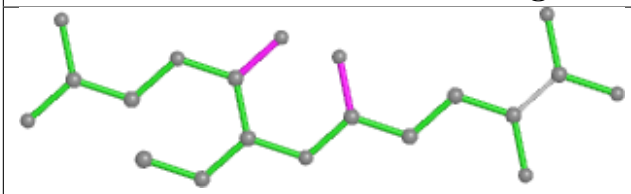

Bond lengths

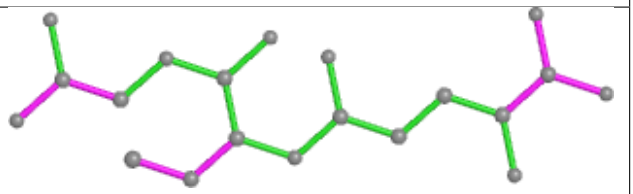

Bond angles

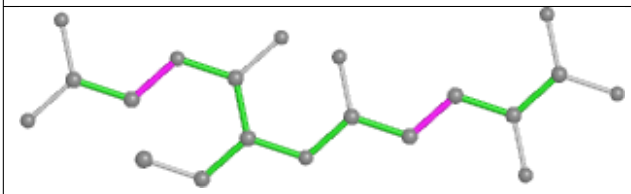

Torsions

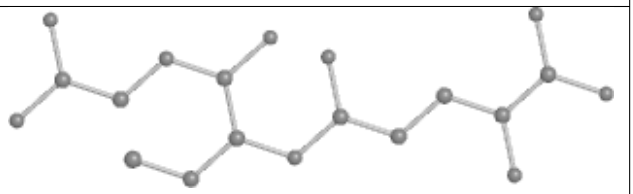

Rings

Ligand GSH I 209

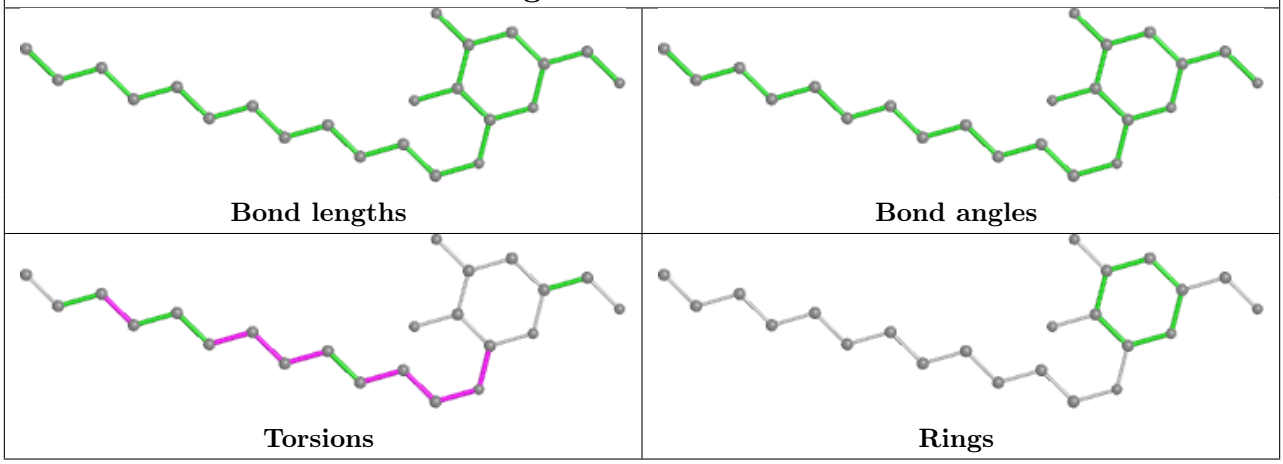

Bond lengths


Bond angles

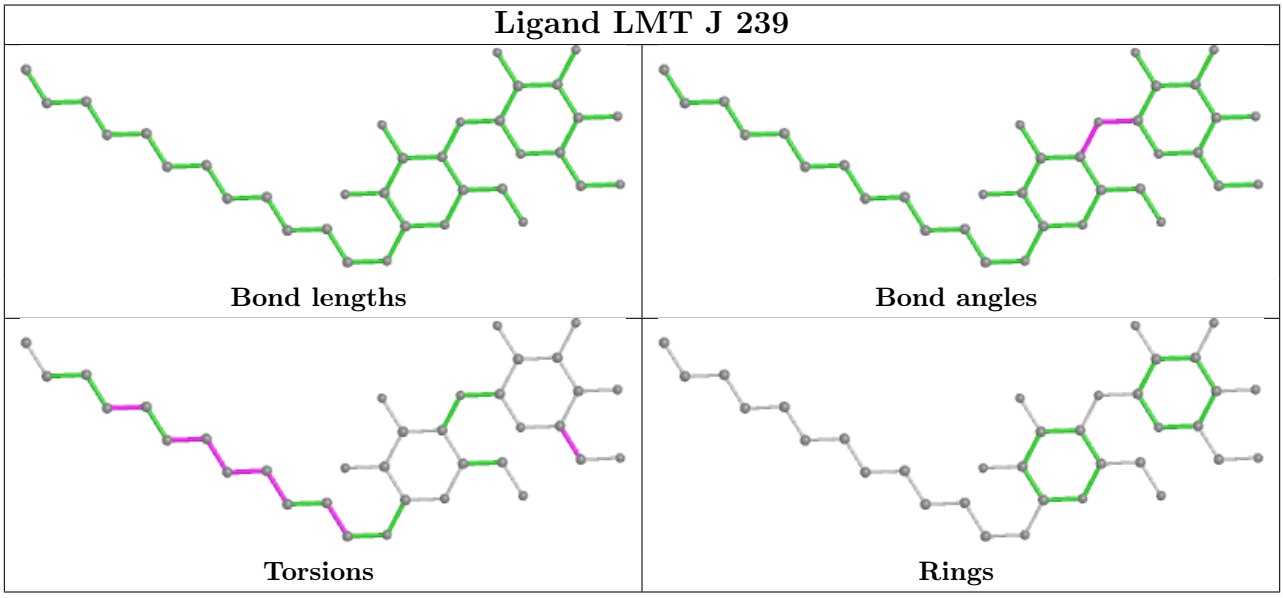

Torsions


Rings

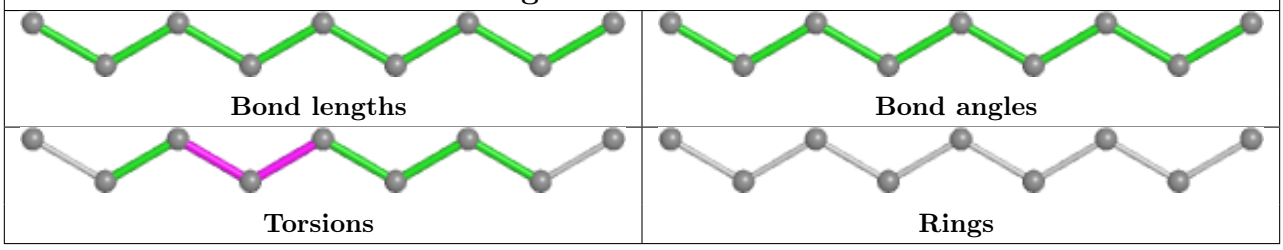
Ligand LMT E 231



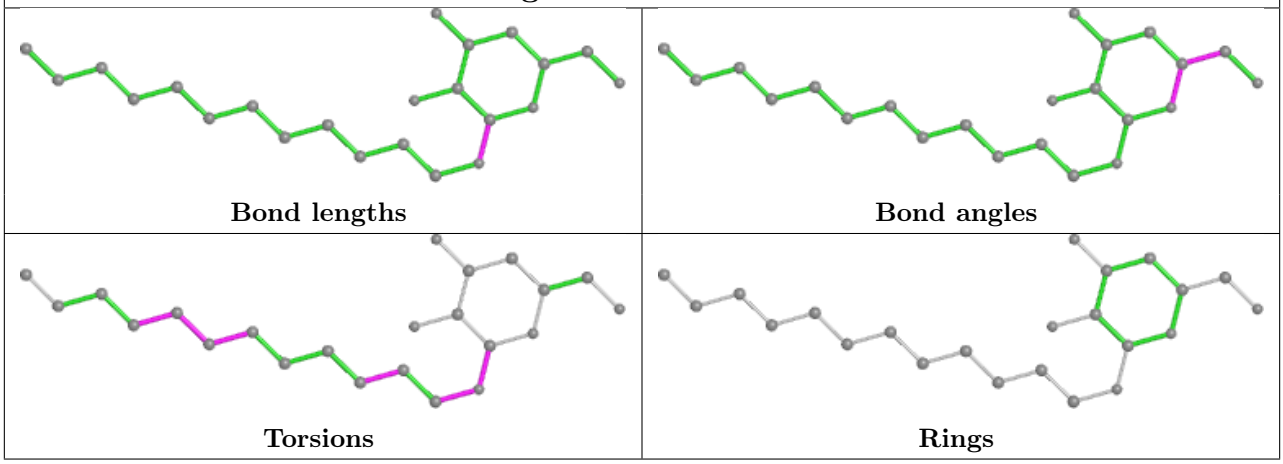
Ligand LMT J 239



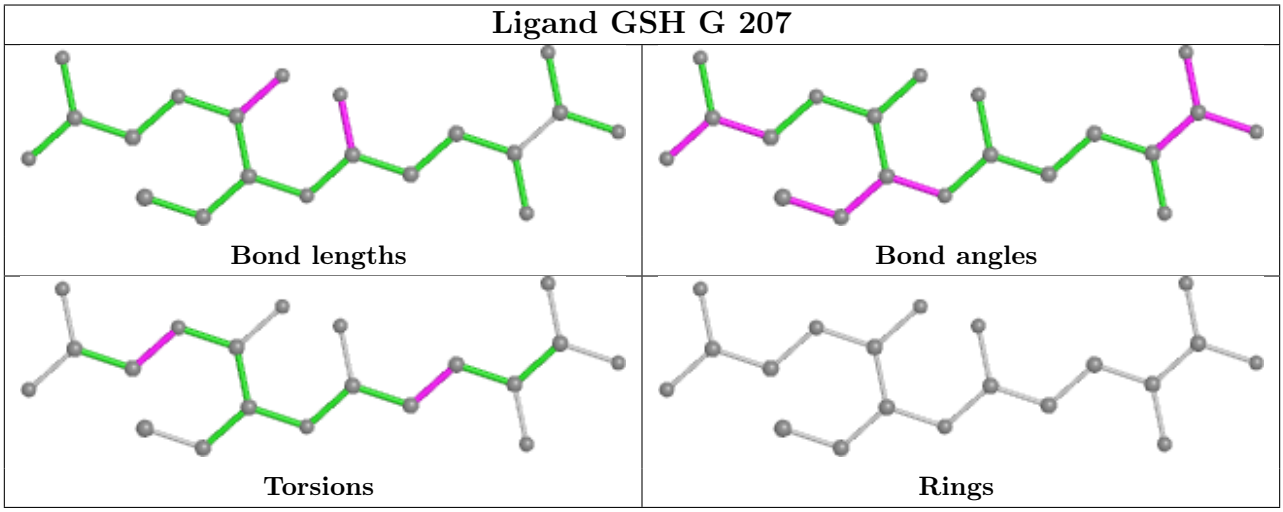
Ligand LMT D 220



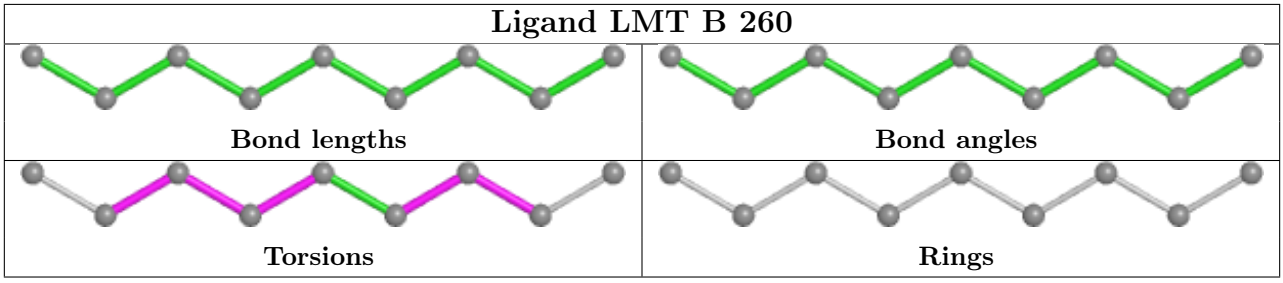
Ligand LMT H 234



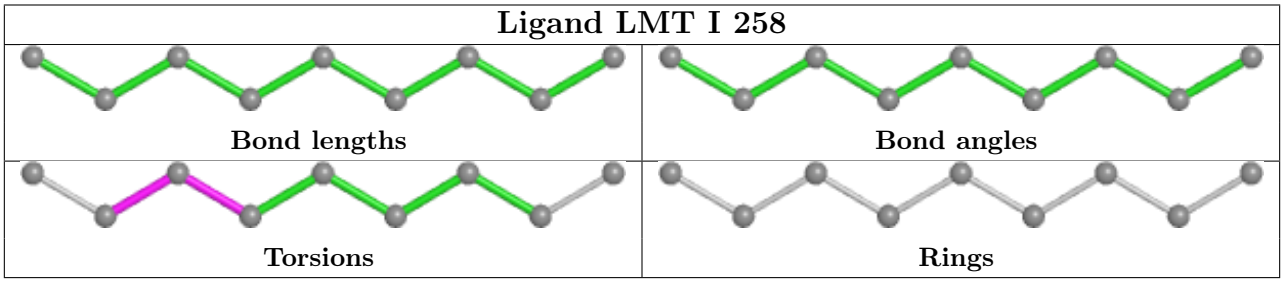
Ligand GSH G 207



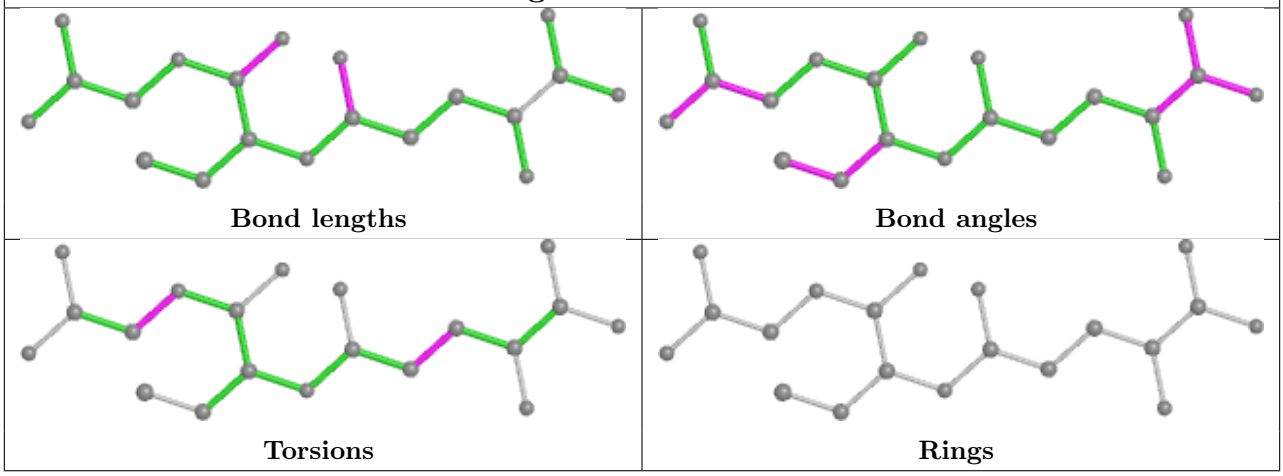
Ligand LMT B 260



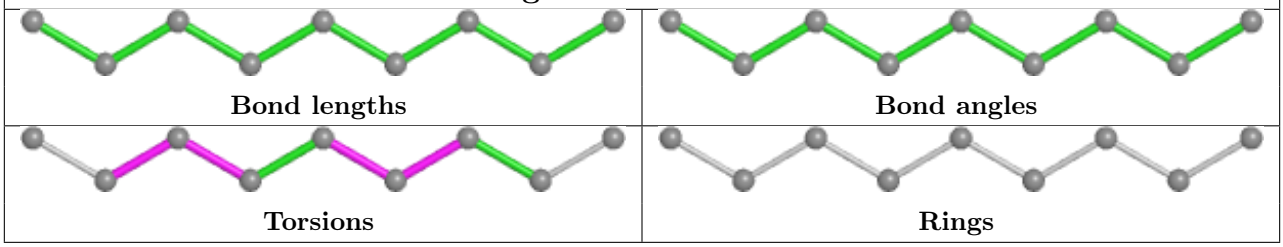
Ligand LMT I 258



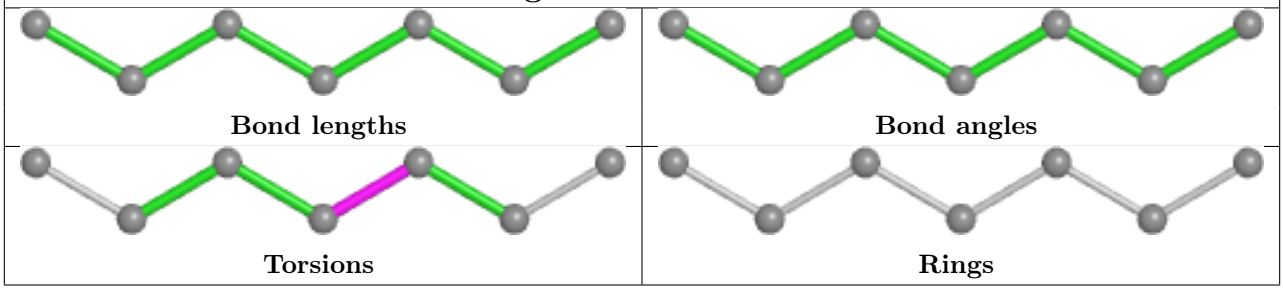
Ligand GSH J 210



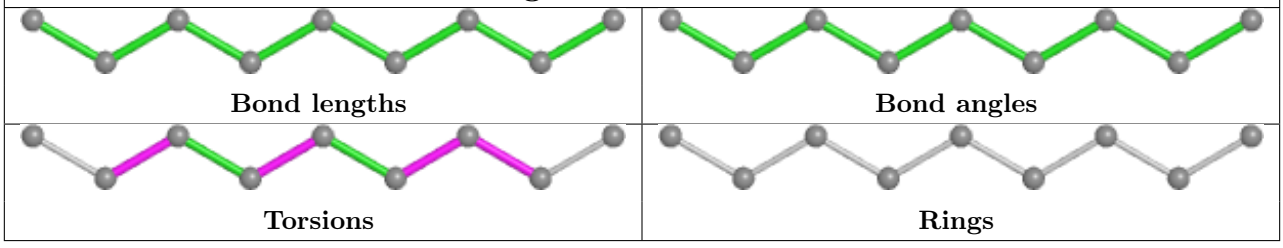
Ligand LMT C 246



Ligand LMT L 265

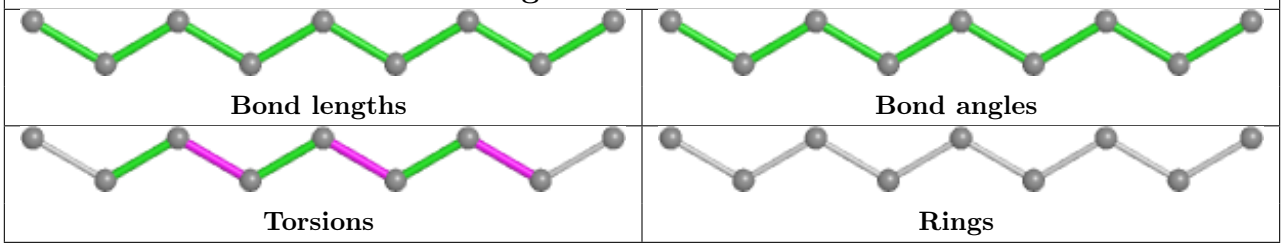


Ligand LMT E 266

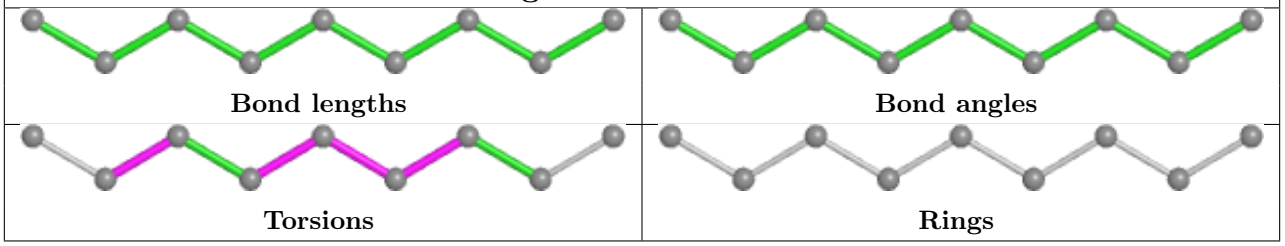


Ligand GSH H 208

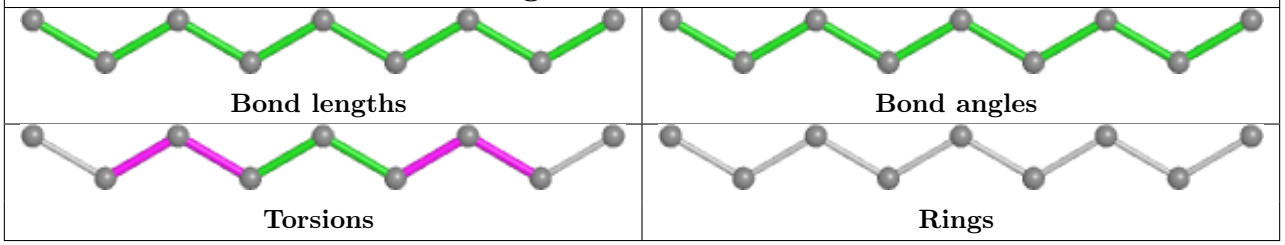
Ligand LMT A 229



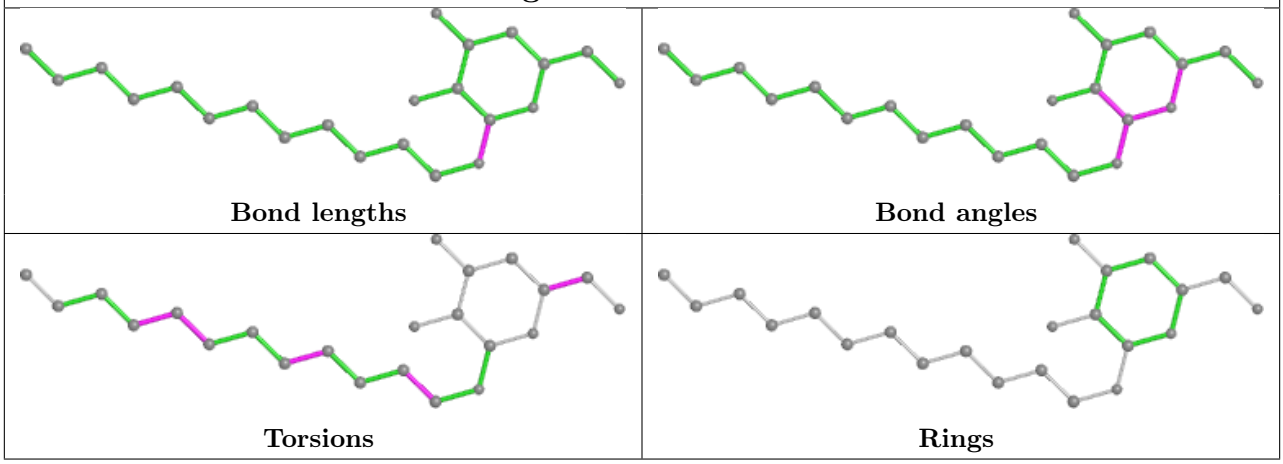
Ligand LMT A 245



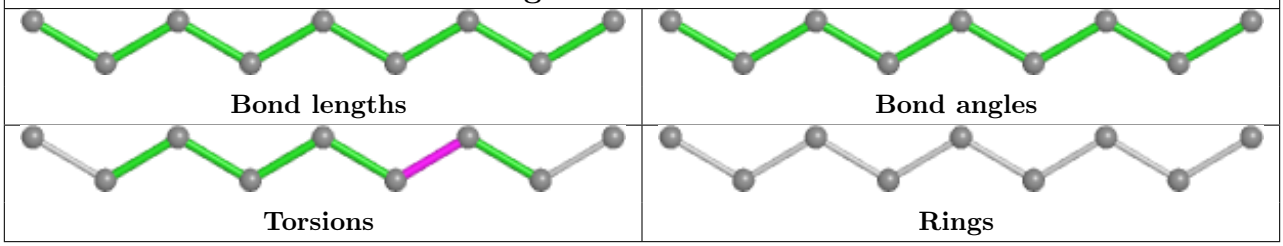
Ligand LMT B 259



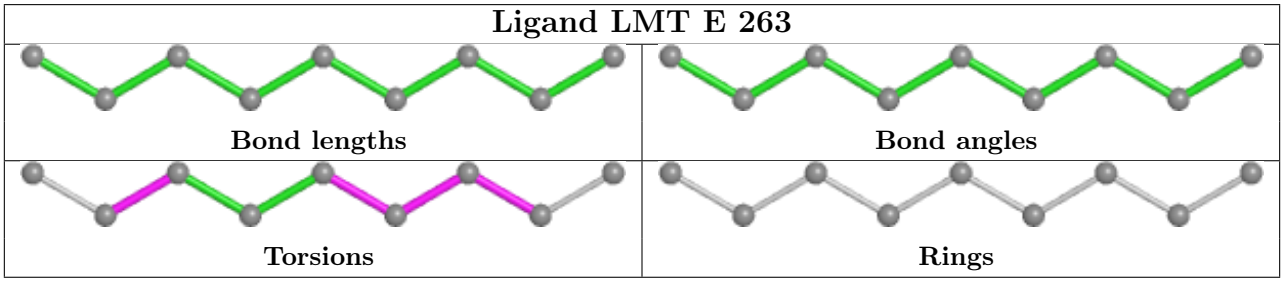
Ligand LMT B 218



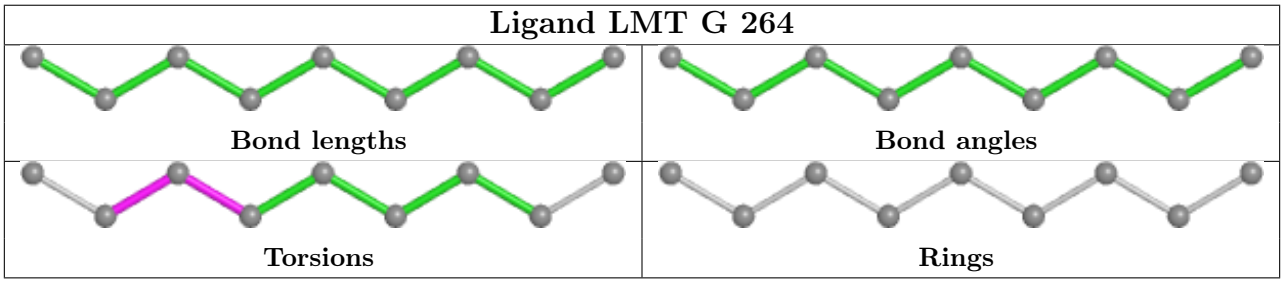
Ligand LMT F 248



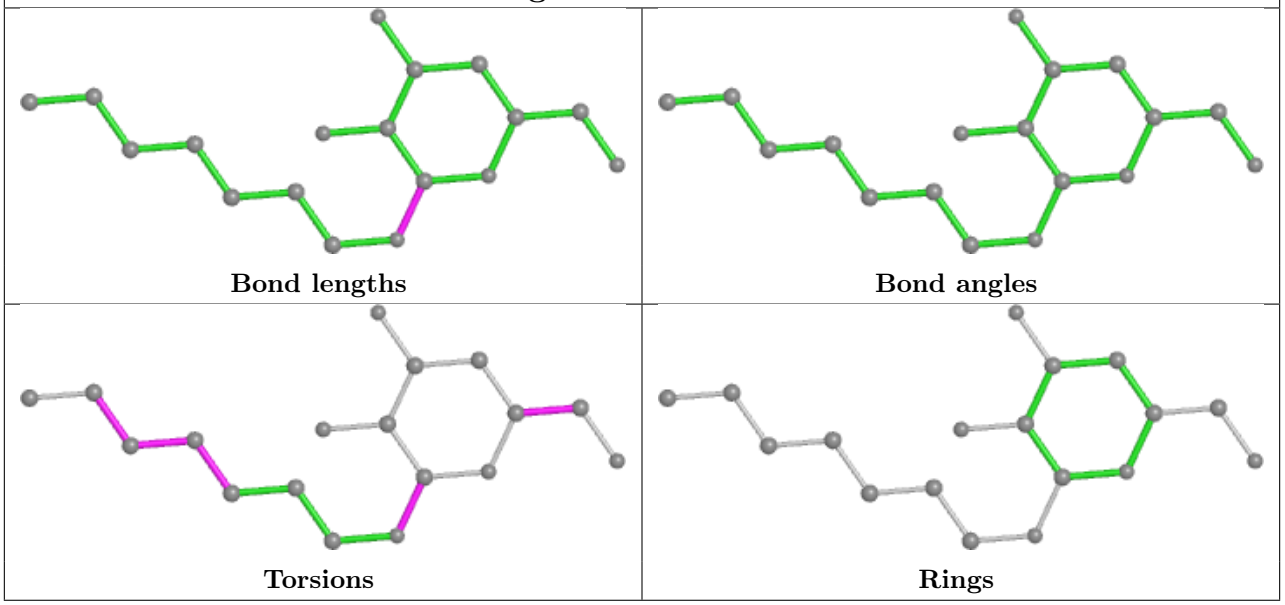
Ligand LMT E 263



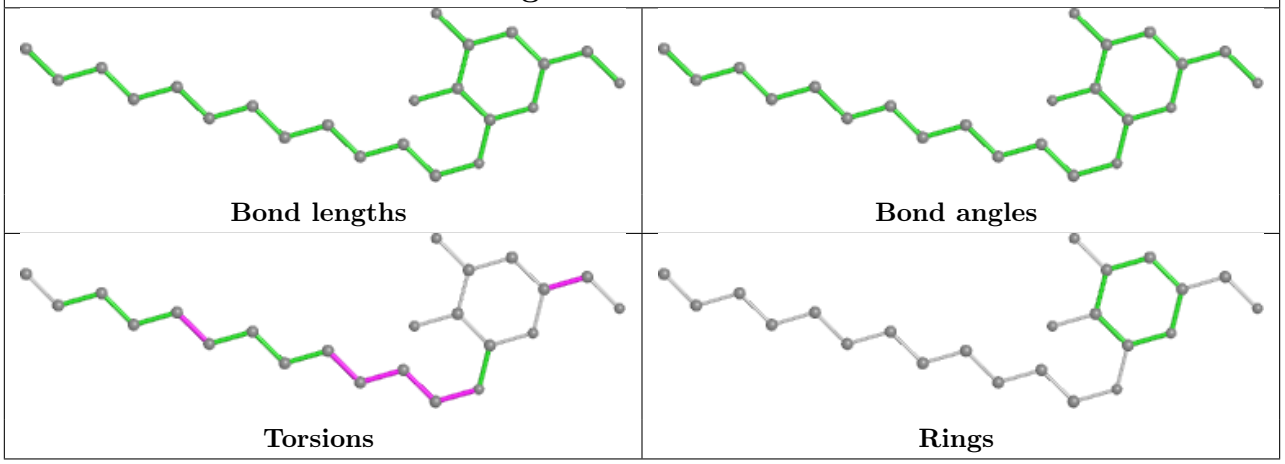
Ligand LMT G 264



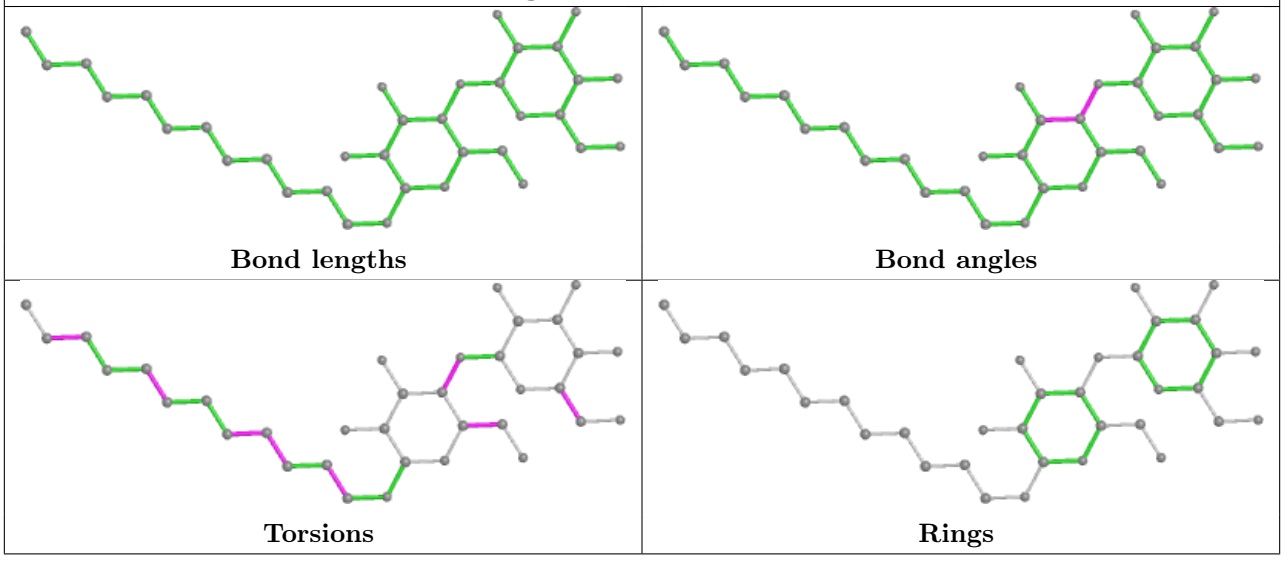
Ligand LMT I 240



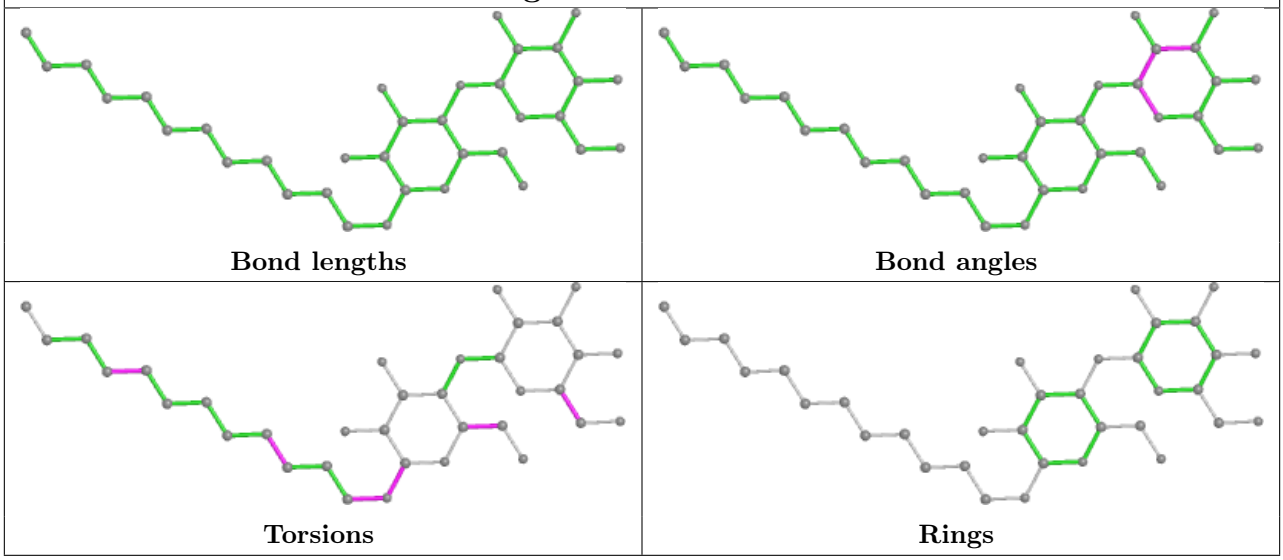
Ligand LMT A 228



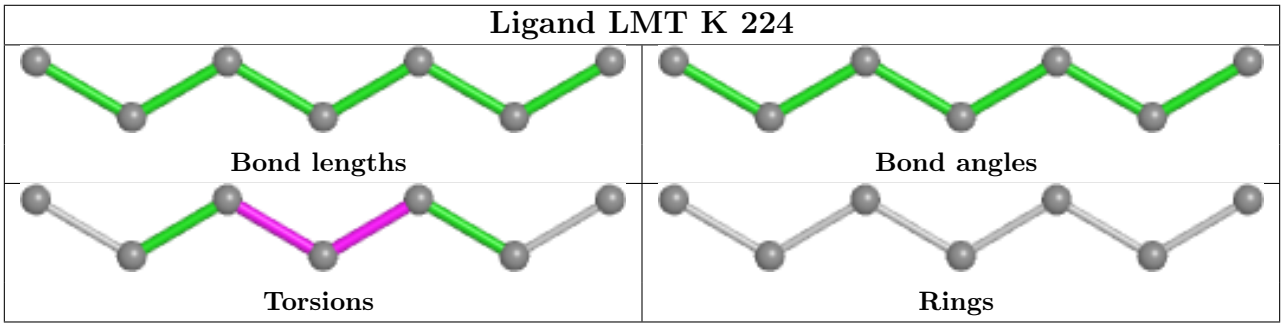
Ligand LMT C 216



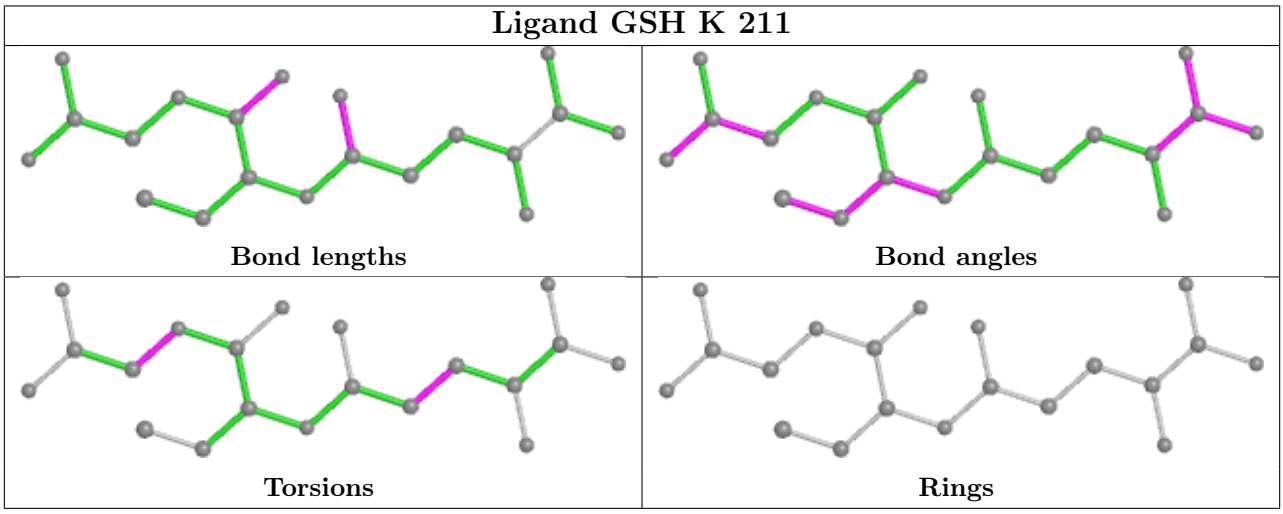
Ligand LMT E 230



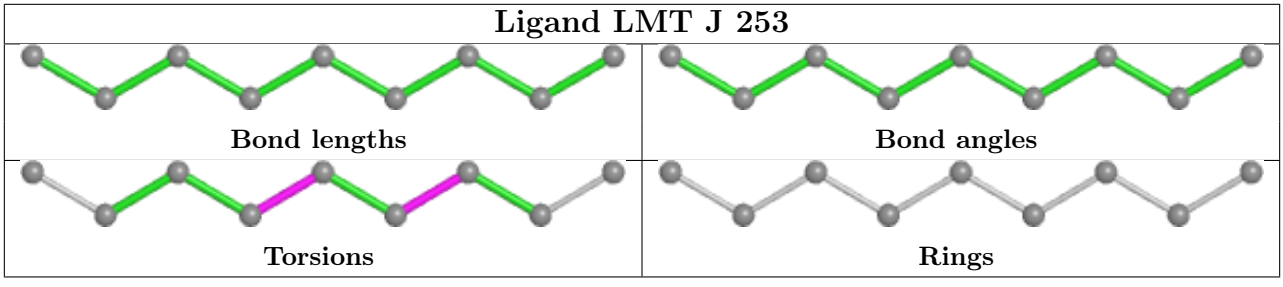
Ligand LMT K 224



Ligand GSH K 211



Ligand LMT J 253



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 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	146/156 (93%)	0.17	5 (3%) 45 43	51, 67, 94, 119	0
1	B	146/156 (93%)	0.12	5 (3%) 45 43	51, 67, 95, 119	0
1	C	146/156 (93%)	0.35	13 (8%) 9 10	51, 67, 93, 119	0
1	D	146/156 (93%)	0.36	15 (10%) 6 6	52, 67, 93, 119	0
1	E	146/156 (93%)	0.13	4 (2%) 54 52	51, 67, 93, 118	0
1	F	146/156 (93%)	0.10	3 (2%) 63 62	51, 67, 94, 118	0
1	G	146/156 (93%)	0.02	7 (4%) 30 28	51, 67, 96, 119	0
1	H	146/156 (93%)	0.04	5 (3%) 45 43	52, 67, 94, 119	0
1	I	146/156 (93%)	0.46	22 (15%) 2 2	52, 67, 94, 119	0
1	J	146/156 (93%)	0.17	8 (5%) 25 23	52, 67, 94, 119	0
1	K	146/156 (93%)	0.29	14 (9%) 8 8	52, 67, 94, 119	0
1	L	146/156 (93%)	0.20	7 (4%) 30 28	52, 67, 93, 119	0
All	All	1752/1872 (93%)	0.20	108 (6%) 20 20	51, 67, 97, 119	0

All (108) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	L	147	LEU	8.1
1	D	147	LEU	6.0
1	L	145	THR	5.4
1	G	147	LEU	5.2
1	D	145	THR	4.8
1	L	146	LEU	4.7
1	A	37	PRO	4.5
1	F	147	LEU	3.8
1	J	146	LEU	3.7
1	C	145	THR	3.7
1	I	138	ALA	3.5

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Mol	Chain	Res	Type	RSRZ
1	D	103	LEU	3.5
1	K	37	PRO	3.5
1	D	102	GLN	3.4
1	I	37	PRO	3.4
1	C	142	ARG	3.4
1	C	101	ALA	3.3
1	D	37	PRO	3.2
1	C	33	PHE	3.2
1	J	103	LEU	3.2
1	C	141	GLY	3.2
1	J	107	PRO	3.2
1	I	103	LEU	3.2
1	C	138	ALA	3.1
1	G	4	GLU	3.1
1	G	146	LEU	3.1
1	C	143	LEU	3.1
1	L	140	LEU	3.1
1	J	96	GLY	3.0
1	D	146	LEU	3.0
1	F	143	LEU	3.0
1	I	46	PHE	3.0
1	G	145	THR	3.0
1	D	95	GLN	3.0
1	I	100	SER	2.9
1	G	140	LEU	2.9
1	I	29	ALA	2.9
1	C	147	LEU	2.9
1	I	34	ARG	2.9
1	B	37	PRO	2.9
1	H	145	THR	2.9
1	I	32	ALA	2.9
1	H	138	ALA	2.9
1	J	95	GLN	2.8
1	A	132	PRO	2.8
1	K	94	PHE	2.8
1	I	36	SER	2.8
1	K	96	GLY	2.7
1	H	147	LEU	2.7
1	K	103	LEU	2.7
1	C	37	PRO	2.7
1	I	97	TYR	2.7
1	K	91	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
1	C	32	ALA	2.7
1	J	145	THR	2.6
1	I	139	LEU	2.6
1	K	93	TYR	2.5
1	I	30	ARG	2.5
1	D	144	ARG	2.5
1	D	98	ALA	2.5
1	I	102	GLN	2.5
1	I	141	GLY	2.5
1	I	136	ARG	2.5
1	I	35	VAL	2.5
1	B	135	LEU	2.4
1	H	137	ALA	2.4
1	K	98	ALA	2.4
1	K	109	TYR	2.4
1	K	95	GLN	2.4
1	D	143	LEU	2.4
1	J	147	LEU	2.4
1	D	101	ALA	2.4
1	H	146	LEU	2.4
1	A	141	GLY	2.4
1	B	138	ALA	2.4
1	E	137	ALA	2.4
1	I	137	ALA	2.4
1	D	46	PHE	2.3
1	D	104	ARG	2.3
1	K	36	SER	2.3
1	A	146	LEU	2.3
1	J	98	ALA	2.3
1	L	141	GLY	2.3
1	K	105	LEU	2.3
1	I	101	ALA	2.3
1	C	140	LEU	2.3
1	B	136	ARG	2.2
1	L	37	PRO	2.2
1	D	45	GLU	2.2
1	K	136	ARG	2.2
1	I	28	SER	2.2
1	G	37	PRO	2.2
1	L	61	PRO	2.2
1	G	5	VAL	2.2
1	K	101	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
1	I	43	PRO	2.1
1	E	37	PRO	2.1
1	I	104	ARG	2.1
1	K	139	LEU	2.1
1	E	103	LEU	2.1
1	C	30	ARG	2.1
1	F	37	PRO	2.1
1	B	140	LEU	2.1
1	E	140	LEU	2.1
1	C	139	LEU	2.0
1	D	96	GLY	2.0
1	A	145	THR	2.0
1	I	44	PRO	2.0

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

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

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
3	LMT	E	269	35/35	0.13	0.60	139,180,186,187	0
3	LMT	C	214	35/35	0.42	0.54	100,130,142,142	0
3	LMT	E	266	9/35	0.44	0.40	102,107,109,110	0
3	LMT	H	250	9/35	0.55	0.58	80,82,84,84	0
3	LMT	F	233	23/35	0.56	0.56	73,112,131,132	0
3	LMT	G	251	9/35	0.57	0.61	82,85,92,92	0
3	LMT	H	234	23/35	0.59	0.55	97,124,139,139	0
3	LMT	E	231	23/35	0.59	0.48	84,124,138,139	0
3	LMT	E	230	35/35	0.61	0.49	88,147,154,154	0
3	LMT	B	227	23/35	0.63	0.51	67,109,127,127	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	LMT	E	263	9/35	0.64	0.50	75,77,80,80	0
3	LMT	L	226	9/35	0.64	0.71	90,94,99,100	0
3	LMT	A	256	18/35	0.65	0.71	92,111,114,114	0
3	LMT	B	260	9/35	0.66	0.43	108,111,112,112	0
3	LMT	K	225	23/35	0.67	0.45	79,111,129,132	0
3	LMT	E	268	35/35	0.67	0.37	54,139,155,156	0
3	LMT	A	262	9/35	0.70	0.49	74,81,85,85	0
3	LMT	A	215	35/35	0.70	0.38	76,105,113,113	0
3	LMT	C	216	35/35	0.71	0.44	52,122,137,139	0
3	LMT	G	267	9/35	0.71	0.53	71,72,75,75	0
3	LMT	D	238	35/35	0.72	0.48	106,133,145,145	0
3	LMT	C	237	35/35	0.72	0.45	100,125,136,136	0
3	LMT	J	239	35/35	0.74	0.54	117,138,148,150	0
3	LMT	F	241	18/35	0.74	0.62	83,110,113,114	0
3	LMT	G	235	23/35	0.74	0.52	82,108,127,127	0
3	LMT	I	240	18/35	0.75	0.86	99,121,123,124	0
3	LMT	B	218	23/35	0.75	0.42	68,106,117,118	0
3	LMT	I	252	9/35	0.77	0.39	79,81,85,85	0
3	LMT	B	242	12/35	0.78	0.41	72,77,87,87	0
3	LMT	A	228	23/35	0.78	0.39	78,104,118,119	0
3	LMT	L	265	7/35	0.78	0.41	52,57,62,62	0
3	LMT	B	236	18/35	0.79	0.38	62,99,103,105	0
3	LMT	B	213	23/35	0.79	0.41	96,112,119,120	0
3	LMT	J	253	9/35	0.81	0.37	106,107,108,108	0
3	LMT	L	254	9/35	0.81	0.39	99,99,101,101	0
3	LMT	E	243	35/35	0.81	0.31	94,109,113,114	0
3	LMT	G	264	9/35	0.82	0.35	65,68,70,70	0
3	LMT	B	259	9/35	0.82	0.39	114,115,116,116	0
3	LMT	E	249	9/35	0.83	0.37	56,65,75,77	0
3	LMT	I	258	9/35	0.83	0.54	66,69,71,72	0
3	LMT	I	257	9/35	0.84	0.27	79,83,85,85	0
3	LMT	A	217	7/35	0.84	0.32	62,64,67,68	0
3	LMT	L	255	9/35	0.85	0.31	85,89,94,95	0
3	LMT	K	224	7/35	0.86	0.31	81,83,84,84	0
3	LMT	D	247	9/35	0.86	0.31	65,73,74,75	0
3	LMT	F	248	9/35	0.86	0.32	66,69,80,81	0
3	LMT	A	229	9/35	0.88	0.42	77,78,80,80	0
3	LMT	C	261	9/35	0.88	0.27	46,53,62,63	0
3	LMT	E	232	6/35	0.88	0.38	59,62,63,64	0
3	LMT	C	246	9/35	0.91	0.25	66,73,82,82	0
2	GSH	I	209	20/20	0.91	0.32	56,61,65,69	0
3	LMT	D	220	9/35	0.91	0.46	49,56,62,62	0

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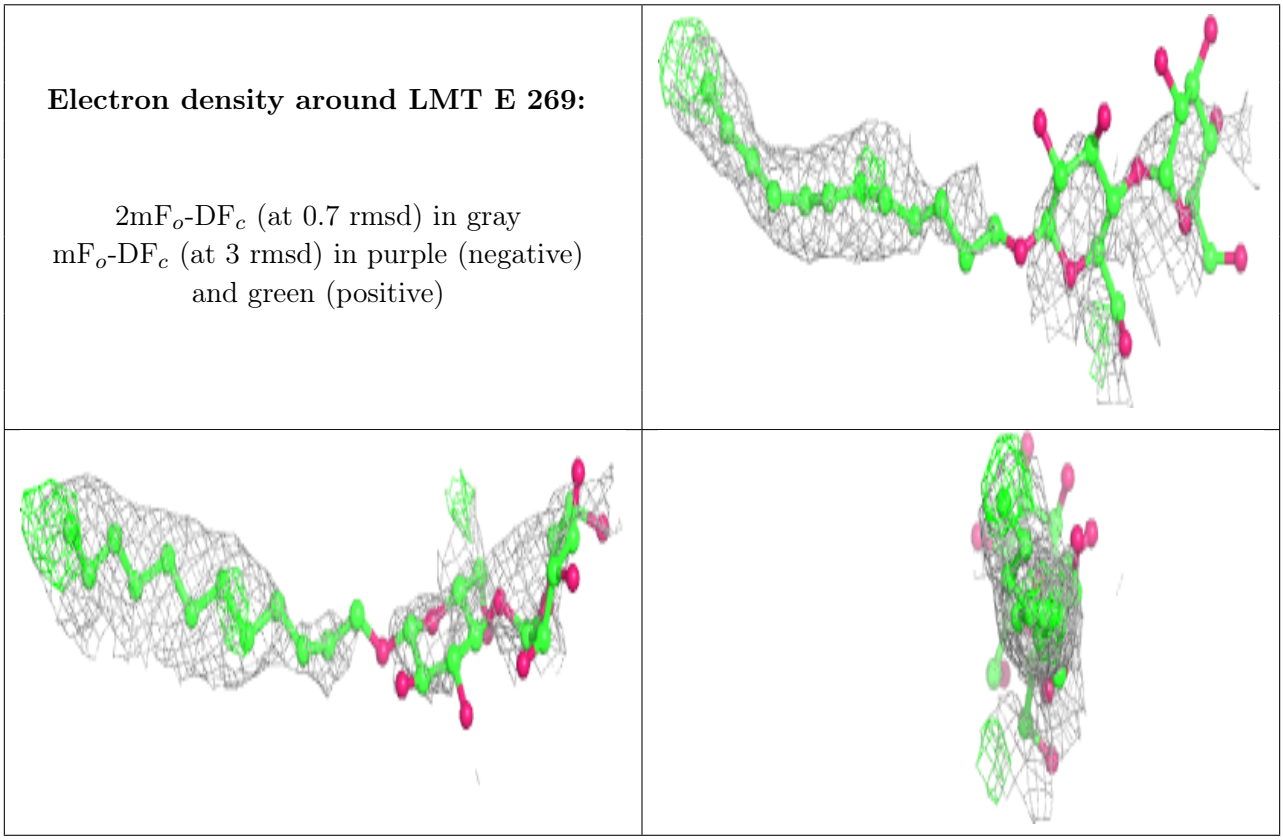
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	GSH	J	210	20/20	0.91	0.20	56,61,65,70	0
2	GSH	D	204	20/20	0.91	0.25	56,61,65,69	0
2	GSH	K	211	20/20	0.92	0.20	56,61,65,70	0
3	LMT	A	244	9/35	0.92	0.32	53,60,64,64	0
3	LMT	F	219	9/35	0.92	0.27	68,74,77,77	0
3	LMT	A	245	9/35	0.93	0.23	53,59,64,64	0
3	LMT	L	223	9/35	0.93	0.22	64,67,69,70	0
2	GSH	E	205	20/20	0.94	0.22	55,61,65,69	0
2	GSH	H	208	20/20	0.94	0.23	56,61,65,69	0
2	GSH	B	202	20/20	0.95	0.22	56,61,65,69	0
2	GSH	G	207	20/20	0.96	0.18	56,61,65,69	0
2	GSH	A	201	20/20	0.96	0.25	55,61,65,69	0
3	LMT	E	221	10/35	0.96	0.26	64,70,71,72	0
2	GSH	L	212	20/20	0.96	0.21	56,61,65,69	0
2	GSH	C	203	20/20	0.96	0.29	56,61,65,69	0
3	LMT	G	222	9/35	0.97	0.27	55,56,59,59	0
2	GSH	F	206	20/20	0.97	0.16	56,61,65,69	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.

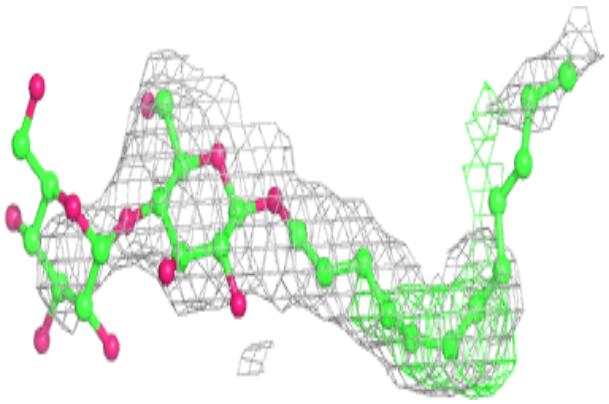
Electron density around LMT E 269:

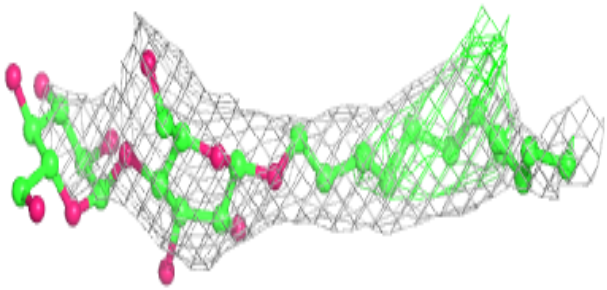
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

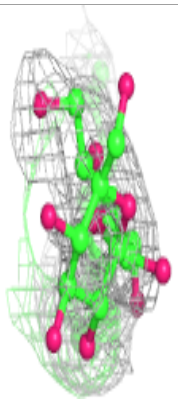


Electron density around LMT C 214:

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

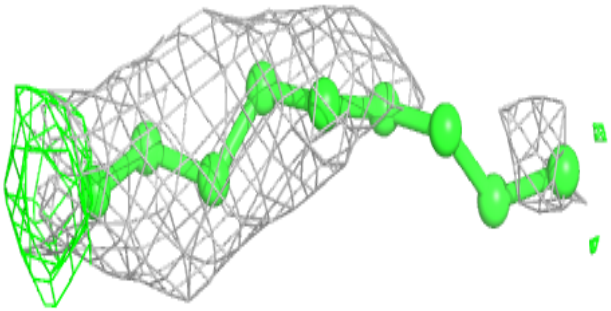


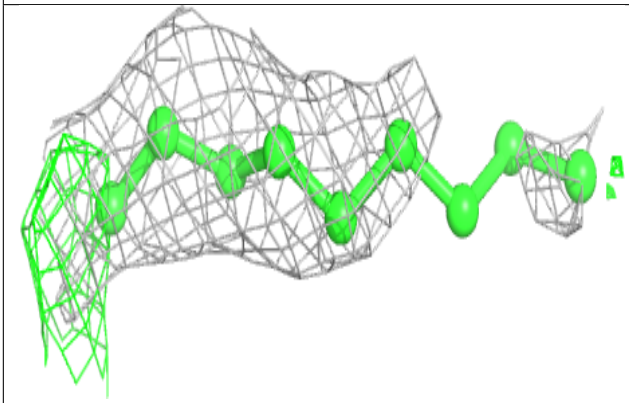


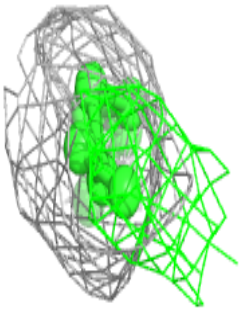


Electron density around LMT E 266:

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

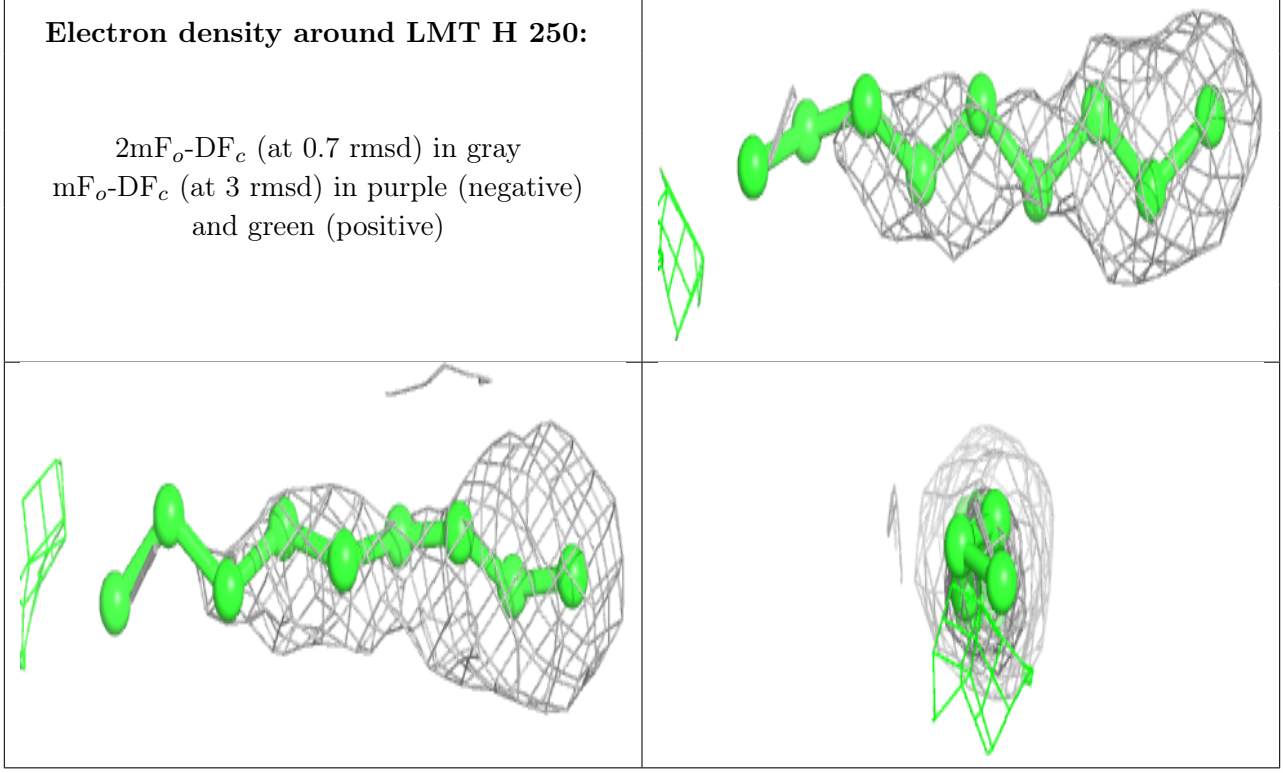






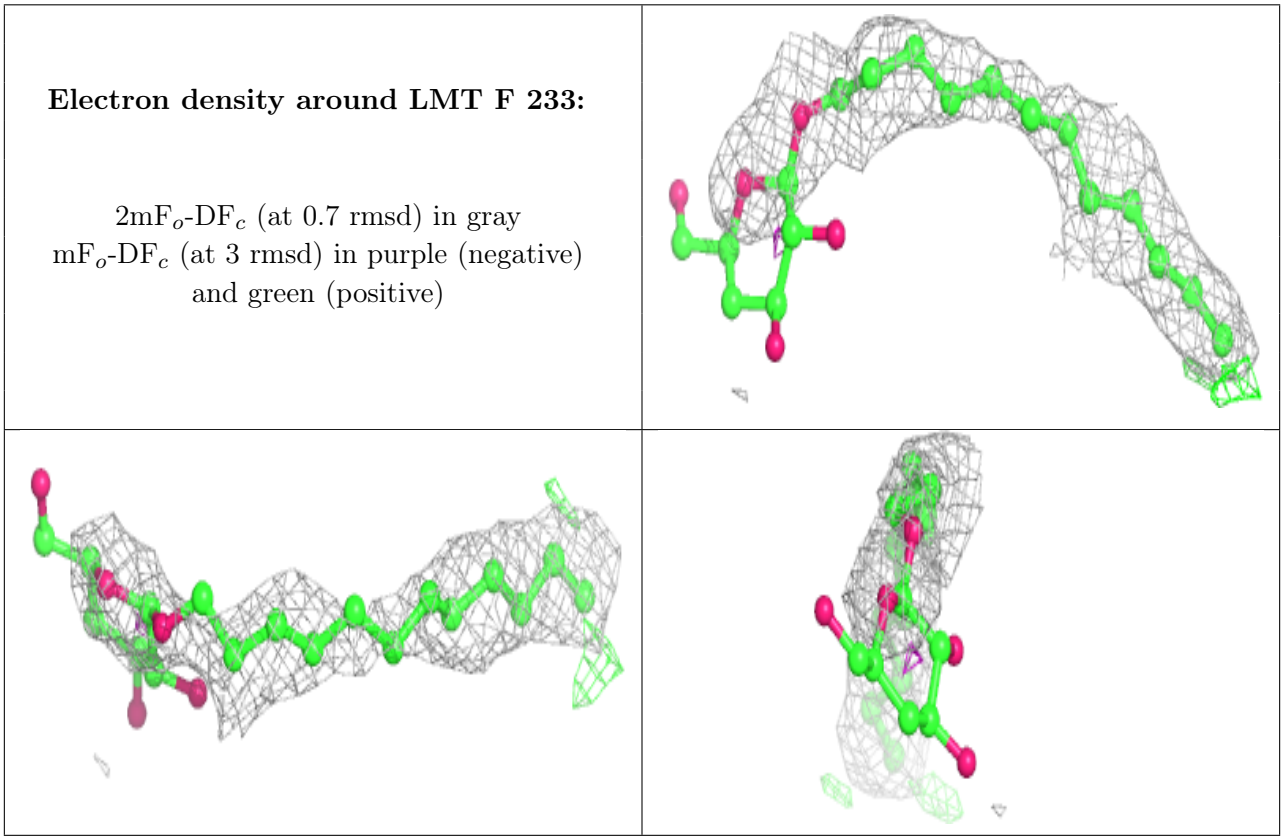
Electron density around LMT H 250:

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



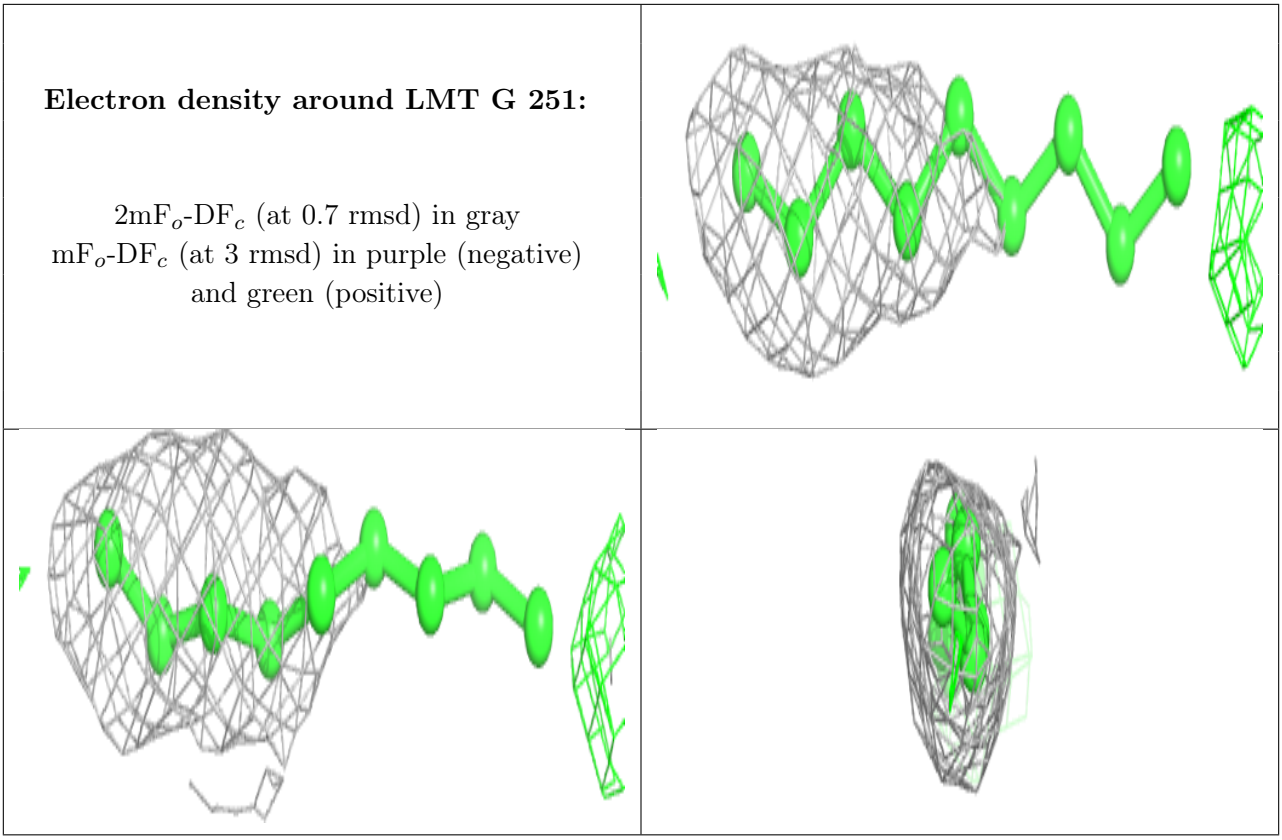
Electron density around LMT F 233:

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



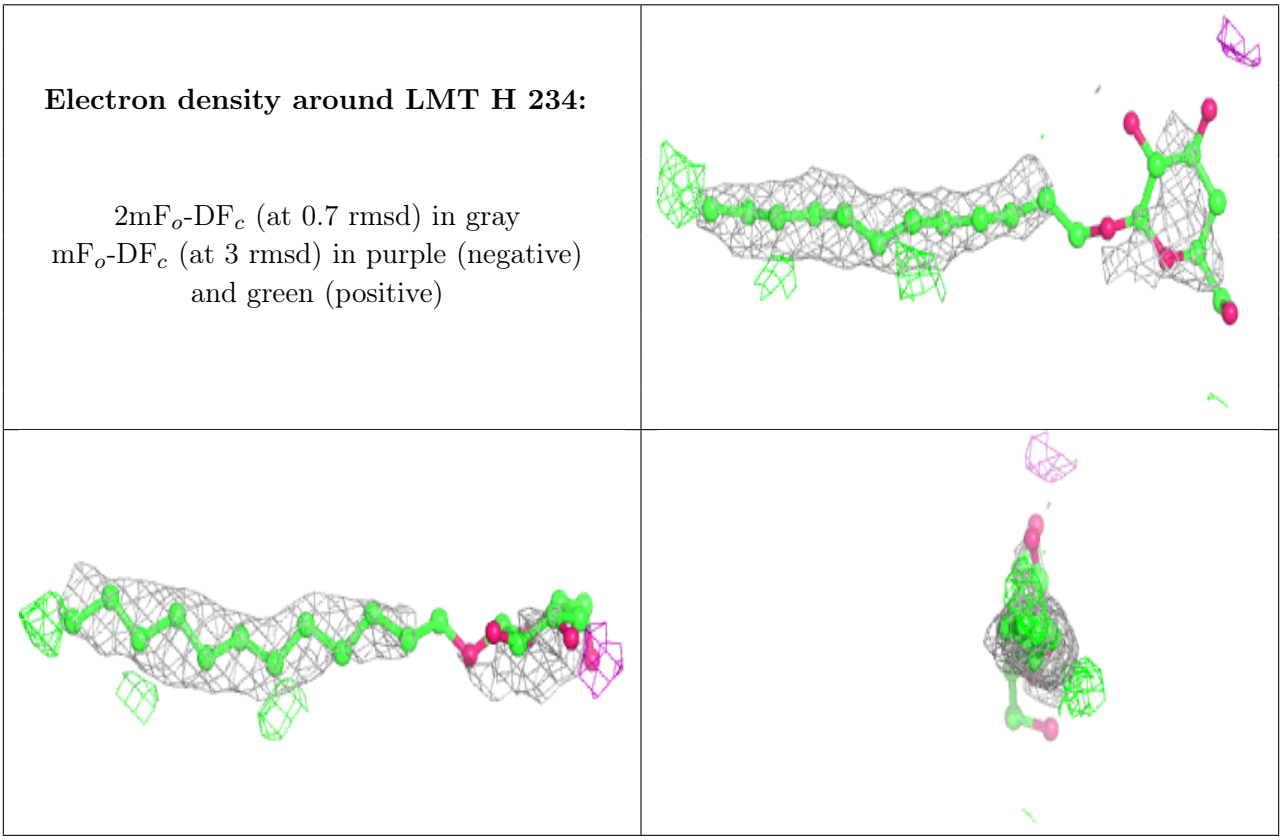
Electron density around LMT G 251:

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



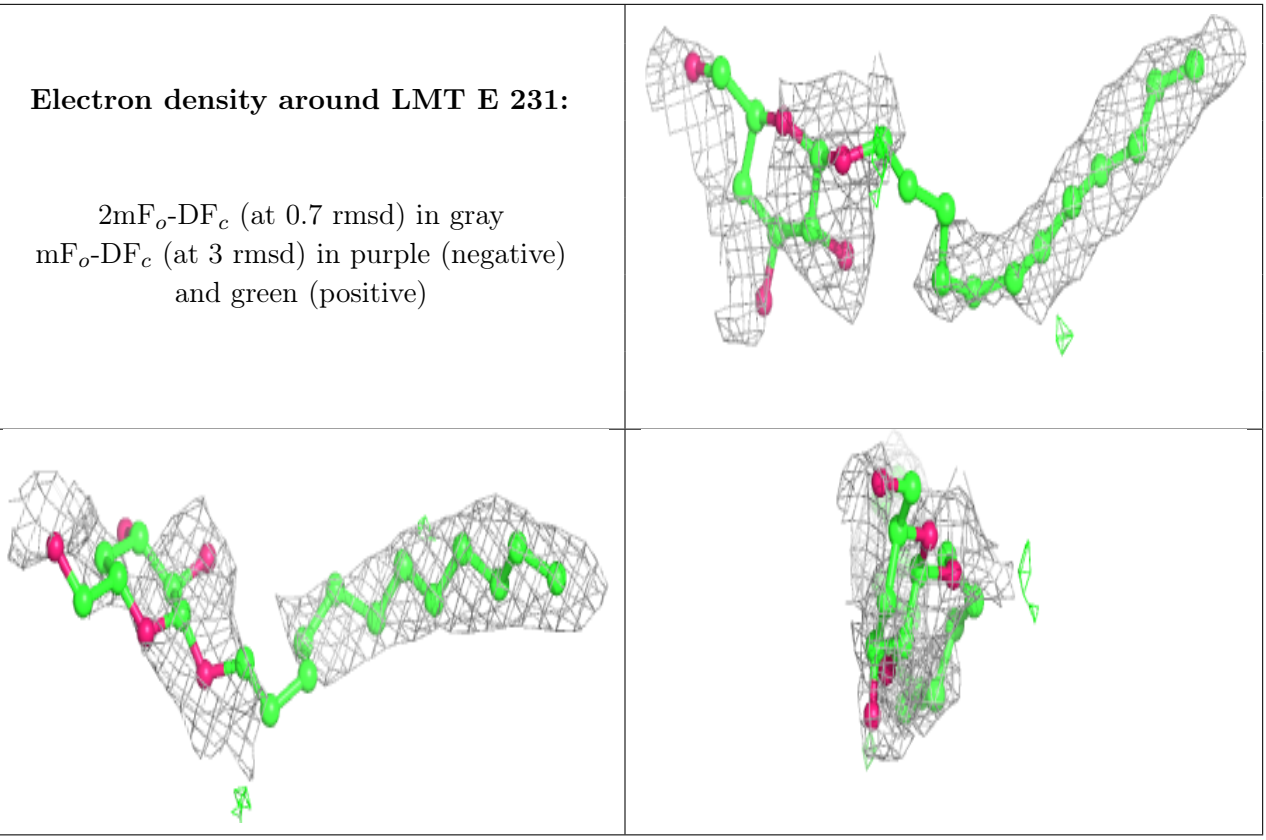
Electron density around LMT H 234:

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



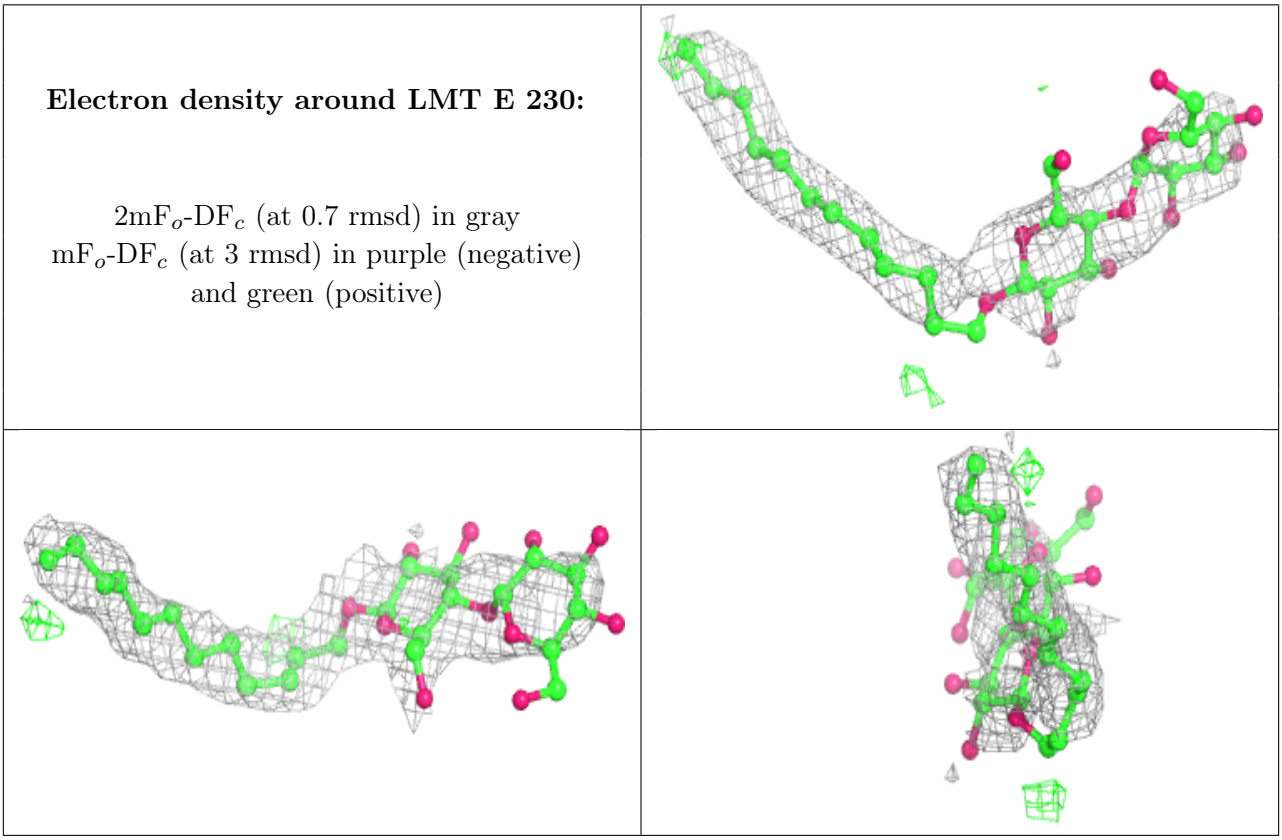
Electron density around LMT E 231:

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



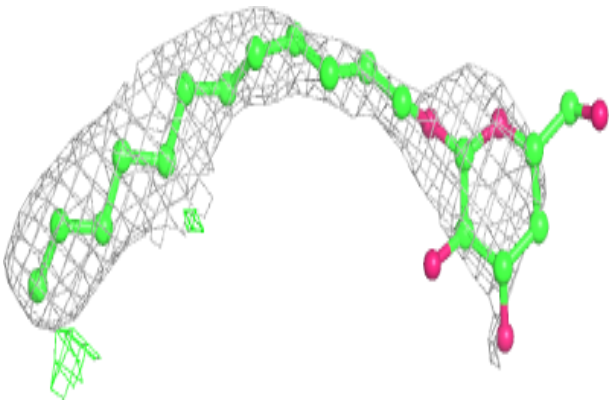
Electron density around LMT E 230:

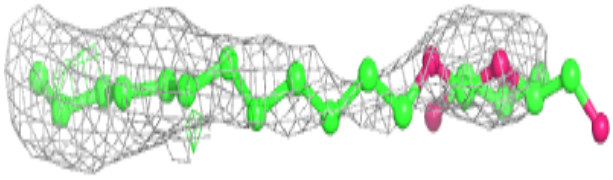
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

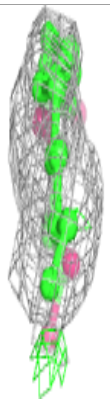


Electron density around LMT B 227:

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

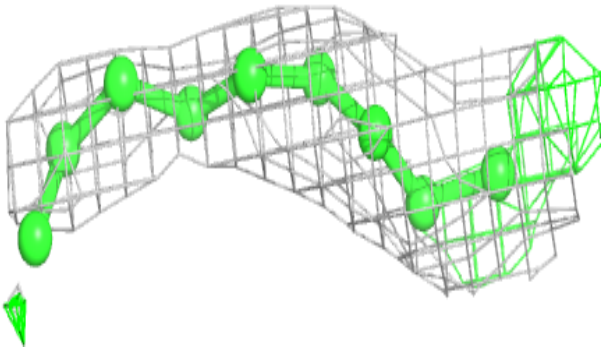


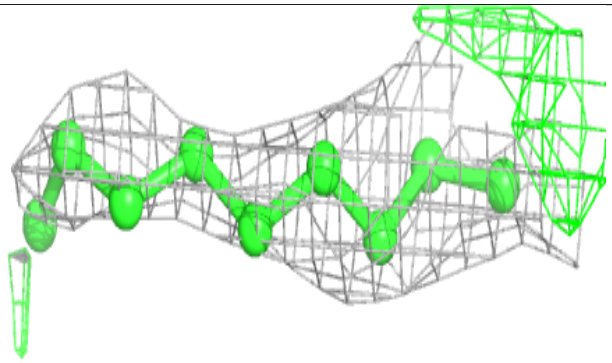


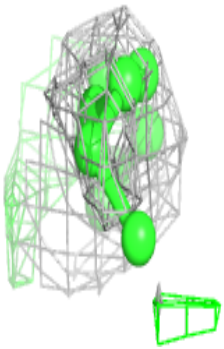


Electron density around LMT E 263:

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

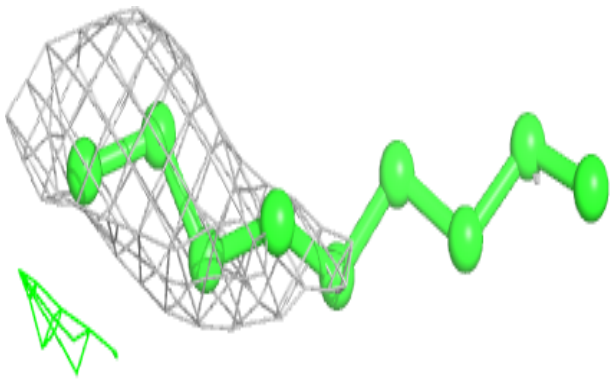


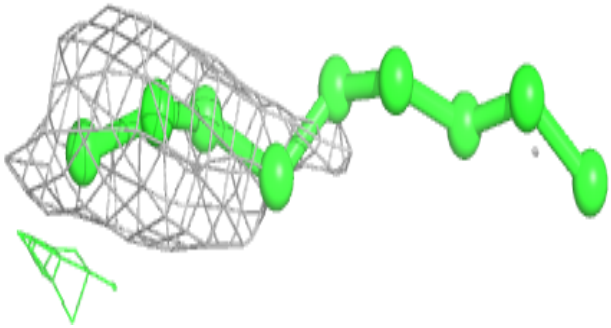


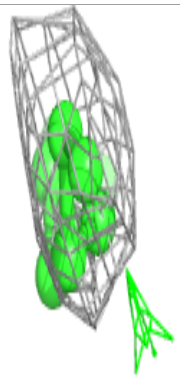


Electron density around LMT L 226:

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

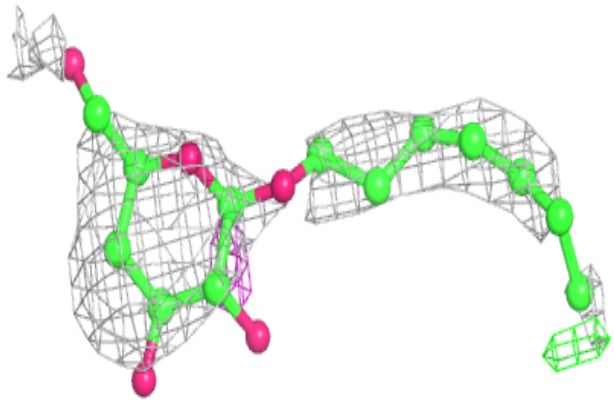


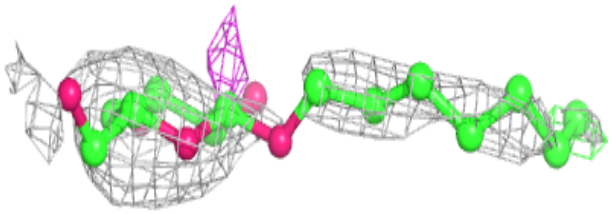


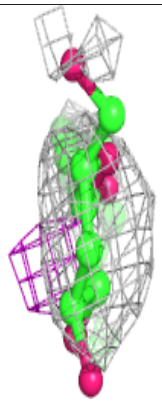


Electron density around LMT A 256:

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

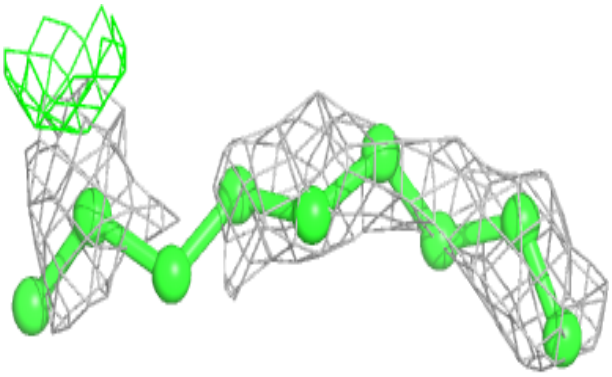


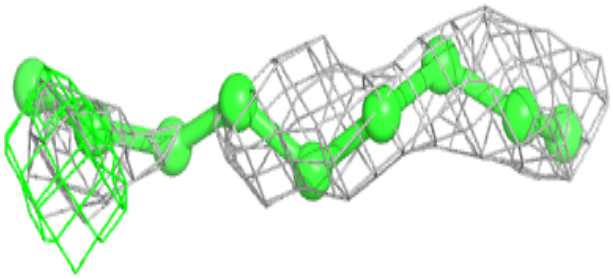


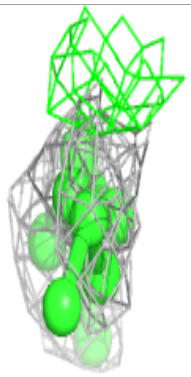


Electron density around LMT B 260:

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

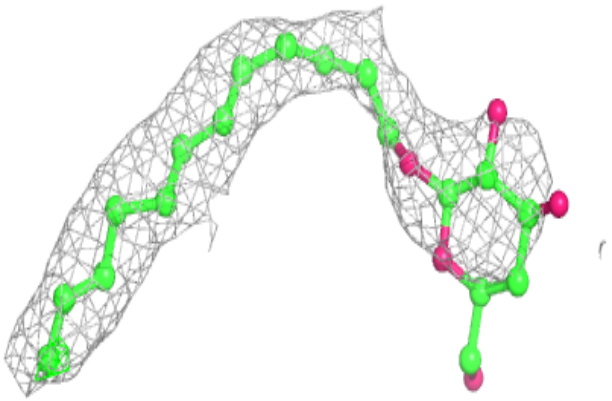


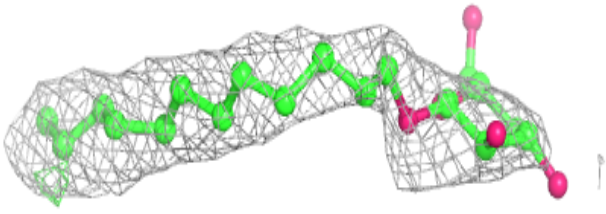


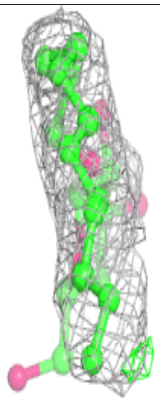


Electron density around LMT K 225:

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

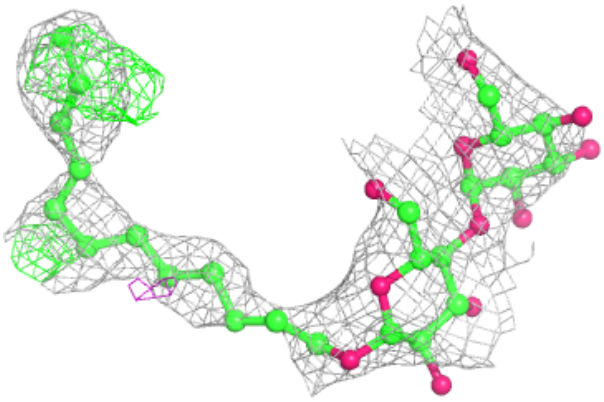


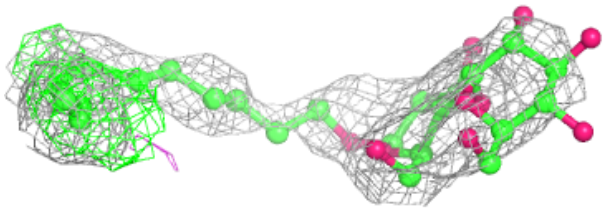




Electron density around LMT E 268:

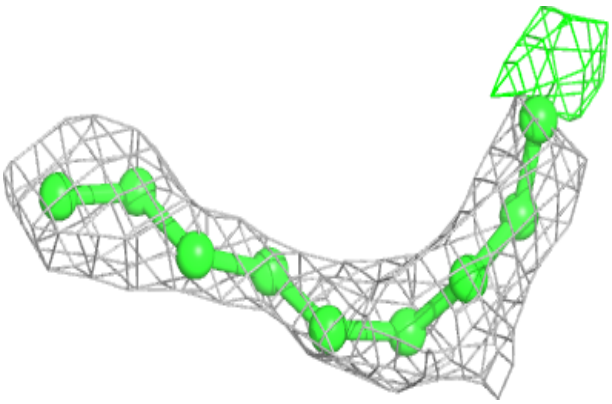
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

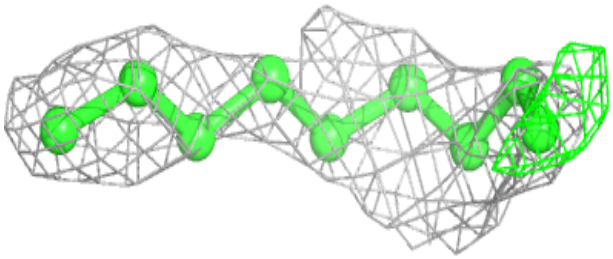


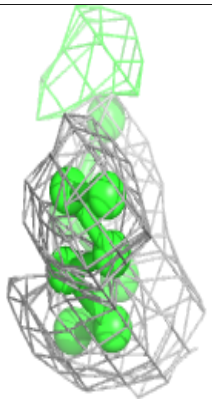


Electron density around LMT A 262:

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

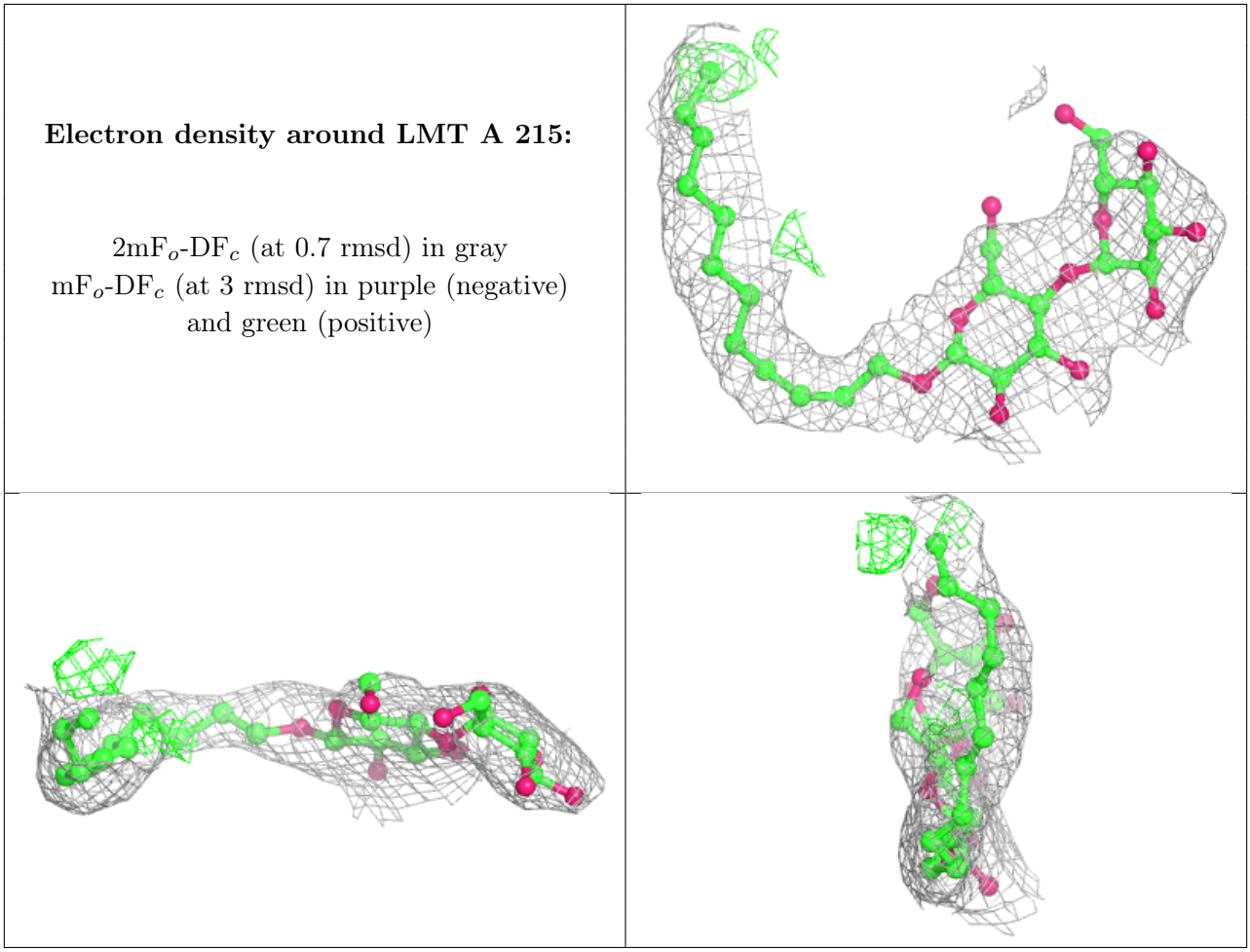






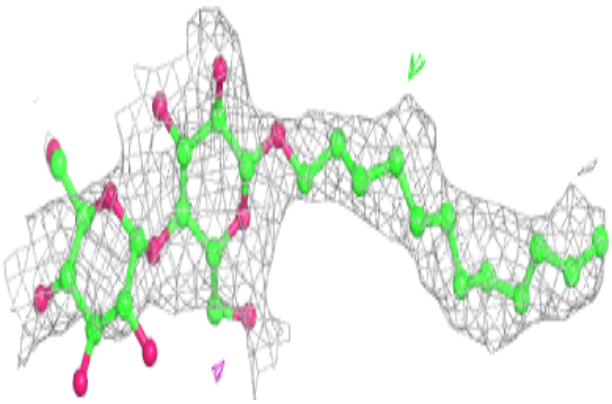
Electron density around LMT A 215:

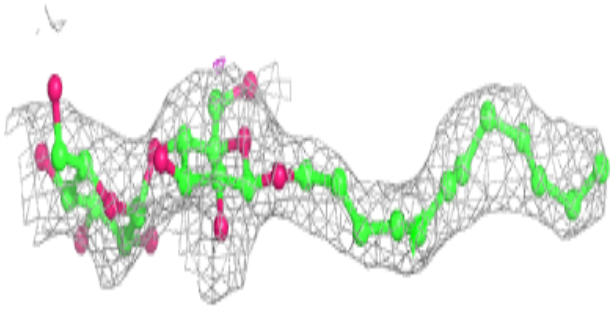
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

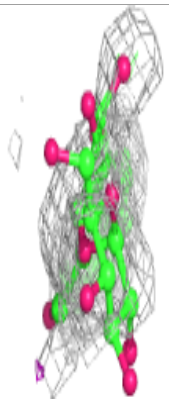


Electron density around LMT C 216:

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

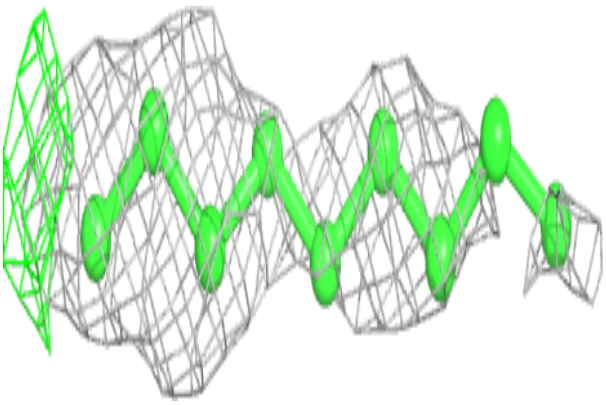


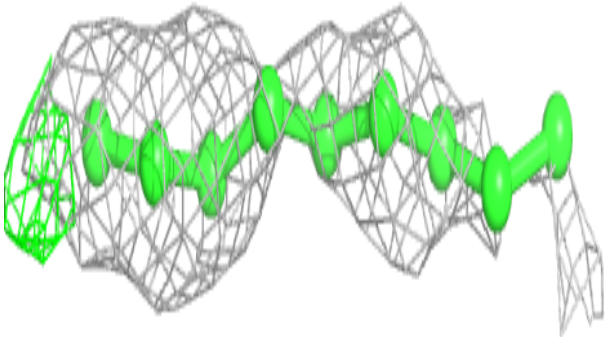


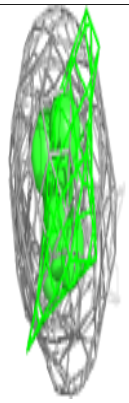


Electron density around LMT G 267:

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

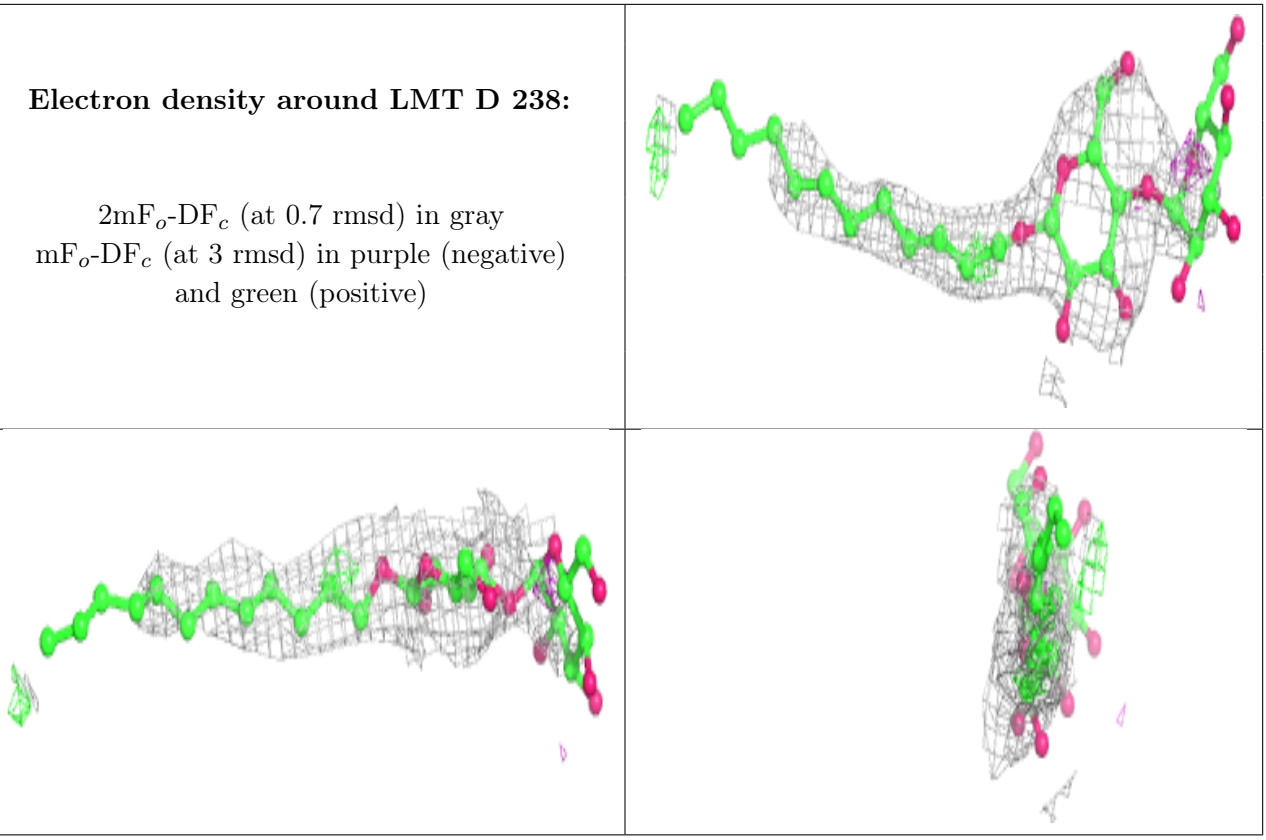






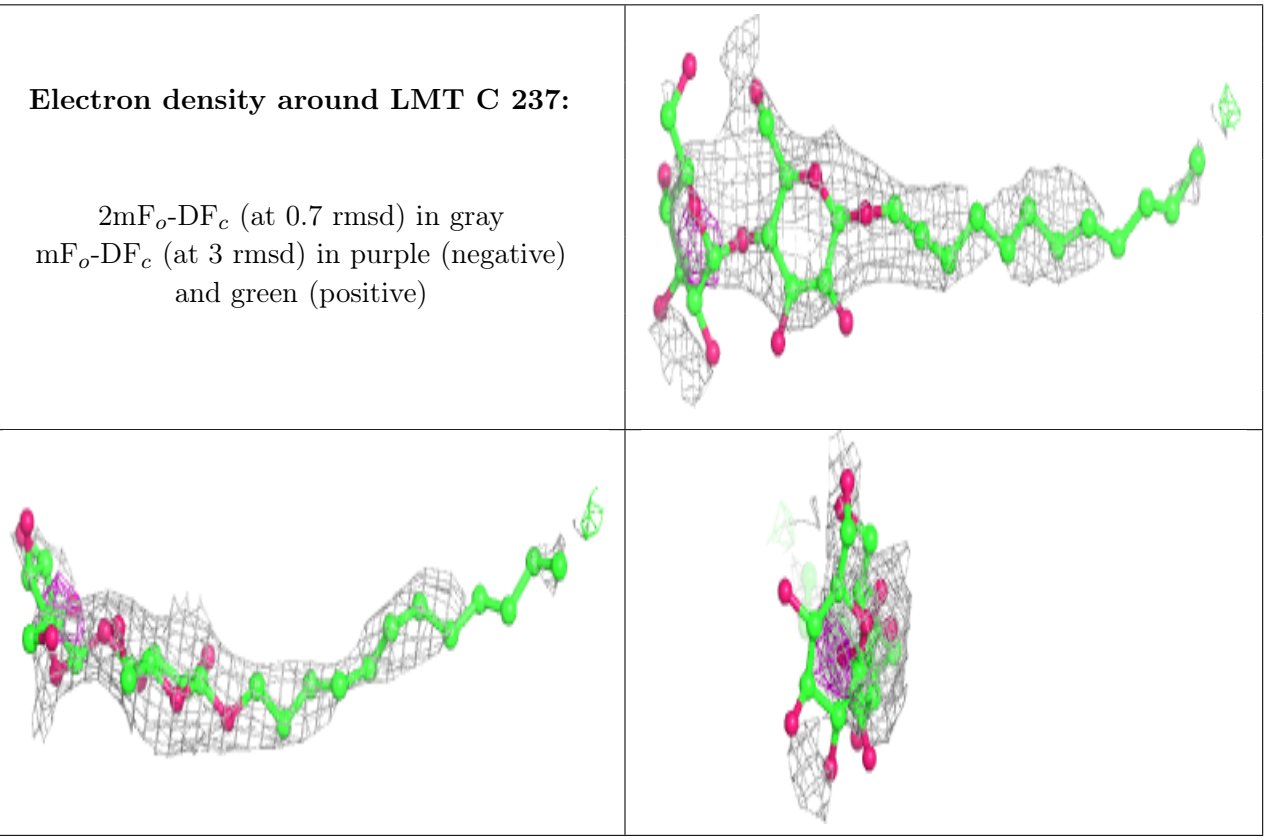
Electron density around LMT D 238:

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



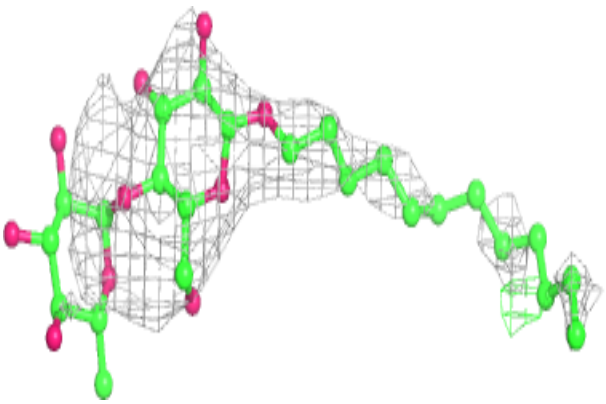
Electron density around LMT C 237:

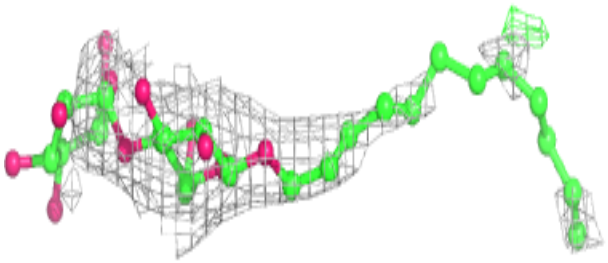
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

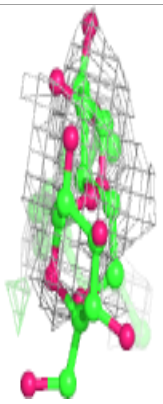


Electron density around LMT J 239:

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

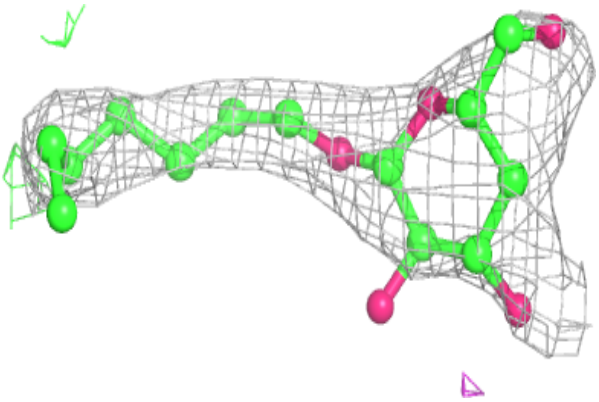


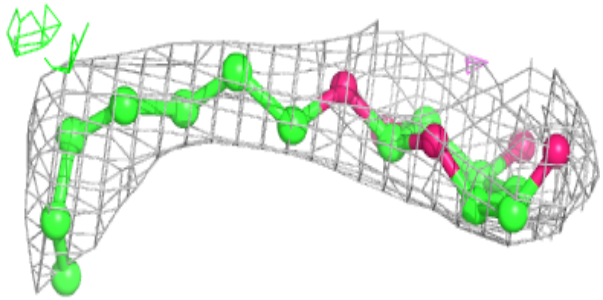


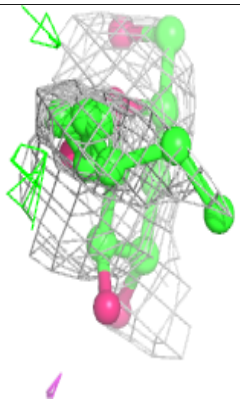


Electron density around LMT F 241:

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

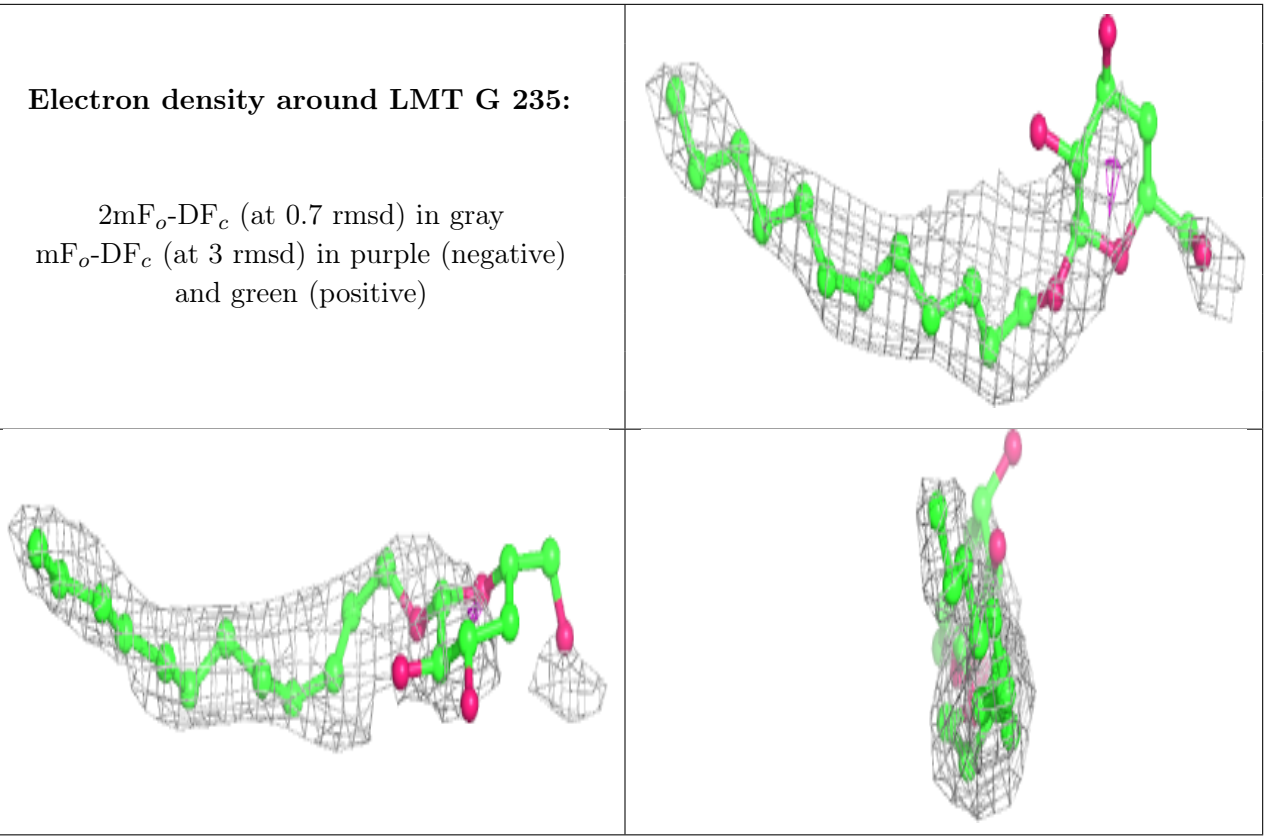






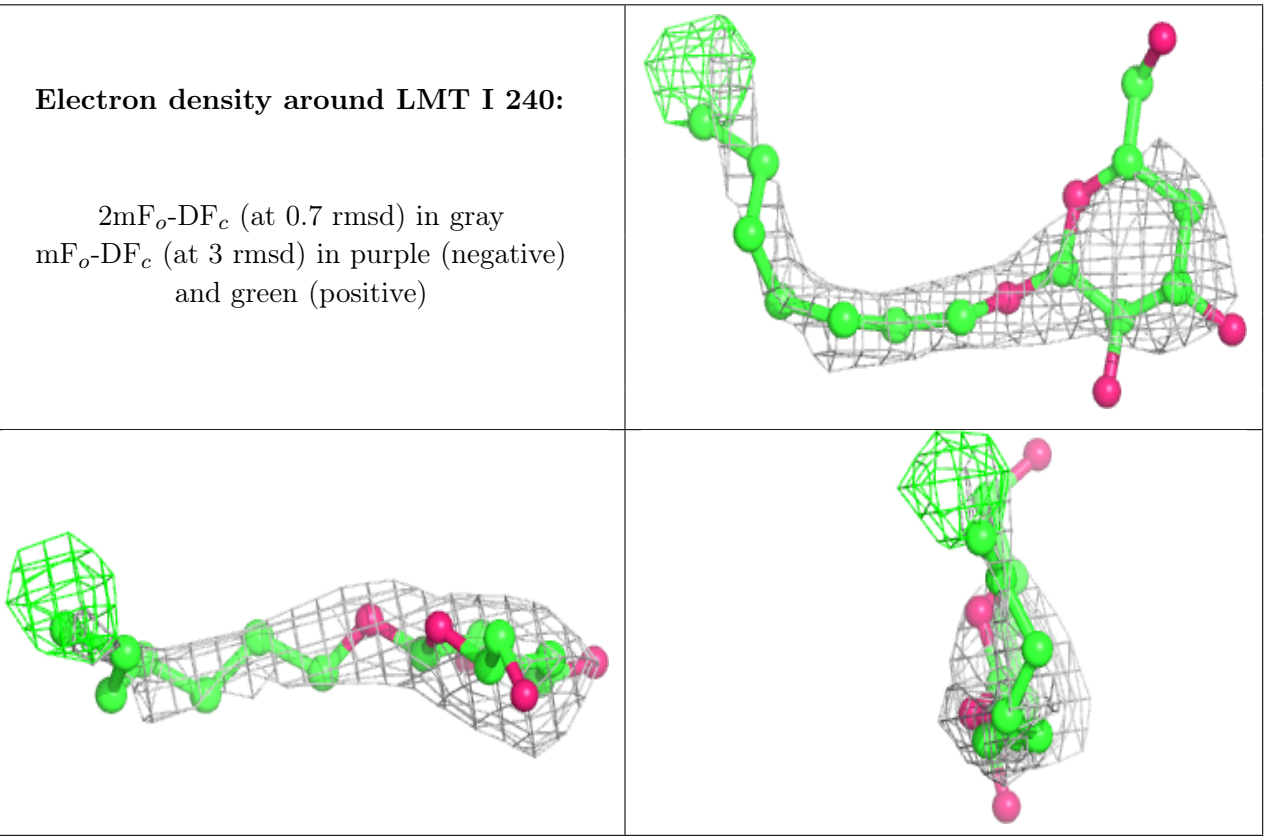
Electron density around LMT G 235:

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



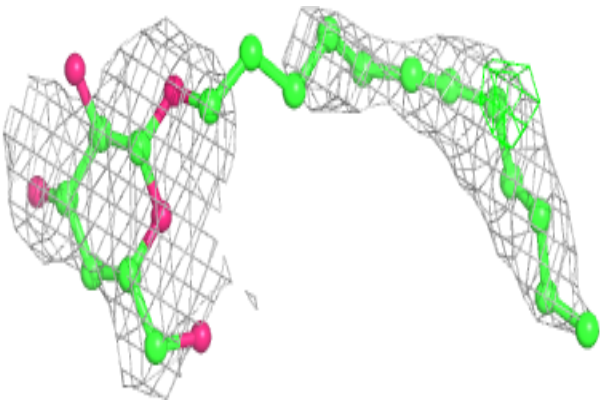
Electron density around LMT I 240:

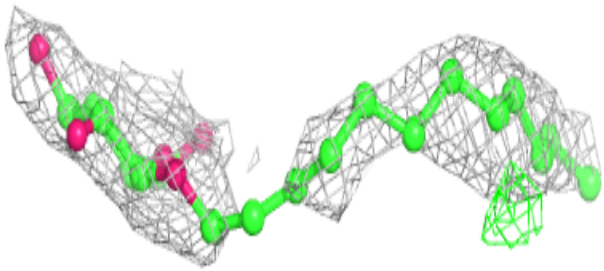
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

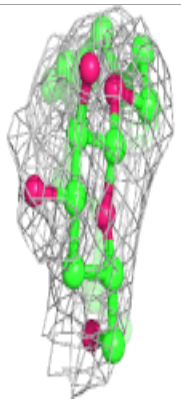


Electron density around LMT B 218:

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

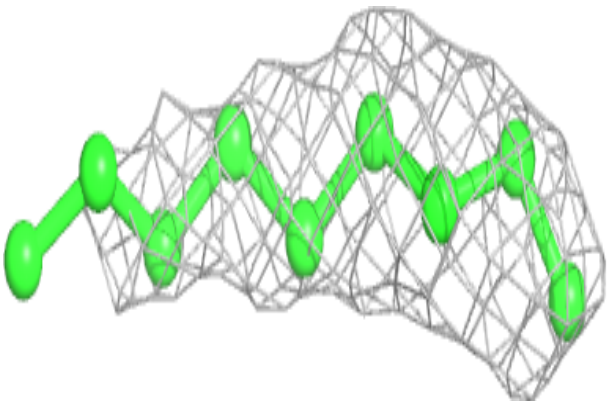


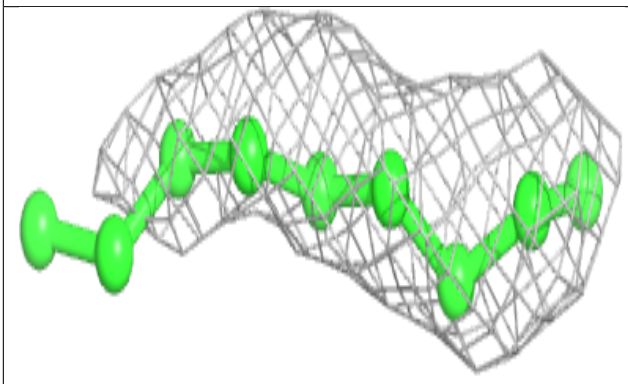


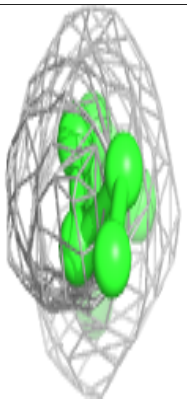


Electron density around LMT I 252:

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

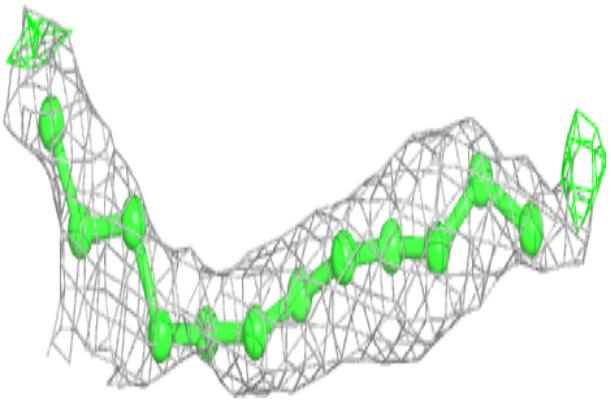


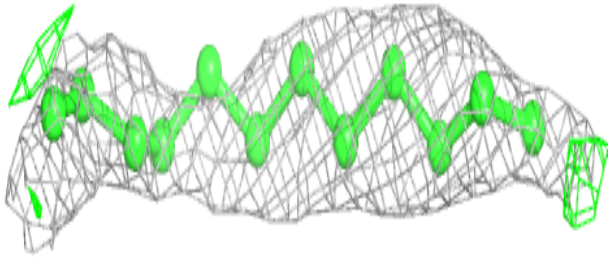


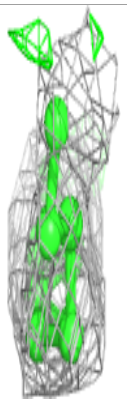


Electron density around LMT B 242:

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

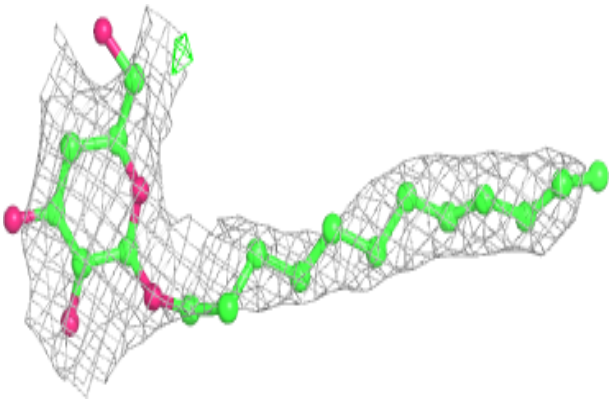


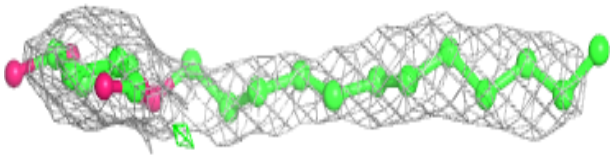


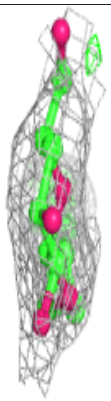


Electron density around LMT A 228:

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

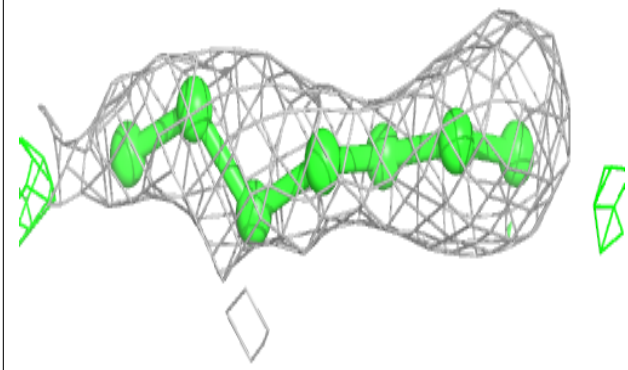


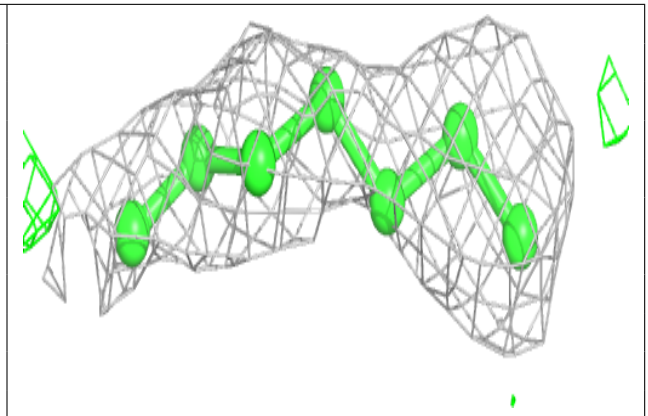


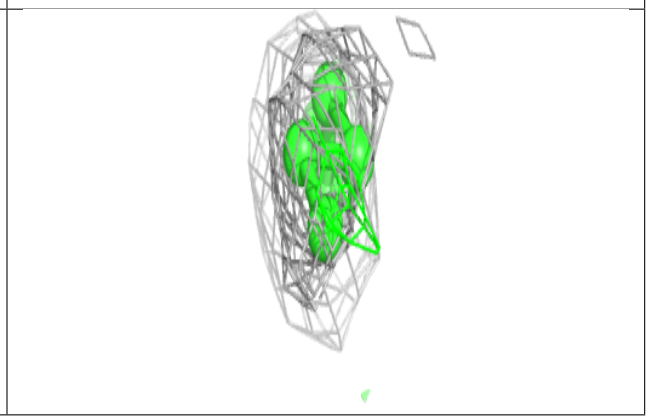


Electron density around LMT L 265:

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

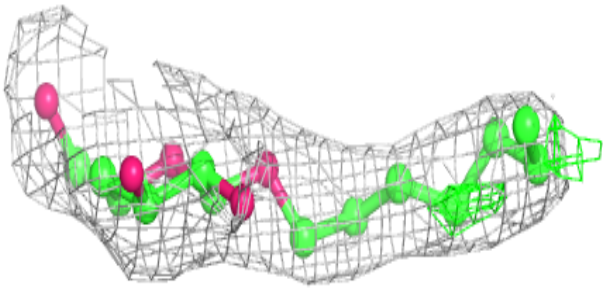


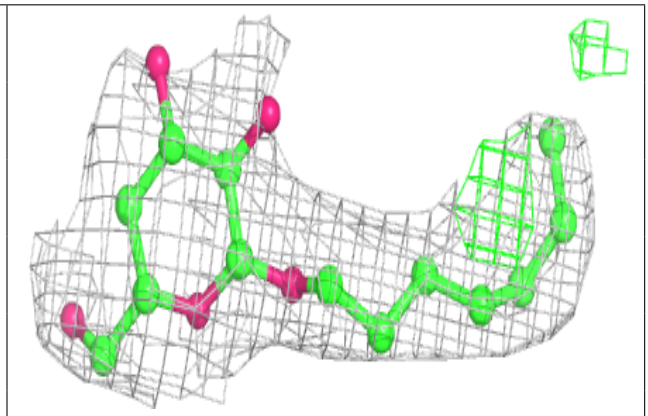


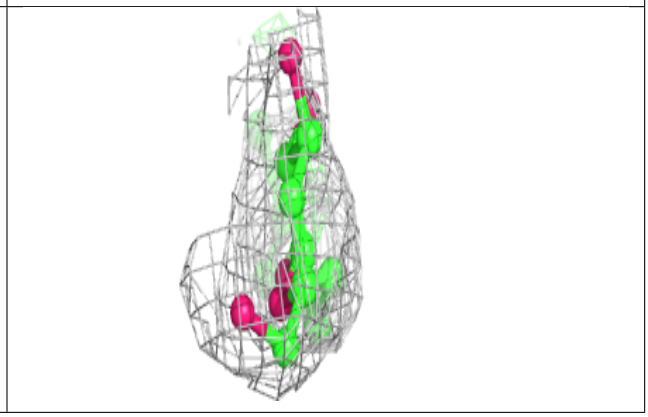


Electron density around LMT B 236:

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

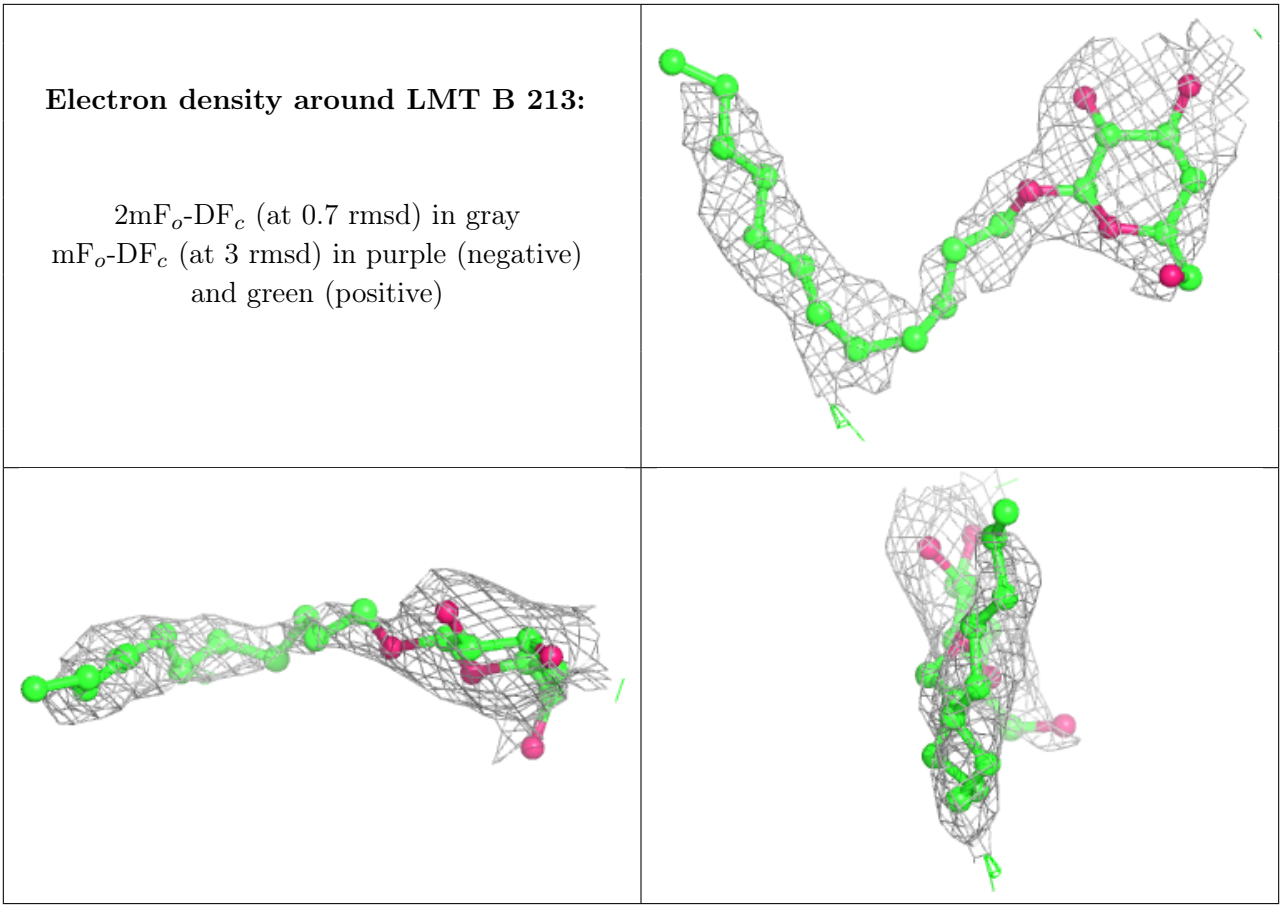






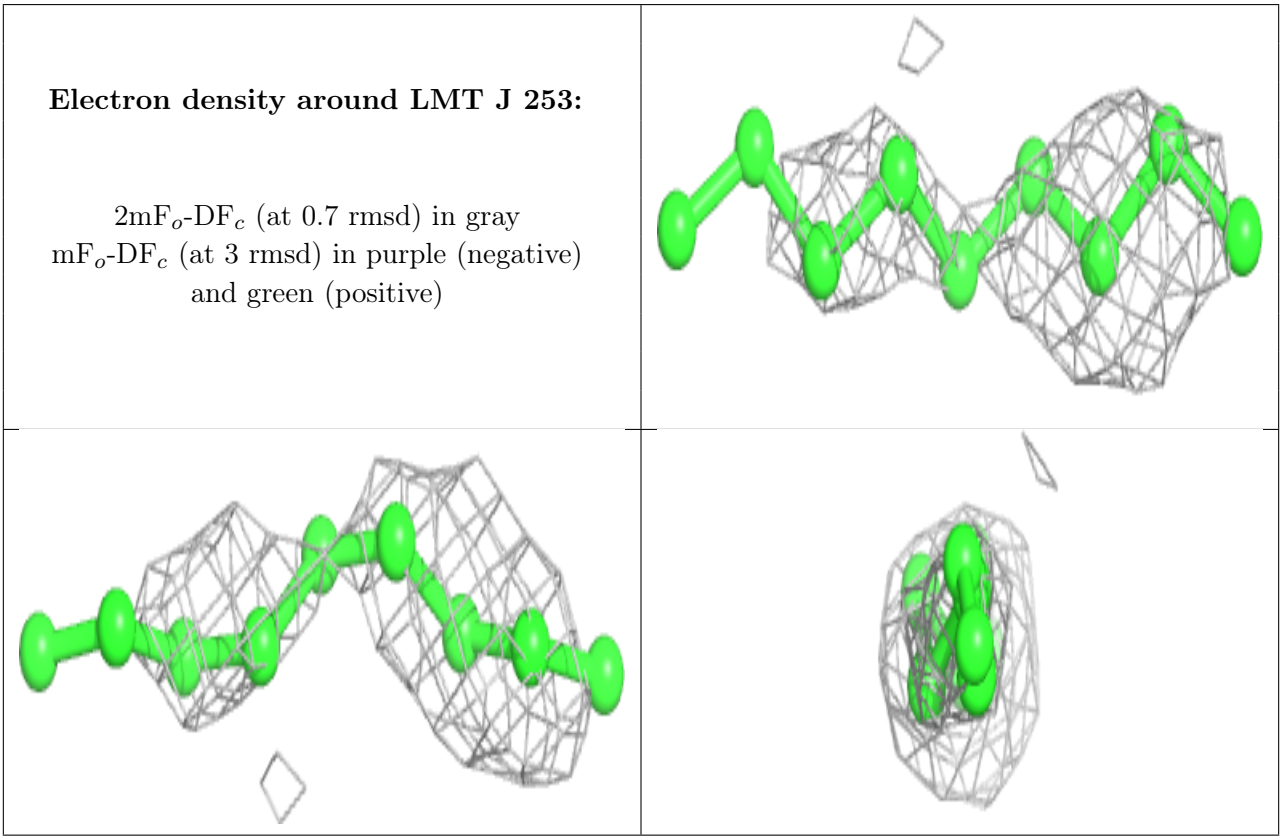
Electron density around LMT B 213:

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



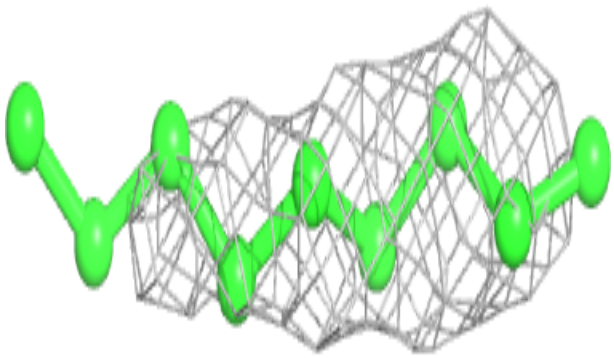
Electron density around LMT J 253:

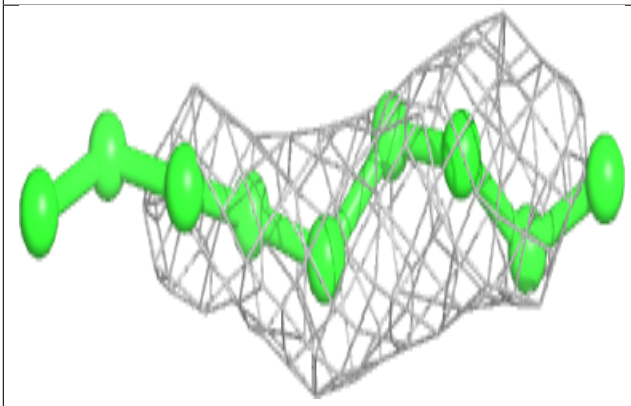
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

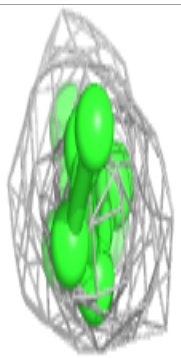


Electron density around LMT L 254:

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

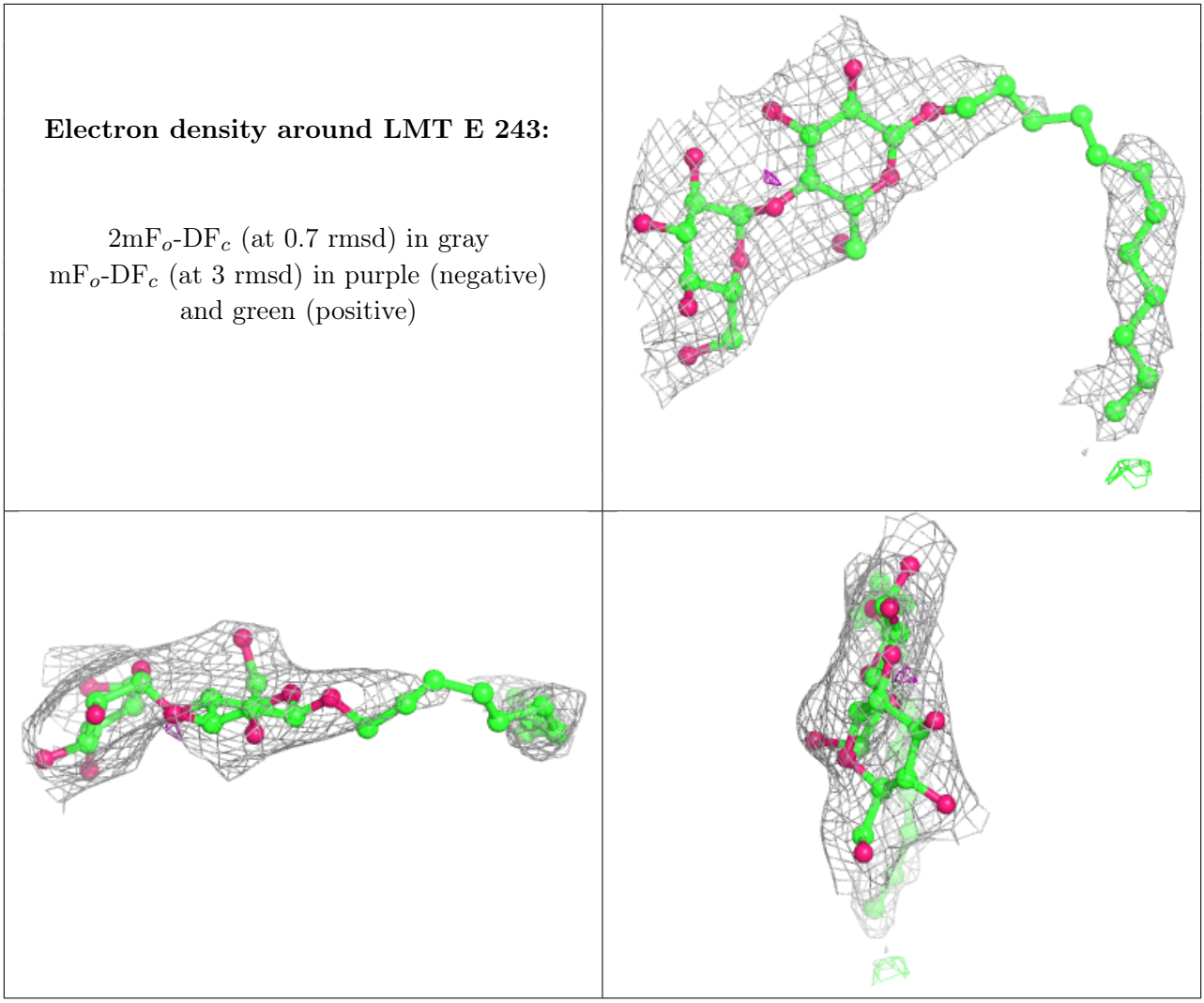






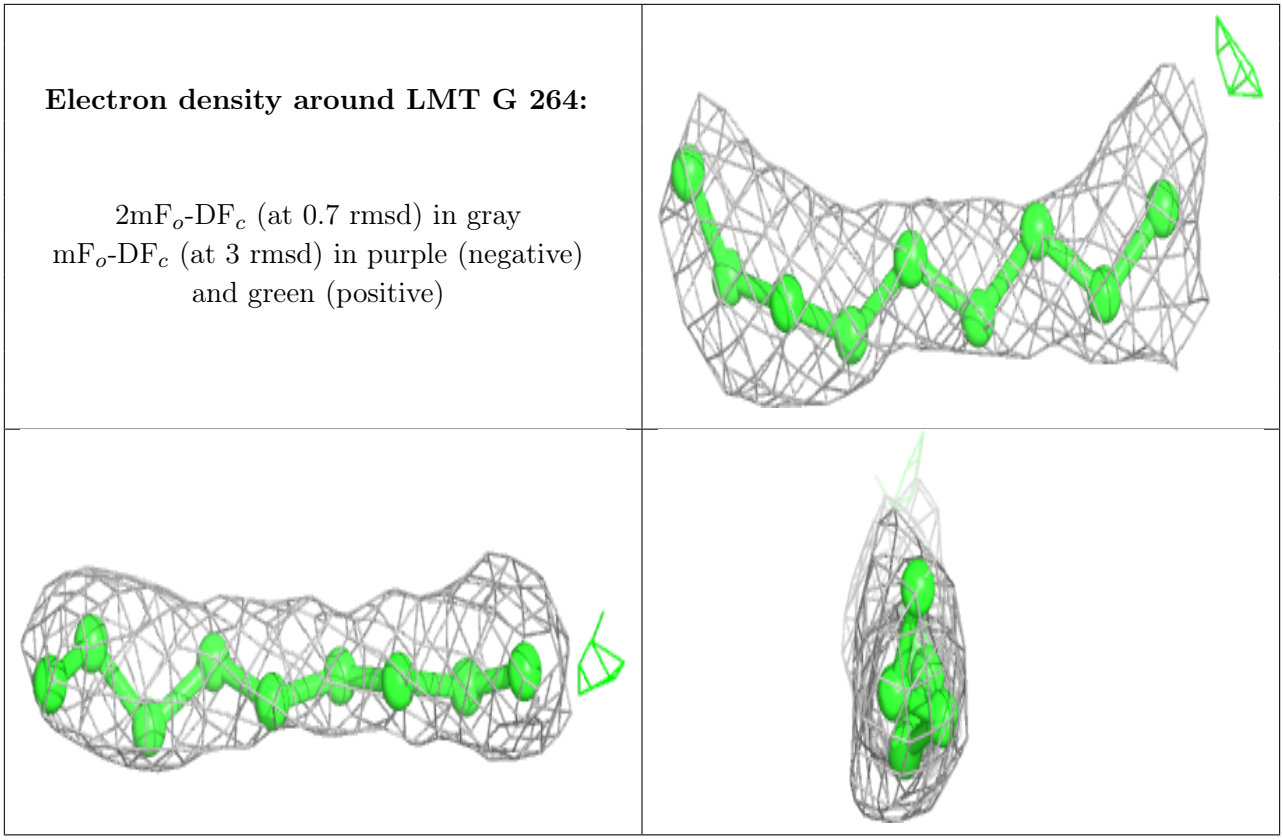
Electron density around LMT E 243:

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



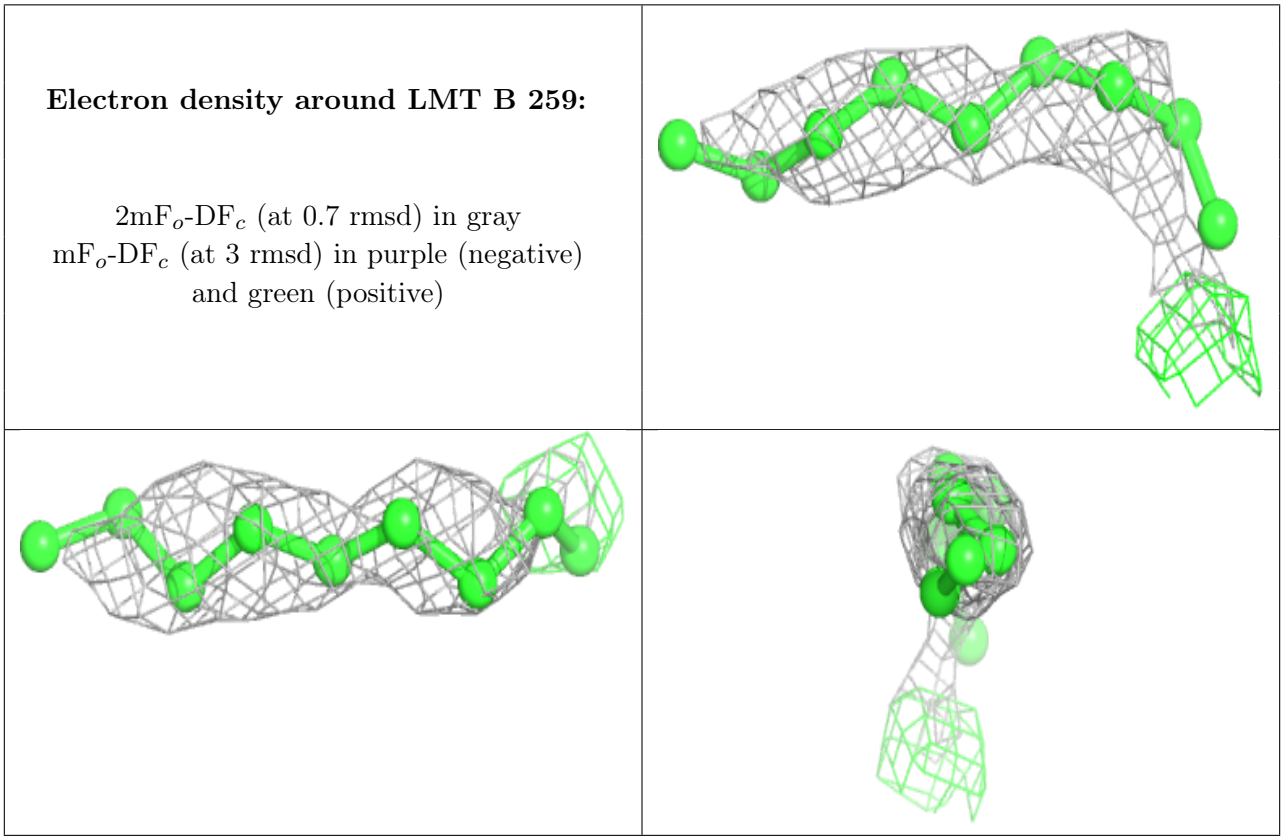
Electron density around LMT G 264:

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



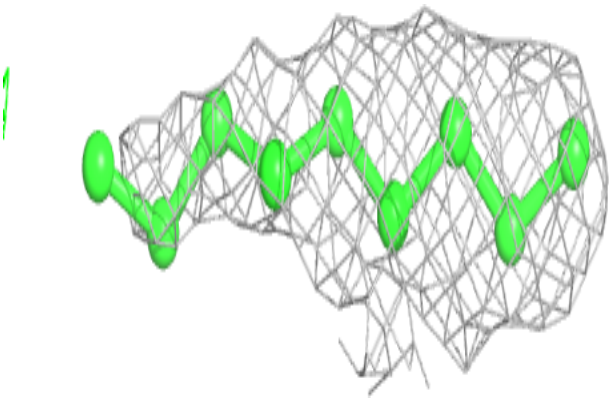
Electron density around LMT B 259:

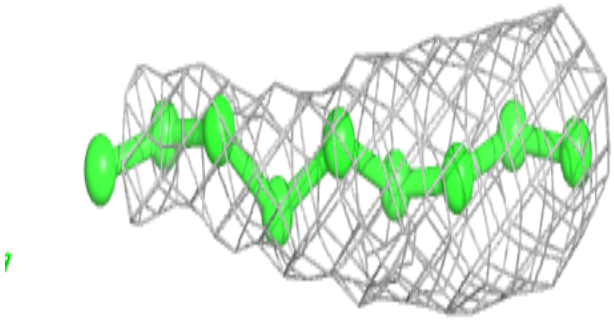
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

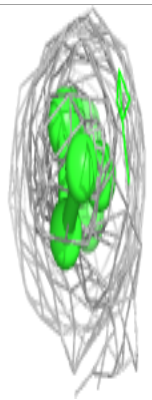


Electron density around LMT E 249:

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

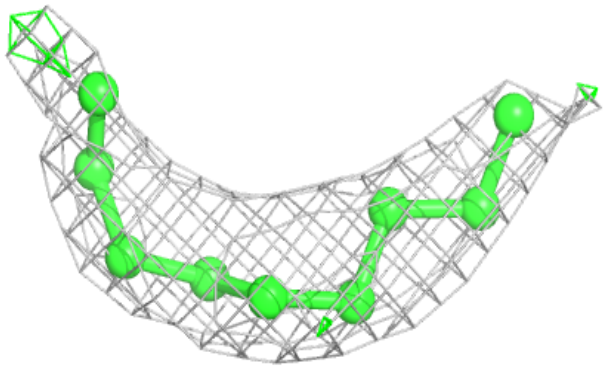


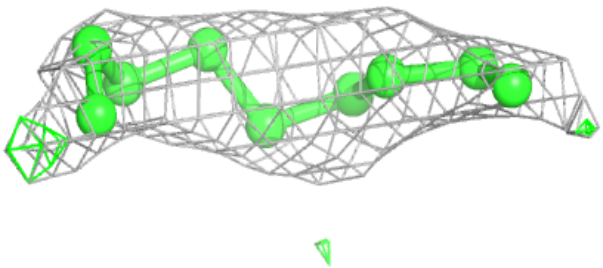


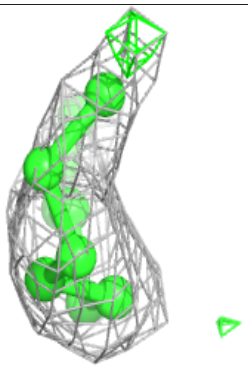


Electron density around LMT I 258:

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

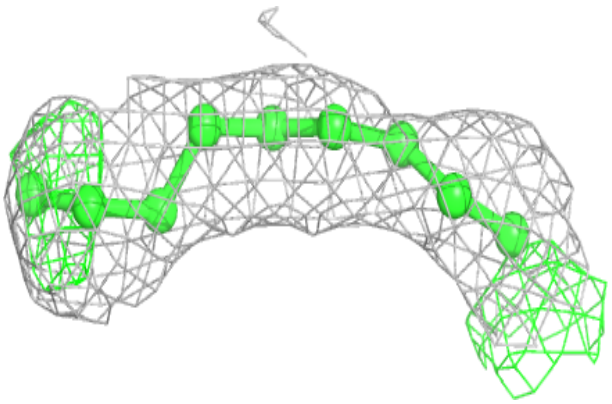


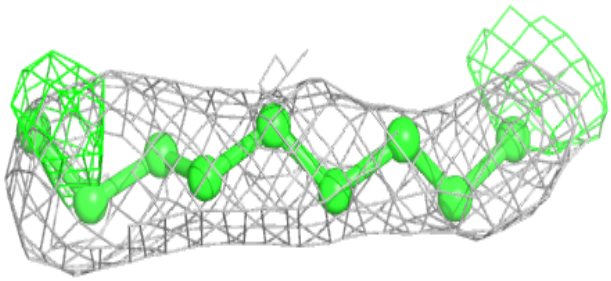


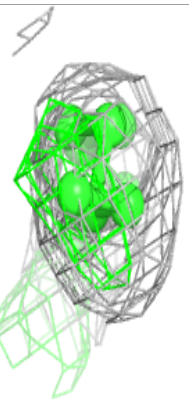


Electron density around LMT I 257:

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

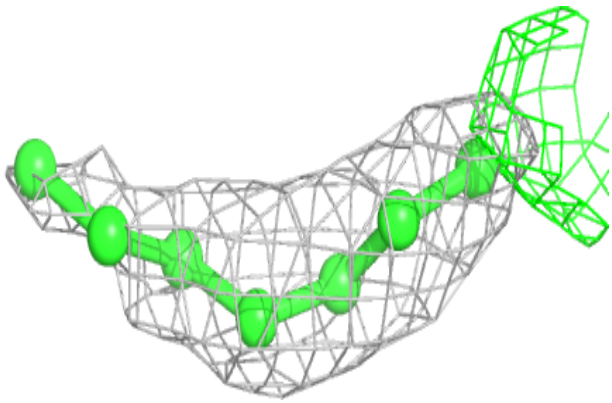


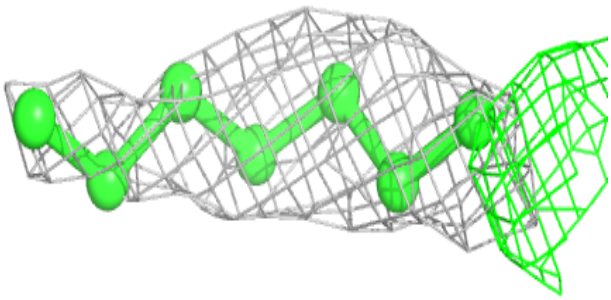


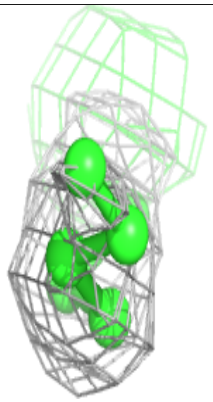


Electron density around LMT A 217:

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

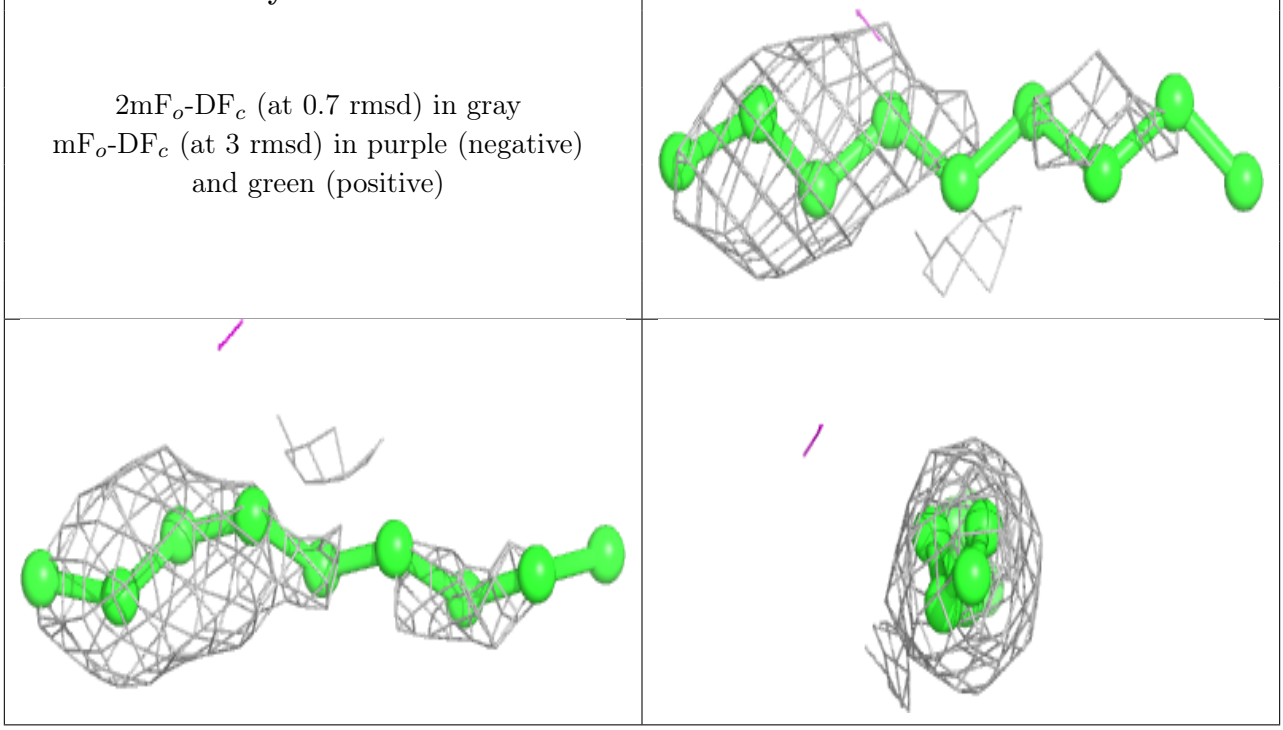






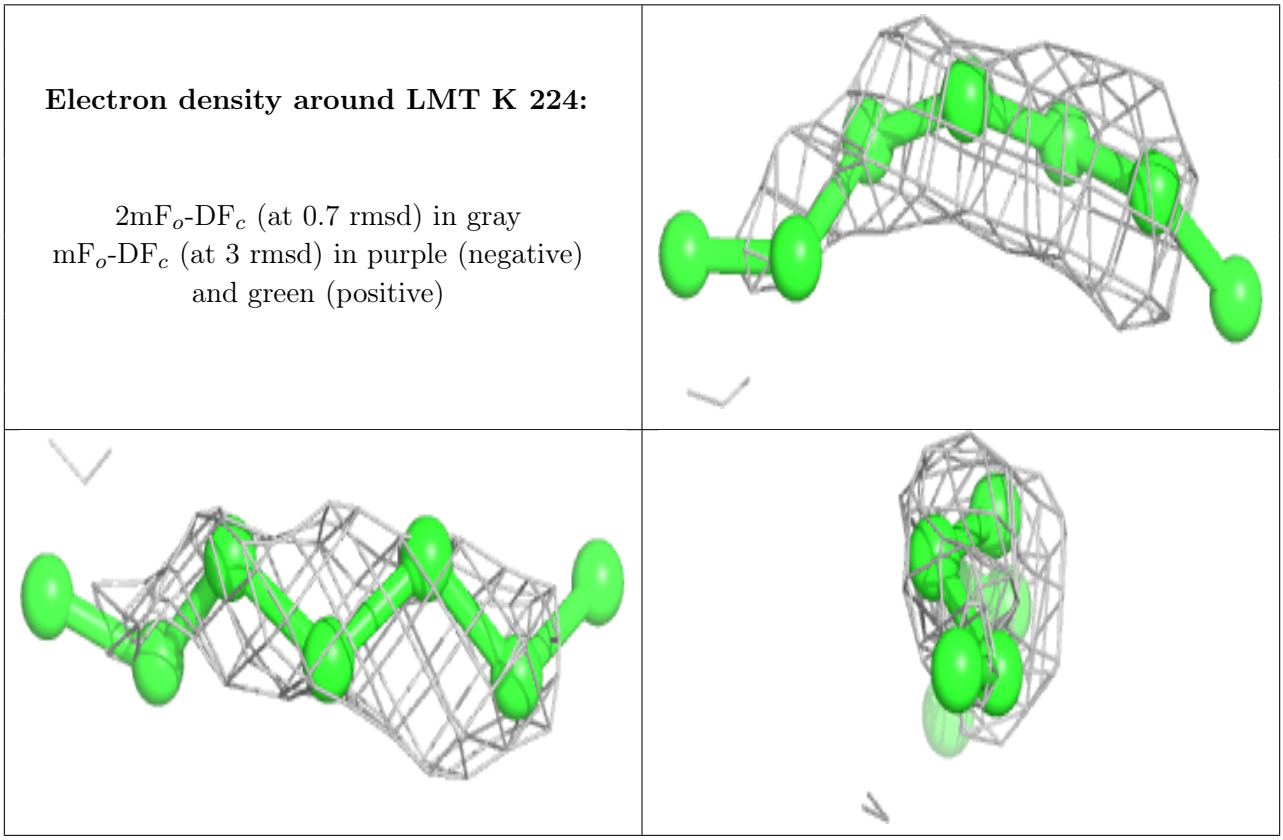
Electron density around LMT L 255:

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



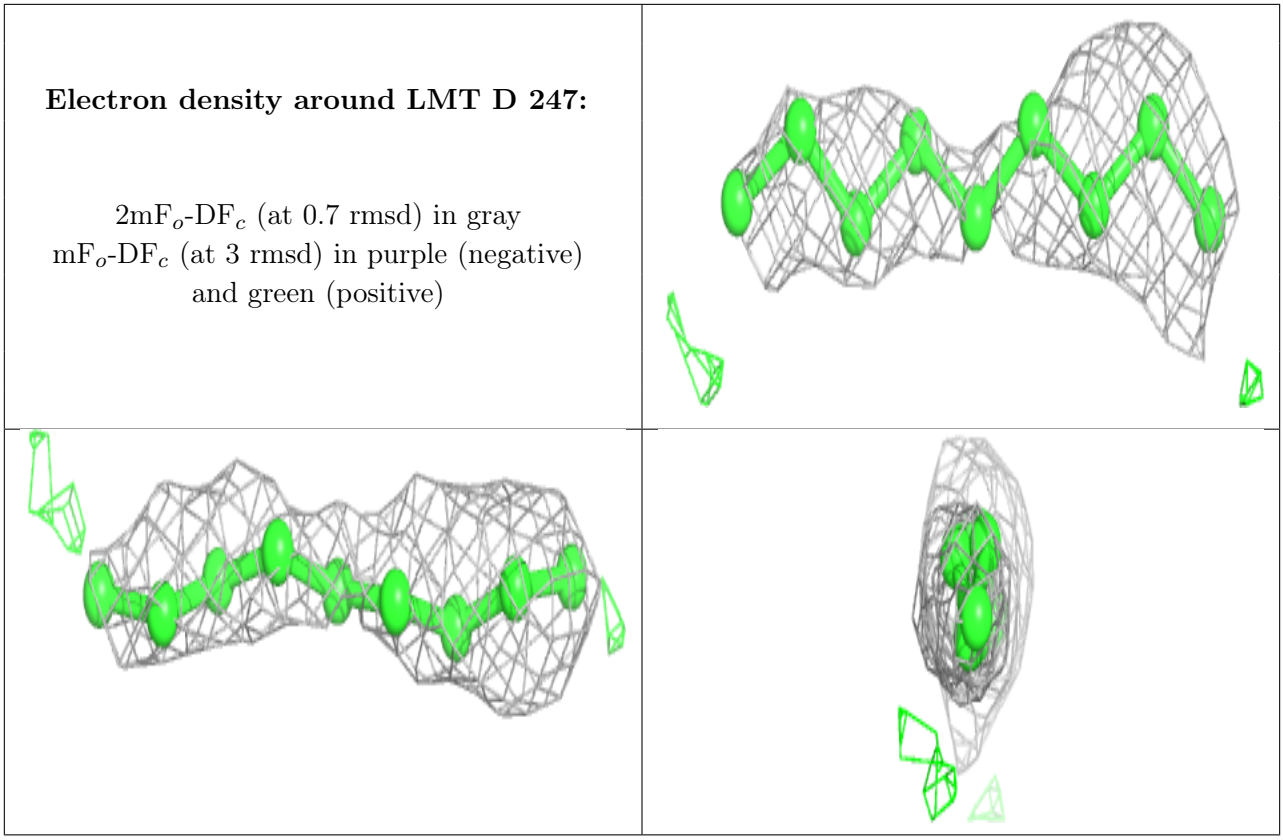
Electron density around LMT K 224:

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



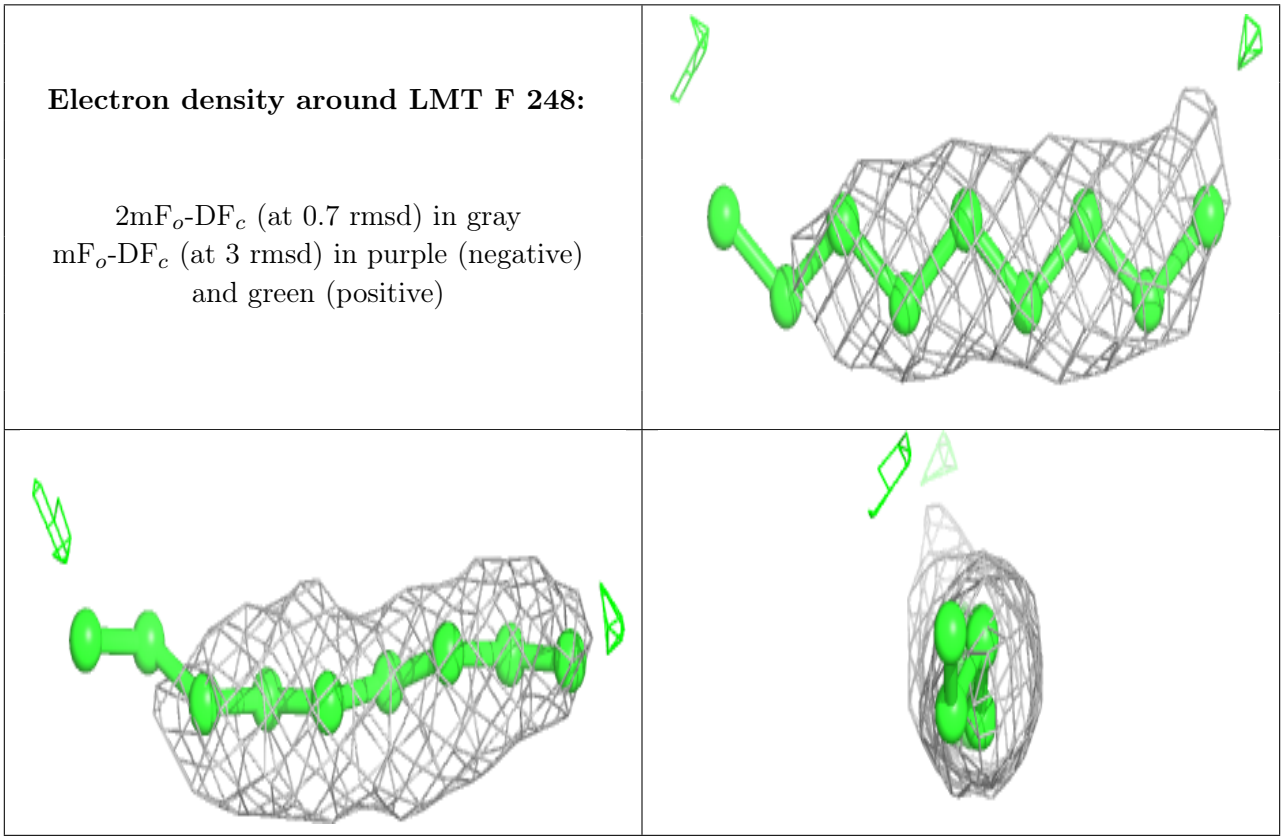
Electron density around LMT D 247:

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



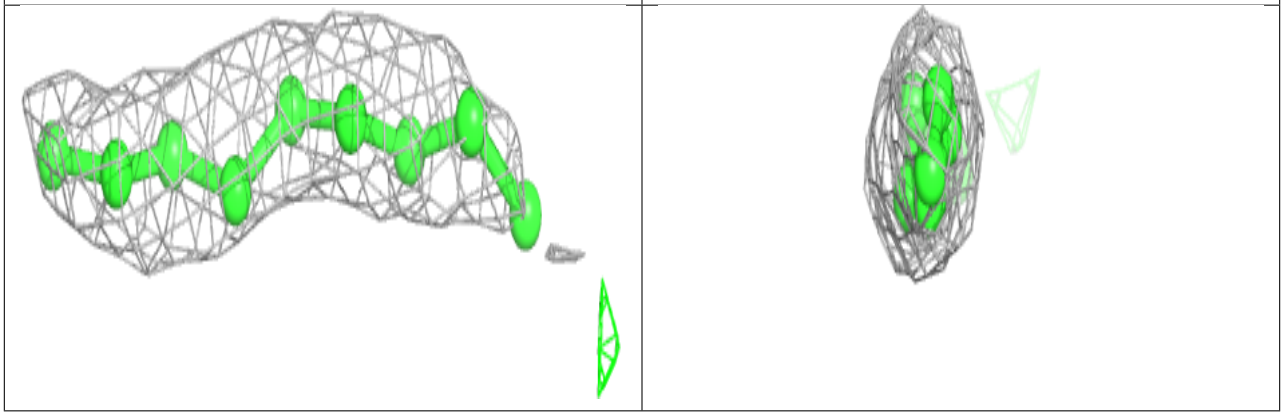
Electron density around LMT F 248:

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



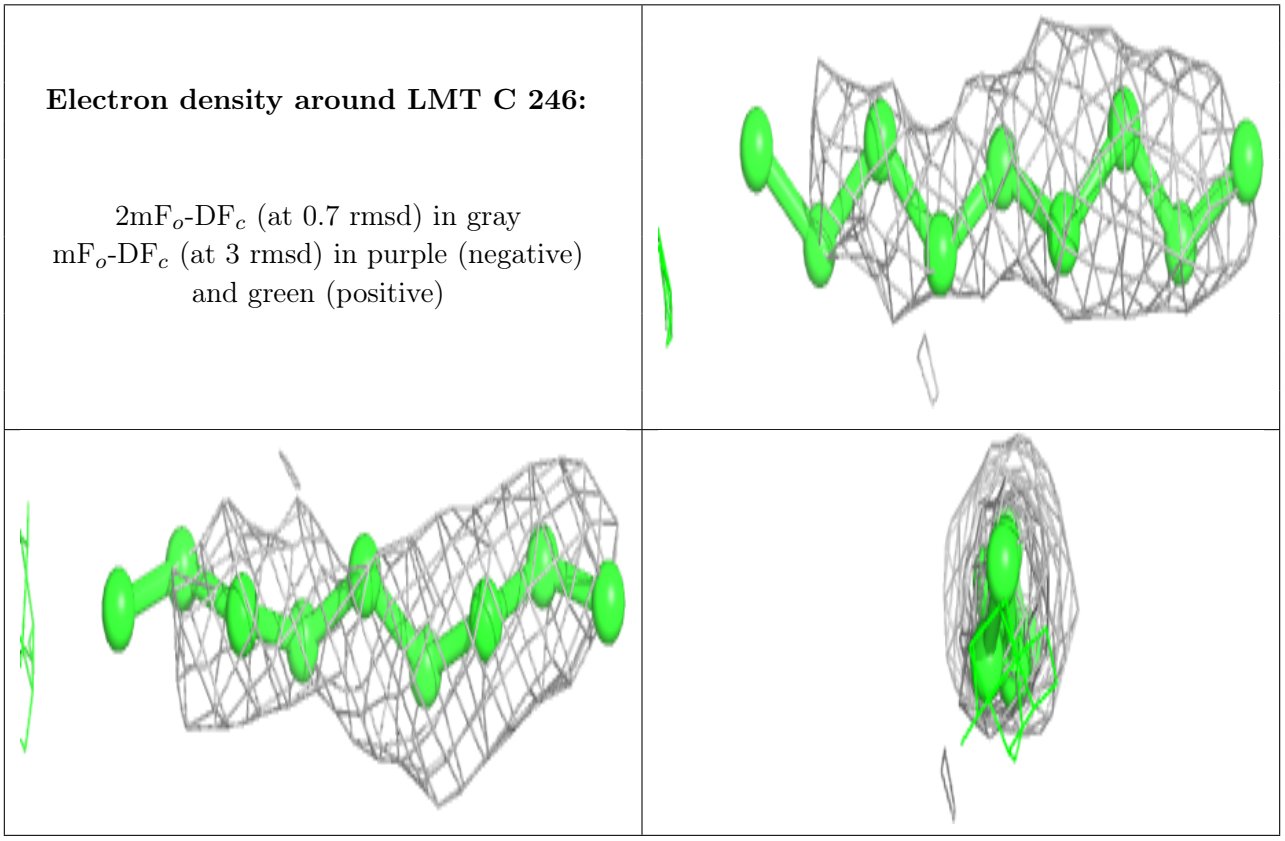
Electron density around LMT A 229:

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



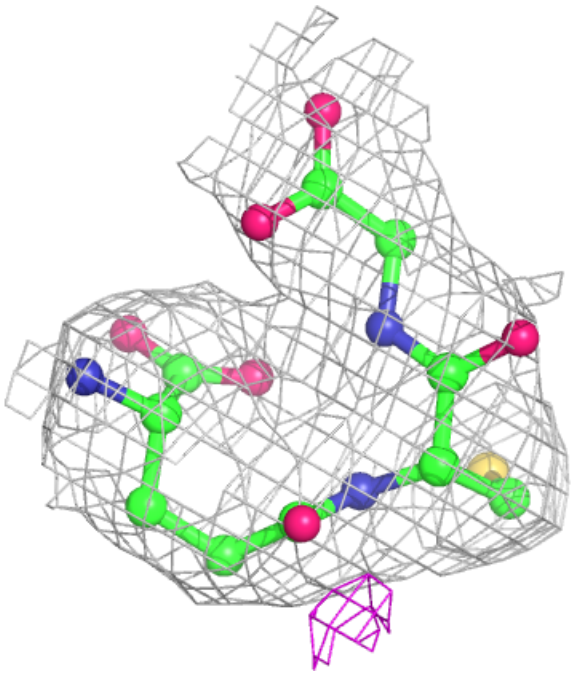
Electron density around LMT C 246:

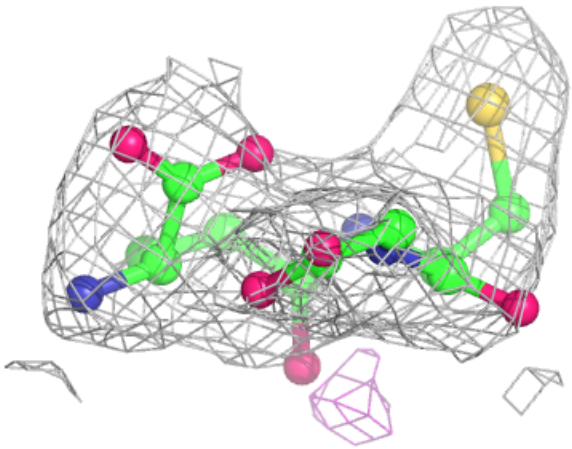
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

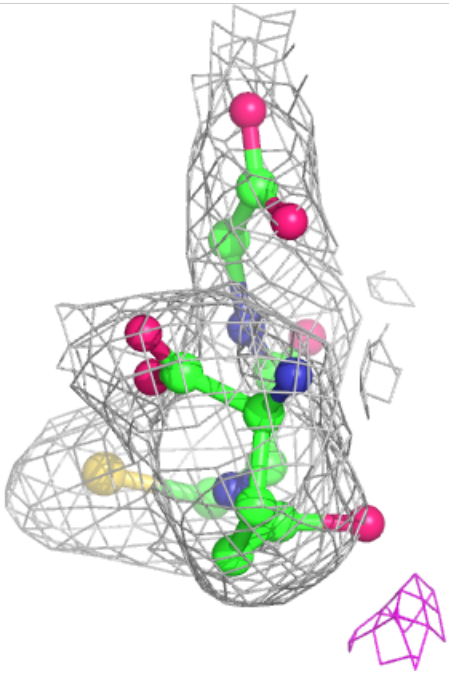


Electron density around GSH I 209:

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

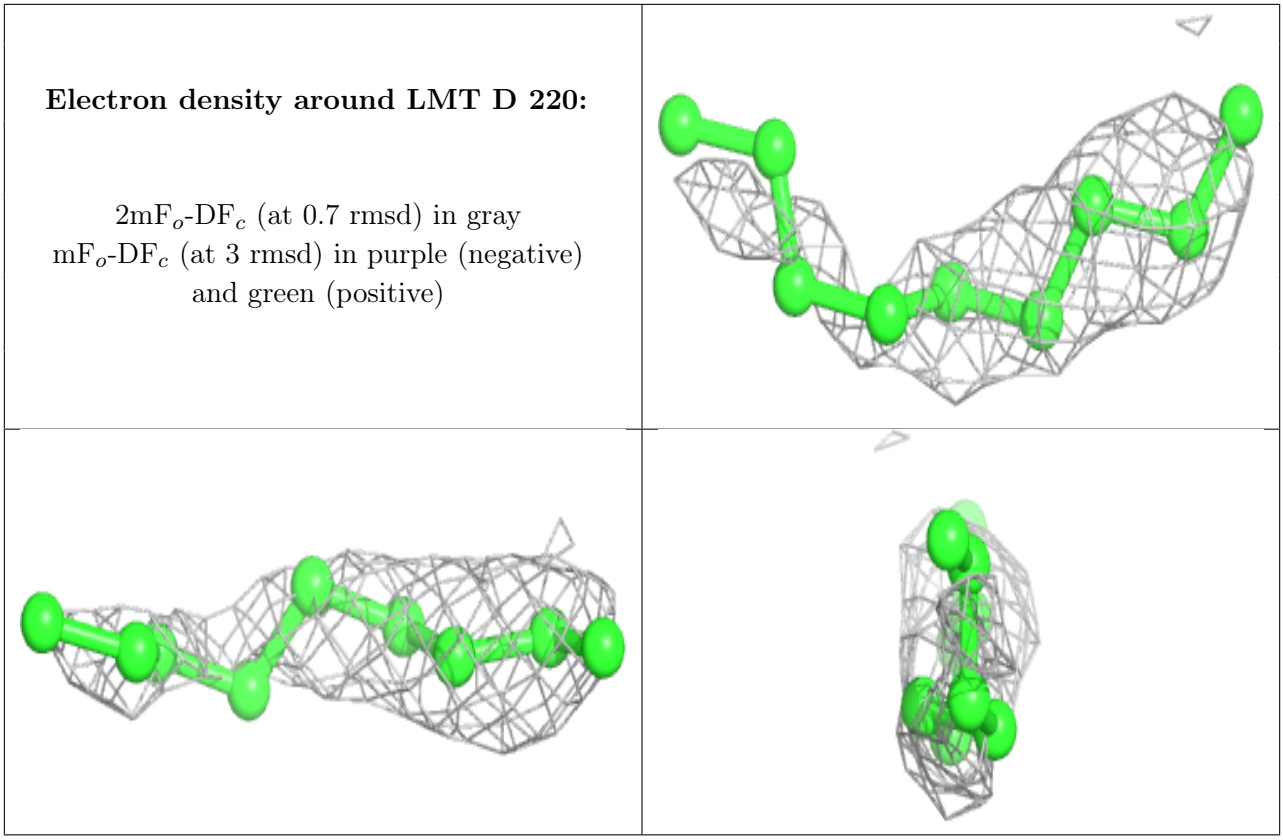






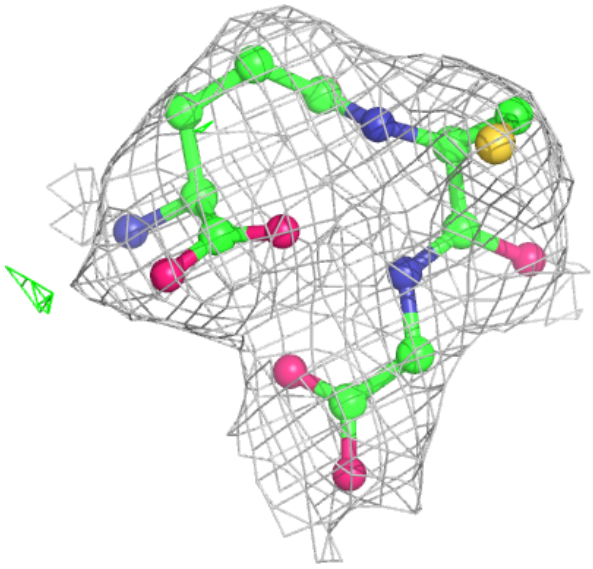
Electron density around LMT D 220:

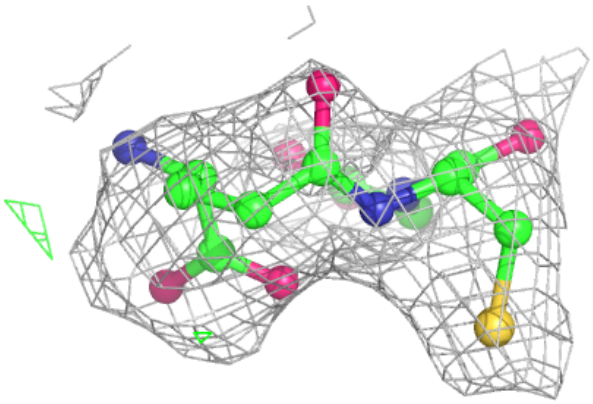
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

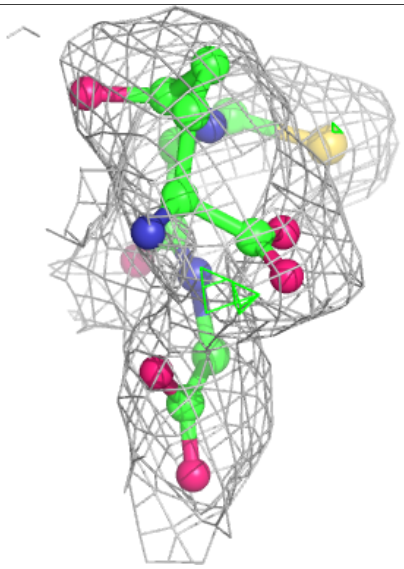


Electron density around GSH J 210:

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

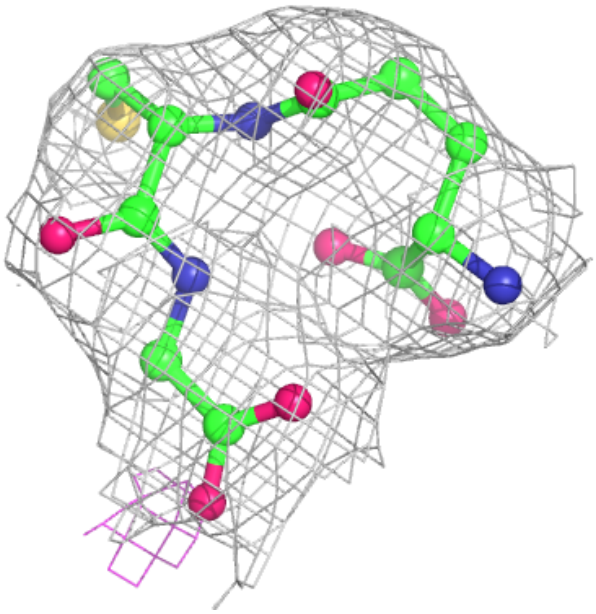


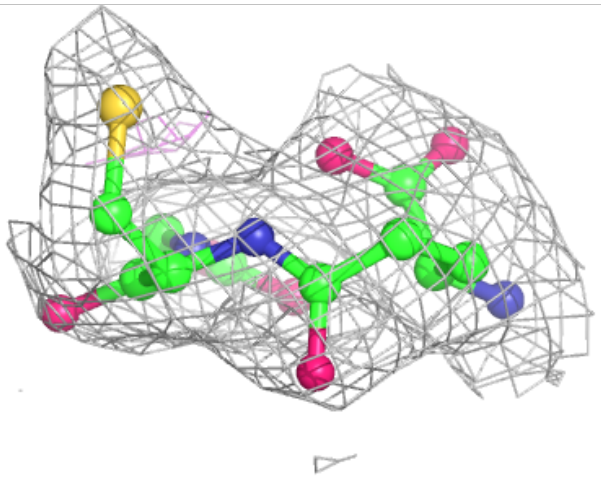


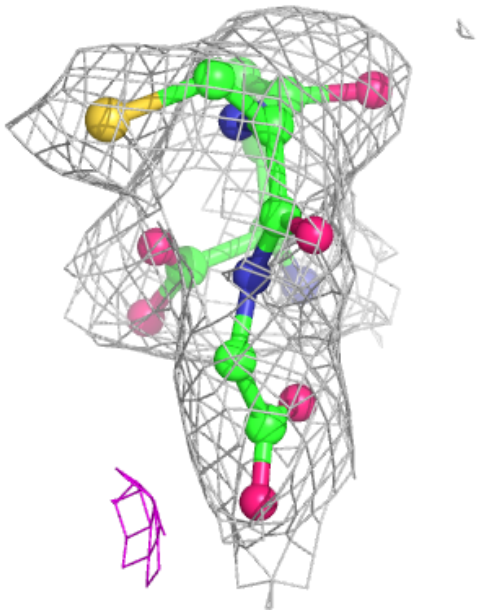


Electron density around GSH D 204:

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

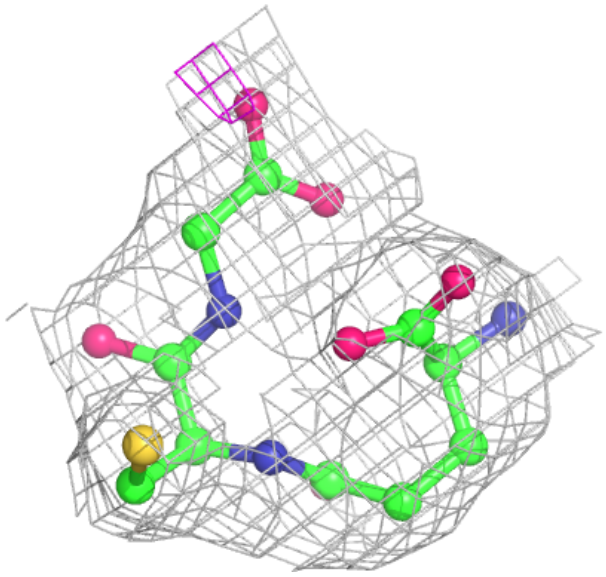


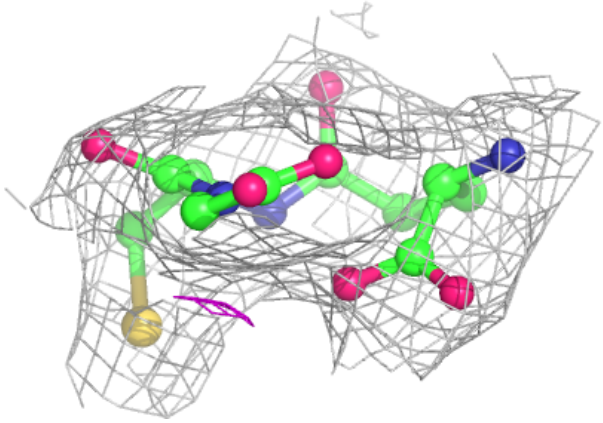


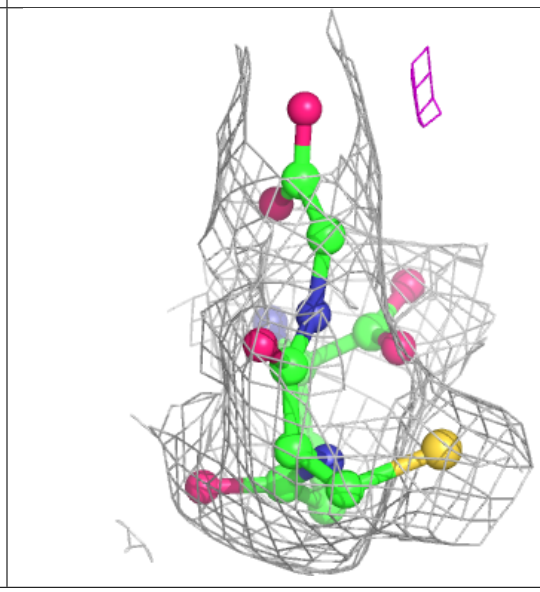


Electron density around GSH K 211:

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

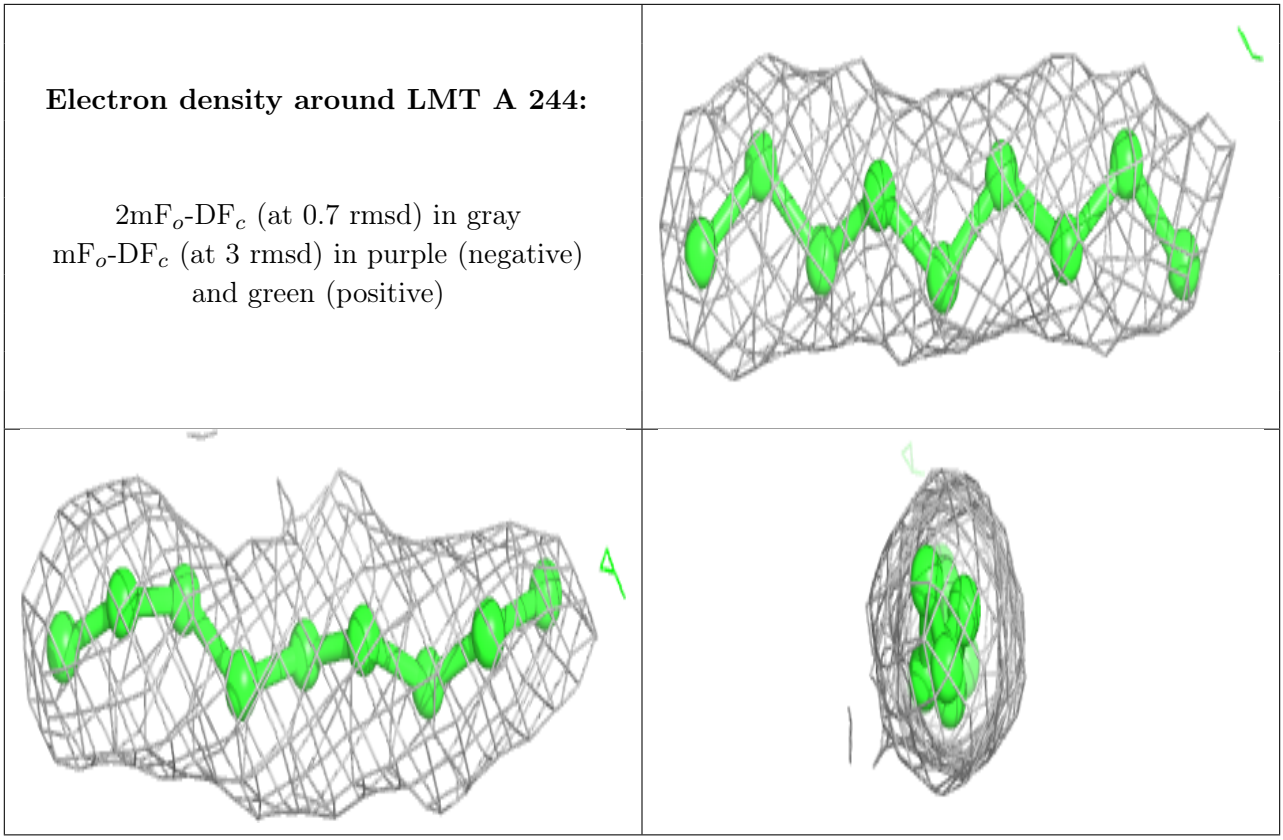






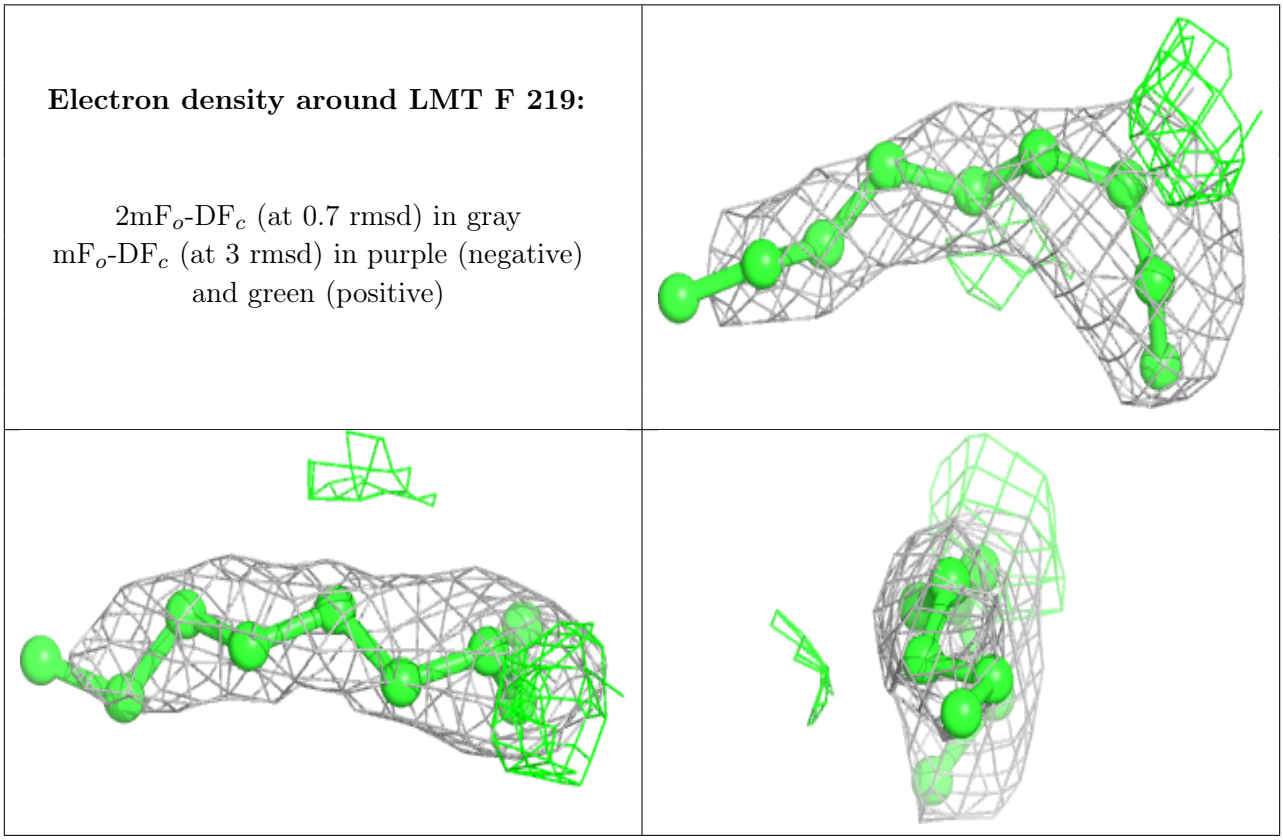
Electron density around LMT A 244:

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



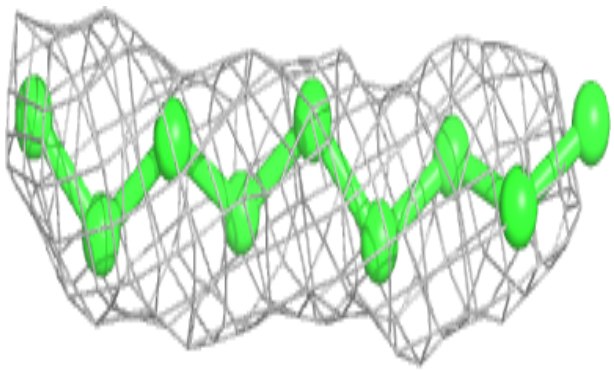
Electron density around LMT F 219:

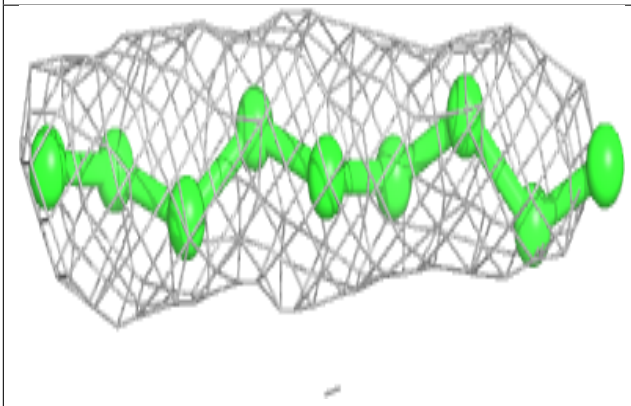
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

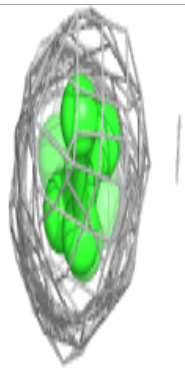


Electron density around LMT A 245:

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

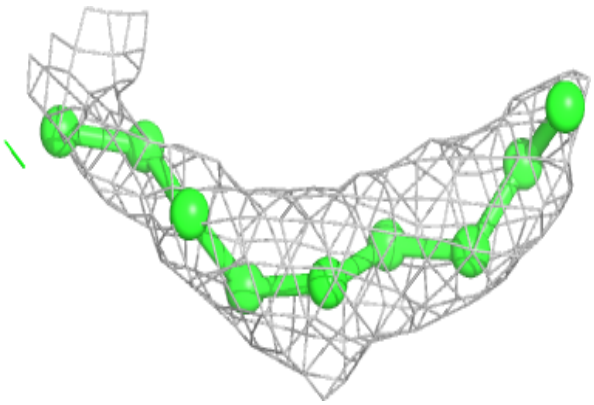


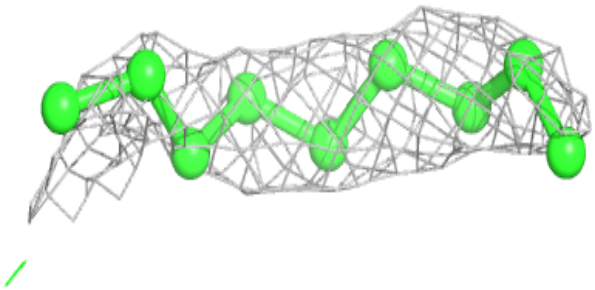


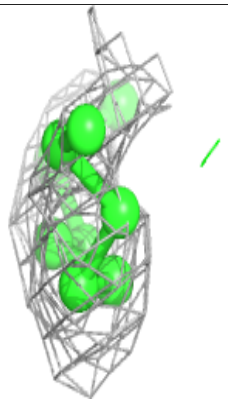


Electron density around LMT L 223:

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

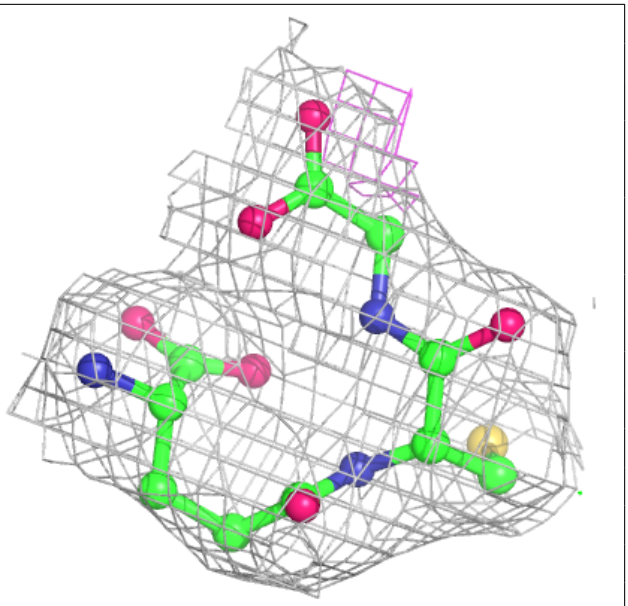


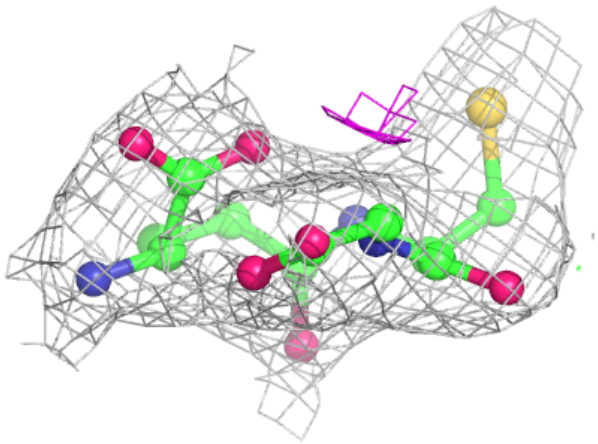


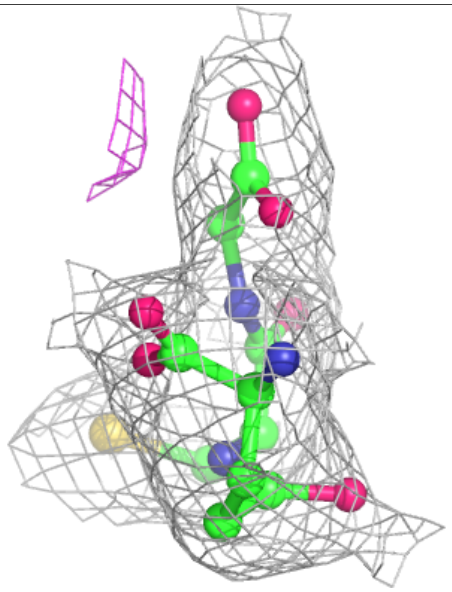


Electron density around GSH E 205:

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

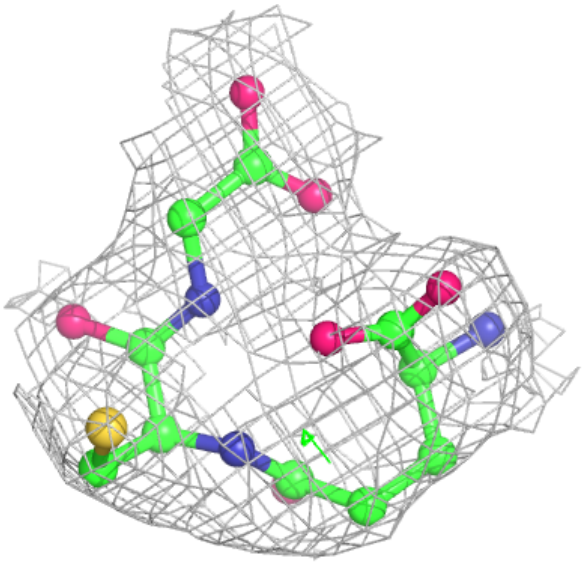


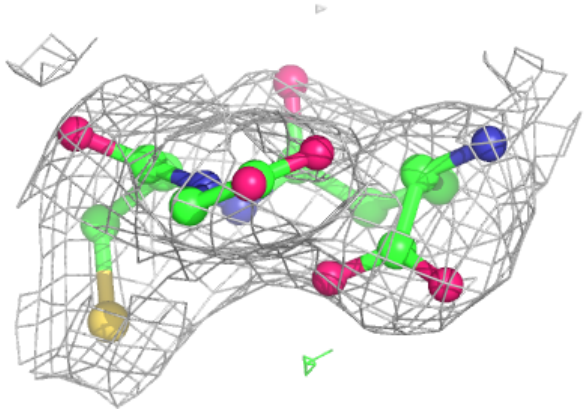


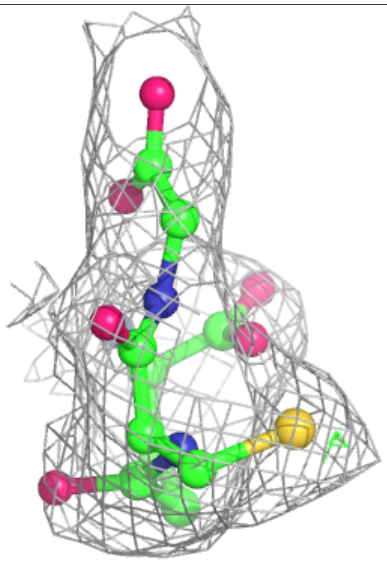


Electron density around GSH H 208:

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

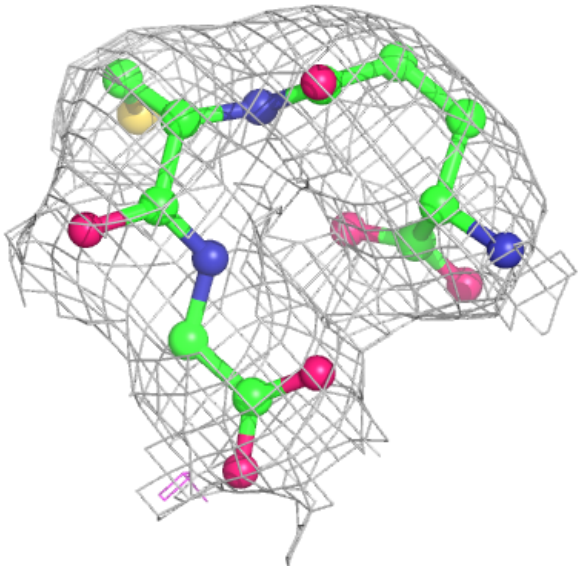


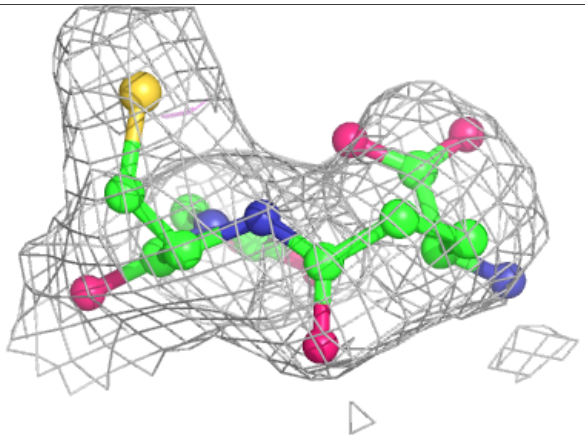


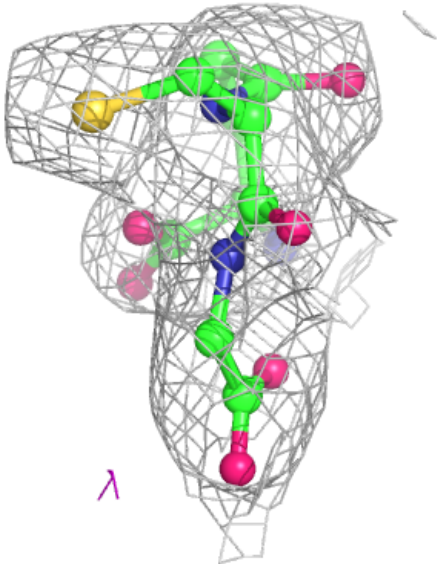


Electron density around GSH B 202:

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

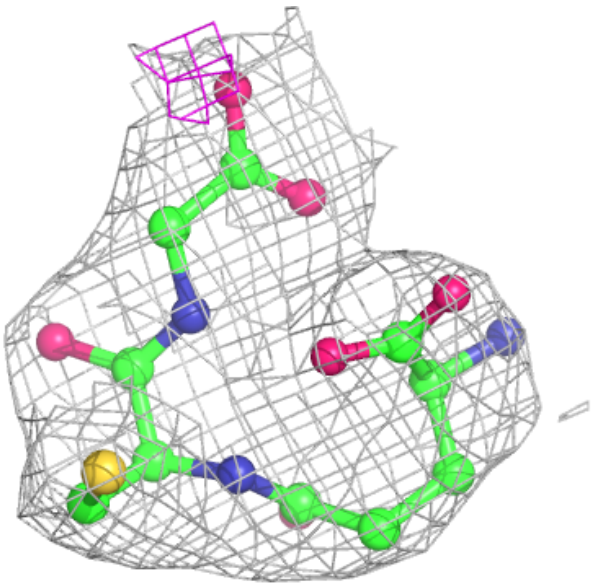


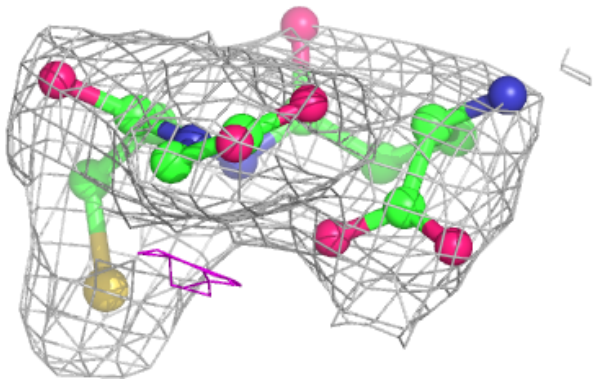


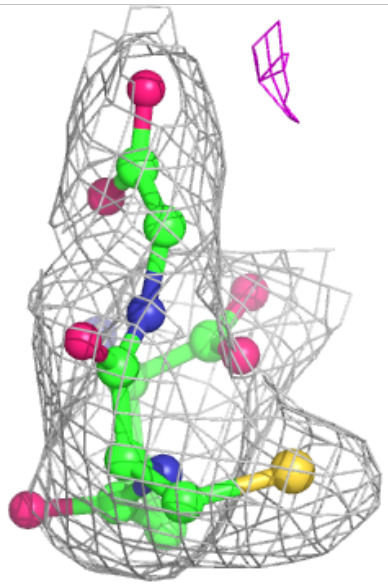


Electron density around GSH G 207:

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

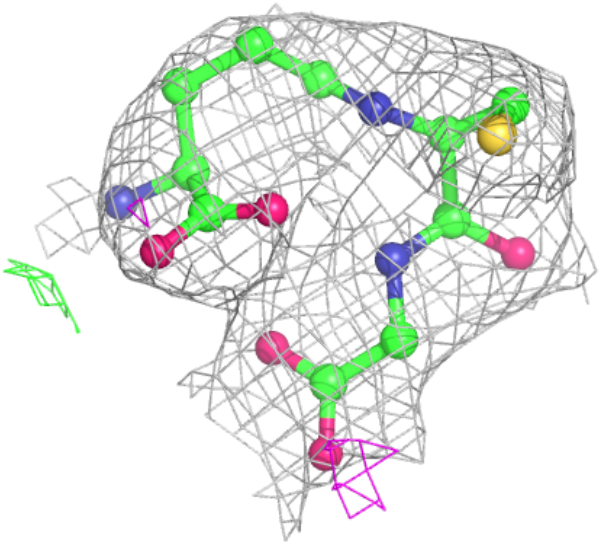


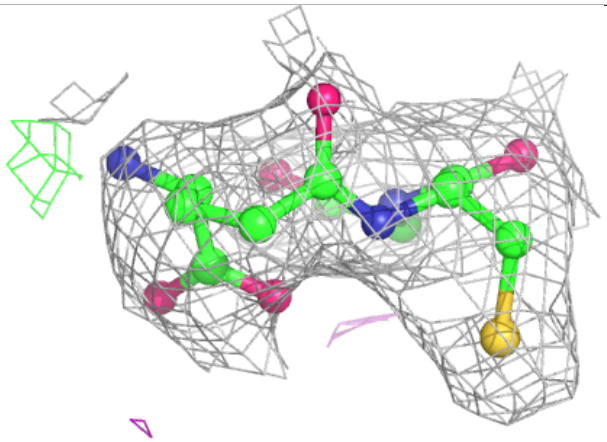


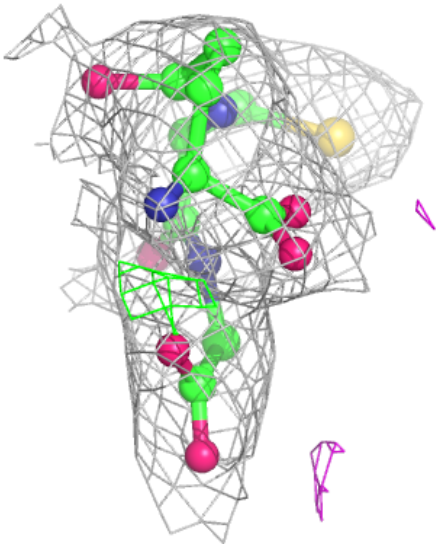


Electron density around GSH A 201:

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

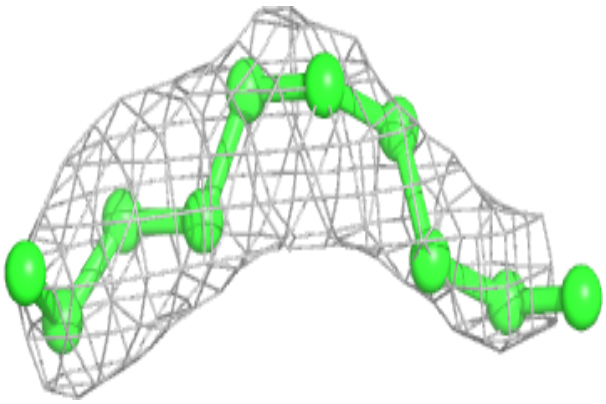


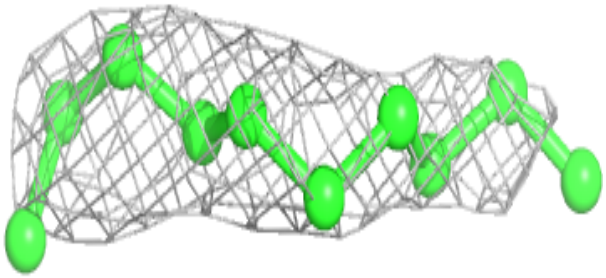


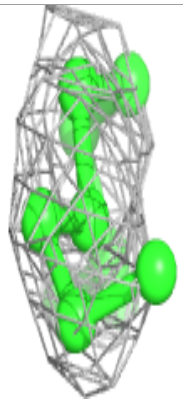


Electron density around LMT E 221:

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

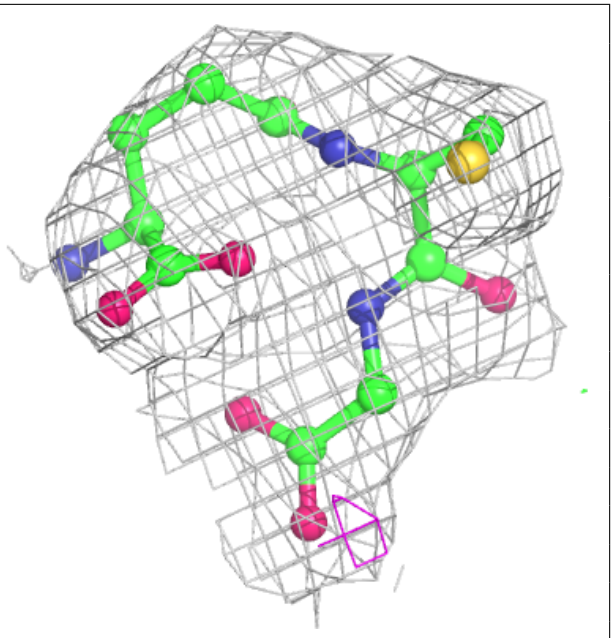


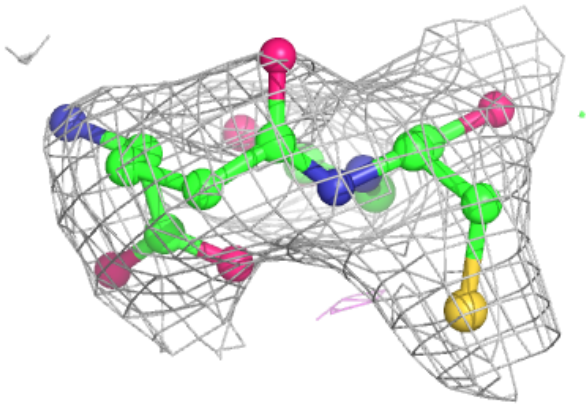


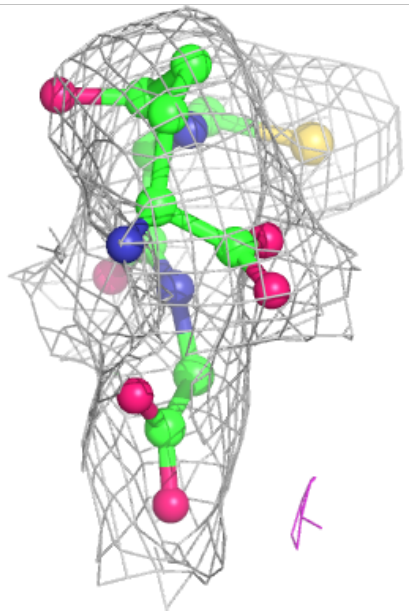


Electron density around GSH L 212:

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

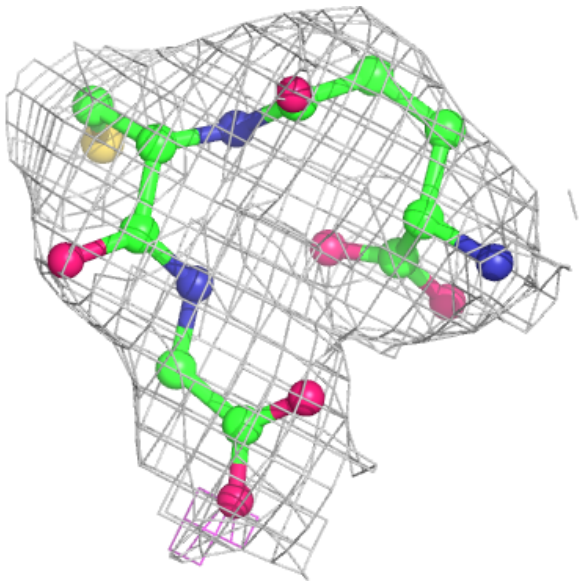


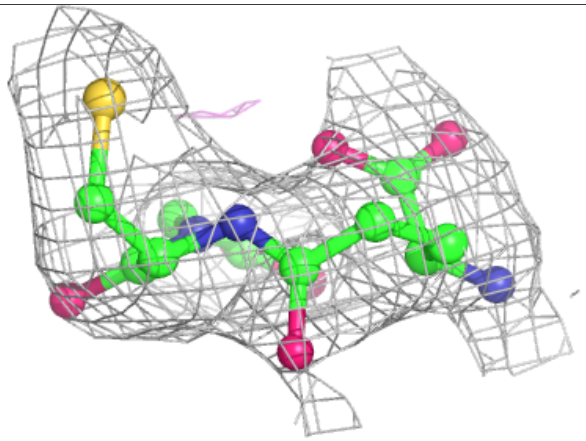


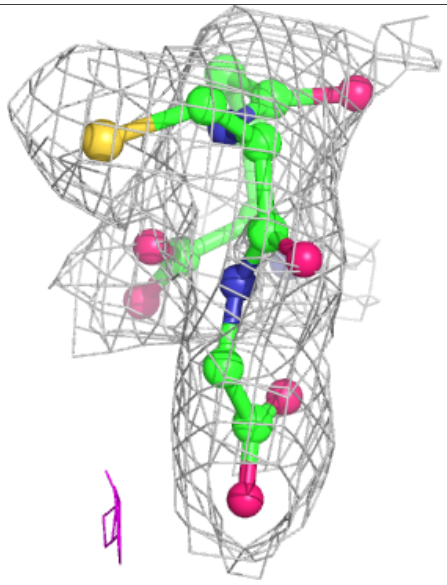


Electron density around GSH C 203:

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

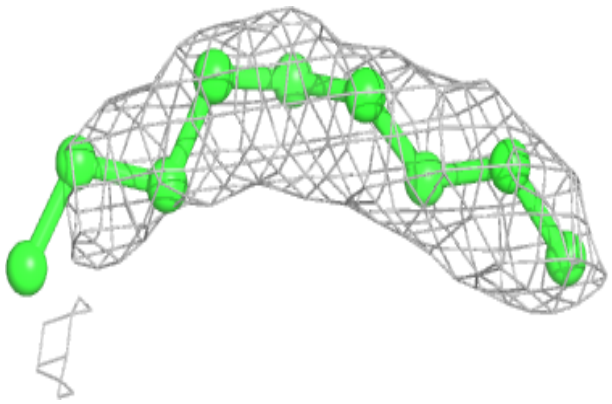


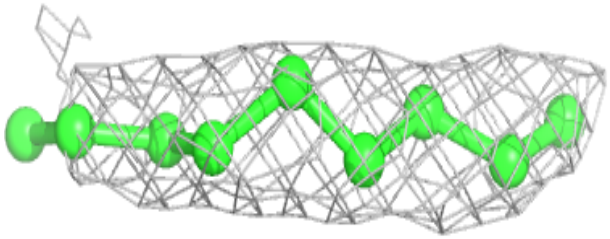


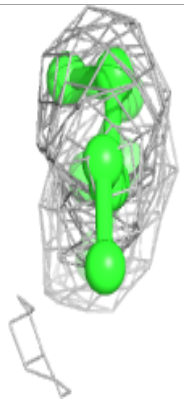


Electron density around LMT G 222:

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

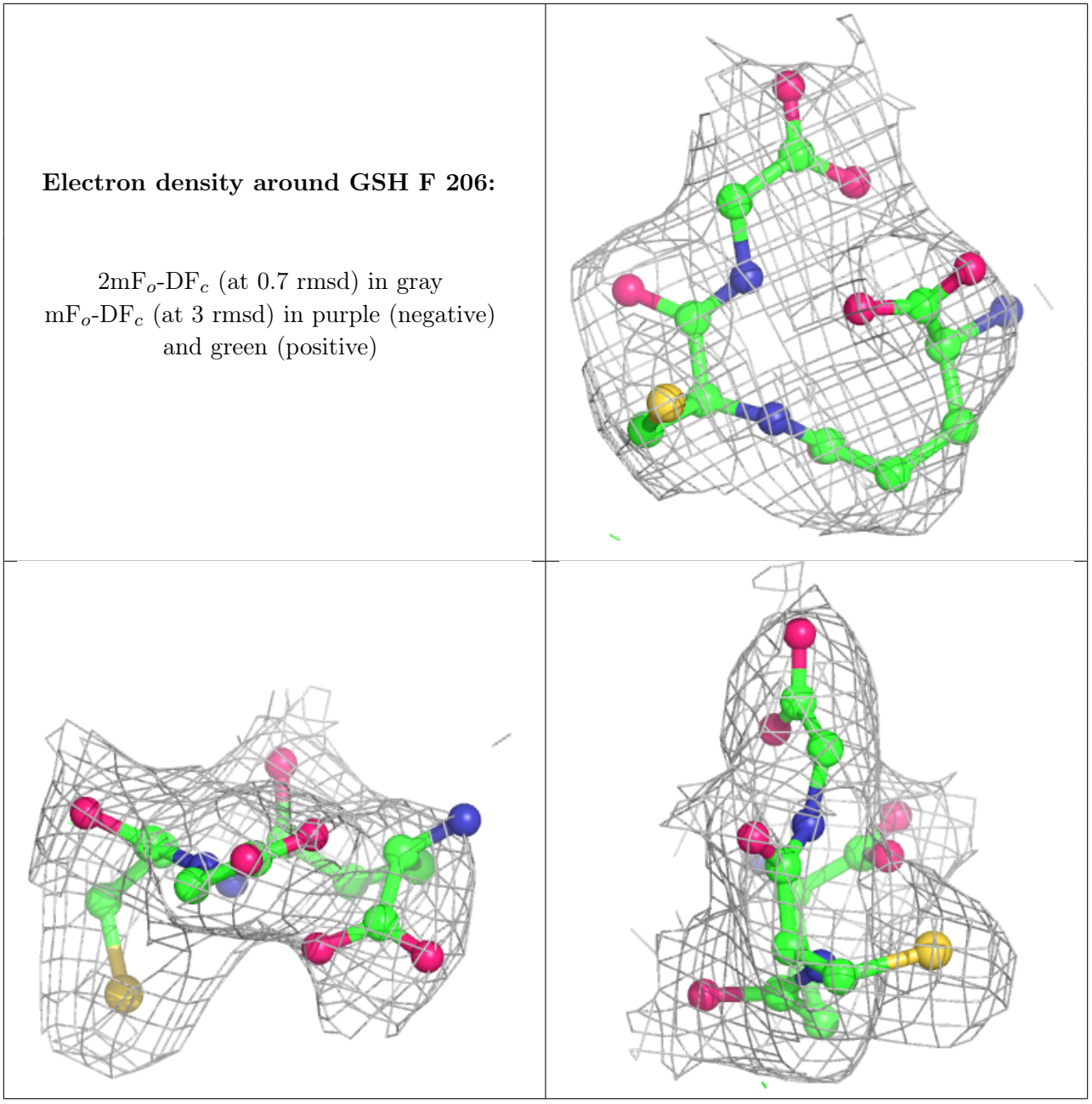






Electron density around GSH F 206:

$2mF_o$-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.