Full wwPDB X-ray Structure Validation Report ⓘ

Sep 1, 2025 – 11:45 PM JST

PDB ID	:	9J24 / pdb_00009j24
Title	:	Structural basis of the bifunctionality of M. salinexigens ZYF650T glucosylglycerol phosphorylase in glucosylglycerol catabolism
Authors	:	Lu, D.; Ma, H.L.
Deposited on	:	2024-08-06
Resolution	:	2.50 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 ⓘ symbol.

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

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

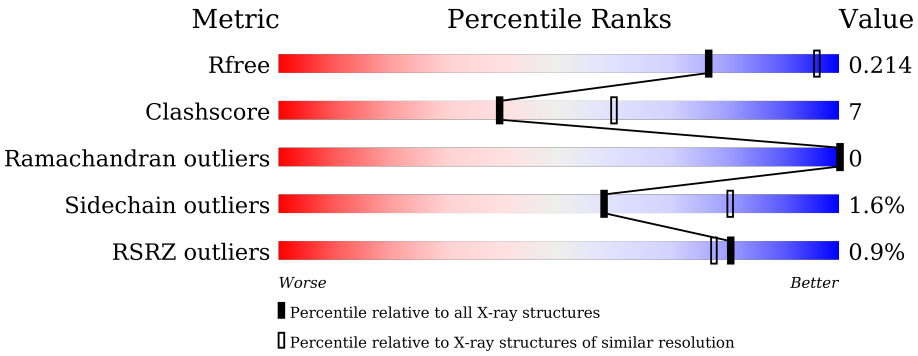
MolProbity	:	4-5-2 with Phenix2.0rc1
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	2.0rc1
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.006 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.45.1

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 2.50 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	5504 (2.50-2.50)
Clashscore	180529	6282 (2.50-2.50)
Ramachandran outliers	177936	6191 (2.50-2.50)
Sidechain outliers	177891	6193 (2.50-2.50)
RSRZ outliers	164620	5504 (2.50-2.50)

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	480	88% 12%
1	B	480	86% 13%
1	C	480	82% 17%
1	D	480	87% 12%
1	E	480	83% 16%
1	F	480	82% 16%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	GOL	B	504	-	-	X	-

2 Entry composition (i)

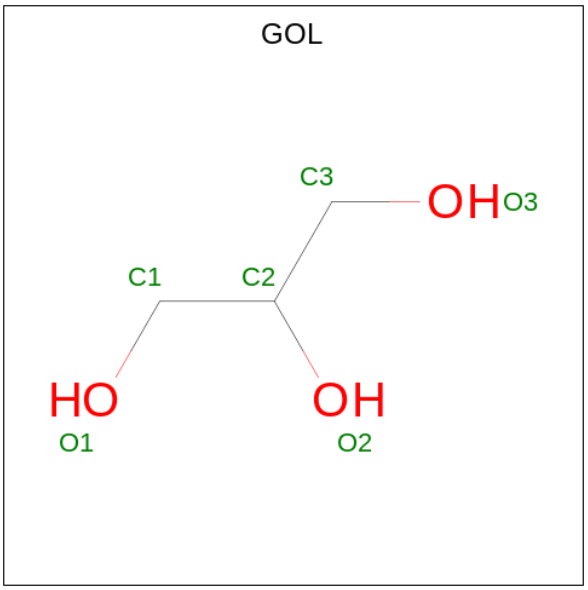
There are 5 unique types of molecules in this entry. The entry contains 24592 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 Sucrose phosphorylase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	B	479	Total	C	N	O	S	0	0	0
			3855	2457	645	731	22			
1	D	479	Total	C	N	O	S	0	0	0
			3855	2457	645	731	22			
1	C	479	Total	C	N	O	S	0	0	0
			3855	2457	645	731	22			
1	A	479	Total	C	N	O	S	0	0	0
			3855	2457	645	731	22			
1	E	479	Total	C	N	O	S	0	0	0
			3855	2457	645	731	22			
1	F	479	Total	C	N	O	S	0	0	0
			3849	2454	642	731	22			

- Molecule 2 is GLYCEROL (CCD ID: GOL) (formula: $C_3H_8O_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	B	1	Total	C	O	0	0
			6	3	3		
2	B	1	Total	C	O	0	0
			6	3	3		
2	B	1	Total	C	O	0	0
			6	3	3		
2	B	1	Total	C	O	0	0
			6	3	3		
2	B	1	Total	C	O	0	0
			6	3	3		
2	B	1	Total	C	O	0	0
			6	3	3		
2	B	1	Total	C	O	0	0
			6	3	3		
2	D	1	Total	C	O	0	0
			6	3	3		
2	D	1	Total	C	O	0	0
			6	3	3		
2	D	1	Total	C	O	0	0
			6	3	3		
2	C	1	Total	C	O	0	0
			6	3	3		
2	C	1	Total	C	O	0	0
			6	3	3		
2	C	1	Total	C	O	0	0
			6	3	3		
2	C	1	Total	C	O	0	0
			6	3	3		
2	C	1	Total	C	O	0	0
			6	3	3		
2	A	1	Total	C	O	0	0
			6	3	3		
2	A	1	Total	C	O	0	0
			6	3	3		
2	A	1	Total	C	O	0	0
			6	3	3		
2	A	1	Total	C	O	0	0
			6	3	3		
2	A	1	Total	C	O	0	0
			6	3	3		
2	A	1	Total	C	O	0	0
			6	3	3		
2	A	1	Total	C	O	0	0
			6	3	3		

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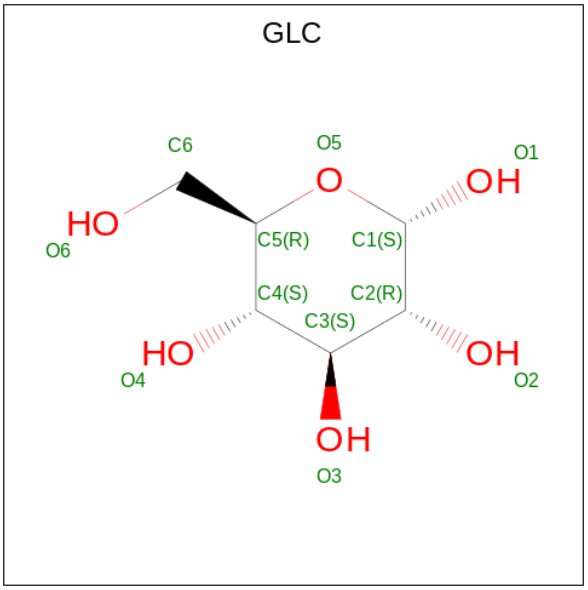
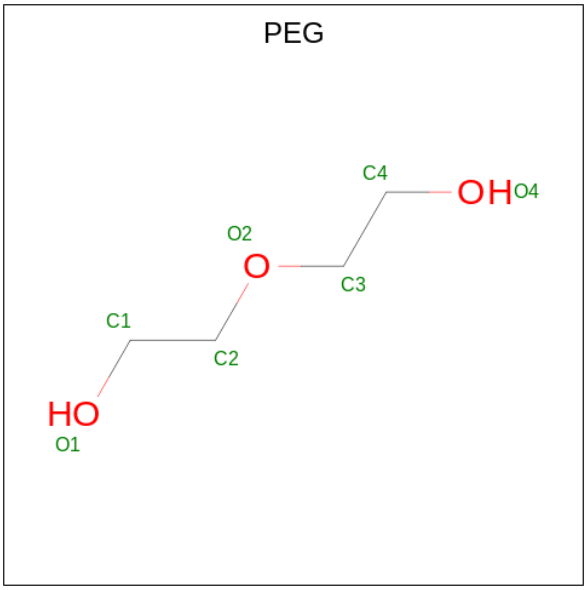
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	E	1	Total C O 6 3 3	0	0
2	E	1	Total C O 6 3 3	0	0
2	F	1	Total C O 6 3 3	0	0
2	F	1	Total C O 6 3 3	0	0
2	F	1	Total C O 6 3 3	0	0

- Molecule 3 is alpha-D-glucopyranose (CCD ID: GLC) (formula: $C_6H_{12}O_6$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	B	1	Total C O 12 6 6	0	0
3	D	1	Total C O 12 6 6	0	0
3	C	1	Total C O 12 6 6	0	0
3	A	1	Total C O 12 6 6	0	0
3	E	1	Total C O 12 6 6	0	0
3	F	1	Total C O 12 6 6	0	0

- Molecule 4 is DI(HYDROXYETHYL)ETHER (CCD ID: PEG) (formula: $C_4H_{10}O_3$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	E	1	Total C O 7 4 3	0	0

- Molecule 5 is water.

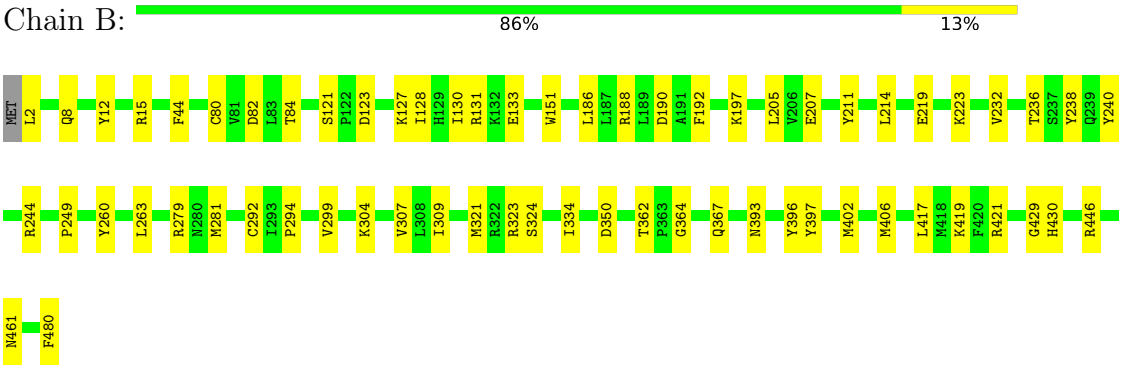
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	B	274	Total O 274 274	0	0
5	D	219	Total O 219 219	0	0
5	C	206	Total O 206 206	0	0
5	A	195	Total O 195 195	0	0
5	E	173	Total O 173 173	0	0
5	F	160	Total O 160 160	0	0

3 Residue-property plots (i)

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

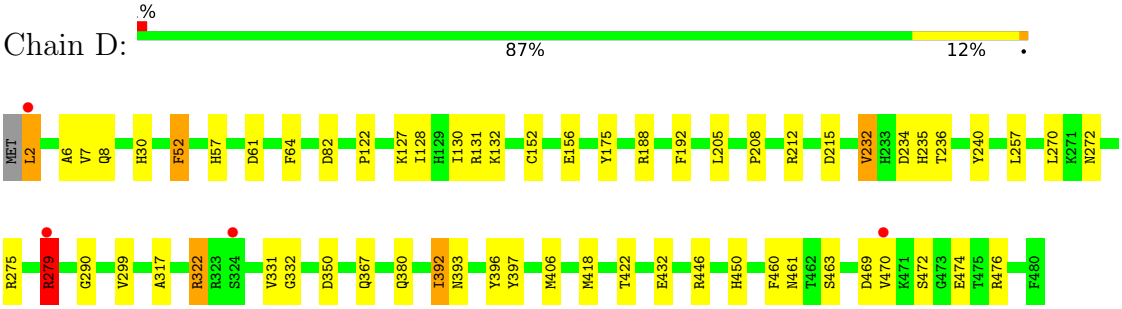
• Molecule 1: Sucrose phosphorylase

Chain B:



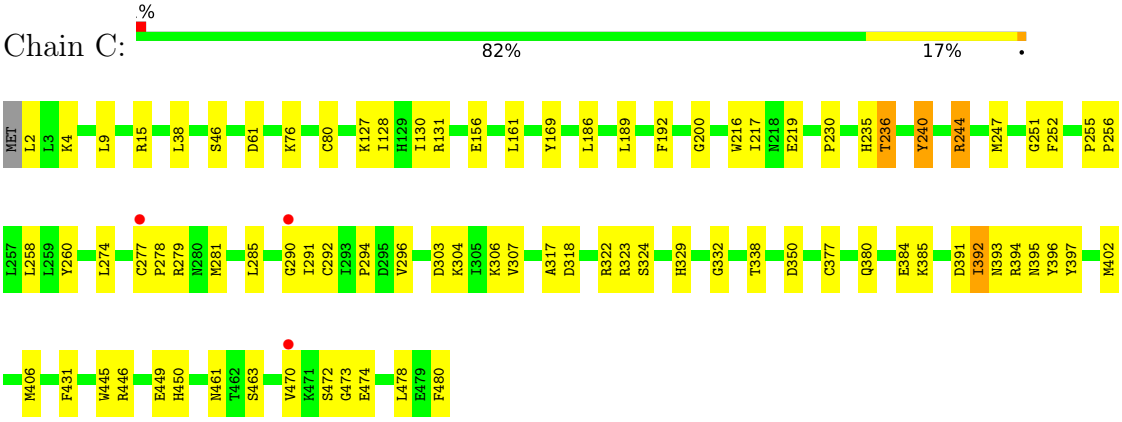
• Molecule 1: Sucrose phosphorylase

Chain D:



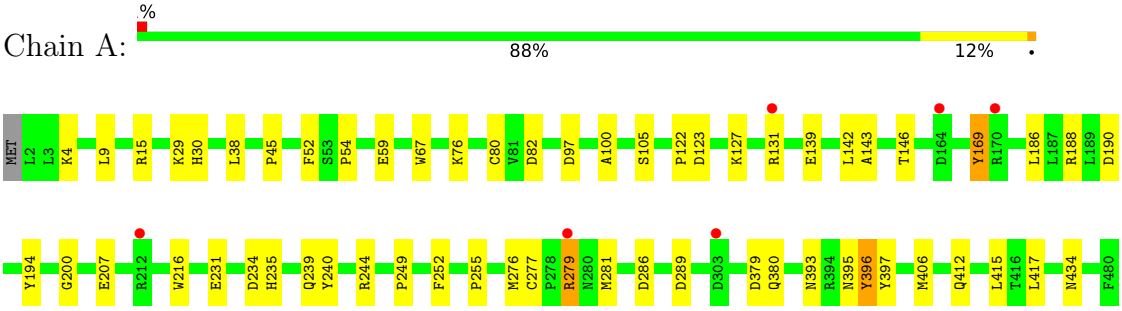
• Molecule 1: Sucrose phosphorylase

Chain C:



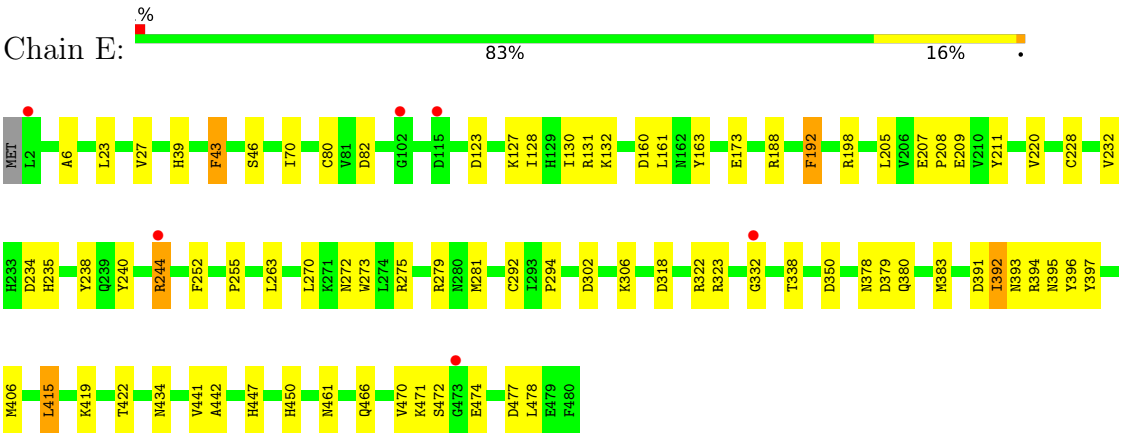
• Molecule 1: Sucrose phosphorylase

Chain A:



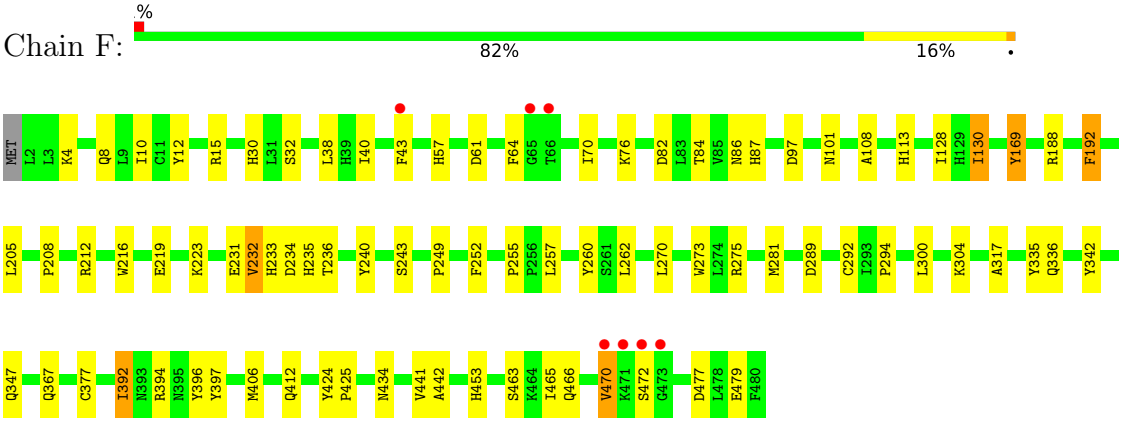
• Molecule 1: Sucrose phosphorylase

Chain E:



• Molecule 1: Sucrose phosphorylase

Chain F:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	172.73Å 115.06Å 182.13Å 90.00° 100.56° 90.00°	Depositor
Resolution (Å)	48.39 – 2.50 48.39 – 2.50	Depositor EDS
% Data completeness (in resolution range)	99.1 (48.39-2.50) 99.1 (48.39-2.50)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.93 (at 2.51Å)	Xtriage
Refinement program	PHENIX (1.17.1_3660: ???)	Depositor
R, R_{free}	0.174 , 0.211 0.179 , 0.214	Depositor DCC
R_{free} test set	5929 reflections (4.88%)	wwPDB-VP
Wilson B-factor (Å^2)	35.8	Xtriage
Anisotropy	0.052	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.33 , 38.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	24592	wwPDB-VP
Average B, all atoms (Å^2)	43.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.79% 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: GOL, PEG, GLC

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.42	0/3952	0.70	3/5369 (0.1%)
1	B	0.44	0/3952	0.73	0/5369
1	C	0.44	0/3952	0.73	3/5369 (0.1%)
1	D	0.43	0/3952	0.74	4/5369 (0.1%)
1	E	0.38	0/3952	0.67	1/5369 (0.0%)
1	F	0.38	0/3946	0.67	4/5362 (0.1%)
All	All	0.42	0/23706	0.71	15/32207 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	E	0	1

There are no bond length outliers.

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	207	GLU	CB-CA-C	9.44	121.80	108.68
1	C	244	ARG	NE-CZ-NH1	-6.50	115.00	121.50
1	E	192	PHE	CA-CB-CG	6.32	120.12	113.80
1	D	279	ARG	CA-CB-CG	6.15	126.39	114.10
1	D	279	ARG	N-CA-CB	6.09	119.54	110.29
1	F	192	PHE	CA-CB-CG	5.81	119.61	113.80
1	D	279	ARG	CB-CA-C	-5.46	99.42	109.46
1	C	192	PHE	CA-CB-CG	5.45	119.25	113.80
1	F	479	GLU	CA-CB-CG	-5.43	103.24	114.10
1	A	289	ASP	CA-C-N	-5.40	106.15	121.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	289	ASP	C-N-CA	-5.40	106.15	121.60
1	C	290	GLY	CA-C-O	-5.36	117.70	121.88
1	F	289	ASP	CA-C-N	-5.16	106.84	121.60
1	F	289	ASP	C-N-CA	-5.16	106.84	121.60
1	D	322	ARG	CG-CD-NE	5.04	123.08	112.00

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	E	244	ARG	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3855	0	3706	46	0
1	B	3855	0	3706	46	0
1	C	3855	0	3706	59	0
1	D	3855	0	3706	47	0
1	E	3855	0	3706	60	0
1	F	3849	0	3695	56	0
2	A	42	0	56	1	0
2	B	42	0	56	6	0
2	C	30	0	40	2	0
2	D	18	0	24	0	0
2	E	12	0	16	1	0
2	F	18	0	24	0	0
3	A	12	0	12	2	0
3	B	12	0	12	0	0
3	C	12	0	12	0	0
3	D	12	0	12	1	0
3	E	12	0	12	0	0
3	F	12	0	12	0	0
4	E	7	0	10	1	0
5	A	195	0	0	12	0
5	B	274	0	0	14	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	C	206	0	0	17	0
5	D	219	0	0	12	0
5	E	173	0	0	11	0
5	F	160	0	0	8	0
All	All	24592	0	22523	303	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 7.

All (303) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:46:SER:O	5:C:601:HOH:O	1.88	0.92
1:D:131:ARG:NH2	5:D:602:HOH:O	2.05	0.89
1:E:131:ARG:NH2	5:E:603:HOH:O	2.08	0.86
1:A:239:GLN:HG3	1:A:249:PRO:HB2	1.58	0.86
1:C:156:GLU:OE1	5:C:602:HOH:O	1.94	0.84
1:C:156:GLU:OE2	5:C:604:HOH:O	1.97	0.83
1:C:324:SER:N	5:C:607:HOH:O	2.08	0.82
1:C:449:GLU:O	5:C:605:HOH:O	1.97	0.82
1:B:127:LYS:NZ	1:E:123:ASP:OD2	2.11	0.80
1:E:46:SER:O	5:E:601:HOH:O	2.01	0.79
1:E:471:LYS:HG3	5:E:616:HOH:O	1.83	0.78
1:B:123:ASP:OD2	1:E:127:LYS:NZ	2.17	0.77
1:C:61:ASP:OD2	5:C:606:HOH:O	2.02	0.77
1:E:43:PHE:HE2	1:E:70:ILE:HG13	1.49	0.77
1:E:378:ASN:O	5:E:602:HOH:O	2.03	0.76
1:B:364:GLY:H	2:B:504:GOL:H2	1.50	0.76
1:D:472:SER:OG	5:D:601:HOH:O	2.03	0.75
1:B:279:ARG:NH1	5:B:605:HOH:O	2.19	0.75
1:B:121:SER:OG	5:B:601:HOH:O	2.05	0.74
1:D:205:LEU:HD21	1:D:232:VAL:HG11	1.69	0.72
1:D:380:GLN:OE1	5:D:603:HOH:O	2.08	0.71
1:C:279:ARG:HE	1:C:279:ARG:HA	1.54	0.70
1:A:30:HIS:HB3	1:A:406:MET:HE2	1.73	0.70
1:F:270:LEU:HD23	1:F:441:VAL:HG21	1.71	0.70
1:A:194:TYR:OH	5:A:601:HOH:O	2.05	0.70
1:D:290:GLY:O	5:D:604:HOH:O	2.09	0.70
1:C:446:ARG:NE	5:C:603:HOH:O	1.95	0.69
1:A:244:ARG:NH1	1:E:275:ARG:O	2.25	0.69
1:B:263:LEU:HD23	2:B:506:GOL:H2	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:362:THR:O	5:B:602:HOH:O	2.12	0.68
1:C:480:PHE:OXT	5:C:608:HOH:O	2.10	0.68
1:A:380:GLN:NE2	5:A:602:HOH:O	2.12	0.67
1:F:470:VAL:HA	5:F:627:HOH:O	1.92	0.67
1:E:447:HIS:ND1	5:E:607:HOH:O	2.26	0.67
1:E:383:MET:HG3	1:E:392:ILE:HD12	1.76	0.67
1:D:322:ARG:HD2	1:D:332:GLY:O	1.95	0.66
1:B:307:VAL:HG21	2:B:502:GOL:H11	1.76	0.66
1:D:322:ARG:NH1	1:D:331:VAL:O	2.29	0.66
1:B:2:LEU:N	5:B:610:HOH:O	2.28	0.66
1:F:4:LYS:NZ	1:F:76:LYS:O	2.28	0.66
1:F:281:MET:HG2	5:F:638:HOH:O	1.96	0.65
1:C:323:ARG:NH1	5:C:613:HOH:O	2.26	0.65
1:A:131:ARG:NH2	5:A:610:HOH:O	2.29	0.65
1:E:43:PHE:CE2	1:E:70:ILE:HG13	2.30	0.65
1:D:208:PRO:HB2	1:D:212:ARG:HH12	1.63	0.63
1:D:127:LYS:NZ	1:A:123:ASP:OD2	2.28	0.63
1:A:406:MET:HE1	1:A:415:LEU:HD21	1.79	0.63
1:C:15:ARG:NH1	1:C:394:ARG:O	2.29	0.63
1:C:251:GLY:HA2	1:C:281:MET:HE2	1.78	0.63
1:C:128:ILE:HG22	1:C:130:ILE:HG12	1.80	0.63
1:D:30:HIS:HB3	1:D:406:MET:HE2	1.82	0.62
1:F:233:HIS:NE2	5:F:609:HOH:O	2.31	0.61
1:B:238:TYR:OH	5:B:604:HOH:O	2.14	0.61
1:A:406:MET:O	1:A:412:GLN:NE2	2.31	0.61
1:C:4:LYS:NZ	1:C:76:LYS:O	2.34	0.61
1:E:228:CYS:N	5:E:604:HOH:O	2.15	0.61
1:D:128:ILE:HG22	1:D:130:ILE:HG12	1.82	0.61
1:E:207:GLU:HG2	1:E:211:TYR:CE2	2.36	0.61
1:E:128:ILE:HG22	1:E:130:ILE:HG12	1.82	0.61
1:C:472:SER:OG	1:C:474:GLU:HG2	2.01	0.61
1:F:342:TYR:CE2	1:F:347:GLN:HG2	2.36	0.60
1:D:130:ILE:HG22	1:D:132:LYS:H	1.67	0.60
1:D:215:ASP:OD1	5:D:605:HOH:O	2.16	0.60
1:F:43:PHE:CE2	1:F:70:ILE:HG13	2.38	0.59
1:E:263:LEU:HD23	2:E:502:GOL:H11	1.85	0.59
1:A:234:ASP:OD1	1:A:235:HIS:N	2.31	0.58
1:F:97:ASP:OD1	1:F:101:ASN:ND2	2.35	0.58
1:A:190:ASP:O	5:A:603:HOH:O	2.17	0.57
1:A:252:PHE:O	1:A:255:PRO:HD2	2.04	0.57
1:E:406:MET:HE1	1:E:415:LEU:HD21	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:151:TRP:CD1	1:B:197:LYS:HE3	2.40	0.57
1:A:139:GLU:O	5:A:604:HOH:O	2.17	0.57
1:E:160:ASP:OD1	5:E:605:HOH:O	2.17	0.57
1:E:279:ARG:HB2	5:E:623:HOH:O	2.05	0.57
1:E:6:ALA:HB1	1:E:422:THR:HG23	1.87	0.57
1:C:131:ARG:NH1	5:C:616:HOH:O	2.38	0.56
1:B:244:ARG:NH1	1:F:275:ARG:O	2.34	0.56
1:C:317:ALA:HB2	1:C:392:ILE:HD13	1.87	0.56
1:A:393:ASN:HB3	5:A:633:HOH:O	2.05	0.56
1:E:393:ASN:HB3	5:E:642:HOH:O	2.06	0.56
1:B:128:ILE:HG22	1:B:130:ILE:HG12	1.86	0.56
1:A:15:ARG:HB2	5:A:744:HOH:O	2.06	0.56
1:F:472:SER:OG	5:F:602:HOH:O	2.17	0.56
1:E:322:ARG:CZ	1:E:332:GLY:HA2	2.35	0.56
1:B:131:ARG:NH2	5:B:603:HOH:O	2.12	0.56
1:B:131:ARG:NH1	5:B:619:HOH:O	2.38	0.55
1:D:236:THR:HG21	1:D:299:VAL:CG2	2.37	0.55
1:D:275:ARG:O	1:C:244:ARG:NH2	2.31	0.55
1:D:474:GLU:OE2	1:D:476:ARG:NH2	2.25	0.55
1:E:380:GLN:OE1	1:E:392:ILE:HD11	2.07	0.55
1:B:292:CYS:SG	1:B:294:PRO:HD2	2.46	0.55
1:F:30:HIS:HB3	1:F:406:MET:HE2	1.88	0.55
1:F:257:LEU:HD21	1:F:270:LEU:HA	1.89	0.55
1:F:208:PRO:HG2	1:F:212:ARG:HH12	1.72	0.54
1:A:82:ASP:OD1	1:A:188:ARG:HD3	2.07	0.54
1:A:396:TYR:OH	5:A:605:HOH:O	2.18	0.54
1:E:302:ASP:O	1:E:306:LYS:HG3	2.08	0.54
1:C:219:GLU:HG3	1:C:219:GLU:O	2.05	0.54
1:D:290:GLY:HA2	5:D:741:HOH:O	2.07	0.54
1:F:169:TYR:HD1	1:F:169:TYR:H	1.54	0.54
1:A:379:ASP:HB2	1:A:395:ASN:ND2	2.23	0.53
1:F:43:PHE:HE2	1:F:70:ILE:HG13	1.73	0.53
1:C:251:GLY:CA	1:C:281:MET:HE2	2.38	0.53
1:B:309:ILE:HD13	1:B:334:ILE:HD13	1.89	0.53
1:B:364:GLY:H	2:B:504:GOL:C2	2.20	0.53
1:D:279:ARG:HH12	1:C:244:ARG:NH1	2.07	0.53
1:B:364:GLY:N	2:B:504:GOL:H2	2.23	0.53
1:F:262:LEU:O	5:F:603:HOH:O	2.19	0.53
1:E:450:HIS:CE1	1:E:470:VAL:HG11	2.44	0.53
1:F:32:SER:HB2	1:F:76:LYS:HZ1	1.75	0.52
1:F:32:SER:HB2	1:F:76:LYS:NZ	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:205:LEU:HD21	1:F:232:VAL:HG11	1.91	0.52
1:B:419:LYS:NZ	5:B:623:HOH:O	2.42	0.52
1:F:208:PRO:HG2	1:F:212:ARG:NH1	2.24	0.52
1:F:169:TYR:N	1:F:169:TYR:CD1	2.78	0.52
1:F:347:GLN:NE2	1:F:377:CYS:SG	2.84	0.51
1:E:43:PHE:HD1	1:E:43:PHE:H	1.57	0.51
1:F:192:PHE:CE2	1:F:232:VAL:HG22	2.45	0.51
1:C:279:ARG:HA	1:C:279:ARG:NE	2.23	0.51
1:B:205:LEU:HD11	1:B:232:VAL:HG21	1.92	0.51
1:C:391:ASP:HA	1:C:394:ARG:HB2	1.92	0.51
1:A:188:ARG:NH2	1:A:231:GLU:HG3	2.26	0.51
1:F:234:ASP:OD1	1:F:235:HIS:N	2.35	0.51
1:D:317:ALA:HB2	1:D:392:ILE:HD13	1.92	0.51
1:B:249:PRO:HG2	1:B:281:MET:HB3	1.93	0.50
1:C:279:ARG:HE	1:C:279:ARG:CA	2.23	0.50
1:E:130:ILE:HG22	1:E:132:LYS:HG2	1.93	0.50
1:F:15:ARG:NH1	1:F:394:ARG:O	2.44	0.50
1:F:243:SER:HB2	1:F:249:PRO:HG3	1.94	0.50
1:A:9:LEU:HB3	1:A:38:LEU:HD12	1.92	0.50
1:F:169:TYR:HB3	1:F:216:TRP:CH2	2.46	0.50
1:F:335:TYR:CD2	1:F:336:GLN:HG3	2.47	0.50
1:B:236:THR:HG21	1:B:299:VAL:CG2	2.42	0.50
1:A:276:MET:HE1	4:E:504:PEG:H21	1.94	0.50
1:F:477:ASP:O	5:F:604:HOH:O	2.20	0.50
1:B:430:HIS:CE1	1:B:446:ARG:HB3	2.46	0.49
1:D:7:VAL:HG11	1:D:418:MET:HE3	1.93	0.49
1:C:377:CYS:HB2	2:C:502:GOL:H12	1.94	0.49
1:C:395:ASN:H	1:C:395:ASN:ND2	2.10	0.49
1:C:473:GLY:O	5:C:609:HOH:O	2.20	0.49
1:A:169:TYR:HD1	1:A:169:TYR:H	1.58	0.49
1:E:130:ILE:CG2	1:E:132:LYS:HG2	2.41	0.49
1:C:80:CYS:HA	1:C:186:LEU:O	2.12	0.49
1:E:198:ARG:HH12	1:E:209:GLU:CD	2.20	0.49
1:C:306:LYS:HE3	1:C:329:HIS:O	2.13	0.49
1:C:318:ASP:O	1:C:338:THR:OG1	2.28	0.49
1:D:208:PRO:HB2	1:D:212:ARG:NH1	2.28	0.49
1:D:257:LEU:HD21	1:D:270:LEU:HA	1.93	0.48
1:E:82:ASP:OD1	1:E:188:ARG:HD3	2.13	0.48
1:E:270:LEU:HD23	1:E:441:VAL:HG21	1.94	0.48
1:F:12:TYR:CD2	1:F:15:ARG:HD2	2.49	0.48
1:F:236:THR:HG22	5:F:717:HOH:O	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:393:ASN:HB3	5:B:690:HOH:O	2.12	0.48
1:C:9:LEU:HB3	1:C:38:LEU:HD12	1.95	0.48
1:C:292:CYS:SG	1:C:294:PRO:HD2	2.53	0.48
1:C:446:ARG:NH2	5:C:603:HOH:O	2.47	0.48
1:A:239:GLN:OE1	5:A:606:HOH:O	2.20	0.48
1:D:2:LEU:N	5:D:614:HOH:O	2.46	0.47
1:E:252:PHE:O	1:E:255:PRO:HD2	2.14	0.47
1:F:61:ASP:HB3	1:F:64:PHE:CD2	2.50	0.47
1:F:453:HIS:O	1:F:465:ILE:HA	2.14	0.47
1:D:234:ASP:OD1	1:D:235:HIS:N	2.40	0.47
1:C:161:LEU:O	5:C:611:HOH:O	2.20	0.47
1:A:122:PRO:HD2	5:A:684:HOH:O	2.15	0.47
1:C:322:ARG:HD2	1:C:332:GLY:O	2.14	0.47
1:A:169:TYR:CD1	1:A:169:TYR:N	2.82	0.47
1:E:292:CYS:SG	1:E:294:PRO:HD2	2.55	0.47
1:E:450:HIS:NE2	1:E:470:VAL:HG11	2.30	0.47
1:E:379:ASP:HB2	1:E:395:ASN:OD1	2.15	0.47
1:E:466:GLN:HG2	1:E:477:ASP:OD1	2.15	0.47
1:D:192:PHE:CE2	1:D:232:VAL:HG13	2.50	0.47
1:C:230:PRO:HG3	1:C:247:MET:HE2	1.96	0.47
1:E:192:PHE:CE2	1:E:232:VAL:HG22	2.50	0.47
1:F:108:ALA:O	1:F:113:HIS:HE1	1.98	0.47
1:C:252:PHE:O	1:C:255:PRO:HD2	2.15	0.46
1:E:39:HIS:HB2	1:E:80:CYS:HB3	1.96	0.46
1:E:273:TRP:CH2	1:E:281:MET:HE1	2.51	0.46
1:F:10:ILE:HD11	1:F:367:GLN:OE1	2.16	0.46
1:F:169:TYR:HD1	1:F:169:TYR:N	2.13	0.46
1:E:406:MET:HE1	1:E:415:LEU:CD2	2.46	0.46
1:A:169:TYR:HB3	1:A:216:TRP:CZ2	2.50	0.46
1:C:236:THR:HG22	5:C:733:HOH:O	2.14	0.46
1:E:391:ASP:HA	1:E:394:ARG:HB2	1.98	0.46
1:E:434:ASN:HB2	1:E:442:ALA:HB3	1.98	0.46
1:E:207:GLU:HG2	1:E:211:TYR:HE2	1.80	0.46
1:C:463:SER:HB2	5:C:736:HOH:O	2.16	0.45
1:E:415:LEU:HD12	1:E:419:LYS:HE3	1.96	0.45
1:C:450:HIS:CD2	1:C:470:VAL:HG11	2.51	0.45
1:F:273:TRP:CH2	1:F:281:MET:HE1	2.51	0.45
1:E:318:ASP:O	1:E:338:THR:OG1	2.33	0.45
1:F:424:TYR:HA	1:F:425:PRO:HD3	1.84	0.45
1:B:44:PHE:O	5:B:606:HOH:O	2.21	0.45
1:B:236:THR:HG22	5:B:696:HOH:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:43:PHE:N	1:E:43:PHE:CD1	2.84	0.45
1:E:130:ILE:HD11	5:E:711:HOH:O	2.16	0.45
1:E:472:SER:OG	1:E:474:GLU:HG2	2.16	0.45
1:C:274:LEU:HA	1:C:277:CYS:SG	2.57	0.45
1:F:82:ASP:OD1	1:F:188:ARG:HD3	2.16	0.45
1:D:130:ILE:CG2	1:D:132:LYS:HG2	2.47	0.45
1:A:80:CYS:HA	1:A:186:LEU:O	2.16	0.45
1:F:292:CYS:SG	1:F:294:PRO:HD2	2.57	0.45
1:B:12:TYR:CD2	1:B:15:ARG:HD2	2.52	0.44
1:B:80:CYS:HA	1:B:186:LEU:O	2.17	0.44
1:D:2:LEU:HD22	5:D:677:HOH:O	2.17	0.44
1:D:52:PHE:CE2	3:D:503:GLC:H2	2.51	0.44
1:E:383:MET:HE2	1:E:392:ILE:HD11	1.99	0.44
1:A:97:ASP:OD2	1:A:105:SER:OG	2.28	0.44
1:E:383:MET:HE3	1:E:383:MET:HB3	1.91	0.44
1:B:260:TYR:CZ	1:B:304:LYS:HD2	2.52	0.44
1:A:52:PHE:CZ	3:A:508:GLC:H2	2.52	0.44
1:F:252:PHE:O	1:F:255:PRO:HD2	2.17	0.44
1:B:133:GLU:HG2	1:B:323:ARG:HG3	1.99	0.44
1:B:219:GLU:OE2	1:B:223:LYS:NZ	2.51	0.44
1:D:205:LEU:HD21	1:D:232:VAL:CG1	2.45	0.44
1:B:324:SER:HB2	5:B:674:HOH:O	2.18	0.44
1:C:189:LEU:HB2	1:C:230:PRO:HA	1.99	0.44
1:C:380:GLN:O	1:C:384:GLU:HG3	2.17	0.43
1:F:8:GLN:HB2	1:F:367:GLN:HG2	1.99	0.43
1:B:429:GLY:HA3	1:B:446:ARG:O	2.18	0.43
1:A:142:LEU:HD12	1:A:146:THR:HB	2.01	0.43
2:A:501:GOL:H31	3:A:508:GLC:H5	1.99	0.43
1:D:82:ASP:OD1	1:D:188:ARG:HD3	2.18	0.43
1:C:127:LYS:NZ	1:C:200:GLY:O	2.43	0.43
1:C:402:MET:HE3	1:C:406:MET:HE2	1.99	0.43
1:F:434:ASN:HB2	1:F:442:ALA:CB	2.48	0.43
1:E:350:ASP:HB3	1:E:461:ASN:O	2.18	0.43
1:B:417:LEU:HG	1:B:480:PHE:CD2	2.54	0.43
1:C:240:TYR:CE1	1:C:278:PRO:HG3	2.54	0.43
1:E:173:GLU:HG3	1:E:220:VAL:HG11	2.00	0.43
1:A:59:GLU:HA	1:A:67:TRP:HE1	1.84	0.43
1:E:234:ASP:OD1	1:E:235:HIS:N	2.50	0.43
1:F:466:GLN:HG2	1:F:477:ASP:OD1	2.19	0.43
1:D:61:ASP:HB3	1:D:64:PHE:CD2	2.54	0.43
1:C:2:LEU:HA	5:C:662:HOH:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:434:ASN:OD1	1:E:208:PRO:HD3	2.19	0.43
1:B:8:GLN:HB2	1:B:367:GLN:HG2	2.00	0.43
1:B:82:ASP:OD1	1:B:188:ARG:HD3	2.19	0.43
1:A:417:LEU:HD23	1:A:417:LEU:HA	1.86	0.43
1:F:257:LEU:HD12	1:F:300:LEU:HD13	2.00	0.43
1:B:84:THR:HG22	1:B:190:ASP:OD2	2.18	0.43
1:F:463:SER:HB2	5:F:683:HOH:O	2.18	0.43
1:B:446:ARG:NH1	5:B:615:HOH:O	2.37	0.42
1:D:272:ASN:HB3	1:C:235:HIS:CE1	2.54	0.42
1:C:216:TRP:HE3	1:C:217:ILE:HG13	1.84	0.42
1:D:6:ALA:HB1	1:D:422:THR:HG23	2.00	0.42
1:D:450:HIS:CE1	1:D:470:VAL:HG11	2.55	0.42
1:D:8:GLN:HB2	1:D:367:GLN:HG2	2.01	0.42
1:C:350:ASP:HB3	1:C:461:ASN:O	2.19	0.42
1:C:256:PRO:HG2	1:C:296:VAL:HB	2.01	0.42
1:E:23:LEU:O	1:E:27:VAL:HG23	2.19	0.42
1:B:421:ARG:NH2	2:B:504:GOL:H32	2.34	0.42
1:D:474:GLU:HA	5:D:708:HOH:O	2.20	0.42
1:C:350:ASP:HB2	2:C:501:GOL:H32	2.01	0.42
1:F:260:TYR:CZ	1:F:304:LYS:HD2	2.55	0.42
1:A:127:LYS:NZ	1:A:200:GLY:O	2.49	0.42
1:E:434:ASN:HB3	5:E:690:HOH:O	2.19	0.42
1:D:432:GLU:OE2	1:D:446:ARG:NH2	2.50	0.42
1:E:130:ILE:O	1:E:323:ARG:HD3	2.20	0.42
1:B:207:GLU:HG2	1:B:211:TYR:CE2	2.54	0.42
1:C:258:LEU:HD12	1:C:285:LEU:HD21	2.02	0.42
1:F:57:HIS:CE1	1:F:84:THR:H	2.38	0.42
1:B:151:TRP:NE1	1:B:197:LYS:HE3	2.35	0.42
1:A:279:ARG:HH21	1:E:244:ARG:HH12	1.67	0.42
1:A:235:HIS:CE1	1:E:272:ASN:HB3	2.55	0.42
1:D:236:THR:HG21	1:D:299:VAL:HG21	2.00	0.41
1:C:393:ASN:HB3	5:C:665:HOH:O	2.20	0.41
1:A:239:GLN:NE2	5:A:608:HOH:O	2.53	0.41
1:A:249:PRO:HG2	1:A:281:MET:HB3	2.01	0.41
1:F:188:ARG:NH2	1:F:231:GLU:HG3	2.35	0.41
1:D:460:PHE:CE1	1:F:130:ILE:HD11	2.54	0.41
1:C:9:LEU:HB3	1:C:38:LEU:CD1	2.50	0.41
1:C:260:TYR:CE1	1:C:304:LYS:HD2	2.55	0.41
1:C:303:ASP:O	1:C:307:VAL:HG23	2.19	0.41
1:F:128:ILE:HG22	1:F:130:ILE:HG12	2.03	0.41
1:B:321:MET:HE2	5:B:659:HOH:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:9:LEU:HD23	1:A:38:LEU:HD11	2.02	0.41
1:A:29:LYS:NZ	5:A:629:HOH:O	2.52	0.41
1:A:100:ALA:HA	1:A:143:ALA:HB2	2.03	0.41
1:D:350:ASP:HB3	1:D:461:ASN:O	2.20	0.41
1:D:469:ASP:O	1:D:472:SER:O	2.39	0.41
1:A:277:CYS:O	1:A:279:ARG:NH2	2.54	0.41
1:B:350:ASP:HB3	1:B:461:ASN:O	2.20	0.41
1:E:205:LEU:HD13	1:E:238:TYR:CE1	2.56	0.41
1:F:219:GLU:HG3	1:F:223:LYS:HE2	2.03	0.41
1:F:406:MET:O	1:F:412:GLN:NE2	2.49	0.41
1:C:431:PHE:HB2	1:C:445:TRP:CH2	2.55	0.41
1:D:131:ARG:CZ	1:D:131:ARG:HB2	2.50	0.41
1:A:169:TYR:HB3	1:A:216:TRP:CH2	2.56	0.41
1:F:317:ALA:HB2	1:F:392:ILE:HD13	2.03	0.41
1:D:122:PRO:HD2	5:D:693:HOH:O	2.20	0.40
1:D:463:SER:HB2	5:D:756:HOH:O	2.20	0.40
1:C:431:PHE:HB2	1:C:445:TRP:CZ2	2.55	0.40
1:A:4:LYS:NZ	1:A:76:LYS:O	2.54	0.40
1:D:57:HIS:HB2	1:D:175:TYR:CG	2.56	0.40
1:D:152:CYS:SG	1:D:156:GLU:HA	2.61	0.40
1:E:161:LEU:HB2	1:E:163:TYR:HE1	1.86	0.40
1:B:402:MET:HE3	1:B:406:MET:HE2	2.03	0.40
1:D:393:ASN:HB3	5:D:691:HOH:O	2.21	0.40
1:A:286:ASP:OD1	1:A:286:ASP:N	2.48	0.40
1:B:192:PHE:CE2	1:B:232:VAL:HB	2.57	0.40
1:A:45:PRO:O	1:A:54:PRO:HA	2.21	0.40
1:F:38:LEU:HG	1:F:40:ILE:HG13	2.02	0.40
1:F:86:ASN:HB3	1:F:87:HIS:ND1	2.36	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	477/480 (99%)	465 (98%)	12 (2%)	0	100	100
1	B	477/480 (99%)	469 (98%)	8 (2%)	0	100	100
1	C	477/480 (99%)	469 (98%)	8 (2%)	0	100	100
1	D	477/480 (99%)	466 (98%)	11 (2%)	0	100	100
1	E	477/480 (99%)	467 (98%)	10 (2%)	0	100	100
1	F	477/480 (99%)	465 (98%)	12 (2%)	0	100	100
All	All	2862/2880 (99%)	2801 (98%)	61 (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	420/421 (100%)	415 (99%)	5 (1%)	67	86
1	B	420/421 (100%)	416 (99%)	4 (1%)	73	88
1	C	420/421 (100%)	411 (98%)	9 (2%)	48	74
1	D	420/421 (100%)	412 (98%)	8 (2%)	52	77
1	E	420/421 (100%)	413 (98%)	7 (2%)	56	79
1	F	419/421 (100%)	411 (98%)	8 (2%)	52	77
All	All	2519/2526 (100%)	2478 (98%)	41 (2%)	58	80

All (41) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	214	LEU
1	B	240	TYR
1	B	396	TYR
1	B	397	TYR
1	D	2	LEU
1	D	52	PHE
1	D	232	VAL

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Mol	Chain	Res	Type
1	D	240	TYR
1	D	279	ARG
1	D	392	ILE
1	D	396	TYR
1	D	397	TYR
1	C	169	TYR
1	C	236	THR
1	C	240	TYR
1	C	291	ILE
1	C	385	LYS
1	C	392	ILE
1	C	396	TYR
1	C	397	TYR
1	C	478	LEU
1	A	169	TYR
1	A	240	TYR
1	A	279	ARG
1	A	396	TYR
1	A	397	TYR
1	E	43	PHE
1	E	240	TYR
1	E	392	ILE
1	E	396	TYR
1	E	397	TYR
1	E	415	LEU
1	E	478	LEU
1	F	130	ILE
1	F	169	TYR
1	F	232	VAL
1	F	240	TYR
1	F	392	ILE
1	F	396	TYR
1	F	397	TYR
1	F	470	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (24) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	129	HIS
1	B	329	HIS
1	B	380	GLN
1	B	393	ASN

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Mol	Chain	Res	Type
1	B	447	HIS
1	D	347	GLN
1	D	430	HIS
1	C	129	HIS
1	C	393	ASN
1	C	434	ASN
1	C	447	HIS
1	A	239	GLN
1	A	347	GLN
1	A	393	ASN
1	A	423	ASN
1	A	447	HIS
1	E	24	HIS
1	E	393	ASN
1	E	430	HIS
1	E	459	ASN
1	F	347	GLN
1	F	434	ASN
1	F	447	HIS
1	F	461	ASN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

34 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond

length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
2	GOL	B	501	-	5,5,5	0.08	0	5,5,5	0.31	0
2	GOL	A	504	-	5,5,5	0.07	0	5,5,5	0.36	0
2	GOL	A	505	-	5,5,5	0.08	0	5,5,5	0.32	0
2	GOL	F	503	-	5,5,5	0.08	0	5,5,5	0.38	0
2	GOL	A	501	-	5,5,5	0.08	0	5,5,5	0.35	0
3	GLC	F	504	-	12,12,12	0.17	0	17,17,17	0.34	0
2	GOL	F	502	-	5,5,5	0.08	0	5,5,5	0.32	0
3	GLC	B	508	-	12,12,12	0.28	0	17,17,17	0.51	0
2	GOL	B	506	-	5,5,5	0.09	0	5,5,5	0.40	0
2	GOL	E	502	-	5,5,5	0.11	0	5,5,5	0.40	0
2	GOL	A	507	-	5,5,5	0.11	0	5,5,5	0.34	0
3	GLC	A	508	-	12,12,12	0.18	0	17,17,17	0.33	0
2	GOL	C	502	-	5,5,5	0.08	0	5,5,5	0.35	0
2	GOL	B	502	-	5,5,5	0.08	0	5,5,5	0.35	0
2	GOL	F	501	-	5,5,5	0.07	0	5,5,5	0.33	0
2	GOL	A	506	-	5,5,5	0.08	0	5,5,5	0.29	0
4	PEG	E	504	-	6,6,6	0.57	0	5,5,5	0.43	0
2	GOL	C	504	-	5,5,5	0.13	0	5,5,5	0.35	0
2	GOL	A	502	-	5,5,5	0.10	0	5,5,5	0.34	0
2	GOL	D	502	-	5,5,5	0.08	0	5,5,5	0.33	0
2	GOL	B	505	-	5,5,5	0.09	0	5,5,5	0.32	0
2	GOL	C	501	-	5,5,5	0.09	0	5,5,5	0.39	0
2	GOL	B	507	-	5,5,5	0.09	0	5,5,5	0.41	0
2	GOL	E	501	-	5,5,5	0.06	0	5,5,5	0.36	0
2	GOL	D	501	-	5,5,5	0.08	0	5,5,5	0.31	0
3	GLC	C	505	-	12,12,12	0.21	0	17,17,17	0.33	0
2	GOL	B	503	-	5,5,5	0.09	0	5,5,5	0.38	0
2	GOL	A	503	-	5,5,5	0.13	0	5,5,5	0.41	0
2	GOL	C	506	-	5,5,5	0.08	0	5,5,5	0.30	0
2	GOL	B	504	-	5,5,5	0.09	0	5,5,5	0.66	0
3	GLC	E	503	-	12,12,12	0.22	0	17,17,17	0.49	0
2	GOL	D	504	-	5,5,5	0.10	0	5,5,5	0.33	0
2	GOL	C	503	-	5,5,5	0.08	0	5,5,5	0.32	0
3	GLC	D	503	-	12,12,12	0.20	0	17,17,17	0.44	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	GOL	B	501	-	-	2/4/4/4	-
2	GOL	A	504	-	-	4/4/4/4	-
2	GOL	A	505	-	-	4/4/4/4	-
2	GOL	F	503	-	-	2/4/4/4	-
2	GOL	A	501	-	-	1/4/4/4	-
3	GLC	F	504	-	-	1/2/22/22	0/1/1/1
2	GOL	F	502	-	-	3/4/4/4	-
3	GLC	B	508	-	-	2/2/22/22	0/1/1/1
2	GOL	B	506	-	-	4/4/4/4	-
2	GOL	E	502	-	-	2/4/4/4	-
2	GOL	A	507	-	-	2/4/4/4	-
3	GLC	A	508	-	-	2/2/22/22	0/1/1/1
2	GOL	C	502	-	-	4/4/4/4	-
2	GOL	B	502	-	-	4/4/4/4	-
2	GOL	F	501	-	-	1/4/4/4	-
2	GOL	A	506	-	-	2/4/4/4	-
4	PEG	E	504	-	-	2/4/4/4	-
2	GOL	C	504	-	-	2/4/4/4	-
2	GOL	A	502	-	-	3/4/4/4	-
2	GOL	D	502	-	-	0/4/4/4	-
2	GOL	B	505	-	-	2/4/4/4	-
2	GOL	C	501	-	-	3/4/4/4	-
2	GOL	B	507	-	-	4/4/4/4	-
2	GOL	E	501	-	-	4/4/4/4	-
2	GOL	D	501	-	-	0/4/4/4	-
3	GLC	C	505	-	-	1/2/22/22	0/1/1/1
2	GOL	B	503	-	-	4/4/4/4	-
2	GOL	A	503	-	-	0/4/4/4	-
2	GOL	C	506	-	-	2/4/4/4	-
2	GOL	B	504	-	-	2/4/4/4	-
3	GLC	E	503	-	-	2/2/22/22	0/1/1/1
2	GOL	D	504	-	-	4/4/4/4	-
2	GOL	C	503	-	-	4/4/4/4	-
3	GLC	D	503	-	-	1/2/22/22	0/1/1/1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (80) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	B	501	GOL	C1-C2-C3-O3
2	B	502	GOL	C1-C2-C3-O3
2	B	503	GOL	O1-C1-C2-C3
2	B	505	GOL	C1-C2-C3-O3
2	B	506	GOL	C1-C2-C3-O3
2	B	507	GOL	C1-C2-C3-O3
2	D	504	GOL	C1-C2-C3-O3
2	C	502	GOL	C1-C2-C3-O3
2	C	503	GOL	C1-C2-C3-O3
2	C	506	GOL	C1-C2-C3-O3
2	A	502	GOL	C1-C2-C3-O3
2	A	504	GOL	O1-C1-C2-C3
2	A	504	GOL	C1-C2-C3-O3
2	A	505	GOL	O1-C1-C2-C3
2	A	505	GOL	C1-C2-C3-O3
2	A	506	GOL	C1-C2-C3-O3
2	A	507	GOL	C1-C2-C3-O3
2	E	501	GOL	O1-C1-C2-C3
2	F	502	GOL	O1-C1-C2-C3
2	F	503	GOL	C1-C2-C3-O3
3	E	503	GLC	O5-C5-C6-O6
3	B	508	GLC	C4-C5-C6-O6
3	E	503	GLC	C4-C5-C6-O6
3	A	508	GLC	O5-C5-C6-O6
3	B	508	GLC	O5-C5-C6-O6
2	C	502	GOL	O2-C2-C3-O3
2	A	505	GOL	O1-C1-C2-O2
3	D	503	GLC	O5-C5-C6-O6
2	B	502	GOL	O1-C1-C2-C3
2	B	503	GOL	C1-C2-C3-O3
2	B	504	GOL	O1-C1-C2-C3
2	B	507	GOL	O1-C1-C2-C3
2	D	504	GOL	O1-C1-C2-C3
2	C	501	GOL	C1-C2-C3-O3
2	A	502	GOL	O1-C1-C2-C3
2	F	502	GOL	C1-C2-C3-O3
3	C	505	GLC	O5-C5-C6-O6
2	B	502	GOL	O1-C1-C2-O2
2	B	504	GOL	O1-C1-C2-O2
2	B	506	GOL	O2-C2-C3-O3

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Mol	Chain	Res	Type	Atoms
2	B	507	GOL	O2-C2-C3-O3
2	D	504	GOL	O2-C2-C3-O3
2	C	501	GOL	O2-C2-C3-O3
2	C	503	GOL	O2-C2-C3-O3
2	C	506	GOL	O2-C2-C3-O3
2	A	502	GOL	O2-C2-C3-O3
2	A	504	GOL	O2-C2-C3-O3
2	A	505	GOL	O2-C2-C3-O3
2	B	502	GOL	O2-C2-C3-O3
2	B	503	GOL	O1-C1-C2-O2
2	B	503	GOL	O2-C2-C3-O3
2	A	506	GOL	O2-C2-C3-O3
2	A	507	GOL	O2-C2-C3-O3
2	E	501	GOL	O1-C1-C2-O2
3	A	508	GLC	C4-C5-C6-O6
3	F	504	GLC	O5-C5-C6-O6
2	C	502	GOL	O1-C1-C2-O2
2	F	503	GOL	O2-C2-C3-O3
4	E	504	PEG	C4-C3-O2-C2
2	B	506	GOL	O1-C1-C2-O2
2	C	504	GOL	O1-C1-C2-O2
2	E	502	GOL	O2-C2-C3-O3
2	C	503	GOL	O1-C1-C2-C3
2	B	501	GOL	O2-C2-C3-O3
2	B	505	GOL	O2-C2-C3-O3
2	A	504	GOL	O1-C1-C2-O2
2	E	501	GOL	C1-C2-C3-O3
2	B	507	GOL	O1-C1-C2-O2
4	E	504	PEG	O2-C3-C4-O4
2	C	501	GOL	O1-C1-C2-C3
2	C	502	GOL	O1-C1-C2-C3
2	C	504	GOL	O1-C1-C2-C3
2	D	504	GOL	O1-C1-C2-O2
2	C	503	GOL	O1-C1-C2-O2
2	E	501	GOL	O2-C2-C3-O3
2	F	502	GOL	O1-C1-C2-O2
2	B	506	GOL	O1-C1-C2-C3
2	A	501	GOL	C1-C2-C3-O3
2	E	502	GOL	C1-C2-C3-O3
2	F	501	GOL	O2-C2-C3-O3

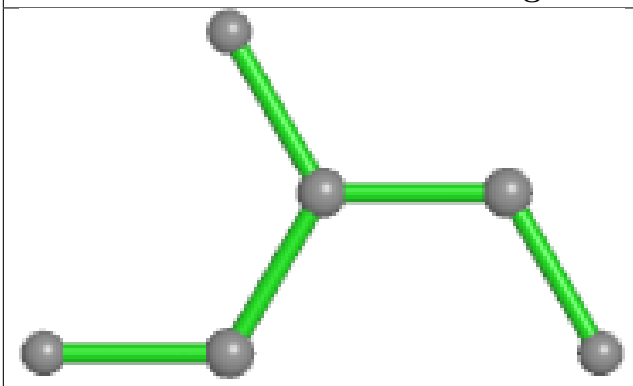
There are no ring outliers.

10 monomers are involved in 13 short contacts:

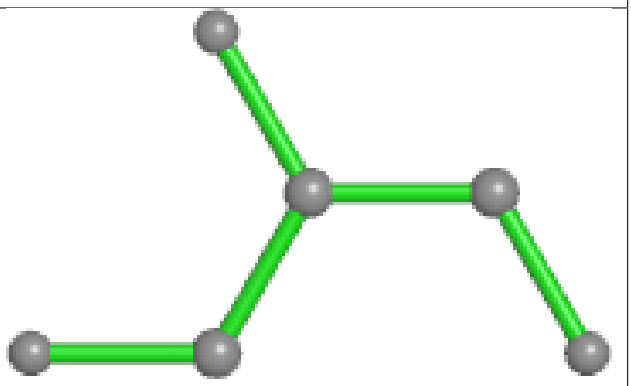
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	501	GOL	1	0
2	B	506	GOL	1	0
2	E	502	GOL	1	0
3	A	508	GLC	2	0
2	C	502	GOL	1	0
2	B	502	GOL	1	0
4	E	504	PEG	1	0
2	C	501	GOL	1	0
2	B	504	GOL	4	0
3	D	503	GLC	1	0

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.

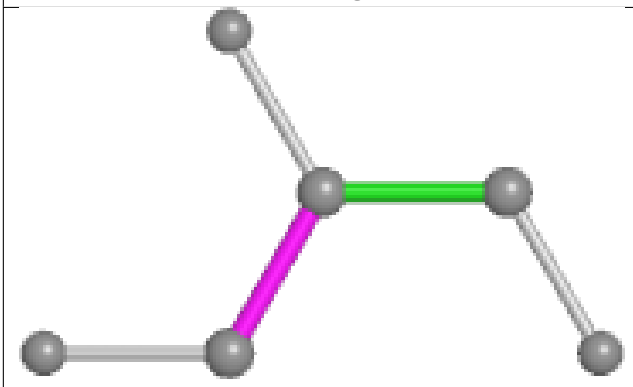
Ligand GOL B 501



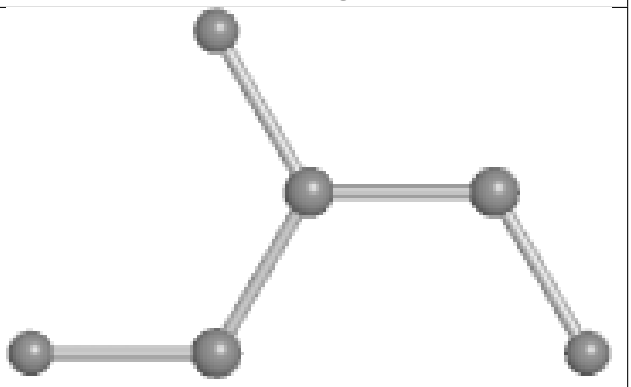
Bond lengths



Bond angles

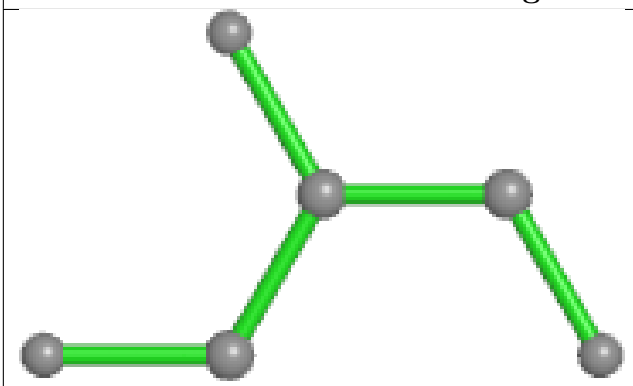


Torsions

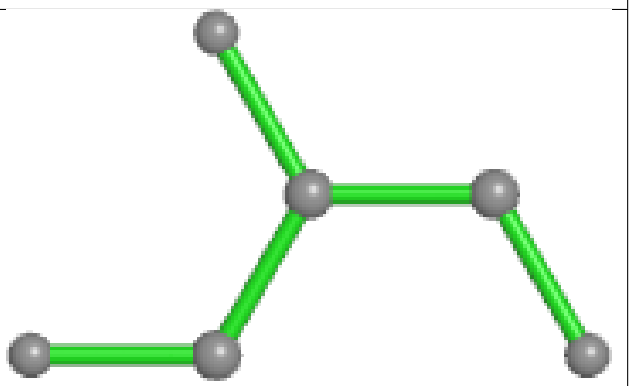


Rings

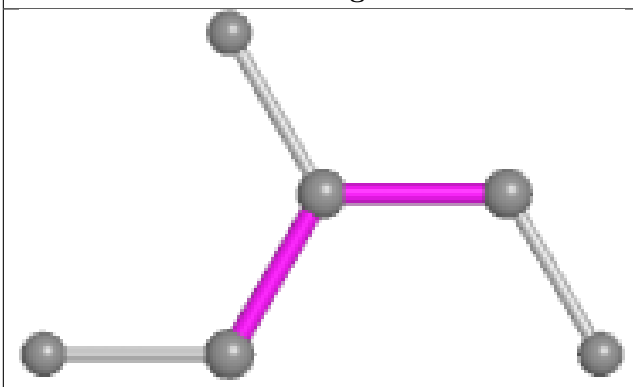
Ligand GOL A 504



Bond lengths



Bond angles



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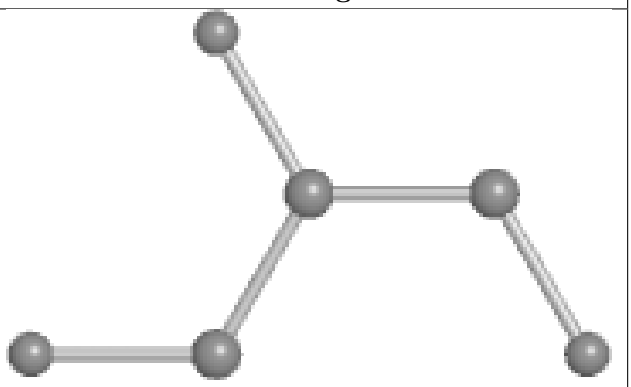
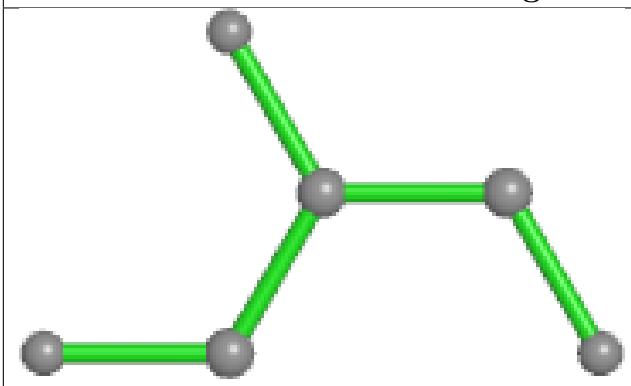
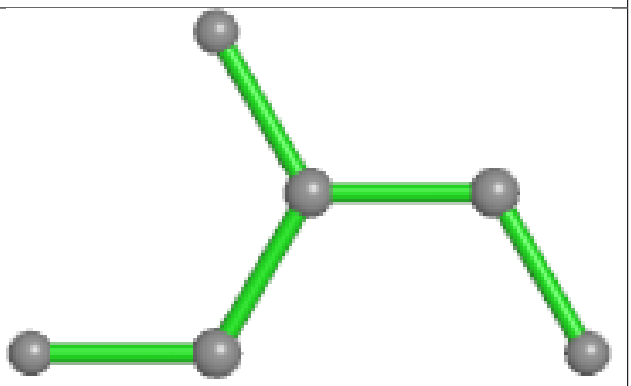


Rings

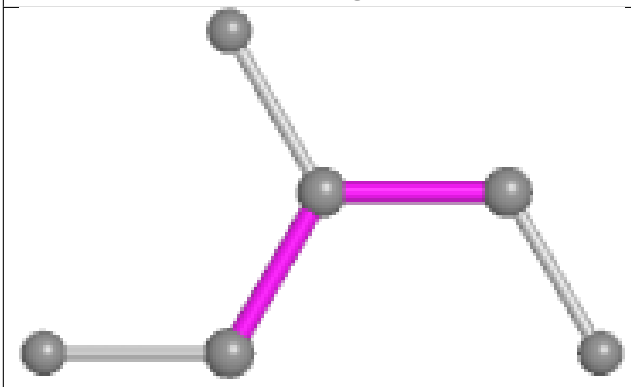
Ligand GOL A 505



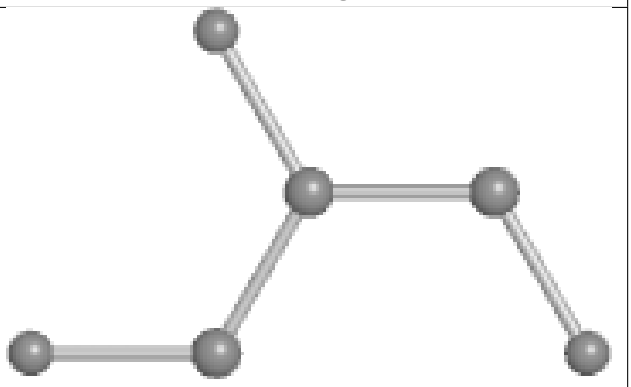
Bond lengths



Bond angles

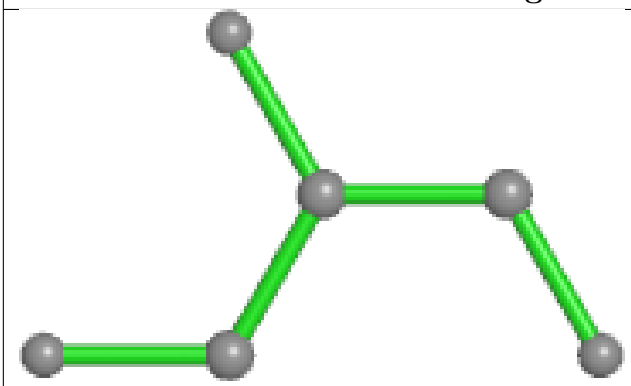


Torsions

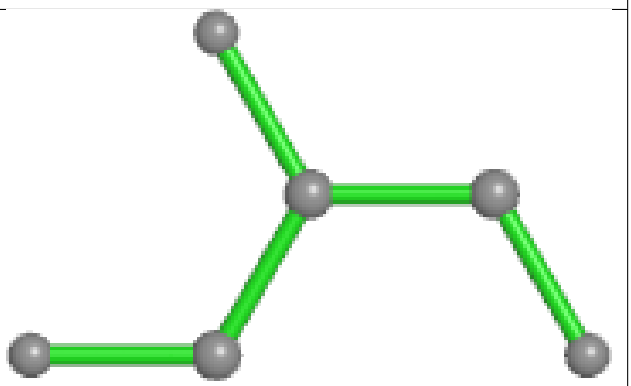


Rings

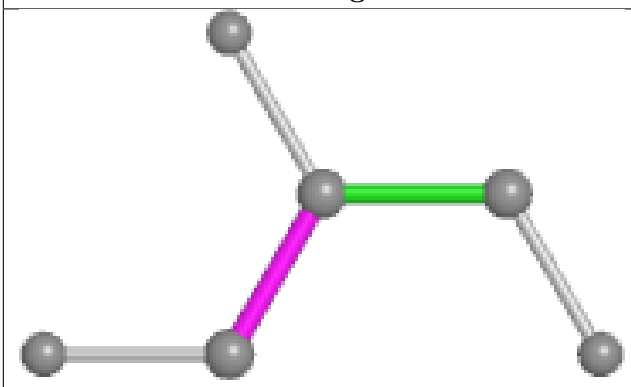
Ligand GOL F 503



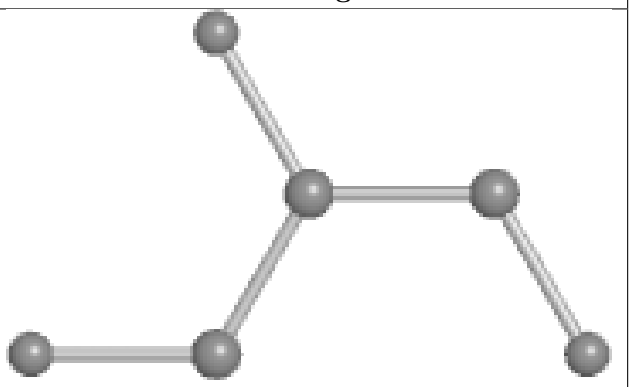
Bond lengths



Bond angles

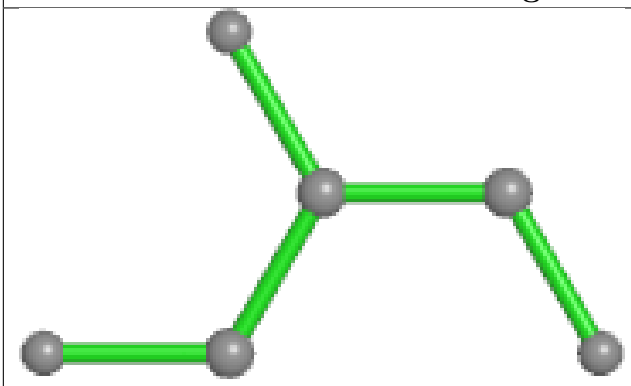


Torsions

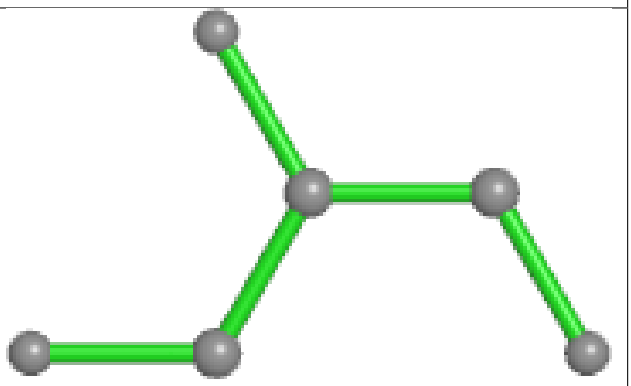


Rings

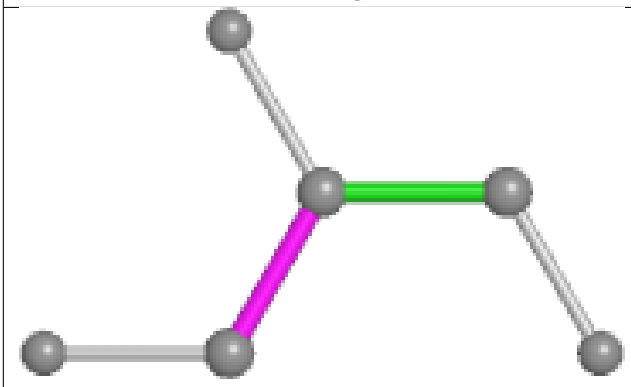
Ligand GOL A 501



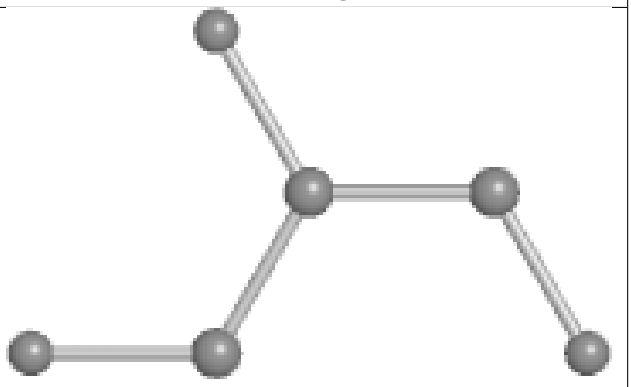
Bond lengths



Bond angles

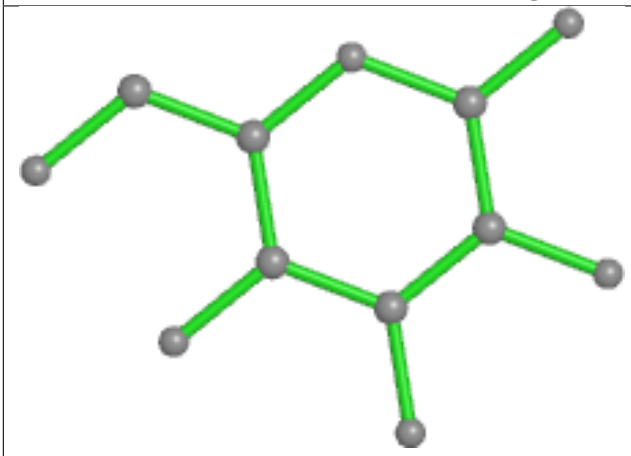


Torsions



Rings

Ligand GLC F 504



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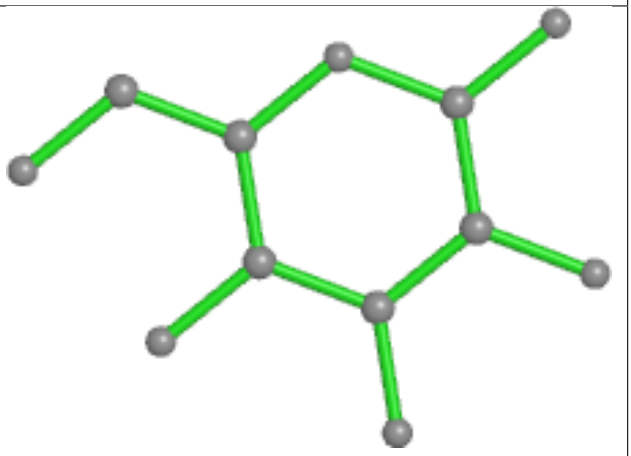
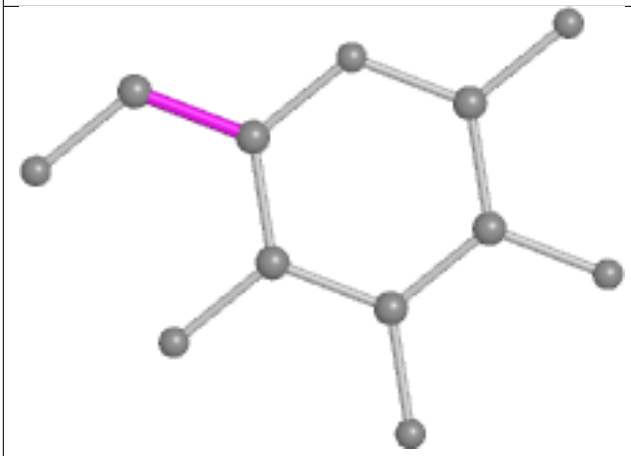
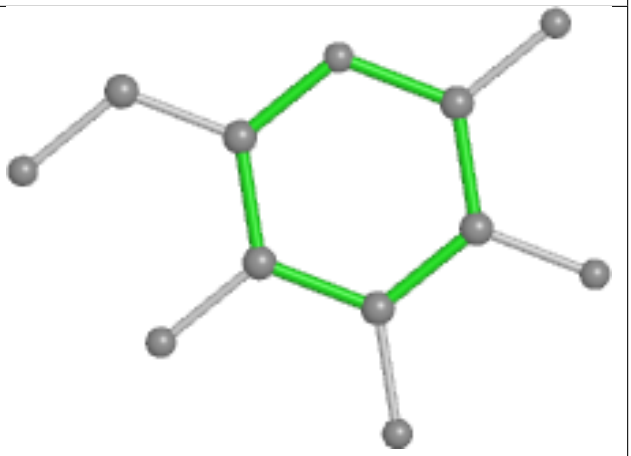


Bond angles

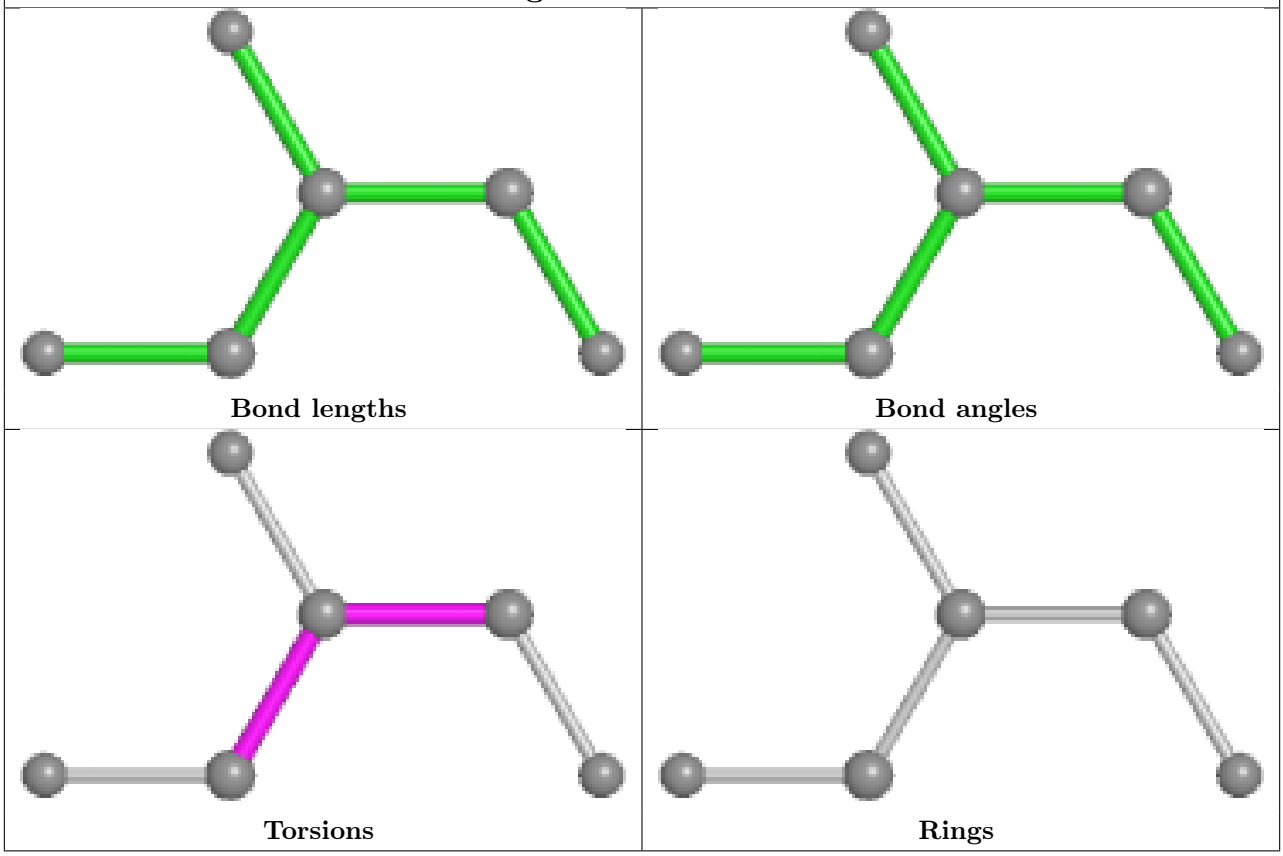


Torsions

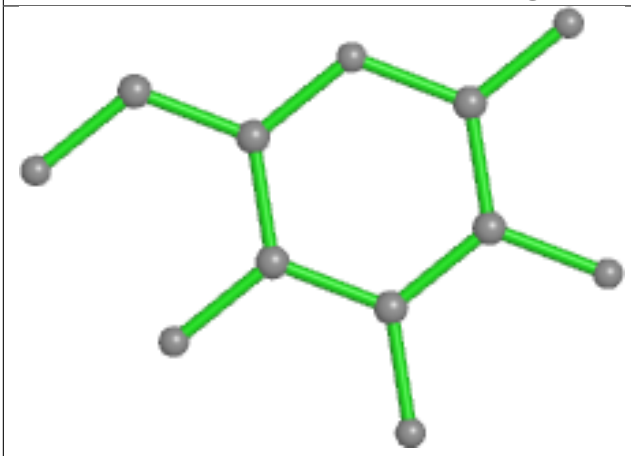


Rings

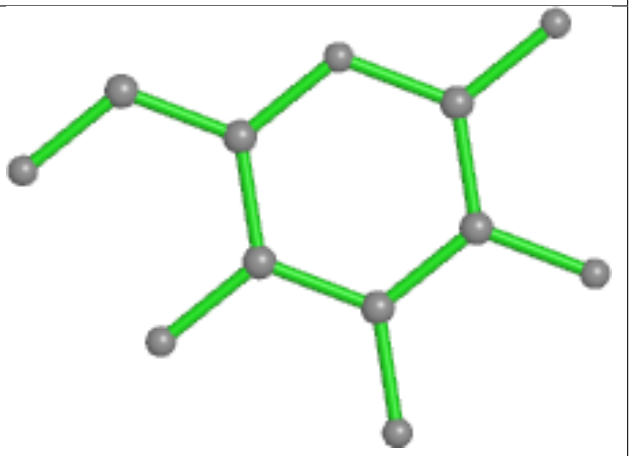
Ligand GOL F 502



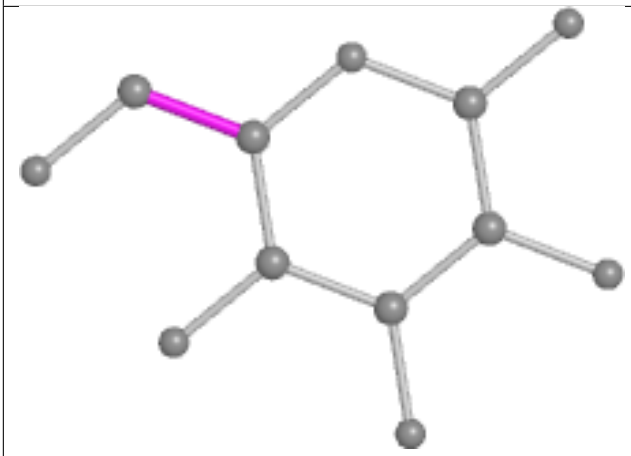
Ligand GLC B 508



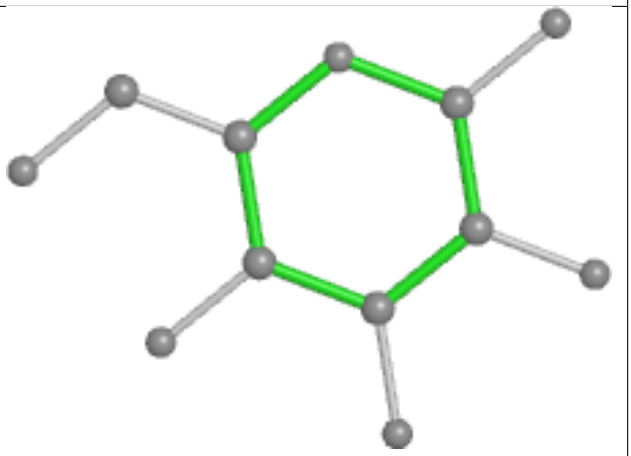
Bond lengths



Bond angles

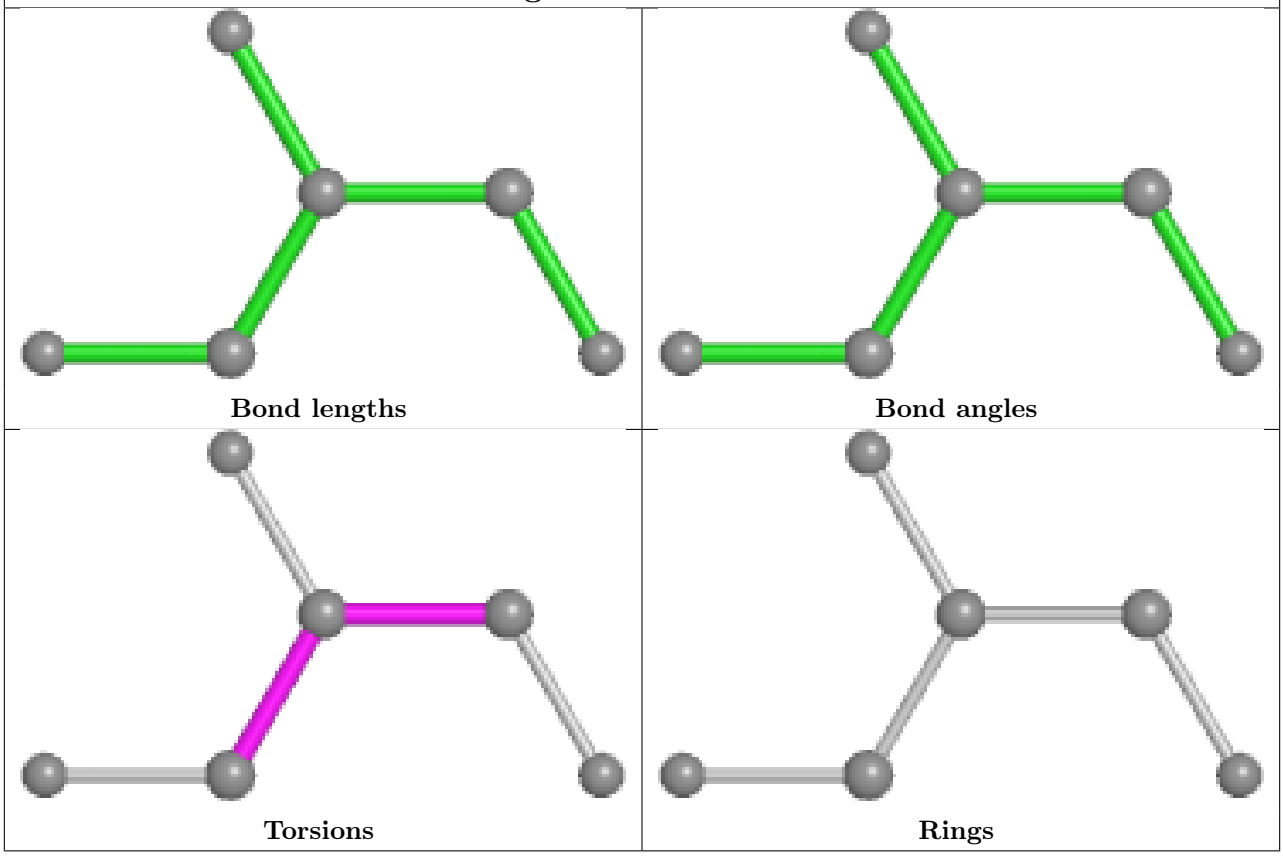


Torsions

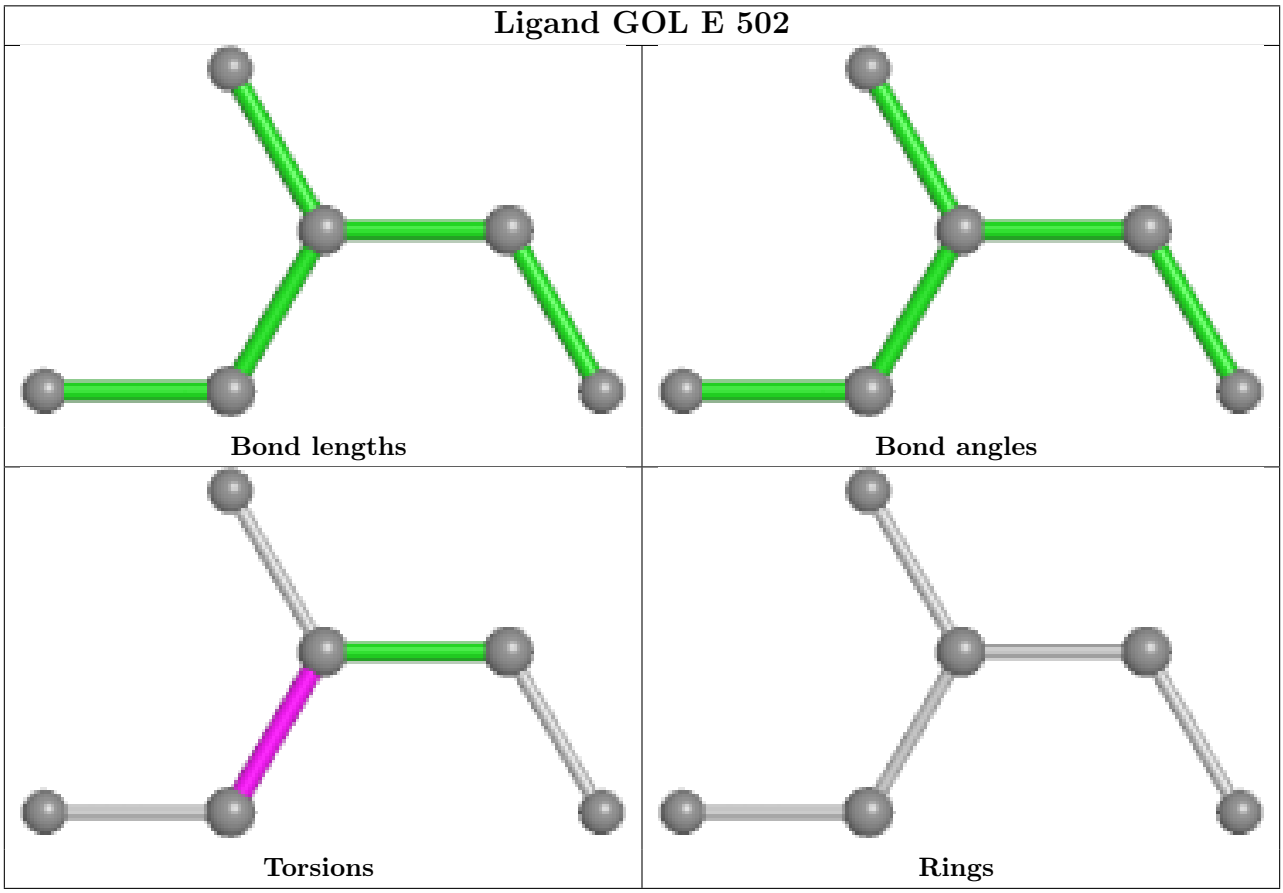


Rings

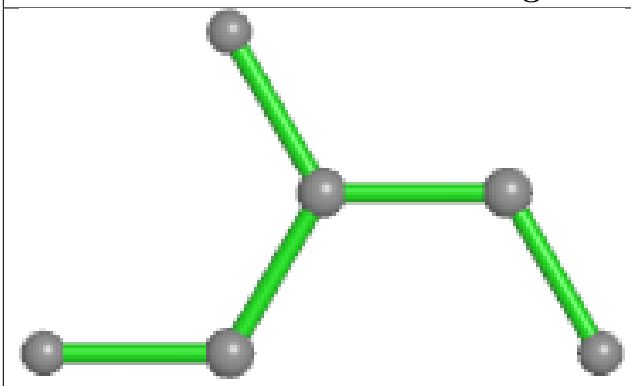
Ligand GOL B 506



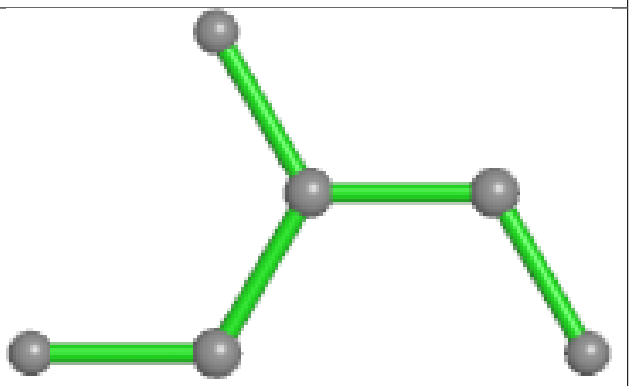
Ligand GOL E 502



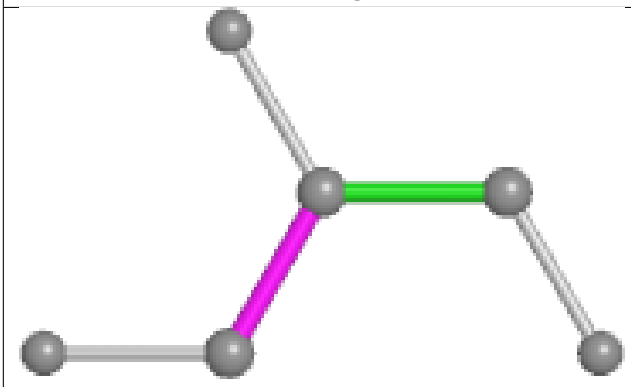
Ligand GOL A 507



Bond lengths



Bond angles



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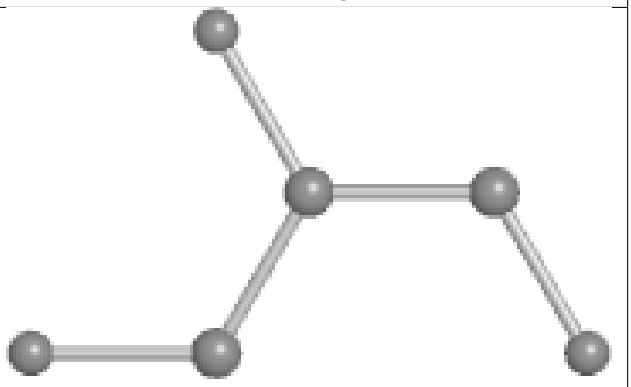
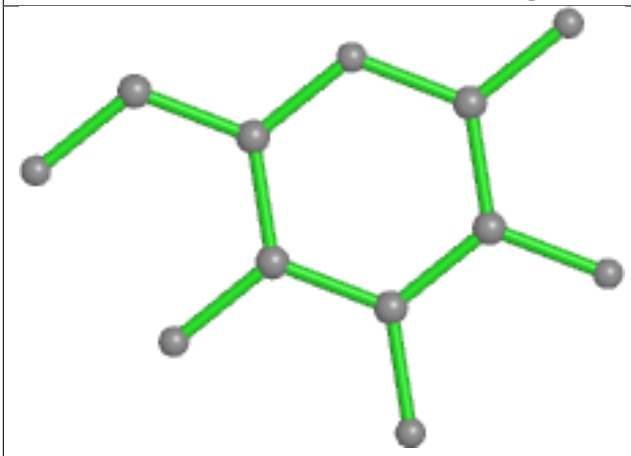


Rings

Ligand GLC A 508



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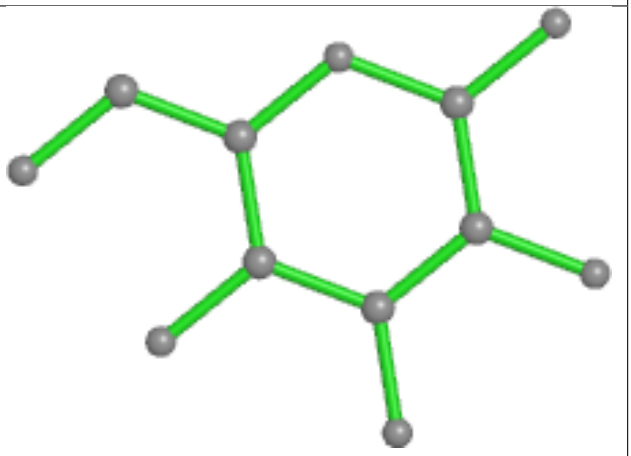
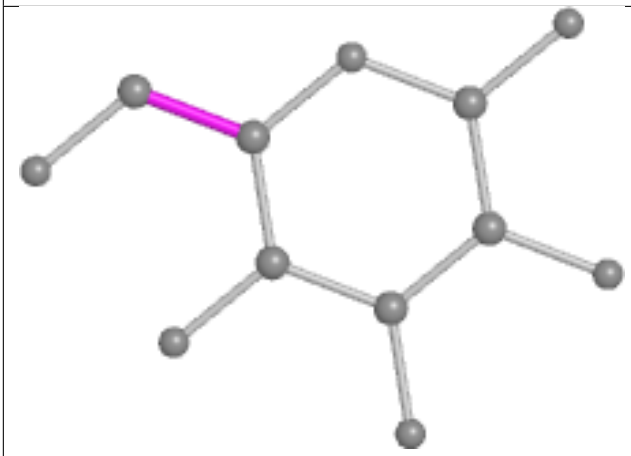
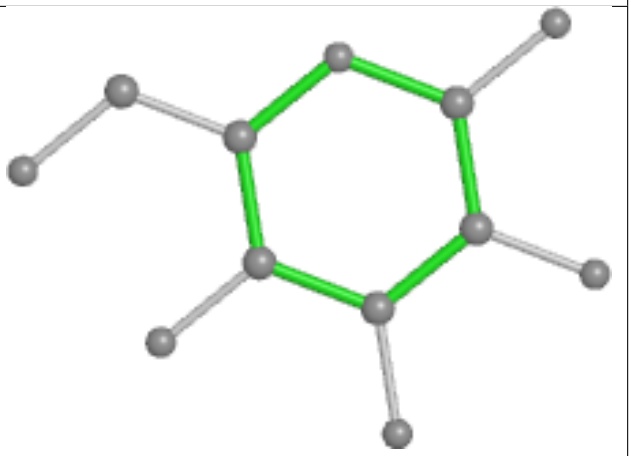


Bond angles

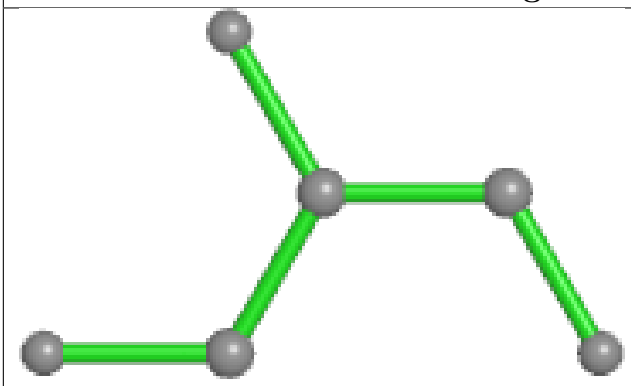


Torsions

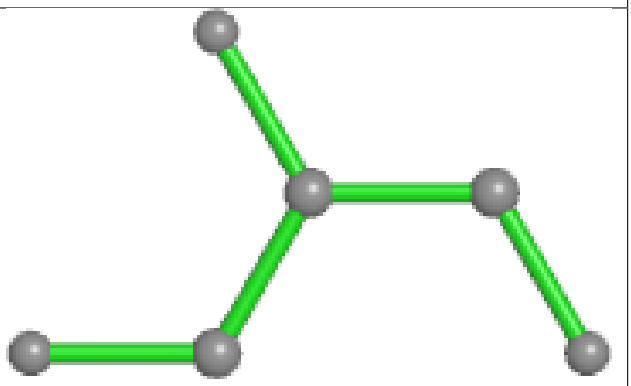


Rings

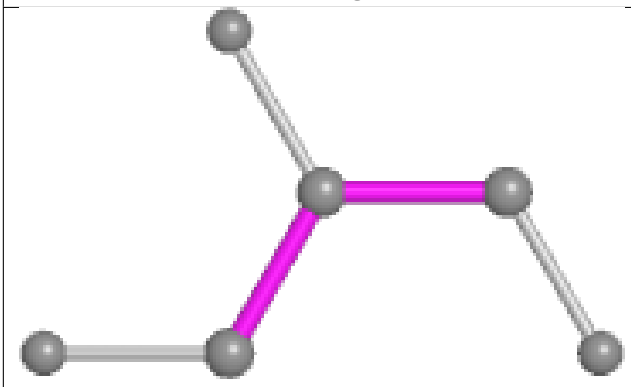
Ligand GOL C 502



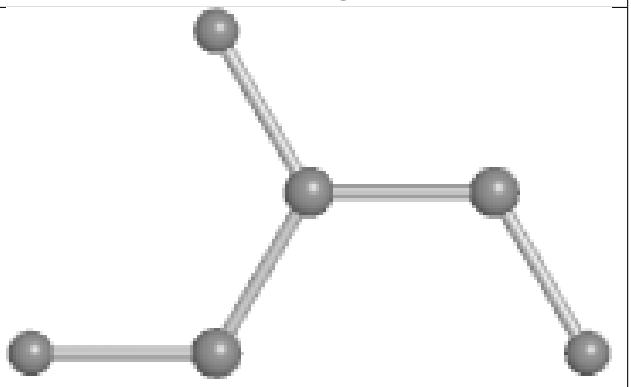
Bond lengths



Bond angles

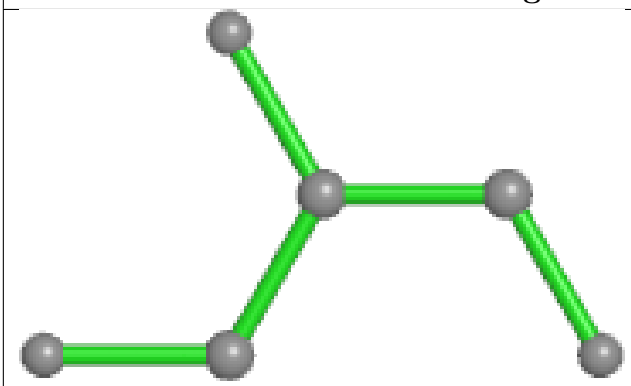


Torsions

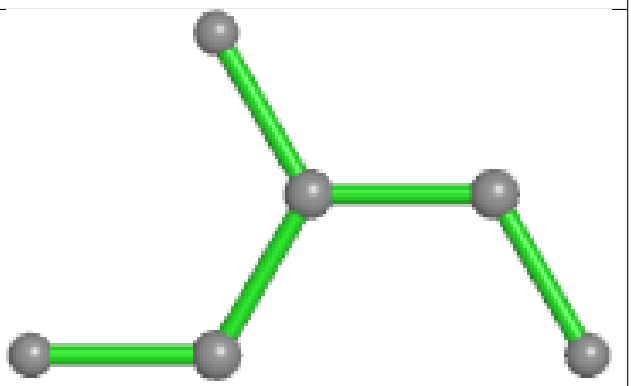


Rings

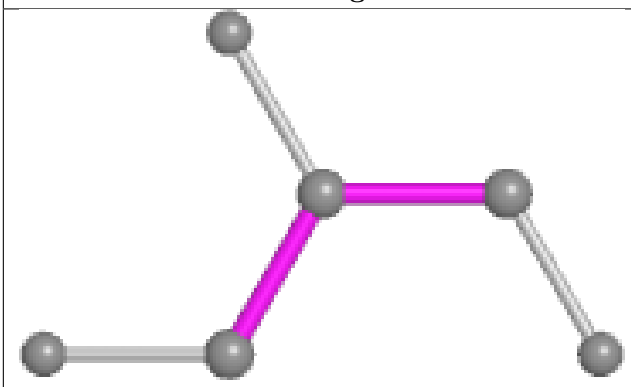
Ligand GOL B 502



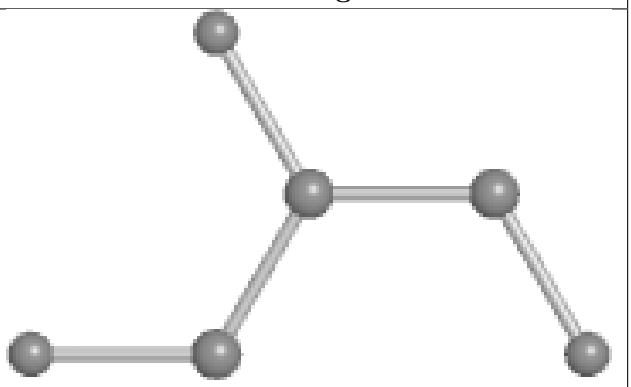
Bond lengths



Bond angles

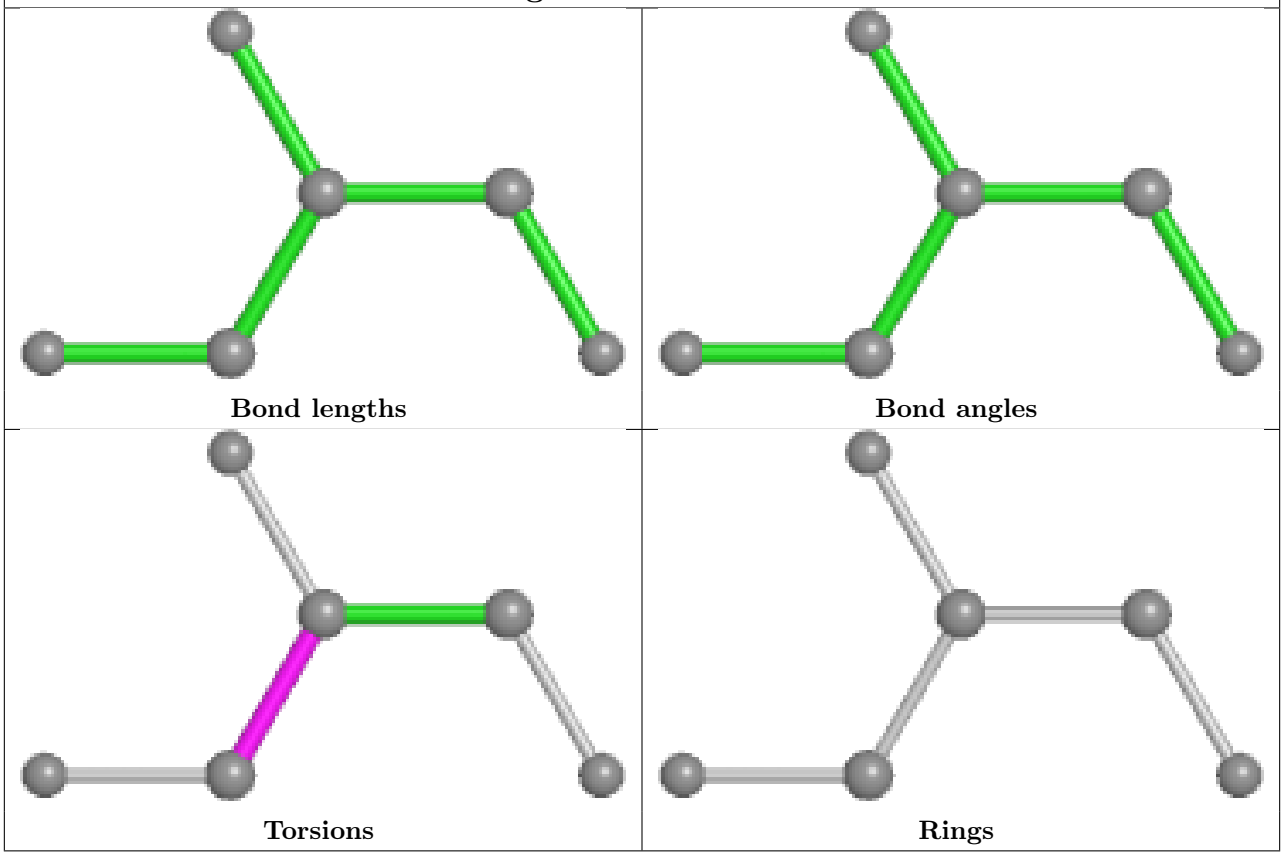


Torsions

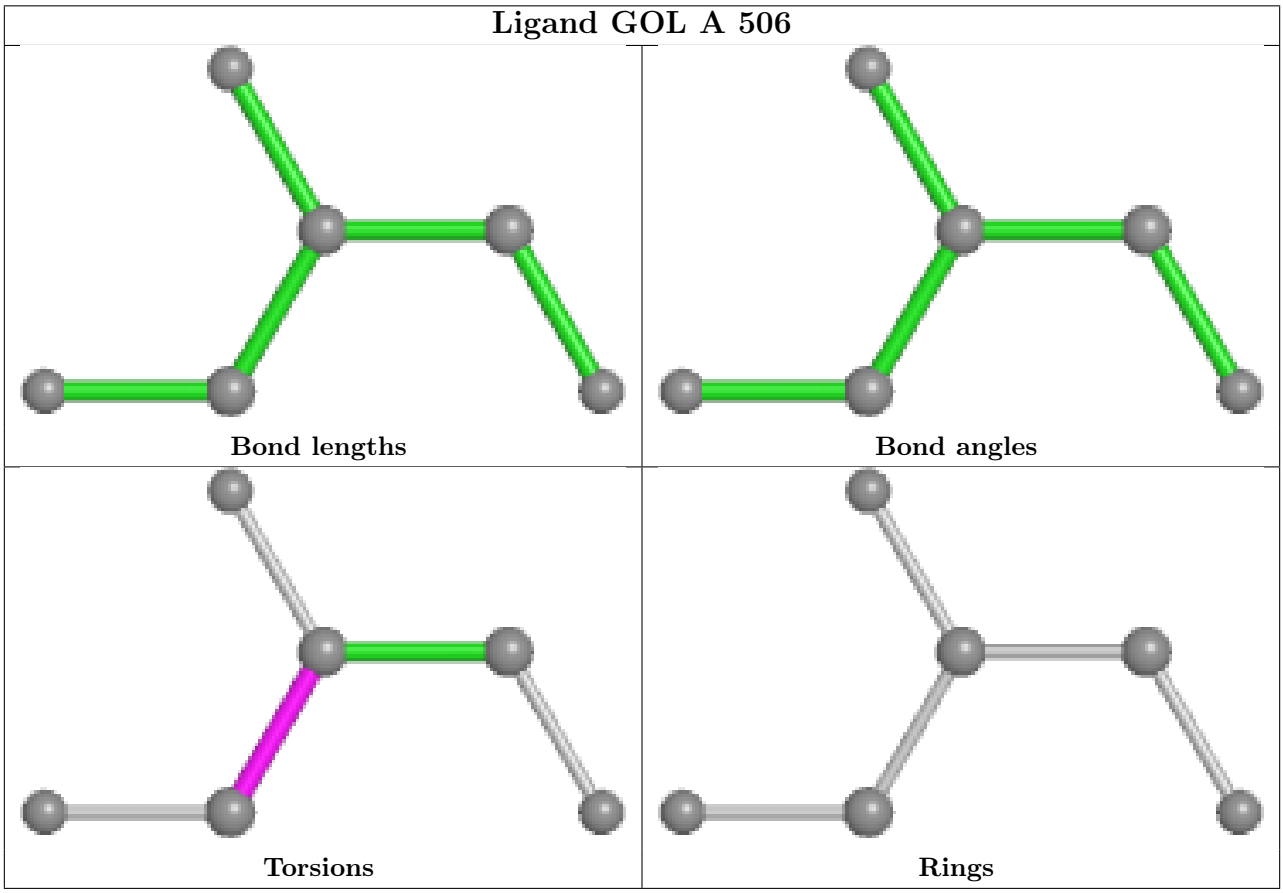


Rings

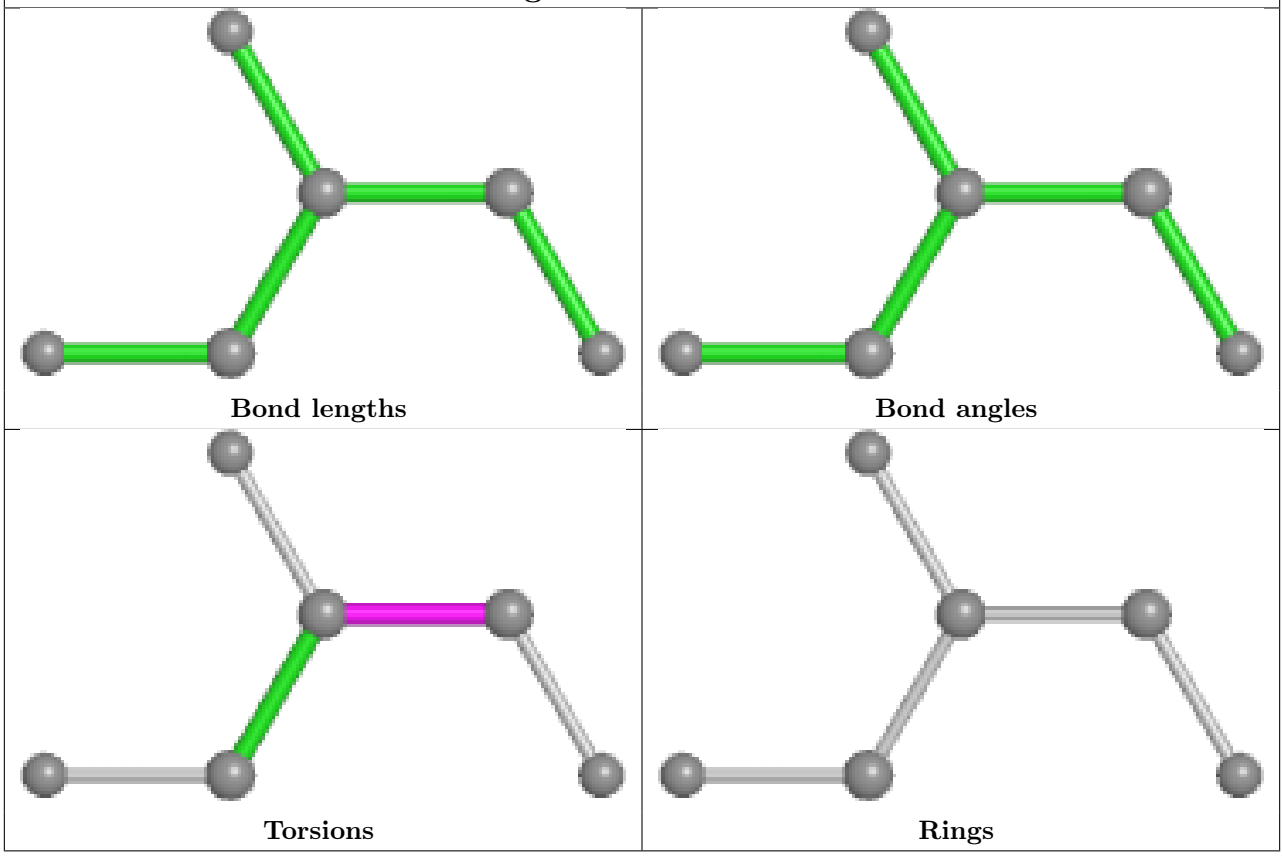
Ligand GOL F 501



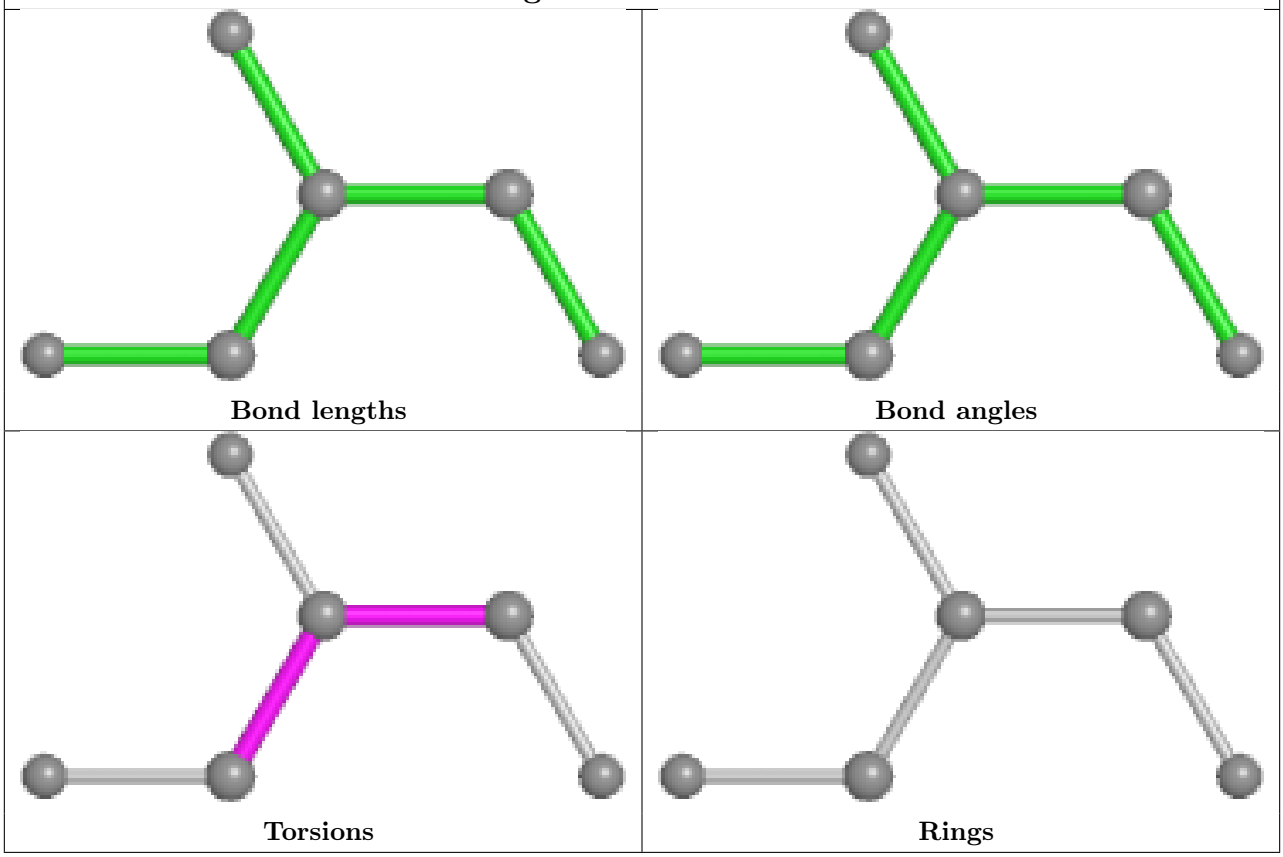
Ligand GOL A 506



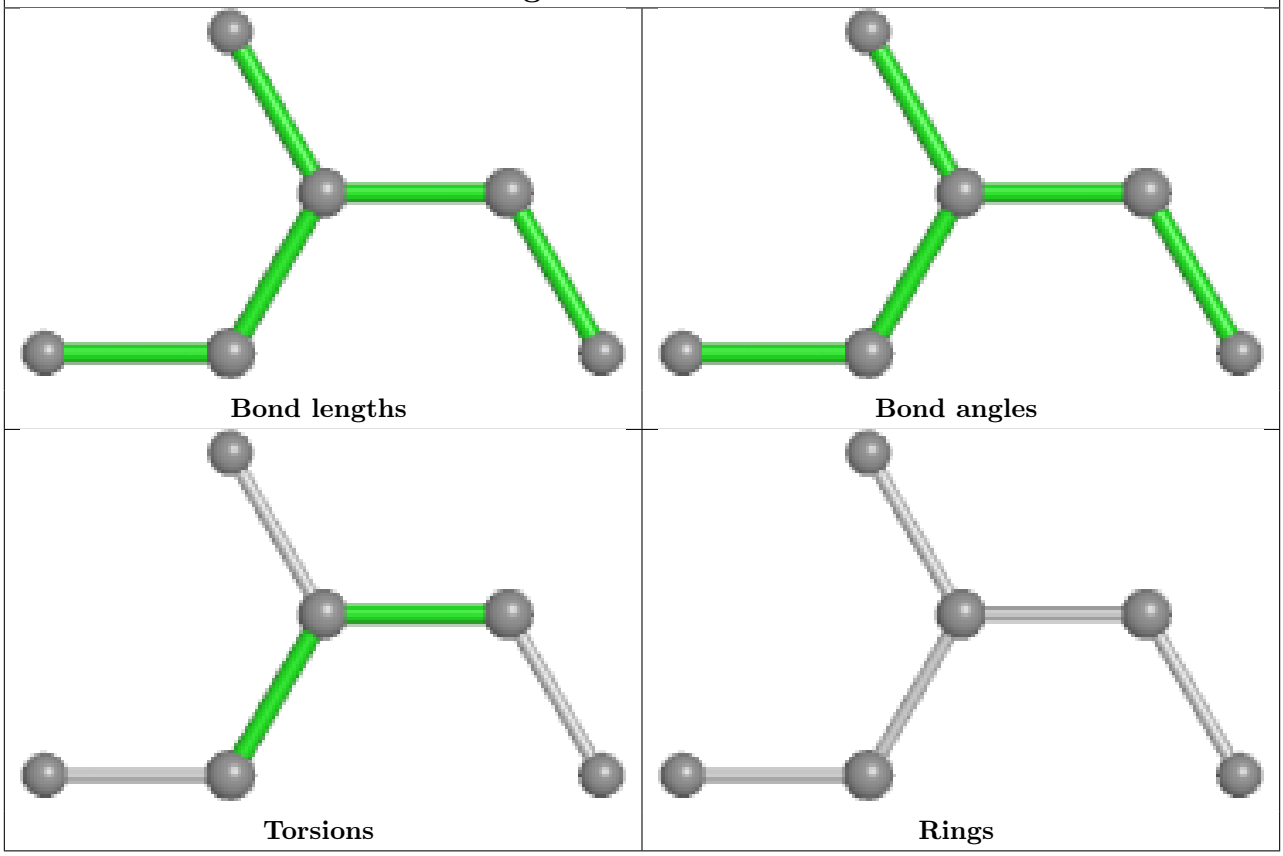
Ligand GOL C 504



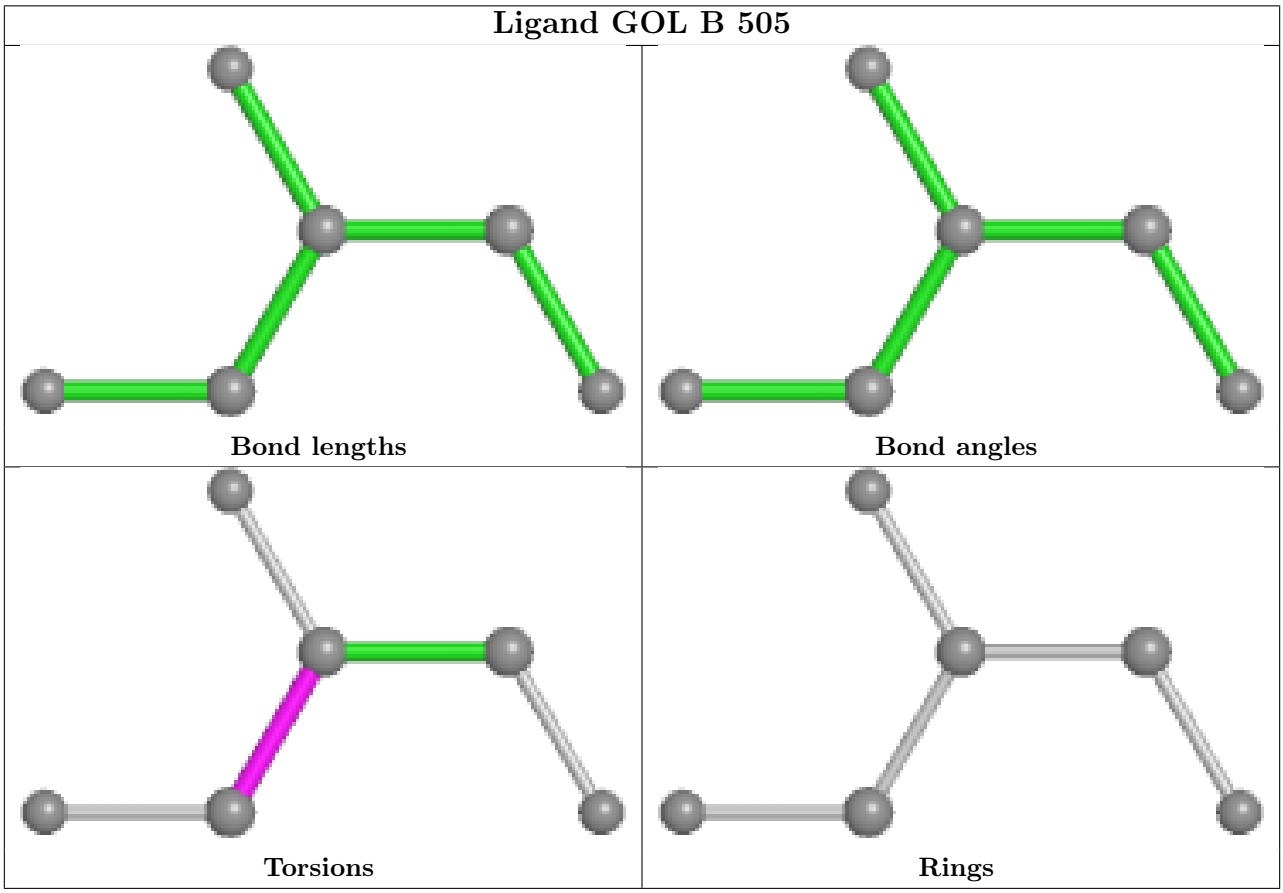
Ligand GOL A 502



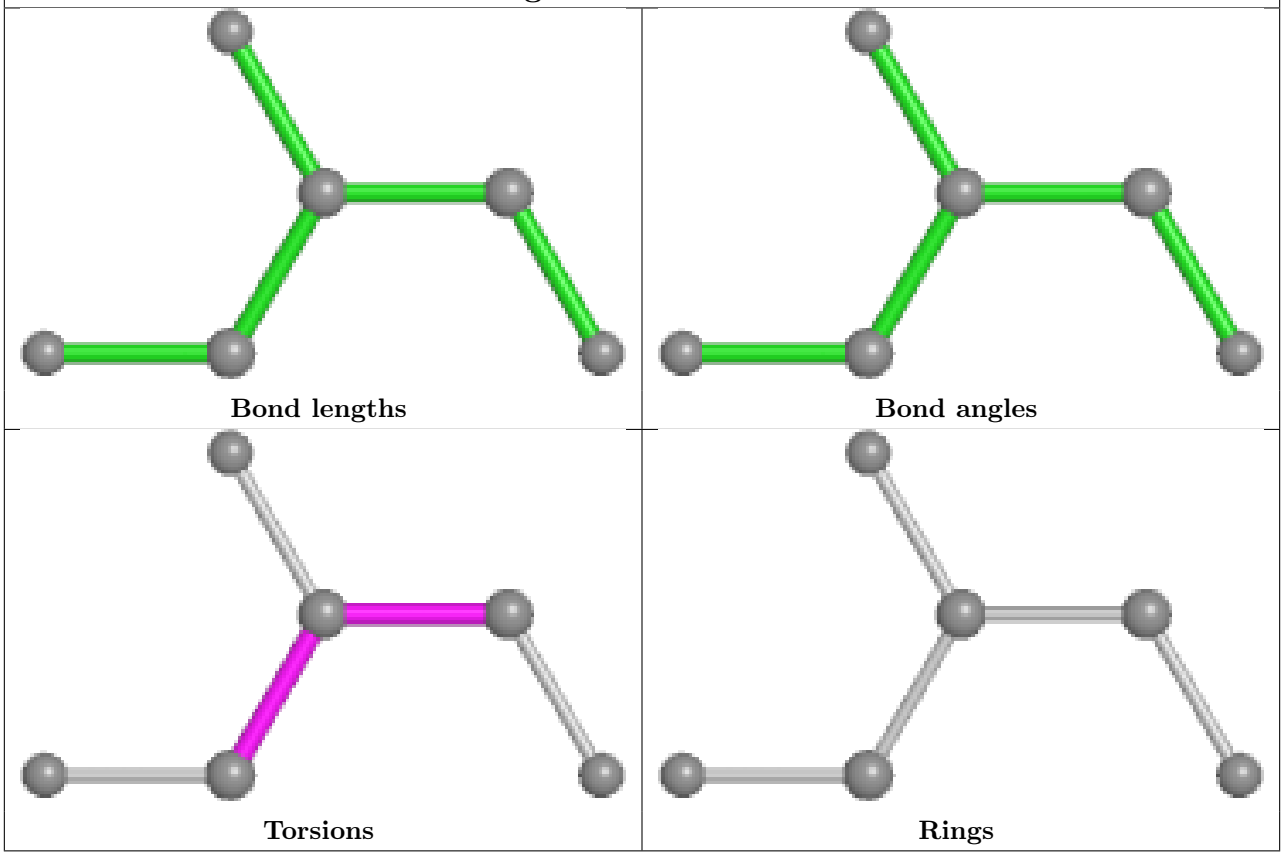
Ligand GOL D 502



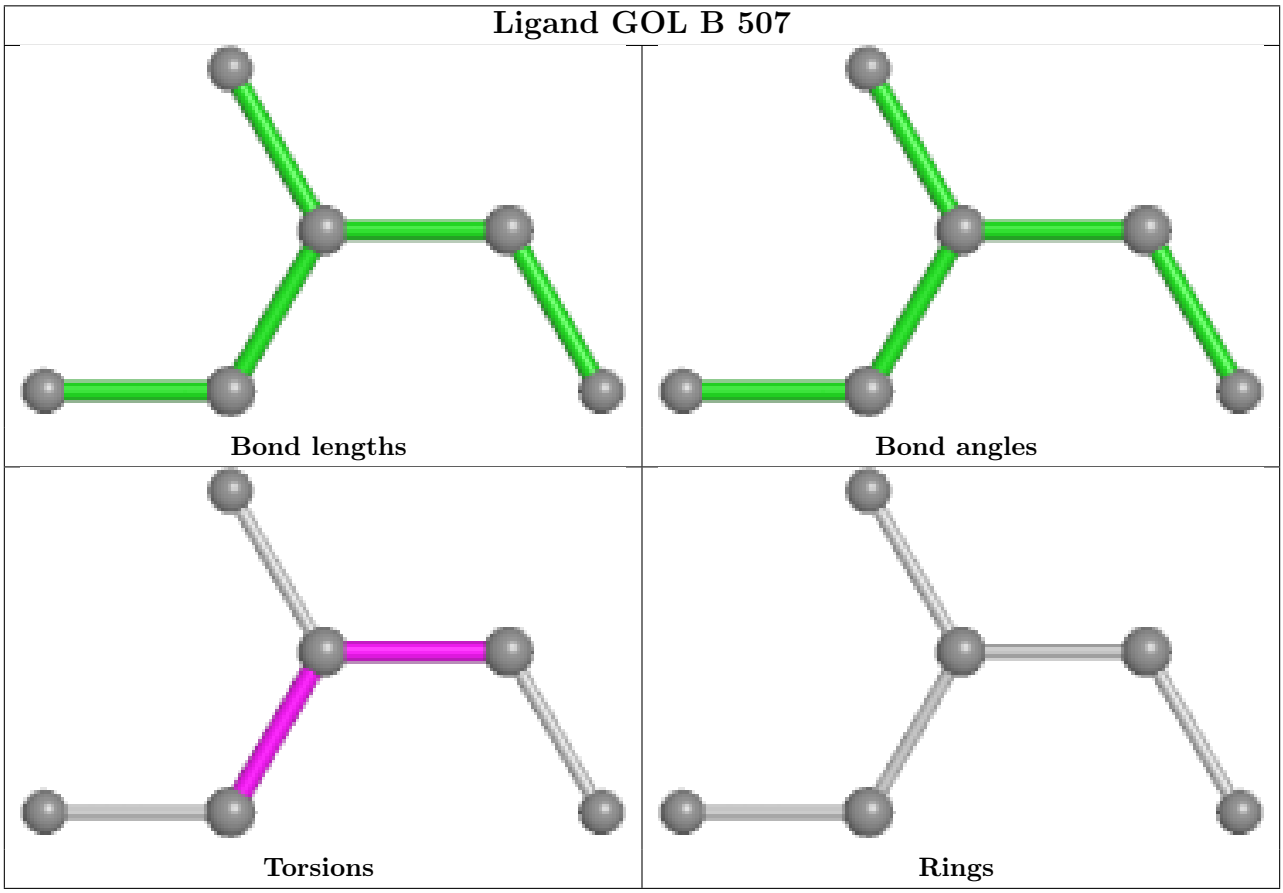
Ligand GOL B 505



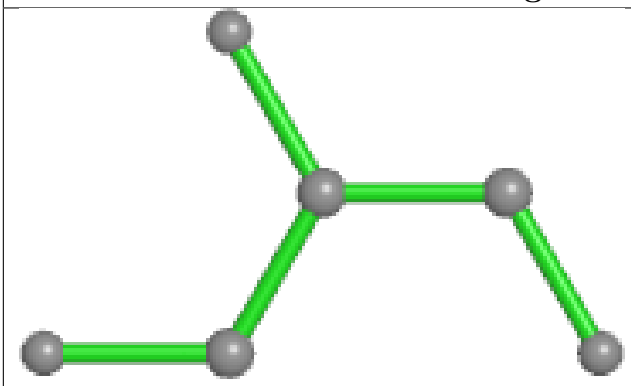
Ligand GOL C 501



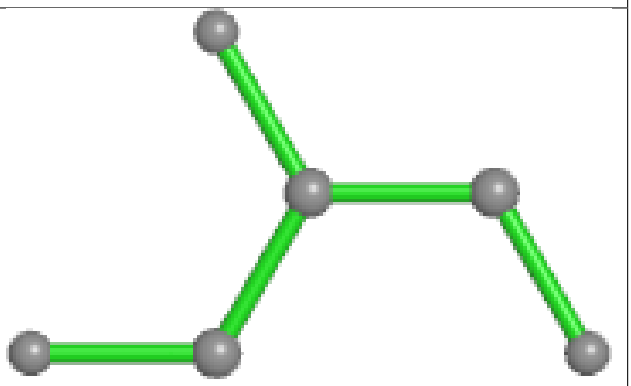
Ligand GOL B 507



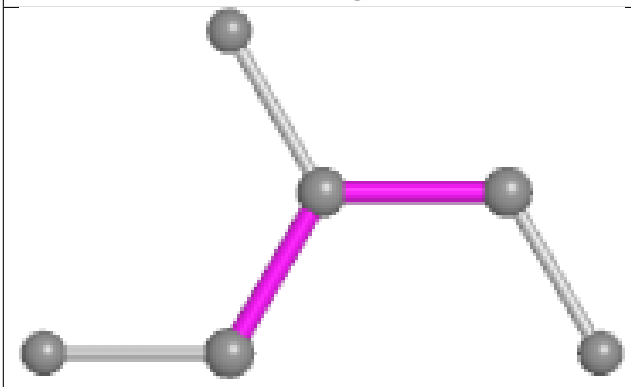
Ligand GOL E 501



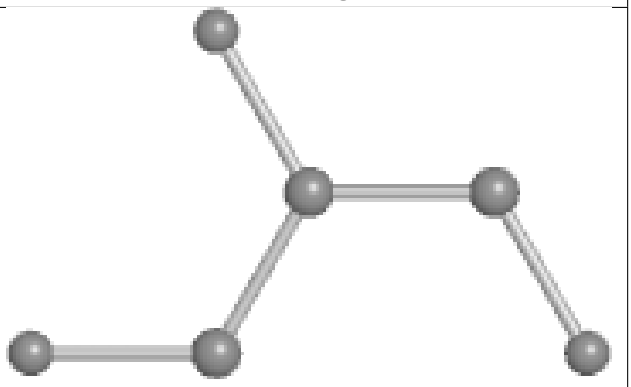
Bond lengths



Bond angles

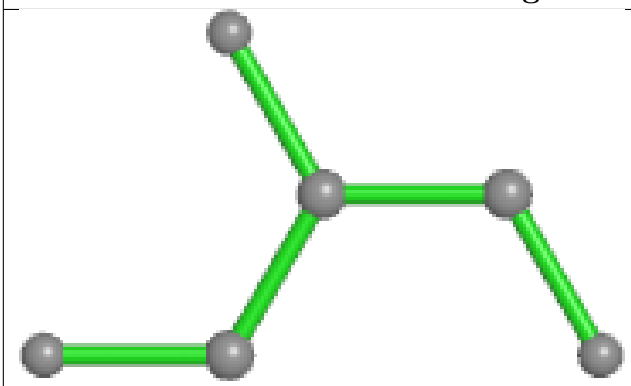


Torsions

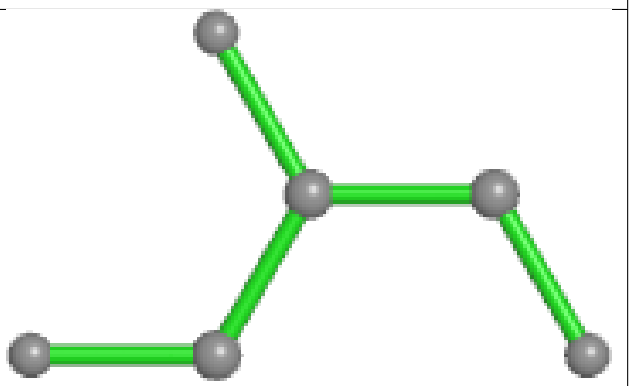


Rings

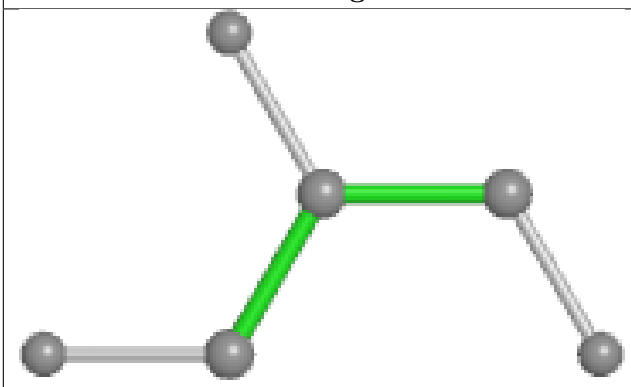
Ligand GOL D 501



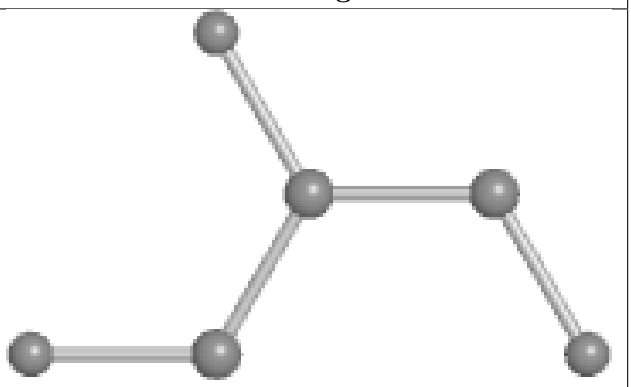
Bond lengths



Bond angles

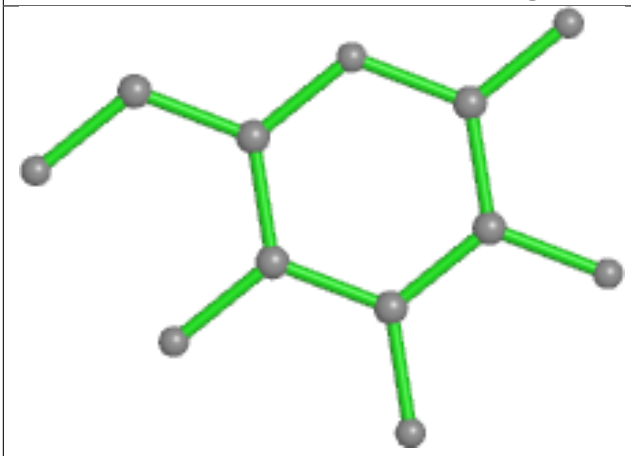


Torsions

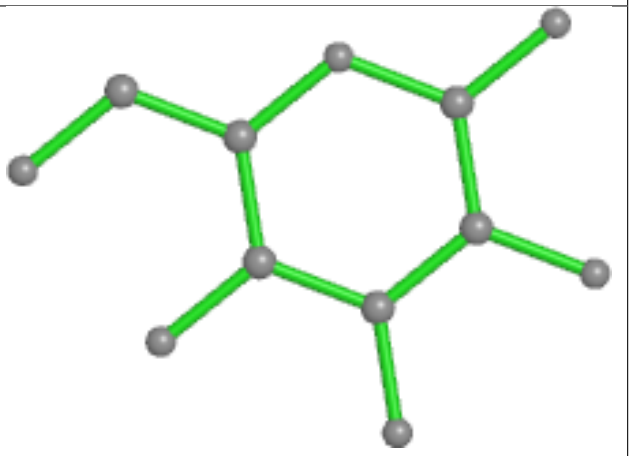


Rings

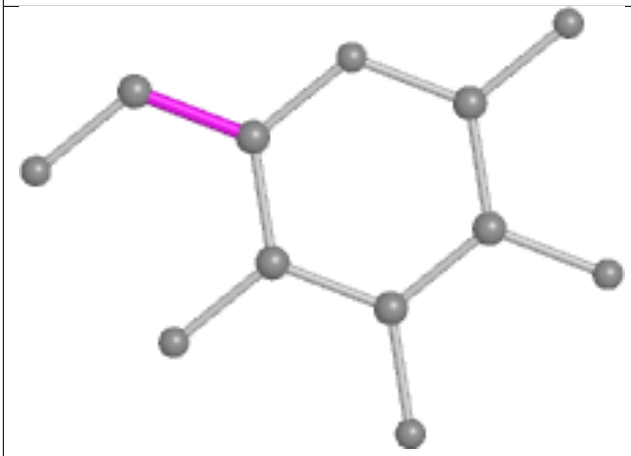
Ligand GLC C 505



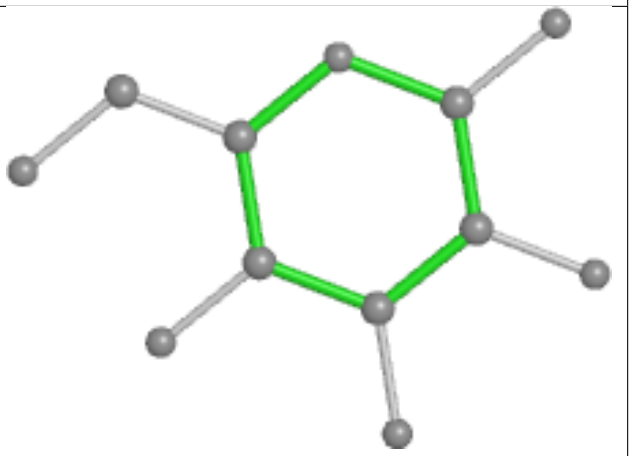
Bond lengths



Bond angles

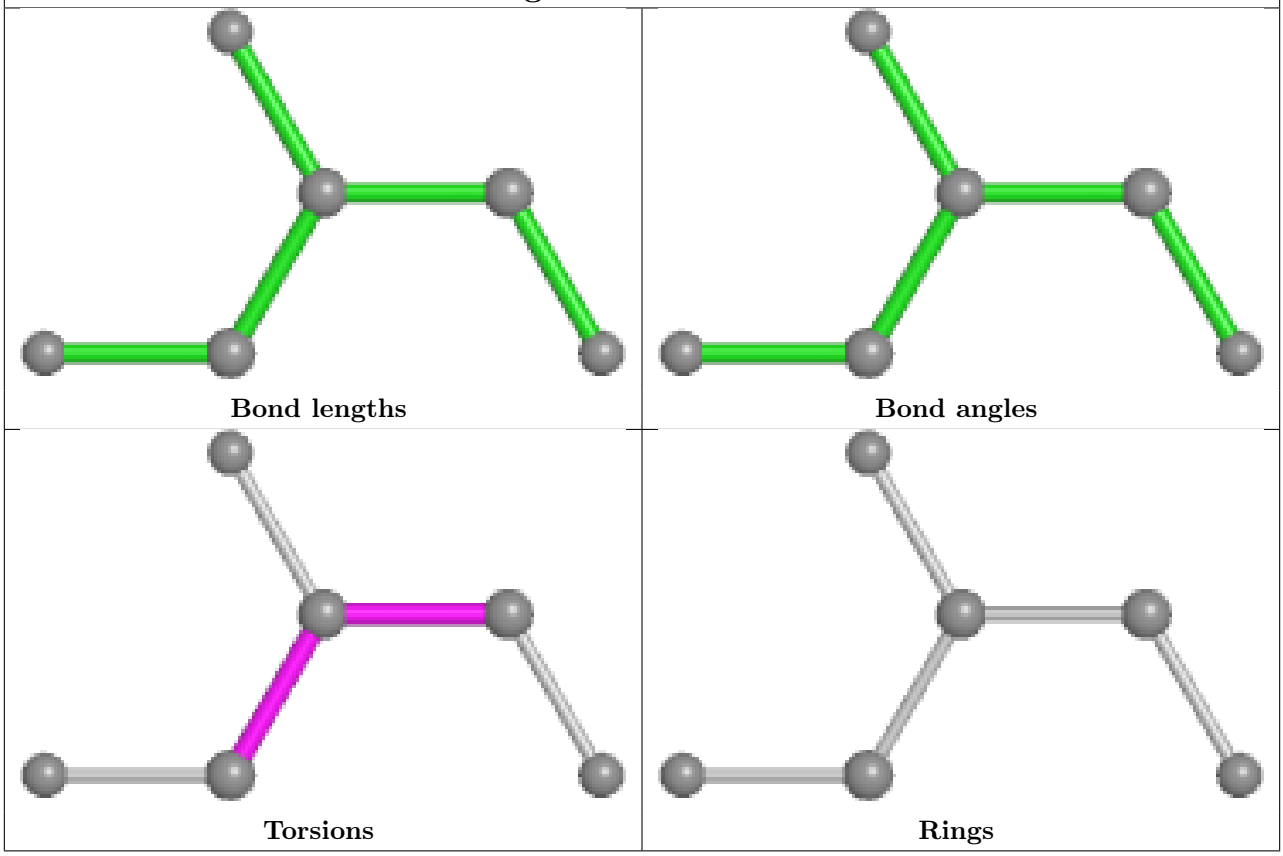


Torsions

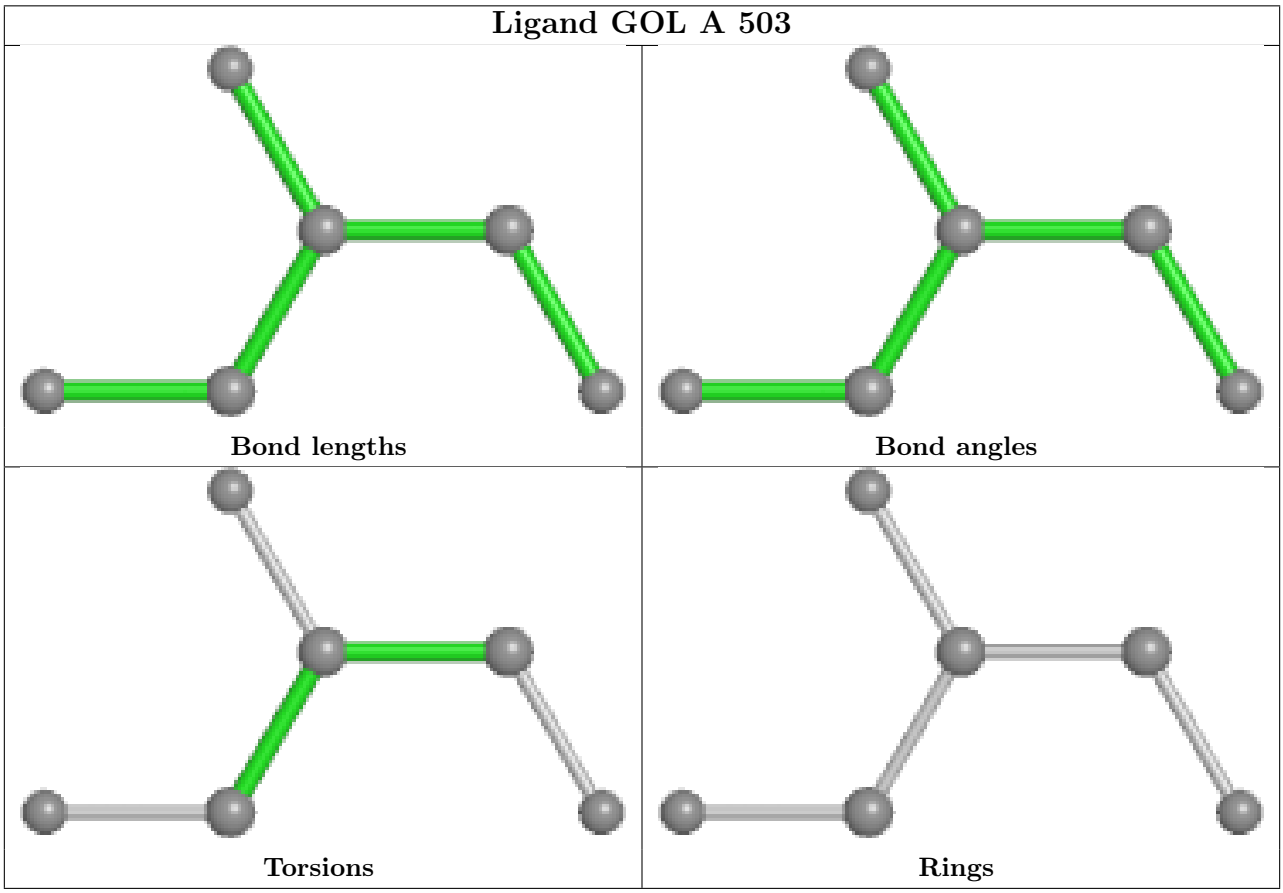


Rings

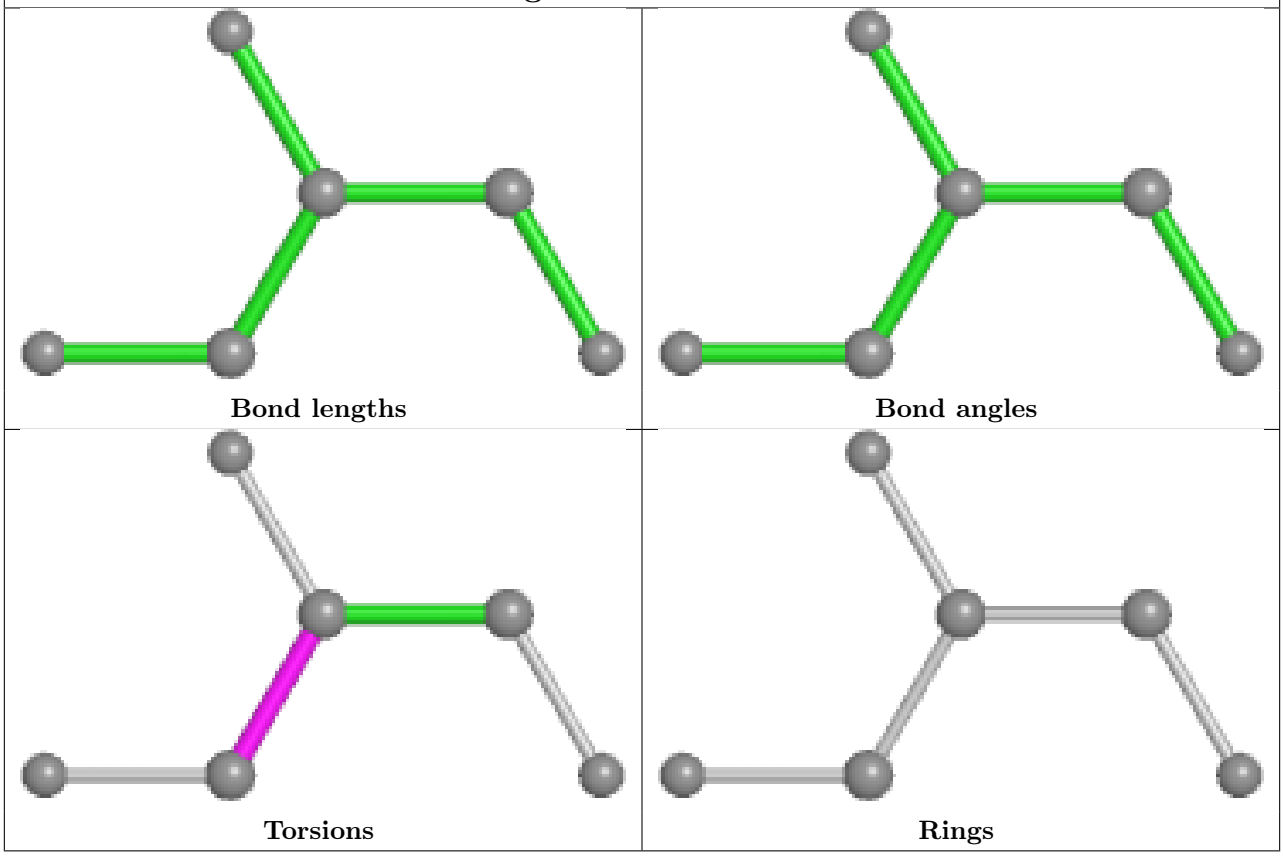
Ligand GOL B 503



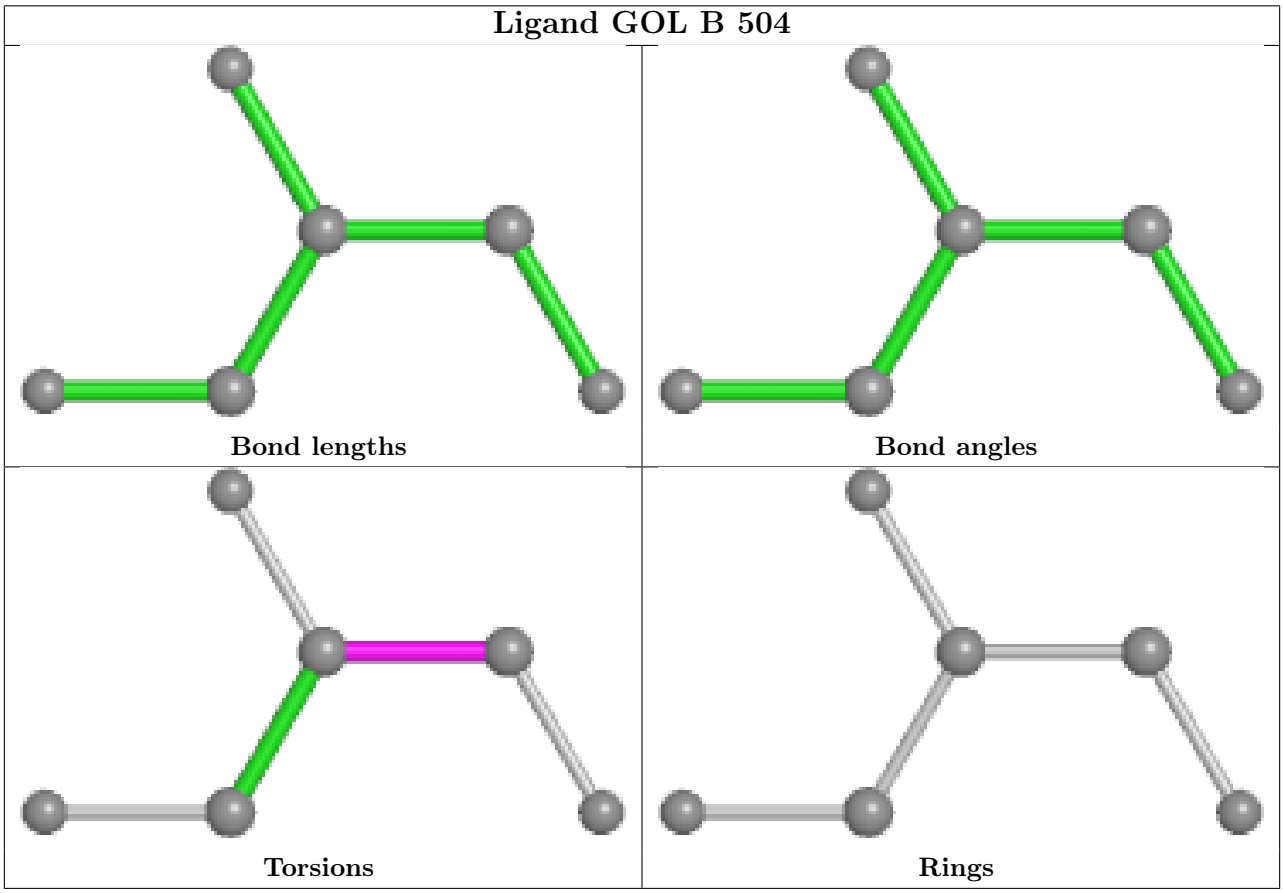
Ligand GOL A 503



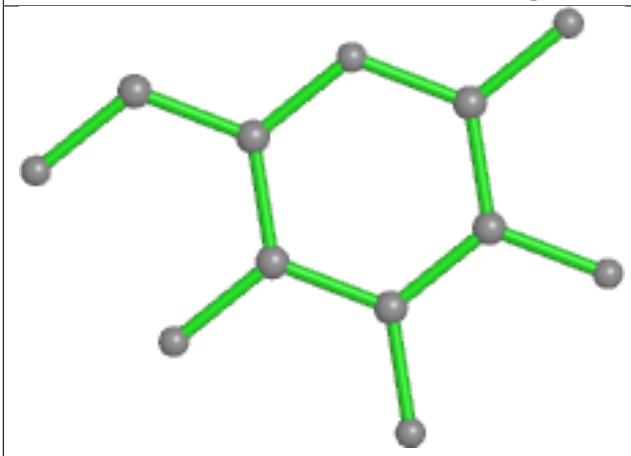
Ligand GOL C 506



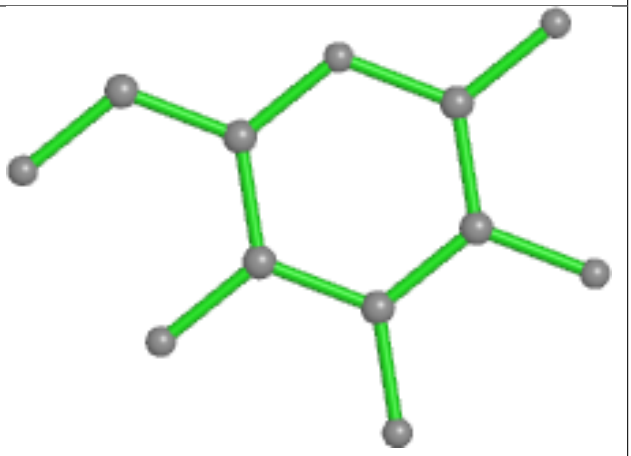
Ligand GOL B 504



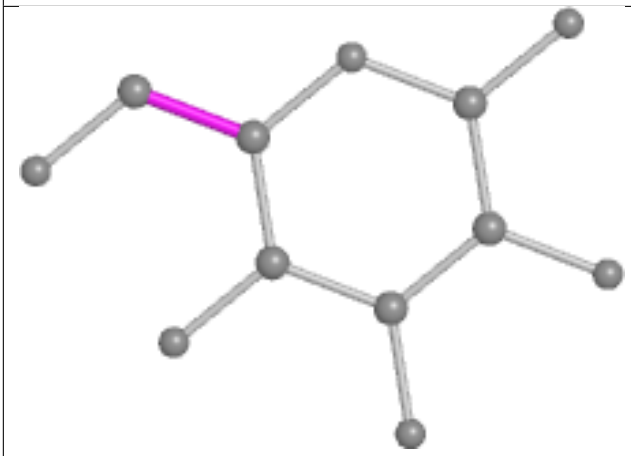
Ligand GLC E 503



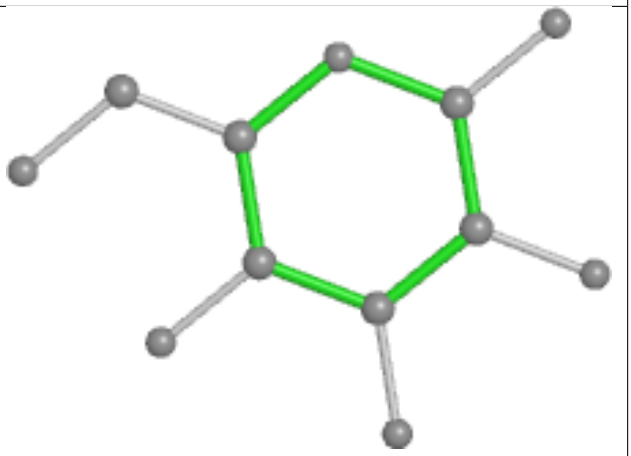
Bond lengths



Bond angles

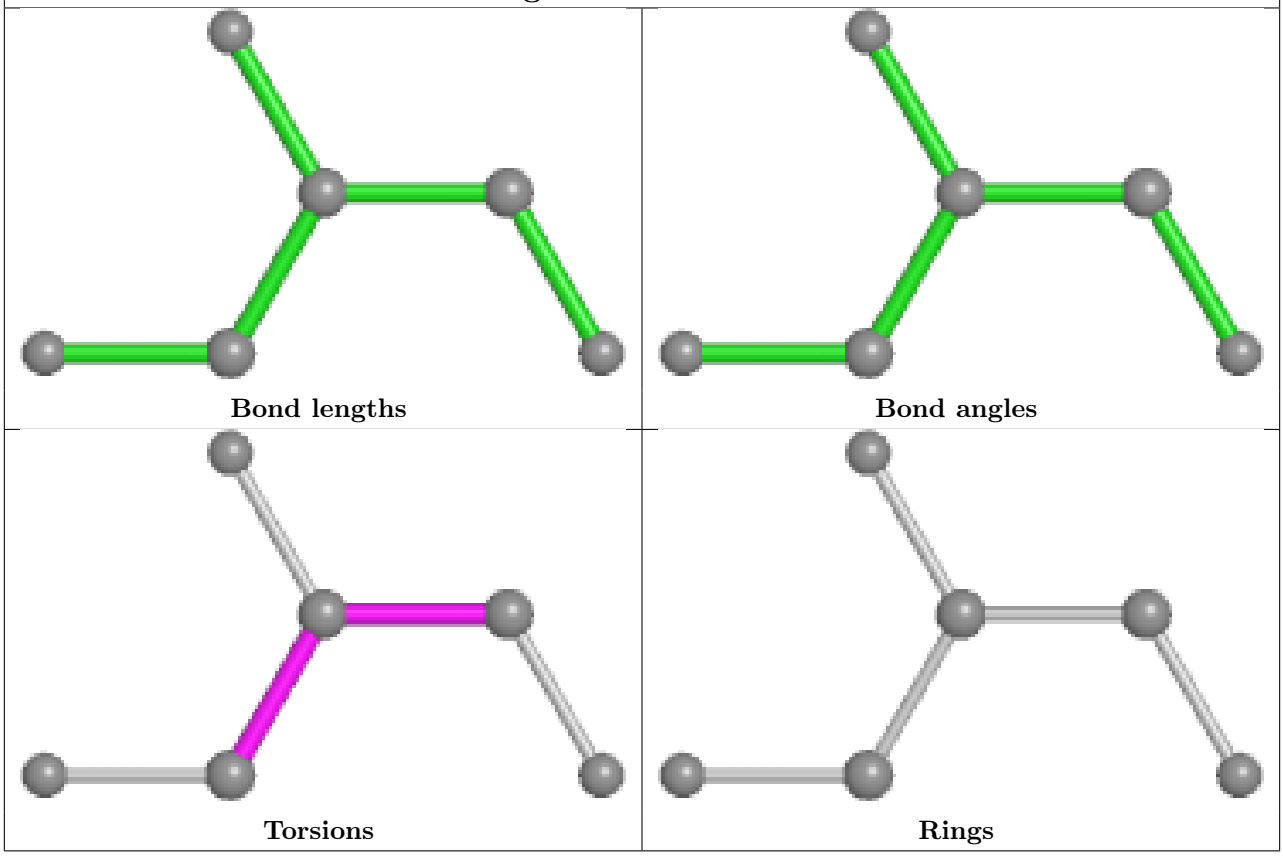


Torsions

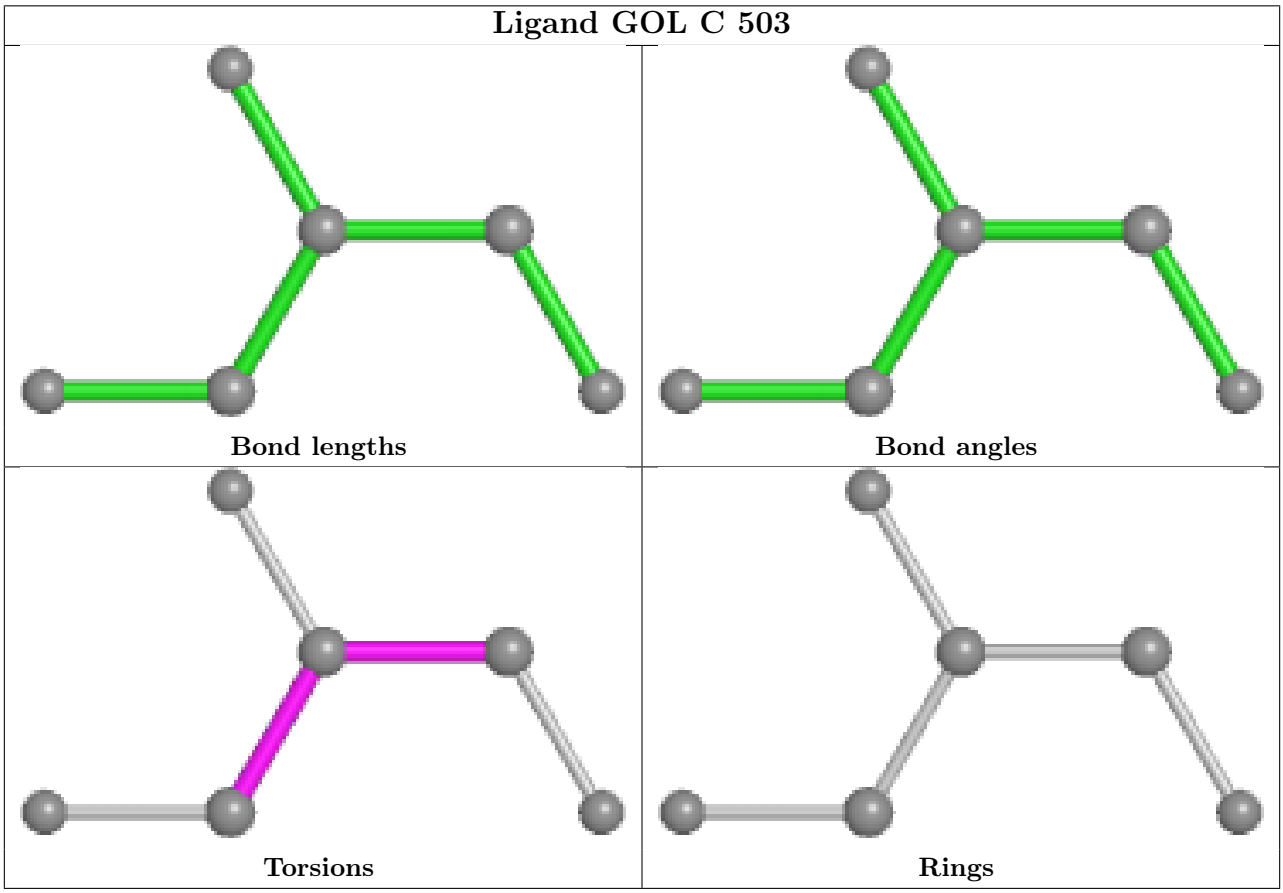


Rings

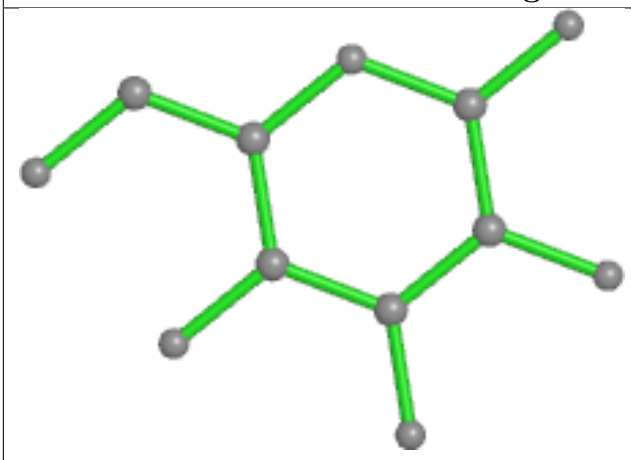
Ligand GOL D 504



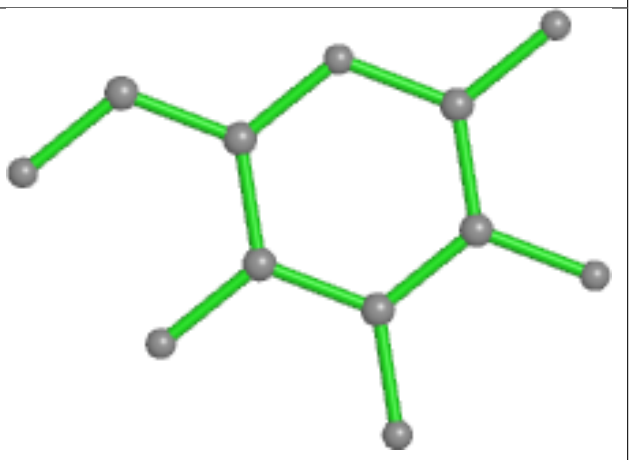
Ligand GOL C 503



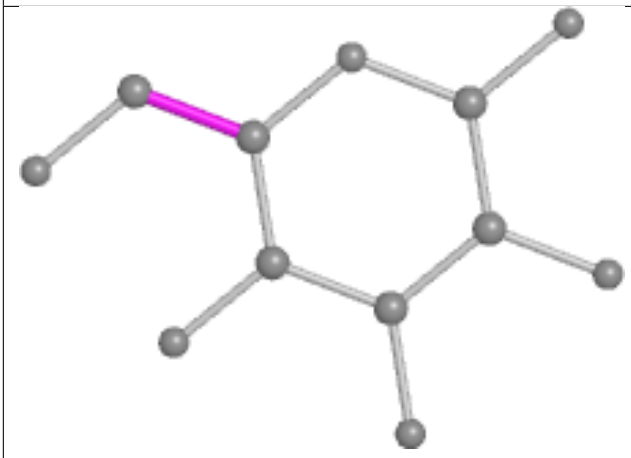
Ligand GLC D 503



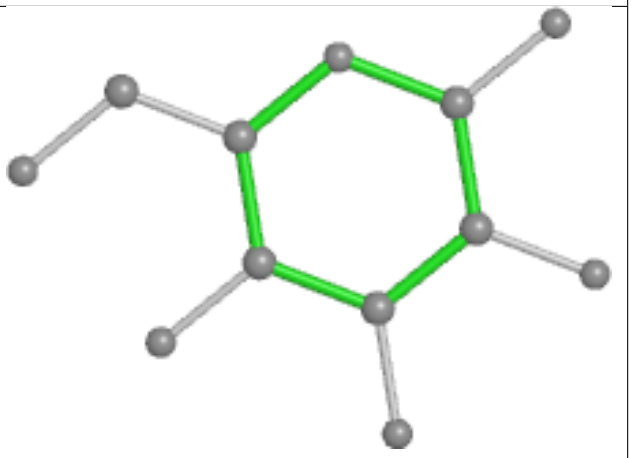
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	A	479/480 (99%)	-0.29	6 (1%) 74 71	25, 42, 65, 82	0
1	B	479/480 (99%)	-0.46	0 100 100	20, 35, 57, 77	0
1	C	479/480 (99%)	-0.30	3 (0%) 85 83	20, 41, 68, 87	0
1	D	479/480 (99%)	-0.41	4 (0%) 82 79	23, 38, 61, 109	0
1	E	479/480 (99%)	-0.11	6 (1%) 74 71	23, 47, 80, 96	0
1	F	479/480 (99%)	-0.10	7 (1%) 71 68	26, 47, 76, 109	0
All	All	2874/2880 (99%)	-0.28	26 (0%) 81 78	20, 41, 70, 109	0

All (26) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	279	ARG	4.8
1	F	473	GLY	4.2
1	F	470	VAL	3.6
1	A	279	ARG	3.3
1	E	244	ARG	2.8
1	A	131	ARG	2.7
1	F	66	THR	2.7
1	F	65	GLY	2.7
1	F	471	LYS	2.5
1	C	290	GLY	2.4
1	E	473	GLY	2.4
1	E	115	ASP	2.4
1	E	2	LEU	2.4
1	E	332	GLY	2.4
1	C	277	CYS	2.2
1	D	2	LEU	2.2
1	F	43	PHE	2.2
1	A	164	ASP	2.1
1	E	102	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
1	D	324	SER	2.1
1	A	212	ARG	2.1
1	A	303	ASP	2.1
1	F	472	SER	2.1
1	D	470	VAL	2.0
1	C	470	VAL	2.0
1	A	170	ARG	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 oligosaccharides in this entry.

6.4 Ligands (i)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	GOL	B	503	6/6	0.64	0.25	75,76,76,76	0
2	GOL	B	506	6/6	0.69	0.18	46,48,50,51	0
2	GOL	B	507	6/6	0.71	0.28	68,70,71,71	0
2	GOL	D	502	6/6	0.75	0.23	49,49,50,51	0
2	GOL	C	502	6/6	0.75	0.22	77,79,80,80	0
2	GOL	A	507	6/6	0.76	0.20	55,57,57,57	0
2	GOL	F	503	6/6	0.76	0.24	73,74,75,75	0
2	GOL	E	502	6/6	0.77	0.24	64,66,68,70	0
2	GOL	D	504	6/6	0.78	0.24	65,67,67,68	0
2	GOL	A	502	6/6	0.78	0.20	69,71,71,71	0
2	GOL	F	501	6/6	0.78	0.22	79,80,80,81	0
2	GOL	A	506	6/6	0.78	0.14	68,68,69,69	0
2	GOL	C	501	6/6	0.79	0.24	58,59,61,62	0
2	GOL	B	502	6/6	0.80	0.23	66,67,68,69	0
2	GOL	B	505	6/6	0.82	0.17	72,73,73,73	0
2	GOL	C	506	6/6	0.82	0.24	46,54,57,57	0

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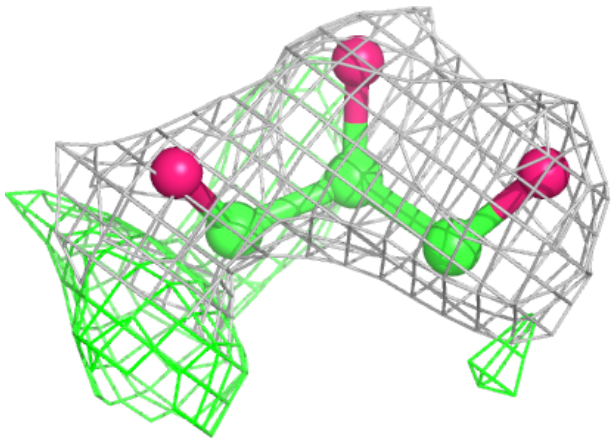
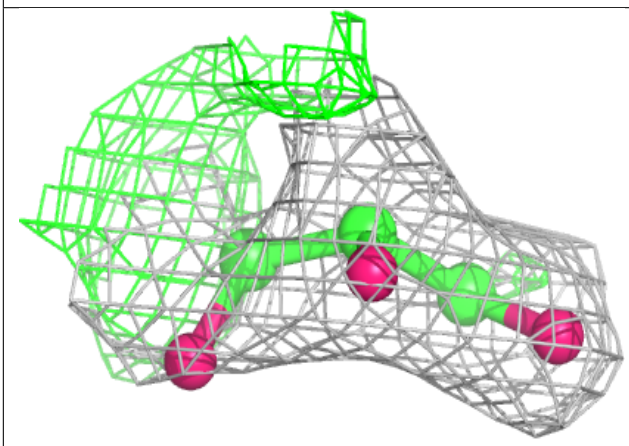
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	GLC	E	503	12/12	0.82	0.14	59,60,61,64	0
2	GOL	C	504	6/6	0.83	0.19	53,57,59,60	0
2	GOL	A	503	6/6	0.83	0.24	51,55,56,56	0
2	GOL	A	504	6/6	0.83	0.17	61,64,65,66	0
2	GOL	A	501	6/6	0.84	0.22	82,83,84,85	0
2	GOL	E	501	6/6	0.84	0.20	59,60,61,61	0
4	PEG	E	504	7/7	0.84	0.20	49,53,55,55	0
2	GOL	F	502	6/6	0.86	0.13	72,73,74,74	0
3	GLC	F	504	12/12	0.87	0.11	44,50,52,52	0
3	GLC	A	508	12/12	0.88	0.12	47,50,55,56	0
2	GOL	A	505	6/6	0.88	0.19	73,75,76,76	0
2	GOL	B	504	6/6	0.88	0.21	48,49,49,49	0
3	GLC	C	505	12/12	0.88	0.12	50,52,55,56	0
2	GOL	B	501	6/6	0.89	0.13	54,56,57,57	0
3	GLC	D	503	12/12	0.90	0.10	40,44,47,49	0
2	GOL	C	503	6/6	0.90	0.15	71,73,73,73	0
3	GLC	B	508	12/12	0.90	0.12	41,46,50,51	0
2	GOL	D	501	6/6	0.91	0.13	53,55,55,55	0

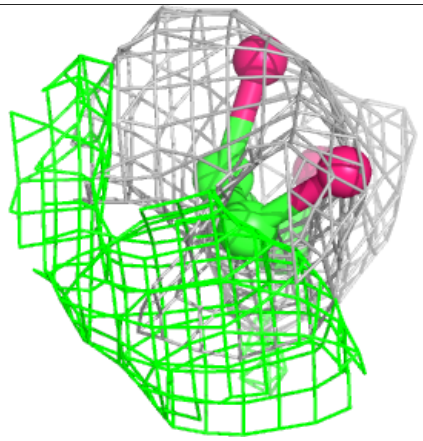
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around GOL B 503:

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

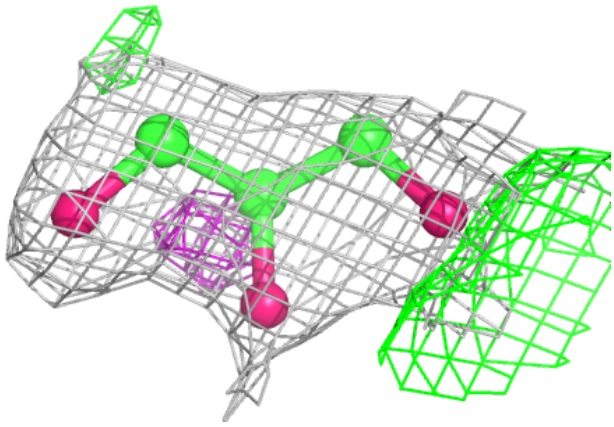


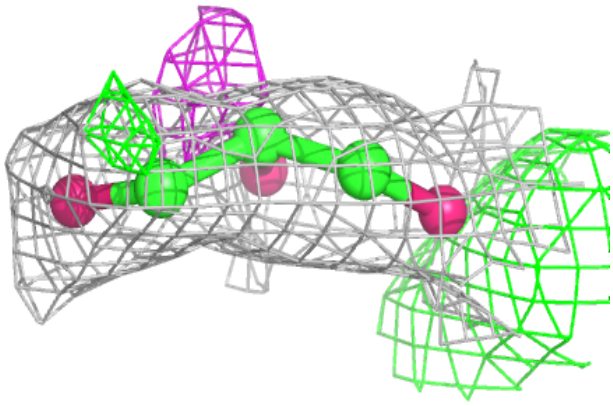


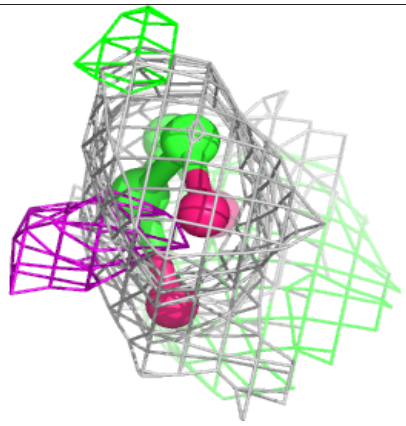


Electron density around GOL B 506:

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

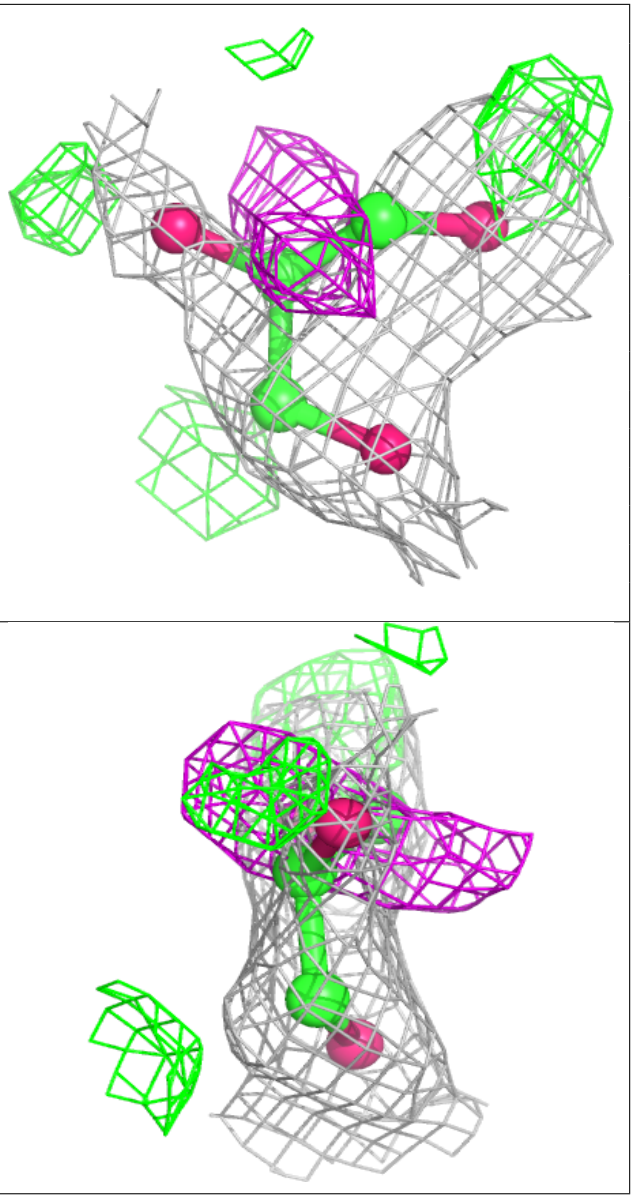


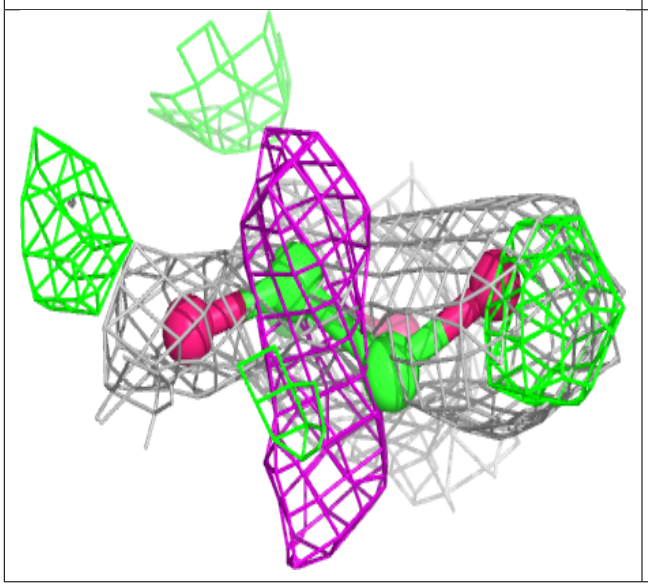




Electron density around GOL B 507:

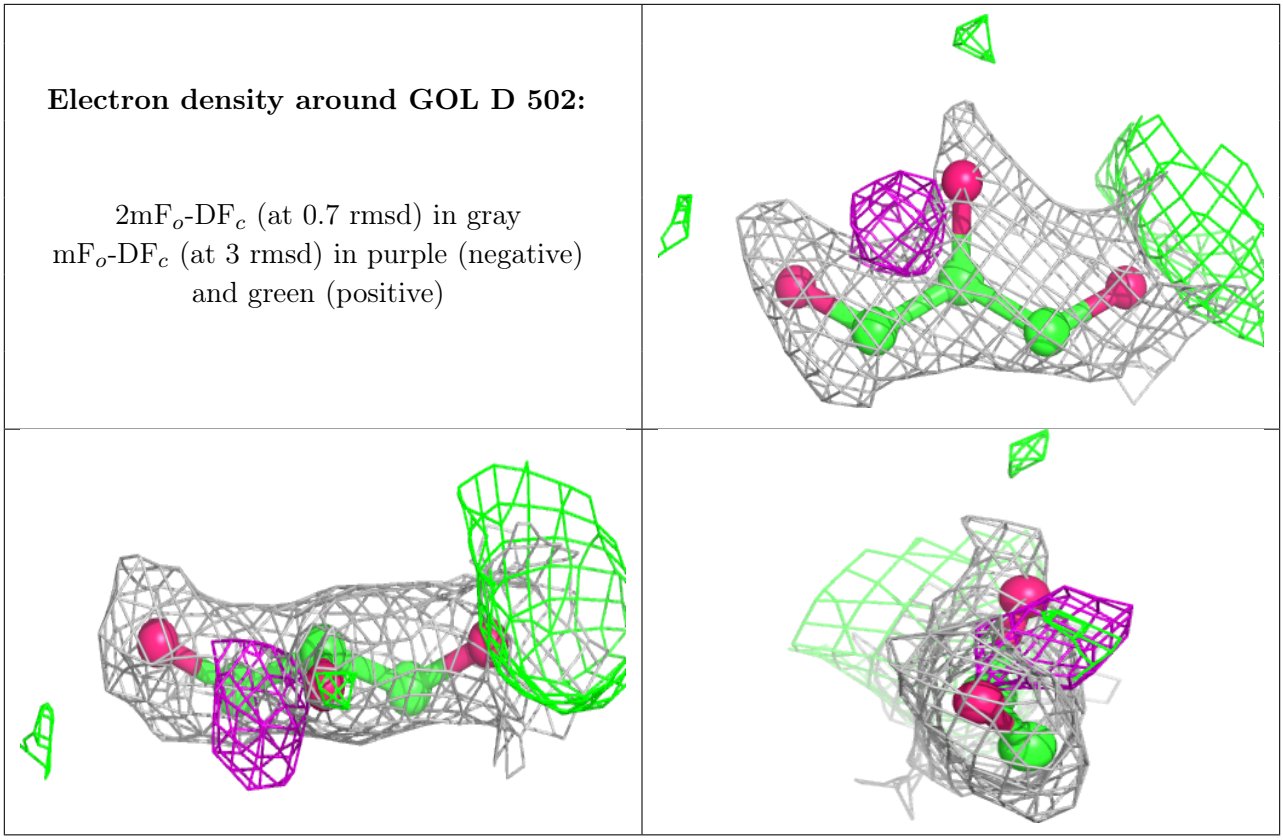
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)





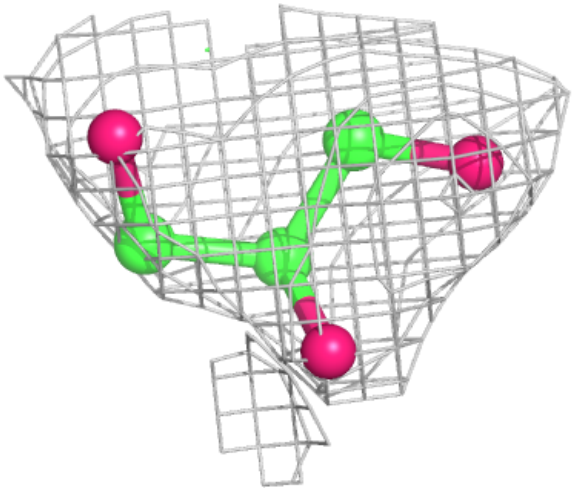
Electron density around GOL D 502:

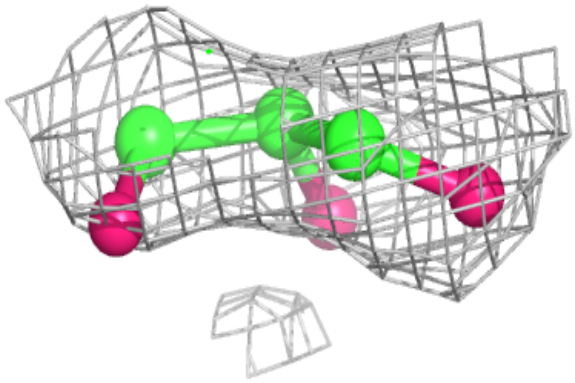
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

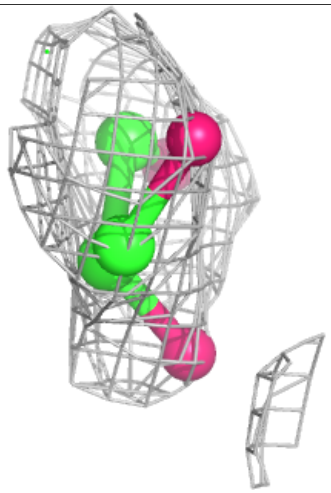


Electron density around GOL C 502:

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

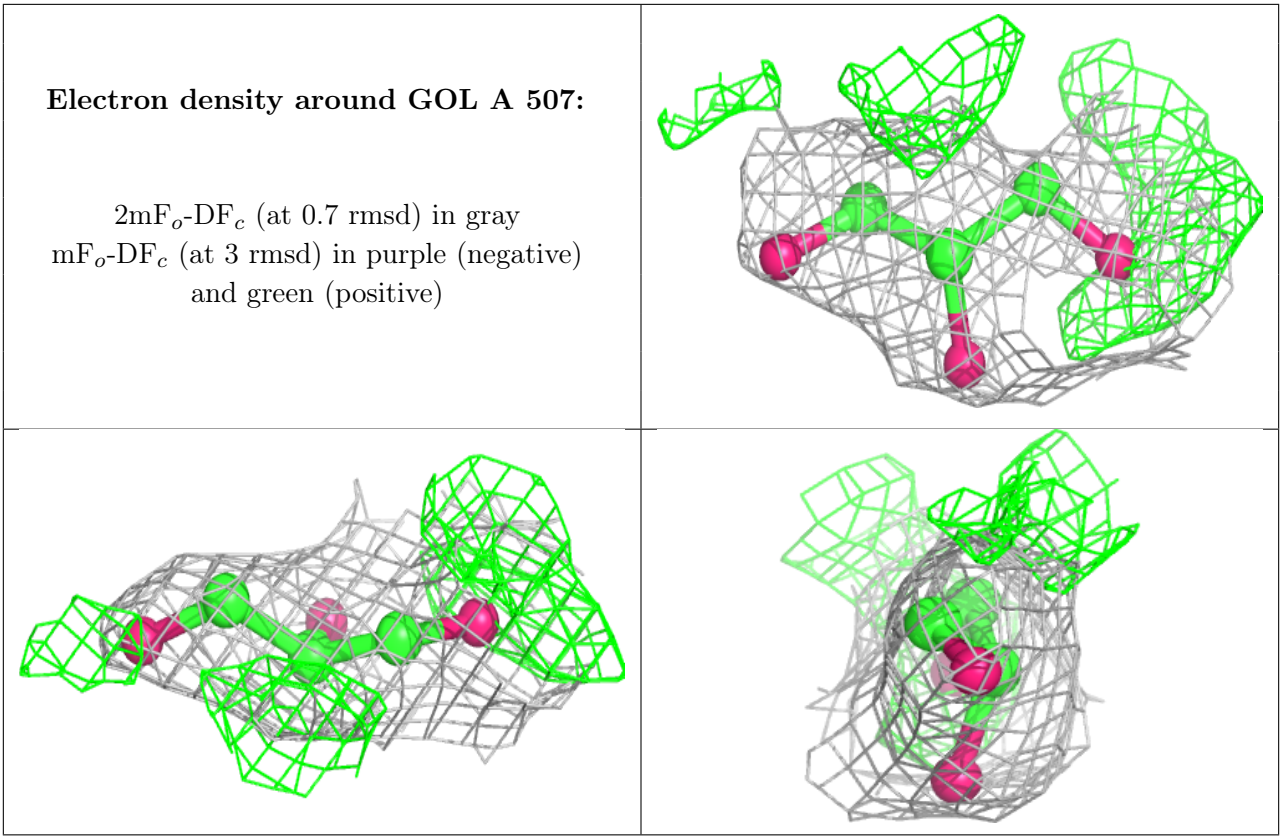






Electron density around GOL A 507:

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



Electron density around GOL F 503:

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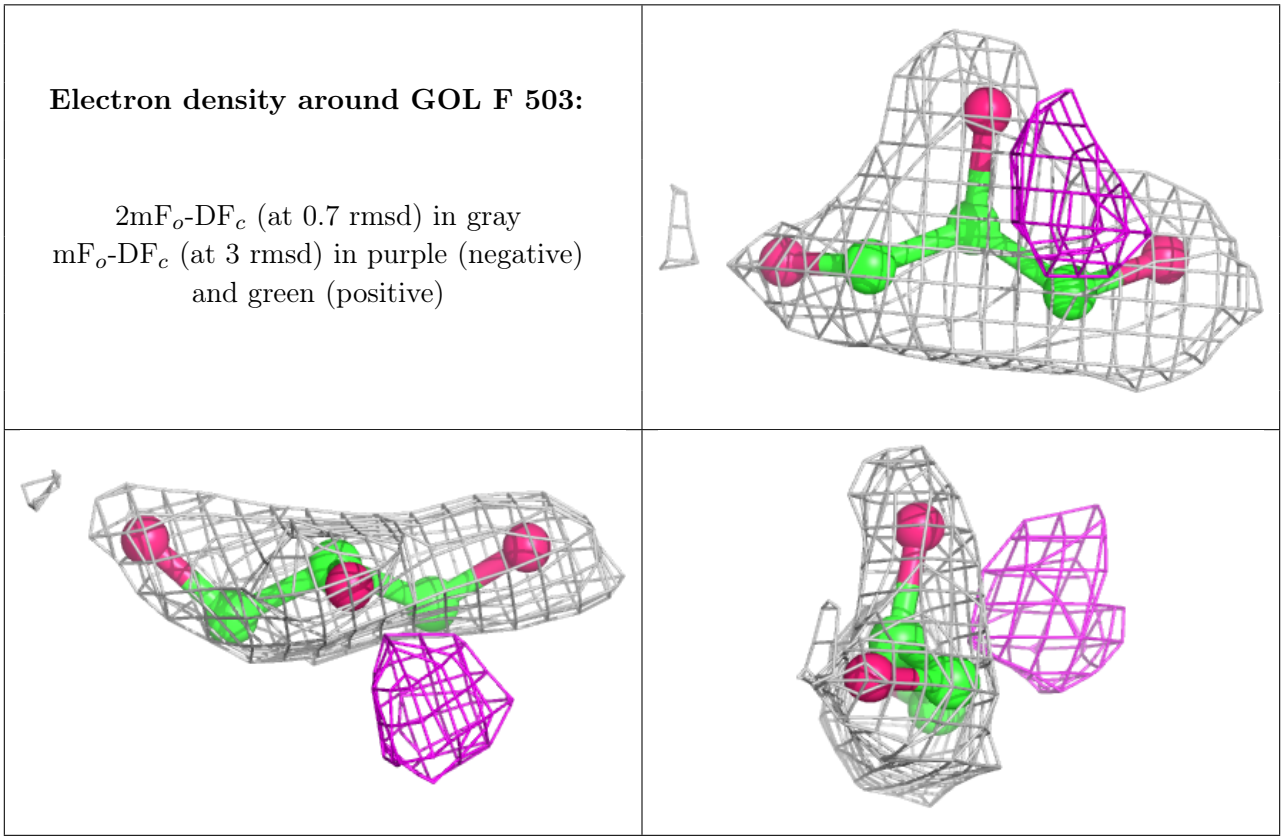
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



Electron density around GOL E 502:

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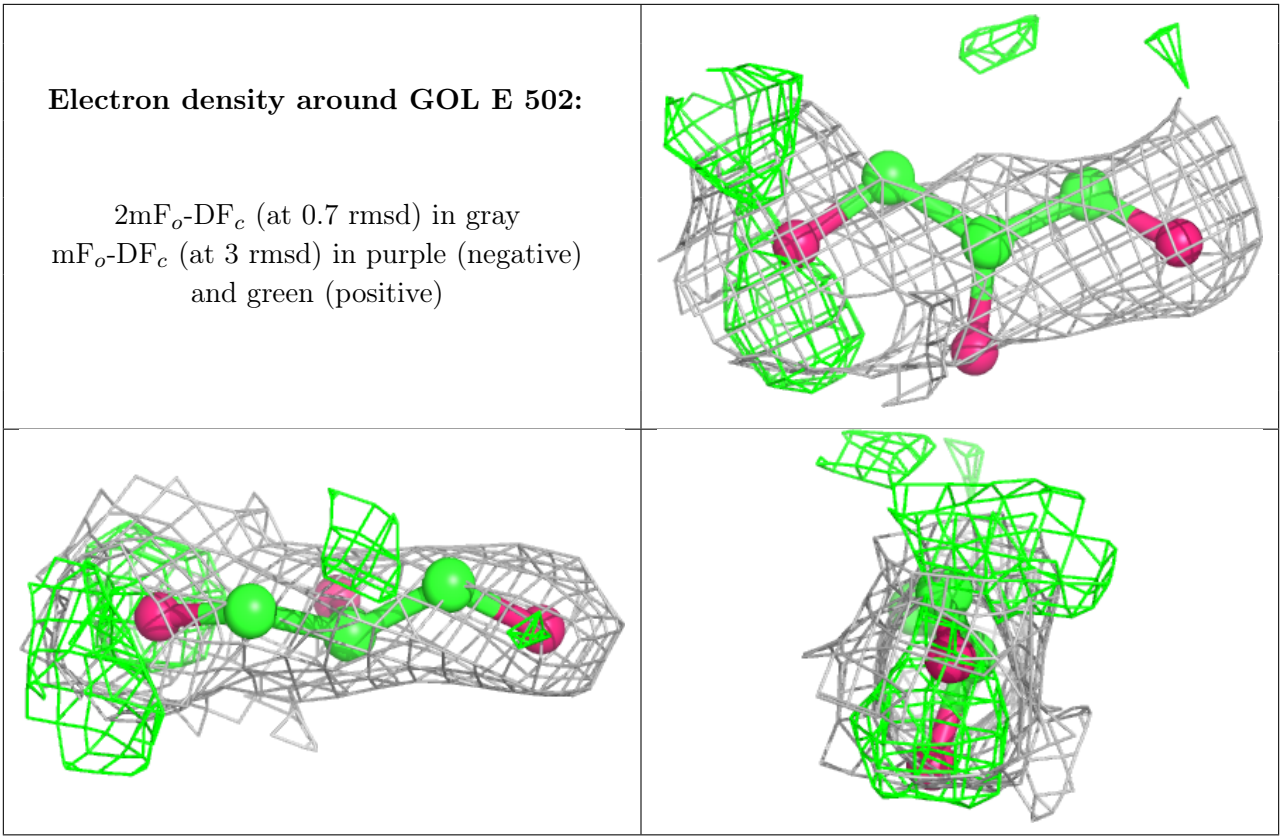
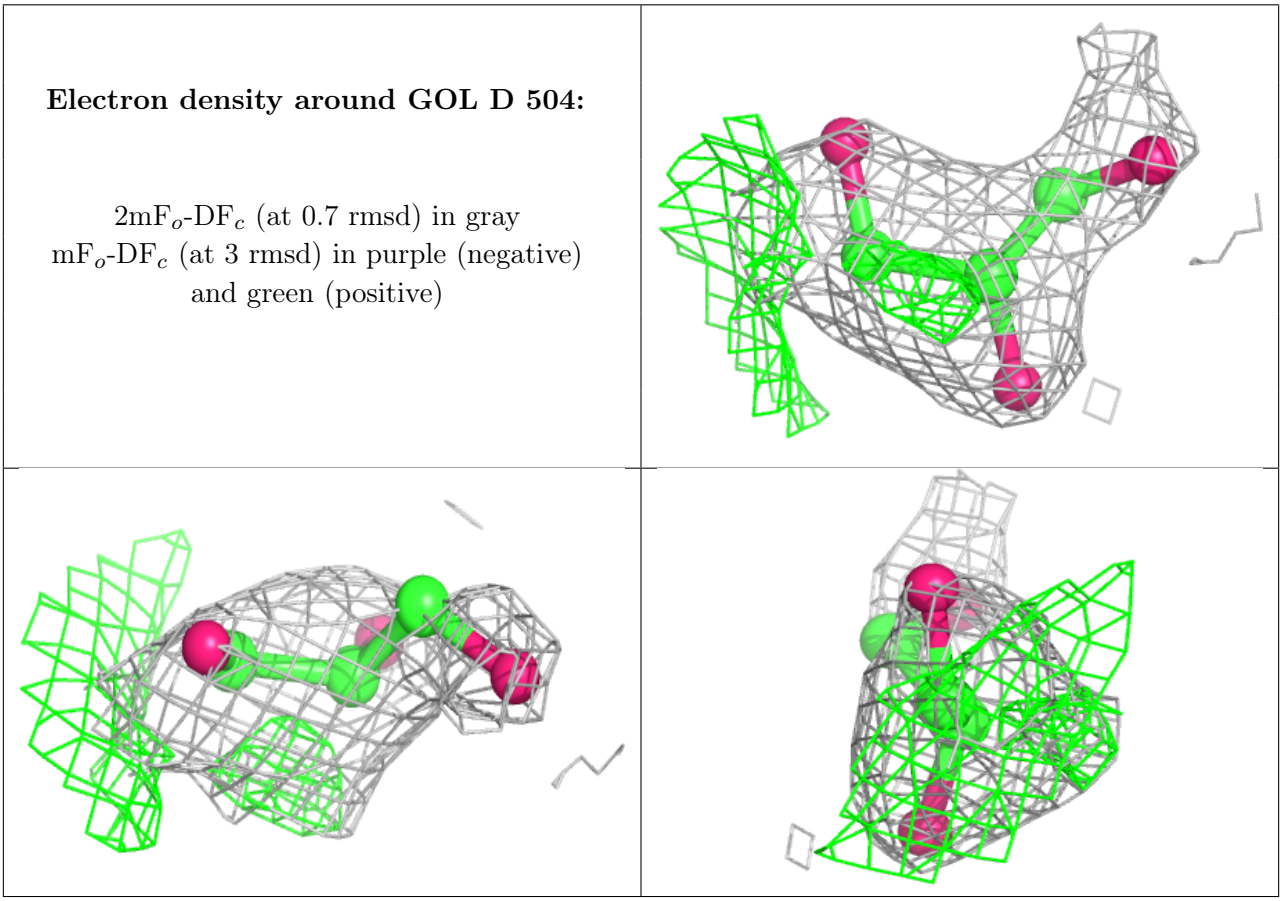
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



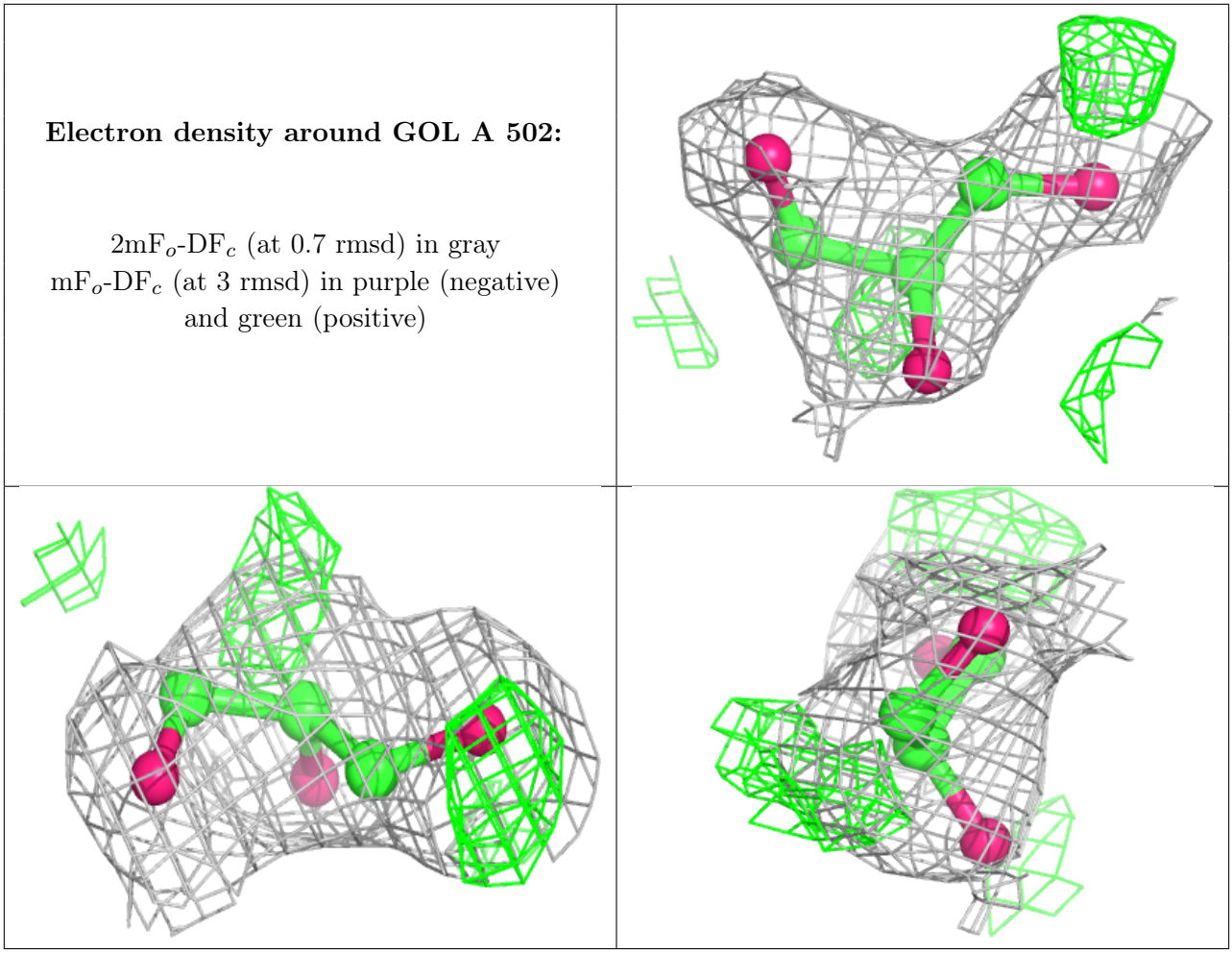
Electron density around GOL D 504:

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



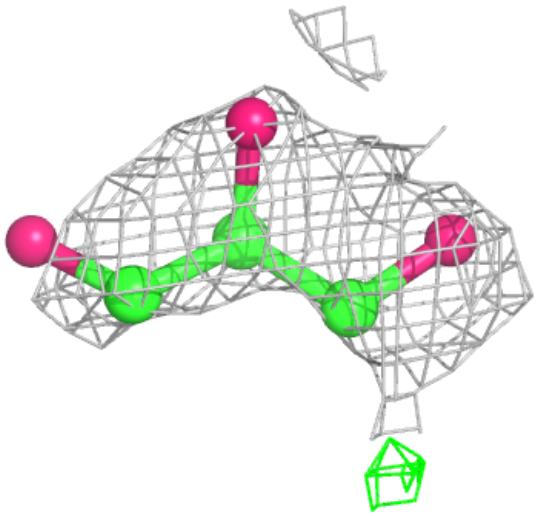
Electron density around GOL A 502:

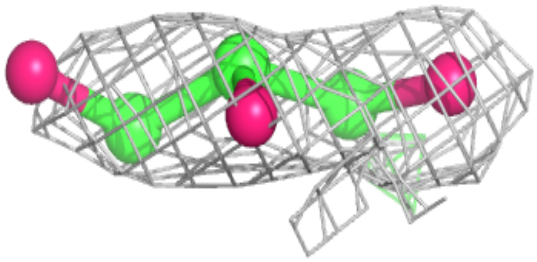
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

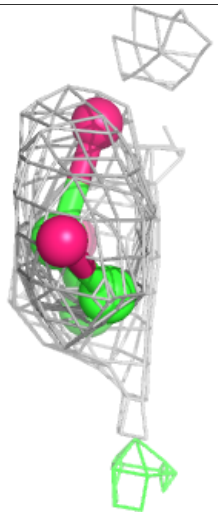


Electron density around GOL F 501:

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

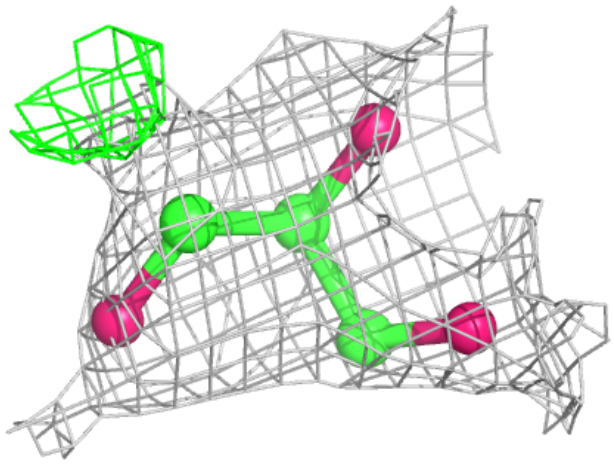


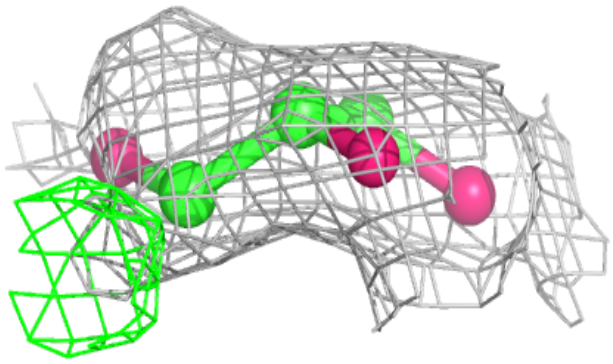


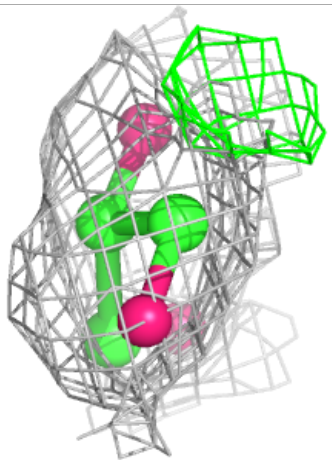


Electron density around GOL A 506:

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

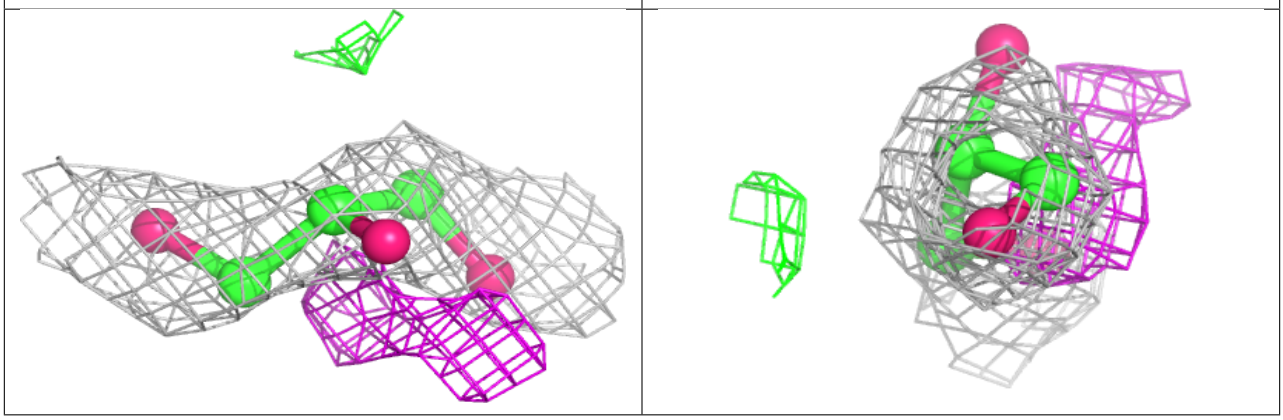






Electron density around GOL C 501:

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



Electron density around GOL B 502:

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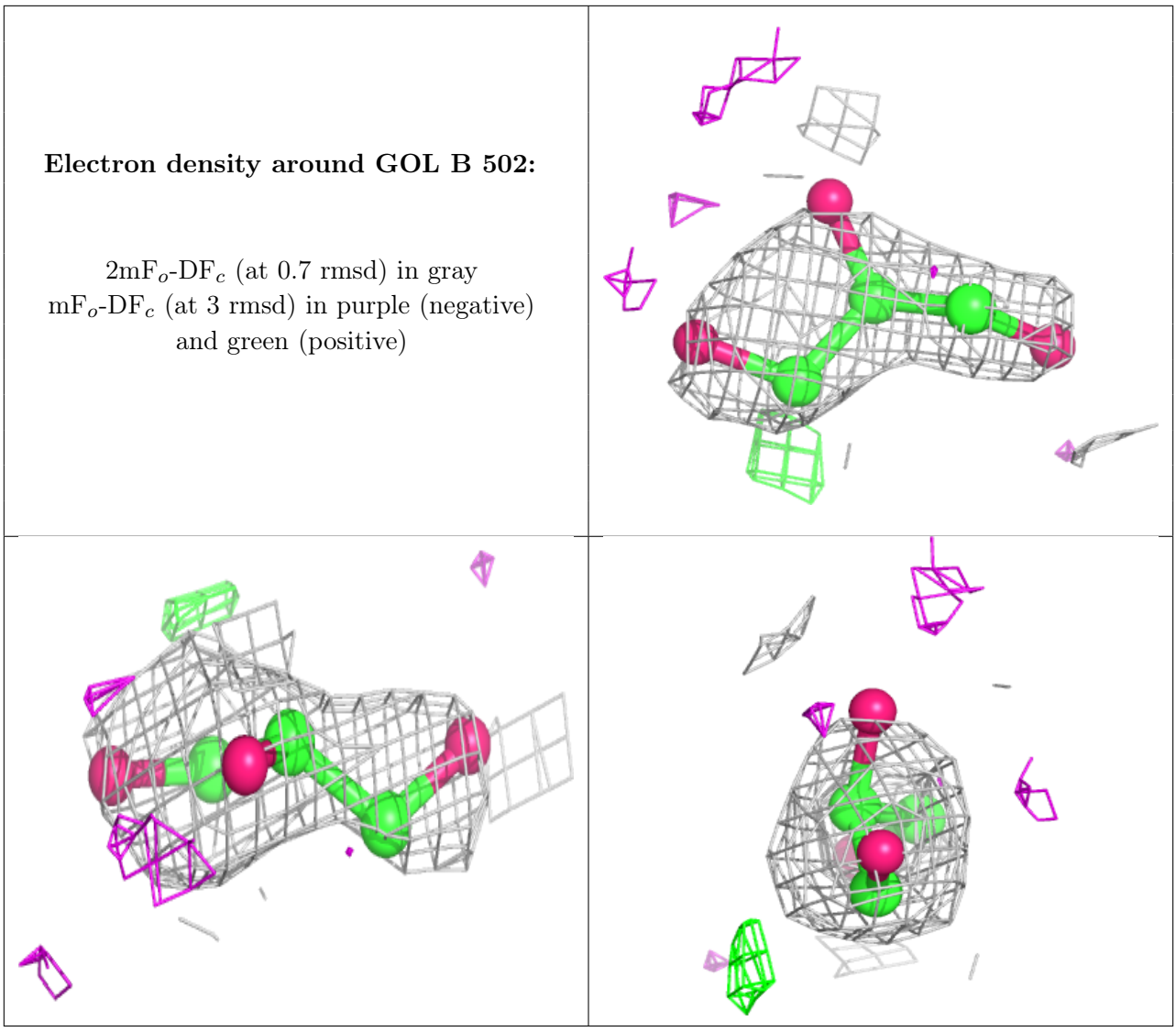
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



Electron density around GOL B 505:

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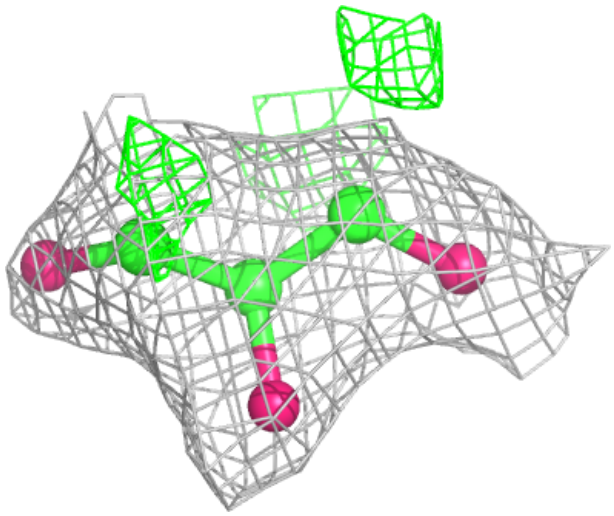
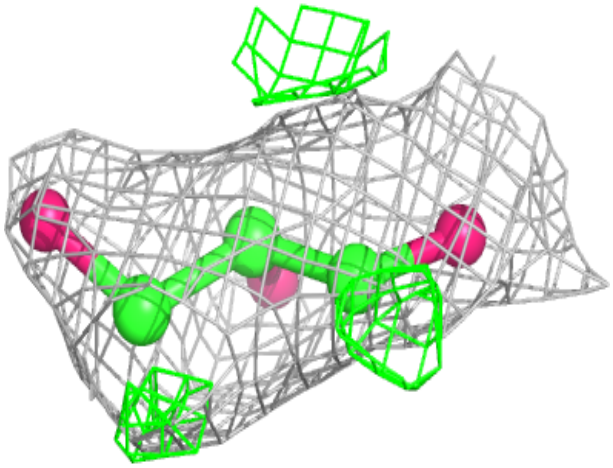
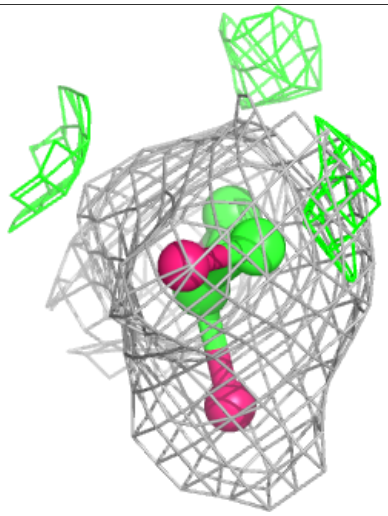
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

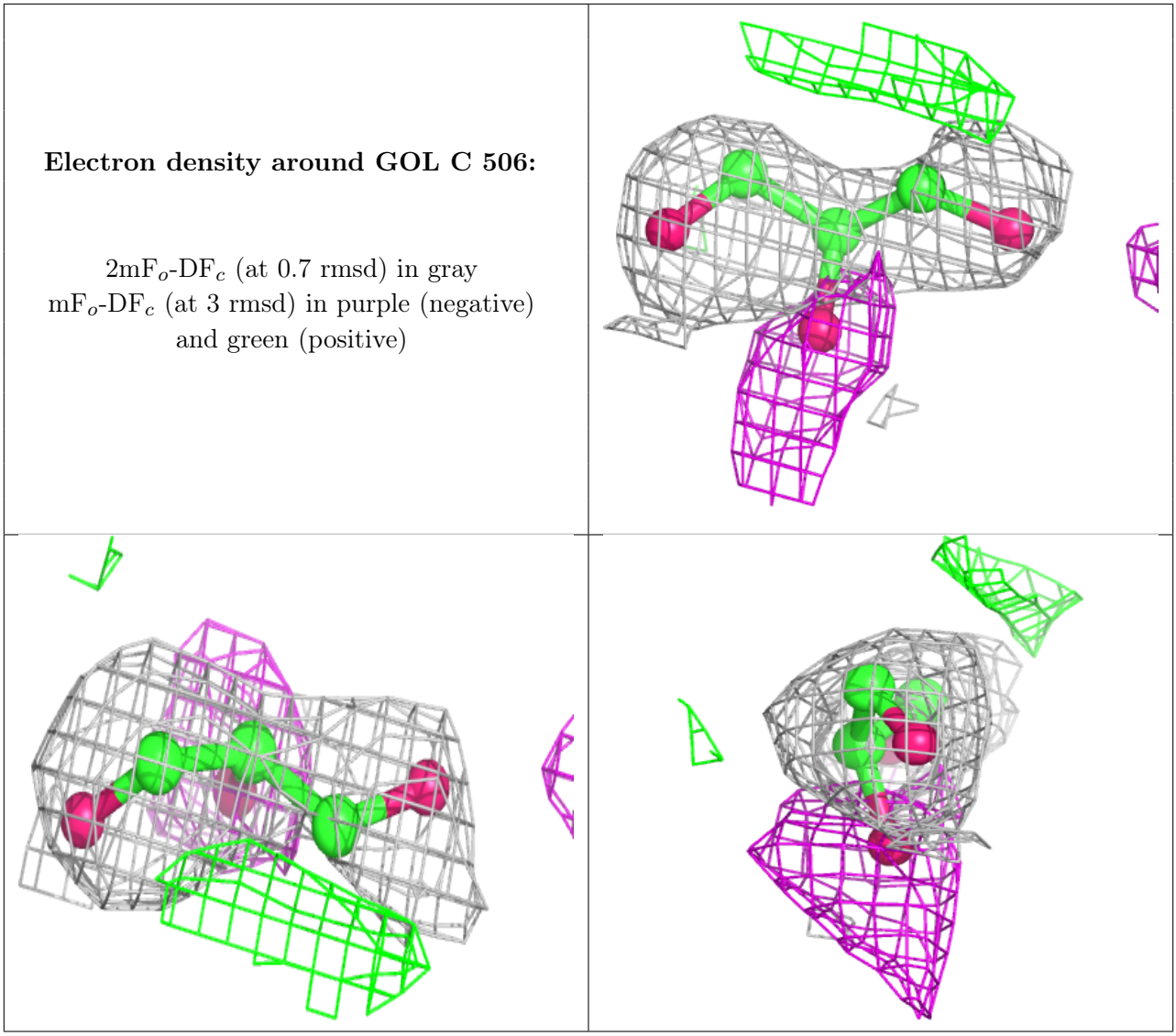






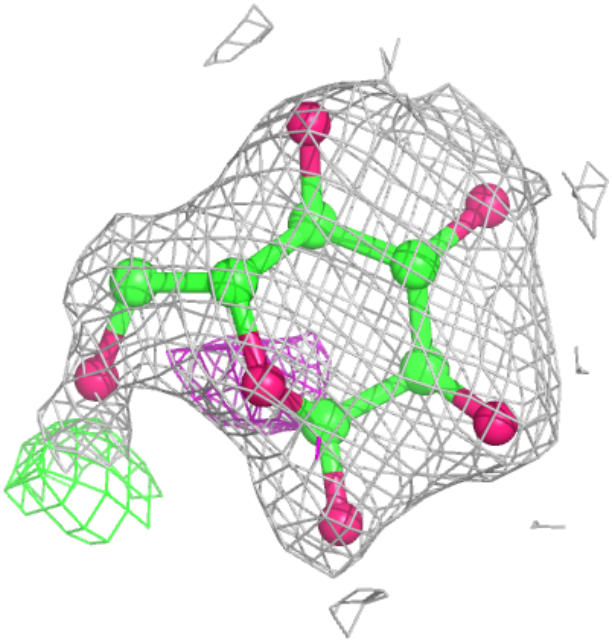
Electron density around GOL C 506:

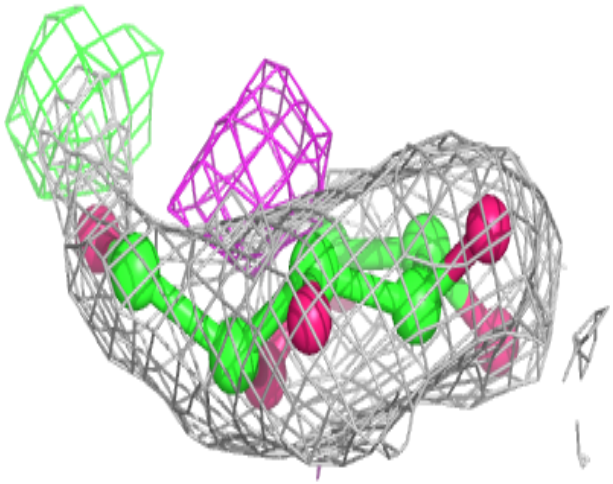
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

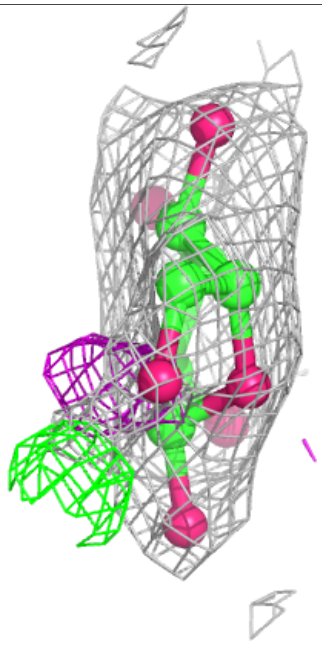


Electron density around GLC E 503:

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

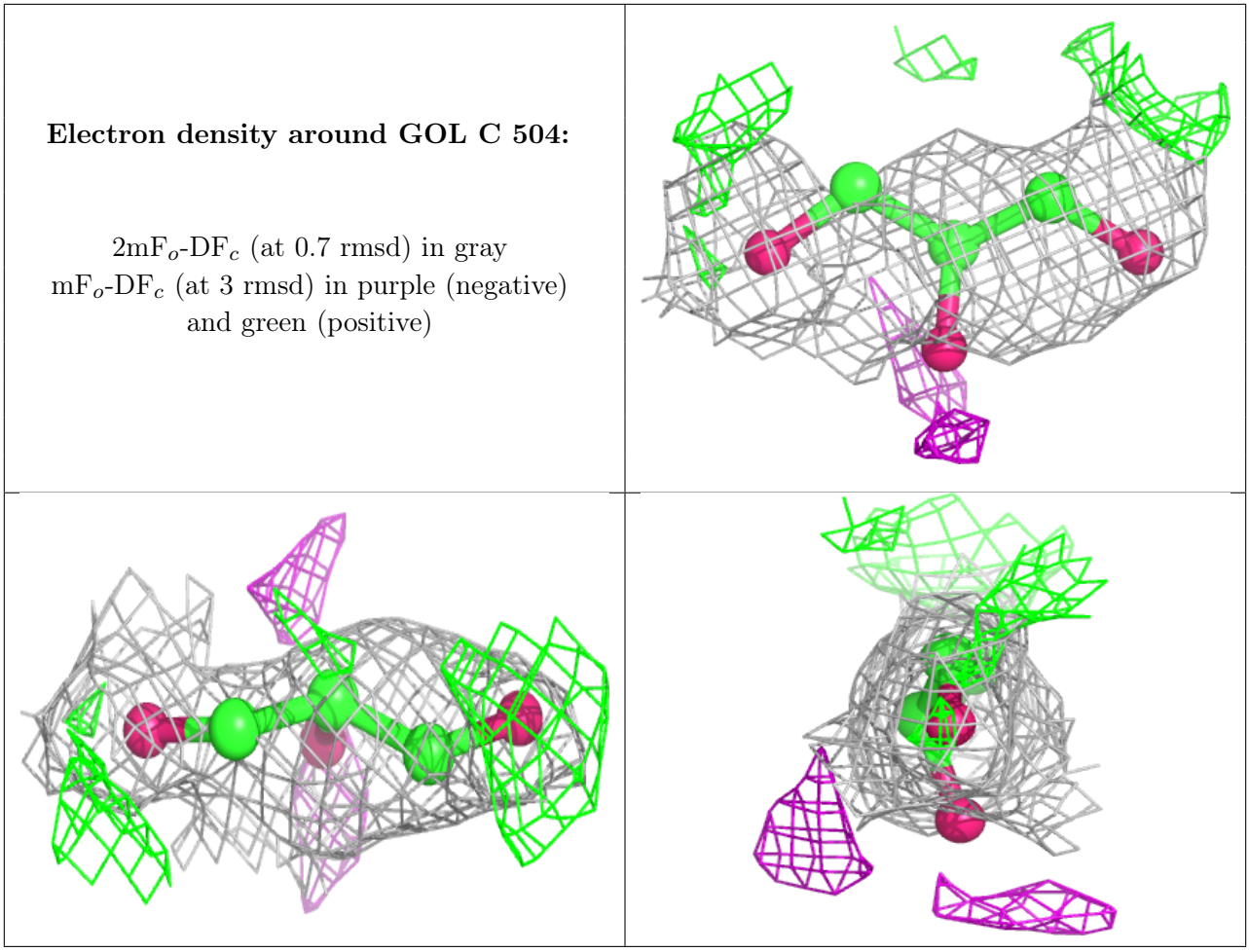






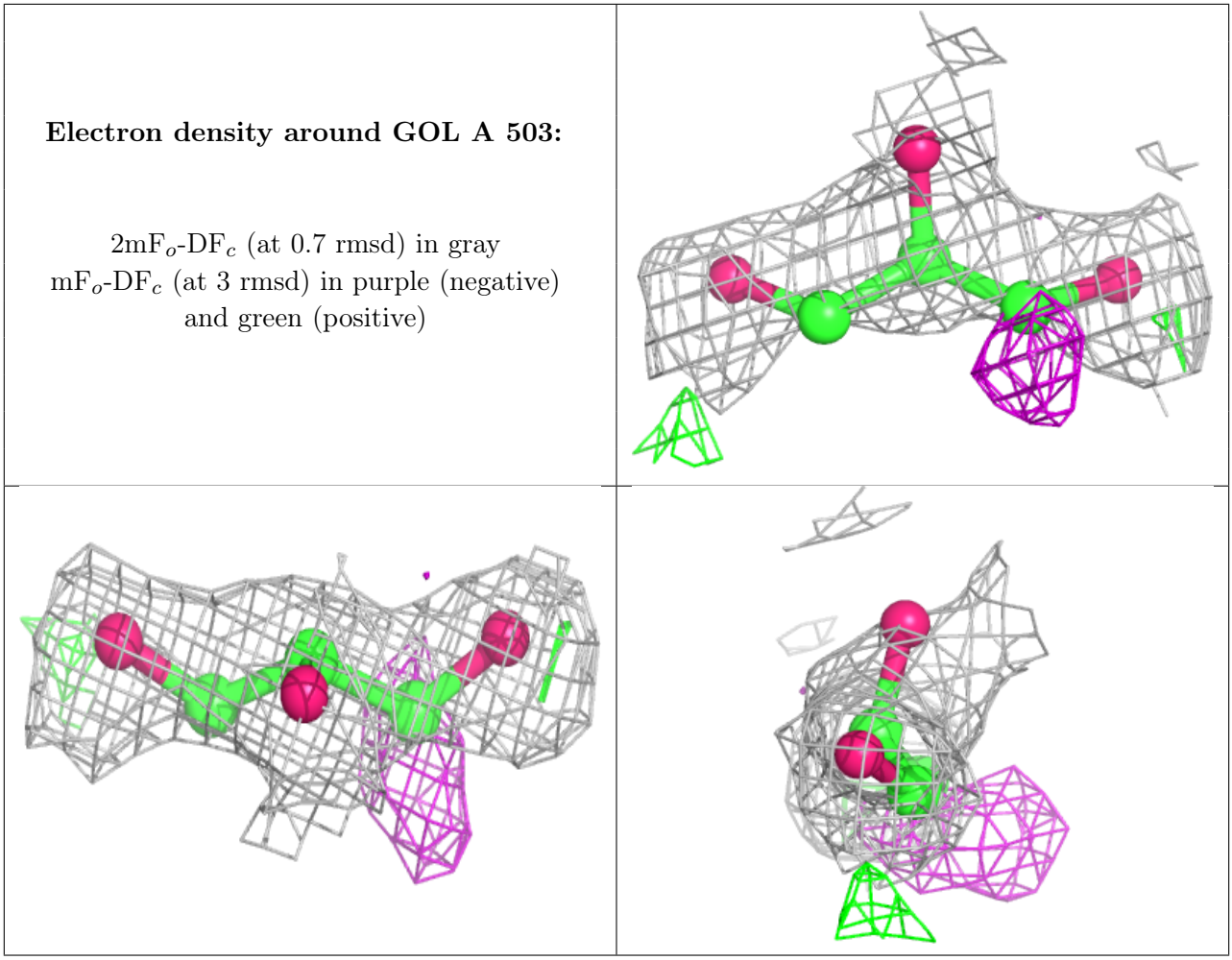
Electron density around GOL C 504:

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



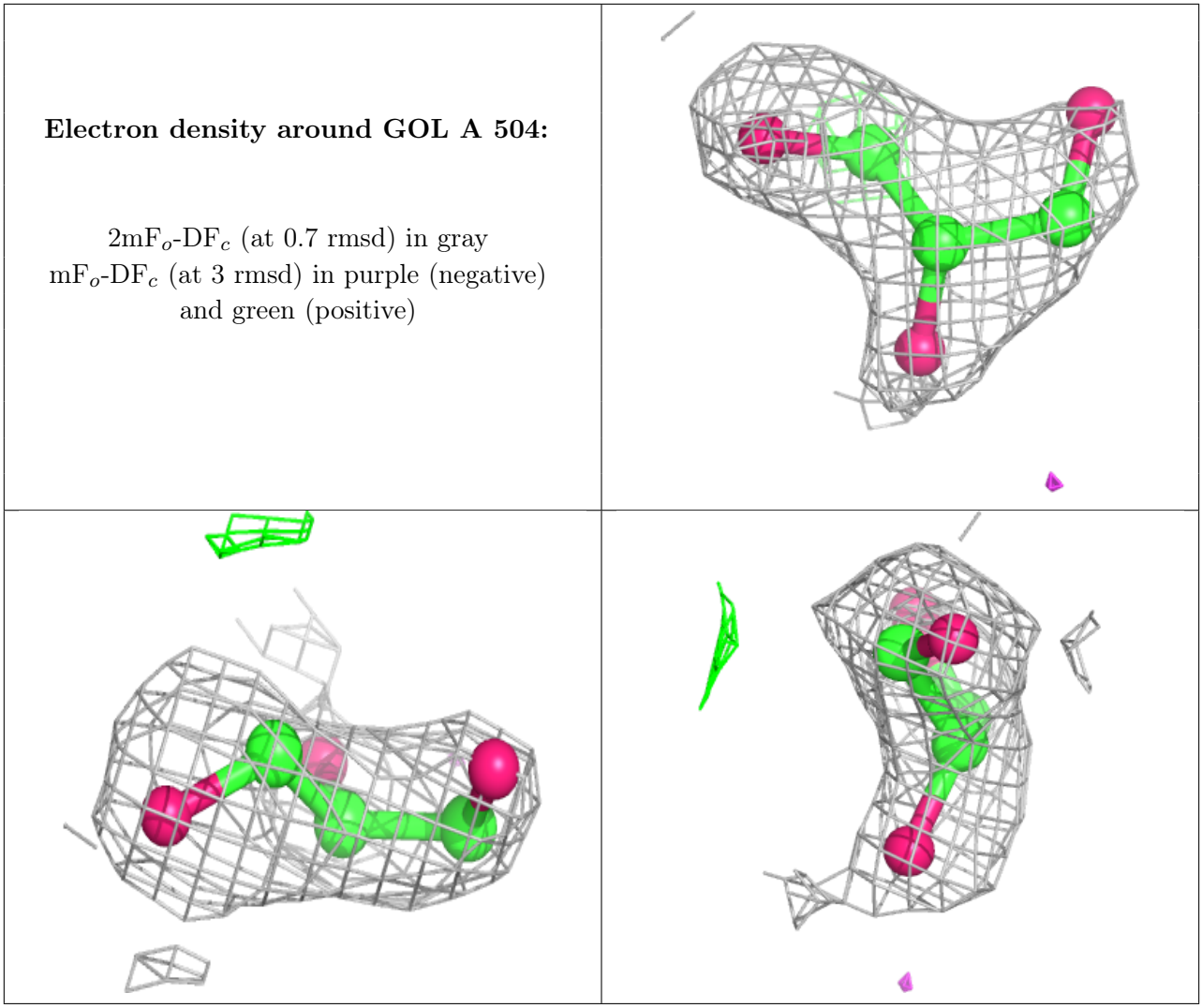
Electron density around GOL A 503:

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



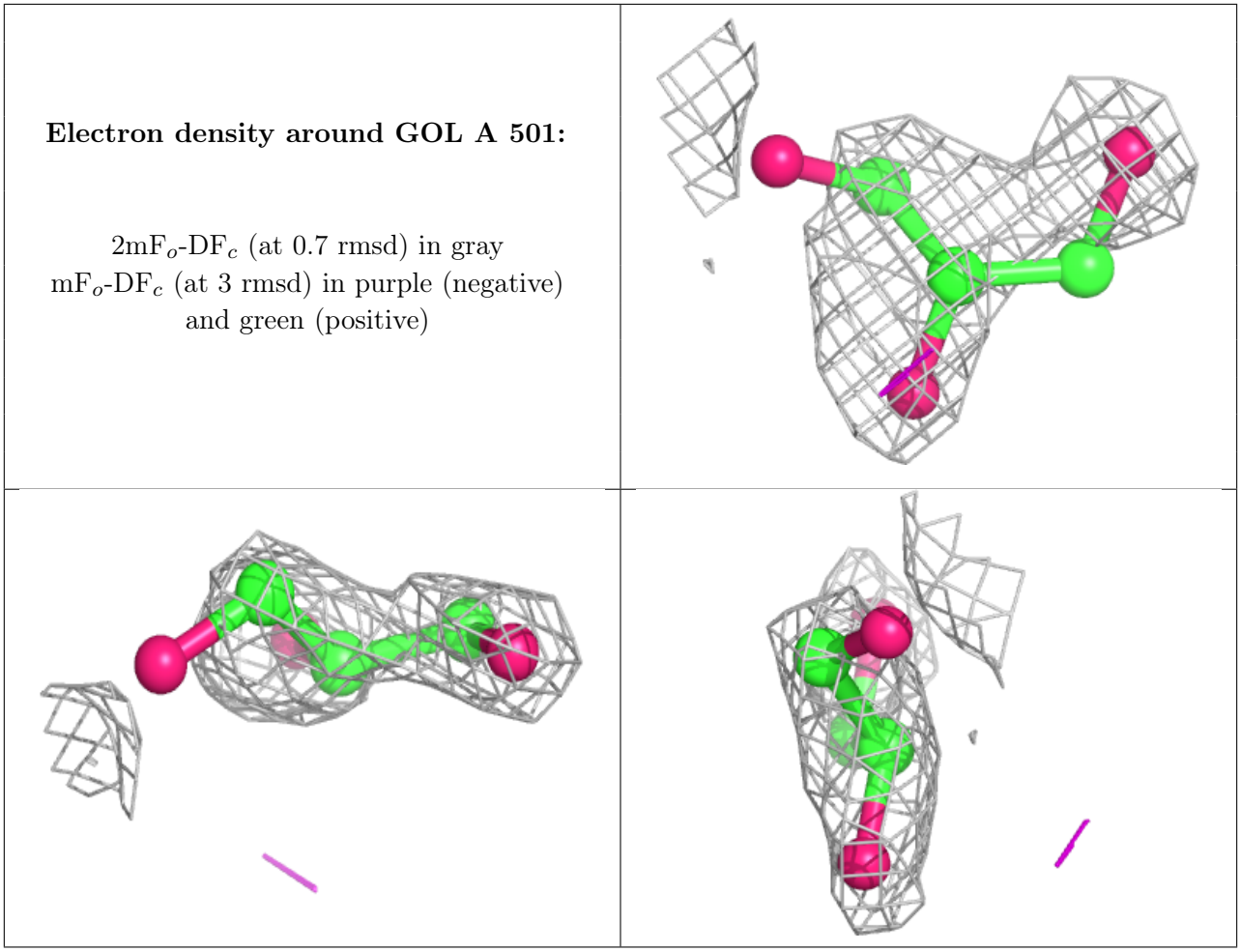
Electron density around GOL A 504:

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



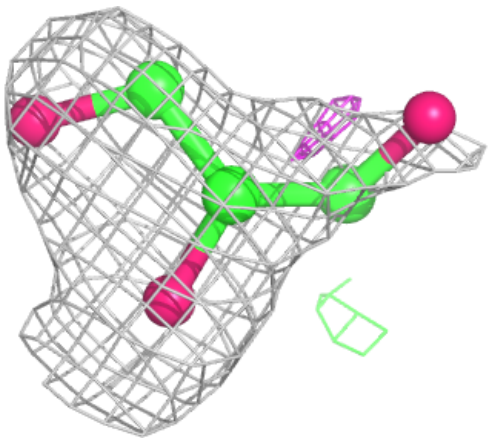
Electron density around GOL A 501:

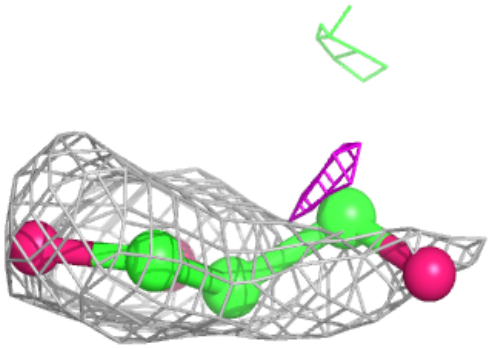
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

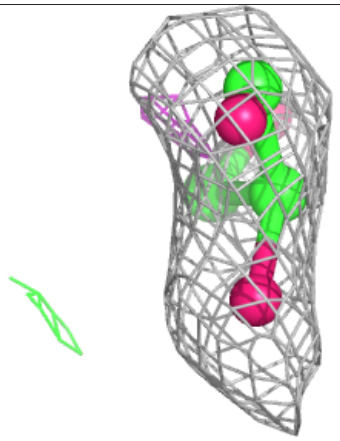


Electron density around GOL E 501:

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

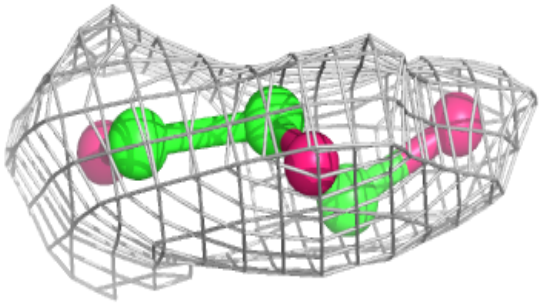


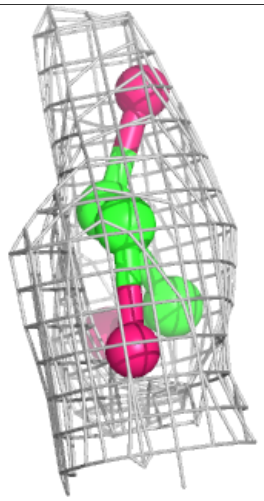




Electron density around GOL F 502:

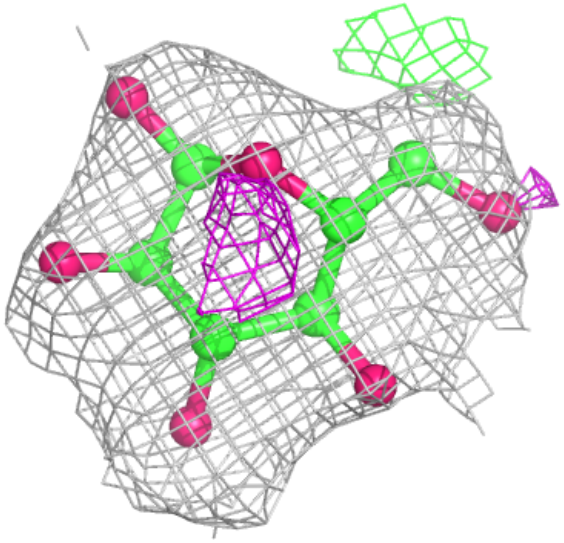
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

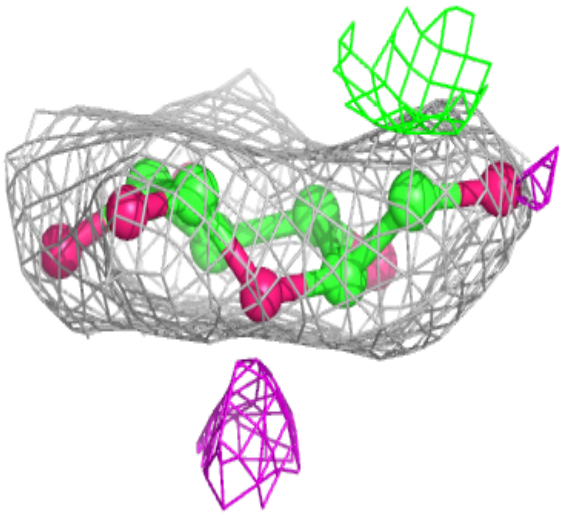


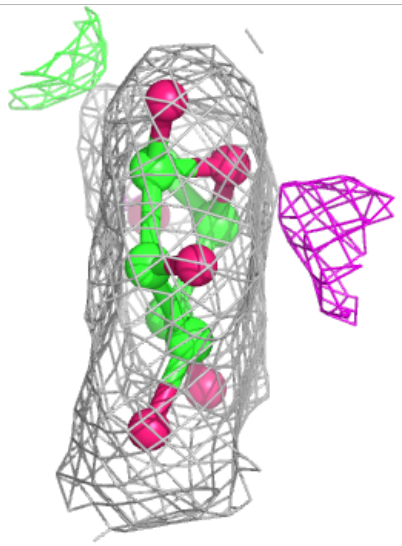


Electron density around GLC F 504:

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

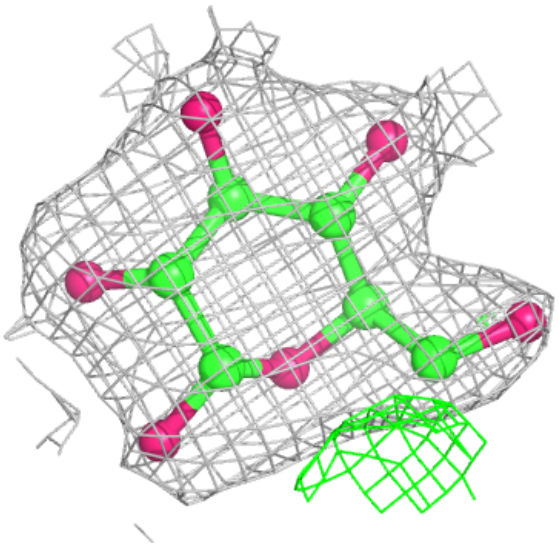


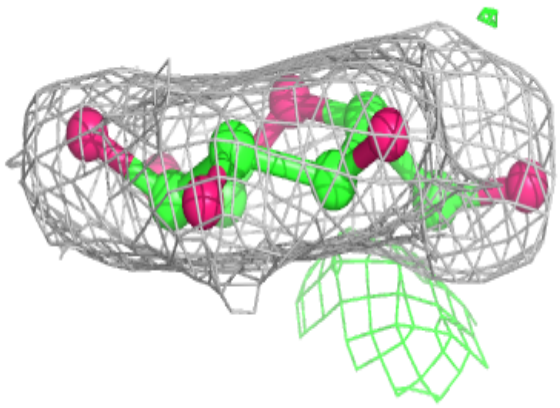


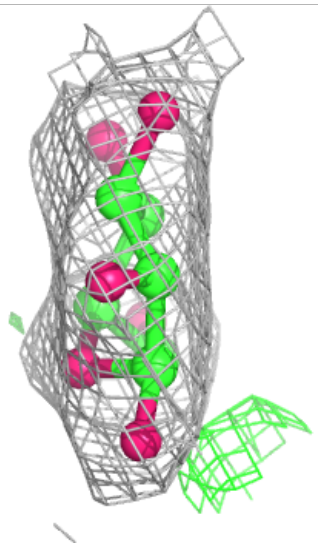


Electron density around GLC A 508:

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

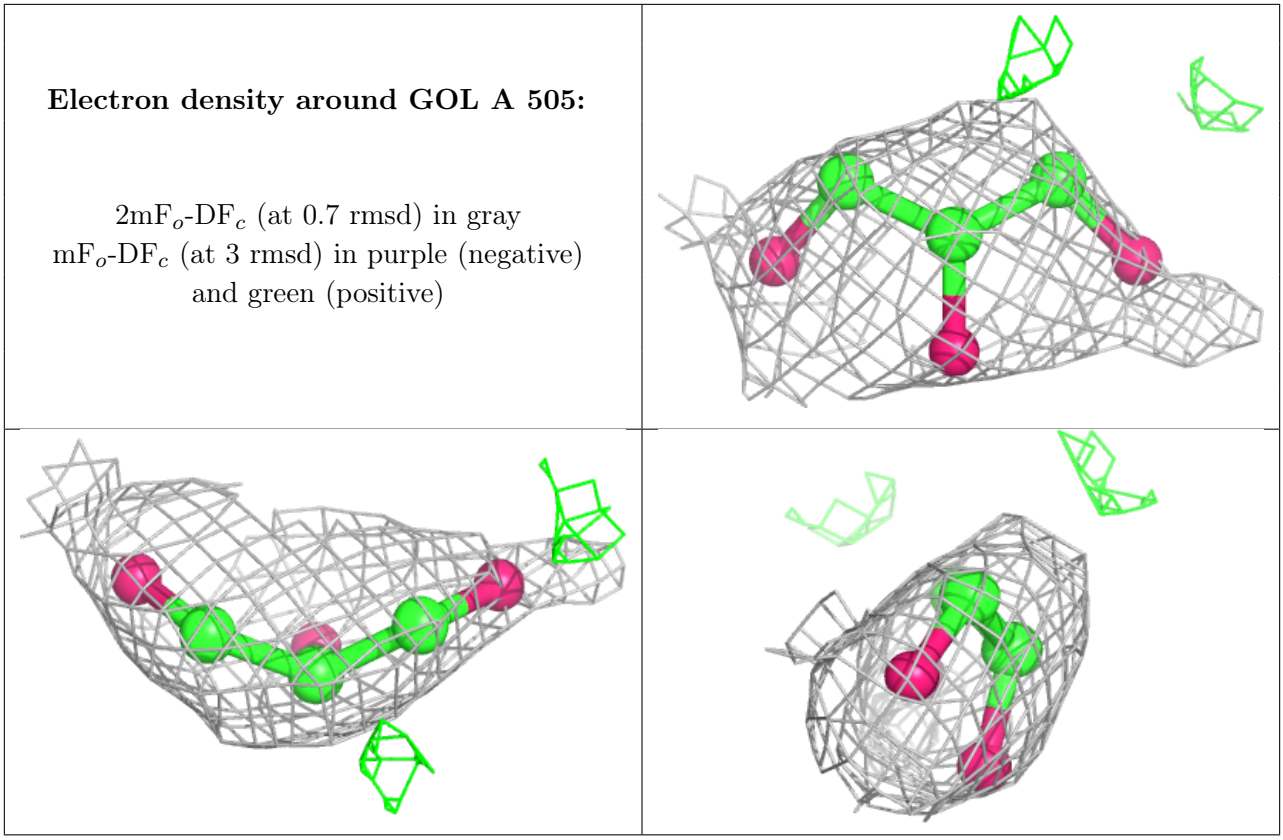






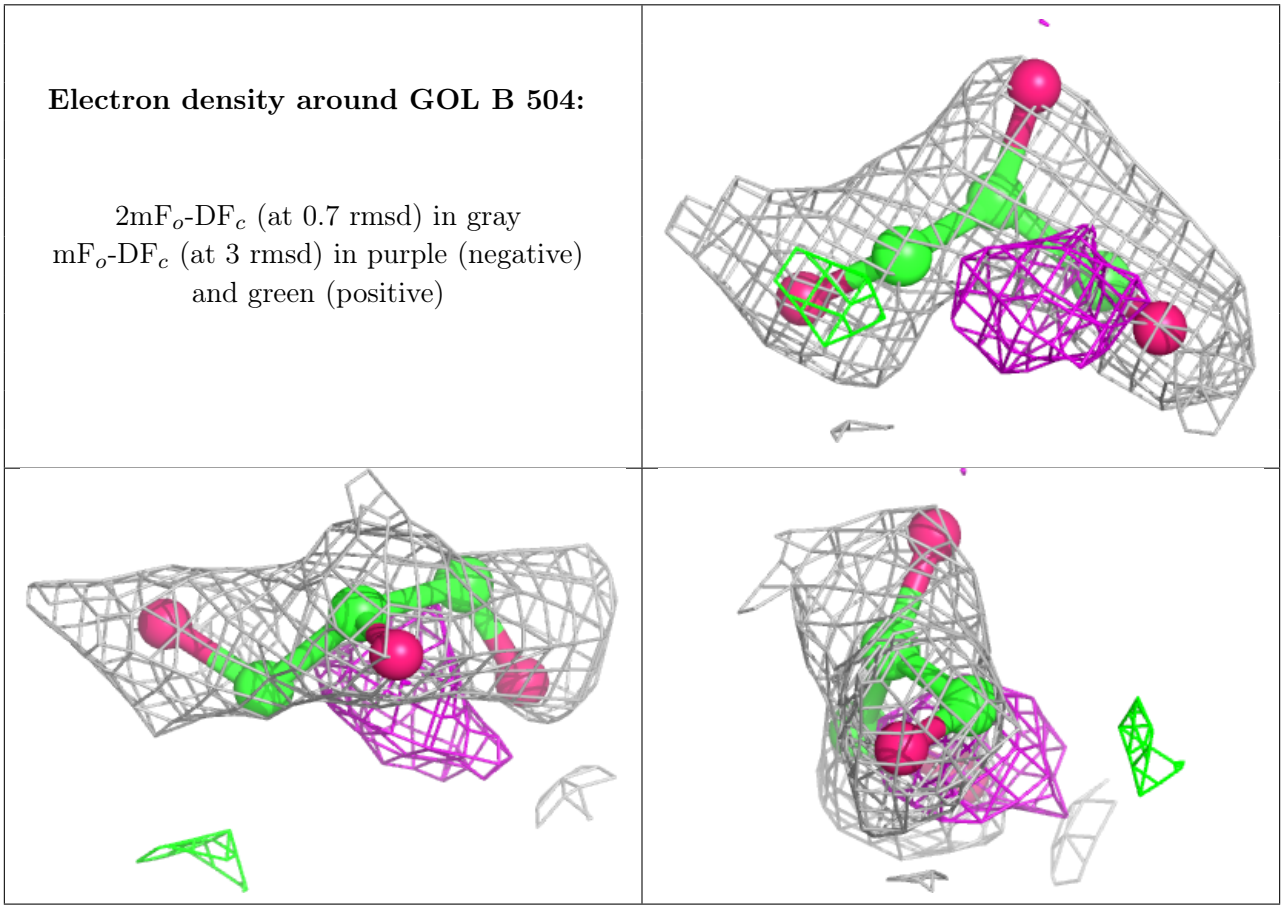
Electron density around GOL A 505:

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



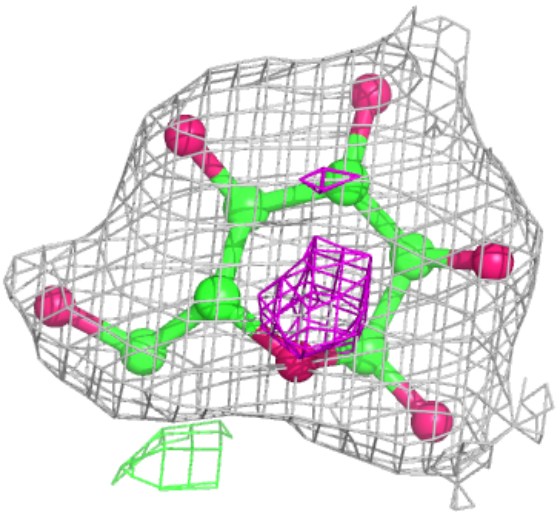
Electron density around GOL B 504:

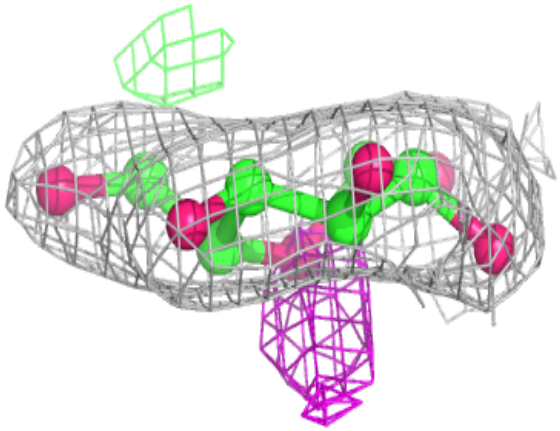
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

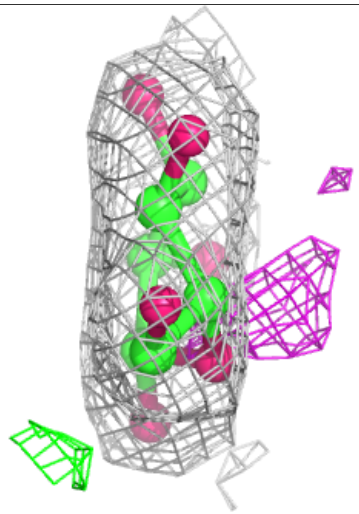


Electron density around GLC C 505:

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

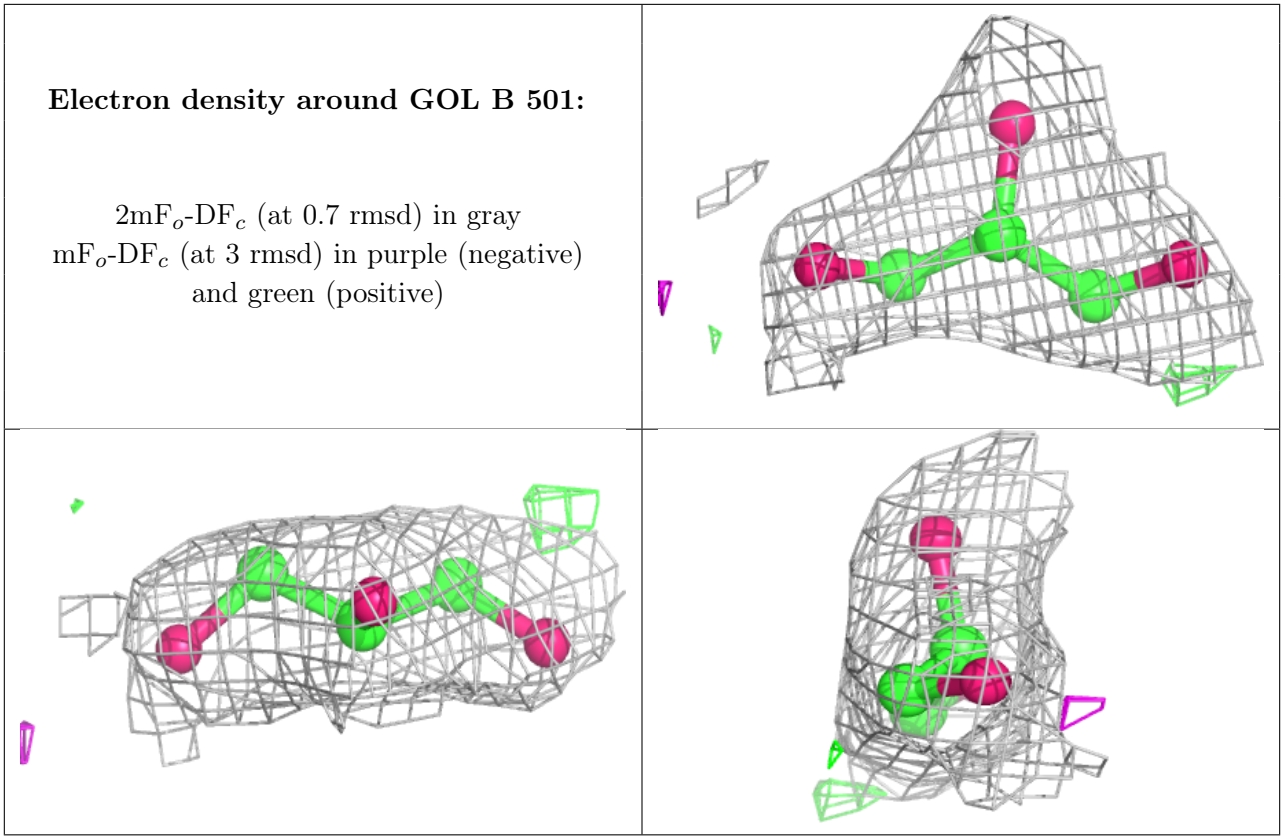






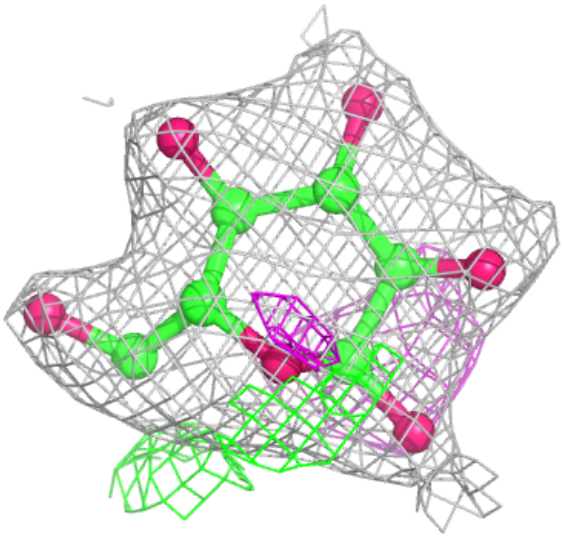
Electron density around GOL B 501:

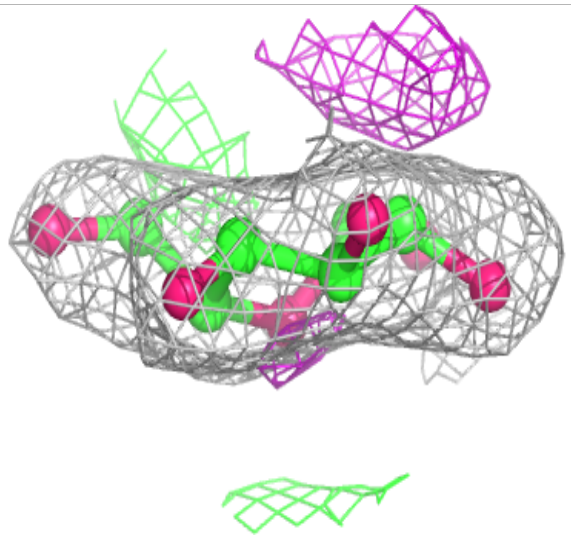
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

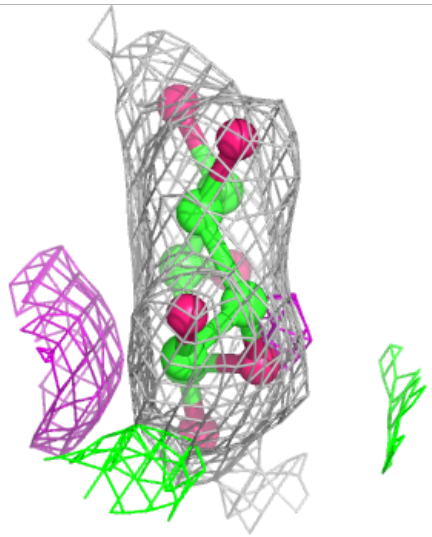


Electron density around GLC D 503:

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

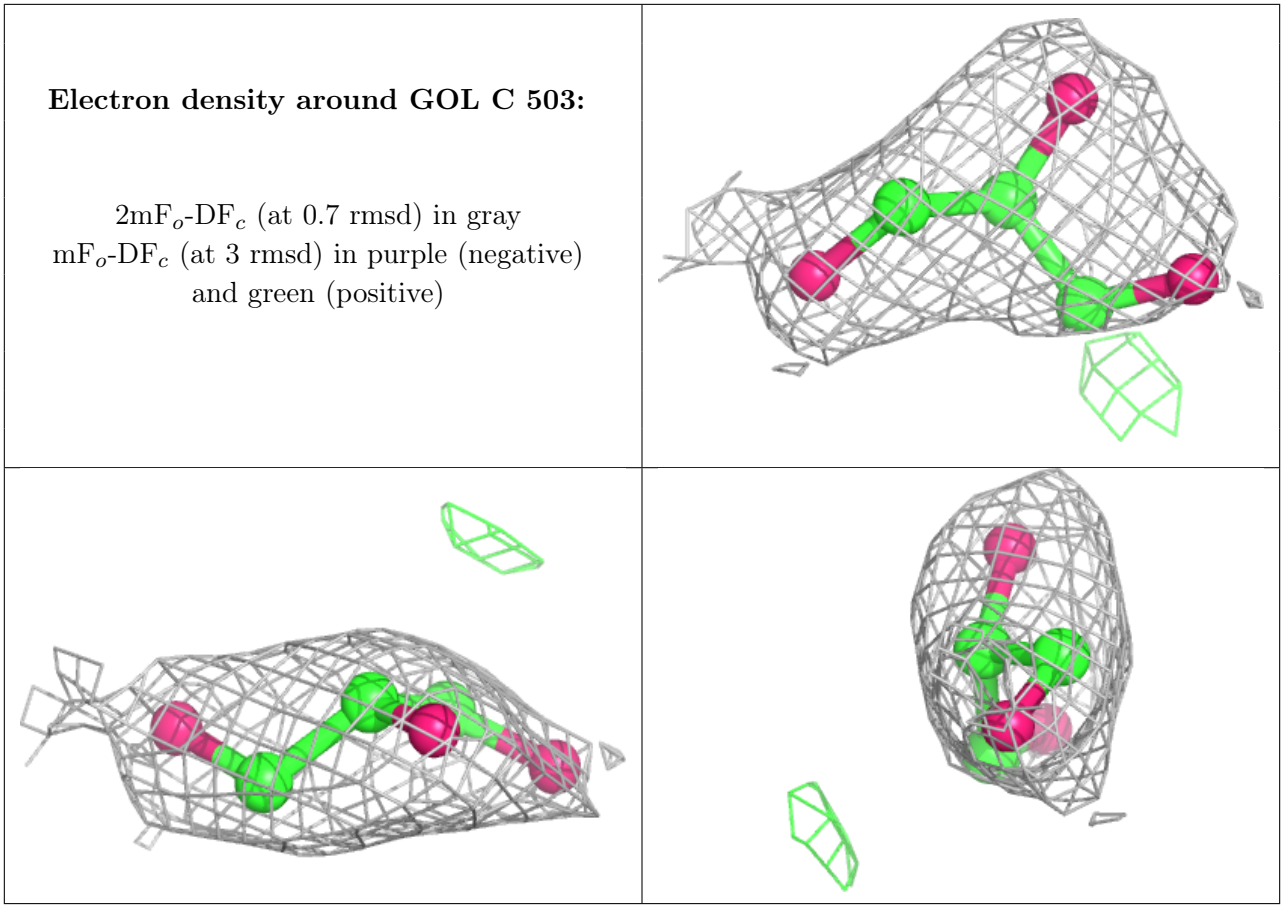






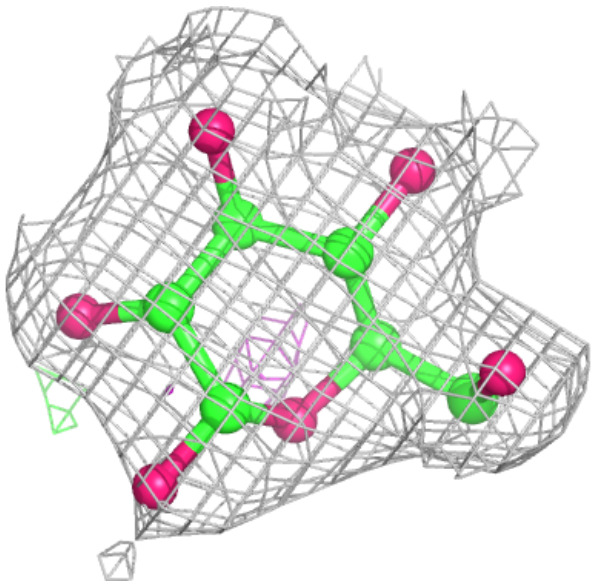
Electron density around GOL C 503:

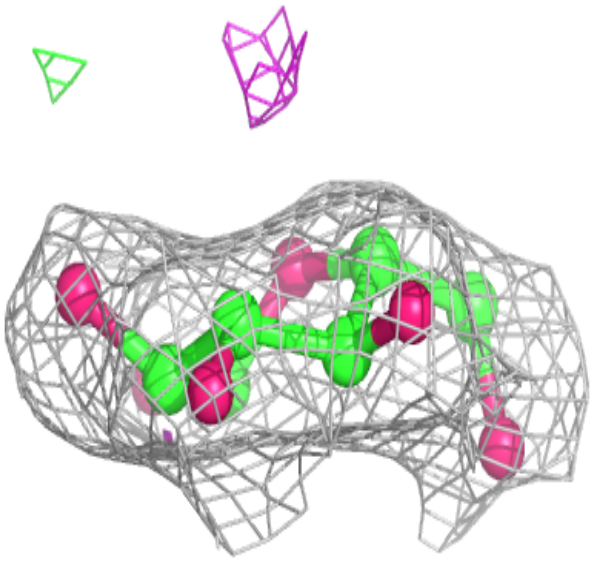
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

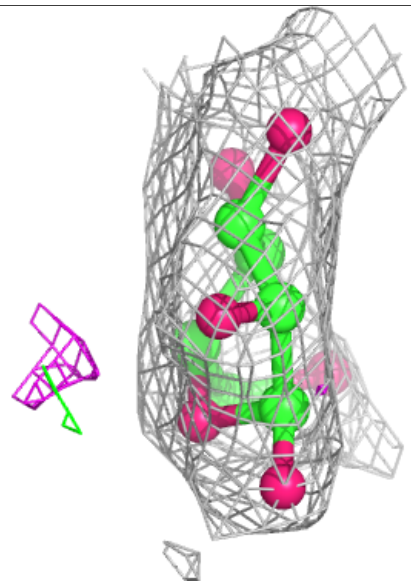


Electron density around GLC B 508:

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

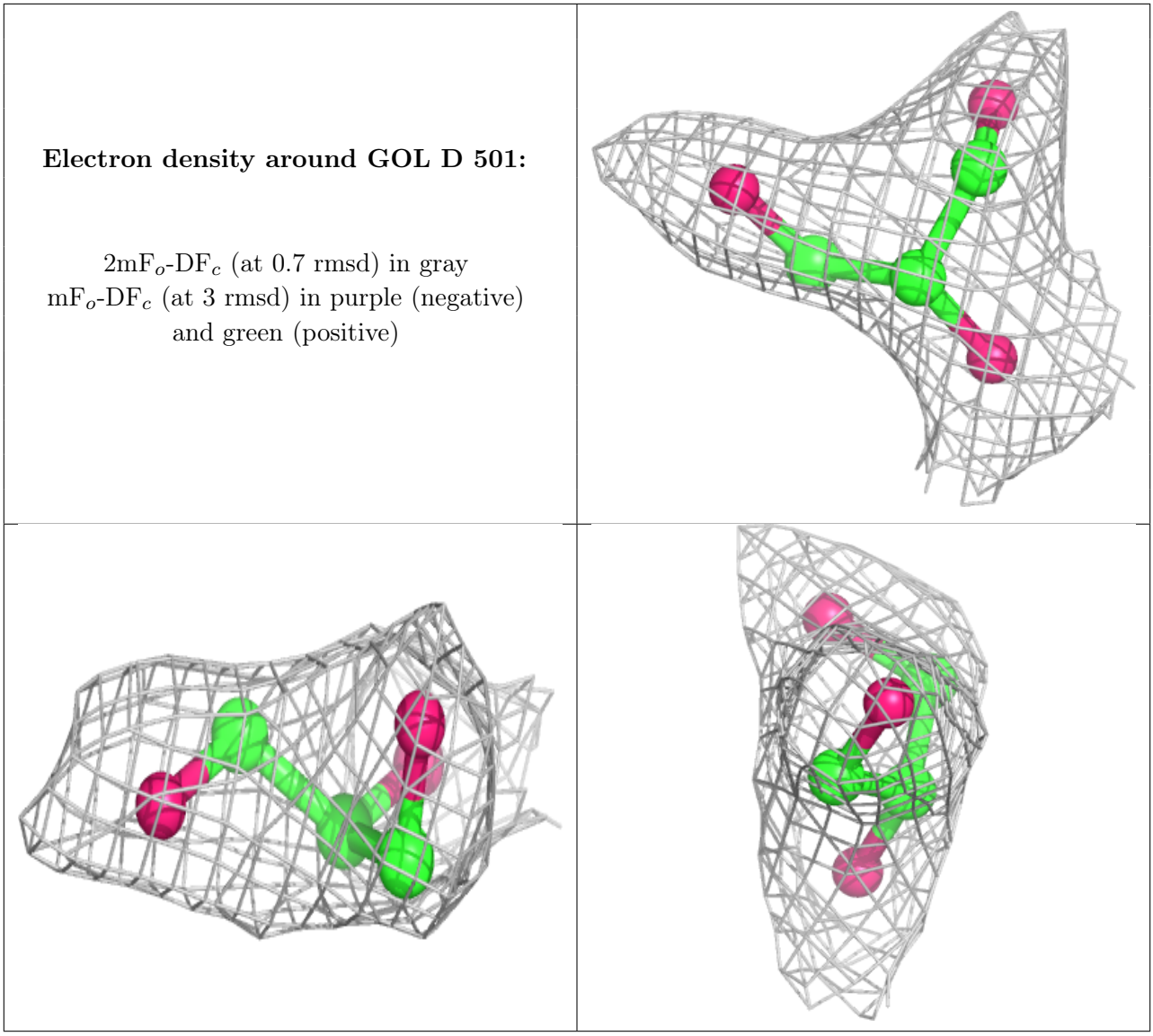






Electron density around GOL D 501:

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



6.5 Other polymers

There are no such residues in this entry.