



wwPDB X-ray Structure Validation Summary Report

Jan 20, 2024 – 05:51 pm GMT

PDB ID : 7AP5
Title : Crystal structure of phycoerythrin from cyanobacterium Nostoc sp. WR13 contains multiple stacks of hexameric assemblies which resemble the rods of phycobilisome.
Authors : Patel, H.M.; Roszak, A.W.; Cogdell, R.J.; Madamwar, D.; Liu, H.; Gross, M.L.; Blankenship, R.E.
Deposited on : 2020-10-15
Resolution : 2.13 Å(reported)

This is a wwPDB X-ray Structure Validation Summary 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](#) ①) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.8.4, CSD as541be (2020)
Xtrriage (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

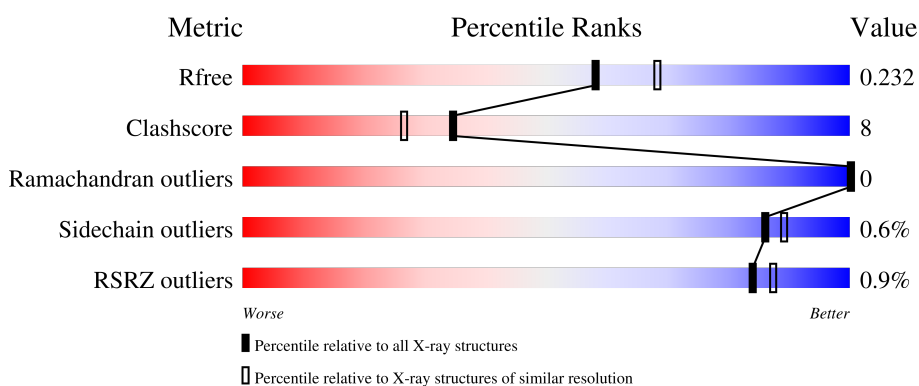
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.13 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.





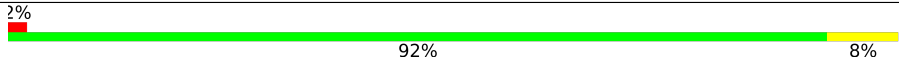


Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	2523 (2.16-2.12)
Clashscore	141614	2653 (2.16-2.12)
Ramachandran outliers	138981	2618 (2.16-2.12)
Sidechain outliers	138945	2617 (2.16-2.12)
RSRZ outliers	127900	2485 (2.16-2.12)

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 $\leq 5\%$. 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	AAA	164	
1	CCC	164	
1	EEE	164	
1	GGG	164	
1	III	164	

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Mol	Chain	Length	Quality of chain
1	KKK	164	 90% 10%
1	MMM	164	 93% 7%
1	OOO	164	 2% 92% 8%
2	BBB	184	 94% 6%
2	DDD	184	 92% 8%
2	FFF	184	 91% 9%
2	HHH	184	 93% 7%
2	JJJ	184	 1% 92% 8%
2	LLL	184	 1% 89% 11%
2	NNN	184	 1% 92% 8%
2	PPP	184	 10% 91% 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
11	1PE	JJJ	308	-	-	X	-
14	EDO	NNN	219	-	-	X	-
4	PG4	AAA	203	-	-	X	-
4	PG4	AAA	204	-	-	X	-
4	PG4	CCC	203	-	-	X	-
4	PG4	KKK	204	-	-	X	-
4	PG4	MMM	203	-	-	X	-
4	PG4	MMM	205	-	-	-	X
4	PG4	PPP	206	-	-	-	X
5	PGE	BBB	209	-	-	-	X
5	PGE	HHH	310	-	-	-	X
5	PGE	HHH	313	-	-	-	X
5	PGE	JJJ	310	-	-	X	-
6	PEG	CCC	210	-	-	X	-
6	PEG	CCC	214	-	-	-	X
6	PEG	CCC	219	-	-	X	-
6	PEG	EEE	212	-	-	-	X
6	PEG	GGG	211	-	-	X	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
6	PEG	III	201	-	-	X	-
6	PEG	LLL	215	-	-	-	X
6	PEG	LLL	217	-	-	X	-
6	PEG	MMM	209	-	-	X	-
6	PEG	OOO	207	-	-	-	X
6	PEG	PPP	212	-	-	-	X
7	PO4	AAA	214	-	-	X	-
7	PO4	CCC	217	-	-	X	-
7	PO4	GGG	214	-	-	X	-
7	PO4	KKK	215	-	-	X	-
7	PO4	PPP	217	-	-	X	-
8	NO3	LLL	223	-	-	X	-
8	NO3	LLL	224	-	-	X	-

2 Entry composition [i](#)

There are 16 unique types of molecules in this entry. The entry contains 26483 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 Alpha subunit of cyanobacterial protein phycoerythrin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	AAA	164	1257	785	220	245	7	0	4	0
1	CCC	164	1256	785	219	245	7	0	4	0
1	EEE	164	1254	784	219	244	7	0	4	0
1	GGG	164	1244	777	218	242	7	0	2	0
1	III	164	1244	777	218	242	7	0	2	0
1	KKK	164	1245	780	217	241	7	0	3	0
1	MMM	164	1247	780	217	243	7	0	3	0
1	OOO	164	1238	774	217	240	7	0	1	0

- Molecule 2 is a protein called Beta subunit of cyanobacterial protein phycoerythrin.

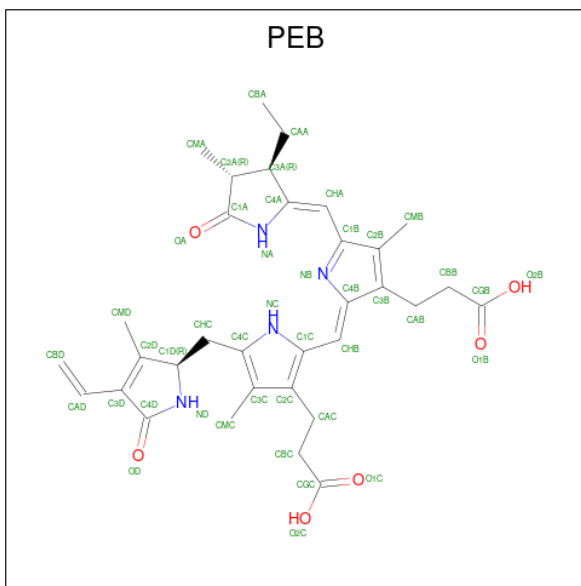
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	BBB	184	1378	845	253	268	12	0	6	0
2	DDD	184	1382	849	251	270	12	0	9	0
2	FFF	184	1370	840	250	268	12	0	6	0
2	HHH	184	1368	839	247	270	12	0	7	0
2	JJJ	184	1376	844	250	270	12	0	8	0
2	LLL	184	1381	847	253	269	12	0	7	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	NNN	184	Total	C	N	O	S	0	3	0
			1355	830	247	266	12			
2	PPP	184	Total	C	N	O	S	0	4	0
			1363	835	250	266	12			

- Molecule 3 is PHYCOERYTHROBILIN (three-letter code: PEB) (formula: $C_{33}H_{40}N_4O_6$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	S		
3	AAA	1	Total	C	N	O	0	0	
			43	33	4	6			
3	AAA	1	Total	C	N	O	0	0	
			43	33	4	6			
3	BBB	1	Total	C	N	O	0	0	
			43	33	4	6			
3	BBB	1	Total	C	N	O	0	0	
			43	33	4	6			
3	BBB	1	Total	C	N	O	0	0	
			43	33	4	6			
3	CCC	1	Total	C	N	O	0	0	
			43	33	4	6			
3	CCC	1	Total	C	N	O	0	0	
			43	33	4	6			
3	DDD	1	Total	C	N	O	0	0	
			43	33	4	6			
3	DDD	1	Total	C	N	O	0	0	
			43	33	4	6			

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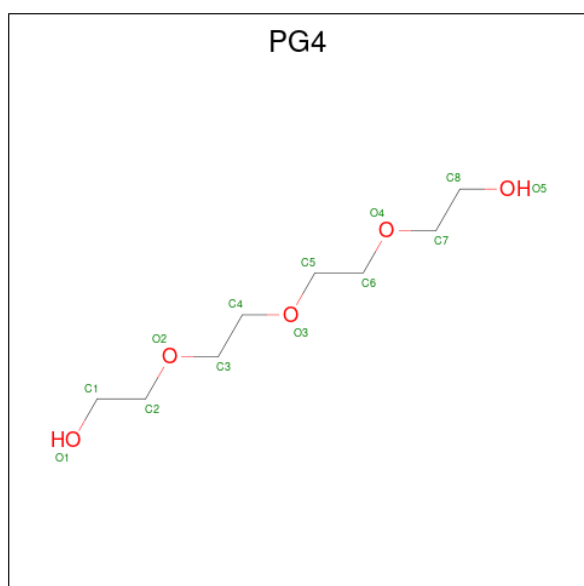
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	DDD	1	Total	C	N	O	0	0
			43	33	4	6		
3	EEE	1	Total	C	N	O	0	0
			43	33	4	6		
3	EEE	1	Total	C	N	O	0	0
			43	33	4	6		
3	FFF	1	Total	C	N	O	0	0
			43	33	4	6		
3	FFF	1	Total	C	N	O	0	0
			43	33	4	6		
3	FFF	1	Total	C	N	O	0	0
			43	33	4	6		
3	GGG	1	Total	C	N	O	0	0
			43	33	4	6		
3	GGG	1	Total	C	N	O	0	0
			43	33	4	6		
3	HHH	1	Total	C	N	O	0	0
			43	33	4	6		
3	HHH	1	Total	C	N	O	0	0
			43	33	4	6		
3	HHH	1	Total	C	N	O	0	0
			43	33	4	6		
3	III	1	Total	C	N	O	0	0
			43	33	4	6		
3	III	1	Total	C	N	O	0	0
			43	33	4	6		
3	JJJ	1	Total	C	N	O	0	0
			43	33	4	6		
3	JJJ	1	Total	C	N	O	0	0
			43	33	4	6		
3	JJJ	1	Total	C	N	O	0	0
			43	33	4	6		
3	KKK	1	Total	C	N	O	0	0
			43	33	4	6		
3	KKK	1	Total	C	N	O	0	0
			43	33	4	6		
3	LLL	1	Total	C	N	O	0	0
			43	33	4	6		
3	LLL	1	Total	C	N	O	0	0
			43	33	4	6		
3	LLL	1	Total	C	N	O	0	0
			43	33	4	6		

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
3	MMM	1	Total 43	C 33	N 4	O 6	0	0
3	MMM	1	Total 43	C 33	N 4	O 6	0	0
3	NNN	1	Total 43	C 33	N 4	O 6	0	0
3	NNN	1	Total 43	C 33	N 4	O 6	0	0
3	NNN	1	Total 43	C 33	N 4	O 6	0	0
3	OOO	1	Total 43	C 33	N 4	O 6	0	0
3	OOO	1	Total 43	C 33	N 4	O 6	0	0
3	PPP	1	Total 43	C 33	N 4	O 6	0	0
3	PPP	1	Total 43	C 33	N 4	O 6	0	0
3	PPP	1	Total 43	C 33	N 4	O 6	0	0

- Molecule 4 is TETRAETHYLENE GLYCOL (three-letter code: PG4) (formula: C₈H₁₈O₅).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	C	O		
4	AAA	1	Total 13	C 8	O 5	0	0

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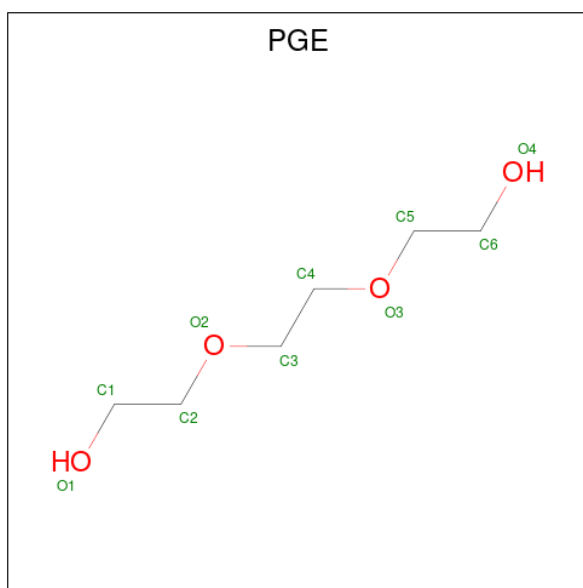
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	AAA	1	Total	C	O	0	0
			13	8	5		
4	AAA	1	Total	C	O	0	0
			13	8	5		
4	CCC	1	Total	C	O	0	0
			13	8	5		
4	DDD	1	Total	C	O	0	0
			13	8	5		
4	DDD	1	Total	C	O	0	0
			13	8	5		
4	FFF	1	Total	C	O	0	0
			13	8	5		
4	FFF	1	Total	C	O	0	0
			13	8	5		
4	FFF	1	Total	C	O	0	0
			13	8	5		
4	FFF	1	Total	C	O	0	0
			13	8	5		
4	GGG	1	Total	C	O	0	0
			13	8	5		
4	GGG	1	Total	C	O	0	0
			13	8	5		
4	GGG	1	Total	C	O	0	0
			13	8	5		
4	HHH	1	Total	C	O	0	0
			13	8	5		
4	HHH	1	Total	C	O	0	0
			13	8	5		
4	JJJ	1	Total	C	O	0	0
			13	8	5		
4	KKK	1	Total	C	O	0	0
			13	8	5		
4	KKK	1	Total	C	O	0	0
			13	8	5		
4	KKK	1	Total	C	O	0	0
			13	8	5		
4	LLL	1	Total	C	O	0	0
			13	8	5		
4	LLL	1	Total	C	O	0	0
			13	8	5		
4	LLL	1	Total	C	O	0	0
			13	8	5		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	MMM	1	Total	C	O	0	0
			13	8	5		
4	MMM	1	Total	C	O	0	0
			13	8	5		
4	MMM	1	Total	C	O	0	0
			13	8	5		
4	MMM	1	Total	C	O	0	0
			13	8	5		
4	NNN	1	Total	C	O	0	0
			13	8	5		
4	NNN	1	Total	C	O	0	0
			13	8	5		
4	NNN	1	Total	C	O	0	0
			13	8	5		
4	NNN	1	Total	C	O	0	0
			13	8	5		
4	OOO	1	Total	C	O	0	0
			13	8	5		
4	PPP	1	Total	C	O	0	0
			13	8	5		
4	PPP	1	Total	C	O	0	0
			13	8	5		

- Molecule 5 is TRIETHYLENE GLYCOL (three-letter code: PGE) (formula: C₆H₁₄O₄).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	AAA	1	Total	C	O	0	0
			10	6	4		
5	AAA	1	Total	C	O	0	0
			10	6	4		
5	AAA	1	Total	C	O	0	0
			10	6	4		
5	AAA	1	Total	C	O	0	0
			10	6	4		
5	AAA	1	Total	C	O	0	0
			10	6	4		
5	BBB	1	Total	C	O	0	0
			10	6	4		
5	BBB	1	Total	C	O	0	0
			10	6	4		
5	BBB	1	Total	C	O	0	0
			10	6	4		
5	CCC	1	Total	C	O	0	0
			10	6	4		
5	CCC	1	Total	C	O	0	0
			10	6	4		
5	CCC	1	Total	C	O	0	0
			10	6	4		
5	CCC	1	Total	C	O	0	0
			10	6	4		
5	DDD	1	Total	C	O	0	0
			10	6	4		
5	DDD	1	Total	C	O	0	0
			10	6	4		
5	DDD	1	Total	C	O	0	0
			10	6	4		
5	EEE	1	Total	C	O	0	0
			10	6	4		
5	EEE	1	Total	C	O	0	0
			10	6	4		
5	EEE	1	Total	C	O	0	0
			10	6	4		
5	FFF	1	Total	C	O	0	0
			10	6	4		

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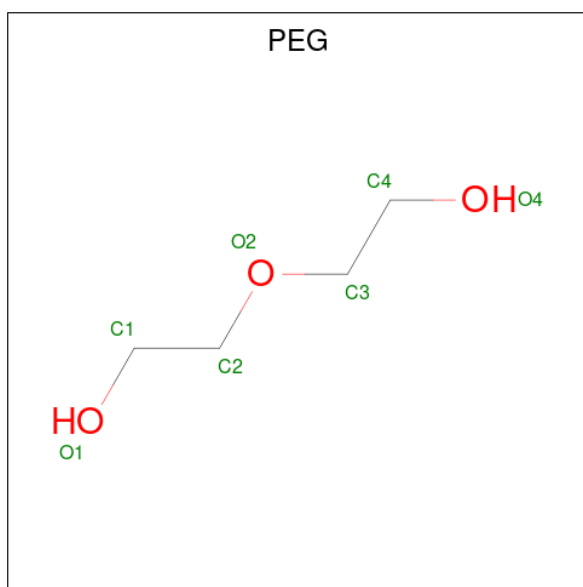
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	FFF	1	Total	C	O	0	0
			10	6	4		
5	FFF	1	Total	C	O	0	0
			10	6	4		
5	GGG	1	Total	C	O	0	0
			10	6	4		
5	GGG	1	Total	C	O	0	0
			10	6	4		
5	GGG	1	Total	C	O	0	0
			10	6	4		
5	GGG	1	Total	C	O	0	0
			10	6	4		
5	HHH	1	Total	C	O	0	0
			10	6	4		
5	HHH	1	Total	C	O	0	0
			10	6	4		
5	HHH	1	Total	C	O	0	0
			10	6	4		
5	HHH	1	Total	C	O	0	0
			10	6	4		
5	HHH	1	Total	C	O	0	0
			10	6	4		
5	III	1	Total	C	O	0	0
			10	6	4		
5	III	1	Total	C	O	0	0
			10	6	4		
5	III	1	Total	C	O	0	0
			10	6	4		
5	III	1	Total	C	O	0	0
			10	6	4		
5	JJJ	1	Total	C	O	0	0
			10	6	4		
5	JJJ	1	Total	C	O	0	0
			10	6	4		
5	JJJ	1	Total	C	O	0	0
			10	6	4		
5	KKK	1	Total	C	O	0	0
			10	6	4		
5	KKK	1	Total	C	O	0	0
			10	6	4		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	LLL	1	Total	C	O	0	0
			10	6	4		
5	LLL	1	Total	C	O	0	0
			10	6	4		
5	LLL	1	Total	C	O	0	0
			10	6	4		
5	LLL	1	Total	C	O	0	0
			10	6	4		
5	MMM	1	Total	C	O	0	0
			10	6	4		
5	MMM	1	Total	C	O	0	0
			10	6	4		
5	NNN	1	Total	C	O	0	0
			10	6	4		
5	NNN	1	Total	C	O	0	0
			10	6	4		
5	NNN	1	Total	C	O	0	0
			10	6	4		
5	NNN	1	Total	C	O	0	0
			10	6	4		
5	OOO	1	Total	C	O	0	0
			10	6	4		
5	OOO	1	Total	C	O	0	0
			10	6	4		
5	OOO	1	Total	C	O	0	0
			10	6	4		
5	PPP	1	Total	C	O	0	0
			10	6	4		

- Molecule 6 is DI(HYDROXYETHYL)ETHER (three-letter code: PEG) (formula: C₄H₁₀O₃).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	AAA	1	Total C O 7 4 3	0	0
6	AAA	1	Total C O 7 4 3	0	0
6	BBB	1	Total C O 7 4 3	0	0
6	BBB	1	Total C O 7 4 3	0	0
6	BBB	1	Total C O 7 4 3	0	0
6	BBB	1	Total C O 7 4 3	0	0
6	BBB	1	Total C O 7 4 3	0	0
6	BBB	1	Total C O 7 4 3	0	0
6	BBB	1	Total C O 7 4 3	0	0
6	BBB	1	Total C O 7 4 3	0	0
6	CCC	1	Total C O 7 4 3	0	0
6	CCC	1	Total C O 7 4 3	0	0
6	CCC	1	Total C O 7 4 3	0	0
6	CCC	1	Total C O 7 4 3	0	0
6	CCC	1	Total C O 7 4 3	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
6	CCC	1	Total	C	O	0	0
			7	4	3		
6	CCC	1	Total	C	O	0	0
			7	4	3		
6	CCC	1	Total	C	O	0	0
			7	4	3		
6	CCC	1	Total	C	O	0	0
			7	4	3		
6	DDD	1	Total	C	O	0	0
			7	4	3		
6	DDD	1	Total	C	O	0	0
			7	4	3		
6	DDD	1	Total	C	O	0	0
			7	4	3		
6	DDD	1	Total	C	O	0	0
			7	4	3		
6	DDD	1	Total	C	O	0	0
			7	4	3		
6	EEE	1	Total	C	O	0	0
			7	4	3		
6	EEE	1	Total	C	O	0	0
			7	4	3		
6	FFF	1	Total	C	O	0	0
			7	4	3		
6	FFF	1	Total	C	O	0	0
			7	4	3		
6	FFF	1	Total	C	O	0	0
			7	4	3		
6	FFF	1	Total	C	O	0	0
			7	4	3		
6	FFF	1	Total	C	O	0	0
			7	4	3		
6	GGG	1	Total	C	O	0	0
			7	4	3		
6	GGG	1	Total	C	O	0	0
			7	4	3		
6	GGG	1	Total	C	O	0	0
			7	4	3		
6	GGG	1	Total	C	O	0	0
			7	4	3		
6	GGG	1	Total	C	O	0	0
			7	4	3		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
6	HHH	1	Total	C	O	0	0
			7	4	3		
6	HHH	1	Total	C	O	0	0
			7	4	3		
6	HHH	1	Total	C	O	0	0
			7	4	3		
6	HHH	1	Total	C	O	0	0
			7	4	3		
6	HHH	1	Total	C	O	0	0
			7	4	3		
6	III	1	Total	C	O	0	0
			7	4	3		
6	III	1	Total	C	O	0	0
			7	4	3		
6	III	1	Total	C	O	0	0
			7	4	3		
6	III	1	Total	C	O	0	0
			7	4	3		
6	III	1	Total	C	O	0	0
			7	4	3		
6	III	1	Total	C	O	0	0
			7	4	3		
6	JJJ	1	Total	C	O	0	0
			7	4	3		
6	JJJ	1	Total	C	O	0	0
			7	4	3		
6	JJJ	1	Total	C	O	0	0
			7	4	3		
6	KKK	1	Total	C	O	0	0
			7	4	3		
6	KKK	1	Total	C	O	0	0
			7	4	3		
6	KKK	1	Total	C	O	0	0
			7	4	3		
6	KKK	1	Total	C	O	0	0
			7	4	3		
6	KKK	1	Total	C	O	0	0
			7	4	3		
6	LLL	1	Total	C	O	0	0
			7	4	3		
6	LLL	1	Total	C	O	0	0
			7	4	3		

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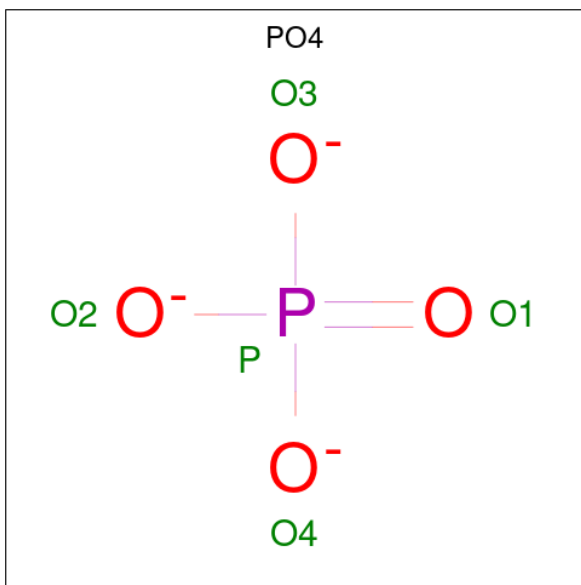
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
6	LLL	1	Total	C	O	0	0
			7	4	3		
6	LLL	1	Total	C	O	0	0
			7	4	3		
6	LLL	1	Total	C	O	0	0
			7	4	3		
6	LLL	1	Total	C	O	0	0
			7	4	3		
6	LLL	1	Total	C	O	0	1
			14	8	6		
6	MMM	1	Total	C	O	0	0
			7	4	3		
6	MMM	1	Total	C	O	0	0
			7	4	3		
6	MMM	1	Total	C	O	0	0
			7	4	3		
6	NNN	1	Total	C	O	0	0
			7	4	3		
6	NNN	1	Total	C	O	0	0
			7	4	3		
6	NNN	1	Total	C	O	0	0
			7	4	3		
6	OOO	1	Total	C	O	0	0
			7	4	3		
6	OOO	1	Total	C	O	0	0
			7	4	3		
6	OOO	1	Total	C	O	0	0
			7	4	3		
6	PPP	1	Total	C	O	0	0
			7	4	3		
6	PPP	1	Total	C	O	0	0
			7	4	3		
6	PPP	1	Total	C	O	0	0
			7	4	3		
6	PPP	1	Total	C	O	0	0
			7	4	3		
6	PPP	1	Total	C	O	0	0
			7	4	3		

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

- Molecule 7 is PHOSPHATE ION (three-letter code: PO4) (formula: O₄P).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	AAA	1	Total O P 5 4 1	0	0
7	AAA	1	Total O P 5 4 1	0	0
7	BBB	1	Total O P 5 4 1	0	0
7	BBB	1	Total O P 5 4 1	0	0
7	BBB	1	Total O P 5 4 1	0	0
7	BBB	1	Total O P 5 4 1	0	0
7	CCC	1	Total O P 5 4 1	0	0
7	CCC	1	Total O P 5 4 1	0	0
7	CCC	1	Total O P 5 4 1	0	0

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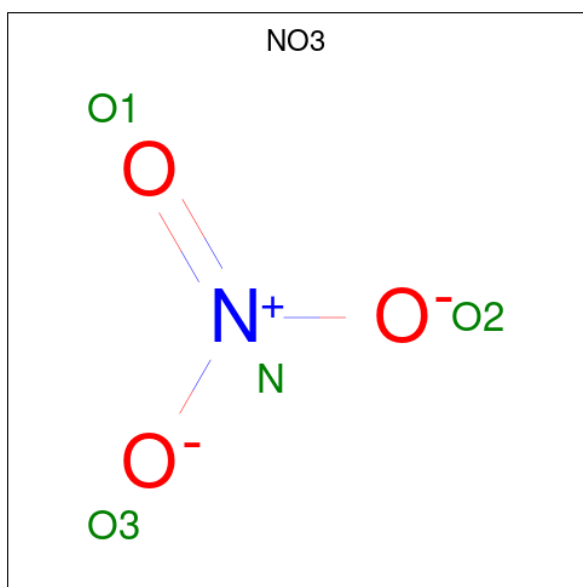
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
7	DDD	1	Total	O	P	0	0
			5	4	1		
7	DDD	1	Total	O	P	0	0
			5	4	1		
7	DDD	1	Total	O	P	0	0
			5	4	1		
7	DDD	1	Total	O	P	0	0
			5	4	1		
7	DDD	1	Total	O	P	0	0
			5	4	1		
7	FFF	1	Total	O	P	0	0
			5	4	1		
7	FFF	1	Total	O	P	0	0
			5	4	1		
7	FFF	1	Total	O	P	0	0
			5	4	1		
7	FFF	1	Total	O	P	0	0
			5	4	1		
7	FFF	1	Total	O	P	0	0
			5	4	1		
7	GGG	1	Total	O	P	0	0
			5	4	1		
7	GGG	1	Total	O	P	0	0
			5	4	1		
7	HHH	1	Total	O	P	0	0
			5	4	1		
7	HHH	1	Total	O	P	0	0
			5	4	1		
7	HHH	1	Total	O	P	0	0
			5	4	1		
7	HHH	1	Total	O	P	0	0
			5	4	1		
7	III	1	Total	O	P	0	0
			5	4	1		
7	III	1	Total	O	P	0	0
			5	4	1		
7	III	1	Total	O	P	0	0
			5	4	1		
7	JJJ	1	Total	O	P	0	0
			5	4	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	O	P		
7	JJJ	1	5	4	1	0	0
7	JJJ	1	5	4	1	0	0
7	JJJ	1	5	4	1	0	0
7	JJJ	1	5	4	1	0	0
7	JJJ	1	5	4	1	0	0
7	KKK	1	5	4	1	0	0
7	KKK	1	5	4	1	0	0
7	KKK	1	5	4	1	0	0
7	LLL	1	5	4	1	0	0
7	LLL	1	5	4	1	0	0
7	NNN	1	5	4	1	0	0
7	NNN	1	5	4	1	0	0
7	NNN	1	5	4	1	0	0
7	NNN	1	5	4	1	0	0
7	NNN	1	5	4	1	0	0
7	OOO	1	5	4	1	0	0
7	PPP	1	5	4	1	0	0
7	PPP	1	5	4	1	0	0
7	PPP	1	5	4	1	0	0

- Molecule 8 is NITRATE ION (three-letter code: NO3) (formula: NO₃).



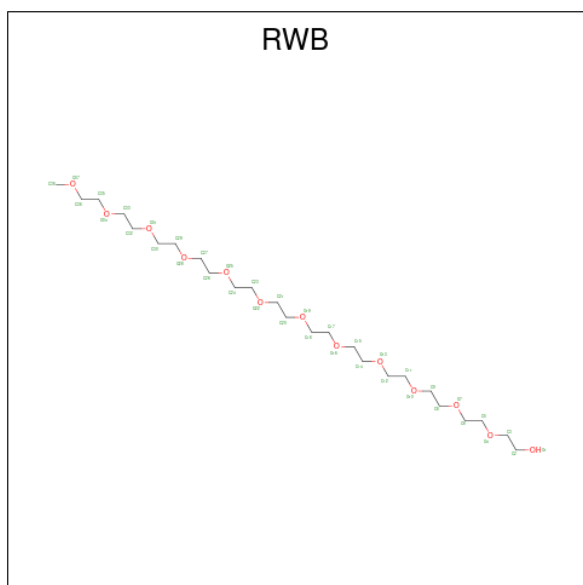
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
8	AAA	1	Total	N	O	0	0
			4	1	3		
8	AAA	1	Total	N	O	0	0
			4	1	3		
8	BBB	1	Total	N	O	0	0
			4	1	3		
8	CCC	1	Total	N	O	0	0
			4	1	3		
8	DDD	1	Total	N	O	0	0
			4	1	3		
8	DDD	1	Total	N	O	0	0
			4	1	3		
8	EEE	1	Total	N	O	0	0
			4	1	3		
8	EEE	1	Total	N	O	0	0
			4	1	3		
8	FFF	1	Total	N	O	0	0
			4	1	3		
8	GGG	1	Total	N	O	0	0
			4	1	3		
8	HHH	1	Total	N	O	0	0
			4	1	3		
8	HHH	1	Total	N	O	0	0
			4	1	3		
8	III	1	Total	N	O	0	0
			4	1	3		
8	JJJ	1	Total	N	O	0	0
			4	1	3		

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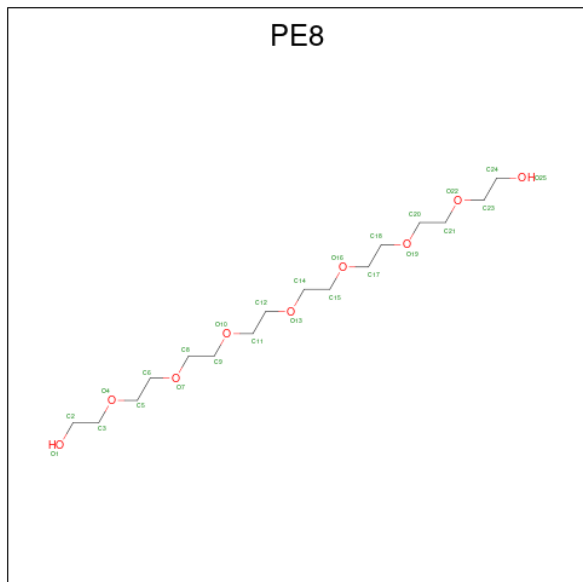
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
8	JJJ	1	Total	N	O	0	0
			4	1	3		
8	KKK	1	Total	N	O	0	0
			4	1	3		
8	KKK	1	Total	N	O	0	0
			4	1	3		
8	LLL	1	Total	N	O	0	0
			4	1	3		
8	LLL	1	Total	N	O	0	0
			4	1	3		
8	LLL	1	Total	N	O	0	0
			4	1	3		
8	MMM	1	Total	N	O	0	0
			4	1	3		
8	OOO	1	Total	N	O	0	0
			4	1	3		
8	PPP	1	Total	N	O	0	0
			4	1	3		

- Molecule 9 is dodecaethylene glycol monomethyl ether (three-letter code: RWB) (formula: $C_{25}H_{52}O_{13}$).



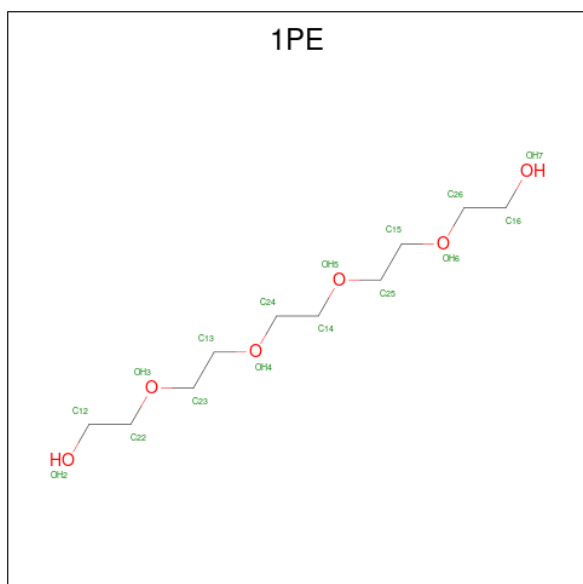
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
9	BBB	1	Total	C	O	0	0
			38	25	13		
9	LLL	1	Total	C	O	0	0
			38	25	13		

- Molecule 10 is 3,6,9,12,15,18,21-HEPTAOXATRICOSANE-1,23-DIOL (three-letter code: PE8) (formula: $C_{16}H_{34}O_9$).



Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	
			Total	C			O
10	BBB	1	25	16	9	0	0

- Molecule 11 is PENTAETHYLENE GLYCOL (three-letter code: 1PE) (formula: $C_{10}H_{22}O_6$).



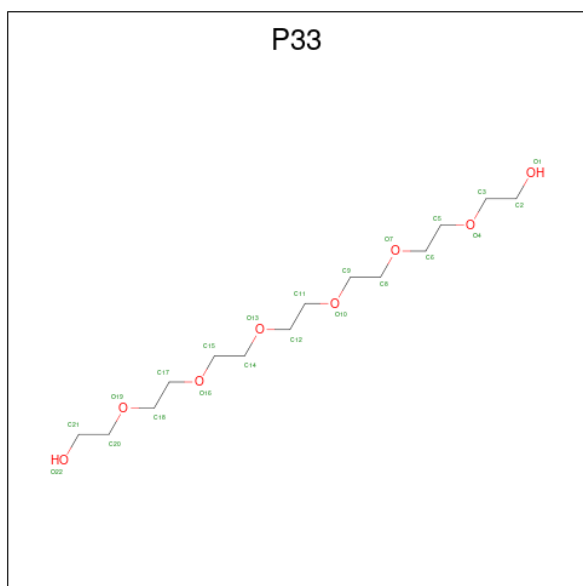
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	
			Total	C			O
11	BBB	1	16	10	6	0	0

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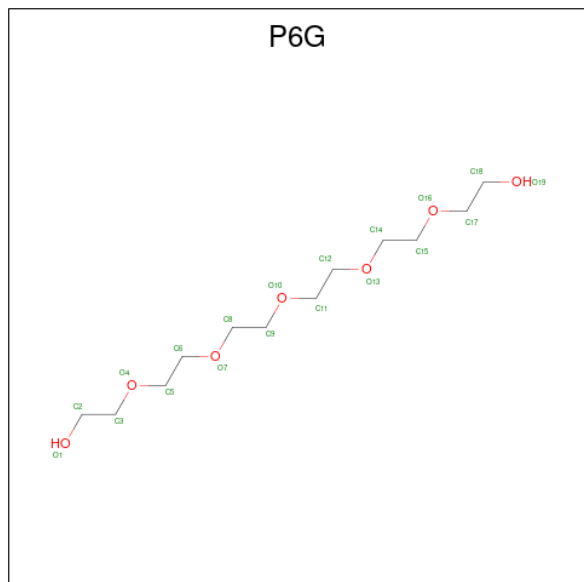
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
11	BBB	1	Total	C	O	0	0
			16	10	6		
11	BBB	1	Total	C	O	0	0
			16	10	6		
11	DDD	1	Total	C	O	0	0
			16	10	6		
11	EEE	1	Total	C	O	0	0
			16	10	6		
11	FFF	1	Total	C	O	0	0
			16	10	6		
11	HHH	1	Total	C	O	0	0
			16	10	6		
11	JJJ	1	Total	C	O	0	0
			16	10	6		
11	JJJ	1	Total	C	O	0	0
			16	10	6		
11	JJJ	1	Total	C	O	0	0
			16	10	6		
11	LLL	1	Total	C	O	0	0
			16	10	6		
11	PPP	1	Total	C	O	0	0
			16	10	6		

- Molecule 12 is 3,6,9,12,15,18-HEXA-OXAICOSANE-1,20-DIOL (three-letter code: P33) (formula: $C_{14}H_{30}O_8$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
12	DDD	1	Total	C	O	0	0
			22	14	8		
12	DDD	1	Total	C	O	0	0
			22	14	8		
12	FFF	1	Total	C	O	0	0
			22	14	8		
12	HHH	1	Total	C	O	0	0
			22	14	8		
12	HHH	1	Total	C	O	0	0
			22	14	8		
12	JJJ	1	Total	C	O	0	0
			22	14	8		

- Molecule 13 is HEXAETHYLENE GLYCOL (three-letter code: P6G) (formula: $C_{12}H_{26}O_7$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
13	DDD	1	Total	C	O	0	0
			19	12	7		

- Molecule 14 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: $C_2H_6O_2$).



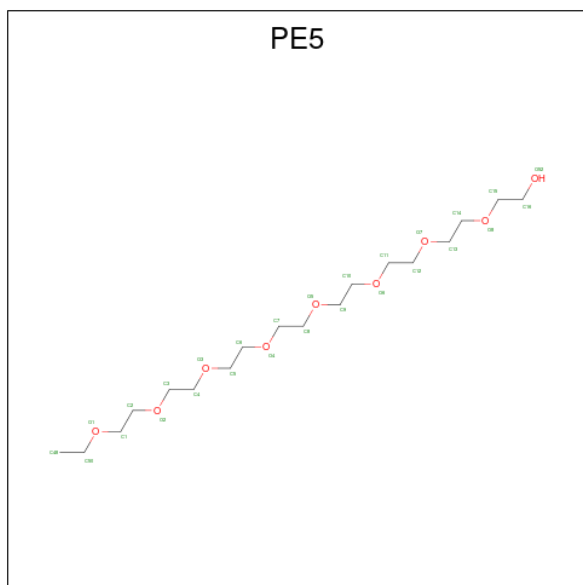
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
14	DDD	1	Total C O 4 2 2	0	0
14	DDD	1	Total C O 4 2 2	0	0
14	EEE	1	Total C O 4 2 2	0	0
14	EEE	1	Total C O 4 2 2	0	0
14	FFF	1	Total C O 4 2 2	0	0
14	FFF	1	Total C O 4 2 2	0	0
14	HHH	1	Total C O 4 2 2	0	0
14	HHH	1	Total C O 4 2 2	0	0
14	III	1	Total C O 4 2 2	0	0
14	III	1	Total C O 4 2 2	0	0
14	LLL	1	Total C O 4 2 2	0	0
14	NNN	1	Total C O 4 2 2	0	0
14	NNN	1	Total C O 4 2 2	0	0
14	NNN	1	Total C O 4 2 2	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
14	PPP	1	Total	C O	0	0
			4	2 2		

- Molecule 15 is 3,6,9,12,15,18,21,24-OCTAOXAHEXACOSAN-1-OL (three-letter code: PE5) (formula: C₁₈H₃₈O₉).



Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
15	NNN	1	Total	C O	0	0
			27	18 9		

- Molecule 16 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
16	AAA	93	Total	O	0	0
			93	93		
16	BBB	90	Total	O	0	0
			90	90		
16	CCC	90	Total	O	0	0
			90	90		
16	DDD	97	Total	O	0	0
			97	97		
16	EEE	82	Total	O	0	0
			82	82		
16	FFF	110	Total	O	0	0
			110	110		
16	GGG	77	Total	O	0	0
			77	77		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
16	HHH	92	Total 92	O 92	0	0
16	III	79	Total 79	O 79	0	0
16	JJJ	106	Total 106	O 106	0	0
16	KKK	86	Total 86	O 86	0	0
16	LLL	97	Total 97	O 97	0	0
16	MMM	76	Total 76	O 76	0	0
16	NNN	76	Total 76	O 76	0	0
16	OOO	57	Total 57	O 57	0	0
16	PPP	57	Total 57	O 57	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.

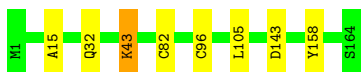
- Molecule 1: Alpha subunit of cyanobacterial protein phycoerythrin

Chain AAA:  93% 7%



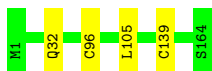
- Molecule 1: Alpha subunit of cyanobacterial protein phycoerythrin

Chain CCC:  95% ..



- Molecule 1: Alpha subunit of cyanobacterial protein phycoerythrin

Chain EEE:  98% .



- Molecule 1: Alpha subunit of cyanobacterial protein phycoerythrin

Chain GGG:  92% 8%



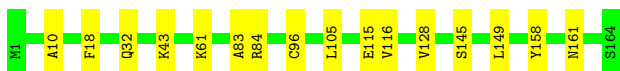
- Molecule 1: Alpha subunit of cyanobacterial protein phycoerythrin

Chain III:  95% 5%



- Molecule 1: Alpha subunit of cyanobacterial protein phycoerythrin

Chain KKK:  90% 10%



- Molecule 1: Alpha subunit of cyanobacterial protein phycoerythrin



- Molecule 1: Alpha subunit of cyanobacterial protein phycoerythrin



- Molecule 2: Beta subunit of cyanobacterial protein phycoerythrin



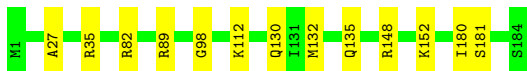
- Molecule 2: Beta subunit of cyanobacterial protein phycoerythrin



- Molecule 2: Beta subunit of cyanobacterial protein phycoerythrin



- Molecule 2: Beta subunit of cyanobacterial protein phycoerythrin



- Molecule 2: Beta subunit of cyanobacterial protein phycoerythrin





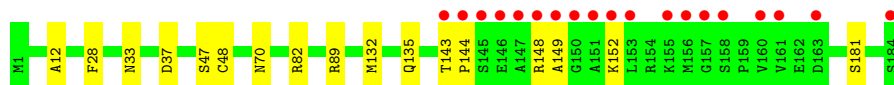
- Molecule 2: Beta subunit of cyanobacterial protein phycoerythrin



- Molecule 2: Beta subunit of cyanobacterial protein phycoerythrin



- Molecule 2: Beta subunit of cyanobacterial protein phycoerythrin



4 Data and refinement statistics

Property	Value	Source
Space group	H 3 2	Depositor
Cell constants a, b, c, α , β , γ	192.76Å 192.76Å 524.49Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	49.01 – 2.13 174.83 – 2.13	Depositor EDS
% Data completeness (in resolution range)	75.0 (49.01-2.13) 75.0 (174.83-2.13)	Depositor EDS
R_{merge}	0.28	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.88 (at 2.12Å)	Xtrriage
Refinement program	REFMAC 5.8.0258	Depositor
R, R_{free}	0.177 , 0.225 0.189 , 0.232	Depositor DCC
R_{free} test set	7767 reflections (4.98%)	wwPDB-VP
Wilson B-factor (Å ²)	29.7	Xtrriage
Anisotropy	0.056	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.34 , 62.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.34$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	26483	wwPDB-VP
Average B, all atoms (Å ²)	43.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.66% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: PE8, EDO, MEN, PO4, PG4, P33, PGE, 1PE, P6G, NO3, RWB, PEB, PEG, PE5

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	AAA	0.74	0/1283	0.83	1/1739 (0.1%)
1	CCC	0.70	0/1285	0.80	0/1741
1	EEE	0.71	0/1283	0.80	0/1739
1	GGG	0.70	0/1267	0.81	0/1717
1	III	0.69	0/1267	0.79	0/1717
1	KKK	0.69	0/1274	0.81	0/1727
1	MMM	0.72	0/1276	0.81	0/1729
1	OOO	0.72	1/1261 (0.1%)	0.81	0/1709
2	BBB	0.71	0/1401	0.81	1/1892 (0.1%)
2	DDD	0.69	0/1411	0.80	0/1905
2	FFF	0.73	1/1390 (0.1%)	0.80	1/1878 (0.1%)
2	HHH	0.70	0/1391	0.81	0/1880
2	JJJ	0.71	0/1402	0.84	0/1894
2	LLL	0.70	0/1407	0.80	1/1900 (0.1%)
2	NNN	0.70	0/1366	0.81	0/1846
2	PPP	0.71	0/1377	0.81	0/1860
All	All	0.71	2/21341 (0.0%)	0.81	4/28873 (0.0%)

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	FFF	113	GLU	CD-OE1	6.99	1.33	1.25
1	OOO	115	GLU	CD-OE1	5.42	1.31	1.25

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AAA	37	ARG	NE-CZ-NH2	-5.91	117.34	120.30
2	LLL	154	ARG	CG-CD-NE	-5.32	100.64	111.80
2	FFF	154	ARG	CG-CD-NE	-5.14	101.00	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	BBB	154	ARG	CG-CD-NE	-5.01	101.28	111.80

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AAA	1257	0	1252	20	0
1	CCC	1256	0	1252	12	0
1	EEE	1254	0	1253	5	0
1	GGG	1244	0	1238	12	0
1	III	1244	0	1238	10	0
1	KKK	1245	0	1248	18	0
1	MMM	1247	0	1245	25	0
1	OOO	1238	0	1234	6	0
2	BBB	1378	0	1410	8	0
2	DDD	1382	0	1420	13	0
2	FFF	1370	0	1397	14	0
2	HHH	1368	0	1394	20	0
2	JJJ	1376	0	1407	15	0
2	LLL	1381	0	1415	23	0
2	NNN	1355	0	1372	17	0
2	PPP	1363	0	1385	18	0
3	AAA	86	0	74	1	0
3	BBB	129	0	110	10	0
3	CCC	86	0	74	2	0
3	DDD	129	0	110	7	0
3	EEE	86	0	74	3	0
3	FFF	129	0	110	6	0
3	GGG	86	0	74	1	0
3	HHH	129	0	110	5	0
3	III	86	0	74	0	0
3	JJJ	129	0	110	6	0
3	KKK	86	0	74	2	0
3	LLL	129	0	110	9	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	MMM	86	0	74	4	0
3	NNN	129	0	110	8	0
3	OOO	86	0	74	5	0
3	PPP	129	0	110	16	0
4	AAA	39	0	54	18	0
4	CCC	13	0	18	7	0
4	DDD	26	0	36	1	0
4	FFF	52	0	72	9	0
4	GGG	39	0	54	4	0
4	HHH	26	0	36	4	0
4	JJJ	13	0	18	3	0
4	KKK	39	0	54	9	0
4	LLL	39	0	54	6	0
4	MMM	52	0	72	27	0
4	NNN	65	0	90	4	0
4	OOO	13	0	18	0	0
4	PPP	26	0	36	5	0
5	AAA	60	0	84	3	0
5	BBB	30	0	42	1	0
5	CCC	50	0	70	3	0
5	DDD	30	0	42	12	0
5	EEE	40	0	56	0	0
5	FFF	30	0	42	6	0
5	GGG	40	0	56	5	0
5	HHH	60	0	84	9	0
5	III	40	0	56	6	0
5	JJJ	30	0	42	7	0
5	KKK	20	0	28	4	0
5	LLL	40	0	56	12	0
5	MMM	20	0	28	0	0
5	NNN	40	0	56	4	0
5	OOO	30	0	42	1	0
5	PPP	10	0	14	1	0
6	AAA	14	0	20	0	0
6	BBB	49	0	70	1	0
6	CCC	63	0	90	16	0
6	DDD	35	0	50	3	0
6	EEE	14	0	20	0	0
6	FFF	35	0	50	0	0
6	GGG	35	0	50	7	0
6	HHH	35	0	50	3	0
6	III	42	0	60	8	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	JJJ	21	0	30	2	0
6	KKK	35	0	50	6	0
6	LLL	63	0	90	7	0
6	MMM	21	0	30	8	0
6	NNN	21	0	30	3	0
6	OOO	28	0	40	1	0
6	PPP	49	0	70	3	0
7	AAA	10	0	0	2	0
7	BBB	20	0	0	0	0
7	CCC	15	0	0	2	0
7	DDD	30	0	0	1	0
7	FFF	25	0	0	0	0
7	GGG	10	0	0	2	0
7	HHH	20	0	0	0	0
7	III	15	0	0	0	0
7	JJJ	30	0	0	0	0
7	KKK	15	0	0	2	0
7	LLL	10	0	0	1	0
7	NNN	25	0	0	0	0
7	OOO	5	0	0	1	0
7	PPP	15	0	0	3	0
8	AAA	8	0	0	0	0
8	BBB	4	0	0	0	0
8	CCC	4	0	0	0	0
8	DDD	8	0	0	0	0
8	EEE	8	0	0	0	0
8	FFF	4	0	0	0	0
8	GGG	4	0	0	0	0
8	HHH	8	0	0	0	0
8	III	4	0	0	0	0
8	JJJ	8	0	0	1	0
8	KKK	8	0	0	1	0
8	LLL	12	0	0	2	0
8	MMM	4	0	0	0	0
8	OOO	4	0	0	1	0
8	PPP	4	0	0	0	0
9	BBB	38	0	0	0	0
9	LLL	38	0	0	2	0
10	BBB	25	0	34	0	0
11	BBB	48	0	66	3	0
11	DDD	16	0	22	5	0
11	EEE	16	0	22	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	FFF	16	0	22	1	0
11	HHH	16	0	22	2	0
11	JJJ	48	0	66	11	0
11	LLL	16	0	22	0	0
11	PPP	16	0	22	1	0
12	DDD	44	0	60	6	0
12	FFF	22	0	30	2	0
12	HHH	44	0	60	4	0
12	JJJ	22	0	30	4	0
13	DDD	19	0	26	2	0
14	DDD	8	0	12	0	0
14	EEE	8	0	12	0	0
14	FFF	8	0	12	0	0
14	HHH	8	0	12	0	0
14	III	8	0	12	1	0
14	LLL	4	0	6	0	0
14	NNN	12	0	18	5	0
14	PPP	4	0	6	0	0
15	NNN	27	0	38	6	0
16	AAA	93	0	0	2	0
16	BBB	90	0	0	2	0
16	CCC	90	0	0	0	0
16	DDD	97	0	0	7	0
16	EEE	82	0	0	0	0
16	FFF	110	0	0	2	0
16	GGG	77	0	0	1	0
16	HHH	92	0	0	1	0
16	III	79	0	0	0	0
16	JJJ	106	0	0	7	0
16	KKK	86	0	0	4	0
16	LLL	97	0	0	1	0
16	MMM	76	0	0	3	0
16	NNN	76	0	0	3	0
16	OOO	57	0	0	1	0
16	PPP	57	0	0	4	0
All	All	26483	0	25474	419	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 8.

The worst 5 of 419 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)
6:CCC:219:PEG:C1	5:DDD:212:PGE:H62	1.53	1.35
7:AAA:214:PO4:O4	16:AAA:301:HOH:O	1.53	1.25
6:CCC:219:PEG:H12	5:DDD:212:PGE:C6	1.77	1.15
1:AAA:47:ASN:HA	4:AAA:203:PG4:H52	1.34	1.08
1:GGG:49:ASP:HB2	5:GGG:208:PGE:H1	1.28	1.08

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	AAA	165/164 (101%)	162 (98%)	3 (2%)	0	100	100
1	CCC	165/164 (101%)	162 (98%)	3 (2%)	0	100	100
1	EEE	165/164 (101%)	162 (98%)	3 (2%)	0	100	100
1	GGG	163/164 (99%)	160 (98%)	3 (2%)	0	100	100
1	III	163/164 (99%)	160 (98%)	3 (2%)	0	100	100
1	KKK	164/164 (100%)	161 (98%)	3 (2%)	0	100	100
1	MMM	164/164 (100%)	161 (98%)	3 (2%)	0	100	100
1	OOO	162/164 (99%)	159 (98%)	3 (2%)	0	100	100
2	BBB	188/184 (102%)	184 (98%)	4 (2%)	0	100	100
2	DDD	190/184 (103%)	186 (98%)	4 (2%)	0	100	100
2	FFF	187/184 (102%)	183 (98%)	4 (2%)	0	100	100
2	HHH	188/184 (102%)	183 (97%)	5 (3%)	0	100	100
2	JJJ	189/184 (103%)	184 (97%)	5 (3%)	0	100	100
2	LLL	189/184 (103%)	185 (98%)	4 (2%)	0	100	100
2	NNN	184/184 (100%)	180 (98%)	4 (2%)	0	100	100
2	PPP	185/184 (100%)	181 (98%)	4 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
All	All	2811/2784 (101%)	2753 (98%)	58 (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	AAA	128/124 (103%)	128 (100%)	0	100	100
1	CCC	128/124 (103%)	127 (99%)	1 (1%)	81	85
1	EEE	128/124 (103%)	128 (100%)	0	100	100
1	GGG	126/124 (102%)	124 (98%)	2 (2%)	62	65
1	III	126/124 (102%)	126 (100%)	0	100	100
1	KKK	127/124 (102%)	126 (99%)	1 (1%)	81	85
1	MMM	127/124 (102%)	127 (100%)	0	100	100
1	OOO	125/124 (101%)	121 (97%)	4 (3%)	39	37
2	BBB	145/138 (105%)	145 (100%)	0	100	100
2	DDD	147/138 (106%)	145 (99%)	2 (1%)	67	70
2	FFF	144/138 (104%)	144 (100%)	0	100	100
2	HHH	145/138 (105%)	145 (100%)	0	100	100
2	JJJ	146/138 (106%)	143 (98%)	3 (2%)	53	54
2	LLL	146/138 (106%)	146 (100%)	0	100	100
2	NNN	141/138 (102%)	140 (99%)	1 (1%)	84	87
2	PPP	142/138 (103%)	140 (99%)	2 (1%)	67	70
All	All	2171/2096 (104%)	2155 (99%)	16 (1%)	86	87

5 of 16 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	PPP	47	SER

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Mol	Chain	Res	Type
1	OOO	118	ARG
1	KKK	43	LYS
1	OOO	114	ARG
2	JJJ	162	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

8 non-standard protein/DNA/RNA residues 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	MEN	HHH	70	2	7,8,9	0.57	0	6,9,11	0.93	0
2	MEN	FFF	70	2	7,8,9	0.60	0	6,9,11	1.13	1 (16%)
2	MEN	NNN	70	2	7,8,9	0.69	0	6,9,11	0.99	1 (16%)
2	MEN	BBB	70	2	7,8,9	0.66	0	6,9,11	1.09	1 (16%)
2	MEN	LLL	70	2	7,8,9	0.63	0	6,9,11	0.74	0
2	MEN	DDD	70	2	7,8,9	0.69	0	6,9,11	1.07	0
2	MEN	JJJ	70	2	7,8,9	0.57	0	6,9,11	0.90	0
2	MEN	PPP	70	2	7,8,9	0.71	0	6,9,11	0.99	1 (16%)

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	MEN	HHH	70	2	-	2/7/8/10	-
2	MEN	FFF	70	2	-	2/7/8/10	-
2	MEN	NNN	70	2	-	3/7/8/10	-
2	MEN	BBB	70	2	-	2/7/8/10	-
2	MEN	LLL	70	2	-	2/7/8/10	-
2	MEN	DDD	70	2	-	2/7/8/10	-
2	MEN	JJJ	70	2	-	3/7/8/10	-
2	MEN	PPP	70	2	-	3/7/8/10	-

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	FFF	70	MEN	CB-CA-C	2.31	115.80	111.47
2	PPP	70	MEN	CB-CA-C	2.08	115.37	111.47
2	BBB	70	MEN	CB-CA-C	2.06	115.33	111.47
2	NNN	70	MEN	CB-CA-C	2.05	115.32	111.47

There are no chirality outliers.

5 of 19 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	DDD	70	MEN	CA-CB-CG-ND2
2	FFF	70	MEN	CA-CB-CG-ND2
2	HHH	70	MEN	CA-CB-CG-ND2
2	BBB	70	MEN	CA-CB-CG-ND2
2	JJJ	70	MEN	CA-CB-CG-ND2

There are no ring outliers.

3 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	NNN	70	MEN	1	0
2	LLL	70	MEN	1	0
2	DDD	70	MEN	1	0

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

321 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	PEB	AAA	201	1	43,46,46	1.80	5 (11%)	45,67,67	1.66	9 (20%)
3	PEB	LLL	202	2	43,46,46	1.30	3 (6%)	45,67,67	1.12	2 (4%)
6	PEG	III	209	-	6,6,6	0.19	0	5,5,5	0.23	0
3	PEB	FFF	205	2	43,46,46	0.90	2 (4%)	45,67,67	0.94	3 (6%)
6	PEG	LLL	218[B]	-	6,6,6	0.36	0	5,5,5	0.19	0
6	PEG	DDD	213	-	6,6,6	0.24	0	5,5,5	0.18	0
3	PEB	DDD	201	2	43,46,46	1.60	5 (11%)	45,67,67	1.53	8 (17%)
6	PEG	BBB	213	-	6,6,6	0.25	0	5,5,5	0.08	0
4	PG4	CCC	203	-	12,12,12	0.38	0	11,11,11	0.19	0
4	PG4	PPP	206	-	12,12,12	0.30	0	11,11,11	0.12	0
6	PEG	LLL	217	-	6,6,6	0.29	0	5,5,5	0.12	0
3	PEB	HHH	303	2	43,46,46	1.80	3 (6%)	45,67,67	1.23	5 (11%)
6	PEG	HHH	316	-	6,6,6	0.68	0	5,5,5	0.57	0
7	PO4	III	216	-	4,4,4	0.96	0	6,6,6	0.43	0
11	1PE	JJJ	308	-	15,15,15	0.73	0	14,14,14	0.59	0
5	PGE	AAA	207	-	9,9,9	0.25	0	8,8,8	0.21	0
6	PEG	PPP	213	-	6,6,6	0.42	0	5,5,5	0.30	0
4	PG4	AAA	203	-	12,12,12	0.39	0	11,11,11	0.21	0
5	PGE	AAA	208	-	9,9,9	0.22	0	8,8,8	0.16	0
6	PEG	HHH	317	-	6,6,6	0.39	0	5,5,5	0.21	0
7	PO4	KKK	215	-	4,4,4	0.35	0	6,6,6	0.75	0
3	PEB	JJJ	305	2	43,46,46	1.36	3 (6%)	45,67,67	1.07	5 (11%)
6	PEG	CCC	210	-	6,6,6	0.30	0	5,5,5	0.58	0
8	NO3	DDD	225	-	1,3,3	1.52	0	0,3,3	-	-
6	PEG	PPP	214	-	6,6,6	0.33	0	5,5,5	0.29	0
7	PO4	DDD	223	-	4,4,4	0.87	0	6,6,6	0.57	0
6	PEG	LLL	212	-	6,6,6	0.22	0	5,5,5	0.09	0
6	PEG	MMM	209	-	6,6,6	0.56	0	5,5,5	0.34	0
14	EDO	III	217	-	3,3,3	0.21	0	2,2,2	0.27	0
6	PEG	FFF	215	-	6,6,6	0.33	0	5,5,5	0.19	0
12	P33	HHH	306	-	21,21,21	0.78	0	20,20,20	0.65	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
6	PEG	GGG	210	-	6,6,6	0.21	0	5,5,5	0.15	0
7	PO4	JJJ	321	-	4,4,4	1.19	1 (25%)	6,6,6	0.37	0
5	PGE	DDD	212	-	9,9,9	0.46	0	8,8,8	0.29	0
4	PG4	GGG	204	-	12,12,12	0.50	0	11,11,11	0.35	0
6	PEG	BBB	212	-	6,6,6	0.24	0	5,5,5	0.23	0
5	PGE	AAA	209	-	9,9,9	0.39	0	8,8,8	0.25	0
6	PEG	OOO	207	-	6,6,6	0.22	0	5,5,5	0.11	0
7	PO4	DDD	224	-	4,4,4	0.79	0	6,6,6	0.49	0
6	PEG	OOO	208	-	6,6,6	0.27	0	5,5,5	0.14	0
5	PGE	HHH	313	-	9,9,9	0.34	0	8,8,8	0.15	0
6	PEG	NNN	214	-	6,6,6	0.39	0	5,5,5	0.37	0
5	PGE	LLL	209	-	9,9,9	0.29	0	8,8,8	0.13	0
3	PEB	OOO	202	1	43,46,46	1.34	3 (6%)	45,67,67	0.98	3 (6%)
6	PEG	III	208	-	6,6,6	0.21	0	5,5,5	0.16	0
4	PG4	MMM	203	-	12,12,12	0.30	0	11,11,11	0.40	0
6	PEG	MMM	208	-	6,6,6	0.11	0	5,5,5	0.27	0
6	PEG	PPP	212	-	6,6,6	0.22	0	5,5,5	0.13	0
4	PG4	FFF	202	-	12,12,12	0.30	0	11,11,11	0.21	0
8	NO3	CCC	218	-	1,3,3	1.30	0	0,3,3	-	-
8	NO3	LLL	222	-	1,3,3	0.16	0	0,3,3	-	-
6	PEG	HHH	318	-	6,6,6	0.24	0	5,5,5	0.13	0
8	NO3	AAA	217	-	1,3,3	0.63	0	0,3,3	-	-
6	PEG	PPP	211	-	6,6,6	0.52	0	5,5,5	0.34	0
7	PO4	DDD	220	-	4,4,4	0.82	0	6,6,6	0.56	0
14	EDO	DDD	217	-	3,3,3	0.38	0	2,2,2	0.42	0
12	P33	FFF	207	-	21,21,21	0.73	0	20,20,20	0.80	0
6	PEG	CCC	213	-	6,6,6	0.22	0	5,5,5	0.09	0
3	PEB	JJJ	304	2	43,46,46	1.49	3 (6%)	45,67,67	1.70	6 (13%)
4	PG4	NNN	207	-	12,12,12	0.35	0	11,11,11	0.22	0
14	EDO	LLL	219	-	3,3,3	0.35	0	2,2,2	0.35	0
5	PGE	NNN	211	-	9,9,9	0.17	0	8,8,8	0.14	0
4	PG4	NNN	208	-	12,12,12	0.37	0	11,11,11	0.21	0
4	PG4	GGG	203	-	12,12,12	0.25	0	11,11,11	0.16	0
5	PGE	DDD	210	-	9,9,9	0.29	0	8,8,8	0.20	0
4	PG4	LLL	206	-	12,12,12	0.24	0	11,11,11	0.26	0
5	PGE	BBB	210	-	9,9,9	0.36	0	8,8,8	0.22	0
6	PEG	DDD	214	-	6,6,6	0.18	0	5,5,5	0.10	0
5	PGE	GGG	206	-	9,9,9	0.36	0	8,8,8	0.20	0
5	PGE	KKK	207	-	9,9,9	0.26	0	8,8,8	0.11	0
6	PEG	III	211	-	6,6,6	0.34	0	5,5,5	0.17	0
3	PEB	MMM	202	1	43,46,46	1.44	2 (4%)	45,67,67	1.26	6 (13%)
8	NO3	KKK	217	-	1,3,3	0.19	0	0,3,3	-	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
5	PGE	PPP	208	-	9,9,9	0.18	0	8,8,8	0.17	0
6	PEG	CCC	214	-	6,6,6	0.20	0	5,5,5	0.09	0
8	NO3	JJJ	320	-	1,3,3	0.85	0	0,3,3	-	-
14	EDO	NNN	217	-	3,3,3	0.16	0	2,2,2	0.22	0
14	EDO	HHH	320	-	3,3,3	0.19	0	2,2,2	0.35	0
3	PEB	DDD	202	2	43,46,46	1.19	3 (6%)	45,67,67	1.05	1 (2%)
6	PEG	CCC	215	-	6,6,6	0.26	0	5,5,5	0.22	0
6	PEG	LLL	213	-	6,6,6	0.36	0	5,5,5	0.31	0
7	PO4	DDD	222	-	4,4,4	0.72	0	6,6,6	0.52	0
8	NO3	LLL	223	-	1,3,3	0.13	0	0,3,3	-	-
8	NO3	MMM	211	-	1,3,3	0.74	0	0,3,3	-	-
5	PGE	EEE	207	-	9,9,9	0.49	0	8,8,8	0.27	0
14	EDO	PPP	215	-	3,3,3	0.07	0	2,2,2	0.12	0
5	PGE	JJJ	301	-	9,9,9	0.28	0	8,8,8	0.15	0
3	PEB	NNN	203	2	43,46,46	1.38	4 (9%)	45,67,67	1.58	7 (15%)
7	PO4	NNN	222	-	4,4,4	0.55	0	6,6,6	0.65	0
5	PGE	EEE	206	-	9,9,9	0.26	0	8,8,8	0.08	0
6	PEG	LLL	214	-	6,6,6	0.16	0	5,5,5	0.13	0
4	PG4	FFF	209	-	12,12,12	0.34	0	11,11,11	0.38	0
5	PGE	III	205	-	9,9,9	0.28	0	8,8,8	0.09	0
5	PGE	AAA	206	-	9,9,9	0.49	0	8,8,8	0.35	0
5	PGE	JJJ	311	-	9,9,9	0.20	0	8,8,8	0.19	0
3	PEB	KKK	202	1	43,46,46	1.83	4 (9%)	45,67,67	1.19	4 (8%)
5	PGE	HHH	312	-	9,9,9	0.36	0	8,8,8	0.27	0
4	PG4	NNN	209	-	12,12,12	0.33	0	11,11,11	0.16	0
7	PO4	III	214	-	4,4,4	1.46	1 (25%)	6,6,6	0.65	0
8	NO3	EEE	210	-	1,3,3	0.95	0	0,3,3	-	-
14	EDO	EEE	208	-	3,3,3	0.22	0	2,2,2	0.46	0
6	PEG	CCC	212	-	6,6,6	0.30	0	5,5,5	0.16	0
7	PO4	NNN	221	-	4,4,4	0.63	0	6,6,6	0.57	0
6	PEG	AAA	213	-	6,6,6	0.14	0	5,5,5	0.09	0
6	PEG	CCC	211	-	6,6,6	0.19	0	5,5,5	0.13	0
7	PO4	HHH	323	-	4,4,4	0.47	0	6,6,6	0.53	0
5	PGE	JJJ	310	-	9,9,9	0.20	0	8,8,8	0.09	0
5	PGE	LLL	225	-	9,9,9	0.30	0	8,8,8	0.21	0
3	PEB	NNN	205	2	43,46,46	1.19	2 (4%)	45,67,67	1.05	3 (6%)
8	NO3	KKK	216	-	1,3,3	0.49	0	0,3,3	-	-
3	PEB	EEE	202	1	43,46,46	1.39	3 (6%)	45,67,67	1.21	5 (11%)
4	PG4	KKK	203	-	12,12,12	0.28	0	11,11,11	0.09	0
6	PEG	JJJ	314	-	6,6,6	0.43	0	5,5,5	0.29	0
11	1PE	DDD	207	-	15,15,15	0.77	0	14,14,14	0.51	0
7	PO4	BBB	218	-	4,4,4	0.70	0	6,6,6	0.32	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
7	PO4	JJJ	315	-	4,4,4	0.55	0	6,6,6	0.48	0
7	PO4	NNN	220	-	4,4,4	0.67	0	6,6,6	0.32	0
3	PEB	NNN	204	2	43,46,46	1.55	3 (6%)	45,67,67	1.24	4 (8%)
6	PEG	LLL	211	-	6,6,6	0.43	0	5,5,5	0.39	0
5	PGE	BBB	222	-	9,9,9	0.32	0	8,8,8	0.12	0
6	PEG	PPP	210	-	6,6,6	0.30	0	5,5,5	0.20	0
8	NO3	EEE	211	-	1,3,3	0.08	0	0,3,3	-	-
8	NO3	PPP	219	-	1,3,3	0.39	0	0,3,3	-	-
14	EDO	FFF	219	-	3,3,3	0.23	0	2,2,2	0.40	0
6	PEG	HHH	314	-	6,6,6	0.15	0	5,5,5	0.09	0
7	PO4	CCC	220	-	4,4,4	1.26	0	6,6,6	0.25	0
14	EDO	EEE	209	-	3,3,3	0.10	0	2,2,2	0.12	0
5	PGE	III	206	-	9,9,9	0.21	0	8,8,8	0.10	0
6	PEG	DDD	215	-	6,6,6	0.21	0	5,5,5	0.12	0
8	NO3	JJJ	322	-	1,3,3	0.37	0	0,3,3	-	-
8	NO3	AAA	216	-	1,3,3	1.30	0	0,3,3	-	-
3	PEB	AAA	202	1	43,46,46	1.27	3 (6%)	45,67,67	1.25	6 (13%)
6	PEG	JJJ	312	-	6,6,6	0.24	0	5,5,5	0.10	0
8	NO3	FFF	225	-	1,3,3	1.29	0	0,3,3	-	-
5	PGE	EEE	205	-	9,9,9	0.21	0	8,8,8	0.24	0
5	PGE	KKK	206	-	9,9,9	0.51	0	8,8,8	0.28	0
3	PEB	OOO	201	1	43,46,46	2.26	4 (9%)	45,67,67	1.30	5 (11%)
6	PEG	III	210	-	6,6,6	0.14	0	5,5,5	0.18	0
5	PGE	LLL	210	-	9,9,9	0.31	0	8,8,8	0.19	0
6	PEG	FFF	214	-	6,6,6	0.34	0	5,5,5	0.27	0
12	P33	DDD	204	-	21,21,21	0.72	0	20,20,20	0.99	1 (5%)
3	PEB	GGG	202	1	43,46,46	1.28	3 (6%)	45,67,67	1.17	5 (11%)
5	PGE	EEE	204	-	9,9,9	0.22	0	8,8,8	0.12	0
7	PO4	JJJ	318	-	4,4,4	0.58	0	6,6,6	0.56	0
6	PEG	KKK	210	-	6,6,6	0.50	0	5,5,5	0.40	0
7	PO4	HHH	321	-	4,4,4	0.82	0	6,6,6	0.73	0
3	PEB	III	202	1	43,46,46	1.99	4 (9%)	45,67,67	1.74	5 (11%)
7	PO4	LLL	221	-	4,4,4	1.13	0	6,6,6	0.67	0
6	PEG	BBB	215	-	6,6,6	0.29	0	5,5,5	0.16	0
7	PO4	DDD	219	-	4,4,4	1.03	0	6,6,6	0.76	0
12	P33	HHH	305	-	21,21,21	0.70	0	20,20,20	0.94	2 (10%)
4	PG4	JJJ	309	-	12,12,12	0.17	0	11,11,11	0.28	0
3	PEB	LLL	203	2	43,46,46	1.89	2 (4%)	45,67,67	1.00	2 (4%)
6	PEG	FFF	218	-	6,6,6	0.44	0	5,5,5	0.31	0
14	EDO	DDD	218	-	3,3,3	0.16	0	2,2,2	0.12	0
5	PGE	FFF	212	-	9,9,9	0.33	0	8,8,8	0.32	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
6	PEG	DDD	227	-	6,6,6	0.16	0	5,5,5	0.16	0
7	PO4	JJJ	317	-	4,4,4	0.77	0	6,6,6	0.47	0
6	PEG	LLL	216	-	6,6,6	0.30	0	5,5,5	0.28	0
6	PEG	GGG	212	-	6,6,6	0.14	0	5,5,5	0.10	0
3	PEB	CCC	201	1	43,46,46	1.52	5 (11%)	45,67,67	1.27	7 (15%)
3	PEB	DDD	203	2	43,46,46	1.53	2 (4%)	45,67,67	1.25	6 (13%)
6	PEG	BBB	214	-	6,6,6	0.25	0	5,5,5	0.15	0
11	1PE	PPP	205	-	15,15,15	0.66	0	14,14,14	0.45	0
7	PO4	FFF	224	-	4,4,4	0.91	0	6,6,6	0.49	0
8	NO3	LLL	224	-	1,3,3	0.04	0	0,3,3	-	-
14	EDO	NNN	219	-	3,3,3	0.26	0	2,2,2	0.26	0
7	PO4	NNN	223	-	4,4,4	0.84	0	6,6,6	0.52	0
6	PEG	HHH	315	-	6,6,6	0.28	0	5,5,5	0.20	0
8	NO3	III	218	-	1,3,3	0.42	0	0,3,3	-	-
6	PEG	BBB	211	-	6,6,6	0.17	0	5,5,5	0.11	0
6	PEG	NNN	216	-	6,6,6	0.19	0	5,5,5	0.12	0
7	PO4	PPP	218	-	4,4,4	0.54	0	6,6,6	0.57	0
3	PEB	HHH	304	2	43,46,46	1.50	3 (6%)	45,67,67	1.20	5 (11%)
5	PGE	DDD	211	-	9,9,9	0.29	0	8,8,8	0.13	0
5	PGE	NNN	213	-	9,9,9	0.46	0	8,8,8	0.27	0
6	PEG	EEE	213	-	6,6,6	0.22	0	5,5,5	0.13	0
3	PEB	PPP	203	2	43,46,46	1.32	4 (9%)	45,67,67	1.14	3 (6%)
5	PGE	HHH	327	-	9,9,9	0.33	0	8,8,8	0.26	0
11	1PE	BBB	206	-	15,15,15	0.60	0	14,14,14	0.51	0
4	PG4	NNN	201	-	12,12,12	0.23	0	11,11,11	0.25	0
4	PG4	GGG	205	-	12,12,12	0.22	0	11,11,11	0.14	0
5	PGE	LLL	226	-	9,9,9	0.43	0	8,8,8	0.26	0
4	PG4	KKK	204	-	12,12,12	0.17	0	11,11,11	0.22	0
6	PEG	III	212	-	6,6,6	0.40	0	5,5,5	0.17	0
3	PEB	CCC	202	1	43,46,46	1.34	3 (6%)	45,67,67	1.29	6 (13%)
6	PEG	CCC	221	-	6,6,6	0.15	0	5,5,5	0.04	0
4	PG4	DDD	208	-	12,12,12	0.40	0	11,11,11	0.24	0
7	PO4	PPP	216	-	4,4,4	0.32	0	6,6,6	0.63	0
4	PG4	OOO	203	-	12,12,12	0.31	0	11,11,11	0.19	0
6	PEG	JJJ	313	-	6,6,6	0.35	0	5,5,5	0.20	0
6	PEG	KKK	208	-	6,6,6	0.43	0	5,5,5	0.49	0
5	PGE	OOO	206	-	9,9,9	0.26	0	8,8,8	0.14	0
6	PEG	AAA	212	-	6,6,6	0.11	0	5,5,5	0.14	0
15	PE5	NNN	206	-	26,26,26	0.25	0	25,25,25	0.34	0
8	NO3	GGG	216	-	1,3,3	1.00	0	0,3,3	-	-
8	NO3	HHH	326	-	1,3,3	0.19	0	0,3,3	-	-
3	PEB	III	203	1	43,46,46	1.21	2 (4%)	45,67,67	1.19	3 (6%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
7	PO4	HHH	324	-	4,4,4	0.67	0	6,6,6	0.52	0
5	PGE	BBB	209	-	9,9,9	0.32	0	8,8,8	0.14	0
3	PEB	HHH	302	2	43,46,46	1.24	4 (9%)	45,67,67	1.35	9 (20%)
4	PG4	MMM	212	-	12,12,12	0.26	0	11,11,11	0.19	0
7	PO4	FFF	221	-	4,4,4	0.84	0	6,6,6	0.68	0
7	PO4	AAA	214	-	4,4,4	0.67	0	6,6,6	0.44	0
4	PG4	PPP	207	-	12,12,12	0.23	0	11,11,11	0.22	0
9	RWB	BBB	204	-	37,37,37	1.22	2 (5%)	36,36,36	1.36	6 (16%)
4	PG4	AAA	204	-	12,12,12	0.31	0	11,11,11	0.23	0
5	PGE	HHH	310	-	9,9,9	0.42	0	8,8,8	0.21	0
6	PEG	FFF	216	-	6,6,6	0.11	0	5,5,5	0.12	0
6	PEG	KKK	212	-	6,6,6	0.39	0	5,5,5	0.20	0
7	PO4	JJJ	319	-	4,4,4	0.79	0	6,6,6	0.45	0
5	PGE	CCC	206	-	9,9,9	0.28	0	8,8,8	0.25	0
6	PEG	NNN	215	-	6,6,6	0.24	0	5,5,5	0.12	0
7	PO4	AAA	215	-	4,4,4	0.64	0	6,6,6	0.34	0
11	1PE	FFF	201	-	15,15,15	0.62	0	14,14,14	0.86	0
14	EDO	FFF	203	-	3,3,3	0.27	0	2,2,2	0.23	0
4	PG4	AAA	205	-	12,12,12	0.31	0	11,11,11	0.19	0
6	PEG	KKK	211	-	6,6,6	0.20	0	5,5,5	0.14	0
6	PEG	KKK	209	-	6,6,6	0.24	0	5,5,5	0.27	0
5	PGE	NNN	212	-	9,9,9	0.34	0	8,8,8	0.43	0
6	PEG	GGG	213	-	6,6,6	0.17	0	5,5,5	0.20	0
3	PEB	JJJ	303	2	43,46,46	1.51	6 (13%)	45,67,67	1.57	7 (15%)
5	PGE	CCC	207	-	9,9,9	0.33	0	8,8,8	0.25	0
5	PGE	III	207	-	9,9,9	0.43	0	8,8,8	0.26	0
3	PEB	PPP	204	2	43,46,46	1.66	2 (4%)	45,67,67	1.23	6 (13%)
5	PGE	MMM	207	-	9,9,9	0.25	0	8,8,8	0.12	0
5	PGE	CCC	208	-	9,9,9	0.48	0	8,8,8	0.35	0
3	PEB	BBB	201	2	43,46,46	1.66	4 (9%)	45,67,67	1.45	9 (20%)
3	PEB	BBB	203	2	43,46,46	1.35	3 (6%)	45,67,67	1.21	4 (8%)
4	PG4	FFF	210	-	12,12,12	0.40	0	11,11,11	0.23	0
7	PO4	KKK	213	-	4,4,4	0.83	0	6,6,6	0.60	0
5	PGE	HHH	309	-	9,9,9	0.35	0	8,8,8	0.42	0
11	1PE	LLL	205	-	15,15,15	0.71	0	14,14,14	0.35	0
5	PGE	FFF	213	-	9,9,9	0.39	0	8,8,8	0.42	0
6	PEG	III	201	-	6,6,6	0.55	0	5,5,5	0.37	0
7	PO4	BBB	220	-	4,4,4	0.61	0	6,6,6	0.48	0
8	NO3	DDD	226	-	1,3,3	0.47	0	0,3,3	-	-
5	PGE	CCC	204	-	9,9,9	0.30	0	8,8,8	0.32	0
14	EDO	NNN	218	-	3,3,3	0.11	0	2,2,2	0.07	0
7	PO4	GGG	215	-	4,4,4	0.71	0	6,6,6	0.52	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	PEB	BBB	202	2	43,46,46	1.22	4 (9%)	45,67,67	1.15	2 (4%)
3	PEB	FFF	206	2	43,46,46	0.99	3 (6%)	45,67,67	1.13	4 (8%)
7	PO4	DDD	221	-	4,4,4	0.76	0	6,6,6	0.40	0
11	1PE	BBB	207	-	15,15,15	0.67	0	14,14,14	0.79	0
13	P6G	DDD	206	-	18,18,18	0.68	0	17,17,17	0.69	0
4	PG4	KKK	205	-	12,12,12	0.31	0	11,11,11	0.13	0
6	PEG	CCC	219	-	6,6,6	0.25	0	5,5,5	0.15	0
8	NO3	HHH	325	-	1,3,3	1.33	0	0,3,3	-	-
7	PO4	FFF	223	-	4,4,4	0.66	0	6,6,6	0.59	0
11	1PE	BBB	208	-	15,15,15	0.68	0	14,14,14	0.56	0
11	1PE	HHH	301	-	15,15,15	0.71	0	14,14,14	0.57	0
6	PEG	PPP	201	-	6,6,6	0.23	0	5,5,5	0.14	0
6	PEG	OOO	209	-	6,6,6	0.30	0	5,5,5	0.18	0
7	PO4	III	215	-	4,4,4	0.86	0	6,6,6	0.51	0
7	PO4	CCC	217	-	4,4,4	0.59	0	6,6,6	0.52	0
6	PEG	EEE	212	-	6,6,6	0.18	0	5,5,5	0.11	0
7	PO4	LLL	220	-	4,4,4	0.94	0	6,6,6	0.41	0
7	PO4	KKK	214	-	4,4,4	0.64	0	6,6,6	0.52	0
5	PGE	GGG	217	-	9,9,9	0.30	0	8,8,8	0.21	0
6	PEG	CCC	209	-	6,6,6	0.44	0	5,5,5	0.26	0
6	PEG	BBB	223	-	6,6,6	0.19	0	5,5,5	0.11	0
5	PGE	NNN	210	-	9,9,9	0.54	0	8,8,8	0.39	0
3	PEB	FFF	204	2	43,46,46	1.77	4 (9%)	45,67,67	1.50	8 (17%)
4	PG4	DDD	209	-	12,12,12	0.30	0	11,11,11	0.21	0
3	PEB	PPP	202	2	43,46,46	1.68	5 (11%)	45,67,67	1.51	6 (13%)
12	P33	DDD	205	-	21,21,21	0.83	0	20,20,20	1.05	0
7	PO4	FFF	220	-	4,4,4	0.88	0	6,6,6	0.38	0
11	1PE	EEE	203	-	15,15,15	1.06	0	14,14,14	1.45	3 (21%)
5	PGE	OOO	205	-	9,9,9	0.25	0	8,8,8	0.10	0
6	PEG	LLL	218[A]	-	6,6,6	0.31	0	5,5,5	0.15	0
6	PEG	FFF	217	-	6,6,6	0.17	0	5,5,5	0.12	0
5	PGE	FFF	211	-	9,9,9	0.30	0	8,8,8	0.19	0
14	EDO	HHH	319	-	3,3,3	0.41	0	2,2,2	0.50	0
4	PG4	HHH	307	-	12,12,12	0.30	0	11,11,11	0.17	0
3	PEB	MMM	201	1	43,46,46	1.53	6 (13%)	45,67,67	1.57	10 (22%)
14	EDO	III	213	-	3,3,3	0.21	0	2,2,2	0.15	0
6	PEG	GGG	211	-	6,6,6	0.32	0	5,5,5	0.22	0
12	P33	JJJ	306	-	21,21,21	0.71	0	20,20,20	0.66	0
7	PO4	JJJ	316	-	4,4,4	0.84	0	6,6,6	0.58	0
4	PG4	MMM	204	-	12,12,12	0.20	0	11,11,11	0.14	0
4	PG4	FFF	208	-	12,12,12	0.30	0	11,11,11	0.20	0
7	PO4	HHH	322	-	4,4,4	0.97	0	6,6,6	0.45	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
11	1PE	JJJ	307	-	15,15,15	0.77	0	14,14,14	0.96	0
5	PGE	AAA	210	-	9,9,9	0.25	0	8,8,8	0.11	0
7	PO4	BBB	219	-	4,4,4	0.77	0	6,6,6	0.48	0
7	PO4	OOO	211	-	4,4,4	0.47	0	6,6,6	0.49	0
6	PEG	DDD	216	-	6,6,6	0.41	0	5,5,5	0.31	0
5	PGE	CCC	205	-	9,9,9	0.23	0	8,8,8	0.14	0
3	PEB	GGG	201	1	43,46,46	1.51	5 (11%)	45,67,67	1.50	7 (15%)
4	PG4	LLL	207	-	12,12,12	0.36	0	11,11,11	0.20	0
5	PGE	GGG	207	-	9,9,9	0.14	0	8,8,8	0.12	0
4	PG4	LLL	208	-	12,12,12	0.30	0	11,11,11	0.11	0
7	PO4	CCC	216	-	4,4,4	0.58	0	6,6,6	0.62	0
7	PO4	FFF	222	-	4,4,4	0.89	0	6,6,6	0.51	0
5	PGE	GGG	208	-	9,9,9	0.50	0	8,8,8	0.32	0
3	PEB	EEE	201	1	43,46,46	1.45	2 (4%)	45,67,67	1.54	7 (15%)
4	PG4	MMM	205	-	12,12,12	0.33	0	11,11,11	0.16	0
7	PO4	NNN	224	-	4,4,4	0.81	0	6,6,6	0.46	0
5	PGE	HHH	311	-	9,9,9	0.29	0	8,8,8	0.18	0
3	PEB	KKK	201	1	43,46,46	1.50	6 (13%)	45,67,67	1.41	6 (13%)
11	1PE	JJJ	302	-	15,15,15	0.92	0	14,14,14	1.13	0
5	PGE	AAA	211	-	9,9,9	0.23	0	8,8,8	0.38	0
9	RWB	LLL	204	-	37,37,37	0.95	0	36,36,36	0.82	0
6	PEG	BBB	216	-	6,6,6	0.30	0	5,5,5	0.15	0
7	PO4	GGG	214	-	4,4,4	0.48	0	6,6,6	0.58	0
5	PGE	MMM	206	-	9,9,9	0.34	0	8,8,8	0.17	0
7	PO4	PPP	217	-	4,4,4	0.86	0	6,6,6	0.74	0
10	PE8	BBB	205	-	24,24,24	0.50	0	23,23,23	0.37	0
5	PGE	OOO	204	-	9,9,9	0.21	0	8,8,8	0.12	0
6	PEG	OOO	210	-	6,6,6	0.33	0	5,5,5	0.28	0
6	PEG	PPP	209	-	6,6,6	0.17	0	5,5,5	0.20	0
4	PG4	NNN	202	-	12,12,12	0.28	0	11,11,11	0.16	0
6	PEG	MMM	210	-	6,6,6	0.28	0	5,5,5	0.21	0
6	PEG	GGG	209	-	6,6,6	0.23	0	5,5,5	0.16	0
8	NO3	BBB	221	-	1,3,3	1.10	0	0,3,3	-	-
6	PEG	LLL	215	-	6,6,6	0.32	0	5,5,5	0.21	0
7	PO4	BBB	217	-	4,4,4	0.88	0	6,6,6	0.45	0
3	PEB	LLL	201	2	43,46,46	0.79	0	45,67,67	1.39	9 (20%)
4	PG4	HHH	308	-	12,12,12	0.28	0	11,11,11	0.14	0
5	PGE	III	204	-	9,9,9	0.43	0	8,8,8	0.48	0
8	NO3	OOO	212	-	1,3,3	0.13	0	0,3,3	-	-

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	PG4	JJJ	309	-	-	3/10/10/10	-
3	PEB	AAA	201	1	-	6/24/74/74	0/4/4/4
3	PEB	LLL	202	2	-	7/24/74/74	0/4/4/4
3	PEB	LLL	203	2	-	7/24/74/74	0/4/4/4
6	PEG	CCC	215	-	-	1/4/4/4	-
6	PEG	LLL	213	-	-	3/4/4/4	-
6	PEG	III	209	-	-	1/4/4/4	-
3	PEB	FFF	205	2	-	6/24/74/74	0/4/4/4
5	PGE	HHH	309	-	-	4/7/7/7	-
6	PEG	FFF	218	-	-	4/4/4/4	-
14	EDO	DDD	218	-	-	0/1/1/1	-
6	PEG	LLL	218[B]	-	-	3/4/4/4	-
11	1PE	LLL	205	-	-	5/13/13/13	-
6	PEG	DDD	213	-	-	1/4/4/4	-
3	PEB	DDD	201	2	-	9/24/74/74	0/4/4/4
5	PGE	FFF	213	-	-	5/7/7/7	-
6	PEG	BBB	213	-	-	3/4/4/4	-
6	PEG	III	201	-	-	1/4/4/4	-
4	PG4	CCC	203	-	-	8/10/10/10	-
4	PG4	PPP	206	-	-	7/10/10/10	-
6	PEG	LLL	217	-	-	3/4/4/4	-
3	PEB	HHH	303	2	-	9/24/74/74	0/4/4/4
5	PGE	FFF	212	-	-	2/7/7/7	-
6	PEG	DDD	227	-	-	2/4/4/4	-
6	PEG	HHH	316	-	-	2/4/4/4	-
11	1PE	JJJ	308	-	-	8/13/13/13	-
5	PGE	EEE	207	-	-	6/7/7/7	-
6	PEG	LLL	216	-	-	2/4/4/4	-
5	PGE	CCC	204	-	-	4/7/7/7	-
5	PGE	AAA	207	-	-	4/7/7/7	-
6	PEG	GGG	212	-	-	2/4/4/4	-
3	PEB	CCC	201	1	-	6/24/74/74	0/4/4/4
14	EDO	PPP	215	-	-	1/1/1/1	-
6	PEG	PPP	213	-	-	2/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	PEB	DDD	203	2	-	2/24/74/74	0/4/4/4
14	EDO	NNN	218	-	-	1/1/1/1	-
4	PG4	AAA	203	-	-	5/10/10/10	-
5	PGE	JJJ	301	-	-	4/7/7/7	-
3	PEB	NNN	203	2	-	10/24/74/74	0/4/4/4
6	PEG	BBB	214	-	-	3/4/4/4	-
11	1PE	PPP	205	-	-	10/13/13/13	-
5	PGE	AAA	208	-	-	4/7/7/7	-
6	PEG	HHH	317	-	-	3/4/4/4	-
3	PEB	BBB	202	2	-	6/24/74/74	0/4/4/4
3	PEB	FFF	206	2	-	6/24/74/74	0/4/4/4
5	PGE	EEE	206	-	-	3/7/7/7	-
11	1PE	BBB	207	-	-	11/13/13/13	-
6	PEG	LLL	214	-	-	2/4/4/4	-
3	PEB	JJJ	305	2	-	4/24/74/74	0/4/4/4
13	P6G	DDD	206	-	-	12/16/16/16	-
4	PG4	FFF	209	-	-	7/10/10/10	-
4	PG4	KKK	205	-	-	7/10/10/10	-
5	PGE	III	205	-	-	3/7/7/7	-
6	PEG	CCC	219	-	-	3/4/4/4	-
11	1PE	BBB	208	-	-	12/13/13/13	-
11	1PE	HHH	301	-	-	5/13/13/13	-
14	EDO	NNN	219	-	-	0/1/1/1	-
6	PEG	PPP	201	-	-	2/4/4/4	-
6	PEG	OOO	209	-	-	2/4/4/4	-
5	PGE	AAA	206	-	-	2/7/7/7	-
6	PEG	HHH	315	-	-	4/4/4/4	-
6	PEG	CCC	210	-	-	4/4/4/4	-
5	PGE	JJJ	311	-	-	5/7/7/7	-
6	PEG	EEE	212	-	-	1/4/4/4	-
3	PEB	KKK	202	1	-	7/24/74/74	0/4/4/4
6	PEG	PPP	214	-	-	1/4/4/4	-
5	PGE	GGG	217	-	-	5/7/7/7	-
5	PGE	HHH	312	-	-	5/7/7/7	-
6	PEG	CCC	209	-	-	1/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	PEG	BBB	223	-	-	1/4/4/4	-
5	PGE	NNN	210	-	-	5/7/7/7	-
6	PEG	LLL	212	-	-	3/4/4/4	-
6	PEG	BBB	211	-	-	2/4/4/4	-
6	PEG	MMM	209	-	-	3/4/4/4	-
3	PEB	FFF	204	2	-	11/24/74/74	0/4/4/4
4	PG4	DDD	209	-	-	5/10/10/10	-
6	PEG	NNN	216	-	-	1/4/4/4	-
4	PG4	NNN	209	-	-	5/10/10/10	-
3	PEB	PPP	202	2	-	9/24/74/74	0/4/4/4
12	P33	DDD	205	-	-	14/19/19/19	-
3	PEB	HHH	304	2	-	5/24/74/74	0/4/4/4
14	EDO	EEE	208	-	-	1/1/1/1	-
14	EDO	III	217	-	-	1/1/1/1	-
11	1PE	EEE	203	-	-	8/13/13/13	-
5	PGE	OOO	205	-	-	3/7/7/7	-
6	PEG	CCC	212	-	-	3/4/4/4	-
5	PGE	DDD	211	-	-	5/7/7/7	-
6	PEG	FFF	217	-	-	3/4/4/4	-
6	PEG	LLL	218[A]	-	-	4/4/4/4	-
6	PEG	FFF	215	-	-	2/4/4/4	-
5	PGE	NNN	213	-	-	5/7/7/7	-
6	PEG	EEE	213	-	-	4/4/4/4	-
3	PEB	PPP	203	2	-	5/24/74/74	0/4/4/4
6	PEG	AAA	213	-	-	1/4/4/4	-
5	PGE	HHH	327	-	-	3/7/7/7	-
11	1PE	BBB	206	-	-	4/13/13/13	-
6	PEG	GGG	210	-	-	0/4/4/4	-
12	P33	HHH	306	-	-	11/19/19/19	-
4	PG4	NNN	201	-	-	3/10/10/10	-
4	PG4	GGG	205	-	-	9/10/10/10	-
5	PGE	LLL	226	-	-	5/7/7/7	-
5	PGE	FFF	211	-	-	3/7/7/7	-
14	EDO	HHH	319	-	-	1/1/1/1	-
6	PEG	CCC	211	-	-	2/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	PG4	HHH	307	-	-	6/10/10/10	-
3	PEB	MMM	201	1	-	6/24/74/74	0/4/4/4
4	PG4	KKK	204	-	-	4/10/10/10	-
5	PGE	DDD	212	-	-	4/7/7/7	-
5	PGE	JJJ	310	-	-	4/7/7/7	-
4	PG4	GGG	204	-	-	3/10/10/10	-
5	PGE	LLL	225	-	-	3/7/7/7	-
6	PEG	BBB	212	-	-	3/4/4/4	-
3	PEB	NNN	205	2	-	8/24/74/74	0/4/4/4
14	EDO	III	213	-	-	1/1/1/1	-
6	PEG	GGG	211	-	-	1/4/4/4	-
5	PGE	AAA	209	-	-	6/7/7/7	-
6	PEG	III	212	-	-	4/4/4/4	-
3	PEB	CCC	202	1	-	8/24/74/74	0/4/4/4
6	PEG	CCC	221	-	-	4/4/4/4	-
3	PEB	EEE	202	1	-	7/24/74/74	0/4/4/4
4	PG4	DDD	208	-	-	7/10/10/10	-
4	PG4	KKK	203	-	-	7/10/10/10	-
6	PEG	OOO	207	-	-	2/4/4/4	-
12	P33	JJJ	306	-	-	8/19/19/19	-
4	PG4	OOO	203	-	-	6/10/10/10	-
4	PG4	MMM	204	-	-	6/10/10/10	-
6	PEG	OOO	208	-	-	4/4/4/4	-
6	PEG	JJJ	313	-	-	3/4/4/4	-
6	PEG	JJJ	314	-	-	3/4/4/4	-
6	PEG	KKK	208	-	-	2/4/4/4	-
4	PG4	FFF	208	-	-	4/10/10/10	-
5	PGE	OOO	206	-	-	5/7/7/7	-
11	1PE	JJJ	307	-	-	7/13/13/13	-
6	PEG	AAA	212	-	-	1/4/4/4	-
11	1PE	DDD	207	-	-	9/13/13/13	-
5	PGE	HHH	313	-	-	3/7/7/7	-
15	PE5	NNN	206	-	-	11/24/24/24	-
5	PGE	AAA	210	-	-	5/7/7/7	-
6	PEG	NNN	214	-	-	3/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	PEB	III	203	1	-	7/24/74/74	0/4/4/4
6	PEG	DDD	216	-	-	1/4/4/4	-
5	PGE	LLL	209	-	-	4/7/7/7	-
3	PEB	NNN	204	2	-	8/24/74/74	0/4/4/4
3	PEB	OOO	202	1	-	6/24/74/74	0/4/4/4
5	PGE	CCC	205	-	-	0/7/7/7	-
6	PEG	III	208	-	-	3/4/4/4	-
6	PEG	LLL	211	-	-	1/4/4/4	-
4	PG4	MMM	203	-	-	7/10/10/10	-
6	PEG	MMM	208	-	-	3/4/4/4	-
5	PGE	BBB	222	-	-	6/7/7/7	-
5	PGE	BBB	209	-	-	5/7/7/7	-
6	PEG	PPP	212	-	-	2/4/4/4	-
6	PEG	PPP	210	-	-	2/4/4/4	-
4	PG4	FFF	202	-	-	7/10/10/10	-
3	PEB	HHH	302	2	-	10/24/74/74	0/4/4/4
3	PEB	GGG	201	1	-	6/24/74/74	0/4/4/4
4	PG4	MMM	212	-	-	5/10/10/10	-
6	PEG	HHH	314	-	-	3/4/4/4	-
6	PEG	HHH	318	-	-	3/4/4/4	-
14	EDO	FFF	219	-	-	0/1/1/1	-
6	PEG	PPP	211	-	-	2/4/4/4	-
4	PG4	LLL	207	-	-	5/10/10/10	-
4	PG4	PPP	207	-	-	6/10/10/10	-
9	RWB	BBB	204	-	-	19/35/35/35	-
14	EDO	DDD	217	-	-	1/1/1/1	-
4	PG4	AAA	204	-	-	3/10/10/10	-
5	PGE	GGG	207	-	-	1/7/7/7	-
5	PGE	III	206	-	-	6/7/7/7	-
14	EDO	EEE	209	-	-	1/1/1/1	-
4	PG4	LLL	208	-	-	6/10/10/10	-
5	PGE	HHH	310	-	-	5/7/7/7	-
6	PEG	DDD	215	-	-	3/4/4/4	-
5	PGE	GGG	208	-	-	2/7/7/7	-
12	P33	FFF	207	-	-	8/19/19/19	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	PEG	CCC	213	-	-	3/4/4/4	-
6	PEG	FFF	216	-	-	3/4/4/4	-
3	PEB	AAA	202	1	-	6/24/74/74	0/4/4/4
3	PEB	JJJ	304	2	-	8/24/74/74	0/4/4/4
4	PG4	NNN	207	-	-	5/10/10/10	-
6	PEG	KKK	212	-	-	2/4/4/4	-
6	PEG	JJJ	312	-	-	3/4/4/4	-
3	PEB	EEE	201	1	-	9/24/74/74	0/4/4/4
14	EDO	LLL	219	-	-	1/1/1/1	-
5	PGE	EEE	205	-	-	4/7/7/7	-
5	PGE	CCC	206	-	-	4/7/7/7	-
4	PG4	MMM	205	-	-	7/10/10/10	-
5	PGE	NNN	211	-	-	5/7/7/7	-
4	PG4	NNN	208	-	-	7/10/10/10	-
6	PEG	NNN	215	-	-	3/4/4/4	-
5	PGE	KKK	206	-	-	3/7/7/7	-
3	PEB	OOO	201	1	-	8/24/74/74	0/4/4/4
5	PGE	HHH	311	-	-	6/7/7/7	-
11	1PE	FFF	201	-	-	2/13/13/13	-
4	PG4	AAA	205	-	-	7/10/10/10	-
3	PEB	KKK	201	1	-	8/24/74/74	0/4/4/4
6	PEG	KKK	211	-	-	2/4/4/4	-
6	PEG	KKK	209	-	-	3/4/4/4	-
14	EDO	FFF	203	-	-	0/1/1/1	-
6	PEG	III	210	-	-	2/4/4/4	-
5	PGE	LLL	210	-	-	4/7/7/7	-
11	1PE	JJJ	302	-	-	8/13/13/13	-
4	PG4	GGG	203	-	-	7/10/10/10	-
5	PGE	NNN	212	-	-	4/7/7/7	-
6	PEG	FFF	214	-	-	3/4/4/4	-
5	PGE	AAA	211	-	-	3/7/7/7	-
5	PGE	DDD	210	-	-	4/7/7/7	-
9	RWB	LLL	204	-	-	16/35/35/35	-
4	PG4	LLL	206	-	-	5/10/10/10	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
5	PGE	BBB	210	-	-	4/7/7/7	-
12	P33	DDD	204	-	-	9/19/19/19	-
6	PEG	DDD	214	-	-	4/4/4/4	-
3	PEB	GGG	202	1	-	6/24/74/74	0/4/4/4
6	PEG	BBB	216	-	-	3/4/4/4	-
5	PGE	EEE	204	-	-	4/7/7/7	-
5	PGE	GGG	206	-	-	6/7/7/7	-
5	PGE	KKK	207	-	-	5/7/7/7	-
5	PGE	MMM	206	-	-	4/7/7/7	-
6	PEG	III	211	-	-	3/4/4/4	-
6	PEG	GGG	213	-	-	2/4/4/4	-
3	PEB	JJJ	303	2	-	10/24/74/74	0/4/4/4
10	PE8	BBB	205	-	-	8/22/22/22	-
5	PGE	OOO	204	-	-	5/7/7/7	-
6	PEG	OOO	210	-	-	2/4/4/4	-
6	PEG	KKK	210	-	-	2/4/4/4	-
4	PG4	NNN	202	-	-	7/10/10/10	-
3	PEB	III	202	1	-	4/24/74/74	0/4/4/4
6	PEG	MMM	210	-	-	2/4/4/4	-
5	PGE	CCC	207	-	-	5/7/7/7	-
6	PEG	GGG	209	-	-	2/4/4/4	-
6	PEG	PPP	209	-	-	3/4/4/4	-
5	PGE	III	207	-	-	6/7/7/7	-
3	PEB	MMM	202	1	-	6/24/74/74	0/4/4/4
3	PEB	PPP	204	2	-	6/24/74/74	0/4/4/4
5	PGE	MMM	207	-	-	5/7/7/7	-
6	PEG	LLL	215	-	-	2/4/4/4	-
14	EDO	HHH	320	-	-	0/1/1/1	-
5	PGE	CCC	208	-	-	4/7/7/7	-
5	PGE	PPP	208	-	-	3/7/7/7	-
6	PEG	CCC	214	-	-	0/4/4/4	-
3	PEB	LLL	201	2	-	12/24/74/74	0/4/4/4
4	PG4	HHH	308	-	-	5/10/10/10	-
6	PEG	BBB	215	-	-	2/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
5	PGE	III	204	-	-	6/7/7/7	-
14	EDO	NNN	217	-	-	1/1/1/1	-
3	PEB	BBB	201	2	-	10/24/74/74	0/4/4/4
3	PEB	BBB	203	2	-	7/24/74/74	0/4/4/4
4	PG4	FFF	210	-	-	5/10/10/10	-
12	P33	HHH	305	-	-	7/19/19/19	-
3	PEB	DDD	202	2	-	6/24/74/74	0/4/4/4

The worst 5 of 141 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	OOO	201	PEB	CHB-C4B	12.87	1.45	1.35
3	LLL	203	PEB	CHB-C4B	11.13	1.44	1.35
3	III	202	PEB	CHB-C4B	10.82	1.44	1.35
3	FFF	204	PEB	CHB-C4B	9.98	1.43	1.35
3	KKK	202	PEB	CHB-C4B	9.84	1.43	1.35

The worst 5 of 230 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	III	202	PEB	CHA-C4A-NA	7.48	134.10	125.20
3	PPP	202	PEB	CHC-C1D-ND	-5.98	107.01	113.95
3	AAA	201	PEB	CHA-C4A-NA	5.86	132.18	125.20
3	NNN	203	PEB	CHC-C1D-ND	-5.84	107.17	113.95
3	JJJ	304	PEB	CHA-C4A-NA	5.68	131.96	125.20

There are no chirality outliers.

5 of 1132 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	AAA	201	PEB	NA-C4A-CHA-C1B
3	AAA	201	PEB	C3A-C4A-CHA-C1B
3	AAA	202	PEB	NB-C1B-CHA-C4A
3	AAA	202	PEB	C2B-C1B-CHA-C4A
3	BBB	201	PEB	NC-C1C-CHB-C4B

There are no ring outliers.

153 monomers are involved in 365 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	LLL	202	PEB	2	0
3	FFF	205	PEB	2	0
6	DDD	213	PEG	1	0
3	DDD	201	PEB	3	0
4	CCC	203	PG4	7	0
4	PPP	206	PG4	2	0
6	LLL	217	PEG	4	0
6	HHH	316	PEG	1	0
11	JJJ	308	1PE	9	0
5	AAA	207	PGE	1	0
4	AAA	203	PG4	8	0
5	AAA	208	PGE	2	0
7	KKK	215	PO4	2	0
3	JJJ	305	PEB	1	0
6	CCC	210	PEG	7	0
6	PPP	214	PEG	2	0
7	DDD	223	PO4	1	0
6	LLL	212	PEG	1	0
6	MMM	209	PEG	4	0
14	III	217	EDO	1	0
12	HHH	306	P33	1	0
5	DDD	212	PGE	5	0
4	GGG	204	PG4	2	0
6	OOO	207	PEG	1	0
6	NNN	214	PEG	3	0
3	OOO	202	PEB	2	0
4	MMM	203	PG4	23	0
6	MMM	208	PEG	1	0
4	FFF	202	PG4	4	0
6	HHH	318	PEG	1	0
12	FFF	207	P33	2	0
6	CCC	213	PEG	2	0
3	JJJ	304	PEB	2	0
4	NNN	207	PG4	1	0
5	NNN	211	PGE	1	0
4	NNN	208	PG4	2	0
5	DDD	210	PGE	4	0
4	LLL	206	PG4	1	0
6	DDD	214	PEG	1	0
5	GGG	206	PGE	1	0
5	KKK	207	PGE	3	0
6	III	211	PEG	2	0
3	MMM	202	PEB	4	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	PPP	208	PGE	1	0
6	CCC	214	PEG	1	0
3	DDD	202	PEB	4	0
6	CCC	215	PEG	1	0
8	LLL	223	NO3	2	0
3	NNN	203	PEB	2	0
6	LLL	214	PEG	1	0
4	FFF	209	PG4	4	0
5	JJJ	311	PGE	1	0
3	KKK	202	PEB	1	0
5	HHH	312	PGE	2	0
5	JJJ	310	PGE	6	0
5	LLL	225	PGE	4	0
3	NNN	205	PEB	3	0
8	KKK	216	NO3	1	0
3	EEE	202	PEB	3	0
6	JJJ	314	PEG	1	0
11	DDD	207	1PE	5	0
3	NNN	204	PEB	3	0
5	BBB	222	PGE	1	0
6	PPP	210	PEG	1	0
6	HHH	314	PEG	1	0
5	III	206	PGE	1	0
6	DDD	215	PEG	1	0
8	JJJ	322	NO3	1	0
3	AAA	202	PEB	1	0
6	JJJ	312	PEG	1	0
5	KKK	206	PGE	3	0
3	OOO	201	PEB	3	0
5	LLL	210	PGE	5	0
12	DDD	204	P33	1	0
7	LLL	221	PO4	1	0
12	HHH	305	P33	3	0
4	JJJ	309	PG4	3	0
3	LLL	203	PEB	2	0
5	FFF	212	PGE	1	0
3	CCC	201	PEB	1	0
11	PPP	205	1PE	1	0
8	LLL	224	NO3	2	0
14	NNN	219	EDO	5	0
3	HHH	304	PEB	2	0
5	DDD	211	PGE	3	0

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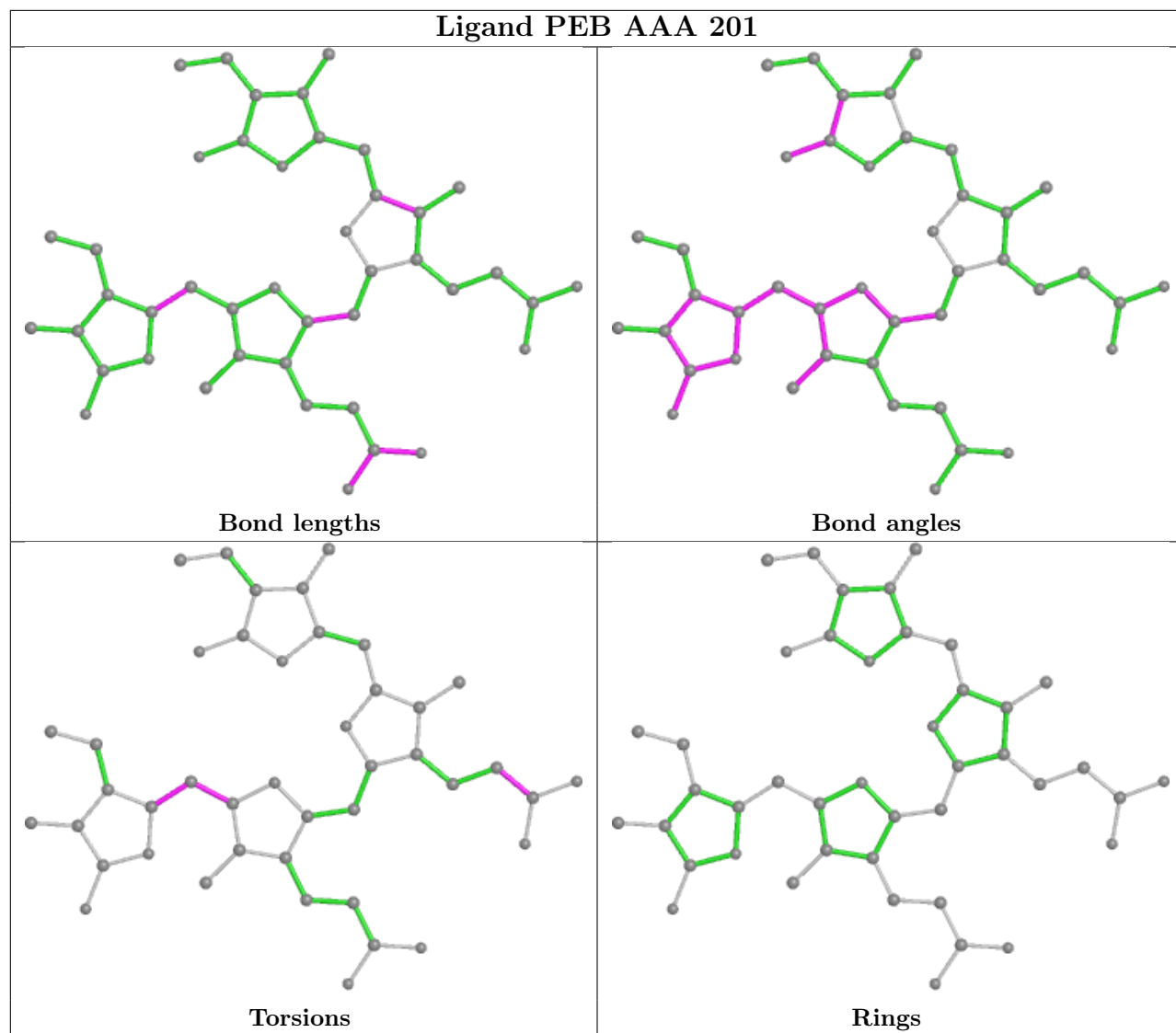
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	PPP	203	PEB	4	0
11	BBB	206	1PE	1	0
4	NNN	201	PG4	1	0
4	GGG	205	PG4	2	0
5	LLL	226	PGE	3	0
4	KKK	204	PG4	8	0
3	CCC	202	PEB	1	0
6	KKK	208	PEG	3	0
5	OOO	206	PGE	1	0
15	NNN	206	PE5	6	0
3	HHH	302	PEB	3	0
7	AAA	214	PO4	2	0
4	PPP	207	PG4	3	0
4	AAA	204	PG4	10	0
5	HHH	310	PGE	3	0
6	KKK	212	PEG	2	0
11	FFF	201	1PE	1	0
6	KKK	209	PEG	1	0
5	NNN	212	PGE	2	0
3	JJJ	303	PEB	3	0
3	PPP	204	PEB	8	0
5	CCC	208	PGE	1	0
3	BBB	201	PEB	3	0
3	BBB	203	PEB	3	0
4	FFF	210	PG4	1	0
5	HHH	309	PGE	2	0
5	FFF	213	PGE	5	0
6	III	201	PEG	6	0
5	CCC	204	PGE	1	0
3	BBB	202	PEB	4	0
3	FFF	206	PEB	1	0
13	DDD	206	P6G	2	0
4	KKK	205	PG4	1	0
6	CCC	219	PEG	5	0
11	BBB	208	1PE	2	0
11	HHH	301	1PE	2	0
7	CCC	217	PO4	2	0
6	BBB	223	PEG	1	0
5	NNN	210	PGE	1	0
3	FFF	204	PEB	3	0
4	DDD	209	PG4	1	0
3	PPP	202	PEB	4	0

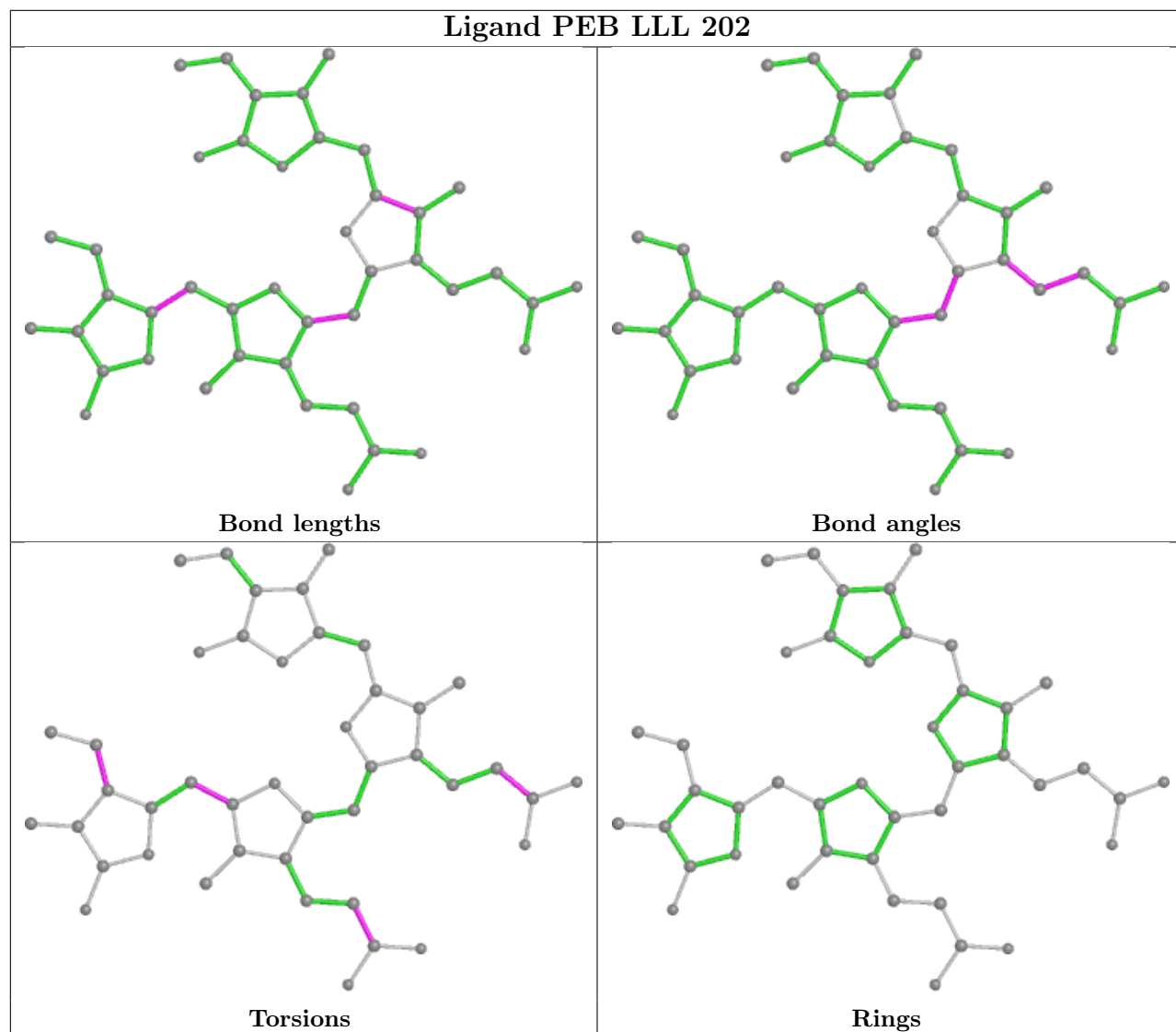
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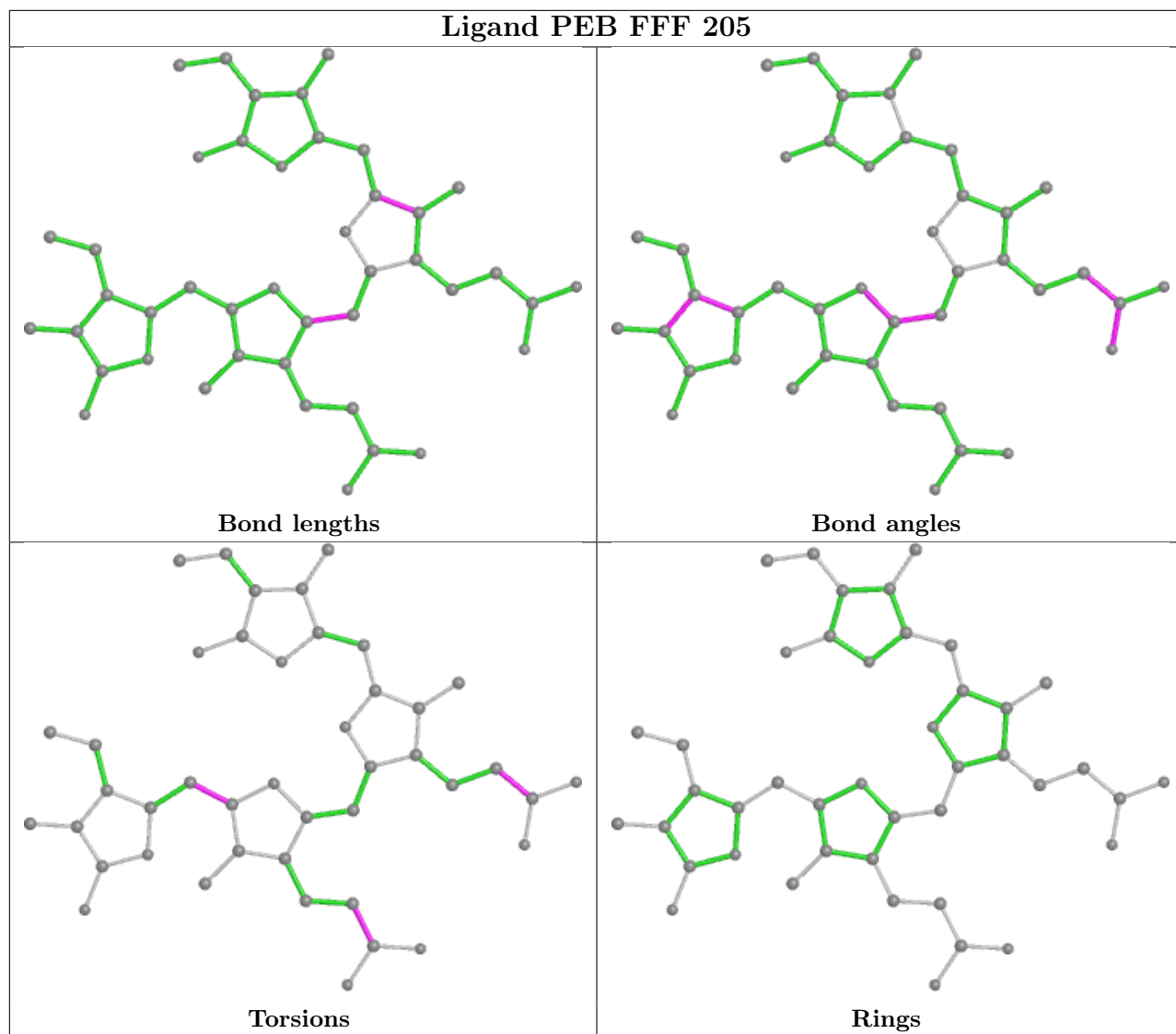
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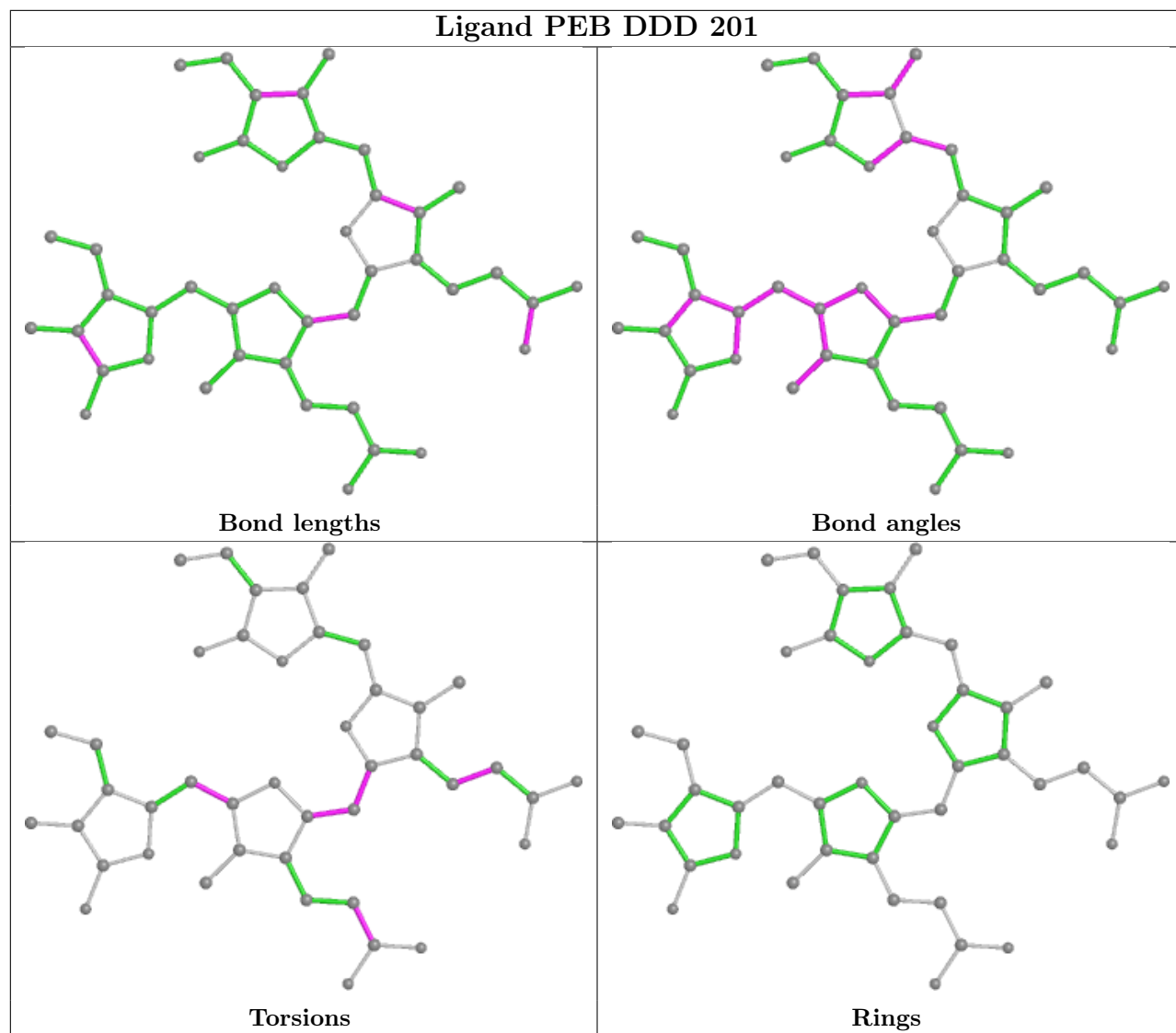
Mol	Chain	Res	Type	Clashes	Symm-Clashes
12	DDD	205	P33	5	0
6	LLL	218[A]	PEG	1	0
4	HHH	307	PG4	3	0
6	GGG	211	PEG	7	0
12	JJJ	306	P33	4	0
11	JJJ	307	1PE	1	0
5	AAA	210	PGE	2	0
7	OOO	211	PO4	1	0
5	CCC	205	PGE	1	0
3	GGG	201	PEB	1	0
4	LLL	207	PG4	1	0
5	GGG	207	PGE	1	0
4	LLL	208	PG4	4	0
5	GGG	208	PGE	3	0
4	MMM	205	PG4	4	0
5	HHH	311	PGE	2	0
3	KKK	201	PEB	1	0
11	JJJ	302	1PE	1	0
9	LLL	204	RWB	2	0
7	GGG	214	PO4	2	0
7	PPP	217	PO4	3	0
6	MMM	210	PEG	3	0
3	LLL	201	PEB	5	0
4	HHH	308	PG4	1	0
5	III	204	PGE	5	0
8	OOO	212	NO3	1	0

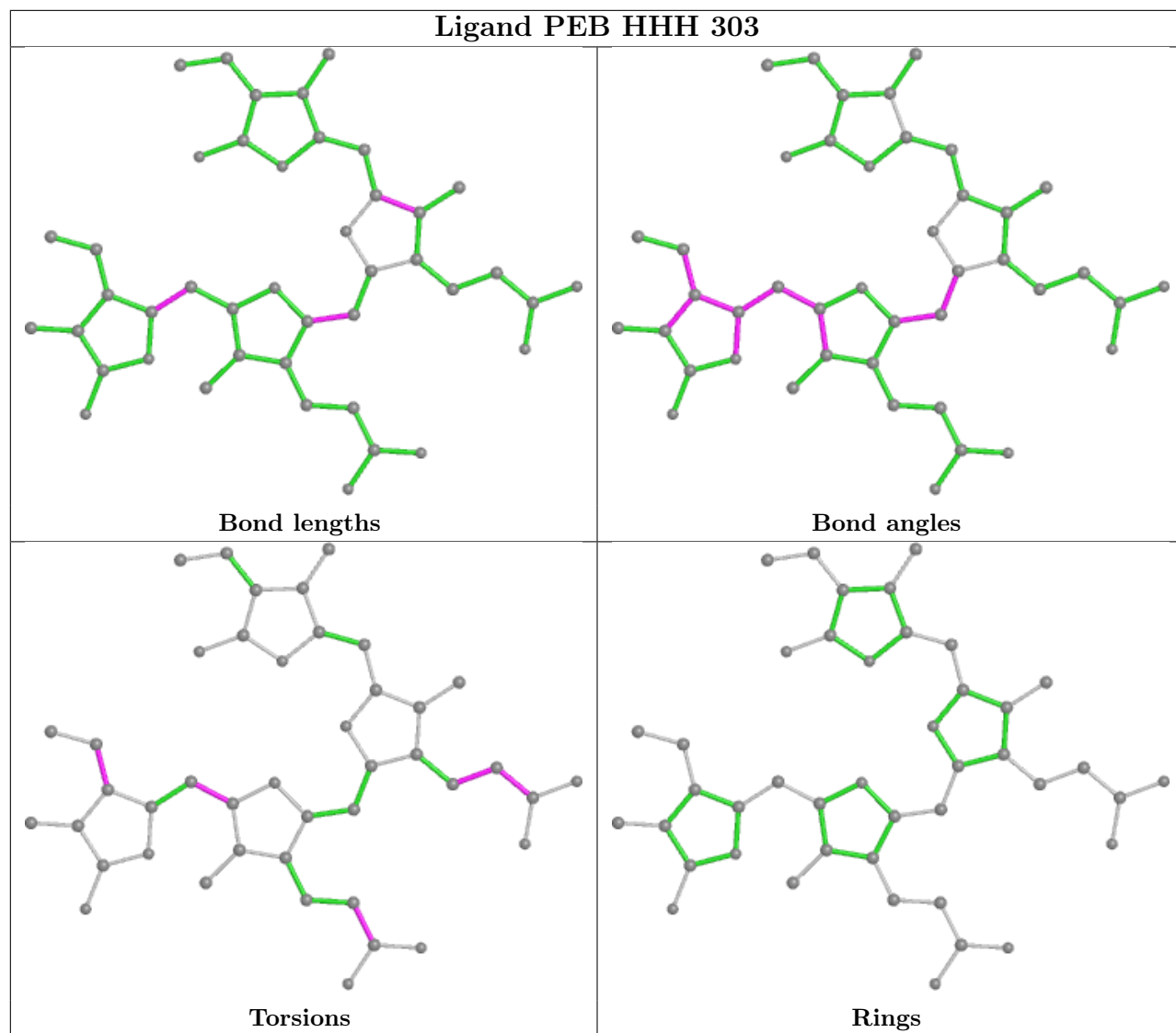
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

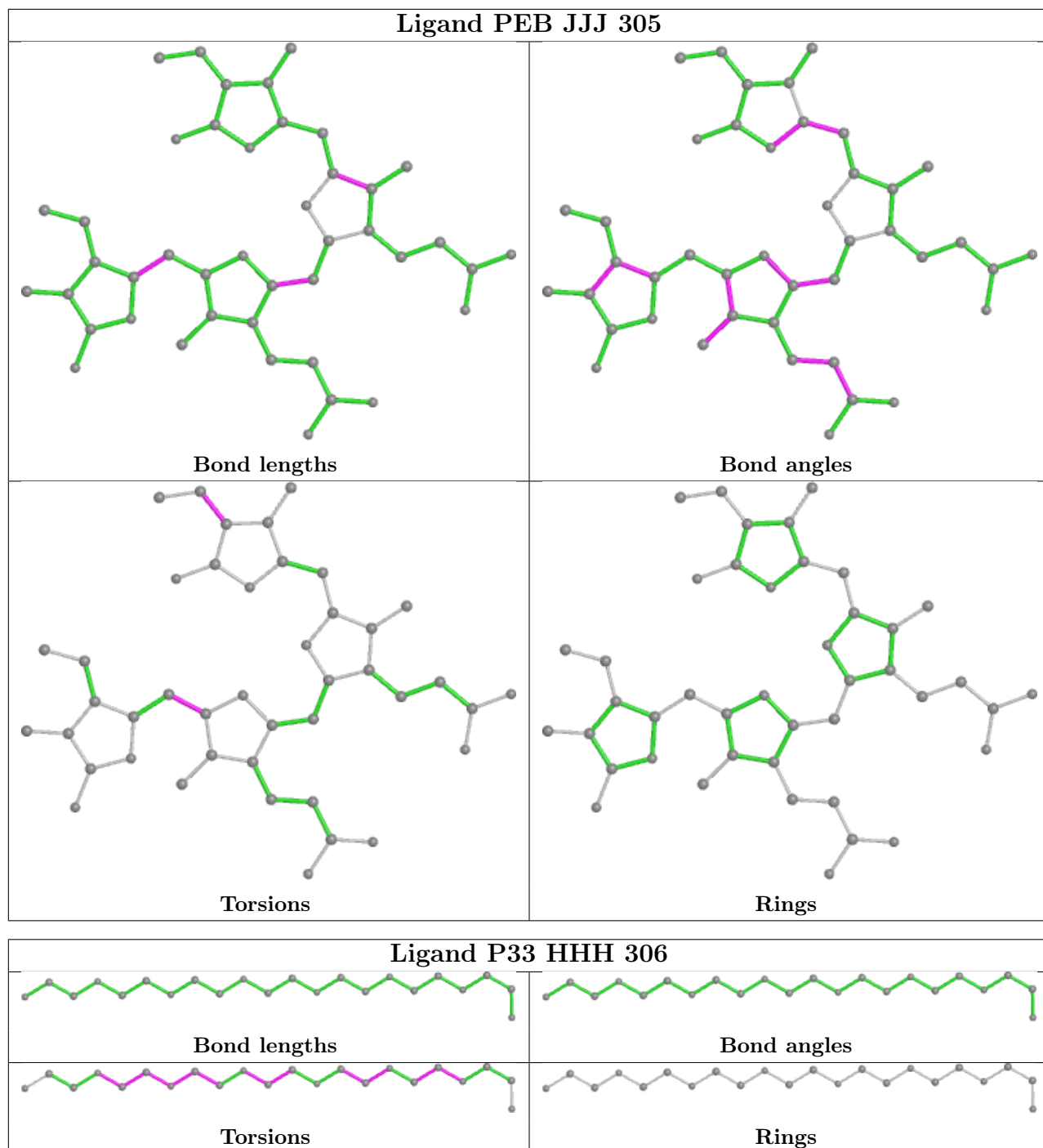


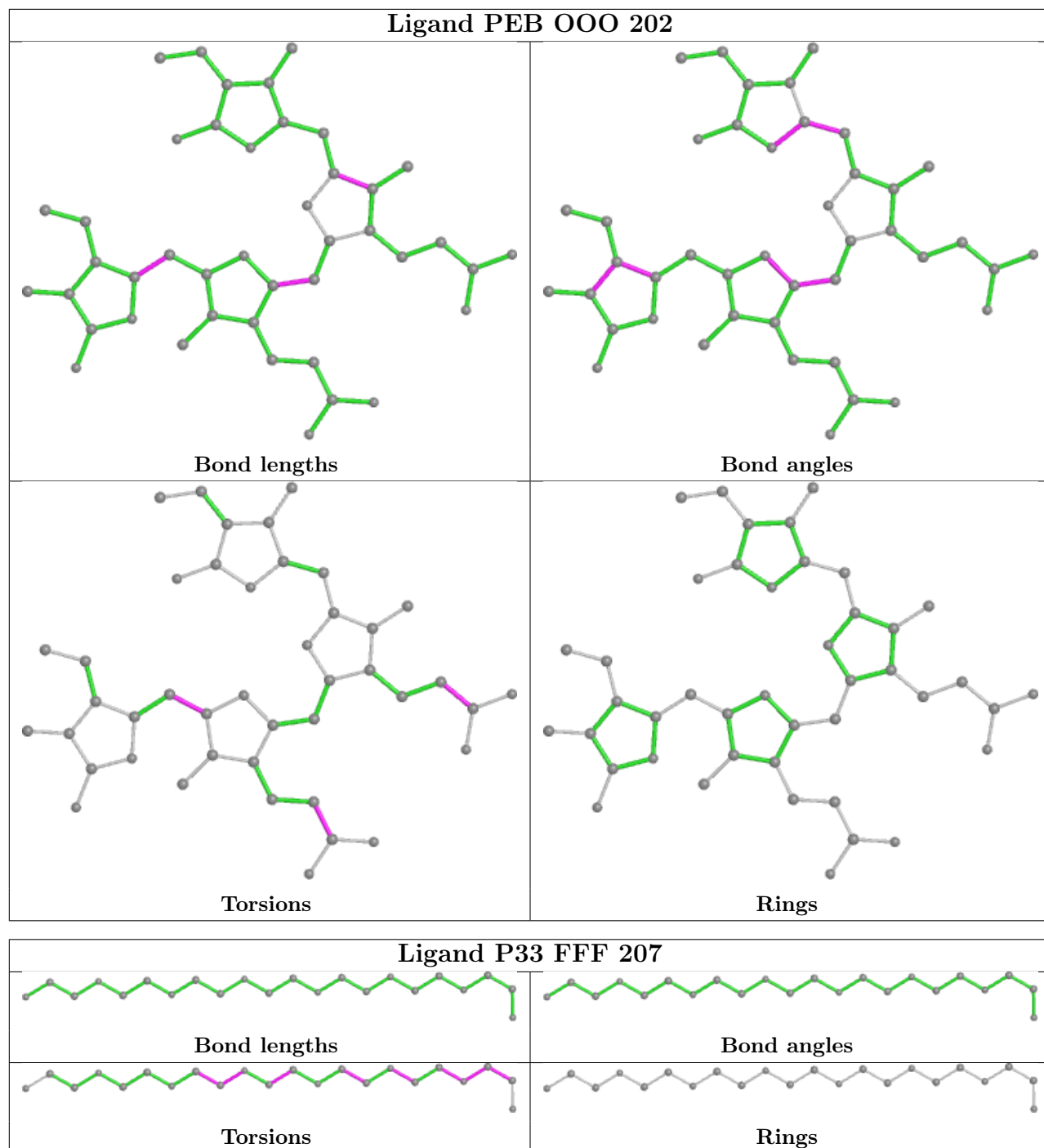


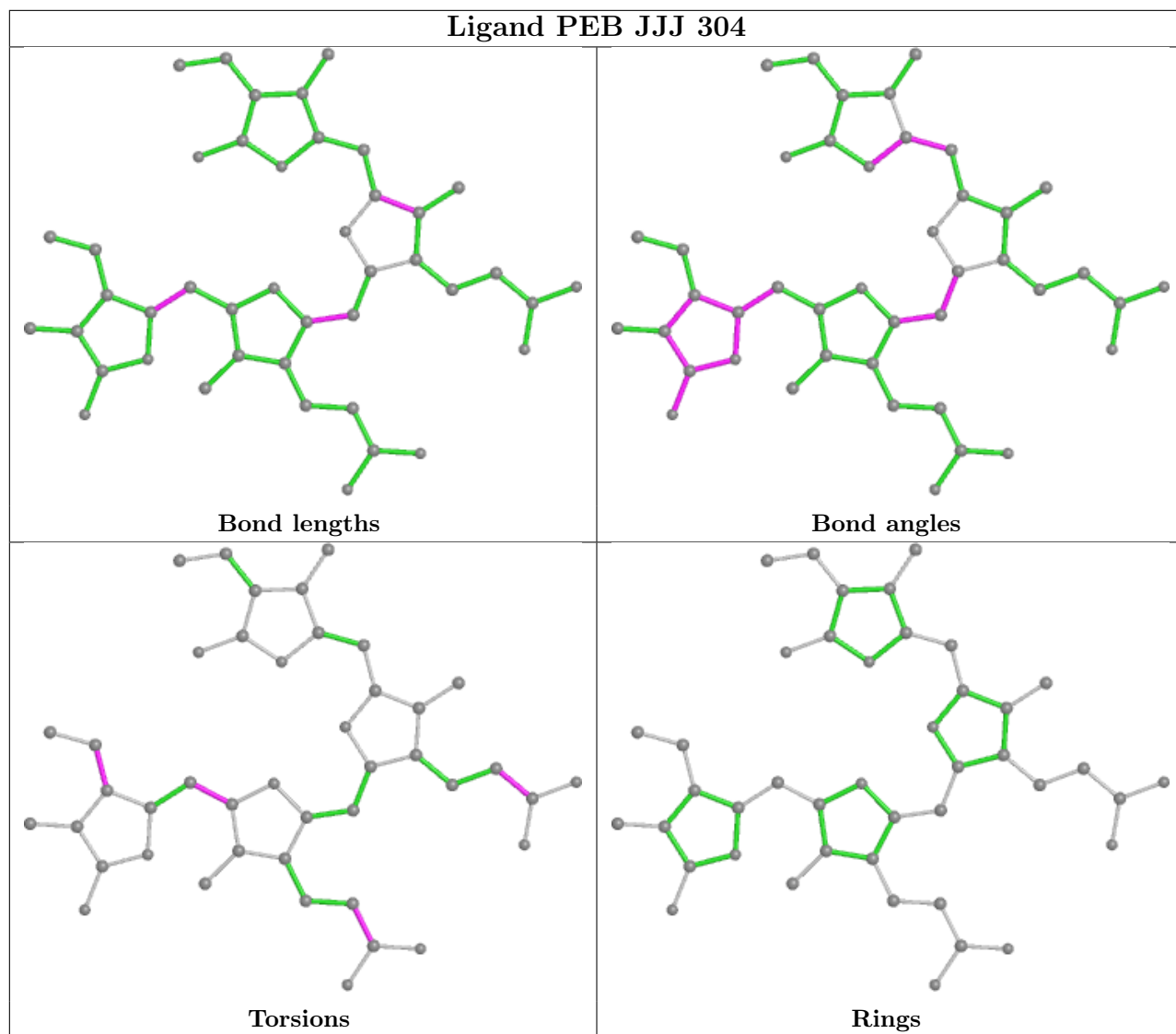


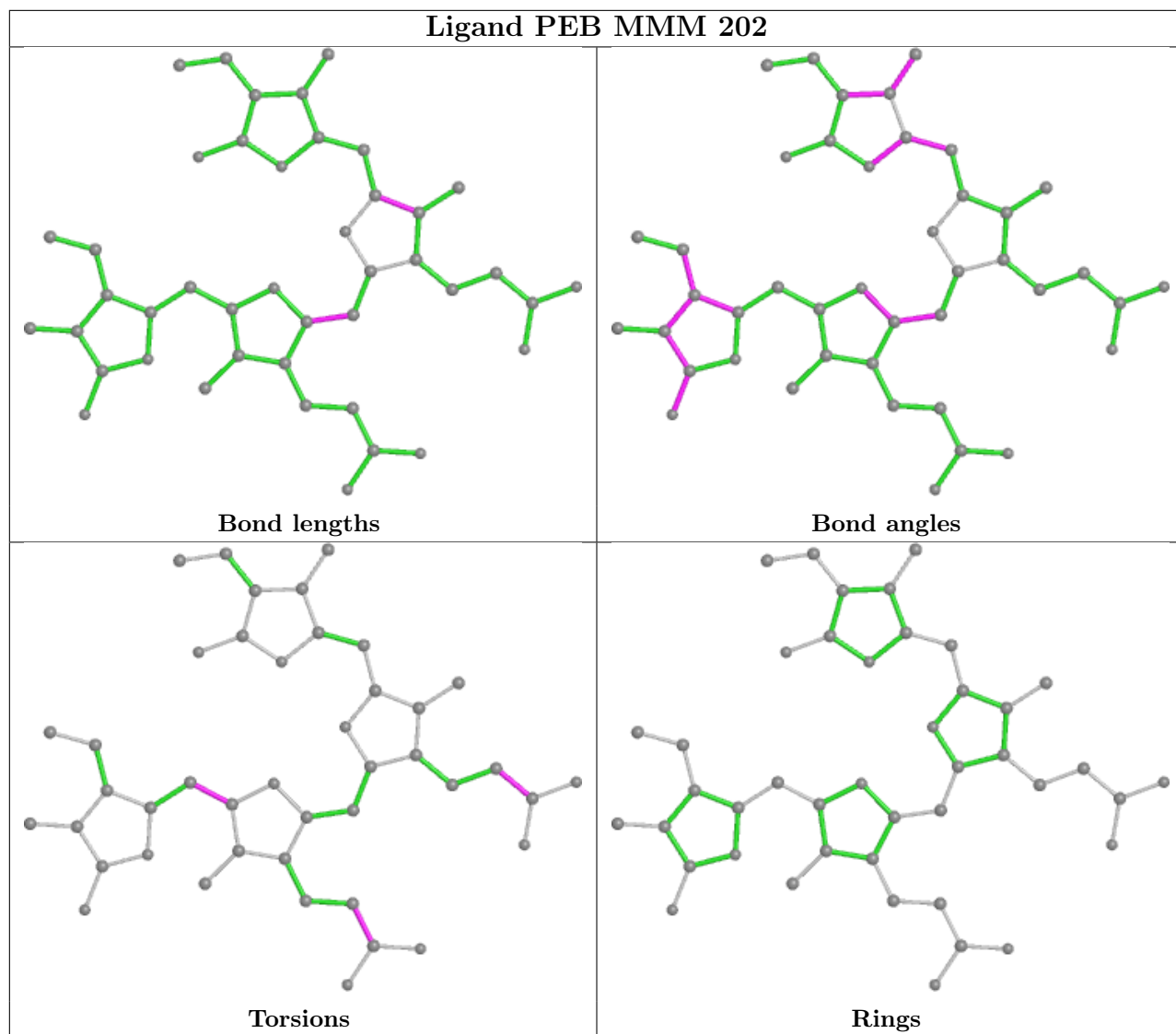


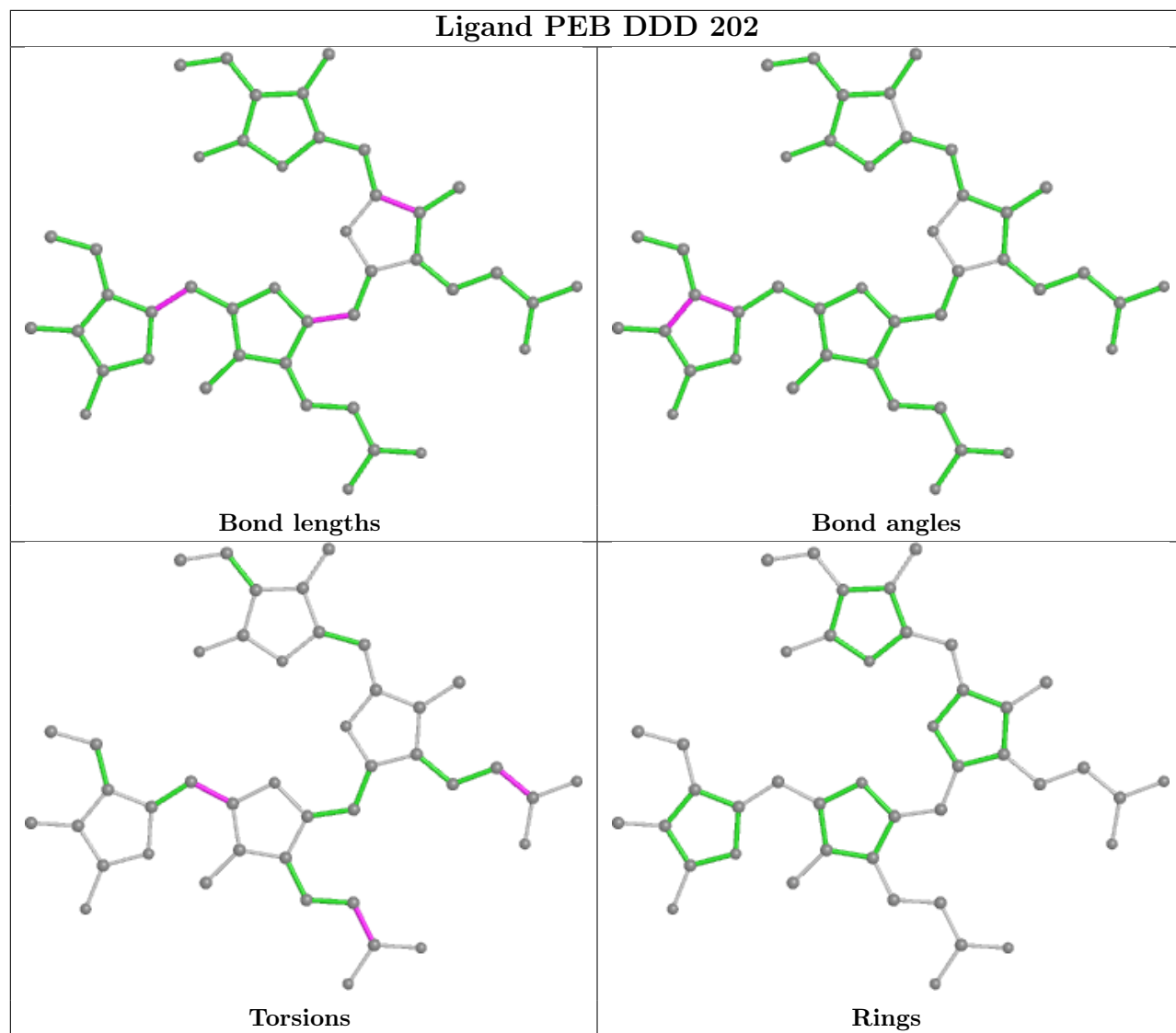


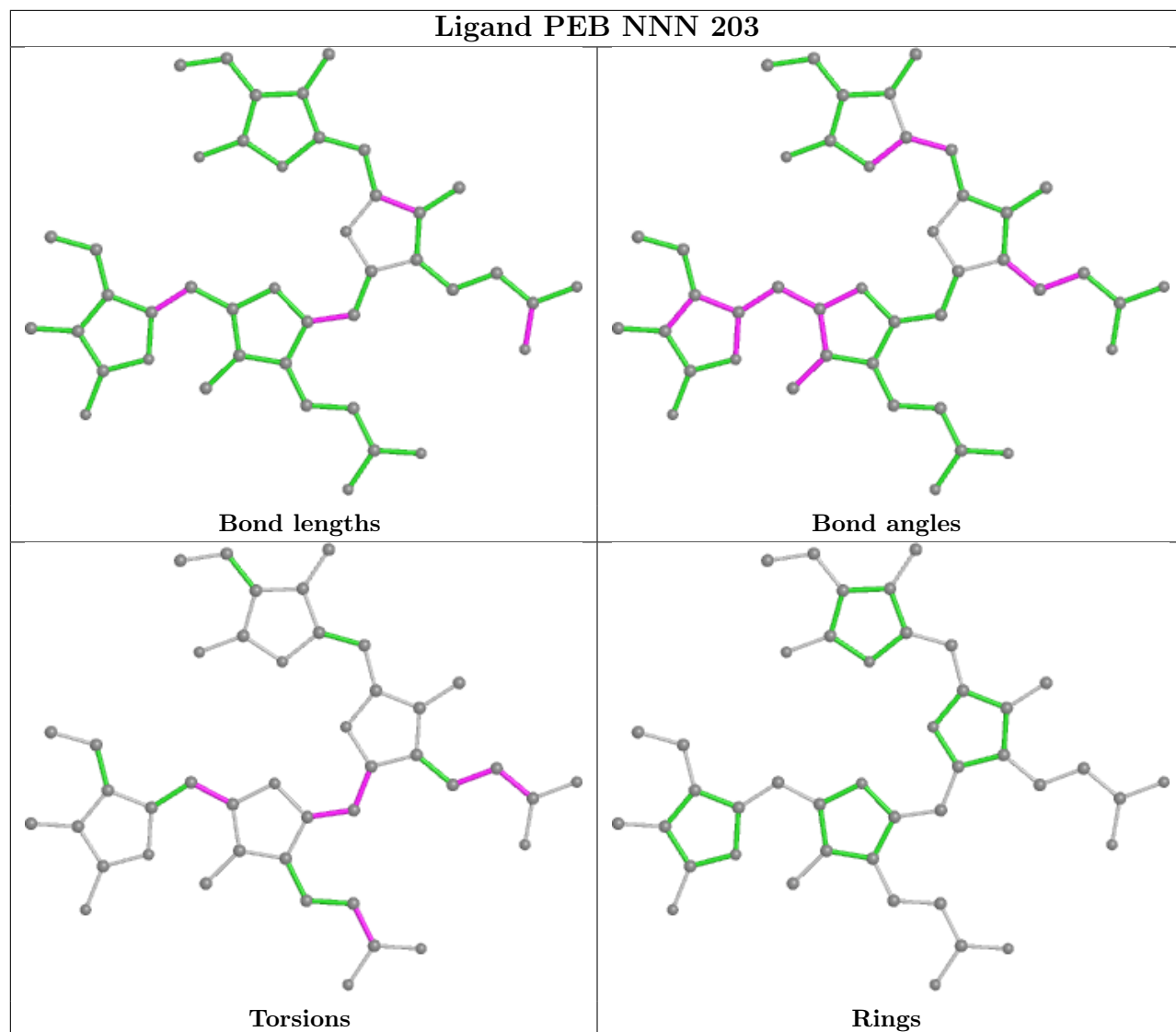


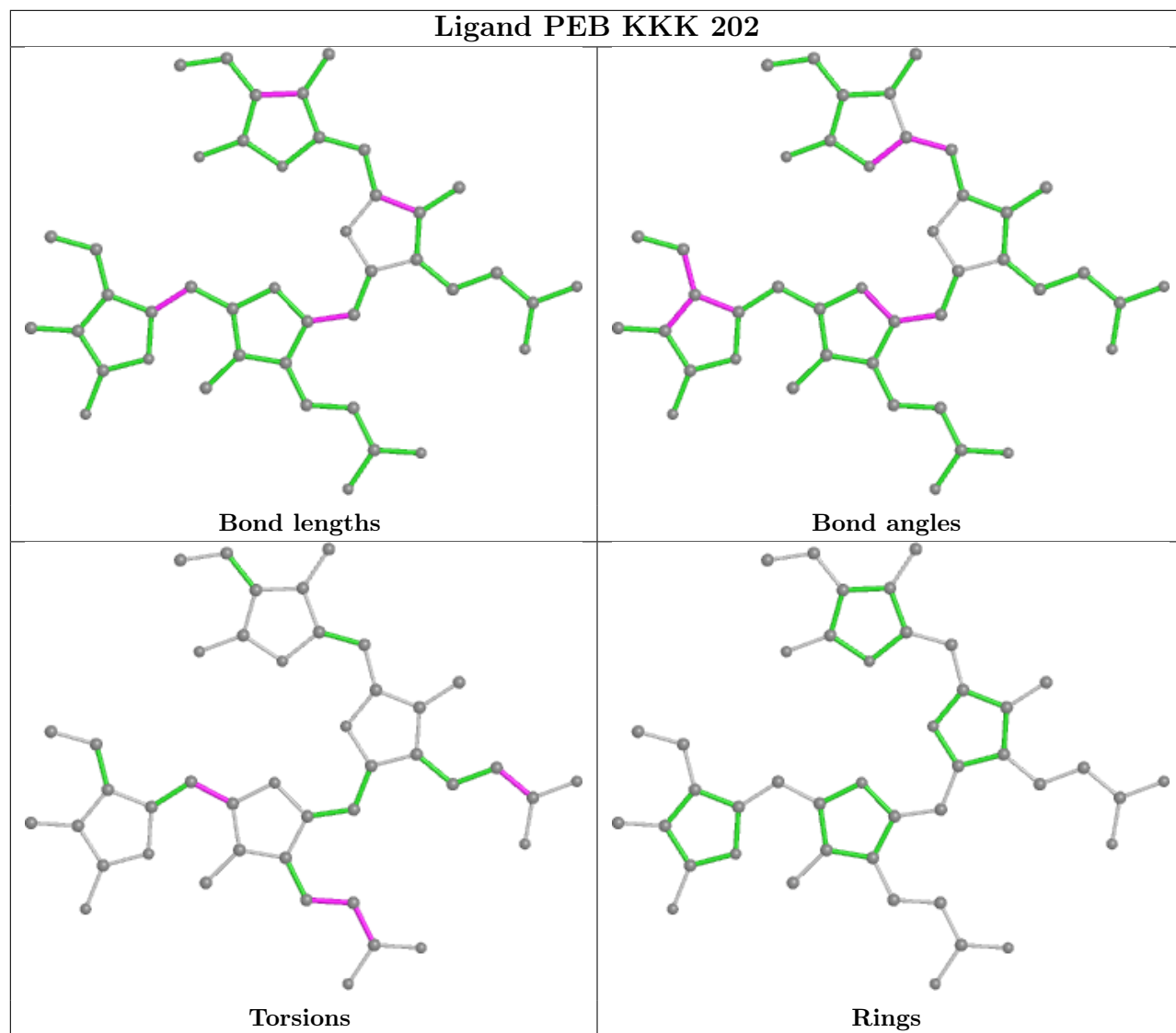


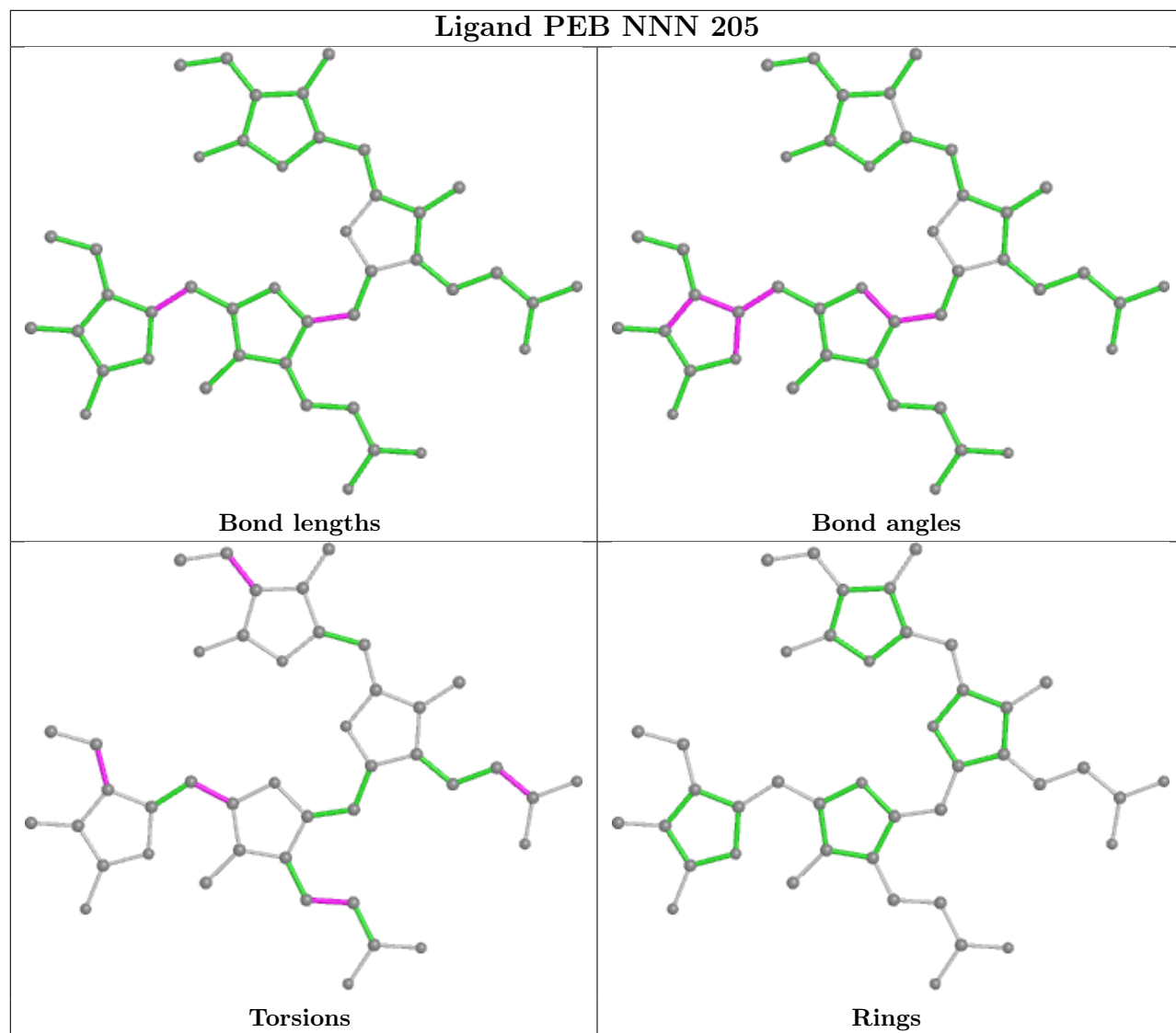


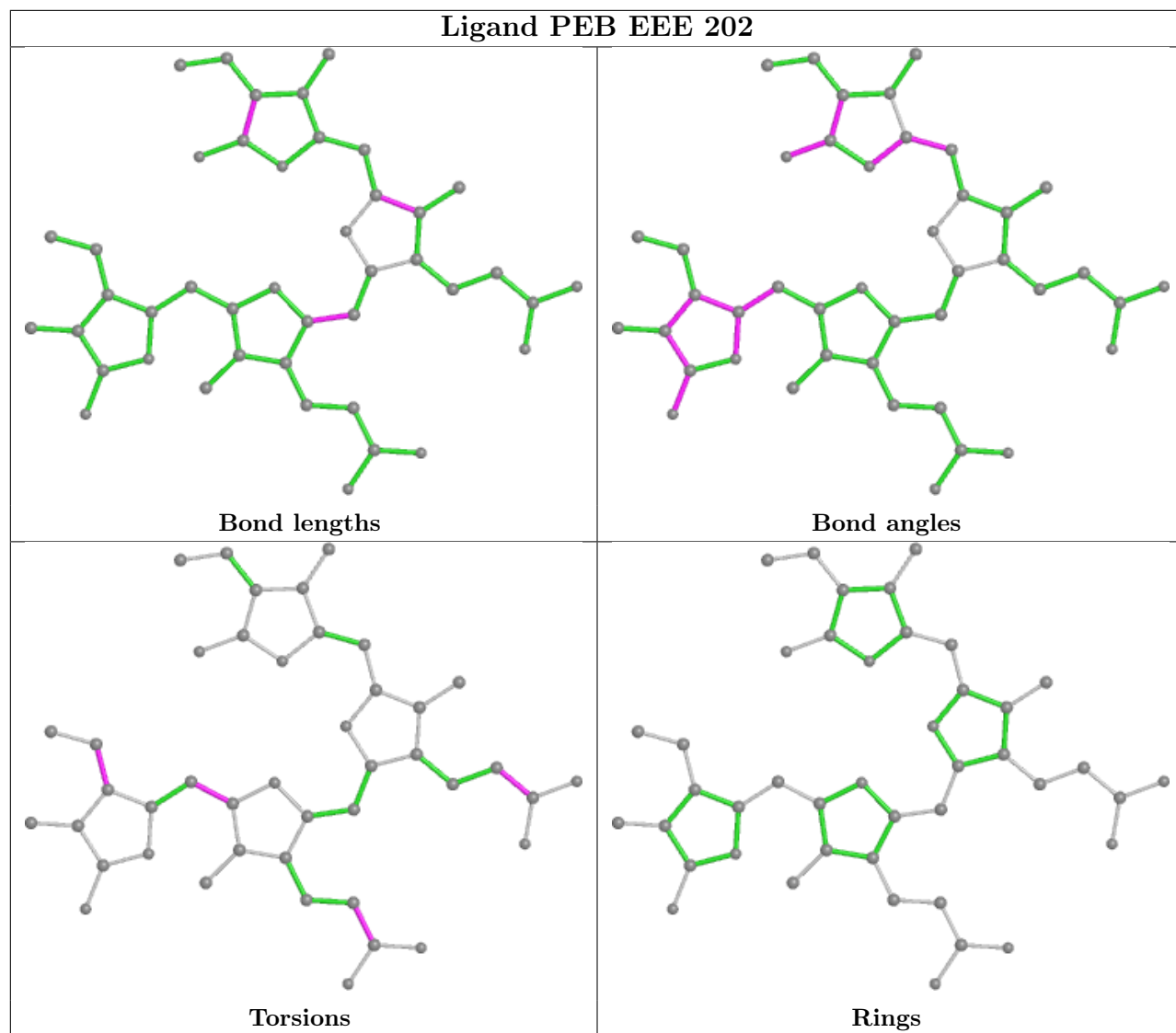


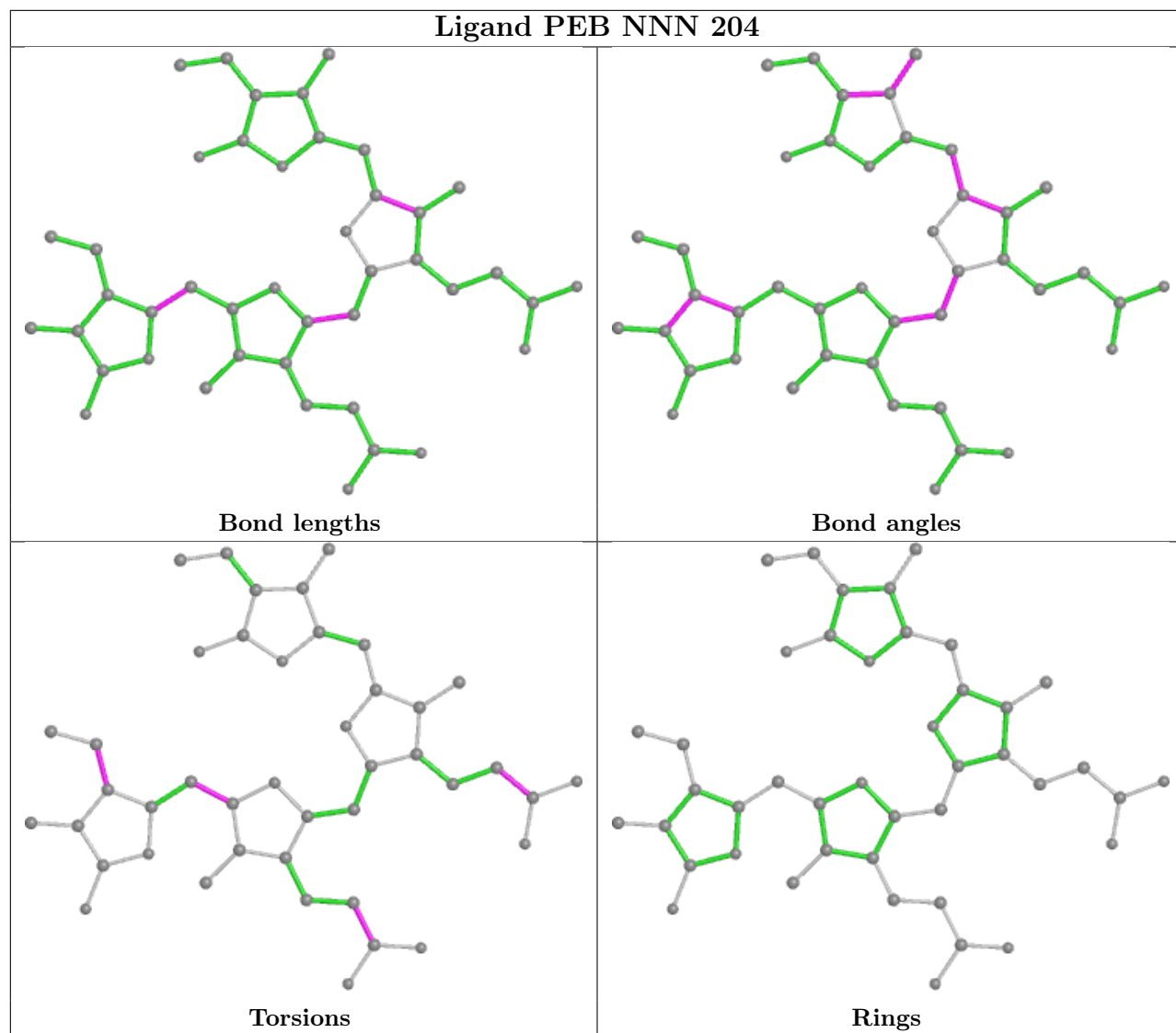


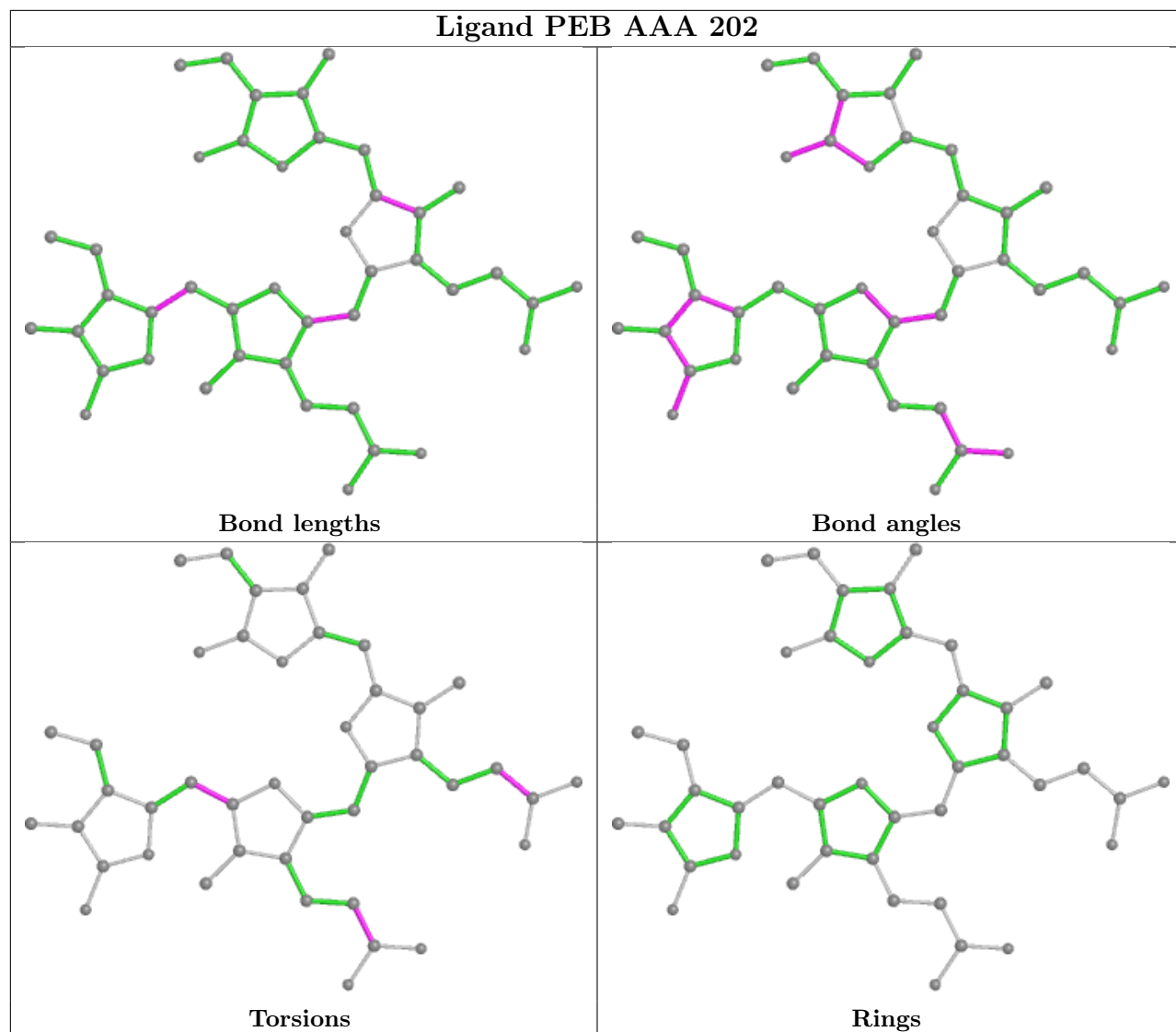


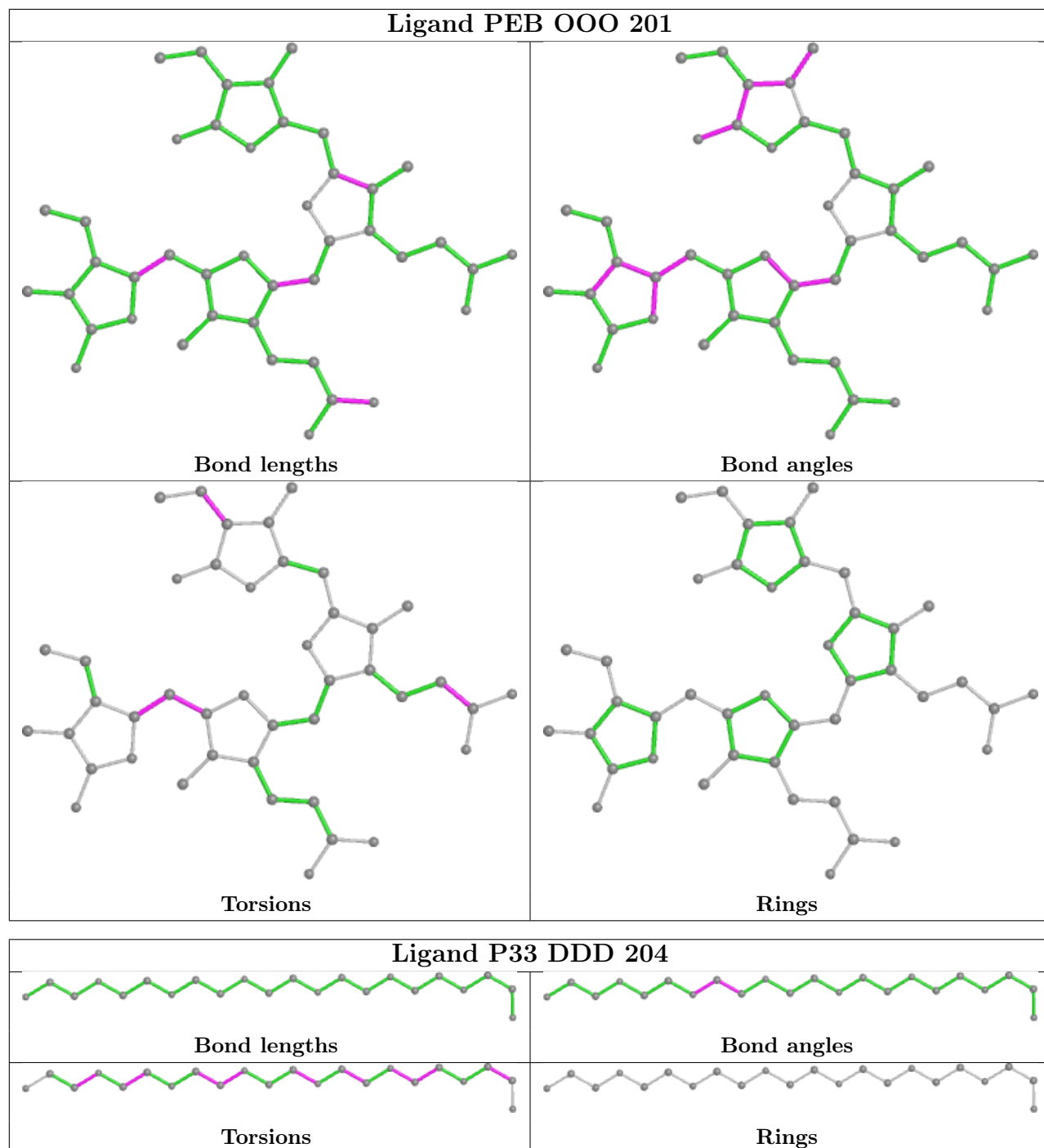


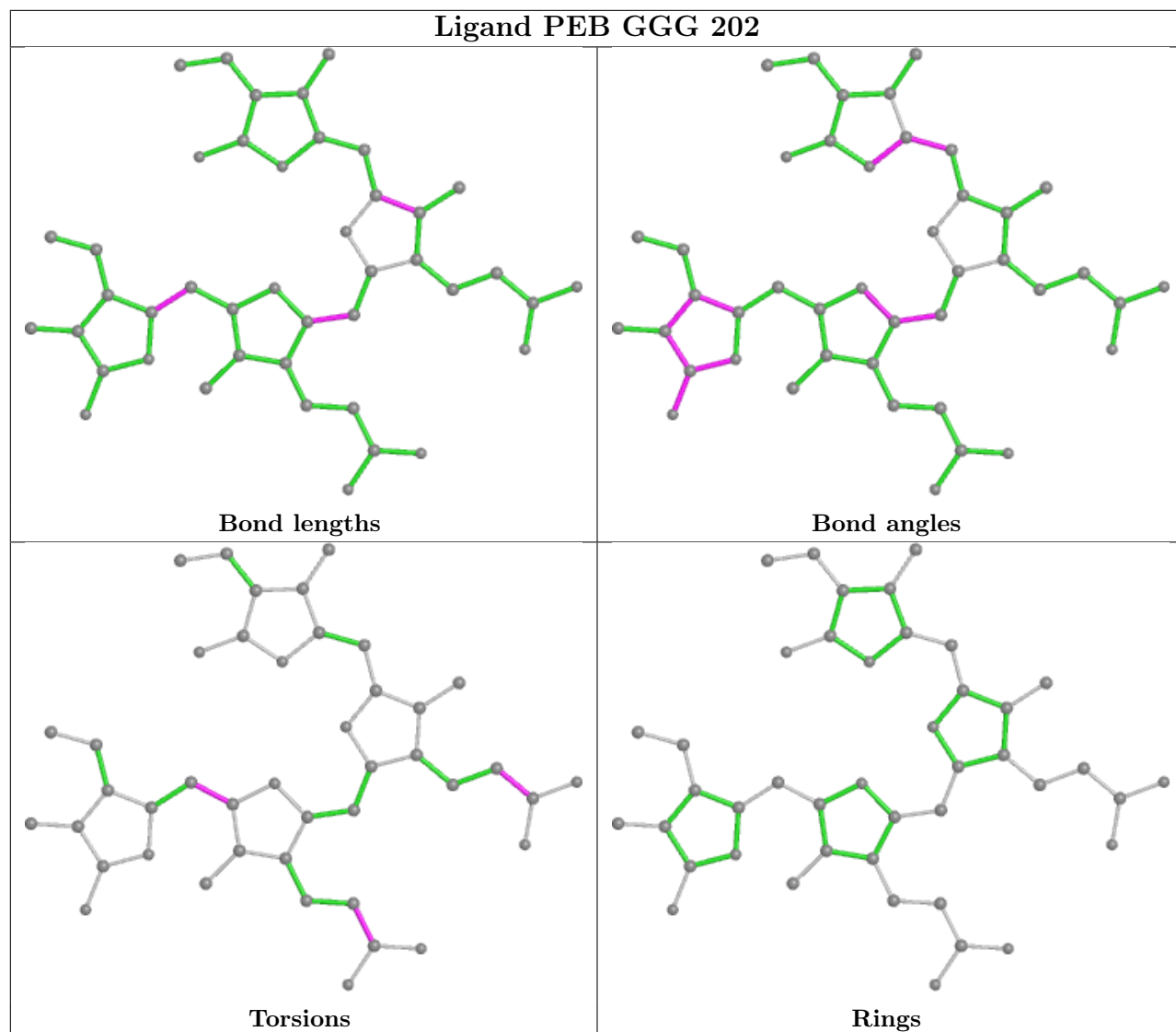


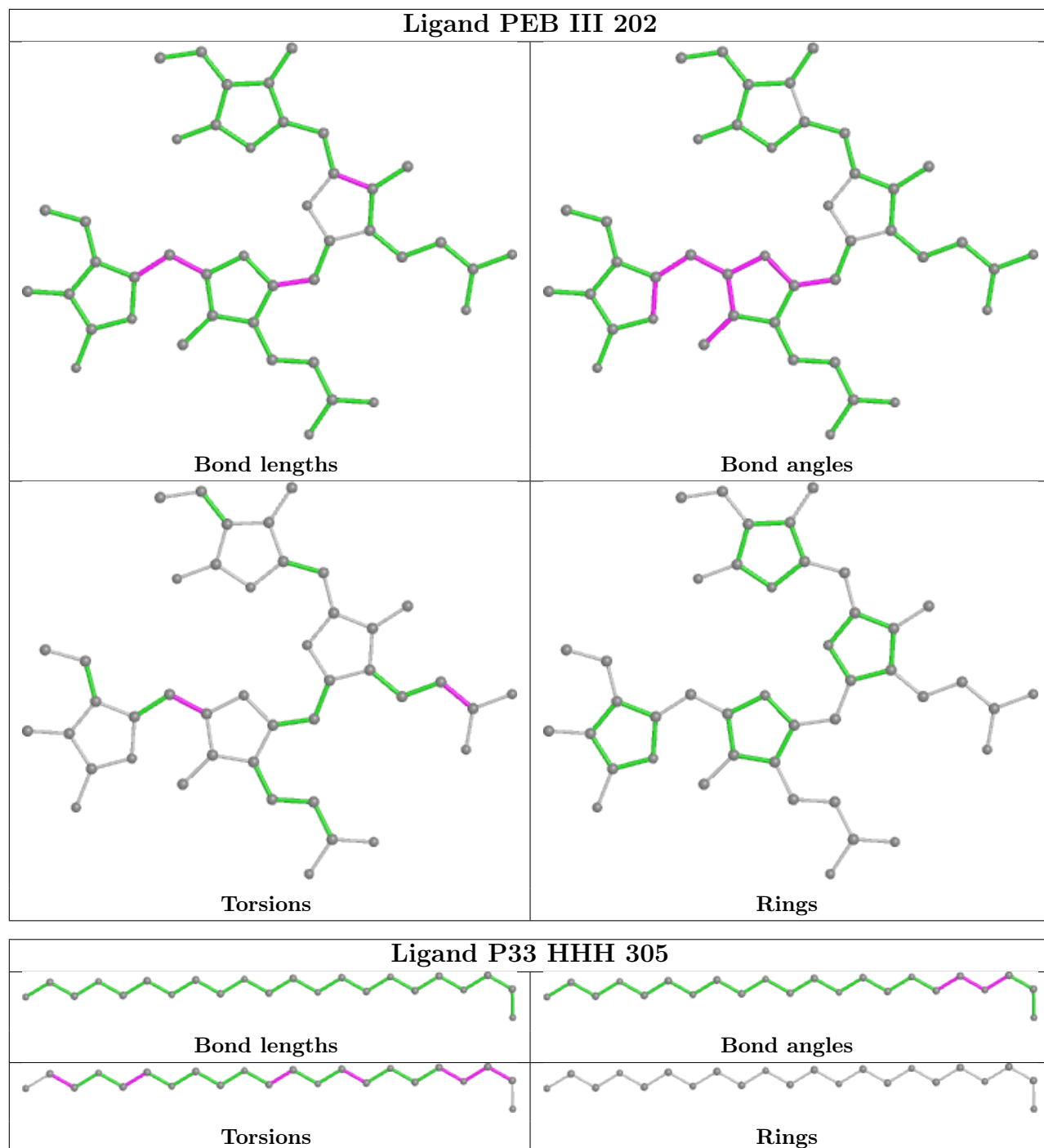


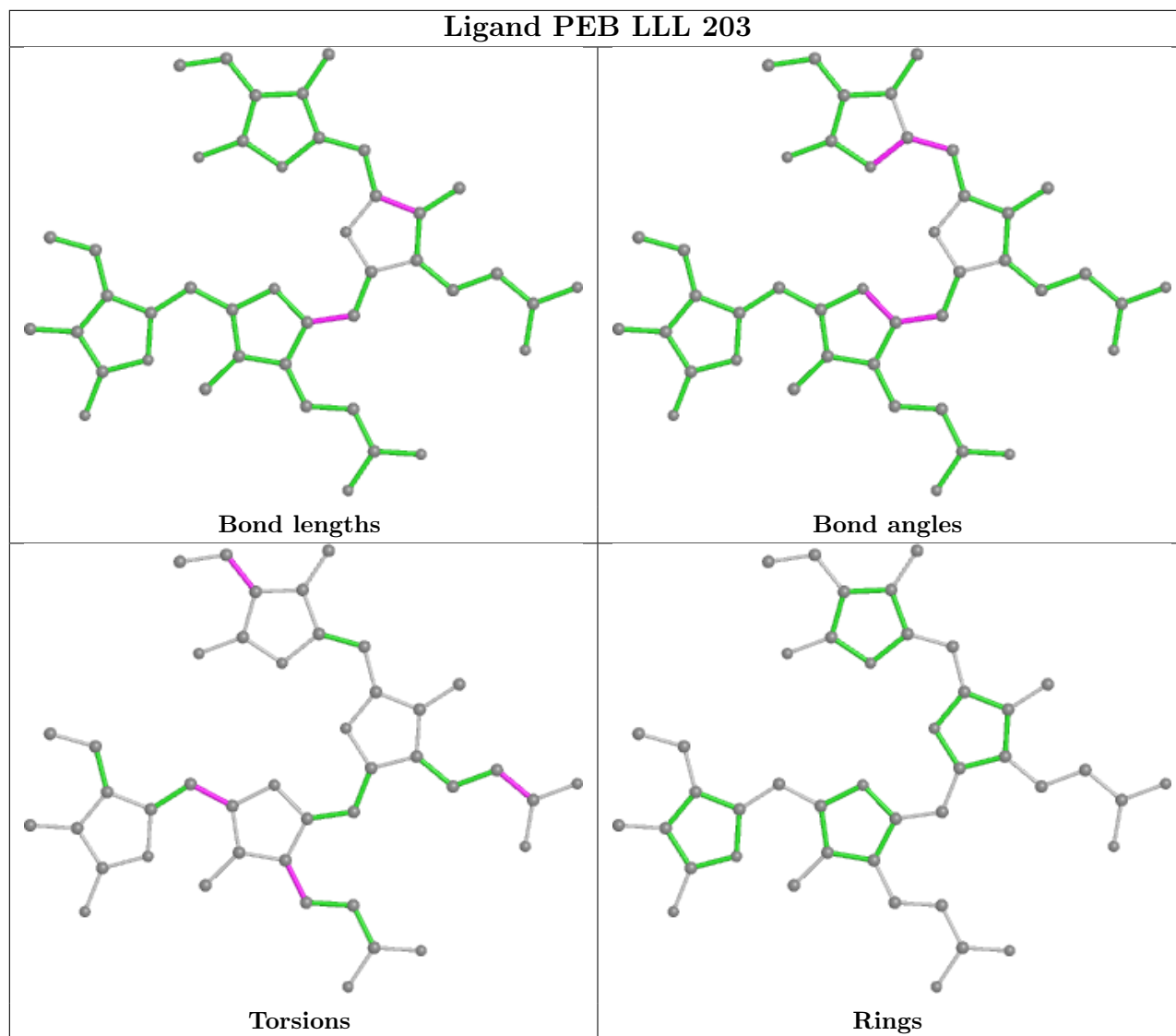


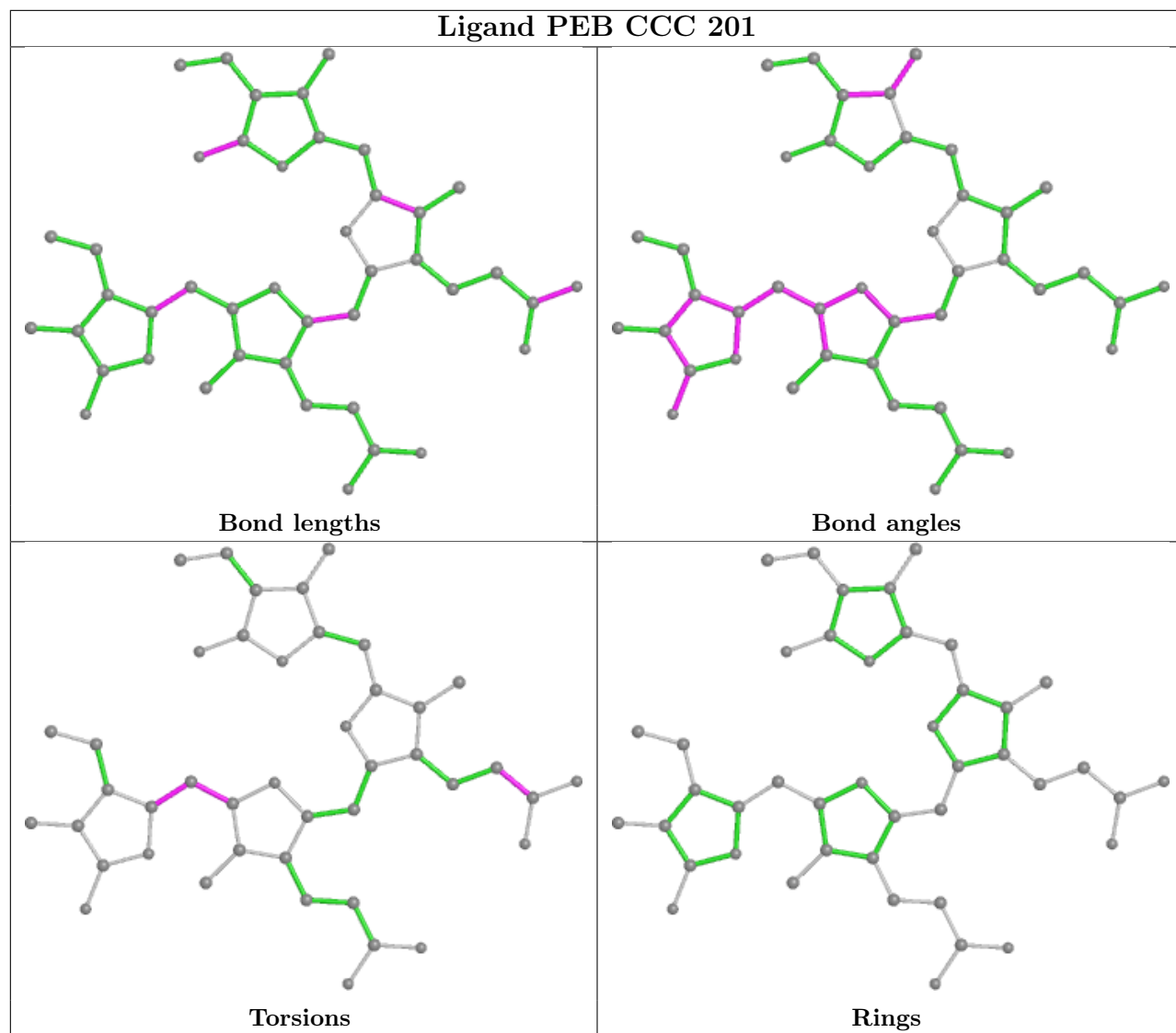


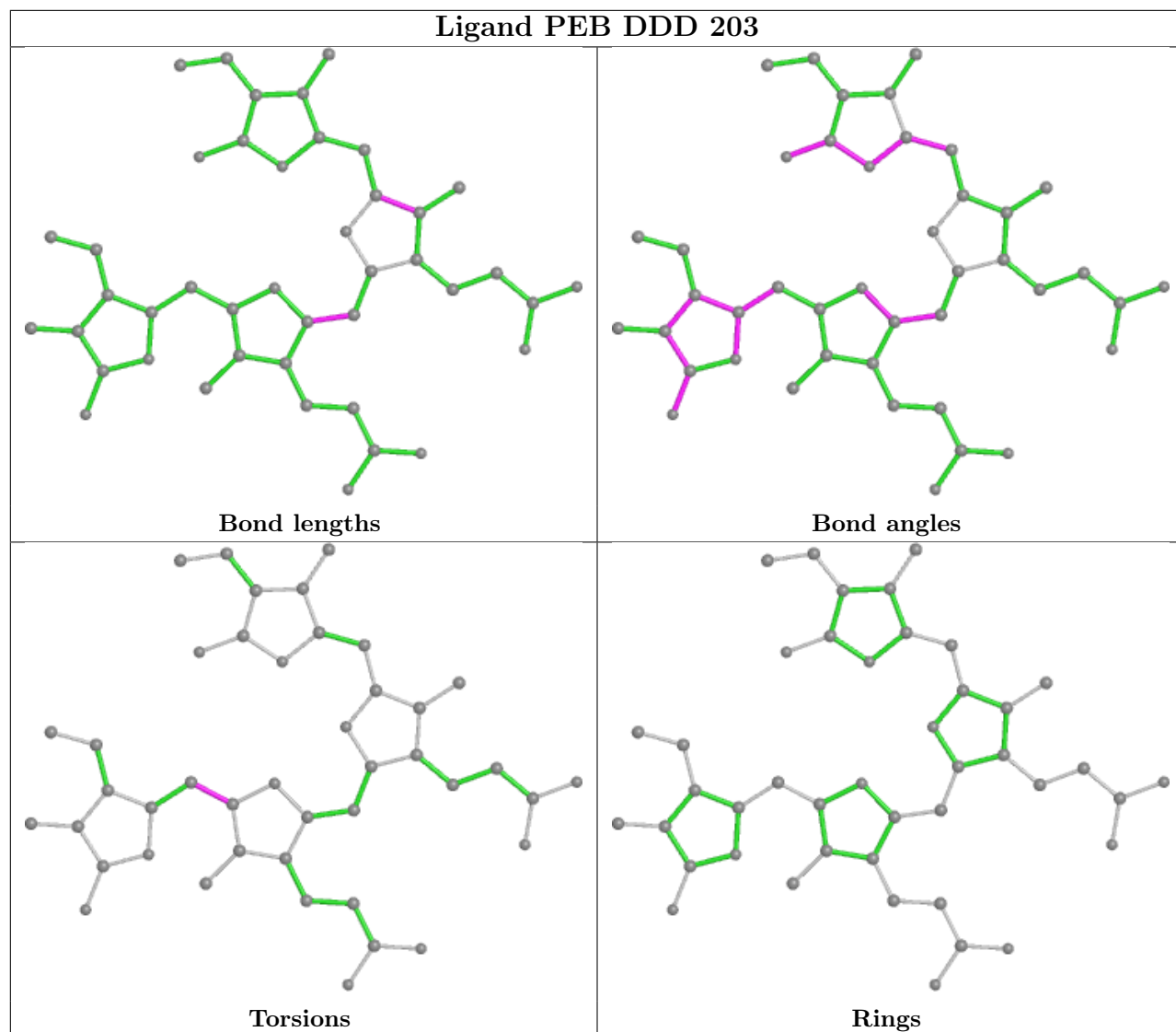


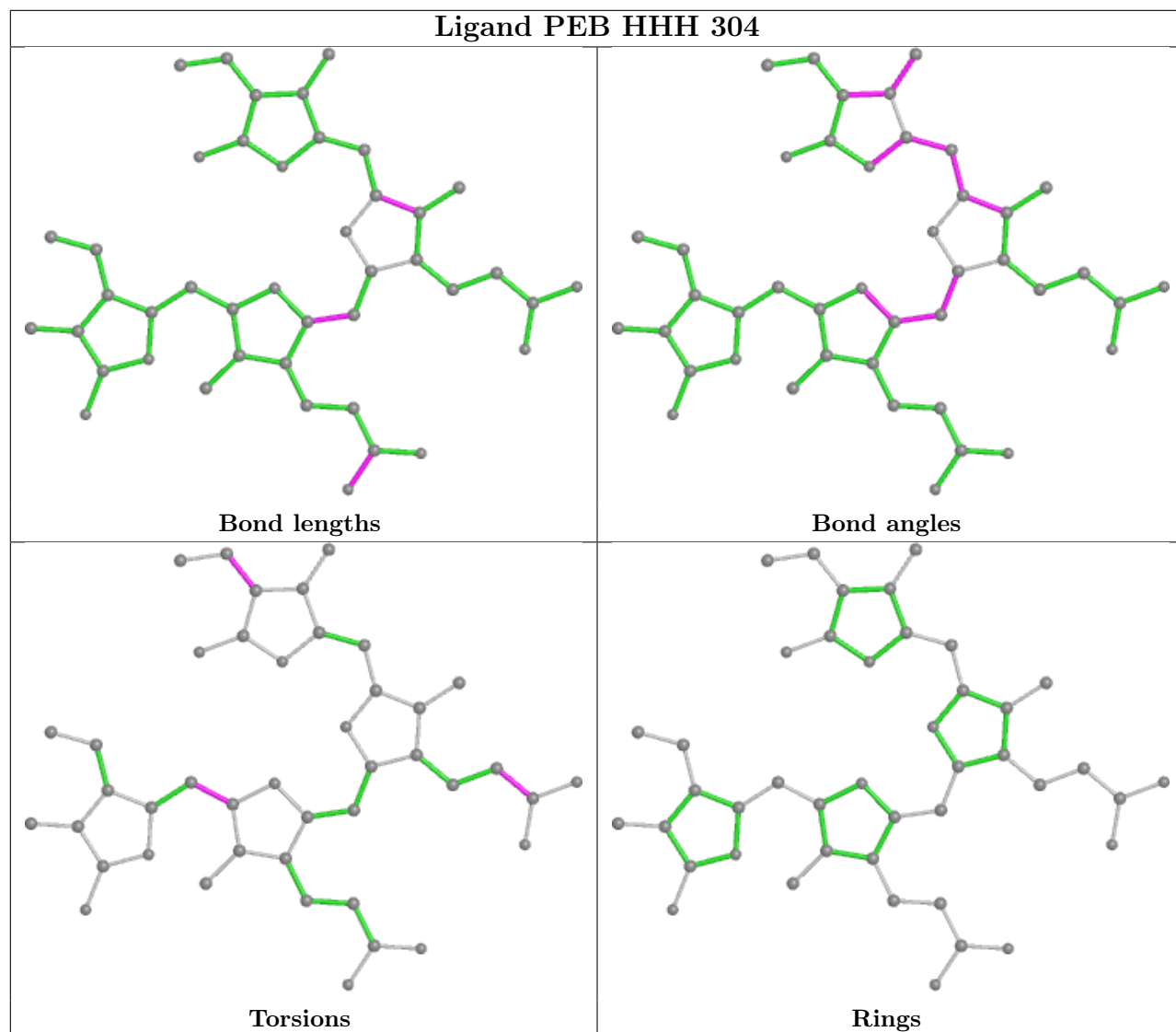


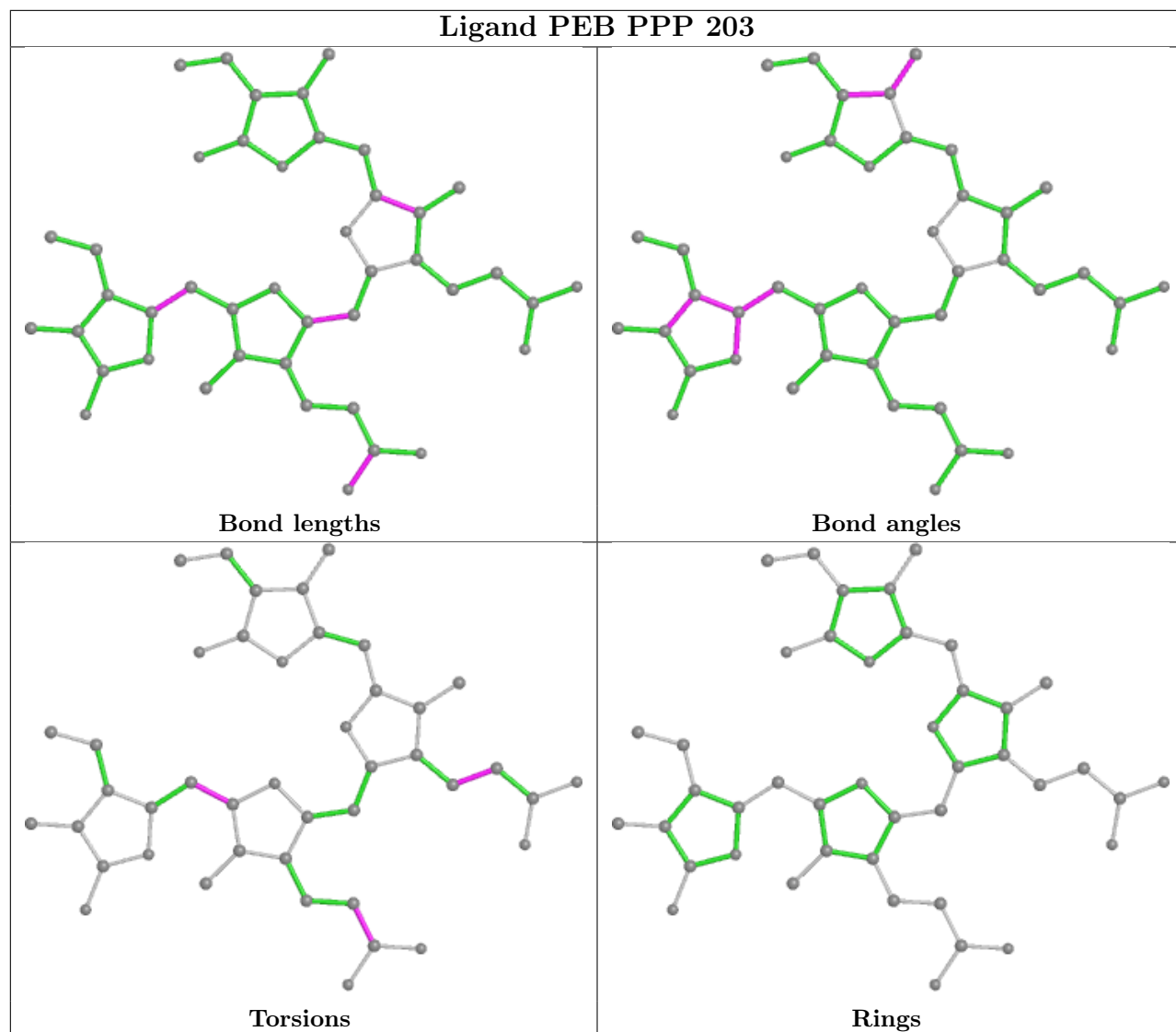


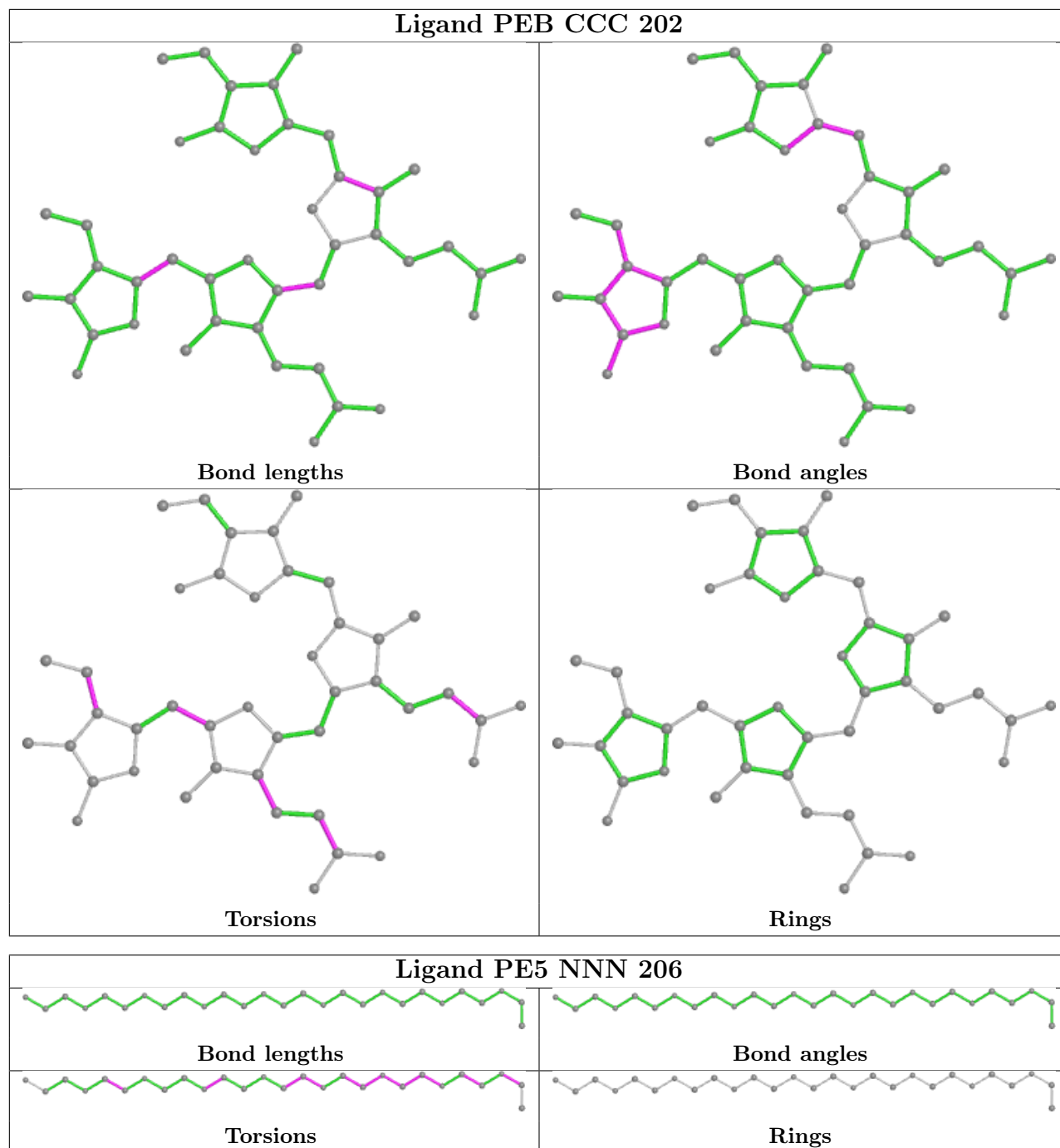


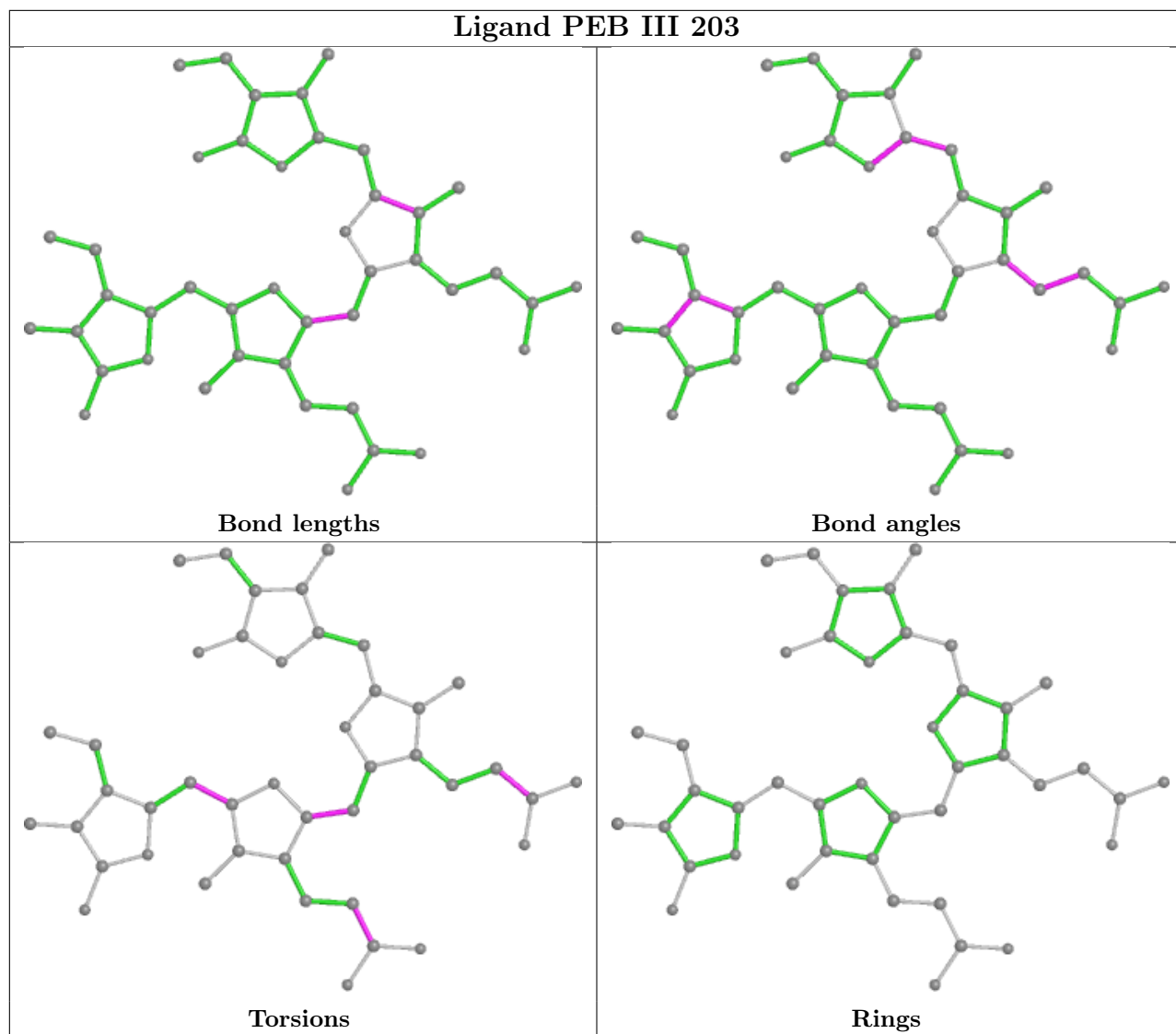


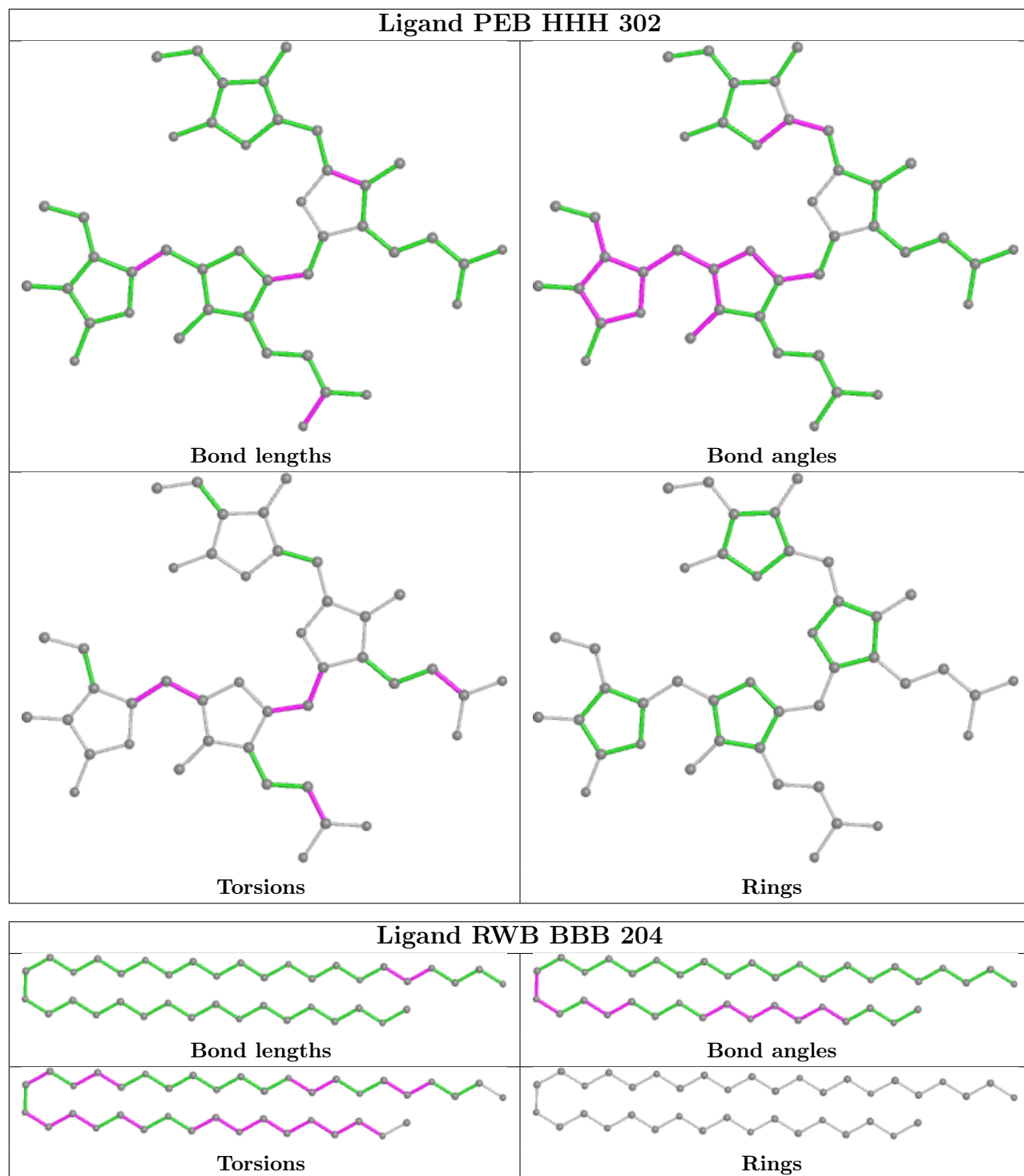


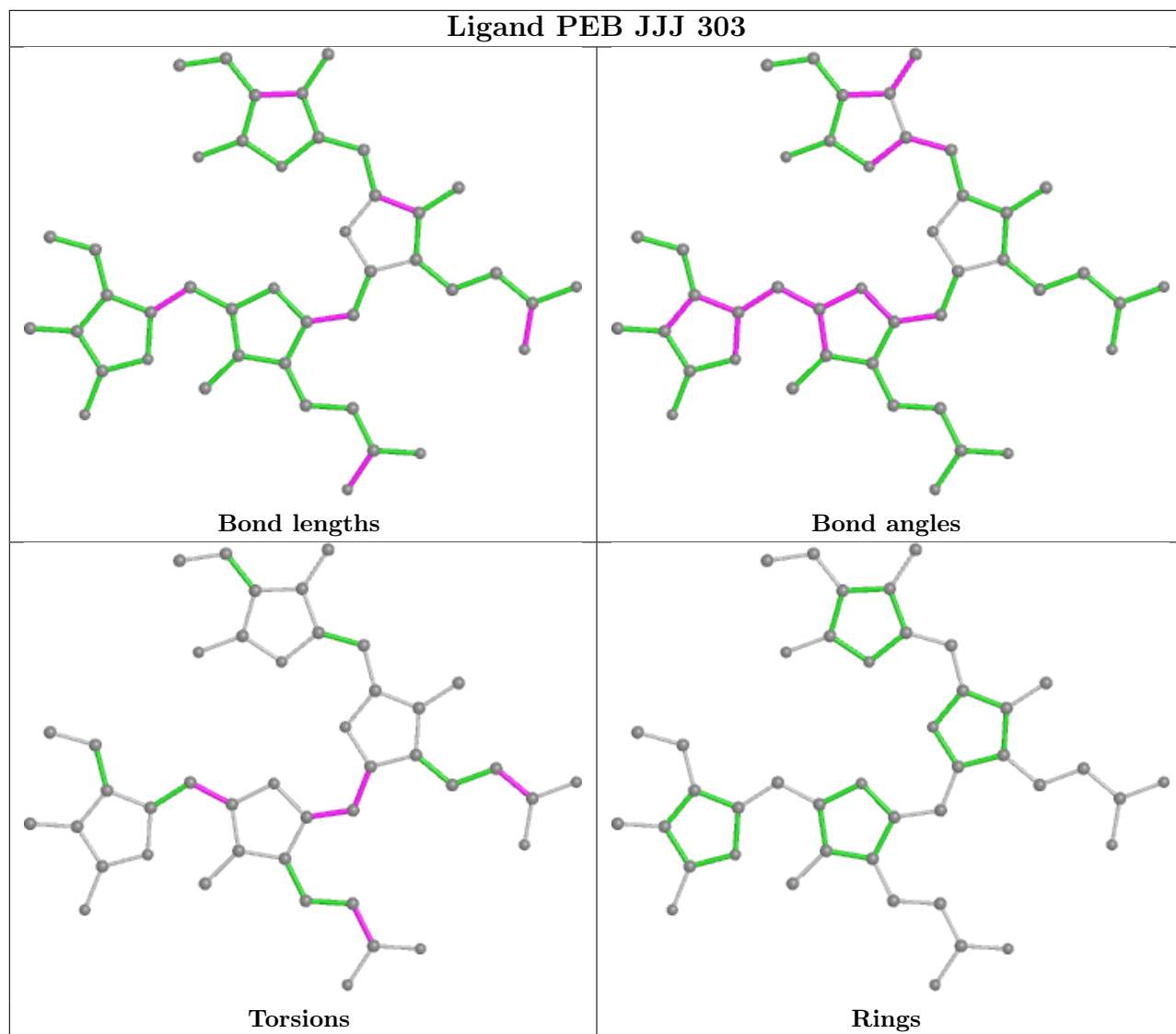


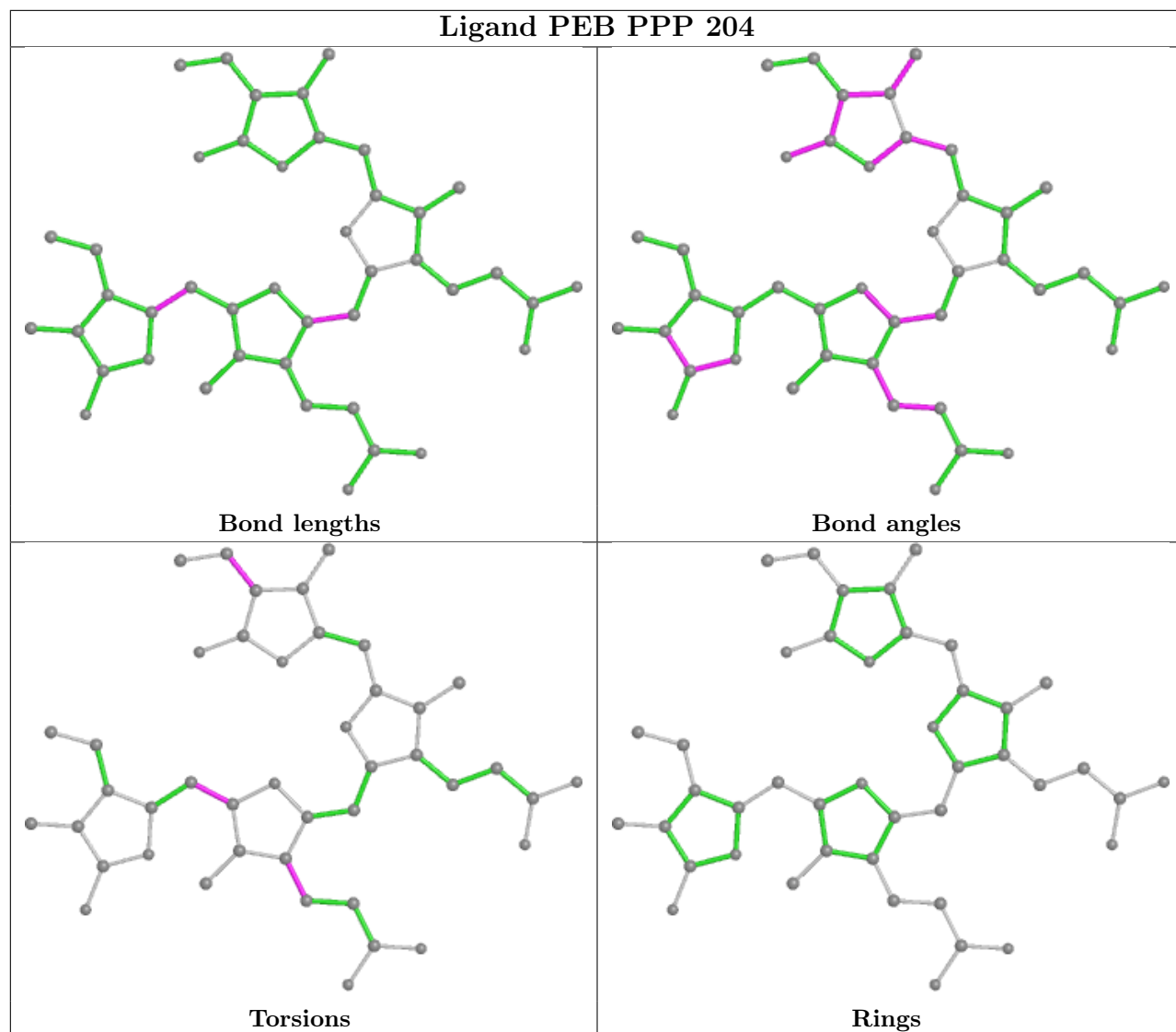


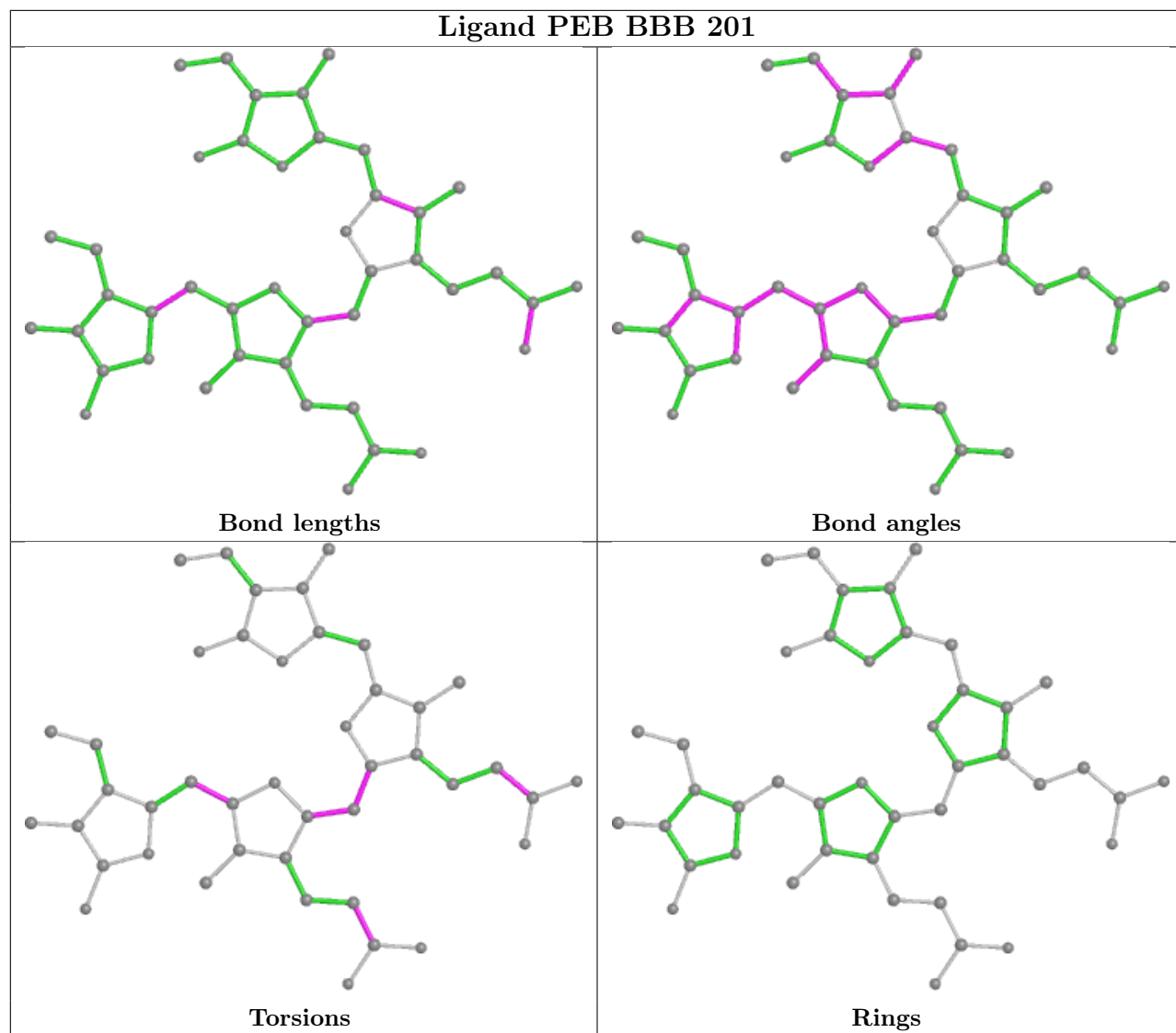


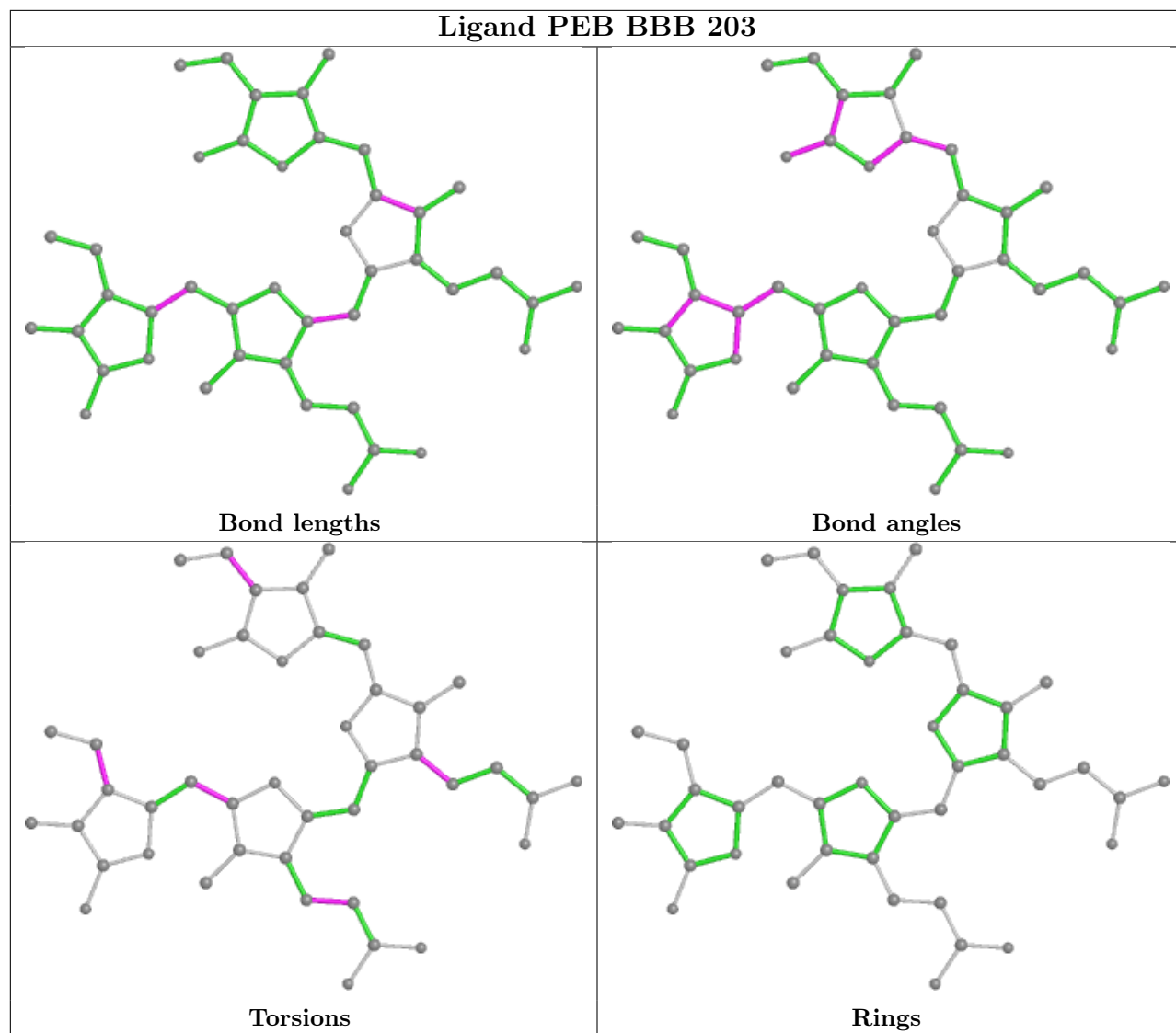


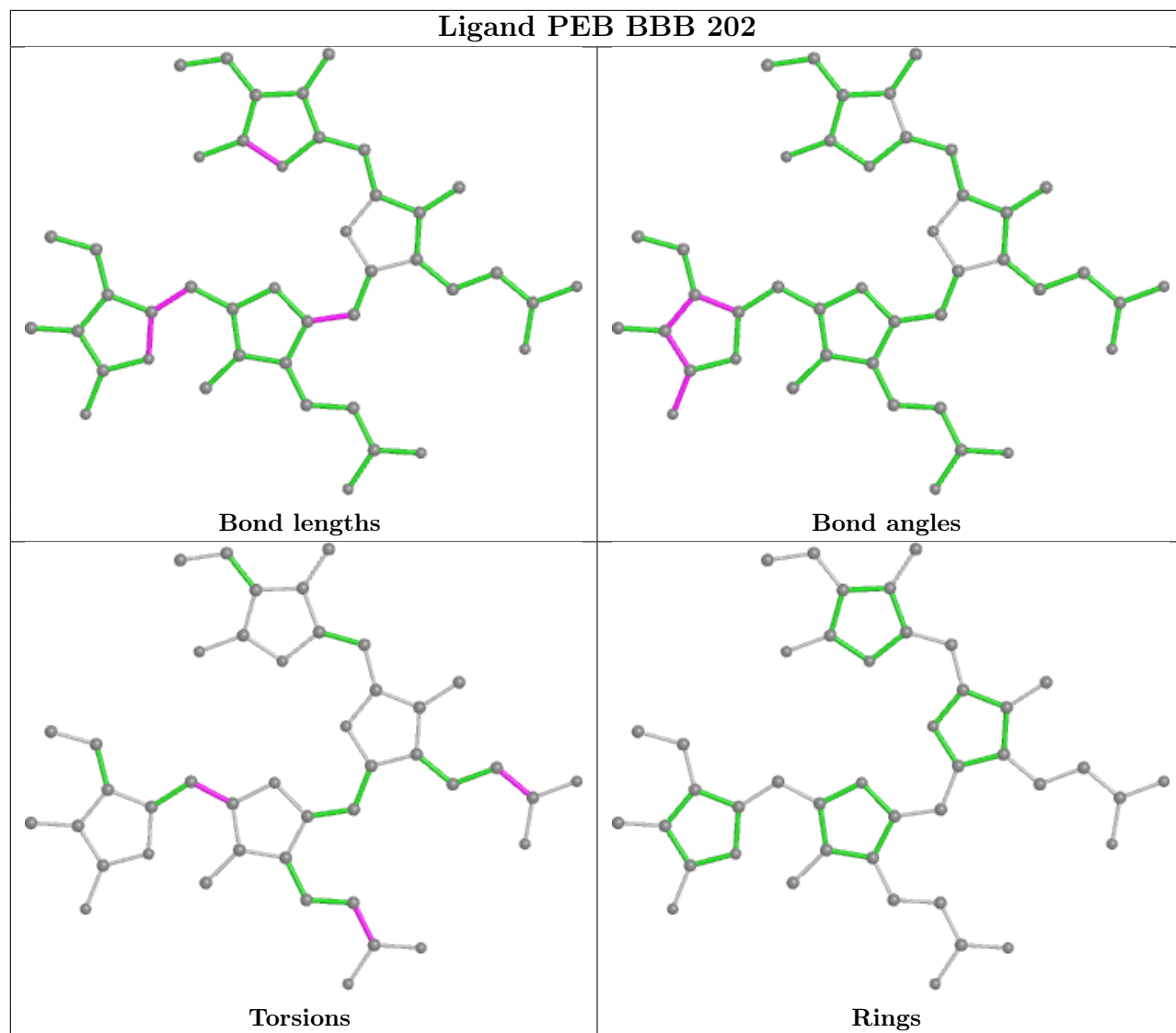


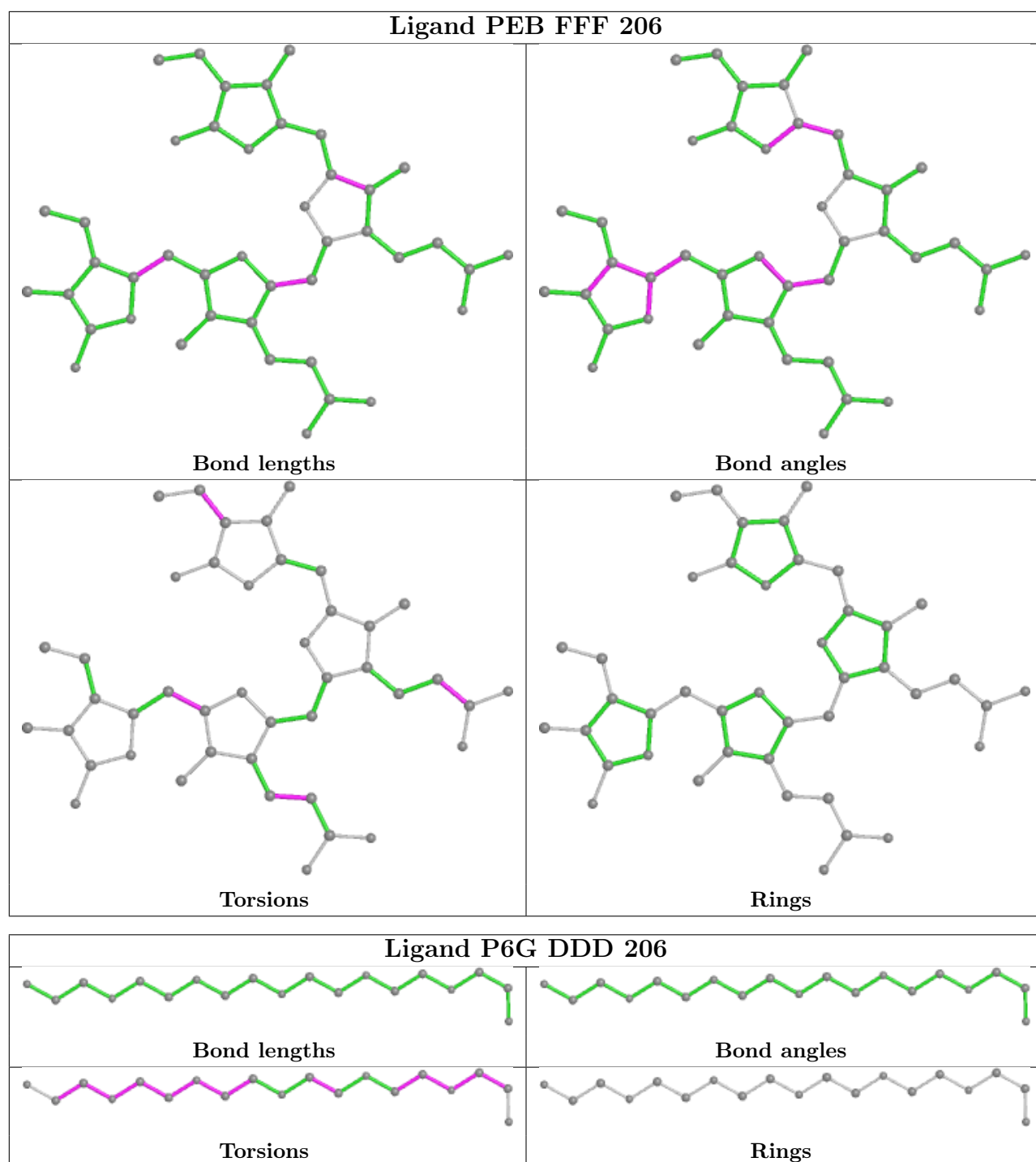


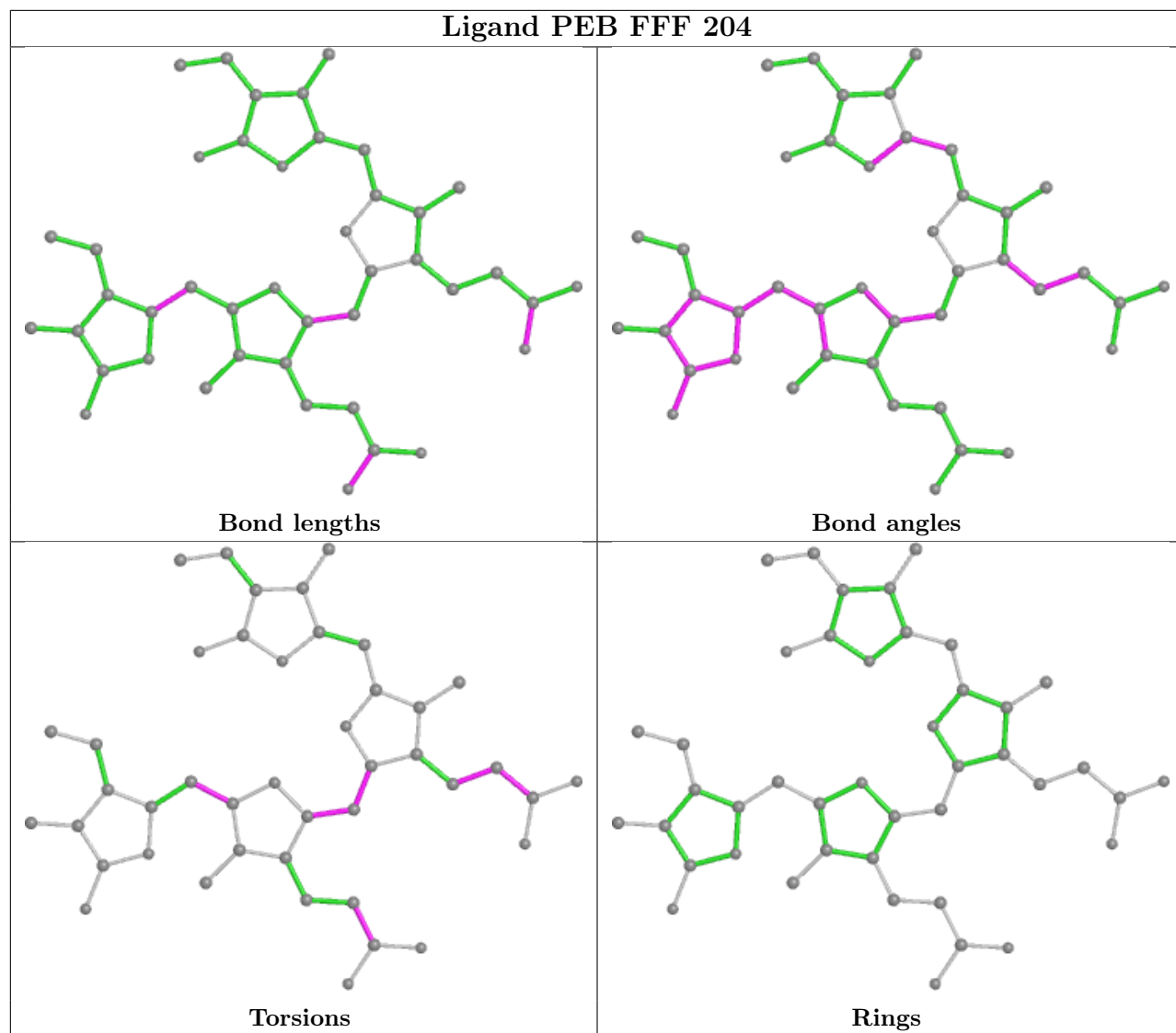


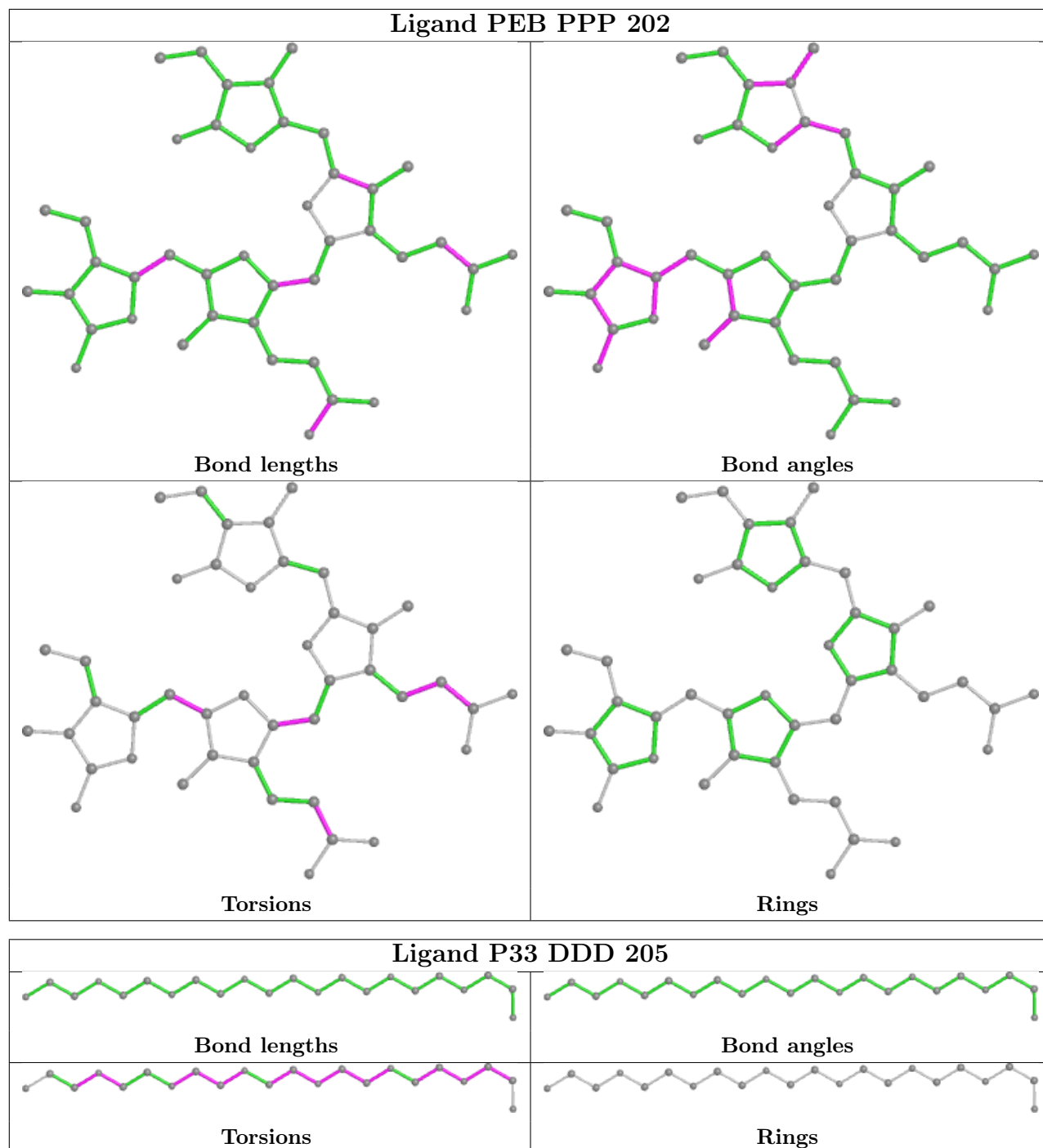


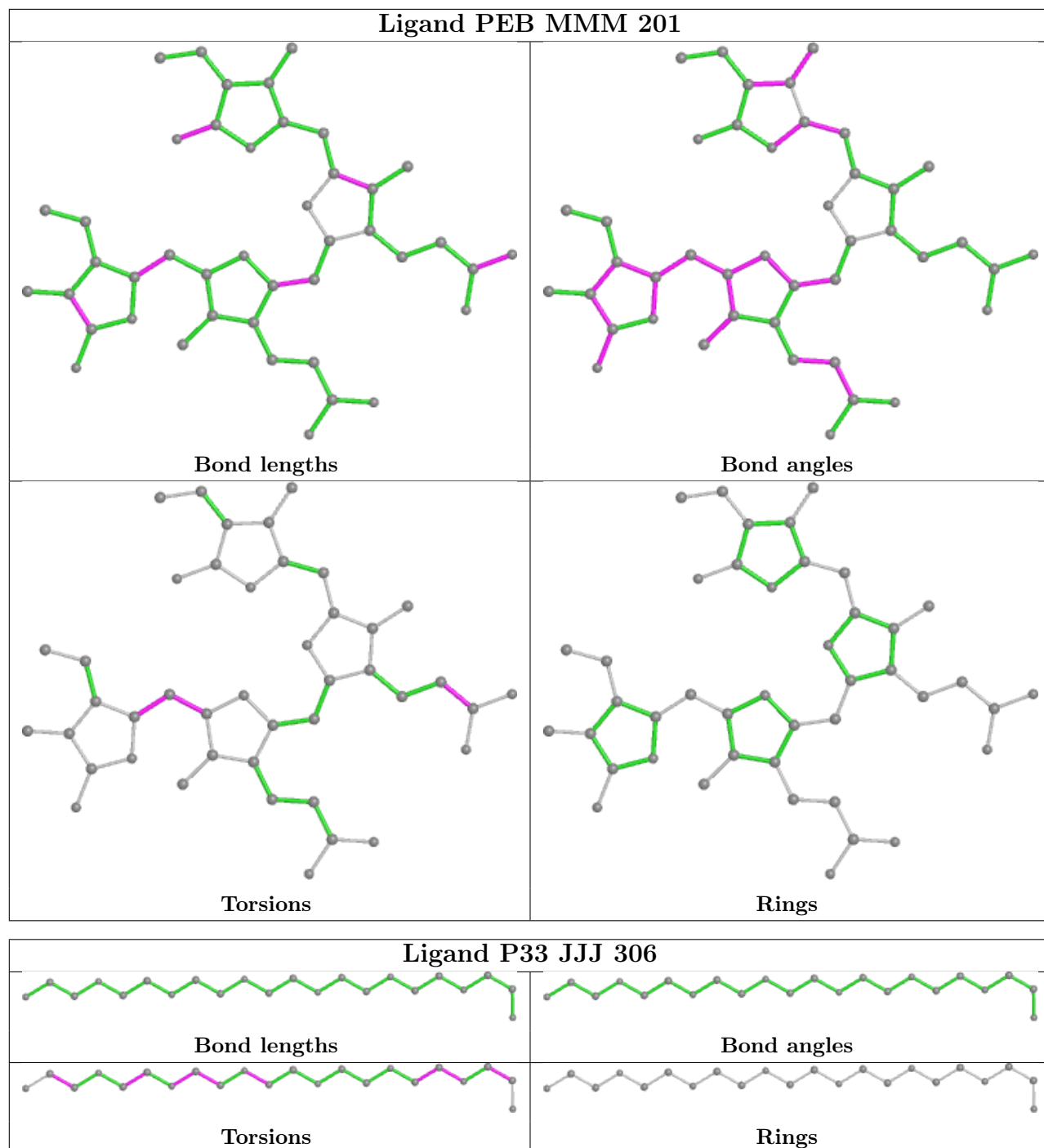


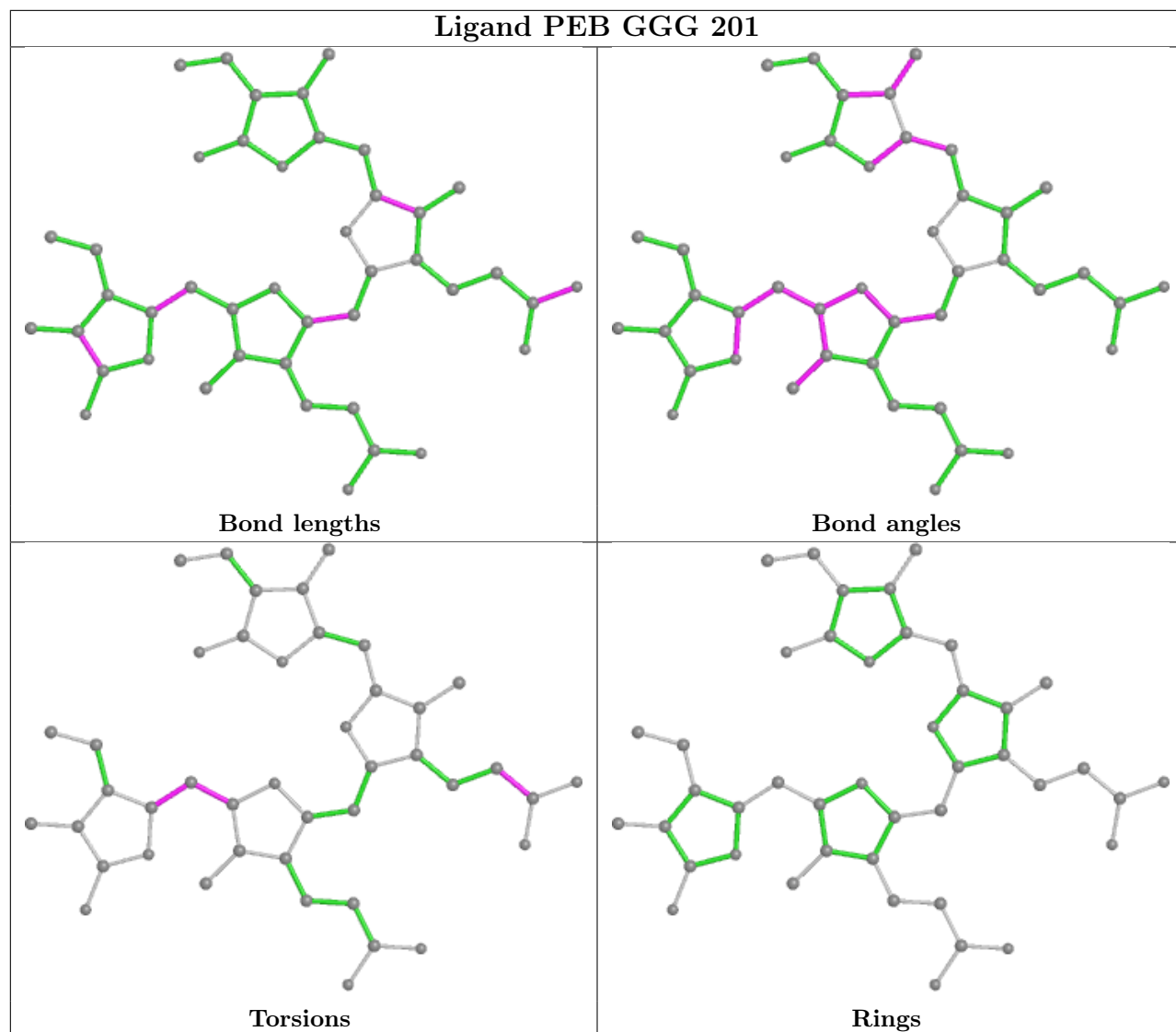


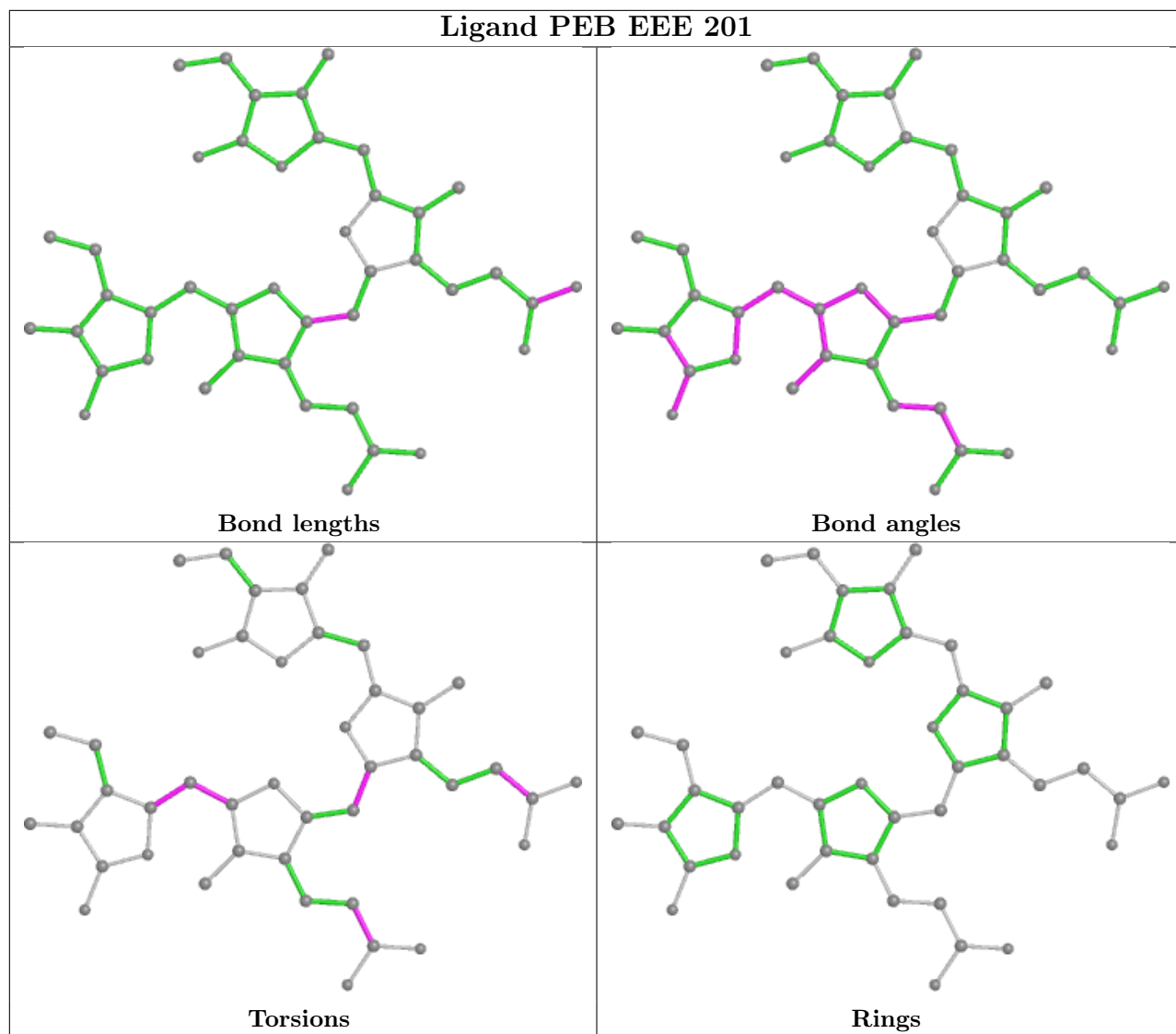


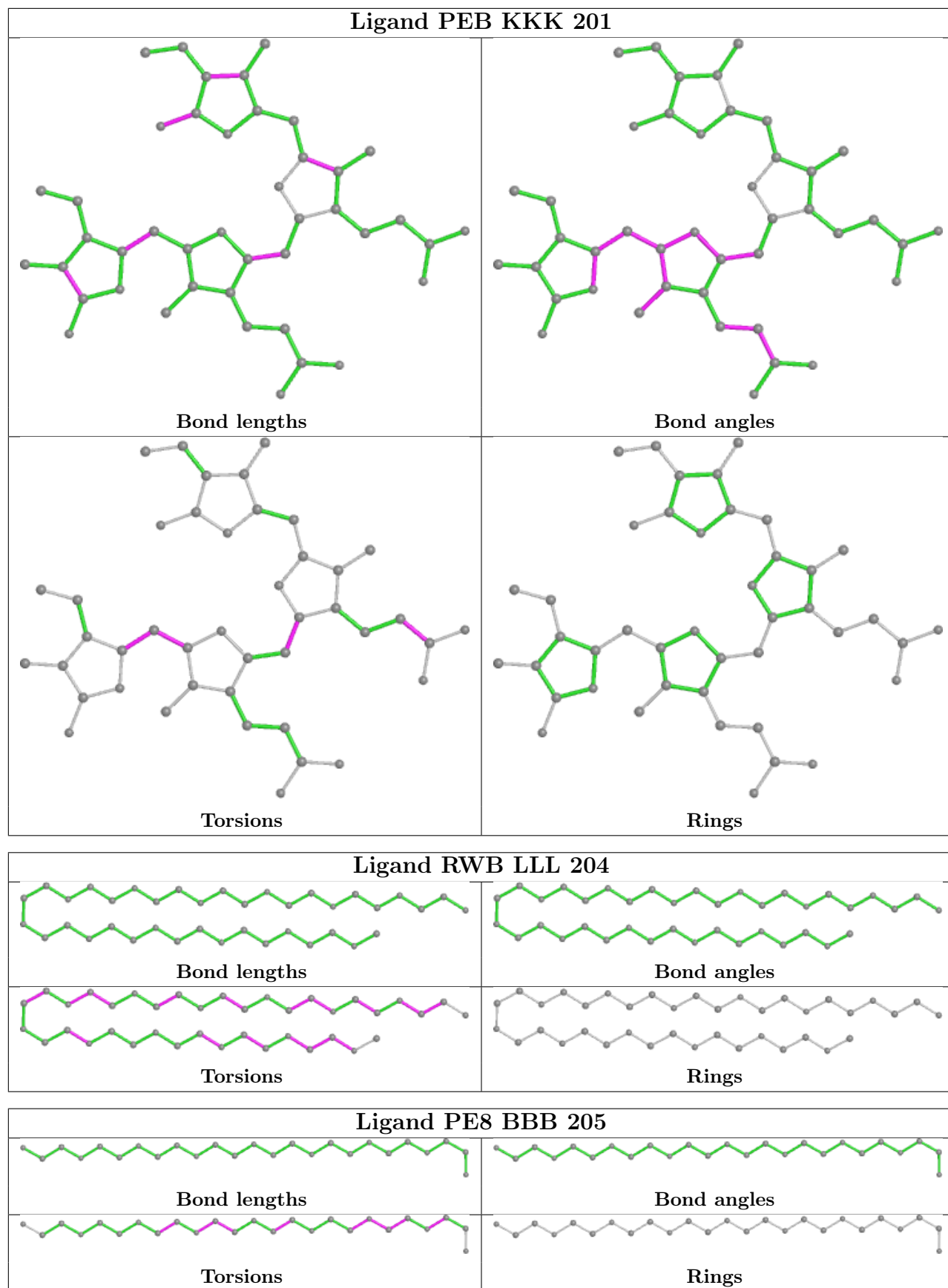


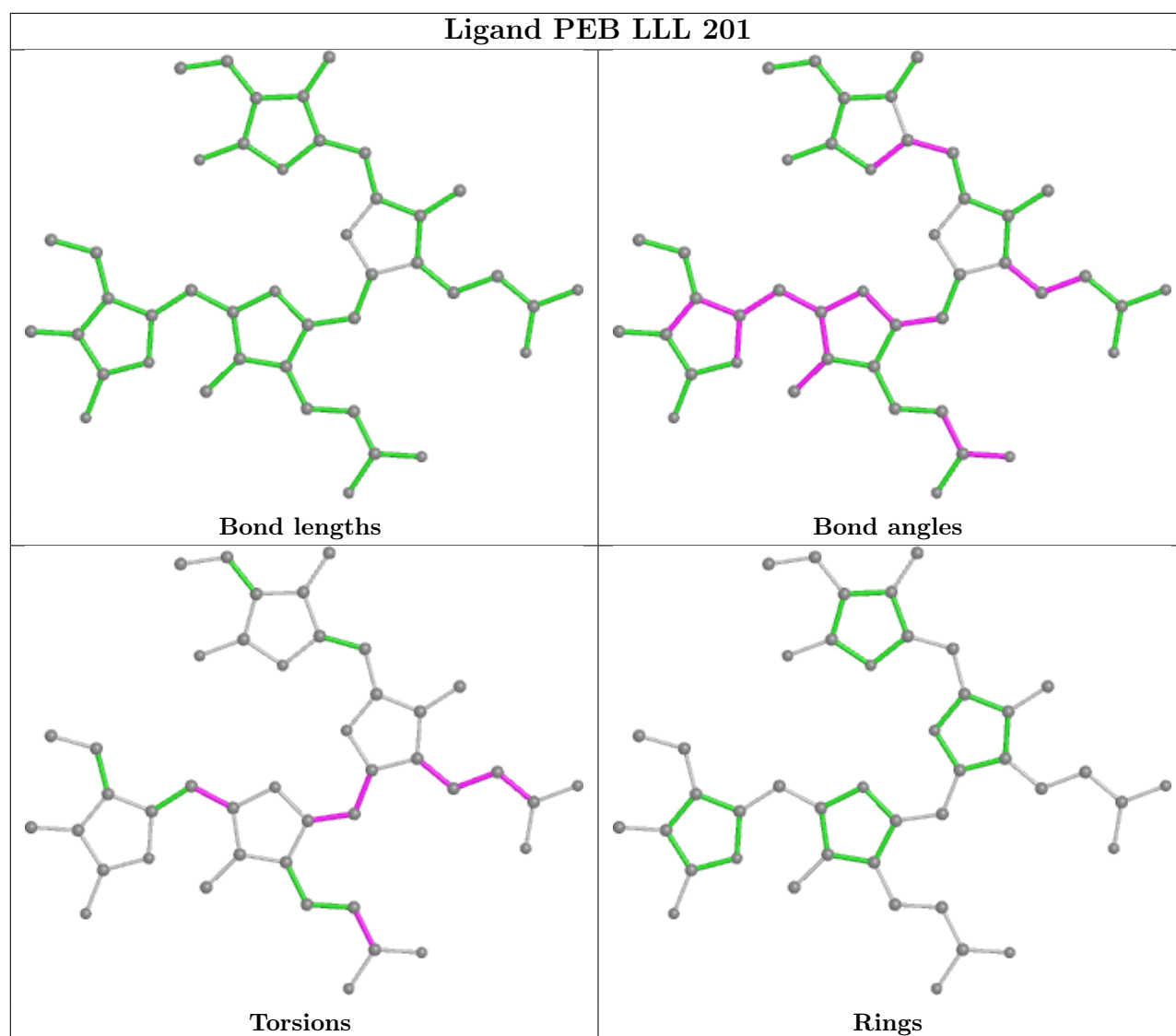












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data i

6.1 Protein, DNA and RNA chains i

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, 95th 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	AAA	164/164 (100%)	-0.42	0 100 100	29, 36, 47, 55	0
1	CCC	164/164 (100%)	-0.45	0 100 100	30, 38, 49, 57	0
1	EEE	164/164 (100%)	-0.42	0 100 100	30, 39, 52, 59	0
1	GGG	164/164 (100%)	-0.42	0 100 100	32, 39, 55, 63	0
1	III	164/164 (100%)	-0.42	0 100 100	30, 39, 52, 61	0
1	KKK	164/164 (100%)	-0.43	0 100 100	32, 40, 52, 59	0
1	MMM	164/164 (100%)	-0.44	0 100 100	32, 39, 54, 65	0
1	OOO	164/164 (100%)	0.22	4 (2%) 59 65	45, 58, 80, 92	0
2	BBB	183/184 (99%)	-0.42	0 100 100	29, 36, 48, 74	0
2	DDD	183/184 (99%)	-0.44	0 100 100	30, 36, 51, 77	0
2	FFF	183/184 (99%)	-0.40	0 100 100	31, 38, 51, 75	0
2	HHH	183/184 (99%)	-0.42	0 100 100	33, 38, 52, 78	0
2	JJJ	183/184 (99%)	-0.39	1 (0%) 91 93	32, 37, 54, 67	0
2	LLL	183/184 (99%)	-0.41	1 (0%) 91 93	31, 38, 51, 67	0
2	NNN	183/184 (99%)	-0.39	1 (0%) 91 93	35, 41, 56, 73	0
2	PPP	183/184 (99%)	0.48	19 (10%) 6 8	41, 54, 137, 182	1 (0%)
All	All	2776/2784 (99%)	-0.32	26 (0%) 84 87	29, 39, 61, 182	1 (0%)

The worst 5 of 26 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	PPP	150	GLY	12.6
2	PPP	153	LEU	9.2
2	PPP	151	ALA	8.0
2	PPP	147	ALA	7.9
2	PPP	145	SER	6.6

6.2 Non-standard residues in protein, DNA, RNA chains [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, 95th 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	MEN	PPP	70	9/10	0.92	0.14	44,45,47,50	0
2	MEN	LLL	70	9/10	0.96	0.12	29,31,35,36	0
2	MEN	FFF	70	9/10	0.96	0.11	33,36,37,39	0
2	MEN	DDD	70	9/10	0.97	0.11	31,33,37,38	0
2	MEN	NNN	70	9/10	0.97	0.10	38,40,42,45	0
2	MEN	BBB	70	9/10	0.97	0.09	31,33,34,35	0
2	MEN	JJJ	70	9/10	0.98	0.10	30,33,37,37	0
2	MEN	HHH	70	9/10	0.98	0.10	31,33,35,36	0

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, 95th 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
6	PEG	PPP	212	7/7	0.53	0.55	45,47,48,48	7
5	PGE	OOO	206	10/10	0.60	0.34	63,68,69,71	10
14	EDO	FFF	203	4/4	0.61	0.40	51,51,51,53	4
5	PGE	AAA	210	10/10	0.63	0.36	50,57,57,58	10
6	PEG	PPP	211	7/7	0.64	0.31	48,48,51,51	7
11	1PE	JJJ	308	16/16	0.66	0.33	42,50,52,52	16
8	NO3	AAA	217	4/4	0.67	0.20	45,48,55,57	4
6	PEG	JJJ	314	7/7	0.67	0.36	51,53,56,57	7
7	PO4	NNN	224	5/5	0.67	0.27	62,63,65,71	5
5	PGE	BBB	209	10/10	0.68	0.50	45,47,48,49	10
7	PO4	III	216	5/5	0.68	0.33	49,51,55,58	5
6	PEG	CCC	214	7/7	0.69	0.43	43,49,54,54	7
8	NO3	JJJ	320	4/4	0.69	0.19	54,55,60,62	4
6	PEG	LLL	212	7/7	0.69	0.34	43,46,49,49	7

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
8	NO3	AAA	216	4/4	0.69	0.18	38,39,42,47	4
5	PGE	KKK	206	10/10	0.70	0.25	47,51,54,55	10
8	NO3	CCC	218	4/4	0.70	0.18	47,48,51,57	4
11	1PE	PPP	205	16/16	0.70	0.37	47,53,56,57	16
8	NO3	DDD	226	4/4	0.70	0.26	43,43,44,46	4
14	EDO	NNN	219	4/4	0.70	0.28	48,49,50,51	4
11	1PE	DDD	207	16/16	0.71	0.31	46,52,53,54	16
12	P33	HHH	306	22/22	0.71	0.37	47,51,58,59	22
7	PO4	CCC	217	5/5	0.72	0.24	55,56,58,59	5
4	PG4	MMM	205	13/13	0.72	0.43	48,49,53,53	13
8	NO3	MMM	211	4/4	0.72	0.22	40,46,49,53	4
6	PEG	OOO	208	7/7	0.73	0.28	51,54,56,56	7
6	PEG	HHH	317	7/7	0.73	0.28	43,48,52,52	7
5	PGE	CCC	208	10/10	0.74	0.36	42,50,51,51	10
5	PGE	AAA	209	10/10	0.74	0.31	50,53,57,58	10
6	PEG	DDD	216	7/7	0.74	0.30	47,48,50,51	7
4	PG4	DDD	208	13/13	0.75	0.36	37,49,54,54	13
4	PG4	AAA	205	13/13	0.75	0.38	46,48,49,49	13
6	PEG	EEE	212	7/7	0.75	0.45	45,47,47,48	7
4	PG4	NNN	207	13/13	0.75	0.34	42,47,55,55	13
6	PEG	III	209	7/7	0.75	0.32	49,51,54,54	7
5	PGE	DDD	211	10/10	0.76	0.37	47,53,55,56	10
4	PG4	GGG	205	13/13	0.76	0.29	50,53,56,56	13
8	NO3	LLL	223	4/4	0.76	0.18	48,51,51,53	4
4	PG4	KKK	204	13/13	0.76	0.34	40,48,54,54	13
6	PEG	CCC	209	7/7	0.76	0.31	40,43,46,47	7
7	PO4	JJJ	321	5/5	0.76	0.16	41,44,47,53	5
4	PG4	NNN	208	13/13	0.76	0.25	49,55,58,58	13
6	PEG	LLL	217	7/7	0.76	0.23	46,48,50,50	7
6	PEG	NNN	215	7/7	0.76	0.35	41,44,49,50	7
4	PG4	OOO	203	13/13	0.76	0.34	49,51,55,56	13
6	PEG	III	211	7/7	0.77	0.25	37,39,40,41	7
5	PGE	OOO	204	10/10	0.77	0.34	49,54,57,57	10
5	PGE	BBB	210	10/10	0.77	0.21	41,45,50,50	10
14	EDO	III	217	4/4	0.77	0.29	42,43,43,44	4
7	PO4	DDD	224	5/5	0.77	0.36	58,59,60,62	5
6	PEG	OOO	210	7/7	0.78	0.24	40,42,43,43	7
11	1PE	BBB	207	16/16	0.78	0.32	41,50,57,58	16
6	PEG	EEE	213	7/7	0.78	0.24	46,49,50,50	7
6	PEG	KKK	210	7/7	0.78	0.23	43,45,49,50	7
6	PEG	CCC	219	7/7	0.78	0.28	46,48,49,50	7
6	PEG	III	201	7/7	0.78	0.26	35,36,38,39	7

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
8	NO3	EEE	210	4/4	0.78	0.14	40,42,45,49	4
5	PGE	HHH	310	10/10	0.78	0.40	48,52,55,55	10
5	PGE	NNN	210	10/10	0.78	0.23	42,49,51,51	10
6	PEG	MMM	209	7/7	0.79	0.25	37,41,42,44	7
8	NO3	OOO	212	4/4	0.79	0.17	44,47,49,49	4
5	PGE	HHH	313	10/10	0.79	0.43	41,45,48,49	10
5	PGE	JJJ	311	10/10	0.79	0.26	47,53,59,59	10
4	PG4	PPP	206	13/13	0.79	0.41	40,48,50,51	13
5	PGE	EEE	205	10/10	0.79	0.25	44,46,51,52	10
5	PGE	FFF	212	10/10	0.79	0.33	43,46,49,52	10
4	PG4	MMM	212	13/13	0.79	0.25	42,47,60,60	13
6	PEG	LLL	215	7/7	0.79	0.41	47,48,51,51	7
6	PEG	BBB	213	7/7	0.79	0.32	38,44,46,47	7
6	PEG	PPP	210	7/7	0.80	0.25	49,52,54,54	7
6	PEG	LLL	211	7/7	0.80	0.20	41,44,49,50	7
8	NO3	FFF	225	4/4	0.80	0.16	43,43,44,50	4
8	NO3	HHH	325	4/4	0.80	0.13	38,42,43,46	4
5	PGE	JJJ	310	10/10	0.80	0.32	38,42,46,47	10
4	PG4	CCC	203	13/13	0.80	0.26	43,46,50,51	13
4	PG4	HHH	308	13/13	0.80	0.31	49,51,54,55	13
7	PO4	GGG	215	5/5	0.80	0.26	43,46,47,49	5
7	PO4	III	215	5/5	0.80	0.29	48,51,52,53	5
5	PGE	LLL	209	10/10	0.80	0.31	47,51,53,53	10
5	PGE	DDD	210	10/10	0.80	0.29	39,48,57,58	10
11	1PE	LLL	205	16/16	0.80	0.24	38,56,63,63	16
6	PEG	OOO	207	7/7	0.80	0.54	43,45,47,47	7
5	PGE	NNN	213	10/10	0.80	0.23	42,48,53,54	10
6	PEG	OOO	209	7/7	0.80	0.28	53,55,56,56	7
8	NO3	BBB	221	4/4	0.80	0.13	41,43,45,48	4
4	PG4	GGG	203	13/13	0.80	0.26	50,52,55,55	13
5	PGE	BBB	222	10/10	0.81	0.25	47,48,49,50	10
7	PO4	KKK	213	5/5	0.81	0.20	42,46,49,49	5
6	PEG	FFF	218	7/7	0.81	0.26	40,43,46,47	7
7	PO4	PPP	218	5/5	0.81	0.24	46,47,49,51	5
6	PEG	GGG	211	7/7	0.81	0.35	29,31,33,33	7
6	PEG	HHH	316	7/7	0.81	0.21	40,48,53,53	7
6	PEG	LLL	216	7/7	0.81	0.22	49,52,54,57	7
5	PGE	OOO	205	10/10	0.81	0.37	45,47,49,50	10
5	PGE	HHH	312	10/10	0.81	0.28	41,47,49,49	10
6	PEG	CCC	221	7/7	0.81	0.32	41,42,44,46	7
4	PG4	NNN	209	13/13	0.81	0.28	44,49,57,58	13
6	PEG	BBB	216	7/7	0.81	0.33	39,43,45,45	7

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
8	NO3	III	218	4/4	0.81	0.16	41,41,46,48	4
6	PEG	HHH	314	7/7	0.82	0.34	46,47,48,50	7
4	PG4	FFF	202	13/13	0.82	0.28	42,44,46,46	13
6	PEG	CCC	212	7/7	0.82	0.23	54,56,58,59	7
4	PG4	NNN	202	13/13	0.82	0.22	47,53,57,59	13
5	PGE	NNN	212	10/10	0.82	0.20	46,51,54,57	10
7	PO4	NNN	223	5/5	0.82	0.27	46,49,51,52	5
4	PG4	PPP	207	13/13	0.82	0.21	44,46,52,53	13
7	PO4	OOO	211	5/5	0.82	0.39	125,128,132,132	0
11	1PE	BBB	208	16/16	0.82	0.32	37,48,54,55	16
6	PEG	DDD	214	7/7	0.82	0.23	45,48,50,51	7
4	PG4	KKK	205	13/13	0.82	0.24	39,47,52,53	13
5	PGE	III	207	10/10	0.82	0.22	42,48,49,50	10
4	PG4	LLL	208	13/13	0.82	0.32	40,42,49,50	13
7	PO4	AAA	215	5/5	0.82	0.29	49,51,53,53	5
14	EDO	DDD	218	4/4	0.82	0.39	38,38,39,39	4
8	NO3	DDD	225	4/4	0.82	0.10	43,44,46,48	4
5	PGE	DDD	212	10/10	0.82	0.27	39,53,55,56	10
4	PG4	AAA	204	13/13	0.82	0.26	46,51,60,61	13
6	PEG	MMM	210	7/7	0.83	0.25	50,51,54,54	7
6	PEG	NNN	214	7/7	0.83	0.29	38,50,57,57	7
6	PEG	III	210	7/7	0.83	0.26	48,48,49,49	7
6	PEG	LLL	213	7/7	0.83	0.20	46,49,52,53	7
11	1PE	HHH	301	16/16	0.83	0.24	43,48,51,52	16
6	PEG	LLL	214	7/7	0.83	0.30	48,49,50,51	7
4	PG4	JJJ	309	13/13	0.83	0.27	44,47,60,61	13
4	PG4	MMM	203	13/13	0.83	0.27	38,44,55,57	13
12	P33	DDD	205	22/22	0.83	0.22	39,51,57,58	22
5	PGE	GGG	208	10/10	0.83	0.21	34,50,56,57	10
6	PEG	LLL	218[A]	7/7	0.83	0.33	40,44,46,46	7
6	PEG	LLL	218[B]	7/7	0.83	0.33	45,48,50,50	7
14	EDO	FFF	219	4/4	0.83	0.23	49,50,53,53	4
6	PEG	PPP	214	7/7	0.83	0.31	42,48,50,50	7
5	PGE	GGG	217	10/10	0.83	0.35	51,53,58,60	10
4	PG4	LLL	207	13/13	0.84	0.25	39,42,48,48	13
8	NO3	PPP	219	4/4	0.84	0.18	39,40,41,42	4
4	PG4	HHH	307	13/13	0.84	0.28	39,43,46,48	13
7	PO4	DDD	220	5/5	0.84	0.23	44,48,52,53	5
7	PO4	KKK	214	5/5	0.84	0.17	50,50,52,56	5
6	PEG	FFF	217	7/7	0.84	0.33	43,45,46,46	7
14	EDO	HHH	320	4/4	0.84	0.24	51,52,52,52	4
5	PGE	HHH	311	10/10	0.84	0.27	47,54,60,61	10

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
6	PEG	CCC	215	7/7	0.84	0.21	35,38,38,38	7
4	PG4	KKK	203	13/13	0.85	0.20	41,55,66,67	13
10	PE8	BBB	205	25/25	0.85	0.20	44,50,68,71	25
11	1PE	BBB	206	16/16	0.85	0.26	40,44,49,50	16
5	PGE	PPP	208	10/10	0.85	0.22	45,50,51,51	10
4	PG4	FFF	210	13/13	0.85	0.23	43,51,55,56	13
7	PO4	FFF	224	5/5	0.85	0.30	51,51,52,54	5
5	PGE	CCC	204	10/10	0.85	0.18	43,53,58,58	10
4	PG4	AAA	203	13/13	0.85	0.23	42,46,51,51	13
5	PGE	LLL	210	10/10	0.85	0.42	43,45,47,48	10
6	PEG	HHH	315	7/7	0.86	0.23	42,45,46,48	7
6	PEG	PPP	213	7/7	0.86	0.23	43,47,50,50	7
5	PGE	MMM	206	10/10	0.86	0.18	44,48,51,52	10
11	1PE	JJJ	307	16/16	0.86	0.16	41,43,48,48	16
7	PO4	NNN	221	5/5	0.86	0.20	49,50,50,52	5
5	PGE	EEE	207	10/10	0.86	0.17	47,49,55,56	10
6	PEG	GGG	210	7/7	0.86	0.31	48,49,51,51	7
6	PEG	III	208	7/7	0.86	0.25	44,44,45,46	7
12	P33	FFF	207	22/22	0.86	0.18	43,46,65,69	22
6	PEG	MMM	208	7/7	0.86	0.27	42,46,49,50	7
12	P33	JJJ	306	22/22	0.86	0.19	44,48,73,75	22
6	PEG	PPP	201	7/7	0.86	0.34	43,47,51,52	7
6	PEG	PPP	209	7/7	0.86	0.30	47,47,50,51	7
9	RWB	BBB	204	38/38	0.86	0.25	34,48,59,61	38
7	PO4	HHH	324	5/5	0.86	0.34	40,42,45,47	5
5	PGE	AAA	208	10/10	0.86	0.35	41,43,45,46	10
14	EDO	NNN	218	4/4	0.86	0.29	44,44,45,45	4
5	PGE	III	206	10/10	0.86	0.37	47,49,50,51	10
6	PEG	HHH	318	7/7	0.87	0.34	41,44,47,47	7
5	PGE	NNN	211	10/10	0.87	0.31	43,43,48,49	10
5	PGE	AAA	206	10/10	0.87	0.22	37,42,55,56	10
5	PGE	GGG	206	10/10	0.87	0.28	45,52,54,54	10
5	PGE	EEE	206	10/10	0.87	0.18	43,50,56,57	10
5	PGE	CCC	207	10/10	0.87	0.19	46,51,57,59	10
5	PGE	HHH	309	10/10	0.87	0.21	46,49,52,52	10
7	PO4	JJJ	317	5/5	0.87	0.16	43,44,45,49	5
5	PGE	MMM	207	10/10	0.87	0.23	41,42,43,45	10
6	PEG	KKK	212	7/7	0.87	0.18	41,42,43,43	7
6	PEG	BBB	211	7/7	0.87	0.31	46,48,52,52	7
6	PEG	DDD	215	7/7	0.87	0.42	53,56,57,59	7
11	1PE	JJJ	302	16/16	0.87	0.22	37,45,48,49	16
5	PGE	FFF	211	10/10	0.87	0.26	42,43,48,49	10

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
6	PEG	KKK	211	7/7	0.88	0.28	43,44,46,47	7
6	PEG	CCC	211	7/7	0.88	0.28	42,42,46,47	7
7	PO4	III	214	5/5	0.88	0.19	45,48,56,59	5
4	PG4	LLL	206	13/13	0.88	0.18	45,49,64,66	13
13	P6G	DDD	206	19/19	0.88	0.27	35,37,54,54	19
6	PEG	III	212	7/7	0.88	0.23	34,37,41,42	7
8	NO3	KKK	216	4/4	0.88	0.14	42,42,49,49	4
6	PEG	JJJ	313	7/7	0.88	0.29	41,44,46,47	7
4	PG4	DDD	209	13/13	0.88	0.25	48,52,53,55	13
7	PO4	DDD	222	5/5	0.88	0.31	48,49,51,52	5
6	PEG	KKK	209	7/7	0.88	0.18	42,52,55,55	7
6	PEG	GGG	212	7/7	0.88	0.26	41,42,44,44	7
14	EDO	PPP	215	4/4	0.88	0.27	51,52,52,53	4
4	PG4	GGG	204	13/13	0.89	0.21	30,35,56,59	13
6	PEG	GGG	209	7/7	0.89	0.23	43,47,57,59	7
4	PG4	FFF	208	13/13	0.89	0.24	40,43,45,45	13
4	PG4	NNN	201	13/13	0.89	0.22	43,48,62,62	13
5	PGE	EEE	204	10/10	0.89	0.24	40,45,49,49	10
6	PEG	GGG	213	7/7	0.89	0.20	46,47,50,52	7
7	PO4	JJJ	318	5/5	0.89	0.16	43,44,45,49	5
7	PO4	JJJ	319	5/5	0.89	0.17	62,62,65,67	5
6	PEG	KKK	208	7/7	0.89	0.18	39,41,41,42	7
5	PGE	FFF	213	10/10	0.89	0.22	41,42,53,53	10
6	PEG	BBB	223	7/7	0.89	0.36	42,46,51,51	7
4	PG4	FFF	209	13/13	0.89	0.20	41,44,48,51	13
5	PGE	GGG	207	10/10	0.89	0.22	41,46,49,50	10
14	EDO	EEE	209	4/4	0.89	0.33	53,53,54,54	4
5	PGE	LLL	226	10/10	0.89	0.18	46,49,50,50	10
6	PEG	FFF	216	7/7	0.89	0.26	43,44,45,45	7
9	RWB	LLL	204	38/38	0.89	0.20	38,47,69,70	38
7	PO4	PPP	216	5/5	0.89	0.18	48,48,51,52	5
14	EDO	NNN	217	4/4	0.89	0.13	48,49,50,51	4
7	PO4	FFF	222	5/5	0.89	0.24	46,46,47,50	5
7	PO4	FFF	223	5/5	0.89	0.23	42,46,47,47	5
6	PEG	CCC	213	7/7	0.89	0.20	38,40,44,44	7
7	PO4	GGG	214	5/5	0.90	0.24	42,49,49,52	5
8	NO3	EEE	211	4/4	0.90	0.26	40,41,42,45	4
7	PO4	BBB	218	5/5	0.90	0.27	43,45,48,51	5
7	PO4	BBB	220	5/5	0.90	0.17	46,47,52,53	5
14	EDO	HHH	319	4/4	0.90	0.29	38,39,41,42	4
11	1PE	EEE	203	16/16	0.90	0.18	47,60,64,67	16
12	P33	HHH	305	22/22	0.90	0.16	45,48,56,57	22

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
14	EDO	LLL	219	4/4	0.90	0.25	33,34,34,35	4
7	PO4	CCC	216	5/5	0.90	0.23	46,47,51,52	5
5	PGE	III	205	10/10	0.90	0.25	42,43,45,45	10
5	PGE	AAA	207	10/10	0.90	0.18	45,47,51,53	10
14	EDO	DDD	217	4/4	0.90	0.23	37,38,38,39	4
7	PO4	HHH	322	5/5	0.91	0.25	37,39,41,41	5
6	PEG	AAA	212	7/7	0.91	0.21	44,45,47,48	7
5	PGE	III	204	10/10	0.91	0.18	44,47,55,59	10
7	PO4	KKK	215	5/5	0.91	0.20	45,47,50,51	5
6	PEG	BBB	212	7/7	0.91	0.21	40,42,51,51	7
14	EDO	III	213	4/4	0.91	0.19	43,43,45,45	4
8	NO3	KKK	217	4/4	0.91	0.14	36,39,41,41	4
6	PEG	NNN	216	7/7	0.91	0.39	42,46,46,48	7
8	NO3	LLL	224	4/4	0.91	0.11	43,45,45,46	4
3	PEB	PPP	202	43/43	0.91	0.14	49,55,74,88	0
7	PO4	CCC	220	5/5	0.91	0.16	43,47,49,50	5
7	PO4	AAA	214	5/5	0.91	0.23	47,47,49,49	5
6	PEG	FFF	215	7/7	0.92	0.20	43,50,52,54	7
3	PEB	PPP	204	43/43	0.92	0.12	49,60,81,87	0
6	PEG	CCC	210	7/7	0.92	0.25	41,42,43,43	7
14	EDO	EEE	208	4/4	0.92	0.16	38,39,40,41	4
6	PEG	DDD	213	7/7	0.92	0.18	42,43,54,58	7
7	PO4	DDD	223	5/5	0.92	0.19	45,52,53,53	5
5	PGE	HHH	327	10/10	0.92	0.18	44,50,66,67	10
3	PEB	OOO	202	43/43	0.92	0.13	56,63,73,74	0
4	PG4	MMM	204	13/13	0.92	0.18	44,49,51,52	13
6	PEG	DDD	227	7/7	0.92	0.13	45,46,51,54	7
12	P33	DDD	204	22/22	0.92	0.16	44,47,65,67	22
5	PGE	KKK	207	10/10	0.92	0.34	40,43,46,46	10
6	PEG	JJJ	312	7/7	0.92	0.26	43,44,46,46	7
5	PGE	AAA	211	10/10	0.92	0.23	27,28,29,31	10
6	PEG	FFF	214	7/7	0.92	0.29	40,43,48,48	7
8	NO3	HHH	326	4/4	0.92	0.10	47,47,49,51	4
6	PEG	BBB	214	7/7	0.93	0.16	43,44,46,47	7
6	PEG	AAA	213	7/7	0.93	0.19	37,37,38,40	7
8	NO3	GGG	216	4/4	0.93	0.15	41,42,44,44	4
3	PEB	PPP	203	43/43	0.93	0.15	55,65,80,97	0
3	PEB	III	203	43/43	0.93	0.11	47,52,58,60	0
3	PEB	KKK	202	43/43	0.93	0.13	45,54,59,63	0
7	PO4	FFF	221	5/5	0.93	0.19	39,42,44,45	5
11	1PE	FFF	201	16/16	0.93	0.20	38,51,63,64	16
8	NO3	JJJ	322	4/4	0.93	0.13	41,45,46,46	4

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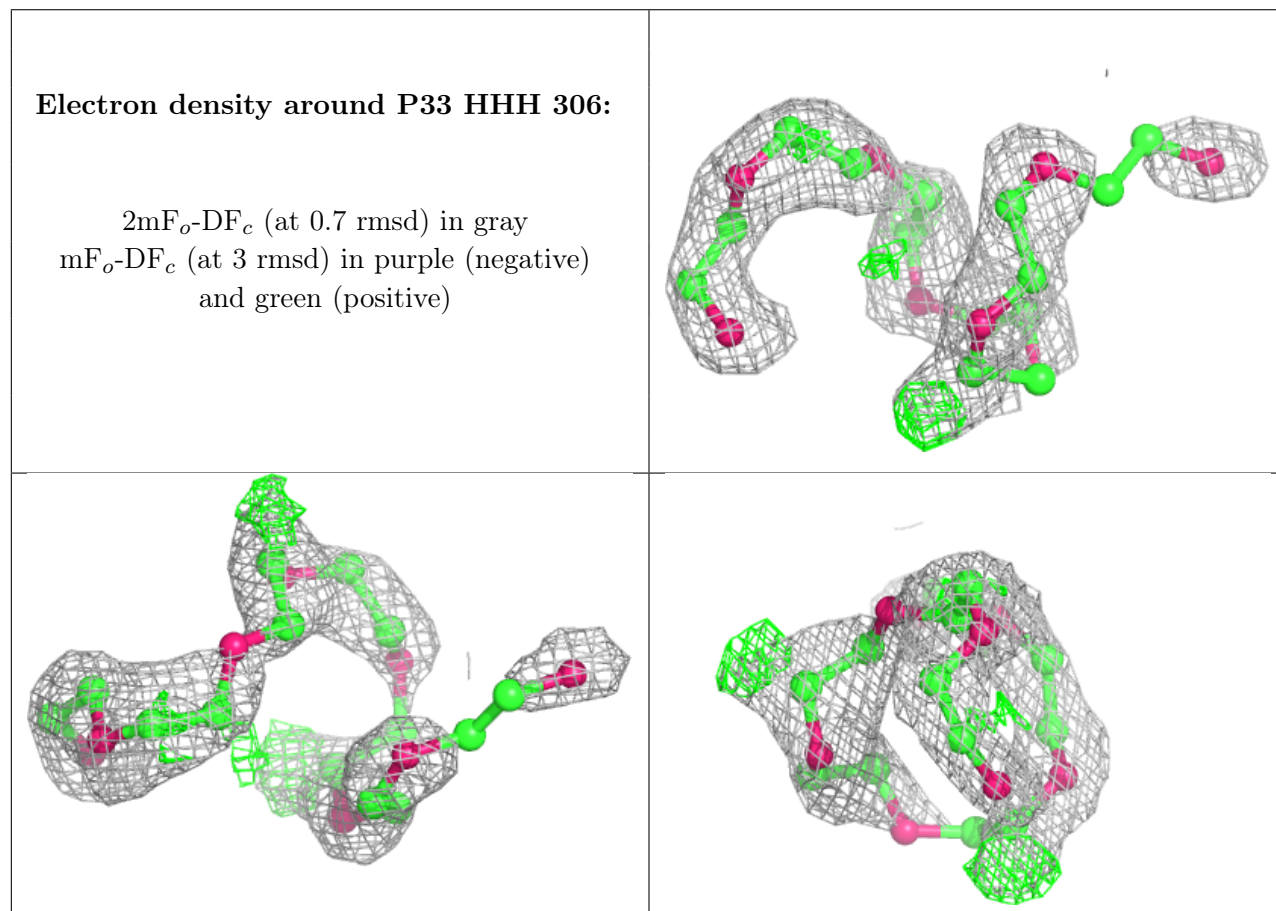
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
15	PE5	NNN	206	27/27	0.93	0.19	33,43,71,74	27
3	PEB	OOO	201	43/43	0.94	0.12	45,51,56,60	0
5	PGE	CCC	205	10/10	0.94	0.13	45,46,55,63	0
3	PEB	EEE	201	43/43	0.94	0.10	33,36,42,45	0
3	PEB	JJJ	304	43/43	0.94	0.10	36,39,46,59	0
8	NO3	LLL	222	4/4	0.94	0.18	43,46,46,47	4
6	PEG	BBB	215	7/7	0.94	0.19	46,49,49,50	7
5	PGE	LLL	225	10/10	0.94	0.14	41,47,62,64	10
3	PEB	EEE	202	43/43	0.94	0.12	45,55,60,64	0
3	PEB	FFF	206	43/43	0.95	0.10	33,37,44,51	0
5	PGE	JJJ	301	10/10	0.95	0.15	37,44,56,56	10
7	PO4	PPP	217	5/5	0.95	0.20	31,33,35,35	5
3	PEB	HHH	304	43/43	0.95	0.09	31,38,43,50	0
3	PEB	BBB	202	43/43	0.95	0.10	32,36,44,55	0
3	PEB	AAA	201	43/43	0.95	0.09	32,35,41,43	0
5	PGE	CCC	206	10/10	0.95	0.13	45,48,58,58	10
3	PEB	AAA	202	43/43	0.95	0.10	41,45,52,64	0
3	PEB	LLL	202	43/43	0.95	0.10	36,41,52,72	0
7	PO4	NNN	220	5/5	0.95	0.21	41,46,47,48	5
3	PEB	MMM	202	43/43	0.95	0.12	44,50,56,58	0
3	PEB	NNN	204	43/43	0.95	0.10	34,40,53,68	0
3	PEB	FFF	205	43/43	0.95	0.10	36,41,47,58	0
3	PEB	HHH	303	43/43	0.96	0.09	37,41,51,58	0
3	PEB	DDD	201	43/43	0.96	0.10	30,35,55,69	0
3	PEB	III	202	43/43	0.96	0.09	31,35,41,43	0
3	PEB	DDD	202	43/43	0.96	0.10	37,40,47,60	0
7	PO4	HHH	321	5/5	0.96	0.15	35,37,40,40	5
3	PEB	BBB	201	43/43	0.96	0.10	32,37,49,64	0
3	PEB	JJJ	305	43/43	0.96	0.09	32,36,41,42	0
3	PEB	KKK	201	43/43	0.96	0.09	32,37,40,42	0
3	PEB	BBB	203	43/43	0.96	0.08	31,36,42,46	0
3	PEB	CCC	201	43/43	0.96	0.10	32,37,40,42	0
7	PO4	JJJ	315	5/5	0.96	0.16	48,51,52,53	5
3	PEB	LLL	203	43/43	0.96	0.09	30,35,48,51	0
3	PEB	MMM	201	43/43	0.96	0.10	36,39,43,49	0
3	PEB	CCC	202	43/43	0.96	0.11	34,41,47,50	0
7	PO4	DDD	221	5/5	0.96	0.12	47,51,53,53	5
3	PEB	NNN	203	43/43	0.96	0.11	40,47,58,72	0
3	PEB	GGG	201	43/43	0.96	0.09	33,37,41,49	0
3	PEB	NNN	205	43/43	0.96	0.09	37,42,46,50	0
7	PO4	LLL	220	5/5	0.96	0.14	46,47,48,51	5
7	PO4	FFF	220	5/5	0.96	0.10	44,47,48,51	5

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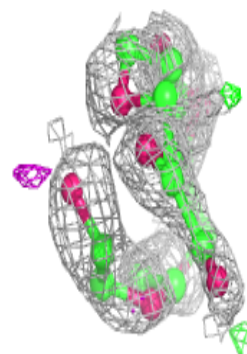
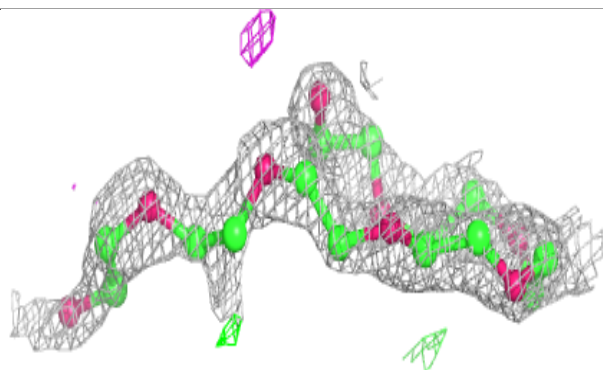
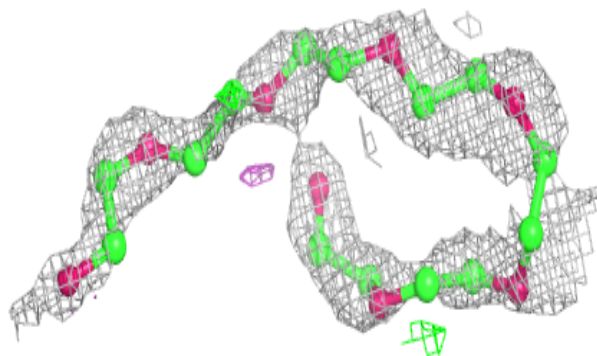
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
3	PEB	GGG	202	43/43	0.96	0.12	45,51,57,60	0
3	PEB	HHH	302	43/43	0.96	0.10	33,37,44,63	0
3	PEB	JJJ	303	43/43	0.97	0.10	34,38,49,75	0
7	PO4	JJJ	316	5/5	0.97	0.19	43,43,46,49	5
3	PEB	FFF	204	43/43	0.97	0.10	32,38,51,73	0
7	PO4	HHH	323	5/5	0.97	0.12	40,41,43,45	5
7	PO4	NNN	222	5/5	0.97	0.20	40,42,42,46	5
3	PEB	LLL	201	43/43	0.97	0.10	32,36,47,68	0
3	PEB	DDD	203	43/43	0.97	0.09	33,36,42,48	0
7	PO4	BBB	217	5/5	0.97	0.12	42,43,44,45	5
7	PO4	DDD	219	5/5	0.97	0.17	37,39,40,41	5
7	PO4	LLL	221	5/5	0.98	0.15	42,43,46,48	5
7	PO4	BBB	219	5/5	0.99	0.12	41,41,44,45	5

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.

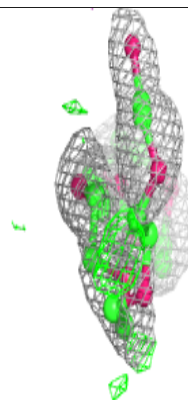
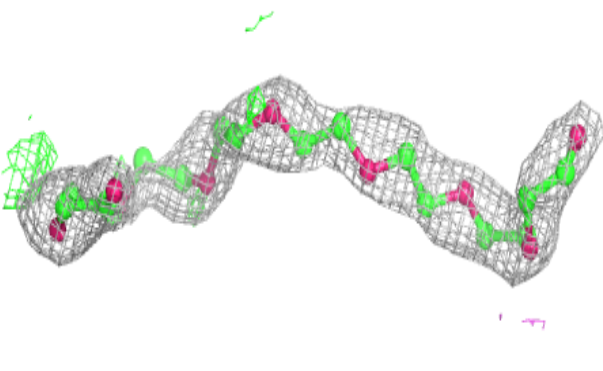
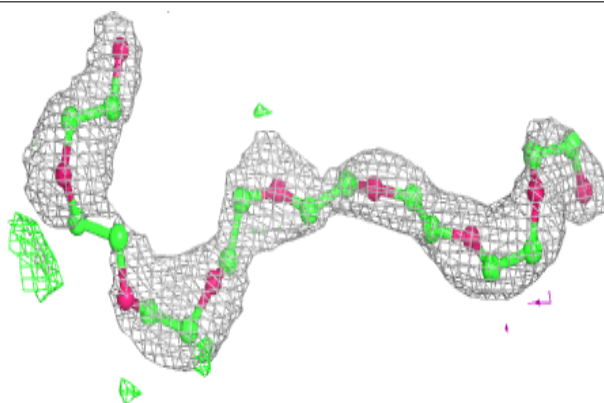


Electron density around P33 DDD 205:

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

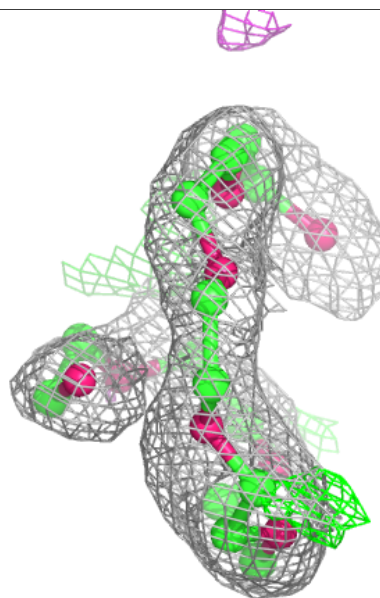
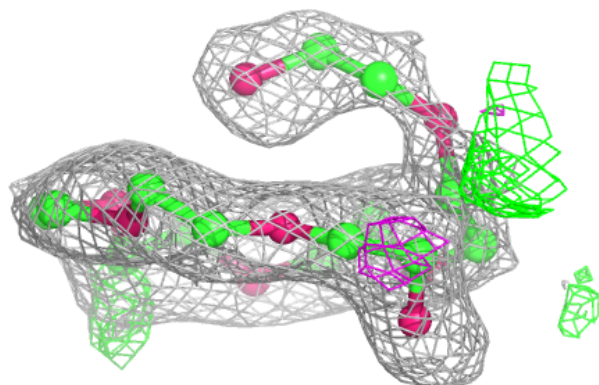
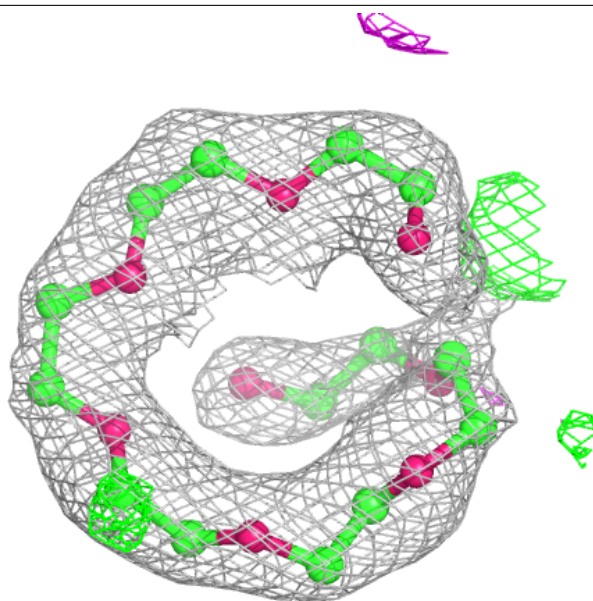
**Electron density around PE8 BBB 205:**

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



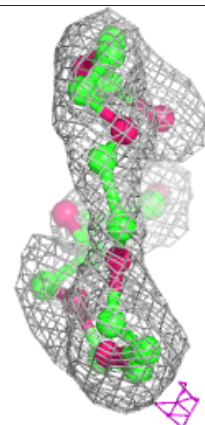
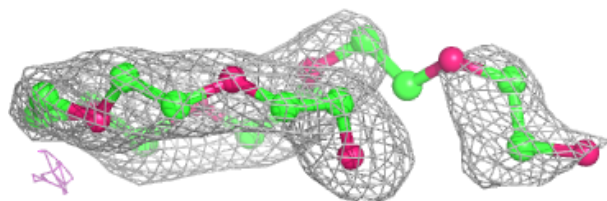
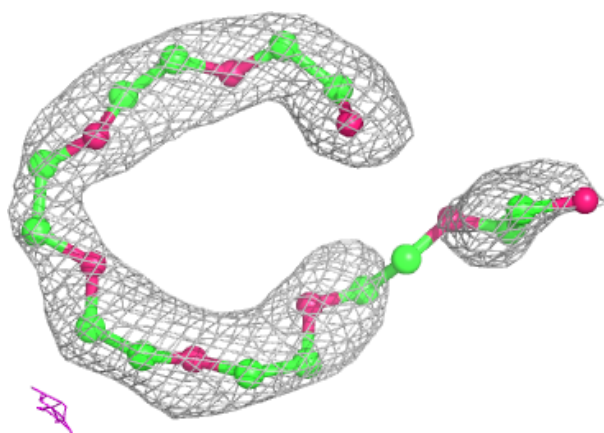
Electron density around P33 FFF 207:

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

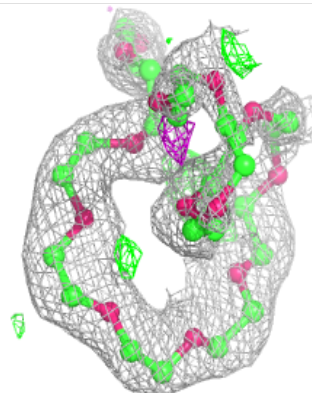
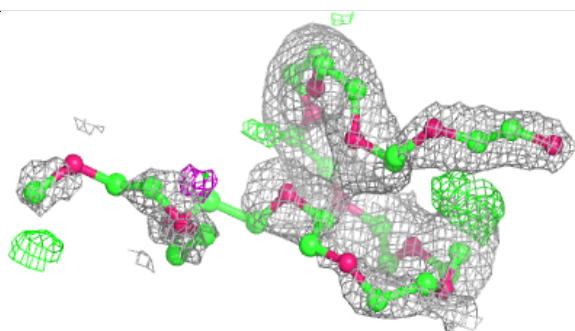
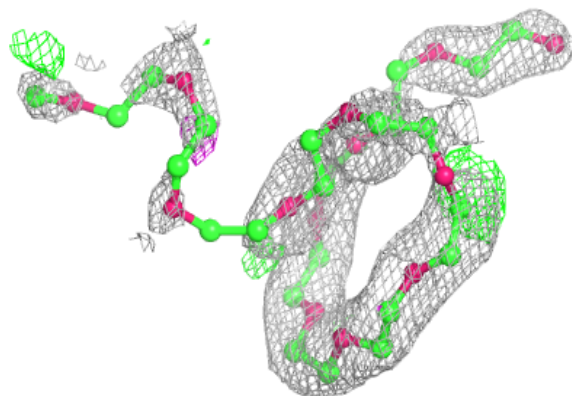


Electron density around P33 JJJ 306:

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

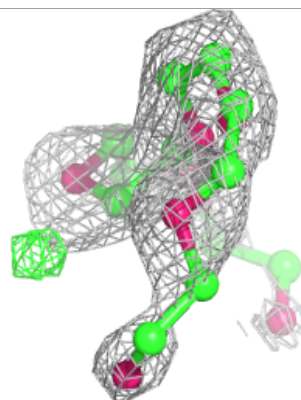
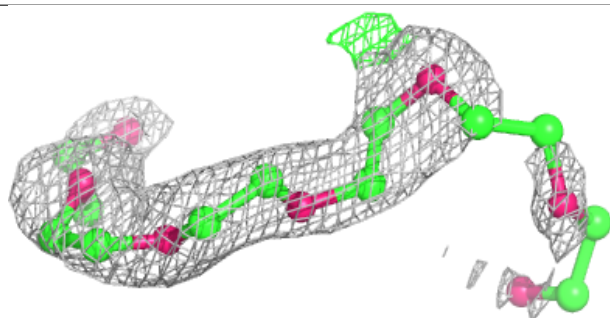
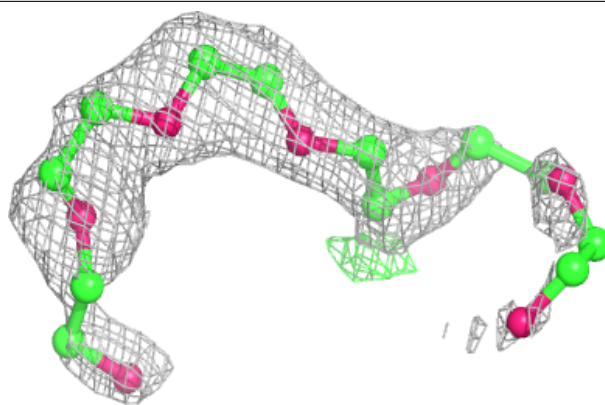
**Electron density around RWB BBB 204:**

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

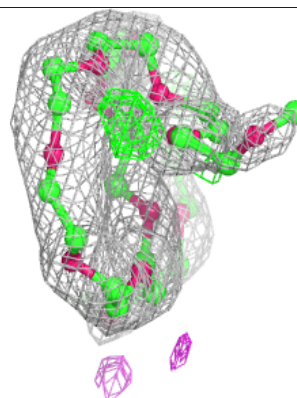
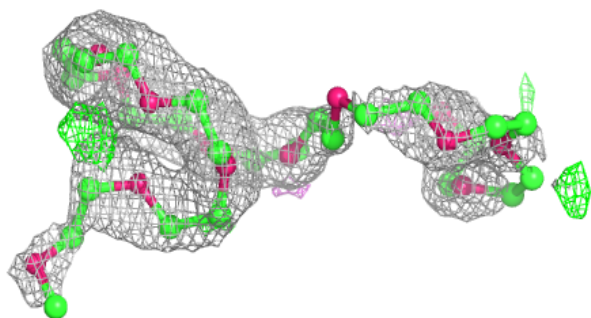
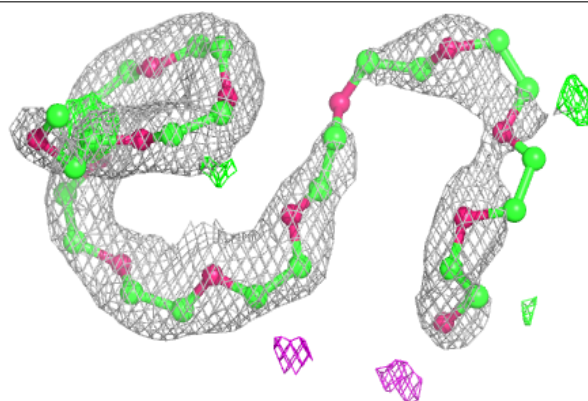


Electron density around P6G DDD 206:

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

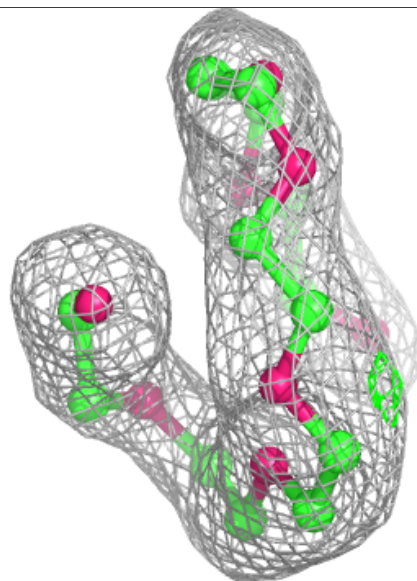
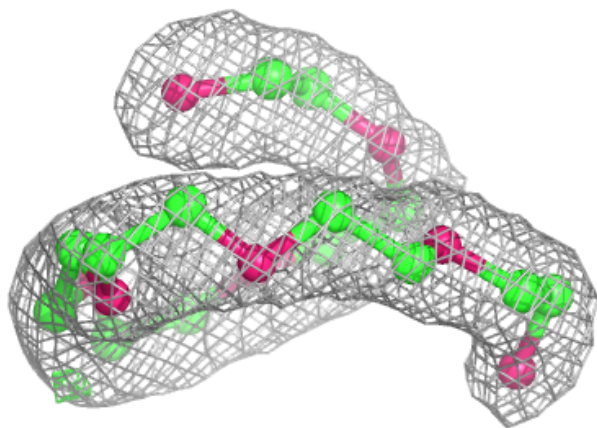
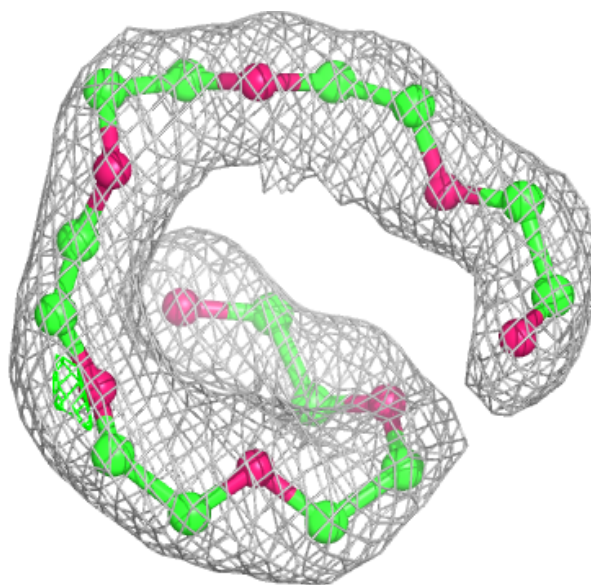
**Electron density around RWB LLL 204:**

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



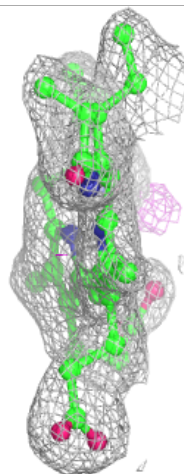
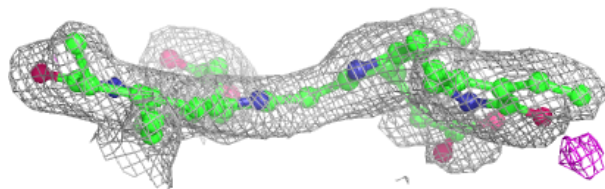
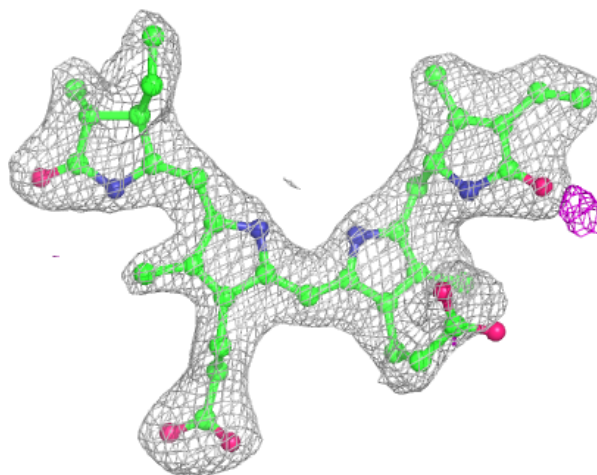
Electron density around P33 HHH 305:

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



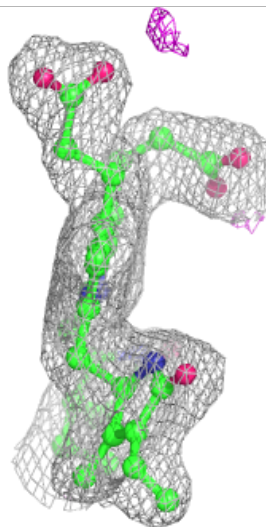
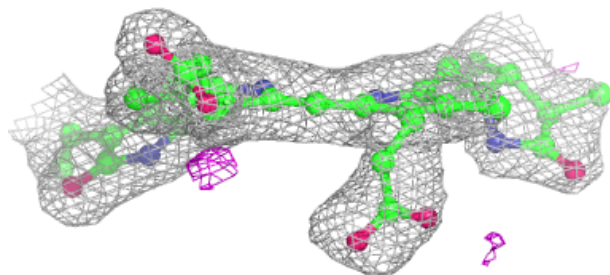
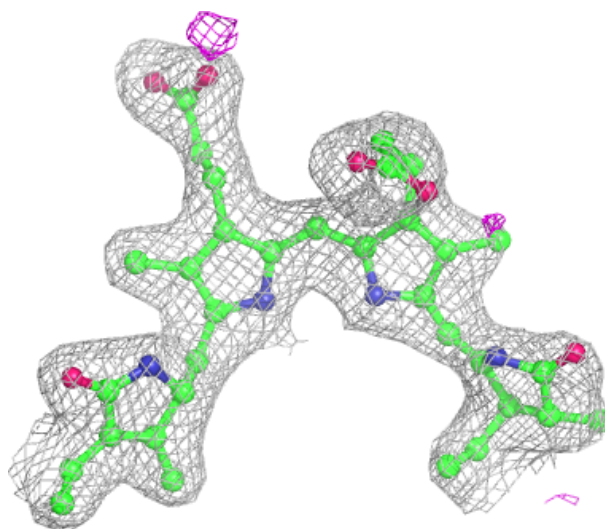
Electron density around PEB PPP 202:

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



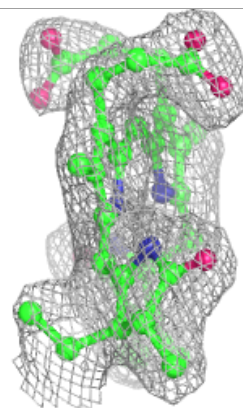
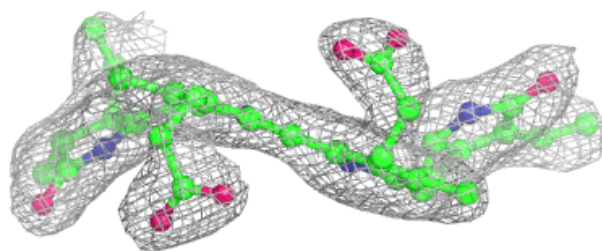
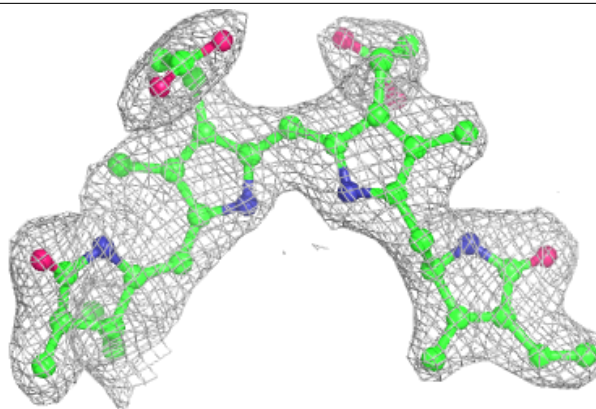
Electron density around PEB PPP 204:

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

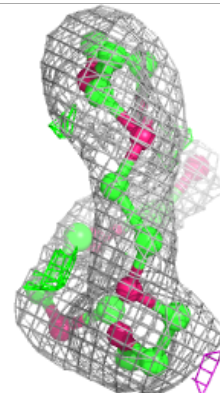
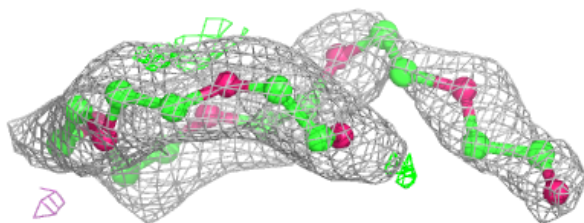
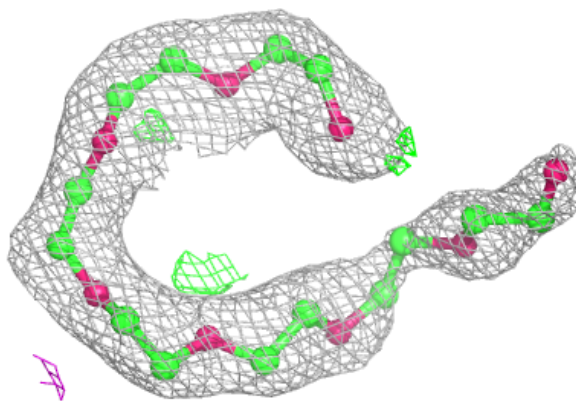


Electron density around PEB OOO 202:

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

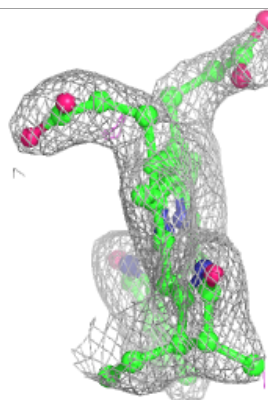
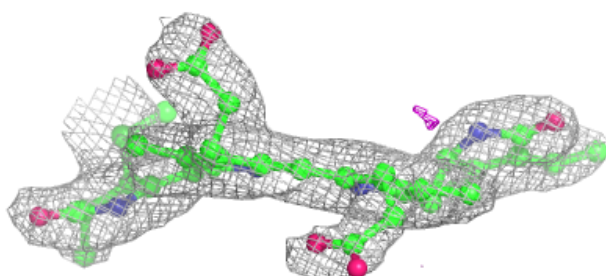
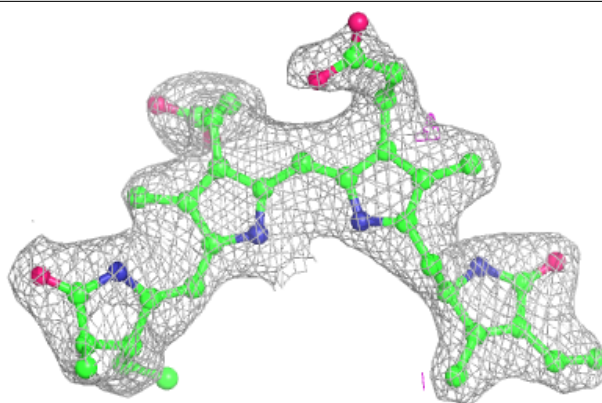
**Electron density around P33 DDD 204:**

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

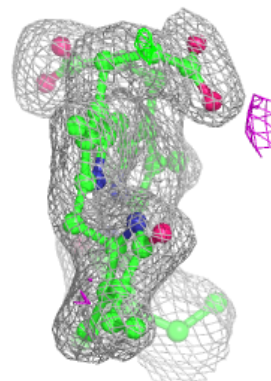
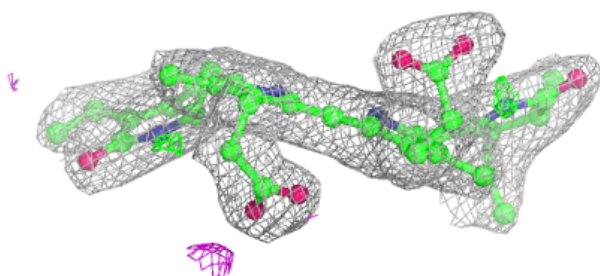
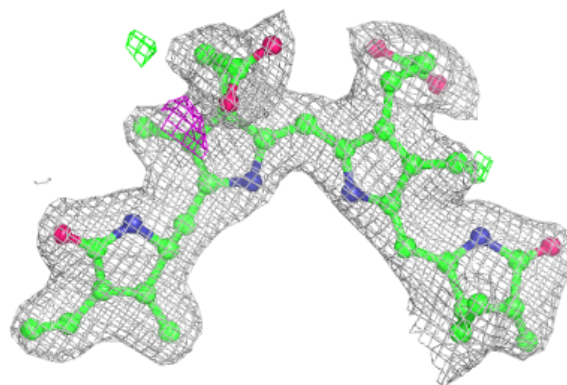


Electron density around PEB PPP 203:

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

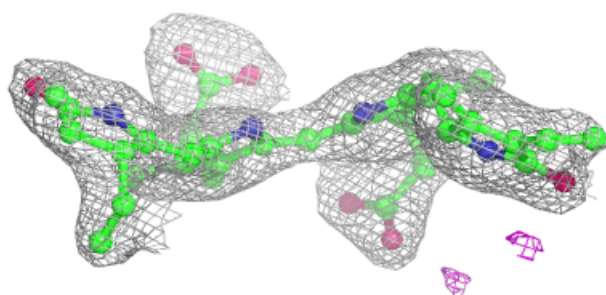
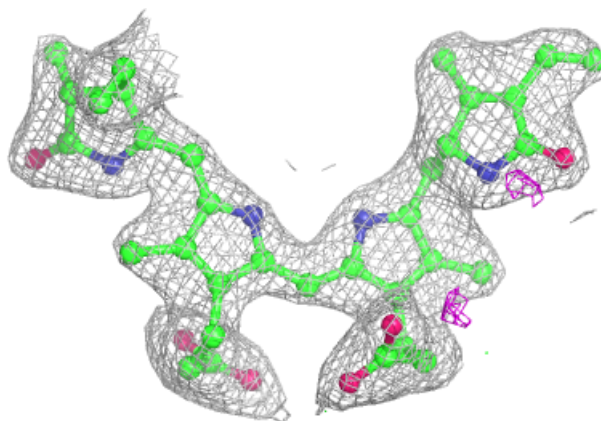
**Electron density around PEB III 203:**

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

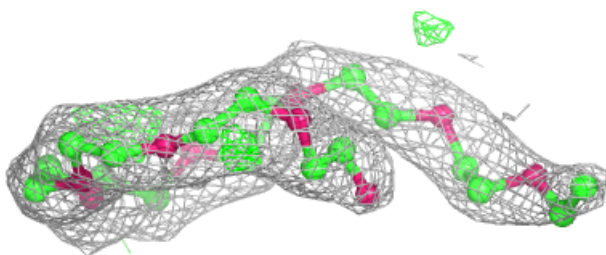
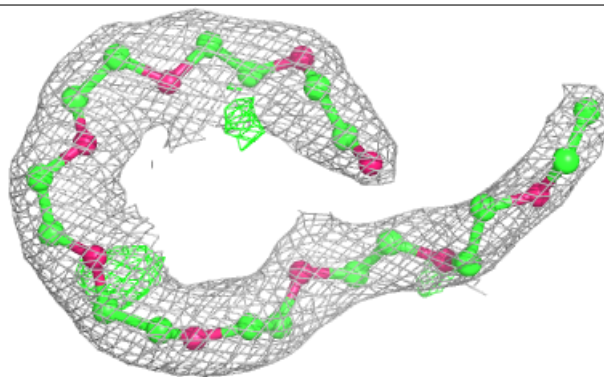


Electron density around PEB KKK 202:

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

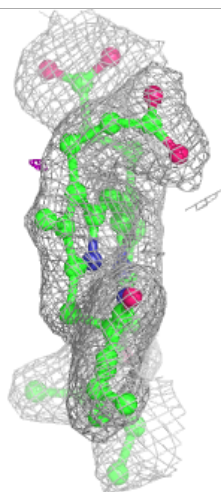
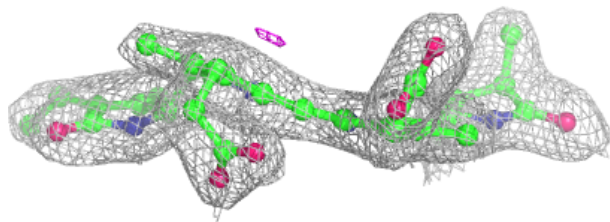
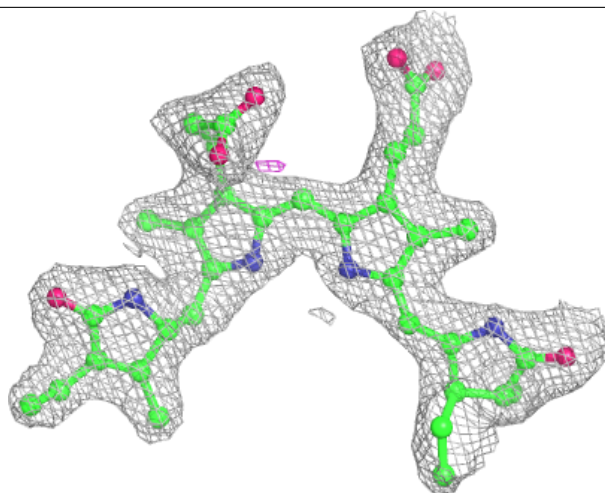
**Electron density around PE5 NNN 206:**

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



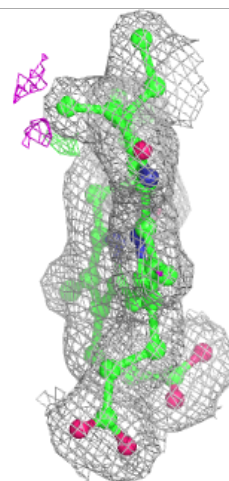
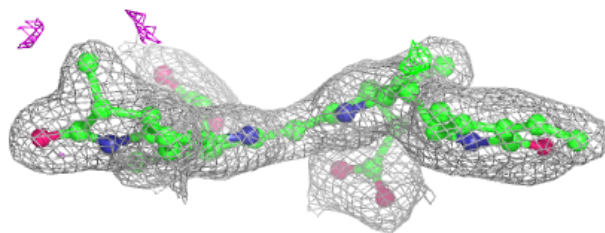
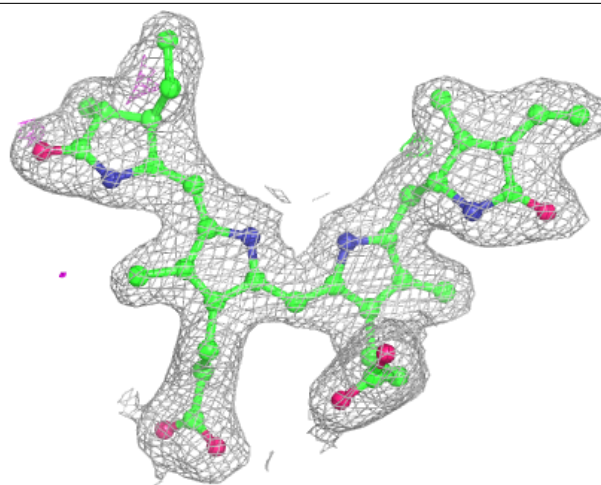
Electron density around PEB OOO 201:

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



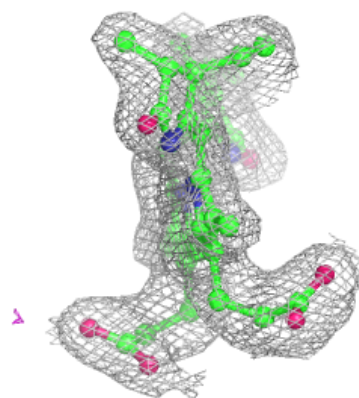
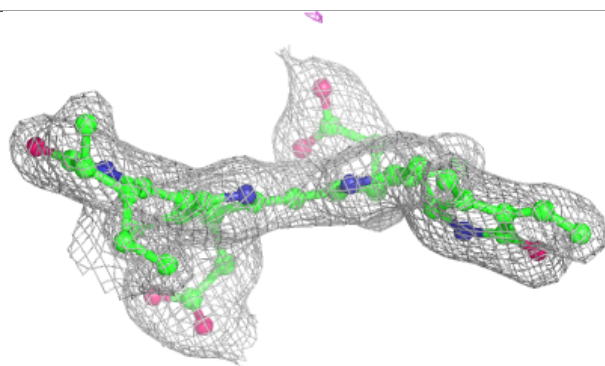
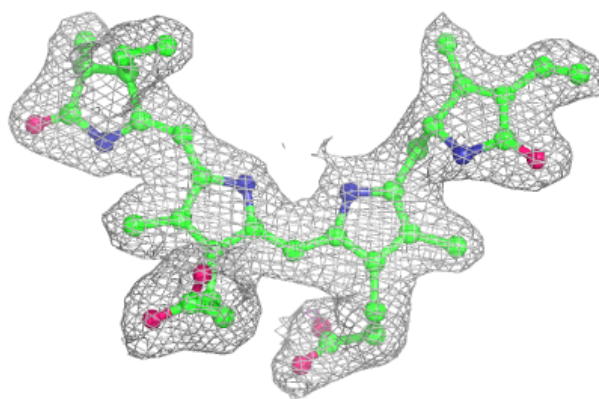
Electron density around PEB EEE 201:

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

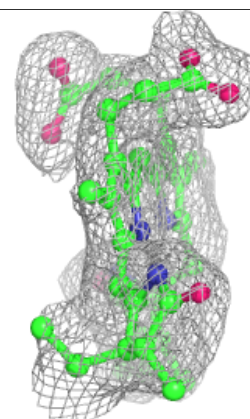
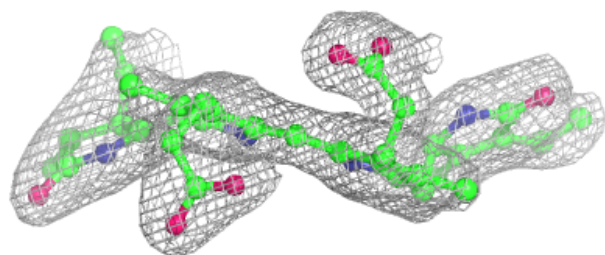
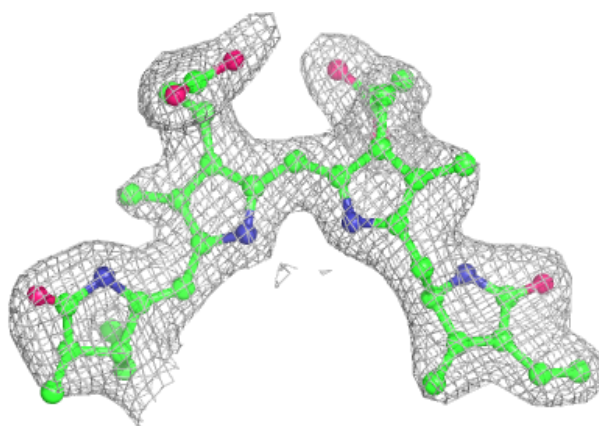


Electron density around PEB JJJ 304:

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

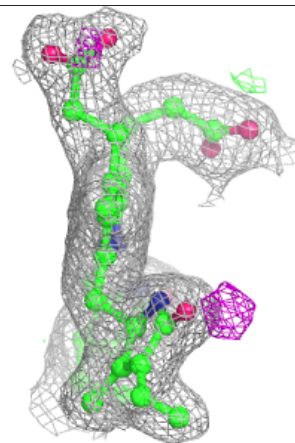
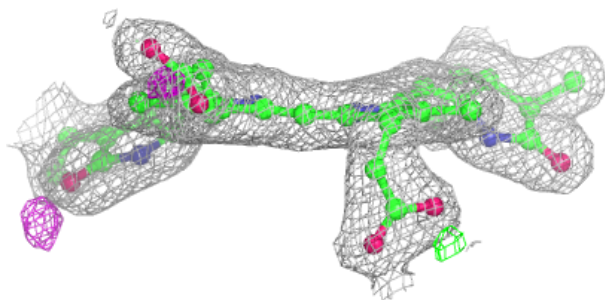
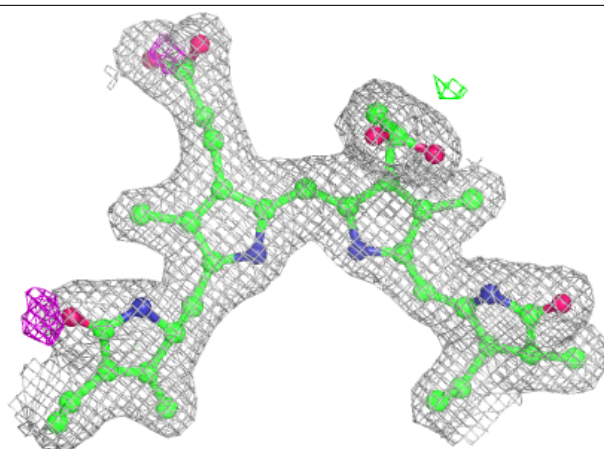
**Electron density around PEB EEE 202:**

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



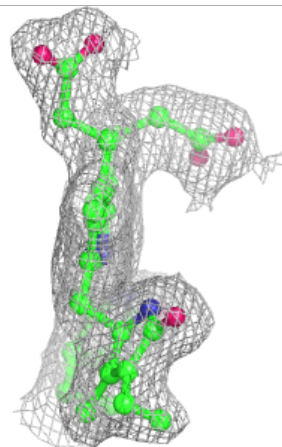
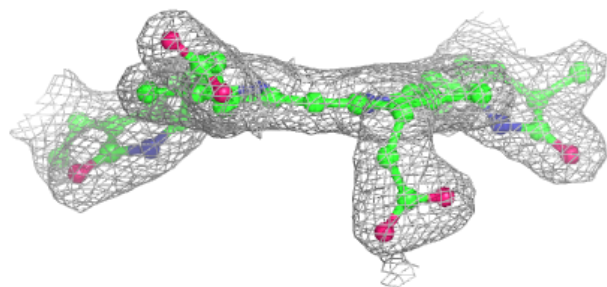
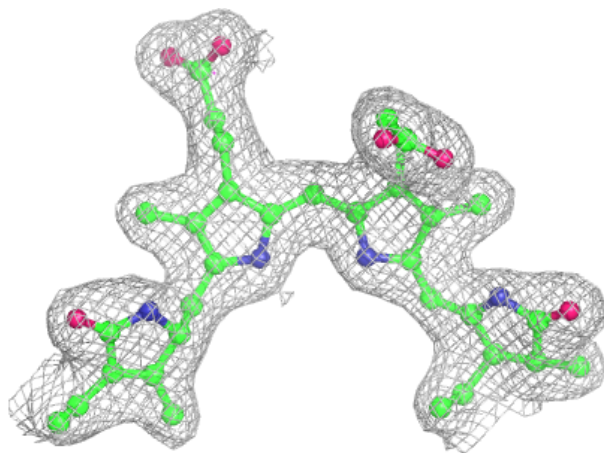
Electron density around PEB FFF 206:

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



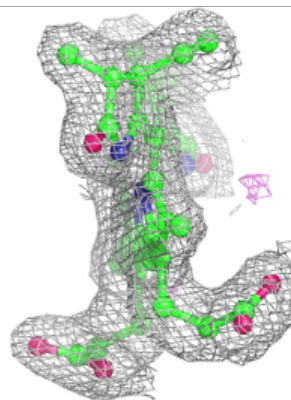
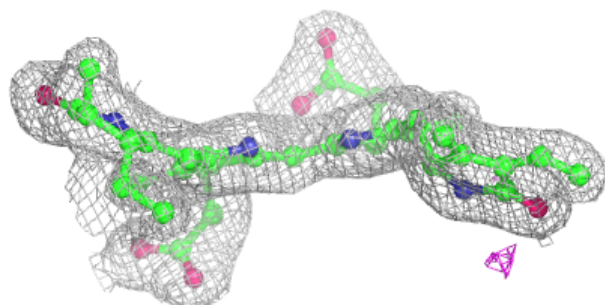
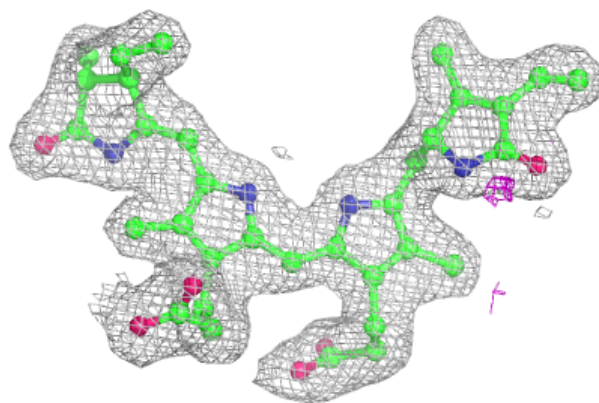
Electron density around PEB HHH 304:

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



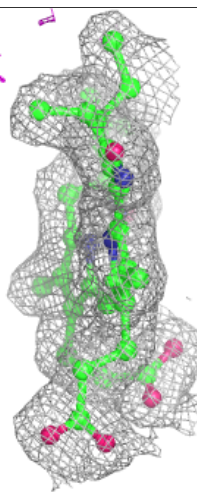
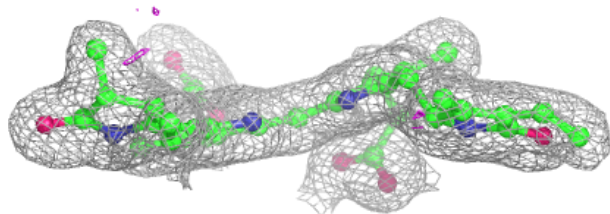
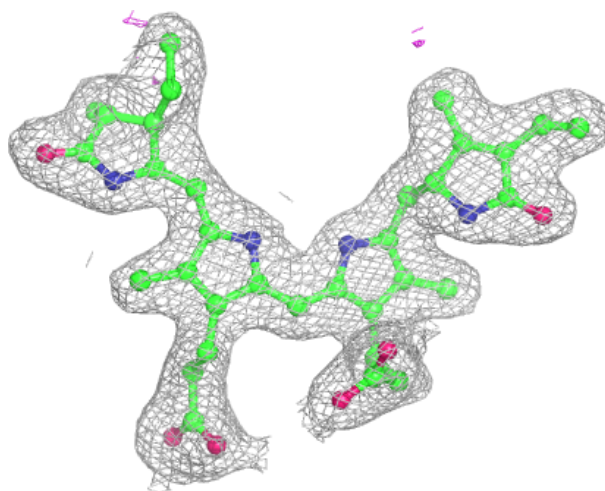
Electron density around PEB BBB 202:

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



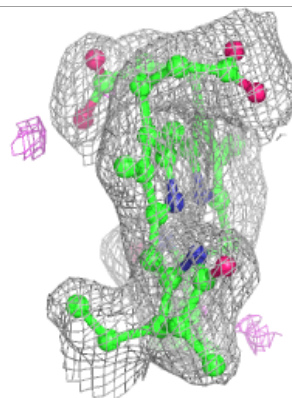
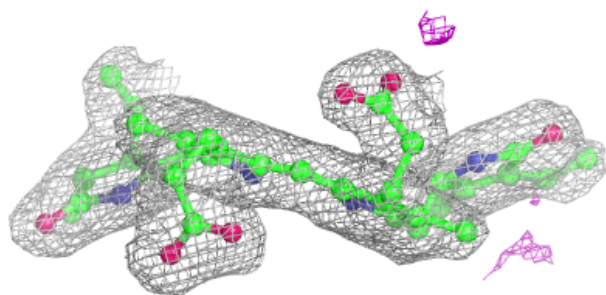
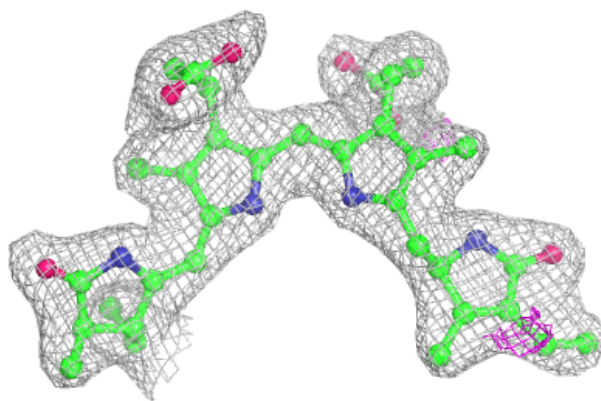
Electron density around PEB AAA 201:

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

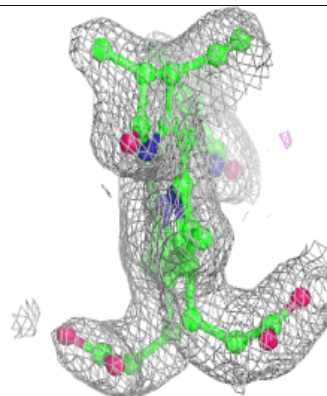
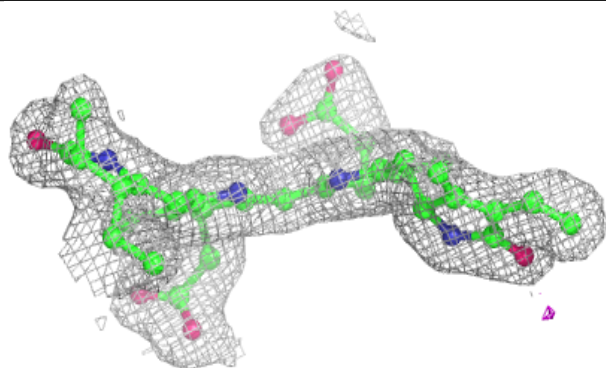
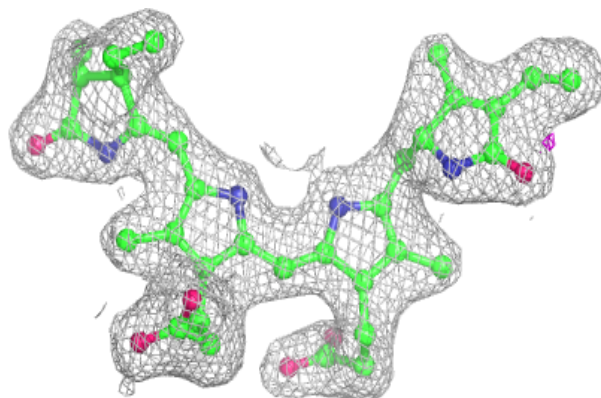


Electron density around PEB AAA 202:

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

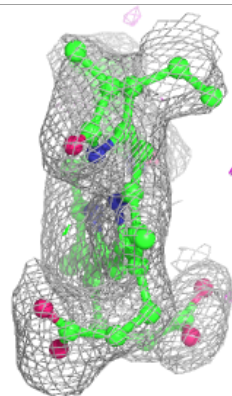
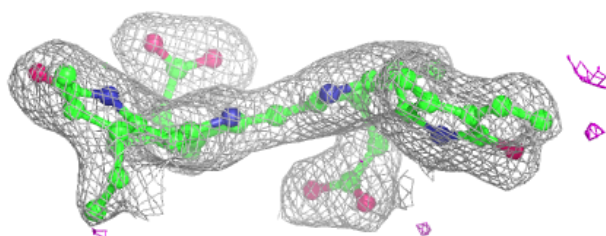
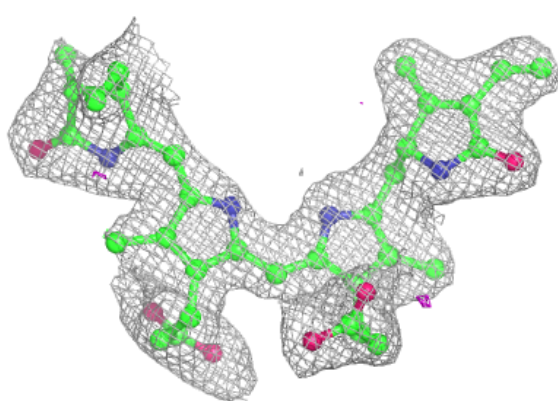
**Electron density around PEB LLL 202:**

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

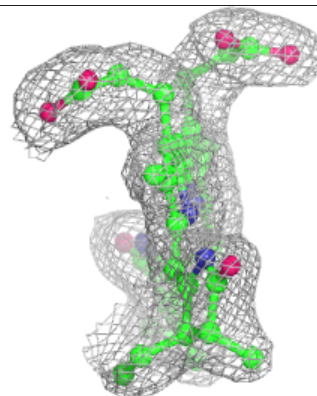
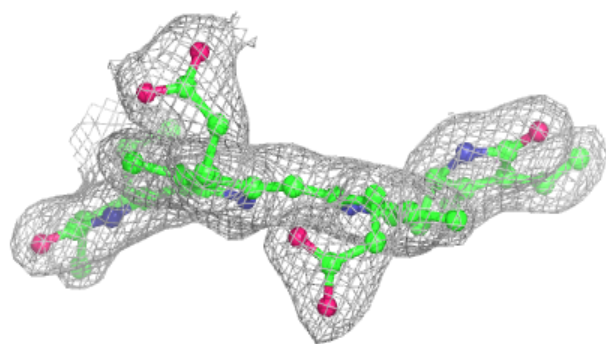
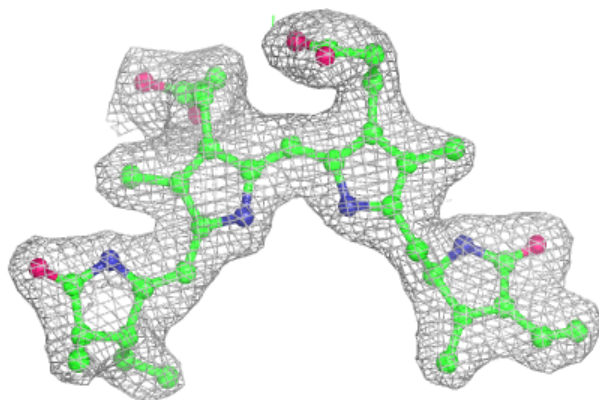


Electron density around PEB MMM 202:

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

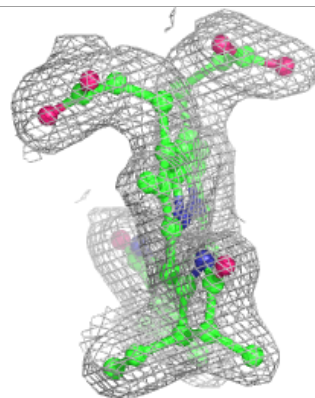
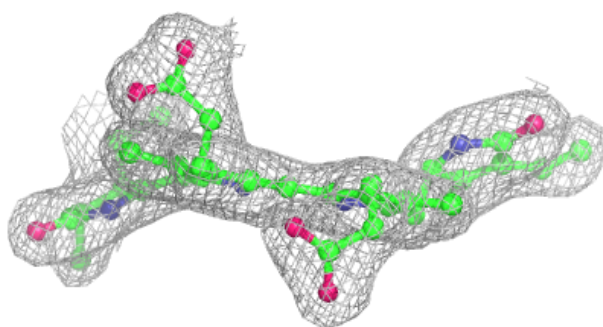
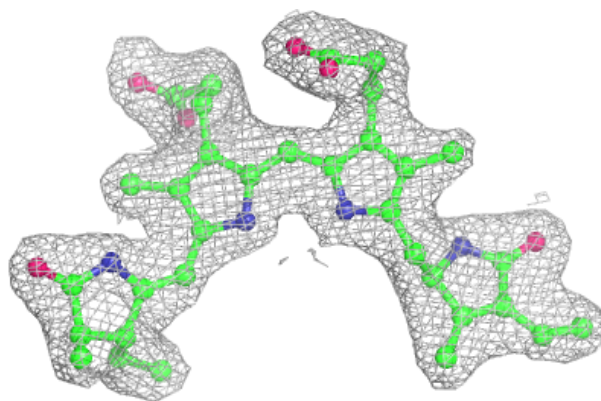
**Electron density around PEB NNN 204:**

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

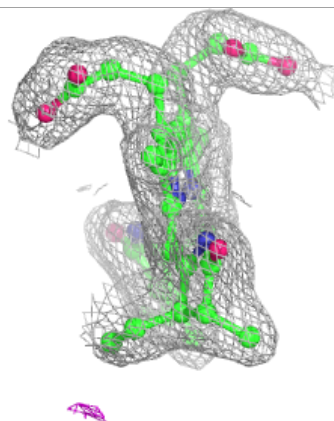
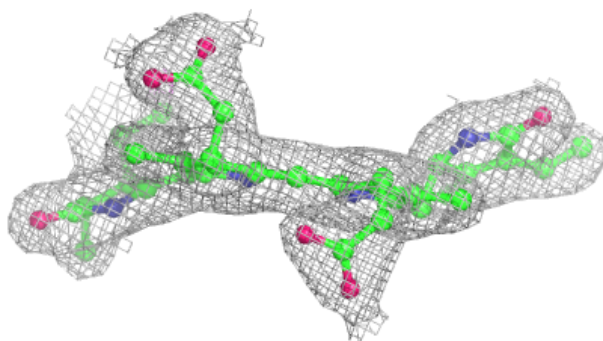
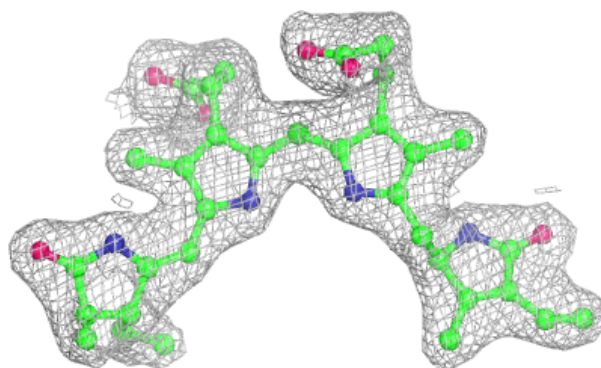


Electron density around PEB FFF 205:

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

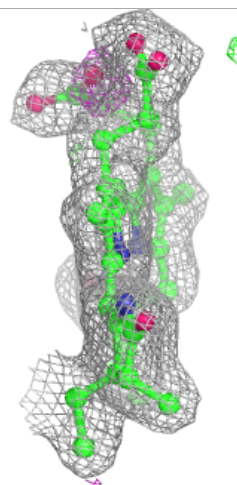
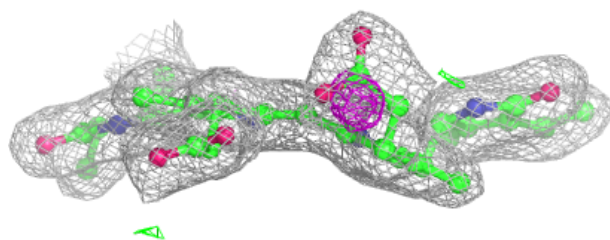
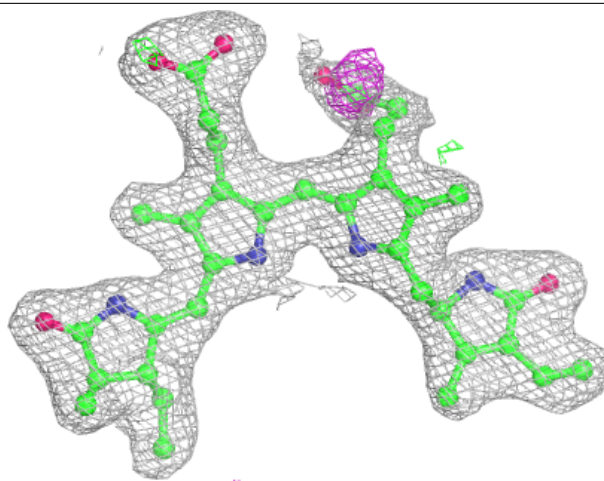
**Electron density around PEB HHH 303:**

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



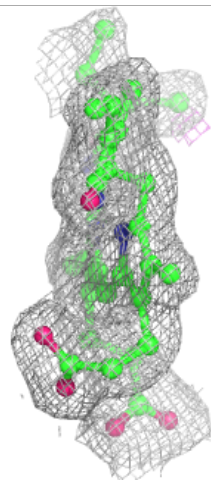
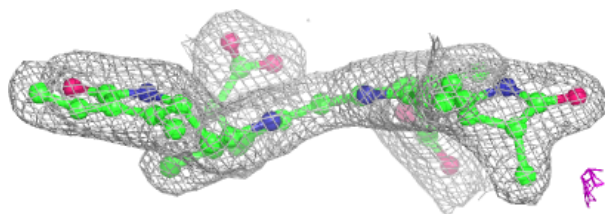
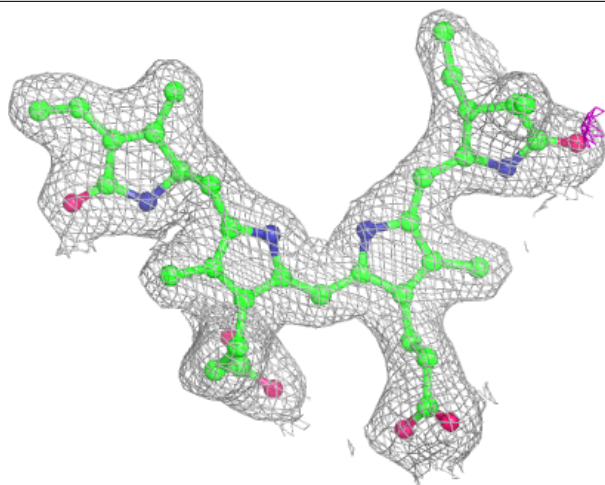
Electron density around PEB DDD 201:

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



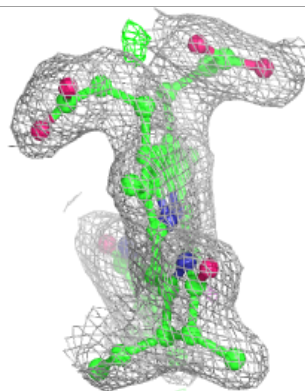
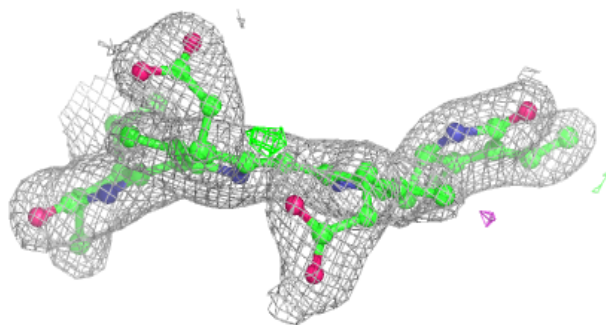
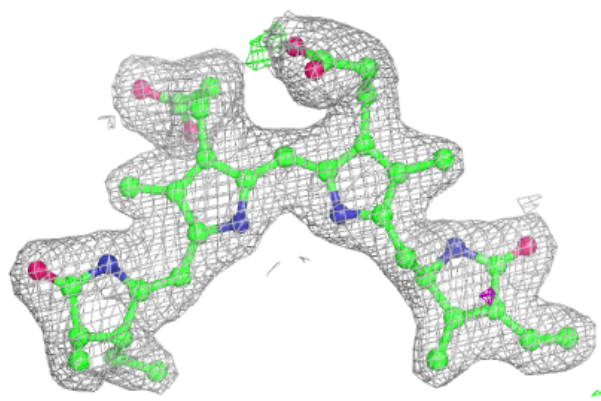
Electron density around PEB III 202:

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



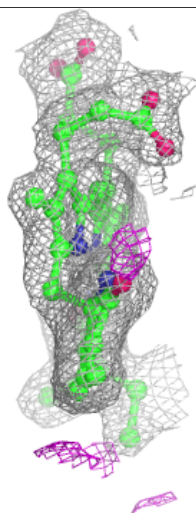
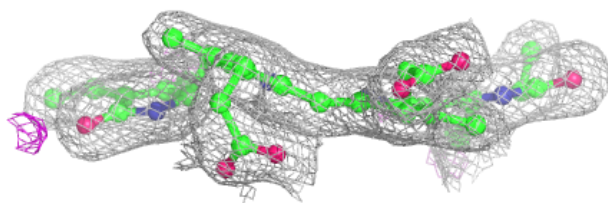
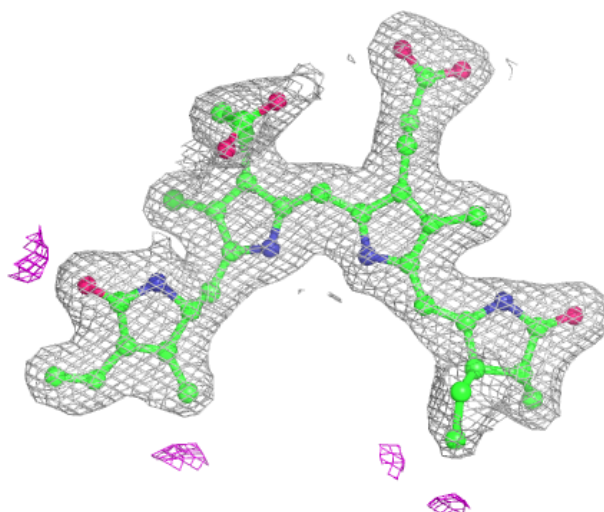
Electron density around PEB DDD 202:

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



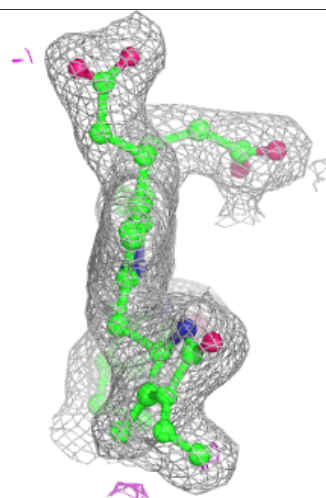
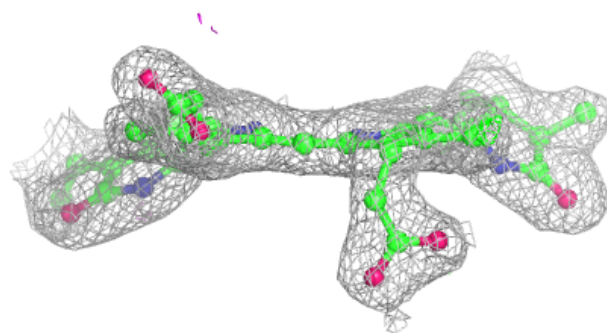
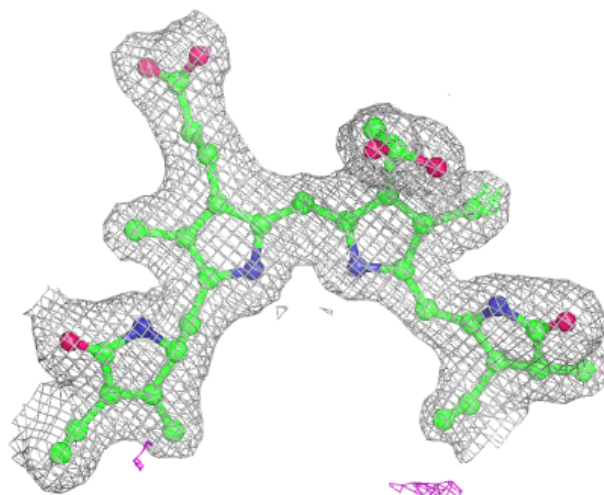
Electron density around PEB BBB 201:

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



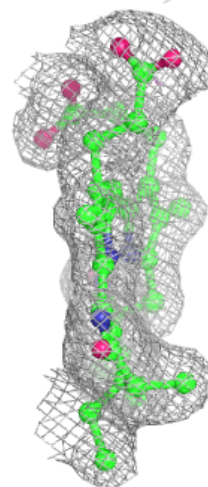
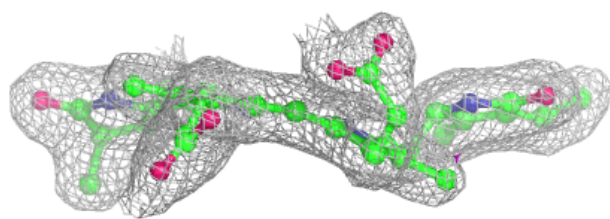
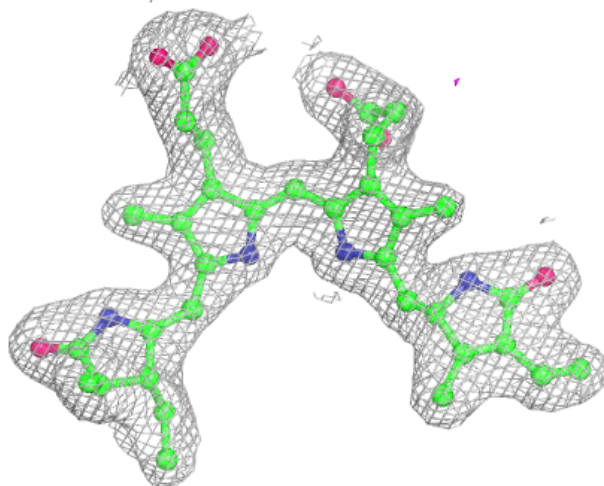
Electron density around PEB JJJ 305:

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



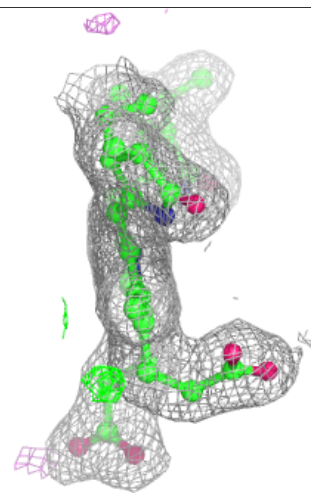
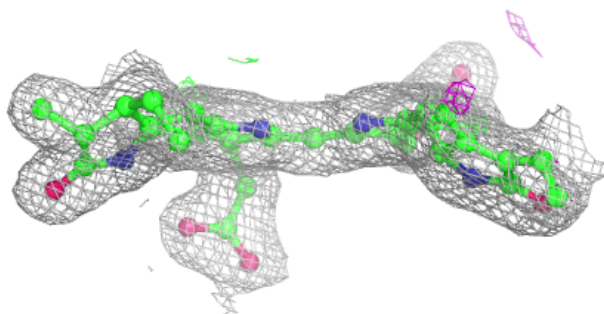
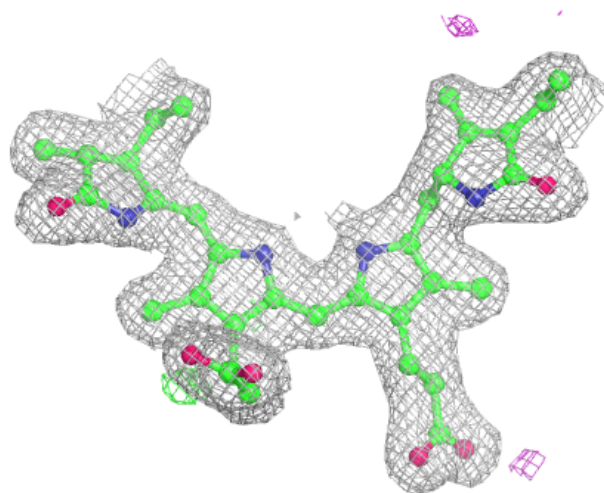
Electron density around PEB KKK 201:

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



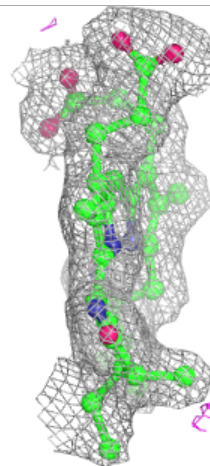
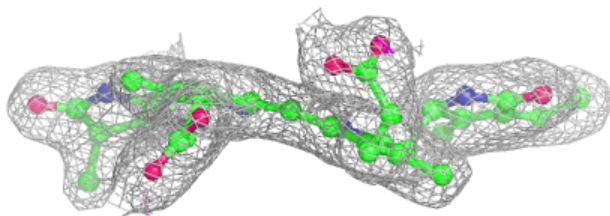
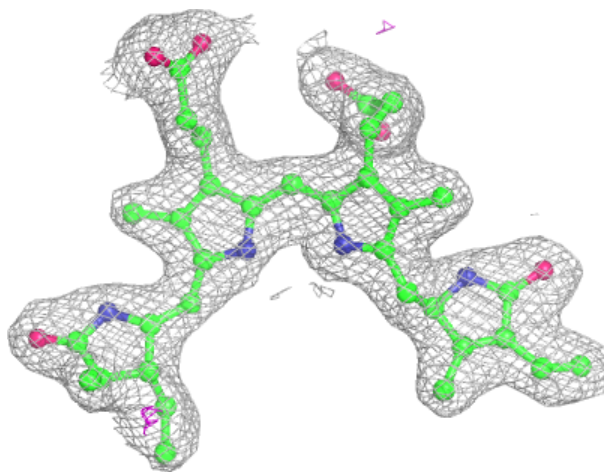
Electron density around PEB BBB 203:

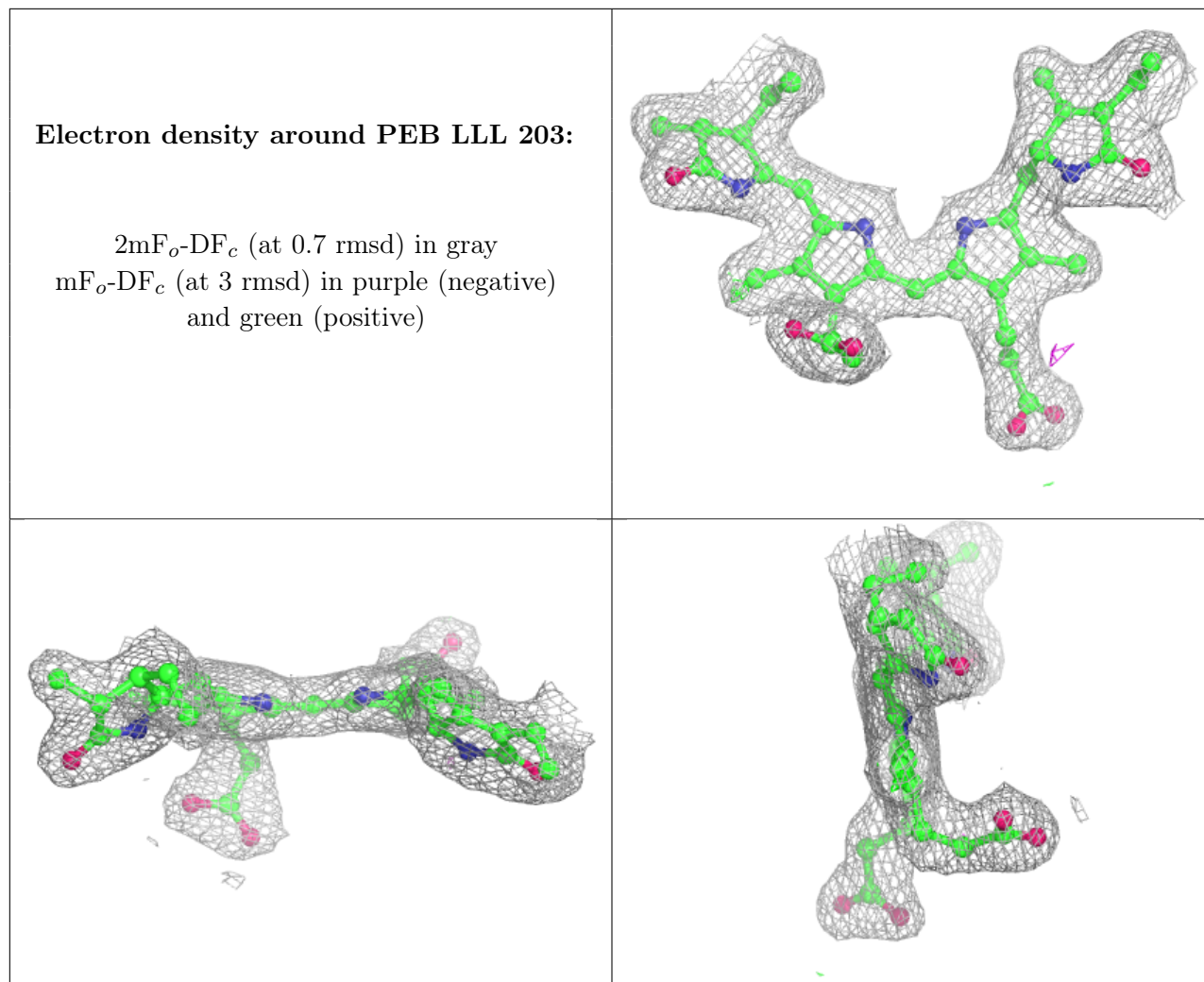
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around PEB CCC 201:

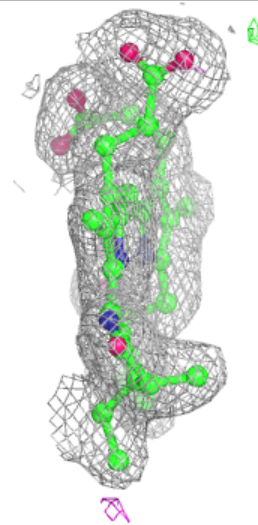
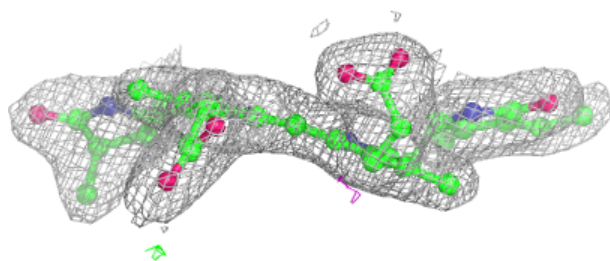
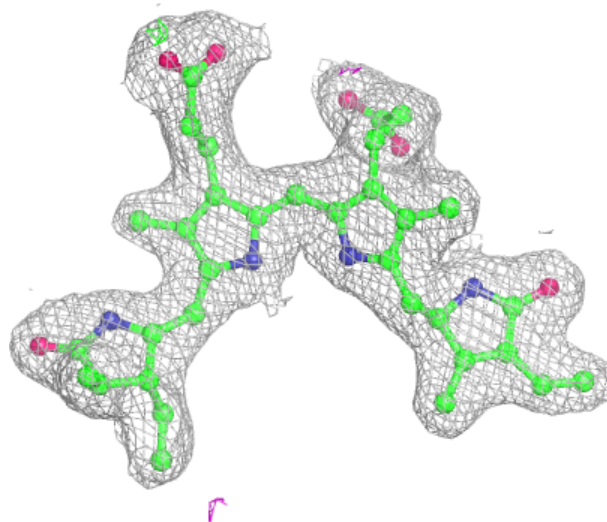
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





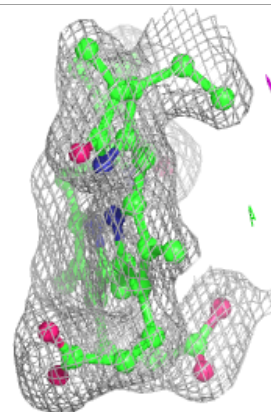
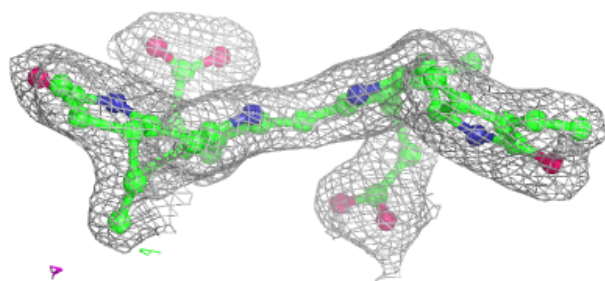
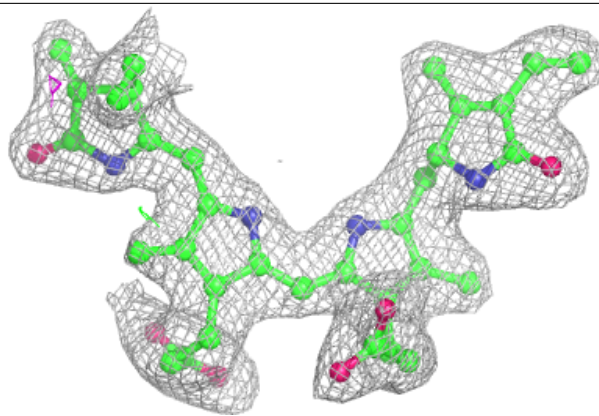
Electron density around PEB MMM 201:

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



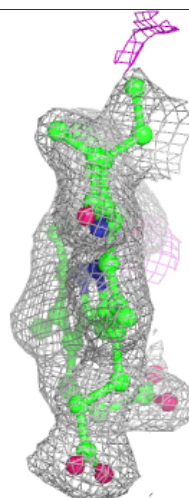
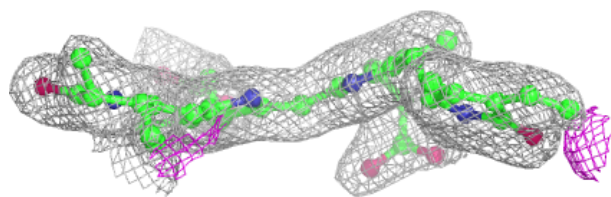
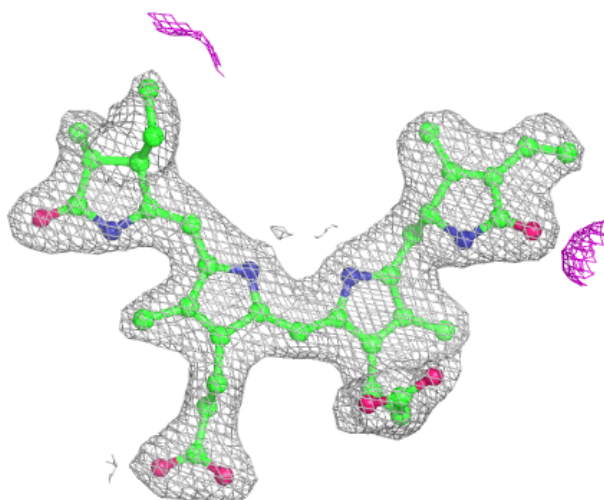
Electron density around PEB CCC 202:

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



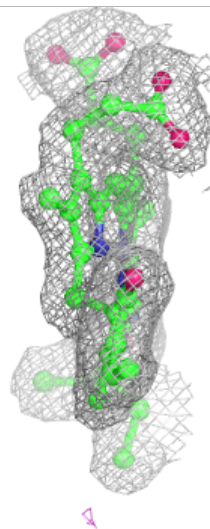
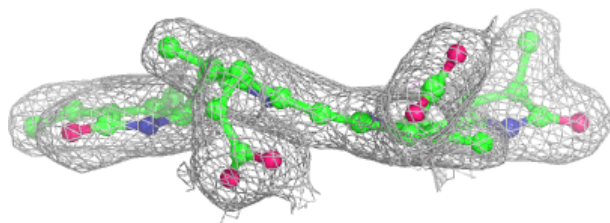
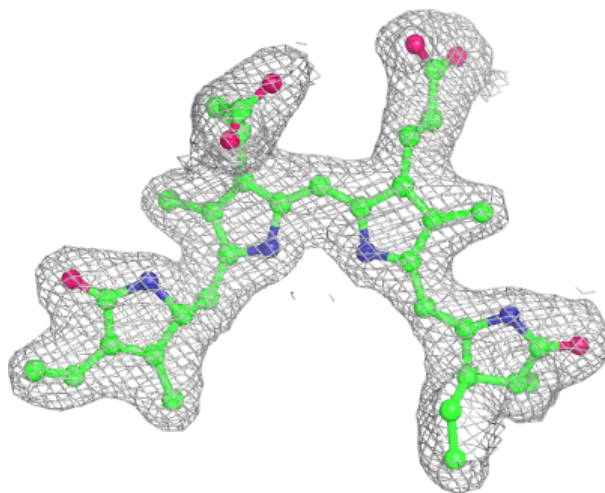
Electron density around PEB NNN 203:

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



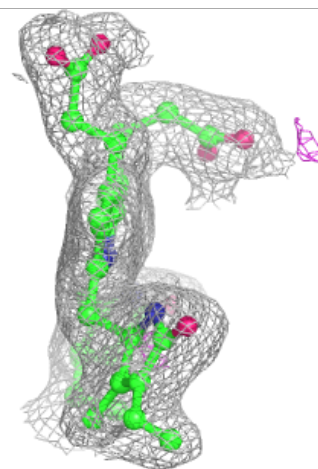
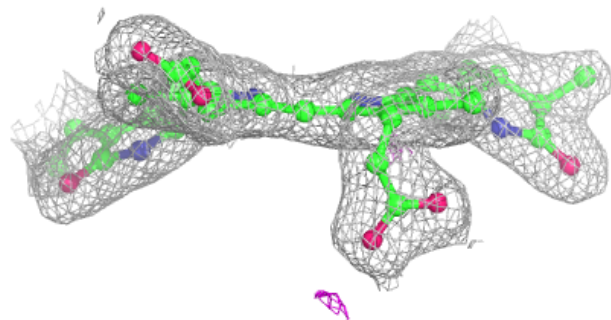
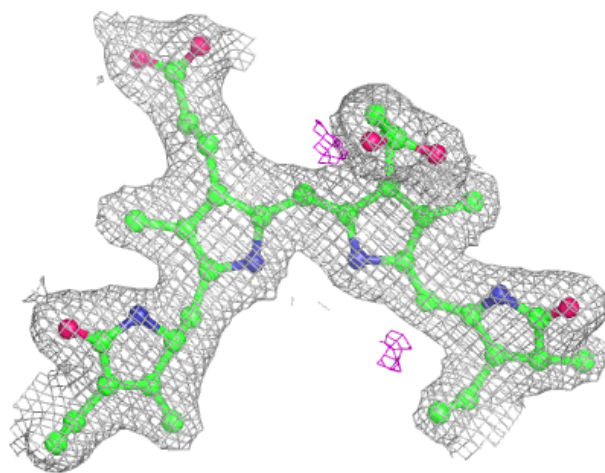
Electron density around PEB GGG 201:

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



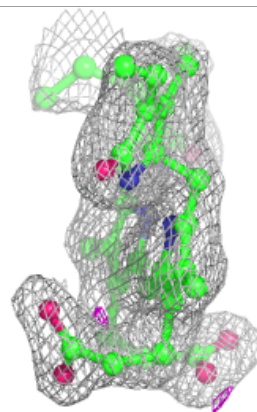
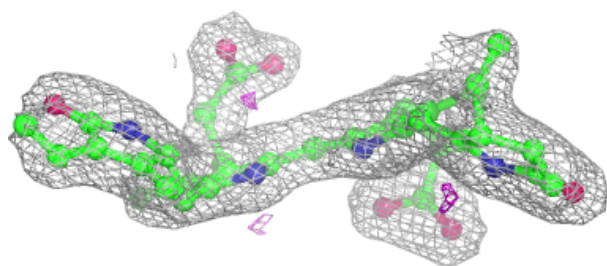
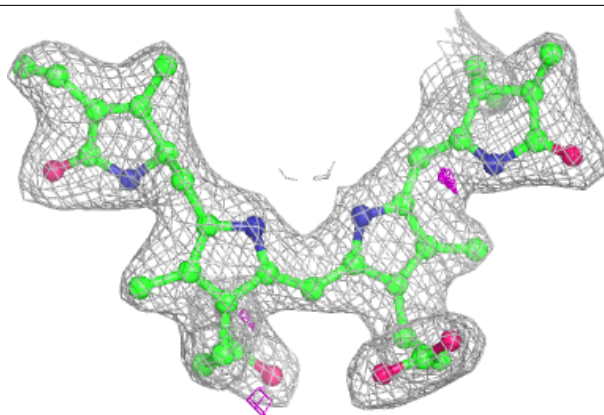
Electron density around PEB NNN 205:

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



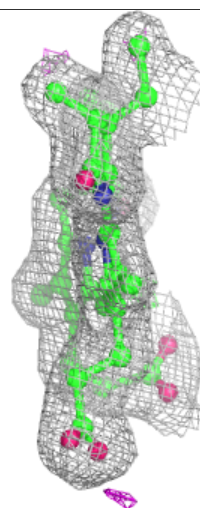
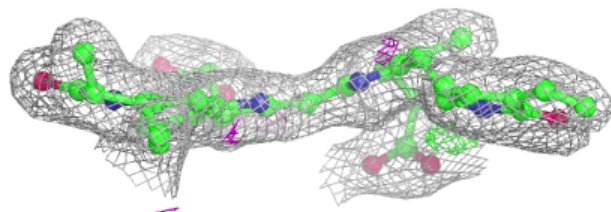
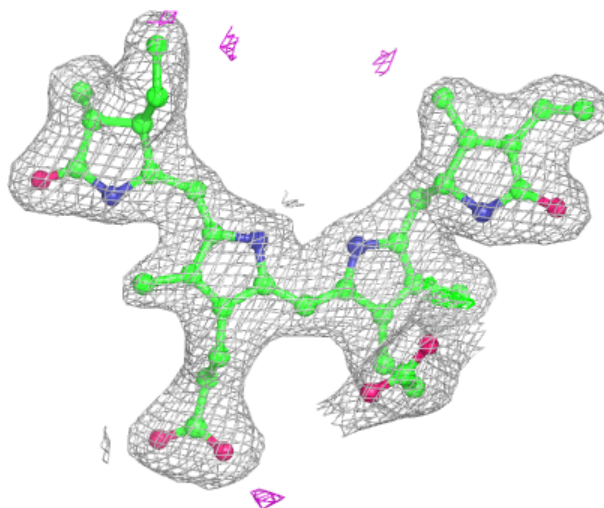
Electron density around PEB GGG 202:

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



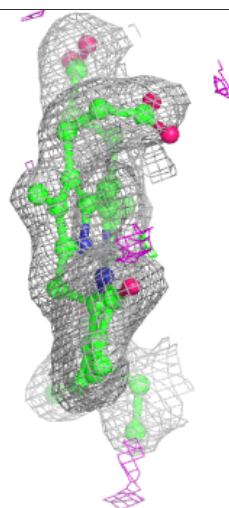
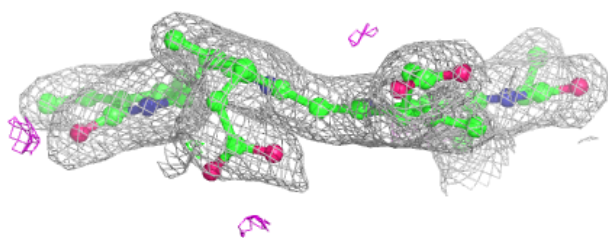
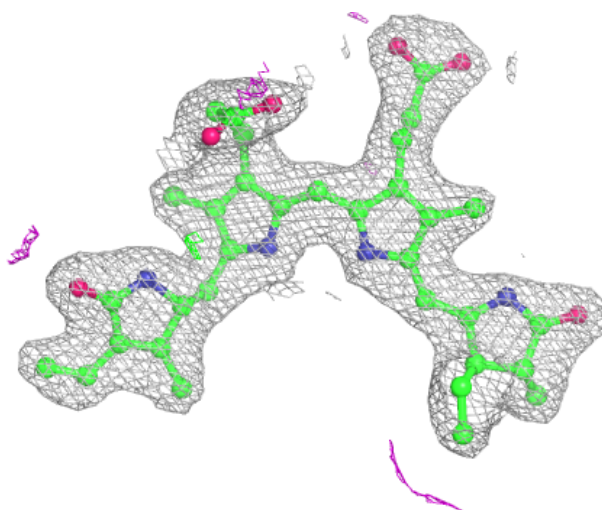
Electron density around PEB HHH 302:

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



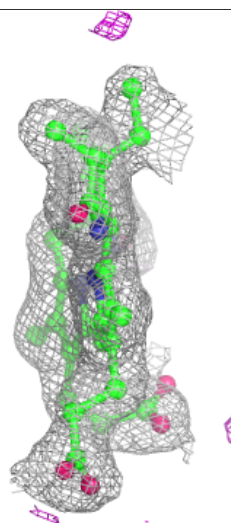
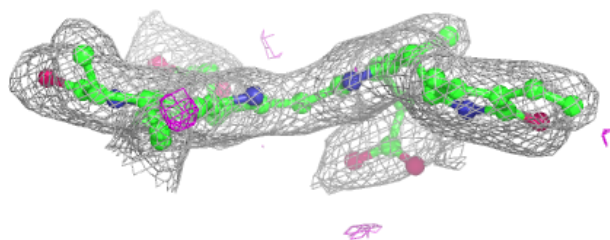
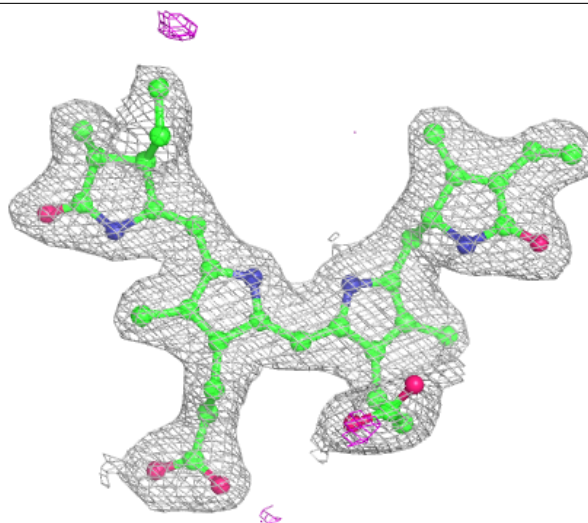
Electron density around PEB JJJ 303:

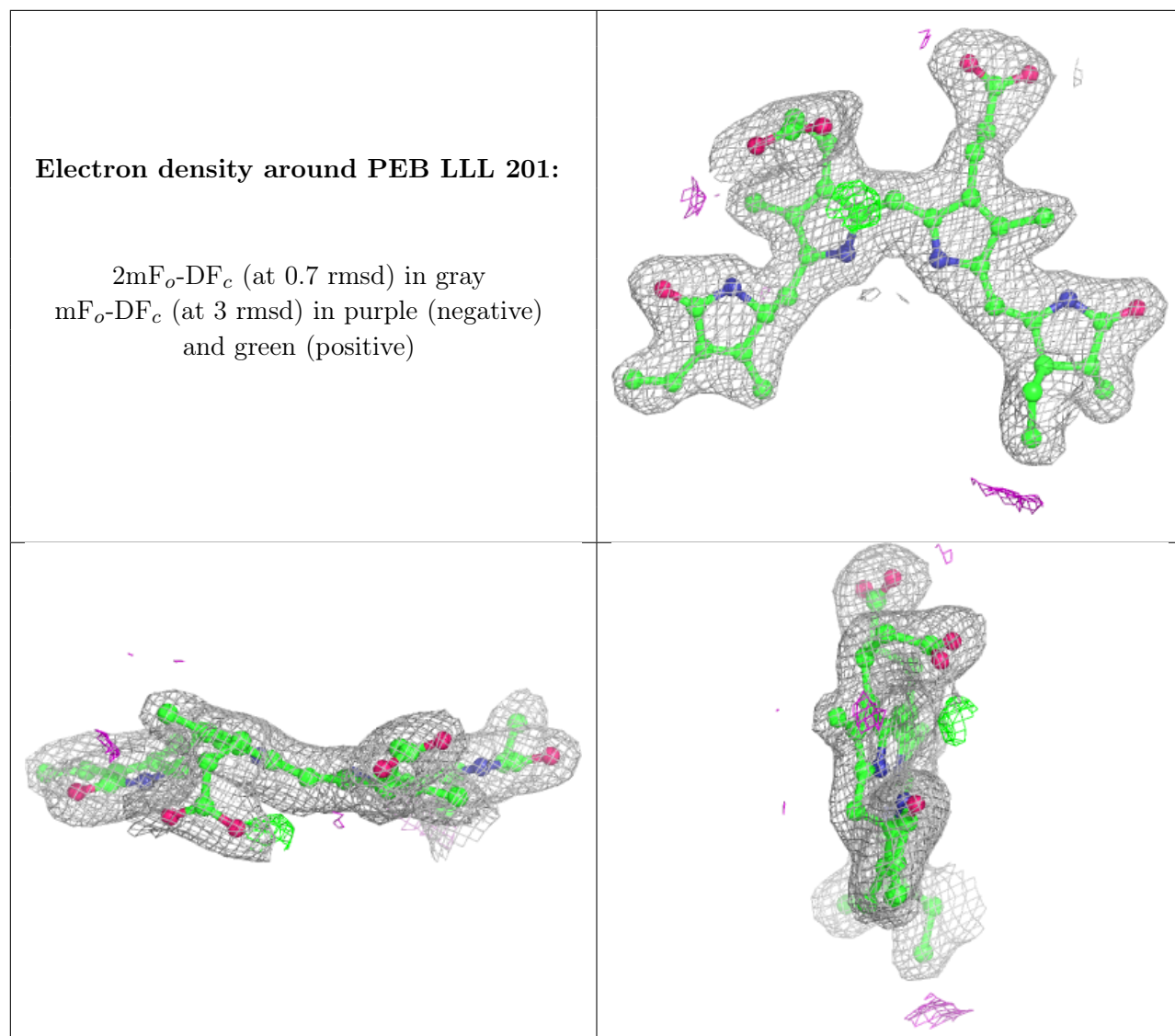
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

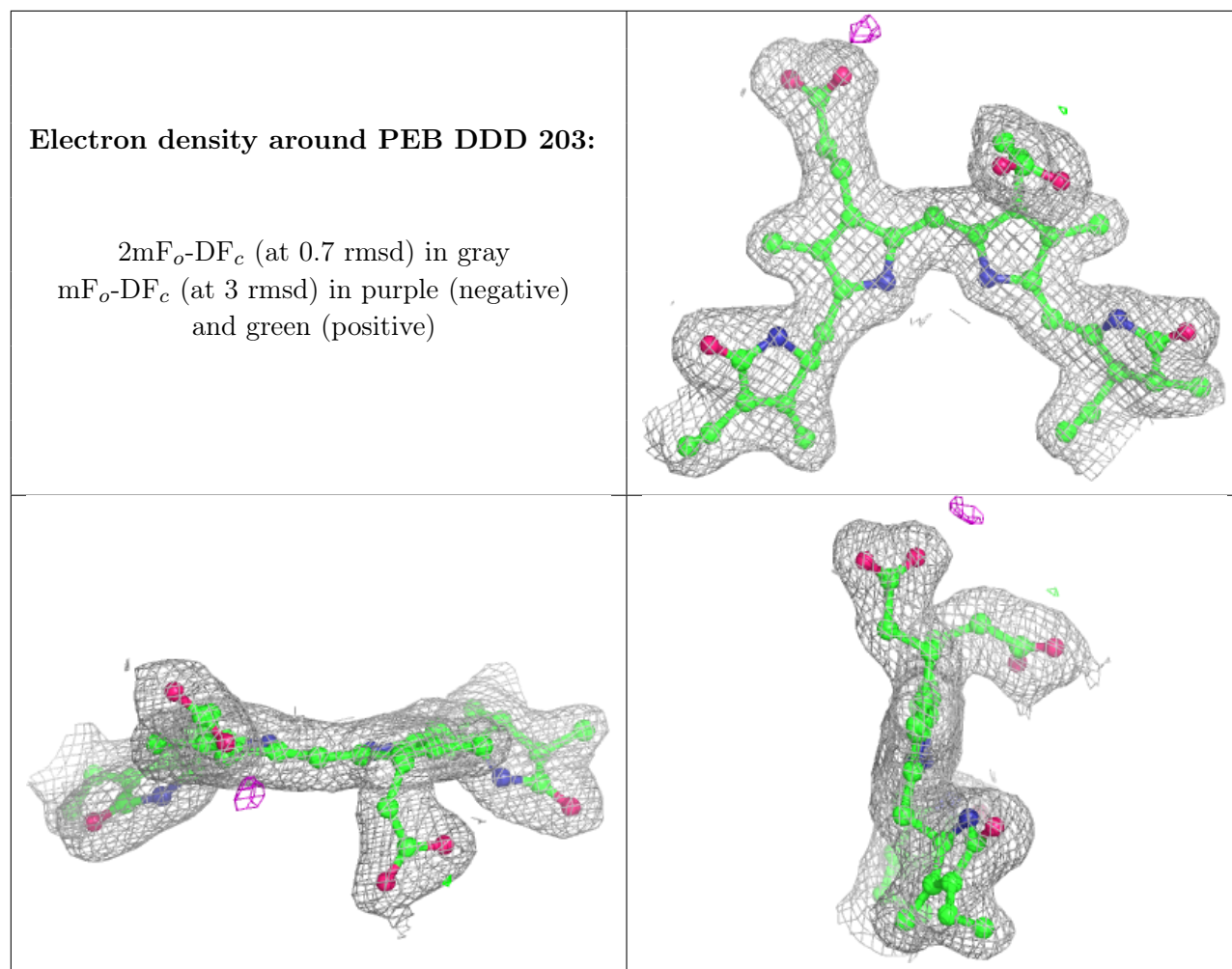


Electron density around PEB FFF 204:

$2mF_o-DF_c$ (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.