Full wwPDB X-ray Structure Validation Report (i)

Feb 10, 2025 – 01:18 PM JST

PDB ID	:	9K2B
Title	:	Structure of ClpP from Staphylococcus aureus in complex with ZY18
Authors	:	Wei, B.Y.; Wang, P.Y.; Wu, W.; Zhang, T.; Yang, C.-G.
Deposited on	:	2024-10-17
Resolution	:	2.45 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

The following versions of software and data (see references (i)) were used in the production of this report:

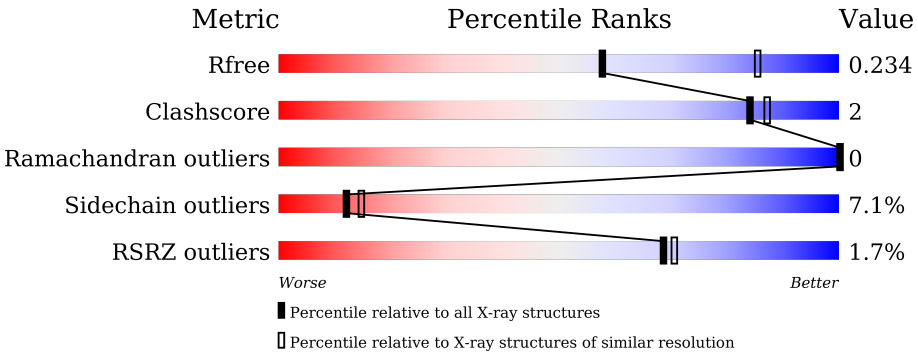
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.21
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.004 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.40

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 2.45 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	1096 (2.46-2.46)
Clashscore	180529	1178 (2.46-2.46)
Ramachandran outliers	177936	1170 (2.46-2.46)
Sidechain outliers	177891	1170 (2.46-2.46)
RSRZ outliers	164620	1096 (2.46-2.46)

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	201	2% 86% 9% 5%
1	B	201	2% 83% 11% 6%
1	C	201	85% 6% 8%
1	D	201	2% 83% 8% 8%
1	E	201	% 81% 9% 10%
1	F	201	2% 84% 5% • 9%

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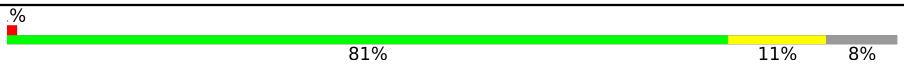
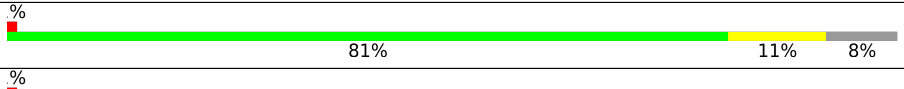
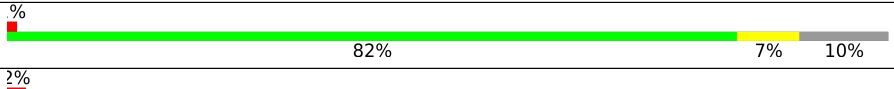
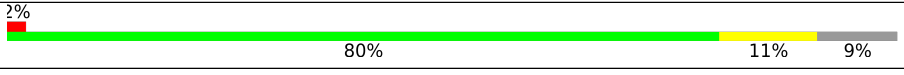
Mol	Chain	Length	Quality of chain
1	G	201	
1	H	201	
1	I	201	
1	J	201	
1	K	201	
1	L	201	
1	M	201	
1	N	201	

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 20624 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 ATP-dependent Clp protease proteolytic subunit.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	191	Total	C	N	O	S	0	0	0
			1452	914	246	286	6			
1	B	189	Total	C	N	O	S	0	0	0
			1438	905	243	284	6			
1	C	184	Total	C	N	O	S	0	0	0
			1412	891	239	276	6			
1	D	184	Total	C	N	O	S	0	0	0
			1409	888	239	276	6			
1	E	181	Total	C	N	O	S	0	0	0
			1390	877	236	271	6			
1	F	182	Total	C	N	O	S	0	0	0
			1401	886	237	272	6			
1	G	184	Total	C	N	O	S	0	0	0
			1408	888	238	276	6			
1	H	191	Total	C	N	O	S	0	0	0
			1455	915	247	287	6			
1	I	190	Total	C	N	O	S	0	0	0
			1443	909	245	283	6			
1	J	185	Total	C	N	O	S	0	0	0
			1418	893	240	279	6			
1	K	181	Total	C	N	O	S	0	0	0
			1386	874	235	271	6			
1	L	183	Total	C	N	O	S	0	0	0
			1400	882	238	274	6			
1	M	180	Total	C	N	O	S	0	0	0
			1378	868	235	269	6			
1	N	180	Total	C	N	O	S	0	0	0
			1378	868	235	269	6			

There are 84 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	196	HIS	-	expression tag	UNP A7WZR9

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Chain	Residue	Modelled	Actual	Comment	Reference
A	197	HIS	-	expression tag	UNP A7WZR9
A	198	HIS	-	expression tag	UNP A7WZR9
A	199	HIS	-	expression tag	UNP A7WZR9
A	200	HIS	-	expression tag	UNP A7WZR9
A	201	HIS	-	expression tag	UNP A7WZR9
B	196	HIS	-	expression tag	UNP A7WZR9
B	197	HIS	-	expression tag	UNP A7WZR9
B	198	HIS	-	expression tag	UNP A7WZR9
B	199	HIS	-	expression tag	UNP A7WZR9
B	200	HIS	-	expression tag	UNP A7WZR9
B	201	HIS	-	expression tag	UNP A7WZR9
C	196	HIS	-	expression tag	UNP A7WZR9
C	197	HIS	-	expression tag	UNP A7WZR9
C	198	HIS	-	expression tag	UNP A7WZR9
C	199	HIS	-	expression tag	UNP A7WZR9
C	200	HIS	-	expression tag	UNP A7WZR9
C	201	HIS	-	expression tag	UNP A7WZR9
D	196	HIS	-	expression tag	UNP A7WZR9
D	197	HIS	-	expression tag	UNP A7WZR9
D	198	HIS	-	expression tag	UNP A7WZR9
D	199	HIS	-	expression tag	UNP A7WZR9
D	200	HIS	-	expression tag	UNP A7WZR9
D	201	HIS	-	expression tag	UNP A7WZR9
E	196	HIS	-	expression tag	UNP A7WZR9
E	197	HIS	-	expression tag	UNP A7WZR9
E	198	HIS	-	expression tag	UNP A7WZR9
E	199	HIS	-	expression tag	UNP A7WZR9
E	200	HIS	-	expression tag	UNP A7WZR9
E	201	HIS	-	expression tag	UNP A7WZR9
F	196	HIS	-	expression tag	UNP A7WZR9
F	197	HIS	-	expression tag	UNP A7WZR9
F	198	HIS	-	expression tag	UNP A7WZR9
F	199	HIS	-	expression tag	UNP A7WZR9
F	200	HIS	-	expression tag	UNP A7WZR9
F	201	HIS	-	expression tag	UNP A7WZR9
G	196	HIS	-	expression tag	UNP A7WZR9
G	197	HIS	-	expression tag	UNP A7WZR9
G	198	HIS	-	expression tag	UNP A7WZR9
G	199	HIS	-	expression tag	UNP A7WZR9
G	200	HIS	-	expression tag	UNP A7WZR9
G	201	HIS	-	expression tag	UNP A7WZR9
H	196	HIS	-	expression tag	UNP A7WZR9

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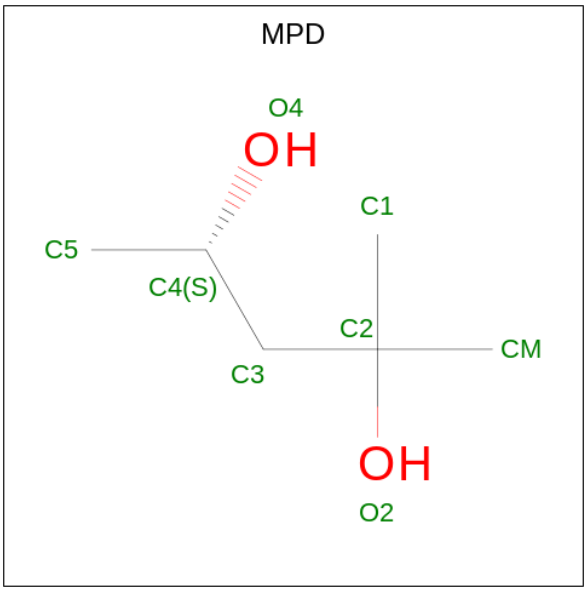
Chain	Residue	Modelled	Actual	Comment	Reference
H	197	HIS	-	expression tag	UNP A7WZR9
H	198	HIS	-	expression tag	UNP A7WZR9
H	199	HIS	-	expression tag	UNP A7WZR9
H	200	HIS	-	expression tag	UNP A7WZR9
H	201	HIS	-	expression tag	UNP A7WZR9
I	196	HIS	-	expression tag	UNP A7WZR9
I	197	HIS	-	expression tag	UNP A7WZR9
I	198	HIS	-	expression tag	UNP A7WZR9
I	199	HIS	-	expression tag	UNP A7WZR9
I	200	HIS	-	expression tag	UNP A7WZR9
I	201	HIS	-	expression tag	UNP A7WZR9
J	196	HIS	-	expression tag	UNP A7WZR9
J	197	HIS	-	expression tag	UNP A7WZR9
J	198	HIS	-	expression tag	UNP A7WZR9
J	199	HIS	-	expression tag	UNP A7WZR9
J	200	HIS	-	expression tag	UNP A7WZR9
J	201	HIS	-	expression tag	UNP A7WZR9
K	196	HIS	-	expression tag	UNP A7WZR9
K	197	HIS	-	expression tag	UNP A7WZR9
K	198	HIS	-	expression tag	UNP A7WZR9
K	199	HIS	-	expression tag	UNP A7WZR9
K	200	HIS	-	expression tag	UNP A7WZR9
K	201	HIS	-	expression tag	UNP A7WZR9
L	196	HIS	-	expression tag	UNP A7WZR9
L	197	HIS	-	expression tag	UNP A7WZR9
L	198	HIS	-	expression tag	UNP A7WZR9
L	199	HIS	-	expression tag	UNP A7WZR9
L	200	HIS	-	expression tag	UNP A7WZR9
L	201	HIS	-	expression tag	UNP A7WZR9
M	196	HIS	-	expression tag	UNP A7WZR9
M	197	HIS	-	expression tag	UNP A7WZR9
M	198	HIS	-	expression tag	UNP A7WZR9
M	199	HIS	-	expression tag	UNP A7WZR9
M	200	HIS	-	expression tag	UNP A7WZR9
M	201	HIS	-	expression tag	UNP A7WZR9
N	196	HIS	-	expression tag	UNP A7WZR9
N	197	HIS	-	expression tag	UNP A7WZR9
N	198	HIS	-	expression tag	UNP A7WZR9
N	199	HIS	-	expression tag	UNP A7WZR9
N	200	HIS	-	expression tag	UNP A7WZR9
N	201	HIS	-	expression tag	UNP A7WZR9

- Molecule 2 is MAGNESIUM ION (three-letter code: MG) (formula: Mg) (labeled as "Ligand

of Interest" by depositor).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total Mg 1 1	0	0
2	B	1	Total Mg 1 1	0	0
2	C	1	Total Mg 1 1	0	0
2	D	1	Total Mg 1 1	0	0
2	E	1	Total Mg 1 1	0	0
2	F	1	Total Mg 1 1	0	0
2	G	1	Total Mg 1 1	0	0
2	H	1	Total Mg 1 1	0	0
2	I	1	Total Mg 1 1	0	0
2	J	1	Total Mg 1 1	0	0
2	K	1	Total Mg 1 1	0	0
2	L	1	Total Mg 1 1	0	0
2	M	1	Total Mg 1 1	0	0
2	N	1	Total Mg 1 1	0	0

- Molecule 3 is (4S)-2-METHYL-2,4-PENTANEDIOL (three-letter code: MPD) (formula: $C_6H_{14}O_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total	C	O	0	0
			8	6	2		
3	B	1	Total	C	O	0	0
			8	6	2		
3	B	1	Total	C	O	0	0
			8	6	2		
3	C	1	Total	C	O	0	0
			8	6	2		
3	D	1	Total	C	O	0	0
			8	6	2		
3	E	1	Total	C	O	0	0
			8	6	2		
3	F	1	Total	C	O	0	0
			8	6	2		
3	G	1	Total	C	O	0	0
			8	6	2		
3	H	1	Total	C	O	0	0
			8	6	2		
3	I	1	Total	C	O	0	0
			8	6	2		
3	I	1	Total	C	O	0	0
			8	6	2		
3	J	1	Total	C	O	0	0
			8	6	2		
3	K	1	Total	C	O	0	0
			8	6	2		
3	L	1	Total	C	O	0	0
			8	6	2		

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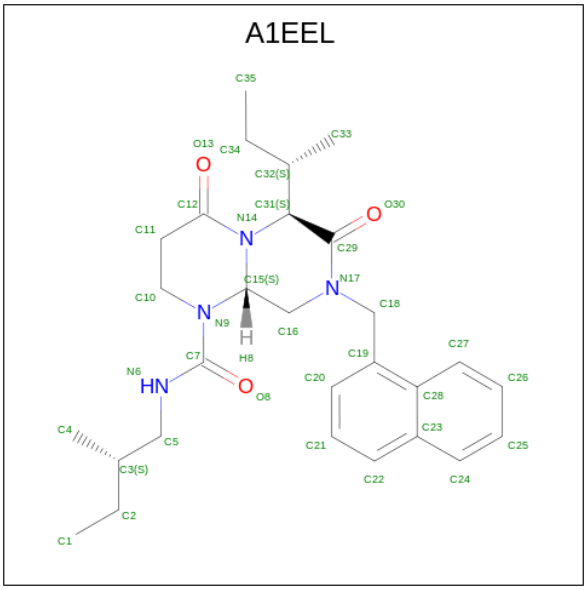
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	M	1	Total C O 8 6 2	0	0
3	N	1	Total C O 8 6 2	0	0

- Molecule 4 is (6 {S},9 {a} {S})-6-[(2 {S})-butan-2-yl]- {N}-[(2 {S})-2-methylbutyl]-8-(naphthalen-1-ylmethyl)-4,7-bis(oxidanylidene)-3,6,9,9 {a}-tetrahydro-2 {H}-pyrazino[1,2-a]pyrimidine-1-carboxamide (three-letter code: A1EEL) (formula: $C_{28}H_{38}N_4O_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total C N O 35 28 4 3	0	0
4	C	1	Total C N O 35 28 4 3	0	0
4	D	1	Total C N O 35 28 4 3	0	0
4	D	1	Total C N O 35 28 4 3	0	0
4	E	1	Total C N O 35 28 4 3	0	0
4	F	1	Total C N O 35 28 4 3	0	0
4	G	1	Total C N O 35 28 4 3	0	0
4	H	1	Total C N O 35 28 4 3	0	0

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	I	1	Total 35	C 28	N 4	O 3	0	0
4	I	1	Total 35	C 28	N 4	O 3	0	0
4	J	1	Total 35	C 28	N 4	O 3	0	0
4	K	1	Total 35	C 28	N 4	O 3	0	0
4	M	1	Total 35	C 28	N 4	O 3	0	0
4	N	1	Total 35	C 28	N 4	O 3	0	0

- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	25	Total 25	O 25	0	0
5	B	29	Total 29	O 29	0	0
5	C	20	Total 20	O 20	0	0
5	D	13	Total 13	O 13	0	0
5	E	3	Total 3	O 3	0	0
5	F	14	Total 14	O 14	0	0
5	G	16	Total 16	O 16	0	0
5	H	21	Total 21	O 21	0	0
5	I	24	Total 24	O 24	0	0
5	J	18	Total 18	O 18	0	0
5	K	7	Total 7	O 7	0	0
5	L	6	Total 6	O 6	0	0
5	M	12	Total 12	O 12	0	0

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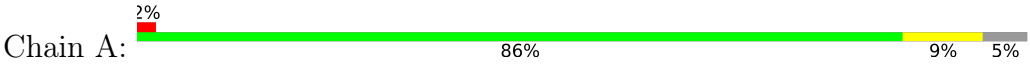
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	N	16	Total	O	0	0
			16	16		

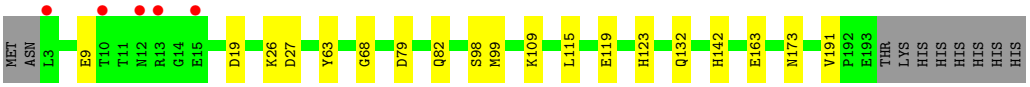
3 Residue-property plots (i)

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: ATP-dependent Clp protease proteolytic subunit

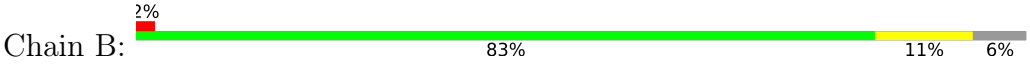
Chain A:

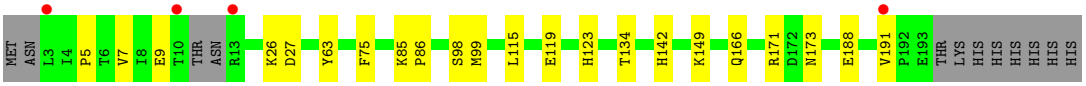




• Molecule 1: ATP-dependent Clp protease proteolytic subunit

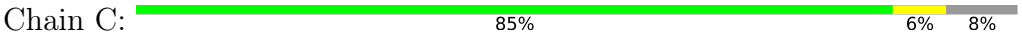
Chain B:

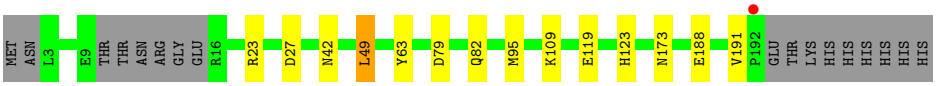




• Molecule 1: ATP-dependent Clp protease proteolytic subunit

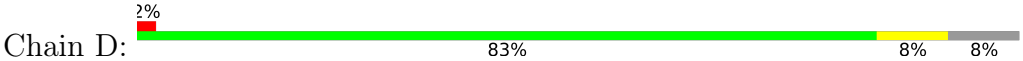
Chain C:

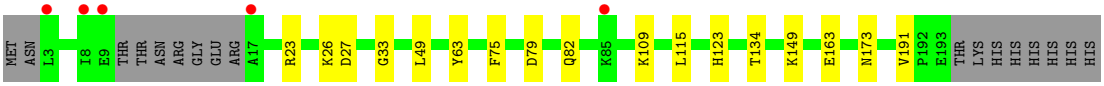




• Molecule 1: ATP-dependent Clp protease proteolytic subunit

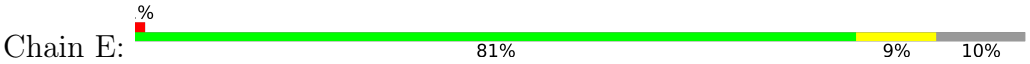
Chain D:

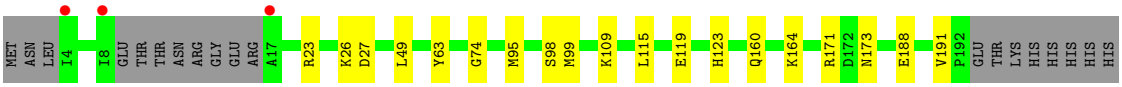




• Molecule 1: ATP-dependent Clp protease proteolytic subunit

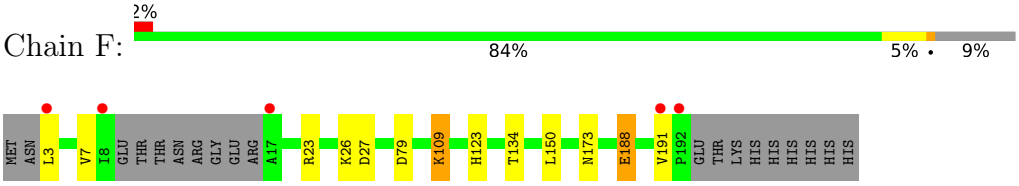
Chain E:





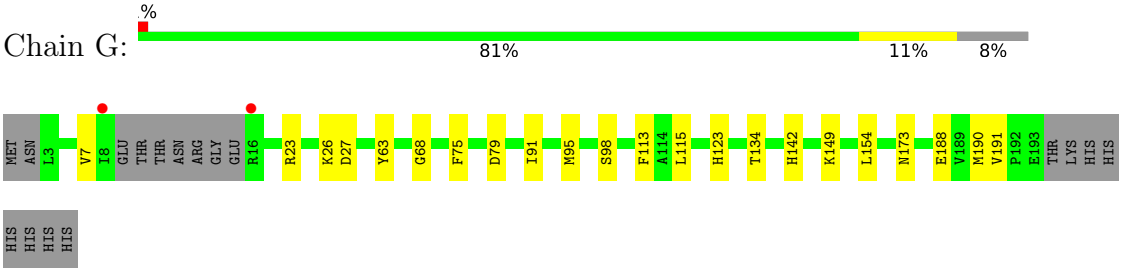
• Molecule 1: ATP-dependent Clp protease proteolytic subunit

Chain F:



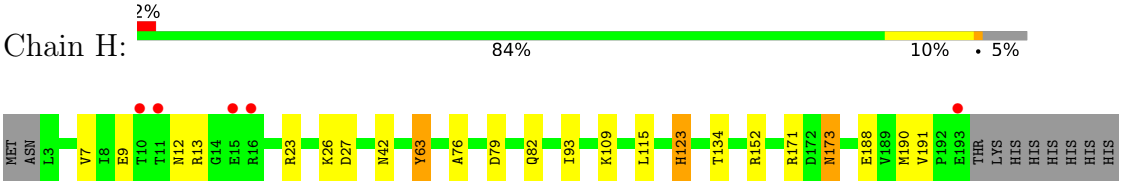
• Molecule 1: ATP-dependent Clp protease proteolytic subunit

Chain G:



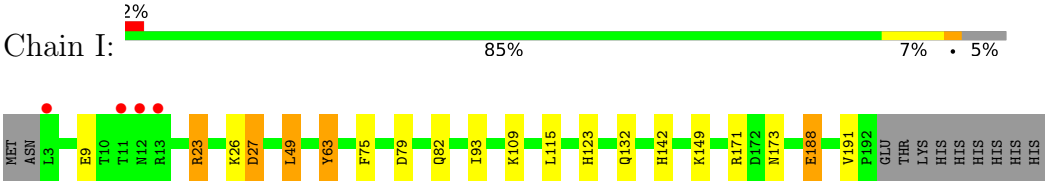
• Molecule 1: ATP-dependent Clp protease proteolytic subunit

Chain H:



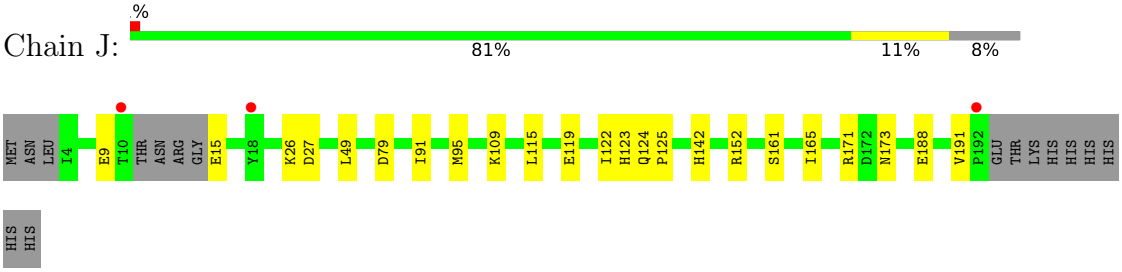
• Molecule 1: ATP-dependent Clp protease proteolytic subunit

Chain I:



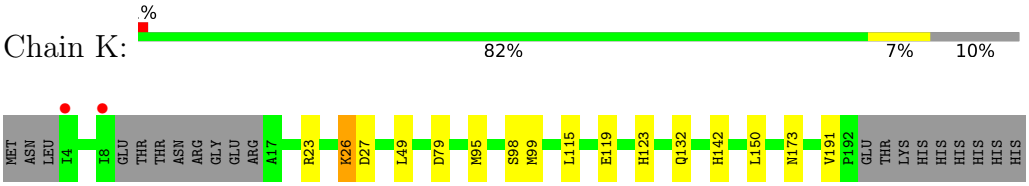
• Molecule 1: ATP-dependent Clp protease proteolytic subunit

Chain J:



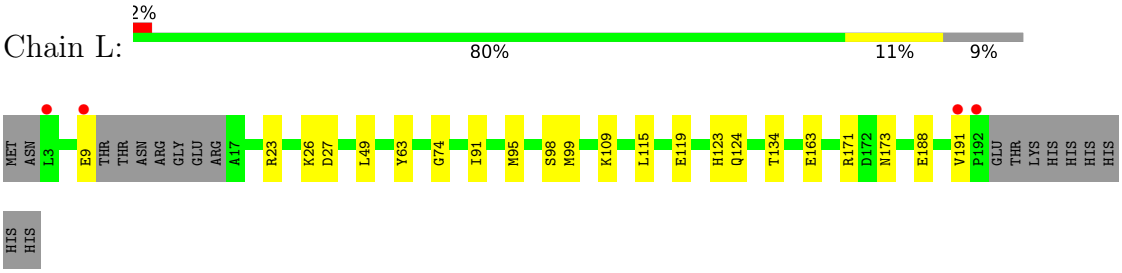
• Molecule 1: ATP-dependent Clp protease proteolytic subunit

Chain K:



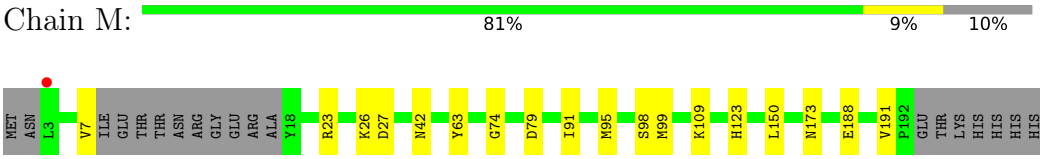
• Molecule 1: ATP-dependent Clp protease proteolytic subunit

Chain L:



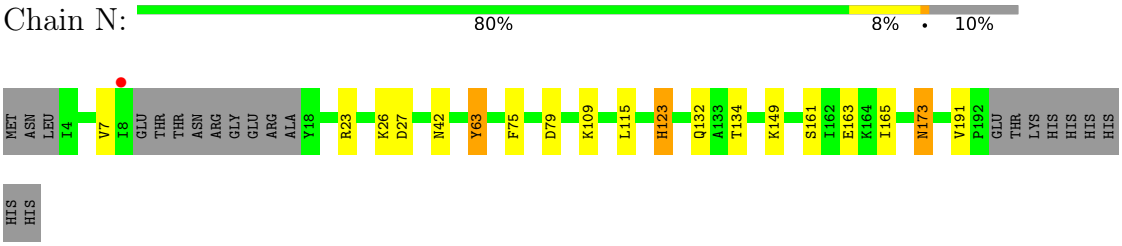
• Molecule 1: ATP-dependent Clp protease proteolytic subunit

Chain M:



• Molecule 1: ATP-dependent Clp protease proteolytic subunit

Chain N:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	95.29Å 127.03Å 145.90Å 90.00° 95.43° 90.00°	Depositor
Resolution (Å)	29.68 – 2.45 29.68 – 2.45	Depositor EDS
% Data completeness (in resolution range)	95.3 (29.68-2.45) 95.4 (29.68-2.45)	Depositor EDS
R_{merge}	0.12	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.69 (at 2.45Å)	Xtriage
Refinement program	REFMAC 5.8.0415	Depositor
R, R_{free}	0.194 , 0.233 0.198 , 0.234	Depositor DCC
R_{free} test set	6466 reflections (5.08%)	wwPDB-VP
Wilson B-factor (Å^2)	32.3	Xtriage
Anisotropy	0.126	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.32 , 20.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	20624	wwPDB-VP
Average B, all atoms (Å^2)	39.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.02% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MPD, MG, A1EEL

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	0.31	0/1471	0.61	0/1989
1	B	0.31	0/1456	0.61	0/1968
1	C	0.30	0/1430	0.59	0/1931
1	D	0.29	0/1427	0.56	0/1927
1	E	0.29	0/1408	0.56	0/1901
1	F	0.29	0/1419	0.58	0/1916
1	G	0.30	0/1426	0.59	0/1927
1	H	0.31	0/1474	0.61	0/1993
1	I	0.30	0/1462	0.63	0/1977
1	J	0.30	0/1436	0.59	0/1939
1	K	0.29	0/1404	0.56	0/1897
1	L	0.28	0/1417	0.59	0/1913
1	M	0.29	0/1395	0.58	0/1883
1	N	0.32	0/1395	0.60	0/1883
All	All	0.30	0/20020	0.59	0/27044

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1452	0	1447	9	0
1	B	1438	0	1431	8	0
1	C	1412	0	1422	6	0
1	D	1409	0	1413	6	0
1	E	1390	0	1403	5	0
1	F	1401	0	1423	5	0
1	G	1408	0	1411	9	0
1	H	1455	0	1451	14	0
1	I	1443	0	1441	12	0
1	J	1418	0	1419	9	0
1	K	1386	0	1392	8	0
1	L	1400	0	1413	7	0
1	M	1378	0	1391	5	0
1	N	1378	0	1391	10	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
2	E	1	0	0	0	0
2	F	1	0	0	0	0
2	G	1	0	0	0	0
2	H	1	0	0	0	0
2	I	1	0	0	0	0
2	J	1	0	0	0	0
2	K	1	0	0	0	0
2	L	1	0	0	0	0
2	M	1	0	0	0	0
2	N	1	0	0	0	0
3	A	8	0	14	1	0
3	B	16	0	28	1	0
3	C	8	0	14	0	0
3	D	8	0	14	0	0
3	E	8	0	14	0	0
3	F	8	0	14	1	0
3	G	8	0	14	1	0
3	H	8	0	14	1	0
3	I	16	0	28	0	0
3	J	8	0	14	1	0
3	K	8	0	14	1	0
3	L	8	0	14	0	0
3	M	8	0	14	1	0
3	N	8	0	14	0	0
4	A	35	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	C	35	0	0	0	0
4	D	70	0	0	0	0
4	E	35	0	0	0	0
4	F	35	0	0	1	0
4	G	35	0	0	0	0
4	H	35	0	0	0	0
4	I	70	0	0	0	0
4	J	35	0	0	0	0
4	K	35	0	0	0	0
4	M	35	0	0	0	0
4	N	35	0	0	0	0
5	A	25	0	0	3	0
5	B	29	0	0	1	0
5	C	20	0	0	0	0
5	D	13	0	0	1	0
5	E	3	0	0	0	0
5	F	14	0	0	2	0
5	G	16	0	0	0	0
5	H	21	0	0	3	0
5	I	24	0	0	2	0
5	J	18	0	0	1	0
5	K	7	0	0	1	0
5	L	6	0	0	0	0
5	M	12	0	0	0	0
5	N	16	0	0	3	0
All	All	20624	0	20072	88	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 2.

All (88) 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)
5:D:406:HOH:O	1:L:134:THR:HG21	1.82	0.79
5:B:402:HOH:O	1:N:134:THR:HG21	1.88	0.74
1:K:132:GLN:OE1	1:L:171:ARG:NH2	2.22	0.71
1:F:134:THR:HG21	5:J:409:HOH:O	1.90	0.70
1:K:26:LYS:HE3	5:K:406:HOH:O	1.92	0.69
1:H:13:ARG:CB	5:H:421:HOH:O	2.43	0.65
1:G:134:THR:HG21	5:I:422:HOH:O	1.96	0.64
1:I:142:HIS:HE1	1:J:119:GLU:OE1	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:132:GLN:OE1	1:B:171:ARG:NH2	2.32	0.60
1:E:160:GLN:OE1	1:E:164:LYS:HE3	2.02	0.59
3:B:303:MPD:HM1	3:B:303:MPD:H52	1.85	0.58
1:M:150:LEU:HD13	3:M:302:MPD:H52	1.85	0.58
1:N:123:HIS:CD2	5:N:406:HOH:O	2.57	0.58
1:H:63:TYR:OH	1:N:42:ASN:ND2	2.31	0.57
1:M:79:ASP:HB3	1:N:115:LEU:HD23	1.86	0.57
1:F:188:GLU:HG3	5:F:407:HOH:O	2.04	0.57
1:A:115:LEU:HD23	1:G:79:ASP:HB3	1.87	0.57
1:F:109:LYS:HG3	5:F:402:HOH:O	2.04	0.55
1:J:79:ASP:HB3	1:K:115:LEU:HD23	1.87	0.55
1:C:82:GLN:HE21	1:C:82:GLN:HA	1.72	0.55
1:A:79:ASP:HB3	1:B:115:LEU:HD23	1.88	0.54
1:A:163:GLU:HG2	5:A:401:HOH:O	2.07	0.54
1:B:142:HIS:HE1	1:C:119:GLU:OE1	1.91	0.53
1:C:82:GLN:HA	1:C:82:GLN:NE2	2.23	0.53
1:K:79:ASP:HB3	1:L:115:LEU:HD23	1.90	0.53
1:N:173:ASN:ND2	5:N:403:HOH:O	2.41	0.53
1:H:115:LEU:HD12	1:H:190:MET:HB2	1.91	0.53
5:A:402:HOH:O	1:I:171:ARG:HD2	2.08	0.52
1:H:171:ARG:NH2	1:N:132:GLN:OE1	2.38	0.51
1:E:74:GLY:HA3	1:E:99:MET:HE2	1.93	0.51
1:B:85:LYS:N	1:B:86:PRO:CD	2.74	0.51
1:H:115:LEU:HD23	1:N:79:ASP:HB3	1.91	0.51
1:A:119:GLU:OE1	1:G:142:HIS:HE1	1.95	0.50
1:A:82:GLN:NE2	1:A:82:GLN:HA	2.27	0.49
1:B:98:SER:OG	1:B:99:MET:N	2.45	0.49
1:H:79:ASP:HB3	1:I:115:LEU:HD23	1.95	0.48
1:I:23:ARG:NH2	1:I:27:ASP:OD1	2.46	0.48
1:I:79:ASP:HB3	1:J:115:LEU:HD23	1.95	0.48
1:A:142:HIS:HE1	1:B:119:GLU:OE1	1.96	0.48
1:K:150:LEU:HD13	3:K:302:MPD:H52	1.96	0.48
4:F:303:A1EEL:C18	1:G:91:ILE:HD13	2.44	0.47
1:F:79:ASP:HB3	1:G:115:LEU:HD23	1.94	0.47
1:L:74:GLY:HA3	1:L:99:MET:HE2	1.97	0.47
1:C:79:ASP:HB3	1:D:115:LEU:HD23	1.96	0.47
1:H:173:ASN:ND2	5:H:401:HOH:O	2.46	0.47
1:B:134:THR:HG21	5:N:401:HOH:O	2.14	0.47
1:K:98:SER:OG	1:K:99:MET:N	2.48	0.46
1:E:98:SER:OG	1:E:99:MET:N	2.48	0.46
1:B:75:PHE:CE2	1:B:149:LYS:HE3	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:42:ASN:ND2	1:I:63:TYR:OH	2.49	0.45
1:H:123:HIS:H	3:H:302:MPD:HM1	1.82	0.45
1:G:68:GLY:HA3	1:G:98:SER:HB3	1.99	0.45
1:A:68:GLY:HA3	1:A:98:SER:HB3	1.99	0.44
1:M:42:ASN:ND2	1:N:63:TYR:OH	2.51	0.43
1:J:161:SER:O	1:J:165:ILE:HG12	2.18	0.43
1:M:74:GLY:HA3	1:M:99:MET:HE2	1.99	0.43
1:D:79:ASP:HB3	1:E:115:LEU:HD23	2.00	0.43
1:N:75:PHE:CE2	1:N:149:LYS:HE3	2.53	0.43
1:F:150:LEU:HD13	3:F:302:MPD:H52	2.00	0.43
1:J:9:GLU:O	1:J:15:GLU:HA	2.19	0.43
1:G:113:PHE:HB3	1:G:190:MET:HG3	2.00	0.42
3:A:302:MPD:HM2	3:A:302:MPD:H4	1.69	0.42
1:J:122:ILE:HG22	3:J:302:MPD:HM3	2.02	0.42
1:H:76:ALA:HB1	1:I:93:ILE:HG22	2.00	0.42
1:I:132:GLN:OE1	1:J:171:ARG:NH2	2.43	0.42
1:N:161:SER:O	1:N:165:ILE:HG12	2.20	0.42
1:C:42:ASN:ND2	1:D:33:GLY:HA3	2.35	0.41
1:C:49:LEU:HD23	1:C:49:LEU:HA	1.91	0.41
1:G:154:LEU:HD11	3:G:302:MPD:HM3	2.02	0.41
1:M:98:SER:OG	1:M:99:MET:N	2.52	0.41
1:H:152:ARG:HD3	5:H:412:HOH:O	2.21	0.41
1:J:142:HIS:HE1	1:K:119:GLU:OE1	2.03	0.41
1:D:75:PHE:CE2	1:D:149:LYS:HE3	2.56	0.41
1:D:134:THR:H	1:L:124:GLN:HE22	1.67	0.41
1:I:82:GLN:NE2	1:I:82:GLN:HA	2.36	0.41
1:K:142:HIS:HE1	1:L:119:GLU:OE1	2.03	0.41
5:A:402:HOH:O	1:H:134:THR:HG21	2.21	0.41
1:A:98:SER:OG	1:A:99:MET:N	2.53	0.41
1:E:95:MET:HA	1:E:119:GLU:O	2.21	0.40
1:I:49:LEU:HD23	1:I:49:LEU:HA	1.93	0.40
1:D:82:GLN:NE2	1:D:82:GLN:HA	2.37	0.40
1:G:75:PHE:CE2	1:G:149:LYS:HE3	2.57	0.40
1:I:75:PHE:CE2	1:I:149:LYS:HE3	2.56	0.40
1:I:188:GLU:HG3	5:I:410:HOH:O	2.22	0.40
1:H:82:GLN:HA	1:H:82:GLN:NE2	2.37	0.40
1:H:93:ILE:HG12	1:H:115:LEU:HD22	2.03	0.40
1:J:124:GLN:HB2	1:J:125:PRO:HD2	2.04	0.40
1:L:98:SER:OG	1:L:99:MET:N	2.53	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	189/201 (94%)	185 (98%)	4 (2%)	0	100	100
1	B	185/201 (92%)	182 (98%)	3 (2%)	0	100	100
1	C	180/201 (90%)	176 (98%)	4 (2%)	0	100	100
1	D	180/201 (90%)	178 (99%)	2 (1%)	0	100	100
1	E	177/201 (88%)	174 (98%)	3 (2%)	0	100	100
1	F	178/201 (89%)	175 (98%)	3 (2%)	0	100	100
1	G	180/201 (90%)	176 (98%)	4 (2%)	0	100	100
1	H	189/201 (94%)	183 (97%)	6 (3%)	0	100	100
1	I	188/201 (94%)	183 (97%)	5 (3%)	0	100	100
1	J	181/201 (90%)	179 (99%)	2 (1%)	0	100	100
1	K	177/201 (88%)	174 (98%)	3 (2%)	0	100	100
1	L	179/201 (89%)	176 (98%)	3 (2%)	0	100	100
1	M	176/201 (88%)	173 (98%)	3 (2%)	0	100	100
1	N	176/201 (88%)	174 (99%)	2 (1%)	0	100	100
All	All	2535/2814 (90%)	2488 (98%)	47 (2%)	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	153/169 (90%)	144 (94%)	9 (6%)	16 23
1	B	152/169 (90%)	141 (93%)	11 (7%)	12 14
1	C	151/169 (89%)	141 (93%)	10 (7%)	14 17
1	D	150/169 (89%)	140 (93%)	10 (7%)	13 17
1	E	149/169 (88%)	138 (93%)	11 (7%)	11 13
1	F	151/169 (89%)	141 (93%)	10 (7%)	14 17
1	G	150/169 (89%)	140 (93%)	10 (7%)	13 17
1	H	154/169 (91%)	142 (92%)	12 (8%)	10 12
1	I	152/169 (90%)	141 (93%)	11 (7%)	12 14
1	J	151/169 (89%)	140 (93%)	11 (7%)	11 14
1	K	148/169 (88%)	140 (95%)	8 (5%)	18 26
1	L	150/169 (89%)	136 (91%)	14 (9%)	7 7
1	M	148/169 (88%)	136 (92%)	12 (8%)	9 11
1	N	148/169 (88%)	138 (93%)	10 (7%)	13 16
All	All	2107/2366 (89%)	1958 (93%)	149 (7%)	12 15

All (149) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	9	GLU
1	A	19	ASP
1	A	26	LYS
1	A	27	ASP
1	A	63	TYR
1	A	109	LYS
1	A	123	HIS
1	A	173	ASN
1	A	191	VAL
1	B	5	PRO
1	B	7	VAL
1	B	9	GLU
1	B	26	LYS
1	B	27	ASP
1	B	63	TYR
1	B	123	HIS
1	B	166	GLN
1	B	173	ASN
1	B	188	GLU

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Mol	Chain	Res	Type
1	B	191	VAL
1	C	23	ARG
1	C	27	ASP
1	C	49	LEU
1	C	63	TYR
1	C	95	MET
1	C	109	LYS
1	C	123	HIS
1	C	173	ASN
1	C	188	GLU
1	C	191	VAL
1	D	23	ARG
1	D	26	LYS
1	D	27	ASP
1	D	49	LEU
1	D	63	TYR
1	D	109	LYS
1	D	123	HIS
1	D	163	GLU
1	D	173	ASN
1	D	191	VAL
1	E	23	ARG
1	E	26	LYS
1	E	27	ASP
1	E	49	LEU
1	E	63	TYR
1	E	109	LYS
1	E	123	HIS
1	E	171	ARG
1	E	173	ASN
1	E	188	GLU
1	E	191	VAL
1	F	3	LEU
1	F	7	VAL
1	F	23	ARG
1	F	26	LYS
1	F	27	ASP
1	F	109	LYS
1	F	123	HIS
1	F	173	ASN
1	F	188	GLU
1	F	191	VAL

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Mol	Chain	Res	Type
1	G	7	VAL
1	G	23	ARG
1	G	26	LYS
1	G	27	ASP
1	G	63	TYR
1	G	95	MET
1	G	123	HIS
1	G	173	ASN
1	G	188	GLU
1	G	191	VAL
1	H	7	VAL
1	H	9	GLU
1	H	12	ASN
1	H	23	ARG
1	H	26	LYS
1	H	27	ASP
1	H	63	TYR
1	H	109	LYS
1	H	123	HIS
1	H	173	ASN
1	H	188	GLU
1	H	191	VAL
1	I	9	GLU
1	I	23	ARG
1	I	26	LYS
1	I	27	ASP
1	I	49	LEU
1	I	63	TYR
1	I	109	LYS
1	I	123	HIS
1	I	173	ASN
1	I	188	GLU
1	I	191	VAL
1	J	26	LYS
1	J	27	ASP
1	J	49	LEU
1	J	91	ILE
1	J	95	MET
1	J	109	LYS
1	J	123	HIS
1	J	152	ARG
1	J	173	ASN

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Mol	Chain	Res	Type
1	J	188	GLU
1	J	191	VAL
1	K	23	ARG
1	K	26	LYS
1	K	27	ASP
1	K	49	LEU
1	K	95	MET
1	K	123	HIS
1	K	173	ASN
1	K	191	VAL
1	L	9	GLU
1	L	23	ARG
1	L	26	LYS
1	L	27	ASP
1	L	49	LEU
1	L	63	TYR
1	L	91	ILE
1	L	95	MET
1	L	109	LYS
1	L	123	HIS
1	L	163	GLU
1	L	173	ASN
1	L	188	GLU
1	L	191	VAL
1	M	7	VAL
1	M	23	ARG
1	M	26	LYS
1	M	27	ASP
1	M	63	TYR
1	M	91	ILE
1	M	95	MET
1	M	109	LYS
1	M	123	HIS
1	M	173	ASN
1	M	188	GLU
1	M	191	VAL
1	N	7	VAL
1	N	23	ARG
1	N	26	LYS
1	N	27	ASP
1	N	63	TYR
1	N	109	LYS

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Mol	Chain	Res	Type
1	N	123	HIS
1	N	163	GLU
1	N	173	ASN
1	N	191	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (88) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	82	GLN
1	A	117	ASN
1	A	124	GLN
1	A	142	HIS
1	A	173	ASN
1	B	82	GLN
1	B	83	HIS
1	B	117	ASN
1	B	124	GLN
1	B	142	HIS
1	B	166	GLN
1	B	173	ASN
1	C	35	GLN
1	C	82	GLN
1	C	117	ASN
1	C	124	GLN
1	C	142	HIS
1	C	173	ASN
1	D	42	ASN
1	D	82	GLN
1	D	124	GLN
1	D	142	HIS
1	D	166	GLN
1	D	173	ASN
1	E	42	ASN
1	E	82	GLN
1	E	83	HIS
1	E	117	ASN
1	E	124	GLN
1	E	142	HIS
1	E	173	ASN
1	F	82	GLN
1	F	117	ASN
1	F	124	GLN

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Mol	Chain	Res	Type
1	F	142	HIS
1	F	173	ASN
1	G	82	GLN
1	G	83	HIS
1	G	117	ASN
1	G	124	GLN
1	G	142	HIS
1	G	173	ASN
1	H	42	ASN
1	H	82	GLN
1	H	83	HIS
1	H	124	GLN
1	H	130	GLN
1	H	142	HIS
1	H	173	ASN
1	I	42	ASN
1	I	82	GLN
1	I	83	HIS
1	I	117	ASN
1	I	124	GLN
1	I	130	GLN
1	I	142	HIS
1	I	173	ASN
1	J	42	ASN
1	J	82	GLN
1	J	124	GLN
1	J	142	HIS
1	J	173	ASN
1	K	82	GLN
1	K	117	ASN
1	K	124	GLN
1	K	142	HIS
1	K	166	GLN
1	K	173	ASN
1	L	42	ASN
1	L	82	GLN
1	L	117	ASN
1	L	124	GLN
1	L	130	GLN
1	L	142	HIS
1	L	173	ASN
1	M	42	ASN

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Mol	Chain	Res	Type
1	M	82	GLN
1	M	117	ASN
1	M	124	GLN
1	M	142	HIS
1	M	173	ASN
1	N	42	ASN
1	N	82	GLN
1	N	83	HIS
1	N	117	ASN
1	N	124	GLN
1	N	142	HIS
1	N	173	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 44 ligands modelled in this entry, 14 are monoatomic - leaving 30 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	$\#\|Z\| > 2$
3	MPD	A	302	-	7,7,7	0.24	0	9,10,10	0.46	0
3	MPD	I	303	-	7,7,7	0.14	0	9,10,10	0.52	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
4	A1EEL	K	303	-	36,38,38	0.42	0	45,54,54	0.55	1 (2%)
4	A1EEL	E	303	-	36,38,38	0.37	0	45,54,54	0.57	0
4	A1EEL	F	303	-	36,38,38	0.35	0	45,54,54	0.62	0
4	A1EEL	C	303	-	36,38,38	0.38	0	45,54,54	0.62	0
3	MPD	K	302	-	7,7,7	0.11	0	9,10,10	0.47	0
3	MPD	I	302	-	7,7,7	0.14	0	9,10,10	0.48	0
3	MPD	F	302	-	7,7,7	0.11	0	9,10,10	0.35	0
3	MPD	C	302	-	7,7,7	0.22	0	9,10,10	0.55	0
3	MPD	H	302	-	7,7,7	0.25	0	9,10,10	0.43	0
4	A1EEL	J	303	-	36,38,38	0.41	0	45,54,54	0.61	1 (2%)
4	A1EEL	I	305	-	36,38,38	0.34	0	45,54,54	0.63	1 (2%)
3	MPD	G	302	-	7,7,7	0.17	0	9,10,10	0.38	0
3	MPD	L	302	-	7,7,7	0.14	0	9,10,10	0.47	0
3	MPD	D	302	-	7,7,7	0.22	0	9,10,10	0.50	0
4	A1EEL	I	304	-	36,38,38	0.35	0	45,54,54	0.61	0
4	A1EEL	M	303	-	36,38,38	0.41	0	45,54,54	0.58	0
4	A1EEL	G	303	-	36,38,38	0.42	0	45,54,54	0.59	0
3	MPD	M	302	-	7,7,7	0.14	0	9,10,10	0.56	0
3	MPD	J	302	-	7,7,7	0.19	0	9,10,10	0.51	0
4	A1EEL	D	303	-	36,38,38	0.33	0	45,54,54	0.65	1 (2%)
3	MPD	E	302	-	7,7,7	0.11	0	9,10,10	0.49	0
3	MPD	N	302	-	7,7,7	0.16	0	9,10,10	0.38	0
4	A1EEL	N	303	-	36,38,38	0.29	0	45,54,54	0.61	0
3	MPD	B	303	-	7,7,7	0.21	0	9,10,10	0.65	0
4	A1EEL	H	303	-	36,38,38	0.32	0	45,54,54	0.64	0
3	MPD	B	302	-	7,7,7	0.20	0	9,10,10	0.50	0
4	A1EEL	D	304	-	36,38,38	0.30	0	45,54,54	0.58	0
4	A1EEL	A	303	-	36,38,38	0.29	0	45,54,54	0.57	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	MPD	A	302	-	-	5/5/5/5	-
3	MPD	I	303	-	-	0/5/5/5	-
4	A1EEL	K	303	-	-	6/21/54/54	0/4/4/4
4	A1EEL	E	303	-	-	9/21/54/54	0/4/4/4
4	A1EEL	F	303	-	-	9/21/54/54	0/4/4/4
4	A1EEL	C	303	-	-	7/21/54/54	0/4/4/4

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	MPD	K	302	-	-	0/5/5/5	-
3	MPD	I	302	-	-	0/5/5/5	-
3	MPD	F	302	-	-	0/5/5/5	-
3	MPD	C	302	-	-	0/5/5/5	-
3	MPD	H	302	-	-	3/5/5/5	-
4	A1EEL	J	303	-	-	8/21/54/54	0/4/4/4
4	A1EEL	I	305	-	-	8/21/54/54	0/4/4/4
3	MPD	G	302	-	-	0/5/5/5	-
3	MPD	L	302	-	-	0/5/5/5	-
3	MPD	D	302	-	-	0/5/5/5	-
4	A1EEL	I	304	-	-	8/21/54/54	0/4/4/4
4	A1EEL	M	303	-	-	8/21/54/54	0/4/4/4
4	A1EEL	G	303	-	-	9/21/54/54	0/4/4/4
3	MPD	M	302	-	-	0/5/5/5	-
3	MPD	J	302	-	-	0/5/5/5	-
4	A1EEL	D	303	-	-	8/21/54/54	0/4/4/4
3	MPD	E	302	-	-	0/5/5/5	-
3	MPD	N	302	-	-	0/5/5/5	-
4	A1EEL	N	303	-	-	9/21/54/54	0/4/4/4
3	MPD	B	303	-	-	4/5/5/5	-
4	A1EEL	H	303	-	-	6/21/54/54	0/4/4/4
3	MPD	B	302	-	-	4/5/5/5	-
4	A1EEL	D	304	-	-	9/21/54/54	0/4/4/4
4	A1EEL	A	303	-	-	9/21/54/54	0/4/4/4

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	D	303	A1EEL	C32-C31-N14	2.37	115.74	111.76
4	I	305	A1EEL	C32-C31-N14	2.20	115.46	111.76
4	J	303	A1EEL	C32-C31-N14	2.19	115.44	111.76
4	K	303	A1EEL	C32-C31-N14	2.01	115.13	111.76

There are no chirality outliers.

All (129) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	302	MPD	O2-C2-C3-C4
3	A	302	MPD	CM-C2-C3-C4
3	B	302	MPD	C2-C3-C4-O4
3	B	303	MPD	CM-C2-C3-C4
3	B	303	MPD	C2-C3-C4-O4
4	A	303	A1EEL	C1-C2-C3-C5
4	D	303	A1EEL	C33-C32-C34-C35
4	E	303	A1EEL	C1-C2-C3-C5
4	G	303	A1EEL	C1-C2-C3-C5
4	I	305	A1EEL	C1-C2-C3-C5
4	J	303	A1EEL	C1-C2-C3-C5
4	M	303	A1EEL	C1-C2-C3-C5
4	N	303	A1EEL	N14-C31-C32-C34
4	N	303	A1EEL	C29-C31-C32-C34
4	A	303	A1EEL	C33-C32-C34-C35
4	D	304	A1EEL	C33-C32-C34-C35
4	E	303	A1EEL	C33-C32-C34-C35
4	F	303	A1EEL	C33-C32-C34-C35
4	G	303	A1EEL	C33-C32-C34-C35
4	K	303	A1EEL	C33-C32-C34-C35
4	I	304	A1EEL	C33-C32-C34-C35
4	J	303	A1EEL	C33-C32-C34-C35
4	N	303	A1EEL	C33-C32-C34-C35
4	C	303	A1EEL	C33-C32-C34-C35
4	D	303	A1EEL	C4-C3-C5-N6
4	G	303	A1EEL	C4-C3-C5-N6
4	J	303	A1EEL	C4-C3-C5-N6
4	K	303	A1EEL	C4-C3-C5-N6
4	H	303	A1EEL	C33-C32-C34-C35
4	I	305	A1EEL	C33-C32-C34-C35
4	M	303	A1EEL	C33-C32-C34-C35
4	A	303	A1EEL	C4-C3-C5-N6
4	C	303	A1EEL	C4-C3-C5-N6
4	D	304	A1EEL	C4-C3-C5-N6
4	E	303	A1EEL	C4-C3-C5-N6
4	F	303	A1EEL	C4-C3-C5-N6
4	H	303	A1EEL	C4-C3-C5-N6
4	I	305	A1EEL	C4-C3-C5-N6
4	M	303	A1EEL	C4-C3-C5-N6
4	N	303	A1EEL	C4-C3-C5-N6
4	D	303	A1EEL	C31-C32-C34-C35
4	N	303	A1EEL	N14-C31-C32-C33
4	A	303	A1EEL	C1-C2-C3-C4

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Mol	Chain	Res	Type	Atoms
4	E	303	A1EEL	C1-C2-C3-C4
4	G	303	A1EEL	C1-C2-C3-C4
4	K	303	A1EEL	C1-C2-C3-C4
4	M	303	A1EEL	C1-C2-C3-C4
4	D	304	A1EEL	C1-C2-C3-C4
4	I	305	A1EEL	C1-C2-C3-C4
4	I	304	A1EEL	C4-C3-C5-N6
4	A	303	A1EEL	C31-C32-C34-C35
4	D	304	A1EEL	C31-C32-C34-C35
4	C	303	A1EEL	C1-C2-C3-C5
4	D	304	A1EEL	C1-C2-C3-C5
4	F	303	A1EEL	C1-C2-C3-C5
4	K	303	A1EEL	C1-C2-C3-C5
4	N	303	A1EEL	C1-C2-C3-C5
4	H	303	A1EEL	N14-C31-C32-C33
4	I	304	A1EEL	N14-C31-C32-C33
4	M	303	A1EEL	N14-C31-C32-C33
4	C	303	A1EEL	C1-C2-C3-C4
4	F	303	A1EEL	C1-C2-C3-C4
4	J	303	A1EEL	C1-C2-C3-C4
3	B	302	MPD	O2-C2-C3-C4
3	B	303	MPD	O2-C2-C3-C4
4	F	303	A1EEL	C31-C32-C34-C35
4	K	303	A1EEL	C31-C32-C34-C35
4	N	303	A1EEL	C1-C2-C3-C4
3	A	302	MPD	C2-C3-C4-C5
3	H	302	MPD	C2-C3-C4-C5
4	E	303	A1EEL	C31-C32-C34-C35
3	A	302	MPD	C1-C2-C3-C4
3	B	302	MPD	C1-C2-C3-C4
3	B	302	MPD	CM-C2-C3-C4
3	B	303	MPD	C1-C2-C3-C4
3	H	302	MPD	CM-C2-C3-C4
4	A	303	A1EEL	C2-C3-C5-N6
4	A	303	A1EEL	N14-C31-C32-C34
4	A	303	A1EEL	C29-C31-C32-C34
4	C	303	A1EEL	C2-C3-C5-N6
4	C	303	A1EEL	N14-C31-C32-C34
4	D	303	A1EEL	C2-C3-C5-N6
4	D	303	A1EEL	N14-C31-C32-C34
4	D	303	A1EEL	C29-C31-C32-C34
4	D	304	A1EEL	C2-C3-C5-N6

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Mol	Chain	Res	Type	Atoms
4	D	304	A1EEL	N14-C31-C32-C34
4	D	304	A1EEL	C29-C31-C32-C34
4	E	303	A1EEL	C2-C3-C5-N6
4	E	303	A1EEL	N14-C31-C32-C34
4	E	303	A1EEL	C29-C31-C32-C34
4	F	303	A1EEL	C2-C3-C5-N6
4	F	303	A1EEL	N14-C31-C32-C34
4	F	303	A1EEL	C29-C31-C32-C34
4	G	303	A1EEL	C2-C3-C5-N6
4	G	303	A1EEL	N14-C31-C32-C34
4	G	303	A1EEL	C29-C31-C32-C34
4	H	303	A1EEL	C2-C3-C5-N6
4	H	303	A1EEL	N14-C31-C32-C34
4	H	303	A1EEL	C29-C31-C32-C34
4	I	304	A1EEL	C2-C3-C5-N6
4	I	304	A1EEL	N14-C31-C32-C34
4	I	304	A1EEL	C29-C31-C32-C34
4	I	305	A1EEL	C2-C3-C5-N6
4	I	305	A1EEL	N14-C31-C32-C34
4	I	305	A1EEL	C29-C31-C32-C34
4	J	303	A1EEL	C2-C3-C5-N6
4	J	303	A1EEL	N14-C31-C32-C34
4	K	303	A1EEL	C2-C3-C5-N6
4	M	303	A1EEL	C2-C3-C5-N6
4	M	303	A1EEL	N14-C31-C32-C34
4	M	303	A1EEL	C29-C31-C32-C34
4	N	303	A1EEL	C2-C3-C5-N6
4	I	304	A1EEL	C1-C2-C3-C4
4	A	303	A1EEL	N14-C31-C32-C33
4	E	303	A1EEL	N14-C31-C32-C33
4	F	303	A1EEL	N14-C31-C32-C33
4	G	303	A1EEL	N14-C31-C32-C33
4	I	305	A1EEL	N14-C31-C32-C33
4	G	303	A1EEL	C31-C32-C34-C35
4	I	304	A1EEL	C1-C2-C3-C5
4	D	303	A1EEL	N14-C31-C32-C33
3	H	302	MPD	O2-C2-C3-C4
4	D	303	A1EEL	C1-C2-C3-C4
4	J	303	A1EEL	C31-C32-C34-C35
4	C	303	A1EEL	N14-C31-C32-C33
4	D	304	A1EEL	N14-C31-C32-C33
4	J	303	A1EEL	N14-C31-C32-C33

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Mol	Chain	Res	Type	Atoms
4	N	303	A1EEL	C29-C31-C32-C33
3	A	302	MPD	C2-C3-C4-O4

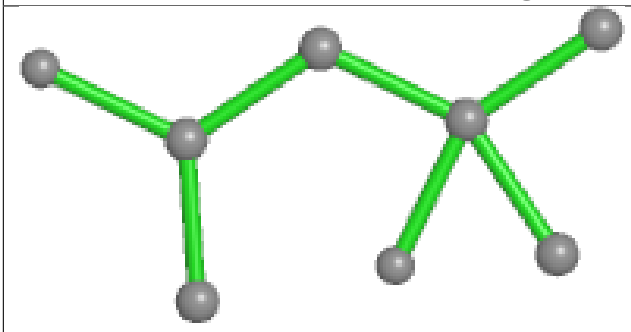
There are no ring outliers.

9 monomers are involved in 9 short contacts:

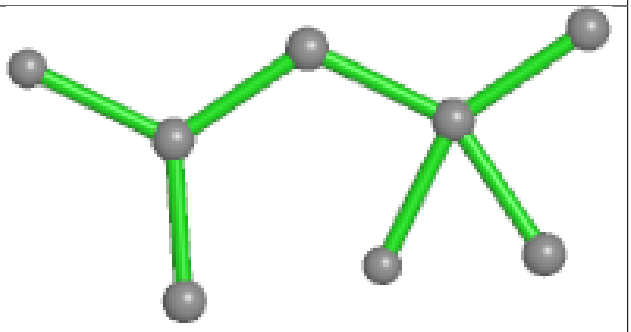
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	A	302	MPD	1	0
4	F	303	A1EEL	1	0
3	K	302	MPD	1	0
3	F	302	MPD	1	0
3	H	302	MPD	1	0
3	G	302	MPD	1	0
3	M	302	MPD	1	0
3	J	302	MPD	1	0
3	B	303	MPD	1	0

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.

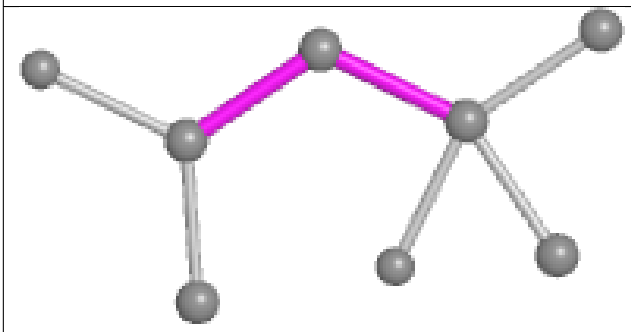
Ligand MPD A 302



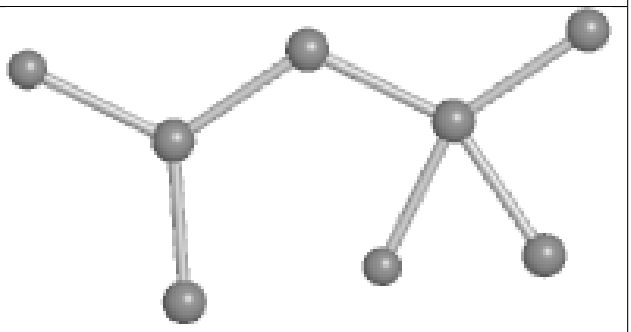
Bond lengths



Bond angles

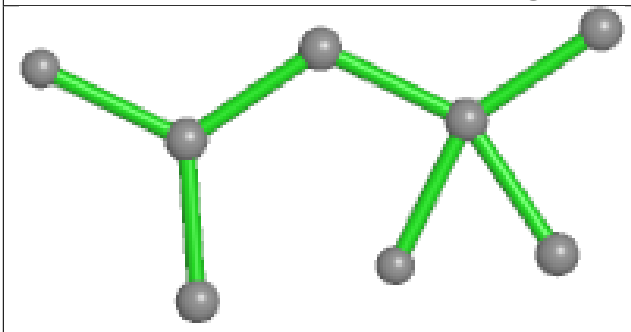


Torsions

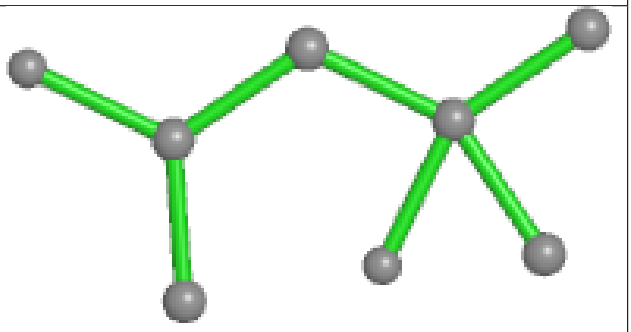


Rings

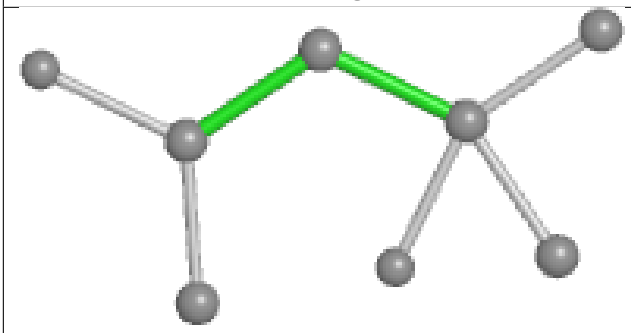
Ligand MPD I 303



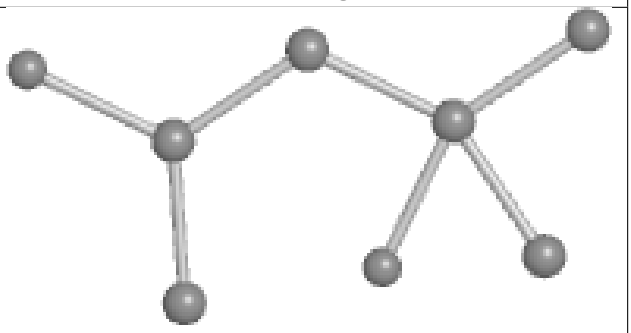
Bond lengths



Bond angles

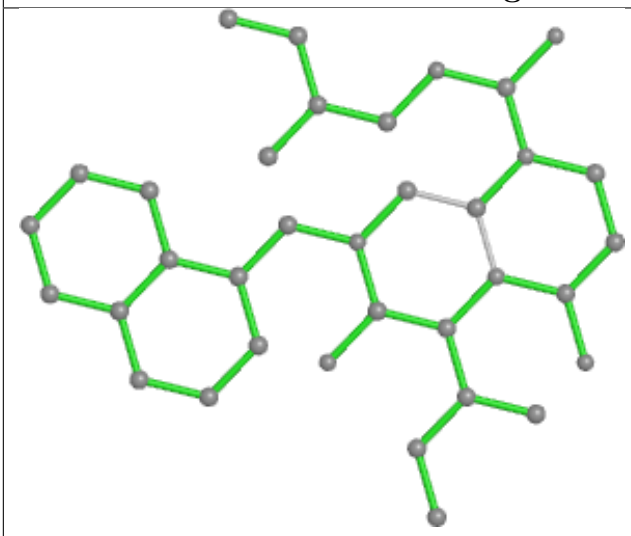


Torsions



Rings

Ligand A1EEL K 303



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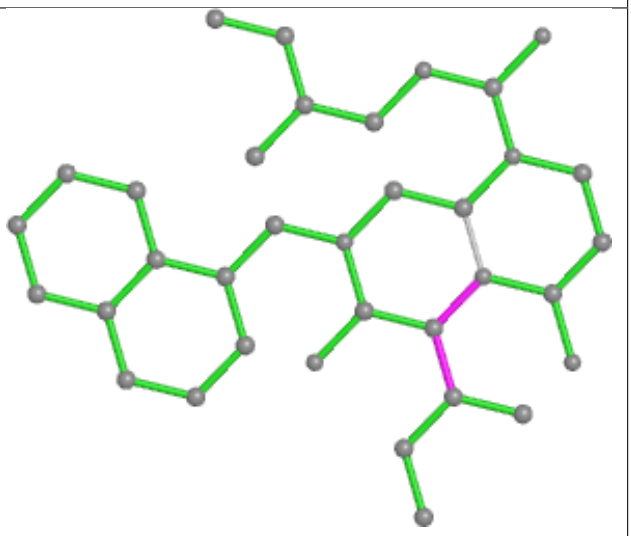

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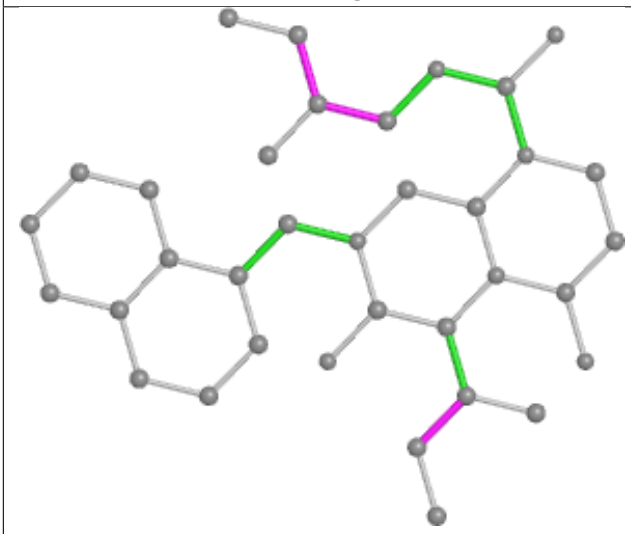

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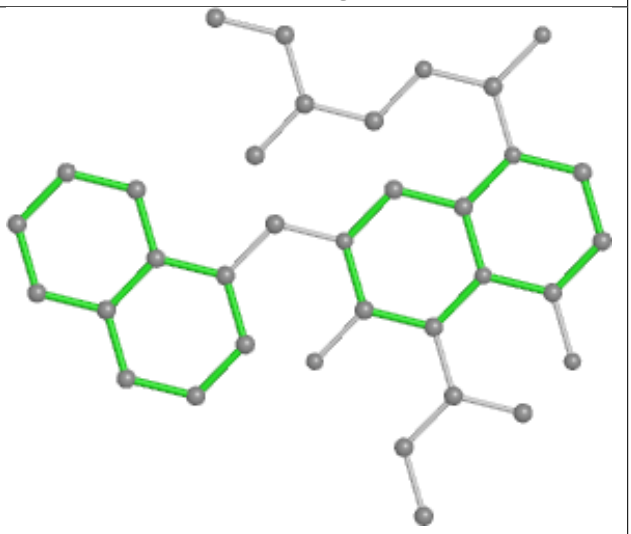
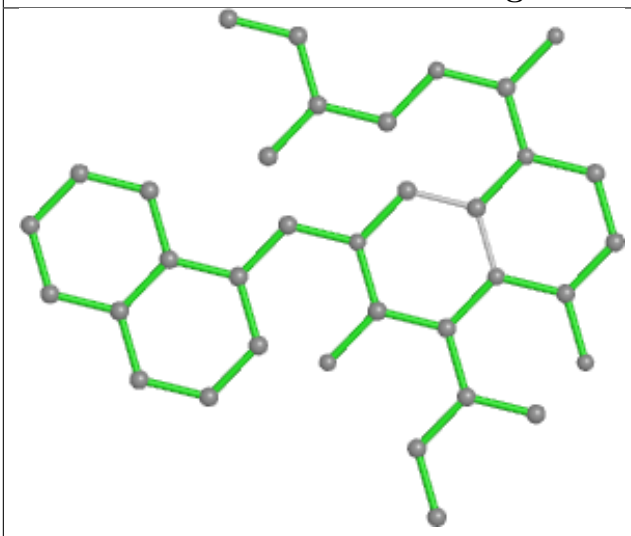


Rings

Ligand A1EEL E 303



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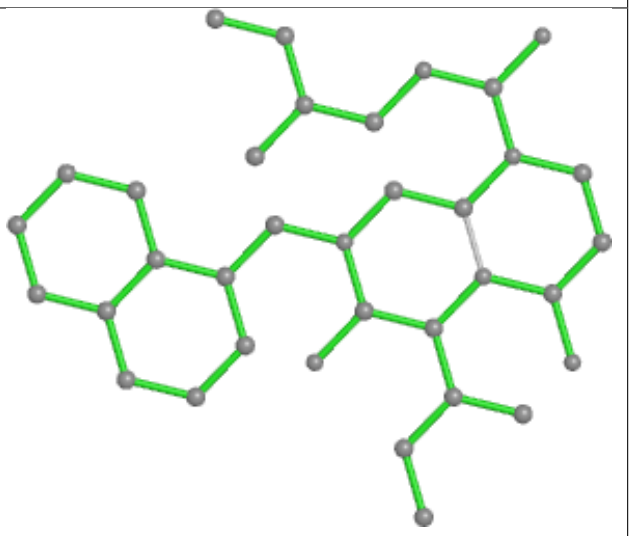
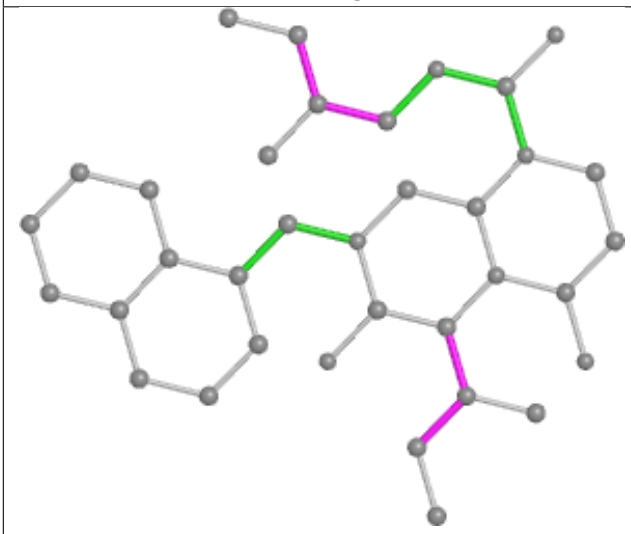


Bond angles



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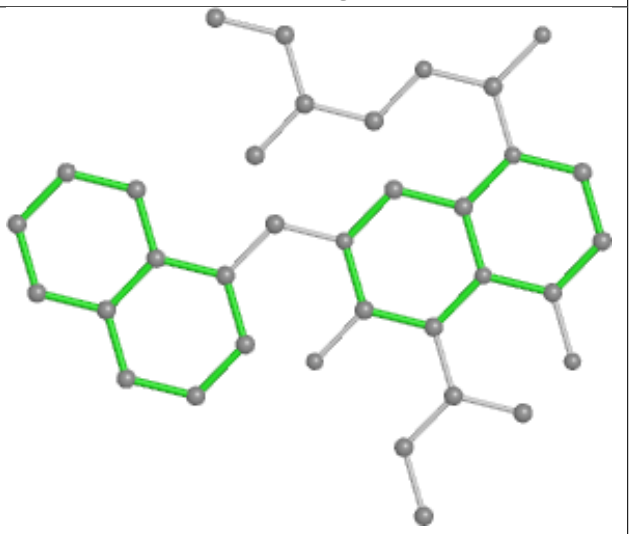
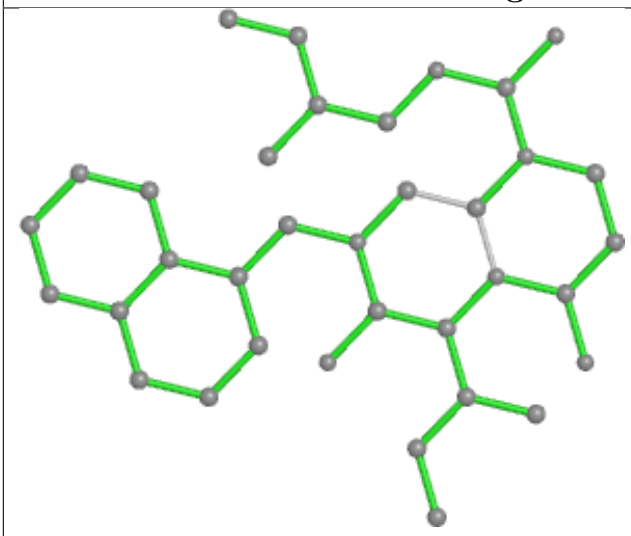


Rings

Ligand A1EEL F 303



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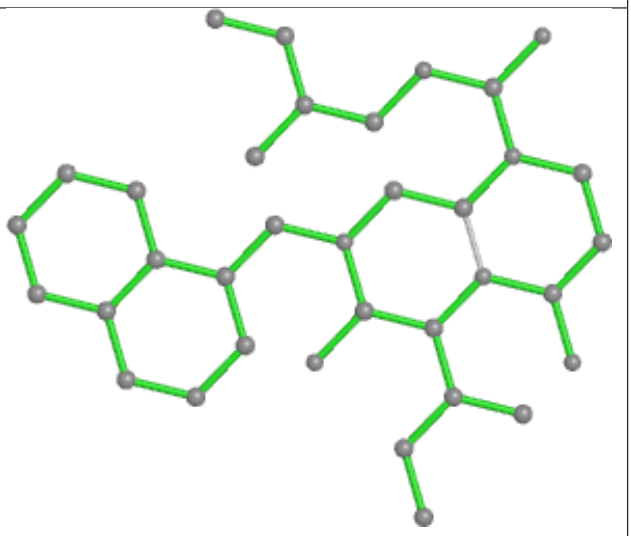
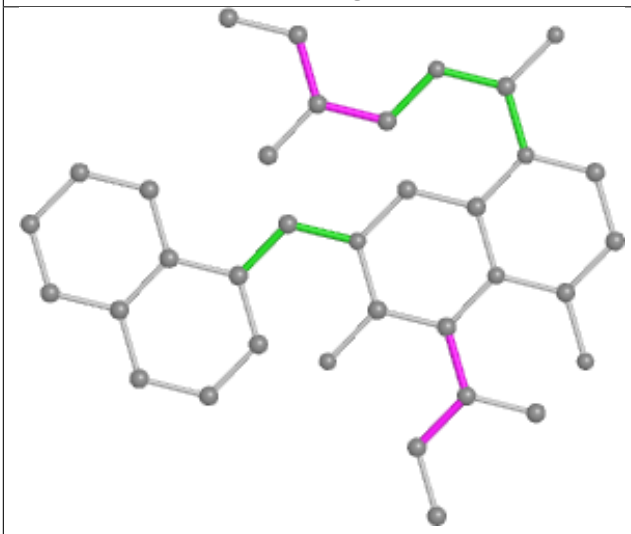


Bond angles



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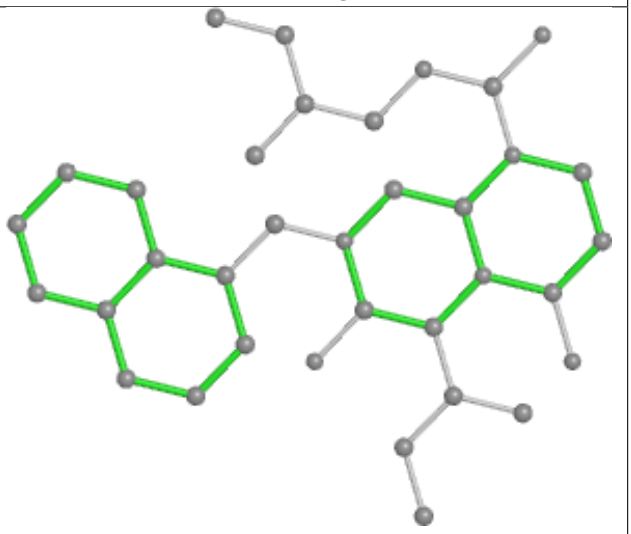
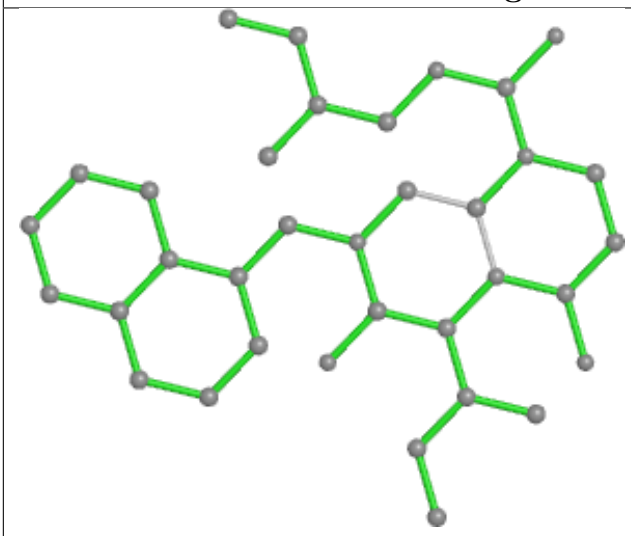


Rings

Ligand A1EEL C 303



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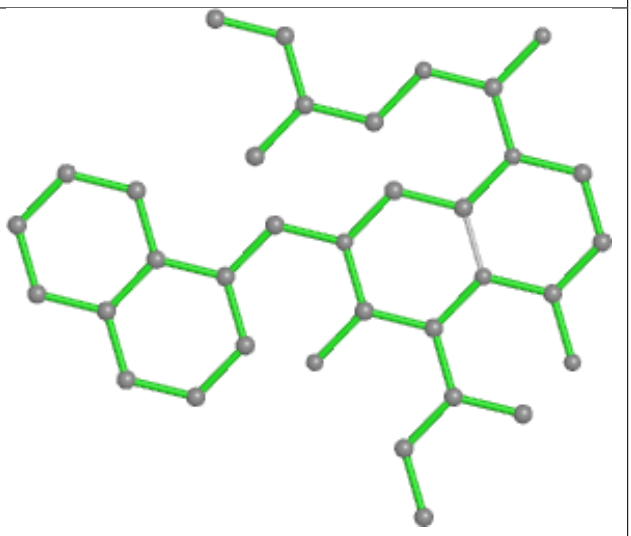

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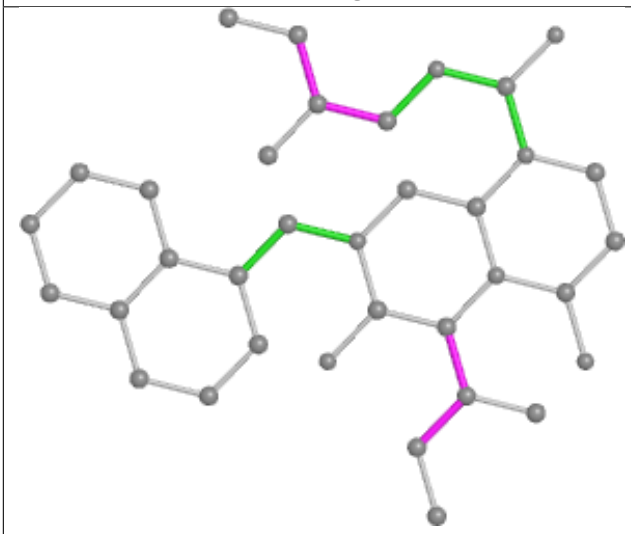

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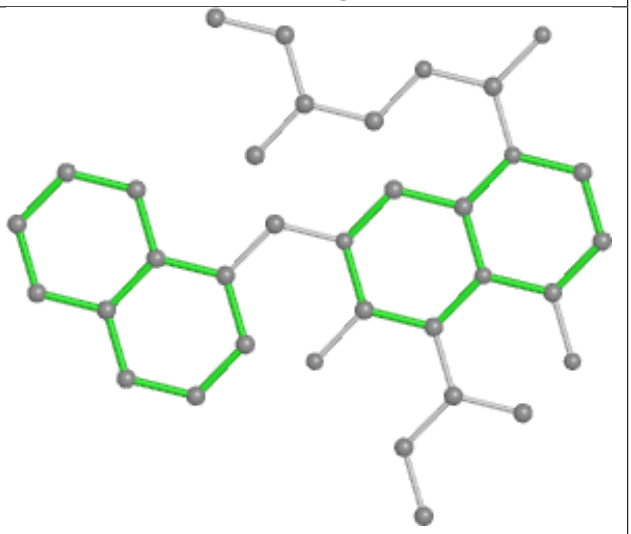
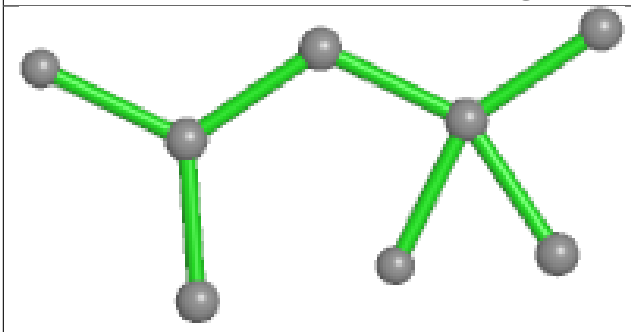


Rings

Ligand MPD K 302



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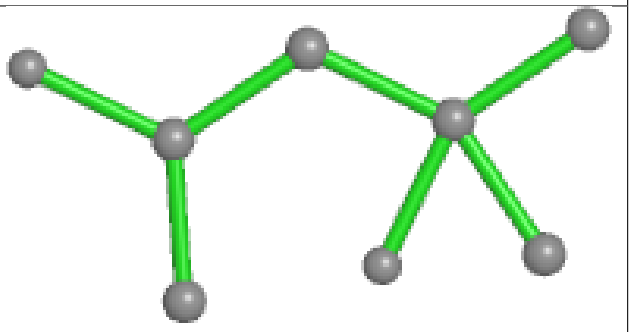
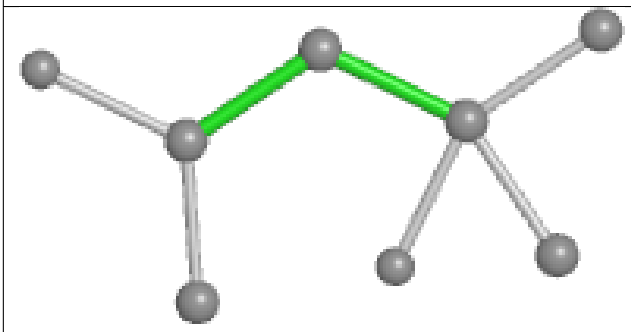


Bond angles



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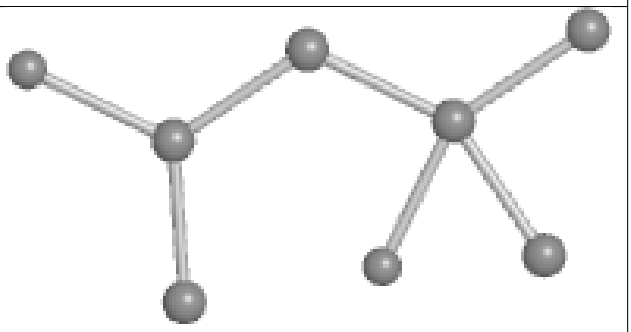
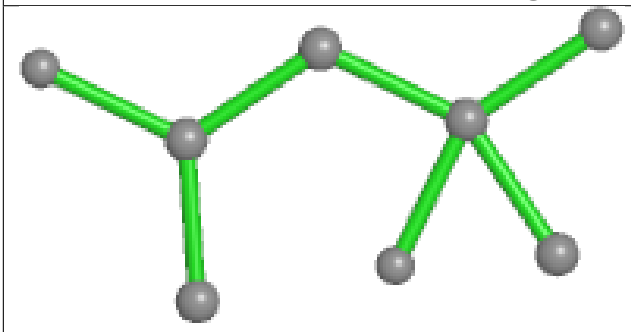


Rings

Ligand MPD I 302



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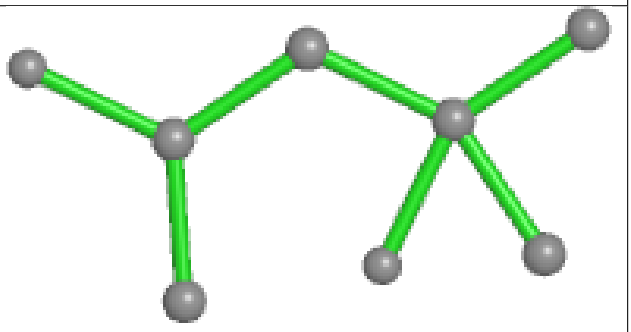
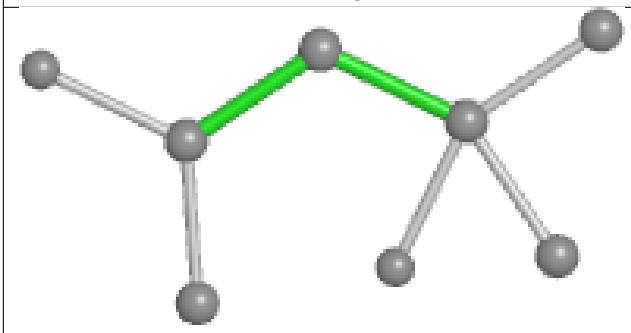


Bond angles



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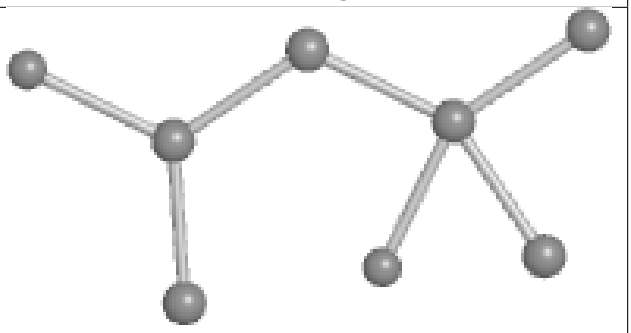
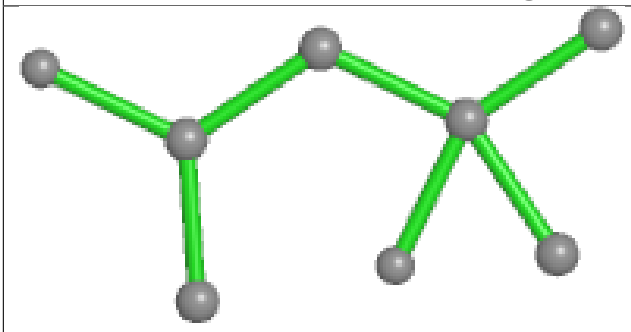


Rings

Ligand MPD F 302



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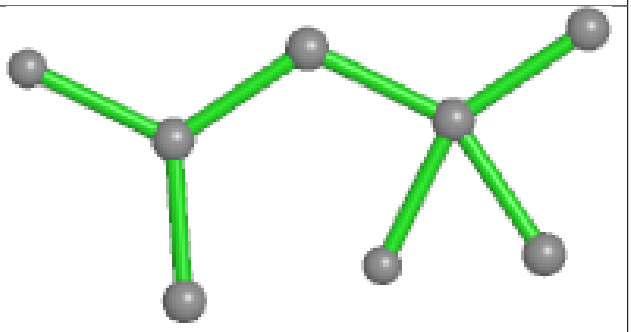
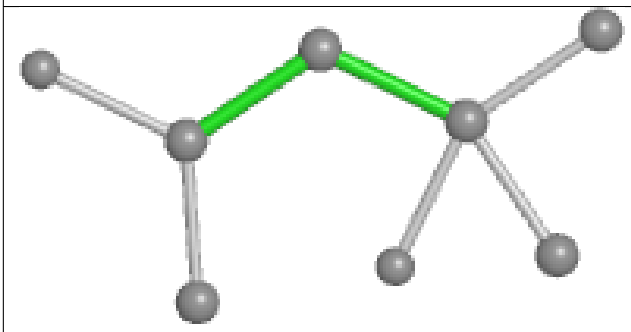


Bond angles



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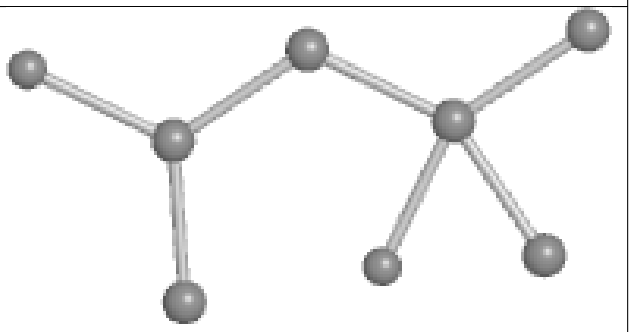
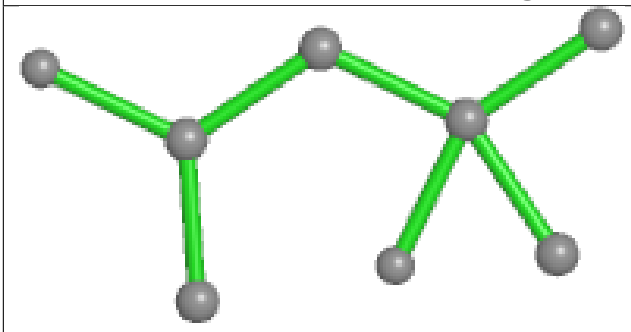


Rings

Ligand MPD C 302



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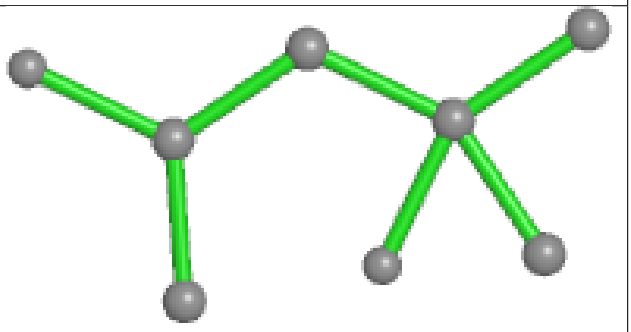
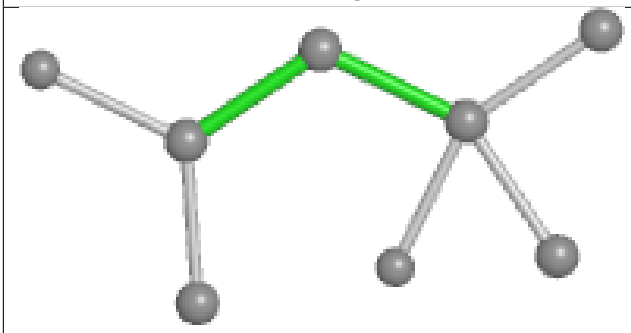
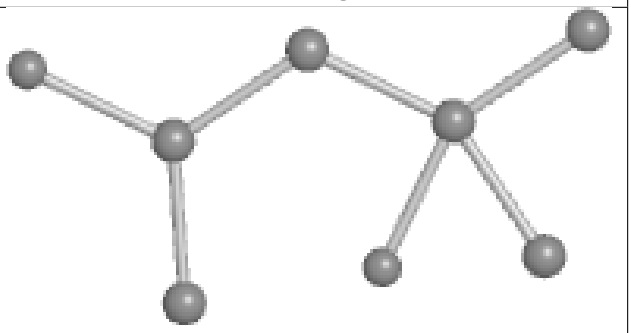


Bond angles

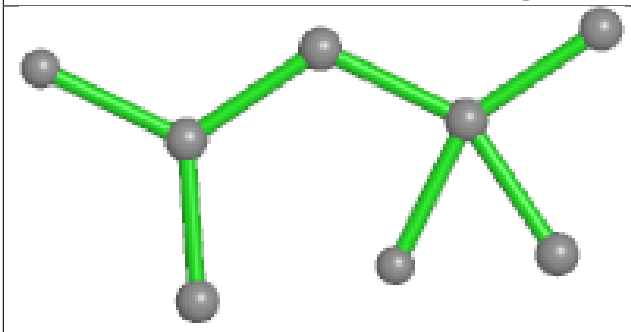


Torsions

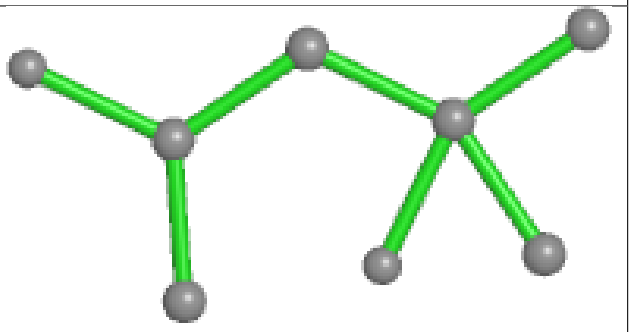


Rings

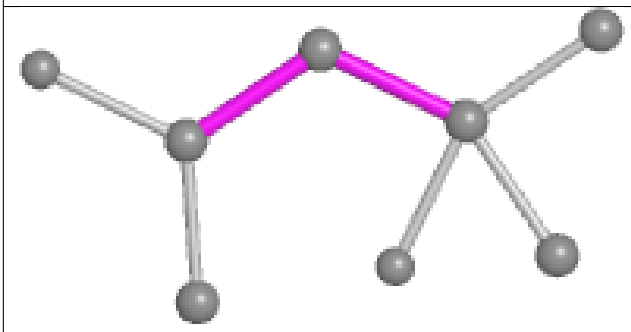
Ligand MPD H 302



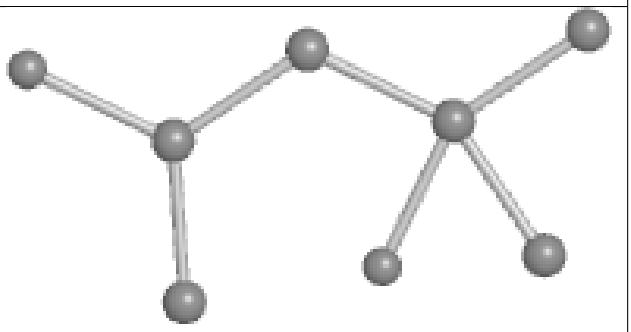
Bond lengths



Bond angles

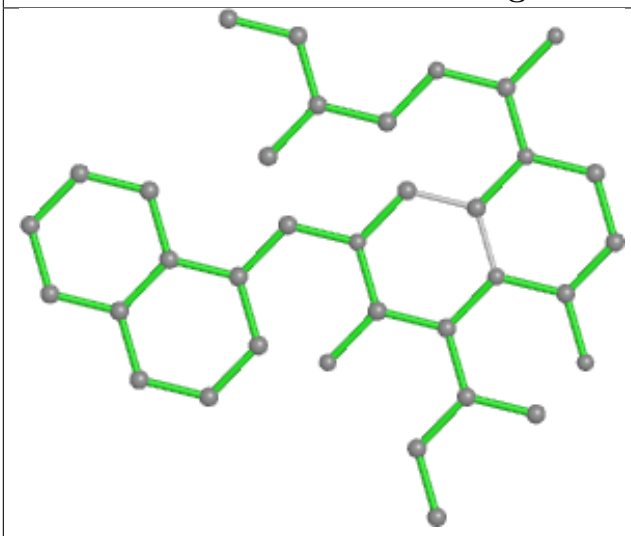


Torsions



Rings

Ligand A1EEL J 303



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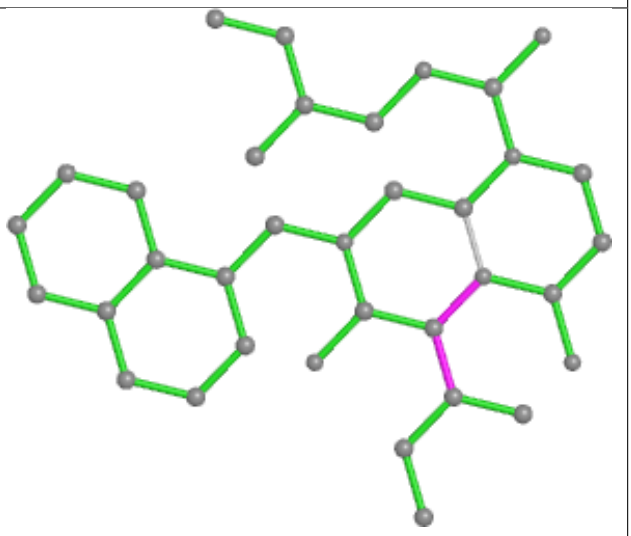
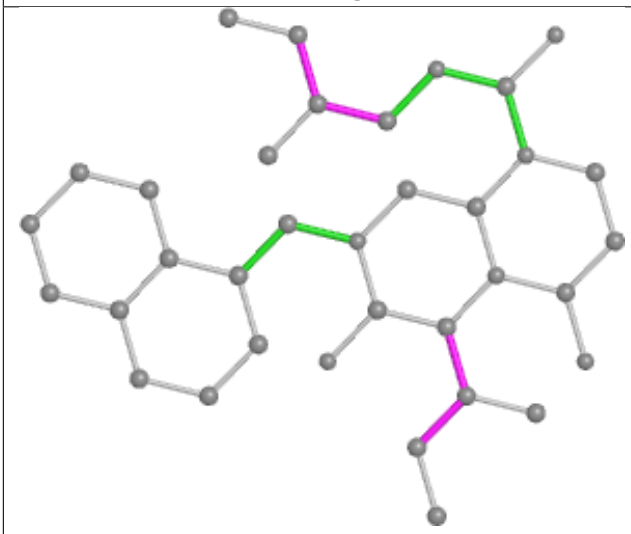


Bond angles



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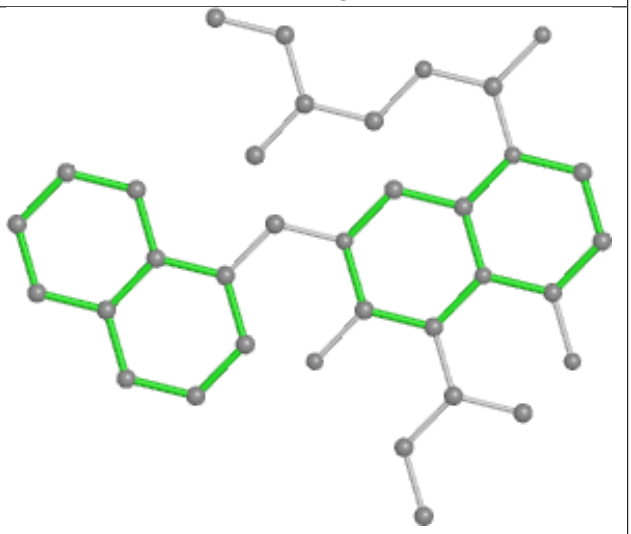
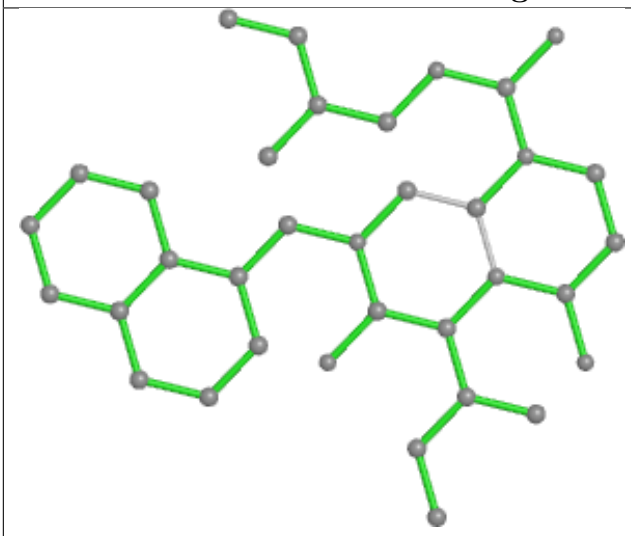


Rings

Ligand A1EEL I 305



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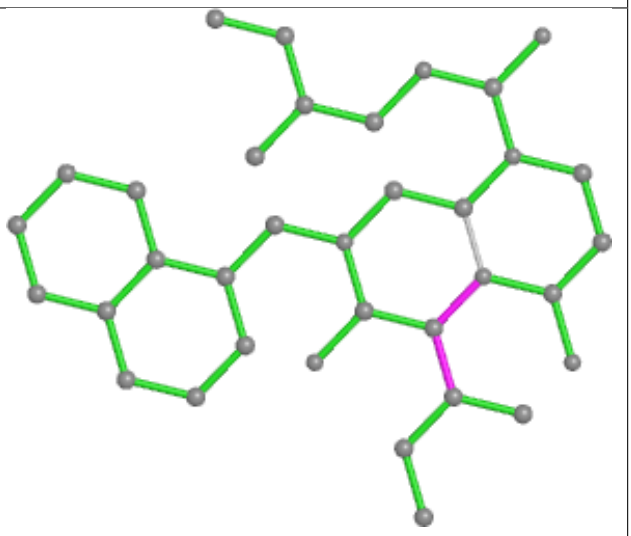
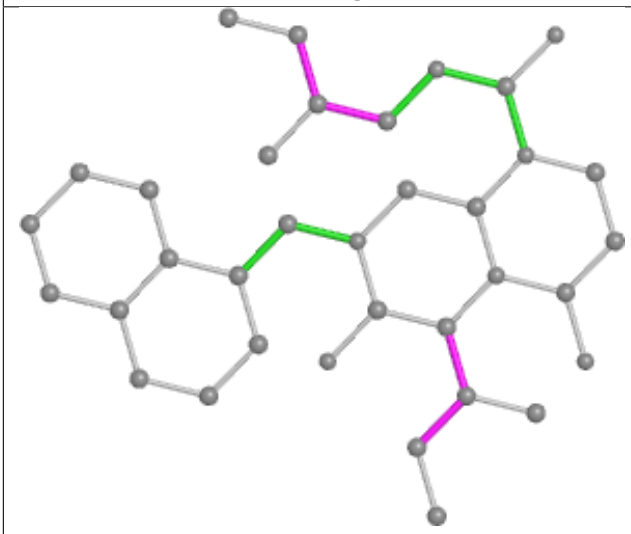
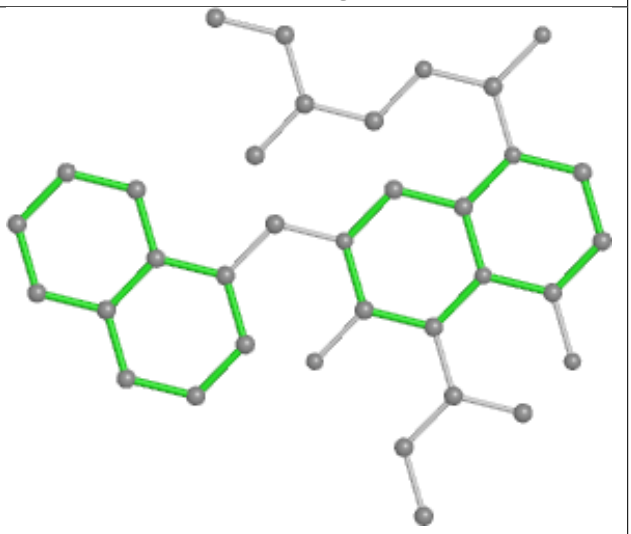


Bond angles

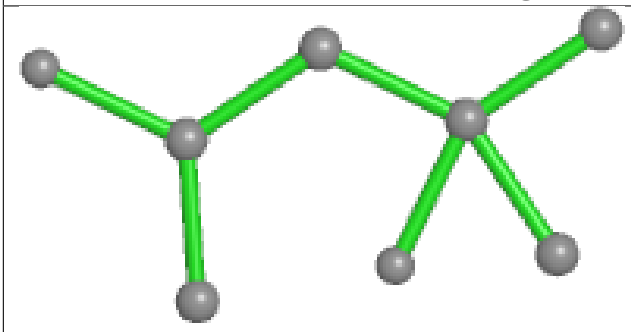


Torsions

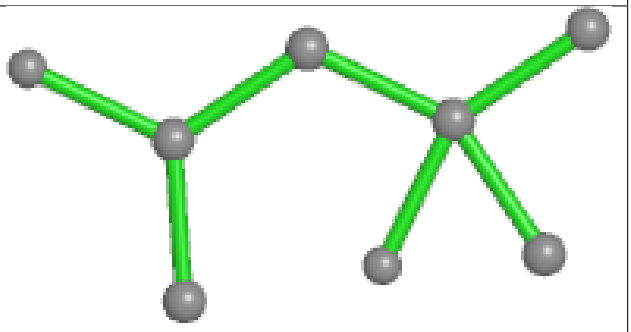


Rings

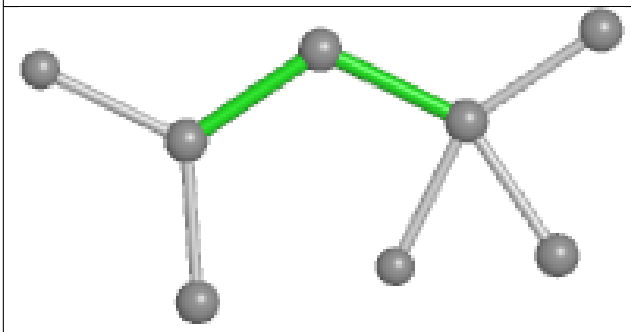
Ligand MPD G 302



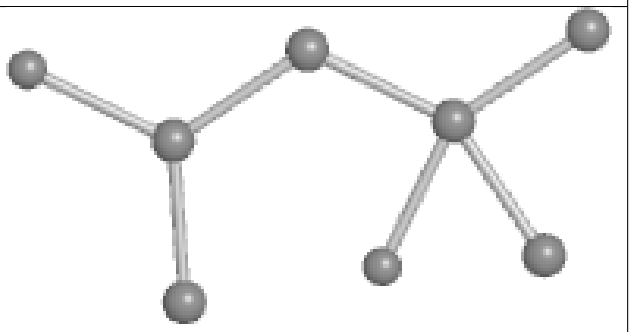
Bond lengths



Bond angles

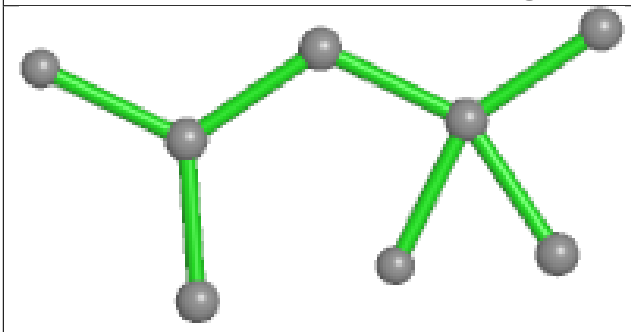


Torsions

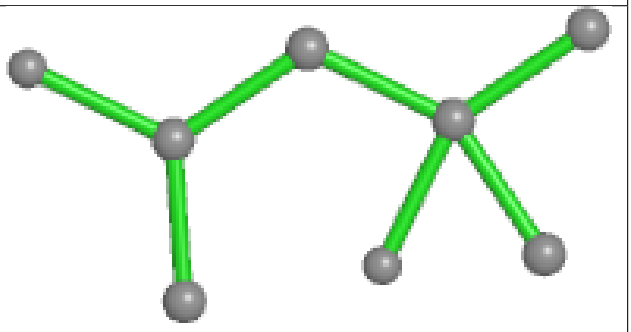


Rings

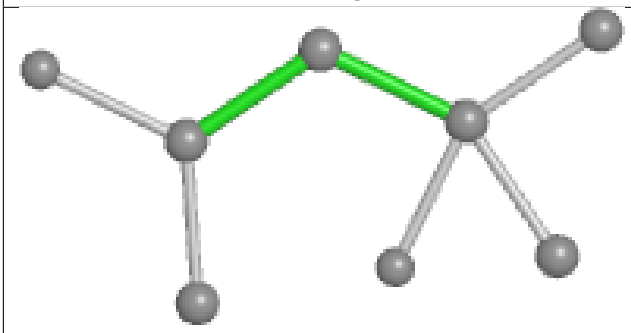
Ligand MPD L 302



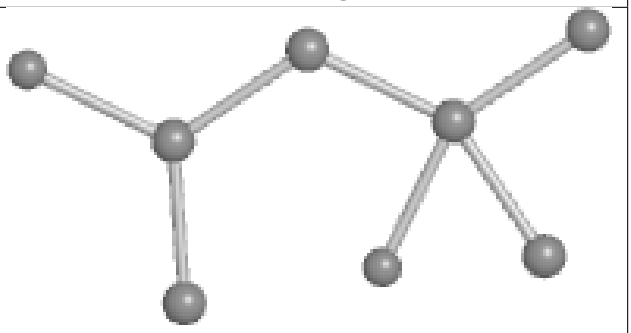
Bond lengths



Bond angles

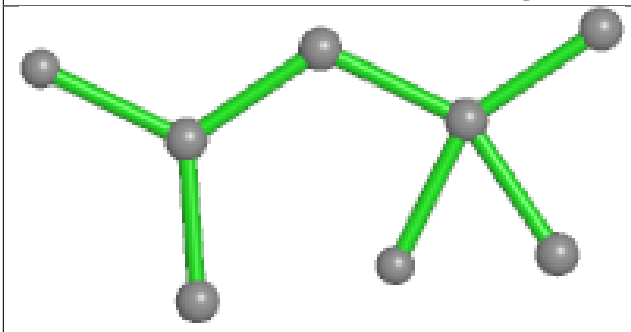


Torsions

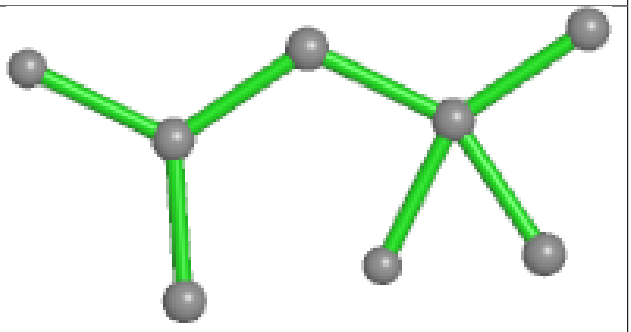


Rings

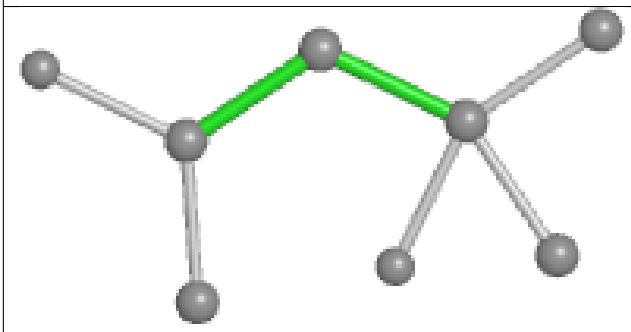
Ligand MPD D 302



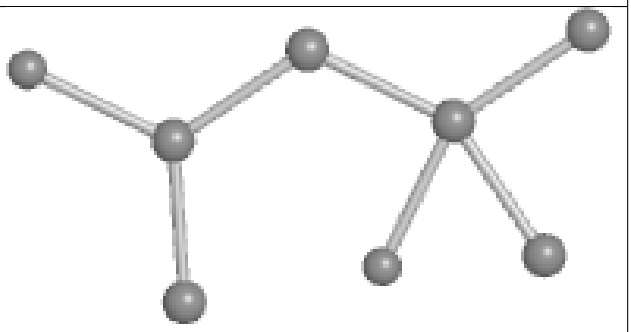
Bond lengths



Bond angles

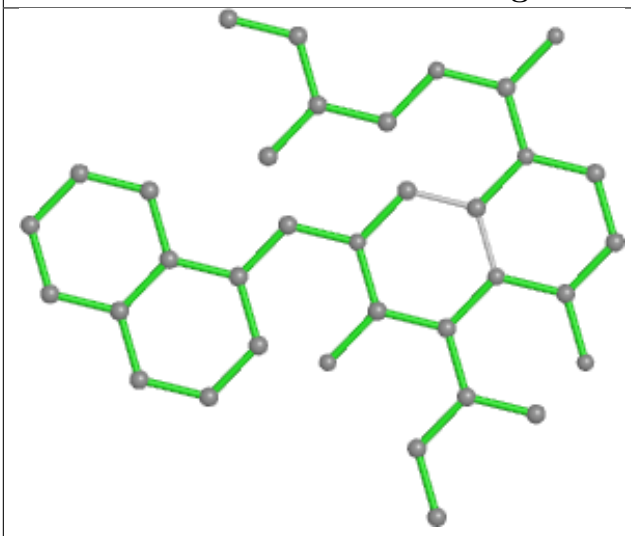


Torsions



Rings

Ligand A1EEL I 304



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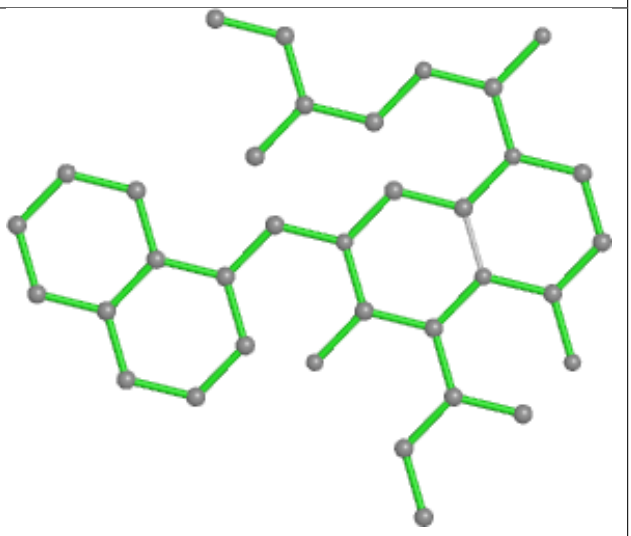
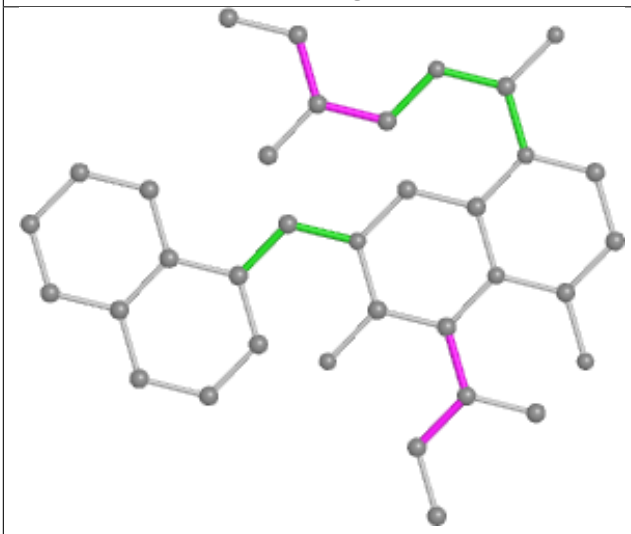


Bond angles



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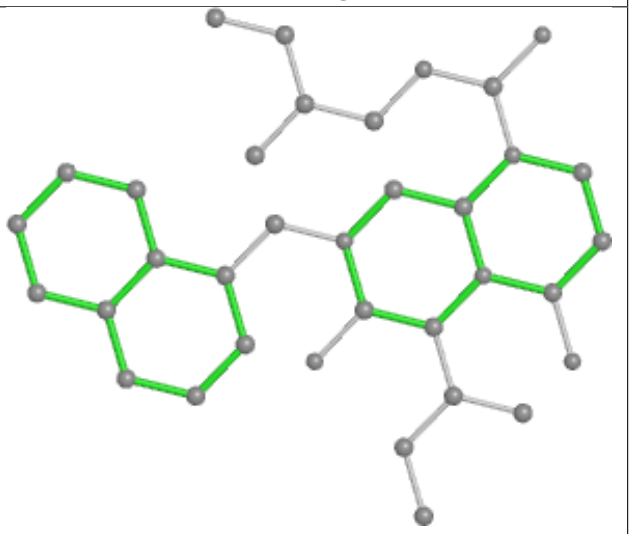
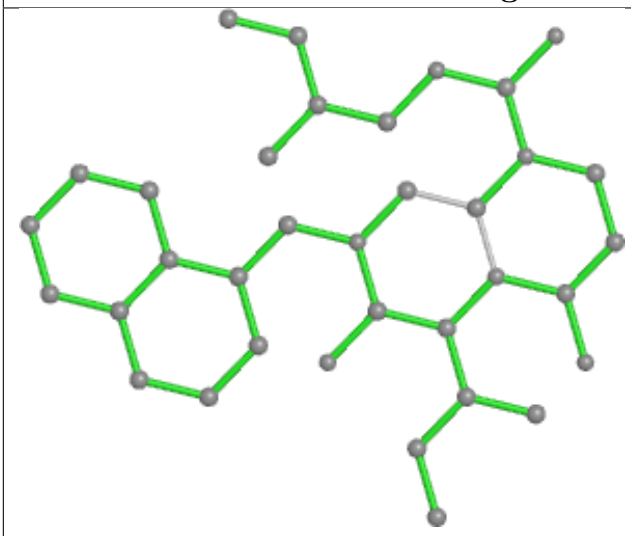


Rings

Ligand A1EEL M 303



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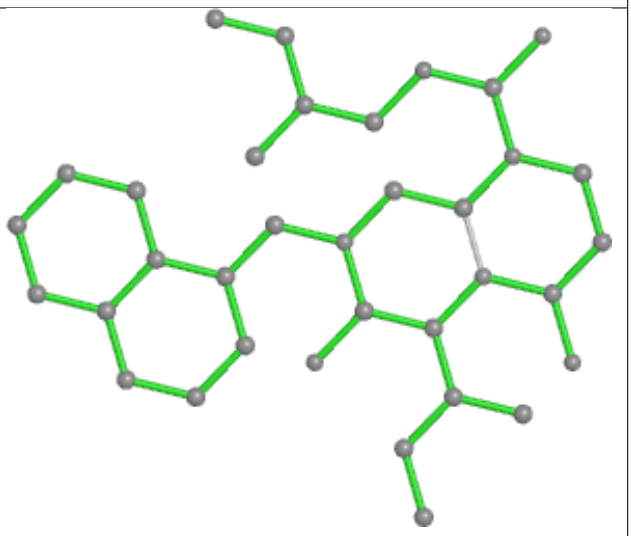
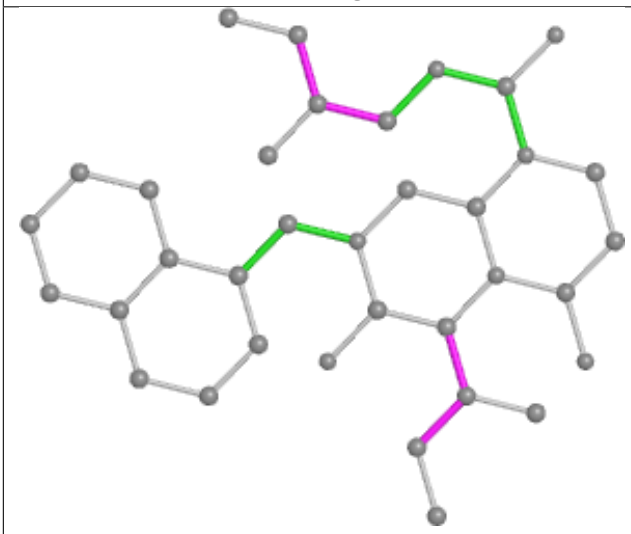
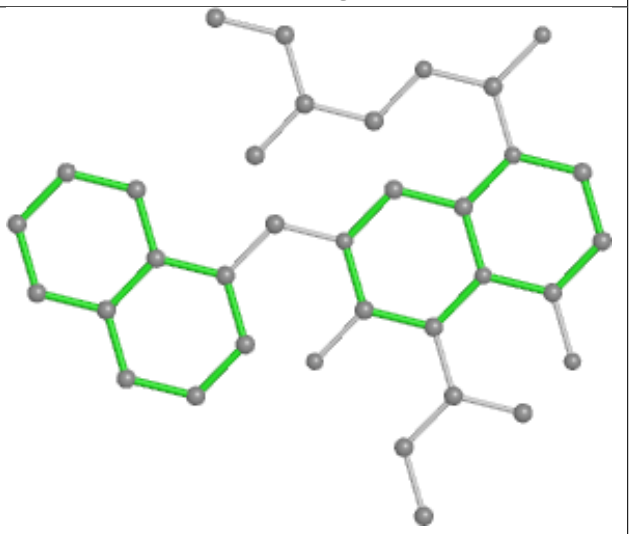


Bond angles

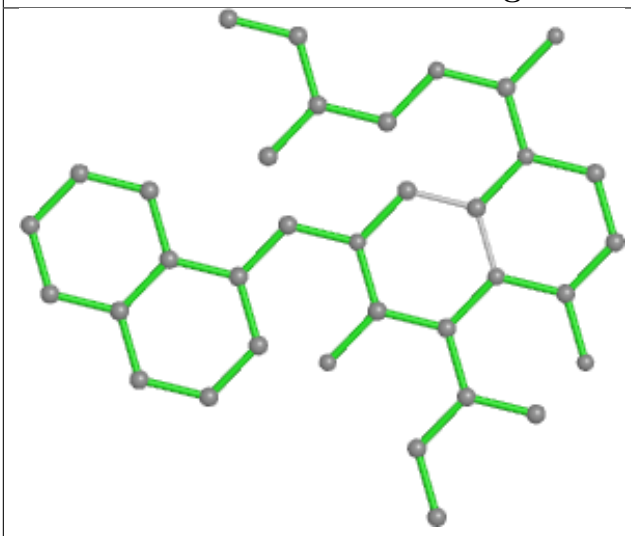


Torsions

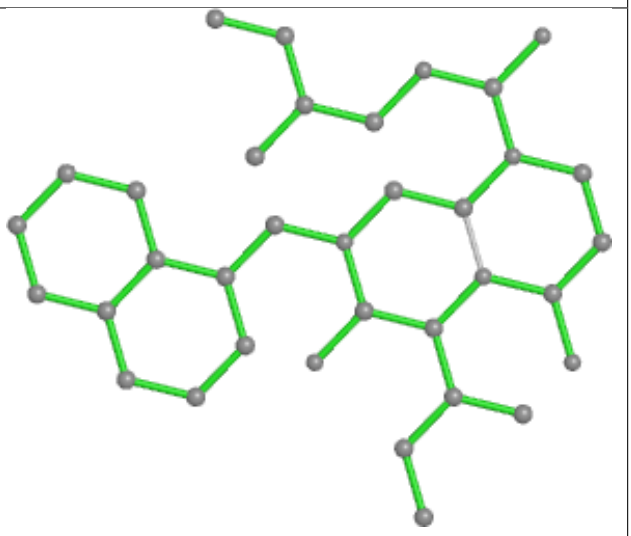


Rings

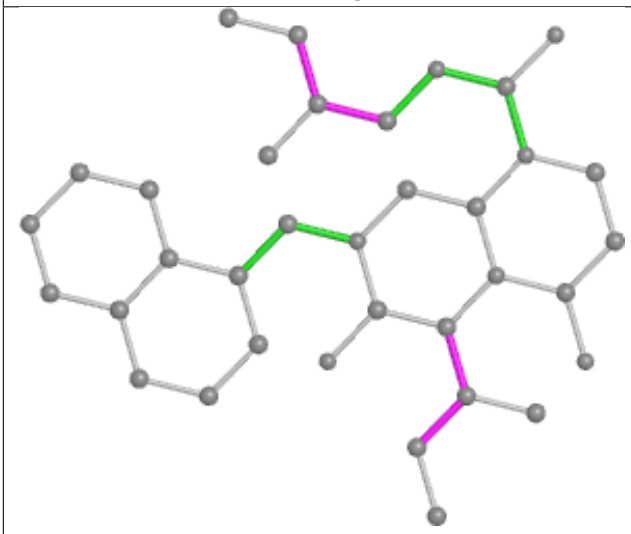
Ligand A1EEL G 303



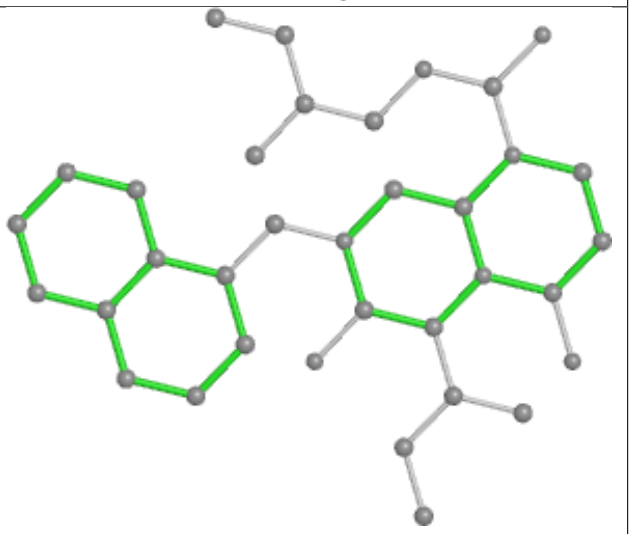
Bond lengths



Bond angles

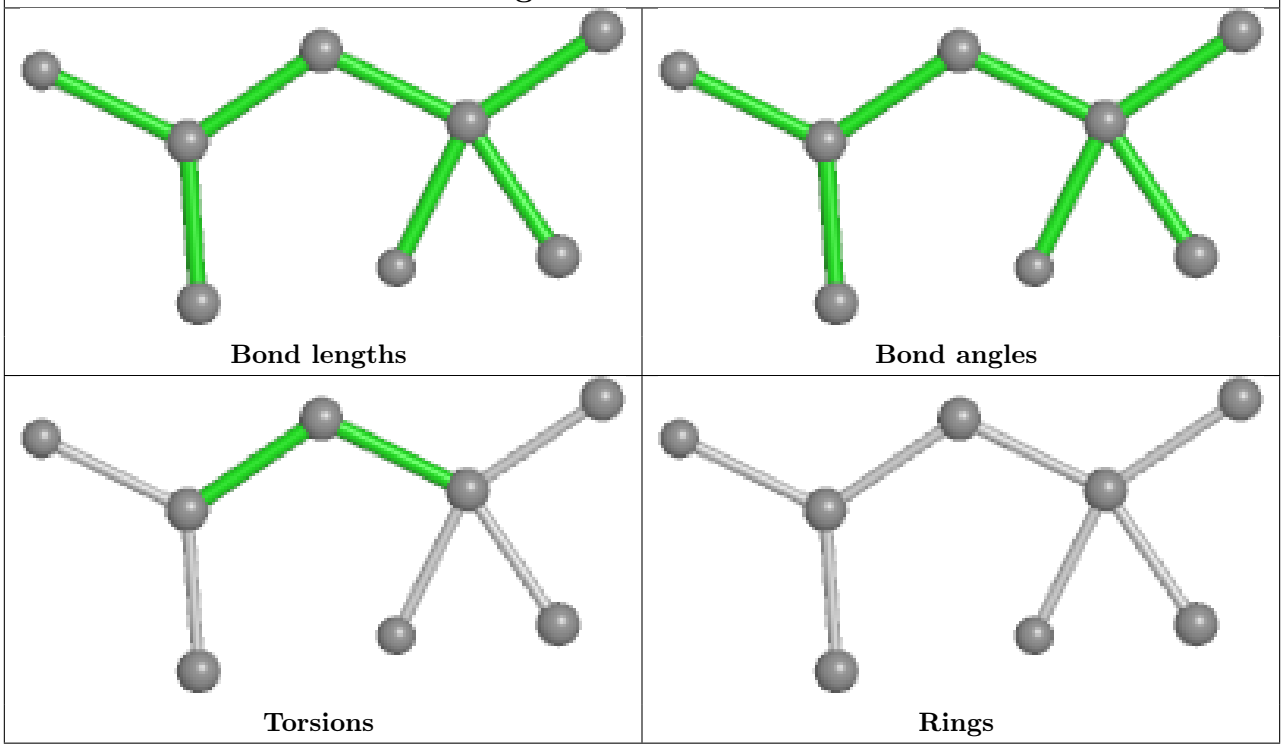


Torsions

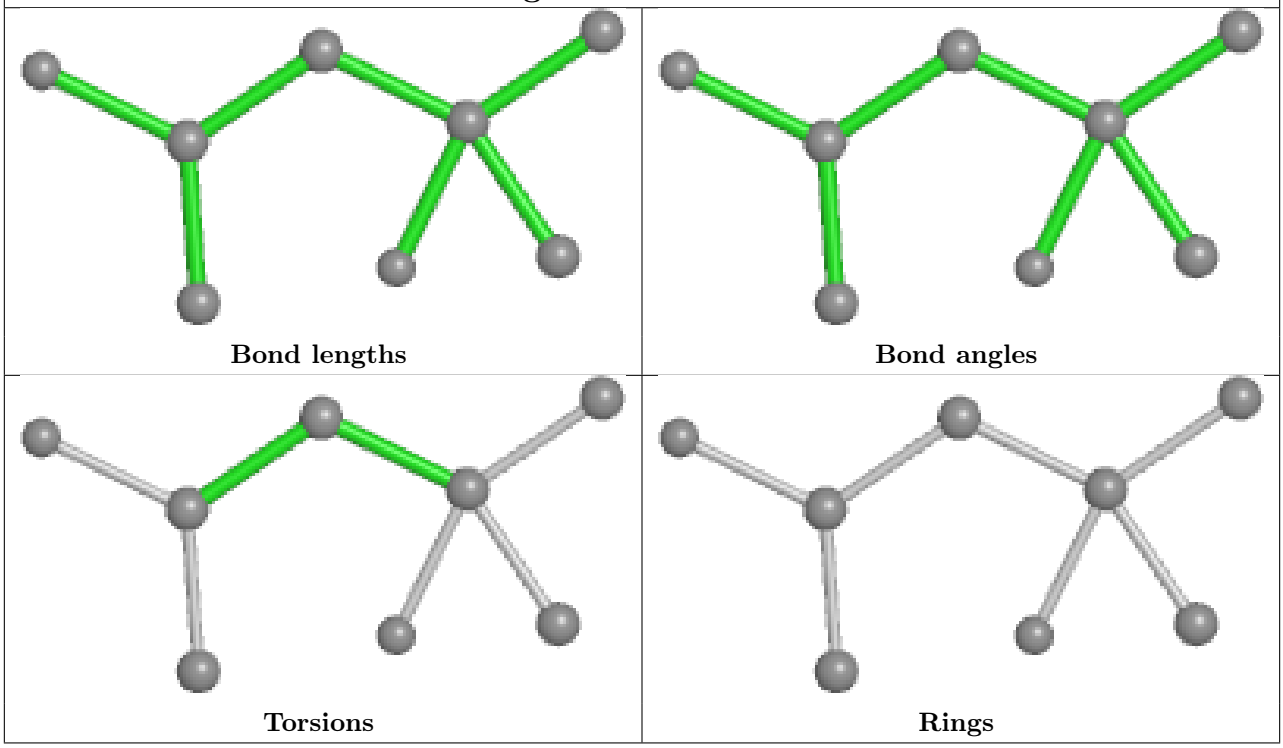


Rings

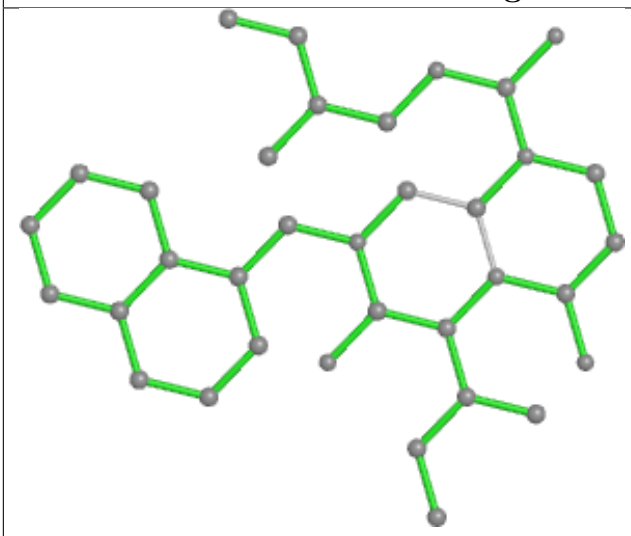
Ligand MPD M 302



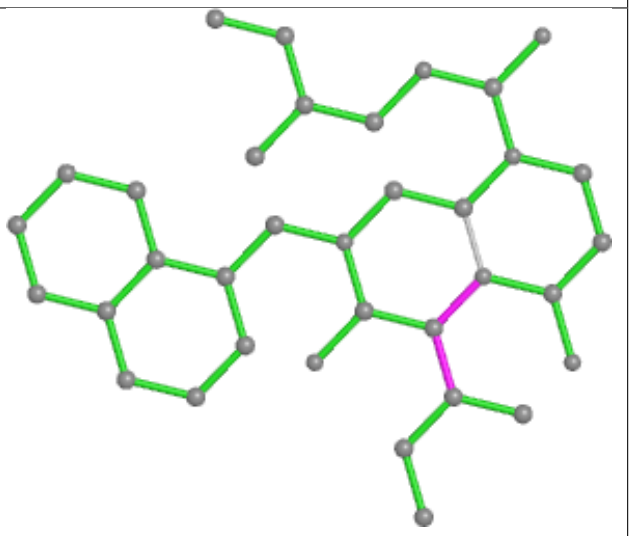
Ligand MPD J 302



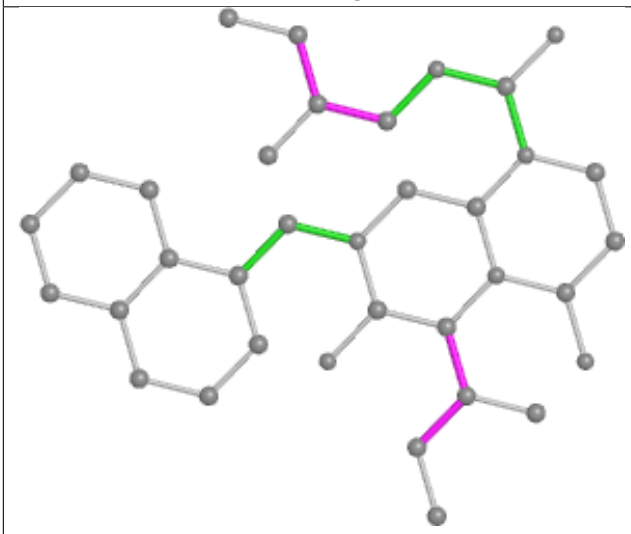
Ligand A1EEL D 303



Bond lengths



Bond angles



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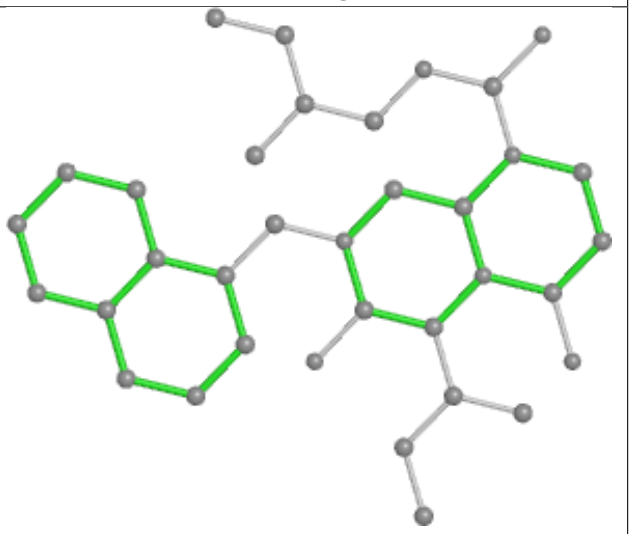
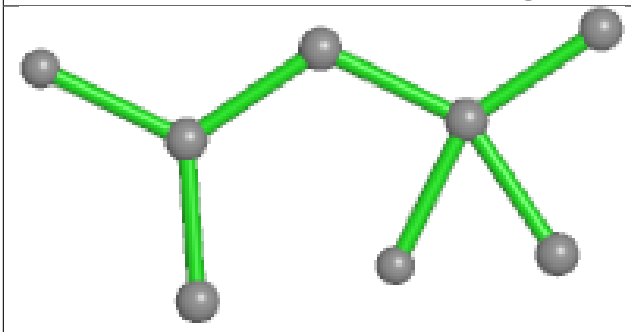
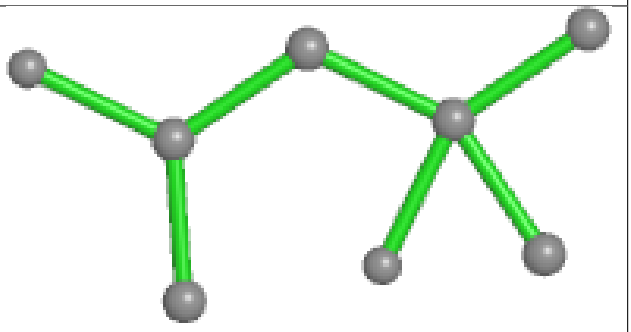


Rings

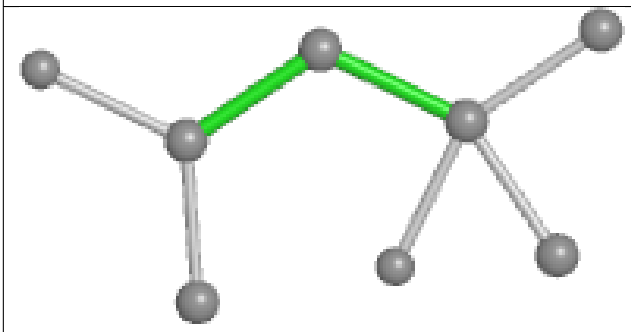
Ligand MPD E 302



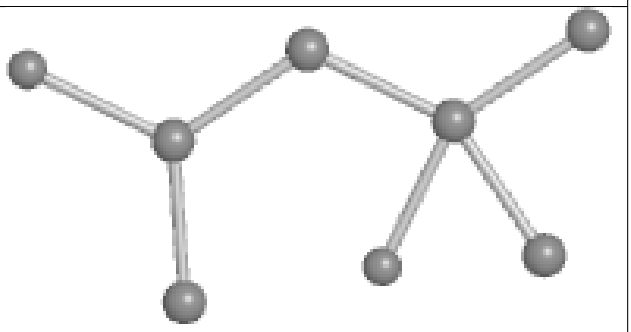
Bond lengths



Bond angles

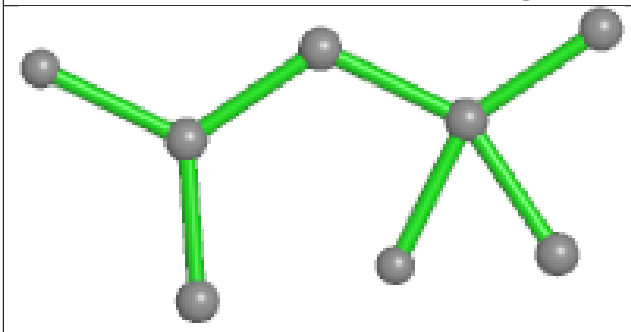


Torsions



Rings

Ligand MPD N 302



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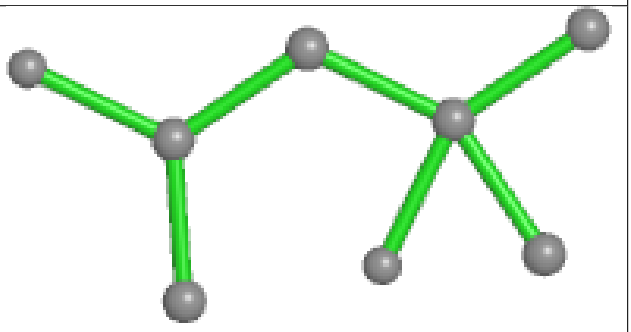
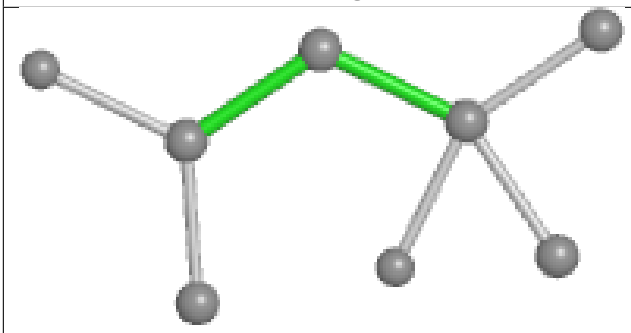
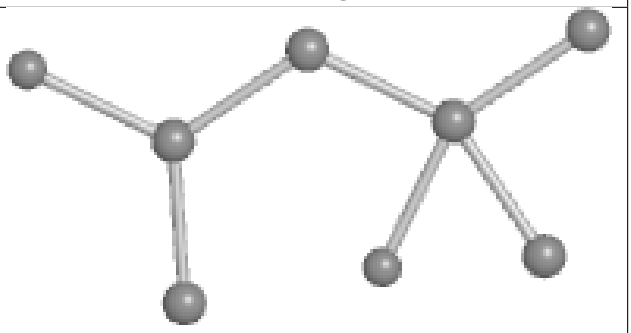


Bond angles

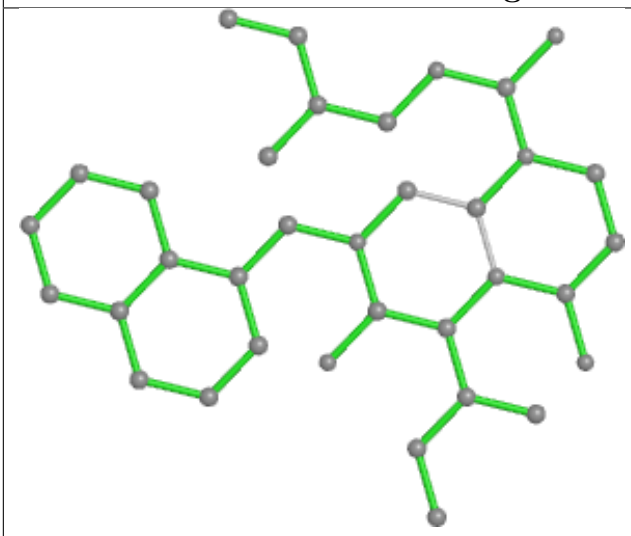


Torsions

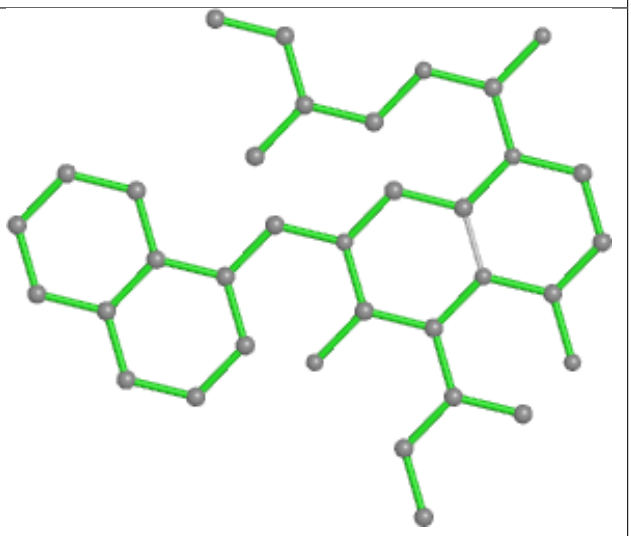


Rings

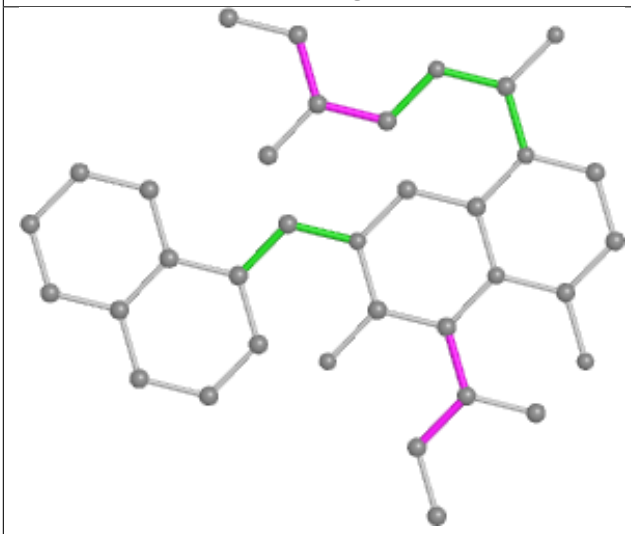
Ligand A1EEL N 303



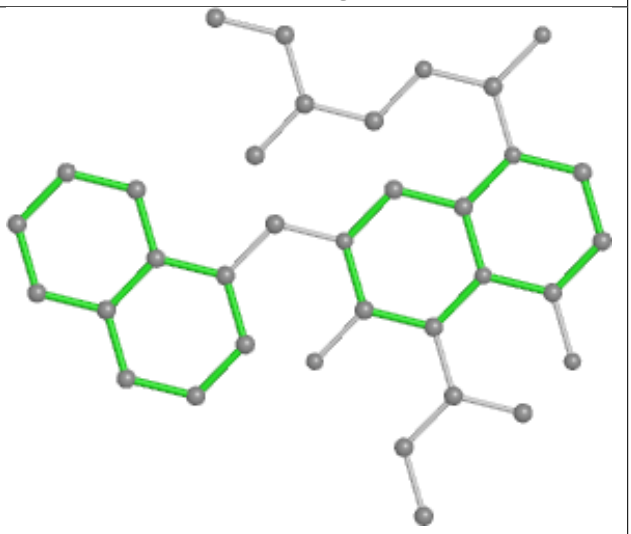
Bond lengths



Bond angles

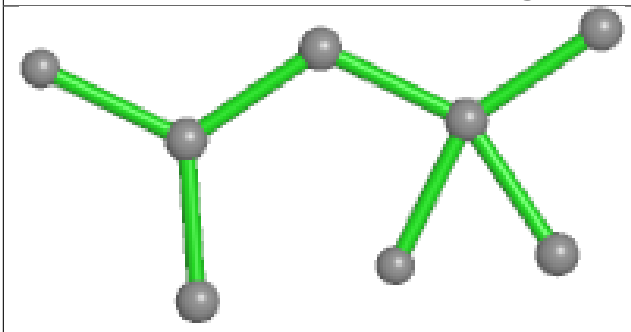


Torsions

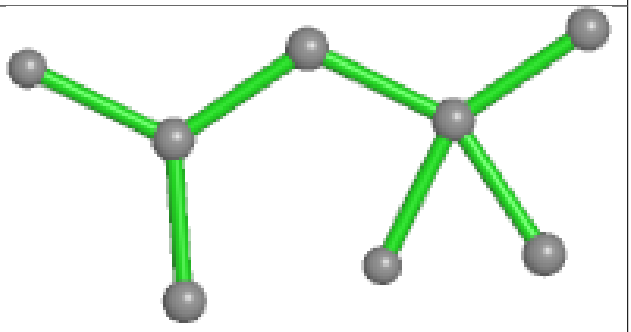


Rings

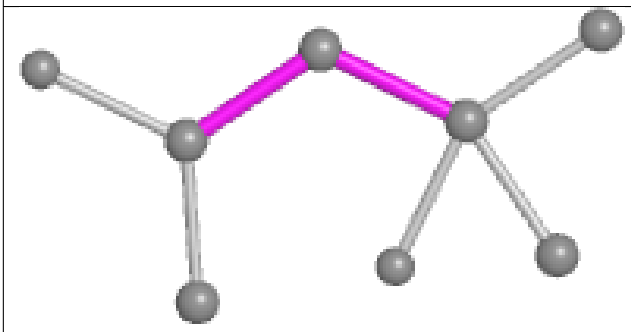
Ligand MPD B 303



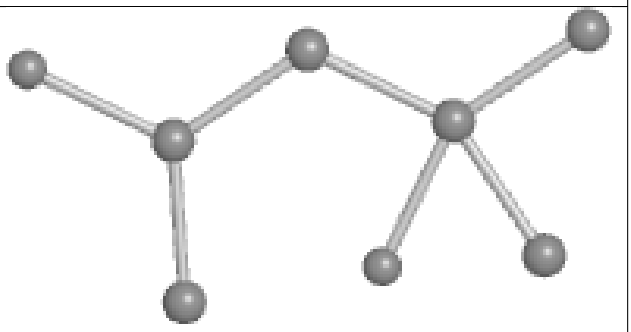
Bond lengths



Bond angles

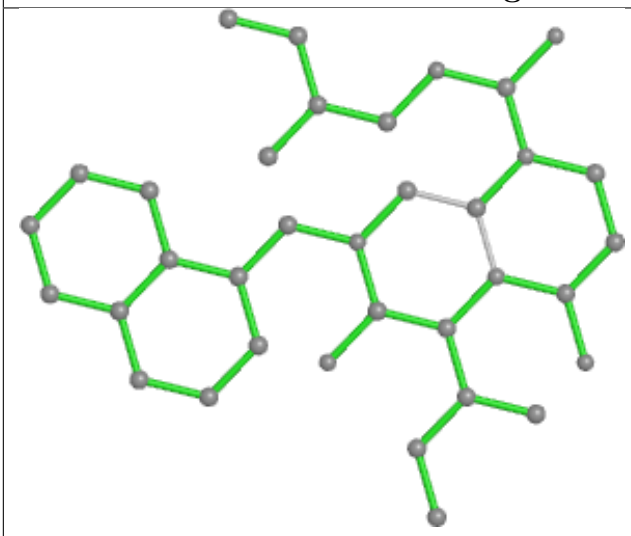


Torsions

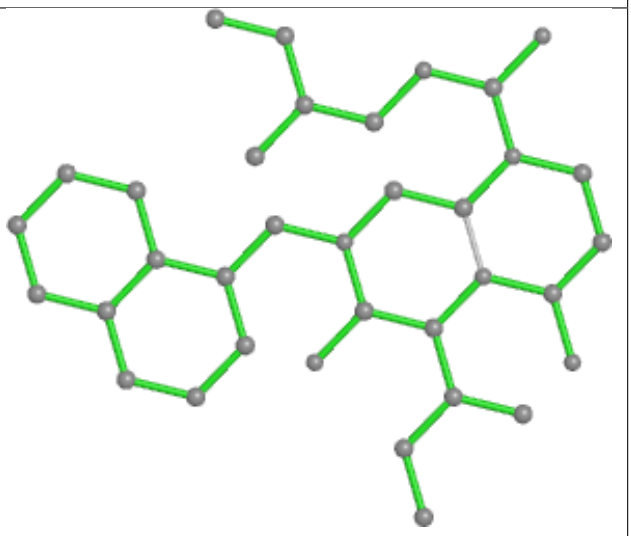


Rings

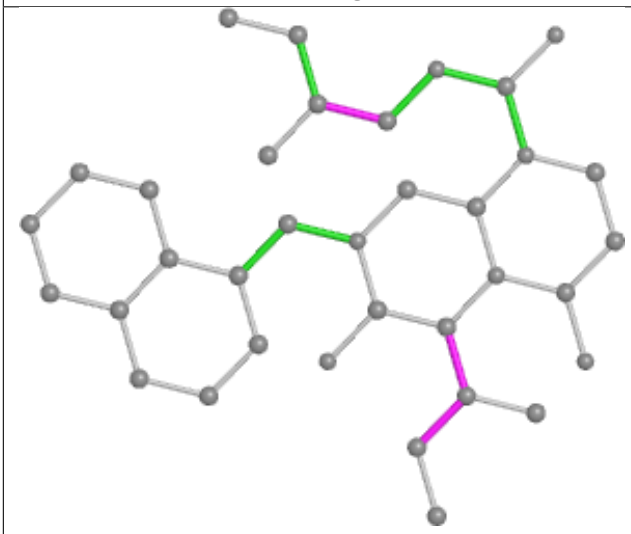
Ligand A1EEL H 303



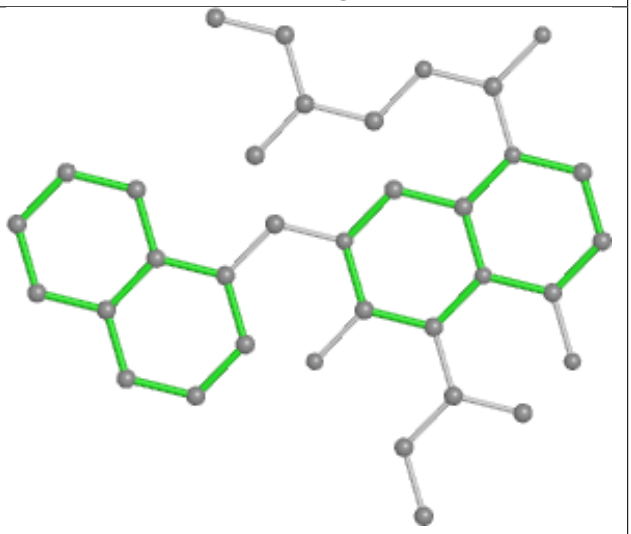
Bond lengths



Bond angles

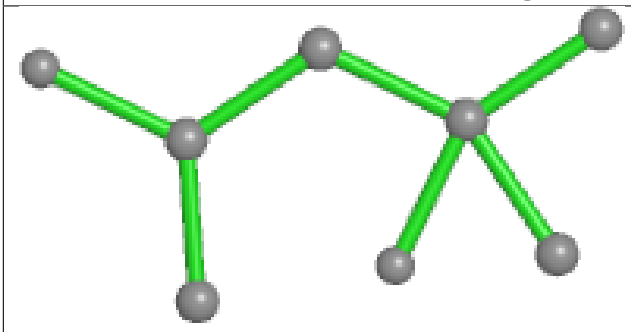


Torsions

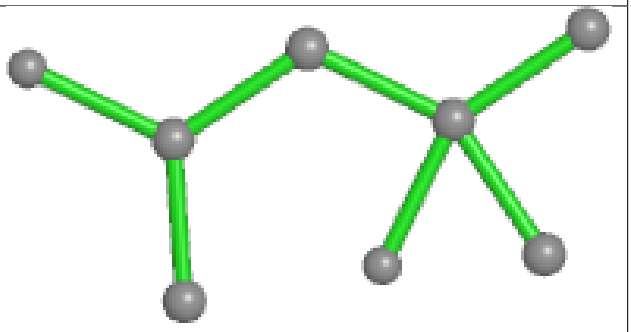


Rings

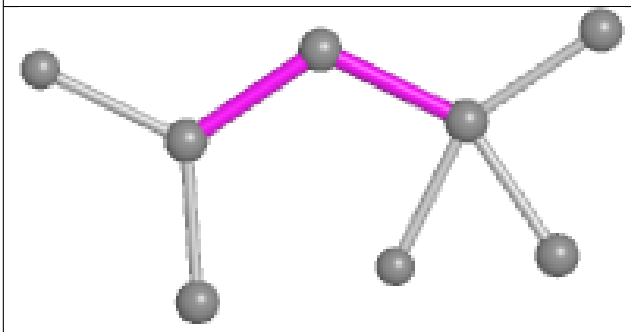
Ligand MPD B 302



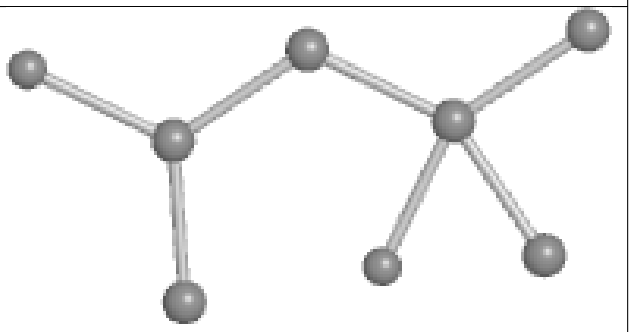
Bond lengths



Bond angles

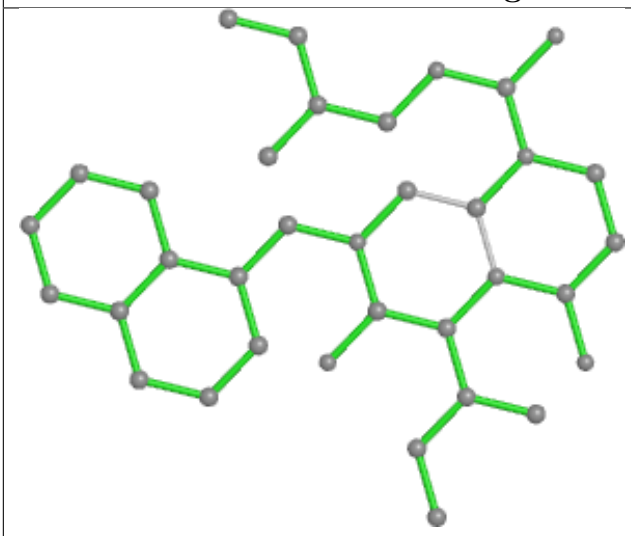


Torsions

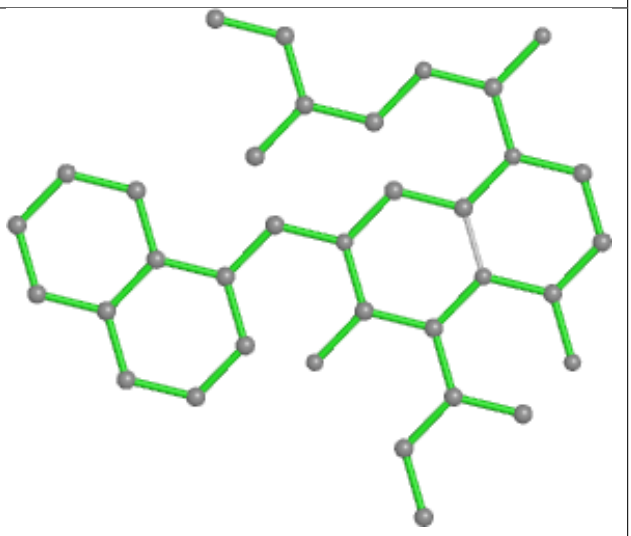


Rings

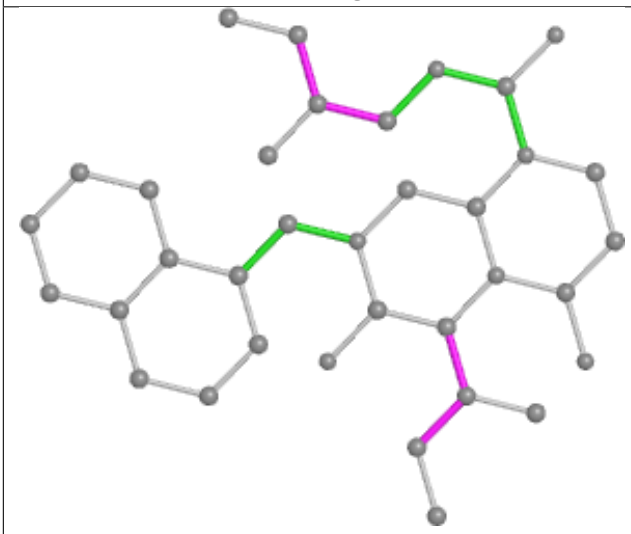
Ligand A1EEL D 304



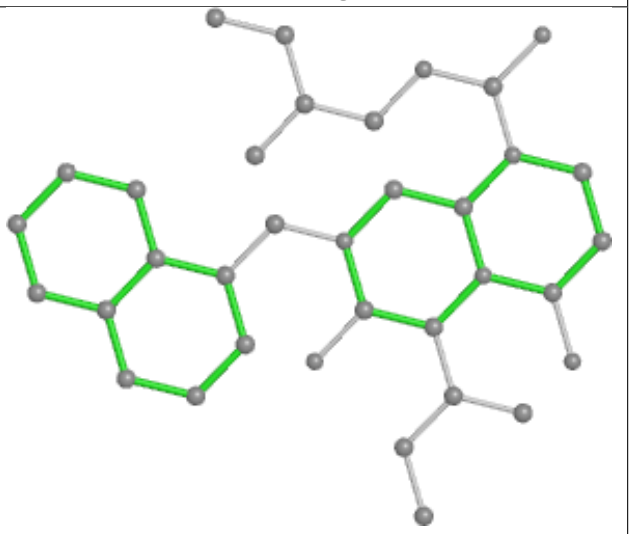
Bond lengths



Bond angles

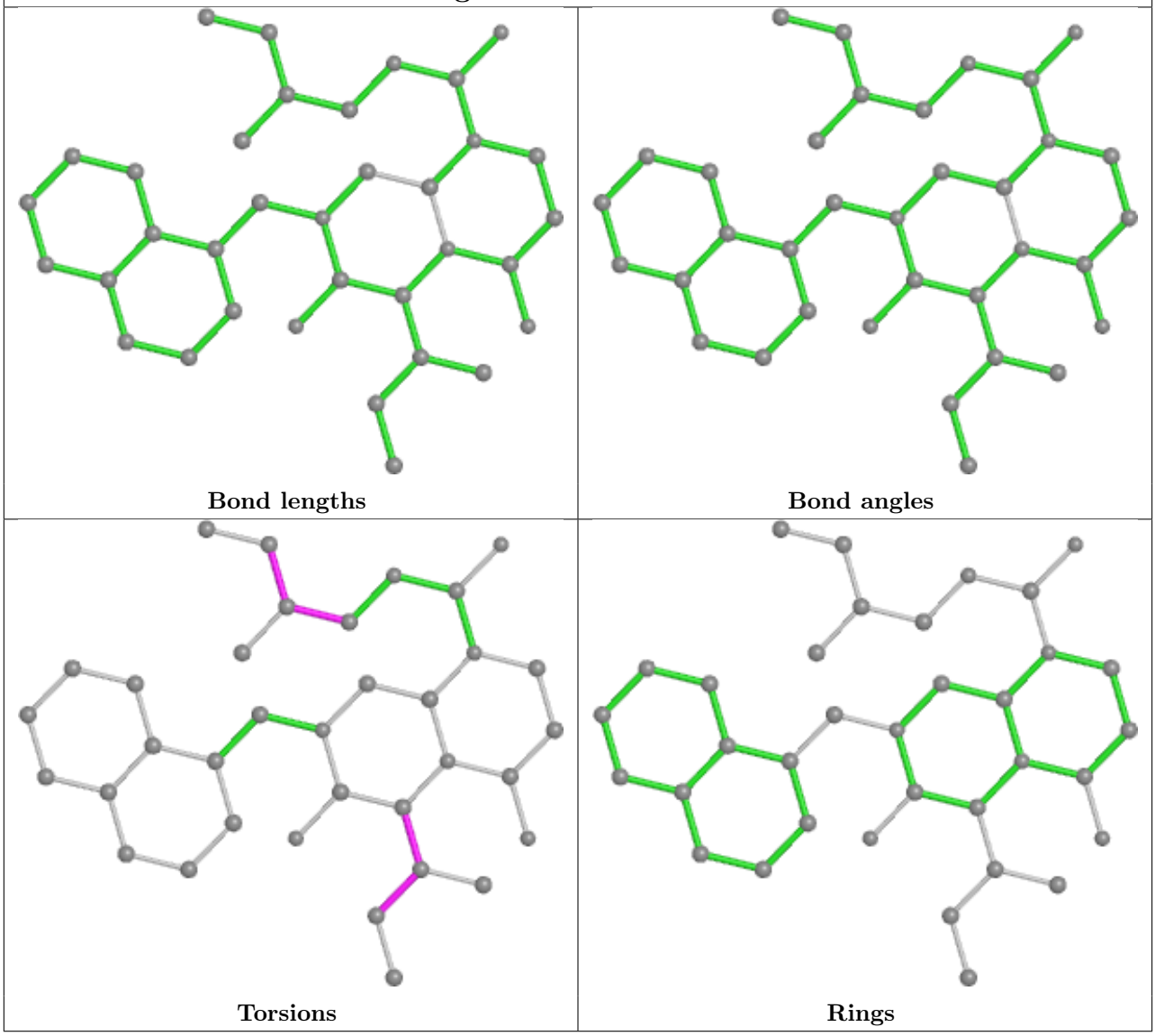


Torsions



Rings

Ligand A1EEL A 303



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	191/201 (95%)	-0.54	5 (2%)	57	60	20, 31, 70, 95	0
1	B	189/201 (94%)	-0.56	4 (2%)	63	65	22, 30, 59, 82	0
1	C	184/201 (91%)	-0.54	1 (0%)	87	88	24, 34, 54, 80	0
1	D	184/201 (91%)	-0.28	5 (2%)	56	59	31, 41, 65, 94	0
1	E	181/201 (90%)	-0.23	3 (1%)	69	70	32, 43, 63, 71	0
1	F	182/201 (90%)	-0.36	5 (2%)	56	59	29, 40, 61, 84	0
1	G	184/201 (91%)	-0.54	2 (1%)	77	79	24, 34, 55, 99	0
1	H	191/201 (95%)	-0.51	5 (2%)	57	60	22, 31, 70, 98	0
1	I	190/201 (94%)	-0.54	4 (2%)	63	65	23, 31, 58, 110	0
1	J	185/201 (92%)	-0.51	3 (1%)	70	72	26, 34, 55, 82	0
1	K	181/201 (90%)	-0.31	2 (1%)	77	79	32, 42, 58, 64	0
1	L	183/201 (91%)	-0.20	4 (2%)	62	65	32, 44, 68, 94	0
1	M	180/201 (89%)	-0.45	1 (0%)	85	87	28, 39, 58, 78	0
1	N	180/201 (89%)	-0.58	1 (0%)	85	87	24, 32, 51, 67	0
All	All	2585/2814 (91%)	-0.44	45 (1%)	69	70	20, 37, 61, 110	0

All (45) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	F	3	LEU	4.9
1	D	3	LEU	4.9
1	G	8	ILE	4.1
1	F	8	ILE	4.0
1	D	9	GLU	3.9
1	B	10	THR	3.8
1	J	10	THR	3.7
1	L	3	LEU	3.5

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Mol	Chain	Res	Type	RSRZ
1	A	15	GLU	3.5
1	H	193	GLU	3.5
1	B	13	ARG	3.5
1	M	3	LEU	3.4
1	B	3	LEU	3.3
1	L	192	PRO	3.3
1	J	192	PRO	3.3
1	N	8	ILE	3.1
1	B	191	VAL	3.1
1	I	12	ASN	3.1
1	I	13	ARG	3.1
1	E	8	ILE	3.1
1	A	10	THR	3.1
1	I	11	THR	3.0
1	I	3	LEU	2.9
1	G	16	ARG	2.9
1	A	12	ASN	2.9
1	K	8	ILE	2.9
1	A	13	ARG	2.8
1	H	11	THR	2.7
1	E	17	ALA	2.6
1	L	9	GLU	2.5
1	H	10	THR	2.4
1	H	16	ARG	2.4
1	F	192	PRO	2.3
1	F	17	ALA	2.3
1	L	191	VAL	2.3
1	E	4	ILE	2.2
1	H	15	GLU	2.2
1	J	18	TYR	2.1
1	D	8	ILE	2.1
1	D	85	LYS	2.1
1	D	17	ALA	2.1
1	K	4	ILE	2.0
1	A	3	LEU	2.0
1	F	191	VAL	2.0
1	C	192	PRO	2.0

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	MPD	I	303	8/8	0.86	0.16	49,50,52,54	0
3	MPD	H	302	8/8	0.89	0.19	45,47,49,54	0
3	MPD	A	302	8/8	0.89	0.18	39,41,47,51	0
4	A1EEL	F	303	35/35	0.89	0.15	54,62,82,85	0
4	A1EEL	K	303	35/35	0.89	0.13	59,63,69,71	0
4	A1EEL	M	303	35/35	0.89	0.14	58,65,74,76	0
4	A1EEL	G	303	35/35	0.90	0.14	49,59,73,74	0
4	A1EEL	H	303	35/35	0.90	0.13	46,53,64,67	0
4	A1EEL	I	305	35/35	0.90	0.14	50,58,62,63	0
4	A1EEL	J	303	35/35	0.90	0.13	44,58,69,71	0
3	MPD	B	303	8/8	0.90	0.14	43,49,52,54	0
3	MPD	B	302	8/8	0.90	0.21	49,51,55,59	0
4	A1EEL	E	303	35/35	0.91	0.12	48,55,61,62	0
4	A1EEL	C	303	35/35	0.91	0.12	41,51,68,69	0
4	A1EEL	D	303	35/35	0.92	0.12	54,61,67,70	0
4	A1EEL	D	304	35/35	0.92	0.13	60,64,74,77	0
3	MPD	C	302	8/8	0.92	0.16	52,52,54,55	0
4	A1EEL	I	304	35/35	0.92	0.10	38,46,59,62	0
3	MPD	D	302	8/8	0.93	0.14	50,50,53,54	0
3	MPD	G	302	8/8	0.93	0.11	43,46,47,48	0
3	MPD	J	302	8/8	0.93	0.14	51,55,56,58	0
4	A1EEL	A	303	35/35	0.93	0.10	33,37,56,62	0
3	MPD	I	302	8/8	0.94	0.14	40,41,42,44	0
3	MPD	M	302	8/8	0.94	0.13	44,46,51,52	0
3	MPD	F	302	8/8	0.94	0.13	48,50,52,54	0
4	A1EEL	N	303	35/35	0.94	0.10	49,53,59,62	0
3	MPD	N	302	8/8	0.95	0.11	40,43,45,46	0
3	MPD	L	302	8/8	0.95	0.14	53,54,56,60	0
3	MPD	E	302	8/8	0.95	0.11	48,49,50,50	0
3	MPD	K	302	8/8	0.96	0.10	45,47,49,51	0
2	MG	K	301	1/1	0.96	0.04	30,30,30,30	0
2	MG	G	301	1/1	0.97	0.07	19,19,19,19	0

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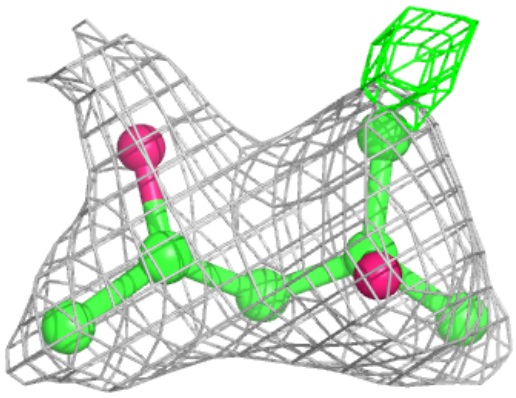
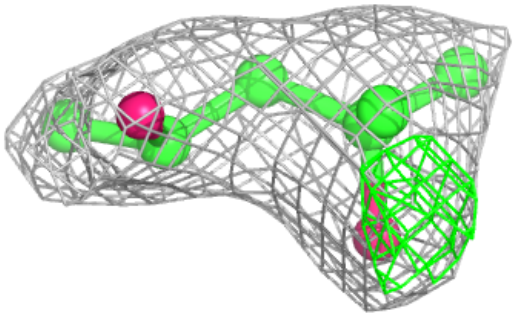
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	MG	L	301	1/1	0.98	0.05	28,28,28,28	0
2	MG	M	301	1/1	0.98	0.07	22,22,22,22	0
2	MG	A	301	1/1	0.98	0.02	15,15,15,15	0
2	MG	E	301	1/1	0.98	0.06	24,24,24,24	0
2	MG	J	301	1/1	0.99	0.04	19,19,19,19	0
2	MG	C	301	1/1	0.99	0.05	16,16,16,16	0
2	MG	F	301	1/1	0.99	0.05	19,19,19,19	0
2	MG	D	301	1/1	0.99	0.03	29,29,29,29	0
2	MG	N	301	1/1	0.99	0.04	16,16,16,16	0
2	MG	H	301	1/1	0.99	0.02	15,15,15,15	0
2	MG	I	301	1/1	0.99	0.02	11,11,11,11	0
2	MG	B	301	1/1	1.00	0.02	13,13,13,13	0

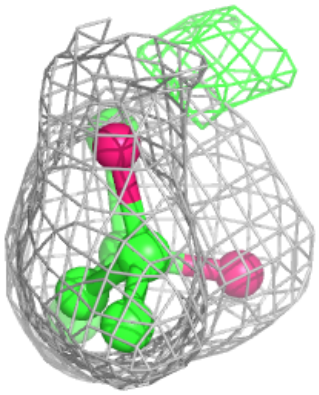
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around MPD I 303:

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

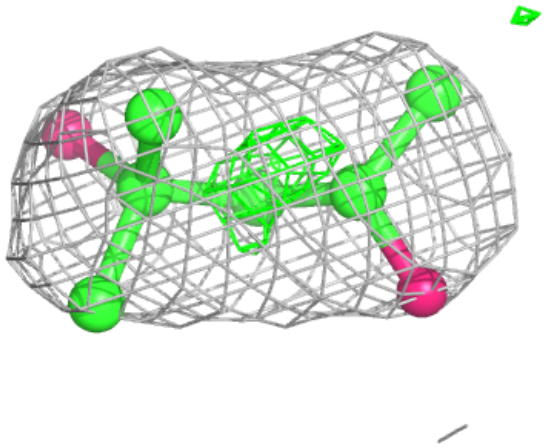


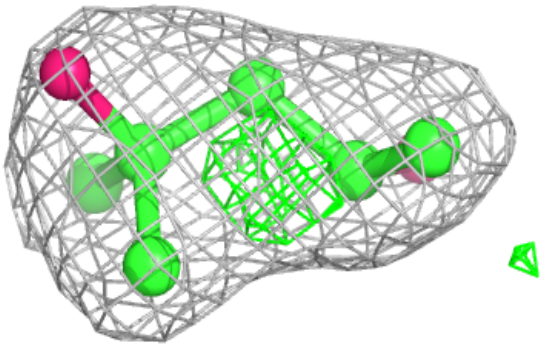


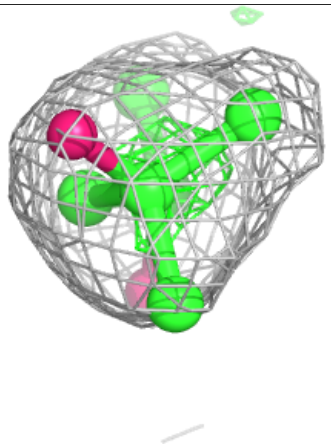


Electron density around MPD H 302:

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

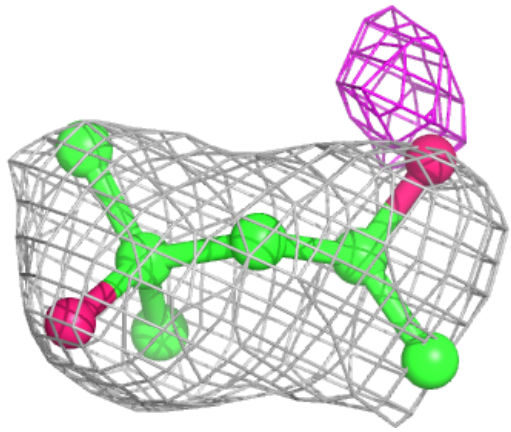


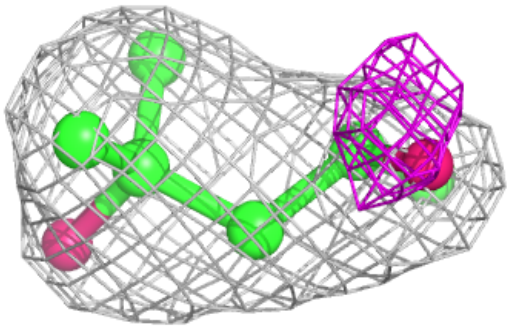


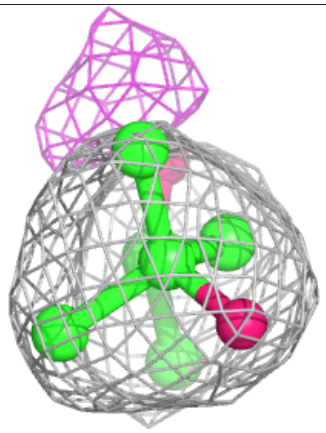


Electron density around MPD A 302:

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

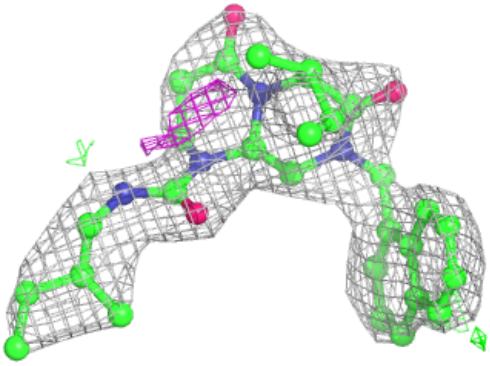


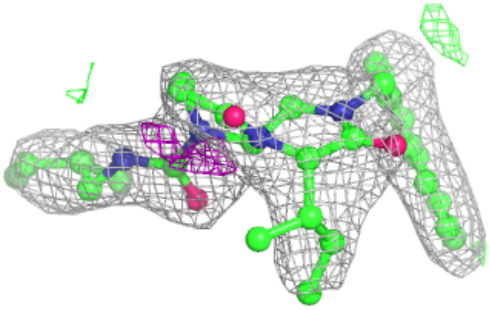


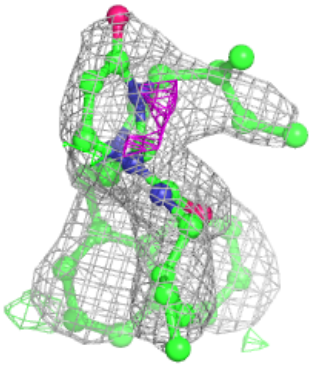


Electron density around A1EEL F 303:

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

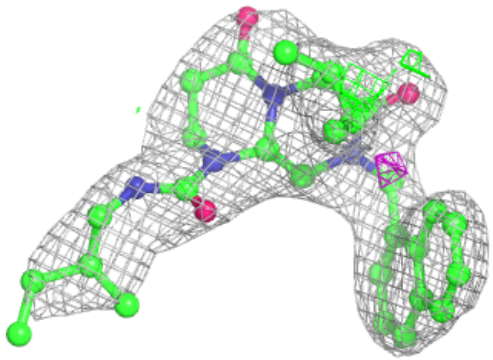


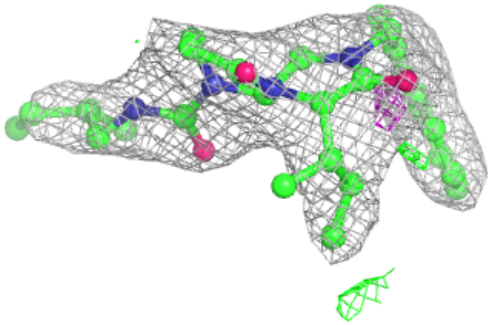


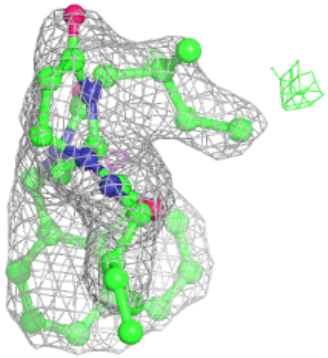


Electron density around A1EEL K 303:

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

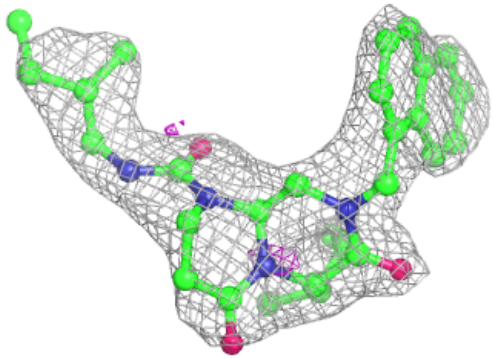


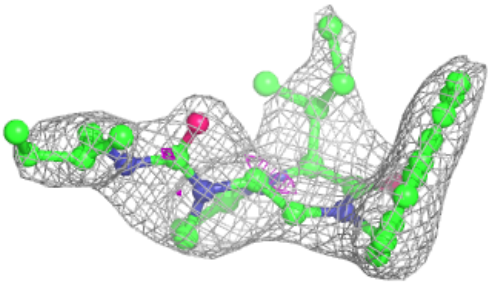


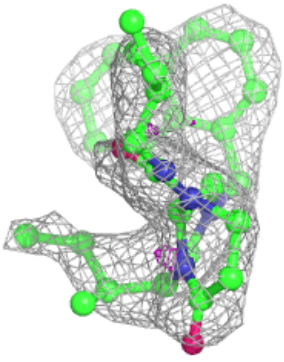


Electron density around A1EEL M 303:

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

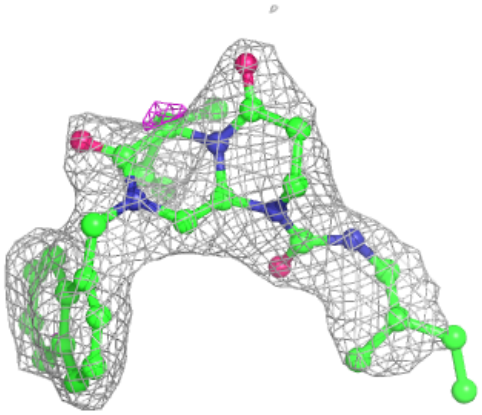


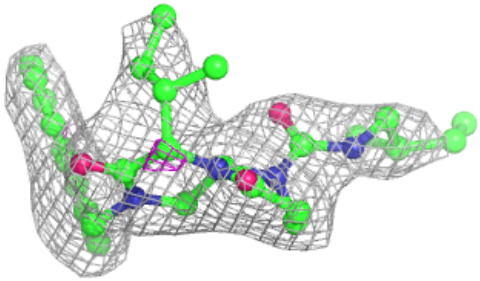


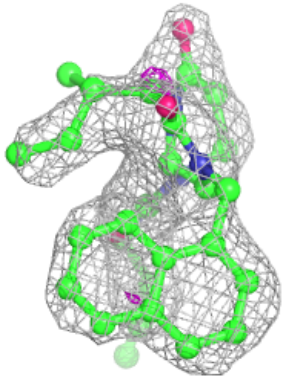


Electron density around A1EEL G 303:

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

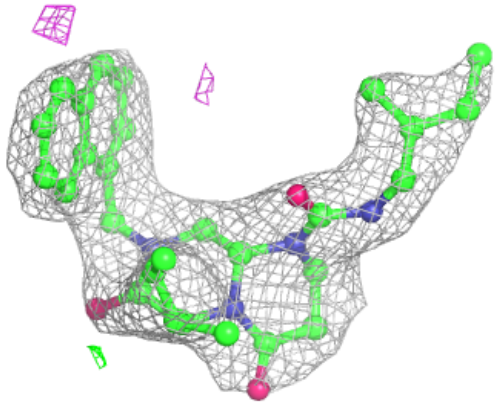


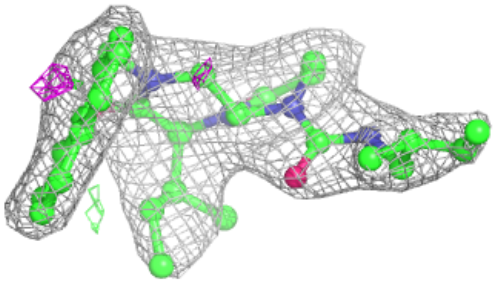


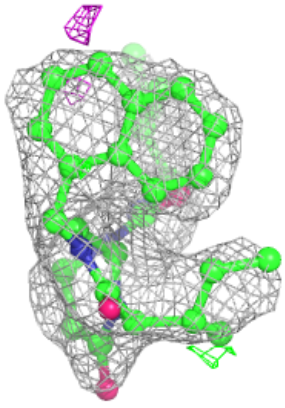


Electron density around A1EEL H 303:

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

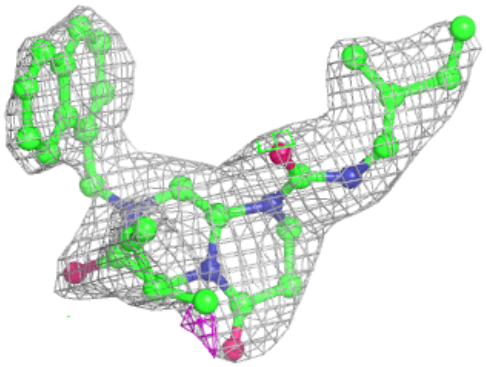


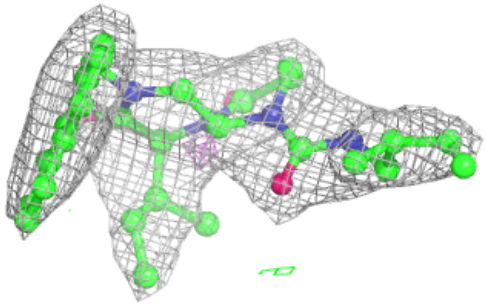


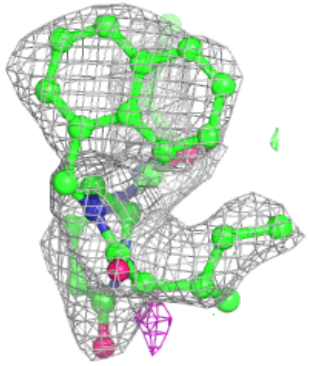


Electron density around A1EEL I 305:

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

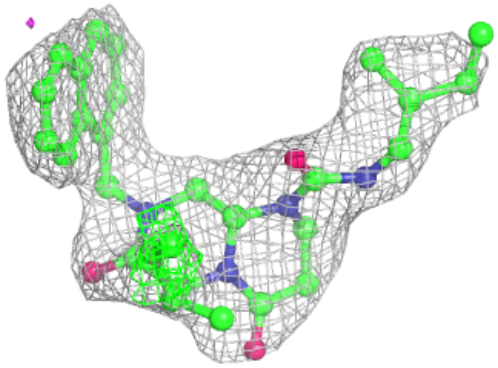


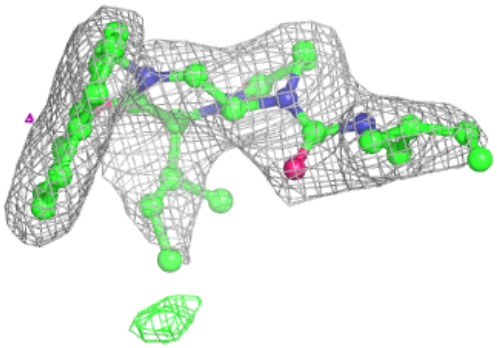


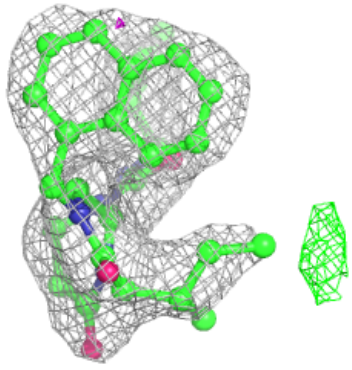


Electron density around A1EEL J 303:

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

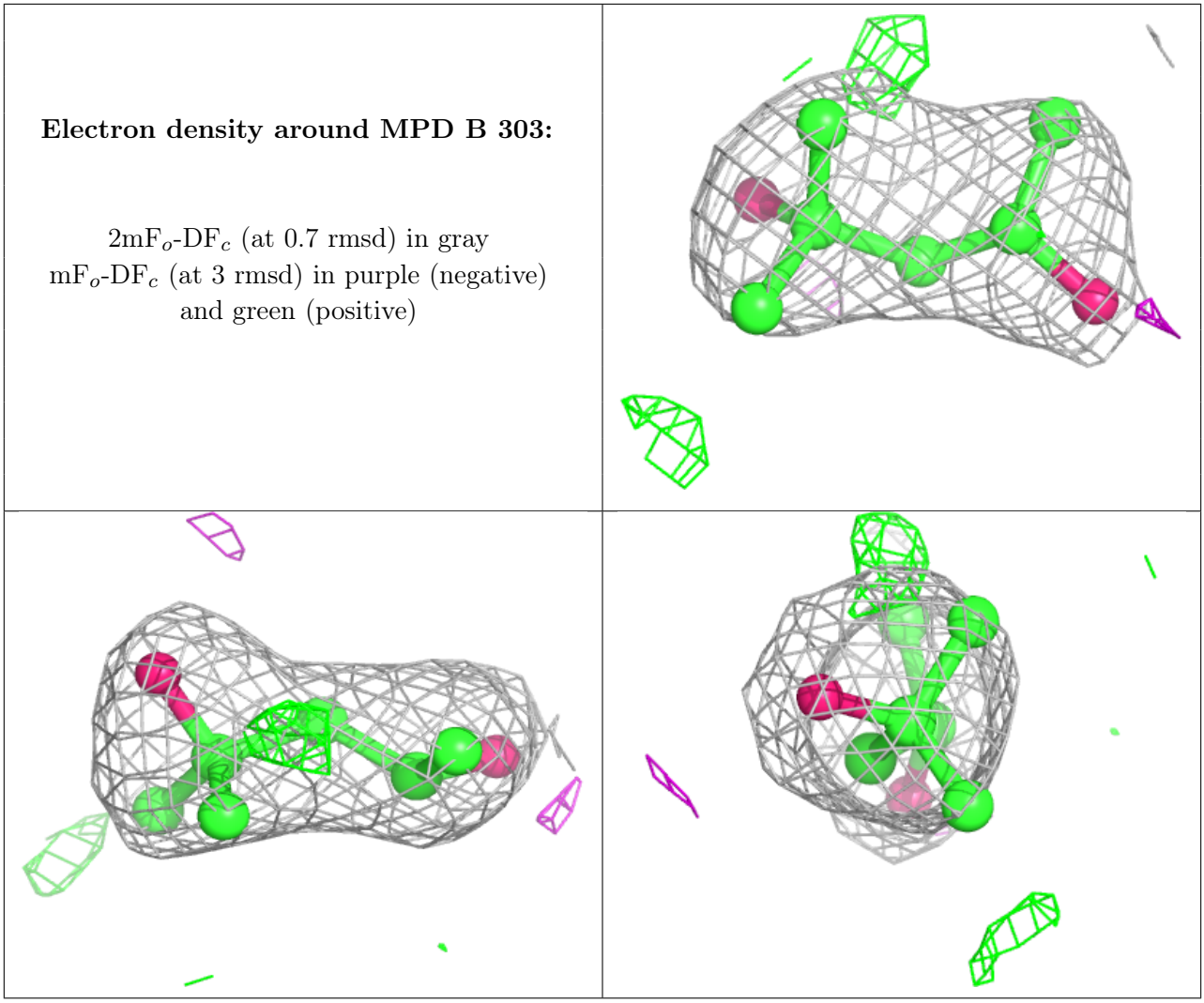






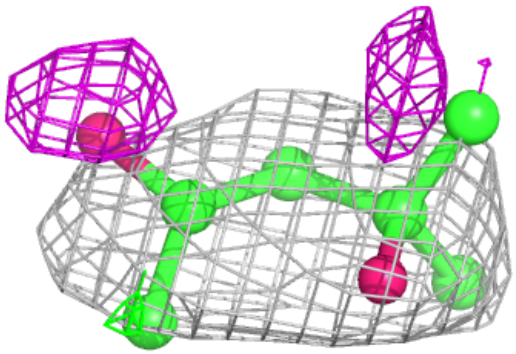
Electron density around MPD B 303:

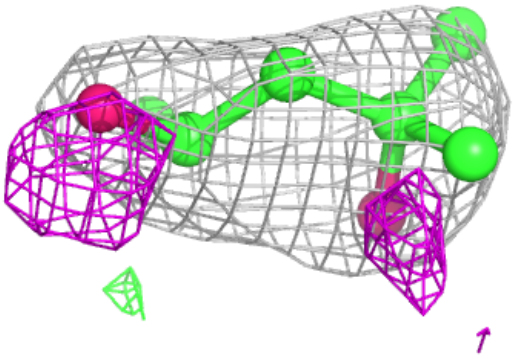
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

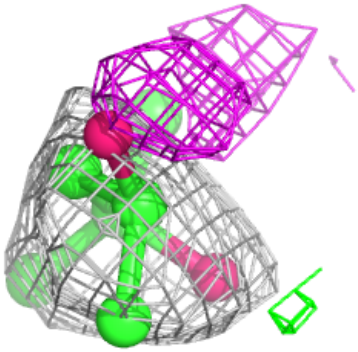


Electron density around MPD B 302:

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

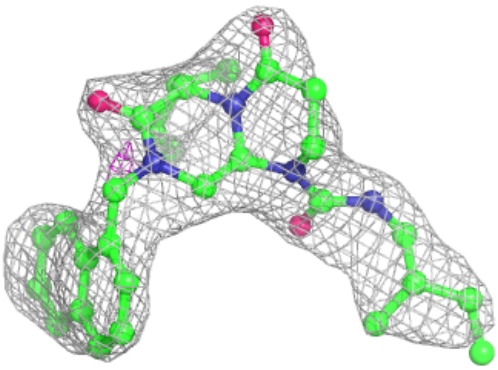


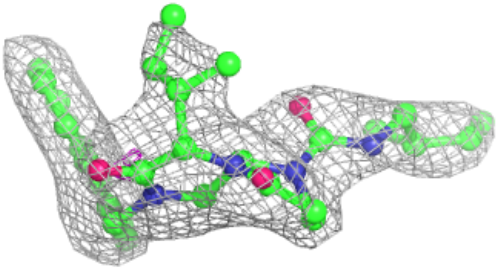


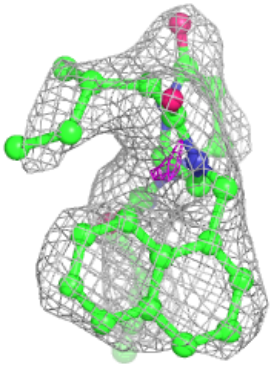


Electron density around A1EEL E 303:

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

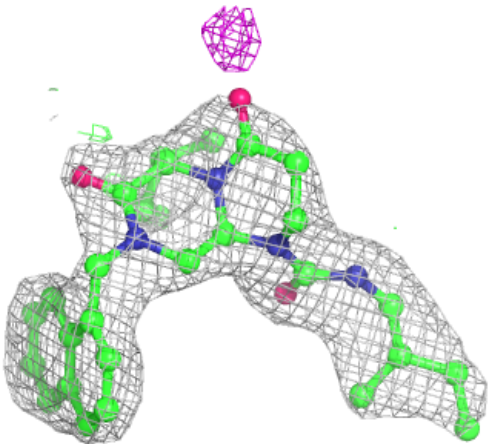


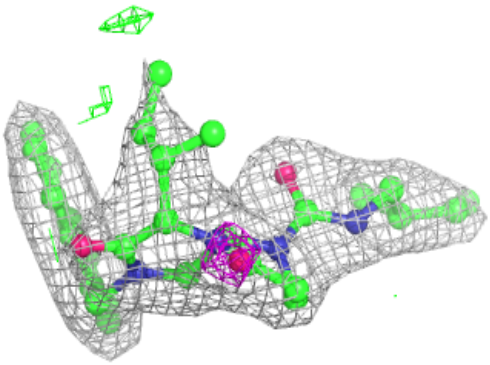


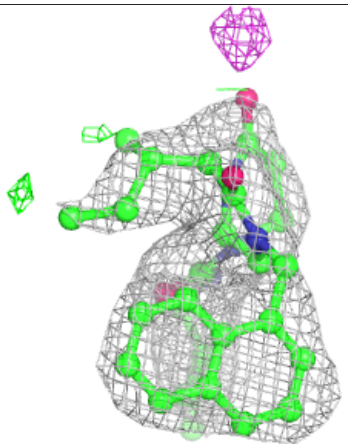


Electron density around A1EEL C 303:

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

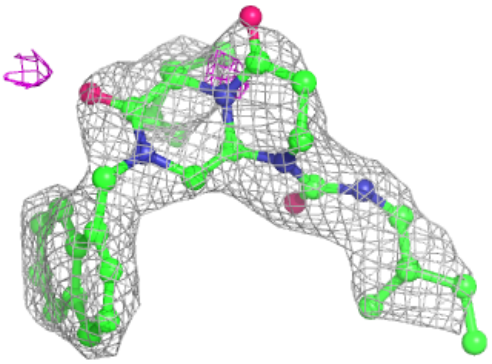


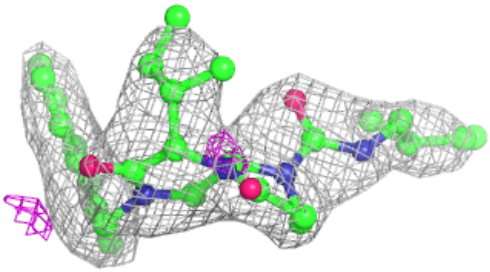


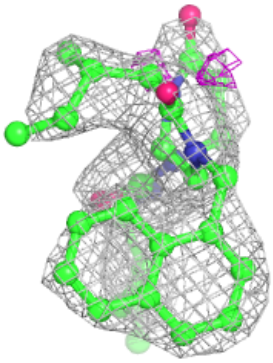


Electron density around A1EEL D 303:

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

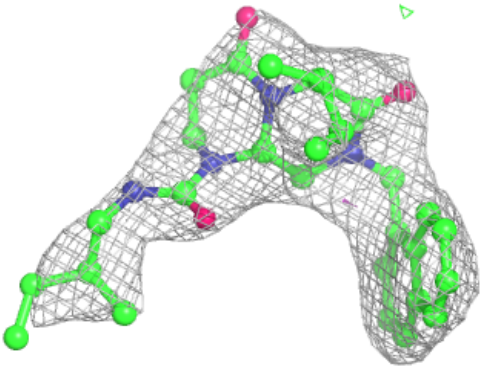


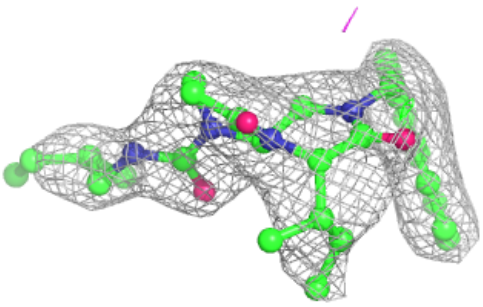


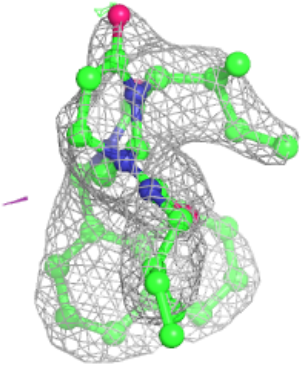


Electron density around A1EEL D 304:

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

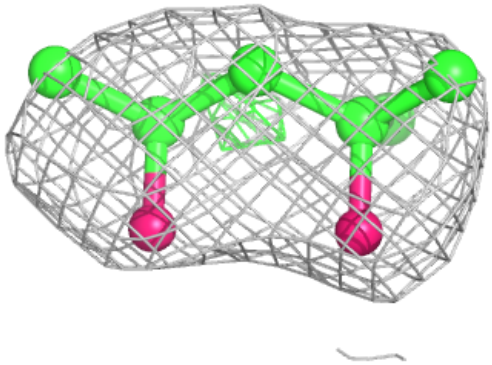


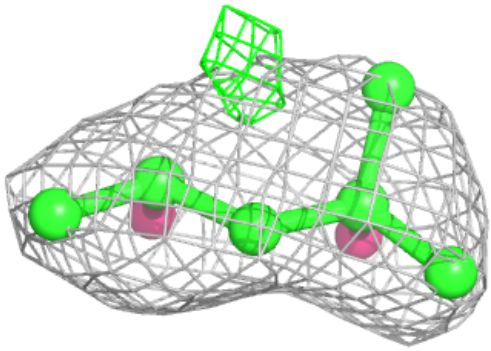


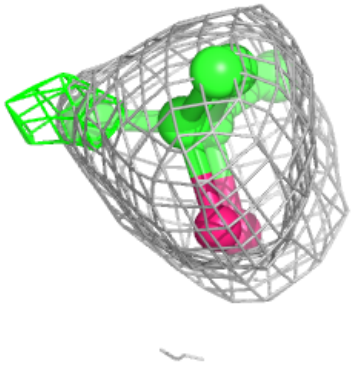


Electron density around MPD C 302:

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

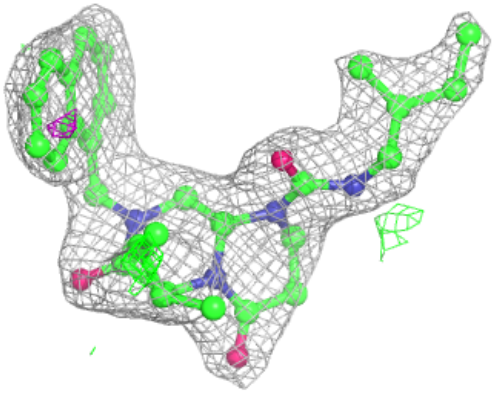


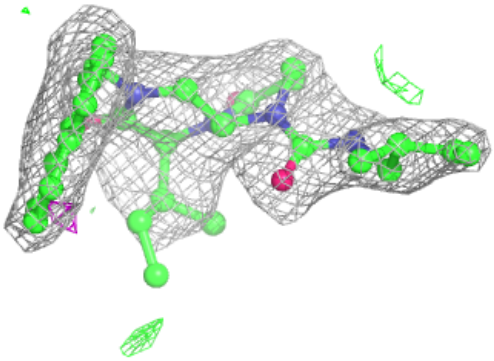


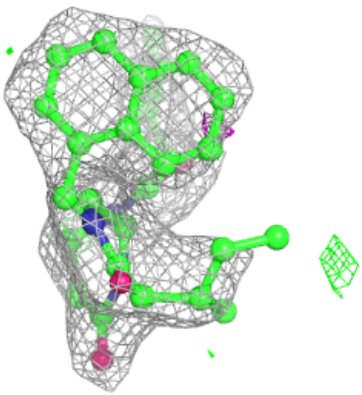


Electron density around A1EEL I 304:

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

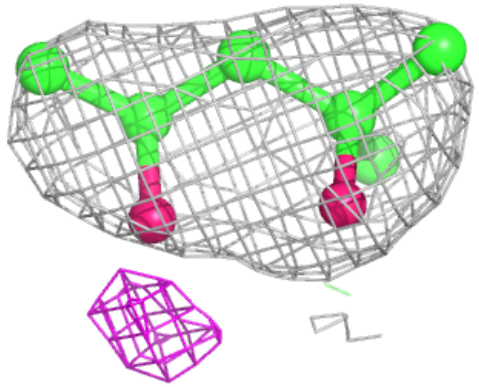


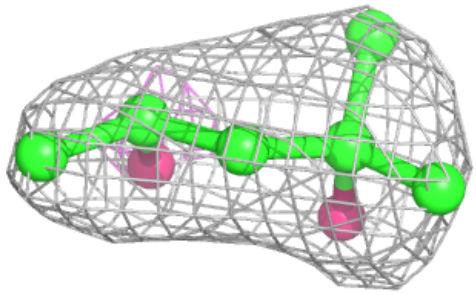


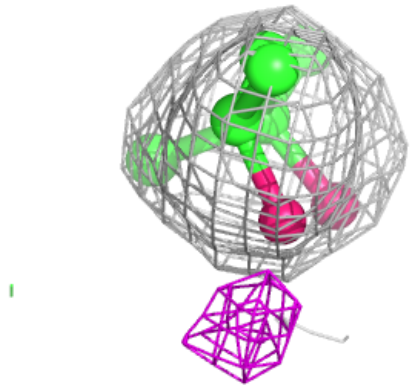


Electron density around MPD D 302:

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

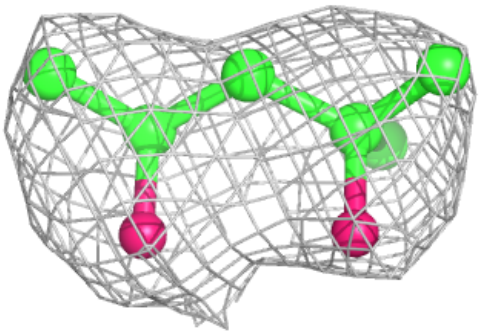


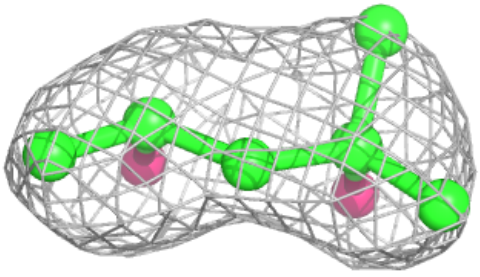


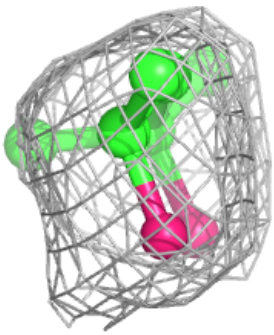


Electron density around MPD G 302:

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

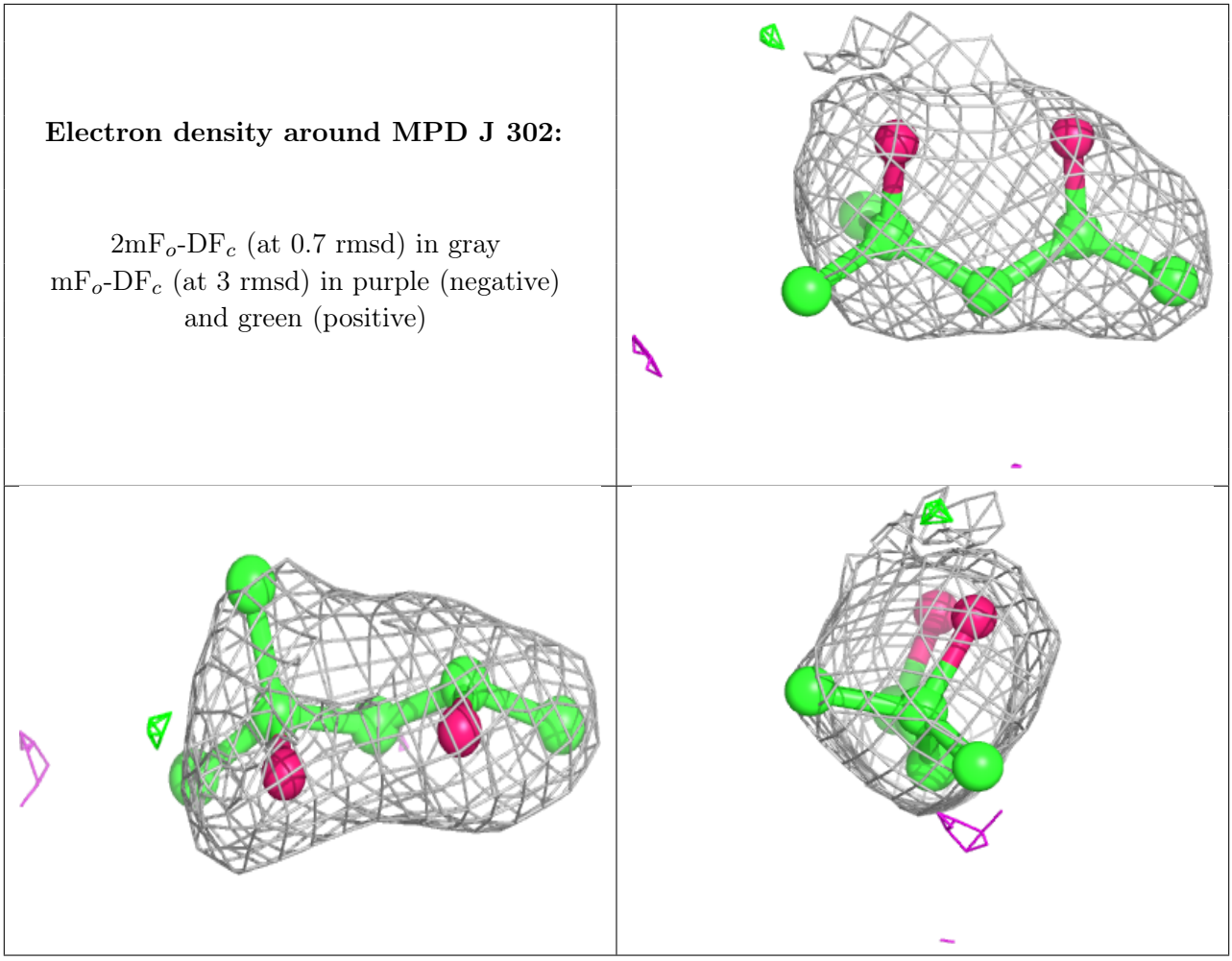






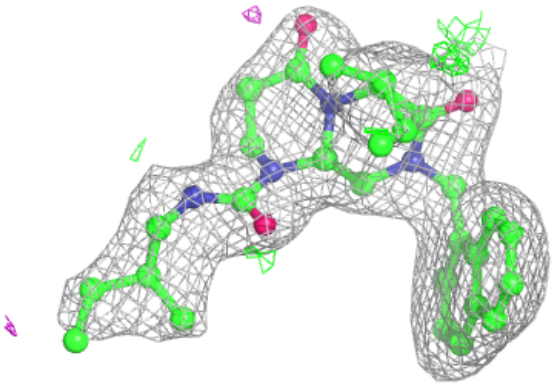
Electron density around MPD J 302:

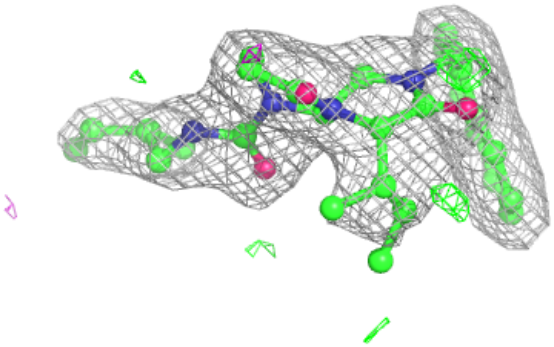
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

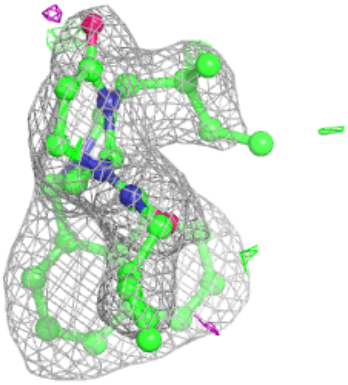


Electron density around A1EEL A 303:

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

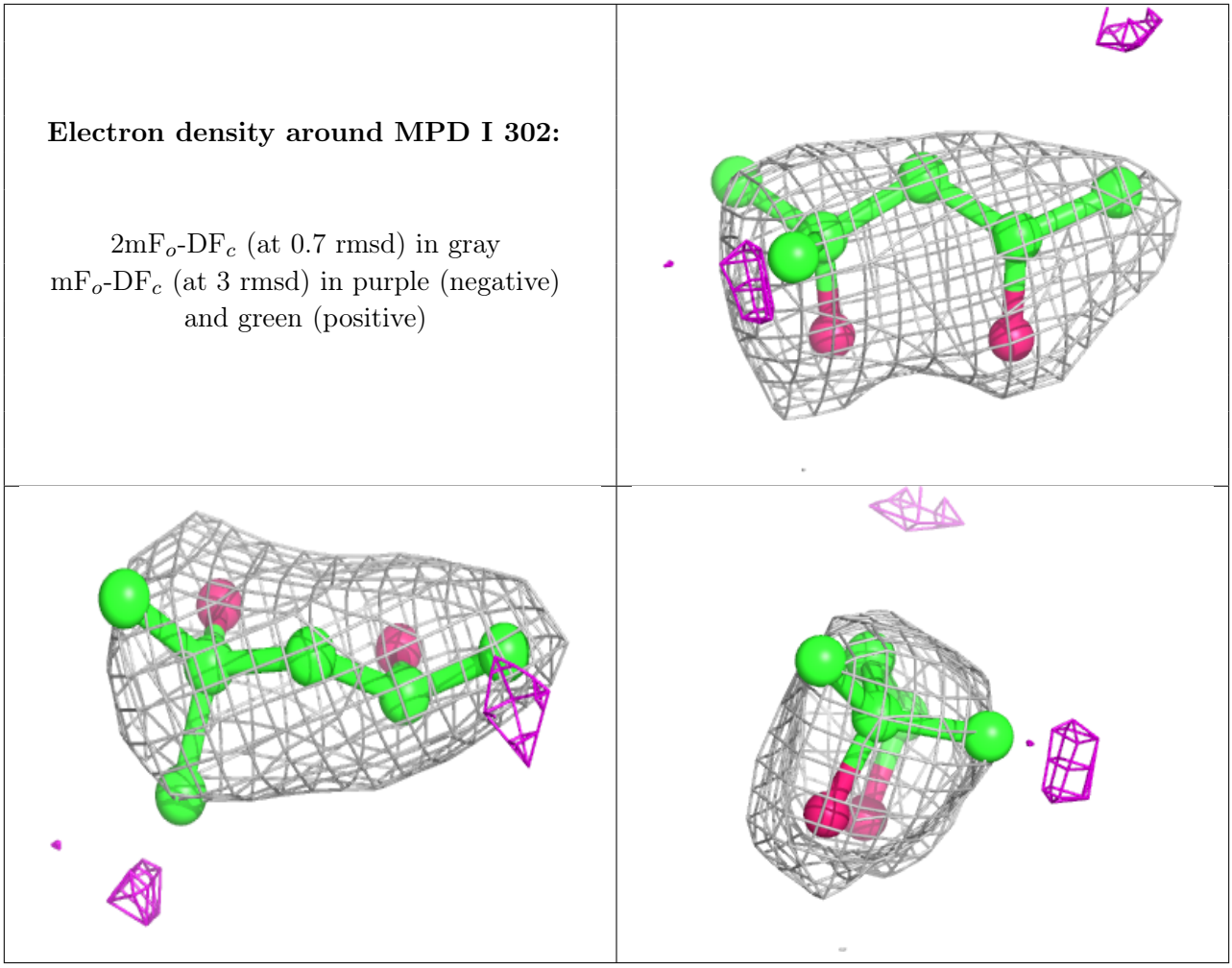






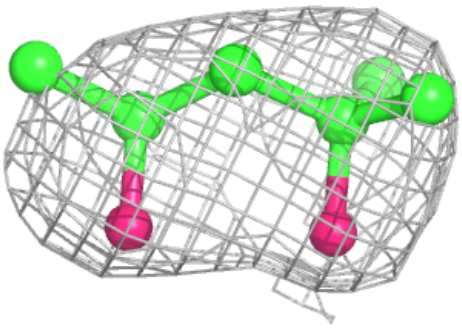
Electron density around MPD I 302:

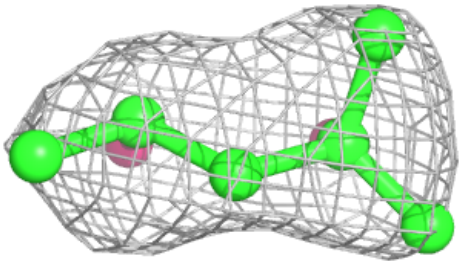
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

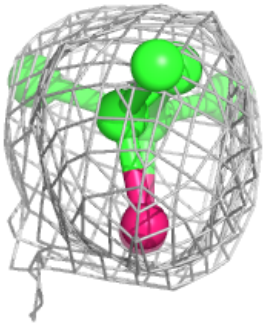


Electron density around MPD M 302:

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

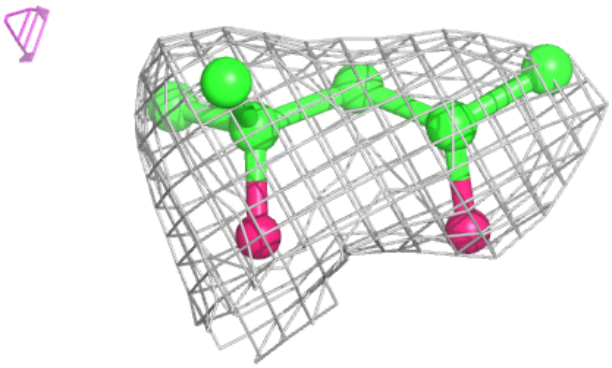


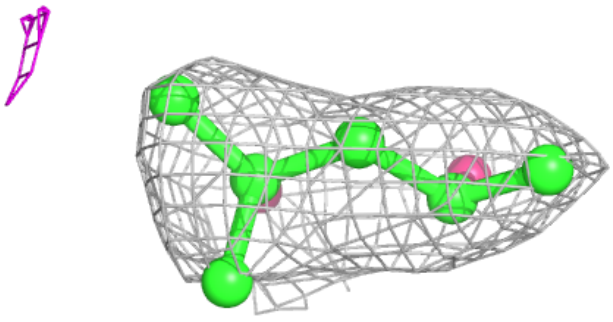


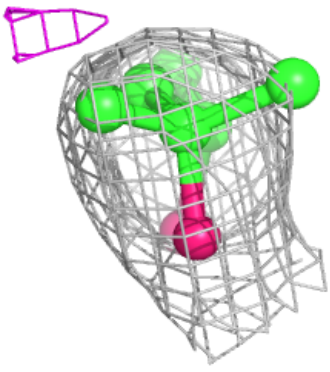


Electron density around MPD F 302:

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

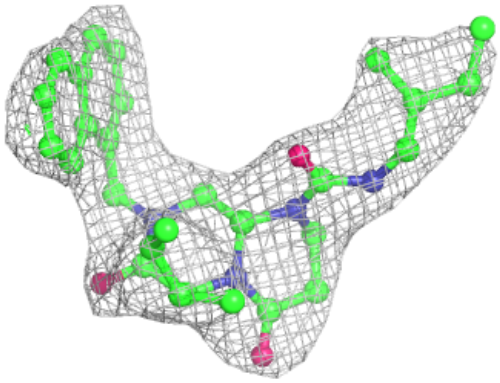


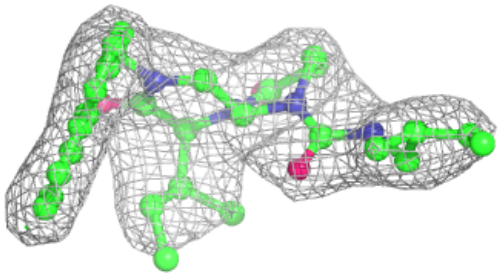


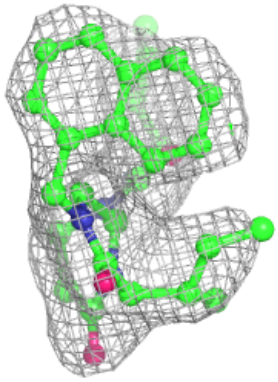


Electron density around A1EEL N 303:

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

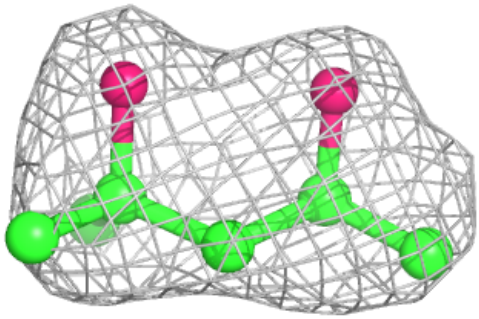


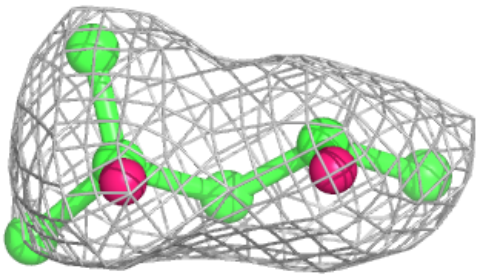


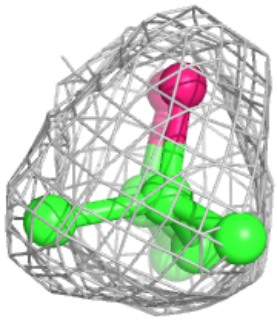


Electron density around MPD N 302:

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

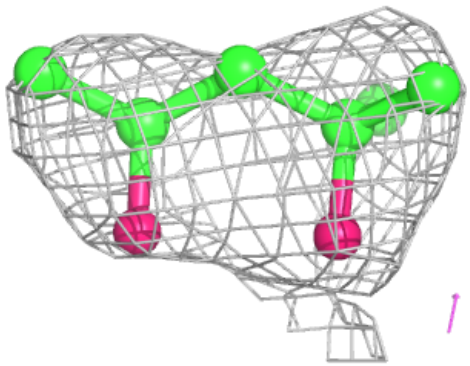


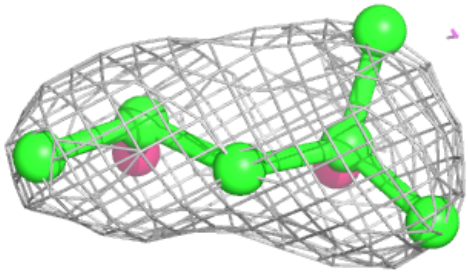


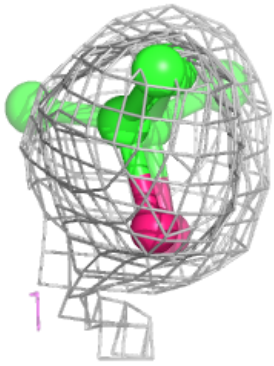


Electron density around MPD L 302:

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

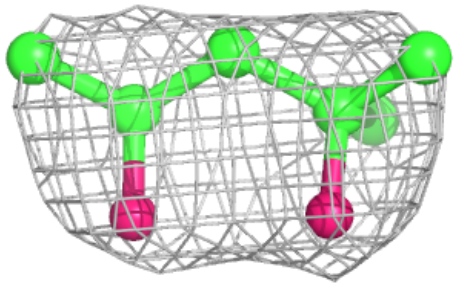


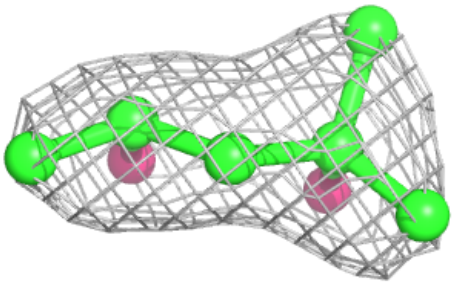


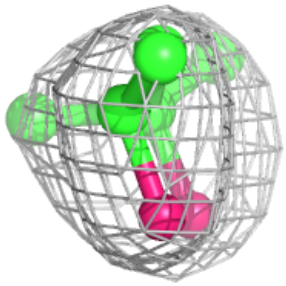


Electron density around MPD E 302:

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

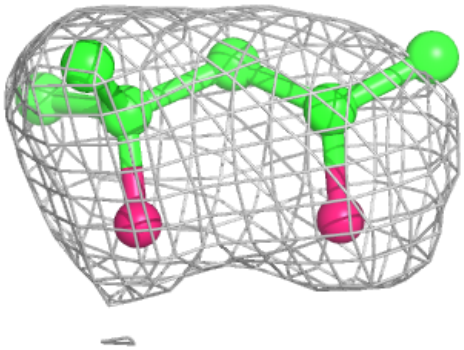


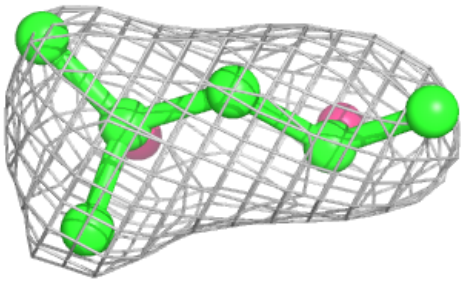


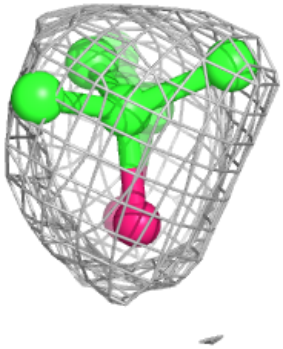


Electron density around MPD K 302:

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

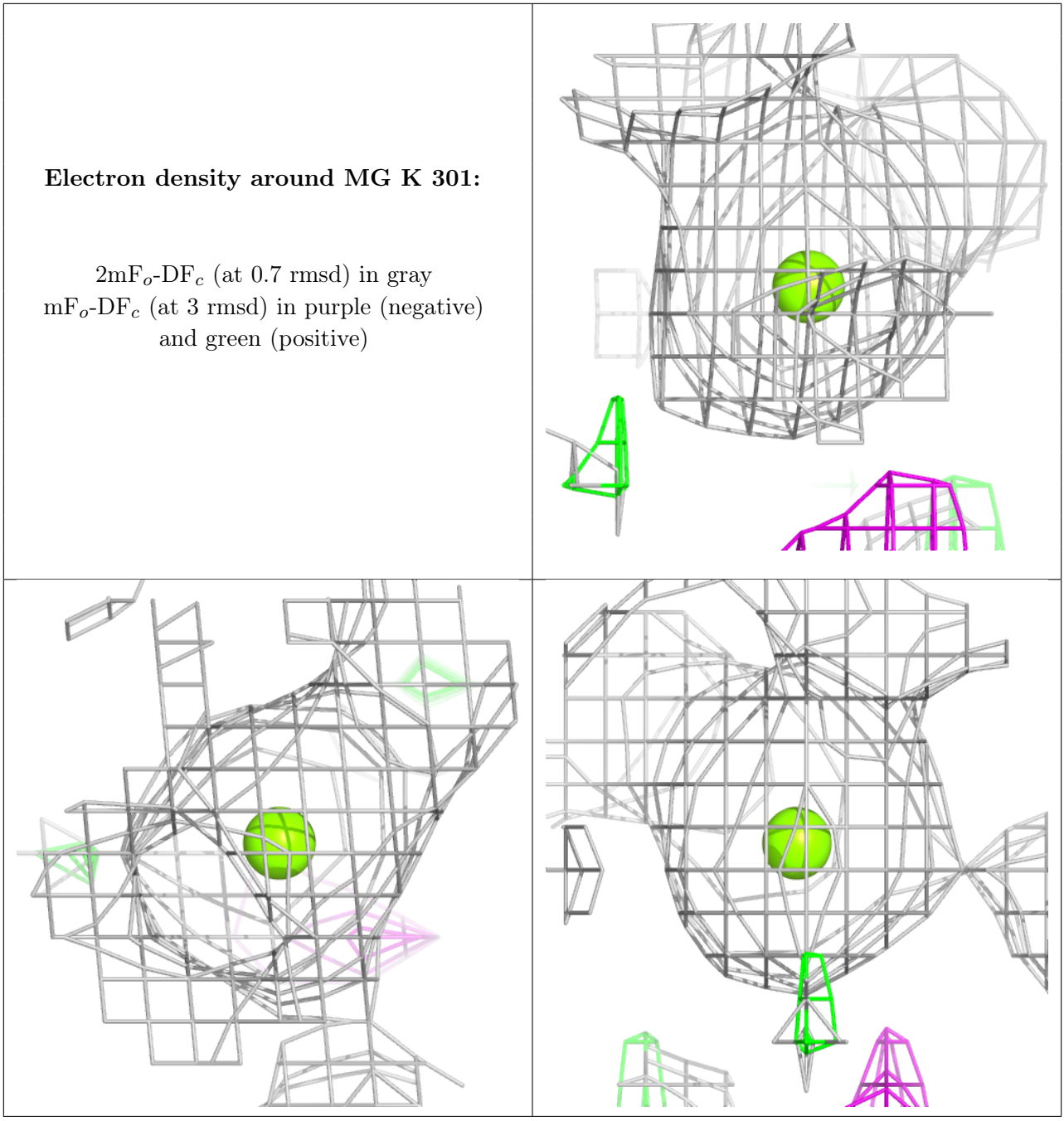






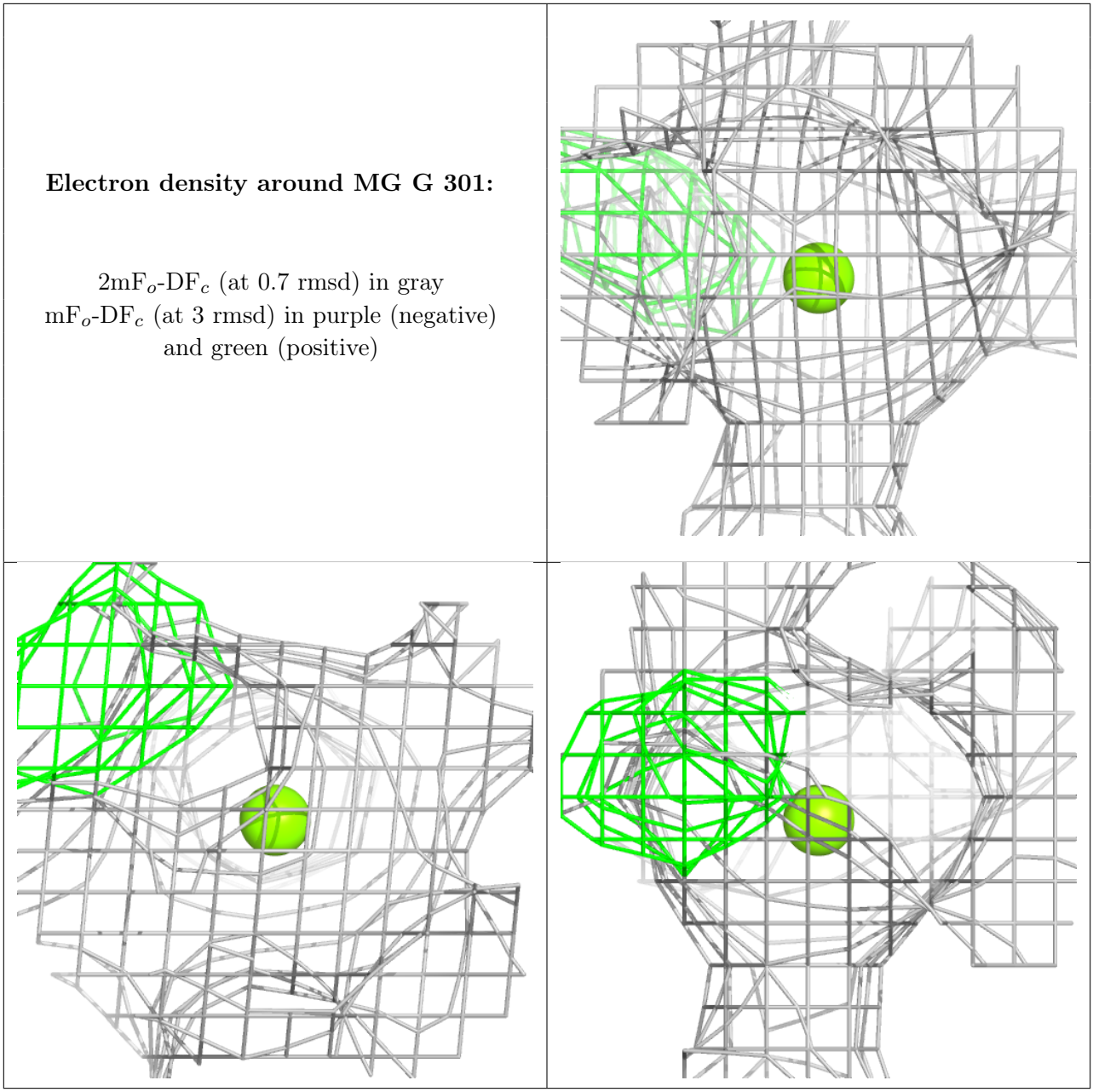
Electron density around MG K 301:

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



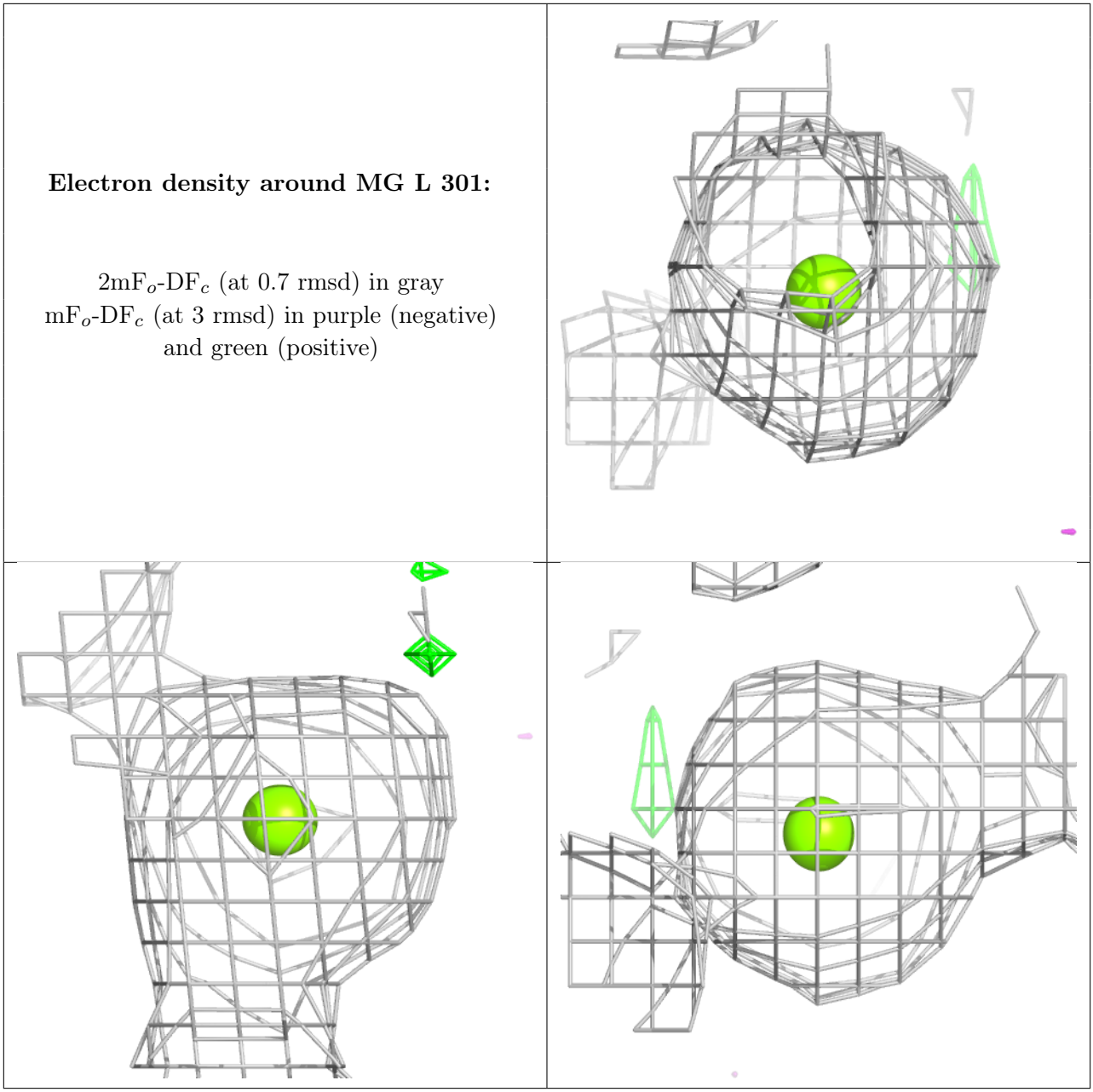
Electron density around MG G 301:

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



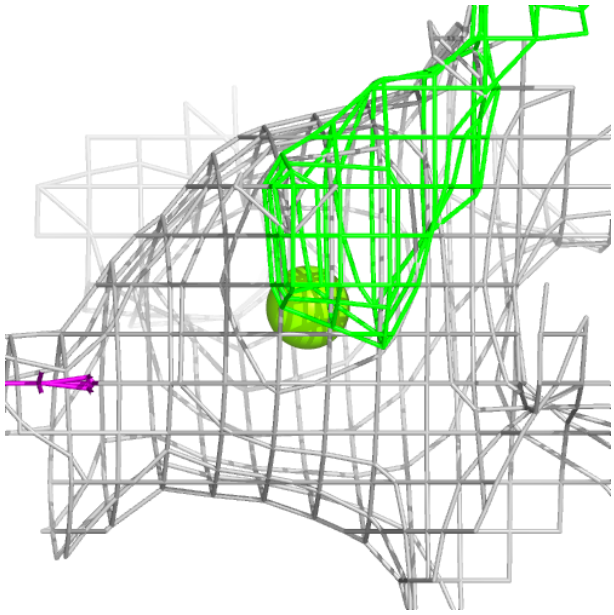
Electron density around MG L 301:

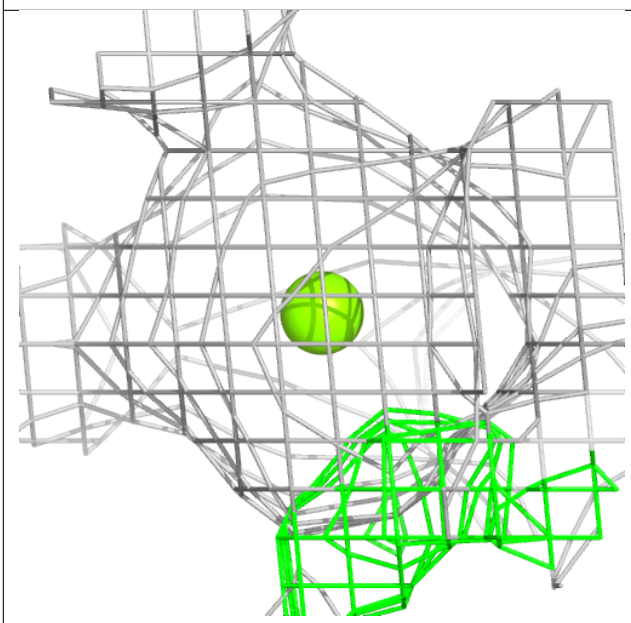
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

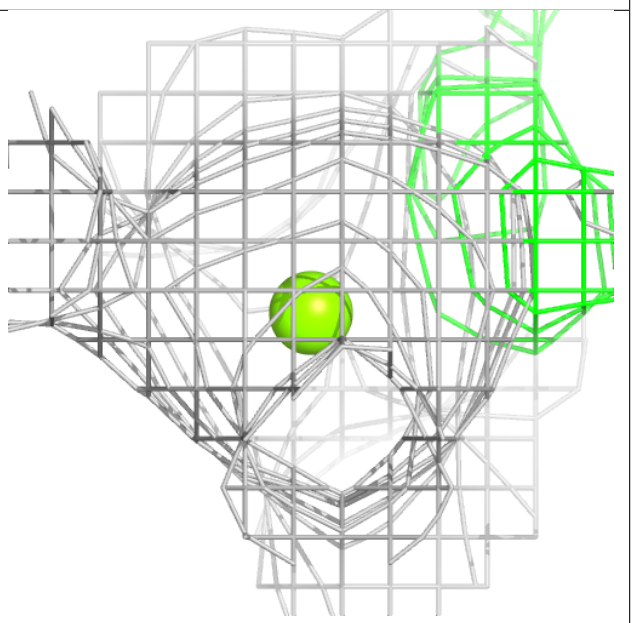


Electron density around MG M 301:

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

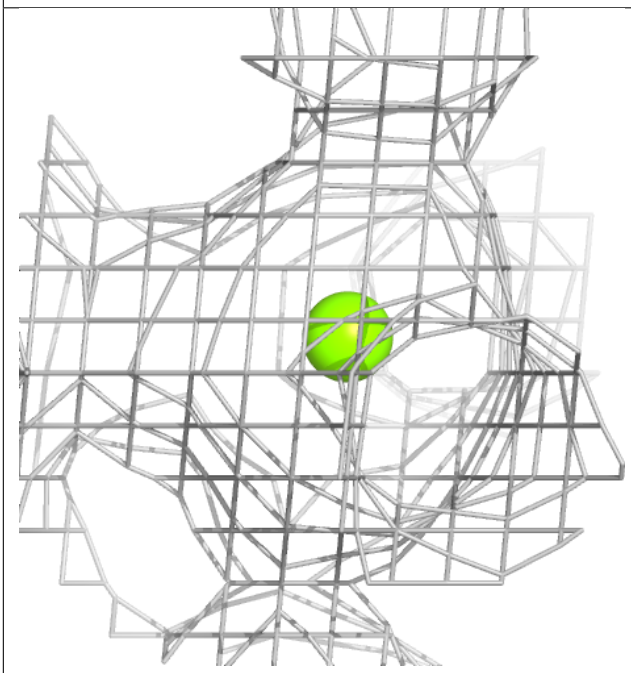


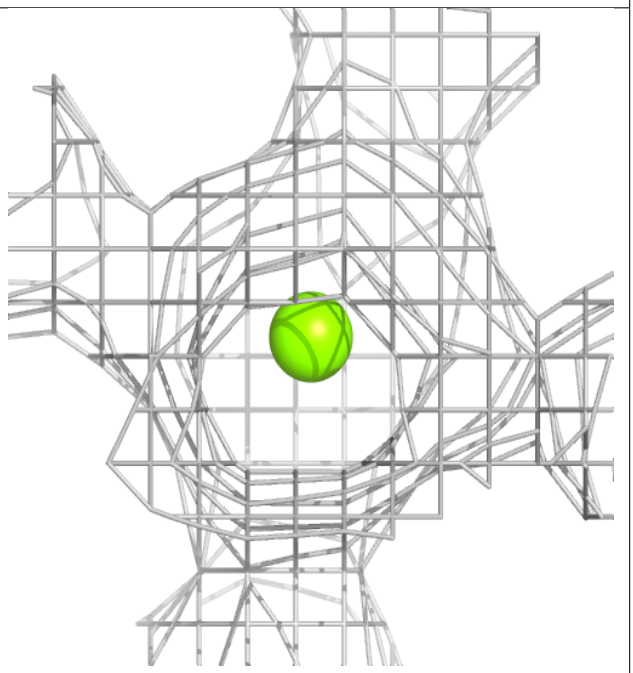




Electron density around MG A 301:

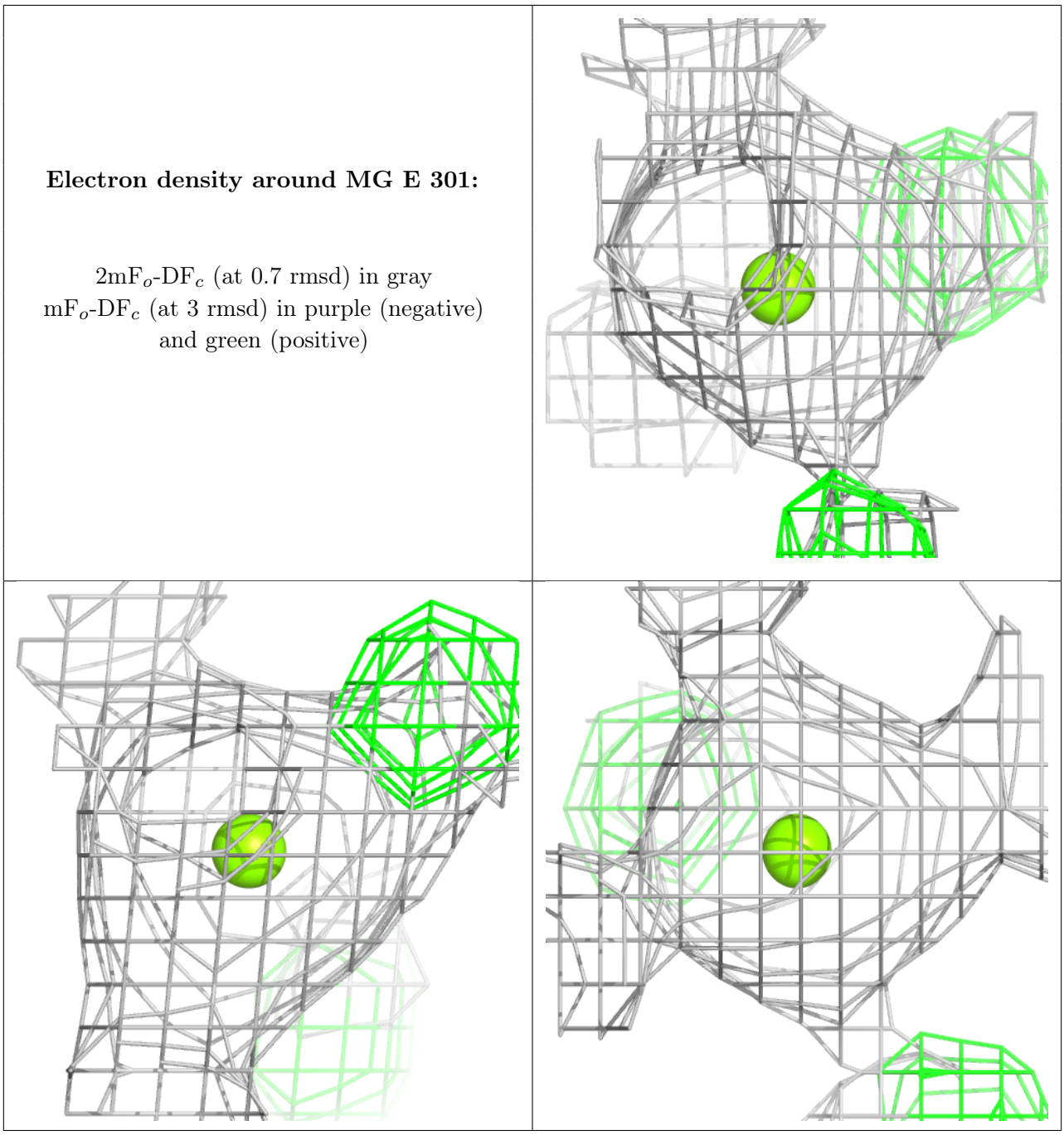
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)





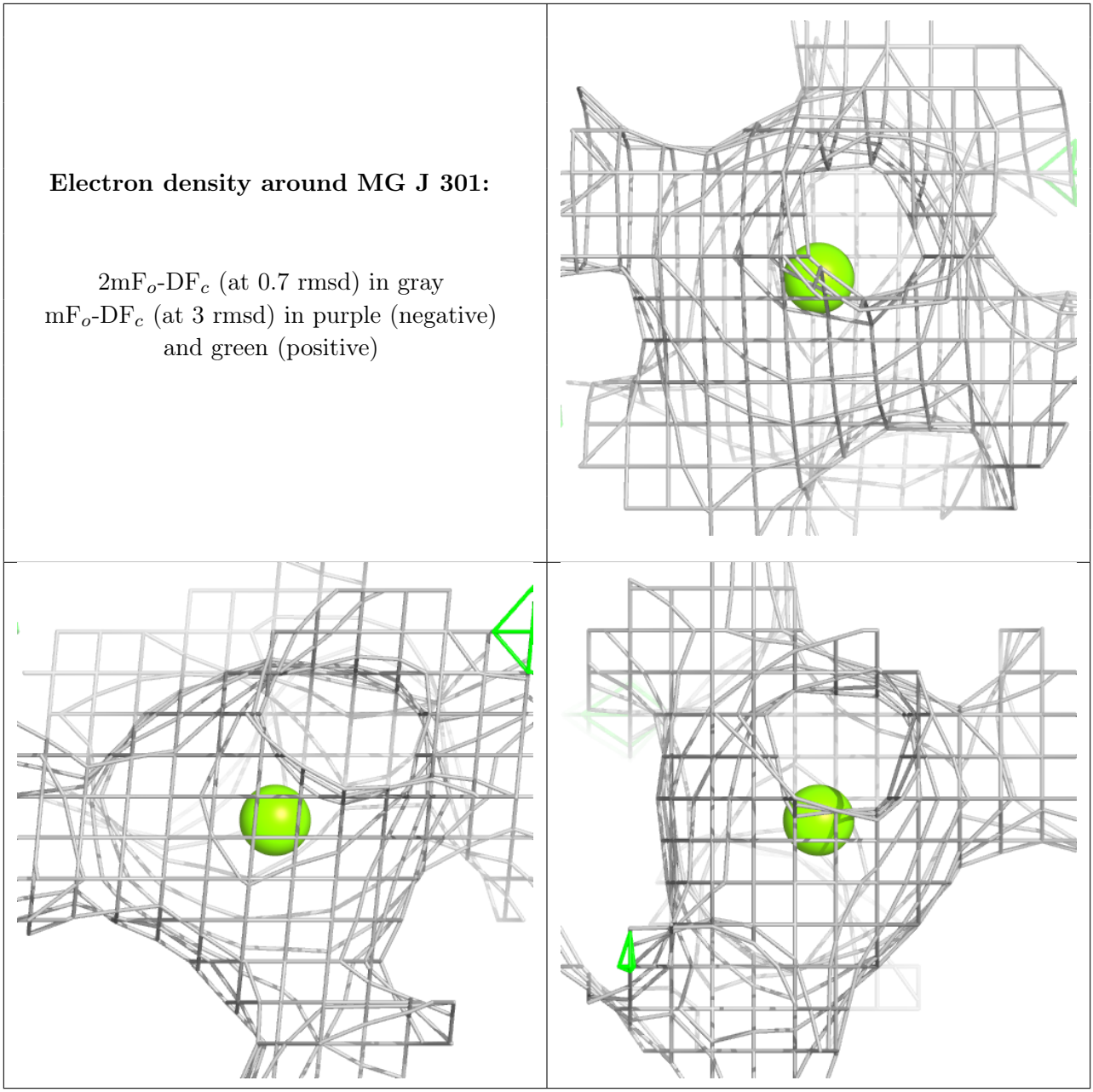
Electron density around MG E 301:

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



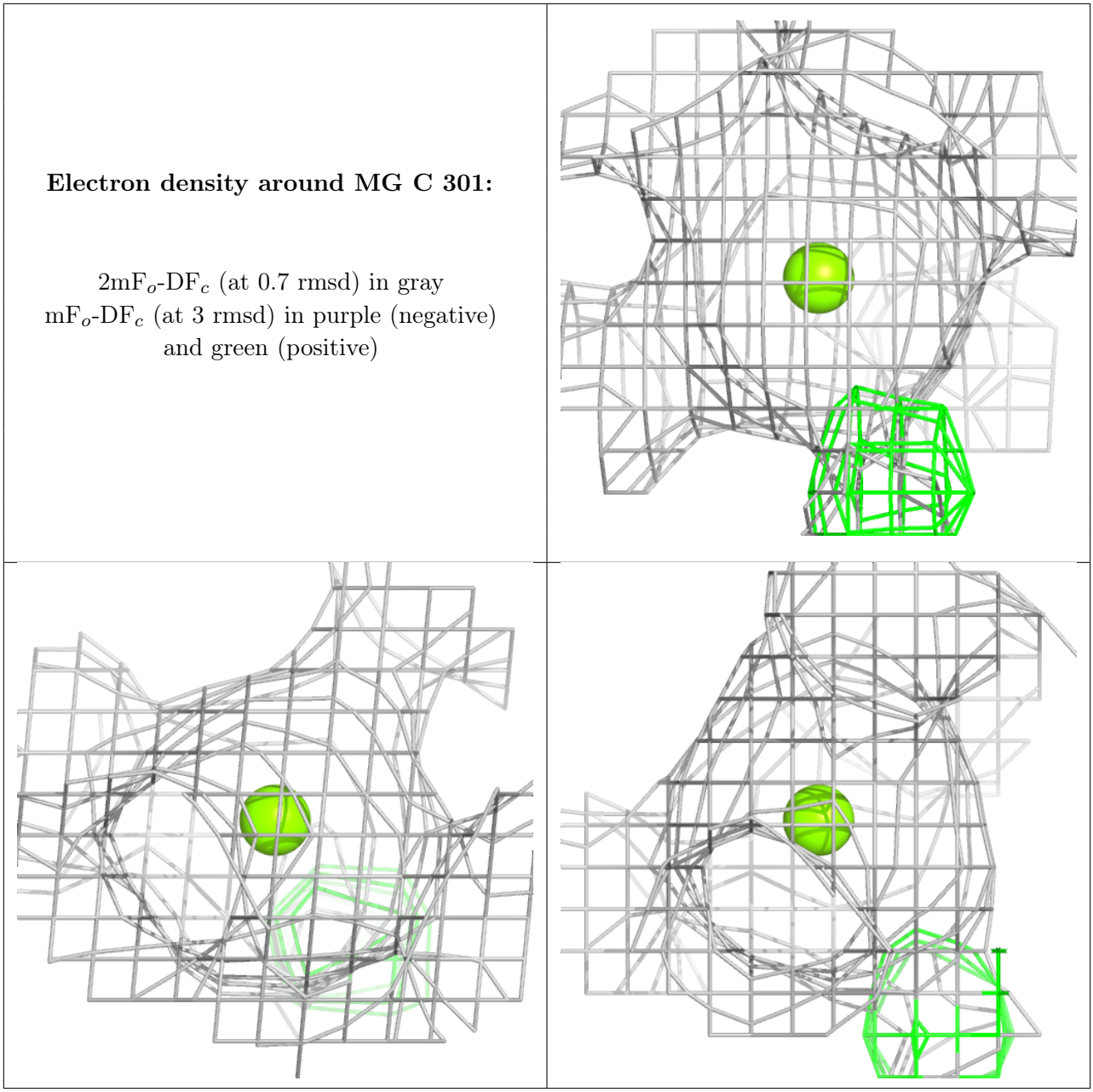
Electron density around MG J 301:

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



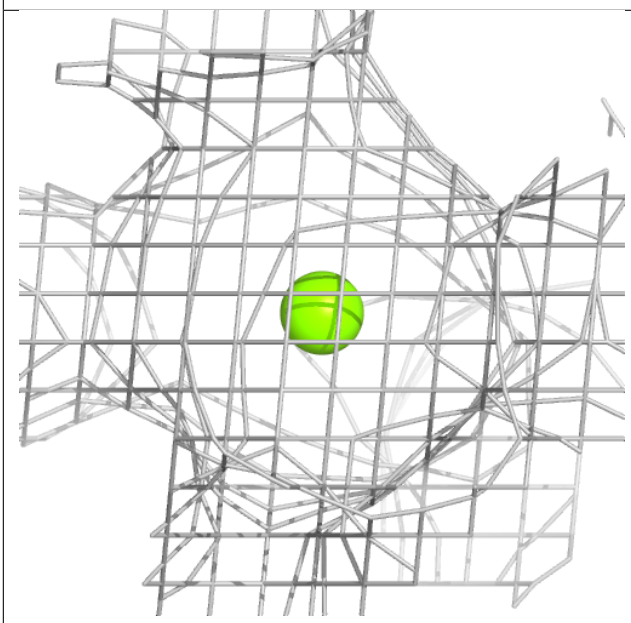
Electron density around MG C 301:

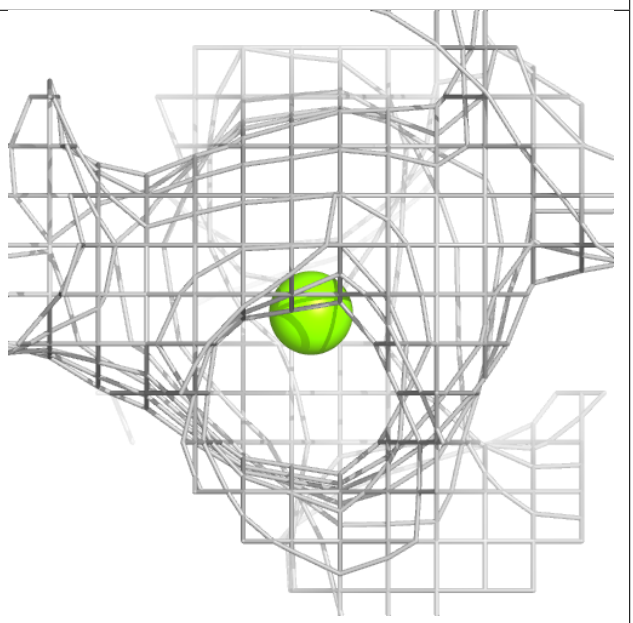
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



Electron density around MG F 301:

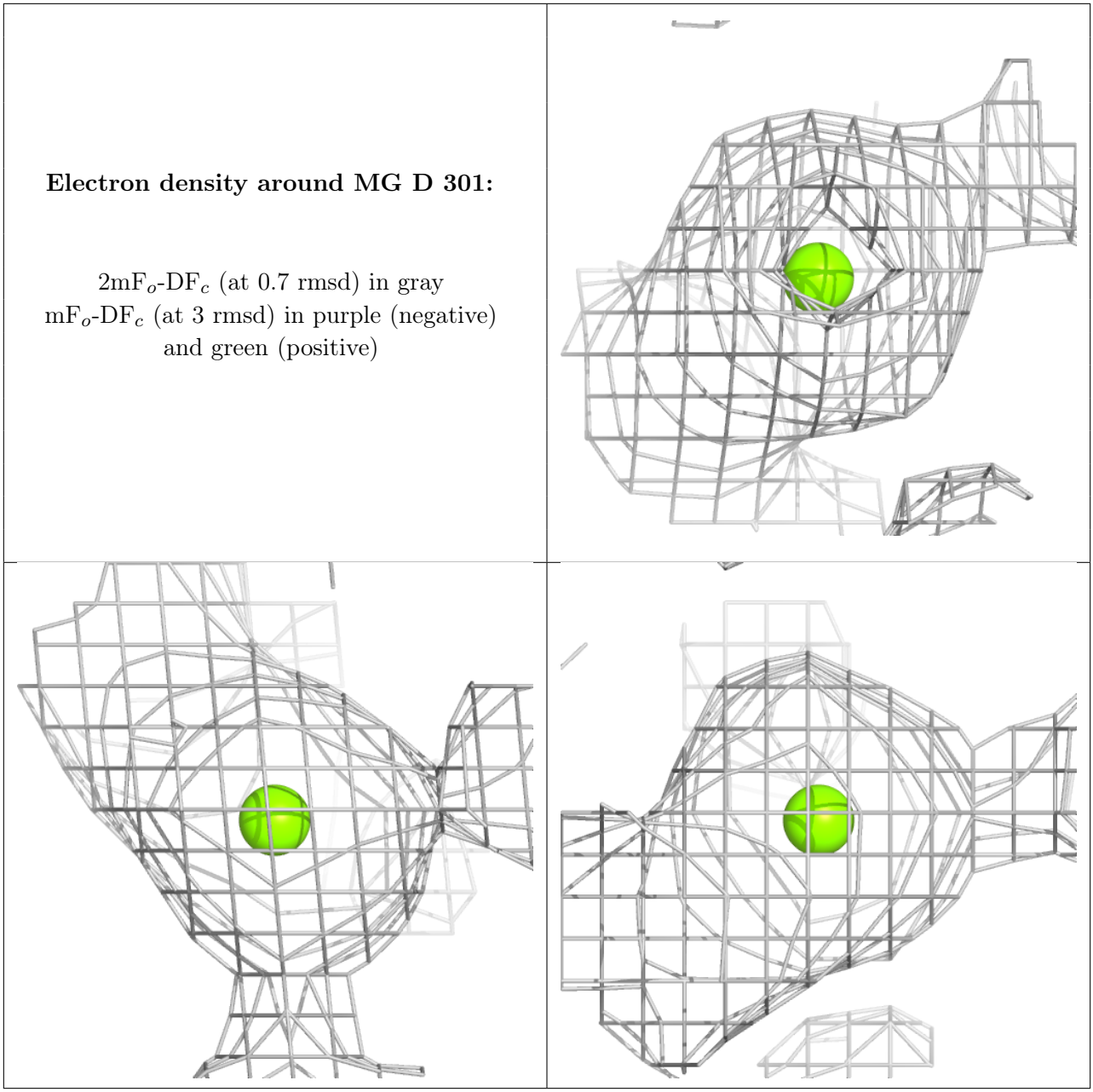
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)





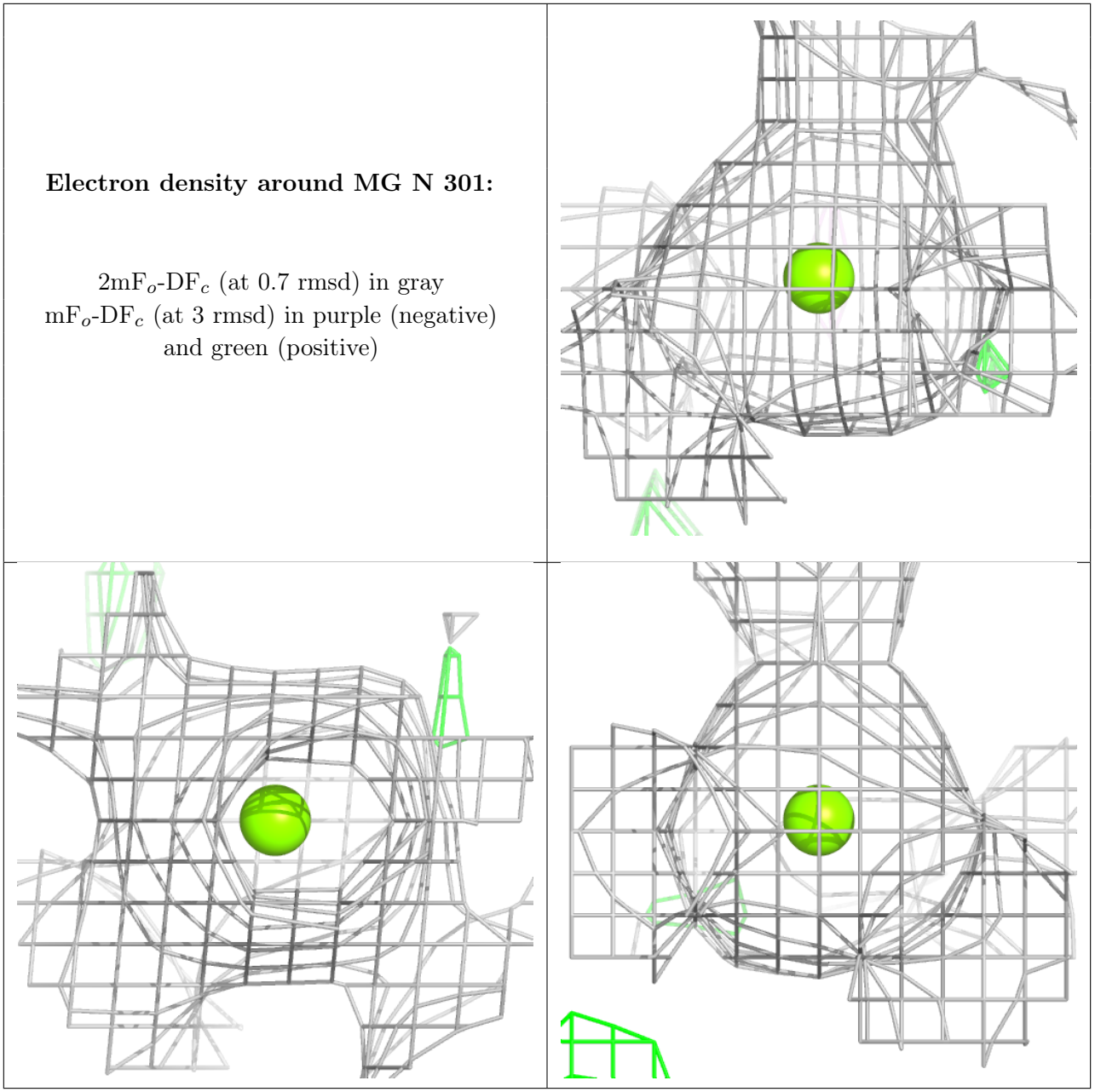
Electron density around MG D 301:

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



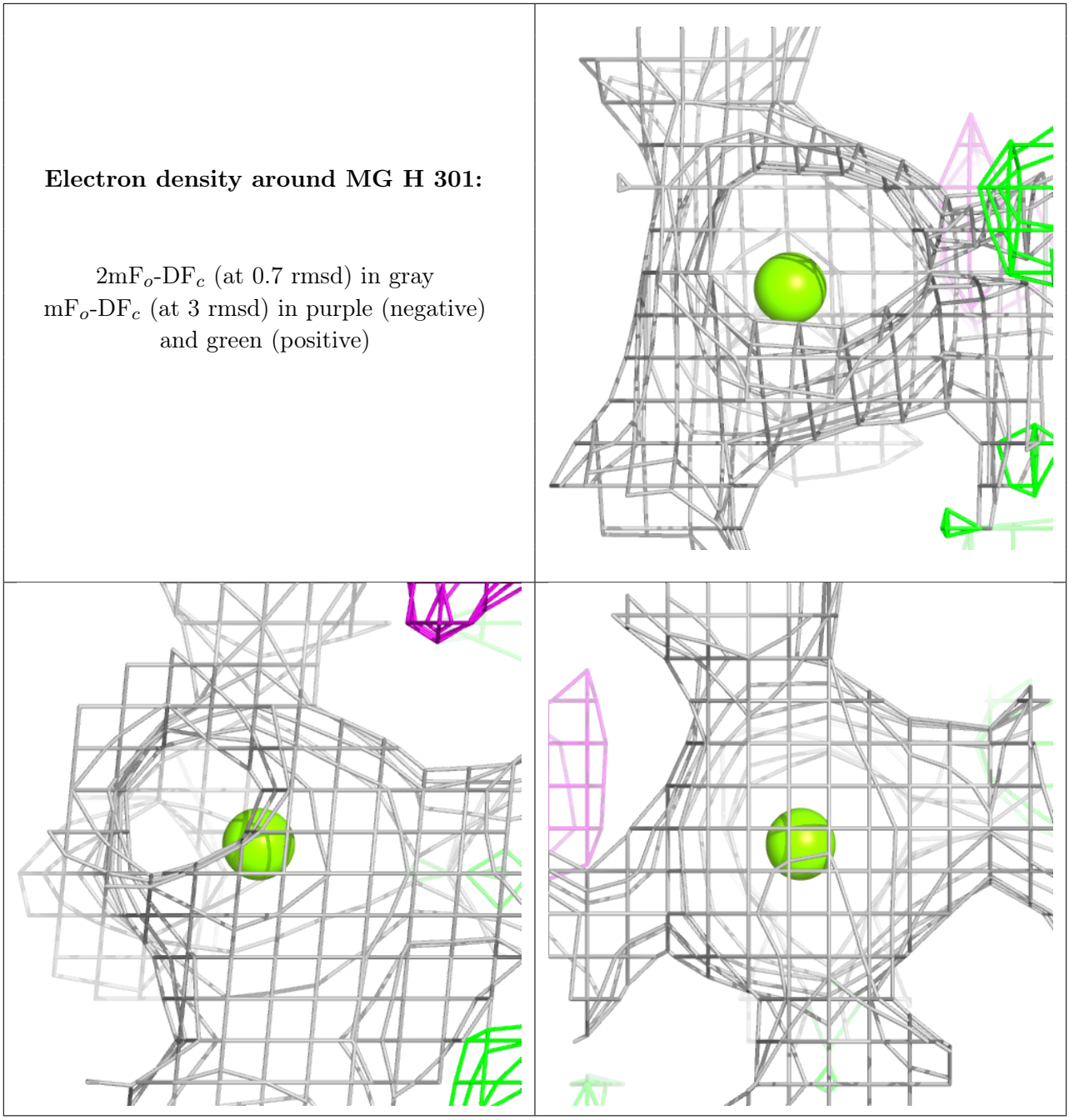
Electron density around MG N 301:

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



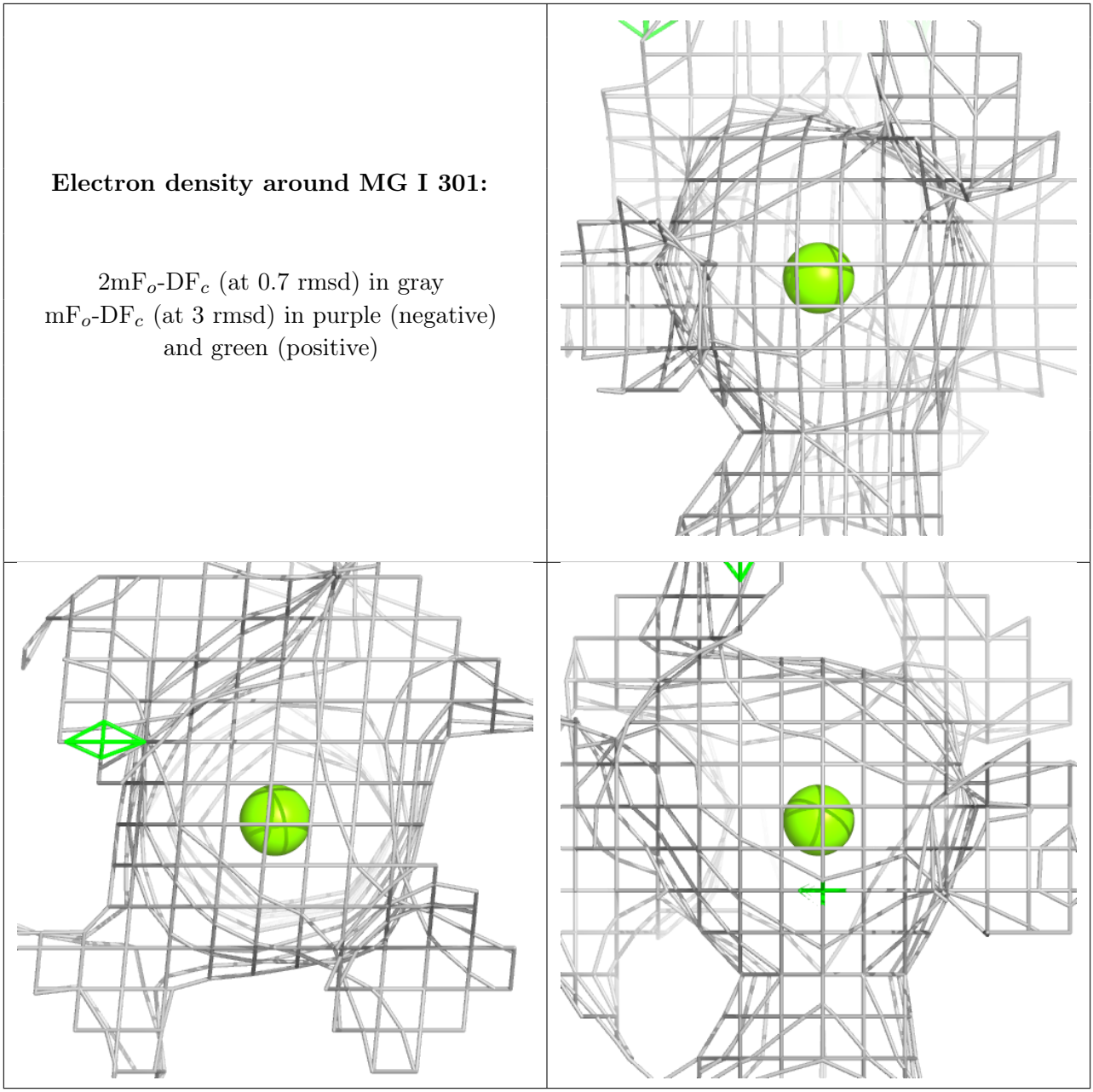
Electron density around MG H 301:

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



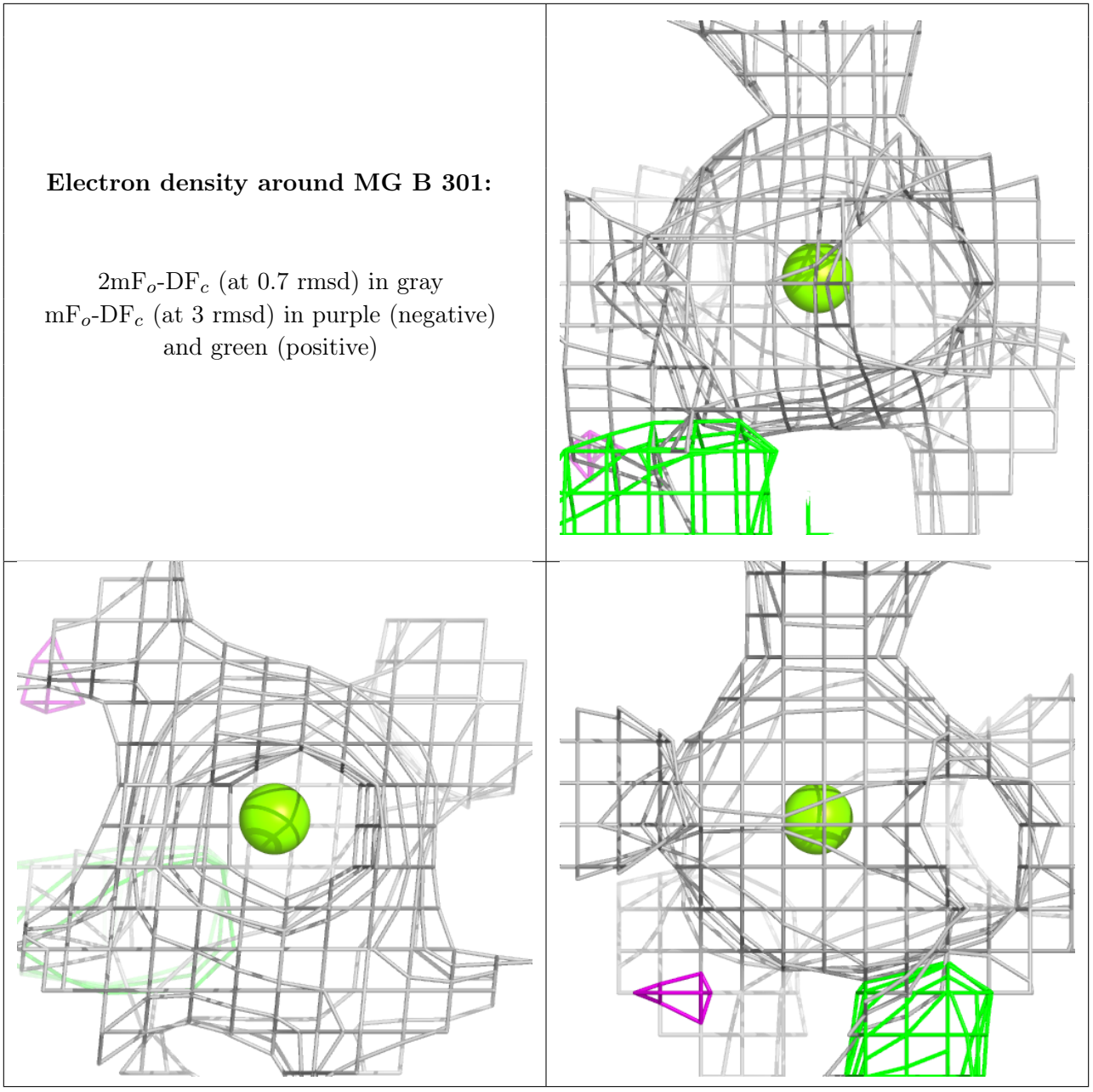
Electron density around MG I 301:

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



Electron density around MG B 301:

$2mF_o$-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.