wwPDB EM Validation Summary Report (i)

Oct 28, 2024 – 02:52 PM JST

PDB ID	:	8WGH
EMDB ID	:	EMD-37513
Title	:	Cryo-EM structure of the red-shifted Fittonia albivenis PSI-LHCI
Authors	:	Huang, G.Q.; Li, X.X.; Sui, S.F.; Qin, X.C.
Deposited on	:	2023-09-21
Resolution	:	2.40 Å(reported)

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

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

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

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

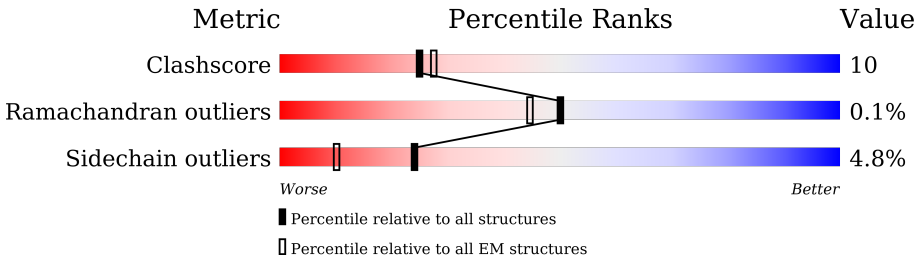
EMDB validation analysis	:	FAILED
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	FAILED
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.40 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)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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%

Mol	Chain	Length	Quality of chain
1	1	246	61% 18% • 19%
2	2	265	62% 16% • 21%
3	3	272	63% 17% • 19%
4	4	248	61% 18% 21%
5	A	750	81% 17% ••
6	B	734	86% 13% •
7	C	81	89% 9% ••
8	D	190	61% 12% • 26%
9	E	151	34% 7% 58%

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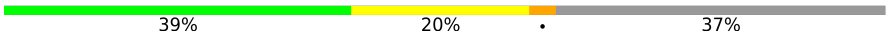
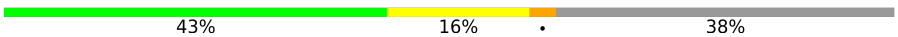
Mol	Chain	Length	Quality of chain
10	F	221	
11	G	145	
12	H	145	
13	I	36	
14	J	44	
15	K	132	
16	L	217	
17	N	173	
18	O	144	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
19	CHL	1	301	X	-	-	-
19	CHL	1	306	X	-	-	-
19	CHL	2	301	X	-	-	-
19	CHL	2	305	X	-	-	-
19	CHL	2	306	X	-	-	-
19	CHL	2	307	X	-	-	-
19	CHL	2	314	X	-	-	-
19	CHL	3	306	X	-	-	-
19	CHL	4	305	X	-	-	-
19	CHL	4	306	X	-	-	-
19	CHL	4	307	X	-	-	-
19	CHL	4	315	X	-	-	-
20	CLA	1	302	X	-	-	-
20	CLA	1	303	X	-	-	-
20	CLA	1	304	X	-	-	-
20	CLA	1	305	X	-	-	-
20	CLA	1	307	X	-	-	-
20	CLA	1	308	X	-	-	-
20	CLA	1	309	X	-	-	-
20	CLA	1	310	X	-	-	-
20	CLA	1	311	X	-	-	-
20	CLA	1	312	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
20	CLA	1	313	X	-	-	-
20	CLA	1	314	X	-	-	-
20	CLA	1	321	X	-	-	-
20	CLA	2	302	X	-	-	-
20	CLA	2	303	X	-	-	-
20	CLA	2	304	X	-	-	-
20	CLA	2	308	X	-	-	-
20	CLA	2	309	X	-	-	-
20	CLA	2	310	X	-	-	-
20	CLA	2	311	X	-	-	-
20	CLA	2	312	X	-	-	-
20	CLA	2	313	X	-	-	-
20	CLA	3	301	X	-	-	-
20	CLA	3	302	X	-	-	-
20	CLA	3	303	X	-	-	-
20	CLA	3	304	X	-	-	-
20	CLA	3	305	X	-	-	-
20	CLA	3	307	X	-	-	-
20	CLA	3	308	X	-	-	-
20	CLA	3	310	X	-	-	-
20	CLA	3	311	X	-	-	-
20	CLA	3	312	X	-	-	-
20	CLA	3	313	X	-	-	-
20	CLA	3	314	X	-	-	-
20	CLA	4	301	X	-	-	-
20	CLA	4	302	X	-	-	-
20	CLA	4	303	X	-	-	-
20	CLA	4	304	X	-	-	-
20	CLA	4	308	X	-	-	-
20	CLA	4	309	X	-	-	-
20	CLA	4	310	X	-	-	-
20	CLA	4	311	X	-	-	-
20	CLA	4	312	X	-	-	-
20	CLA	4	313	X	-	-	-
20	CLA	4	314	X	-	-	-
20	CLA	A	801	X	-	-	-
20	CLA	A	802	X	-	-	-
20	CLA	A	803	X	-	-	-
20	CLA	A	804	X	-	-	-
20	CLA	A	805	X	-	-	-
20	CLA	A	806	X	-	-	-
20	CLA	A	807	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
20	CLA	A	808	X	-	-	-
20	CLA	A	809	X	-	-	-
20	CLA	A	810	X	-	-	-
20	CLA	A	811	X	-	-	-
20	CLA	A	812	X	-	-	-
20	CLA	A	813	X	-	-	-
20	CLA	A	814	X	-	-	-
20	CLA	A	815	X	-	-	-
20	CLA	A	816	X	-	-	-
20	CLA	A	817	X	-	-	-
20	CLA	A	818	X	-	-	-
20	CLA	A	819	X	-	-	-
20	CLA	A	820	X	-	-	-
20	CLA	A	821	X	-	-	-
20	CLA	A	822	X	-	-	-
20	CLA	A	823	X	-	-	-
20	CLA	A	824	X	-	-	-
20	CLA	A	825	X	-	-	-
20	CLA	A	826	X	-	-	-
20	CLA	A	827	X	-	-	-
20	CLA	A	828	X	-	-	-
20	CLA	A	829	X	-	-	-
20	CLA	A	830	X	-	-	-
20	CLA	A	831	X	-	-	-
20	CLA	A	832	X	-	-	-
20	CLA	A	833	X	-	-	-
20	CLA	A	834	X	-	-	-
20	CLA	A	835	X	-	-	-
20	CLA	A	836	X	-	-	-
20	CLA	A	837	X	-	-	-
20	CLA	A	838	X	-	-	-
20	CLA	A	839	X	-	-	-
20	CLA	A	840	X	-	-	-
20	CLA	A	841	X	-	-	-
20	CLA	A	851	X	-	-	-
20	CLA	A	853	X	-	-	-
20	CLA	B	801	X	-	-	-
20	CLA	B	802	X	-	-	-
20	CLA	B	803	X	-	-	-
20	CLA	B	804	X	-	-	-
20	CLA	B	805	X	-	-	-
20	CLA	B	806	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
20	CLA	B	807	X	-	-	-
20	CLA	B	808	X	-	-	-
20	CLA	B	809	X	-	-	-
20	CLA	B	810	X	-	-	-
20	CLA	B	811	X	-	-	-
20	CLA	B	812	X	-	-	-
20	CLA	B	813	X	-	-	-
20	CLA	B	814	X	-	-	-
20	CLA	B	815	X	-	-	-
20	CLA	B	816	X	-	-	-
20	CLA	B	817	X	-	-	-
20	CLA	B	818	X	-	-	-
20	CLA	B	819	X	-	-	-
20	CLA	B	820	X	-	-	-
20	CLA	B	821	X	-	-	-
20	CLA	B	822	X	-	-	-
20	CLA	B	823	X	-	-	-
20	CLA	B	824	X	-	-	-
20	CLA	B	825	X	-	-	-
20	CLA	B	826	X	-	-	-
20	CLA	B	827	X	-	-	-
20	CLA	B	828	X	-	-	-
20	CLA	B	829	X	-	-	-
20	CLA	B	830	X	-	-	-
20	CLA	B	831	X	-	-	-
20	CLA	B	832	X	-	-	-
20	CLA	B	833	X	-	-	-
20	CLA	B	834	X	-	-	-
20	CLA	B	835	X	-	-	-
20	CLA	B	836	X	-	-	-
20	CLA	B	837	X	-	-	-
20	CLA	B	838	X	-	-	-
20	CLA	B	839	X	-	-	-
20	CLA	F	802	X	-	-	-
20	CLA	F	804	X	-	-	-
20	CLA	F	805	X	-	-	-
20	CLA	G	603	X	-	-	-
20	CLA	G	604	X	-	-	-
20	CLA	G	605	X	-	-	-
20	CLA	H	201	X	-	-	-
20	CLA	J	101	X	-	-	-
20	CLA	J	103	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
20	CLA	K	201	X	-	-	-
20	CLA	K	202	X	-	-	-
20	CLA	K	203	X	-	-	-
20	CLA	K	205	X	-	-	-
20	CLA	L	302	X	-	-	-
20	CLA	L	303	X	-	-	-
20	CLA	L	304	X	-	-	-
20	CLA	L	307	X	-	-	-
20	CLA	N	202	X	-	-	-
20	CLA	N	203	X	-	-	-
20	CLA	O	201	X	-	-	-
20	CLA	O	202	X	-	-	-
20	CLA	O	203	X	-	-	-

2 Entry composition (i)

There are 30 unique types of molecules in this entry. The entry contains 38187 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 Chlorophyll a-b binding protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	1	199	1559	1016	261	278	4	0	0

- Molecule 2 is a protein called Chlorophyll a-b binding protein 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	2	209	1626	1068	264	289	5	0	0

- Molecule 3 is a protein called Chlorophyll a-b binding protein 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	3	220	1727	1139	277	305	6	0	0

- Molecule 4 is a protein called Chlorophyll a-b binding protein 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	4	197	1568	1027	253	283	5	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	A	742	5831	3820	989	1003	19	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	248	SER	VAL	conflict	UNP A0A8A0WPY6

- Molecule 6 is a protein called Photosystem I P700 chlorophyll a apoprotein A2.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	B	733	Total	C	N	O	S	0	0
			5854	3843	996	1002	13		

- Molecule 7 is a protein called Photosystem I iron-sulfur center.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	C	80	Total	C	N	O	S	0	0
			615	381	107	116	11		

- Molecule 8 is a protein called Photosystem I reaction center subunit II.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	D	141	Total	C	N	O	S	0	0
			1116	714	193	206	3		

- Molecule 9 is a protein called Photosystem I reaction center subunit IV.

Mol	Chain	Residues	Atoms				AltConf	Trace
9	E	63	Total	C	N	O	0	0
			511	324	92	95		

- Molecule 10 is a protein called Photosystem I reaction center subunit III, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	F	153	Total	C	N	O	S	0	0
			1216	793	208	212	3		

- Molecule 11 is a protein called Photosystem I reaction center subunit VIII.

Mol	Chain	Residues	Atoms				AltConf	Trace
11	G	98	Total	C	N	O	0	0
			768	498	126	144		

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

Mol	Chain	Residues	Atoms				AltConf	Trace
12	H	90	Total	C	N	O	0	0
			681	444	109	128		

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

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

- Molecule 14 is a protein called Photosystem I reaction center subunit IX.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	J	40	Total	C	N	O	S	0	0
			318	215	49	53	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
15	K	83	Total	C	N	O	S	0	0
			588	378	100	108	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
16	L	162	Total	C	N	O	S	0	0
			1225	812	195	217	1		

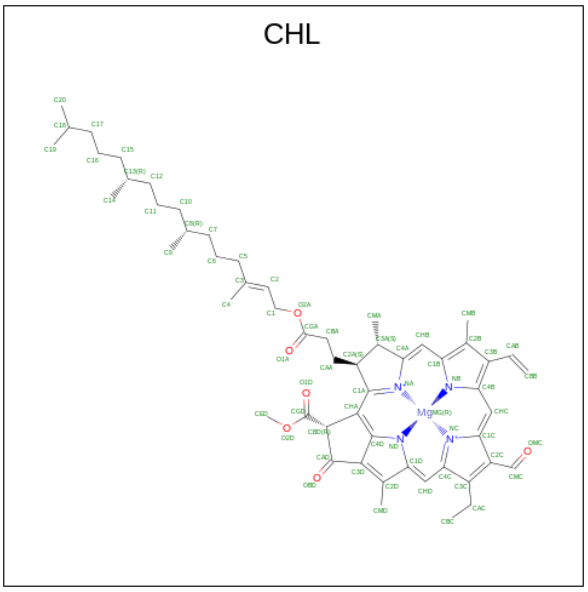
- Molecule 17 is a protein called Photosystem I reaction center subunit N.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	N	84	Total	C	N	O	S	0	0
			686	440	111	131	4		

- Molecule 18 is a protein called Photosystem I reaction center subunit O.

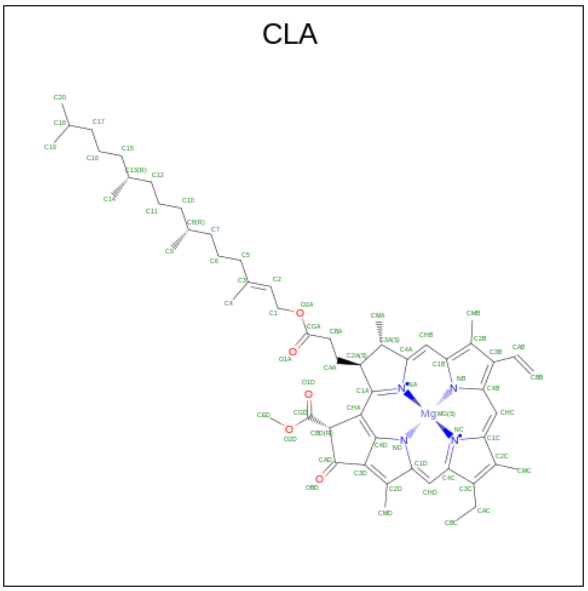
Mol	Chain	Residues	Atoms					AltConf	Trace
18	O	89	Total	C	N	O	S	0	0
			705	475	112	117	1		

- Molecule 19 is CHLOROPHYLL B (three-letter code: CHL) (formula: $C_{55}H_{70}MgN_4O_6$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
19	1	1	Total 52	C 41	Mg 1	N 4	O 6	0
19	1	1	Total 48	C 37	Mg 1	N 4	O 6	0
19	2	1	Total 53	C 42	Mg 1	N 4	O 6	0
19	2	1	Total 43	C 34	Mg 1	N 4	O 4	0
19	2	1	Total 48	C 37	Mg 1	N 4	O 6	0
19	2	1	Total 51	C 40	Mg 1	N 4	O 6	0
19	2	1	Total 43	C 34	Mg 1	N 4	O 4	0
19	3	1	Total 47	C 36	Mg 1	N 4	O 6	0
19	4	1	Total 53	C 42	Mg 1	N 4	O 6	0
19	4	1	Total 51	C 40	Mg 1	N 4	O 6	0
19	4	1	Total 51	C 40	Mg 1	N 4	O 6	0
19	4	1	Total 43	C 34	Mg 1	N 4	O 4	0

- Molecule 20 is CHLOROPHYLL A (three-letter code: CLA) (formula: $C_{55}H_{72}MgN_4O_5$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
20	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	1	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
20	1	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
20	1	1	Total	C	Mg	N	O	0
			61	51	1	4	5	
20	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	1	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
20	1	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
20	1	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
20	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	1	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
20	1	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
20	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	2	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
20	2	1	Total	C	Mg	N	O	0
			49	39	1	4	5	
20	2	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
20	2	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
20	2	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
20	2	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
20	2	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
20	2	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	2	1	Total	C	Mg	N	O	0
			43	35	1	4	3	
20	3	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
20	3	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
20	3	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
20	3	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
20	3	1	Total	C	Mg	N	O	0
			47	37	1	4	5	
20	3	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
20	3	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
20	3	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
20	3	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
20	3	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
20	3	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
20	3	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
20	3	1	Total	C	Mg	N	O	0
			46	36	1	4	5	

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Mol	Chain	Residues	Atoms	AltConf
20	4	1	Total C Mg N O 46 36 1 4 5	0
20	4	1	Total C Mg N O 60 50 1 4 5	0
20	4	1	Total C Mg N O 60 50 1 4 5	0
20	4	1	Total C Mg N O 50 40 1 4 5	0
20	4	1	Total C Mg N O 50 40 1 4 5	0
20	4	1	Total C Mg N O 60 50 1 4 5	0
20	4	1	Total C Mg N O 55 45 1 4 5	0
20	4	1	Total C Mg N O 52 42 1 4 5	0
20	4	1	Total C Mg N O 65 55 1 4 5	0
20	4	1	Total C Mg N O 45 35 1 4 5	0
20	4	1	Total C Mg N O 50 40 1 4 5	0
20	A	1	Total C Mg N O 65 55 1 4 5	0
20	A	1	Total C Mg N O 65 55 1 4 5	0
20	A	1	Total C Mg N O 55 45 1 4 5	0
20	A	1	Total C Mg N O 65 55 1 4 5	0
20	A	1	Total C Mg N O 65 55 1 4 5	0
20	A	1	Total C Mg N O 65 55 1 4 5	0
20	A	1	Total C Mg N O 65 55 1 4 5	0
20	A	1	Total C Mg N O 65 55 1 4 5	0
20	A	1	Total C Mg N O 65 55 1 4 5	0
20	A	1	Total C Mg N O 65 55 1 4 5	0

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

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Mol	Chain	Residues	Atoms					AltConf
20	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	A	1	Total 45	C 35	Mg 1	N 4	O 5	0
20	A	1	Total 51	C 41	Mg 1	N 4	O 5	0
20	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	B	1	Total 45	C 35	Mg 1	N 4	O 5	0
20	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	B	1	Total 55	C 45	Mg 1	N 4	O 5	0
20	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	B	1	Total 65	C 55	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms					AltConf
20	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			54	44	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			56	46	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			50	40	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
20	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			58	48	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			51	41	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			47	37	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	F	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	F	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
20	F	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
20	G	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
20	G	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
20	G	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
20	H	1	Total	C	Mg	N	O	0
			56	46	1	4	5	
20	J	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	J	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
20	K	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
20	K	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
20	K	1	Total	C	Mg	N	O	0
			46	36	1	4	5	

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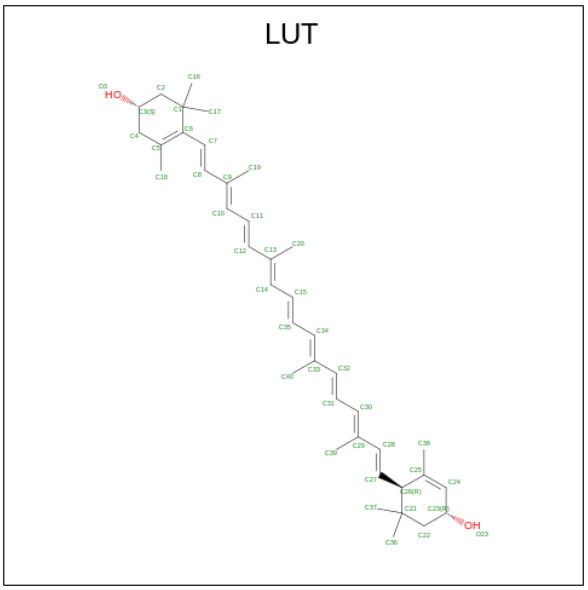
Mol	Chain	Residues	Atoms					AltConf
20	K	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
20	L	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
20	L	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	L	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
20	L	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
20	N	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
20	N	1	Total	C	Mg	N	O	0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

- Molecule 21 is (3R,3'R,6S)-4,5-DIDEHYDRO-5,6-DIHYDRO-BETA,BETA-CAROTENE-3 ,3'-DIOL (three-letter code: LUT) (formula: $C_{40}H_{56}O_2$).



Mol	Chain	Residues	Atoms			AltConf
21	1	1	Total	C	O	0
			42	40	2	

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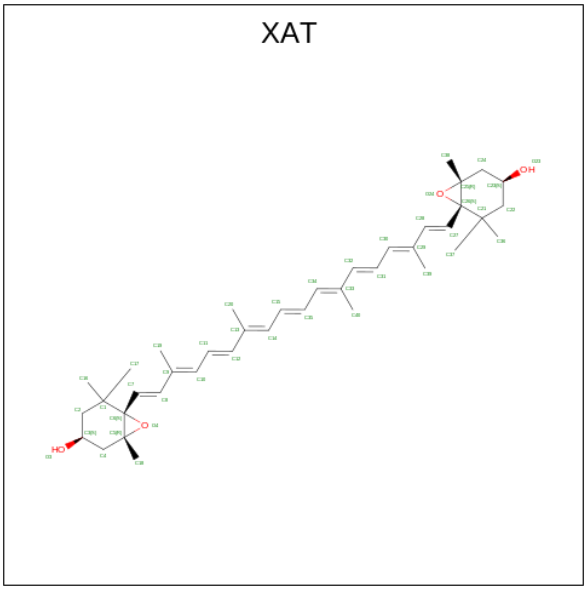
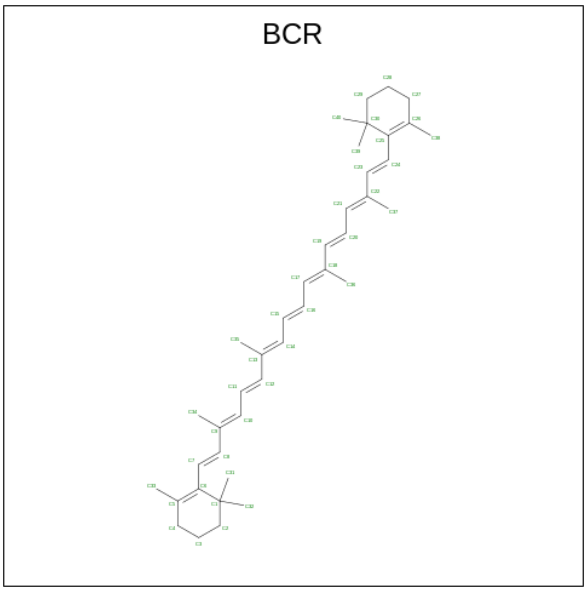
Mol	Chain	Residues	Atoms	AltConf
21	1	1	Total C O 42 40 2	0
21	2	1	Total C O 42 40 2	0
21	3	1	Total C O 42 40 2	0
21	4	1	Total C O 42 40 2	0
21	O	1	Total C O 42 40 2	0
21	O	1	Total C O 42 40 2	0

- Molecule 22 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 (three-letter code: XAT) (formula: $C_{40}H_{56}O_4$).



Mol	Chain	Residues	Atoms	AltConf
22	1	1	Total C O 44 40 4	0
22	2	1	Total C O 44 40 4	0
22	3	1	Total C O 44 40 4	0
22	4	1	Total C O 44 40 4	0

- Molecule 23 is BETA-CAROTENE (three-letter code: BCR) (formula: $C_{40}H_{56}$).



Mol	Chain	Residues	Atoms	AltConf
23	1	1	Total C 40 40	0
23	2	1	Total C 40 40	0
23	3	1	Total C 40 40	0
23	4	1	Total C 40 40	0
23	A	1	Total C 40 40	0
23	A	1	Total C 40 40	0
23	A	1	Total C 40 40	0
23	A	1	Total C 40 40	0
23	A	1	Total C 40 40	0
23	A	1	Total C 40 40	0
23	B	1	Total C 40 40	0
23	B	1	Total C 40 40	0
23	B	1	Total C 40 40	0
23	B	1	Total C 40 40	0

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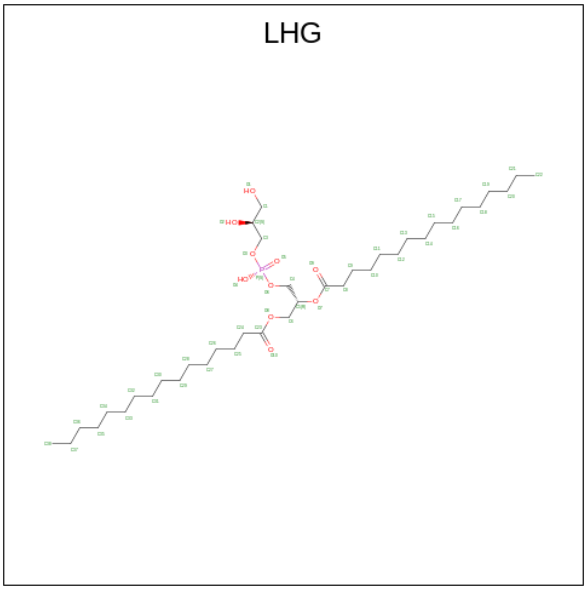
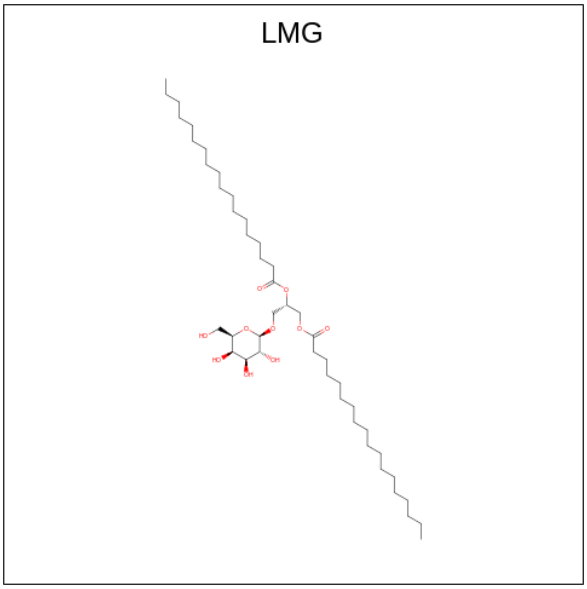
Mol	Chain	Residues	Atoms	AltConf
23	B	1	Total C 40 40	0
23	B	1	Total C 40 40	0
23	F	1	Total C 40 40	0
23	F	1	Total C 40 40	0
23	G	1	Total C 40 40	0
23	I	1	Total C 40 40	0
23	J	1	Total C 40 40	0
23	J	1	Total C 40 40	0
23	K	1	Total C 40 40	0
23	L	1	Total C 40 40	0
23	L	1	Total C 40 40	0
23	L	1	Total C 40 40	0

- Molecule 24 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula: $C_{38}H_{75}O_{10}P$) (labeled as "Ligand of Interest" by depositor).



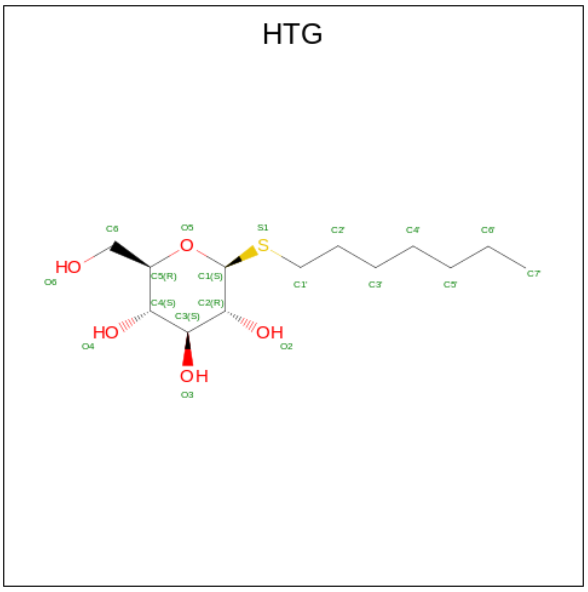
Mol	Chain	Residues	Atoms				AltConf
24	1	1	Total	C	O	P	0
			49	38	10	1	
24	2	1	Total	C	O	P	0
			37	26	10	1	
24	A	1	Total	C	O	P	0
			49	38	10	1	
24	A	1	Total	C	O	P	0
			27	16	10	1	
24	B	1	Total	C	O	P	0
			23	12	10	1	

- Molecule 25 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula: $C_{45}H_{86}O_{10}$) (labeled as "Ligand of Interest" by depositor).



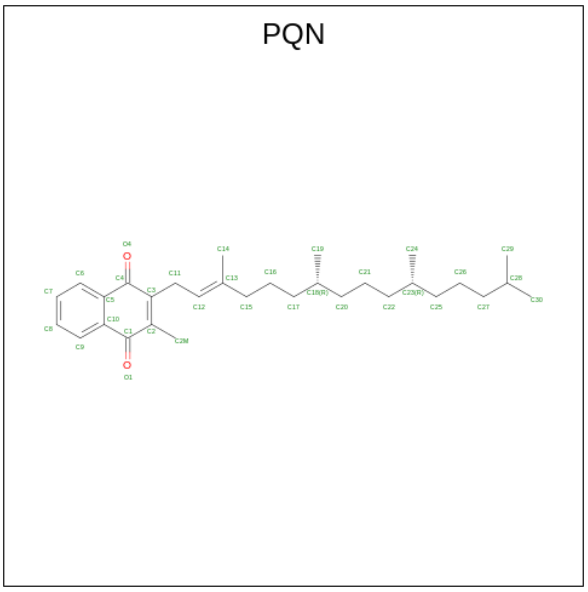
Mol	Chain	Residues	Atoms			AltConf
25	1	1	Total	C	O	0
			49	39	10	
25	1	1	Total	C	O	0
			44	34	10	
25	4	1	Total	C	O	0
			44	34	10	

- Molecule 26 is heptyl 1-thio-beta-D-glucopyranoside (three-letter code: HTG) (formula: $C_{13}H_{26}O_5S$).



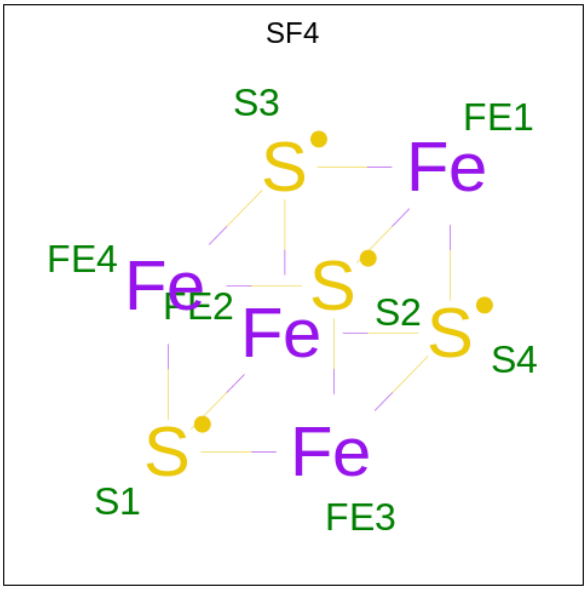
Mol	Chain	Residues	Atoms				AltConf
26	1	1	Total	C	O	S	0
			19	13	5	1	
26	4	1	Total	C	O	S	0
			19	13	5	1	
26	A	1	Total	C	O	S	0
			19	13	5	1	
26	B	1	Total	C	O	S	0
			19	13	5	1	
26	B	1	Total	C	O	S	0
			19	13	5	1	
26	F	1	Total	C	O	S	0
			19	13	5	1	
26	F	1	Total	C	O	S	0
			19	13	5	1	
26	G	1	Total	C	O	S	0
			19	13	5	1	
26	J	1	Total	C	O	S	0
			19	13	5	1	
26	N	1	Total	C	O	S	0
			19	13	5	1	

- Molecule 27 is PHYLLOQUINONE (three-letter code: PQN) (formula: $C_{31}H_{46}O_2$).



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

- Molecule 28 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe_4S_4).



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

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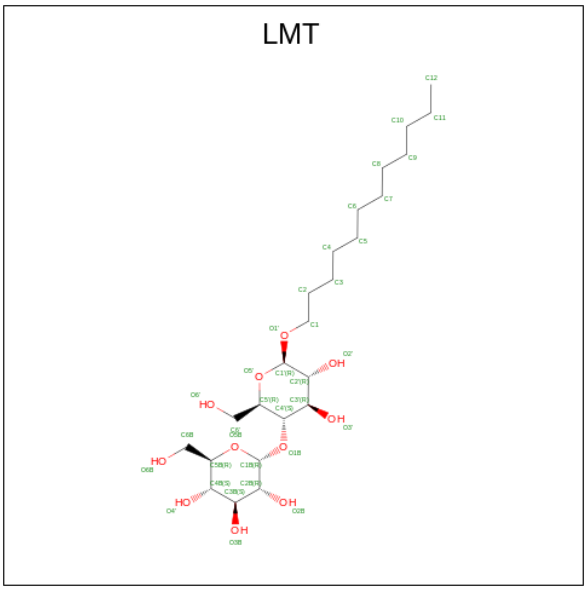
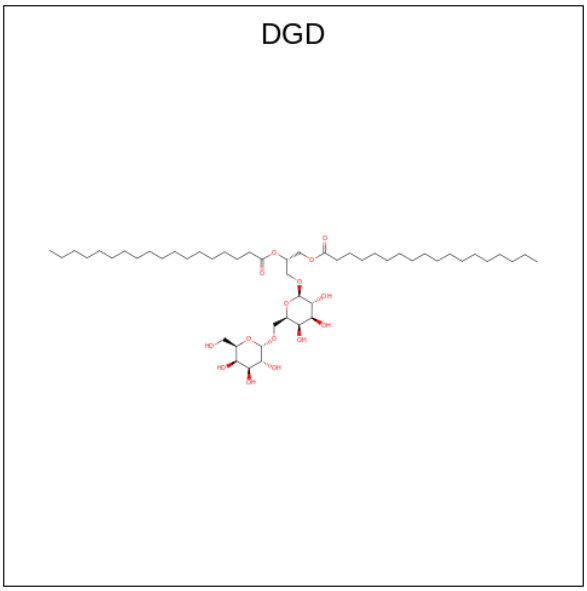
Mol	Chain	Residues	Atoms			AltConf
28	C	1	Total	Fe	S	0
			8	4	4	

- Molecule 29 is DODECYL-BETA-D-MALTOSIDE (three-letter code: LMT) (formula: $C_{24}H_{46}O_{11}$).



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

- Molecule 30 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (three-letter code: DGD) (formula: $C_{51}H_{96}O_{15}$).



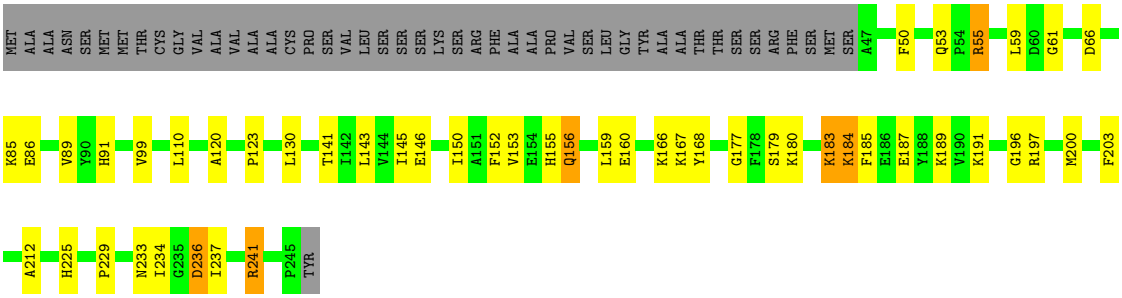
Mol	Chain	Residues	Atoms			AltConf
30	B	1	Total	C	O	0
			66	51	15	

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. 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. 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.

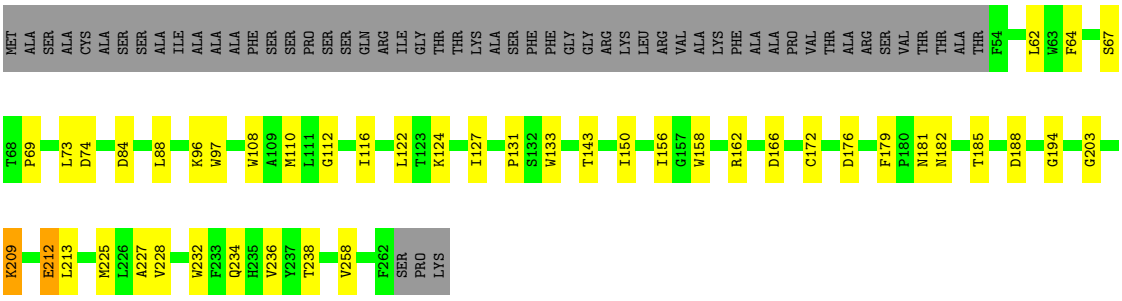
• Molecule 1: Chlorophyll a-b binding protein 1

Chain 1:



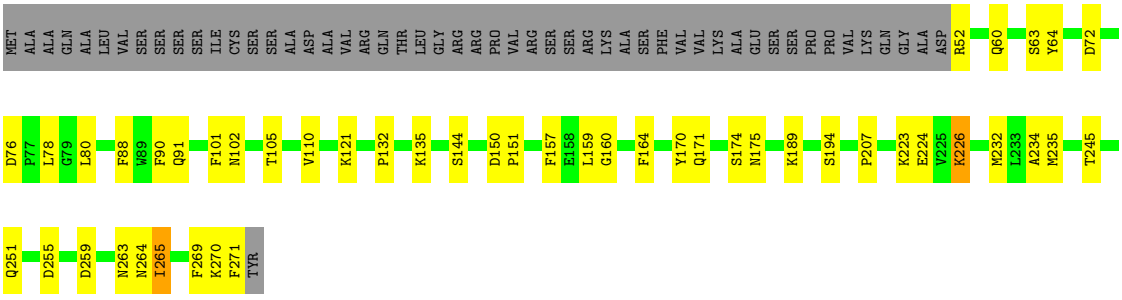
• Molecule 2: Chlorophyll a-b binding protein 2

Chain 2:



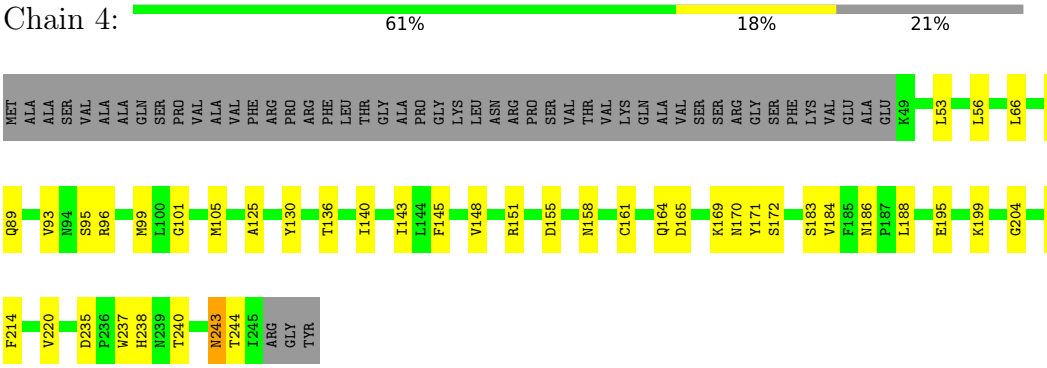
• Molecule 3: Chlorophyll a-b binding protein 3

Chain 3:



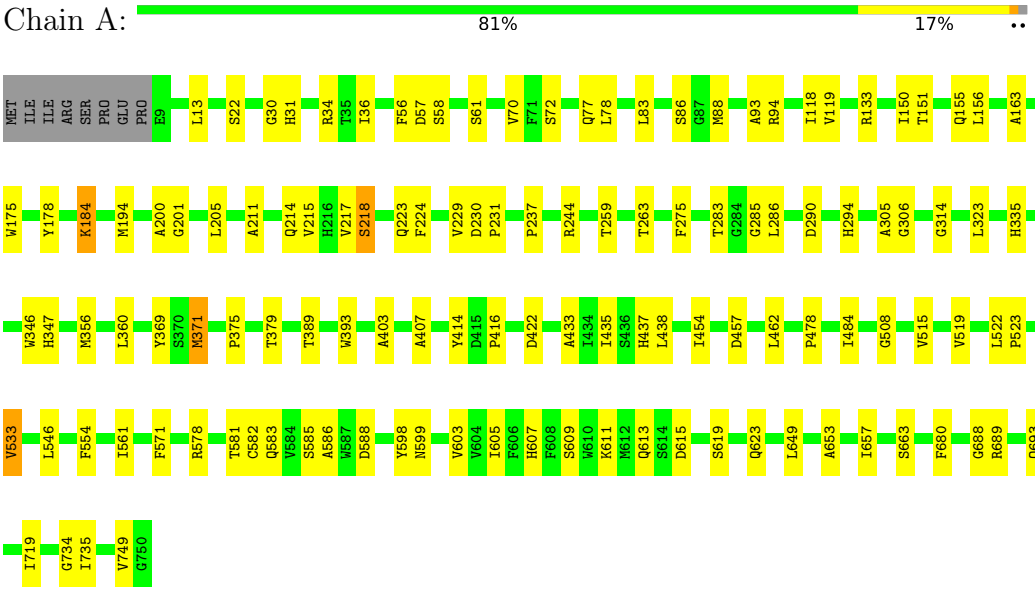
• Molecule 4: Chlorophyll a-b binding protein 4

Chain 4:



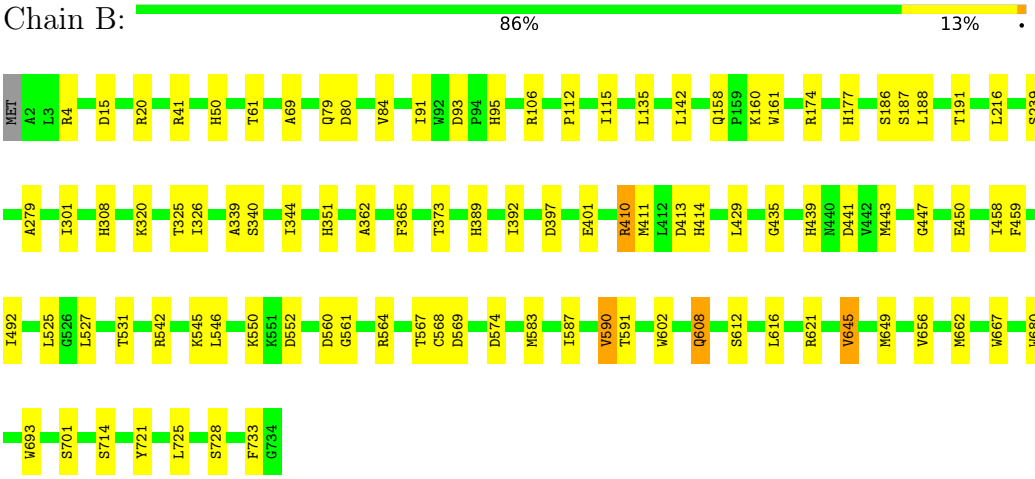
• Molecule 5: Photosystem I P700 chlorophyll a apoprotein A1

Chain A:



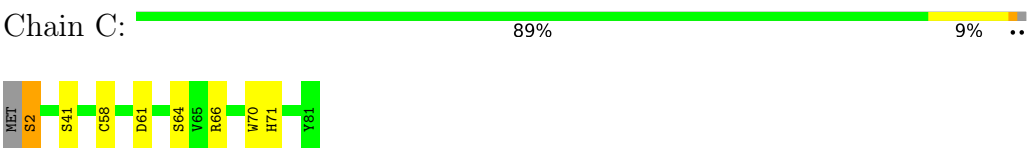
• Molecule 6: Photosystem I P700 chlorophyll a apoprotein A2

Chain B:



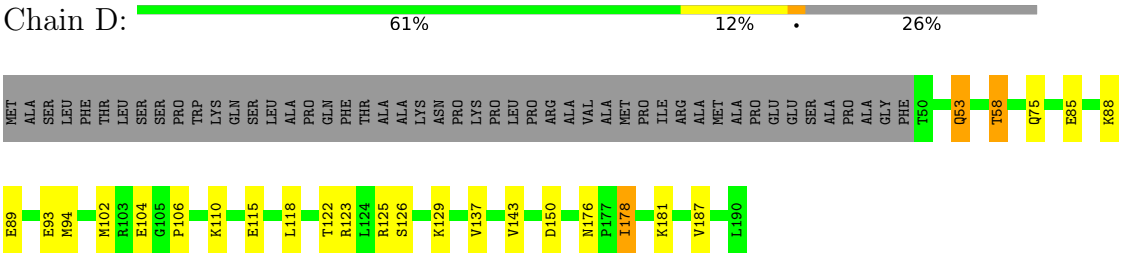
• Molecule 7: Photosystem I iron-sulfur center

Chain C:



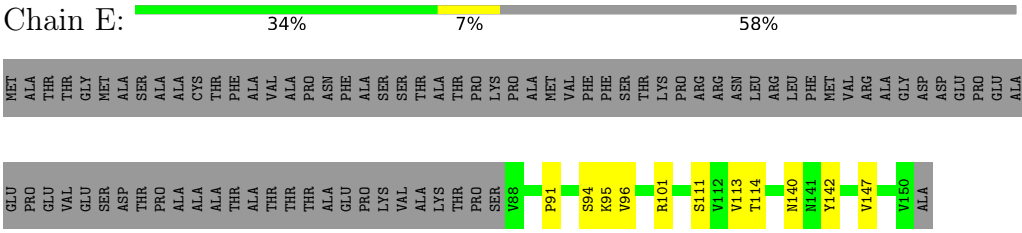
• Molecule 8: Photosystem I reaction center subunit II

Chain D:



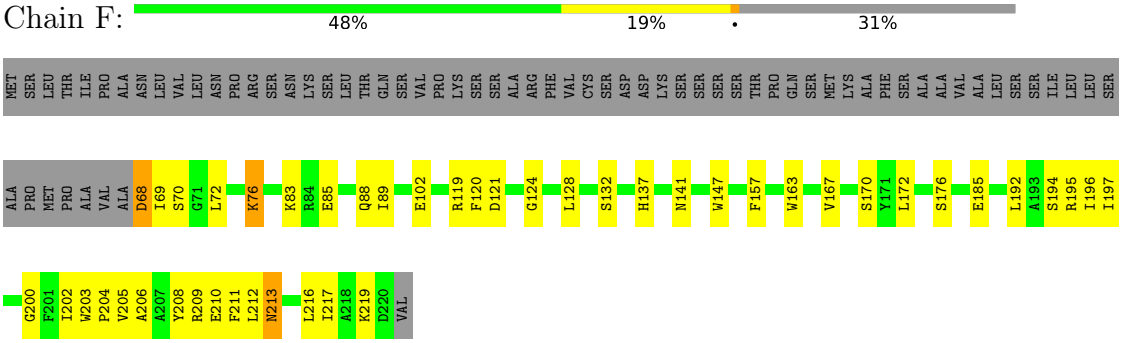
• Molecule 9: Photosystem I reaction center subunit IV

Chain E:



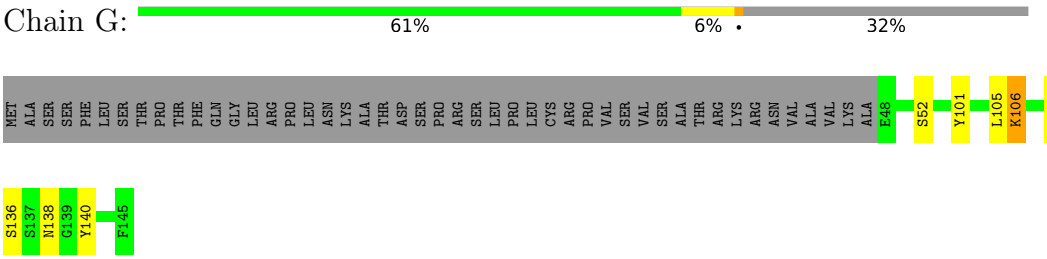
• Molecule 10: Photosystem I reaction center subunit III, chloroplastic

Chain F:



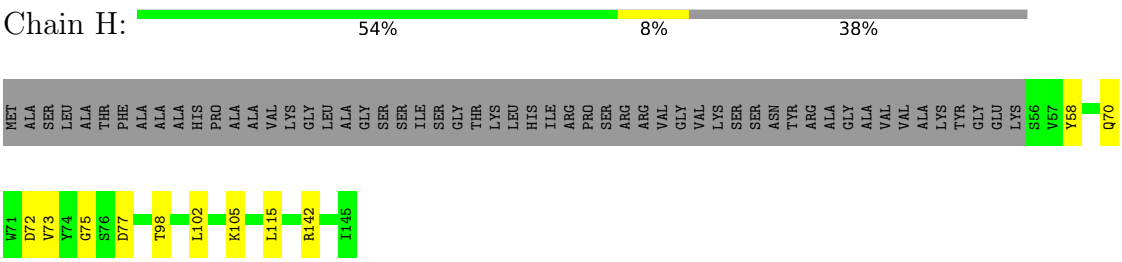
• Molecule 11: Photosystem I reaction center subunit VIII

Chain G:



• Molecule 12: Photosystem I reaction center subunit VI

Chain H:

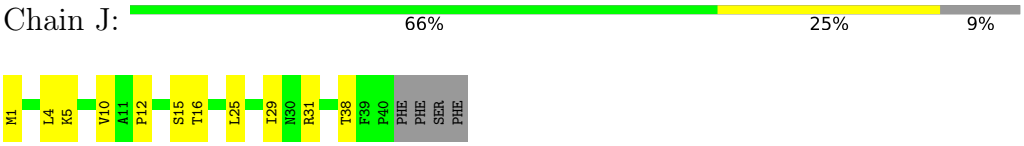


• Molecule 13: Photosystem I reaction center subunit VIII

Chain I:

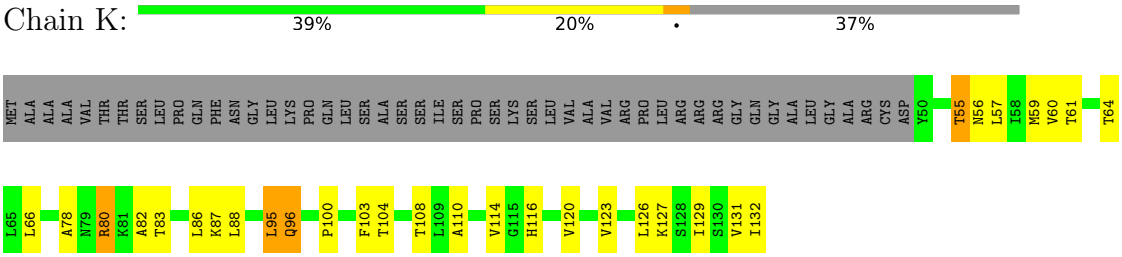
• Molecule 14: Photosystem I reaction center subunit IX

Chain J:



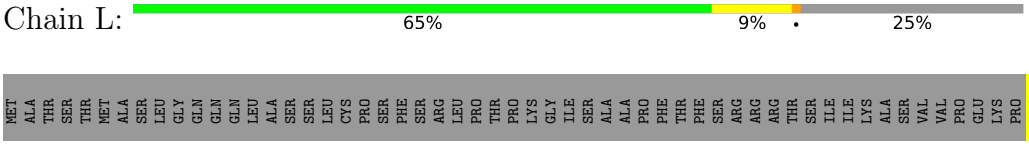
• Molecule 15: Photosystem I reaction center subunit psaK

Chain K:



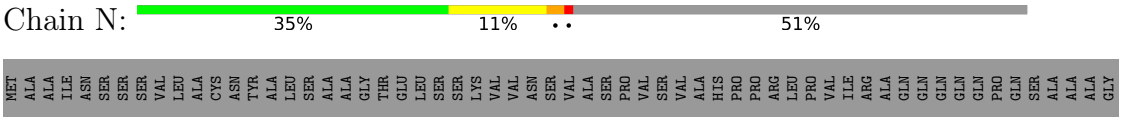
• Molecule 16: Photosystem I reaction center subunit XI

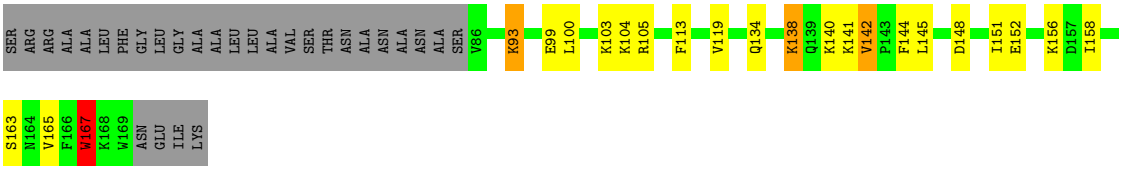
Chain L:



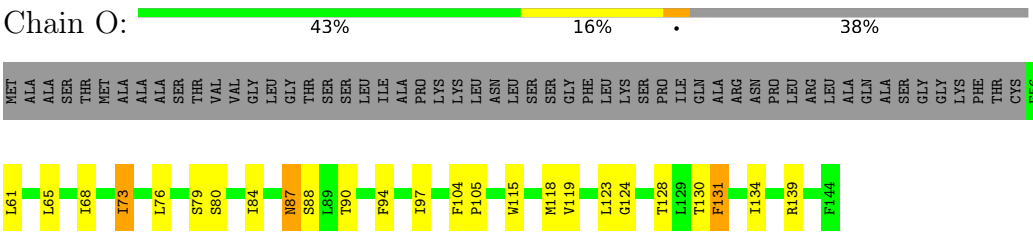
• Molecule 17: Photosystem I reaction center subunit N

Chain N:





• Molecule 18: Photosystem I reaction center subunit O



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	157342	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor

5 Model quality

5.1 Standard geometry

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

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	1	0.26	0/1610	0.45	0/2195
2	2	0.34	0/1687	0.52	1/2313 (0.0%)
3	3	0.31	0/1791	0.47	1/2435 (0.0%)
4	4	0.27	0/1621	0.43	0/2215
5	A	0.26	0/6029	0.44	0/8223
6	B	0.26	0/6066	0.45	0/8285
7	C	0.25	0/628	0.50	0/852
8	D	0.27	0/1143	0.52	0/1546
9	E	0.27	0/522	0.51	0/710
10	F	0.27	0/1246	0.49	0/1681
11	G	0.52	0/788	0.49	0/1070
12	H	0.26	0/701	0.45	0/955
13	I	0.27	0/227	0.44	0/310
14	J	0.26	0/327	0.51	0/446
15	K	0.27	0/596	0.54	0/809
16	L	0.27	0/1263	0.45	0/1731
17	N	0.38	0/701	0.48	0/942
18	O	0.29	0/733	0.50	0/1001
All	All	0.28	0/27679	0.47	2/37719 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	3	226	LYS	CD-CE-NZ	-5.68	98.64	111.70
2	2	74	ASP	CB-CG-OD2	5.14	122.92	118.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1	1559	0	1536	38	0
2	2	1626	0	1570	37	0
3	3	1727	0	1651	36	0
4	4	1568	0	1517	36	0
5	A	5831	0	5683	94	0
6	B	5854	0	5635	69	0
7	C	615	0	600	3	0
8	D	1116	0	1122	13	0
9	E	511	0	510	6	0
10	F	1216	0	1245	37	0
11	G	768	0	740	7	0
12	H	681	0	671	7	0
13	I	221	0	237	3	0
14	J	318	0	331	9	0
15	K	588	0	619	21	0
16	L	1225	0	1240	15	0
17	N	686	0	664	18	0
18	O	705	0	686	19	0
19	1	100	0	72	6	0
19	2	238	0	169	23	0
19	3	47	0	30	3	0
19	4	198	0	143	12	0
20	1	744	0	720	32	0
20	2	485	0	445	21	0
20	3	633	0	499	24	0
20	4	593	0	524	35	0
20	A	2610	0	2708	132	0
20	B	2361	0	2424	96	0
20	F	156	0	138	7	0
20	G	141	0	105	0	0
20	H	56	0	51	3	0
20	J	107	0	103	2	0
20	K	197	0	158	8	0
20	L	206	0	177	8	0
20	N	95	0	69	2	0
20	O	157	0	135	16	0
21	1	84	0	112	8	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
21	2	42	0	56	2	0
21	3	42	0	56	4	0
21	4	42	0	56	5	0
21	O	84	0	112	8	0
22	1	44	0	56	2	0
22	2	44	0	56	2	0
22	3	44	0	56	6	0
22	4	44	0	56	8	0
23	1	40	0	56	4	0
23	2	40	0	56	6	0
23	3	40	0	56	4	0
23	4	40	0	56	5	0
23	A	240	0	336	18	0
23	B	240	0	336	22	0
23	F	80	0	112	7	0
23	G	40	0	56	3	0
23	I	40	0	56	6	0
23	J	80	0	112	10	0
23	K	40	0	56	4	0
23	L	120	0	168	9	0
24	1	49	0	74	7	0
24	2	37	0	44	1	0
24	A	76	0	98	3	0
24	B	23	0	16	2	0
25	1	93	0	132	6	0
25	4	44	0	61	4	0
26	1	19	0	26	2	0
26	4	19	0	26	0	0
26	A	19	0	26	0	0
26	B	38	0	52	1	0
26	F	38	0	52	1	0
26	G	19	0	26	0	0
26	J	19	0	26	0	0
26	N	19	0	26	1	0
27	A	33	0	46	3	0
27	B	33	0	46	1	0
28	A	8	0	0	0	0
28	C	16	0	0	0	0
29	B	35	0	46	0	0
29	G	35	0	46	0	0
30	B	66	0	96	2	0
All	All	38187	0	37964	787	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 10.

The worst 5 of 787 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)
10:F:217:ILE:HG13	20:F:802:CLA:O1A	1.45	1.16
20:1:309:CLA:HAB	21:1:315:LUT:H32	1.42	0.98
19:2:306:CHL:HMB1	19:2:306:CHL:HBB1	1.49	0.93
20:3:309:CLA:HBC2	20:3:309:CLA:HHD	1.50	0.93
19:2:307:CHL:HBB1	19:2:307:CHL:HMB1	1.51	0.93

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	1	197/246 (80%)	194 (98%)	3 (2%)	0	100	100
2	2	207/265 (78%)	203 (98%)	3 (1%)	1 (0%)	25	38
3	3	218/272 (80%)	206 (94%)	12 (6%)	0	100	100
4	4	195/248 (79%)	189 (97%)	6 (3%)	0	100	100
5	A	740/750 (99%)	722 (98%)	18 (2%)	0	100	100
6	B	731/734 (100%)	716 (98%)	14 (2%)	1 (0%)	48	65
7	C	78/81 (96%)	75 (96%)	3 (4%)	0	100	100
8	D	139/190 (73%)	135 (97%)	4 (3%)	0	100	100
9	E	61/151 (40%)	59 (97%)	2 (3%)	0	100	100
10	F	151/221 (68%)	150 (99%)	1 (1%)	0	100	100
11	G	96/145 (66%)	95 (99%)	1 (1%)	0	100	100
12	H	88/145 (61%)	87 (99%)	1 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
13	I	27/36 (75%)	27 (100%)	0	0	100 100
14	J	38/44 (86%)	38 (100%)	0	0	100 100
15	K	81/132 (61%)	75 (93%)	5 (6%)	1 (1%)	11 16
16	L	160/217 (74%)	157 (98%)	3 (2%)	0	100 100
17	N	82/173 (47%)	76 (93%)	5 (6%)	1 (1%)	11 16
18	O	87/144 (60%)	85 (98%)	2 (2%)	0	100 100
All	All	3376/4194 (80%)	3289 (97%)	83 (2%)	4 (0%)	50 65

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	2	172	CYS
6	B	362	ALA
17	N	167	TRP
15	K	96	GLN

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	1	162/198 (82%)	153 (94%)	9 (6%)	17 30
2	2	168/208 (81%)	164 (98%)	4 (2%)	44 64
3	3	175/217 (81%)	164 (94%)	11 (6%)	15 25
4	4	168/207 (81%)	163 (97%)	5 (3%)	36 57
5	A	600/608 (99%)	579 (96%)	21 (4%)	31 51
6	B	598/599 (100%)	577 (96%)	21 (4%)	31 51
7	C	70/71 (99%)	65 (93%)	5 (7%)	12 20
8	D	121/159 (76%)	110 (91%)	11 (9%)	7 12
9	E	57/124 (46%)	56 (98%)	1 (2%)	54 73
10	F	126/185 (68%)	112 (89%)	14 (11%)	5 7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
11	G	84/125 (67%)	82 (98%)	2 (2%)	44 64
12	H	72/110 (66%)	69 (96%)	3 (4%)	25 43
13	I	25/31 (81%)	23 (92%)	2 (8%)	10 16
14	J	34/38 (90%)	33 (97%)	1 (3%)	37 58
15	K	61/99 (62%)	57 (93%)	4 (7%)	14 23
16	L	129/176 (73%)	125 (97%)	4 (3%)	35 56
17	N	74/139 (53%)	65 (88%)	9 (12%)	4 5
18	O	73/114 (64%)	65 (89%)	8 (11%)	5 7
All	All	2797/3408 (82%)	2662 (95%)	135 (5%)	24 37

5 of 135 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
16	L	67	PRO
17	N	138	LYS
18	O	65	LEU
5	A	663	SER
5	A	623	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 42 such sidechains are listed below:

Mol	Chain	Res	Type
6	B	704	GLN
11	G	50	ASN
7	C	38	GLN
8	D	167	ASN
12	H	83	ASN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

225 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	$\#\|Z\| > 2$
20	CLA	B	809	6	65,73,73	1.46	5 (7%)	76,113,113	1.41	8 (10%)
23	BCR	B	843	-	41,41,41	0.70	0	56,56,56	2.06	14 (25%)
20	CLA	3	305	3	47,55,73	1.74	5 (10%)	54,91,113	1.52	7 (12%)
23	BCR	F	806	-	41,41,41	0.71	0	56,56,56	2.03	17 (30%)
23	BCR	I	101	-	41,41,41	0.76	0	56,56,56	2.08	17 (30%)
19	CHL	2	301	2	53,61,74	2.50	25 (47%)	57,98,114	3.86	30 (52%)
20	CLA	A	827	-	65,73,73	1.46	6 (9%)	76,113,113	1.40	8 (10%)
20	CLA	3	312	-	45,53,73	1.78	5 (11%)	52,89,113	1.58	7 (13%)
20	CLA	A	820	-	65,73,73	1.48	5 (7%)	76,113,113	1.37	8 (10%)
20	CLA	B	822	-	65,73,73	1.49	6 (9%)	76,113,113	1.42	8 (10%)
21	LUT	O	205	-	42,43,43	0.85	1 (2%)	51,60,60	2.00	14 (27%)
27	PQN	B	840	-	34,34,34	1.60	2 (5%)	42,45,45	1.12	3 (7%)
20	CLA	A	812	-	65,73,73	1.47	5 (7%)	76,113,113	1.38	6 (7%)
20	CLA	B	815	-	60,68,73	1.51	5 (8%)	70,107,113	1.45	7 (10%)
20	CLA	B	835	-	51,59,73	1.64	6 (11%)	59,96,113	1.53	7 (11%)
20	CLA	B	803	-	65,73,73	1.47	7 (10%)	76,113,113	1.40	8 (10%)
20	CLA	A	834	-	65,73,73	1.50	5 (7%)	76,113,113	1.36	7 (9%)
20	CLA	3	309	-	46,54,73	2.15	11 (23%)	53,90,113	2.36	16 (30%)
20	CLA	3	307	3	50,58,73	1.65	6 (12%)	58,95,113	1.57	8 (13%)
20	CLA	B	838	-	65,73,73	1.48	6 (9%)	76,113,113	1.36	8 (10%)
26	HTG	A	852	-	19,19,19	1.27	2 (10%)	23,24,24	1.49	4 (17%)
28	SF4	C	101	-	0,12,12	-	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
22	XAT	2	316	-	39,47,47	0.88	0	54,74,74	2.64	20 (37%)
26	HTG	F	807	-	19,19,19	1.06	2 (10%)	23,24,24	0.52	0
23	BCR	G	606	-	41,41,41	0.68	0	56,56,56	1.95	16 (28%)
20	CLA	A	831	-	65,73,73	1.47	6 (9%)	76,113,113	1.36	8 (10%)
20	CLA	B	818	-	60,68,73	1.53	6 (10%)	70,107,113	1.42	7 (10%)
20	CLA	B	807	-	55,63,73	1.59	6 (10%)	64,101,113	1.47	9 (14%)
20	CLA	A	837	-	65,73,73	1.45	6 (9%)	76,113,113	1.43	8 (10%)
20	CLA	1	310	24	41,49,73	1.81	6 (14%)	47,84,113	1.69	8 (17%)
20	CLA	B	813	-	65,73,73	1.48	6 (9%)	76,113,113	1.37	7 (9%)
21	LUT	4	316	-	42,43,43	0.76	0	51,60,60	1.61	13 (25%)
20	CLA	A	826	-	65,73,73	1.49	6 (9%)	76,113,113	1.37	7 (9%)
19	CHL	2	314	2	43,51,74	2.25	12 (27%)	45,86,114	2.96	18 (40%)
19	CHL	4	305	-	53,61,74	2.23	16 (30%)	57,98,114	3.06	26 (45%)
20	CLA	B	828	-	65,73,73	1.50	5 (7%)	76,113,113	1.33	9 (11%)
20	CLA	K	203	-	46,54,73	1.72	7 (15%)	53,90,113	1.61	6 (11%)
24	LHG	2	318	20	36,36,48	1.07	2 (5%)	39,42,54	1.13	3 (7%)
20	CLA	N	202	17	44,53,73	1.77	6 (13%)	50,89,113	1.58	7 (14%)
20	CLA	B	820	-	50,58,73	1.68	5 (10%)	58,95,113	1.56	7 (12%)
20	CLA	L	303	-	65,73,73	1.48	5 (7%)	76,113,113	1.39	9 (11%)
23	BCR	A	849	-	41,41,41	0.72	0	56,56,56	1.97	15 (26%)
20	CLA	2	312	2	65,73,73	1.49	5 (7%)	76,113,113	1.36	9 (11%)
20	CLA	1	312	1	65,73,73	1.50	5 (7%)	76,113,113	1.34	7 (9%)
20	CLA	3	313	-	45,53,73	1.80	5 (11%)	52,89,113	1.54	6 (11%)
20	CLA	B	830	-	50,58,73	1.67	6 (12%)	58,95,113	1.53	8 (13%)
20	CLA	A	822	-	51,59,73	1.67	6 (11%)	59,96,113	1.46	8 (13%)
20	CLA	F	802	-	65,73,73	1.47	6 (9%)	76,113,113	1.38	8 (10%)
20	CLA	A	839	-	65,73,73	1.47	5 (7%)	76,113,113	1.39	8 (10%)
23	BCR	L	305	-	41,41,41	0.70	0	56,56,56	2.09	13 (23%)
26	HTG	B	851	-	19,19,19	1.08	2 (10%)	23,24,24	0.51	0
29	LMT	B	847	-	36,36,36	0.40	0	47,47,47	0.68	1 (2%)
20	CLA	2	311	2	52,60,73	1.63	6 (11%)	60,97,113	1.56	7 (11%)
24	LHG	B	849	-	22,22,48	1.19	2 (9%)	25,28,54	1.01	1 (4%)
20	CLA	4	301	4	46,54,73	1.76	5 (10%)	53,90,113	1.53	6 (11%)
21	LUT	1	315	-	42,43,43	0.76	0	51,60,60	1.64	14 (27%)
20	CLA	B	810	-	65,73,73	1.47	6 (9%)	76,113,113	1.41	8 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
20	CLA	A	841	-	65,73,73	1.49	6 (9%)	76,113,113	1.35	9 (11%)
29	LMT	G	601	-	36,36,36	0.41	0	47,47,47	0.64	1 (2%)
19	CHL	2	307	-	51,59,74	2.33	21 (41%)	55,96,114	3.45	28 (50%)
20	CLA	B	832	-	58,66,73	1.56	6 (10%)	67,104,113	1.49	10 (14%)
20	CLA	B	837	-	47,55,73	1.73	6 (12%)	54,91,113	1.56	7 (12%)
24	LHG	A	844	20	26,26,48	1.25	2 (7%)	29,32,54	1.34	3 (10%)
19	CHL	2	306	-	48,56,74	2.32	16 (33%)	51,92,114	3.24	23 (45%)
19	CHL	4	306	-	51,59,74	2.42	23 (45%)	55,96,114	3.03	26 (47%)
20	CLA	O	203	-	60,68,73	1.53	6 (10%)	70,107,113	1.43	8 (11%)
20	CLA	L	304	-	50,58,73	1.67	6 (12%)	58,95,113	1.54	9 (15%)
20	CLA	2	304	-	60,68,73	1.55	6 (10%)	70,107,113	1.40	7 (10%)
20	CLA	1	313	-	55,63,73	1.61	5 (9%)	64,101,113	1.47	7 (10%)
20	CLA	B	819	-	65,73,73	1.48	7 (10%)	76,113,113	1.35	8 (10%)
20	CLA	B	821	-	56,64,73	1.61	6 (10%)	65,102,113	1.45	8 (12%)
20	CLA	3	314	-	46,54,73	1.78	5 (10%)	53,90,113	1.51	6 (11%)
20	CLA	O	202	-	45,53,73	2.01	8 (17%)	52,89,113	1.94	7 (13%)
20	CLA	B	808	-	65,73,73	1.46	6 (9%)	76,113,113	1.42	9 (11%)
23	BCR	B	842	-	41,41,41	0.71	0	56,56,56	2.03	19 (33%)
23	BCR	B	846	-	41,41,41	0.71	0	56,56,56	1.76	14 (25%)
23	BCR	2	317	-	41,41,41	0.74	0	56,56,56	2.13	17 (30%)
25	LMG	1	323	-	44,44,55	0.99	2 (4%)	52,52,63	1.04	3 (5%)
20	CLA	1	321	-	65,73,73	1.49	6 (9%)	76,113,113	1.36	9 (11%)
20	CLA	4	314	-	50,58,73	1.69	5 (10%)	58,95,113	1.51	9 (15%)
20	CLA	B	802	-	65,73,73	1.48	6 (9%)	76,113,113	1.31	7 (9%)
20	CLA	L	302	16	45,53,73	1.76	6 (13%)	52,89,113	1.66	7 (13%)
26	HTG	G	602	-	19,19,19	1.08	2 (10%)	23,24,24	0.56	0
20	CLA	B	833	-	65,73,73	1.48	6 (9%)	76,113,113	1.36	9 (11%)
20	CLA	A	824	-	65,73,73	1.48	6 (9%)	76,113,113	1.40	7 (9%)
20	CLA	B	834	-	45,53,73	1.75	5 (11%)	52,89,113	1.62	7 (13%)
20	CLA	3	303	-	45,53,73	1.77	5 (11%)	52,89,113	1.60	8 (15%)
20	CLA	B	801	-	65,73,73	1.49	5 (7%)	76,113,113	1.40	7 (9%)
20	CLA	A	805	-	65,73,73	1.47	6 (9%)	76,113,113	1.40	7 (9%)
20	CLA	J	101	-	65,73,73	1.47	6 (9%)	76,113,113	1.42	9 (11%)
20	CLA	4	308	4	50,58,73	1.67	6 (12%)	58,95,113	1.52	9 (15%)
26	HTG	4	320	-	19,19,19	1.12	2 (10%)	23,24,24	0.57	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
27	PQN	A	842	-	34,34,34	1.62	2 (5%)	42,45,45	1.05	3 (7%)
30	DGD	B	848	-	67,67,67	0.84	2 (2%)	81,81,81	0.94	4 (4%)
20	CLA	A	818	-	65,73,73	1.48	6 (9%)	76,113,113	1.40	9 (11%)
25	LMG	4	319	-	44,44,55	0.98	2 (4%)	52,52,63	1.01	3 (5%)
20	CLA	A	813	-	45,53,73	1.77	5 (11%)	52,89,113	1.60	8 (15%)
20	CLA	A	810	20	65,73,73	1.48	6 (9%)	76,113,113	1.35	7 (9%)
20	CLA	B	812	-	55,63,73	1.61	5 (9%)	64,101,113	1.45	8 (12%)
20	CLA	A	817	-	65,73,73	1.49	7 (10%)	76,113,113	1.35	9 (11%)
20	CLA	A	821	-	49,57,73	1.67	6 (12%)	55,93,113	1.58	7 (12%)
23	BCR	B	841	-	41,41,41	0.71	0	56,56,56	1.89	16 (28%)
28	SF4	C	102	-	0,12,12	-	-	-		
20	CLA	2	303	-	49,57,73	1.70	6 (12%)	55,93,113	1.55	7 (12%)
23	BCR	J	104	-	41,41,41	0.67	0	56,56,56	1.98	15 (26%)
20	CLA	A	829	-	65,73,73	1.46	6 (9%)	76,113,113	1.45	7 (9%)
20	CLA	A	838	-	65,73,73	1.50	6 (9%)	76,113,113	1.39	7 (9%)
21	LUT	O	204	-	42,43,43	0.76	0	51,60,60	1.73	12 (23%)
20	CLA	B	814	-	65,73,73	1.47	6 (9%)	76,113,113	1.38	7 (9%)
26	HTG	N	201	-	19,19,19	1.08	2 (10%)	23,24,24	0.61	0
20	CLA	B	836	-	65,73,73	1.47	5 (7%)	76,113,113	1.40	8 (10%)
20	CLA	A	851	-	65,73,73	1.47	6 (9%)	76,113,113	1.36	8 (10%)
22	XAT	3	316	-	39,47,47	0.88	0	54,74,74	2.72	21 (38%)
20	CLA	A	825	-	65,73,73	1.47	6 (9%)	76,113,113	1.44	10 (13%)
23	BCR	A	854	-	41,41,41	0.69	0	56,56,56	1.94	12 (21%)
20	CLA	A	808	5	65,73,73	1.49	6 (9%)	76,113,113	1.36	8 (10%)
20	CLA	3	304	-	42,50,73	1.80	5 (11%)	48,85,113	1.67	6 (12%)
23	BCR	A	846	-	41,41,41	0.73	0	56,56,56	1.97	15 (26%)
26	HTG	B	850	-	19,19,19	1.06	2 (10%)	23,24,24	0.84	0
26	HTG	F	803	-	19,19,19	1.09	2 (10%)	23,24,24	0.55	0
20	CLA	A	840	-	65,73,73	1.49	6 (9%)	76,113,113	1.35	8 (10%)
24	LHG	A	843	-	48,48,48	0.92	2 (4%)	51,54,54	1.00	3 (5%)
20	CLA	1	311	1	52,60,73	1.64	6 (11%)	60,97,113	1.57	7 (11%)
20	CLA	A	809	-	65,73,73	1.47	6 (9%)	76,113,113	1.38	8 (10%)
20	CLA	F	804	-	45,53,73	1.79	6 (13%)	52,89,113	1.55	7 (13%)
25	LMG	1	320	-	49,49,55	0.94	2 (4%)	57,57,63	1.02	3 (5%)
20	CLA	1	304	-	52,60,73	1.65	6 (11%)	60,97,113	1.52	8 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
20	CLA	1	303	-	65,73,73	1.51	6 (9%)	76,113,113	1.37	8 (10%)
20	CLA	A	801	-	65,73,73	1.48	5 (7%)	76,113,113	1.49	10 (13%)
20	CLA	3	308	3	50,58,73	1.66	6 (12%)	58,95,113	1.54	8 (13%)
20	CLA	B	824	-	65,73,73	1.47	6 (9%)	76,113,113	1.44	8 (10%)
20	CLA	A	828	-	65,73,73	1.46	6 (9%)	76,113,113	1.40	7 (9%)
20	CLA	1	305	-	52,60,73	1.66	6 (11%)	60,97,113	1.48	7 (11%)
22	XAT	4	317	-	39,47,47	0.88	0	54,74,74	2.65	19 (35%)
20	CLA	N	203	-	50,58,73	1.70	5 (10%)	58,95,113	1.54	9 (15%)
20	CLA	2	313	-	43,51,73	1.78	6 (13%)	49,86,113	1.63	7 (14%)
20	CLA	B	806	6	65,73,73	1.45	5 (7%)	76,113,113	1.38	8 (10%)
23	BCR	3	317	-	41,41,41	0.66	0	56,56,56	1.99	16 (28%)
19	CHL	4	315	-	43,51,74	2.35	18 (41%)	45,86,114	3.22	21 (46%)
20	CLA	K	205	15	45,53,73	1.78	6 (13%)	52,89,113	1.56	6 (11%)
20	CLA	B	811	-	54,62,73	1.67	7 (12%)	67,100,113	1.51	9 (13%)
20	CLA	H	201	-	56,64,73	1.60	6 (10%)	65,102,113	1.45	7 (10%)
23	BCR	J	102	-	41,41,41	0.68	0	56,56,56	1.97	17 (30%)
20	CLA	3	301	3	60,68,73	1.54	7 (11%)	70,107,113	1.42	7 (10%)
20	CLA	2	309	2	60,68,73	1.53	6 (10%)	70,107,113	1.40	8 (11%)
20	CLA	B	805	-	65,73,73	1.47	5 (7%)	76,113,113	1.40	8 (10%)
20	CLA	A	807	5	65,73,73	1.45	5 (7%)	76,113,113	1.42	9 (11%)
20	CLA	L	307	-	45,53,73	1.80	6 (13%)	52,89,113	1.59	7 (13%)
19	CHL	2	305	-	43,51,74	2.42	19 (44%)	45,86,114	3.72	24 (53%)
23	BCR	A	845	-	41,41,41	0.72	0	56,56,56	1.94	16 (28%)
23	BCR	B	844	-	41,41,41	0.71	0	56,56,56	1.85	15 (26%)
20	CLA	B	829	-	65,73,73	1.47	6 (9%)	76,113,113	1.41	6 (7%)
23	BCR	L	301	-	41,41,41	0.72	0	56,56,56	1.96	13 (23%)
20	CLA	A	804	-	65,73,73	1.47	7 (10%)	76,113,113	1.42	6 (7%)
20	CLA	B	823	-	60,68,73	1.54	7 (11%)	70,107,113	1.47	10 (14%)
23	BCR	A	847	-	41,41,41	0.68	0	56,56,56	2.00	16 (28%)
20	CLA	A	814	-	50,58,73	1.67	5 (10%)	58,95,113	1.59	9 (15%)
20	CLA	B	825	-	65,73,73	1.47	6 (9%)	76,113,113	1.43	9 (11%)
20	CLA	A	836	-	51,59,73	1.64	5 (9%)	59,96,113	1.57	9 (15%)
23	BCR	L	306	-	41,41,41	0.72	0	56,56,56	2.09	13 (23%)
20	CLA	A	833	-	65,73,73	1.47	6 (9%)	76,113,113	1.38	8 (10%)
20	CLA	2	310	24	41,49,73	1.81	5 (12%)	47,84,113	1.68	8 (17%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
20	CLA	4	304	-	50,58,73	2.02	13 (26%)	58,95,113	3.47	22 (37%)
20	CLA	4	310	-	55,63,73	1.63	5 (9%)	64,101,113	1.41	8 (12%)
21	LUT	3	315	-	42,43,43	0.75	0	51,60,60	1.59	12 (23%)
20	CLA	1	314	1	46,54,73	1.73	6 (13%)	53,90,113	1.56	6 (11%)
20	CLA	B	826	-	65,73,73	1.47	5 (7%)	76,113,113	1.42	8 (10%)
23	BCR	F	801	-	41,41,41	0.68	0	56,56,56	1.79	14 (25%)
24	LHG	1	318	20	48,48,48	0.93	2 (4%)	51,54,54	1.04	3 (5%)
26	HTG	1	322	-	19,19,19	1.06	2 (10%)	23,24,24	1.05	3 (13%)
20	CLA	A	815	-	45,53,73	1.78	6 (13%)	52,89,113	1.56	6 (11%)
21	LUT	2	315	-	42,43,43	0.75	0	51,60,60	1.69	15 (29%)
20	CLA	F	805	-	46,54,73	1.76	6 (13%)	53,90,113	1.55	6 (11%)
20	CLA	A	819	-	45,53,73	1.77	6 (13%)	52,89,113	1.59	7 (13%)
20	CLA	3	311	3	55,63,73	1.63	6 (10%)	64,101,113	1.45	8 (12%)
20	CLA	2	302	2	65,73,73	1.45	6 (9%)	76,113,113	1.39	8 (10%)
20	CLA	B	816	-	55,63,73	1.59	6 (10%)	64,101,113	1.45	8 (12%)
20	CLA	B	839	-	65,73,73	1.48	6 (9%)	76,113,113	1.36	8 (10%)
20	CLA	O	201	24	52,60,73	1.66	6 (11%)	60,97,113	1.45	7 (11%)
20	CLA	G	603	-	45,53,73	1.79	5 (11%)	52,89,113	1.58	7 (13%)
20	CLA	A	816	-	65,73,73	1.48	6 (9%)	76,113,113	1.33	8 (10%)
20	CLA	B	827	-	65,73,73	1.53	6 (9%)	76,113,113	1.33	9 (11%)
20	CLA	1	308	1	65,73,73	1.49	5 (7%)	76,113,113	1.36	7 (9%)
20	CLA	4	312	-	65,73,73	1.48	6 (9%)	76,113,113	1.39	6 (7%)
20	CLA	A	835	5	45,53,73	1.80	5 (11%)	52,89,113	1.56	7 (13%)
20	CLA	4	309	4	60,68,73	1.51	6 (10%)	70,107,113	1.42	9 (12%)
20	CLA	K	201	15	46,54,73	1.76	6 (13%)	53,90,113	1.53	6 (11%)
20	CLA	1	307	-	61,69,73	1.53	5 (8%)	71,108,113	1.40	8 (11%)
20	CLA	A	806	-	65,73,73	1.45	5 (7%)	76,113,113	1.42	8 (10%)
20	CLA	B	804	-	45,53,73	1.76	5 (11%)	52,89,113	1.60	8 (15%)
20	CLA	B	817	-	65,73,73	1.49	6 (9%)	76,113,113	1.39	7 (9%)
23	BCR	B	845	-	41,41,41	0.69	0	56,56,56	1.99	17 (30%)
20	CLA	G	604	-	50,58,73	1.69	5 (10%)	58,95,113	1.53	8 (13%)
23	BCR	K	204	-	41,41,41	0.68	0	56,56,56	2.02	18 (32%)
20	CLA	A	811	-	54,62,73	1.65	6 (11%)	62,99,113	1.44	8 (12%)
19	CHL	1	301	1	52,60,74	2.23	16 (30%)	56,97,114	2.70	23 (41%)
20	CLA	B	831	-	65,73,73	1.47	5 (7%)	76,113,113	1.34	7 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
21	LUT	1	319	-	42,43,43	0.71	0	51,60,60	1.73	12 (23%)
20	CLA	K	202	-	60,68,73	1.55	6 (10%)	70,107,113	1.45	11 (15%)
19	CHL	3	306	-	47,55,74	2.40	21 (44%)	50,91,114	3.55	26 (52%)
19	CHL	4	307	-	51,59,74	2.31	24 (47%)	55,96,114	3.13	24 (43%)
20	CLA	2	308	2	50,58,73	1.65	6 (12%)	58,95,113	1.55	8 (13%)
20	CLA	4	303	-	60,68,73	1.53	7 (11%)	70,107,113	1.46	7 (10%)
20	CLA	A	823	-	55,63,73	1.61	5 (9%)	64,101,113	1.43	9 (14%)
20	CLA	A	832	-	65,73,73	1.49	5 (7%)	76,113,113	1.34	7 (9%)
20	CLA	1	302	1	65,73,73	1.48	7 (10%)	76,113,113	1.38	7 (9%)
19	CHL	1	306	1	48,56,74	2.33	19 (39%)	51,92,114	3.21	26 (50%)
20	CLA	3	310	-	52,60,73	1.67	6 (11%)	60,97,113	1.49	8 (13%)
22	XAT	1	316	-	39,47,47	0.88	0	54,74,74	2.58	18 (33%)
20	CLA	G	605	11	46,54,73	1.76	5 (10%)	53,90,113	1.51	6 (11%)
20	CLA	4	313	-	45,53,73	1.79	5 (11%)	52,89,113	1.59	8 (15%)
20	CLA	J	103	14	42,50,73	1.83	6 (14%)	48,85,113	1.59	7 (14%)
20	CLA	A	802	-	65,73,73	1.46	5 (7%)	76,113,113	1.39	7 (9%)
26	HTG	J	105	-	19,19,19	1.11	2 (10%)	23,24,24	0.56	0
20	CLA	A	803	20	55,63,73	1.62	6 (10%)	64,101,113	1.49	9 (14%)
20	CLA	4	302	4	60,68,73	1.51	6 (10%)	70,107,113	1.46	7 (10%)
23	BCR	A	848	-	41,41,41	0.75	1 (2%)	56,56,56	1.88	15 (26%)
28	SF4	A	850	-	0,12,12	-	-	-		
23	BCR	4	318	-	41,41,41	0.67	0	56,56,56	3.33	22 (39%)
20	CLA	4	311	4	52,60,73	1.64	6 (11%)	60,97,113	1.53	6 (10%)
20	CLA	A	830	-	50,58,73	1.66	6 (12%)	58,95,113	1.58	7 (12%)
23	BCR	1	317	-	41,41,41	0.68	0	56,56,56	1.91	18 (32%)
20	CLA	1	309	1	60,68,73	1.50	5 (8%)	70,107,113	1.43	8 (11%)
20	CLA	A	853	-	65,73,73	1.49	6 (9%)	76,113,113	1.34	8 (10%)
20	CLA	3	302	-	50,58,73	1.72	5 (10%)	58,95,113	1.50	8 (13%)

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
20	CLA	B	809	6	1/1/15/20	4/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
23	BCR	B	843	-	-	4/29/63/63	0/2/2/2
20	CLA	3	305	3	1/1/11/20	7/16/94/115	-
23	BCR	F	806	-	-	2/29/63/63	0/2/2/2
23	BCR	I	101	-	-	8/29/63/63	0/2/2/2
19	CHL	2	301	2	3/3/17/26	8/24/122/137	-
20	CLA	A	827	-	1/1/15/20	16/37/115/115	-
20	CLA	3	312	-	1/1/11/20	3/13/91/115	-
20	CLA	A	820	-	1/1/15/20	8/37/115/115	-
20	CLA	B	822	-	1/1/15/20	12/37/115/115	-
21	LUT	O	205	-	-	6/29/67/67	0/2/2/2
27	PQN	B	840	-	-	1/23/43/43	0/2/2/2
20	CLA	A	812	-	1/1/15/20	15/37/115/115	-
20	CLA	B	815	-	1/1/14/20	9/31/109/115	-
20	CLA	B	835	-	1/1/12/20	3/21/99/115	-
20	CLA	B	803	-	1/1/15/20	10/37/115/115	-
20	CLA	A	834	-	1/1/15/20	11/37/115/115	-
20	CLA	3	309	-	-	4/15/93/115	-
20	CLA	3	307	3	1/1/12/20	6/19/97/115	-
20	CLA	B	838	-	1/1/15/20	5/37/115/115	-
26	HTG	A	852	-	-	2/10/30/30	0/1/1/1
28	SF4	C	101	-	-	-	0/6/5/5
22	XAT	2	316	-	-	0/31/93/93	0/4/4/4
26	HTG	F	807	-	-	2/10/30/30	0/1/1/1
23	BCR	G	606	-	-	0/29/63/63	0/2/2/2
20	CLA	A	831	-	1/1/15/20	15/37/115/115	-
20	CLA	B	818	-	1/1/14/20	11/31/109/115	-
20	CLA	B	807	-	1/1/13/20	8/25/103/115	-
20	CLA	A	837	-	1/1/15/20	12/37/115/115	-
20	CLA	1	310	24	1/1/10/20	2/8/86/115	-
20	CLA	B	813	-	1/1/15/20	14/37/115/115	-
21	LUT	4	316	-	-	2/29/67/67	0/2/2/2
20	CLA	A	826	-	1/1/15/20	5/37/115/115	-
19	CHL	2	314	2	3/3/15/26	2/12/110/137	-
19	CHL	4	305	-	3/3/17/26	5/24/122/137	-
20	CLA	B	828	-	1/1/15/20	15/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
20	CLA	K	203	-	1/1/11/20	6/15/93/115	-
24	LHG	2	318	20	-	12/41/41/53	-
20	CLA	N	202	17	1/1/11/20	4/13/91/115	-
20	CLA	B	820	-	1/1/12/20	1/19/97/115	-
20	CLA	L	303	-	1/1/15/20	12/37/115/115	-
23	BCR	A	849	-	-	4/29/63/63	0/2/2/2
20	CLA	2	312	2	1/1/15/20	9/37/115/115	-
20	CLA	1	312	1	1/1/15/20	15/37/115/115	-
20	CLA	3	313	-	1/1/11/20	3/13/91/115	-
20	CLA	B	830	-	1/1/12/20	5/19/97/115	-
20	CLA	A	822	-	1/1/12/20	7/21/99/115	-
20	CLA	F	802	-	1/1/15/20	9/37/115/115	-
20	CLA	A	839	-	1/1/15/20	16/37/115/115	-
23	BCR	L	305	-	-	4/29/63/63	0/2/2/2
26	HTG	B	851	-	-	2/10/30/30	0/1/1/1
29	LMT	B	847	-	-	6/21/61/61	0/2/2/2
20	CLA	2	311	2	1/1/12/20	8/22/100/115	-
24	LHG	B	849	-	-	7/26/26/53	-
20	CLA	4	301	4	1/1/11/20	7/15/93/115	-
21	LUT	1	315	-	-	2/29/67/67	0/2/2/2
20	CLA	B	810	-	1/1/15/20	11/37/115/115	-
20	CLA	A	841	-	1/1/15/20	23/37/115/115	-
29	LMT	G	601	-	-	4/21/61/61	0/2/2/2
19	CHL	2	307	-	3/3/17/26	9/21/119/137	-
20	CLA	B	832	-	1/1/13/20	2/29/107/115	-
20	CLA	B	837	-	1/1/11/20	2/16/94/115	-
24	LHG	A	844	20	-	12/31/31/53	-
19	CHL	2	306	-	3/3/16/26	10/18/116/137	-
19	CHL	4	306	-	3/3/17/26	10/21/119/137	-
20	CLA	O	203	-	1/1/14/20	7/31/109/115	-
20	CLA	L	304	-	1/1/12/20	2/19/97/115	-
20	CLA	2	304	-	1/1/14/20	10/31/109/115	-
20	CLA	1	313	-	1/1/13/20	11/25/103/115	-
20	CLA	B	819	-	1/1/15/20	7/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
20	CLA	B	821	-	1/1/13/20	9/27/105/115	-
20	CLA	3	314	-	1/1/11/20	4/15/93/115	-
20	CLA	O	202	-	1/1/11/20	7/13/91/115	-
20	CLA	B	808	-	1/1/15/20	5/37/115/115	-
23	BCR	B	842	-	-	6/29/63/63	0/2/2/2
23	BCR	B	846	-	-	2/29/63/63	0/2/2/2
23	BCR	2	317	-	-	2/29/63/63	0/2/2/2
25	LMG	1	323	-	-	10/39/59/70	0/1/1/1
20	CLA	1	321	-	1/1/15/20	7/37/115/115	-
20	CLA	4	314	-	1/1/12/20	7/19/97/115	-
20	CLA	B	802	-	1/1/15/20	8/37/115/115	-
20	CLA	L	302	16	1/1/11/20	6/13/91/115	-
26	HTG	G	602	-	-	0/10/30/30	0/1/1/1
20	CLA	B	833	-	1/1/15/20	11/37/115/115	-
20	CLA	A	824	-	1/1/15/20	11/37/115/115	-
20	CLA	B	834	-	1/1/11/20	1/13/91/115	-
20	CLA	3	303	-	1/1/11/20	4/13/91/115	-
20	CLA	B	801	-	1/1/15/20	5/37/115/115	-
20	CLA	A	805	-	1/1/15/20	17/37/115/115	-
20	CLA	J	101	-	1/1/15/20	5/37/115/115	-
20	CLA	4	308	4	1/1/12/20	4/19/97/115	-
26	HTG	4	320	-	-	3/10/30/30	0/1/1/1
27	PQN	A	842	-	-	7/23/43/43	0/2/2/2
30	DGD	B	848	-	-	10/55/95/95	0/2/2/2
20	CLA	A	818	-	1/1/15/20	9/37/115/115	-
25	LMG	4	319	-	-	6/39/59/70	0/1/1/1
20	CLA	A	813	-	1/1/11/20	2/13/91/115	-
20	CLA	A	810	20	1/1/15/20	16/37/115/115	-
20	CLA	B	812	-	1/1/13/20	6/25/103/115	-
20	CLA	A	817	-	1/1/15/20	14/37/115/115	-
20	CLA	A	821	-	1/1/11/20	9/18/96/115	-
23	BCR	B	841	-	-	3/29/63/63	0/2/2/2
28	SF4	C	102	-	-	-	0/6/5/5
20	CLA	2	303	-	1/1/11/20	8/18/96/115	-
23	BCR	J	104	-	-	2/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
20	CLA	A	829	-	1/1/15/20	9/37/115/115	-
20	CLA	A	838	-	1/1/15/20	12/37/115/115	-
21	LUT	O	204	-	-	1/29/67/67	0/2/2/2
20	CLA	B	814	-	1/1/15/20	7/37/115/115	-
26	HTG	N	201	-	-	2/10/30/30	0/1/1/1
20	CLA	B	836	-	1/1/15/20	6/37/115/115	-
20	CLA	A	851	-	1/1/15/20	15/37/115/115	-
22	XAT	3	316	-	-	0/31/93/93	0/4/4/4
20	CLA	A	825	-	1/1/15/20	3/37/115/115	-
23	BCR	A	854	-	-	0/29/63/63	0/2/2/2
20	CLA	A	808	5	1/1/15/20	16/37/115/115	-
20	CLA	3	304	-	1/1/10/20	0/10/88/115	-
23	BCR	A	846	-	-	0/29/63/63	0/2/2/2
26	HTG	B	850	-	-	8/10/30/30	0/1/1/1
26	HTG	F	803	-	-	2/10/30/30	0/1/1/1
20	CLA	A	840	-	1/1/15/20	6/37/115/115	-
24	LHG	A	843	-	-	9/53/53/53	-
20	CLA	1	311	1	1/1/12/20	7/22/100/115	-
20	CLA	A	809	-	1/1/15/20	14/37/115/115	-
20	CLA	F	804	-	1/1/11/20	3/13/91/115	-
25	LMG	1	320	-	-	9/44/64/70	0/1/1/1
20	CLA	1	304	-	1/1/12/20	5/22/100/115	-
20	CLA	1	303	-	1/1/15/20	10/37/115/115	-
20	CLA	A	801	-	1/1/15/20	11/37/115/115	-
20	CLA	3	308	3	1/1/12/20	1/19/97/115	-
20	CLA	B	824	-	1/1/15/20	14/37/115/115	-
20	CLA	A	828	-	1/1/15/20	11/37/115/115	-
20	CLA	1	305	-	1/1/12/20	3/22/100/115	-
22	XAT	4	317	-	-	0/31/93/93	0/4/4/4
20	CLA	N	203	-	1/1/12/20	8/19/97/115	-
20	CLA	2	313	-	1/1/10/20	4/11/89/115	-
20	CLA	B	806	6	1/1/15/20	13/37/115/115	-
23	BCR	3	317	-	-	4/29/63/63	0/2/2/2
19	CHL	4	315	-	3/3/15/26	4/12/110/137	-
20	CLA	K	205	15	1/1/11/20	0/13/91/115	-
20	CLA	B	811	-	1/1/13/20	8/25/101/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
20	CLA	H	201	-	1/1/13/20	11/27/105/115	-
23	BCR	J	102	-	-	7/29/63/63	0/2/2/2
20	CLA	3	301	3	1/1/14/20	6/31/109/115	-
20	CLA	2	309	2	1/1/14/20	6/31/109/115	-
20	CLA	B	805	-	1/1/15/20	15/37/115/115	-
20	CLA	A	807	5	1/1/15/20	10/37/115/115	-
20	CLA	L	307	-	1/1/11/20	7/13/91/115	-
19	CHL	2	305	-	3/3/15/26	3/12/110/137	-
23	BCR	A	845	-	-	6/29/63/63	0/2/2/2
23	BCR	B	844	-	-	2/29/63/63	0/2/2/2
20	CLA	B	829	-	1/1/15/20	6/37/115/115	-
23	BCR	L	301	-	-	4/29/63/63	0/2/2/2
20	CLA	A	804	-	1/1/15/20	10/37/115/115	-
20	CLA	B	823	-	1/1/14/20	12/31/109/115	-
23	BCR	A	847	-	-	2/29/63/63	0/2/2/2
20	CLA	A	814	-	1/1/12/20	7/19/97/115	-
20	CLA	B	825	-	1/1/15/20	15/37/115/115	-
20	CLA	A	836	-	1/1/12/20	6/21/99/115	-
23	BCR	L	306	-	-	0/29/63/63	0/2/2/2
20	CLA	A	833	-	1/1/15/20	10/37/115/115	-
20	CLA	2	310	24	1/1/10/20	4/8/86/115	-
20	CLA	4	304	-	1/1/12/20	8/19/97/115	-
20	CLA	4	310	-	1/1/13/20	7/25/103/115	-
21	LUT	3	315	-	-	2/29/67/67	0/2/2/2
20	CLA	1	314	1	1/1/11/20	3/15/93/115	-
20	CLA	B	826	-	1/1/15/20	2/37/115/115	-
23	BCR	F	801	-	-	3/29/63/63	0/2/2/2
24	LHG	1	318	20	-	13/53/53/53	-
26	HTG	1	322	-	-	0/10/30/30	0/1/1/1
20	CLA	A	815	-	1/1/11/20	0/13/91/115	-
21	LUT	2	315	-	-	2/29/67/67	0/2/2/2
20	CLA	F	805	-	1/1/11/20	6/15/93/115	-
20	CLA	A	819	-	1/1/11/20	2/13/91/115	-
20	CLA	3	311	3	1/1/13/20	1/25/103/115	-
20	CLA	2	302	2	1/1/15/20	7/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
20	CLA	B	816	-	1/1/13/20	6/25/103/115	-
20	CLA	B	839	-	1/1/15/20	6/37/115/115	-
20	CLA	O	201	24	1/1/12/20	9/22/100/115	-
20	CLA	G	603	-	1/1/11/20	2/13/91/115	-
20	CLA	A	816	-	1/1/15/20	10/37/115/115	-
20	CLA	B	827	-	1/1/15/20	14/37/115/115	-
20	CLA	1	308	1	1/1/15/20	12/37/115/115	-
20	CLA	4	312	-	1/1/15/20	12/37/115/115	-
20	CLA	A	835	5	1/1/11/20	9/13/91/115	-
20	CLA	4	309	4	1/1/14/20	6/31/109/115	-
20	CLA	K	201	15	1/1/11/20	2/15/93/115	-
20	CLA	1	307	-	1/1/14/20	12/33/111/115	-
20	CLA	A	806	-	1/1/15/20	10/37/115/115	-
20	CLA	B	804	-	1/1/11/20	5/13/91/115	-
20	CLA	B	817	-	1/1/15/20	13/37/115/115	-
23	BCR	B	845	-	-	2/29/63/63	0/2/2/2
20	CLA	G	604	-	1/1/12/20	4/19/97/115	-
23	BCR	K	204	-	-	6/29/63/63	0/2/2/2
20	CLA	A	811	-	1/1/12/20	5/24/102/115	-
19	CHL	1	301	1	3/3/17/26	10/23/121/137	-
20	CLA	B	831	-	1/1/15/20	12/37/115/115	-
21	LUT	1	319	-	-	2/29/67/67	0/2/2/2
20	CLA	K	202	-	1/1/14/20	7/31/109/115	-
19	CHL	3	306	-	3/3/16/26	5/17/115/137	-
19	CHL	4	307	-	3/3/17/26	3/21/119/137	-
20	CLA	2	308	2	1/1/12/20	5/19/97/115	-
20	CLA	4	303	-	1/1/14/20	9/31/109/115	-
20	CLA	A	823	-	1/1/13/20	4/25/103/115	-
20	CLA	A	832	-	1/1/15/20	8/37/115/115	-
20	CLA	1	302	1	1/1/15/20	10/37/115/115	-
19	CHL	1	306	1	3/3/16/26	11/18/116/137	-
20	CLA	3	310	-	1/1/12/20	0/22/100/115	-
22	XAT	1	316	-	-	1/31/93/93	0/4/4/4
20	CLA	G	605	11	1/1/11/20	6/15/93/115	-
20	CLA	4	313	-	1/1/11/20	1/13/91/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
20	CLA	J	103	14	1/1/10/20	4/10/88/115	-
20	CLA	A	802	-	1/1/15/20	15/37/115/115	-
26	HTG	J	105	-	-	1/10/30/30	0/1/1/1
20	CLA	A	803	20	1/1/13/20	6/25/103/115	-
20	CLA	4	302	4	1/1/14/20	8/31/109/115	-
23	BCR	A	848	-	-	0/29/63/63	0/2/2/2
28	SF4	A	850	-	-	-	0/6/5/5
23	BCR	4	318	-	-	6/29/63/63	0/2/2/2
20	CLA	4	311	4	1/1/12/20	5/22/100/115	-
20	CLA	A	830	-	1/1/12/20	3/19/97/115	-
23	BCR	1	317	-	-	2/29/63/63	0/2/2/2
20	CLA	1	309	1	1/1/14/20	4/31/109/115	-
20	CLA	A	853	-	1/1/15/20	14/37/115/115	-
20	CLA	3	302	-	1/1/12/20	4/19/97/115	-

The worst 5 of 1148 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	B	827	CLA	C4B-NB	8.01	1.42	1.35
20	1	303	CLA	C4B-NB	7.81	1.42	1.35
20	3	314	CLA	C4B-NB	7.77	1.42	1.35
20	3	309	CLA	C4B-NB	7.74	1.42	1.35
27	A	842	PQN	C3-C2	7.73	1.49	1.35

The worst 5 of 2091 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	4	318	BCR	C32-C1-C6	-15.04	85.90	110.30
20	4	304	CLA	O2D-CGD-CBD	14.88	137.72	111.27
19	2	301	CHL	O2D-CGD-CBD	14.22	136.54	111.27
19	2	305	CHL	O2D-CGD-CBD	12.66	133.77	111.27
20	4	304	CLA	O2D-CGD-O1D	-9.88	104.53	123.84

5 of 185 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
19	1	301	CHL	ND
19	1	301	CHL	NC
19	1	301	CHL	NA

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Mol	Chain	Res	Type	Atom
19	1	306	CHL	ND
19	1	306	CHL	NC

5 of 1463 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
19	1	301	CHL	C2-C3-C5-C6
19	1	301	CHL	C4-C3-C5-C6
19	1	306	CHL	C1A-C2A-CAA-CBA
19	1	306	CHL	C3A-C2A-CAA-CBA
19	1	306	CHL	C3C-C2C-CMC-OMC

There are no ring outliers.

193 monomers are involved in 527 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
20	B	809	CLA	4	0
23	B	843	BCR	2	0
23	F	806	BCR	3	0
23	I	101	BCR	6	0
19	2	301	CHL	10	0
20	A	827	CLA	6	0
20	A	820	CLA	4	0
20	B	822	CLA	2	0
21	O	205	LUT	5	0
27	B	840	PQN	1	0
20	A	812	CLA	6	0
20	B	815	CLA	1	0
20	B	835	CLA	3	0
20	B	803	CLA	4	0
20	A	834	CLA	3	0
20	3	309	CLA	7	0
20	3	307	CLA	7	0
20	B	838	CLA	3	0
22	2	316	XAT	2	0
26	F	807	HTG	1	0
23	G	606	BCR	3	0
20	A	831	CLA	5	0
20	B	818	CLA	3	0
20	B	807	CLA	2	0
20	A	837	CLA	3	0
20	1	310	CLA	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
20	B	813	CLA	7	0
21	4	316	LUT	5	0
20	A	826	CLA	5	0
19	2	314	CHL	1	0
19	4	305	CHL	4	0
20	B	828	CLA	5	0
20	K	203	CLA	1	0
24	2	318	LHG	1	0
20	L	303	CLA	5	0
23	A	849	BCR	4	0
20	2	312	CLA	4	0
20	1	312	CLA	4	0
20	3	313	CLA	1	0
20	B	830	CLA	2	0
20	A	822	CLA	3	0
20	F	802	CLA	4	0
20	A	839	CLA	1	0
23	L	305	BCR	4	0
20	2	311	CLA	3	0
24	B	849	LHG	2	0
20	4	301	CLA	6	0
21	1	315	LUT	4	0
20	B	810	CLA	3	0
20	A	841	CLA	3	0
19	2	307	CHL	3	0
20	B	832	CLA	4	0
20	B	837	CLA	2	0
24	A	844	LHG	1	0
19	2	306	CHL	8	0
19	4	306	CHL	3	0
20	O	203	CLA	6	0
20	2	304	CLA	2	0
20	1	313	CLA	3	0
20	B	819	CLA	2	0
20	B	821	CLA	1	0
20	3	314	CLA	2	0
20	O	202	CLA	6	0
20	B	808	CLA	4	0
23	B	842	BCR	1	0
23	B	846	BCR	3	0
23	2	317	BCR	6	0
25	1	323	LMG	3	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
20	1	321	CLA	5	0
20	4	314	CLA	2	0
20	B	802	CLA	5	0
20	L	302	CLA	3	0
20	B	833	CLA	2	0
20	A	824	CLA	4	0
20	B	834	CLA	3	0
20	B	801	CLA	4	0
20	A	805	CLA	5	0
20	J	101	CLA	1	0
20	4	308	CLA	7	0
27	A	842	PQN	3	0
30	B	848	DGD	2	0
20	A	818	CLA	4	0
25	4	319	LMG	4	0
20	A	810	CLA	7	0
20	B	812	CLA	3	0
20	A	817	CLA	5	0
20	A	821	CLA	3	0
23	B	841	BCR	8	0
20	2	303	CLA	1	0
23	J	104	BCR	2	0
20	A	829	CLA	1	0
20	A	838	CLA	4	0
21	O	204	LUT	3	0
26	N	201	HTG	1	0
20	B	836	CLA	2	0
20	A	851	CLA	5	0
22	3	316	XAT	6	0
20	A	825	CLA	6	0
23	A	854	BCR	6	0
20	A	808	CLA	5	0
20	3	304	CLA	1	0
23	A	846	BCR	1	0
26	B	850	HTG	1	0
20	A	840	CLA	1	0
24	A	843	LHG	2	0
20	1	311	CLA	2	0
20	A	809	CLA	3	0
25	1	320	LMG	3	0
20	1	304	CLA	2	0
20	1	303	CLA	6	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
20	A	801	CLA	7	0
20	3	308	CLA	2	0
20	B	824	CLA	9	0
20	A	828	CLA	2	0
22	4	317	XAT	8	0
20	N	203	CLA	2	0
20	2	313	CLA	1	0
20	B	806	CLA	2	0
23	3	317	BCR	4	0
19	4	315	CHL	5	0
20	K	205	CLA	3	0
20	H	201	CLA	3	0
23	J	102	BCR	8	0
20	3	301	CLA	1	0
20	2	309	CLA	2	0
20	B	805	CLA	6	0
20	A	807	CLA	4	0
19	2	305	CHL	5	0
23	A	845	BCR	2	0
23	B	844	BCR	3	0
20	B	829	CLA	3	0
23	L	301	BCR	2	0
20	A	804	CLA	6	0
20	B	823	CLA	4	0
23	A	847	BCR	2	0
20	A	814	CLA	1	0
20	B	825	CLA	4	0
20	A	836	CLA	3	0
23	L	306	BCR	3	0
20	A	833	CLA	4	0
20	2	310	CLA	4	0
20	4	304	CLA	3	0
21	3	315	LUT	4	0
20	B	826	CLA	1	0
23	F	801	BCR	4	0
24	1	318	LHG	7	0
26	1	322	HTG	2	0
21	2	315	LUT	2	0
20	F	805	CLA	3	0
20	3	311	CLA	4	0
20	2	302	CLA	2	0
20	B	816	CLA	2	0

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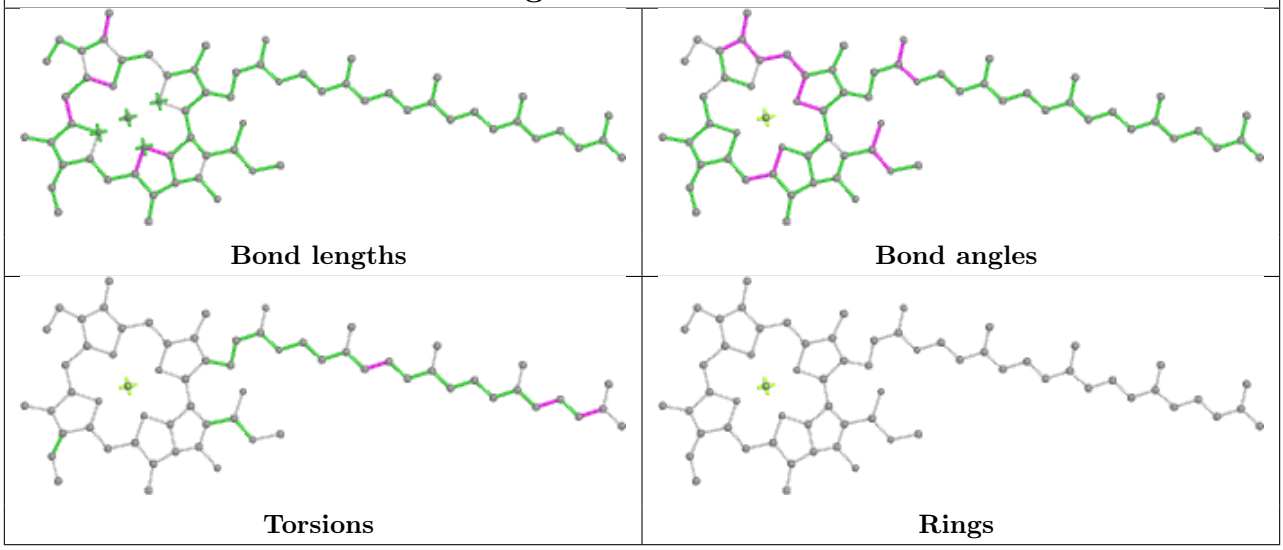
Mol	Chain	Res	Type	Clashes	Symm-Clashes
20	B	839	CLA	3	0
20	O	201	CLA	4	0
20	A	816	CLA	2	0
20	B	827	CLA	4	0
20	1	308	CLA	5	0
20	4	312	CLA	5	0
20	A	835	CLA	1	0
20	4	309	CLA	3	0
20	K	201	CLA	2	0
20	1	307	CLA	3	0
20	A	806	CLA	4	0
20	B	804	CLA	1	0
20	B	817	CLA	5	0
23	B	845	BCR	5	0
23	K	204	BCR	4	0
20	A	811	CLA	5	0
19	1	301	CHL	3	0
20	B	831	CLA	5	0
21	1	319	LUT	4	0
20	K	202	CLA	2	0
19	3	306	CHL	3	0
19	4	307	CHL	1	0
20	2	308	CLA	6	0
20	4	303	CLA	8	0
20	A	823	CLA	7	0
20	A	832	CLA	1	0
20	1	302	CLA	3	0
19	1	306	CHL	3	0
20	3	310	CLA	1	0
22	1	316	XAT	2	0
20	4	313	CLA	2	0
20	J	103	CLA	1	0
20	A	802	CLA	3	0
20	A	803	CLA	3	0
20	4	302	CLA	5	0
23	A	848	BCR	4	0
23	4	318	BCR	5	0
20	4	311	CLA	2	0
23	1	317	BCR	4	0
20	1	309	CLA	2	0
20	A	853	CLA	5	0

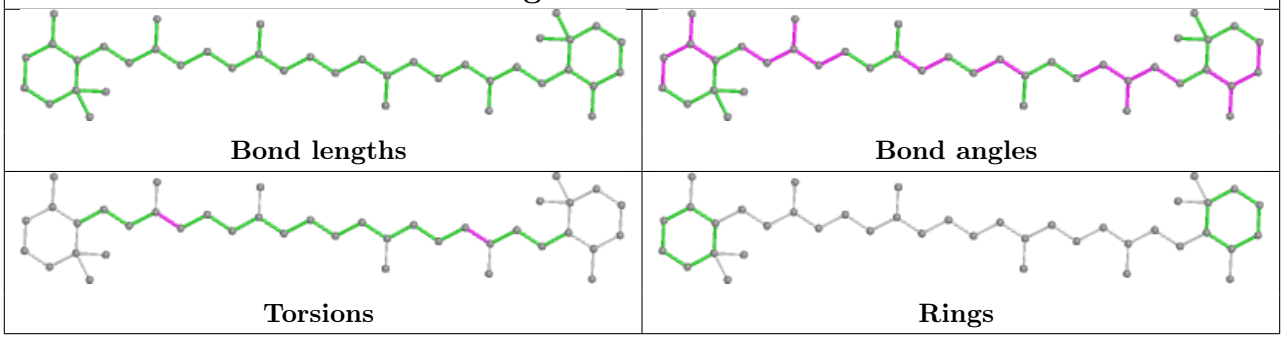
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths,

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.

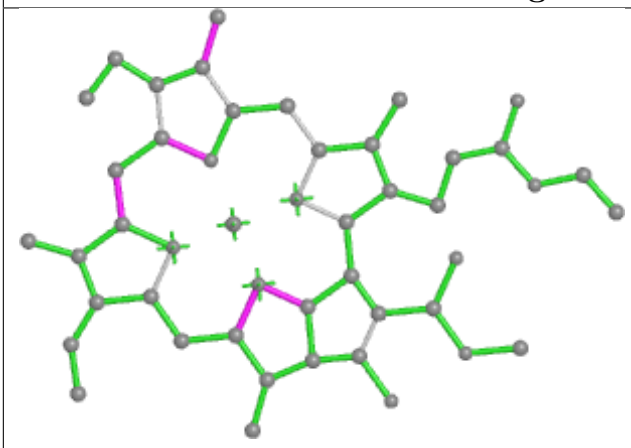
Ligand CLA B 809



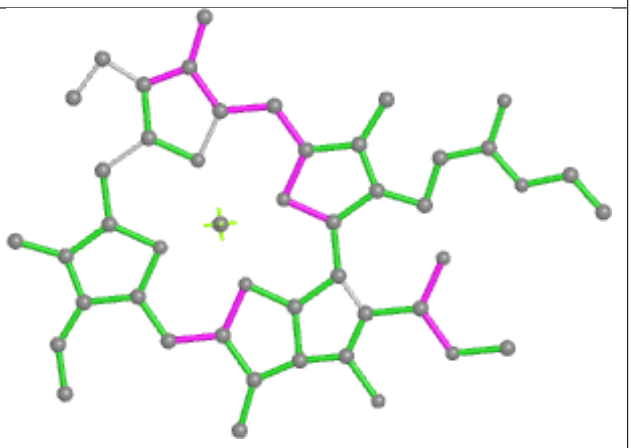
Ligand BCR B 843



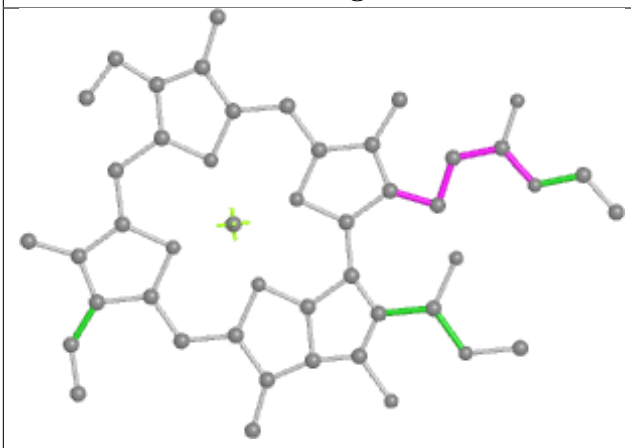
Ligand CLA 3 305



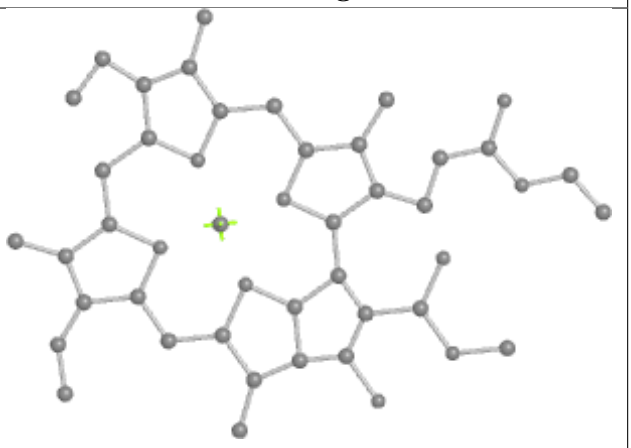
Bond lengths



Bond angles

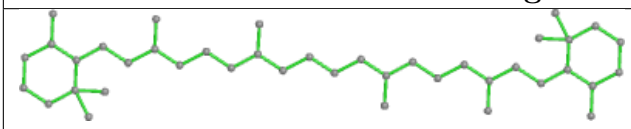


Torsions

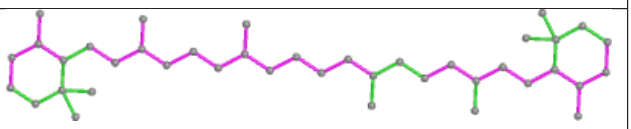


Rings

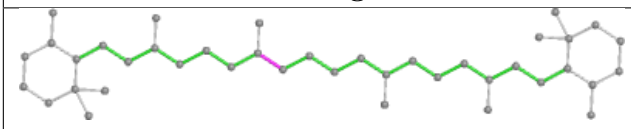
Ligand BCR F 806



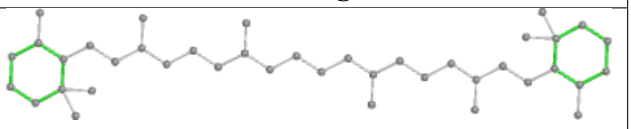
Bond lengths



Bond angles

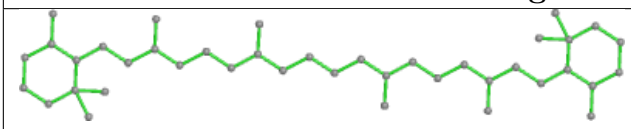


Torsions

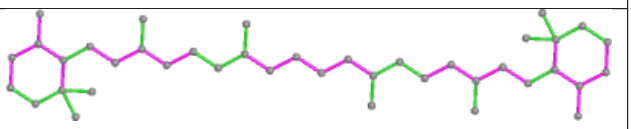


Rings

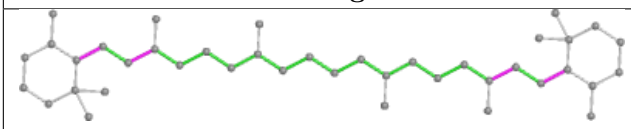
Ligand BCR I 101



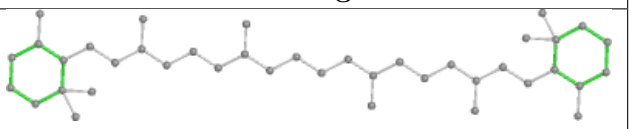
Bond lengths



Bond angles

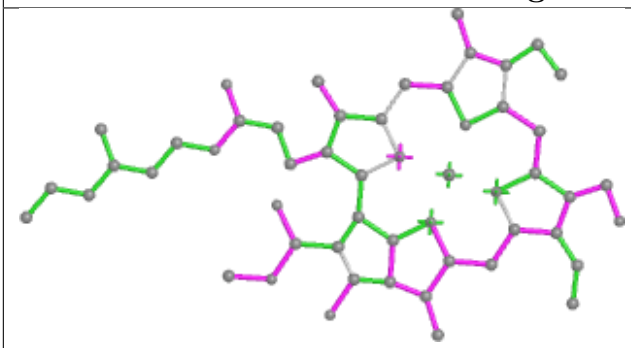


Torsions

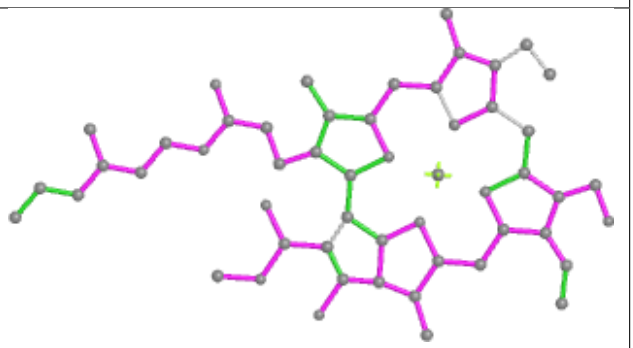


Rings

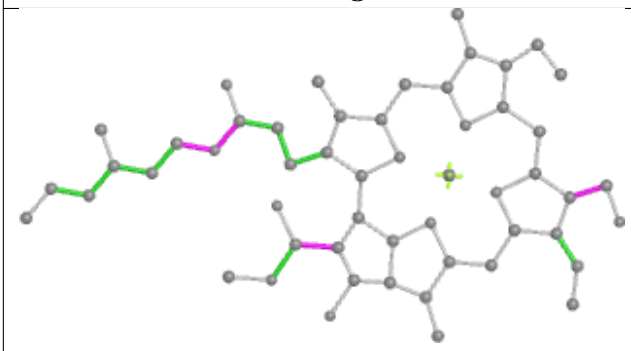
Ligand CHL 2 301



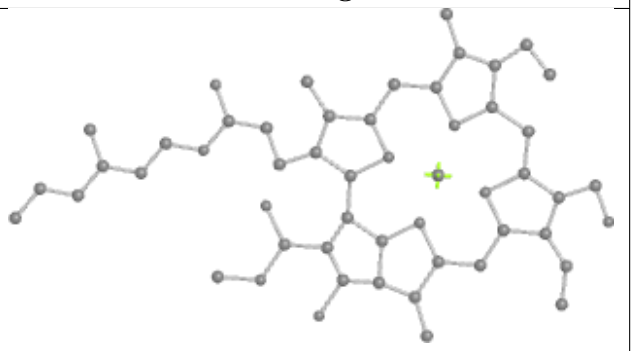
Bond lengths



Bond angles

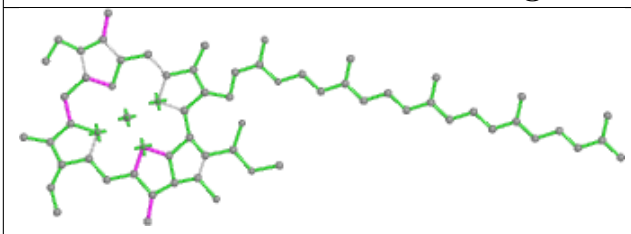


Torsions

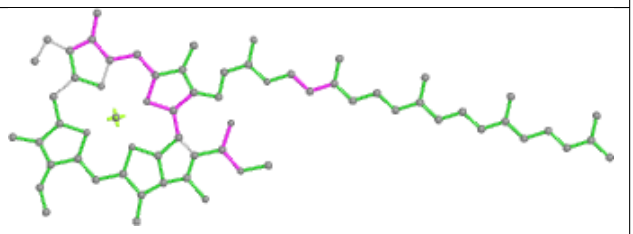


Rings

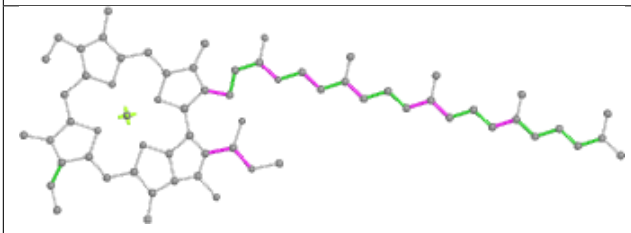
Ligand CLA A 827



Bond lengths



Bond angles



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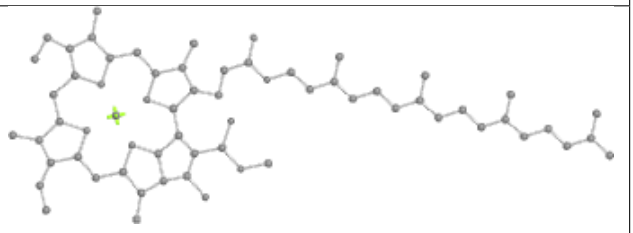
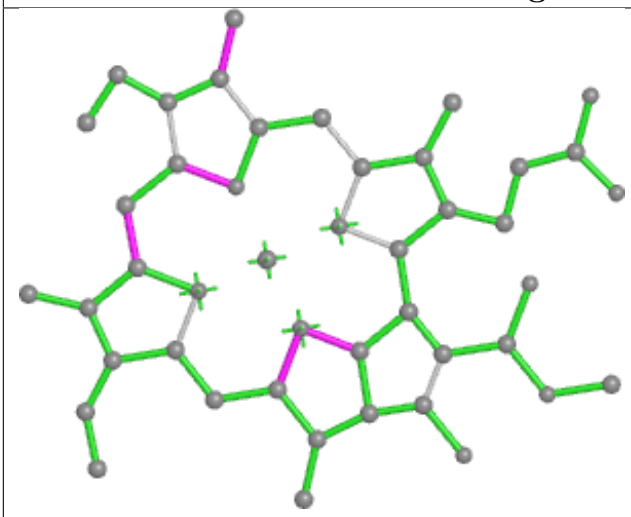
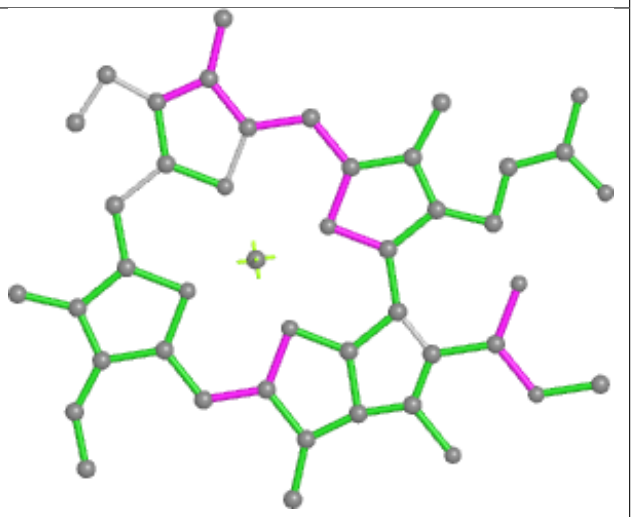


Rings

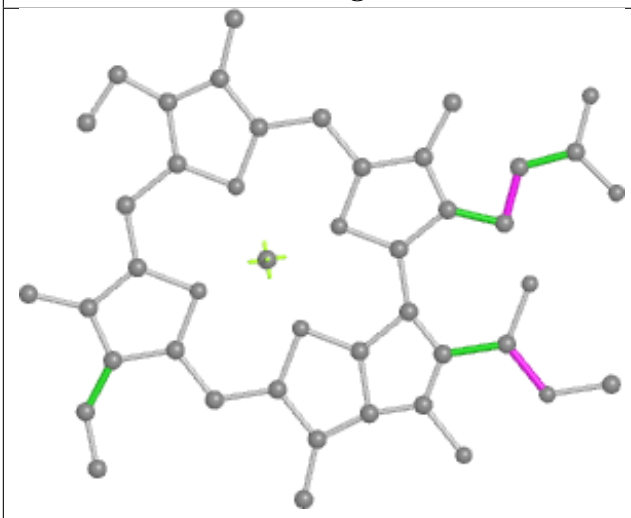
Ligand CLA 3 312



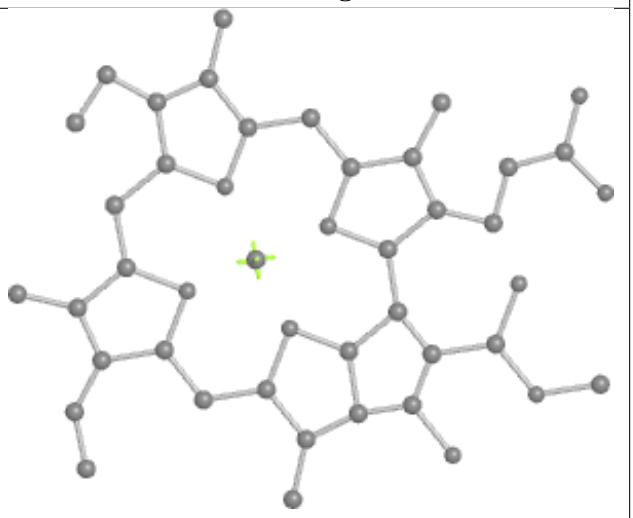
Bond lengths



Bond angles

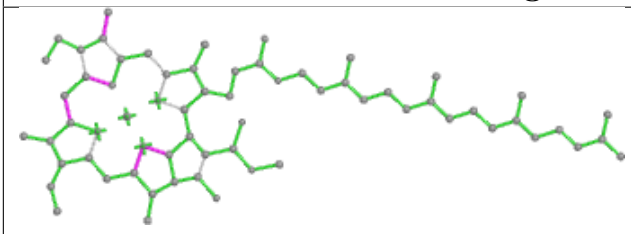


Torsions

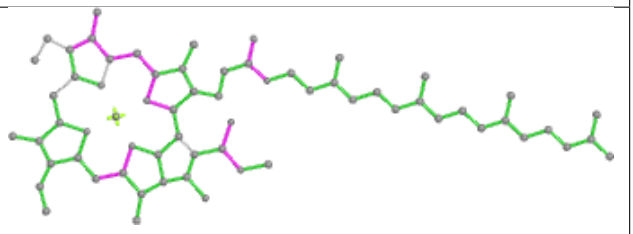


Rings

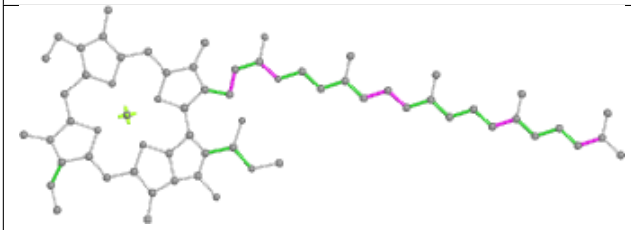
Ligand CLA A 820



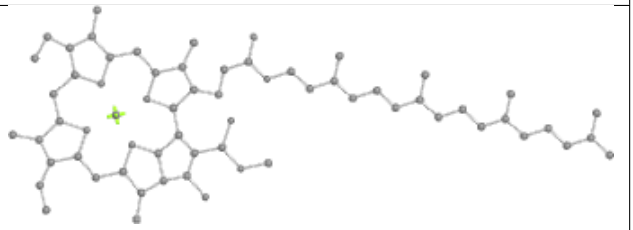
Bond lengths



Bond angles

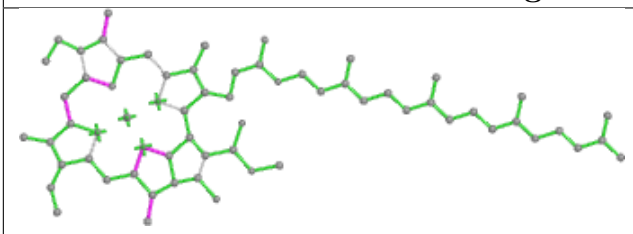


Torsions

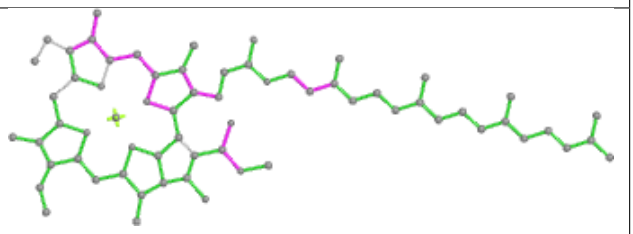


Rings

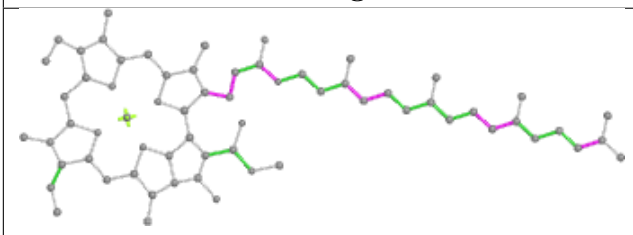
Ligand CLA B 822



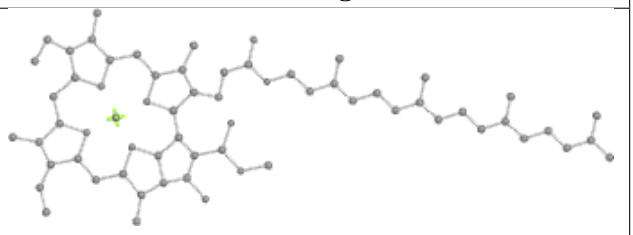
Bond lengths



Bond angles

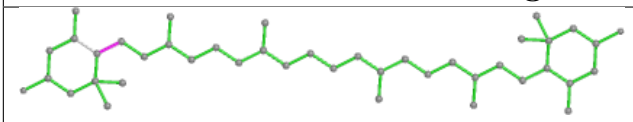


Torsions

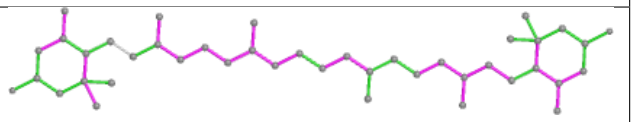


Rings

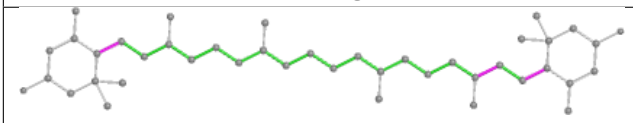
Ligand LUT O 205



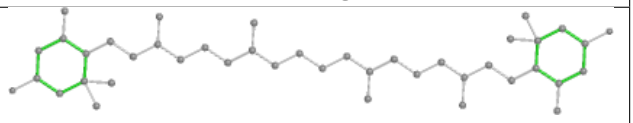
Bond lengths



Bond angles

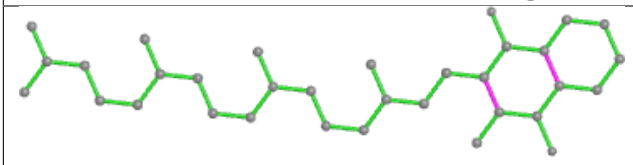


Torsions

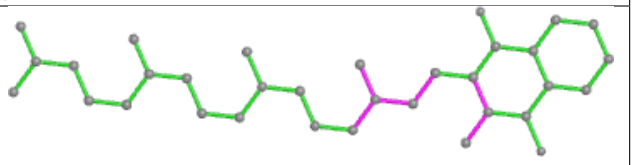


Rings

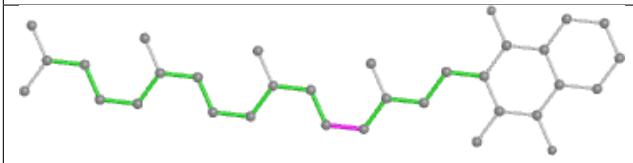
Ligand PQN B 840



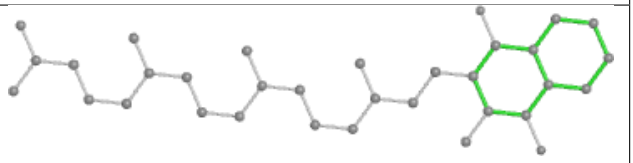
Bond lengths



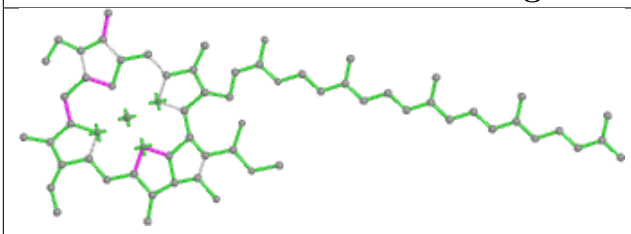
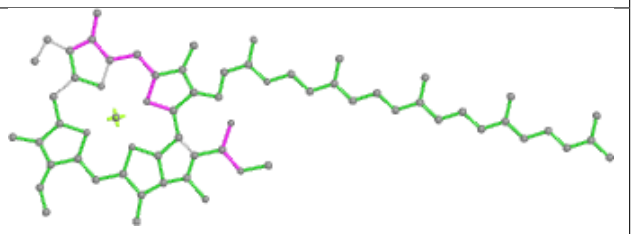
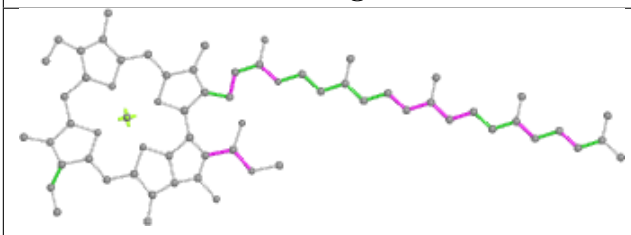
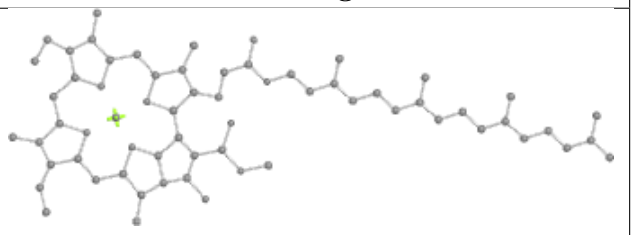
Bond angles

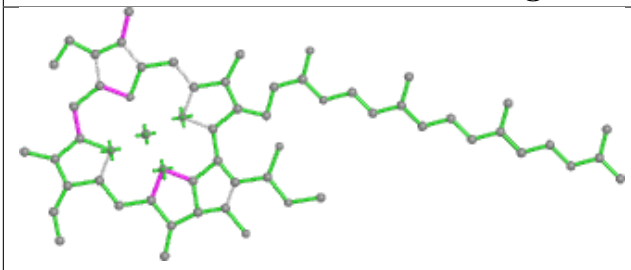
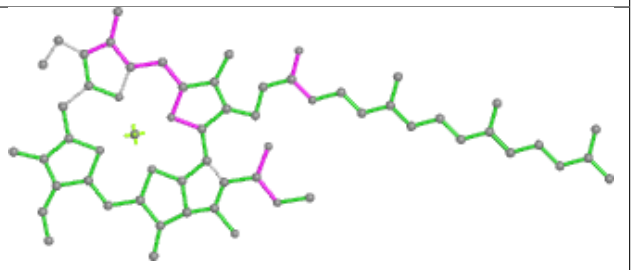
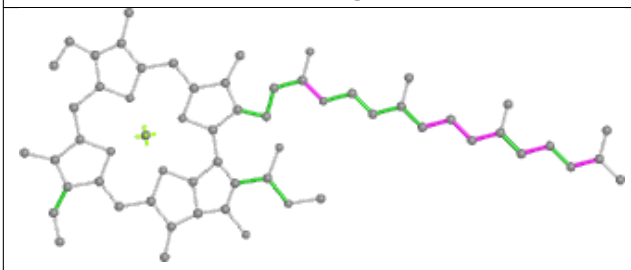
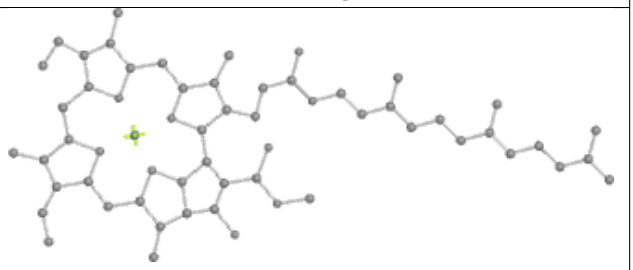


Torsions

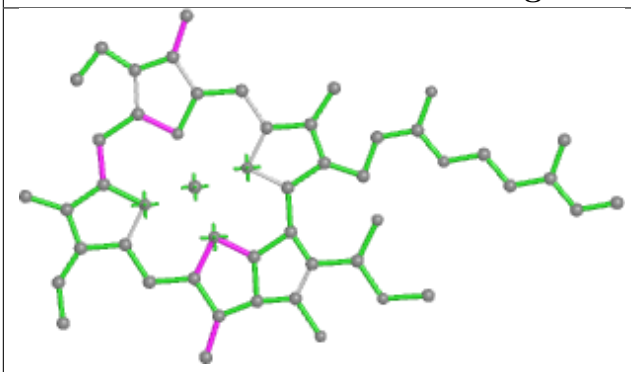


Rings

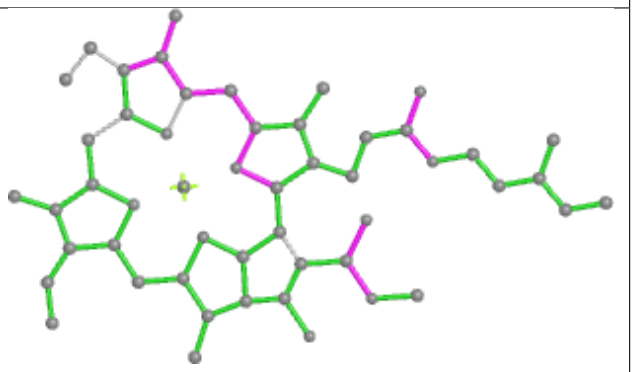
Ligand CLA A 812	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand CLA B 815	
 Bond lengths	 Bond angles
 Torsions	 Rings

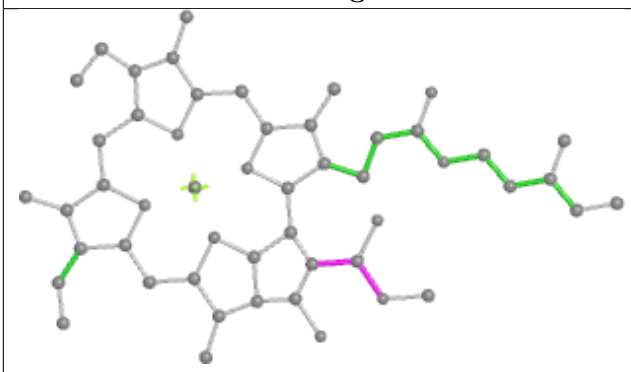
Ligand CLA B 835



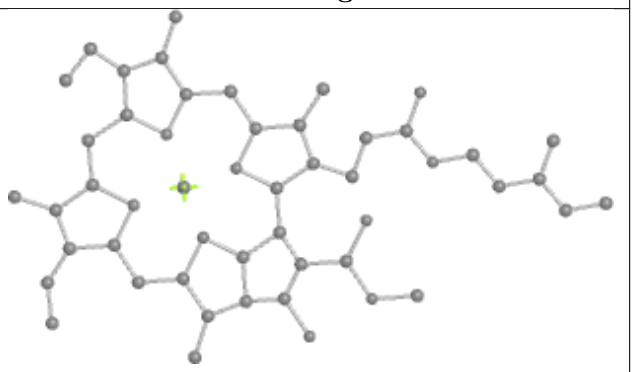
Bond lengths



Bond angles

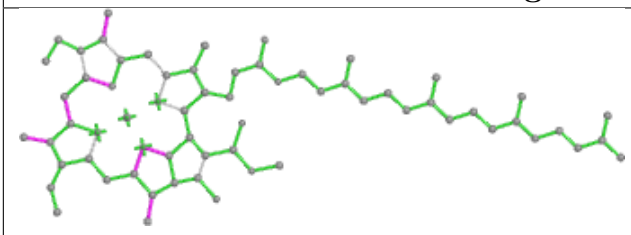


Torsions



Rings

Ligand CLA B 803



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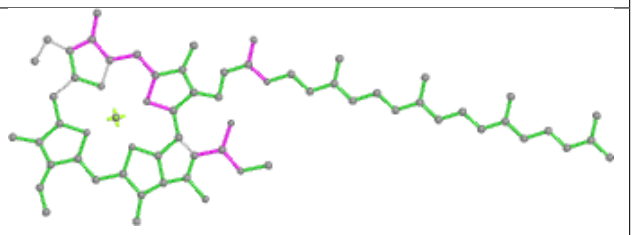
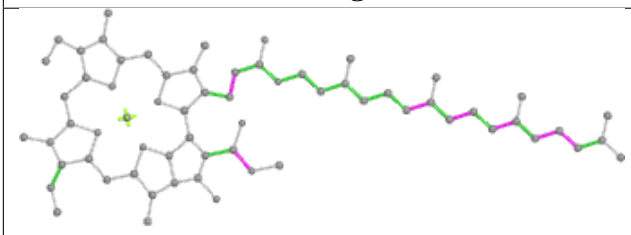
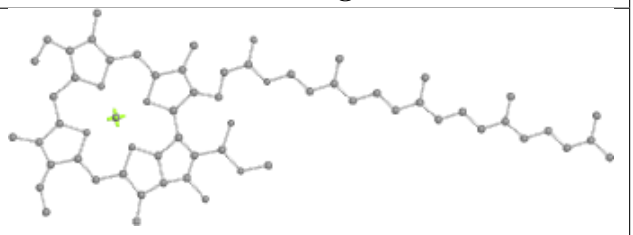


Bond angles

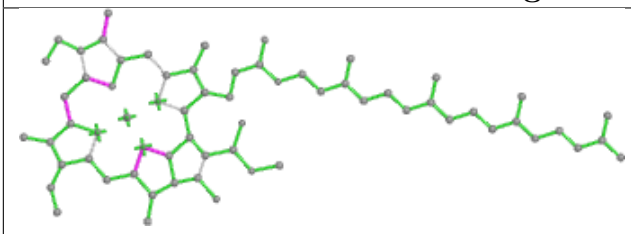


Torsions

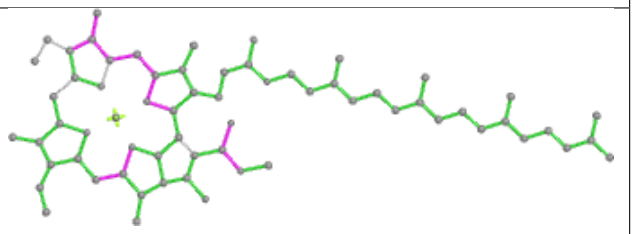


Rings

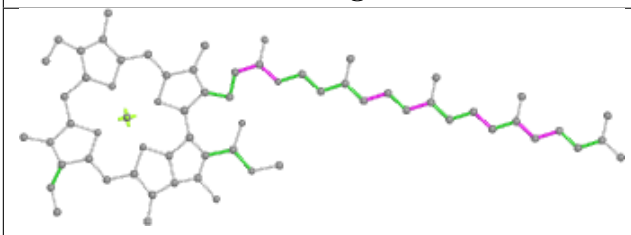
Ligand CLA A 834



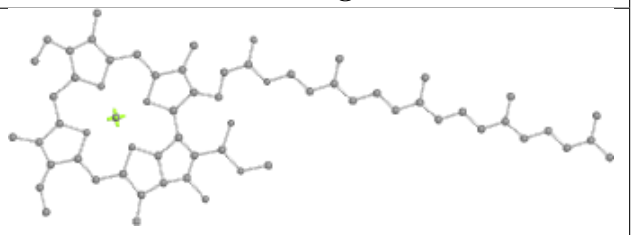
Bond lengths



Bond angles

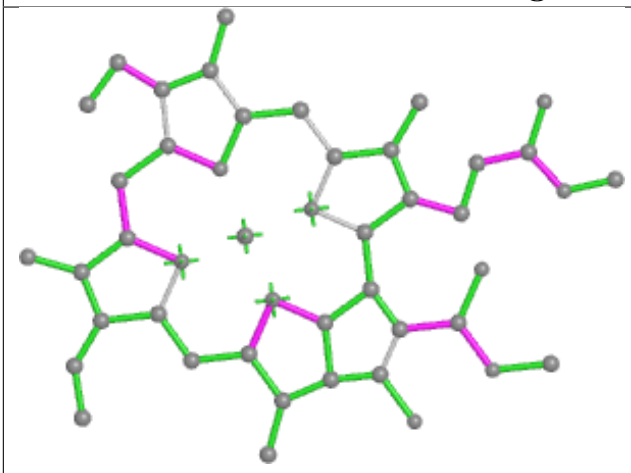


Torsions



Rings

Ligand CLA 3 309



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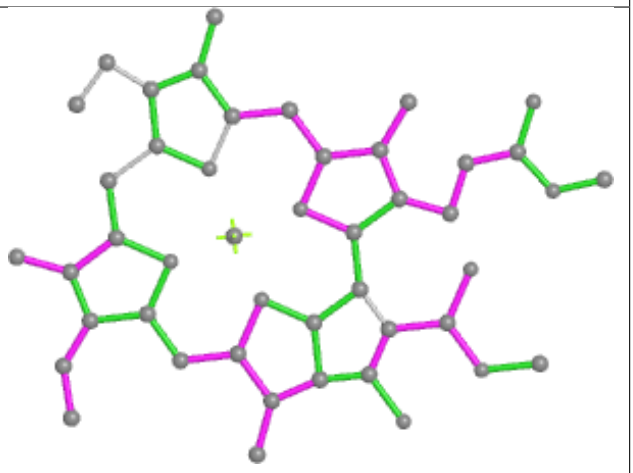
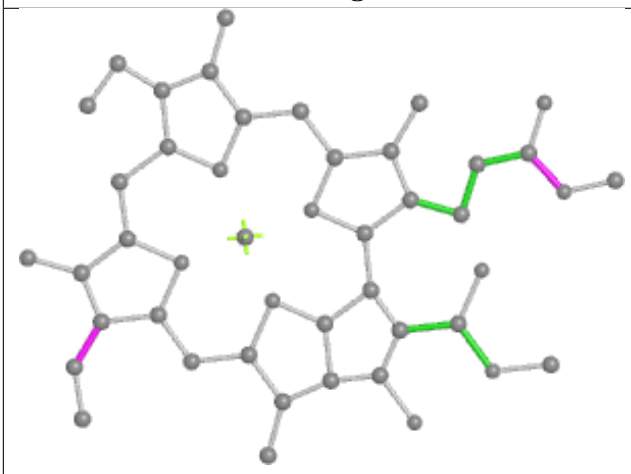
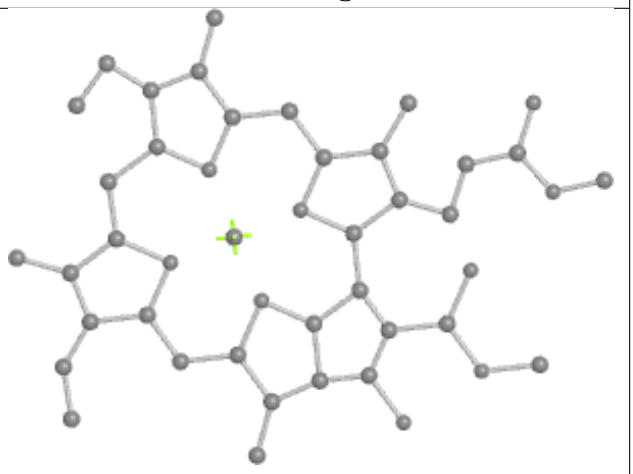


Bond angles

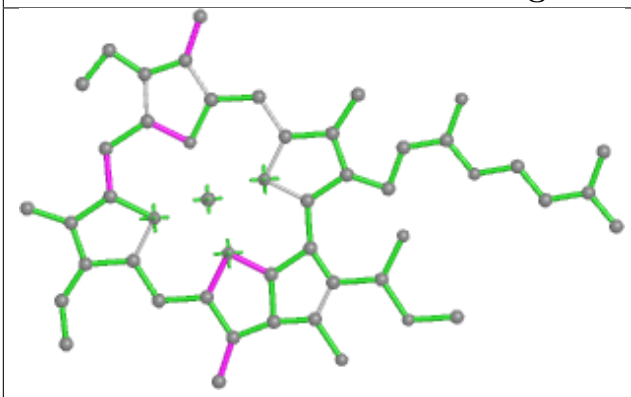


Torsions

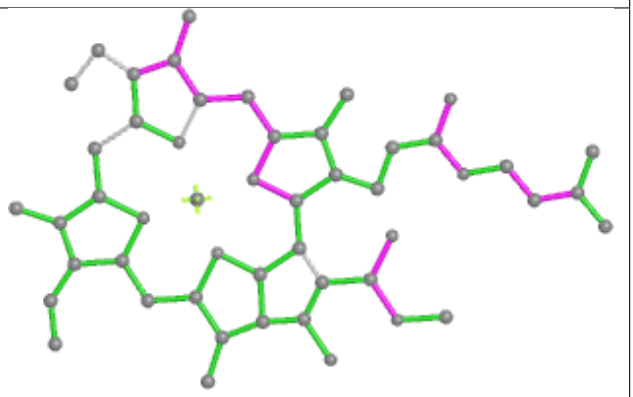


Rings

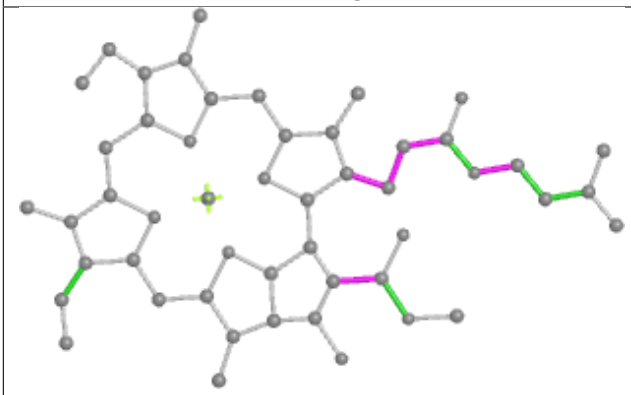
Ligand CLA 3 307



Bond lengths



Bond angles



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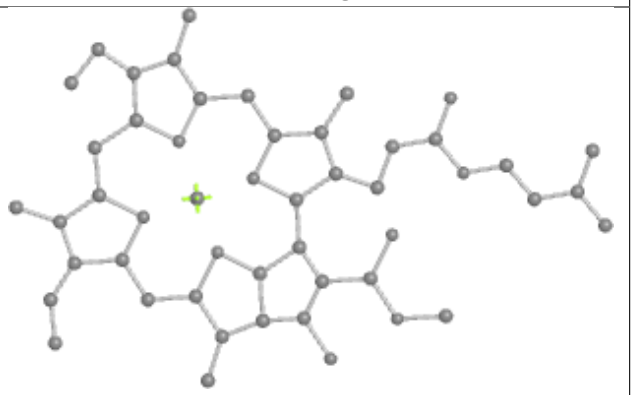
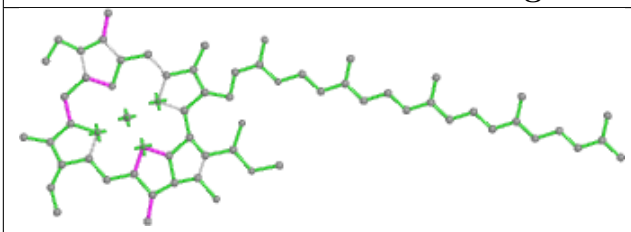


Rings

Ligand CLA B 838



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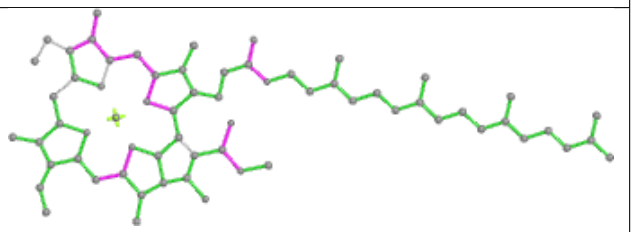
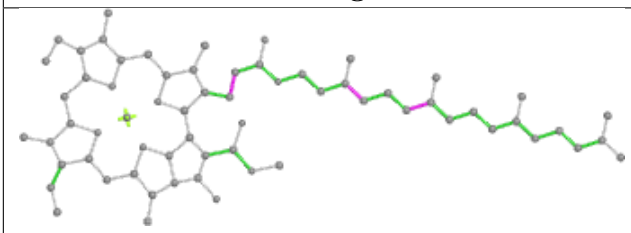
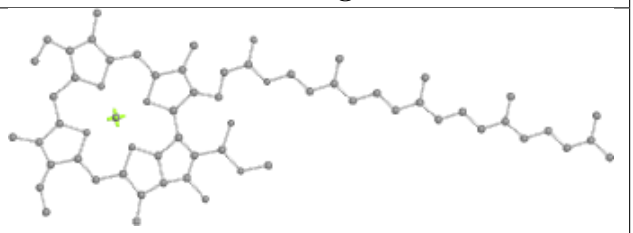


Bond angles

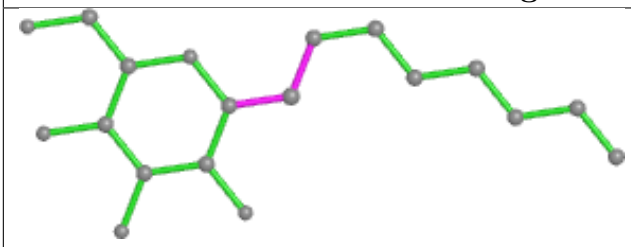


Torsions

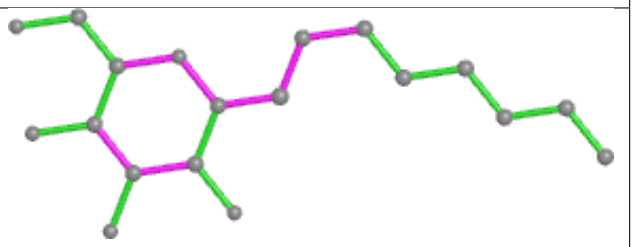


Rings

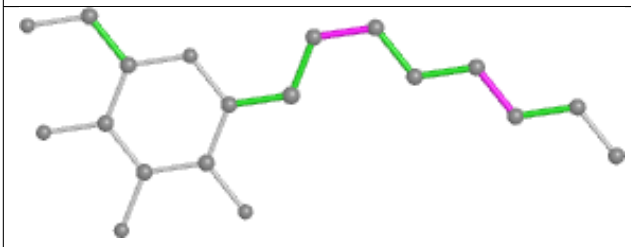
Ligand HTG A 852



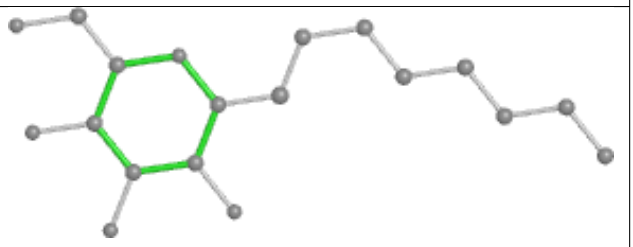
Bond lengths



Bond angles

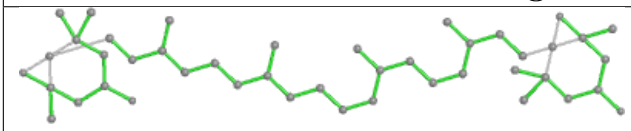


Torsions

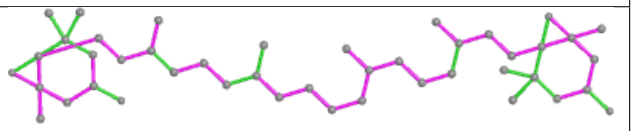


Rings

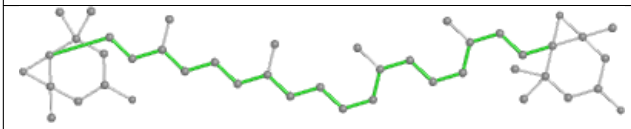
Ligand XAT 2 316



Bond lengths



Bond angles



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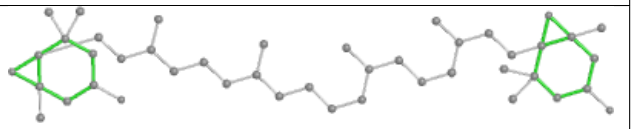
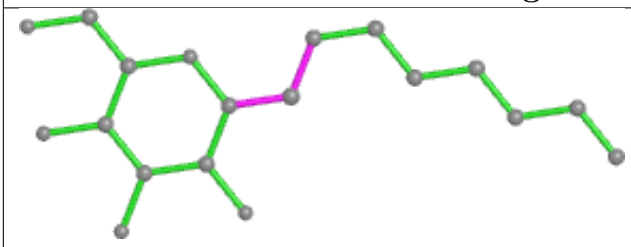
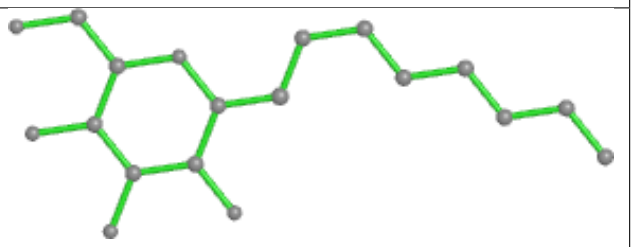


Rings

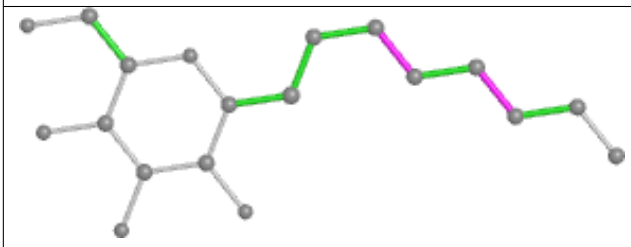
Ligand HTG F 807



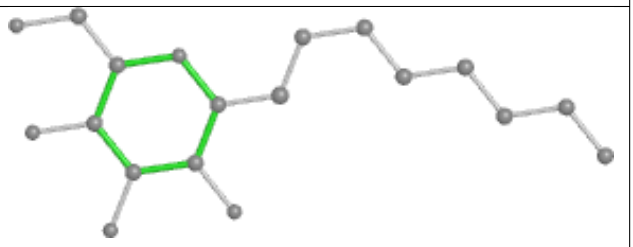
Bond lengths



Bond angles

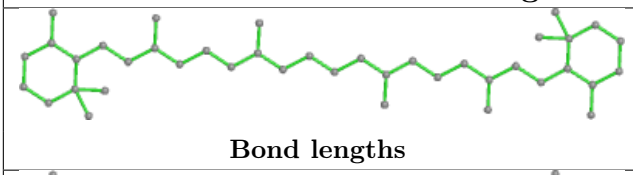


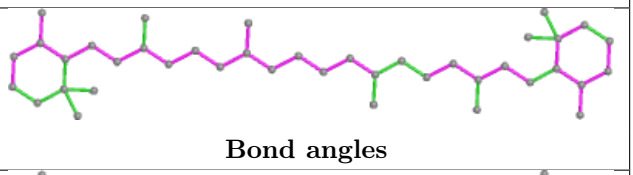
Torsions

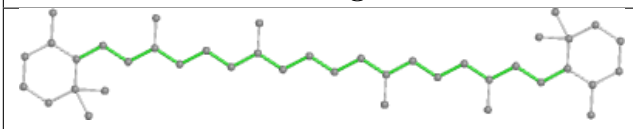


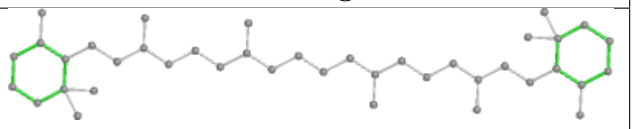
Rings

Ligand BCR G 606

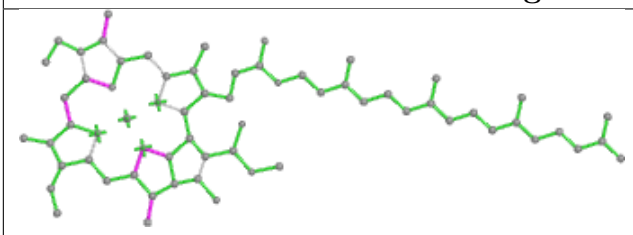

Bond lengths

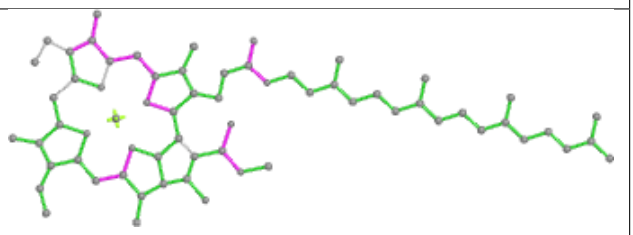

Bond angles

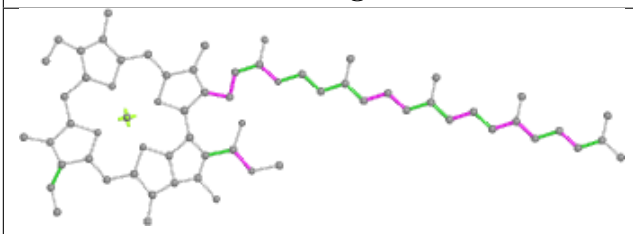

Torsions

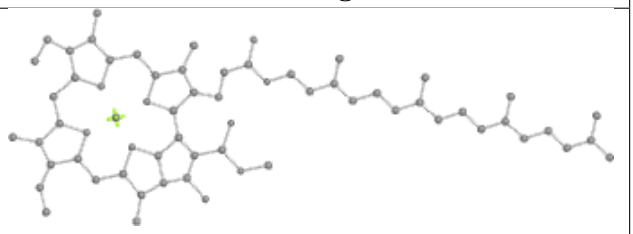

Rings

Ligand CLA A 831

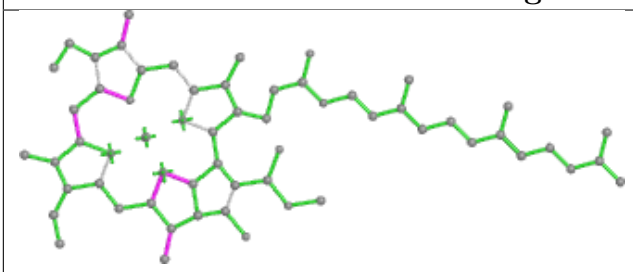

Bond lengths

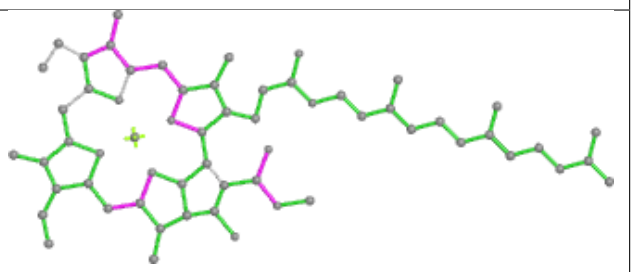

Bond angles

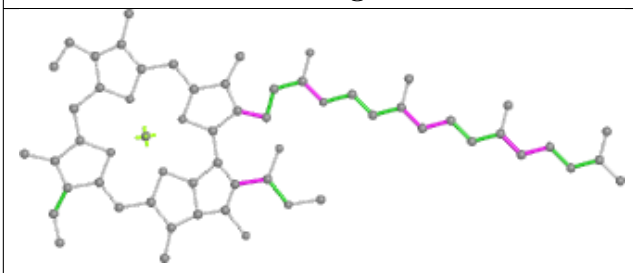

Torsions

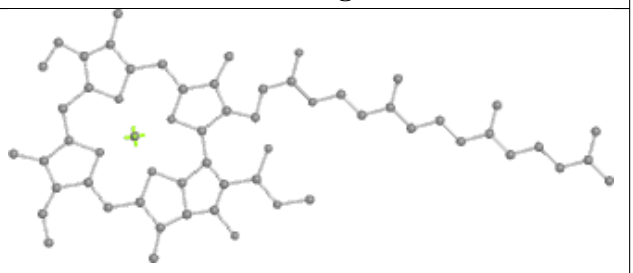

Rings

Ligand CLA B 818

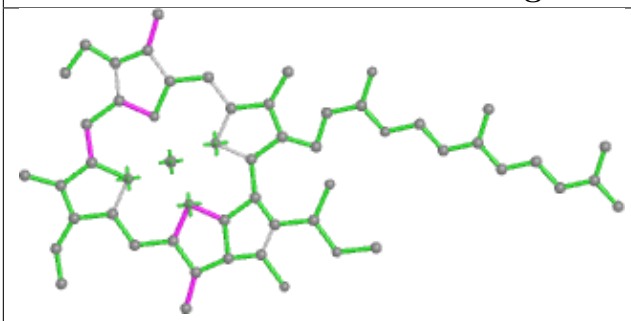

Bond lengths


Bond angles

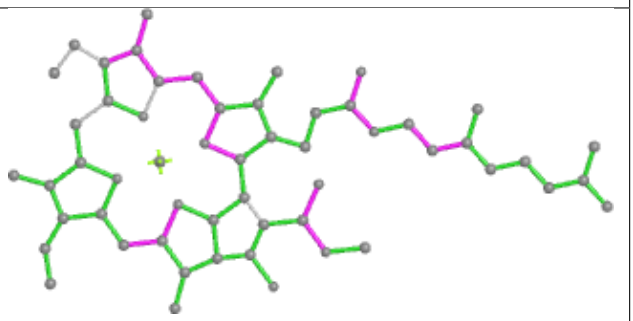

Torsions


Rings

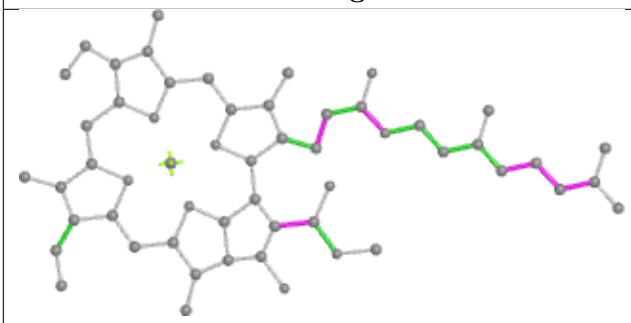
Ligand CLA B 807



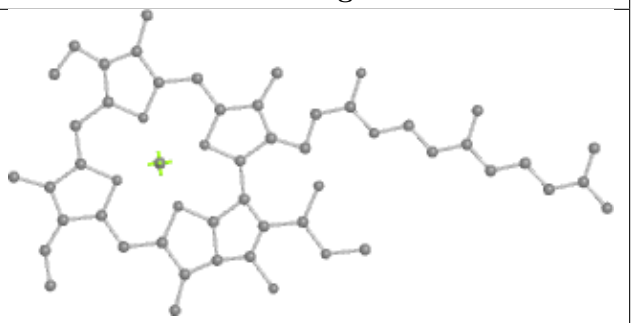
Bond lengths



Bond angles

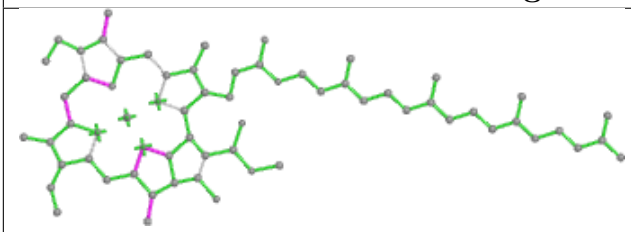


Torsions

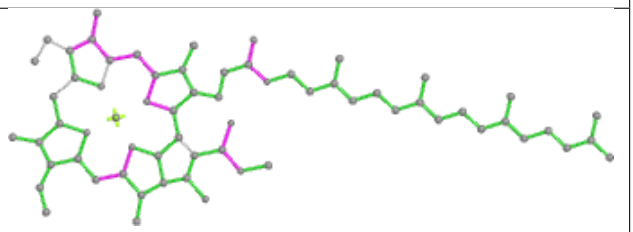


Rings

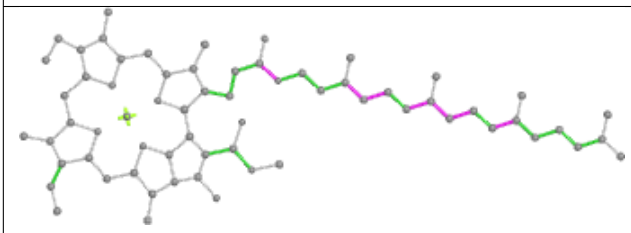
Ligand CLA A 837



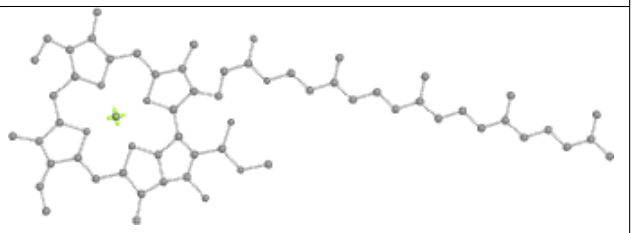
Bond lengths



Bond angles

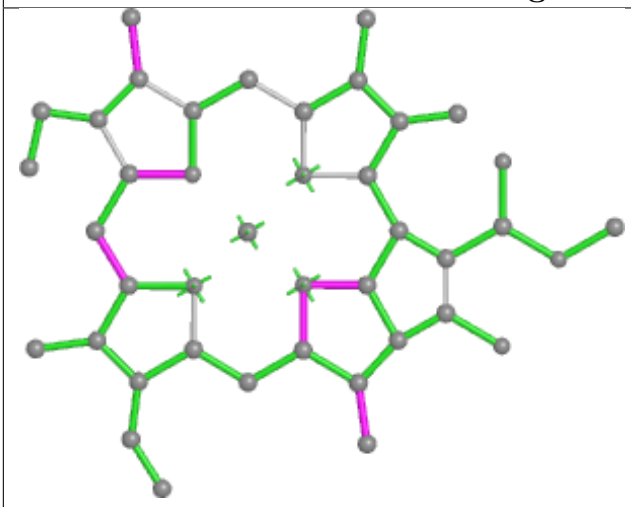


Torsions

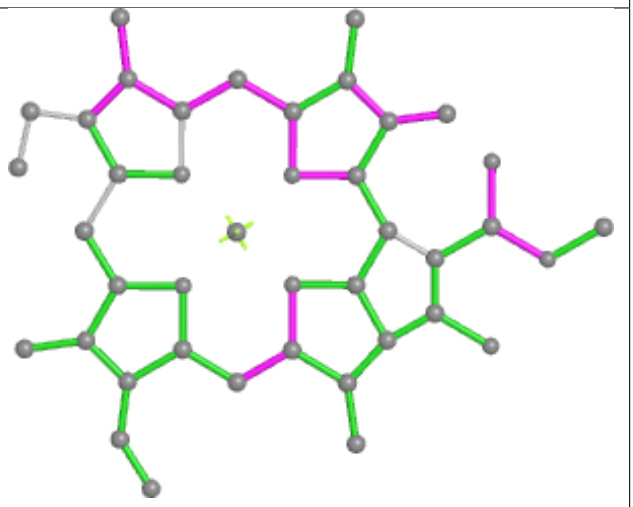


Rings

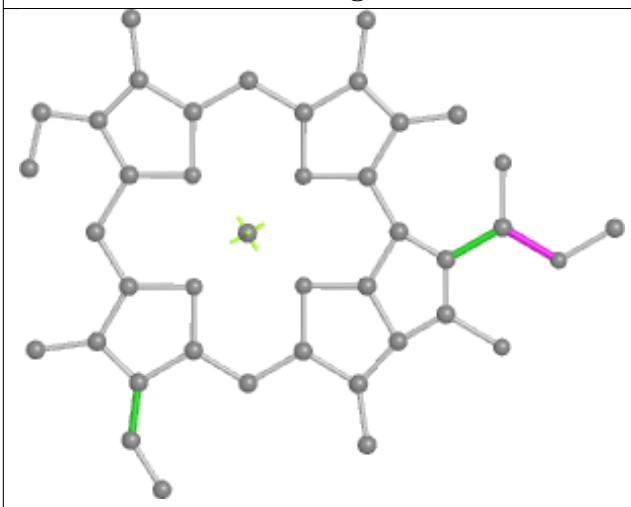
Ligand CLA 1 310



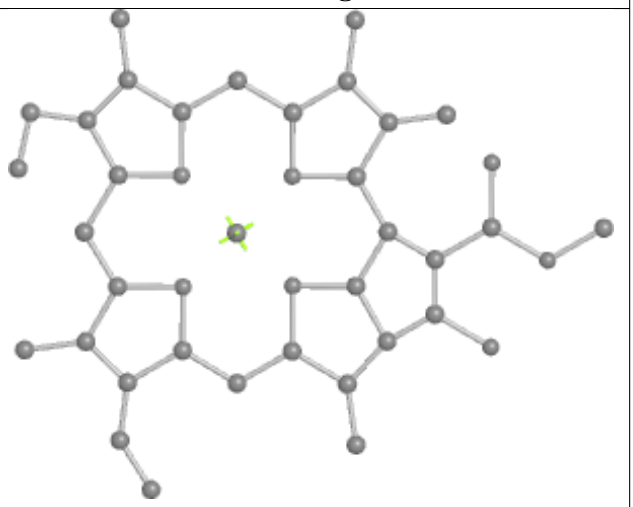
Bond lengths



Bond angles

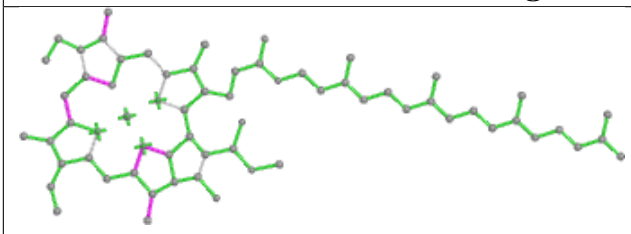


Torsions

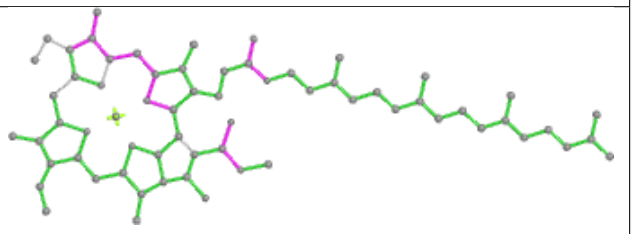


Rings

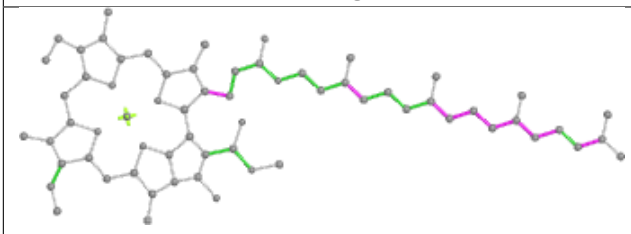
Ligand CLA B 813



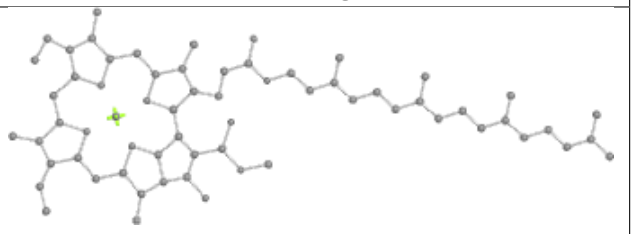
Bond lengths



Bond angles

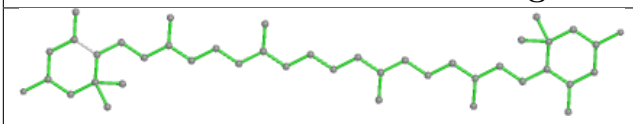


Torsions



Rings

Ligand LUT 4 316



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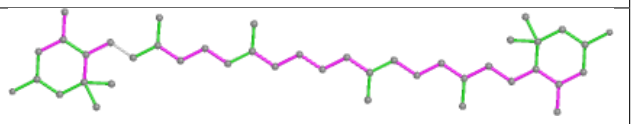
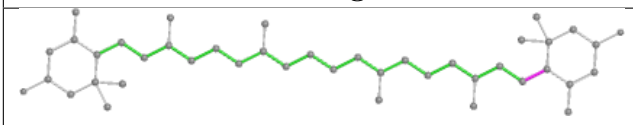


Bond angles



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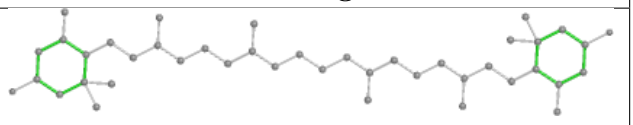
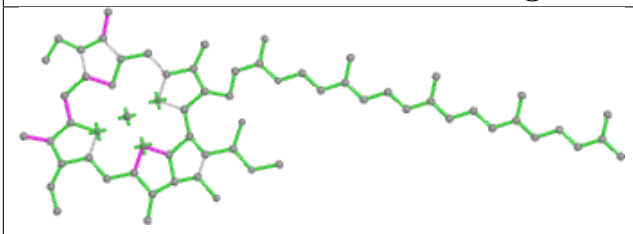
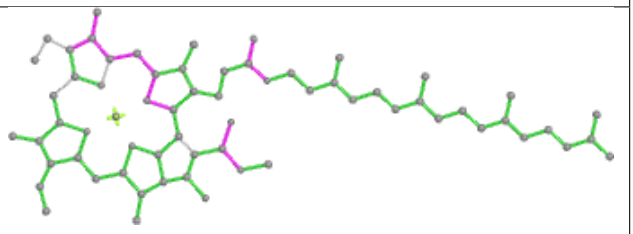


Rings

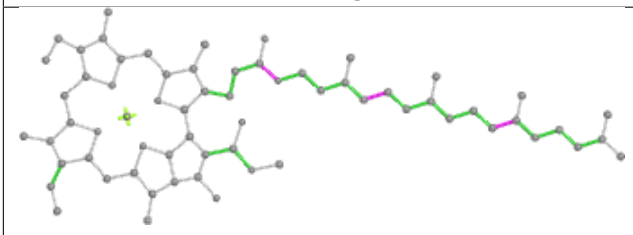
Ligand CLA A 826



Bond lengths



Bond angles



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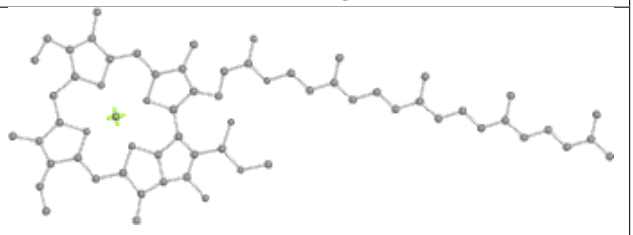
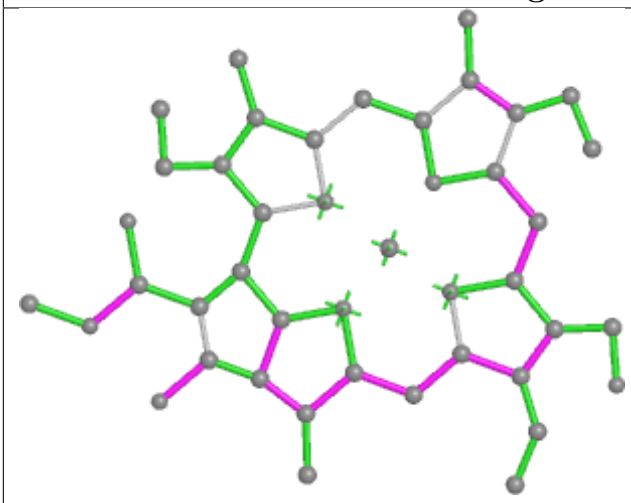
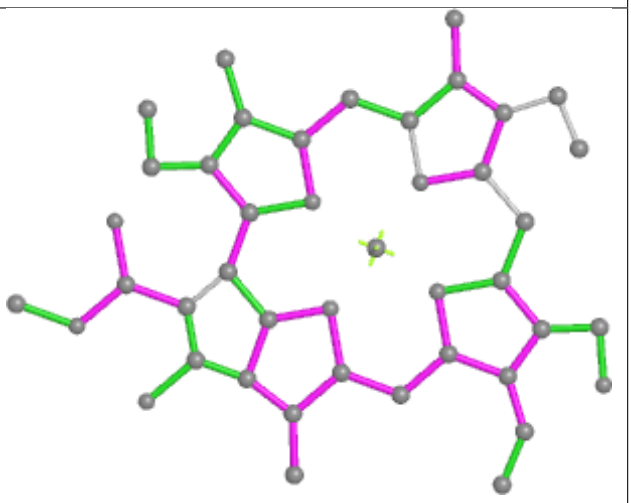


Rings

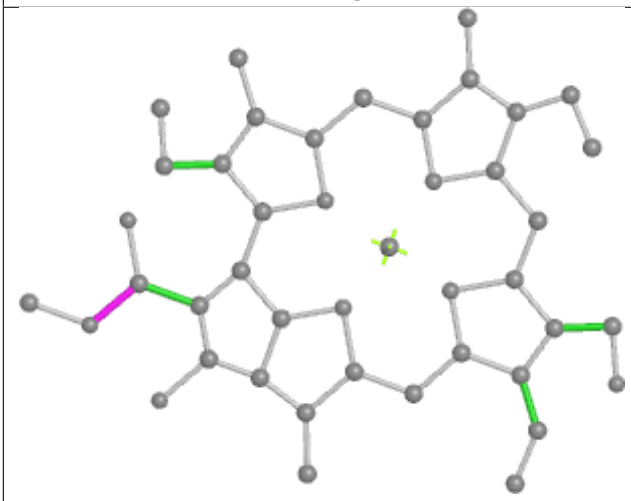
Ligand CHL 2 314



Bond lengths



Bond angles



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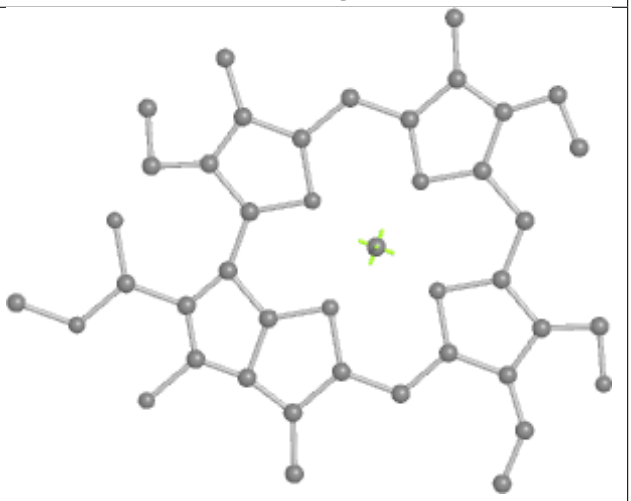
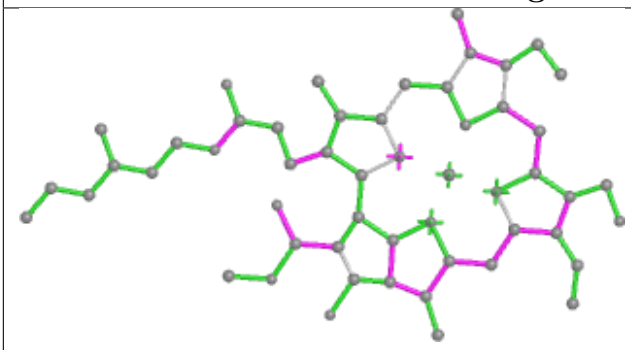
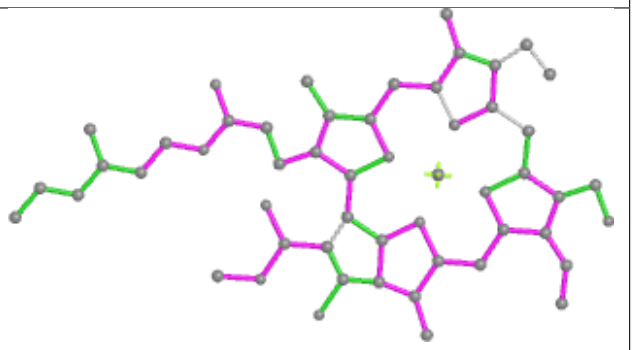


Rings

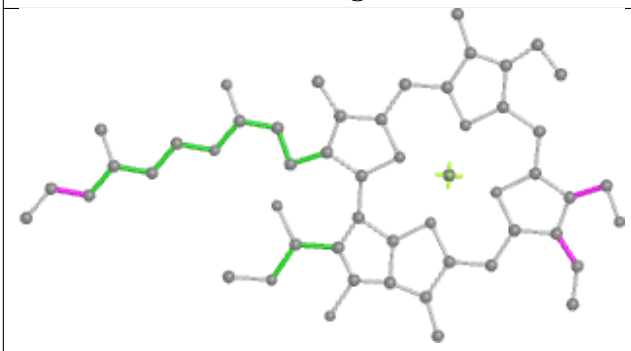
Ligand CHL 4 305



Bond lengths



Bond angles



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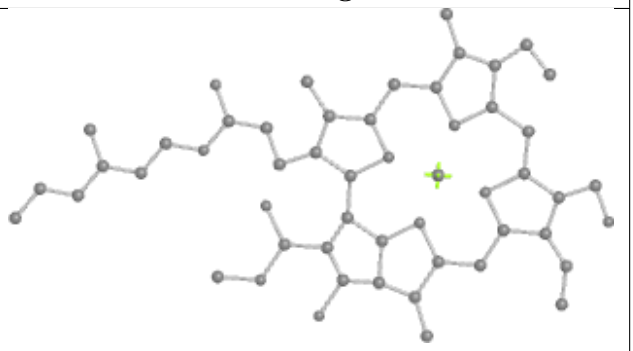
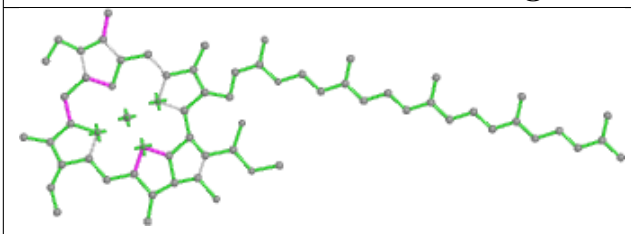


Rings

Ligand CLA B 828



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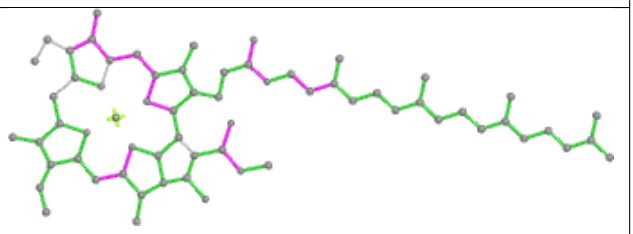
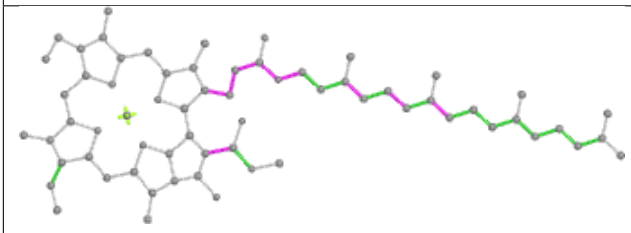


Bond angles



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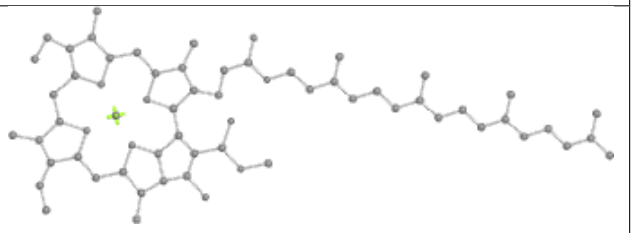
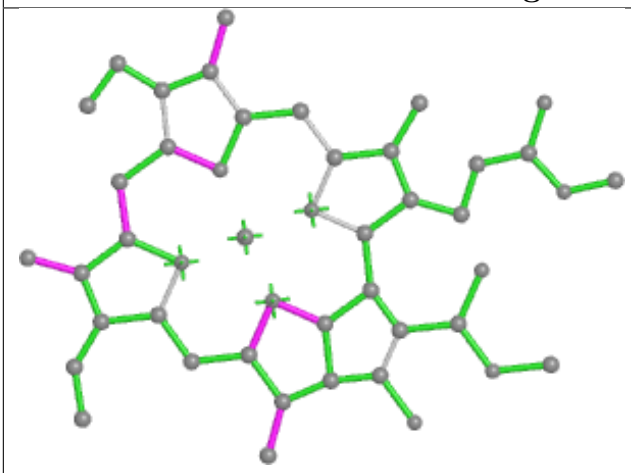


Rings

Ligand CLA K 203



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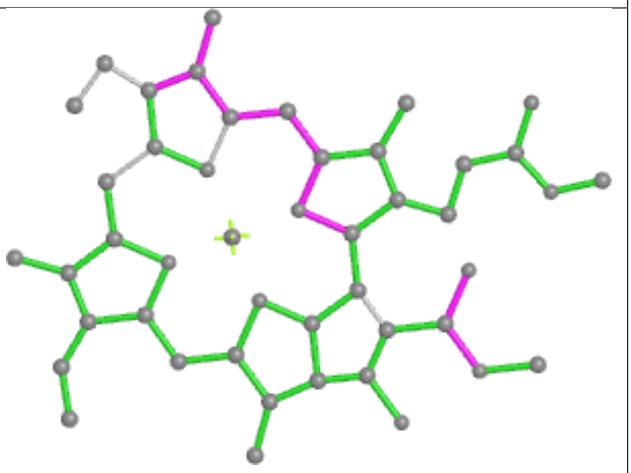
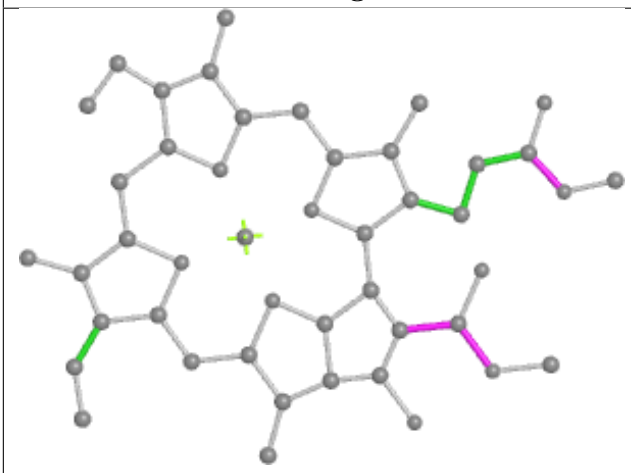


Bond angles



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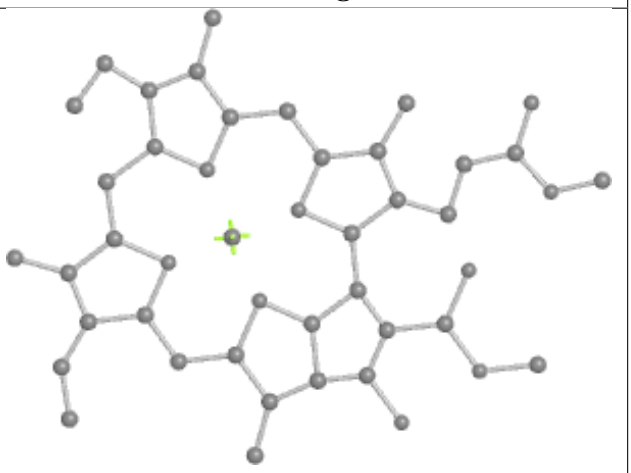
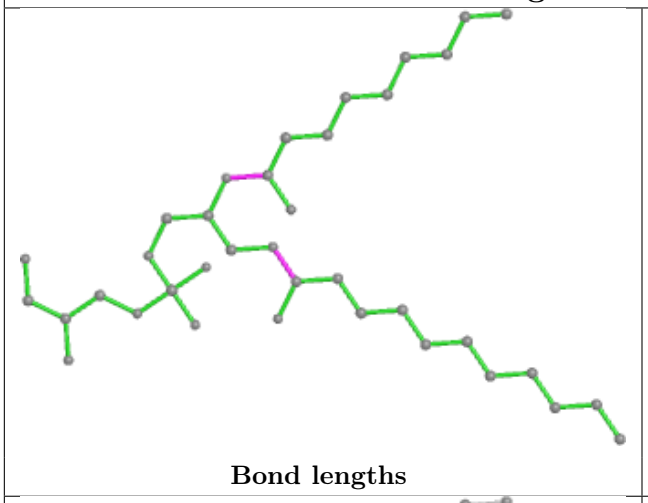
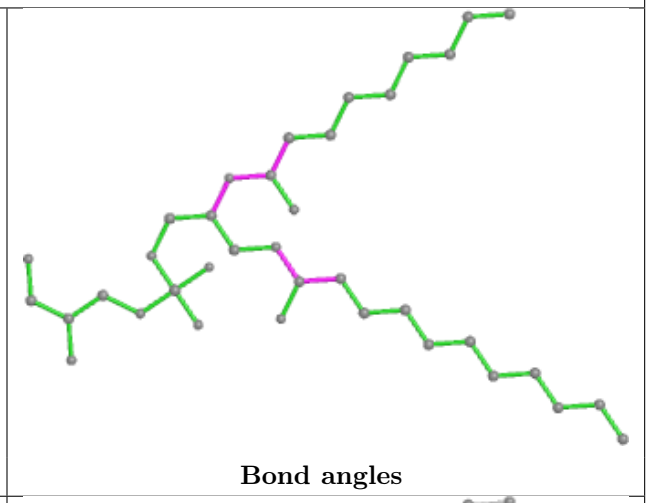


Rings

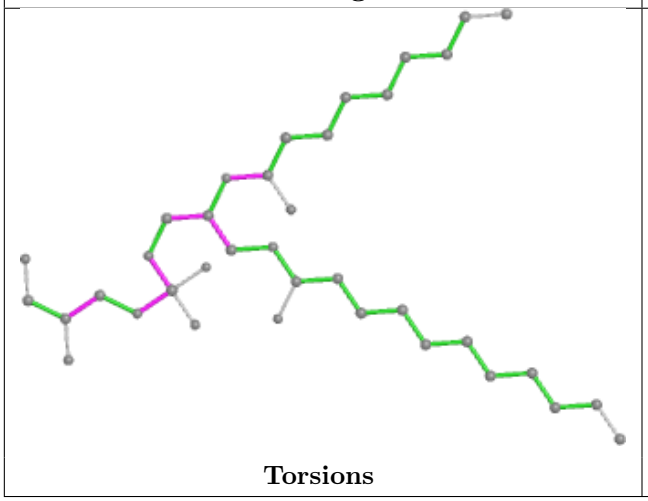
Ligand LHG 2 318



Bond lengths



Bond angles



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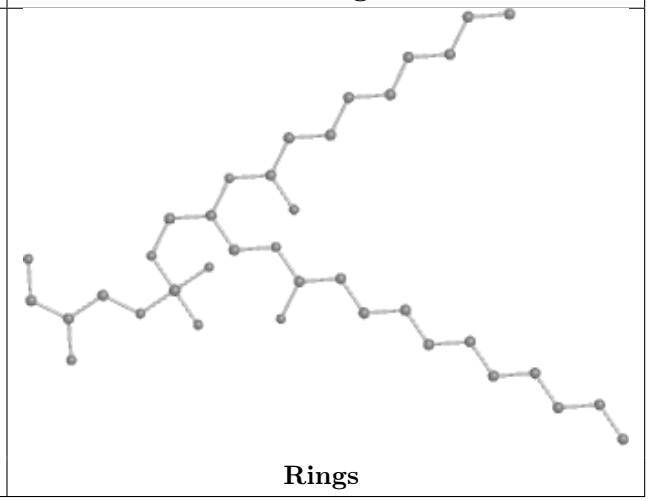
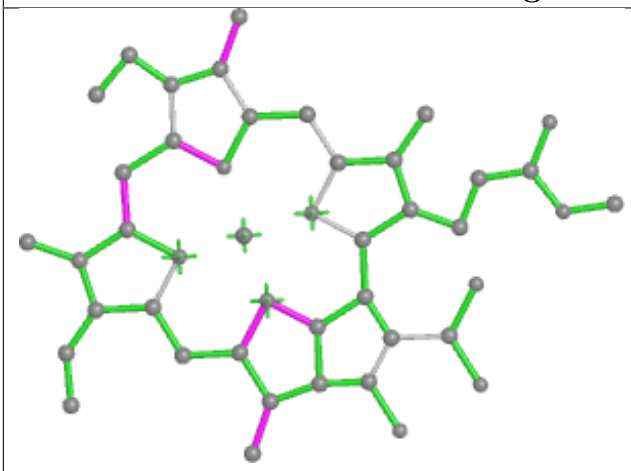
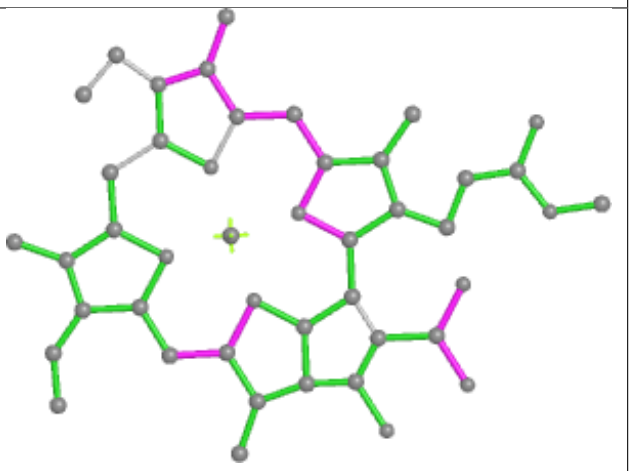


Rings

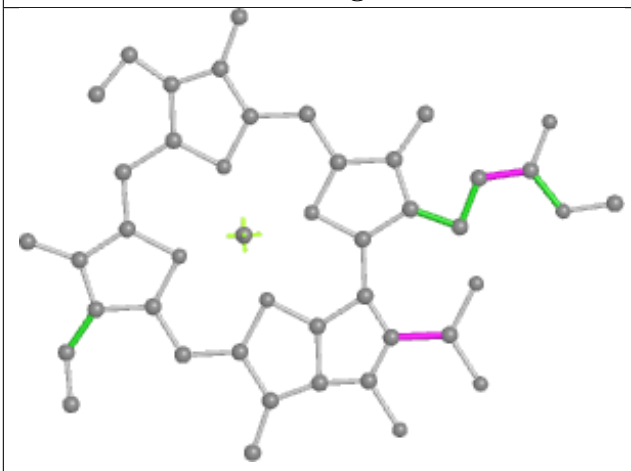
Ligand CLA N 202



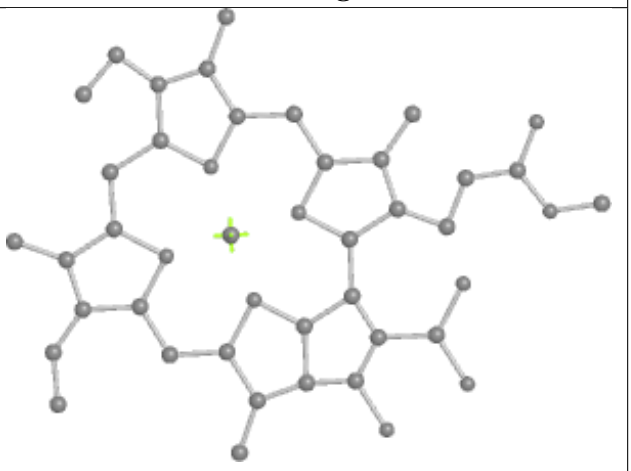
Bond lengths



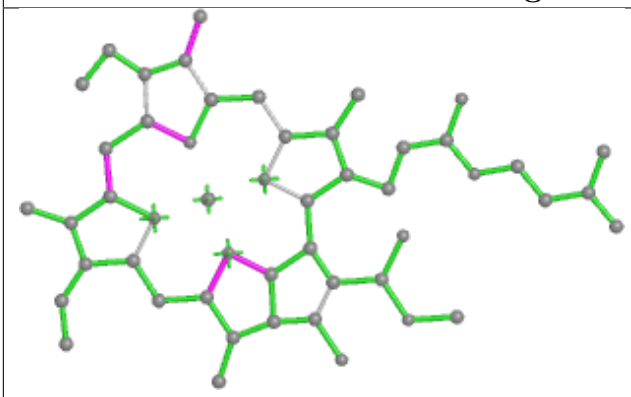
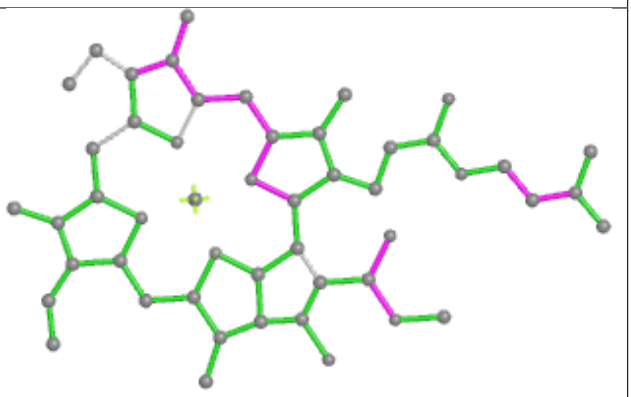
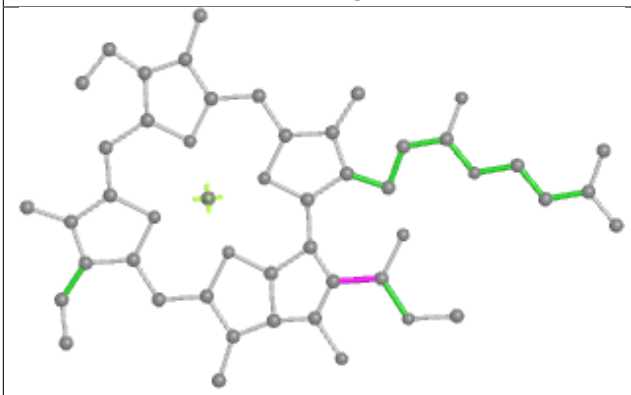
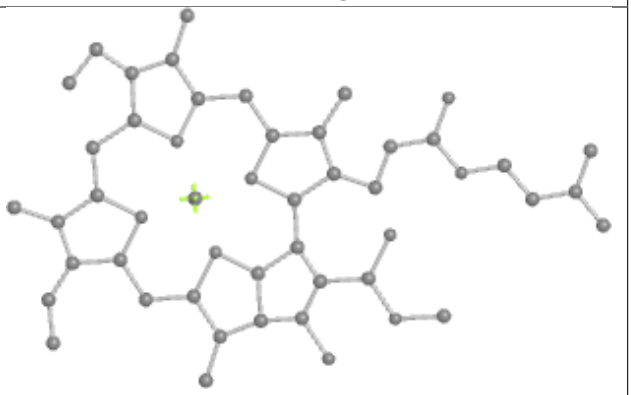
Bond angles

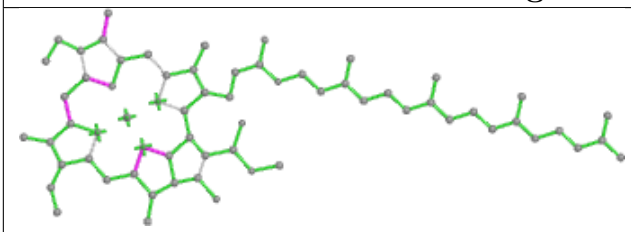
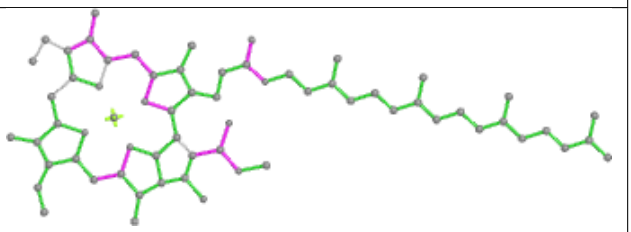
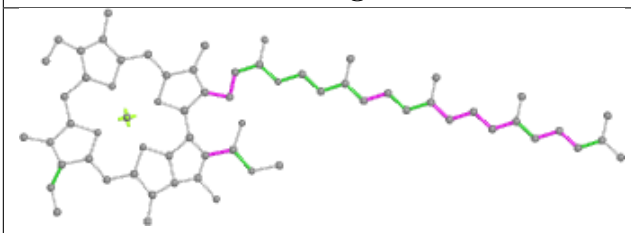
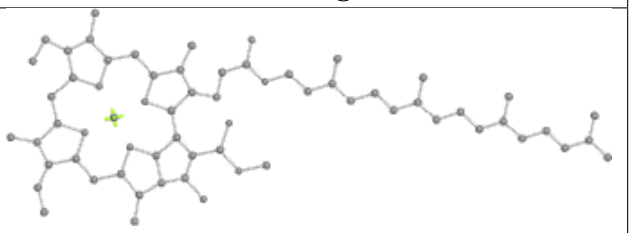


Torsions

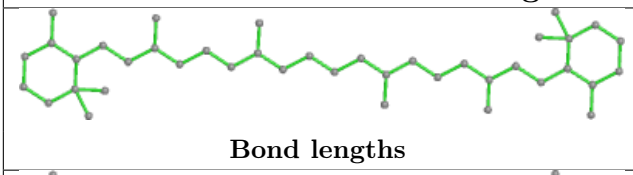


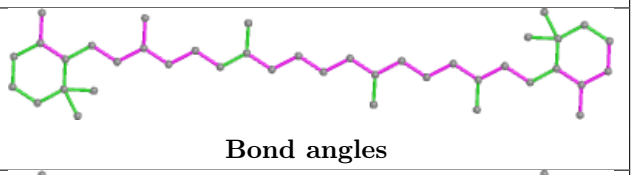
Rings

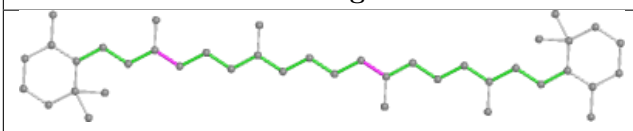
Ligand CLA B 820	
	
Bond lengths	Bond angles
	
Torsions	Rings

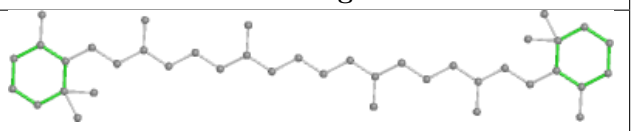
Ligand CLA L 303	
	
Bond lengths	Bond angles
	
Torsions	Rings

Ligand BCR A 849

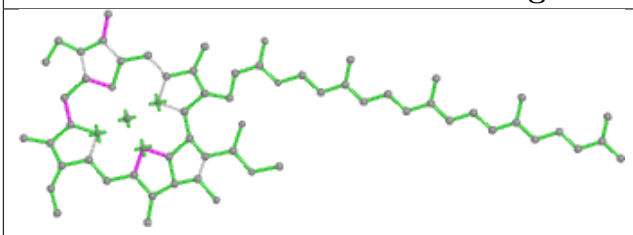

Bond lengths

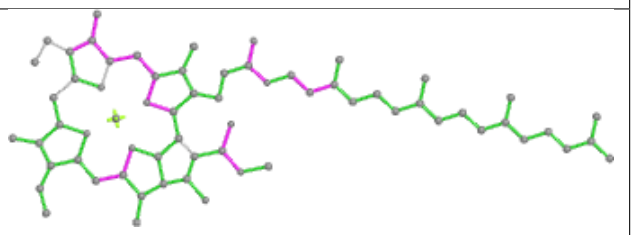

Bond angles

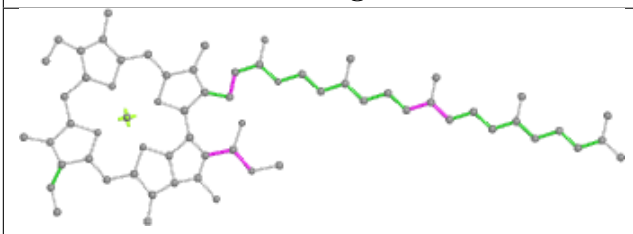

Torsions

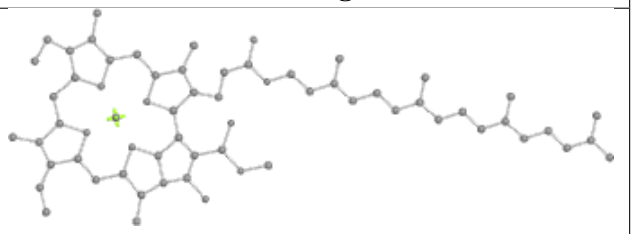

Rings

Ligand CLA 2 312

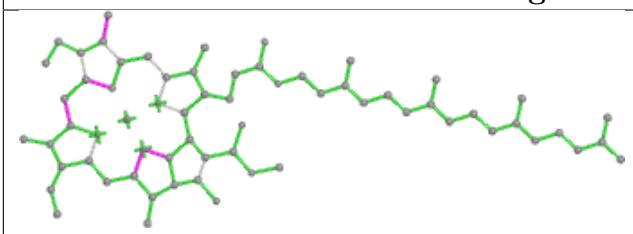

Bond lengths

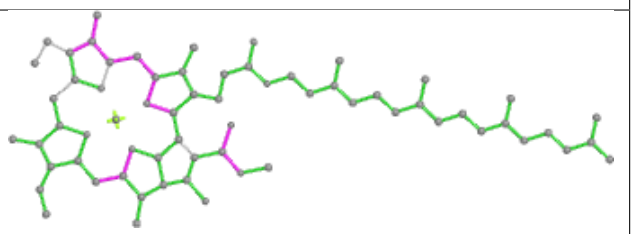

Bond angles

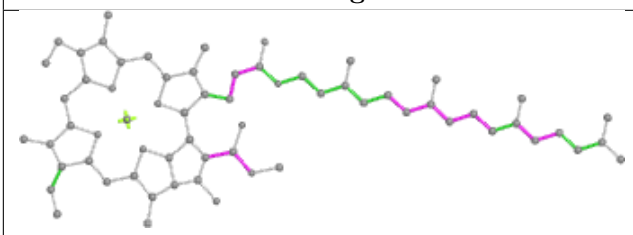

Torsions

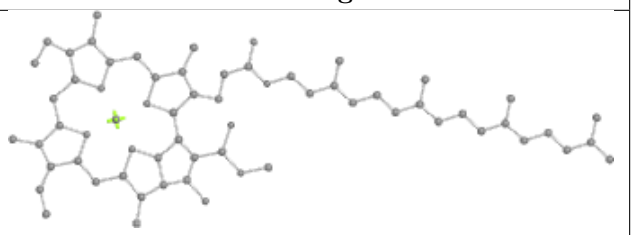

Rings

Ligand CLA 1 312

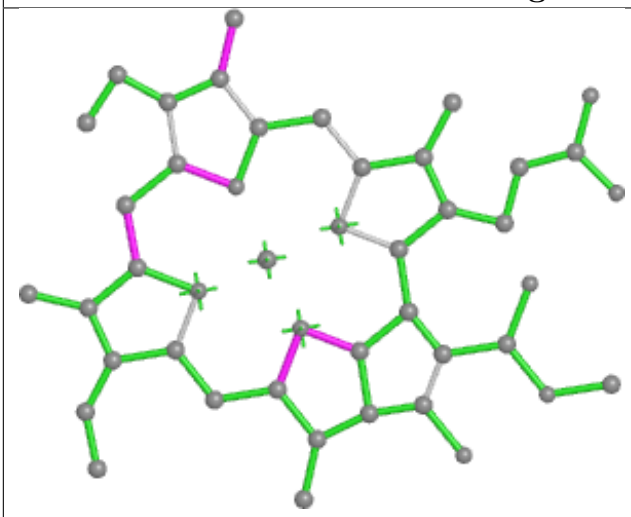

Bond lengths


Bond angles

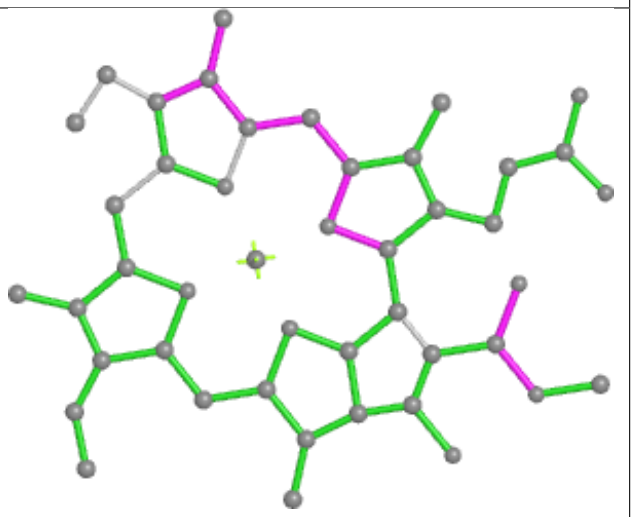

Torsions


Rings

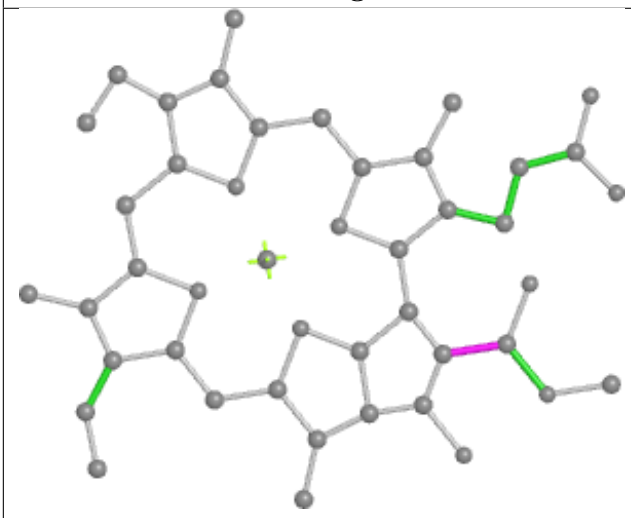
Ligand CLA 3 313



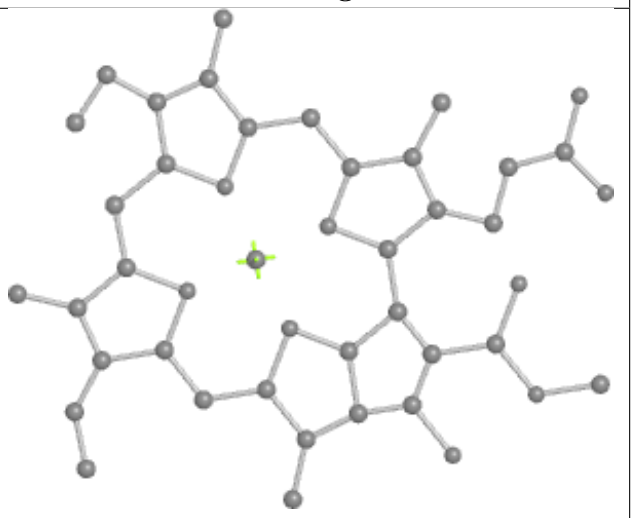
Bond lengths



Bond angles

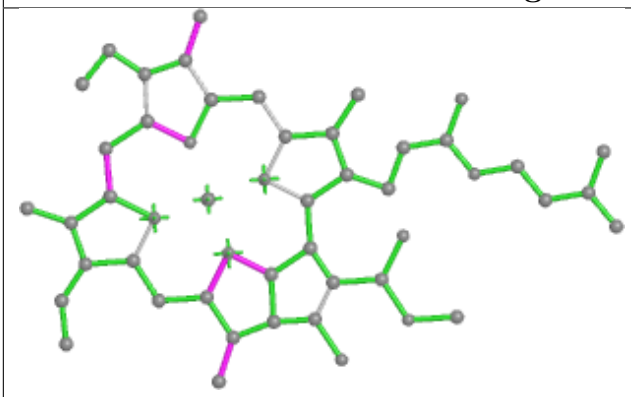


Torsions

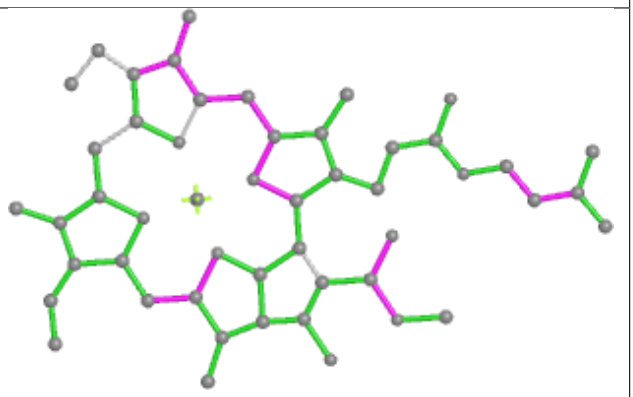


Rings

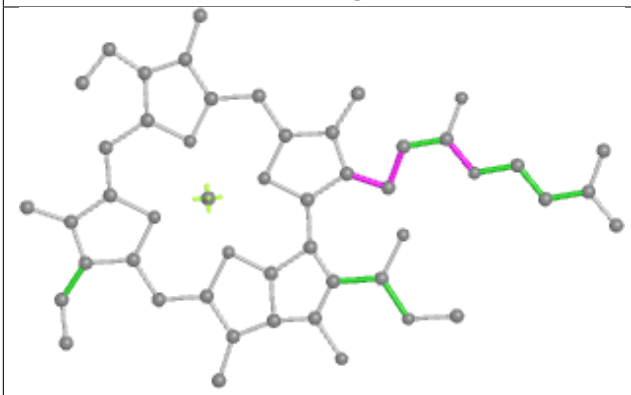
Ligand CLA B 830



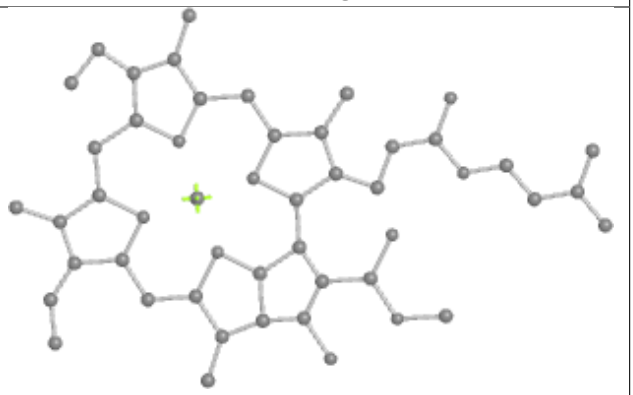
Bond lengths



Bond angles

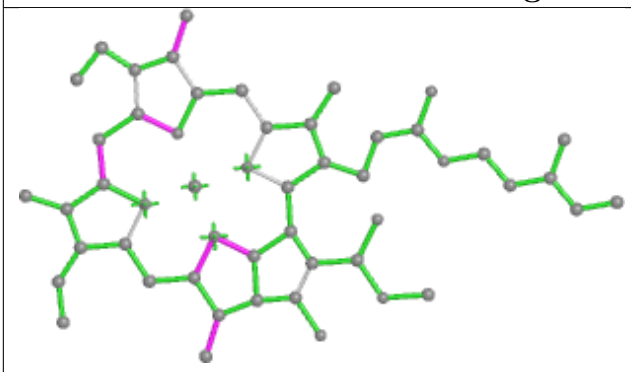


Torsions

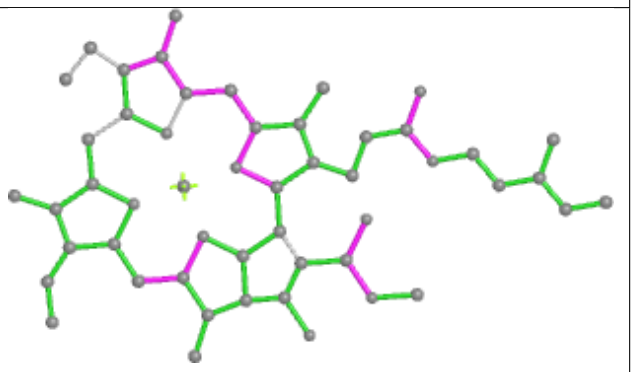


Rings

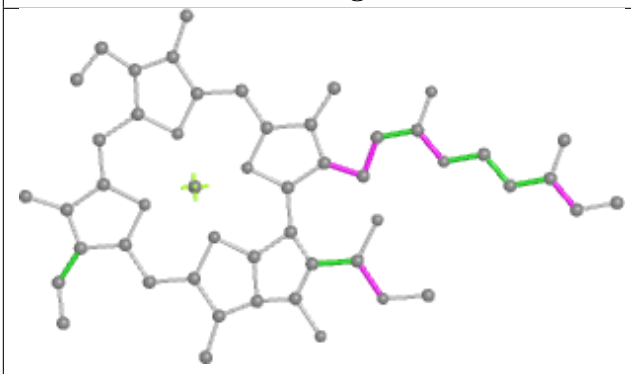
Ligand CLA A 822



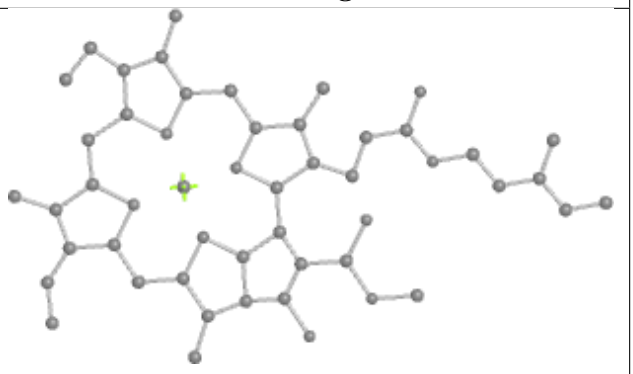
Bond lengths



Bond angles

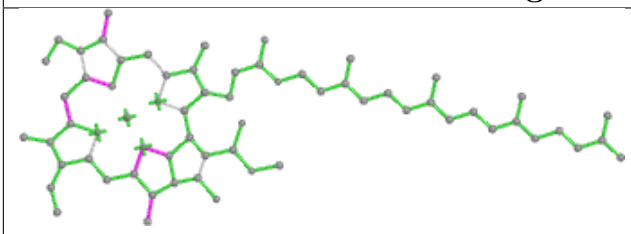


Torsions

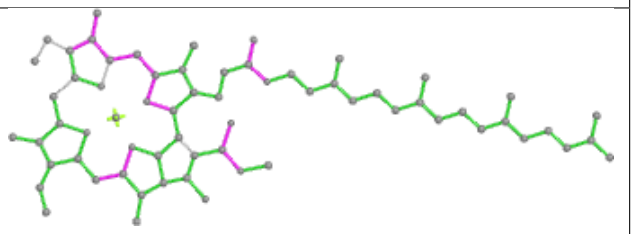


Rings

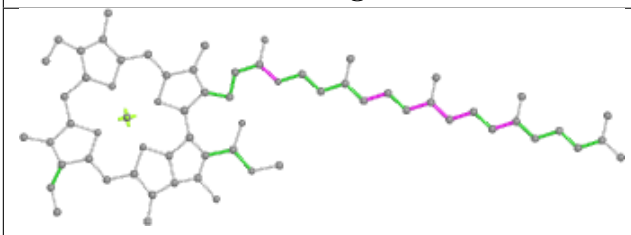
Ligand CLA F 802



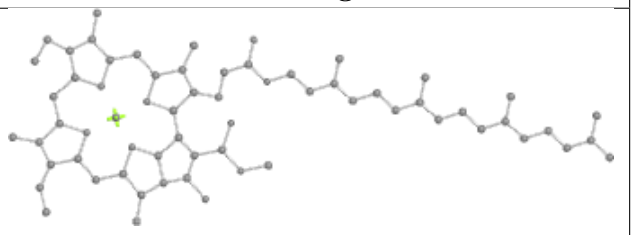
Bond lengths



Bond angles

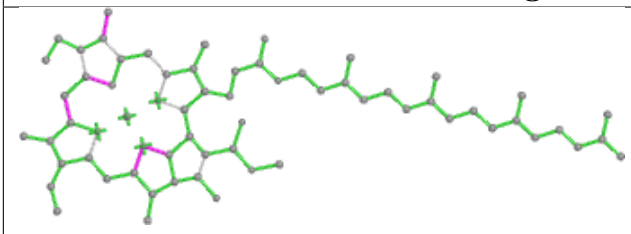


Torsions

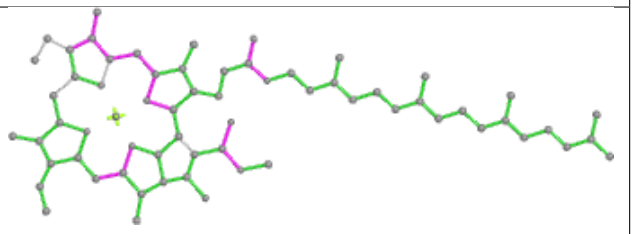


Rings

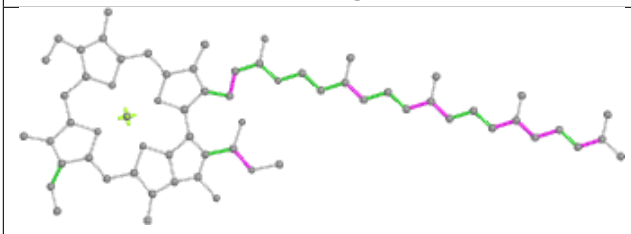
Ligand CLA A 839



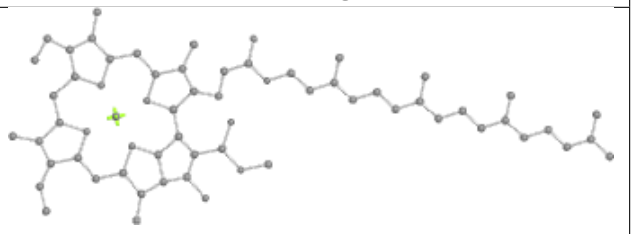
Bond lengths



Bond angles

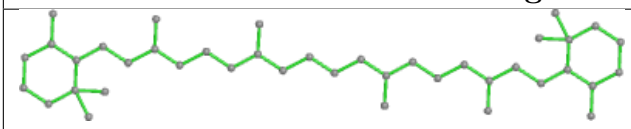


Torsions

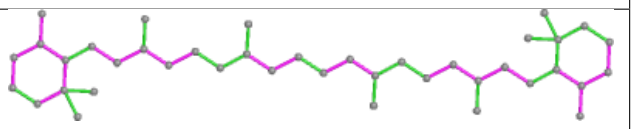


Rings

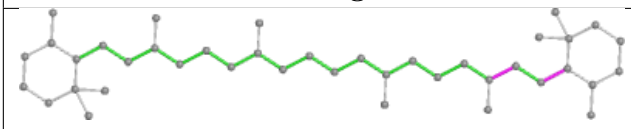
Ligand BCR L 305



Bond lengths



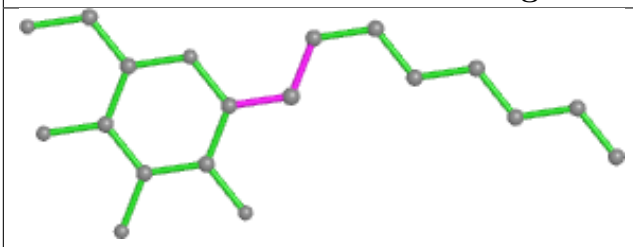
Bond angles



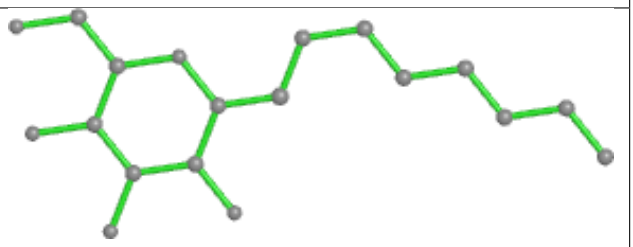
Torsions

Rings

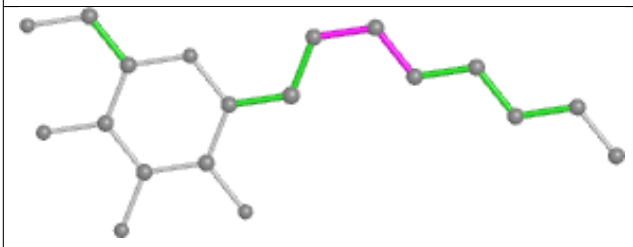
Ligand HTG B 851



Bond lengths



Bond angles



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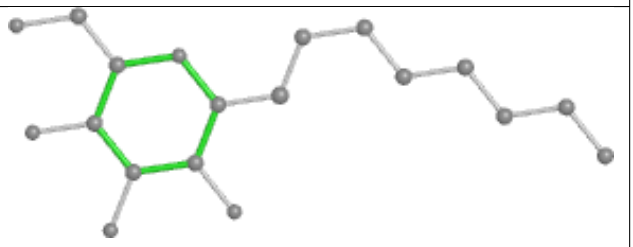
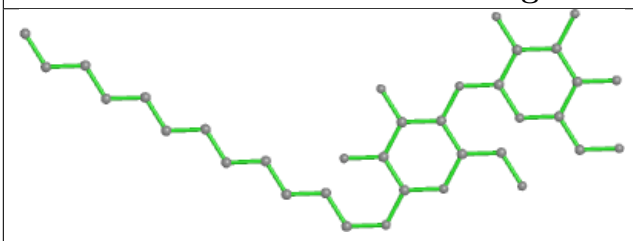
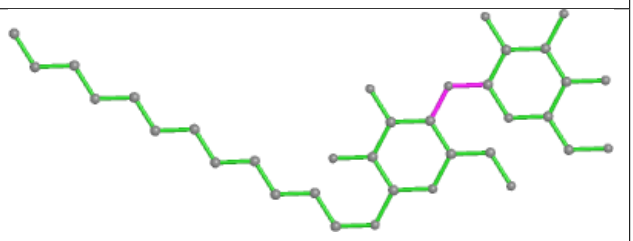


Rings

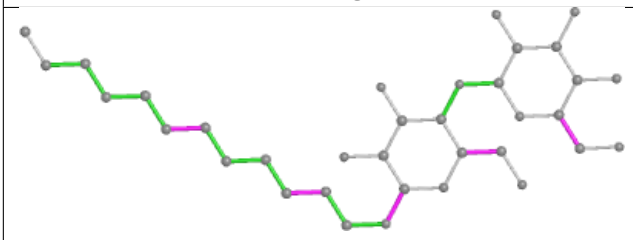
Ligand LMT B 847



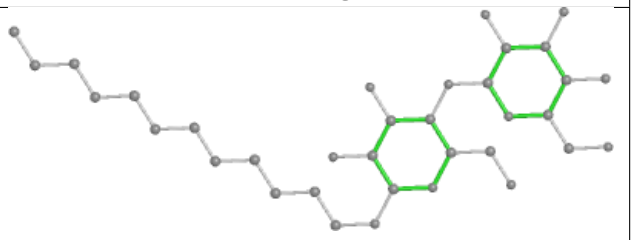
Bond lengths



Bond angles

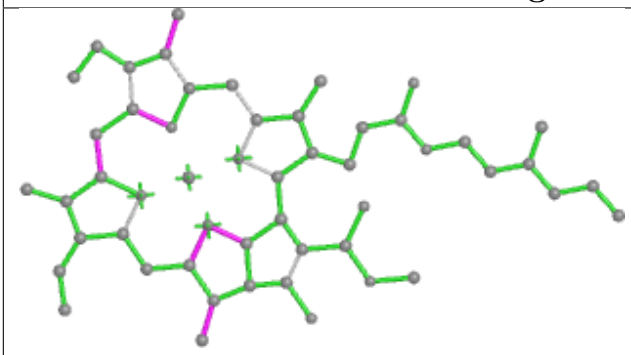


Torsions

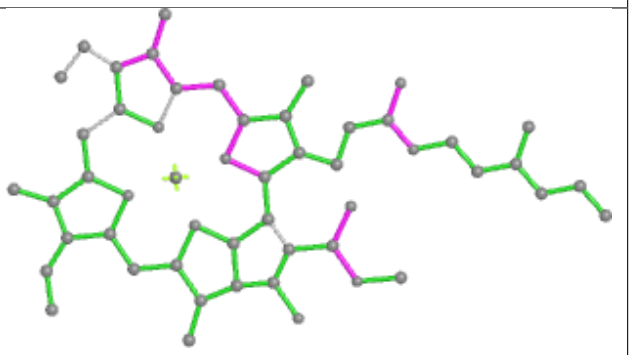


Rings

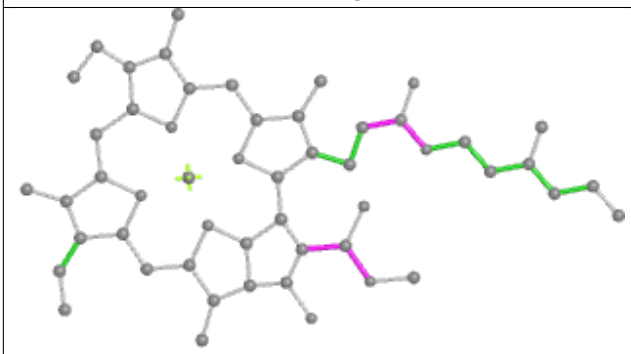
Ligand CLA 2 311



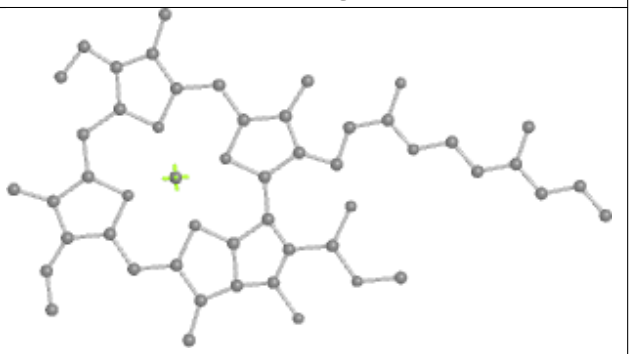
Bond lengths



Bond angles

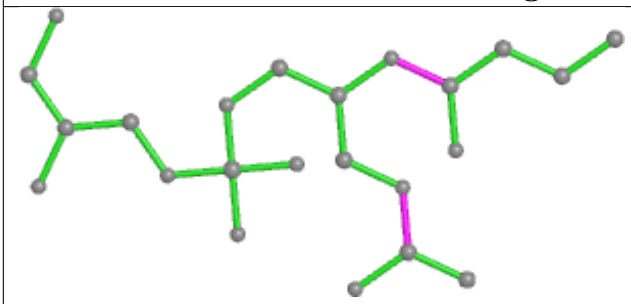


Torsions

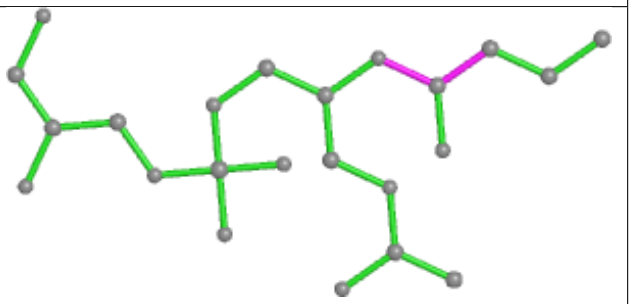


Rings

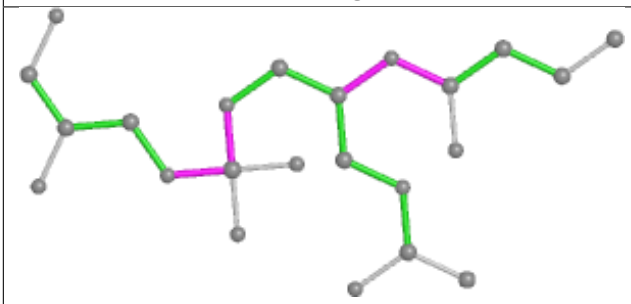
Ligand LHG B 849



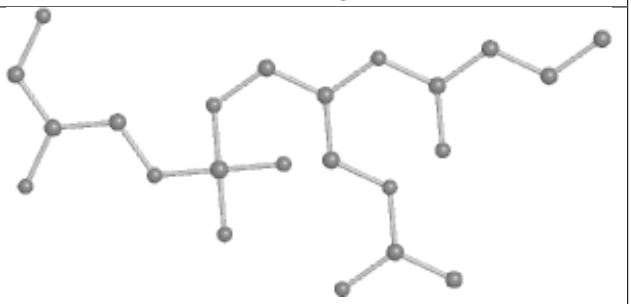
Bond lengths



Bond angles

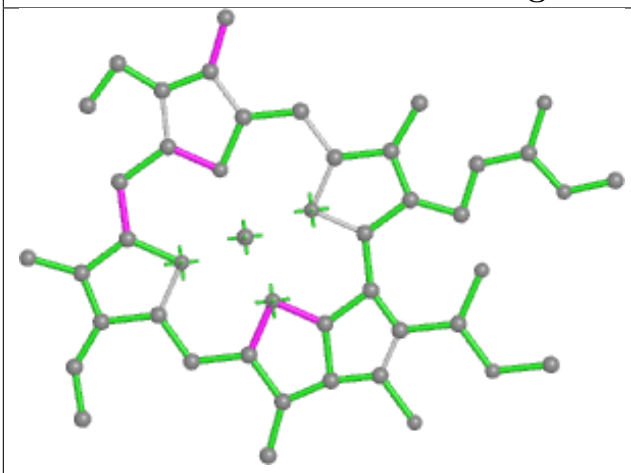


Torsions

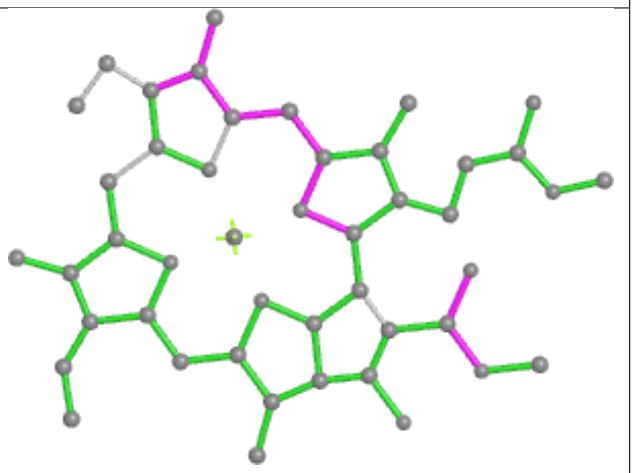


Rings

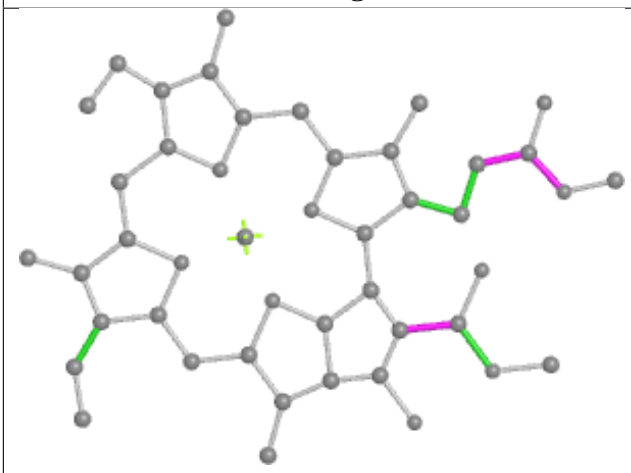
Ligand CLA 4 301



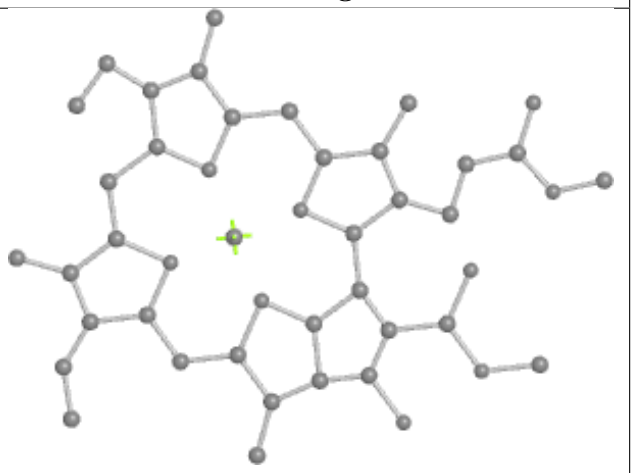
Bond lengths



Bond angles

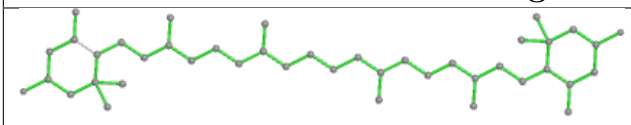


Torsions

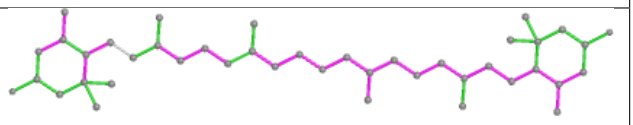


Rings

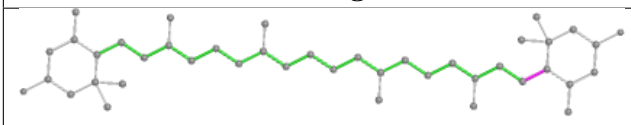
Ligand LUT 1 315



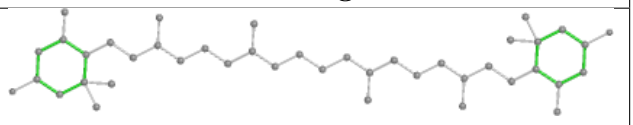
Bond lengths



Bond angles

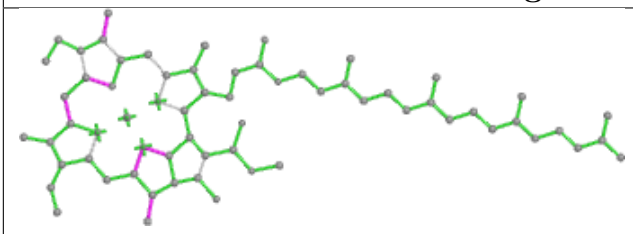


Torsions

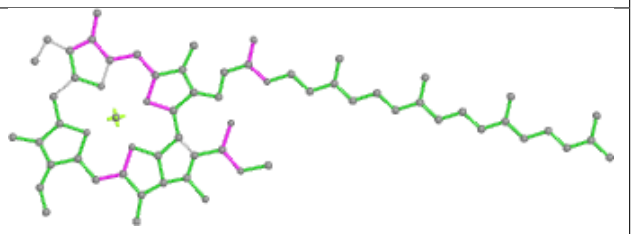


Rings

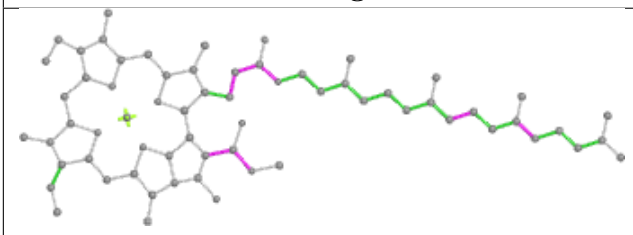
Ligand CLA B 810



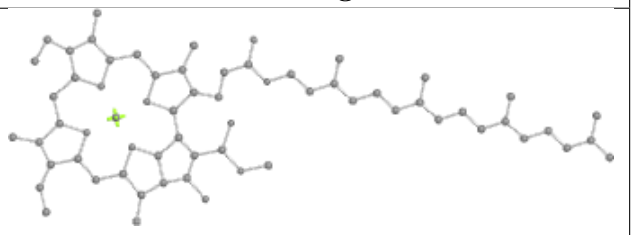
Bond lengths



Bond angles

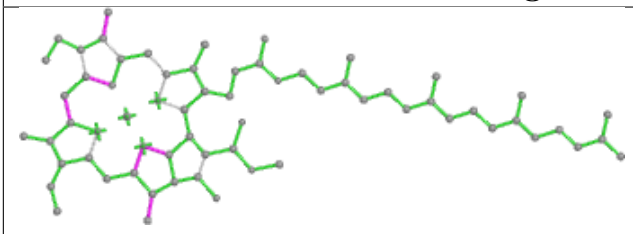


Torsions

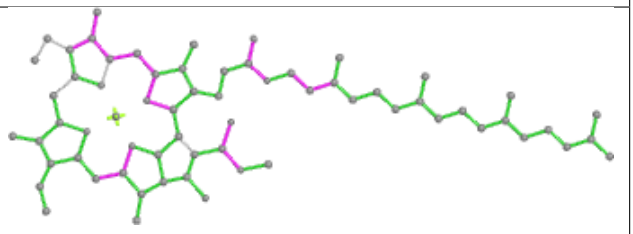


Rings

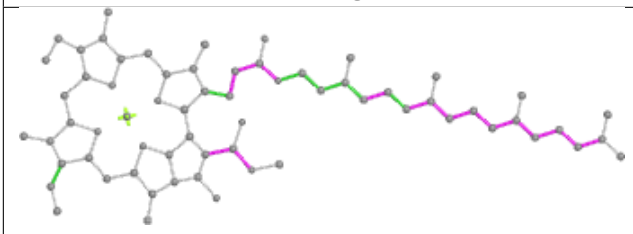
Ligand CLA A 841



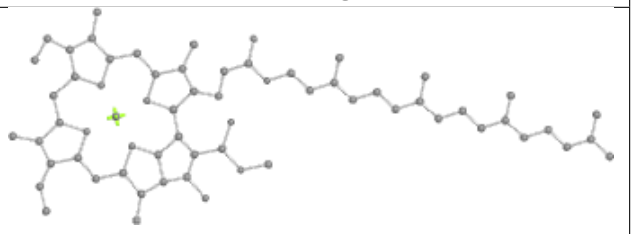
Bond lengths



Bond angles

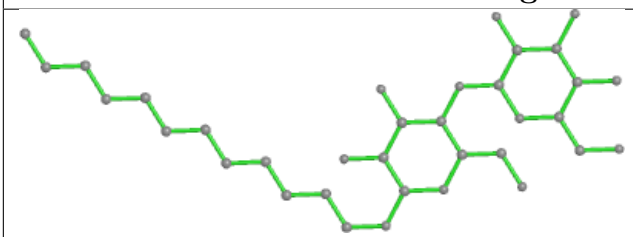


Torsions

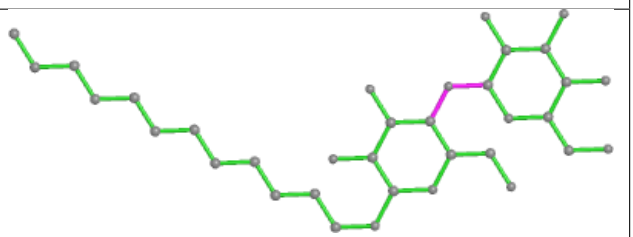


Rings

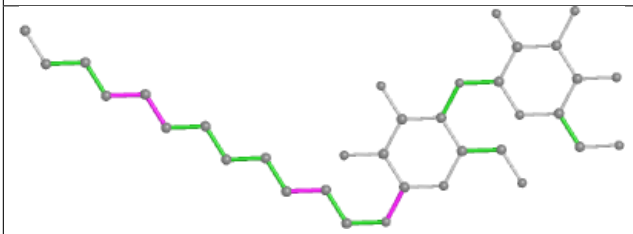
Ligand LMT G 601



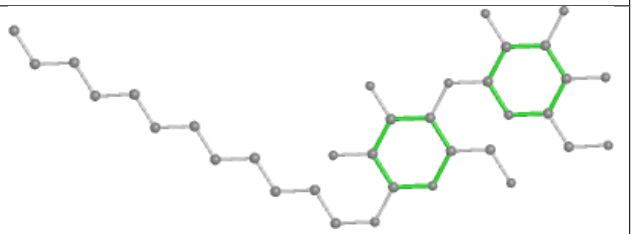
Bond lengths



Bond angles

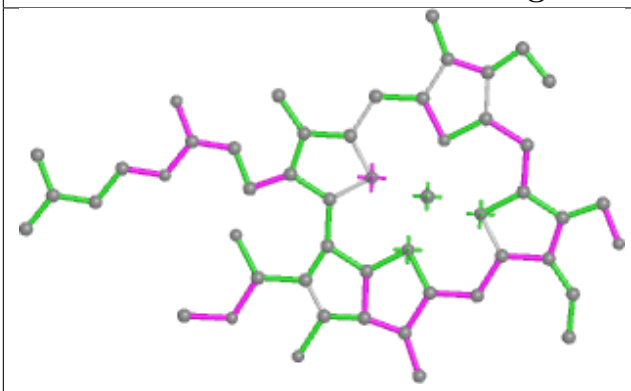


Torsions

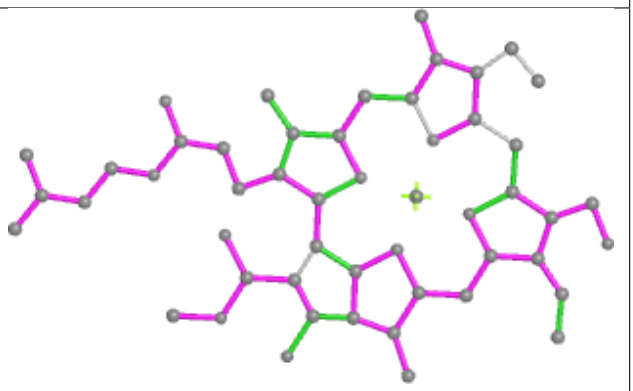


Rings

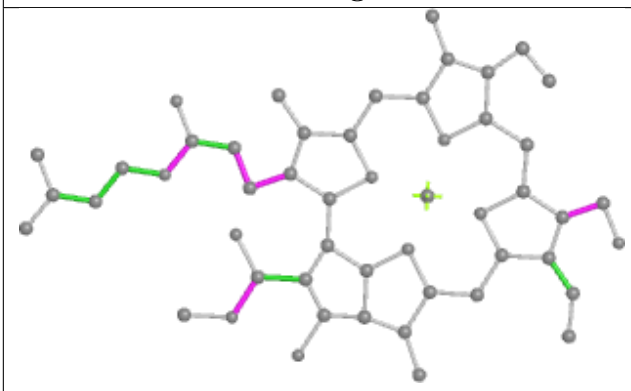
Ligand CHL 2 307



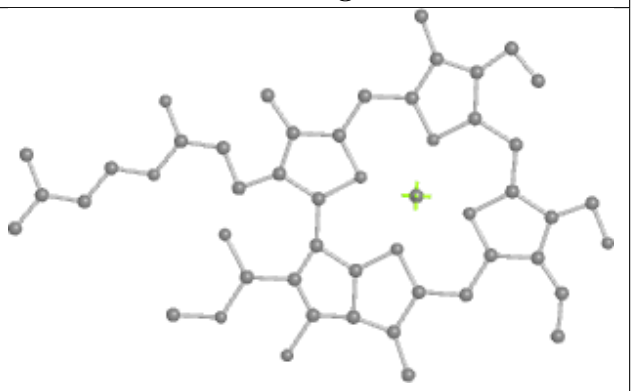
Bond lengths



Bond angles

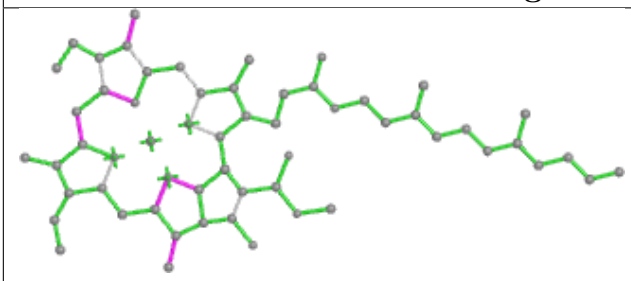


Torsions

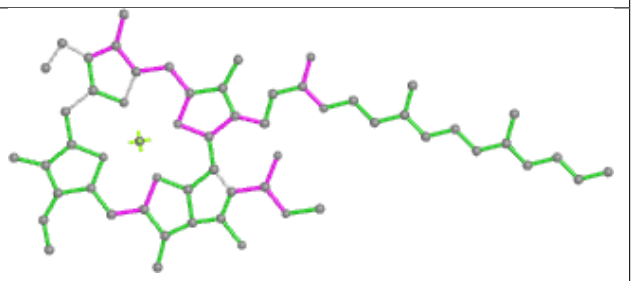


Rings

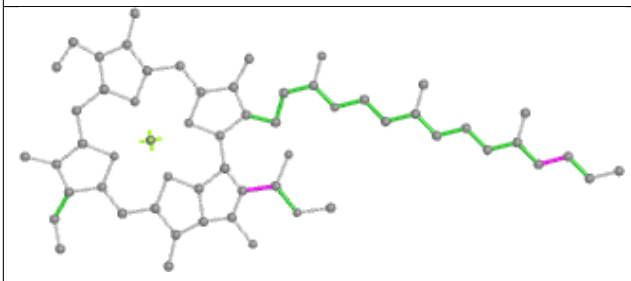
Ligand CLA B 832



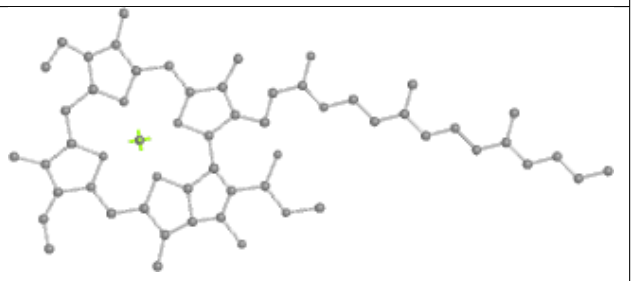
Bond lengths



Bond angles

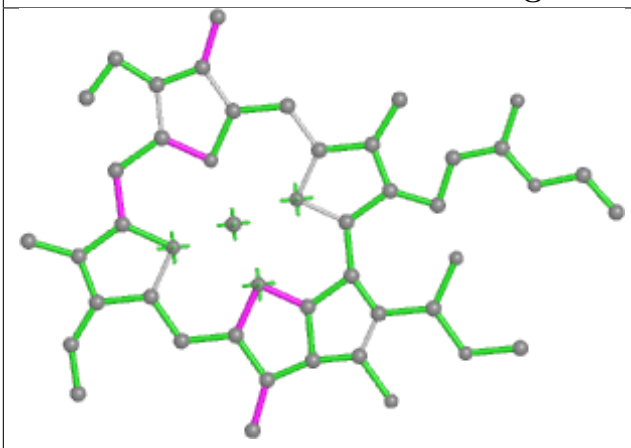


Torsions

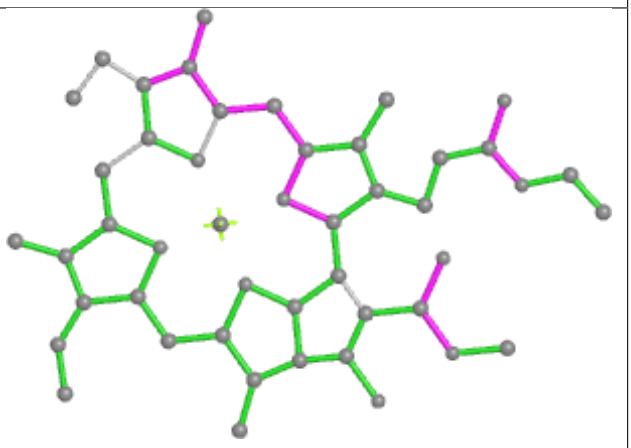


Rings

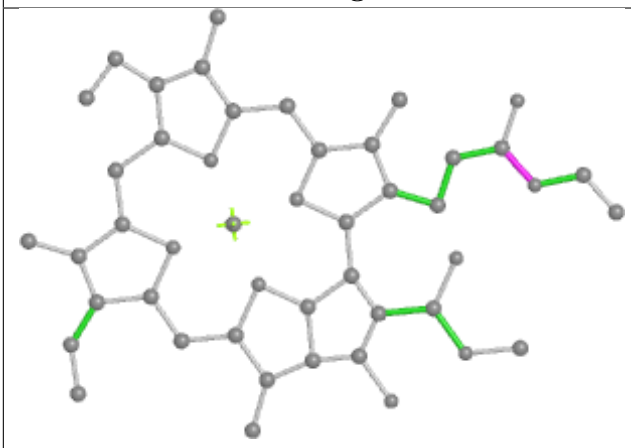
Ligand CLA B 837



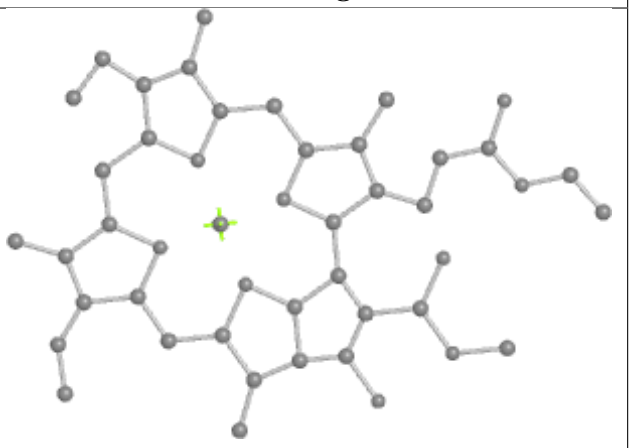
Bond lengths



Bond angles

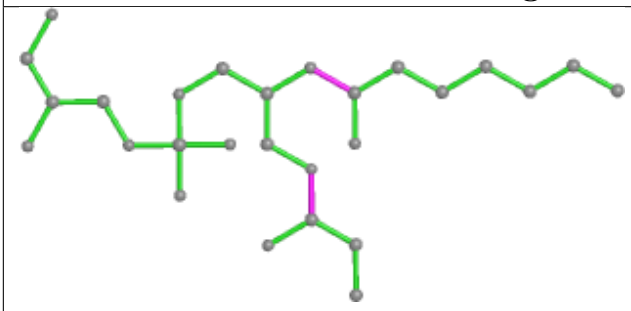


Torsions

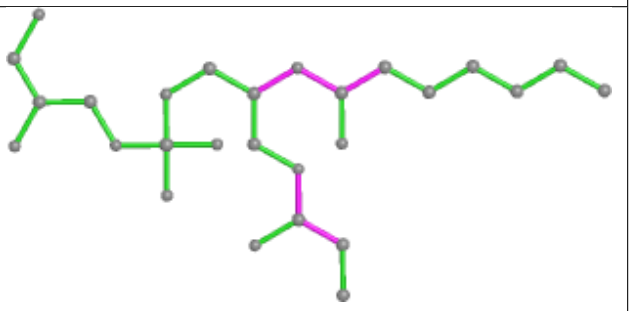


Rings

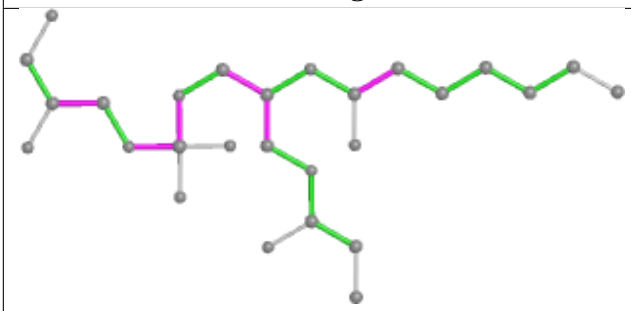
Ligand LHG A 844



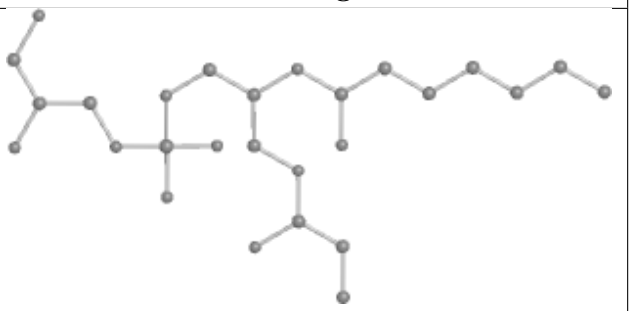
Bond lengths



Bond angles

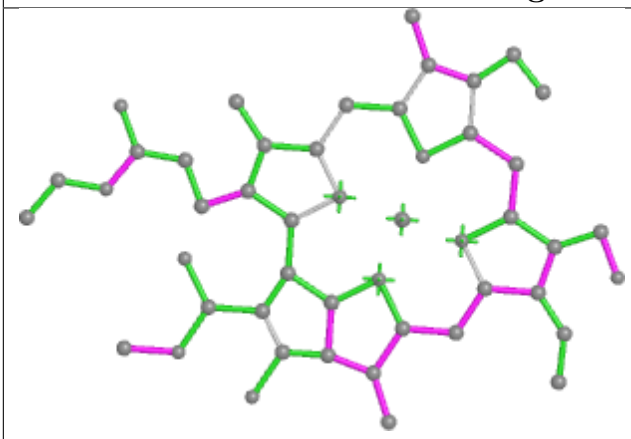


Torsions

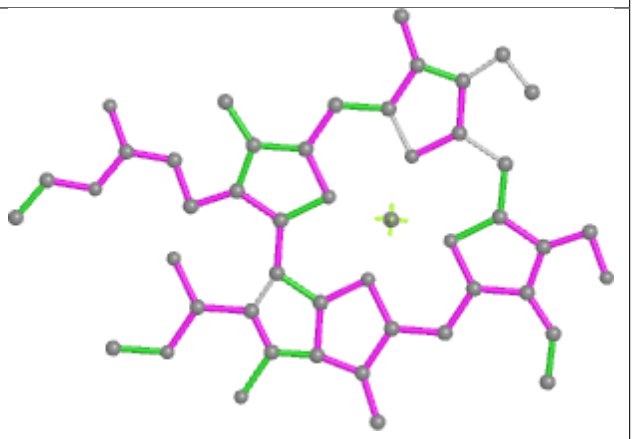


Rings

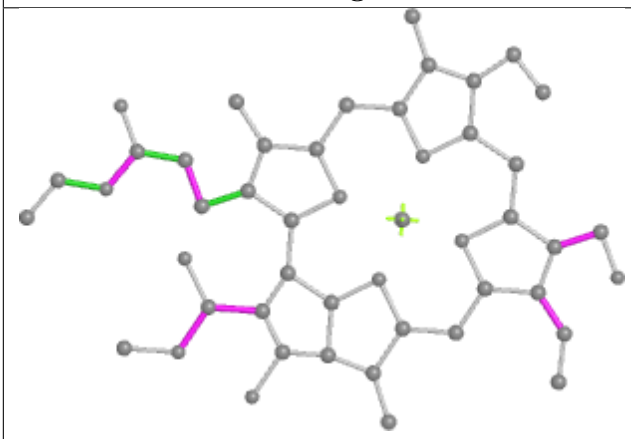
Ligand CHL 2 306



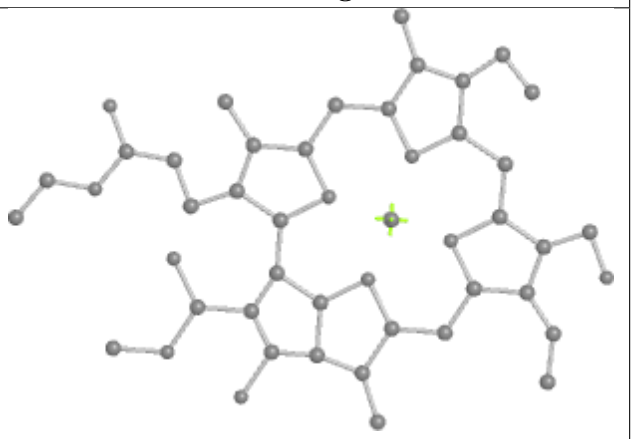
Bond lengths



Bond angles

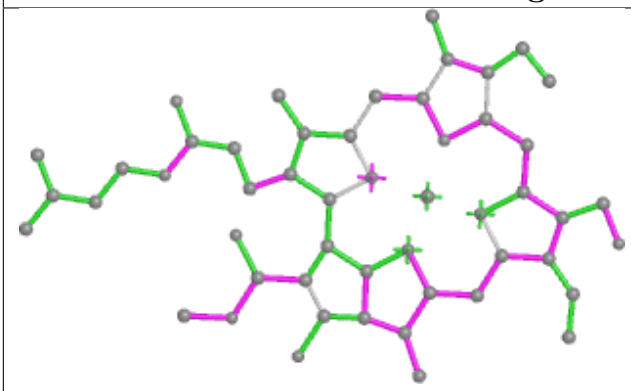


Torsions

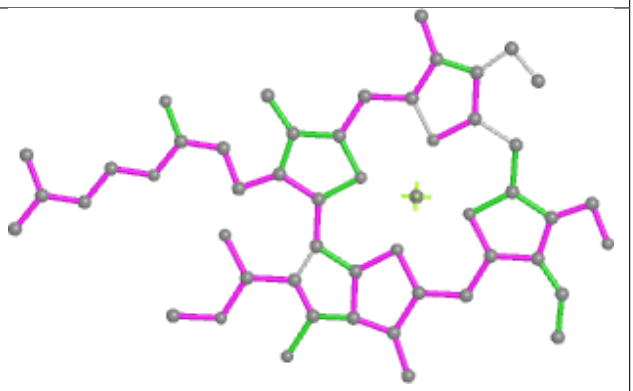


Rings

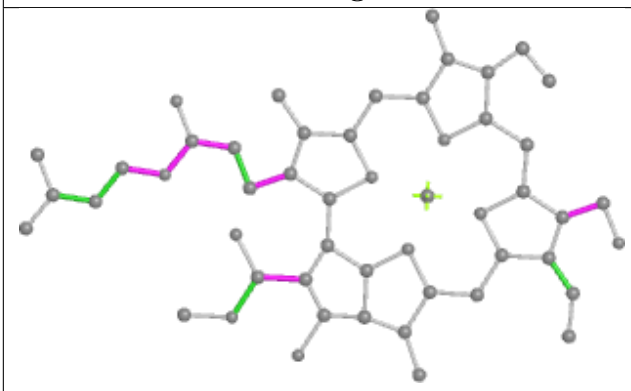
Ligand CHL 4 306



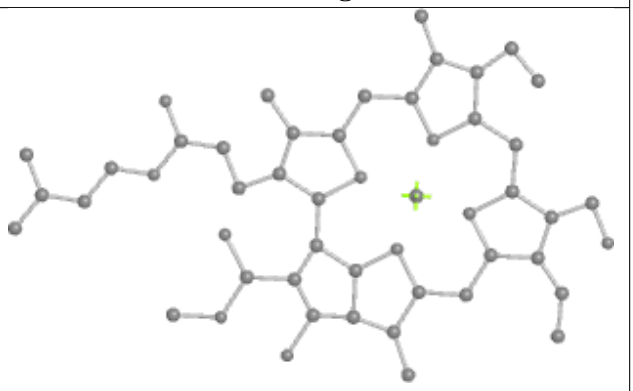
Bond lengths



Bond angles

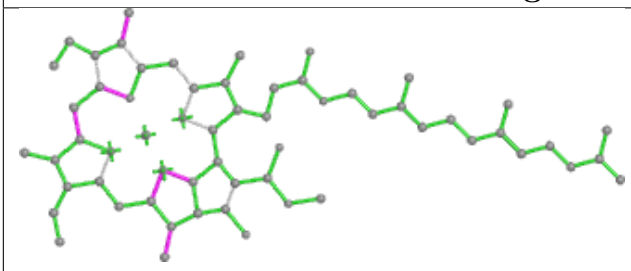


Torsions

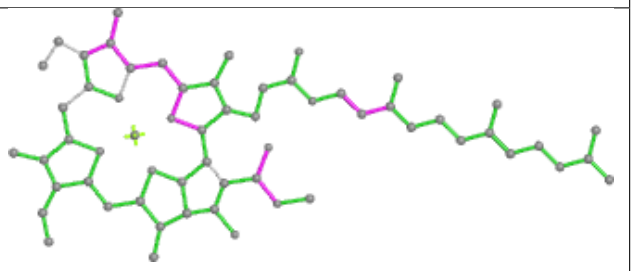


Rings

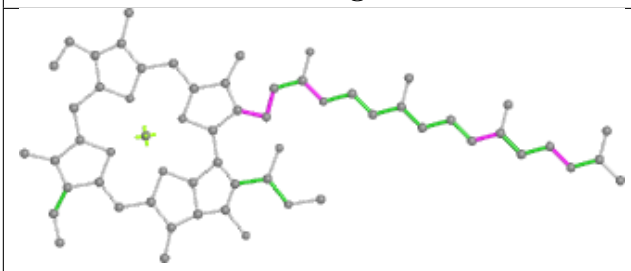
Ligand CLA O 203



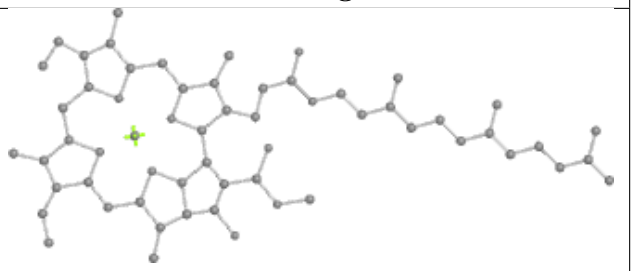
Bond lengths



Bond angles

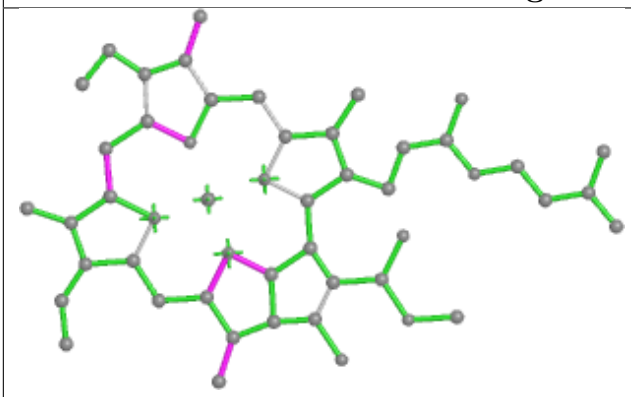


Torsions

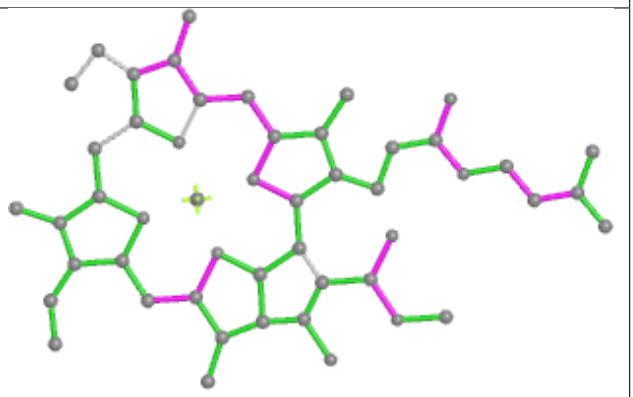


Rings

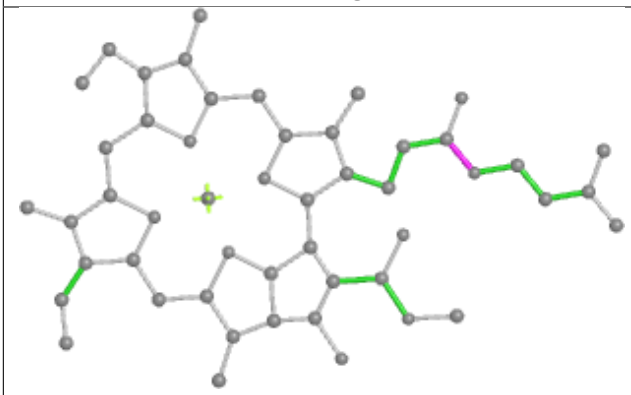
Ligand CLA L 304



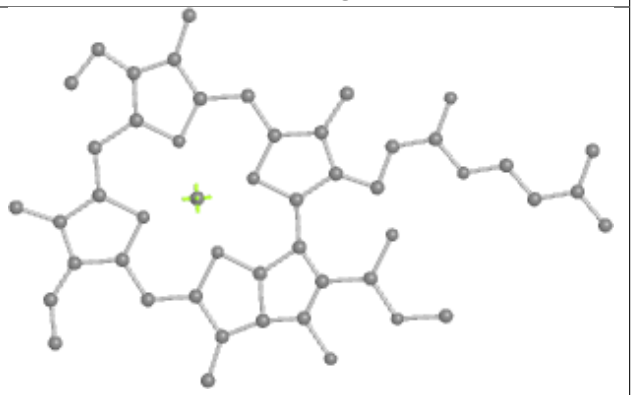
Bond lengths



Bond angles

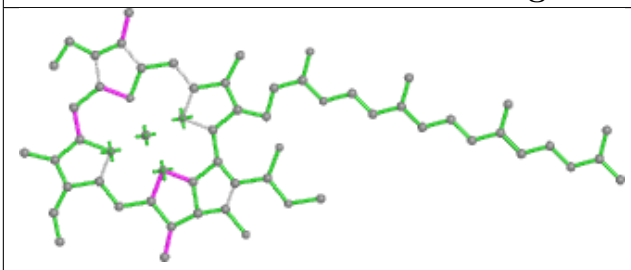


Torsions

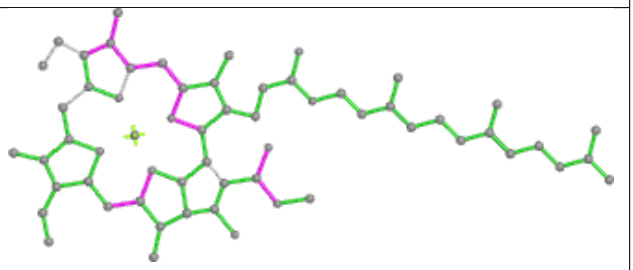


Rings

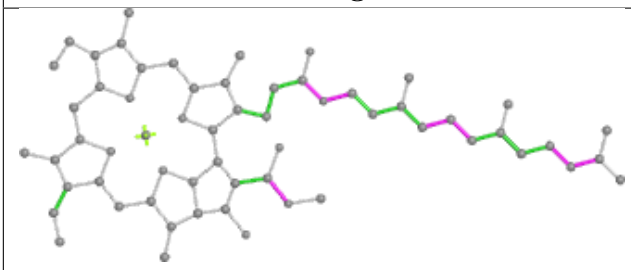
Ligand CLA 2 304



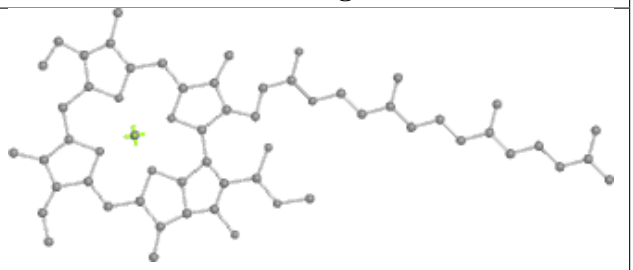
Bond lengths



Bond angles

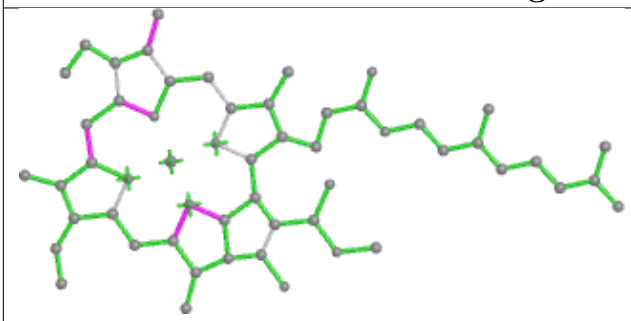


Torsions

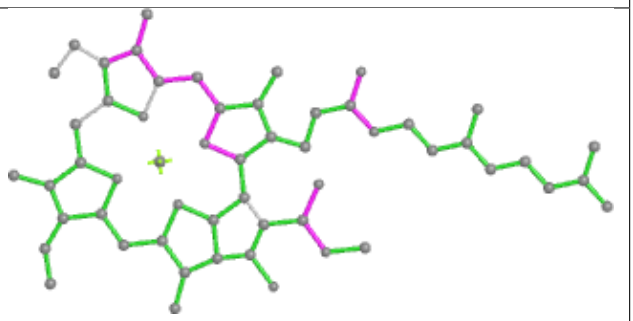


Rings

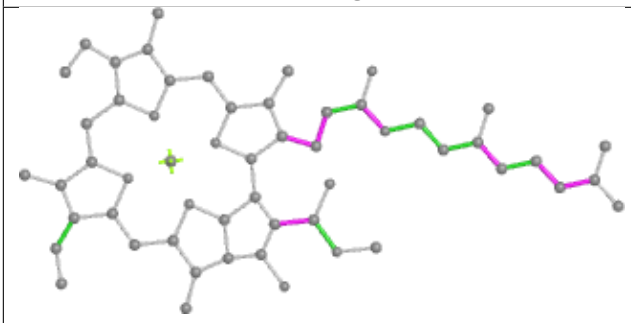
Ligand CLA 1 313



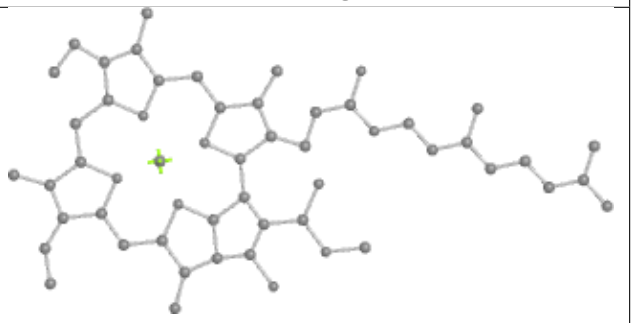
Bond lengths



Bond angles

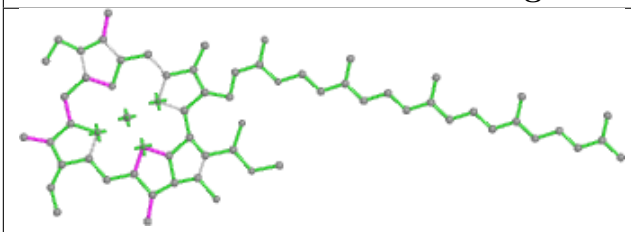


Torsions

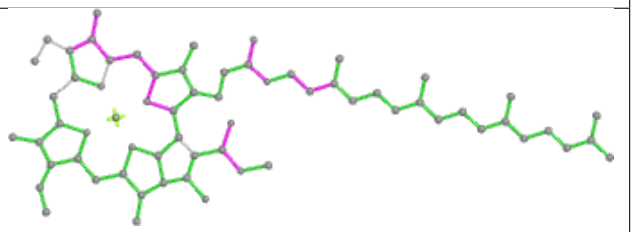


Rings

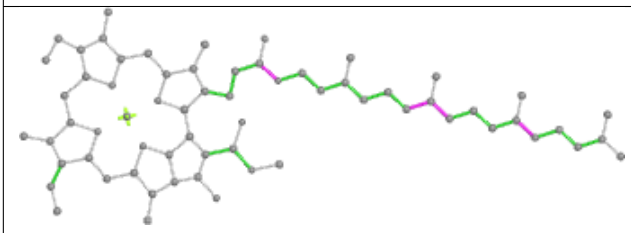
Ligand CLA B 819



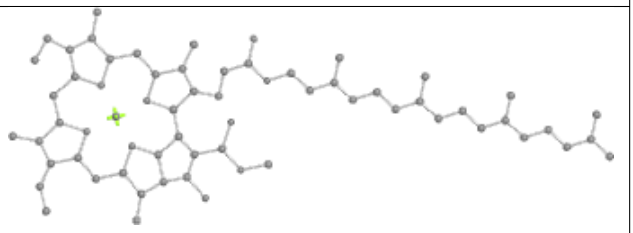
Bond lengths



Bond angles

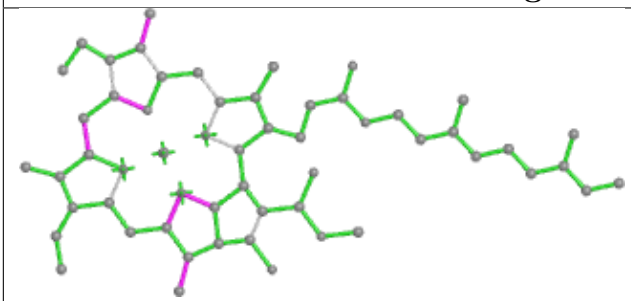


Torsions

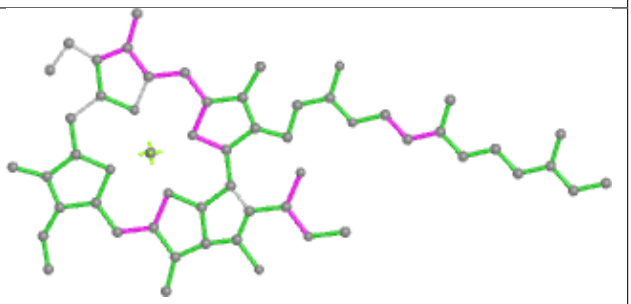


Rings

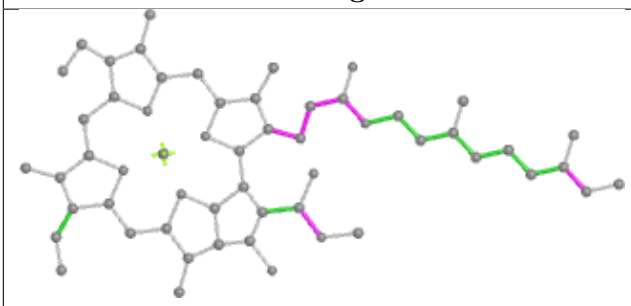
Ligand CLA B 821



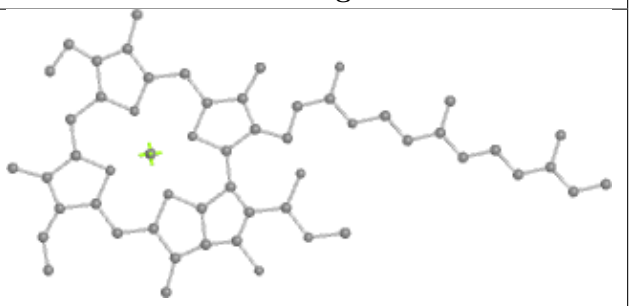
Bond lengths



Bond angles

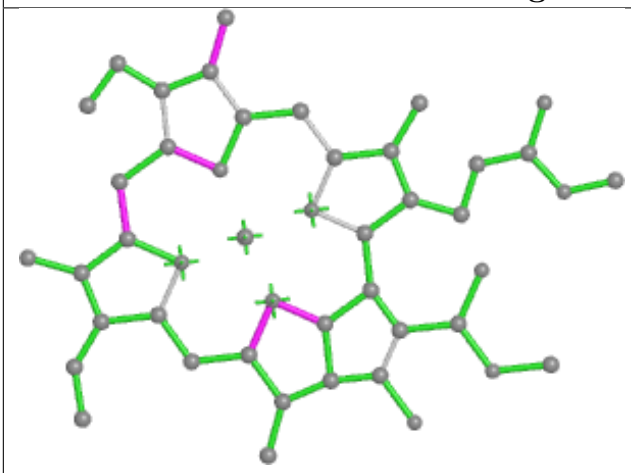


Torsions

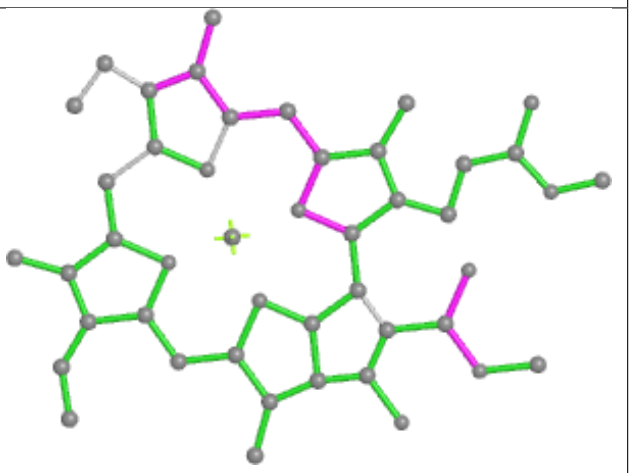


Rings

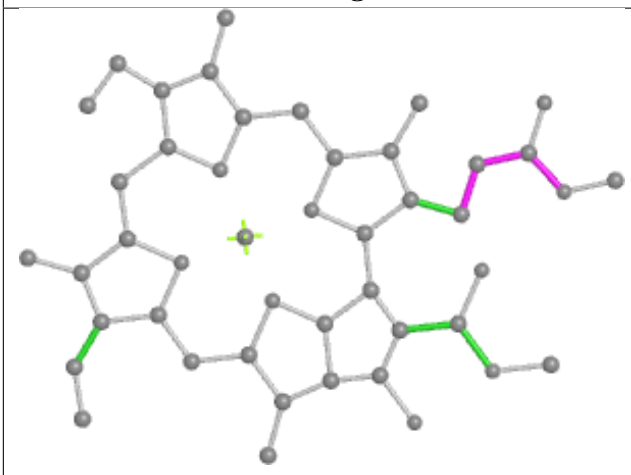
Ligand CLA 3 314



Bond lengths



Bond angles



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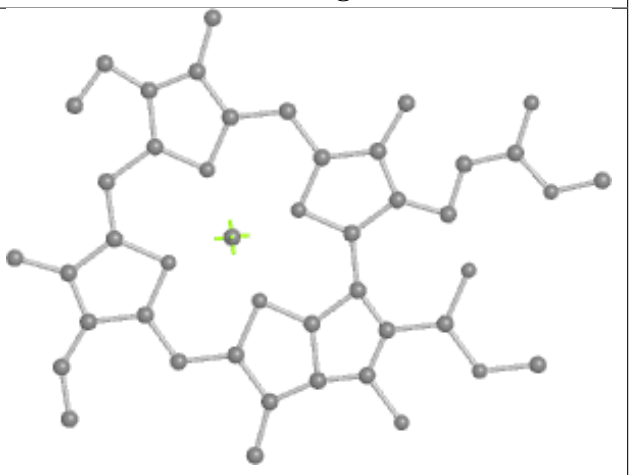
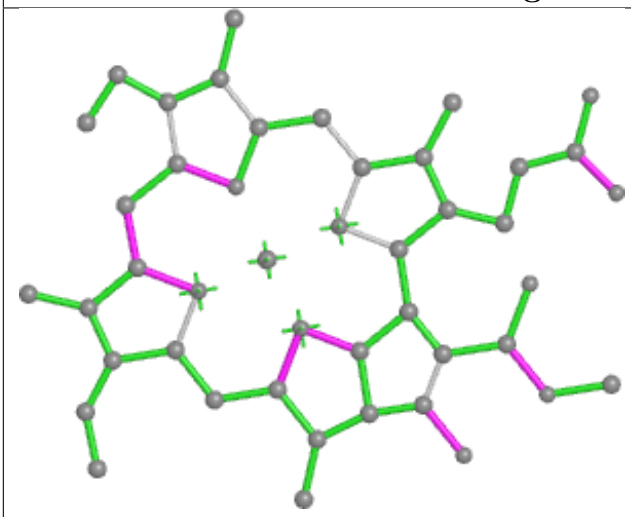
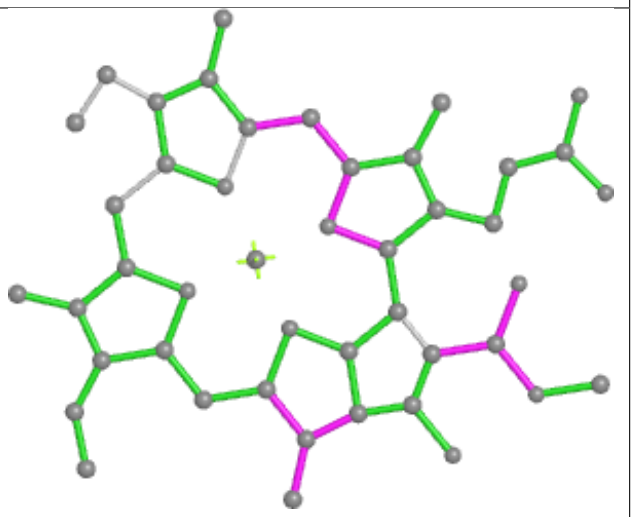


Rings

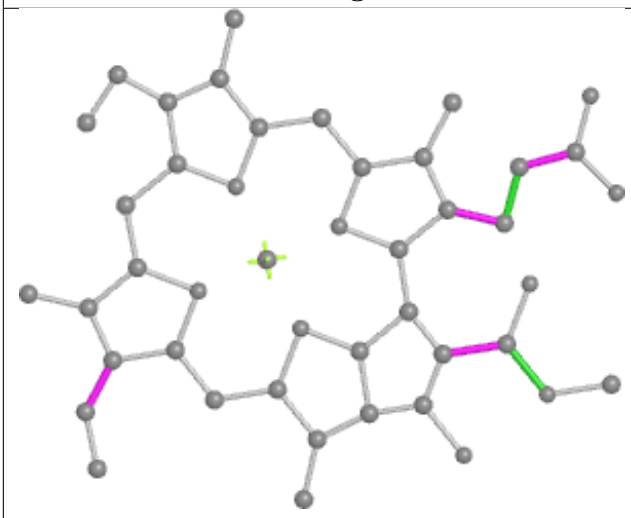
Ligand CLA O 202



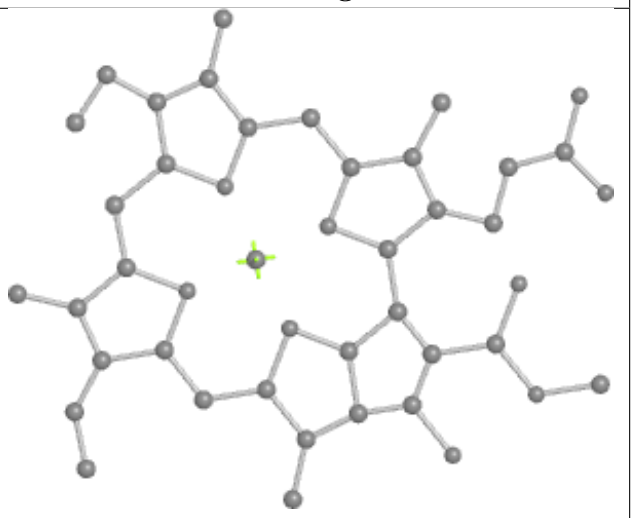
Bond lengths



Bond angles

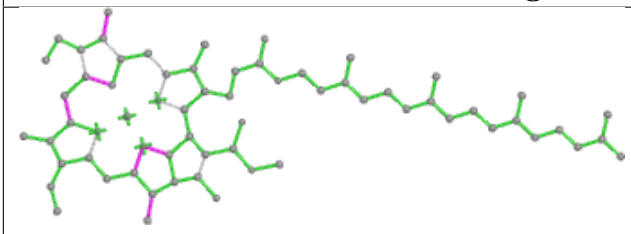


Torsions

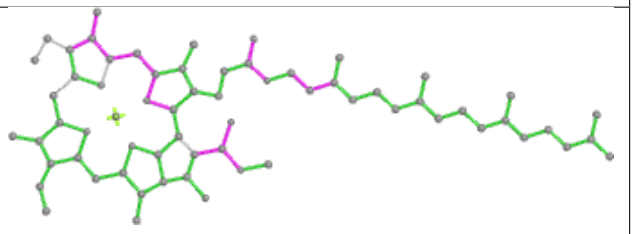


Rings

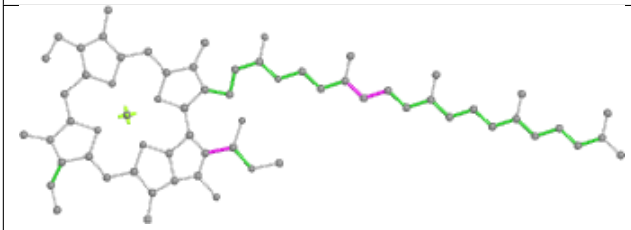
Ligand CLA B 808



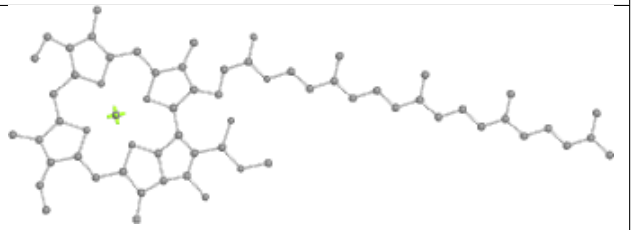
Bond lengths



Bond angles

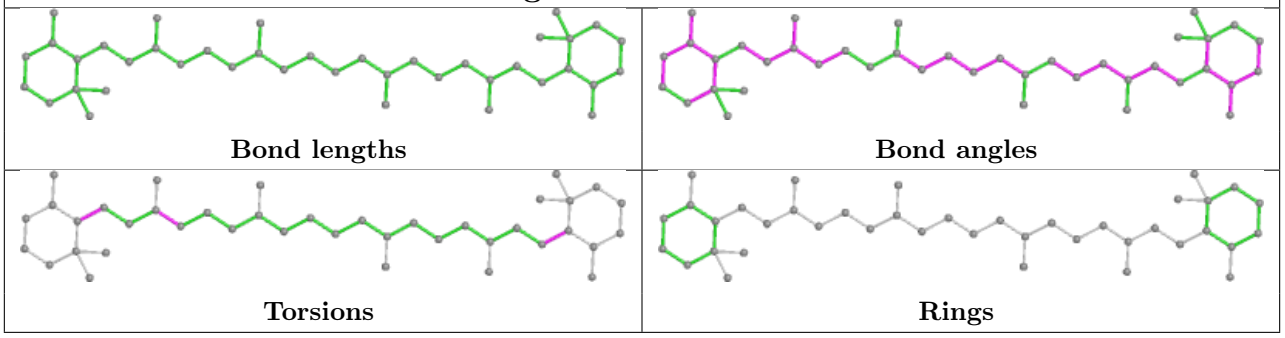


Torsions

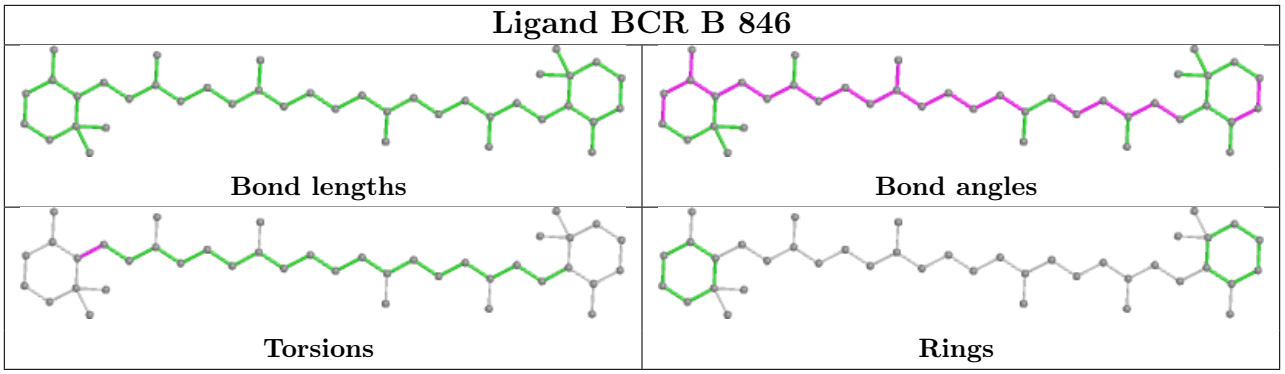


Rings

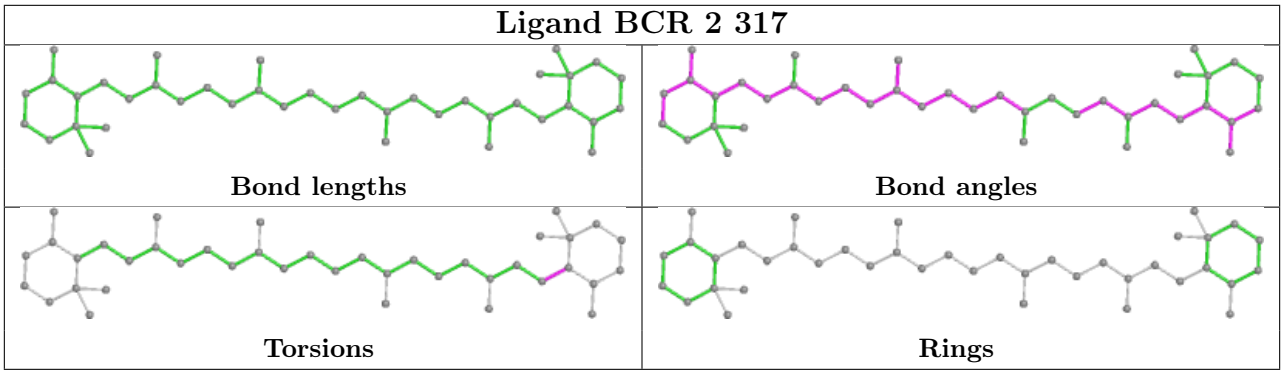
Ligand BCR B 842



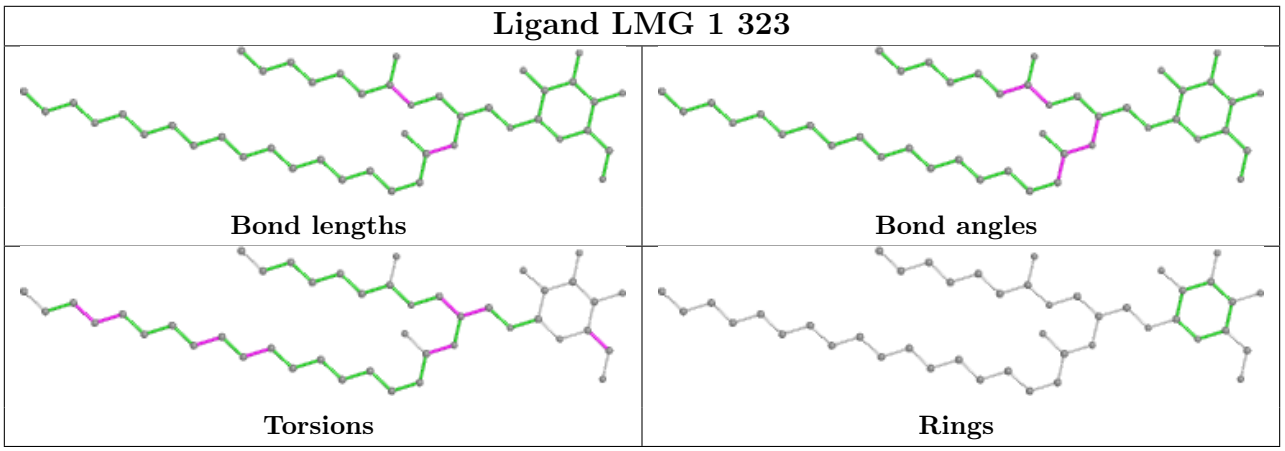
Ligand BCR B 846



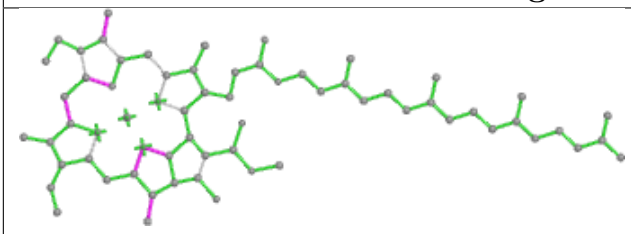
Ligand BCR 2 317



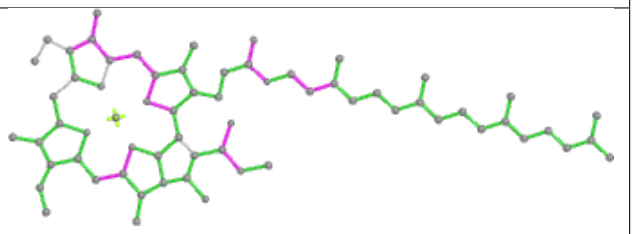
Ligand LMG 1 323



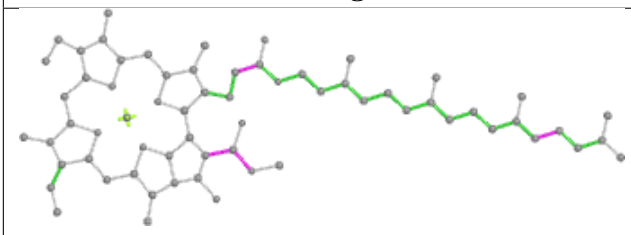
Ligand CLA 1 321



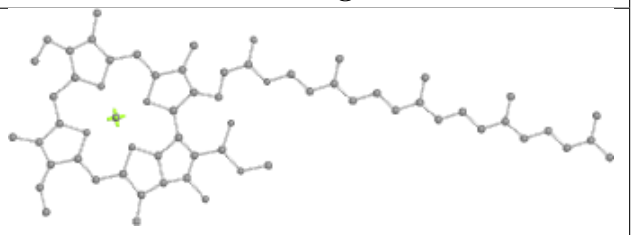
Bond lengths



Bond angles

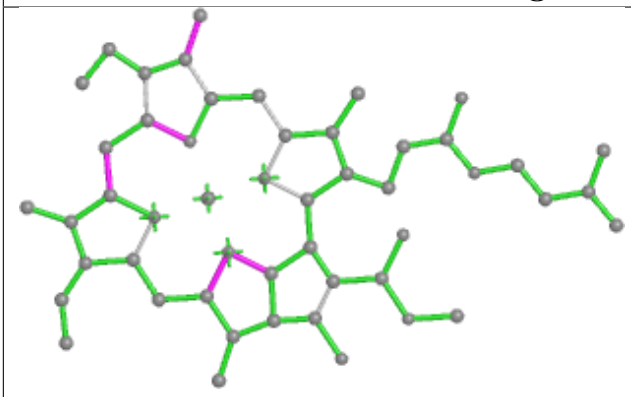


Torsions



Rings

Ligand CLA 4 314



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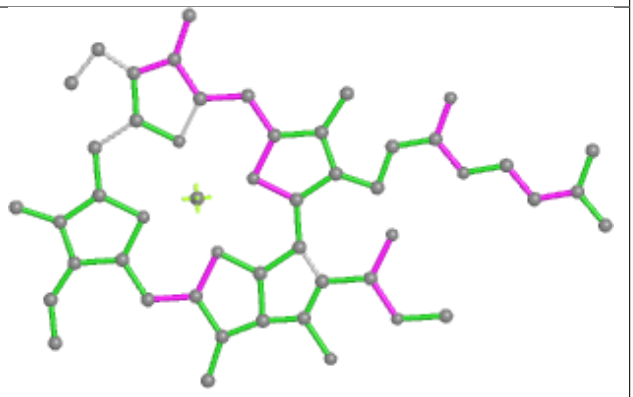
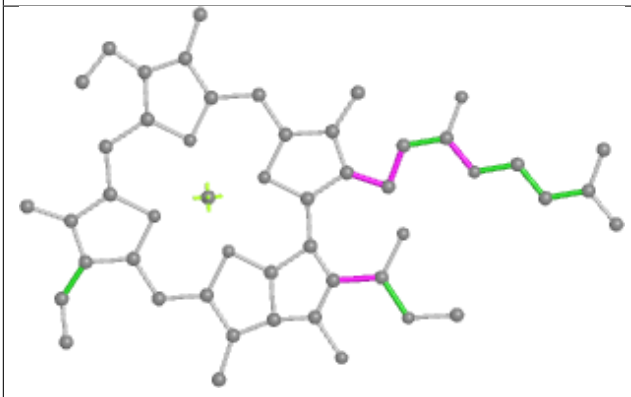
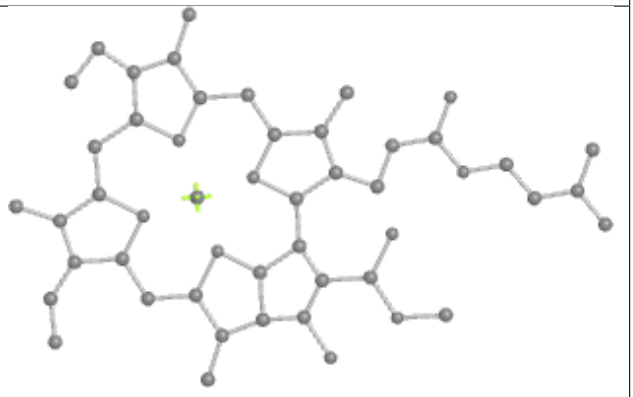


Bond angles

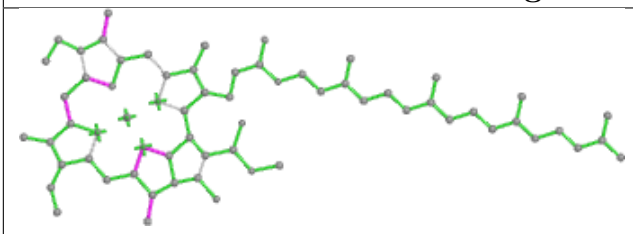


Torsions

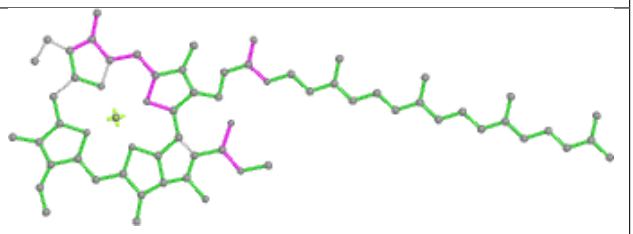


Rings

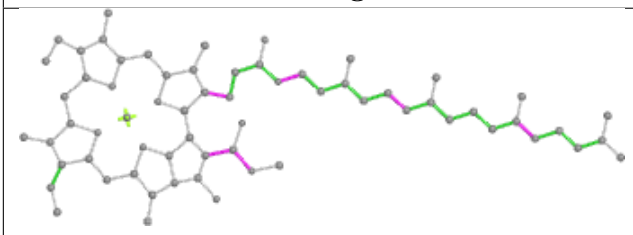
Ligand CLA B 802



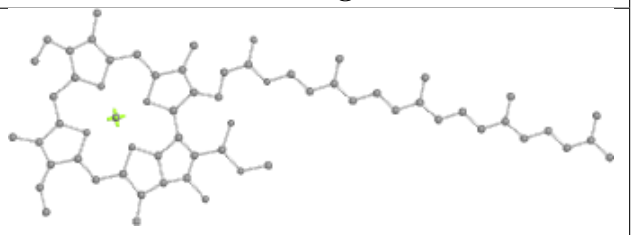
Bond lengths



Bond angles

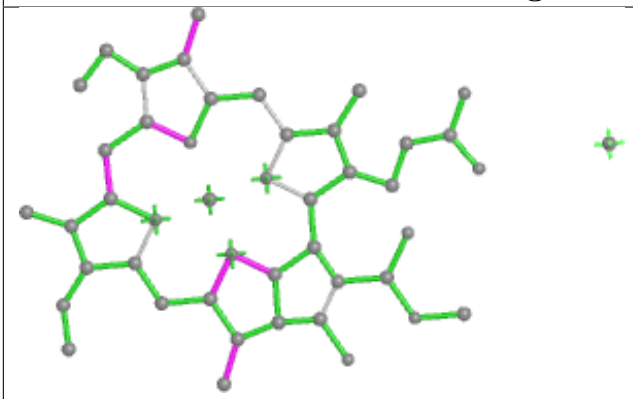


Torsions

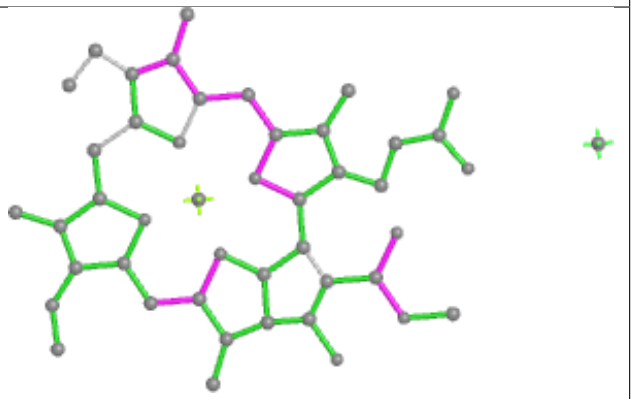


Rings

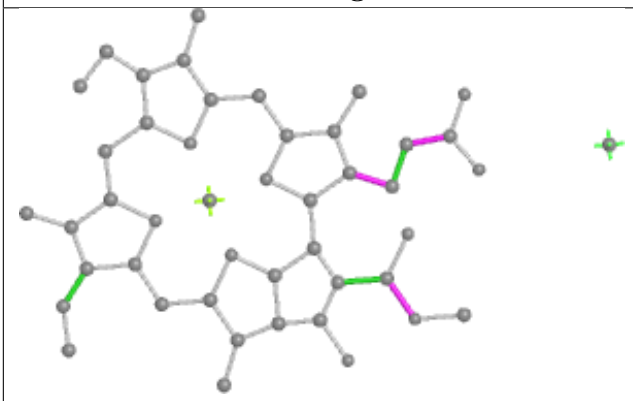
Ligand CLA L 302



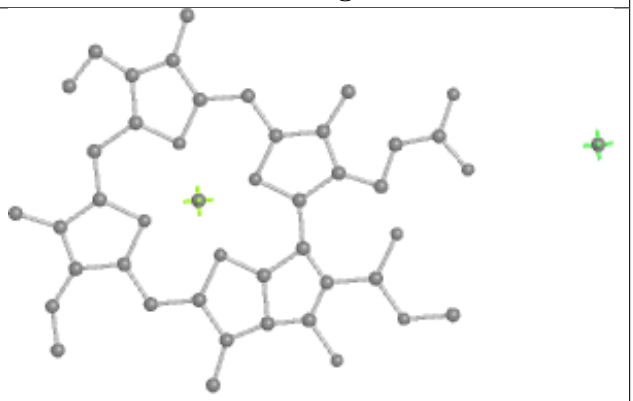
Bond lengths



Bond angles

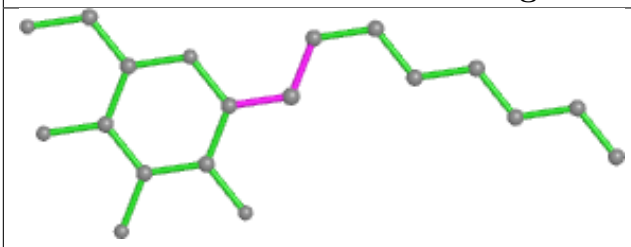


Torsions

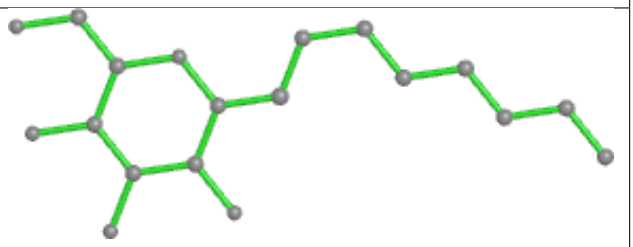


Rings

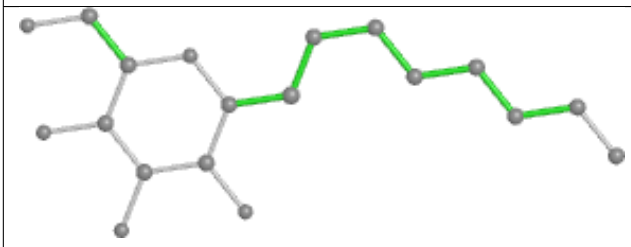
Ligand HTG G 602



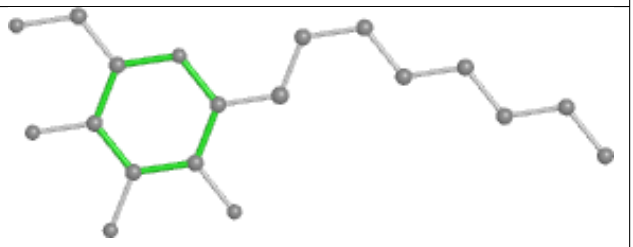
Bond lengths



Bond angles

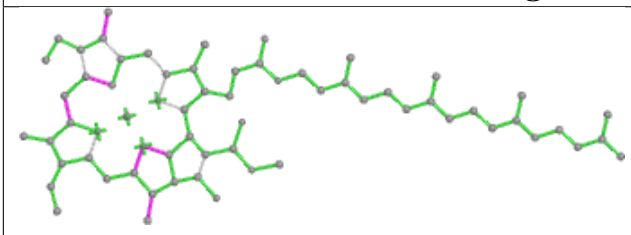


Torsions

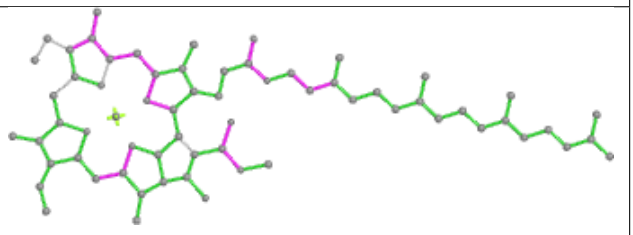


Rings

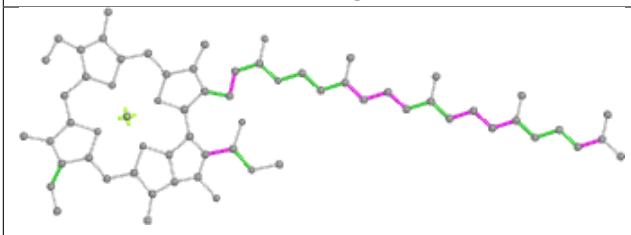
Ligand CLA B 833



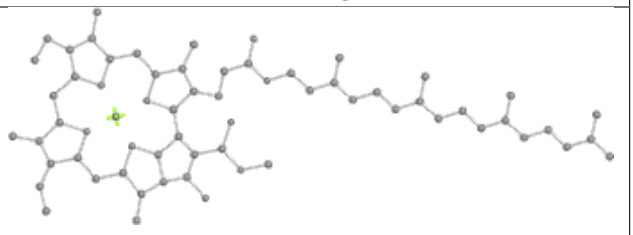
Bond lengths



Bond angles

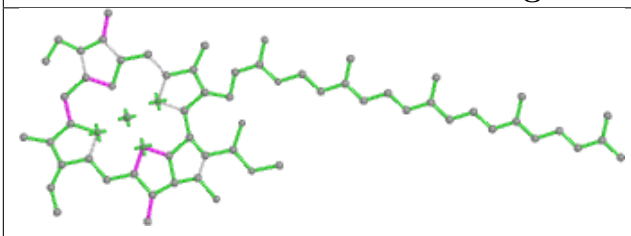


Torsions

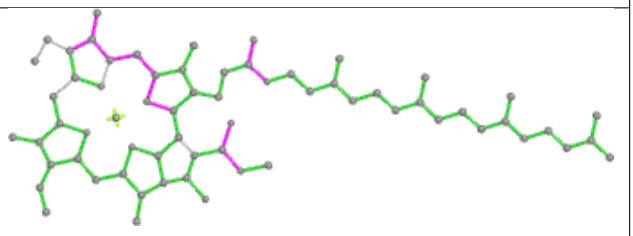


Rings

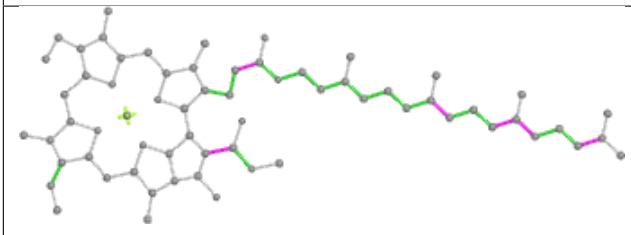
Ligand CLA A 824



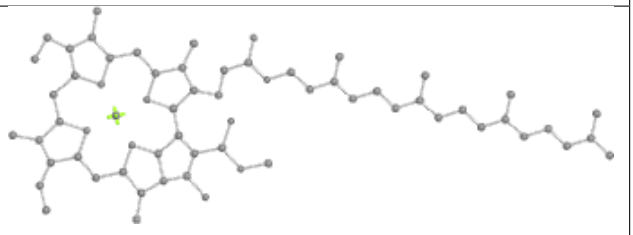
Bond lengths



Bond angles

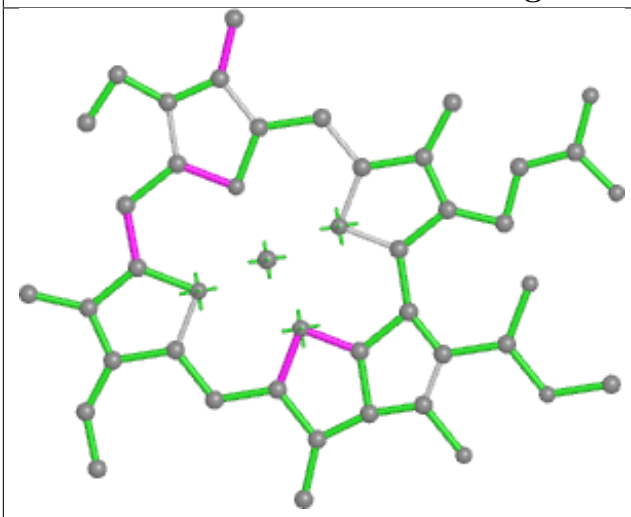


Torsions

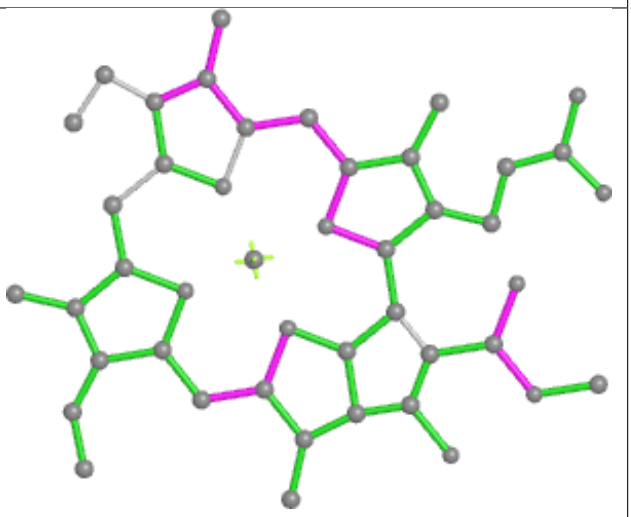


Rings

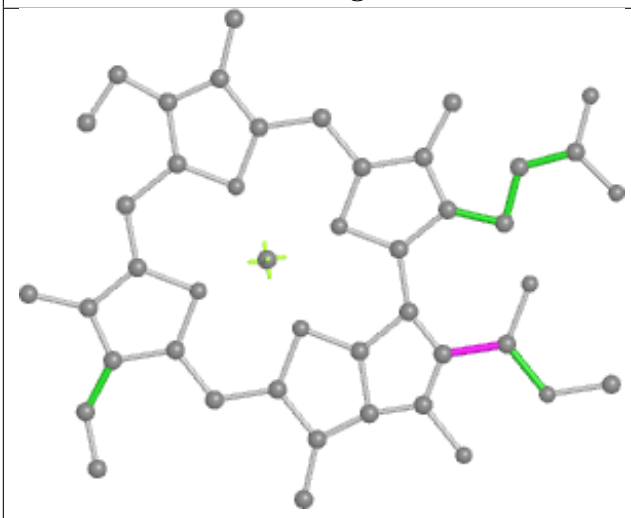
Ligand CLA B 834



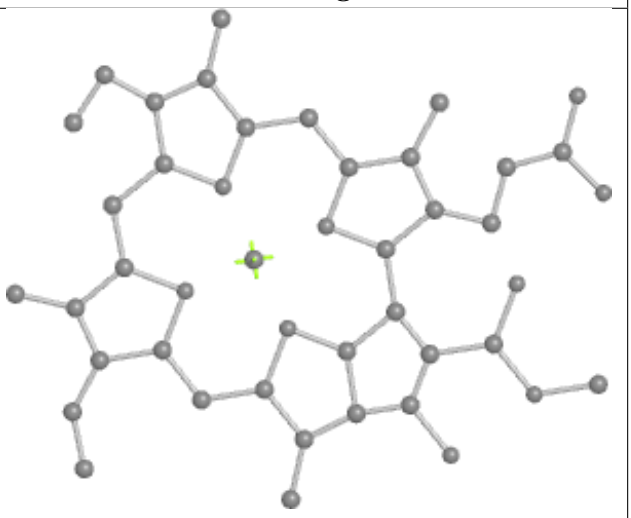
Bond lengths



Bond angles

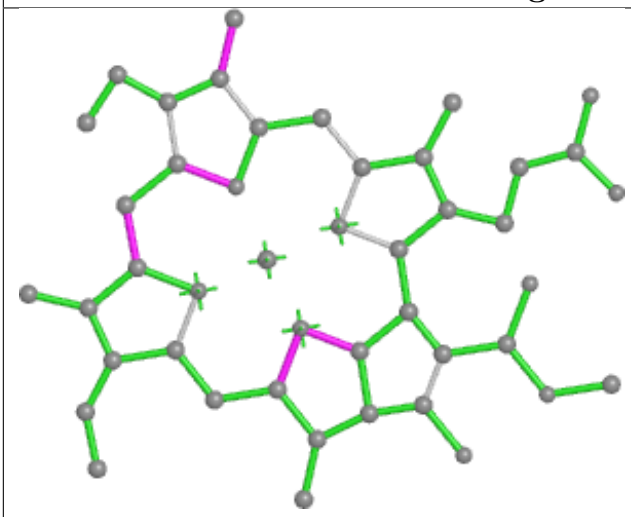


Torsions

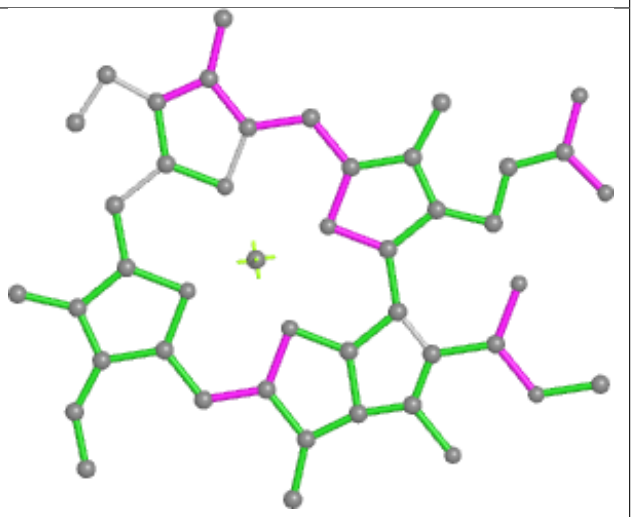


Rings

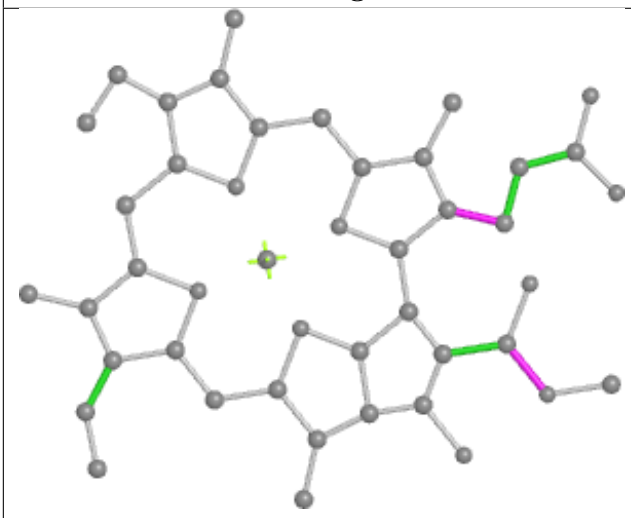
Ligand CLA 3 303



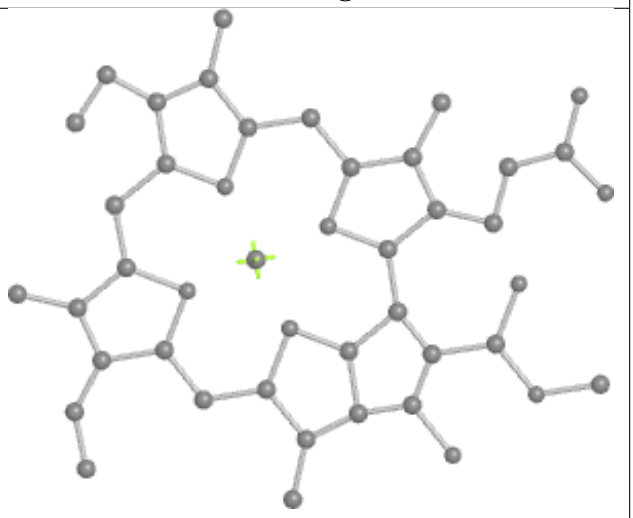
Bond lengths



Bond angles

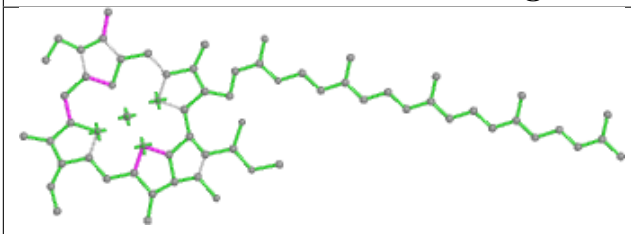


Torsions

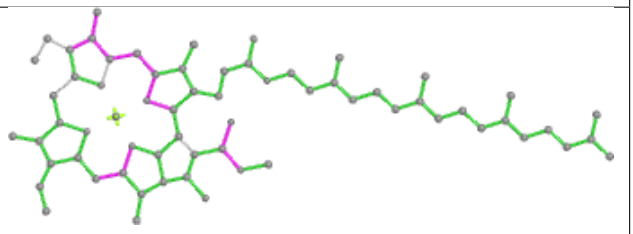


Rings

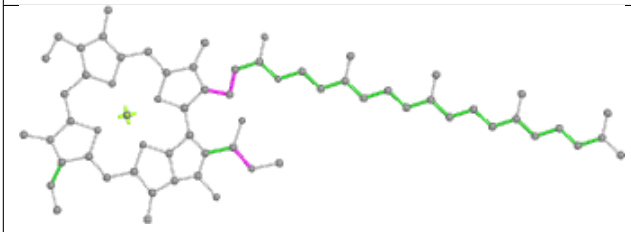
Ligand CLA B 801



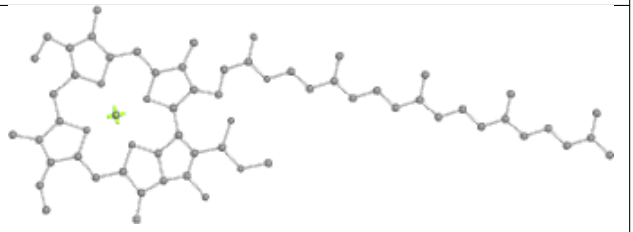
Bond lengths



Bond angles

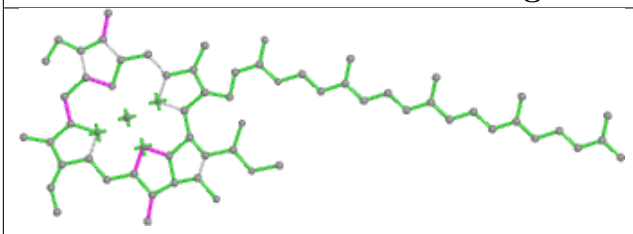


Torsions

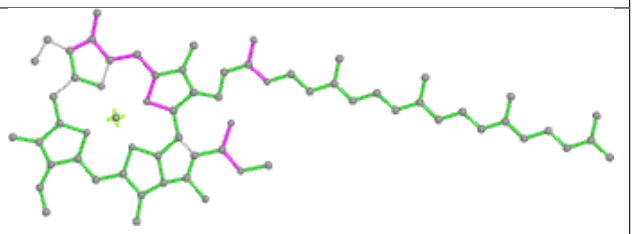


Rings

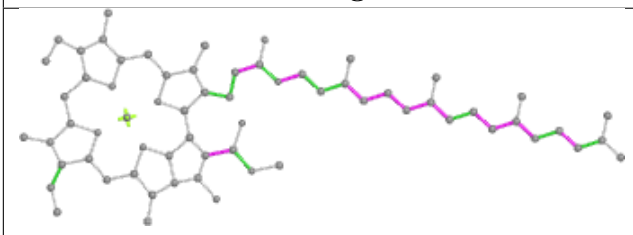
Ligand CLA A 805



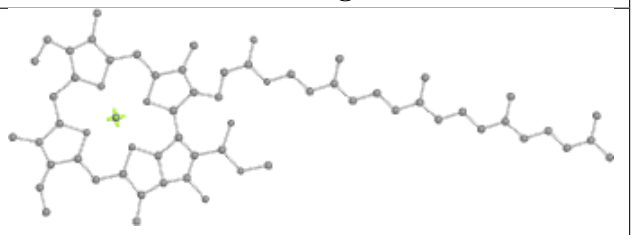
Bond lengths



Bond angles

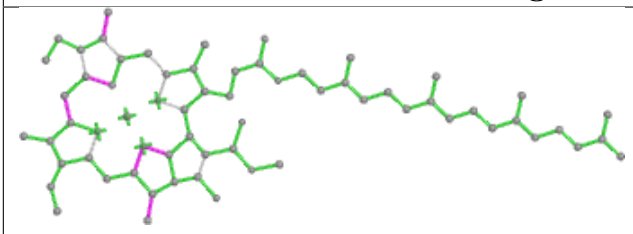


Torsions

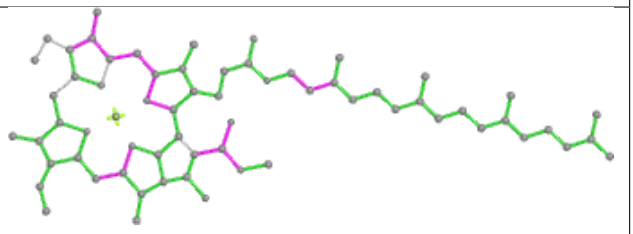


Rings

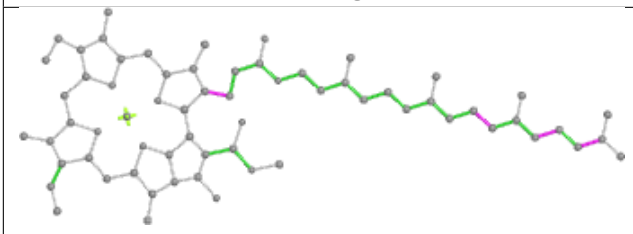
Ligand CLA J 101



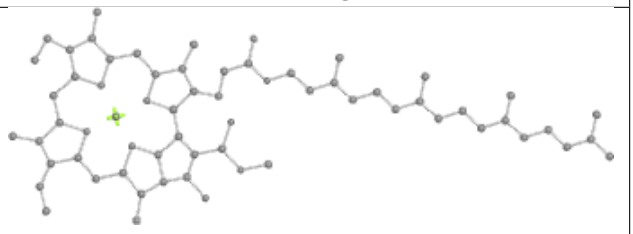
Bond lengths



Bond angles

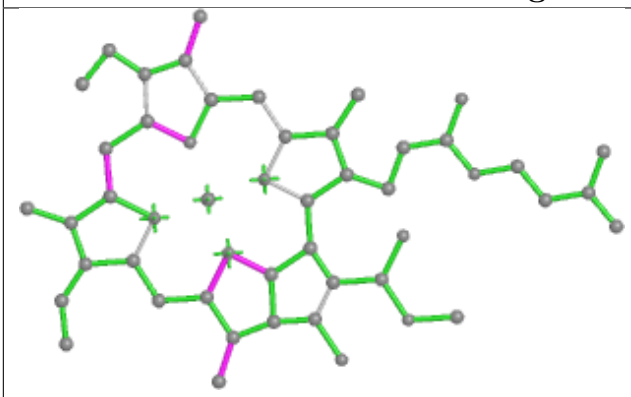


Torsions

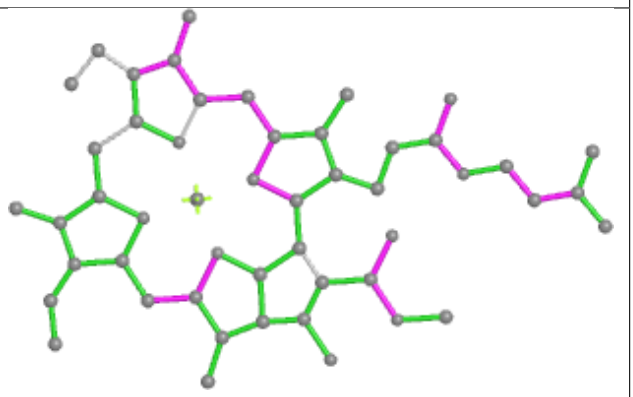


Rings

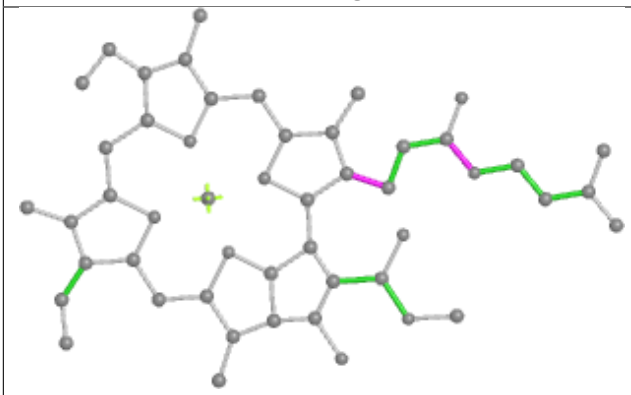
Ligand CLA 4 308



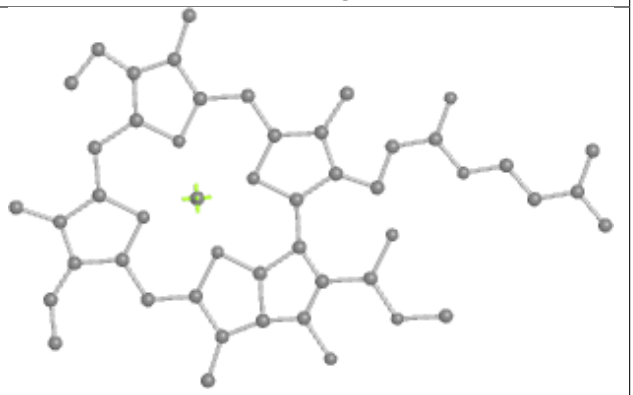
Bond lengths



Bond angles

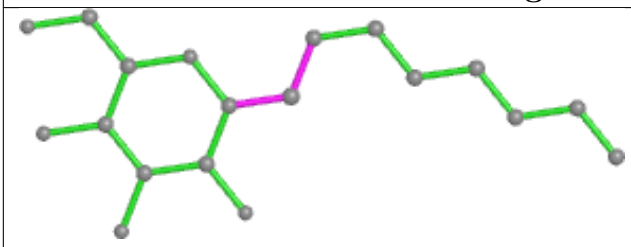


Torsions

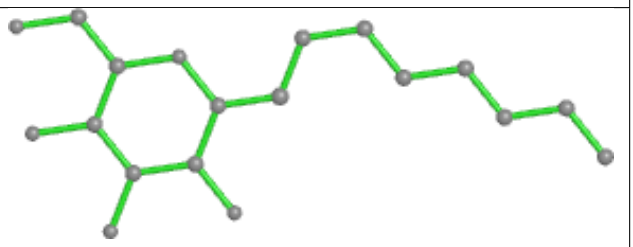


Rings

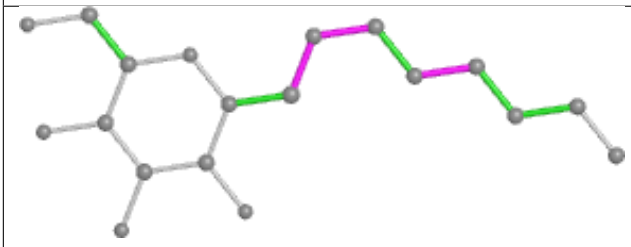
Ligand HTG 4 320



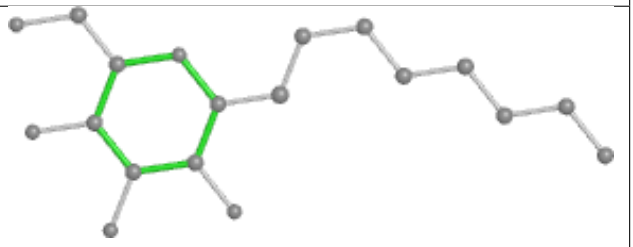
Bond lengths



Bond angles

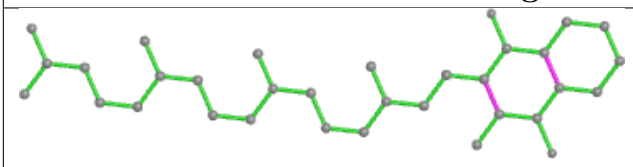


Torsions

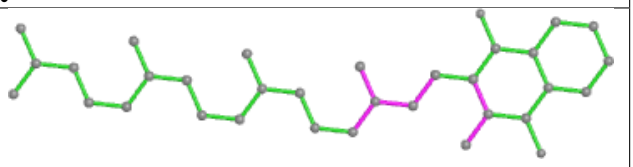


Rings

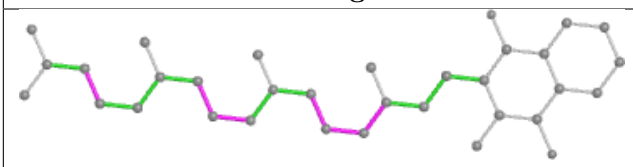
Ligand PQN A 842



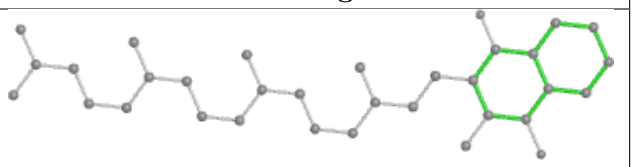
Bond lengths



Bond angles

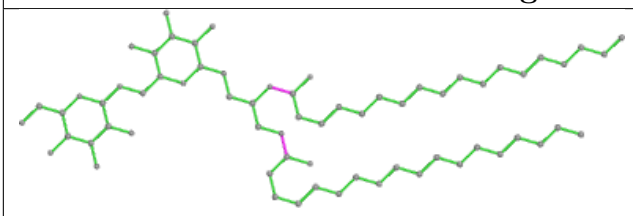


Torsions

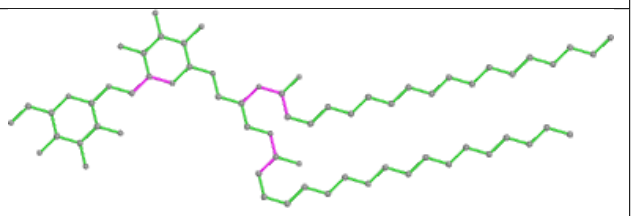


Rings

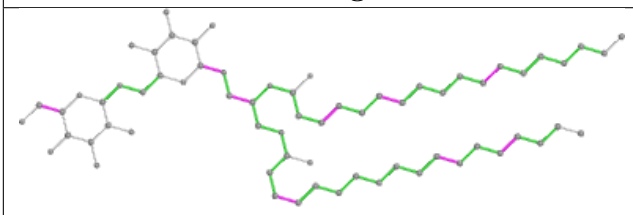
Ligand DGD B 848



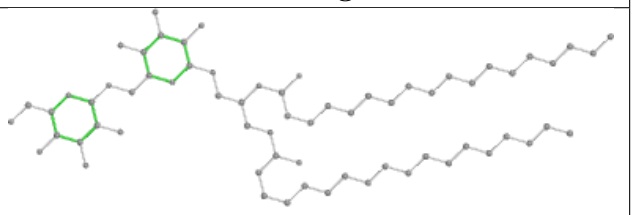
Bond lengths



Bond angles

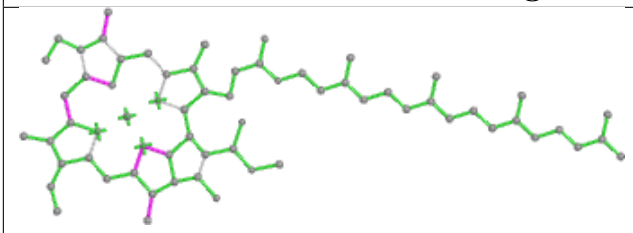


Torsions



Rings

Ligand CLA A 818



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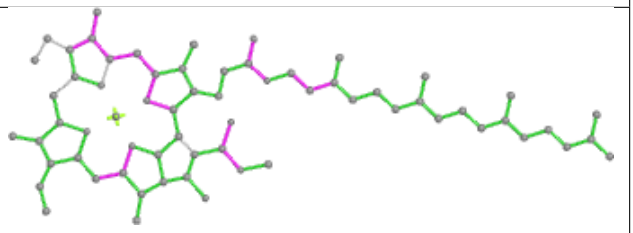
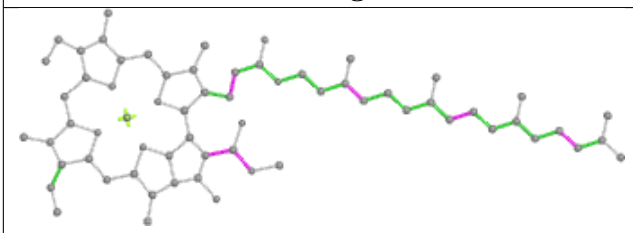


Bond angles



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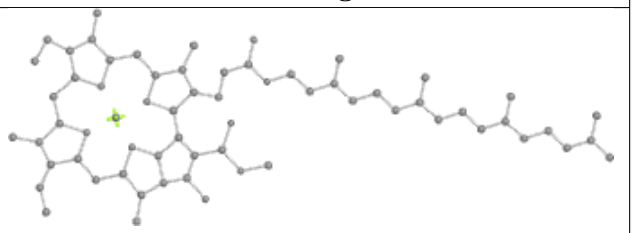
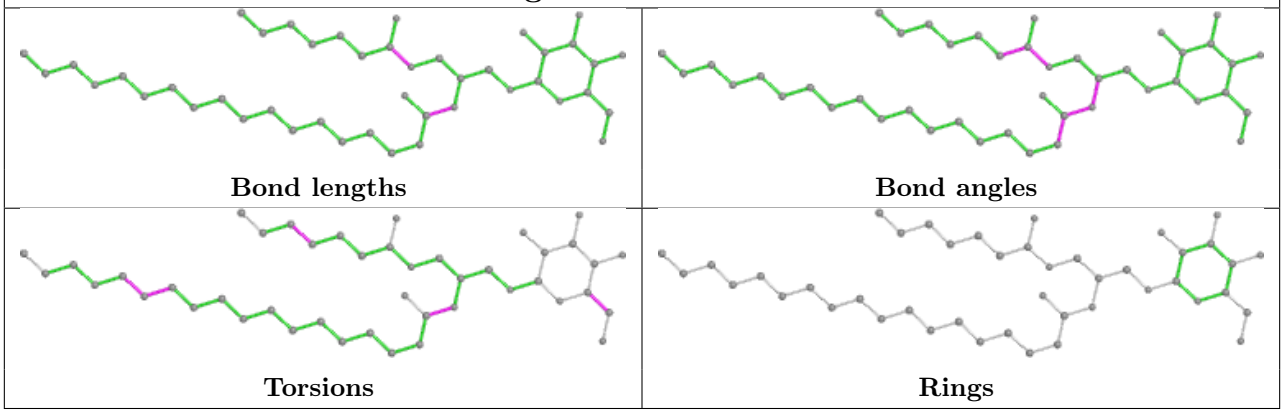
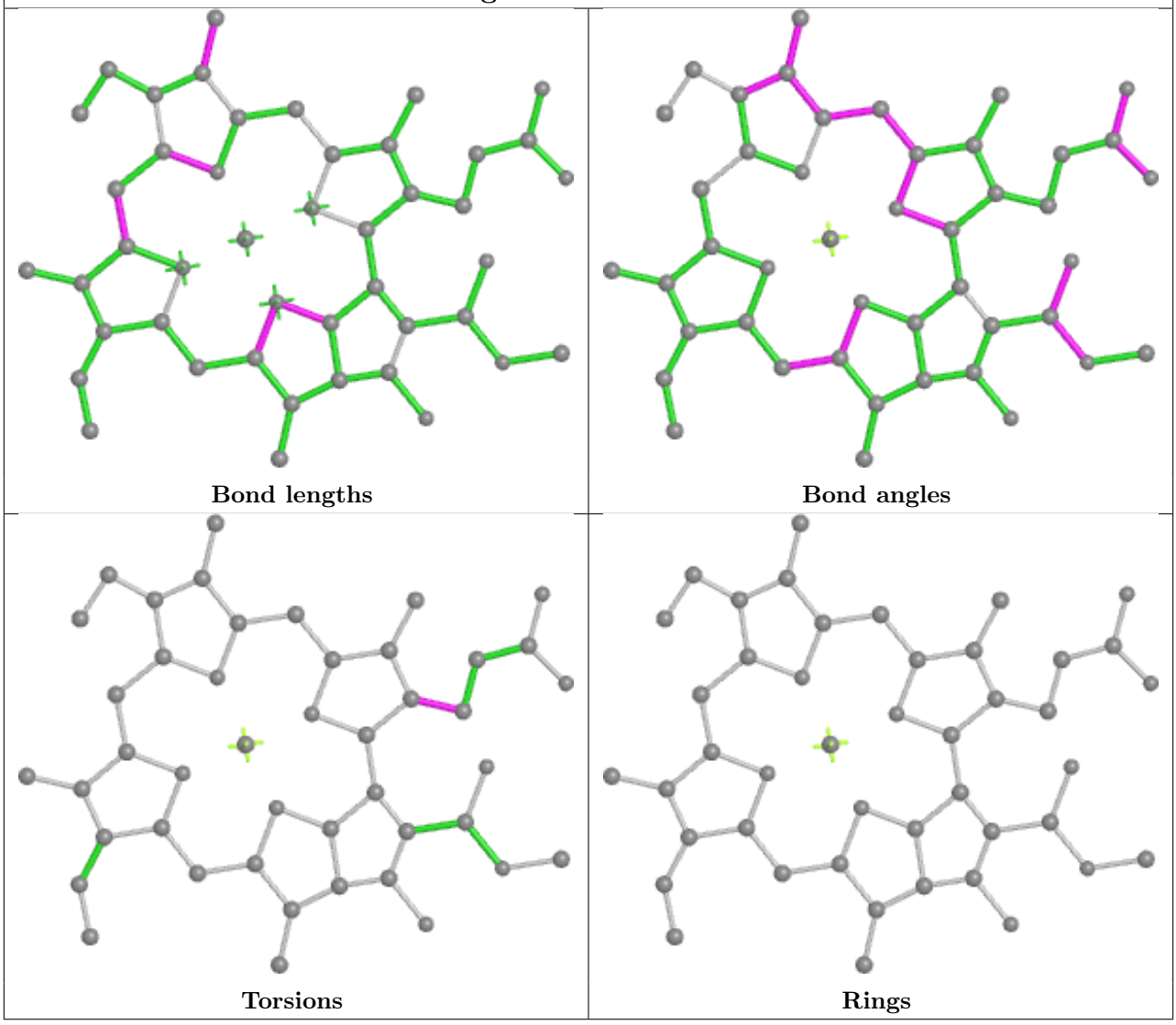


Rings

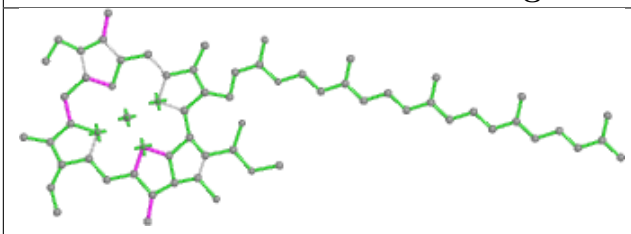
Ligand LMG 4 319



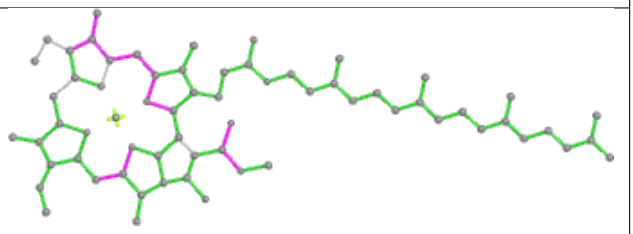
Ligand CLA A 813



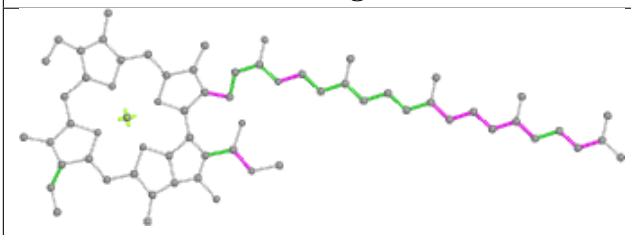
Ligand CLA A 810



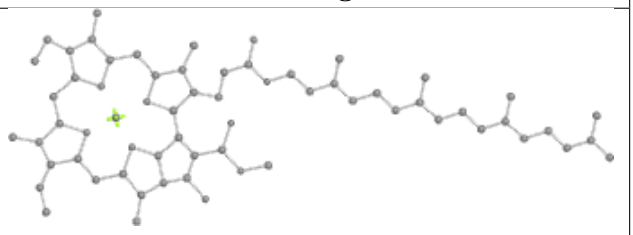
Bond lengths



Bond angles

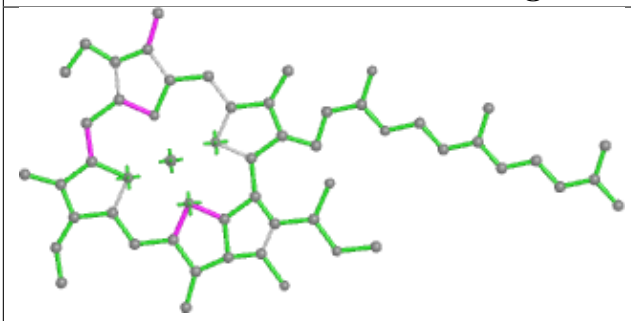


Torsions

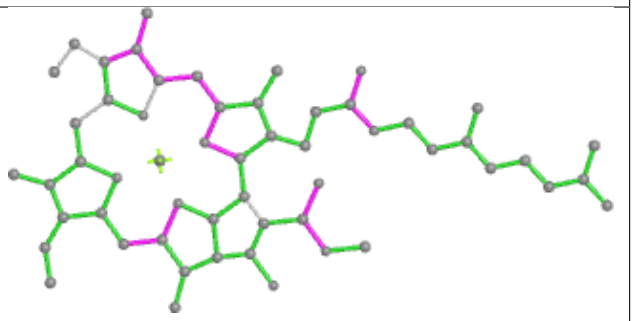


Rings

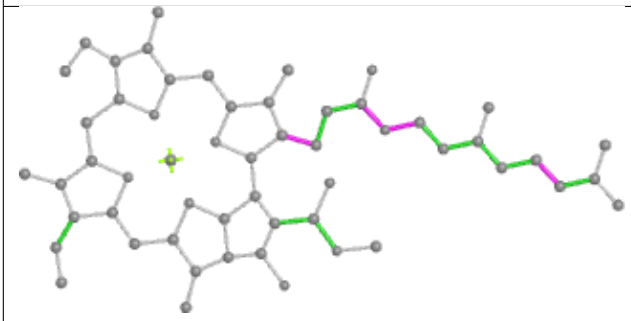
Ligand CLA B 812



Bond lengths



Bond angles



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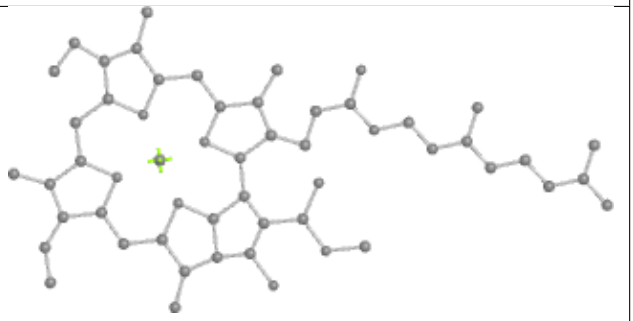
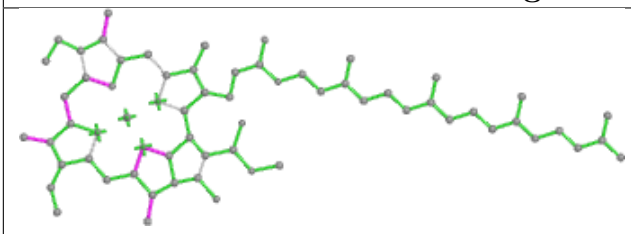
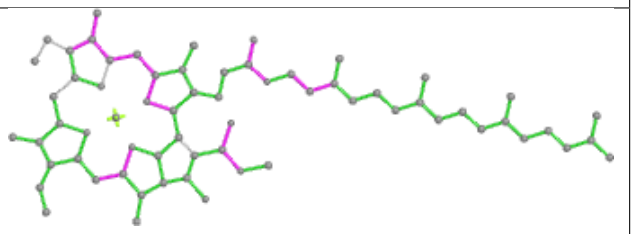


Rings

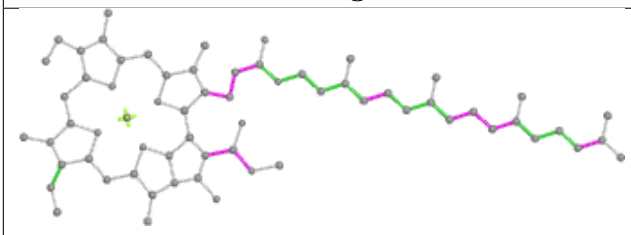
Ligand CLA A 817



Bond lengths



Bond angles



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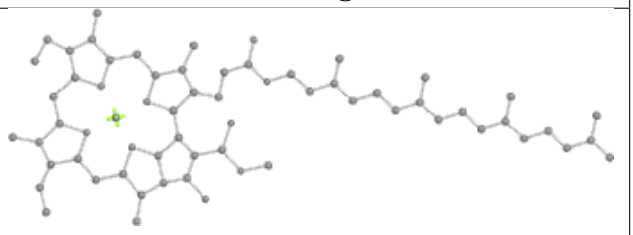
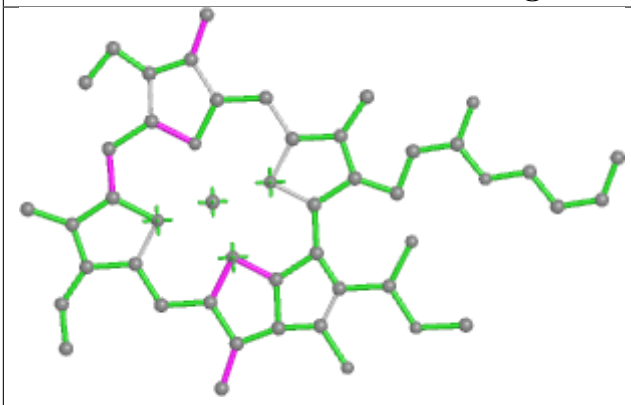
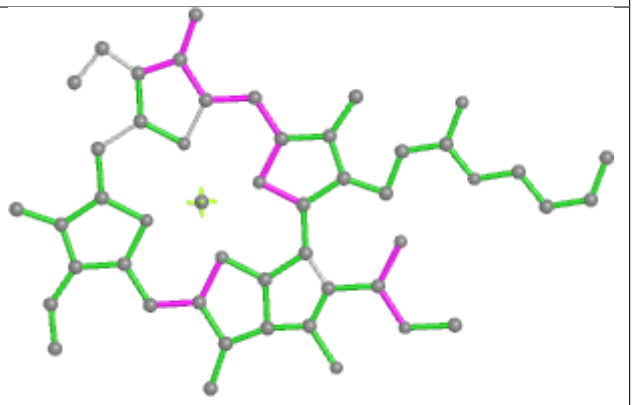


Rings

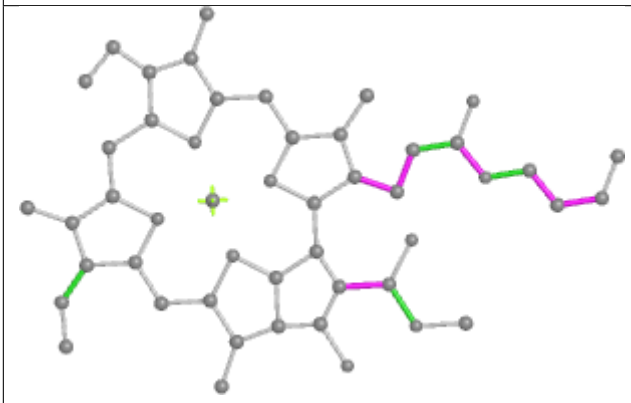
Ligand CLA A 821



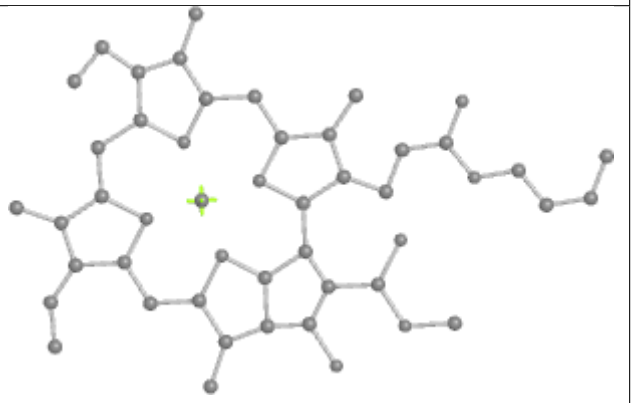
Bond lengths



Bond angles

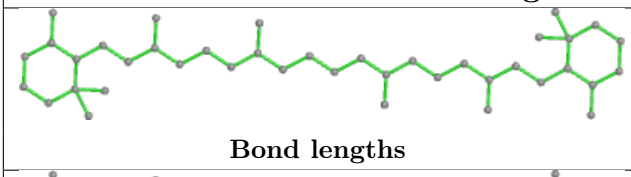


Torsions

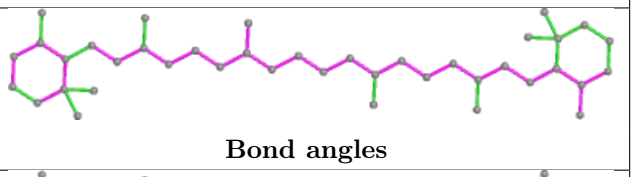


Rings

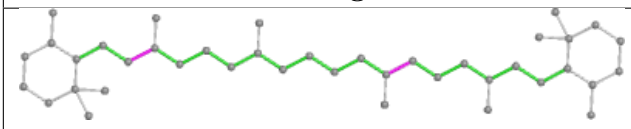
Ligand BCR B 841



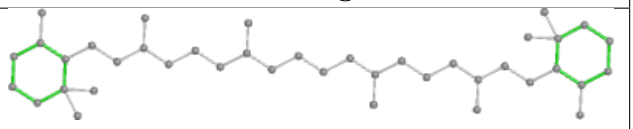
Bond lengths



Bond angles

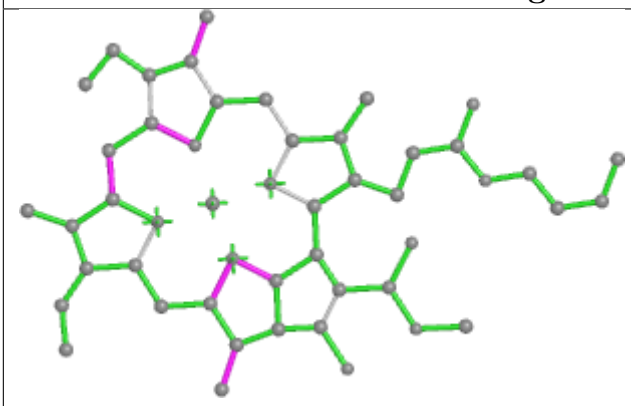


Torsions

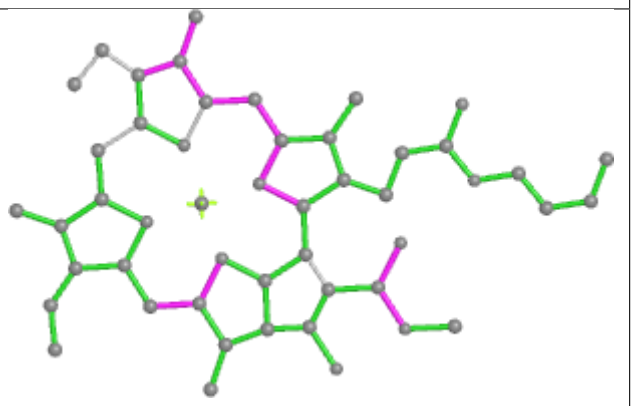


Rings

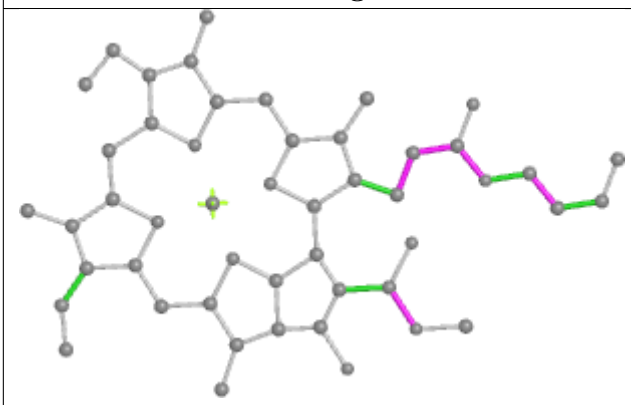
Ligand CLA 2 303



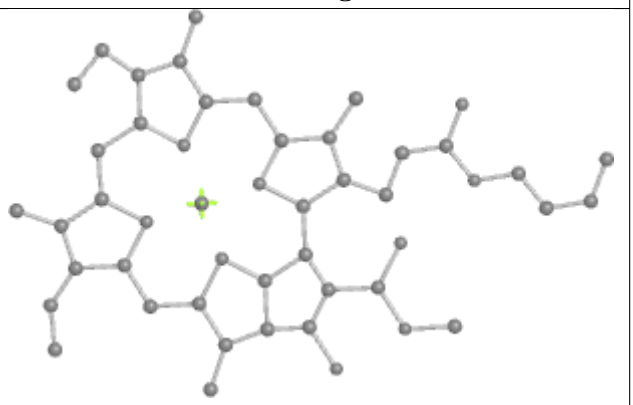
Bond lengths



Bond angles

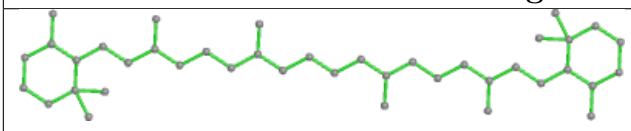


Torsions

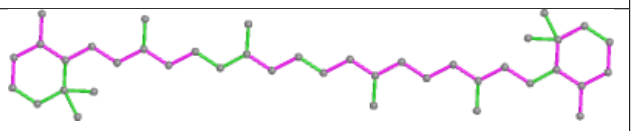


Rings

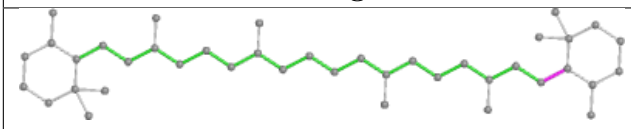
Ligand BCR J 104



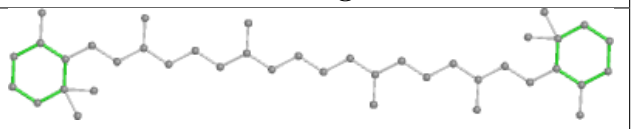
Bond lengths



Bond angles

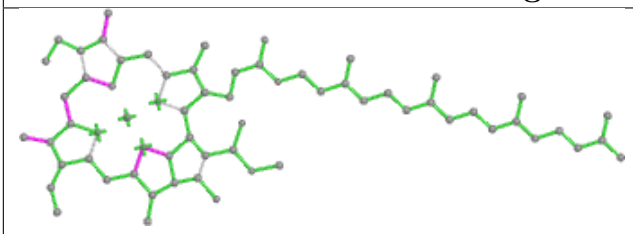


Torsions

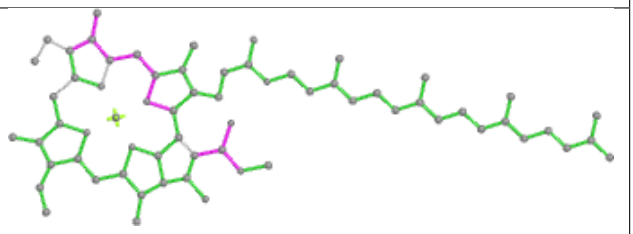


Rings

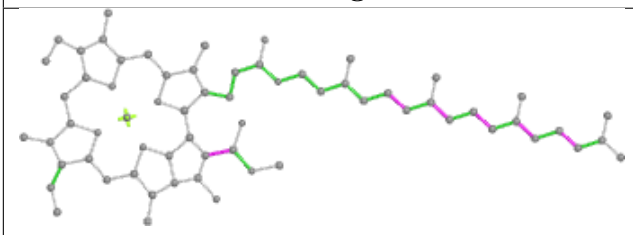
Ligand CLA A 829



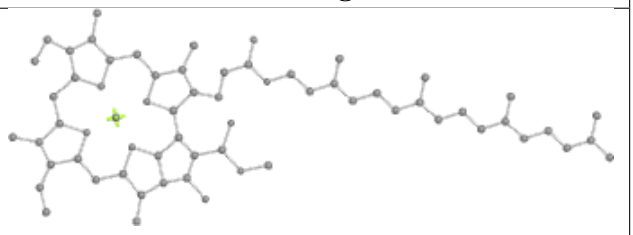
Bond lengths



Bond angles

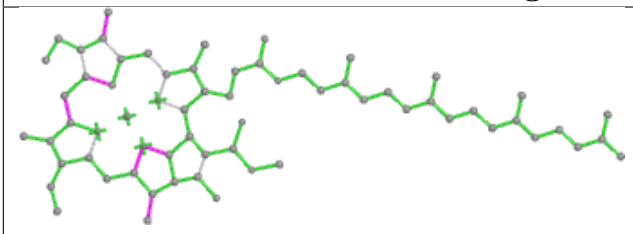


Torsions



Rings

Ligand CLA A 838



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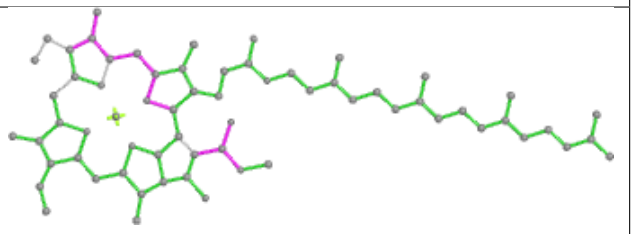
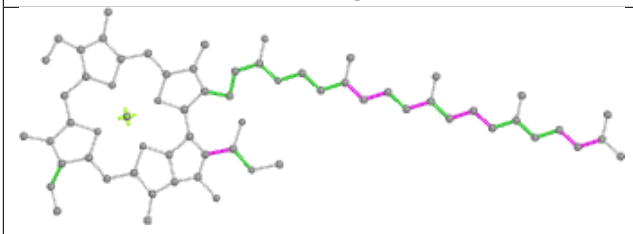
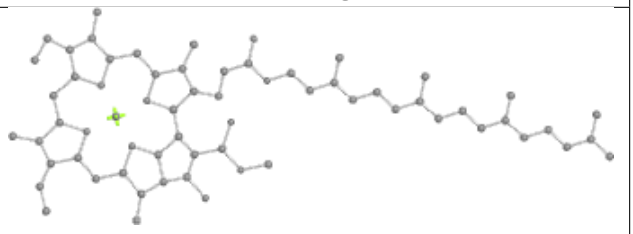


Bond angles

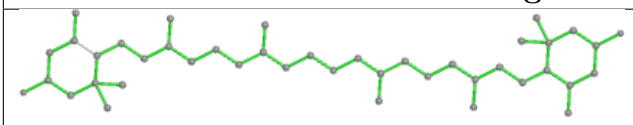


Torsions

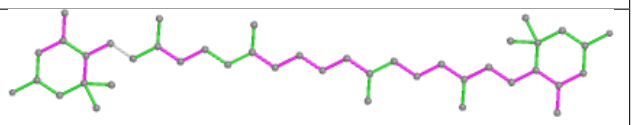


Rings

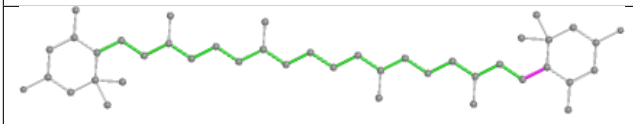
Ligand LUT O 204



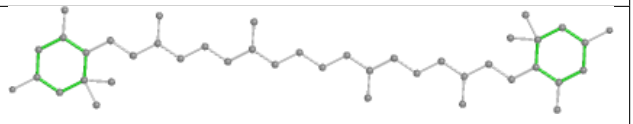
Bond lengths



Bond angles

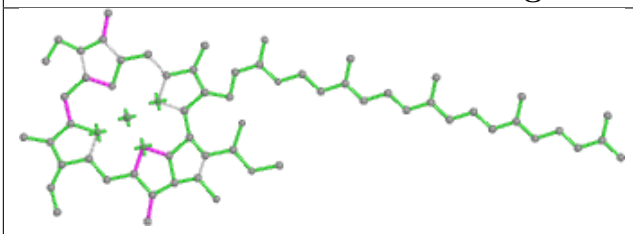


Torsions

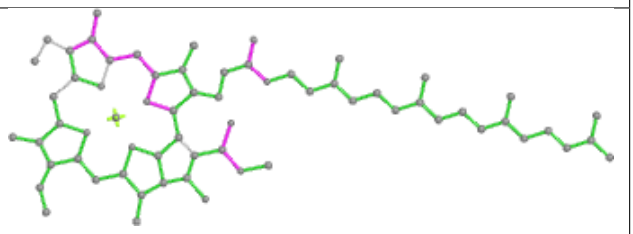


Rings

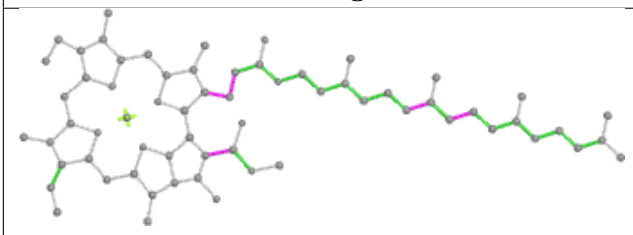
Ligand CLA B 814



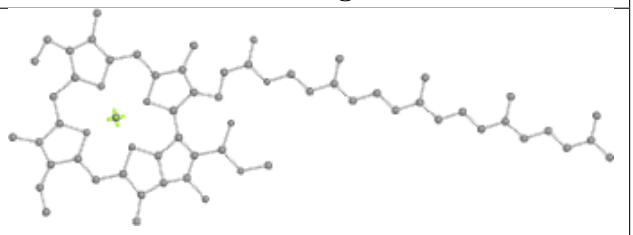
Bond lengths



Bond angles

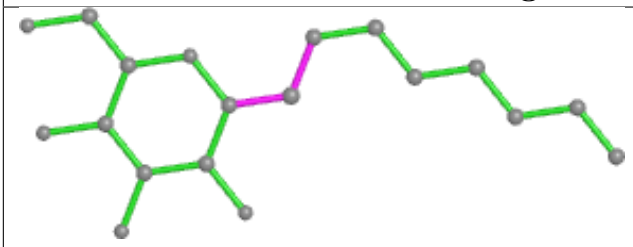


Torsions

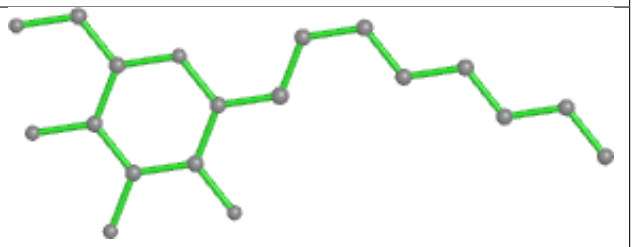


Rings

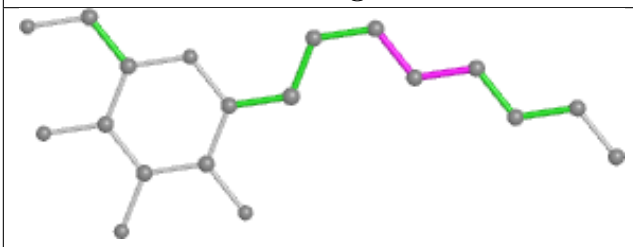
Ligand HTG N 201



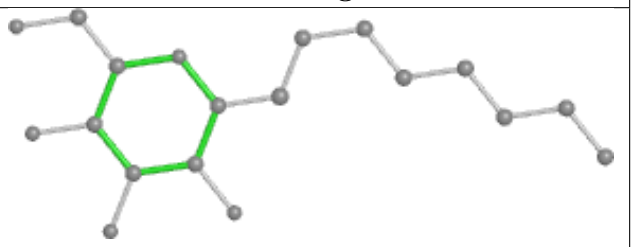
Bond lengths



Bond angles

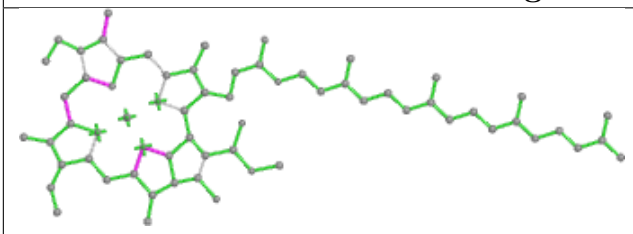


Torsions

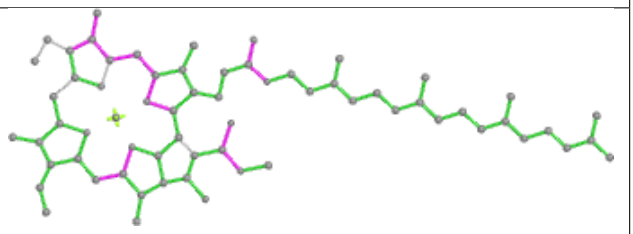


Rings

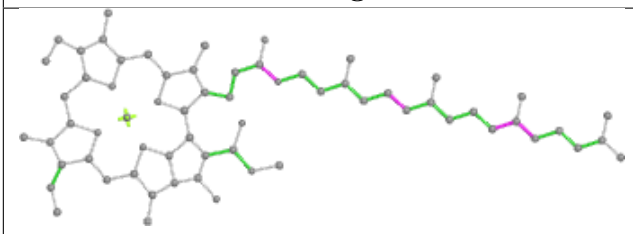
Ligand CLA B 836



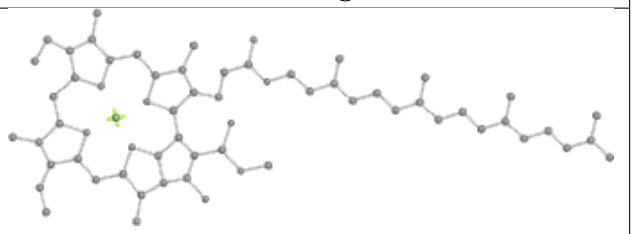
Bond lengths



Bond angles

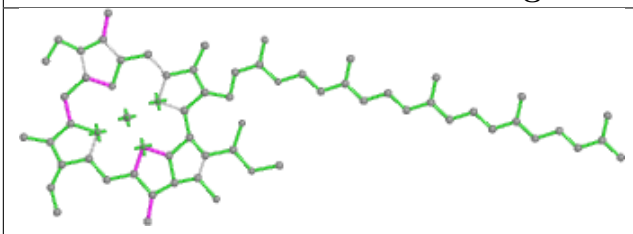


Torsions

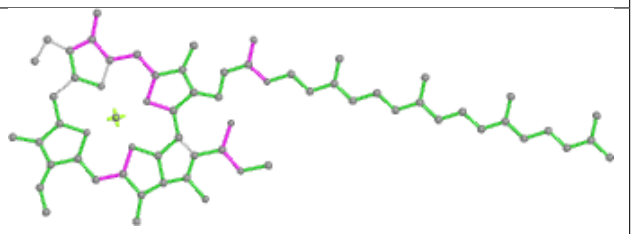


Rings

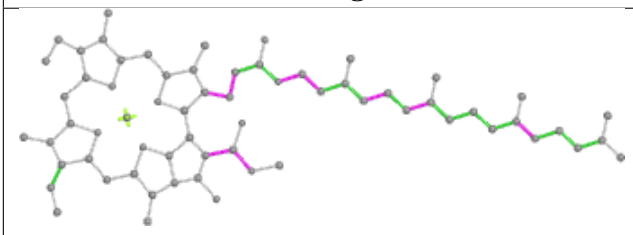
Ligand CLA A 851



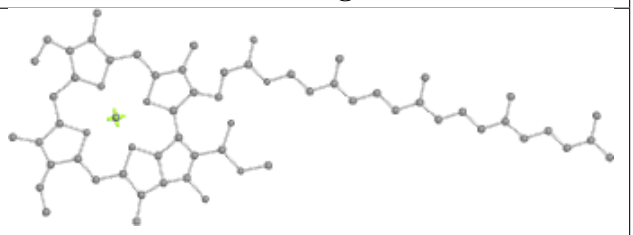
Bond lengths



Bond angles

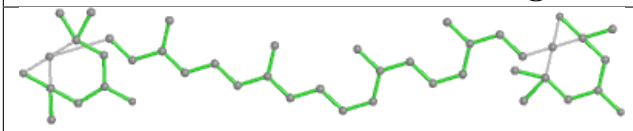


Torsions

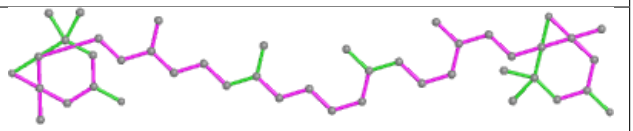


Rings

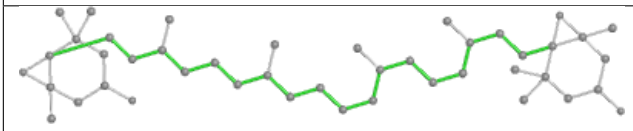
Ligand XAT 3 316



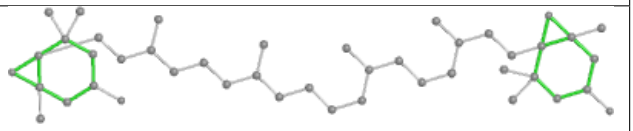
Bond lengths



Bond angles

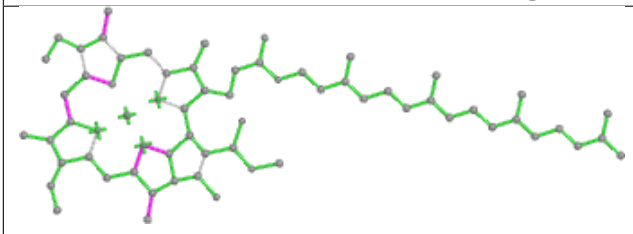


Torsions

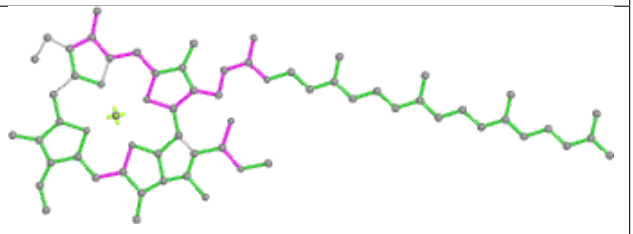


Rings

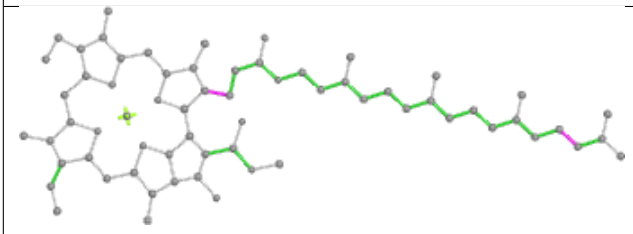
Ligand CLA A 825



Bond lengths



Bond angles



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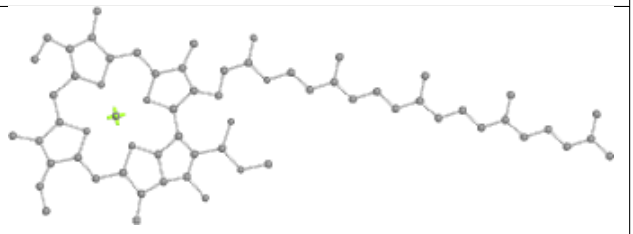
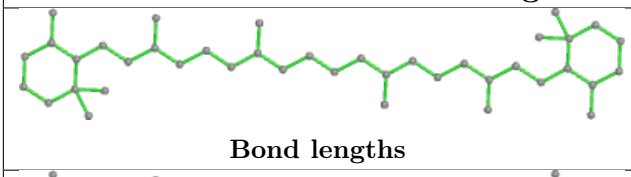


Rings

Ligand BCR A 854



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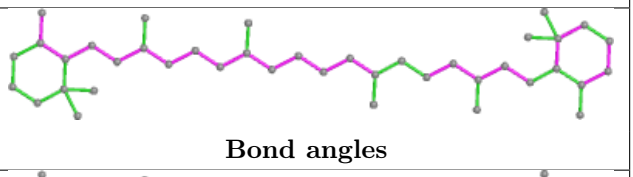
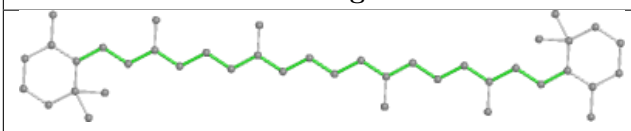


Bond angles



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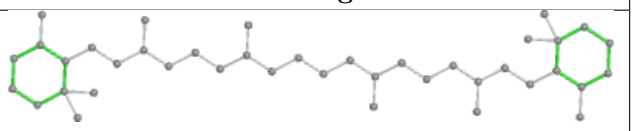
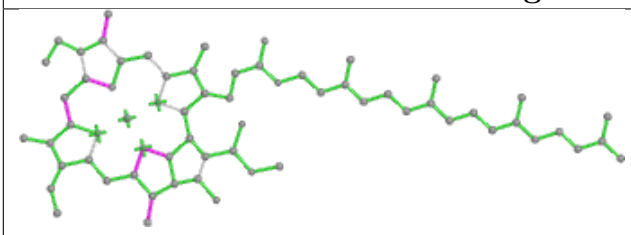
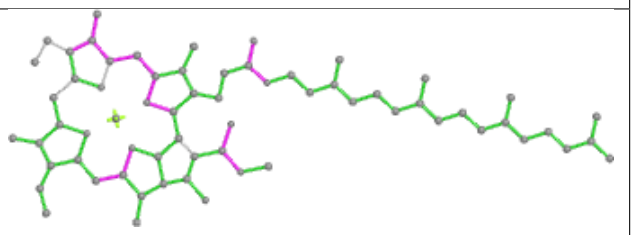


Rings

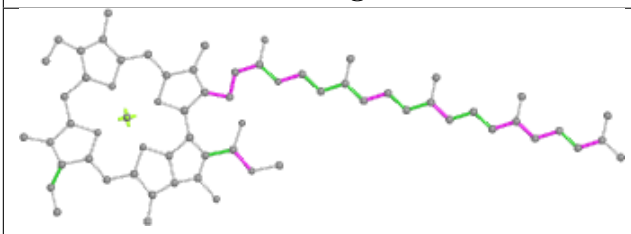
Ligand CLA A 808



Bond lengths



Bond angles



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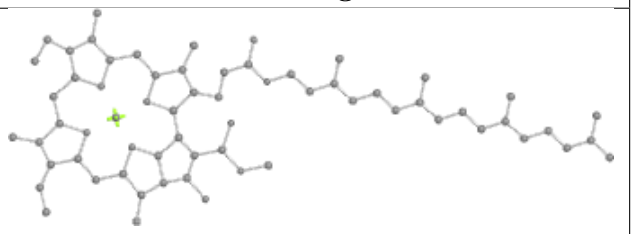
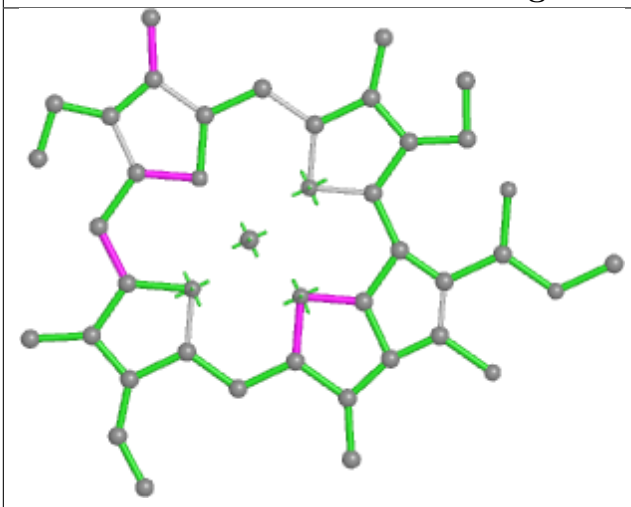
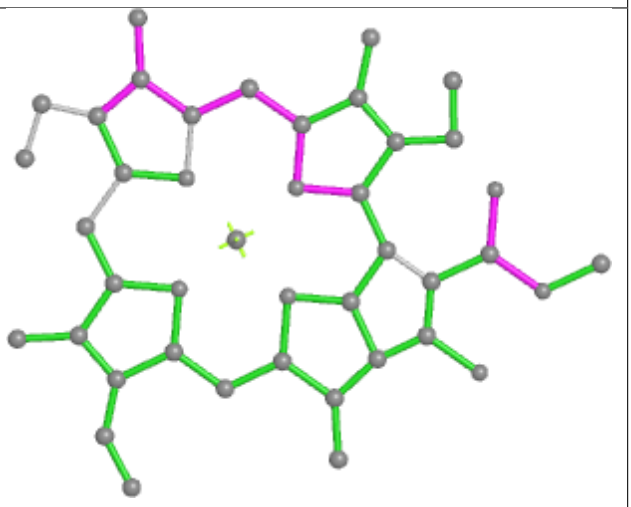


Rings

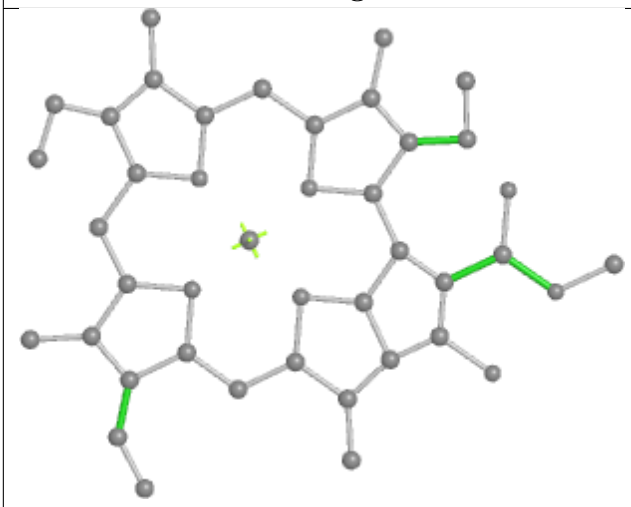
Ligand CLA 3 304



Bond lengths



Bond angles



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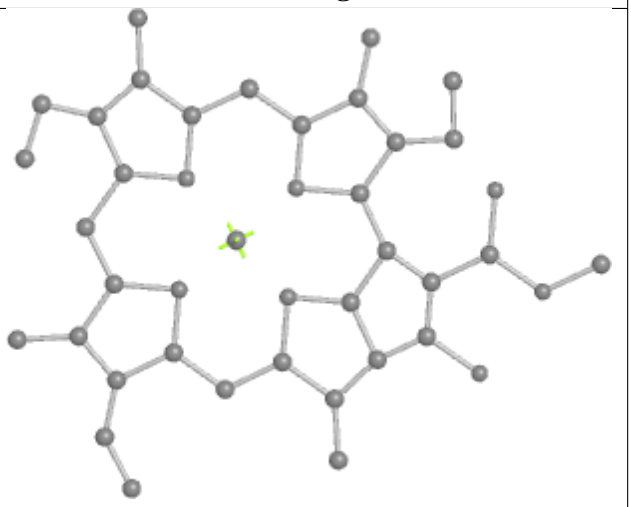
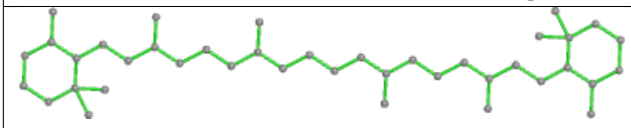
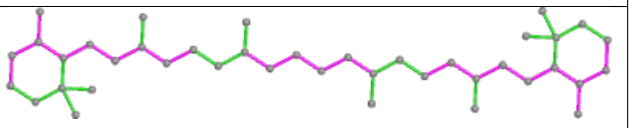


Rings

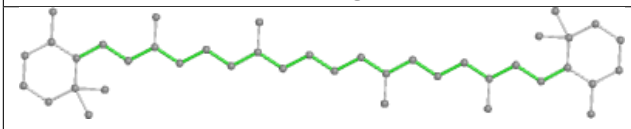
Ligand BCR A 846



Bond lengths



Bond angles



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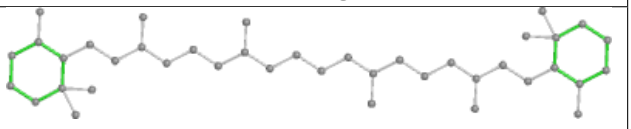
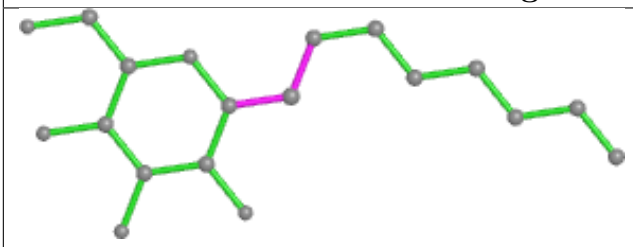
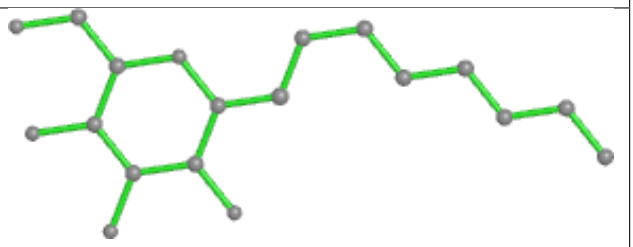


Rings

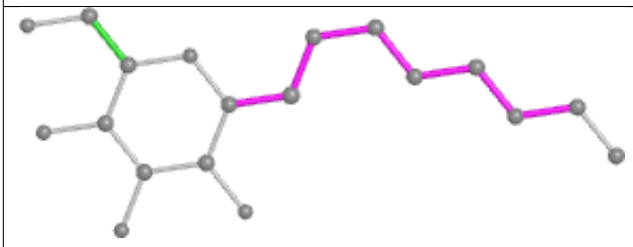
Ligand HTG B 850



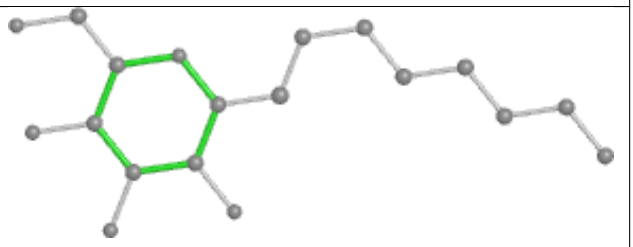
Bond lengths



Bond angles

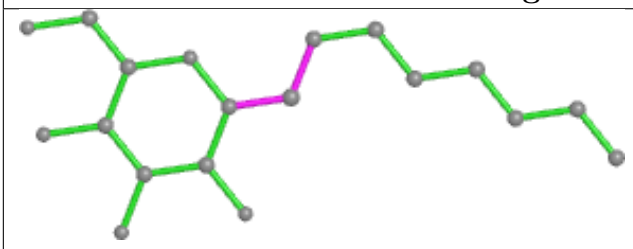


Torsions

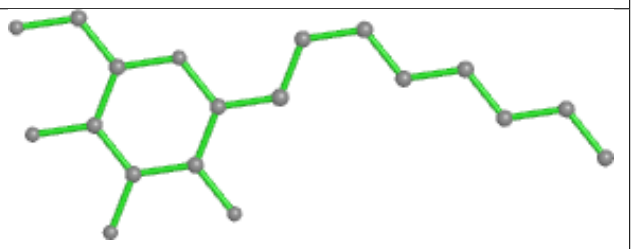


Rings

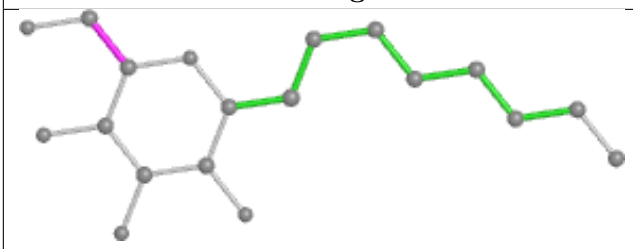
Ligand HTG F 803



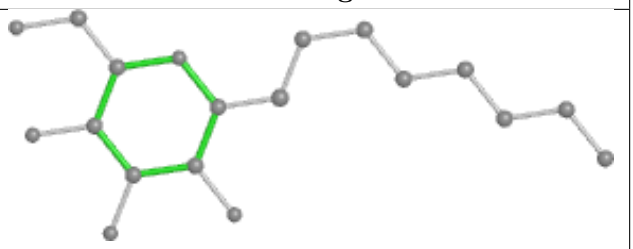
Bond lengths



Bond angles

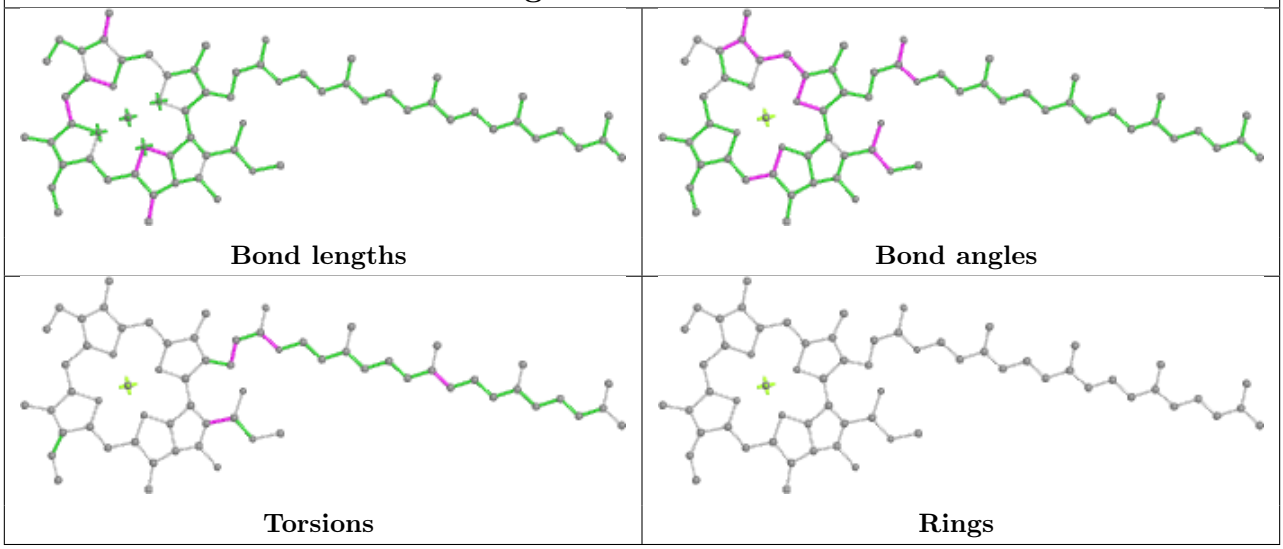


Torsions

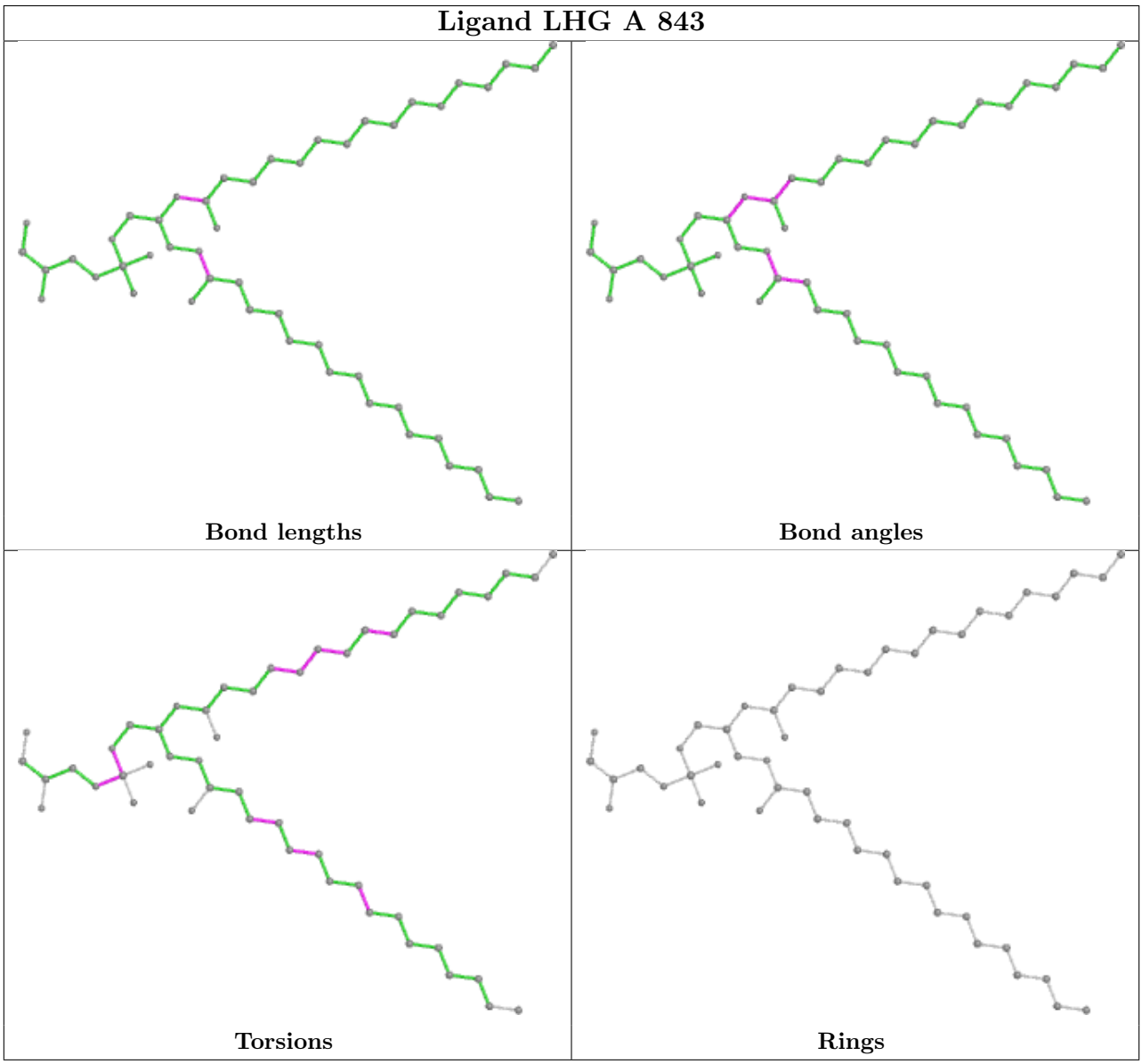


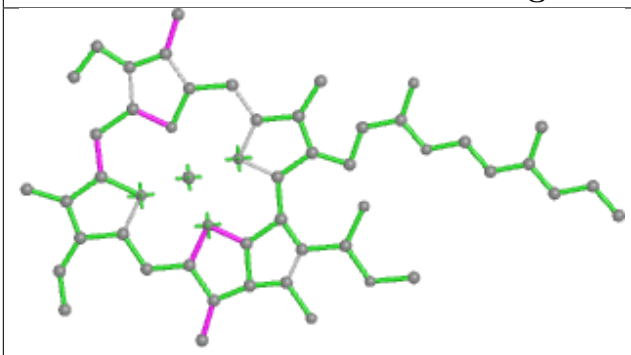
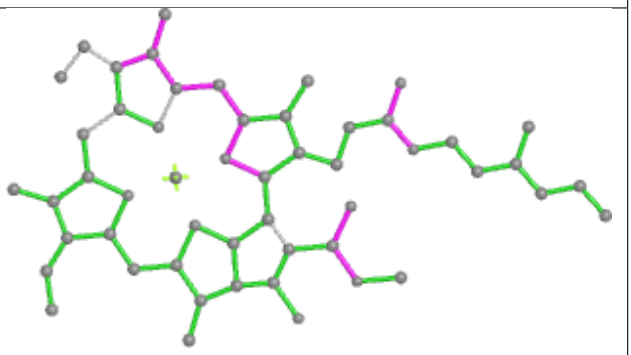
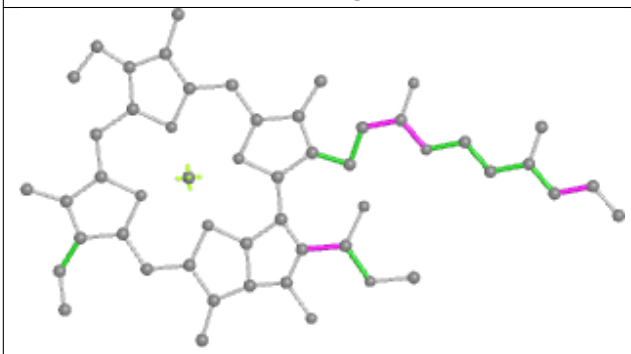
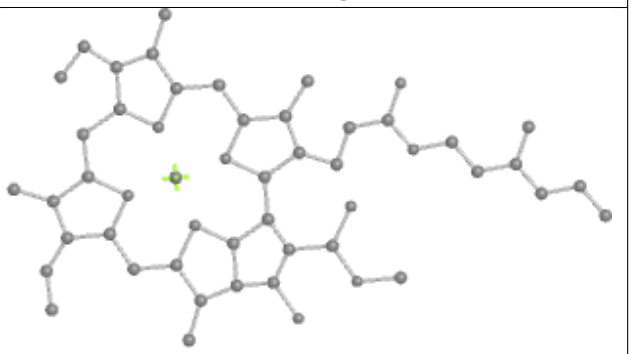
Rings

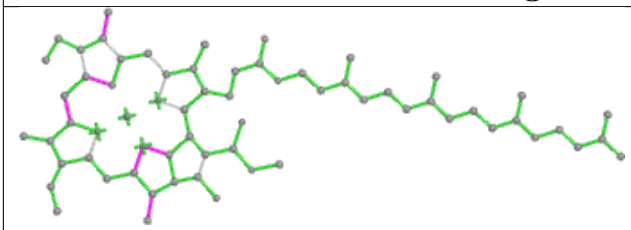
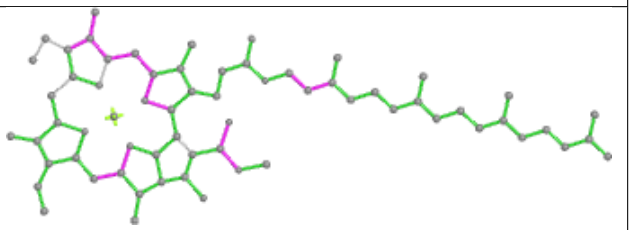
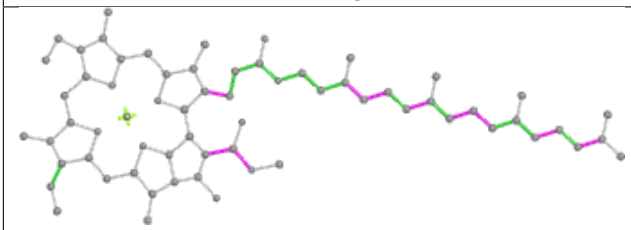
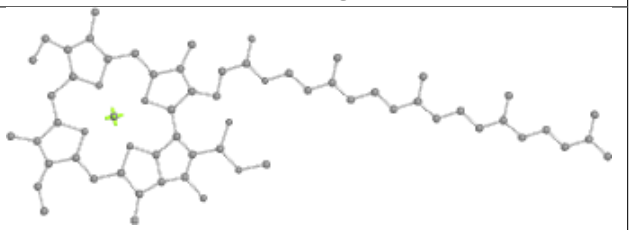
Ligand CLA A 840



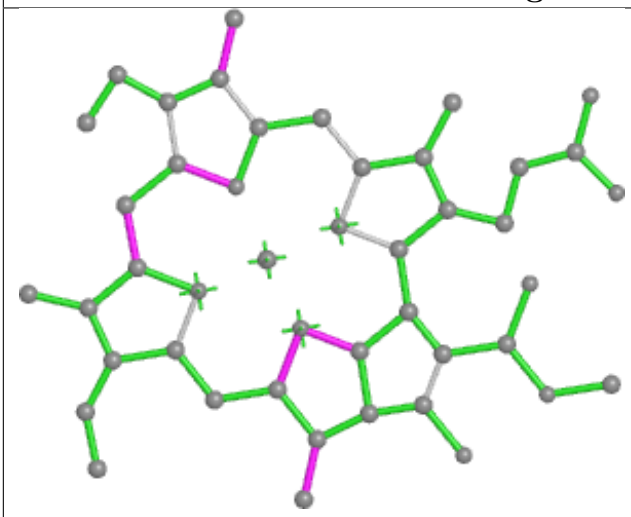
Ligand LHG A 843



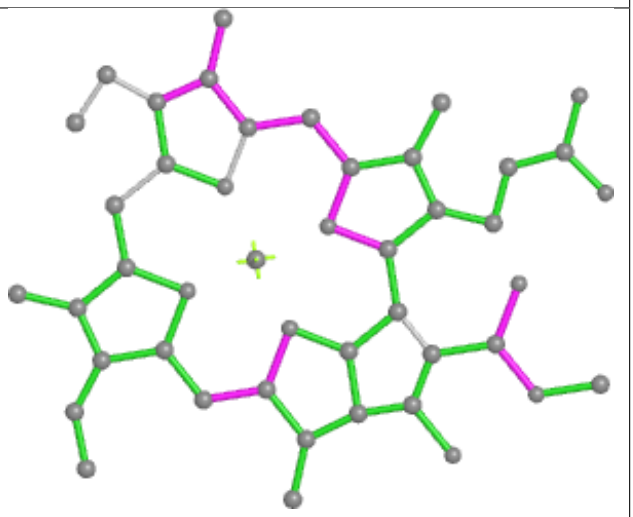
Ligand CLA 1 311	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand CLA A 809	
 Bond lengths	 Bond angles
 Torsions	 Rings

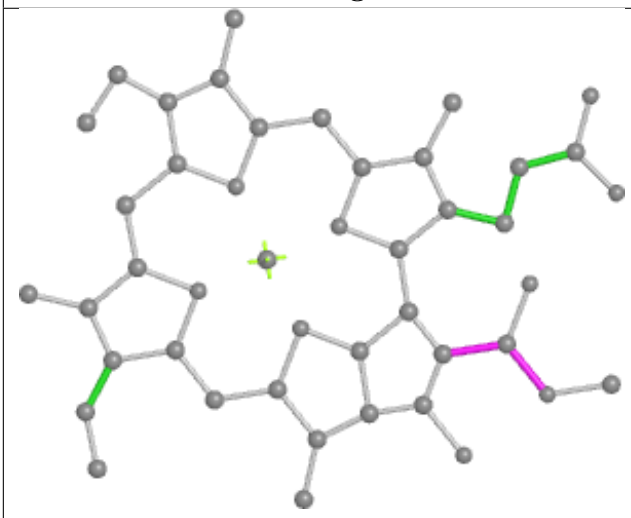
Ligand CLA F 804



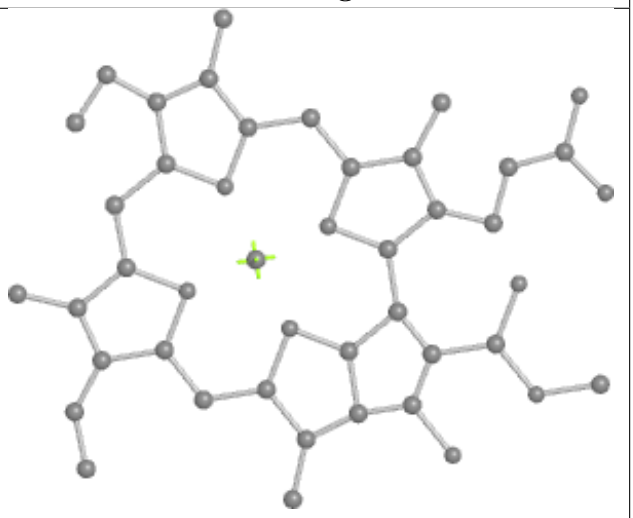
Bond lengths



Bond angles

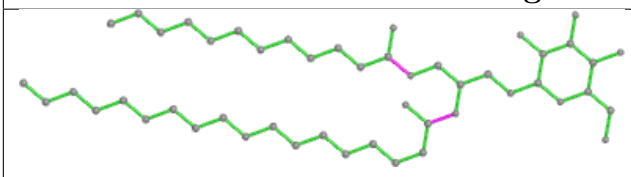


Torsions

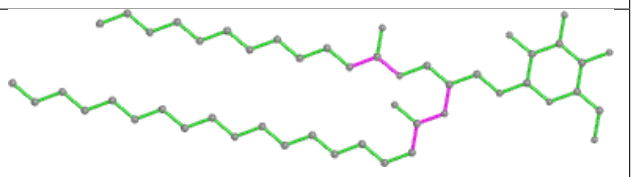


Rings

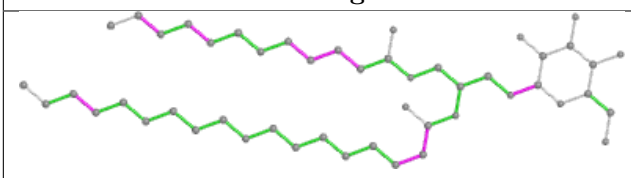
Ligand LMG 1 320



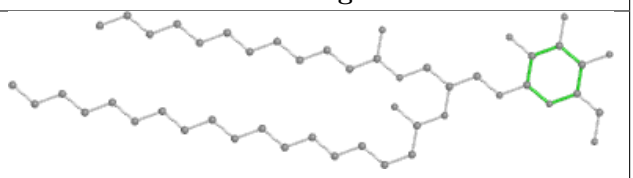
Bond lengths



Bond angles

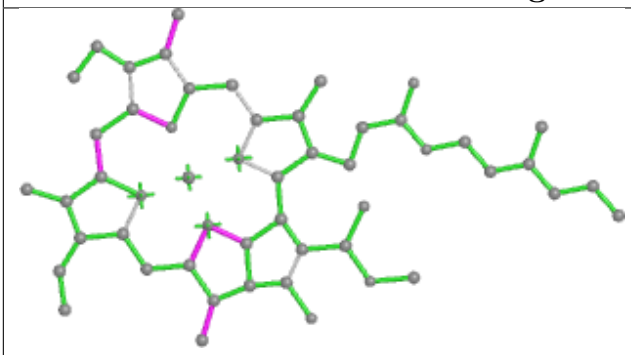


Torsions

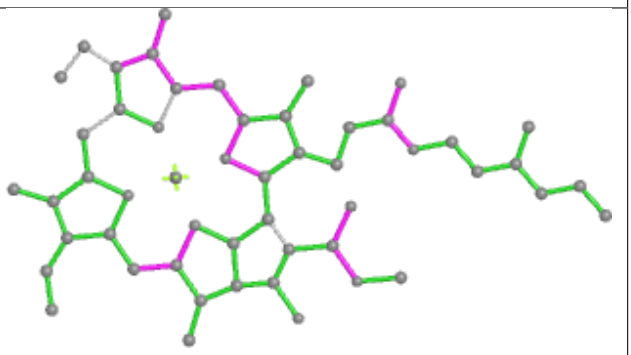


Rings

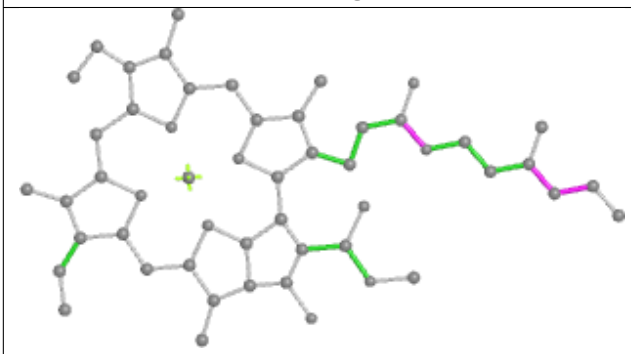
Ligand CLA 1 304



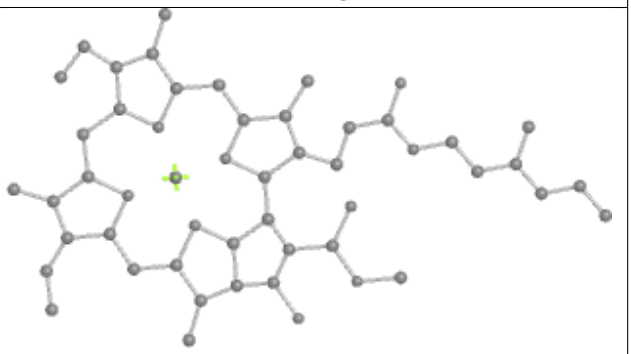
Bond lengths



Bond angles

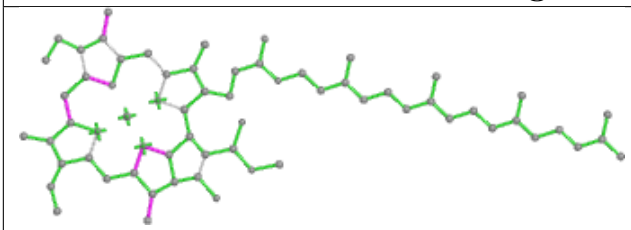


Torsions

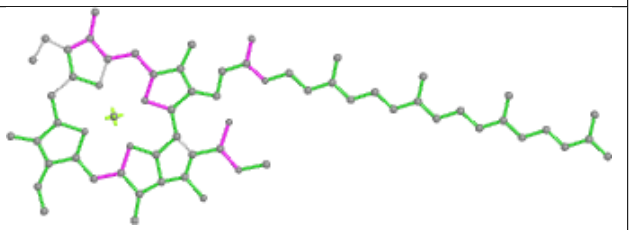


Rings

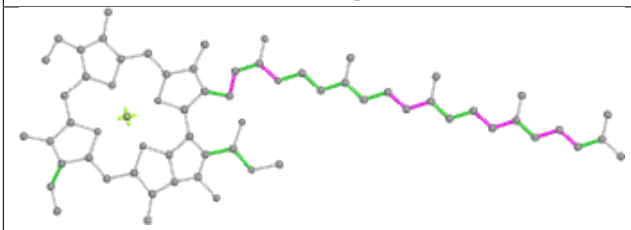
Ligand CLA 1 303



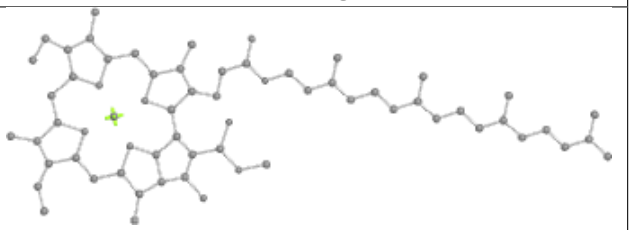
Bond lengths



Bond angles

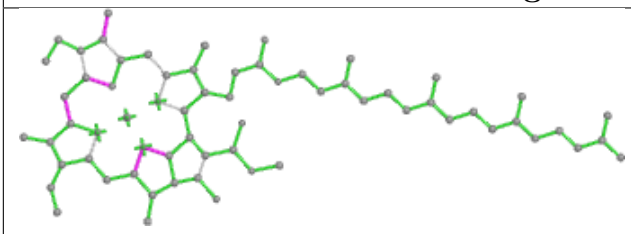


Torsions



Rings

Ligand CLA A 801



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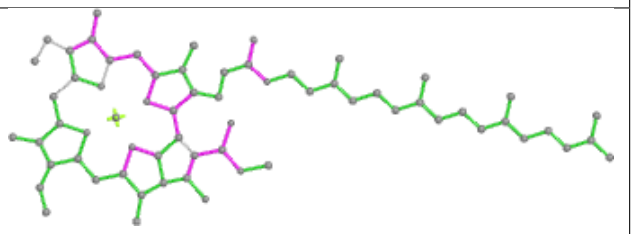
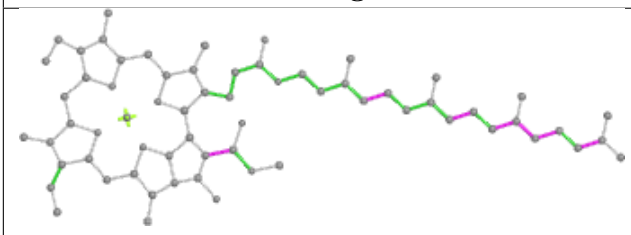
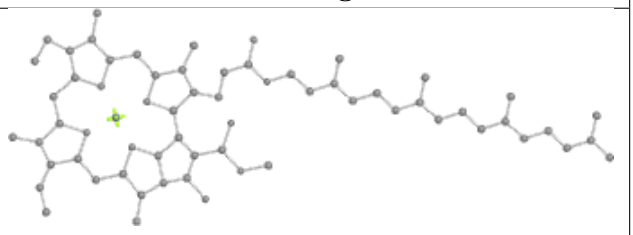


Bond angles

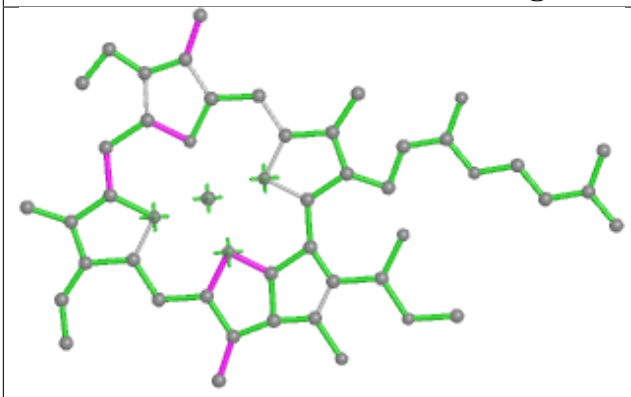


Torsions

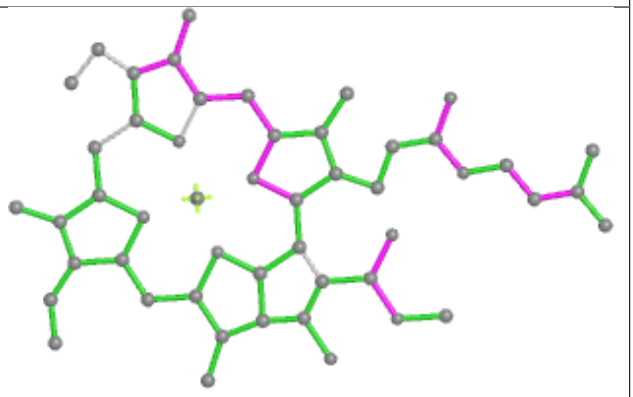


Rings

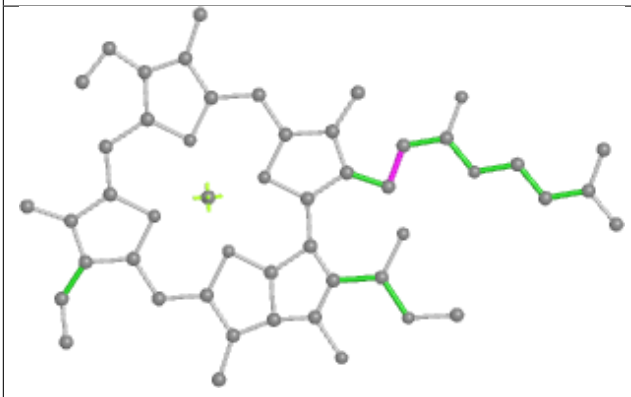
Ligand CLA 3 308



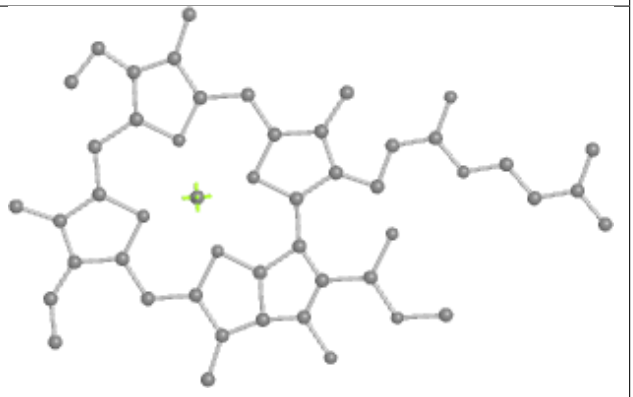
Bond lengths



Bond angles

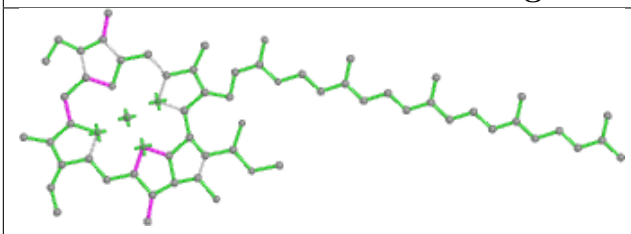


Torsions

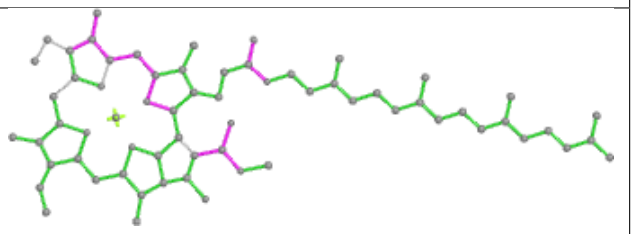


Rings

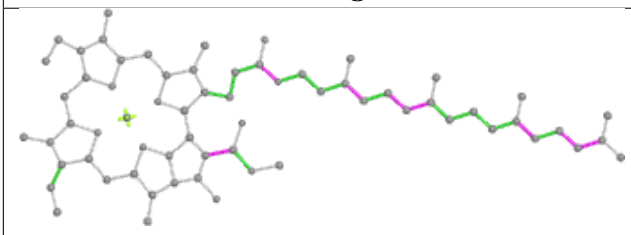
Ligand CLA B 824



Bond lengths



Bond angles



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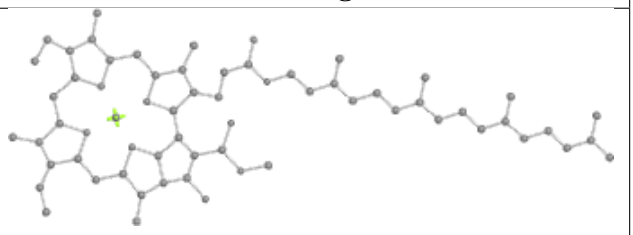
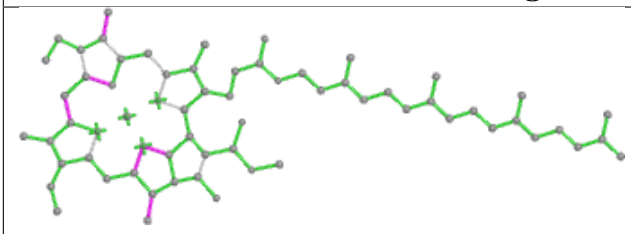
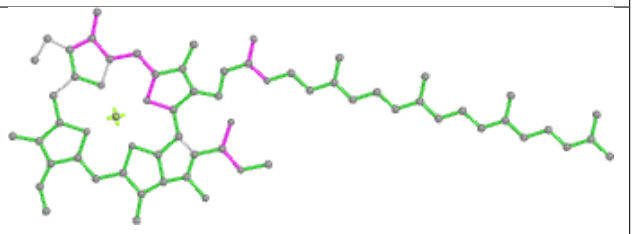


Rings

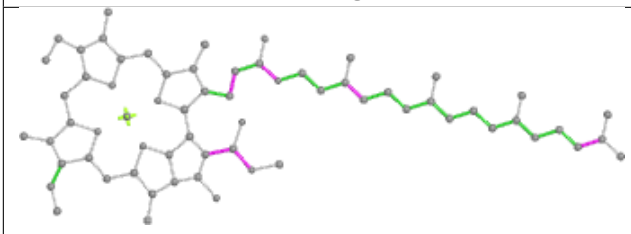
Ligand CLA A 828



Bond lengths



Bond angles



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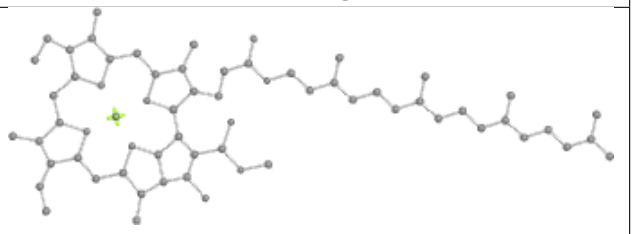
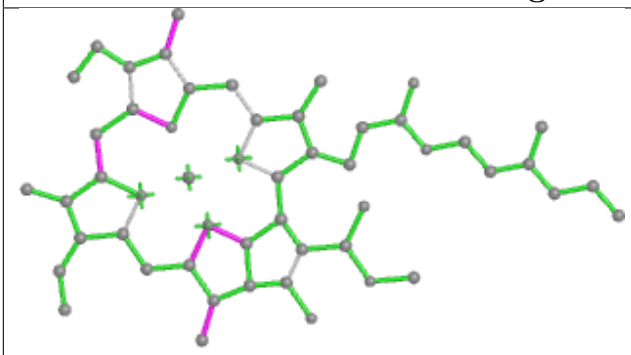
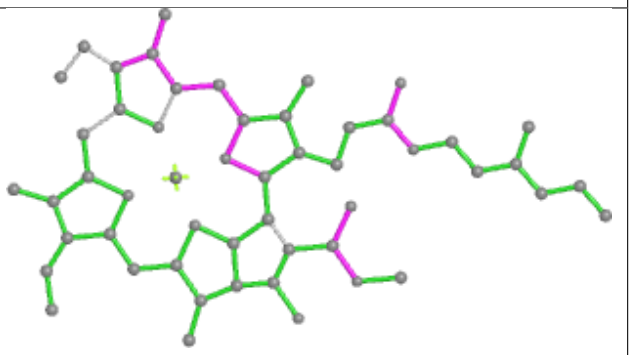


Rings

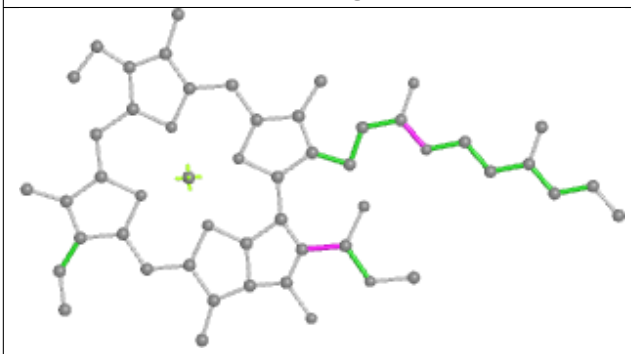
Ligand CLA 1 305



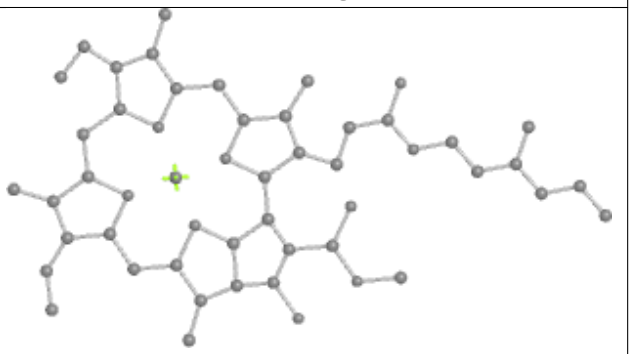
Bond lengths



Bond angles

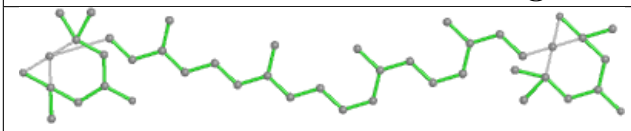


Torsions

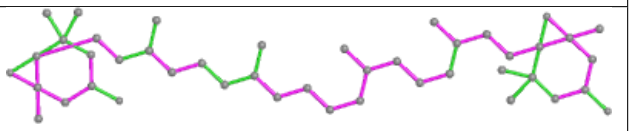


Rings

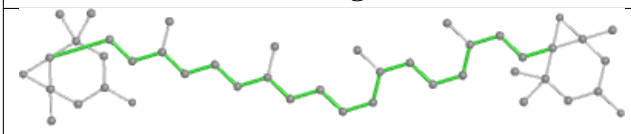
Ligand XAT 4 317



Bond lengths



Bond angles



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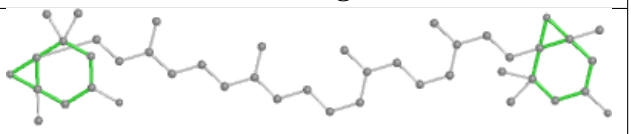
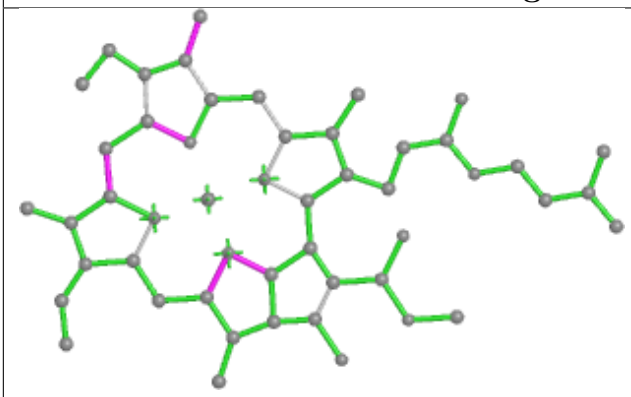
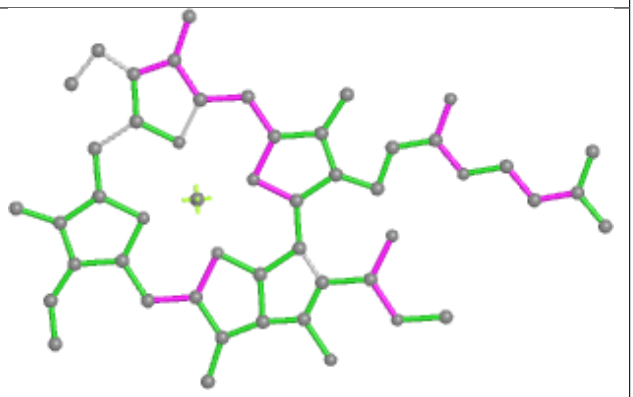


Rings

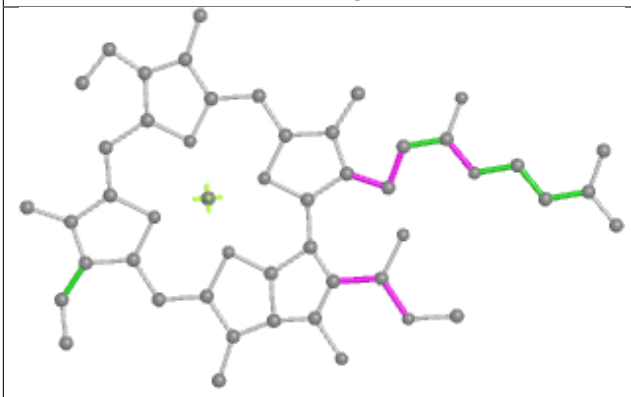
Ligand CLA N 203



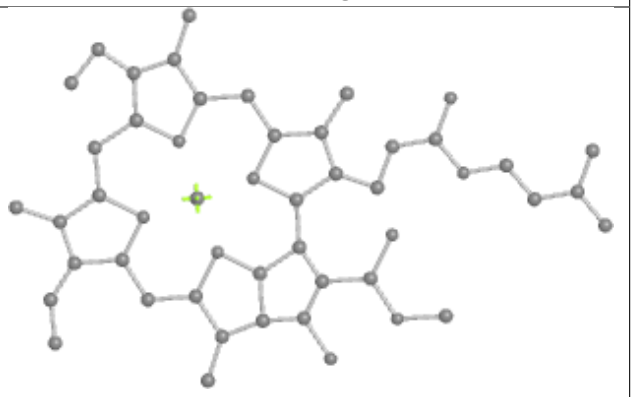
Bond lengths



Bond angles

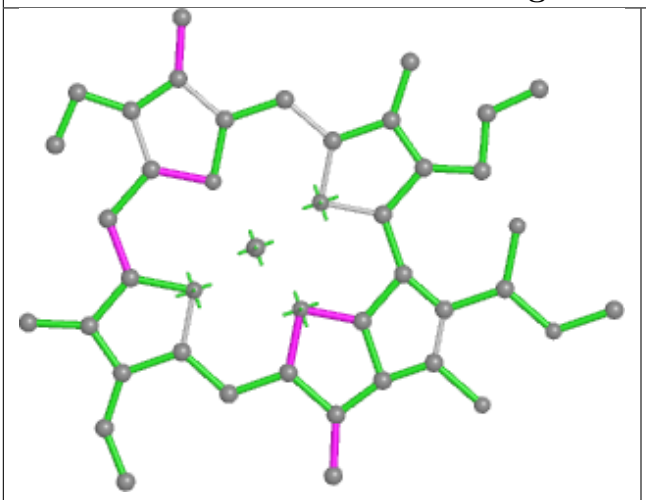


Torsions

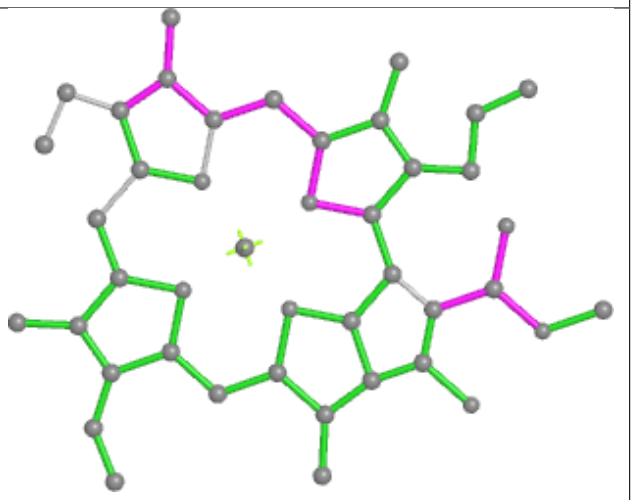


Rings

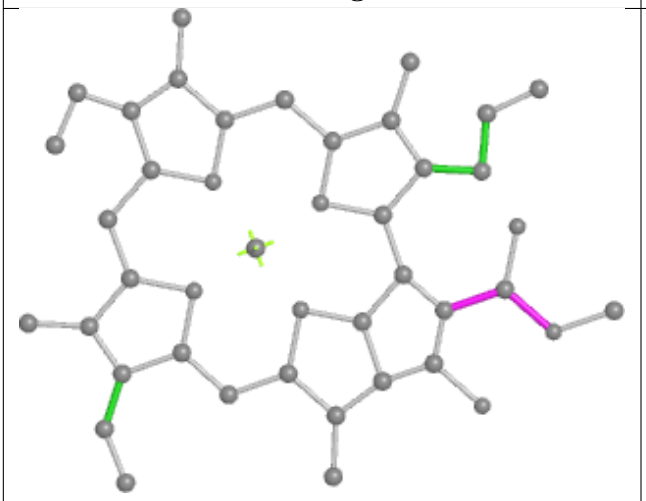
Ligand CLA 2 313



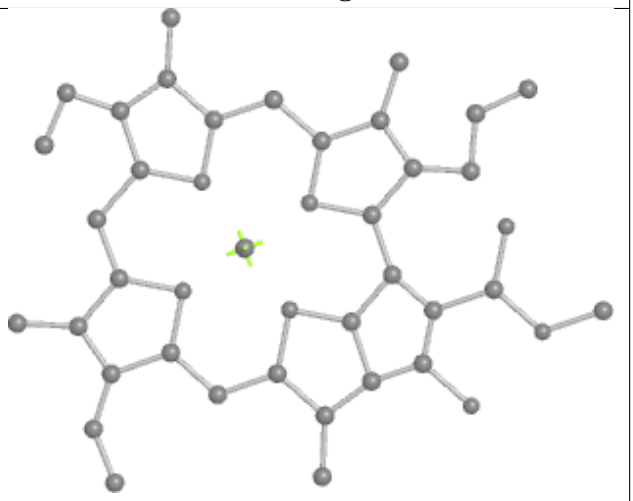
Bond lengths



Bond angles

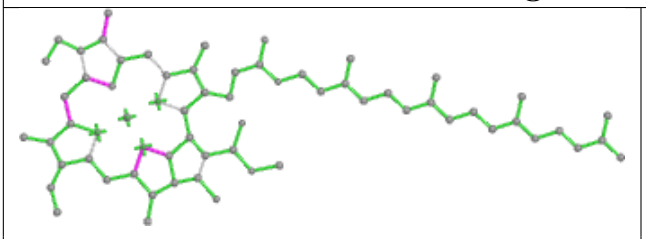


Torsions

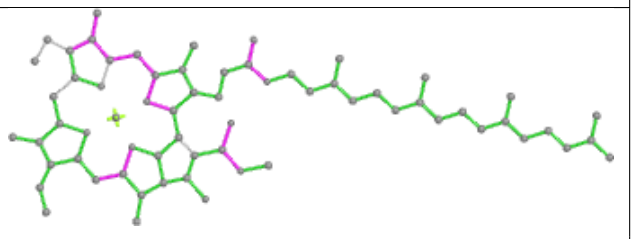


Rings

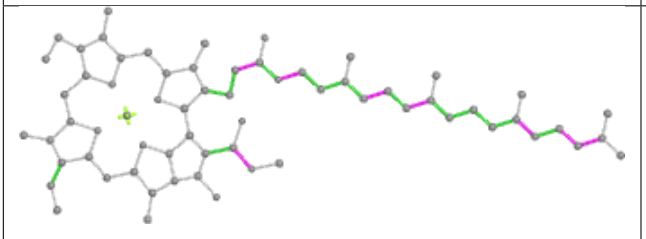
Ligand CLA B 806



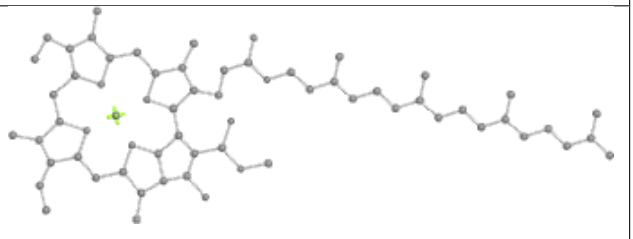
Bond lengths



Bond angles

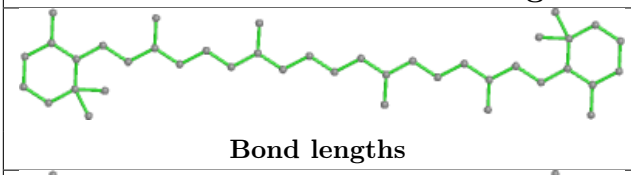


Torsions

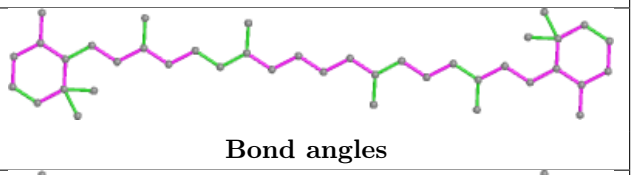


Rings

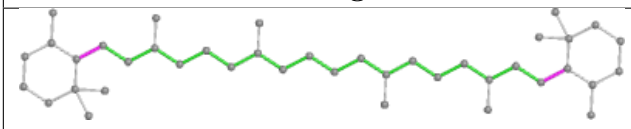
Ligand BCR 3 317



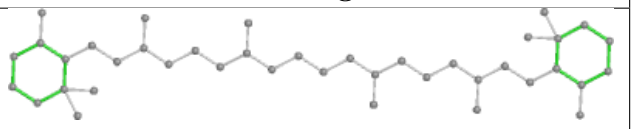
Bond lengths



Bond angles

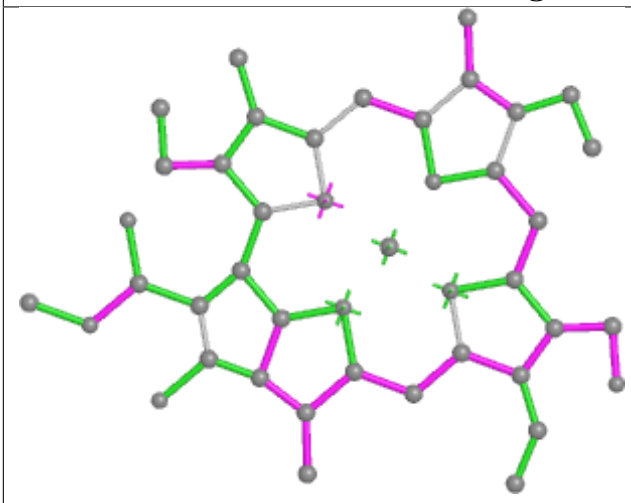


Torsions

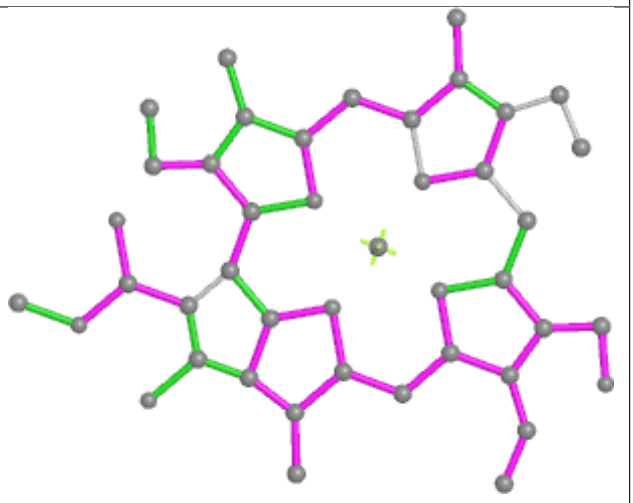


Rings

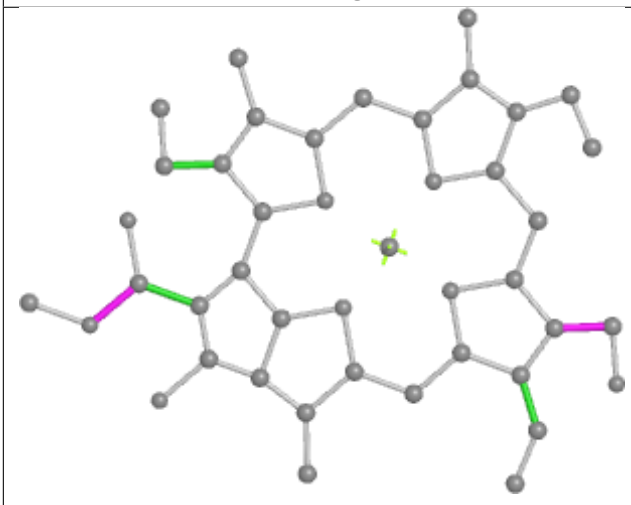
Ligand CHL 4 315



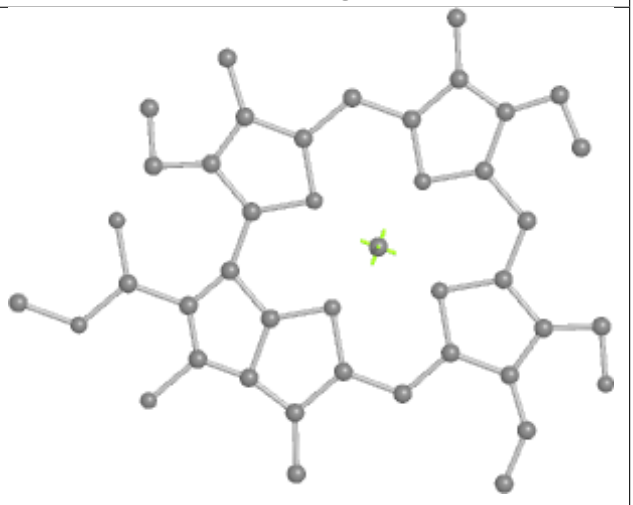
Bond lengths



Bond angles

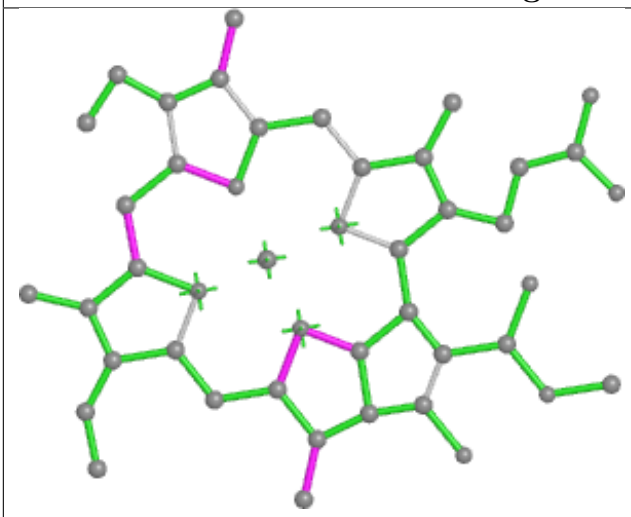


Torsions

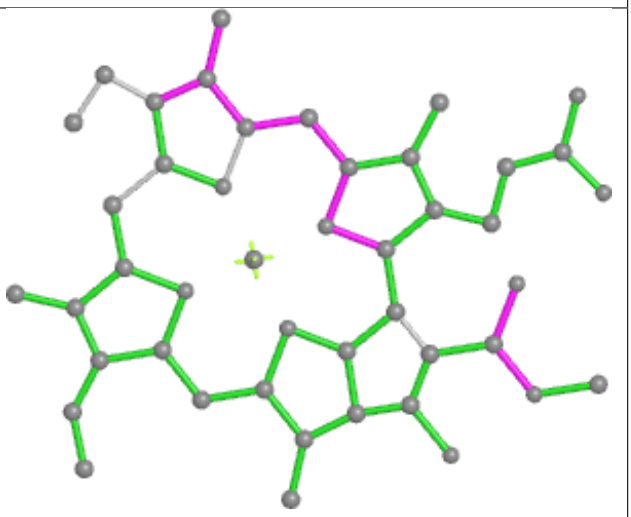


Rings

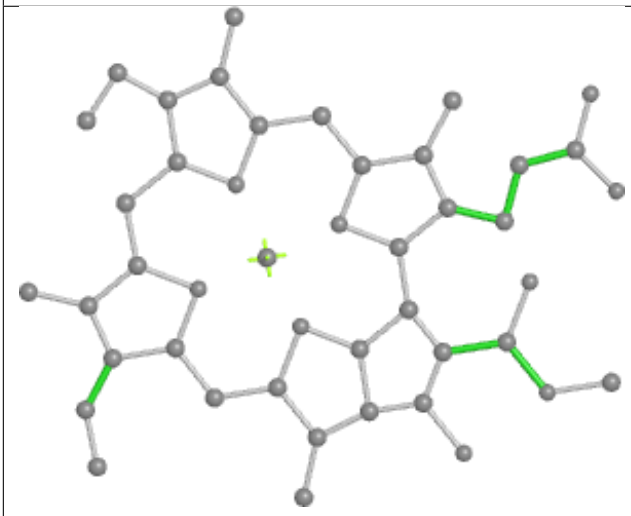
Ligand CLA K 205



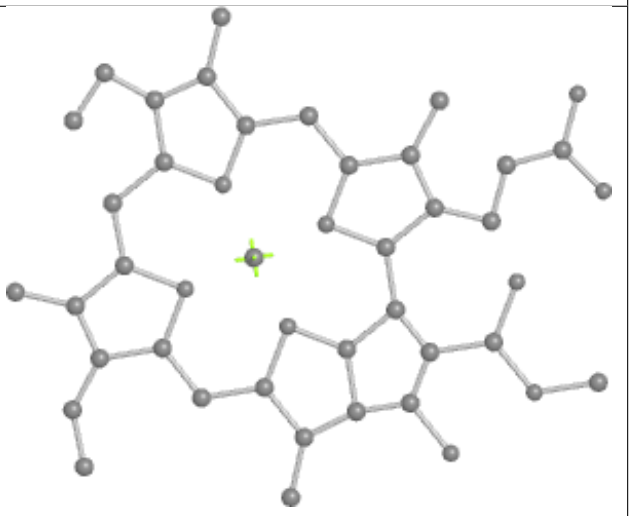
Bond lengths



Bond angles

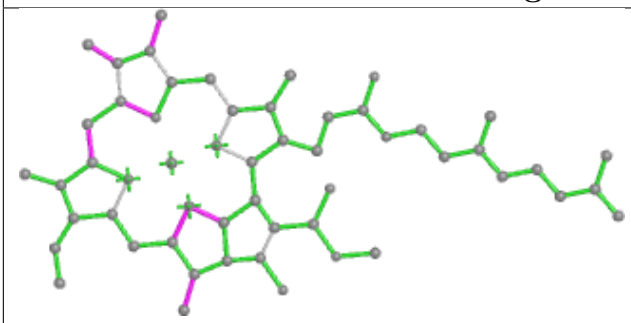


Torsions

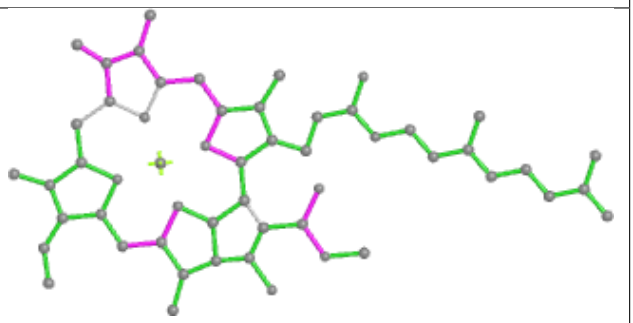


Rings

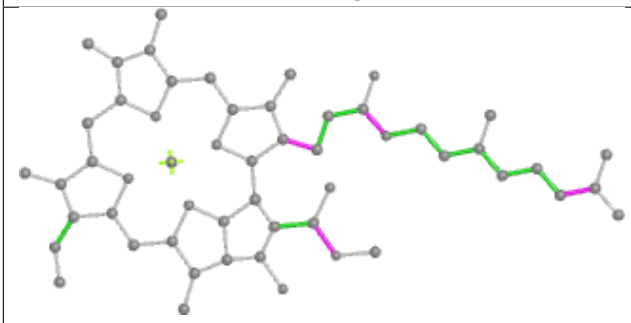
Ligand CLA B 811



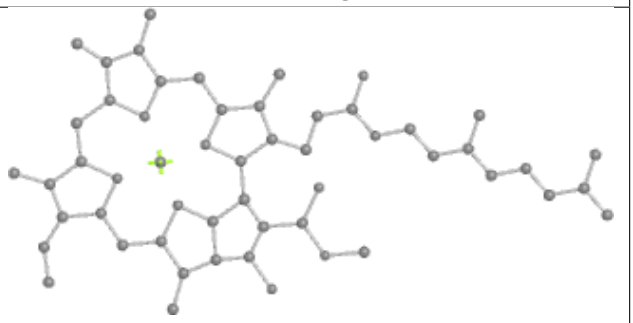
Bond lengths



Bond angles

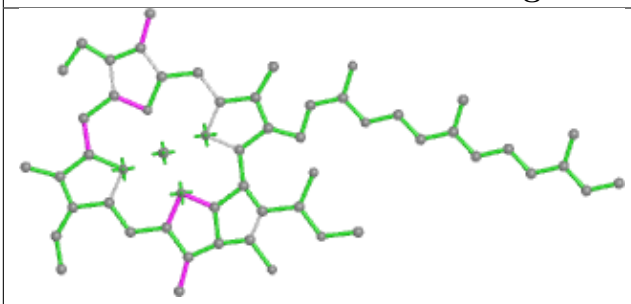


Torsions

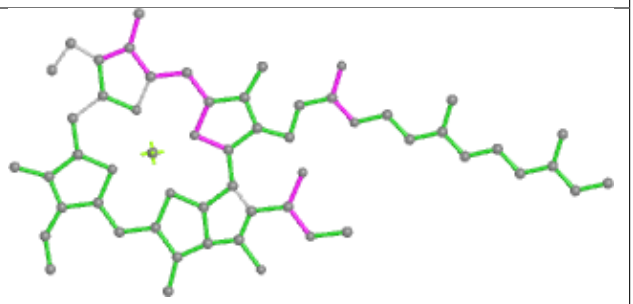


Rings

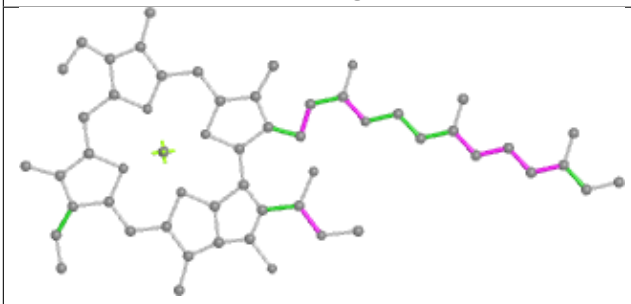
Ligand CLA H 201



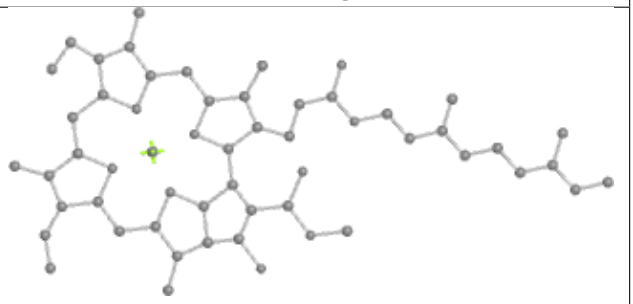
Bond lengths



Bond angles

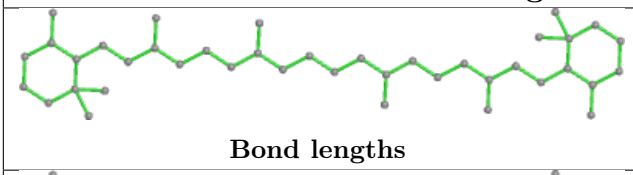


Torsions

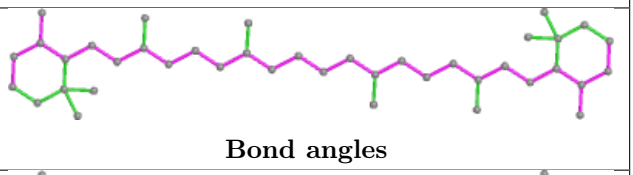


Rings

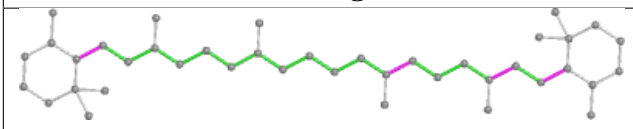
Ligand BCR J 102



Bond lengths



Bond angles



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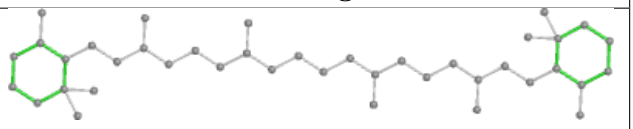
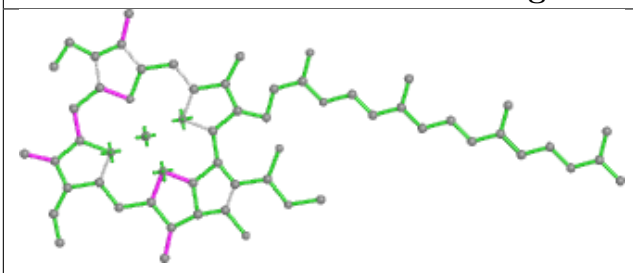


Rings

Ligand CLA 3 301



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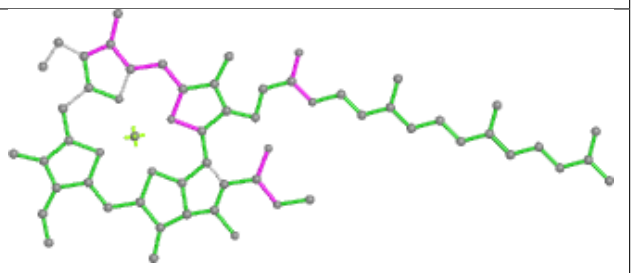
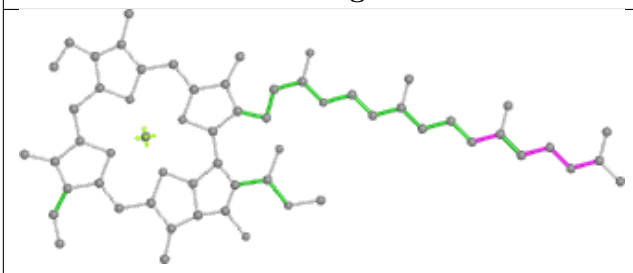


Bond angles



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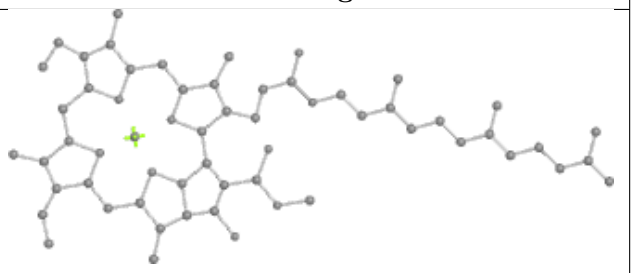
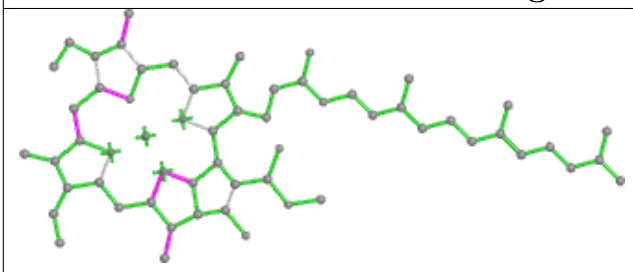
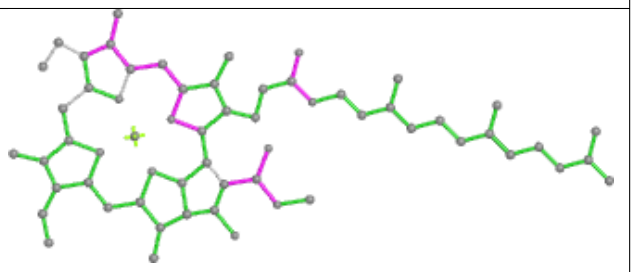


Rings

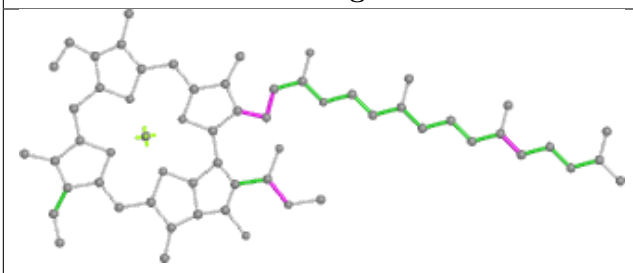
Ligand CLA 2 309



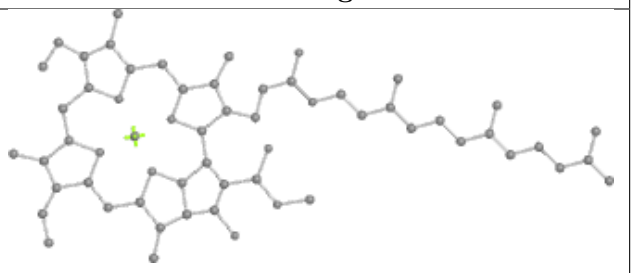
Bond lengths



Bond angles

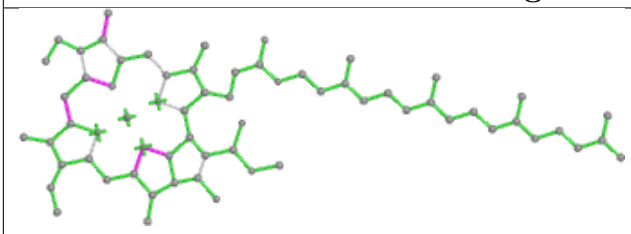


Torsions

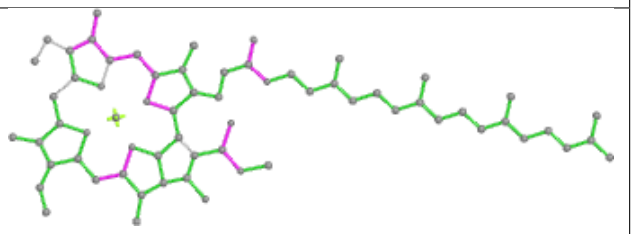


Rings

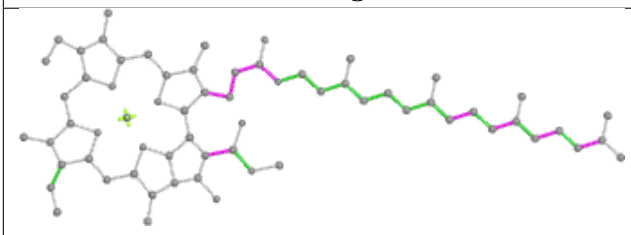
Ligand CLA B 805



Bond lengths



Bond angles



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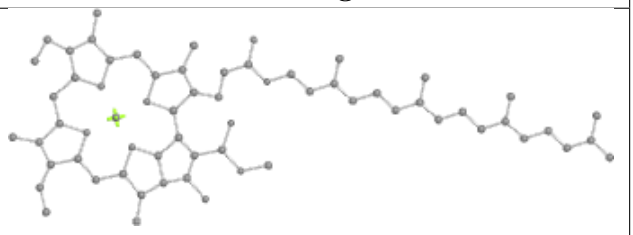
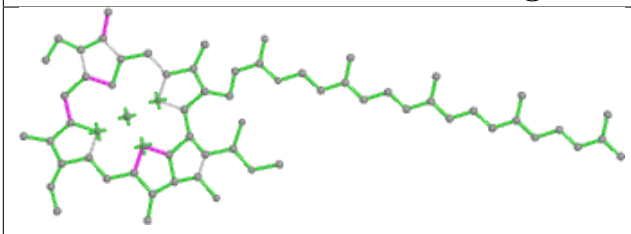
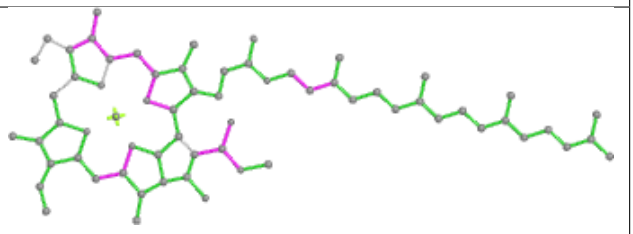


Rings

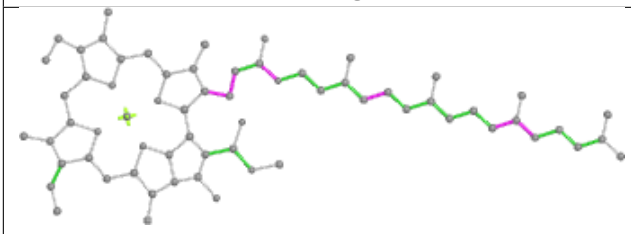
Ligand CLA A 807



Bond lengths



Bond angles



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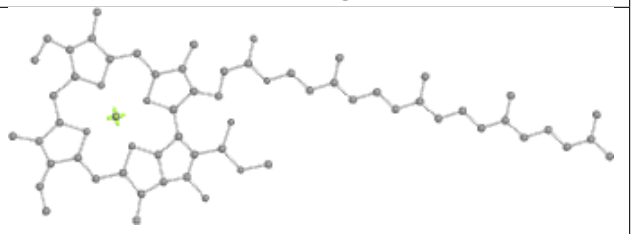
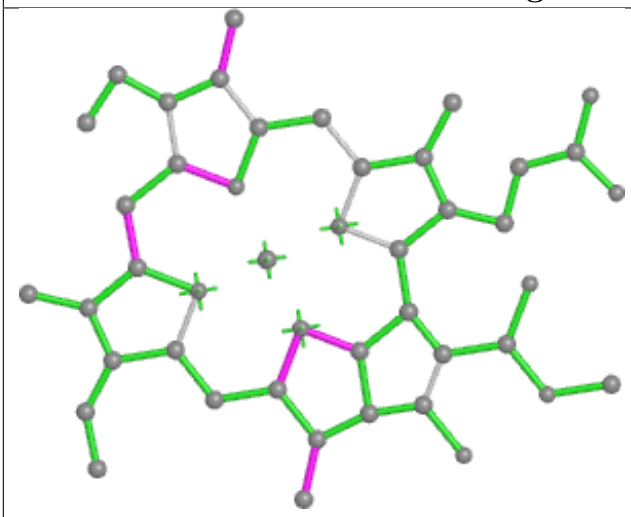
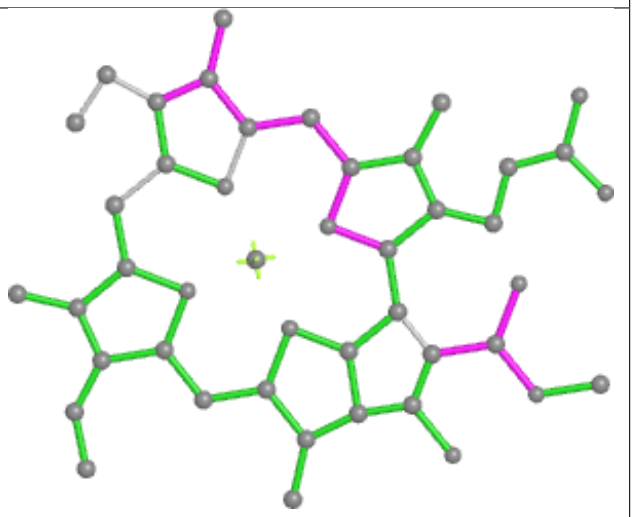


Rings

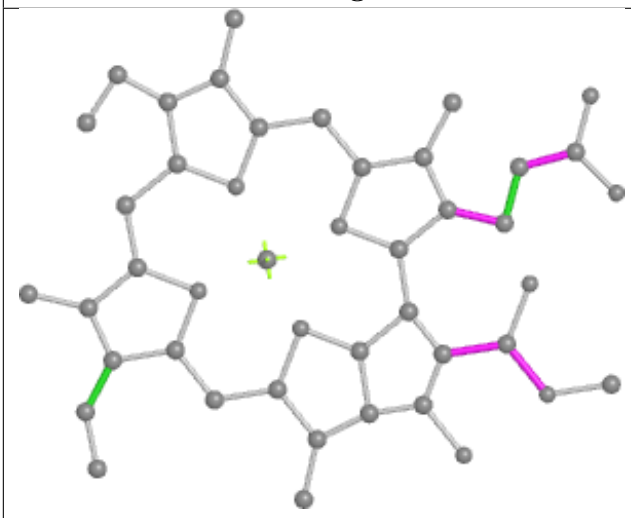
Ligand CLA L 307



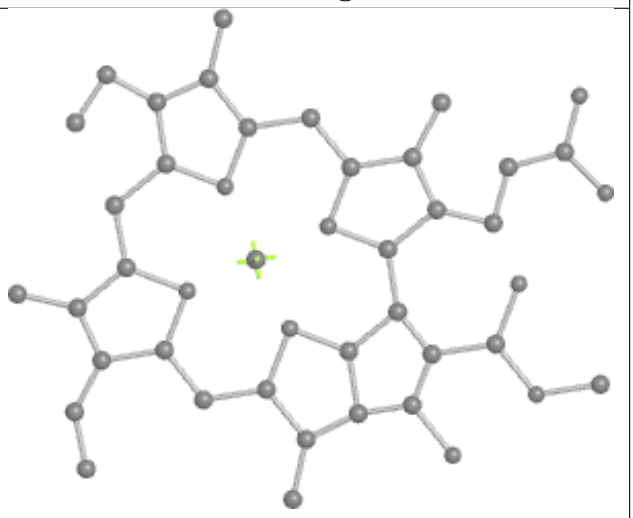
Bond lengths



Bond angles

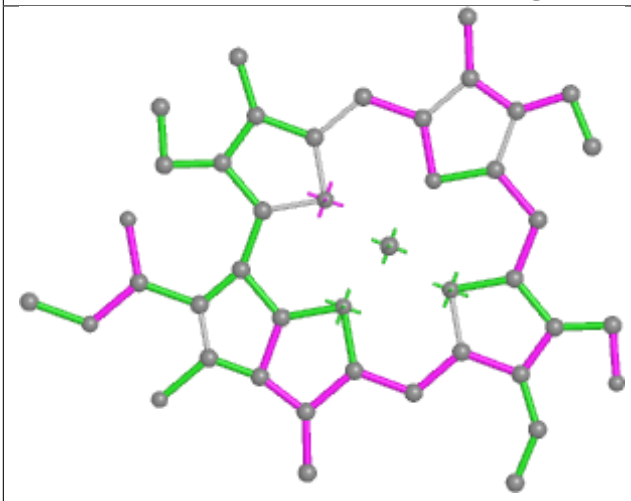


Torsions

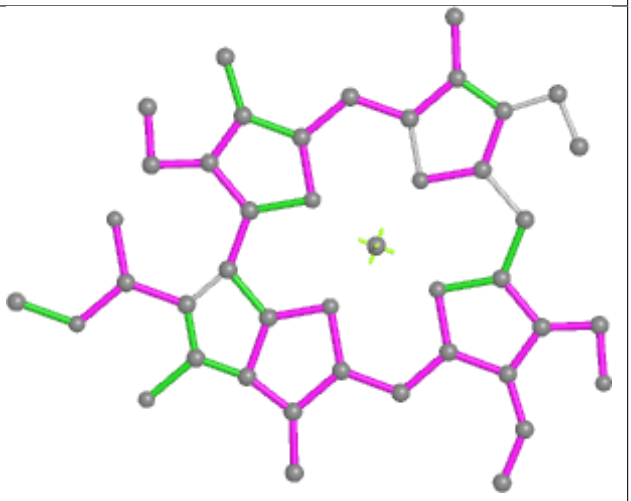


Rings

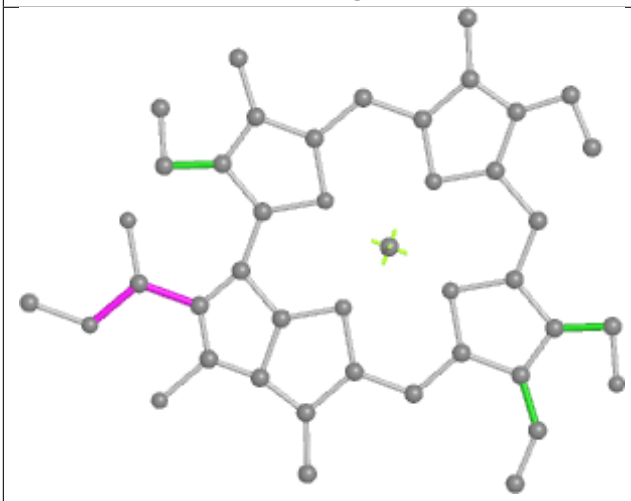
Ligand CHL 2 305



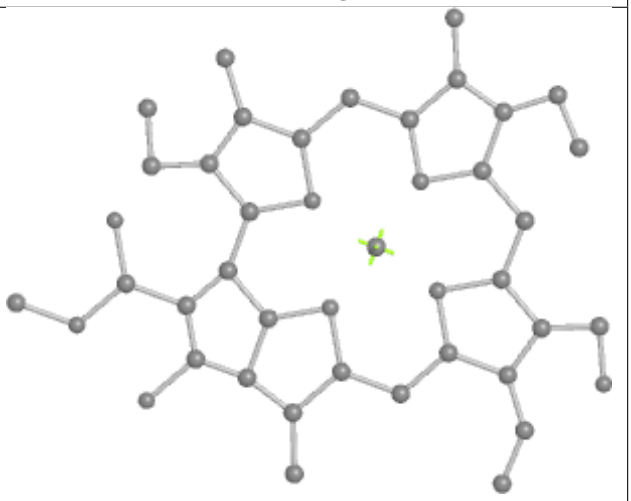
Bond lengths



Bond angles

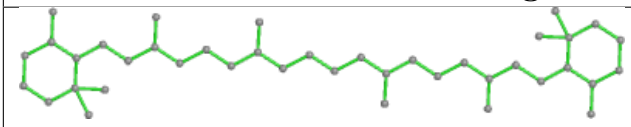


Torsions

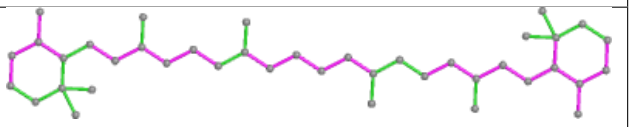


Rings

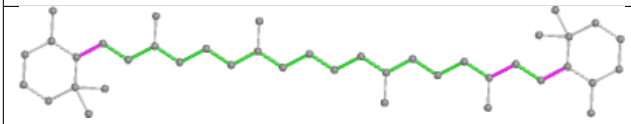
Ligand BCR A 845



Bond lengths



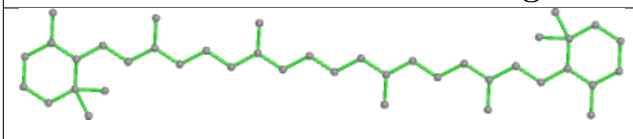
Bond angles



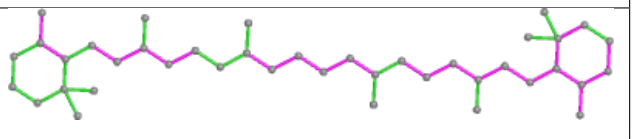
Torsions

Rings

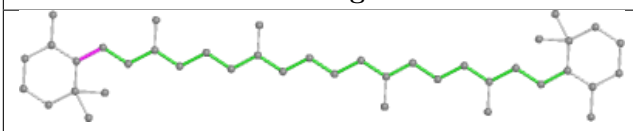
Ligand BCR B 844



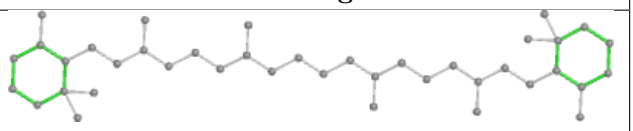
Bond lengths



Bond angles

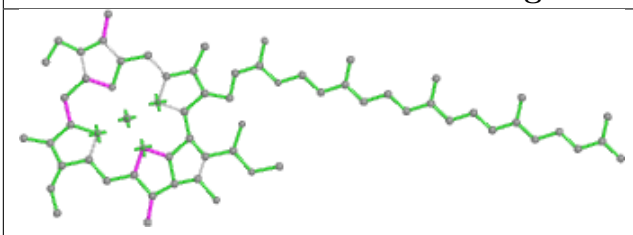


Torsions

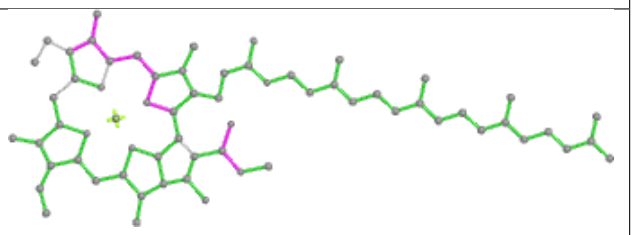


Rings

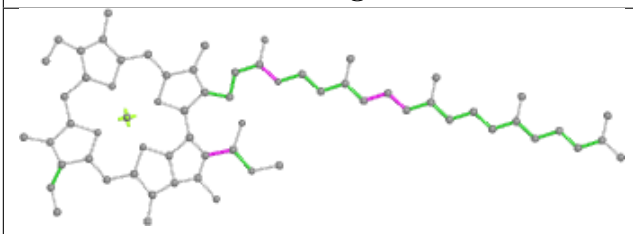
Ligand CLA B 829



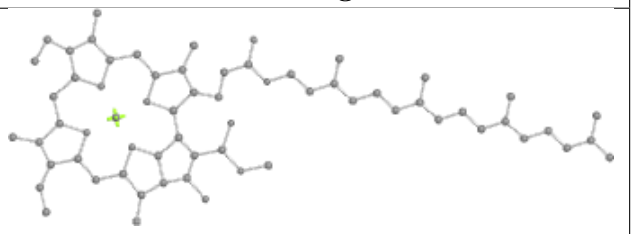
Bond lengths



Bond angles

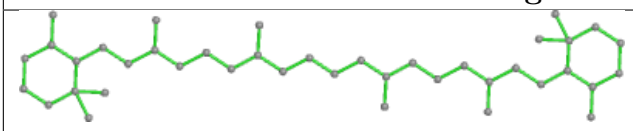


Torsions



Rings

Ligand BCR L 301



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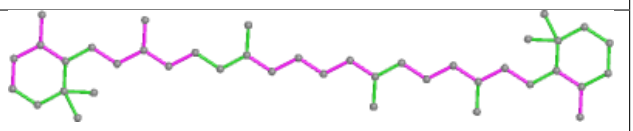
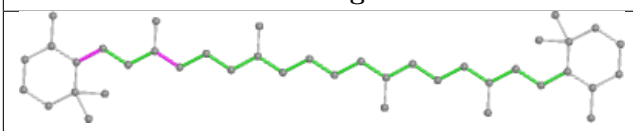
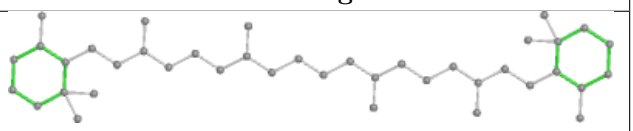


Bond angles

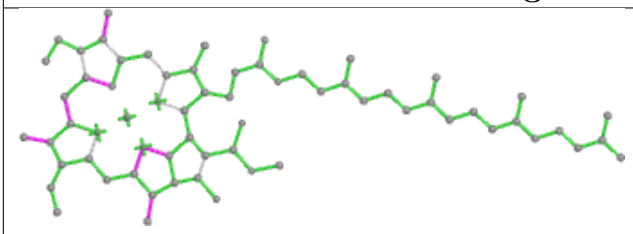


Torsions

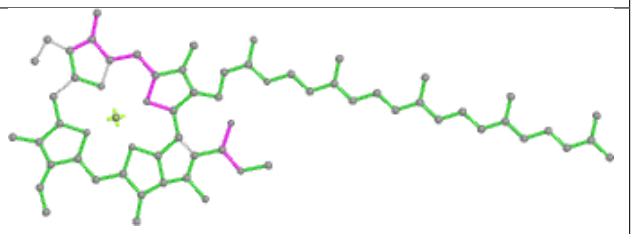


Rings

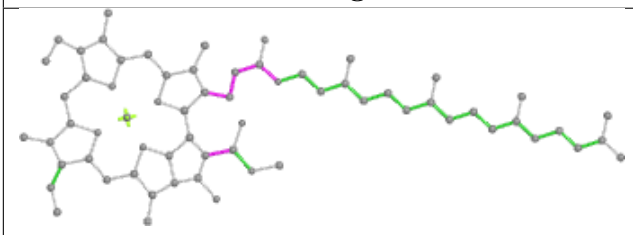
Ligand CLA A 804



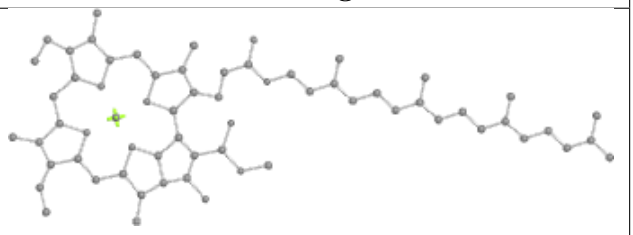
Bond lengths



Bond angles

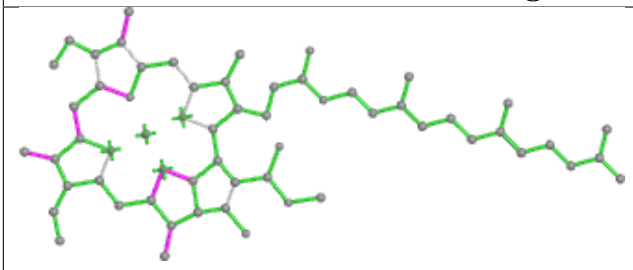


Torsions

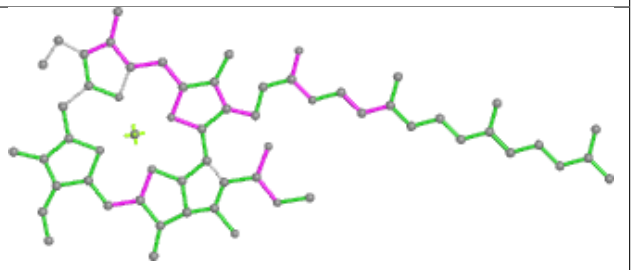


Rings

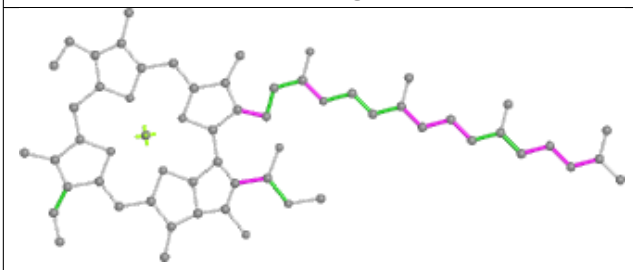
Ligand CLA B 823



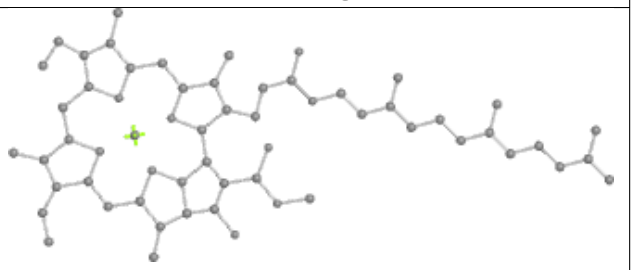
Bond lengths



Bond angles

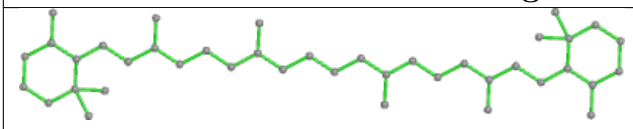


Torsions

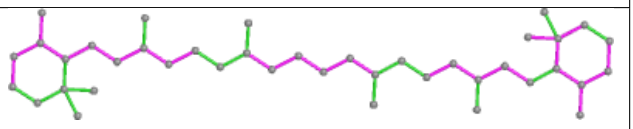


Rings

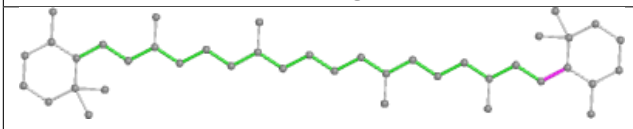
Ligand BCR A 847



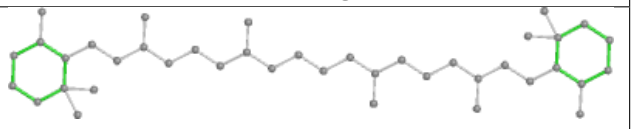
Bond lengths



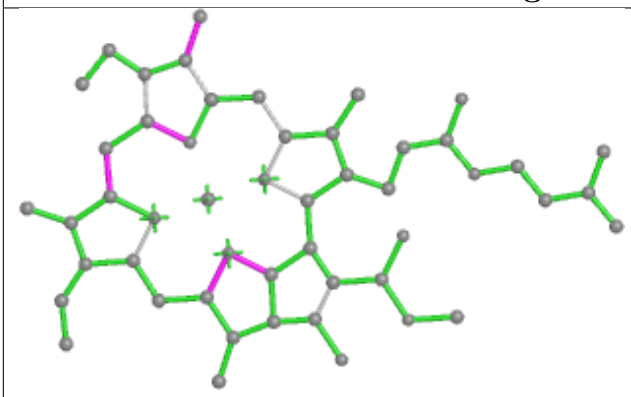
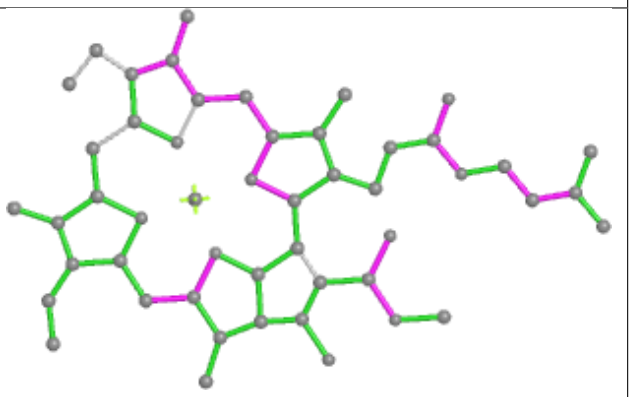
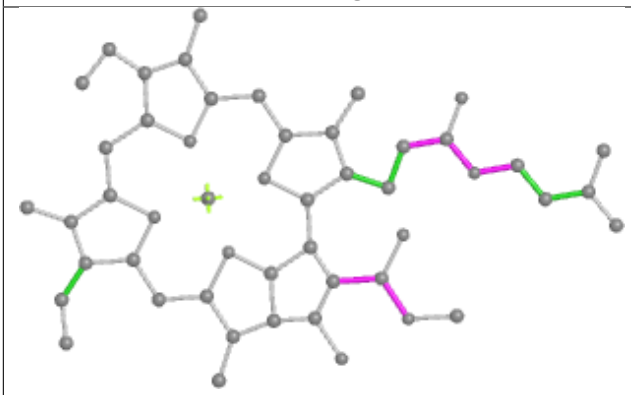
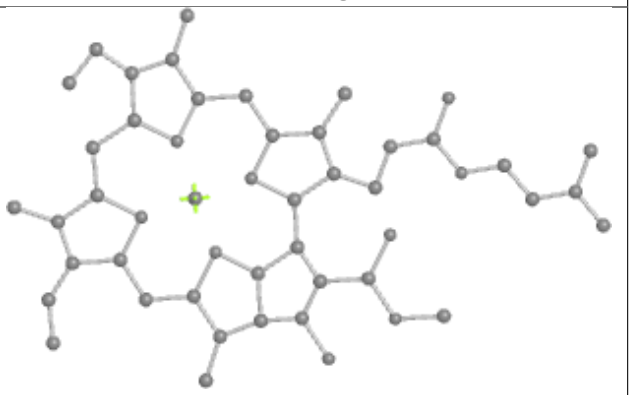
Bond angles

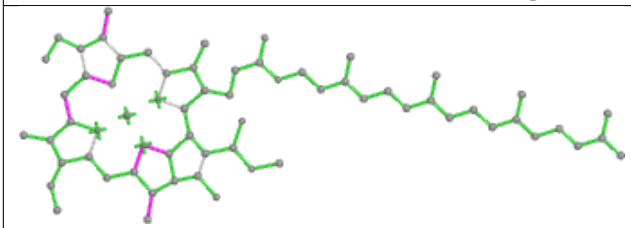
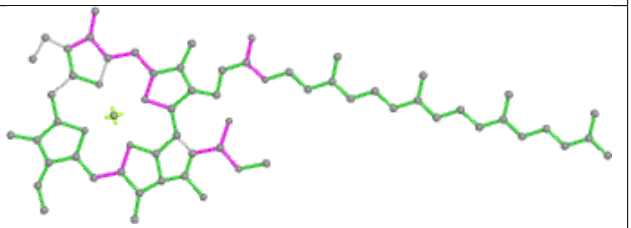
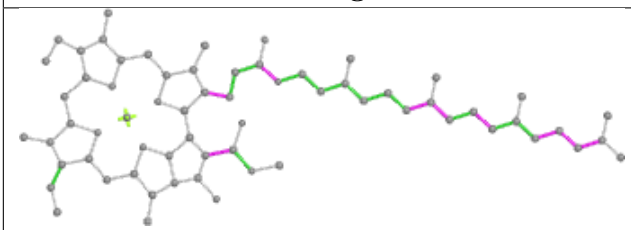
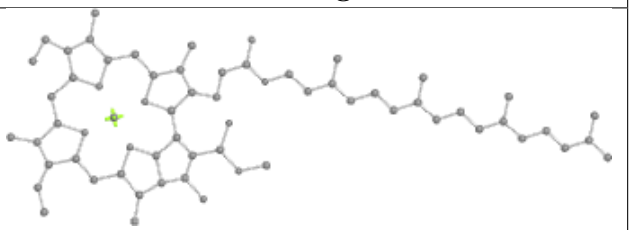


Torsions

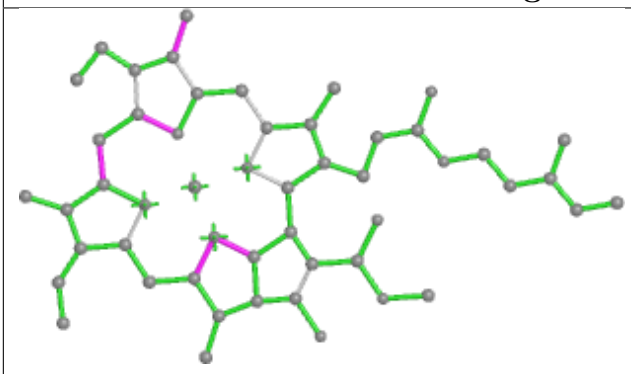


Rings

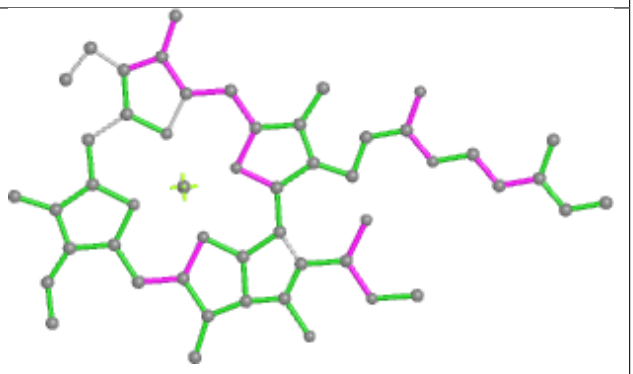
Ligand CLA A 814	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand CLA B 825	
 Bond lengths	 Bond angles
 Torsions	 Rings

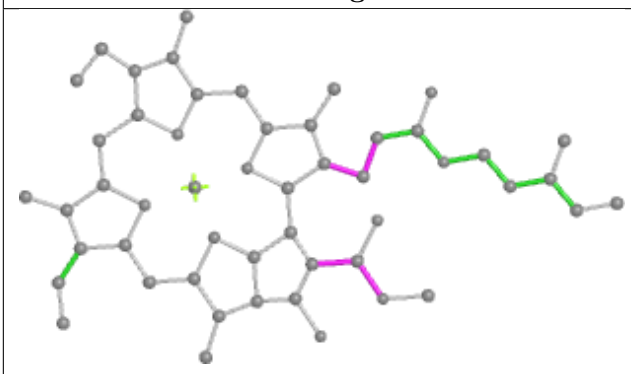
Ligand CLA A 836



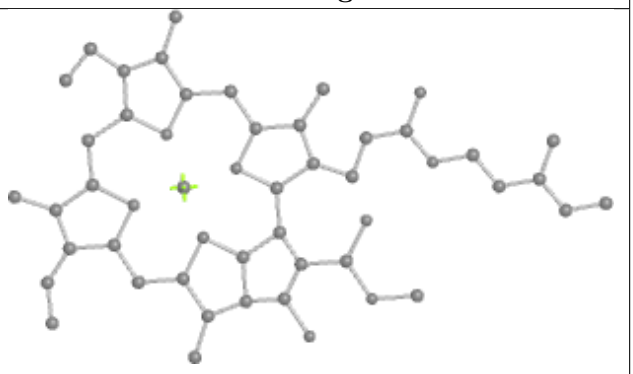
Bond lengths



Bond angles

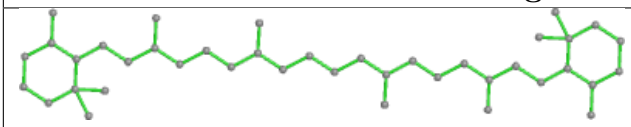


Torsions

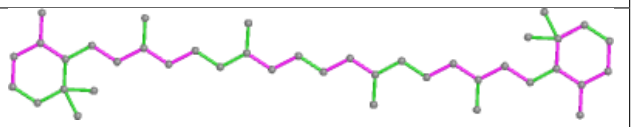


Rings

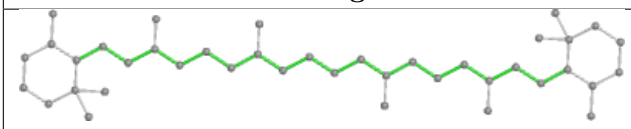
Ligand BCR L 306



Bond lengths



Bond angles



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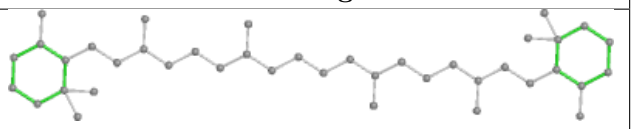
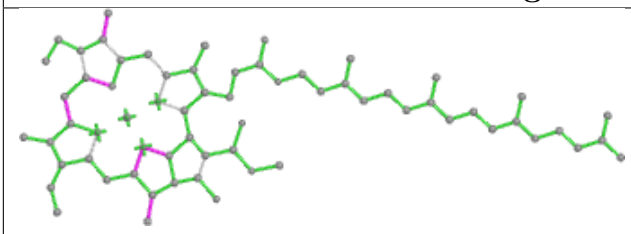
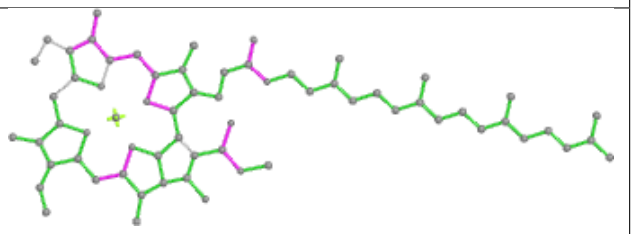


Rings

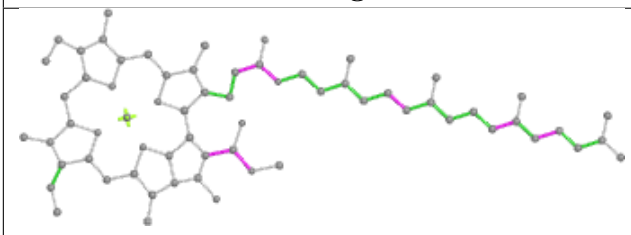
Ligand CLA A 833



Bond lengths



Bond angles



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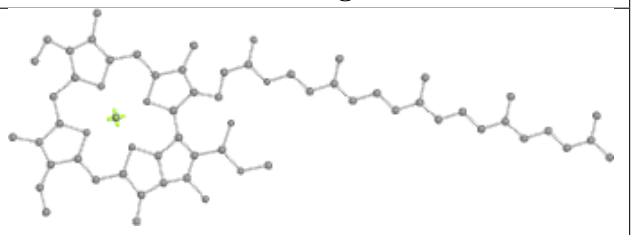
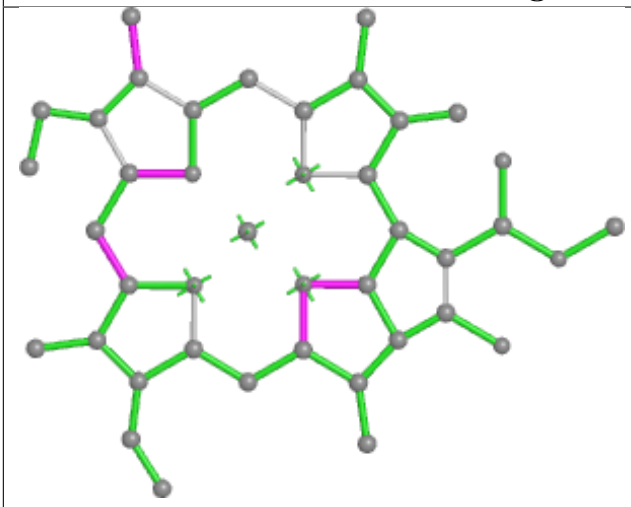
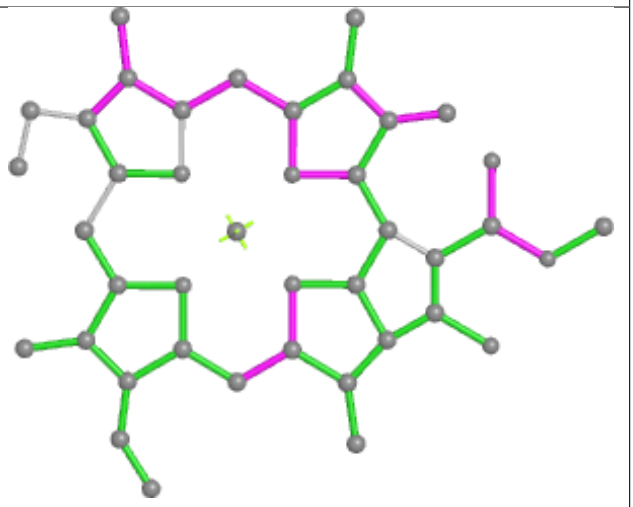


Rings

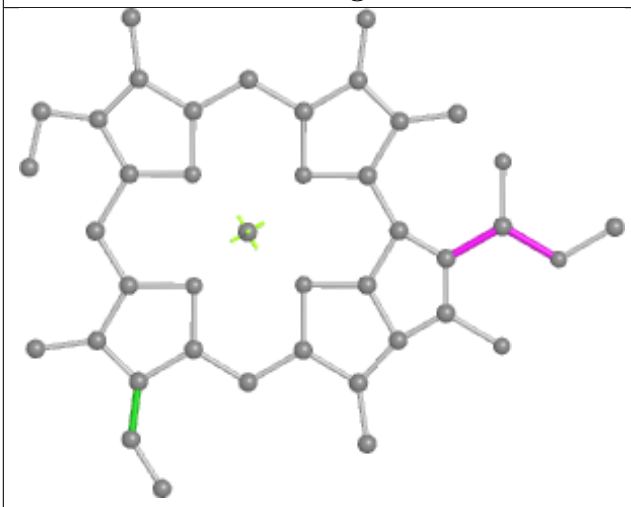
Ligand CLA 2 310



Bond lengths



Bond angles



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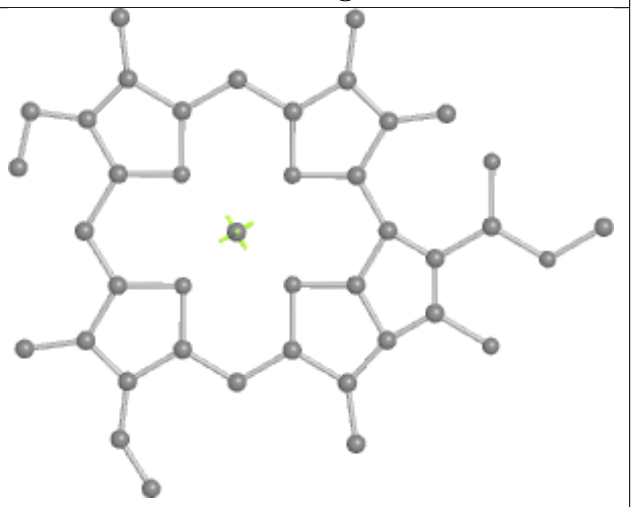
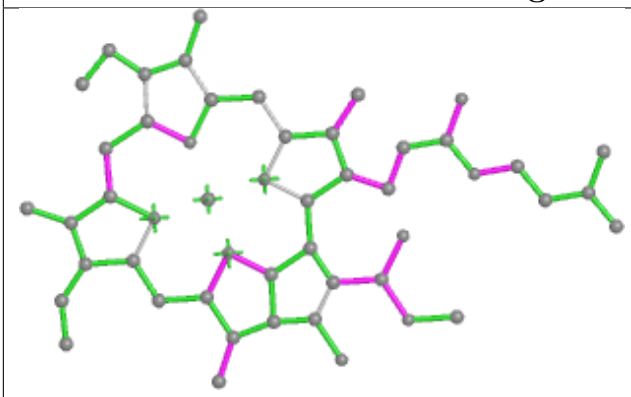
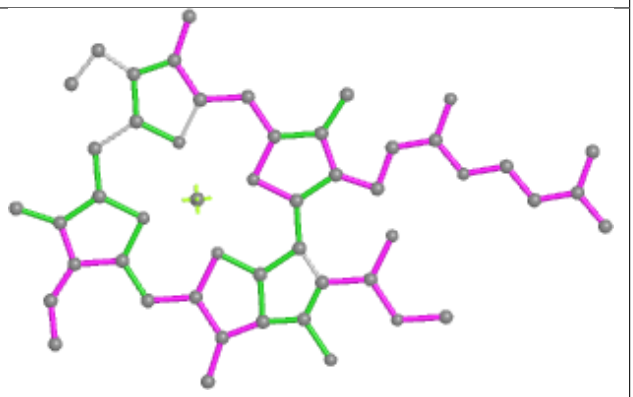


Rings

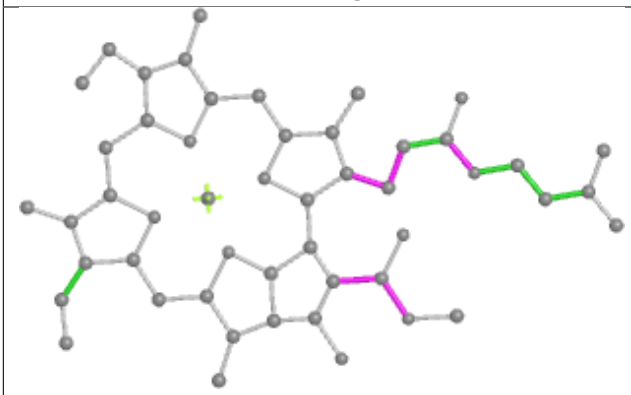
Ligand CLA 4 304



Bond lengths



Bond angles



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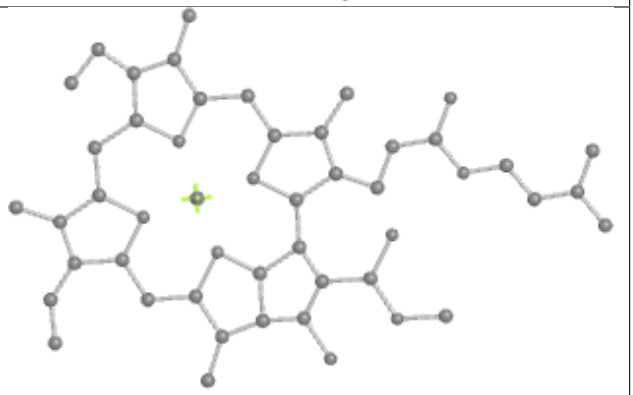
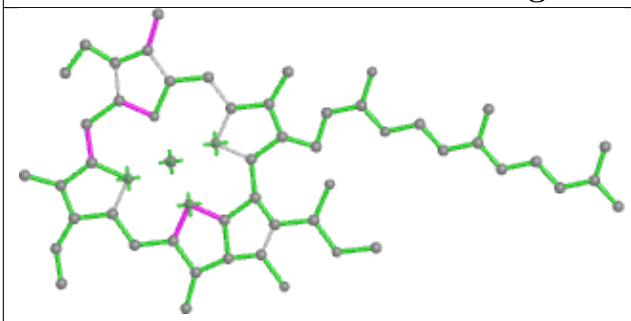
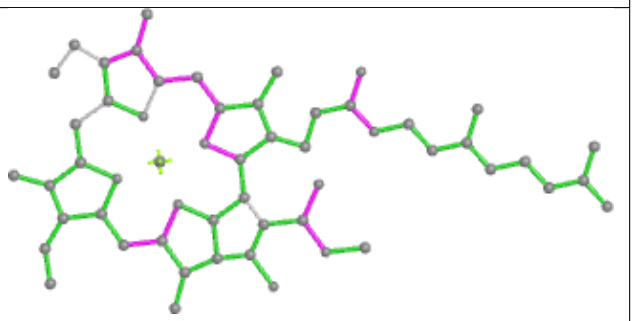


Rings

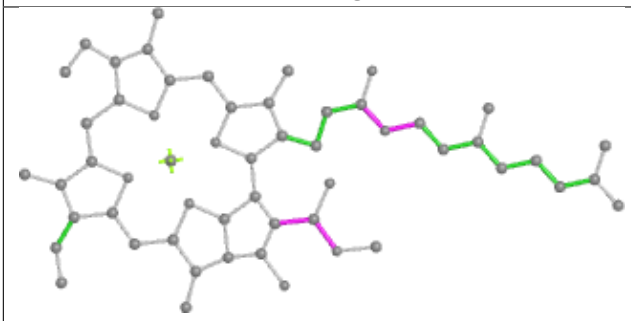
Ligand CLA 4 310



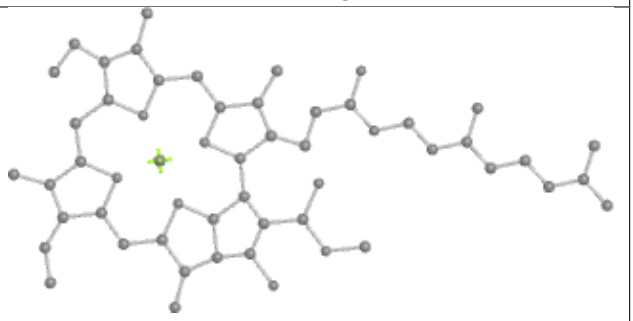
Bond lengths



Bond angles

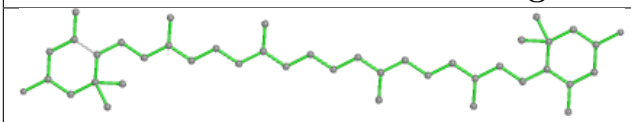


Torsions

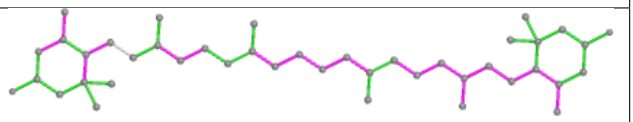


Rings

Ligand LUT 3 315



Bond lengths



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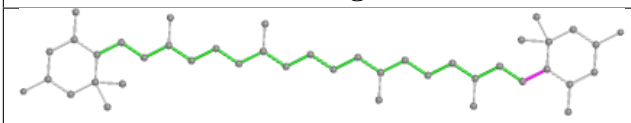
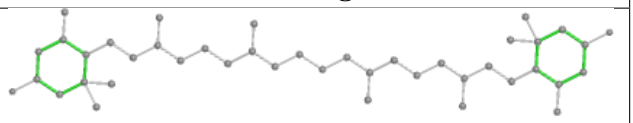
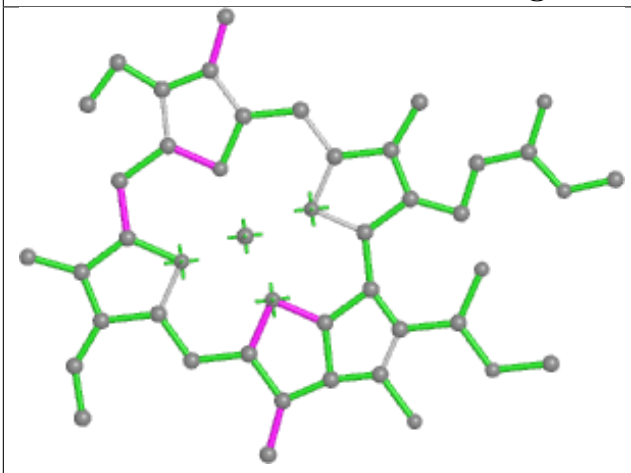


Torsions

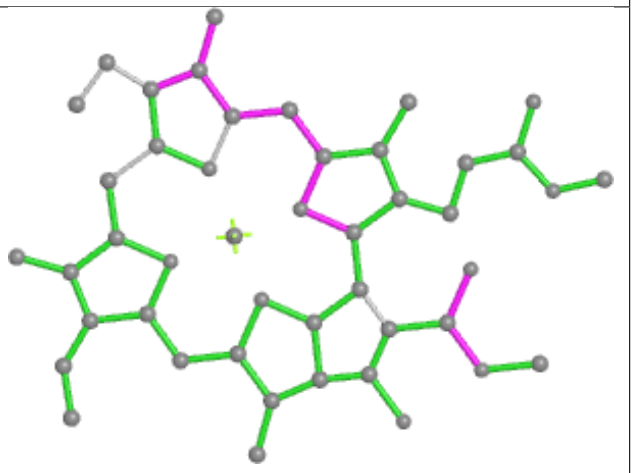


Rings

Ligand CLA 1 314



Bond lengths



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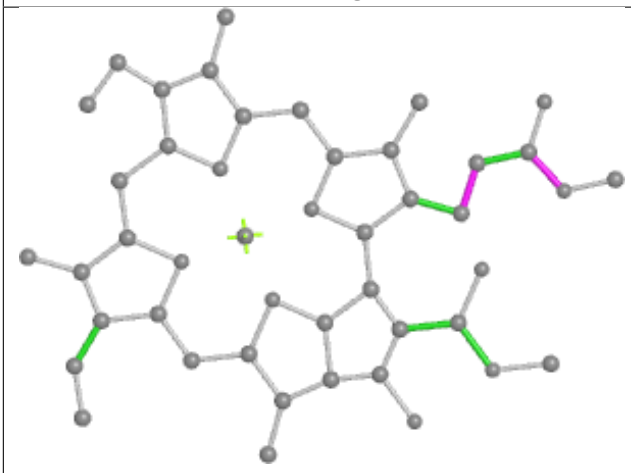
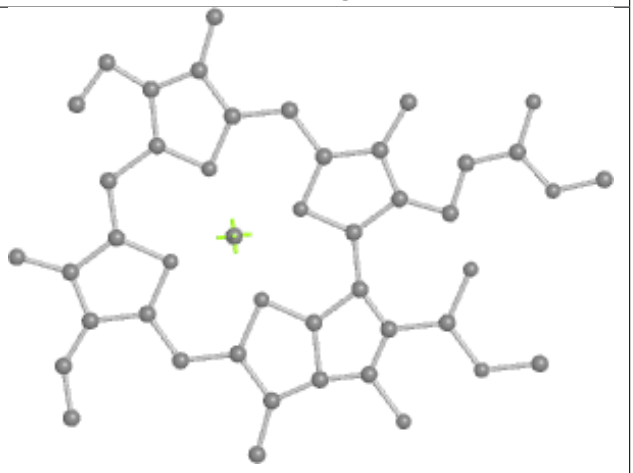
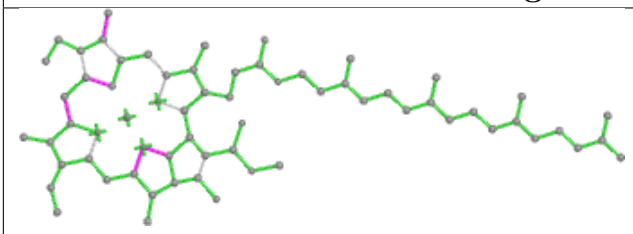


Torsions

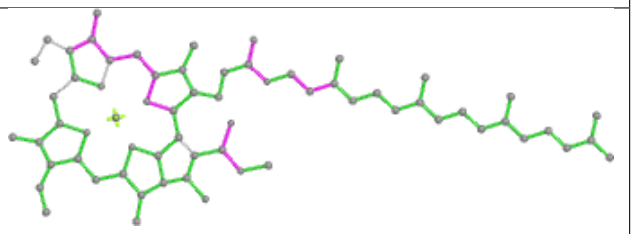


Rings

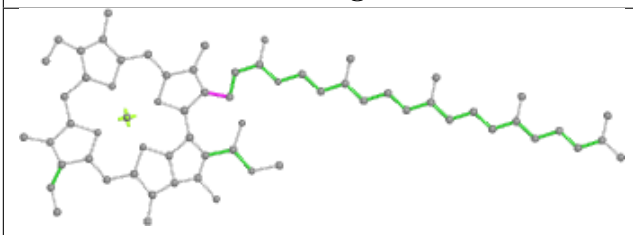
Ligand CLA B 826



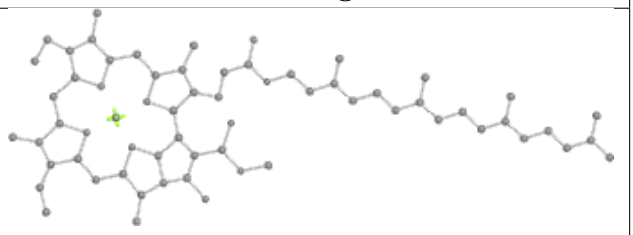
Bond lengths



Bond angles

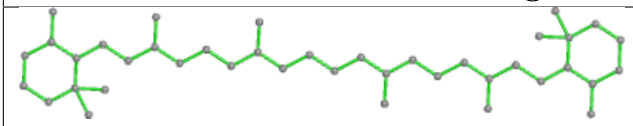


Torsions

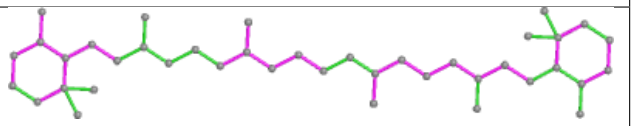


Rings

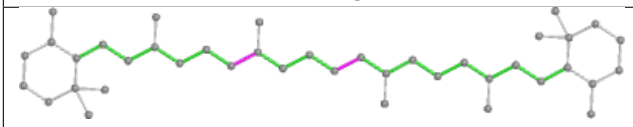
Ligand BCR F 801



Bond lengths



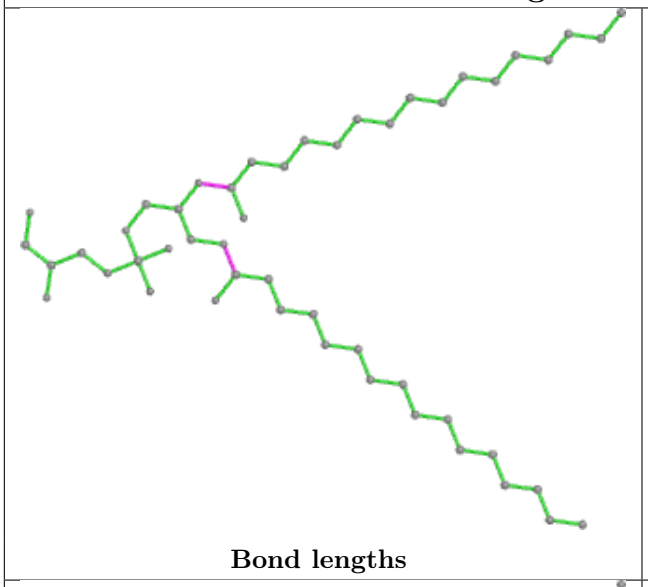
Bond angles



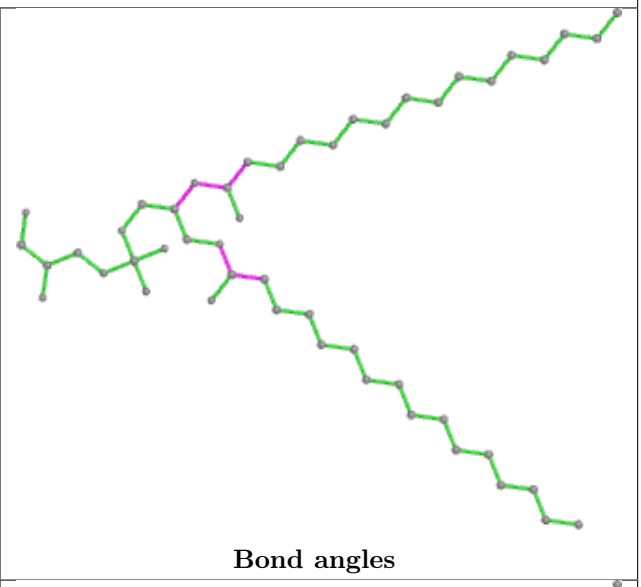
Torsions

Rings

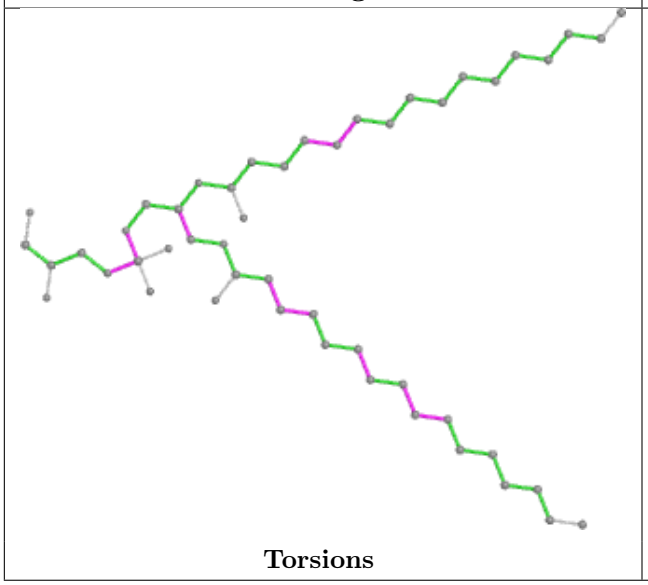
Ligand LHG 1 318



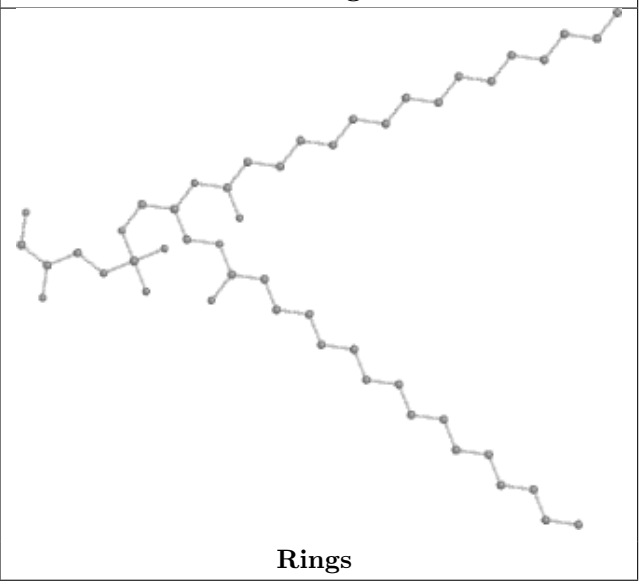
Bond lengths



Bond angles

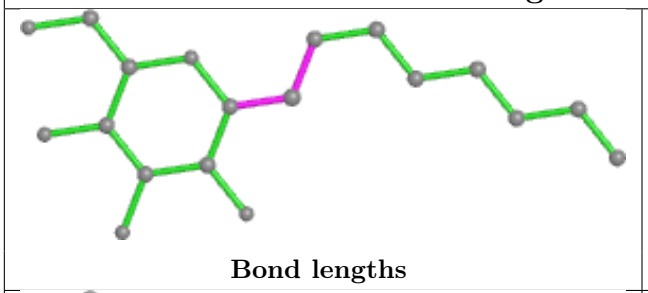


Torsions

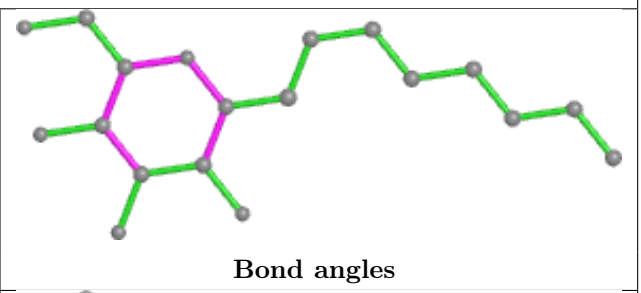


Rings

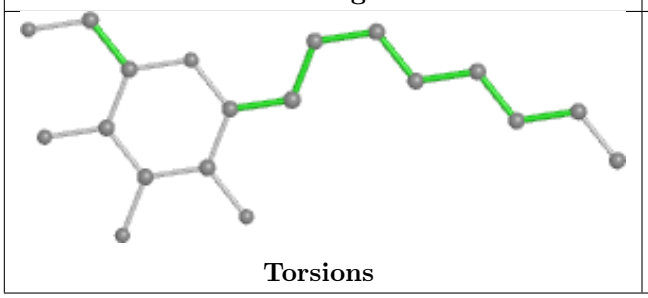
Ligand HTG 1 322



Bond lengths



Bond angles



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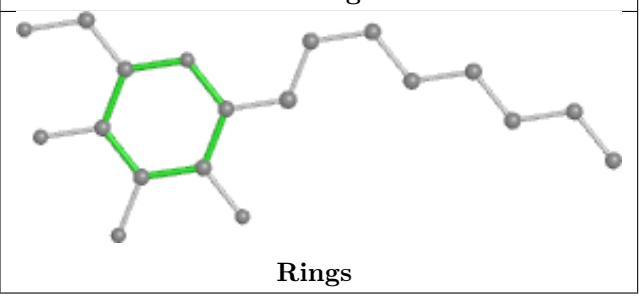
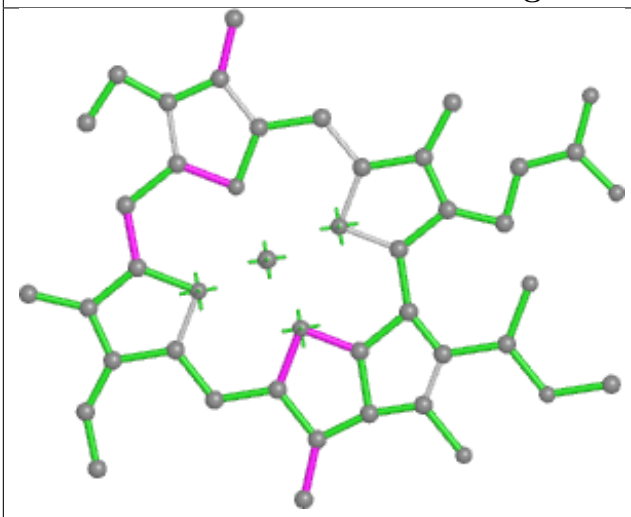
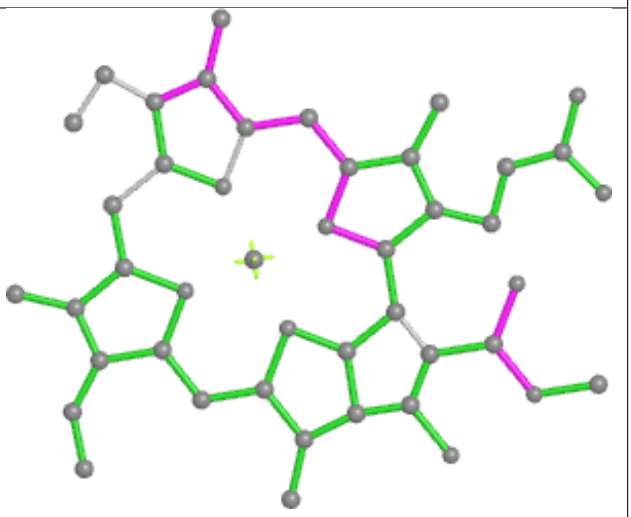


Rings

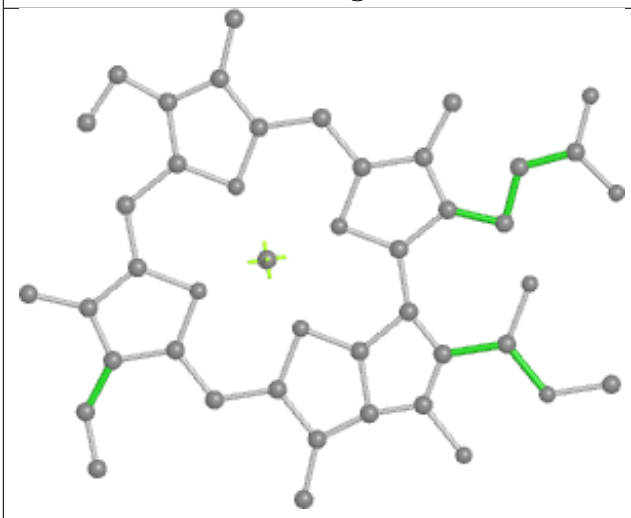
Ligand CLA A 815



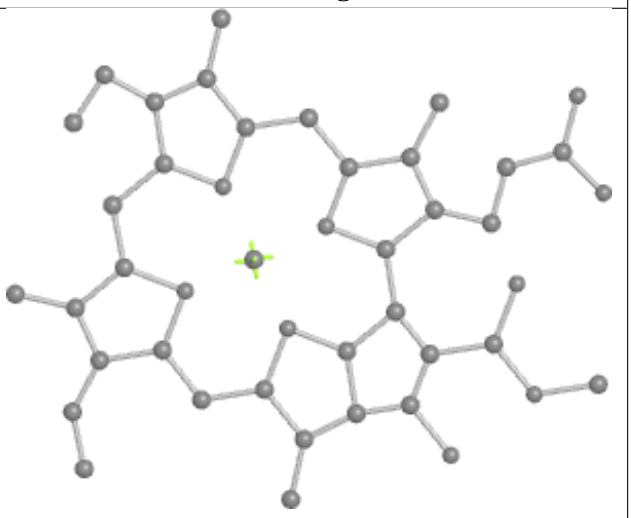
Bond lengths



Bond angles

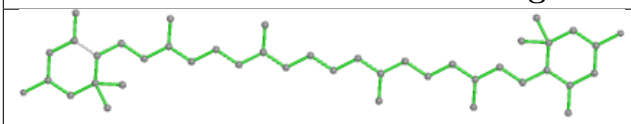


Torsions

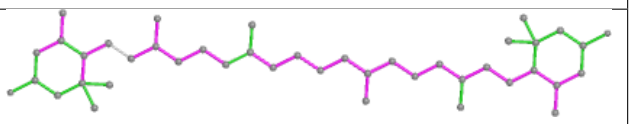


Rings

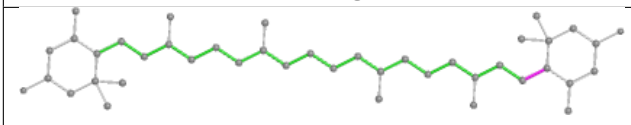
Ligand LUT 2 315



Bond lengths



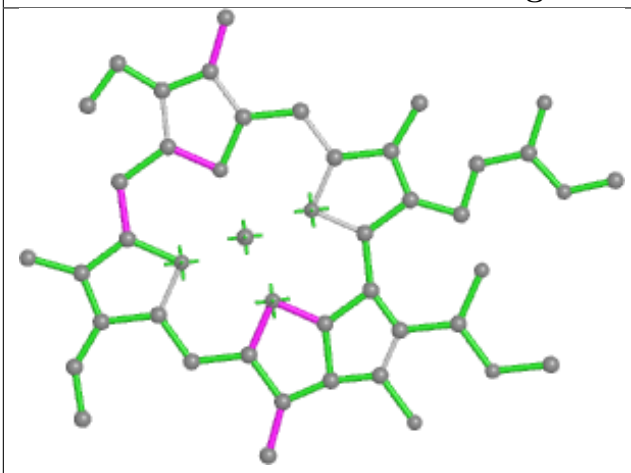
Bond angles



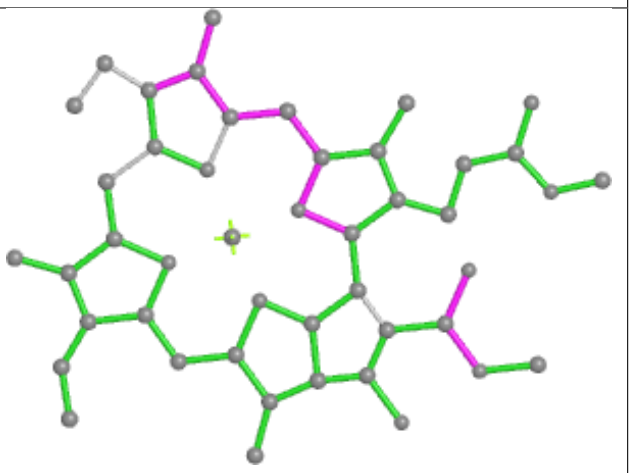
Torsions

Rings

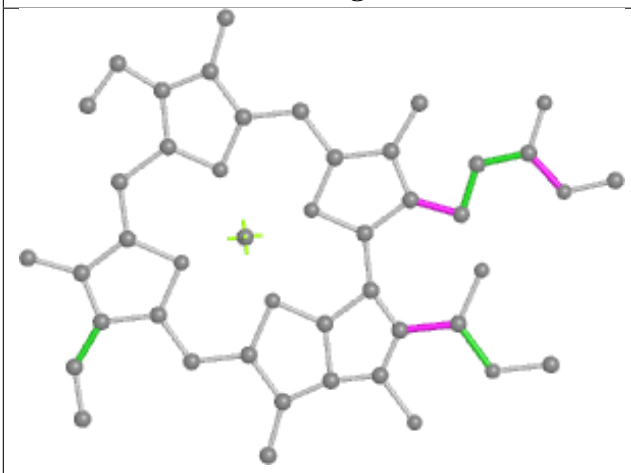
Ligand CLA F 805



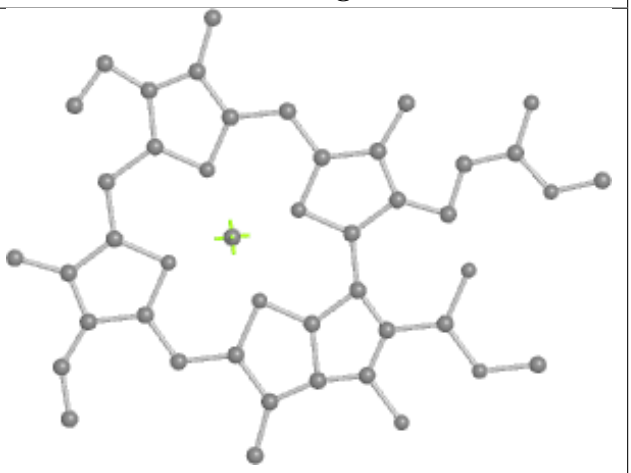
Bond lengths



Bond angles

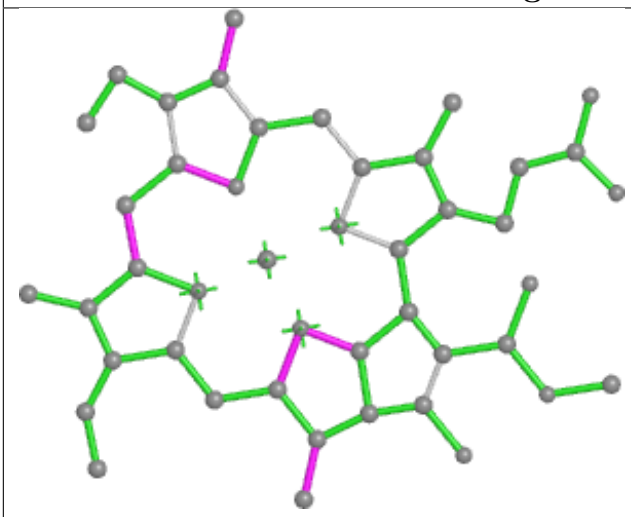


Torsions

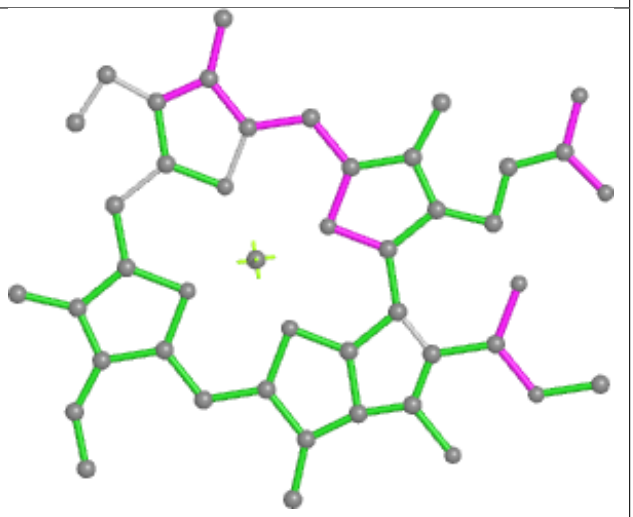


Rings

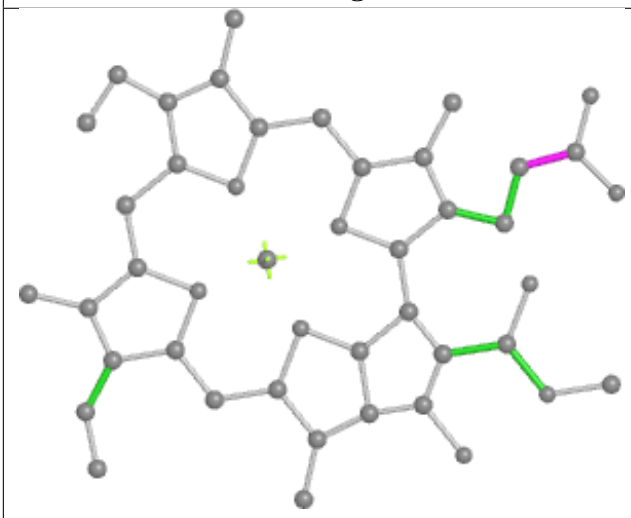
Ligand CLA A 819



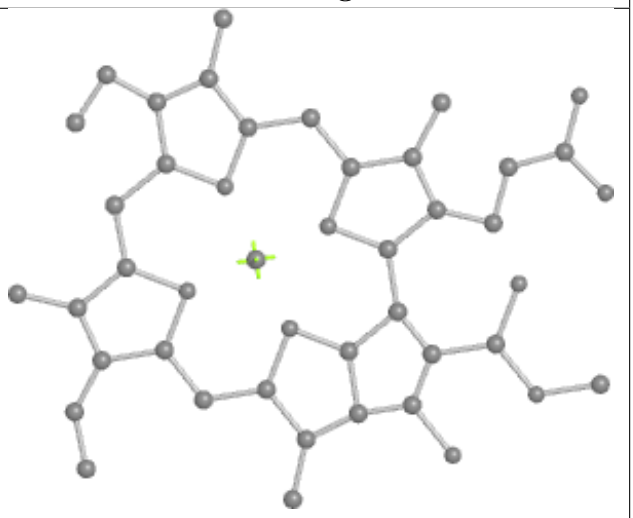
Bond lengths



Bond angles

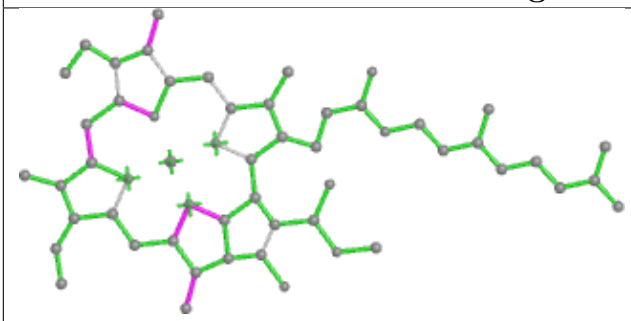


Torsions



Rings

Ligand CLA 3 311



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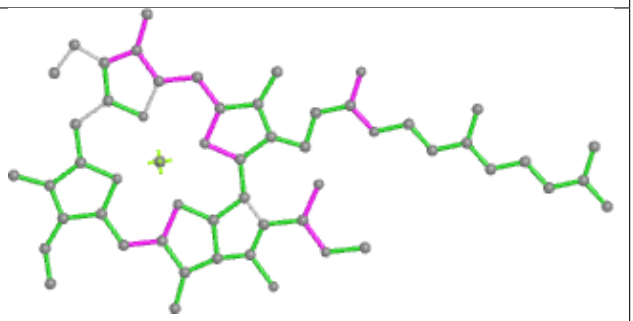
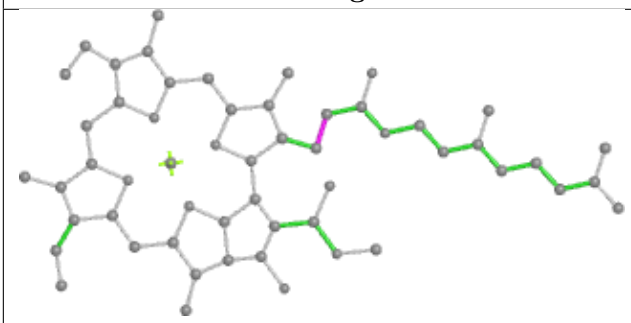
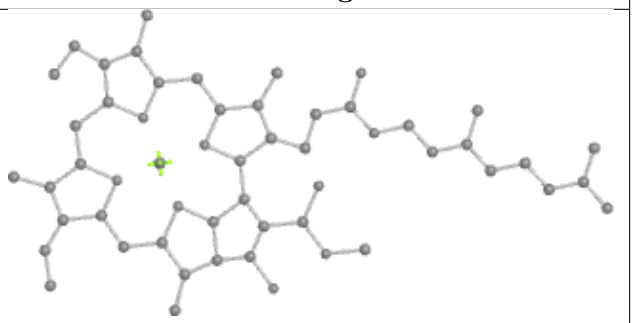


Bond angles

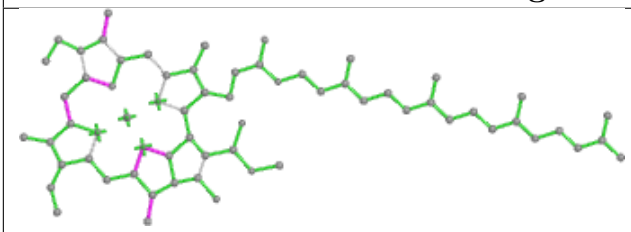


Torsions

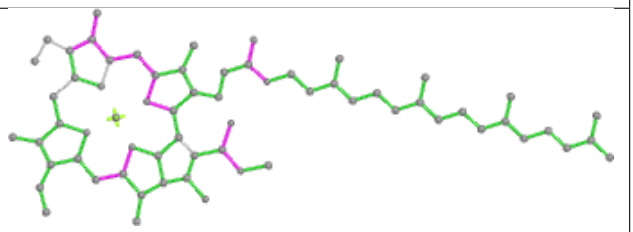


Rings

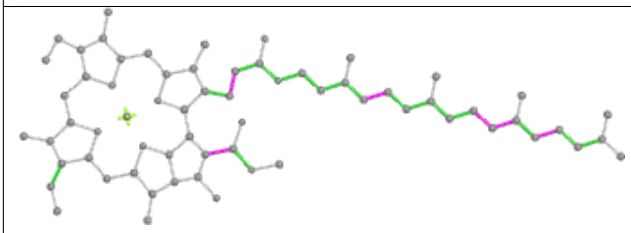
Ligand CLA 2 302



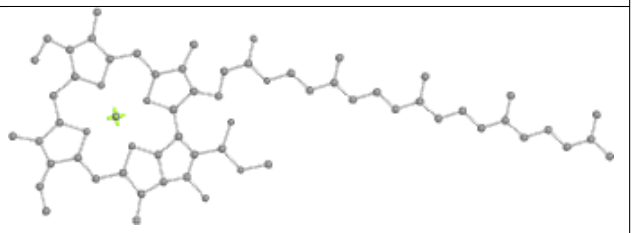
Bond lengths



Bond angles

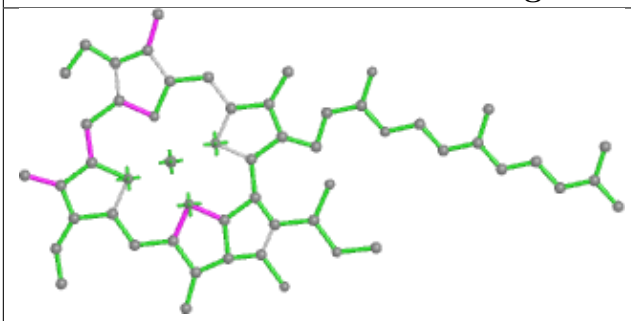


Torsions

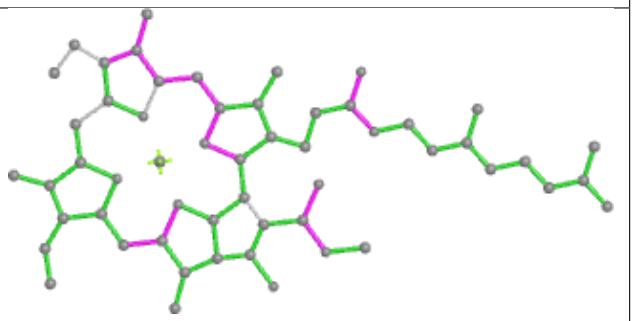


Rings

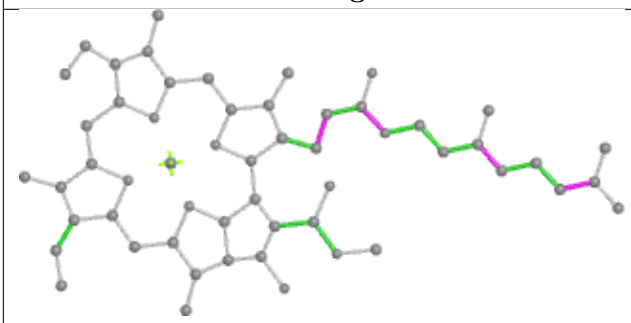
Ligand CLA B 816



Bond lengths



Bond angles



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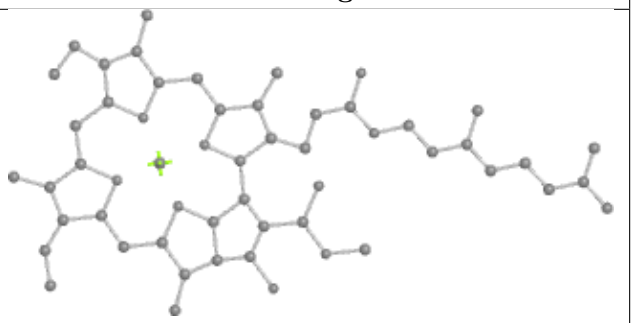
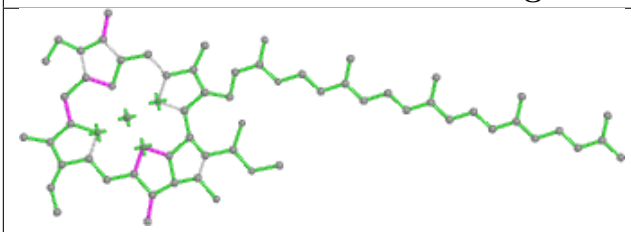


Rings

Ligand CLA B 839



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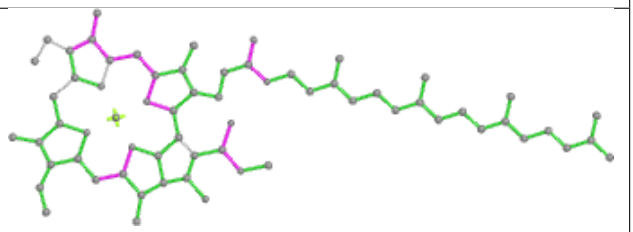
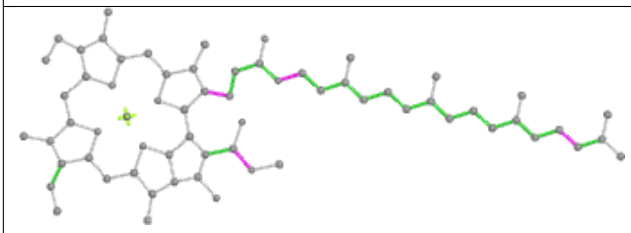
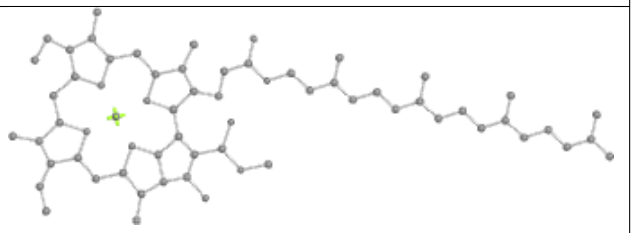


Bond angles

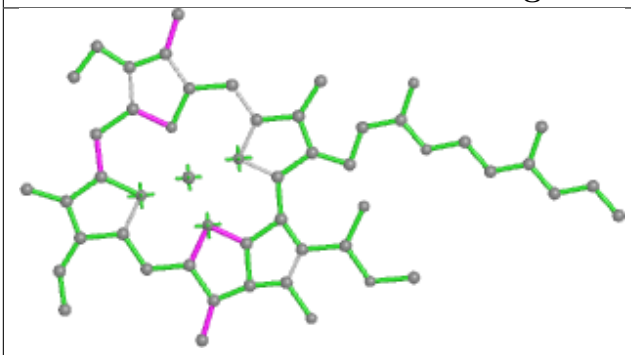


Torsions

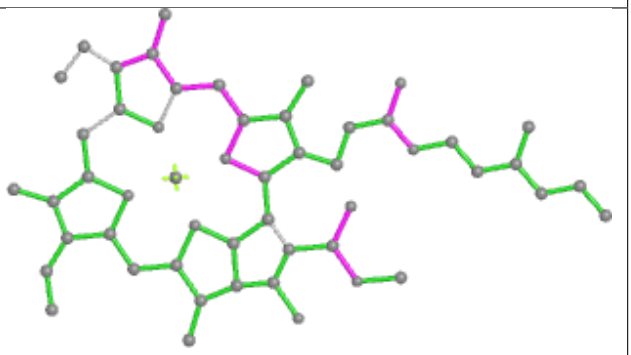


Rings

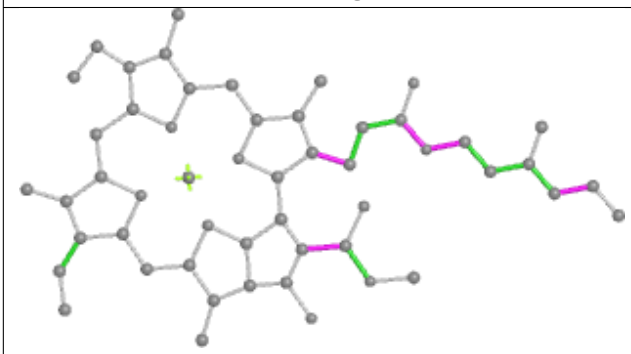
Ligand CLA O 201



Bond lengths



Bond angles



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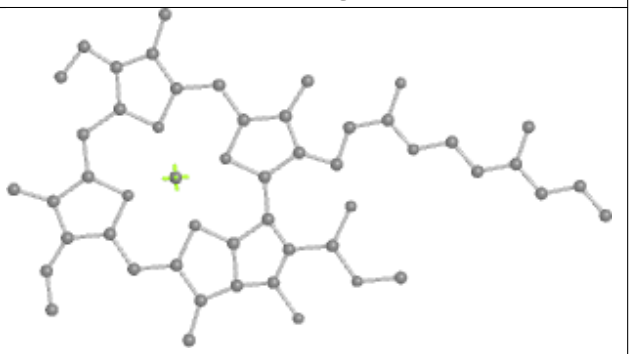
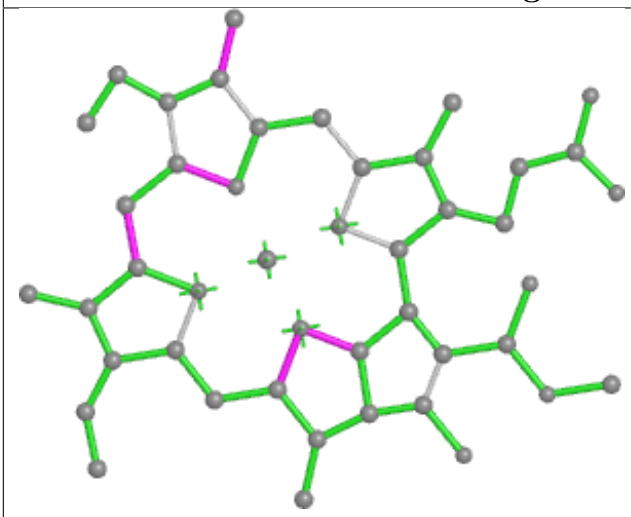
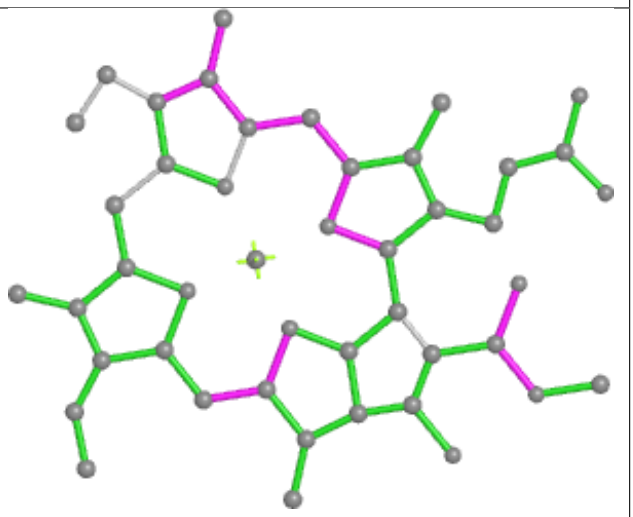


Rings

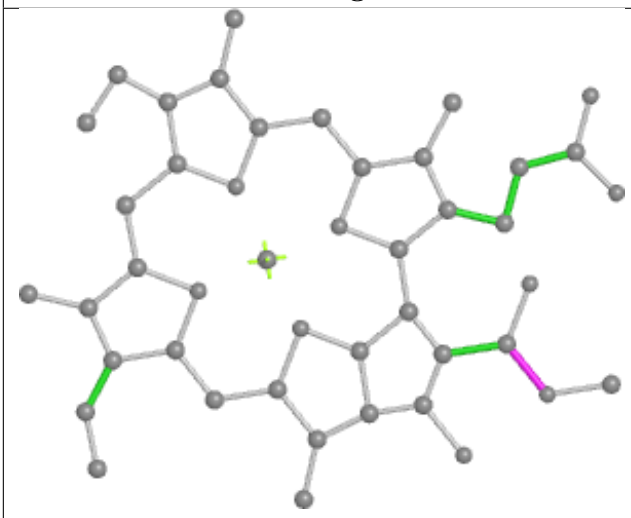
Ligand CLA G 603



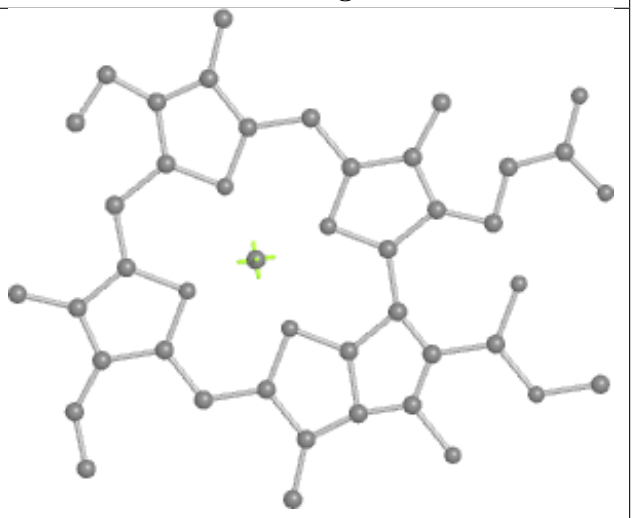
Bond lengths



Bond angles

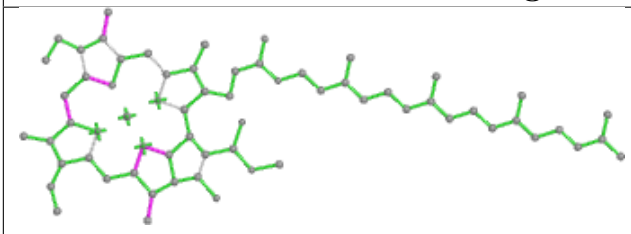


Torsions

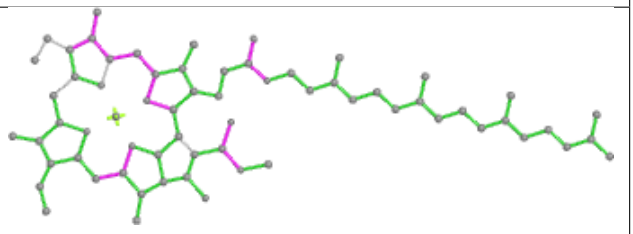


Rings

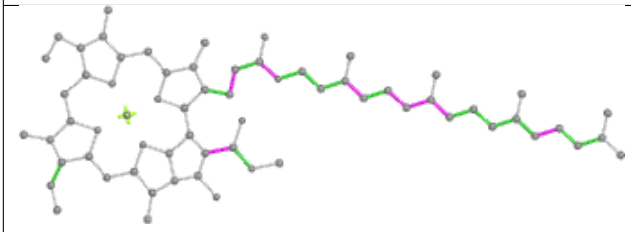
Ligand CLA A 816



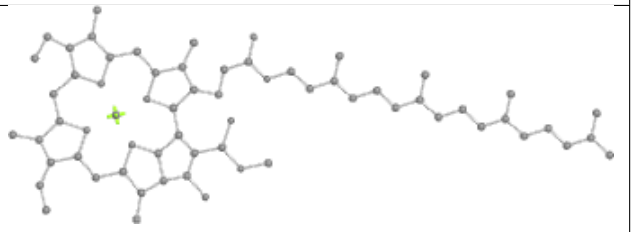
Bond lengths



Bond angles

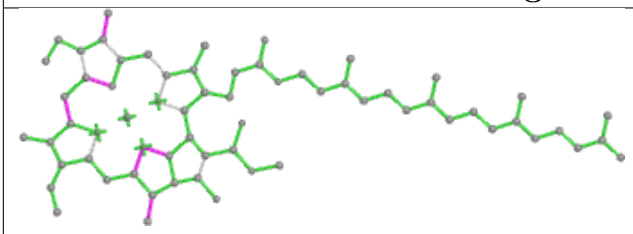


Torsions

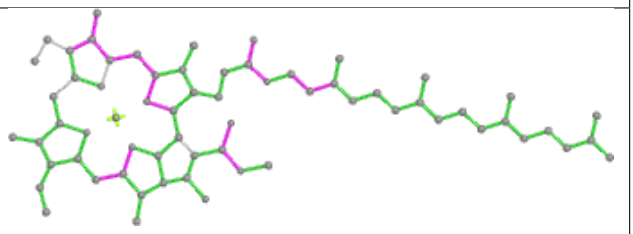


Rings

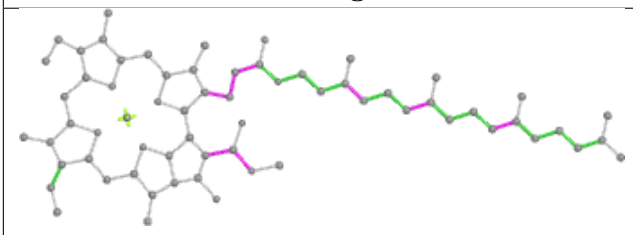
Ligand CLA B 827



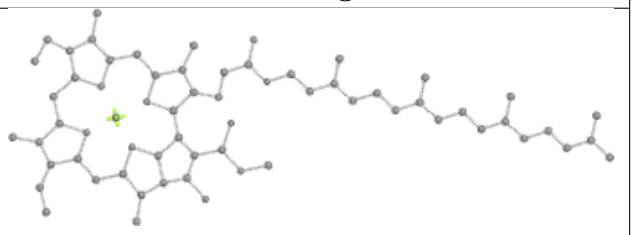
Bond lengths



Bond angles

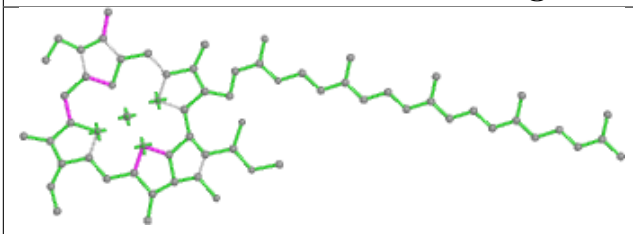


Torsions



Rings

Ligand CLA 1 308



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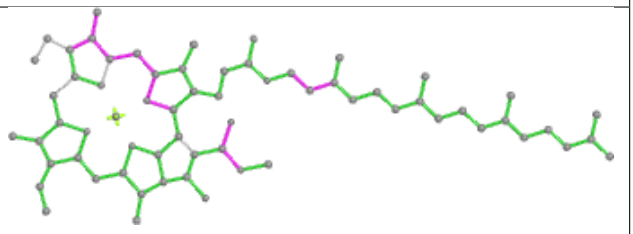
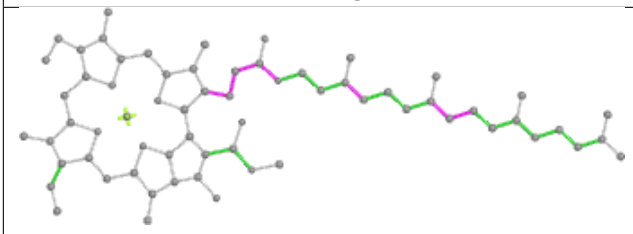
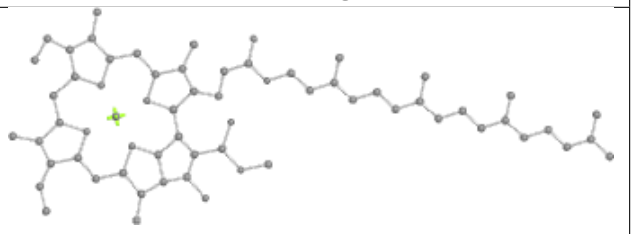


Bond angles

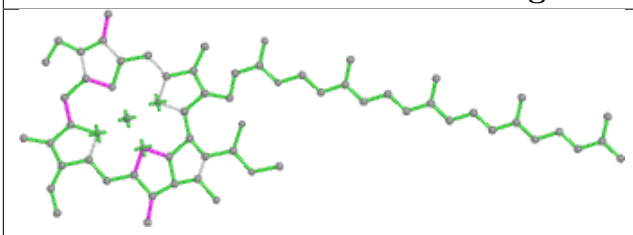


Torsions

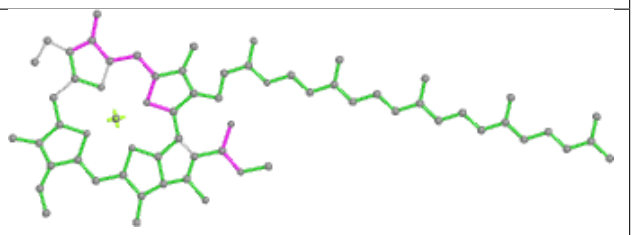


Rings

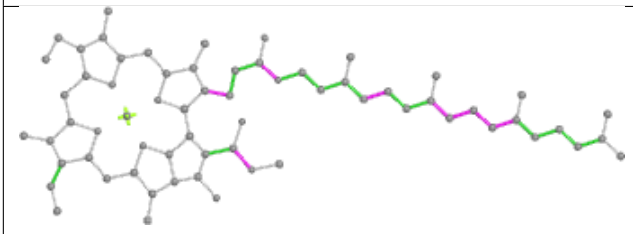
Ligand CLA 4 312



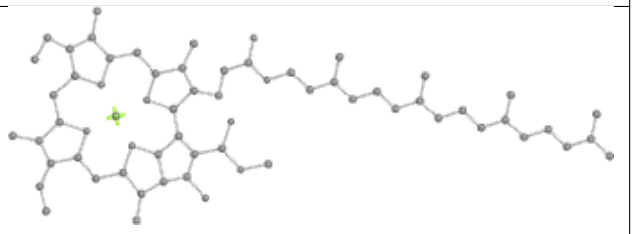
Bond lengths



Bond angles

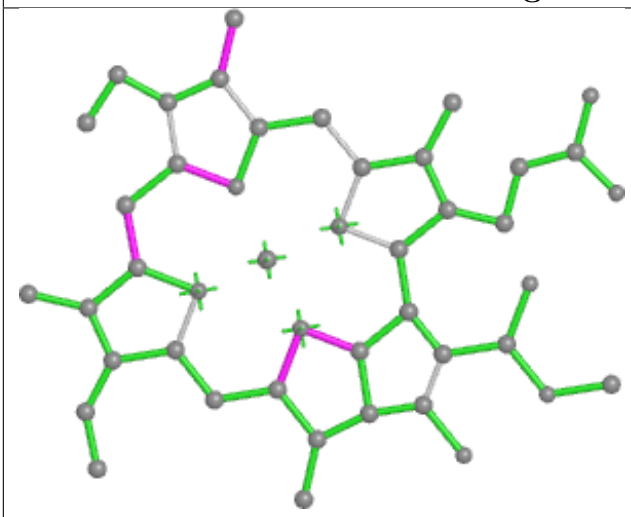


Torsions

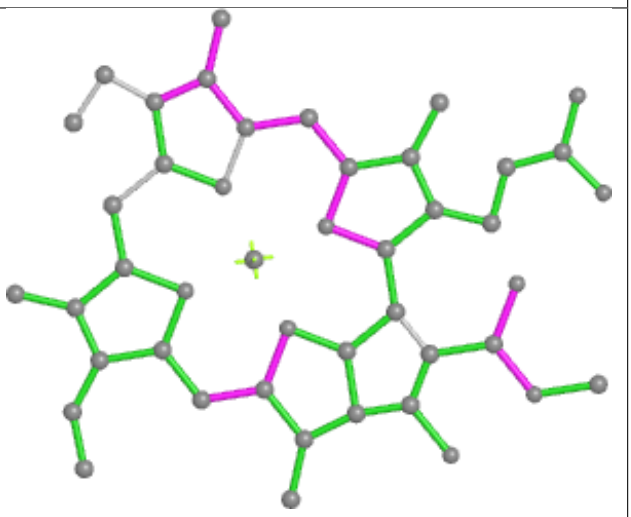


Rings

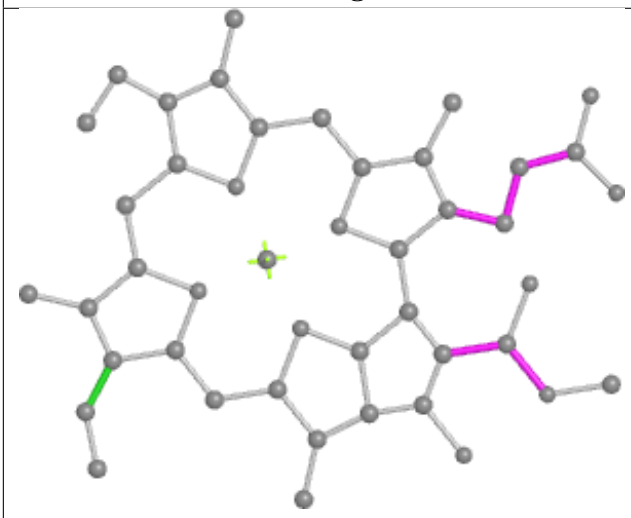
Ligand CLA A 835



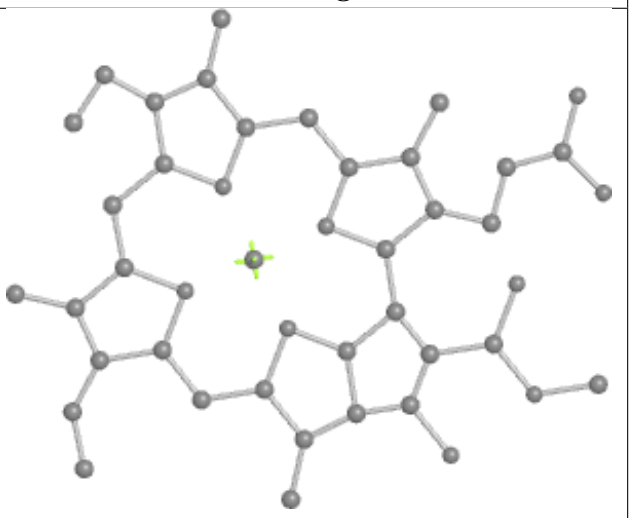
Bond lengths



Bond angles

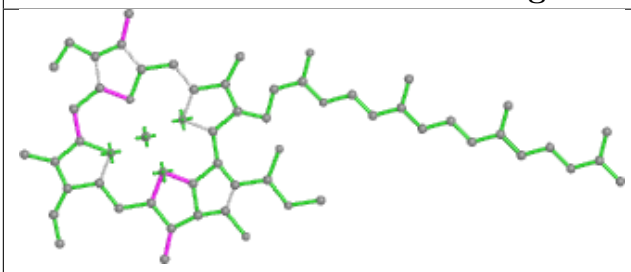


Torsions

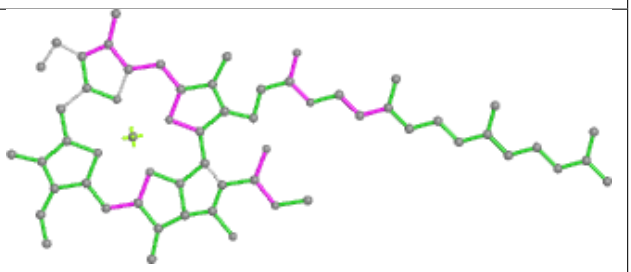


Rings

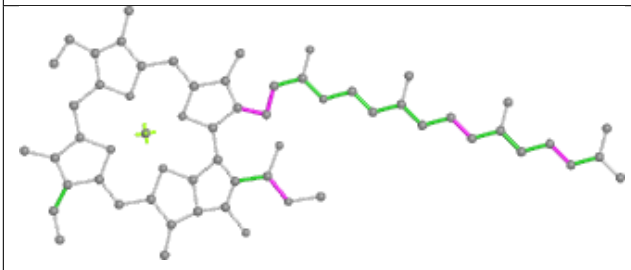
Ligand CLA 4 309



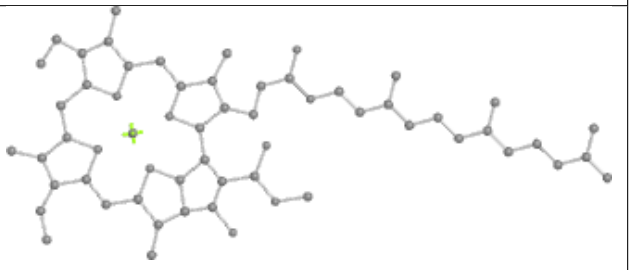
Bond lengths



Bond angles

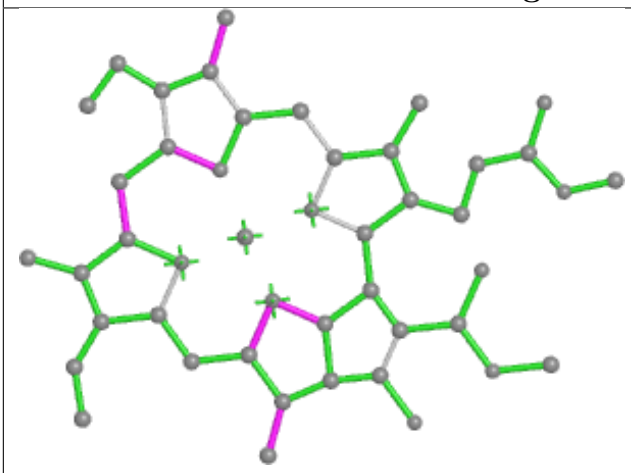


Torsions

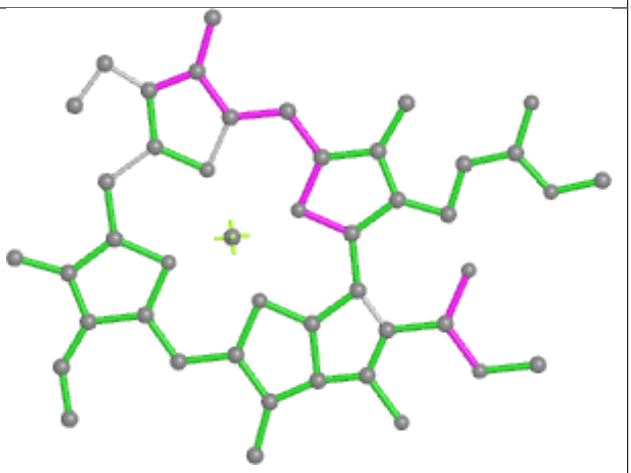


Rings

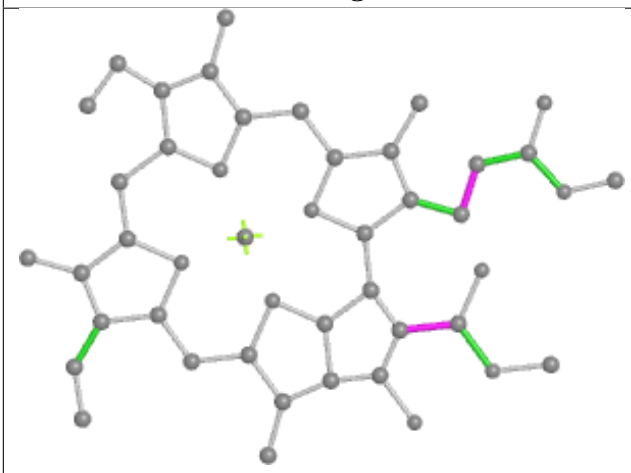
Ligand CLA K 201



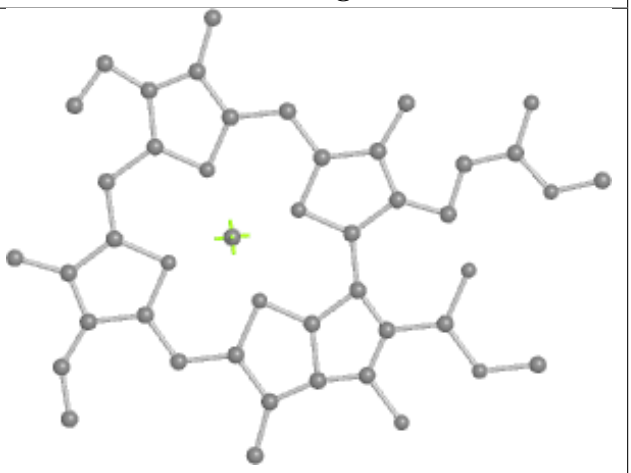
Bond lengths



Bond angles

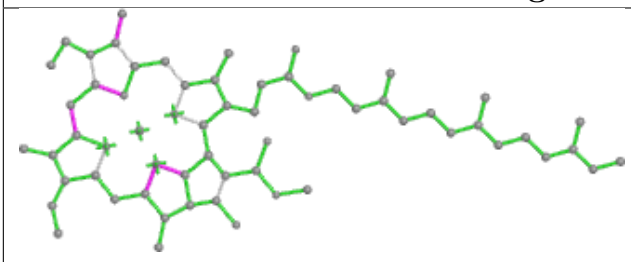


Torsions

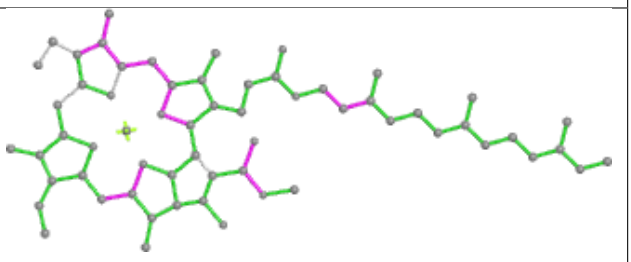


Rings

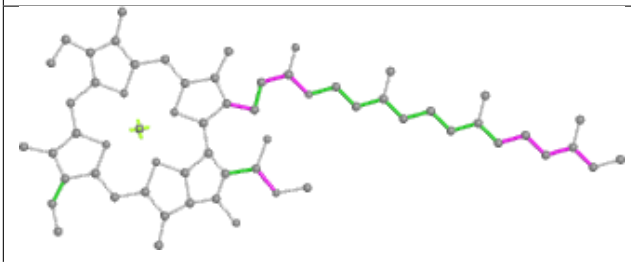
Ligand CLA 1 307



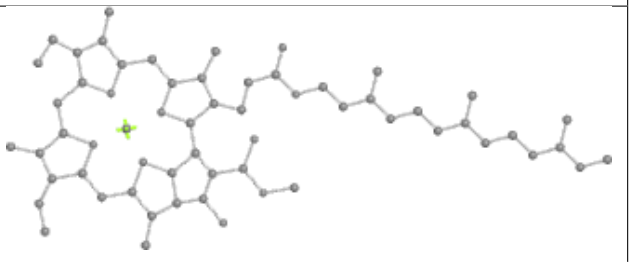
Bond lengths



Bond angles

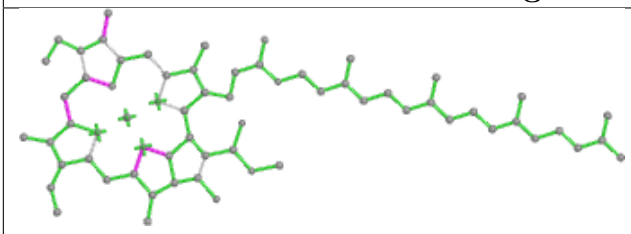


Torsions

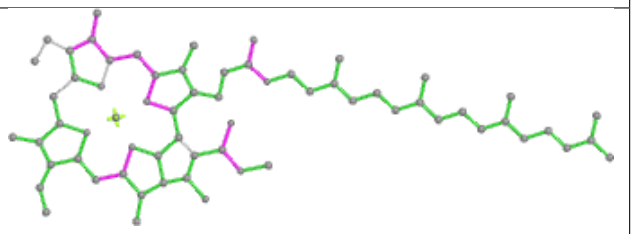


Rings

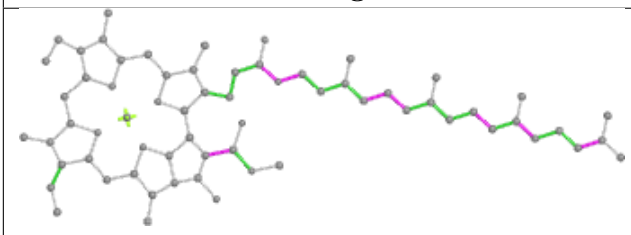
Ligand CLA A 806



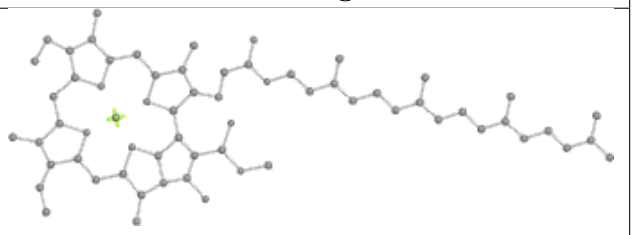
Bond lengths



Bond angles

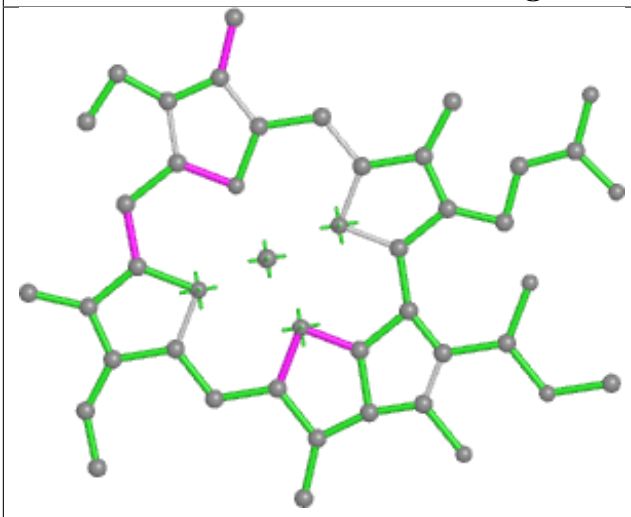


Torsions

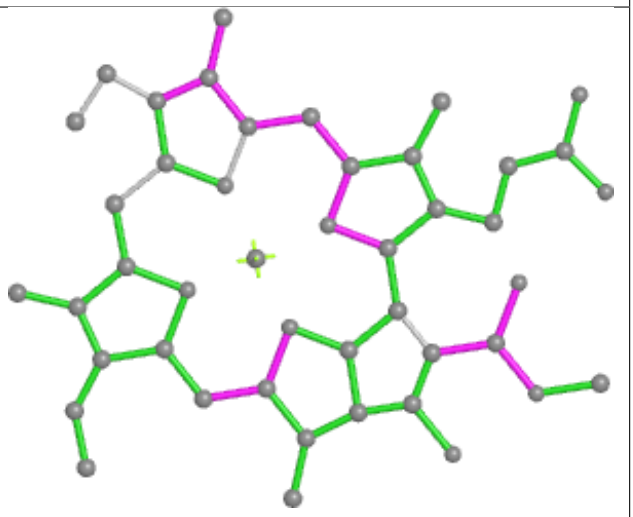


Rings

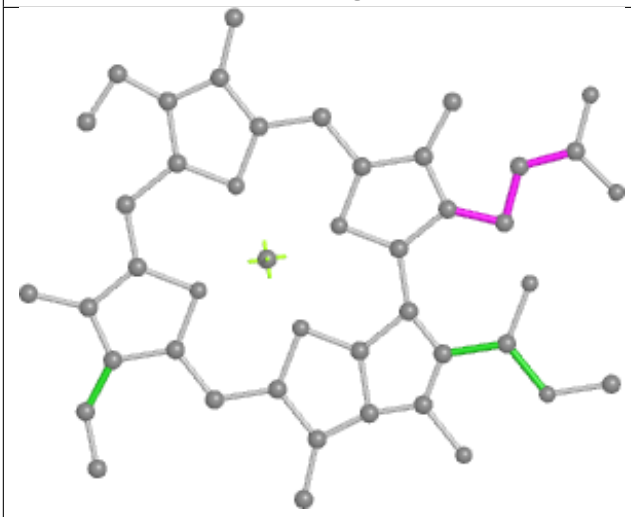
Ligand CLA B 804



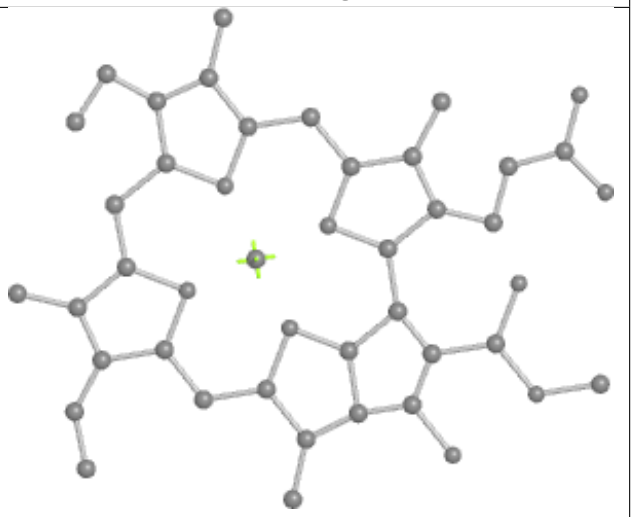
Bond lengths



Bond angles

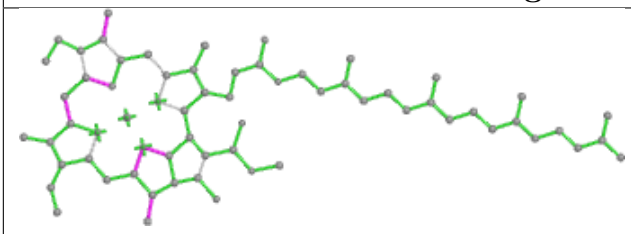


Torsions

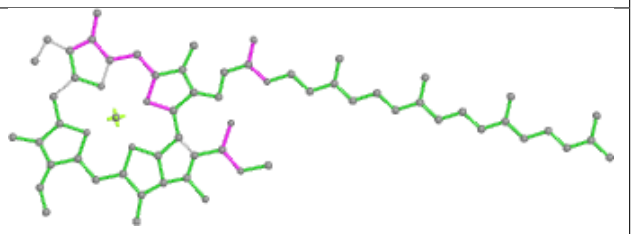


Rings

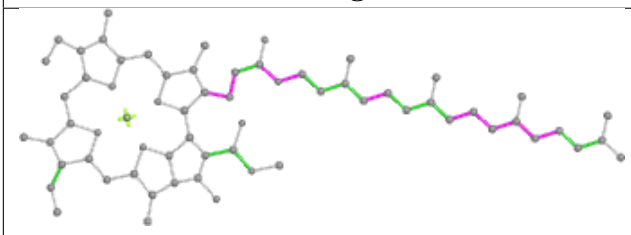
Ligand CLA B 817



Bond lengths



Bond angles



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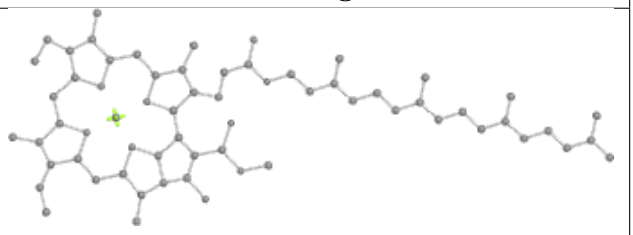
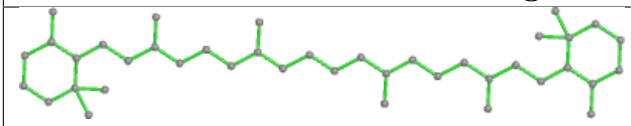
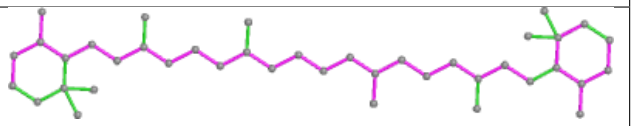


Rings

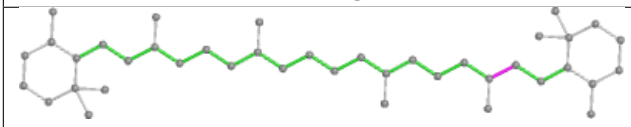
Ligand BCR B 845



Bond lengths



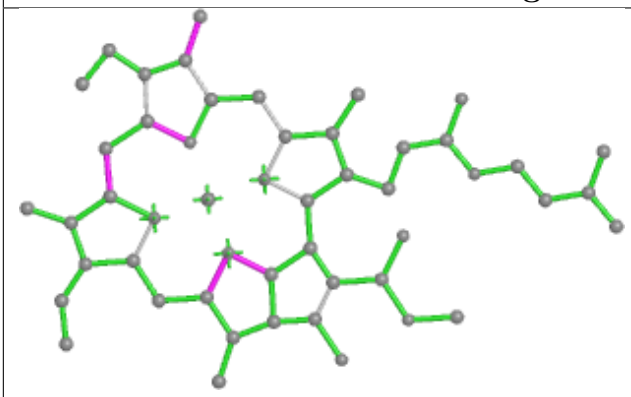
Bond angles



Torsions

Rings

Ligand CLA G 604



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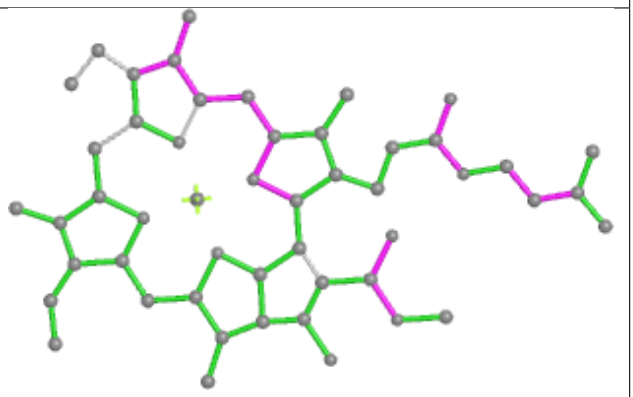
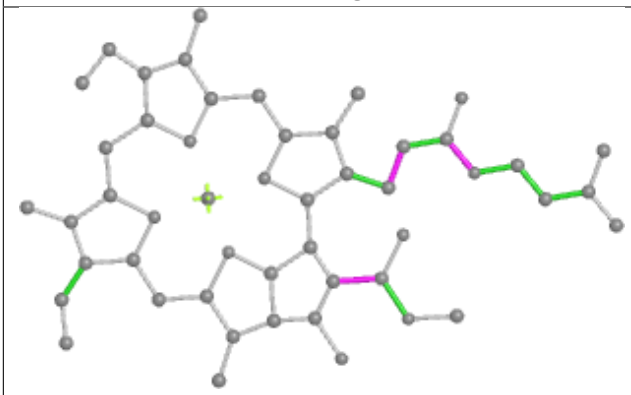
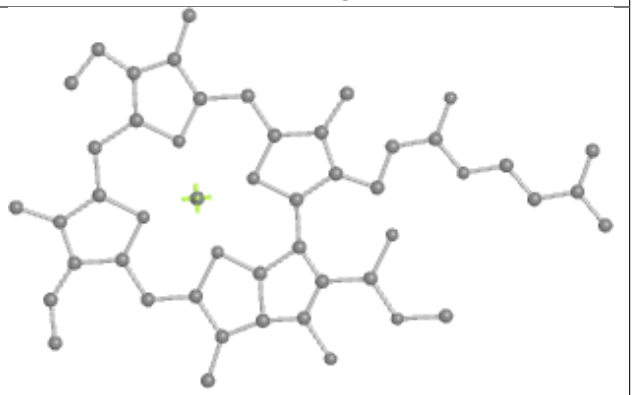


Bond angles

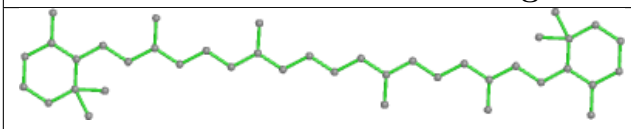


Torsions

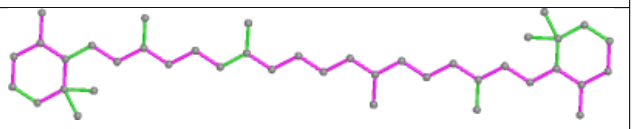


Rings

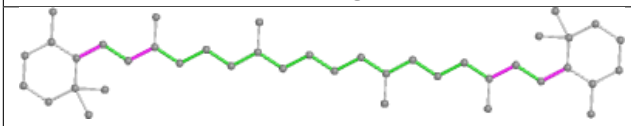
Ligand BCR K 204



Bond lengths



Bond angles



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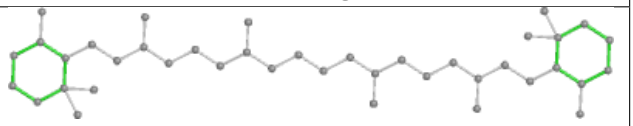
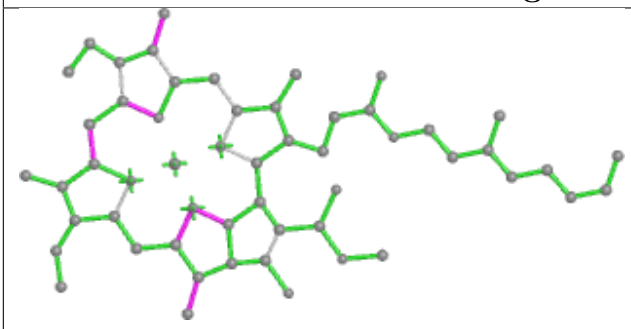
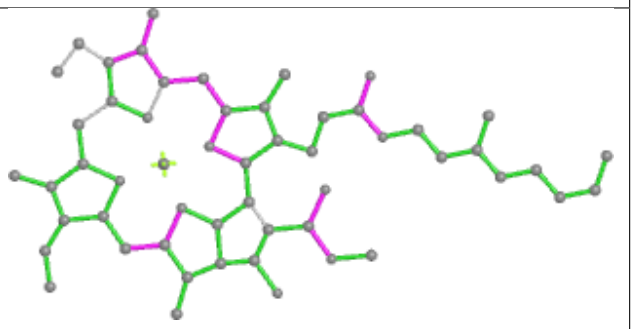


Rings

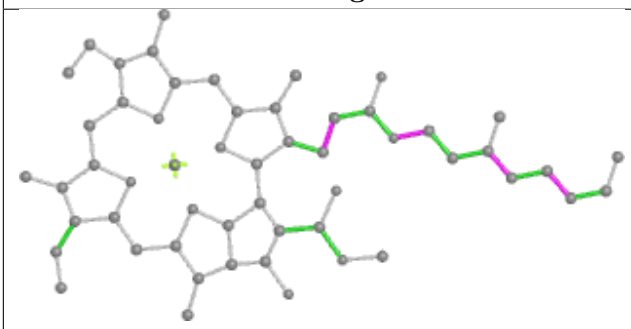
Ligand CLA A 811



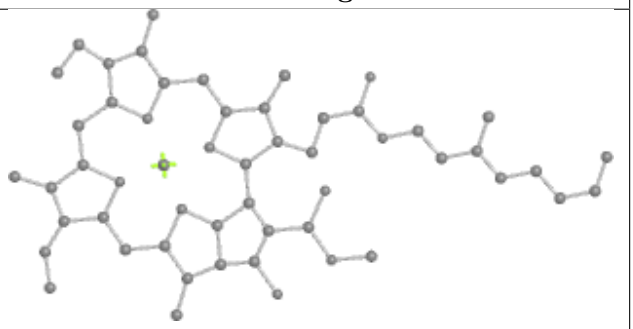
Bond lengths



Bond angles

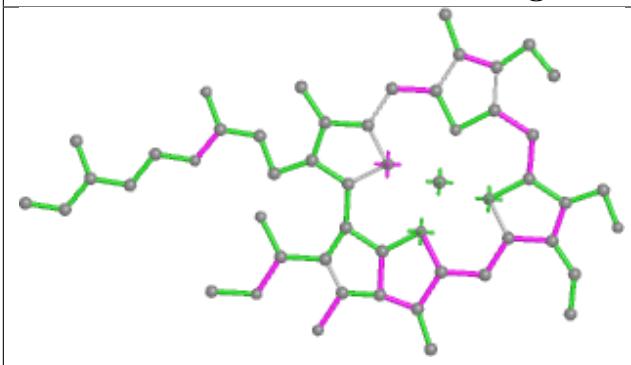


Torsions

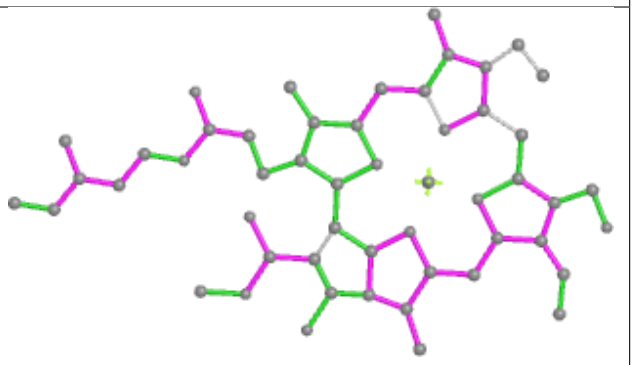


Rings

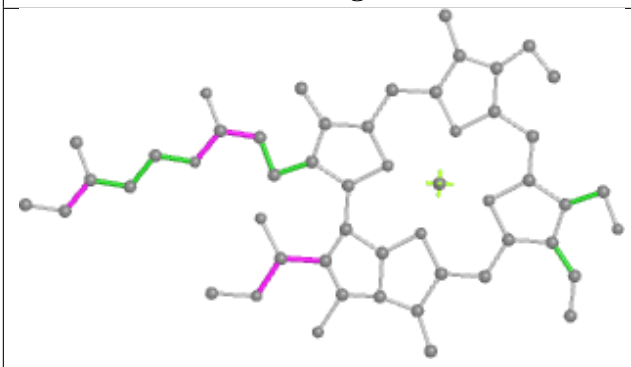
Ligand CHL 1 301



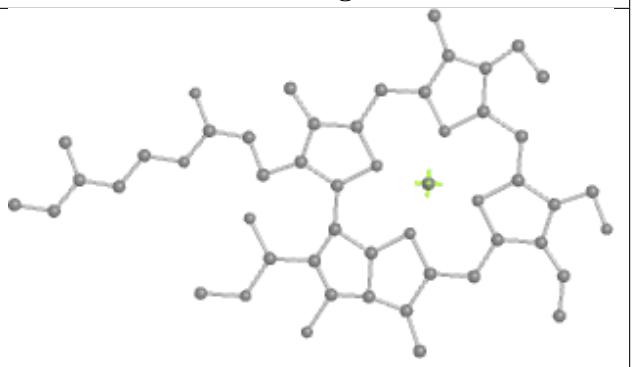
Bond lengths



Bond angles

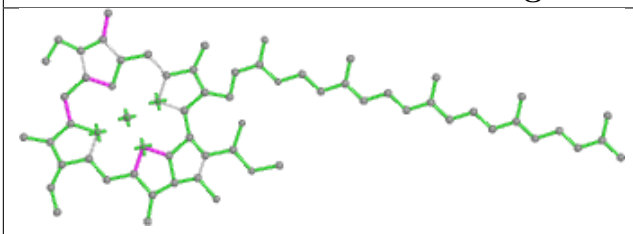


Torsions

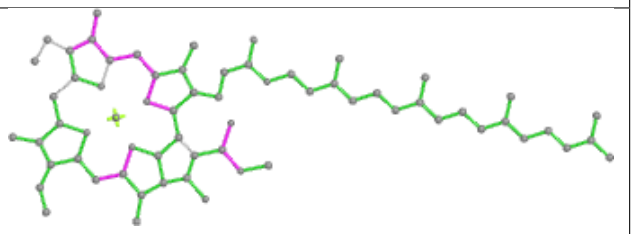


Rings

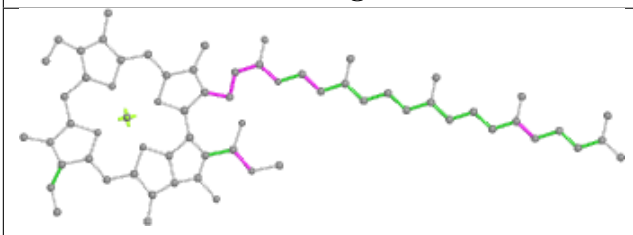
Ligand CLA B 831



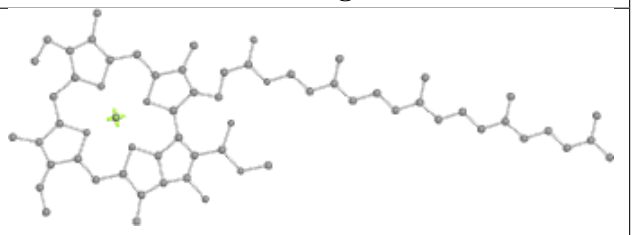
Bond lengths



Bond angles

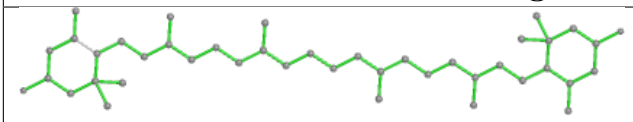


Torsions



Rings

Ligand LUT 1 319



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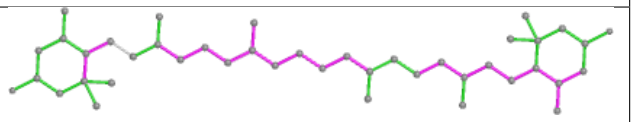
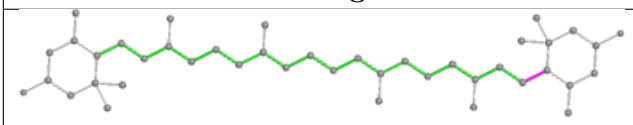
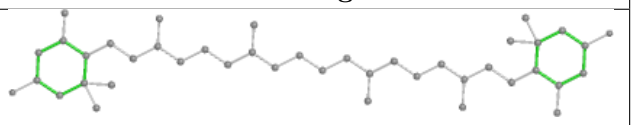


Bond angles

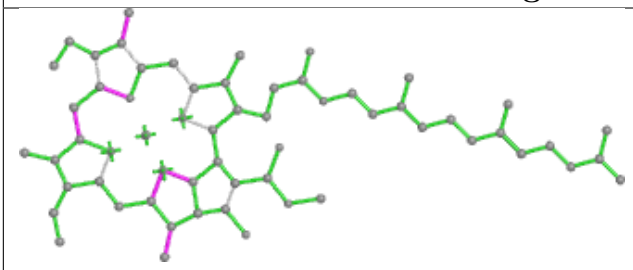


Torsions

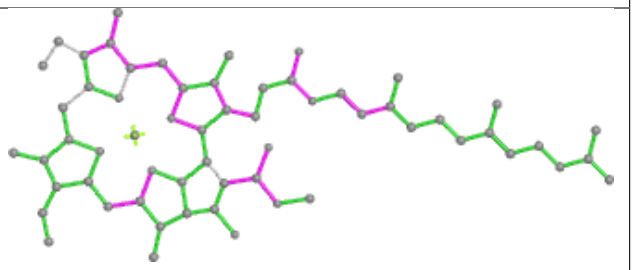


Rings

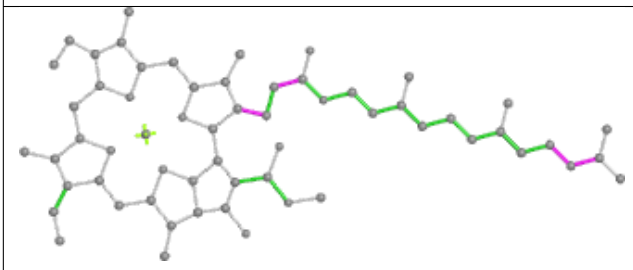
Ligand CLA K 202



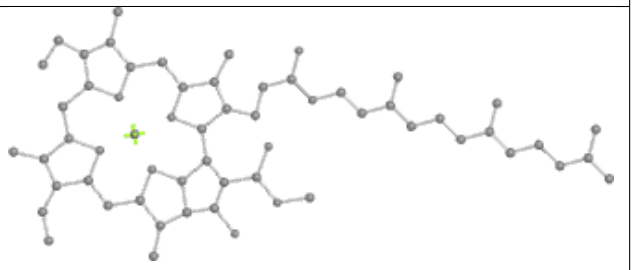
Bond lengths



Bond angles

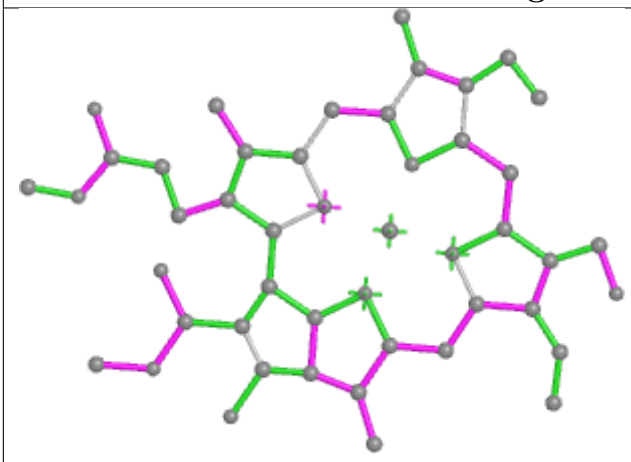


Torsions

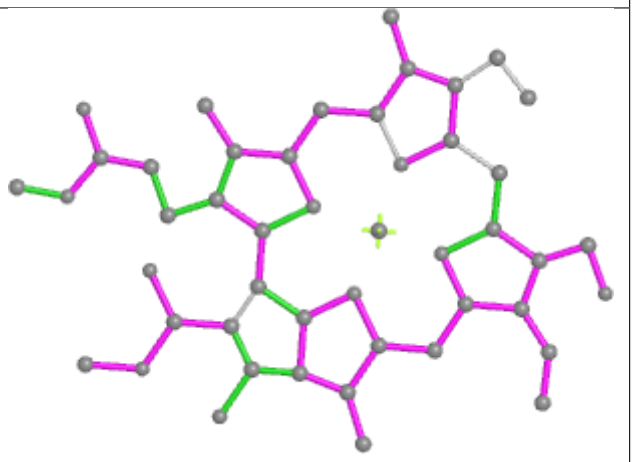


Rings

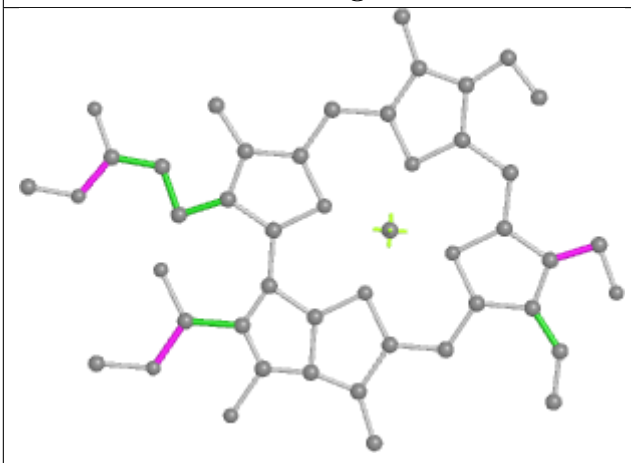
Ligand CHL 3 306



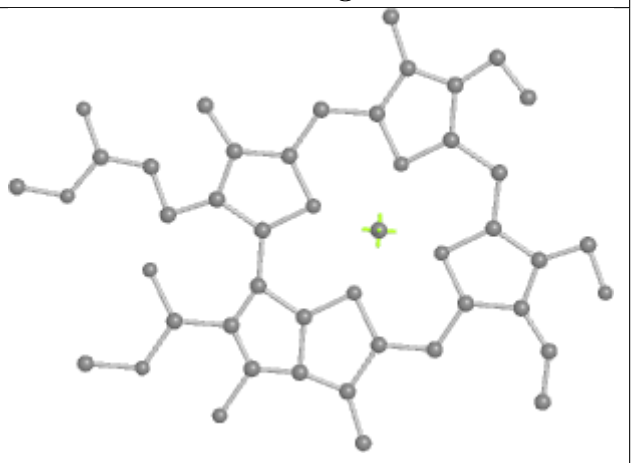
Bond lengths



Bond angles

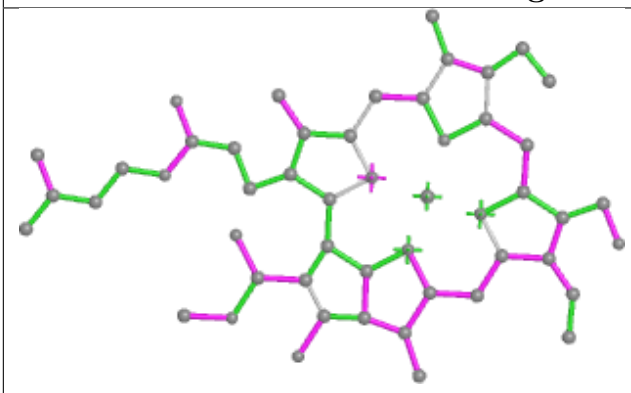


Torsions

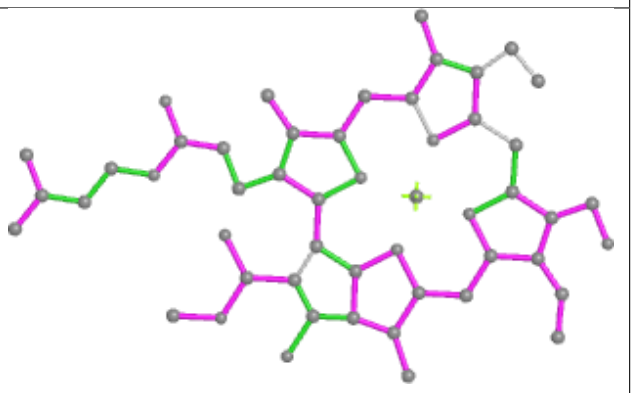


Rings

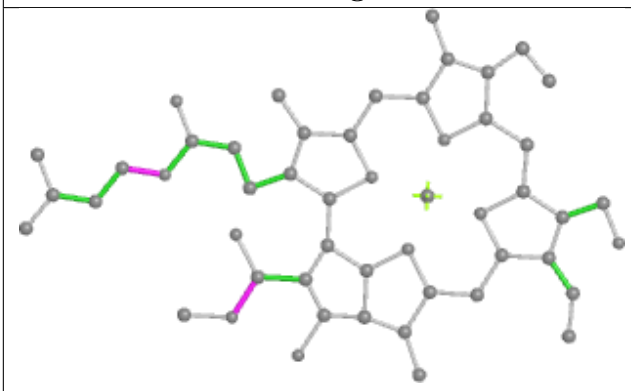
Ligand CHL 4 307



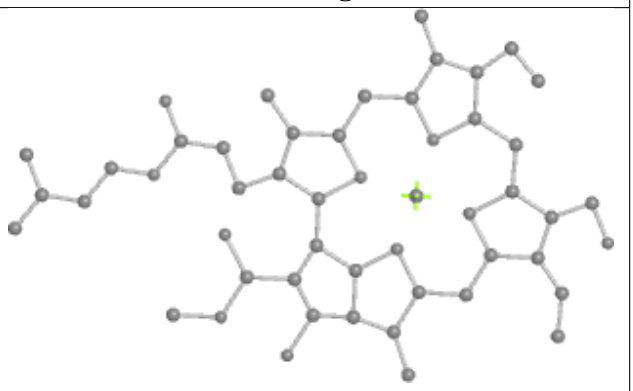
Bond lengths



Bond angles

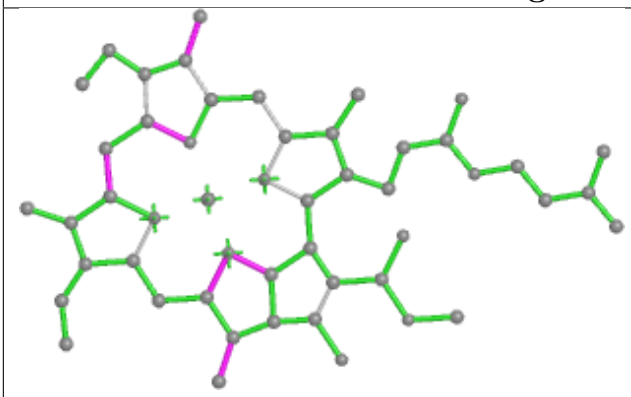


Torsions

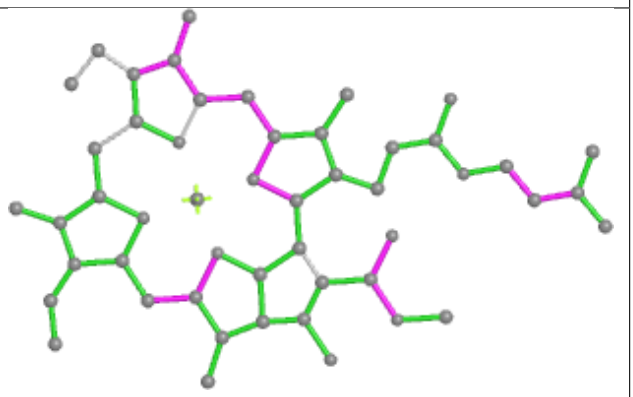


Rings

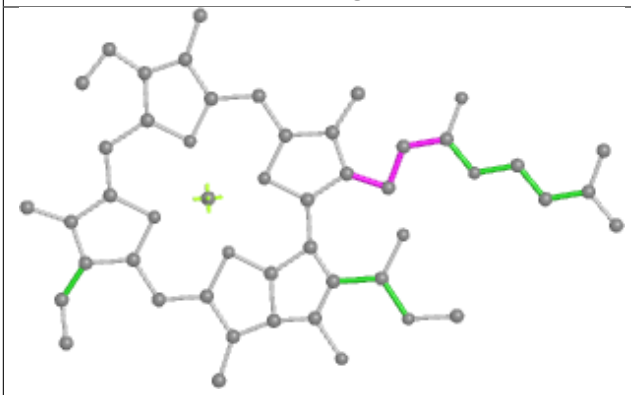
Ligand CLA 2 308



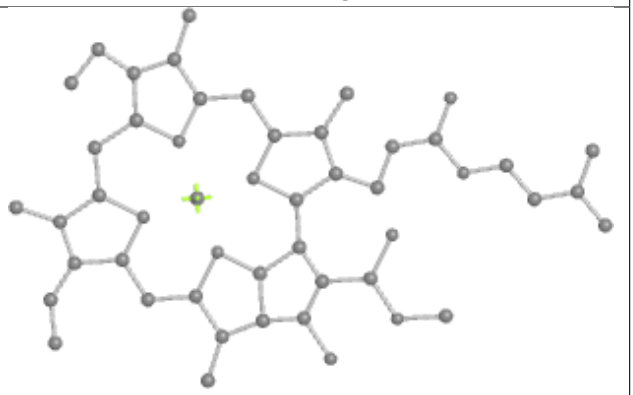
Bond lengths



Bond angles

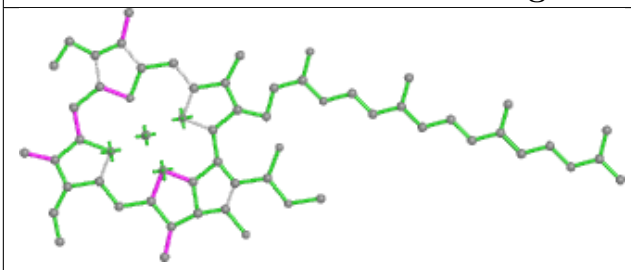


Torsions

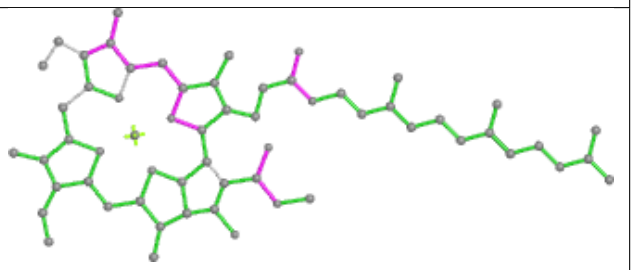


Rings

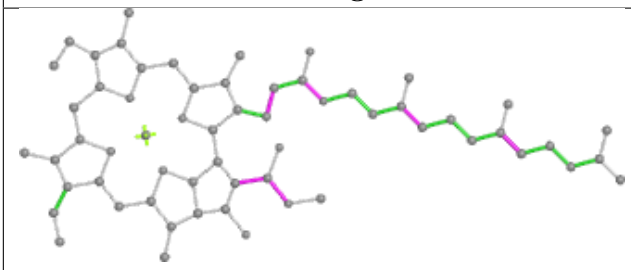
Ligand CLA 4 303



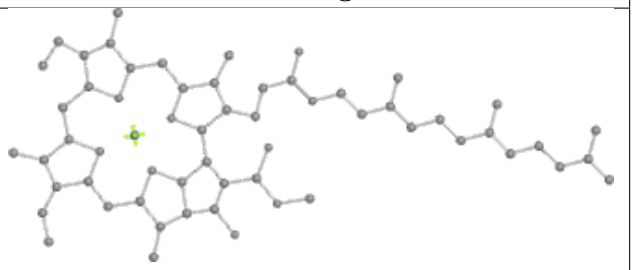
Bond lengths



Bond angles

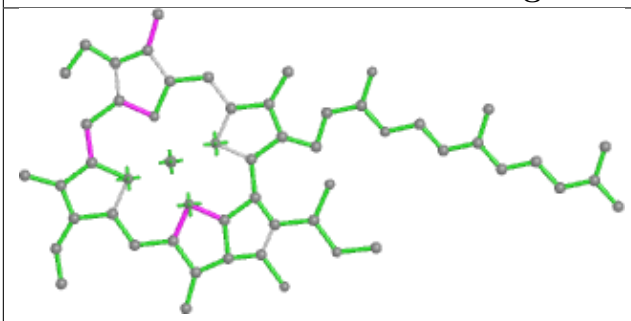


Torsions

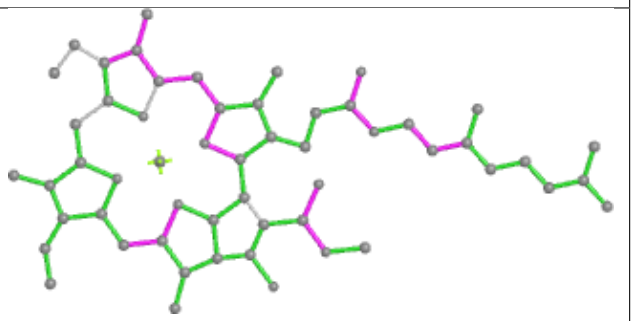


Rings

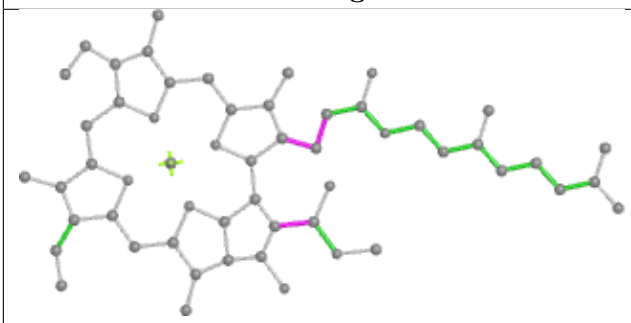
Ligand CLA A 823



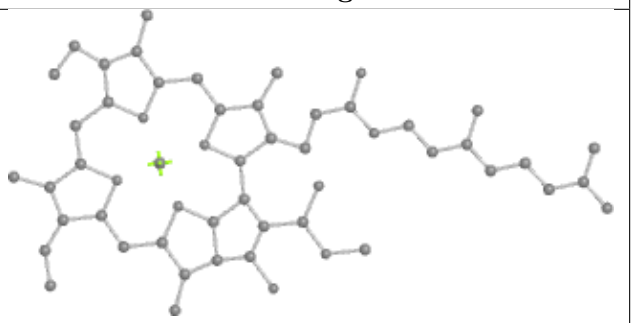
Bond lengths



Bond angles

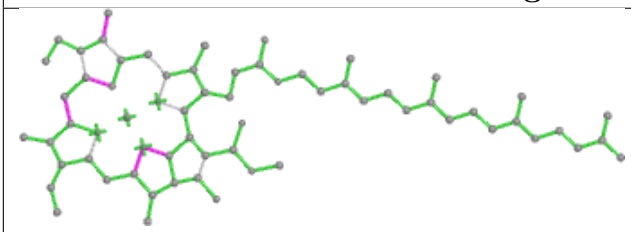


Torsions

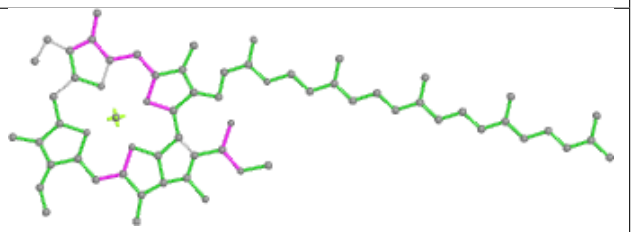


Rings

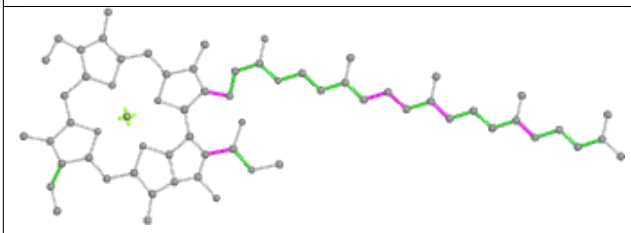
Ligand CLA A 832



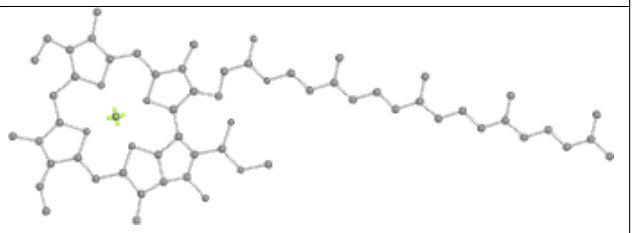
Bond lengths



Bond angles

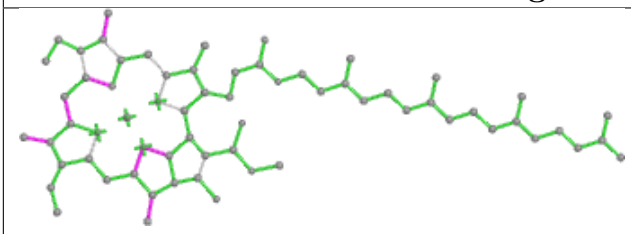


Torsions

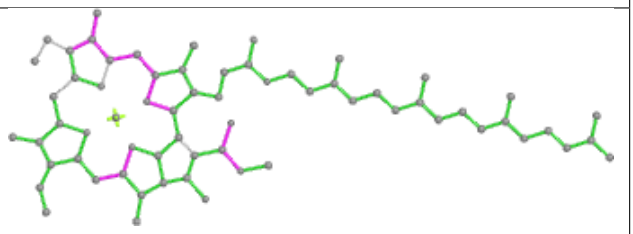


Rings

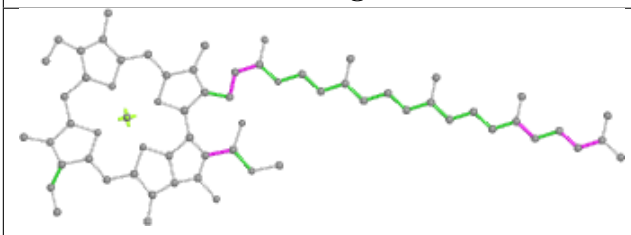
Ligand CLA 1 302



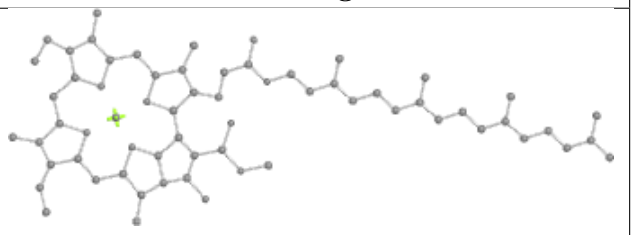
Bond lengths



Bond angles

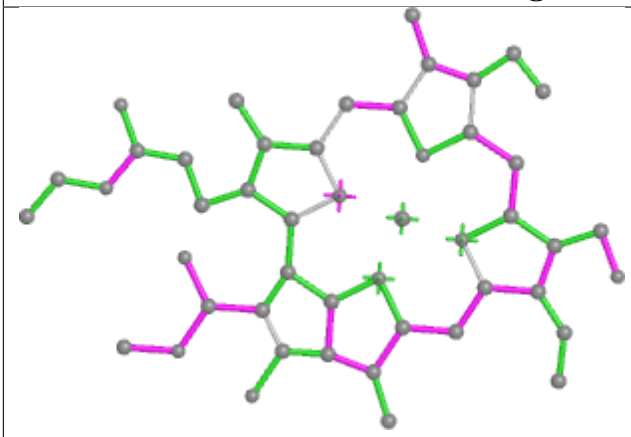


Torsions

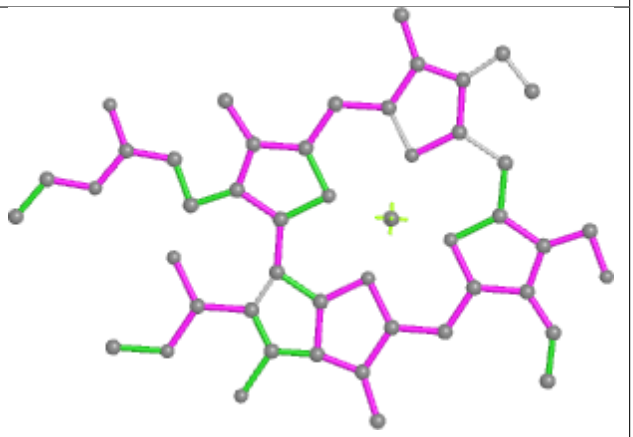


Rings

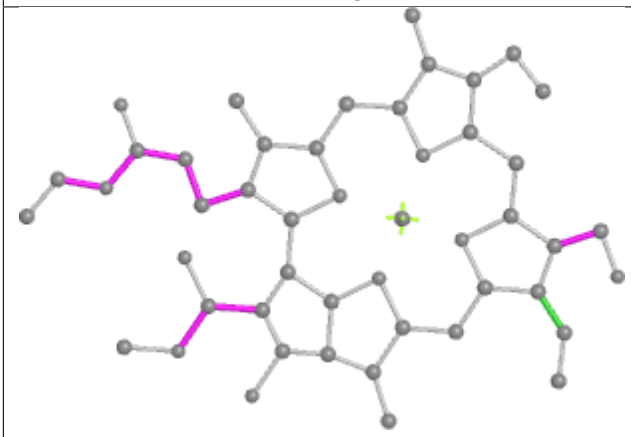
Ligand CHL 1 306



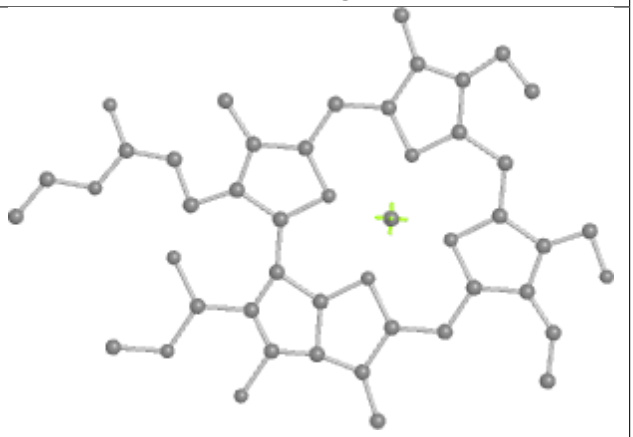
Bond lengths



Bond angles

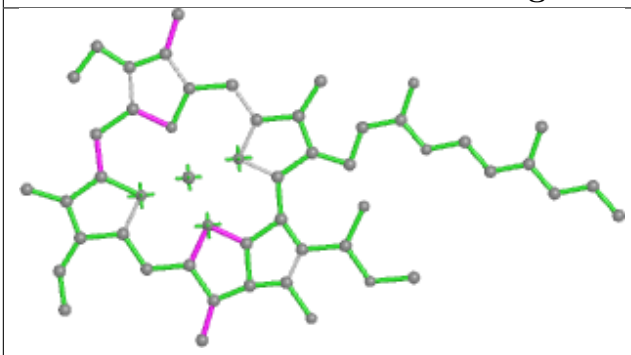


Torsions

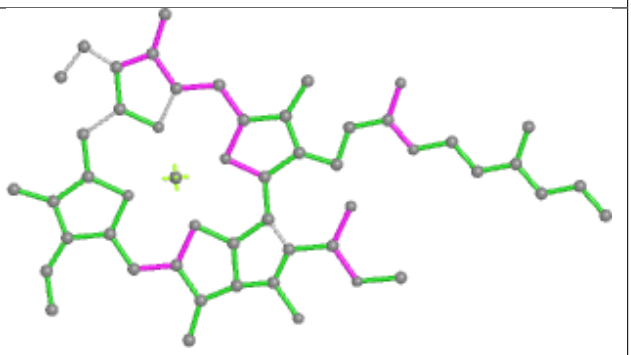


Rings

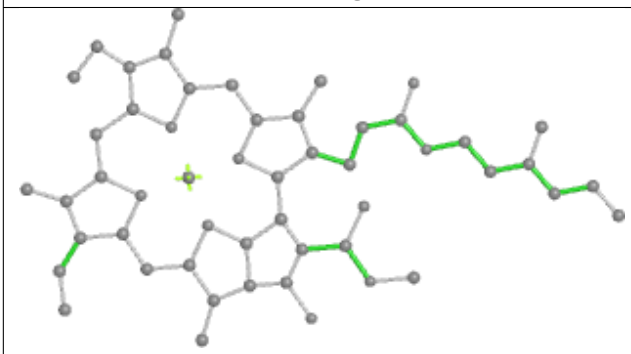
Ligand CLA 3 310



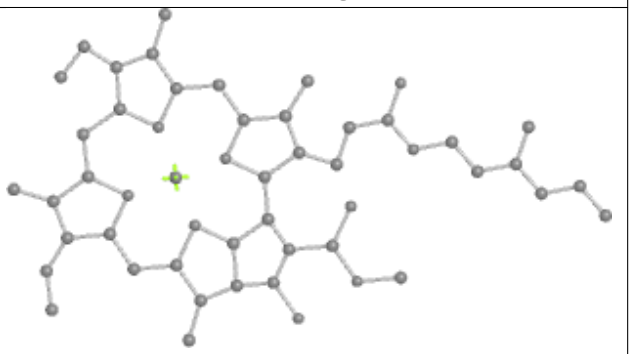
Bond lengths



Bond angles

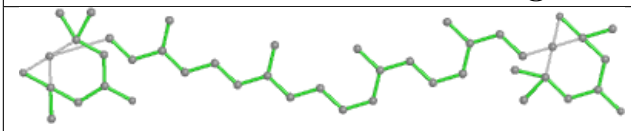


Torsions

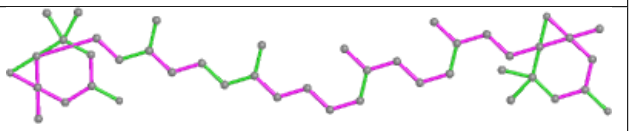


Rings

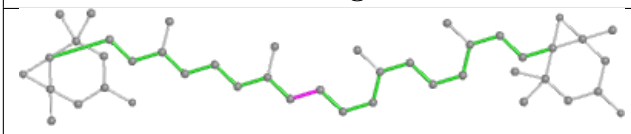
Ligand XAT 1 316



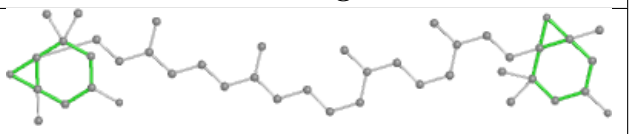
Bond lengths



Bond angles

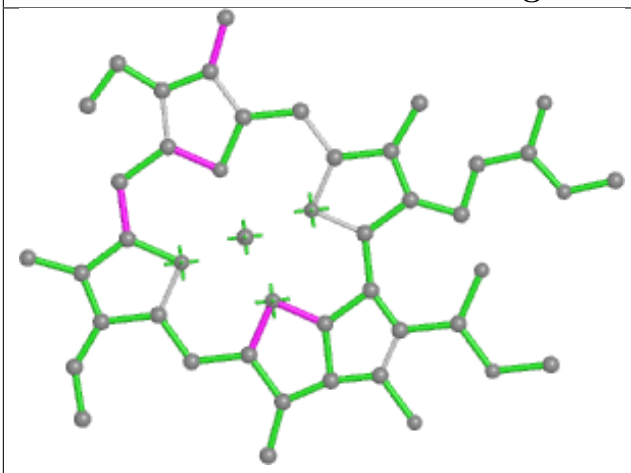


Torsions

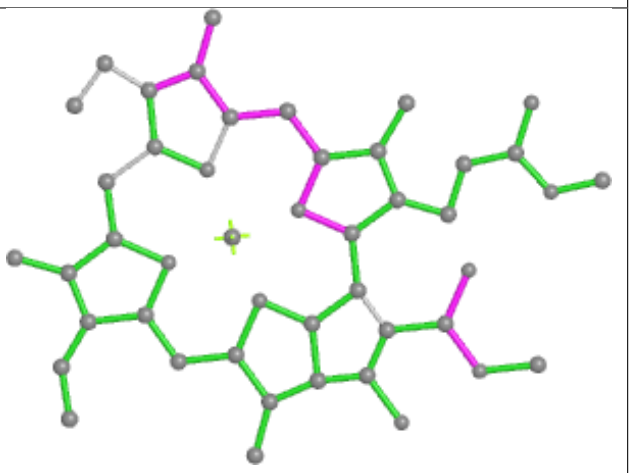


Rings

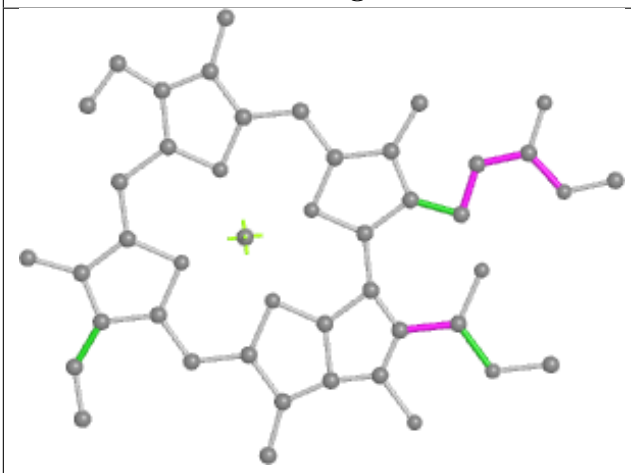
Ligand CLA G 605



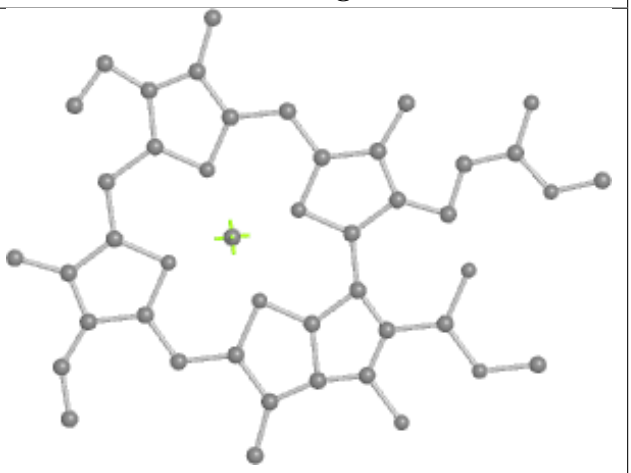
Bond lengths



Bond angles

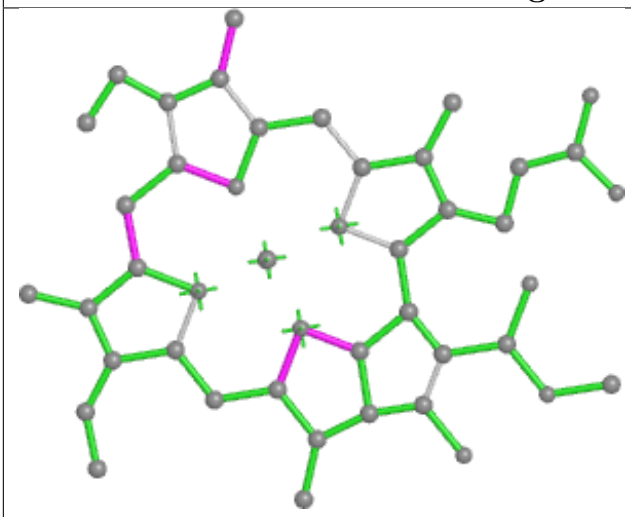


Torsions

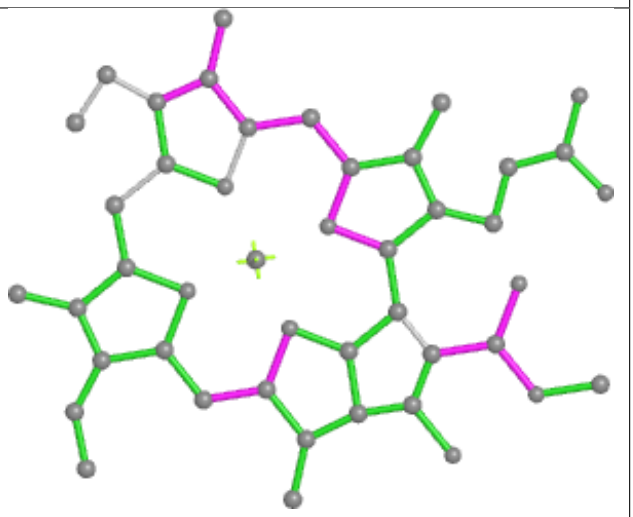


Rings

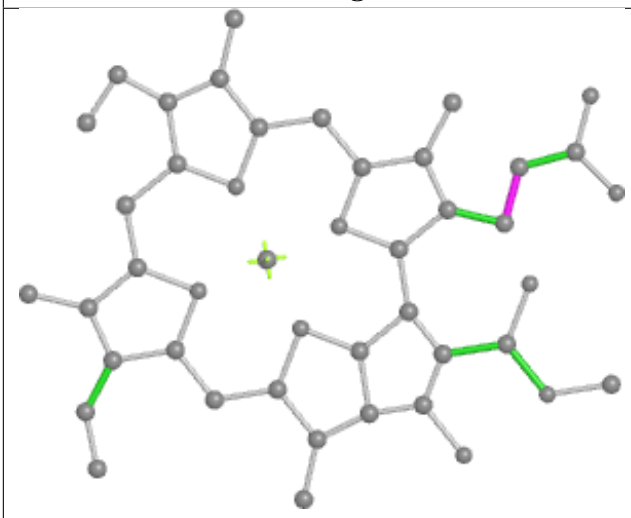
Ligand CLA 4 313



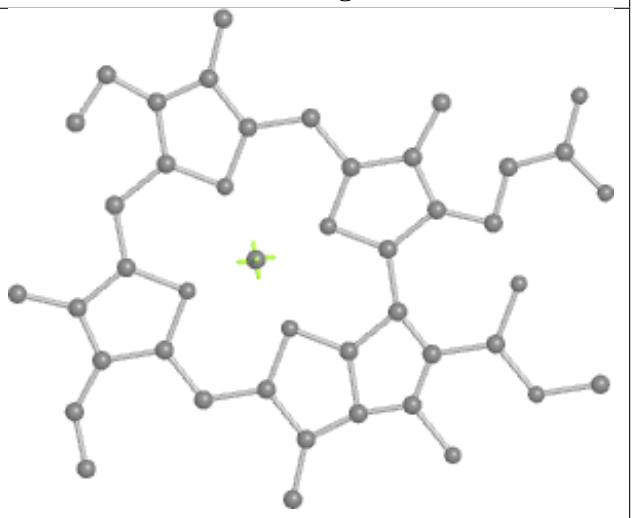
Bond lengths



Bond angles

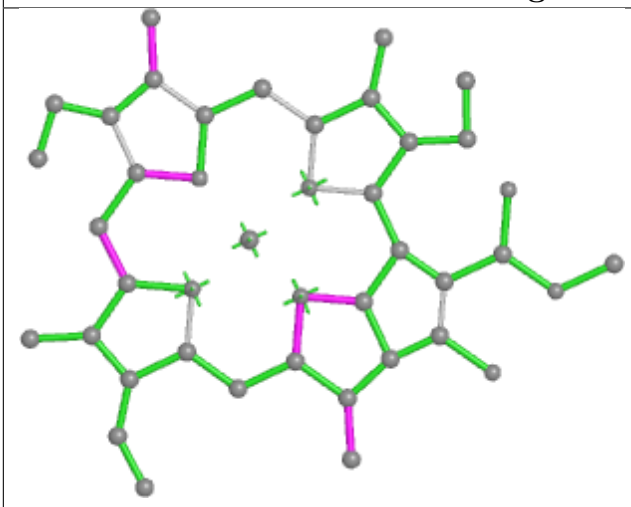


Torsions

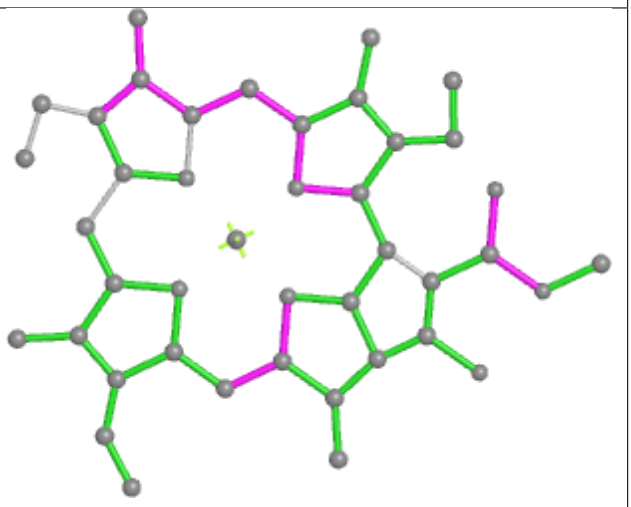


Rings

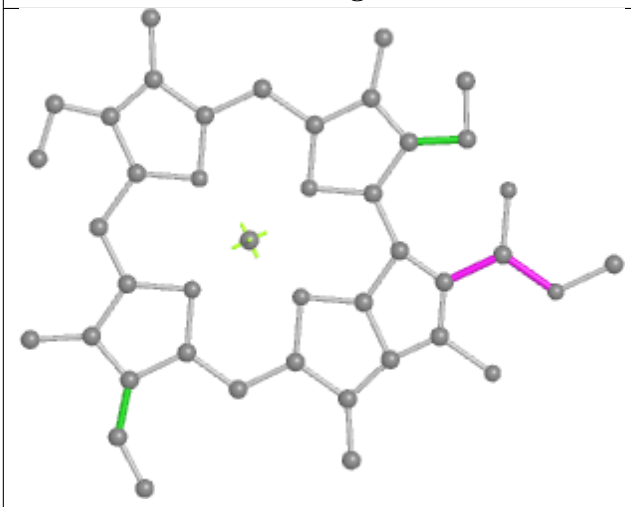
Ligand CLA J 103



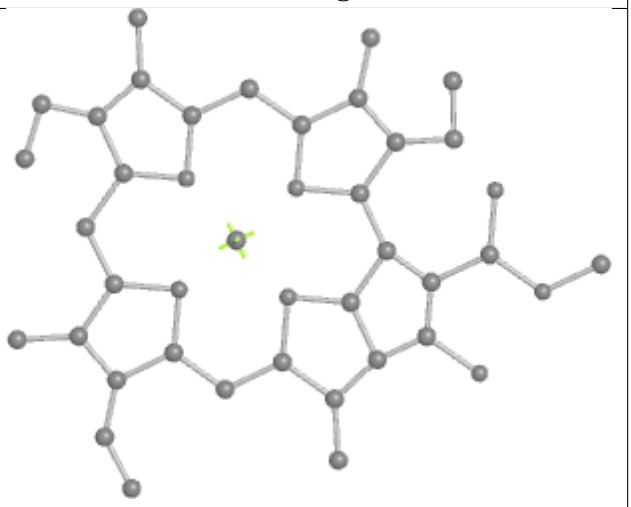
Bond lengths



Bond angles

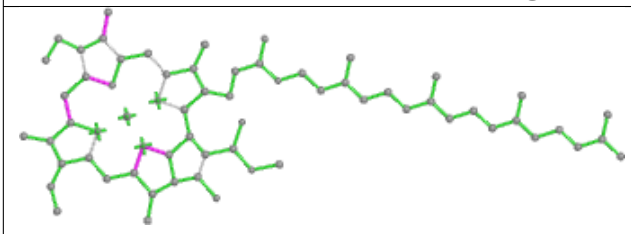


Torsions

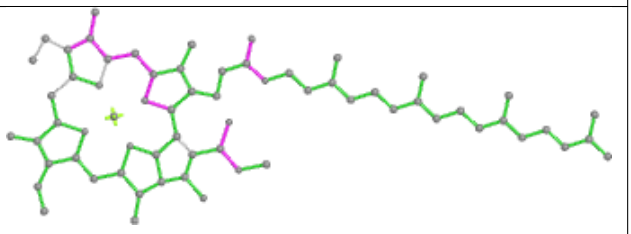


Rings

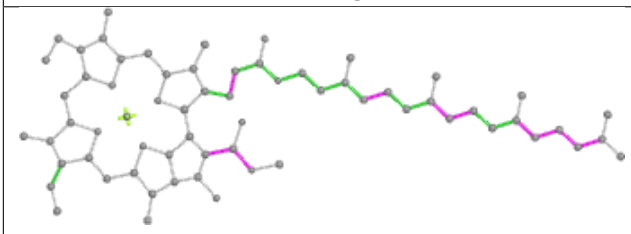
Ligand CLA A 802



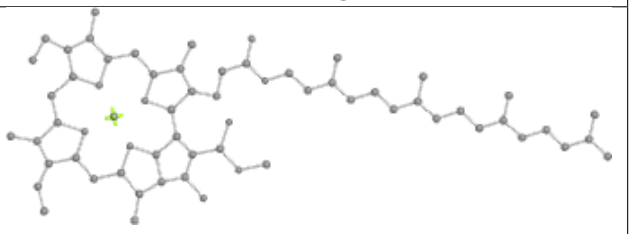
Bond lengths



Bond angles

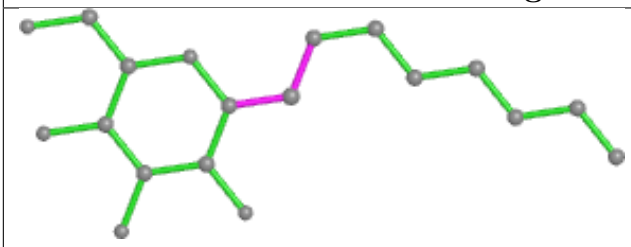


Torsions

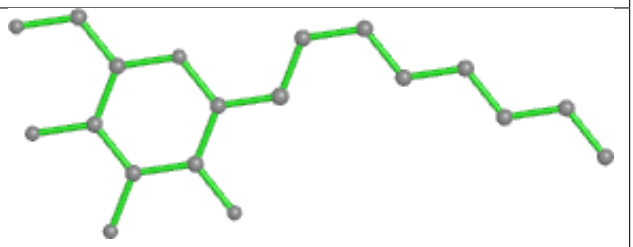


Rings

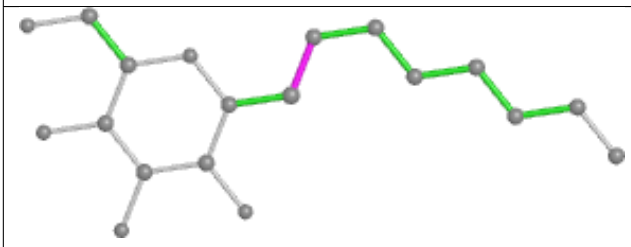
Ligand HTG J 105



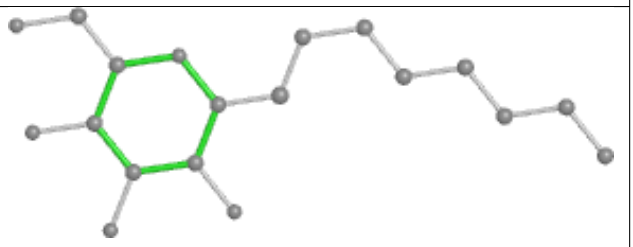
Bond lengths



Bond angles

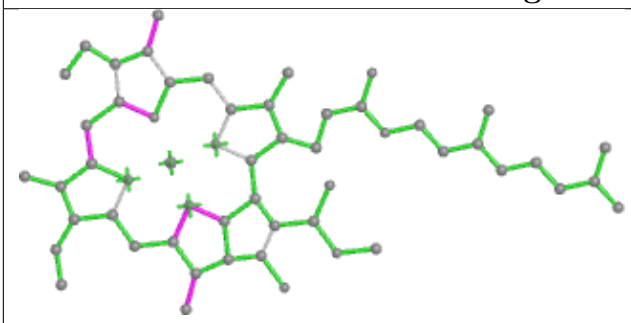


Torsions

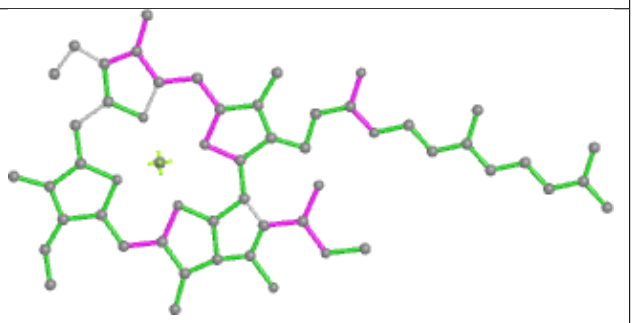


Rings

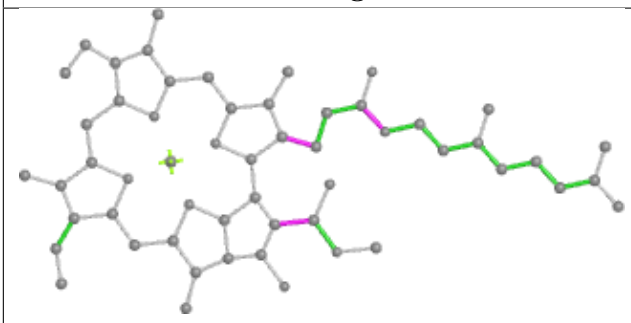
Ligand CLA A 803



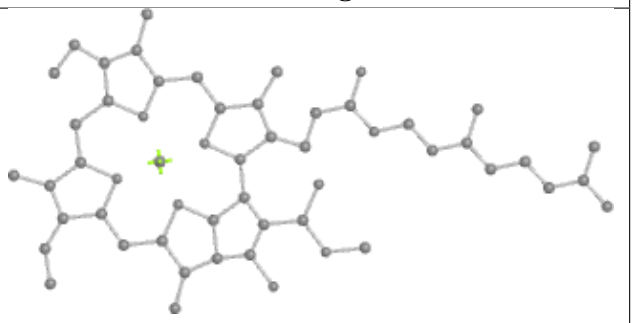
Bond lengths



Bond angles

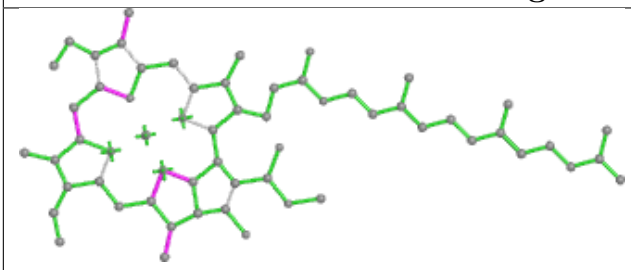


Torsions

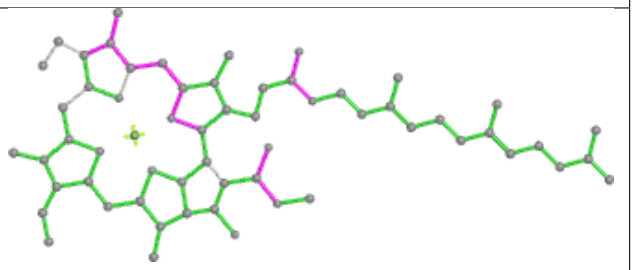


Rings

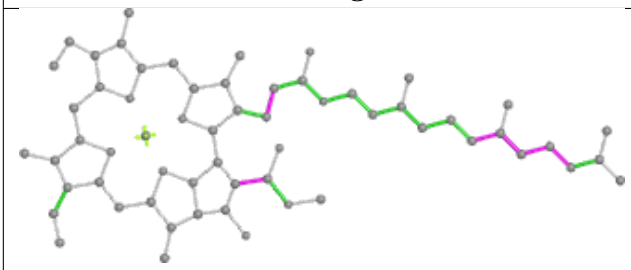
Ligand CLA 4 302



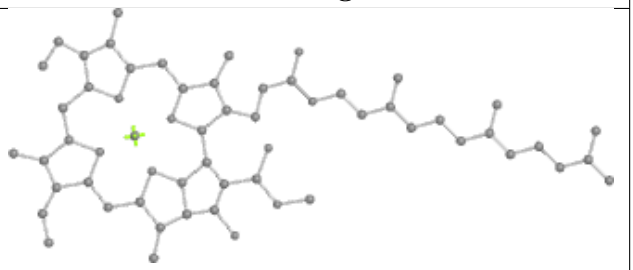
Bond lengths



Bond angles

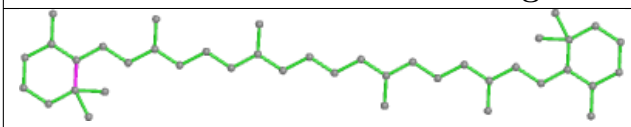


Torsions

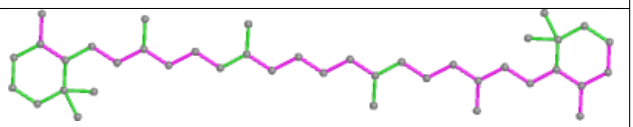


Rings

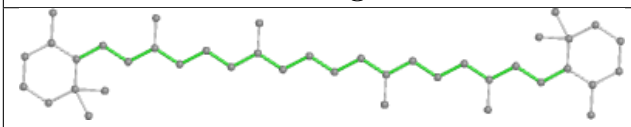
Ligand BCR A 848



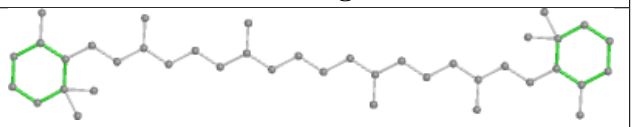
Bond lengths



Bond angles

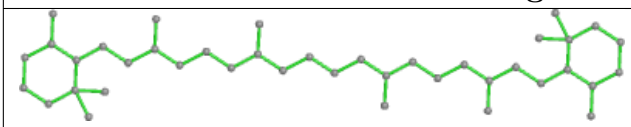


Torsions

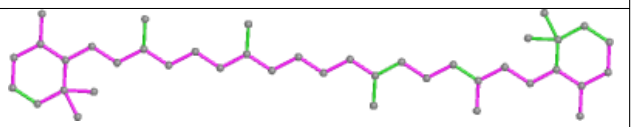


Rings

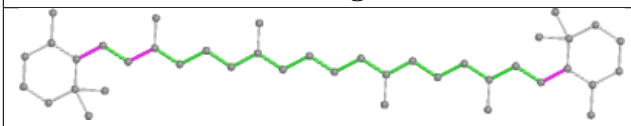
Ligand BCR 4 318



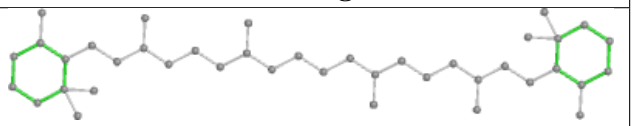
Bond lengths



Bond angles

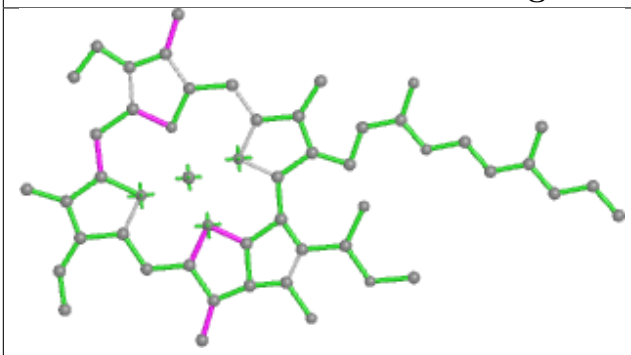


Torsions

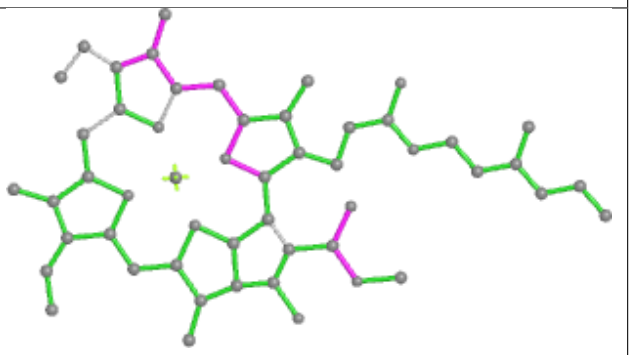


Rings

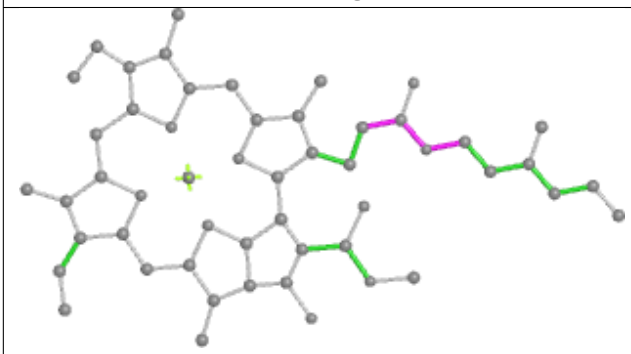
Ligand CLA 4 311



Bond lengths



Bond angles



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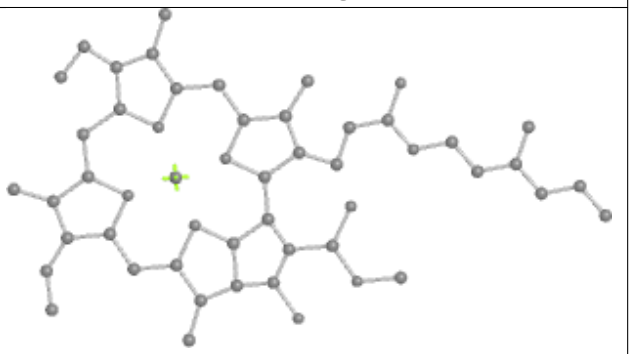
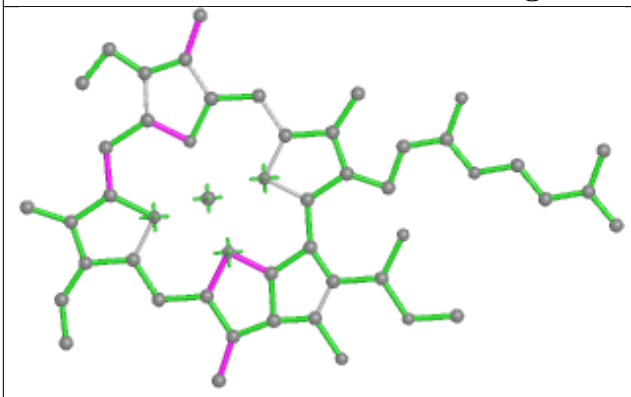
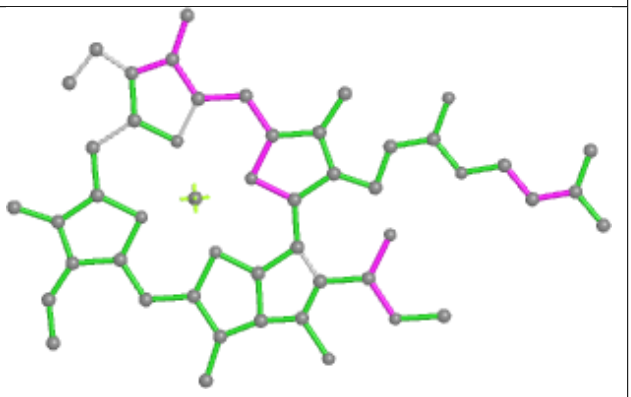


Rings

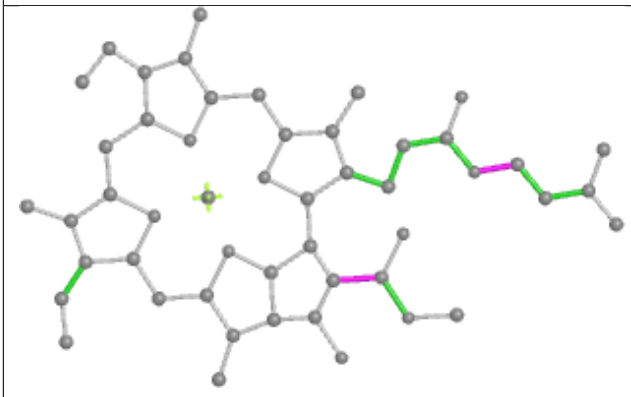
Ligand CLA A 830



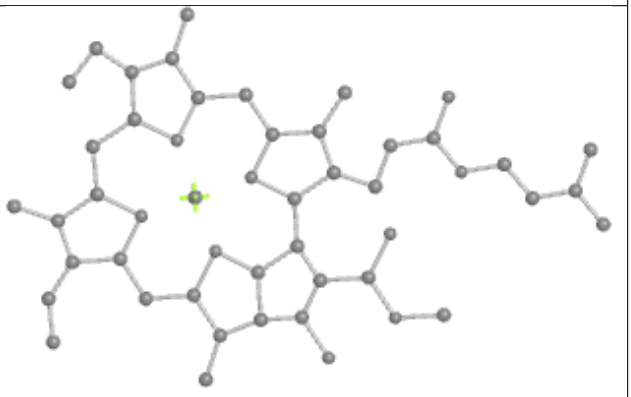
Bond lengths



Bond angles

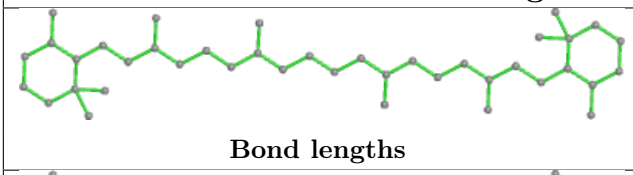


Torsions



Rings

Ligand BCR 1 317



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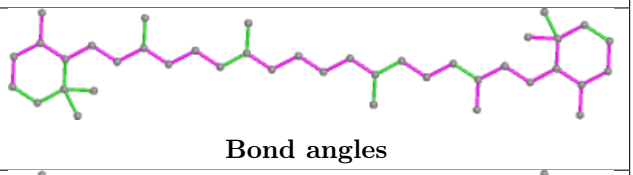
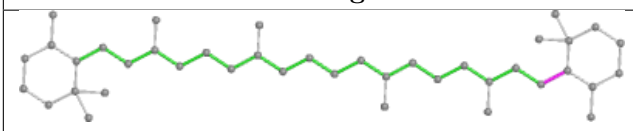
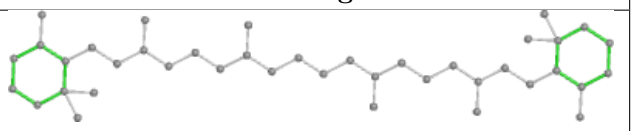


Bond angles

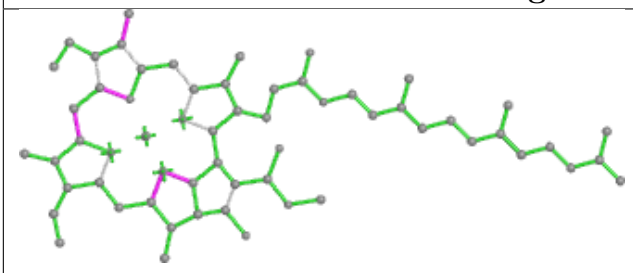


Torsions

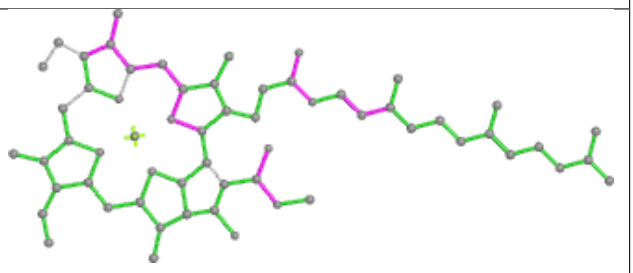


Rings

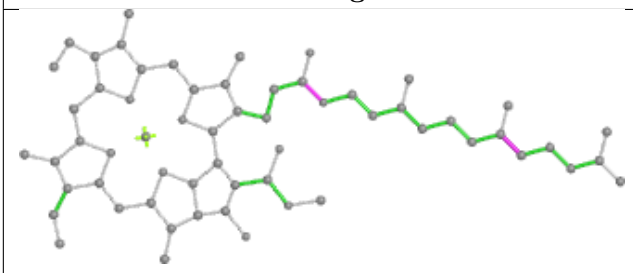
Ligand CLA 1 309



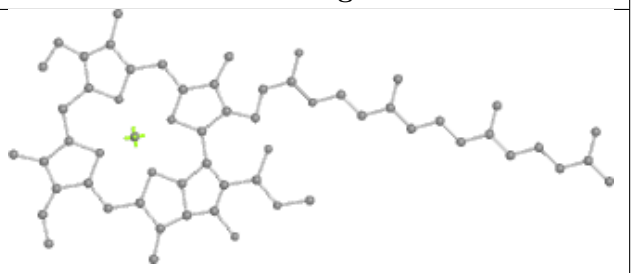
Bond lengths



Bond angles

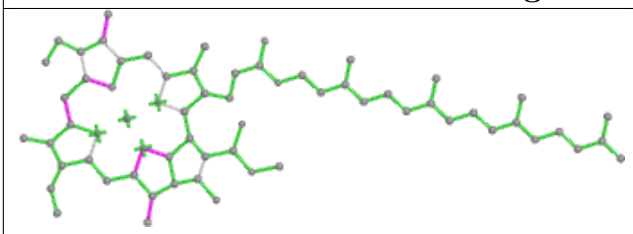


Torsions

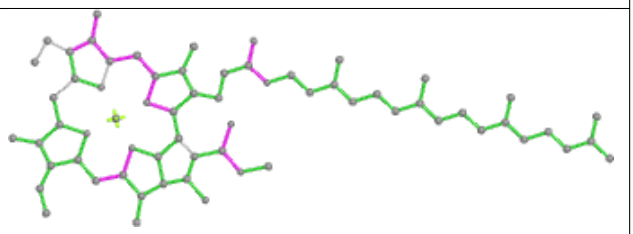


Rings

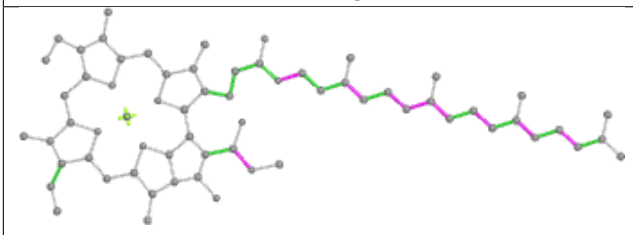
Ligand CLA A 853



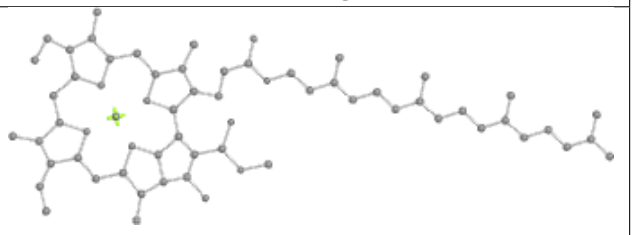
Bond lengths



Bond angles

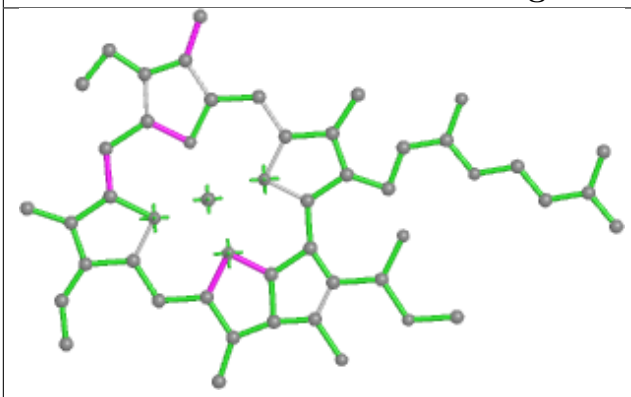


Torsions

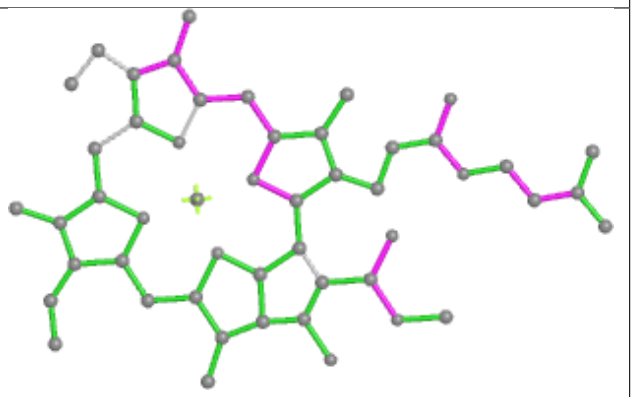


Rings

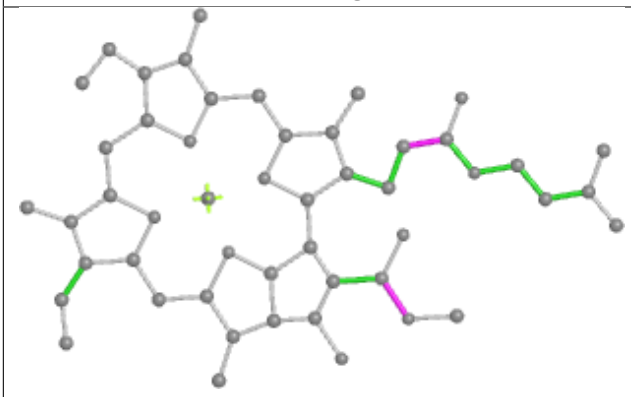
Ligand CLA 3 302



Bond lengths



Bond angles



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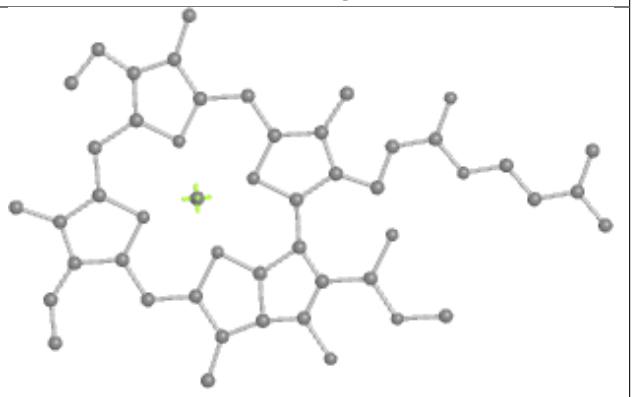

Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.