Full wwPDB EM Validation Report ⓘ

Nov 16, 2026 – 05:21 pm GMT

PDB ID	:	29QB / pdb_000029qb
EMDB ID	:	EMD-57280
Title	:	Avicennia marina PSI
Authors	:	Malavath, T.; Heilmann, E.; Yuan, X.; Naschberger, A.; Gholami, A.
Deposited on	:	2026-03-29
Resolution	:	2.30 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

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

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

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

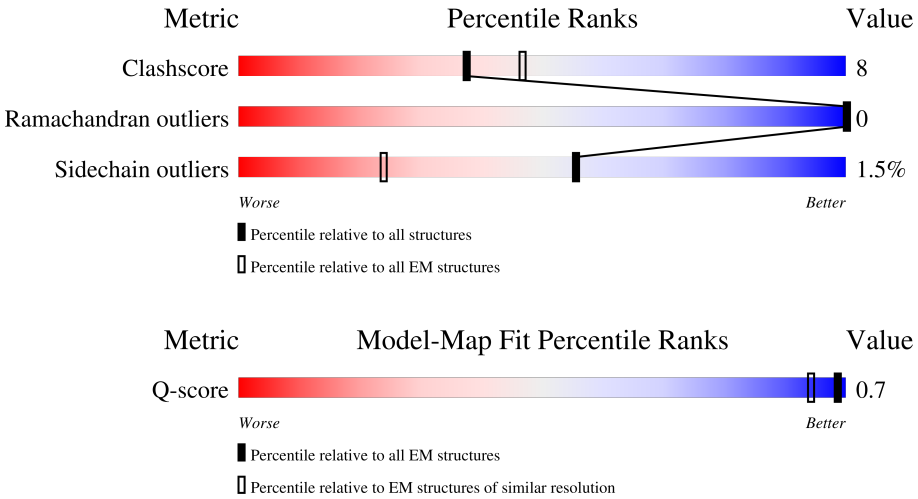
EMDB validation analysis	:	0.0.1.dev133
Mogul	:	1.8.4, CSD as541be (2020)
MolProbity	:	4-5-2 with Phenix2.2
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.51

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 2.30 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.



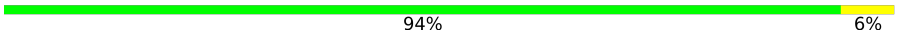
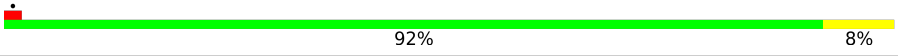
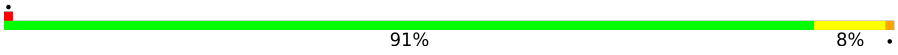
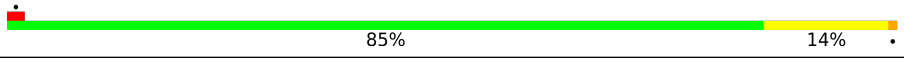
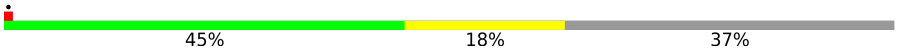
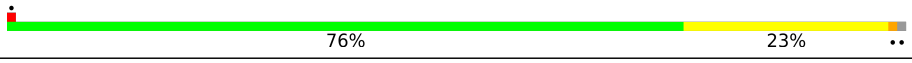
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	4254 (1.80 - 2.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	4	199	83% 17%
2	1	196	87% 13%
3	2	206	86% 14%
4	3	222	91% 9%

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Mol	Chain	Length	Quality of chain
5	A	744	
6	C	78	
7	D	142	
8	E	65	
9	F	153	
10	G	98	
11	H	94	
12	I	29	
13	J	44	
14	B	732	
15	K	84	
16	L	153	

2 Entry composition

There are 30 unique types of molecules in this entry. The entry contains 36236 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 Lhca4.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	4	199	Total	C	N	O	S	0	0
			1570	1035	252	276	7		

- Molecule 2 is a protein called Lhca1.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	1	196	Total	C	N	O	S	0	0
			1508	975	251	271	11		

- Molecule 3 is a protein called Lhca2.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	2	206	Total	C	N	O	S	0	0
			1567	1013	259	286	9		

- Molecule 4 is a protein called Lhca3.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	3	222	Total	C	N	O	S	0	0
			1690	1104	281	295	10		

- Molecule 5 is a protein called Photosystem I P700 chlorophyll a apoprotein A1.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	A	744	Total	C	N	O	S	0	0
			5845	3830	991	1006	18		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	504	ASP	GLY	conflict	UNP A0A7T8G471
A	507	SER	ALA	conflict	UNP A0A7T8G471

- Molecule 6 is a protein called PsaC.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	C	78	Total	C	N	O	S	0	0
			605	376	105	113	11		

- Molecule 7 is a protein called PsaD.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	D	142	Total	C	N	O	S	0	0
			1126	724	192	206	4		

- Molecule 8 is a protein called PsaE.

Mol	Chain	Residues	Atoms				AltConf	Trace
8	E	65	Total	C	N	O	0	0
			515	327	90	98		

- Molecule 9 is a protein called PsaF.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	F	153	Total	C	N	O	S	0	0
			1224	792	210	217	5		

- Molecule 10 is a protein called PsaG.

Mol	Chain	Residues	Atoms				AltConf	Trace
10	G	98	Total	C	N	O	0	0
			768	502	123	143		

- Molecule 11 is a protein called PsaH.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	H	94	Total	C	N	O	S	0	0
			712	469	116	126	1		

- Molecule 12 is a protein called Photosystem I reaction center subunit VIII.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	I	29	Total	C	N	O	S	0	0
			221	151	35	34	1		

- Molecule 13 is a protein called Photosystem I reaction center subunit IX.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	J	43	Total	C	N	O	S	0	0
			346	236	52	57	1		

- Molecule 14 is a protein called Photosystem I P700 chlorophyll a apoprotein A2.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	B	732	Total	C	N	O	S	0	0
			5850	3840	996	1001	13		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	136	ASN	THR	conflict	UNP G9IB61
B	212	VAL	LEU	conflict	UNP G9IB61

- Molecule 15 is a protein called Photosystem I reaction center subunit psaK, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	K	53	Total	C	N	O	S	0	0
			374	244	61	66	3		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
K	12	ILE	VAL	conflict	UNP A0AAW1LKN9
K	83	VAL	SER	conflict	UNP A0AAW1LKN9

- Molecule 16 is a protein called Photosystem I reaction center subunit XI, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	L	152	Total	C	N	O	S	0	0
			1143	756	179	206	2		

There are 9 discrepancies between the modelled and reference sequences:

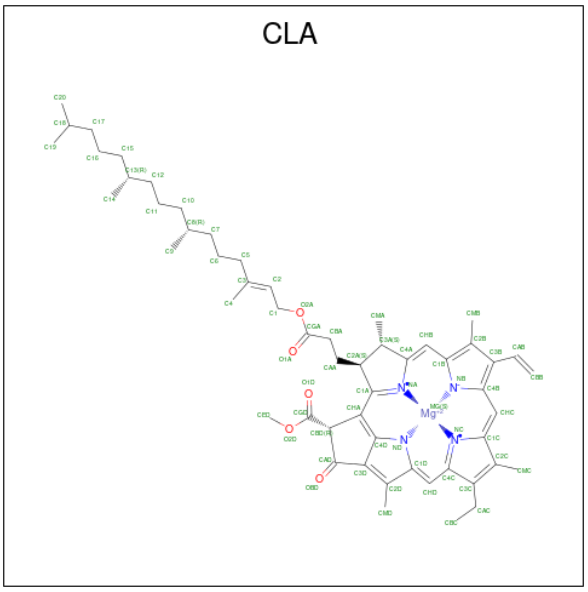
Chain	Residue	Modelled	Actual	Comment	Reference
L	29	GLY	ALA	variant	UNP A0A2G9G897
L	35	ASP	SER	variant	UNP A0A2G9G897
L	49	TYR	PHE	variant	UNP A0A2G9G897
L	57	ILE	LYS	variant	UNP A0A2G9G897
L	69	ALA	GLY	variant	UNP A0A2G9G897
L	88	MET	ILE	variant	UNP A0A2G9G897

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Chain	Residue	Modelled	Actual	Comment	Reference
L	121	GLU	ASP	variant	UNP A0A2G9G897
L	125	ARG	LYS	variant	UNP A0A2G9G897
L	127	SER	THR	variant	UNP A0A2G9G897

- Molecule 17 is CHLOROPHYLL A (CCD ID: CLA) (formula: $C_{55}H_{72}MgN_4O_5$).



Mol	Chain	Residues	Atoms					AltConf
17	4	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
17	4	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
17	4	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
17	4	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
17	4	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
17	4	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
17	4	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
17	4	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
17	4	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	4	1	Total	C	Mg	N	O	0
			45	35	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
17	4	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
17	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	1	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
17	1	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
17	1	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
17	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	1	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
17	1	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
17	1	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
17	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	1	1	Total	C	Mg	N	O	0
			43	35	1	4	3	
17	1	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
17	2	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	2	1	Total	C	Mg	N	O	0
			49	39	1	4	5	
17	2	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
17	2	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
17	2	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
17	2	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
17	2	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
17	2	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
17	2	1	Total	C	Mg	N	O	0
			43	35	1	4	3	
17	3	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
17	3	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
17	3	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
17	3	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
17	3	1	Total	C	Mg	N	O	0
			47	37	1	4	5	
17	3	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
17	3	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
17	3	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
17	3	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
17	3	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
17	3	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
17	3	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
17	3	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			54	44	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			49	39	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			51	41	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
17	A	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			51	41	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	F	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	F	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
17	F	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
17	F	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	G	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
17	G	1	Total	C	Mg	N	O	0
			50	40	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
17	G	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
17	H	1	Total	C	Mg	N	O	0
			56	46	1	4	5	
17	J	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			54	44	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

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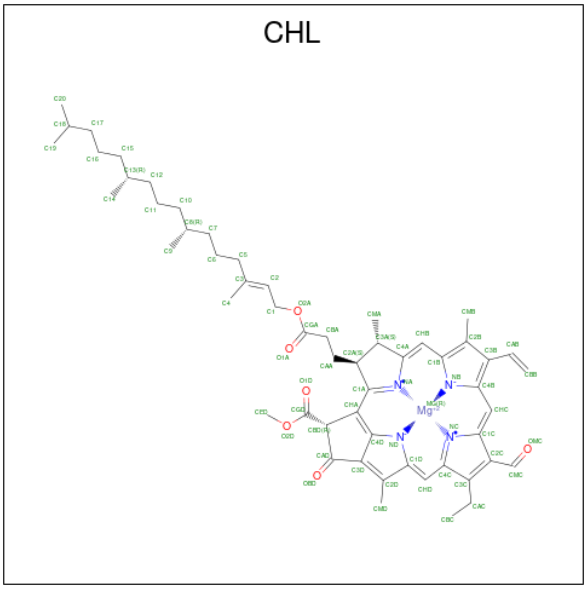
Mol	Chain	Residues	Atoms					AltConf
17	B	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			56	46	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			58	48	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			51	41	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			47	37	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
17	K	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
17	K	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
17	K	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
17	L	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
17	L	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
17	L	1	Total	C	Mg	N	O	0
			50	40	1	4	5	

- Molecule 18 is CHLOROPHYLL B (CCD ID: CHL) (formula: $C_{55}H_{70}MgN_4O_6$).



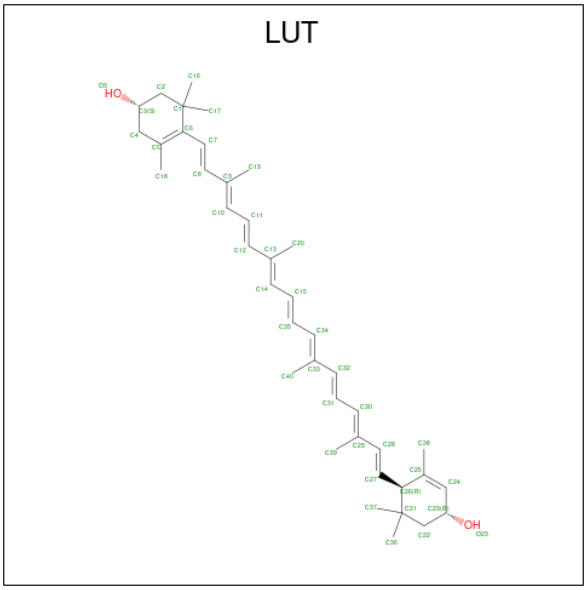
Mol	Chain	Residues	Atoms					AltConf
18	4	1	Total	C	Mg	N	O	0
			53	42	1	4	6	
18	4	1	Total	C	Mg	N	O	0
			51	40	1	4	6	
18	4	1	Total	C	Mg	N	O	0
			51	40	1	4	6	
18	4	1	Total	C	Mg	N	O	0
			43	34	1	4	4	
18	1	1	Total	C	Mg	N	O	0
			52	41	1	4	6	

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Mol	Chain	Residues	Atoms					AltConf
18	1	1	Total	C	Mg	N	O	0
			48	37	1	4	6	
18	2	1	Total	C	Mg	N	O	0
			53	42	1	4	6	
18	2	1	Total	C	Mg	N	O	0
			43	34	1	4	4	
18	2	1	Total	C	Mg	N	O	0
			48	37	1	4	6	
18	2	1	Total	C	Mg	N	O	0
			51	40	1	4	6	
18	2	1	Total	C	Mg	N	O	0
			43	34	1	4	4	
18	3	1	Total	C	Mg	N	O	0
			47	36	1	4	6	

- Molecule 19 is (3R,3'R,6S)-4,5-DIDEHYDRO-5,6-DIHYDRO-BETA,BETA-CAROTENE-3,3'-DIOL (CCD ID: LUT) (formula: $C_{40}H_{56}O_2$).



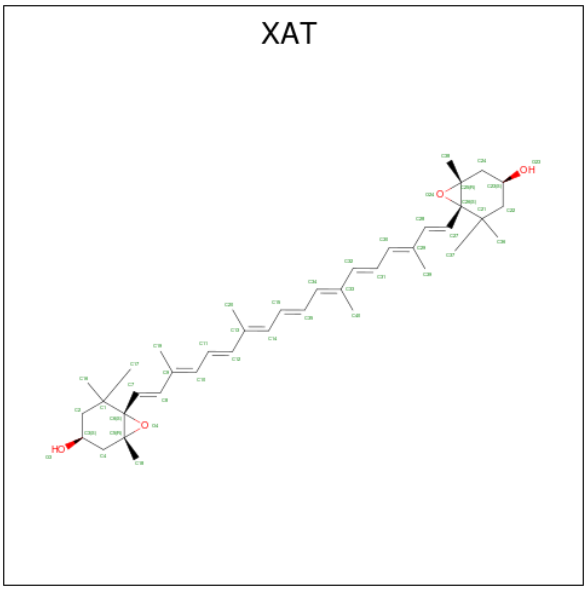
Mol	Chain	Residues	Atoms			AltConf
19	4	1	Total	C	O	0
			42	40	2	
19	1	1	Total	C	O	0
			42	40	2	
19	1	1	Total	C	O	0
			42	40	2	
19	2	1	Total	C	O	0
			42	40	2	

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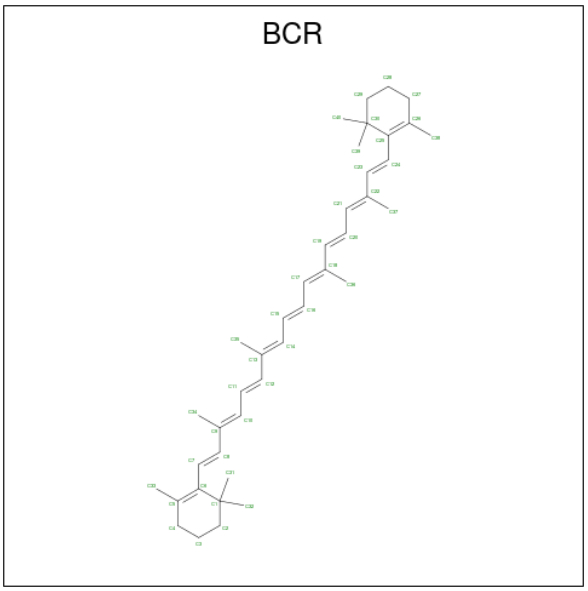
Mol	Chain	Residues	Atoms			AltConf
19	3	1	Total	C	O	0
			42	40	2	

- Molecule 20 is (3S,5R,6S,3'S,5'R,6'S)-5,6,5',6'-DIEPOXY-5,6,5',6'- TETRAHYDRO-BETA ,BETA-CAROTENE-3,3'-DIOL (CCD ID: XAT) (formula: $C_{40}H_{56}O_4$).



Mol	Chain	Residues	Atoms			AltConf
20	4	1	Total	C	O	0
			44	40	4	
20	1	1	Total	C	O	0
			44	40	4	
20	2	1	Total	C	O	0
			44	40	4	
20	3	1	Total	C	O	0
			44	40	4	

- Molecule 21 is BETA-CAROTENE (CCD ID: BCR) (formula: $C_{40}H_{56}$).



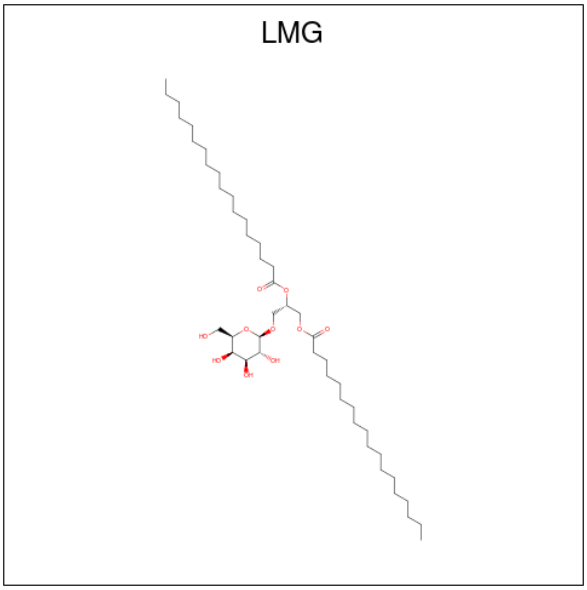
Mol	Chain	Residues	Atoms	AltConf
21	4	1	Total C 40 40	0
21	1	1	Total C 40 40	0
21	2	1	Total C 40 40	0
21	3	1	Total C 40 40	0
21	A	1	Total C 40 40	0
21	A	1	Total C 40 40	0
21	A	1	Total C 40 40	0
21	A	1	Total C 40 40	0
21	A	1	Total C 40 40	0
21	F	1	Total C 40 40	0
21	F	1	Total C 40 40	0
21	G	1	Total C 40 40	0
21	I	1	Total C 40 40	0
21	J	1	Total C 40 40	0

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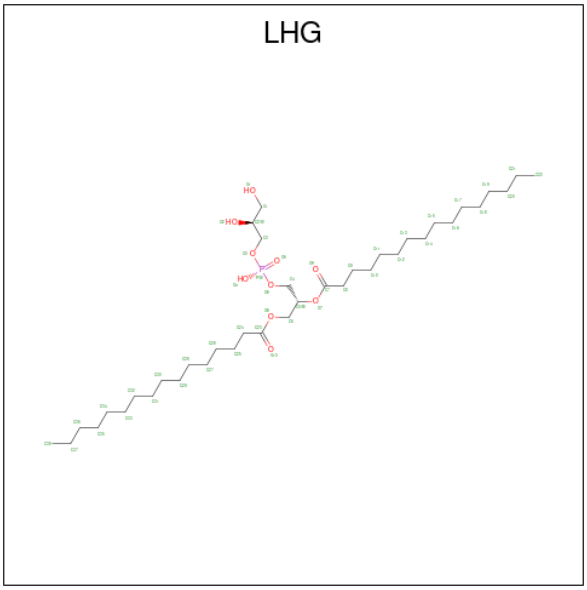
Mol	Chain	Residues	Atoms	AltConf
21	J	1	Total C 40 40	0
21	B	1	Total C 40 40	0
21	B	1	Total C 40 40	0
21	B	1	Total C 40 40	0
21	B	1	Total C 40 40	0
21	B	1	Total C 40 40	0
21	B	1	Total C 40 40	0
21	K	1	Total C 40 40	0
21	K	1	Total C 40 40	0
21	L	1	Total C 40 40	0
21	L	1	Total C 40 40	0
21	L	1	Total C 40 40	0

- Molecule 22 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (CCD ID: LMG) (formula: $C_{45}H_{86}O_{10}$).



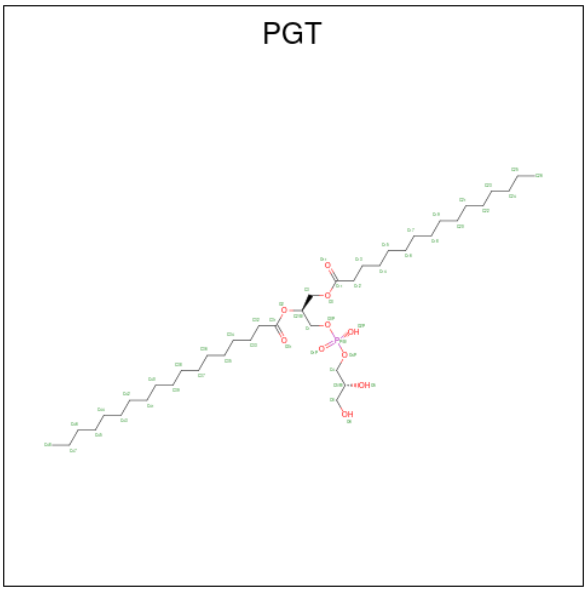
Mol	Chain	Residues	Atoms			AltConf
22	4	1	Total 44	C 34	O 10	0
22	4	1	Total 49	C 39	O 10	0
22	G	1	Total 44	C 34	O 10	0

- Molecule 23 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (CCD ID: LHG) (formula: $C_{38}H_{75}O_{10}P$).



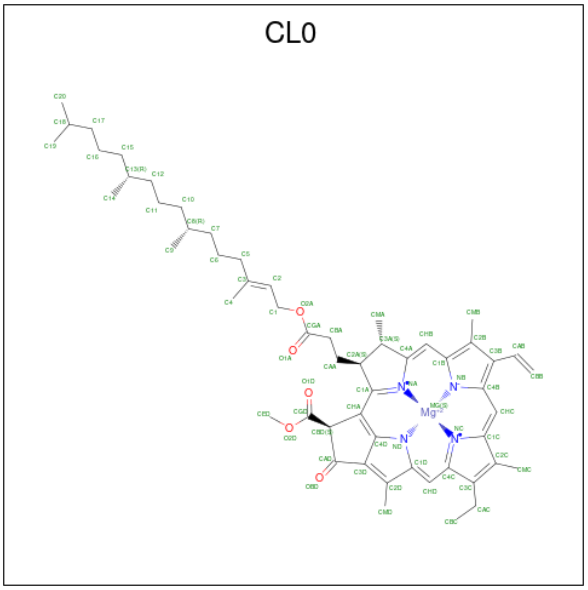
Mol	Chain	Residues	Atoms				AltConf
23	1	1	Total 41	C 35	O 5	P 1	0
23	1	1	Total 23	C 12	O 10	P 1	0
23	2	1	Total 37	C 26	O 10	P 1	0
23	A	1	Total 49	C 38	O 10	P 1	0

- Molecule 24 is (1S)-2-{[{[(2R)-2,3-DIHYDROXYPROPYL]OXY}(HYDROXY)PHOSPHORYL]OXY}-1-[(PALMITOYLOXY)METHYL]ETHYL STEARATE (CCD ID: PGT) (formula: $C_{40}H_{79}O_{10}P$).



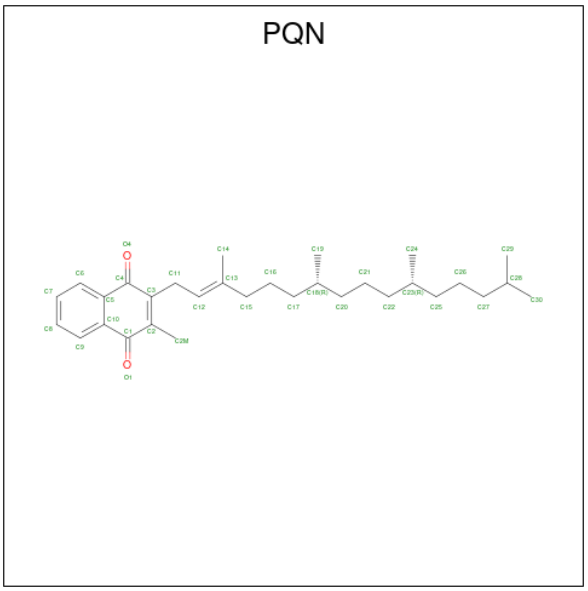
Mol	Chain	Residues	Atoms				AltConf
24	1	1	Total	C	O	P	0
			23	13	9	1	
24	G	1	Total	C	O	P	0
			23	13	9	1	

- Molecule 25 is CHLOROPHYLL A ISOMER (CCD ID: CL0) (formula: $C_{55}H_{72}MgN_4O_5$).



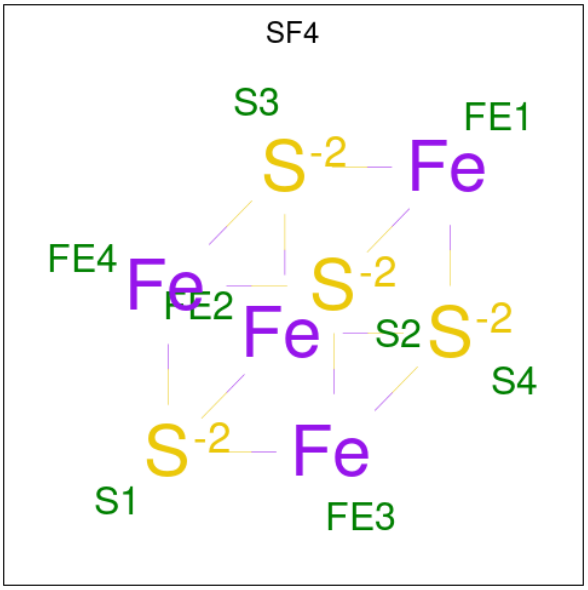
Mol	Chain	Residues	Atoms					AltConf
25	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

- Molecule 26 is PHYLLOQUINONE (CCD ID: PQN) (formula: $C_{31}H_{46}O_2$).



Mol	Chain	Residues	Atoms			AltConf
26	A	1	Total	C	O	0
			33	31	2	
26	B	1	Total	C	O	0
			33	31	2	

- Molecule 27 is IRON/SULFUR CLUSTER (CCD ID: SF4) (formula: Fe_4S_4).



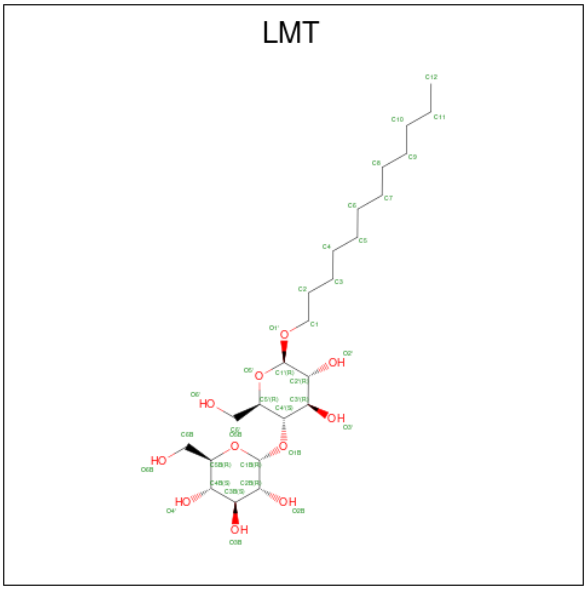
Mol	Chain	Residues	Atoms			AltConf
27	A	1	Total	Fe	S	0
			8	4	4	
27	C	1	Total	Fe	S	0
			8	4	4	

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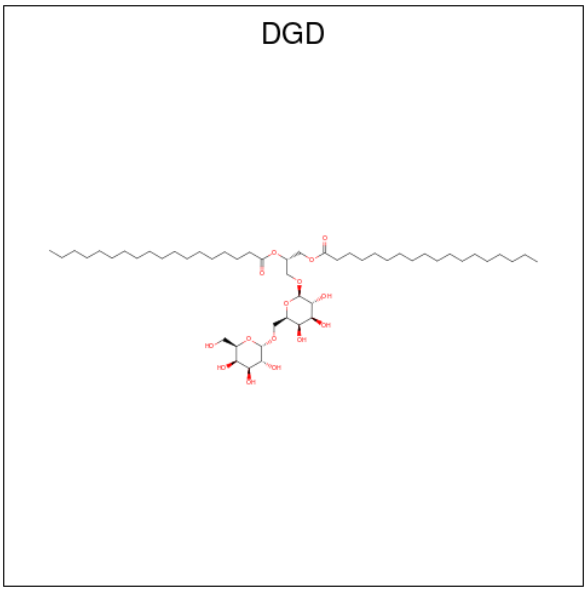
Mol	Chain	Residues	Atoms			AltConf
			Total	Fe	S	
27	C	1	8	4	4	0

- Molecule 28 is DODECYL-BETA-D-MALTOSIDE (CCD ID: LMT) (formula: $C_{24}H_{46}O_{11}$).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
28	G	1	35	24	11	0
			Total	C	O	
28	B	1	35	24	11	0

- Molecule 29 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (CCD ID: DGD) (formula: $C_{51}H_{96}O_{15}$).



Mol	Chain	Residues	Atoms	AltConf
29	B	1	Total C O 66 51 15	0

- Molecule 30 is water.

Mol	Chain	Residues	Atoms	AltConf
30	4	10	Total O 10 10	0
30	1	7	Total O 7 7	0
30	2	4	Total O 4 4	0
30	3	13	Total O 13 13	0
30	A	129	Total O 129 129	0
30	C	26	Total O 26 26	0
30	D	26	Total O 26 26	0
30	E	12	Total O 12 12	0
30	F	21	Total O 21 21	0
30	G	9	Total O 9 9	0
30	H	2	Total O 2 2	0

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Mol	Chain	Residues	Atoms	AltConf
30	I	4	Total O 4 4	0
30	J	3	Total O 3 3	0
30	B	146	Total O 146 146	0
30	K	1	Total O 1 1	0
30	L	15	Total O 15 15	0

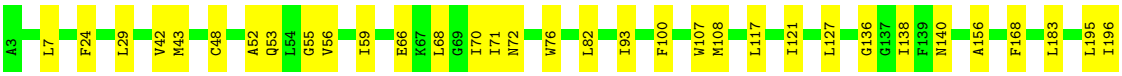
3 Residue-property plots (i)

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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: Lhca4

Chain 4:



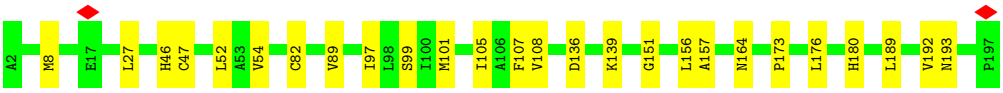




• Molecule 2: Lhca1

Chain 1:





• Molecule 3: Lhca2

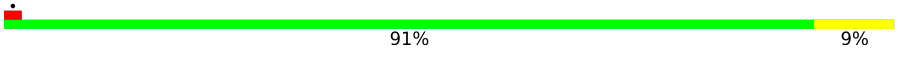
Chain 2:





• Molecule 4: Lhca3

Chain 3:

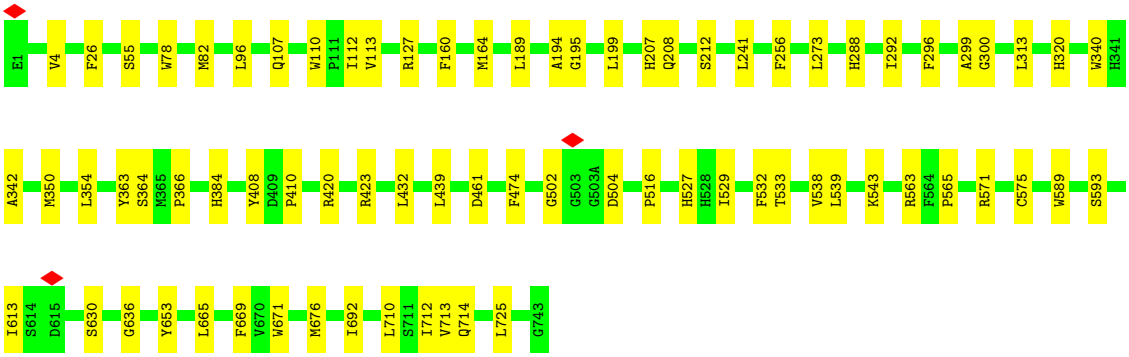




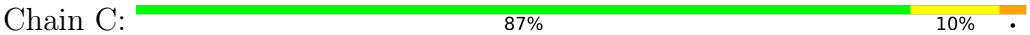
• Molecule 5: Photosystem I P700 chlorophyll a apoprotein A1

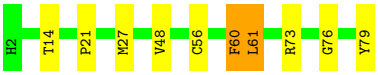
Chain A:





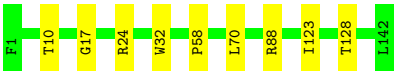
• Molecule 6: PsaC



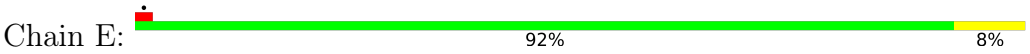


• Molecule 7: PsaD



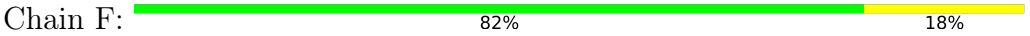


• Molecule 8: PsaE



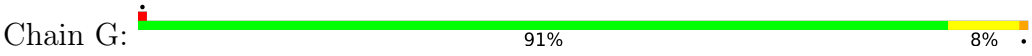


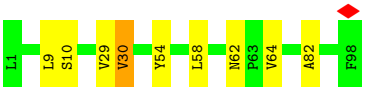
• Molecule 9: PsaF



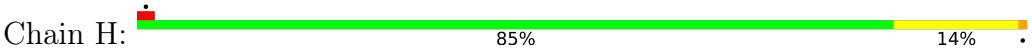


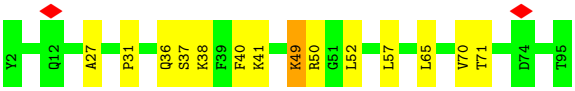
• Molecule 10: PsaG





• Molecule 11: PsaH

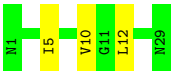




• Molecule 12: Photosystem I reaction center subunit VIII

Chain I:





• Molecule 13: Photosystem I reaction center subunit IX

Chain J:

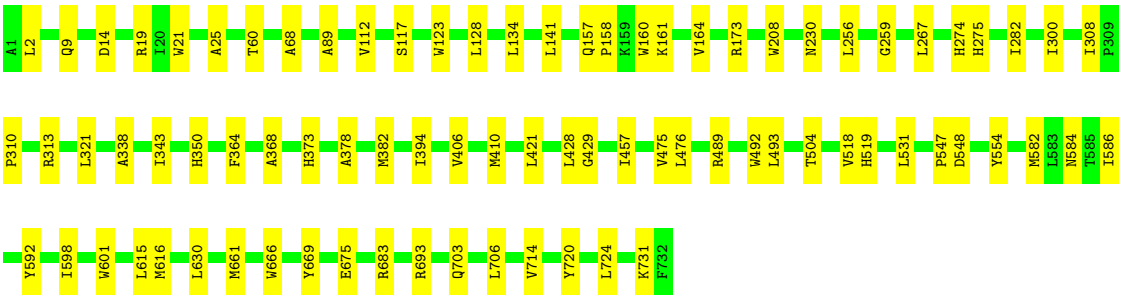




• Molecule 14: Photosystem I P700 chlorophyll a apoprotein A2

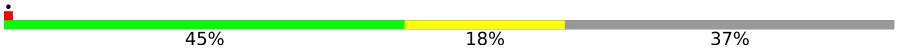
Chain B:

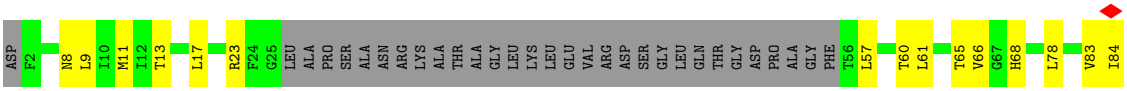




• Molecule 15: Photosystem I reaction center subunit psaK, chloroplastic

Chain K:

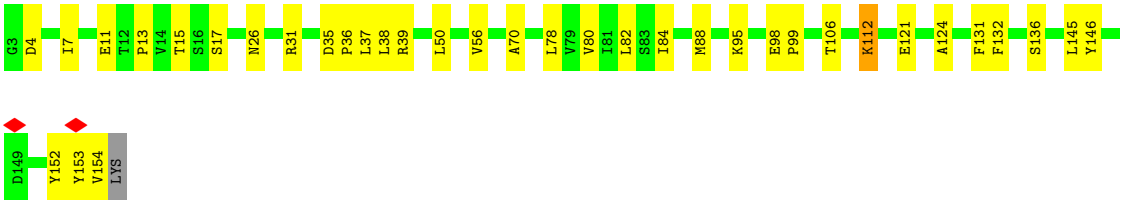




• Molecule 16: Photosystem I reaction center subunit XI, chloroplastic

Chain L:





4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	157448	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	40	Depositor
Minimum defocus (nm)	5000	Depositor
Maximum defocus (nm)	21000	Depositor
Magnification	165000	Depositor
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	0.048	Depositor
Minimum map value	-0.017	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.001	Depositor
Recommended contour level	0.006	Depositor
Map size (Å)	364.5, 364.5, 364.5	wwPDB
Map dimensions	500, 500, 500	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.729, 0.729, 0.729	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: DGD, CHL, LUT, LMT, BCR, XAT, PGT, CL0, SF4, PQN, LHG, LMG, CLA

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	4	0.21	0/1624	0.29	0/2216
2	1	0.21	0/1556	0.30	0/2122
3	2	0.27	0/1619	0.47	0/2216
4	3	0.17	0/1745	0.30	0/2371
5	A	0.32	0/6044	0.37	0/8247
6	C	0.17	0/618	0.41	0/839
7	D	0.14	0/1156	0.29	0/1566
8	E	0.12	0/526	0.26	0/716
9	F	0.14	0/1253	0.27	0/1693
10	G	0.20	0/789	0.28	0/1074
11	H	0.14	0/734	0.27	0/1002
12	I	0.15	0/227	0.28	0/310
13	J	0.12	0/357	0.28	0/486
14	B	0.31	0/6062	0.37	0/8280
15	K	0.51	0/377	0.61	0/509
16	L	0.35	0/1178	0.49	0/1613
All	All	0.27	0/25865	0.36	0/35260

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	4	1570	0	1532	25	0
2	1	1508	0	1476	21	0
3	2	1567	0	1512	31	0
4	3	1690	0	1670	14	0
5	A	5845	0	5696	64	0
6	C	605	0	584	13	0
7	D	1126	0	1131	8	0
8	E	515	0	514	4	0
9	F	1224	0	1244	18	0
10	G	768	0	744	7	0
11	H	712	0	721	21	0
12	I	221	0	240	4	0
13	J	346	0	354	5	0
14	B	5850	0	5630	66	0
15	K	374	0	402	34	0
16	L	1143	0	1144	43	0
17	1	656	0	607	12	0
17	2	485	0	445	10	0
17	3	633	0	499	8	0
17	4	593	0	524	16	0
17	A	2610	0	2709	99	0
17	B	2361	0	2424	83	0
17	F	221	0	210	5	0
17	G	141	0	105	3	0
17	H	56	0	51	2	0
17	J	42	0	31	0	0
17	K	152	0	125	8	0
17	L	161	0	144	10	0
18	1	100	0	72	2	0
18	2	238	0	169	11	0
18	3	47	0	31	1	0
18	4	198	0	144	2	0
19	1	84	0	112	1	0
19	2	42	0	56	3	0
19	3	42	0	56	1	0
19	4	42	0	56	1	0
20	1	44	0	56	2	0
20	2	44	0	56	4	0
20	3	44	0	56	2	0
20	4	44	0	56	2	0
21	1	40	0	56	4	0
21	2	40	0	56	15	0
21	3	40	0	56	6	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
21	4	40	0	56	2	0
21	A	200	0	279	14	0
21	B	240	0	336	12	0
21	F	80	0	112	7	0
21	G	40	0	55	5	0
21	I	40	0	56	1	0
21	J	80	0	112	7	0
21	K	80	0	111	18	0
21	L	120	0	168	5	0
22	4	93	0	132	5	0
22	G	44	0	61	0	0
23	1	64	0	83	8	0
23	2	37	0	44	4	0
23	A	49	0	74	4	0
24	1	23	0	22	3	0
24	G	23	0	22	6	0
25	A	65	0	72	5	0
26	A	33	0	46	2	0
26	B	33	0	46	2	0
27	A	8	0	0	0	0
27	C	16	0	0	0	0
28	B	35	0	46	0	0
28	G	35	0	46	2	0
29	B	66	0	96	5	0
30	1	7	0	0	1	0
30	2	4	0	0	0	0
30	3	13	0	0	0	0
30	4	10	0	0	3	0
30	A	129	0	0	4	0
30	B	146	0	0	6	0
30	C	26	0	0	2	0
30	D	26	0	0	0	0
30	E	12	0	0	1	0
30	F	21	0	0	1	0
30	G	9	0	0	0	0
30	H	2	0	0	0	0
30	I	4	0	0	0	0
30	J	3	0	0	0	0
30	K	1	0	0	0	0
30	L	15	0	0	1	0
All	All	36236	0	35631	538	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.

All (538) 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)
16:L:145:LEU:CD1	17:L:304:CLA:HED3	1.45	1.44
16:L:145:LEU:HD11	17:L:304:CLA:CED	1.56	1.34
15:K:66:VAL:HG21	21:K:101:BCR:H402	1.44	1.00
5:A:420:ARG:HD3	30:A:941:HOH:O	1.63	0.97
15:K:78:LEU:HB3	15:K:83:VAL:CG1	1.95	0.96
15:K:78:LEU:HD22	15:K:83:VAL:HG11	1.48	0.93
11:H:40:PHE:CE1	16:L:132:PHE:HE1	1.87	0.92
15:K:65:THR:HG21	21:K:101:BCR:C19	2.01	0.90
16:L:11:GLU:O	16:L:11:GLU:HG2	1.71	0.90
18:2:305:CHL:NA	21:2:317:BCR:H383	1.86	0.90
30:1:301:HOH:O	14:B:313:ARG:HB2	1.73	0.86
11:H:40:PHE:CE1	16:L:132:PHE:CE1	2.63	0.85
16:L:56:VAL:HG11	16:L:146:TYR:OH	1.75	0.84
21:A:848:BCR:H362	17:A:850:CLA:H42	1.58	0.83
17:A:808:CLA:HBB1	21:J:103:BCR:H23C	1.62	0.80
17:A:841:CLA:H151	16:L:82:LEU:HD21	1.62	0.80
16:L:145:LEU:CD1	17:L:304:CLA:CED	2.32	0.79
4:3:11:MET:HE1	30:A:920:HOH:O	1.82	0.78
11:H:40:PHE:HE1	16:L:132:PHE:CE1	2.00	0.78
17:A:820:CLA:HMA1	17:A:824:CLA:NC	1.97	0.78
4:3:186:ILE:HG21	20:3:316:XAT:H12	1.66	0.78
15:K:83:VAL:HG13	15:K:84:ILE:HG23	1.66	0.75
15:K:65:THR:HG21	21:K:101:BCR:C18	2.16	0.75
21:A:844:BCR:H362	21:A:845:BCR:H21C	1.68	0.75
2:1:54:VAL:HG11	19:1:215:LUT:H12	1.69	0.74
17:A:802:CLA:HBB1	17:A:850:CLA:C4B	1.98	0.74
5:A:256:PHE:HA	17:K:104:CLA:HBC3	1.71	0.73
15:K:78:LEU:CD2	15:K:83:VAL:HG11	2.17	0.73
5:A:296:PHE:HE1	17:A:820:CLA:HAB	1.54	0.71
18:2:301:CHL:HMD1	21:3:317:BCR:HC21	1.72	0.71
15:K:78:LEU:HB3	15:K:83:VAL:HG12	1.72	0.71
18:2:305:CHL:C4A	21:2:317:BCR:H383	2.19	0.71
14:B:661:MET:HB3	17:B:804:CLA:C1C	2.21	0.71
3:2:101:LEU:HA	21:2:317:BCR:H351	1.72	0.70
5:A:502:GLY:HA2	5:A:516:PRO:HB3	1.72	0.70
11:H:37:SER:O	11:H:41:LYS:HG2	1.91	0.70
3:2:174:VAL:HG11	20:2:316:XAT:H12	1.73	0.69
21:I:101:BCR:H281	17:B:804:CLA:H122	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:671:TRP:CD2	25:A:801:CL0:H5	2.27	0.69
17:1:208:CLA:HBA1	24:G:107:PGT:H321	1.75	0.68
17:B:813:CLA:H71	17:B:813:CLA:HBB1	1.75	0.68
17:B:824:CLA:HAB	17:B:831:CLA:HMD2	1.75	0.68
21:4:318:BCR:HC8	21:4:318:BCR:H311	1.76	0.68
3:2:51:ARG:HD2	20:2:316:XAT:H15	1.77	0.67
9:F:22:LEU:O	9:F:26:GLU:HG2	1.94	0.67
15:K:78:LEU:CB	15:K:83:VAL:CG1	2.71	0.67
21:2:317:BCR:H321	21:2:317:BCR:HC8	1.77	0.66
5:A:127:ARG:HG3	9:F:38:PRO:HB3	1.77	0.66
17:A:850:CLA:H11	14:B:615:LEU:HD12	1.77	0.66
15:K:78:LEU:HB3	15:K:83:VAL:HG11	1.74	0.66
3:2:51:ARG:HD3	20:2:316:XAT:H201	1.76	0.66
3:2:37:ASP:HB2	3:2:40:SER:HB2	1.78	0.65
15:K:66:VAL:HG21	21:K:101:BCR:C40	2.24	0.65
15:K:78:LEU:CB	15:K:83:VAL:HG11	2.27	0.65
17:A:820:CLA:HMA1	17:A:824:CLA:C1C	2.26	0.65
16:L:4:ASP:CG	16:L:7:ILE:HG12	2.22	0.64
2:1:164:ASN:HB3	2:1:176:LEU:HD13	1.79	0.64
5:A:571:ARG:HG2	6:C:76:GLY:HA3	1.79	0.63
13:J:10:VAL:HG12	13:J:12:PRO:HD2	1.80	0.63
14:B:661:MET:HB3	17:B:804:CLA:C2C	2.29	0.63
18:4:306:CHL:HBA2	22:4:320:LMG:H142	1.81	0.62
14:B:282:ILE:HG12	17:B:823:CLA:H201	1.82	0.62
17:G:105:CLA:NC	21:G:106:BCR:H281	2.15	0.62
2:1:136:ASP:HB3	2:1:139:LYS:HB2	1.82	0.62
17:A:830:CLA:HBB2	17:A:838:CLA:HAB	1.80	0.62
16:L:7:ILE:HG22	16:L:7:ILE:O	1.98	0.62
18:2:305:CHL:HAA1	21:2:317:BCR:H372	1.82	0.61
30:C:212:HOH:O	7:D:123:ILE:HG22	1.99	0.61
7:D:128:THR:HG22	30:B:981:HOH:O	1.99	0.61
11:H:70:VAL:CG1	12:I:5:ILE:HD11	2.31	0.61
17:A:814:CLA:HBA2	21:K:101:BCR:HC32	1.83	0.61
15:K:65:THR:HG23	21:K:105:BCR:H343	1.82	0.61
17:A:809:CLA:HBB2	17:A:812:CLA:HMA3	1.83	0.61
11:H:70:VAL:HG13	12:I:5:ILE:HD11	1.83	0.61
17:B:818:CLA:HBA2	17:B:827:CLA:HBB2	1.83	0.60
7:D:128:THR:CG2	30:B:981:HOH:O	2.49	0.60
4:3:192:GLN:HE22	19:3:315:LUT:H41	1.65	0.60
1:4:117:LEU:HD23	30:4:408:HOH:O	2.01	0.60
1:4:7:LEU:HD13	17:4:301:CLA:HMA3	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:A:808:CLA:HAB	17:B:832:CLA:HMD2	1.84	0.60
17:B:807:CLA:H151	17:B:829:CLA:HBB2	1.83	0.60
18:2:307:CHL:H11	19:2:315:LUT:H383	1.83	0.60
2:1:173:PRO:HA	2:1:176:LEU:HD12	1.84	0.60
5:A:529:ILE:HD12	25:A:801:CL0:H63	1.84	0.60
15:K:78:LEU:CG	15:K:83:VAL:HG11	2.31	0.60
17:A:852:CLA:HMB1	17:A:852:CLA:HBB1	1.84	0.60
16:L:145:LEU:HD11	17:L:304:CLA:HED3	0.68	0.60
3:2:51:ARG:HG2	3:2:51:ARG:HH11	1.67	0.59
11:H:40:PHE:CD1	16:L:132:PHE:CE1	2.90	0.59
15:K:66:VAL:CG2	21:K:101:BCR:H402	2.25	0.59
14:B:158:PRO:HA	14:B:161:LYS:HE2	1.84	0.59
17:A:852:CLA:C4B	17:B:804:CLA:HBB1	1.99	0.59
14:B:720:TYR:HB2	17:B:803:CLA:HED2	1.84	0.59
4:3:121:LEU:HB2	17:3:307:CLA:HMA1	1.84	0.59
14:B:475:VAL:HG22	14:B:476:LEU:H	1.67	0.59
17:3:301:CLA:HAB	20:3:316:XAT:H32	1.85	0.58
9:F:123:VAL:O	9:F:127:THR:HG23	2.02	0.58
21:2:317:BCR:H393	21:2:317:BCR:H371	1.86	0.58
3:2:50:SER:HA	3:2:53:ARG:HG2	1.85	0.58
17:A:828:CLA:H61	21:A:845:BCR:H342	1.84	0.58
21:G:106:BCR:H312	21:B:841:BCR:H362	1.86	0.58
15:K:65:THR:CG2	21:K:101:BCR:C19	2.80	0.58
16:L:145:LEU:HD13	17:L:304:CLA:HED3	1.71	0.58
17:2:310:CLA:HAB	21:3:317:BCR:H312	1.86	0.58
9:F:25:LEU:HB3	9:F:46:MET:HE2	1.84	0.58
1:4:68:LEU:HD22	1:4:70:ILE:HG13	1.86	0.58
16:L:154:VAL:HG12	17:L:304:CLA:HAA2	1.86	0.58
10:G:29:VAL:HG12	17:B:822:CLA:HED2	1.86	0.57
16:L:152:TYR:HB3	16:L:154:VAL:HG13	1.85	0.57
14:B:282:ILE:HG23	17:B:823:CLA:H191	1.85	0.57
11:H:41:LYS:HD3	16:L:38:LEU:HD21	1.87	0.57
1:4:117:LEU:CD2	30:4:408:HOH:O	2.53	0.57
17:B:818:CLA:HAC2	17:B:825:CLA:H201	1.87	0.57
17:A:829:CLA:H42	23:A:843:LHG:H262	1.87	0.57
17:3:303:CLA:C1C	21:3:317:BCR:H281	2.33	0.56
9:F:84:ILE:HG12	30:F:310:HOH:O	2.05	0.56
28:G:102:LMT:H12	24:G:107:PGT:H331	1.86	0.56
17:B:820:CLA:HMA2	17:B:825:CLA:C1C	2.30	0.56
17:A:824:CLA:H42	17:A:828:CLA:H193	1.88	0.56
14:B:173:ARG:HB2	17:B:814:CLA:HBC2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:B:274:HIS:HB3	17:B:818:CLA:HMB2	1.87	0.56
17:B:804:CLA:H143	21:B:846:BCR:H362	1.87	0.56
23:2:318:LHG:H271	23:2:318:LHG:HC82	1.88	0.56
5:A:563:ARG:HD3	5:A:713:VAL:HG11	1.88	0.56
9:F:43:LYS:HA	9:F:46:MET:HG3	1.88	0.56
25:A:801:CL0:H15	25:A:801:CL0:H11	1.86	0.56
17:A:839:CLA:HAB	17:A:839:CLA:H112	1.88	0.55
16:L:36:PRO:HA	16:L:39:ARG:HD3	1.88	0.55
14:B:300:ILE:HG23	17:B:820:CLA:HED3	1.88	0.55
13:J:31:ARG:HD3	21:J:101:BCR:H312	1.87	0.55
4:3:72:LYS:HD3	4:3:201:PHE:HE2	1.72	0.55
17:A:835:CLA:HBA2	17:K:103:CLA:H2	1.89	0.55
14:B:489:ARG:HA	14:B:493:LEU:HB2	1.89	0.55
15:K:78:LEU:HD22	15:K:83:VAL:CG1	2.31	0.55
1:4:196:ILE:HG21	3:2:92:SER:HB3	1.89	0.55
1:4:108:MET:HE1	2:1:8:MET:HG2	1.88	0.55
4:3:118:TYR:HE1	17:3:314:CLA:NC	2.05	0.55
9:F:90:TYR:HB2	21:F:202:BCR:H321	1.89	0.55
14:B:128:LEU:HD23	17:B:815:CLA:HED2	1.89	0.55
16:L:4:ASP:OD2	16:L:7:ILE:HG12	2.06	0.54
14:B:21:TRP:CG	14:B:703:GLN:HE22	2.25	0.54
17:A:841:CLA:H143	21:L:301:BCR:H17C	1.88	0.54
16:L:121:GLU:H	16:L:121:GLU:CD	2.15	0.54
17:A:812:CLA:HAA2	17:A:824:CLA:H52	1.89	0.54
10:G:29:VAL:HG11	17:B:822:CLA:H2A	1.89	0.54
12:I:10:VAL:HG21	17:B:808:CLA:H12	1.90	0.54
11:H:40:PHE:HE1	16:L:132:PHE:CZ	2.26	0.54
17:A:807:CLA:H143	17:A:850:CLA:H191	1.90	0.54
9:F:16:LYS:O	9:F:20:GLN:HG3	2.08	0.54
17:B:839:CLA:H192	16:L:88:MET:HE1	1.89	0.54
17:2:302:CLA:HBC1	23:2:318:LHG:H281	1.89	0.54
17:A:850:CLA:HBB1	17:A:850:CLA:HMB1	1.90	0.54
24:G:107:PGT:H11	17:B:823:CLA:HAA2	1.89	0.54
14:B:230:ASN:HA	17:B:817:CLA:HAA2	1.90	0.54
17:K:104:CLA:HBA1	21:K:105:BCR:H362	1.89	0.54
5:A:653:TYR:HB2	30:A:936:HOH:O	2.08	0.53
23:1:220:LHG:HC42	17:B:801:CLA:HBA1	1.89	0.53
3:2:143:PHE:HZ	18:2:307:CHL:NB	2.05	0.53
1:4:24:PHE:HZ	22:4:319:LMG:HC2	1.74	0.53
11:H:27:ALA:HB2	16:L:112:LYS:NZ	2.22	0.53
17:A:819:CLA:H3A	15:K:61:LEU:HD11	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:4:196:ILE:HD11	3:2:96:ILE:HG13	1.90	0.52
17:2:312:CLA:H142	23:2:318:LHG:H141	1.91	0.52
14:B:731:LYS:NZ	30:B:902:HOH:O	2.42	0.52
5:A:273:LEU:HD21	5:A:366:PRO:HD2	1.91	0.52
17:A:851:CLA:H101	13:J:16:THR:HA	1.90	0.52
6:C:56:CYS:HB3	6:C:61:LEU:HB3	1.92	0.52
17:B:820:CLA:HMA2	17:B:825:CLA:C4B	2.38	0.52
17:4:302:CLA:H71	17:4:303:CLA:HMA1	1.91	0.52
7:D:10:THR:HG23	7:D:58:PRO:HB2	1.90	0.52
14:B:164:VAL:HG23	30:B:1008:HOH:O	2.09	0.52
17:B:814:CLA:H161	21:B:842:BCR:H271	1.92	0.52
14:B:394:ILE:HD13	14:B:554:TYR:HA	1.91	0.52
1:4:59:ILE:HG23	1:4:76:TRP:CD1	2.43	0.52
3:2:145:PRO:HD2	19:2:315:LUT:H23	1.91	0.52
14:B:406:VAL:O	14:B:410:MET:HG2	2.10	0.52
16:L:98:GLU:HG3	16:L:99:PRO:HD2	1.91	0.52
14:B:14:ASP:HB3	14:B:19:ARG:HB2	1.92	0.51
5:A:296:PHE:CE1	17:A:820:CLA:HAB	2.41	0.51
5:A:208:GLN:HA	5:A:212:SER:HB2	1.92	0.51
28:G:102:LMT:H11	17:B:823:CLA:H43	1.92	0.51
5:A:110:TRP:CD2	17:A:808:CLA:HED3	2.45	0.51
17:B:824:CLA:H121	21:B:844:BCR:H332	1.92	0.51
1:4:52:ALA:O	1:4:56:VAL:HG23	2.11	0.51
17:A:829:CLA:H18	17:A:840:CLA:H3A	1.92	0.51
17:A:807:CLA:HAB	17:A:827:CLA:H111	1.91	0.51
11:H:70:VAL:HG23	11:H:71:THR:HG23	1.92	0.51
17:B:829:CLA:H171	21:B:842:BCR:H352	1.93	0.51
3:2:143:PHE:HZ	18:2:307:CHL:C1B	2.23	0.51
14:B:714:VAL:HG22	29:B:848:DGD:HBV2	1.92	0.51
1:4:53:GLN:OE1	17:4:309:CLA:HAB	2.11	0.50
18:2:301:CHL:HAB	23:2:318:LHG:H272	1.92	0.50
14:B:275:HIS:HB2	17:B:818:CLA:C1B	2.41	0.50
1:4:55:GLY:HA2	20:4:317:XAT:H181	1.93	0.50
17:A:805:CLA:H71	17:A:829:CLA:HBC3	1.92	0.50
2:1:82:CYS:HB2	2:1:89:VAL:HB	1.92	0.50
5:A:671:TRP:CG	25:A:801:CL0:H5	2.46	0.50
18:4:305:CHL:H43	21:4:318:BCR:H17C	1.94	0.50
3:2:138:PRO:HB3	18:2:307:CHL:HBC2	1.92	0.50
15:K:8:ASN:HA	17:K:104:CLA:OBD	2.11	0.50
15:K:65:THR:HG23	21:K:105:BCR:C34	2.42	0.50
1:4:56:VAL:HG13	1:4:168:PHE:CE2	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:K:66:VAL:CG2	21:K:101:BCR:C23	2.89	0.50
17:4:310:CLA:HAB	21:2:317:BCR:HC22	1.93	0.50
5:A:589:TRP:HE1	17:B:804:CLA:C1D	2.24	0.50
15:K:23:ARG:HG2	17:K:102:CLA:C3B	2.41	0.50
3:2:134:GLU:HG3	3:2:160:ARG:HH22	1.77	0.49
5:A:288:HIS:HB2	17:A:817:CLA:C1B	2.42	0.49
17:4:310:CLA:HAB	21:2:317:BCR:H322	1.93	0.49
17:A:852:CLA:H191	17:B:810:CLA:H2	1.94	0.49
8:E:1:ALA:N	30:E:101:HOH:O	2.44	0.49
16:L:11:GLU:CD	16:L:11:GLU:H	2.20	0.49
16:L:145:LEU:HD12	16:L:145:LEU:N	2.28	0.49
17:4:314:CLA:HED1	23:1:218:LHG:H321	1.93	0.49
5:A:299:ALA:HB2	17:A:820:CLA:HBC2	1.95	0.49
16:L:13:PRO:O	16:L:17:SER:HB2	2.13	0.49
2:1:47:CYS:HB3	2:1:151:GLY:HA3	1.94	0.49
17:A:841:CLA:H152	16:L:78:LEU:HD11	1.94	0.49
2:1:156:LEU:HD11	23:1:218:LHG:H332	1.95	0.49
17:G:105:CLA:C4C	21:G:106:BCR:H281	2.43	0.49
17:B:819:CLA:H122	17:B:825:CLA:H171	1.95	0.49
5:A:112:ILE:HB	21:J:101:BCR:H322	1.95	0.49
5:A:669:PHE:CG	21:A:848:BCR:H363	2.48	0.49
3:2:56:GLN:OE1	17:2:309:CLA:HAB	2.11	0.49
5:A:571:ARG:HG3	6:C:48:VAL:HB	1.94	0.49
14:B:25:ALA:HB2	29:B:848:DGD:HA32	1.94	0.49
21:L:301:BCR:H352	17:L:303:CLA:HAB	1.95	0.49
2:1:101:MET:HE1	18:1:206:CHL:OMC	2.13	0.48
5:A:432:LEU:HD22	17:A:838:CLA:HBB1	1.95	0.48
17:A:807:CLA:C3D	17:A:827:CLA:HBA2	2.43	0.48
17:A:828:CLA:HBB1	17:A:828:CLA:HMB1	1.95	0.48
17:B:835:CLA:HMB1	17:B:835:CLA:HBB1	1.95	0.48
15:K:60:THR:HG21	17:K:102:CLA:H3A	1.95	0.48
4:3:134:TRP:CH2	4:3:136:LEU:HD23	2.48	0.48
4:3:195:VAL:HG22	17:A:814:CLA:H12	1.95	0.48
5:A:342:ALA:HB1	21:A:846:BCR:H393	1.94	0.48
10:G:29:VAL:HG11	17:B:822:CLA:HMA1	1.95	0.48
2:1:107:PHE:CZ	21:1:217:BCR:H10C	2.48	0.48
3:2:54:TRP:CE2	17:2:308:CLA:HBC3	2.49	0.48
16:L:4:ASP:OD2	16:L:7:ILE:CG1	2.62	0.48
5:A:340:TRP:HB3	17:A:804:CLA:HAC1	1.96	0.48
5:A:669:PHE:CD1	21:A:848:BCR:H363	2.49	0.48
1:4:42:VAL:HG12	1:4:43:MET:HE2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:A:834:CLA:H161	17:A:838:CLA:H112	1.95	0.48
17:B:838:CLA:HBB2	26:B:840:PQN:H141	1.95	0.48
17:A:819:CLA:HHB	15:K:61:LEU:CD1	2.43	0.48
15:K:78:LEU:CB	15:K:83:VAL:HG12	2.41	0.48
15:K:83:VAL:HG13	15:K:84:ILE:N	2.29	0.48
17:A:837:CLA:H62	17:A:837:CLA:H41	1.62	0.48
7:D:24:ARG:HG3	7:D:24:ARG:HH11	1.79	0.48
11:H:36:GLN:HB2	17:H:201:CLA:C4C	2.43	0.48
17:B:829:CLA:H203	21:B:842:BCR:H321	1.96	0.48
5:A:710:LEU:HB3	5:A:714:GLN:HG2	1.96	0.48
7:D:32:TRP:HZ2	7:D:88:ARG:HH21	1.62	0.48
14:B:492:TRP:CE2	17:B:818:CLA:H43	2.48	0.48
11:H:41:LYS:HD2	16:L:37:LEU:HD23	1.95	0.48
17:1:204:CLA:CHC	21:1:217:BCR:H393	2.43	0.48
3:2:27:PHE:HZ	3:2:165:LYS:HE2	1.78	0.48
21:L:305:BCR:H392	21:L:305:BCR:H23C	1.96	0.48
5:A:527:HIS:CG	17:A:837:CLA:HED3	2.49	0.47
17:A:802:CLA:CBB	17:A:850:CLA:C4B	2.84	0.47
17:A:838:CLA:H18	21:A:846:BCR:HC8	1.95	0.47
17:A:823:CLA:H52	17:A:838:CLA:H12	1.97	0.47
17:A:824:CLA:HBD	17:A:824:CLA:HAA2	1.96	0.47
17:B:820:CLA:HMB2	17:B:825:CLA:HMA3	1.94	0.47
1:4:100:PHE:CZ	17:4:314:CLA:C4D	2.93	0.47
21:2:317:BCR:H371	21:2:317:BCR:C39	2.43	0.47
5:A:575:CYS:HB2	14:B:666:TRP:HB3	1.97	0.47
17:A:819:CLA:HBB1	21:K:105:BCR:H342	1.96	0.47
21:F:202:BCR:H323	17:F:206:CLA:HAB	1.96	0.47
1:4:156:ALA:HB2	22:4:319:LMG:HC5	1.96	0.47
5:A:195:GLY:O	5:A:199:LEU:HB2	2.14	0.47
5:A:408:TYR:CE2	5:A:410:PRO:HD3	2.49	0.47
17:1:211:CLA:H62	17:1:211:CLA:H41	1.79	0.47
5:A:364:SER:OG	17:A:826:CLA:HAC2	2.15	0.47
17:A:803:CLA:H2	17:A:810:CLA:H92	1.97	0.47
17:A:809:CLA:C4B	17:A:812:CLA:H151	2.45	0.47
17:A:818:CLA:HAB	17:A:818:CLA:H8	1.96	0.47
6:C:73:ARG:HD3	30:C:206:HOH:O	2.13	0.47
15:K:66:VAL:HG22	21:K:101:BCR:H23C	1.96	0.47
17:1:203:CLA:HBA2	17:1:203:CLA:HBD	1.97	0.47
5:A:432:LEU:HD21	5:A:538:VAL:HG12	1.96	0.47
8:E:12:LYS:HB3	8:E:63:GLU:HG2	1.96	0.47
21:B:842:BCR:H382	21:B:842:BCR:H23C	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:3:310:CLA:HMA1	17:3:310:CLA:H2	1.97	0.47
14:B:368:ALA:HB1	14:B:724:LEU:HD11	1.97	0.47
17:B:825:CLA:H92	17:B:827:CLA:H42	1.96	0.47
3:2:101:LEU:HB3	21:2:317:BCR:H17C	1.97	0.47
23:1:220:LHG:HC31	14:B:310:PRO:HG2	1.96	0.46
17:A:829:CLA:H162	17:A:829:CLA:H122	1.75	0.46
17:F:201:CLA:HMC2	21:F:202:BCR:H381	1.98	0.46
1:4:136:GLY:HA2	1:4:140:ASN:HB2	1.96	0.46
17:A:840:CLA:O1A	23:A:843:LHG:H131	2.15	0.46
21:K:101:BCR:C11	21:K:105:BCR:H333	2.45	0.46
17:A:832:CLA:H143	26:B:840:PQN:H191	1.97	0.46
14:B:519:HIS:CG	17:B:836:CLA:HED3	2.49	0.46
2:1:101:MET:HE2	17:1:205:CLA:NB	2.31	0.46
11:H:65:LEU:HD21	12:I:12:LEU:HD12	1.98	0.46
14:B:373:HIS:HB2	17:B:828:CLA:C1B	2.45	0.46
14:B:518:VAL:HG21	14:B:592:TYR:HB2	1.97	0.46
17:B:822:CLA:H61	17:B:822:CLA:H41	1.75	0.46
29:B:848:DGD:HG32	30:B:929:HOH:O	2.16	0.46
18:1:201:CHL:HAB	23:1:218:LHG:H282	1.97	0.46
17:A:831:CLA:HAA1	16:L:15:THR:HG22	1.98	0.46
17:A:834:CLA:HBA2	21:A:847:BCR:H291	1.96	0.46
17:A:821:CLA:HMD2	21:K:101:BCR:H24C	1.97	0.46
15:K:11:MET:HE1	15:K:68:HIS:HA	1.98	0.46
17:4:312:CLA:H52	17:4:312:CLA:C1C	2.46	0.46
3:2:171:MET:HB3	20:2:316:XAT:C35	2.46	0.46
25:A:801:CL0:H72	25:A:801:CL0:H10	1.60	0.46
9:F:71:LEU:HD22	9:F:82:GLU:HG2	1.97	0.46
2:1:180:HIS:CG	17:1:212:CLA:HAA2	2.51	0.45
9:F:74:CYS:HB3	14:B:457:ILE:HG21	1.98	0.45
14:B:693:ARG:HG3	17:B:838:CLA:HED2	1.98	0.45
3:2:53:ARG:HG3	18:2:307:CHL:CGD	2.47	0.45
6:C:60:PHE:CD2	8:E:17:GLU:HB2	2.51	0.45
6:C:61:LEU:H	6:C:61:LEU:HG	1.42	0.45
17:B:825:CLA:HBD	17:B:825:CLA:HAA2	1.98	0.45
1:4:196:ILE:H	1:4:196:ILE:HD12	1.82	0.45
17:3:303:CLA:CHC	21:3:317:BCR:H393	2.46	0.45
5:A:461:ASP:HB3	17:A:833:CLA:HED3	1.99	0.45
5:A:676:MET:HB2	17:A:802:CLA:C1C	2.46	0.45
10:G:10:SER:HB2	10:G:82:ALA:HB2	1.98	0.45
17:1:203:CLA:H61	17:1:203:CLA:H41	1.56	0.45
5:A:665:LEU:HD11	14:B:616:MET:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:A:810:CLA:H3A	17:A:810:CLA:HBA2	1.64	0.45
17:A:832:CLA:HAA2	21:L:301:BCR:C14	2.46	0.45
17:L:302:CLA:HMB2	17:L:303:CLA:HMA2	1.97	0.45
17:4:310:CLA:HMC3	21:2:317:BCR:H333	1.97	0.45
17:1:202:CLA:CBB	20:1:216:XAT:H32	2.47	0.45
3:2:108:ARG:HA	3:2:108:ARG:HD2	1.84	0.45
17:B:809:CLA:H122	17:B:828:CLA:H151	1.98	0.45
11:H:57:LEU:HD13	16:L:84:ILE:HG13	1.99	0.45
2:1:46:HIS:HD2	20:1:216:XAT:H15	1.80	0.45
15:K:23:ARG:HG2	17:K:102:CLA:HAB	1.98	0.45
2:1:189:LEU:HD23	2:1:192:VAL:HB	1.99	0.45
17:1:204:CLA:C1C	21:1:217:BCR:H281	2.38	0.45
17:A:830:CLA:CBB	17:A:838:CLA:HAB	2.47	0.45
14:B:68:ALA:HB2	14:B:134:LEU:HB2	1.99	0.45
2:1:52:LEU:HD23	2:1:52:LEU:HA	1.83	0.45
5:A:189:LEU:HD12	5:A:313:LEU:HD11	1.99	0.45
17:A:817:CLA:HBA2	17:A:817:CLA:H3A	1.80	0.45
9:F:23:LYS:HE2	9:F:23:LYS:HB2	1.76	0.45
1:4:93:ILE:HD11	2:1:193:ASN:HD22	1.81	0.45
24:1:221:PGT:H362	24:G:107:PGT:H341	1.99	0.45
5:A:160:PHE:O	5:A:164:MET:HG2	2.16	0.45
17:A:817:CLA:HBC1	17:A:826:CLA:H191	1.98	0.45
24:G:107:PGT:O31	17:B:823:CLA:HBA1	2.17	0.45
13:J:14:LEU:HD12	13:J:14:LEU:HA	1.78	0.45
17:B:801:CLA:H52	17:B:824:CLA:HBB2	1.99	0.45
5:A:420:ARG:CD	30:A:941:HOH:O	2.41	0.44
16:L:153:TYR:CD1	16:L:153:TYR:N	2.85	0.44
3:2:49:LEU:HD11	3:2:137:TYR:CZ	2.52	0.44
17:3:303:CLA:C4B	21:3:317:BCR:H281	2.47	0.44
14:B:89:ALA:HA	14:B:112:VAL:HG12	1.98	0.44
2:1:105:ILE:HA	2:1:108:VAL:HG22	1.99	0.44
17:A:807:CLA:H71	21:J:103:BCR:H343	1.98	0.44
9:F:96:TRP:CD1	9:F:133:GLY:HA3	2.53	0.44
21:J:103:BCR:H24C	21:J:103:BCR:H371	1.87	0.44
17:B:810:CLA:H102	17:B:828:CLA:H193	1.99	0.44
16:L:56:VAL:CG1	16:L:146:TYR:OH	2.58	0.44
5:A:533:THR:HB	5:A:593:SER:HB2	2.00	0.44
16:L:26:ASN:HB3	17:L:302:CLA:HAC1	2.00	0.44
15:K:23:ARG:HG2	17:K:102:CLA:CAB	2.46	0.44
17:A:818:CLA:CAD	17:A:828:CLA:H41	2.48	0.44
24:G:107:PGT:H2	17:B:823:CLA:CGA	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:B:343:ILE:CG1	17:B:825:CLA:H42	2.48	0.44
17:B:831:CLA:H3A	17:B:831:CLA:HBA2	1.60	0.44
17:4:310:CLA:CHC	21:2:317:BCR:HC42	2.47	0.44
5:A:110:TRP:HB3	21:J:101:BCR:HC21	2.00	0.44
5:A:474:PHE:HB3	17:A:836:CLA:H12	2.00	0.44
26:A:842:PQN:H193	21:F:202:BCR:H382	1.99	0.44
21:F:202:BCR:H24C	21:F:202:BCR:H371	1.86	0.44
17:4:301:CLA:HMC2	22:4:319:LMG:HC8	1.99	0.44
17:A:809:CLA:HBA1	17:A:811:CLA:HMD3	2.00	0.44
14:B:157:GLN:HB2	14:B:160:TRP:HE3	1.82	0.44
16:L:152:TYR:CB	16:L:154:VAL:HG13	2.47	0.44
15:K:9:LEU:O	15:K:13:THR:HG22	2.18	0.44
1:4:24:PHE:HE2	30:4:405:HOH:O	1.99	0.43
5:A:78:TRP:O	5:A:82:MET:HG2	2.18	0.43
17:A:802:CLA:O1A	14:B:429:GLY:HA3	2.18	0.43
17:A:850:CLA:H41	17:A:850:CLA:H71	2.00	0.43
17:B:829:CLA:HBA2	17:B:829:CLA:H3A	1.75	0.43
2:1:157:ALA:HA	17:1:212:CLA:HBB1	2.01	0.43
17:2:302:CLA:H51	17:2:303:CLA:H3A	1.99	0.43
5:A:112:ILE:HG13	5:A:113:VAL:HG13	2.00	0.43
17:A:804:CLA:H51	17:A:812:CLA:H12	2.00	0.43
14:B:364:PHE:HB3	14:B:601:TRP:CZ3	2.53	0.43
15:K:13:THR:O	15:K:17:LEU:HD23	2.18	0.43
3:2:51:ARG:HE	17:2:308:CLA:HMD2	1.83	0.43
17:A:833:CLA:H101	17:L:303:CLA:CBB	2.47	0.43
2:1:156:LEU:HD11	23:1:218:LHG:H302	2.00	0.43
3:2:128:CYS:HB3	18:2:314:CHL:C2D	2.48	0.43
17:4:301:CLA:OBD	3:2:108:ARG:HD3	2.17	0.43
17:4:301:CLA:HAA1	22:4:319:LMG:H332	2.01	0.43
2:1:27:LEU:HD22	23:1:220:LHG:HC92	1.99	0.43
5:A:194:ALA:HB2	5:A:300:GLY:HA3	2.00	0.43
5:A:384:HIS:HB2	17:A:827:CLA:CHB	2.48	0.43
6:C:79:TYR:HE1	14:B:675:GLU:HG3	1.83	0.43
9:F:136:TRP:CD1	9:F:137:PRO:HD3	2.53	0.43
17:B:824:CLA:HBA1	21:B:844:BCR:H14C	1.99	0.43
3:2:37:ASP:OD2	13:J:2:ARG:HG3	2.19	0.43
10:G:62:ASN:ND2	10:G:64:VAL:HG22	2.33	0.43
14:B:117:SER:HA	17:B:828:CLA:HMA2	2.00	0.43
14:B:661:MET:HE2	17:B:804:CLA:NB	2.33	0.43
14:B:282:ILE:HD13	17:B:820:CLA:H191	2.01	0.43
14:B:338:ALA:HB2	21:B:845:BCR:H372	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:4:312:CLA:H41	17:4:312:CLA:H61	1.82	0.43
17:2:309:CLA:H52	19:2:315:LUT:H30	2.00	0.43
5:A:350:MET:HG3	17:A:824:CLA:HHB	1.99	0.43
21:G:106:BCR:H24C	21:G:106:BCR:H371	1.89	0.43
21:J:101:BCR:H371	21:J:101:BCR:H24C	1.85	0.43
14:B:321:LEU:HD23	14:B:321:LEU:HA	1.84	0.43
21:A:846:BCR:H20C	21:A:846:BCR:H361	1.90	0.43
17:A:850:CLA:HBC2	14:B:584:ASN:HB2	2.01	0.43
14:B:259:GLY:HA3	30:B:1045:HOH:O	2.17	0.43
17:B:820:CLA:H61	17:B:820:CLA:H41	1.84	0.43
23:1:218:LHG:H102	23:1:218:LHG:H292	2.00	0.42
5:A:630:SER:O	5:A:636:GLY:HA3	2.18	0.42
9:F:43:LYS:O	9:F:47:GLU:HG2	2.19	0.42
1:4:29:LEU:HG	20:4:317:XAT:H221	2.01	0.42
1:4:107:TRP:HB2	17:4:308:CLA:HMA1	2.01	0.42
5:A:725:LEU:HD22	17:A:840:CLA:HMA1	2.01	0.42
17:A:807:CLA:CHC	17:A:808:CLA:HMD2	2.49	0.42
17:A:828:CLA:C4B	21:A:845:BCR:HC32	2.49	0.42
17:A:829:CLA:H202	17:A:829:CLA:H151	2.01	0.42
21:F:205:BCR:HC8	17:F:206:CLA:H142	2.02	0.42
14:B:421:LEU:HD13	14:B:531:LEU:HA	2.00	0.42
14:B:661:MET:HE2	17:B:804:CLA:C1B	2.48	0.42
14:B:208:TRP:CE2	17:B:815:CLA:H42	2.54	0.42
14:B:428:LEU:HD11	17:B:836:CLA:HMB2	2.01	0.42
15:K:78:LEU:O	15:K:83:VAL:HG12	2.19	0.42
3:2:101:LEU:HB3	21:2:317:BCR:H15C	2.00	0.42
11:H:50:ARG:HG2	16:L:124:ALA:HB2	2.00	0.42
17:1:208:CLA:HAA2	24:1:221:PGT:H32	2.02	0.42
5:A:96:LEU:HD23	5:A:96:LEU:HA	1.88	0.42
6:C:60:PHE:HZ	14:B:548:ASP:CG	2.27	0.42
9:F:136:TRP:CG	9:F:137:PRO:HD3	2.55	0.42
14:B:492:TRP:NE1	17:B:818:CLA:H43	2.34	0.42
4:3:11:MET:HE2	4:3:33:ASN:HD22	1.84	0.42
6:C:14:THR:HG22	6:C:27:MET:HG3	2.01	0.42
9:F:97:ILE:HD13	17:F:203:CLA:C4C	2.45	0.42
11:H:31:PRO:HG3	16:L:31:ARG:CZ	2.50	0.42
17:B:820:CLA:HMA2	17:B:825:CLA:CHC	2.49	0.42
3:2:168:ARG:HA	3:2:171:MET:HG3	2.01	0.42
5:A:26:PHE:HB3	17:A:803:CLA:HED2	2.02	0.42
5:A:423:ARG:HD2	7:D:17:GLY:O	2.20	0.42
14:B:123:TRP:HB3	14:B:128:LEU:HD12	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:58:MET:SD	17:3:308:CLA:HAB	2.60	0.42
5:A:292:ILE:HD13	5:A:292:ILE:HA	1.83	0.42
17:A:804:CLA:H161	17:A:804:CLA:H122	1.90	0.42
9:F:137:PRO:HB3	17:B:802:CLA:H151	2.02	0.42
11:H:36:GLN:HB2	17:H:201:CLA:NC	2.34	0.42
17:4:303:CLA:O1A	17:4:303:CLA:HMA2	2.19	0.42
5:A:241:LEU:HD12	5:A:241:LEU:HA	1.83	0.42
9:F:105:LEU:HD23	9:F:105:LEU:HA	1.93	0.42
11:H:49:LYS:HB2	11:H:52:LEU:HB3	2.01	0.42
14:B:493:LEU:HD23	14:B:493:LEU:HA	1.82	0.42
1:4:66:GLU:OE1	1:4:72:ASN:HA	2.19	0.42
3:2:196:LEU:HD23	3:2:196:LEU:HA	1.95	0.42
14:B:267:LEU:HD13	17:B:818:CLA:HMA2	2.01	0.42
17:B:818:CLA:H8	17:B:818:CLA:NC	2.35	0.42
26:A:842:PQN:H23	17:F:201:CLA:C1B	2.50	0.41
6:C:60:PHE:HD1	6:C:60:PHE:HA	1.63	0.41
17:B:811:CLA:H42	16:L:70:ALA:HB1	2.01	0.41
15:K:65:THR:HG21	21:K:101:BCR:C20	2.45	0.41
3:2:154:GLU:CD	3:2:154:GLU:H	2.28	0.41
17:A:810:CLA:H192	23:A:843:LHG:H222	2.01	0.41
16:L:4:ASP:C	16:L:4:ASP:OD1	2.57	0.41
5:A:565:PRO:HB3	5:A:712:ILE:HB	2.01	0.41
17:A:804:CLA:H202	17:A:812:CLA:H61	2.03	0.41
6:C:21:PRO:C	7:D:70:LEU:HD23	2.45	0.41
17:B:830:CLA:H122	29:B:848:DGD:HAF1	2.03	0.41
21:L:306:BCR:H24C	21:L:306:BCR:H371	1.84	0.41
5:A:4:VAL:HG13	17:A:811:CLA:HED3	2.01	0.41
17:G:105:CLA:C4B	21:G:106:BCR:H402	2.50	0.41
17:B:819:CLA:H122	17:B:825:CLA:H202	2.01	0.41
21:K:101:BCR:H24C	21:K:101:BCR:H371	1.83	0.41
4:3:29:LEU:O	17:A:811:CLA:HBA1	2.21	0.41
4:3:156:PHE:HZ	18:3:306:CHL:NC	2.13	0.41
5:A:692:ILE:HD13	17:A:839:CLA:HMD1	2.02	0.41
1:4:183:LEU:HB2	19:4:316:LUT:H22	2.03	0.41
5:A:432:LEU:HG	5:A:539:LEU:HB2	2.02	0.41
23:A:843:LHG:H342	23:A:843:LHG:H311	1.95	0.41
11:H:38:LYS:HB2	11:H:38:LYS:HE2	1.70	0.41
14:B:60:THR:HB	14:B:141:LEU:HD13	2.02	0.41
17:B:807:CLA:H2	17:B:807:CLA:HED3	2.02	0.41
2:1:108:VAL:HG11	21:1:217:BCR:H362	2.01	0.41
14:B:350:HIS:CE1	17:B:827:CLA:NB	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:313:LEU:HD23	17:A:820:CLA:HED3	2.02	0.41
17:B:825:CLA:HMA3	17:B:825:CLA:H52	2.03	0.41
16:L:80:VAL:HG22	16:L:131:PHE:HE1	1.85	0.41
1:4:127:LEU:HD21	1:4:138:ILE:HG22	2.02	0.41
3:2:13:ALA:N	4:3:122:MET:HE1	2.36	0.41
21:2:317:BCR:H371	21:2:317:BCR:C25	2.51	0.41
5:A:543:LYS:HE3	14:B:669:TYR:CE1	2.56	0.41
17:A:840:CLA:H12	17:A:851:CLA:O1A	2.21	0.41
21:A:848:BCR:H20C	21:A:848:BCR:H361	1.85	0.41
14:B:378:ALA:O	14:B:382:MET:HG2	2.21	0.41
14:B:706:LEU:HD11	29:B:848:DGD:HB71	2.02	0.41
17:B:802:CLA:H61	17:B:802:CLA:H41	1.84	0.41
17:B:811:CLA:O1D	17:B:811:CLA:H43	2.21	0.41
17:B:818:CLA:H112	17:B:818:CLA:CHC	2.51	0.41
21:B:841:BCR:H24C	21:B:841:BCR:H371	1.92	0.41
17:2:304:CLA:C4B	21:2:317:BCR:H291	2.51	0.41
17:A:812:CLA:H91	17:A:812:CLA:H112	1.89	0.41
6:C:60:PHE:CE2	14:B:547:PRO:HB2	2.56	0.41
17:B:829:CLA:H12	21:B:842:BCR:H393	2.03	0.41
5:A:207:HIS:HB2	17:A:813:CLA:CHC	2.51	0.40
21:A:844:BCR:H361	21:A:844:BCR:H20C	1.85	0.40
11:H:50:ARG:HD2	30:L:415:HOH:O	2.21	0.40
14:B:582:MET:O	14:B:586:ILE:HG12	2.21	0.40
21:B:844:BCR:H24C	21:B:844:BCR:H371	1.88	0.40
17:A:807:CLA:H92	21:A:848:BCR:H341	2.04	0.40
17:A:808:CLA:H202	17:A:810:CLA:H111	2.01	0.40
21:A:845:BCR:H20C	21:A:845:BCR:H361	1.91	0.40
6:C:60:PHE:HD2	8:E:17:GLU:HG3	1.86	0.40
17:B:801:CLA:CGD	17:B:824:CLA:HMA1	2.51	0.40
17:B:809:CLA:H8	17:B:809:CLA:HBB1	2.03	0.40
16:L:95:LYS:HE3	16:L:95:LYS:HB2	1.80	0.40
16:L:106:THR:HG23	16:L:112:LYS:HG2	2.04	0.40
17:1:208:CLA:HAA2	24:1:221:PGT:C3	2.52	0.40
17:2:309:CLA:H62	17:2:309:CLA:H41	1.96	0.40
21:3:317:BCR:H24C	21:3:317:BCR:H371	1.90	0.40
17:A:821:CLA:CHD	21:K:101:BCR:H382	2.51	0.40
14:B:275:HIS:HB2	17:B:818:CLA:CHB	2.52	0.40
5:A:340:TRP:CD1	17:A:824:CLA:H192	2.57	0.40
5:A:354:LEU:HD11	17:A:818:CLA:H71	2.03	0.40
17:A:818:CLA:H72	17:A:818:CLA:H111	1.87	0.40
21:F:202:BCR:H20C	21:F:202:BCR:H361	1.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:B:683:ARG:HA	14:B:683:ARG:HD3	1.81	0.40
17:B:809:CLA:C1A	17:B:809:CLA:CGA	3.00	0.40
4:3:46:LEU:HD23	4:3:46:LEU:HA	1.93	0.40
5:A:107:GLN:HE22	17:A:807:CLA:C4B	2.33	0.40
5:A:439:LEU:HB3	5:A:532:PHE:HB2	2.03	0.40
17:A:820:CLA:H61	17:A:820:CLA:H2	1.94	0.40
10:G:30:VAL:HG23	17:B:822:CLA:O1D	2.21	0.40
10:G:54:TYR:O	10:G:58:LEU:HG	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	4	197/199 (99%)	194 (98%)	3 (2%)	0	100	100
2	1	194/196 (99%)	193 (100%)	1 (0%)	0	100	100
3	2	204/206 (99%)	199 (98%)	5 (2%)	0	100	100
4	3	220/222 (99%)	219 (100%)	1 (0%)	0	100	100
5	A	742/744 (100%)	730 (98%)	12 (2%)	0	100	100
6	C	76/78 (97%)	68 (90%)	8 (10%)	0	100	100
7	D	140/142 (99%)	136 (97%)	4 (3%)	0	100	100
8	E	63/65 (97%)	62 (98%)	1 (2%)	0	100	100
9	F	151/153 (99%)	150 (99%)	1 (1%)	0	100	100
10	G	96/98 (98%)	95 (99%)	1 (1%)	0	100	100
11	H	92/94 (98%)	91 (99%)	1 (1%)	0	100	100
12	I	27/29 (93%)	27 (100%)	0	0	100	100
13	J	41/44 (93%)	41 (100%)	0	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	B	730/732 (100%)	718 (98%)	12 (2%)	0	100	100
15	K	49/84 (58%)	46 (94%)	3 (6%)	0	100	100
16	L	150/153 (98%)	146 (97%)	4 (3%)	0	100	100
All	All	3172/3239 (98%)	3115 (98%)	57 (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 PDB entries followed by that with respect to all EM entries.

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	4	166/166 (100%)	161 (97%)	5 (3%)	36	53
2	1	158/158 (100%)	156 (99%)	2 (1%)	61	77
3	2	163/163 (100%)	162 (99%)	1 (1%)	78	89
4	3	171/171 (100%)	167 (98%)	4 (2%)	44	63
5	A	602/602 (100%)	597 (99%)	5 (1%)	73	86
6	C	69/69 (100%)	67 (97%)	2 (3%)	37	55
7	D	121/121 (100%)	121 (100%)	0	100	100
8	E	57/57 (100%)	56 (98%)	1 (2%)	51	70
9	F	128/128 (100%)	124 (97%)	4 (3%)	35	52
10	G	83/83 (100%)	81 (98%)	2 (2%)	43	62
11	H	76/76 (100%)	75 (99%)	1 (1%)	61	77
12	I	25/25 (100%)	25 (100%)	0	100	100
13	J	37/38 (97%)	36 (97%)	1 (3%)	39	58
14	B	598/598 (100%)	591 (99%)	7 (1%)	63	79
15	K	41/63 (65%)	40 (98%)	1 (2%)	43	62
16	L	118/119 (99%)	114 (97%)	4 (3%)	32	49
All	All	2613/2637 (99%)	2573 (98%)	40 (2%)	55	75

All (40) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	4	48	CYS
1	4	71	ILE
1	4	82	LEU
1	4	121	ILE
1	4	195	LEU
2	1	97	ILE
2	1	99	SER
3	2	204	VAL
4	3	90	ASN
4	3	109	GLN
4	3	149	SER
4	3	169	LYS
5	A	55	SER
5	A	320	HIS
5	A	363	TYR
5	A	504	ASP
5	A	613	ILE
6	C	60	PHE
6	C	61	LEU
8	E	24	THR
9	F	2	ILE
9	F	27	SER
9	F	130	LEU
9	F	152	THR
10	G	9	LEU
10	G	30	VAL
11	H	49	LYS
13	J	4	LEU
14	B	2	LEU
14	B	9	GLN
14	B	256	LEU
14	B	308	ILE
14	B	504	THR
14	B	598	ILE
14	B	630	LEU
15	K	57	LEU
16	L	35	ASP
16	L	50	LEU
16	L	112	LYS
16	L	136	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (18)

such sidechains are listed below:

Mol	Chain	Res	Type
1	4	197	ASN
2	1	45	ASN
2	1	116	GLN
3	2	181	HIS
3	2	201	HIS
4	3	96	HIS
4	3	178	ASN
5	A	216	ASN
5	A	329	HIS
8	E	32	ASN
9	F	59	HIS
9	F	116	GLN
10	G	38	GLN
10	G	96	ASN
14	B	228	GLN
14	B	235	ASN
14	B	265	GLN
14	B	607	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

207 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	$\#\|Z\| > 2$
17	CLA	3	305	4	51,55,73	1.27	4 (7%)	61,91,113	1.00	3 (4%)
17	CLA	A	825	-	69,73,73	1.07	4 (5%)	83,113,113	0.84	3 (3%)
17	CLA	3	313	-	49,53,73	1.30	3 (6%)	59,89,113	1.00	3 (5%)
17	CLA	L	304	-	54,58,73	1.22	4 (7%)	65,95,113	0.96	3 (4%)
17	CLA	3	310	4	56,60,73	1.20	4 (7%)	67,97,113	0.95	3 (4%)
17	CLA	B	816	14	64,68,73	1.07	4 (6%)	77,107,113	0.88	3 (3%)
17	CLA	B	818	14	69,73,73	1.09	5 (7%)	83,113,113	0.84	3 (3%)
21	BCR	A	844	-	41,41,41	0.30	0	56,56,56	0.39	0
21	BCR	L	301	-	41,41,41	0.31	0	56,56,56	0.38	0
17	CLA	3	302	-	54,58,73	1.22	5 (9%)	65,95,113	0.98	3 (4%)
21	BCR	4	318	-	41,41,41	0.41	0	56,56,56	0.52	0
21	BCR	F	202	-	41,41,41	0.33	0	56,56,56	0.54	0
18	CHL	4	306	-	55,59,74	1.72	8 (14%)	62,96,114	1.16	7 (11%)
17	CLA	B	814	14	69,73,73	1.05	4 (5%)	83,113,113	0.86	3 (3%)
17	CLA	4	308	1	54,58,73	1.26	4 (7%)	65,95,113	0.98	3 (4%)
21	BCR	2	317	-	41,41,41	0.59	1 (2%)	56,56,56	0.99	3 (5%)
17	CLA	A	837	5	69,73,73	1.04	3 (4%)	83,113,113	0.86	3 (3%)
21	BCR	F	205	-	41,41,41	0.32	0	56,56,56	0.41	0
17	CLA	A	817	5	69,73,73	1.09	5 (7%)	83,113,113	0.86	3 (3%)
17	CLA	B	805	14	49,53,73	1.25	4 (8%)	59,89,113	0.97	3 (5%)
17	CLA	B	828	14	69,73,73	1.07	4 (5%)	83,113,113	0.84	4 (4%)
17	CLA	A	818	5	69,73,73	1.06	4 (5%)	83,113,113	0.87	3 (3%)
21	BCR	3	317	-	41,41,41	0.36	0	56,56,56	0.53	0
17	CLA	A	816	-	69,73,73	1.08	4 (5%)	83,113,113	0.87	3 (3%)
17	CLA	4	313	1	49,53,73	1.26	4 (8%)	59,89,113	1.01	3 (5%)
17	CLA	1	207	-	53,57,73	1.26	4 (7%)	62,92,113	0.98	3 (4%)
17	CLA	B	832	14	62,66,73	1.11	5 (8%)	74,104,113	0.93	3 (4%)
17	CLA	A	806	5	69,73,73	1.04	4 (5%)	83,113,113	0.87	3 (3%)
17	CLA	A	809	5	69,73,73	1.10	4 (5%)	83,113,113	0.84	3 (3%)
17	CLA	B	839	14	69,73,73	1.09	3 (4%)	83,113,113	0.88	3 (3%)
21	BCR	I	101	-	41,41,41	0.33	0	56,56,56	0.47	0
17	CLA	4	302	-	64,68,73	1.14	5 (7%)	77,107,113	0.88	3 (3%)
17	CLA	F	203	30	49,53,73	1.29	4 (8%)	59,89,113	1.02	4 (6%)
17	CLA	B	812	14	58,62,73	1.20	4 (6%)	73,100,113	1.03	5 (6%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
17	CLA	F	201	-	69,73,73	1.08	4 (5%)	83,113,113	0.86	3 (3%)
18	CHL	3	306	30	51,55,74	1.74	7 (13%)	57,91,114	1.18	6 (10%)
17	CLA	G	104	10	54,58,73	1.22	4 (7%)	65,95,113	0.95	3 (4%)
17	CLA	2	303	3	53,57,73	1.37	4 (7%)	62,93,113	1.03	3 (4%)
17	CLA	A	805	5	69,73,73	1.08	4 (5%)	83,113,113	0.85	4 (4%)
17	CLA	B	807	14	69,73,73	1.09	4 (5%)	83,113,113	0.85	3 (3%)
17	CLA	F	204	9	50,54,73	1.28	4 (8%)	60,90,113	0.99	3 (5%)
17	CLA	4	304	-	54,58,73	1.22	4 (7%)	65,95,113	0.94	3 (4%)
17	CLA	1	208	-	69,73,73	1.09	4 (5%)	83,113,113	0.91	3 (3%)
18	CHL	4	307	30	55,59,74	1.69	6 (10%)	62,96,114	1.18	7 (11%)
17	CLA	A	832	5	69,73,73	1.10	4 (5%)	83,113,113	0.89	4 (4%)
17	CLA	3	311	4	59,63,73	1.24	4 (6%)	71,101,113	0.94	5 (7%)
17	CLA	K	103	-	64,68,73	1.14	5 (7%)	77,107,113	0.91	3 (3%)
17	CLA	A	827	5	69,73,73	1.11	4 (5%)	83,113,113	0.88	4 (4%)
17	CLA	A	813	5	49,53,73	1.26	4 (8%)	59,89,113	1.01	3 (5%)
17	CLA	B	813	14	59,63,73	1.17	3 (5%)	71,101,113	0.96	4 (5%)
17	CLA	K	102	-	50,54,73	1.28	4 (8%)	60,90,113	1.00	3 (5%)
19	LUT	1	219	-	42,43,43	0.35	0	51,60,60	0.39	0
17	CLA	4	312	1	69,73,73	1.13	4 (5%)	83,113,113	0.87	3 (3%)
17	CLA	A	820	-	69,73,73	1.12	4 (5%)	83,113,113	0.87	5 (6%)
17	CLA	A	808	5	69,73,73	1.12	4 (5%)	83,113,113	0.88	4 (4%)
21	BCR	A	848	-	41,41,41	0.30	0	56,56,56	0.48	0
20	XAT	1	216	-	39,47,47	0.15	0	54,74,74	0.63	1 (1%)
21	BCR	A	847	-	41,41,41	0.39	0	56,56,56	0.50	0
17	CLA	A	828	-	69,73,73	1.08	4 (5%)	83,113,113	0.88	3 (3%)
17	CLA	3	301	4	64,68,73	1.15	3 (4%)	77,107,113	0.89	3 (3%)
17	CLA	L	302	16	49,53,73	1.30	3 (6%)	59,89,113	1.00	3 (5%)
22	LMG	G	101	-	44,44,55	0.20	0	52,52,63	0.21	0
18	CHL	2	301	3	57,61,74	1.72	7 (12%)	64,98,114	1.17	7 (10%)
24	PGT	G	107	-	22,22,50	0.50	0	24,27,56	0.72	0
18	CHL	2	306	-	52,56,74	1.76	6 (11%)	58,92,114	1.21	7 (12%)
17	CLA	4	303	-	64,68,73	1.13	4 (6%)	77,107,113	0.93	3 (3%)
17	CLA	L	303	16	69,73,73	1.04	4 (5%)	83,113,113	0.85	3 (3%)
28	LMT	G	102	-	36,36,36	0.46	0	47,47,47	0.79	0
17	CLA	B	802	14	69,73,73	1.08	4 (5%)	83,113,113	0.88	5 (6%)
23	LHG	1	218	-	39,40,48	0.17	0	41,42,54	0.16	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
17	CLA	A	850	-	69,73,73	1.23	5 (7%)	83,113,113	1.00	5 (6%)
17	CLA	1	210	-	45,49,73	1.41	5 (11%)	54,84,113	1.06	3 (5%)
21	BCR	J	103	-	41,41,41	0.31	0	56,56,56	0.38	0
17	CLA	1	212	-	69,73,73	1.09	4 (5%)	83,113,113	0.85	3 (3%)
28	LMT	B	847	-	36,36,36	0.48	0	47,47,47	0.71	0
21	BCR	J	101	-	41,41,41	0.33	0	56,56,56	0.40	0
17	CLA	2	311	3	56,60,73	1.19	4 (7%)	67,97,113	0.98	3 (4%)
26	PQN	A	842	-	34,34,34	0.26	0	42,45,45	0.36	0
17	CLA	B	830	14	69,73,73	1.02	4 (5%)	83,113,113	0.87	5 (6%)
17	CLA	G	105	10	50,54,73	1.28	3 (6%)	60,90,113	0.99	3 (5%)
27	SF4	C	101	6	0,12,12	-	-	-		
18	CHL	4	315	-	47,51,74	1.73	4 (8%)	52,86,114	1.26	7 (13%)
17	CLA	A	819	5	49,53,73	1.28	4 (8%)	59,89,113	1.03	4 (6%)
17	CLA	2	310	23	45,49,73	1.44	5 (11%)	54,84,113	1.07	3 (5%)
17	CLA	A	812	5	69,73,73	1.07	5 (7%)	83,113,113	0.86	3 (3%)
17	CLA	K	104	15	50,54,73	1.33	3 (6%)	60,90,113	1.04	5 (8%)
21	BCR	B	846	-	41,41,41	0.32	0	56,56,56	0.50	0
17	CLA	4	310	30	59,63,73	1.17	4 (6%)	71,101,113	0.90	3 (4%)
17	CLA	A	821	5	53,57,73	1.23	4 (7%)	62,93,113	0.99	4 (6%)
17	CLA	B	808	14	59,63,73	1.17	4 (6%)	71,101,113	0.93	3 (4%)
17	CLA	B	821	14	54,58,73	1.22	4 (7%)	65,95,113	0.95	3 (4%)
17	CLA	B	827	14	69,73,73	1.10	4 (5%)	83,113,113	0.89	5 (6%)
22	LMG	4	319	-	44,44,55	0.21	0	52,52,63	0.29	0
17	CLA	A	829	5	69,73,73	1.03	4 (5%)	83,113,113	0.83	3 (3%)
17	CLA	4	301	-	50,54,73	1.31	4 (8%)	60,90,113	1.00	3 (5%)
21	BCR	A	845	-	41,41,41	0.44	0	56,56,56	0.48	0
17	CLA	B	810	14	69,73,73	1.10	4 (5%)	83,113,113	0.86	3 (3%)
21	BCR	B	842	-	41,41,41	0.54	0	56,56,56	0.59	0
17	CLA	B	836	14	69,73,73	1.06	4 (5%)	83,113,113	0.85	3 (3%)
17	CLA	J	102	-	46,50,73	1.32	3 (6%)	55,85,113	1.04	3 (5%)
17	CLA	3	314	4	50,54,73	1.25	3 (6%)	60,90,113	0.98	3 (5%)
18	CHL	2	307	-	55,59,74	1.66	7 (12%)	62,96,114	1.18	7 (11%)
18	CHL	2	314	3	47,51,74	1.74	6 (12%)	52,86,114	1.33	8 (15%)
17	CLA	A	814	5	54,58,73	1.20	4 (7%)	65,95,113	0.96	3 (4%)
21	BCR	B	843	-	41,41,41	0.29	0	56,56,56	0.37	0
21	BCR	A	846	-	41,41,41	0.32	0	56,56,56	0.37	0
21	BCR	L	306	-	41,41,41	0.29	0	56,56,56	0.37	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
17	CLA	B	817	14	59,63,73	1.14	4 (6%)	71,101,113	0.93	3 (4%)
21	BCR	L	305	-	41,41,41	0.36	0	56,56,56	0.49	0
21	BCR	G	106	-	41,41,41	0.36	0	56,56,56	0.49	0
21	BCR	K	101	-	41,41,41	0.31	0	56,56,56	0.49	0
17	CLA	A	815	-	49,53,73	1.33	4 (8%)	59,89,113	1.04	4 (6%)
23	LHG	A	843	-	48,48,48	0.21	0	51,54,54	0.28	0
21	BCR	B	844	-	41,41,41	0.31	0	56,56,56	0.38	0
27	SF4	C	100	6	0,12,12	-	-	-		
17	CLA	B	831	14	54,58,73	1.18	4 (7%)	65,95,113	0.97	3 (4%)
17	CLA	1	209	-	64,68,73	1.12	4 (6%)	77,107,113	0.86	3 (3%)
17	CLA	B	815	14	69,73,73	1.03	4 (5%)	83,113,113	0.85	3 (3%)
17	CLA	A	838	5	69,73,73	1.08	4 (5%)	83,113,113	0.85	3 (3%)
17	CLA	1	202	2	69,73,73	1.10	4 (5%)	83,113,113	0.86	3 (3%)
17	CLA	A	852	-	69,73,73	1.24	5 (7%)	83,113,113	0.95	4 (4%)
19	LUT	3	315	-	42,43,43	0.37	0	51,60,60	0.34	0
17	CLA	B	834	-	49,53,73	1.29	4 (8%)	59,89,113	1.01	3 (5%)
17	CLA	B	826	-	69,73,73	1.08	4 (5%)	83,113,113	0.83	3 (3%)
17	CLA	A	836	5	55,59,73	1.19	4 (7%)	66,96,113	0.97	3 (4%)
17	CLA	1	203	2	69,73,73	1.07	4 (5%)	83,113,113	0.86	3 (3%)
17	CLA	2	304	30	64,68,73	1.13	4 (6%)	77,107,113	0.88	3 (3%)
17	CLA	1	205	-	56,60,73	1.24	4 (7%)	67,97,113	0.96	3 (4%)
17	CLA	B	837	14	51,55,73	1.24	4 (7%)	61,91,113	0.97	4 (6%)
17	CLA	B	811	14	69,73,73	1.07	4 (5%)	83,113,113	0.89	5 (6%)
17	CLA	4	311	1	56,60,73	1.21	4 (7%)	67,97,113	0.95	3 (4%)
17	CLA	3	304	-	46,50,73	1.35	4 (8%)	55,85,113	1.06	3 (5%)
17	CLA	A	841	-	69,73,73	1.12	4 (5%)	83,113,113	0.92	3 (3%)
17	CLA	B	835	14	55,59,73	1.20	5 (9%)	66,96,113	0.95	3 (4%)
19	LUT	4	316	-	42,43,43	0.39	0	51,60,60	0.37	0
17	CLA	1	204	-	56,60,73	1.20	3 (5%)	67,97,113	0.96	3 (4%)
17	CLA	A	851	5	69,73,73	1.07	4 (5%)	83,113,113	0.87	3 (3%)
18	CHL	1	206	-	52,56,74	1.79	7 (13%)	58,92,114	1.20	7 (12%)
20	XAT	4	317	-	39,47,47	0.12	0	54,74,74	0.53	1 (1%)
17	CLA	A	823	5	59,63,73	1.16	4 (6%)	71,101,113	0.92	3 (4%)
17	CLA	A	839	5	69,73,73	1.07	4 (5%)	83,113,113	0.86	3 (3%)
17	CLA	2	313	3	47,51,73	1.29	4 (8%)	56,86,113	1.05	3 (5%)
17	CLA	B	804	-	69,73,73	0.99	4 (5%)	83,113,113	0.81	3 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
17	CLA	B	822	14	60,64,73	1.16	4 (6%)	72,102,113	0.95	5 (6%)
17	CLA	A	802	-	69,73,73	1.06	4 (5%)	83,113,113	0.83	2 (2%)
21	BCR	1	217	-	41,41,41	0.35	0	56,56,56	0.54	0
27	SF4	A	849	5,14	0,12,12	-	-	-		
21	BCR	B	845	-	41,41,41	0.34	0	56,56,56	0.55	0
17	CLA	1	214	2	50,54,73	1.26	3 (6%)	60,90,113	1.02	3 (5%)
17	CLA	A	835	5	49,53,73	1.32	3 (6%)	59,89,113	1.01	3 (5%)
19	LUT	2	315	-	42,43,43	0.39	0	51,60,60	0.35	0
17	CLA	A	830	5	54,58,73	1.20	5 (9%)	65,95,113	0.96	3 (4%)
17	CLA	A	833	5	69,73,73	1.04	3 (4%)	83,113,113	0.85	3 (3%)
17	CLA	B	824	14	64,68,73	1.13	4 (6%)	77,107,113	0.94	3 (3%)
23	LHG	1	220	17	22,22,48	0.31	0	25,28,54	0.42	0
17	CLA	3	308	4	54,58,73	1.22	4 (7%)	65,95,113	0.94	3 (4%)
17	CLA	B	823	14	69,73,73	1.06	4 (5%)	83,113,113	0.85	3 (3%)
17	CLA	1	213	2	47,51,73	1.29	3 (6%)	56,86,113	1.04	3 (5%)
17	CLA	4	309	1	64,68,73	1.14	4 (6%)	77,107,113	0.86	3 (3%)
17	CLA	B	803	14	69,73,73	1.09	4 (5%)	83,113,113	0.83	4 (4%)
24	PGT	1	221	-	22,22,50	0.48	0	24,27,56	0.82	1 (4%)
17	CLA	A	822	5	55,59,73	1.22	4 (7%)	66,96,113	0.96	3 (4%)
20	XAT	2	316	-	39,47,47	0.15	0	54,74,74	0.57	1 (1%)
17	CLA	2	309	3	64,68,73	1.13	4 (6%)	77,107,113	0.87	3 (3%)
17	CLA	2	308	-	54,58,73	1.24	4 (7%)	65,95,113	0.96	3 (4%)
17	CLA	A	840	5	69,73,73	1.09	4 (5%)	83,113,113	0.87	4 (4%)
17	CLA	1	211	2	56,60,73	1.22	4 (7%)	67,97,113	0.95	3 (4%)
17	CLA	A	807	5	69,73,73	1.07	4 (5%)	83,113,113	0.82	3 (3%)
17	CLA	F	206	14	69,73,73	1.05	4 (5%)	83,113,113	0.85	3 (3%)
17	CLA	A	824	30	69,73,73	1.11	5 (7%)	83,113,113	0.86	4 (4%)
17	CLA	A	810	5,17	69,73,73	1.01	4 (5%)	83,113,113	0.92	3 (3%)
17	CLA	B	806	14	69,73,73	1.07	5 (7%)	83,113,113	0.85	3 (3%)
17	CLA	B	809	14	69,73,73	1.03	4 (5%)	83,113,113	0.83	3 (3%)
17	CLA	B	829	-	69,73,73	1.06	4 (5%)	83,113,113	0.89	3 (3%)
18	CHL	2	305	-	47,51,74	1.83	5 (10%)	52,86,114	1.29	8 (15%)
19	LUT	1	215	-	42,43,43	0.39	0	51,60,60	0.42	0
17	CLA	A	831	5	69,73,73	1.11	4 (5%)	83,113,113	0.86	4 (4%)
17	CLA	B	838	30	69,73,73	1.06	4 (5%)	83,113,113	0.84	3 (3%)
26	PQN	B	840	-	34,34,34	0.29	0	42,45,45	0.36	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
25	CL0	A	801	5	69,73,73	1.03	5 (7%)	83,113,113	1.38	8 (9%)
17	CLA	4	314	-	54,58,73	1.24	3 (5%)	65,95,113	0.99	3 (4%)
17	CLA	B	833	14	69,73,73	1.07	4 (5%)	83,113,113	0.88	3 (3%)
17	CLA	2	302	3	69,73,73	1.02	3 (4%)	83,113,113	0.88	5 (6%)
17	CLA	B	825	-	69,73,73	1.09	5 (7%)	83,113,113	0.89	6 (7%)
17	CLA	A	804	5	69,73,73	1.05	4 (5%)	83,113,113	0.89	4 (4%)
17	CLA	2	312	3	69,73,73	1.11	4 (5%)	83,113,113	0.87	4 (4%)
18	CHL	1	201	2	56,60,74	1.73	7 (12%)	63,97,114	1.10	6 (9%)
17	CLA	H	201	11	60,64,73	1.17	3 (5%)	72,102,113	0.91	3 (4%)
20	XAT	3	316	-	39,47,47	0.17	0	54,74,74	0.60	0
17	CLA	A	834	5	69,73,73	1.04	3 (4%)	83,113,113	0.84	3 (3%)
17	CLA	3	309	-	50,54,73	1.27	4 (8%)	60,90,113	0.99	3 (5%)
17	CLA	A	826	5	69,73,73	1.08	4 (5%)	83,113,113	0.86	4 (4%)
21	BCR	K	105	-	41,41,41	0.36	0	56,56,56	0.41	0
21	BCR	B	841	-	41,41,41	0.35	0	56,56,56	0.48	0
17	CLA	A	811	5	58,62,73	1.18	4 (6%)	69,99,113	0.93	3 (4%)
17	CLA	B	820	-	69,73,73	1.13	4 (5%)	83,113,113	0.86	5 (6%)
23	LHG	2	318	17	36,36,48	0.25	0	39,42,54	0.30	0
29	DGD	B	848	-	67,67,67	0.20	0	81,81,81	0.25	0
17	CLA	B	819	14	64,68,73	1.10	4 (6%)	77,107,113	1.01	4 (5%)
18	CHL	4	305	-	57,61,74	1.68	6 (10%)	64,98,114	1.19	7 (10%)
22	LMG	4	320	-	49,49,55	0.19	0	57,57,63	0.17	0
17	CLA	A	803	5,17	59,63,73	1.13	4 (6%)	71,101,113	0.92	3 (4%)
17	CLA	3	303	30	49,53,73	1.28	3 (6%)	59,89,113	1.02	3 (5%)
17	CLA	3	312	-	49,53,73	1.28	4 (8%)	59,89,113	1.02	3 (5%)
17	CLA	3	307	-	54,58,73	1.25	4 (7%)	65,95,113	0.95	3 (4%)
17	CLA	G	103	-	49,53,73	1.28	4 (8%)	59,89,113	1.00	3 (5%)
17	CLA	B	801	23	69,73,73	1.10	4 (5%)	83,113,113	0.85	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
17	CLA	3	305	4	-	4/18/94/115	-
17	CLA	A	825	-	-	2/39/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
17	CLA	3	313	-	-	5/15/91/115	-
17	CLA	L	304	-	-	1/21/97/115	-
17	CLA	3	310	4	-	2/24/100/115	-
17	CLA	B	816	14	-	5/33/109/115	-
17	CLA	B	818	14	-	6/39/115/115	-
21	BCR	A	844	-	-	2/29/63/63	0/2/2/2
21	BCR	L	301	-	-	4/29/63/63	0/2/2/2
17	CLA	3	302	-	-	4/21/97/115	-
21	BCR	4	318	-	-	4/29/63/63	0/2/2/2
21	BCR	F	202	-	-	0/29/63/63	0/2/2/2
18	CHL	4	306	-	-	2/23/99/117	-
17	CLA	B	814	14	-	6/39/115/115	-
17	CLA	4	308	1	-	2/21/97/115	-
21	BCR	2	317	-	-	6/29/63/63	0/2/2/2
17	CLA	A	837	5	-	7/39/115/115	-
21	BCR	F	205	-	-	2/29/63/63	0/2/2/2
17	CLA	A	817	5	-	9/39/115/115	-
17	CLA	B	805	14	-	1/15/91/115	-
17	CLA	B	828	14	-	8/39/115/115	-
17	CLA	A	818	5	-	2/39/115/115	-
21	BCR	3	317	-	-	2/29/63/63	0/2/2/2
17	CLA	A	816	-	-	8/39/115/115	-
17	CLA	4	313	1	-	6/15/91/115	-
17	CLA	1	207	-	-	4/19/95/115	-
17	CLA	B	832	14	-	2/31/107/115	-
17	CLA	A	806	5	-	5/39/115/115	-
17	CLA	A	809	5	-	7/39/115/115	-
17	CLA	B	839	14	-	2/39/115/115	-
21	BCR	I	101	-	-	0/29/63/63	0/2/2/2
17	CLA	4	302	-	-	4/33/109/115	-
17	CLA	F	203	30	-	1/15/91/115	-
17	CLA	B	812	14	-	5/25/101/115	-
17	CLA	F	201	-	-	6/39/115/115	-
18	CHL	3	306	30	-	1/19/95/117	-
17	CLA	G	104	10	-	4/21/97/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
17	CLA	2	303	3	-	3/20/96/115	-
17	CLA	A	805	5	-	5/39/115/115	-
17	CLA	B	807	14	-	9/39/115/115	-
17	CLA	F	204	9	-	5/17/93/115	-
17	CLA	4	304	-	-	0/21/97/115	-
17	CLA	1	208	-	-	10/39/115/115	-
18	CHL	4	307	30	-	0/23/99/117	-
17	CLA	A	832	5	-	7/39/115/115	-
17	CLA	3	311	4	-	3/27/103/115	-
17	CLA	K	103	-	-	4/33/109/115	-
17	CLA	A	827	5	-	4/39/115/115	-
17	CLA	A	813	5	-	2/15/91/115	-
17	CLA	B	813	14	-	5/27/103/115	-
17	CLA	K	102	-	-	7/17/93/115	-
19	LUT	1	219	-	-	2/29/67/67	0/2/2/2
17	CLA	4	312	1	-	4/39/115/115	-
17	CLA	A	820	-	-	4/39/115/115	-
17	CLA	A	808	5	-	4/39/115/115	-
21	BCR	A	848	-	-	4/29/63/63	0/2/2/2
20	XAT	1	216	-	-	0/31/93/93	0/4/4/4
21	BCR	A	847	-	-	2/29/63/63	0/2/2/2
17	CLA	A	828	-	-	3/39/115/115	-
17	CLA	3	301	4	-	2/33/109/115	-
17	CLA	L	302	16	-	3/15/91/115	-
22	LMG	G	101	-	-	3/39/59/70	0/1/1/1
18	CHL	2	301	3	-	8/26/102/117	-
24	PGT	G	107	-	-	10/26/26/55	-
18	CHL	2	306	-	-	2/20/96/117	-
17	CLA	4	303	-	-	6/33/109/115	-
17	CLA	L	303	16	-	4/39/115/115	-
28	LMT	G	102	-	-	5/21/61/61	0/2/2/2
17	CLA	B	802	14	-	4/39/115/115	-
23	LHG	1	218	-	-	6/41/42/53	-
17	CLA	A	850	-	-	4/39/115/115	-
17	CLA	1	210	-	-	2/10/86/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	BCR	J	103	-	-	2/29/63/63	0/2/2/2
17	CLA	1	212	-	-	4/39/115/115	-
28	LMT	B	847	-	-	4/21/61/61	0/2/2/2
21	BCR	J	101	-	-	4/29/63/63	0/2/2/2
17	CLA	2	311	3	-	4/24/100/115	-
26	PQN	A	842	-	-	3/23/43/43	0/2/2/2
17	CLA	B	830	14	-	3/39/115/115	-
17	CLA	G	105	10	-	3/17/93/115	-
27	SF4	C	101	6	-	-	0/6/5/5
18	CHL	4	315	-	-	2/14/90/117	-
17	CLA	A	819	5	-	3/15/91/115	-
17	CLA	2	310	23	-	4/10/86/115	-
17	CLA	A	812	5	-	8/39/115/115	-
17	CLA	K	104	15	-	5/17/93/115	-
21	BCR	B	846	-	-	2/29/63/63	0/2/2/2
17	CLA	4	310	30	-	6/27/103/115	-
17	CLA	A	821	5	-	4/20/96/115	-
17	CLA	B	808	14	-	2/27/103/115	-
17	CLA	B	821	14	-	1/21/97/115	-
17	CLA	B	827	14	-	0/39/115/115	-
22	LMG	4	319	-	-	3/39/59/70	0/1/1/1
17	CLA	A	829	5	-	7/39/115/115	-
17	CLA	4	301	-	-	7/17/93/115	-
21	BCR	A	845	-	-	0/29/63/63	0/2/2/2
17	CLA	B	810	14	-	3/39/115/115	-
21	BCR	B	842	-	-	4/29/63/63	0/2/2/2
17	CLA	B	836	14	-	1/39/115/115	-
17	CLA	J	102	-	-	4/12/88/115	-
17	CLA	3	314	4	-	0/17/93/115	-
18	CHL	2	307	-	-	3/23/99/117	-
18	CHL	2	314	3	-	2/14/90/117	-
17	CLA	A	814	5	-	1/21/97/115	-
21	BCR	B	843	-	-	6/29/63/63	0/2/2/2
21	BCR	A	846	-	-	0/29/63/63	0/2/2/2
21	BCR	L	306	-	-	2/29/63/63	0/2/2/2
17	CLA	B	817	14	-	6/27/103/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	BCR	L	305	-	-	2/29/63/63	0/2/2/2
21	BCR	G	106	-	-	2/29/63/63	0/2/2/2
21	BCR	K	101	-	-	0/29/63/63	0/2/2/2
17	CLA	A	815	-	-	1/15/91/115	-
23	LHG	A	843	-	-	15/53/53/53	-
21	BCR	B	844	-	-	2/29/63/63	0/2/2/2
27	SF4	C	100	6	-	-	0/6/5/5
17	CLA	B	831	14	-	4/21/97/115	-
17	CLA	1	209	-	-	2/33/109/115	-
17	CLA	B	815	14	-	3/39/115/115	-
17	CLA	A	838	5	-	2/39/115/115	-
17	CLA	1	202	2	-	2/39/115/115	-
17	CLA	A	852	-	-	2/39/115/115	-
19	LUT	3	315	-	-	2/29/67/67	0/2/2/2
17	CLA	B	834	-	-	0/15/91/115	-
17	CLA	B	826	-	-	3/39/115/115	-
17	CLA	A	836	5	-	3/23/99/115	-
17	CLA	1	203	2	-	10/39/115/115	-
17	CLA	2	304	30	-	5/33/109/115	-
17	CLA	1	205	-	-	1/24/100/115	-
17	CLA	B	837	14	-	0/18/94/115	-
17	CLA	B	811	14	-	6/39/115/115	-
17	CLA	4	311	1	-	5/24/100/115	-
17	CLA	3	304	-	-	0/12/88/115	-
17	CLA	A	841	-	-	7/39/115/115	-
17	CLA	B	835	14	-	3/23/99/115	-
19	LUT	4	316	-	-	2/29/67/67	0/2/2/2
17	CLA	1	204	-	-	3/24/100/115	-
17	CLA	A	851	5	-	9/39/115/115	-
18	CHL	1	206	-	-	5/20/96/117	-
20	XAT	4	317	-	-	0/31/93/93	0/4/4/4
17	CLA	A	823	5	-	6/27/103/115	-
17	CLA	A	839	5	-	7/39/115/115	-
17	CLA	2	313	3	-	3/13/89/115	-
17	CLA	B	804	-	-	7/39/115/115	-
17	CLA	B	822	14	-	4/29/105/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
17	CLA	A	802	-	-	5/39/115/115	-
21	BCR	1	217	-	-	2/29/63/63	0/2/2/2
27	SF4	A	849	5,14	-	-	0/6/5/5
21	BCR	B	845	-	-	4/29/63/63	0/2/2/2
17	CLA	1	214	2	-	2/17/93/115	-
17	CLA	A	835	5	-	4/15/91/115	-
19	LUT	2	315	-	-	2/29/67/67	0/2/2/2
17	CLA	A	830	5	-	3/21/97/115	-
17	CLA	A	833	5	-	6/39/115/115	-
17	CLA	B	824	14	-	9/33/109/115	-
23	LHG	1	220	17	-	4/26/26/53	-
17	CLA	3	308	4	-	0/21/97/115	-
17	CLA	B	823	14	-	4/39/115/115	-
17	CLA	1	213	2	-	5/13/89/115	-
17	CLA	4	309	1	-	0/33/109/115	-
17	CLA	B	803	14	-	5/39/115/115	-
24	PGT	1	221	-	-	11/26/26/55	-
17	CLA	A	822	5	-	8/23/99/115	-
20	XAT	2	316	-	-	0/31/93/93	0/4/4/4
17	CLA	2	309	3	-	3/33/109/115	-
17	CLA	2	308	-	-	1/21/97/115	-
17	CLA	A	840	5	-	2/39/115/115	-
17	CLA	1	211	2	-	3/24/100/115	-
17	CLA	A	807	5	-	2/39/115/115	-
17	CLA	F	206	14	-	3/39/115/115	-
17	CLA	A	824	30	-	6/39/115/115	-
17	CLA	A	810	5,17	-	7/39/115/115	-
17	CLA	B	806	14	-	6/39/115/115	-
17	CLA	B	809	14	-	7/39/115/115	-
17	CLA	B	829	-	-	3/39/115/115	-
18	CHL	2	305	-	-	2/14/90/117	-
19	LUT	1	215	-	-	2/29/67/67	0/2/2/2
17	CLA	A	831	5	-	0/39/115/115	-
17	CLA	B	838	30	-	7/39/115/115	-
26	PQN	B	840	-	-	1/23/43/43	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	CL0	A	801	5	-	6/39/115/115	-
17	CLA	4	314	-	-	2/21/97/115	-
17	CLA	B	833	14	-	6/39/115/115	-
17	CLA	2	302	3	-	3/39/115/115	-
17	CLA	B	825	-	-	8/39/115/115	-
17	CLA	A	804	5	-	7/39/115/115	-
17	CLA	2	312	3	-	5/39/115/115	-
18	CHL	1	201	2	-	3/25/101/117	-
17	CLA	H	201	11	-	2/29/105/115	-
20	XAT	3	316	-	-	0/31/93/93	0/4/4/4
17	CLA	A	834	5	-	7/39/115/115	-
17	CLA	3	309	-	-	2/17/93/115	-
17	CLA	A	826	5	-	3/39/115/115	-
21	BCR	K	105	-	-	4/29/63/63	0/2/2/2
21	BCR	B	841	-	-	0/29/63/63	0/2/2/2
17	CLA	A	811	5	-	0/26/102/115	-
17	CLA	B	820	-	-	4/39/115/115	-
23	LHG	2	318	17	-	10/41/41/53	-
29	DGD	B	848	-	-	8/55/95/95	0/2/2/2
17	CLA	B	819	14	-	7/33/109/115	-
18	CHL	4	305	-	-	0/26/102/117	-
22	LMG	4	320	-	-	4/44/64/70	0/1/1/1
17	CLA	A	803	5,17	-	0/27/103/115	-
17	CLA	3	303	30	-	0/15/91/115	-
17	CLA	3	312	-	-	4/15/91/115	-
17	CLA	3	307	-	-	2/21/97/115	-
17	CLA	G	103	-	-	3/15/91/115	-
17	CLA	B	801	23	-	2/39/115/115	-

All (646) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	4	315	CHL	MG-NB	-7.41	1.91	2.05
17	A	852	CLA	MG-NB	-7.13	1.91	2.05
18	4	307	CHL	MG-NB	-7.00	1.91	2.05
17	A	850	CLA	MG-NB	-6.83	1.92	2.05
18	2	301	CHL	MG-NB	-6.60	1.92	2.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	1	201	CHL	MG-NB	-6.60	1.92	2.05
18	1	206	CHL	MG-NB	-6.59	1.92	2.05
18	2	305	CHL	MG-NB	-6.48	1.92	2.05
18	4	306	CHL	MG-NB	-6.43	1.93	2.05
18	2	306	CHL	MG-NB	-6.42	1.93	2.05
18	4	305	CHL	MG-NB	-6.40	1.93	2.05
18	2	307	CHL	MG-NB	-6.22	1.93	2.05
18	2	301	CHL	MG-ND	-5.84	1.94	2.05
18	3	306	CHL	MG-NB	-5.74	1.94	2.05
18	1	206	CHL	MG-ND	-5.74	1.94	2.05
17	B	803	CLA	MG-NB	-5.58	1.94	2.05
18	3	306	CHL	MG-ND	-5.58	1.94	2.05
18	2	301	CHL	C4B-NB	5.58	1.44	1.37
18	1	201	CHL	MG-ND	-5.55	1.94	2.05
17	3	311	CLA	MG-ND	-5.51	1.94	2.05
18	2	306	CHL	MG-ND	-5.51	1.94	2.05
17	A	831	CLA	MG-NB	-5.47	1.94	2.05
18	2	314	CHL	MG-NB	-5.46	1.95	2.05
17	B	824	CLA	MG-NB	-5.46	1.95	2.05
18	4	305	CHL	MG-ND	-5.45	1.95	2.05
18	4	306	CHL	MG-ND	-5.43	1.95	2.05
18	2	314	CHL	MG-ND	-5.43	1.95	2.05
17	A	827	CLA	MG-NB	-5.32	1.95	2.05
17	A	832	CLA	MG-NB	-5.31	1.95	2.05
18	2	305	CHL	MG-NA	-5.30	1.93	2.06
18	2	305	CHL	C4B-NB	5.30	1.44	1.37
17	B	827	CLA	MG-NB	-5.29	1.95	2.05
17	A	811	CLA	MG-NB	-5.29	1.95	2.05
17	A	819	CLA	MG-NB	-5.23	1.95	2.05
18	3	306	CHL	C4B-NB	5.23	1.44	1.37
17	A	826	CLA	MG-NB	-5.21	1.95	2.05
17	A	817	CLA	MG-NB	-5.20	1.95	2.05
17	B	813	CLA	MG-NB	-5.20	1.95	2.05
17	B	822	CLA	MG-NB	-5.16	1.95	2.05
17	2	303	CLA	MG-NB	-5.16	1.95	2.05
17	B	811	CLA	MG-NB	-5.14	1.95	2.05
17	A	841	CLA	MG-NB	-5.14	1.95	2.05
17	1	209	CLA	MG-NB	-5.13	1.95	2.05
17	B	833	CLA	MG-NB	-5.13	1.95	2.05
17	2	303	CLA	C1D-ND	5.12	1.44	1.37
17	A	838	CLA	MG-NB	-5.11	1.95	2.05
17	B	828	CLA	MG-NB	-5.10	1.95	2.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	K	104	CLA	MG-ND	-5.10	1.95	2.05
17	B	837	CLA	MG-NB	-5.08	1.95	2.05
17	B	808	CLA	MG-NB	-5.08	1.95	2.05
18	1	201	CHL	MG-NA	-5.07	1.94	2.06
18	2	307	CHL	C4B-NB	5.07	1.44	1.37
17	B	821	CLA	MG-NB	-5.07	1.95	2.05
18	4	306	CHL	C4B-NB	5.06	1.44	1.37
17	4	303	CLA	C1D-ND	5.06	1.44	1.37
18	2	307	CHL	MG-ND	-5.06	1.95	2.05
18	4	305	CHL	C4B-NB	5.03	1.44	1.37
17	A	813	CLA	MG-NB	-5.03	1.95	2.05
17	B	835	CLA	MG-NB	-5.01	1.95	2.05
18	1	201	CHL	C4B-NB	5.01	1.43	1.37
17	1	213	CLA	MG-NB	-5.00	1.95	2.05
17	B	823	CLA	MG-NB	-4.99	1.95	2.05
18	2	306	CHL	C4B-NB	4.98	1.43	1.37
18	1	206	CHL	C4B-NB	4.96	1.43	1.37
17	B	805	CLA	MG-NB	-4.96	1.96	2.05
18	2	314	CHL	C4B-NB	4.96	1.43	1.37
17	1	207	CLA	MG-NB	-4.96	1.96	2.05
17	B	812	CLA	MG-NB	-4.95	1.96	2.05
17	A	830	CLA	MG-NB	-4.95	1.96	2.05
18	1	206	CHL	MG-NA	-4.94	1.94	2.06
17	4	308	CLA	MG-NB	-4.93	1.96	2.05
17	A	803	CLA	MG-NB	-4.93	1.96	2.05
17	L	303	CLA	MG-NB	-4.92	1.96	2.05
17	3	302	CLA	C1D-ND	4.92	1.43	1.37
17	1	205	CLA	MG-NB	-4.92	1.96	2.05
17	A	815	CLA	MG-NB	-4.91	1.96	2.05
18	4	307	CHL	C4B-NB	4.91	1.43	1.37
17	A	808	CLA	MG-NB	-4.90	1.96	2.05
17	A	851	CLA	MG-NB	-4.90	1.96	2.05
17	4	312	CLA	MG-NB	-4.90	1.96	2.05
17	A	807	CLA	MG-NB	-4.90	1.96	2.05
17	A	823	CLA	MG-NB	-4.89	1.96	2.05
17	4	313	CLA	MG-NB	-4.88	1.96	2.05
17	B	818	CLA	MG-NB	-4.88	1.96	2.05
17	A	835	CLA	MG-NB	-4.87	1.96	2.05
17	A	814	CLA	MG-NB	-4.87	1.96	2.05
17	B	819	CLA	MG-NB	-4.86	1.96	2.05
18	4	315	CHL	C4B-NB	4.85	1.43	1.37
17	B	839	CLA	MG-NB	-4.84	1.96	2.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	3	301	CLA	MG-NB	-4.84	1.96	2.05
17	B	810	CLA	MG-NB	-4.82	1.96	2.05
17	2	309	CLA	MG-NB	-4.82	1.96	2.05
17	4	309	CLA	MG-NB	-4.82	1.96	2.05
17	2	310	CLA	MG-NB	-4.81	1.96	2.05
17	3	307	CLA	MG-NB	-4.81	1.96	2.05
25	A	801	CL0	C1D-ND	4.81	1.43	1.37
17	B	802	CLA	MG-NB	-4.81	1.96	2.05
17	A	809	CLA	MG-NB	-4.81	1.96	2.05
17	3	304	CLA	MG-NB	-4.80	1.96	2.05
17	G	104	CLA	MG-NB	-4.80	1.96	2.05
17	A	821	CLA	MG-NB	-4.79	1.96	2.05
17	3	312	CLA	MG-NB	-4.79	1.96	2.05
17	3	308	CLA	MG-NB	-4.78	1.96	2.05
17	B	801	CLA	MG-NB	-4.78	1.96	2.05
17	1	202	CLA	MG-NB	-4.77	1.96	2.05
17	K	102	CLA	MG-NB	-4.77	1.96	2.05
17	1	204	CLA	MG-NB	-4.77	1.96	2.05
17	K	103	CLA	MG-NB	-4.76	1.96	2.05
17	A	818	CLA	MG-NB	-4.76	1.96	2.05
17	L	302	CLA	MG-NB	-4.75	1.96	2.05
17	A	828	CLA	MG-NB	-4.74	1.96	2.05
17	2	312	CLA	MG-NB	-4.74	1.96	2.05
17	4	301	CLA	MG-NB	-4.73	1.96	2.05
17	4	314	CLA	MG-NB	-4.72	1.96	2.05
17	A	824	CLA	MG-NB	-4.72	1.96	2.05
17	A	829	CLA	MG-NB	-4.72	1.96	2.05
17	3	310	CLA	C1D-ND	4.72	1.43	1.37
17	4	302	CLA	MG-NB	-4.72	1.96	2.05
17	A	804	CLA	MG-NB	-4.72	1.96	2.05
18	2	305	CHL	MG-ND	-4.72	1.96	2.05
18	2	306	CHL	MG-NA	-4.71	1.95	2.06
17	G	103	CLA	MG-NB	-4.70	1.96	2.05
17	3	305	CLA	MG-NB	-4.70	1.96	2.05
17	A	822	CLA	MG-NB	-4.70	1.96	2.05
17	2	308	CLA	MG-NB	-4.70	1.96	2.05
17	2	313	CLA	MG-NB	-4.70	1.96	2.05
17	A	816	CLA	MG-NB	-4.70	1.96	2.05
17	1	210	CLA	MG-NB	-4.69	1.96	2.05
17	3	303	CLA	MG-NB	-4.69	1.96	2.05
17	1	208	CLA	MG-NB	-4.69	1.96	2.05
17	A	825	CLA	MG-NB	-4.69	1.96	2.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	F	201	CLA	MG-NB	-4.69	1.96	2.05
17	A	837	CLA	MG-NB	-4.68	1.96	2.05
17	B	806	CLA	MG-NB	-4.68	1.96	2.05
17	A	812	CLA	MG-NB	-4.67	1.96	2.05
17	1	211	CLA	C1D-ND	4.67	1.43	1.37
17	A	840	CLA	MG-NB	-4.67	1.96	2.05
17	4	311	CLA	C1D-ND	4.66	1.43	1.37
17	K	102	CLA	C1D-ND	4.66	1.43	1.37
17	2	304	CLA	MG-NB	-4.66	1.96	2.05
17	F	203	CLA	MG-NB	-4.66	1.96	2.05
17	J	102	CLA	MG-NB	-4.66	1.96	2.05
17	G	105	CLA	MG-NB	-4.66	1.96	2.05
17	B	834	CLA	MG-NB	-4.66	1.96	2.05
17	A	836	CLA	MG-NB	-4.65	1.96	2.05
17	B	814	CLA	MG-NB	-4.65	1.96	2.05
17	3	313	CLA	MG-NB	-4.64	1.96	2.05
17	4	304	CLA	MG-NB	-4.64	1.96	2.05
17	A	806	CLA	MG-NB	-4.63	1.96	2.05
17	L	304	CLA	MG-NB	-4.63	1.96	2.05
17	B	807	CLA	MG-NB	-4.63	1.96	2.05
18	4	306	CHL	MG-NA	-4.63	1.95	2.06
17	B	826	CLA	MG-NB	-4.62	1.96	2.05
17	2	303	CLA	MG-ND	-4.62	1.96	2.05
17	B	815	CLA	MG-NB	-4.62	1.96	2.05
17	B	820	CLA	MG-NB	-4.62	1.96	2.05
17	4	301	CLA	C1D-ND	4.62	1.43	1.37
17	F	204	CLA	MG-NB	-4.61	1.96	2.05
17	H	201	CLA	MG-NB	-4.60	1.96	2.05
18	4	307	CHL	MG-ND	-4.60	1.96	2.05
17	1	212	CLA	MG-NB	-4.59	1.96	2.05
17	3	309	CLA	MG-NB	-4.59	1.96	2.05
17	4	310	CLA	C1D-ND	4.59	1.43	1.37
17	A	820	CLA	C1D-ND	4.58	1.43	1.37
17	2	311	CLA	C1D-ND	4.58	1.43	1.37
17	3	313	CLA	C1D-ND	4.57	1.43	1.37
17	B	825	CLA	MG-NB	-4.57	1.96	2.05
17	A	812	CLA	C1D-ND	4.57	1.43	1.37
18	4	305	CHL	MG-NA	-4.57	1.95	2.06
17	K	104	CLA	MG-NB	-4.56	1.96	2.05
17	A	808	CLA	MG-ND	-4.56	1.96	2.05
17	3	314	CLA	MG-NB	-4.55	1.96	2.05
17	A	805	CLA	MG-NB	-4.55	1.96	2.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	4	314	CLA	C1D-ND	4.55	1.43	1.37
17	4	310	CLA	MG-NB	-4.54	1.96	2.05
17	1	207	CLA	C1D-ND	4.54	1.43	1.37
17	B	817	CLA	MG-NB	-4.54	1.96	2.05
17	4	313	CLA	C1D-ND	4.53	1.43	1.37
17	F	206	CLA	MG-NB	-4.53	1.96	2.05
18	4	315	CHL	MG-NC	-4.53	1.95	2.06
17	1	214	CLA	MG-NB	-4.52	1.96	2.05
17	B	831	CLA	MG-NB	-4.51	1.96	2.05
17	B	814	CLA	C1D-ND	4.51	1.43	1.37
17	1	211	CLA	MG-NB	-4.50	1.96	2.05
17	3	311	CLA	C1D-ND	4.50	1.43	1.37
17	B	828	CLA	C1D-ND	4.50	1.43	1.37
17	B	832	CLA	MG-NB	-4.50	1.96	2.05
17	A	832	CLA	C1D-ND	4.50	1.43	1.37
17	B	829	CLA	C1D-ND	4.49	1.43	1.37
17	2	313	CLA	C1D-ND	4.49	1.43	1.37
17	3	309	CLA	C1D-ND	4.47	1.43	1.37
18	2	301	CHL	MG-NA	-4.47	1.95	2.06
17	F	204	CLA	C1D-ND	4.46	1.43	1.37
18	3	306	CHL	MG-NA	-4.46	1.95	2.06
17	1	208	CLA	C1D-ND	4.45	1.43	1.37
17	A	839	CLA	MG-NB	-4.45	1.97	2.05
17	3	303	CLA	C1D-ND	4.45	1.43	1.37
17	1	203	CLA	MG-NB	-4.44	1.97	2.05
17	B	809	CLA	MG-NB	-4.44	1.97	2.05
17	2	310	CLA	C1D-ND	4.44	1.43	1.37
17	A	833	CLA	C1D-ND	4.44	1.43	1.37
17	3	312	CLA	C1D-ND	4.43	1.43	1.37
17	A	838	CLA	C1D-ND	4.43	1.43	1.37
17	B	834	CLA	C1D-ND	4.43	1.43	1.37
17	4	311	CLA	MG-NB	-4.43	1.97	2.05
17	A	802	CLA	MG-NB	-4.42	1.97	2.05
17	B	820	CLA	C1D-ND	4.42	1.43	1.37
17	A	817	CLA	C1D-ND	4.41	1.43	1.37
17	A	815	CLA	MG-ND	-4.41	1.97	2.05
17	A	820	CLA	MG-NB	-4.41	1.97	2.05
17	G	104	CLA	C1D-ND	4.41	1.43	1.37
17	3	304	CLA	C1D-ND	4.41	1.43	1.37
17	2	312	CLA	C1D-ND	4.41	1.43	1.37
17	2	311	CLA	MG-NB	-4.40	1.97	2.05
17	3	305	CLA	C1D-ND	4.40	1.43	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	B	809	CLA	C1D-ND	4.40	1.43	1.37
17	1	212	CLA	C1D-ND	4.40	1.43	1.37
17	A	836	CLA	C1D-ND	4.39	1.43	1.37
17	B	817	CLA	C1D-ND	4.39	1.43	1.37
17	A	822	CLA	C1D-ND	4.39	1.43	1.37
17	B	837	CLA	C1D-ND	4.38	1.43	1.37
17	H	201	CLA	C1D-ND	4.38	1.43	1.37
17	1	214	CLA	C1D-ND	4.38	1.43	1.37
17	B	816	CLA	MG-NB	-4.38	1.97	2.05
17	1	203	CLA	C1D-ND	4.37	1.43	1.37
17	A	810	CLA	MG-NB	-4.37	1.97	2.05
17	2	312	CLA	MG-ND	-4.36	1.97	2.05
17	1	213	CLA	C1D-ND	4.36	1.43	1.37
17	A	826	CLA	C1D-ND	4.36	1.43	1.37
17	A	835	CLA	C1D-ND	4.36	1.43	1.37
17	1	205	CLA	C1D-ND	4.36	1.43	1.37
17	3	310	CLA	MG-NB	-4.35	1.97	2.05
17	B	818	CLA	C1D-ND	4.35	1.43	1.37
17	2	304	CLA	C1D-ND	4.35	1.43	1.37
17	B	806	CLA	C1D-ND	4.35	1.43	1.37
17	A	833	CLA	MG-NB	-4.34	1.97	2.05
17	A	840	CLA	MG-ND	-4.34	1.97	2.05
17	B	829	CLA	MG-NB	-4.34	1.97	2.05
17	B	820	CLA	MG-ND	-4.34	1.97	2.05
17	K	103	CLA	MG-ND	-4.34	1.97	2.05
17	4	312	CLA	MG-ND	-4.34	1.97	2.05
17	A	824	CLA	C1D-ND	4.34	1.43	1.37
17	2	302	CLA	MG-NB	-4.33	1.97	2.05
17	B	808	CLA	C1D-ND	4.32	1.43	1.37
17	B	827	CLA	C1D-ND	4.32	1.43	1.37
17	A	827	CLA	C1D-ND	4.32	1.43	1.37
17	A	814	CLA	C1D-ND	4.32	1.43	1.37
17	1	202	CLA	C1D-ND	4.31	1.43	1.37
17	B	838	CLA	MG-NB	-4.31	1.97	2.05
17	B	810	CLA	C1D-ND	4.31	1.43	1.37
17	B	807	CLA	C1D-ND	4.31	1.43	1.37
17	1	205	CLA	MG-ND	-4.31	1.97	2.05
17	B	836	CLA	C1D-ND	4.31	1.43	1.37
17	4	308	CLA	C1D-ND	4.31	1.43	1.37
17	A	816	CLA	MG-ND	-4.30	1.97	2.05
17	B	830	CLA	C1D-ND	4.30	1.43	1.37
17	A	834	CLA	C1D-ND	4.30	1.43	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	B	801	CLA	C1D-ND	4.30	1.43	1.37
17	4	301	CLA	MG-ND	-4.30	1.97	2.05
17	A	811	CLA	C1D-ND	4.30	1.43	1.37
17	B	835	CLA	C1D-ND	4.30	1.43	1.37
17	A	820	CLA	MG-ND	-4.29	1.97	2.05
17	3	301	CLA	C1D-ND	4.29	1.43	1.37
17	A	813	CLA	C1D-ND	4.28	1.43	1.37
17	F	206	CLA	C1D-ND	4.28	1.43	1.37
17	J	102	CLA	C1D-ND	4.28	1.43	1.37
17	B	836	CLA	MG-NB	-4.28	1.97	2.05
17	B	821	CLA	C1D-ND	4.28	1.43	1.37
17	B	823	CLA	C1D-ND	4.28	1.43	1.37
17	4	304	CLA	C1D-ND	4.28	1.43	1.37
17	L	304	CLA	C1D-ND	4.28	1.43	1.37
17	1	204	CLA	C1D-ND	4.28	1.43	1.37
17	B	816	CLA	C1D-ND	4.28	1.43	1.37
18	4	307	CHL	MG-NA	-4.27	1.96	2.06
17	B	833	CLA	C1D-ND	4.27	1.43	1.37
17	1	212	CLA	MG-ND	-4.27	1.97	2.05
17	A	831	CLA	C1D-ND	4.27	1.43	1.37
17	4	309	CLA	C1D-ND	4.27	1.43	1.37
17	G	105	CLA	C1D-ND	4.27	1.43	1.37
17	B	801	CLA	MG-ND	-4.26	1.97	2.05
17	A	851	CLA	C1D-ND	4.26	1.43	1.37
17	3	308	CLA	MG-ND	-4.26	1.97	2.05
17	A	841	CLA	MG-ND	-4.26	1.97	2.05
17	A	815	CLA	C1D-ND	4.26	1.43	1.37
17	A	805	CLA	C1D-ND	4.25	1.43	1.37
17	4	312	CLA	C1D-ND	4.25	1.43	1.37
17	A	818	CLA	C1D-ND	4.25	1.43	1.37
17	B	826	CLA	C1D-ND	4.25	1.43	1.37
17	B	838	CLA	C1D-ND	4.25	1.43	1.37
17	2	308	CLA	C1D-ND	4.24	1.43	1.37
17	A	834	CLA	MG-NB	-4.24	1.97	2.05
17	4	302	CLA	MG-ND	-4.24	1.97	2.05
17	F	203	CLA	C1D-ND	4.24	1.43	1.37
17	B	803	CLA	C1D-ND	4.24	1.43	1.37
17	B	811	CLA	C1D-ND	4.24	1.43	1.37
17	A	850	CLA	MG-ND	-4.23	1.97	2.05
17	A	840	CLA	C1D-ND	4.23	1.43	1.37
17	A	809	CLA	MG-ND	-4.23	1.97	2.05
17	A	839	CLA	MG-ND	-4.22	1.97	2.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	1	202	CLA	MG-ND	-4.22	1.97	2.05
17	B	812	CLA	C1D-ND	4.22	1.43	1.37
17	L	302	CLA	C1D-ND	4.21	1.43	1.37
17	F	201	CLA	C1D-ND	4.21	1.43	1.37
17	3	307	CLA	MG-ND	-4.21	1.97	2.05
17	B	805	CLA	C1D-ND	4.21	1.43	1.37
17	2	310	CLA	MG-ND	-4.20	1.97	2.05
17	A	828	CLA	C1D-ND	4.20	1.43	1.37
17	3	301	CLA	MG-ND	-4.20	1.97	2.05
17	A	837	CLA	C1D-ND	4.20	1.42	1.37
17	B	839	CLA	MG-ND	-4.20	1.97	2.05
17	L	302	CLA	MG-ND	-4.20	1.97	2.05
17	F	203	CLA	MG-ND	-4.20	1.97	2.05
17	4	308	CLA	MG-ND	-4.20	1.97	2.05
17	4	309	CLA	MG-ND	-4.20	1.97	2.05
17	3	304	CLA	MG-ND	-4.20	1.97	2.05
17	A	835	CLA	MG-ND	-4.20	1.97	2.05
17	B	807	CLA	MG-ND	-4.19	1.97	2.05
18	2	314	CHL	MG-NA	-4.19	1.96	2.06
18	2	307	CHL	MG-NA	-4.19	1.96	2.06
17	B	825	CLA	C1D-ND	4.18	1.42	1.37
17	1	210	CLA	C1D-ND	4.18	1.42	1.37
17	A	839	CLA	C1D-ND	4.18	1.42	1.37
17	L	304	CLA	MG-ND	-4.18	1.97	2.05
17	A	806	CLA	C1D-ND	4.18	1.42	1.37
17	2	304	CLA	MG-ND	-4.17	1.97	2.05
17	4	302	CLA	C1D-ND	4.17	1.42	1.37
17	A	810	CLA	C1D-ND	4.17	1.42	1.37
17	A	807	CLA	C1D-ND	4.17	1.42	1.37
17	A	809	CLA	C1D-ND	4.17	1.42	1.37
17	A	823	CLA	C1D-ND	4.17	1.42	1.37
17	B	813	CLA	C1D-ND	4.16	1.42	1.37
17	B	834	CLA	MG-ND	-4.16	1.97	2.05
17	B	832	CLA	C1D-ND	4.16	1.42	1.37
17	2	309	CLA	MG-ND	-4.15	1.97	2.05
17	G	103	CLA	C1D-ND	4.15	1.42	1.37
17	B	815	CLA	C1D-ND	4.15	1.42	1.37
17	B	830	CLA	MG-NB	-4.14	1.97	2.05
17	3	309	CLA	MG-ND	-4.14	1.97	2.05
17	H	201	CLA	MG-ND	-4.14	1.97	2.05
17	K	103	CLA	C1D-ND	4.14	1.42	1.37
17	B	810	CLA	MG-ND	-4.13	1.97	2.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	A	822	CLA	MG-ND	-4.13	1.97	2.05
17	B	819	CLA	C1D-ND	4.12	1.42	1.37
17	B	802	CLA	C1D-ND	4.12	1.42	1.37
17	A	808	CLA	C1D-ND	4.10	1.42	1.37
17	F	204	CLA	MG-ND	-4.10	1.97	2.05
17	G	105	CLA	MG-ND	-4.10	1.97	2.05
17	1	211	CLA	MG-ND	-4.10	1.97	2.05
17	1	210	CLA	MG-ND	-4.09	1.97	2.05
17	A	805	CLA	MG-ND	-4.09	1.97	2.05
17	A	852	CLA	MG-ND	-4.09	1.97	2.05
17	B	831	CLA	C1D-ND	4.09	1.42	1.37
17	F	201	CLA	MG-ND	-4.09	1.97	2.05
17	3	314	CLA	MG-ND	-4.09	1.97	2.05
17	4	311	CLA	MG-ND	-4.09	1.97	2.05
17	1	208	CLA	MG-ND	-4.08	1.97	2.05
17	B	824	CLA	C1D-ND	4.08	1.42	1.37
17	A	821	CLA	C1D-ND	4.08	1.42	1.37
17	B	838	CLA	MG-ND	-4.08	1.97	2.05
17	A	830	CLA	C1D-ND	4.08	1.42	1.37
17	B	836	CLA	MG-ND	-4.07	1.97	2.05
17	4	304	CLA	MG-ND	-4.07	1.97	2.05
17	3	305	CLA	MG-ND	-4.07	1.97	2.05
17	A	804	CLA	C1D-ND	4.06	1.42	1.37
17	A	841	CLA	C1D-ND	4.06	1.42	1.37
17	J	102	CLA	MG-ND	-4.06	1.97	2.05
17	G	103	CLA	MG-ND	-4.05	1.97	2.05
17	2	309	CLA	C1D-ND	4.05	1.42	1.37
17	2	308	CLA	MG-ND	-4.05	1.97	2.05
17	A	828	CLA	MG-ND	-4.04	1.97	2.05
17	A	829	CLA	C1D-ND	4.04	1.42	1.37
17	1	214	CLA	MG-ND	-4.04	1.97	2.05
17	3	313	CLA	MG-ND	-4.04	1.97	2.05
17	B	822	CLA	C1D-ND	4.04	1.42	1.37
17	4	314	CLA	MG-ND	-4.03	1.97	2.05
17	2	302	CLA	C1D-ND	4.03	1.42	1.37
17	3	314	CLA	C1D-ND	4.01	1.42	1.37
17	A	816	CLA	C1D-ND	4.01	1.42	1.37
17	4	310	CLA	MG-ND	-4.00	1.97	2.05
17	A	819	CLA	C1D-ND	4.00	1.42	1.37
17	A	803	CLA	C1D-ND	3.99	1.42	1.37
17	3	311	CLA	MG-NB	-3.99	1.97	2.05
17	2	311	CLA	MG-ND	-3.98	1.97	2.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	B	802	CLA	MG-ND	-3.98	1.97	2.05
17	B	839	CLA	C1D-ND	3.98	1.42	1.37
17	3	307	CLA	C1D-ND	3.97	1.42	1.37
17	A	825	CLA	C1D-ND	3.97	1.42	1.37
17	3	310	CLA	MG-ND	-3.97	1.97	2.05
17	A	825	CLA	MG-ND	-3.96	1.97	2.05
17	1	209	CLA	C1D-ND	3.95	1.42	1.37
17	3	308	CLA	C1D-ND	3.94	1.42	1.37
17	A	821	CLA	MG-ND	-3.93	1.98	2.05
17	3	302	CLA	MG-ND	-3.92	1.98	2.05
17	B	826	CLA	MG-ND	-3.92	1.98	2.05
17	A	802	CLA	MG-ND	-3.91	1.98	2.05
17	A	802	CLA	C1D-ND	3.89	1.42	1.37
17	K	104	CLA	C1D-ND	3.88	1.42	1.37
17	A	824	CLA	MG-ND	-3.86	1.98	2.05
17	B	804	CLA	MG-NB	-3.85	1.98	2.05
17	4	303	CLA	MG-ND	-3.84	1.98	2.05
17	4	303	CLA	MG-NB	-3.83	1.98	2.05
17	B	832	CLA	MG-ND	-3.83	1.98	2.05
17	3	302	CLA	MG-NB	-3.79	1.98	2.05
17	B	804	CLA	C1D-ND	3.78	1.42	1.37
17	B	822	CLA	MG-ND	-3.78	1.98	2.05
17	1	207	CLA	MG-ND	-3.78	1.98	2.05
17	A	834	CLA	MG-ND	-3.76	1.98	2.05
17	B	818	CLA	MG-ND	-3.75	1.98	2.05
17	3	312	CLA	MG-ND	-3.75	1.98	2.05
17	B	831	CLA	MG-ND	-3.74	1.98	2.05
17	1	203	CLA	MG-ND	-3.74	1.98	2.05
17	A	850	CLA	C1D-ND	3.73	1.42	1.37
17	1	209	CLA	MG-ND	-3.72	1.98	2.05
17	2	302	CLA	MG-ND	-3.71	1.98	2.05
17	A	852	CLA	C1D-ND	3.69	1.42	1.37
17	L	303	CLA	C1D-ND	3.69	1.42	1.37
17	A	823	CLA	MG-ND	-3.67	1.98	2.05
17	1	204	CLA	MG-ND	-3.66	1.98	2.05
17	B	825	CLA	MG-ND	-3.61	1.98	2.05
17	A	804	CLA	MG-ND	-3.61	1.98	2.05
17	G	104	CLA	MG-ND	-3.59	1.98	2.05
17	L	303	CLA	MG-ND	-3.55	1.98	2.05
17	B	816	CLA	MG-ND	-3.55	1.98	2.05
17	A	818	CLA	MG-ND	-3.51	1.98	2.05
17	B	813	CLA	MG-ND	-3.50	1.98	2.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	A	830	CLA	MG-ND	-3.50	1.98	2.05
17	F	206	CLA	MG-ND	-3.49	1.98	2.05
17	A	851	CLA	MG-ND	-3.49	1.98	2.05
17	A	831	CLA	MG-ND	-3.49	1.98	2.05
17	A	807	CLA	MG-ND	-3.49	1.98	2.05
17	B	819	CLA	MG-ND	-3.48	1.98	2.05
17	B	804	CLA	MG-ND	-3.48	1.98	2.05
17	K	102	CLA	MG-ND	-3.47	1.98	2.05
17	3	303	CLA	MG-ND	-3.47	1.98	2.05
17	B	821	CLA	MG-ND	-3.46	1.98	2.05
17	B	817	CLA	MG-ND	-3.45	1.98	2.05
17	2	313	CLA	MG-ND	-3.45	1.99	2.05
17	A	819	CLA	MG-ND	-3.42	1.99	2.05
17	A	814	CLA	MG-ND	-3.41	1.99	2.05
17	A	827	CLA	MG-ND	-3.40	1.99	2.05
17	B	806	CLA	MG-ND	-3.39	1.99	2.05
17	A	806	CLA	MG-ND	-3.38	1.99	2.05
17	A	833	CLA	MG-ND	-3.37	1.99	2.05
17	A	836	CLA	MG-ND	-3.37	1.99	2.05
17	A	837	CLA	MG-ND	-3.34	1.99	2.05
17	A	812	CLA	MG-ND	-3.33	1.99	2.05
17	A	811	CLA	MG-ND	-3.33	1.99	2.05
17	B	827	CLA	MG-ND	-3.32	1.99	2.05
17	B	812	CLA	MG-ND	-3.30	1.99	2.05
17	B	808	CLA	MG-ND	-3.29	1.99	2.05
17	B	823	CLA	MG-ND	-3.28	1.99	2.05
17	A	832	CLA	MG-ND	-3.28	1.99	2.05
17	B	837	CLA	MG-ND	-3.26	1.99	2.05
17	B	815	CLA	MG-ND	-3.24	1.99	2.05
17	B	811	CLA	MG-ND	-3.23	1.99	2.05
17	A	817	CLA	MG-ND	-3.23	1.99	2.05
17	B	824	CLA	MG-ND	-3.23	1.99	2.05
17	2	310	CLA	C3A-C2A	-3.22	1.51	1.54
17	1	210	CLA	C3A-C2A	-3.22	1.51	1.54
17	A	838	CLA	MG-ND	-3.21	1.99	2.05
17	B	835	CLA	MG-ND	-3.21	1.99	2.05
17	A	813	CLA	MG-ND	-3.16	1.99	2.05
17	B	829	CLA	MG-ND	-3.16	1.99	2.05
17	B	814	CLA	MG-ND	-3.16	1.99	2.05
18	4	305	CHL	C1D-ND	3.14	1.41	1.37
17	1	213	CLA	MG-ND	-3.11	1.99	2.05
17	B	833	CLA	MG-ND	-3.11	1.99	2.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	2	305	CHL	C1D-ND	3.08	1.41	1.37
17	A	810	CLA	MG-ND	-3.07	1.99	2.05
17	A	826	CLA	MG-ND	-3.03	1.99	2.05
17	B	830	CLA	MG-ND	-3.03	1.99	2.05
18	2	307	CHL	C1D-ND	3.02	1.41	1.37
18	2	306	CHL	C1D-ND	3.01	1.41	1.37
18	2	314	CHL	C1D-ND	3.00	1.41	1.37
17	A	829	CLA	MG-ND	-3.00	1.99	2.05
18	4	315	CHL	C1D-ND	2.98	1.41	1.37
17	A	803	CLA	MG-ND	-2.96	1.99	2.05
17	B	809	CLA	MG-ND	-2.96	1.99	2.05
17	B	805	CLA	MG-ND	-2.95	1.99	2.05
17	4	313	CLA	MG-ND	-2.95	1.99	2.05
18	4	307	CHL	C1D-ND	2.94	1.41	1.37
17	B	828	CLA	MG-ND	-2.88	2.00	2.05
18	1	206	CHL	MG-NC	-2.86	1.99	2.06
18	4	306	CHL	C1D-ND	2.85	1.41	1.37
18	3	306	CHL	C1D-ND	2.84	1.41	1.37
18	2	306	CHL	MG-NC	-2.70	1.99	2.06
17	B	803	CLA	MG-ND	-2.66	2.00	2.05
18	4	307	CHL	MG-NC	-2.65	2.00	2.06
18	2	301	CHL	C1D-ND	2.61	1.41	1.37
18	1	201	CHL	MG-NC	-2.60	2.00	2.06
18	4	305	CHL	MG-NC	-2.57	2.00	2.06
18	2	314	CHL	MG-NC	-2.54	2.00	2.06
18	4	306	CHL	MG-NC	-2.53	2.00	2.06
18	2	301	CHL	MG-NC	-2.52	2.00	2.06
18	2	307	CHL	MG-NC	-2.50	2.00	2.06
18	1	201	CHL	C1D-ND	2.49	1.40	1.37
17	B	825	CLA	MG-NA	2.48	2.12	2.06
25	A	801	CL0	MG-NA	2.48	2.12	2.06
18	1	206	CHL	C1D-ND	2.47	1.40	1.37
18	3	306	CHL	MG-NC	-2.45	2.00	2.06
25	A	801	CL0	MG-NB	-2.40	2.01	2.05
21	2	317	BCR	C38-C26	2.31	1.54	1.50
17	A	824	CLA	MG-NA	2.31	2.11	2.06
17	B	803	CLA	C1D-C2D	-2.20	1.41	1.45
17	B	818	CLA	C1D-C2D	-2.20	1.41	1.45
17	A	808	CLA	C1D-C2D	-2.19	1.41	1.45
17	B	804	CLA	C1D-C2D	-2.18	1.41	1.45
17	F	206	CLA	C1D-C2D	-2.18	1.41	1.45
17	A	827	CLA	C1D-C2D	-2.18	1.41	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	A	824	CLA	C1D-C2D	-2.16	1.41	1.45
17	B	820	CLA	C1D-C2D	-2.15	1.41	1.45
17	B	827	CLA	C1D-C2D	-2.15	1.41	1.45
17	B	830	CLA	C1D-C2D	-2.15	1.41	1.45
17	A	831	CLA	C1D-C2D	-2.14	1.41	1.45
17	B	805	CLA	C1D-C2D	-2.14	1.41	1.45
17	B	828	CLA	C1D-C2D	-2.14	1.41	1.45
17	1	205	CLA	C1D-C2D	-2.13	1.41	1.45
17	1	212	CLA	C1D-C2D	-2.13	1.41	1.45
17	B	825	CLA	C1D-C2D	-2.13	1.41	1.45
17	A	826	CLA	C1D-C2D	-2.13	1.41	1.45
17	A	812	CLA	C1D-C2D	-2.13	1.41	1.45
17	A	807	CLA	C1D-C2D	-2.12	1.41	1.45
17	4	302	CLA	C1D-C2D	-2.12	1.41	1.45
17	A	805	CLA	C1D-C2D	-2.12	1.41	1.45
17	B	809	CLA	C1D-C2D	-2.12	1.41	1.45
17	A	817	CLA	C1D-C2D	-2.12	1.41	1.45
17	2	312	CLA	C1D-C2D	-2.11	1.41	1.45
17	A	820	CLA	C1D-C2D	-2.11	1.41	1.45
17	B	807	CLA	C1D-C2D	-2.11	1.41	1.45
17	B	801	CLA	C1D-C2D	-2.11	1.41	1.45
17	F	201	CLA	C1D-C2D	-2.11	1.41	1.45
17	4	301	CLA	C1D-C2D	-2.11	1.41	1.45
17	3	302	CLA	C1D-C2D	-2.11	1.41	1.45
17	B	816	CLA	C1D-C2D	-2.11	1.41	1.45
17	A	836	CLA	C1D-C2D	-2.11	1.41	1.45
17	B	817	CLA	C1D-C2D	-2.11	1.41	1.45
17	4	308	CLA	C1D-C2D	-2.11	1.41	1.45
17	A	811	CLA	C1D-C2D	-2.11	1.41	1.45
17	B	821	CLA	C1D-C2D	-2.11	1.41	1.45
17	A	840	CLA	C1D-C2D	-2.11	1.41	1.45
17	F	203	CLA	C1D-C2D	-2.11	1.41	1.45
17	1	211	CLA	C1D-C2D	-2.10	1.41	1.45
17	B	822	CLA	C1D-C2D	-2.10	1.41	1.45
17	B	824	CLA	C1D-C2D	-2.10	1.41	1.45
17	A	832	CLA	C1D-C2D	-2.10	1.41	1.45
17	B	832	CLA	C1D-C2D	-2.10	1.41	1.45
17	2	308	CLA	C1D-C2D	-2.09	1.41	1.45
17	2	309	CLA	C1D-C2D	-2.09	1.41	1.45
17	A	852	CLA	C3D-C4D	-2.09	1.39	1.44
17	1	202	CLA	C1D-C2D	-2.09	1.41	1.45
17	G	104	CLA	C1D-C2D	-2.08	1.41	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	A	813	CLA	C1D-C2D	-2.08	1.41	1.45
17	A	829	CLA	C1D-C2D	-2.08	1.41	1.45
17	3	310	CLA	C1D-C2D	-2.08	1.41	1.45
17	A	806	CLA	C1D-C2D	-2.08	1.41	1.45
17	L	303	CLA	C1D-C2D	-2.08	1.41	1.45
17	B	838	CLA	C1D-C2D	-2.08	1.41	1.45
17	B	808	CLA	C1D-C2D	-2.08	1.41	1.45
17	B	831	CLA	C1D-C2D	-2.08	1.41	1.45
17	B	811	CLA	C1D-C2D	-2.08	1.41	1.45
18	2	301	CHL	C3D-C4D	-2.08	1.39	1.44
17	B	833	CLA	C1D-C2D	-2.08	1.41	1.45
18	3	306	CHL	C3D-C4D	-2.08	1.39	1.44
17	3	304	CLA	C1D-C2D	-2.08	1.41	1.45
17	A	819	CLA	C1D-C2D	-2.07	1.41	1.45
17	A	838	CLA	C1D-C2D	-2.07	1.41	1.45
17	B	823	CLA	C1D-C2D	-2.07	1.41	1.45
17	4	312	CLA	C1D-C2D	-2.07	1.41	1.45
17	1	208	CLA	C1D-C2D	-2.07	1.41	1.45
17	B	814	CLA	C1D-C2D	-2.07	1.41	1.45
17	A	814	CLA	C1D-C2D	-2.06	1.41	1.45
17	2	303	CLA	C1D-C2D	-2.06	1.41	1.45
17	A	839	CLA	C1D-C2D	-2.06	1.41	1.45
17	B	812	CLA	C1D-C2D	-2.06	1.41	1.45
17	1	209	CLA	C1D-C2D	-2.06	1.41	1.45
17	B	832	CLA	C3D-C4D	-2.06	1.39	1.44
17	A	821	CLA	C1D-C2D	-2.06	1.41	1.45
25	A	801	CL0	C1C-C2C	2.06	1.48	1.44
17	4	311	CLA	C1D-C2D	-2.06	1.41	1.45
17	A	809	CLA	C1D-C2D	-2.06	1.41	1.45
17	B	834	CLA	C1D-C2D	-2.06	1.41	1.45
17	A	804	CLA	C1D-C2D	-2.06	1.41	1.45
17	A	828	CLA	C1D-C2D	-2.06	1.41	1.45
17	A	852	CLA	C1B-NB	-2.06	1.35	1.37
17	B	835	CLA	C1D-C2D	-2.06	1.41	1.45
17	A	850	CLA	C1B-NB	-2.06	1.35	1.37
18	4	306	CHL	C2C-C1C	2.06	1.49	1.44
25	A	801	CL0	CBB-CAB	2.05	1.40	1.30
17	4	303	CLA	C1D-C2D	-2.05	1.41	1.45
17	3	307	CLA	C1D-C2D	-2.05	1.41	1.45
17	B	810	CLA	C1D-C2D	-2.05	1.41	1.45
17	B	837	CLA	C1D-C2D	-2.05	1.41	1.45
18	1	201	CHL	C3D-C4D	-2.05	1.39	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	A	841	CLA	C1D-C2D	-2.05	1.41	1.45
17	B	815	CLA	C1D-C2D	-2.05	1.41	1.45
17	4	309	CLA	C1D-C2D	-2.05	1.41	1.45
17	2	313	CLA	C1D-C2D	-2.05	1.41	1.45
17	G	103	CLA	C1D-C2D	-2.05	1.41	1.45
17	3	305	CLA	C1D-C2D	-2.05	1.41	1.45
18	4	306	CHL	C3D-C4D	-2.04	1.39	1.44
17	A	823	CLA	C1D-C2D	-2.04	1.41	1.45
17	F	204	CLA	C1D-C2D	-2.04	1.41	1.45
17	3	312	CLA	C1D-C2D	-2.04	1.41	1.45
17	A	851	CLA	C1D-C2D	-2.04	1.41	1.45
17	B	802	CLA	C1D-C2D	-2.04	1.41	1.45
17	4	310	CLA	C1D-C2D	-2.03	1.41	1.45
17	1	203	CLA	C1D-C2D	-2.03	1.41	1.45
17	A	825	CLA	C1D-C2D	-2.03	1.41	1.45
18	1	206	CHL	C3D-C4D	-2.03	1.39	1.44
17	2	311	CLA	C1D-C2D	-2.03	1.41	1.45
17	A	802	CLA	C1D-C2D	-2.03	1.41	1.45
17	1	207	CLA	C1D-C2D	-2.03	1.41	1.45
17	A	810	CLA	C1D-C2D	-2.03	1.41	1.45
17	B	826	CLA	C1D-C2D	-2.03	1.41	1.45
17	3	311	CLA	C1D-C2D	-2.03	1.41	1.45
17	A	830	CLA	C1D-C2D	-2.03	1.41	1.45
17	3	308	CLA	C1D-C2D	-2.02	1.41	1.45
17	K	102	CLA	C1D-C2D	-2.02	1.41	1.45
17	A	815	CLA	C1D-C2D	-2.02	1.41	1.45
17	2	310	CLA	C1D-C2D	-2.02	1.41	1.45
17	4	304	CLA	C1D-C2D	-2.02	1.41	1.45
17	A	822	CLA	C1D-C2D	-2.02	1.41	1.45
17	4	313	CLA	C1D-C2D	-2.02	1.41	1.45
17	B	835	CLA	C3D-C4D	-2.02	1.39	1.44
17	A	818	CLA	C1D-C2D	-2.02	1.41	1.45
17	K	103	CLA	C1D-C2D	-2.02	1.41	1.45
17	B	806	CLA	C3D-C4D	-2.02	1.39	1.44
17	B	836	CLA	C1D-C2D	-2.02	1.41	1.45
17	2	304	CLA	C1D-C2D	-2.02	1.41	1.45
17	B	806	CLA	C1D-C2D	-2.01	1.41	1.45
17	A	830	CLA	C3D-C4D	-2.01	1.39	1.44
17	B	829	CLA	C1D-C2D	-2.01	1.41	1.45
17	3	302	CLA	C3D-C4D	-2.01	1.39	1.44
17	A	817	CLA	C3D-C4D	-2.01	1.39	1.44
17	3	309	CLA	C1D-C2D	-2.01	1.41	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	A	816	CLA	C1D-C2D	-2.01	1.41	1.45
17	A	850	CLA	C1D-C2D	-2.01	1.41	1.45
17	L	304	CLA	C1D-C2D	-2.01	1.41	1.45
17	1	210	CLA	C1D-C2D	-2.01	1.41	1.45
17	4	302	CLA	C3D-C4D	-2.01	1.39	1.44
17	B	818	CLA	C3D-C4D	-2.00	1.39	1.44
17	A	812	CLA	C3D-C4D	-2.00	1.39	1.44
17	K	103	CLA	C3D-C4D	-2.00	1.39	1.44
18	2	307	CHL	C3D-C4D	-2.00	1.39	1.44
17	B	819	CLA	C1D-C2D	-2.00	1.41	1.45
17	A	803	CLA	C3D-C4D	-2.00	1.39	1.44

All (571) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	A	801	CL0	CHD-C1D-ND	-5.55	119.36	124.45
25	A	801	CL0	C4A-NA-C1A	5.54	109.19	106.71
17	2	303	CLA	C1D-ND-C4D	-4.16	103.38	106.33
17	A	810	CLA	C1D-ND-C4D	-4.05	103.45	106.33
17	4	303	CLA	C1D-ND-C4D	-3.99	103.50	106.33
17	3	302	CLA	C1D-ND-C4D	-3.97	103.51	106.33
21	2	317	BCR	C23-C24-C25	3.97	138.34	127.20
18	1	201	CHL	CHD-C1D-ND	-3.85	120.92	124.45
17	4	314	CLA	C1D-ND-C4D	-3.84	103.61	106.33
25	A	801	CL0	C1D-ND-C4D	-3.83	103.62	106.33
17	B	829	CLA	C1D-ND-C4D	-3.83	103.62	106.33
17	1	214	CLA	C1D-ND-C4D	-3.82	103.62	106.33
17	B	806	CLA	C1D-ND-C4D	-3.82	103.62	106.33
17	4	313	CLA	C1D-ND-C4D	-3.82	103.62	106.33
18	3	306	CHL	CHD-C1D-ND	-3.80	120.96	124.45
17	2	311	CLA	C1D-ND-C4D	-3.79	103.64	106.33
17	3	312	CLA	C1D-ND-C4D	-3.78	103.65	106.33
17	3	303	CLA	C1D-ND-C4D	-3.78	103.65	106.33
17	A	822	CLA	C1D-ND-C4D	-3.78	103.65	106.33
17	A	803	CLA	C1D-ND-C4D	-3.78	103.65	106.33
17	1	211	CLA	C1D-ND-C4D	-3.76	103.67	106.33
18	4	306	CHL	CHD-C1D-ND	-3.76	121.00	124.45
17	2	302	CLA	C1D-ND-C4D	-3.75	103.67	106.33
18	4	307	CHL	CHD-C1D-ND	-3.74	121.01	124.45
17	A	818	CLA	C1D-ND-C4D	-3.74	103.68	106.33
17	3	310	CLA	C1D-ND-C4D	-3.74	103.68	106.33
18	2	314	CHL	CHD-C1D-ND	-3.73	121.02	124.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	B	828	CLA	C1D-ND-C4D	-3.73	103.69	106.33
17	3	309	CLA	C1D-ND-C4D	-3.72	103.69	106.33
17	K	102	CLA	C1D-ND-C4D	-3.72	103.69	106.33
17	4	311	CLA	C1D-ND-C4D	-3.72	103.69	106.33
17	1	204	CLA	C1D-ND-C4D	-3.72	103.69	106.33
17	B	823	CLA	C1D-ND-C4D	-3.71	103.70	106.33
18	2	301	CHL	CHD-C1D-ND	-3.70	121.05	124.45
17	A	833	CLA	C1D-ND-C4D	-3.70	103.71	106.33
18	1	206	CHL	CHD-C1D-ND	-3.69	121.06	124.45
17	A	814	CLA	C1D-ND-C4D	-3.69	103.71	106.33
17	1	205	CLA	C1D-ND-C4D	-3.69	103.72	106.33
17	B	832	CLA	C1D-ND-C4D	-3.68	103.72	106.33
17	A	850	CLA	C4A-NA-C1A	3.67	108.36	106.71
17	J	102	CLA	C1D-ND-C4D	-3.67	103.72	106.33
17	3	305	CLA	C1D-ND-C4D	-3.67	103.73	106.33
17	A	817	CLA	C1D-ND-C4D	-3.67	103.73	106.33
18	2	306	CHL	CHD-C1D-ND	-3.67	121.08	124.45
17	A	812	CLA	C1D-ND-C4D	-3.66	103.73	106.33
18	4	315	CHL	CHD-C1D-ND	-3.65	121.10	124.45
17	1	213	CLA	C1D-ND-C4D	-3.65	103.74	106.33
17	K	103	CLA	C1D-ND-C4D	-3.64	103.75	106.33
17	B	808	CLA	C1D-ND-C4D	-3.64	103.75	106.33
17	B	817	CLA	C1D-ND-C4D	-3.64	103.75	106.33
17	B	826	CLA	C1D-ND-C4D	-3.63	103.75	106.33
17	4	310	CLA	C1D-ND-C4D	-3.63	103.75	106.33
17	H	201	CLA	C1D-ND-C4D	-3.63	103.75	106.33
17	4	302	CLA	C1D-ND-C4D	-3.63	103.76	106.33
18	4	305	CHL	CHD-C1D-ND	-3.63	121.12	124.45
17	B	809	CLA	C1D-ND-C4D	-3.63	103.76	106.33
17	B	811	CLA	C1D-ND-C4D	-3.62	103.76	106.33
17	B	835	CLA	C1D-ND-C4D	-3.62	103.76	106.33
17	A	806	CLA	C1D-ND-C4D	-3.62	103.76	106.33
17	A	835	CLA	C1D-ND-C4D	-3.62	103.76	106.33
17	1	208	CLA	C1D-ND-C4D	-3.61	103.77	106.33
17	3	313	CLA	C1D-ND-C4D	-3.61	103.77	106.33
17	B	819	CLA	C1D-ND-C4D	-3.61	103.77	106.33
17	B	833	CLA	C1D-ND-C4D	-3.61	103.77	106.33
17	2	313	CLA	C1D-ND-C4D	-3.61	103.77	106.33
17	F	204	CLA	C1D-ND-C4D	-3.61	103.77	106.33
17	G	103	CLA	C1D-ND-C4D	-3.61	103.77	106.33
17	2	308	CLA	C1D-ND-C4D	-3.61	103.77	106.33
17	B	836	CLA	C1D-ND-C4D	-3.61	103.77	106.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	1	210	CLA	C1D-ND-C4D	-3.60	103.78	106.33
17	B	814	CLA	C1D-ND-C4D	-3.59	103.78	106.33
17	A	825	CLA	C1D-ND-C4D	-3.59	103.78	106.33
17	3	301	CLA	C1D-ND-C4D	-3.59	103.78	106.33
17	B	813	CLA	C1D-ND-C4D	-3.59	103.78	106.33
17	L	303	CLA	C1D-ND-C4D	-3.58	103.79	106.33
17	B	839	CLA	C1D-ND-C4D	-3.58	103.79	106.33
17	1	202	CLA	C1D-ND-C4D	-3.57	103.80	106.33
17	B	801	CLA	C1D-ND-C4D	-3.57	103.80	106.33
17	B	816	CLA	C1D-ND-C4D	-3.57	103.80	106.33
17	4	301	CLA	C1D-ND-C4D	-3.57	103.80	106.33
17	A	826	CLA	C1D-ND-C4D	-3.57	103.80	106.33
17	3	304	CLA	C1D-ND-C4D	-3.56	103.80	106.33
17	A	832	CLA	C1D-ND-C4D	-3.56	103.81	106.33
17	2	310	CLA	C1D-ND-C4D	-3.56	103.81	106.33
17	1	207	CLA	C1D-ND-C4D	-3.56	103.81	106.33
17	A	837	CLA	C1D-ND-C4D	-3.56	103.81	106.33
17	4	304	CLA	C1D-ND-C4D	-3.55	103.81	106.33
17	A	830	CLA	C1D-ND-C4D	-3.55	103.81	106.33
17	A	851	CLA	C1D-ND-C4D	-3.55	103.81	106.33
17	3	307	CLA	C1D-ND-C4D	-3.54	103.82	106.33
17	B	815	CLA	C1D-ND-C4D	-3.54	103.82	106.33
17	A	834	CLA	C1D-ND-C4D	-3.54	103.82	106.33
17	L	302	CLA	C1D-ND-C4D	-3.54	103.82	106.33
17	2	304	CLA	C1D-ND-C4D	-3.54	103.82	106.33
17	A	821	CLA	C1D-ND-C4D	-3.54	103.82	106.33
17	B	802	CLA	C1D-ND-C4D	-3.53	103.83	106.33
17	A	841	CLA	C1D-ND-C4D	-3.52	103.83	106.33
17	B	834	CLA	C1D-ND-C4D	-3.52	103.83	106.33
17	4	308	CLA	C1D-ND-C4D	-3.51	103.84	106.33
17	A	831	CLA	C1D-ND-C4D	-3.50	103.85	106.33
17	A	819	CLA	C1D-ND-C4D	-3.50	103.85	106.33
17	A	805	CLA	C1D-ND-C4D	-3.50	103.85	106.33
17	B	831	CLA	C1D-ND-C4D	-3.50	103.85	106.33
17	K	104	CLA	C1D-ND-C4D	-3.49	103.86	106.33
17	1	203	CLA	C1D-ND-C4D	-3.49	103.86	106.33
17	A	838	CLA	C1D-ND-C4D	-3.49	103.86	106.33
17	3	314	CLA	C1D-ND-C4D	-3.48	103.86	106.33
17	A	804	CLA	C1D-ND-C4D	-3.48	103.86	106.33
17	B	821	CLA	C1D-ND-C4D	-3.47	103.87	106.33
18	2	305	CHL	CHD-C1D-ND	-3.45	121.28	124.45
17	G	105	CLA	C1D-ND-C4D	-3.45	103.88	106.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	A	809	CLA	C1D-ND-C4D	-3.45	103.88	106.33
17	A	811	CLA	C1D-ND-C4D	-3.45	103.89	106.33
17	A	836	CLA	C1D-ND-C4D	-3.45	103.89	106.33
17	A	813	CLA	C1D-ND-C4D	-3.44	103.89	106.33
17	B	830	CLA	C1D-ND-C4D	-3.44	103.89	106.33
18	1	206	CHL	CHC-C1C-NC	3.43	129.41	124.20
17	A	815	CLA	C1D-ND-C4D	-3.43	103.90	106.33
17	B	838	CLA	C1D-ND-C4D	-3.43	103.90	106.33
17	4	312	CLA	C1D-ND-C4D	-3.43	103.90	106.33
17	B	812	CLA	C1D-ND-C4D	-3.42	103.91	106.33
17	F	206	CLA	C1D-ND-C4D	-3.42	103.91	106.33
17	B	807	CLA	C1D-ND-C4D	-3.42	103.91	106.33
17	B	819	CLA	O2A-C1-C2	3.42	117.61	108.64
17	A	802	CLA	C1D-ND-C4D	-3.41	103.91	106.33
17	A	816	CLA	C1D-ND-C4D	-3.41	103.91	106.33
17	B	805	CLA	C1D-ND-C4D	-3.41	103.91	106.33
17	3	311	CLA	C1D-ND-C4D	-3.41	103.91	106.33
18	2	307	CHL	CHD-C1D-ND	-3.40	121.33	124.45
17	F	201	CLA	C1D-ND-C4D	-3.40	103.92	106.33
17	B	804	CLA	C1D-ND-C4D	-3.40	103.92	106.33
17	B	824	CLA	C1D-ND-C4D	-3.39	103.93	106.33
17	4	309	CLA	C1D-ND-C4D	-3.38	103.93	106.33
17	L	304	CLA	C1D-ND-C4D	-3.38	103.94	106.33
17	A	839	CLA	C1D-ND-C4D	-3.37	103.94	106.33
17	A	823	CLA	C1D-ND-C4D	-3.37	103.94	106.33
17	B	837	CLA	C1D-ND-C4D	-3.37	103.94	106.33
17	A	852	CLA	CHD-C1D-ND	-3.36	121.36	124.45
17	2	309	CLA	C1D-ND-C4D	-3.36	103.95	106.33
17	A	829	CLA	C1D-ND-C4D	-3.34	103.96	106.33
18	2	306	CHL	CHC-C1C-NC	3.31	129.23	124.20
17	G	104	CLA	C1D-ND-C4D	-3.31	103.98	106.33
17	B	827	CLA	C1D-ND-C4D	-3.31	103.98	106.33
17	A	807	CLA	C1D-ND-C4D	-3.31	103.99	106.33
17	A	828	CLA	C1D-ND-C4D	-3.31	103.99	106.33
17	F	203	CLA	C1D-ND-C4D	-3.30	103.99	106.33
17	2	312	CLA	C1D-ND-C4D	-3.29	104.00	106.33
17	A	850	CLA	CHD-C1D-ND	-3.29	121.43	124.45
17	B	818	CLA	C1D-ND-C4D	-3.29	104.00	106.33
17	1	212	CLA	C1D-ND-C4D	-3.29	104.00	106.33
17	B	822	CLA	C1D-ND-C4D	-3.28	104.00	106.33
17	3	308	CLA	C1D-ND-C4D	-3.26	104.02	106.33
17	A	810	CLA	CHD-C1D-ND	-3.26	121.46	124.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	1	209	CLA	C1D-ND-C4D	-3.26	104.02	106.33
17	A	840	CLA	C1D-ND-C4D	-3.26	104.02	106.33
18	2	314	CHL	CHC-C1C-NC	3.25	129.14	124.20
17	A	852	CLA	C4A-NA-C1A	3.25	108.17	106.71
17	B	810	CLA	C1D-ND-C4D	-3.24	104.03	106.33
17	K	104	CLA	CHD-C1D-ND	-3.23	121.49	124.45
17	A	803	CLA	CHD-C1D-ND	-3.21	121.50	124.45
17	B	803	CLA	C1D-ND-C4D	-3.21	104.05	106.33
17	B	813	CLA	CHD-C1D-ND	-3.19	121.52	124.45
17	K	103	CLA	CHD-C1D-ND	-3.19	121.53	124.45
17	B	829	CLA	CHD-C1D-ND	-3.18	121.53	124.45
17	A	821	CLA	CHD-C1D-ND	-3.17	121.54	124.45
17	B	839	CLA	CHD-C1D-ND	-3.16	121.55	124.45
17	4	314	CLA	CHD-C1D-ND	-3.16	121.55	124.45
17	B	825	CLA	C1D-ND-C4D	-3.16	104.09	106.33
17	B	832	CLA	CHD-C1D-ND	-3.15	121.56	124.45
17	A	808	CLA	C1D-ND-C4D	-3.15	104.10	106.33
17	A	852	CLA	C3B-C4B-NB	-3.15	107.60	110.52
17	A	852	CLA	C1D-ND-C4D	-3.14	104.11	106.33
17	A	824	CLA	C1D-ND-C4D	-3.13	104.11	106.33
17	A	818	CLA	CHD-C1D-ND	-3.13	121.58	124.45
17	A	850	CLA	C3B-C4B-NB	-3.13	107.61	110.52
17	B	802	CLA	CHD-C1D-ND	-3.10	121.60	124.45
17	3	302	CLA	CHC-C4B-NB	3.09	127.53	124.26
17	B	836	CLA	CHD-C1D-ND	-3.09	121.62	124.45
17	1	203	CLA	CHD-C1D-ND	-3.08	121.62	124.45
17	A	820	CLA	C1D-ND-C4D	-3.08	104.15	106.33
17	1	214	CLA	CHD-C1D-ND	-3.08	121.63	124.45
17	B	804	CLA	CHD-C1D-ND	-3.08	121.63	124.45
18	4	305	CHL	CHC-C1C-NC	3.07	128.87	124.20
17	A	833	CLA	CHD-C1D-ND	-3.07	121.63	124.45
17	B	833	CLA	CHD-C1D-ND	-3.07	121.63	124.45
17	L	302	CLA	CHD-C1D-ND	-3.07	121.63	124.45
17	4	303	CLA	CHC-C4B-NB	3.07	127.50	124.26
17	4	309	CLA	CHD-C1D-ND	-3.07	121.64	124.45
17	3	307	CLA	CHD-C1D-ND	-3.06	121.64	124.45
17	A	802	CLA	CHD-C1D-ND	-3.06	121.64	124.45
17	B	826	CLA	CHD-C1D-ND	-3.06	121.64	124.45
17	A	827	CLA	C1D-ND-C4D	-3.05	104.17	106.33
17	B	831	CLA	CHD-C1D-ND	-3.05	121.65	124.45
17	B	822	CLA	CHD-C1D-ND	-3.05	121.65	124.45
17	A	825	CLA	CHD-C1D-ND	-3.05	121.65	124.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	3	312	CLA	CHD-C1D-ND	-3.04	121.66	124.45
17	A	816	CLA	CHD-C1D-ND	-3.04	121.66	124.45
17	B	819	CLA	CHD-C1D-ND	-3.04	121.66	124.45
17	B	808	CLA	CHD-C1D-ND	-3.03	121.67	124.45
17	B	806	CLA	CHD-C1D-ND	-3.03	121.67	124.45
17	L	303	CLA	CHD-C1D-ND	-3.03	121.67	124.45
17	1	213	CLA	CHD-C1D-ND	-3.02	121.68	124.45
17	A	806	CLA	CHD-C1D-ND	-3.02	121.68	124.45
17	A	819	CLA	CHD-C1D-ND	-3.02	121.68	124.45
17	A	814	CLA	CHD-C1D-ND	-3.02	121.68	124.45
17	3	303	CLA	CHD-C1D-ND	-3.01	121.68	124.45
17	A	804	CLA	CHD-C1D-ND	-3.01	121.68	124.45
17	A	831	CLA	CHD-C1D-ND	-3.01	121.68	124.45
17	A	822	CLA	CHD-C1D-ND	-3.01	121.69	124.45
17	A	828	CLA	CHD-C1D-ND	-3.01	121.69	124.45
17	A	834	CLA	CHD-C1D-ND	-3.01	121.69	124.45
17	A	851	CLA	CHD-C1D-ND	-3.01	121.69	124.45
17	4	313	CLA	CHD-C1D-ND	-3.00	121.70	124.45
17	A	837	CLA	CHD-C1D-ND	-3.00	121.70	124.45
17	2	308	CLA	CHD-C1D-ND	-3.00	121.70	124.45
18	2	305	CHL	CHC-C1C-NC	3.00	128.75	124.20
17	A	812	CLA	CHD-C1D-ND	-3.00	121.70	124.45
17	B	812	CLA	CHD-C1D-ND	-3.00	121.70	124.45
17	1	208	CLA	CHD-C1D-ND	-2.99	121.70	124.45
17	3	308	CLA	CHD-C1D-ND	-2.99	121.70	124.45
17	4	308	CLA	CHD-C1D-ND	-2.99	121.71	124.45
17	J	102	CLA	CHD-C1D-ND	-2.99	121.71	124.45
17	H	201	CLA	CHD-C1D-ND	-2.98	121.71	124.45
17	2	309	CLA	CHD-C1D-ND	-2.98	121.71	124.45
17	1	204	CLA	CHD-C1D-ND	-2.98	121.71	124.45
17	2	302	CLA	CHD-C1D-ND	-2.97	121.72	124.45
17	G	103	CLA	CHD-C1D-ND	-2.97	121.72	124.45
25	A	801	CL0	C1-C2-C3	-2.97	120.90	126.04
17	B	816	CLA	CHD-C1D-ND	-2.97	121.73	124.45
17	A	838	CLA	CHD-C1D-ND	-2.97	121.73	124.45
25	A	801	CL0	CHB-C1B-NB	-2.96	121.12	124.26
17	A	832	CLA	CHD-C1D-ND	-2.95	121.74	124.45
17	B	835	CLA	CHD-C1D-ND	-2.95	121.74	124.45
17	1	202	CLA	CHD-C1D-ND	-2.95	121.74	124.45
17	B	828	CLA	CHD-C1D-ND	-2.95	121.74	124.45
17	A	813	CLA	CHD-C1D-ND	-2.94	121.75	124.45
17	B	823	CLA	CHD-C1D-ND	-2.94	121.75	124.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	A	823	CLA	CHD-C1D-ND	-2.94	121.76	124.45
17	B	811	CLA	CHD-C1D-ND	-2.94	121.76	124.45
17	3	305	CLA	CHD-C1D-ND	-2.93	121.76	124.45
17	B	815	CLA	CHD-C1D-ND	-2.93	121.76	124.45
17	B	830	CLA	CHD-C1D-ND	-2.92	121.77	124.45
17	B	820	CLA	C1D-ND-C4D	-2.92	104.26	106.33
18	2	307	CHL	C1D-ND-C4D	-2.92	104.26	106.33
17	3	301	CLA	CHD-C1D-ND	-2.92	121.77	124.45
17	2	304	CLA	CHD-C1D-ND	-2.92	121.77	124.45
17	1	209	CLA	CHD-C1D-ND	-2.92	121.77	124.45
17	1	210	CLA	CHD-C1D-ND	-2.92	121.77	124.45
17	B	805	CLA	CHD-C1D-ND	-2.92	121.78	124.45
17	4	312	CLA	CHD-C1D-ND	-2.91	121.78	124.45
17	K	102	CLA	CHD-C1D-ND	-2.91	121.78	124.45
17	2	310	CLA	CHD-C1D-ND	-2.91	121.78	124.45
17	G	104	CLA	CHC-C4B-NB	2.91	127.33	124.26
17	3	314	CLA	CHD-C1D-ND	-2.90	121.79	124.45
17	A	830	CLA	CHD-C1D-ND	-2.90	121.79	124.45
17	B	824	CLA	CHD-C1D-ND	-2.90	121.79	124.45
17	A	827	CLA	CHD-C1D-ND	-2.89	121.79	124.45
17	A	835	CLA	CHD-C1D-ND	-2.89	121.80	124.45
18	2	301	CHL	CHC-C1C-NC	2.89	128.59	124.20
17	A	841	CLA	CHD-C1D-ND	-2.89	121.80	124.45
17	A	807	CLA	CHD-C1D-ND	-2.88	121.81	124.45
17	B	801	CLA	CHD-C1D-ND	-2.88	121.81	124.45
17	3	304	CLA	CHD-C1D-ND	-2.87	121.81	124.45
17	3	309	CLA	CHD-C1D-ND	-2.87	121.82	124.45
17	1	207	CLA	CHD-C1D-ND	-2.87	121.82	124.45
17	2	313	CLA	CHD-C1D-ND	-2.87	121.82	124.45
17	A	815	CLA	CHD-C1D-ND	-2.86	121.82	124.45
17	A	809	CLA	CHD-C1D-ND	-2.86	121.83	124.45
17	2	313	CLA	CHC-C4B-NB	2.86	127.28	124.26
17	B	807	CLA	CHD-C1D-ND	-2.86	121.83	124.45
17	L	304	CLA	CHD-C1D-ND	-2.86	121.83	124.45
17	A	815	CLA	CHC-C4B-NB	2.85	127.28	124.26
17	A	850	CLA	C1D-ND-C4D	-2.85	104.31	106.33
17	A	826	CLA	CHD-C1D-ND	-2.85	121.84	124.45
17	A	810	CLA	CHC-C4B-NB	2.84	127.26	124.26
17	A	836	CLA	CHD-C1D-ND	-2.84	121.84	124.45
17	2	312	CLA	CHC-C4B-NB	2.84	127.26	124.26
17	3	311	CLA	CHD-C1D-ND	-2.84	121.85	124.45
17	4	301	CLA	CHD-C1D-ND	-2.83	121.85	124.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	B	803	CLA	CHD-C1D-ND	-2.83	121.85	124.45
17	A	839	CLA	CHD-C1D-ND	-2.83	121.85	124.45
17	A	829	CLA	CHD-C1D-ND	-2.83	121.85	124.45
17	F	204	CLA	CHD-C1D-ND	-2.83	121.86	124.45
17	B	814	CLA	CHD-C1D-ND	-2.83	121.86	124.45
17	G	105	CLA	CHD-C1D-ND	-2.83	121.86	124.45
17	B	838	CLA	CHD-C1D-ND	-2.82	121.86	124.45
17	4	312	CLA	CHC-C4B-NB	2.82	127.24	124.26
17	F	203	CLA	CHD-C1D-ND	-2.82	121.86	124.45
17	B	821	CLA	CHD-C1D-ND	-2.82	121.87	124.45
17	B	817	CLA	CHD-C1D-ND	-2.81	121.87	124.45
17	4	304	CLA	CHD-C1D-ND	-2.81	121.87	124.45
17	A	851	CLA	CHC-C4B-NB	2.81	127.23	124.26
17	A	841	CLA	CHC-C4B-NB	2.81	127.23	124.26
17	B	834	CLA	CHD-C1D-ND	-2.81	121.88	124.45
17	2	311	CLA	CHD-C1D-ND	-2.80	121.88	124.45
17	4	311	CLA	CHD-C1D-ND	-2.79	121.89	124.45
17	A	805	CLA	CHD-C1D-ND	-2.79	121.89	124.45
17	4	308	CLA	CHC-C4B-NB	2.79	127.21	124.26
17	B	815	CLA	CHC-C4B-NB	2.78	127.20	124.26
17	2	312	CLA	CHD-C1D-ND	-2.78	121.90	124.45
17	B	817	CLA	CHC-C4B-NB	2.78	127.20	124.26
17	B	818	CLA	CHD-C1D-ND	-2.78	121.90	124.45
17	A	824	CLA	CHD-C1D-ND	-2.78	121.90	124.45
17	A	840	CLA	CHD-C1D-ND	-2.78	121.90	124.45
17	B	825	CLA	CHD-C1D-ND	-2.77	121.91	124.45
18	2	305	CHL	C1D-ND-C4D	-2.77	104.37	106.33
18	4	315	CHL	CHC-C1C-NC	2.77	128.40	124.20
17	2	303	CLA	CHC-C4B-NB	2.77	127.19	124.26
17	1	212	CLA	CHD-C1D-ND	-2.76	121.91	124.45
17	3	310	CLA	CHD-C1D-ND	-2.76	121.92	124.45
17	A	811	CLA	CHD-C1D-ND	-2.76	121.92	124.45
17	F	201	CLA	CHD-C1D-ND	-2.76	121.92	124.45
17	A	837	CLA	CHC-C4B-NB	2.76	127.18	124.26
17	4	302	CLA	CHD-C1D-ND	-2.76	121.92	124.45
17	3	313	CLA	CHD-C1D-ND	-2.76	121.92	124.45
17	A	817	CLA	CHD-C1D-ND	-2.76	121.92	124.45
17	4	301	CLA	CHC-C4B-NB	2.75	127.17	124.26
17	2	310	CLA	CHC-C4B-NB	2.75	127.17	124.26
17	4	310	CLA	CHD-C1D-ND	-2.75	121.93	124.45
18	4	307	CHL	CHC-C1C-NC	2.74	128.36	124.20
17	B	812	CLA	CAB-C3B-C2B	2.74	130.69	123.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	B	837	CLA	CHD-C1D-ND	-2.74	121.94	124.45
17	B	821	CLA	CHC-C4B-NB	2.73	127.15	124.26
17	G	104	CLA	CHD-C1D-ND	-2.73	121.95	124.45
17	B	816	CLA	CHC-C4B-NB	2.73	127.15	124.26
17	B	831	CLA	CHC-C4B-NB	2.73	127.15	124.26
17	B	827	CLA	CHD-C1D-ND	-2.72	121.95	124.45
18	4	306	CHL	C1D-ND-C4D	-2.72	104.40	106.33
17	1	211	CLA	CHC-C4B-NB	2.72	127.13	124.26
17	1	213	CLA	CHC-C4B-NB	2.72	127.13	124.26
17	1	211	CLA	CHD-C1D-ND	-2.71	121.96	124.45
17	A	811	CLA	CHC-C4B-NB	2.71	127.12	124.26
17	F	201	CLA	CHC-C4B-NB	2.71	127.12	124.26
17	B	827	CLA	CHC-C4B-NB	2.71	127.12	124.26
17	3	310	CLA	CHC-C4B-NB	2.71	127.12	124.26
17	B	834	CLA	CHC-C4B-NB	2.71	127.12	124.26
17	B	807	CLA	CHC-C4B-NB	2.71	127.12	124.26
17	F	206	CLA	CHD-C1D-ND	-2.71	121.97	124.45
18	3	306	CHL	CHC-C1C-NC	2.70	128.30	124.20
17	A	836	CLA	CHC-C4B-NB	2.70	127.11	124.26
17	2	304	CLA	CHC-C4B-NB	2.70	127.11	124.26
17	B	801	CLA	CHC-C4B-NB	2.69	127.11	124.26
18	2	307	CHL	CHC-C1C-NC	2.69	128.29	124.20
17	3	309	CLA	CHC-C4B-NB	2.69	127.11	124.26
17	A	808	CLA	CHD-C1D-ND	-2.69	121.98	124.45
17	G	105	CLA	CHC-C4B-NB	2.69	127.10	124.26
17	B	810	CLA	CHC-C4B-NB	2.69	127.10	124.26
17	2	311	CLA	CHC-C4B-NB	2.68	127.10	124.26
17	L	303	CLA	CHC-C4B-NB	2.68	127.09	124.26
17	A	823	CLA	CHC-C4B-NB	2.68	127.09	124.26
17	F	204	CLA	CHC-C4B-NB	2.67	127.09	124.26
17	4	304	CLA	CHC-C4B-NB	2.67	127.08	124.26
17	A	839	CLA	CHC-C4B-NB	2.67	127.08	124.26
17	B	811	CLA	CHC-C4B-NB	2.67	127.08	124.26
17	K	102	CLA	CHC-C4B-NB	2.67	127.08	124.26
17	1	214	CLA	CHC-C4B-NB	2.67	127.08	124.26
17	B	832	CLA	CHC-C4B-NB	2.67	127.08	124.26
17	A	805	CLA	CHC-C4B-NB	2.66	127.08	124.26
17	1	208	CLA	CHC-C4B-NB	2.66	127.08	124.26
17	B	814	CLA	CHC-C4B-NB	2.66	127.08	124.26
17	A	806	CLA	CHC-C4B-NB	2.66	127.07	124.26
17	3	303	CLA	CHC-C4B-NB	2.66	127.07	124.26
17	A	835	CLA	CHC-C4B-NB	2.66	127.07	124.26

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	4	306	CHL	CHC-C1C-NC	2.66	128.23	124.20
17	1	212	CLA	CHC-C4B-NB	2.66	127.07	124.26
18	1	201	CHL	CHC-C1C-NC	2.65	128.22	124.20
18	2	307	CHL	CHB-C4A-NA	2.65	128.18	124.51
17	A	813	CLA	CHC-C4B-NB	2.65	127.06	124.26
17	1	205	CLA	CHC-C4B-NB	2.65	127.06	124.26
18	1	201	CHL	C1D-ND-C4D	-2.65	104.46	106.33
17	F	203	CLA	CHC-C4B-NB	2.64	127.06	124.26
21	2	317	BCR	C24-C23-C22	2.64	130.23	126.23
18	3	306	CHL	C1D-ND-C4D	-2.64	104.46	106.33
17	B	810	CLA	CHD-C1D-ND	-2.63	122.04	124.45
18	4	305	CHL	C1D-ND-C4D	-2.63	104.47	106.33
17	3	313	CLA	CHC-C4B-NB	2.63	127.04	124.26
17	B	804	CLA	CHC-C4B-NB	2.63	127.04	124.26
17	3	304	CLA	CHC-C4B-NB	2.63	127.04	124.26
17	L	304	CLA	CHC-C4B-NB	2.62	127.03	124.26
17	2	303	CLA	CHD-C1D-ND	-2.62	122.05	124.45
17	B	809	CLA	CHC-C4B-NB	2.62	127.03	124.26
17	B	836	CLA	CHC-C4B-NB	2.61	127.02	124.26
17	B	818	CLA	CHC-C4B-NB	2.61	127.02	124.26
17	3	302	CLA	CHD-C1D-ND	-2.60	122.06	124.45
20	1	216	XAT	C7-C8-C9	2.60	129.56	125.53
17	3	308	CLA	CHC-C4B-NB	2.60	127.01	124.26
17	1	203	CLA	CHC-C4B-NB	2.60	127.01	124.26
18	2	306	CHL	C1D-ND-C4D	-2.59	104.49	106.33
17	A	820	CLA	CHC-C4B-NB	2.59	127.00	124.26
17	4	310	CLA	CHC-C4B-NB	2.59	127.00	124.26
17	1	207	CLA	CHC-C4B-NB	2.59	127.00	124.26
17	3	305	CLA	CHC-C4B-NB	2.59	127.00	124.26
17	L	302	CLA	CHC-C4B-NB	2.59	126.99	124.26
17	A	812	CLA	CHC-C4B-NB	2.58	126.99	124.26
17	K	103	CLA	CHC-C4B-NB	2.58	126.99	124.26
17	1	204	CLA	CHC-C4B-NB	2.58	126.99	124.26
17	4	311	CLA	CHC-C4B-NB	2.57	126.98	124.26
17	2	308	CLA	CHC-C4B-NB	2.57	126.98	124.26
17	A	808	CLA	CHC-C4B-NB	2.57	126.98	124.26
17	A	824	CLA	CHC-C4B-NB	2.57	126.98	124.26
17	2	302	CLA	CHC-C4B-NB	2.57	126.97	124.26
17	A	828	CLA	CHC-C4B-NB	2.57	126.97	124.26
17	A	829	CLA	CHC-C4B-NB	2.56	126.97	124.26
17	B	833	CLA	CHC-C4B-NB	2.56	126.97	124.26
18	2	301	CHL	CHB-C4A-NA	2.56	128.06	124.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	1	210	CLA	CHC-C4B-NB	2.56	126.97	124.26
17	B	822	CLA	CHC-C4B-NB	2.56	126.97	124.26
18	2	305	CHL	CHB-C4A-NA	2.56	128.05	124.51
17	A	807	CLA	CHC-C4B-NB	2.56	126.96	124.26
17	A	833	CLA	CHC-C4B-NB	2.56	126.96	124.26
17	2	309	CLA	CHC-C4B-NB	2.55	126.96	124.26
17	4	303	CLA	CHD-C1D-ND	-2.55	122.11	124.45
17	3	307	CLA	CHC-C4B-NB	2.55	126.95	124.26
17	A	819	CLA	CHC-C4B-NB	2.55	126.95	124.26
18	4	307	CHL	C1D-ND-C4D	-2.55	104.53	106.33
17	B	820	CLA	CHD-C1D-ND	-2.54	122.12	124.45
17	B	839	CLA	CHC-C4B-NB	2.54	126.94	124.26
17	A	834	CLA	CHC-C4B-NB	2.54	126.94	124.26
17	3	312	CLA	CHC-C4B-NB	2.54	126.94	124.26
17	B	802	CLA	CHC-C4B-NB	2.53	126.94	124.26
17	G	103	CLA	CHC-C4B-NB	2.53	126.94	124.26
17	J	102	CLA	CHC-C4B-NB	2.52	126.92	124.26
25	A	801	CL0	CHD-C1D-C2D	2.52	130.76	125.48
17	A	820	CLA	CHD-C1D-ND	-2.51	122.14	124.45
18	2	314	CHL	C1D-ND-C4D	-2.51	104.55	106.33
18	2	301	CHL	CHA-C1A-NA	-2.51	120.64	126.40
17	B	822	CLA	C4A-NA-C1A	2.51	107.84	106.71
18	4	315	CHL	C1D-ND-C4D	-2.51	104.55	106.33
17	A	831	CLA	CHC-C4B-NB	2.51	126.92	124.26
18	2	301	CHL	C4B-CHC-C1C	-2.51	120.38	126.34
17	4	309	CLA	CHC-C4B-NB	2.51	126.91	124.26
17	B	805	CLA	CHC-C4B-NB	2.51	126.91	124.26
17	A	821	CLA	CHC-C4B-NB	2.51	126.91	124.26
17	F	206	CLA	CHC-C4B-NB	2.51	126.91	124.26
17	B	829	CLA	CHC-C4B-NB	2.51	126.91	124.26
17	A	830	CLA	CHC-C4B-NB	2.50	126.91	124.26
17	1	202	CLA	CHC-C4B-NB	2.50	126.91	124.26
17	A	817	CLA	CHC-C4B-NB	2.50	126.91	124.26
17	4	302	CLA	CHC-C4B-NB	2.50	126.90	124.26
17	1	205	CLA	CHD-C1D-ND	-2.49	122.16	124.45
18	2	314	CHL	CHB-C4A-NA	2.49	127.95	124.51
17	B	812	CLA	CHC-C4B-NB	2.49	126.89	124.26
17	B	819	CLA	CHC-C4B-NB	2.49	126.89	124.26
18	4	315	CHL	CHB-C4A-NA	2.49	127.95	124.51
17	B	838	CLA	CHC-C4B-NB	2.48	126.89	124.26
17	A	816	CLA	CHC-C4B-NB	2.48	126.89	124.26
17	A	822	CLA	CHC-C4B-NB	2.48	126.88	124.26

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	B	820	CLA	CHC-C4B-NB	2.48	126.88	124.26
18	2	306	CHL	CHB-C4A-NA	2.48	127.94	124.51
17	3	301	CLA	CHC-C4B-NB	2.48	126.88	124.26
18	1	206	CHL	C1D-ND-C4D	-2.47	104.58	106.33
17	4	313	CLA	CHC-C4B-NB	2.47	126.88	124.26
17	B	835	CLA	CHC-C4B-NB	2.47	126.87	124.26
24	1	221	PGT	C2-O2-C31	2.46	123.85	117.79
25	A	801	CL0	O2A-C1-C2	2.46	115.10	108.64
17	H	201	CLA	CHC-C4B-NB	2.45	126.85	124.26
17	B	826	CLA	CHC-C4B-NB	2.44	126.84	124.26
17	3	311	CLA	C4A-NA-C1A	2.44	107.80	106.71
17	B	806	CLA	CHC-C4B-NB	2.43	126.83	124.26
17	B	820	CLA	C4A-NA-C1A	2.43	107.80	106.71
17	A	832	CLA	CHC-C4B-NB	2.43	126.83	124.26
21	2	317	BCR	C8-C7-C6	2.43	134.02	127.20
17	4	314	CLA	CHC-C4B-NB	2.43	126.83	124.26
18	1	206	CHL	CHC-C1C-C2C	-2.42	117.32	126.11
17	A	809	CLA	CHC-C4B-NB	2.42	126.82	124.26
17	A	825	CLA	CHC-C4B-NB	2.42	126.82	124.26
17	A	826	CLA	CHC-C4B-NB	2.42	126.82	124.26
18	2	314	CHL	CHA-C1A-NA	-2.41	120.88	126.40
17	A	814	CLA	CHC-C4B-NB	2.40	126.80	124.26
17	1	209	CLA	CHC-C4B-NB	2.40	126.80	124.26
17	A	804	CLA	CHC-C4B-NB	2.40	126.80	124.26
17	3	311	CLA	CHC-C4B-NB	2.39	126.79	124.26
18	1	206	CHL	C4B-CHC-C1C	-2.39	120.67	126.34
17	B	825	CLA	C3B-C4B-NB	-2.39	108.30	110.52
17	B	830	CLA	CHC-C4B-NB	2.38	126.78	124.26
17	A	840	CLA	CHC-C4B-NB	2.38	126.78	124.26
17	A	818	CLA	CHC-C4B-NB	2.37	126.77	124.26
17	B	809	CLA	CHD-C1D-ND	-2.37	122.27	124.45
17	B	808	CLA	CHC-C4B-NB	2.37	126.77	124.26
18	3	306	CHL	CHB-C4A-NA	2.37	127.79	124.51
17	K	104	CLA	C4A-NA-C1A	2.37	107.77	106.71
18	3	306	CHL	CHA-C1A-NA	-2.37	120.98	126.40
17	B	825	CLA	CHC-C4B-NB	2.36	126.76	124.26
18	4	307	CHL	CHB-C4A-NA	2.36	127.78	124.51
18	4	315	CHL	CHA-C1A-NA	-2.36	120.99	126.40
17	B	824	CLA	CHC-C4B-NB	2.36	126.75	124.26
18	2	306	CHL	C4B-CHC-C1C	-2.35	120.75	126.34
17	B	803	CLA	CHC-C4B-NB	2.35	126.74	124.26
17	A	838	CLA	CHC-C4B-NB	2.34	126.74	124.26

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	4	305	CHL	CHB-C4A-NA	2.34	127.74	124.51
17	B	837	CLA	CHC-C4B-NB	2.34	126.73	124.26
18	4	306	CHL	CHB-C4A-NA	2.33	127.74	124.51
18	1	206	CHL	CHA-C1A-NA	-2.33	121.07	126.40
17	A	808	CLA	C4A-NA-C1A	2.32	107.75	106.71
18	2	305	CHL	C4B-CHC-C1C	-2.32	120.85	126.34
17	B	820	CLA	CMA-C3A-C2A	2.31	123.17	113.83
17	3	314	CLA	CHC-C4B-NB	2.31	126.70	124.26
18	2	306	CHL	CHA-C1A-NA	-2.31	121.11	126.40
18	2	306	CHL	CHC-C1C-C2C	-2.30	117.78	126.11
18	4	307	CHL	CHA-C1A-NA	-2.30	121.14	126.40
17	A	803	CLA	CHC-C4B-NB	2.29	126.68	124.26
18	4	305	CHL	CHA-C1A-NA	-2.29	121.15	126.40
17	B	813	CLA	C3B-C4B-NB	-2.29	108.39	110.52
18	2	314	CHL	CHC-C1C-C2C	-2.29	117.81	126.11
18	2	314	CHL	C4B-CHC-C1C	-2.28	120.92	126.34
17	B	830	CLA	CHB-C1B-NB	-2.28	121.84	124.26
18	4	306	CHL	CHA-C1A-NA	-2.28	121.18	126.40
25	A	801	CL0	CMD-C2D-C1D	2.27	128.71	124.71
18	4	305	CHL	C4B-CHC-C1C	-2.25	121.00	126.34
18	3	306	CHL	C4B-CHC-C1C	-2.25	121.00	126.34
17	A	804	CLA	C4A-NA-C1A	2.25	107.72	106.71
17	A	827	CLA	CAA-C2A-C3A	-2.24	106.63	112.78
18	4	307	CHL	C1-C2-C3	-2.24	123.12	126.75
18	1	201	CHL	CHB-C4A-NA	2.24	127.61	124.51
18	2	301	CHL	C1D-ND-C4D	-2.24	104.74	106.33
17	B	803	CLA	CHB-C1B-NB	-2.24	121.89	124.26
18	4	307	CHL	C4B-CHC-C1C	-2.23	121.04	126.34
17	B	825	CLA	O2A-C1-C2	2.23	114.50	108.64
17	B	827	CLA	C4A-NA-C1A	2.23	107.71	106.71
18	2	305	CHL	CHC-C1C-C2C	-2.22	118.06	126.11
18	2	307	CHL	CHA-C1A-NA	-2.22	121.31	126.40
17	A	824	CLA	C3B-C4B-NB	-2.21	108.47	110.52
18	1	206	CHL	CHB-C4A-NA	2.21	127.57	124.51
17	A	826	CLA	C4A-NA-C1A	2.20	107.69	106.71
17	B	827	CLA	C3B-C4B-NB	-2.20	108.48	110.52
18	2	307	CHL	C4B-CHC-C1C	-2.18	121.16	126.34
17	B	830	CLA	C4A-NA-C1A	2.18	107.69	106.71
18	4	305	CHL	CHC-C1C-C2C	-2.18	118.21	126.11
17	B	823	CLA	CHC-C4B-NB	2.18	126.56	124.26
18	2	305	CHL	CHA-C1A-NA	-2.17	121.42	126.40
20	2	316	XAT	C7-C8-C9	2.17	128.90	125.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	A	820	CLA	CMA-C3A-C2A	2.16	122.56	113.83
17	A	815	CLA	C4A-NA-C1A	2.16	107.68	106.71
18	1	201	CHL	CHA-C1A-NA	-2.15	121.46	126.40
18	4	315	CHL	CAA-C2A-C1A	2.15	116.90	112.14
17	B	813	CLA	CHC-C4B-NB	2.15	126.53	124.26
17	F	203	CLA	C4A-NA-C1A	2.15	107.67	106.71
18	4	306	CHL	C4B-CHC-C1C	-2.15	121.24	126.34
18	1	201	CHL	C4B-CHC-C1C	-2.15	121.25	126.34
17	B	828	CLA	CHC-C4B-NB	2.14	126.52	124.26
17	B	811	CLA	C4A-NA-C1A	2.14	107.67	106.71
17	2	302	CLA	C4A-NA-C1A	2.12	107.66	106.71
17	B	837	CLA	CHB-C1B-NB	-2.12	122.01	124.26
17	K	104	CLA	CHC-C4B-NB	2.12	126.50	124.26
17	B	802	CLA	C4A-NA-C1A	2.11	107.66	106.71
18	4	315	CHL	C4B-CHC-C1C	-2.11	121.33	126.34
17	B	828	CLA	CHB-C1B-NB	-2.11	122.03	124.26
17	A	821	CLA	C3B-C4B-NB	-2.11	108.56	110.52
17	A	820	CLA	C4A-NA-C1A	2.10	107.65	106.71
18	2	314	CHL	CAA-C2A-C1A	2.10	116.80	112.14
17	2	312	CLA	C4A-NA-C1A	2.10	107.65	106.71
17	K	104	CLA	CHB-C1B-NB	-2.08	122.05	124.26
17	B	802	CLA	C3B-C4B-NB	-2.08	108.59	110.52
17	A	805	CLA	C4A-NA-C1A	2.07	107.64	106.71
17	A	819	CLA	CHB-C1B-NB	-2.06	122.07	124.26
17	A	832	CLA	CHB-C1B-NB	-2.06	122.08	124.26
18	4	306	CHL	C1-C2-C3	-2.06	123.42	126.75
17	B	825	CLA	CAA-C2A-C1A	2.06	118.72	111.97
18	2	301	CHL	CAA-C2A-C1A	2.06	118.72	111.97
18	2	307	CHL	C1-C2-C3	-2.06	123.42	126.75
17	B	812	CLA	CAB-C3B-C4B	-2.05	122.24	125.37
17	A	840	CLA	C4A-NA-C1A	2.05	107.63	106.71
17	B	822	CLA	C3B-C4B-NB	-2.05	108.61	110.52
17	3	311	CLA	CHB-C1B-NB	-2.03	122.11	124.26
17	B	811	CLA	C3B-C4B-NB	-2.03	108.63	110.52
17	A	827	CLA	CHB-C1B-NB	-2.03	122.11	124.26
17	2	302	CLA	C3D-C4D-ND	2.02	113.50	110.24
20	4	317	XAT	O4-C5-C6	-2.01	57.30	58.96
17	A	850	CLA	C1-C2-C3	-2.01	122.57	126.04
18	2	305	CHL	CAA-C2A-C1A	2.01	116.58	112.14
17	A	831	CLA	C3B-C4B-NB	-2.00	108.66	110.52

There are no chirality outliers.

All (759) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
17	4	310	CLA	C4B-C3B-CAB-CBB
17	4	310	CLA	CHA-CBD-CGD-O1D
17	4	310	CLA	CHA-CBD-CGD-O2D
17	4	311	CLA	C2B-C3B-CAB-CBB
17	4	311	CLA	C4B-C3B-CAB-CBB
17	4	312	CLA	C2B-C3B-CAB-CBB
17	4	312	CLA	C4B-C3B-CAB-CBB
17	4	313	CLA	C2B-C3B-CAB-CBB
17	4	313	CLA	C4B-C3B-CAB-CBB
17	4	313	CLA	CHA-CBD-CGD-O1D
17	4	314	CLA	CHA-CBD-CGD-O1D
17	4	314	CLA	CHA-CBD-CGD-O2D
17	1	203	CLA	C1A-C2A-CAA-CBA
17	1	203	CLA	C2B-C3B-CAB-CBB
17	1	203	CLA	C4B-C3B-CAB-CBB
17	1	203	CLA	C2-C3-C5-C6
17	1	203	CLA	C4-C3-C5-C6
17	1	208	CLA	C1A-C2A-CAA-CBA
17	1	208	CLA	C2B-C3B-CAB-CBB
17	1	208	CLA	C4B-C3B-CAB-CBB
17	1	210	CLA	C2B-C3B-CAB-CBB
17	1	210	CLA	C4B-C3B-CAB-CBB
17	1	212	CLA	C4B-C3B-CAB-CBB
17	1	213	CLA	C2B-C3B-CAB-CBB
17	1	213	CLA	C4B-C3B-CAB-CBB
17	1	213	CLA	CHA-CBD-CGD-O1D
17	1	213	CLA	CHA-CBD-CGD-O2D
17	2	304	CLA	CHA-CBD-CGD-O1D
17	2	304	CLA	CHA-CBD-CGD-O2D
17	2	310	CLA	C2B-C3B-CAB-CBB
17	2	310	CLA	C4B-C3B-CAB-CBB
17	2	310	CLA	CHA-CBD-CGD-O1D
17	2	310	CLA	CHA-CBD-CGD-O2D
17	2	311	CLA	CHA-CBD-CGD-O2D
17	3	310	CLA	C2B-C3B-CAB-CBB
17	3	310	CLA	C4B-C3B-CAB-CBB
17	3	311	CLA	C2B-C3B-CAB-CBB
17	3	311	CLA	C4B-C3B-CAB-CBB
17	3	312	CLA	C2B-C3B-CAB-CBB
17	3	312	CLA	C4B-C3B-CAB-CBB
17	A	809	CLA	CHA-CBD-CGD-O1D
17	A	810	CLA	C3A-C2A-CAA-CBA

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Mol	Chain	Res	Type	Atoms
17	A	816	CLA	C2-C3-C5-C6
17	A	816	CLA	C4-C3-C5-C6
17	A	817	CLA	C3A-C2A-CAA-CBA
17	A	822	CLA	C1A-C2A-CAA-CBA
17	A	822	CLA	C3A-C2A-CAA-CBA
17	A	823	CLA	CHA-CBD-CGD-O1D
17	A	823	CLA	CHA-CBD-CGD-O2D
17	A	828	CLA	C2A-CAA-CBA-CGA
17	A	829	CLA	CHA-CBD-CGD-O1D
17	A	829	CLA	CHA-CBD-CGD-O2D
17	A	830	CLA	C2B-C3B-CAB-CBB
17	A	830	CLA	C4B-C3B-CAB-CBB
17	A	832	CLA	C2B-C3B-CAB-CBB
17	A	832	CLA	C4B-C3B-CAB-CBB
17	A	833	CLA	CHA-CBD-CGD-O2D
17	A	834	CLA	C2B-C3B-CAB-CBB
17	A	834	CLA	C4B-C3B-CAB-CBB
17	A	835	CLA	CHA-CBD-CGD-O1D
17	A	836	CLA	C2-C3-C5-C6
17	A	836	CLA	C4-C3-C5-C6
17	A	838	CLA	CHA-CBD-CGD-O1D
17	A	838	CLA	CHA-CBD-CGD-O2D
17	A	851	CLA	C1A-C2A-CAA-CBA
17	A	851	CLA	C3A-C2A-CAA-CBA
17	F	201	CLA	C2B-C3B-CAB-CBB
17	F	201	CLA	C4B-C3B-CAB-CBB
17	J	102	CLA	C2B-C3B-CAB-CBB
17	J	102	CLA	C4B-C3B-CAB-CBB
17	B	804	CLA	C2B-C3B-CAB-CBB
17	B	804	CLA	C4B-C3B-CAB-CBB
17	B	806	CLA	C1A-C2A-CAA-CBA
17	B	808	CLA	C2B-C3B-CAB-CBB
17	B	808	CLA	C4B-C3B-CAB-CBB
17	B	809	CLA	C2B-C3B-CAB-CBB
17	B	809	CLA	C4B-C3B-CAB-CBB
17	B	809	CLA	CHA-CBD-CGD-O2D
17	B	813	CLA	C2B-C3B-CAB-CBB
17	B	813	CLA	C4B-C3B-CAB-CBB
17	B	816	CLA	C2-C3-C5-C6
17	B	816	CLA	C4-C3-C5-C6
17	B	818	CLA	C4B-C3B-CAB-CBB
17	B	819	CLA	C3A-C2A-CAA-CBA

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Mol	Chain	Res	Type	Atoms
17	B	820	CLA	C2B-C3B-CAB-CBB
17	B	820	CLA	C4B-C3B-CAB-CBB
17	B	823	CLA	C2-C3-C5-C6
17	B	823	CLA	C4-C3-C5-C6
17	B	828	CLA	C1A-C2A-CAA-CBA
17	B	829	CLA	C1A-C2A-CAA-CBA
17	B	829	CLA	C3A-C2A-CAA-CBA
17	B	830	CLA	CHA-CBD-CGD-O2D
17	B	831	CLA	C1A-C2A-CAA-CBA
17	B	831	CLA	C3A-C2A-CAA-CBA
17	B	835	CLA	C2-C3-C5-C6
17	B	835	CLA	C4-C3-C5-C6
17	B	838	CLA	C2B-C3B-CAB-CBB
17	B	838	CLA	C4B-C3B-CAB-CBB
17	K	102	CLA	C4B-C3B-CAB-CBB
17	K	104	CLA	C2B-C3B-CAB-CBB
17	K	104	CLA	C4B-C3B-CAB-CBB
18	2	306	CHL	C4B-C3B-CAB-CBB
18	2	307	CHL	CHA-CBD-CGD-O1D
18	2	307	CHL	CHA-CBD-CGD-O2D
21	3	317	BCR	C23-C24-C25-C30
21	J	101	BCR	C23-C24-C25-C26
21	J	101	BCR	C23-C24-C25-C30
21	J	103	BCR	C23-C24-C25-C30
21	B	843	BCR	C1-C6-C7-C8
21	K	105	BCR	C1-C6-C7-C8
21	L	301	BCR	C1-C6-C7-C8
21	L	306	BCR	C23-C24-C25-C30
22	4	320	LMG	C2-C1-O1-C7
22	4	320	LMG	O6-C1-O1-C7
22	G	101	LMG	C2-C1-O1-C7
22	G	101	LMG	O6-C1-O1-C7
23	1	220	LHG	C4-O6-P-O4
23	2	318	LHG	O2-C2-C3-O3
23	A	843	LHG	C3-O3-P-O5
23	A	843	LHG	C4-O6-P-O3
23	A	843	LHG	C4-O6-P-O4
23	A	843	LHG	C4-O6-P-O5
23	A	843	LHG	O6-C4-C5-O7
24	1	221	PGT	O2-C2-C3-O3
24	1	221	PGT	C1-C2-C3-O3
24	1	221	PGT	C1-O3P-P-O1P

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Mol	Chain	Res	Type	Atoms
24	1	221	PGT	C1-O3P-P-O2P
24	1	221	PGT	C1-O3P-P-O4P
24	G	107	PGT	O4P-C4-C5-O5
29	B	848	DGD	C2D-C1D-O3G-C3G
29	B	848	DGD	O6D-C1D-O3G-C3G
17	1	211	CLA	C4-C3-C5-C6
17	A	837	CLA	C4-C3-C5-C6
17	A	837	CLA	C2-C3-C5-C6
23	A	843	LHG	O2-C2-C3-O3
23	A	843	LHG	C2-C3-O3-P
17	4	310	CLA	C4-C3-C5-C6
17	B	825	CLA	C4-C3-C5-C6
17	4	310	CLA	C2-C3-C5-C6
17	B	825	CLA	C2-C3-C5-C6
17	A	810	CLA	C2A-CAA-CBA-CGA
17	B	838	CLA	C2A-CAA-CBA-CGA
28	B	847	LMT	C2-C3-C4-C5
23	2	318	LHG	C1-C2-C3-O3
24	1	221	PGT	O4P-C4-C5-C6
17	1	211	CLA	C2-C3-C5-C6
17	4	302	CLA	C11-C10-C8-C9
17	A	851	CLA	C6-C7-C8-C9
17	B	807	CLA	C11-C10-C8-C9
17	B	825	CLA	C6-C7-C8-C9
26	A	842	PQN	C16-C17-C18-C19
21	2	317	BCR	C36-C18-C19-C20
17	2	302	CLA	C13-C15-C16-C17
17	4	302	CLA	C11-C10-C8-C7
17	B	807	CLA	C11-C10-C8-C7
17	A	850	CLA	C3-C5-C6-C7
17	A	841	CLA	C13-C15-C16-C17
17	A	805	CLA	C15-C16-C17-C18
17	B	814	CLA	C13-C15-C16-C17
17	2	309	CLA	C8-C10-C11-C12
23	1	220	LHG	C4-O6-P-O3
17	1	203	CLA	C5-C6-C7-C8
23	A	843	LHG	C1-C2-C3-O3
24	G	107	PGT	O4P-C4-C5-C6
26	A	842	PQN	C20-C21-C22-C23
17	4	303	CLA	C2A-CAA-CBA-CGA
17	B	818	CLA	C2A-CAA-CBA-CGA
17	B	807	CLA	C3-C5-C6-C7

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Mol	Chain	Res	Type	Atoms
28	G	102	LMT	C5-C6-C7-C8
17	A	832	CLA	C3-C5-C6-C7
28	B	847	LMT	C7-C8-C9-C10
17	B	817	CLA	C6-C7-C8-C10
17	A	820	CLA	C14-C13-C15-C16
17	A	829	CLA	C11-C12-C13-C14
17	B	804	CLA	C11-C12-C13-C14
17	B	838	CLA	C14-C13-C15-C16
17	A	808	CLA	C2A-CAA-CBA-CGA
17	4	301	CLA	C4B-C3B-CAB-CBB
17	2	313	CLA	C4B-C3B-CAB-CBB
17	B	801	CLA	C4B-C3B-CAB-CBB
17	B	839	CLA	C4B-C3B-CAB-CBB
18	4	306	CHL	C4B-C3B-CAB-CBB
18	2	301	CHL	C4B-C3B-CAB-CBB
24	G	107	PGT	C33-C34-C35-C36
17	A	832	CLA	C3A-C2A-CAA-CBA
17	B	828	CLA	C3A-C2A-CAA-CBA
17	A	820	CLA	C4-C3-C5-C6
17	A	818	CLA	C2-C3-C5-C6
17	A	820	CLA	C2-C3-C5-C6
17	A	833	CLA	C2-C3-C5-C6
17	4	301	CLA	C2B-C3B-CAB-CBB
17	4	310	CLA	C2B-C3B-CAB-CBB
17	1	212	CLA	C2B-C3B-CAB-CBB
17	2	313	CLA	C2B-C3B-CAB-CBB
17	B	801	CLA	C2B-C3B-CAB-CBB
17	B	818	CLA	C2B-C3B-CAB-CBB
17	B	839	CLA	C2B-C3B-CAB-CBB
17	K	102	CLA	C2B-C3B-CAB-CBB
18	4	306	CHL	C2B-C3B-CAB-CBB
18	2	306	CHL	C2B-C3B-CAB-CBB
17	B	819	CLA	C2-C1-O2A-CGA
23	A	843	LHG	C25-C26-C27-C28
17	B	809	CLA	C3-C5-C6-C7
19	3	315	LUT	C1-C6-C7-C8
19	3	315	LUT	C5-C6-C7-C8
21	4	318	BCR	C23-C24-C25-C26
21	4	318	BCR	C23-C24-C25-C30
21	1	217	BCR	C23-C24-C25-C26
21	1	217	BCR	C23-C24-C25-C30
21	2	317	BCR	C1-C6-C7-C8

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Mol	Chain	Res	Type	Atoms
21	2	317	BCR	C5-C6-C7-C8
21	3	317	BCR	C23-C24-C25-C26
21	A	844	BCR	C1-C6-C7-C8
21	A	844	BCR	C5-C6-C7-C8
21	A	847	BCR	C23-C24-C25-C26
21	A	847	BCR	C23-C24-C25-C30
21	J	101	BCR	C1-C6-C7-C8
21	J	101	BCR	C5-C6-C7-C8
21	J	103	BCR	C23-C24-C25-C26
21	B	842	BCR	C1-C6-C7-C8
21	B	842	BCR	C5-C6-C7-C8
21	B	843	BCR	C5-C6-C7-C8
21	B	844	BCR	C23-C24-C25-C26
21	B	844	BCR	C23-C24-C25-C30
21	B	845	BCR	C1-C6-C7-C8
21	B	845	BCR	C5-C6-C7-C8
21	B	845	BCR	C23-C24-C25-C26
21	B	845	BCR	C23-C24-C25-C30
21	K	105	BCR	C5-C6-C7-C8
21	L	301	BCR	C5-C6-C7-C8
21	L	306	BCR	C23-C24-C25-C26
17	A	824	CLA	C4-C3-C5-C6
17	A	826	CLA	C4-C3-C5-C6
17	A	833	CLA	C4-C3-C5-C6
17	A	812	CLA	C12-C13-C15-C16
17	A	824	CLA	C2-C3-C5-C6
17	A	826	CLA	C2-C3-C5-C6
17	A	829	CLA	C11-C12-C13-C15
17	B	804	CLA	C11-C12-C13-C15
17	B	807	CLA	C12-C13-C15-C16
17	B	819	CLA	C6-C7-C8-C10
17	B	833	CLA	C11-C10-C8-C7
17	B	838	CLA	C12-C13-C15-C16
26	A	842	PQN	C18-C20-C21-C22
23	2	318	LHG	C9-C10-C11-C12
17	2	309	CLA	C4-C3-C5-C6
17	A	818	CLA	C4-C3-C5-C6
17	B	817	CLA	C4-C3-C5-C6
17	B	817	CLA	C2-C3-C5-C6
17	B	807	CLA	C14-C13-C15-C16
17	B	819	CLA	C6-C7-C8-C9
17	B	825	CLA	C14-C13-C15-C16

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Mol	Chain	Res	Type	Atoms
17	B	833	CLA	C11-C10-C8-C9
17	A	822	CLA	C2A-CAA-CBA-CGA
17	B	812	CLA	C2A-CAA-CBA-CGA
17	B	828	CLA	C2A-CAA-CBA-CGA
22	4	319	LMG	O6-C5-C6-O5
29	B	848	DGD	O6E-C5E-C6E-O5E
17	2	304	CLA	C1A-C2A-CAA-CBA
17	A	810	CLA	C1A-C2A-CAA-CBA
17	A	817	CLA	C1A-C2A-CAA-CBA
17	A	823	CLA	C1A-C2A-CAA-CBA
17	A	832	CLA	C1A-C2A-CAA-CBA
17	B	819	CLA	C1A-C2A-CAA-CBA
17	B	823	CLA	C1A-C2A-CAA-CBA
17	B	830	CLA	C1A-C2A-CAA-CBA
17	B	817	CLA	C6-C7-C8-C9
23	A	843	LHG	C3-O3-P-O6
23	A	843	LHG	C27-C28-C29-C30
17	A	852	CLA	C2A-CAA-CBA-CGA
22	G	101	LMG	O6-C5-C6-O5
17	4	301	CLA	CAA-CBA-CGA-O2A
24	G	107	PGT	C32-C31-O2-C2
17	2	312	CLA	C4-C3-C5-C6
17	A	828	CLA	C4-C3-C5-C6
17	B	809	CLA	C4-C3-C5-C6
17	A	828	CLA	C2-C3-C5-C6
17	B	833	CLA	C15-C16-C17-C18
28	G	102	LMT	C11-C10-C9-C8
28	G	102	LMT	C2-C3-C4-C5
17	1	203	CLA	CAA-CBA-CGA-O2A
17	A	809	CLA	C12-C13-C15-C16
17	A	816	CLA	C12-C13-C15-C16
17	A	851	CLA	C6-C7-C8-C10
17	B	809	CLA	C2-C3-C5-C6
17	B	825	CLA	C6-C7-C8-C10
17	B	825	CLA	C12-C13-C15-C16
17	3	307	CLA	CAA-CBA-CGA-O2A
17	A	802	CLA	C11-C10-C8-C9
17	A	809	CLA	C14-C13-C15-C16
17	2	312	CLA	C4B-C3B-CAB-CBB
17	3	302	CLA	C4B-C3B-CAB-CBB
17	3	309	CLA	C4B-C3B-CAB-CBB
17	A	802	CLA	C4B-C3B-CAB-CBB

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Mol	Chain	Res	Type	Atoms
17	A	816	CLA	C4B-C3B-CAB-CBB
17	A	822	CLA	C4B-C3B-CAB-CBB
17	A	823	CLA	C4B-C3B-CAB-CBB
17	B	817	CLA	C4B-C3B-CAB-CBB
17	B	824	CLA	C4B-C3B-CAB-CBB
17	B	833	CLA	C4B-C3B-CAB-CBB
17	K	103	CLA	C4B-C3B-CAB-CBB
18	2	305	CHL	C4B-C3B-CAB-CBB
17	B	802	CLA	C4-C3-C5-C6
17	2	312	CLA	C2-C3-C5-C6
17	A	841	CLA	C3-C5-C6-C7
28	G	102	LMT	C4-C5-C6-C7
17	A	804	CLA	C2A-CAA-CBA-CGA
24	1	221	PGT	C5-C4-O4P-P
24	G	107	PGT	C5-C4-O4P-P
17	1	208	CLA	C3A-C2A-CAA-CBA
17	B	806	CLA	C3A-C2A-CAA-CBA
17	B	813	CLA	C3A-C2A-CAA-CBA
17	A	840	CLA	C13-C15-C16-C17
23	1	218	LHG	C32-C33-C34-C35
17	B	818	CLA	O2A-C1-C2-C3
17	A	834	CLA	C4-C3-C5-C6
17	B	806	CLA	C4-C3-C5-C6
17	B	818	CLA	C4-C3-C5-C6
23	1	218	LHG	C13-C14-C15-C16
25	A	801	CL0	C3-C5-C6-C7
23	1	218	LHG	O6-C4-C5-O7
24	G	107	PGT	O3P-C1-C2-O2
24	G	107	PGT	O31-C31-O2-C2
17	2	312	CLA	C2B-C3B-CAB-CBB
17	3	302	CLA	C2B-C3B-CAB-CBB
17	A	802	CLA	C2B-C3B-CAB-CBB
17	A	822	CLA	C2B-C3B-CAB-CBB
17	A	823	CLA	C2B-C3B-CAB-CBB
17	B	824	CLA	C2B-C3B-CAB-CBB
17	B	833	CLA	C2B-C3B-CAB-CBB
17	K	103	CLA	C2B-C3B-CAB-CBB
18	2	301	CHL	C2B-C3B-CAB-CBB
17	A	822	CLA	CAA-CBA-CGA-O2A
17	B	828	CLA	CAA-CBA-CGA-O2A
17	A	841	CLA	C2-C1-O2A-CGA
17	B	806	CLA	C2-C3-C5-C6

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Mol	Chain	Res	Type	Atoms
17	A	816	CLA	C14-C13-C15-C16
17	A	837	CLA	C6-C7-C8-C9
17	A	851	CLA	C14-C13-C15-C16
17	B	838	CLA	C11-C12-C13-C14
17	K	103	CLA	C6-C7-C8-C9
19	1	215	LUT	C1-C6-C7-C8
19	1	215	LUT	C5-C6-C7-C8
19	1	219	LUT	C1-C6-C7-C8
19	1	219	LUT	C5-C6-C7-C8
19	2	315	LUT	C1-C6-C7-C8
19	2	315	LUT	C5-C6-C7-C8
21	2	317	BCR	C23-C24-C25-C26
21	G	106	BCR	C1-C6-C7-C8
21	G	106	BCR	C5-C6-C7-C8
21	B	846	BCR	C1-C6-C7-C8
21	K	105	BCR	C23-C24-C25-C30
21	2	317	BCR	C17-C18-C19-C20
23	A	843	LHG	O6-C4-C5-C6
17	A	817	CLA	CAA-CBA-CGA-O2A
17	B	815	CLA	C4-C3-C5-C6
17	A	802	CLA	C11-C10-C8-C7
17	A	817	CLA	C11-C12-C13-C15
17	A	834	CLA	C12-C13-C15-C16
17	A	837	CLA	C6-C7-C8-C10
17	A	851	CLA	C12-C13-C15-C16
17	K	103	CLA	C6-C7-C8-C10
23	A	843	LHG	C9-C10-C11-C12
17	4	303	CLA	CAD-CBD-CGD-O2D
17	1	205	CLA	CAD-CBD-CGD-O2D
17	A	813	CLA	CAD-CBD-CGD-O2D
17	A	814	CLA	CAD-CBD-CGD-O2D
17	A	824	CLA	CAD-CBD-CGD-O2D
17	A	825	CLA	CAD-CBD-CGD-O2D
17	A	830	CLA	CAD-CBD-CGD-O2D
17	A	832	CLA	CAD-CBD-CGD-O2D
17	G	105	CLA	CAD-CBD-CGD-O2D
17	B	812	CLA	CAD-CBD-CGD-O2D
17	B	822	CLA	CAD-CBD-CGD-O2D
17	B	835	CLA	CAD-CBD-CGD-O2D
17	K	104	CLA	CAD-CBD-CGD-O2D
17	L	304	CLA	CAD-CBD-CGD-O2D
28	B	847	LMT	C5-C6-C7-C8

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Mol	Chain	Res	Type	Atoms
29	B	848	DGD	C4B-C5B-C6B-C7B
28	G	102	LMT	C1-C2-C3-C4
17	A	821	CLA	C2A-CAA-CBA-CGA
17	4	301	CLA	CHA-CBD-CGD-O1D
17	4	301	CLA	CHA-CBD-CGD-O2D
17	4	313	CLA	CHA-CBD-CGD-O2D
17	2	302	CLA	CHA-CBD-CGD-O1D
17	2	302	CLA	CHA-CBD-CGD-O2D
17	2	311	CLA	CHA-CBD-CGD-O1D
17	3	313	CLA	CHA-CBD-CGD-O1D
17	3	313	CLA	CHA-CBD-CGD-O2D
17	A	804	CLA	CHA-CBD-CGD-O1D
17	A	804	CLA	CHA-CBD-CGD-O2D
17	A	807	CLA	CHA-CBD-CGD-O1D
17	A	807	CLA	CHA-CBD-CGD-O2D
17	A	809	CLA	CHA-CBD-CGD-O2D
17	A	813	CLA	CHA-CBD-CGD-O1D
17	A	833	CLA	CHA-CBD-CGD-O1D
17	A	835	CLA	CHA-CBD-CGD-O2D
17	A	839	CLA	CHA-CBD-CGD-O1D
17	J	102	CLA	CHA-CBD-CGD-O1D
17	B	809	CLA	CHA-CBD-CGD-O1D
17	B	816	CLA	CHA-CBD-CGD-O2D
17	B	825	CLA	CHA-CBD-CGD-O1D
17	B	825	CLA	CHA-CBD-CGD-O2D
17	B	826	CLA	CHA-CBD-CGD-O1D
17	B	826	CLA	CHA-CBD-CGD-O2D
17	B	830	CLA	CHA-CBD-CGD-O1D
17	B	832	CLA	CHA-CBD-CGD-O1D
17	B	832	CLA	CHA-CBD-CGD-O2D
17	K	102	CLA	CHA-CBD-CGD-O1D
17	K	102	CLA	CHA-CBD-CGD-O2D
18	1	206	CHL	CHA-CBD-CGD-O1D
18	2	301	CHL	CHA-CBD-CGD-O1D
18	2	301	CHL	CHA-CBD-CGD-O2D
17	A	806	CLA	C4-C3-C5-C6
17	1	209	CLA	C11-C10-C8-C9
17	A	817	CLA	C11-C12-C13-C14
17	F	206	CLA	C14-C13-C15-C16
17	B	804	CLA	C2C-C3C-CAC-CBC
17	2	308	CLA	CAA-CBA-CGA-O2A
17	F	204	CLA	C1A-C2A-CAA-CBA

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Mol	Chain	Res	Type	Atoms
17	B	813	CLA	C1A-C2A-CAA-CBA
17	B	824	CLA	C2-C1-O2A-CGA
17	B	811	CLA	C4-C3-C5-C6
18	2	301	CHL	C4-C3-C5-C6
25	A	801	CL0	CAA-CBA-CGA-O2A
18	4	315	CHL	C4B-C3B-CAB-CBB
18	2	314	CHL	C4B-C3B-CAB-CBB
23	2	318	LHG	C4-O6-P-O4
23	A	843	LHG	C3-O3-P-O4
23	1	218	LHG	O6-C4-C5-C6
23	2	318	LHG	O6-C4-C5-C6
17	4	301	CLA	CAD-CBD-CGD-O1D
17	3	313	CLA	CAD-CBD-CGD-O1D
17	A	804	CLA	CAD-CBD-CGD-O1D
17	K	102	CLA	CAD-CBD-CGD-O1D
18	1	206	CHL	CAD-CBD-CGD-O1D
18	2	301	CHL	CAD-CBD-CGD-O1D
17	A	804	CLA	C3A-C2A-CAA-CBA
17	A	810	CLA	C11-C10-C8-C7
17	A	816	CLA	C11-C10-C8-C7
17	A	839	CLA	C11-C10-C8-C7
23	2	318	LHG	O6-C4-C5-O7
17	B	814	CLA	C15-C16-C17-C18
17	B	822	CLA	C4-C3-C5-C6
17	A	810	CLA	C14-C13-C15-C16
17	A	834	CLA	C14-C13-C15-C16
17	L	303	CLA	C11-C12-C13-C14
29	B	848	DGD	C7B-C8B-C9B-CAB
17	4	303	CLA	C2B-C3B-CAB-CBB
17	3	305	CLA	C2B-C3B-CAB-CBB
17	3	309	CLA	C2B-C3B-CAB-CBB
17	A	816	CLA	C2B-C3B-CAB-CBB
17	A	817	CLA	C2B-C3B-CAB-CBB
17	A	819	CLA	C2B-C3B-CAB-CBB
17	A	833	CLA	C2B-C3B-CAB-CBB
17	A	835	CLA	C2B-C3B-CAB-CBB
17	F	204	CLA	C2B-C3B-CAB-CBB
17	G	104	CLA	C2B-C3B-CAB-CBB
17	B	807	CLA	C2B-C3B-CAB-CBB
17	B	811	CLA	C2B-C3B-CAB-CBB
17	B	817	CLA	C2B-C3B-CAB-CBB
18	4	315	CHL	C2B-C3B-CAB-CBB

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Mol	Chain	Res	Type	Atoms
18	2	305	CHL	C2B-C3B-CAB-CBB
18	2	314	CHL	C2B-C3B-CAB-CBB
23	1	218	LHG	C23-C24-C25-C26
17	L	303	CLA	C4-C3-C5-C6
17	L	303	CLA	C2-C3-C5-C6
18	2	301	CHL	C2-C3-C5-C6
17	A	821	CLA	C1-C2-C3-C4
24	G	107	PGT	O3P-C1-C2-C3
17	A	850	CLA	C2A-CAA-CBA-CGA
17	4	311	CLA	C2-C1-O2A-CGA
17	F	201	CLA	C16-C17-C18-C20
17	B	814	CLA	C4-C3-C5-C6
19	4	316	LUT	C1-C6-C7-C8
19	4	316	LUT	C5-C6-C7-C8
21	2	317	BCR	C23-C24-C25-C30
21	K	105	BCR	C23-C24-C25-C26
17	A	806	CLA	C2-C3-C5-C6
23	2	318	LHG	C3-O3-P-O6
24	1	221	PGT	C4-O4P-P-O3P
24	G	107	PGT	C4-O4P-P-O3P
17	B	828	CLA	C4-C3-C5-C6
17	B	811	CLA	C2-C3-C5-C6
17	A	827	CLA	C6-C7-C8-C9
17	F	201	CLA	C16-C17-C18-C19
17	B	819	CLA	CBA-CGA-O2A-C1
23	1	220	LHG	C2-C3-O3-P
23	2	318	LHG	C2-C3-O3-P
17	2	309	CLA	C2-C3-C5-C6
17	B	802	CLA	C2-C3-C5-C6
17	B	815	CLA	C2-C3-C5-C6
17	B	822	CLA	C2-C3-C5-C6
25	A	801	CL0	CBA-CGA-O2A-C1
17	4	303	CLA	C4B-C3B-CAB-CBB
17	3	305	CLA	C4B-C3B-CAB-CBB
17	A	819	CLA	C4B-C3B-CAB-CBB
17	A	833	CLA	C4B-C3B-CAB-CBB
17	F	204	CLA	C4B-C3B-CAB-CBB
17	B	807	CLA	C4B-C3B-CAB-CBB
17	L	302	CLA	C4B-C3B-CAB-CBB
17	3	312	CLA	CAA-CBA-CGA-O1A
17	A	832	CLA	C5-C6-C7-C8
17	A	812	CLA	C4-C3-C5-C6

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Mol	Chain	Res	Type	Atoms
17	A	806	CLA	C2-C1-O2A-CGA
17	B	802	CLA	C2-C1-O2A-CGA
17	3	305	CLA	C2A-CAA-CBA-CGA
17	A	817	CLA	C2A-CAA-CBA-CGA
17	4	301	CLA	CAA-CBA-CGA-O1A
17	1	203	CLA	C3A-C2A-CAA-CBA
17	F	204	CLA	C3A-C2A-CAA-CBA
25	A	801	CL0	C3A-C2A-CAA-CBA
17	1	204	CLA	C4-C3-C5-C6
17	A	827	CLA	C4-C3-C5-C6
17	A	839	CLA	C4-C3-C5-C6
17	A	839	CLA	C2-C3-C5-C6
23	1	218	LHG	O8-C23-C24-C25
21	A	848	BCR	C11-C10-C9-C34
21	A	848	BCR	C16-C17-C18-C36
21	F	205	BCR	C35-C13-C14-C15
21	B	842	BCR	C11-C10-C9-C34
21	B	843	BCR	C11-C10-C9-C34
21	B	843	BCR	C20-C21-C22-C37
21	L	301	BCR	C11-C10-C9-C34
24	1	221	PGT	O4P-C4-C5-O5
17	3	312	CLA	CAA-CBA-CGA-O2A
23	1	220	LHG	C6-C5-O7-C7
17	A	804	CLA	C1A-C2A-CAA-CBA
18	2	301	CHL	C1A-C2A-CAA-CBA
17	1	212	CLA	C11-C10-C8-C7
17	A	805	CLA	C11-C10-C8-C7
17	A	837	CLA	C12-C13-C15-C16
22	4	320	LMG	O7-C10-C11-C12
25	A	801	CL0	O1A-CGA-O2A-C1
17	3	313	CLA	CAA-CBA-CGA-O2A
22	4	320	LMG	C29-C30-C31-C32
17	B	831	CLA	C2A-CAA-CBA-CGA
17	B	824	CLA	C5-C6-C7-C8
17	3	313	CLA	CAA-CBA-CGA-O1A
17	A	829	CLA	C16-C17-C18-C19
17	A	839	CLA	C10-C11-C12-C13
17	A	827	CLA	C2-C3-C5-C6
18	1	201	CHL	C2B-C3B-CAB-CBB
18	1	206	CHL	C2B-C3B-CAB-CBB
21	A	848	BCR	C11-C10-C9-C8
21	A	848	BCR	C16-C17-C18-C19

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Mol	Chain	Res	Type	Atoms
21	F	205	BCR	C12-C13-C14-C15
21	B	842	BCR	C11-C10-C9-C8
21	B	843	BCR	C11-C10-C9-C8
21	B	843	BCR	C20-C21-C22-C23
21	L	301	BCR	C11-C10-C9-C8
17	F	206	CLA	C2C-C3C-CAC-CBC
29	B	848	DGD	C8B-C9B-CAB-CBB
17	1	208	CLA	C4-C3-C5-C6
17	1	204	CLA	C2-C1-O2A-CGA
17	A	809	CLA	C2-C1-O2A-CGA
17	A	834	CLA	C2-C1-O2A-CGA
17	A	850	CLA	C2-C1-O2A-CGA
17	F	201	CLA	C2-C1-O2A-CGA
17	B	803	CLA	C2-C1-O2A-CGA
17	B	814	CLA	C2-C3-C5-C6
17	F	201	CLA	C11-C10-C8-C9
17	B	828	CLA	C6-C7-C8-C9
17	1	203	CLA	CAA-CBA-CGA-O1A
24	G	107	PGT	C2-C1-O3P-P
17	B	804	CLA	C10-C11-C12-C13
21	4	318	BCR	C1-C6-C7-C8
21	B	846	BCR	C5-C6-C7-C8
21	L	305	BCR	C23-C24-C25-C30
17	A	834	CLA	C2-C3-C5-C6
17	B	828	CLA	C2-C3-C5-C6
17	1	208	CLA	C3-C5-C6-C7
17	3	307	CLA	CAA-CBA-CGA-O1A
17	3	305	CLA	C2-C1-O2A-CGA
29	B	848	DGD	C2B-C3B-C4B-C5B
17	A	810	CLA	C4B-C3B-CAB-CBB
17	A	817	CLA	C4B-C3B-CAB-CBB
17	A	835	CLA	C4B-C3B-CAB-CBB
17	G	104	CLA	C4B-C3B-CAB-CBB
17	B	811	CLA	C4B-C3B-CAB-CBB
18	1	201	CHL	C4B-C3B-CAB-CBB
18	1	206	CHL	C4B-C3B-CAB-CBB
17	B	820	CLA	C4-C3-C5-C6
17	1	204	CLA	C2-C3-C5-C6
17	1	208	CLA	C2-C3-C5-C6
17	1	209	CLA	C11-C10-C8-C7
17	A	827	CLA	C6-C7-C8-C10
17	A	841	CLA	C12-C13-C15-C16

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Mol	Chain	Res	Type	Atoms
17	B	818	CLA	C2-C3-C5-C6
17	B	824	CLA	C6-C7-C8-C10
17	4	308	CLA	C4C-C3C-CAC-CBC
17	1	213	CLA	C2A-CAA-CBA-CGA
17	2	303	CLA	O2A-C1-C2-C3
17	1	214	CLA	CAA-CBA-CGA-O2A
17	4	312	CLA	C4-C3-C5-C6
17	1	202	CLA	C4-C3-C5-C6
17	B	824	CLA	C4-C3-C5-C6
17	B	833	CLA	C4-C3-C5-C6
17	B	836	CLA	C4-C3-C5-C6
17	2	312	CLA	C14-C13-C15-C16
17	A	810	CLA	C11-C10-C8-C9
17	A	812	CLA	C14-C13-C15-C16
17	A	816	CLA	C11-C10-C8-C9
17	A	839	CLA	C11-C10-C8-C9
17	B	823	CLA	C14-C13-C15-C16
17	1	203	CLA	CAD-CBD-CGD-O2D
17	2	313	CLA	CAD-CBD-CGD-O2D
17	A	806	CLA	CAD-CBD-CGD-O2D
17	A	808	CLA	CAD-CBD-CGD-O2D
17	A	812	CLA	CAD-CBD-CGD-O2D
17	A	815	CLA	CAD-CBD-CGD-O2D
17	A	821	CLA	CAD-CBD-CGD-O2D
17	A	826	CLA	CAD-CBD-CGD-O2D
17	A	836	CLA	CAD-CBD-CGD-O2D
17	A	840	CLA	CAD-CBD-CGD-O2D
17	F	204	CLA	CAD-CBD-CGD-O2D
17	H	201	CLA	CAD-CBD-CGD-O2D
17	B	805	CLA	CAD-CBD-CGD-O2D
17	B	814	CLA	CAD-CBD-CGD-O2D
17	B	815	CLA	CAD-CBD-CGD-O2D
18	3	306	CHL	CAD-CBD-CGD-O2D
17	B	810	CLA	C8-C10-C11-C12
17	4	303	CLA	C2-C1-O2A-CGA
18	1	201	CHL	C2-C1-O2A-CGA
17	A	805	CLA	CAA-CBA-CGA-O2A
17	G	105	CLA	CAA-CBA-CGA-O2A
17	3	311	CLA	C4-C3-C5-C6
17	1	207	CLA	CAA-CBA-CGA-O2A
17	A	824	CLA	CAA-CBA-CGA-O2A
17	K	104	CLA	CAA-CBA-CGA-O2A

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Mol	Chain	Res	Type	Atoms
17	A	822	CLA	O2A-C1-C2-C3
17	A	824	CLA	O2A-C1-C2-C3
17	A	841	CLA	O2A-C1-C2-C3
17	A	850	CLA	O2A-C1-C2-C3
17	H	201	CLA	O2A-C1-C2-C3
17	B	822	CLA	O2A-C1-C2-C3
17	4	311	CLA	CAA-CBA-CGA-O2A
17	B	811	CLA	CAA-CBA-CGA-O2A
17	4	302	CLA	CHA-CBD-CGD-O1D
17	1	202	CLA	CHA-CBD-CGD-O2D
17	3	301	CLA	CHA-CBD-CGD-O1D
17	3	301	CLA	CHA-CBD-CGD-O2D
17	A	819	CLA	CHA-CBD-CGD-O2D
17	A	839	CLA	CHA-CBD-CGD-O2D
17	A	851	CLA	CHA-CBD-CGD-O1D
17	A	851	CLA	CHA-CBD-CGD-O2D
17	G	103	CLA	CHA-CBD-CGD-O2D
17	G	104	CLA	CHA-CBD-CGD-O1D
17	G	104	CLA	CHA-CBD-CGD-O2D
17	J	102	CLA	CHA-CBD-CGD-O2D
17	B	803	CLA	CHA-CBD-CGD-O1D
17	B	803	CLA	CHA-CBD-CGD-O2D
17	B	816	CLA	CHA-CBD-CGD-O1D
17	B	821	CLA	CHA-CBD-CGD-O2D
17	B	824	CLA	CHA-CBD-CGD-O1D
17	B	824	CLA	CHA-CBD-CGD-O2D
17	B	831	CLA	CHA-CBD-CGD-O2D
18	1	206	CHL	CHA-CBD-CGD-O2D
17	B	807	CLA	CAA-CBA-CGA-O2A
17	K	102	CLA	CAA-CBA-CGA-O2A
17	2	311	CLA	CAA-CBA-CGA-O2A
17	A	812	CLA	CAA-CBA-CGA-O2A
23	A	843	LHG	C19-C20-C21-C22
17	B	828	CLA	CAA-CBA-CGA-O1A
17	1	208	CLA	CAA-CBA-CGA-O2A
17	B	816	CLA	C11-C10-C8-C7
17	B	824	CLA	C2-C3-C5-C6
17	A	837	CLA	C13-C15-C16-C17
17	1	207	CLA	C2B-C3B-CAB-CBB
17	A	808	CLA	CAA-CBA-CGA-O2A
17	B	819	CLA	O1A-CGA-O2A-C1
17	A	823	CLA	C2A-CAA-CBA-CGA

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Mol	Chain	Res	Type	Atoms
17	A	841	CLA	C2A-CAA-CBA-CGA
17	B	804	CLA	C2A-CAA-CBA-CGA
17	1	207	CLA	CAA-CBA-CGA-O1A
17	K	104	CLA	CAA-CBA-CGA-O1A
17	A	829	CLA	C16-C17-C18-C20
17	A	852	CLA	C4-C3-C5-C6
28	B	847	LMT	C4-C5-C6-C7
17	L	302	CLA	CAA-CBA-CGA-O1A
17	A	822	CLA	CAA-CBA-CGA-O1A
17	4	308	CLA	C2C-C3C-CAC-CBC
17	B	814	CLA	C1A-C2A-CAA-CBA
25	A	801	CL0	C1A-C2A-CAA-CBA
17	A	825	CLA	C2-C1-O2A-CGA
17	A	824	CLA	CAA-CBA-CGA-O1A
17	G	105	CLA	CAA-CBA-CGA-O1A
17	B	807	CLA	CAA-CBA-CGA-O1A
17	K	102	CLA	CAA-CBA-CGA-O1A
17	B	829	CLA	C2A-CAA-CBA-CGA
17	4	311	CLA	CAA-CBA-CGA-O1A
17	1	214	CLA	CAA-CBA-CGA-O1A
17	A	817	CLA	CAA-CBA-CGA-O1A
17	B	838	CLA	C8-C10-C11-C12
17	B	810	CLA	CAA-CBA-CGA-O2A
24	1	221	PGT	C2-C1-O3P-P
17	B	811	CLA	CAA-CBA-CGA-O1A
17	A	812	CLA	C2-C3-C5-C6
17	4	313	CLA	CAA-CBA-CGA-O2A
17	1	207	CLA	C4B-C3B-CAB-CBB
17	B	803	CLA	C4B-C3B-CAB-CBB
23	2	318	LHG	C3-O3-P-O5
23	2	318	LHG	C4-O6-P-O5
17	1	208	CLA	CAA-CBA-CGA-O1A
17	A	805	CLA	CAA-CBA-CGA-O1A
17	A	821	CLA	O2A-C1-C2-C3
18	2	307	CHL	CAA-CBA-CGA-O2A
21	4	318	BCR	C5-C6-C7-C8
21	L	305	BCR	C23-C24-C25-C26
17	A	820	CLA	C15-C16-C17-C18
17	2	311	CLA	CAA-CBA-CGA-O1A
17	B	806	CLA	CAA-CBA-CGA-O2A
17	F	203	CLA	CAA-CBA-CGA-O2A
17	A	851	CLA	C2A-CAA-CBA-CGA

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Mol	Chain	Res	Type	Atoms
17	B	802	CLA	C2A-CAA-CBA-CGA
17	G	103	CLA	CAA-CBA-CGA-O2A
17	2	304	CLA	CAA-CBA-CGA-O2A
17	A	829	CLA	C15-C16-C17-C18
17	B	826	CLA	C4-C3-C5-C6
17	4	313	CLA	CAA-CBA-CGA-O1A
17	G	103	CLA	CAA-CBA-CGA-O1A
17	B	806	CLA	CAD-CBD-CGD-O1D
17	L	303	CLA	CAD-CBD-CGD-O1D
24	1	221	PGT	C3-C2-O2-C31
17	1	212	CLA	C11-C10-C8-C9
17	A	805	CLA	C11-C10-C8-C9
17	A	806	CLA	C14-C13-C15-C16
17	A	837	CLA	C14-C13-C15-C16
17	3	302	CLA	CAA-CBA-CGA-O2A
17	B	812	CLA	CAA-CBA-CGA-O2A
17	A	812	CLA	CAA-CBA-CGA-O1A
17	A	809	CLA	C4-C3-C5-C6
17	B	813	CLA	C4-C3-C5-C6
17	4	312	CLA	C3A-C2A-CAA-CBA
17	1	208	CLA	C6-C7-C8-C10
17	A	804	CLA	C11-C10-C8-C7
17	B	812	CLA	C3A-C2A-CAA-CBA
17	B	820	CLA	C2-C3-C5-C6
26	B	840	PQN	C17-C18-C20-C21
17	A	808	CLA	CAA-CBA-CGA-O1A
17	B	810	CLA	CAA-CBA-CGA-O1A
17	L	302	CLA	CAA-CBA-CGA-O2A
17	1	211	CLA	CAA-CBA-CGA-O2A
17	2	303	CLA	CAA-CBA-CGA-O2A
17	A	841	CLA	CAA-CBA-CGA-O2A
22	4	319	LMG	O7-C10-C11-C12
17	A	809	CLA	C13-C15-C16-C17
17	F	206	CLA	C13-C15-C16-C17
17	2	303	CLA	CAA-CBA-CGA-O1A
17	2	304	CLA	CAA-CBA-CGA-O1A
17	B	812	CLA	CAA-CBA-CGA-O1A
17	4	303	CLA	C2C-C3C-CAC-CBC
29	B	848	DGD	C5A-C6A-C7A-C8A
17	3	302	CLA	CAA-CBA-CGA-O1A
17	A	802	CLA	CAA-CBA-CGA-O2A
17	B	803	CLA	CAA-CBA-CGA-O2A

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Mol	Chain	Res	Type	Atoms
22	4	319	LMG	O9-C10-C11-C12
17	4	302	CLA	C8-C10-C11-C12
17	A	812	CLA	C10-C11-C12-C13

There are no ring outliers.

162 monomers are involved in 348 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
17	L	304	CLA	6	0
17	3	310	CLA	1	0
17	B	818	CLA	10	0
21	A	844	BCR	2	0
21	L	301	BCR	3	0
21	4	318	BCR	2	0
21	F	202	BCR	6	0
18	4	306	CHL	1	0
17	B	814	CLA	2	0
17	4	308	CLA	1	0
21	2	317	BCR	15	0
17	A	837	CLA	2	0
21	F	205	BCR	1	0
17	A	817	CLA	3	0
17	B	828	CLA	4	0
17	A	818	CLA	4	0
21	3	317	BCR	6	0
17	B	832	CLA	1	0
17	A	809	CLA	3	0
17	B	839	CLA	1	0
21	I	101	BCR	1	0
17	4	302	CLA	1	0
17	F	203	CLA	1	0
17	F	201	CLA	2	0
18	3	306	CHL	1	0
17	2	303	CLA	1	0
17	A	805	CLA	1	0
17	B	807	CLA	2	0
17	1	208	CLA	3	0
17	A	832	CLA	2	0
17	K	103	CLA	1	0
17	A	827	CLA	3	0
17	A	813	CLA	1	0
17	B	813	CLA	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
17	K	102	CLA	4	0
17	4	312	CLA	2	0
17	A	820	CLA	7	0
17	A	808	CLA	5	0
21	A	848	BCR	5	0
20	1	216	XAT	2	0
21	A	847	BCR	1	0
17	A	828	CLA	5	0
17	3	301	CLA	1	0
17	L	302	CLA	2	0
18	2	301	CHL	2	0
24	G	107	PGT	6	0
17	4	303	CLA	2	0
17	L	303	CLA	3	0
28	G	102	LMT	2	0
17	B	802	CLA	2	0
23	1	218	LHG	5	0
17	A	850	CLA	8	0
21	J	103	BCR	3	0
17	1	212	CLA	2	0
21	J	101	BCR	4	0
26	A	842	PQN	2	0
17	B	830	CLA	1	0
17	G	105	CLA	3	0
17	A	819	CLA	3	0
17	2	310	CLA	1	0
17	A	812	CLA	6	0
17	K	104	CLA	3	0
21	B	846	BCR	1	0
17	4	310	CLA	4	0
17	A	821	CLA	2	0
17	B	808	CLA	1	0
17	B	827	CLA	3	0
22	4	319	LMG	4	0
17	A	829	CLA	5	0
17	4	301	CLA	4	0
21	A	845	BCR	4	0
17	B	810	CLA	2	0
21	B	842	BCR	5	0
17	B	836	CLA	2	0
17	3	314	CLA	1	0
18	2	307	CHL	5	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
18	2	314	CHL	1	0
17	A	814	CLA	2	0
21	A	846	BCR	3	0
21	L	306	BCR	1	0
17	B	817	CLA	1	0
21	L	305	BCR	1	0
21	G	106	BCR	5	0
21	K	101	BCR	14	0
23	A	843	LHG	4	0
21	B	844	BCR	3	0
17	B	831	CLA	2	0
17	B	815	CLA	2	0
17	A	838	CLA	6	0
17	1	202	CLA	1	0
17	A	852	CLA	3	0
19	3	315	LUT	1	0
17	A	836	CLA	1	0
17	1	203	CLA	2	0
17	2	304	CLA	1	0
17	1	205	CLA	1	0
17	B	811	CLA	2	0
17	A	841	CLA	3	0
17	B	835	CLA	1	0
19	4	316	LUT	1	0
17	1	204	CLA	2	0
17	A	851	CLA	2	0
18	1	206	CHL	1	0
20	4	317	XAT	2	0
17	A	823	CLA	1	0
17	A	839	CLA	2	0
17	B	804	CLA	8	0
17	B	822	CLA	5	0
17	A	802	CLA	4	0
21	1	217	BCR	4	0
21	B	845	BCR	1	0
17	A	835	CLA	1	0
19	2	315	LUT	3	0
17	A	830	CLA	2	0
17	A	833	CLA	2	0
17	B	824	CLA	5	0
23	1	220	LHG	3	0
17	3	308	CLA	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
17	B	823	CLA	6	0
17	4	309	CLA	1	0
17	B	803	CLA	1	0
24	1	221	PGT	3	0
20	2	316	XAT	4	0
17	2	309	CLA	3	0
17	2	308	CLA	2	0
17	A	840	CLA	4	0
17	1	211	CLA	1	0
17	A	807	CLA	7	0
17	F	206	CLA	2	0
17	A	824	CLA	7	0
17	A	810	CLA	4	0
17	B	809	CLA	3	0
17	B	829	CLA	5	0
18	2	305	CHL	3	0
19	1	215	LUT	1	0
17	A	831	CLA	1	0
17	B	838	CLA	2	0
26	B	840	PQN	2	0
25	A	801	CL0	5	0
17	4	314	CLA	2	0
17	2	302	CLA	2	0
17	B	825	CLA	11	0
17	A	804	CLA	4	0
17	2	312	CLA	1	0
18	1	201	CHL	1	0
17	H	201	CLA	2	0
20	3	316	XAT	2	0
17	A	834	CLA	2	0
17	A	826	CLA	2	0
21	K	105	BCR	5	0
21	B	841	BCR	2	0
17	A	811	CLA	3	0
17	B	820	CLA	7	0
23	2	318	LHG	4	0
29	B	848	DGD	5	0
17	B	819	CLA	2	0
18	4	305	CHL	1	0
22	4	320	LMG	1	0
17	A	803	CLA	2	0
17	3	303	CLA	3	0

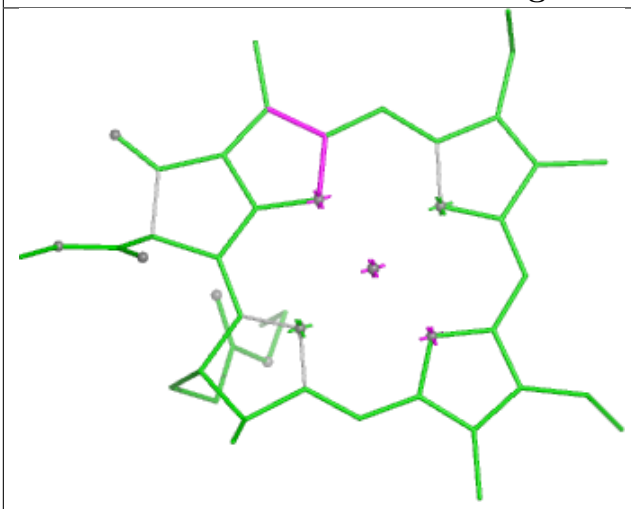
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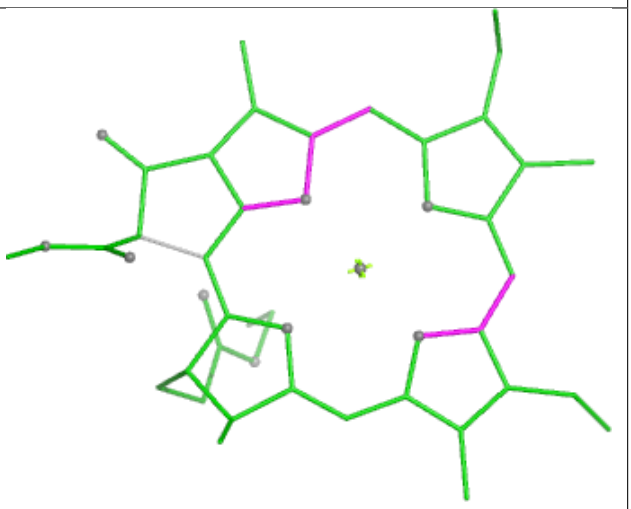
Mol	Chain	Res	Type	Clashes	Symm-Clashes
17	3	307	CLA	1	0
17	B	801	CLA	3	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

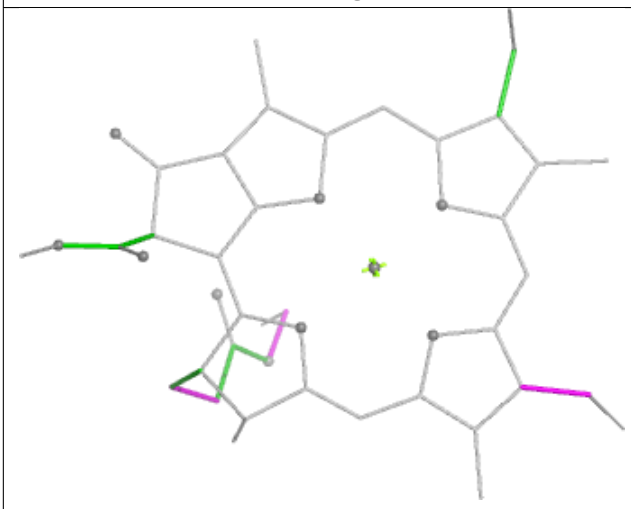
Ligand CLA 3 305



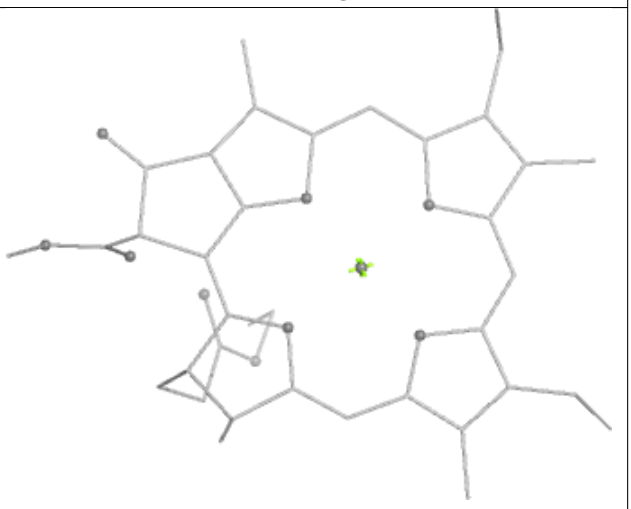
Bond lengths



Bond angles

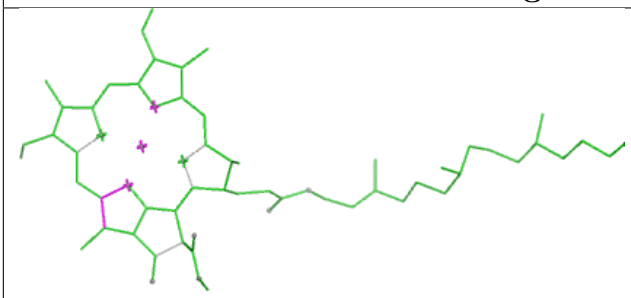


Torsions

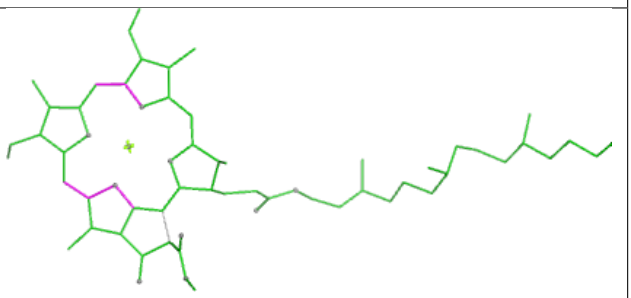


Rings

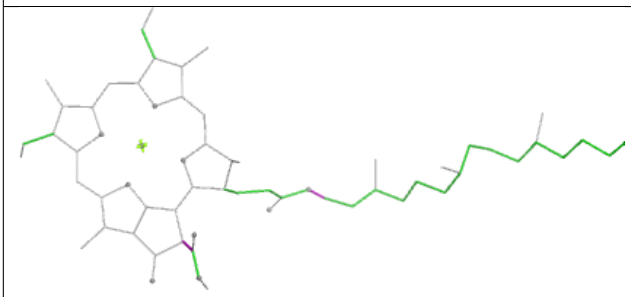
Ligand CLA A 825



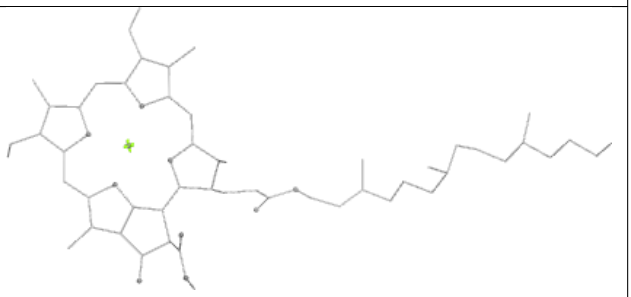
Bond lengths



Bond angles

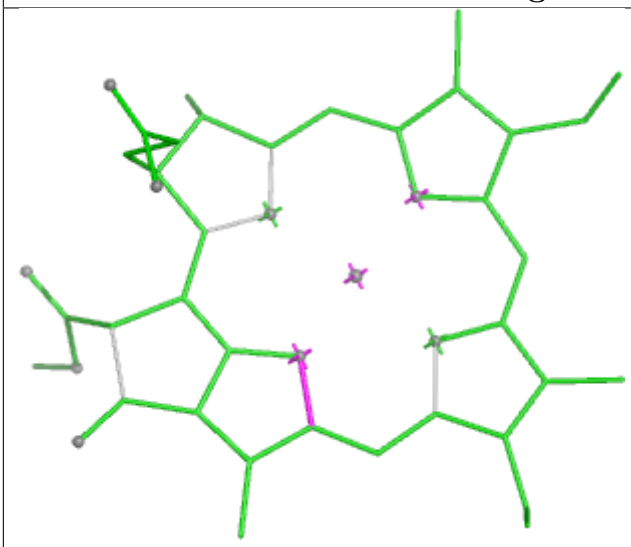


Torsions



Rings

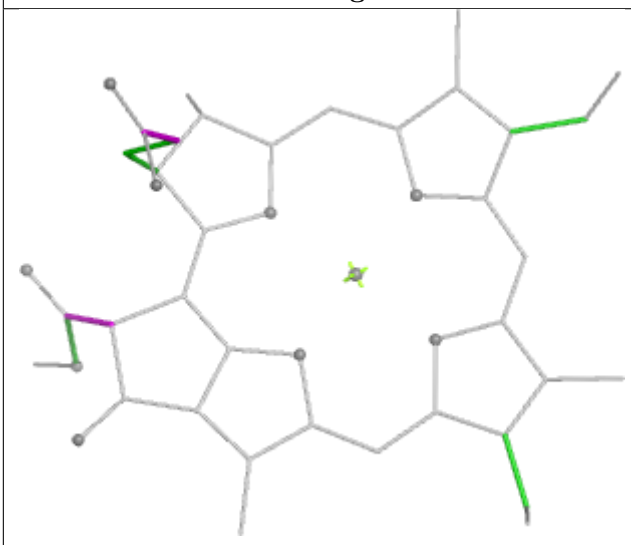
Ligand CLA 3 313



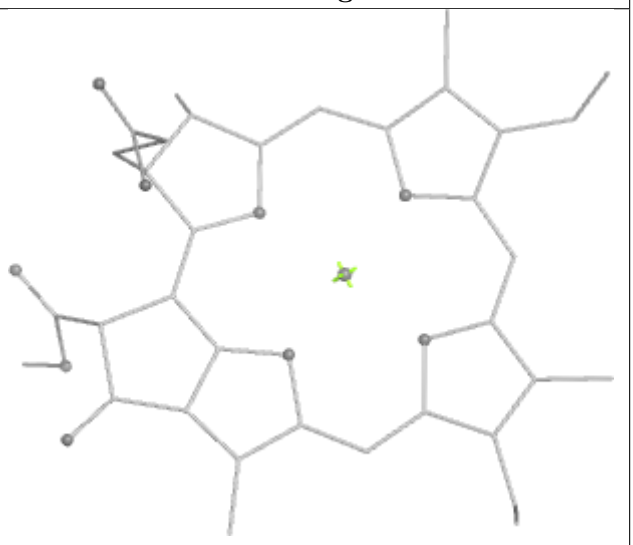
Bond lengths



Bond angles

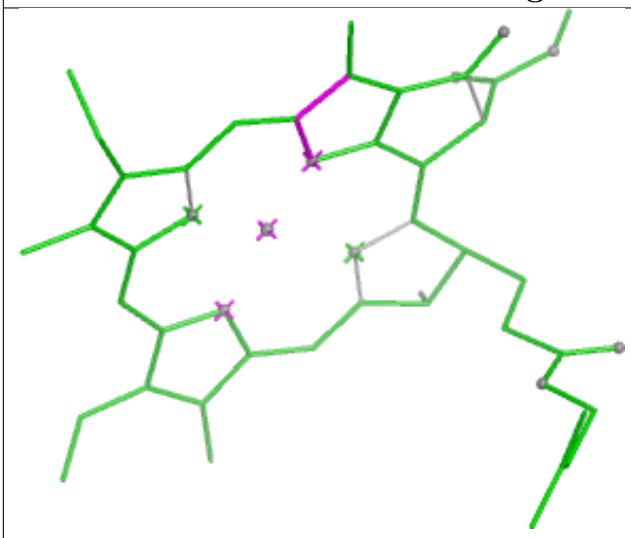


Torsions

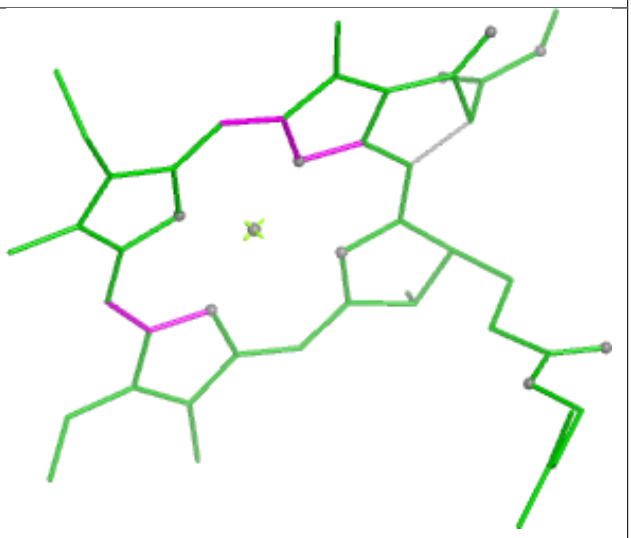


Rings

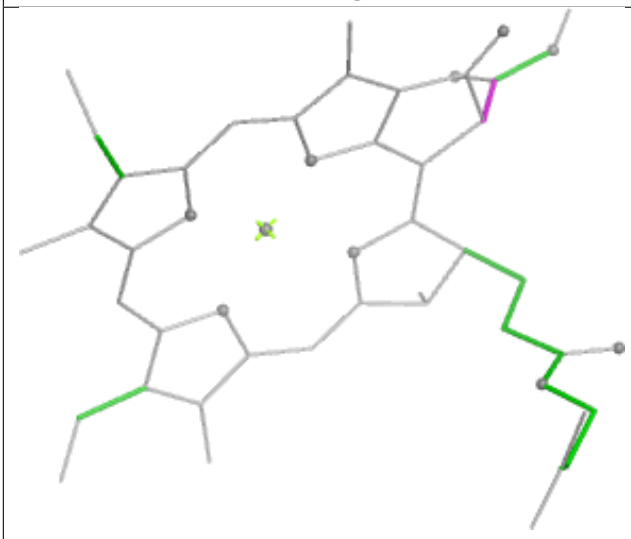
Ligand CLA L 304



Bond lengths



Bond angles

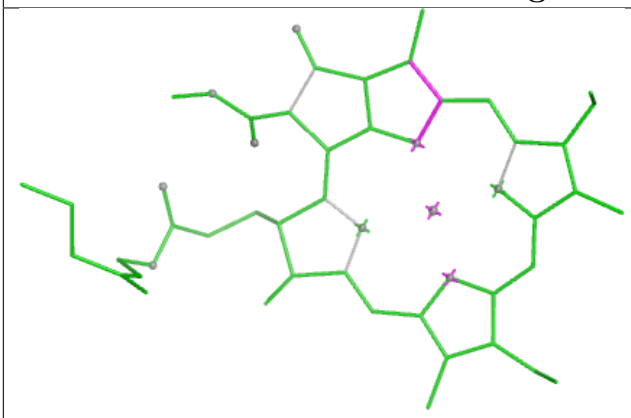


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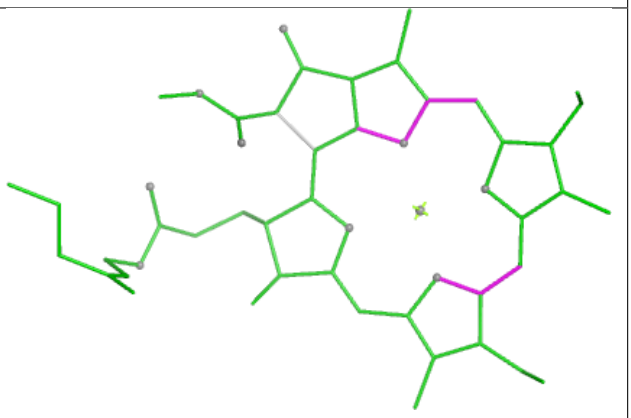


Rings

Ligand CLA 3 310



Bond lengths



Bond angles

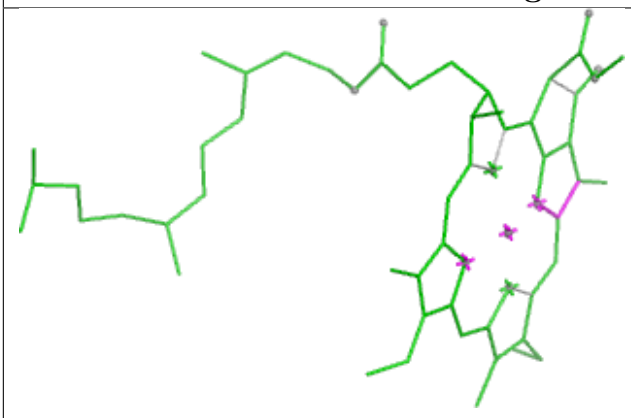


Torsions



Rings

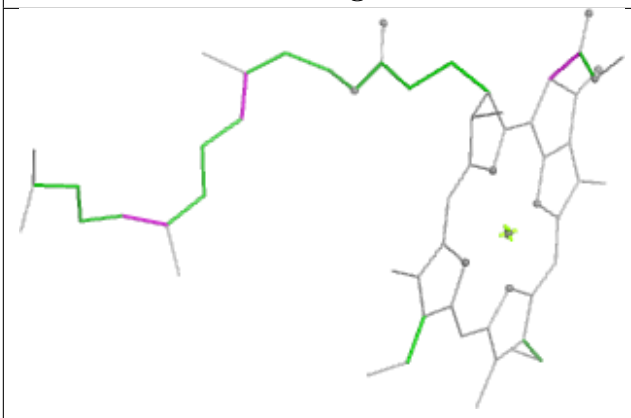
Ligand CLA B 816



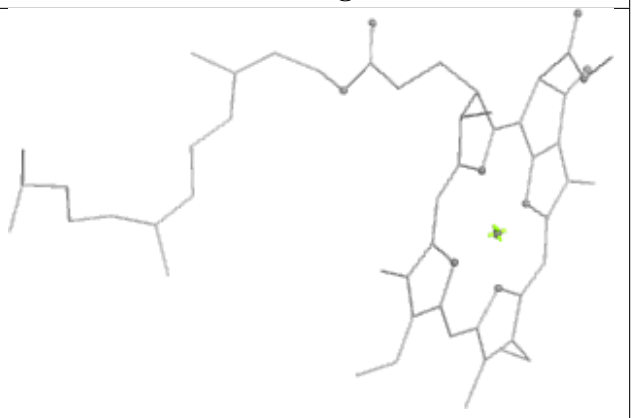
Bond lengths



Bond angles

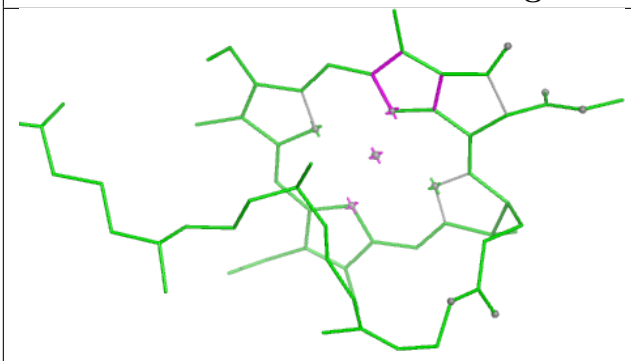


Torsions

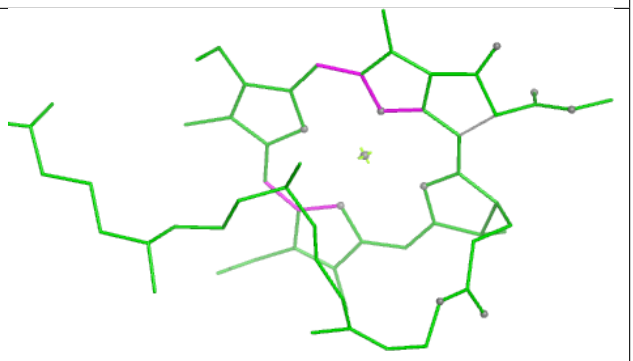


Rings

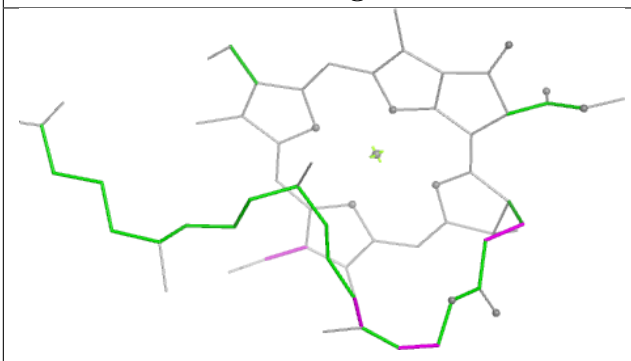
Ligand CLA B 818



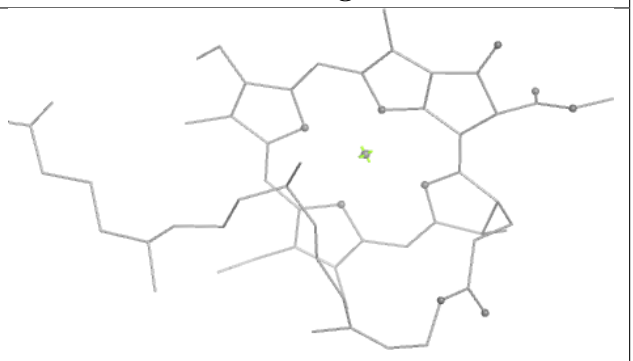
Bond lengths



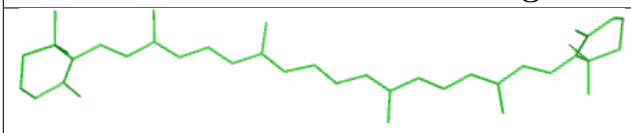
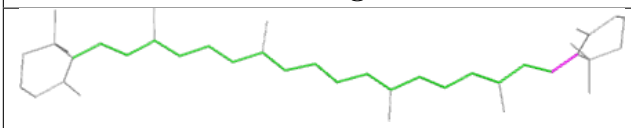
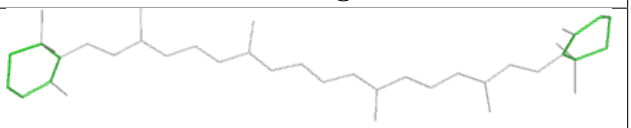
Bond angles

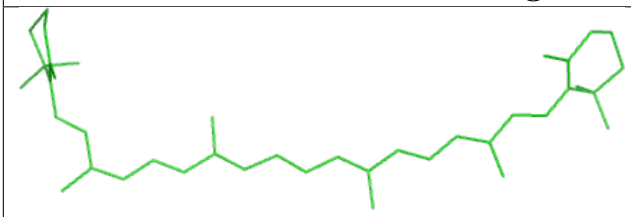
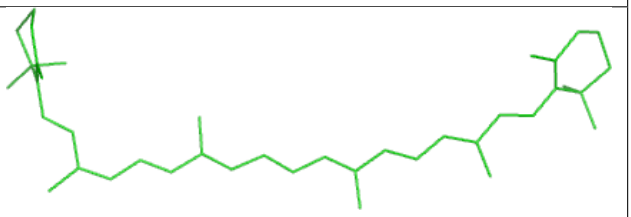
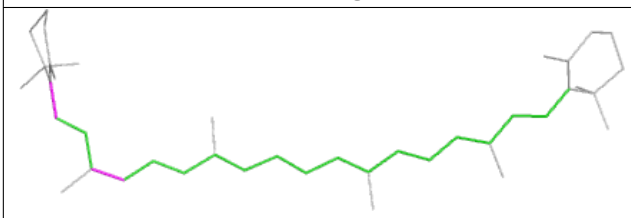
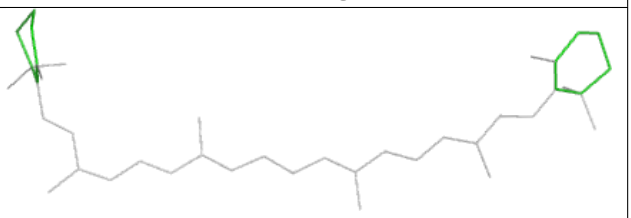


Torsions

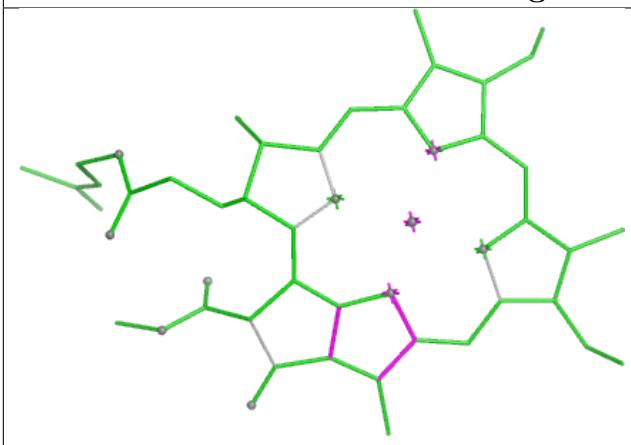


Rings

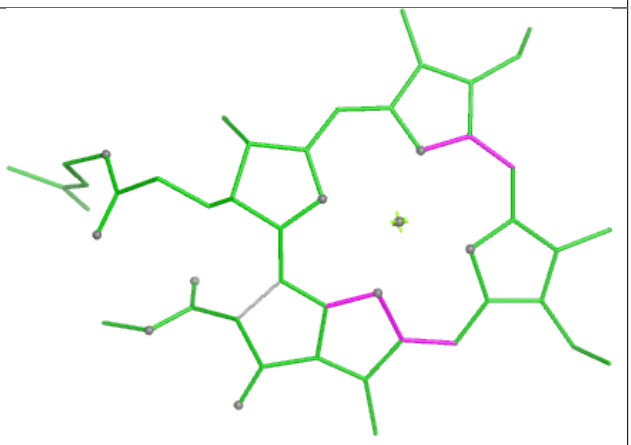
Ligand BCR A 844	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand BCR L 301	
 Bond lengths	 Bond angles
 Torsions	 Rings

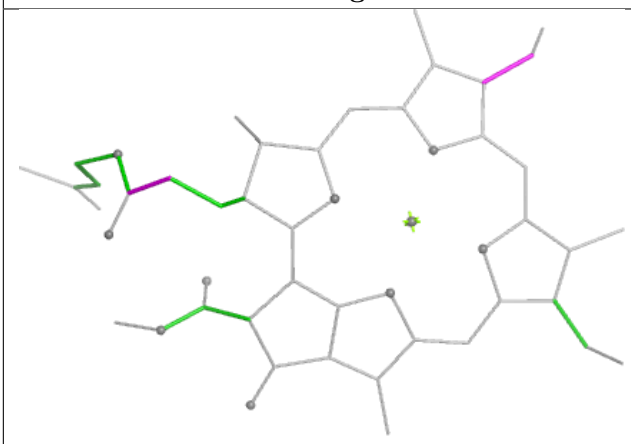
Ligand CLA 3 302



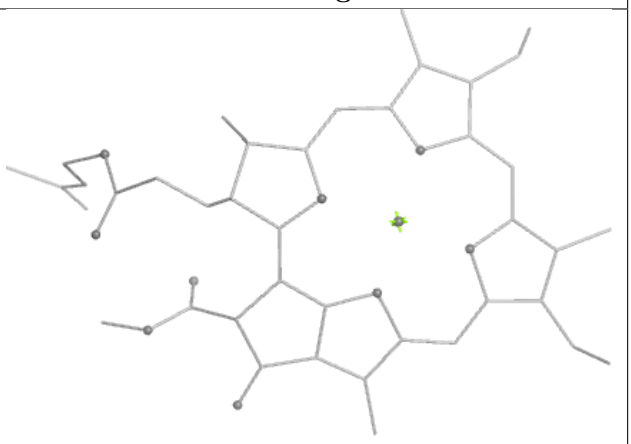
Bond lengths



Bond angles



Torsions

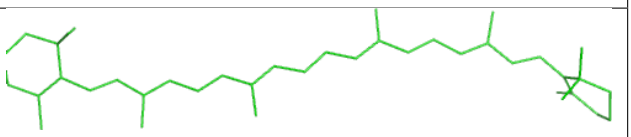


Rings

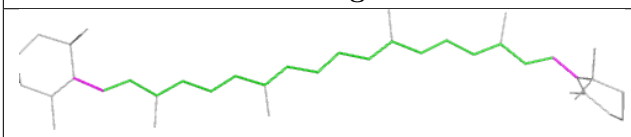
Ligand BCR 4 318



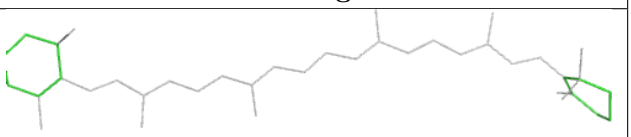
Bond lengths



Bond angles

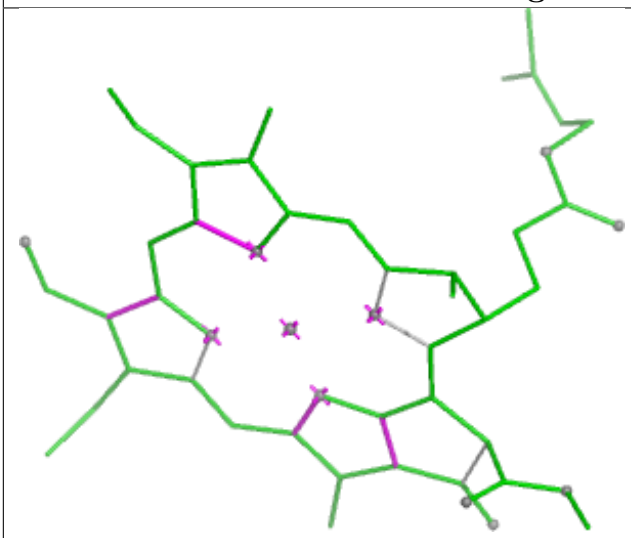


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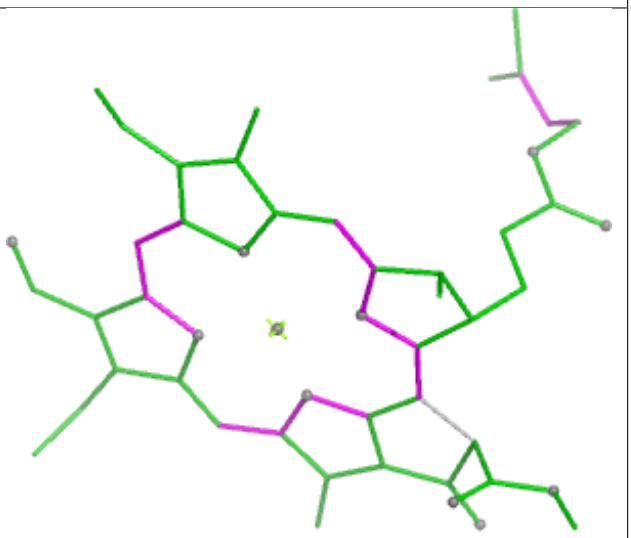


Rings

Ligand CHL 4 306



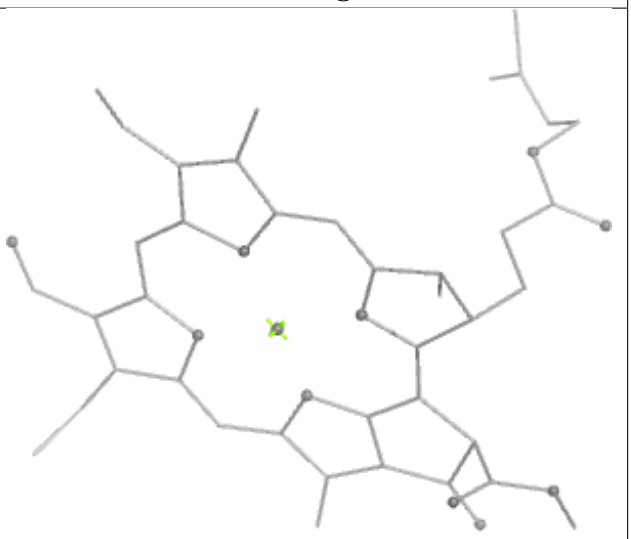
Bond lengths



Bond angles

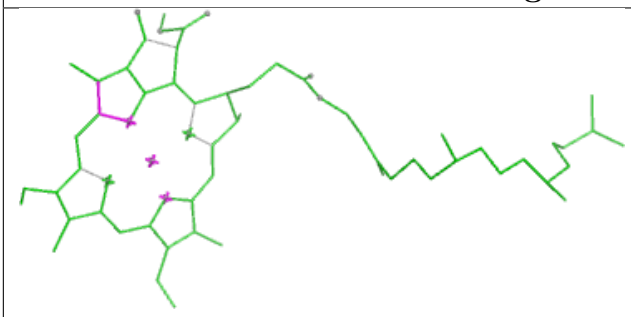


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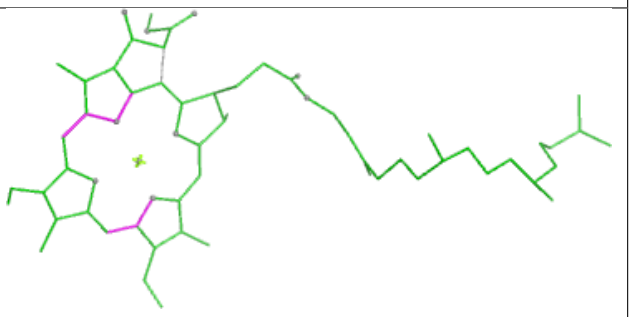


Rings

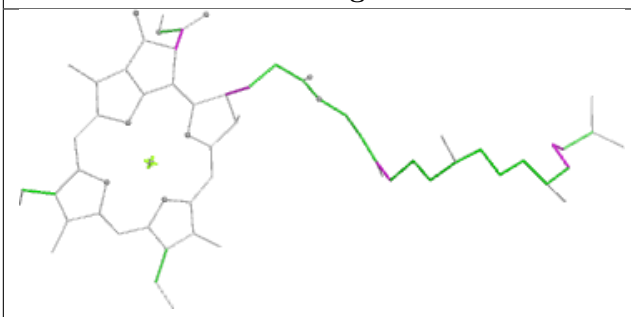
Ligand CLA B 814



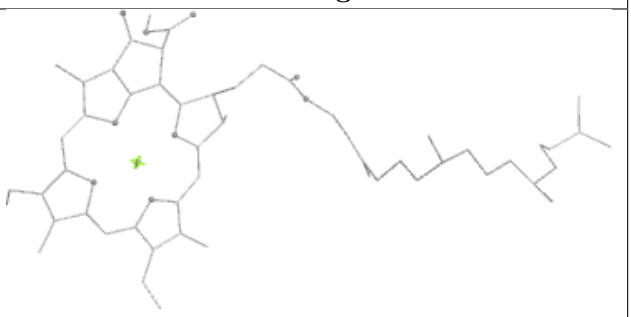
Bond lengths



Bond angles



Torsions



Rings

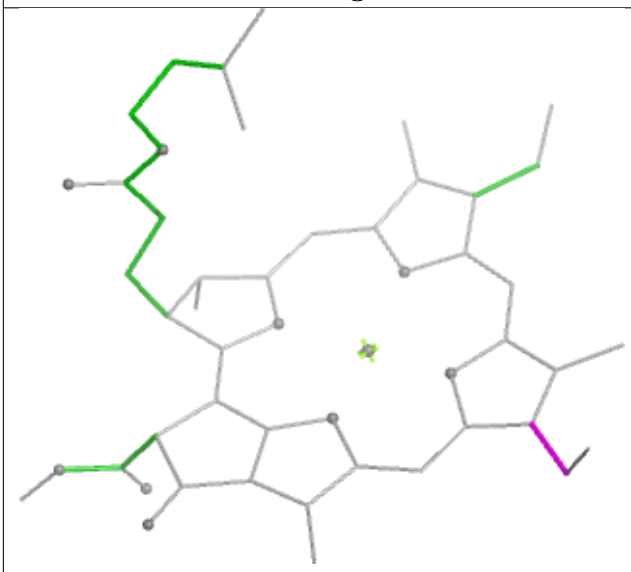
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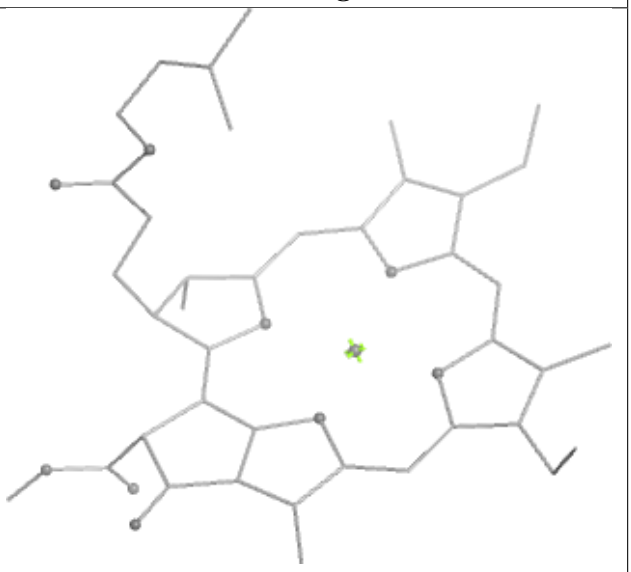
Bond lengths



Bond angles

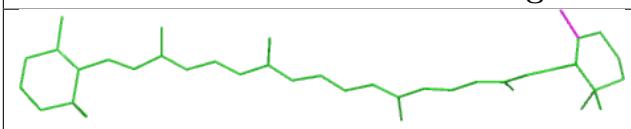


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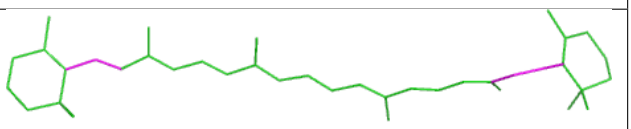


Rings

Ligand BCR 2 317



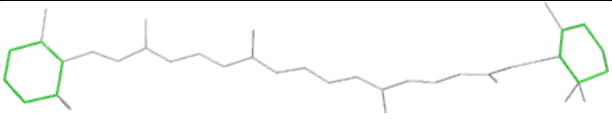
Bond lengths



Bond angles

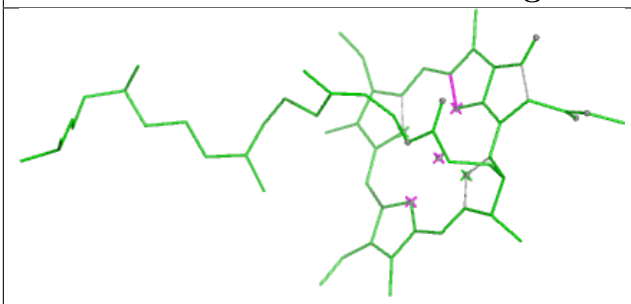


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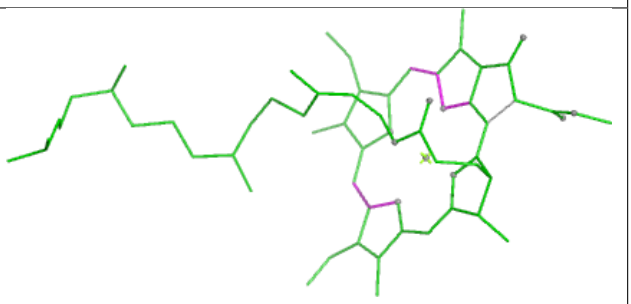


Rings

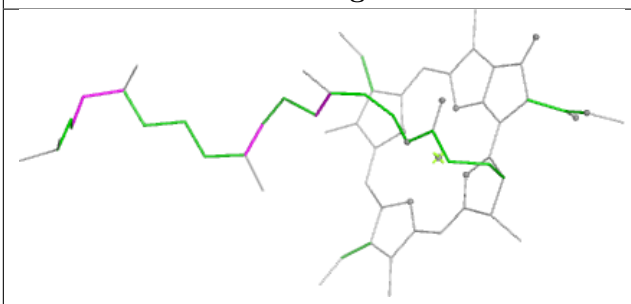
Ligand CLA A 837



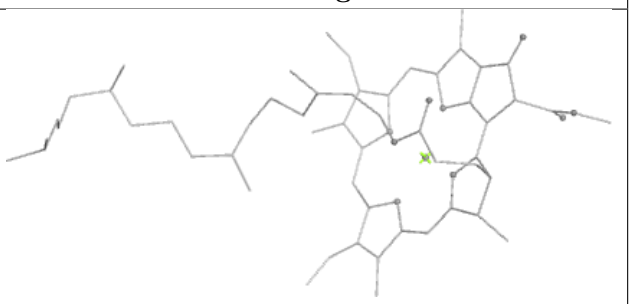
Bond lengths



Bond angles

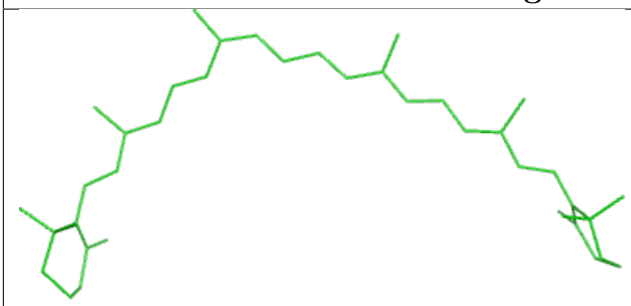


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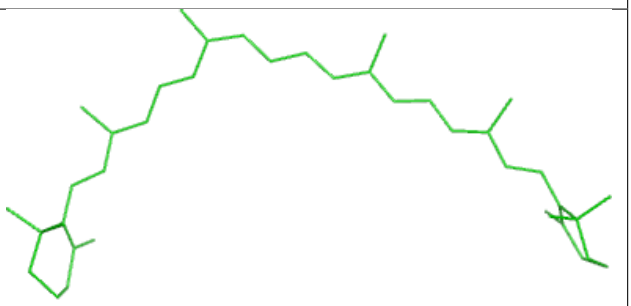


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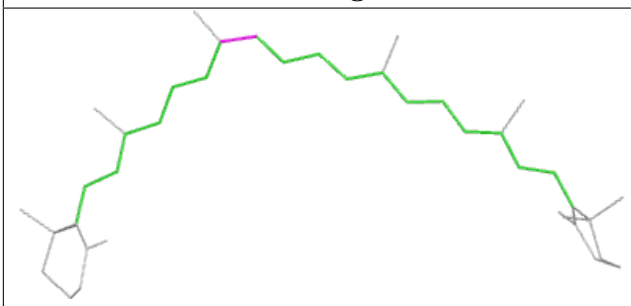
Ligand BCR F 205



Bond lengths



Bond angles

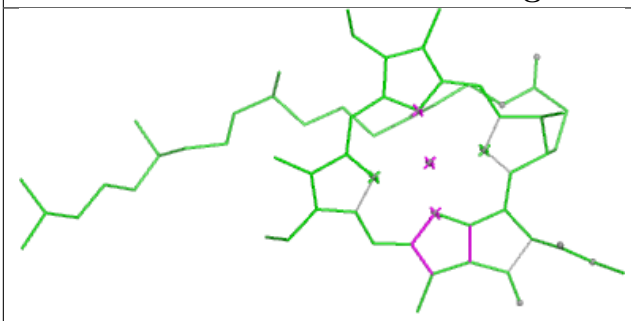


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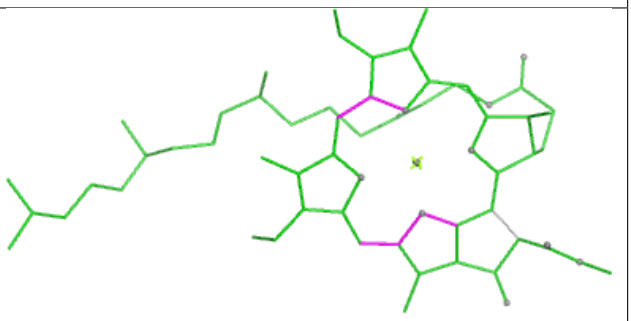


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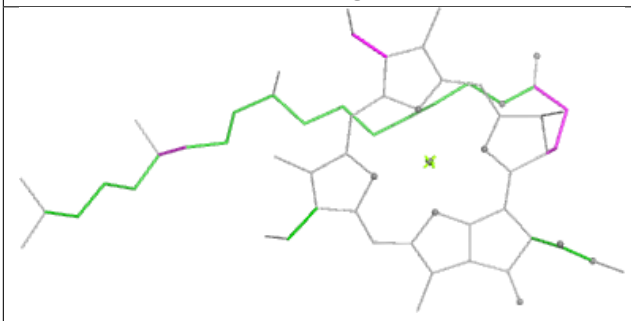
Ligand CLA A 817



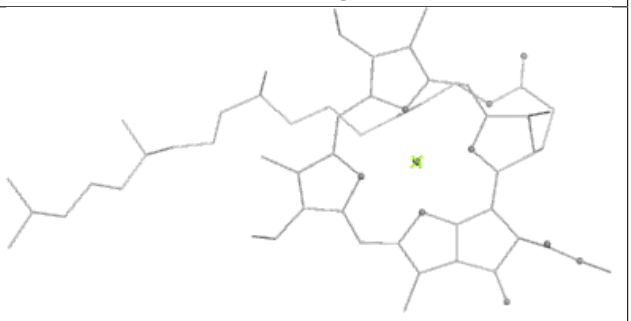
Bond lengths



Bond angles

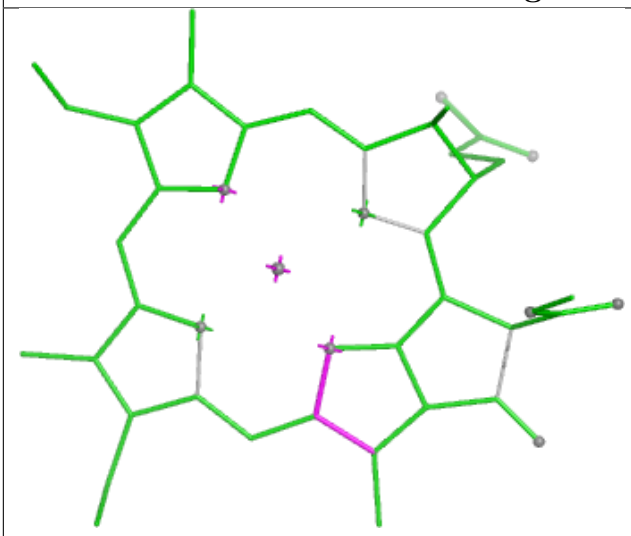


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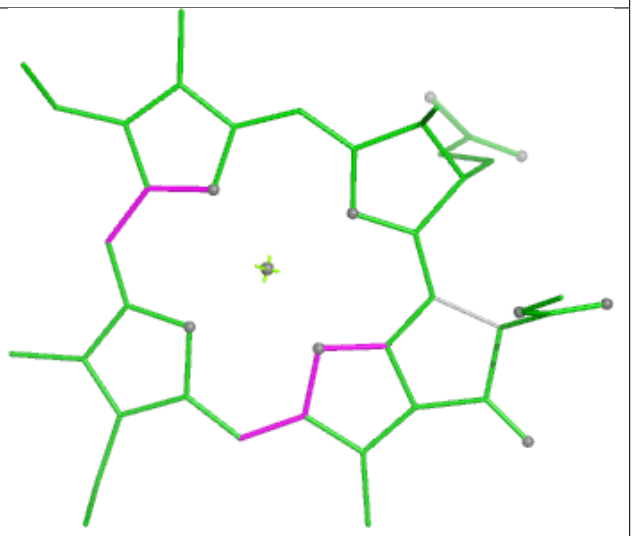


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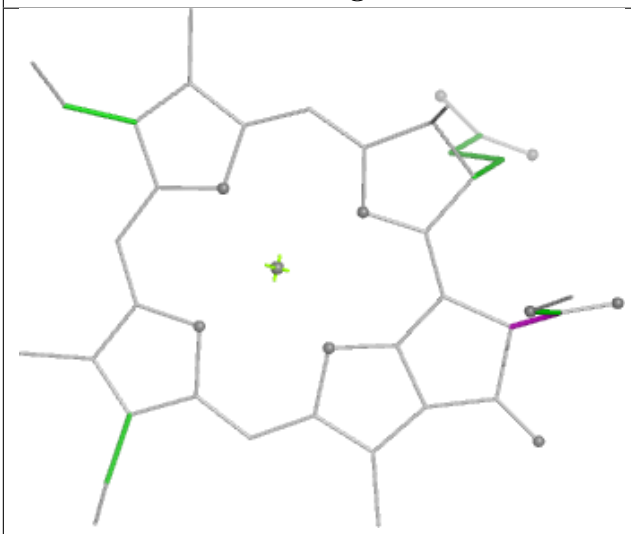
Ligand CLA B 805



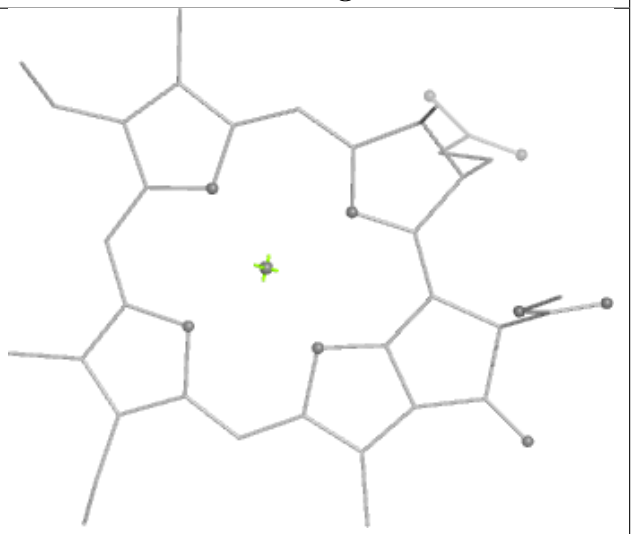
Bond lengths



Bond angles

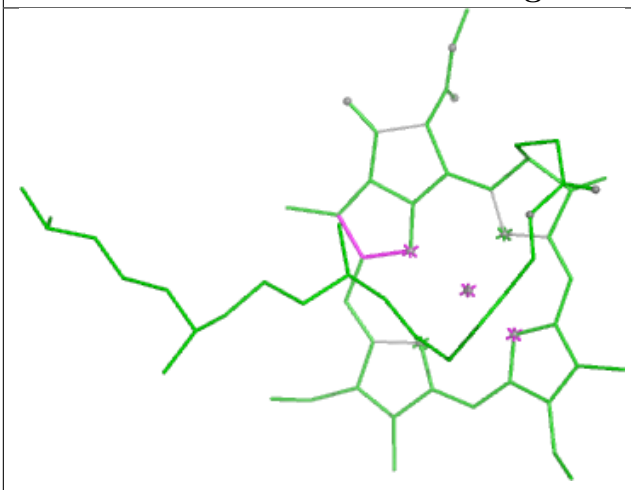


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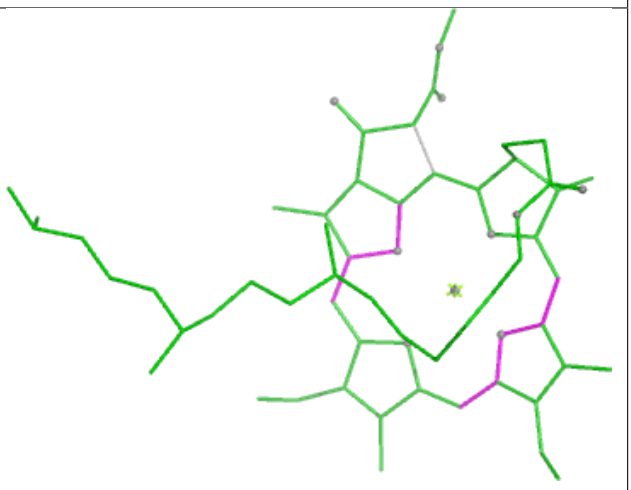


Rings

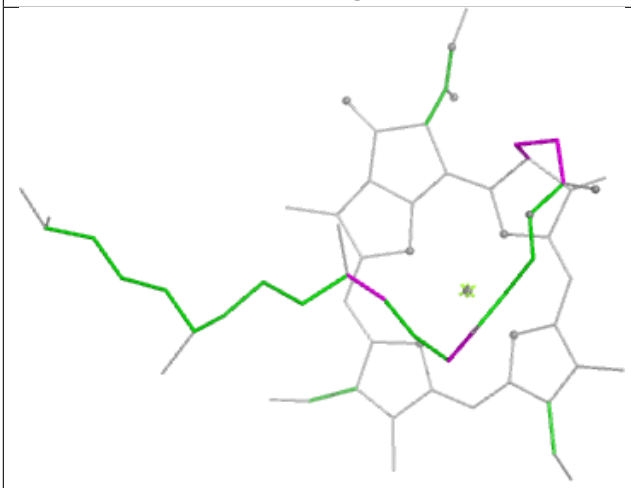
Ligand CLA B 828



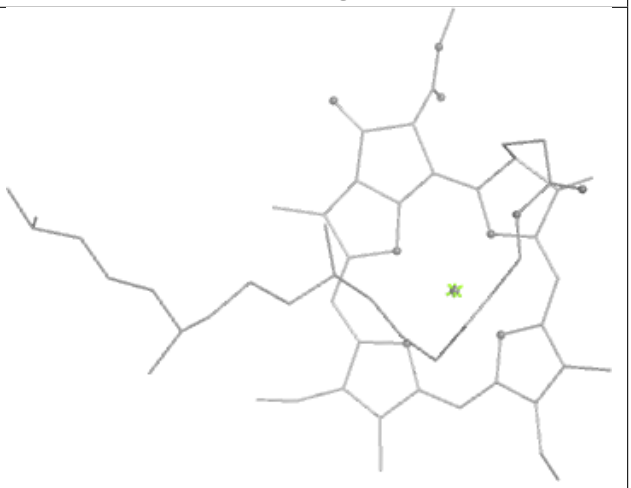
Bond lengths



Bond angles

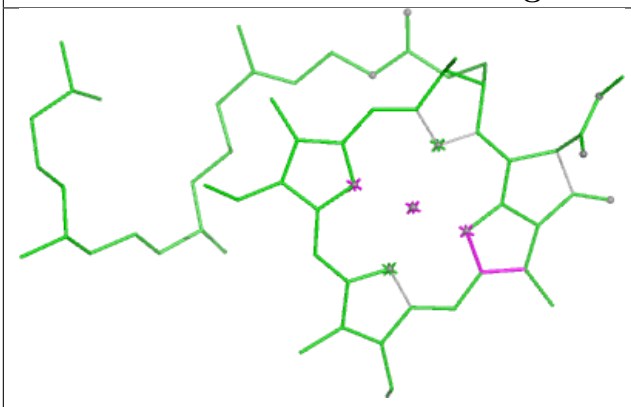


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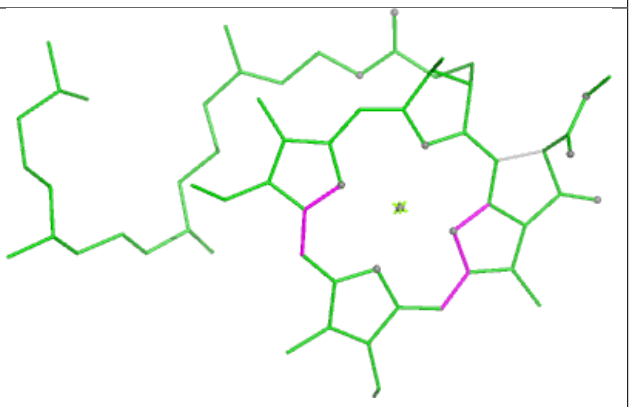


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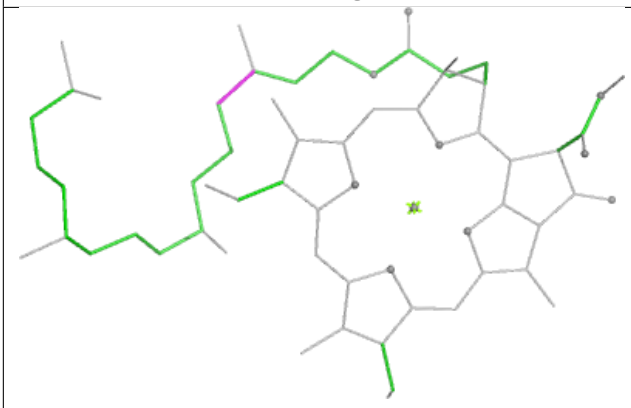
Ligand CLA A 818



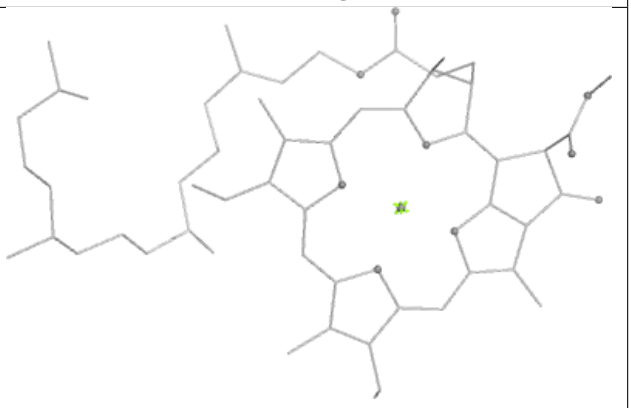
Bond lengths



Bond angles



Torsions

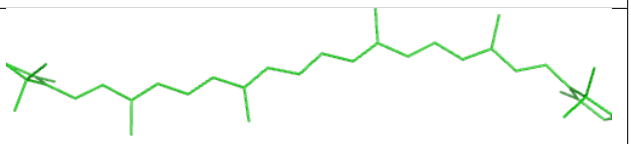


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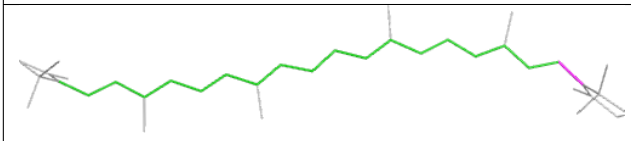
Ligand BCR 3 317



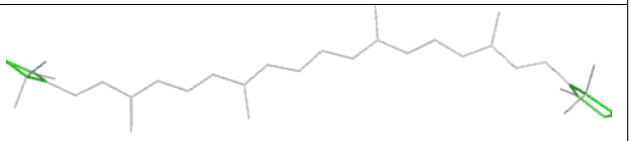
Bond lengths



Bond angles

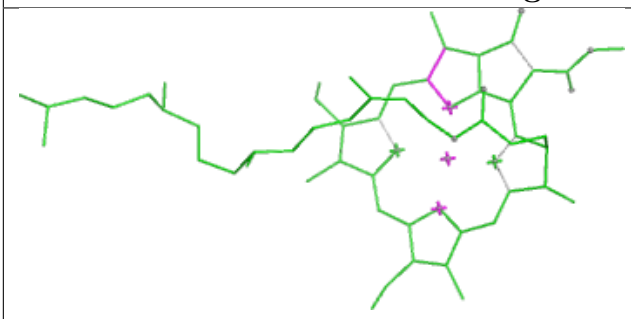


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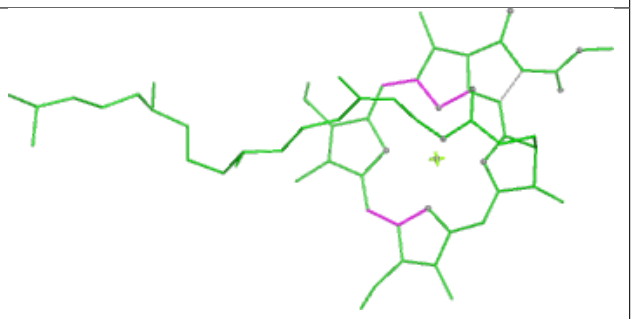


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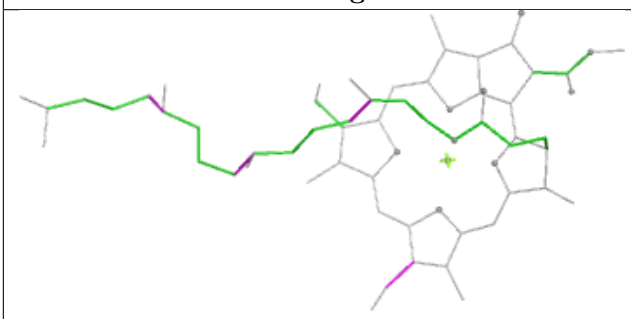
Ligand CLA A 816



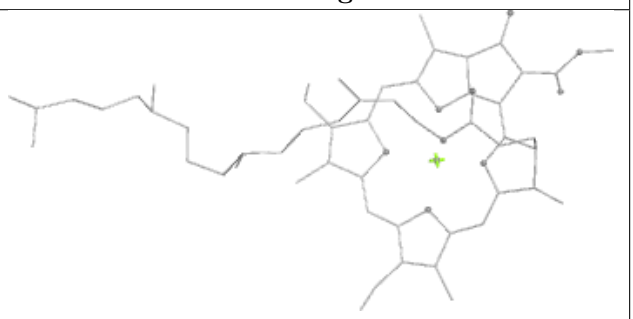
Bond lengths



Bond angles

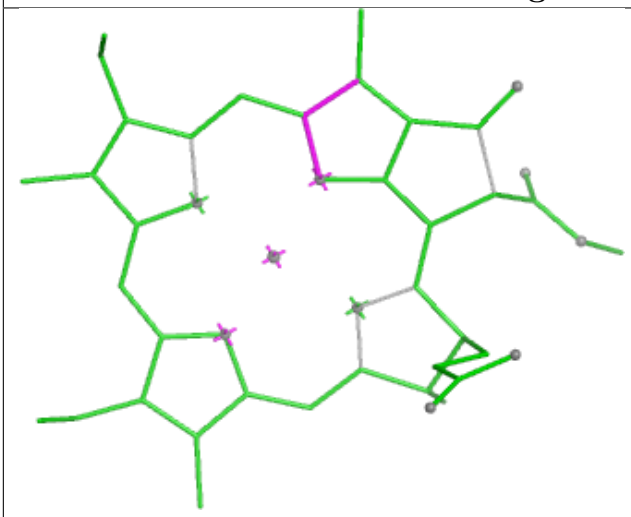


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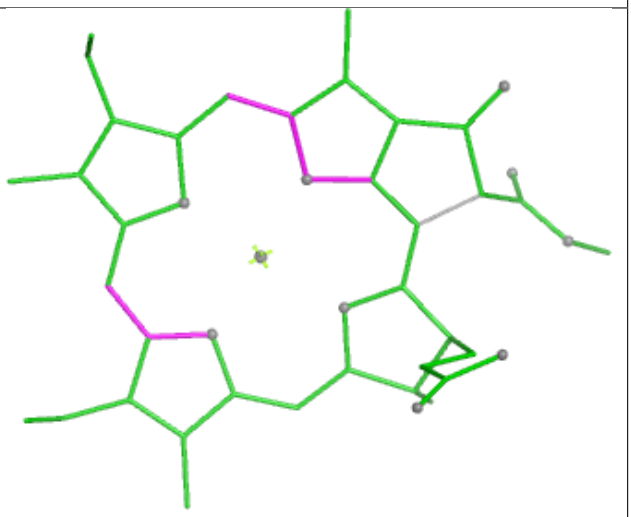


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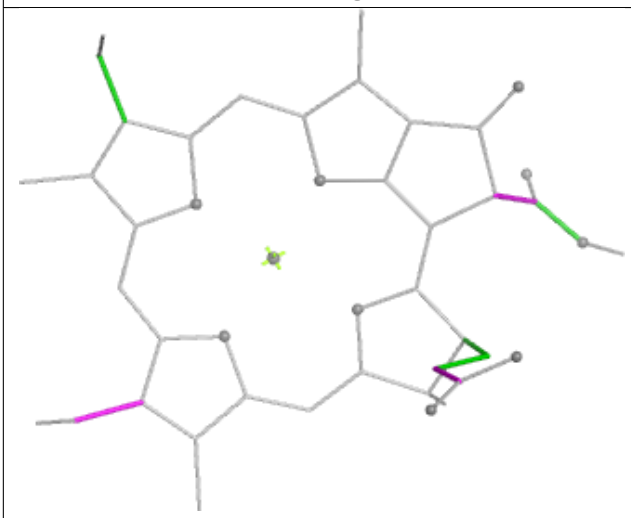
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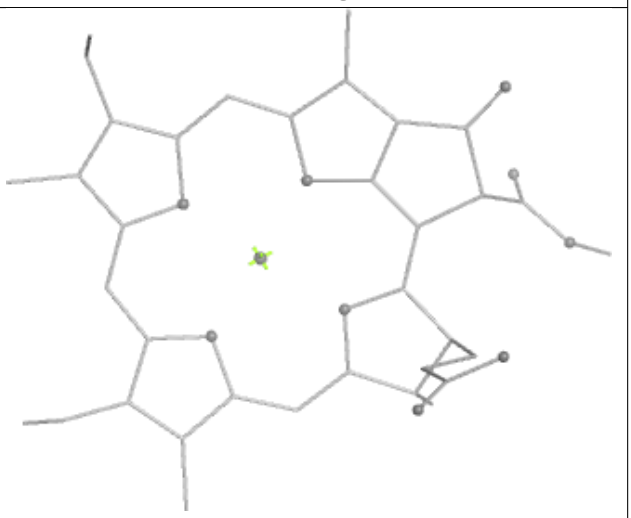
Bond lengths



Bond angles

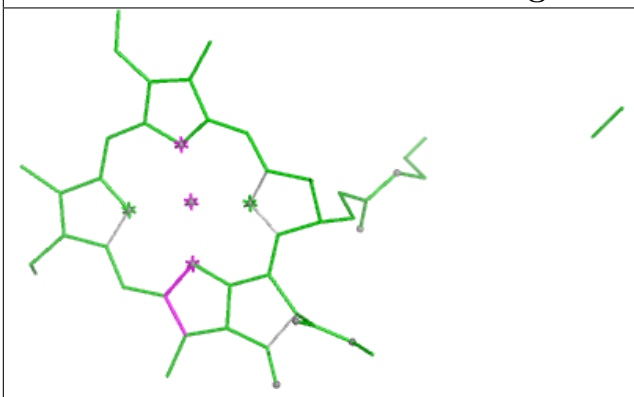


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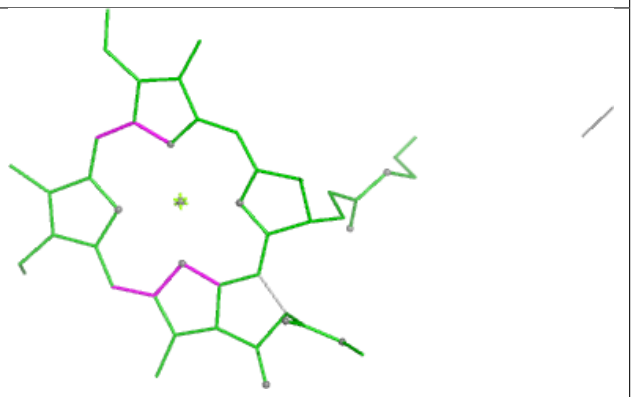


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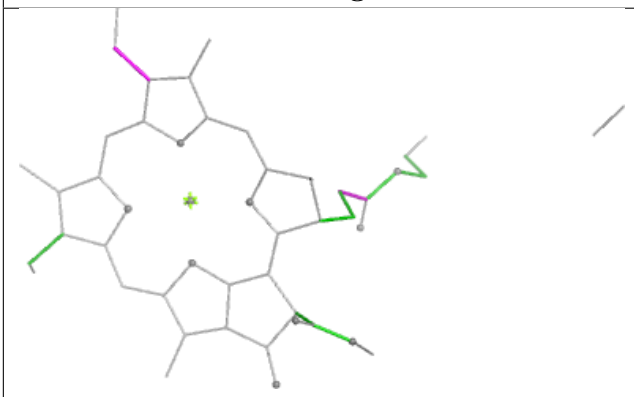
Ligand CLA 1 207



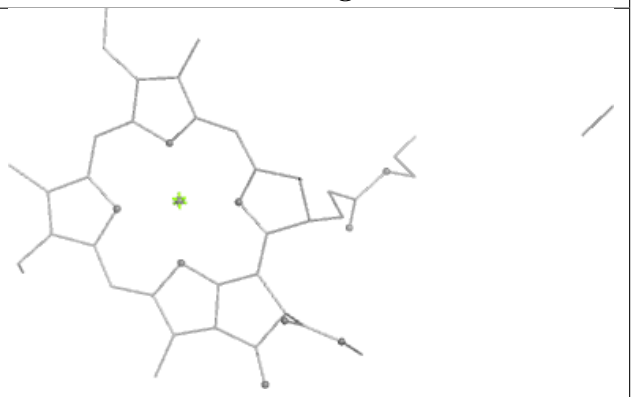
Bond lengths



Bond angles

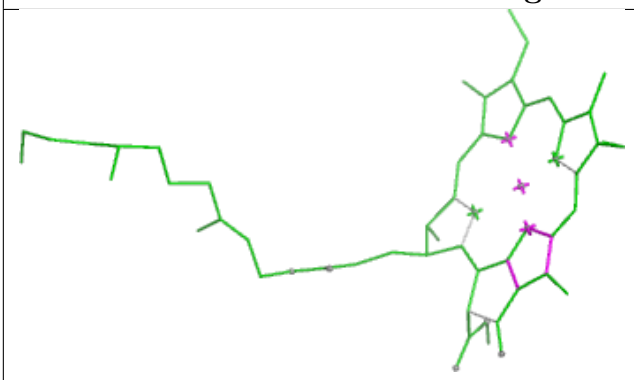


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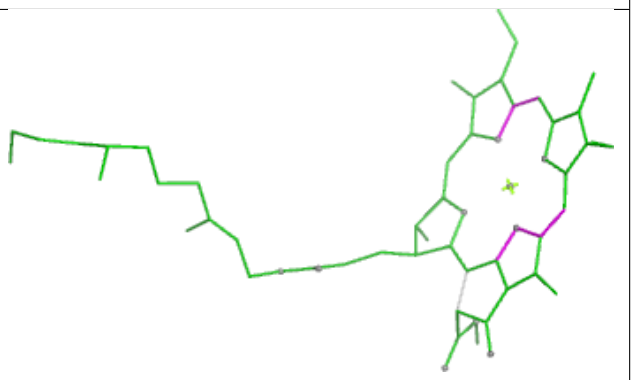


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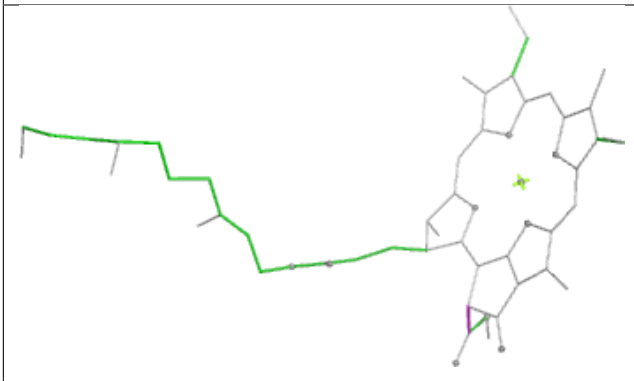
Ligand CLA B 832



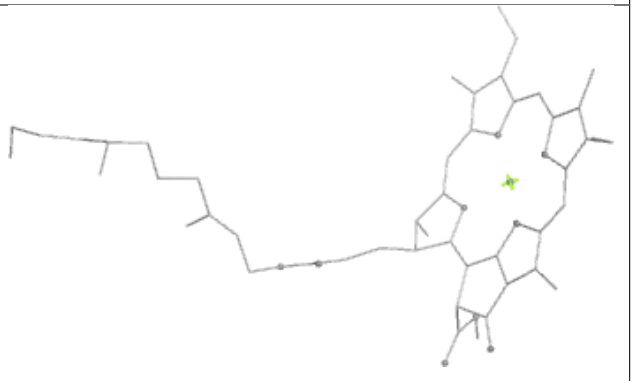
Bond lengths



Bond angles

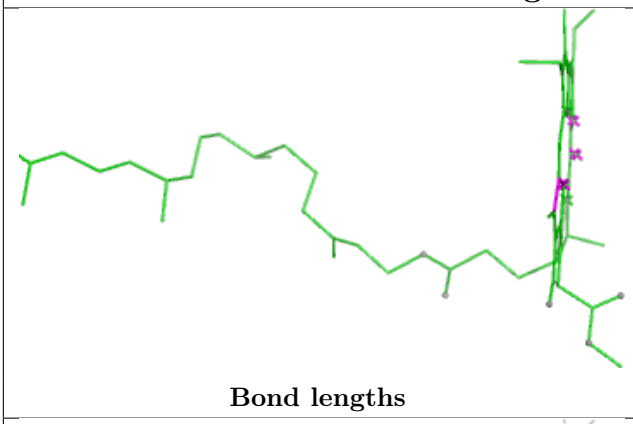


Torsions

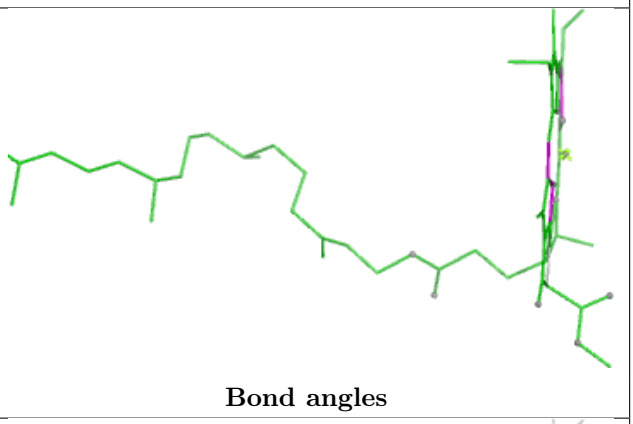


Rings

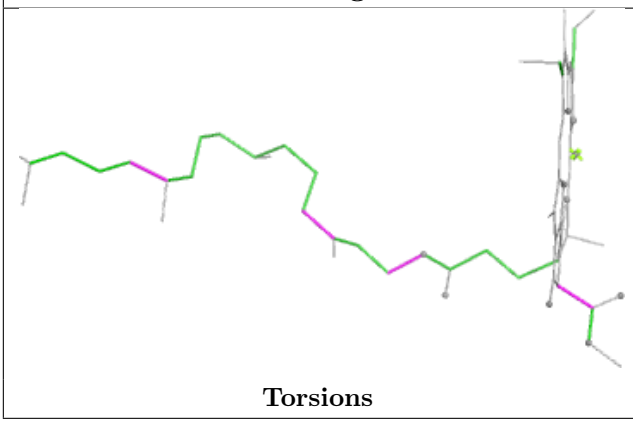
Ligand CLA A 806



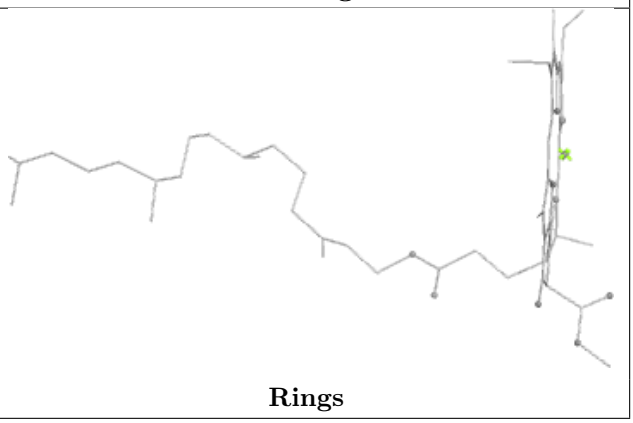
Bond lengths



Bond angles

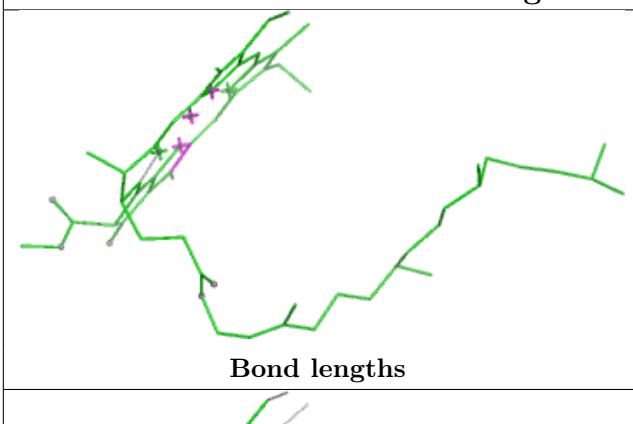


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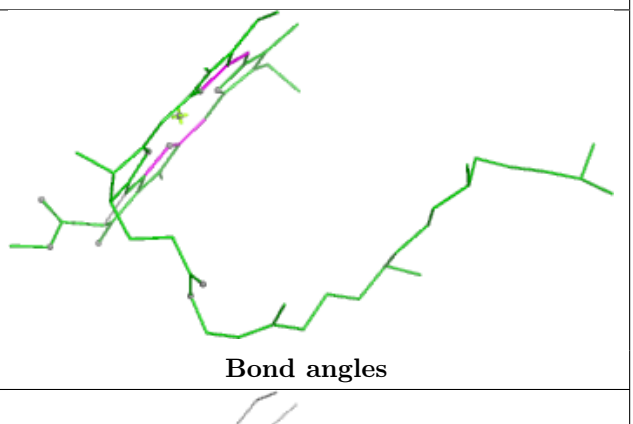


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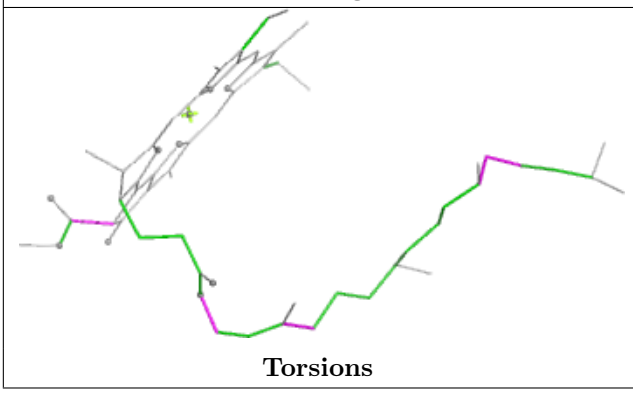
Ligand CLA A 809



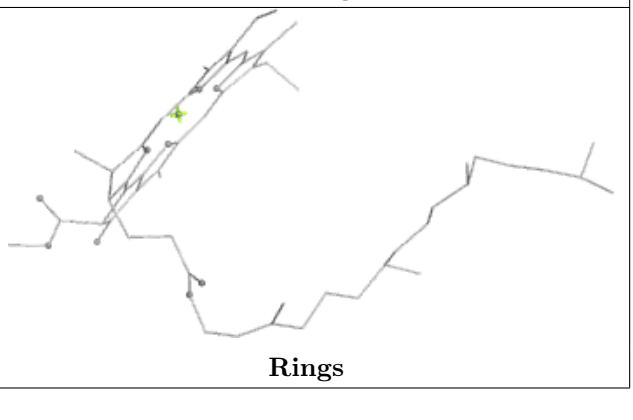
Bond lengths



Bond angles

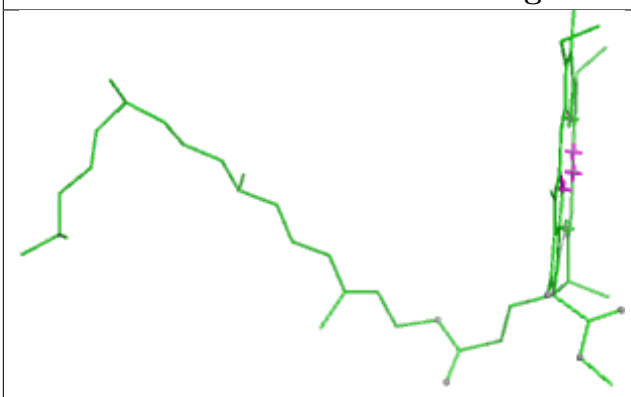


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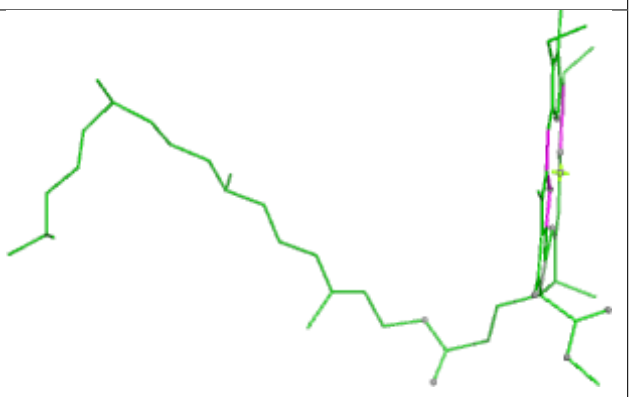


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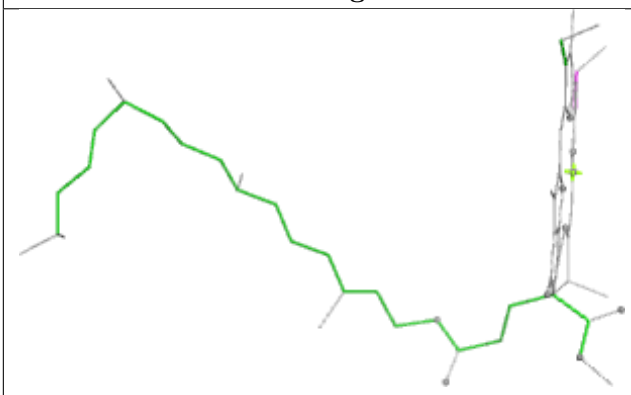
Ligand CLA B 839



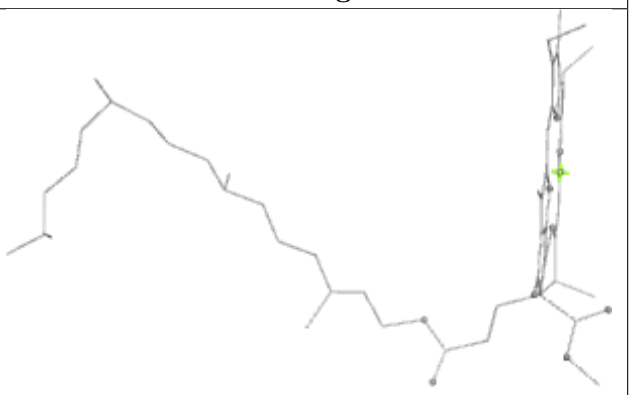
Bond lengths



Bond angles

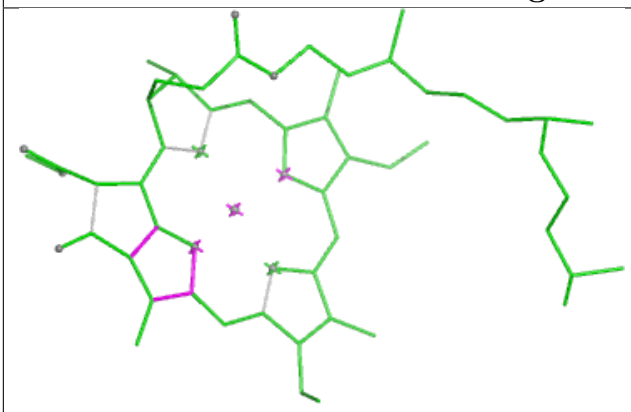


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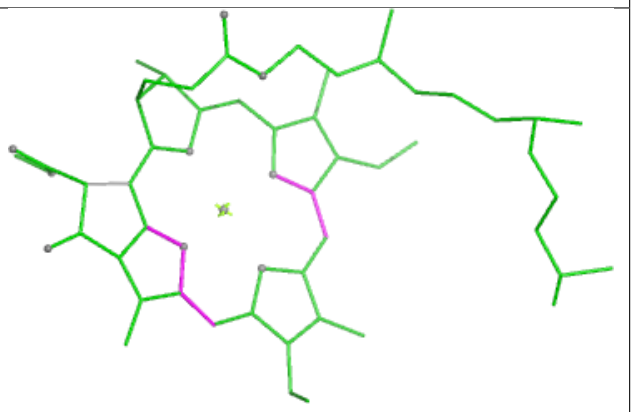


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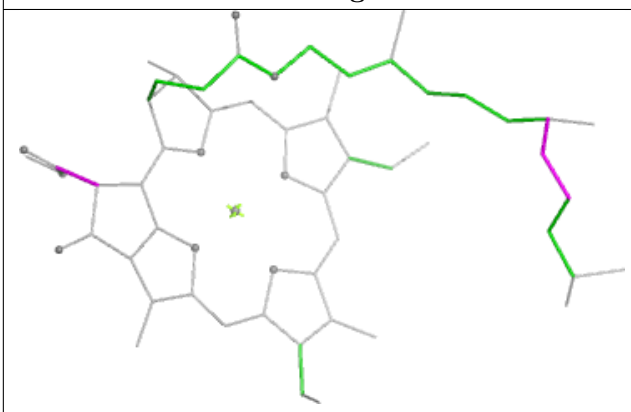
Ligand CLA 4 302



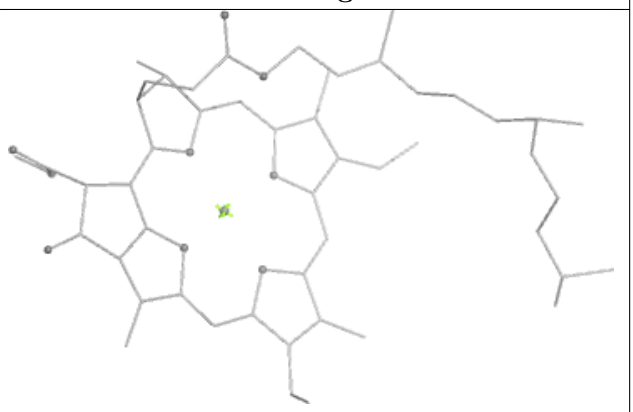
Bond lengths



Bond angles

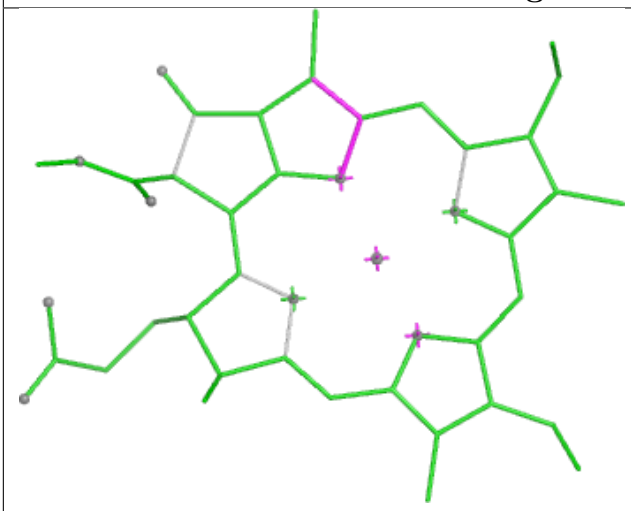


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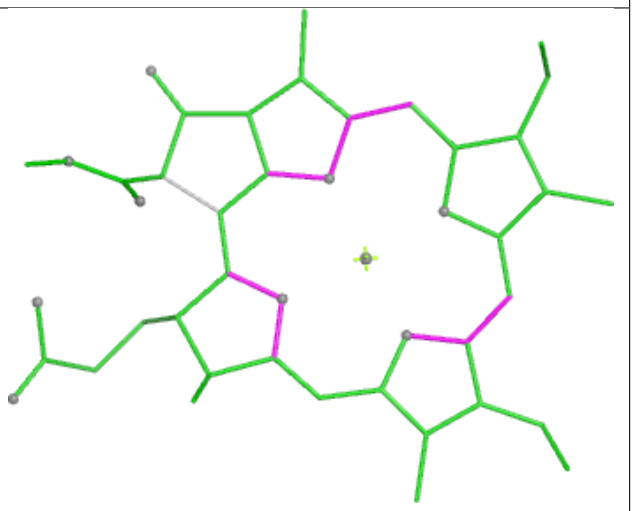


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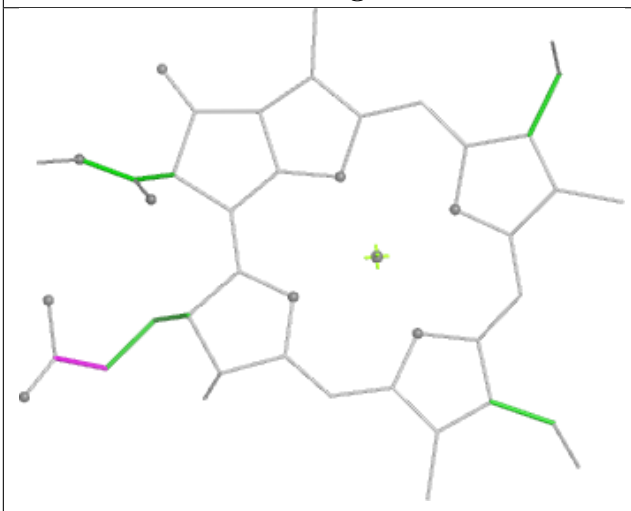
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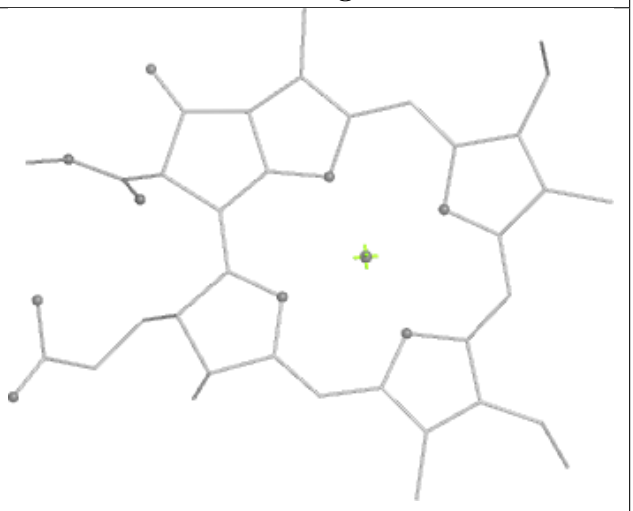
Bond lengths



Bond angles

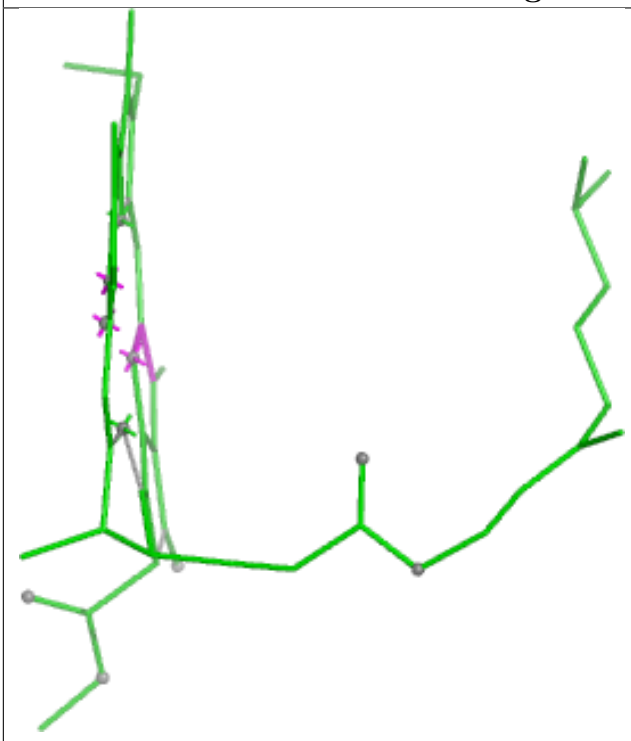


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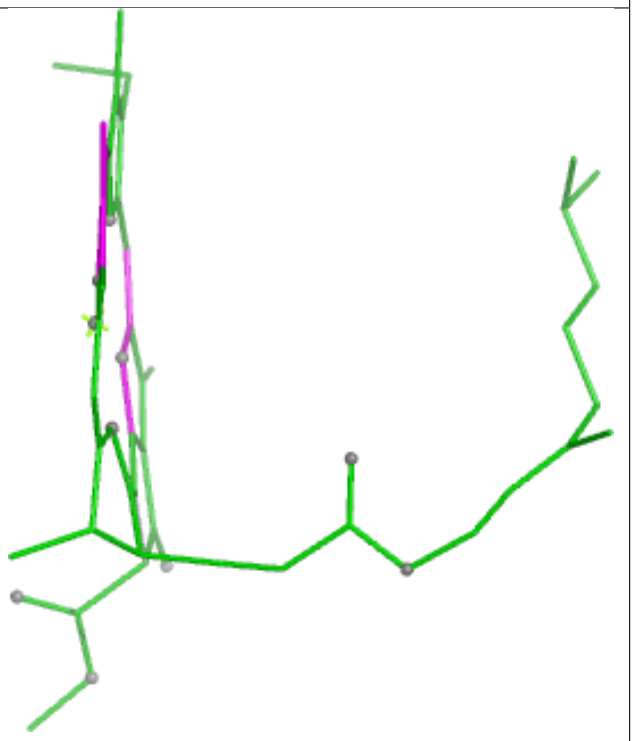


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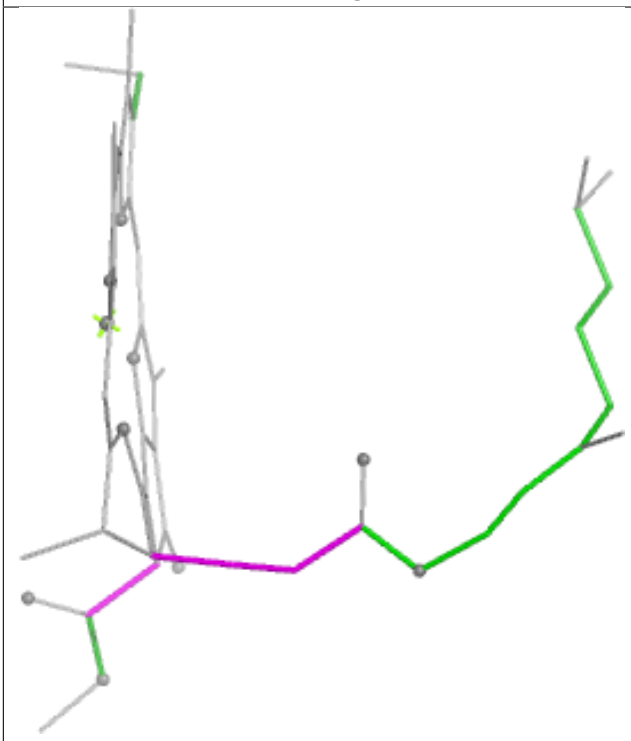
Ligand CLA B 812



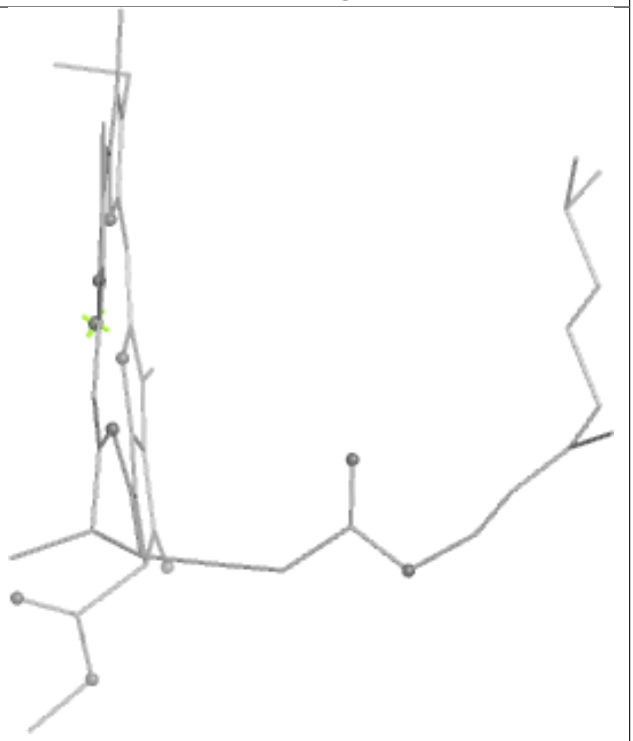
Bond lengths



Bond angles

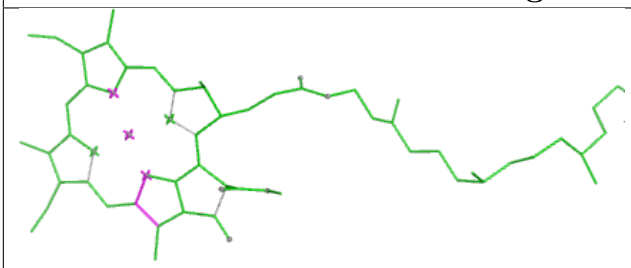


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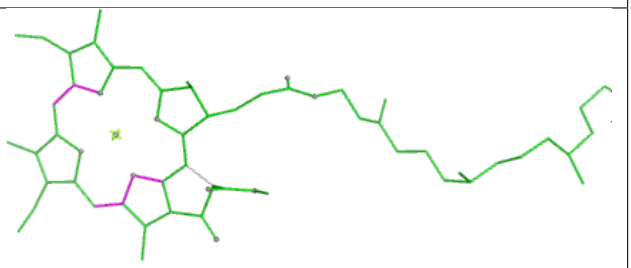


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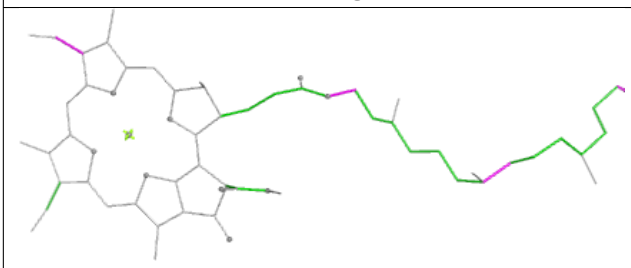
Ligand CLA F 201



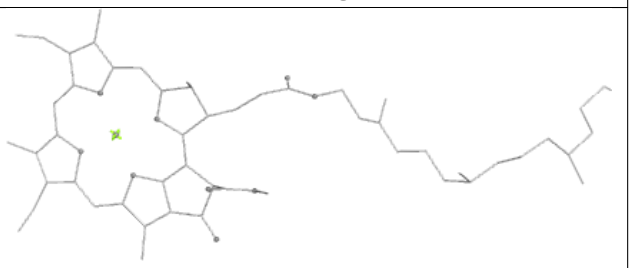
Bond lengths



Bond angles

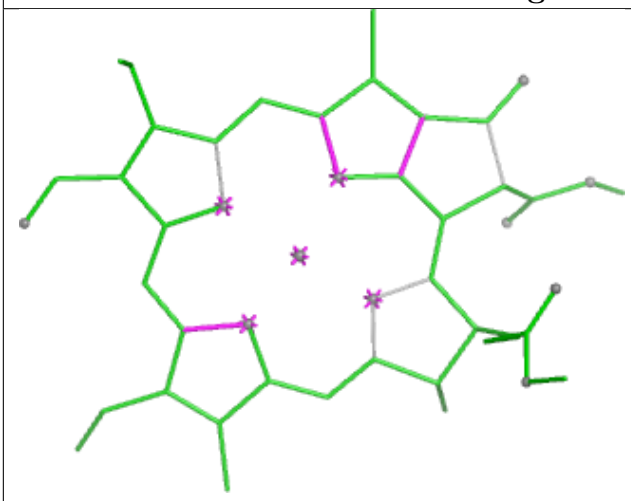


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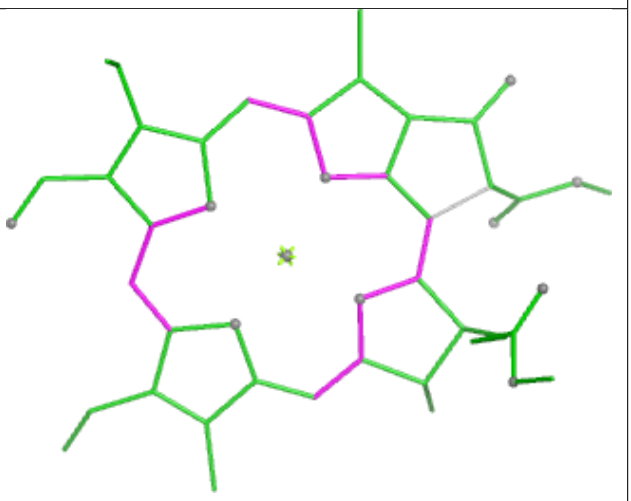


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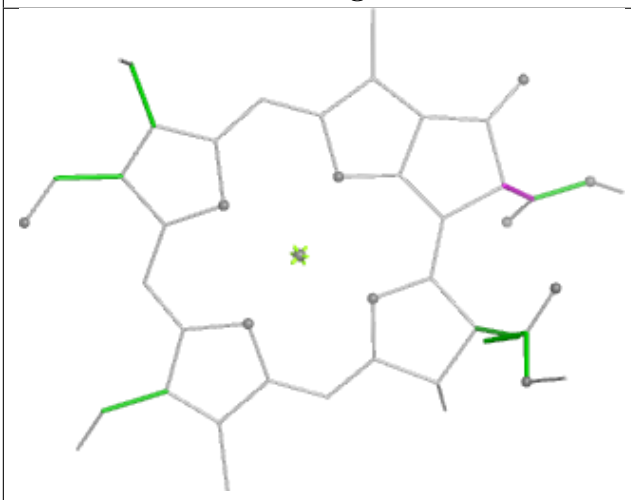
Ligand CHL 3 306



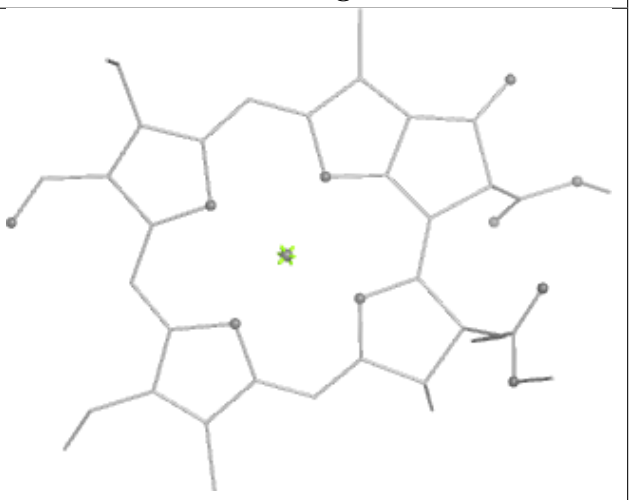
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Bond angles

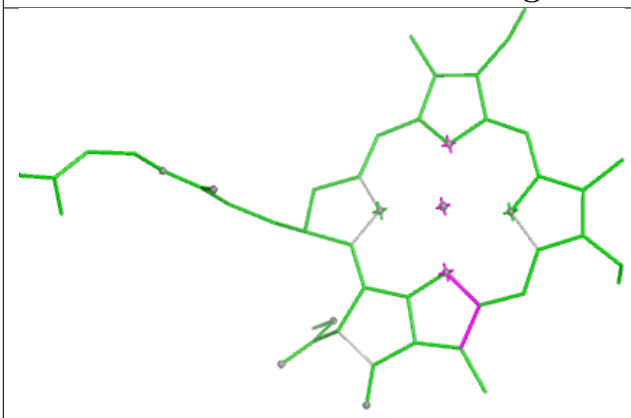


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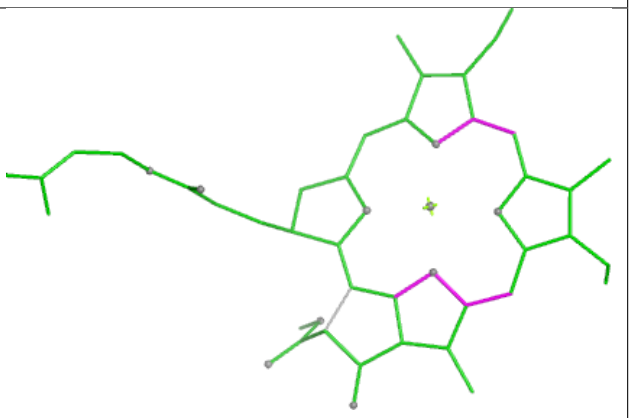


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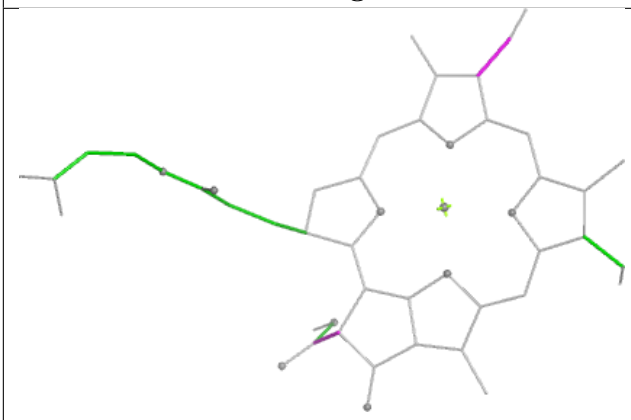
Ligand CLA G 104



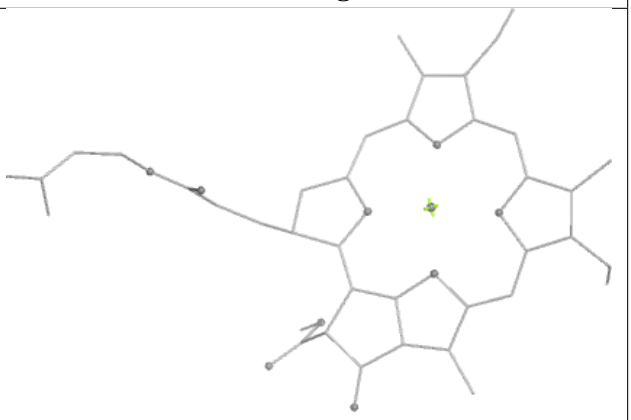
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Bond angles

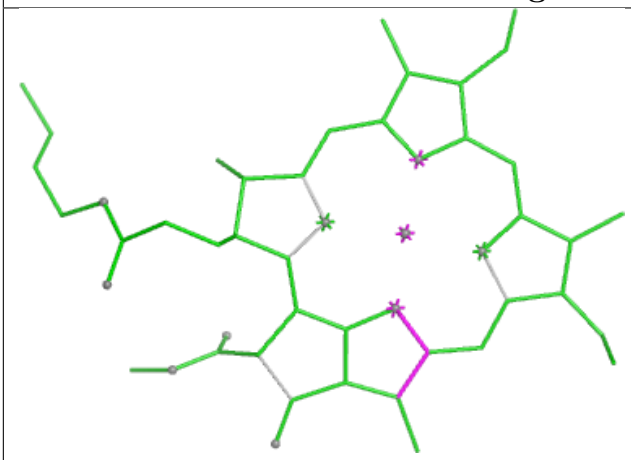


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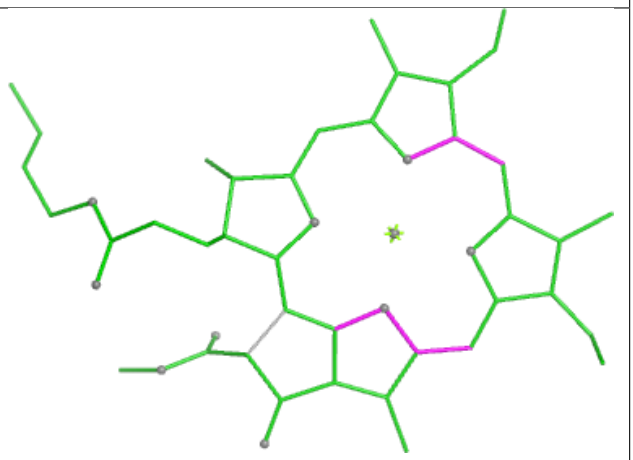


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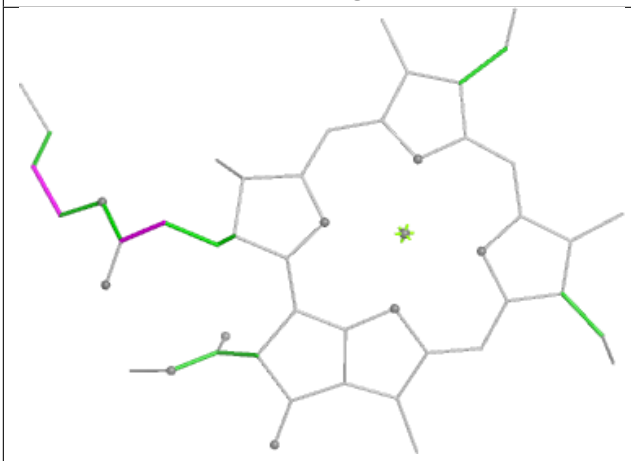
Ligand CLA 2 303



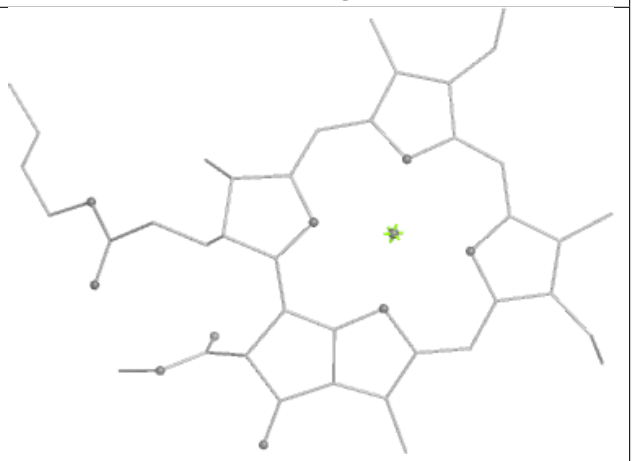
Bond lengths



Bond angles

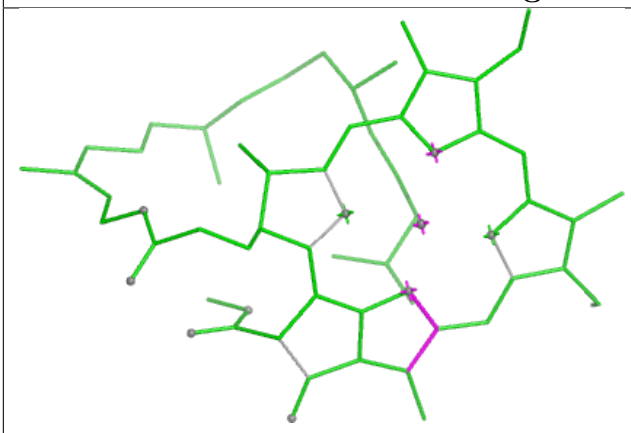


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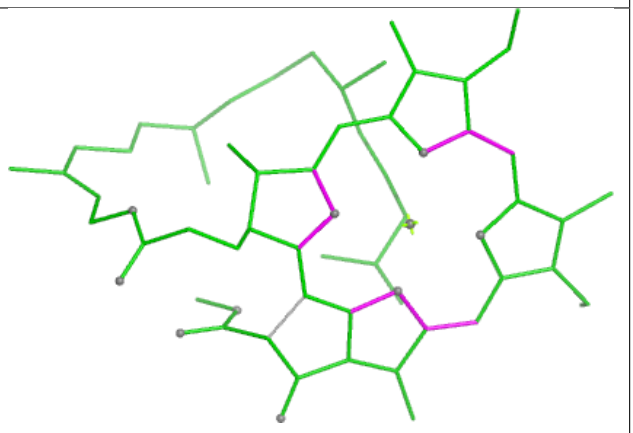


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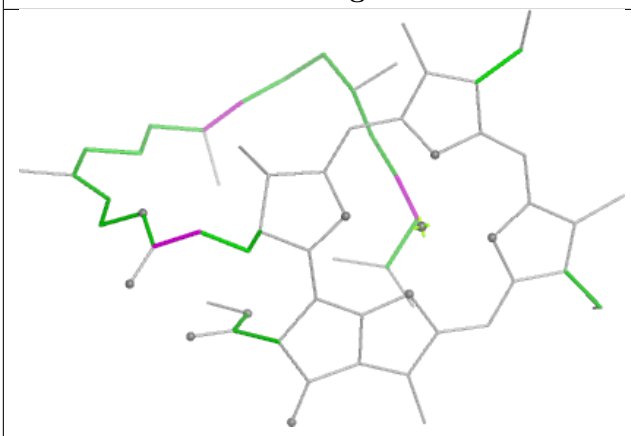
Ligand CLA A 805



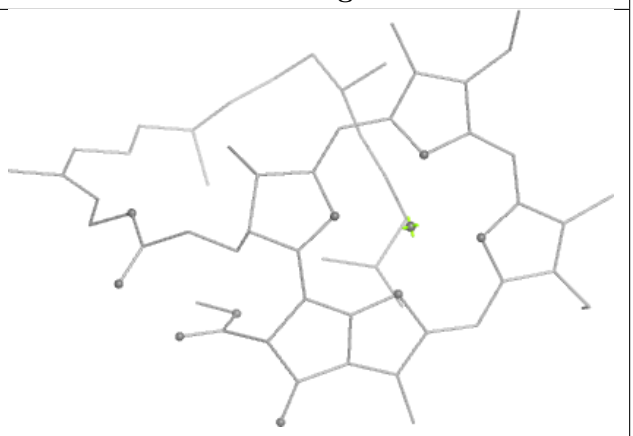
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Bond angles

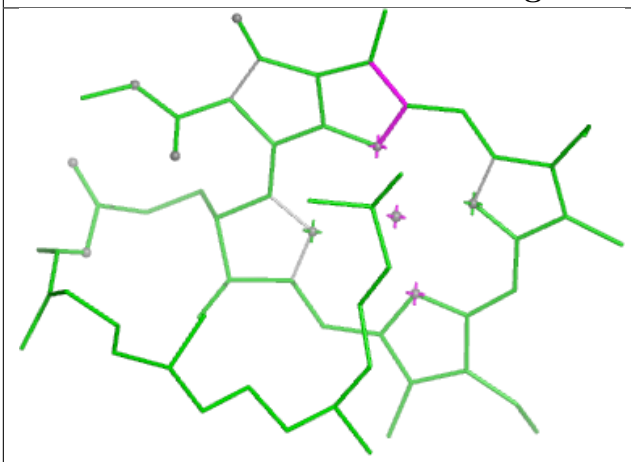


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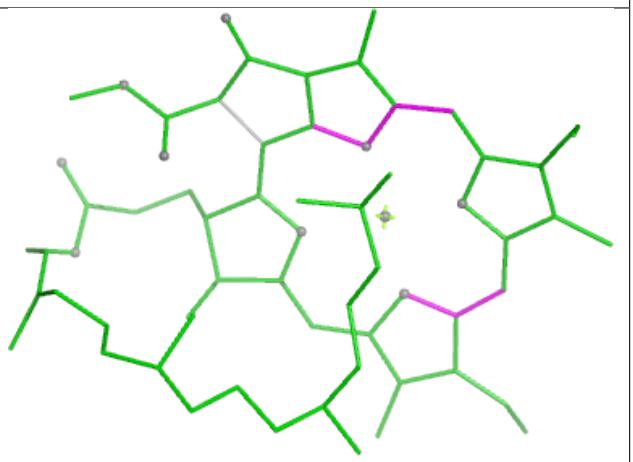


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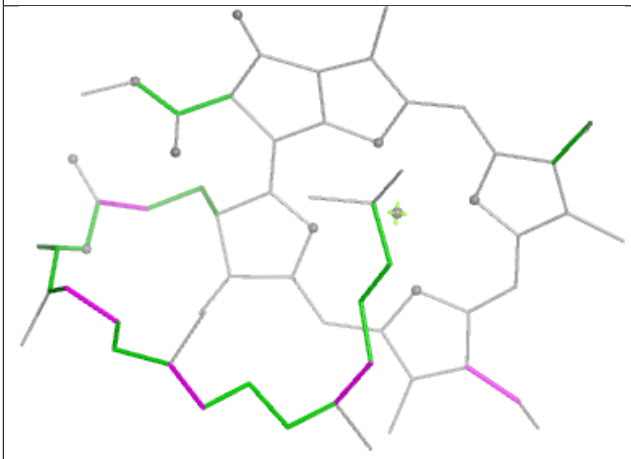
Ligand CLA B 807



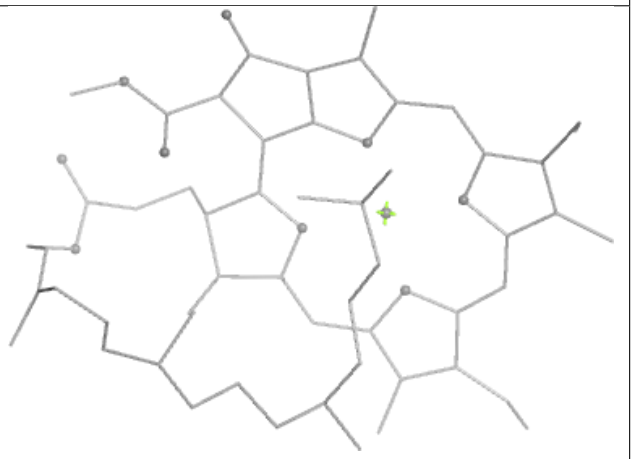
Bond lengths



Bond angles

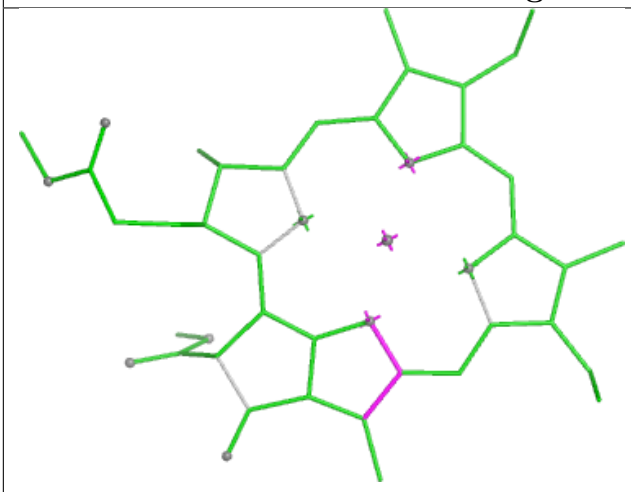


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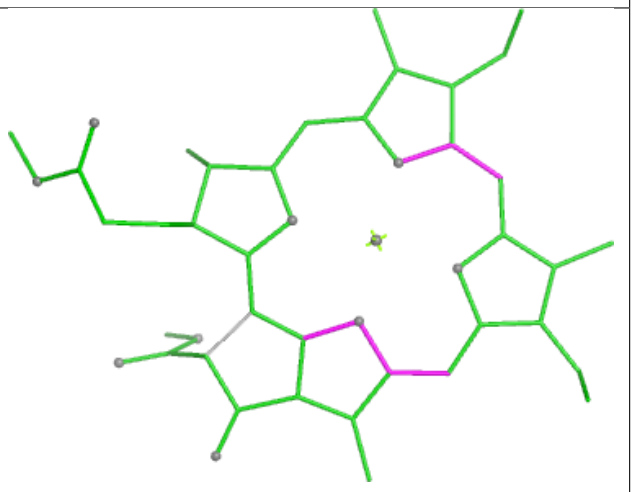


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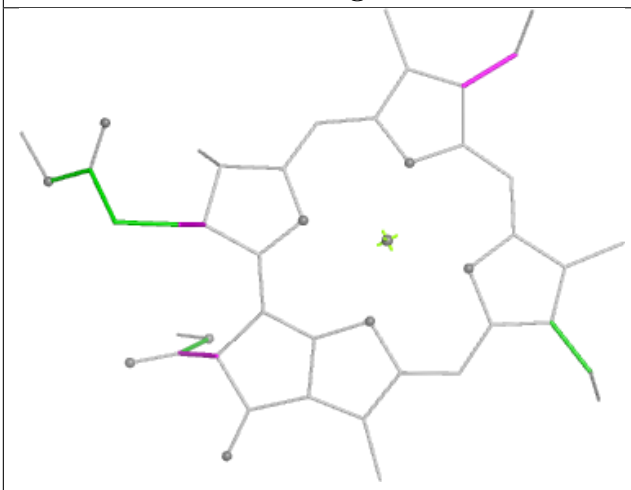
Ligand CLA F 204



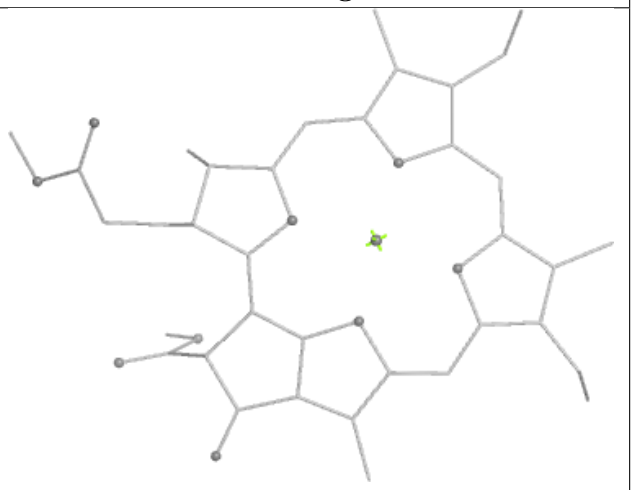
Bond lengths



Bond angles

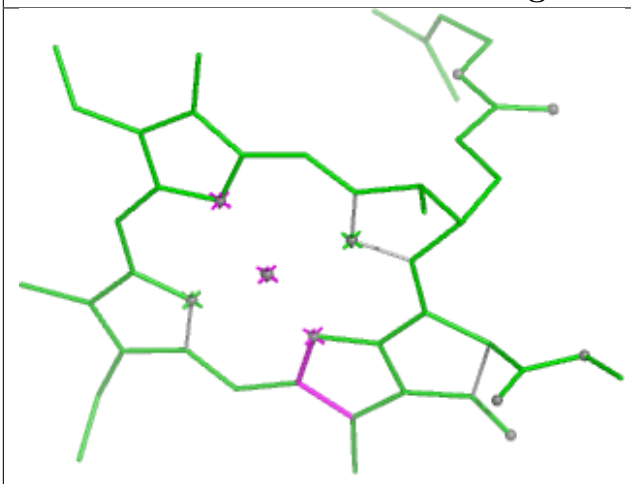


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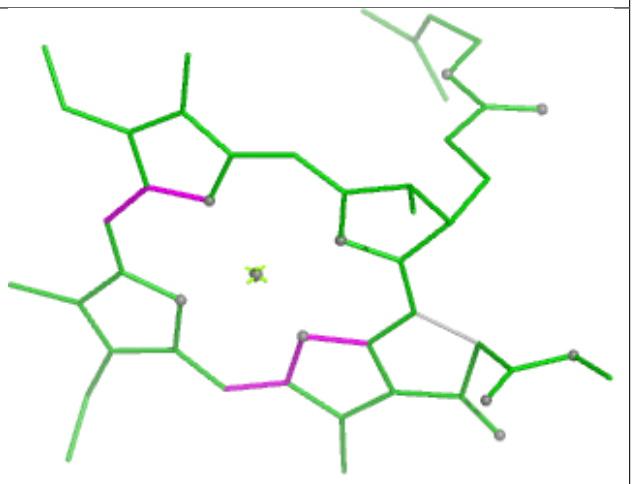


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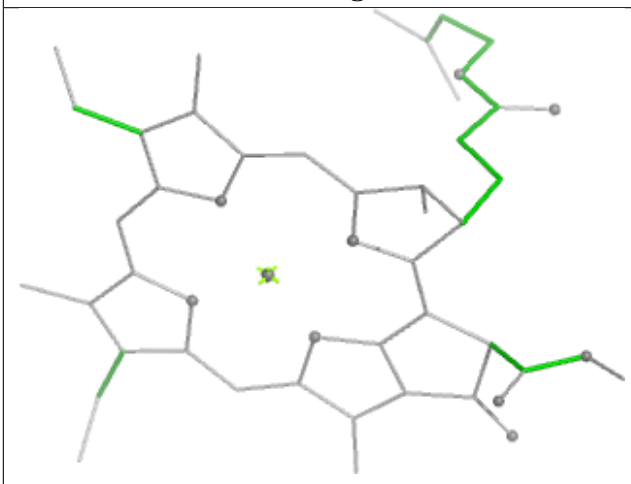
Ligand CLA 4 304



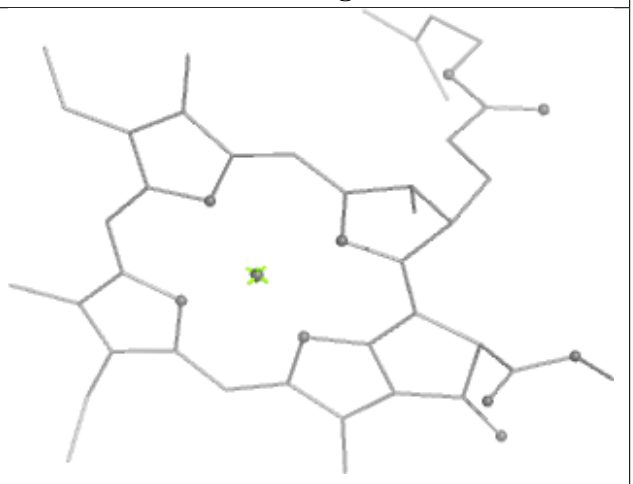
Bond lengths



Bond angles

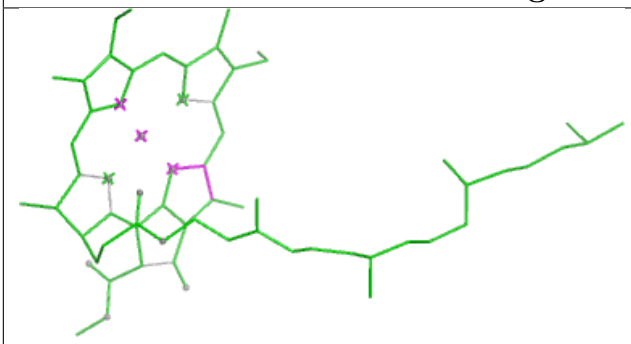


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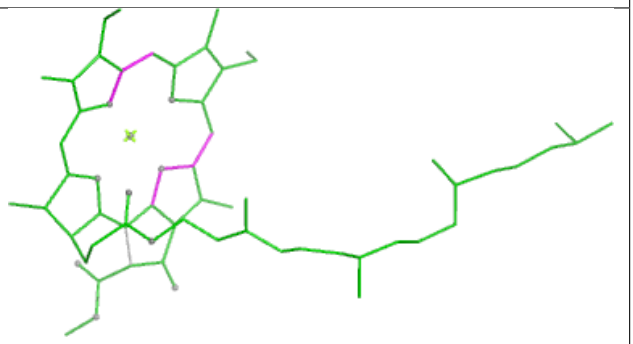


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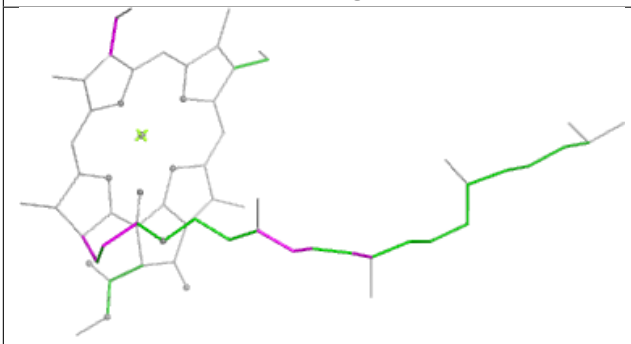
Ligand CLA 1 208



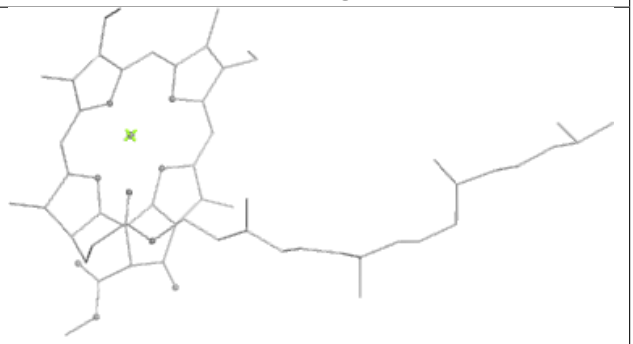
Bond lengths



Bond angles

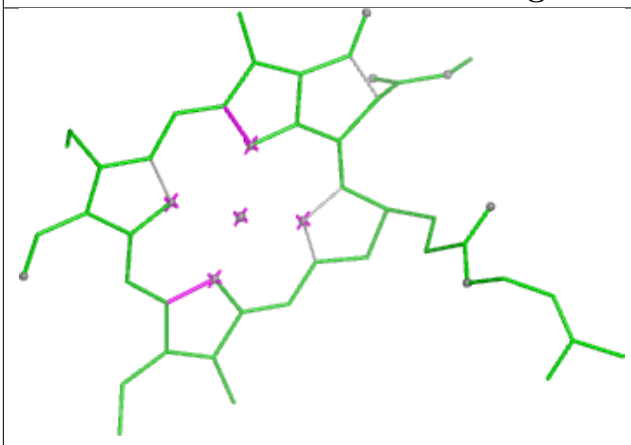


Torsions

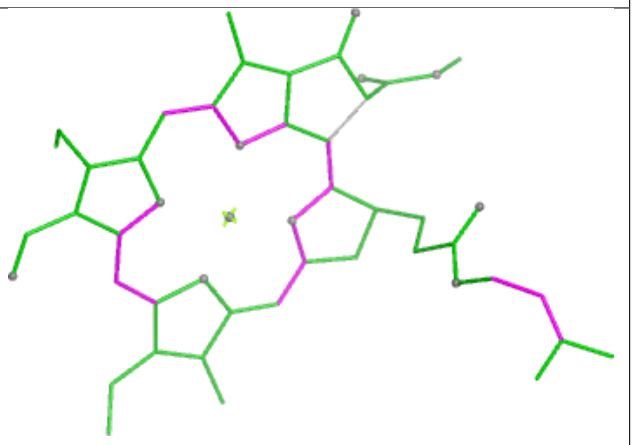


Rings

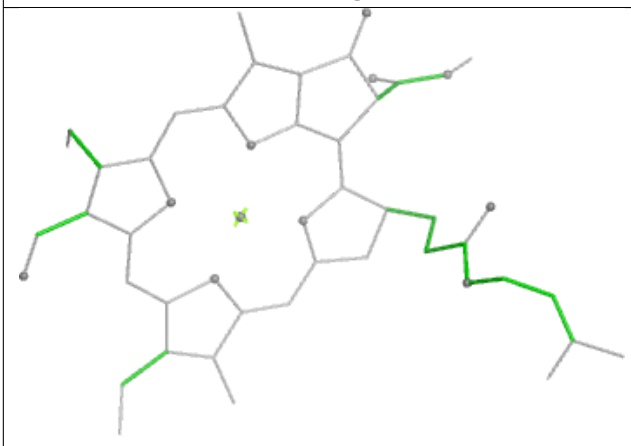
Ligand CHL 4 307



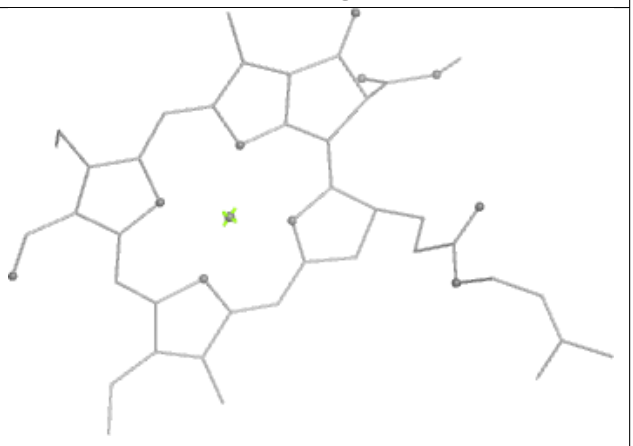
Bond lengths



Bond angles

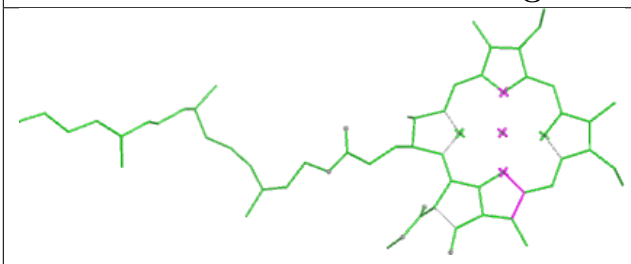


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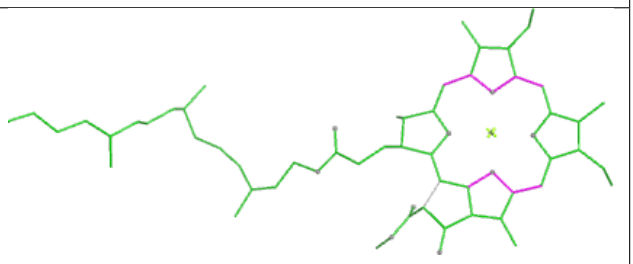


Rings

Ligand CLA A 832



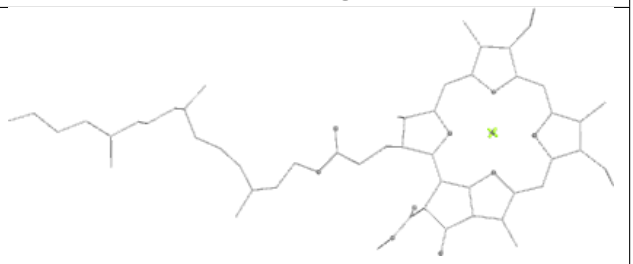
Bond lengths



Bond angles

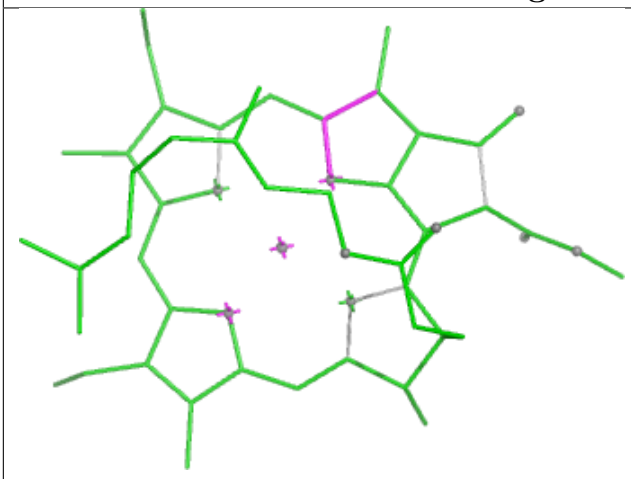


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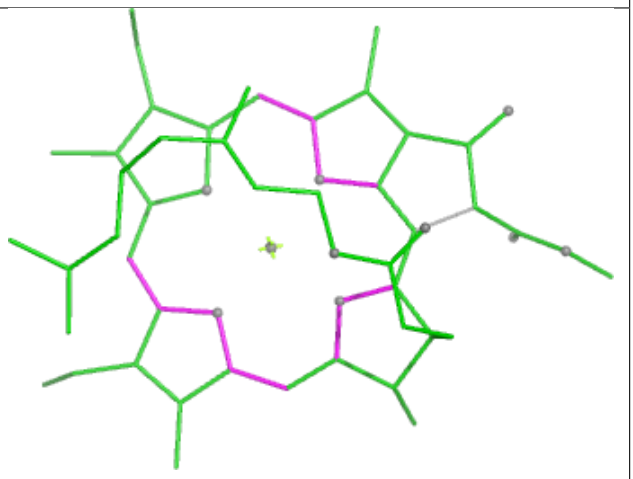


Rings

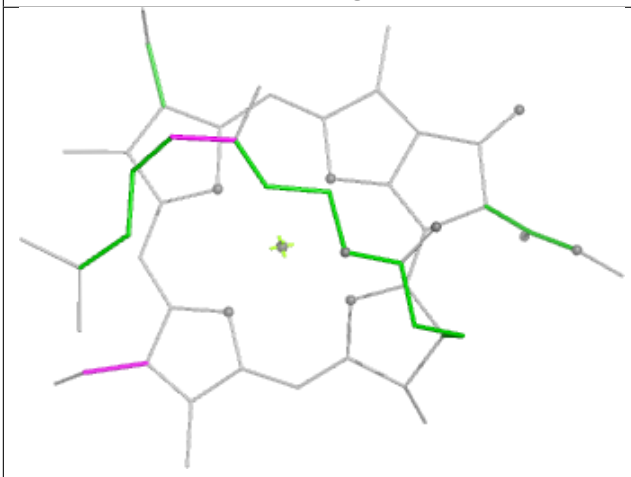
Ligand CLA 3 311



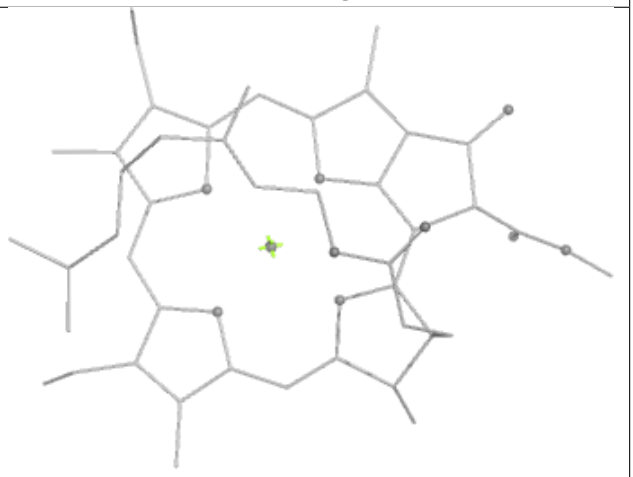
Bond lengths



Bond angles

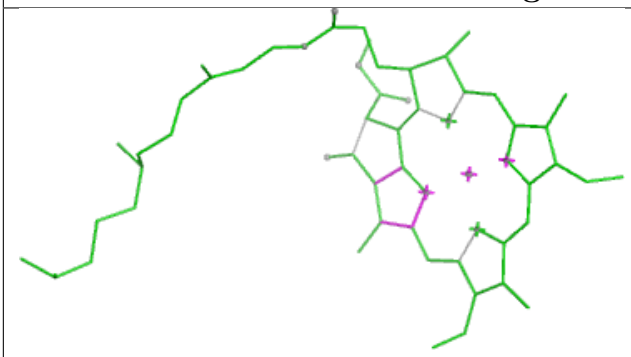


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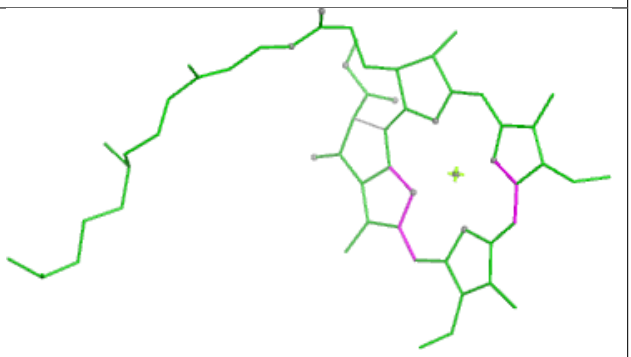


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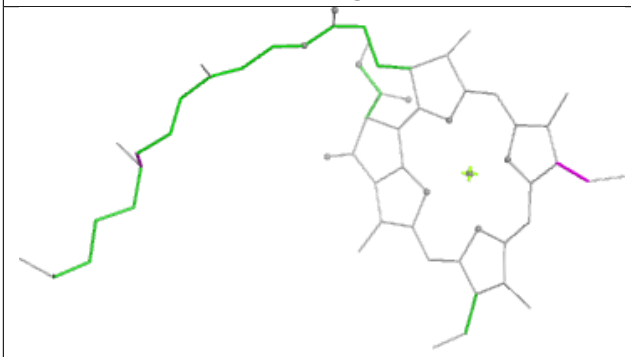
Ligand CLA K 103



Bond lengths



Bond angles

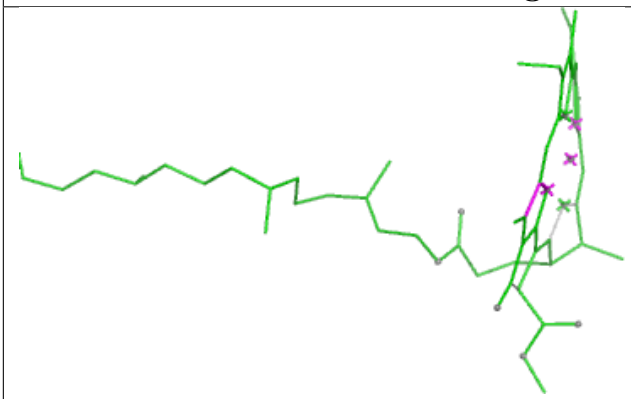


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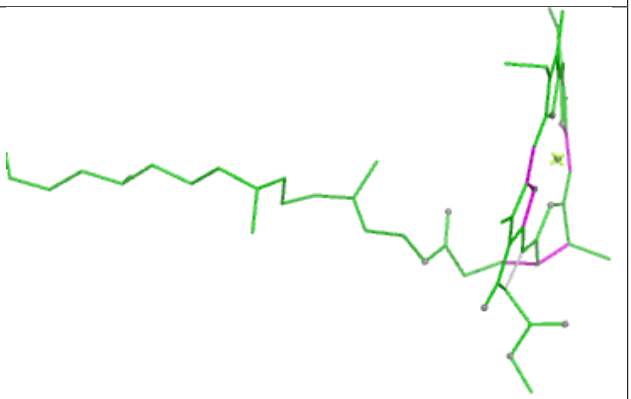


Rings

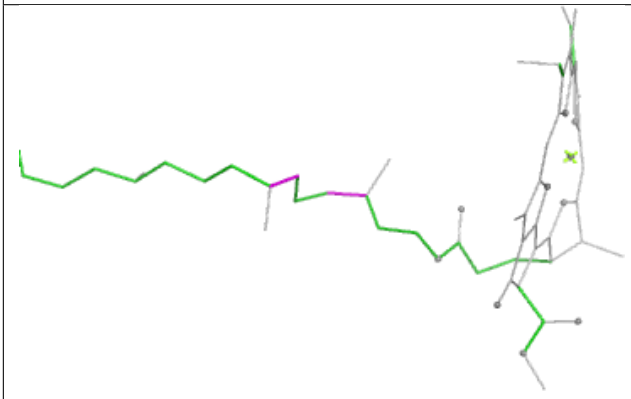
Ligand CLA A 827



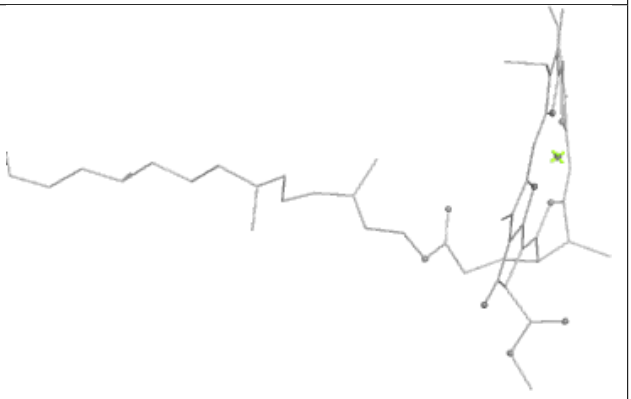
Bond lengths



Bond angles

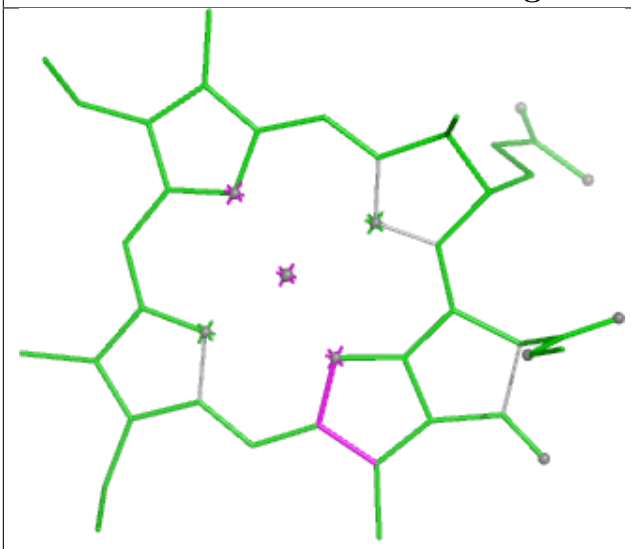


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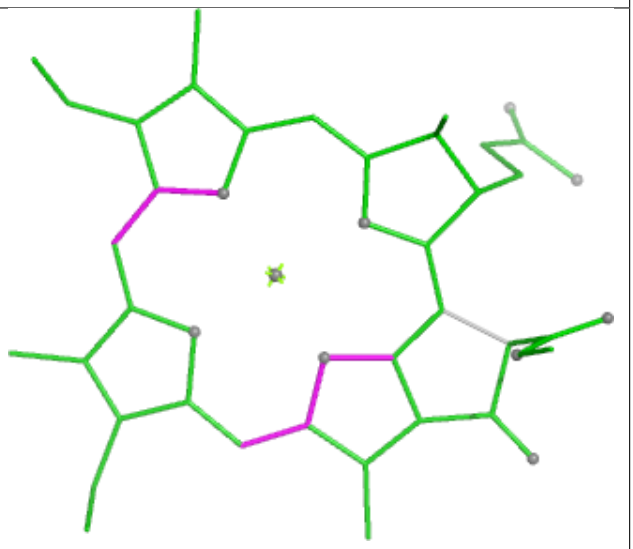


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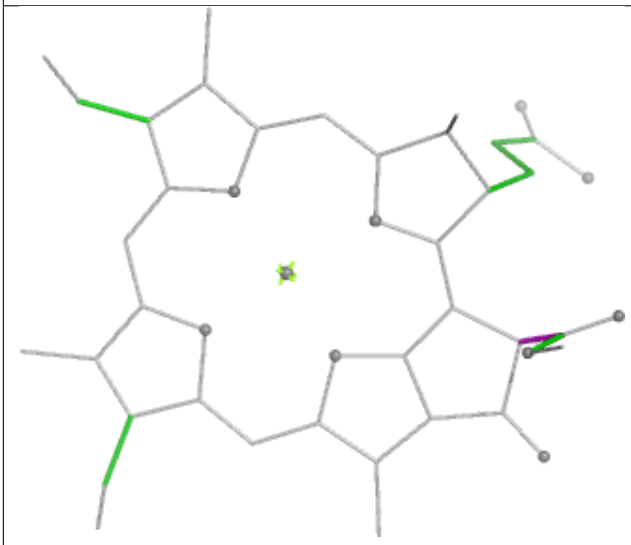
Ligand CLA A 813



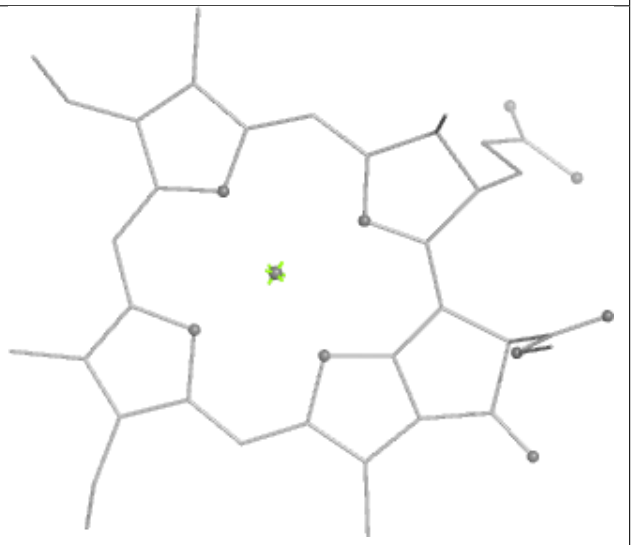
Bond lengths



Bond angles

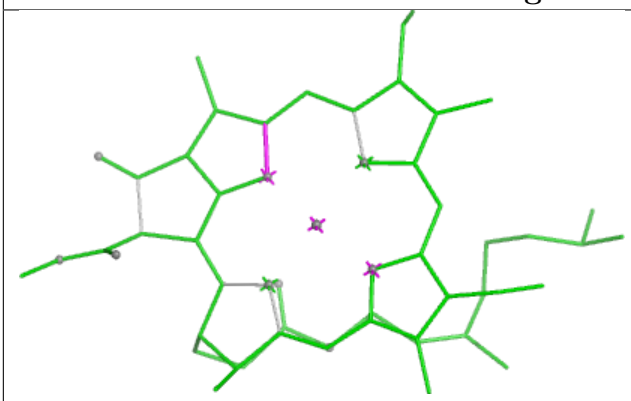


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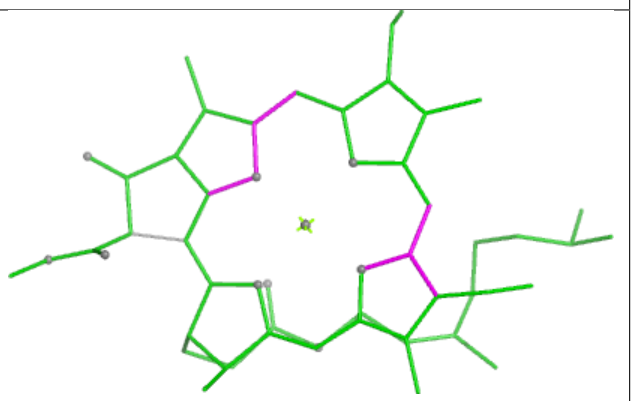


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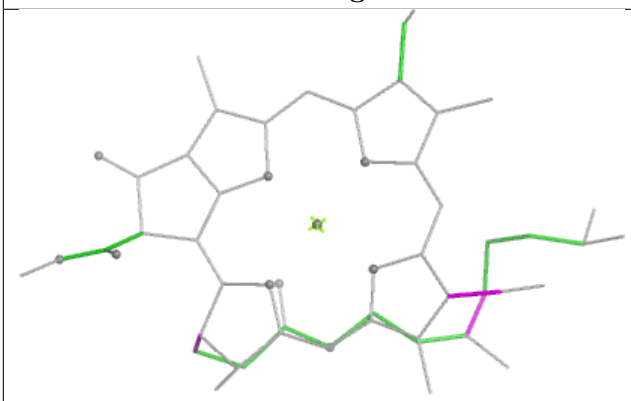
Ligand CLA B 813



Bond lengths



Bond angles

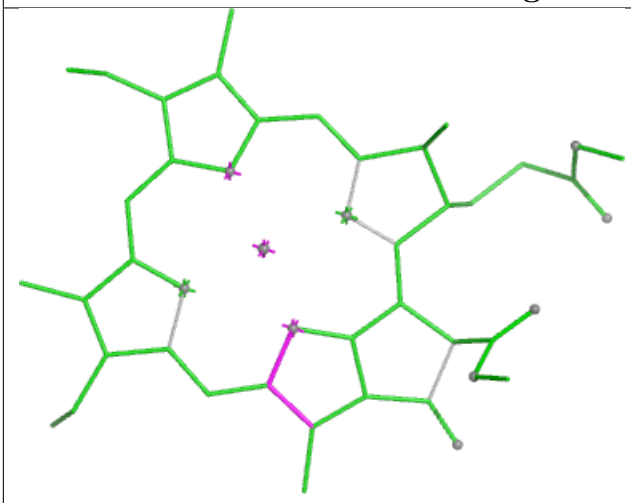


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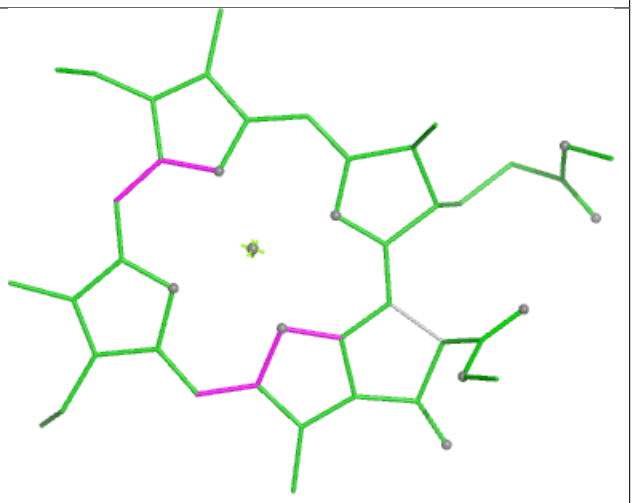


Rings

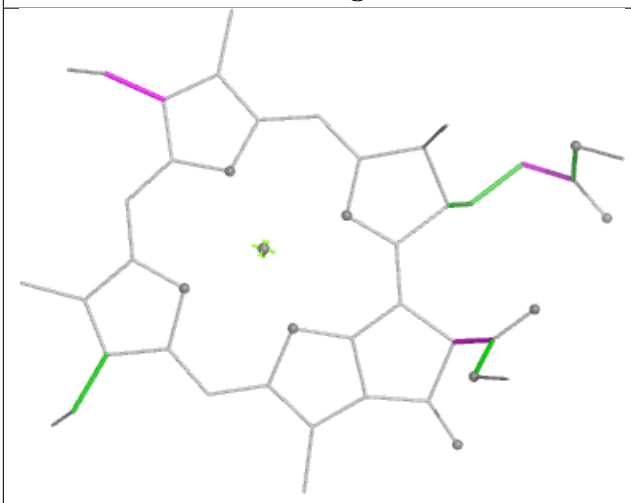
Ligand CLA K 102



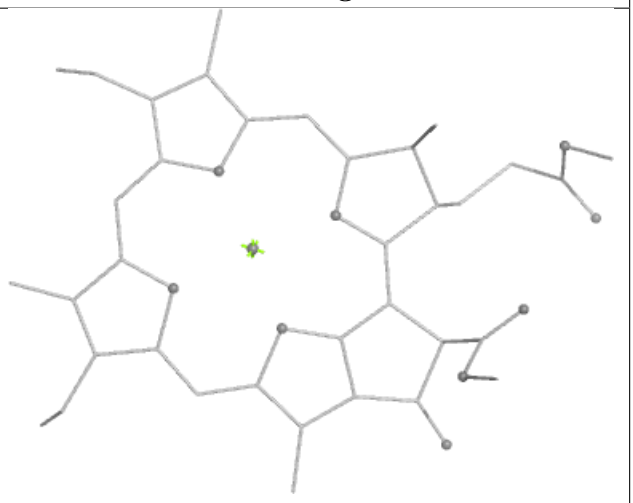
Bond lengths



Bond angles

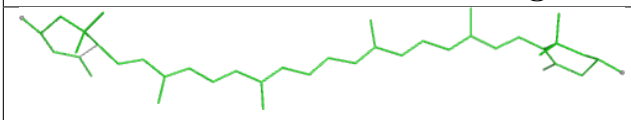


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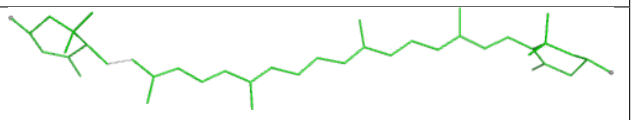


Rings

Ligand LUT 1 219



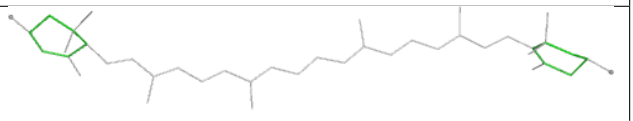
Bond lengths



Bond angles

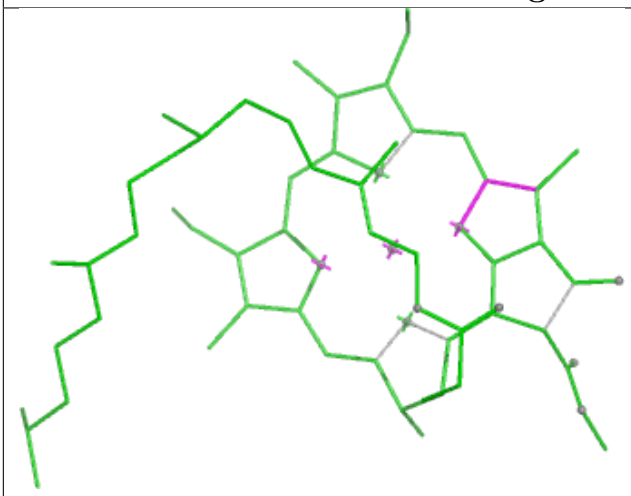


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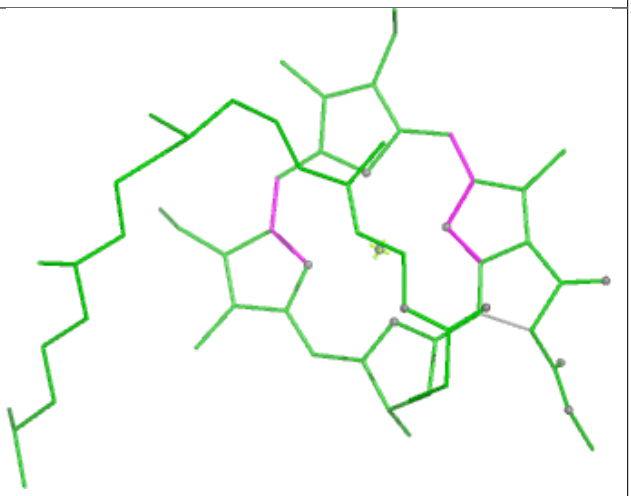


Rings

Ligand CLA 4 312



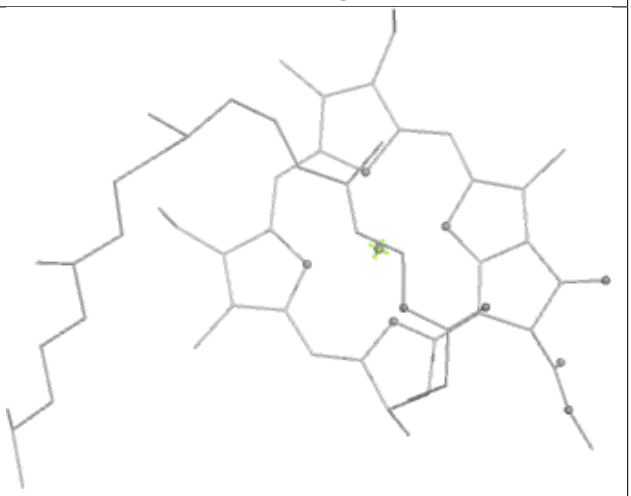
Bond lengths



Bond angles

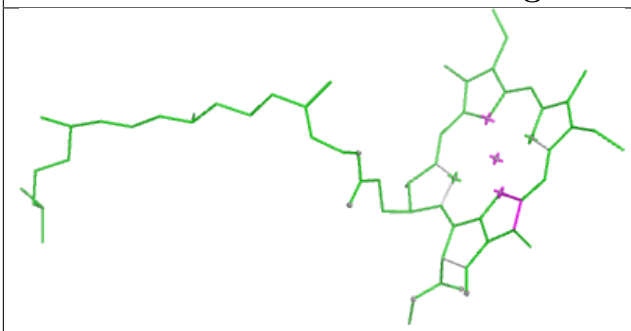


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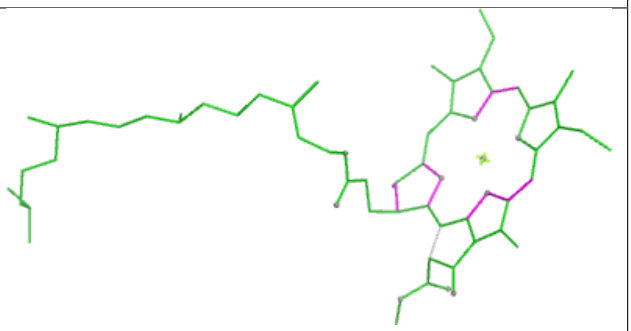


Rings

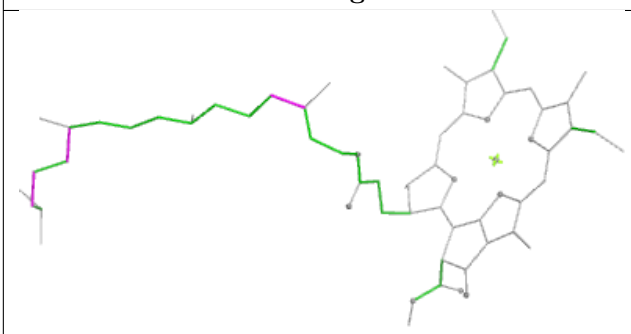
Ligand CLA A 820



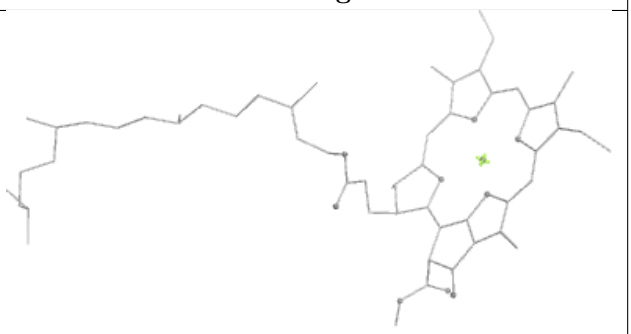
Bond lengths



Bond angles

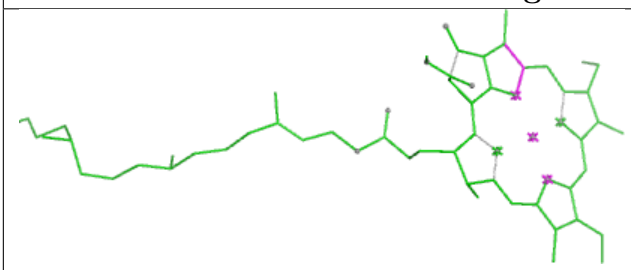


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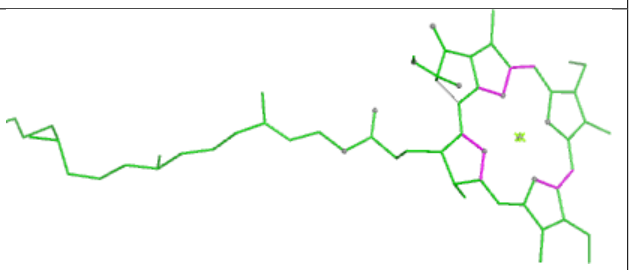


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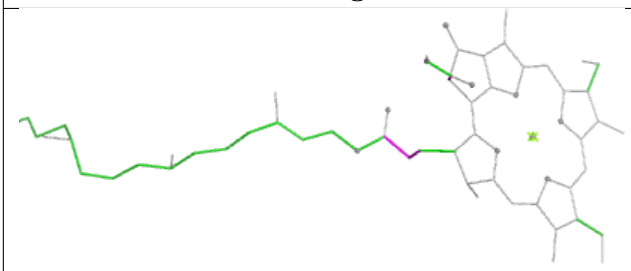
Ligand CLA A 808



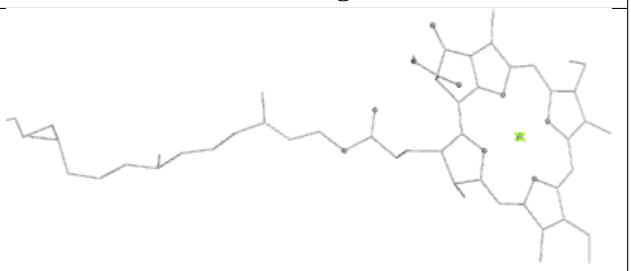
Bond lengths



Bond angles

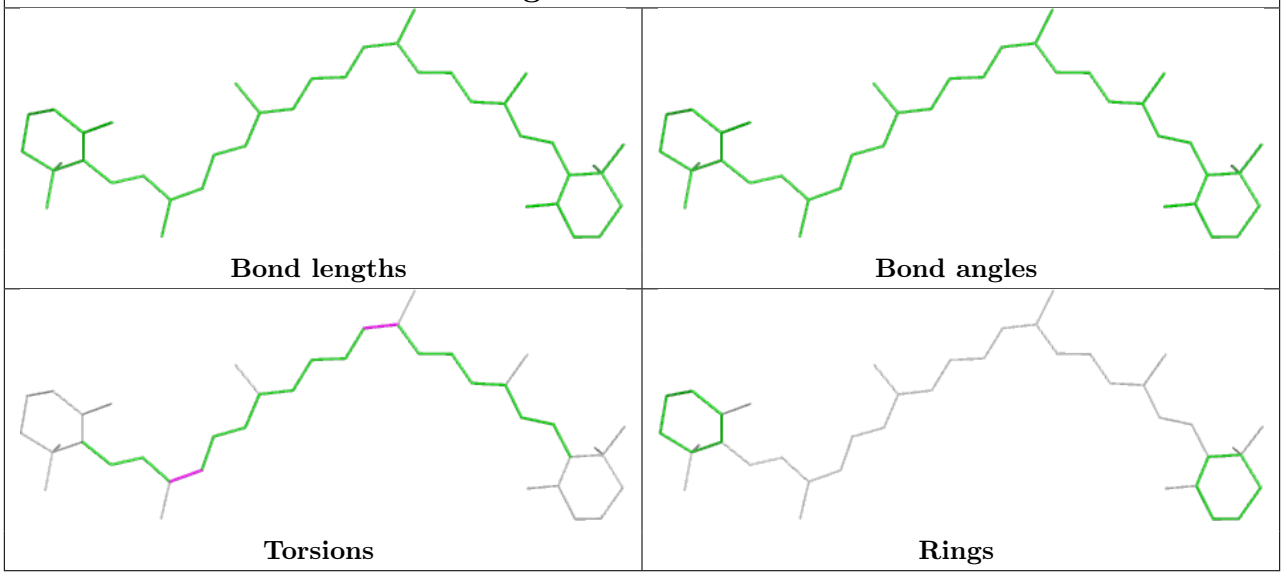


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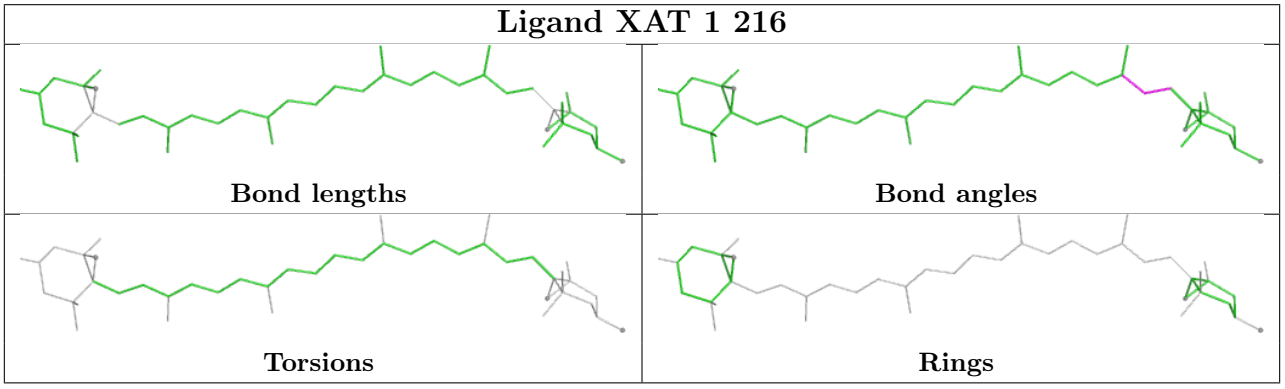


Rings

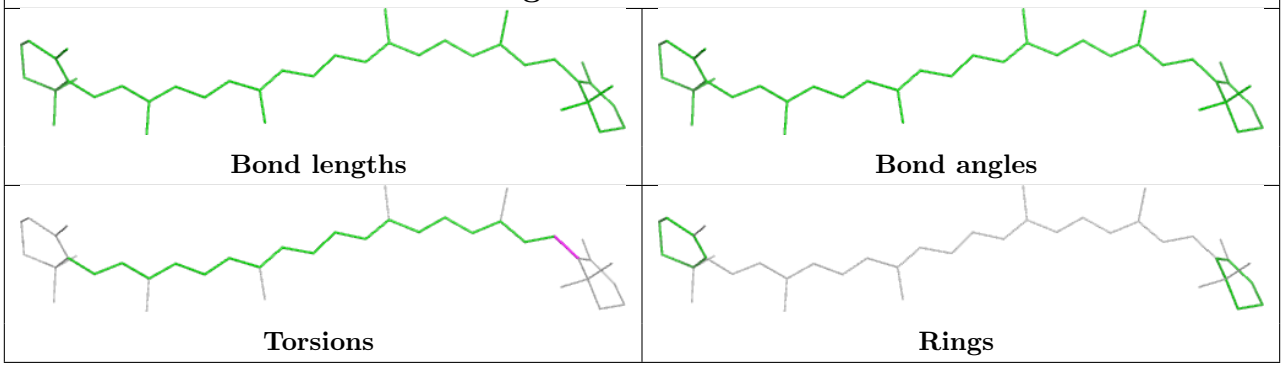
Ligand BCR A 848



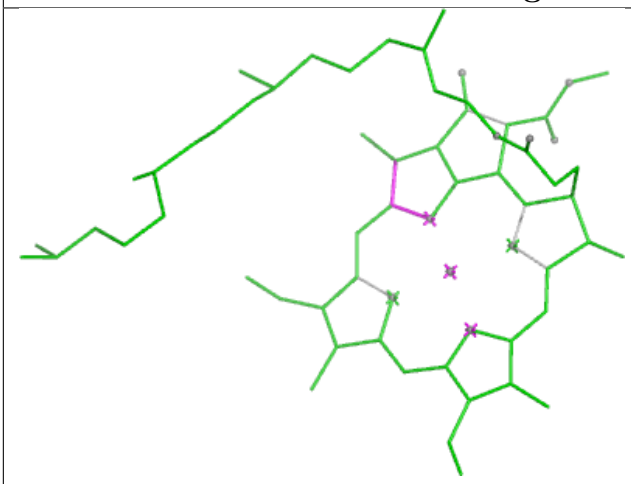
Ligand XAT 1 216



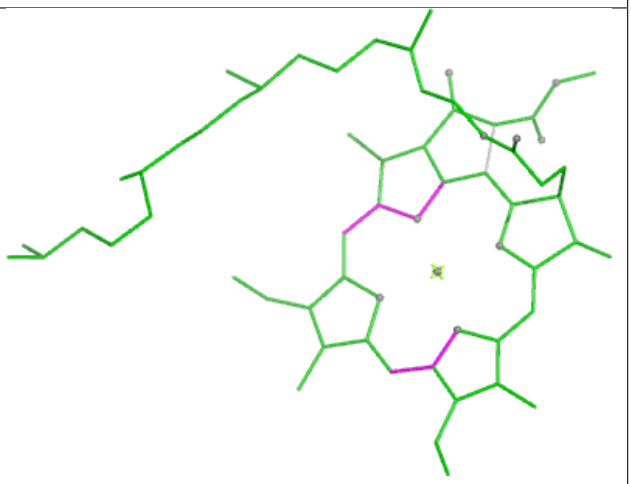
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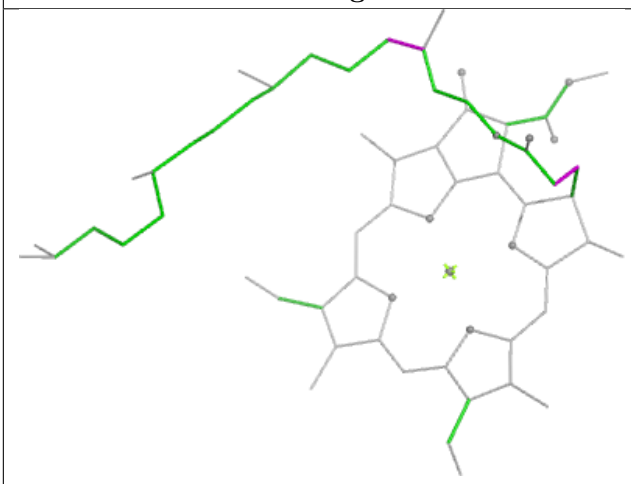
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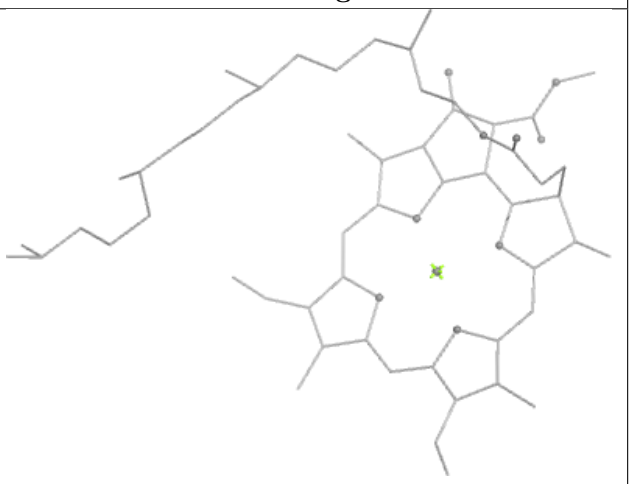
Bond lengths



Bond angles

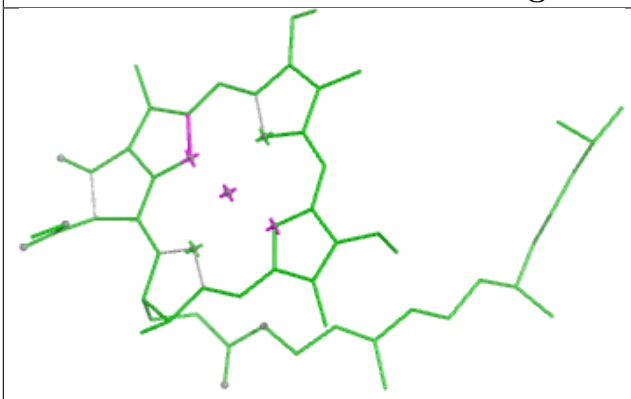


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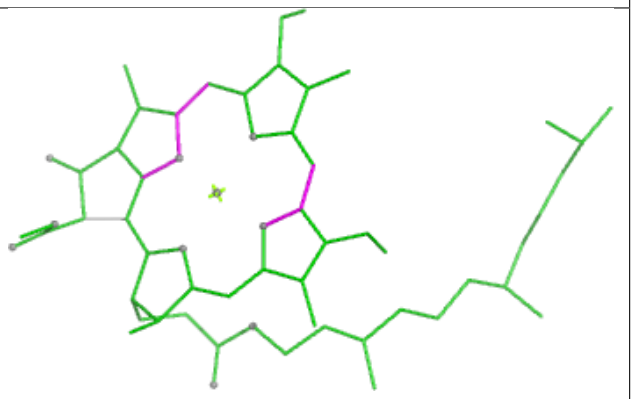


Rings

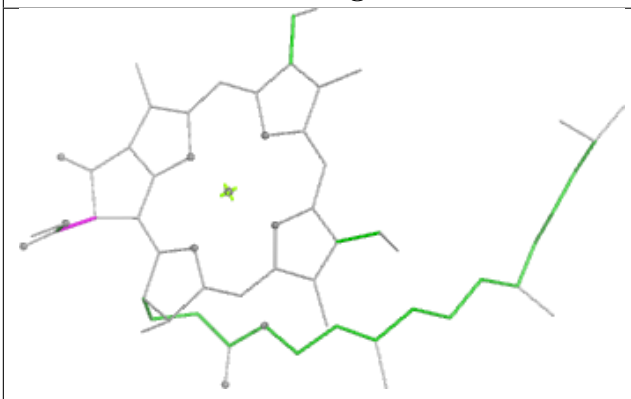
Ligand CLA 3 301



Bond lengths



Bond angles

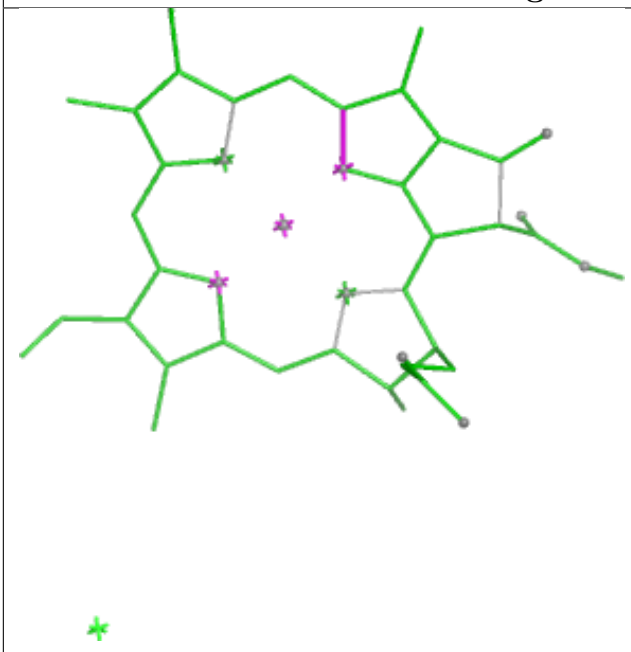


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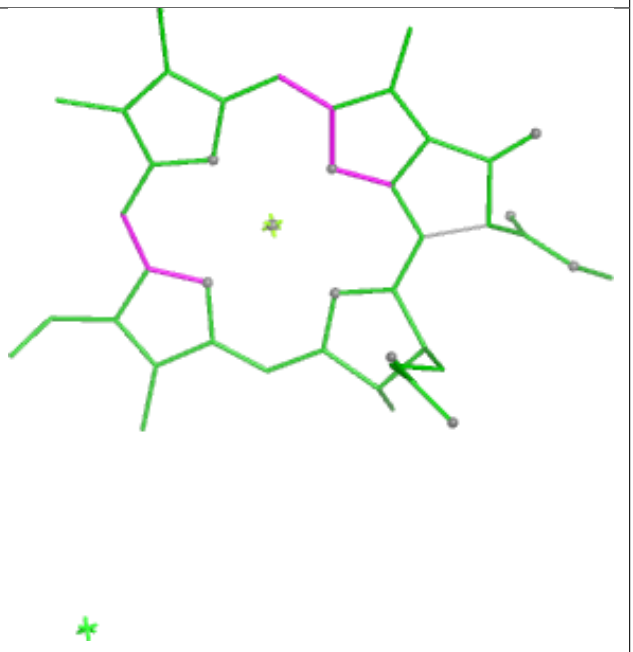


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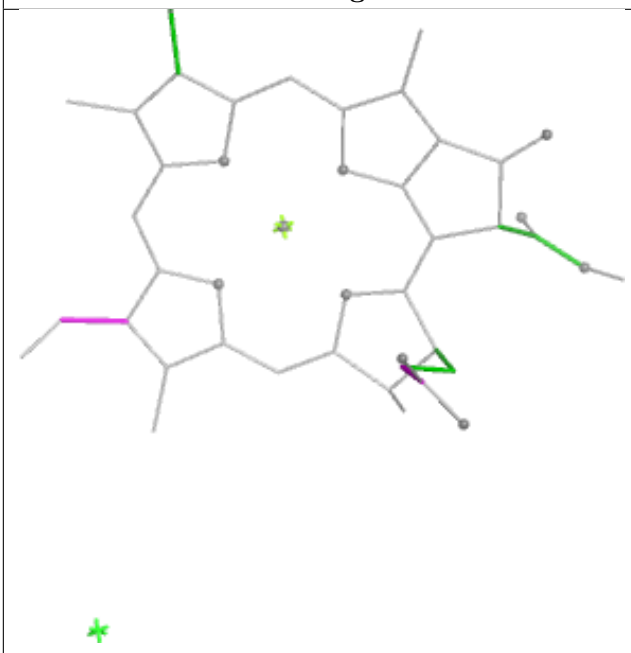
Ligand CLA L 302



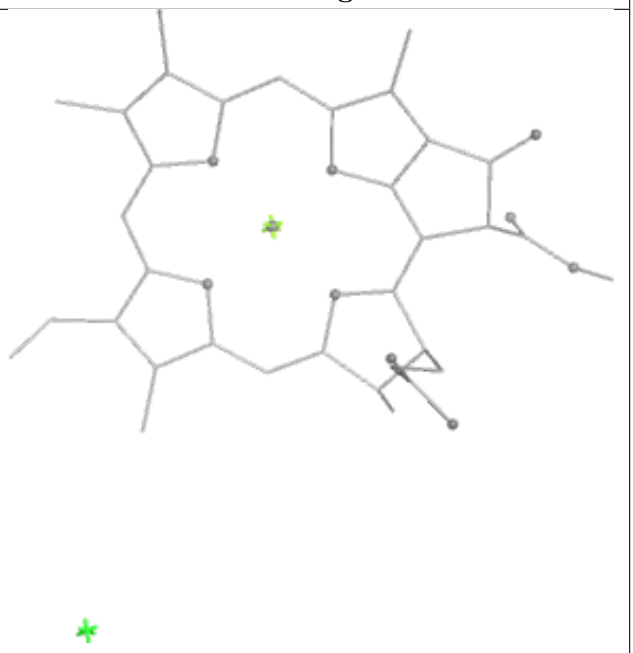
Bond lengths



Bond angles

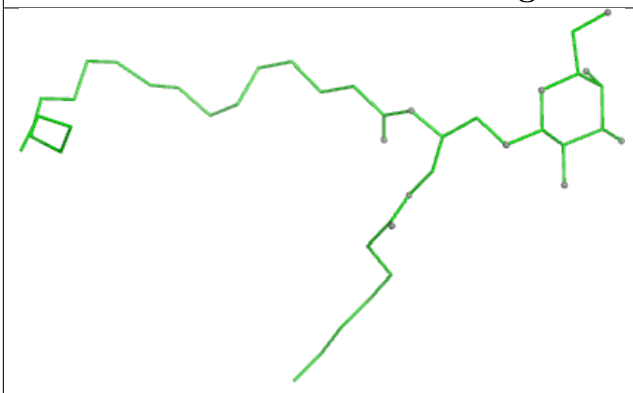


Torsions

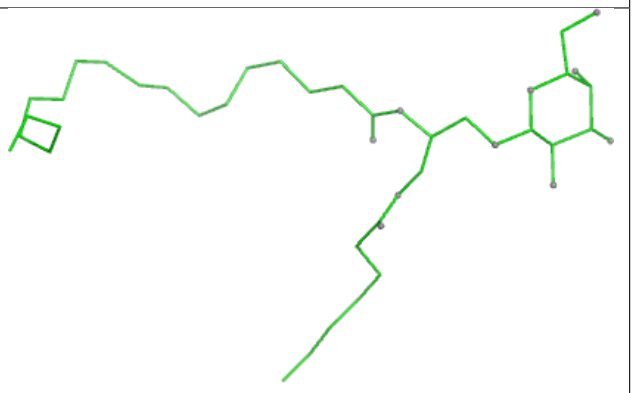


Rings

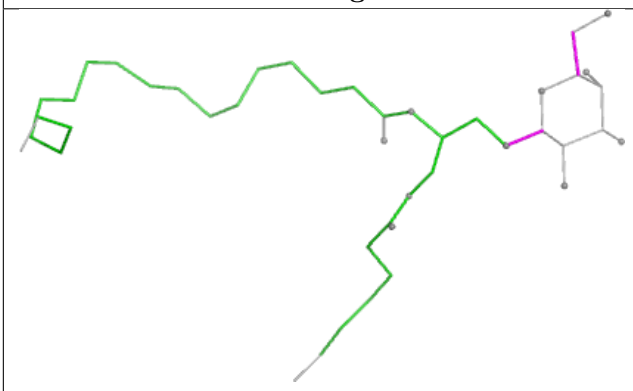
Ligand LMG G 101



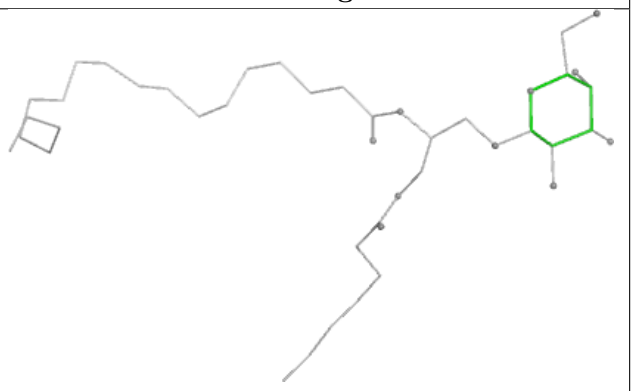
Bond lengths



Bond angles

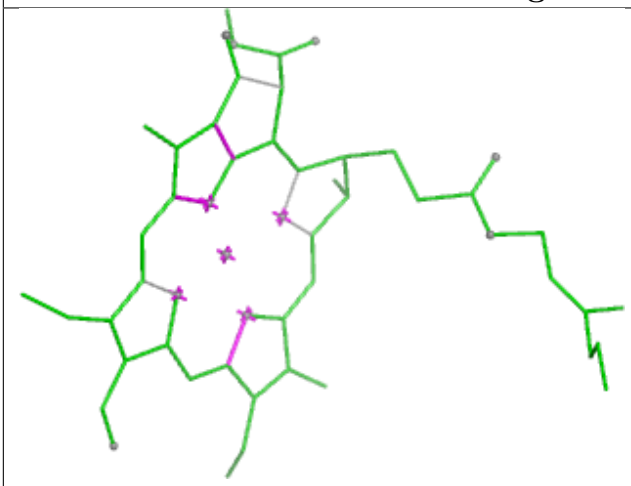


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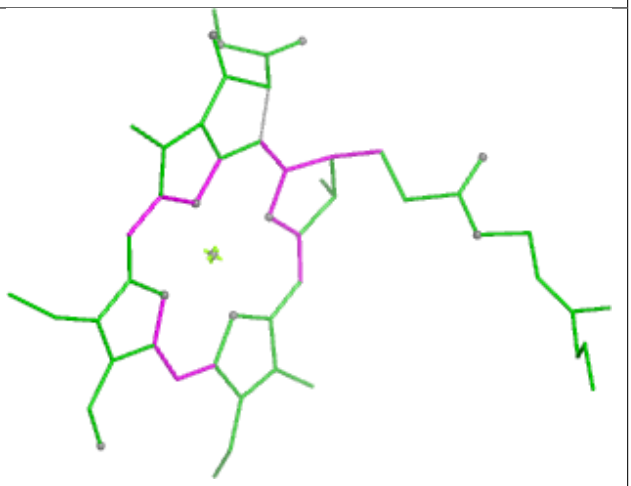


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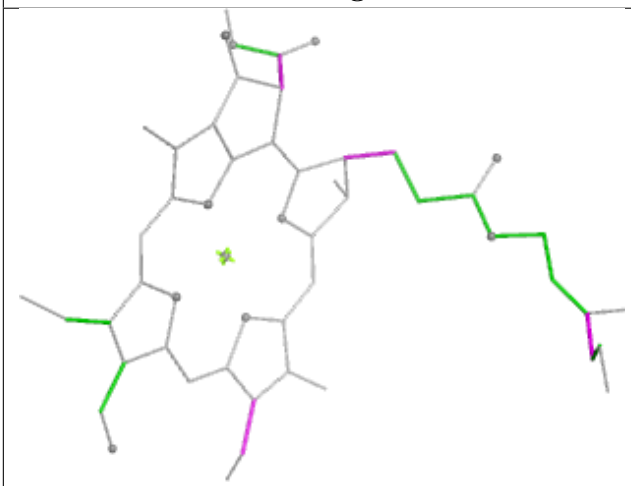
Ligand CHL 2 301



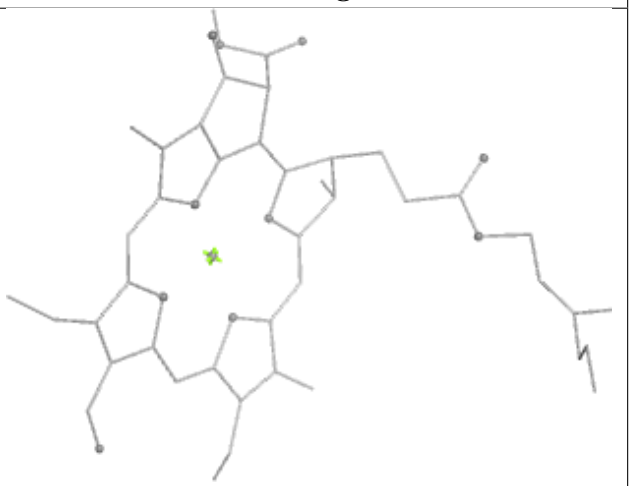
Bond lengths



Bond angles

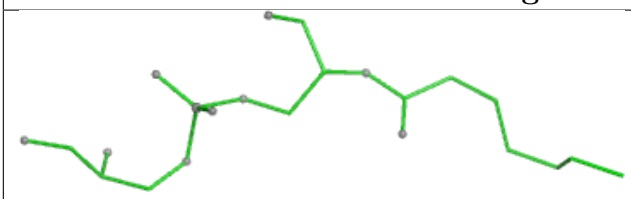


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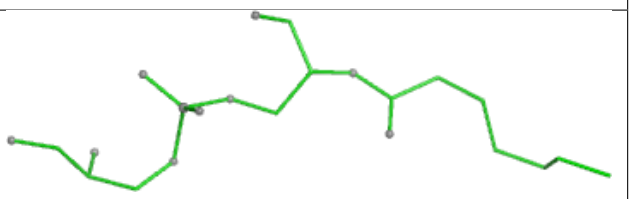


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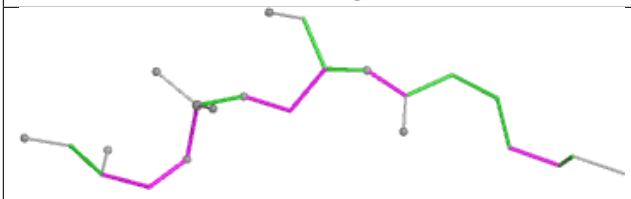
Ligand PGT G 107



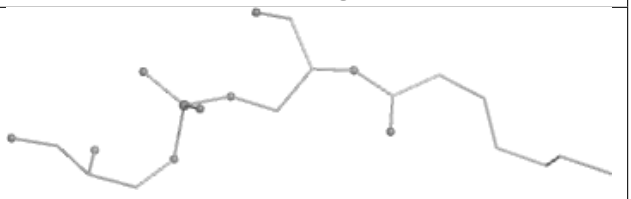
Bond lengths



Bond angles

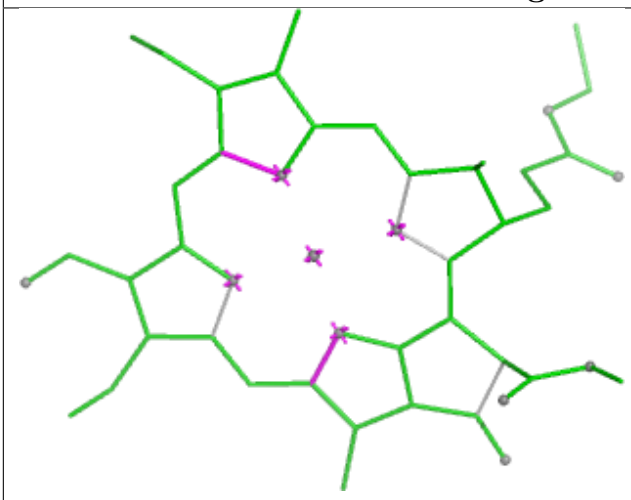


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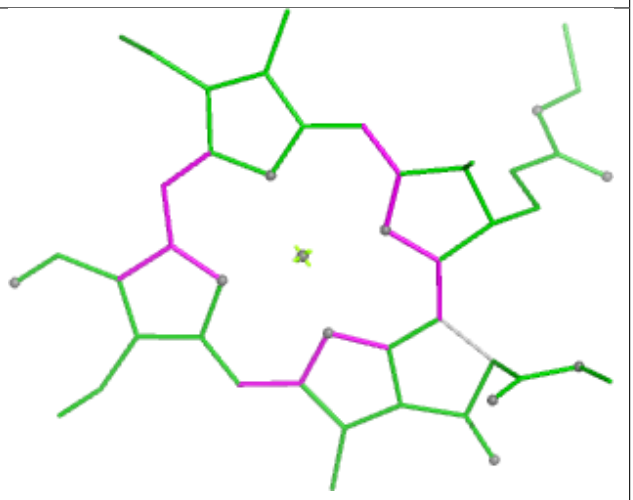


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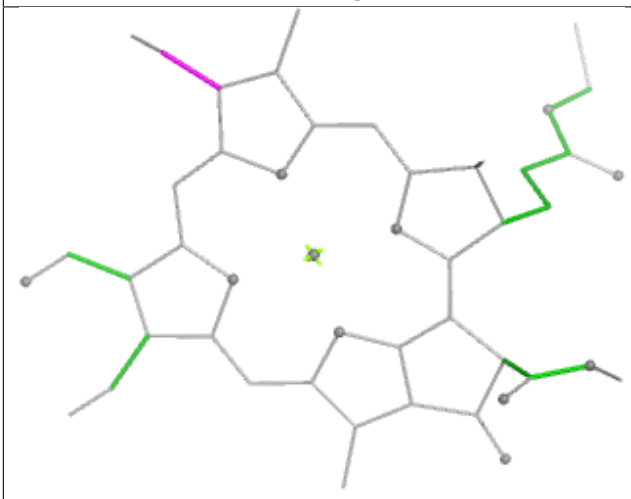
Ligand CHL 2 306



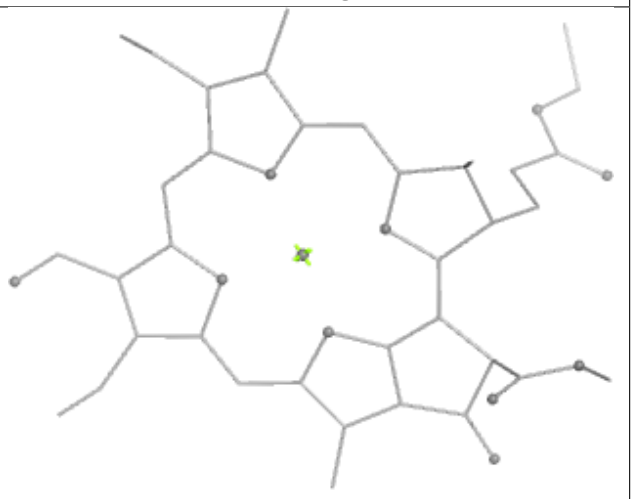
Bond lengths



Bond angles

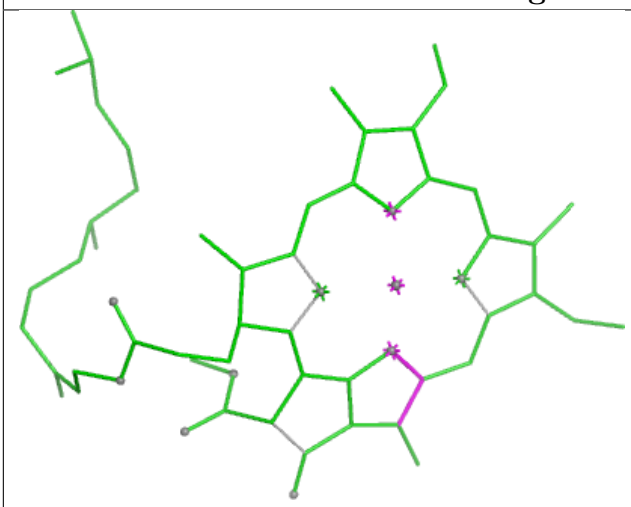


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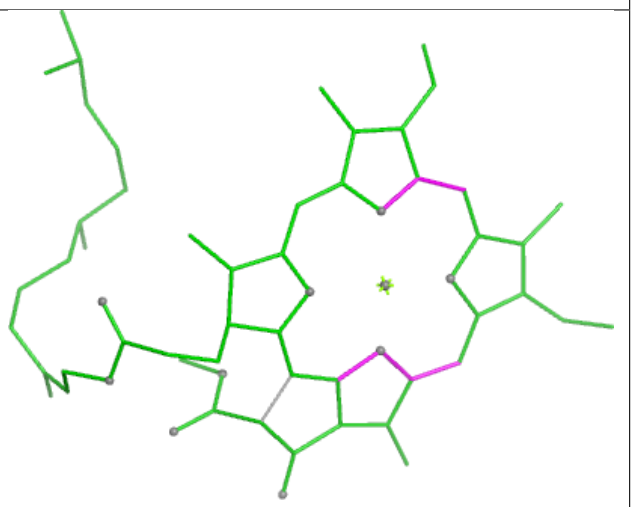


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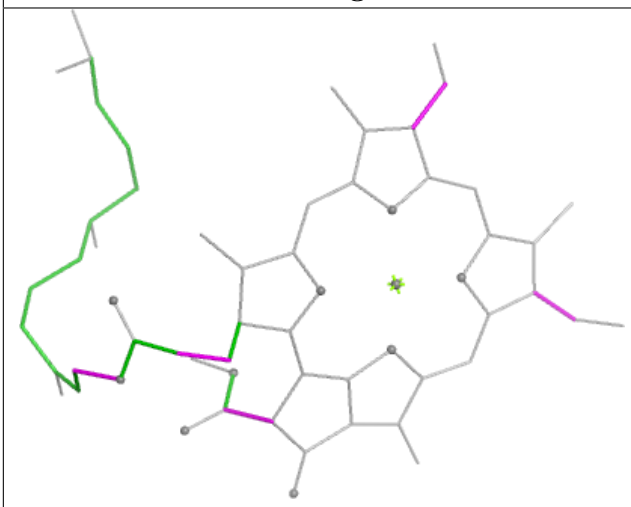
Ligand CLA 4 303



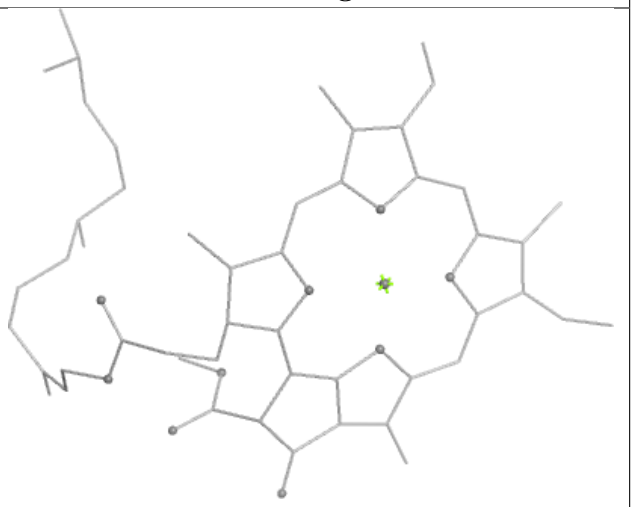
Bond lengths



Bond angles

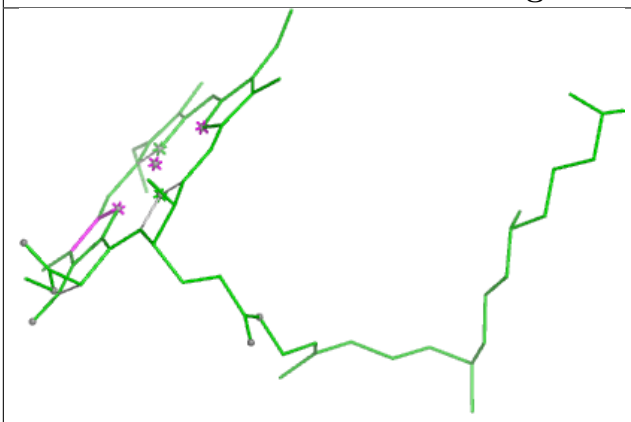


Torsions



Rings

Ligand CLA L 303



Bond lengths



Bond angles

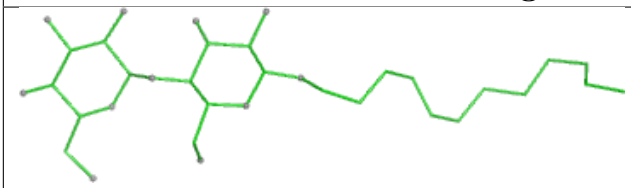


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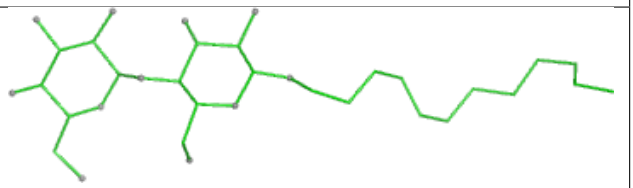


Rings

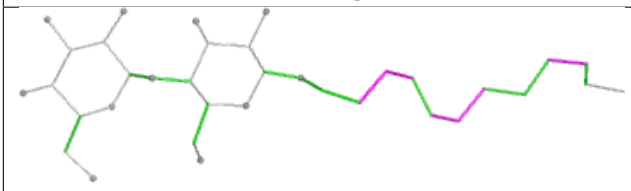
Ligand LMT G 102



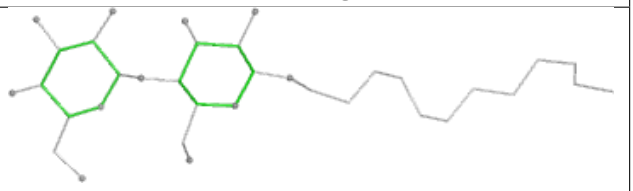
Bond lengths



Bond angles

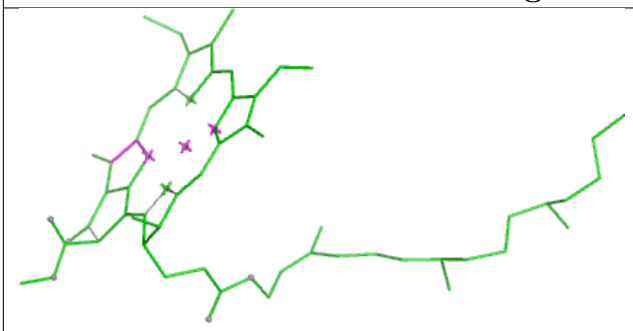


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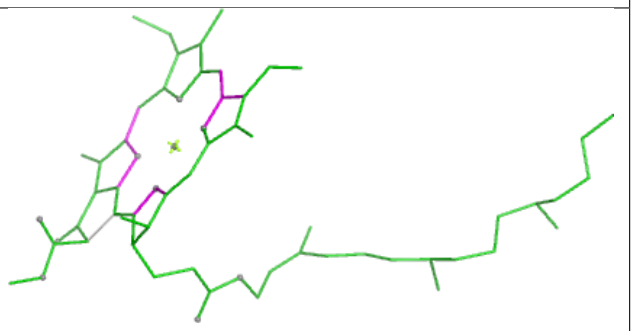


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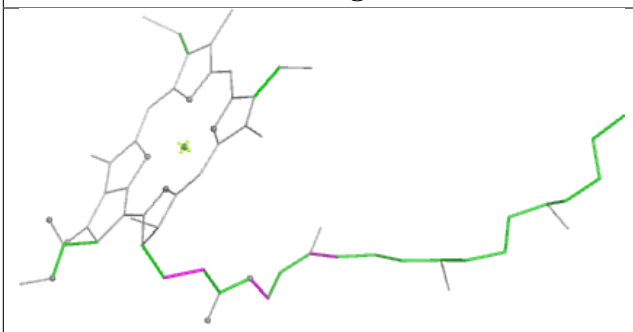
Ligand CLA B 802



Bond lengths



Bond angles



Torsions

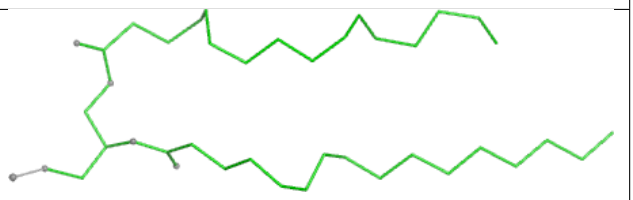


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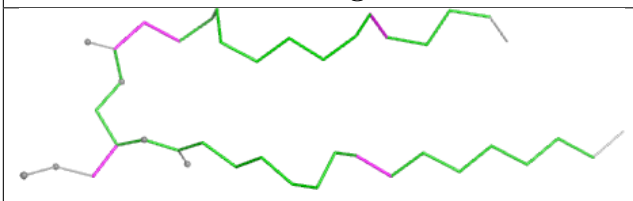
Ligand LHG 1 218



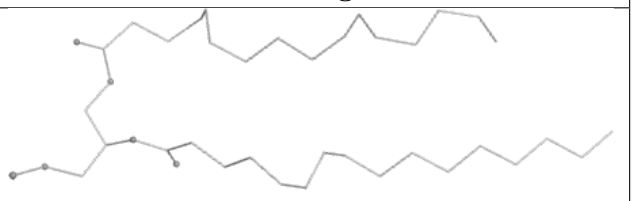
Bond lengths



Bond angles

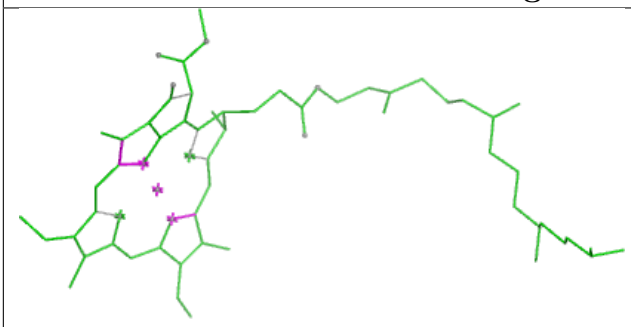


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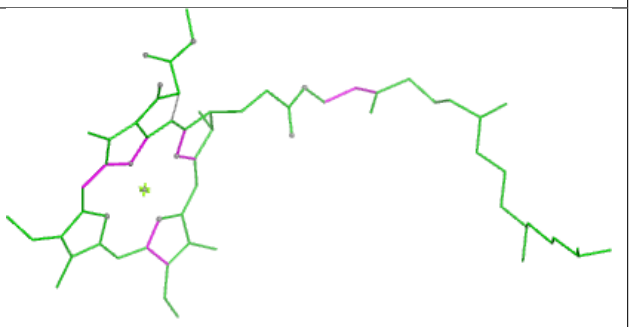


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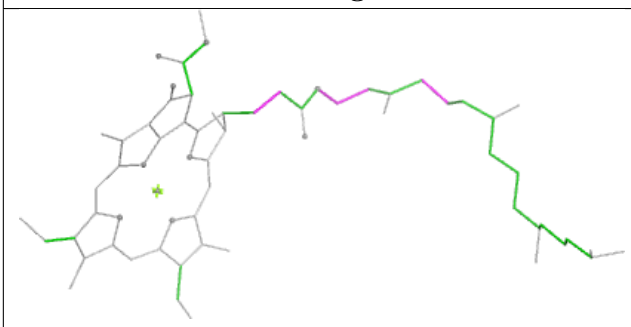
Ligand CLA A 850



Bond lengths



Bond angles

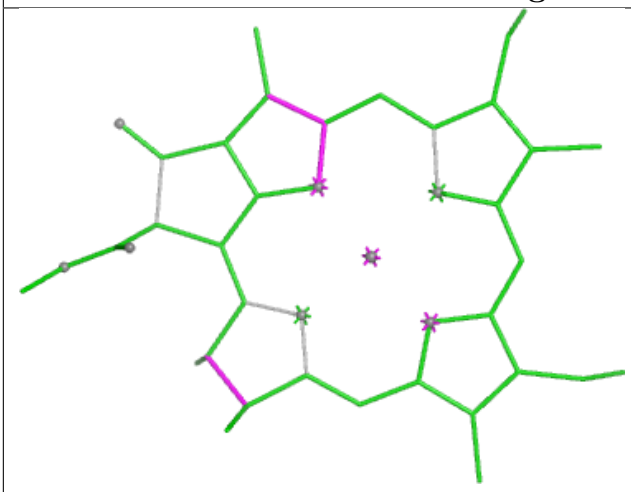


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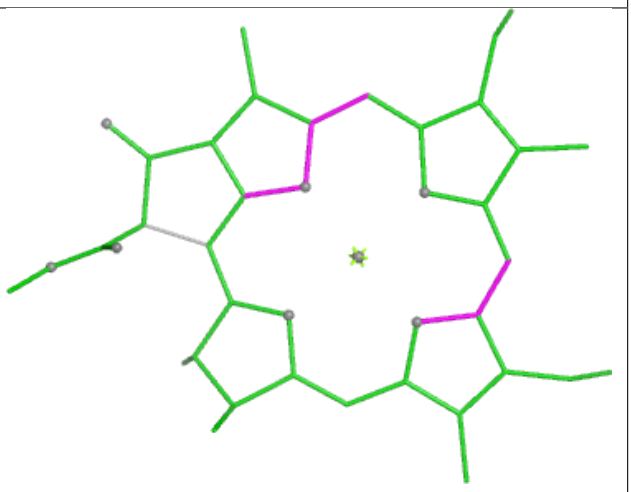


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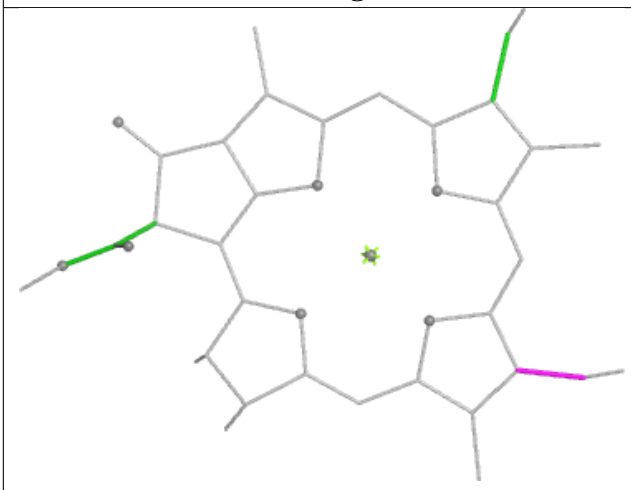
Ligand CLA 1 210



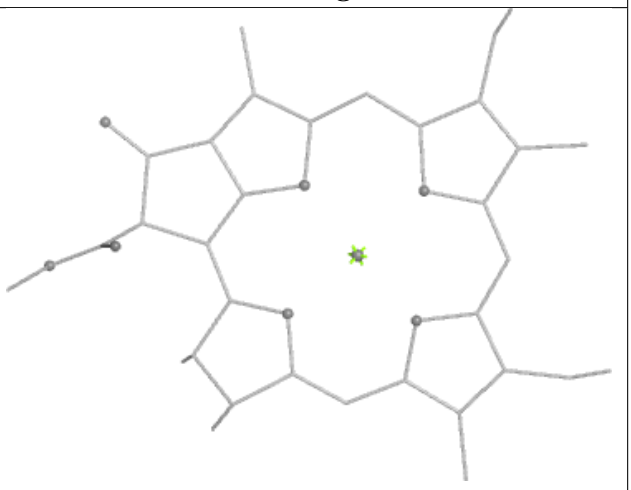
Bond lengths



Bond angles

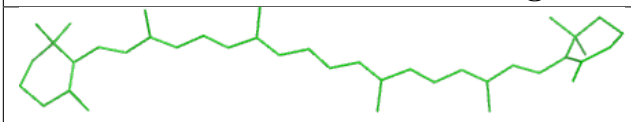


Torsions



Rings

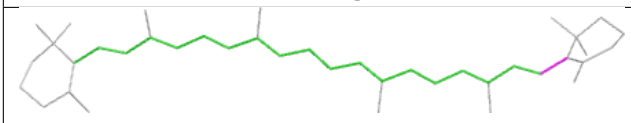
Ligand BCR J 103



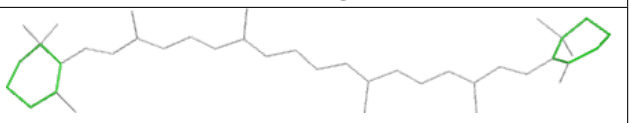
Bond lengths



Bond angles



Torsions

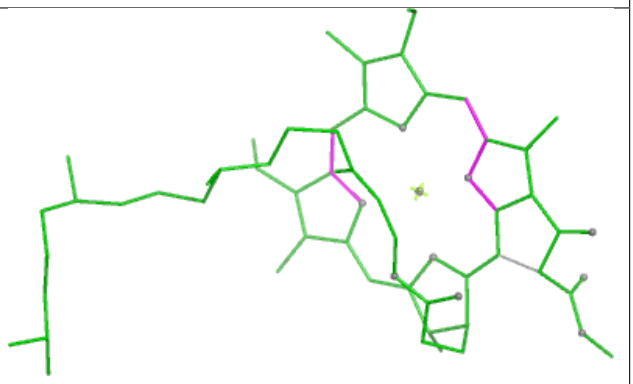


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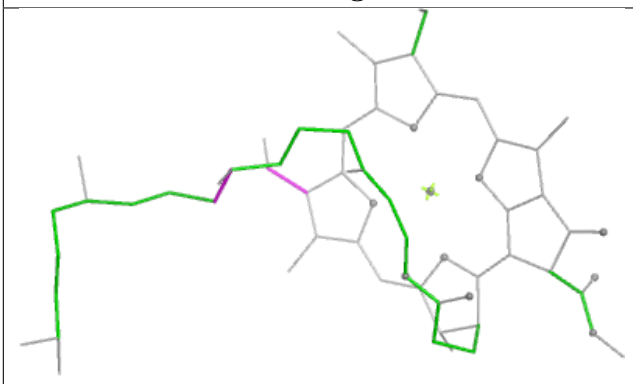
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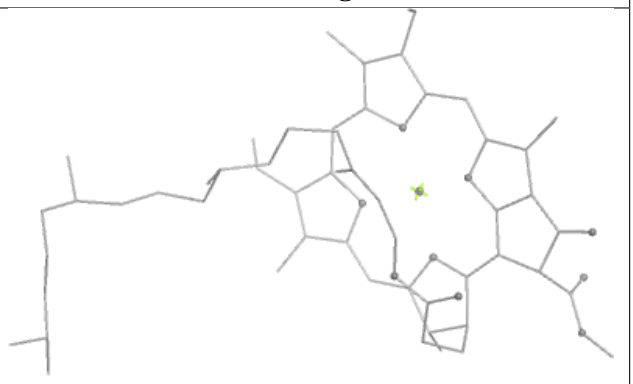
Bond lengths



Bond angles

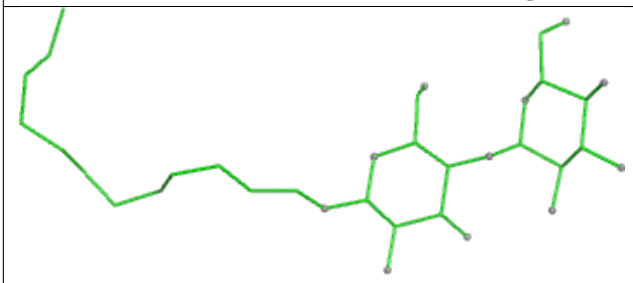


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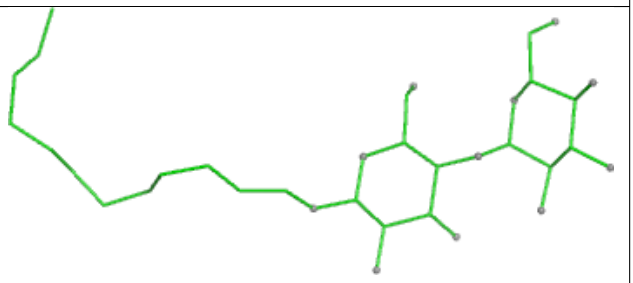


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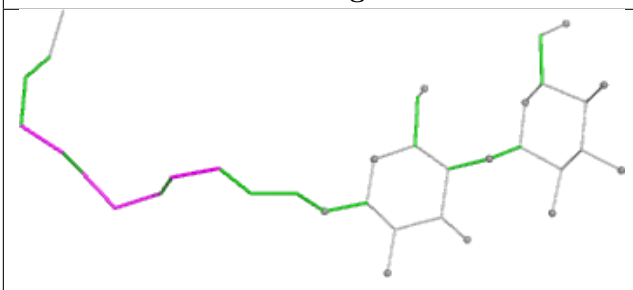
Ligand LMT B 847



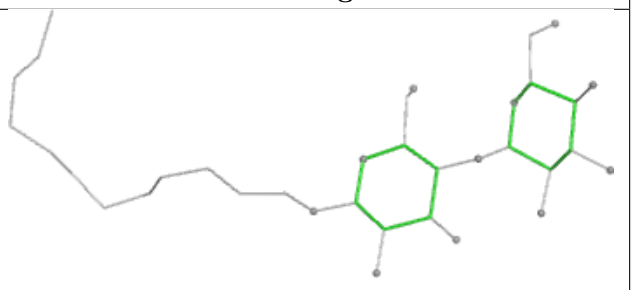
Bond lengths



Bond angles



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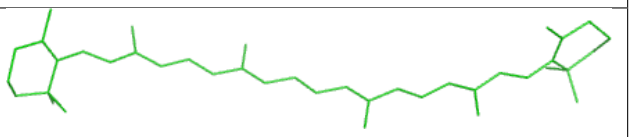


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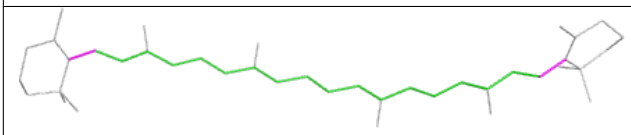
Ligand BCR J 101



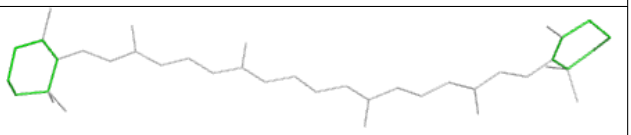
Bond lengths



Bond angles

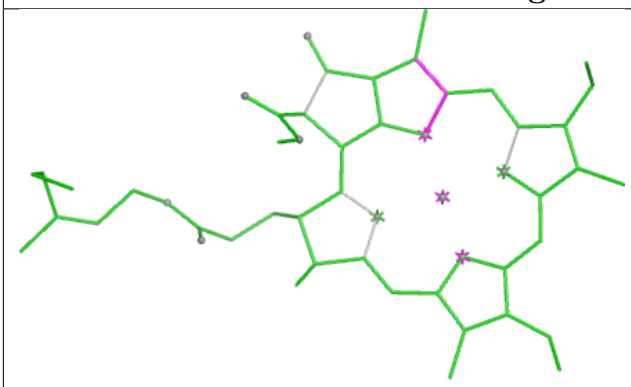


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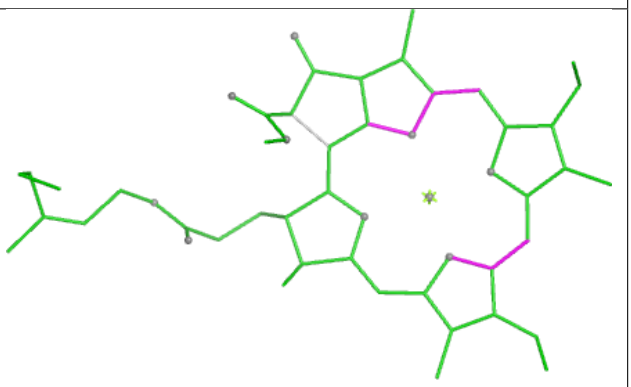


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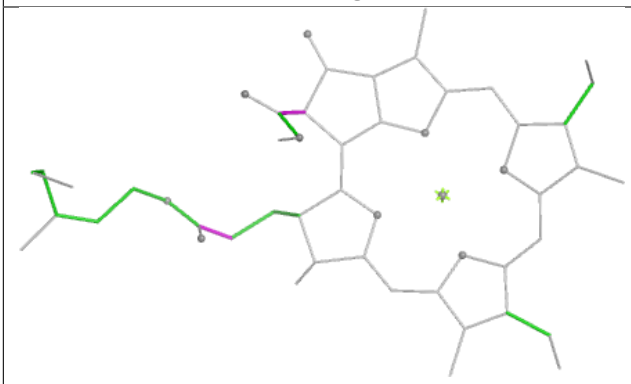
Ligand CLA 2 311



Bond lengths



Bond angles



Torsions



Rings

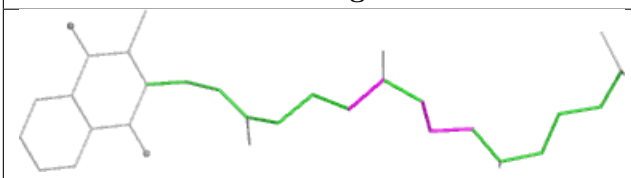
Ligand PQN A 842



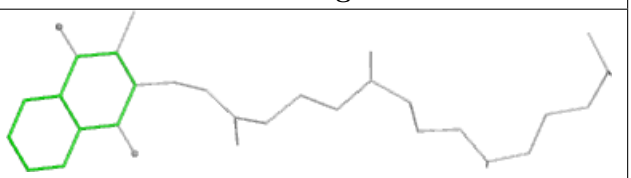
Bond lengths



Bond angles

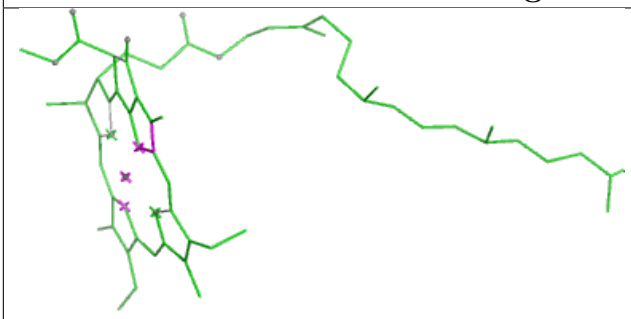


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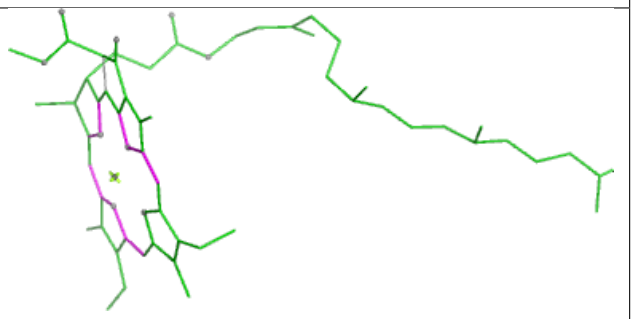


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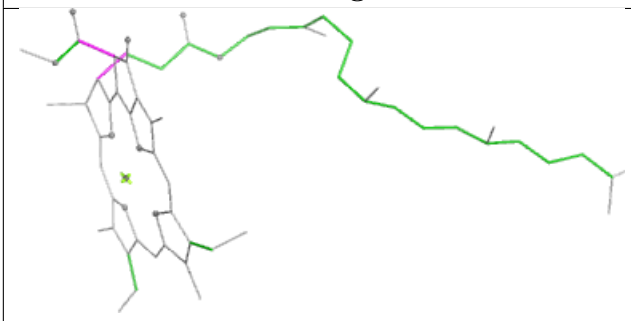
Ligand CLA B 830



Bond lengths



Bond angles

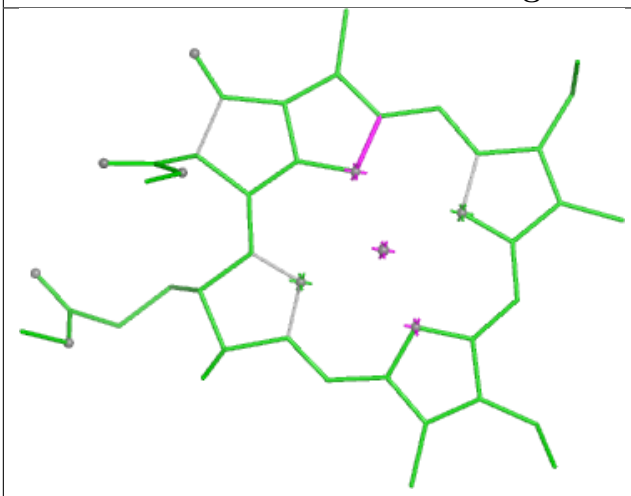


Torsions

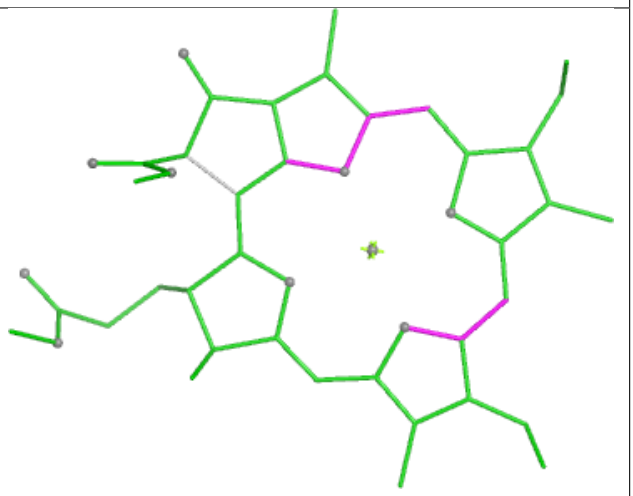


Rings

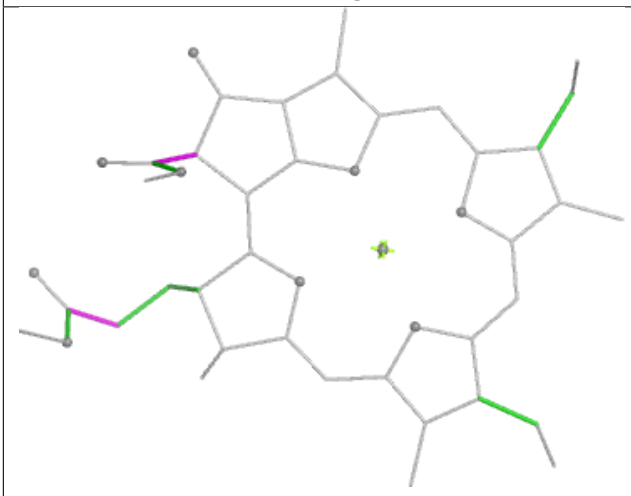
Ligand CLA G 105



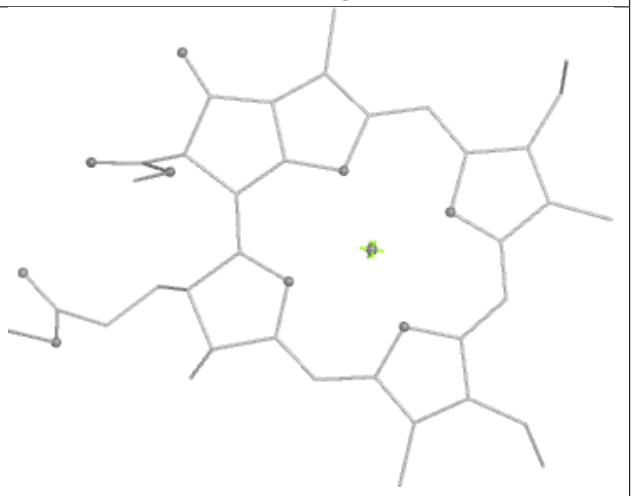
Bond lengths



Bond angles

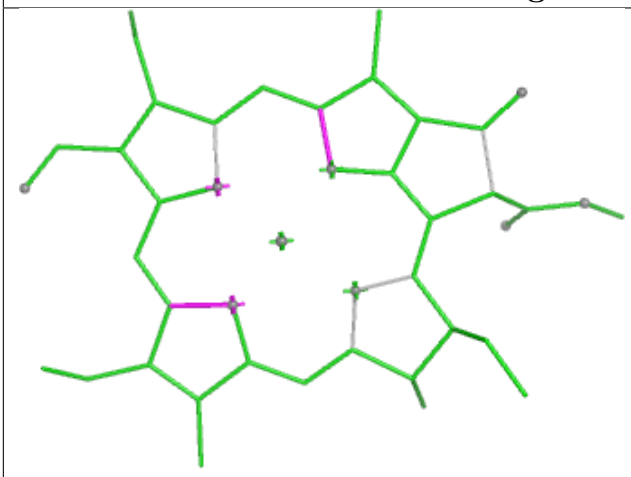


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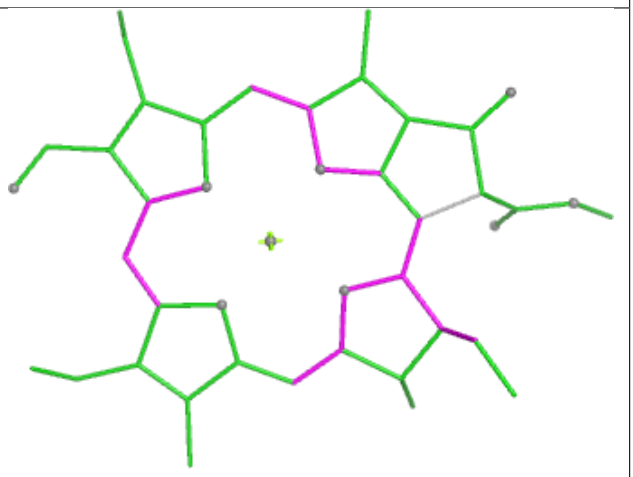


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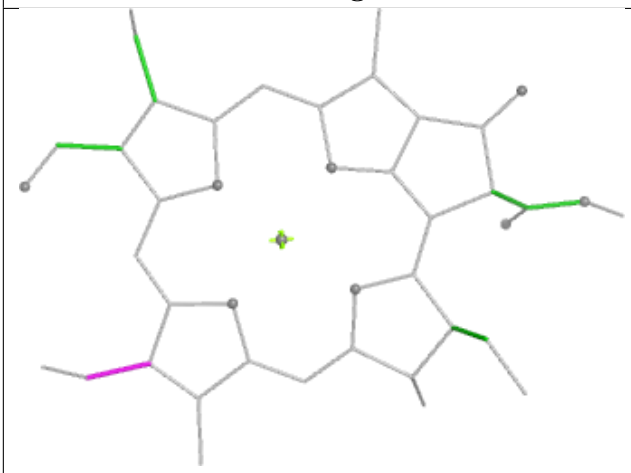
Ligand CHL 4 315



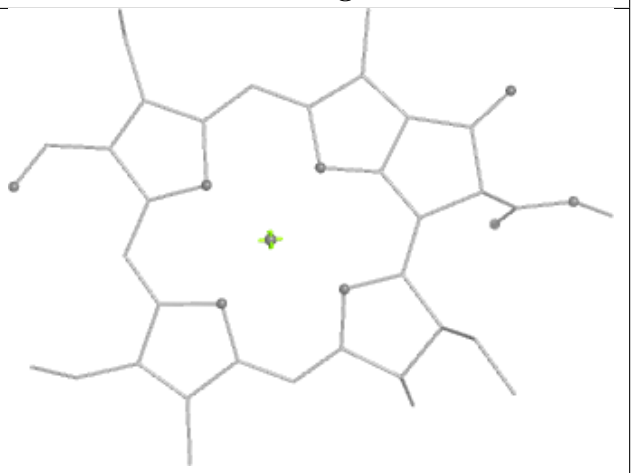
Bond lengths



Bond angles

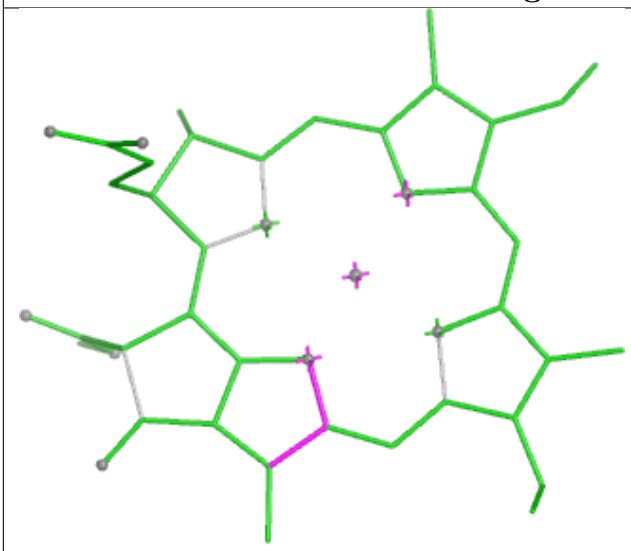


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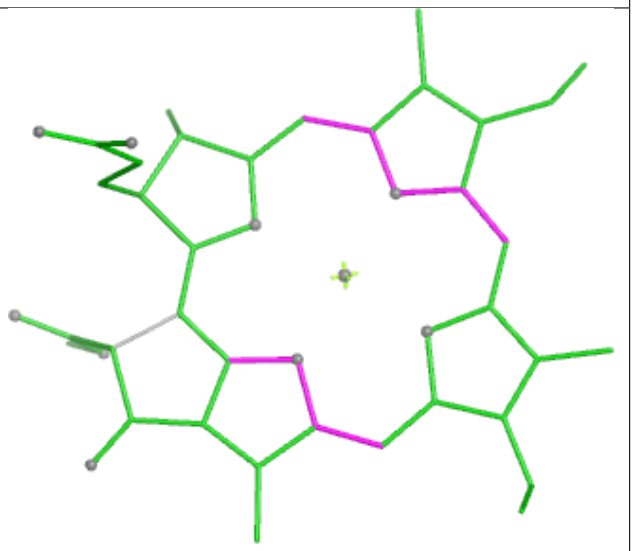


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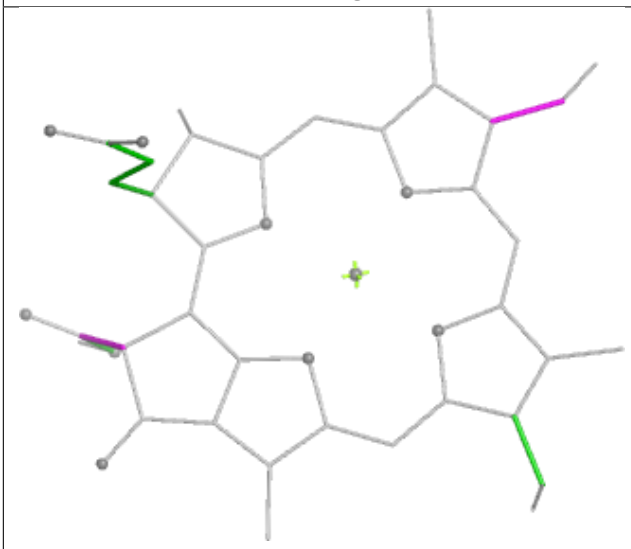
Ligand CLA A 819



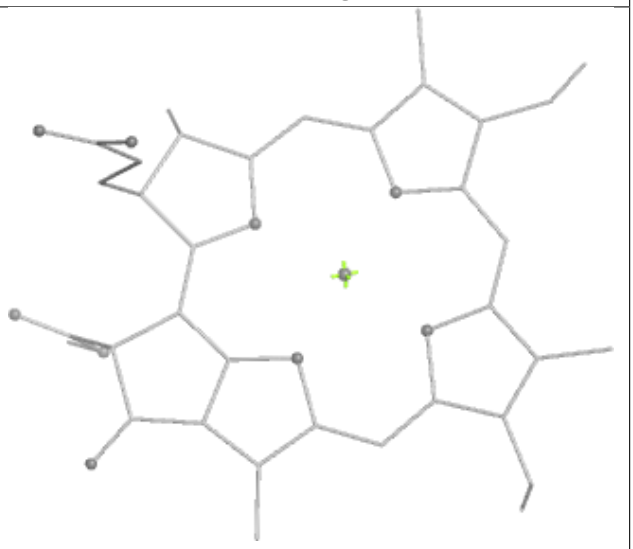
Bond lengths



Bond angles

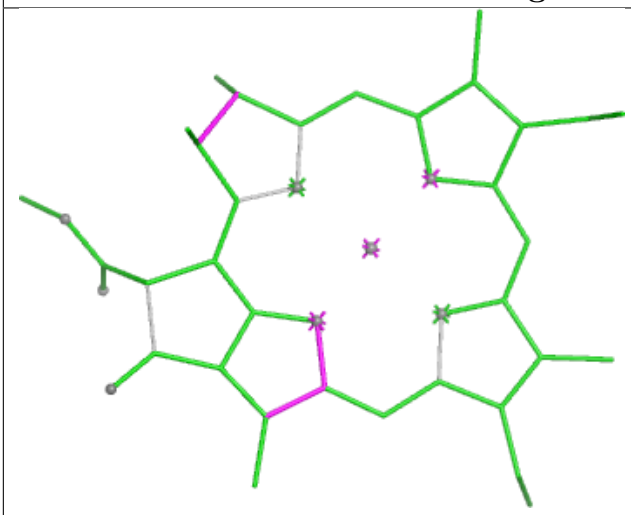


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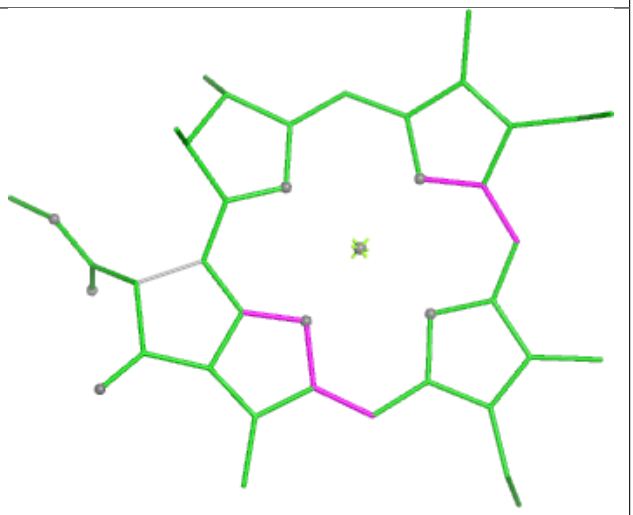


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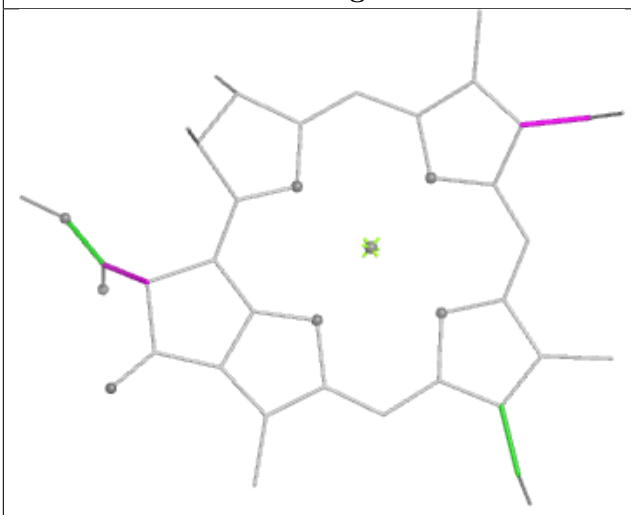
Ligand CLA 2 310



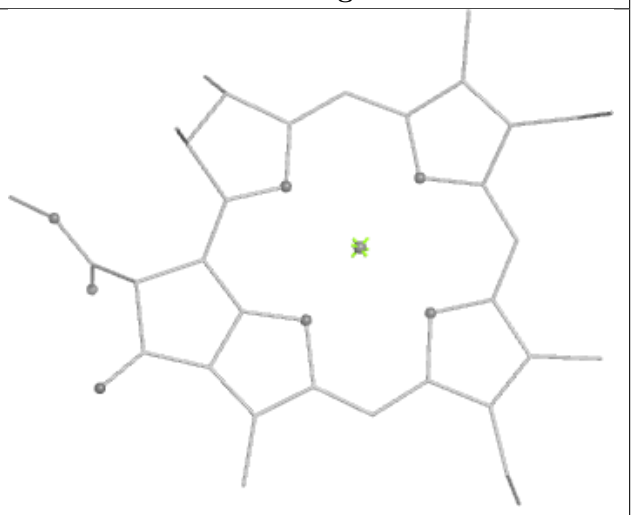
Bond lengths



Bond angles

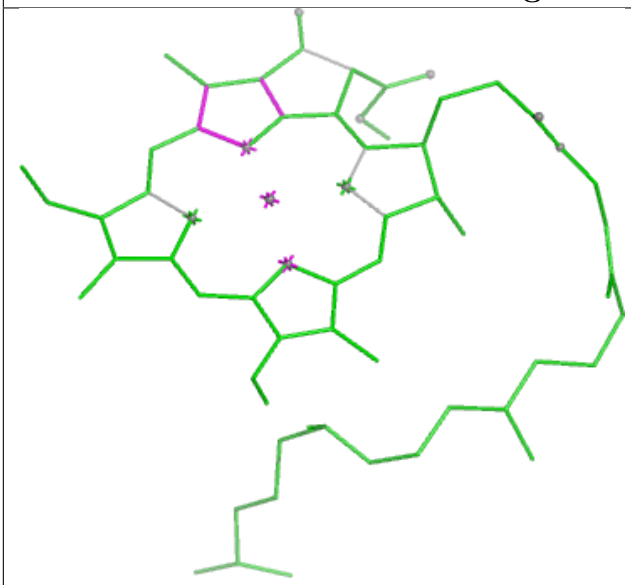


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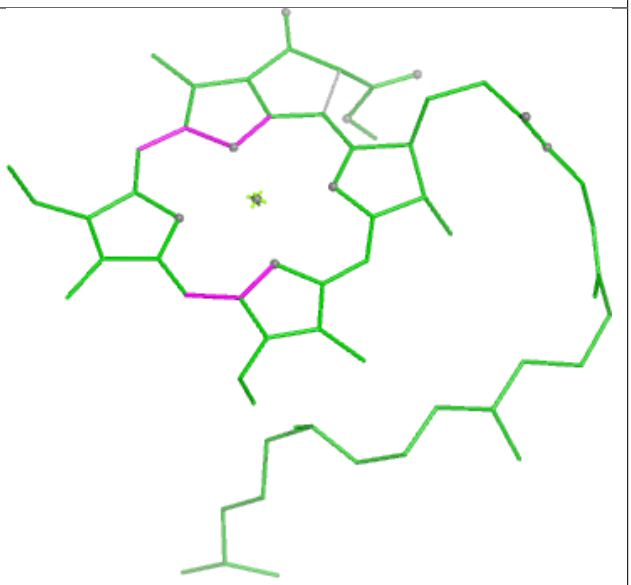


Rings

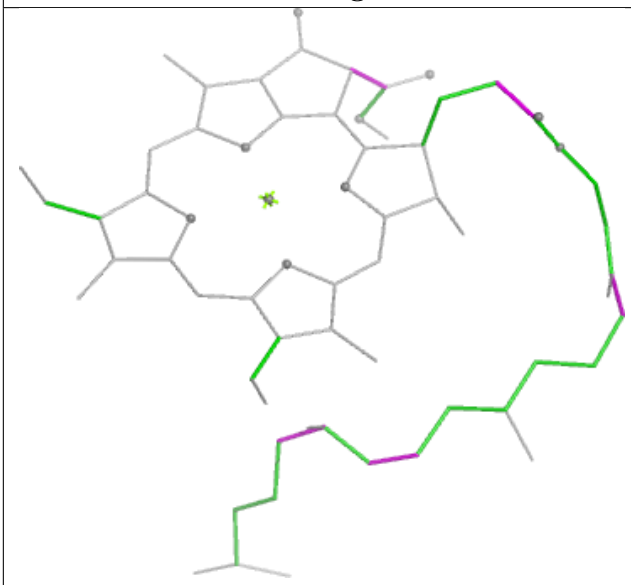
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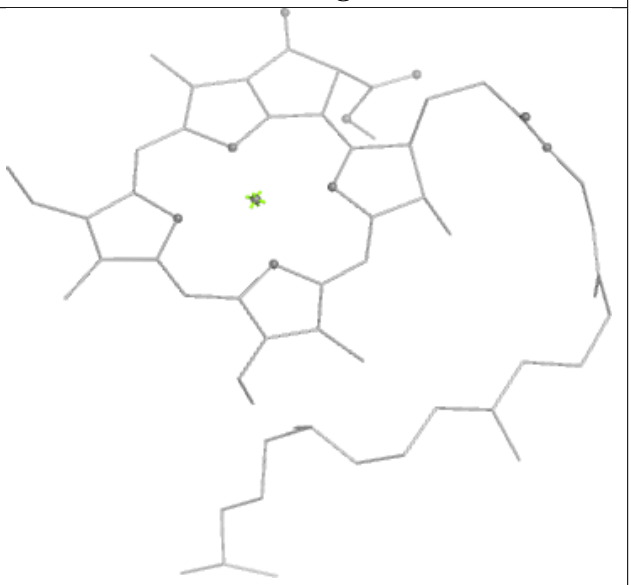
Bond lengths



Bond angles

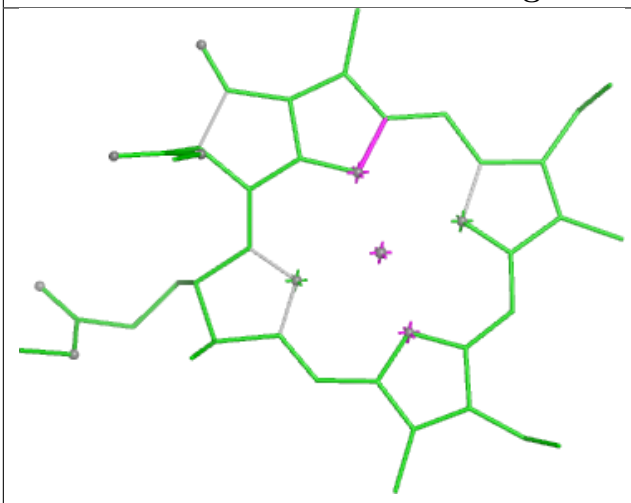


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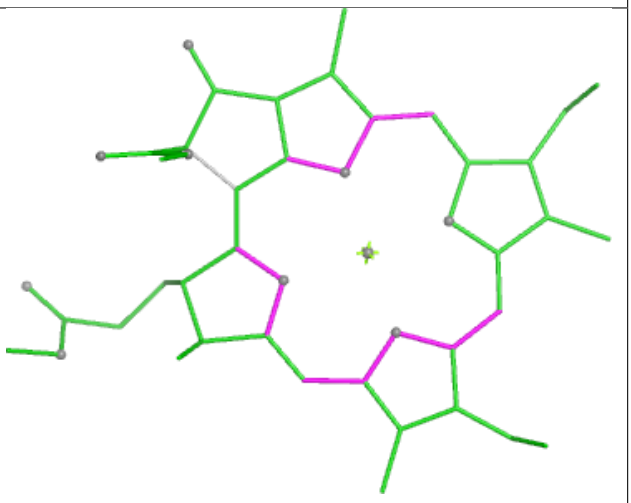


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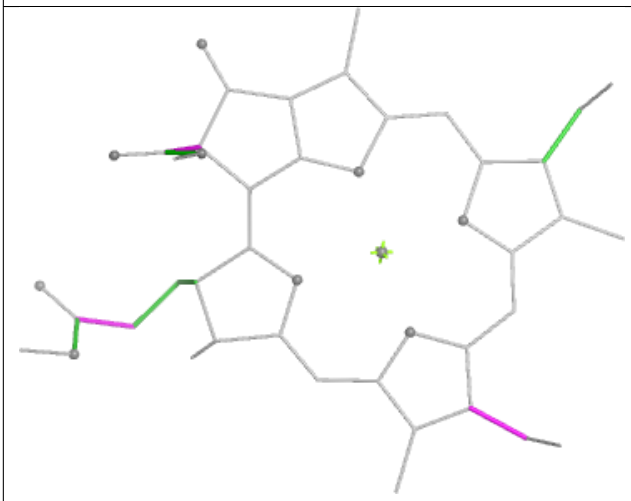
Ligand CLA K 104



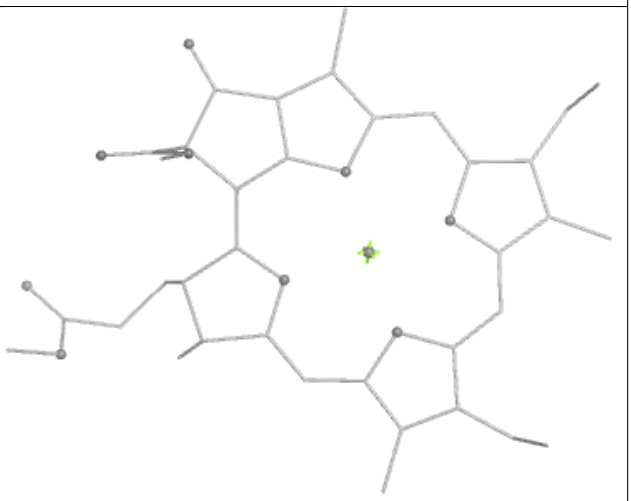
Bond lengths



Bond angles

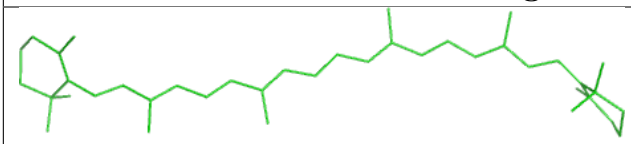


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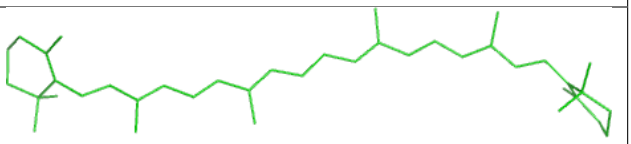


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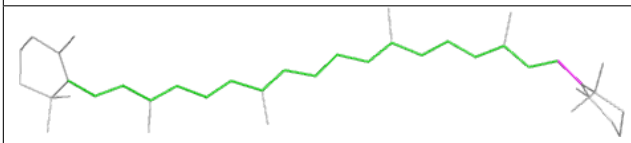
Ligand BCR B 846



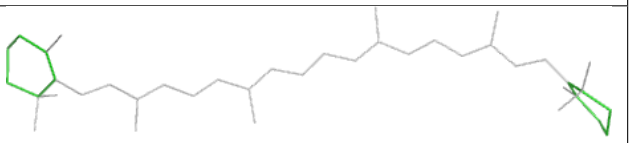
Bond lengths



Bond angles

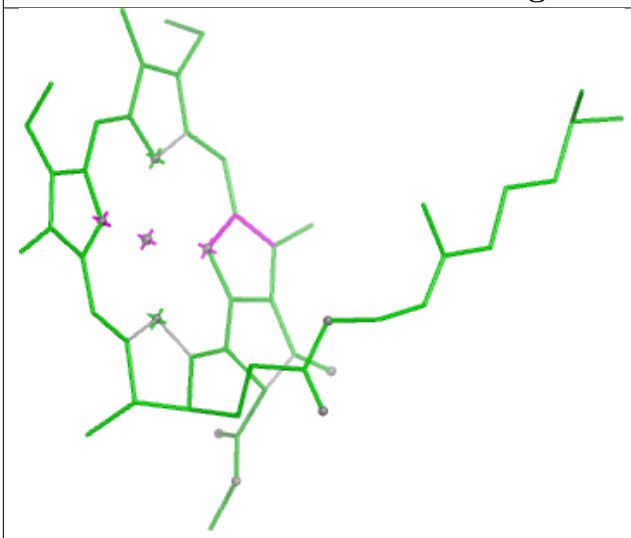


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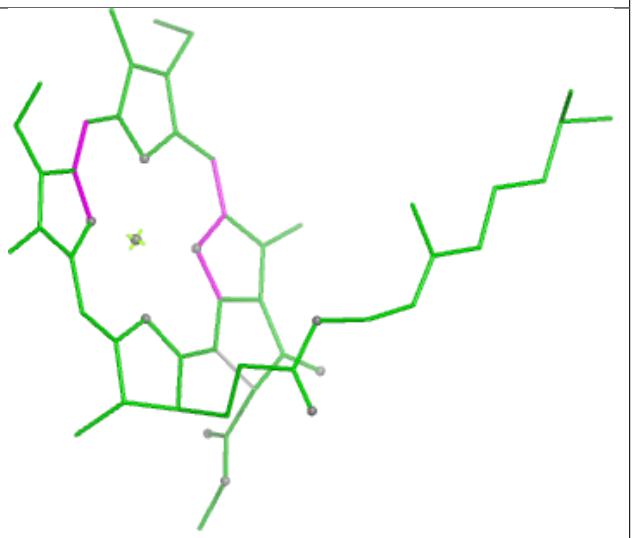


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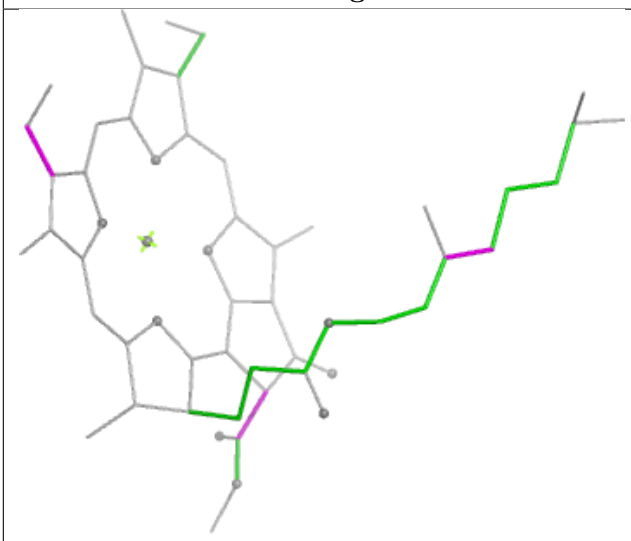
Ligand CLA 4 310



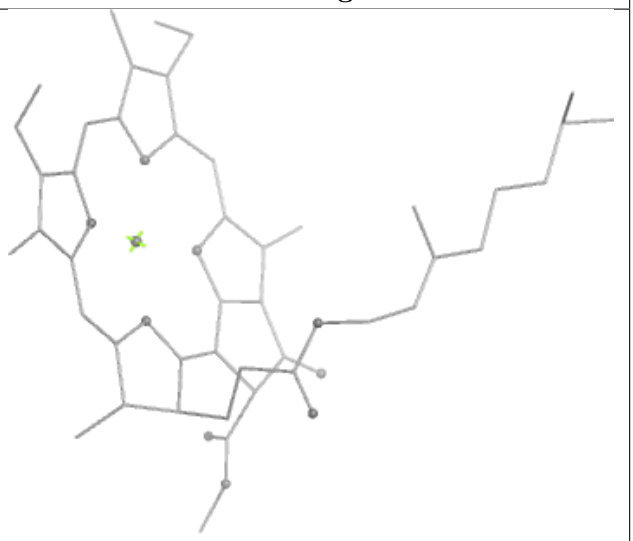
Bond lengths



Bond angles

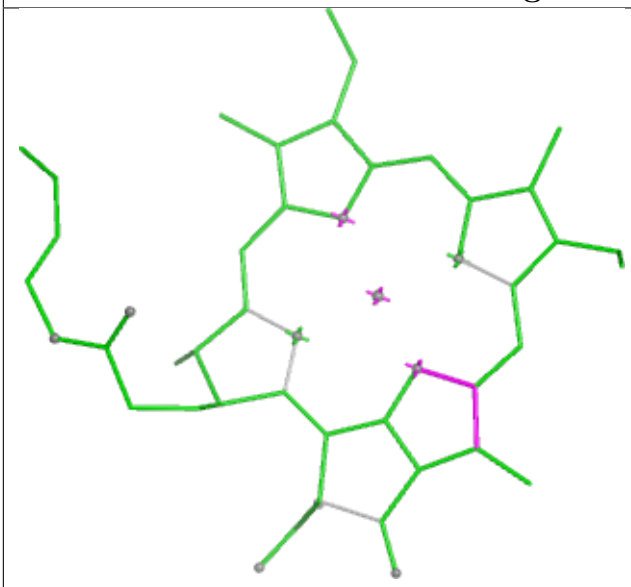


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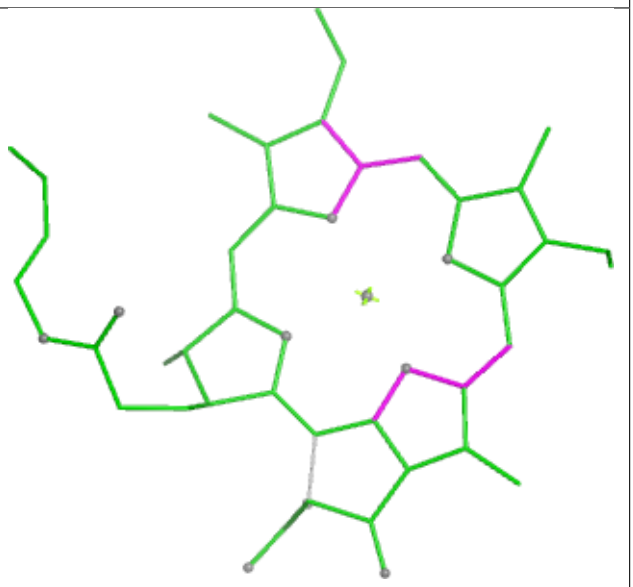


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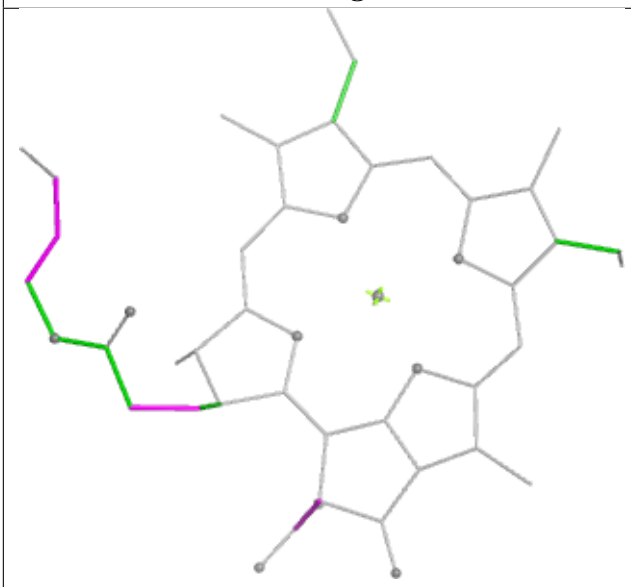
Ligand CLA A 821



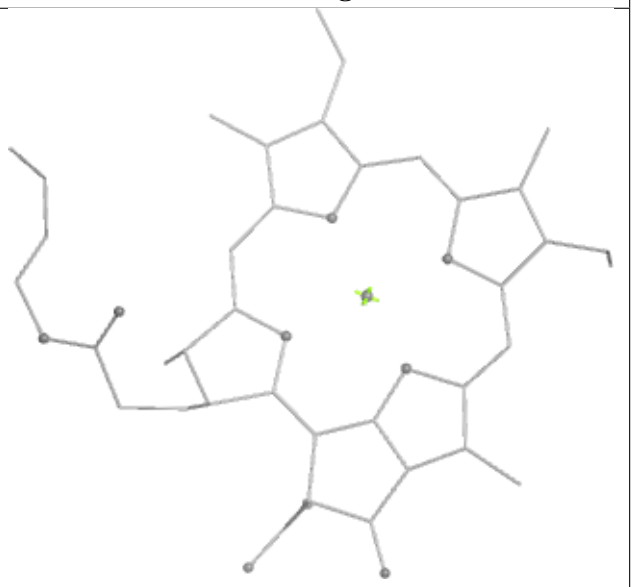
Bond lengths



Bond angles

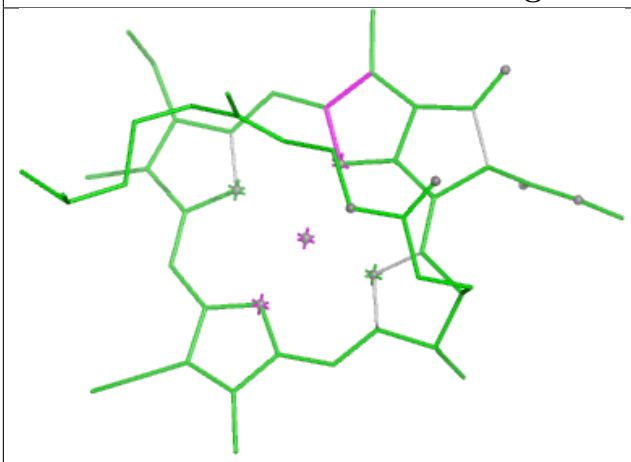


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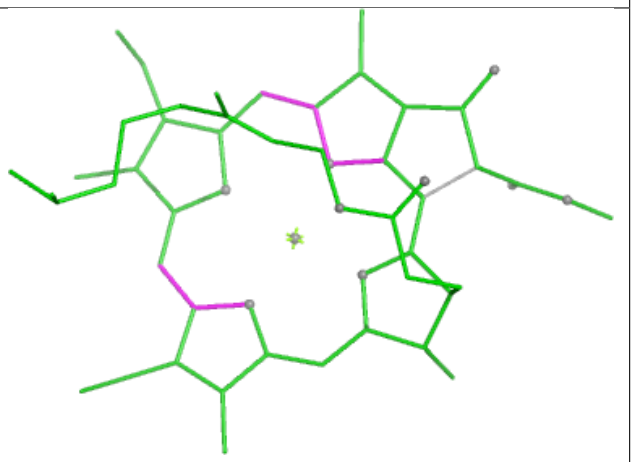


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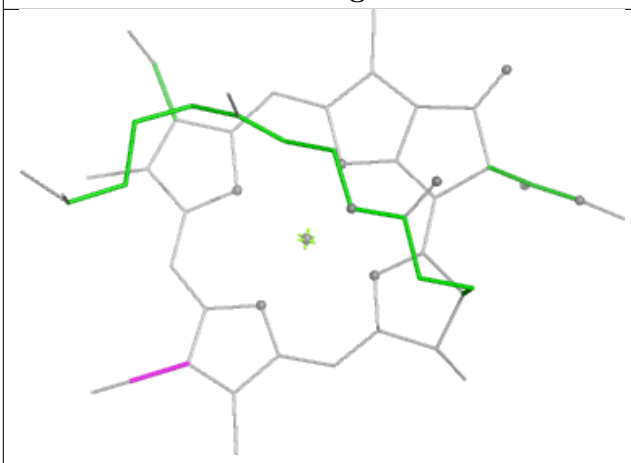
Ligand CLA B 808



Bond lengths



Bond angles

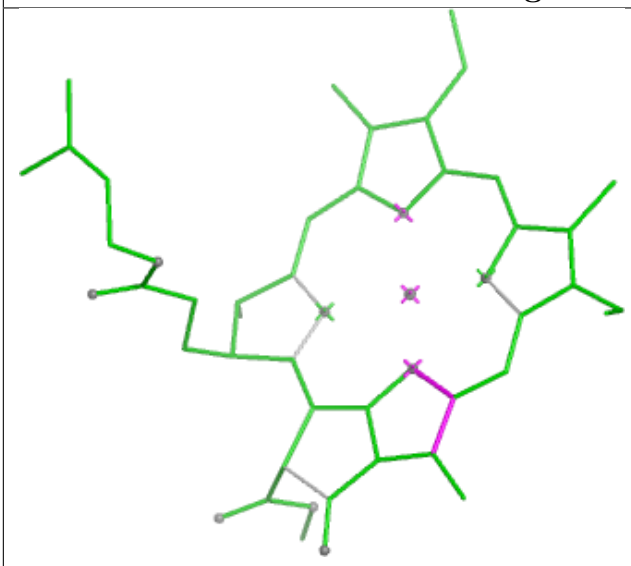


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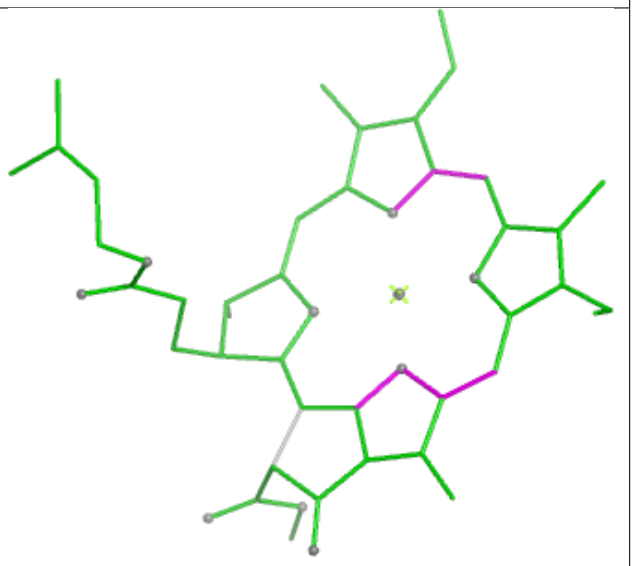


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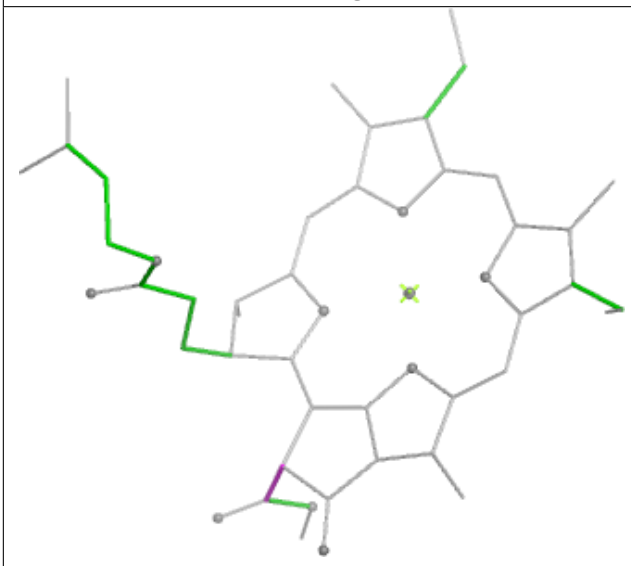
Ligand CLA B 821



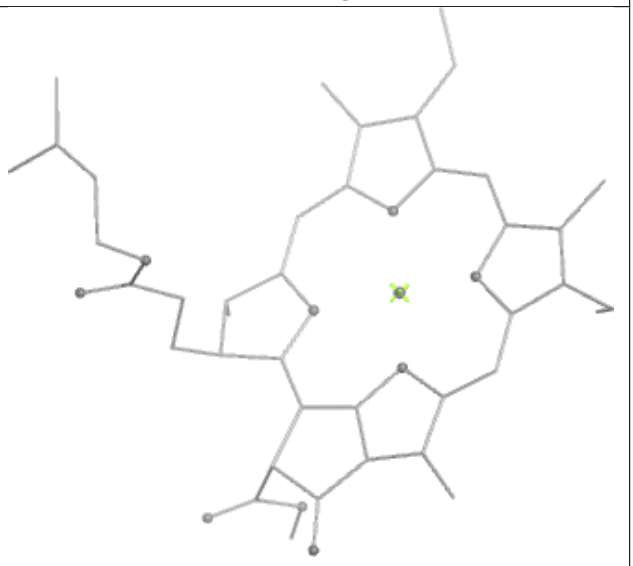
Bond lengths



Bond angles

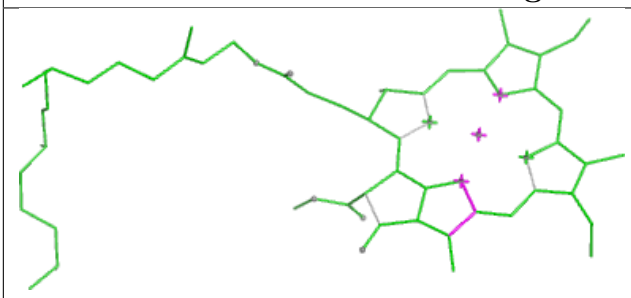


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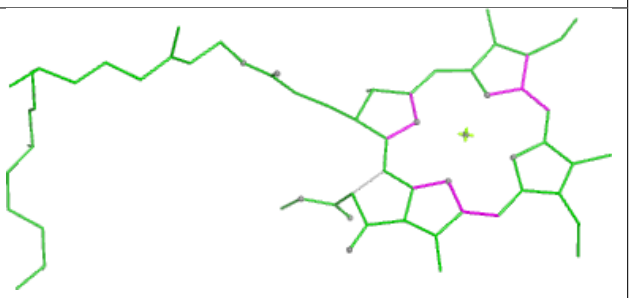


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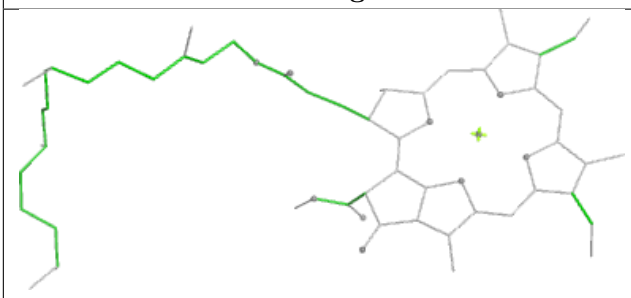
Ligand CLA B 827



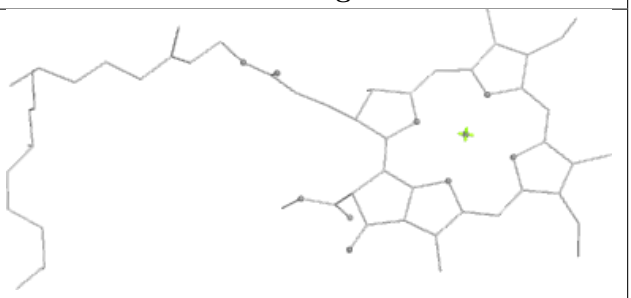
Bond lengths



Bond angles

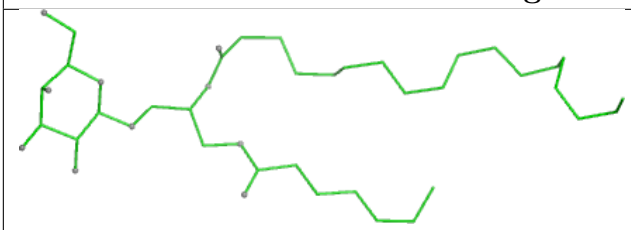


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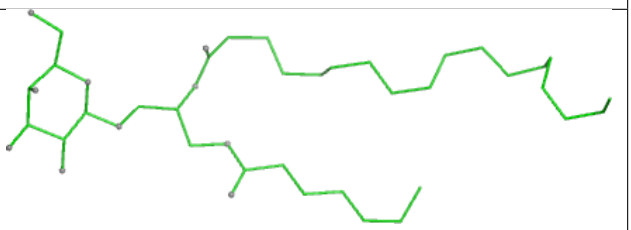


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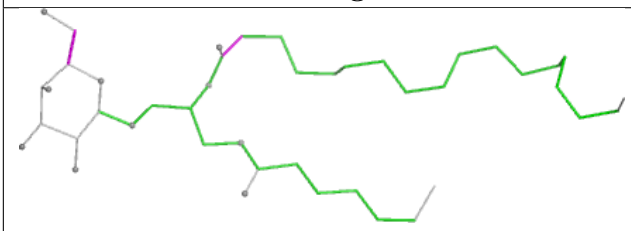
Ligand LMG 4 319



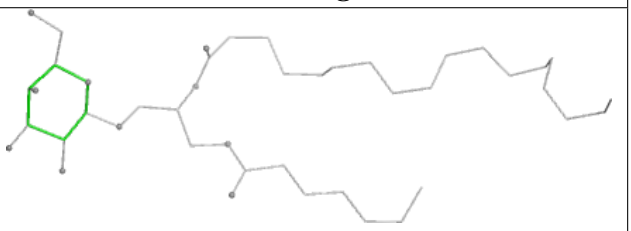
Bond lengths



Bond angles

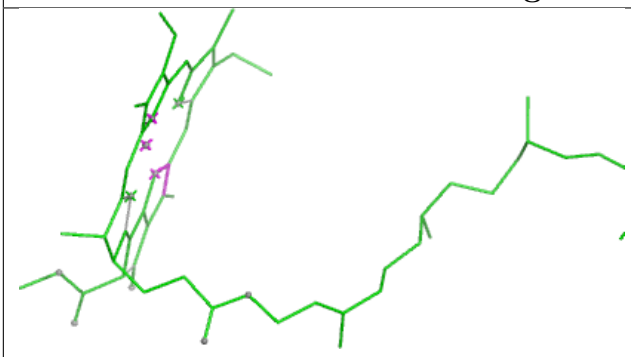


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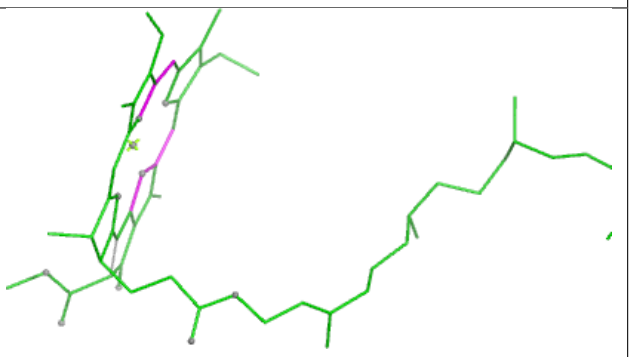


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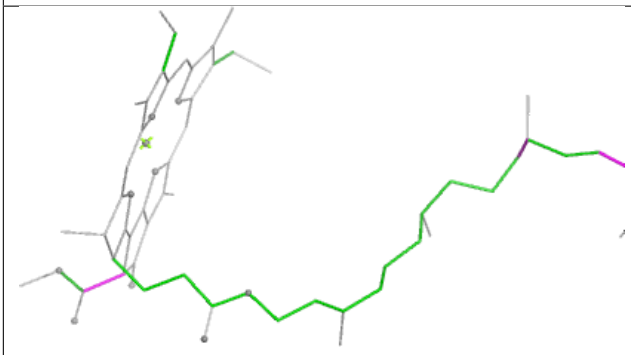
Ligand CLA A 829



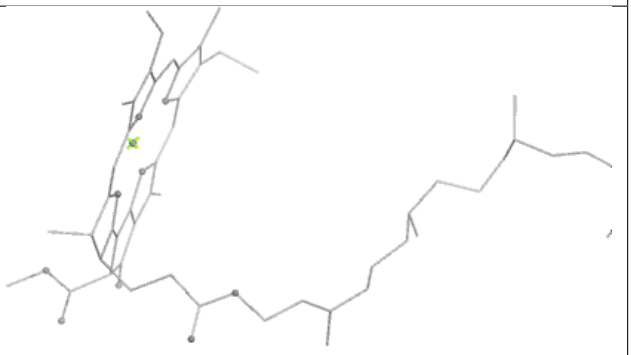
Bond lengths



Bond angles

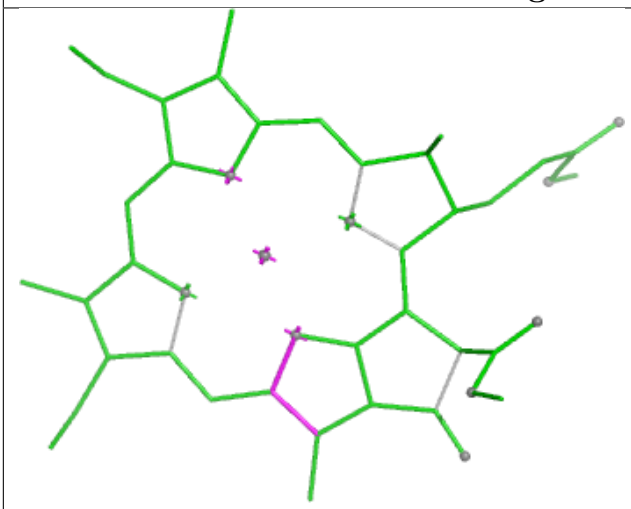


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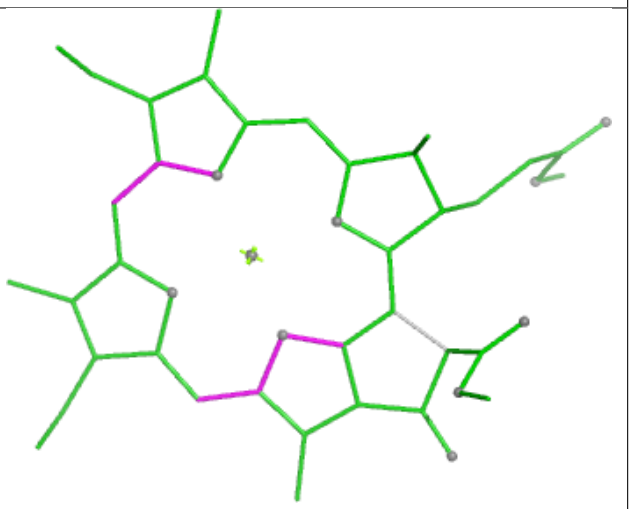


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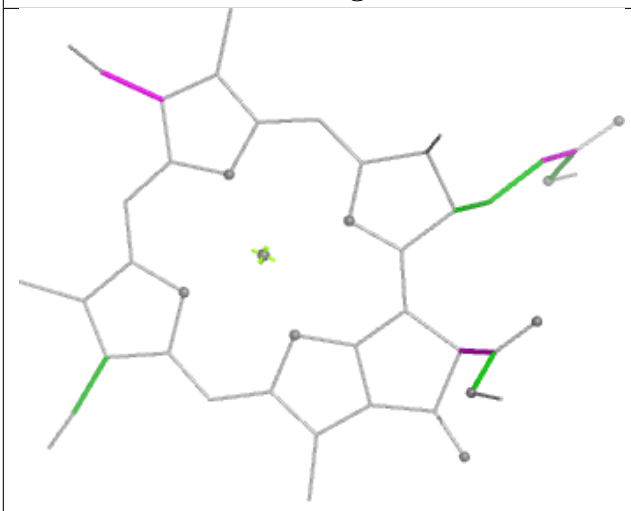
Ligand CLA 4 301



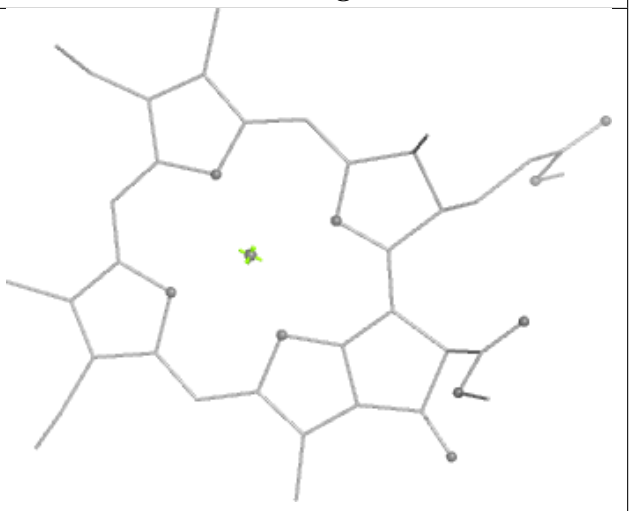
Bond lengths



Bond angles

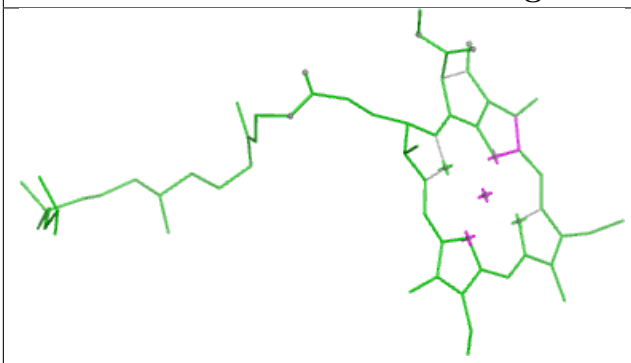


Torsions

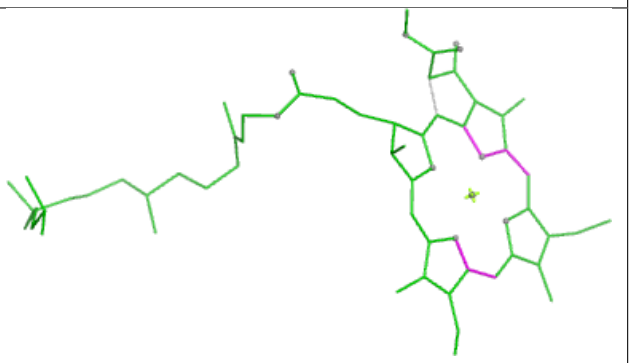


Rings

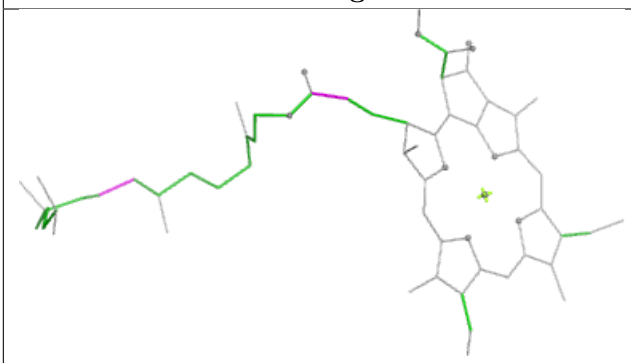
Ligand CLA B 810



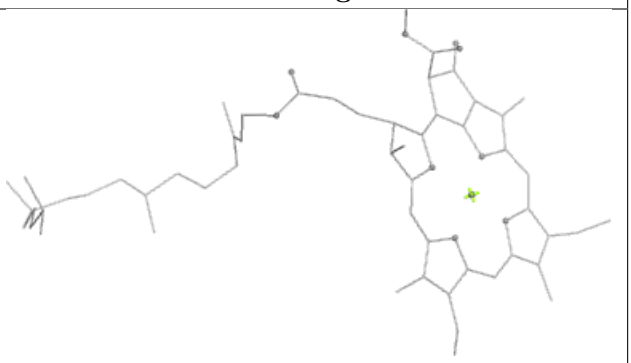
Bond lengths



Bond angles

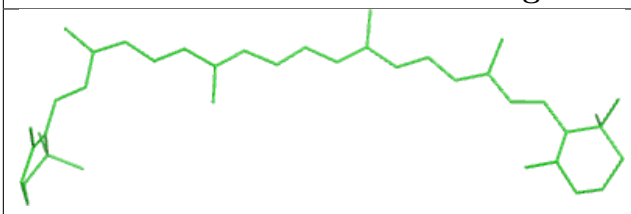


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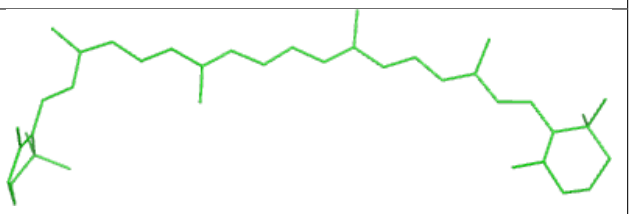


Rings

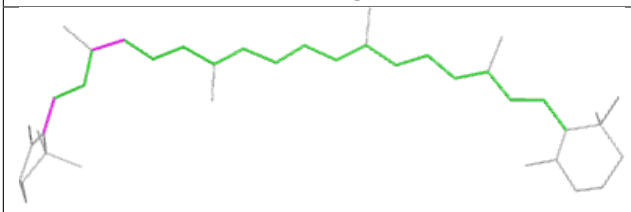
Ligand BCR B 842



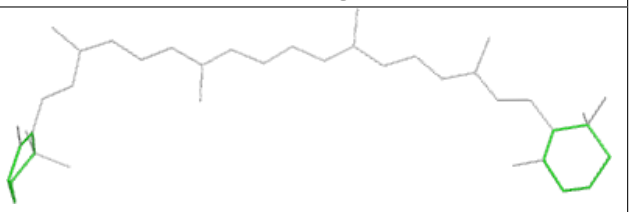
Bond lengths



Bond angles

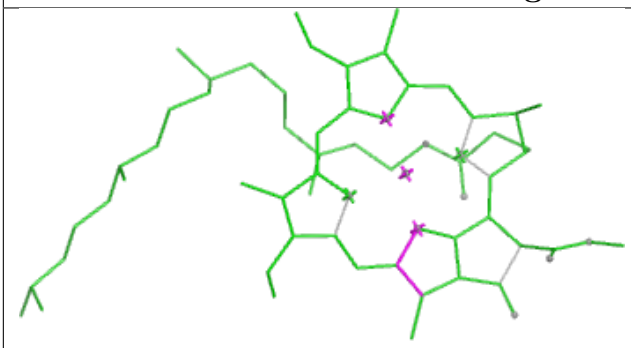


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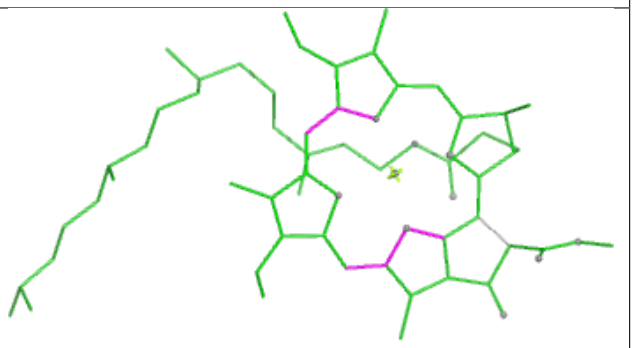


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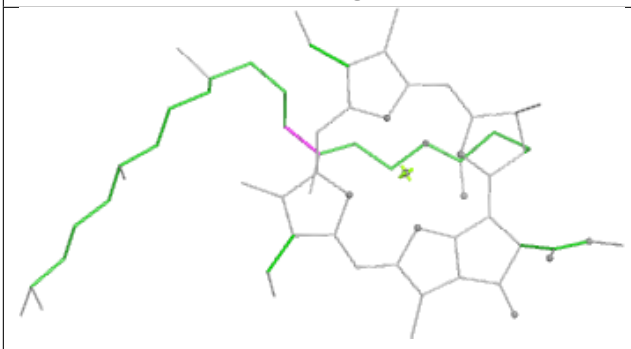
Ligand CLA B 836



Bond lengths



Bond angles

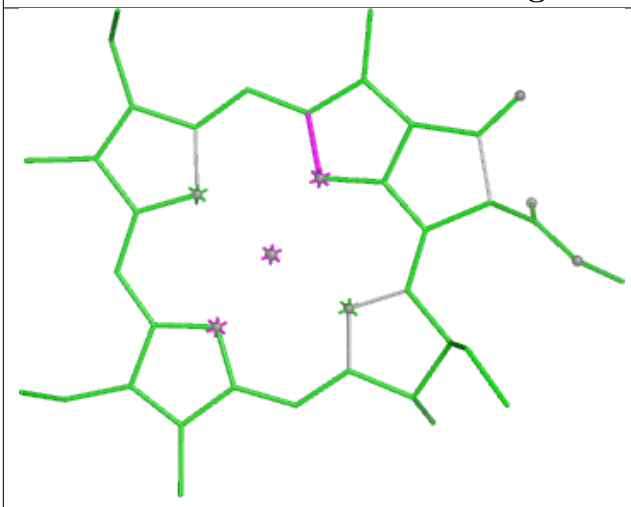


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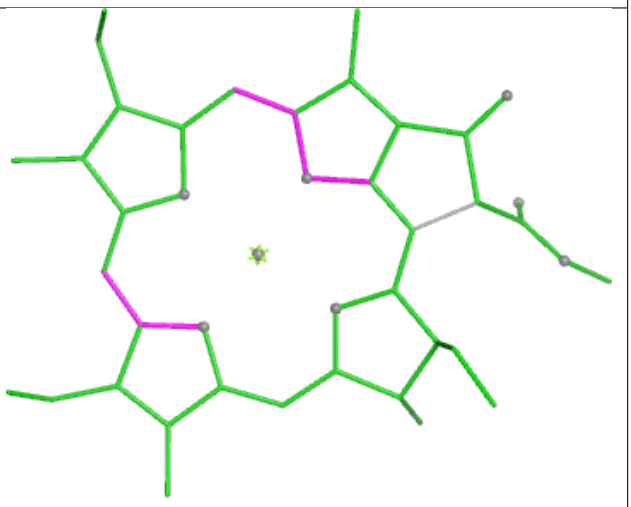


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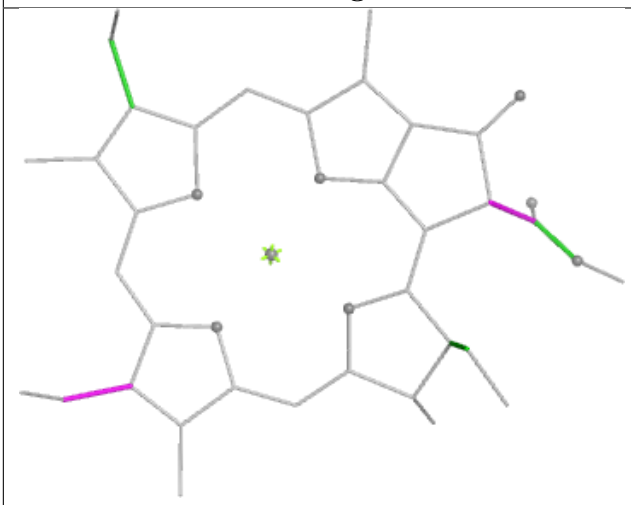
Ligand CLA J 102



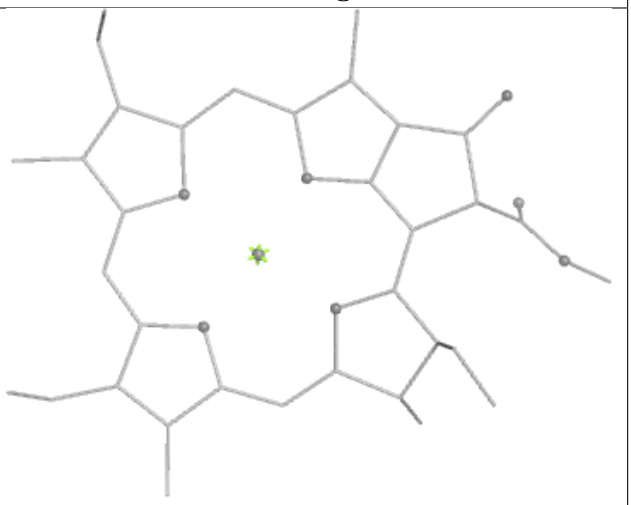
Bond lengths



Bond angles

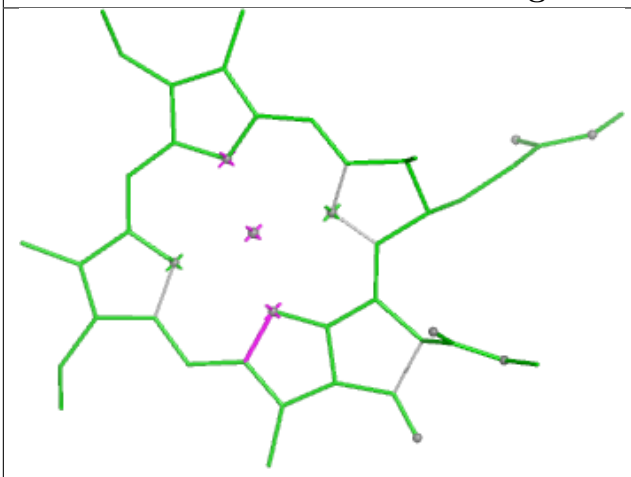


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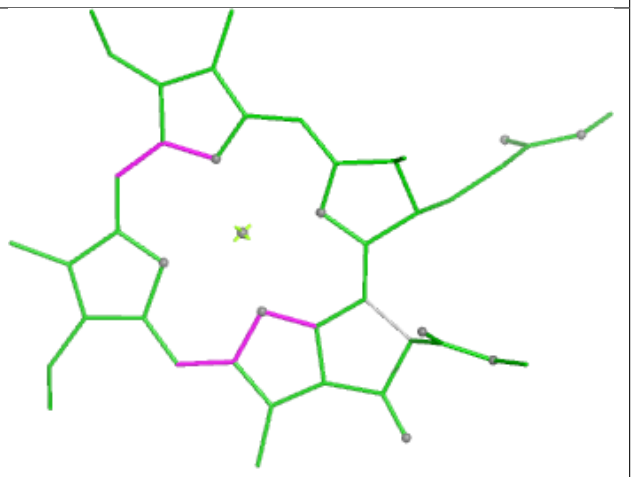


Rings

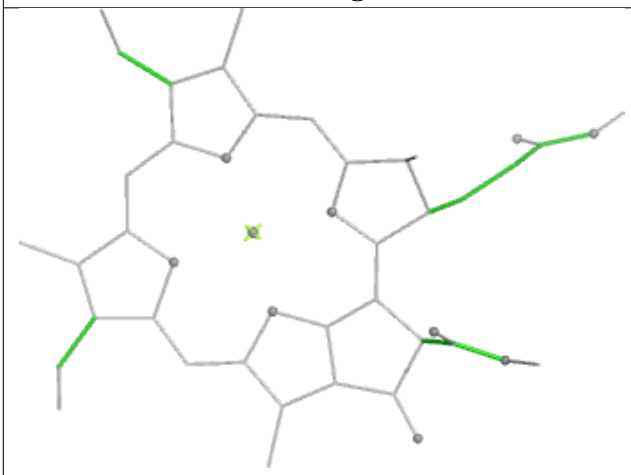
Ligand CLA 3 314



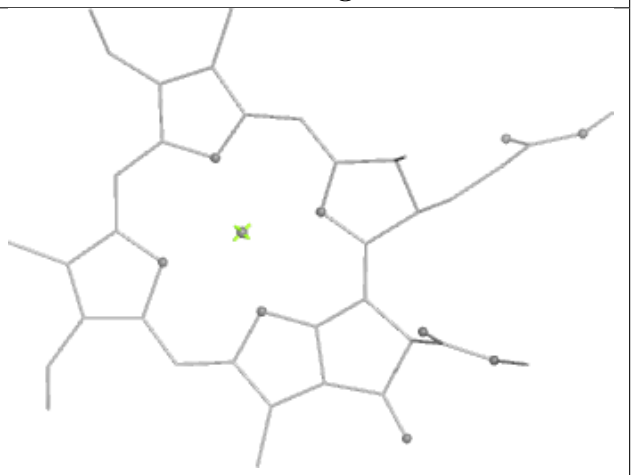
Bond lengths



Bond angles

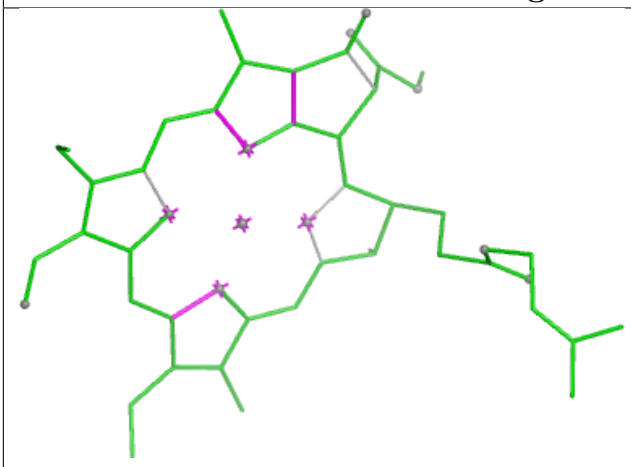


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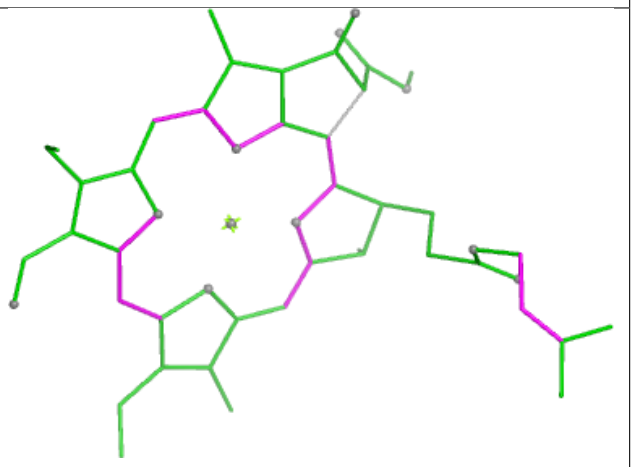


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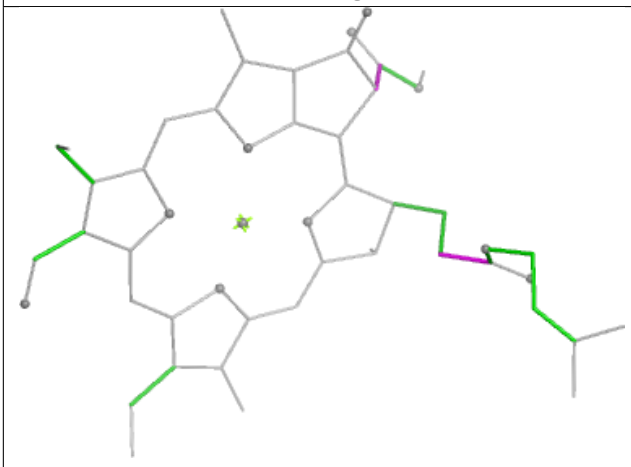
Ligand CHL 2 307



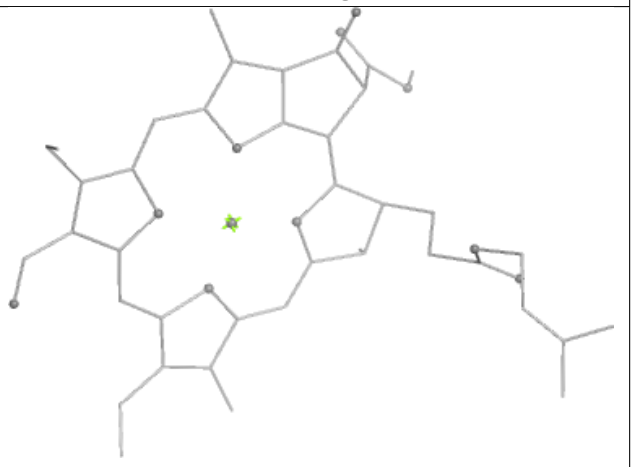
Bond lengths



Bond angles

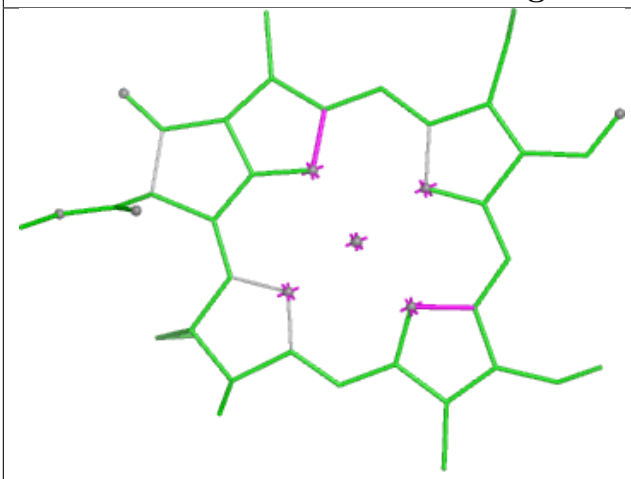


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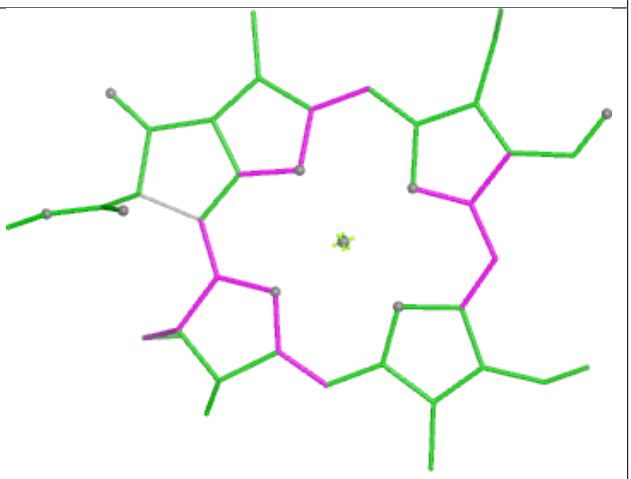


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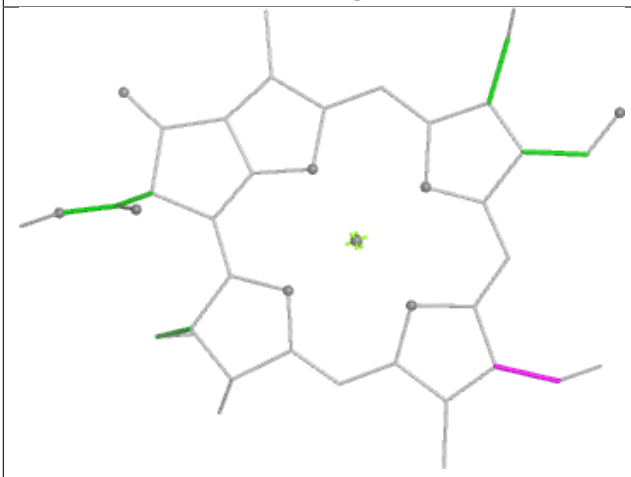
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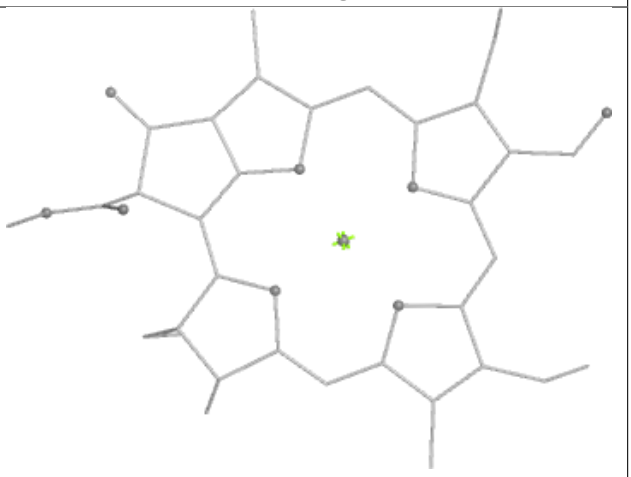
Bond lengths



Bond angles

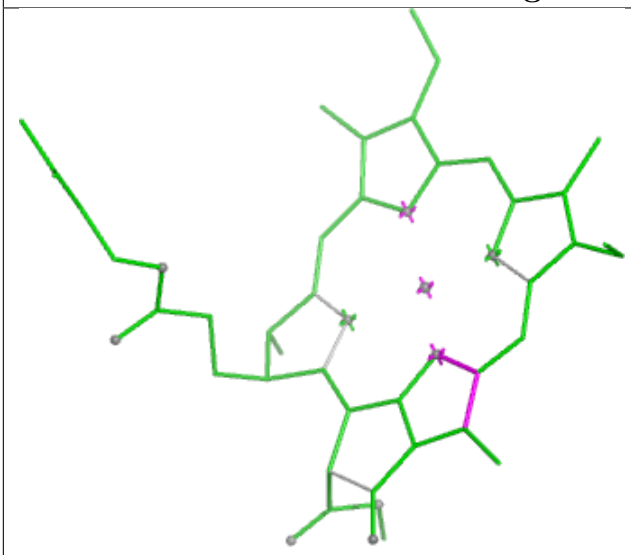


Torsions



Rings

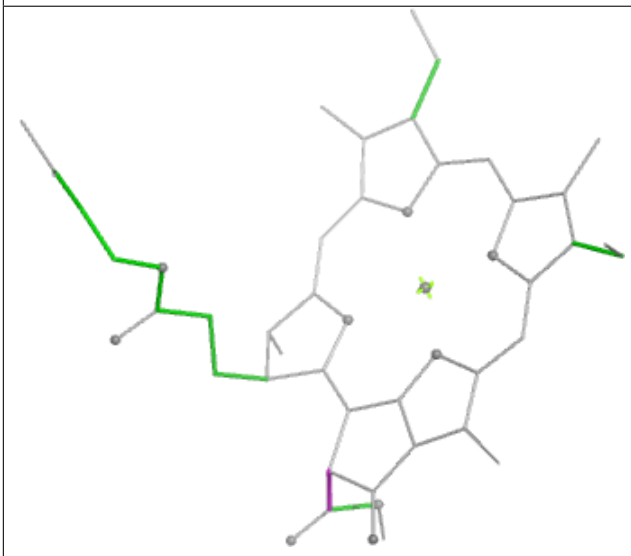
Ligand CLA A 814



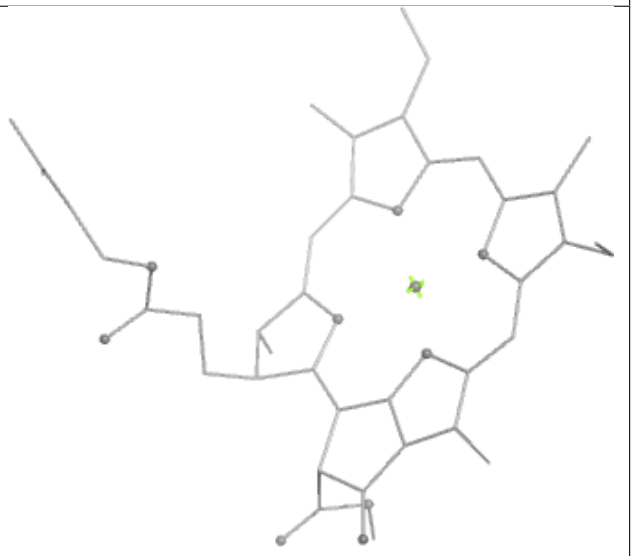
Bond lengths



Bond angles

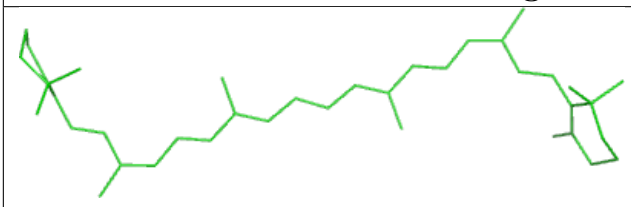


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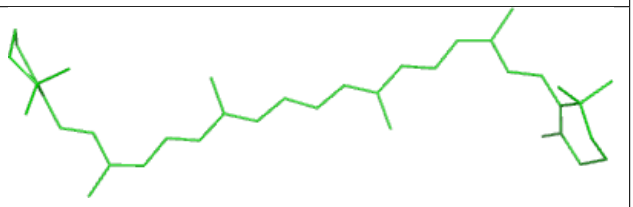


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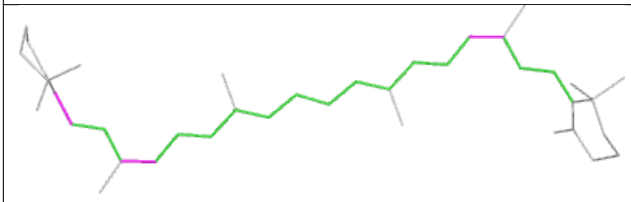
Ligand BCR B 843



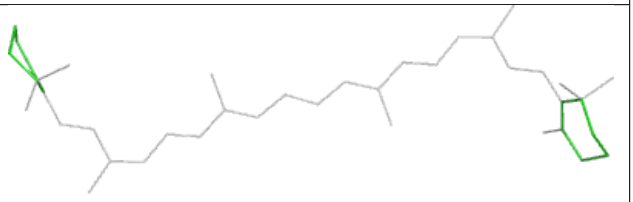
Bond lengths



Bond angles



Torsions

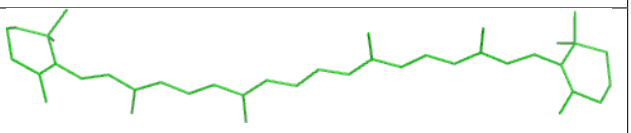


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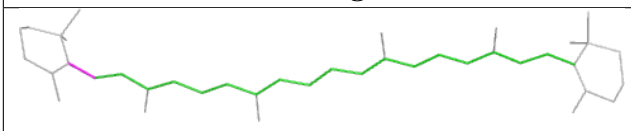
Ligand BCR L 306



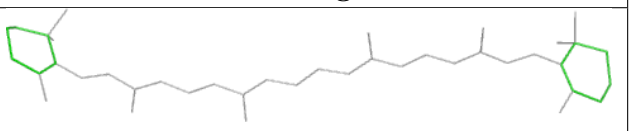
Bond lengths



Bond angles

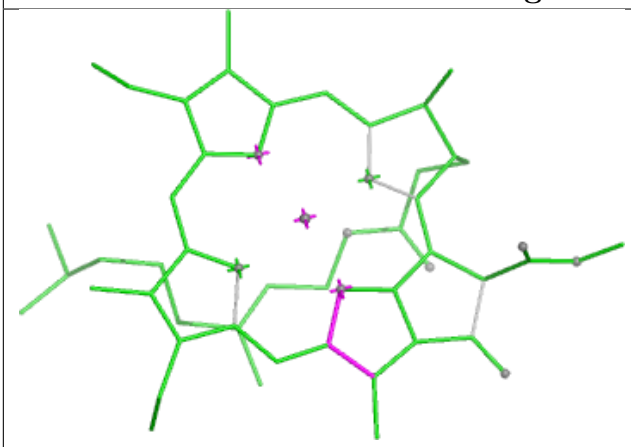


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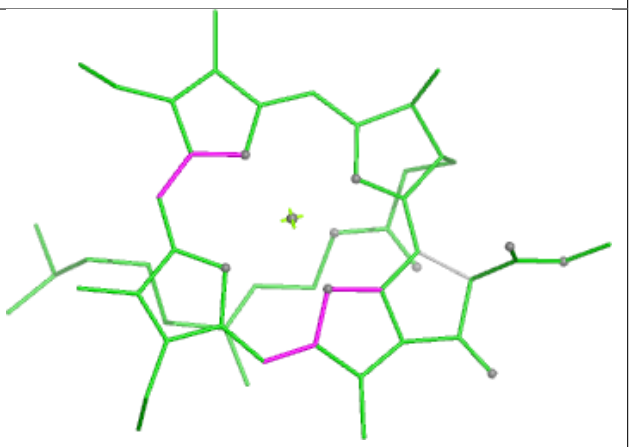


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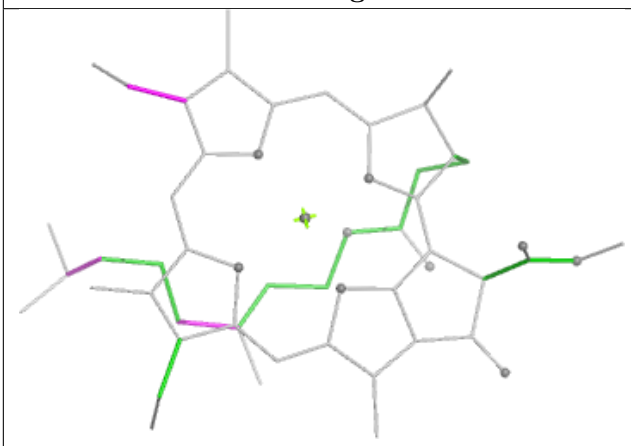
Ligand CLA B 817



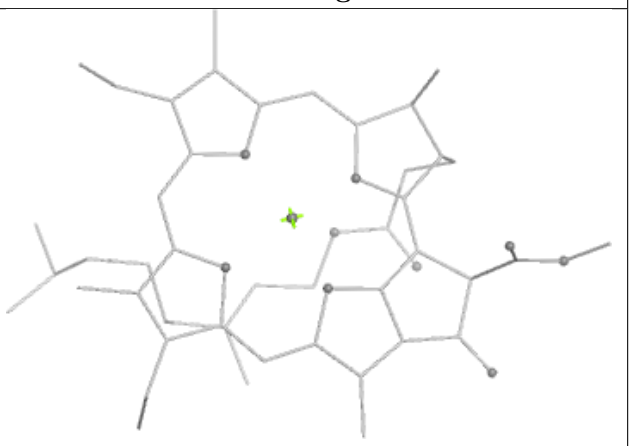
Bond lengths



Bond angles



Torsions

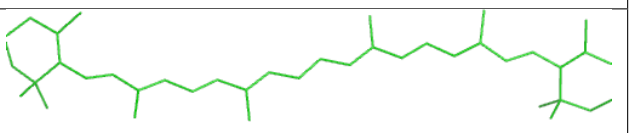


Rings

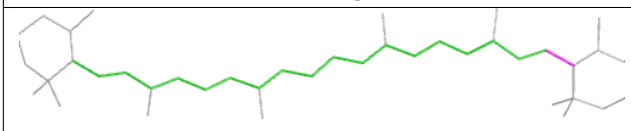
Ligand BCR L 305



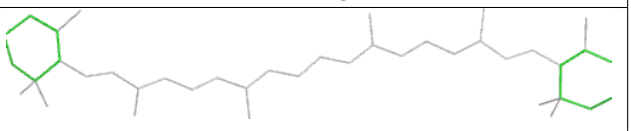
Bond lengths



Bond angles

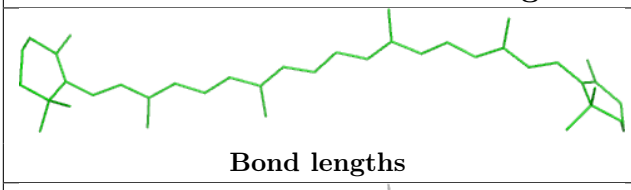


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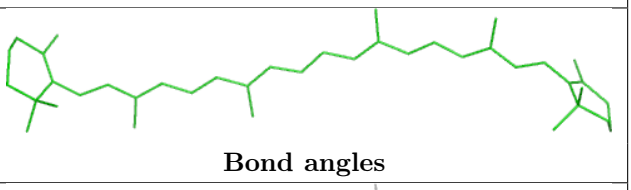


Rings

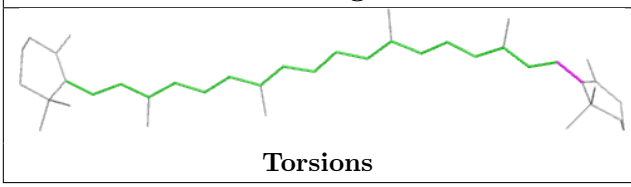
Ligand BCR G 106



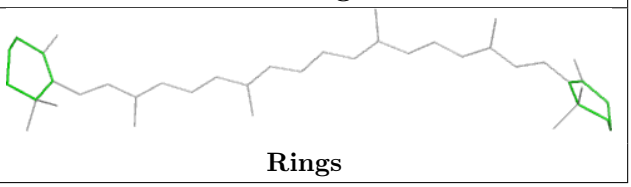
Bond lengths



Bond angles

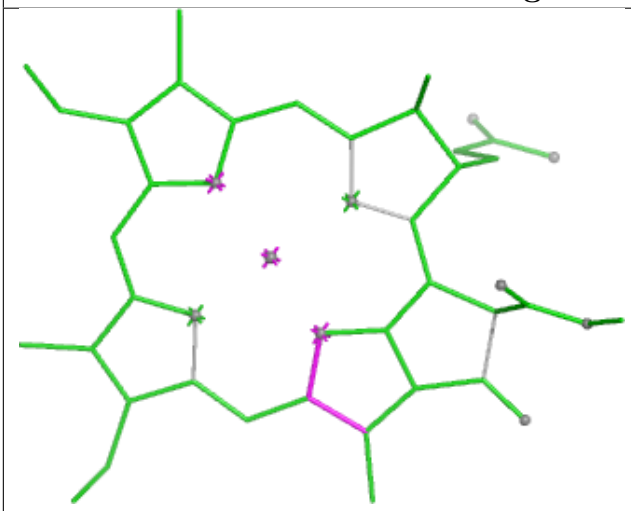


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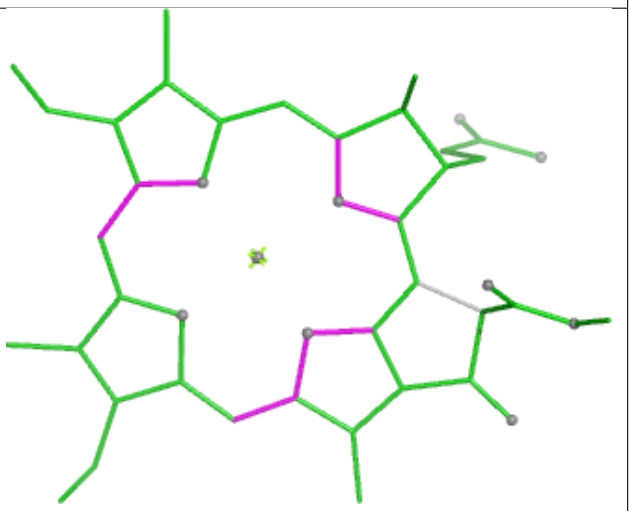


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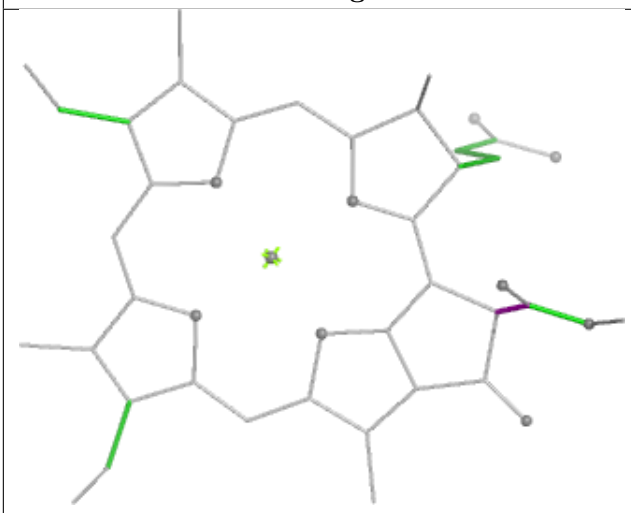
Ligand CLA A 815



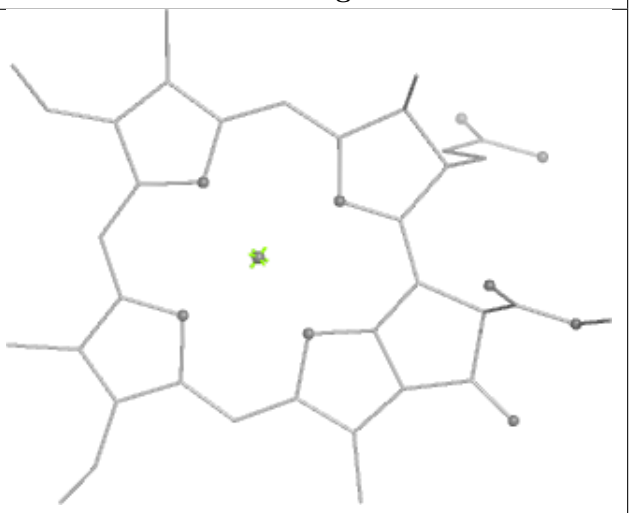
Bond lengths



Bond angles

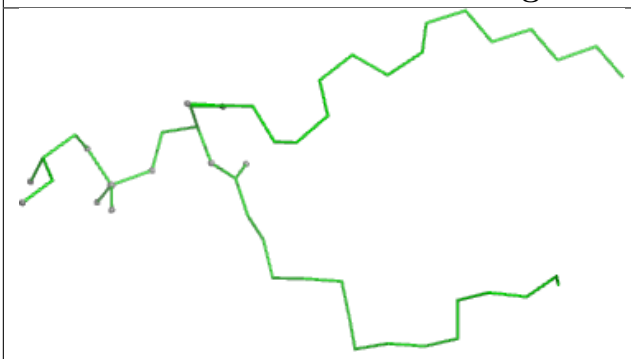


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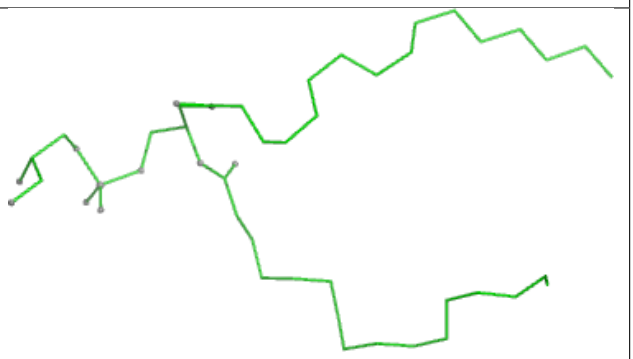


Rings

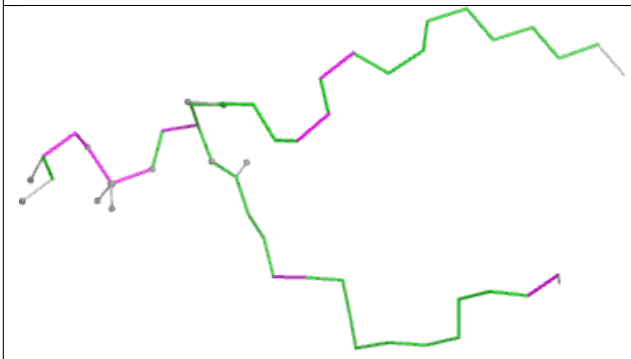
Ligand LHG A 843



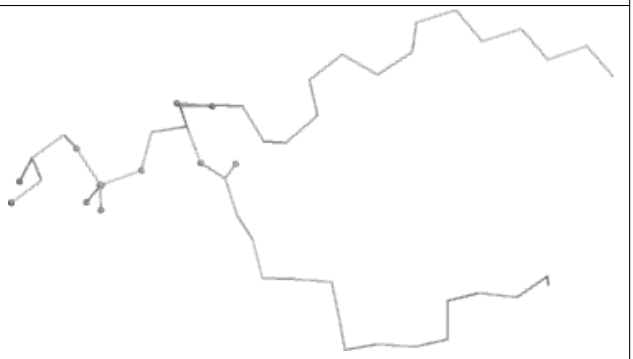
Bond lengths



Bond angles

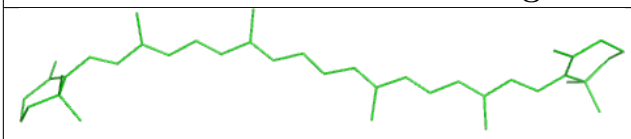


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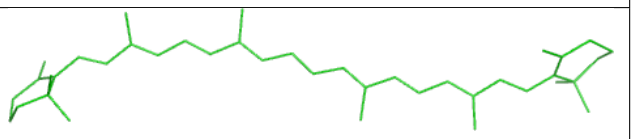


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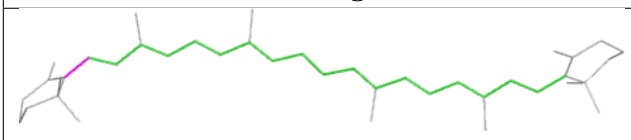
Ligand BCR B 844



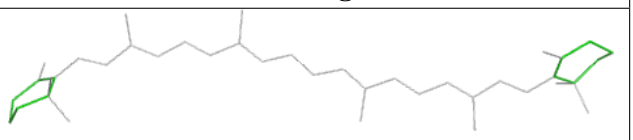
Bond lengths



Bond angles

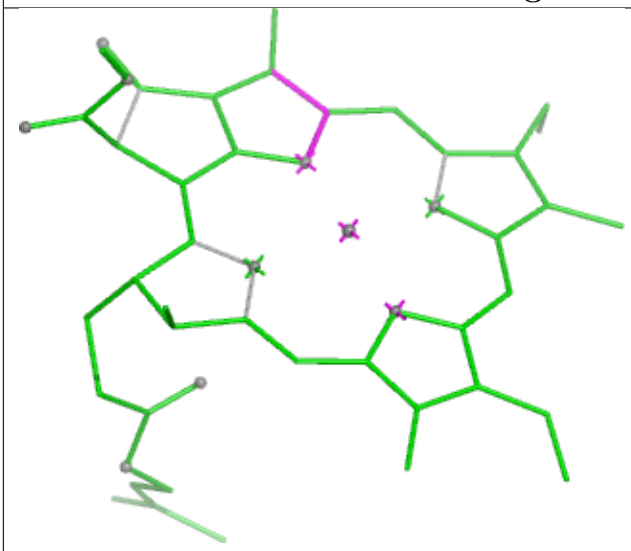


Torsions

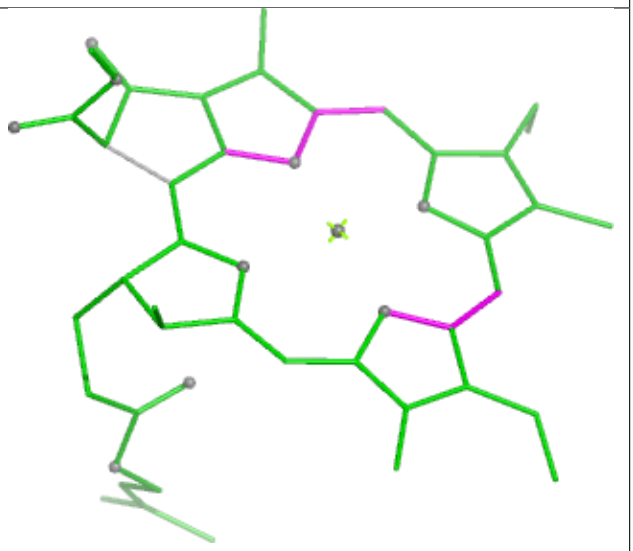


Rings

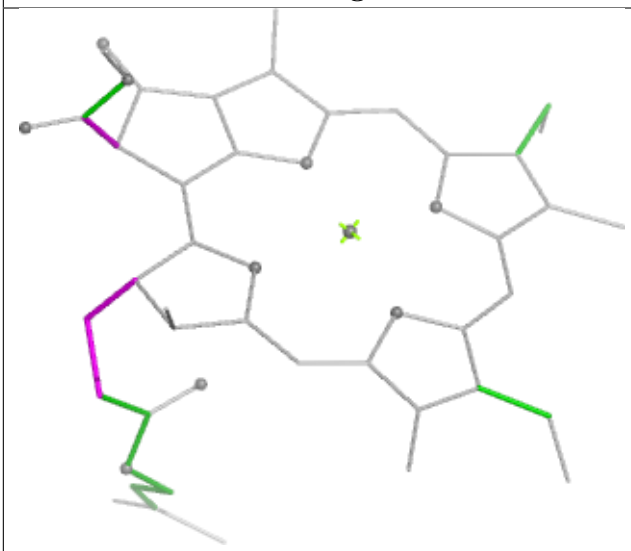
Ligand CLA B 831



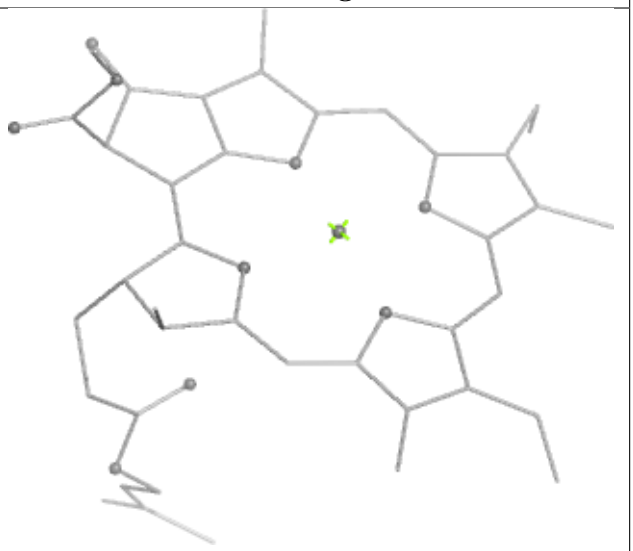
Bond lengths



Bond angles

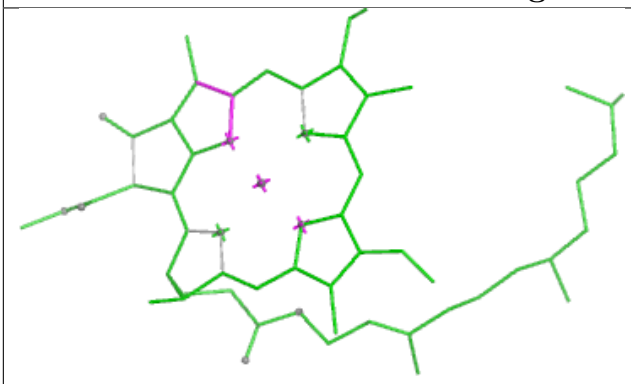


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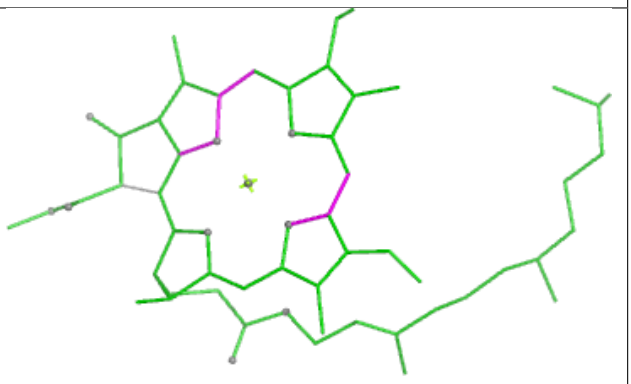


Rings

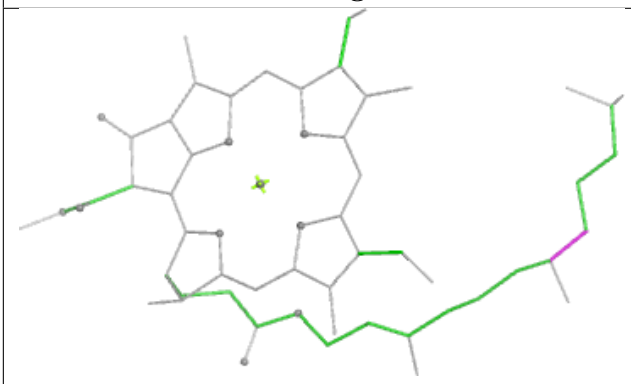
Ligand CLA 1 209



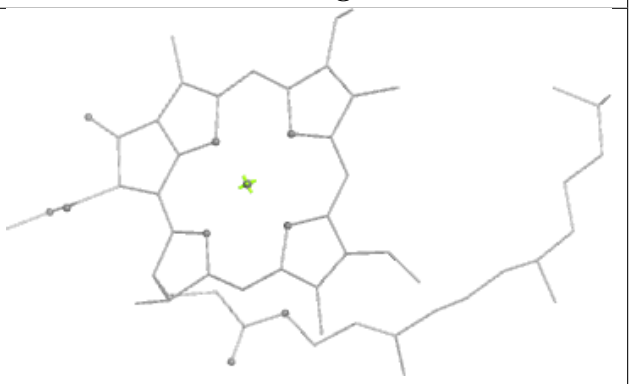
Bond lengths



Bond angles

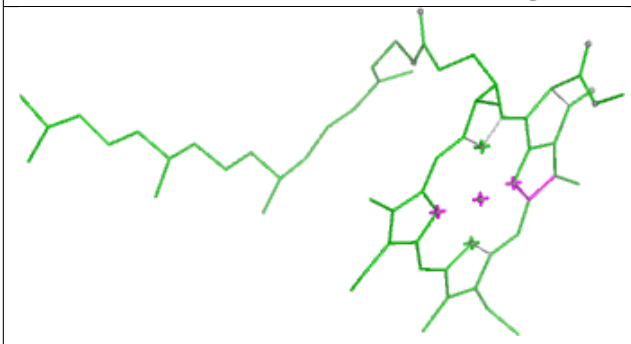


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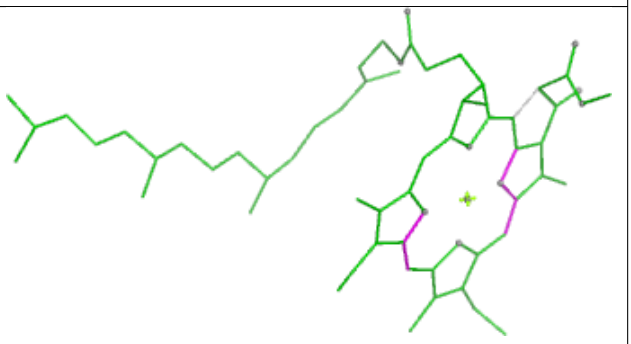


Rings

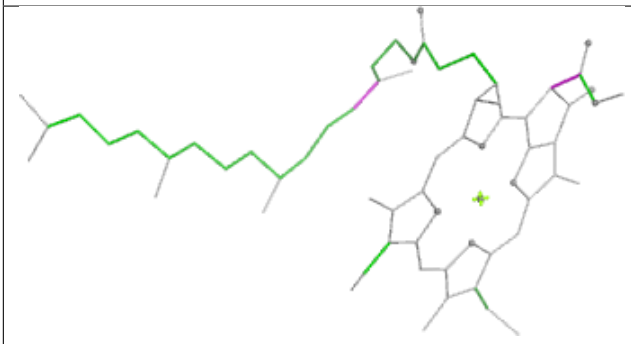
Ligand CLA B 815



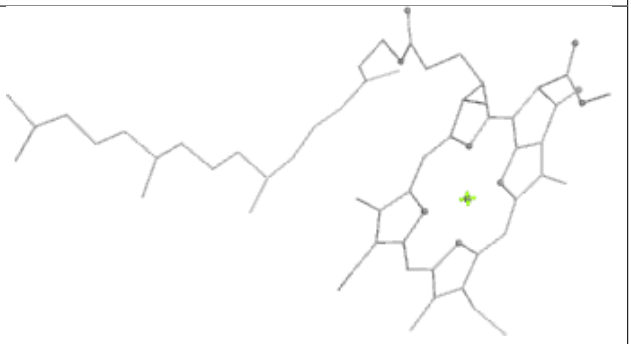
Bond lengths



Bond angles

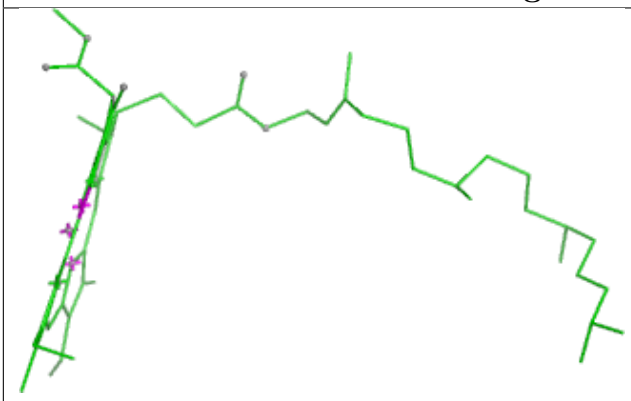


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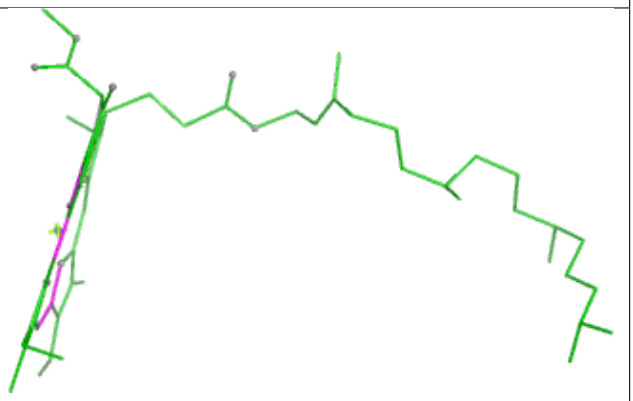


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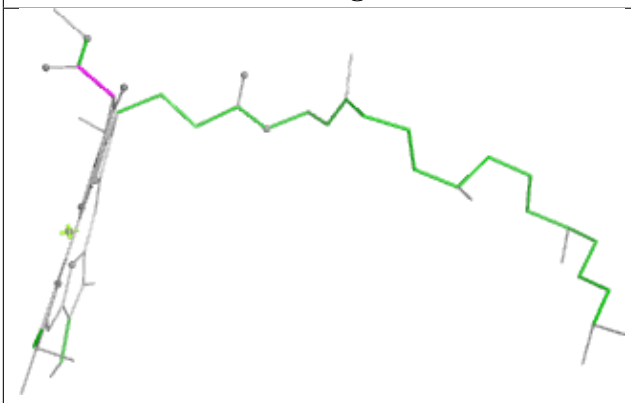
Ligand CLA A 838



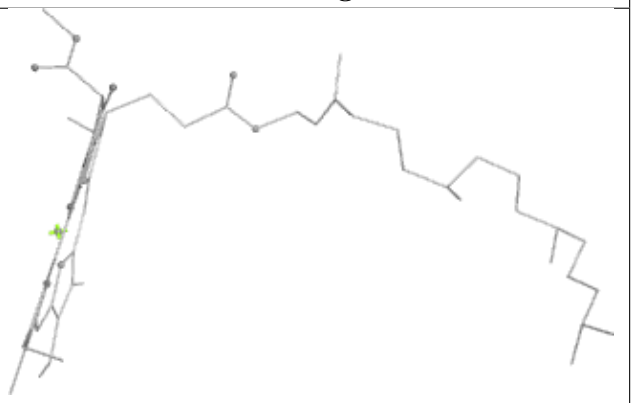
Bond lengths



Bond angles

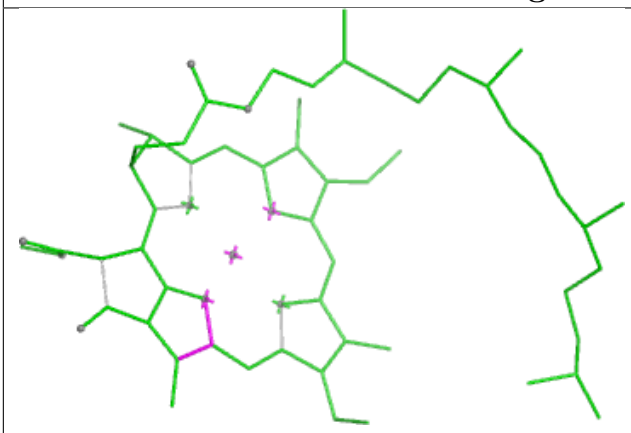


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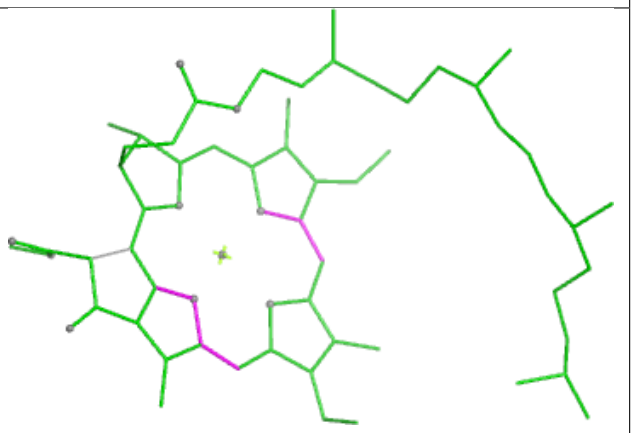


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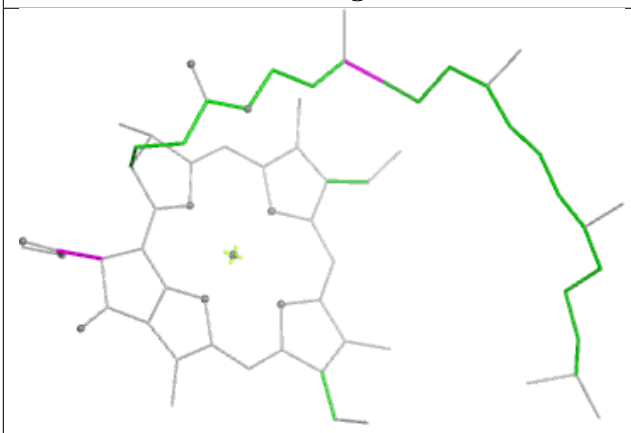
Ligand CLA 1 202



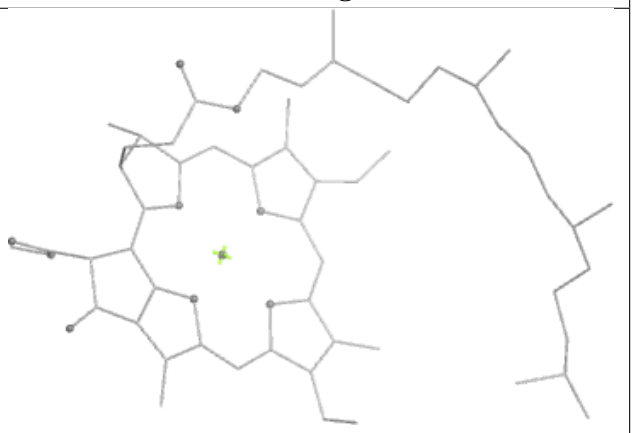
Bond lengths



Bond angles

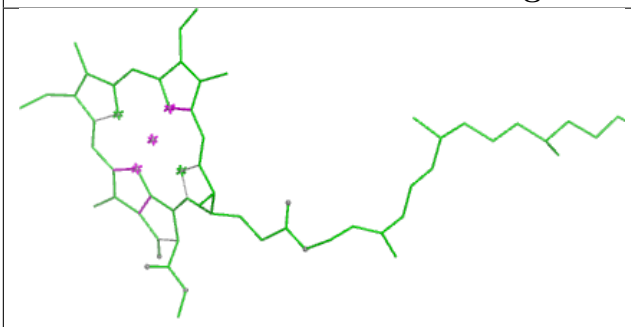


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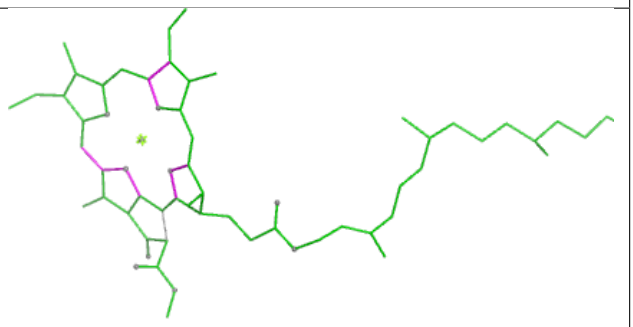


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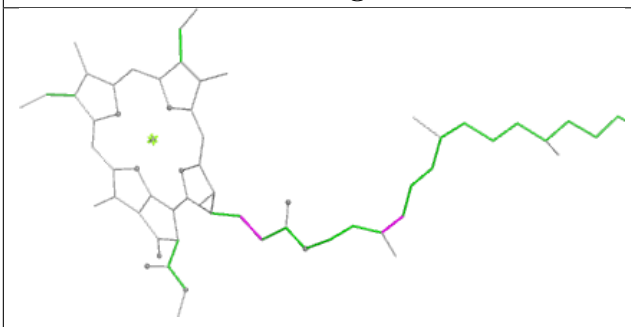
Ligand CLA A 852



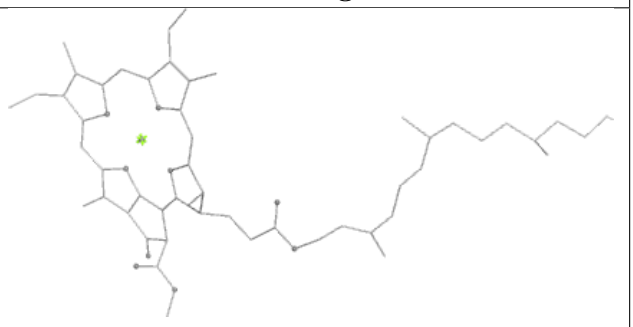
Bond lengths



Bond angles

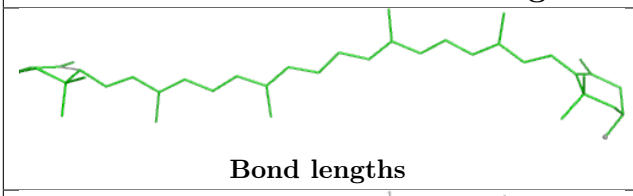


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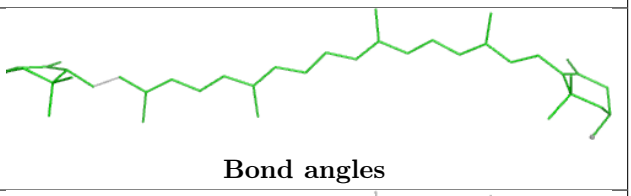


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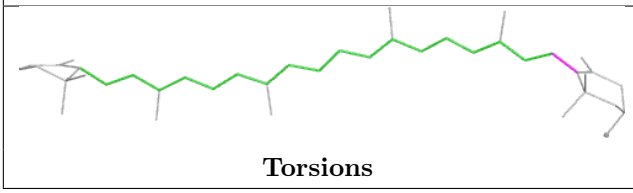
Ligand LUT 3 315



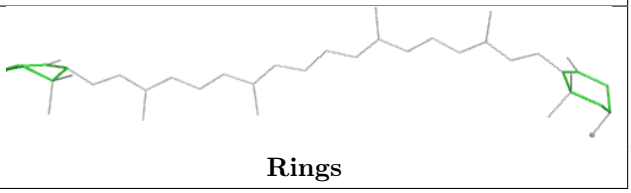
Bond lengths



Bond angles

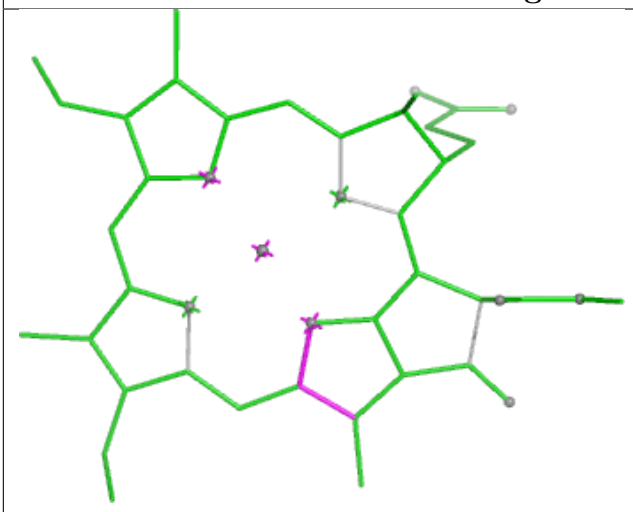


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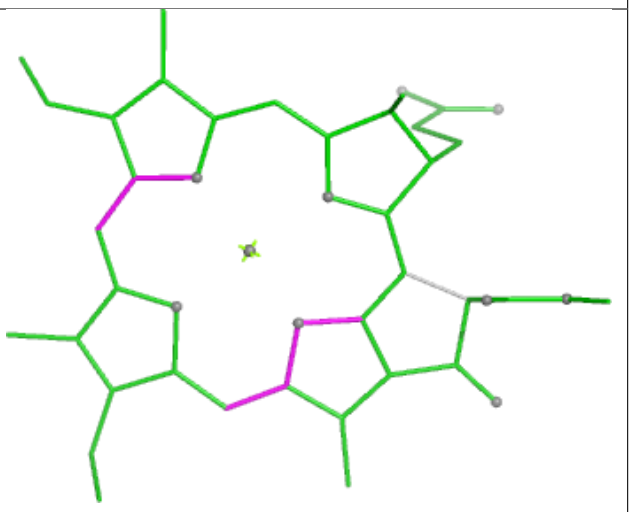


Rings

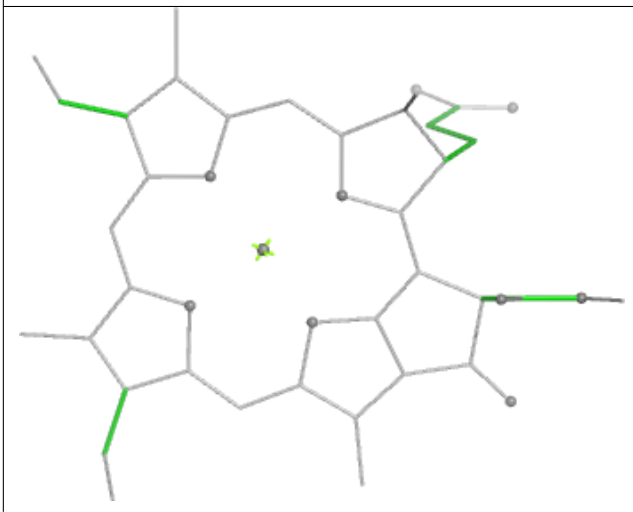
Ligand CLA B 834



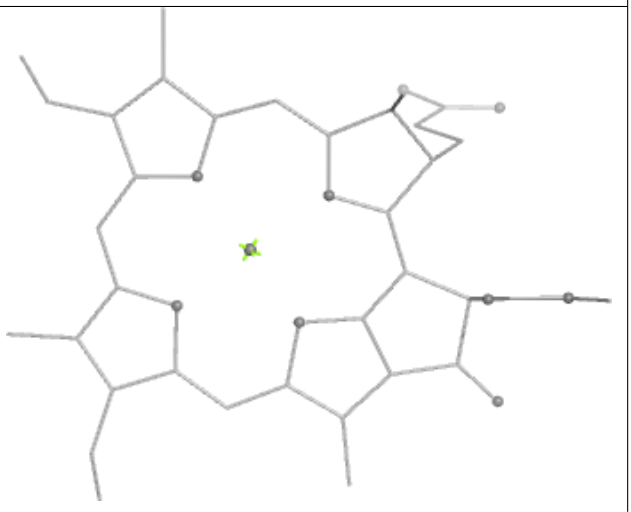
Bond lengths



Bond angles

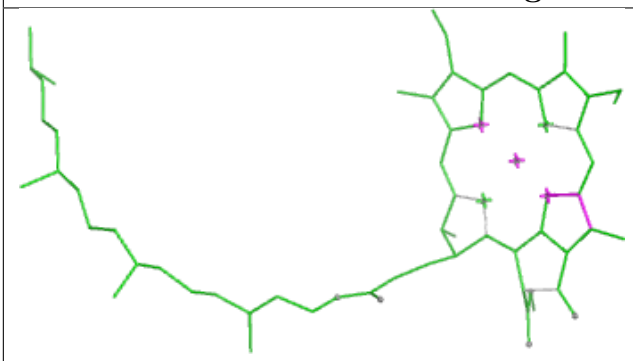


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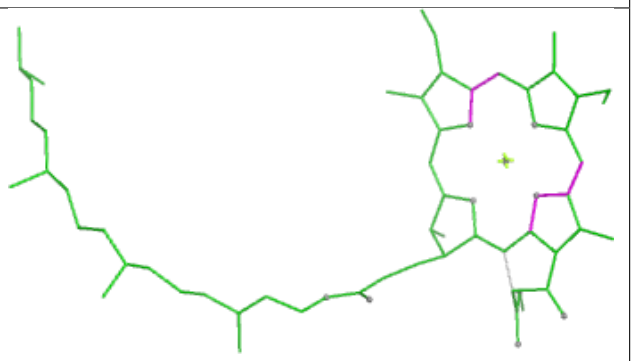


Rings

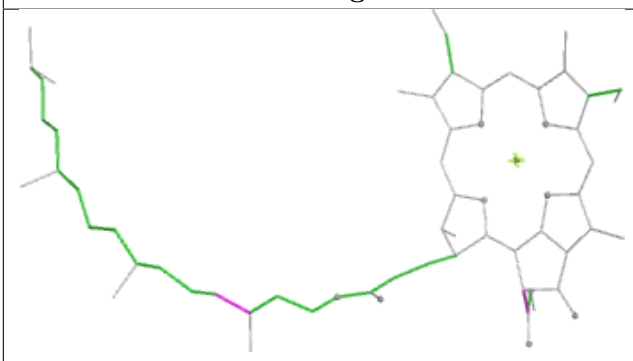
Ligand CLA B 826



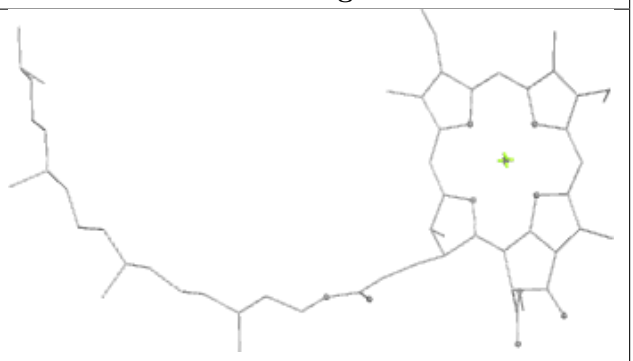
Bond lengths



Bond angles

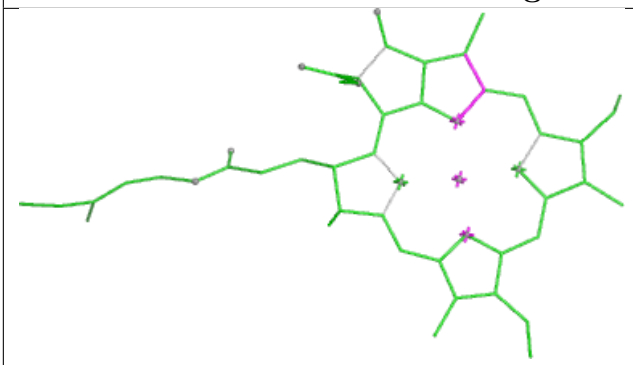


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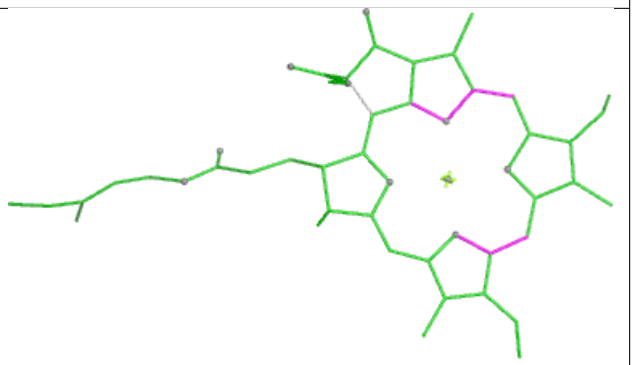


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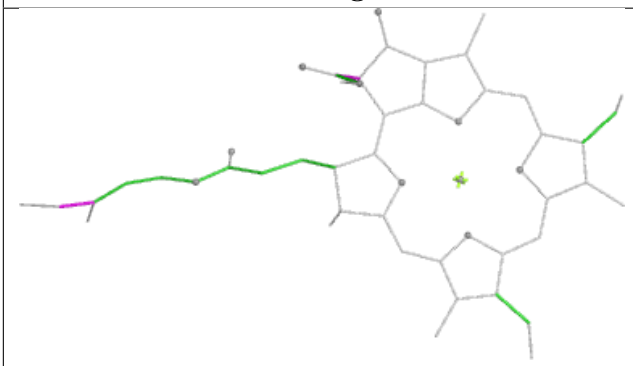
Ligand CLA A 836



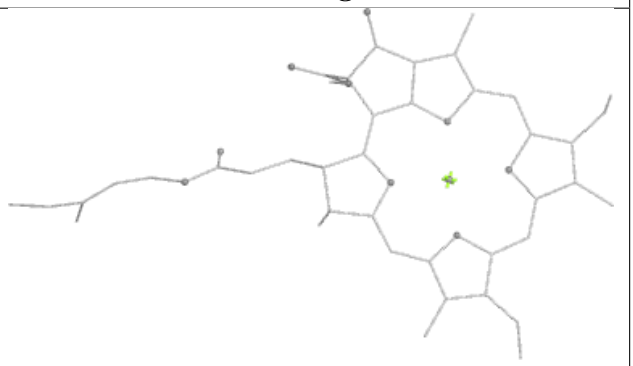
Bond lengths



Bond angles

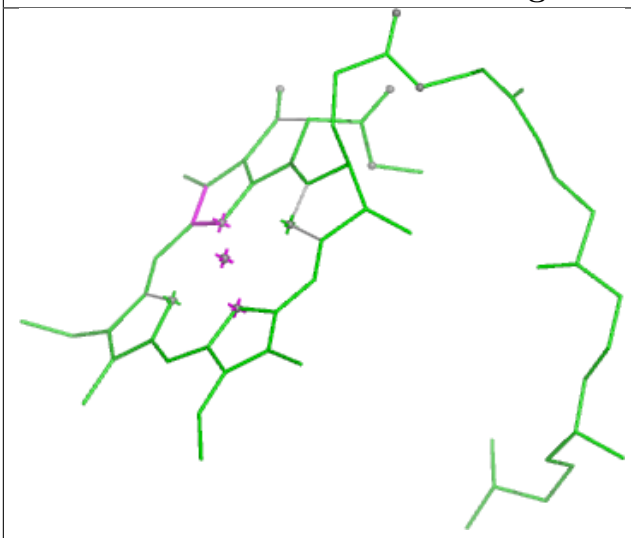


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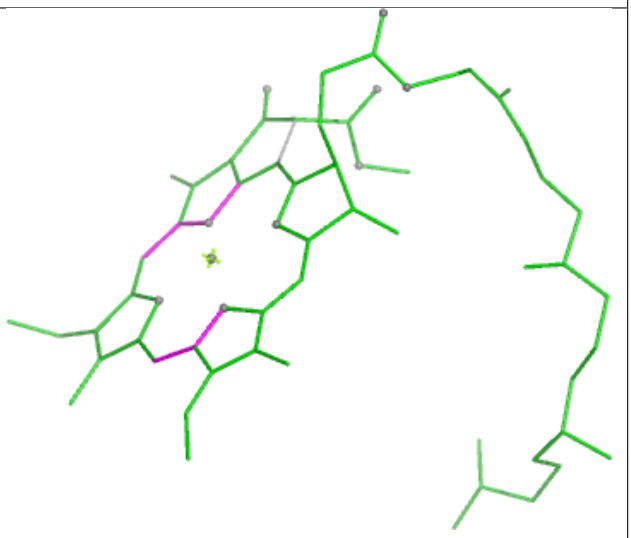


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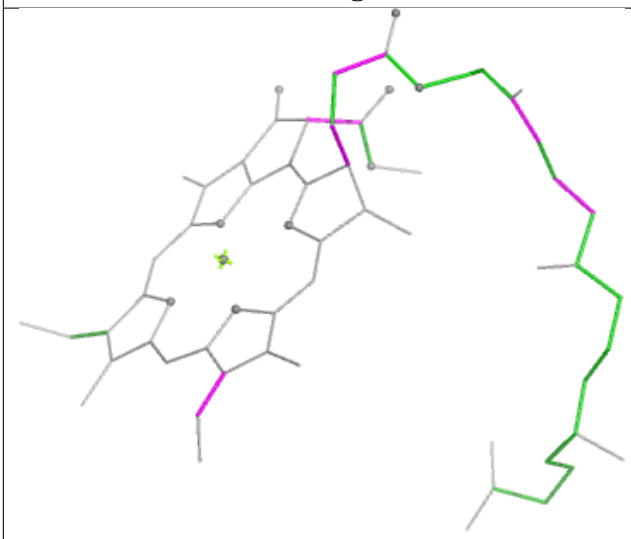
Ligand CLA 1 203



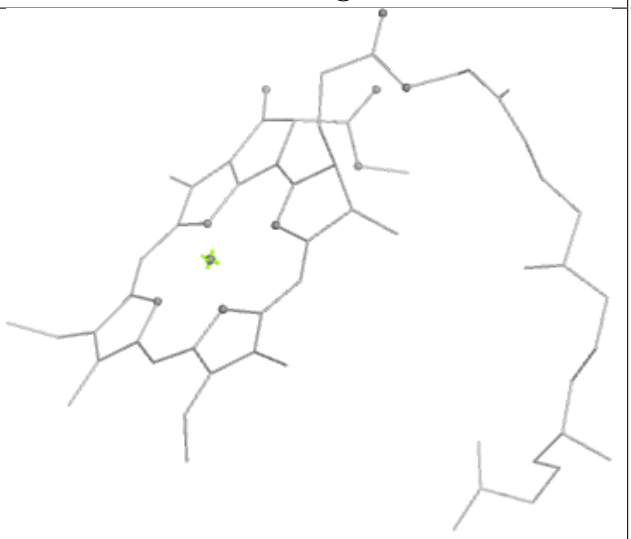
Bond lengths



Bond angles



Torsions



Rings

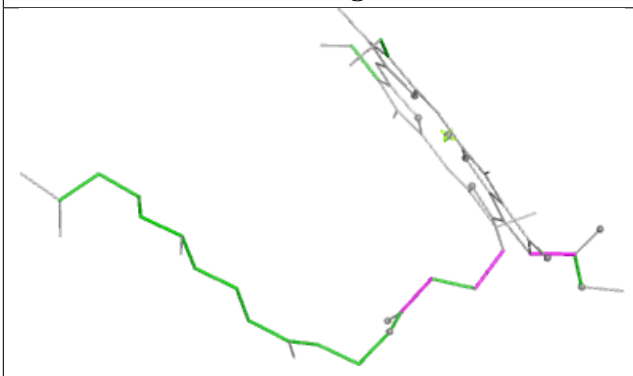
Ligand CLA 2 304



Bond lengths



Bond angles

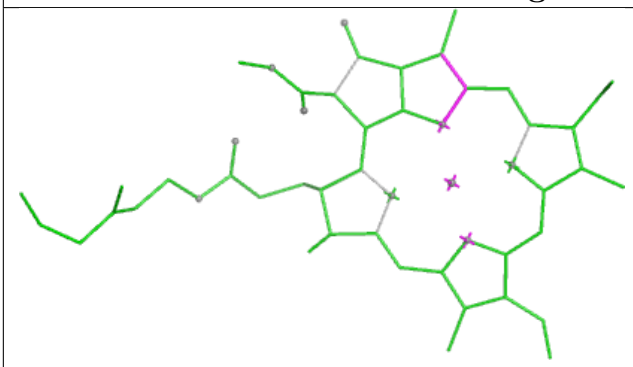


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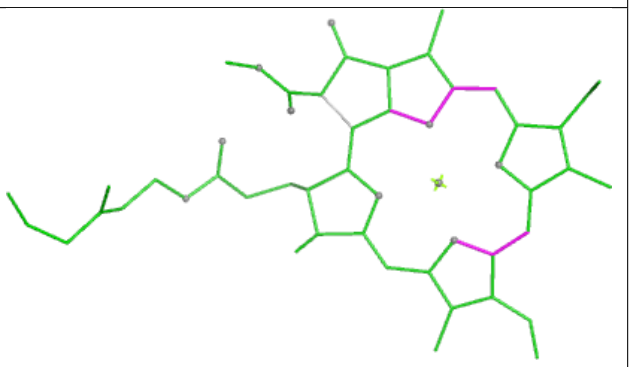


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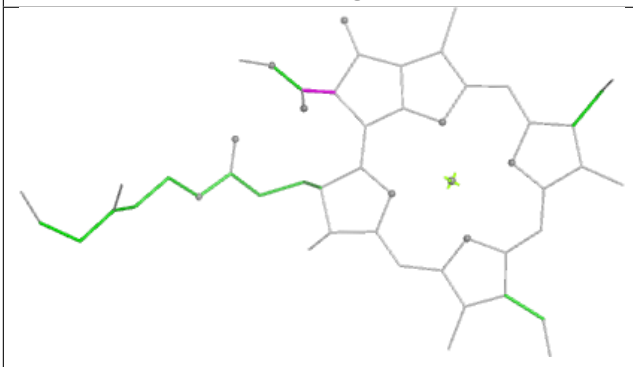
Ligand CLA 1 205



Bond lengths



Bond angles

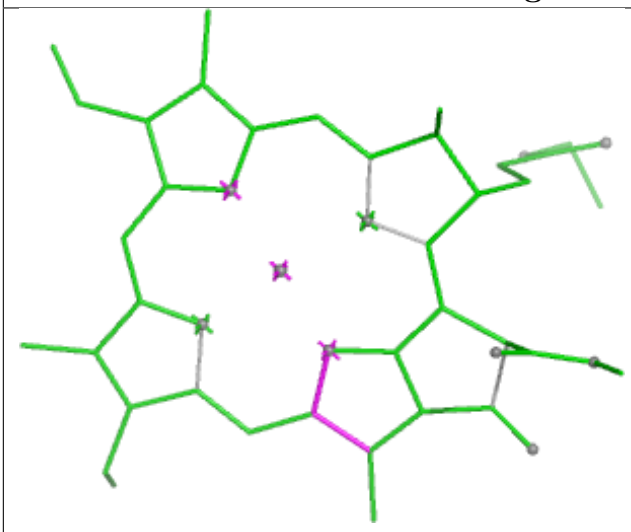


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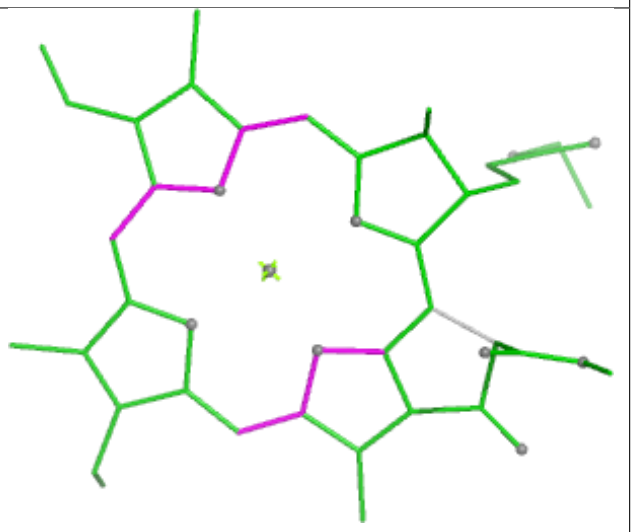


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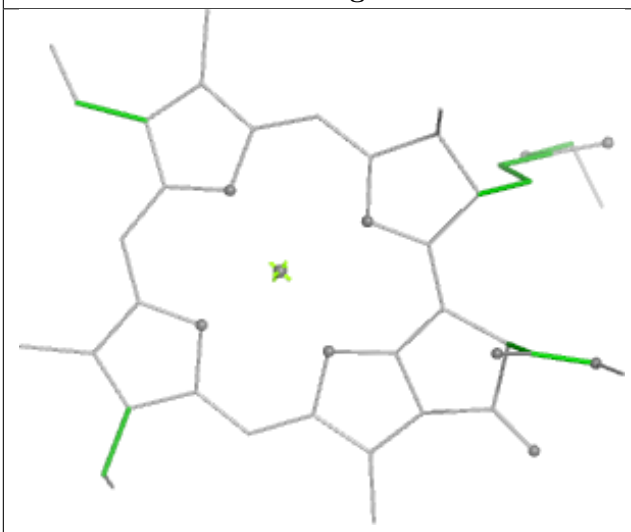
Ligand CLA B 837



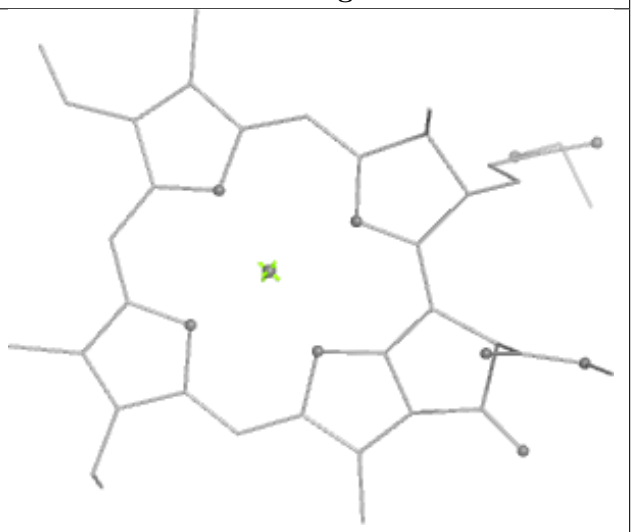
Bond lengths



Bond angles

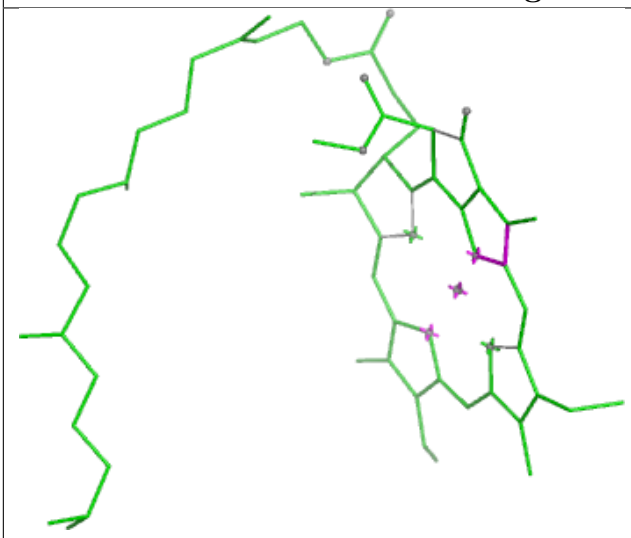


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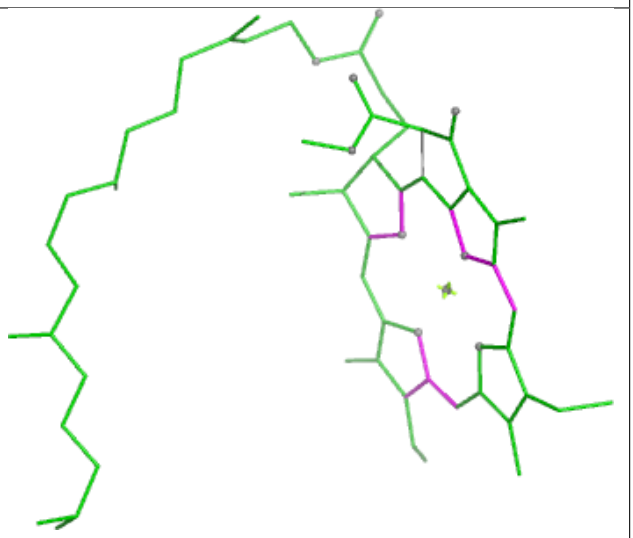


Rings

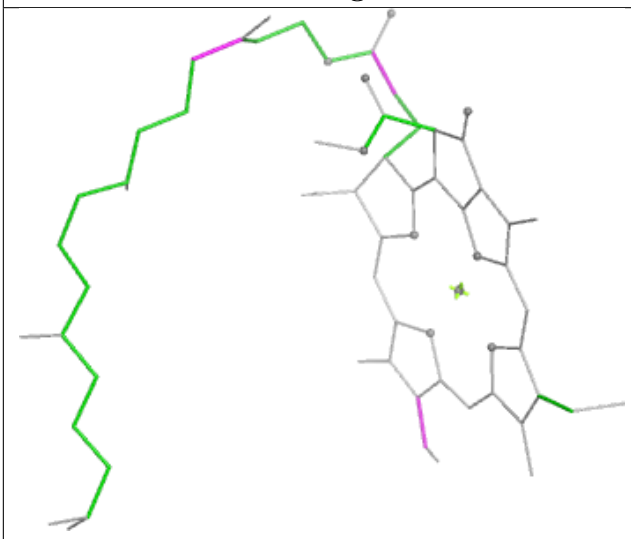
Ligand CLA B 811



Bond lengths



Bond angles

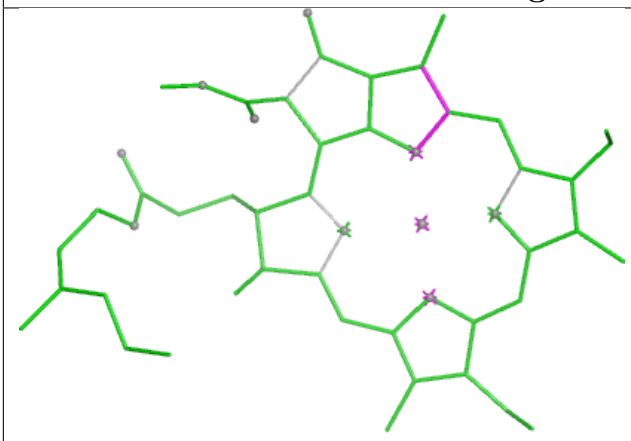


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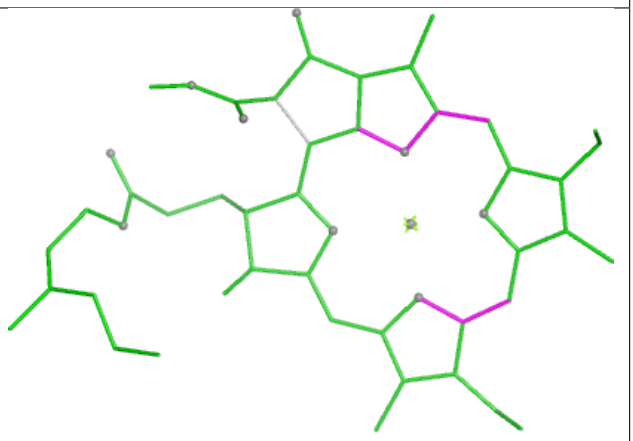


Rings

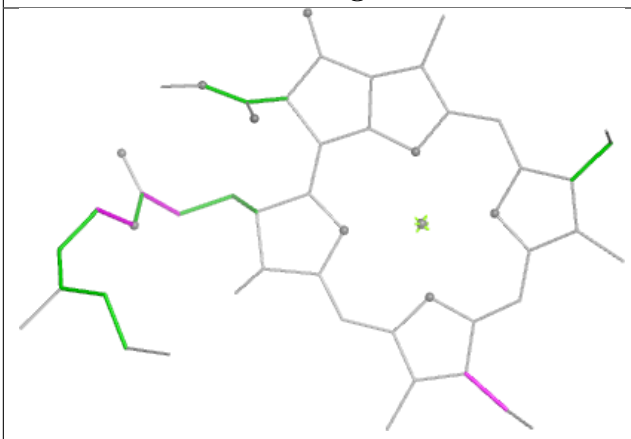
Ligand CLA 4 311



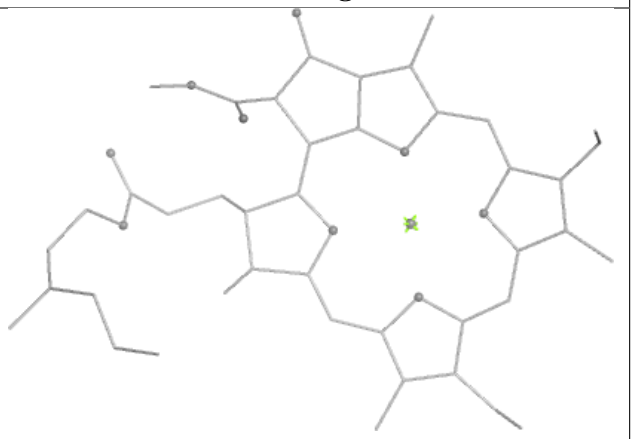
Bond lengths



Bond angles

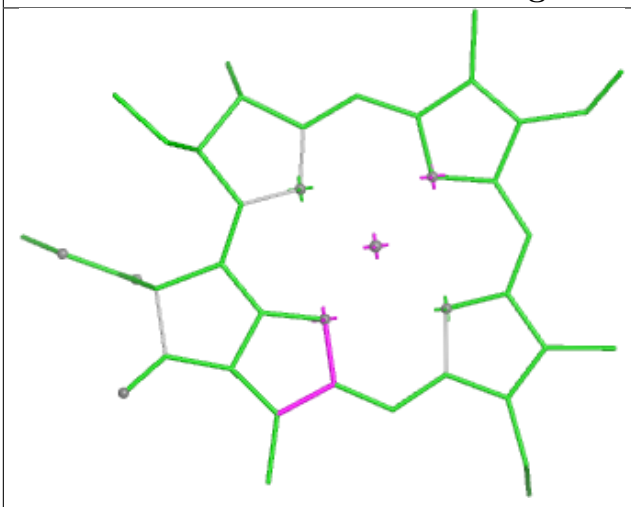


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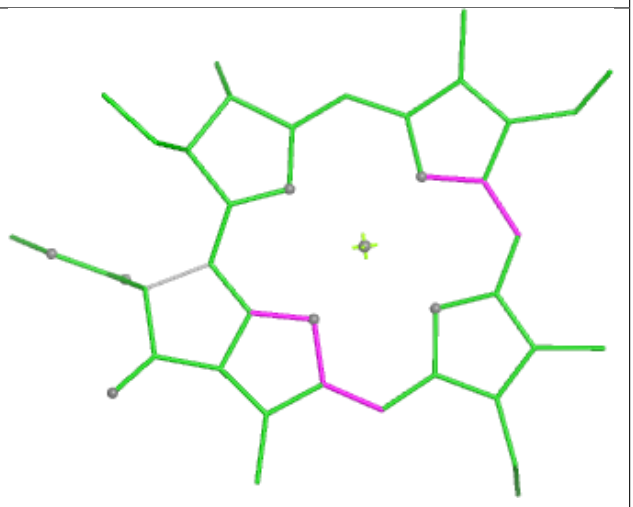


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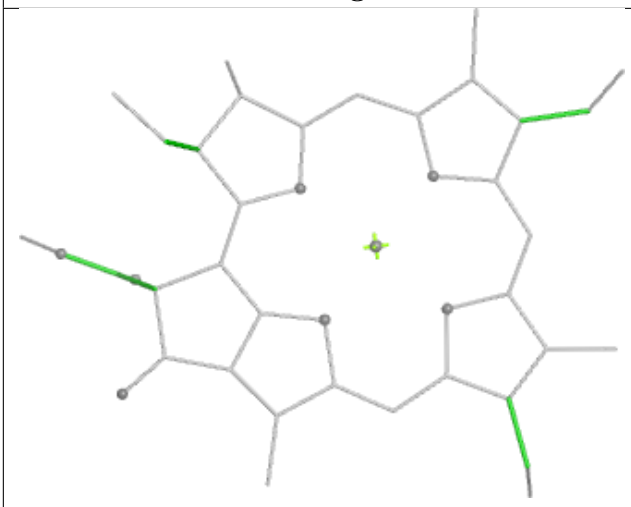
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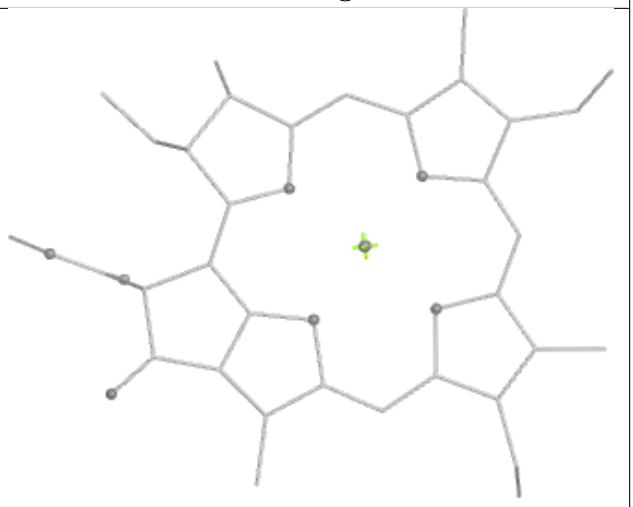
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Bond angles

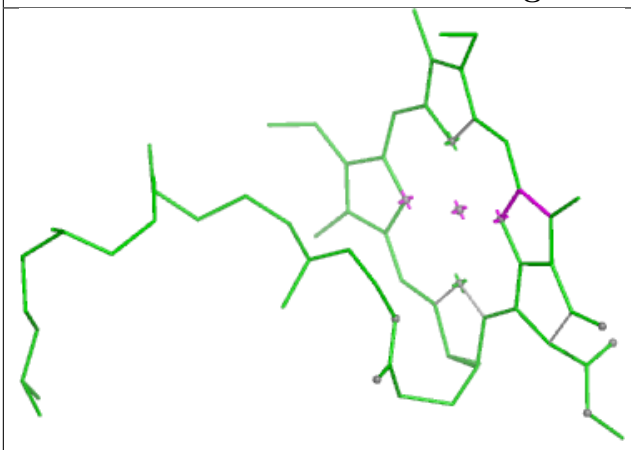


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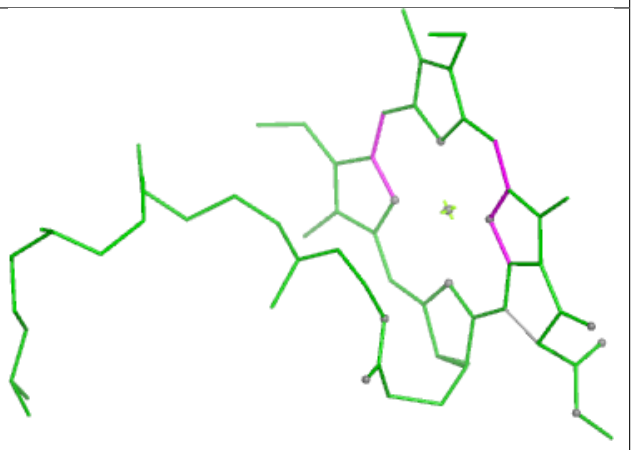


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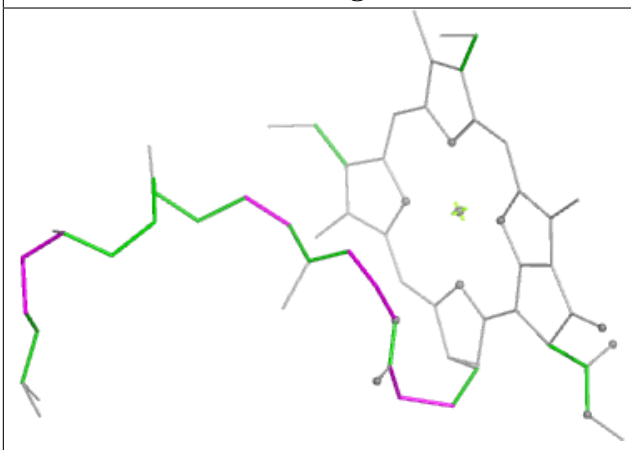
Ligand CLA A 841



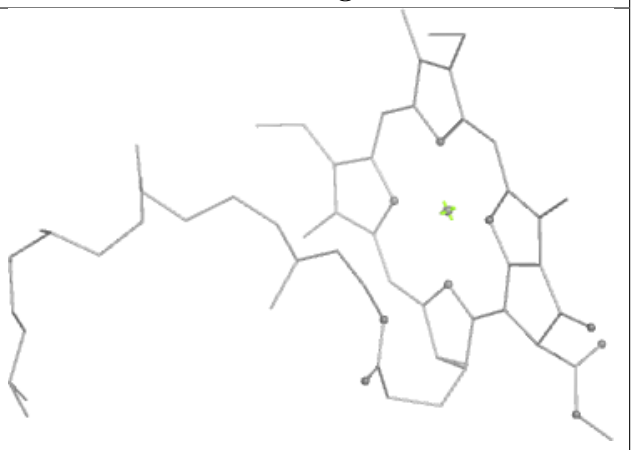
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Bond angles

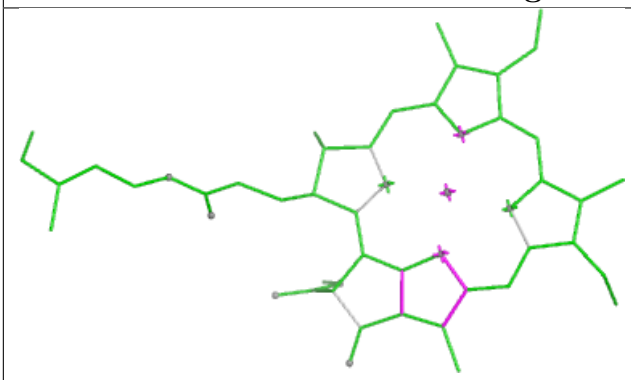


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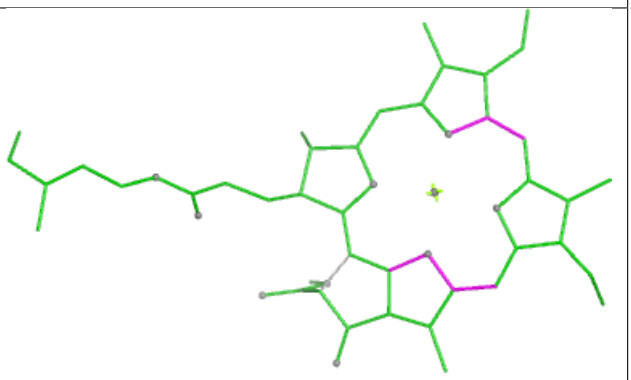


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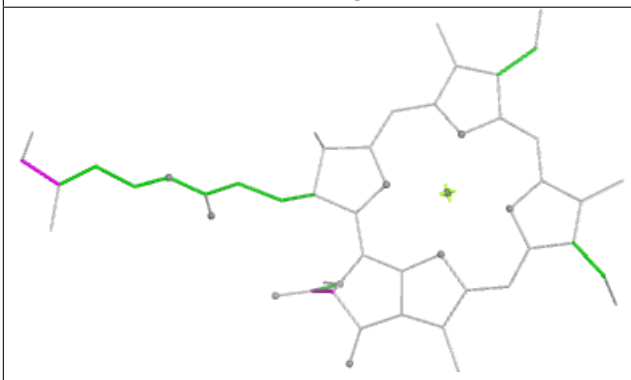
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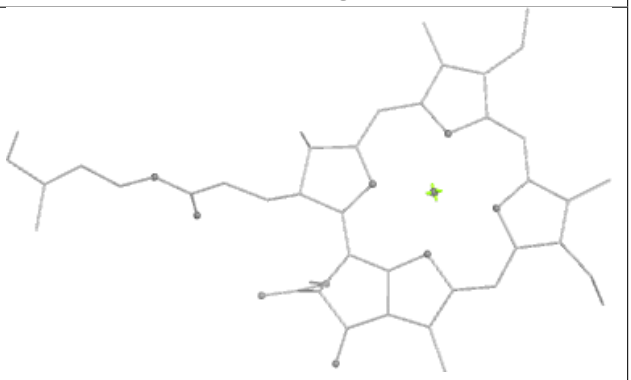
Bond lengths



Bond angles



Torsions



Rings

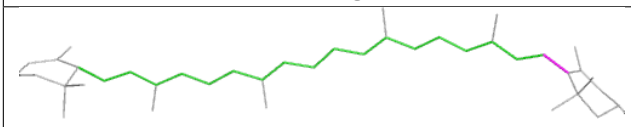
Ligand LUT 4 316



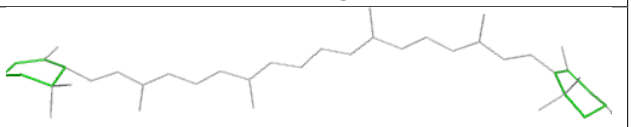
Bond lengths



Bond angles

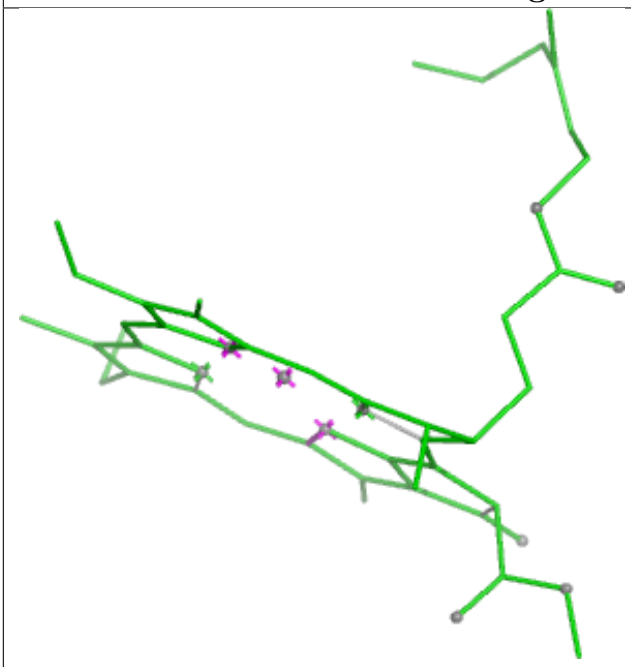


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Rings

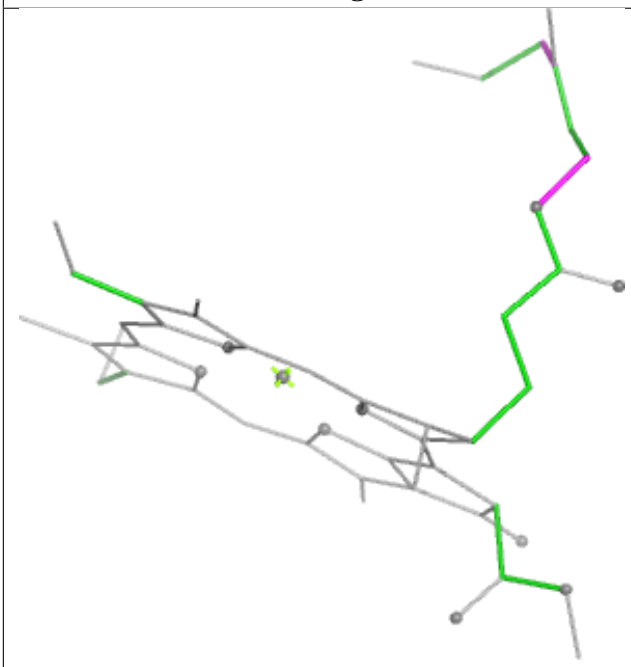
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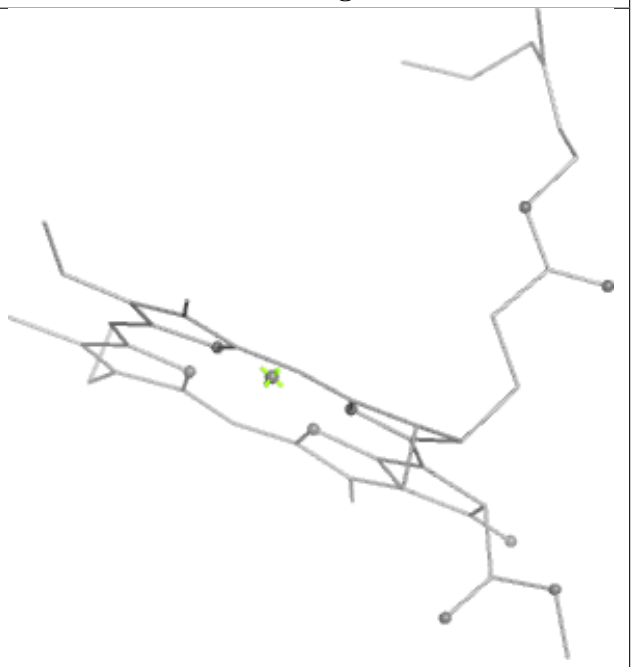
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Bond angles

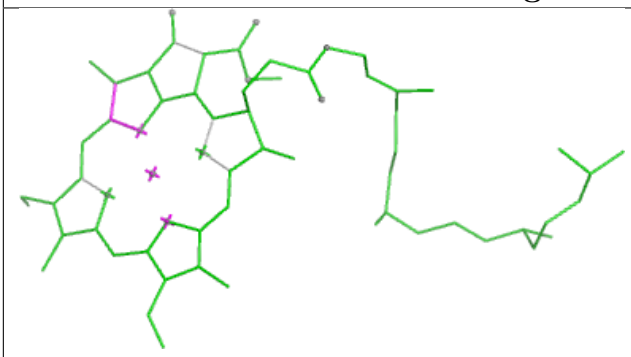


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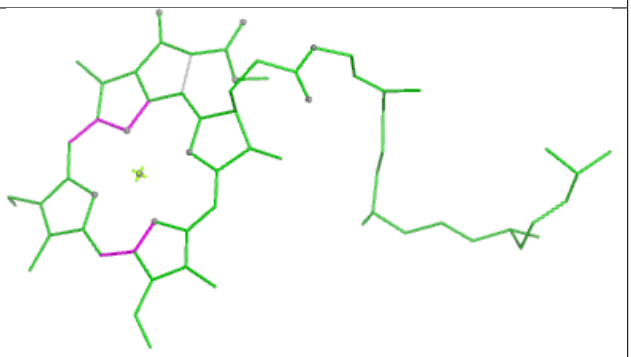


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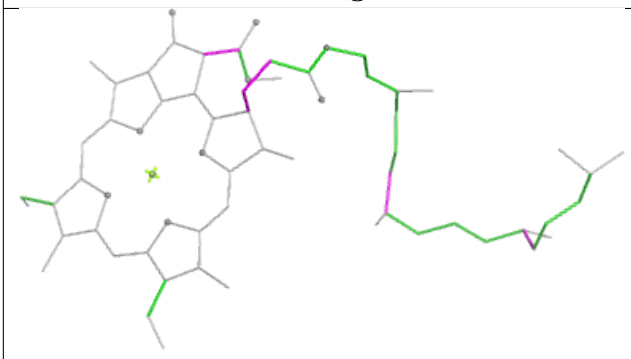
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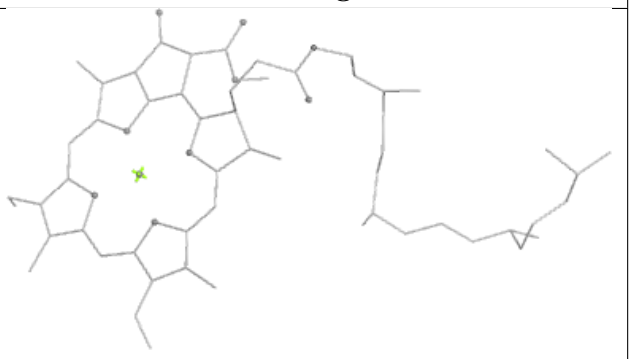
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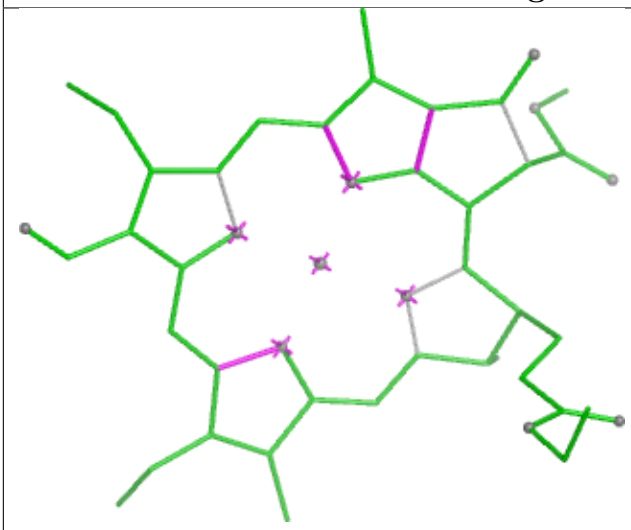


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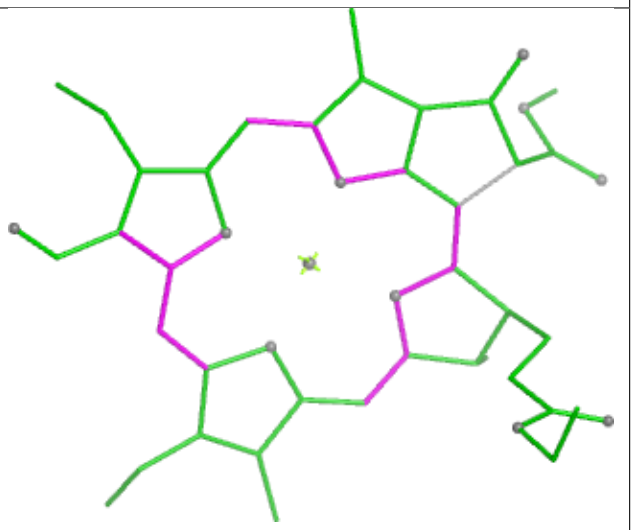


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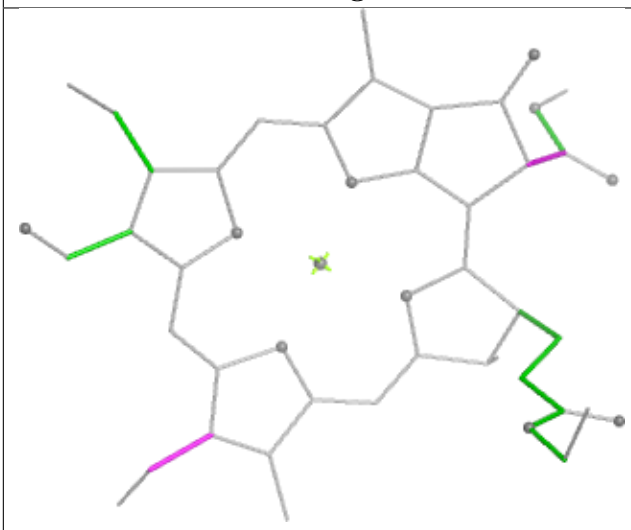
Ligand CHL 1 206



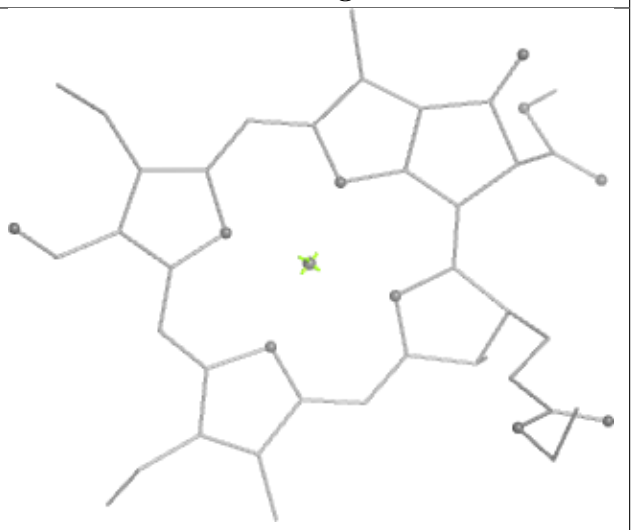
Bond lengths



Bond angles

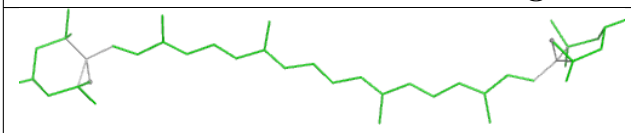


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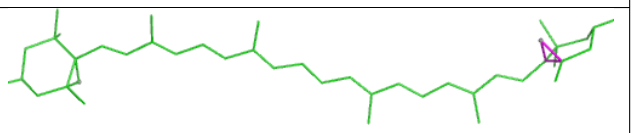


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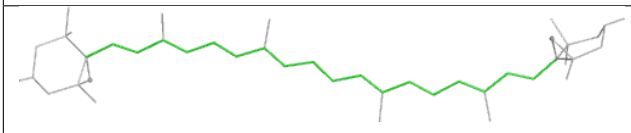
Ligand XAT 4 317



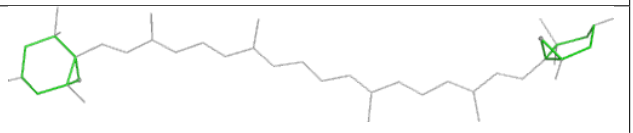
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Bond angles

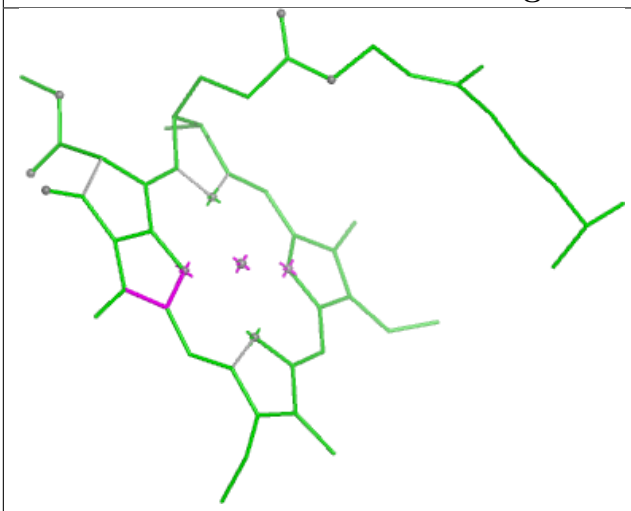


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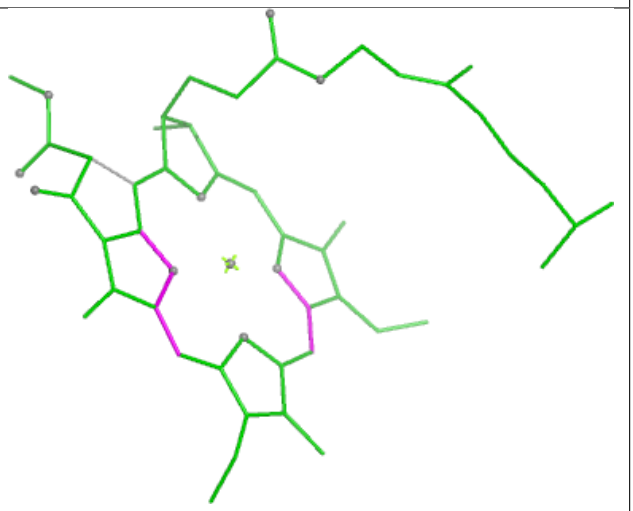


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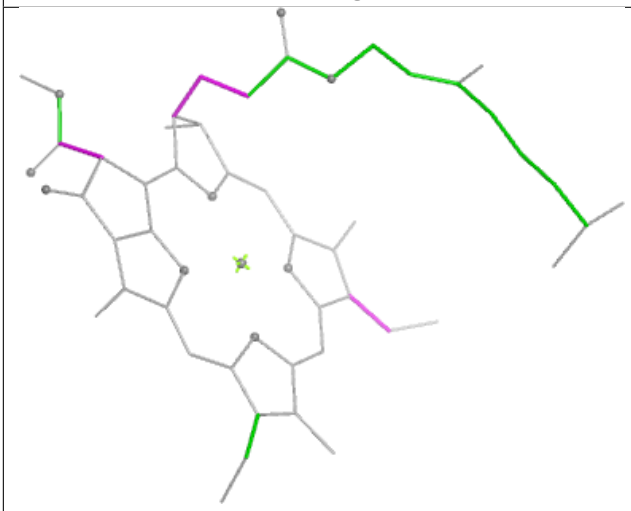
Ligand CLA A 823



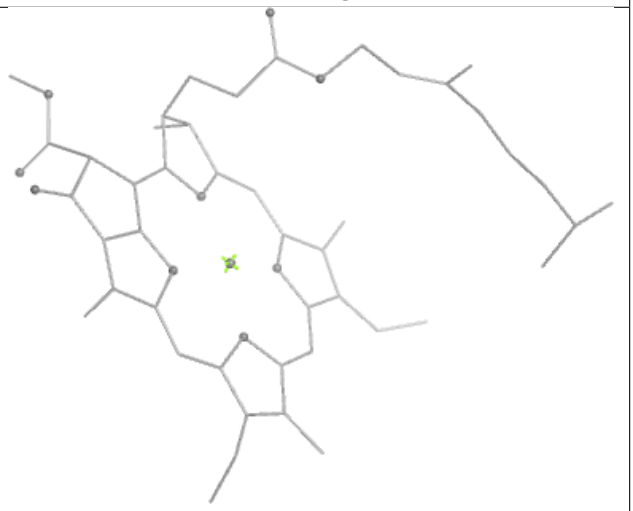
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Bond angles

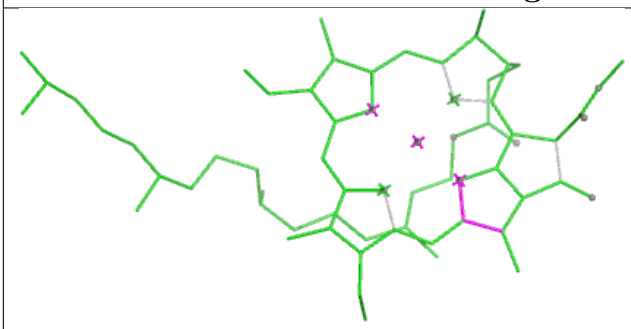


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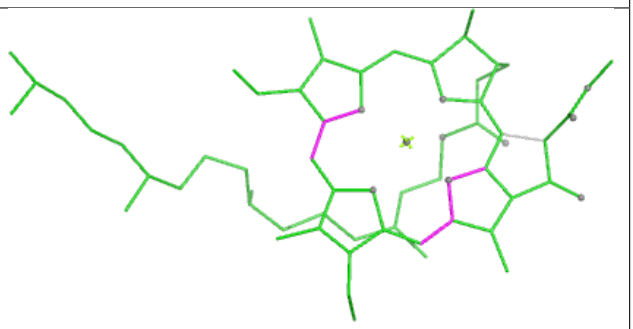


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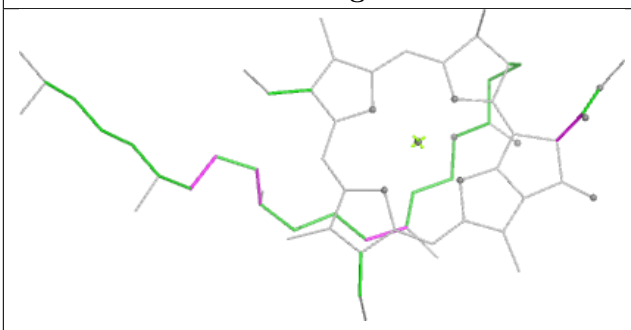
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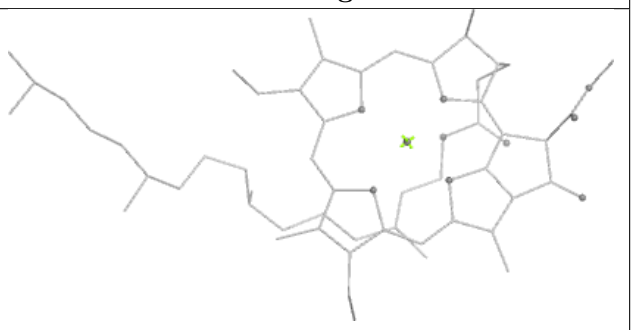
Bond lengths



Bond angles

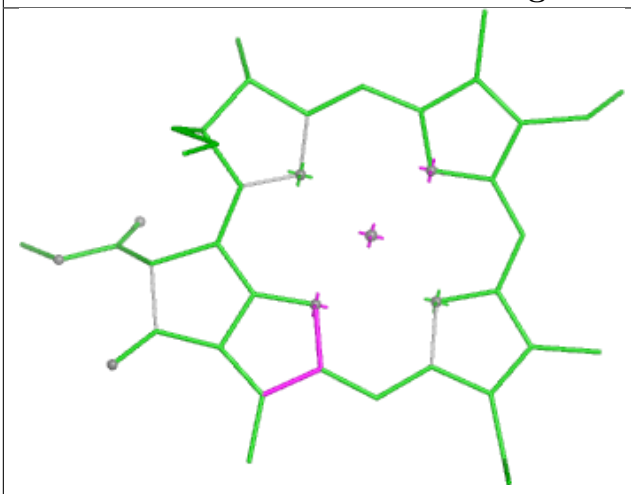


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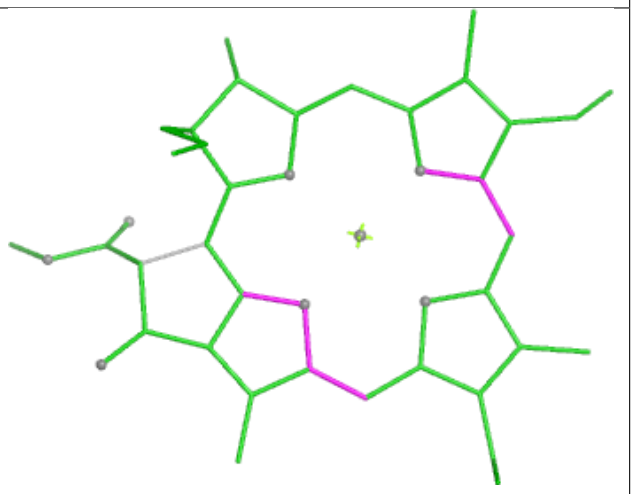


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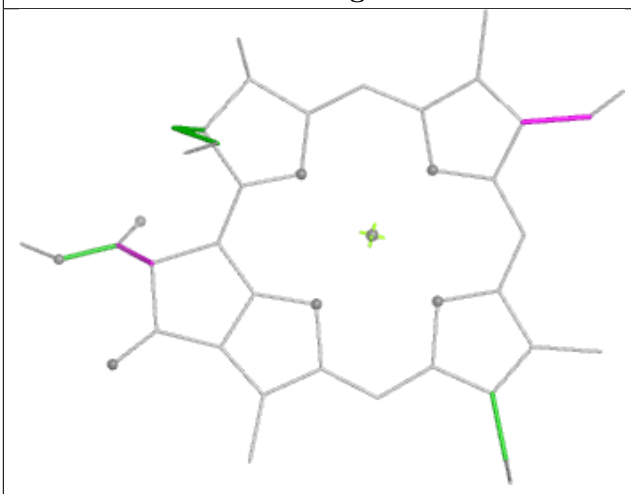
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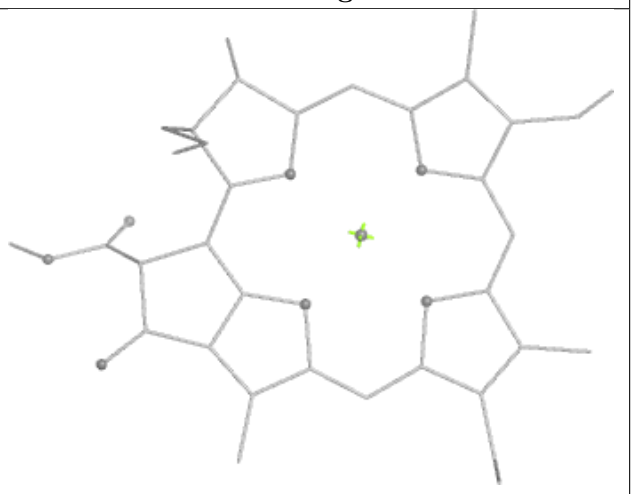
Bond lengths



Bond angles

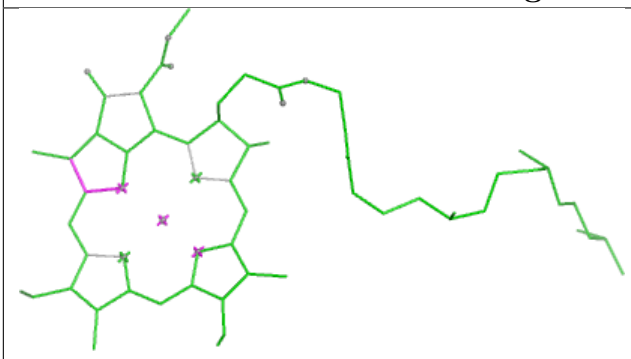


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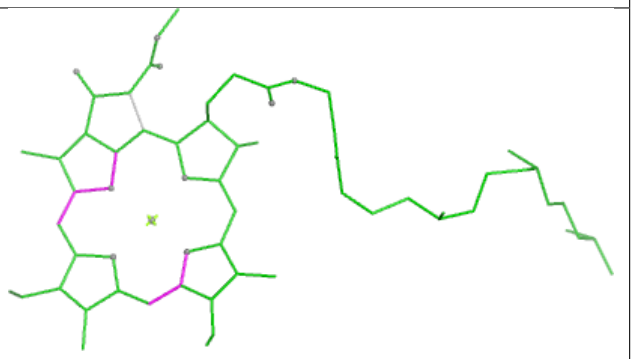


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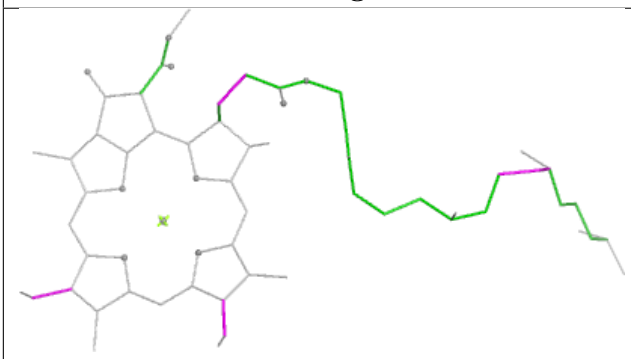
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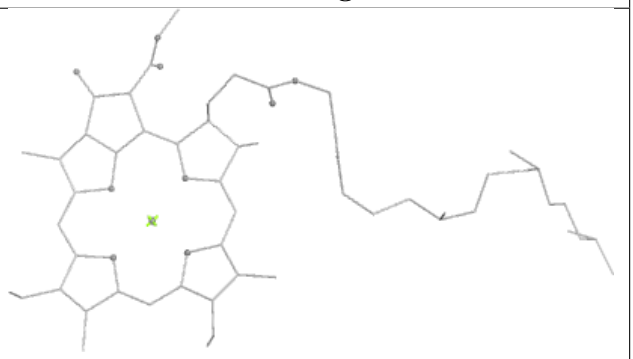
Bond lengths



Bond angles

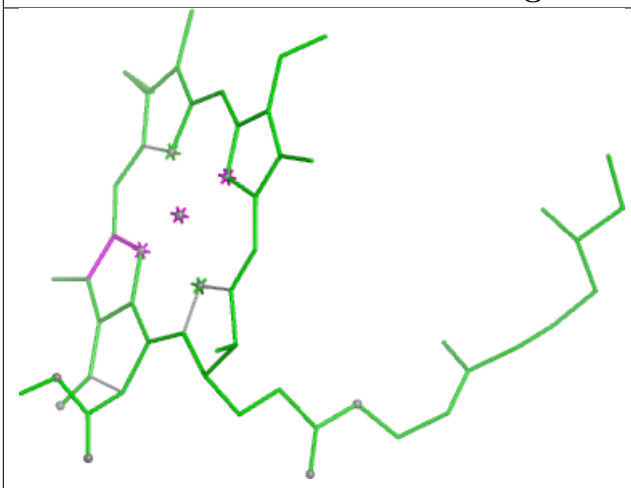


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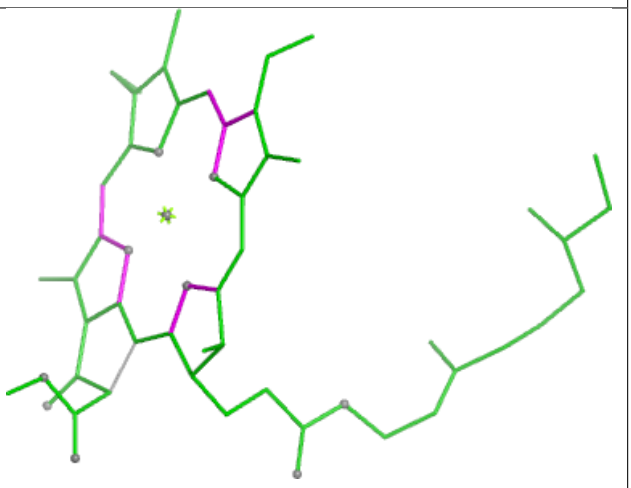


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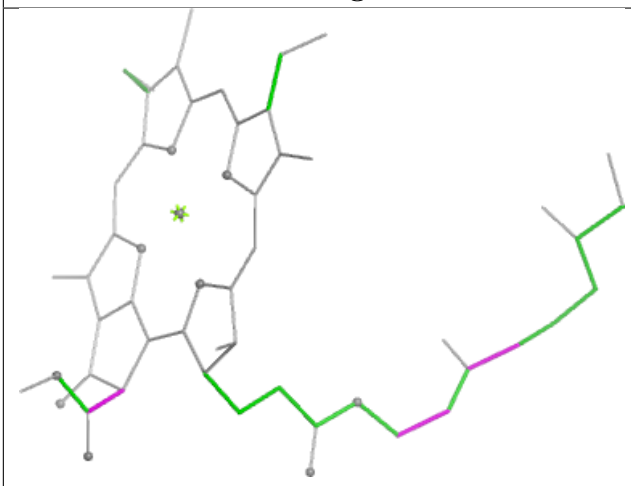
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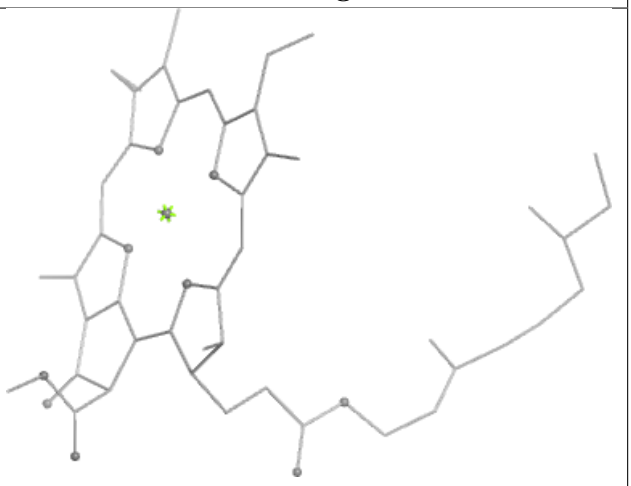
Bond lengths



Bond angles

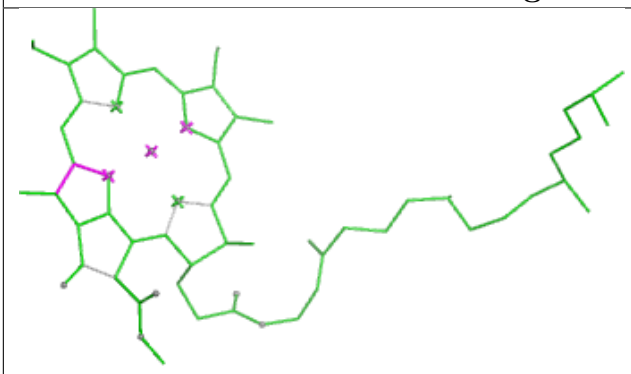


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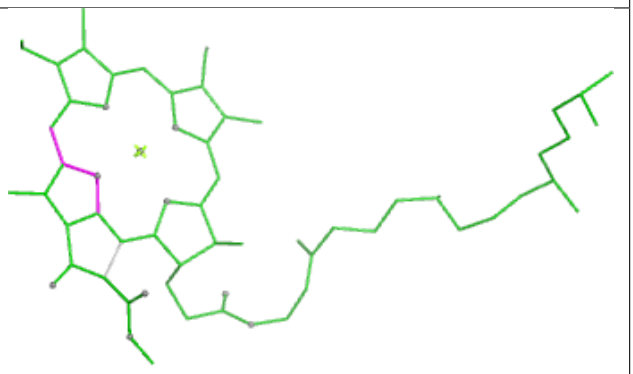


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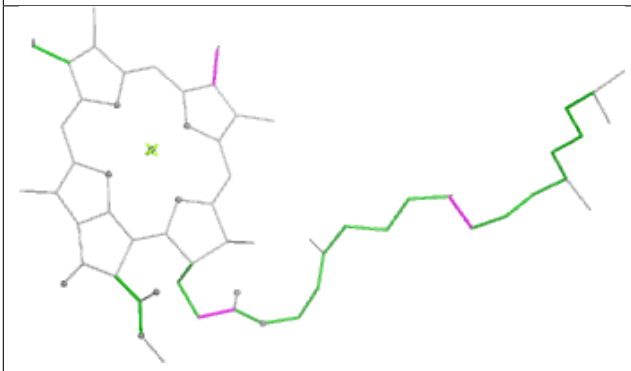
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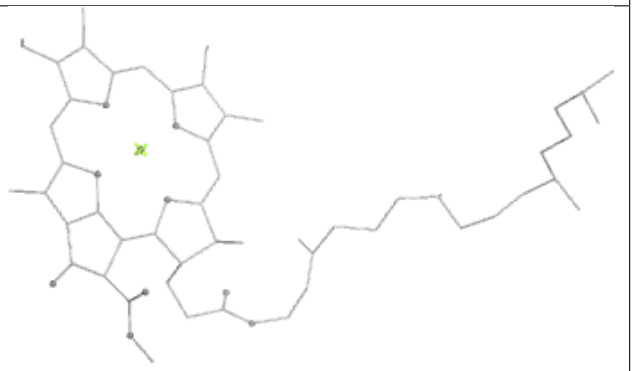
Bond lengths



Bond angles

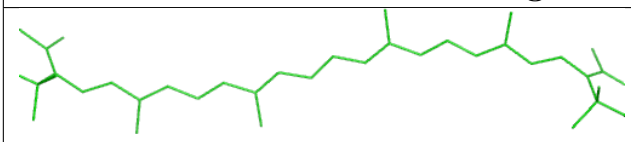


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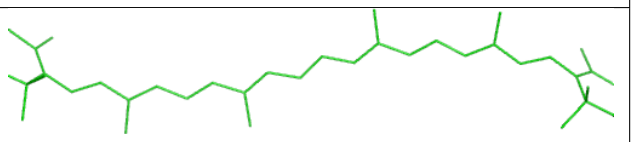


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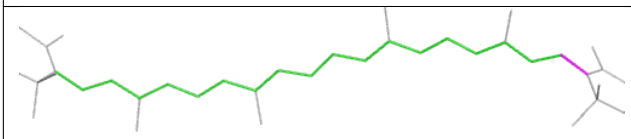
Ligand BCR 1 217



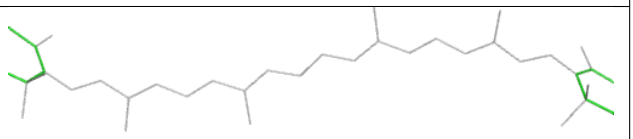
Bond lengths



Bond angles

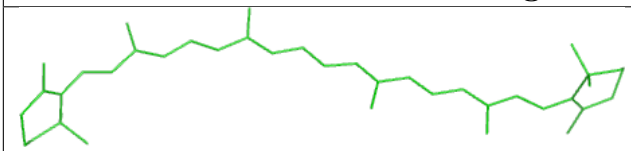


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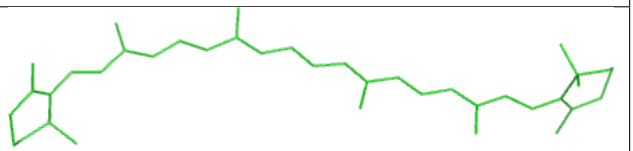


Rings

Ligand BCR B 845



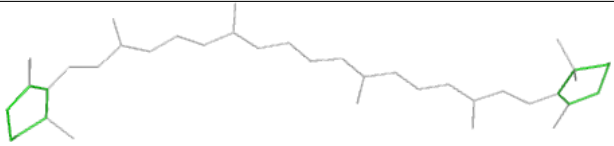
Bond lengths



Bond angles

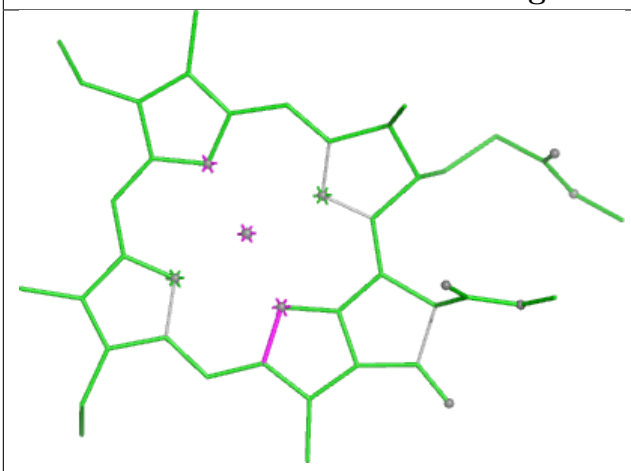


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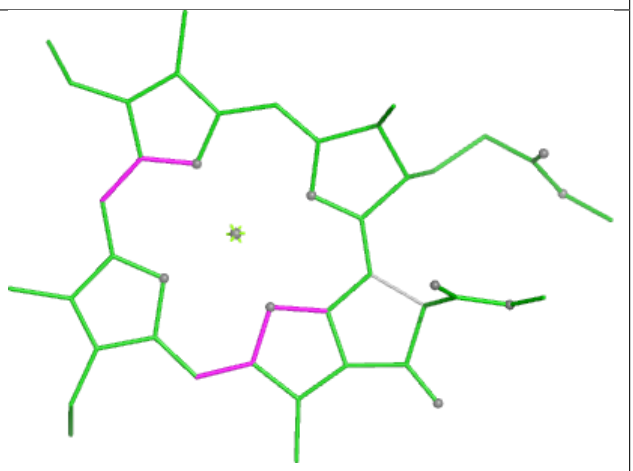


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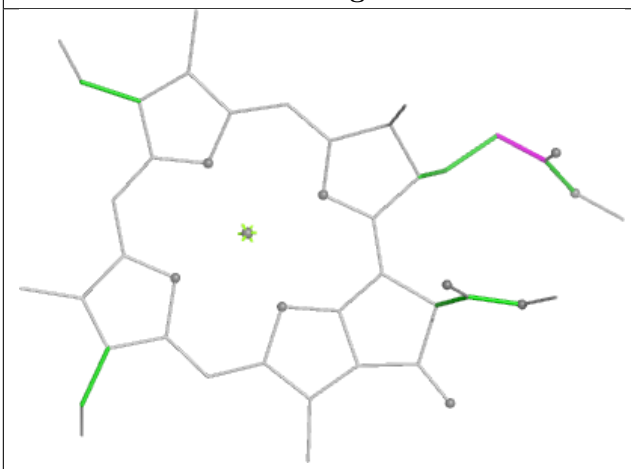
Ligand CLA 1 214



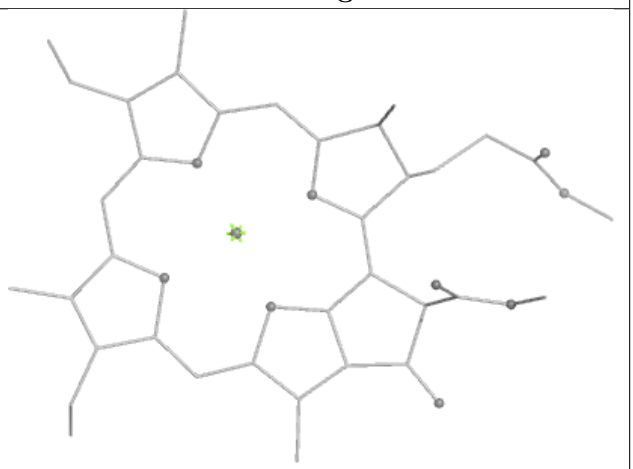
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Bond angles

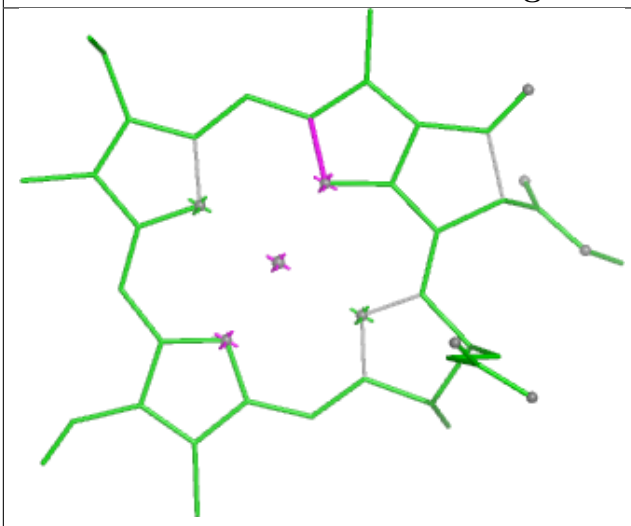


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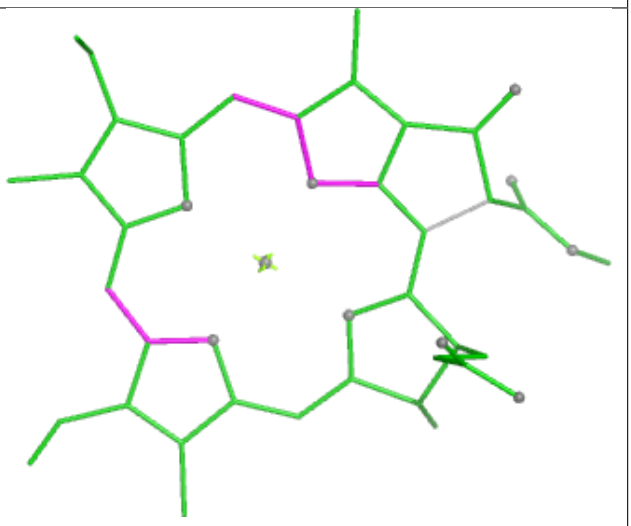


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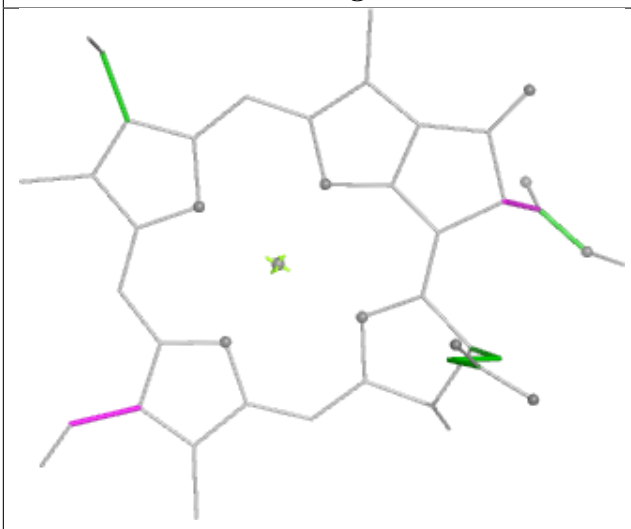
Ligand CLA A 835



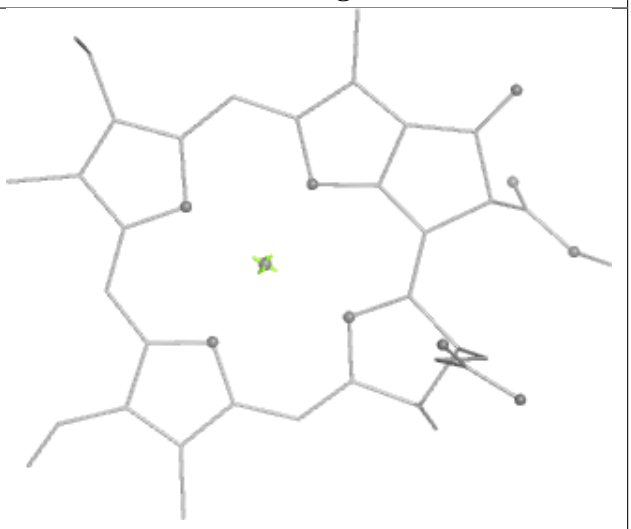
Bond lengths



Bond angles



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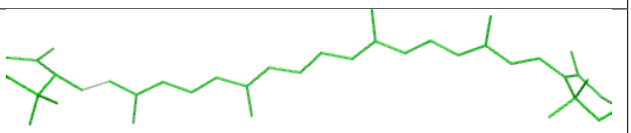


Rings

Ligand LUT 2 315



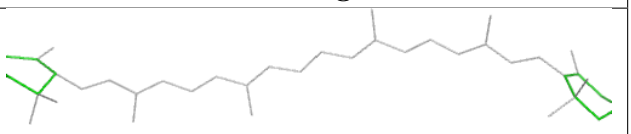
Bond lengths



Bond angles

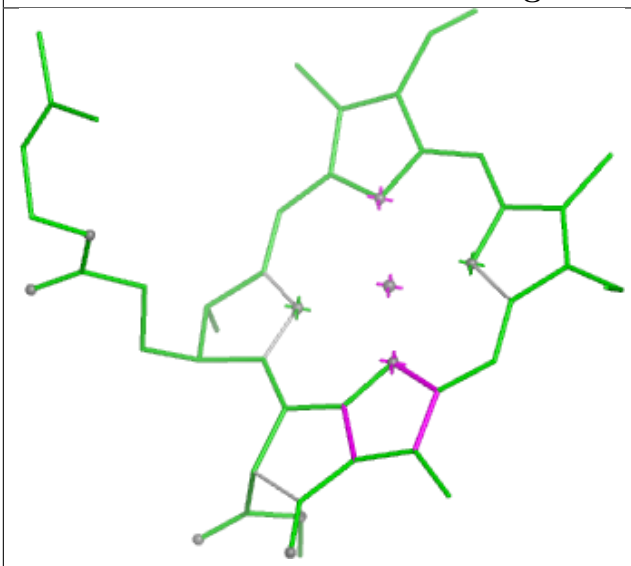


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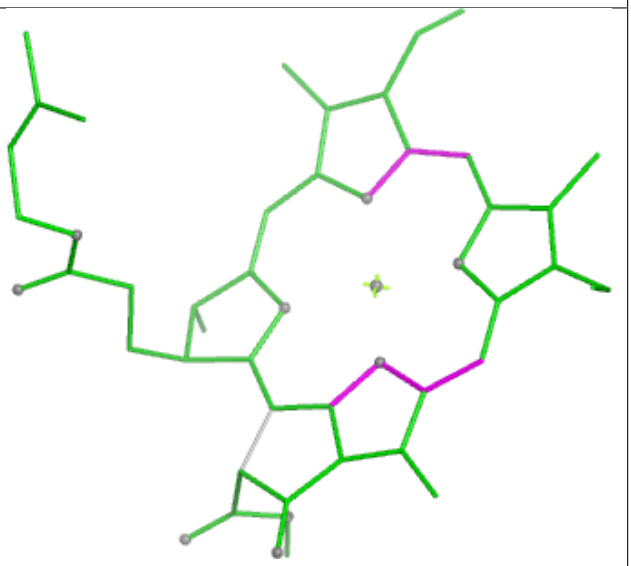


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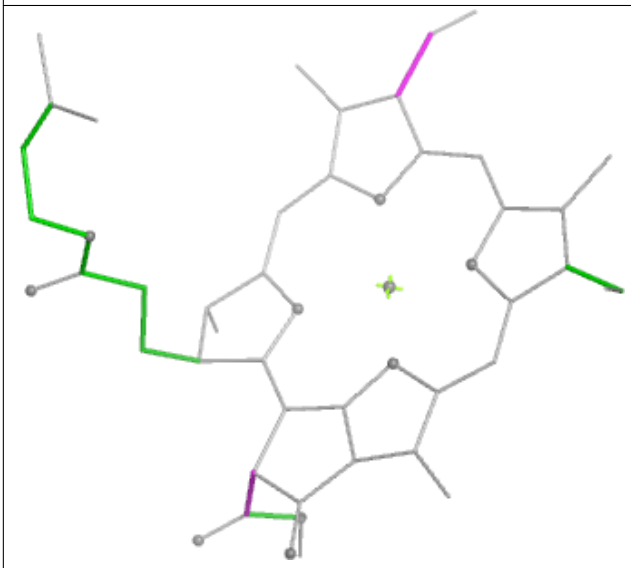
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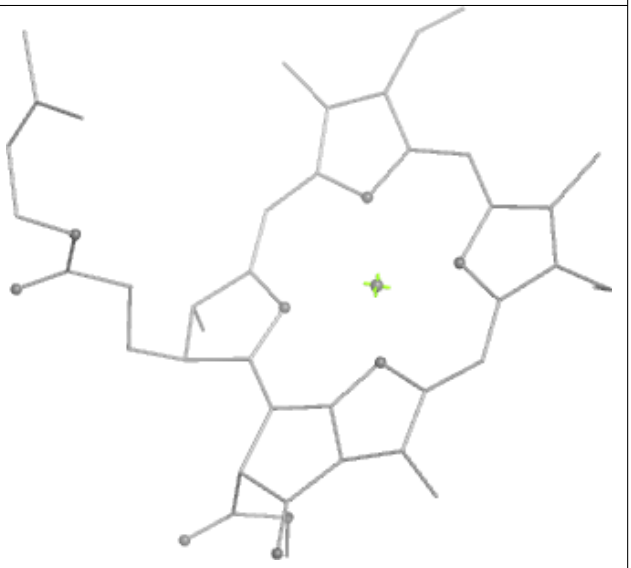
Bond lengths



Bond angles

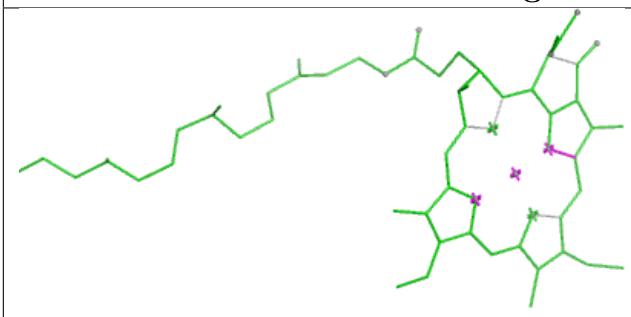


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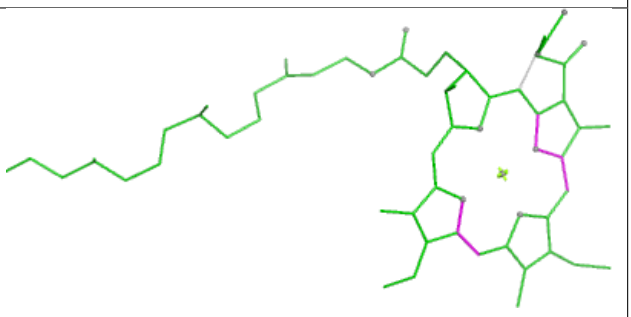


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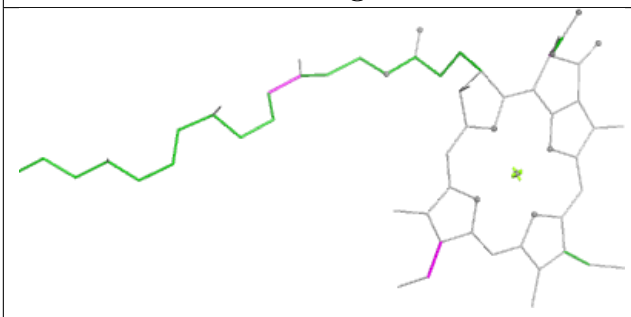
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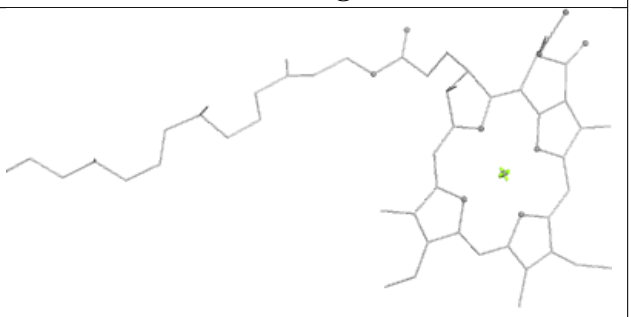
Bond lengths



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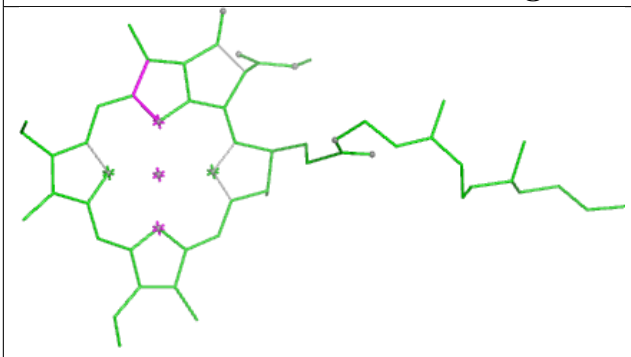


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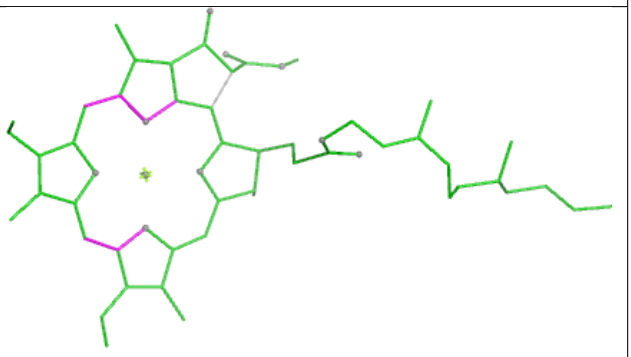


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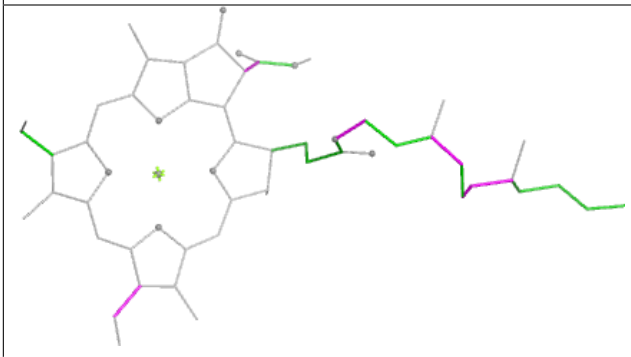
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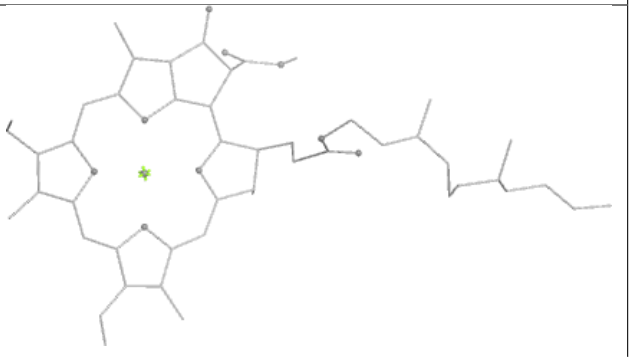
Bond lengths



Bond angles

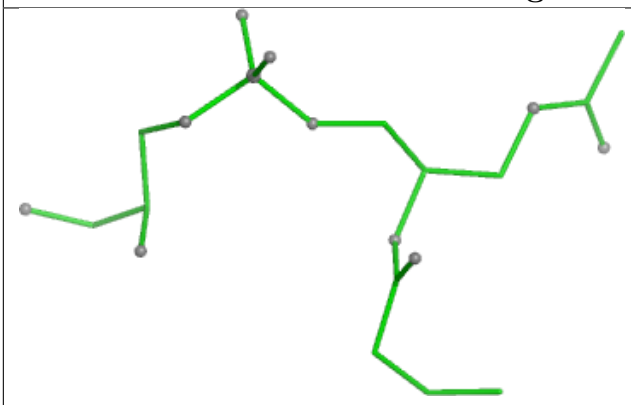


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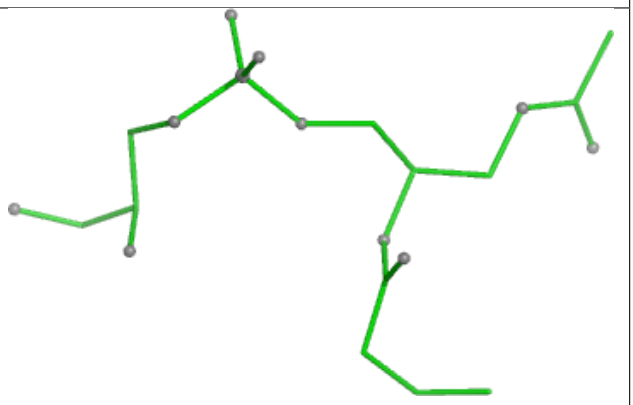


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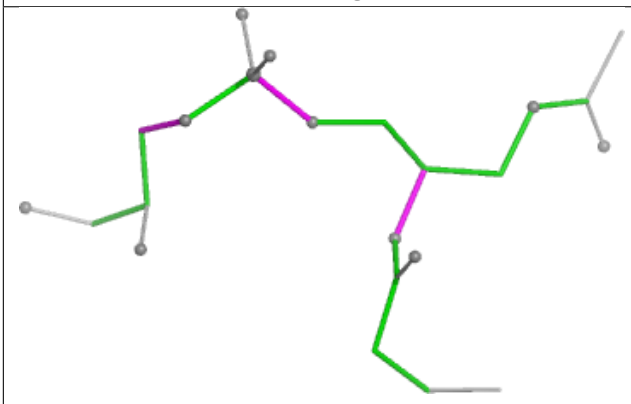
Ligand LHG 1 220



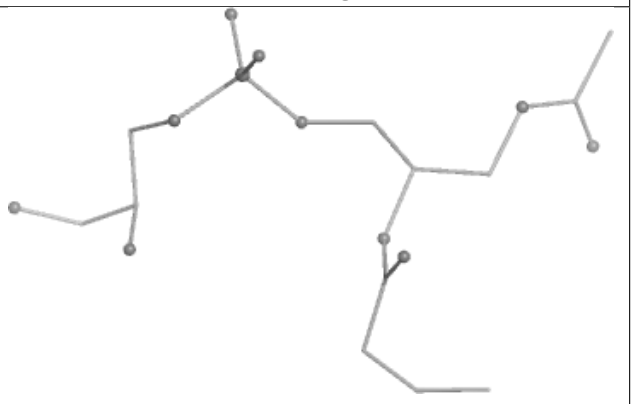
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Bond angles

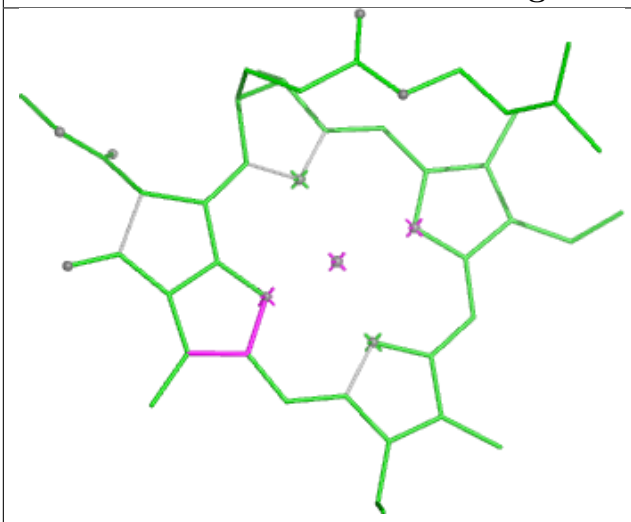


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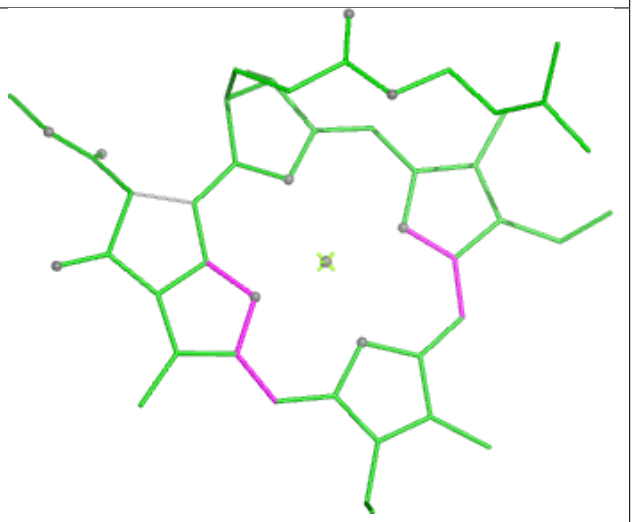


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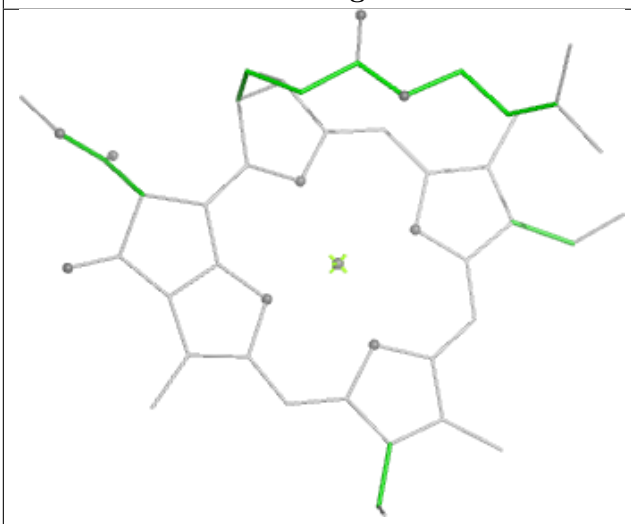
Ligand CLA 3 308



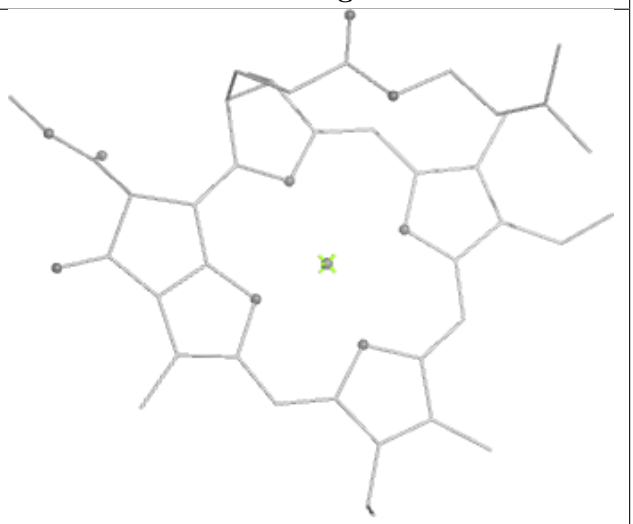
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Bond angles

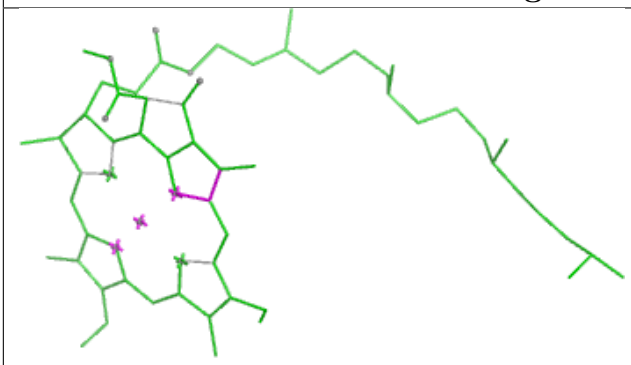


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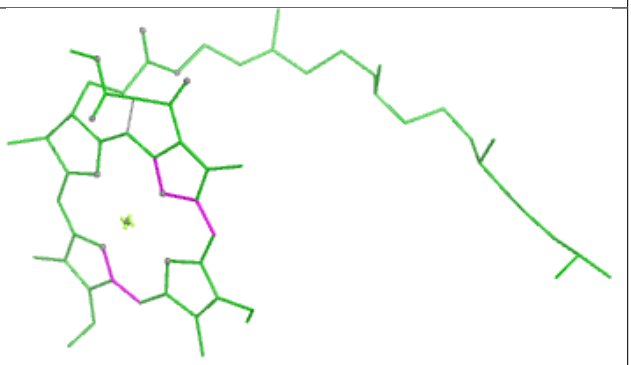


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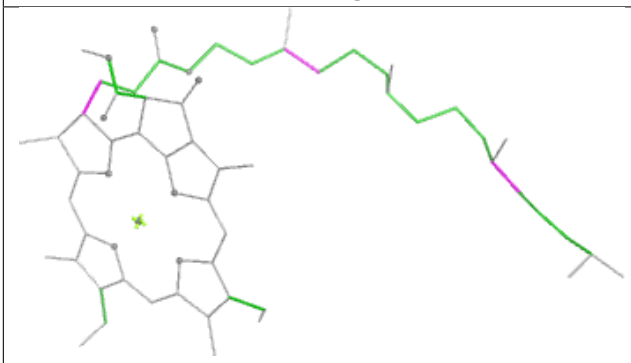
Ligand CLA B 823



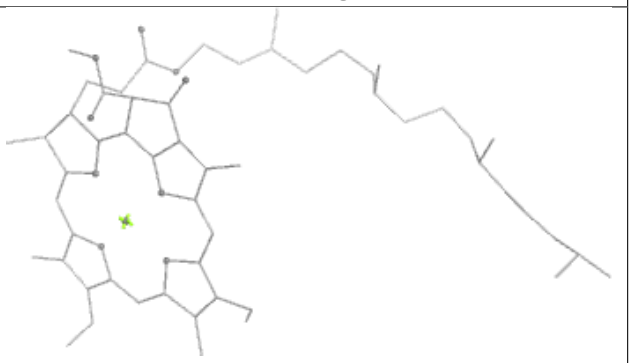
Bond lengths



Bond angles

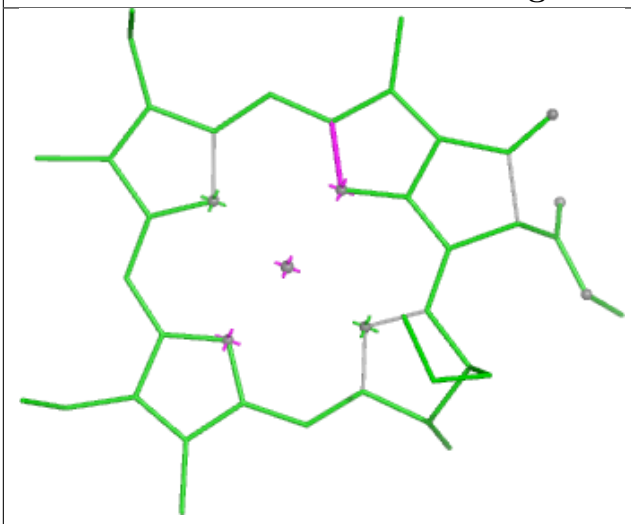


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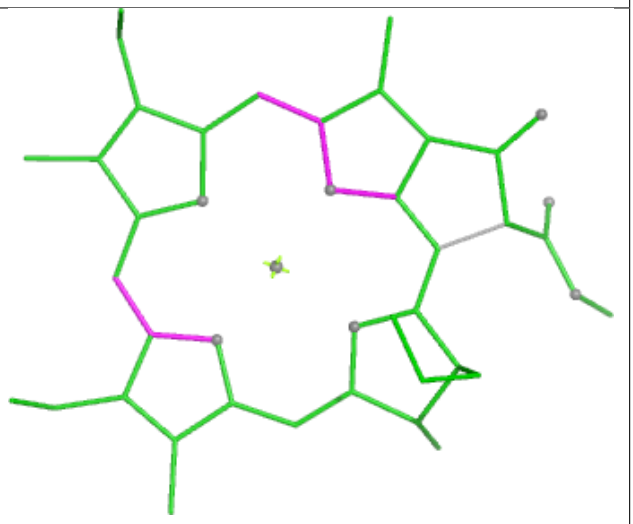


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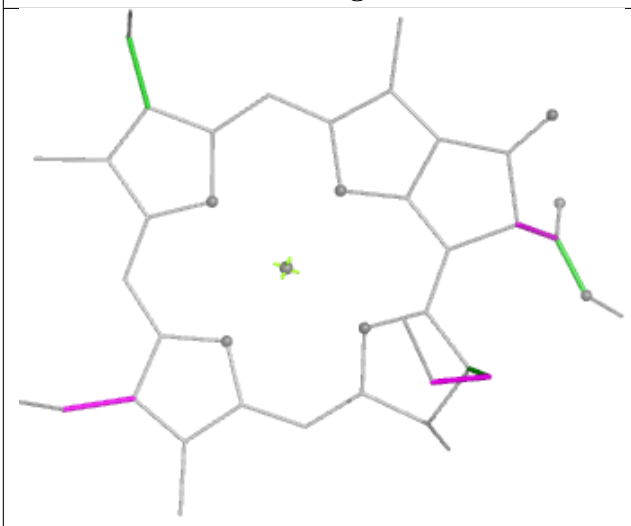
Ligand CLA 1 213



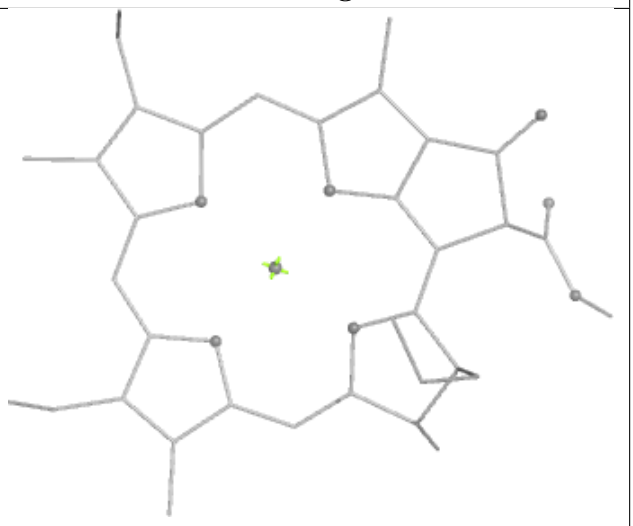
Bond lengths



Bond angles

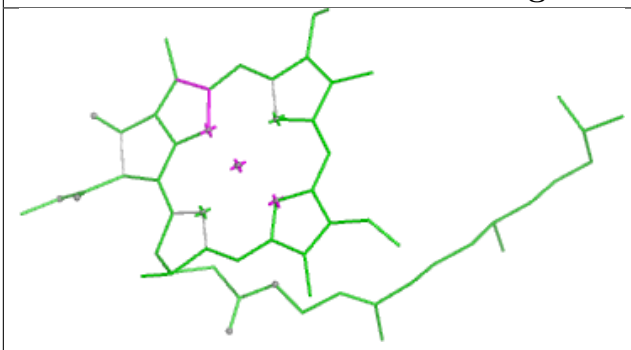


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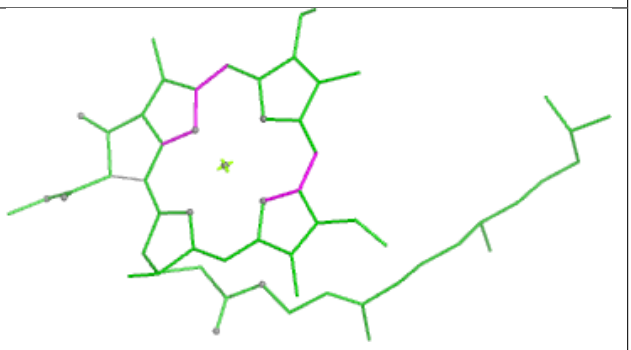


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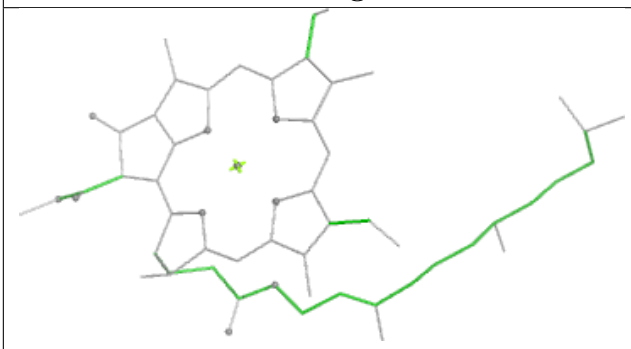
Ligand CLA 4 309



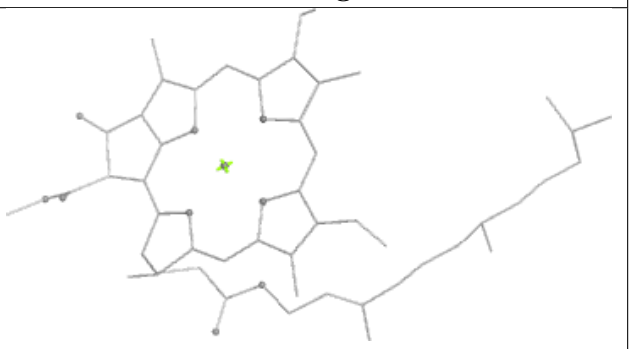
Bond lengths



Bond angles

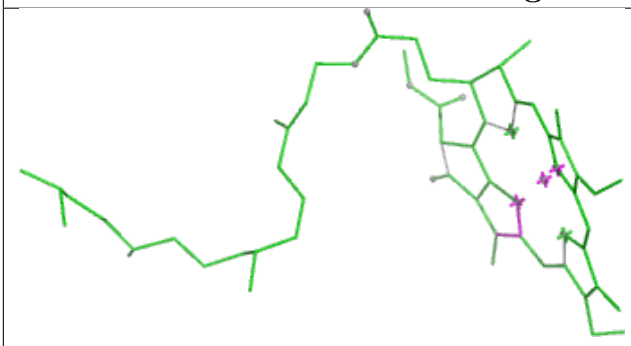


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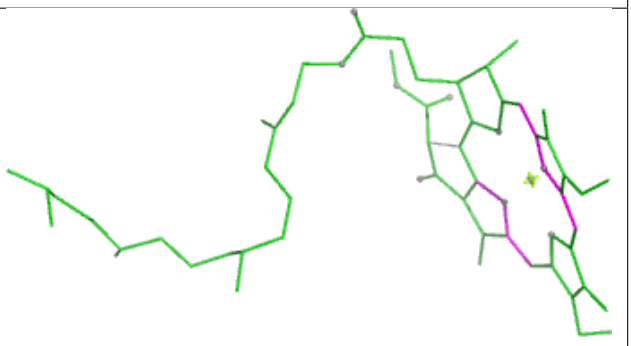


Rings

Ligand CLA B 803



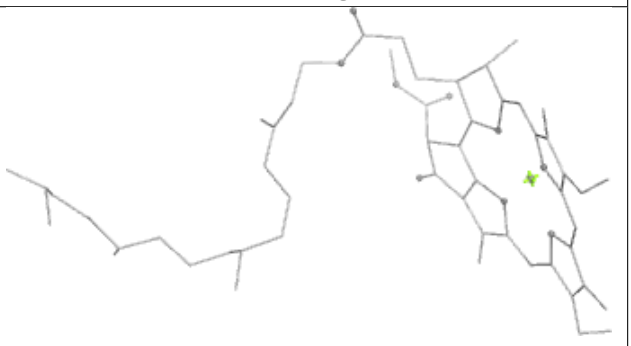
Bond lengths



Bond angles

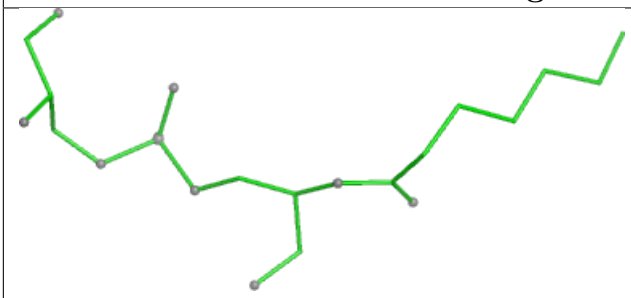


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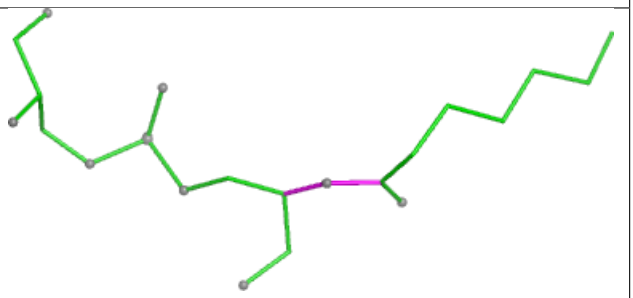


Rings

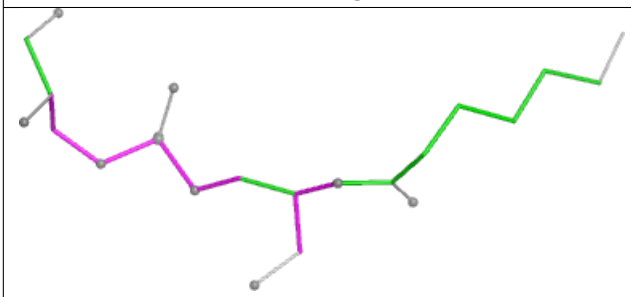
Ligand PGT 1 221



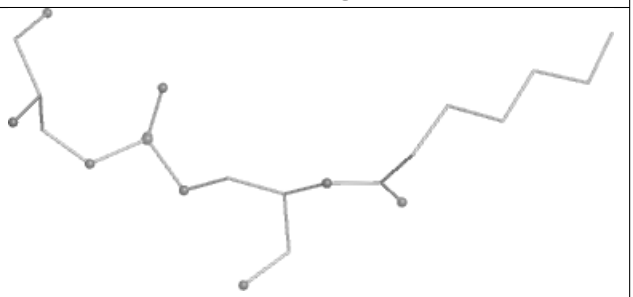
Bond lengths



Bond angles

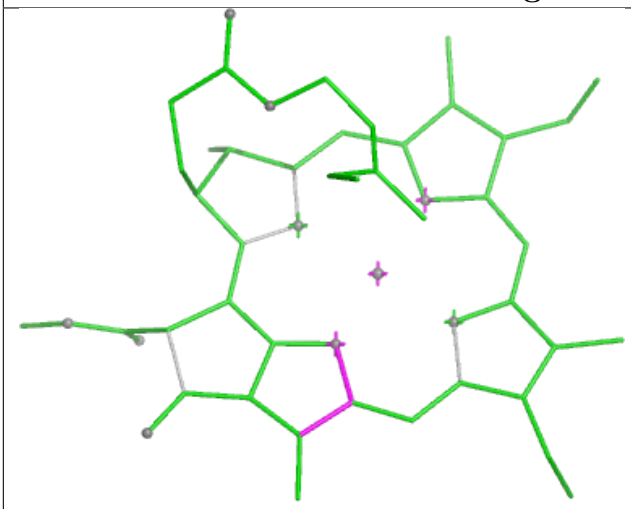


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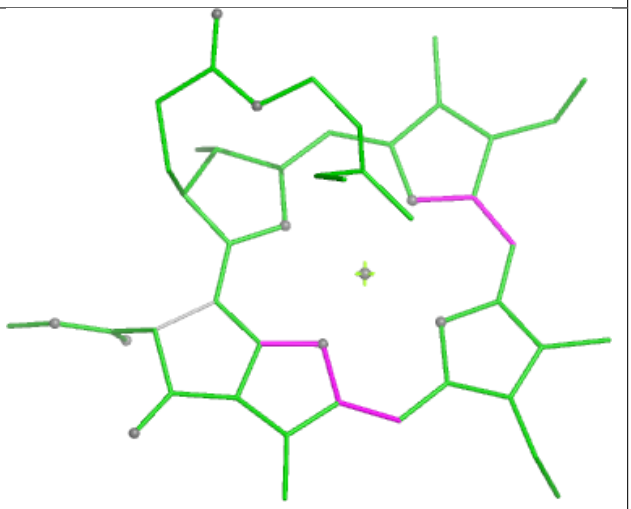


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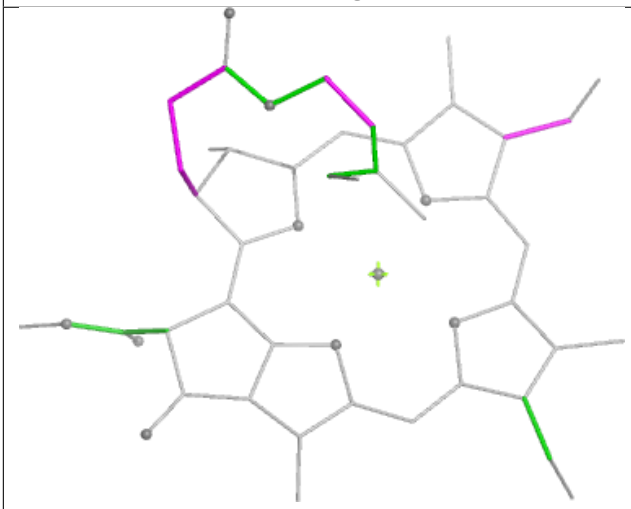
Ligand CLA A 822



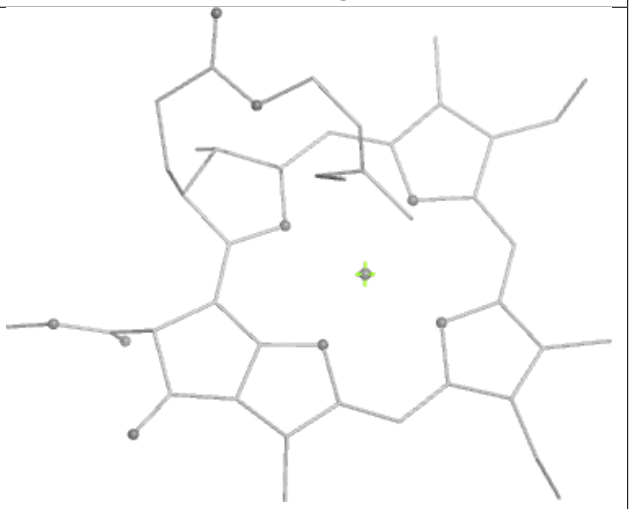
Bond lengths



Bond angles

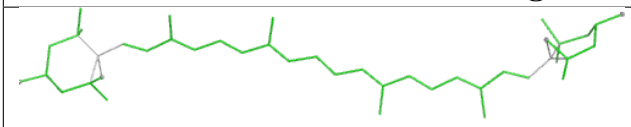


Torsions

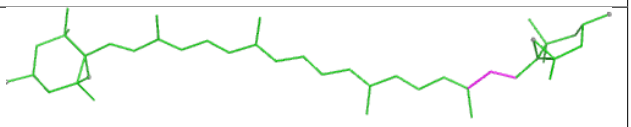


Rings

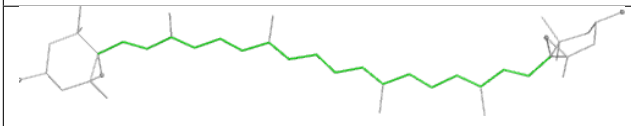
Ligand XAT 2 316



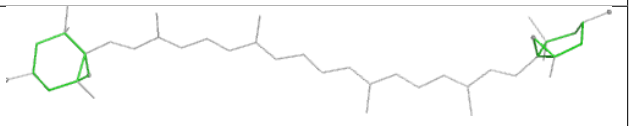
Bond lengths



Bond angles

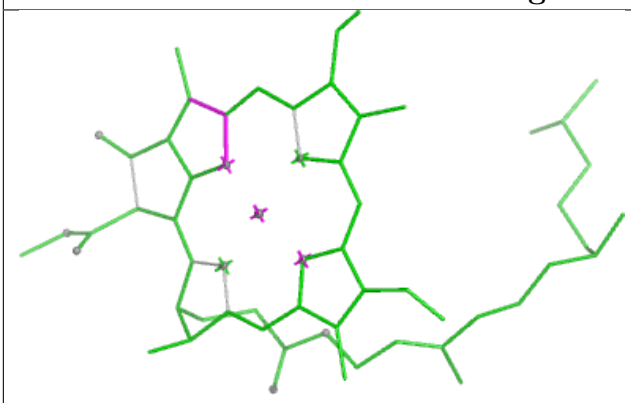


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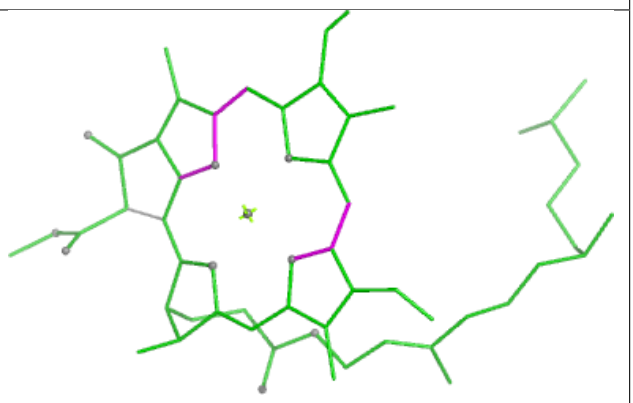


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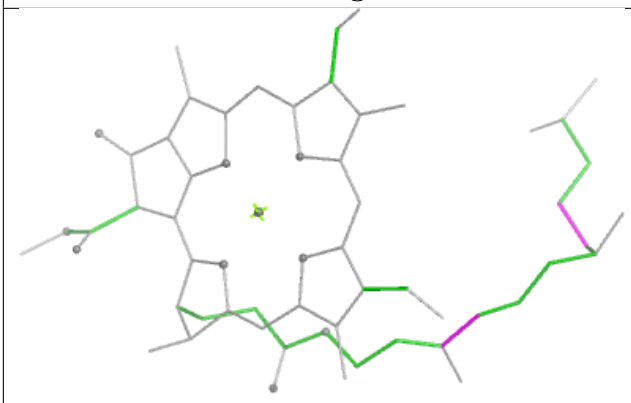
Ligand CLA 2 309



Bond lengths



Bond angles

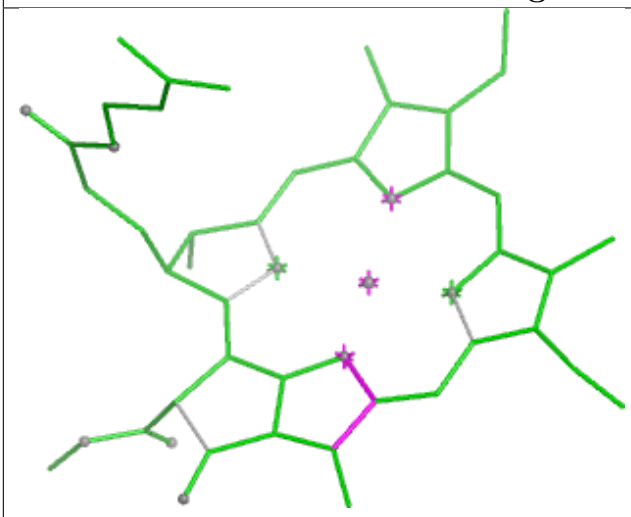


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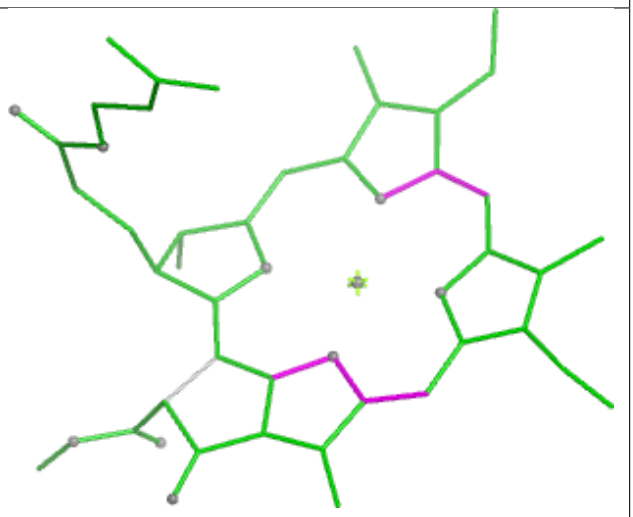


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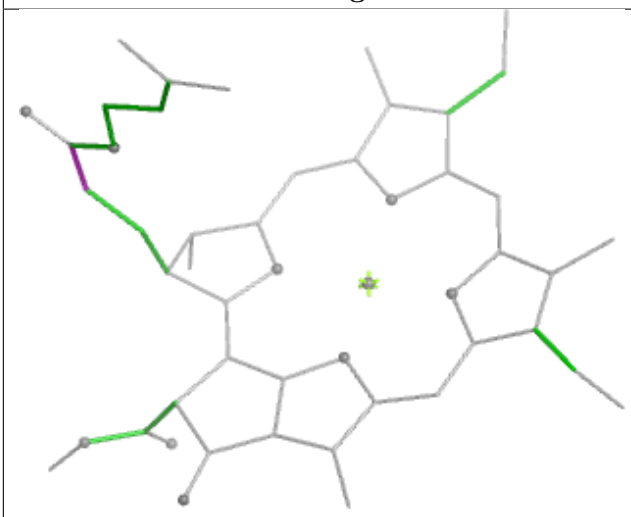
Ligand CLA 2 308



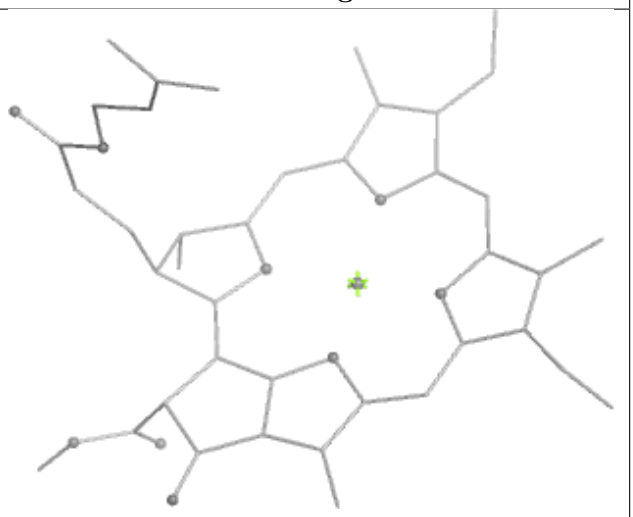
Bond lengths



Bond angles

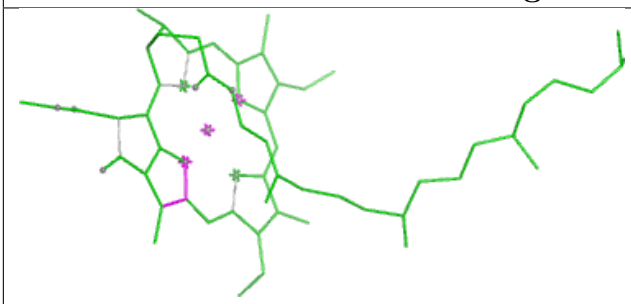


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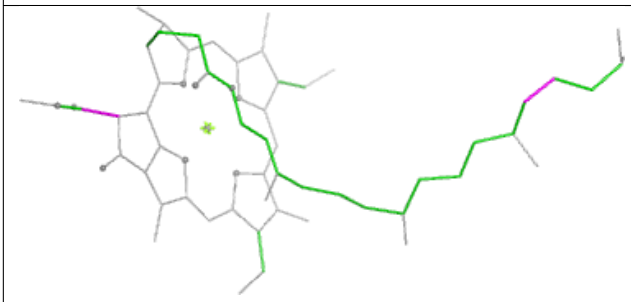
Ligand CLA A 840



Bond lengths



Bond angles

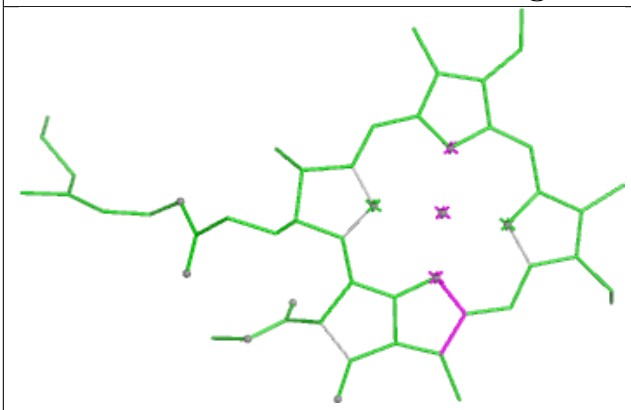


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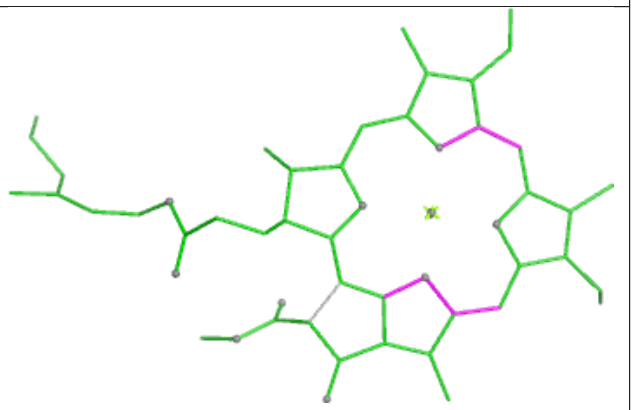


Rings

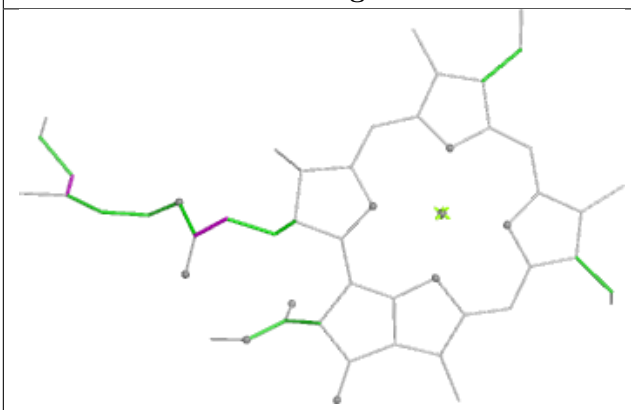
Ligand CLA 1 211



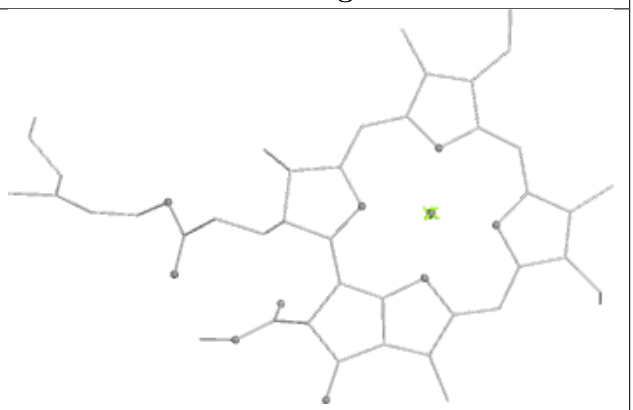
Bond lengths



Bond angles

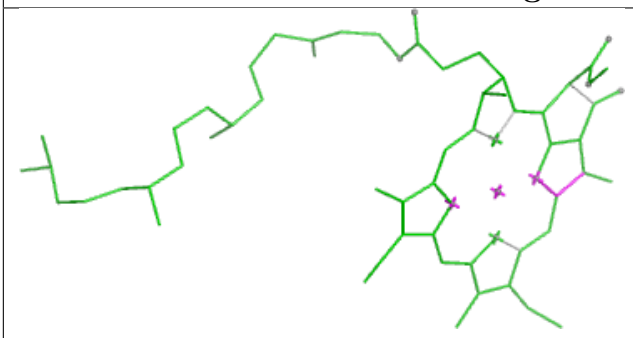


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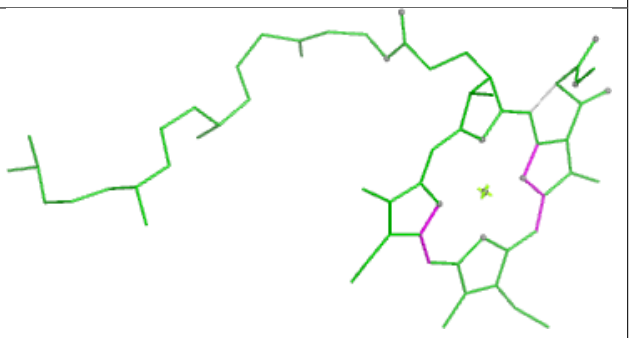


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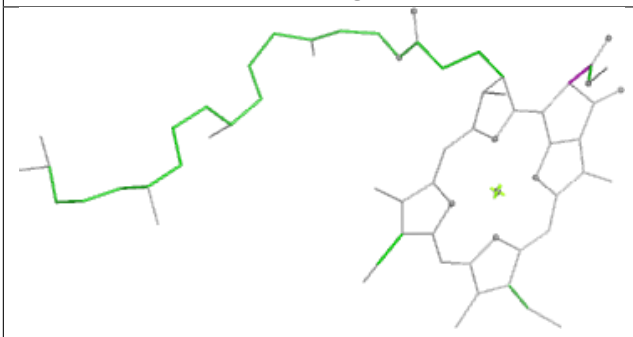
Ligand CLA A 807



Bond lengths



Bond angles

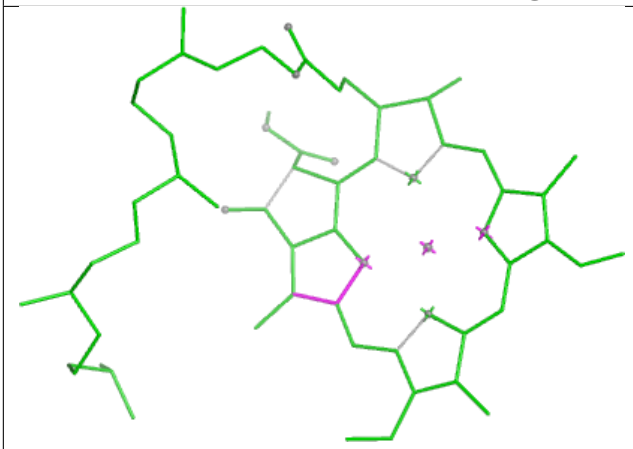


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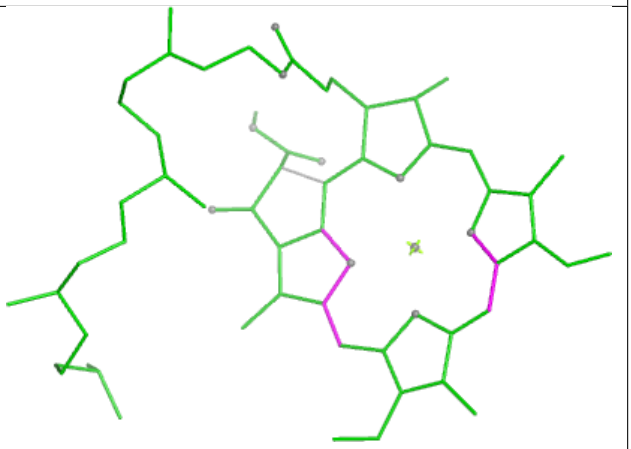


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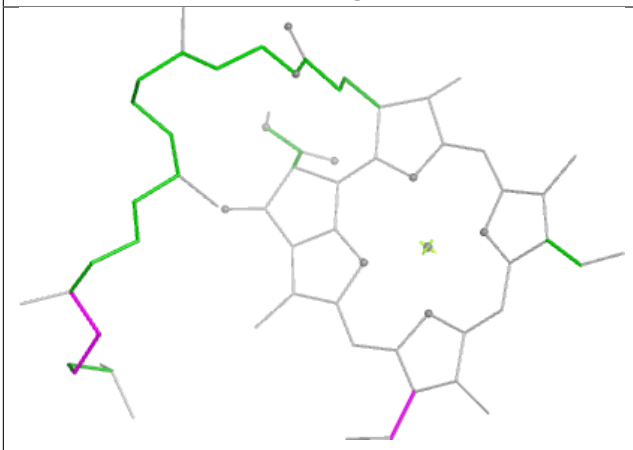
Ligand CLA F 206



Bond lengths



Bond angles

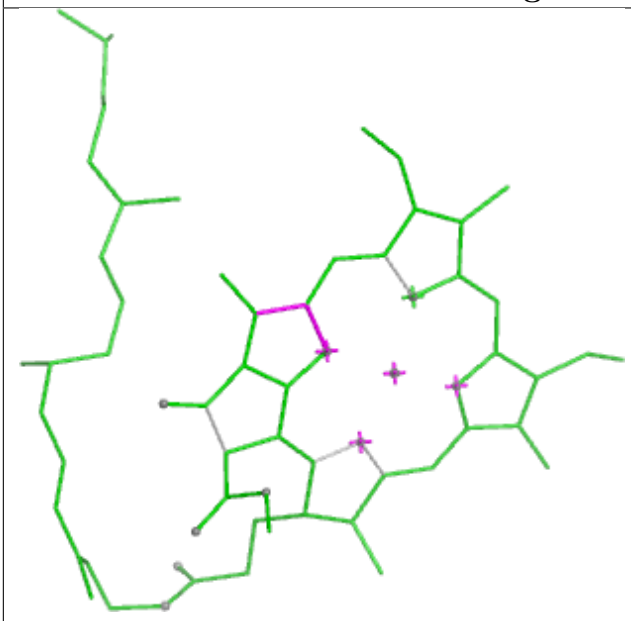


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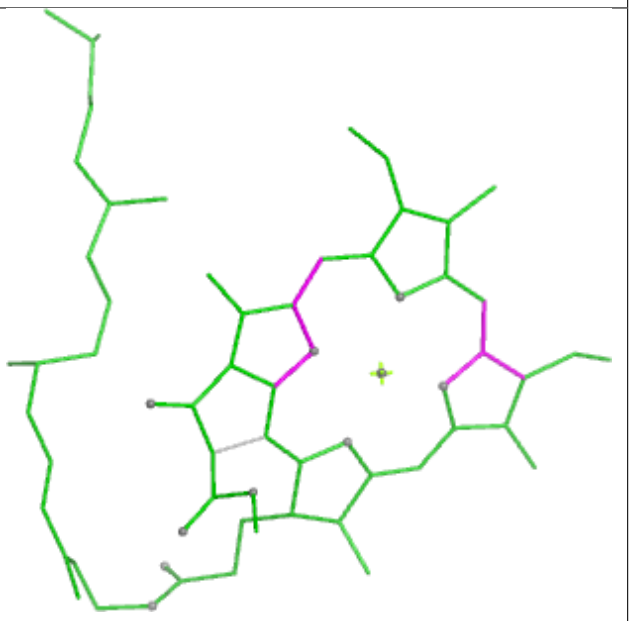


Rings

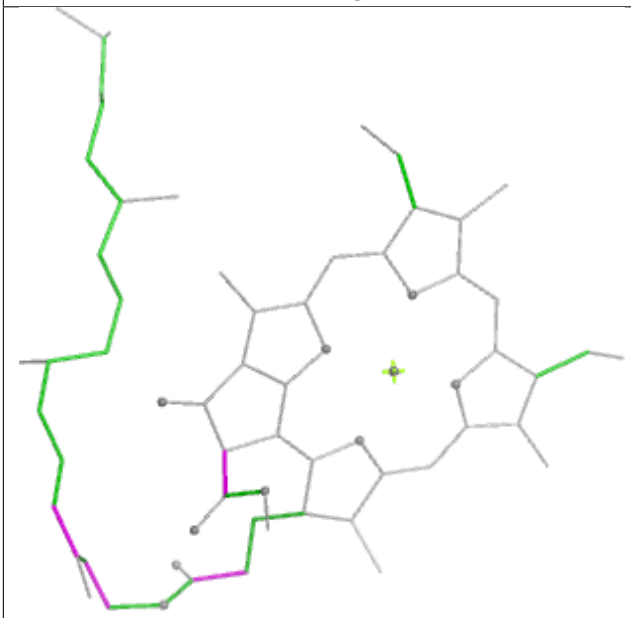
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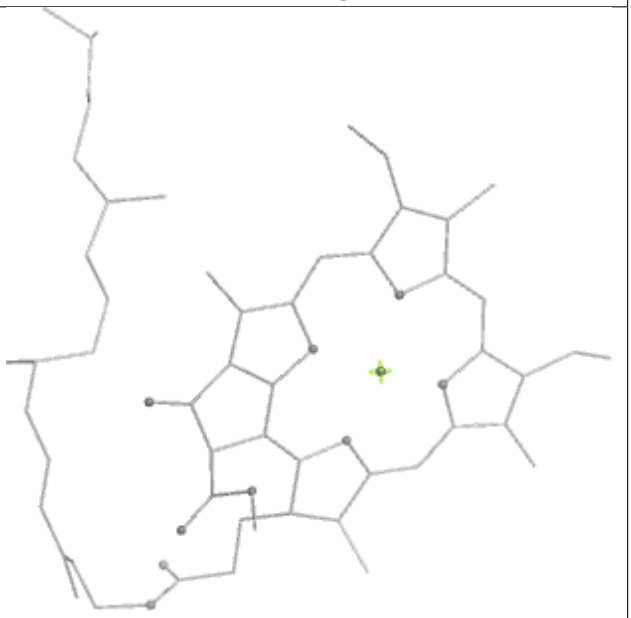
Bond lengths



Bond angles

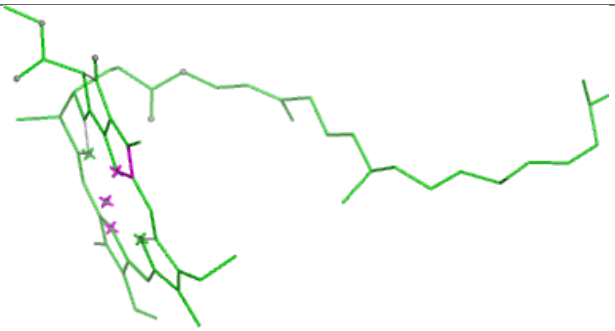


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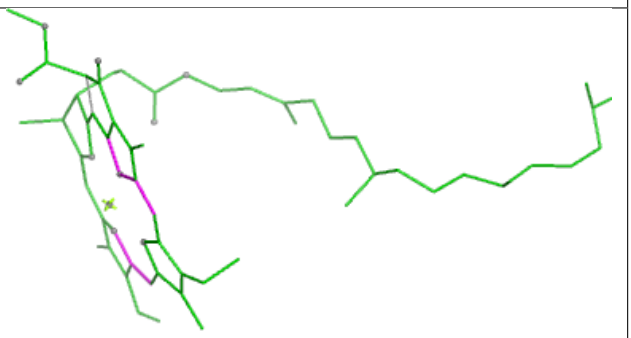


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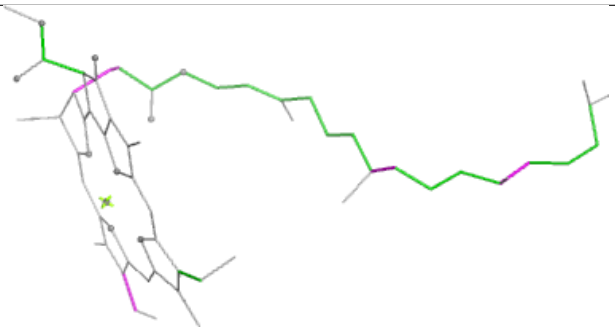
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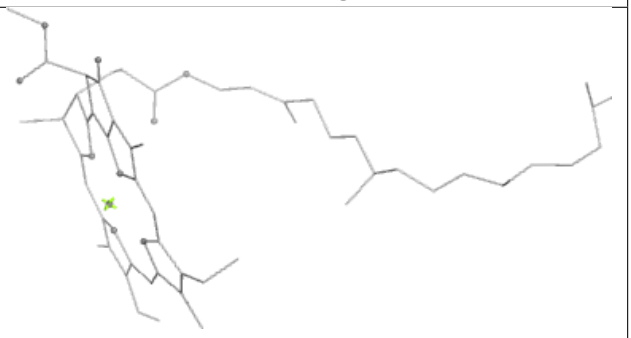
Bond lengths



Bond angles

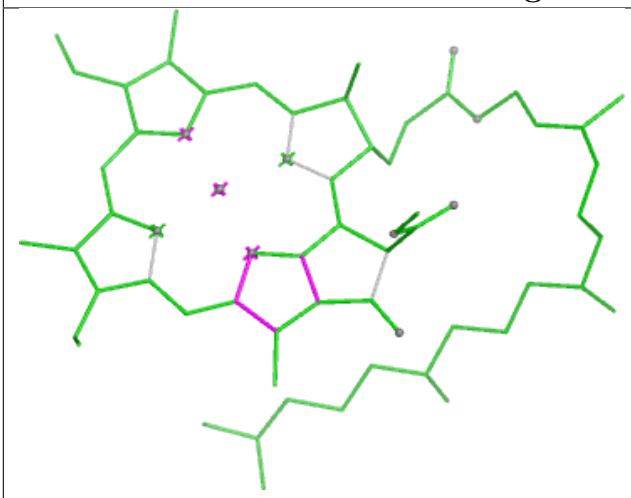


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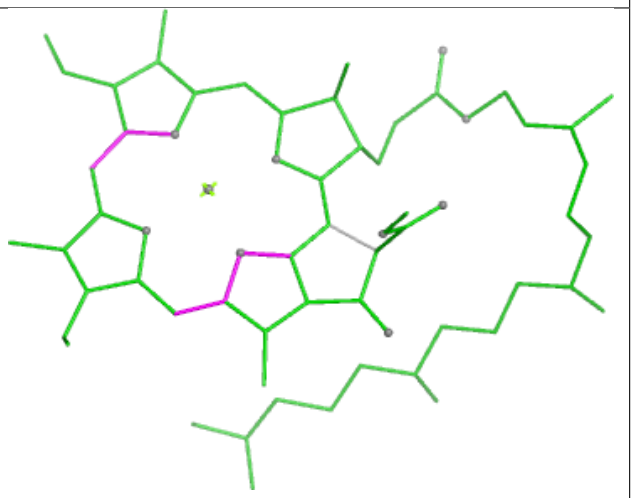


Rings

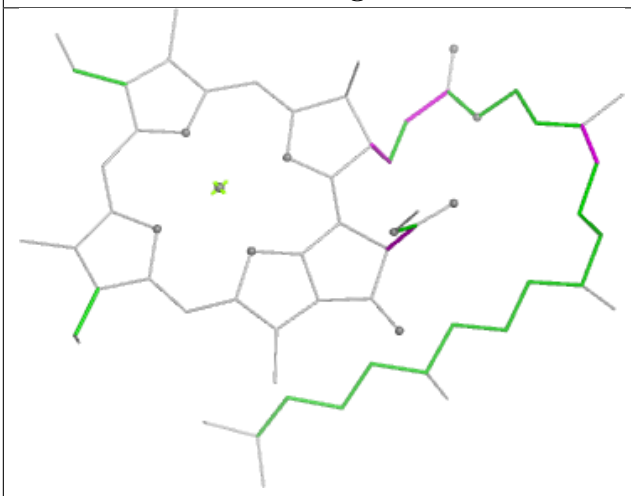
Ligand CLA B 806



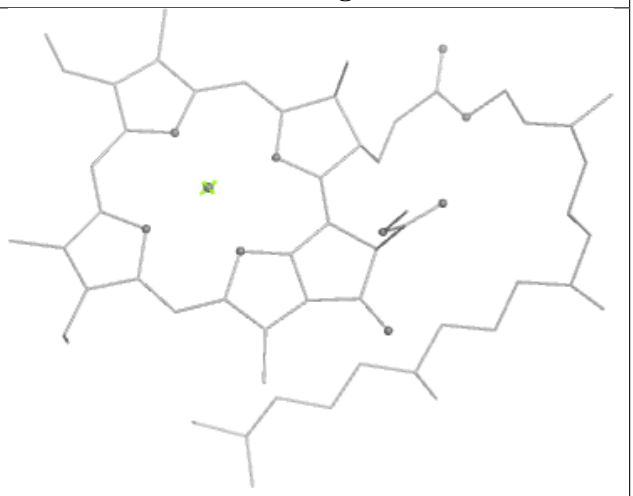
Bond lengths



Bond angles

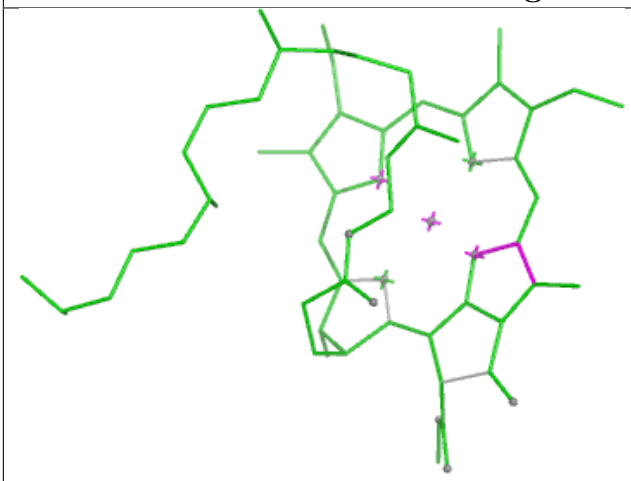


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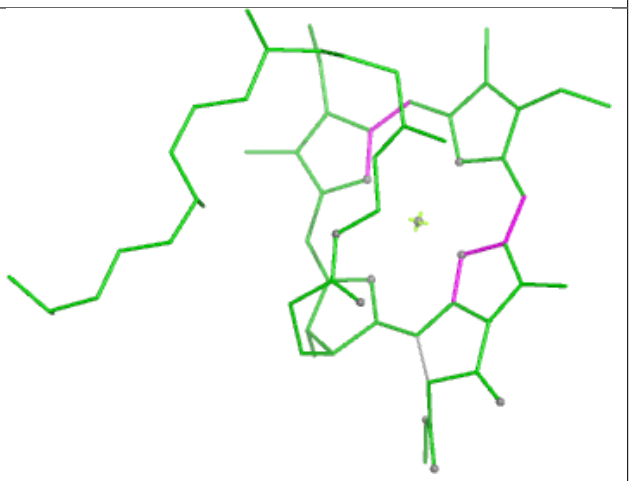


Rings

Ligand CLA B 809



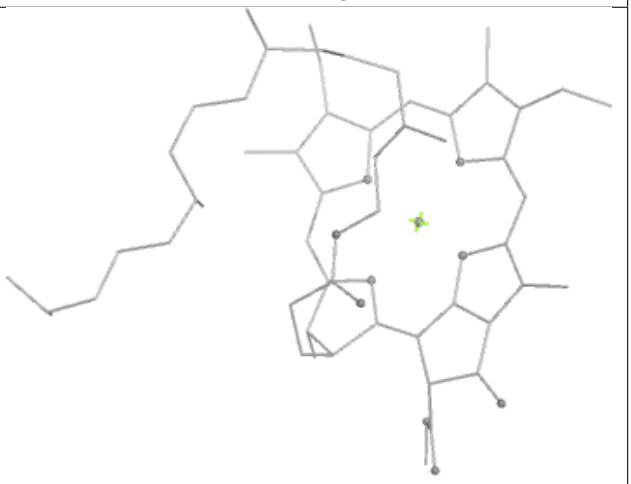
Bond lengths



Bond angles

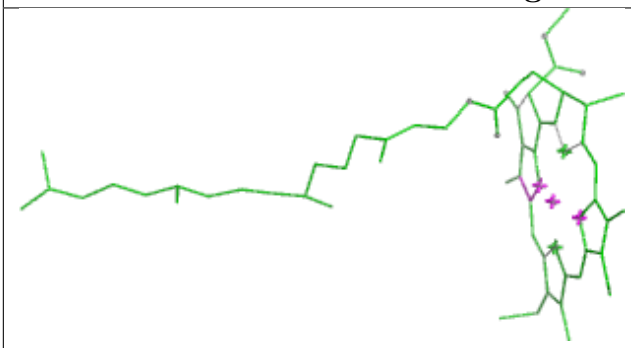


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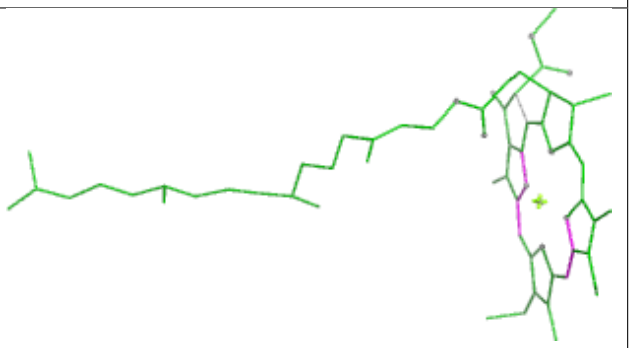


Rings

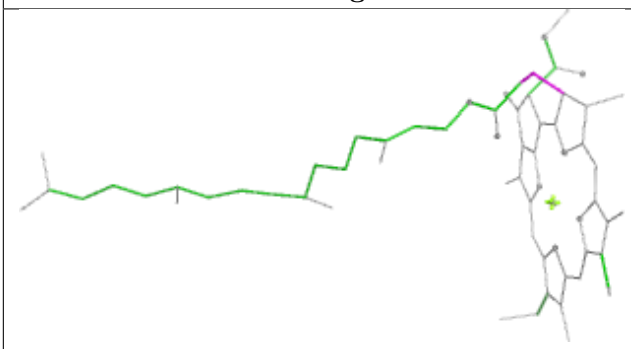
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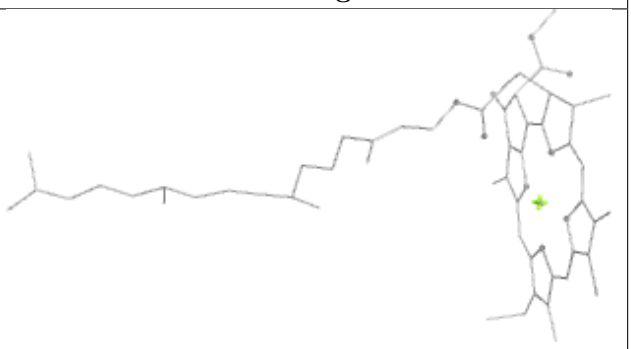
Bond lengths



Bond angles

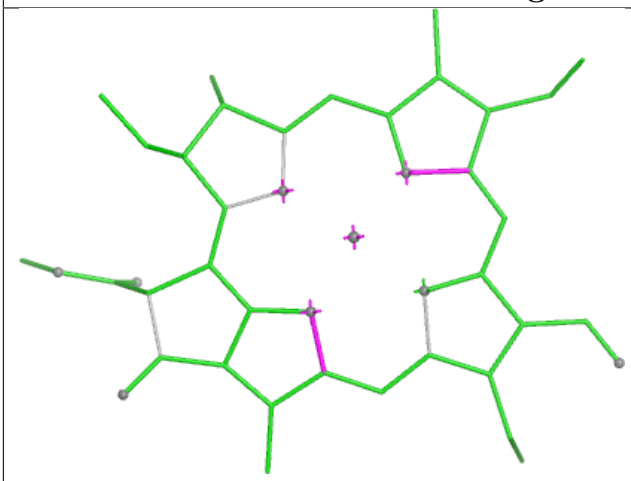


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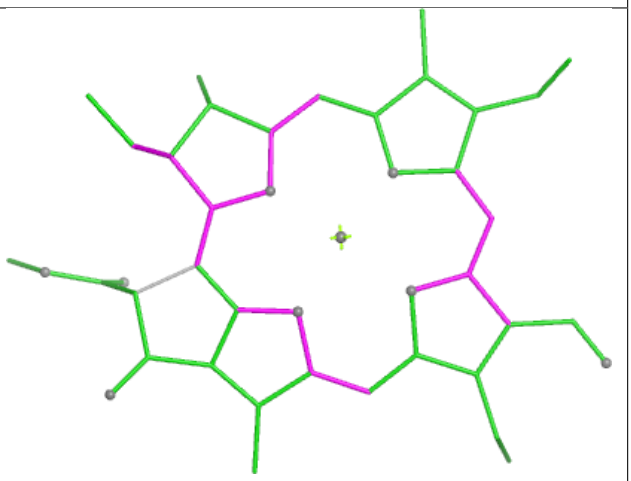


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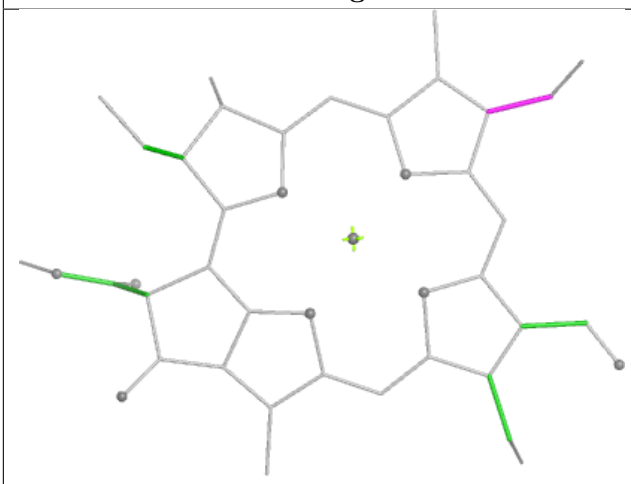
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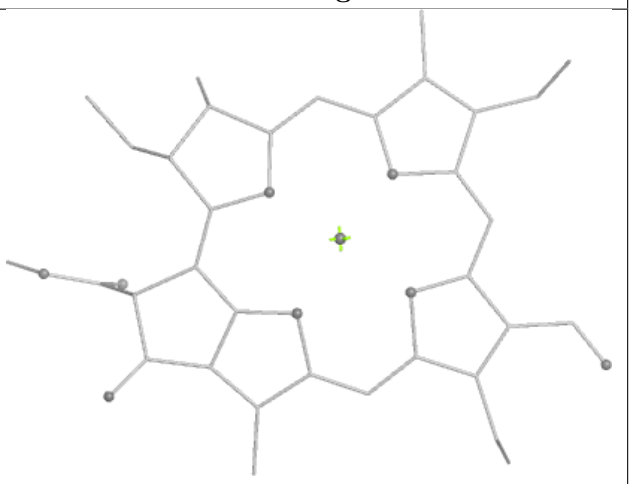
Bond lengths



Bond angles

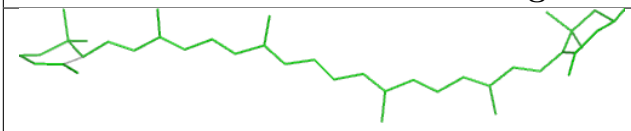


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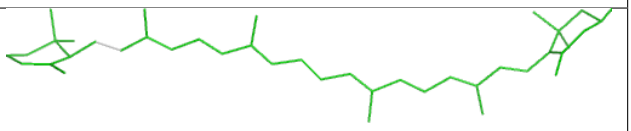


Rings

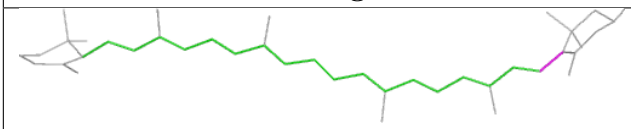
Ligand LUT 1 215



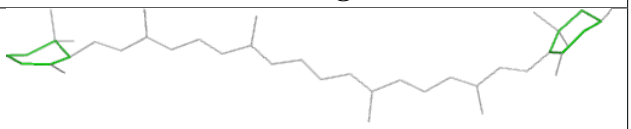
Bond lengths



Bond angles

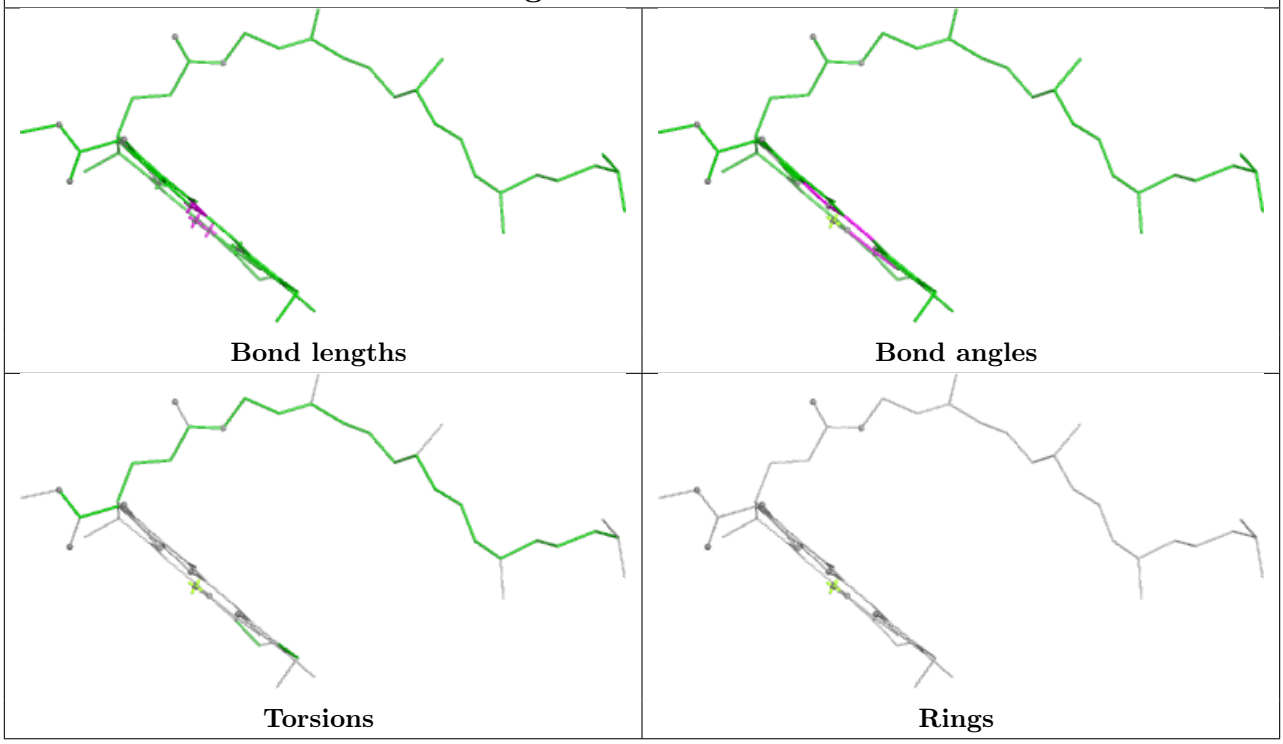


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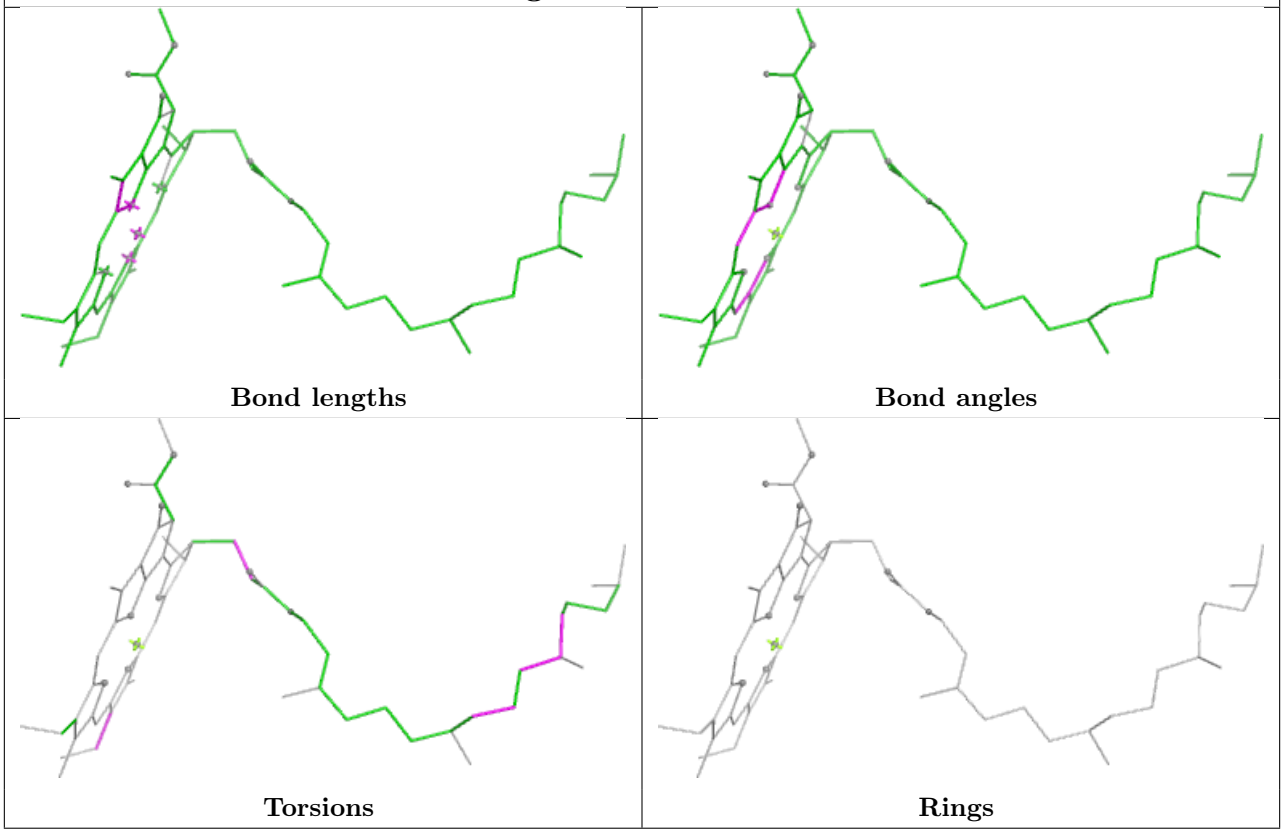


Rings

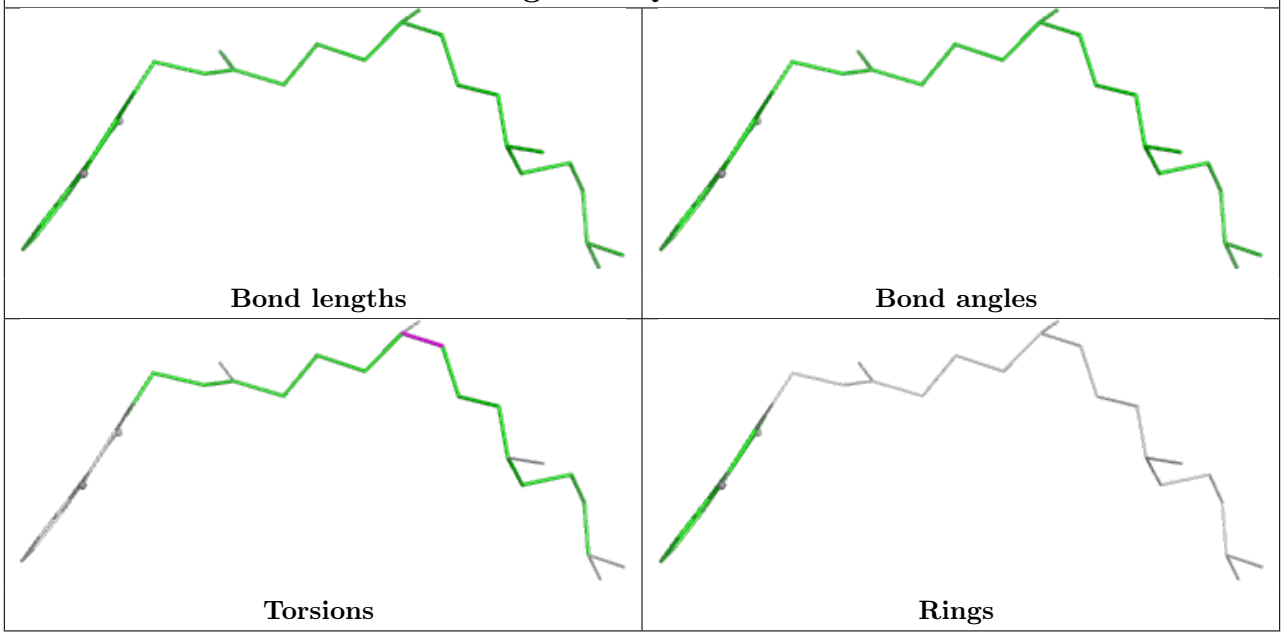
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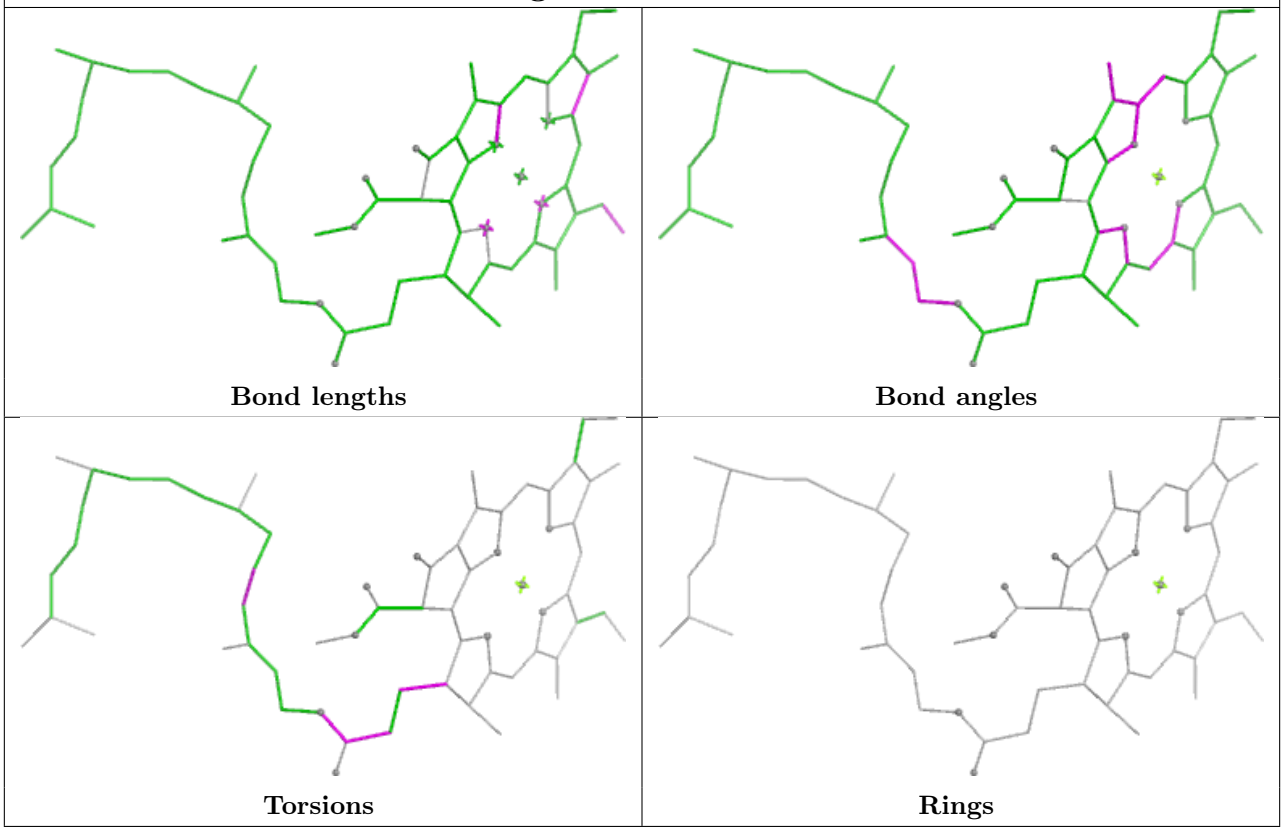
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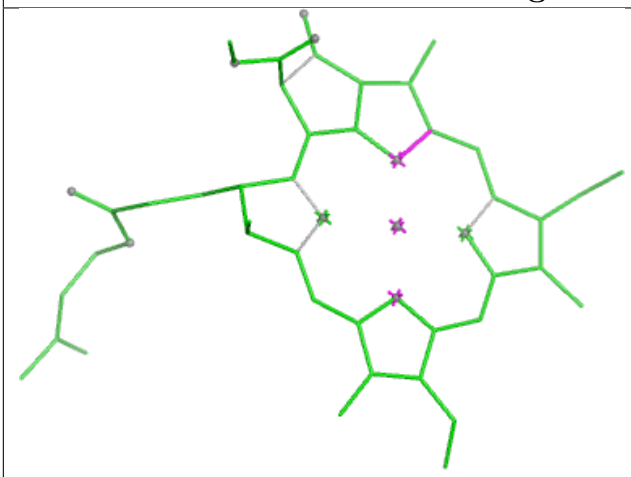
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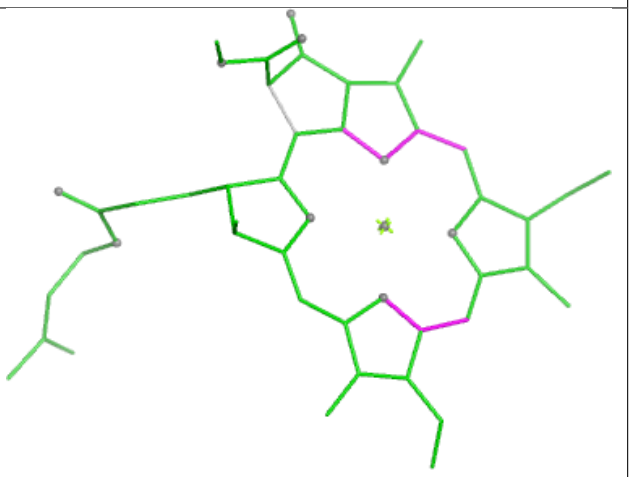
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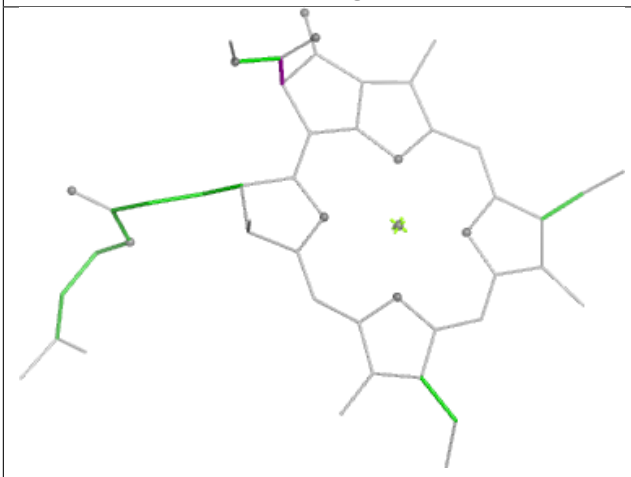
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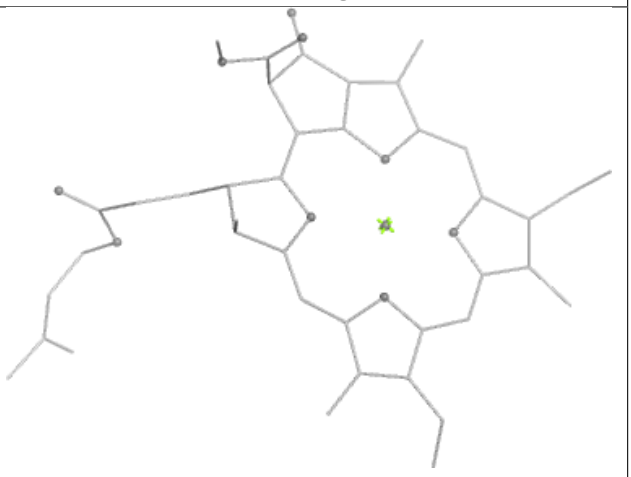
Bond lengths



Bond angles

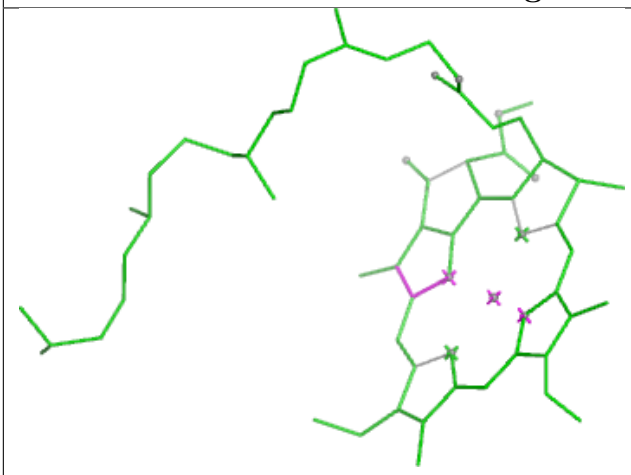


Torsions

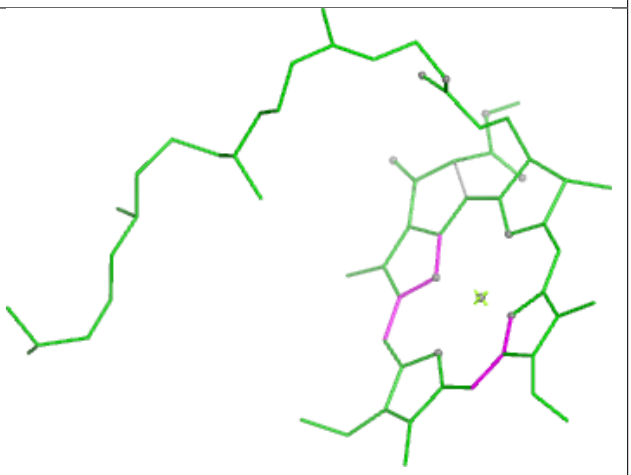


Rings

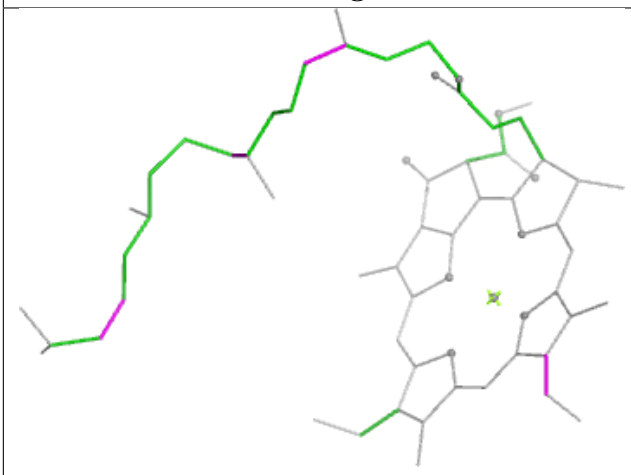
Ligand CLA B 833



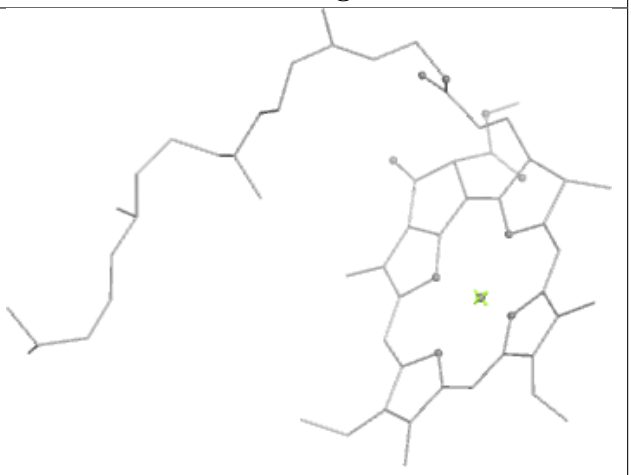
Bond lengths



Bond angles

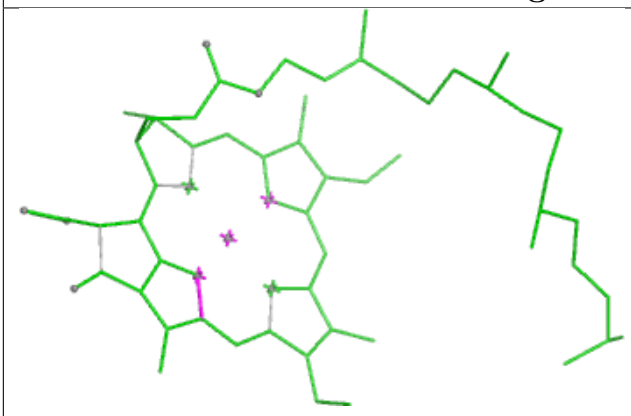


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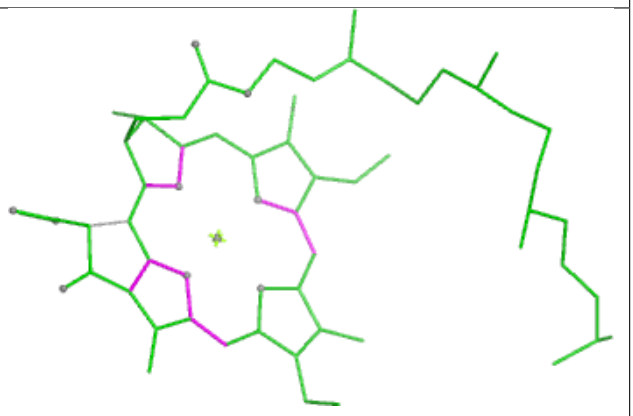


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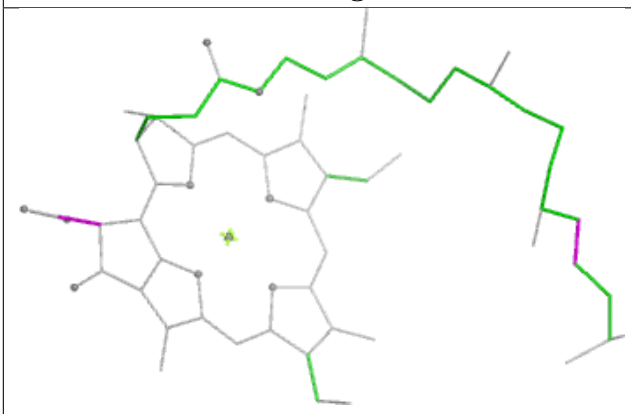
Ligand CLA 2 302



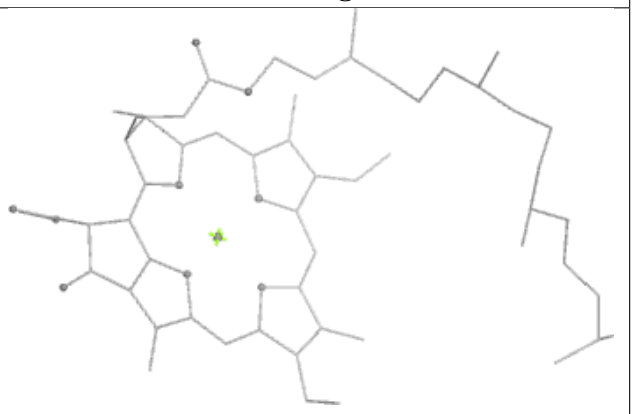
Bond lengths



Bond angles

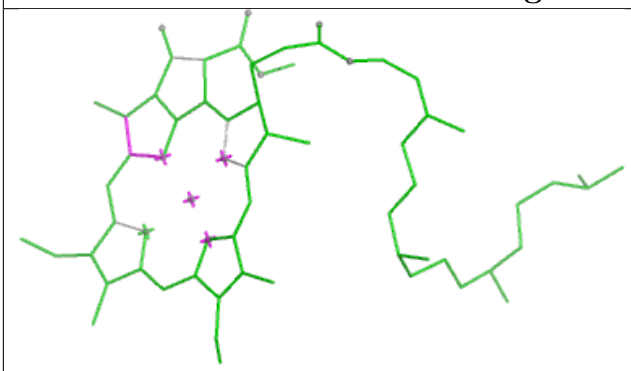


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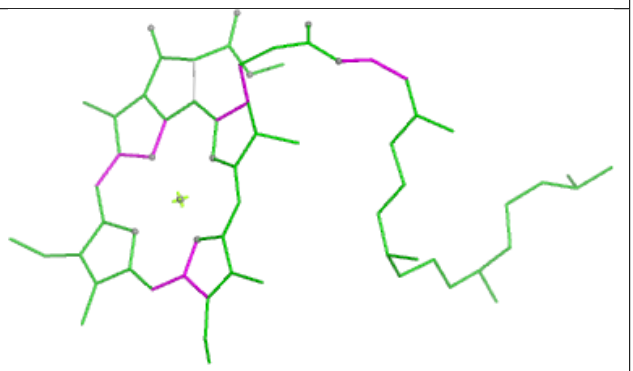


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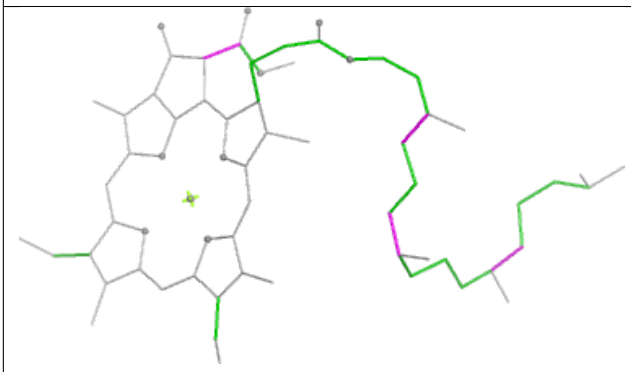
Ligand CLA B 825



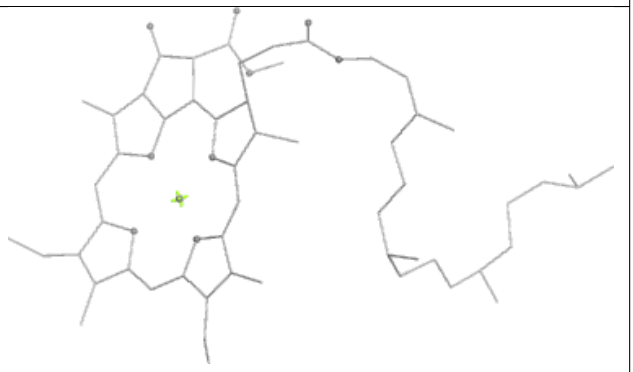
Bond lengths



Bond angles

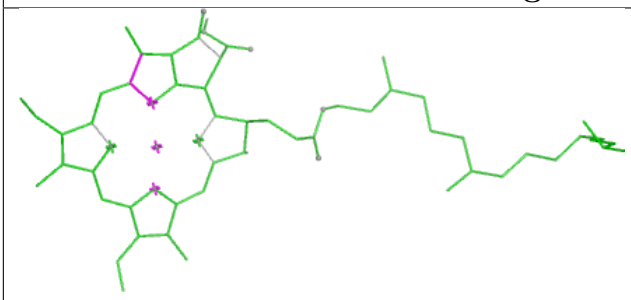


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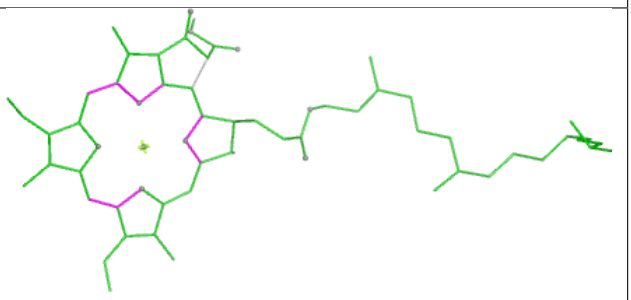


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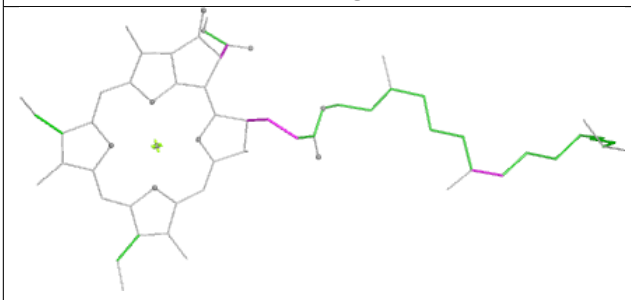
Ligand CLA A 804



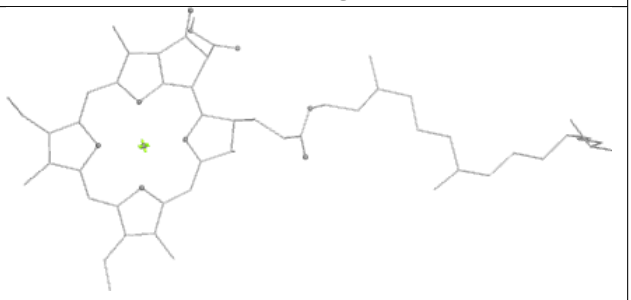
Bond lengths



Bond angles

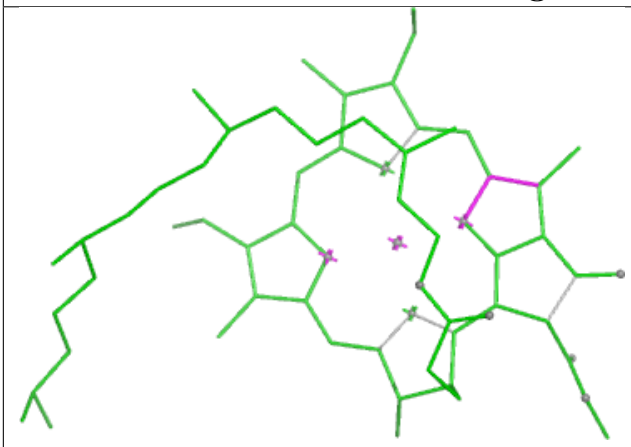


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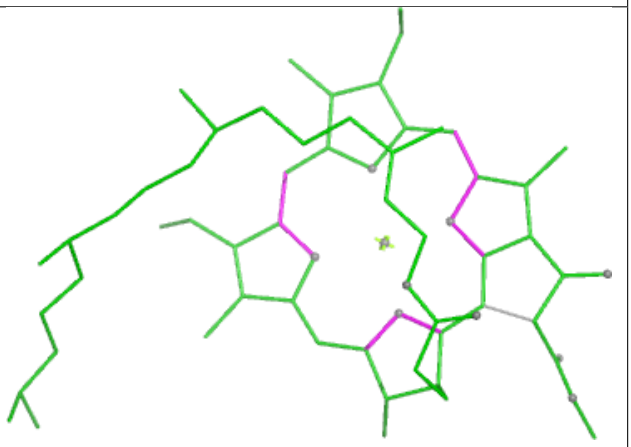


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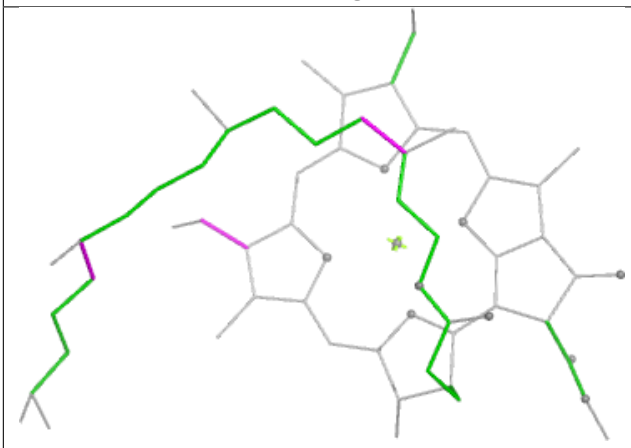
Ligand CLA 2 312



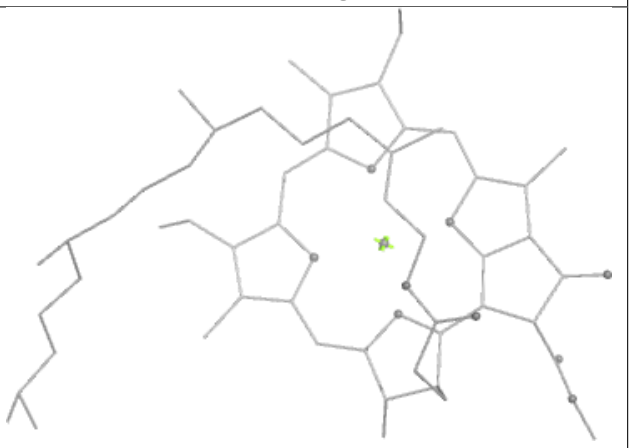
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Bond angles

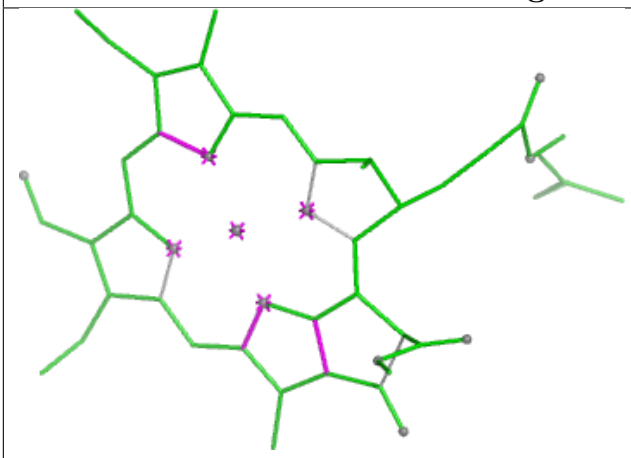


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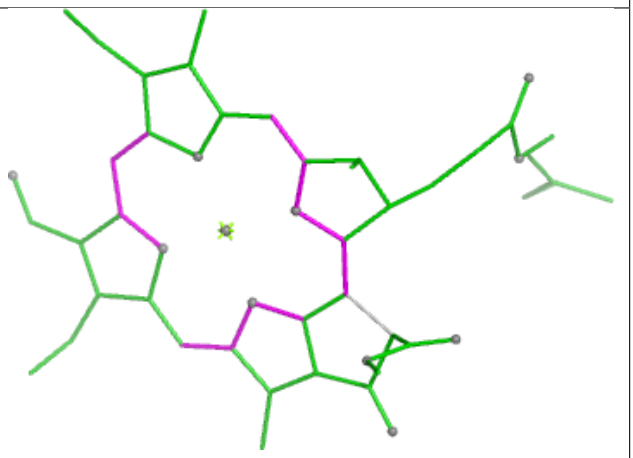


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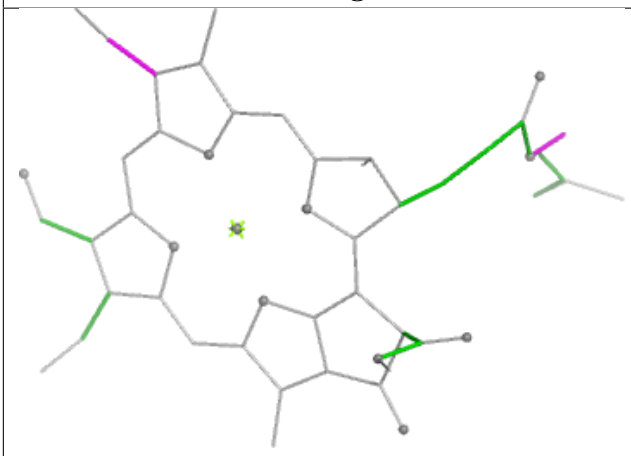
Ligand CHL 1 201



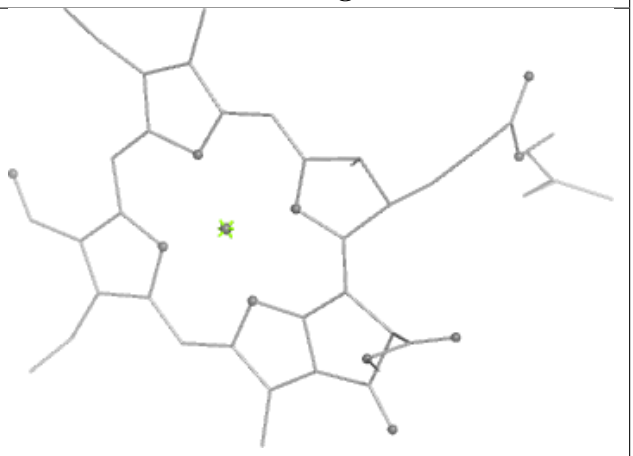
Bond lengths



Bond angles

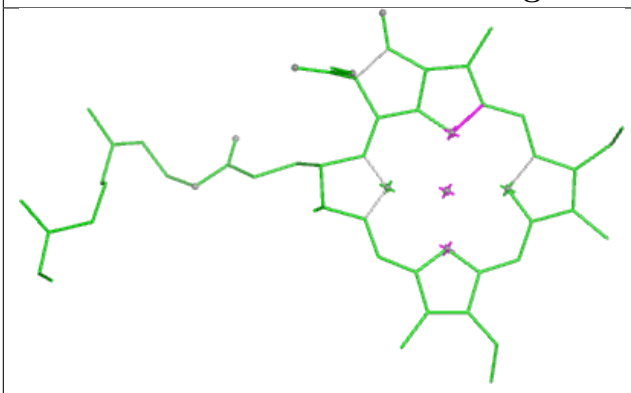


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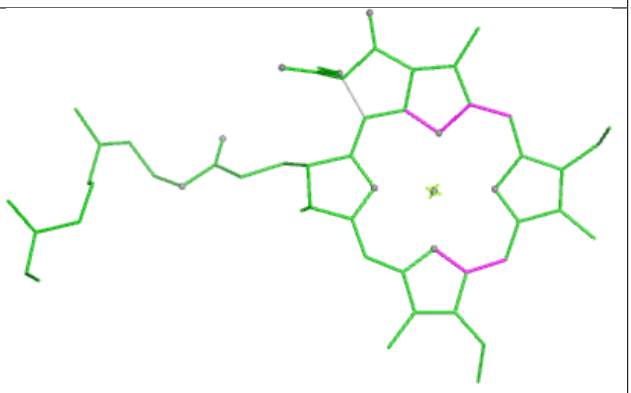


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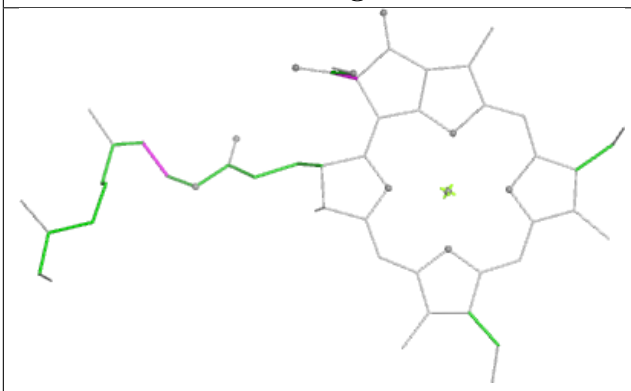
Ligand CLA H 201



Bond lengths



Bond angles

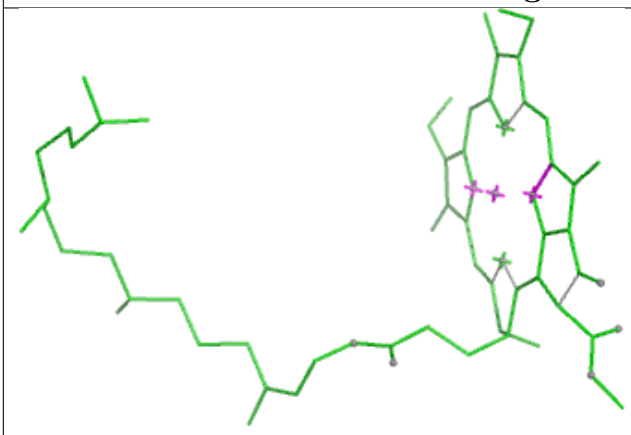


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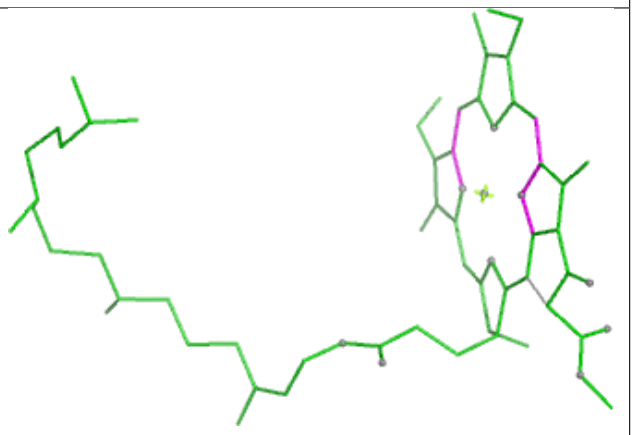


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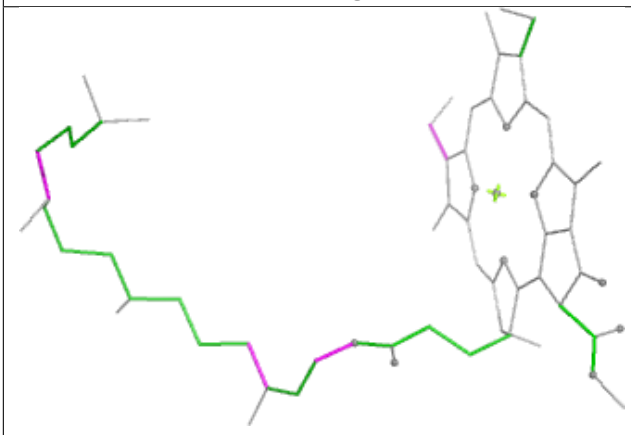
Ligand CLA A 834



Bond lengths



Bond angles

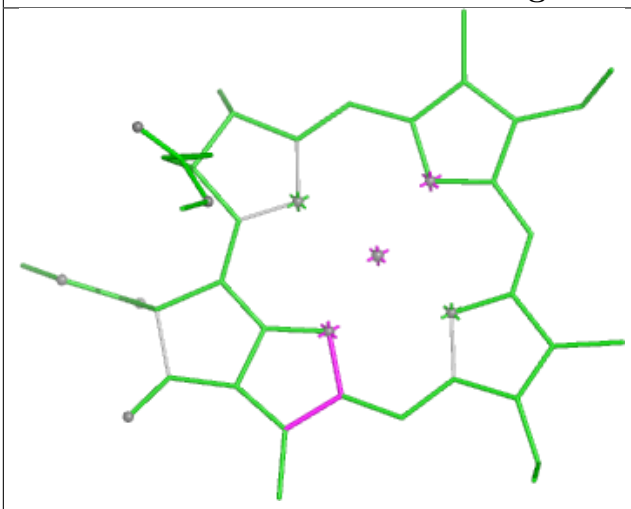


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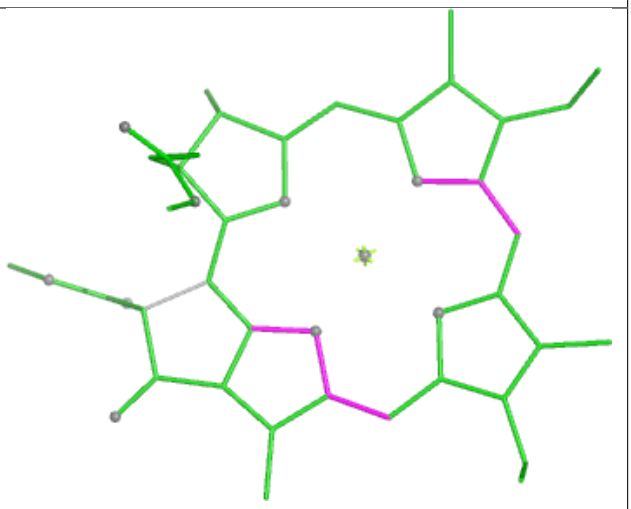


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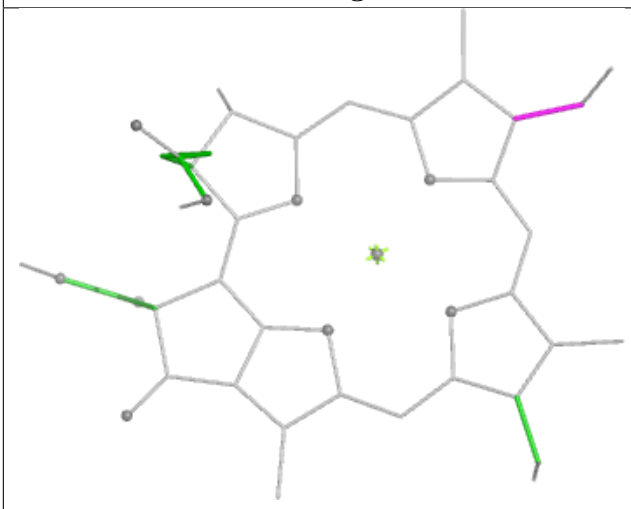
Ligand CLA 3 309



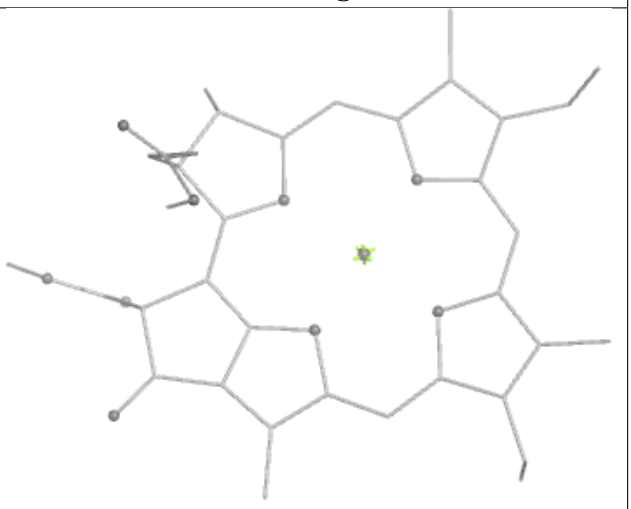
Bond lengths



Bond angles

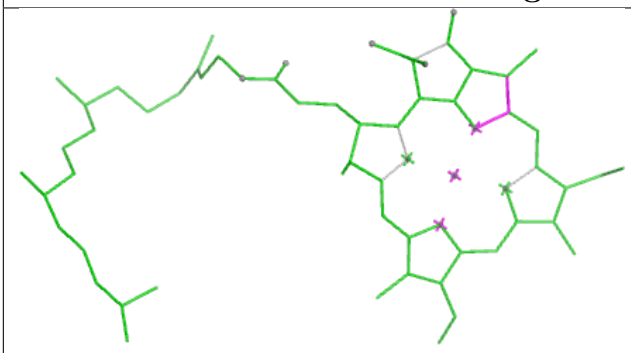


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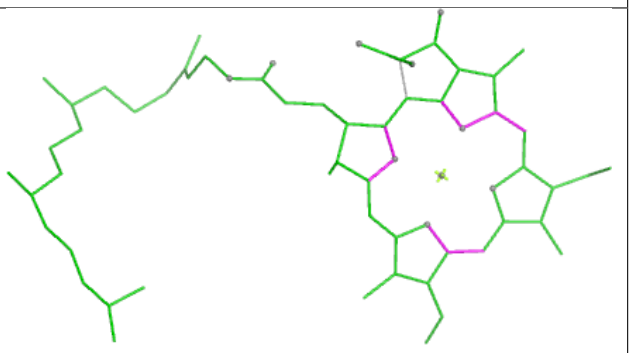


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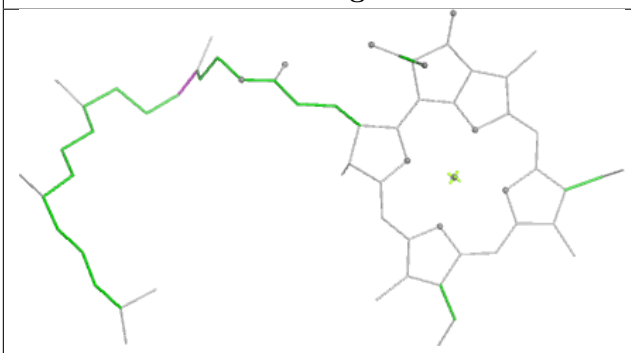
Ligand CLA A 826



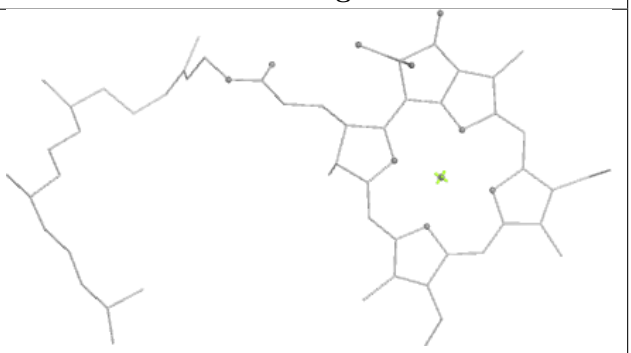
Bond lengths



Bond angles



Torsions



Rings

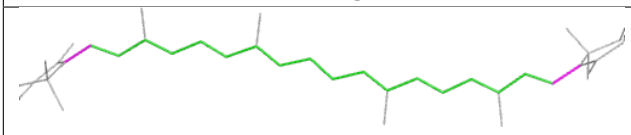
Ligand BCR K 105



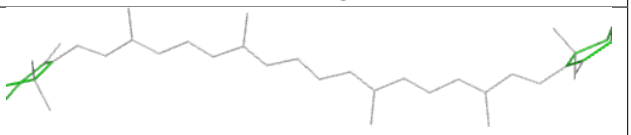
Bond lengths



Bond angles

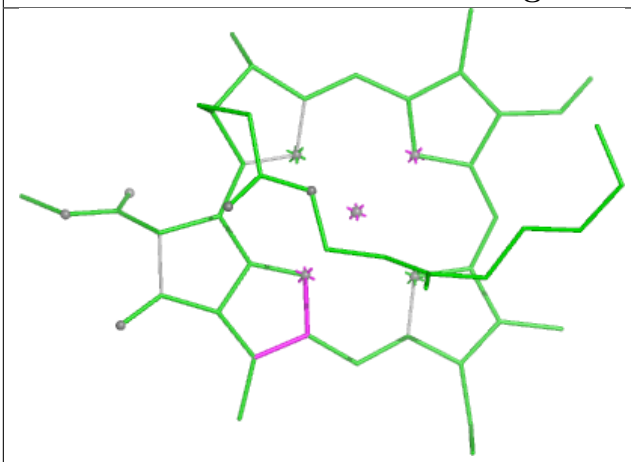


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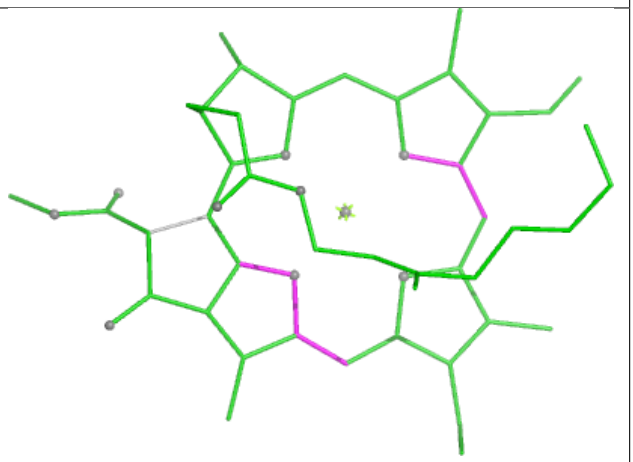


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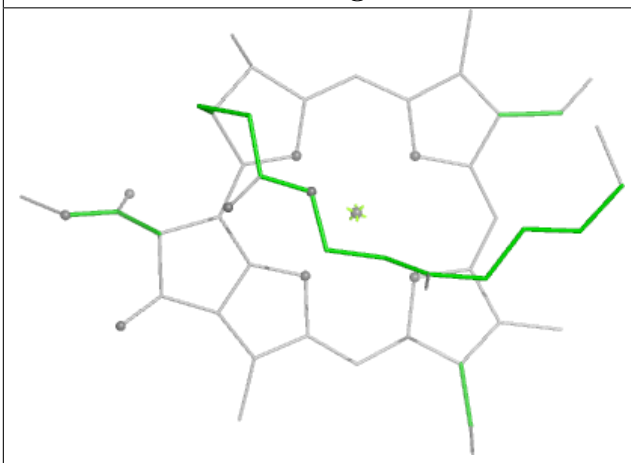
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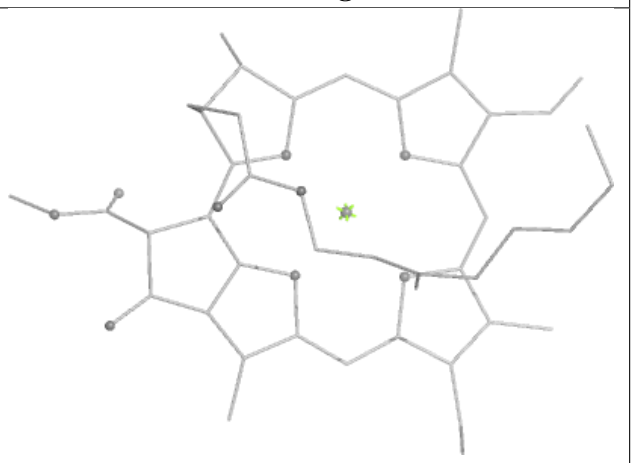
Bond lengths



Bond angles

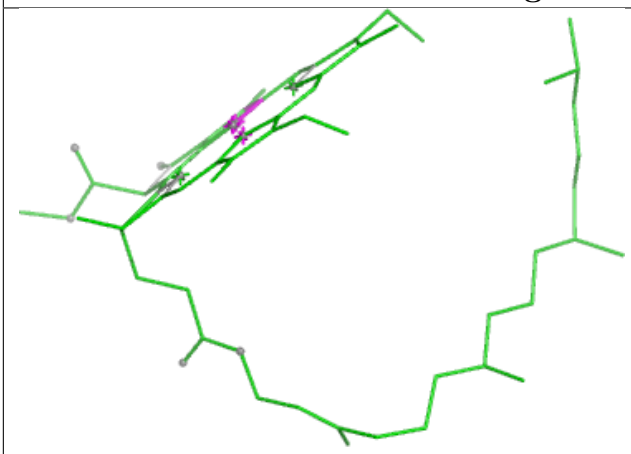


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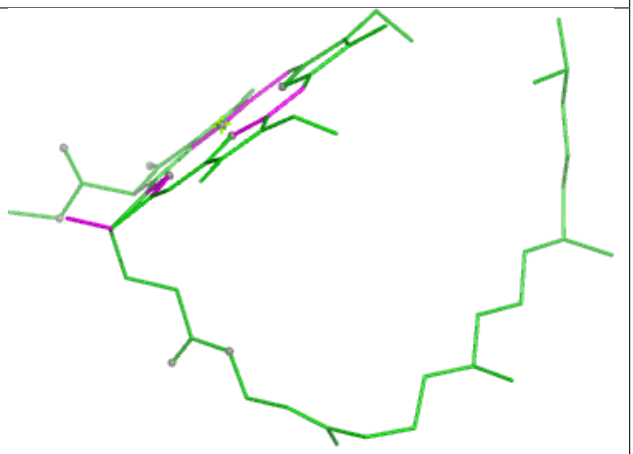


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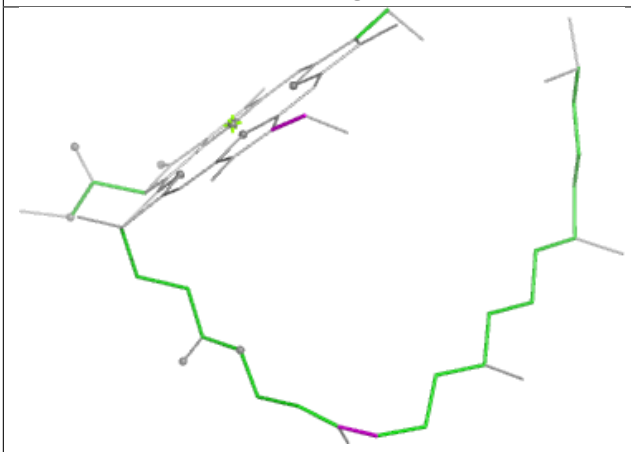
Ligand CLA B 820



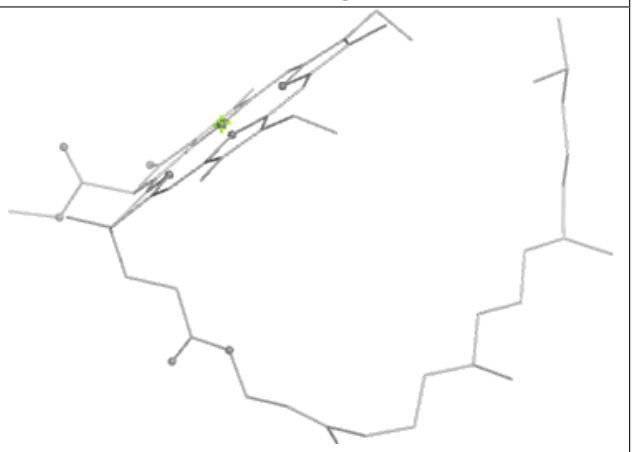
Bond lengths



Bond angles

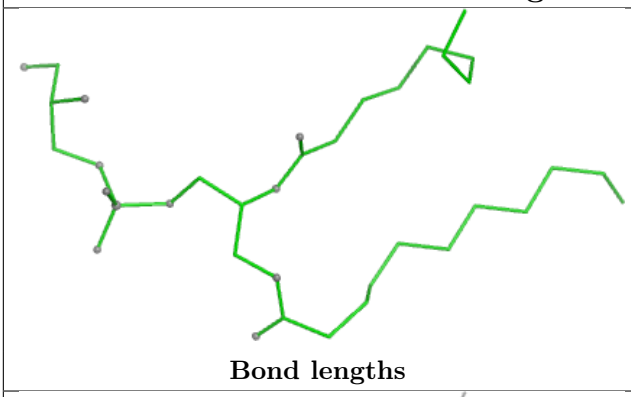


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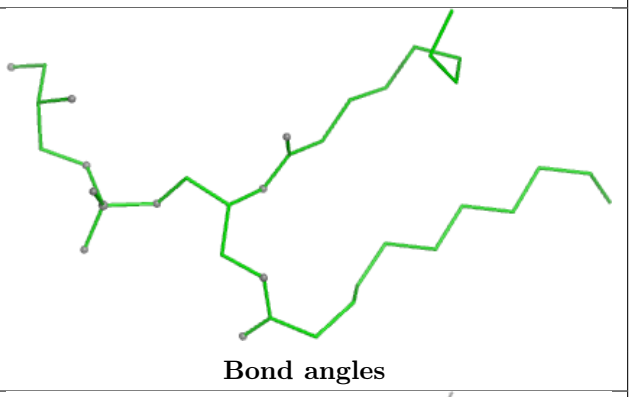


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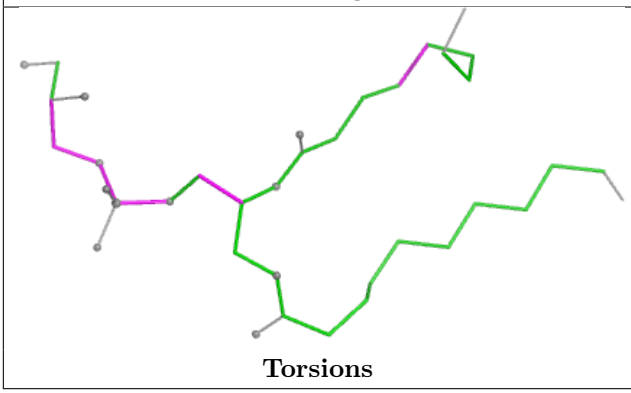
Ligand LHG 2 318



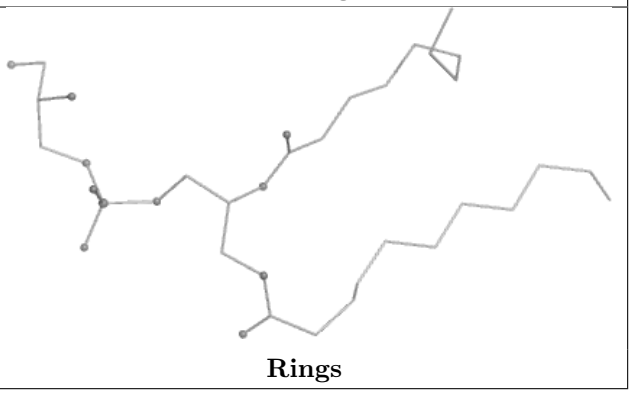
Bond lengths



Bond angles

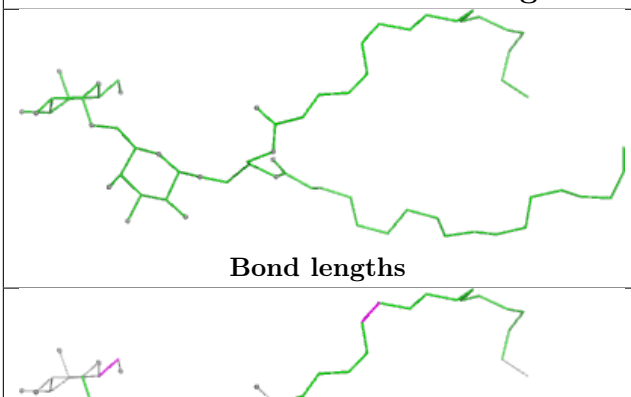


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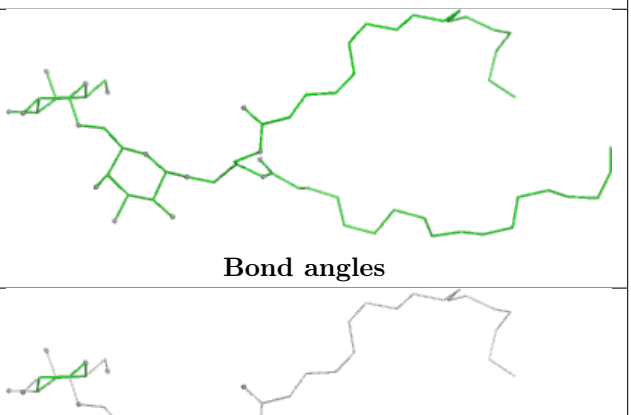


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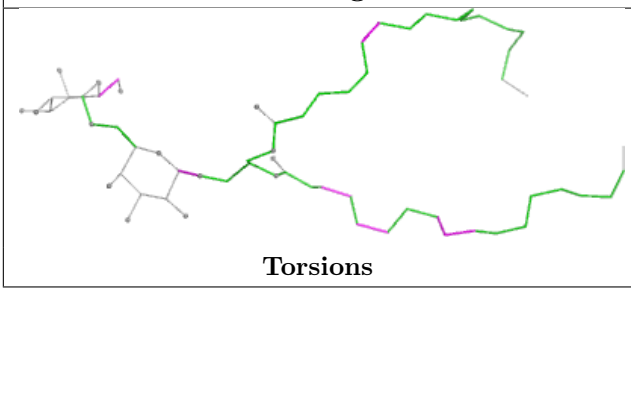
Ligand DGD B 848



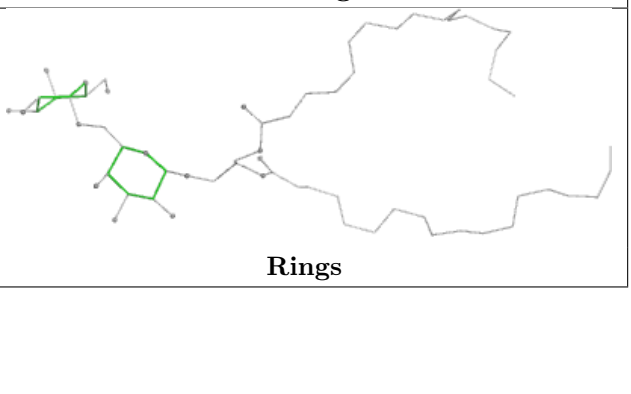
Bond lengths



Bond angles

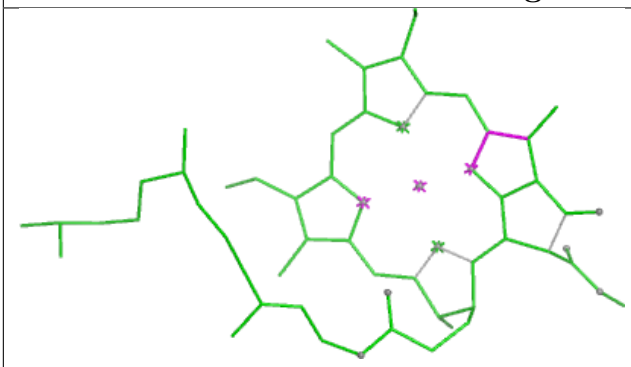


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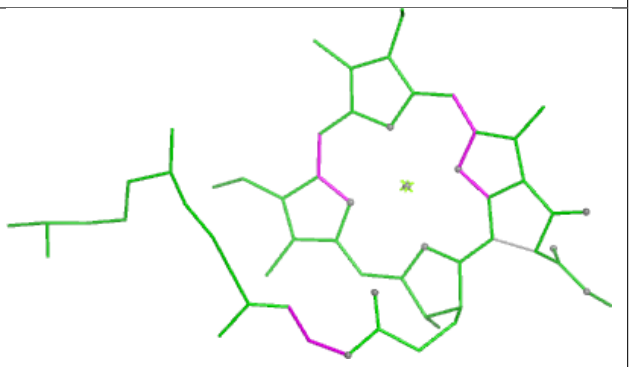


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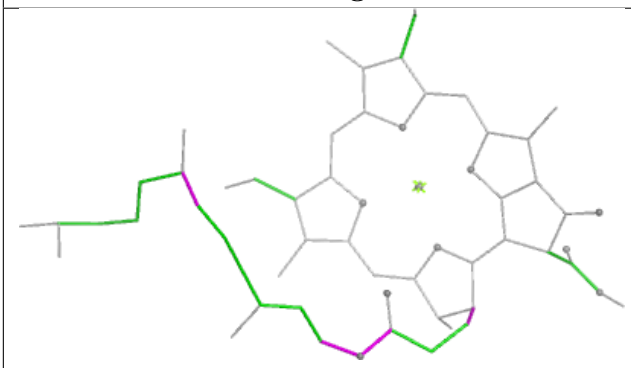
Ligand CLA B 819



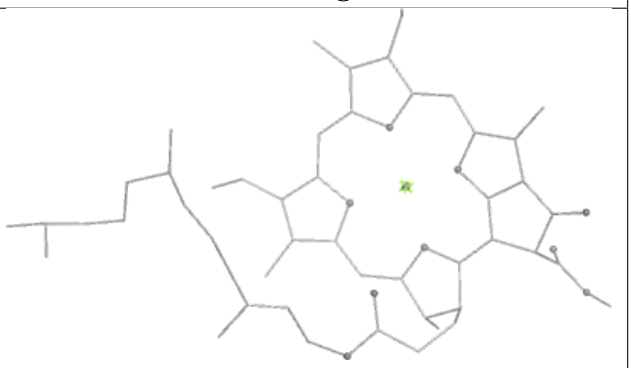
Bond lengths



Bond angles

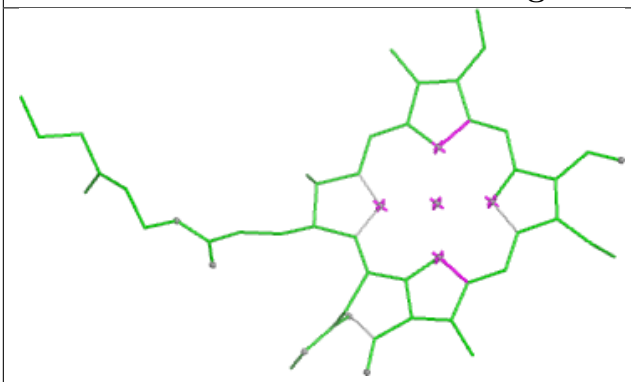


Torsions

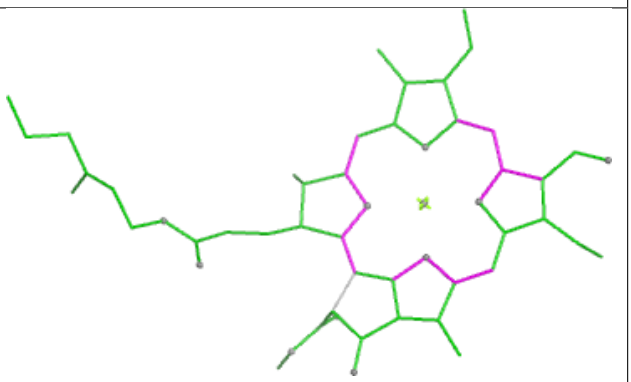


Rings

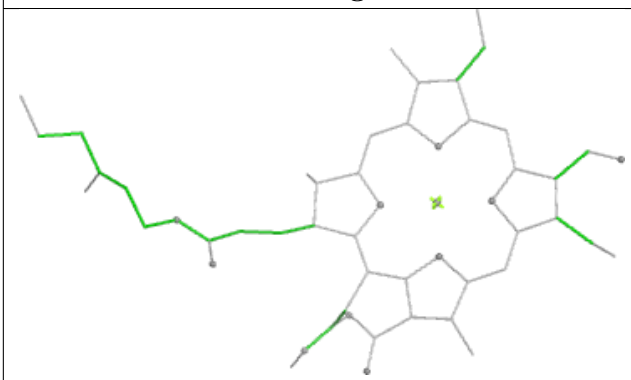
Ligand CHL 4 305



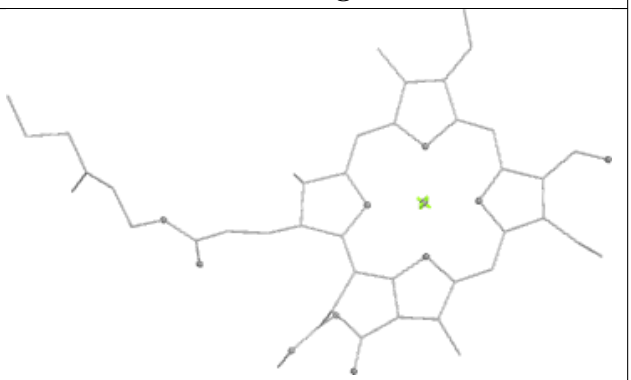
Bond lengths



Bond angles

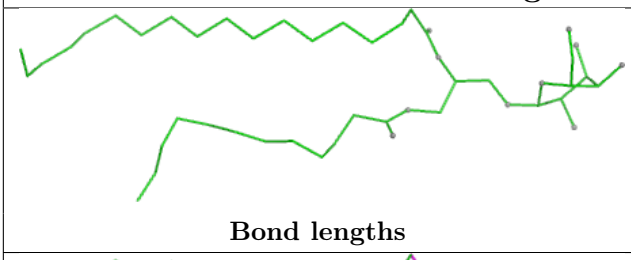


Torsions

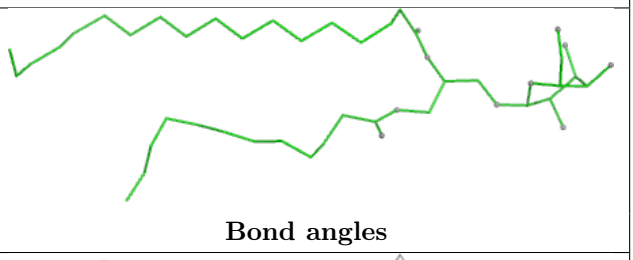


Rings

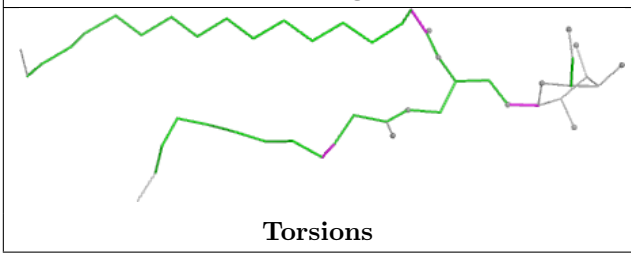
Ligand LMG 4 320



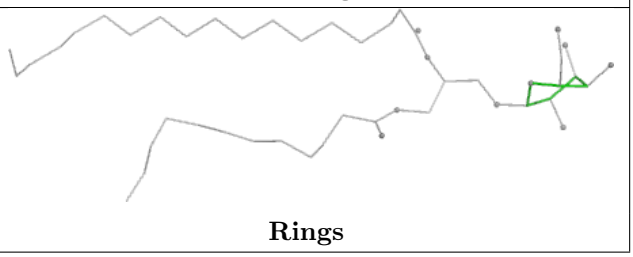
Bond lengths



Bond angles

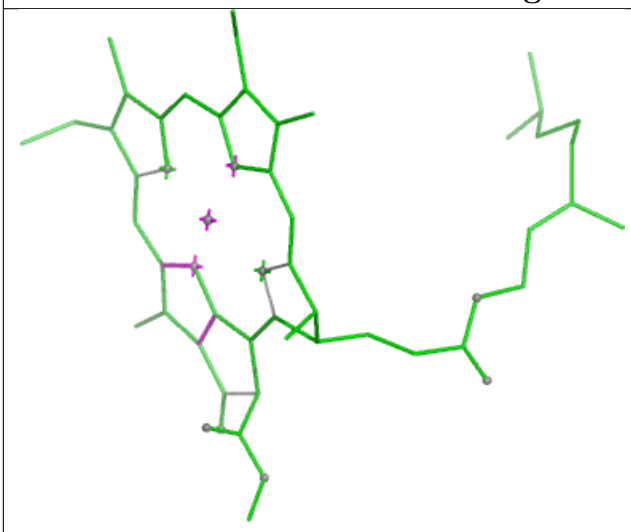


Torsions

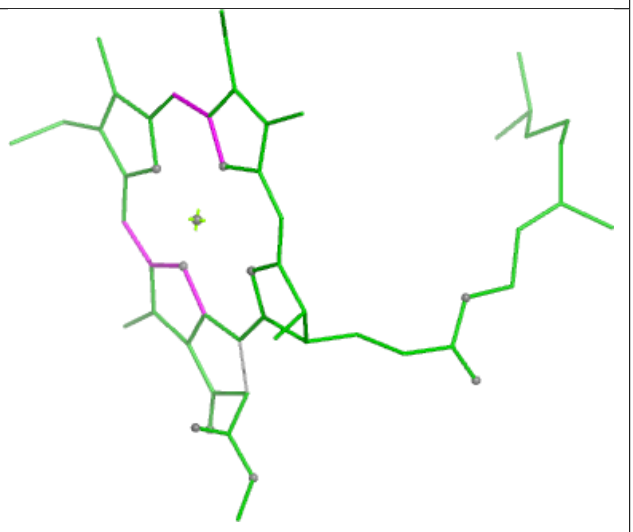


Rings

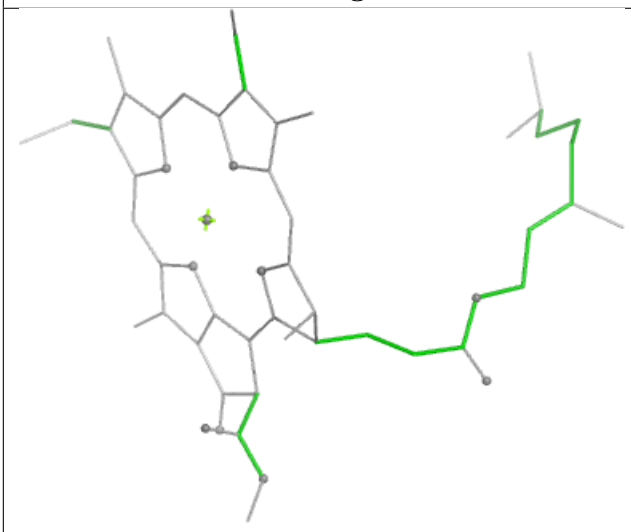
Ligand CLA A 803



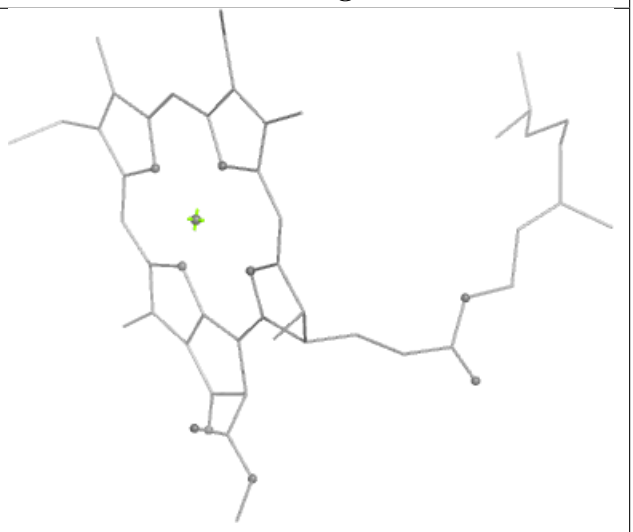
Bond lengths



Bond angles

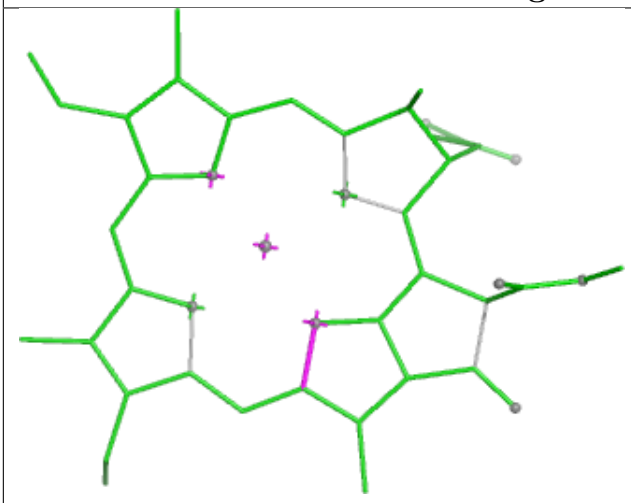


Torsions

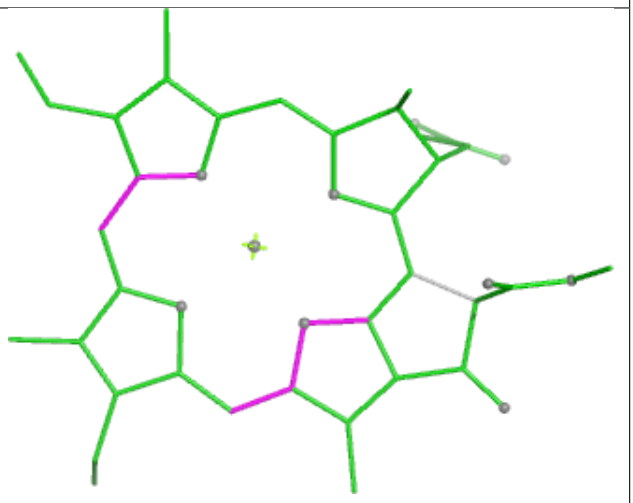


Rings

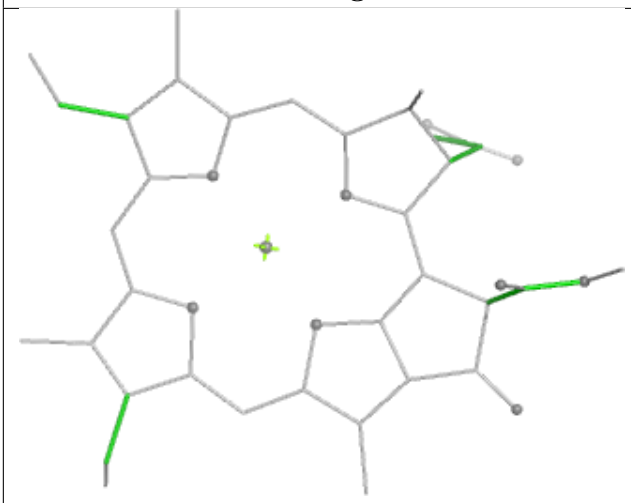
Ligand CLA 3 303



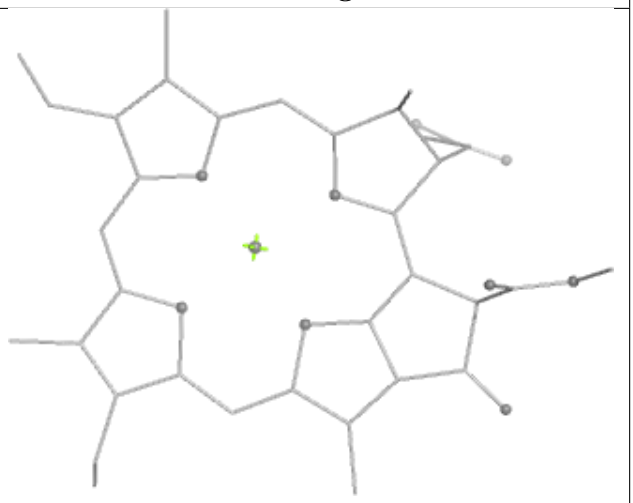
Bond lengths



Bond angles

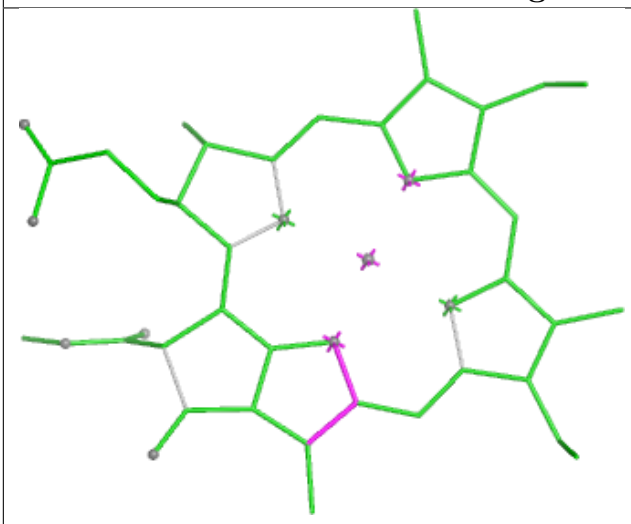


Torsions

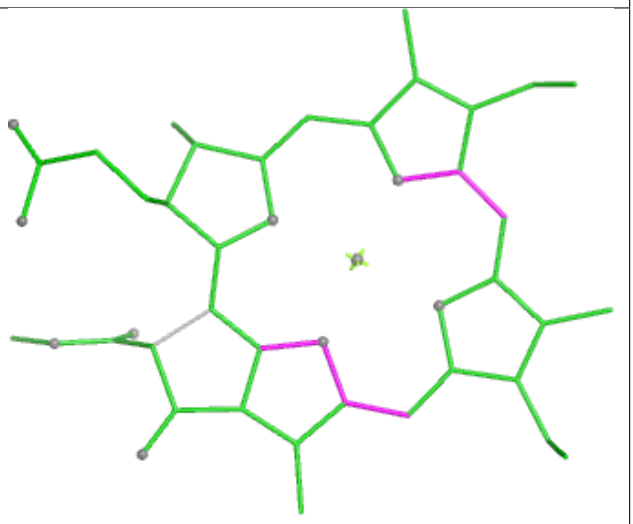


Rings

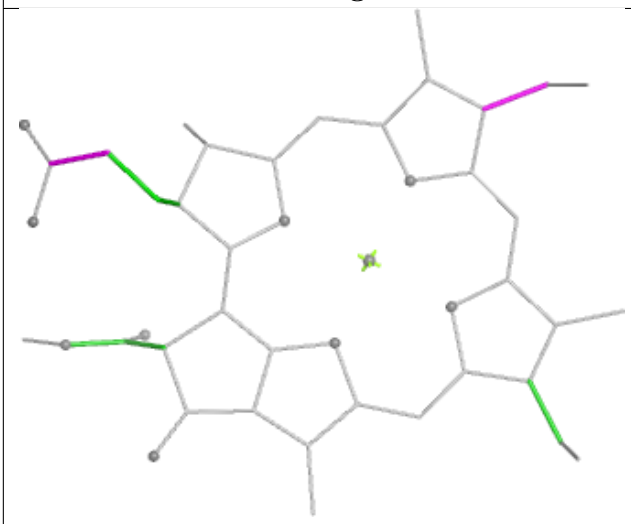
Ligand CLA 3 312



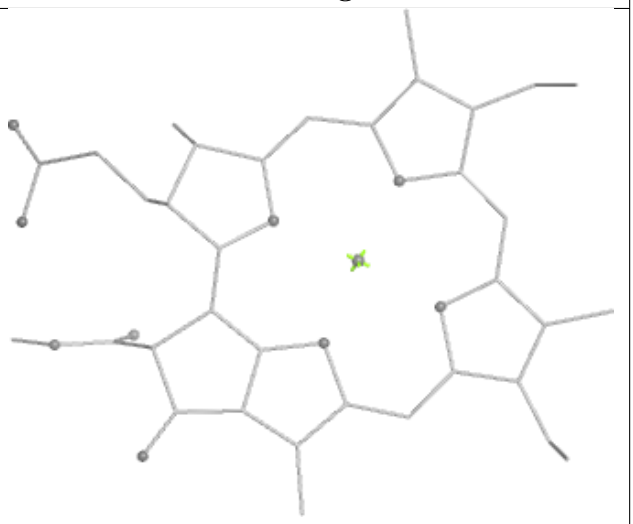
Bond lengths



Bond angles

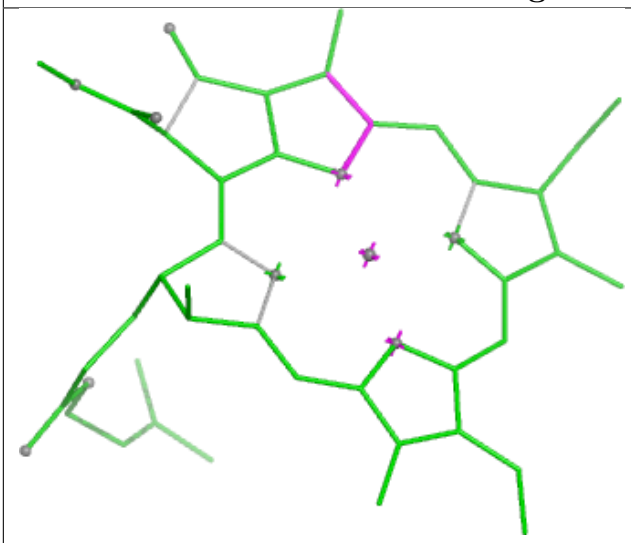


Torsions

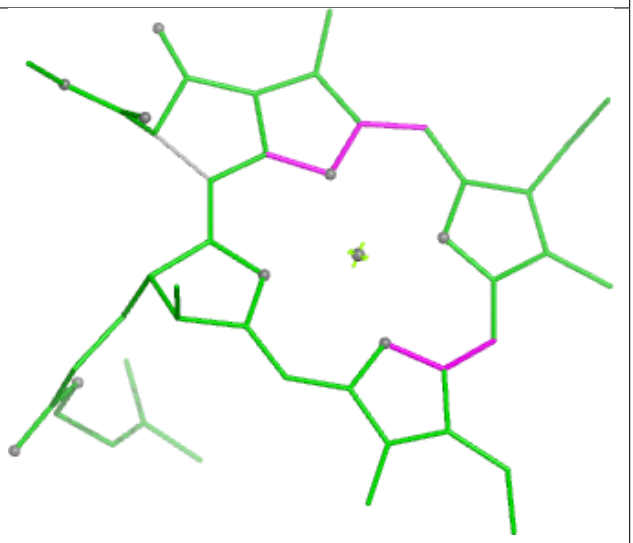


Rings

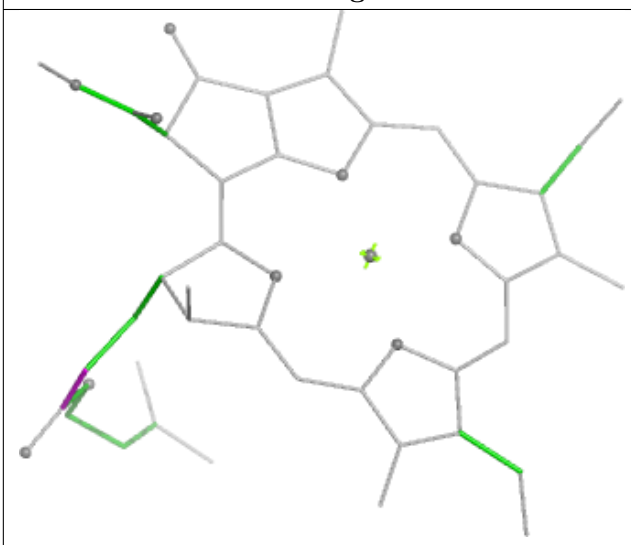
Ligand CLA 3 307



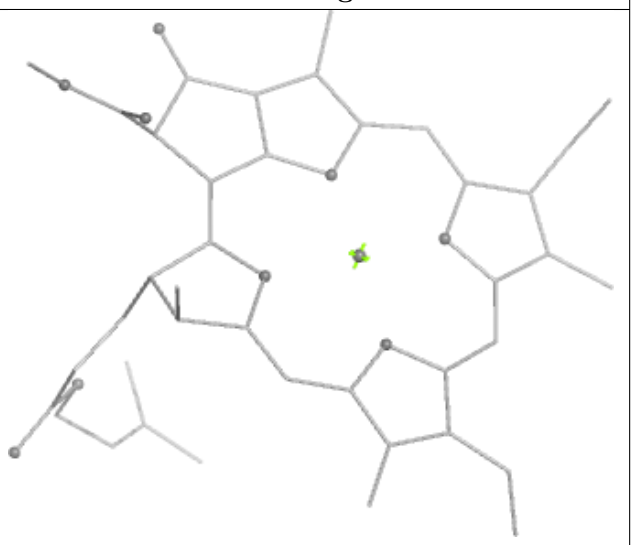
Bond lengths



Bond angles

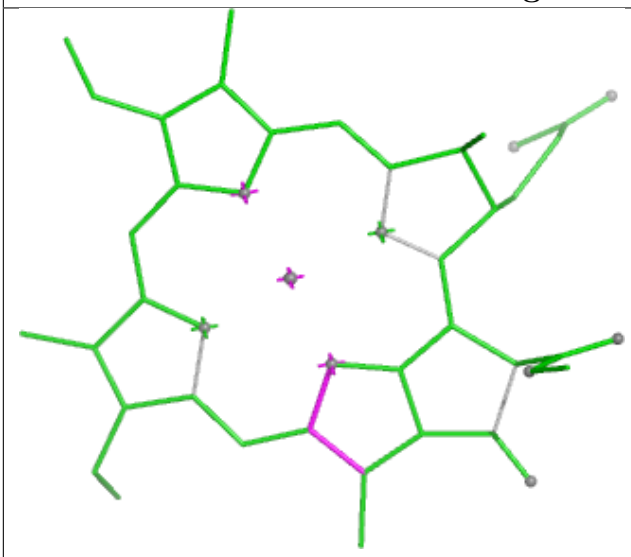


Torsions

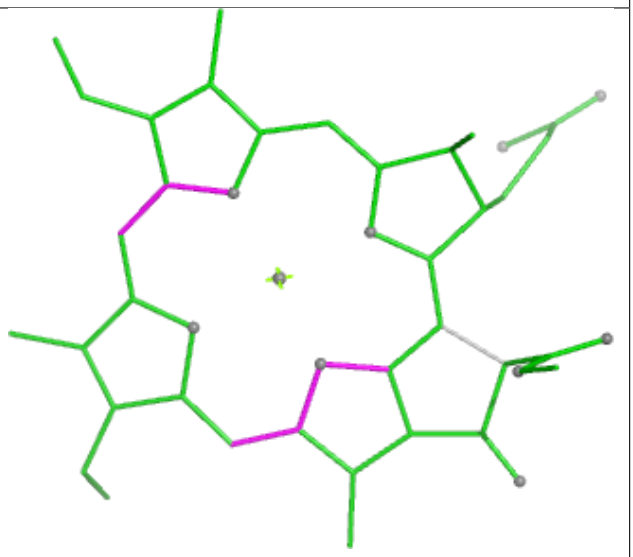


Rings

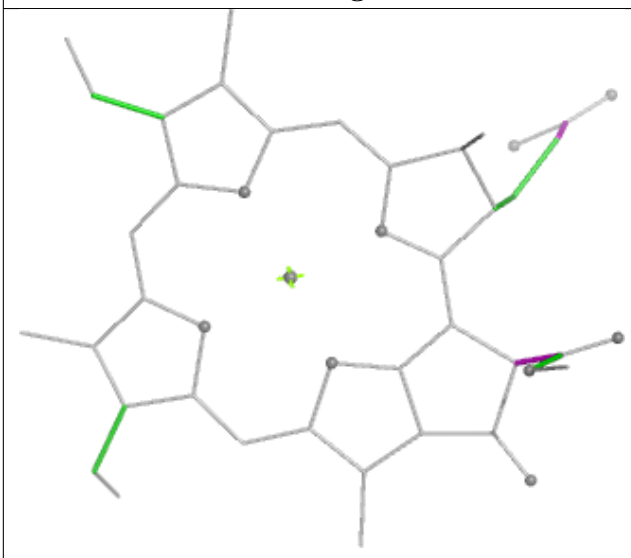
Ligand CLA G 103



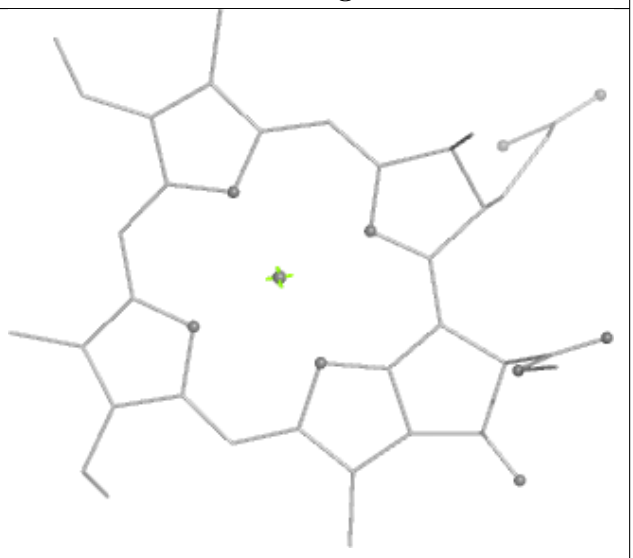
Bond lengths



Bond angles

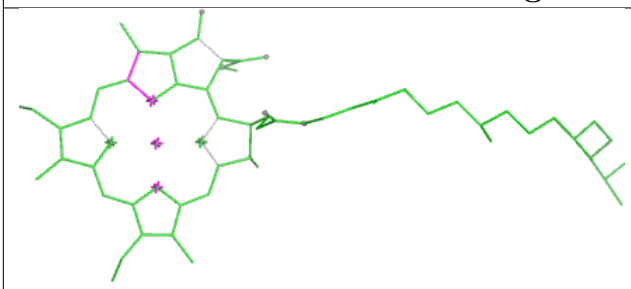


Torsions

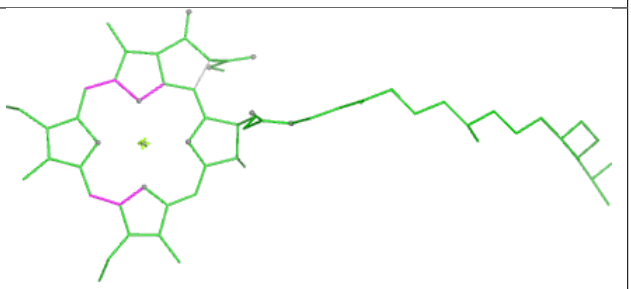


Rings

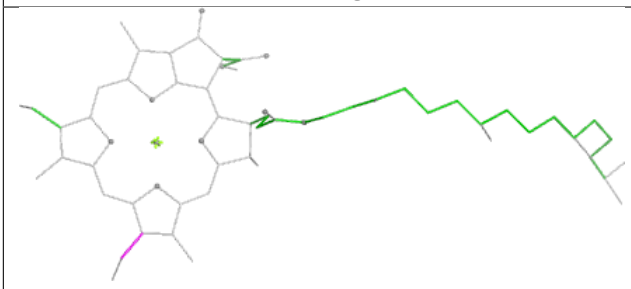
Ligand CLA B 801



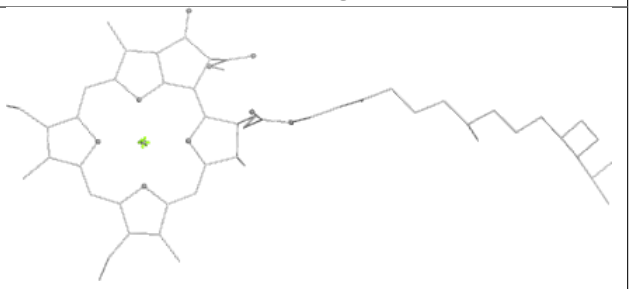
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

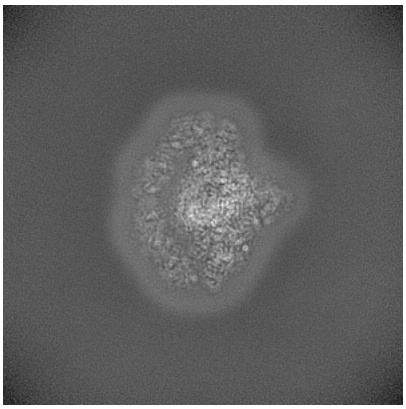
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-57280. These allow visual inspection of the internal detail of the map and identification of artifacts.

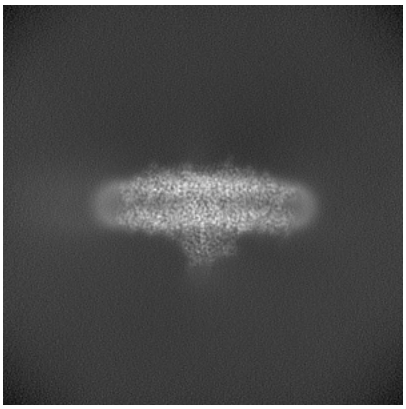
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

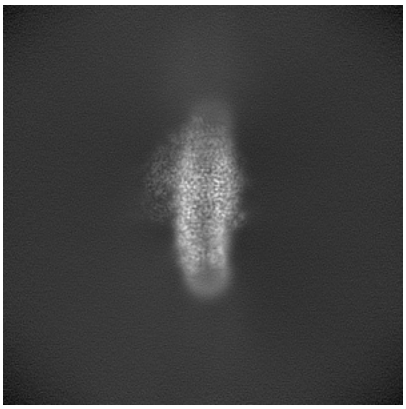
6.1.1 Primary map



X

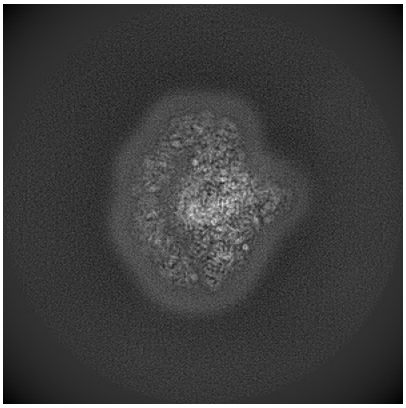


Y

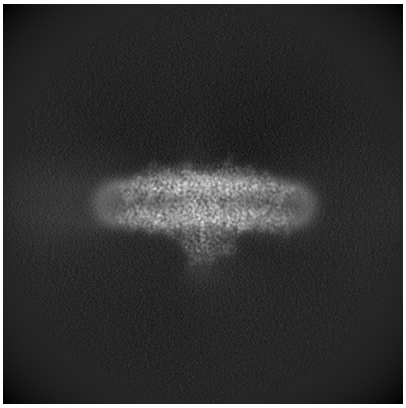


Z

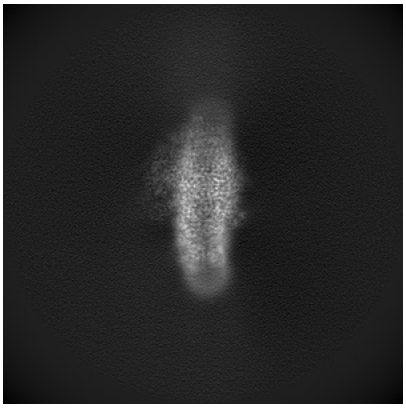
6.1.2 Raw map



X



Y

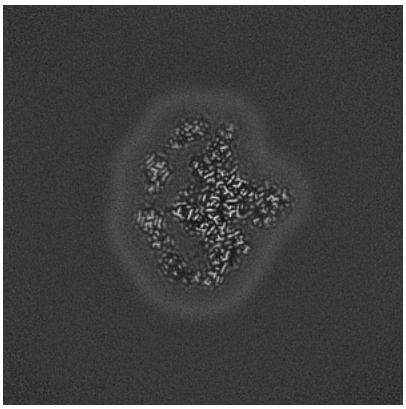


Z

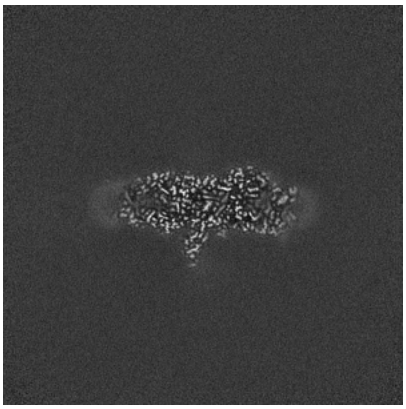
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

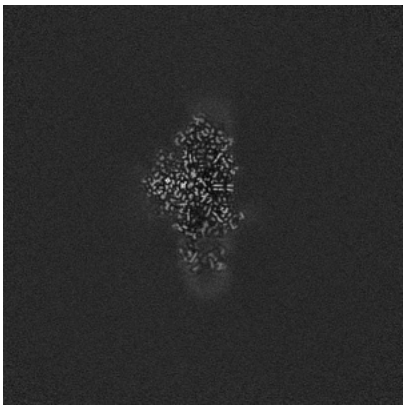
6.2.1 Primary map



X Index: 250

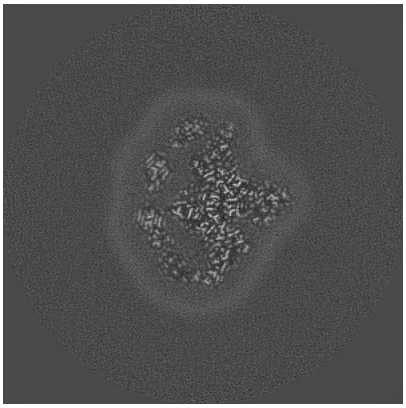


Y Index: 250

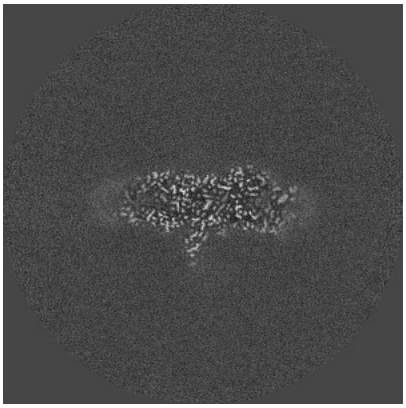


Z Index: 250

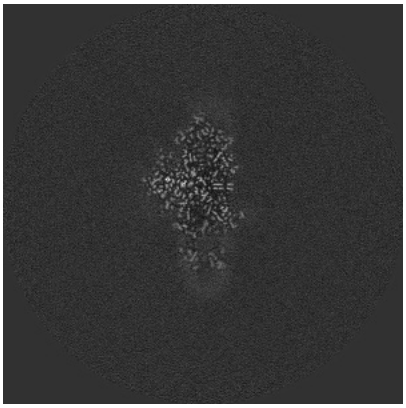
6.2.2 Raw map



X Index: 250



Y Index: 250

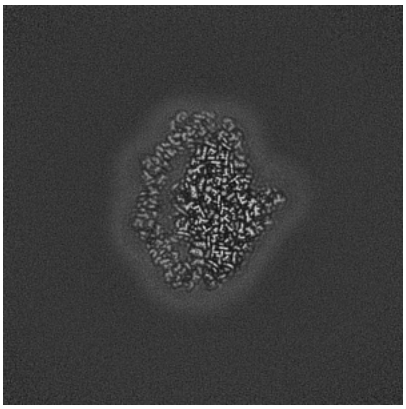


Z Index: 250

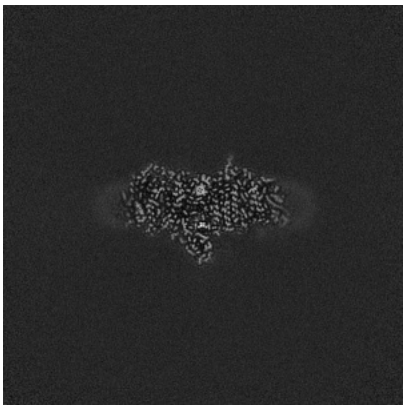
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

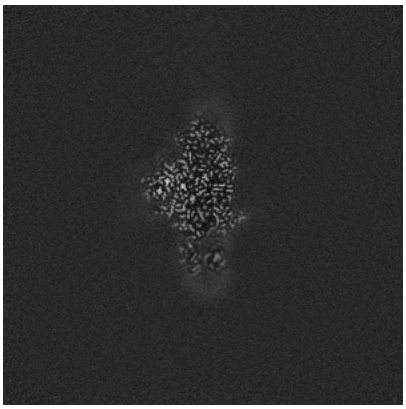
6.3.1 Primary map



X Index: 268

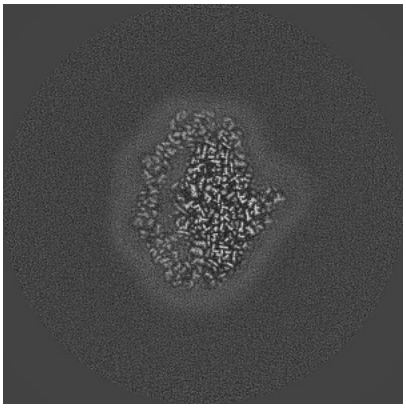


Y Index: 274

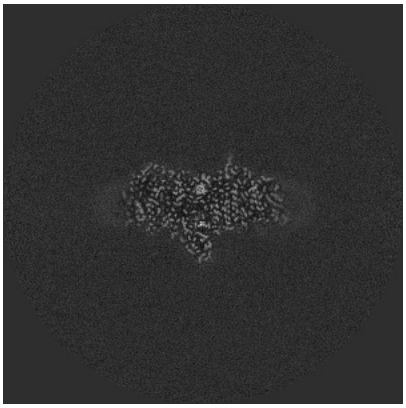


Z Index: 248

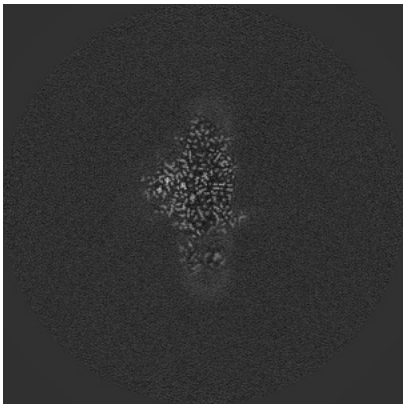
6.3.2 Raw map



X Index: 268



Y Index: 274

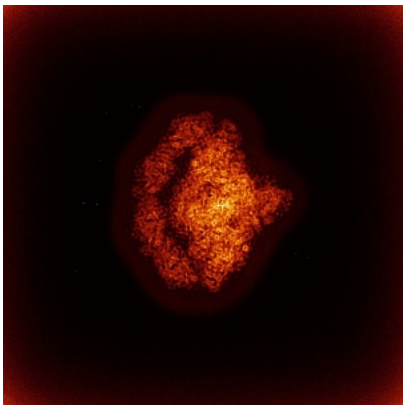


Z Index: 248

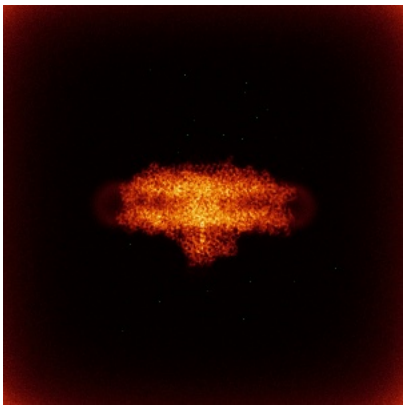
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

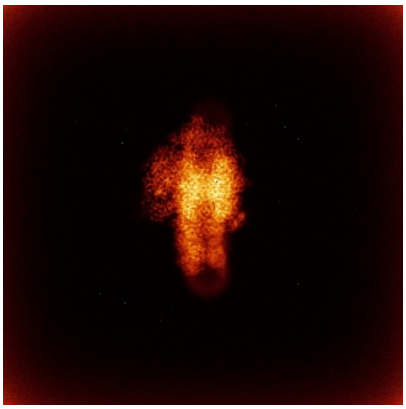
6.4.1 Primary map



X

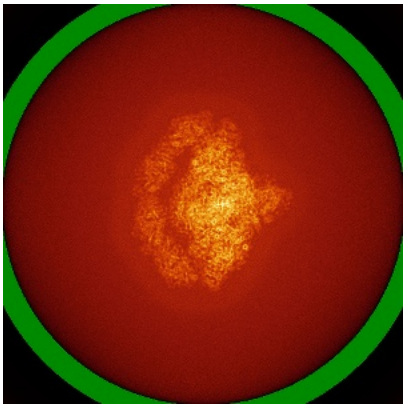


Y

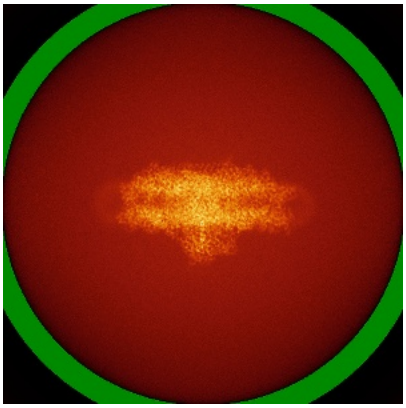


Z

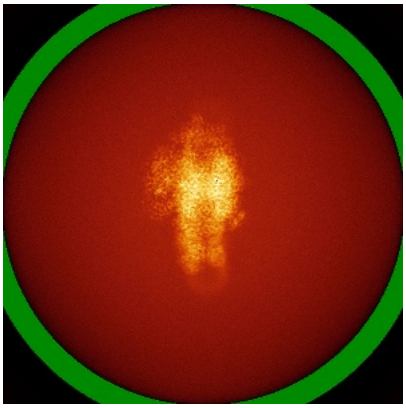
6.4.2 Raw map



X



Y



Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.006. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

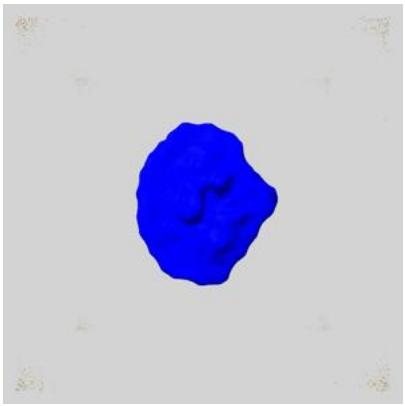
6.6 Mask visualisation (i)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

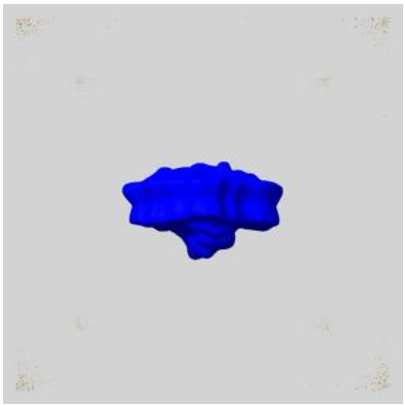
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

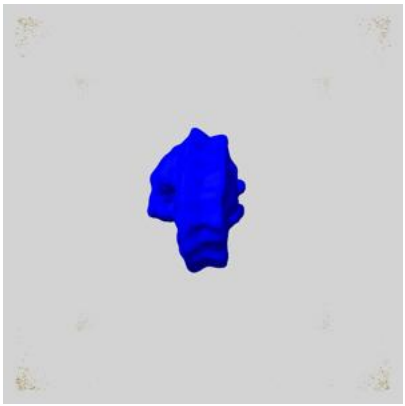
6.6.1 emd_57280_msk_1.map (i)



X



Y

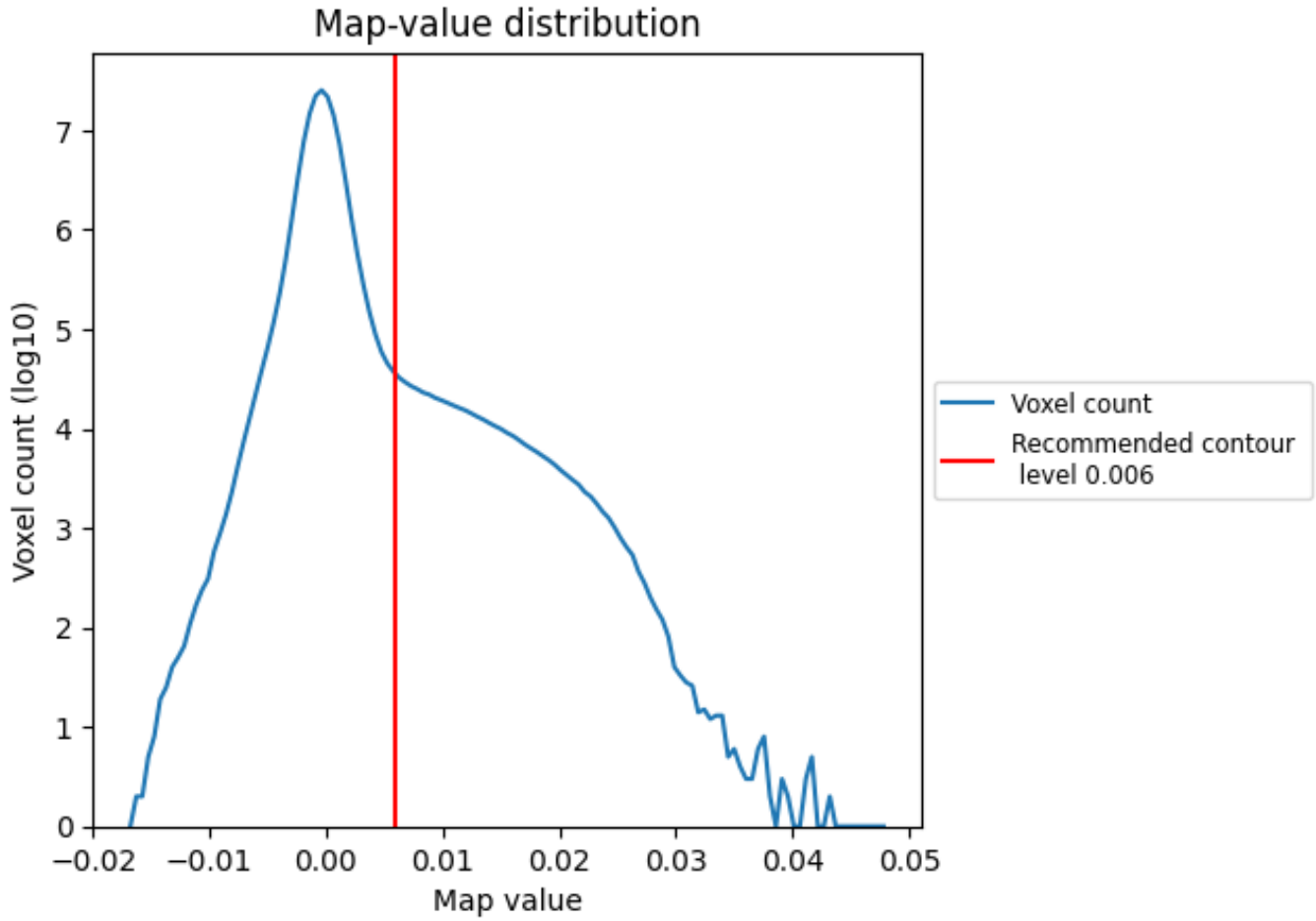


Z

7 Map analysis

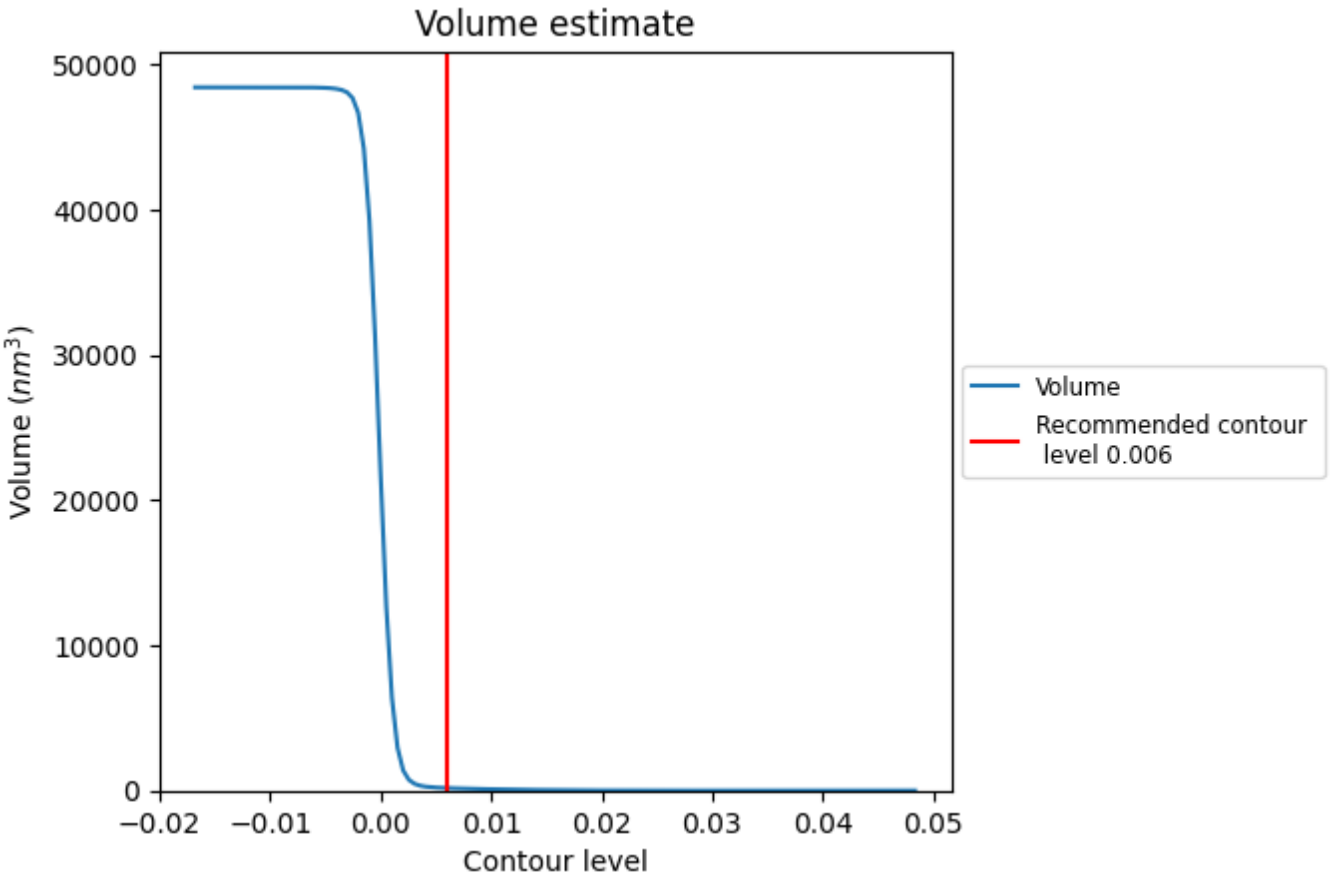
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

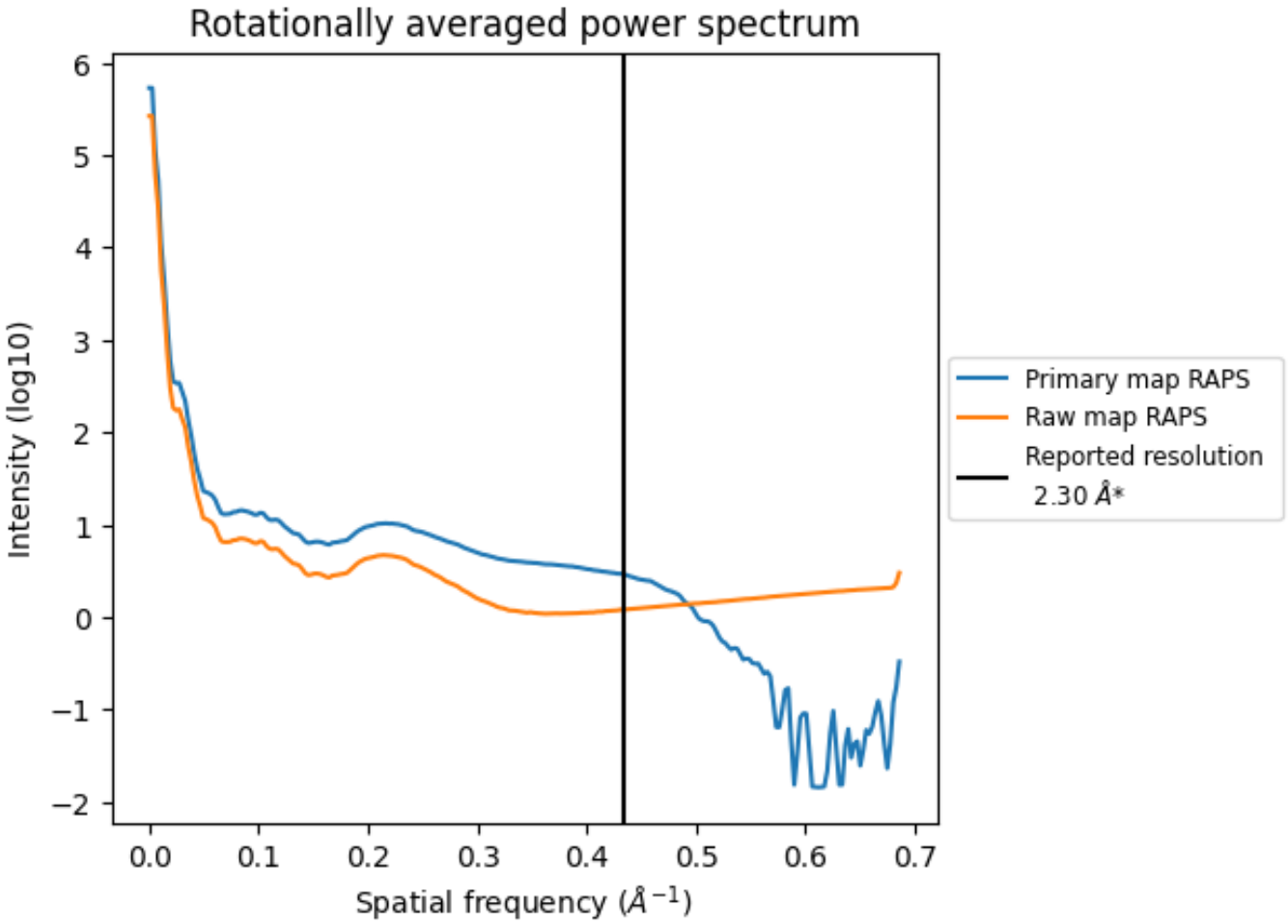
7.2 Volume estimate



The volume at the recommended contour level is 172 nm^3; this corresponds to an approximate mass of 155 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)

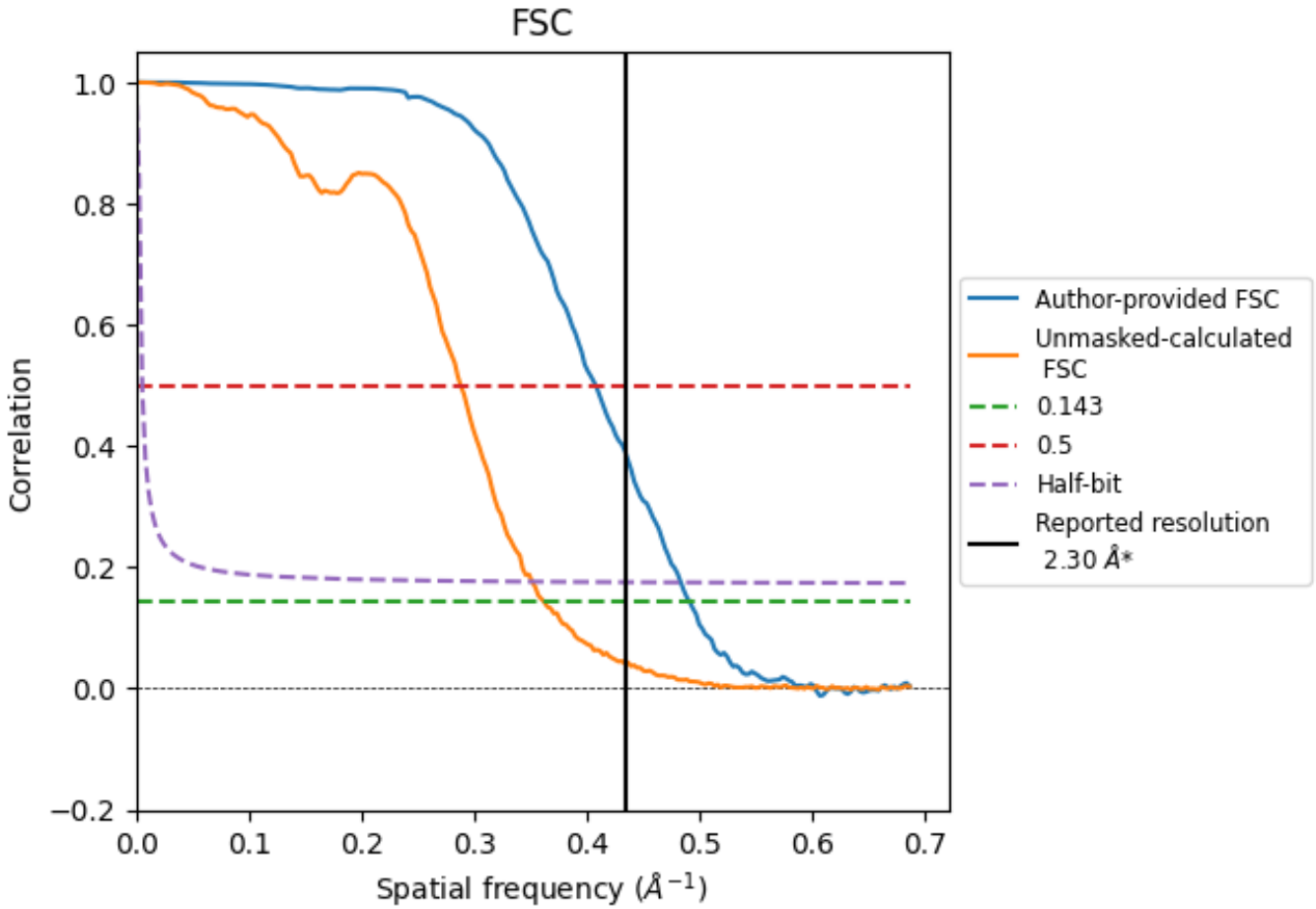


*Reported resolution corresponds to spatial frequency of 0.435 $Å^{-1}$

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.435 Å^{-1}

8.2 Resolution estimates (i)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.30	-	-
Author-provided FSC curve	2.04	2.45	2.07
Unmasked-calculated*	2.77	3.47	2.85

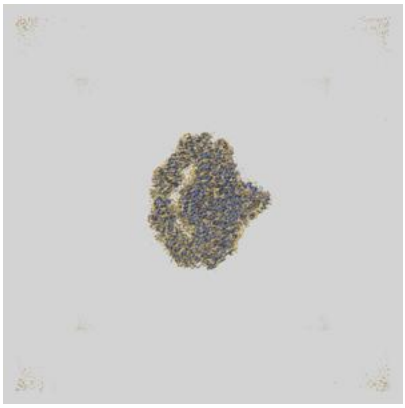
*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from author-provided FSC intersecting FSC 0.143 CUT-OFF 2.04 differs from the reported value 2.3 by more than 10 %

The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 2.77 differs from the reported value 2.3 by more than 10 %

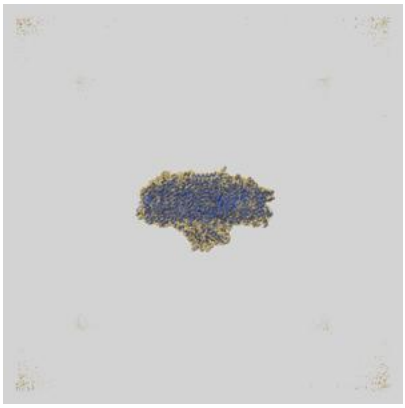
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-57280 and PDB model 29QB. Per-residue inclusion information can be found in section 3 on page 25.

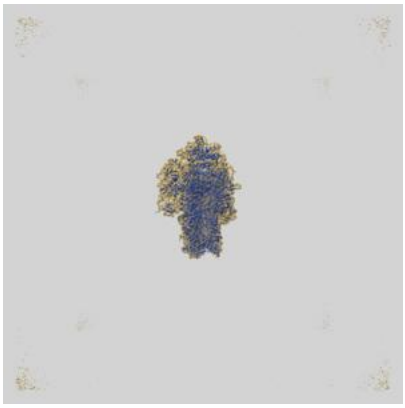
9.1 Map-model overlay



X



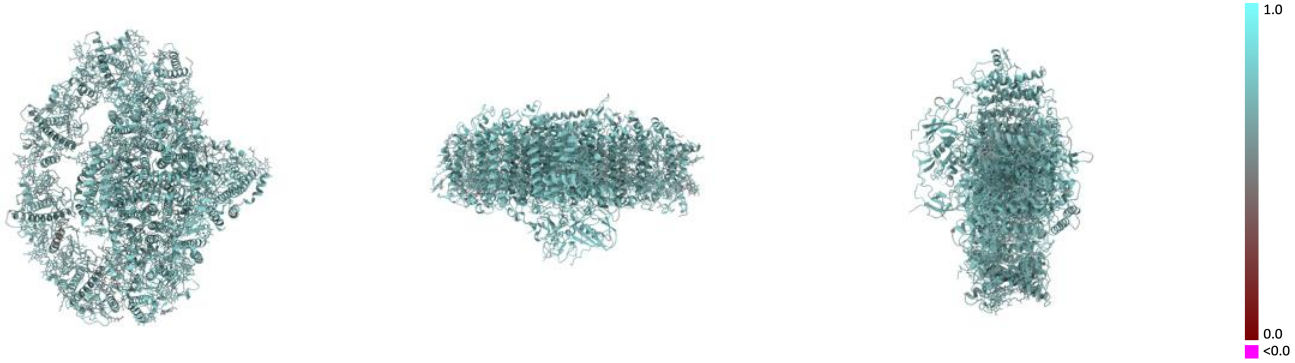
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.006 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

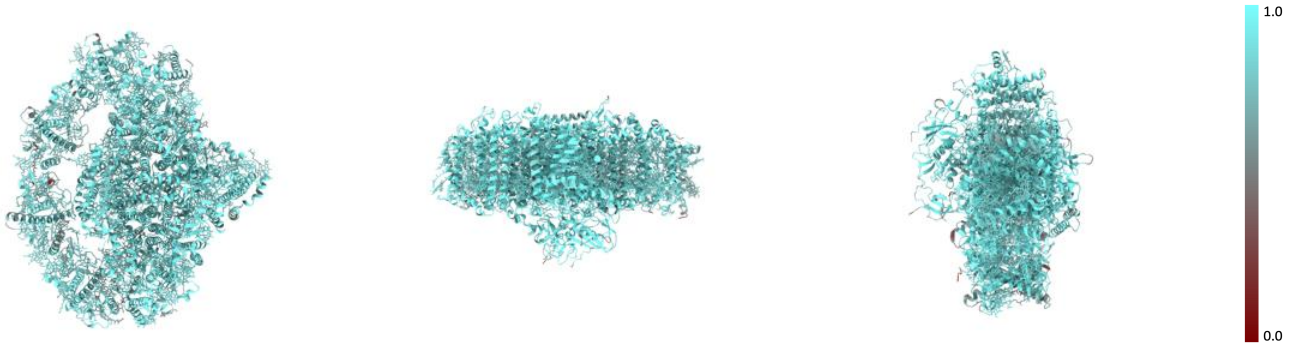
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

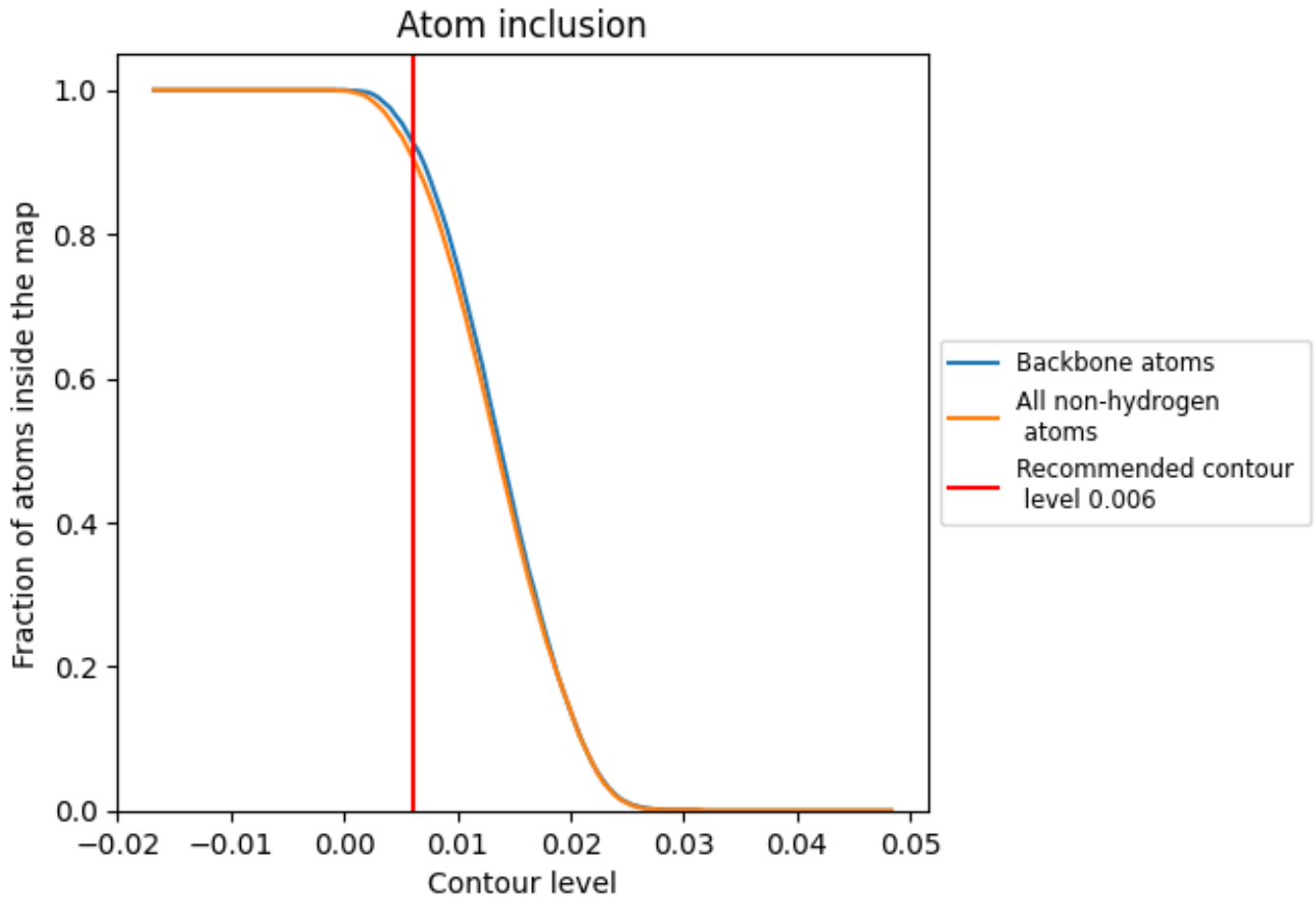
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.006).

9.4 Atom inclusion (i)



At the recommended contour level, 93% of all backbone atoms, 91% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.006) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9080	0.7000
1	0.8590	0.6560
2	0.8360	0.6470
3	0.8770	0.6730
4	0.8470	0.6590
A	0.9400	0.7240
B	0.9510	0.7310
C	0.9550	0.7200
D	0.9390	0.7210
E	0.8840	0.6940
F	0.9090	0.7050
G	0.8630	0.6710
H	0.8350	0.6660
I	0.9620	0.7250
J	0.9320	0.7110
K	0.7800	0.6300
L	0.9110	0.6980

