Full wwPDB X-ray Structure Validation Report ⓘ

Dec 13, 2023 – 12:10 am GMT

PDB ID	:	2Y2X
Title	:	Crystal Structure of Pseudomonas Aeruginosa OpdK with Vanillate
Authors	:	Touw, D.S.; Vijayaraghavan, J.; Vandenberg, B.
Deposited on	:	2010-12-16
Resolution	:	1.65 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:

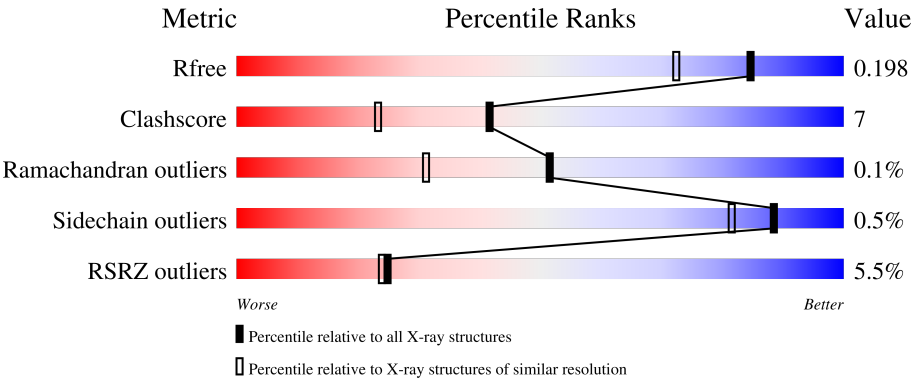
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 1.65 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1827 (1.66-1.66)
Clashscore	141614	1931 (1.66-1.66)
Ramachandran outliers	138981	1891 (1.66-1.66)
Sidechain outliers	138945	1891 (1.66-1.66)
RSRZ outliers	127900	1791 (1.66-1.66)

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	390	5% 87% 8% .
1	B	390	6% 87% 9% .

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	C8E	B	1405	-	-	-	X

2 Entry composition (i)

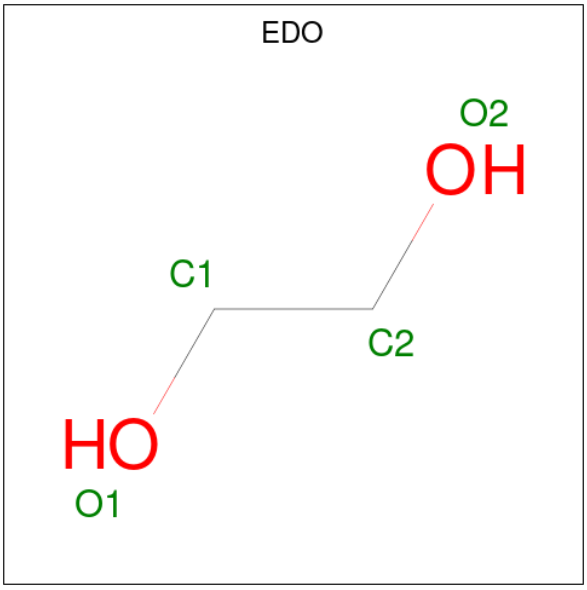
There are 5 unique types of molecules in this entry. The entry contains 6878 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 VANILLATE PORIN OPDK.

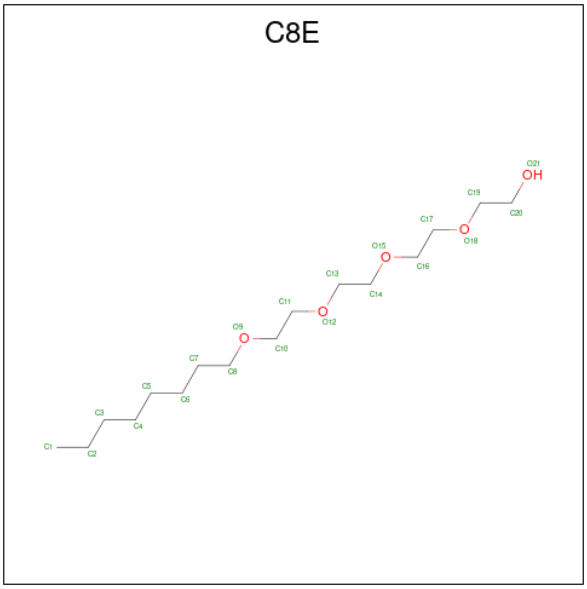
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	374	Total	C	N	O	S	16	2	0
			2937	1854	524	553	6			
1	B	378	Total	C	N	O	S	23	1	0
			2962	1866	531	560	5			

- Molecule 2 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: $C_2H_6O_2$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	C	O	0	0
			4	2	2		
2	B	1	Total	C	O	0	0
			4	2	2		
2	B	1	Total	C	O	0	0
			4	2	2		
2	B	1	Total	C	O	0	0
			4	2	2		

- Molecule 3 is (HYDROXYETHYLOXY)TRI(ETHYLOXY)OCTANE (three-letter code: C8E) (formula: $C_{16}H_{34}O_5$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total C O 9 8 1	0	0
3	A	1	Total C 7 7	0	0
3	A	1	Total C 6 6	0	0
3	A	1	Total C O 9 6 3	0	0
3	A	1	Total C O 14 12 2	0	0
3	A	1	Total C O 16 12 4	0	0
3	A	1	Total C O 5 3 2	0	0
3	A	1	Total C O 9 8 1	0	0
3	A	1	Total C O 7 4 3	0	0
3	A	1	Total C O 9 6 3	0	0
3	A	1	Total C O 6 4 2	0	0
3	A	1	Total C O 9 6 3	0	0

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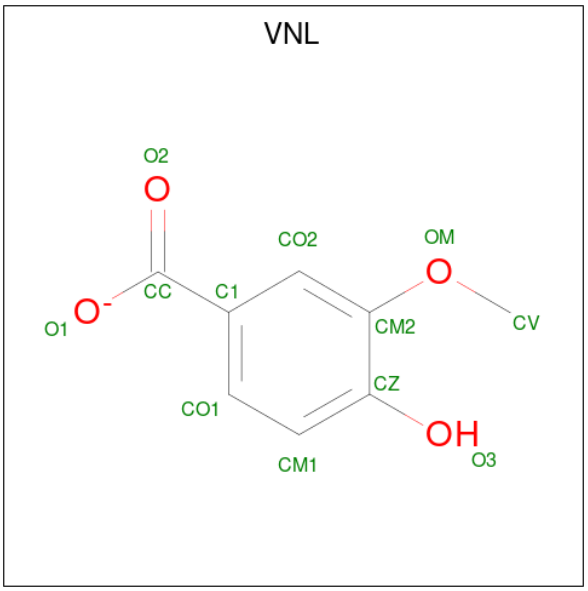
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total C O 9 8 1	0	0
3	A	1	Total C O 15 10 5	0	0
3	B	1	Total C 7 7	0	0
3	B	1	Total C 5 5	0	0
3	B	1	Total C O 11 9 2	0	0
3	B	1	Total C 6 6	0	0
3	B	1	Total C O 12 8 4	0	0
3	B	1	Total C O 8 5 3	0	0
3	B	1	Total C 7 7	0	0
3	B	1	Total C O 10 6 4	0	0
3	B	1	Total C O 11 10 1	0	0
3	B	1	Total C 6 6	0	0
3	B	1	Total C O 14 12 2	0	0
3	B	1	Total C O 5 3 2	0	0
3	B	1	Total C 4 4	0	0
3	B	1	Total C 7 7	0	0
3	B	1	Total C 5 5	0	0

- Molecule 4 is 4-HYDROXY-3-METHOXYBENZOATE (three-letter code: VNL) (formula: $C_8H_7O_4$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total C O 12 8 4	0	0
4	A	1	Total C O 12 8 4	0	0
4	B	1	Total C O 12 8 4	0	0
4	B	1	Total C O 12 8 4	0	0

- Molecule 5 is water.

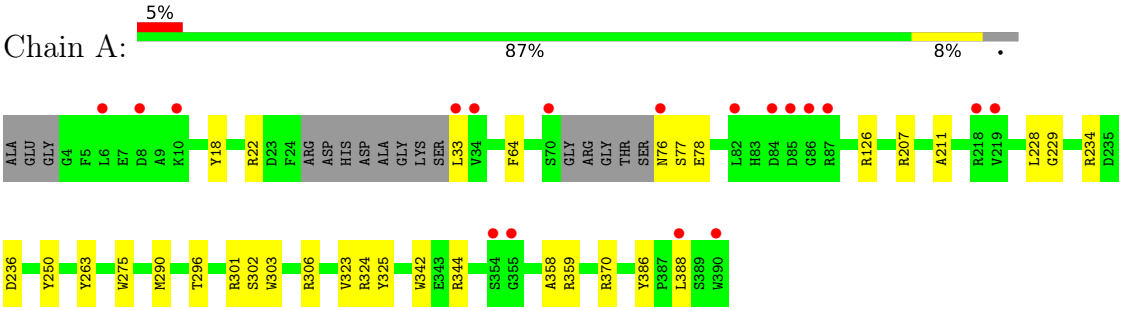
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	335	Total O 335 335	0	0
5	B	332	Total O 332 332	0	0

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.

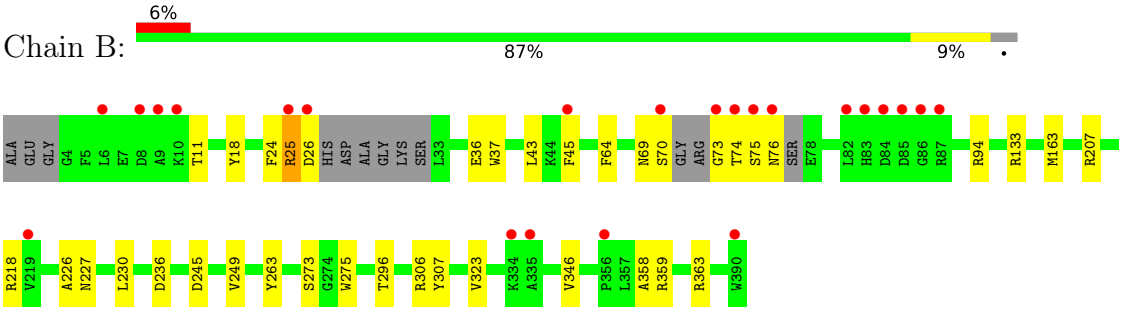
• Molecule 1: VANILLATE PORIN OPDK

Chain A:



• Molecule 1: VANILLATE PORIN OPDK

Chain B:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	82.14Å 96.84Å 121.56Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	19.91 – 1.65 37.81 – 1.65	Depositor EDS
% Data completeness (in resolution range)	96.7 (19.91-1.65) 96.2 (37.81-1.65)	Depositor EDS
R_{merge}	0.06	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.87 (at 1.65Å)	Xtriage
Refinement program	PHENIX (PHENIX.REFINE)	Depositor
R, R_{free}	0.180 , 0.201 0.175 , 0.198	Depositor DCC
R_{free} test set	2000 reflections (1.71%)	wwPDB-VP
Wilson B-factor (Å^2)	18.6	Xtriage
Anisotropy	0.221	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.41 , 65.9	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	6878	wwPDB-VP
Average B, all atoms (Å^2)	27.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 34.39 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 6.8729e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

[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: EDO, C8E, VNL

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
1	A	0.34	0/3011	0.54	0/4072
1	B	0.34	0/3031	0.54	0/4096
All	All	0.34	0/6042	0.54	0/8168

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	2937	0	2812	44	0
1	B	2962	0	2828	36	0
2	A	4	0	6	0	0
2	B	12	0	18	1	0
3	A	130	0	181	20	0
3	B	118	0	182	12	0
4	A	24	0	14	0	0
4	B	24	0	14	0	0
5	A	335	0	0	3	0
5	B	332	0	0	6	0
All	All	6878	0	6055	85	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 (85) 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:A:303:TRP:HD1	3:A:1405:C8E:H201	1.16	1.05
1:A:303:TRP:CD1	3:A:1405:C8E:H201	1.98	0.98
1:A:301:ARG:HD3	3:A:1405:C8E:H161	1.54	0.89
1:A:76:ASN:ND2	1:A:126:ARG:HH21	1.73	0.86
1:A:301:ARG:HG2	3:A:1405:C8E:H191	1.57	0.85
1:A:76:ASN:HB3	1:A:77:SER:HA	1.60	0.84
1:B:163:MET:HB2	3:B:1405:C8E:H112	1.63	0.77
1:A:76:ASN:HD21	1:A:126:ARG:HH21	1.33	0.75
1:B:64:PHE:HB2	3:B:1396:C8E:H81	1.70	0.74
1:B:26:ASP:HB3	5:B:2320:HOH:O	1.92	0.70
1:B:75:SER:C	1:B:76:ASN:N	2.47	0.68
1:A:22:ARG:NH2	1:A:76:ASN:HD22	1.92	0.67
1:A:22:ARG:CZ	1:A:76:ASN:HD22	2.07	0.67
1:A:76:ASN:HD21	1:A:126:ARG:NH2	1.93	0.66
1:A:207:ARG:HD3	1:A:234:ARG:NH1	2.10	0.66
3:A:1394:C8E:H11	3:A:1404:C8E:H52	1.77	0.66
1:A:207:ARG:HD3	1:A:234:ARG:HH12	1.61	0.64
1:A:358:ALA:O	1:A:359:ARG:HB2	1.98	0.64
1:A:22:ARG:NH2	1:A:76:ASN:ND2	2.47	0.63
1:B:94:ARG:HH12	3:B:1405:C8E:H101	1.65	0.62
1:B:230:LEU:HD13	1:B:249:VAL:HG12	1.82	0.61
1:A:344:ARG:CD	3:A:1404:C8E:H51	2.31	0.60
1:A:301:ARG:CD	3:A:1405:C8E:H161	2.30	0.60
1:B:94:ARG:HH22	3:B:1405:C8E:C8	2.14	0.59
1:B:323[A]:VAL:HG13	1:B:346:VAL:HG22	1.87	0.57
1:B:11:THR:HG23	1:B:45:PHE:CE1	2.40	0.57
1:B:43:LEU:HD21	1:B:45:PHE:CZ	2.40	0.56
1:A:76:ASN:ND2	1:A:126:ARG:NH2	2.50	0.56
1:B:275:TRP:HB3	1:B:296:THR:HB	1.87	0.56
1:A:344:ARG:HD3	3:A:1404:C8E:H51	1.87	0.54
1:A:76:ASN:HA	1:A:78:GLU:HG3	1.91	0.52
1:B:26:ASP:O	1:B:26:ASP:OD1	2.27	0.52
1:B:227:ASN:HB2	2:B:1391:EDO:H12	1.91	0.52
1:B:245:ASP:C	5:B:2222:HOH:O	2.47	0.52
1:B:307:TYR:CE2	3:B:1402:C8E:H82	2.44	0.52
1:A:275:TRP:HB3	1:A:296:THR:HB	1.92	0.52
1:A:301:ARG:CG	3:A:1405:C8E:H191	2.36	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:342:TRP:CZ2	1:A:370:ARG:HG3	2.46	0.51
3:A:1394:C8E:H11	3:A:1404:C8E:C5	2.39	0.51
1:B:24:PHE:O	1:B:25:ARG:HB2	2.11	0.51
1:A:386:TYR:HE2	1:A:388:LEU:HD21	1.75	0.51
1:A:207:ARG:HG3	1:A:236:ASP:HB2	1.93	0.50
1:B:363:ARG:HD3	5:B:2306:HOH:O	2.11	0.49
1:B:163:MET:H	3:B:1405:C8E:C11	2.25	0.49
1:A:344:ARG:HD2	3:A:1404:C8E:H51	1.94	0.49
1:A:76:ASN:CB	1:A:77:SER:HA	2.39	0.49
1:B:163:MET:H	3:B:1405:C8E:H112	1.78	0.49
1:A:207:ARG:HD3	1:A:234:ARG:CZ	2.43	0.49
1:A:207:ARG:HD3	1:A:234:ARG:NH2	2.28	0.48
1:A:302:SER:HA	3:A:1405:C8E:H202	1.95	0.48
1:B:263:TYR:HB2	1:B:306:ARG:HB3	1.96	0.48
1:A:76:ASN:CG	1:A:126:ARG:HH21	2.17	0.47
1:B:37:TRP:HB3	1:B:69:ASN:HB3	1.96	0.47
1:A:211:ALA:HB1	3:A:1392:C8E:H13	1.97	0.47
1:B:358:ALA:O	1:B:359:ARG:HB2	2.14	0.47
1:A:263:TYR:HB2	1:A:306:ARG:HB3	1.97	0.47
1:B:226:ALA:HB2	3:B:1407:C8E:H52	1.95	0.46
1:B:307:TYR:CZ	3:B:1402:C8E:H61	2.50	0.46
1:B:273:SER:N	5:B:2222:HOH:O	2.26	0.45
1:B:11:THR:HG23	1:B:45:PHE:CD1	2.51	0.45
1:A:344:ARG:HD2	3:A:1404:C8E:H32	1.98	0.45
3:B:1399:C8E:H132	5:B:2100:HOH:O	2.15	0.45
1:A:323:VAL:CG2	3:A:1394:C8E:H21	2.47	0.45
1:B:11:THR:CG2	1:B:45:PHE:HE1	2.29	0.45
1:A:325:TYR:HB2	3:A:1394:C8E:H12	1.98	0.45
1:B:207:ARG:HG3	1:B:236:ASP:HB2	1.99	0.45
1:A:234:ARG:HD2	5:A:2202:HOH:O	2.17	0.44
1:B:163:MET:CB	3:B:1405:C8E:H112	2.42	0.43
1:A:64:PHE:HB2	3:A:1399:C8E:H42	2.00	0.43
1:B:25:ARG:O	1:B:26:ASP:C	2.57	0.43
1:A:207:ARG:HD3	1:A:234:ARG:HH22	1.84	0.42
1:B:133:ARG:NH1	5:B:2117:HOH:O	2.51	0.42
1:A:33:LEU:N	5:A:2019:HOH:O	2.52	0.42
1:A:76:ASN:HB3	1:A:77:SER:CA	2.39	0.42
1:A:229:GLY:HA3	1:A:250:TYR:CE2	2.55	0.41
1:A:290:MET:CE	1:A:324:ARG:HG3	2.50	0.41
1:B:36:GLU:OE2	1:B:76:ASN:N	2.53	0.41
3:B:1400:C8E:H12	3:B:1400:C8E:H42	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:24:PHE:O	1:B:25:ARG:CB	2.68	0.41
1:A:344:ARG:HH11	3:A:1404:C8E:H62	1.85	0.41
1:B:73:GLY:HA2	1:B:74:THR:HA	1.72	0.41
1:A:228:LEU:HB3	3:A:1392:C8E:H61	2.03	0.41
3:A:1396:C8E:H81	3:A:1397:C8E:H12	2.03	0.41
5:A:2123:HOH:O	1:B:218:ARG:HD3	2.20	0.40
1:B:11:THR:HG23	1:B:45:PHE:HE1	1.83	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	370/390 (95%)	361 (98%)	9 (2%)	0	100 100
1	B	370/390 (95%)	360 (97%)	9 (2%)	1 (0%)	41 22
All	All	740/780 (95%)	721 (97%)	18 (2%)	1 (0%)	51 31

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	25	ARG

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	301/309 (97%)	300 (100%)	1 (0%)	92 88
1	B	303/309 (98%)	301 (99%)	2 (1%)	84 73
All	All	604/618 (98%)	601 (100%)	3 (0%)	88 81

All (3) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	18	TYR
1	B	18	TYR
1	B	70	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	76	ASN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

37 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	$\#\|Z\|>2$
4	VNL	A	1407	-	12,12,12	1.73	3 (25%)	16,16,16	1.31	1 (6%)
3	C8E	B	1399	-	7,7,20	0.37	0	6,6,19	0.18	0
3	C8E	B	1395	-	4,4,20	0.25	0	3,3,19	0.41	0
3	C8E	A	1395	-	8,8,20	0.38	0	7,7,19	0.19	0
3	C8E	B	1406	-	3,3,20	0.35	0	2,2,19	0.64	0
2	EDO	B	1393	-	3,3,3	0.45	0	2,2,2	0.33	0
3	C8E	A	1393	-	6,6,20	0.28	0	5,5,19	0.43	0
3	C8E	A	1402	-	5,5,20	0.44	0	4,4,19	0.35	0
3	C8E	B	1400	-	6,6,20	0.28	0	5,5,19	0.38	0
3	C8E	B	1408	-	4,4,20	0.29	0	3,3,19	0.37	0
3	C8E	A	1400	-	6,6,20	0.38	0	5,5,19	0.29	0
3	C8E	A	1392	-	8,8,20	0.22	0	7,7,19	0.57	0
3	C8E	A	1399	-	8,8,20	0.26	0	7,7,19	0.42	0
3	C8E	A	1405	-	14,14,20	0.47	0	13,13,19	0.18	0
3	C8E	B	1407	-	6,6,20	0.27	0	5,5,19	0.44	0
3	C8E	A	1404	-	8,8,20	0.25	0	7,7,19	0.52	0
3	C8E	A	1401	-	8,8,20	0.45	0	7,7,19	0.23	0
3	C8E	A	1394	-	5,5,20	0.28	0	4,4,19	0.40	0
4	VNL	B	1409	-	12,12,12	1.69	3 (25%)	16,16,16	1.45	3 (18%)
2	EDO	B	1391	-	3,3,3	0.53	0	2,2,2	0.26	0
3	C8E	B	1404	-	13,13,20	0.39	0	12,12,19	0.32	0
4	VNL	A	1406	-	12,12,12	1.72	3 (25%)	16,16,16	1.38	2 (12%)
3	C8E	B	1401	-	9,9,20	0.39	0	8,8,19	0.26	0
3	C8E	A	1396	-	13,13,20	0.37	0	12,12,19	0.43	0
3	C8E	B	1396	-	10,10,20	0.29	0	9,9,19	0.59	0
2	EDO	B	1392	-	3,3,3	0.45	0	2,2,2	0.37	0
3	C8E	A	1403	-	8,8,20	0.46	0	7,7,19	0.25	0
3	C8E	B	1405	-	4,4,20	0.33	0	3,3,19	0.28	0
3	C8E	B	1398	-	11,11,20	0.46	0	10,10,19	0.28	0
3	C8E	B	1403	-	5,5,20	0.28	0	4,4,19	0.40	0
3	C8E	A	1397	-	14,14,20	0.37	0	12,12,19	0.36	0
3	C8E	B	1394	-	6,6,20	0.26	0	5,5,19	0.46	0
4	VNL	B	1410	-	12,12,12	1.56	2 (16%)	16,16,16	1.20	1 (6%)
3	C8E	B	1397	-	5,5,20	0.26	0	4,4,19	0.36	0
3	C8E	A	1398	-	4,4,20	0.33	0	3,3,19	0.41	0
2	EDO	A	1391	-	3,3,3	0.43	0	2,2,2	0.34	0
3	C8E	B	1402	-	10,10,20	0.33	0	9,9,19	0.49	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
4	VNL	A	1407	-	-	0/6/6/6	0/1/1/1
3	C8E	B	1399	-	-	4/5/5/18	-
3	C8E	B	1395	-	-	2/2/2/18	-
3	C8E	A	1395	-	-	6/6/6/18	-
3	C8E	B	1406	-	-	0/1/1/18	-
2	EDO	B	1393	-	-	0/1/1/1	-
3	C8E	A	1393	-	-	3/4/4/18	-
3	C8E	A	1402	-	-	3/3/3/18	-
3	C8E	B	1400	-	-	4/4/4/18	-
3	C8E	B	1408	-	-	2/2/2/18	-
3	C8E	A	1400	-	-	2/4/4/18	-
3	C8E	A	1392	-	-	3/6/6/18	-
3	C8E	A	1399	-	-	4/6/6/18	-
3	C8E	A	1405	-	-	7/12/12/18	-
3	C8E	B	1407	-	-	3/4/4/18	-
3	C8E	A	1404	-	-	5/6/6/18	-
3	C8E	A	1401	-	-	5/6/6/18	-
3	C8E	A	1394	-	-	3/3/3/18	-
4	VNL	B	1409	-	-	0/6/6/6	0/1/1/1
2	EDO	B	1391	-	-	1/1/1/1	-
3	C8E	B	1404	-	-	7/11/11/18	-
4	VNL	A	1406	-	-	0/6/6/6	0/1/1/1
3	C8E	B	1401	-	-	6/7/7/18	-
3	C8E	A	1396	-	-	7/11/11/18	-
3	C8E	B	1396	-	-	4/8/8/18	-
2	EDO	B	1392	-	-	0/1/1/1	-
3	C8E	A	1403	-	-	4/6/6/18	-
3	C8E	B	1405	-	-	0/2/2/18	-
3	C8E	B	1398	-	-	4/9/9/18	-
3	C8E	B	1403	-	-	3/3/3/18	-
3	C8E	A	1397	-	-	6/10/10/18	-
3	C8E	B	1394	-	-	3/4/4/18	-
4	VNL	B	1410	-	-	0/6/6/6	0/1/1/1
3	C8E	B	1397	-	-	2/3/3/18	-
3	C8E	A	1398	-	-	2/2/2/18	-
2	EDO	A	1391	-	-	0/1/1/1	-
3	C8E	B	1402	-	-	6/8/8/18	-

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	1407	VNL	O3-CZ	4.37	1.45	1.36
4	B	1409	VNL	O3-CZ	4.29	1.45	1.36
4	A	1406	VNL	O3-CZ	4.28	1.45	1.36
4	B	1410	VNL	O3-CZ	3.89	1.44	1.36
4	A	1407	VNL	OM-CV	-3.24	1.33	1.42
4	B	1410	VNL	OM-CV	-3.09	1.33	1.42
4	B	1409	VNL	OM-CV	-3.06	1.33	1.42
4	A	1406	VNL	OM-CV	-3.04	1.33	1.42
4	A	1406	VNL	OM-CM2	2.27	1.40	1.37
4	A	1407	VNL	OM-CM2	2.20	1.40	1.37
4	B	1409	VNL	OM-CM2	2.19	1.40	1.37

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	A	1407	VNL	OM-CM2-CZ	3.35	119.42	114.57
4	B	1409	VNL	OM-CM2-CZ	3.22	119.23	114.57
4	A	1406	VNL	OM-CM2-CZ	2.98	118.88	114.57
4	B	1410	VNL	OM-CM2-CZ	2.66	118.42	114.57
4	B	1409	VNL	CV-OM-CM2	2.57	121.41	117.53
4	A	1406	VNL	O1-CC-C1	2.24	120.66	114.85
4	B	1409	VNL	O1-CC-C1	2.07	120.22	114.85

There are no chirality outliers.

All (111) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	1395	C8E	O9-C10-C11-O12
3	A	1403	C8E	O9-C10-C11-O12
3	A	1405	C8E	O12-C13-C14-O15
3	A	1397	C8E	O15-C16-C17-O18
3	A	1398	C8E	O9-C10-C11-O12
3	A	1402	C8E	O9-C10-C11-O12
3	B	1401	C8E	O9-C10-C11-O12
3	A	1400	C8E	O12-C13-C14-O15
3	B	1401	C8E	O15-C16-C17-O18
3	B	1400	C8E	C1-C2-C3-C4
3	A	1404	C8E	C3-C4-C5-C6
3	A	1397	C8E	C2-C3-C4-C5
3	B	1404	C8E	C3-C4-C5-C6
3	A	1405	C8E	O15-C16-C17-O18

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Mol	Chain	Res	Type	Atoms
3	B	1402	C8E	C3-C4-C5-C6
3	A	1401	C8E	O9-C10-C11-O12
3	A	1403	C8E	O12-C13-C14-O15
3	B	1402	C8E	C6-C7-C8-O9
3	B	1399	C8E	O9-C10-C11-O12
3	A	1396	C8E	C2-C3-C4-C5
3	A	1397	C8E	O9-C10-C11-O12
3	A	1405	C8E	O18-C19-C20-O21
3	A	1393	C8E	C3-C4-C5-C6
3	B	1400	C8E	C2-C3-C4-C5
3	A	1393	C8E	C1-C2-C3-C4
3	A	1404	C8E	C2-C3-C4-C5
3	A	1395	C8E	O12-C13-C14-O15
3	B	1394	C8E	C2-C3-C4-C5
3	B	1396	C8E	C3-C4-C5-C6
3	A	1394	C8E	C2-C3-C4-C5
3	B	1404	C8E	C4-C5-C6-C7
3	B	1407	C8E	C3-C4-C5-C6
3	A	1404	C8E	C5-C6-C7-C8
3	A	1396	C8E	C4-C5-C6-C7
3	A	1392	C8E	C6-C7-C8-O9
3	B	1396	C8E	C4-C5-C6-C7
3	B	1397	C8E	C1-C2-C3-C4
3	A	1399	C8E	C7-C8-O9-C10
3	B	1397	C8E	C3-C4-C5-C6
3	B	1395	C8E	C1-C2-C3-C4
3	B	1407	C8E	C4-C5-C6-C7
3	B	1407	C8E	C1-C2-C3-C4
3	B	1403	C8E	C3-C4-C5-C6
3	B	1408	C8E	C1-C2-C3-C4
3	B	1404	C8E	C14-C13-O12-C11
3	B	1404	C8E	C5-C6-C7-C8
3	A	1401	C8E	C17-C16-O15-C14
3	B	1400	C8E	C4-C5-C6-C7
3	A	1404	C8E	C1-C2-C3-C4
3	A	1396	C8E	C5-C6-C7-C8
3	B	1398	C8E	C20-C19-O18-C17
3	B	1399	C8E	C11-C10-O9-C8
3	A	1392	C8E	C2-C3-C4-C5
3	A	1393	C8E	C4-C5-C6-C7
3	A	1399	C8E	C4-C5-C6-C7
3	A	1402	C8E	C7-C8-O9-C10

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Mol	Chain	Res	Type	Atoms
3	A	1405	C8E	C7-C8-O9-C10
3	A	1399	C8E	C3-C4-C5-C6
3	A	1396	C8E	C14-C13-O12-C11
3	A	1395	C8E	C11-C10-O9-C8
3	A	1397	C8E	C13-C14-O15-C16
3	B	1401	C8E	C13-C14-O15-C16
3	A	1398	C8E	C11-C10-O9-C8
3	B	1399	C8E	C14-C13-O12-C11
3	B	1408	C8E	C2-C3-C4-C5
3	A	1397	C8E	C10-C11-O12-C13
3	B	1395	C8E	C2-C3-C4-C5
3	B	1400	C8E	C3-C4-C5-C6
3	B	1398	C8E	C17-C16-O15-C14
3	A	1392	C8E	C3-C4-C5-C6
3	A	1396	C8E	C6-C7-C8-O9
3	A	1403	C8E	C7-C8-O9-C10
3	B	1398	C8E	O12-C13-C14-O15
3	B	1399	C8E	O12-C13-C14-O15
3	A	1401	C8E	C10-C11-O12-C13
3	B	1398	C8E	C10-C11-O12-C13
3	A	1394	C8E	C3-C4-C5-C6
3	A	1400	C8E	C14-C13-O12-C11
3	A	1405	C8E	C10-C11-O12-C13
3	B	1394	C8E	C4-C5-C6-C7
3	A	1402	C8E	C11-C10-O9-C8
3	A	1395	C8E	C10-C11-O12-C13
3	B	1396	C8E	C5-C6-C7-C8
3	B	1404	C8E	C2-C3-C4-C5
3	A	1397	C8E	C17-C16-O15-C14
3	A	1405	C8E	C13-C14-O15-C16
3	A	1394	C8E	C1-C2-C3-C4
3	A	1399	C8E	C2-C3-C4-C5
3	B	1401	C8E	C17-C16-O15-C14
3	B	1403	C8E	C2-C3-C4-C5
3	B	1402	C8E	C7-C8-O9-C10
3	B	1402	C8E	C2-C3-C4-C5
3	B	1402	C8E	C4-C5-C6-C7
3	A	1405	C8E	C17-C16-O15-C14
3	B	1401	C8E	O12-C13-C14-O15
3	B	1404	C8E	C7-C8-O9-C10
3	B	1396	C8E	C7-C8-O9-C10
3	A	1404	C8E	C4-C5-C6-C7

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Mol	Chain	Res	Type	Atoms
3	A	1396	C8E	C7-C8-O9-C10
3	A	1396	C8E	O9-C10-C11-O12
3	A	1395	C8E	C13-C14-O15-C16
3	A	1403	C8E	C14-C13-O12-C11
3	B	1401	C8E	C10-C11-O12-C13
3	A	1401	C8E	C14-C13-O12-C11
2	B	1391	EDO	O1-C1-C2-O2
3	B	1394	C8E	C1-C2-C3-C4
3	A	1401	C8E	O12-C13-C14-O15
3	B	1402	C8E	C1-C2-C3-C4
3	A	1395	C8E	C14-C13-O12-C11
3	B	1403	C8E	C1-C2-C3-C4
3	B	1404	C8E	O9-C10-C11-O12

There are no ring outliers.

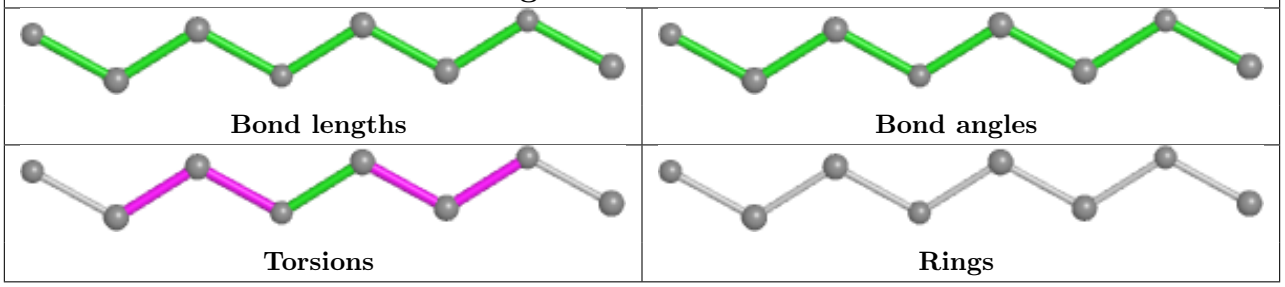
14 monomers are involved in 33 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	1399	C8E	1	0
3	B	1400	C8E	1	0
3	A	1392	C8E	2	0
3	A	1399	C8E	1	0
3	A	1405	C8E	7	0
3	B	1407	C8E	1	0
3	A	1404	C8E	7	0
3	A	1394	C8E	4	0
2	B	1391	EDO	1	0
3	A	1396	C8E	1	0
3	B	1396	C8E	1	0
3	B	1405	C8E	6	0
3	A	1397	C8E	1	0
3	B	1402	C8E	2	0

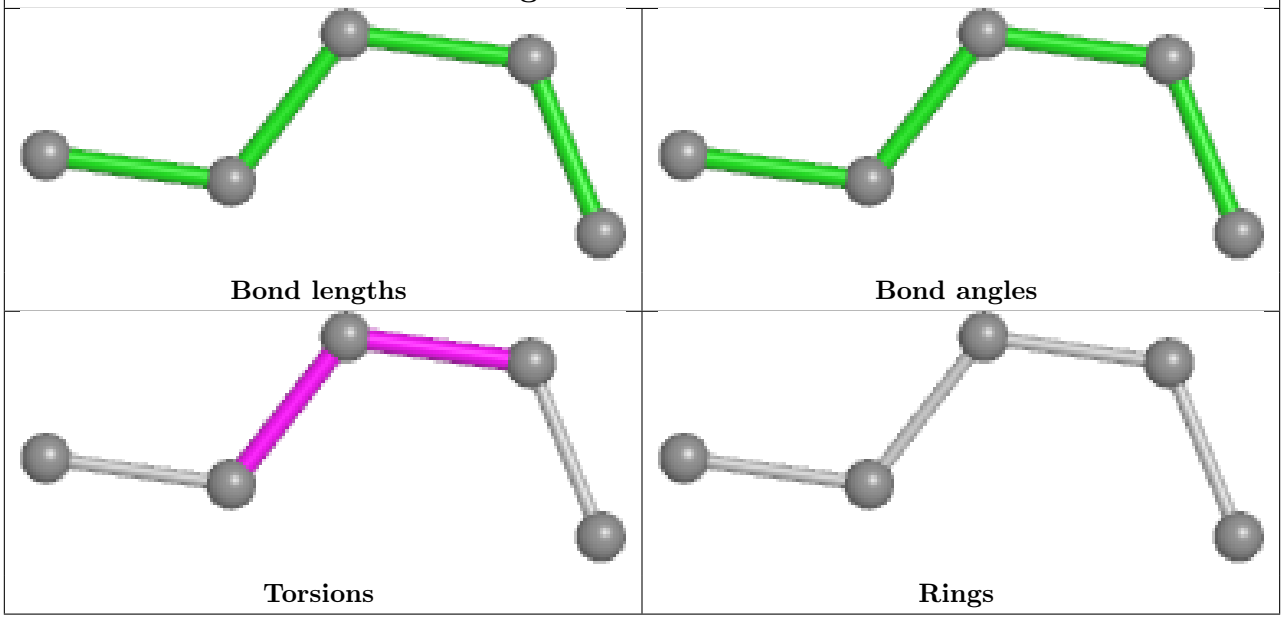
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

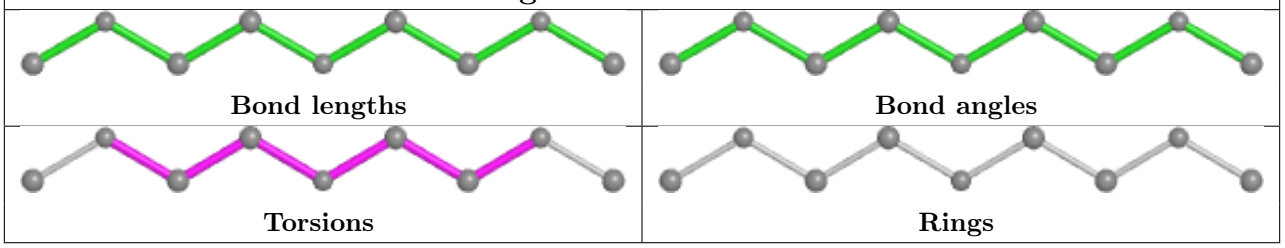
Ligand C8E B 1399



Ligand C8E B 1395



Ligand C8E A 1395



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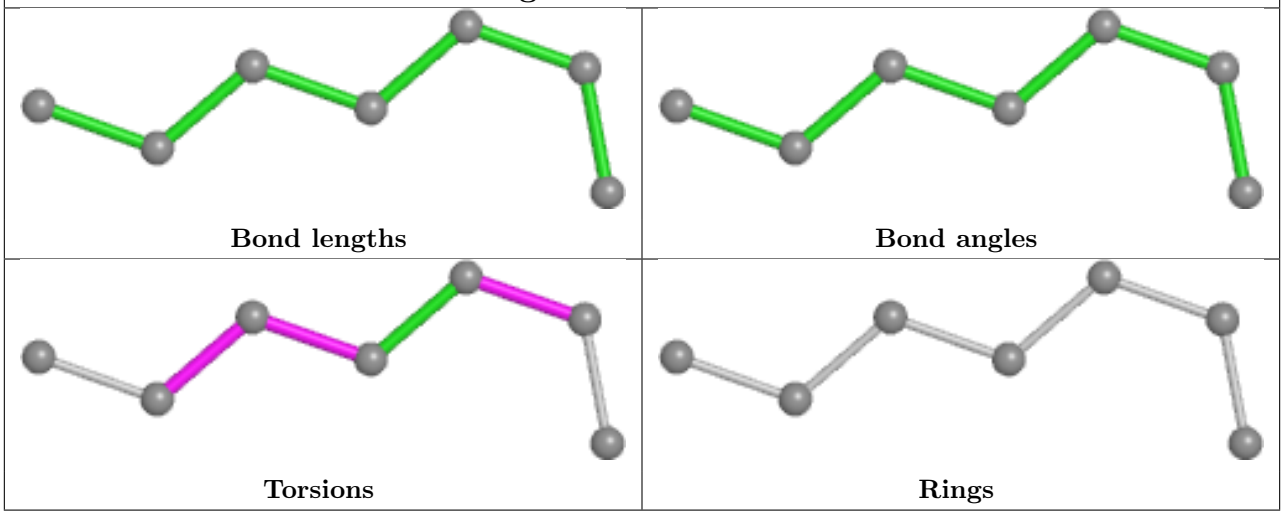

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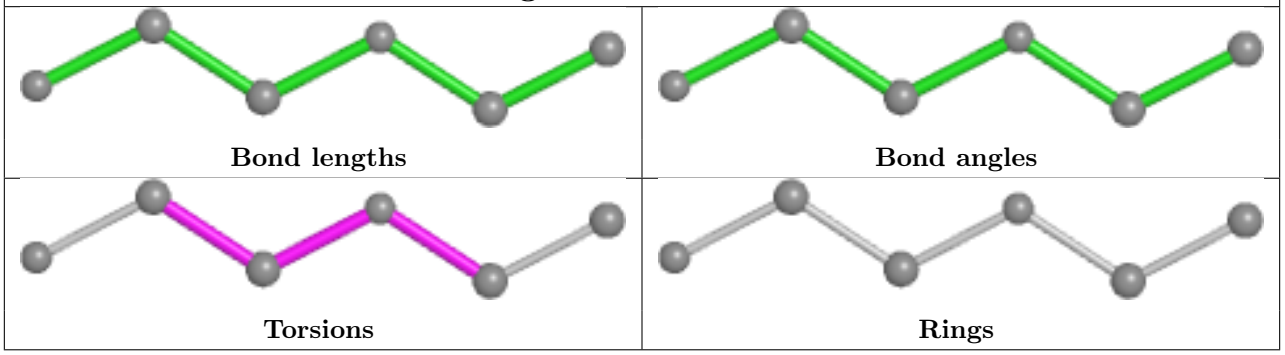

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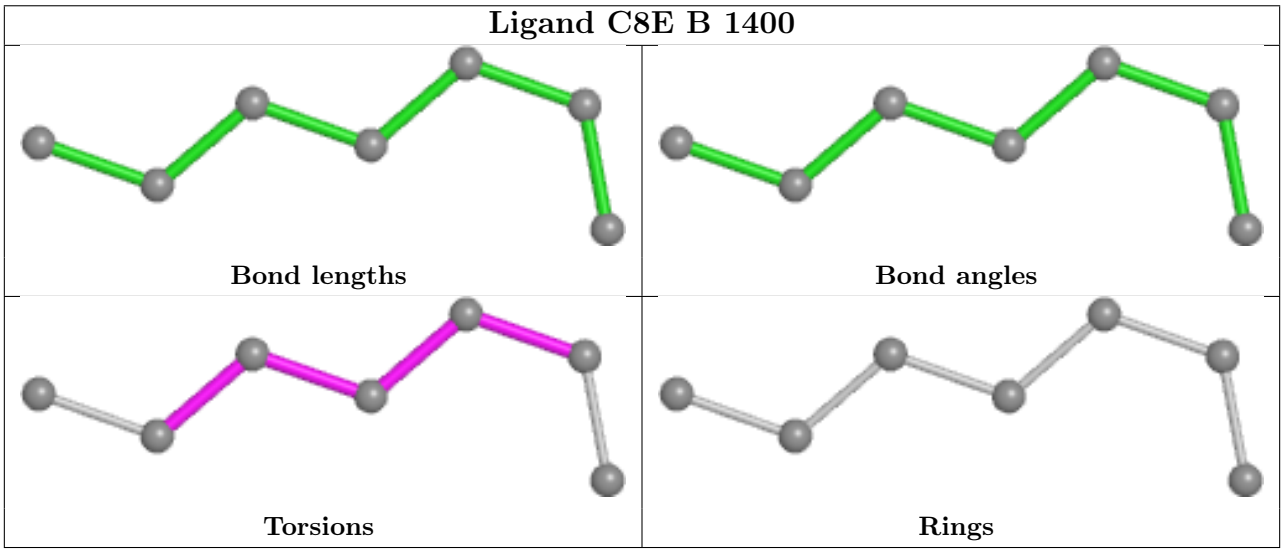

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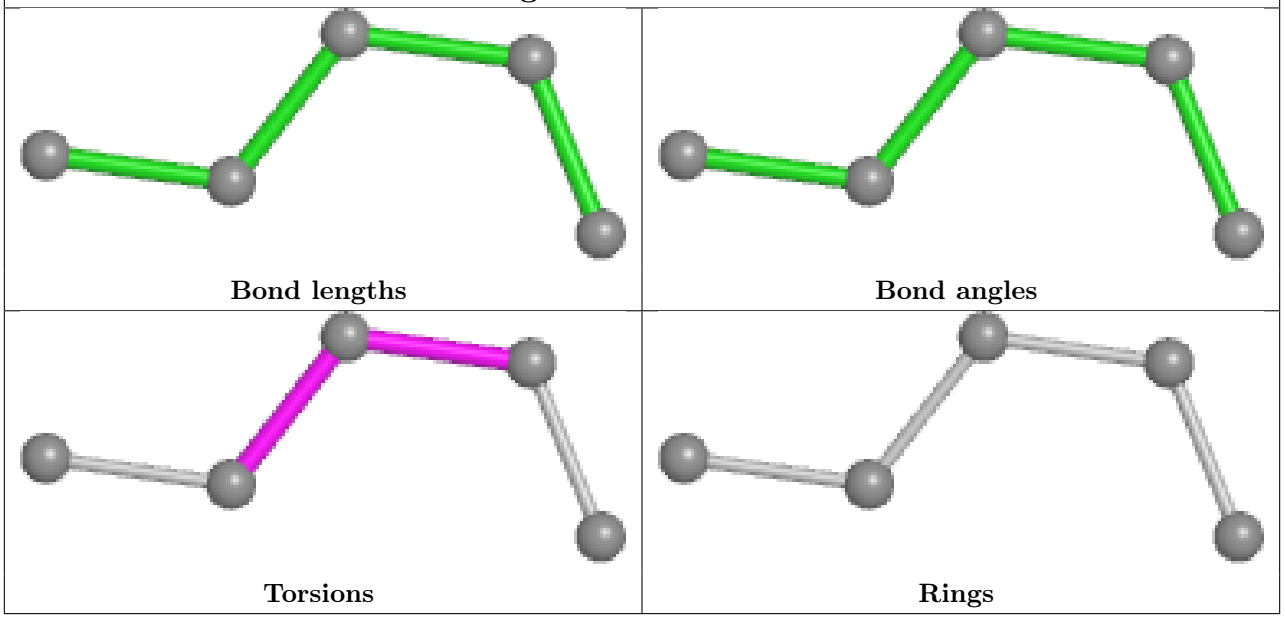

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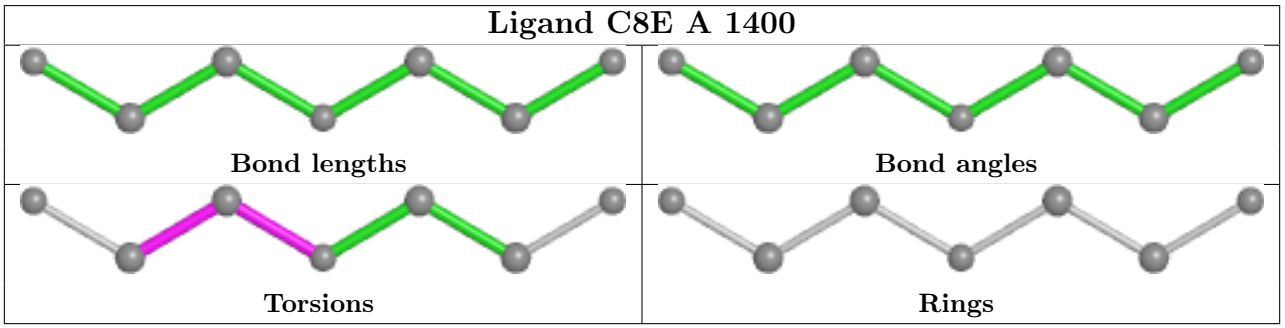

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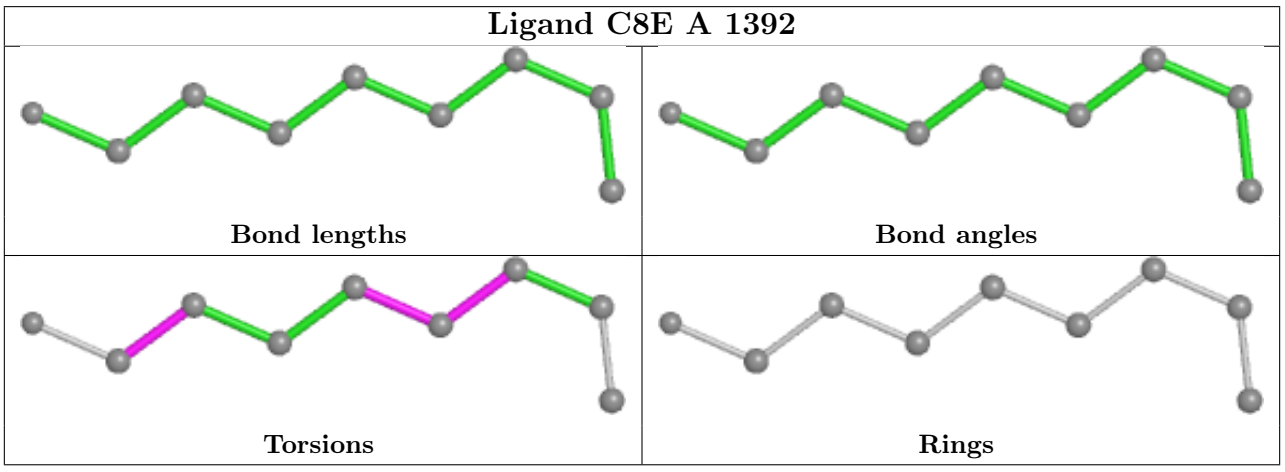

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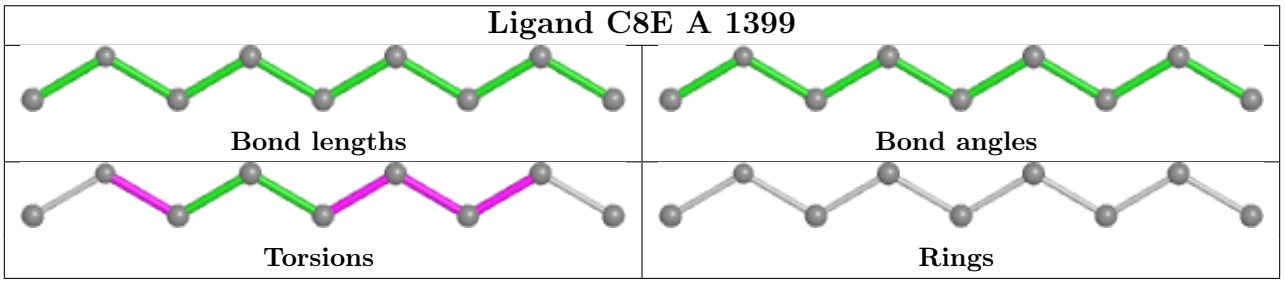

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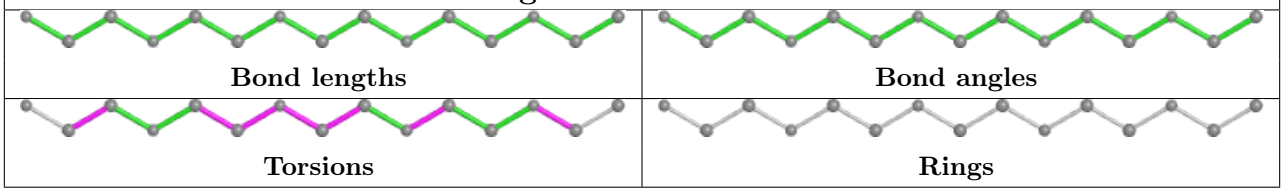

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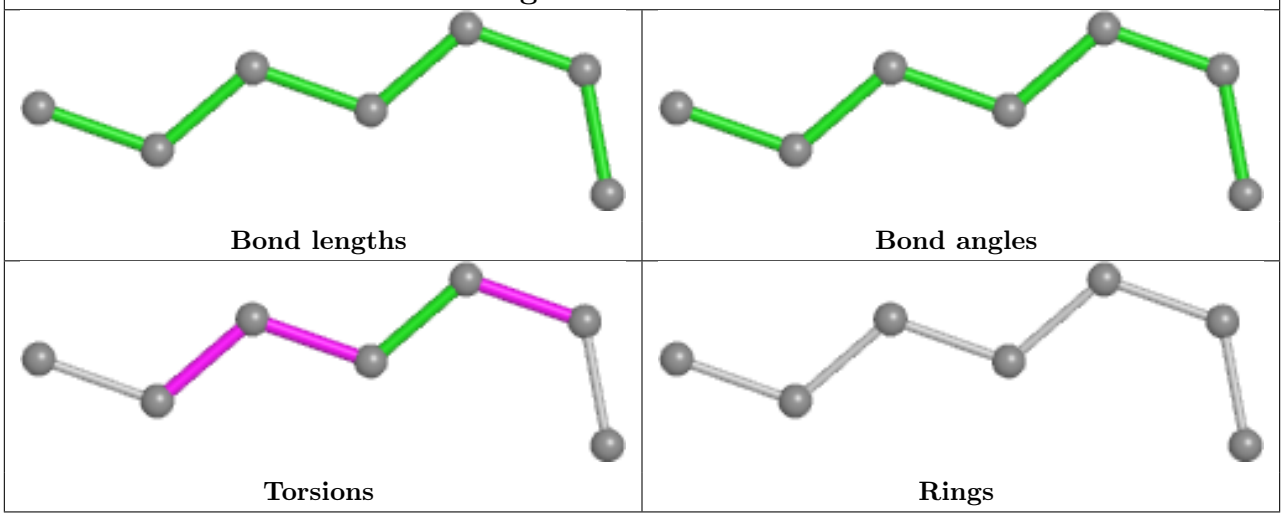
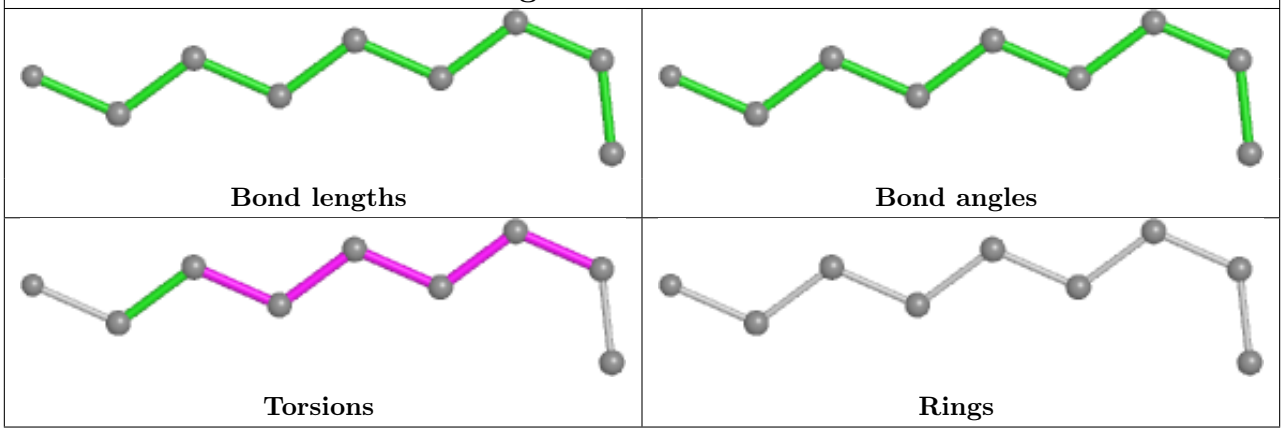
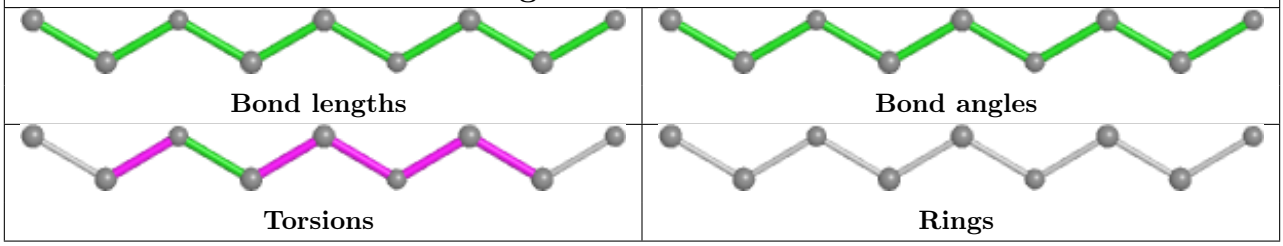


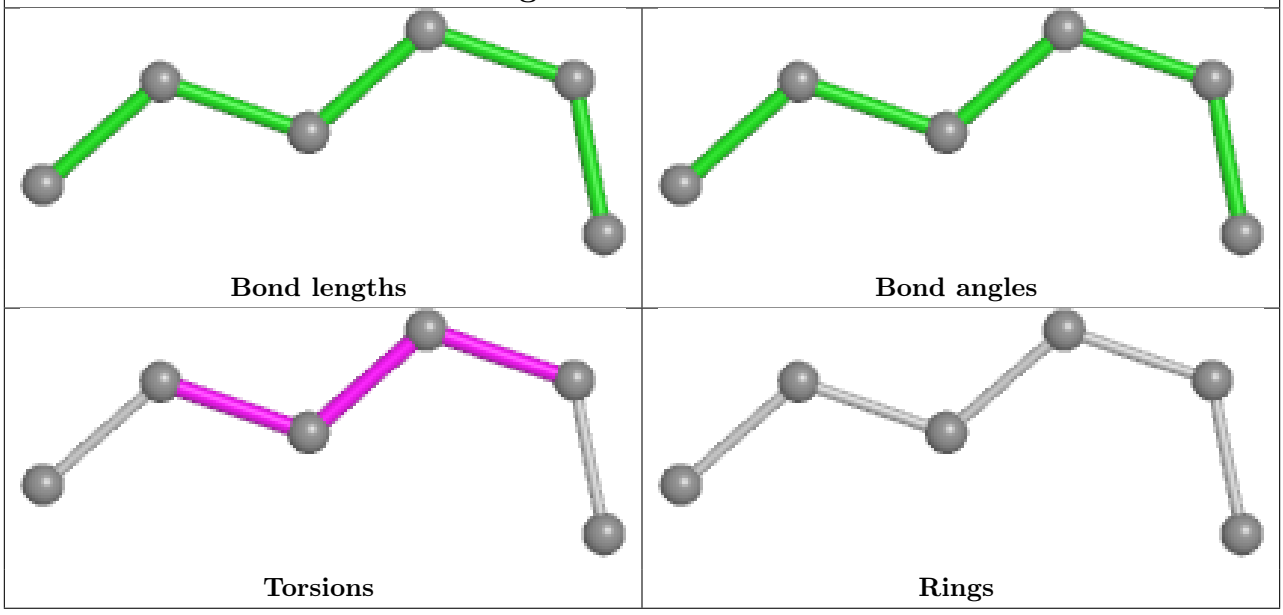
Ligand C8E A 1404



Ligand C8E A 1401



Ligand C8E A 1394



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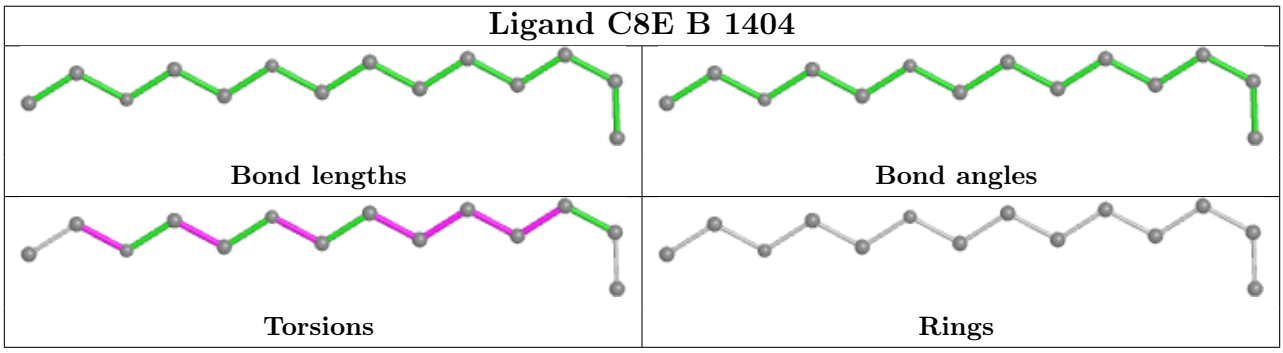
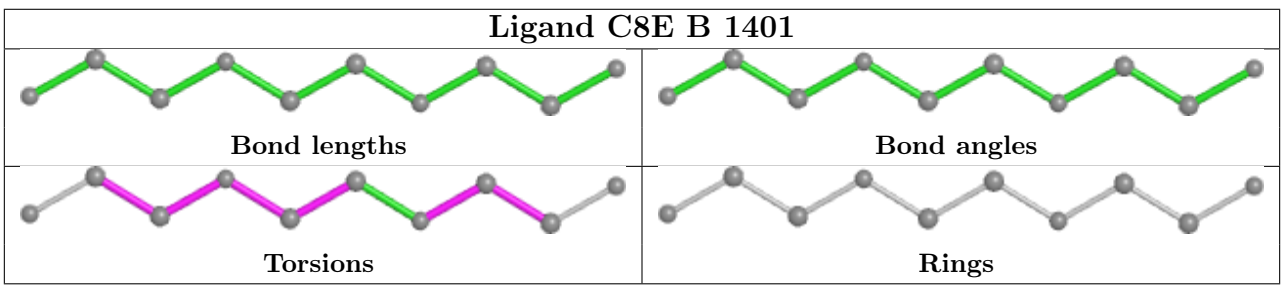
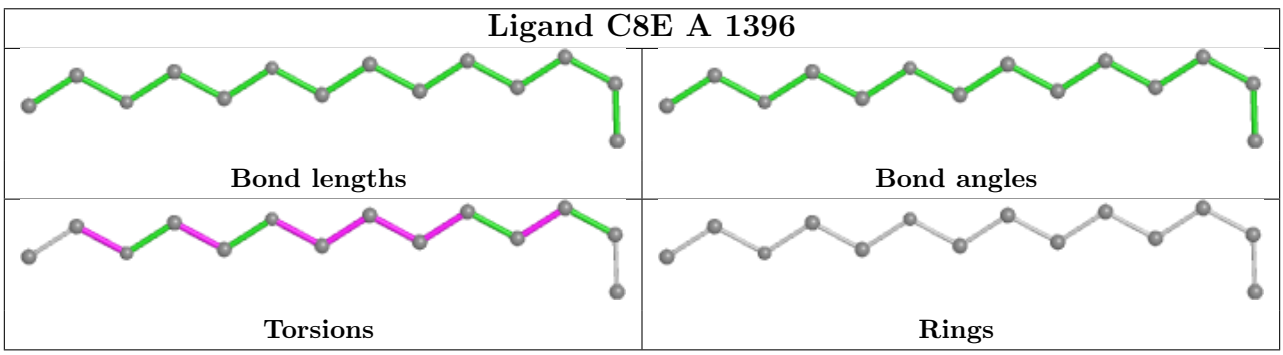


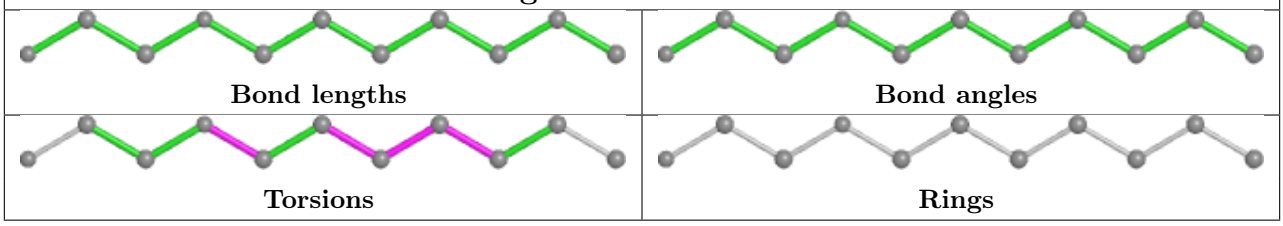
Ligand C8E B 1401



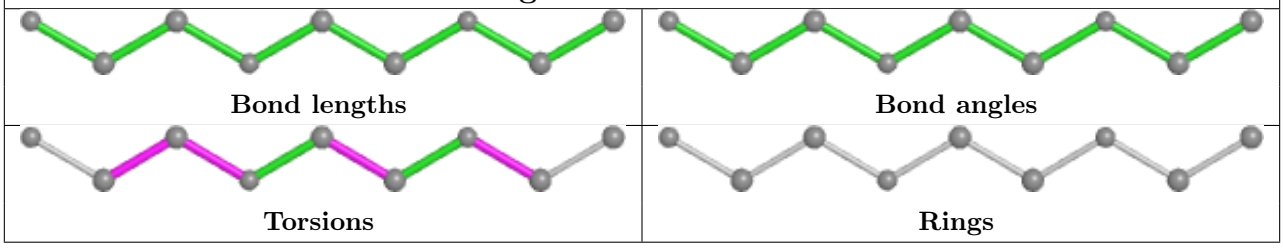
Ligand C8E A 1396



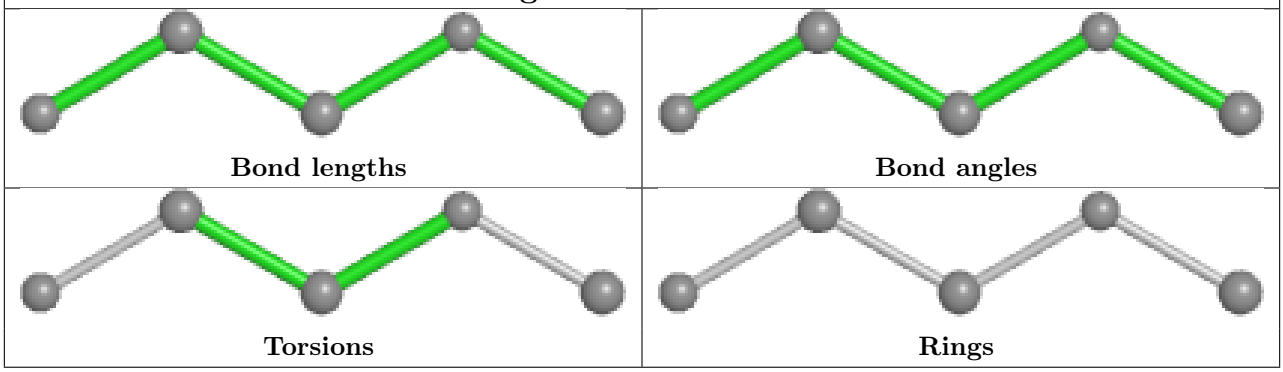
Ligand C8E B 1396



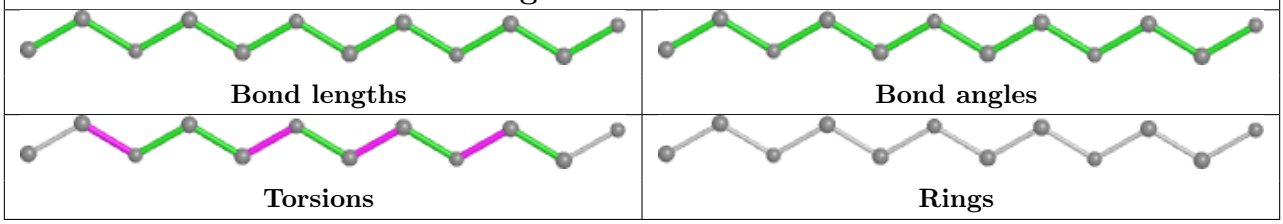
Ligand C8E A 1403



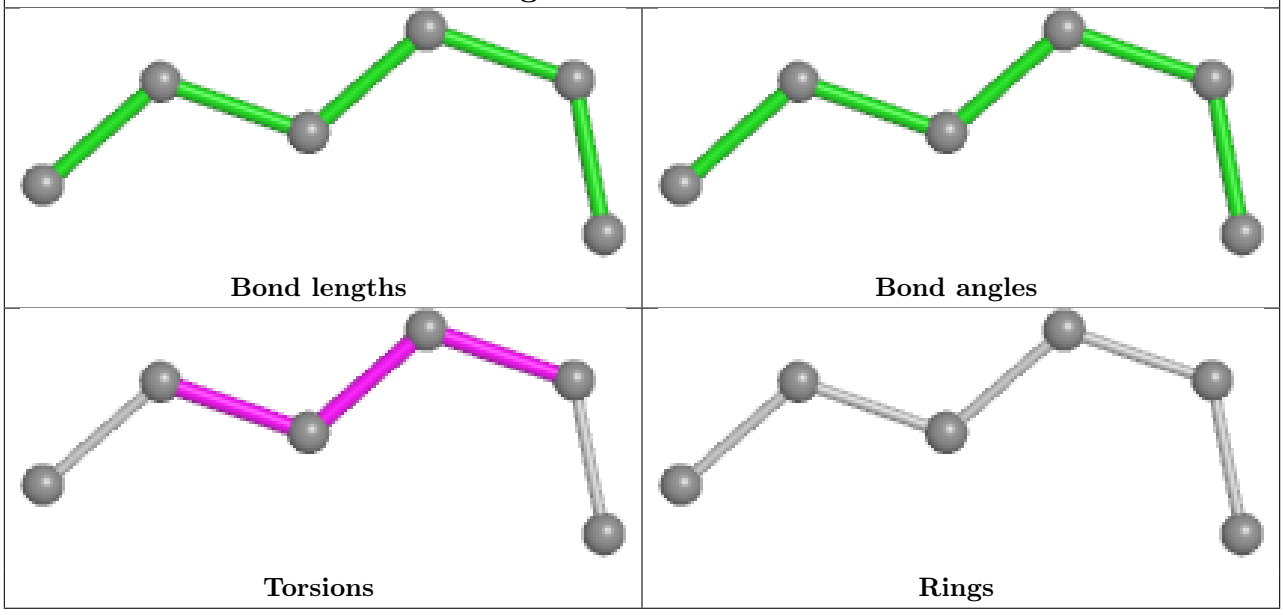
Ligand C8E B 1405



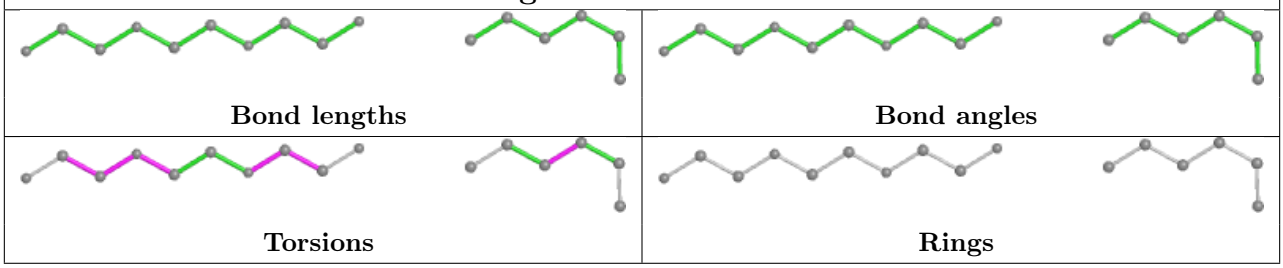
Ligand C8E B 1398



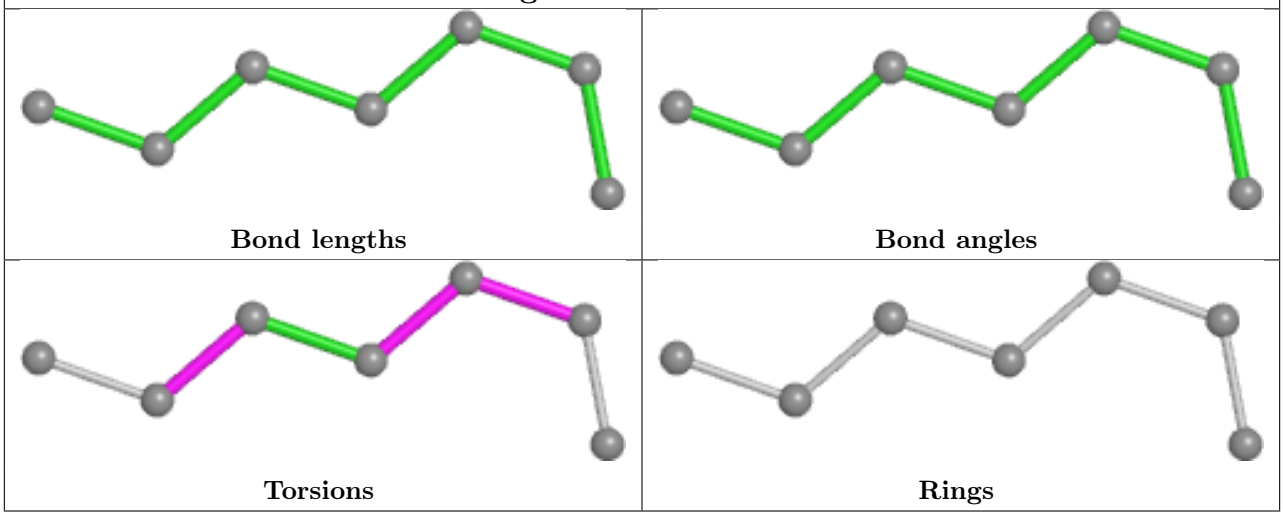
Ligand C8E B 1403

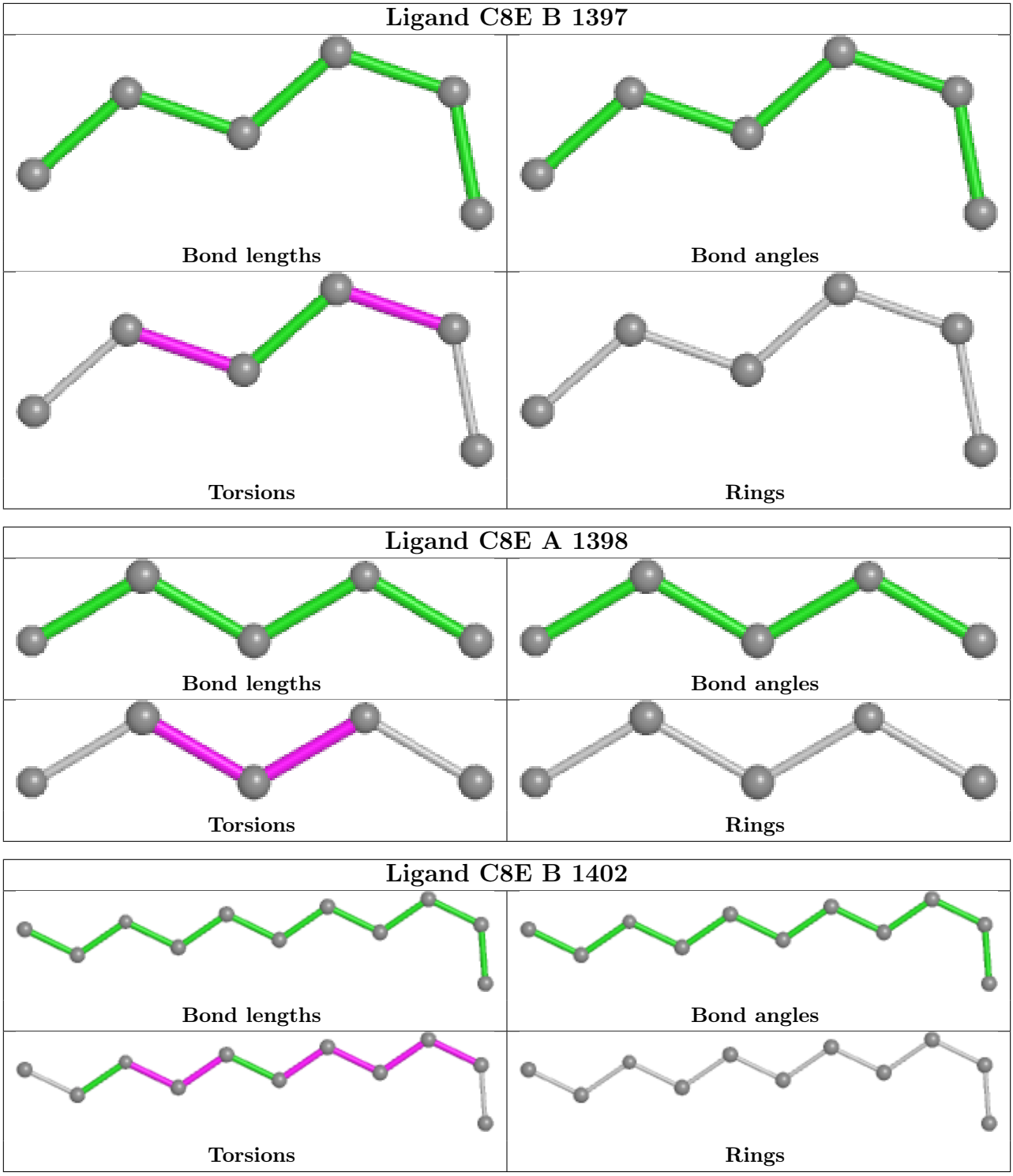


Ligand C8E A 1397



Ligand C8E B 1394





5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	B	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B	75:SER	C	76:ASN	N	2.47

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	374/390 (95%)	0.05	18 (4%)	30	29	12, 21, 47, 119	4 (1%)
1	B	378/390 (96%)	-0.01	23 (6%)	21	19	12, 21, 49, 133	6 (1%)
All	All	752/780 (96%)	0.02	41 (5%)	25	24	12, 21, 47, 133	10 (1%)

All (41) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	33	LEU	7.9
1	B	73	GLY	7.0
1	B	84	ASP	5.7
1	B	45	PHE	5.3
1	A	390	TRP	5.3
1	A	84	ASP	5.2
1	B	75	SER	5.0
1	B	74	THR	4.9
1	A	70	SER	4.7
1	B	86	GLY	4.6
1	A	87	ARG	4.6
1	A	76	ASN	4.5
1	B	390	TRP	4.3
1	B	76	ASN	4.2
1	B	335	ALA	4.2
1	B	85	ASP	4.1
1	A	219	VAL	4.0
1	A	85	ASP	4.0
1	B	87	ARG	3.6
1	A	86	GLY	3.4
1	A	355	GLY	3.3
1	A	6	LEU	3.3
1	A	34	VAL	3.3
1	B	6	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
1	B	356	PRO	3.2
1	A	10	LYS	3.1
1	A	82	LEU	2.9
1	A	218	ARG	2.9
1	A	388	LEU	2.8
1	B	26	ASP	2.8
1	A	8	ASP	2.8
1	A	354	SER	2.8
1	B	9	ALA	2.7
1	B	25	ARG	2.6
1	B	10	LYS	2.5
1	B	8	ASP	2.5
1	B	70	SER	2.5
1	B	83	HIS	2.5
1	B	334	LYS	2.4
1	B	82	LEU	2.0
1	B	219	VAL	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	C8E	B	1408	5/21	0.67	0.17	45,46,52,53	0
3	C8E	A	1405	15/21	0.68	0.27	28,48,61,61	0
2	EDO	B	1391	4/4	0.68	0.15	40,45,46,48	0
3	C8E	B	1404	14/21	0.71	0.24	44,58,71,72	0
3	C8E	A	1400	7/21	0.73	0.22	68,69,70,73	0
3	C8E	A	1403	9/21	0.75	0.17	47,53,59,61	0

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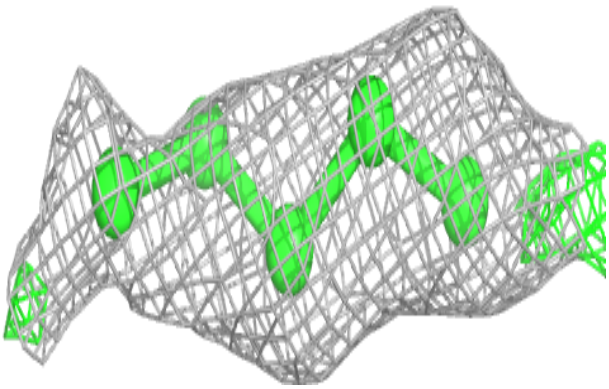
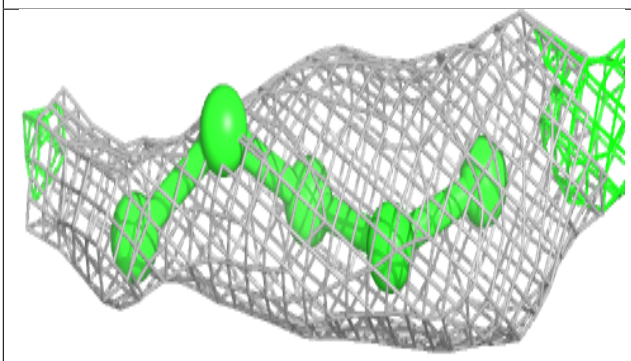
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	C8E	B	1400	7/21	0.75	0.18	37,44,52,53	0
3	C8E	B	1398	12/21	0.76	0.19	54,58,62,62	0
3	C8E	B	1401	10/21	0.77	0.18	35,50,58,58	0
3	C8E	B	1402	11/21	0.77	0.23	28,39,55,57	0
3	C8E	A	1393	7/21	0.78	0.14	34,39,43,45	0
3	C8E	A	1404	9/21	0.78	0.15	44,48,53,54	0
3	C8E	B	1407	7/21	0.78	0.30	48,52,52,54	0
2	EDO	B	1392	4/4	0.78	0.29	53,57,60,62	0
3	C8E	A	1399	9/21	0.79	0.13	45,48,56,59	0
3	C8E	B	1405	5/21	0.79	0.40	38,43,51,56	0
3	C8E	A	1401	9/21	0.81	0.14	45,52,59,62	0
3	C8E	A	1394	6/21	0.81	0.14	53,53,57,58	0
3	C8E	A	1397	16/21	0.83	0.12	29,55,63,64	0
3	C8E	B	1403	6/21	0.83	0.15	30,39,42,42	0
3	C8E	B	1396	11/21	0.84	0.16	39,45,62,69	0
3	C8E	A	1396	14/21	0.84	0.15	30,58,62,62	0
3	C8E	A	1395	9/21	0.86	0.15	38,45,52,56	0
3	C8E	A	1402	6/21	0.87	0.12	57,58,59,59	0
3	C8E	B	1399	8/21	0.87	0.13	25,42,56,57	0
3	C8E	A	1392	9/21	0.88	0.19	44,47,57,57	0
3	C8E	A	1398	5/21	0.88	0.15	35,35,57,61	0
4	VNL	A	1407	12/12	0.88	0.19	29,34,44,51	0
2	EDO	A	1391	4/4	0.89	0.24	47,48,51,55	0
3	C8E	B	1394	7/21	0.89	0.12	40,48,51,51	0
2	EDO	B	1393	4/4	0.90	0.10	53,55,55,58	0
3	C8E	B	1395	5/21	0.90	0.20	23,31,36,37	0
4	VNL	B	1410	12/12	0.91	0.10	20,23,32,35	0
3	C8E	B	1406	4/21	0.94	0.18	36,38,40,45	0
4	VNL	A	1406	12/12	0.94	0.10	24,26,31,32	0
3	C8E	B	1397	6/21	0.95	0.17	34,41,50,54	0
4	VNL	B	1409	12/12	0.96	0.11	19,24,28,30	0

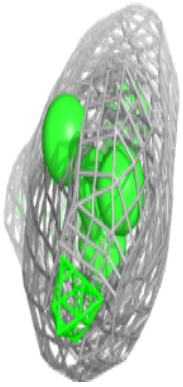
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around C8E B 1408:

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

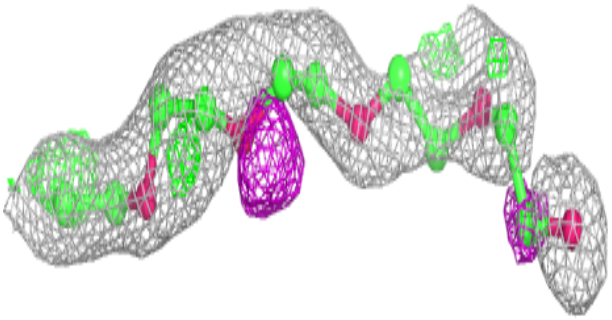


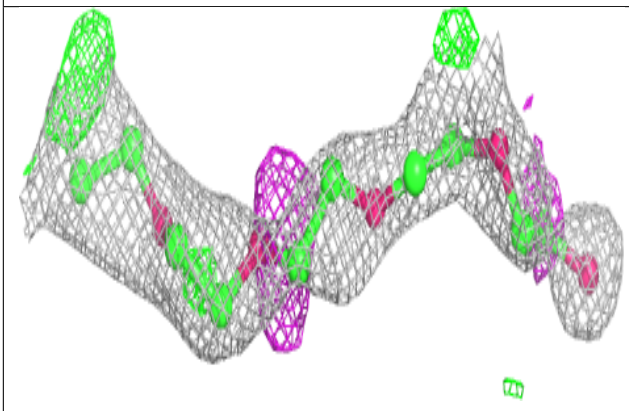


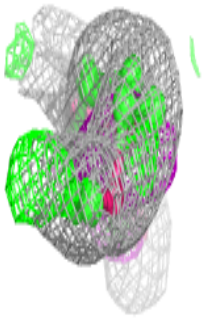


Electron density around C8E A 1405:

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

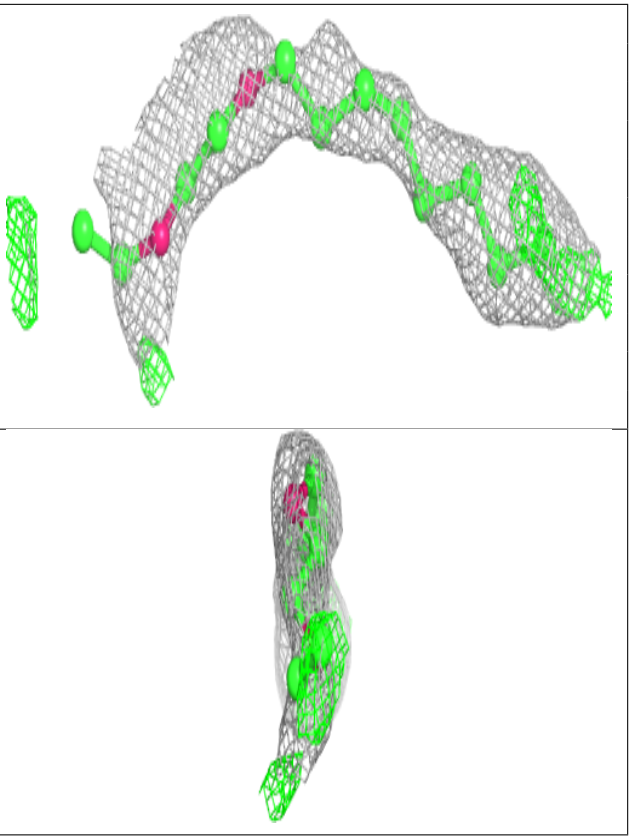






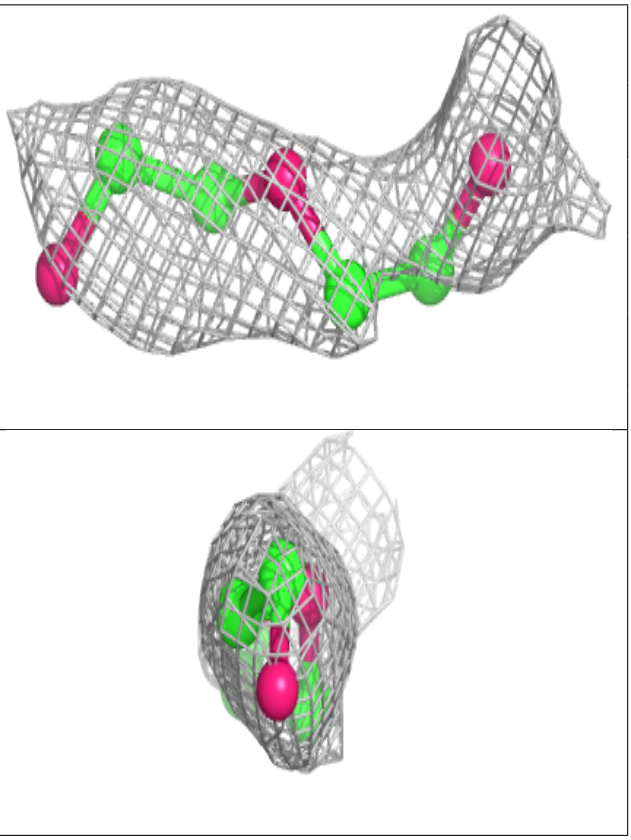
Electron density around C8E B 1404:

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



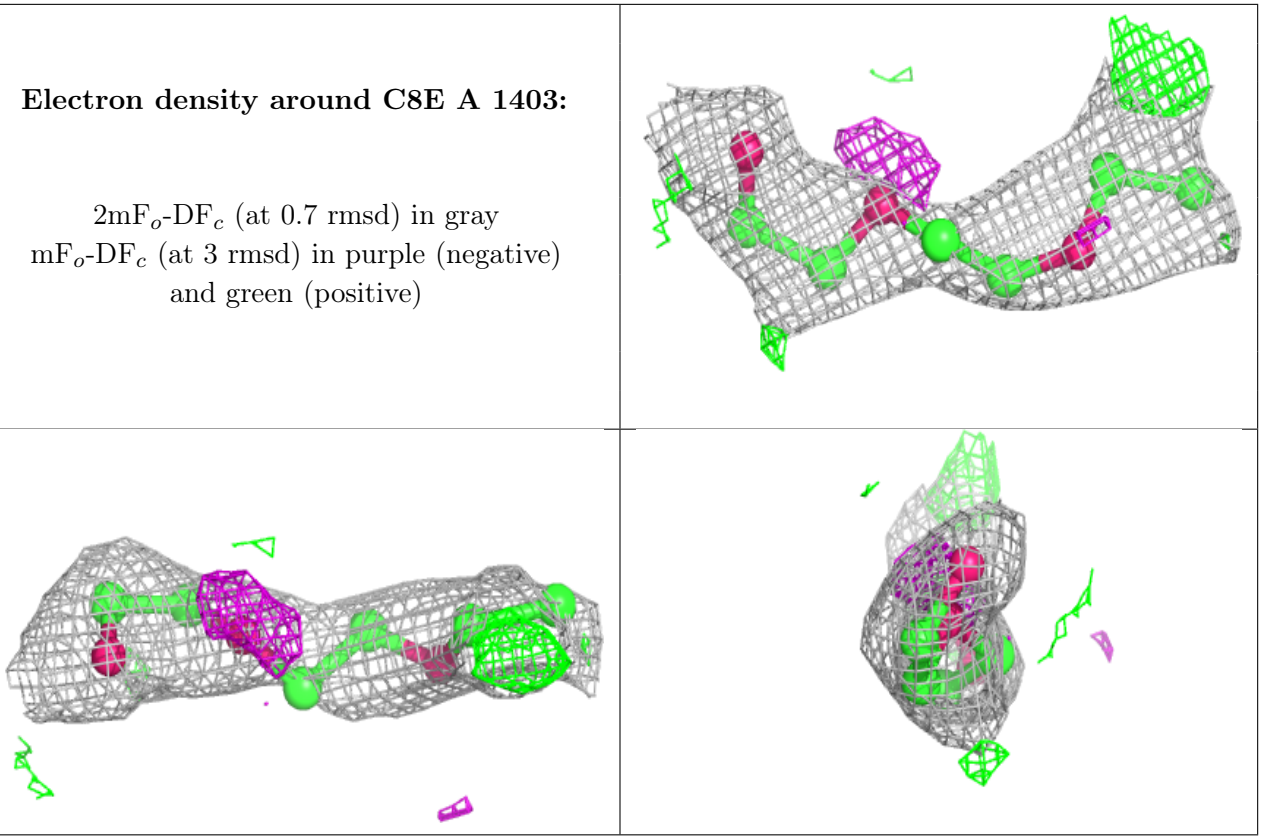
Electron density around C8E A 1400:

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



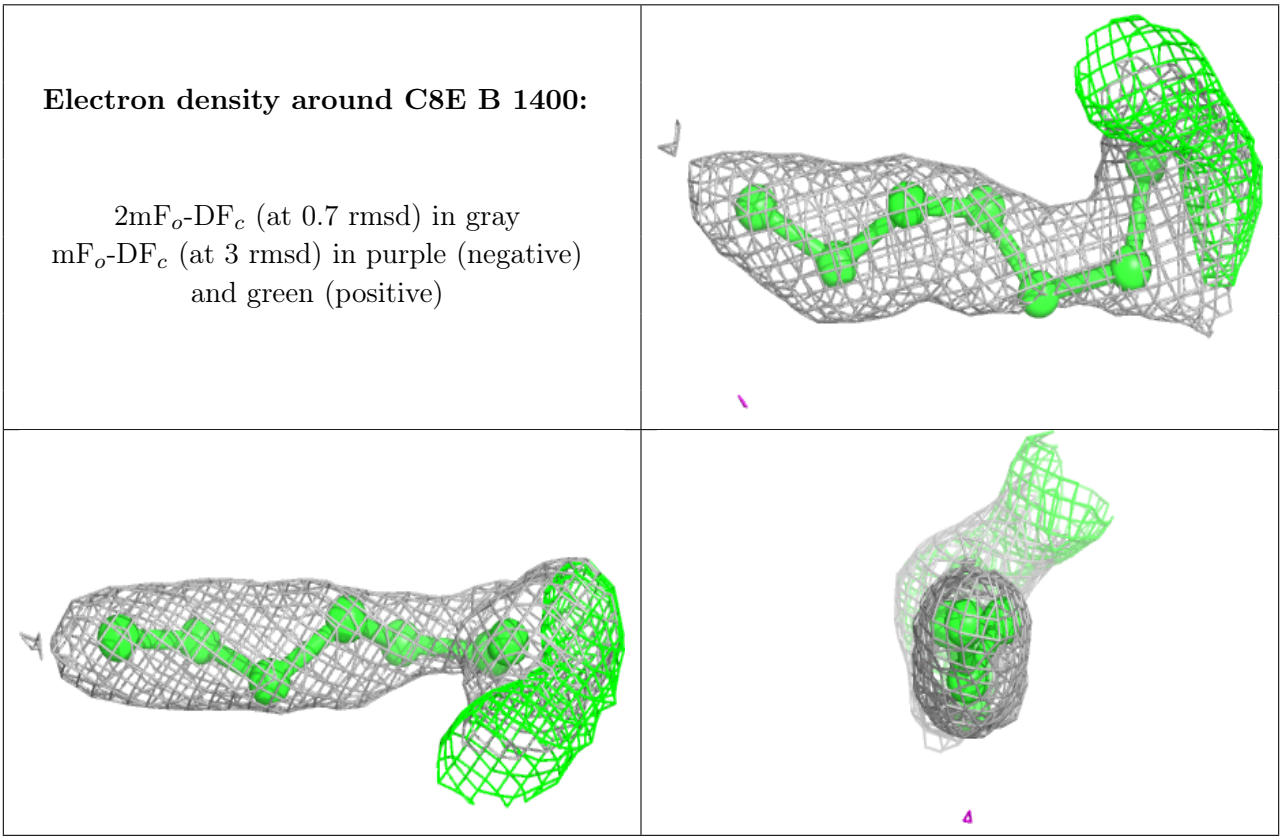
Electron density around C8E A 1403:

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



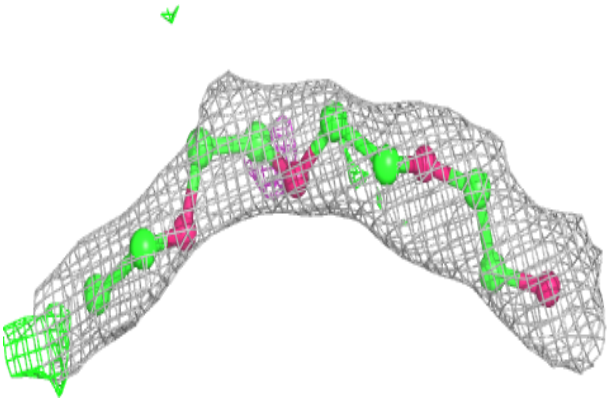
Electron density around C8E B 1400:

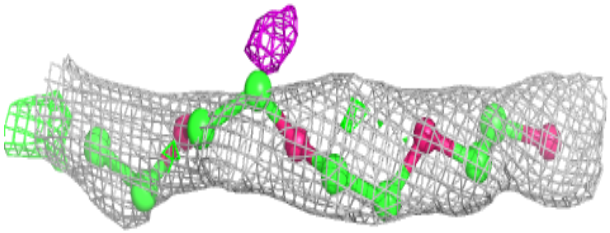
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

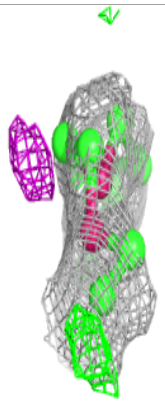


Electron density around C8E B 1398:

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

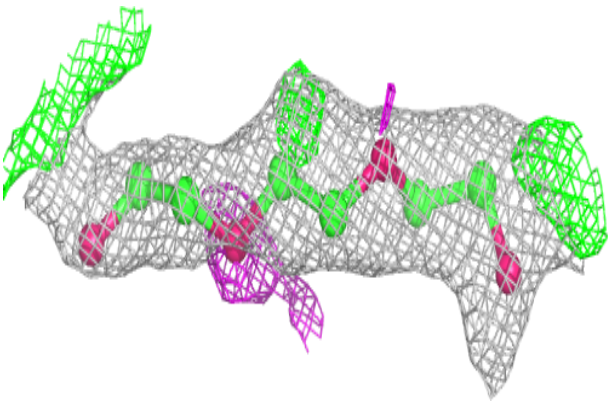


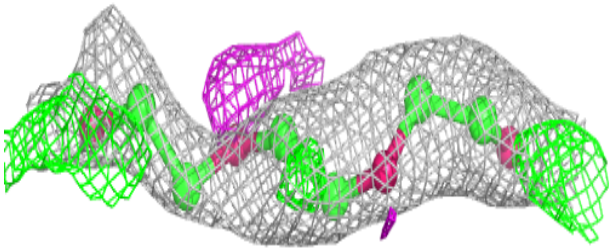


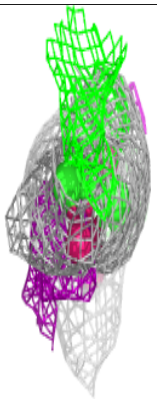


Electron density around C8E B 1401:

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

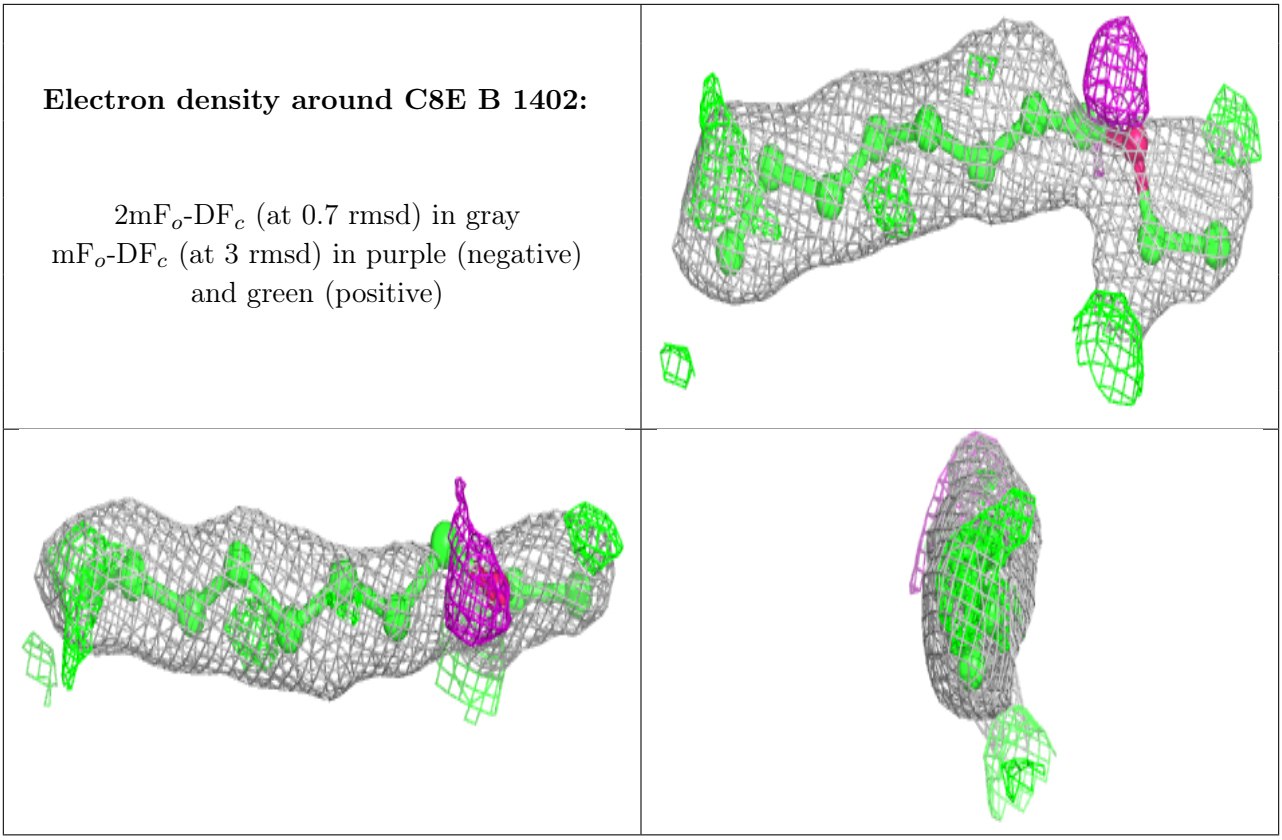






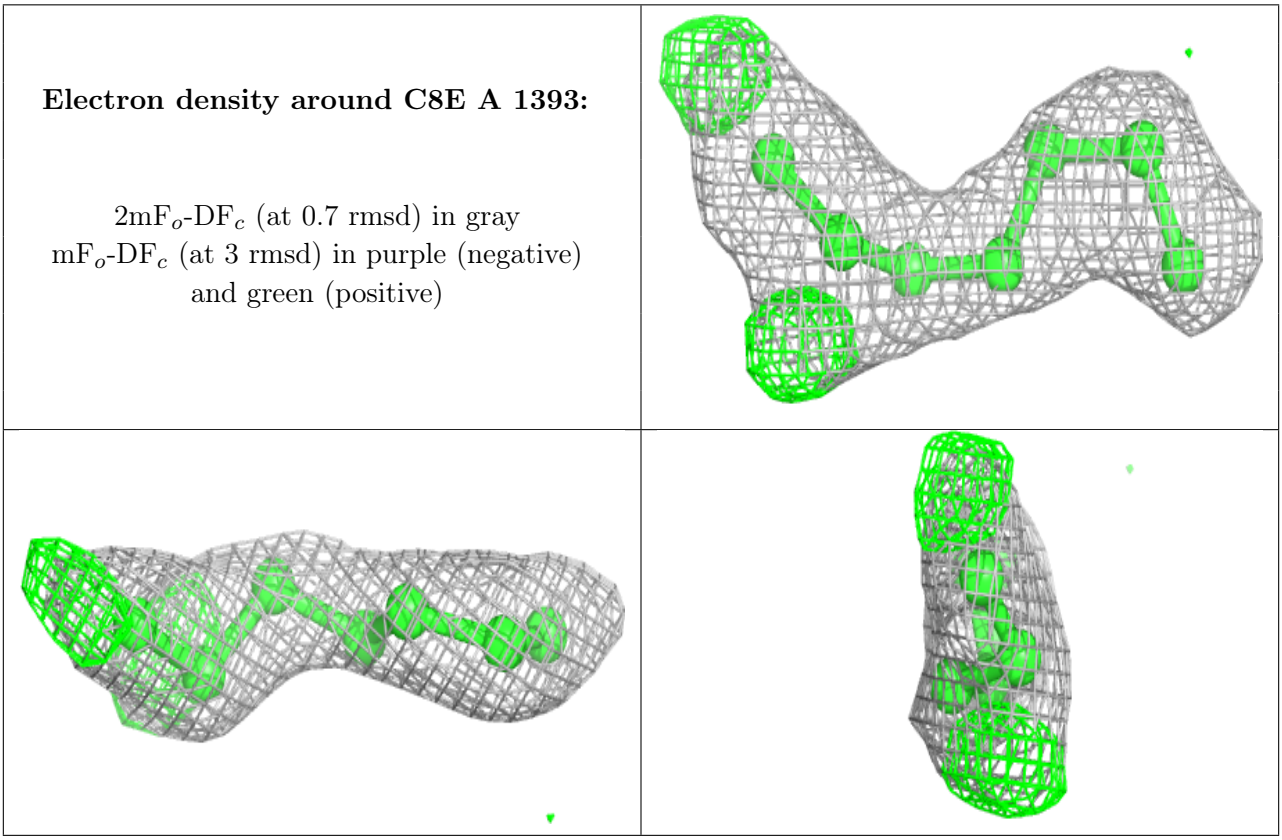
Electron density around C8E B 1402:

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



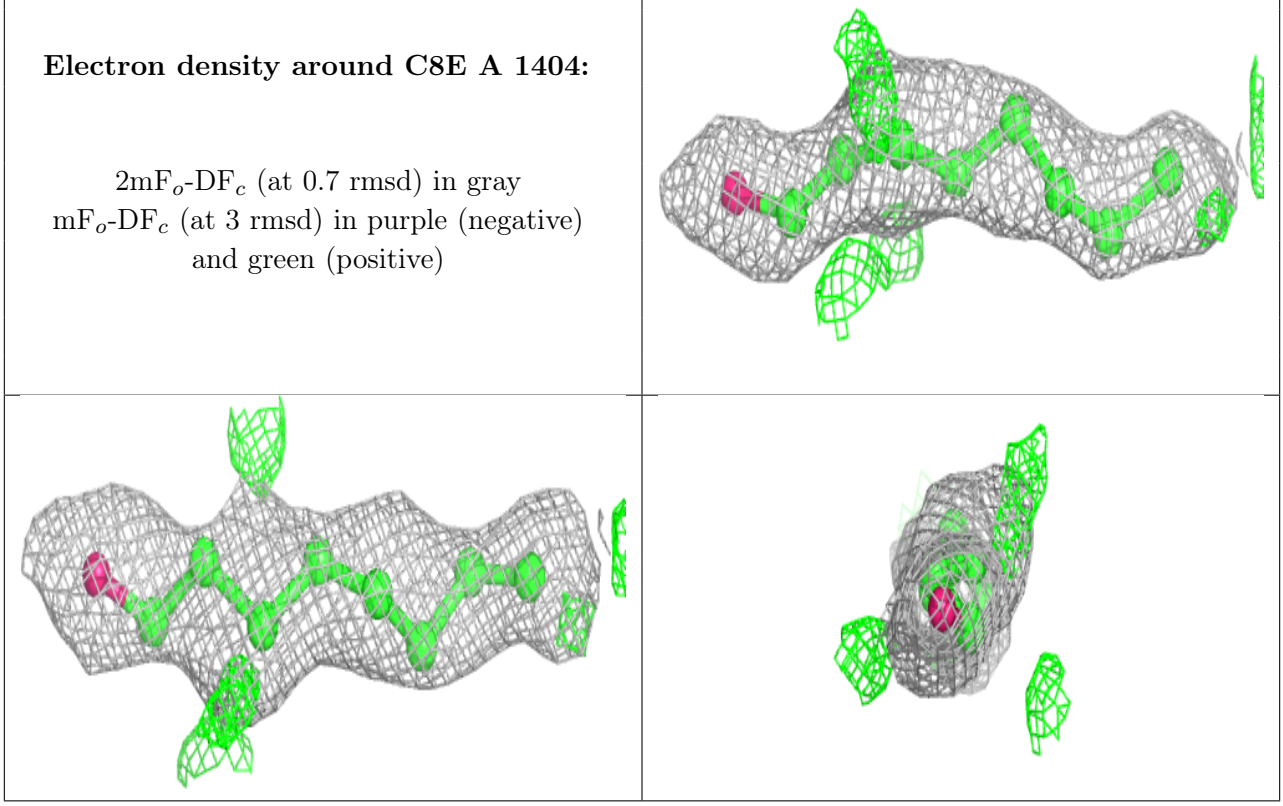
Electron density around C8E A 1393:

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



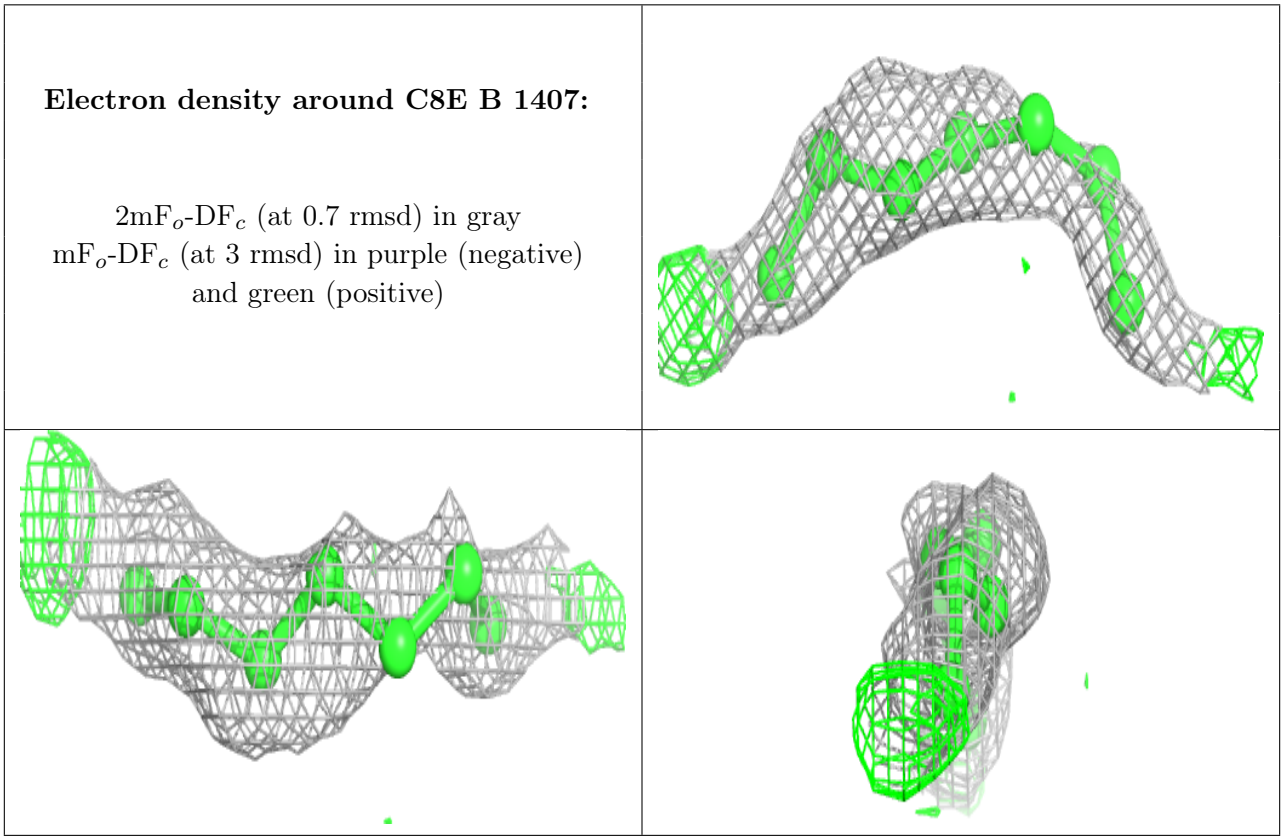
Electron density around C8E A 1404:

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



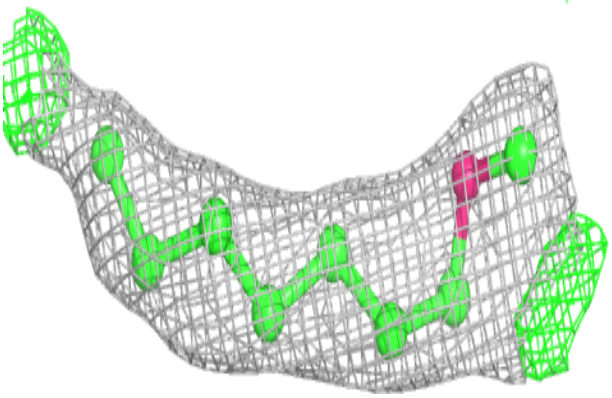
Electron density around C8E B 1407:

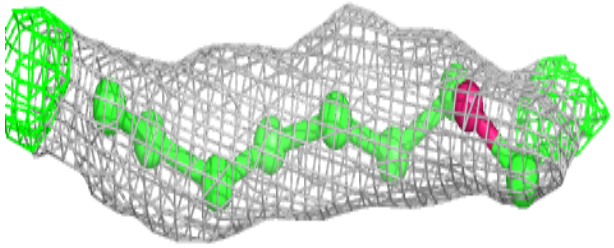
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

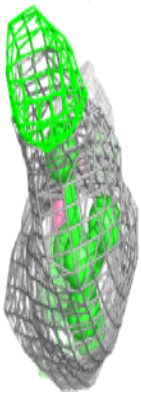


Electron density around C8E A 1399:

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

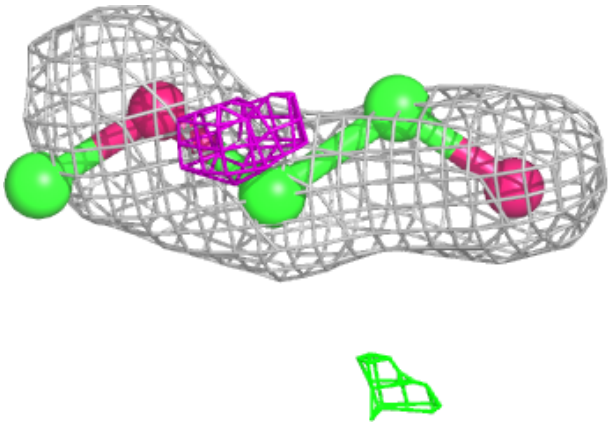


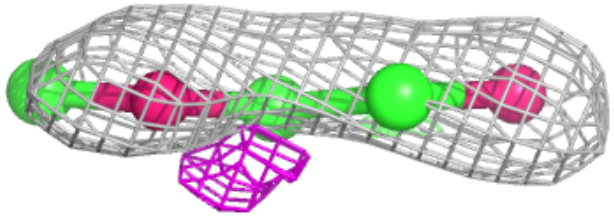


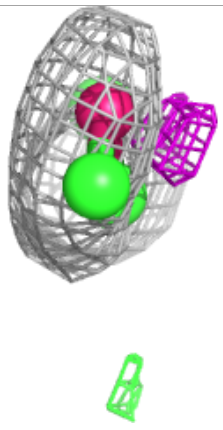


Electron density around C8E B 1405:

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

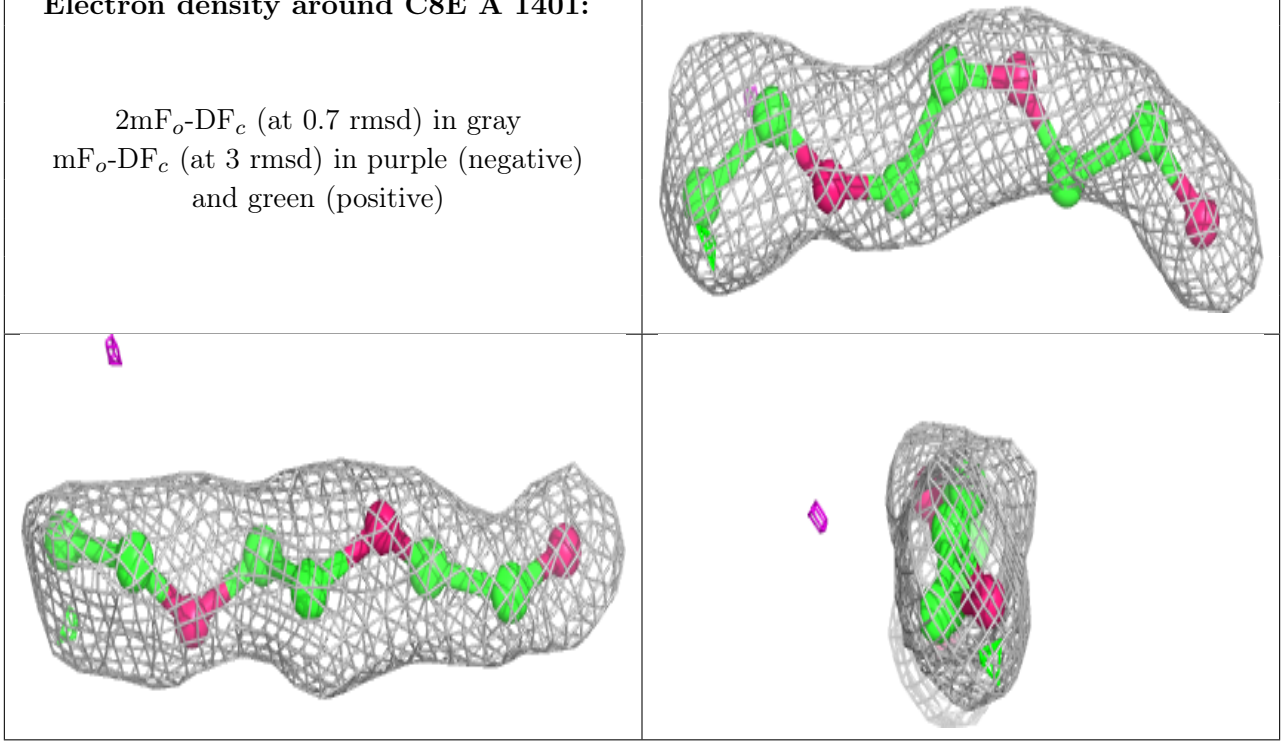






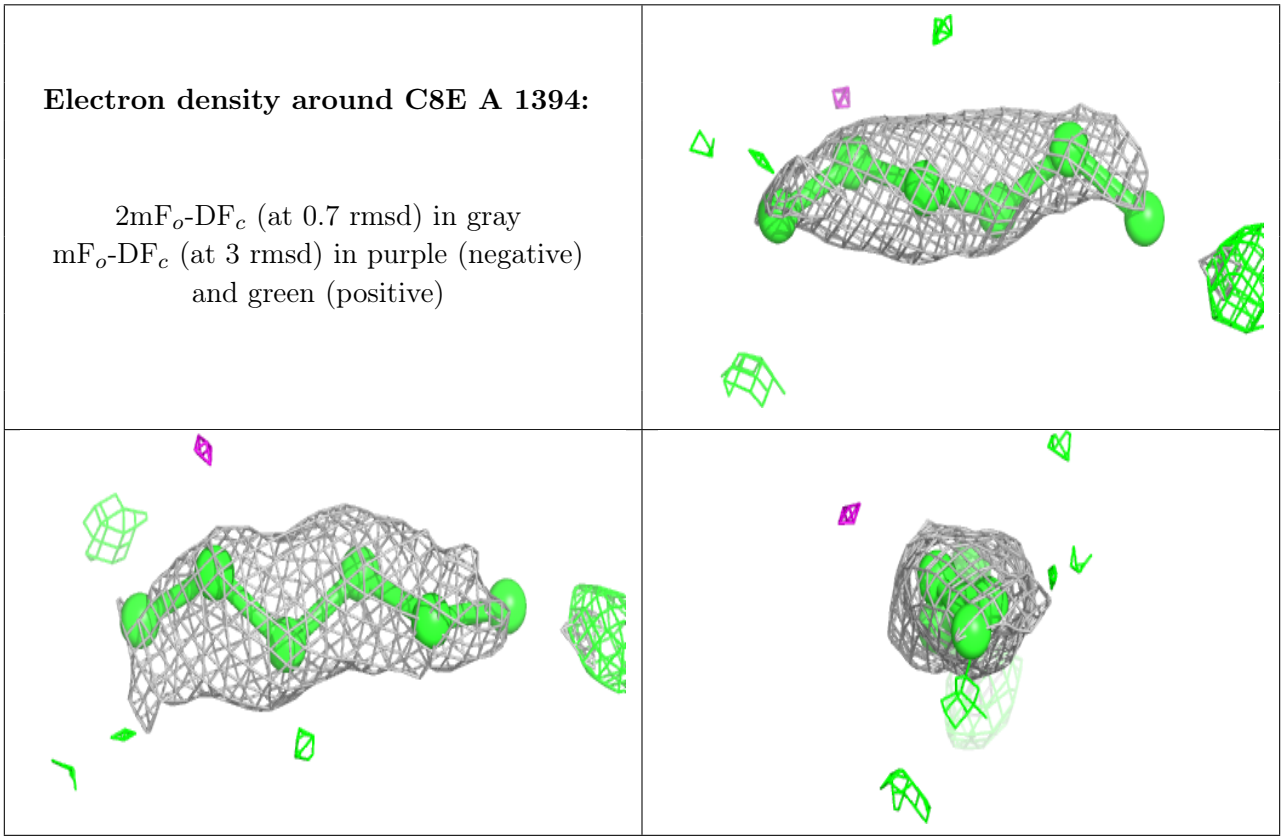
Electron density around C8E A 1401:

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



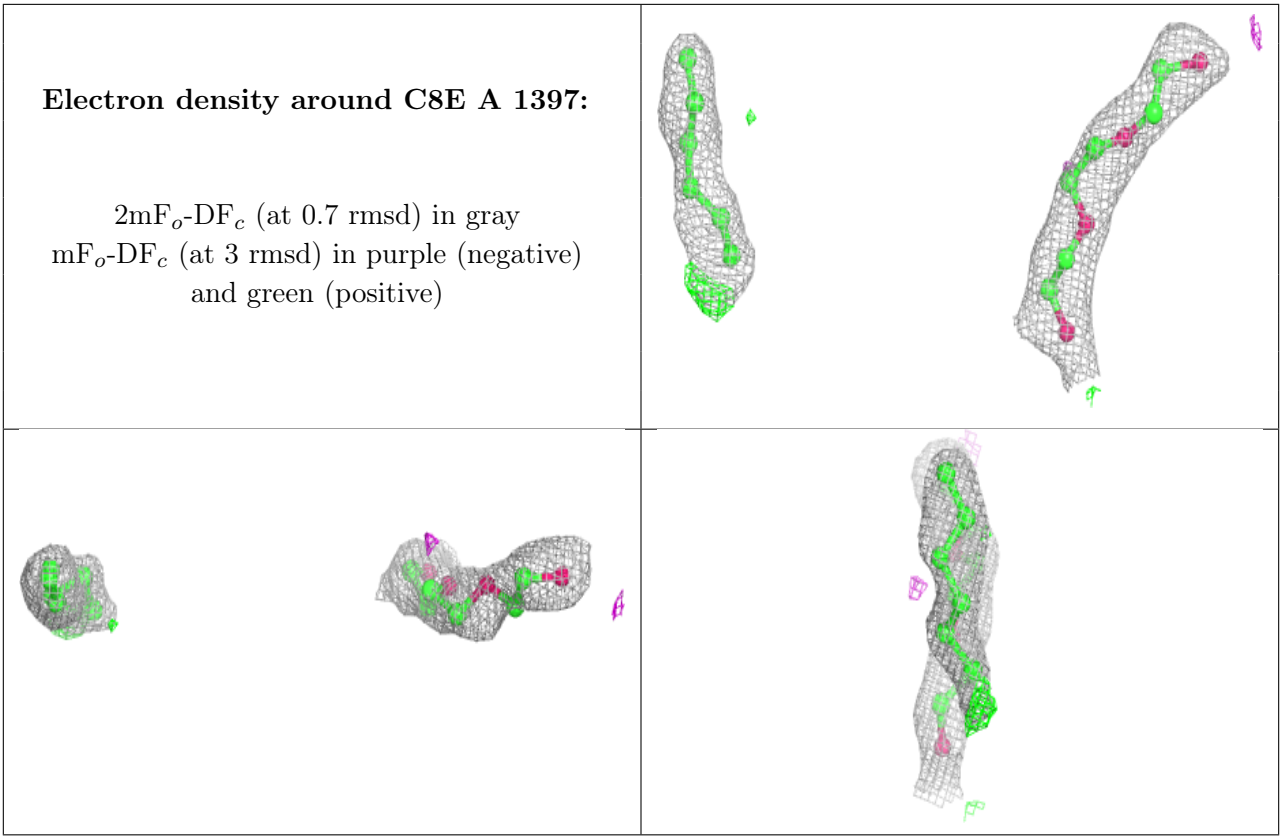
Electron density around C8E A 1394:

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



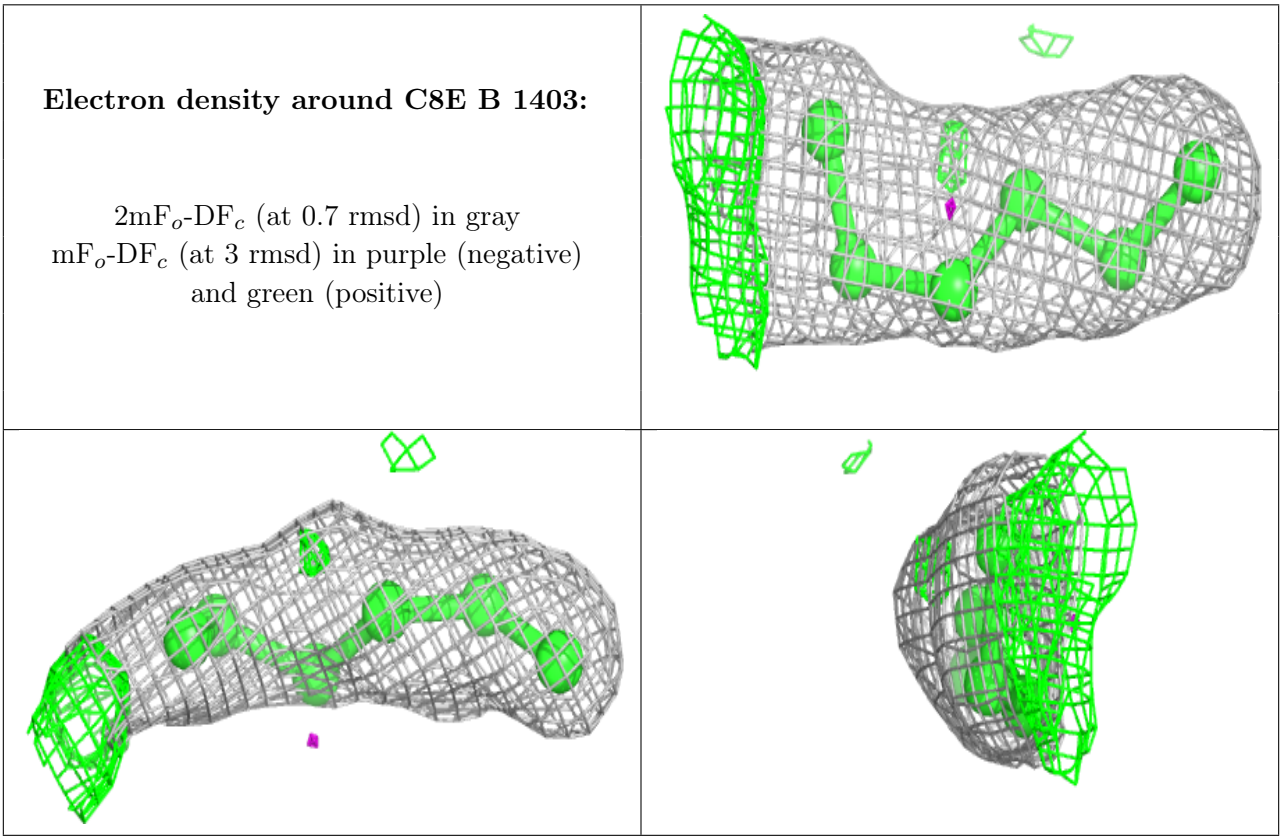
Electron density around C8E A 1397:

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



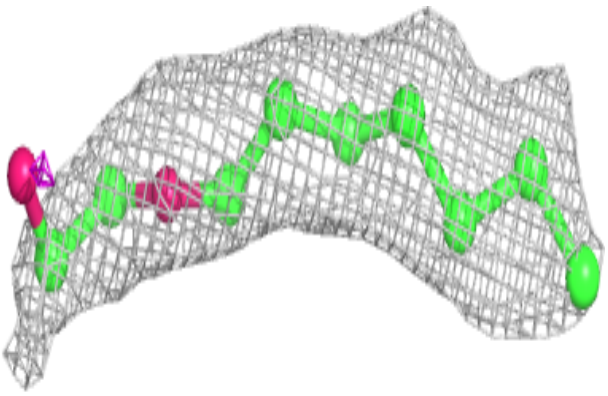
Electron density around C8E B 1403:

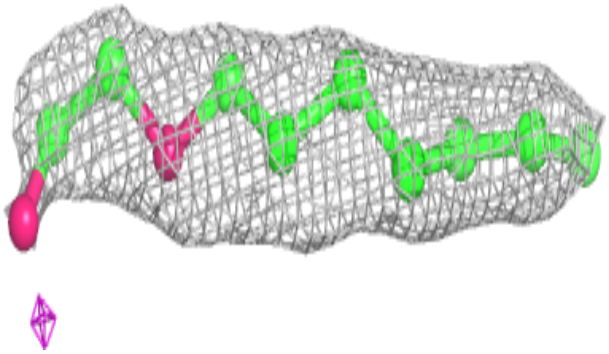
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

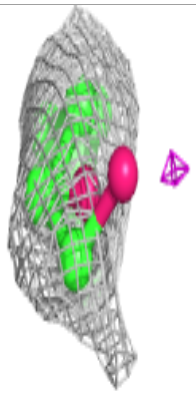


Electron density around C8E B 1396:

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

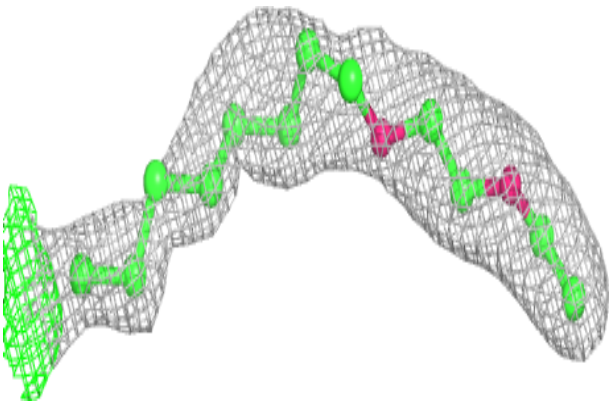


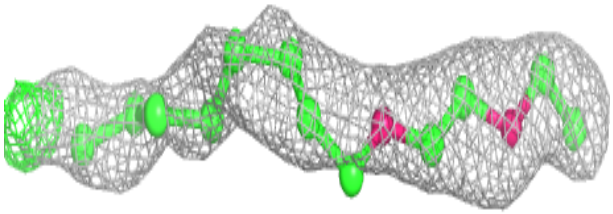


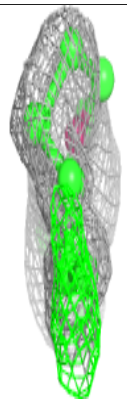


Electron density around C8E A 1396:

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

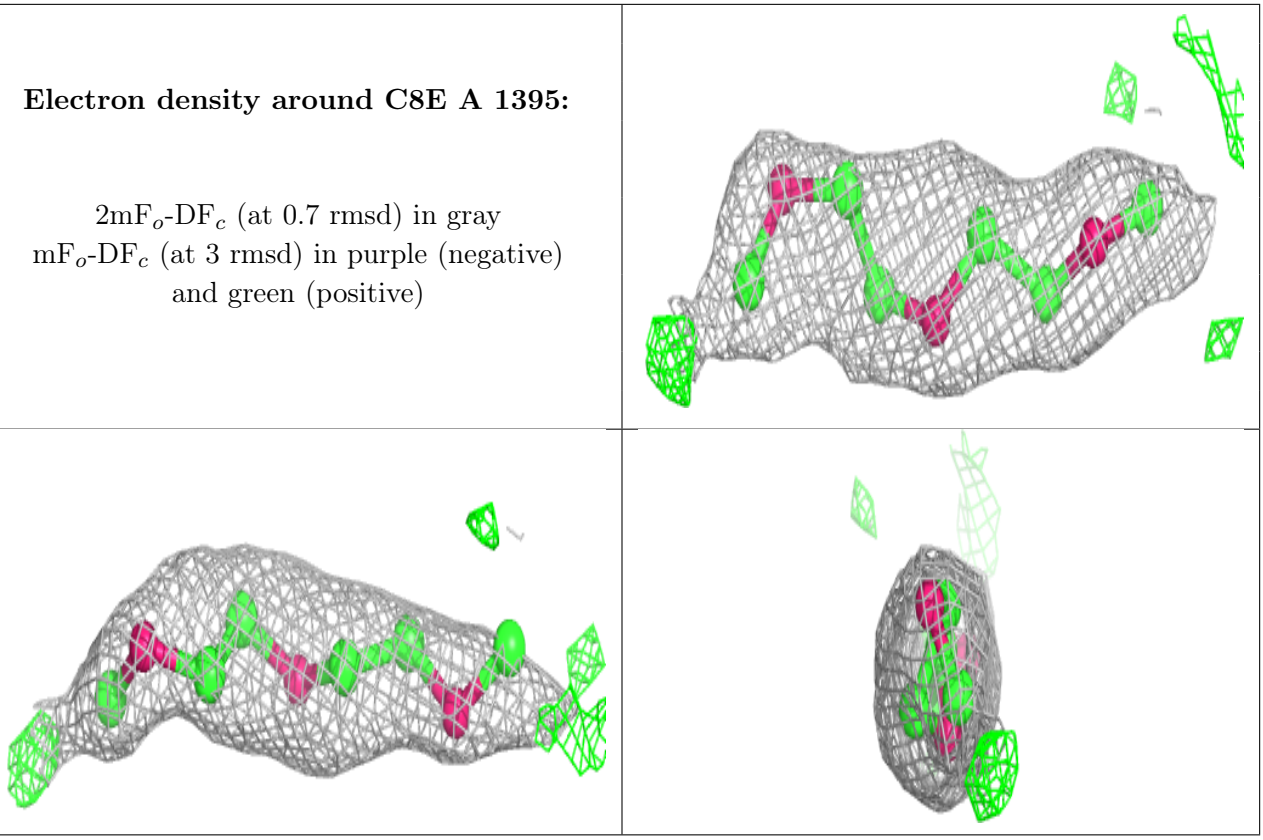






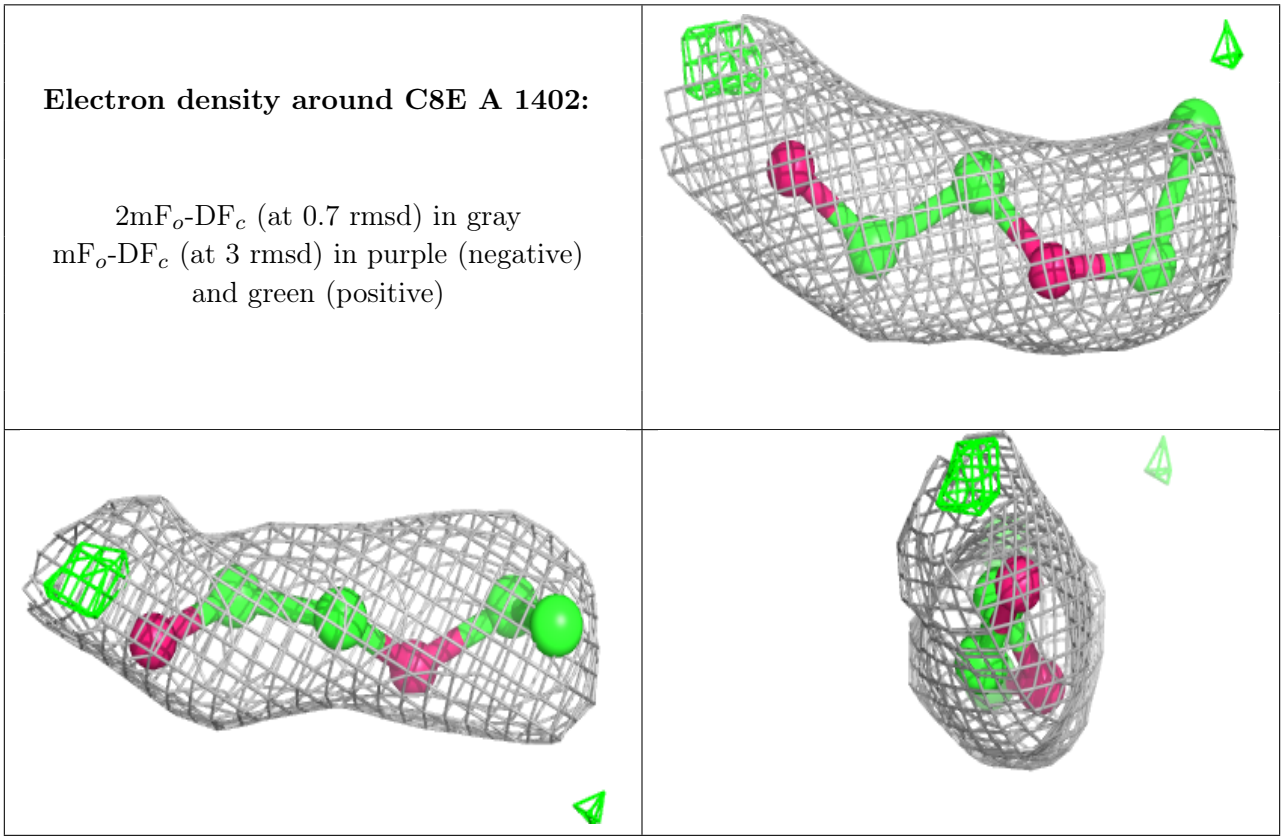
Electron density around C8E A 1395:

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



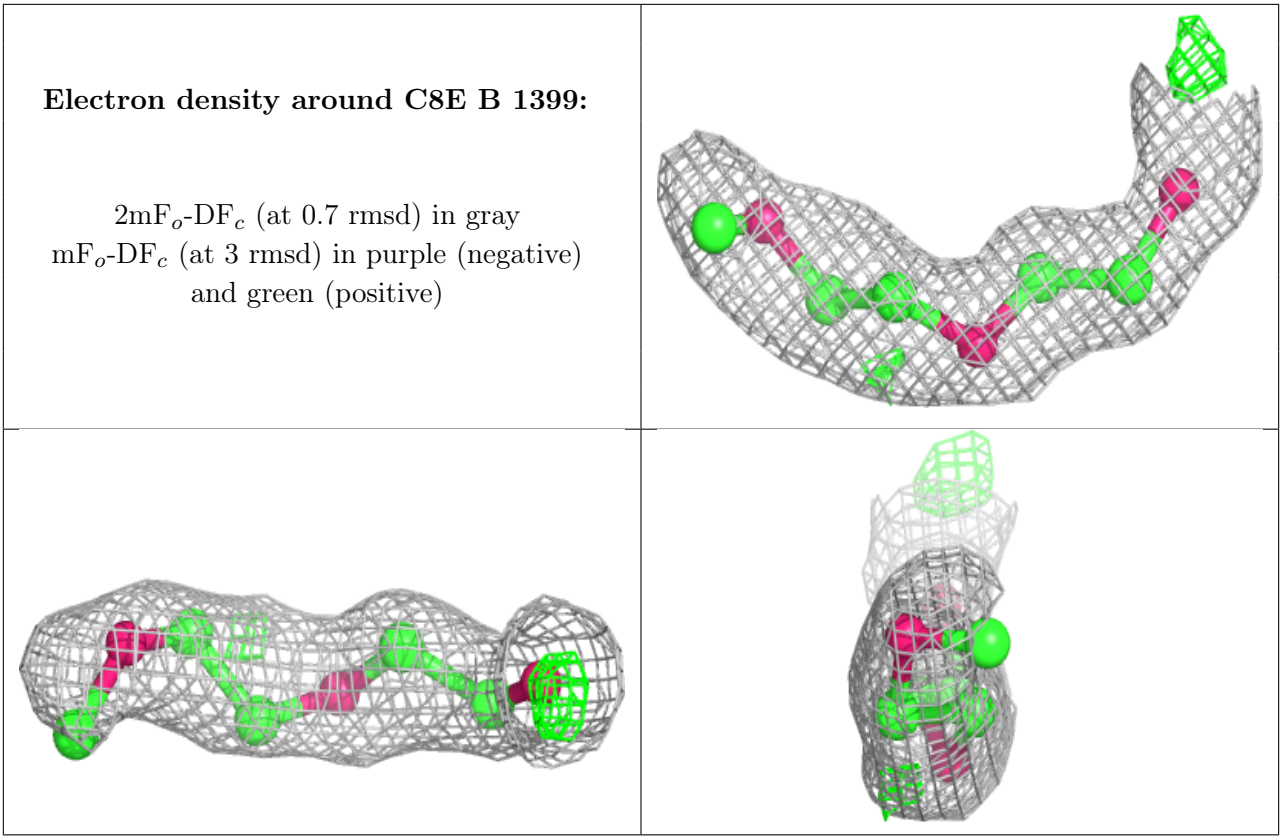
Electron density around C8E A 1402:

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



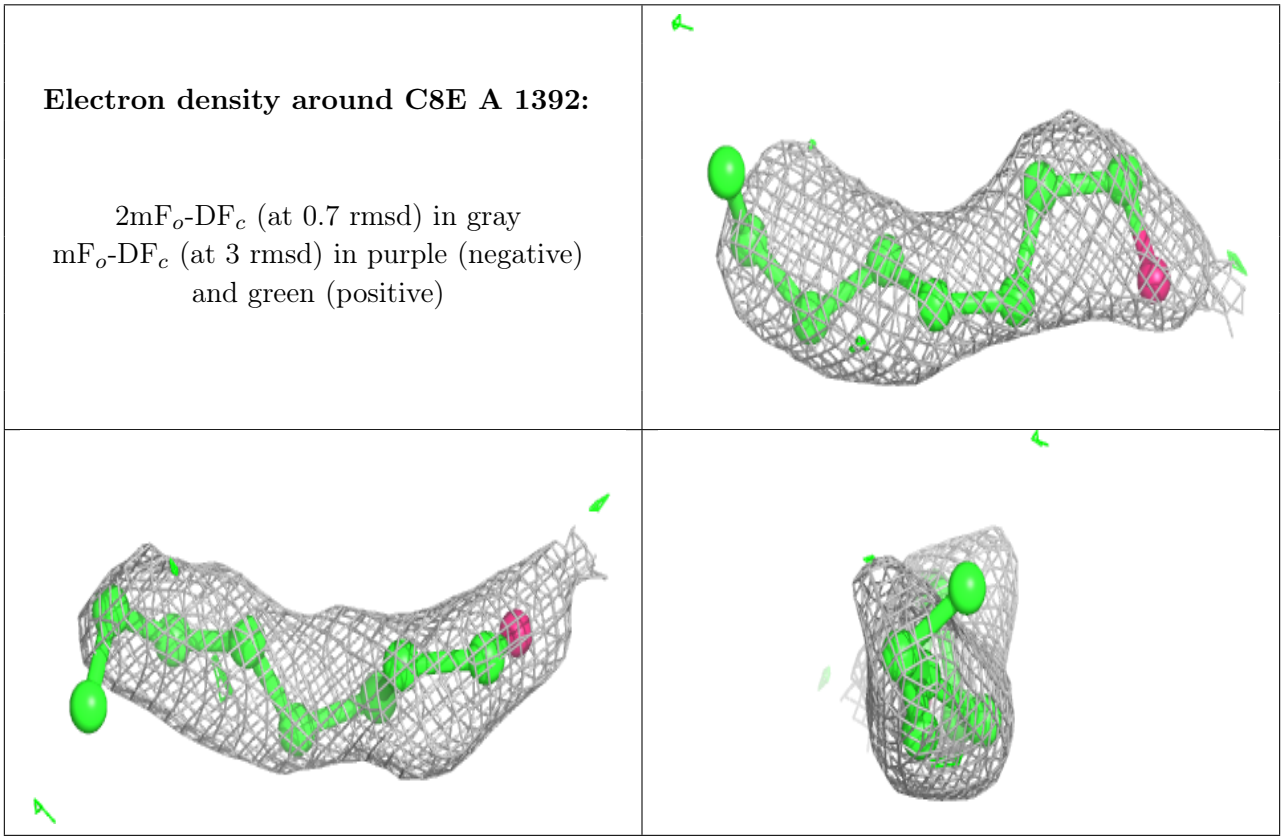
Electron density around C8E B 1399:

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



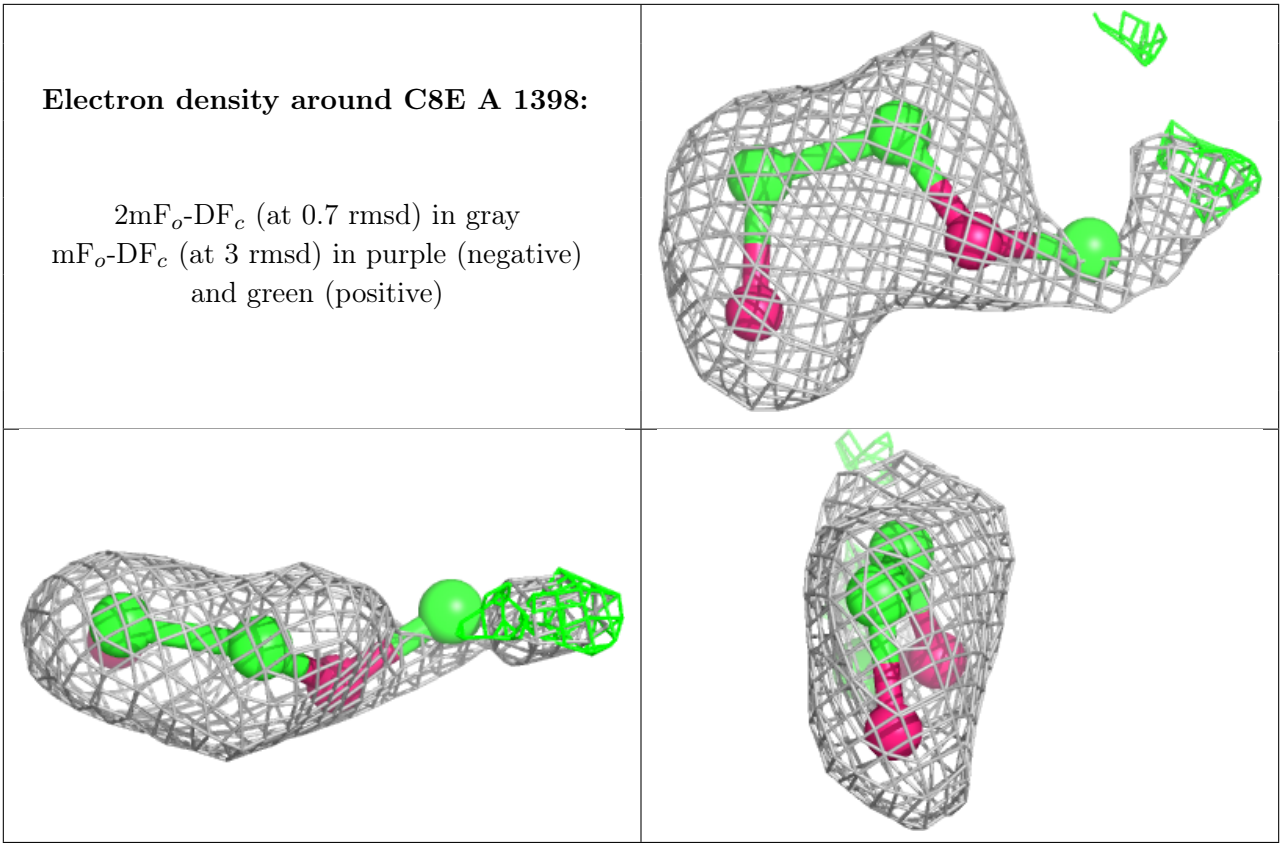
Electron density around C8E A 1392:

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



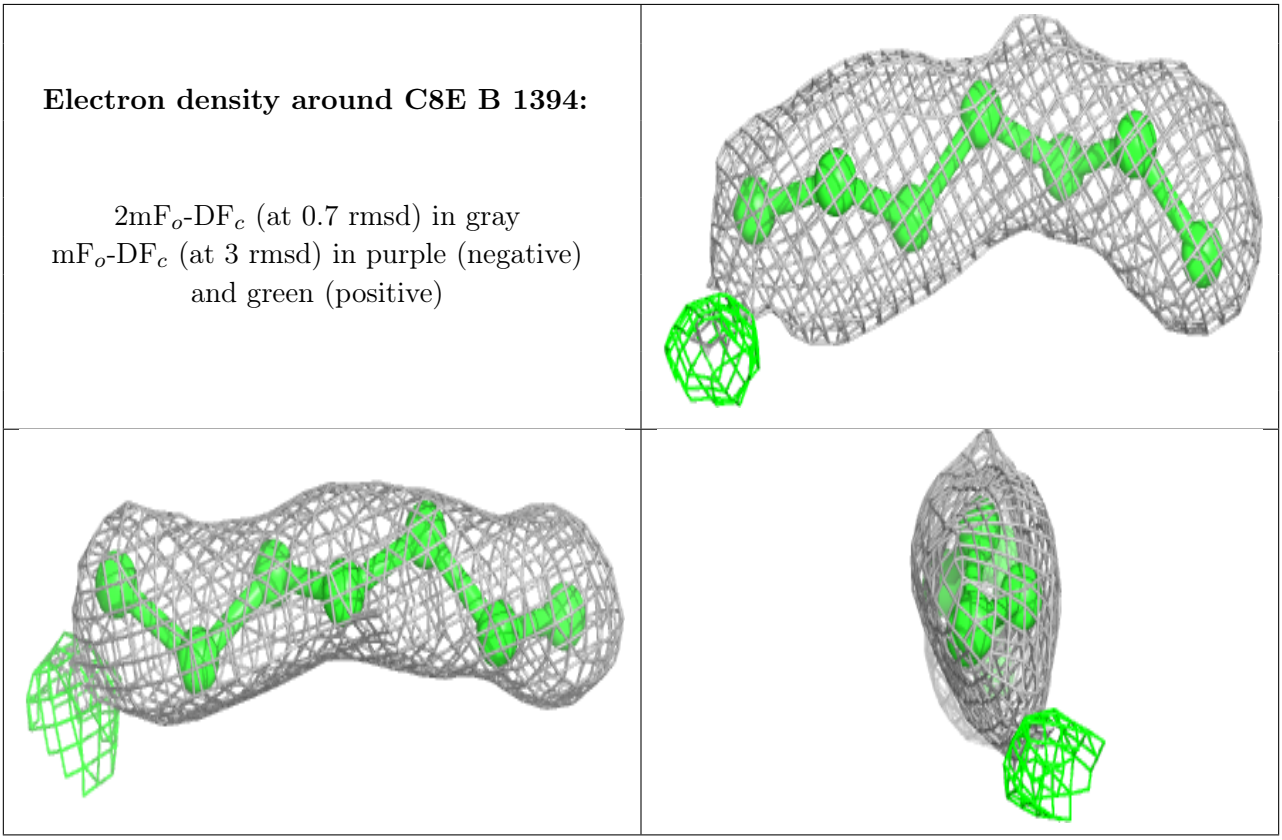
Electron density around C8E A 1398:

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



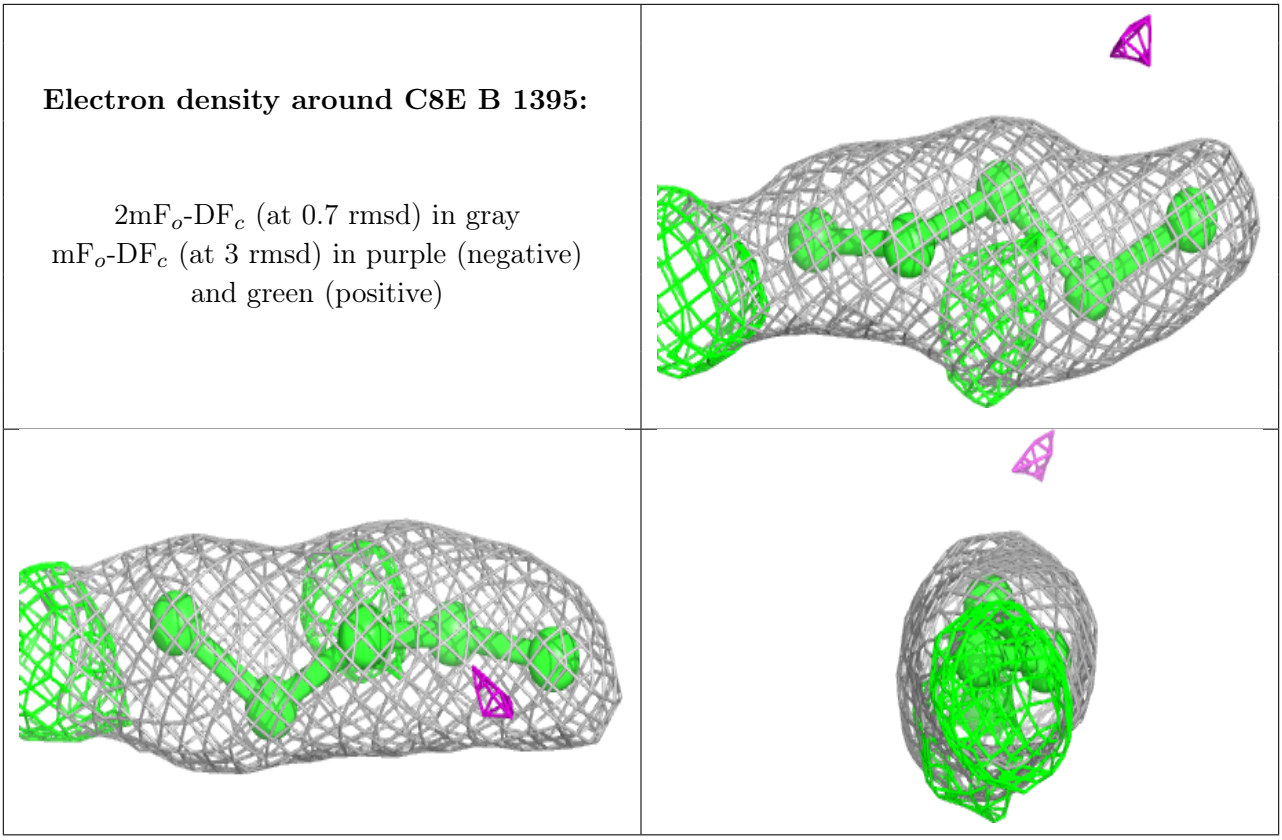
Electron density around C8E B 1394:

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



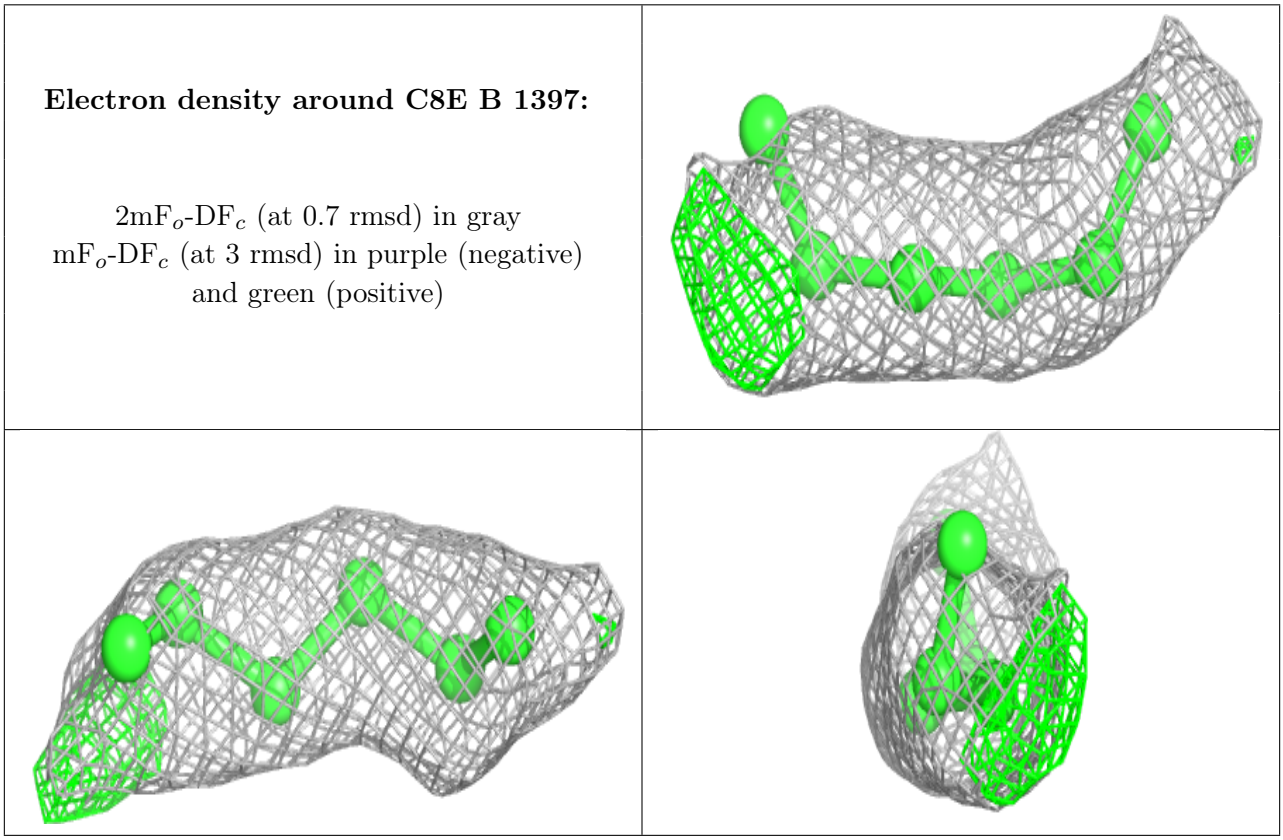
Electron density around C8E B 1395:

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



Electron density around C8E B 1397:

$2mF_o$-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.