Full wwPDB X-ray Structure Validation Report (i)

Apr 29, 2024 – 07:07 am BST

PDB ID	:	2BL2
Title	:	The membrane rotor of the V-type ATPase from Enterococcus hirae
Authors	:	Murata, T.; Yamato, I.; Kakinuma, Y.; Leslie, A.G.W.; Walker, J.E.
Deposited on	:	2005-02-25
Resolution	:	2.10 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:

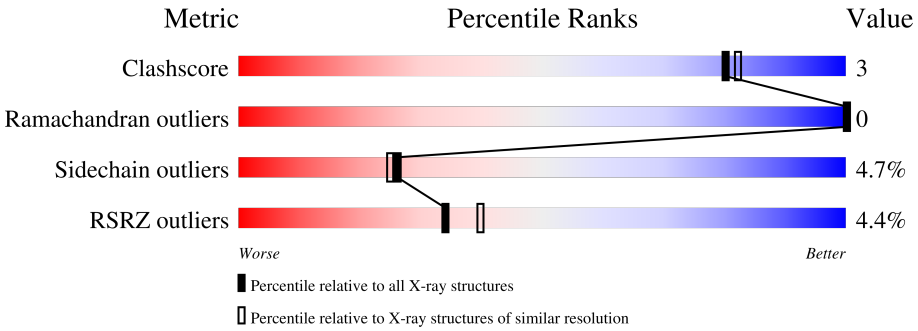
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36.2
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	5710 (2.10-2.10)
Ramachandran outliers	138981	5647 (2.10-2.10)
Sidechain outliers	138945	5648 (2.10-2.10)
RSRZ outliers	127900	5083 (2.10-2.10)

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

Mol	Chain	Length	Quality of chain
1	A	156	4% 94%
1	B	156	4% 94%
1	C	156	6% 94%
1	D	156	9% 93% 5%
1	E	156	8% 93%
1	F	156	5% 94%

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Mol	Chain	Length	Quality of chain
1	G	156	4% 94%
1	H	156	3% 93% 5%
1	I	156	% 92% 6%
1	J	156	96%

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
2	LHG	A	1159	-	-	-	X
2	LHG	A	1160	-	-	-	X
2	LHG	A	1161	-	-	-	X
2	LHG	A	1164	-	-	-	X
2	LHG	A	1165	-	-	-	X
2	LHG	A	1166	-	-	-	X
2	LHG	A	162	-	-	-	X
2	LHG	B	1159	-	-	-	X
2	LHG	B	1160	-	-	-	X
2	LHG	B	1161	-	-	-	X
2	LHG	B	1164	-	-	-	X
2	LHG	C	1160	-	-	-	X
2	LHG	C	161	-	-	-	X
2	LHG	D	1160	-	-	-	X
2	LHG	D	1162	-	-	-	X
2	LHG	D	1163	-	-	-	X
2	LHG	D	1164	-	-	-	X
2	LHG	D	1165	-	-	-	X
2	LHG	D	162	-	-	-	X
2	LHG	F	1160	-	-	-	X
2	LHG	F	1161	-	-	-	X
2	LHG	F	1165	-	-	-	X
2	LHG	F	162	-	-	-	X
2	LHG	G	161	-	-	-	X
2	LHG	G	162	-	-	-	X
2	LHG	H	1159	-	-	-	X
2	LHG	H	161	-	-	-	X
2	LHG	H	162	-	-	-	X
2	LHG	I	1160	-	-	-	X
2	LHG	I	1161	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	LHG	I	1162	-	-	-	X
2	LHG	I	1165	-	-	-	X
2	LHG	J	1159	-	-	-	X
4	UMQ	C	1164	X	-	-	-
4	UMQ	D	163	-	-	-	X
4	UMQ	F	1162	-	-	-	X
4	UMQ	F	1167	X	-	-	-

2 Entry composition (i)

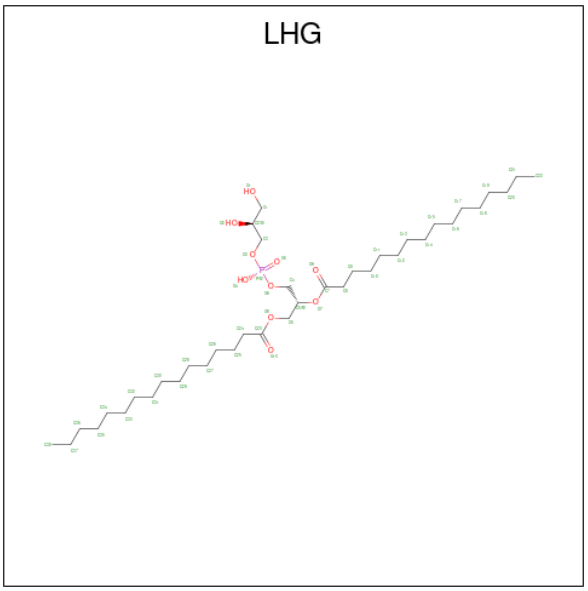
There are 5 unique types of molecules in this entry. The entry contains 13367 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 V-TYPE SODIUM ATP SYNTHASE SUBUNIT K.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	156	Total	C	N	O	S	0	9	0
			1155	760	179	208	8			
1	B	156	Total	C	N	O	S	0	9	0
			1155	760	179	208	8			
1	C	156	Total	C	N	O	S	0	9	0
			1155	760	179	208	8			
1	D	156	Total	C	N	O	S	0	9	0
			1155	760	179	208	8			
1	E	156	Total	C	N	O	S	0	9	0
			1155	760	179	208	8			
1	F	156	Total	C	N	O	S	0	9	0
			1155	760	179	208	8			
1	G	156	Total	C	N	O	S	0	9	0
			1155	760	179	208	8			
1	H	156	Total	C	N	O	S	0	9	0
			1155	760	179	208	8			
1	I	156	Total	C	N	O	S	0	7	0
			1148	757	178	205	8			
1	J	156	Total	C	N	O	S	0	8	0
			1153	759	180	207	7			

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



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total C 10 10	0	0
2	A	1	Total C O P 49 38 10 1	0	0
2	A	1	Total C O 40 35 5	0	0
2	A	1	Total C 11 11	0	0
2	A	1	Total C 8 8	0	0
2	A	1	Total C O 40 35 5	0	0
2	A	1	Total C 9 9	0	0
2	A	1	Total C 10 10	0	0
2	B	1	Total C O P 49 38 10 1	0	0
2	B	1	Total C 9 9	0	0
2	B	1	Total C 9 9	0	0
2	B	1	Total C 8 8	0	0
2	B	1	Total C 10 10	0	0
2	C	1	Total C 9 9	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	C	1	Total C O P 49 38 10 1	0	0
2	C	1	Total C O 40 35 5	0	0
2	C	1	Total C 9 9	0	0
2	C	1	Total C O 40 35 5	0	0
2	D	1	Total C 5 5	0	0
2	D	1	Total C O P 49 38 10 1	0	0
2	D	1	Total C 9 9	0	0
2	D	1	Total C 8 8	0	0
2	D	1	Total C O 40 35 5	0	0
2	D	1	Total C 9 9	0	0
2	D	1	Total C 8 8	0	0
2	D	1	Total C 8 8	0	0
2	E	1	Total C O P 49 38 10 1	0	0
2	F	1	Total C 10 10	0	0
2	F	1	Total C O P 49 38 10 1	0	0
2	F	1	Total C O 40 35 5	0	0
2	F	1	Total C 11 11	0	0
2	F	1	Total C 11 11	0	0
2	F	1	Total C O 40 35 5	0	0
2	F	1	Total C 7 7	0	0
2	F	1	Total C O 40 35 5	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	G	1	Total C 9 9	0	0
2	G	1	Total C 10 10	0	0
2	G	1	Total C O P 49 38 10 1	0	0
2	H	1	Total C 9 9	0	0
2	H	1	Total C 10 10	0	0
2	H	1	Total C O P 49 38 10 1	0	0
2	H	1	Total C 9 9	0	0
2	I	1	Total C O P 49 38 10 1	0	0
2	I	1	Total C O 40 35 5	0	0
2	I	1	Total C 8 8	0	0
2	I	1	Total C 8 8	0	0
2	I	1	Total C 8 8	0	0
2	I	1	Total C O 40 35 5	0	0
2	J	1	Total C O P 49 38 10 1	0	0
2	J	1	Total C 11 11	0	0

- Molecule 3 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total Na 1 1	0	0
3	B	1	Total Na 1 1	0	0
3	C	1	Total Na 1 1	0	0
3	D	1	Total Na 1 1	0	0

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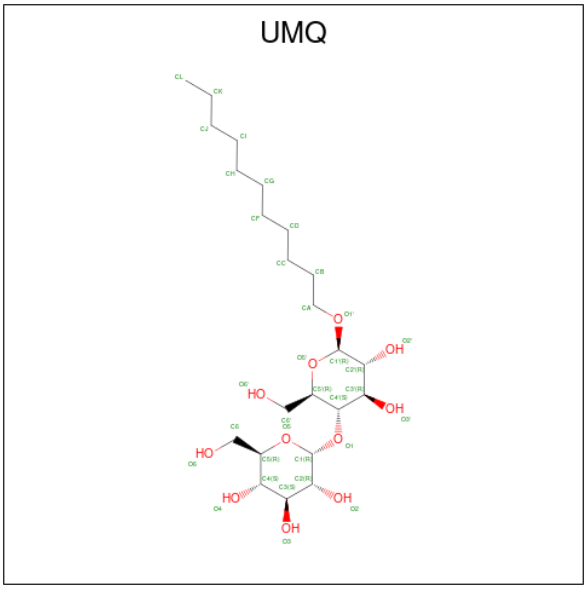
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	E	1	Total Na 1 1	0	0
3	F	1	Total Na 1 1	0	0
3	G	1	Total Na 1 1	0	0
3	H	1	Total Na 1 1	0	0
3	I	1	Total Na 1 1	0	0
3	J	1	Total Na 1 1	0	0

- Molecule 4 is UNDECYL-MALTOSIDE (three-letter code: UMQ) (formula: $C_{23}H_{44}O_{11}$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total C O 12 11 1	0	0
4	A	1	Total C O 12 11 1	0	0
4	B	1	Total C O 12 11 1	0	0
4	B	1	Total C O 12 11 1	0	0
4	C	1	Total C O 12 11 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	C	1	Total C O 12 11 1	0	0
4	C	1	Total C O 34 23 11	0	0
4	D	1	Total C O 12 11 1	0	0
4	D	1	Total C O 12 11 1	0	0
4	E	1	Total C O 12 11 1	0	0
4	E	1	Total C O 12 11 1	0	0
4	F	1	Total C O 12 11 1	0	0
4	F	1	Total C O 12 11 1	0	0
4	F	1	Total C O 34 23 11	0	0
4	G	1	Total C O 12 11 1	0	0
4	G	1	Total C O 12 11 1	0	0
4	H	1	Total C O 12 11 1	0	0
4	H	1	Total C O 12 11 1	0	0
4	I	1	Total C O 12 11 1	0	0
4	I	1	Total C O 12 11 1	0	0
4	J	1	Total C O 12 11 1	0	0
4	J	1	Total C O 12 11 1	0	0

- Molecule 5 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	32	Total O 32 32	0	0
5	B	33	Total O 33 33	0	0

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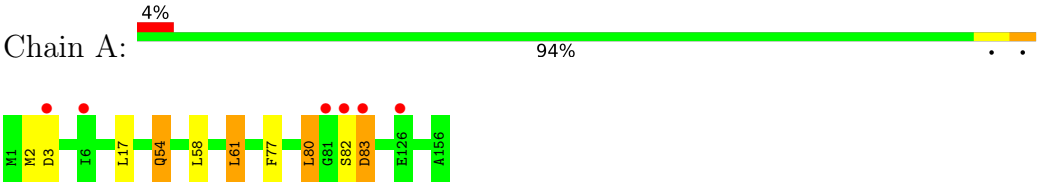
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	C	21	Total O 21 21	0	0
5	D	26	Total O 26 26	0	0
5	E	28	Total O 28 28	0	0
5	F	34	Total O 34 34	0	0
5	G	36	Total O 36 36	0	0
5	H	44	Total O 44 44	0	0
5	I	57	Total O 57 57	0	0
5	J	37	Total O 37 37	0	0

3 Residue-property plots (i)

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

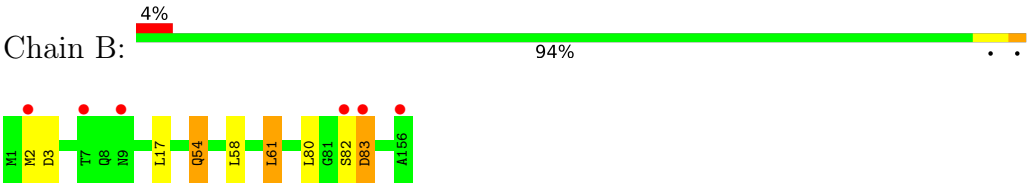
• Molecule 1: V-TYPE SODIUM ATP SYNTHASE SUBUNIT K

Chain A:



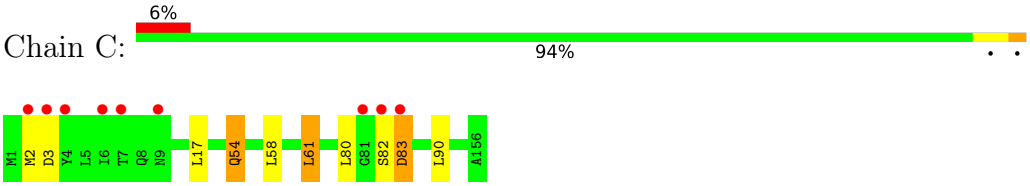
• Molecule 1: V-TYPE SODIUM ATP SYNTHASE SUBUNIT K

Chain B:



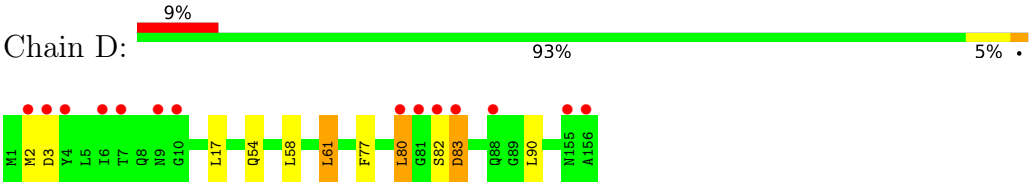
• Molecule 1: V-TYPE SODIUM ATP SYNTHASE SUBUNIT K

Chain C:



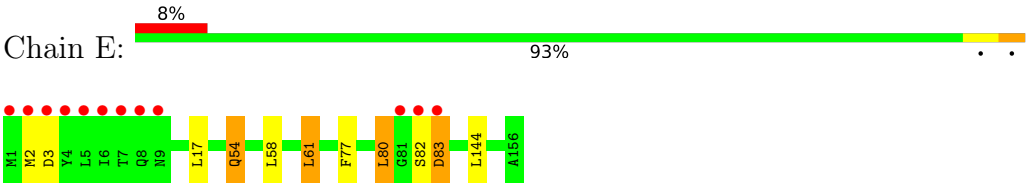
• Molecule 1: V-TYPE SODIUM ATP SYNTHASE SUBUNIT K

Chain D:



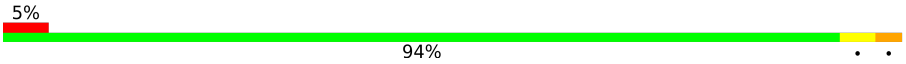
• Molecule 1: V-TYPE SODIUM ATP SYNTHASE SUBUNIT K

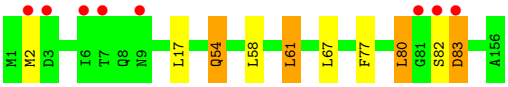
Chain E:



• Molecule 1: V-TYPE SODIUM ATP SYNTHASE SUBUNIT K

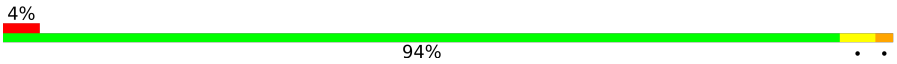
Chain F:

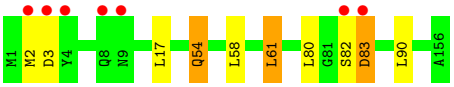




• Molecule 1: V-TYPE SODIUM ATP SYNTHASE SUBUNIT K

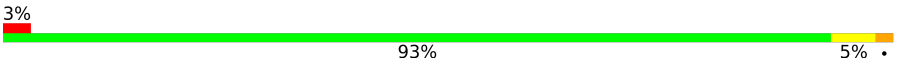
Chain G:





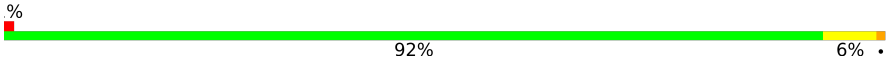
• Molecule 1: V-TYPE SODIUM ATP SYNTHASE SUBUNIT K

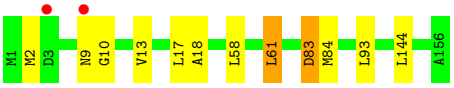
Chain H:



• Molecule 1: V-TYPE SODIUM ATP SYNTHASE SUBUNIT K

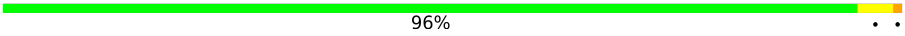
Chain I:





• Molecule 1: V-TYPE SODIUM ATP SYNTHASE SUBUNIT K

Chain J:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	120.14Å 125.60Å 210.87Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	61.00 – 2.10 60.19 – 2.10	Depositor EDS
% Data completeness (in resolution range)	99.3 (61.00-2.10) 99.3 (60.19-2.10)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.72 (at 2.10Å)	Xtriage
Refinement program	REFMAC 5.1.24	Depositor
R, R_{free}	0.190 , 0.200 0.201 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	wwPDB-VP
Wilson B-factor (Å^2)	36.0	Xtriage
Anisotropy	0.213	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.38 , 79.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	0.000 for k,h,-l	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	13367	wwPDB-VP
Average B, all atoms (Å^2)	38.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.32% 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 (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: NA, LHG, UMQ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|>5$	RMSZ	#$\|Z\|>5$
1	A	0.42	0/1219	0.57	3/1649 (0.2%)
1	B	0.41	0/1219	0.57	3/1649 (0.2%)
1	C	0.40	0/1219	0.58	3/1649 (0.2%)
1	D	0.39	0/1219	0.57	3/1649 (0.2%)
1	E	0.39	0/1219	0.57	3/1649 (0.2%)
1	F	0.41	0/1219	0.57	2/1649 (0.1%)
1	G	0.43	0/1219	0.57	3/1649 (0.2%)
1	H	0.45	0/1219	0.57	3/1649 (0.2%)
1	I	0.48	0/1202	0.56	0/1626
1	J	0.47	0/1212	0.57	1/1640 (0.1%)
All	All	0.43	0/12166	0.57	24/16458 (0.1%)

There are no bond length outliers.

All (24) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	J	3	ASP	CB-CG-OD2	5.29	123.06	118.30
1	D	83[A]	ASP	CB-CG-OD2	5.20	122.98	118.30
1	D	83[B]	ASP	CB-CG-OD2	5.20	122.98	118.30
1	E	83[A]	ASP	CB-CG-OD2	5.19	122.97	118.30
1	E	83[B]	ASP	CB-CG-OD2	5.19	122.97	118.30
1	H	83[A]	ASP	CB-CG-OD2	5.16	122.95	118.30
1	H	83[B]	ASP	CB-CG-OD2	5.16	122.95	118.30
1	C	83[A]	ASP	CB-CG-OD2	5.15	122.93	118.30
1	C	83[B]	ASP	CB-CG-OD2	5.15	122.93	118.30
1	B	83[A]	ASP	CB-CG-OD2	5.14	122.93	118.30
1	B	83[B]	ASP	CB-CG-OD2	5.14	122.93	118.30
1	G	83[A]	ASP	CB-CG-OD2	5.14	122.92	118.30
1	G	83[B]	ASP	CB-CG-OD2	5.14	122.92	118.30
1	A	3	ASP	CB-CG-OD2	5.13	122.92	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	83[A]	ASP	CB-CG-OD2	5.12	122.90	118.30
1	A	83[B]	ASP	CB-CG-OD2	5.12	122.90	118.30
1	G	3	ASP	CB-CG-OD2	5.12	122.90	118.30
1	F	83[A]	ASP	CB-CG-OD2	5.10	122.89	118.30
1	F	83[B]	ASP	CB-CG-OD2	5.10	122.89	118.30
1	D	3	ASP	CB-CG-OD2	5.09	122.88	118.30
1	C	3	ASP	CB-CG-OD2	5.07	122.86	118.30
1	E	3	ASP	CB-CG-OD2	5.07	122.86	118.30
1	H	3	ASP	CB-CG-OD2	5.04	122.84	118.30
1	B	3	ASP	CB-CG-OD2	5.01	122.81	118.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1155	0	1218	4	0
1	B	1155	0	1218	3	0
1	C	1155	0	1218	4	0
1	D	1155	0	1218	4	0
1	E	1155	0	1218	5	0
1	F	1155	0	1218	5	0
1	G	1155	0	1218	4	0
1	H	1155	0	1218	4	0
1	I	1148	0	1214	7	0
1	J	1153	0	1217	4	0
2	A	177	0	284	10	0
2	B	85	0	130	3	0
2	C	147	0	236	11	0
2	D	136	0	211	6	0
2	E	49	0	74	1	0
2	F	208	0	337	13	0
2	G	68	0	104	1	0
2	H	77	0	118	0	0
2	I	153	0	244	11	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	J	60	0	92	2	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
3	E	1	0	0	0	0
3	F	1	0	0	0	0
3	G	1	0	0	0	0
3	H	1	0	0	0	0
3	I	1	0	0	0	0
3	J	1	0	0	0	0
4	A	24	0	46	0	0
4	B	24	0	46	0	0
4	C	58	0	87	0	0
4	D	24	0	46	0	0
4	E	24	0	46	0	0
4	F	58	0	86	0	0
4	G	24	0	46	0	0
4	H	24	0	46	0	0
4	I	24	0	46	0	0
4	J	24	0	46	0	0
5	A	32	0	0	0	0
5	B	33	0	0	0	0
5	C	21	0	0	0	0
5	D	26	0	0	0	0
5	E	28	0	0	0	0
5	F	34	0	0	0	0
5	G	36	0	0	0	0
5	H	44	0	0	0	0
5	I	57	0	0	0	0
5	J	37	0	0	0	0
All	All	13367	0	14546	75	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 3.

All (75) 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)
2:A:1159:LHG:HC62	2:I:1165:LHG:HC81	1.73	0.69
1:I:10:GLY:O	1:I:13[A]:VAL:HG22	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:1164:LHG:H192	1:B:17[B]:LEU:HD21	1.79	0.65
2:F:1166:LHG:H192	1:H:17[B]:LEU:HD21	1.79	0.64
2:F:1164:LHG:H192	1:G:17[B]:LEU:HD21	1.80	0.64
2:F:1164:LHG:HC81	2:F:1166:LHG:HC62	1.79	0.64
2:D:1162:LHG:H192	1:E:17[B]:LEU:HD21	1.80	0.63
2:C:1163:LHG:H192	1:D:17[B]:LEU:HD21	1.80	0.63
1:A:17[B]:LEU:HD21	2:A:1159:LHG:H192	1.81	0.63
2:A:1159:LHG:C6	2:I:1165:LHG:HC81	2.30	0.62
1:C:17[B]:LEU:HD21	2:C:1159:LHG:H192	1.82	0.62
1:I:17[B]:LEU:HD21	2:I:1159:LHG:H192	1.80	0.61
2:I:1165:LHG:H192	1:J:17[B]:LEU:HD21	1.82	0.61
2:F:1159:LHG:HC81	2:F:1164:LHG:HC62	1.80	0.61
1:F:17[B]:LEU:HD21	2:F:1159:LHG:H192	1.82	0.61
2:C:1159:LHG:HC81	2:C:1163:LHG:HC62	1.85	0.59
2:D:1162:LHG:HC81	2:F:1159:LHG:HC62	1.85	0.59
2:A:1159:LHG:HC81	2:A:1164:LHG:HC62	1.84	0.58
2:F:1164:LHG:HC81	2:F:1166:LHG:C6	2.34	0.57
2:A:1164:LHG:HC81	2:C:1159:LHG:HC62	1.87	0.55
2:C:1159:LHG:HC81	2:C:1163:LHG:C6	2.37	0.55
2:I:1159:LHG:HC81	2:I:1165:LHG:HC62	1.87	0.55
2:F:1159:LHG:HC81	2:F:1164:LHG:C6	2.37	0.55
1:I:9:ASN:HD21	1:I:84:MET:H	1.54	0.54
2:C:1163:LHG:HC81	2:D:1162:LHG:HC62	1.93	0.50
2:A:1159:LHG:HC81	2:A:1164:LHG:C6	2.41	0.50
2:E:1158:LHG:H342	2:F:1159:LHG:H331	1.94	0.49
1:I:9:ASN:HD21	1:I:83:ASP:HA	1.76	0.48
2:I:1158:LHG:H101	2:I:1160:LHG:HC92	1.95	0.48
2:B:1158:LHG:H342	2:C:1159:LHG:H331	1.95	0.48
2:C:1163:LHG:HC81	2:D:1162:LHG:C6	2.46	0.46
1:F:58:LEU:HA	1:F:61:LEU:HD22	1.98	0.46
2:B:1160:LHG:H112	2:B:1161:LHG:H111	1.99	0.45
2:F:1158:LHG:H342	2:F:1164:LHG:H331	1.99	0.45
2:F:1165:LHG:HC91	2:G:1158:LHG:H311	1.99	0.45
2:I:1158:LHG:H342	2:I:1165:LHG:H331	1.99	0.45
1:D:90:LEU:HD22	2:D:1162:LHG:H181	2.00	0.44
2:B:1159:LHG:HC92	2:B:1160:LHG:HC91	2.00	0.44
1:E:58:LEU:HA	1:E:61:LEU:HD22	1.99	0.44
1:H:58:LEU:HA	1:H:61:LEU:HD22	2.00	0.44
2:A:1159:LHG:H331	2:J:1158:LHG:H342	2.00	0.43
1:G:58:LEU:HA	1:G:61:LEU:HD22	2.01	0.43
1:D:58:LEU:HA	1:D:61:LEU:HD22	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:1158:LHG:H101	2:C:1160:LHG:H102	2.01	0.43
1:A:58:LEU:HA	1:A:61:LEU:HD22	2.01	0.43
1:I:18:ALA:HB2	1:I:93:LEU:HA	2.01	0.42
2:I:1160:LHG:H122	2:I:1161:LHG:H121	2.00	0.42
1:B:58:LEU:HA	1:B:61:LEU:HD22	2.01	0.42
1:I:144:LEU:HD11	1:J:67:LEU:HD23	2.02	0.42
2:F:1166:LHG:H181	1:G:90:LEU:HD22	2.02	0.42
2:F:1166:LHG:HC81	2:I:1159:LHG:HC62	2.02	0.42
1:H:90:LEU:HD22	2:I:1159:LHG:H181	2.02	0.42
1:F:77:PHE:HA	1:F:80:LEU:HD22	2.02	0.41
1:I:58:LEU:HA	1:I:61:LEU:HD22	2.03	0.41
2:A:1158:LHG:H342	2:A:1164:LHG:H331	2.02	0.41
2:D:1160:LHG:HC82	2:D:1165:LHG:HC92	2.03	0.41
1:A:77:PHE:HA	1:A:80:LEU:HD22	2.03	0.41
2:J:1158:LHG:H101	2:J:1159:LHG:H122	2.02	0.41
1:C:58:LEU:HA	1:C:61:LEU:HD22	2.02	0.41
1:C:90:LEU:HD22	2:C:1163:LHG:H181	2.03	0.41
1:E:144:LEU:HD11	1:F:67:LEU:HD23	2.03	0.41
1:H:77:PHE:HA	1:H:80:LEU:HD22	2.03	0.41
2:A:1165:LHG:H132	2:A:1166:LHG:H151	2.03	0.40
2:C:1158:LHG:H182	2:C:1163:LHG:H361	2.03	0.40
1:E:77:PHE:HA	1:E:80:LEU:HD22	2.03	0.40
1:J:18:ALA:HB2	1:J:93:LEU:HA	2.03	0.40
1:D:77:PHE:HA	1:D:80:LEU:HD22	2.03	0.40
2:I:1159:LHG:HC81	2:I:1165:LHG:C6	2.49	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	163/156 (104%)	162 (99%)	1 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	B	163/156 (104%)	162 (99%)	1 (1%)	0	100	100
1	C	163/156 (104%)	162 (99%)	1 (1%)	0	100	100
1	D	163/156 (104%)	162 (99%)	1 (1%)	0	100	100
1	E	163/156 (104%)	162 (99%)	1 (1%)	0	100	100
1	F	163/156 (104%)	162 (99%)	1 (1%)	0	100	100
1	G	163/156 (104%)	162 (99%)	1 (1%)	0	100	100
1	H	163/156 (104%)	162 (99%)	1 (1%)	0	100	100
1	I	161/156 (103%)	161 (100%)	0	0	100	100
1	J	162/156 (104%)	162 (100%)	0	0	100	100
All	All	1627/1560 (104%)	1619 (100%)	8 (0%)	0	100	100

There are no Ramachandran outliers to report.

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	122/113 (108%)	114 (93%)	8 (7%)	16	14
1	B	122/113 (108%)	114 (93%)	8 (7%)	16	14
1	C	122/113 (108%)	114 (93%)	8 (7%)	16	14
1	D	122/113 (108%)	114 (93%)	8 (7%)	16	14
1	E	122/113 (108%)	114 (93%)	8 (7%)	16	14
1	F	122/113 (108%)	114 (93%)	8 (7%)	16	14
1	G	122/113 (108%)	114 (93%)	8 (7%)	16	14
1	H	122/113 (108%)	114 (93%)	8 (7%)	16	14
1	I	120/113 (106%)	117 (98%)	3 (2%)	47	52
1	J	121/113 (107%)	118 (98%)	3 (2%)	47	52
All	All	1217/1130 (108%)	1147 (94%)	70 (6%)	26	17

All (70) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	2	MET
1	A	54[A]	GLN
1	A	54[B]	GLN
1	A	61	LEU
1	A	80	LEU
1	A	82	SER
1	A	83[A]	ASP
1	A	83[B]	ASP
1	B	2	MET
1	B	54[A]	GLN
1	B	54[B]	GLN
1	B	61	LEU
1	B	80	LEU
1	B	82	SER
1	B	83[A]	ASP
1	B	83[B]	ASP
1	C	2	MET
1	C	54[A]	GLN
1	C	54[B]	GLN
1	C	61	LEU
1	C	80	LEU
1	C	82	SER
1	C	83[A]	ASP
1	C	83[B]	ASP
1	D	2	MET
1	D	54[A]	GLN
1	D	54[B]	GLN
1	D	61	LEU
1	D	80	LEU
1	D	82	SER
1	D	83[A]	ASP
1	D	83[B]	ASP
1	E	2	MET
1	E	54[A]	GLN
1	E	54[B]	GLN
1	E	61	LEU
1	E	80	LEU
1	E	82	SER
1	E	83[A]	ASP
1	E	83[B]	ASP
1	F	2	MET
1	F	54[A]	GLN

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Mol	Chain	Res	Type
1	F	54[B]	GLN
1	F	61	LEU
1	F	80	LEU
1	F	82	SER
1	F	83[A]	ASP
1	F	83[B]	ASP
1	G	2	MET
1	G	54[A]	GLN
1	G	54[B]	GLN
1	G	61	LEU
1	G	80	LEU
1	G	82	SER
1	G	83[A]	ASP
1	G	83[B]	ASP
1	H	2	MET
1	H	54[A]	GLN
1	H	54[B]	GLN
1	H	61	LEU
1	H	80	LEU
1	H	82	SER
1	H	83[A]	ASP
1	H	83[B]	ASP
1	I	2	MET
1	I	61	LEU
1	I	83	ASP
1	J	54[A]	GLN
1	J	54[B]	GLN
1	J	61	LEU

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

Mol	Chain	Res	Type
1	I	9	ASN
1	I	79	ASN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 82 ligands modelled in this entry, 10 are monoatomic - leaving 72 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
2	LHG	A	1161	-	7,7,48	0.26	0	6,6,54	0.50	0
2	LHG	I	1161	-	7,7,48	0.26	0	6,6,54	0.50	0
2	LHG	H	1158	-	48,48,48	0.97	2 (4%)	51,54,54	0.98	2 (3%)
4	UMQ	G	1160	-	11,11,35	0.24	0	10,10,46	0.57	0
4	UMQ	A	1163	-	11,11,35	0.24	0	10,10,46	0.57	0
4	UMQ	G	1159	-	11,11,35	0.24	0	10,10,46	0.57	0
2	LHG	C	161	-	8,8,48	0.26	0	7,7,54	0.53	0
4	UMQ	D	163	-	11,11,35	0.23	0	10,10,46	0.57	0
4	UMQ	I	1163	-	11,11,35	0.23	0	10,10,46	0.57	0
2	LHG	B	1158	-	48,48,48	0.97	2 (4%)	51,54,54	0.98	2 (3%)
2	LHG	D	162	-	4,4,48	0.29	0	3,3,54	0.40	0
2	LHG	A	1165	-	8,8,48	0.26	0	7,7,54	0.53	0
4	UMQ	D	1161	-	11,11,35	0.24	0	10,10,46	0.57	0
2	LHG	A	1159	-	39,39,48	1.03	2 (5%)	41,41,54	1.05	2 (4%)
2	LHG	I	1159	-	39,39,48	1.03	2 (5%)	41,41,54	1.05	2 (4%)
2	LHG	B	1161	-	7,7,48	0.26	0	6,6,54	0.50	0
2	LHG	F	162	-	9,9,48	0.25	0	8,8,54	0.54	0
2	LHG	G	1158	-	48,48,48	0.97	2 (4%)	51,54,54	0.98	2 (3%)
2	LHG	G	162	-	9,9,48	0.25	0	8,8,54	0.54	0
2	LHG	G	161	-	8,8,48	0.26	0	7,7,54	0.52	0
2	LHG	C	1160	-	8,8,48	0.26	0	7,7,54	0.52	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
2	LHG	D	1163	-	8,8,48	0.26	0	7,7,54	0.53	0
2	LHG	D	1160	-	7,7,48	0.26	0	6,6,54	0.50	0
2	LHG	H	1159	-	8,8,48	0.25	0	7,7,54	0.53	0
4	UMQ	B	1163	-	11,11,35	0.23	0	10,10,46	0.57	0
2	LHG	A	1158	-	48,48,48	0.97	2 (4%)	51,54,54	0.99	2 (3%)
2	LHG	C	1159	-	39,39,48	1.04	2 (5%)	41,41,54	1.05	2 (4%)
2	LHG	B	1160	-	8,8,48	0.26	0	7,7,54	0.53	0
4	UMQ	C	1164	-	35,35,35	1.08	2 (5%)	46,46,46	1.71	6 (13%)
4	UMQ	I	1164	-	11,11,35	0.24	0	10,10,46	0.56	0
4	UMQ	F	1163	-	11,11,35	0.24	0	10,10,46	0.57	0
2	LHG	B	1159	-	8,8,48	0.26	0	7,7,54	0.53	0
2	LHG	C	1158	-	48,48,48	0.98	2 (4%)	51,54,54	0.98	2 (3%)
2	LHG	F	1160	-	10,10,48	0.25	0	9,9,54	0.56	0
4	UMQ	F	1162	-	11,11,35	0.24	0	10,10,46	0.57	0
2	LHG	D	1158	-	48,48,48	0.97	2 (4%)	51,54,54	0.98	2 (3%)
4	UMQ	H	1161	-	11,11,35	0.23	0	10,10,46	0.57	0
2	LHG	A	162	-	9,9,48	0.26	0	8,8,54	0.55	0
4	UMQ	E	1159	-	11,11,35	0.24	0	10,10,46	0.57	0
2	LHG	H	162	-	9,9,48	0.25	0	8,8,54	0.55	0
4	UMQ	B	1162	-	11,11,35	0.24	0	10,10,46	0.57	0
2	LHG	A	1164	-	39,39,48	1.03	2 (5%)	41,41,54	1.05	2 (4%)
2	LHG	C	1163	-	39,39,48	1.03	2 (5%)	41,41,54	1.05	2 (4%)
2	LHG	A	1160	-	10,10,48	0.25	0	9,9,54	0.57	0
4	UMQ	J	1161	-	11,11,35	0.24	0	10,10,46	0.57	0
2	LHG	E	1158	-	48,48,48	0.97	2 (4%)	51,54,54	0.98	2 (3%)
4	UMQ	F	1167	-	35,35,35	1.09	2 (5%)	46,46,46	1.71	6 (13%)
2	LHG	F	1158	-	48,48,48	0.98	2 (4%)	51,54,54	0.98	2 (3%)
2	LHG	A	1166	-	9,9,48	0.26	0	8,8,54	0.54	0
2	LHG	H	161	-	8,8,48	0.26	0	7,7,54	0.53	0
4	UMQ	C	1162	-	11,11,35	0.24	0	10,10,46	0.57	0
4	UMQ	E	1160	-	11,11,35	0.24	0	10,10,46	0.57	0
4	UMQ	J	1160	-	11,11,35	0.24	0	10,10,46	0.56	0
2	LHG	F	1161	-	10,10,48	0.25	0	9,9,54	0.56	0
4	UMQ	A	1162	-	11,11,35	0.24	0	10,10,46	0.57	0
4	UMQ	C	1161	-	11,11,35	0.23	0	10,10,46	0.57	0
4	UMQ	H	1160	-	11,11,35	0.23	0	10,10,46	0.57	0
2	LHG	D	1164	-	7,7,48	0.26	0	6,6,54	0.50	0
2	LHG	F	1166	-	39,39,48	1.04	2 (5%)	41,41,54	1.06	2 (4%)
2	LHG	I	1160	-	7,7,48	0.26	0	6,6,54	0.50	0
2	LHG	F	1164	-	39,39,48	1.03	2 (5%)	41,41,54	1.05	2 (4%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
2	LHG	D	1159	-	8,8,48	0.26	0	7,7,54	0.53	0
2	LHG	I	1158	-	48,48,48	0.97	2 (4%)	51,54,54	0.98	2 (3%)
2	LHG	I	1162	-	7,7,48	0.26	0	6,6,54	0.50	0
2	LHG	J	1159	-	10,10,48	0.25	0	9,9,54	0.56	0
2	LHG	D	1165	-	7,7,48	0.26	0	6,6,54	0.49	0
2	LHG	I	1165	-	39,39,48	1.03	2 (5%)	41,41,54	1.02	2 (4%)
2	LHG	F	1165	-	6,6,48	0.27	0	5,5,54	0.45	0
2	LHG	J	1158	-	48,48,48	0.97	2 (4%)	51,54,54	0.99	2 (3%)
2	LHG	D	1162	-	39,39,48	1.03	2 (5%)	41,41,54	1.05	2 (4%)
2	LHG	F	1159	-	39,39,48	1.03	2 (5%)	41,41,54	1.05	2 (4%)
2	LHG	B	1164	-	9,9,48	0.26	0	8,8,54	0.54	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
2	LHG	A	1161	-	-	2/5/5/53	-
2	LHG	I	1161	-	-	1/5/5/53	-
2	LHG	H	1158	-	-	27/53/53/53	-
4	UMQ	G	1160	-	-	2/9/9/60	-
4	UMQ	A	1163	-	-	2/9/9/60	-
4	UMQ	G	1159	-	-	2/9/9/60	-
2	LHG	C	161	-	-	2/6/6/53	-
4	UMQ	D	163	-	-	4/9/9/60	-
4	UMQ	I	1163	-	-	4/9/9/60	-
2	LHG	B	1158	-	-	27/53/53/53	-
2	LHG	A	1165	-	-	2/6/6/53	-
2	LHG	D	162	-	-	0/2/2/53	-
4	UMQ	D	1161	-	-	1/9/9/60	-
2	LHG	A	1159	-	-	25/41/41/53	-
2	LHG	I	1159	-	-	25/41/41/53	-
2	LHG	B	1161	-	-	0/5/5/53	-
2	LHG	F	162	-	-	1/7/7/53	-
2	LHG	G	1158	-	-	27/53/53/53	-
4	UMQ	C	1164	-	2/2/10/10	12/20/60/60	0/2/2/2
2	LHG	G	161	-	-	0/6/6/53	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	LHG	C	1160	-	-	2/6/6/53	-
2	LHG	D	1163	-	-	4/6/6/53	-
2	LHG	D	1160	-	-	3/5/5/53	-
2	LHG	G	162	-	-	0/7/7/53	-
2	LHG	H	1159	-	-	4/6/6/53	-
2	LHG	A	1158	-	-	27/53/53/53	-
2	LHG	C	1159	-	-	25/41/41/53	-
2	LHG	B	1160	-	-	0/6/6/53	-
4	UMQ	I	1164	-	-	2/9/9/60	-
4	UMQ	F	1163	-	-	2/9/9/60	-
2	LHG	B	1159	-	-	4/6/6/53	-
2	LHG	C	1158	-	-	27/53/53/53	-
2	LHG	F	1160	-	-	3/8/8/53	-
4	UMQ	B	1163	-	-	2/9/9/60	-
2	LHG	D	1158	-	-	27/53/53/53	-
4	UMQ	F	1162	-	-	6/9/9/60	-
4	UMQ	H	1161	-	-	1/9/9/60	-
2	LHG	A	162	-	-	0/7/7/53	-
4	UMQ	E	1159	-	-	4/9/9/60	-
2	LHG	H	162	-	-	0/7/7/53	-
4	UMQ	B	1162	-	-	5/9/9/60	-
2	LHG	A	1164	-	-	25/41/41/53	-
2	LHG	C	1163	-	-	25/41/41/53	-
2	LHG	A	1160	-	-	3/8/8/53	-
4	UMQ	J	1161	-	-	3/9/9/60	-
2	LHG	E	1158	-	-	27/53/53/53	-
4	UMQ	F	1167	-	2/2/10/10	11/20/60/60	0/2/2/2
2	LHG	F	1158	-	-	27/53/53/53	-
2	LHG	A	1166	-	-	1/7/7/53	-
2	LHG	H	161	-	-	1/6/6/53	-
4	UMQ	C	1162	-	-	3/9/9/60	-
4	UMQ	E	1160	-	-	4/9/9/60	-
4	UMQ	J	1160	-	-	3/9/9/60	-
2	LHG	F	1161	-	-	1/8/8/53	-
4	UMQ	A	1162	-	-	5/9/9/60	-
4	UMQ	C	1161	-	-	3/9/9/60	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	UMQ	H	1160	-	-	6/9/9/60	-
2	LHG	D	1164	-	-	1/5/5/53	-
2	LHG	F	1166	-	-	25/41/41/53	-
2	LHG	I	1160	-	-	3/5/5/53	-
2	LHG	F	1164	-	-	25/41/41/53	-
2	LHG	D	1159	-	-	0/6/6/53	-
2	LHG	I	1158	-	-	27/53/53/53	-
2	LHG	I	1162	-	-	1/5/5/53	-
2	LHG	J	1159	-	-	4/8/8/53	-
2	LHG	D	1165	-	-	0/5/5/53	-
2	LHG	I	1165	-	-	25/41/41/53	-
2	LHG	F	1165	-	-	2/4/4/53	-
2	LHG	J	1158	-	-	28/53/53/53	-
2	LHG	D	1162	-	-	25/41/41/53	-
2	LHG	F	1159	-	-	25/41/41/53	-
2	LHG	B	1164	-	-	0/7/7/53	-

All (44) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	1158	LHG	O8-C23	4.44	1.46	1.33
2	I	1158	LHG	O8-C23	4.43	1.46	1.33
2	J	1158	LHG	O8-C23	4.42	1.46	1.33
2	B	1158	LHG	O8-C23	4.42	1.46	1.33
2	E	1158	LHG	O8-C23	4.41	1.46	1.33
2	G	1158	LHG	O7-C7	4.40	1.46	1.34
2	F	1158	LHG	O8-C23	4.39	1.46	1.33
2	H	1158	LHG	O8-C23	4.39	1.46	1.33
2	F	1158	LHG	O7-C7	4.38	1.46	1.34
2	D	1158	LHG	O8-C23	4.38	1.46	1.33
2	A	1158	LHG	O8-C23	4.38	1.46	1.33
2	G	1158	LHG	O8-C23	4.37	1.46	1.33
2	E	1158	LHG	O7-C7	4.37	1.46	1.34
2	F	1166	LHG	O8-C23	4.36	1.46	1.33
2	A	1164	LHG	O8-C23	4.36	1.46	1.33
2	C	1158	LHG	O7-C7	4.36	1.46	1.34
2	D	1162	LHG	O8-C23	4.36	1.46	1.33
2	C	1159	LHG	O8-C23	4.35	1.46	1.33
2	F	1164	LHG	O8-C23	4.35	1.46	1.33
2	A	1159	LHG	O8-C23	4.34	1.46	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	I	1165	LHG	O8-C23	4.33	1.46	1.33
2	C	1163	LHG	O8-C23	4.33	1.46	1.33
2	A	1158	LHG	O7-C7	4.33	1.46	1.34
2	J	1158	LHG	O7-C7	4.32	1.46	1.34
2	I	1159	LHG	O8-C23	4.32	1.46	1.33
2	I	1158	LHG	O7-C7	4.32	1.46	1.34
2	D	1158	LHG	O7-C7	4.31	1.46	1.34
2	H	1158	LHG	O7-C7	4.30	1.46	1.34
2	B	1158	LHG	O7-C7	4.30	1.46	1.34
2	F	1159	LHG	O8-C23	4.30	1.45	1.33
2	I	1159	LHG	O7-C7	4.21	1.46	1.34
2	C	1159	LHG	O7-C7	4.21	1.46	1.34
2	F	1166	LHG	O7-C7	4.20	1.46	1.34
2	I	1165	LHG	O7-C7	4.18	1.46	1.34
2	F	1159	LHG	O7-C7	4.17	1.46	1.34
2	D	1162	LHG	O7-C7	4.17	1.46	1.34
2	C	1163	LHG	O7-C7	4.17	1.46	1.34
2	A	1164	LHG	O7-C7	4.17	1.46	1.34
4	F	1167	UMQ	O3-C3	-4.15	1.33	1.43
2	A	1159	LHG	O7-C7	4.14	1.46	1.34
2	F	1164	LHG	O7-C7	4.13	1.46	1.34
4	C	1164	UMQ	O3-C3	-4.11	1.33	1.43
4	F	1167	UMQ	O2-C2	-4.11	1.33	1.43
4	C	1164	UMQ	O2-C2	-4.04	1.33	1.43

All (52) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	C	1164	UMQ	C4-C3-C2	5.58	120.56	110.82
4	F	1167	UMQ	C4-C3-C2	5.43	120.31	110.82
4	C	1164	UMQ	C1-C2-C3	4.56	119.50	110.00
4	F	1167	UMQ	C1-C2-C3	4.35	119.06	110.00
4	F	1167	UMQ	O2-C2-C1	4.33	120.56	110.05
4	F	1167	UMQ	O2-C2-C3	4.31	120.32	110.35
2	J	1158	LHG	O7-C7-C8	4.25	120.67	111.50
2	A	1158	LHG	O7-C7-C8	4.22	120.59	111.50
4	C	1164	UMQ	O2-C2-C3	4.21	120.08	110.35
2	F	1158	LHG	O7-C7-C8	4.20	120.55	111.50
2	G	1158	LHG	O7-C7-C8	4.20	120.54	111.50
2	H	1158	LHG	O7-C7-C8	4.18	120.52	111.50
2	E	1158	LHG	O7-C7-C8	4.17	120.50	111.50
2	I	1158	LHG	O7-C7-C8	4.16	120.48	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	C	1164	UMQ	O2-C2-C1	4.16	120.15	110.05
2	B	1158	LHG	O7-C7-C8	4.16	120.46	111.50
2	D	1158	LHG	O7-C7-C8	4.14	120.41	111.50
2	C	1158	LHG	O7-C7-C8	4.13	120.39	111.50
4	F	1167	UMQ	O3-C3-C4	4.12	119.88	110.35
4	C	1164	UMQ	O3-C3-C4	4.00	119.59	110.35
2	F	1166	LHG	O7-C7-C8	3.92	119.95	111.50
2	A	1164	LHG	O7-C7-C8	3.89	119.89	111.50
2	C	1163	LHG	O7-C7-C8	3.89	119.89	111.50
2	I	1159	LHG	O7-C7-C8	3.88	119.86	111.50
2	D	1162	LHG	O7-C7-C8	3.85	119.79	111.50
2	A	1159	LHG	O7-C7-C8	3.84	119.78	111.50
2	C	1159	LHG	O7-C7-C8	3.83	119.76	111.50
4	C	1164	UMQ	O3-C3-C2	3.83	119.21	110.35
2	F	1164	LHG	O7-C7-C8	3.83	119.76	111.50
2	F	1159	LHG	O7-C7-C8	3.83	119.75	111.50
4	F	1167	UMQ	O3-C3-C2	3.80	119.13	110.35
2	I	1165	LHG	O7-C7-C8	3.73	119.54	111.50
2	I	1158	LHG	O8-C23-C24	2.64	120.18	111.91
2	F	1166	LHG	O8-C23-C24	2.63	120.16	111.91
2	F	1164	LHG	O8-C23-C24	2.63	120.16	111.91
2	G	1158	LHG	O8-C23-C24	2.62	120.13	111.91
2	C	1163	LHG	O8-C23-C24	2.61	120.11	111.91
2	D	1158	LHG	O8-C23-C24	2.61	120.11	111.91
2	H	1158	LHG	O8-C23-C24	2.61	120.10	111.91
2	I	1159	LHG	O8-C23-C24	2.61	120.10	111.91
2	A	1164	LHG	O8-C23-C24	2.61	120.10	111.91
2	E	1158	LHG	O8-C23-C24	2.61	120.10	111.91
2	B	1158	LHG	O8-C23-C24	2.61	120.08	111.91
2	F	1159	LHG	O8-C23-C24	2.60	120.08	111.91
2	A	1159	LHG	O8-C23-C24	2.60	120.06	111.91
2	D	1162	LHG	O8-C23-C24	2.60	120.06	111.91
2	C	1159	LHG	O8-C23-C24	2.59	120.05	111.91
2	A	1158	LHG	O8-C23-C24	2.59	120.03	111.91
2	J	1158	LHG	O8-C23-C24	2.58	120.01	111.91
2	F	1158	LHG	O8-C23-C24	2.58	120.00	111.91
2	C	1158	LHG	O8-C23-C24	2.57	119.97	111.91
2	I	1165	LHG	O8-C23-C24	2.56	119.95	111.91

All (4) chirality outliers are listed below:

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Mol	Chain	Res	Type	Atom
4	C	1164	UMQ	C3
4	C	1164	UMQ	C2
4	F	1167	UMQ	C3
4	F	1167	UMQ	C2

All (653) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	1158	LHG	O1-C1-C2-C3
2	A	1158	LHG	C4-O6-P-O4
2	A	1158	LHG	C8-C7-O7-C5
2	B	1158	LHG	O1-C1-C2-C3
2	B	1158	LHG	C4-O6-P-O4
2	B	1158	LHG	C8-C7-O7-C5
2	C	1158	LHG	C4-O6-P-O4
2	C	1158	LHG	C8-C7-O7-C5
2	D	1158	LHG	O1-C1-C2-C3
2	D	1158	LHG	C4-O6-P-O4
2	D	1158	LHG	C8-C7-O7-C5
2	E	1158	LHG	C4-O6-P-O4
2	E	1158	LHG	C8-C7-O7-C5
2	F	1158	LHG	C4-O6-P-O4
2	F	1158	LHG	C8-C7-O7-C5
2	G	1158	LHG	O1-C1-C2-C3
2	G	1158	LHG	C4-O6-P-O4
2	G	1158	LHG	C8-C7-O7-C5
2	H	1158	LHG	O1-C1-C2-C3
2	H	1158	LHG	C4-O6-P-O4
2	H	1158	LHG	C8-C7-O7-C5
2	I	1158	LHG	C4-O6-P-O4
2	I	1158	LHG	C8-C7-O7-C5
2	J	1158	LHG	C4-O6-P-O4
2	J	1158	LHG	C8-C7-O7-C5
2	A	1158	LHG	O9-C7-O7-C5
2	B	1158	LHG	O9-C7-O7-C5
2	C	1158	LHG	O9-C7-O7-C5
2	D	1158	LHG	O9-C7-O7-C5
2	E	1158	LHG	O9-C7-O7-C5
2	F	1158	LHG	O9-C7-O7-C5
2	G	1158	LHG	O9-C7-O7-C5
2	H	1158	LHG	O9-C7-O7-C5

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Mol	Chain	Res	Type	Atoms
2	I	1158	LHG	O9-C7-O7-C5
2	J	1158	LHG	O9-C7-O7-C5
2	A	1159	LHG	O10-C23-O8-C6
2	A	1159	LHG	C24-C23-O8-C6
2	A	1164	LHG	C24-C23-O8-C6
2	C	1159	LHG	C24-C23-O8-C6
2	C	1163	LHG	C24-C23-O8-C6
2	D	1162	LHG	C24-C23-O8-C6
2	F	1159	LHG	C24-C23-O8-C6
2	F	1164	LHG	C24-C23-O8-C6
2	F	1166	LHG	C24-C23-O8-C6
2	I	1159	LHG	C24-C23-O8-C6
2	I	1165	LHG	C24-C23-O8-C6
2	A	1164	LHG	O10-C23-O8-C6
2	C	1159	LHG	O10-C23-O8-C6
2	C	1163	LHG	O10-C23-O8-C6
2	D	1162	LHG	O10-C23-O8-C6
2	F	1159	LHG	O10-C23-O8-C6
2	F	1164	LHG	O10-C23-O8-C6
2	F	1166	LHG	O10-C23-O8-C6
2	I	1159	LHG	O10-C23-O8-C6
2	I	1165	LHG	O10-C23-O8-C6
4	F	1167	UMQ	O5-C5-C6-O6
2	A	1159	LHG	C8-C7-O7-C5
2	A	1164	LHG	C8-C7-O7-C5
2	C	1159	LHG	C8-C7-O7-C5
2	C	1163	LHG	C8-C7-O7-C5
2	D	1162	LHG	C8-C7-O7-C5
2	F	1159	LHG	C8-C7-O7-C5
2	F	1164	LHG	C8-C7-O7-C5
2	F	1166	LHG	C8-C7-O7-C5
2	I	1159	LHG	C8-C7-O7-C5
2	I	1165	LHG	C8-C7-O7-C5
4	C	1164	UMQ	O5-C5-C6-O6
4	C	1164	UMQ	C4'-C5'-C6'-O6'
4	F	1167	UMQ	C4'-C5'-C6'-O6'
4	F	1167	UMQ	O5'-C5'-C6'-O6'
2	I	1165	LHG	O9-C7-O7-C5
4	C	1164	UMQ	O5'-C5'-C6'-O6'
2	A	1159	LHG	O9-C7-O7-C5
2	A	1164	LHG	O9-C7-O7-C5
2	C	1159	LHG	O9-C7-O7-C5

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Mol	Chain	Res	Type	Atoms
2	C	1163	LHG	O9-C7-O7-C5
2	D	1162	LHG	O9-C7-O7-C5
2	F	1159	LHG	O9-C7-O7-C5
2	F	1164	LHG	O9-C7-O7-C5
2	F	1166	LHG	O9-C7-O7-C5
2	I	1159	LHG	O9-C7-O7-C5
2	A	1158	LHG	C4-O6-P-O3
2	B	1158	LHG	C4-O6-P-O3
2	C	1158	LHG	C4-O6-P-O3
2	D	1158	LHG	C4-O6-P-O3
2	E	1158	LHG	C4-O6-P-O3
2	F	1158	LHG	C4-O6-P-O3
2	G	1158	LHG	C4-O6-P-O3
2	H	1158	LHG	C4-O6-P-O3
2	I	1158	LHG	C4-O6-P-O3
2	J	1158	LHG	C4-O6-P-O3
4	F	1167	UMQ	C4-C5-C6-O6
4	F	1167	UMQ	O1'-CA-CB-CC
2	A	1160	LHG	C9-C10-C11-C12
2	D	1158	LHG	C29-C30-C31-C32
2	H	1158	LHG	C29-C30-C31-C32
4	C	1161	UMQ	CC-CD-CF-CG
4	I	1163	UMQ	CF-CG-CH-CI
2	B	1158	LHG	C29-C30-C31-C32
2	E	1158	LHG	C29-C30-C31-C32
2	G	1158	LHG	C29-C30-C31-C32
2	I	1159	LHG	C26-C27-C28-C29
2	I	1165	LHG	C26-C27-C28-C29
2	J	1158	LHG	C29-C30-C31-C32
4	B	1162	UMQ	CC-CD-CF-CG
4	D	163	UMQ	CF-CG-CH-CI
4	E	1159	UMQ	CC-CD-CF-CG
4	G	1159	UMQ	CC-CD-CF-CG
4	G	1159	UMQ	CF-CG-CH-CI
2	A	1158	LHG	C29-C30-C31-C32
2	A	1159	LHG	C26-C27-C28-C29
2	A	1164	LHG	C26-C27-C28-C29
2	C	1158	LHG	C29-C30-C31-C32
2	C	1159	LHG	C26-C27-C28-C29
2	F	1158	LHG	C29-C30-C31-C32
2	F	1159	LHG	C26-C27-C28-C29
2	F	1164	LHG	C26-C27-C28-C29

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Mol	Chain	Res	Type	Atoms
2	I	1158	LHG	C29-C30-C31-C32
2	I	1159	LHG	C10-C11-C12-C13
2	I	1160	LHG	C10-C11-C12-C13
4	C	1164	UMQ	CB-CC-CD-CF
4	E	1159	UMQ	CF-CG-CH-CI
4	F	1162	UMQ	CH-CI-CJ-CK
2	A	1159	LHG	C10-C11-C12-C13
2	A	1164	LHG	C10-C11-C12-C13
2	C	1159	LHG	C10-C11-C12-C13
2	C	1163	LHG	C10-C11-C12-C13
2	C	1163	LHG	C26-C27-C28-C29
2	D	1162	LHG	C10-C11-C12-C13
2	D	1162	LHG	C26-C27-C28-C29
2	F	1159	LHG	C10-C11-C12-C13
2	F	1164	LHG	C10-C11-C12-C13
2	F	1166	LHG	C10-C11-C12-C13
2	F	1166	LHG	C26-C27-C28-C29
4	J	1160	UMQ	CF-CG-CH-CI
2	A	1158	LHG	C27-C28-C29-C30
2	A	1164	LHG	C28-C29-C30-C31
2	B	1158	LHG	C27-C28-C29-C30
2	C	1158	LHG	C27-C28-C29-C30
2	E	1158	LHG	C27-C28-C29-C30
2	F	1164	LHG	C28-C29-C30-C31
2	G	1158	LHG	C27-C28-C29-C30
2	H	1158	LHG	C27-C28-C29-C30
2	I	1159	LHG	C33-C34-C35-C36
2	J	1158	LHG	C27-C28-C29-C30
4	C	1164	UMQ	C4-C5-C6-O6
2	A	1159	LHG	C33-C34-C35-C36
2	C	1159	LHG	C28-C29-C30-C31
2	C	1159	LHG	C33-C34-C35-C36
2	C	1163	LHG	C33-C34-C35-C36
2	D	1158	LHG	C27-C28-C29-C30
2	D	1162	LHG	C33-C34-C35-C36
2	F	1158	LHG	C27-C28-C29-C30
2	F	1159	LHG	C33-C34-C35-C36
2	F	1164	LHG	C33-C34-C35-C36
2	F	1166	LHG	C28-C29-C30-C31
2	F	1166	LHG	C33-C34-C35-C36
2	I	1165	LHG	C10-C11-C12-C13
2	I	1165	LHG	C28-C29-C30-C31

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Mol	Chain	Res	Type	Atoms
2	I	1165	LHG	C33-C34-C35-C36
2	A	1159	LHG	C28-C29-C30-C31
2	A	1164	LHG	C15-C16-C17-C18
2	A	1164	LHG	C33-C34-C35-C36
2	C	1158	LHG	C31-C32-C33-C34
2	C	1163	LHG	C15-C16-C17-C18
2	C	1163	LHG	C28-C29-C30-C31
2	D	1162	LHG	C15-C16-C17-C18
2	D	1162	LHG	C28-C29-C30-C31
2	F	1159	LHG	C28-C29-C30-C31
2	F	1164	LHG	C15-C16-C17-C18
2	F	1166	LHG	C15-C16-C17-C18
2	I	1158	LHG	C27-C28-C29-C30
2	I	1159	LHG	C15-C16-C17-C18
2	I	1159	LHG	C28-C29-C30-C31
2	I	1165	LHG	C15-C16-C17-C18
4	J	1160	UMQ	CC-CD-CF-CG
2	A	1158	LHG	C31-C32-C33-C34
2	A	1159	LHG	C15-C16-C17-C18
2	B	1158	LHG	C31-C32-C33-C34
2	C	1159	LHG	C15-C16-C17-C18
2	D	1158	LHG	C31-C32-C33-C34
2	F	1158	LHG	C31-C32-C33-C34
2	F	1159	LHG	C15-C16-C17-C18
2	F	1160	LHG	C10-C11-C12-C13
2	I	1158	LHG	C31-C32-C33-C34
4	C	1164	UMQ	CG-CH-CI-CJ
2	B	1158	LHG	C14-C15-C16-C17
2	C	1158	LHG	C14-C15-C16-C17
2	D	1158	LHG	C14-C15-C16-C17
2	D	1160	LHG	C10-C11-C12-C13
2	E	1158	LHG	C31-C32-C33-C34
2	F	1158	LHG	C14-C15-C16-C17
2	G	1158	LHG	C31-C32-C33-C34
2	H	1158	LHG	C14-C15-C16-C17
2	H	1158	LHG	C31-C32-C33-C34
4	D	163	UMQ	CH-CI-CJ-CK
4	H	1160	UMQ	CB-CC-CD-CF
2	E	1158	LHG	C14-C15-C16-C17
2	F	1160	LHG	C11-C10-C9-C8
2	I	1158	LHG	C14-C15-C16-C17
2	J	1158	LHG	C31-C32-C33-C34

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Mol	Chain	Res	Type	Atoms
2	C	1158	LHG	O1-C1-C2-C3
2	E	1158	LHG	O1-C1-C2-C3
2	F	1158	LHG	O1-C1-C2-C3
2	I	1158	LHG	O1-C1-C2-C3
2	J	1158	LHG	O1-C1-C2-C3
2	A	1158	LHG	C14-C15-C16-C17
2	G	1158	LHG	C14-C15-C16-C17
4	F	1167	UMQ	CG-CH-CI-CJ
2	J	1158	LHG	C14-C15-C16-C17
4	C	1164	UMQ	CF-CG-CH-CI
4	H	1160	UMQ	CD-CF-CG-CH
4	H	1160	UMQ	CH-CI-CJ-CK
4	I	1163	UMQ	CH-CI-CJ-CK
4	C	1161	UMQ	CF-CG-CH-CI
2	I	1159	LHG	C14-C15-C16-C17
2	C	1163	LHG	C14-C15-C16-C17
2	D	1162	LHG	C14-C15-C16-C17
2	F	1164	LHG	C14-C15-C16-C17
2	F	1166	LHG	C14-C15-C16-C17
2	I	1165	LHG	C14-C15-C16-C17
4	F	1167	UMQ	CB-CC-CD-CF
2	A	1159	LHG	C14-C15-C16-C17
2	A	1164	LHG	C14-C15-C16-C17
2	C	1159	LHG	C14-C15-C16-C17
2	F	1159	LHG	C14-C15-C16-C17
2	C	1160	LHG	C11-C12-C13-C14
2	D	1160	LHG	C11-C10-C9-C8
4	B	1162	UMQ	CH-CI-CJ-CK
2	A	1158	LHG	C28-C29-C30-C31
2	B	1158	LHG	C28-C29-C30-C31
2	C	1158	LHG	C28-C29-C30-C31
2	C	1163	LHG	C30-C31-C32-C33
2	D	1158	LHG	C28-C29-C30-C31
2	E	1158	LHG	C28-C29-C30-C31
2	F	1158	LHG	C28-C29-C30-C31
2	F	1164	LHG	C30-C31-C32-C33
2	F	1166	LHG	C30-C31-C32-C33
2	H	1158	LHG	C28-C29-C30-C31
2	I	1158	LHG	C28-C29-C30-C31
2	J	1158	LHG	C28-C29-C30-C31
2	A	1159	LHG	C30-C31-C32-C33
2	A	1164	LHG	C30-C31-C32-C33

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Mol	Chain	Res	Type	Atoms
2	C	1159	LHG	C30-C31-C32-C33
2	D	1162	LHG	C30-C31-C32-C33
2	G	1158	LHG	C28-C29-C30-C31
2	I	1165	LHG	C30-C31-C32-C33
2	F	1159	LHG	C30-C31-C32-C33
2	I	1159	LHG	C30-C31-C32-C33
2	I	1160	LHG	C9-C10-C11-C12
2	A	1159	LHG	C27-C28-C29-C30
2	C	1159	LHG	C27-C28-C29-C30
2	F	1164	LHG	C27-C28-C29-C30
2	F	1166	LHG	C27-C28-C29-C30
2	I	1159	LHG	C27-C28-C29-C30
4	I	1164	UMQ	CA-CB-CC-CD
2	A	1164	LHG	C27-C28-C29-C30
2	C	1163	LHG	C27-C28-C29-C30
2	D	1162	LHG	C27-C28-C29-C30
2	F	1159	LHG	C27-C28-C29-C30
2	I	1165	LHG	C27-C28-C29-C30
4	E	1159	UMQ	CA-CB-CC-CD
2	C	1158	LHG	C34-C35-C36-C37
2	F	1158	LHG	C34-C35-C36-C37
2	J	1158	LHG	C34-C35-C36-C37
2	H	1158	LHG	C34-C35-C36-C37
2	A	1158	LHG	C34-C35-C36-C37
2	D	1158	LHG	C34-C35-C36-C37
2	G	1158	LHG	C34-C35-C36-C37
2	B	1158	LHG	C34-C35-C36-C37
2	E	1158	LHG	C34-C35-C36-C37
2	I	1158	LHG	C34-C35-C36-C37
2	A	1161	LHG	C11-C10-C9-C8
4	E	1160	UMQ	O1'-CA-CB-CC
4	A	1162	UMQ	CH-CI-CJ-CK
2	A	1159	LHG	C4-C5-C6-O8
2	A	1164	LHG	C4-C5-C6-O8
2	C	1159	LHG	C4-C5-C6-O8
2	C	1163	LHG	C4-C5-C6-O8
2	D	1162	LHG	C4-C5-C6-O8
2	F	1159	LHG	C4-C5-C6-O8
2	F	1164	LHG	C4-C5-C6-O8
2	F	1166	LHG	C4-C5-C6-O8
2	I	1165	LHG	C4-C5-C6-O8
4	J	1161	UMQ	CH-CI-CJ-CK

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Mol	Chain	Res	Type	Atoms
4	B	1163	UMQ	O1'-CA-CB-CC
4	G	1160	UMQ	O1'-CA-CB-CC
4	H	1161	UMQ	O1'-CA-CB-CC
4	I	1164	UMQ	O1'-CA-CB-CC
2	I	1165	LHG	C35-C36-C37-C38
4	E	1160	UMQ	CD-CF-CG-CH
2	I	1159	LHG	C35-C36-C37-C38
2	A	1164	LHG	C35-C36-C37-C38
2	D	1162	LHG	C35-C36-C37-C38
2	A	1159	LHG	C35-C36-C37-C38
2	C	1159	LHG	C35-C36-C37-C38
2	C	1163	LHG	C35-C36-C37-C38
2	F	1159	LHG	C35-C36-C37-C38
2	F	1166	LHG	C35-C36-C37-C38
2	F	1164	LHG	C35-C36-C37-C38
4	A	1163	UMQ	O1'-CA-CB-CC
4	F	1162	UMQ	O1'-CA-CB-CC
4	F	1163	UMQ	O1'-CA-CB-CC
4	I	1163	UMQ	O1'-CA-CB-CC
2	H	161	LHG	C11-C10-C9-C8
2	H	1159	LHG	C11-C12-C13-C14
2	B	1159	LHG	C11-C10-C9-C8
4	B	1163	UMQ	CA-CB-CC-CD
4	C	1164	UMQ	CD-CF-CG-CH
4	J	1161	UMQ	CI-CJ-CK-CL
2	C	1158	LHG	C16-C17-C18-C19
2	E	1158	LHG	C16-C17-C18-C19
2	B	1158	LHG	C16-C17-C18-C19
2	F	1158	LHG	C16-C17-C18-C19
2	D	1162	LHG	C34-C35-C36-C37
2	F	1158	LHG	C25-C26-C27-C28
2	F	1164	LHG	C34-C35-C36-C37
2	F	1166	LHG	C34-C35-C36-C37
2	H	1159	LHG	C9-C10-C11-C12
4	H	1160	UMQ	CG-CH-CI-CJ
2	C	1163	LHG	C34-C35-C36-C37
2	H	1158	LHG	C16-C17-C18-C19
2	A	1164	LHG	C34-C35-C36-C37
2	G	1158	LHG	C16-C17-C18-C19
2	I	1159	LHG	C34-C35-C36-C37
2	J	1158	LHG	C16-C17-C18-C19
4	B	1162	UMQ	O1'-CA-CB-CC

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Mol	Chain	Res	Type	Atoms
2	A	1158	LHG	C16-C17-C18-C19
2	A	1159	LHG	C34-C35-C36-C37
2	F	1158	LHG	C10-C11-C12-C13
2	D	1158	LHG	C16-C17-C18-C19
4	C	1162	UMQ	CG-CH-CI-CJ
2	F	1159	LHG	C34-C35-C36-C37
2	J	1158	LHG	C25-C26-C27-C28
2	C	1159	LHG	C34-C35-C36-C37
2	D	1158	LHG	C10-C11-C12-C13
2	G	1158	LHG	C10-C11-C12-C13
2	I	1165	LHG	C34-C35-C36-C37
4	C	1162	UMQ	CB-CC-CD-CF
2	D	1163	LHG	C11-C12-C13-C14
2	F	1158	LHG	C26-C27-C28-C29
2	H	1158	LHG	C10-C11-C12-C13
2	A	1158	LHG	C25-C26-C27-C28
2	B	1158	LHG	C25-C26-C27-C28
2	B	1159	LHG	C7-C8-C9-C10
2	E	1158	LHG	C10-C11-C12-C13
2	E	1158	LHG	C26-C27-C28-C29
2	H	1158	LHG	C26-C27-C28-C29
2	B	1158	LHG	C10-C11-C12-C13
2	C	1158	LHG	C25-C26-C27-C28
2	D	1158	LHG	C26-C27-C28-C29
2	G	1158	LHG	C25-C26-C27-C28
2	G	1158	LHG	C26-C27-C28-C29
4	C	1161	UMQ	O1'-CA-CB-CC
2	A	1158	LHG	C26-C27-C28-C29
2	B	1158	LHG	C26-C27-C28-C29
2	I	1158	LHG	C16-C17-C18-C19
2	I	1158	LHG	C25-C26-C27-C28
2	I	1159	LHG	C4-C5-C6-O8
2	E	1158	LHG	C25-C26-C27-C28
2	I	1158	LHG	C26-C27-C28-C29
2	J	1158	LHG	C26-C27-C28-C29
2	D	1158	LHG	C25-C26-C27-C28
2	H	1158	LHG	C25-C26-C27-C28
2	C	1158	LHG	C26-C27-C28-C29
2	F	1165	LHG	C9-C10-C11-C12
2	I	1158	LHG	C24-C23-O8-C6
2	A	1158	LHG	C10-C11-C12-C13
2	F	1165	LHG	C10-C11-C12-C13

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Mol	Chain	Res	Type	Atoms
4	D	163	UMQ	CA-CB-CC-CD
2	H	1159	LHG	C11-C10-C9-C8
2	C	1158	LHG	C10-C11-C12-C13
2	I	1158	LHG	C10-C11-C12-C13
2	A	1158	LHG	C35-C36-C37-C38
2	I	1158	LHG	C35-C36-C37-C38
2	B	1158	LHG	C35-C36-C37-C38
2	C	1158	LHG	C35-C36-C37-C38
2	F	1158	LHG	C35-C36-C37-C38
2	H	1158	LHG	C35-C36-C37-C38
2	E	1158	LHG	C35-C36-C37-C38
2	J	1158	LHG	C35-C36-C37-C38
2	D	1158	LHG	C35-C36-C37-C38
2	C	1160	LHG	C10-C11-C12-C13
2	G	1158	LHG	C35-C36-C37-C38
2	C	1159	LHG	C16-C17-C18-C19
2	A	1164	LHG	C16-C17-C18-C19
2	A	1159	LHG	C16-C17-C18-C19
2	A	1161	LHG	C7-C8-C9-C10
2	C	1163	LHG	C16-C17-C18-C19
2	D	1162	LHG	C16-C17-C18-C19
2	F	1164	LHG	C16-C17-C18-C19
2	D	1163	LHG	C7-C8-C9-C10
2	F	1159	LHG	C16-C17-C18-C19
2	F	1166	LHG	C16-C17-C18-C19
2	I	1159	LHG	C16-C17-C18-C19
2	D	1163	LHG	C11-C10-C9-C8
2	I	1165	LHG	C16-C17-C18-C19
2	J	1158	LHG	C10-C11-C12-C13
2	J	1159	LHG	C12-C13-C14-C15
2	I	1159	LHG	C11-C12-C13-C14
2	A	1158	LHG	C24-C23-O8-C6
2	B	1158	LHG	C24-C23-O8-C6
2	D	1158	LHG	C24-C23-O8-C6
2	E	1158	LHG	C24-C23-O8-C6
2	F	1158	LHG	C24-C23-O8-C6
2	G	1158	LHG	C24-C23-O8-C6
2	H	1158	LHG	C24-C23-O8-C6
2	J	1158	LHG	C24-C23-O8-C6
4	F	1162	UMQ	CG-CH-CI-CJ
2	B	1159	LHG	C9-C10-C11-C12
2	A	1158	LHG	C6-C5-O7-C7

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Mol	Chain	Res	Type	Atoms
2	B	1158	LHG	C6-C5-O7-C7
2	D	1158	LHG	C6-C5-O7-C7
2	E	1158	LHG	C6-C5-O7-C7
2	F	1158	LHG	C6-C5-O7-C7
2	G	1158	LHG	C6-C5-O7-C7
2	H	1158	LHG	C6-C5-O7-C7
2	I	1158	LHG	C6-C5-O7-C7
2	J	1158	LHG	C6-C5-O7-C7
4	C	1164	UMQ	O1'-CA-CB-CC
2	C	1158	LHG	C24-C23-O8-C6
4	B	1162	UMQ	CA-CB-CC-CD
2	C	1158	LHG	C2-C3-O3-P
2	D	1158	LHG	C2-C3-O3-P
2	E	1158	LHG	C2-C3-O3-P
2	F	1158	LHG	C2-C3-O3-P
2	A	1158	LHG	O10-C23-O8-C6
2	B	1158	LHG	O10-C23-O8-C6
2	F	1158	LHG	O10-C23-O8-C6
2	G	1158	LHG	O10-C23-O8-C6
2	J	1158	LHG	O10-C23-O8-C6
2	D	1162	LHG	C11-C12-C13-C14
2	F	1166	LHG	C11-C12-C13-C14
2	A	1164	LHG	C11-C12-C13-C14
2	C	1159	LHG	C11-C12-C13-C14
2	C	1163	LHG	C11-C12-C13-C14
4	A	1162	UMQ	CB-CC-CD-CF
2	H	1158	LHG	O10-C23-O8-C6
2	F	1164	LHG	C11-C12-C13-C14
2	A	1159	LHG	C11-C12-C13-C14
2	D	1158	LHG	O10-C23-O8-C6
2	E	1158	LHG	O10-C23-O8-C6
4	F	1167	UMQ	CH-CI-CJ-CK
2	A	1159	LHG	O7-C5-C6-O8
2	A	1164	LHG	O7-C5-C6-O8
2	C	1159	LHG	O7-C5-C6-O8
2	C	1163	LHG	O7-C5-C6-O8
2	D	1162	LHG	O7-C5-C6-O8
2	F	1159	LHG	O7-C5-C6-O8
2	F	1164	LHG	O7-C5-C6-O8
2	F	1166	LHG	O7-C5-C6-O8
2	I	1159	LHG	O7-C5-C6-O8
2	I	1165	LHG	O7-C5-C6-O8

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Mol	Chain	Res	Type	Atoms
2	I	1158	LHG	O10-C23-O8-C6
2	F	1159	LHG	C11-C12-C13-C14
2	E	1158	LHG	O1-C1-C2-O2
2	I	1158	LHG	O1-C1-C2-O2
2	J	1158	LHG	O1-C1-C2-O2
4	J	1160	UMQ	CA-CB-CC-CD
2	C	1158	LHG	O10-C23-O8-C6
2	I	1162	LHG	C9-C10-C11-C12
4	H	1160	UMQ	O1'-CA-CB-CC
2	F	1161	LHG	C11-C10-C9-C8
4	A	1162	UMQ	CF-CG-CH-CI
2	J	1159	LHG	C11-C12-C13-C14
2	A	1158	LHG	C2-C3-O3-P
2	B	1158	LHG	C2-C3-O3-P
2	G	1158	LHG	C2-C3-O3-P
2	H	1158	LHG	C2-C3-O3-P
2	I	1158	LHG	C2-C3-O3-P
2	J	1158	LHG	C2-C3-O3-P
4	C	1164	UMQ	CC-CD-CF-CG
2	C	1158	LHG	C32-C33-C34-C35
2	I	1165	LHG	C11-C12-C13-C14
2	J	1158	LHG	C32-C33-C34-C35
2	D	1158	LHG	C32-C33-C34-C35
2	A	1158	LHG	C32-C33-C34-C35
2	G	1158	LHG	C32-C33-C34-C35
4	F	1167	UMQ	CI-CJ-CK-CL
2	H	1158	LHG	C32-C33-C34-C35
2	F	1158	LHG	C32-C33-C34-C35
2	H	1159	LHG	C10-C11-C12-C13
2	E	1158	LHG	C32-C33-C34-C35
2	I	1158	LHG	C32-C33-C34-C35
2	B	1158	LHG	C32-C33-C34-C35
2	A	1158	LHG	O1-C1-C2-O2
2	B	1158	LHG	O1-C1-C2-O2
2	D	1158	LHG	O1-C1-C2-O2
2	F	1158	LHG	O1-C1-C2-O2
2	G	1158	LHG	O1-C1-C2-O2
2	H	1158	LHG	O1-C1-C2-O2
4	G	1160	UMQ	CA-CB-CC-CD
2	J	1159	LHG	C10-C11-C12-C13
2	F	162	LHG	C7-C8-C9-C10
2	C	1158	LHG	C6-C5-O7-C7

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Mol	Chain	Res	Type	Atoms
4	E	1160	UMQ	CF-CG-CH-CI
4	D	163	UMQ	CG-CH-CI-CJ
2	A	1165	LHG	C11-C10-C9-C8
2	A	1160	LHG	C11-C12-C13-C14
2	G	1158	LHG	C11-C10-C9-C8
2	D	1158	LHG	C11-C10-C9-C8
2	E	1158	LHG	C11-C10-C9-C8
2	H	1158	LHG	C11-C10-C9-C8
2	B	1158	LHG	C11-C10-C9-C8
2	C	1158	LHG	O1-C1-C2-O2
4	E	1160	UMQ	CC-CD-CF-CG
2	F	1158	LHG	C11-C10-C9-C8
4	C	1164	UMQ	O5'-C1'-O1'-CA
4	C	1164	UMQ	C2'-C1'-O1'-CA
4	F	1167	UMQ	C2'-C1'-O1'-CA
2	I	1161	LHG	C9-C10-C11-C12
2	B	1158	LHG	C19-C20-C21-C22
2	D	1158	LHG	C19-C20-C21-C22
2	H	1158	LHG	C19-C20-C21-C22
2	A	1158	LHG	C11-C10-C9-C8
2	C	1158	LHG	C11-C10-C9-C8
2	E	1158	LHG	C19-C20-C21-C22
4	F	1167	UMQ	O5'-C1'-O1'-CA
2	F	1160	LHG	C11-C12-C13-C14
2	I	1158	LHG	C19-C20-C21-C22
4	A	1162	UMQ	O1'-CA-CB-CC
2	A	1158	LHG	C19-C20-C21-C22
2	C	161	LHG	C11-C12-C13-C14
2	C	1158	LHG	C19-C20-C21-C22
2	F	1158	LHG	C19-C20-C21-C22
2	G	1158	LHG	C19-C20-C21-C22
2	D	1164	LHG	C7-C8-C9-C10
2	A	1165	LHG	C9-C10-C11-C12
4	J	1161	UMQ	CF-CG-CH-CI
2	A	1166	LHG	C7-C8-C9-C10
2	C	1163	LHG	C32-C33-C34-C35
2	A	1164	LHG	C32-C33-C34-C35
2	F	1166	LHG	C32-C33-C34-C35
4	D	1161	UMQ	O1'-CA-CB-CC
2	D	1163	LHG	C10-C11-C12-C13
2	I	1165	LHG	C31-C32-C33-C34
4	H	1160	UMQ	CF-CG-CH-CI

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Mol	Chain	Res	Type	Atoms
2	D	1162	LHG	C32-C33-C34-C35
2	F	1164	LHG	C32-C33-C34-C35
4	B	1162	UMQ	CB-CC-CD-CF
2	D	1160	LHG	C11-C12-C13-C14
2	C	1159	LHG	C31-C32-C33-C34
2	J	1158	LHG	C19-C20-C21-C22
2	I	1158	LHG	C11-C10-C9-C8
4	F	1163	UMQ	CB-CC-CD-CF
2	A	1159	LHG	C32-C33-C34-C35
2	F	1159	LHG	C31-C32-C33-C34
2	I	1165	LHG	C32-C33-C34-C35
2	A	1159	LHG	O6-C4-C5-O7
2	A	1164	LHG	O6-C4-C5-O7
2	C	1159	LHG	O6-C4-C5-O7
2	C	1163	LHG	O6-C4-C5-O7
2	D	1162	LHG	O6-C4-C5-O7
2	F	1159	LHG	O6-C4-C5-O7
2	F	1164	LHG	O6-C4-C5-O7
2	F	1166	LHG	O6-C4-C5-O7
2	I	1159	LHG	O6-C4-C5-O7
2	I	1165	LHG	O6-C4-C5-O7
4	F	1162	UMQ	CD-CF-CG-CH
2	C	1159	LHG	C32-C33-C34-C35
2	F	1159	LHG	O8-C23-C24-C25
2	I	1159	LHG	C32-C33-C34-C35
2	D	1162	LHG	O8-C23-C24-C25
2	I	1159	LHG	O8-C23-C24-C25
2	A	1160	LHG	C12-C13-C14-C15
2	F	1159	LHG	C32-C33-C34-C35
2	C	1159	LHG	O8-C23-C24-C25
2	A	1159	LHG	C31-C32-C33-C34
2	A	1159	LHG	O8-C23-C24-C25
2	A	1164	LHG	O8-C23-C24-C25
2	F	1164	LHG	O8-C23-C24-C25
2	F	1166	LHG	O8-C23-C24-C25
2	I	1165	LHG	O8-C23-C24-C25
2	I	1159	LHG	C31-C32-C33-C34
4	A	1163	UMQ	CB-CC-CD-CF
2	C	1163	LHG	O8-C23-C24-C25
2	F	1158	LHG	O7-C7-C8-C9
2	A	1158	LHG	O7-C7-C8-C9
2	D	1158	LHG	O7-C7-C8-C9

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Mol	Chain	Res	Type	Atoms
2	I	1165	LHG	O7-C7-C8-C9
2	I	1160	LHG	C7-C8-C9-C10
2	F	1164	LHG	C31-C32-C33-C34
2	A	1164	LHG	C31-C32-C33-C34
2	B	1158	LHG	O7-C7-C8-C9
2	C	1158	LHG	O7-C7-C8-C9
2	E	1158	LHG	O7-C7-C8-C9
2	I	1158	LHG	O7-C7-C8-C9
2	G	1158	LHG	O7-C7-C8-C9
2	J	1158	LHG	O7-C7-C8-C9
2	F	1166	LHG	C31-C32-C33-C34
2	H	1158	LHG	O7-C7-C8-C9
2	C	1163	LHG	C31-C32-C33-C34
2	D	1162	LHG	C31-C32-C33-C34
2	B	1159	LHG	C10-C11-C12-C13
2	F	1159	LHG	O7-C7-C8-C9
4	E	1159	UMQ	CI-CJ-CK-CL
4	F	1162	UMQ	CC-CD-CF-CG
2	F	1166	LHG	O7-C7-C8-C9
4	A	1162	UMQ	CA-CB-CC-CD
2	J	1158	LHG	C11-C10-C9-C8
2	A	1164	LHG	O7-C7-C8-C9
2	C	1159	LHG	O7-C7-C8-C9
2	C	1163	LHG	O7-C7-C8-C9
2	D	1162	LHG	O7-C7-C8-C9
2	F	1164	LHG	O7-C7-C8-C9
2	A	1159	LHG	O10-C23-C24-C25
2	A	1159	LHG	O7-C7-C8-C9
2	I	1159	LHG	O7-C7-C8-C9
2	D	1162	LHG	O10-C23-C24-C25
2	F	1159	LHG	O10-C23-C24-C25
2	I	1159	LHG	O9-C7-C8-C9
2	A	1159	LHG	O9-C7-C8-C9
2	F	1164	LHG	O10-C23-C24-C25
2	F	1166	LHG	O10-C23-C24-C25
2	I	1159	LHG	O10-C23-C24-C25
2	I	1165	LHG	O10-C23-C24-C25
2	J	1158	LHG	O8-C23-C24-C25
2	A	1164	LHG	O10-C23-C24-C25
2	C	1159	LHG	O10-C23-C24-C25
2	C	1163	LHG	O10-C23-C24-C25
2	F	1164	LHG	O9-C7-C8-C9

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Mol	Chain	Res	Type	Atoms
4	C	1162	UMQ	O1'-CA-CB-CC
2	C	1159	LHG	O9-C7-C8-C9
2	J	1159	LHG	C13-C14-C15-C16
2	F	1158	LHG	O8-C23-C24-C25
2	C	1163	LHG	O9-C7-C8-C9
2	I	1165	LHG	O9-C7-C8-C9
2	A	1164	LHG	O9-C7-C8-C9
2	D	1162	LHG	O9-C7-C8-C9
2	F	1158	LHG	O9-C7-C8-C9
2	F	1159	LHG	O9-C7-C8-C9
2	H	1158	LHG	O9-C7-C8-C9
2	J	1158	LHG	O9-C7-C8-C9
2	A	1158	LHG	O9-C7-C8-C9
2	B	1158	LHG	O9-C7-C8-C9
2	C	1158	LHG	O9-C7-C8-C9
2	D	1158	LHG	O9-C7-C8-C9
2	E	1158	LHG	O9-C7-C8-C9
2	F	1166	LHG	O9-C7-C8-C9
2	C	1158	LHG	O8-C23-C24-C25
2	I	1158	LHG	O9-C7-C8-C9
2	G	1158	LHG	O9-C7-C8-C9
4	I	1163	UMQ	CG-CH-CI-CJ
2	C	161	LHG	C9-C10-C11-C12
2	A	1158	LHG	O8-C23-C24-C25
2	D	1158	LHG	O8-C23-C24-C25
2	E	1158	LHG	O8-C23-C24-C25
2	G	1158	LHG	O8-C23-C24-C25
2	B	1158	LHG	O8-C23-C24-C25
2	H	1158	LHG	O8-C23-C24-C25
2	I	1158	LHG	O8-C23-C24-C25
2	J	1158	LHG	O10-C23-C24-C25
4	F	1162	UMQ	CF-CG-CH-CI

There are no ring outliers.

30 monomers are involved in 47 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	I	1161	LHG	1	0
2	B	1158	LHG	1	0
2	A	1165	LHG	1	0
2	A	1159	LHG	6	0
2	I	1159	LHG	5	0

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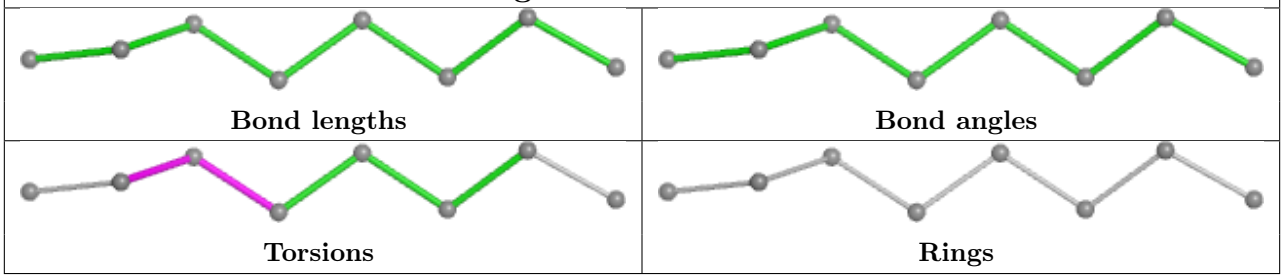
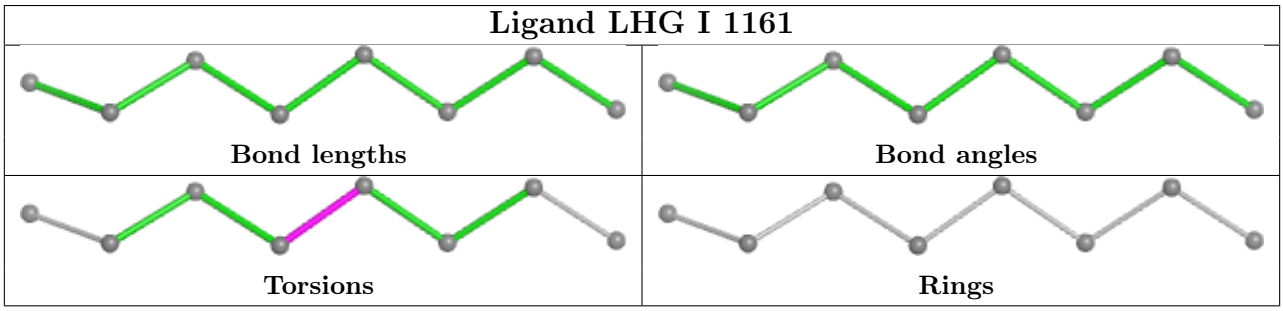
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	1161	LHG	1	0
2	G	1158	LHG	1	0
2	C	1160	LHG	1	0
2	D	1160	LHG	1	0
2	A	1158	LHG	1	0
2	C	1159	LHG	5	0
2	B	1160	LHG	2	0
2	B	1159	LHG	1	0
2	C	1158	LHG	2	0
2	A	1164	LHG	5	0
2	C	1163	LHG	7	0
2	E	1158	LHG	1	0
2	F	1158	LHG	1	0
2	A	1166	LHG	1	0
2	F	1166	LHG	5	0
2	I	1160	LHG	2	0
2	F	1164	LHG	6	0
2	I	1158	LHG	2	0
2	J	1159	LHG	1	0
2	D	1165	LHG	1	0
2	I	1165	LHG	6	0
2	F	1165	LHG	1	0
2	J	1158	LHG	2	0
2	D	1162	LHG	5	0
2	F	1159	LHG	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.

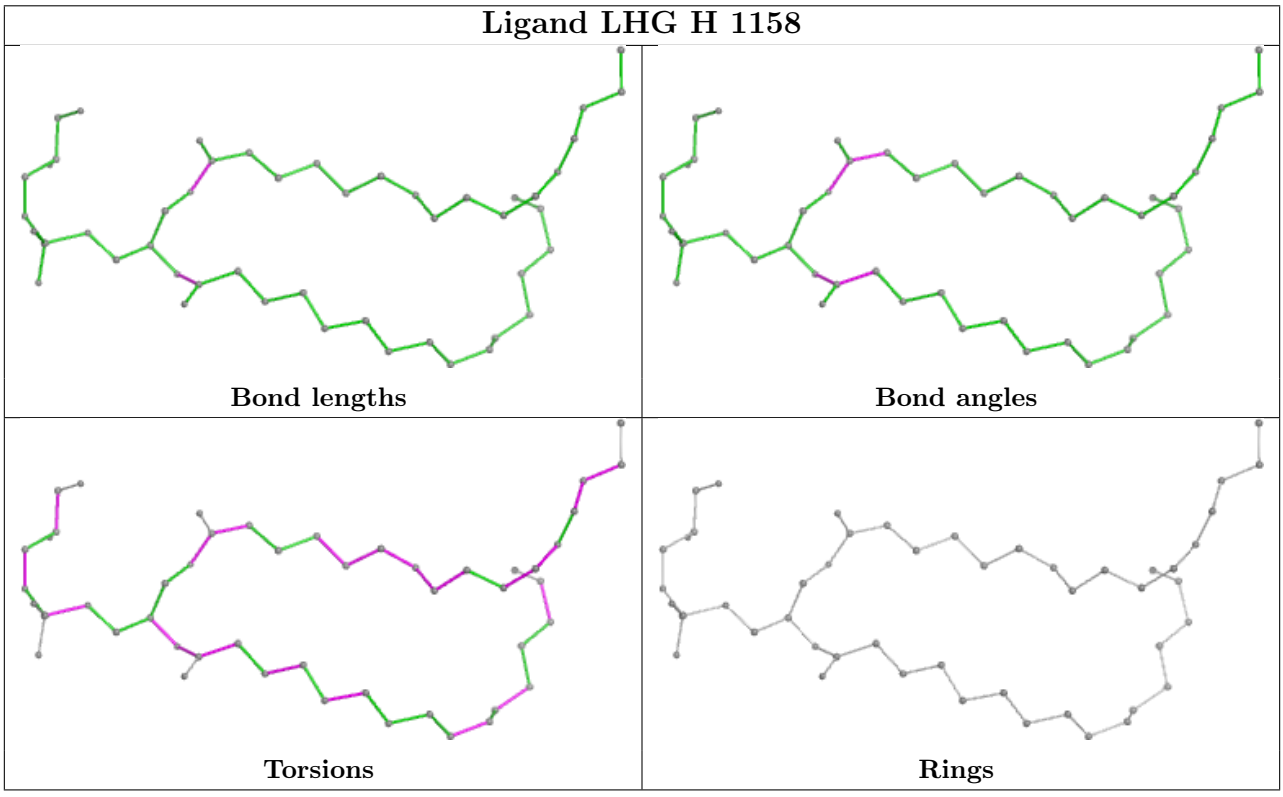
Ligand LHG A 1161



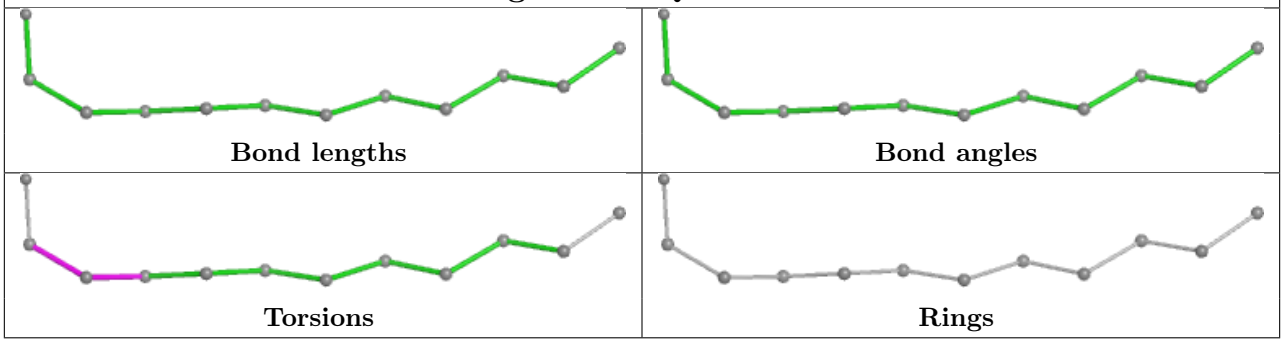
Ligand LHG I 1161



Ligand LHG H 1158



Ligand UMQ G 1160



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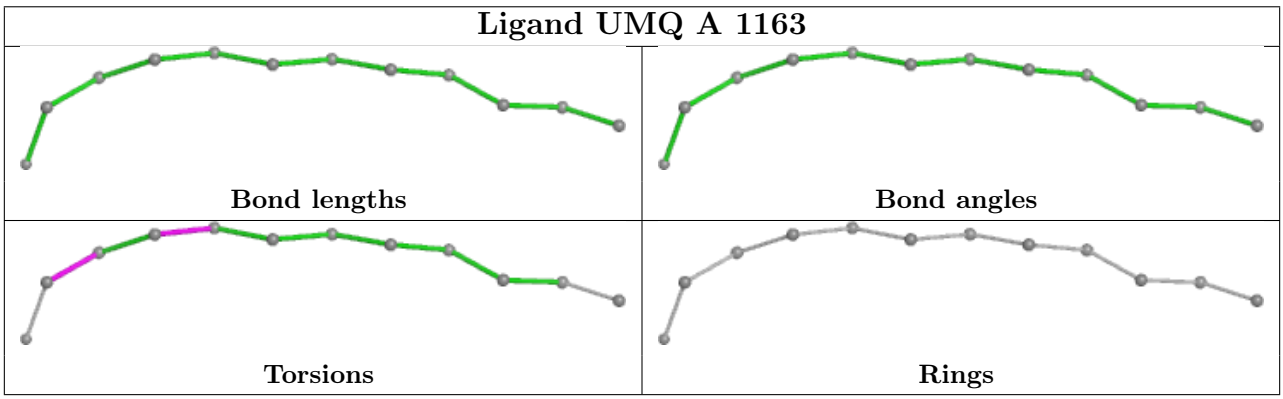

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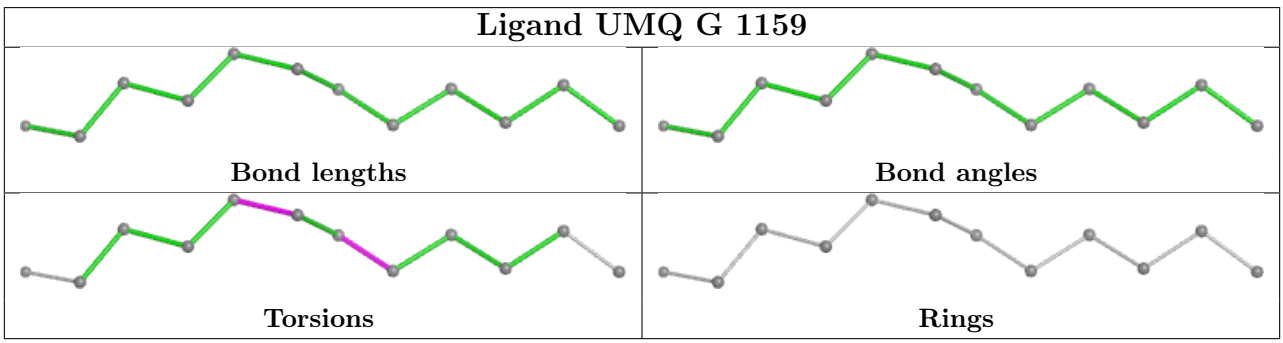
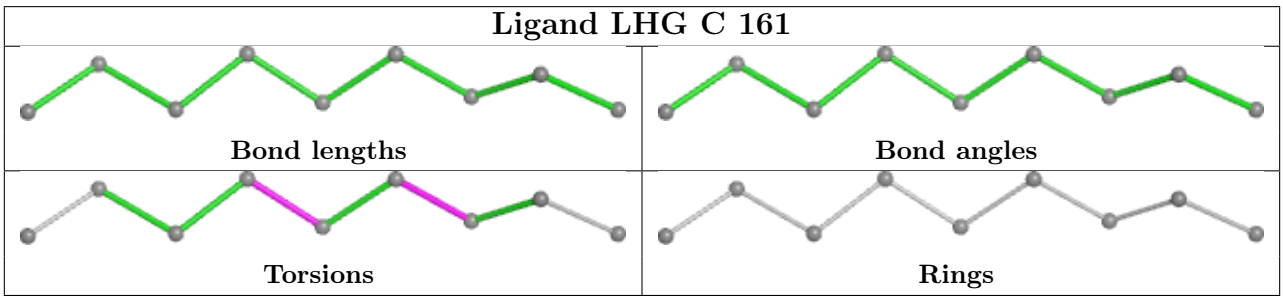


Ligand LHG C 161



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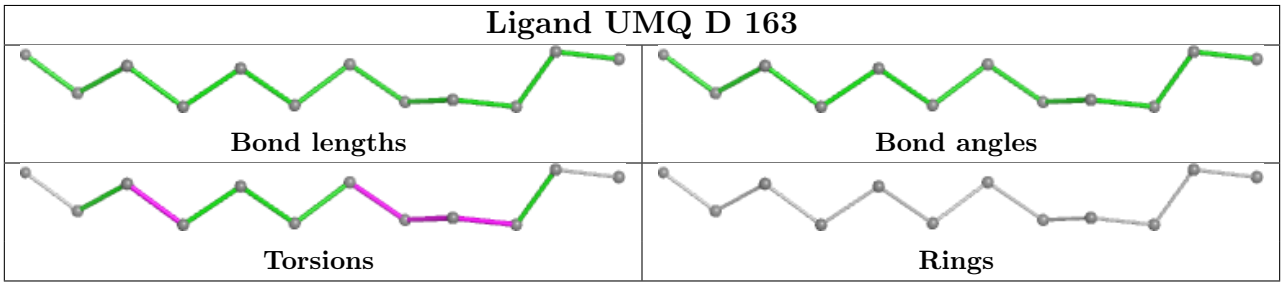
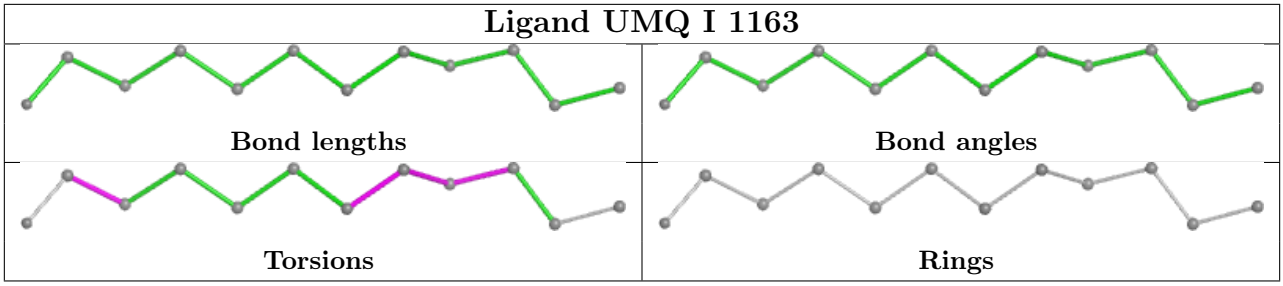
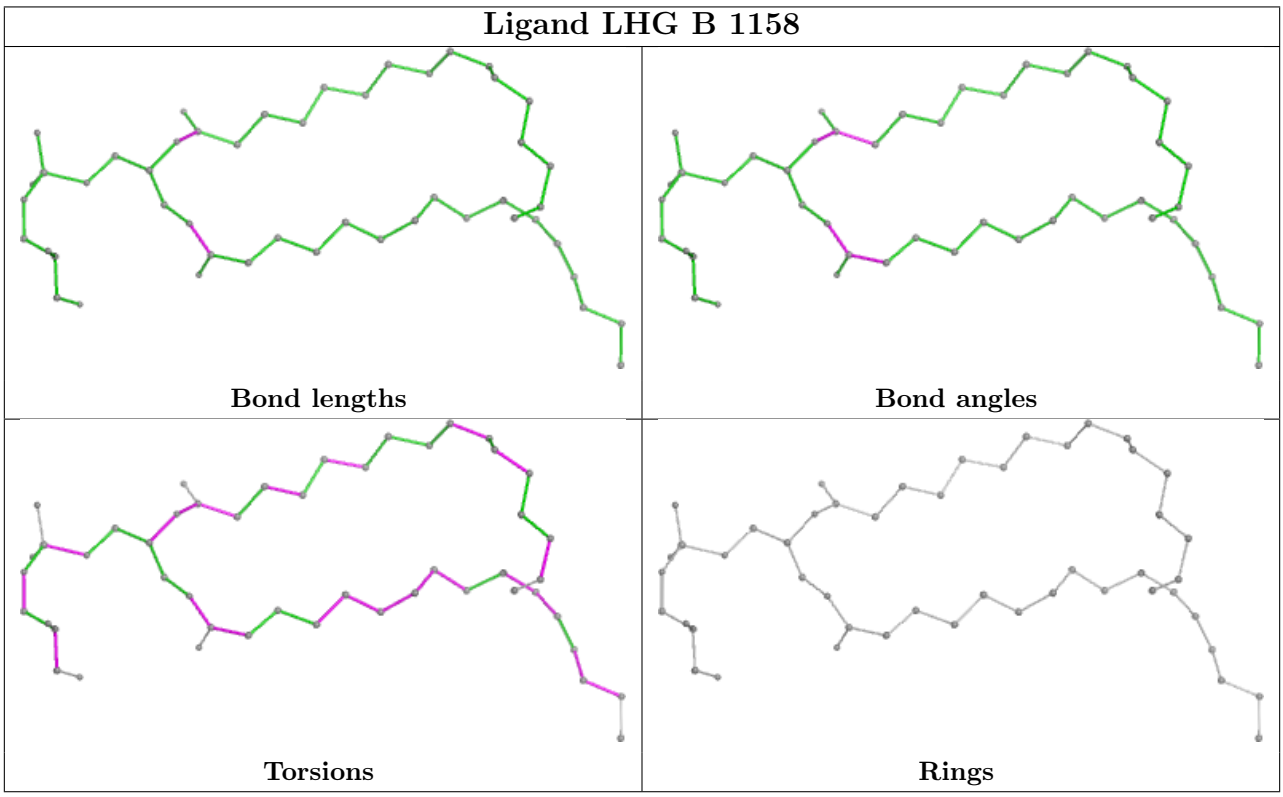
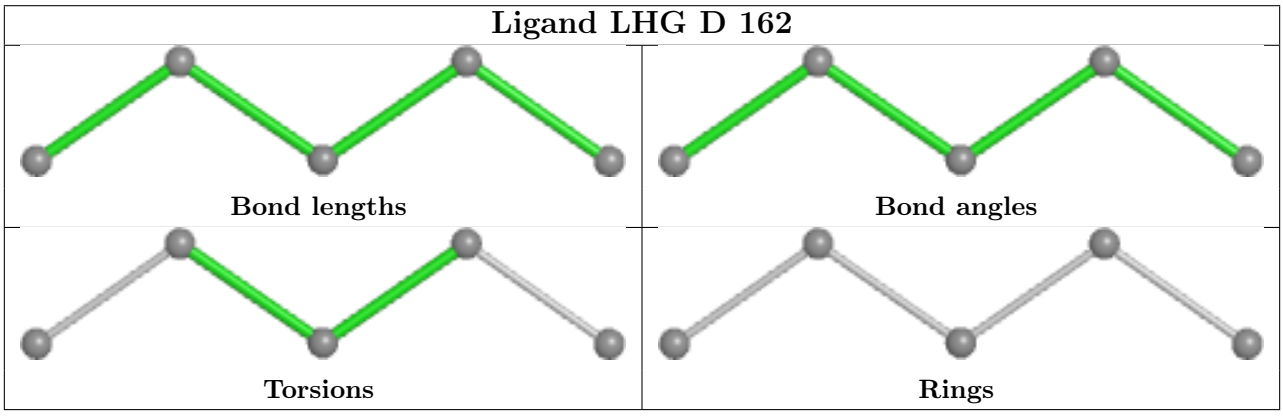
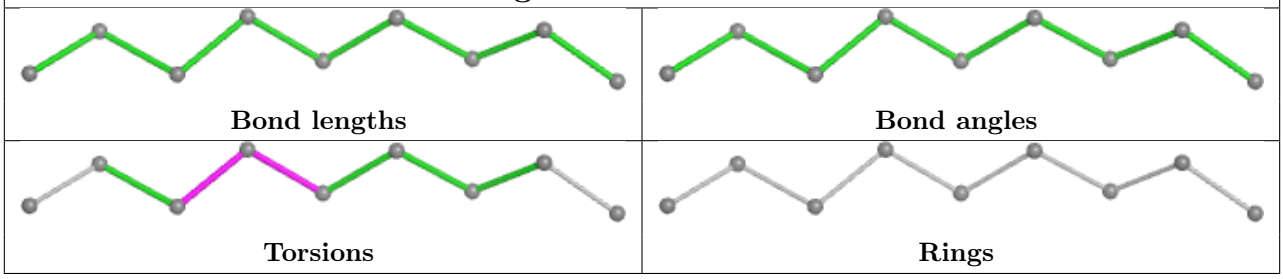



Ligand UMQ I 1163
Bond lengths
Bond angles
Torsions
Rings

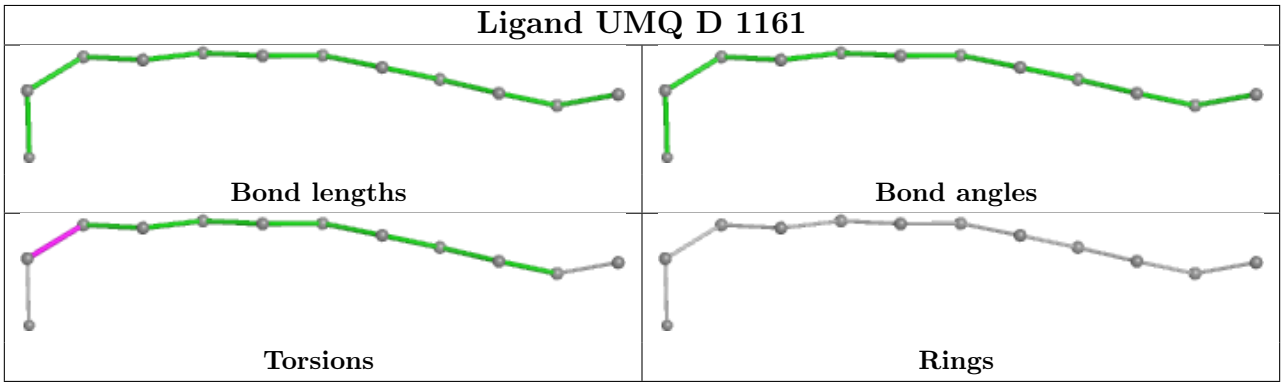

Ligand LHG B 1158
Bond lengths
Bond angles
Torsions
Rings


Ligand LHG D 162
Bond lengths
Bond angles
Torsions
Rings

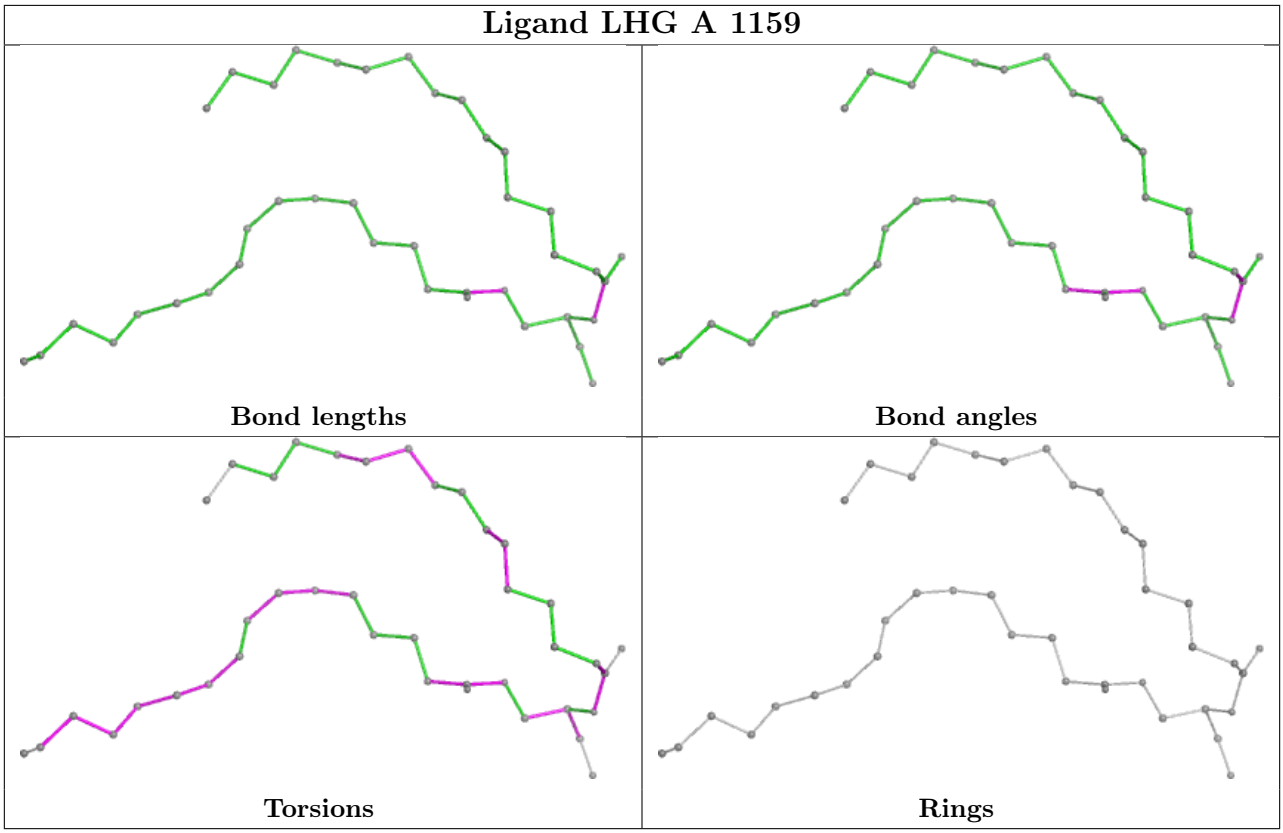
Ligand LHG A 1165



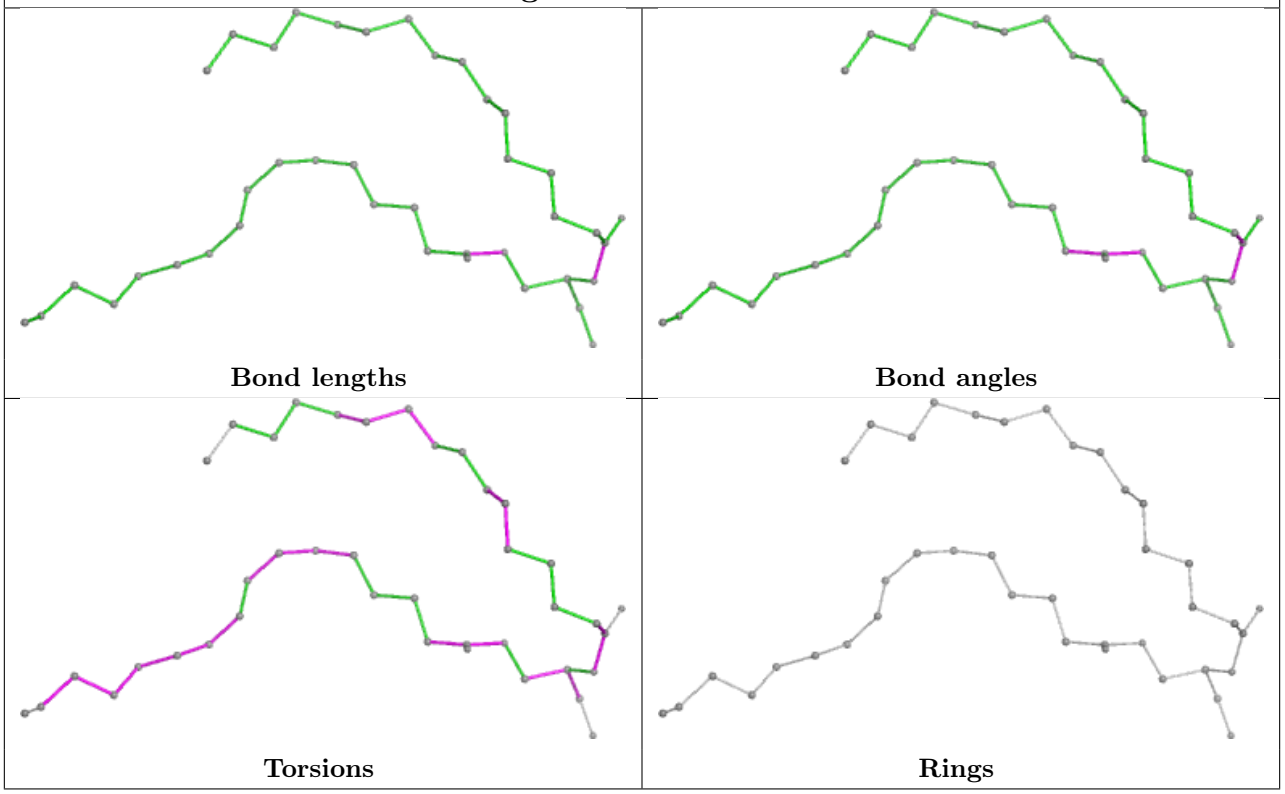
Ligand UMQ D 1161



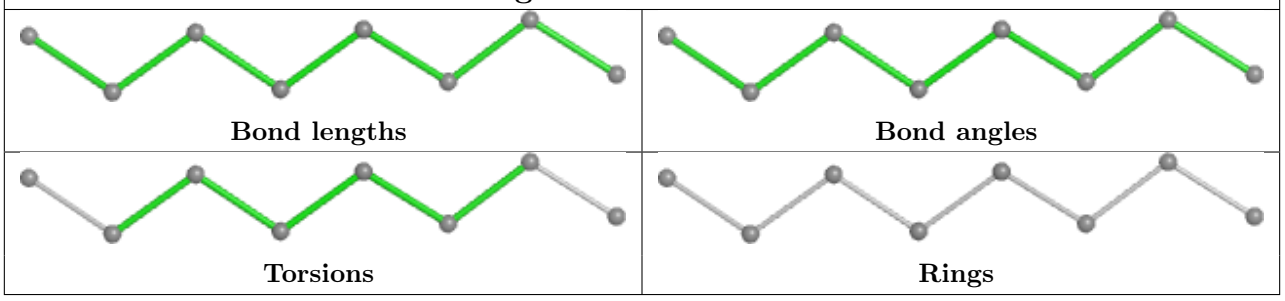
Ligand LHG A 1159



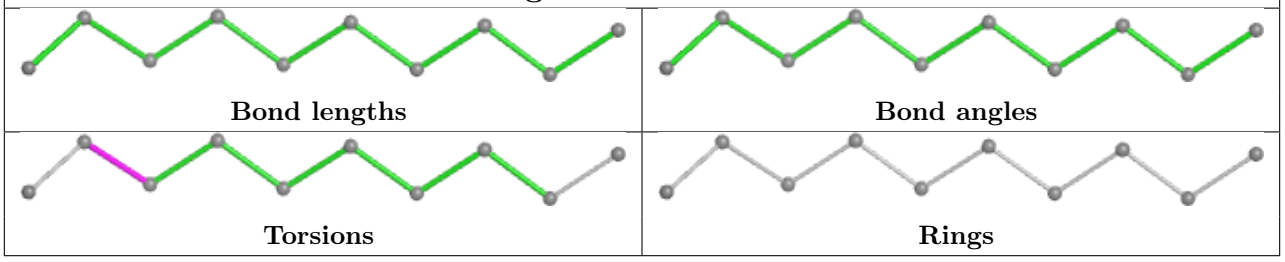
Ligand LHG I 1159



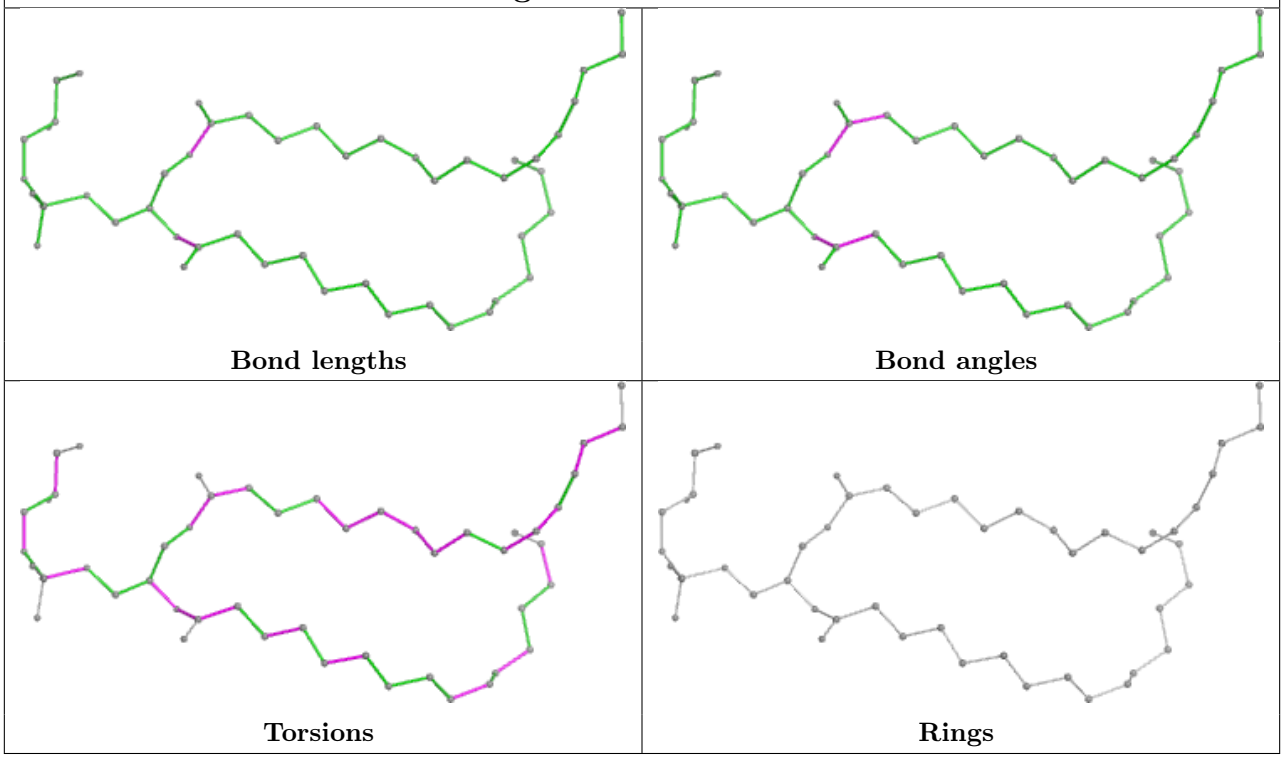
Ligand LHG B 1161



Ligand LHG F 162



Ligand LHG G 1158



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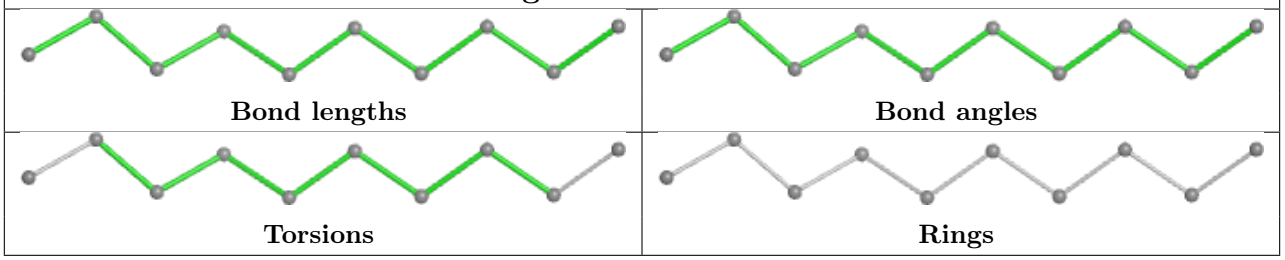

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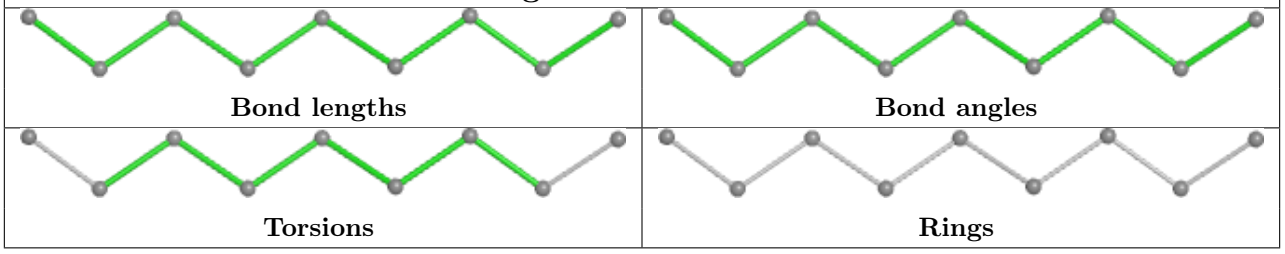
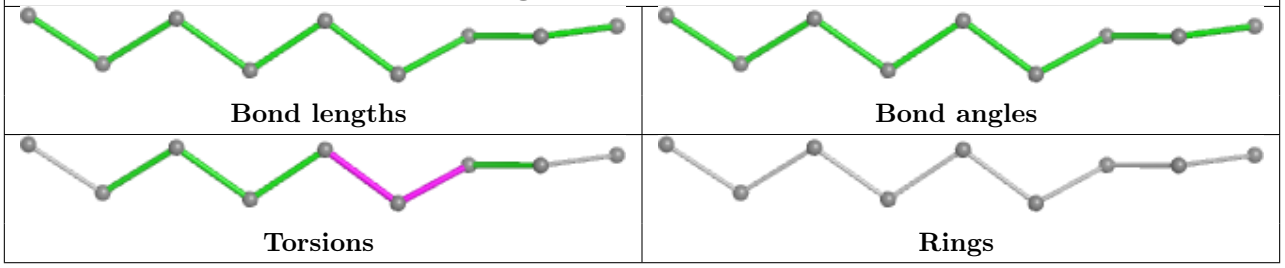


Ligand LHG C 1160



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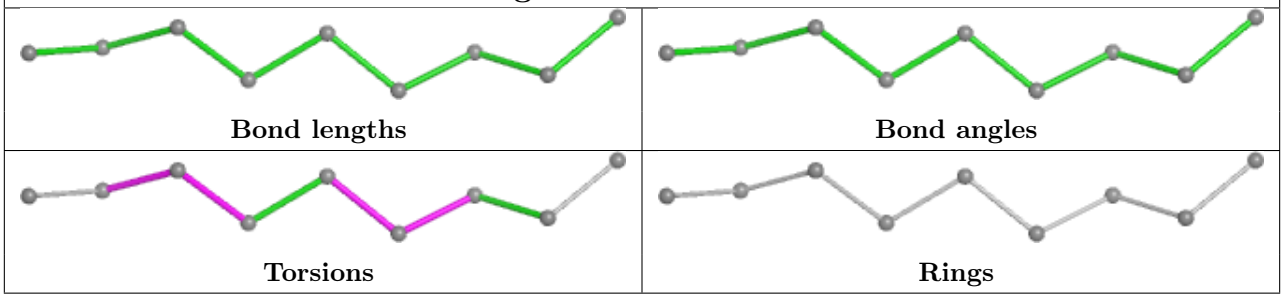

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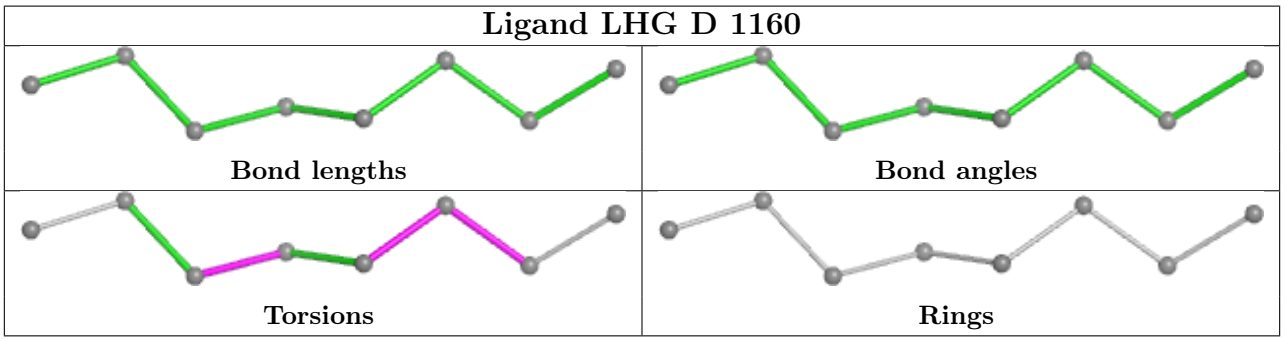
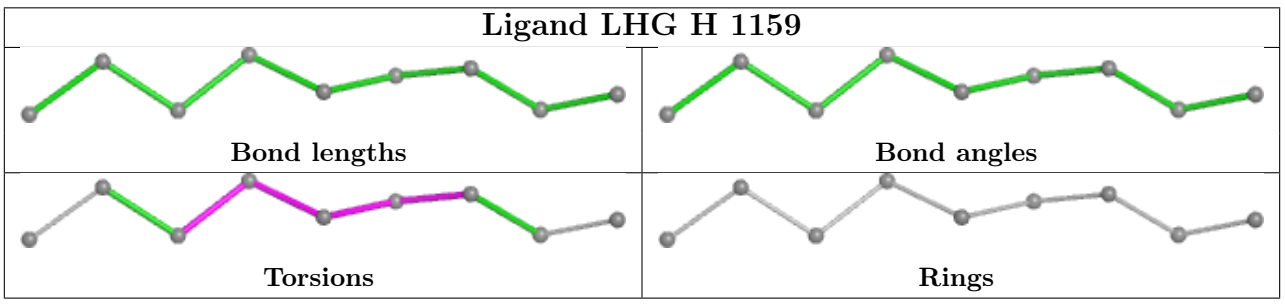
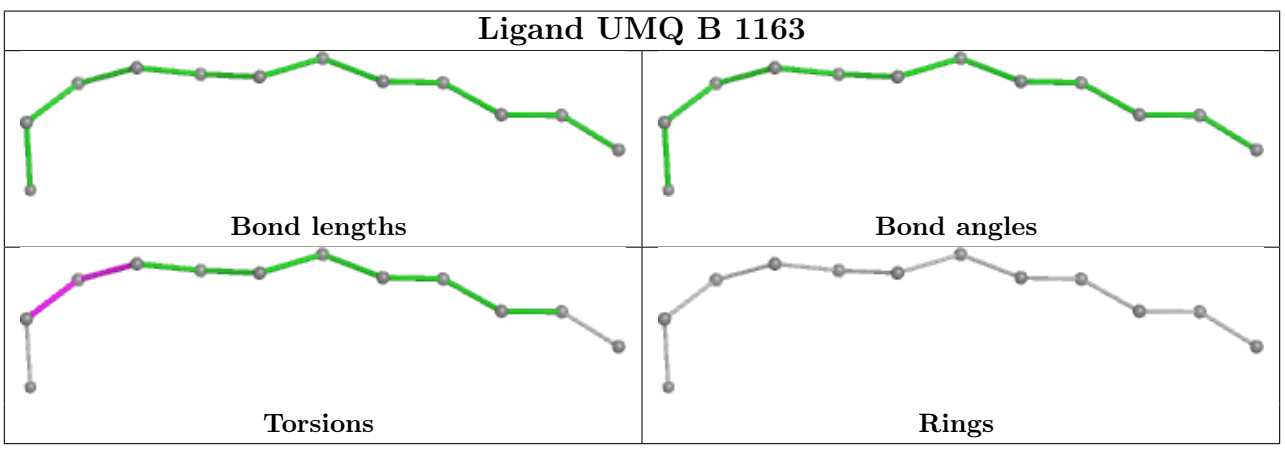


Ligand LHG H 1159



Ligand UMQ B 1163



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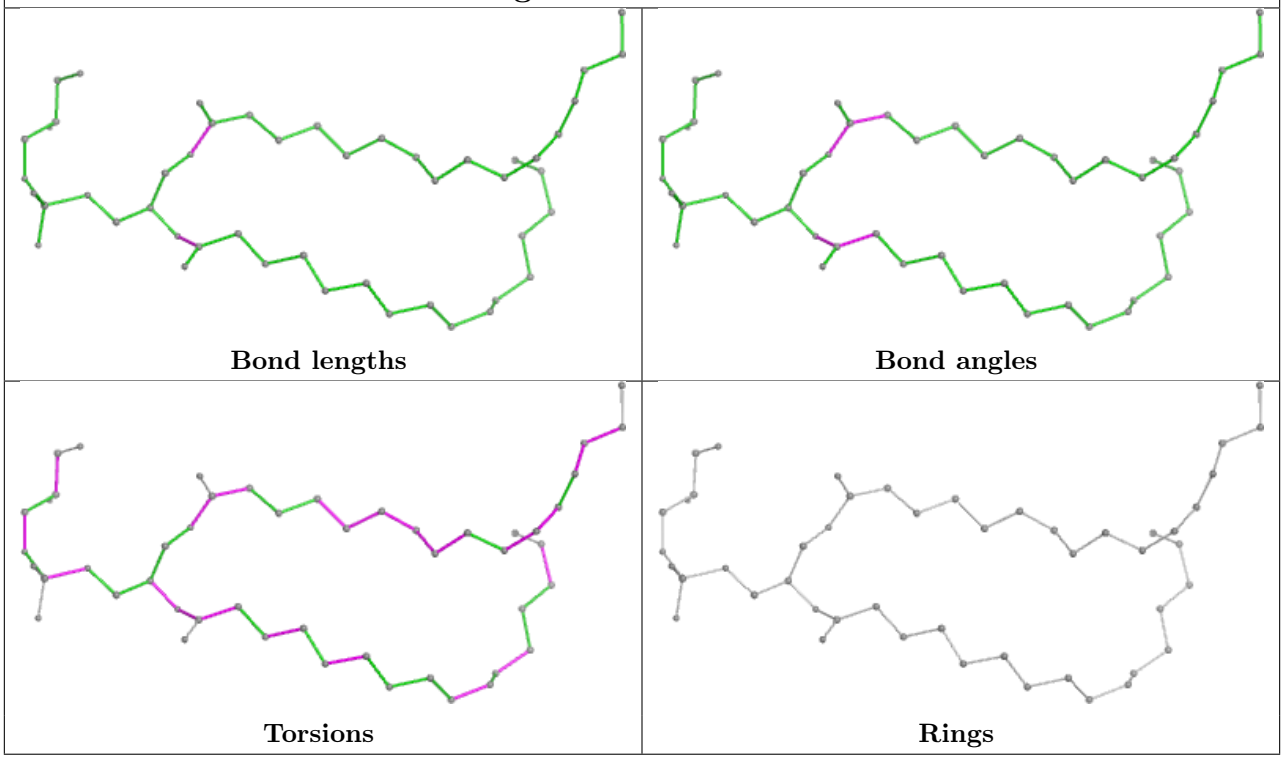

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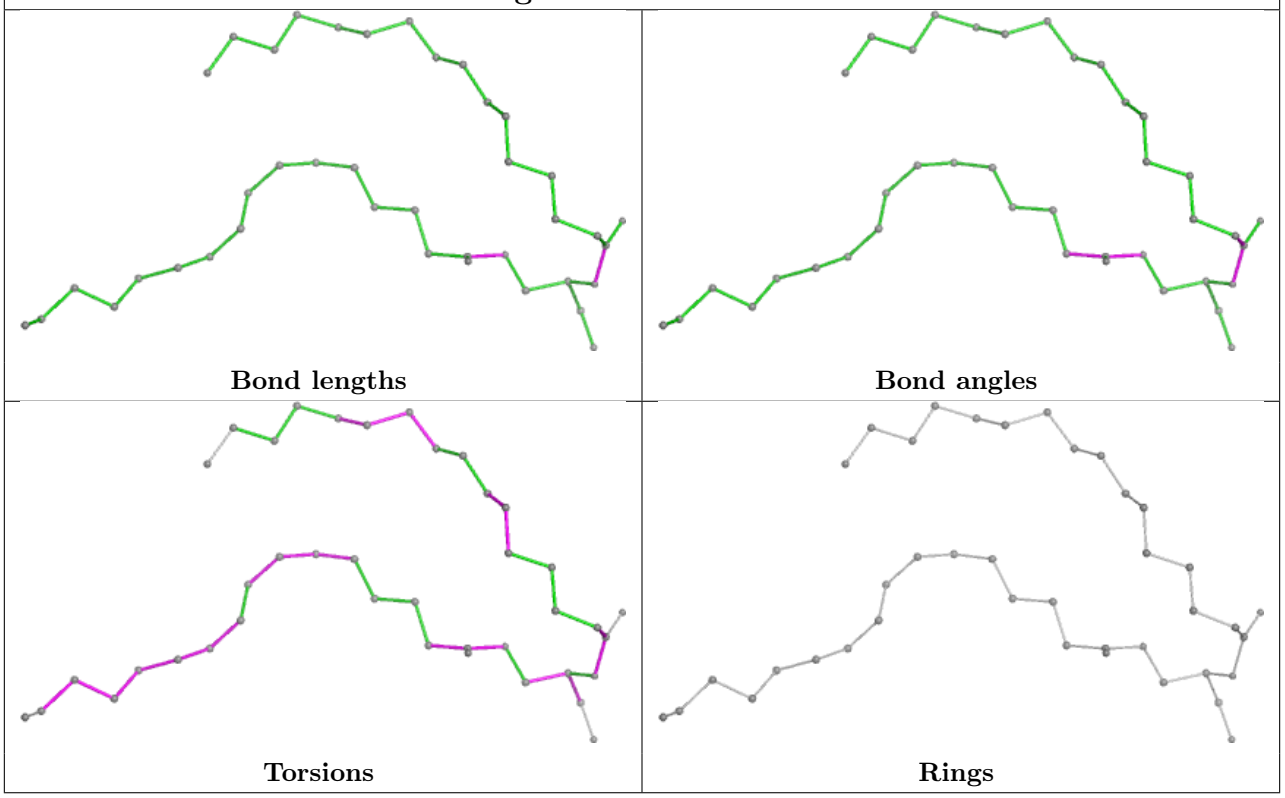

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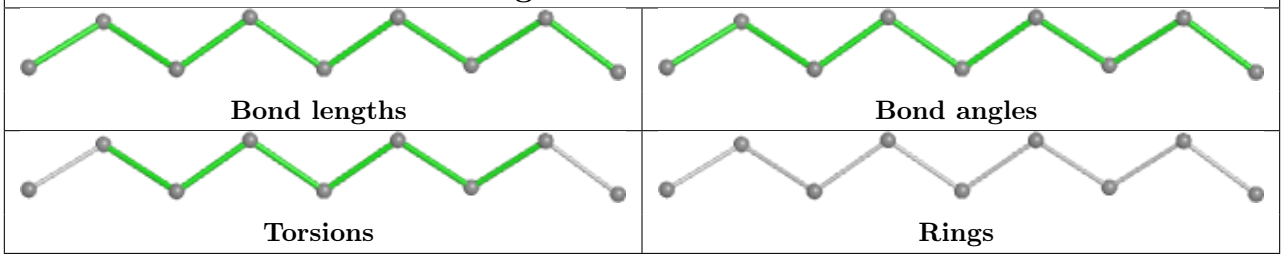
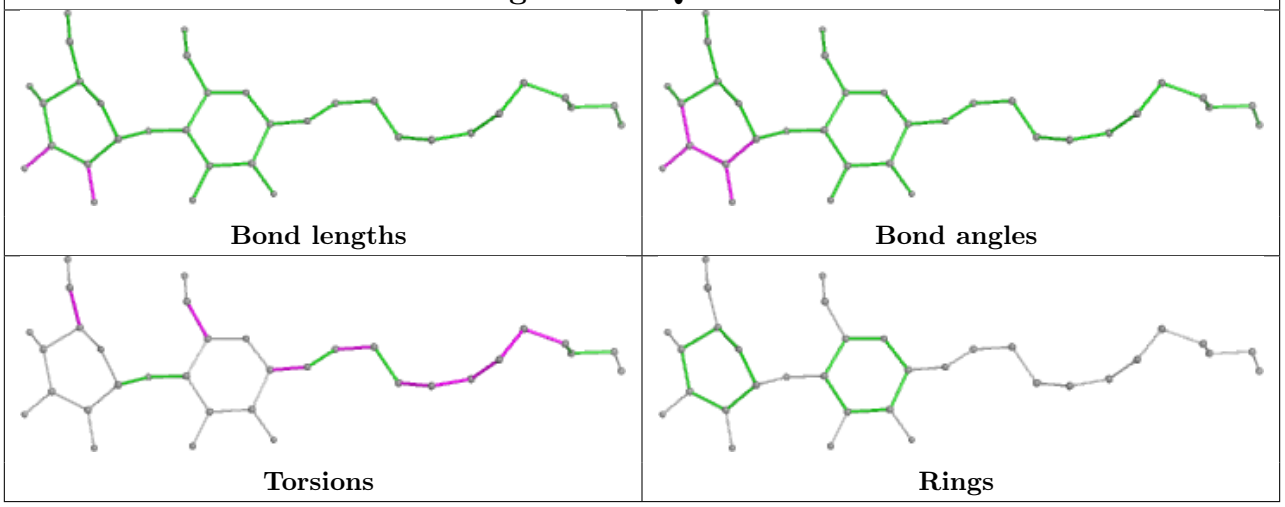
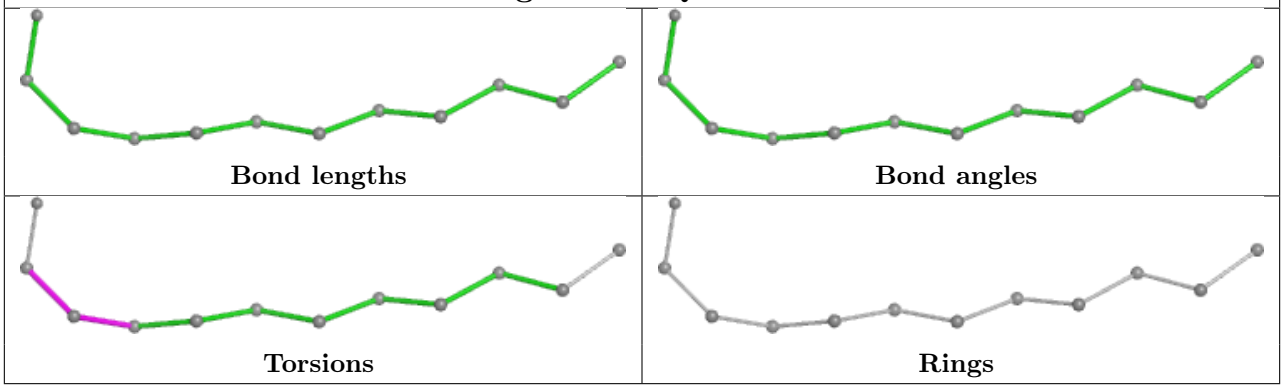


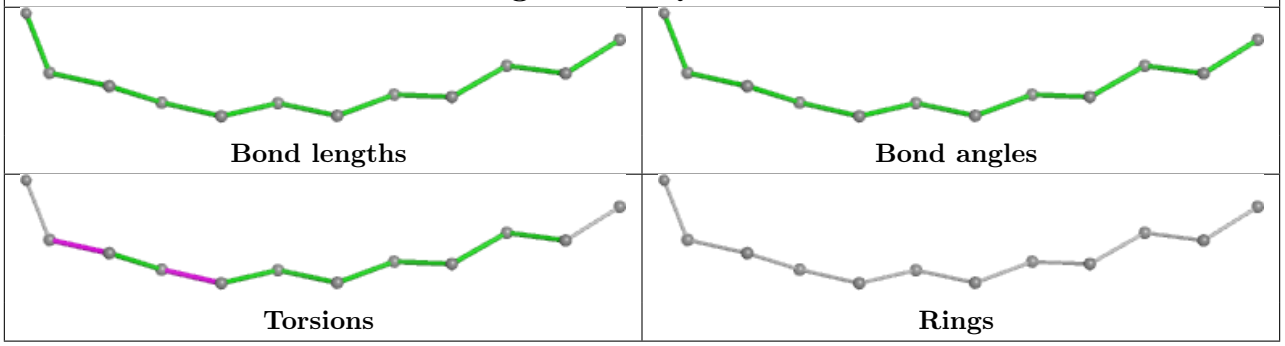
Ligand UMQ C 1164



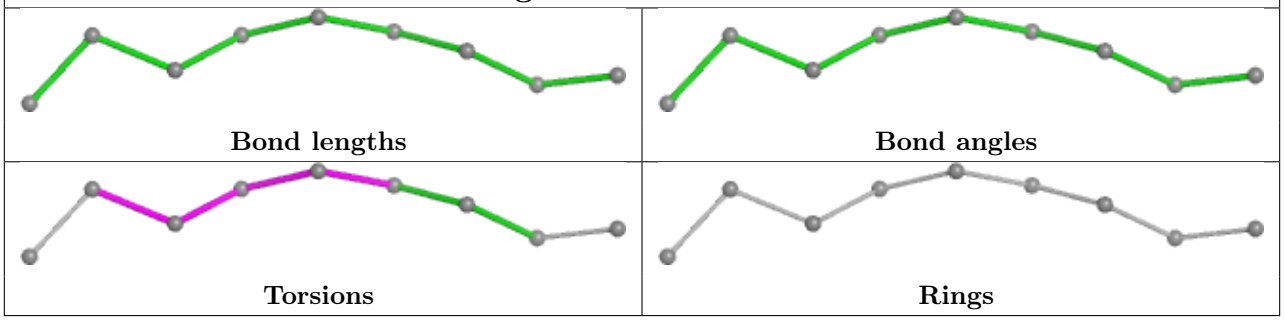
Ligand UMQ I 1164



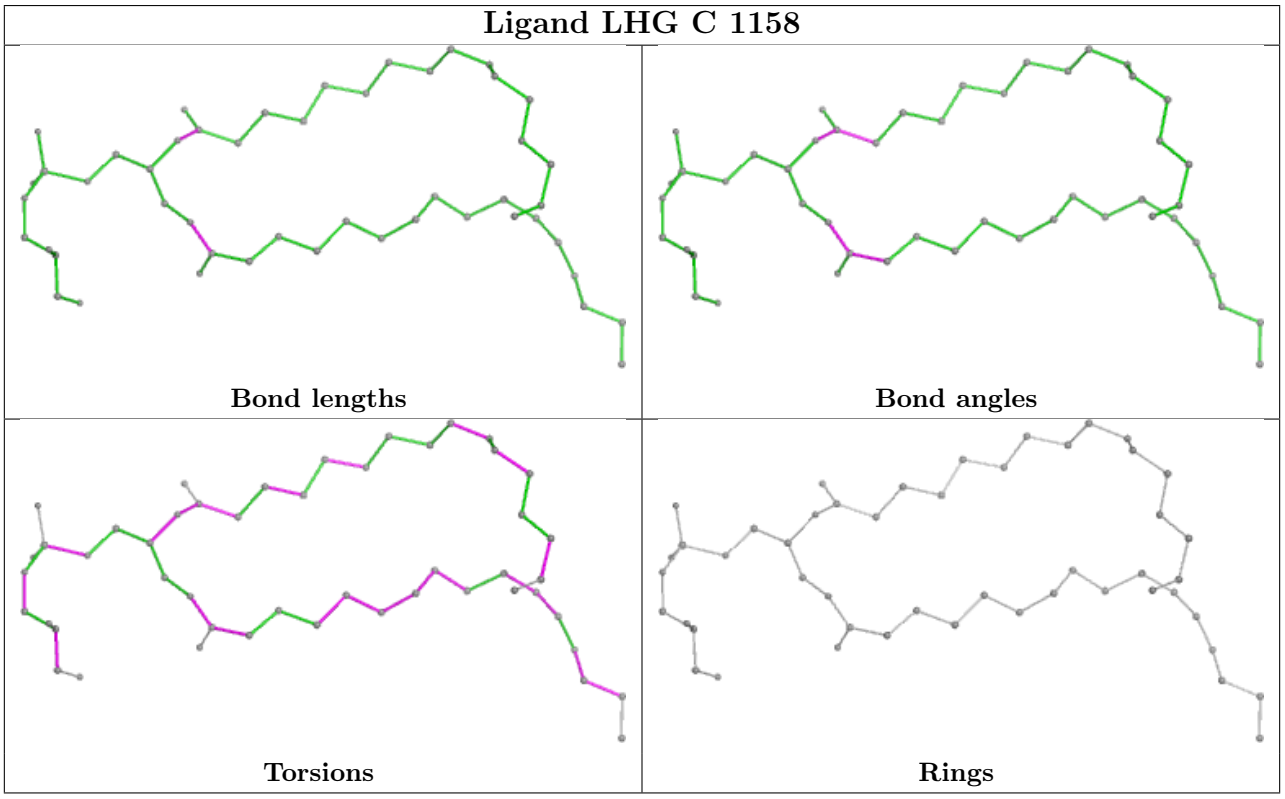
Ligand UMQ F 1163



Ligand LHG B 1159



Ligand LHG C 1158



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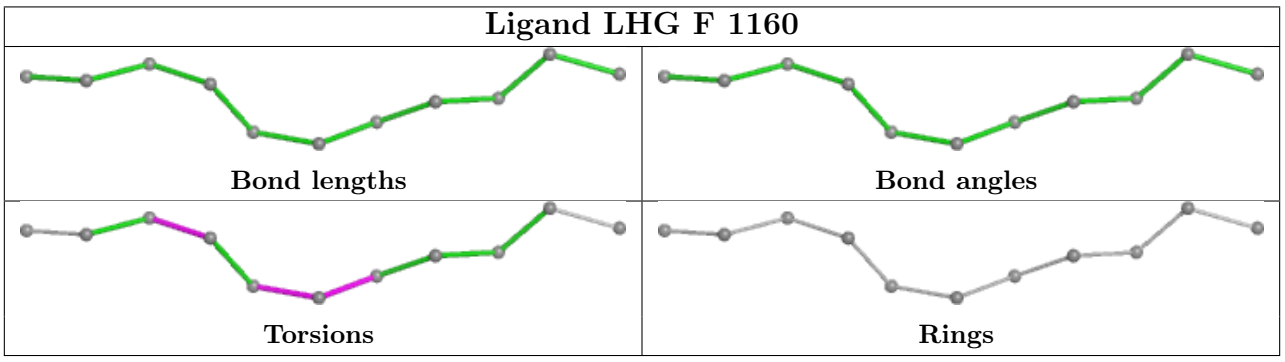
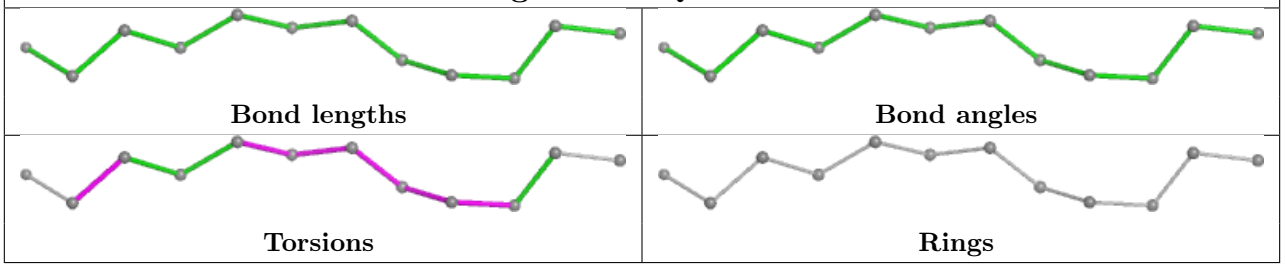
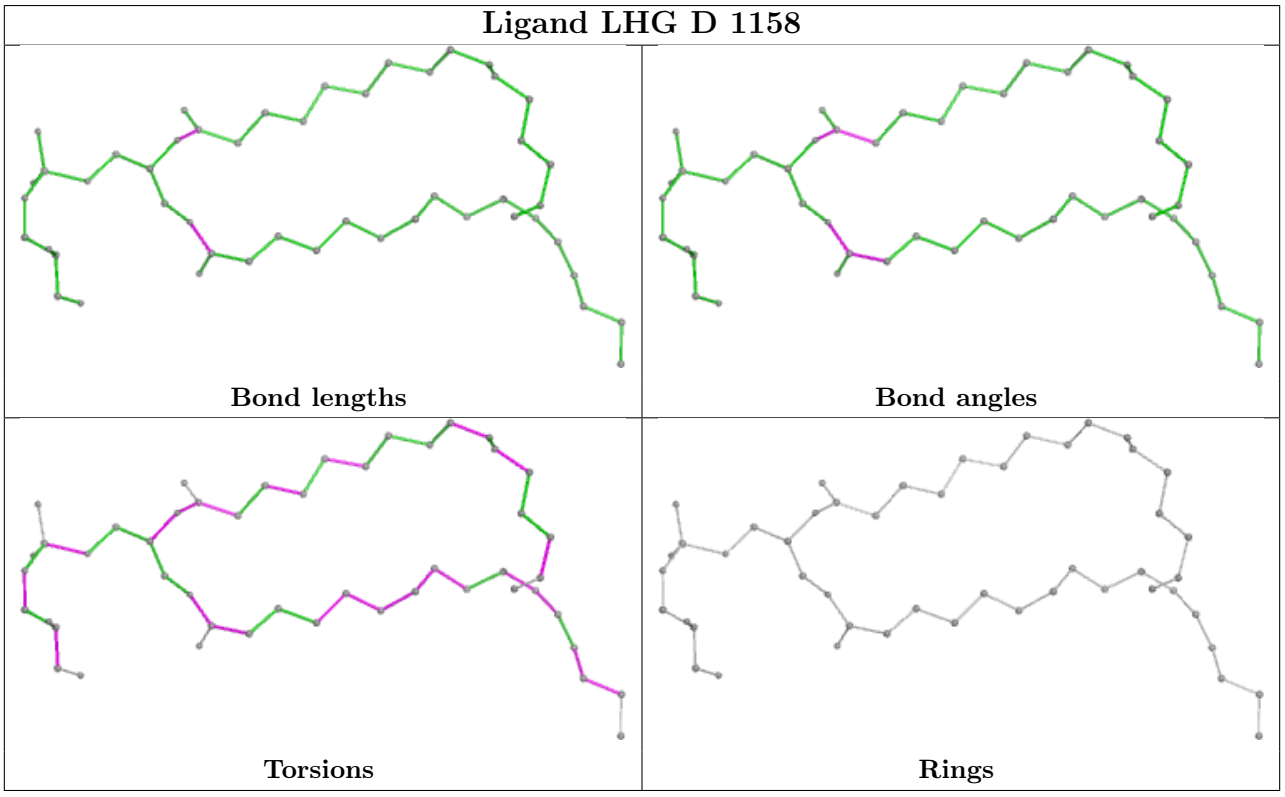


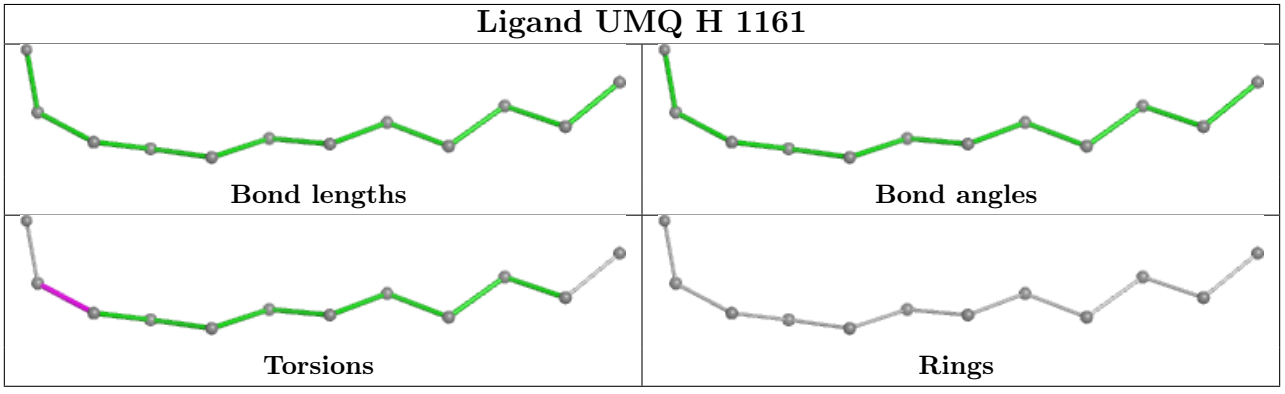
Ligand UMQ F 1162



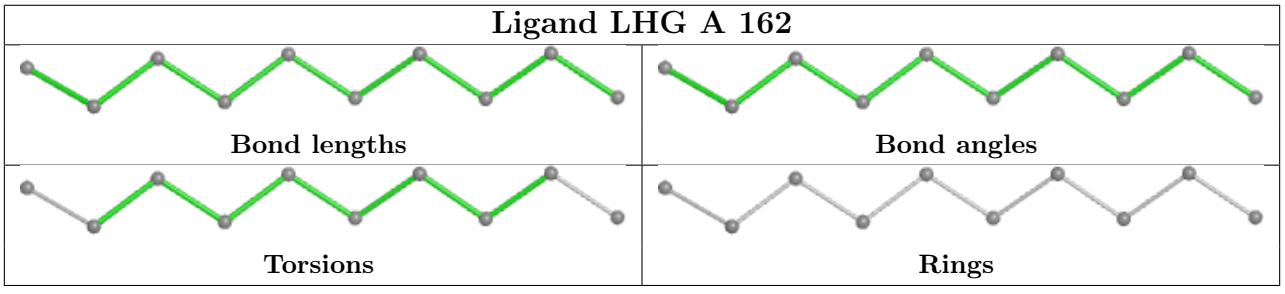
Ligand LHG D 1158



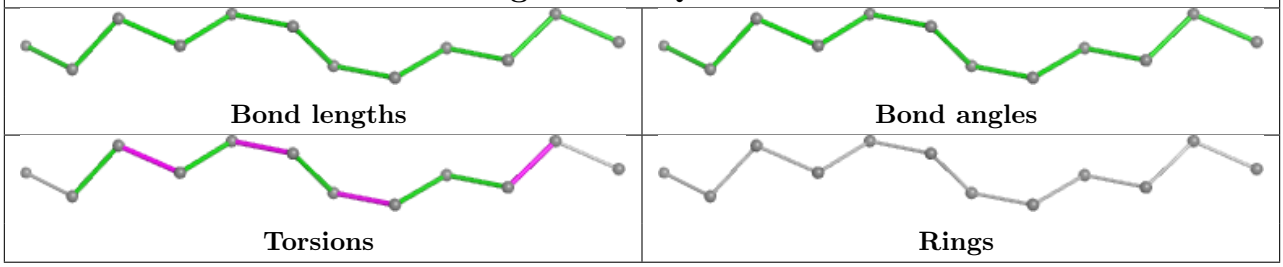
Ligand UMQ H 1161



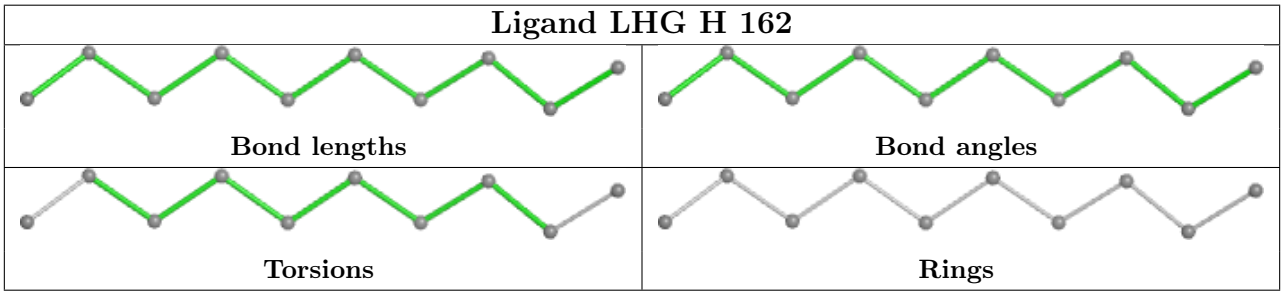
Ligand LHG A 162



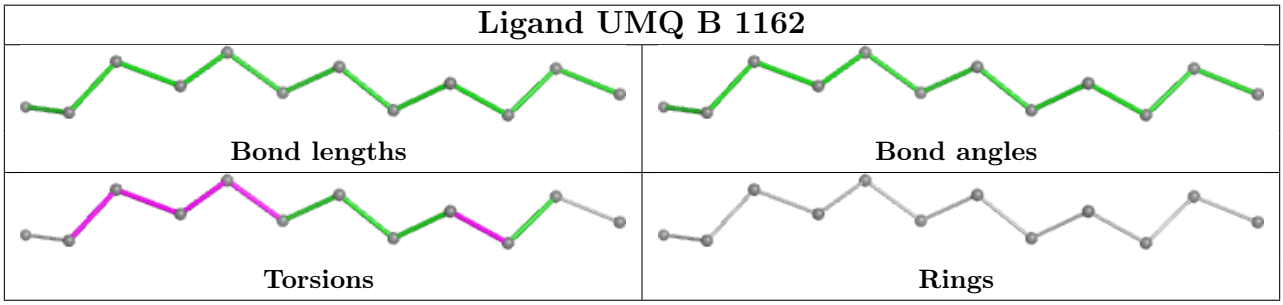
Ligand UMQ E 1159



Ligand LHG H 162



Ligand UMQ B 1162



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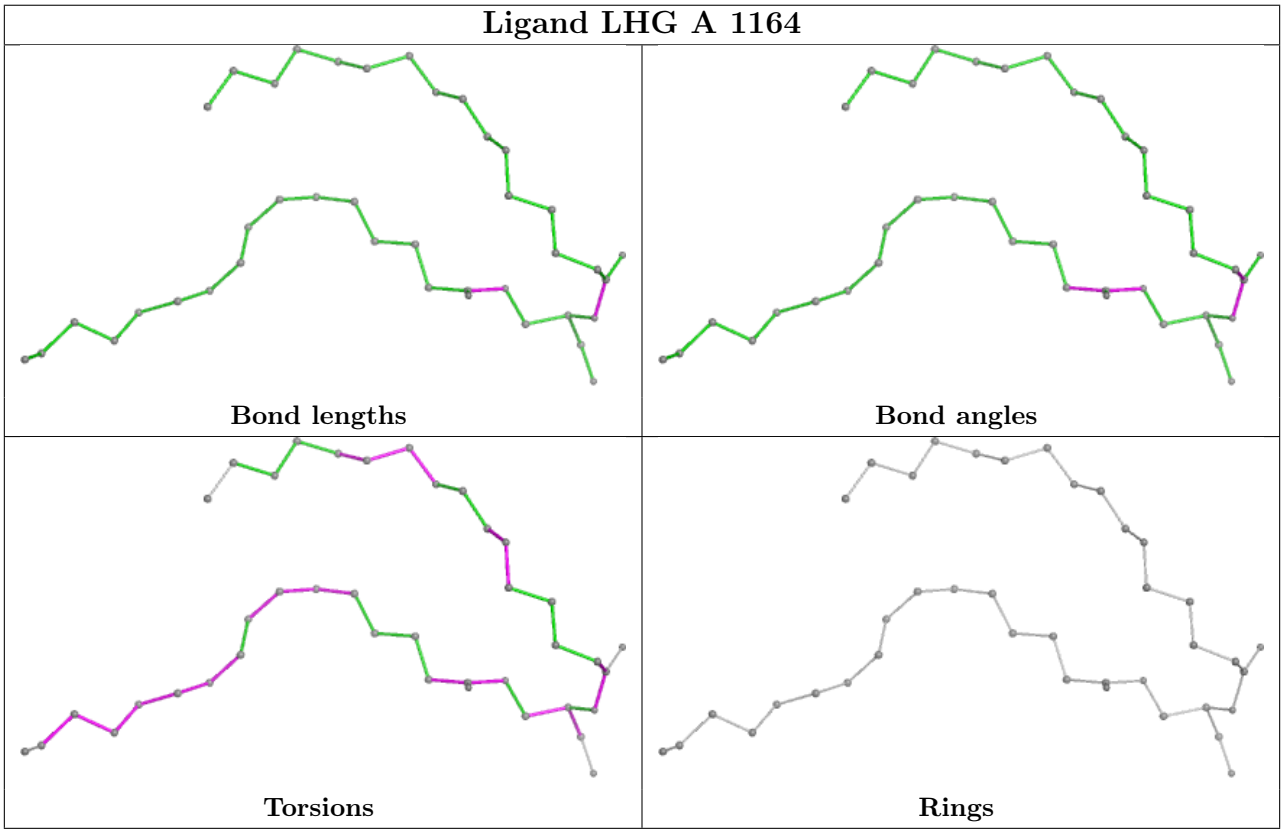
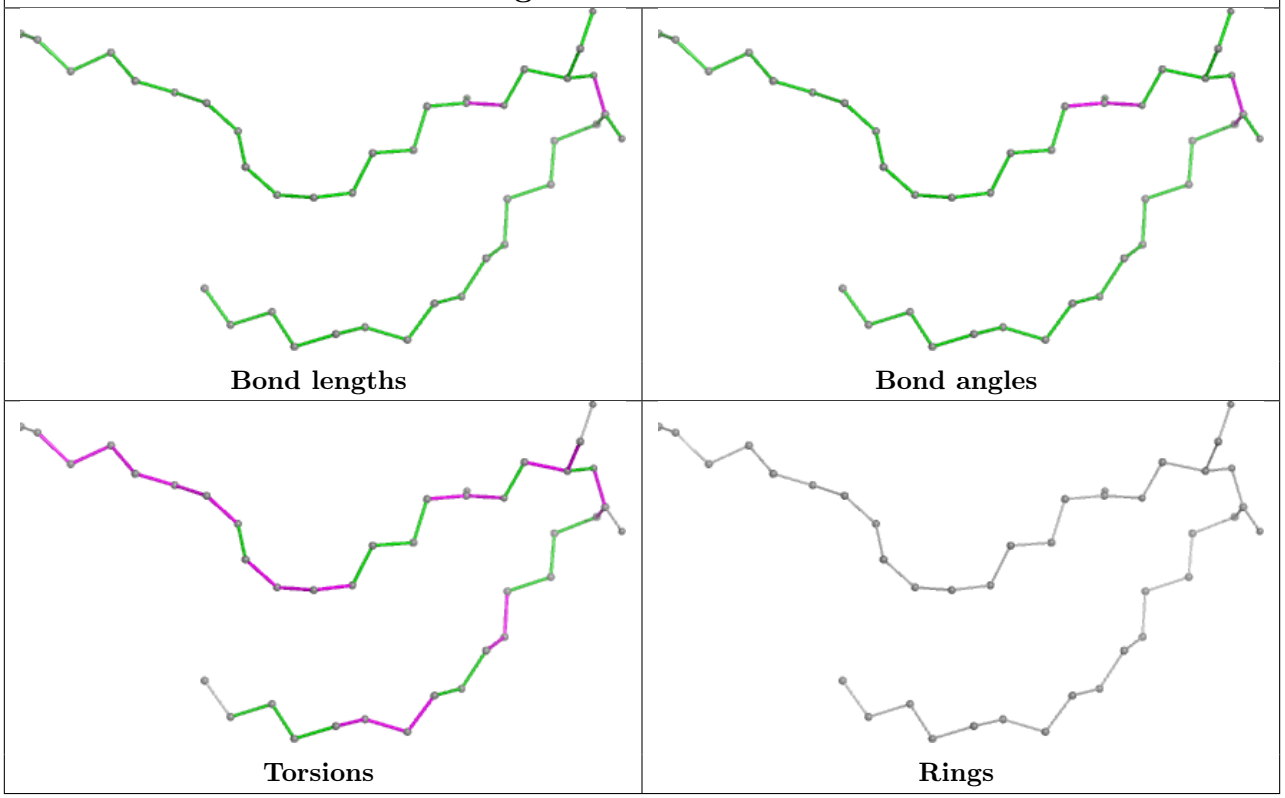
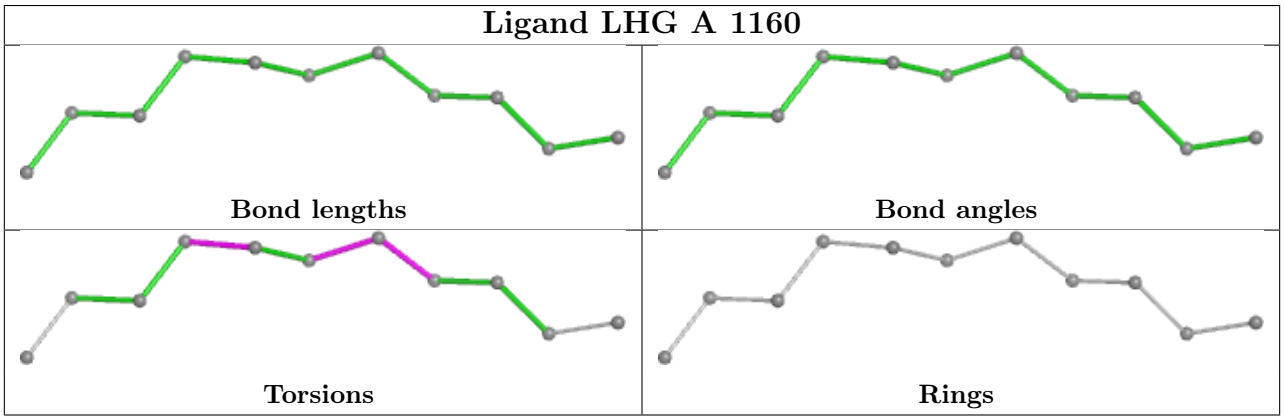


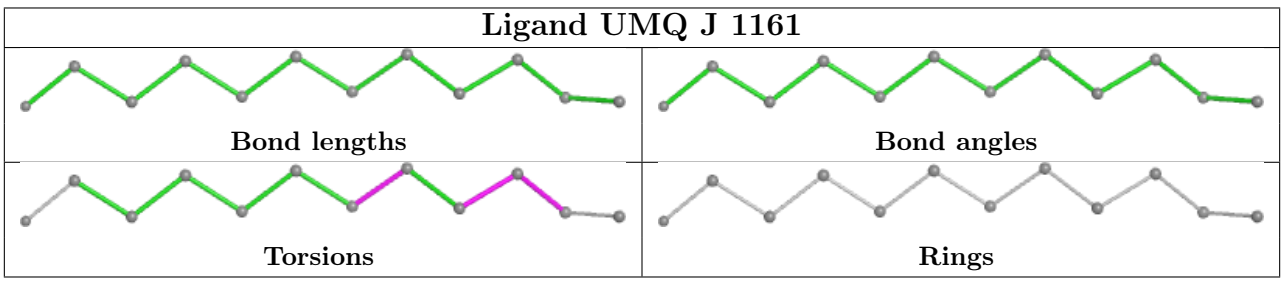
Ligand LHG C 1163



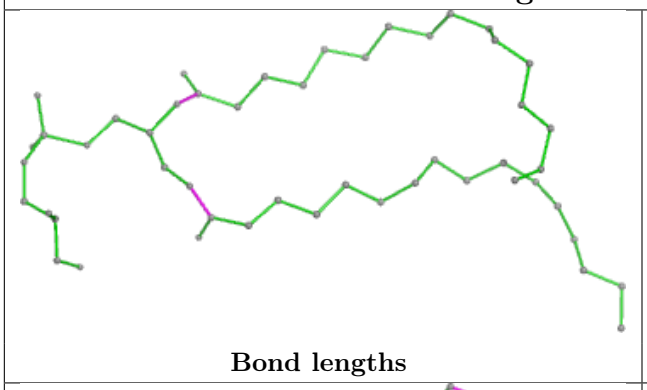
Ligand LHG A 1160



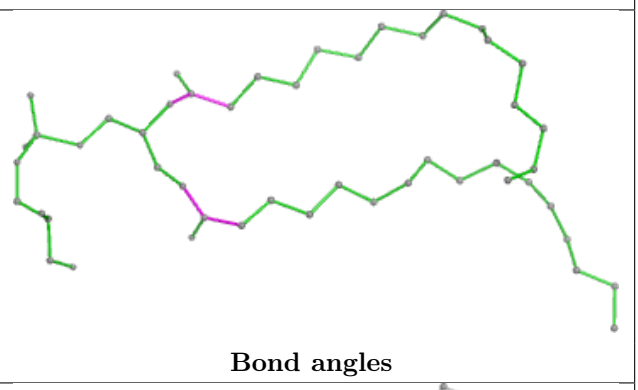
Ligand UMQ J 1161



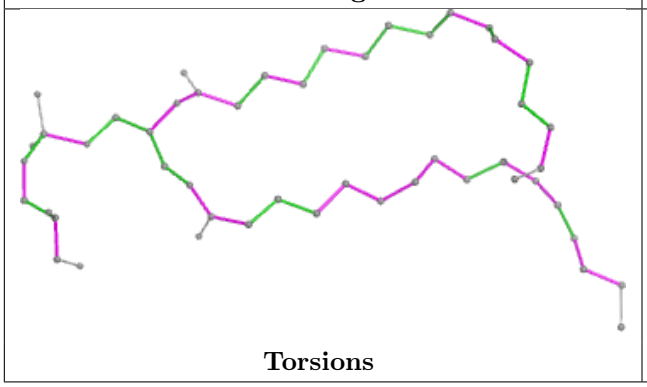
Ligand LHG E 1158



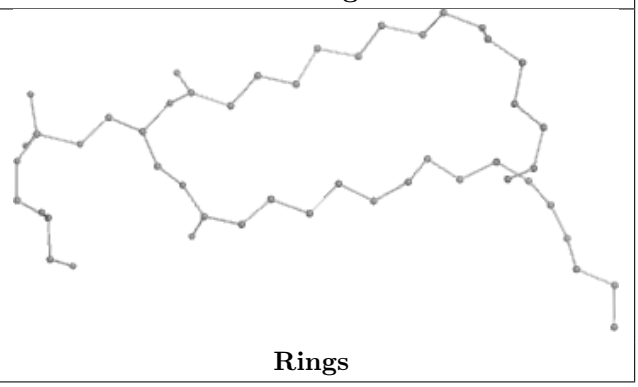
Bond lengths



Bond angles

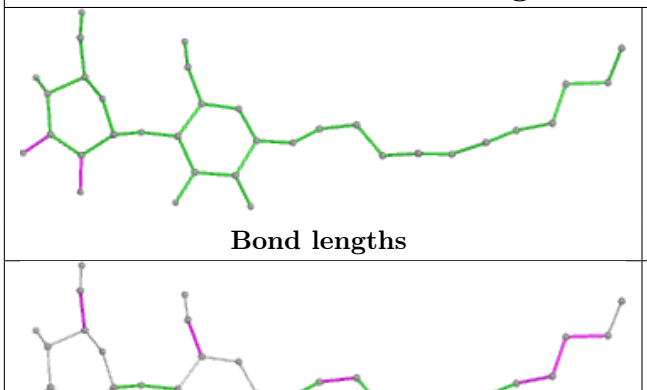


Torsions

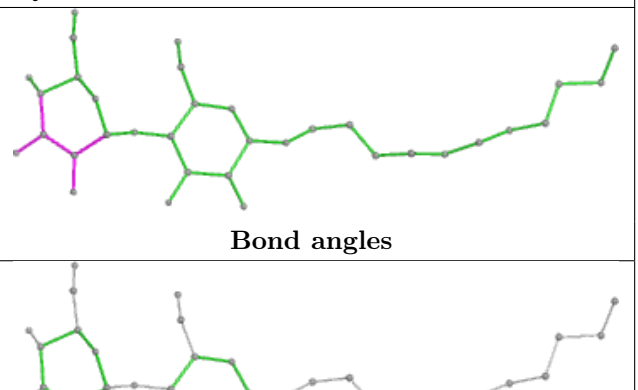


Rings

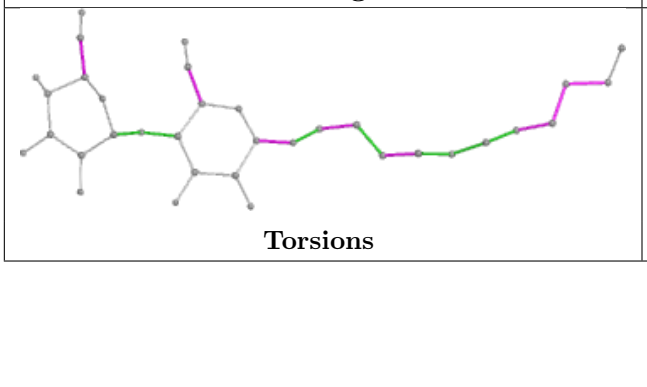
Ligand UMQ F 1167



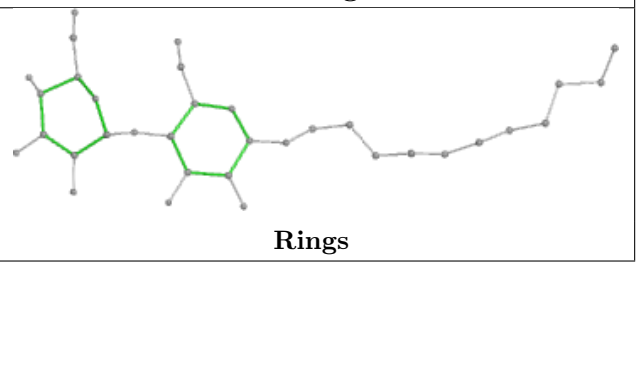
Bond lengths



Bond angles

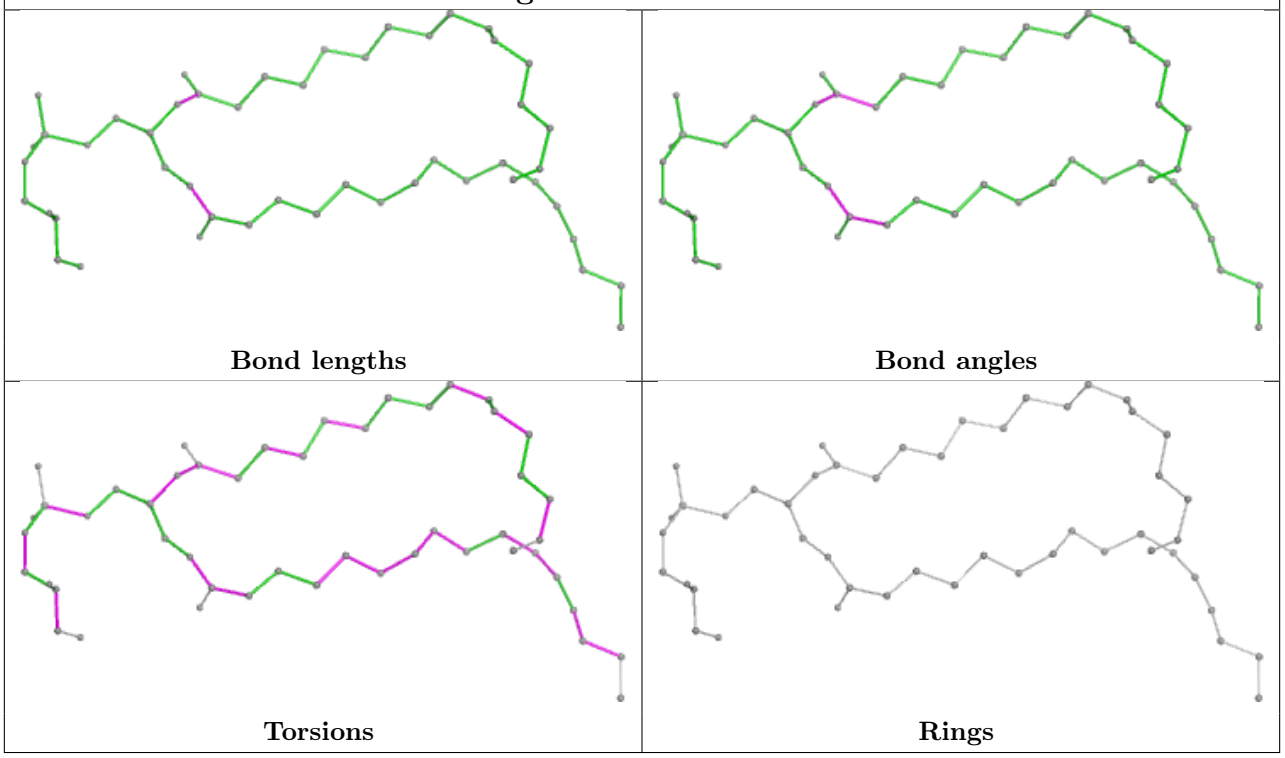


Torsions

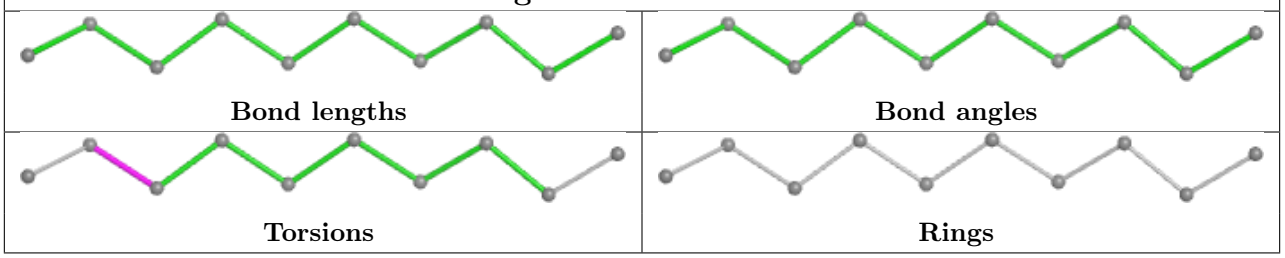


Rings

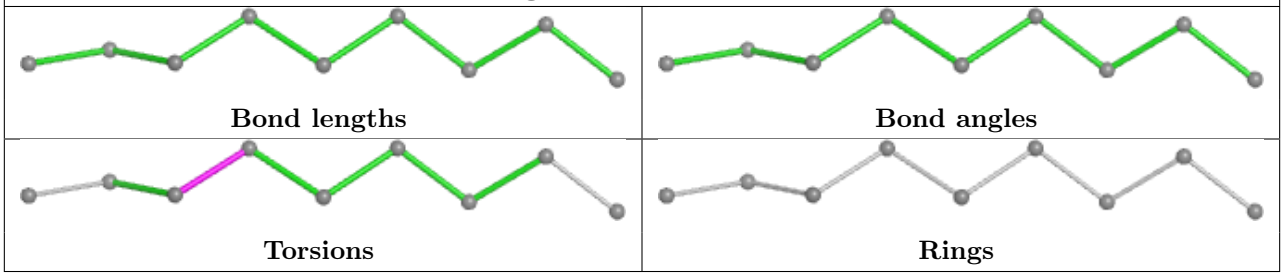
Ligand LHG F 1158



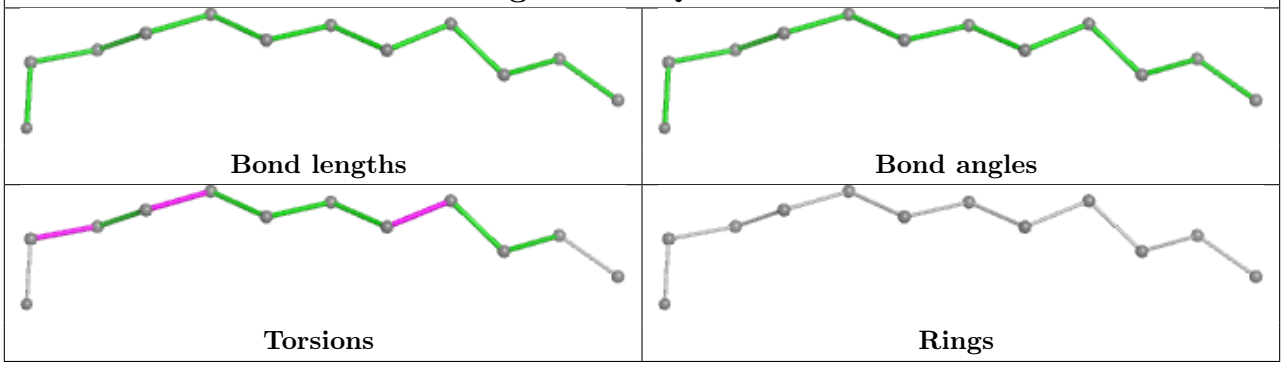
Ligand LHG A 1166



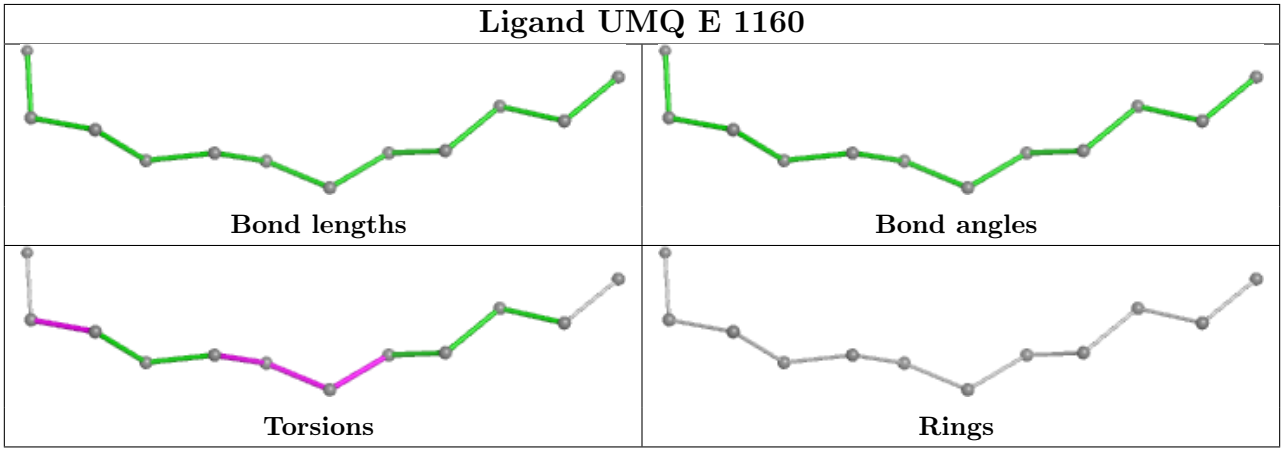
Ligand LHG H 161



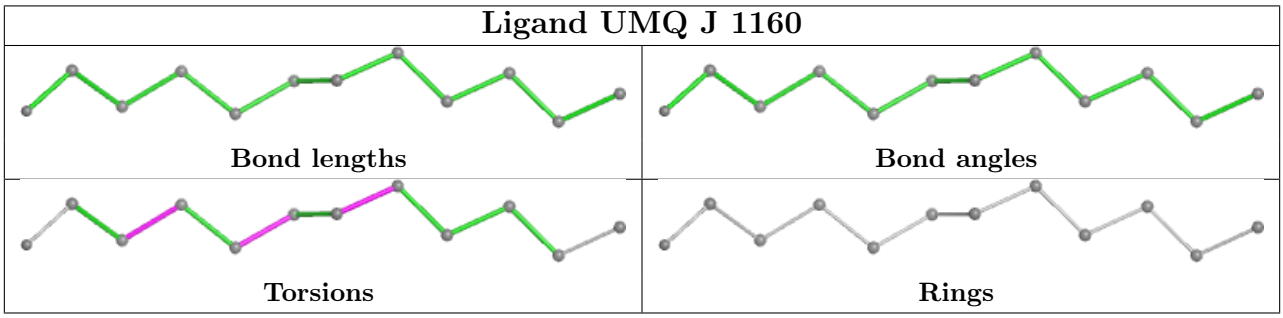
Ligand UMQ C 1162



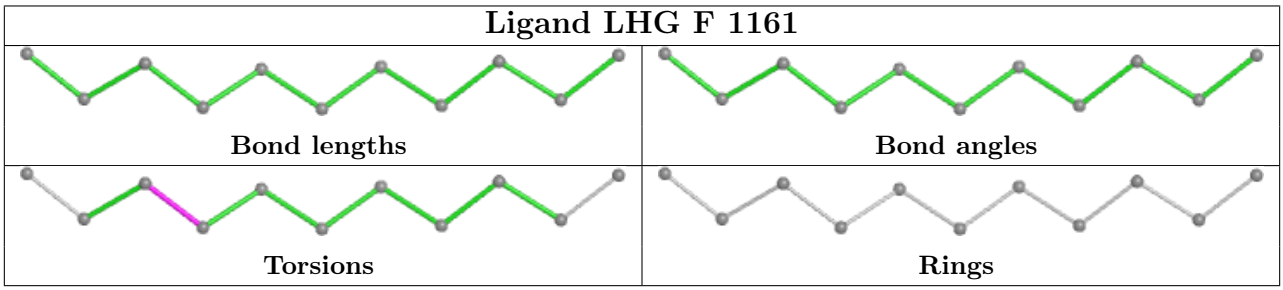
Ligand UMQ E 1160



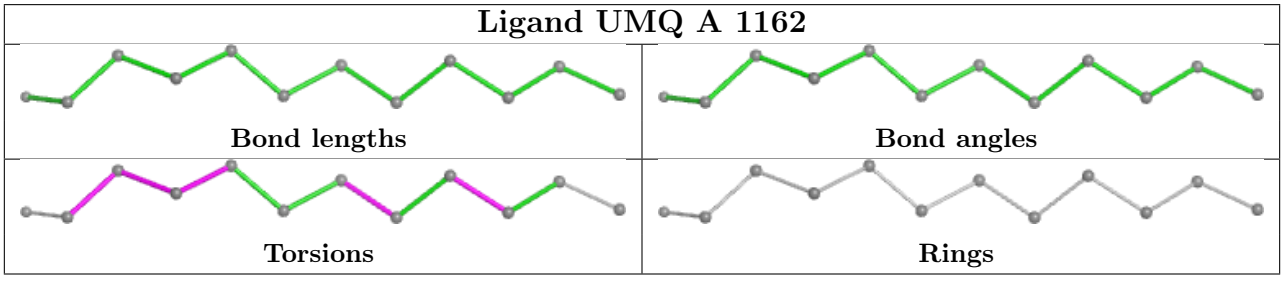
Ligand UMQ J 1160

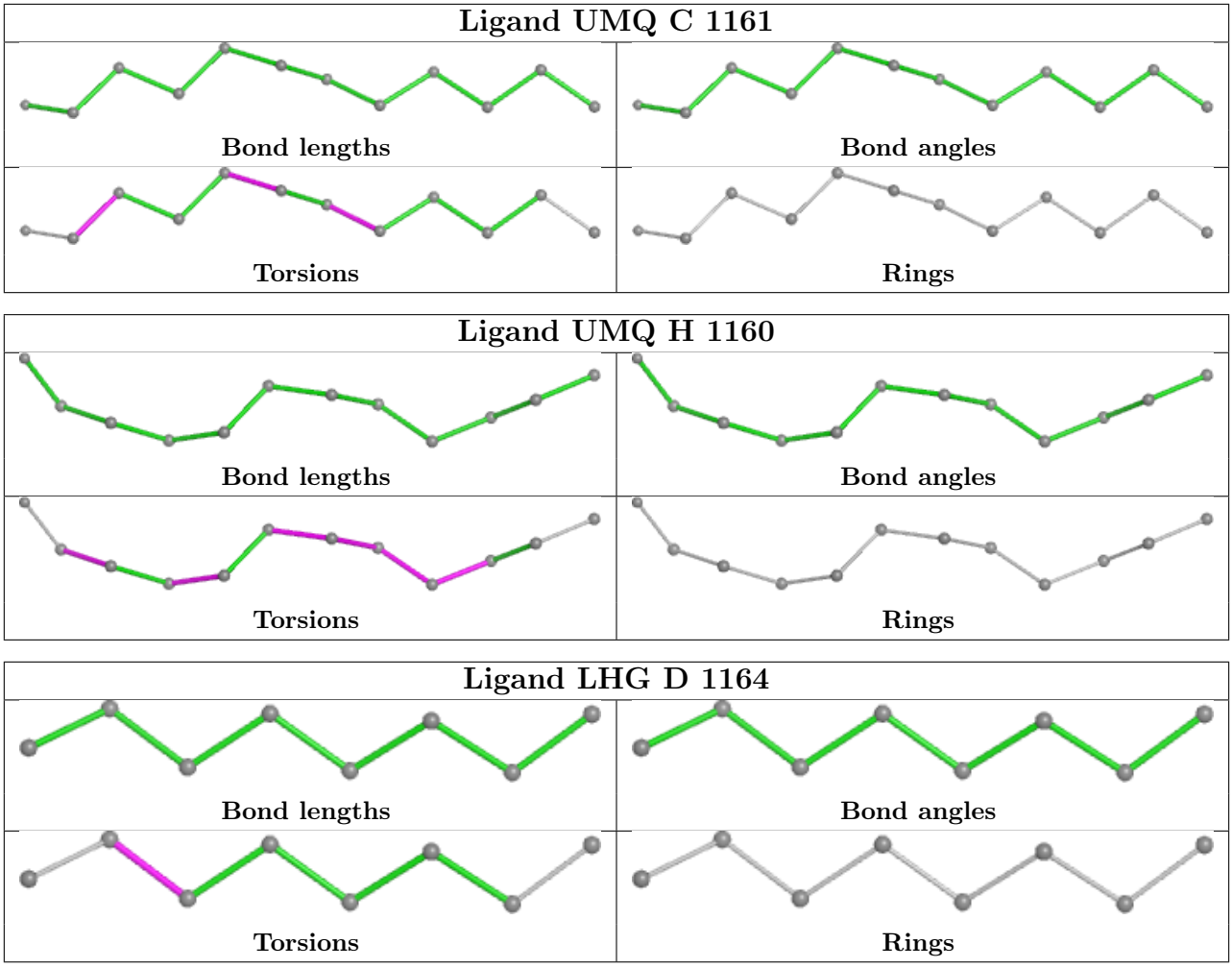


Ligand LHG F 1161

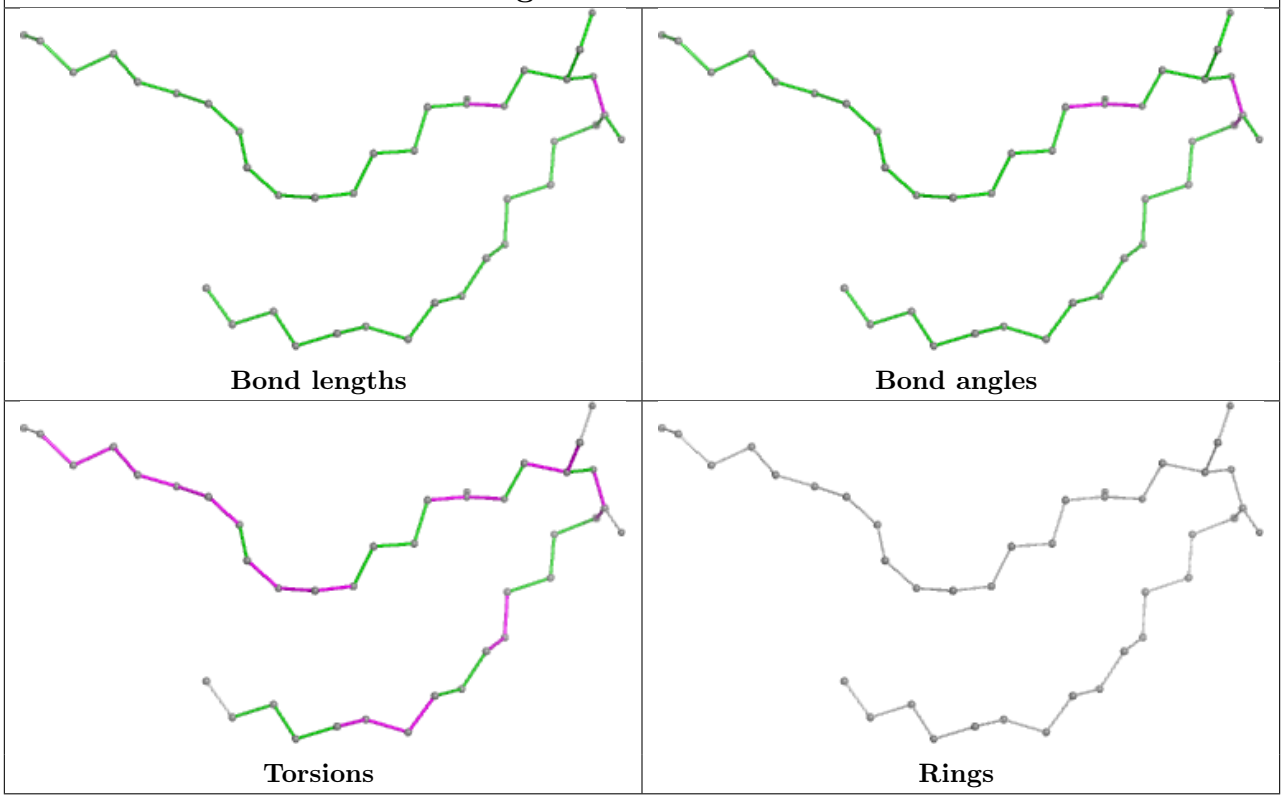


Ligand UMQ A 1162




Ligand UMQ C 1161
Bond lengths
Bond angles
Torsions
Rings
Ligand UMQ H 1160
Bond lengths
Bond angles
Torsions
Rings
Ligand LHG D 1164
Bond lengths
Bond angles
Torsions
Rings

Ligand LHG F 1166



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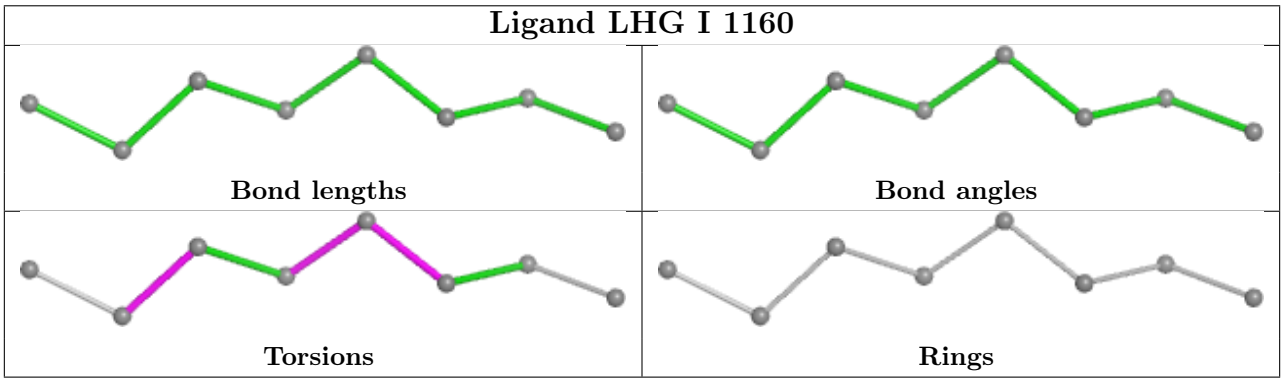
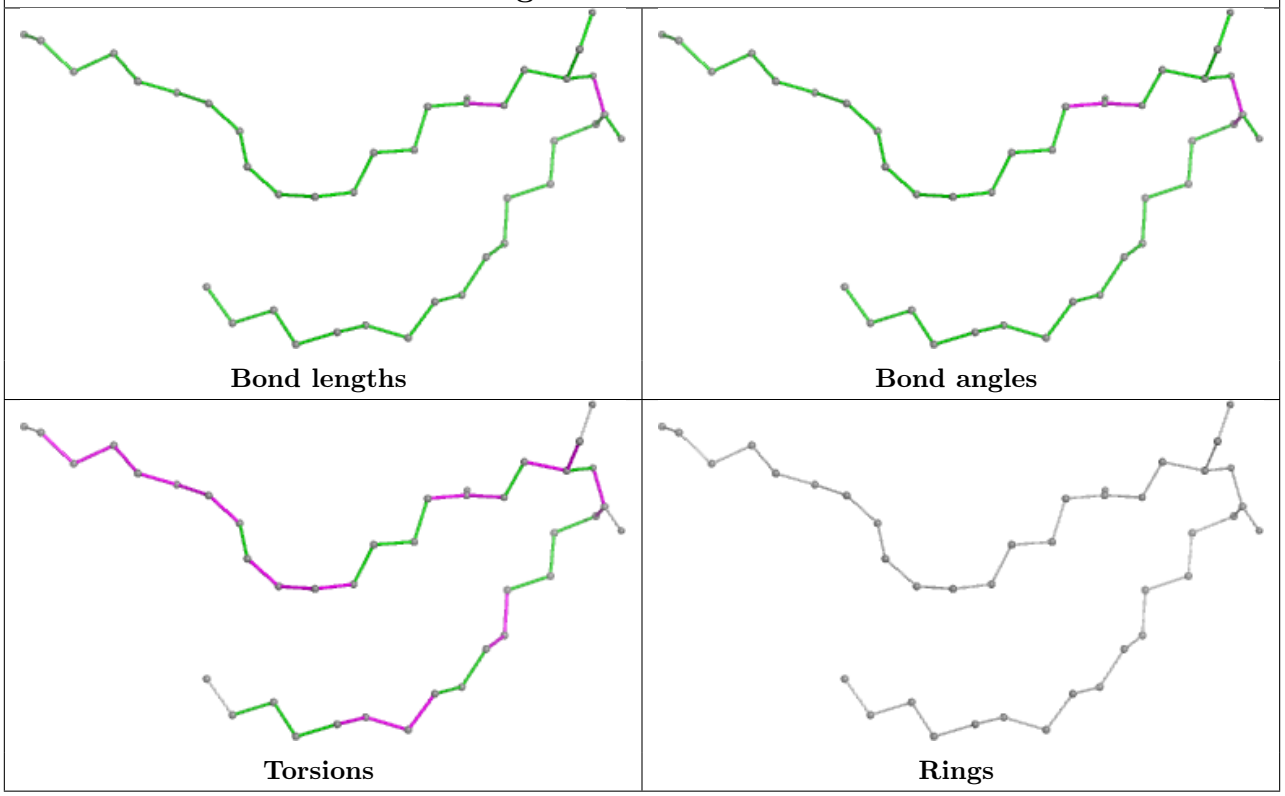


Ligand LHG F 1164



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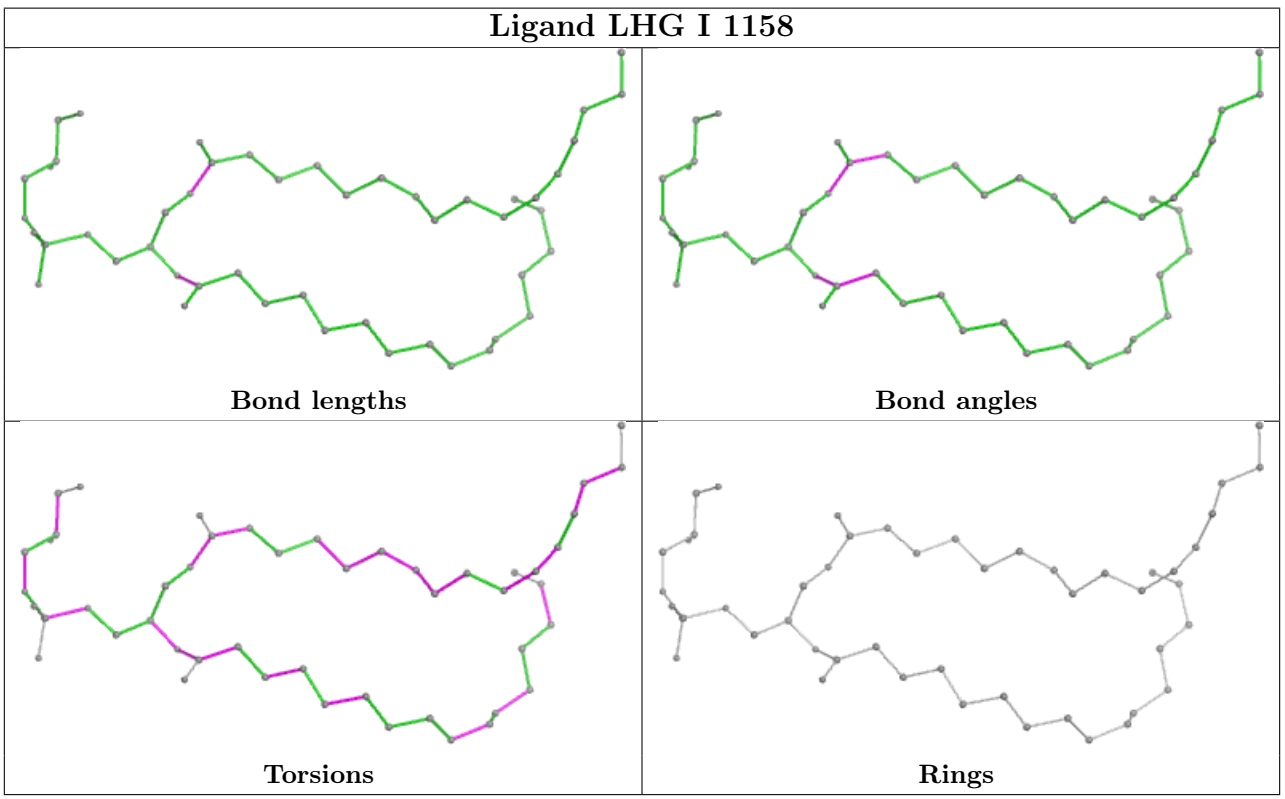
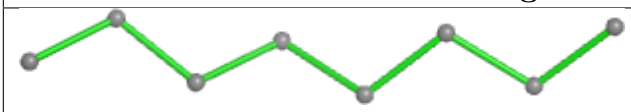
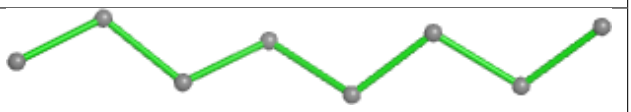
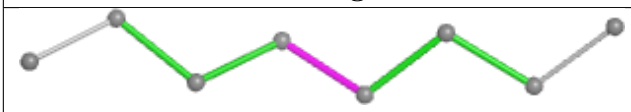
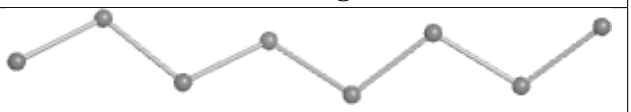
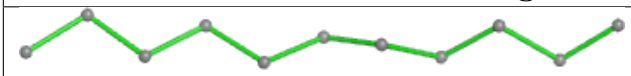
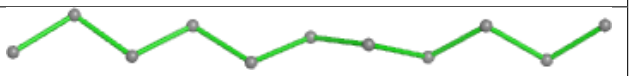
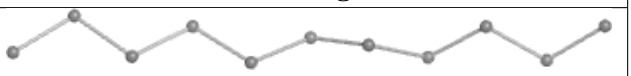
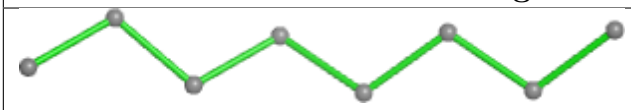
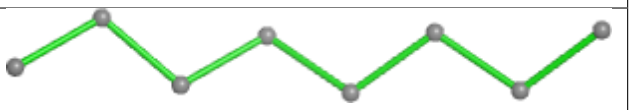
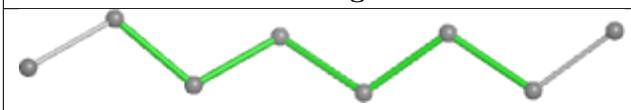
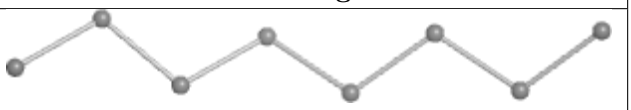
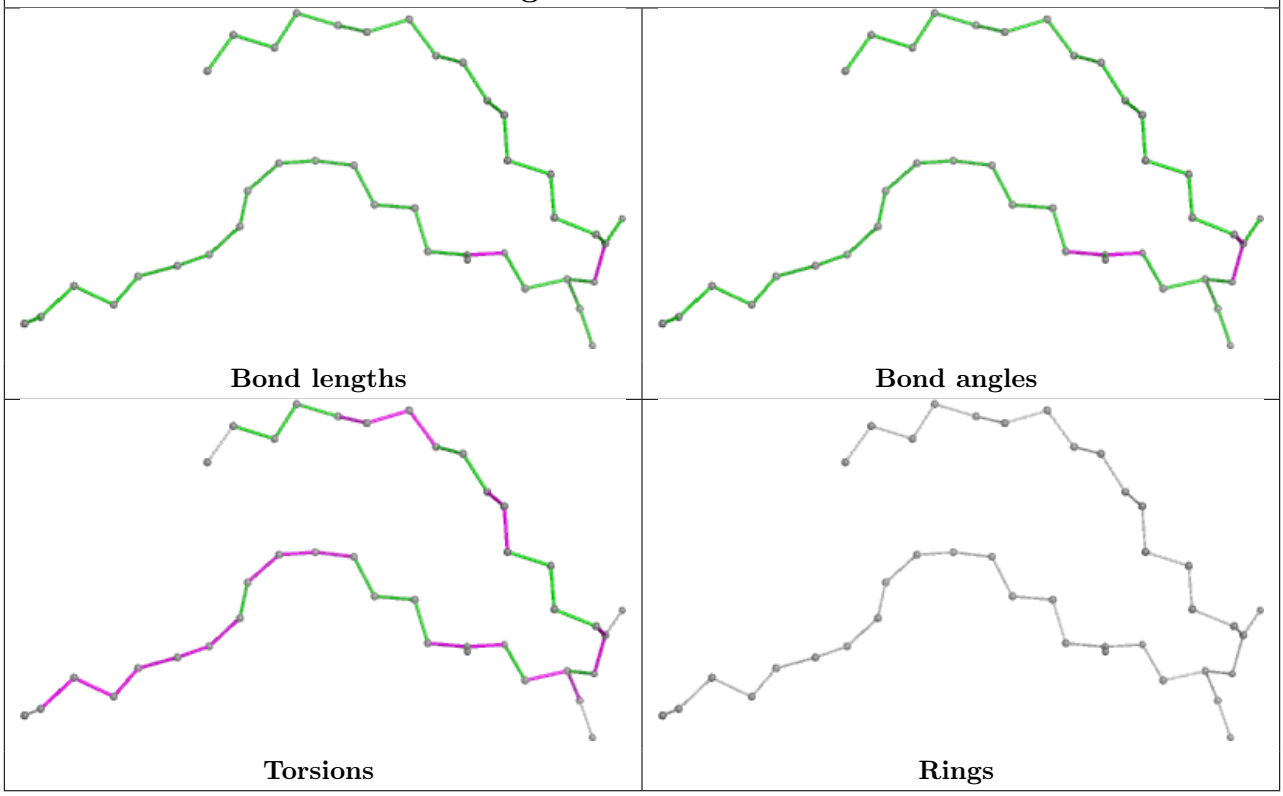


Ligand LHG I 1162	
 Bond lengths	 Bond angles
 Torsions	 Rings

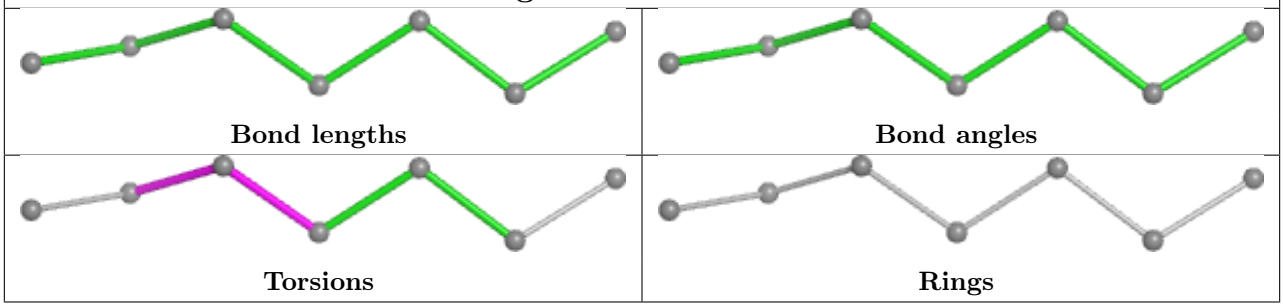
Ligand LHG J 1159	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand LHG D 1165	
 Bond lengths	 Bond angles
 Torsions	 Rings

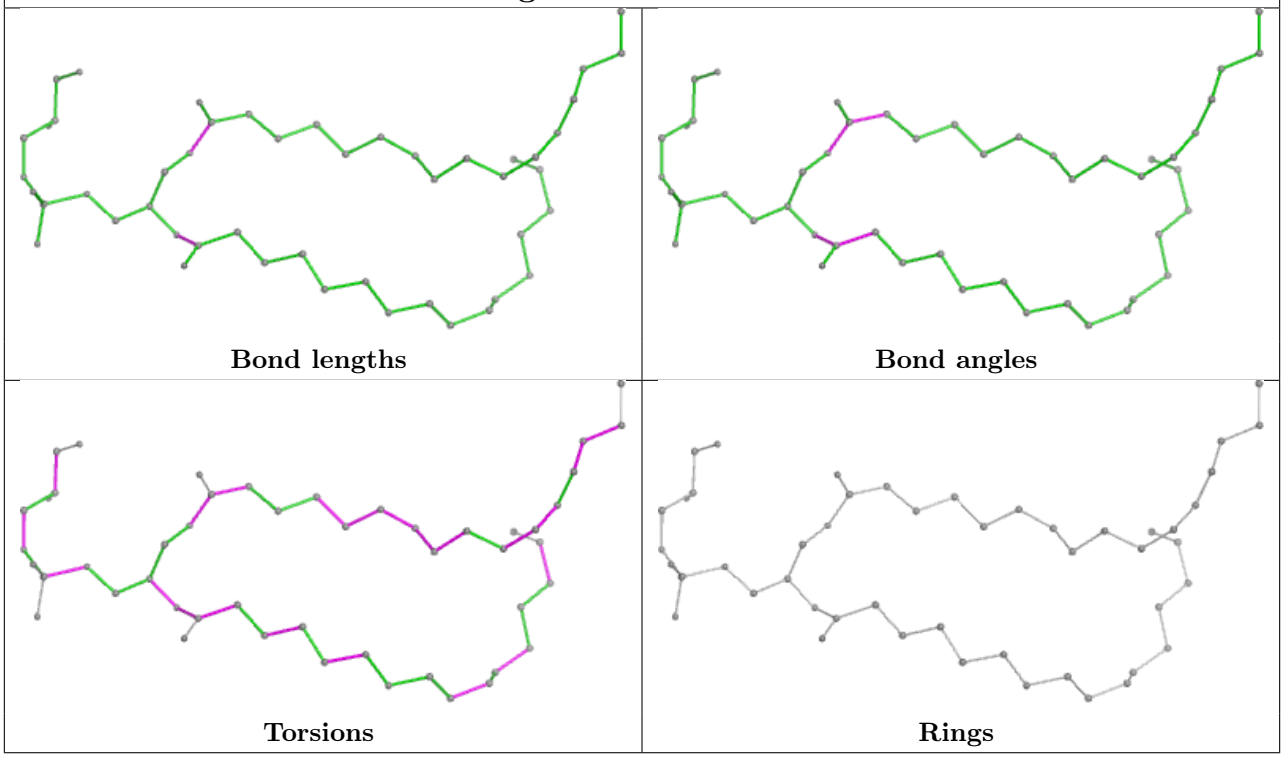
Ligand LHG I 1165



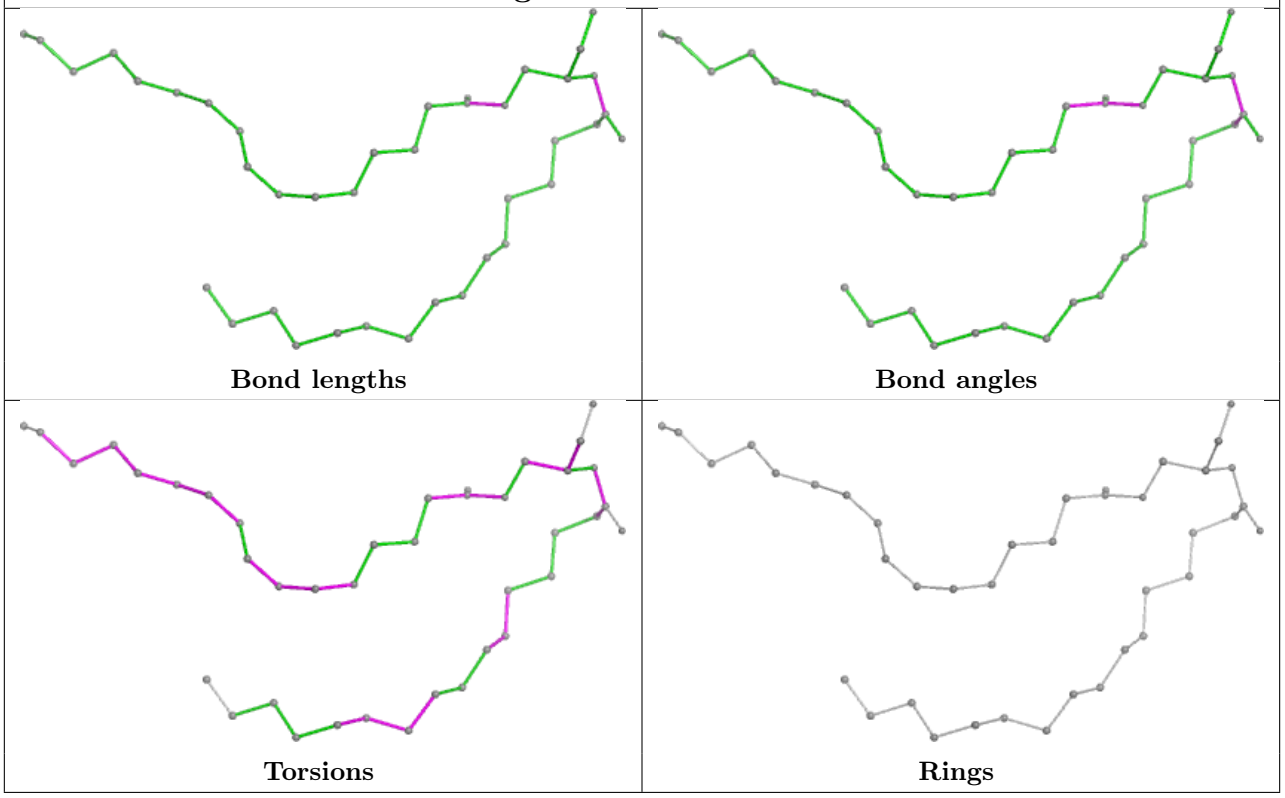
Ligand LHG F 1165

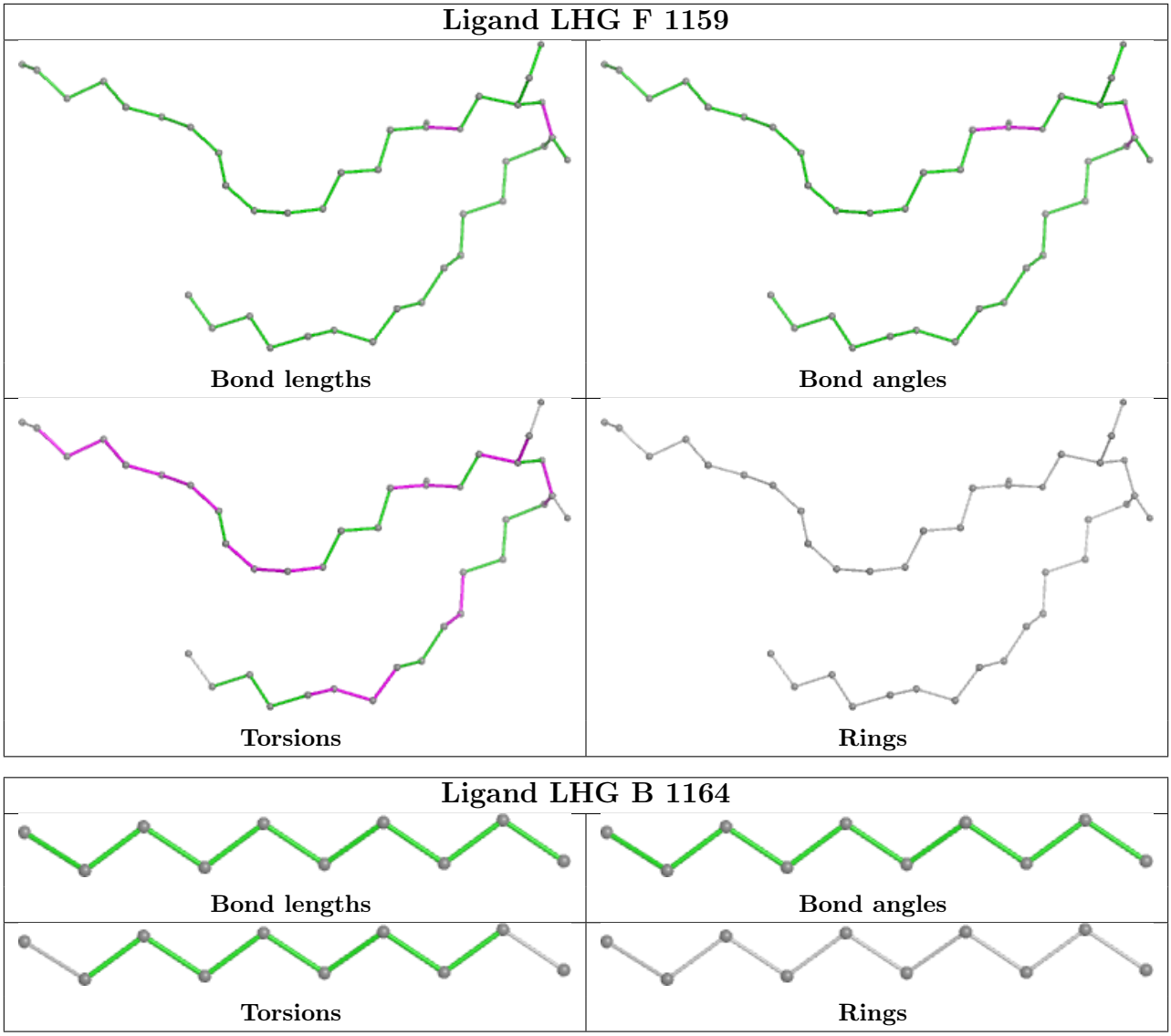


Ligand LHG J 1158



Ligand LHG D 1162





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	156/156 (100%)	0.03	6 (3%) 40 46	20, 24, 43, 54	0
1	B	156/156 (100%)	-0.03	6 (3%) 40 46	19, 24, 43, 54	0
1	C	156/156 (100%)	0.08	9 (5%) 23 28	19, 24, 43, 55	0
1	D	156/156 (100%)	0.19	14 (8%) 9 12	20, 24, 43, 55	0
1	E	156/156 (100%)	0.27	12 (7%) 13 17	20, 24, 43, 55	0
1	F	156/156 (100%)	0.01	8 (5%) 28 33	19, 24, 42, 56	0
1	G	156/156 (100%)	-0.00	7 (4%) 33 38	19, 24, 43, 56	0
1	H	156/156 (100%)	-0.02	4 (2%) 56 61	19, 24, 43, 54	0
1	I	156/156 (100%)	-0.22	2 (1%) 77 80	20, 24, 39, 52	0
1	J	156/156 (100%)	-0.21	0 100 100	19, 24, 36, 52	0
All	All	1560/1560 (100%)	0.01	68 (4%) 34 40	19, 24, 43, 56	0

All (68) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	E	81	GLY	10.5
1	E	83[A]	ASP	9.1
1	E	82	SER	7.0
1	D	81	GLY	6.4
1	D	9	ASN	6.2
1	F	83[A]	ASP	5.7
1	E	7	THR	5.7
1	A	82	SER	5.6
1	G	82	SER	5.5
1	C	2	MET	5.4
1	C	82	SER	5.0
1	B	83[A]	ASP	4.8
1	E	9	ASN	4.7

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Mol	Chain	Res	Type	RSRZ
1	D	82	SER	4.6
1	D	83[A]	ASP	4.6
1	B	82	SER	4.5
1	F	81	GLY	4.5
1	H	83[A]	ASP	4.4
1	A	83[A]	ASP	4.4
1	F	9	ASN	4.3
1	C	7	THR	4.3
1	D	6	ILE	4.2
1	C	3	ASP	4.2
1	E	5	LEU	4.1
1	H	81	GLY	4.1
1	H	82	SER	4.1
1	E	6	ILE	4.0
1	G	2	MET	3.9
1	C	83[A]	ASP	3.8
1	D	156	ALA	3.8
1	D	7	THR	3.8
1	E	1	MET	3.8
1	F	6	ILE	3.8
1	H	9	ASN	3.7
1	F	3	ASP	3.6
1	B	9	ASN	3.6
1	F	82	SER	3.6
1	C	9	ASN	3.5
1	E	2	MET	3.4
1	G	3	ASP	3.3
1	F	7	THR	3.3
1	B	2	MET	3.2
1	E	8	GLN	3.1
1	G	9	ASN	3.0
1	F	2	MET	3.0
1	A	81	GLY	3.0
1	C	81	GLY	2.9
1	D	3	ASP	2.9
1	A	126	GLU	2.9
1	G	83[A]	ASP	2.9
1	B	156	ALA	2.8
1	I	3	ASP	2.8
1	D	2	MET	2.8
1	G	4	TYR	2.7
1	D	4	TYR	2.6

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Mol	Chain	Res	Type	RSRZ
1	E	4	TYR	2.6
1	D	155[A]	ASN	2.5
1	C	4	TYR	2.5
1	D	80	LEU	2.4
1	C	6	ILE	2.4
1	D	10	GLY	2.3
1	B	7	THR	2.2
1	A	3	ASP	2.2
1	E	3	ASP	2.2
1	D	88	GLN	2.1
1	G	8	GLN	2.1
1	I	9	ASN	2.1
1	A	6	ILE	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
2	LHG	H	161	9/49	-0.18	1.65	199,199,199,199	0
2	LHG	A	162	10/49	0.11	2.30	202,202,202,202	0
2	LHG	F	1165	7/49	0.19	1.37	199,199,199,199	0
2	LHG	C	1160	9/49	0.20	2.27	199,199,199,199	0
2	LHG	I	1162	8/49	0.21	2.03	196,196,196,196	0
2	LHG	B	1164	10/49	0.22	1.87	194,194,194,194	0
2	LHG	B	1161	8/49	0.26	1.85	196,196,197,197	0
2	LHG	C	161	9/49	0.28	1.71	197,197,198,198	0
2	LHG	F	1161	11/49	0.31	1.35	196,196,196,196	0
2	LHG	A	1164	40/49	0.31	0.47	107,115,118,118	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	LHG	F	1160	11/49	0.32	1.35	204,204,204,204	0
2	LHG	D	1162	40/49	0.34	0.43	108,115,118,118	0
2	LHG	A	1159	40/49	0.34	0.45	108,115,119,119	0
4	UMQ	D	163	12/34	0.35	0.42	157,157,158,158	0
2	LHG	I	1165	40/49	0.36	0.47	108,114,119,119	0
4	UMQ	F	1162	12/34	0.40	0.42	165,165,166,166	0
2	LHG	I	1159	40/49	0.41	0.40	107,114,119,119	0
2	LHG	H	1159	9/49	0.43	1.17	196,196,196,196	0
4	UMQ	J	1160	12/34	0.43	0.30	154,154,155,155	0
2	LHG	F	1159	40/49	0.44	0.36	108,115,118,119	0
2	LHG	A	1161	8/49	0.44	1.35	199,199,199,199	0
2	LHG	F	162	10/49	0.45	1.62	196,196,196,196	0
2	LHG	G	161	9/49	0.45	1.72	196,196,196,196	0
2	LHG	I	1161	8/49	0.46	2.10	191,191,192,192	0
2	LHG	C	1159	40/49	0.46	0.37	108,115,119,119	0
2	LHG	C	1163	40/49	0.46	0.38	108,115,118,118	0
4	UMQ	C	1161	12/34	0.47	0.26	162,162,162,162	0
4	UMQ	A	1162	12/34	0.47	0.30	160,160,161,161	0
2	LHG	A	1165	9/49	0.49	2.00	198,198,198,198	0
2	LHG	H	162	10/49	0.51	1.59	196,196,196,196	0
4	UMQ	H	1160	12/34	0.51	0.31	157,157,158,158	0
2	LHG	H	1158	49/49	0.51	0.32	69,83,94,95	0
2	LHG	F	1166	40/49	0.52	0.34	107,115,118,118	0
2	LHG	D	1165	8/49	0.52	1.54	198,198,198,198	0
4	UMQ	B	1162	12/34	0.53	0.37	159,159,159,159	0
4	UMQ	A	1163	12/34	0.53	0.24	150,151,152,152	0
2	LHG	D	1163	9/49	0.54	1.61	195,196,196,196	0
4	UMQ	C	1162	12/34	0.54	0.24	150,151,151,151	0
2	LHG	F	1164	40/49	0.54	0.37	108,115,118,118	0
4	UMQ	G	1160	12/34	0.55	0.31	143,143,143,143	0
2	LHG	J	1158	49/49	0.55	0.34	68,83,94,95	0
2	LHG	E	1158	49/49	0.55	0.27	69,83,93,95	0
4	UMQ	F	1167	34/34	0.56	0.34	153,159,169,169	0
2	LHG	I	1158	49/49	0.56	0.33	69,83,95,95	0
4	UMQ	B	1163	12/34	0.56	0.27	151,152,152,152	0
4	UMQ	I	1163	12/34	0.56	0.35	144,145,146,146	0
2	LHG	F	1158	49/49	0.56	0.25	70,82,94,94	0
2	LHG	D	1164	8/49	0.57	1.24	192,192,193,193	0
2	LHG	D	1158	49/49	0.58	0.27	70,83,94,95	0
2	LHG	A	1166	10/49	0.58	1.74	197,197,197,198	0
2	LHG	D	162	5/49	0.59	2.00	197,197,197,197	0
4	UMQ	G	1159	12/34	0.59	0.35	159,159,159,159	0

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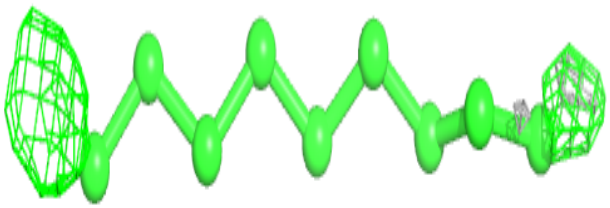
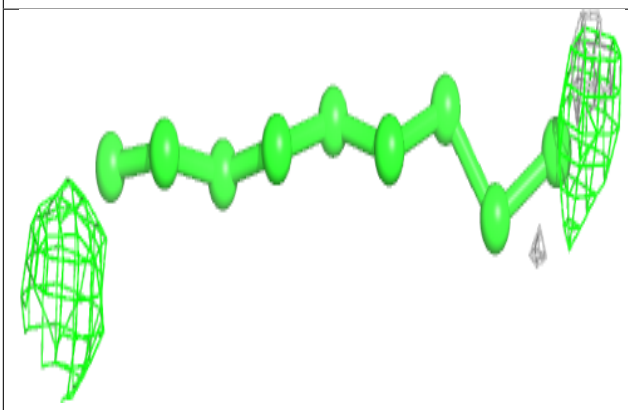
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	LHG	G	1158	49/49	0.59	0.26	68,83,94,95	0
2	LHG	B	1158	49/49	0.60	0.29	69,83,94,95	0
2	LHG	I	1160	8/49	0.60	1.50	198,198,198,198	0
2	LHG	D	1160	8/49	0.60	1.28	197,197,197,197	0
4	UMQ	C	1164	34/34	0.60	0.33	161,166,172,172	0
2	LHG	A	1158	49/49	0.61	0.28	69,83,94,95	0
2	LHG	C	1158	49/49	0.62	0.26	71,83,94,95	0
4	UMQ	E	1160	12/34	0.63	0.31	152,153,153,153	0
2	LHG	J	1159	11/49	0.63	1.93	197,198,198,198	0
2	LHG	G	162	10/49	0.64	1.56	196,196,196,196	0
2	LHG	B	1160	9/49	0.65	1.37	198,198,198,198	0
4	UMQ	E	1159	12/34	0.65	0.28	159,160,160,160	0
2	LHG	B	1159	9/49	0.66	1.22	202,202,202,202	0
4	UMQ	H	1161	12/34	0.68	0.19	137,138,139,139	0
4	UMQ	J	1161	12/34	0.70	0.27	153,153,153,153	0
2	LHG	A	1160	11/49	0.71	1.61	197,197,197,197	0
4	UMQ	F	1163	12/34	0.72	0.29	137,138,140,140	0
4	UMQ	D	1161	12/34	0.74	0.28	154,154,154,154	0
4	UMQ	I	1164	12/34	0.80	0.23	122,124,124,124	0
2	LHG	D	1159	9/49	0.83	1.28	196,196,197,197	0
3	NA	E	1157	1/1	0.95	0.26	23,23,23,23	0
3	NA	F	1157	1/1	0.95	0.24	22,22,22,22	0
3	NA	A	1157	1/1	0.95	0.23	23,23,23,23	0
3	NA	C	1157	1/1	0.96	0.23	22,22,22,22	0
3	NA	D	1157	1/1	0.96	0.17	24,24,24,24	0
3	NA	B	1157	1/1	0.97	0.26	23,23,23,23	0
3	NA	G	1157	1/1	0.98	0.21	23,23,23,23	0
3	NA	J	1157	1/1	0.98	0.14	22,22,22,22	0
3	NA	I	1157	1/1	0.99	0.10	21,21,21,21	0
3	NA	H	1157	1/1	0.99	0.13	23,23,23,23	0

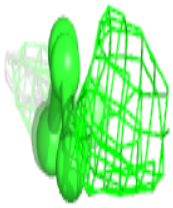
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around LHG H 161:

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

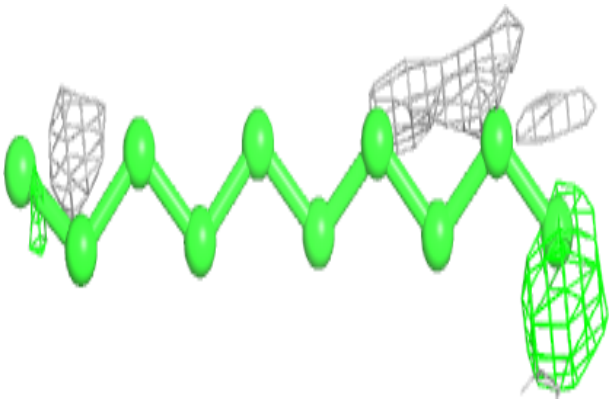


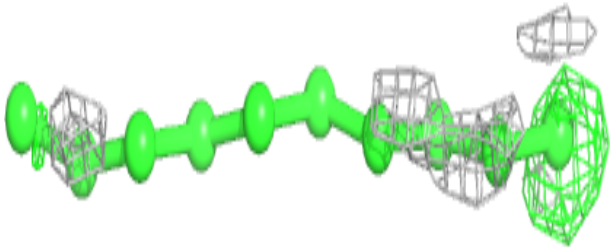




Electron density around LHG A 162:

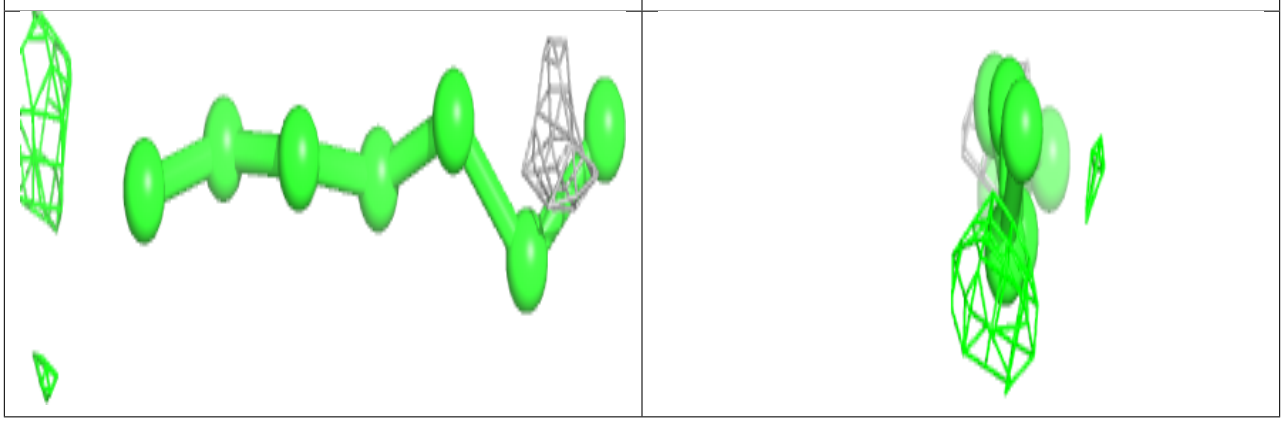
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)





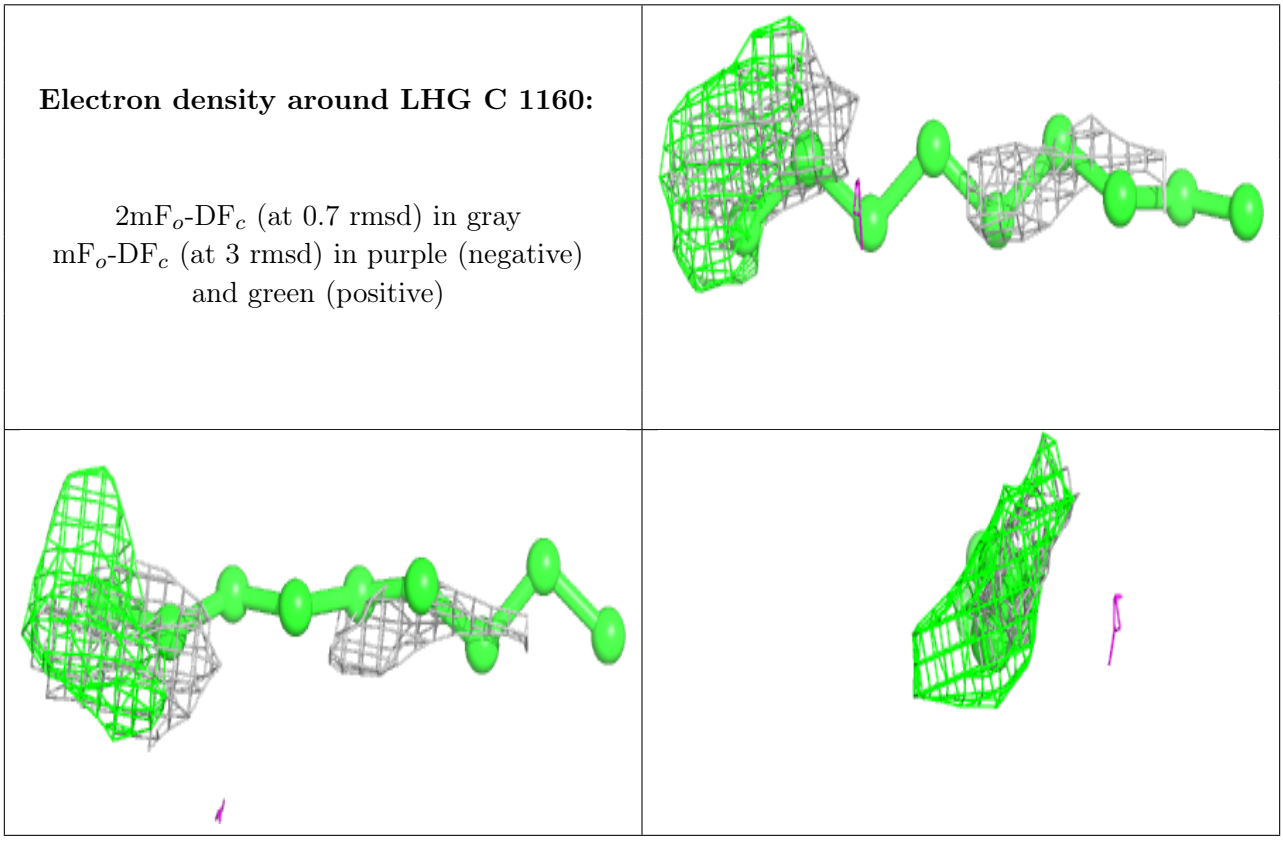
Electron density around LHG F 1165:

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



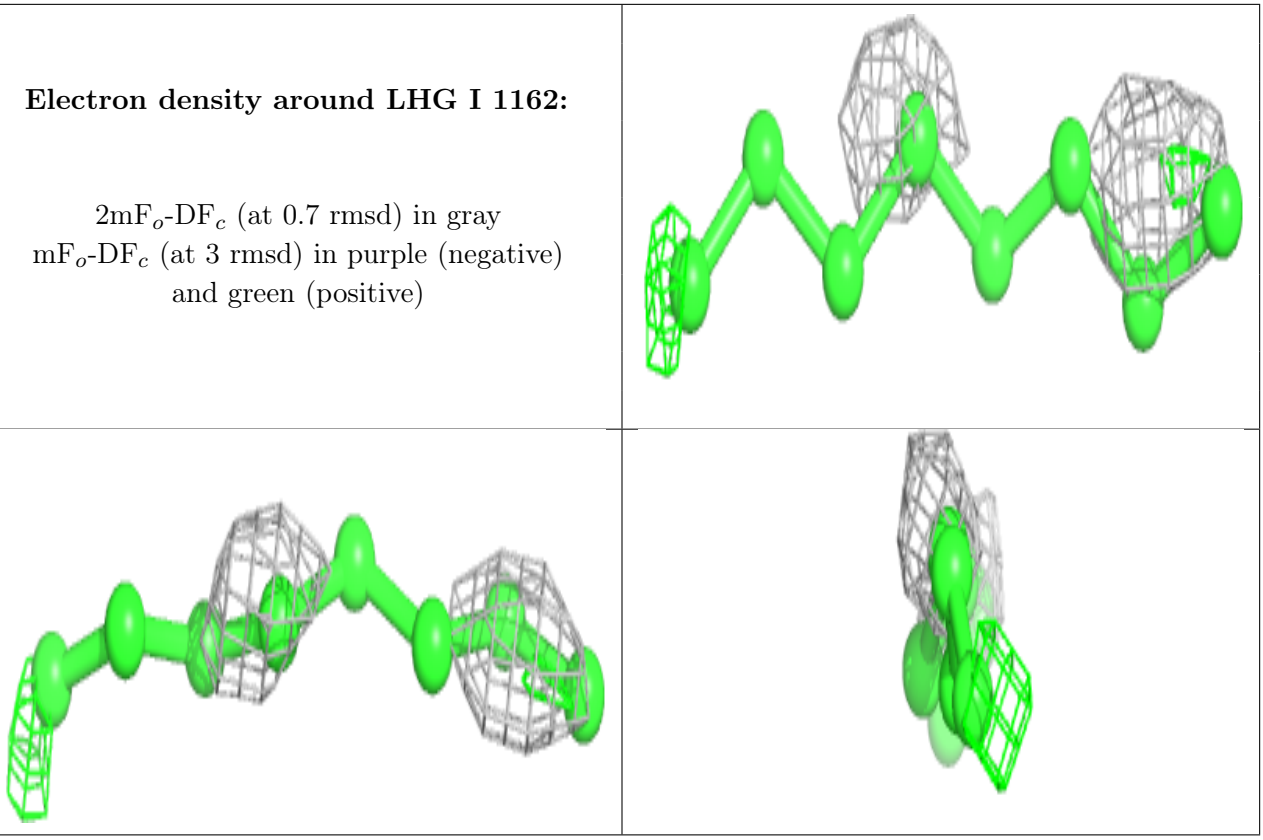
Electron density around LHG C 1160:

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



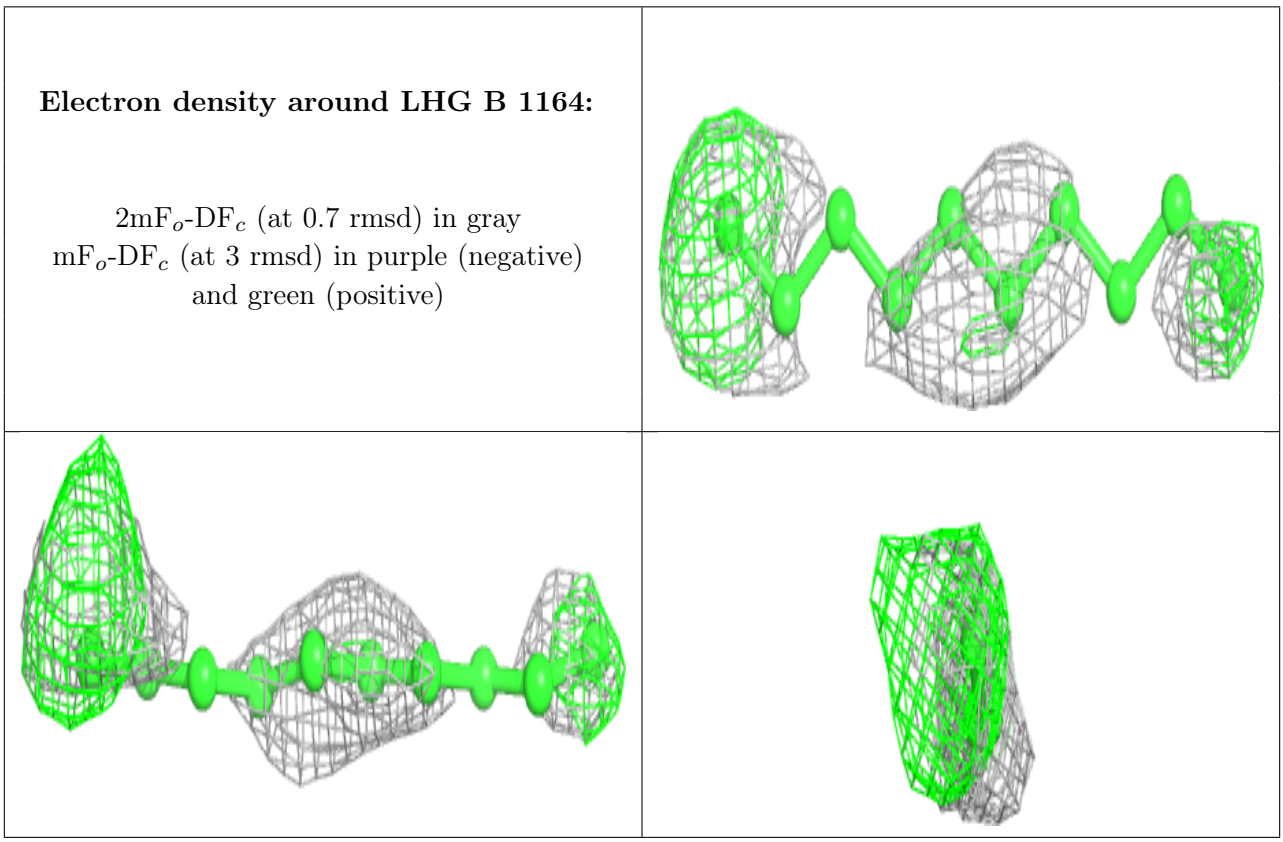
Electron density around LHG I 1162:

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



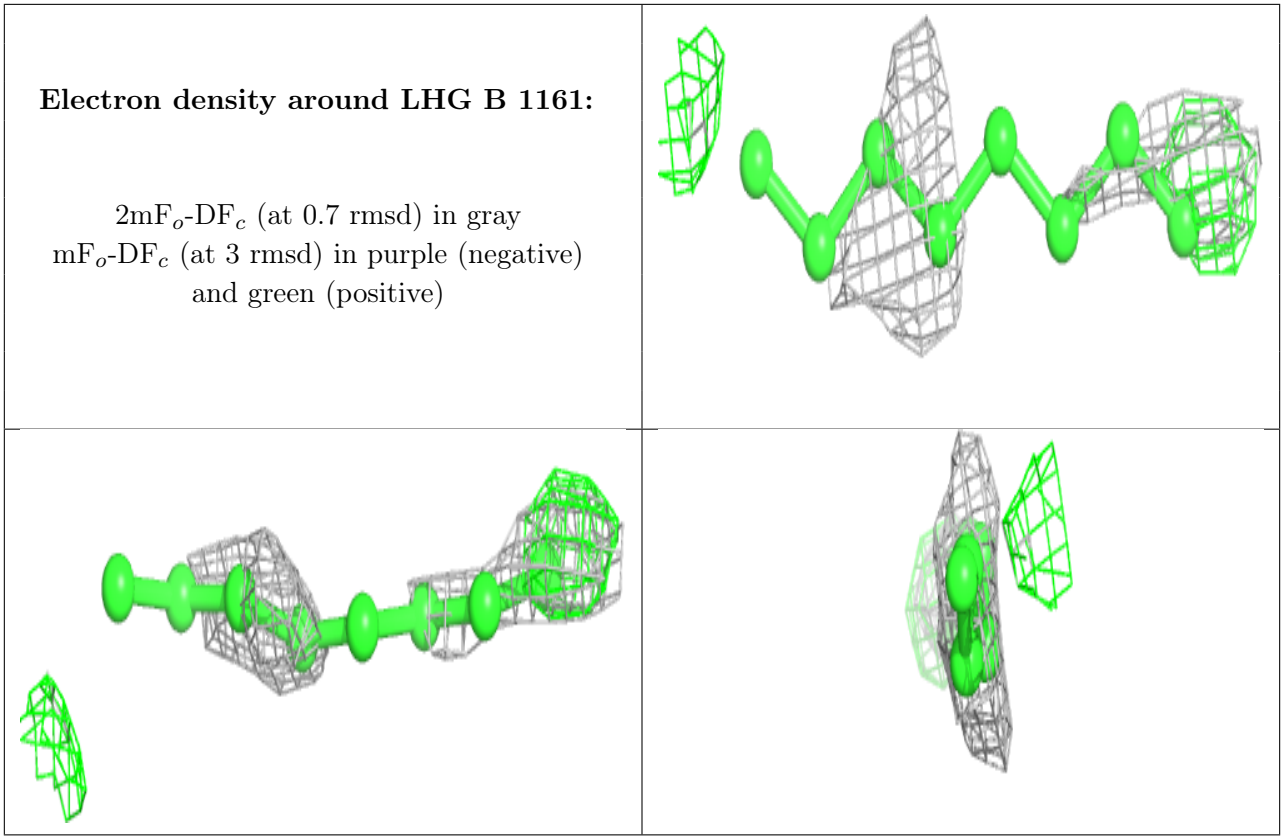
Electron density around LHG B 1164:

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



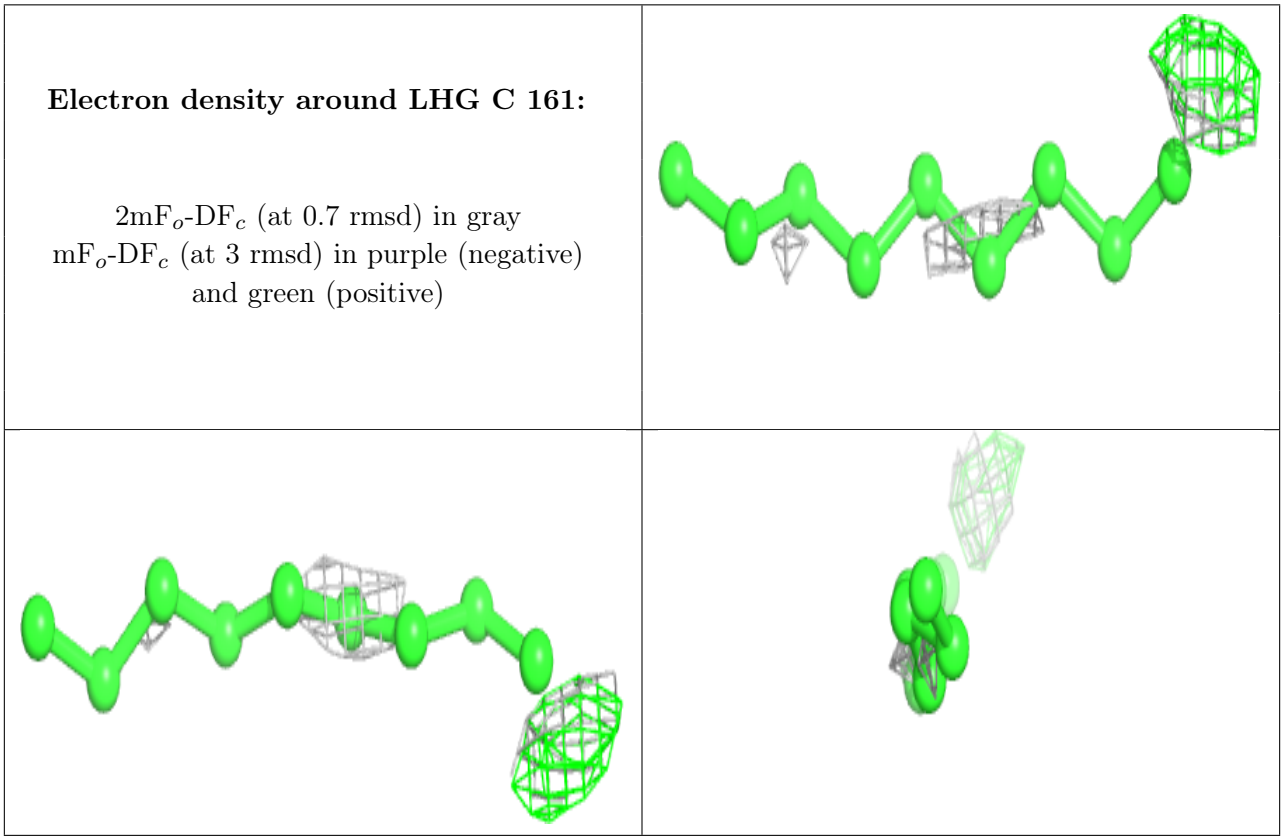
Electron density around LHG B 1161:

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



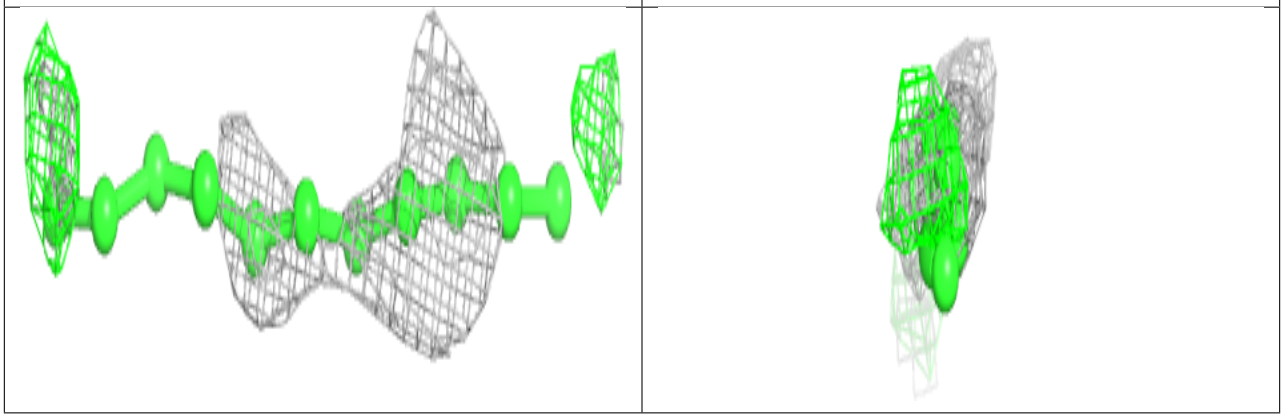
Electron density around LHG C 161:

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



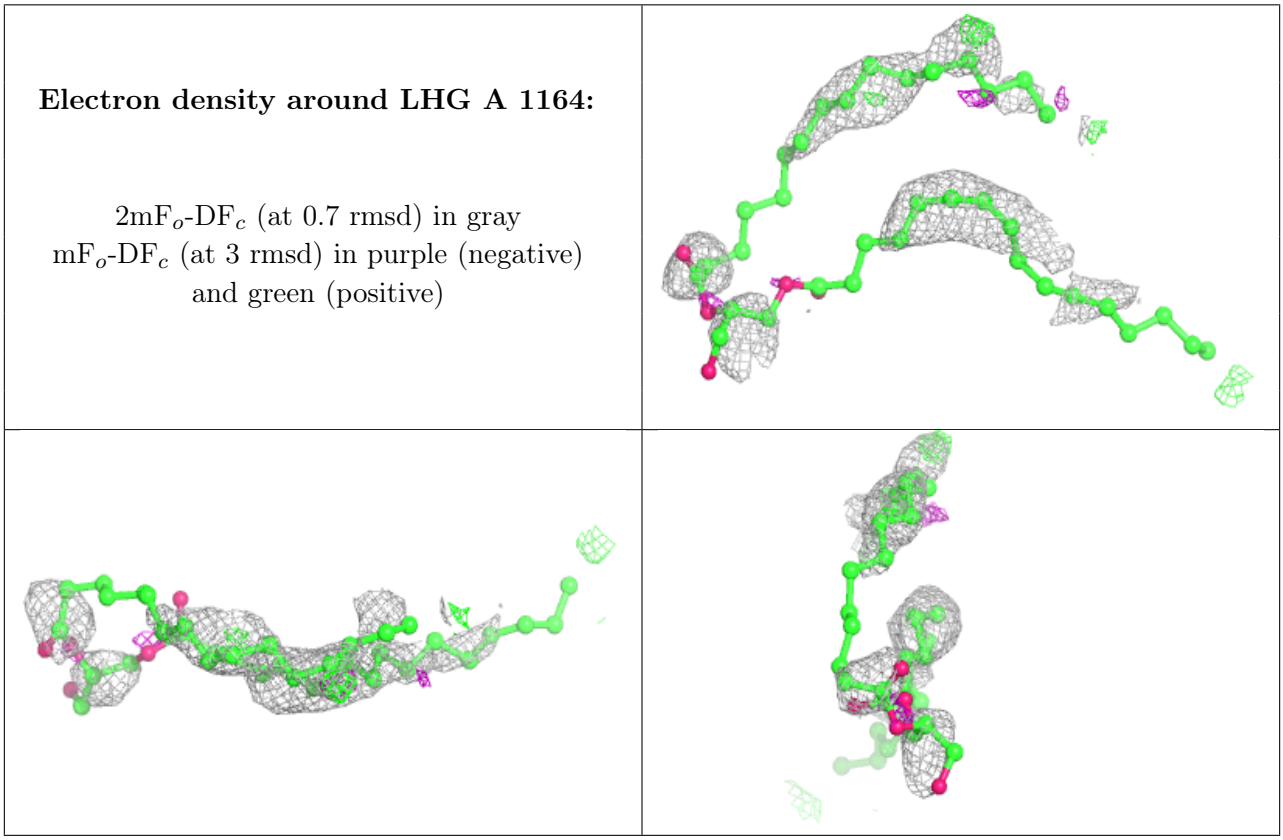
Electron density around LHG F 1161:

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



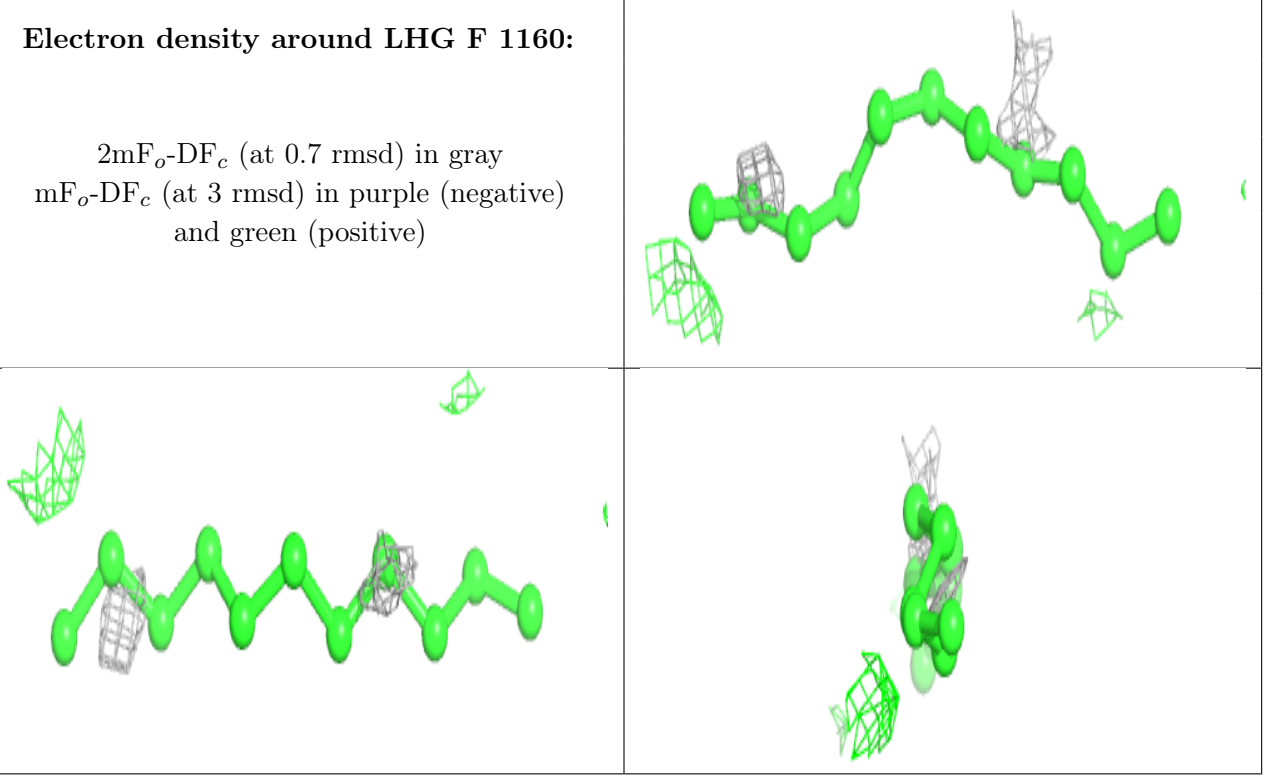
Electron density around LHG A 1164:

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



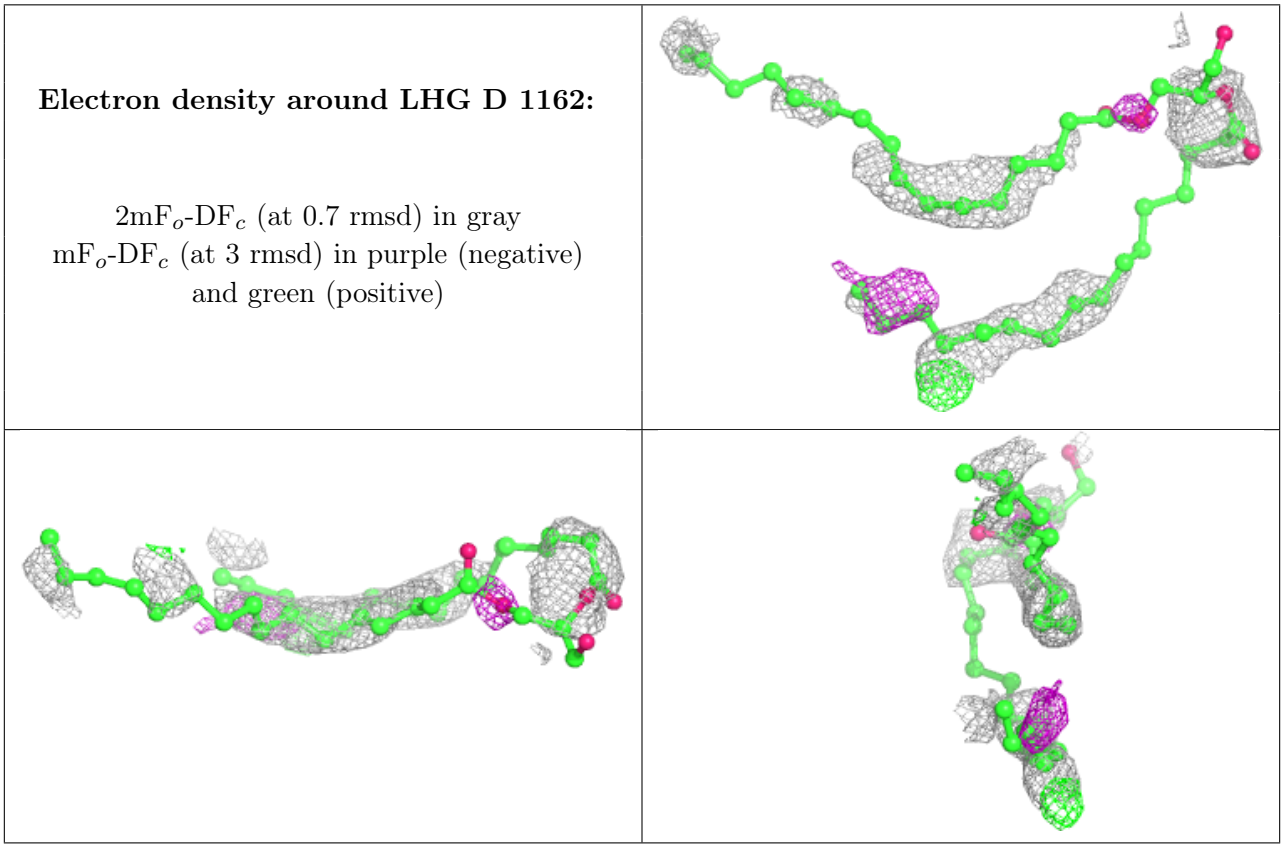
Electron density around LHG F 1160:

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



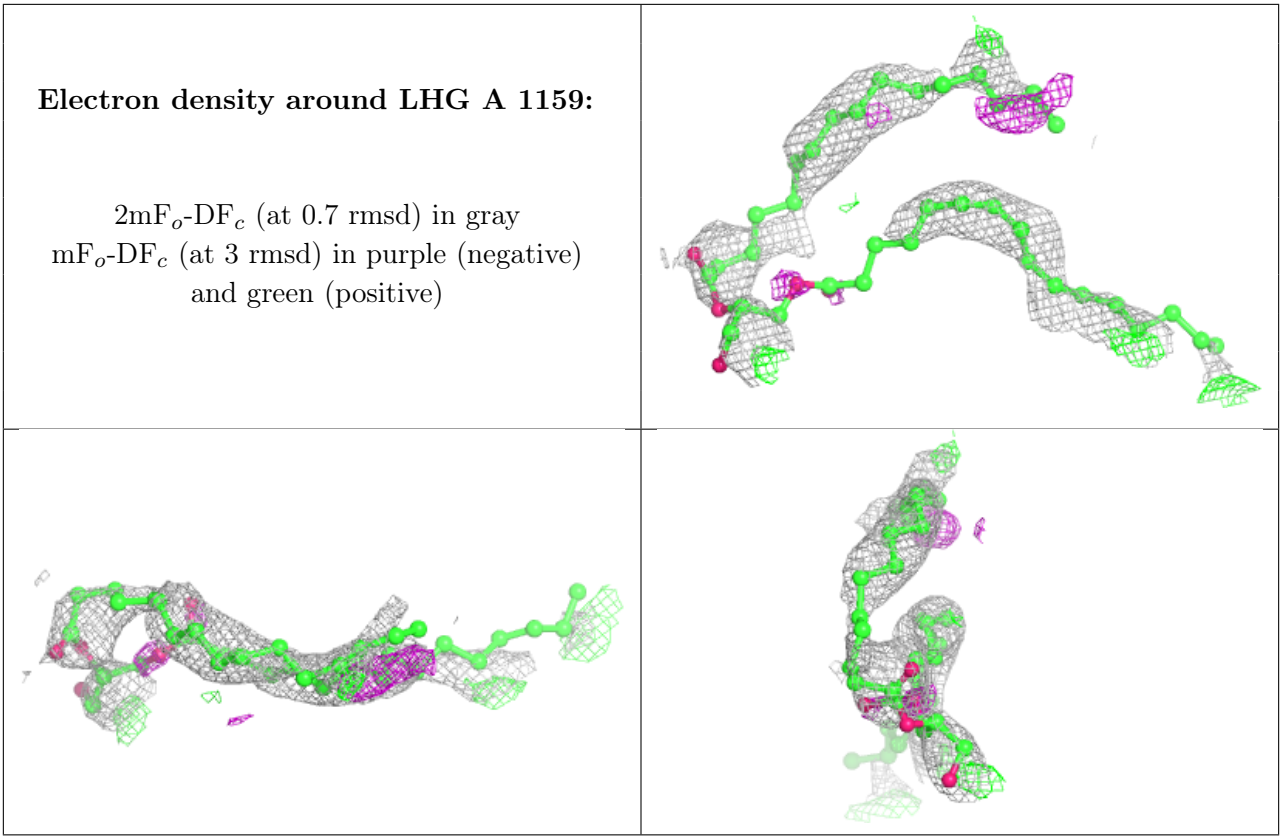
Electron density around LHG D 1162:

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



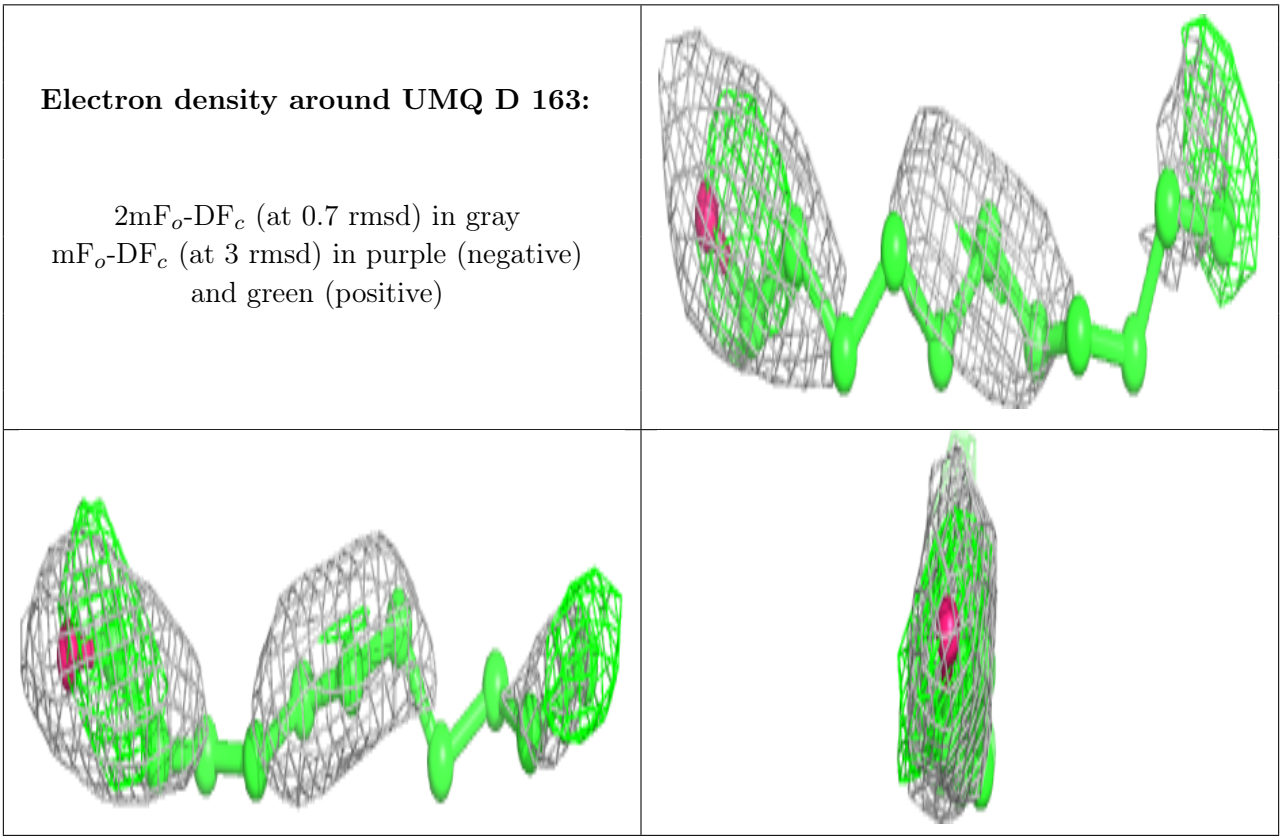
Electron density around LHG A 1159:

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



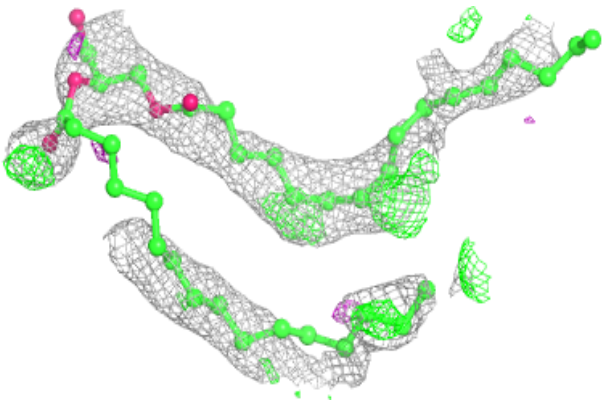
Electron density around UMQ D 163:

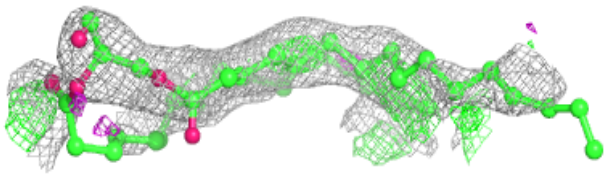
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

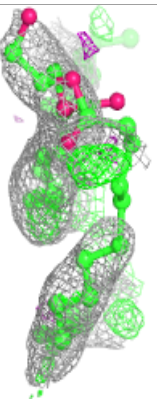


Electron density around LHG I 1165:

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

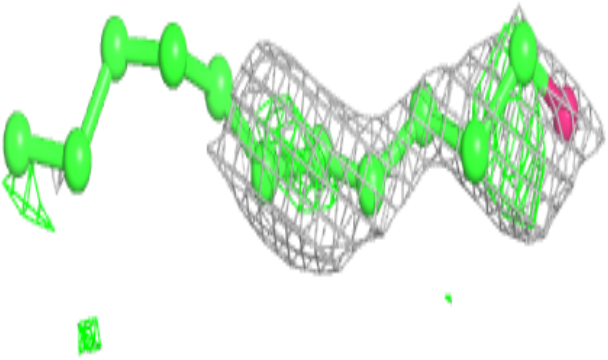


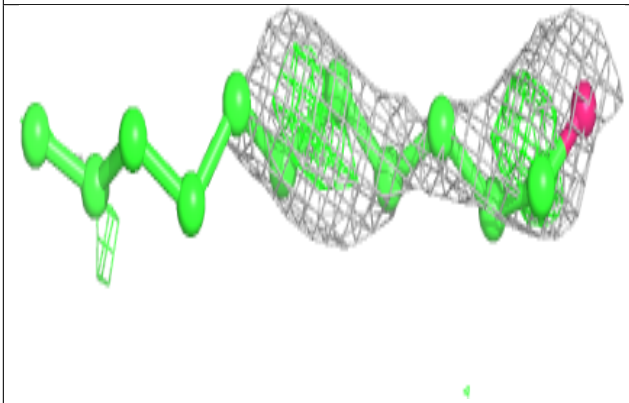


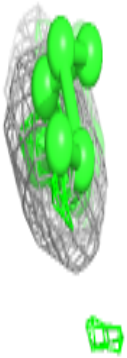


Electron density around UMQ F 1162:

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

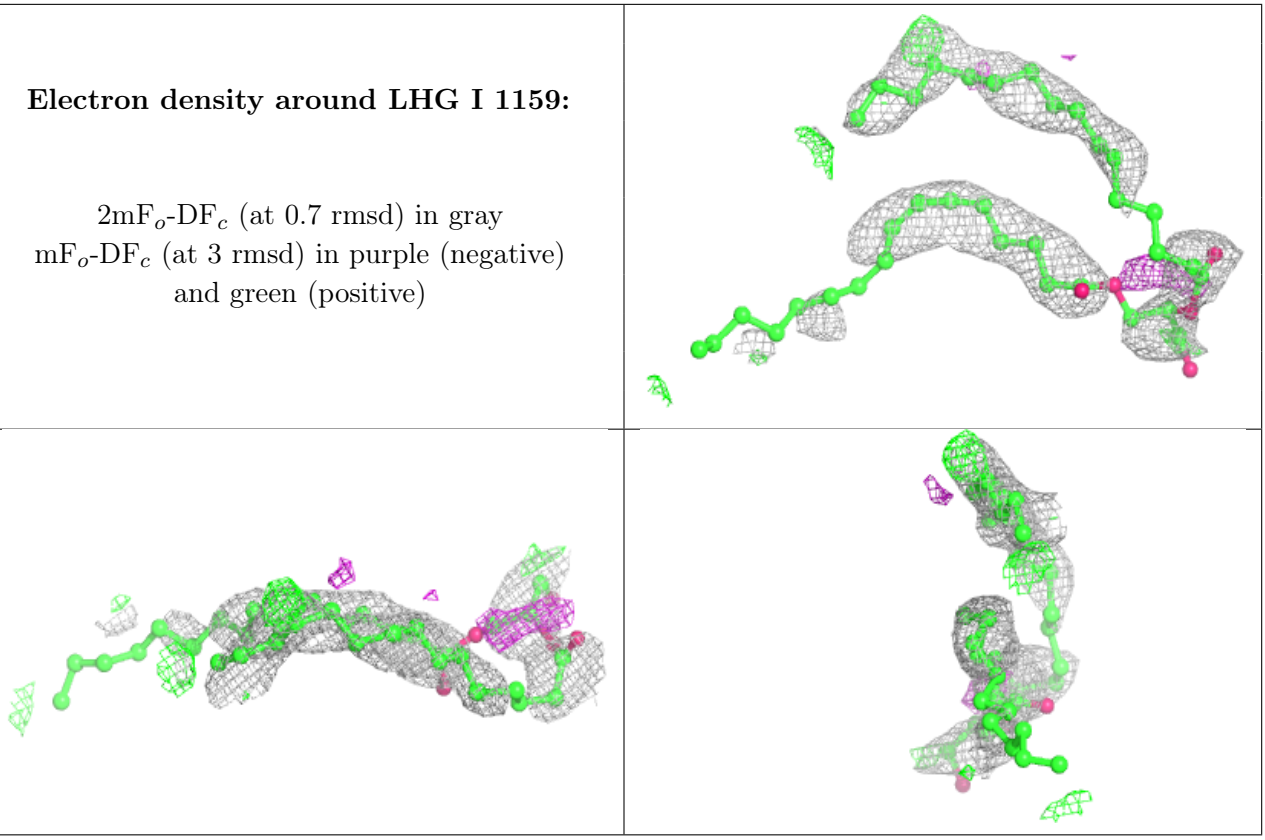






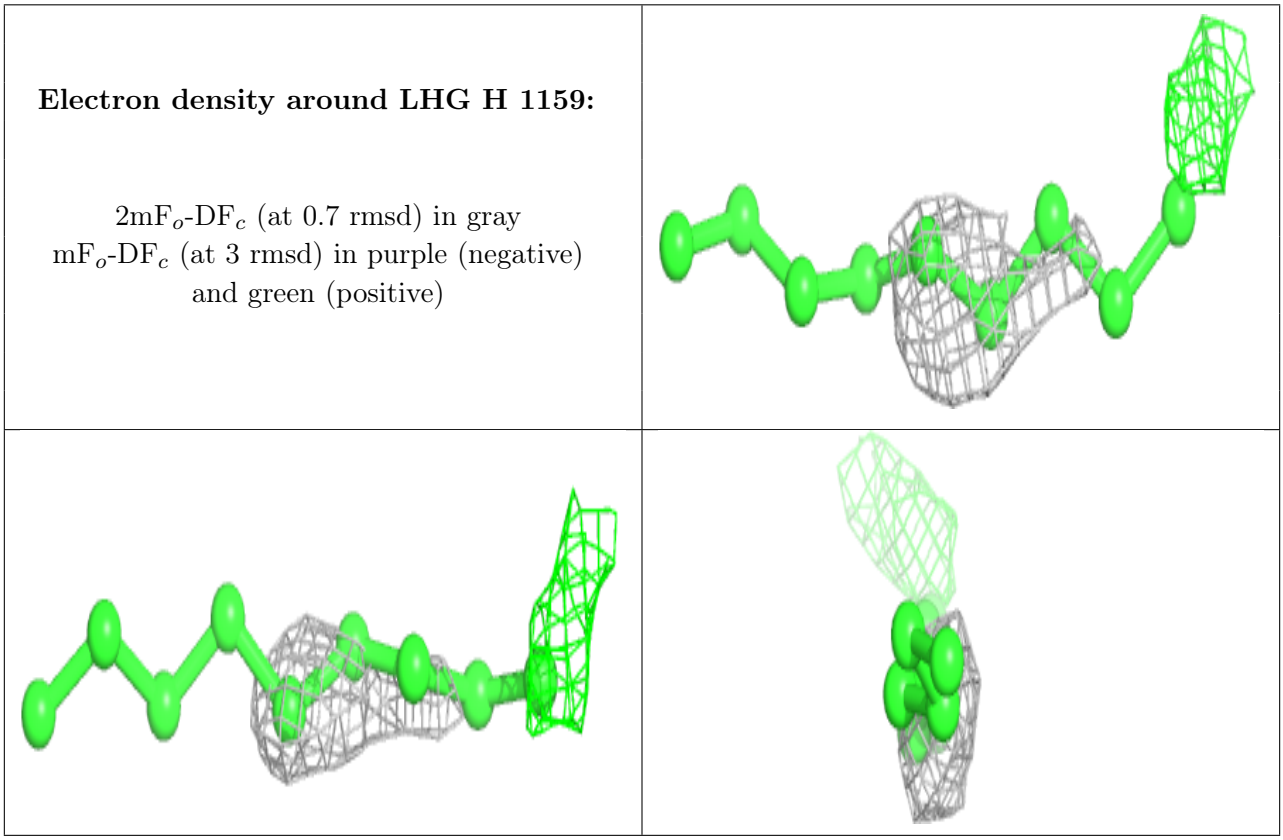
Electron density around LHG I 1159:

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



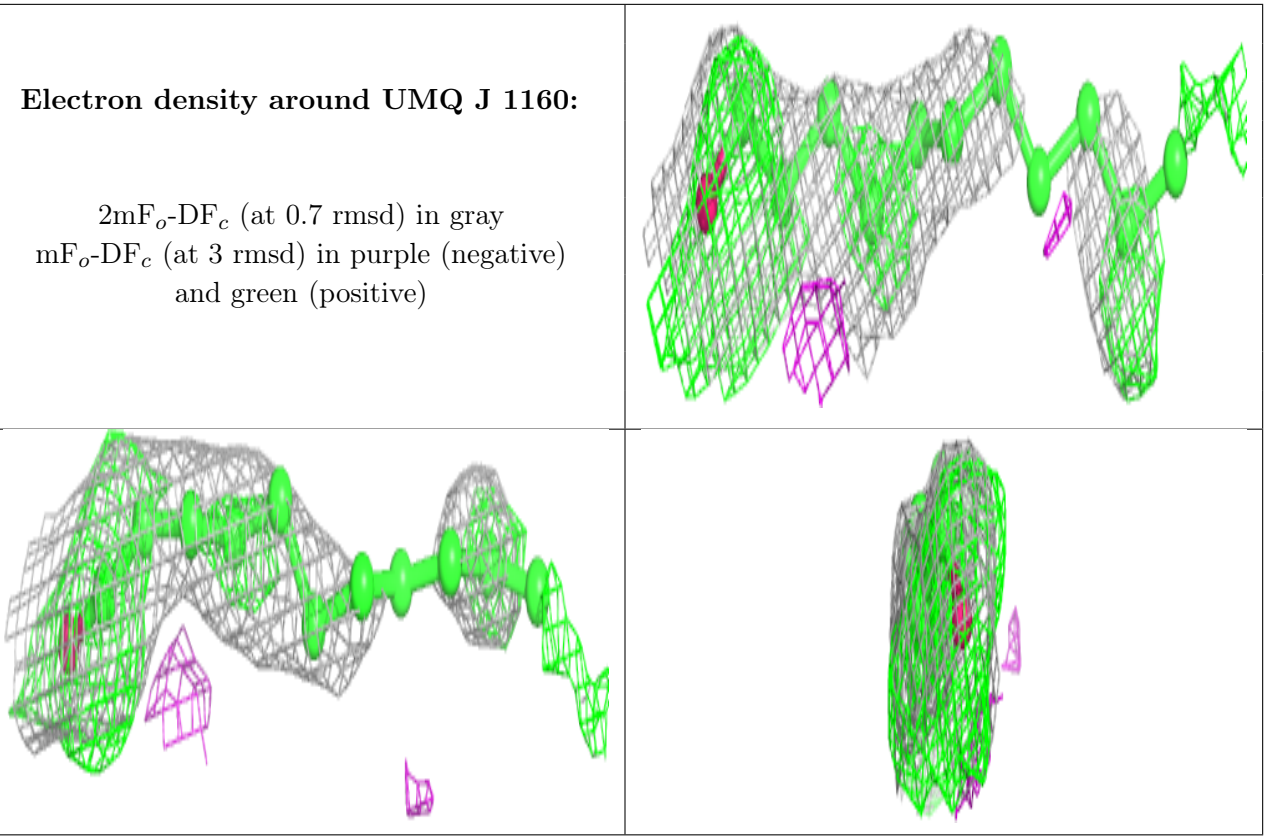
Electron density around LHG H 1159:

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



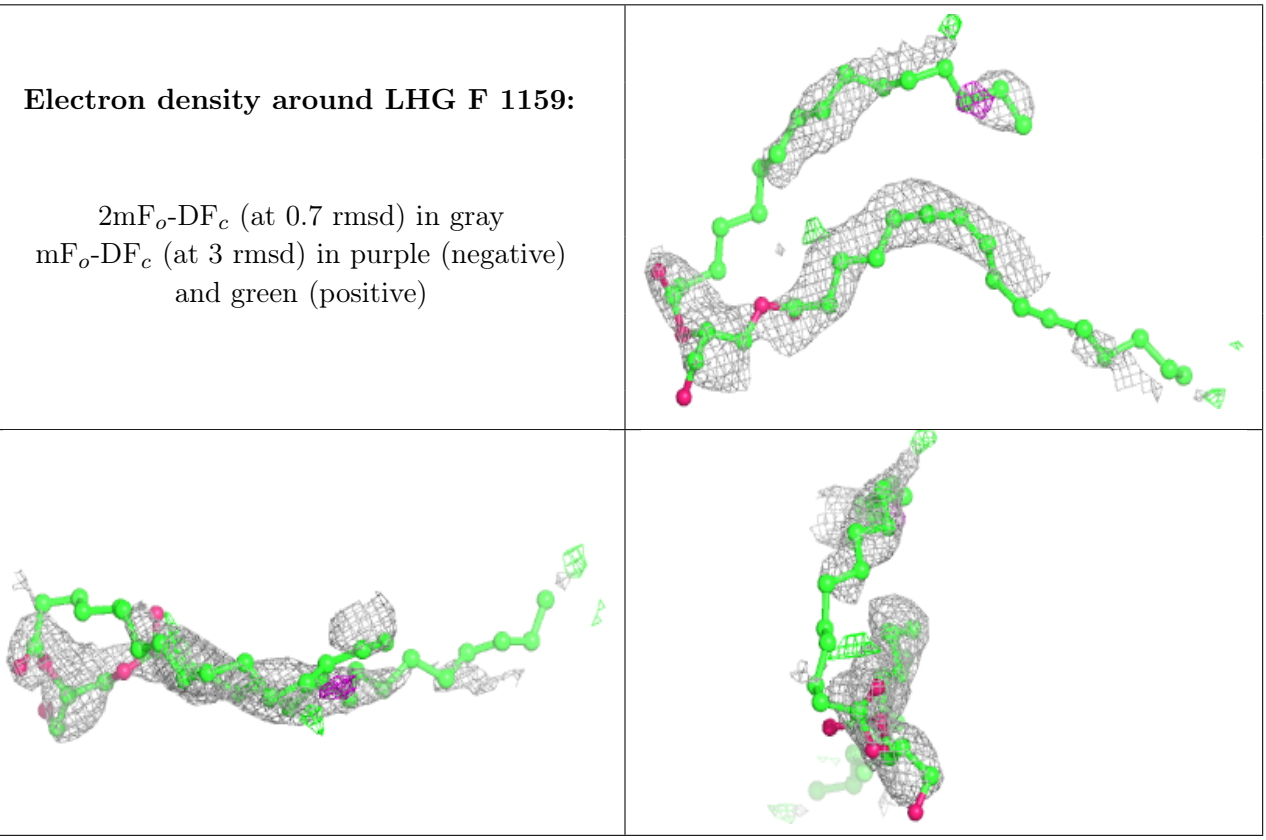
Electron density around UMQ J 1160:

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



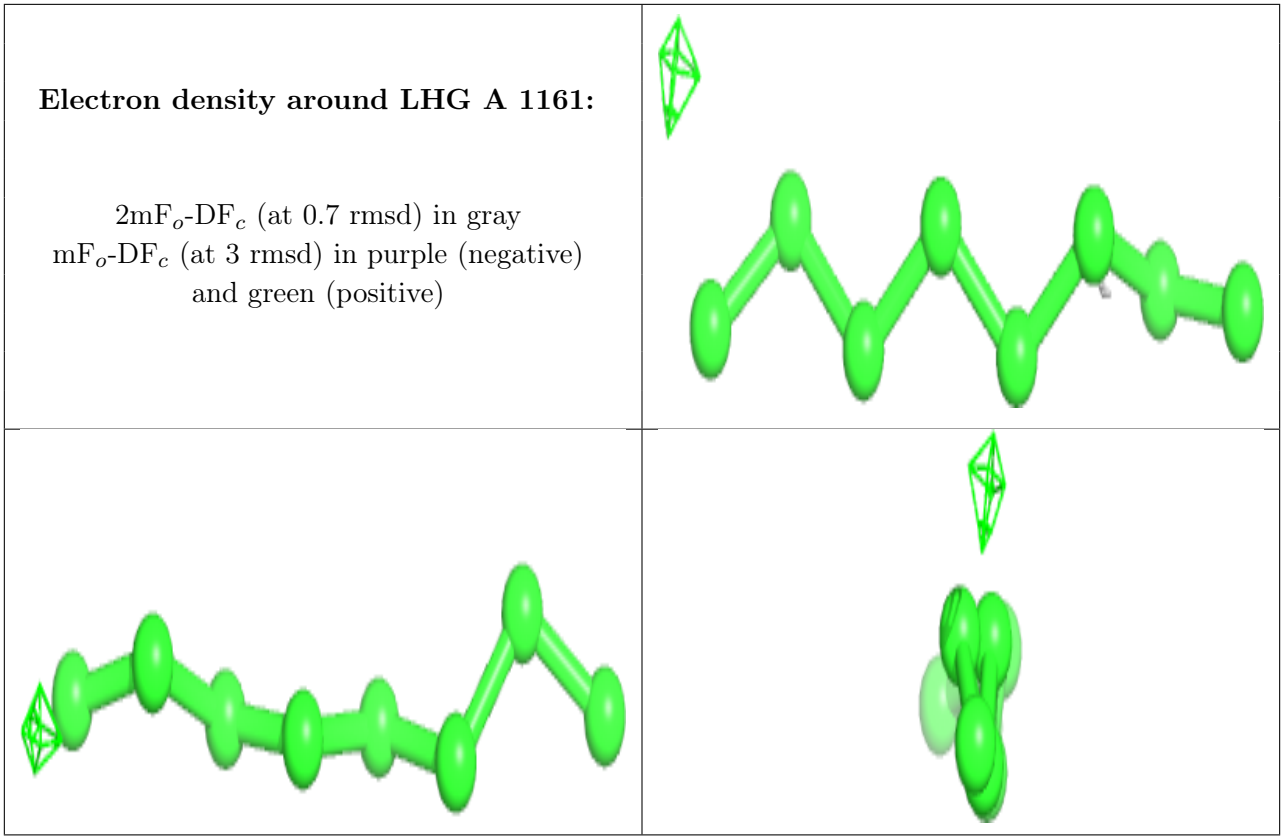
Electron density around LHG F 1159:

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



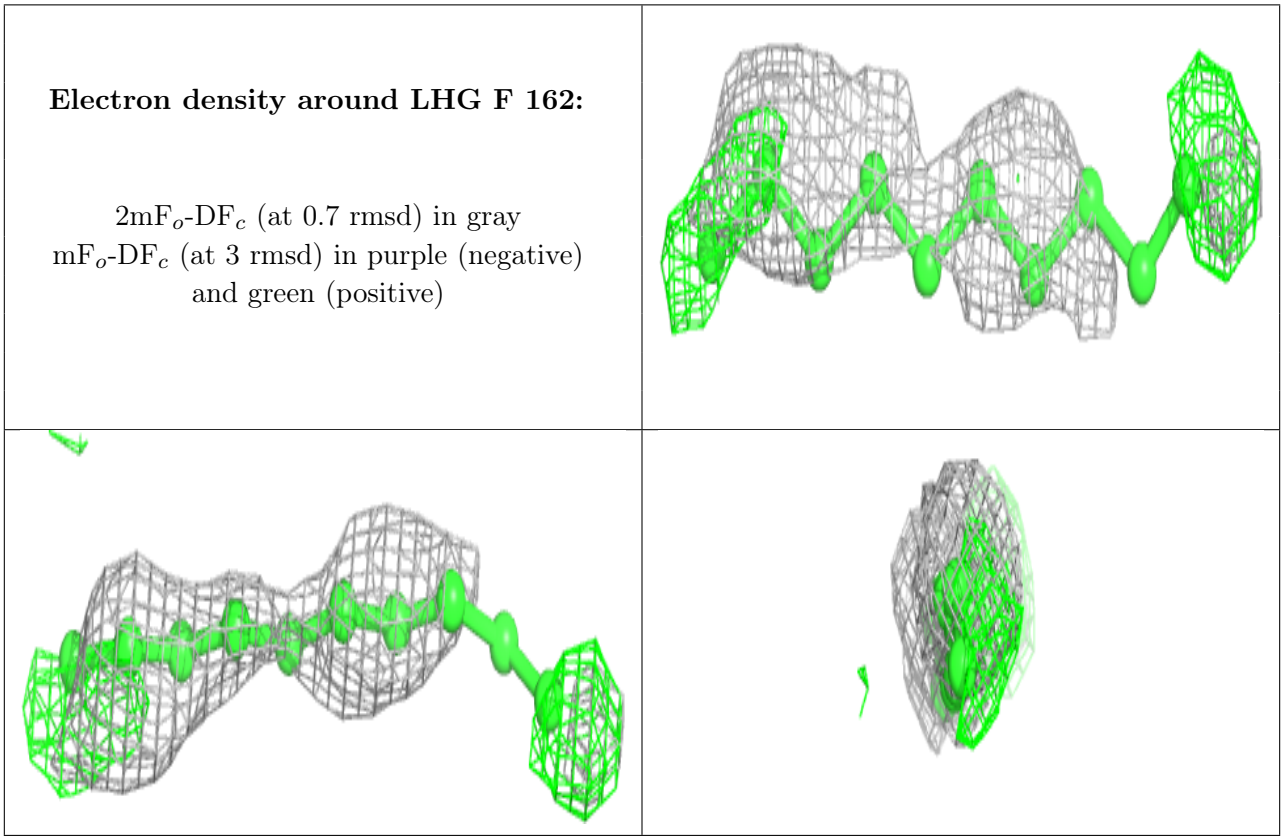
Electron density around LHG A 1161:

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



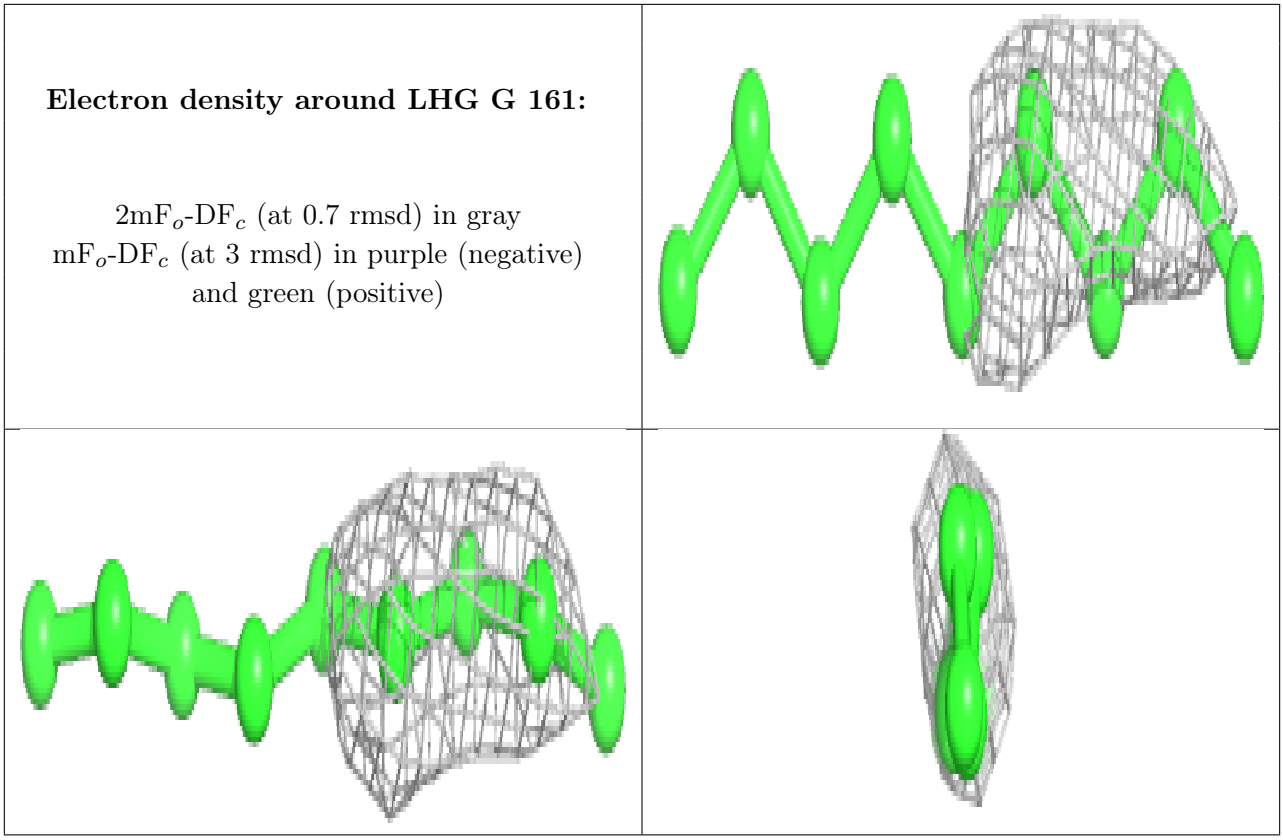
Electron density around LHG F 162:

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



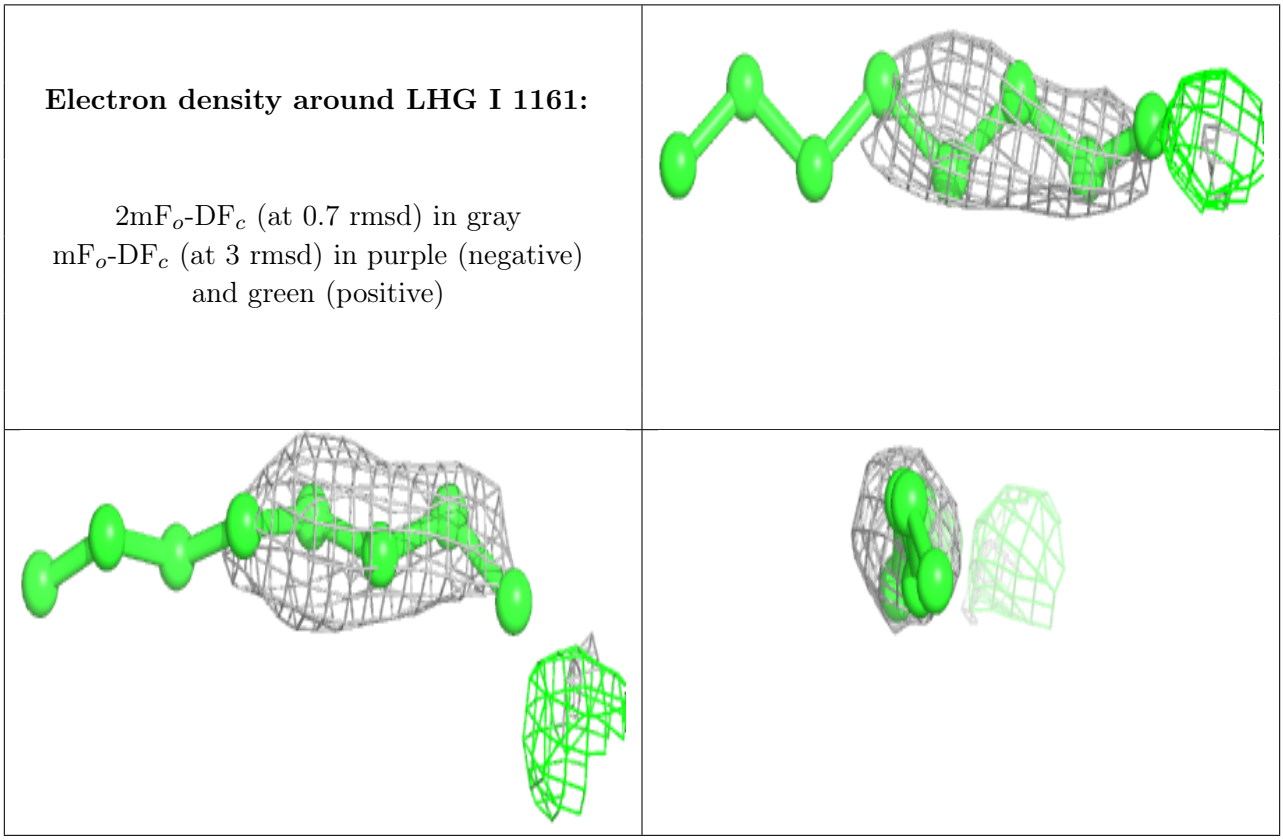
Electron density around LHG G 161:

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



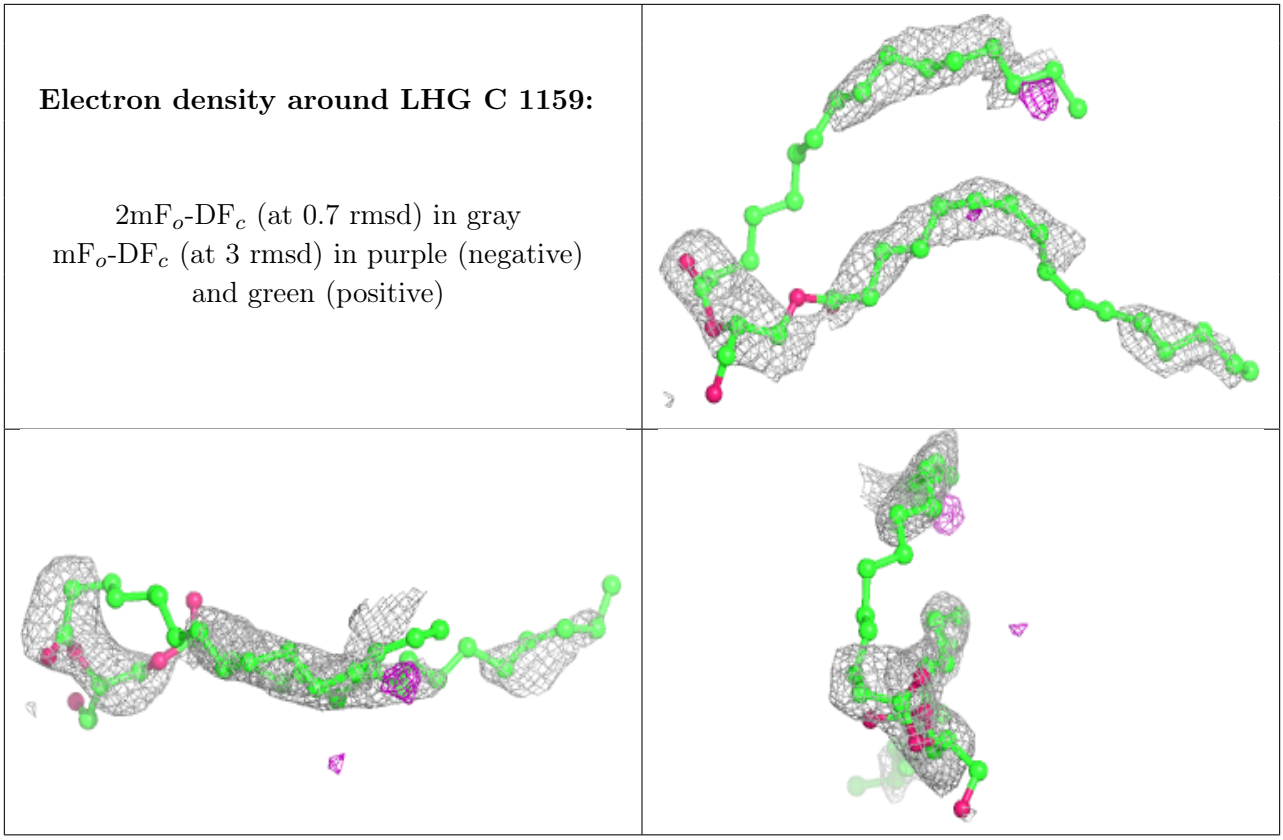
Electron density around LHG I 1161:

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



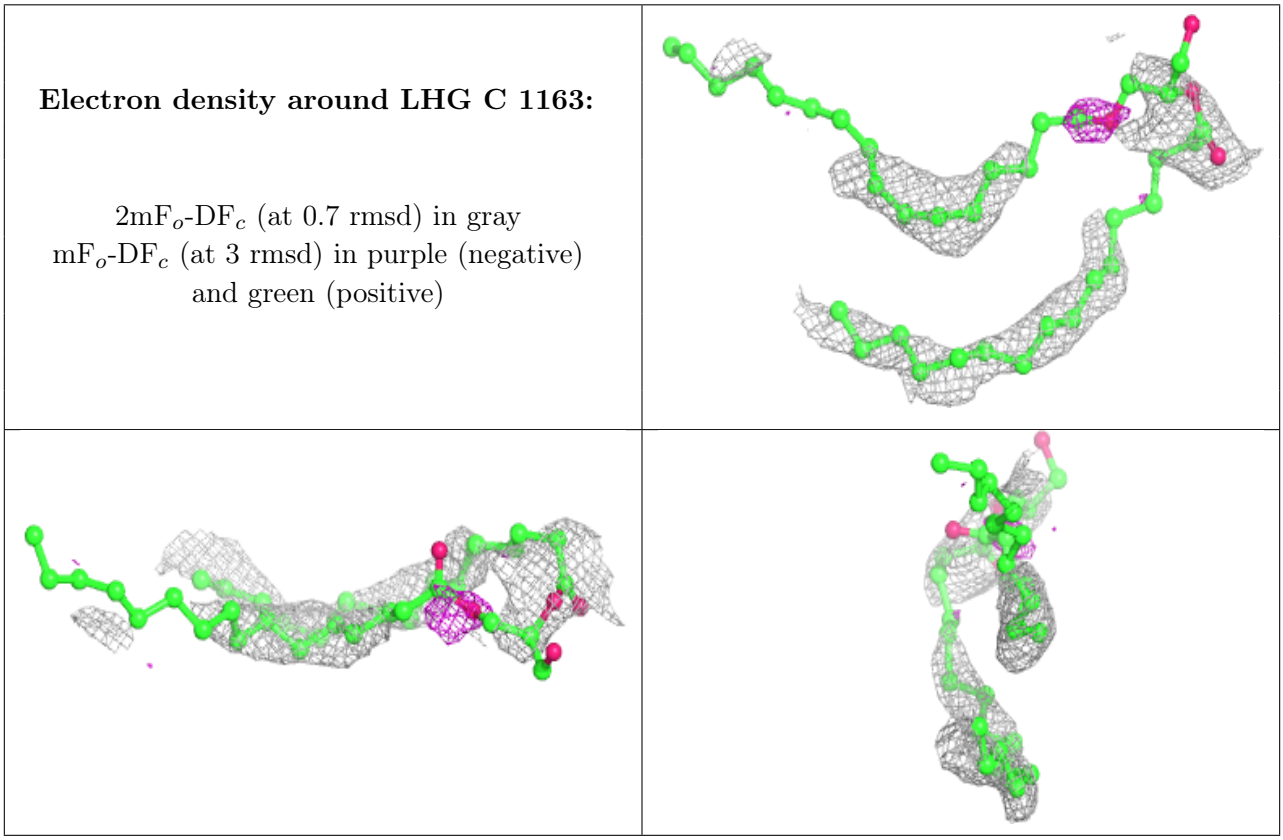
Electron density around LHG C 1159:

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



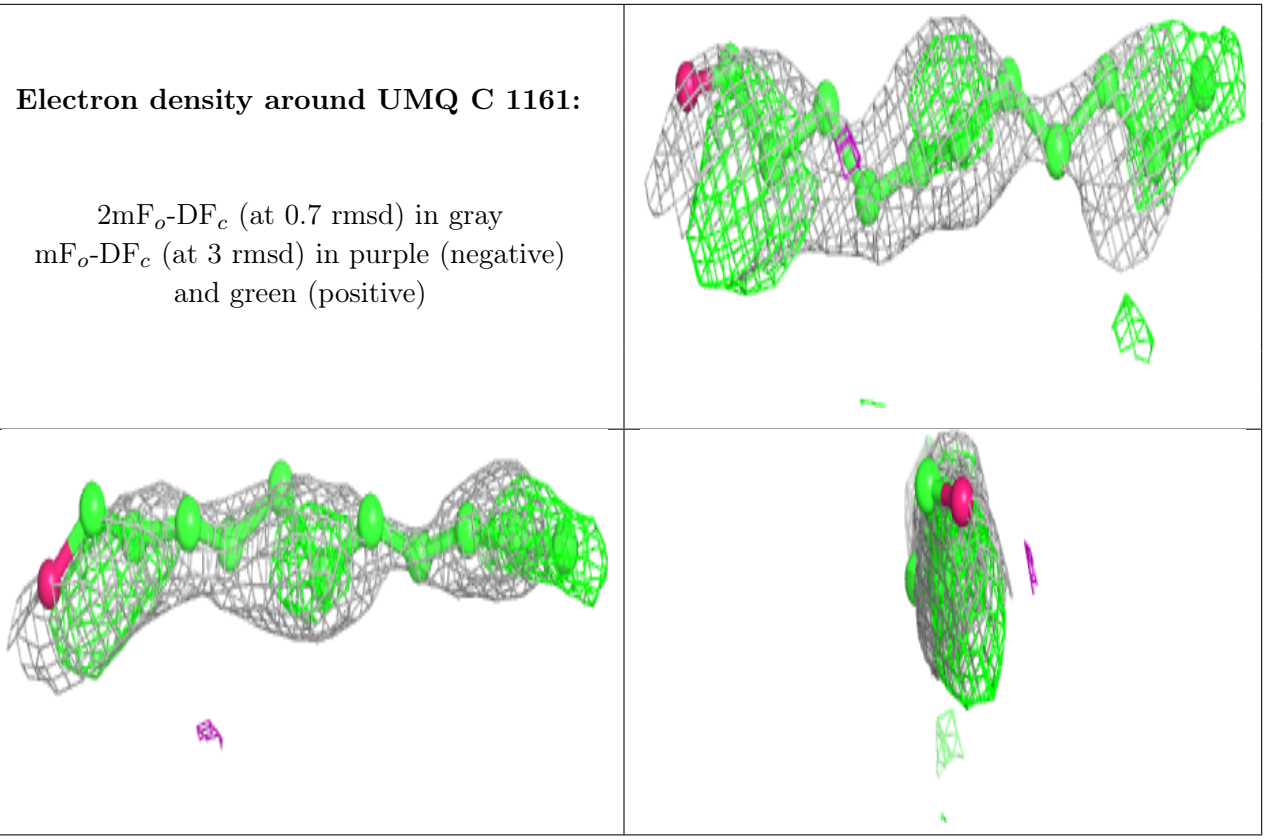
Electron density around LHG C 1163:

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



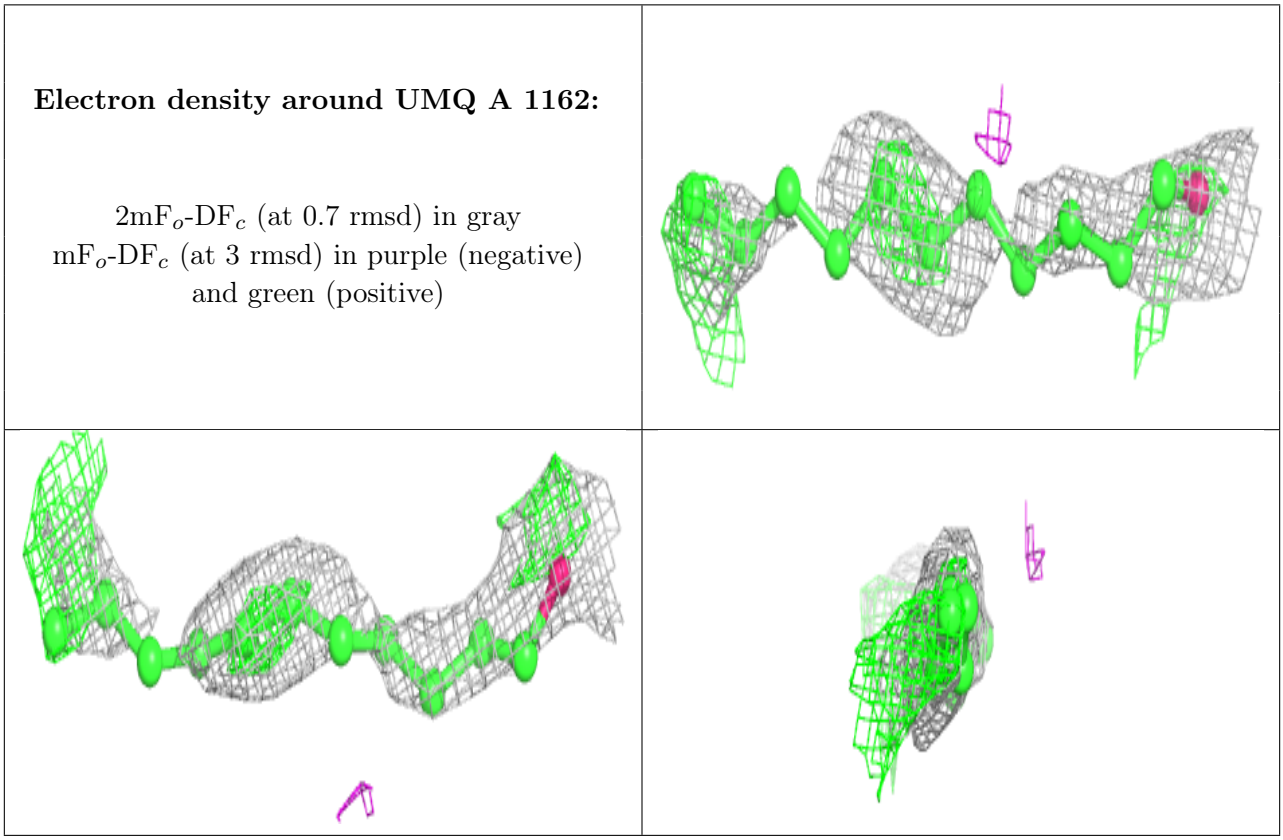
Electron density around UMQ C 1161:

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



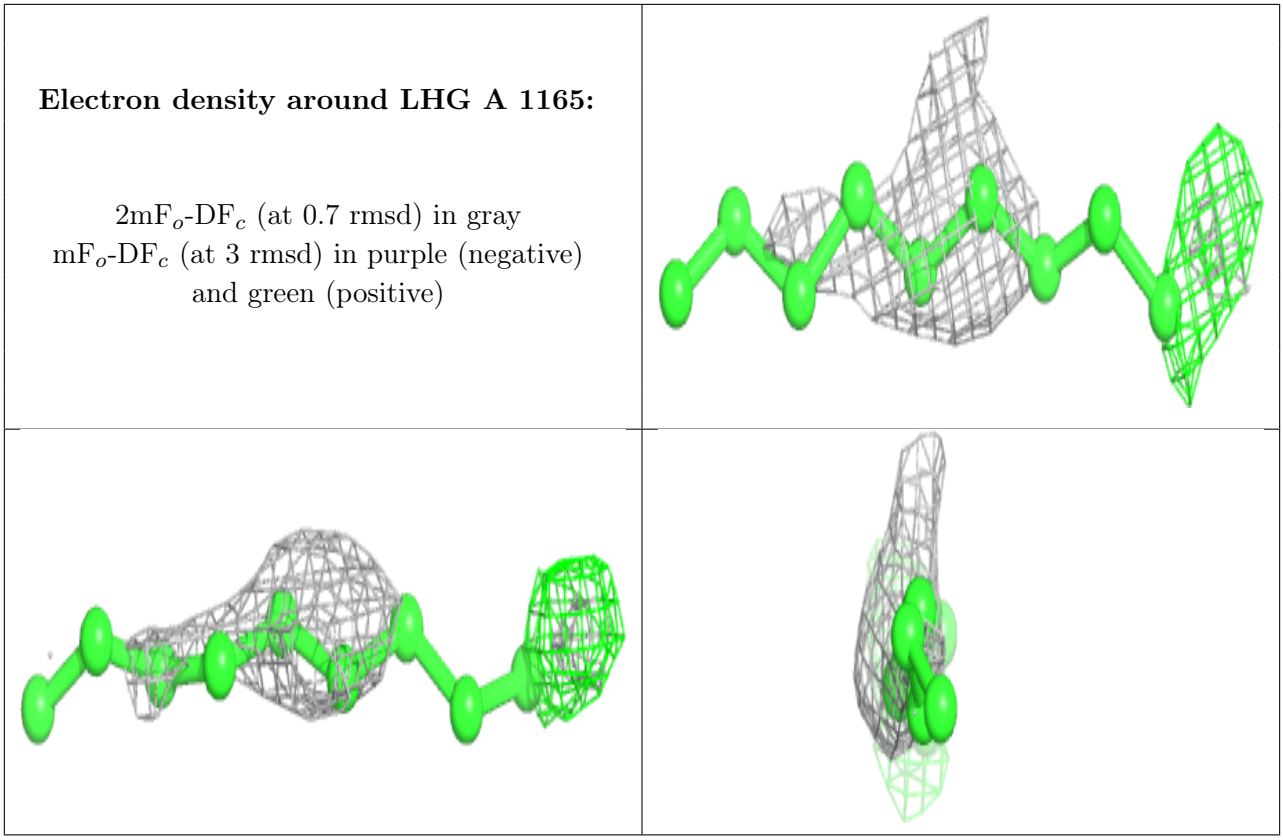
Electron density around UMQ A 1162:

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



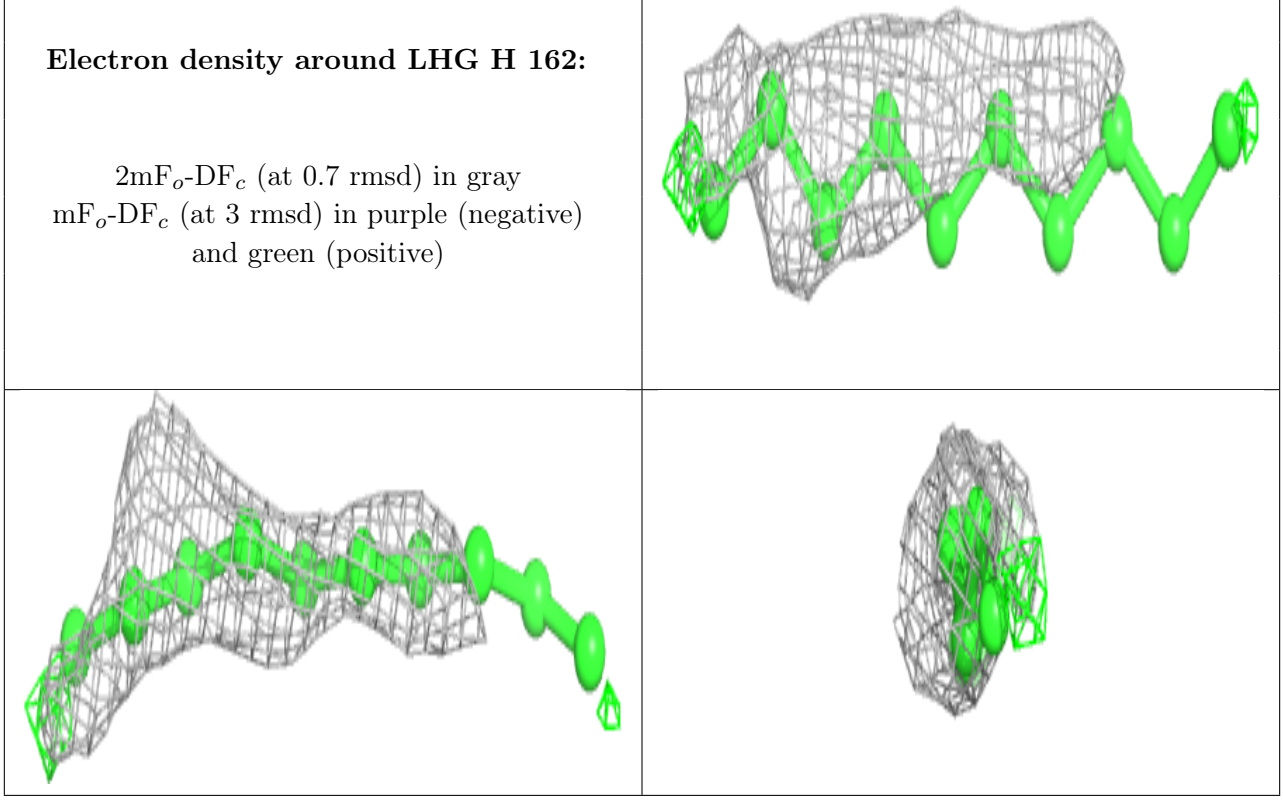
Electron density around LHG A 1165:

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



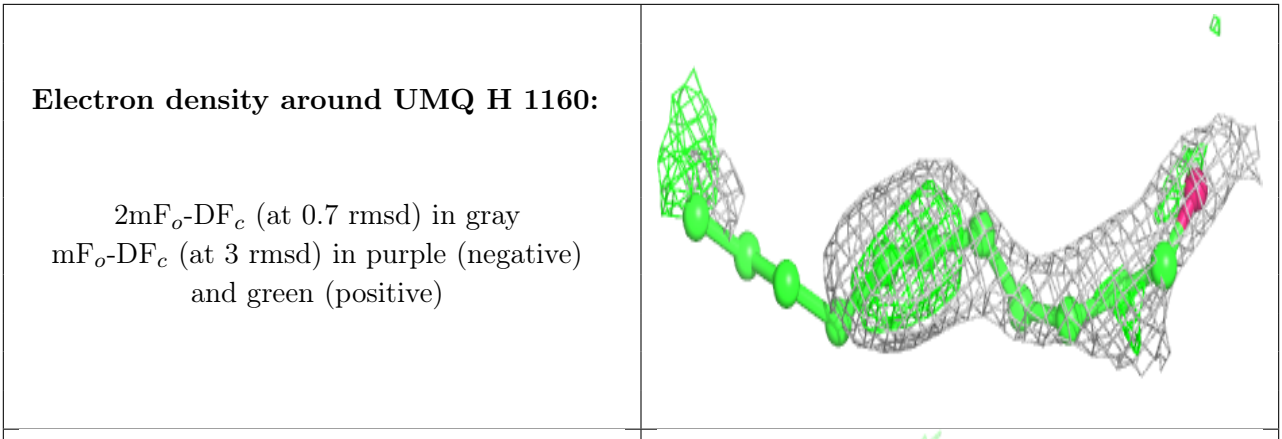
Electron density around LHG H 162:

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



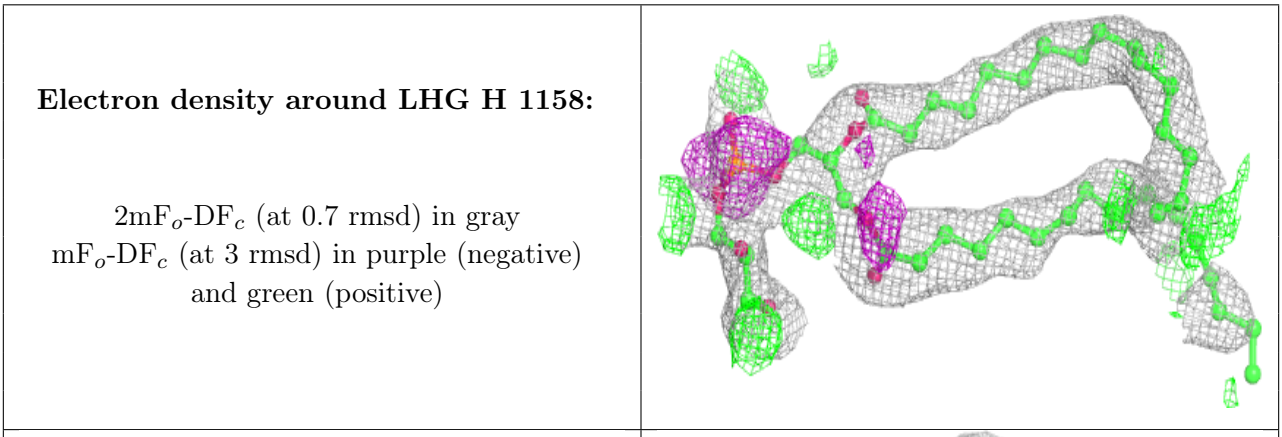
Electron density around UMQ H 1160:

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



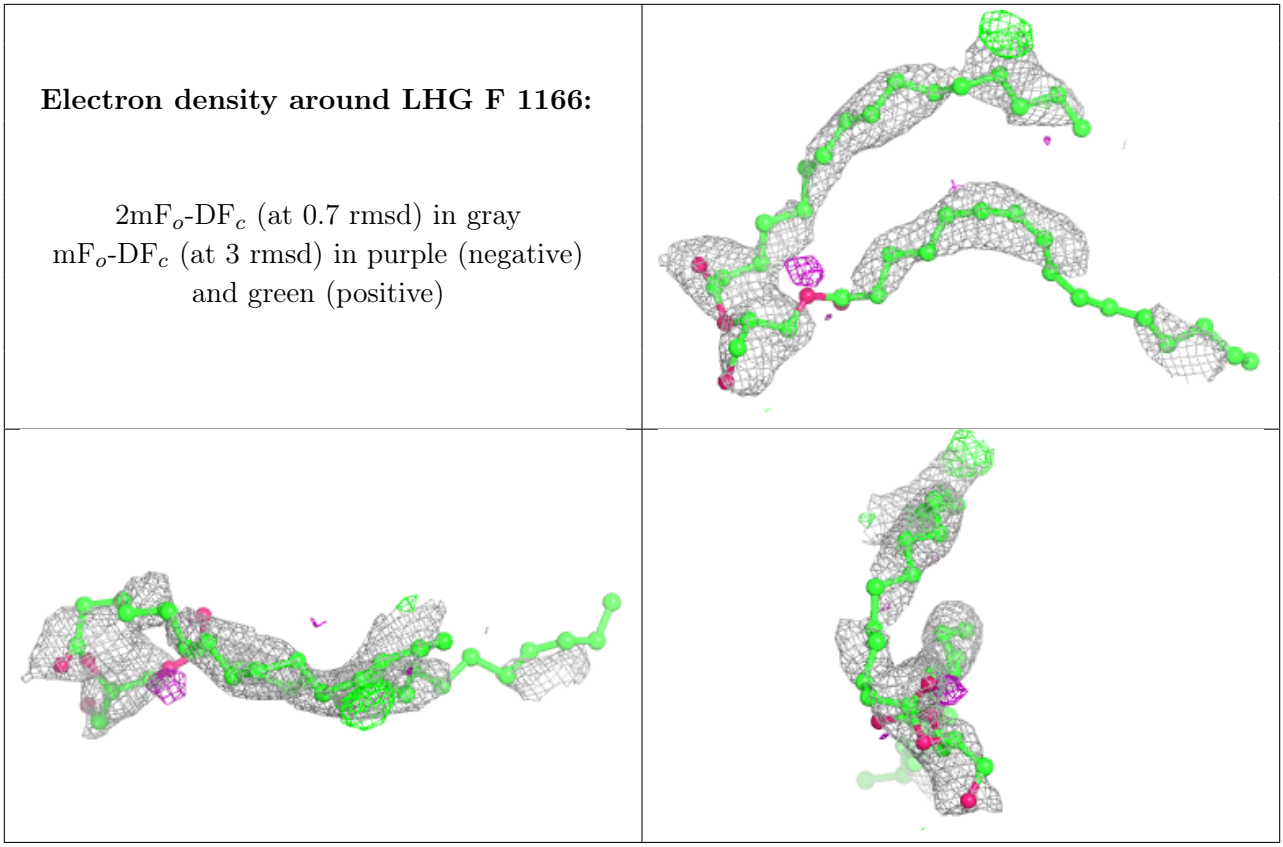
Electron density around LHG H 1158:

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



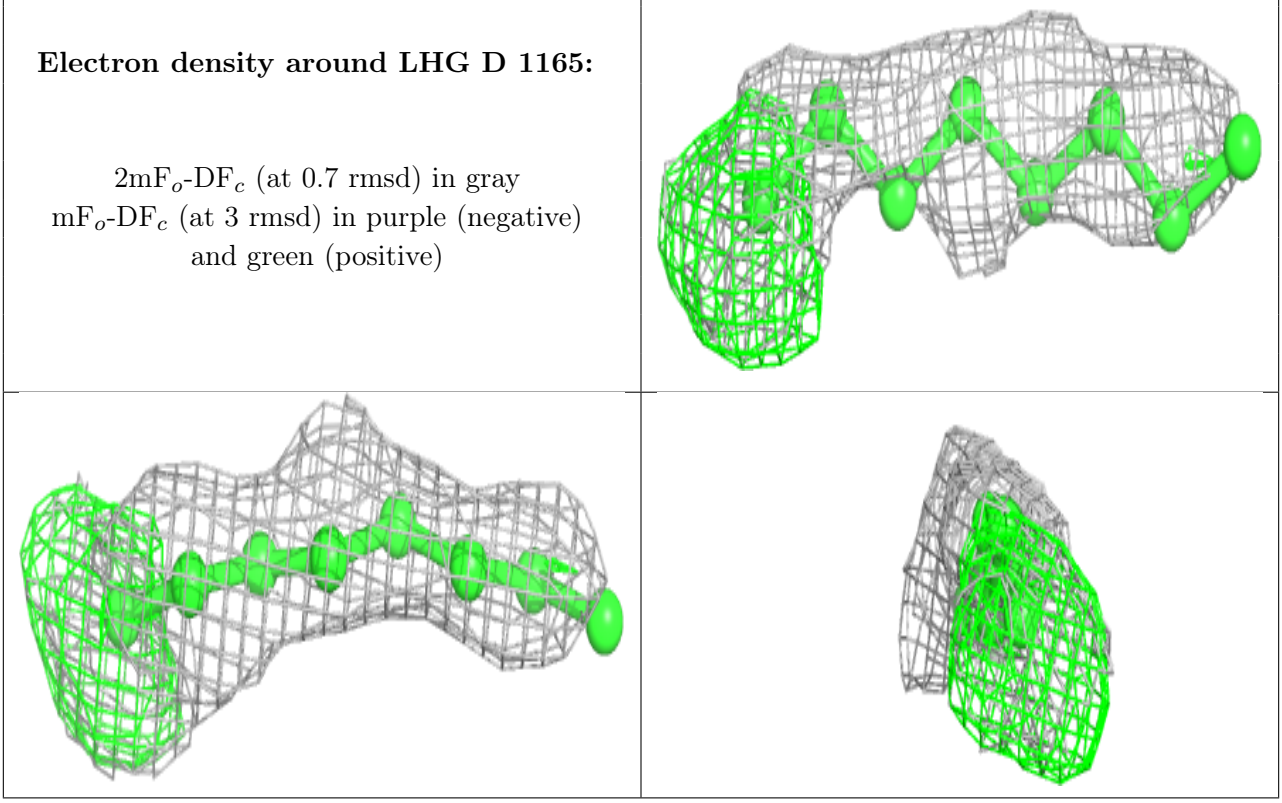
Electron density around LHG F 1166:

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



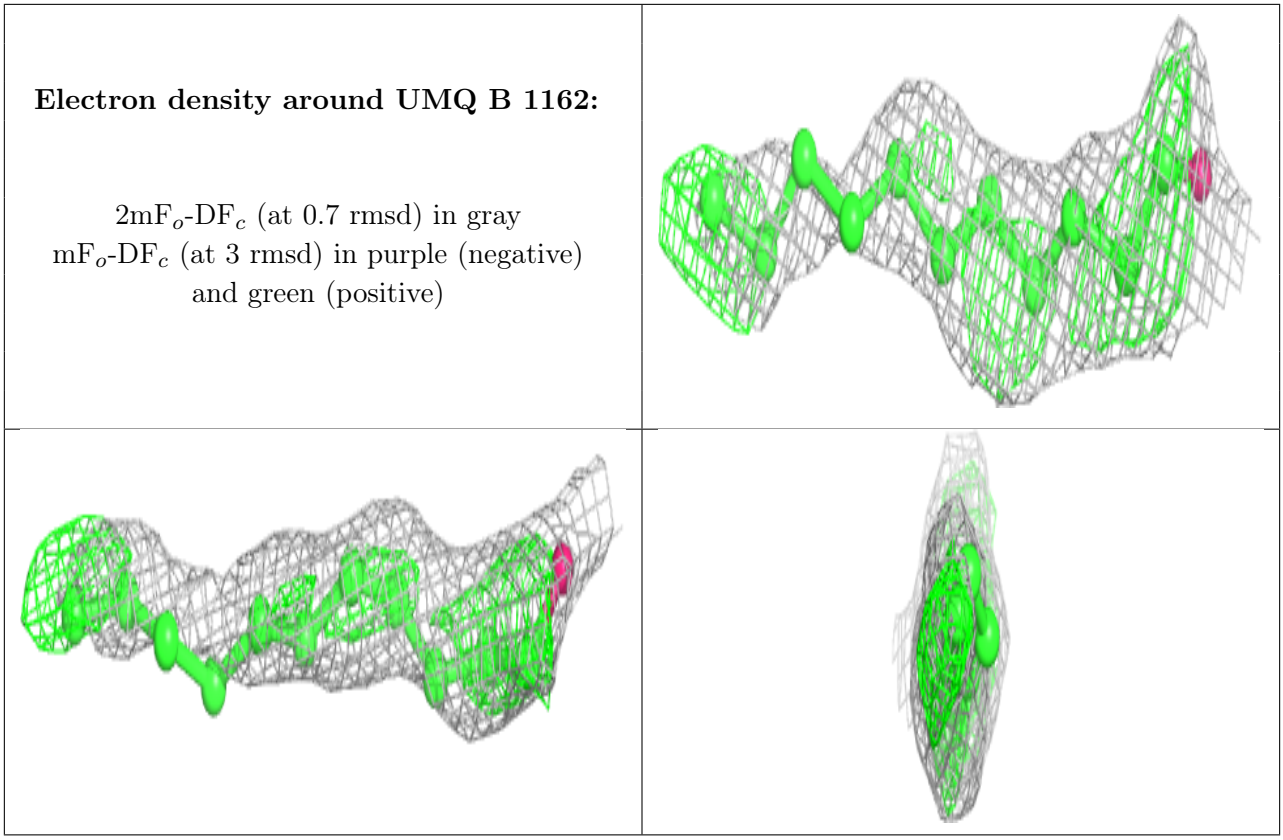
Electron density around LHG D 1165:

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



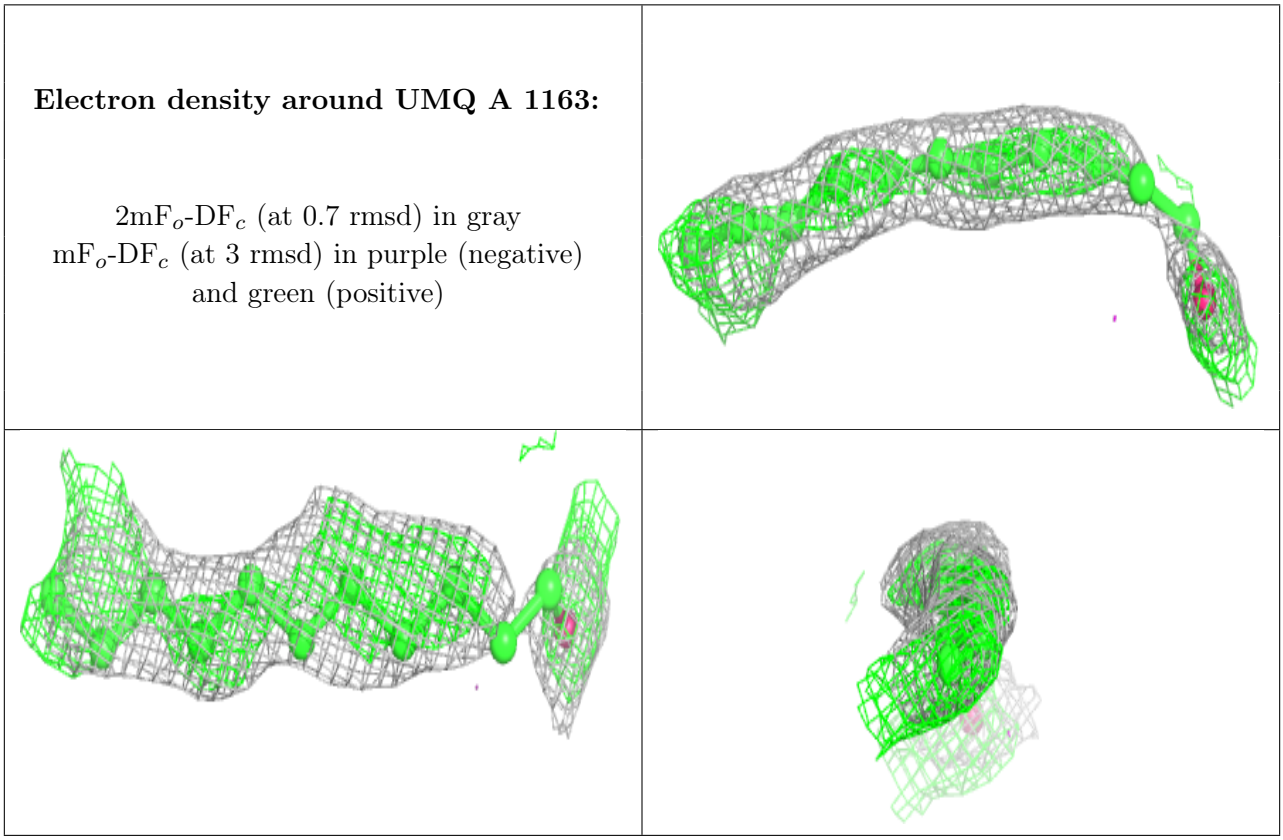
Electron density around UMQ B 1162:

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



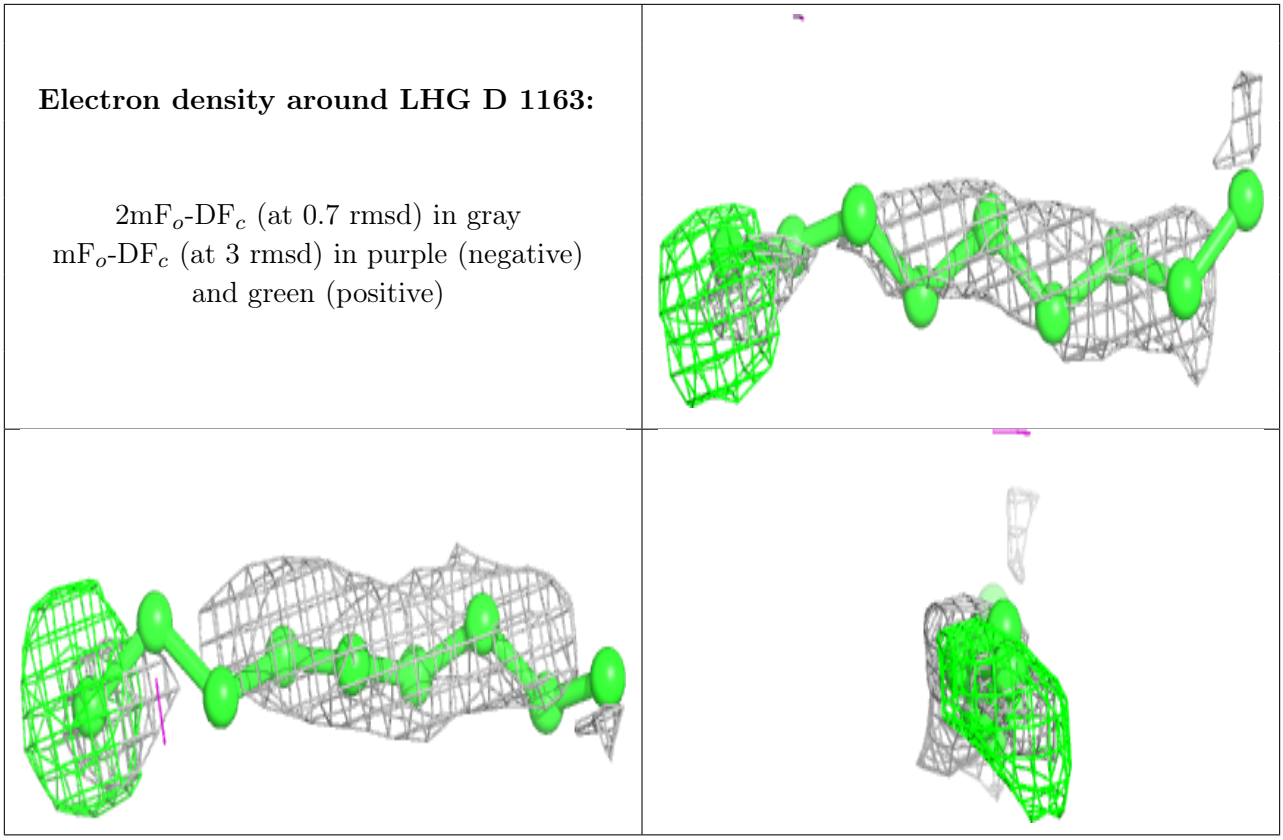
Electron density around UMQ A 1163:

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



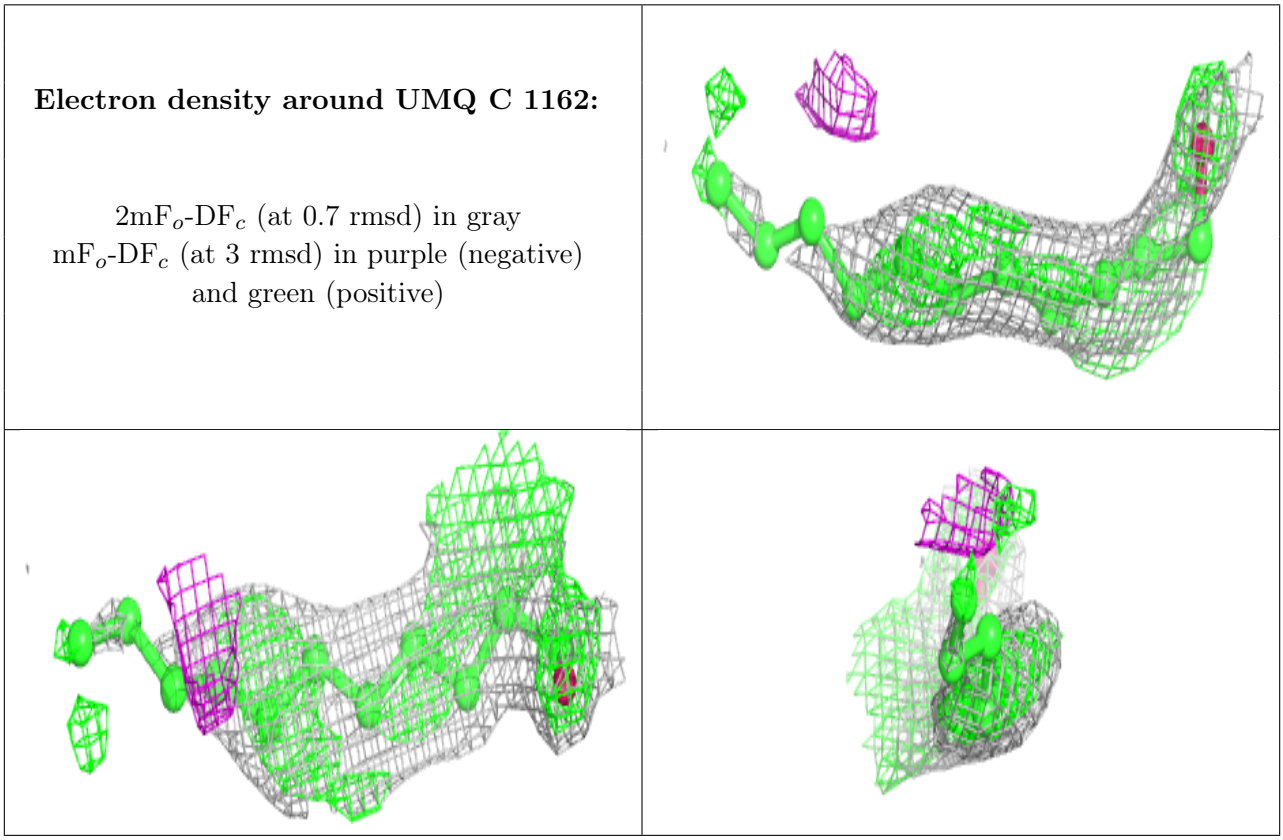
Electron density around LHG D 1163:

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



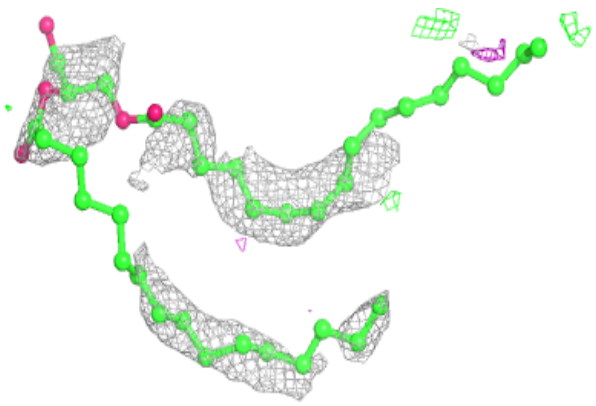
Electron density around UMQ C 1162:

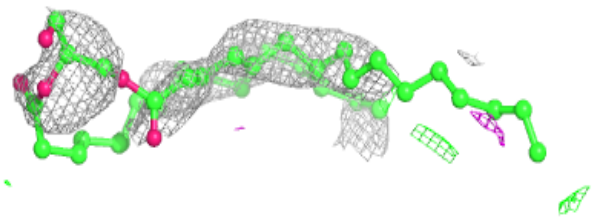
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

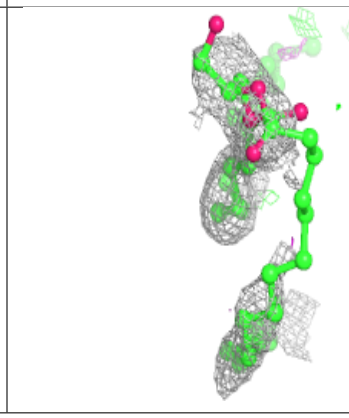


Electron density around LHG F 1164:

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

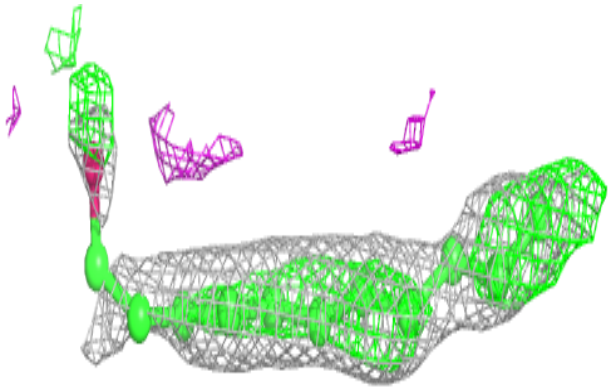


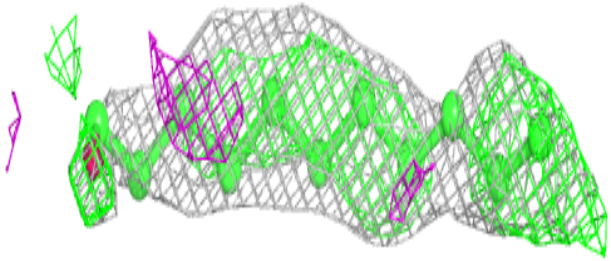


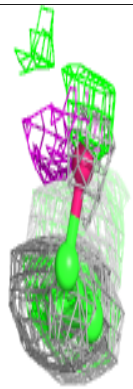


Electron density around UMQ G 1160:

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

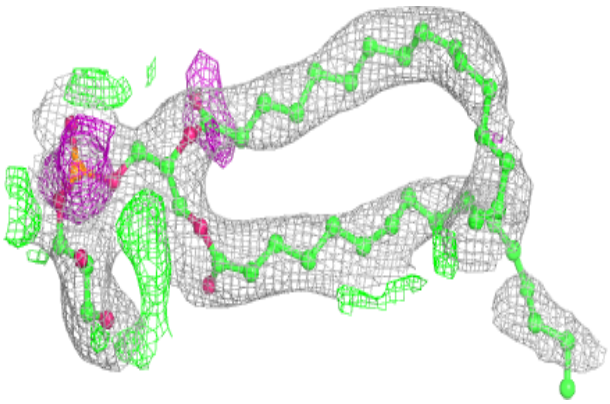


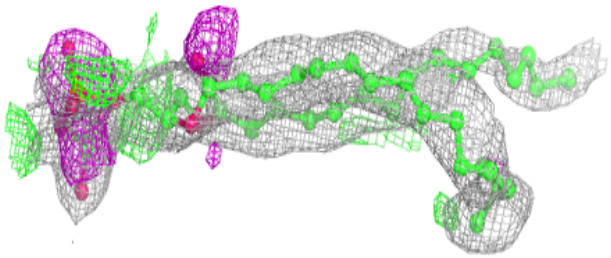


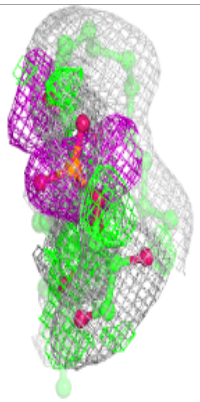


Electron density around LHG J 1158:

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

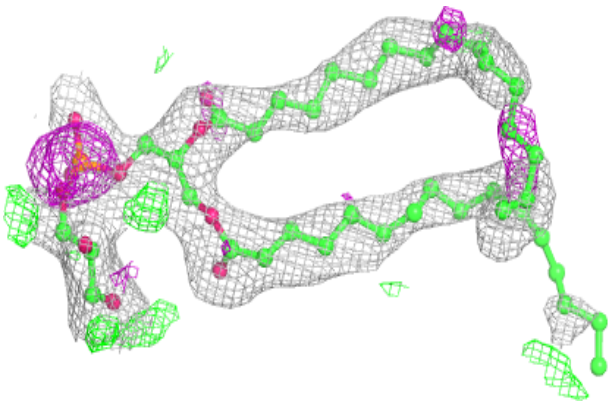


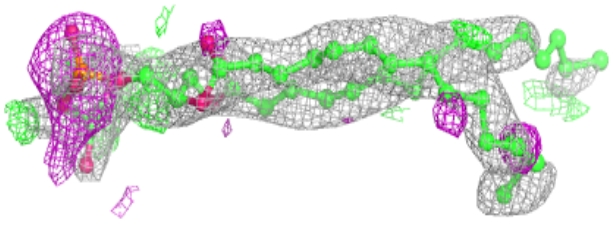


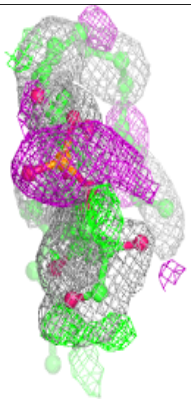


Electron density around LHG E 1158:

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

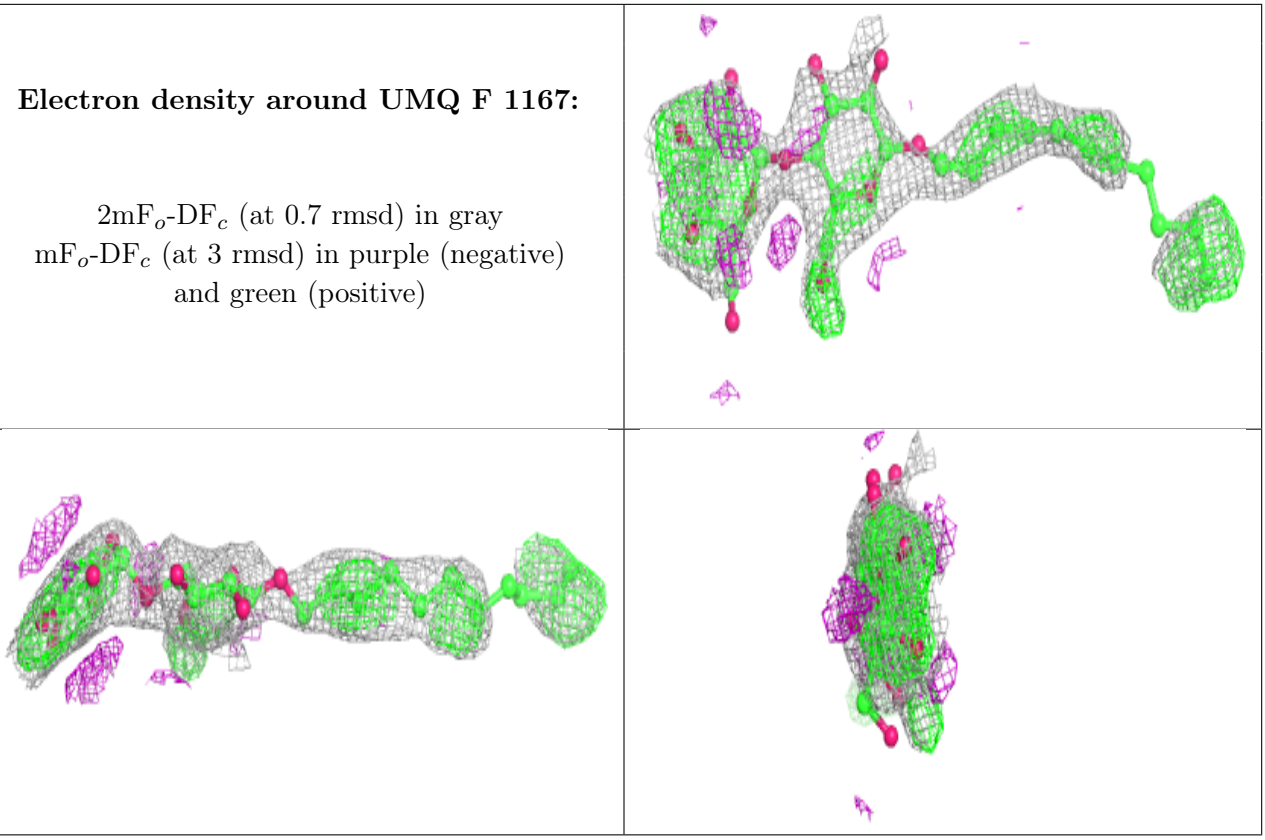






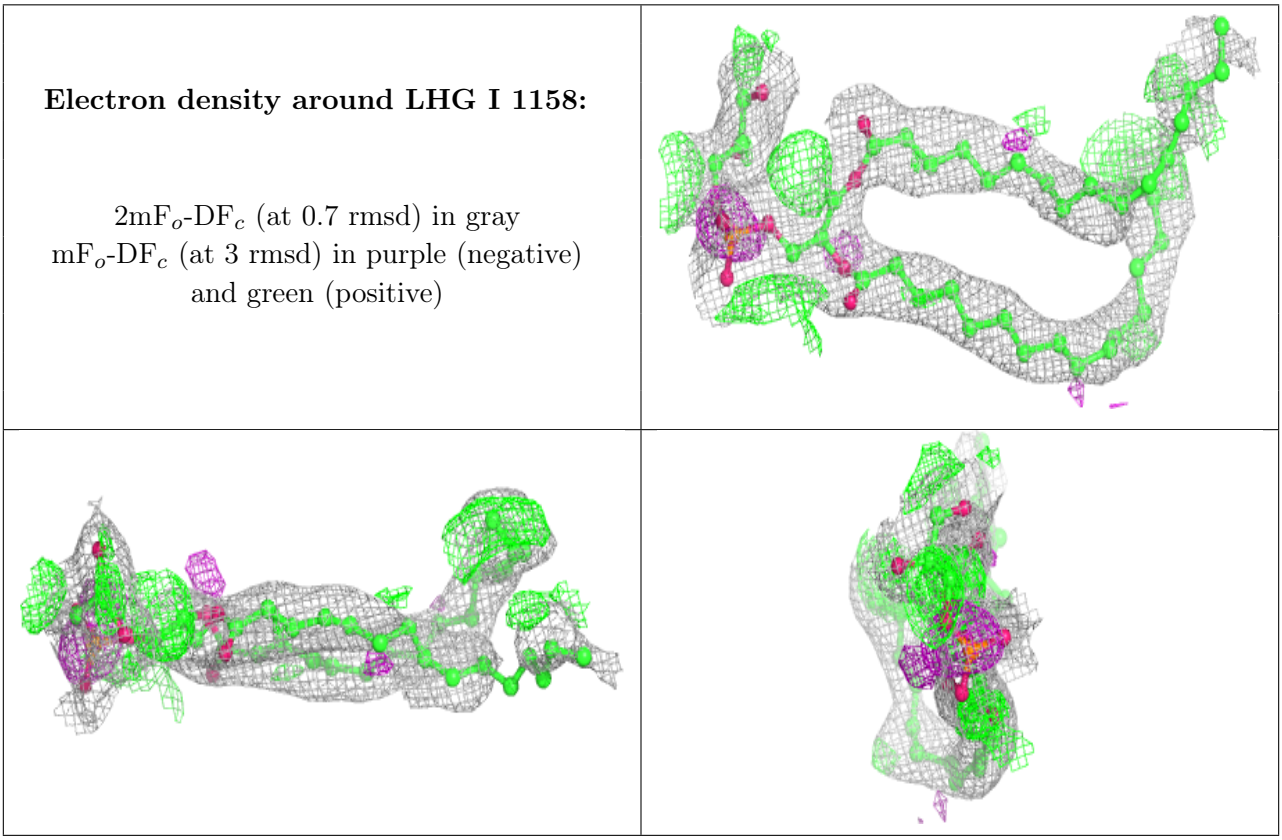
Electron density around UMQ F 1167:

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



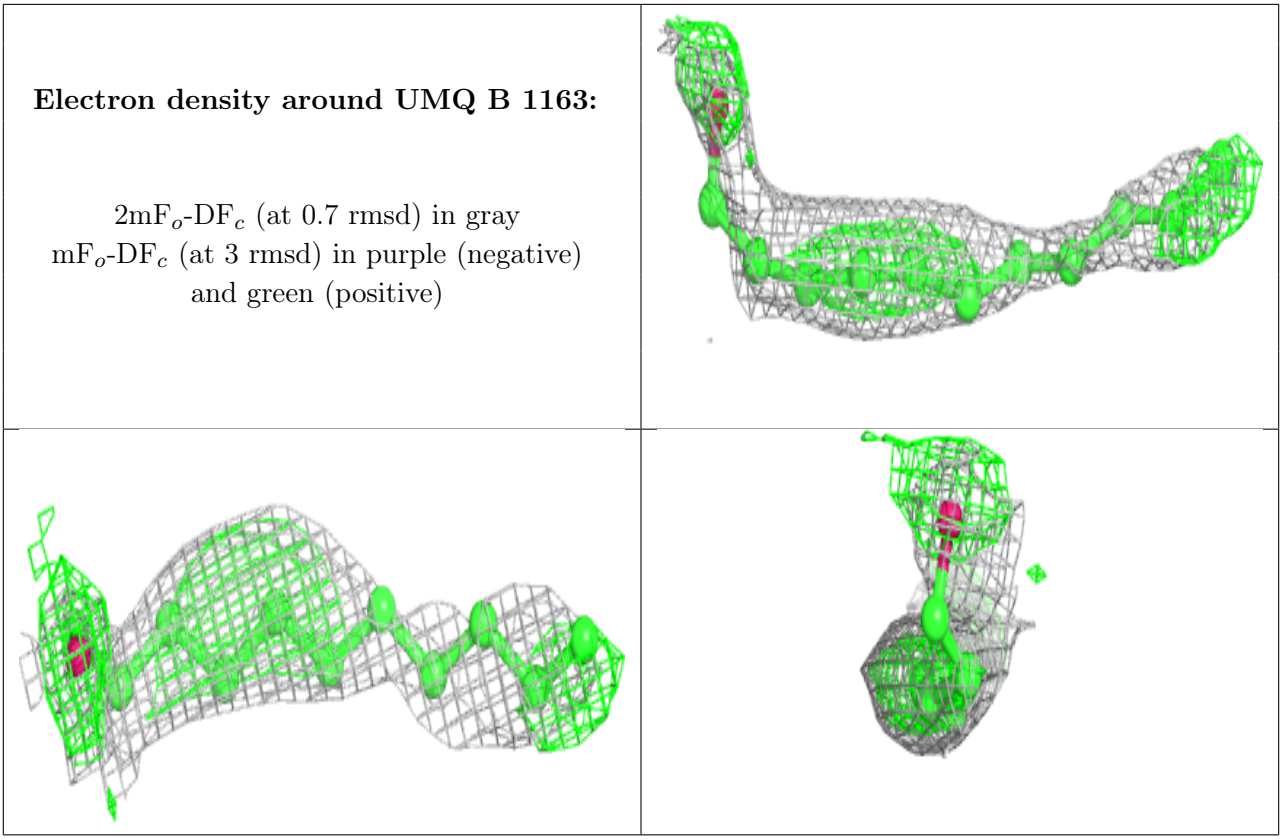
Electron density around LHG I 1158:

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



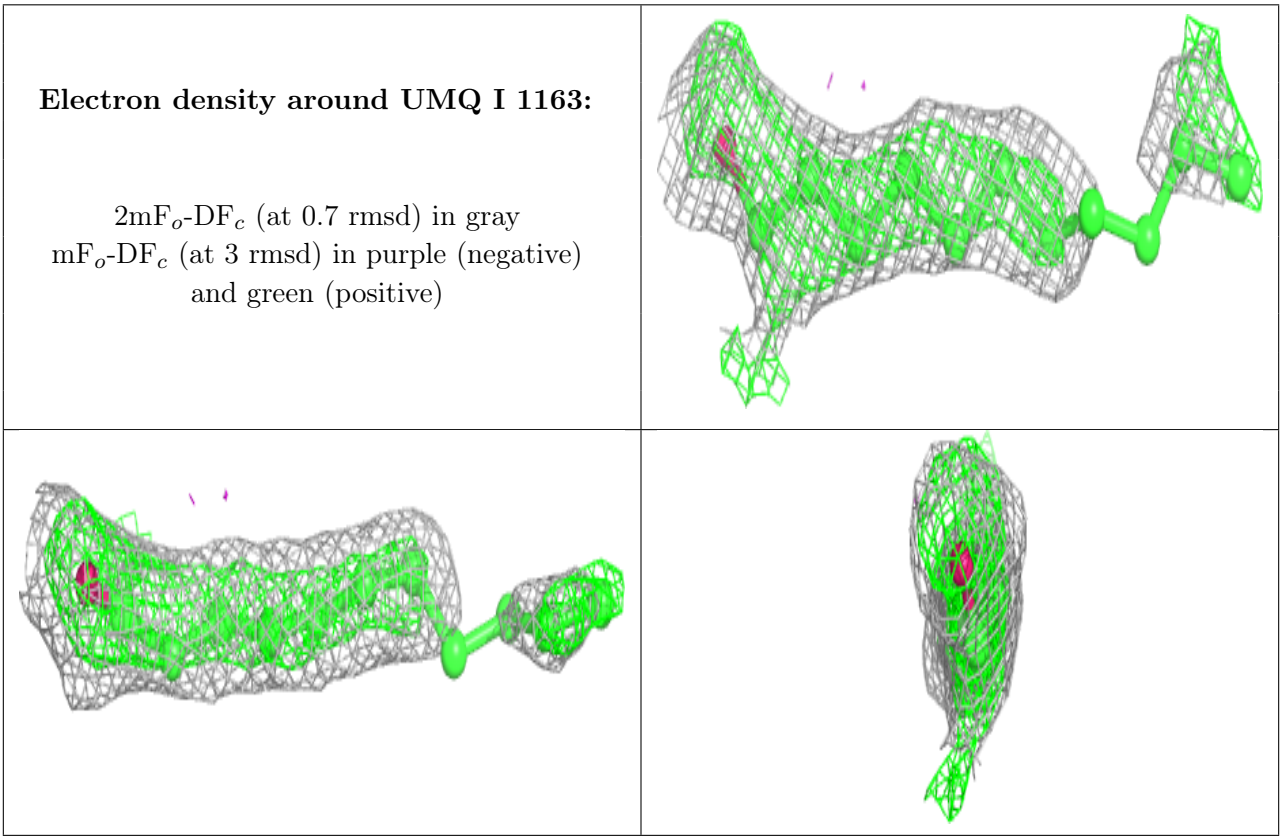
Electron density around UMQ B 1163:

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



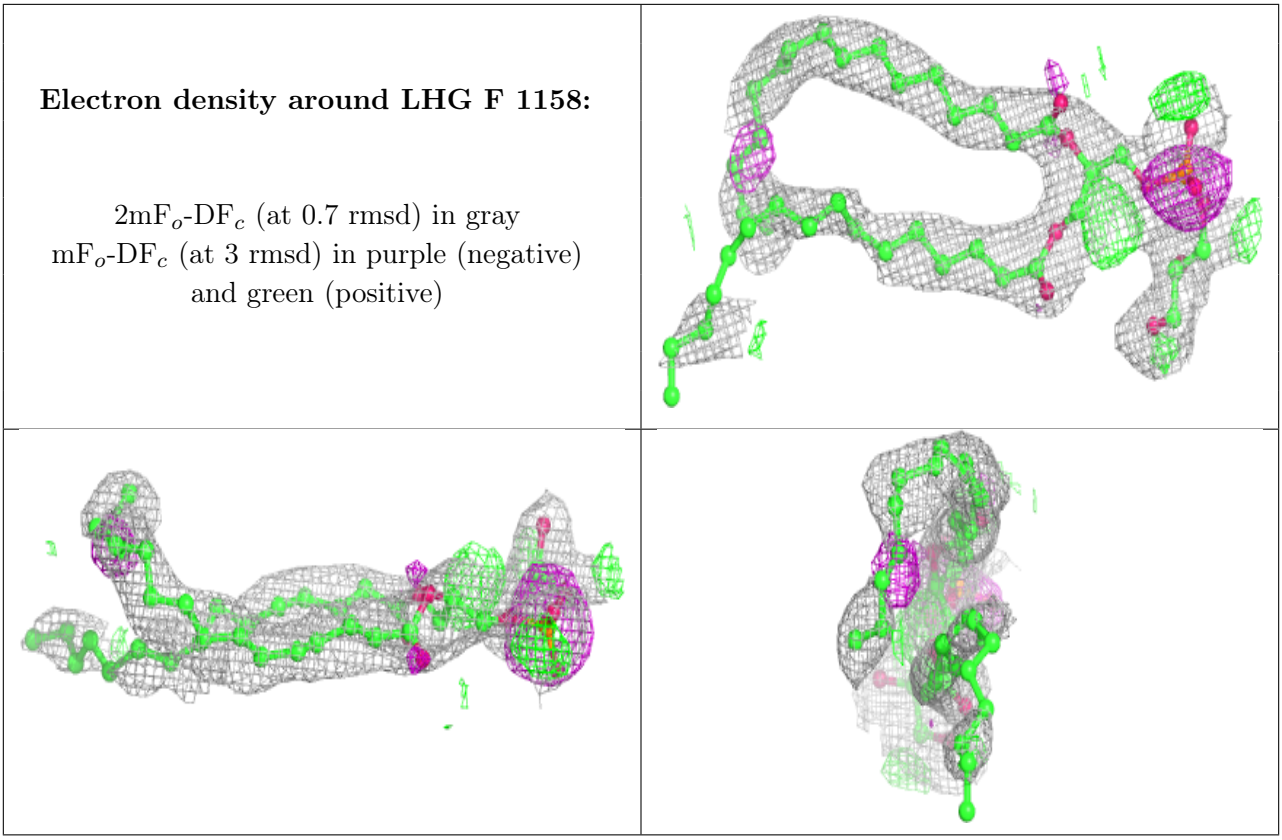
Electron density around UMQ I 1163:

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



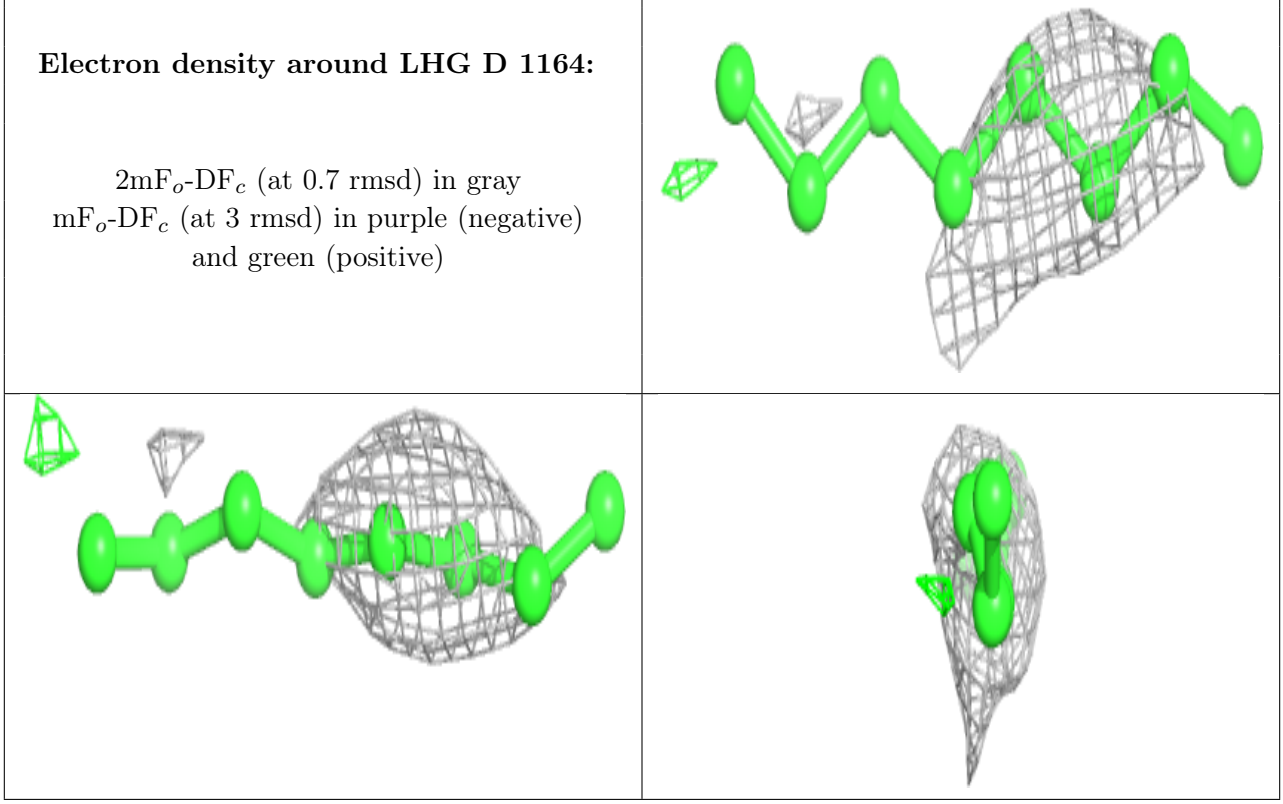
Electron density around LHG F 1158:

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



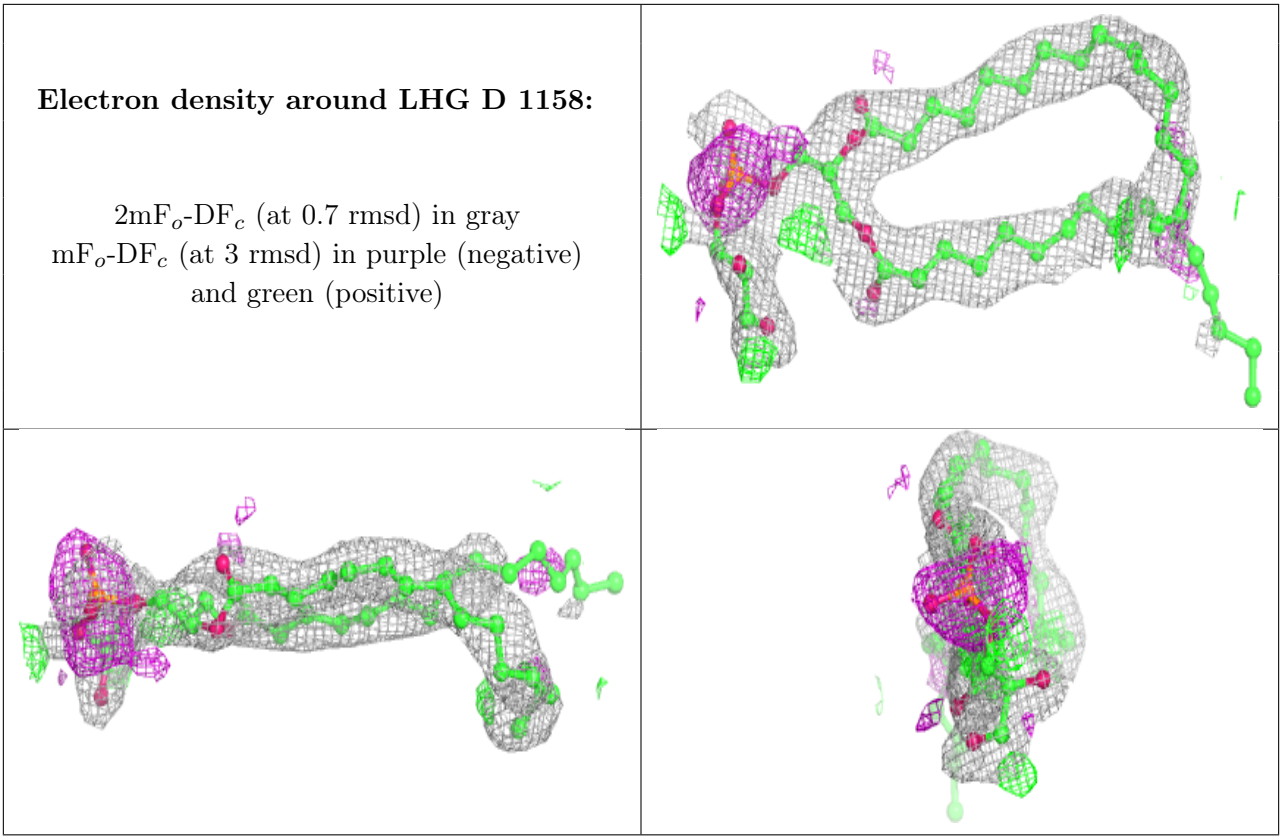
Electron density around LHG D 1164:

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



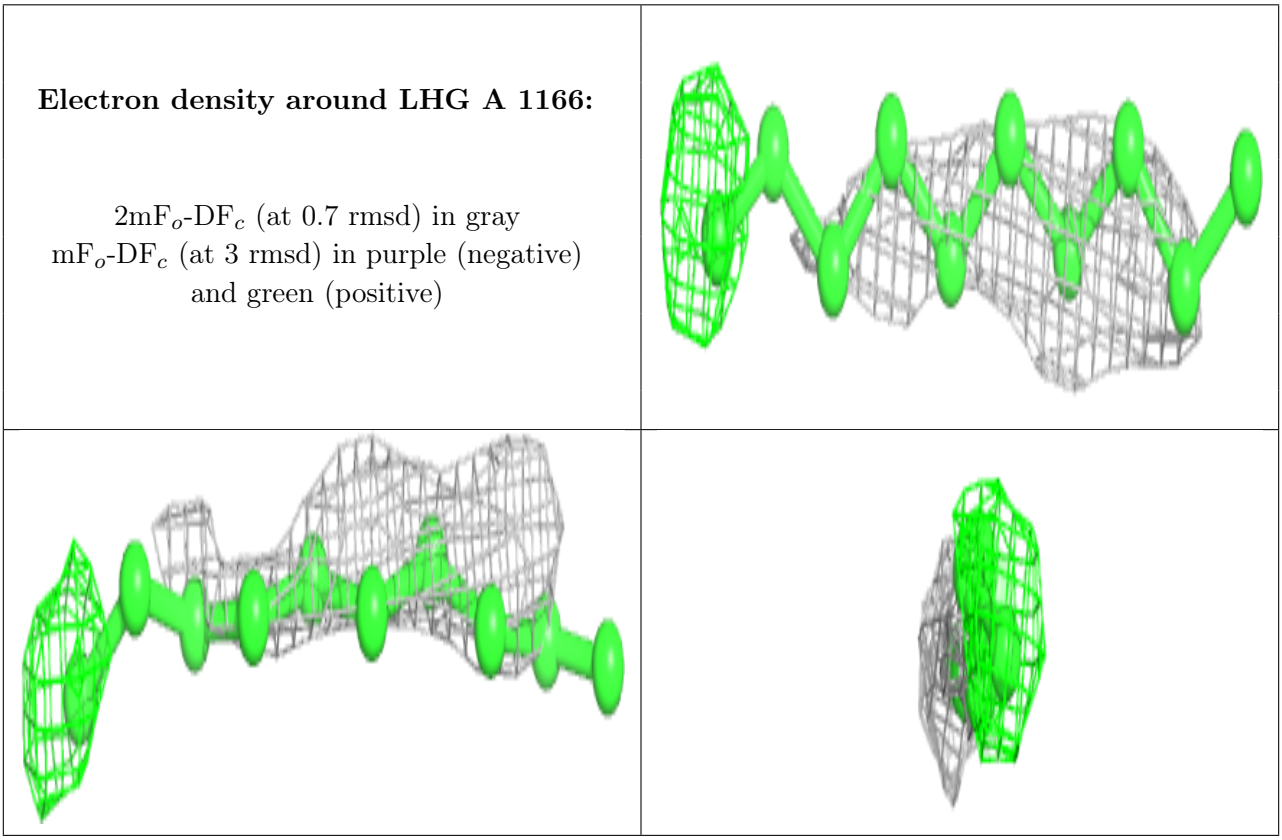
Electron density around LHG D 1158:

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



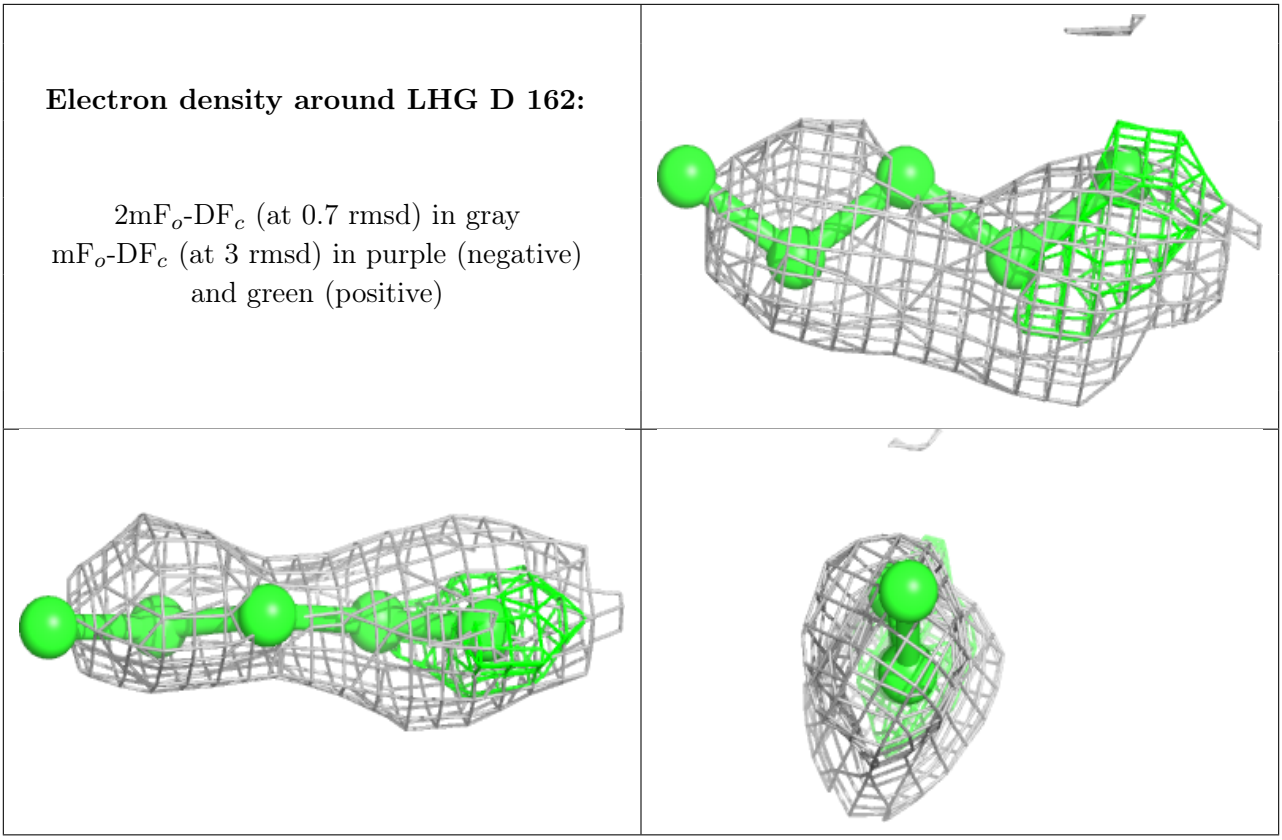
Electron density around LHG A 1166:

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



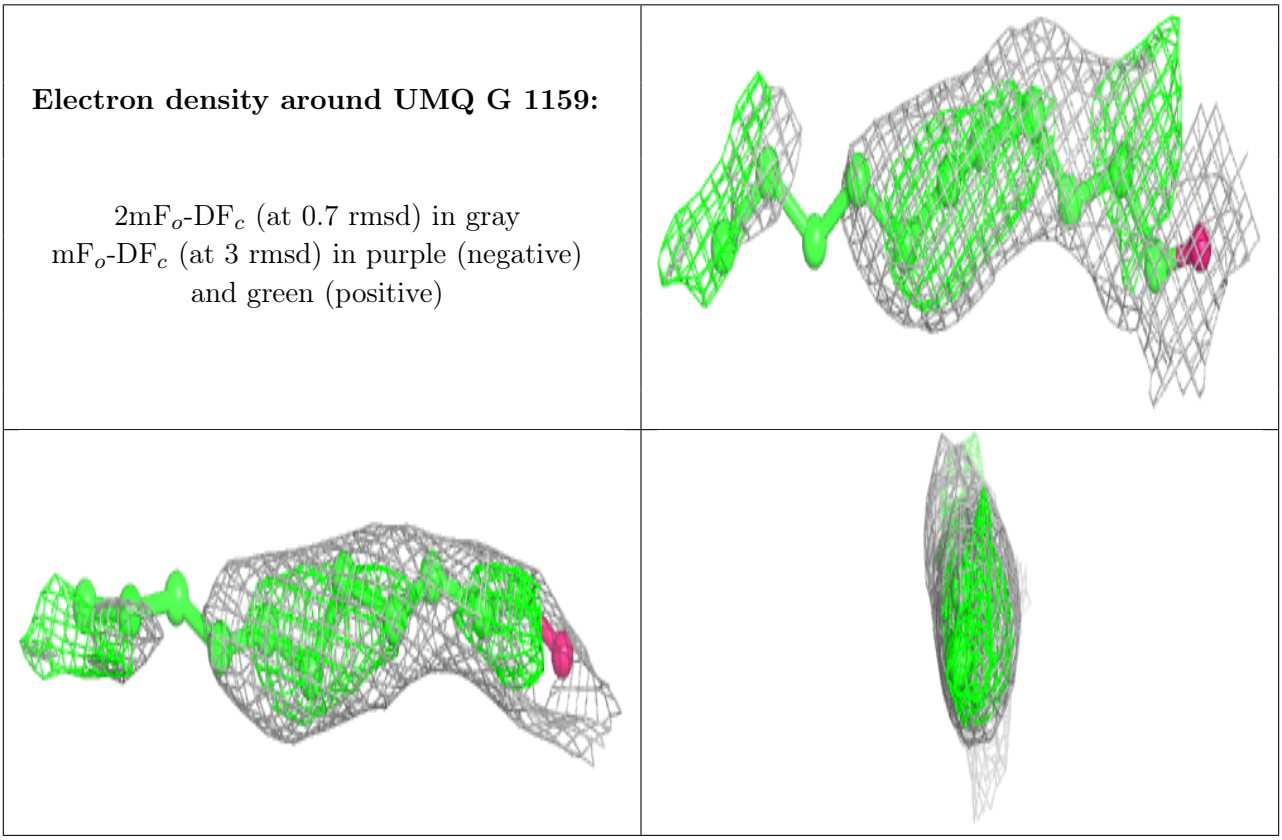
Electron density around LHG D 162:

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



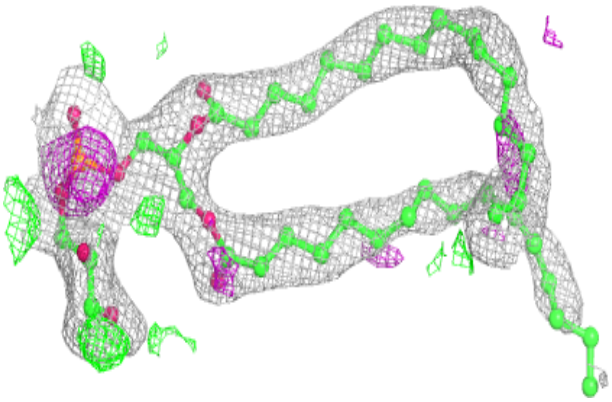
Electron density around UMQ G 1159:

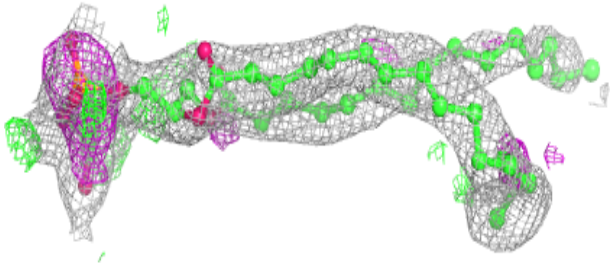
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

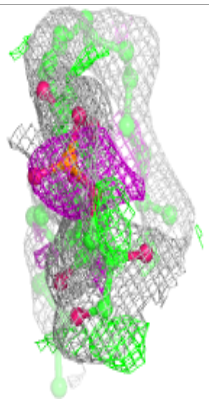


Electron density around LHG G 1158:

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

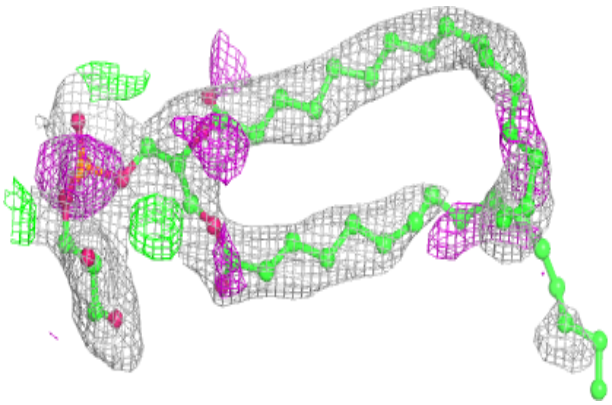


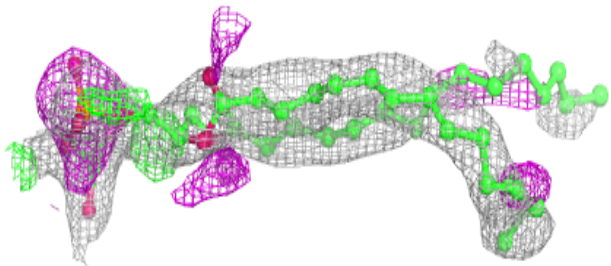


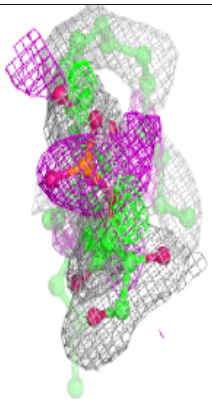


Electron density around LHG B 1158:

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

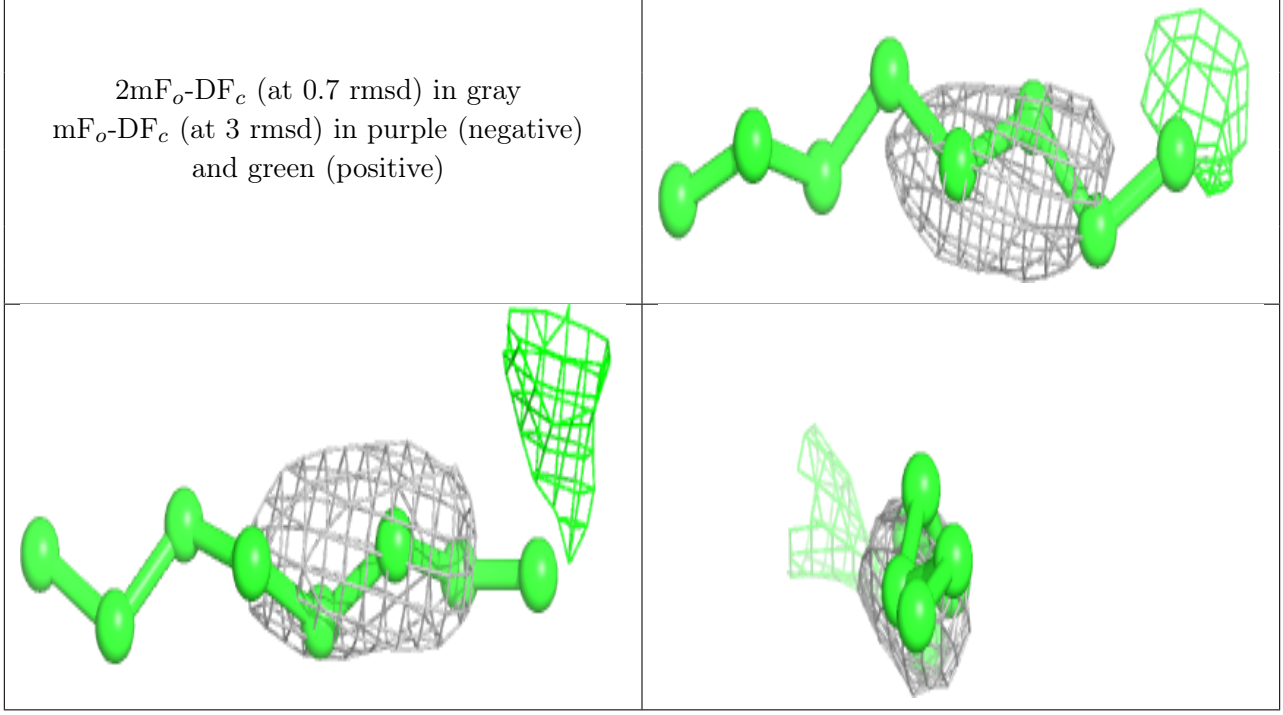






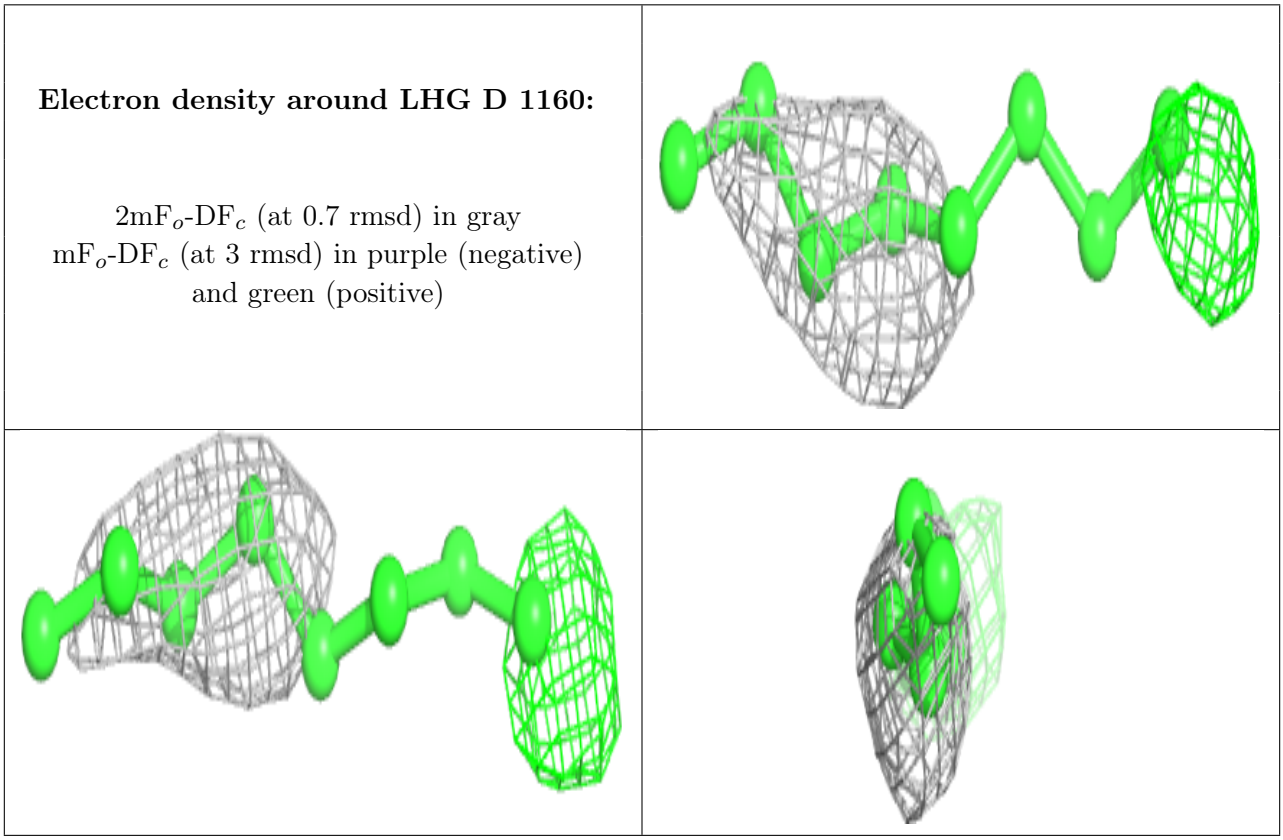
Electron density around LHG I 1160:

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



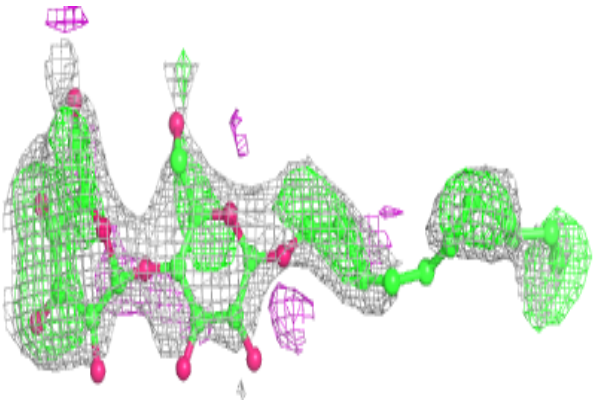
Electron density around LHG D 1160:

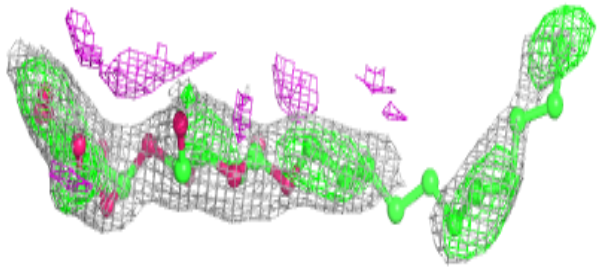
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

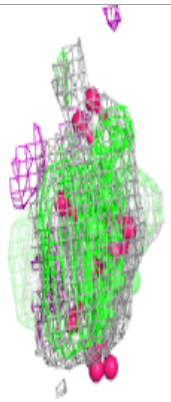


Electron density around UMQ C 1164:

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

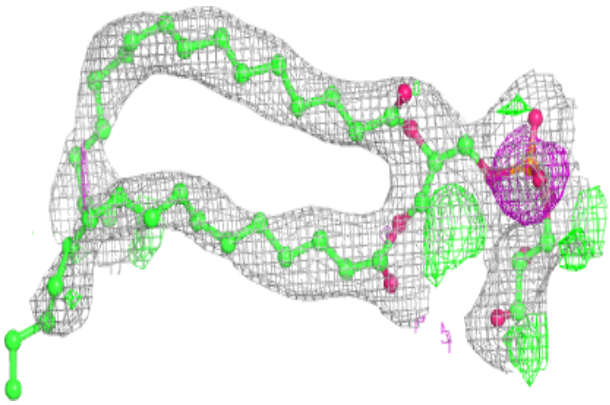


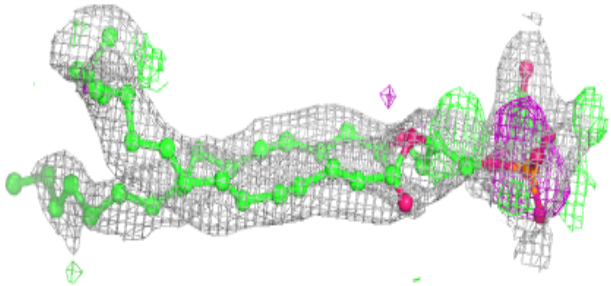


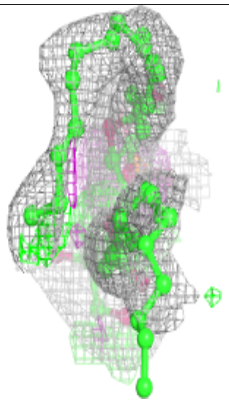


Electron density around LHG A 1158:

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

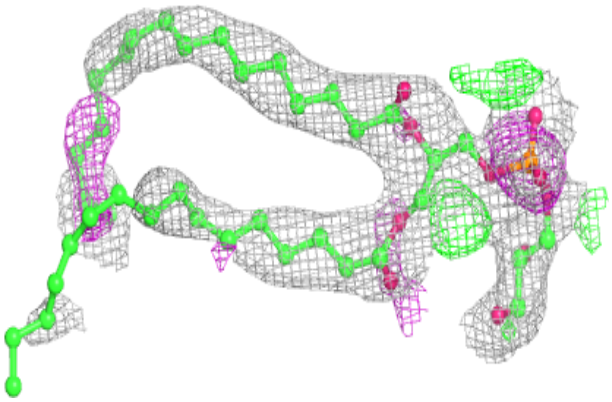


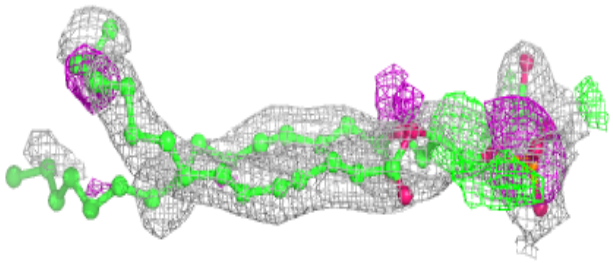


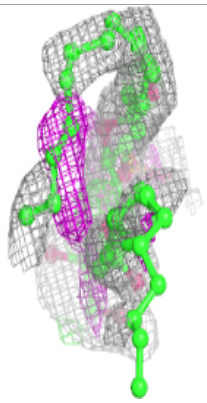


Electron density around LHG C 1158:

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

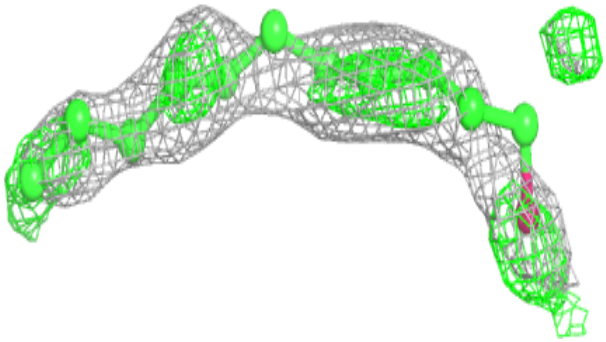


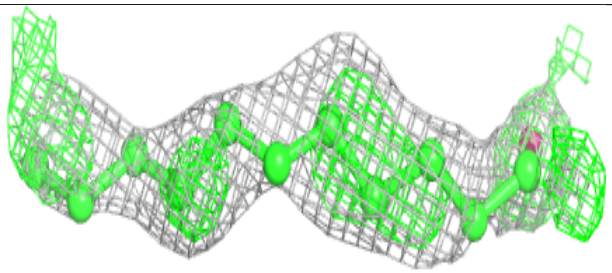


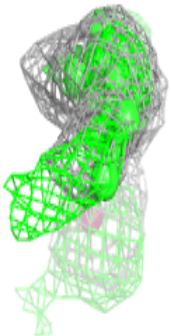


Electron density around UMQ E 1160:

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

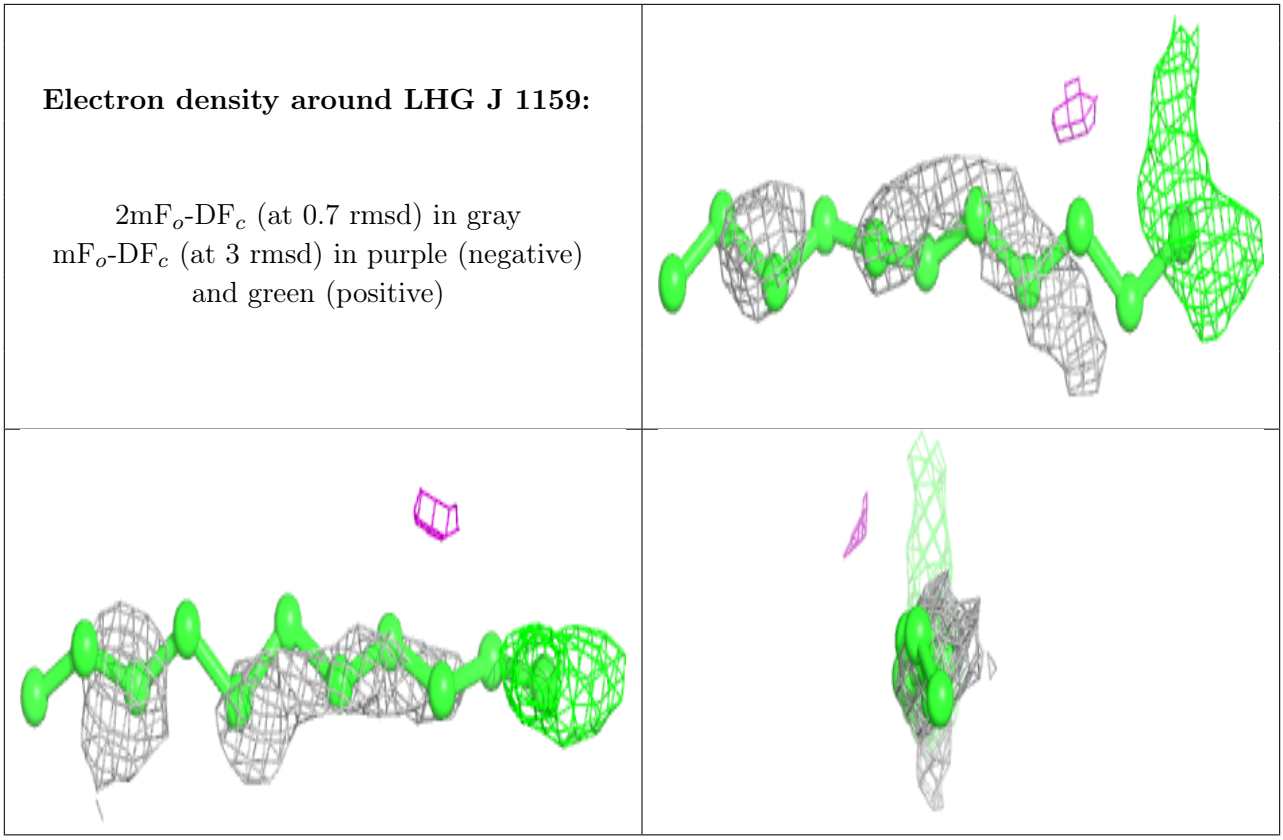






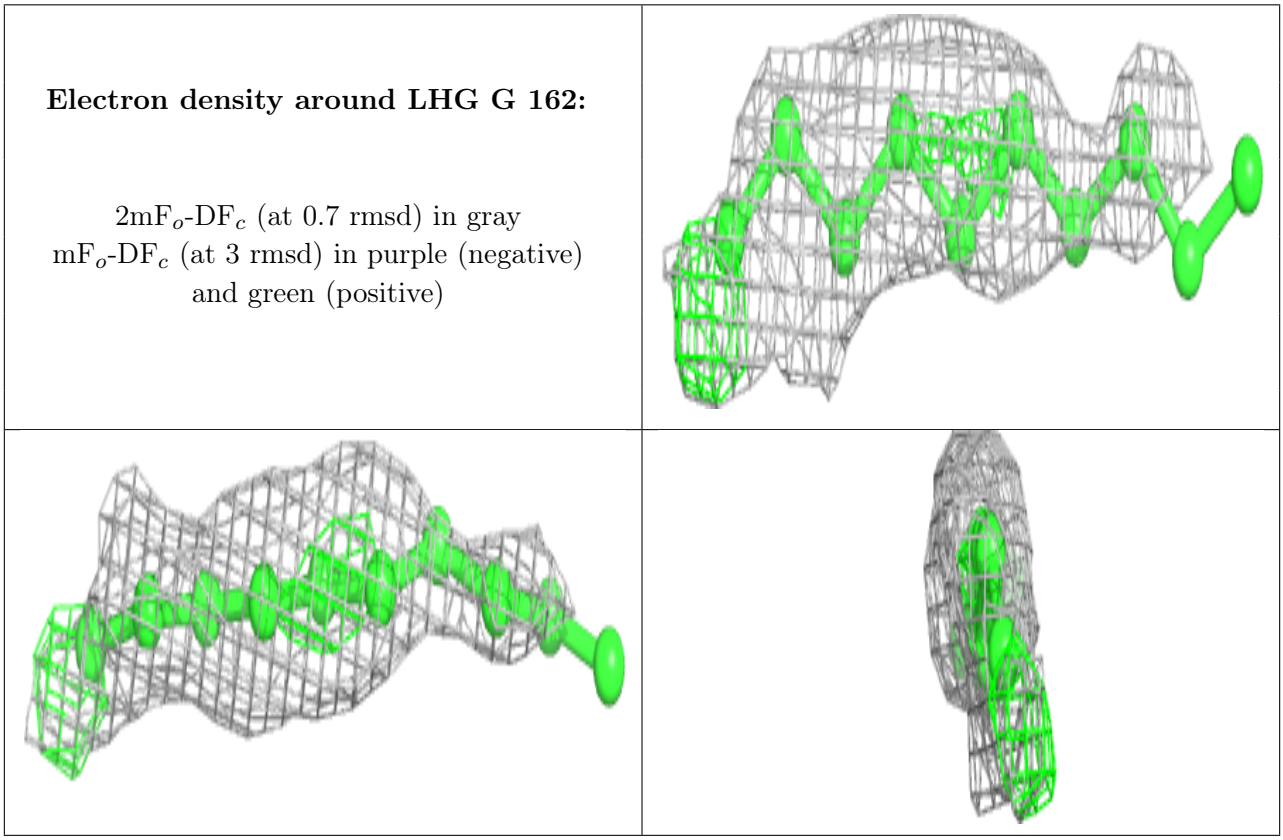
Electron density around LHG J 1159:

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



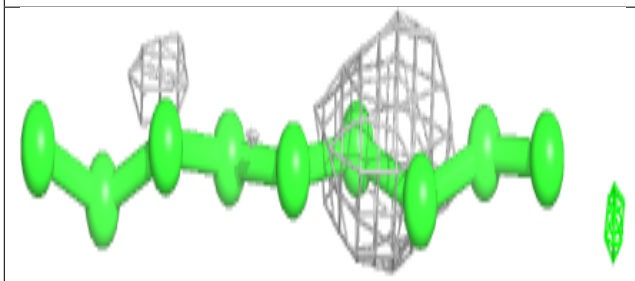
Electron density around LHG G 162:

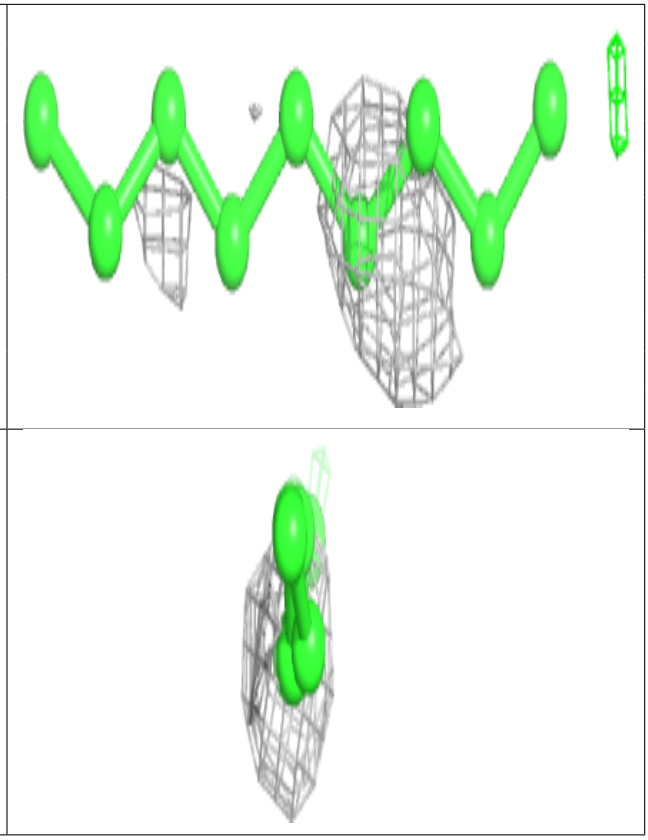
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



Electron density around LHG B 1160:

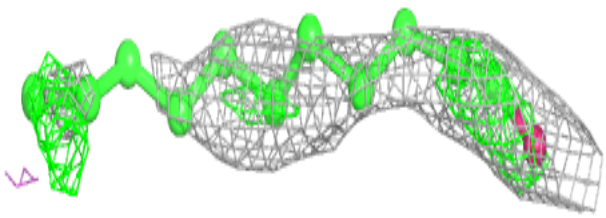
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

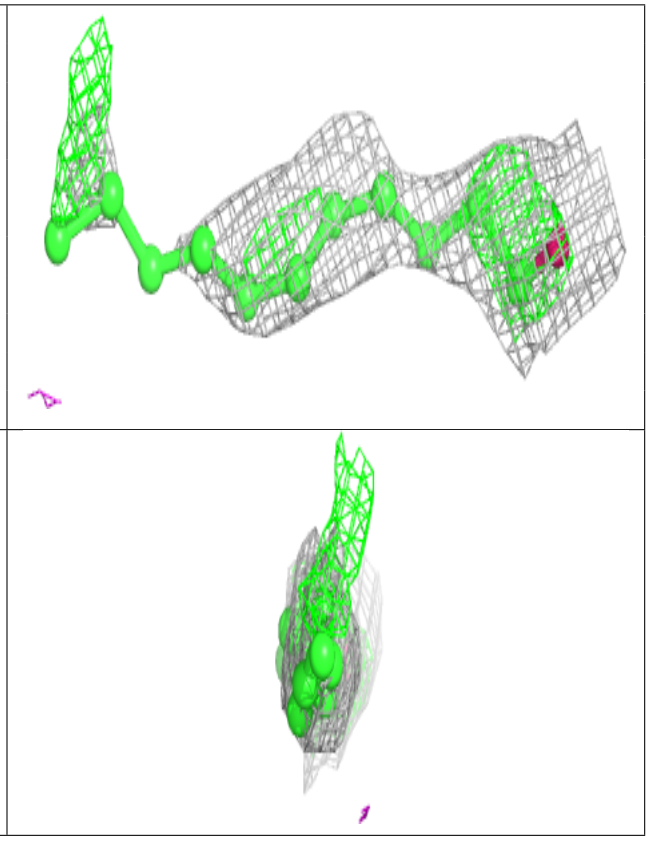




Electron density around UMQ E 1159:

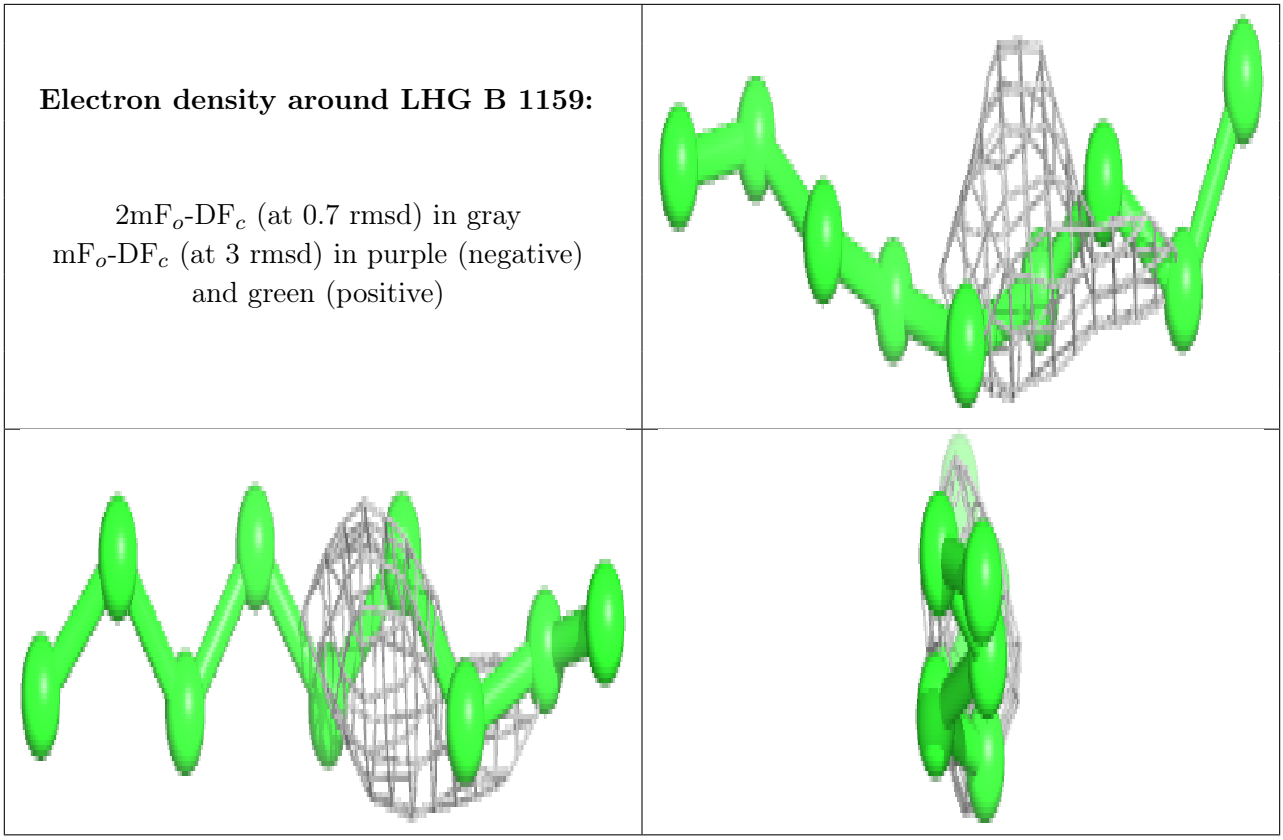
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)





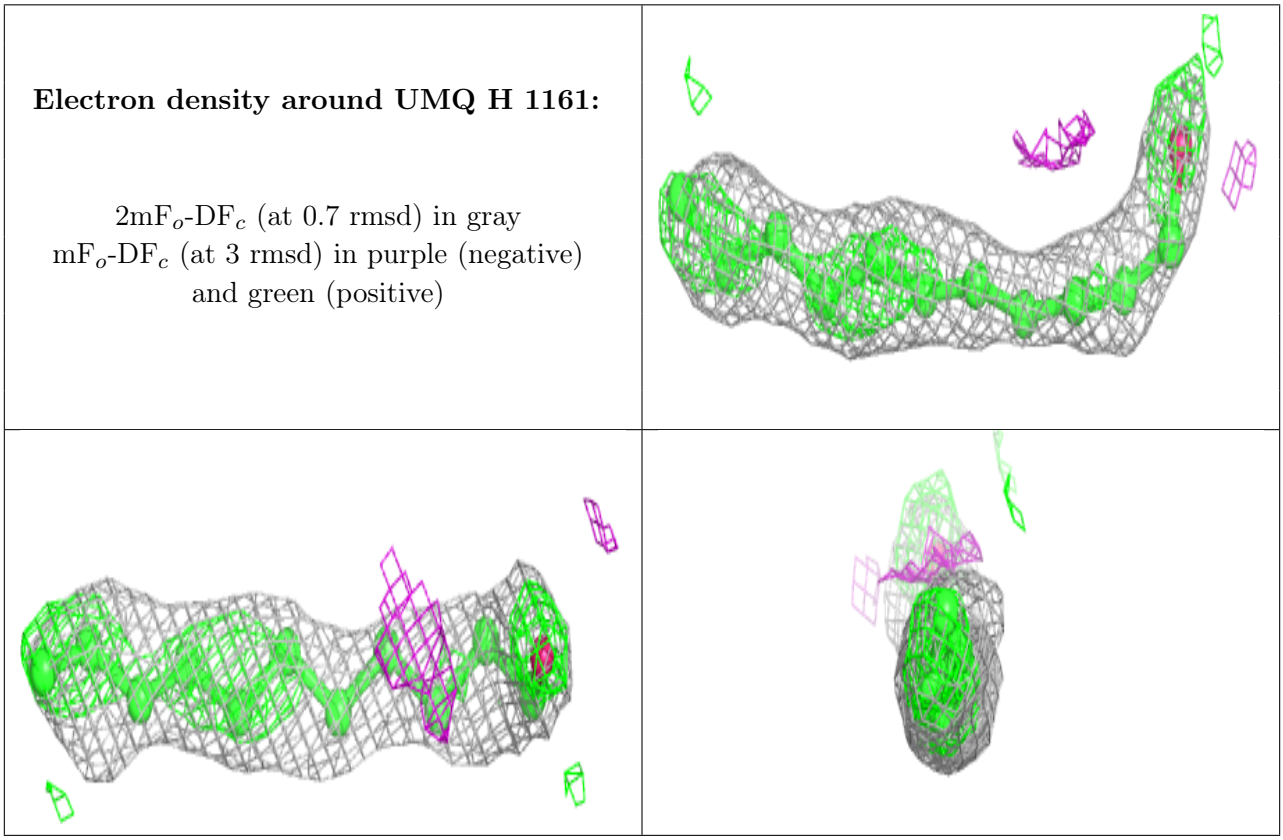
Electron density around LHG B 1159:

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



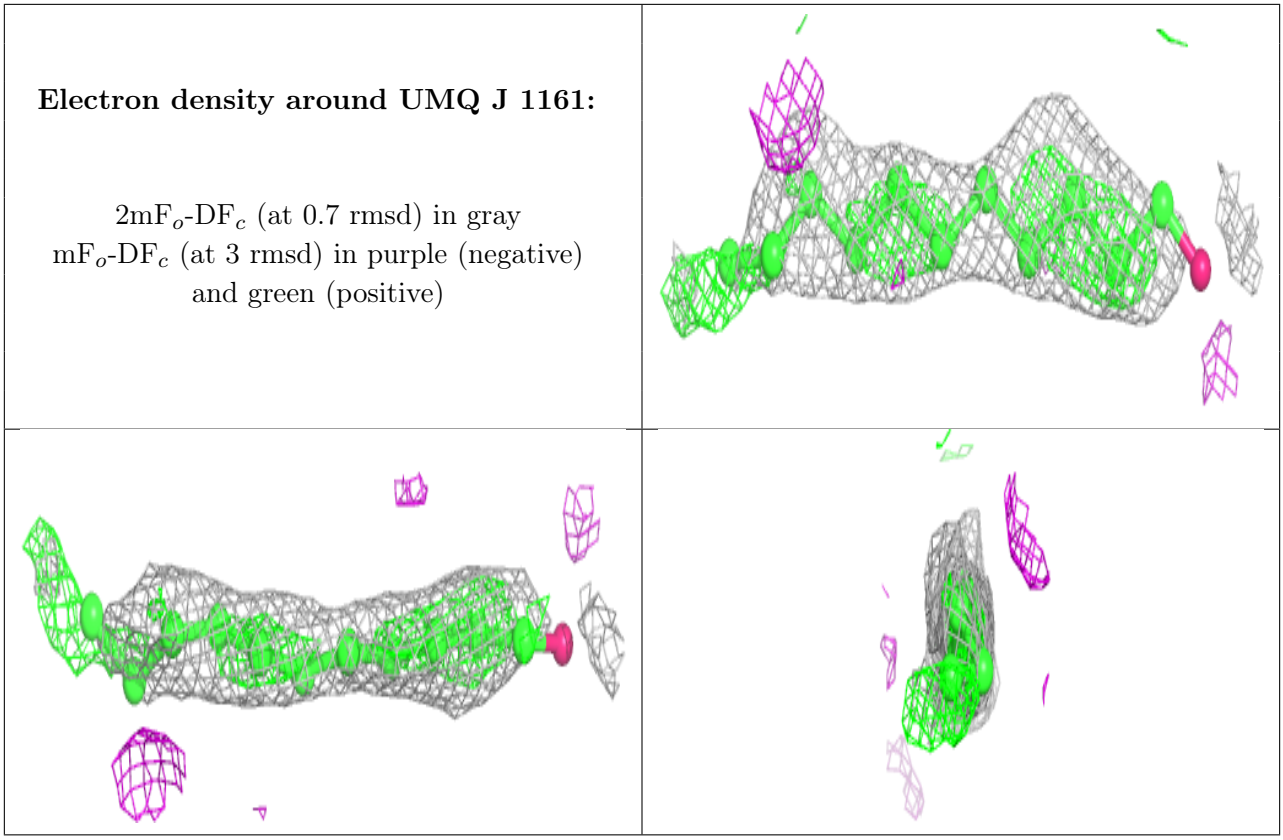
Electron density around UMQ H 1161:

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



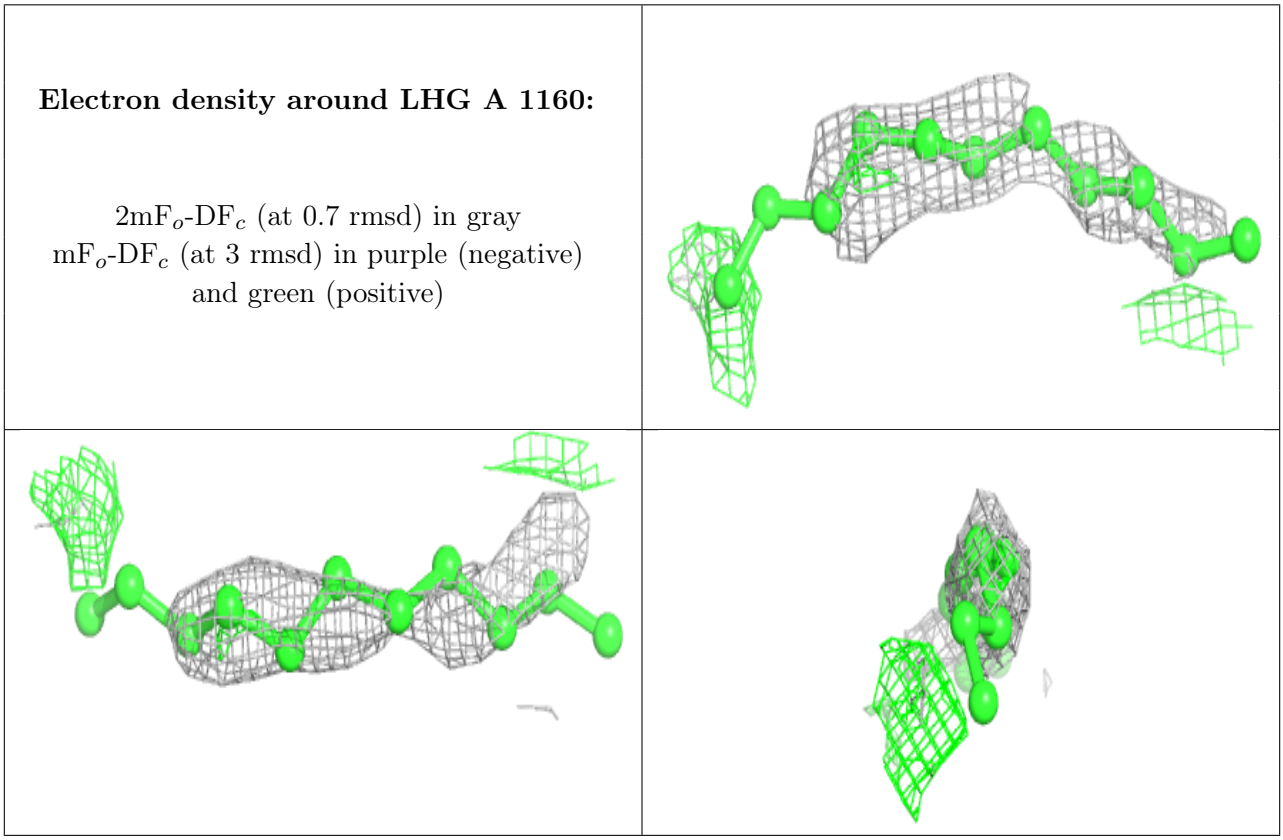
Electron density around UMQ J 1161:

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



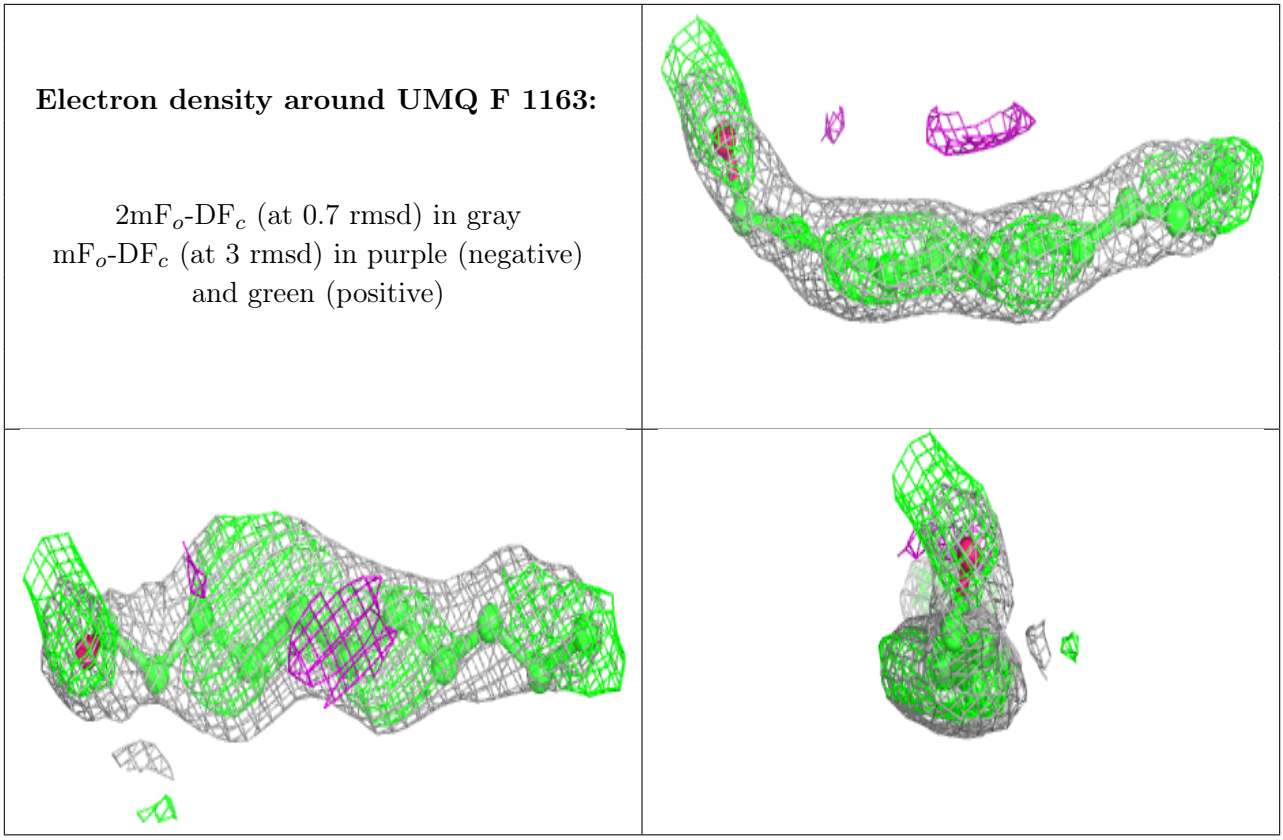
Electron density around LHG A 1160:

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



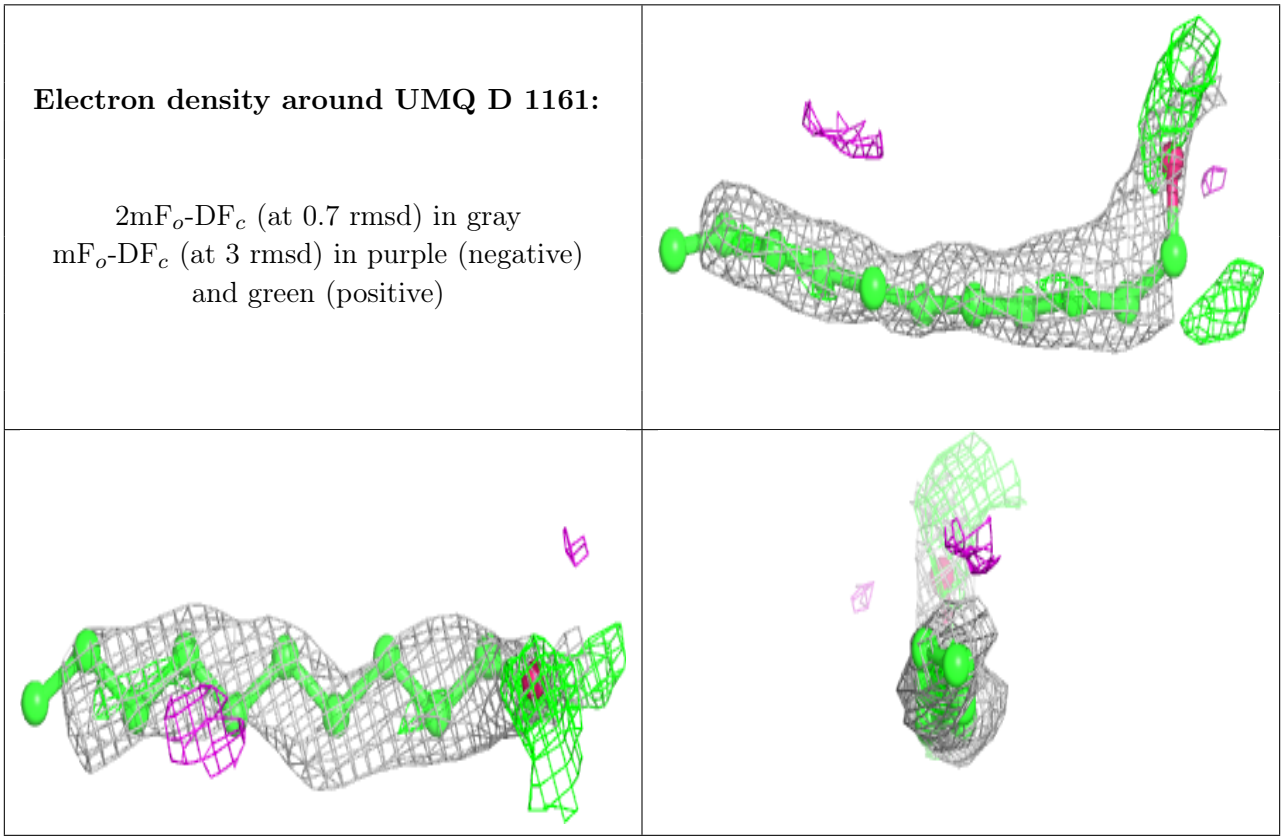
Electron density around UMQ F 1163:

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



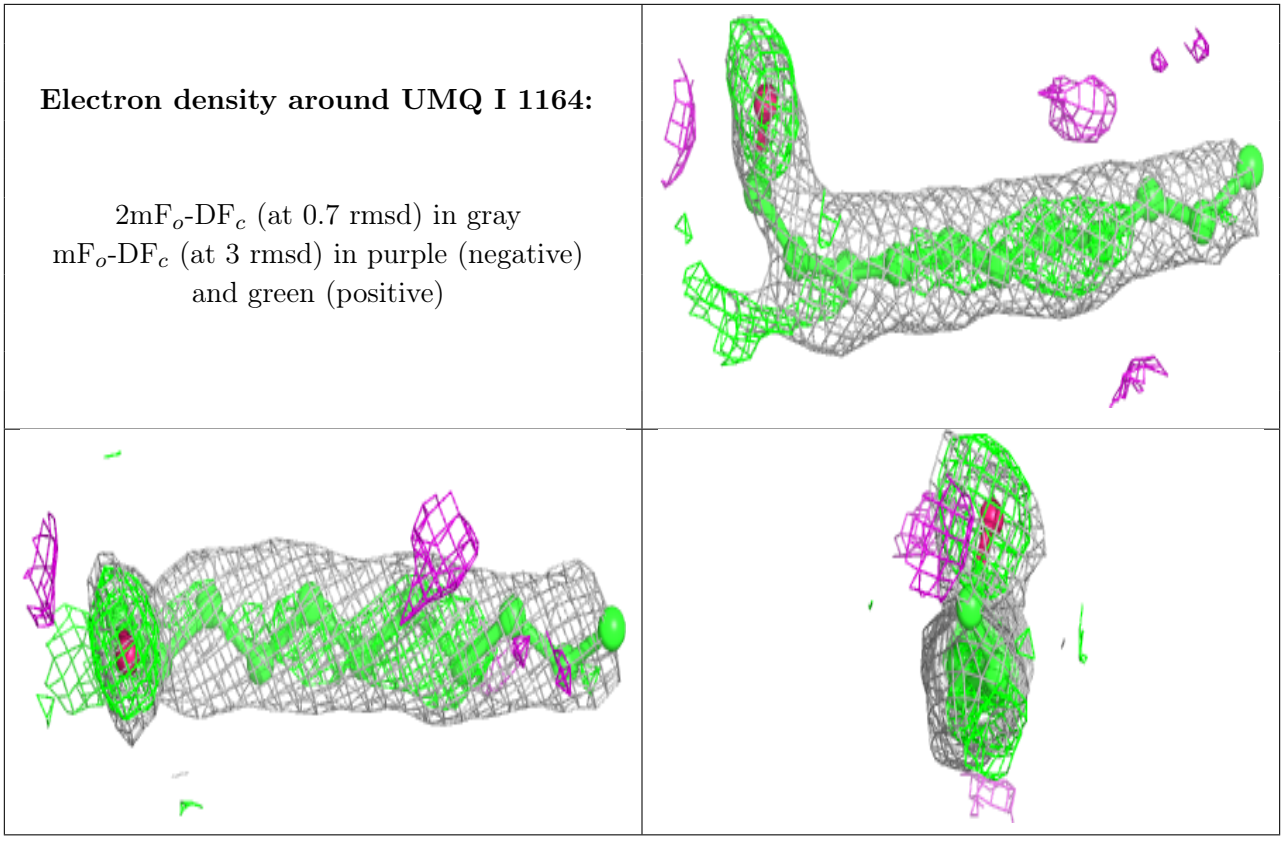
Electron density around UMQ D 1161:

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



Electron density around UMQ I 1164:

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



6.5 Other polymers (i)

There are no such residues in this entry.