wwPDB EM Validation Summary Report

Jun 17, 2025 – 11:18 AM EDT

PDB ID	:	9MH0 / pdb_00009mh0
EMDB ID	:	EMD-48265
Title	:	Dunaliella salina PSI-LHCI supercomplex
Authors	:	Liu, H.W.; Khera, R.; Iwai, M.; Merchant, S.S.
Deposited on	:	2024-12-11
Resolution	:	2.90 Å(reported)
Based on initial model	:	6SL5

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 ⓘ symbol.

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

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

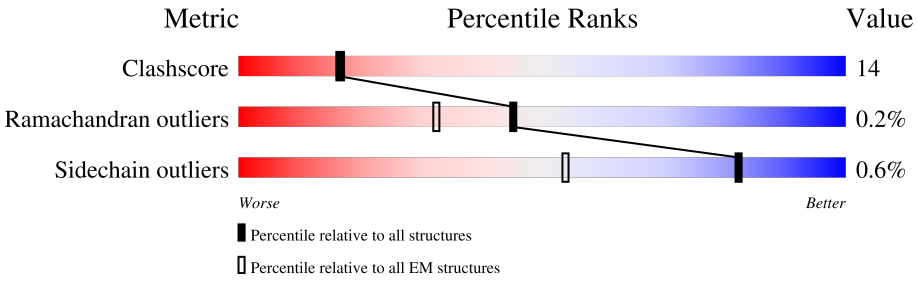
EMDB validation analysis	:	0.0.1.dev118
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0rc1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.44

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 2.90 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% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	1	228	13% 63% 24% 14%
2	2	263	41% 65% 19% 16%
3	3	320	8% 48% 17% 35%
4	7	256	7% 65% 17% 18%
5	8	254	13% 66% 22% • 11%
6	9	222	18% 61% 22% • 16%
7	A	751	• 71% 27% •
8	B	735	• 77% 22%

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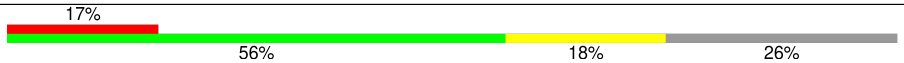
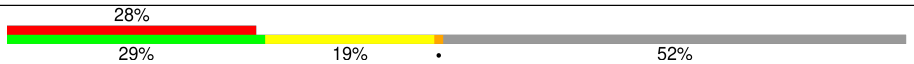
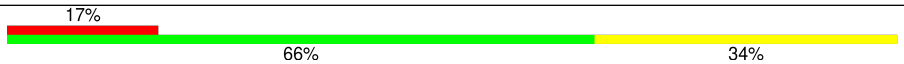
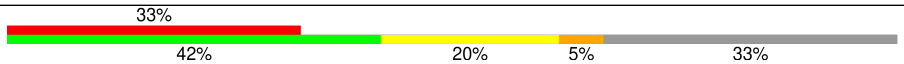
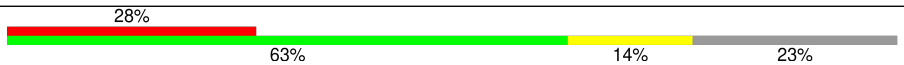
Mol	Chain	Length	Quality of chain
9	C	81	
10	D	202	
11	E	125	
12	F	232	
13	G	141	
14	H	135	
15	I	109	
16	J	41	
17	K	123	
18	L	202	

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	601	X	-	-	-
19	CHL	1	606	X	-	-	-
19	CHL	2	601	X	-	-	-
19	CHL	2	606	X	-	-	-
19	CHL	3	401	X	-	-	-
19	CHL	7	302	X	-	-	-
19	CHL	7	306	X	-	-	-
19	CHL	7	307	X	-	-	-
19	CHL	7	308	X	-	-	-
19	CHL	8	304	X	-	-	-
19	CHL	8	305	X	-	-	-
19	CHL	8	306	X	-	-	-
19	CHL	9	606	X	-	-	-
20	CLA	1	602	X	-	-	-
20	CLA	1	603	X	-	-	-
20	CLA	1	604	X	-	-	-
20	CLA	1	605	X	-	-	-
20	CLA	1	607	X	-	-	-
20	CLA	1	608	X	-	-	-
20	CLA	1	609	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
20	CLA	1	610	X	-	-	-
20	CLA	1	611	X	-	-	-
20	CLA	1	612	X	-	-	-
20	CLA	1	613	X	-	-	-
20	CLA	1	614	X	-	-	-
20	CLA	2	602	X	-	-	-
20	CLA	2	603	X	-	-	-
20	CLA	2	604	X	-	-	-
20	CLA	2	605	X	-	-	-
20	CLA	2	607	X	-	-	-
20	CLA	2	608	X	-	-	-
20	CLA	2	609	X	-	-	-
20	CLA	2	610	X	-	-	-
20	CLA	2	611	X	-	-	-
20	CLA	2	612	X	-	-	-
20	CLA	2	613	X	-	-	-
20	CLA	2	622	X	-	-	-
20	CLA	3	402	X	-	-	-
20	CLA	3	403	X	-	-	-
20	CLA	3	404	X	-	-	-
20	CLA	3	405	X	-	-	-
20	CLA	3	406	X	-	-	-
20	CLA	3	407	X	-	-	-
20	CLA	3	408	X	-	-	-
20	CLA	3	409	X	-	-	-
20	CLA	3	410	X	-	-	-
20	CLA	3	411	X	-	-	-
20	CLA	3	412	X	-	-	-
20	CLA	3	413	X	-	-	-
20	CLA	3	414	X	-	-	-
20	CLA	7	303	X	-	-	-
20	CLA	7	304	X	-	-	-
20	CLA	7	305	X	-	-	-
20	CLA	7	309	X	-	-	-
20	CLA	7	310	X	-	-	-
20	CLA	7	311	X	-	-	-
20	CLA	7	312	X	-	-	-
20	CLA	7	313	X	-	-	-
20	CLA	7	314	X	-	-	-
20	CLA	7	315	X	-	-	-
20	CLA	7	324	X	-	-	-
20	CLA	8	302	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
20	CLA	8	303	X	-	-	-
20	CLA	8	307	X	-	-	-
20	CLA	8	308	X	-	-	-
20	CLA	8	309	X	-	-	-
20	CLA	8	310	X	-	-	-
20	CLA	8	312	X	-	-	-
20	CLA	8	313	X	-	-	-
20	CLA	9	601	X	-	-	-
20	CLA	9	602	X	-	-	-
20	CLA	9	603	X	-	-	-
20	CLA	9	604	X	-	-	-
20	CLA	9	605	X	-	-	-
20	CLA	9	607	X	-	-	-
20	CLA	9	608	X	-	-	-
20	CLA	9	609	X	-	-	-
20	CLA	9	610	X	-	-	-
20	CLA	9	611	X	-	-	-
20	CLA	A	804	X	-	-	-
20	CLA	A	805	X	-	-	-
20	CLA	A	806	X	-	-	-
20	CLA	A	807	X	-	-	-
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	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	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
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	842	X	-	-	-
20	CLA	A	843	X	-	-	-
20	CLA	A	844	X	-	-	-
20	CLA	B	803	X	-	-	-
20	CLA	B	804	X	-	-	-
20	CLA	B	805	X	-	-	-
20	CLA	B	806	X	-	-	-
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	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
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	B	840	X	-	-	-
20	CLA	B	841	X	-	-	-
20	CLA	B	842	X	-	-	-
20	CLA	B	843	X	-	-	-
20	CLA	F	5003	X	-	-	-
20	CLA	F	5005	X	-	-	-
20	CLA	F	5006	X	-	-	-
20	CLA	F	5007	X	-	-	-
20	CLA	G	4002	X	-	-	-
20	CLA	G	4003	X	-	-	-
20	CLA	G	4004	X	-	-	-
20	CLA	H	204	X	-	-	-
20	CLA	J	4002	X	-	-	-
20	CLA	K	201	X	-	-	-
20	CLA	K	202	X	-	-	-
20	CLA	K	203	X	-	-	-
20	CLA	K	204	X	-	-	-
20	CLA	L	301	X	-	-	-
20	CLA	L	302	X	-	-	-
20	CLA	L	304	X	-	-	-
20	CLA	L	305	X	-	-	-
20	CLA	L	306	X	-	-	-
20	CLA	L	307	X	-	-	-
21	LUT	1	615	X	-	-	-
21	LUT	2	614	X	-	-	-
21	LUT	2	615	X	-	-	-
21	LUT	2	616	X	-	-	-
21	LUT	2	617	X	-	-	-
21	LUT	3	415	X	-	-	-
21	LUT	7	316	X	-	-	-
21	LUT	8	314	X	-	-	-
21	LUT	9	613	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
34	SF4	A	846	-	-	X	-

2 Entry composition (i)

There are 36 unique types of molecules in this entry. The entry contains 43016 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, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	1	197	1498	962	253	276	7	0	0

- Molecule 2 is a protein called LHCA2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	2	222	1736	1128	286	313	9	0	0

- Molecule 3 is a protein called LHCA3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	3	208	1597	1042	264	286	5	0	0

- Molecule 4 is a protein called LHCA7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	7	209	1609	1039	269	295	6	0	0

- Molecule 5 is a protein called LHCA8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	8	226	1726	1113	288	319	6	0	0

- Molecule 6 is a protein called LHCA9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	9	187	1456	947	244	259	6	0	0

- Molecule 7 is a protein called Photosystem I P700 chlorophyll a apoprotein A1.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	A	740	Total	C	N	O	S	0	0
			5807	3795	993	1001	18		

- Molecule 8 is a protein called Photosystem I P700 chlorophyll a apoprotein A2.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	B	732	Total	C	N	O	S	0	0
			5803	3813	973	1004	13		

- Molecule 9 is a protein called Photosystem I iron-sulfur center.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	C	80	Total	C	N	O	S	0	0
			600	370	104	115	11		

- Molecule 10 is a protein called PSAD1.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	D	143	Total	C	N	O	S	0	0
			1133	726	196	205	6		

- Molecule 11 is a protein called PSAE1.

Mol	Chain	Residues	Atoms				AltConf	Trace
11	E	64	Total	C	N	O	0	0
			509	323	88	98		

- Molecule 12 is a protein called PSAF1.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	F	165	Total	C	N	O	S	0	0
			1303	840	223	238	2		

- Molecule 13 is a protein called PSAG1.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	G	105	Total	C	N	O	S	0	0
			794	516	136	140	2		

- Molecule 14 is a protein called PSAH1.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	H	65	Total	C	N	O	S	0	0
			488	307	88	92	1		

- Molecule 15 is a protein called PSAI1.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	I	41	Total	C	N	O	S	0	0
			321	219	48	53	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
16	J	41	Total	C	N	O	S	0	0
			327	223	47	56	1		

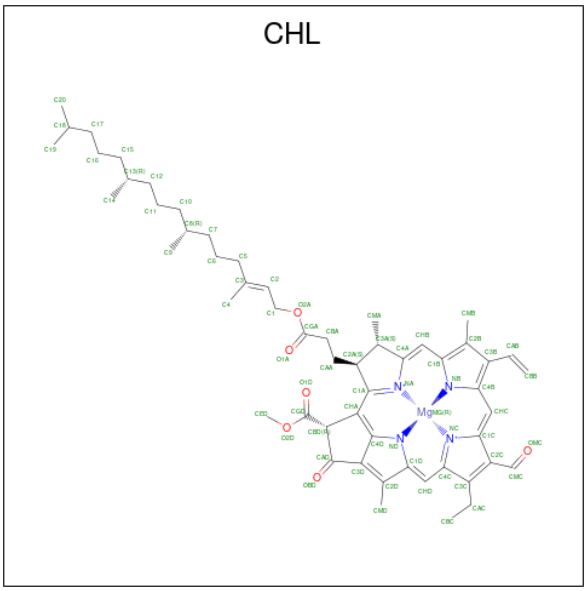
- Molecule 17 is a protein called PSAK1.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	K	83	Total	C	N	O	S	0	0
			584	373	101	107	3		

- Molecule 18 is a protein called PSAL1.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	L	156	Total	C	N	O	S	0	0
			1149	749	188	206	6		

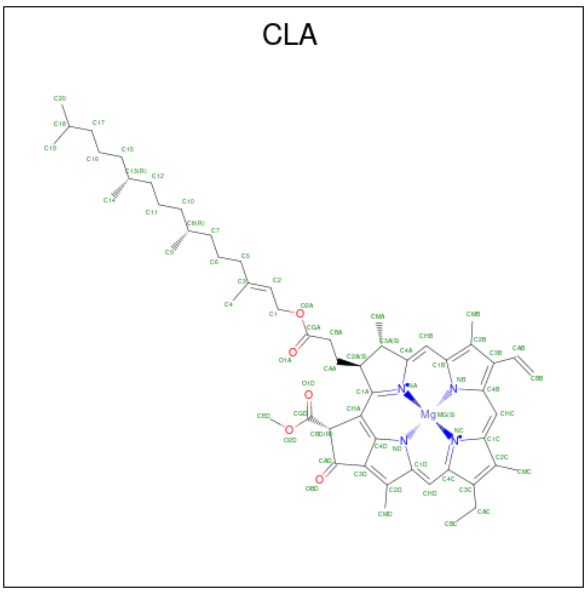
- Molecule 19 is CHLOROPHYLL B (CCD ID: CHL) (formula: $C_{55}H_{70}MgN_4O_6$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
19	1	1	Total 51	C 40	Mg 1	N 4	O 6	0
19	1	1	Total 47	C 36	Mg 1	N 4	O 6	0
19	2	1	Total 61	C 50	Mg 1	N 4	O 6	0
19	2	1	Total 47	C 36	Mg 1	N 4	O 6	0
19	3	1	Total 56	C 45	Mg 1	N 4	O 6	0
19	7	1	Total 66	C 55	Mg 1	N 4	O 6	0
19	7	1	Total 46	C 35	Mg 1	N 4	O 6	0
19	7	1	Total 51	C 40	Mg 1	N 4	O 6	0
19	7	1	Total 48	C 37	Mg 1	N 4	O 6	0
19	8	1	Total 47	C 36	Mg 1	N 4	O 6	0
19	8	1	Total 47	C 36	Mg 1	N 4	O 6	0
19	8	1	Total 51	C 40	Mg 1	N 4	O 6	0
19	9	1	Total 47	C 36	Mg 1	N 4	O 6	0

- Molecule 20 is CHLOROPHYLL A (CCD ID: 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 61	C 51	Mg 1	N 4	O 5	0
20	1	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	1	1	Total 50	C 40	Mg 1	N 4	O 5	0
20	1	1	Total 45	C 35	Mg 1	N 4	O 5	0
20	1	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	1	1	Total 60	C 50	Mg 1	N 4	O 5	0
20	1	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	1	1	Total 46	C 36	Mg 1	N 4	O 5	0
20	1	1	Total 46	C 36	Mg 1	N 4	O 5	0
20	1	1	Total 55	C 45	Mg 1	N 4	O 5	0
20	1	1	Total 55	C 45	Mg 1	N 4	O 5	0
20	1	1	Total 46	C 36	Mg 1	N 4	O 5	0
20	2	1	Total 56	C 46	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms					AltConf
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
			45	35	1	4	5	
20	2	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
20	2	1	Total	C	Mg	N	O	0
			45	35	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
			46	36	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
			44	35	1	4	4	
20	2	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
20	2	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
20	3	1	Total	C	Mg	N	O	0
			65	55	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
			46	36	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
			55	45	1	4	5	
20	3	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
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
			52	42	1	4	5	
20	3	1	Total	C	Mg	N	O	0
			57	47	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
20	3	1	Total	C	Mg	N	O	0
			65	55	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
			46	36	1	4	5	
20	7	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
20	7	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
20	7	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
20	7	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	7	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	7	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
20	7	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
20	7	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	7	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
20	7	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	7	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
20	8	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
20	8	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
20	8	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
20	8	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
20	8	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
20	8	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
20	8	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
20	8	1	Total 46	C 36	Mg 1	N 4	O 5	0
20	8	1	Total 51	C 41	Mg 1	N 4	O 5	0
20	9	1	Total 46	C 36	Mg 1	N 4	O 5	0
20	9	1	Total 60	C 50	Mg 1	N 4	O 5	0
20	9	1	Total 55	C 45	Mg 1	N 4	O 5	0
20	9	1	Total 50	C 40	Mg 1	N 4	O 5	0
20	9	1	Total 45	C 35	Mg 1	N 4	O 5	0
20	9	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	9	1	Total 60	C 50	Mg 1	N 4	O 5	0
20	9	1	Total 60	C 50	Mg 1	N 4	O 5	0
20	9	1	Total 50	C 40	Mg 1	N 4	O 5	0
20	9	1	Total 55	C 45	Mg 1	N 4	O 5	0
20	9	1	Total 45	C 35	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 60	C 50	Mg 1	N 4	O 5	0
20	A	1	Total 65	C 55	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms					AltConf
20	A	1	Total	C	Mg	N	O	0
			65	55	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
			62	52	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
			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
			55	45	1	4	5	
20	A	1	Total	C	Mg	N	O	0
			60	50	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
			60	50	1	4	5	
20	A	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
20	A	1	Total	C	Mg	N	O	0
			60	50	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
			56	46	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	

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Mol	Chain	Residues	Atoms					AltConf
20	A	1	Total	C	Mg	N	O	0
			65	55	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
			60	50	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
			51	41	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
			60	50	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
			61	51	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	
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
			48	38	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	

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Mol	Chain	Residues	Atoms					AltConf
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
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 60	C 50	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 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 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
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 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 60	C 50	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
			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
			50	40	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
			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
			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	F	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
20	F	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
20	F	1	Total	C	Mg	N	O	0
			47	37	1	4	5	
20	F	1	Total	C	Mg	N	O	0
			49	39	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
			47	37	1	4	5	
20	G	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	H	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
20	J	1	Total	C	Mg	N	O	0
			49	39	1	4	5	

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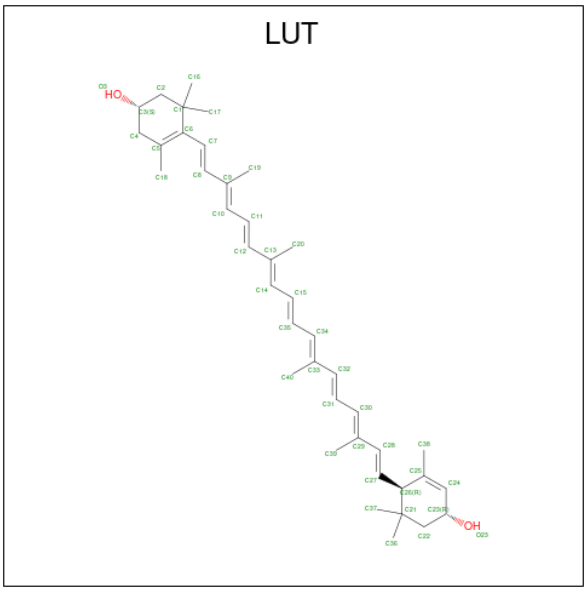
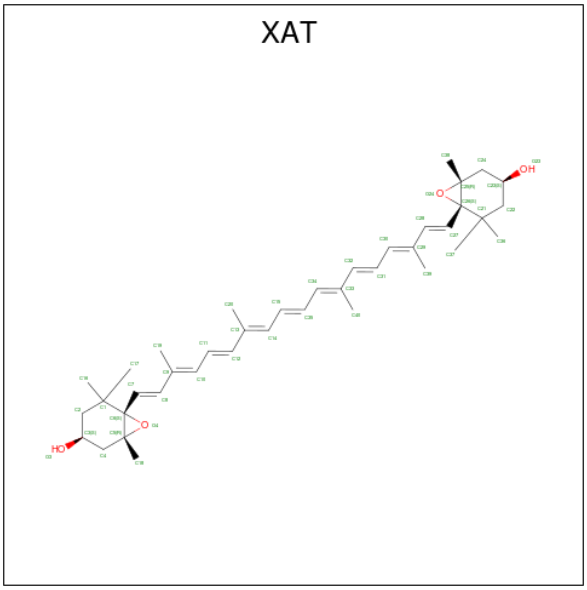
Mol	Chain	Residues	Atoms					AltConf
20	K	1	Total 45	C 35	Mg 1	N 4	O 5	0
20	K	1	Total 55	C 45	Mg 1	N 4	O 5	0
20	K	1	Total 45	C 35	Mg 1	N 4	O 5	0
20	K	1	Total 48	C 38	Mg 1	N 4	O 5	0
20	L	1	Total 45	C 35	Mg 1	N 4	O 5	0
20	L	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	L	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	L	1	Total 65	C 55	Mg 1	N 4	O 5	0
20	L	1	Total 50	C 40	Mg 1	N 4	O 5	0
20	L	1	Total 50	C 40	Mg 1	N 4	O 5	0

- Molecule 21 is (3R,3'R,6S)-4,5-DIDEHYDRO-5,6-DIHYDRO-BETA,BETA-CAROTENE-3,3'-DIOL (CCD ID: LUT) (formula: $C_{40}H_{56}O_2$) (labeled as "Ligand of Interest" by depositor).



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	2	1	Total C O 42 40 2	0
21	2	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	7	1	Total C O 42 40 2	0
21	8	1	Total C O 42 40 2	0
21	9	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 (CCD ID: XAT) (formula: $C_{40}H_{56}O_4$).



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

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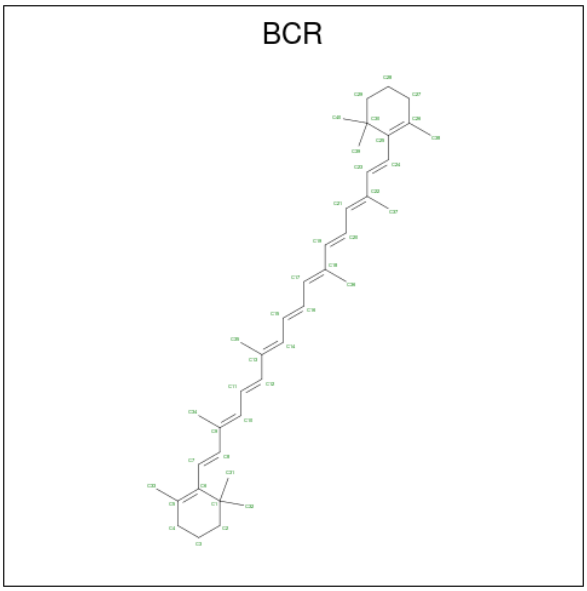
Mol	Chain	Residues	Atoms	AltConf
22	7	1	Total C O 44 40 4	0
22	8	1	Total C O 44 40 4	0
22	9	1	Total C O 44 40 4	0
22	9	1	Total C O 44 40 4	0

- Molecule 23 is BETA-CAROTENE (CCD ID: BCR) (formula: $C_{40}H_{56}$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
23	1	1	Total C 40 40	0
23	3	1	Total C 40 40	0
23	3	1	Total C 40 40	0
23	3	1	Total C 40 40	0
23	7	1	Total C 40 40	0
23	8	1	Total C 40 40	0
23	A	1	Total C 40 40	0

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Mol	Chain	Residues	Atoms	AltConf
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
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	G	1	Total C 40 40	0
23	H	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

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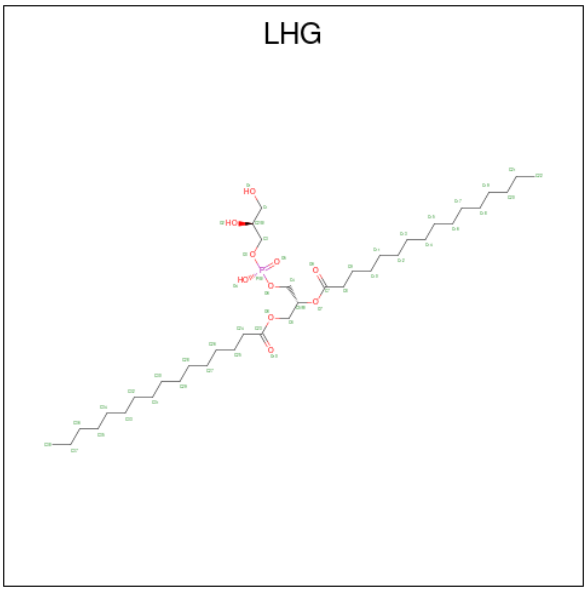
Mol	Chain	Residues	Atoms	AltConf
23	L	1	Total C 40 40	0
23	L	1	Total C 40 40	0
23	L	1	Total C 40 40	0

- Molecule 24 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (CCD ID: 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 25 14 10 1	0
24	1	1	Total C O P 44 33 10 1	0
24	1	1	Total C O P 31 20 10 1	0
24	1	1	Total C O P 46 35 10 1	0
24	2	1	Total C O P 44 35 8 1	0
24	2	1	Total C O P 36 25 10 1	0
24	3	1	Total C O P 17 8 8 1	0
24	3	1	Total C O P 39 28 10 1	0

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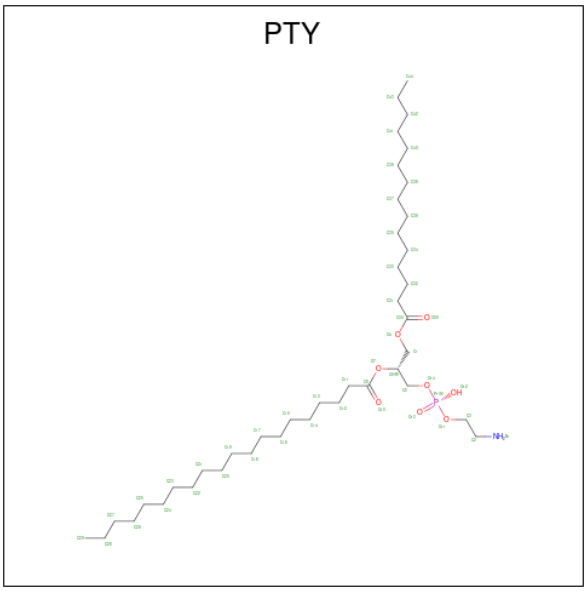
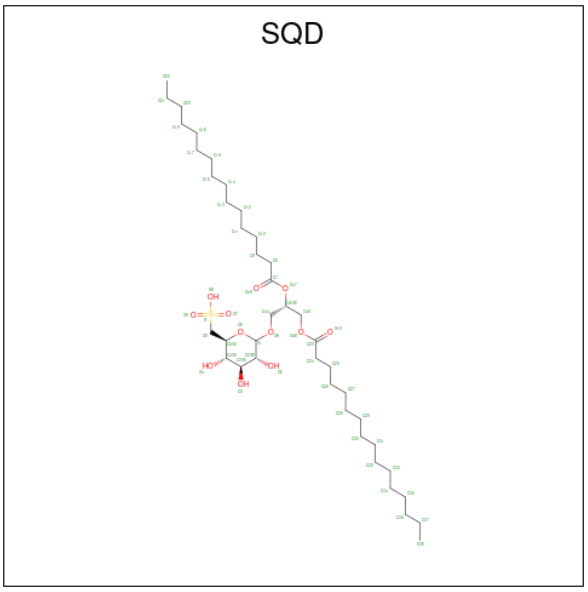
Mol	Chain	Residues	Atoms				AltConf
24	7	1	Total	C	O	P	0
			49	38	10	1	
24	7	1	Total	C	O	P	0
			22	11	10	1	
24	7	1	Total	C	O	P	0
			40	29	10	1	
24	8	1	Total	C	O	P	0
			34	23	10	1	
24	8	1	Total	C	O	P	0
			31	20	10	1	
24	9	1	Total	C	O	P	0
			41	30	10	1	
24	9	1	Total	C	O	P	0
			49	38	10	1	
24	A	1	Total	C	O	P	0
			30	20	9	1	
24	A	1	Total	C	O	P	0
			45	34	10	1	
24	B	1	Total	C	O	P	0
			49	38	10	1	
24	F	1	Total	C	O	P	0
			43	32	10	1	
24	F	1	Total	C	O	P	0
			42	31	10	1	
24	G	1	Total	C	O	P	0
			49	38	10	1	
24	H	1	Total	C	O	P	0
			38	27	10	1	
24	I	1	Total	C	O	P	0
			49	38	10	1	
24	J	1	Total	C	O	P	0
			36	29	6	1	

- Molecule 25 is PHOSPHATIDYLETHANOLAMINE (CCD ID: PTY) (formula: $C_{40}H_{80}NO_8P$).



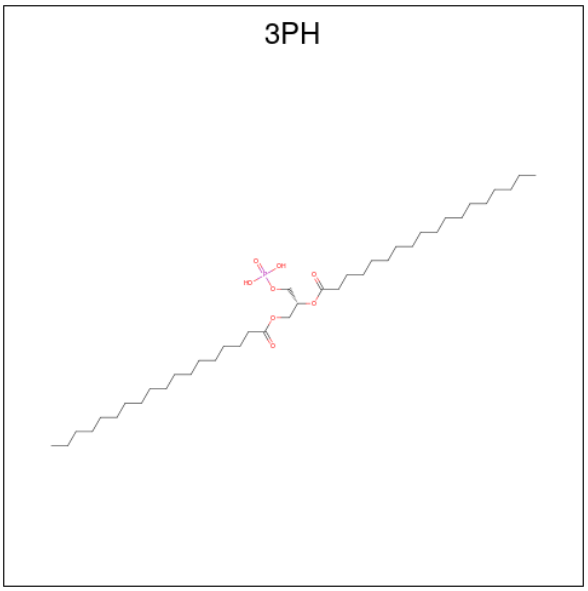
Mol	Chain	Residues	Atoms					AltConf
25	1	1	Total	C	N	O	P	0
			20	10	1	8	1	
25	1	1	Total	C	N	O	P	0
			35	25	1	8	1	
25	3	1	Total	C	N	O	P	0
			26	16	1	8	1	
25	7	1	Total	C	N	O	P	0
			25	15	1	8	1	
25	8	1	Total	C	N	O	P	0
			24	14	1	8	1	
25	8	1	Total	C	N	O	P	0
			21	11	1	8	1	
25	B	1	Total	C	N	O	P	0
			27	17	1	8	1	
25	F	1	Total	C	N	O	P	0
			22	12	1	8	1	
25	H	1	Total	C	N	O	P	0
			46	36	1	8	1	
25	H	1	Total	C	N	O	P	0
			32	22	1	8	1	
25	L	1	Total	C	N	O	P	0
			20	10	1	8	1	

- Molecule 26 is 1,2-DI-O-ACYL-3-O-[6-DEOXY-6-SULFO-ALPHA-D-GLUCOPYRANOSYL]-SN-GLYCEROL (CCD ID: SQD) (formula: $C_{41}H_{78}O_{12}S$) (labeled as "Ligand of Interest" by depositor).



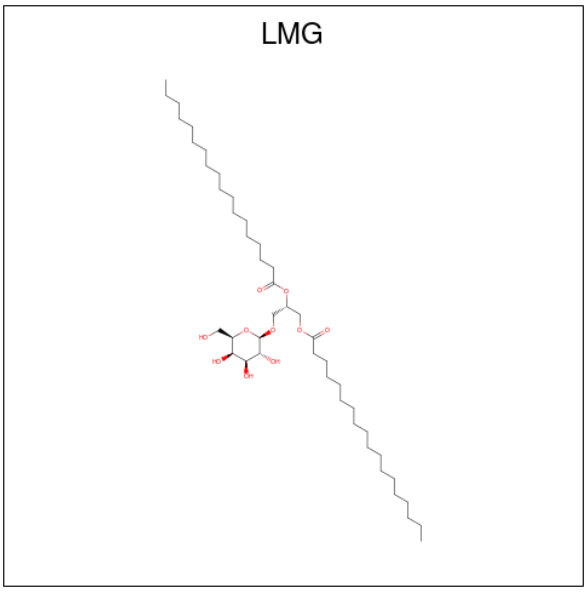
Mol	Chain	Residues	Atoms				AltConf
26	2	1	Total	C	O	S	0
			41	28	12	1	
26	3	1	Total	C	O	S	0
			35	22	12	1	
26	3	1	Total	C	O	S	0
			32	19	12	1	
26	9	1	Total	C	O	S	0
			37	24	12	1	
26	B	1	Total	C	O	S	0
			31	18	12	1	

- Molecule 27 is 1,2-DIACYL-GLYCEROL-3-SN-PHOSPHATE (CCD ID: 3PH) (formula: $C_{39}H_{77}O_8P$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
27	2	1	Total	C	O	P	0
			33	24	8	1	

- Molecule 28 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (CCD ID: LMG) (formula: $C_{45}H_{86}O_{10}$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
28	7	1	Total	C	O	0
			40	30	10	
28	7	1	Total	C	O	0
			54	44	10	

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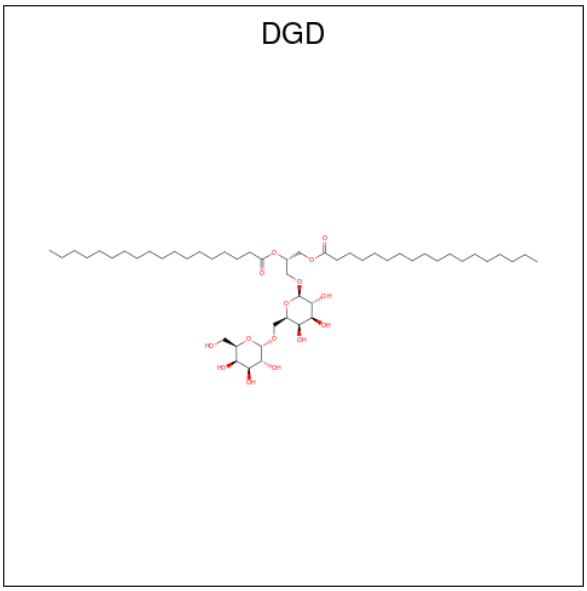
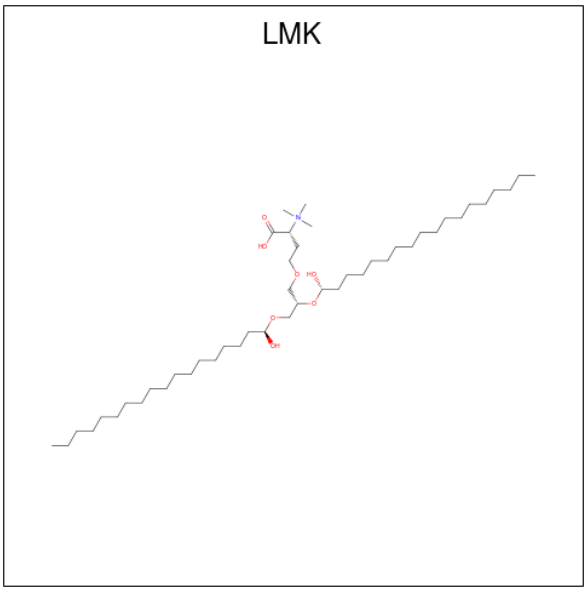
Mol	Chain	Residues	Atoms	AltConf
28	8	1	Total C O 50 40 10	0
28	A	1	Total C O 32 22 10	0
28	F	1	Total C O 46 36 10	0

- Molecule 29 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (CCD ID: DGD) (formula: $C_{51}H_{96}O_{15}$) (labeled as "Ligand of Interest" by depositor).



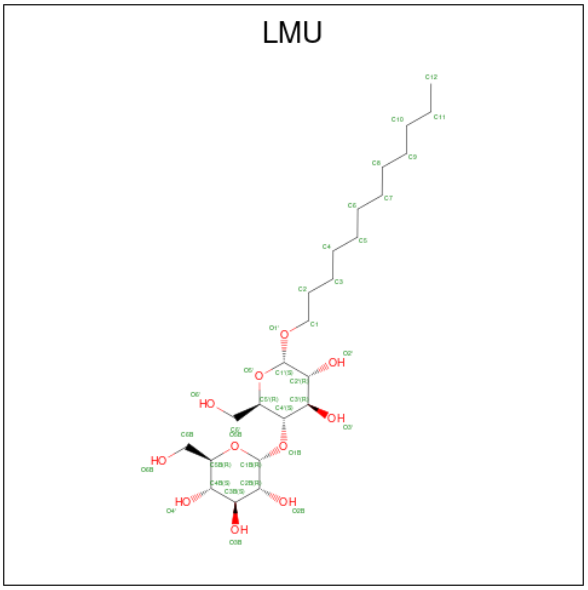
Mol	Chain	Residues	Atoms	AltConf
29	7	1	Total C O 47 32 15	0
29	A	1	Total C O 66 51 15	0
29	B	1	Total C O 61 46 15	0
29	L	1	Total C O 58 43 15	0

- Molecule 30 is trimethyl-[(2 {R})-1-oxidanyl-1-oxidanylidene-4-[(2 {S})-2-[(1 {S})-1-oxidanyloctadecoxy]-3-[(1 {R})-1-oxidanyloctadecoxy]propoxy]butan-2-yl]azanium (CCD ID: LMK) (formula: $C_{46}H_{94}NO_7$) (labeled as "Ligand of Interest" by depositor).



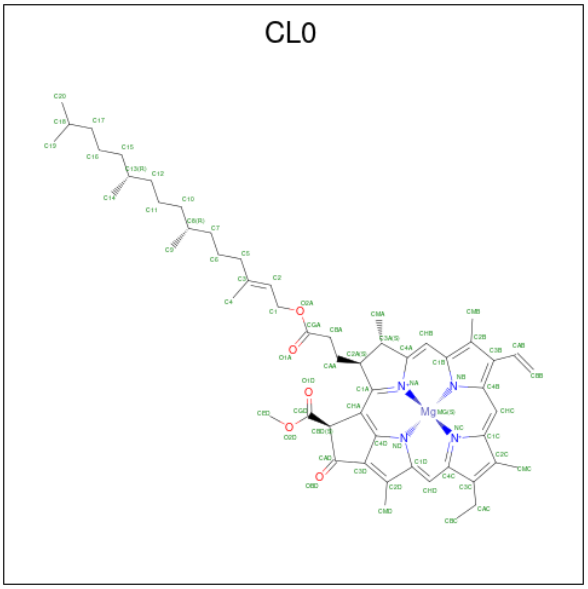
Mol	Chain	Residues	Atoms				AltConf
30	8	1	Total	C	N	O	0
			35	27	1	7	

- Molecule 31 is DODECYL-ALPHA-D-MALTOSIDE (CCD ID: LMU) (formula: $C_{24}H_{46}O_{11}$).



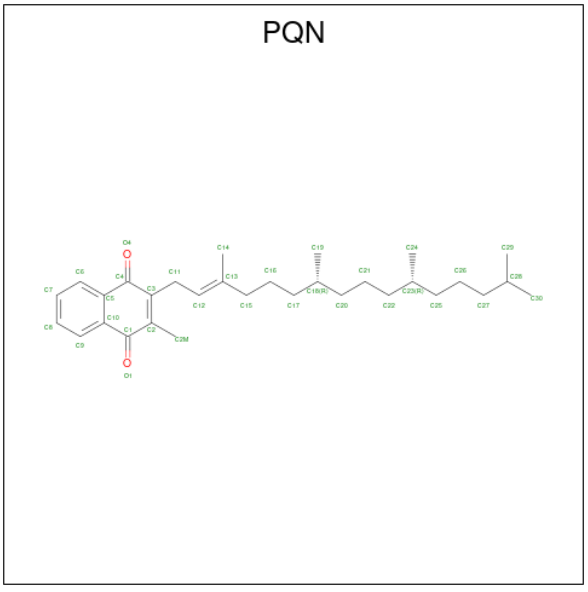
Mol	Chain	Residues	Atoms			AltConf
31	9	1	Total	C	O	0
			35	24	11	
31	A	1	Total	C	O	0
			35	24	11	
31	A	1	Total	C	O	0
			35	24	11	

- Molecule 32 is CHLOROPHYLL A ISOMER (CCD ID: CL0) (formula: $C_{55}H_{72}MgN_4O_5$) (labeled as "Ligand of Interest" by depositor).



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

- Molecule 33 is PHYLLOQUINONE (CCD ID: PQN) (formula: $C_{31}H_{46}O_2$).



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

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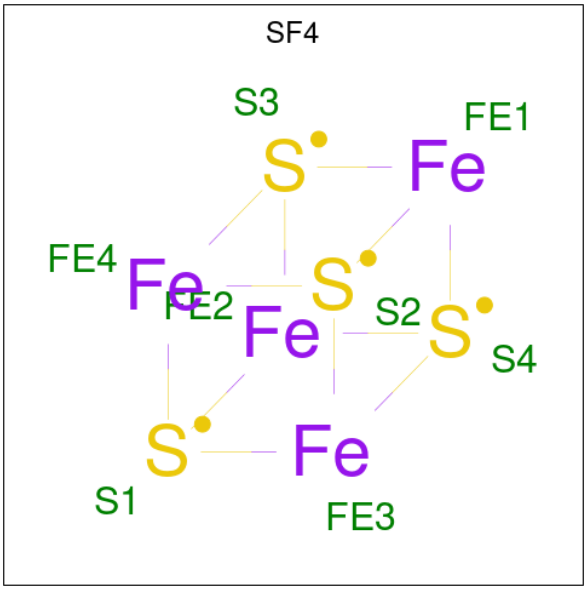
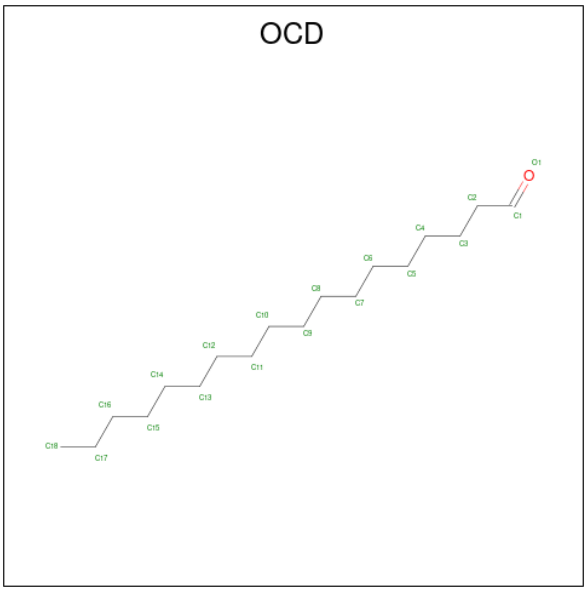
Mol	Chain	Residues	Atoms	AltConf
33	B	1	Total C O 33 31 2	0

- Molecule 34 is IRON/SULFUR CLUSTER (CCD ID: SF4) (formula: Fe_4S_4).



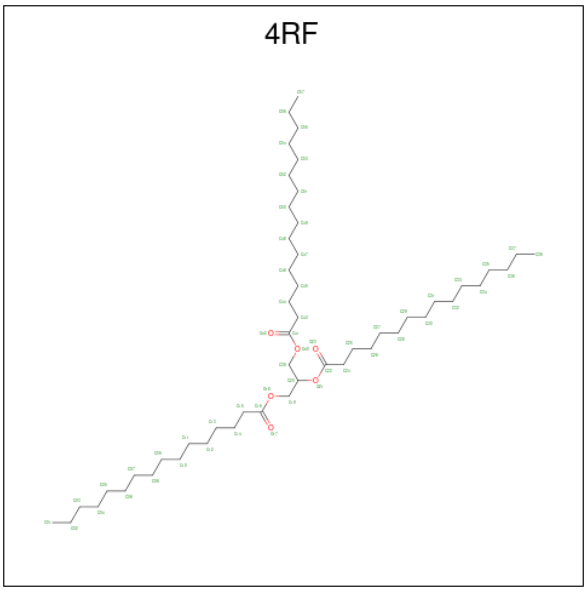
Mol	Chain	Residues	Atoms	AltConf
34	A	1	Total Fe S 8 4 4	0
34	C	1	Total Fe S 8 4 4	0
34	C	1	Total Fe S 8 4 4	0

- Molecule 35 is octadecanal (CCD ID: OCD) (formula: $C_{18}H_{36}O$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
35	A	1	Total C 11 11	0

- Molecule 36 is Tripalmitoylglycerol (CCD ID: 4RF) (formula: $C_{51}H_{98}O_6$) (labeled as "Ligand of Interest" by depositor).



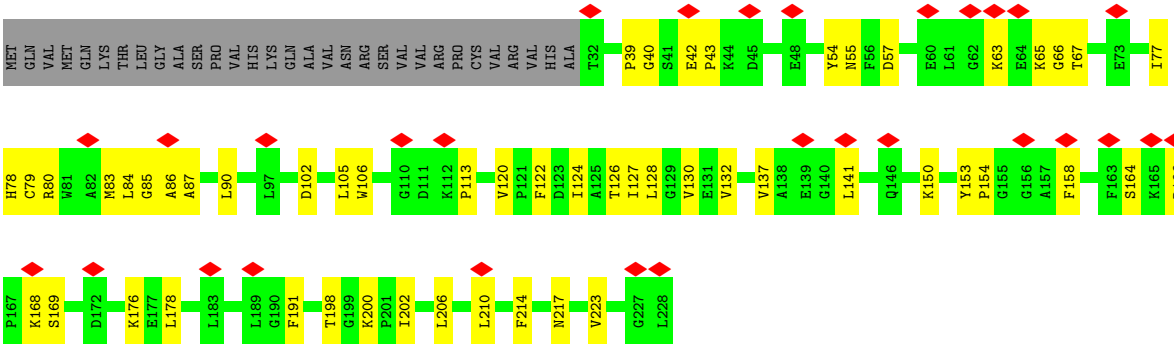
Mol	Chain	Residues	Atoms	AltConf
36	A	1	Total C O 39 33 6	0

3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

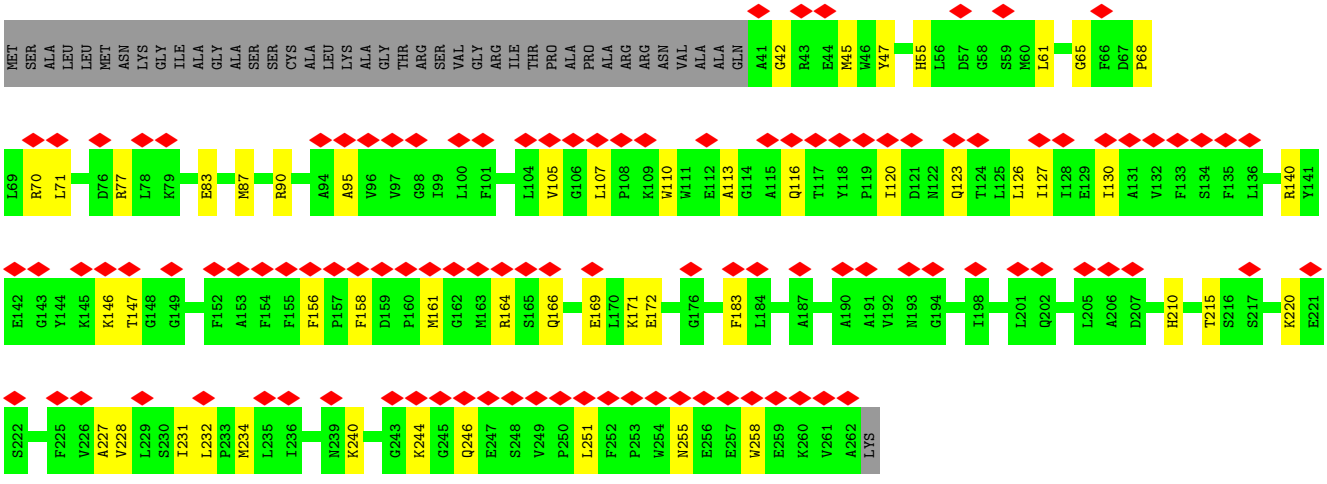
• Molecule 1: Chlorophyll a-b binding protein, chloroplastic

Chain 1:



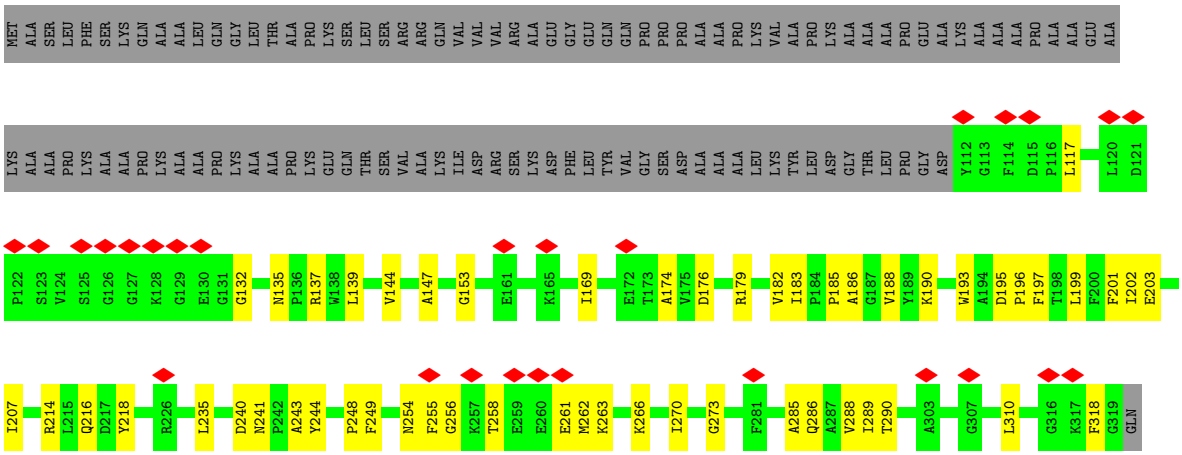
• Molecule 2: LHCA2

Chain 2:



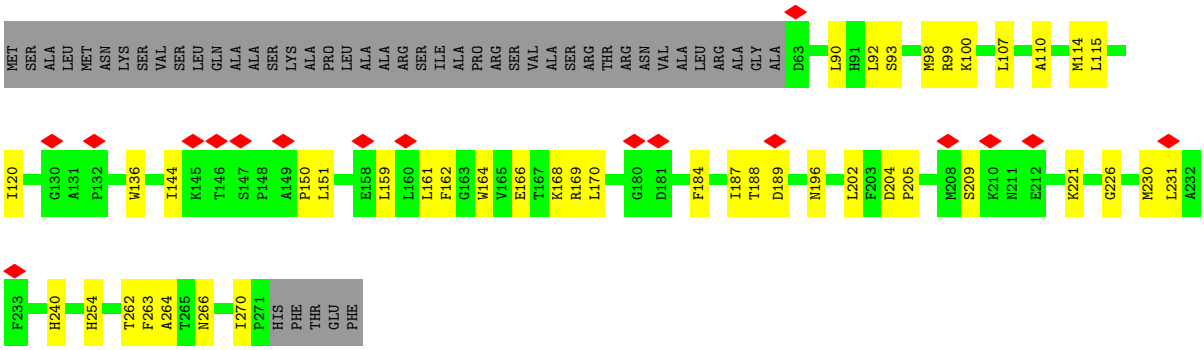
• Molecule 3: LHCA3

Chain 3:



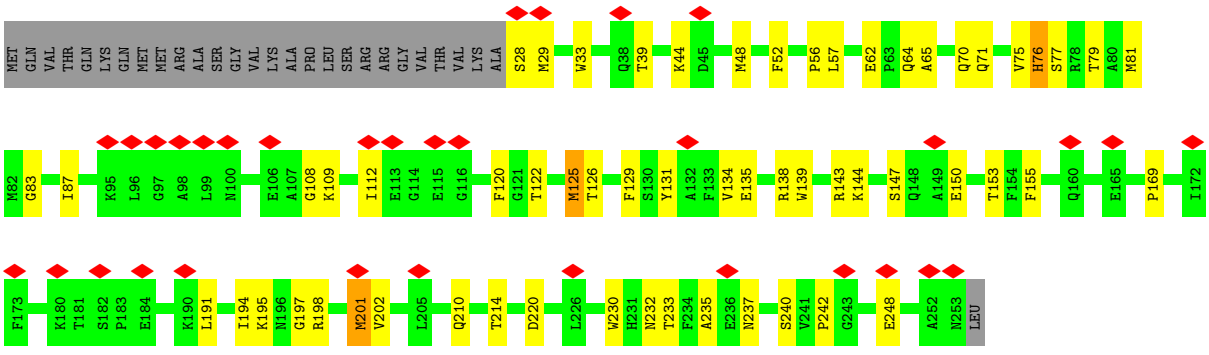
• Molecule 4: LHCA7

Chain 7:



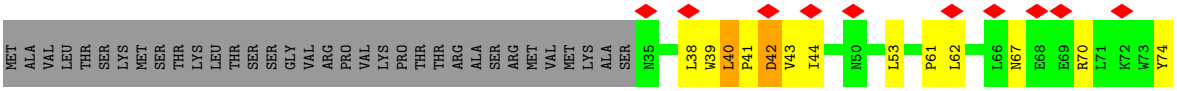
• Molecule 5: LHCA8

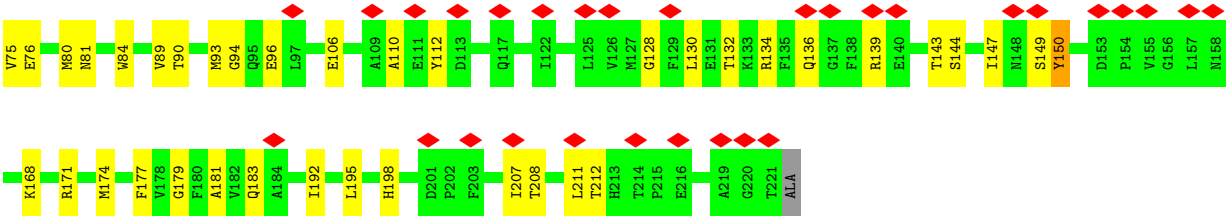
Chain 8:



• Molecule 6: LHCA9

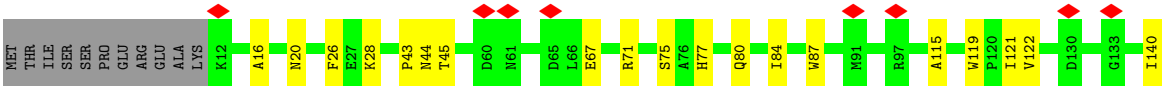
Chain 9:

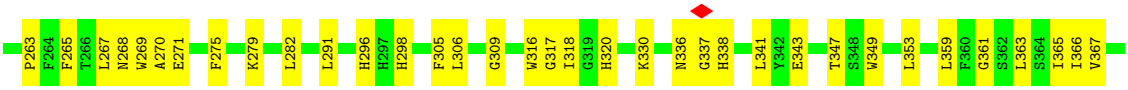


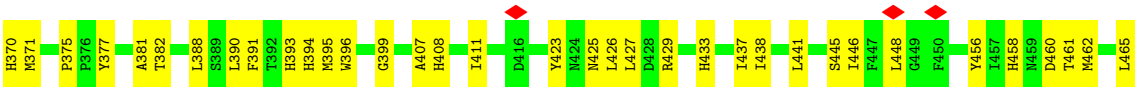


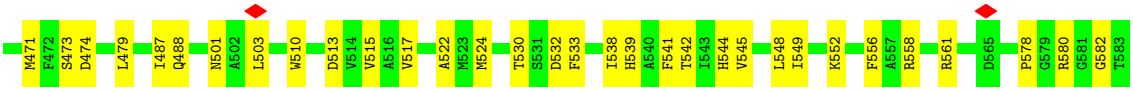
• Molecule 7: Photosystem I P700 chlorophyll a apoprotein A1

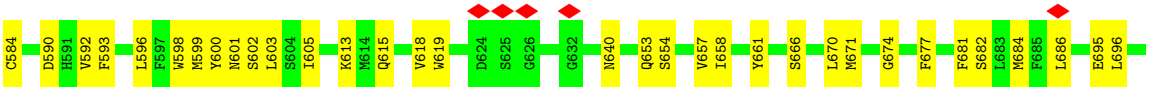
Chain A:

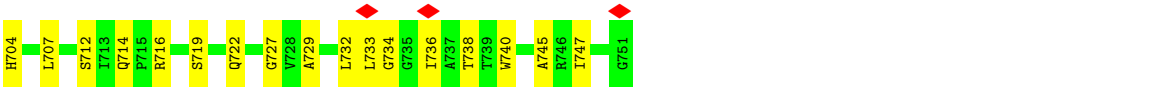


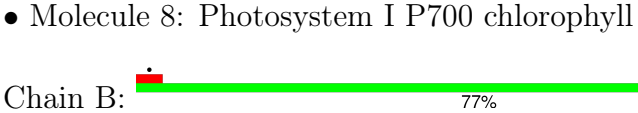






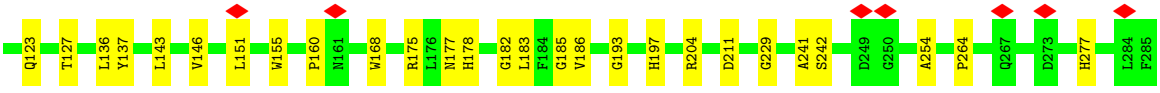


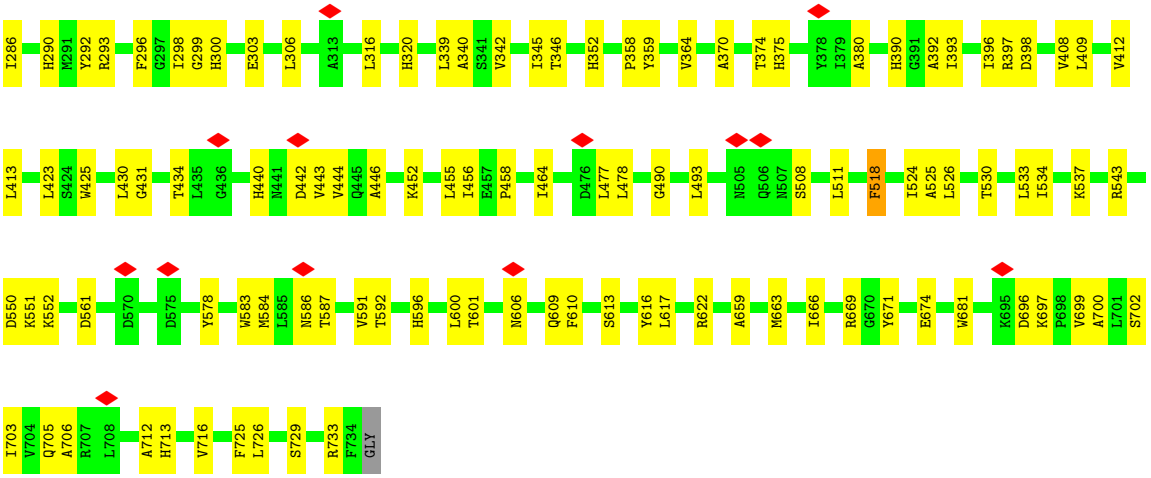




• Molecule 8: Photosystem I P700 chlorophyll a apoprotein A2

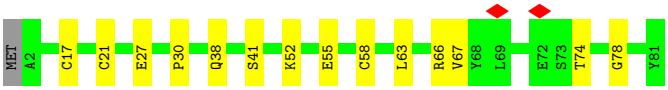
Chain B:





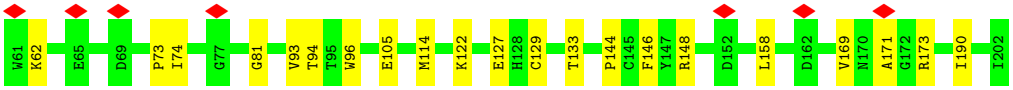
• Molecule 9: Photosystem I iron-sulfur center

Chain C:



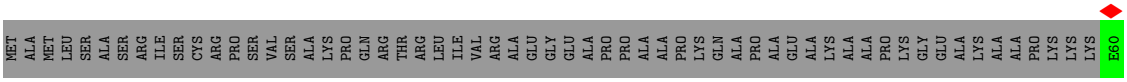
• Molecule 10: PSAD1

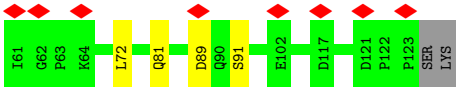
Chain D:



• Molecule 11: PSAE1

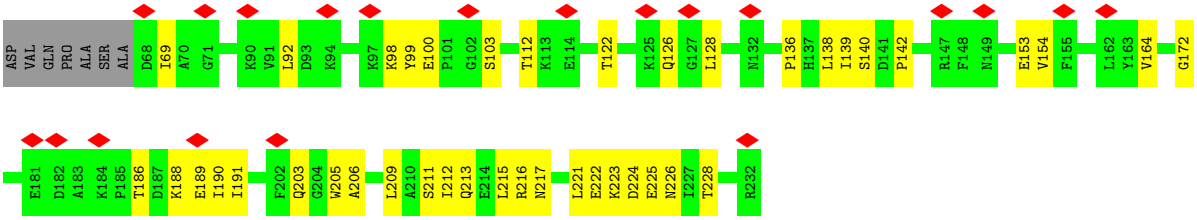
Chain E:





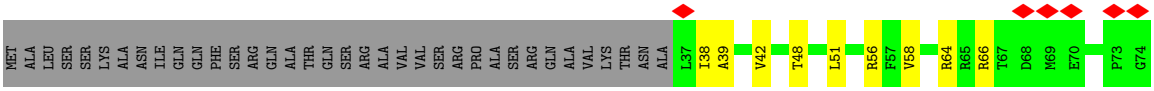
• Molecule 12: PSAF1

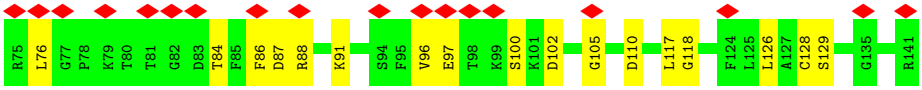
Chain F:



• Molecule 13: PSAG1

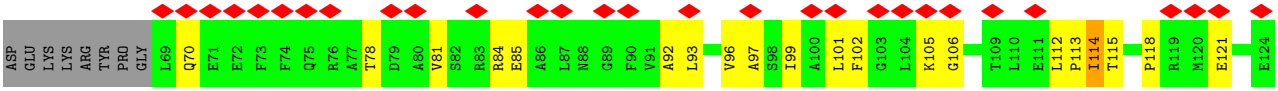
Chain G:





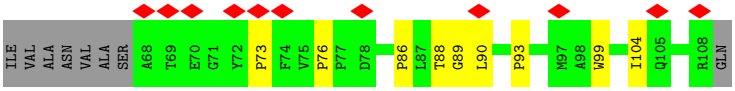
• Molecule 14: PSAH1

Chain H:



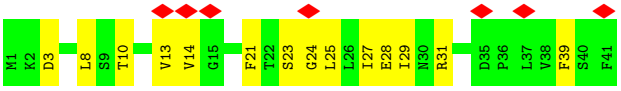
• Molecule 15: PSAI1

Chain I:



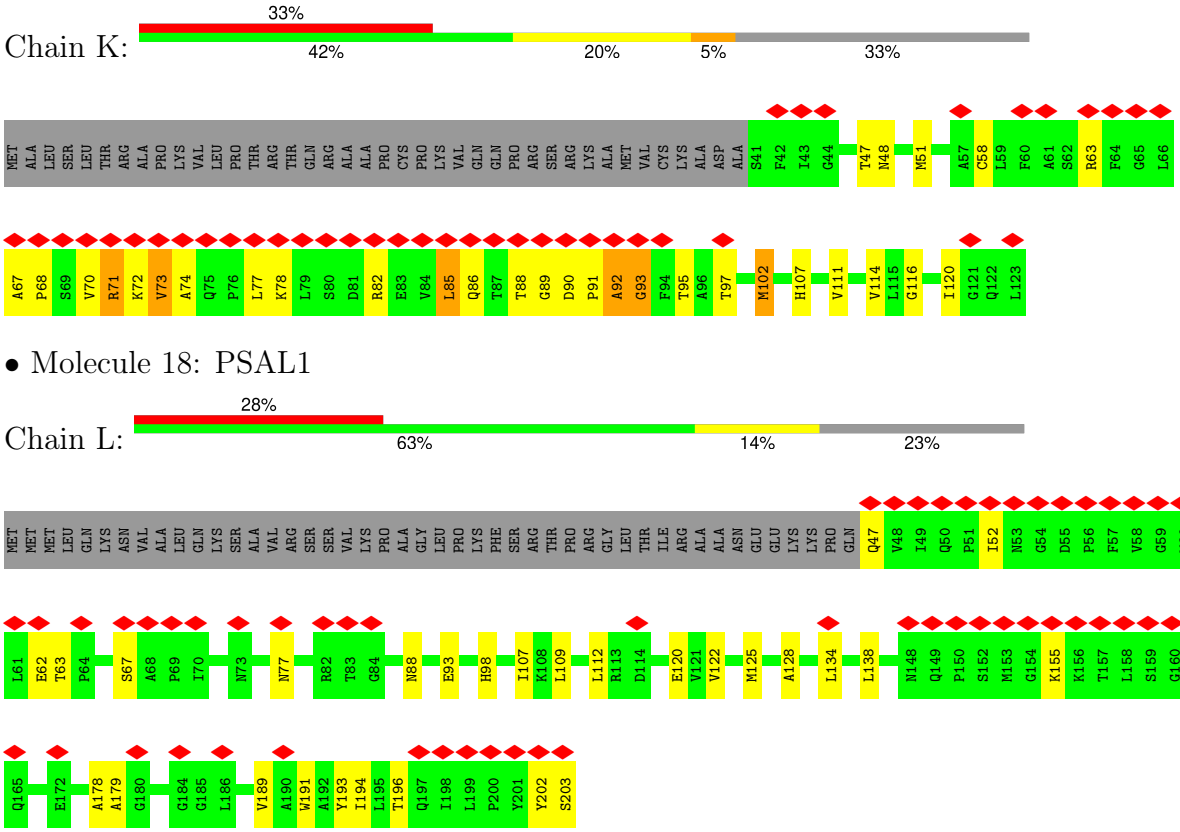
• Molecule 16: Photosystem I reaction center subunit IX

Chain J:



• Molecule 17: PSAK1

Chain K:



• Molecule 18: PSAL1

Chain L:

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	98784	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	60	Depositor
Minimum defocus (nm)	900	Depositor
Maximum defocus (nm)	2100	Depositor
Magnification	81000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.081	Depositor
Minimum map value	-0.022	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.001	Depositor
Recommended contour level	0.0165	Depositor
Map size (Å)	503.99997, 503.99997, 503.99997	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.05, 1.05, 1.05	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: CLA, LUT, CHL, LMU, SF4, OCD, 3PH, 4RF, SQD, LMG, XAT, LMK, BCR, CL0, PQN, DGD, LHG, PTY

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	0.19	0/1537	0.47	0/2084
2	2	0.18	0/1787	0.44	0/2425
3	3	0.19	0/1644	0.42	0/2228
4	7	0.17	0/1659	0.39	0/2254
5	8	0.19	0/1775	0.44	1/2406 (0.0%)
6	9	0.29	0/1499	0.60	0/2043
7	A	0.15	0/6003	0.34	0/8189
8	B	0.16	0/6016	0.35	0/8225
9	C	0.15	0/610	0.36	0/828
10	D	0.15	0/1163	0.35	0/1571
11	E	0.12	0/521	0.28	0/711
12	F	0.19	0/1332	0.47	0/1801
13	G	0.18	0/815	0.47	0/1104
14	H	0.28	0/493	0.75	1/660 (0.2%)
15	I	0.23	0/335	0.62	0/463
16	J	0.23	0/338	0.59	0/461
17	K	0.31	0/592	0.96	4/801 (0.5%)
18	L	0.17	0/1179	0.48	0/1612
All	All	0.18	0/29298	0.44	6/39866 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
12	F	0	1

There are no bond length outliers.

The worst 5 of 6 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	K	71	ARG	CA-C-N	-11.03	107.45	123.11
17	K	71	ARG	C-N-CA	-11.03	107.45	123.11
17	K	85	LEU	CA-CB-CG	5.87	136.84	116.30
5	8	125	MET	CB-CG-SD	5.73	129.90	112.70
17	K	102	MET	CB-CG-SD	5.51	129.24	112.70

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
12	F	216	ARG	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1	1498	0	1468	52	0
2	2	1736	0	1704	54	0
3	3	1597	0	1559	63	0
4	7	1609	0	1565	39	0
5	8	1726	0	1678	53	0
6	9	1456	0	1441	51	0
7	A	5807	0	5640	192	0
8	B	5803	0	5556	153	0
9	C	600	0	583	15	0
10	D	1133	0	1141	16	0
11	E	509	0	497	2	0
12	F	1303	0	1331	33	0
13	G	794	0	799	28	0
14	H	488	0	505	30	0
15	I	321	0	316	10	0
16	J	327	0	327	16	0
17	K	584	0	614	41	0
18	L	1149	0	1171	22	0
19	1	98	0	68	8	0
19	2	108	0	88	8	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	3	56	0	47	6	0
19	7	211	0	171	16	0
19	8	145	0	97	9	0
19	9	47	0	31	4	0
20	1	659	0	603	29	0
20	2	589	0	467	25	0
20	3	699	0	622	25	0
20	7	647	0	634	21	0
20	8	488	0	434	15	0
20	9	591	0	520	20	0
20	A	2535	0	2641	175	0
20	B	2559	0	2703	148	0
20	F	262	0	225	11	0
20	G	138	0	101	4	0
20	H	45	0	33	0	0
20	J	49	0	38	6	0
20	K	193	0	151	11	0
20	L	340	0	325	13	0
21	1	42	0	56	7	0
21	2	168	0	224	15	0
21	3	42	0	56	2	0
21	7	42	0	56	2	0
21	8	42	0	56	0	0
21	9	42	0	56	4	0
22	1	44	0	56	2	0
22	3	44	0	56	3	0
22	7	44	0	56	6	0
22	8	44	0	56	3	0
22	9	88	0	112	9	0
23	1	40	0	56	2	0
23	3	120	0	168	10	0
23	7	40	0	56	4	0
23	8	40	0	56	4	0
23	A	280	0	389	46	0
23	B	240	0	336	27	0
23	F	80	0	111	9	0
23	G	80	0	112	5	0
23	H	40	0	56	0	0
23	I	40	0	56	3	0
23	J	80	0	112	10	0
23	K	40	0	56	5	0
23	L	120	0	168	10	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
24	1	146	0	178	5	0
24	2	80	0	107	4	0
24	3	56	0	62	2	0
24	7	111	0	141	6	0
24	8	65	0	70	3	0
24	9	90	0	129	4	0
24	A	75	0	92	4	0
24	B	49	0	74	0	0
24	F	85	0	113	6	0
24	G	49	0	74	3	0
24	H	38	0	49	2	0
24	I	49	0	74	6	0
24	J	36	0	52	1	0
25	1	55	0	56	2	0
25	3	26	0	25	0	0
25	7	25	0	23	0	0
25	8	45	0	38	0	0
25	B	27	0	27	0	0
25	F	22	0	17	0	0
25	H	78	0	100	6	0
25	L	20	0	13	0	0
26	2	41	0	49	3	0
26	3	67	0	62	5	0
26	9	37	0	38	1	0
26	B	31	0	26	1	0
27	2	33	0	39	4	0
28	7	94	0	134	4	0
28	8	50	0	70	5	0
28	A	32	0	34	2	0
28	F	46	0	62	3	0
29	7	47	0	52	4	0
29	A	66	0	92	4	0
29	B	61	0	83	8	0
29	L	58	0	77	4	0
30	8	35	0	0	0	0
31	9	35	0	46	4	0
31	A	70	0	91	3	0
32	A	65	0	72	8	0
33	A	33	0	46	1	0
33	B	33	0	46	4	0
34	A	8	0	0	4	0
34	C	16	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
35	A	11	0	0	0	0
36	A	39	0	53	2	0
All	All	43016	0	43152	1190	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 14.

The worst 5 of 1190 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)
7:A:584:CYS:SG	34:A:846:SF4:FE4	1.05	1.49
2:2:227:ALA:O	2:2:231:ILE:HD12	1.19	1.29
8:B:431:GLY:CA	8:B:526:LEU:HD11	1.74	1.16
1:1:80:ARG:HA	1:1:83:MET:HE3	1.24	1.15
17:K:71:ARG:NH1	17:K:72:LYS:HE2	1.61	1.15

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	195/228 (86%)	179 (92%)	16 (8%)	0	100	100
2	2	220/263 (84%)	211 (96%)	8 (4%)	1 (0%)	25	56
3	3	206/320 (64%)	201 (98%)	4 (2%)	1 (0%)	25	56
4	7	207/256 (81%)	198 (96%)	9 (4%)	0	100	100
5	8	224/254 (88%)	218 (97%)	6 (3%)	0	100	100
6	9	185/222 (83%)	168 (91%)	15 (8%)	2 (1%)	12	37
7	A	738/751 (98%)	709 (96%)	29 (4%)	0	100	100
8	B	730/735 (99%)	704 (96%)	26 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
9	C	78/81 (96%)	73 (94%)	5 (6%)	0	100 100
10	D	141/202 (70%)	134 (95%)	7 (5%)	0	100 100
11	E	62/125 (50%)	60 (97%)	2 (3%)	0	100 100
12	F	163/232 (70%)	152 (93%)	11 (7%)	0	100 100
13	G	103/141 (73%)	96 (93%)	6 (6%)	1 (1%)	13 40
14	H	63/135 (47%)	55 (87%)	7 (11%)	1 (2%)	8 28
15	I	39/109 (36%)	38 (97%)	1 (3%)	0	100 100
16	J	39/41 (95%)	33 (85%)	6 (15%)	0	100 100
17	K	81/123 (66%)	64 (79%)	15 (18%)	2 (2%)	4 18
18	L	154/202 (76%)	145 (94%)	9 (6%)	0	100 100
All	All	3628/4420 (82%)	3438 (95%)	182 (5%)	8 (0%)	45 73

5 of 8 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	2	120	ILE
3	3	255	PHE
6	9	40	LEU
13	G	38	ILE
17	K	92	ALA

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	151/178 (85%)	150 (99%)	1 (1%)	81 94
2	2	179/207 (86%)	179 (100%)	0	100 100
3	3	159/236 (67%)	158 (99%)	1 (1%)	84 95
4	7	166/201 (83%)	165 (99%)	1 (1%)	84 95
5	8	173/196 (88%)	171 (99%)	2 (1%)	67 89
6	9	153/183 (84%)	150 (98%)	3 (2%)	50 79

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
7	A	599/609 (98%)	597 (100%)	2 (0%)	91 97
8	B	593/594 (100%)	591 (100%)	2 (0%)	91 97
9	C	68/69 (99%)	68 (100%)	0	100 100
10	D	123/163 (76%)	122 (99%)	1 (1%)	79 93
11	E	57/101 (56%)	56 (98%)	1 (2%)	54 82
12	F	138/184 (75%)	137 (99%)	1 (1%)	81 94
13	G	81/110 (74%)	81 (100%)	0	100 100
14	H	50/105 (48%)	50 (100%)	0	100 100
15	I	32/77 (42%)	32 (100%)	0	100 100
16	J	36/36 (100%)	36 (100%)	0	100 100
17	K	61/94 (65%)	59 (97%)	2 (3%)	33 68
18	L	120/159 (76%)	120 (100%)	0	100 100
All	All	2939/3502 (84%)	2922 (99%)	17 (1%)	82 95

5 of 17 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
12	F	222	GLU
17	K	88	THR
6	9	150	TYR
7	A	471	MET
7	A	544	HIS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 27 such sidechains are listed below:

Mol	Chain	Res	Type
7	A	387	GLN
8	B	99	GLN
12	F	174	GLN
7	A	539	HIS
8	B	206	GLN

5.3.3 RNA

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)

291 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	$\#\|Z\| > 2$
19	CHL	8	304	-	45,55,74	1.39	5 (11%)	48,91,114	2.39	8 (16%)
20	CLA	2	610	2	44,54,73	1.59	6 (13%)	51,90,113	1.61	6 (11%)
21	LUT	2	615	-	42,43,43	0.27	0	51,60,60	0.70	1 (1%)
20	CLA	1	607	-	63,73,73	1.34	5 (7%)	74,113,113	1.32	7 (9%)
21	LUT	8	314	-	42,43,43	0.26	0	51,60,60	0.39	0
20	CLA	9	603	6	53,63,73	1.58	8 (15%)	62,101,113	1.42	8 (12%)
23	BCR	L	308	-	41,41,41	0.19	0	56,56,56	0.37	0
20	CLA	3	414	3	44,54,73	1.63	5 (11%)	51,90,113	1.45	6 (11%)
20	CLA	A	821	7	63,73,73	1.37	6 (9%)	74,113,113	1.36	7 (9%)
24	LHG	8	319	20	33,33,48	0.34	0	36,39,54	0.34	0
20	CLA	A	810	-	58,68,73	1.39	5 (8%)	68,107,113	1.31	8 (11%)
20	CLA	A	815	7	60,70,73	1.41	7 (11%)	70,109,113	1.23	7 (10%)
20	CLA	1	605	-	43,53,73	1.63	4 (9%)	50,89,113	1.53	6 (12%)
20	CLA	B	837	8	49,59,73	1.52	6 (12%)	56,96,113	1.61	6 (10%)
20	CLA	L	304	18	63,73,73	1.36	4 (6%)	74,113,113	1.29	7 (9%)
22	XAT	8	315	-	41,47,47	0.16	0	54,74,74	0.68	1 (1%)
24	LHG	7	323	-	21,21,48	0.41	0	24,27,54	0.44	0
29	DGD	A	802	-	67,67,67	0.17	0	81,81,81	0.16	0
34	SF4	A	846	8,7	0,12,12	-	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
26	SQD	9	618	-	35,37,54	0.27	0	45,48,65	0.40	0
20	CLA	B	829	8	63,73,73	1.36	8 (12%)	74,113,113	1.25	6 (8%)
20	CLA	A	843	24	48,58,73	1.53	6 (12%)	56,95,113	1.52	7 (12%)
21	LUT	2	614	-	42,43,43	0.40	1 (2%)	51,60,60	1.15	2 (3%)
21	LUT	2	617	-	42,43,43	0.31	0	51,60,60	0.36	0
20	CLA	A	830	7	63,73,73	1.37	6 (9%)	74,113,113	1.35	8 (10%)
19	CHL	8	305	-	45,55,74	1.29	4 (8%)	48,91,114	2.37	8 (16%)
20	CLA	2	602	2	54,64,73	1.45	5 (9%)	63,102,113	1.39	6 (9%)
20	CLA	A	833	7	63,73,73	1.37	6 (9%)	74,113,113	1.29	7 (9%)
20	CLA	G	4002	13	45,55,73	1.61	6 (13%)	52,91,113	1.54	7 (13%)
20	CLA	A	842	7	59,69,73	1.40	6 (10%)	69,108,113	1.35	6 (8%)
25	PTY	F	5010	-	21,21,49	0.66	0	24,26,54	0.54	0
19	CHL	7	302	-	64,74,74	1.37	4 (6%)	71,114,114	2.08	11 (15%)
33	PQN	B	844	-	34,34,34	0.29	0	43,45,45	0.57	1 (2%)
22	XAT	1	616	-	41,47,47	0.15	0	54,74,74	1.04	4 (7%)
20	CLA	7	303	4	58,68,73	1.39	5 (8%)	68,107,113	1.25	7 (10%)
20	CLA	A	808	7	63,73,73	1.31	6 (9%)	74,113,113	1.23	7 (9%)
23	BCR	F	5009	-	41,41,41	0.16	0	56,56,56	0.34	0
20	CLA	2	613	-	48,58,73	1.53	6 (12%)	56,95,113	1.43	11 (19%)
20	CLA	L	306	-	48,58,73	1.54	6 (12%)	56,95,113	1.49	7 (12%)
22	XAT	7	317	-	41,47,47	0.18	0	54,74,74	0.81	2 (3%)
24	LHG	A	854	-	44,44,48	0.30	0	47,50,54	0.31	0
20	CLA	B	816	8	53,63,73	1.47	7 (13%)	62,101,113	1.42	6 (9%)
31	LMU	9	616	-	36,36,36	0.27	0	47,47,47	0.59	0
20	CLA	B	803	-	63,73,73	1.37	7 (11%)	74,113,113	1.29	8 (10%)
20	CLA	B	832	8	58,68,73	1.41	7 (12%)	68,107,113	1.42	7 (10%)
20	CLA	H	204	14	43,53,73	1.61	6 (13%)	50,89,113	1.49	6 (12%)
20	CLA	B	808	8	63,73,73	1.33	5 (7%)	74,113,113	1.30	6 (8%)
20	CLA	A	834	7	53,63,73	1.45	6 (11%)	62,101,113	1.37	7 (11%)
20	CLA	7	304	4	53,63,73	1.49	5 (9%)	62,101,113	1.40	7 (11%)
23	BCR	A	852	-	41,41,41	0.15	0	56,56,56	0.34	0
22	XAT	3	416	-	41,47,47	0.19	0	54,74,74	0.91	3 (5%)
20	CLA	9	610	6	48,58,73	1.58	6 (12%)	56,95,113	1.59	9 (16%)
23	BCR	H	205	-	41,41,41	0.30	0	56,56,56	0.72	2 (3%)
23	BCR	3	417	-	41,41,41	0.19	0	56,56,56	0.37	0
20	CLA	B	831	-	63,73,73	1.35	6 (9%)	74,113,113	1.32	8 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
20	CLA	L	302	-	63,73,73	1.33	5 (7%)	74,113,113	1.25	8 (10%)
23	BCR	J	4003	-	41,41,41	0.15	0	56,56,56	0.26	0
20	CLA	9	602	6	58,68,73	1.35	7 (12%)	68,107,113	1.28	8 (11%)
20	CLA	3	411	3	54,64,73	1.49	6 (11%)	62,101,113	1.35	7 (11%)
24	LHG	2	618	20	43,43,48	0.42	0	46,48,54	0.65	2 (4%)
26	SQD	B	851	-	29,31,54	0.22	0	39,42,65	0.25	0
20	CLA	9	608	6	58,68,73	1.40	6 (10%)	68,107,113	1.31	7 (10%)
20	CLA	1	604	-	48,58,73	1.48	6 (12%)	56,95,113	1.45	8 (14%)
22	XAT	9	615	-	41,47,47	0.18	0	54,74,74	1.09	4 (7%)
23	BCR	B	846	-	41,41,41	0.38	0	56,56,56	1.31	7 (12%)
20	CLA	B	823	8	63,73,73	1.35	6 (9%)	74,113,113	1.33	8 (10%)
23	BCR	F	5004	-	41,41,41	0.15	0	56,56,56	0.33	0
20	CLA	B	830	8	63,73,73	1.42	7 (11%)	74,113,113	1.32	10 (13%)
29	DGD	7	321	-	48,48,67	0.20	0	62,62,81	0.32	0
20	CLA	A	811	7	63,73,73	1.29	5 (7%)	74,113,113	1.22	7 (9%)
34	SF4	C	102	9	0,12,12	-	-	-		
19	CHL	8	306	-	49,59,74	1.24	5 (10%)	53,96,114	2.29	8 (15%)
20	CLA	9	612	6	43,53,73	1.80	8 (18%)	50,89,113	1.68	9 (18%)
20	CLA	A	807	7	63,73,73	1.32	4 (6%)	74,113,113	1.16	7 (9%)
20	CLA	2	611	-	58,68,73	1.40	5 (8%)	68,107,113	1.36	6 (8%)
20	CLA	9	604	6	48,58,73	1.53	6 (12%)	56,95,113	1.39	7 (12%)
20	CLA	A	837	7	53,63,73	1.47	6 (11%)	62,101,113	1.43	7 (11%)
26	SQD	3	421	-	33,35,54	0.26	0	43,46,65	0.32	0
20	CLA	9	601	6	44,54,73	1.75	6 (13%)	51,90,113	1.36	6 (11%)
20	CLA	1	602	1	59,69,73	1.39	6 (10%)	69,108,113	1.28	7 (10%)
20	CLA	9	609	24	58,68,73	1.38	5 (8%)	68,107,113	1.30	6 (8%)
20	CLA	A	841	7	63,73,73	1.33	6 (9%)	74,113,113	1.27	8 (10%)
33	PQN	A	845	-	34,34,34	0.28	0	43,45,45	0.55	1 (2%)
20	CLA	B	804	-	63,73,73	1.40	7 (11%)	74,113,113	1.30	6 (8%)
20	CLA	L	301	7	43,53,73	1.65	6 (13%)	50,89,113	1.47	6 (12%)
20	CLA	8	302	5	58,68,73	1.38	5 (8%)	68,107,113	1.21	8 (11%)
25	PTY	3	422	-	25,25,49	0.62	0	28,30,54	0.51	0
26	SQD	2	619	-	39,41,54	0.20	0	49,52,65	0.22	0
20	CLA	2	605	-	43,53,73	1.63	4 (9%)	50,89,113	1.45	6 (12%)
20	CLA	B	815	-	63,73,73	1.34	6 (9%)	74,113,113	1.26	7 (9%)
20	CLA	F	5007	12	47,57,73	1.54	5 (10%)	53,93,113	1.47	7 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
20	CLA	A	813	7	53,63,73	1.50	6 (11%)	62,101,113	1.31	6 (9%)
20	CLA	K	203	17	43,53,73	1.67	7 (16%)	50,89,113	1.64	6 (12%)
25	PTY	1	623	-	34,34,49	0.55	0	37,39,54	0.43	0
20	CLA	7	305	-	48,58,73	1.55	5 (10%)	56,95,113	1.51	7 (12%)
20	CLA	A	823	7	63,73,73	1.32	6 (9%)	74,113,113	1.33	7 (9%)
20	CLA	8	308	5	58,68,73	1.38	6 (10%)	68,107,113	1.22	6 (8%)
20	CLA	A	819	-	53,63,73	1.51	6 (11%)	62,101,113	1.46	7 (11%)
28	LMG	F	5001	-	46,46,55	0.19	0	54,54,63	0.16	0
20	CLA	1	612	-	53,63,73	1.60	9 (16%)	62,101,113	1.76	19 (30%)
24	LHG	G	4006	-	48,48,48	0.30	0	51,54,54	0.28	0
20	CLA	9	607	6	63,73,73	1.32	6 (9%)	74,113,113	1.27	7 (9%)
23	BCR	J	4001	-	41,41,41	0.31	0	56,56,56	0.96	4 (7%)
24	LHG	8	321	-	30,30,48	0.38	0	33,36,54	0.39	0
20	CLA	B	833	8	63,73,73	1.34	4 (6%)	74,113,113	1.52	9 (12%)
20	CLA	A	816	7	63,73,73	1.32	6 (9%)	74,113,113	1.44	8 (10%)
20	CLA	B	820	-	63,73,73	1.37	8 (12%)	74,113,113	1.30	8 (10%)
24	LHG	9	617	20	40,40,48	0.33	0	43,46,54	0.36	0
20	CLA	8	312	5	44,54,73	1.59	4 (9%)	51,90,113	1.38	6 (11%)
20	CLA	B	841	8	63,73,73	1.32	5 (7%)	74,113,113	1.21	8 (10%)
19	CHL	7	308	-	46,56,74	1.03	4 (8%)	49,92,114	1.42	9 (18%)
20	CLA	B	826	-	63,73,73	1.31	6 (9%)	74,113,113	1.24	8 (10%)
19	CHL	9	606	-	45,55,74	1.58	4 (8%)	48,91,114	2.34	8 (16%)
24	LHG	3	424	-	38,38,48	0.34	0	41,44,54	0.34	0
20	CLA	2	622	-	44,54,73	1.56	5 (11%)	51,90,113	1.49	8 (15%)
24	LHG	A	853	20	29,29,48	0.35	0	33,35,54	0.40	0
20	CLA	A	839	7	63,73,73	1.31	5 (7%)	74,113,113	1.27	7 (9%)
20	CLA	8	303	-	48,58,73	1.55	7 (14%)	56,95,113	1.54	7 (12%)
20	CLA	K	204	-	46,56,73	1.57	4 (8%)	53,92,113	1.47	7 (13%)
28	LMG	8	301	-	50,50,55	0.22	0	58,58,63	0.28	0
20	CLA	8	309	24	58,68,73	1.41	6 (10%)	68,107,113	1.34	7 (10%)
20	CLA	A	820	7	58,68,73	1.39	4 (6%)	68,107,113	1.28	6 (8%)
23	BCR	8	316	-	41,41,41	0.17	0	56,56,56	0.50	0
20	CLA	F	5005	-	53,63,73	1.44	5 (9%)	62,101,113	1.32	7 (11%)
21	LUT	7	316	-	42,43,43	0.37	1 (2%)	51,60,60	0.55	1 (1%)
24	LHG	F	5011	-	41,41,48	0.34	0	44,47,54	0.48	0
20	CLA	A	829	-	54,64,73	1.47	6 (11%)	63,102,113	1.37	7 (11%)
23	BCR	3	419	-	41,41,41	0.22	0	56,56,56	0.49	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
19	CHL	3	401	3	54,64,74	1.25	4 (7%)	59,102,114	2.00	6 (10%)
20	CLA	1	611	1	44,54,73	1.62	7 (15%)	51,90,113	1.57	8 (15%)
20	CLA	B	822	8	63,73,73	1.34	5 (7%)	74,113,113	1.21	8 (10%)
20	CLA	A	817	-	53,63,73	1.43	6 (11%)	62,101,113	1.43	8 (12%)
20	CLA	A	828	-	63,73,73	1.35	6 (9%)	74,113,113	1.46	8 (10%)
24	LHG	3	420	-	16,16,48	0.90	1 (6%)	17,20,54	0.65	0
23	BCR	A	858	-	41,41,41	0.24	0	56,56,56	0.42	1 (1%)
20	CLA	B	813	8	63,73,73	1.36	6 (9%)	74,113,113	1.29	8 (10%)
25	PTY	B	801	-	26,26,49	0.61	0	29,31,54	0.50	0
20	CLA	B	805	8	46,56,73	1.51	6 (13%)	53,92,113	1.48	7 (13%)
27	3PH	2	620	-	32,32,47	0.32	0	35,37,52	0.34	0
23	BCR	I	202	-	41,41,41	0.16	0	56,56,56	0.32	0
20	CLA	A	824	-	63,73,73	1.32	6 (9%)	74,113,113	1.21	7 (9%)
20	CLA	B	809	8	63,73,73	1.34	5 (7%)	74,113,113	1.24	8 (10%)
28	LMG	7	301	-	40,40,55	0.22	0	48,48,63	0.23	0
20	CLA	A	826	7	58,68,73	1.39	5 (8%)	68,107,113	1.22	6 (8%)
22	XAT	9	614	-	41,47,47	0.14	0	54,74,74	0.76	2 (3%)
20	CLA	2	603	2	58,68,73	1.47	6 (10%)	68,107,113	1.48	8 (11%)
20	CLA	B	834	8	63,73,73	1.35	7 (11%)	74,113,113	1.26	7 (9%)
20	CLA	1	613	1	53,63,73	1.48	6 (11%)	62,101,113	1.45	8 (12%)
20	CLA	B	806	8	63,73,73	1.35	6 (9%)	74,113,113	1.50	7 (9%)
24	LHG	1	619	-	43,43,48	0.32	0	46,49,54	0.33	0
20	CLA	1	609	1	63,73,73	1.30	5 (7%)	74,113,113	1.17	6 (8%)
20	CLA	A	809	7	63,73,73	1.34	5 (7%)	74,113,113	1.37	8 (10%)
24	LHG	B	852	-	48,48,48	0.31	0	51,54,54	0.32	0
26	SQD	3	423	-	30,32,54	0.23	0	40,43,65	0.16	0
35	OCD	A	855	-	10,10,18	0.24	0	9,9,17	0.19	0
23	BCR	G	4005	-	41,41,41	0.24	0	56,56,56	0.84	3 (5%)
32	CL0	A	803	7	63,73,73	1.10	4 (6%)	74,113,113	1.76	7 (9%)
20	CLA	A	832	7	63,73,73	1.36	8 (12%)	74,113,113	1.35	8 (10%)
20	CLA	A	831	7	63,73,73	1.30	6 (9%)	74,113,113	1.33	8 (10%)
20	CLA	A	840	7	58,68,73	1.39	6 (10%)	68,107,113	1.25	8 (11%)
21	LUT	1	615	-	42,43,43	0.22	0	51,60,60	1.47	8 (15%)
23	BCR	A	850	-	41,41,41	0.25	0	56,56,56	0.95	3 (5%)
20	CLA	L	305	18	63,73,73	1.28	5 (7%)	74,113,113	1.29	8 (10%)
24	LHG	9	619	-	48,48,48	0.31	0	51,54,54	0.32	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
25	PTY	H	202	-	31,31,49	0.53	0	34,36,54	0.75	1 (2%)
20	CLA	F	5008	12	44,54,73	1.88	9 (20%)	51,90,113	1.55	6 (11%)
20	CLA	A	825	7	58,68,73	1.41	6 (10%)	68,107,113	1.39	6 (8%)
20	CLA	7	310	4	63,73,73	1.30	4 (6%)	74,113,113	1.19	8 (10%)
20	CLA	9	611	-	53,63,73	1.47	6 (11%)	62,101,113	1.42	7 (11%)
20	CLA	B	838	-	58,68,73	1.39	5 (8%)	68,107,113	1.29	7 (10%)
20	CLA	7	315	4	63,73,73	1.36	5 (7%)	74,113,113	1.23	6 (8%)
20	CLA	G	4003	13	44,54,73	1.61	5 (11%)	51,90,113	1.50	6 (11%)
23	BCR	B	845	-	41,41,41	0.16	0	56,56,56	0.37	0
20	CLA	B	817	8	58,68,73	1.45	7 (12%)	68,107,113	1.43	6 (8%)
30	LMK	8	320	-	34,34,53	0.53	0	34,41,60	0.70	2 (5%)
20	CLA	7	312	4	50,60,73	1.52	7 (14%)	57,97,113	1.55	7 (12%)
20	CLA	7	309	4	63,73,73	1.33	5 (7%)	74,113,113	1.35	8 (10%)
20	CLA	8	311	5	63,73,73	1.63	7 (11%)	74,113,113	1.25	7 (9%)
20	CLA	A	827	7	58,68,73	1.43	7 (12%)	68,107,113	1.40	9 (13%)
23	BCR	L	309	-	41,41,41	0.15	0	56,56,56	0.24	0
24	LHG	J	4004	-	32,35,48	0.23	0	34,37,54	0.33	0
21	LUT	9	613	-	42,43,43	0.30	0	51,60,60	0.34	0
20	CLA	7	314	4	48,58,73	1.54	5 (10%)	56,95,113	1.45	8 (14%)
20	CLA	A	805	-	63,73,73	1.33	6 (9%)	74,113,113	1.27	6 (8%)
31	LMU	A	857	-	36,36,36	0.19	0	47,47,47	0.21	0
19	CHL	2	601	2	59,69,74	1.24	4 (6%)	65,108,114	2.10	8 (12%)
20	CLA	7	313	4	63,73,73	1.41	6 (9%)	74,113,113	1.27	7 (9%)
20	CLA	B	836	-	48,58,73	1.53	6 (12%)	56,95,113	1.55	8 (14%)
20	CLA	A	844	-	63,73,73	1.29	5 (7%)	74,113,113	1.32	7 (9%)
24	LHG	1	618	20	24,24,48	0.40	0	27,30,54	0.36	0
23	BCR	B	847	-	41,41,41	0.14	0	56,56,56	0.28	0
24	LHG	H	203	-	37,37,48	0.34	0	40,43,54	0.35	0
20	CLA	B	840	-	63,73,73	1.38	7 (11%)	74,113,113	1.34	7 (9%)
20	CLA	2	607	2	44,54,73	1.62	5 (11%)	51,90,113	1.34	6 (11%)
20	CLA	F	5003	5	63,73,73	1.37	6 (9%)	74,113,113	1.38	7 (9%)
20	CLA	B	812	-	53,63,73	1.46	5 (9%)	62,101,113	1.36	6 (9%)
20	CLA	B	818	8	63,73,73	1.32	5 (7%)	74,113,113	1.27	6 (8%)
23	BCR	B	849	-	41,41,41	0.19	0	56,56,56	0.67	2 (3%)
20	CLA	A	812	7	63,73,73	1.43	6 (9%)	74,113,113	1.41	8 (10%)
20	CLA	2	608	-	43,53,73	1.59	5 (11%)	50,89,113	1.45	7 (14%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
20	CLA	L	307	-	48,58,73	1.52	5 (10%)	56,95,113	1.44	8 (14%)
20	CLA	3	403	-	44,54,73	1.59	5 (11%)	51,90,113	1.53	6 (11%)
23	BCR	1	617	-	41,41,41	0.14	0	56,56,56	0.33	0
20	CLA	3	409	-	48,58,73	1.57	5 (10%)	56,95,113	1.48	7 (12%)
24	LHG	I	201	-	48,48,48	0.30	0	51,54,54	0.31	0
20	CLA	A	814	7	63,73,73	1.33	6 (9%)	74,113,113	1.20	7 (9%)
19	CHL	7	306	-	44,54,74	1.51	5 (11%)	47,90,114	2.45	5 (10%)
20	CLA	B	821	8	63,73,73	1.39	7 (11%)	74,113,113	1.29	8 (10%)
23	BCR	A	847	-	41,41,41	0.17	0	56,56,56	0.65	1 (1%)
20	CLA	A	835	7	63,73,73	1.36	5 (7%)	74,113,113	1.34	8 (10%)
20	CLA	3	404	-	44,54,73	1.60	5 (11%)	51,90,113	1.42	6 (11%)
20	CLA	A	806	7	63,73,73	1.36	6 (9%)	74,113,113	1.32	7 (9%)
24	LHG	F	5002	-	42,42,48	0.31	0	45,48,54	0.32	0
25	PTY	1	622	-	19,19,49	0.69	0	22,24,54	0.53	0
20	CLA	9	605	6	43,53,73	1.80	8 (18%)	50,89,113	1.59	10 (20%)
20	CLA	3	407	3	63,73,73	1.36	5 (7%)	74,113,113	1.34	7 (9%)
20	CLA	B	825	-	63,73,73	1.33	7 (11%)	74,113,113	1.42	10 (13%)
19	CHL	7	307	-	49,59,74	1.24	4 (8%)	53,96,114	2.28	11 (20%)
20	CLA	A	818	7	63,73,73	1.35	5 (7%)	74,113,113	1.40	8 (10%)
20	CLA	B	828	-	63,73,73	1.32	5 (7%)	74,113,113	1.27	7 (9%)
20	CLA	B	810	8	63,73,73	1.36	7 (11%)	74,113,113	1.32	7 (9%)
24	LHG	1	621	-	45,45,48	0.32	0	48,51,54	0.34	0
24	LHG	7	320	20	48,48,48	0.29	0	51,54,54	0.28	0
20	CLA	F	5006	-	45,55,73	1.58	6 (13%)	52,91,113	1.42	7 (13%)
23	BCR	L	303	-	41,41,41	0.15	0	56,56,56	0.27	0
20	CLA	2	609	24	39,49,73	1.67	5 (12%)	46,84,113	1.45	7 (15%)
25	PTY	8	317	-	23,23,49	0.67	0	26,28,54	0.49	0
25	PTY	7	322	-	24,24,49	0.63	0	27,29,54	0.50	0
20	CLA	K	202	-	53,63,73	1.47	5 (9%)	62,101,113	1.27	6 (9%)
20	CLA	8	307	5	44,54,73	1.59	6 (13%)	51,90,113	1.34	6 (11%)
20	CLA	8	313	5	49,59,73	1.54	6 (12%)	56,96,113	1.34	6 (10%)
20	CLA	B	835	-	58,68,73	1.39	6 (10%)	68,107,113	1.36	7 (10%)
20	CLA	3	412	3	63,73,73	1.35	5 (7%)	74,113,113	1.25	8 (10%)
24	LHG	7	325	-	39,39,48	0.34	0	42,45,54	0.38	0
20	CLA	K	201	-	43,53,73	1.65	6 (13%)	50,89,113	1.49	6 (12%)
23	BCR	A	851	-	41,41,41	0.19	0	56,56,56	0.46	0
19	CHL	2	606	-	45,55,74	1.35	5 (11%)	48,91,114	2.32	8 (16%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
20	CLA	A	822	7	63,73,73	1.33	5 (7%)	74,113,113	1.28	9 (12%)
20	CLA	1	603	1	63,73,73	1.36	7 (11%)	74,113,113	1.30	6 (8%)
20	CLA	3	406	-	53,63,73	1.51	7 (13%)	62,101,113	1.43	7 (11%)
20	CLA	3	405	3	48,58,73	1.53	6 (12%)	56,95,113	1.44	7 (12%)
21	LUT	3	415	-	42,43,43	0.27	0	51,60,60	0.54	1 (1%)
20	CLA	3	410	3	50,60,73	1.54	5 (10%)	57,97,113	1.58	9 (15%)
20	CLA	8	310	5	48,58,73	1.59	8 (16%)	56,95,113	1.51	9 (16%)
24	LHG	1	620	20	30,30,48	0.36	0	33,36,54	0.33	0
31	LMU	A	856	-	36,36,36	0.18	0	47,47,47	0.40	0
20	CLA	B	811	8	63,73,73	1.31	6 (9%)	74,113,113	1.31	6 (8%)
20	CLA	2	612	2	41,52,73	1.67	5 (12%)	47,87,113	1.44	6 (12%)
23	BCR	A	848	-	41,41,41	0.43	0	56,56,56	0.99	3 (5%)
23	BCR	3	418	-	41,41,41	0.20	0	56,56,56	0.99	2 (3%)
25	PTY	L	310	-	19,19,49	0.71	0	22,24,54	0.56	0
20	CLA	B	814	8	63,73,73	1.35	5 (7%)	74,113,113	1.35	6 (8%)
20	CLA	3	402	3	63,73,73	1.36	6 (9%)	74,113,113	1.37	7 (9%)
20	CLA	B	824	8	53,63,73	1.44	6 (11%)	62,101,113	1.25	8 (12%)
20	CLA	1	610	24	44,54,73	1.58	5 (11%)	51,90,113	1.35	6 (11%)
20	CLA	B	842	24	63,73,73	1.36	6 (9%)	74,113,113	1.34	6 (8%)
23	BCR	B	802	-	41,41,41	0.23	0	56,56,56	1.02	5 (8%)
29	DGD	B	850	-	62,62,67	0.18	0	76,76,81	0.24	0
20	CLA	7	311	24	58,68,73	1.42	7 (12%)	68,107,113	1.40	8 (11%)
20	CLA	G	4004	-	43,53,73	1.62	6 (13%)	50,89,113	1.51	7 (14%)
20	CLA	3	408	3	58,68,73	1.38	5 (8%)	68,107,113	1.27	7 (10%)
28	LMG	A	801	-	32,32,55	0.21	0	40,40,63	0.27	0
20	CLA	1	614	1	44,54,73	1.52	5 (11%)	51,90,113	1.75	8 (15%)
34	SF4	C	101	9	0,12,12	-	-	-		
20	CLA	B	807	8	63,73,73	1.33	6 (9%)	74,113,113	1.26	8 (10%)
20	CLA	1	608	1	58,68,73	1.40	6 (10%)	68,107,113	1.37	7 (10%)
20	CLA	B	819	8	63,73,73	1.28	5 (7%)	74,113,113	1.28	10 (13%)
20	CLA	B	839	-	53,63,73	1.44	5 (9%)	62,101,113	1.45	7 (11%)
29	DGD	L	311	-	59,59,67	0.20	0	73,73,81	0.23	0
20	CLA	A	804	-	63,73,73	1.39	8 (12%)	74,113,113	1.26	6 (8%)
36	4RF	A	859	-	38,38,56	0.43	0	41,41,59	0.38	0
20	CLA	3	413	-	40,50,73	1.66	5 (12%)	45,85,113	1.47	6 (13%)
21	LUT	2	616	-	42,43,43	0.23	0	51,60,60	0.72	3 (5%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
23	BCR	K	205	-	41,41,41	0.34	0	56,56,56	0.75	2 (3%)
20	CLA	B	843	-	63,73,73	1.37	6 (9%)	74,113,113	1.36	7 (9%)
25	PTY	8	318	-	20,20,49	0.66	0	21,24,54	0.54	0
19	CHL	1	601	-	49,59,74	1.54	4 (8%)	53,96,114	1.83	9 (16%)
20	CLA	7	324	5	58,68,73	1.45	6 (10%)	68,107,113	1.42	7 (10%)
20	CLA	A	836	-	58,68,73	1.46	7 (12%)	68,107,113	1.37	7 (10%)
25	PTY	H	201	-	45,45,49	0.48	0	48,50,54	0.44	0
23	BCR	B	848	-	41,41,41	0.13	0	56,56,56	0.36	0
20	CLA	J	4002	16	47,57,73	1.57	6 (12%)	53,93,113	1.80	7 (13%)
20	CLA	A	838	7	49,59,73	1.58	7 (14%)	56,96,113	1.52	6 (10%)
23	BCR	G	4001	-	41,41,41	0.18	0	56,56,56	0.39	0
28	LMG	7	319	-	54,54,55	0.23	0	62,62,63	0.28	0
19	CHL	1	606	-	45,55,74	1.36	5 (11%)	48,91,114	2.24	9 (18%)
20	CLA	2	604	-	48,58,73	1.50	6 (12%)	56,95,113	1.34	8 (14%)
20	CLA	B	827	8	63,73,73	1.40	7 (11%)	74,113,113	1.35	7 (9%)
24	LHG	2	621	-	35,35,48	0.38	0	38,41,54	0.34	0
23	BCR	7	318	-	41,41,41	0.14	0	56,56,56	0.40	0
23	BCR	A	849	-	41,41,41	0.29	0	56,56,56	0.95	4 (7%)

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
19	CHL	8	304	-	1/1/16/26	8/17/115/137	-
20	CLA	2	610	2	1/1/11/20	6/15/93/115	-
21	LUT	2	615	-	3/3/12/27	6/29/67/67	0/2/2/2
20	CLA	1	607	-	1/1/15/20	11/37/115/115	-
21	LUT	8	314	-	3/3/12/27	2/29/67/67	0/2/2/2
20	CLA	9	603	6	1/1/13/20	4/25/103/115	-
23	BCR	L	308	-	-	4/29/63/63	0/2/2/2
20	CLA	3	414	3	1/1/11/20	6/15/93/115	-
20	CLA	A	821	7	1/1/15/20	15/37/115/115	-
24	LHG	8	319	20	-	4/38/38/53	-
20	CLA	A	810	-	1/1/14/20	6/31/109/115	-
20	CLA	A	815	7	1/1/14/20	13/34/112/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
20	CLA	1	605	-	1/1/11/20	4/13/91/115	-
20	CLA	B	837	8	1/1/12/20	4/21/99/115	-
20	CLA	L	304	18	1/1/15/20	9/37/115/115	-
22	XAT	8	315	-	-	1/31/93/93	0/4/4/4
24	LHG	7	323	-	-	5/25/25/53	-
29	DGD	A	802	-	-	11/55/95/95	0/2/2/2
34	SF4	A	846	8,7	-	-	0/6/5/5
26	SQD	9	618	-	-	9/32/52/69	0/1/1/1
20	CLA	B	829	8	1/1/15/20	22/37/115/115	-
20	CLA	A	843	24	1/1/12/20	8/19/97/115	-
21	LUT	2	614	-	3/3/12/27	4/29/67/67	0/2/2/2
21	LUT	2	617	-	3/3/12/27	4/29/67/67	0/2/2/2
20	CLA	A	830	7	1/1/15/20	13/37/115/115	-
19	CHL	8	305	-	1/1/16/26	8/17/115/137	-
20	CLA	2	602	2	1/1/13/20	8/27/105/115	-
20	CLA	A	833	7	1/1/15/20	7/37/115/115	-
20	CLA	G	4002	13	1/1/11/20	6/16/94/115	-
20	CLA	A	842	7	1/1/14/20	7/33/111/115	-
25	PTY	F	5010	-	-	7/25/25/53	-
19	CHL	7	302	-	3/3/20/26	16/39/137/137	-
33	PQN	B	844	-	-	9/23/43/43	0/2/2/2
22	XAT	1	616	-	-	3/31/93/93	0/4/4/4
20	CLA	7	303	4	1/1/14/20	9/31/109/115	-
20	CLA	A	808	7	1/1/15/20	14/37/115/115	-
23	BCR	F	5009	-	-	4/29/63/63	0/2/2/2
20	CLA	2	613	-	1/1/12/20	7/19/97/115	-
20	CLA	L	306	-	1/1/12/20	5/19/97/115	-
22	XAT	7	317	-	-	4/31/93/93	0/4/4/4
24	LHG	A	854	-	-	11/49/49/53	-
20	CLA	B	816	8	1/1/13/20	5/25/103/115	-
31	LMU	9	616	-	-	5/21/61/61	0/2/2/2
20	CLA	B	803	-	1/1/15/20	19/37/115/115	-
20	CLA	B	832	8	1/1/14/20	8/31/109/115	-
20	CLA	H	204	14	1/1/11/20	6/13/91/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
20	CLA	B	808	8	1/1/15/20	12/37/115/115	-
20	CLA	A	834	7	1/1/13/20	5/25/103/115	-
20	CLA	7	304	4	1/1/13/20	9/25/103/115	-
23	BCR	A	852	-	-	4/29/63/63	0/2/2/2
22	XAT	3	416	-	-	2/31/93/93	0/4/4/4
20	CLA	9	610	6	1/1/12/20	10/19/97/115	-
23	BCR	H	205	-	-	10/29/63/63	0/2/2/2
23	BCR	3	417	-	-	4/29/63/63	0/2/2/2
20	CLA	B	831	-	1/1/15/20	13/37/115/115	-
20	CLA	L	302	-	1/1/15/20	19/37/115/115	-
23	BCR	J	4003	-	-	4/29/63/63	0/2/2/2
20	CLA	9	602	6	1/1/14/20	17/31/109/115	-
20	CLA	3	411	3	1/1/13/20	7/25/103/115	-
24	LHG	2	618	20	-	5/45/45/53	-
26	SQD	B	851	-	-	10/25/45/69	0/1/1/1
20	CLA	9	608	6	1/1/14/20	9/31/109/115	-
20	CLA	1	604	-	1/1/12/20	7/19/97/115	-
22	XAT	9	615	-	-	5/31/93/93	0/4/4/4
23	BCR	B	846	-	-	13/29/63/63	0/2/2/2
20	CLA	B	823	8	1/1/15/20	13/37/115/115	-
23	BCR	F	5004	-	-	0/29/63/63	0/2/2/2
20	CLA	B	830	8	1/1/15/20	13/37/115/115	-
29	DGD	7	321	-	-	11/36/76/95	0/2/2/2
20	CLA	A	811	7	1/1/15/20	11/37/115/115	-
34	SF4	C	102	9	-	-	0/6/5/5
19	CHL	8	306	-	2/2/17/26	9/21/119/137	-
20	CLA	9	612	6	-	6/13/91/115	-
20	CLA	A	807	7	1/1/15/20	7/37/115/115	-
20	CLA	2	611	-	1/1/14/20	9/31/109/115	-
20	CLA	9	604	6	1/1/12/20	5/19/97/115	-
20	CLA	A	837	7	1/1/13/20	6/25/103/115	-
26	SQD	3	421	-	-	10/30/50/69	0/1/1/1
20	CLA	9	601	6	1/1/11/20	10/15/93/115	-
20	CLA	1	602	1	1/1/14/20	10/33/111/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
20	CLA	9	609	24	1/1/14/20	15/31/109/115	-
20	CLA	A	841	7	1/1/15/20	15/37/115/115	-
33	PQN	A	845	-	-	0/23/43/43	0/2/2/2
20	CLA	B	804	-	1/1/15/20	12/37/115/115	-
20	CLA	L	301	7	1/1/11/20	6/13/91/115	-
20	CLA	8	302	5	1/1/14/20	11/31/109/115	-
25	PTY	3	422	-	-	5/29/29/53	-
26	SQD	2	619	-	-	13/36/56/69	0/1/1/1
20	CLA	2	605	-	1/1/11/20	7/13/91/115	-
20	CLA	B	815	-	1/1/15/20	14/37/115/115	-
20	CLA	F	5007	12	1/1/11/20	5/18/96/115	-
20	CLA	A	813	7	1/1/13/20	8/25/103/115	-
20	CLA	K	203	17	1/1/11/20	6/13/91/115	-
25	PTY	1	623	-	-	8/38/38/53	-
20	CLA	7	305	-	1/1/12/20	4/19/97/115	-
20	CLA	A	823	7	1/1/15/20	17/37/115/115	-
20	CLA	8	308	5	1/1/14/20	9/31/109/115	-
20	CLA	A	819	-	1/1/13/20	11/25/103/115	-
28	LMG	F	5001	-	-	6/41/61/70	0/1/1/1
20	CLA	1	612	-	1/1/13/20	7/25/103/115	-
24	LHG	G	4006	-	-	7/53/53/53	-
20	CLA	9	607	6	1/1/15/20	9/37/115/115	-
23	BCR	J	4001	-	-	9/29/63/63	0/2/2/2
24	LHG	8	321	-	-	10/35/35/53	-
20	CLA	B	833	8	1/1/15/20	13/37/115/115	-
20	CLA	B	820	-	1/1/15/20	12/37/115/115	-
20	CLA	A	816	7	-	14/37/115/115	-
24	LHG	9	617	20	-	11/45/45/53	-
20	CLA	8	312	5	1/1/11/20	5/15/93/115	-
20	CLA	B	841	8	1/1/15/20	13/37/115/115	-
19	CHL	7	308	-	1/1/16/26	7/18/116/137	-
20	CLA	B	826	-	1/1/15/20	8/37/115/115	-
19	CHL	9	606	-	1/1/16/26	8/17/115/137	-
24	LHG	3	424	-	-	15/43/43/53	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
20	CLA	2	622	-	1/1/11/20	3/15/93/115	-
24	LHG	A	853	20	-	7/33/33/53	-
20	CLA	A	839	7	1/1/15/20	9/37/115/115	-
20	CLA	8	303	-	1/1/12/20	6/19/97/115	-
20	CLA	K	204	-	1/1/11/20	8/17/95/115	-
28	LMG	8	301	-	-	8/45/65/70	0/1/1/1
20	CLA	8	309	24	1/1/14/20	11/31/109/115	-
20	CLA	A	820	7	1/1/14/20	11/31/109/115	-
23	BCR	8	316	-	-	4/29/63/63	0/2/2/2
20	CLA	F	5005	-	1/1/13/20	9/25/103/115	-
21	LUT	7	316	-	3/3/12/27	2/29/67/67	0/2/2/2
24	LHG	F	5011	-	-	8/46/46/53	-
20	CLA	A	829	-	1/1/13/20	8/27/105/115	-
23	BCR	3	419	-	-	5/29/63/63	0/2/2/2
19	CHL	3	401	3	2/2/18/26	14/27/125/137	-
20	CLA	1	611	1	1/1/11/20	6/15/93/115	-
20	CLA	B	822	8	1/1/15/20	12/37/115/115	-
20	CLA	A	817	-	1/1/13/20	7/25/103/115	-
20	CLA	A	828	-	1/1/15/20	9/37/115/115	-
24	LHG	3	420	-	-	5/19/19/53	-
23	BCR	A	858	-	-	6/29/63/63	0/2/2/2
20	CLA	B	813	8	1/1/15/20	11/37/115/115	-
25	PTY	B	801	-	-	12/30/30/53	-
20	CLA	B	805	8	1/1/11/20	6/17/95/115	-
27	3PH	2	620	-	-	6/34/34/49	-
23	BCR	I	202	-	-	4/29/63/63	0/2/2/2
20	CLA	A	824	-	1/1/15/20	12/37/115/115	-
20	CLA	B	809	8	1/1/15/20	8/37/115/115	-
28	LMG	7	301	-	-	13/35/55/70	0/1/1/1
20	CLA	A	826	7	1/1/14/20	13/31/109/115	-
22	XAT	9	614	-	-	0/31/93/93	0/4/4/4
20	CLA	2	603	2	1/1/14/20	11/31/109/115	-
20	CLA	B	834	8	1/1/15/20	16/37/115/115	-
20	CLA	1	613	1	1/1/13/20	7/25/103/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
20	CLA	B	806	8	1/1/15/20	14/37/115/115	-
24	LHG	1	619	-	-	9/48/48/53	-
20	CLA	1	609	1	1/1/15/20	8/37/115/115	-
20	CLA	A	809	7	1/1/15/20	12/37/115/115	-
24	LHG	B	852	-	-	19/53/53/53	-
26	SQD	3	423	-	-	9/27/47/69	0/1/1/1
35	OCD	A	855	-	-	0/8/8/16	-
23	BCR	G	4005	-	-	8/29/63/63	0/2/2/2
32	CL0	A	803	7	-	11/37/135/135	-
20	CLA	A	832	7	1/1/15/20	10/37/115/115	-
20	CLA	A	831	7	1/1/15/20	17/37/115/115	-
20	CLA	A	840	7	1/1/14/20	9/31/109/115	-
21	LUT	1	615	-	3/3/12/27	11/29/67/67	0/2/2/2
23	BCR	A	850	-	-	12/29/63/63	0/2/2/2
20	CLA	L	305	18	1/1/15/20	7/37/115/115	-
24	LHG	9	619	-	-	8/53/53/53	-
25	PTY	H	202	-	-	16/35/35/53	-
20	CLA	F	5008	12	-	8/15/93/115	-
20	CLA	A	825	7	1/1/14/20	7/31/109/115	-
20	CLA	7	310	4	1/1/15/20	11/37/115/115	-
20	CLA	9	611	-	1/1/13/20	6/25/103/115	-
20	CLA	B	838	-	1/1/14/20	6/31/109/115	-
20	CLA	7	315	4	1/1/15/20	5/37/115/115	-
20	CLA	G	4003	13	1/1/11/20	6/15/93/115	-
23	BCR	B	845	-	-	2/29/63/63	0/2/2/2
20	CLA	B	817	8	1/1/14/20	7/31/109/115	-
30	LMK	8	320	-	-	10/41/41/60	-
20	CLA	7	312	4	1/1/12/20	6/22/100/115	-
20	CLA	7	309	4	1/1/15/20	9/37/115/115	-
20	CLA	8	311	5	-	14/37/115/115	-
20	CLA	A	827	7	1/1/14/20	9/31/109/115	-
23	BCR	L	309	-	-	0/29/63/63	0/2/2/2
24	LHG	J	4004	-	-	6/35/37/53	-
21	LUT	9	613	-	3/3/12/27	2/29/67/67	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
20	CLA	7	314	4	1/1/12/20	8/19/97/115	-
20	CLA	A	805	-	1/1/15/20	13/37/115/115	-
31	LMU	A	857	-	-	5/21/61/61	0/2/2/2
19	CHL	2	601	2	2/2/19/26	14/33/131/137	-
20	CLA	7	313	4	1/1/15/20	9/37/115/115	-
20	CLA	B	836	-	1/1/12/20	9/19/97/115	-
20	CLA	A	844	-	1/1/15/20	10/37/115/115	-
24	LHG	1	618	20	-	4/29/29/53	-
23	BCR	B	847	-	-	2/29/63/63	0/2/2/2
24	LHG	H	203	-	-	8/42/42/53	-
20	CLA	B	840	-	1/1/15/20	9/37/115/115	-
20	CLA	2	607	2	1/1/11/20	7/15/93/115	-
20	CLA	F	5003	5	1/1/15/20	11/37/115/115	-
20	CLA	B	812	-	1/1/13/20	6/25/103/115	-
20	CLA	B	818	8	1/1/15/20	16/37/115/115	-
23	BCR	B	849	-	-	7/29/63/63	0/2/2/2
20	CLA	A	812	7	1/1/15/20	12/37/115/115	-
20	CLA	2	608	-	1/1/11/20	3/13/91/115	-
20	CLA	L	307	-	1/1/12/20	9/19/97/115	-
20	CLA	3	403	-	1/1/11/20	4/15/93/115	-
23	BCR	1	617	-	-	4/29/63/63	0/2/2/2
20	CLA	3	409	-	1/1/12/20	5/19/97/115	-
24	LHG	I	201	-	-	17/53/53/53	-
20	CLA	A	814	7	1/1/15/20	16/37/115/115	-
19	CHL	7	306	-	1/1/16/26	7/15/113/137	-
20	CLA	B	821	8	1/1/15/20	9/37/115/115	-
23	BCR	A	847	-	-	11/29/63/63	0/2/2/2
20	CLA	A	835	7	1/1/15/20	6/37/115/115	-
20	CLA	3	404	-	1/1/11/20	5/15/93/115	-
20	CLA	A	806	7	1/1/15/20	11/37/115/115	-
24	LHG	F	5002	-	-	12/47/47/53	-
25	PTY	1	622	-	-	7/22/22/53	-
20	CLA	9	605	6	1/1/11/20	2/13/91/115	-
20	CLA	3	407	3	1/1/15/20	13/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
20	CLA	B	825	-	1/1/15/20	10/37/115/115	-
19	CHL	7	307	-	2/2/17/26	11/21/119/137	-
20	CLA	A	818	7	1/1/15/20	13/37/115/115	-
20	CLA	B	828	-	1/1/15/20	15/37/115/115	-
20	CLA	B	810	8	1/1/15/20	10/37/115/115	-
24	LHG	1	621	-	-	10/50/50/53	-
24	LHG	7	320	20	-	17/53/53/53	-
20	CLA	F	5006	-	1/1/11/20	7/16/94/115	-
23	BCR	L	303	-	-	4/29/63/63	0/2/2/2
20	CLA	2	609	24	1/1/10/20	2/8/86/115	-
25	PTY	8	317	-	-	8/27/27/53	-
25	PTY	7	322	-	-	5/28/28/53	-
20	CLA	K	202	-	1/1/13/20	4/25/103/115	-
20	CLA	8	307	5	1/1/11/20	4/15/93/115	-
20	CLA	8	313	5	1/1/12/20	4/21/99/115	-
20	CLA	B	835	-	1/1/14/20	10/31/109/115	-
20	CLA	3	412	3	1/1/15/20	14/37/115/115	-
24	LHG	7	325	-	-	6/44/44/53	-
20	CLA	K	201	-	1/1/11/20	4/13/91/115	-
23	BCR	A	851	-	-	2/29/63/63	0/2/2/2
19	CHL	2	606	-	2/2/16/26	7/17/115/137	-
20	CLA	A	822	7	1/1/15/20	11/37/115/115	-
20	CLA	1	603	1	1/1/15/20	18/37/115/115	-
20	CLA	3	406	-	1/1/13/20	6/25/103/115	-
20	CLA	3	405	3	1/1/12/20	3/19/97/115	-
21	LUT	3	415	-	3/3/12/27	4/29/67/67	0/2/2/2
20	CLA	3	410	3	1/1/12/20	7/22/100/115	-
20	CLA	8	310	5	1/1/12/20	8/19/97/115	-
24	LHG	1	620	20	-	7/35/35/53	-
31	LMU	A	856	-	-	0/21/61/61	0/2/2/2
20	CLA	B	811	8	1/1/15/20	16/37/115/115	-
20	CLA	2	612	2	1/1/10/20	2/12/90/115	-
23	BCR	A	848	-	-	11/29/63/63	0/2/2/2
23	BCR	3	418	-	-	9/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	PTY	L	310	-	-	9/22/22/53	-
20	CLA	B	814	8	1/1/15/20	17/37/115/115	-
20	CLA	3	402	3	1/1/15/20	14/37/115/115	-
20	CLA	B	824	8	1/1/13/20	11/25/103/115	-
20	CLA	1	610	24	1/1/11/20	7/15/93/115	-
20	CLA	B	842	24	1/1/15/20	9/37/115/115	-
23	BCR	B	802	-	-	6/29/63/63	0/2/2/2
29	DGD	B	850	-	-	7/50/90/95	0/2/2/2
20	CLA	7	311	24	1/1/14/20	7/31/109/115	-
20	CLA	G	4004	-	1/1/11/20	4/13/91/115	-
20	CLA	3	408	3	1/1/14/20	12/31/109/115	-
28	LMG	A	801	-	-	3/26/46/70	0/1/1/1
20	CLA	1	614	1	1/1/11/20	8/15/93/115	-
34	SF4	C	101	9	-	-	0/6/5/5
20	CLA	B	807	8	1/1/15/20	12/37/115/115	-
20	CLA	1	608	1	1/1/14/20	10/31/109/115	-
20	CLA	B	819	8	1/1/15/20	15/37/115/115	-
20	CLA	B	839	-	1/1/13/20	4/25/103/115	-
29	DGD	L	311	-	-	11/47/87/95	0/2/2/2
20	CLA	A	804	-	1/1/15/20	11/37/115/115	-
36	4RF	A	859	-	-	17/41/41/59	-
20	CLA	3	413	-	1/1/10/20	2/10/88/115	-
21	LUT	2	616	-	3/3/12/27	7/29/67/67	0/2/2/2
23	BCR	K	205	-	-	9/29/63/63	0/2/2/2
20	CLA	B	843	-	1/1/15/20	13/37/115/115	-
25	PTY	8	318	-	-	11/23/23/53	-
19	CHL	1	601	-	1/1/17/26	4/21/119/137	-
20	CLA	7	324	5	1/1/14/20	7/31/109/115	-
20	CLA	A	836	-	1/1/14/20	12/31/109/115	-
25	PTY	H	201	-	-	21/49/49/53	-
23	BCR	B	848	-	-	2/29/63/63	0/2/2/2
20	CLA	J	4002	16	1/1/11/20	8/18/96/115	-
20	CLA	A	838	7	1/1/12/20	7/21/99/115	-
23	BCR	G	4001	-	-	5/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
28	LMG	7	319	-	-	11/49/69/70	0/1/1/1
19	CHL	1	606	-	1/1/16/26	4/17/115/137	-
20	CLA	2	604	-	1/1/12/20	6/19/97/115	-
20	CLA	B	827	8	1/1/15/20	6/37/115/115	-
24	LHG	2	621	-	-	6/40/40/53	-
23	BCR	7	318	-	-	6/29/63/63	0/2/2/2
23	BCR	A	849	-	-	3/29/63/63	0/2/2/2

The worst 5 of 1058 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	1	601	CHL	MG-NA	8.08	2.25	2.06
20	8	311	CLA	MG-NC	7.33	2.23	2.06
19	7	306	CHL	MG-NA	7.12	2.23	2.06
19	7	302	CHL	MG-NA	7.01	2.22	2.06
20	B	804	CLA	CHB-C4A	6.75	1.39	1.33

The worst 5 of 1422 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	7	302	CHL	C4A-NA-C1A	14.81	113.43	106.68
19	7	306	CHL	C4A-NA-C1A	14.71	113.39	106.68
19	2	601	CHL	C4A-NA-C1A	14.18	113.15	106.68
19	8	305	CHL	C4A-NA-C1A	14.06	113.09	106.68
19	8	304	CHL	C4A-NA-C1A	13.98	113.06	106.68

5 of 213 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
19	1	601	CHL	ND
19	1	606	CHL	NC
19	2	601	CHL	C8
19	2	601	CHL	NC
19	2	606	CHL	C3A

5 of 2427 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
19	1	601	CHL	C1A-C2A-CAA-CBA
19	1	601	CHL	C3A-C2A-CAA-CBA

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Mol	Chain	Res	Type	Atoms
19	1	601	CHL	CHA-CBD-CGD-O1D
19	1	601	CHL	CHA-CBD-CGD-O2D
19	1	606	CHL	C3A-C2A-CAA-CBA

There are no ring outliers.

258 monomers are involved in 706 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
19	8	304	CHL	7	0
20	2	610	CLA	2	0
21	2	615	LUT	4	0
20	1	607	CLA	3	0
20	9	603	CLA	2	0
23	L	308	BCR	4	0
20	3	414	CLA	2	0
20	A	821	CLA	5	0
24	8	319	LHG	1	0
20	A	810	CLA	2	0
20	A	815	CLA	5	0
20	1	605	CLA	3	0
20	B	837	CLA	1	0
20	L	304	CLA	5	0
22	8	315	XAT	3	0
24	7	323	LHG	1	0
29	A	802	DGD	4	0
34	A	846	SF4	4	0
26	9	618	SQD	1	0
20	B	829	CLA	2	0
21	2	617	LUT	1	0
20	A	830	CLA	6	0
19	8	305	CHL	2	0
20	2	602	CLA	4	0
20	A	833	CLA	4	0
20	A	842	CLA	4	0
19	7	302	CHL	4	0
33	B	844	PQN	4	0
22	1	616	XAT	2	0
20	7	303	CLA	3	0
20	A	808	CLA	7	0
23	F	5009	BCR	4	0
20	2	613	CLA	1	0
22	7	317	XAT	6	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	A	854	LHG	2	0
20	B	816	CLA	1	0
31	9	616	LMU	4	0
20	B	803	CLA	3	0
20	B	832	CLA	5	0
20	B	808	CLA	5	0
20	A	834	CLA	4	0
20	7	304	CLA	1	0
23	A	852	BCR	7	0
22	3	416	XAT	3	0
20	B	831	CLA	6	0
20	L	302	CLA	3	0
23	J	4003	BCR	3	0
20	9	602	CLA	6	0
20	3	411	CLA	3	0
24	2	618	LHG	1	0
26	B	851	SQD	1	0
20	9	608	CLA	2	0
20	1	604	CLA	2	0
22	9	615	XAT	4	0
23	B	846	BCR	4	0
20	B	823	CLA	3	0
23	F	5004	BCR	5	0
20	B	830	CLA	4	0
29	7	321	DGD	4	0
20	A	811	CLA	3	0
34	C	102	SF4	1	0
19	8	306	CHL	1	0
20	9	612	CLA	3	0
20	A	807	CLA	2	0
20	2	611	CLA	2	0
20	9	604	CLA	1	0
20	A	837	CLA	4	0
26	3	421	SQD	5	0
20	9	601	CLA	1	0
20	1	602	CLA	3	0
20	A	841	CLA	7	0
33	A	845	PQN	1	0
20	B	804	CLA	11	0
20	L	301	CLA	1	0
20	8	302	CLA	4	0
26	2	619	SQD	3	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
20	B	815	CLA	1	0
20	F	5007	CLA	1	0
20	A	813	CLA	3	0
20	K	203	CLA	5	0
25	1	623	PTY	1	0
20	7	305	CLA	1	0
20	A	823	CLA	2	0
20	A	819	CLA	5	0
28	F	5001	LMG	3	0
20	1	612	CLA	2	0
24	G	4006	LHG	3	0
20	9	607	CLA	2	0
23	J	4001	BCR	7	0
24	8	321	LHG	2	0
20	A	816	CLA	7	0
20	B	820	CLA	4	0
24	9	617	LHG	1	0
20	B	841	CLA	4	0
19	7	308	CHL	5	0
20	B	826	CLA	3	0
19	9	606	CHL	4	0
24	3	424	LHG	2	0
24	A	853	LHG	2	0
20	A	839	CLA	1	0
20	8	303	CLA	3	0
20	K	204	CLA	1	0
28	8	301	LMG	5	0
20	8	309	CLA	3	0
20	A	820	CLA	7	0
23	8	316	BCR	4	0
20	F	5005	CLA	3	0
21	7	316	LUT	2	0
24	F	5011	LHG	2	0
20	A	829	CLA	3	0
23	3	419	BCR	5	0
19	3	401	CHL	6	0
20	1	611	CLA	3	0
20	B	822	CLA	4	0
20	A	817	CLA	3	0
20	A	828	CLA	5	0
23	A	858	BCR	6	0
20	B	813	CLA	9	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
20	B	805	CLA	2	0
27	2	620	3PH	4	0
23	I	202	BCR	3	0
20	A	824	CLA	4	0
20	B	809	CLA	6	0
28	7	301	LMG	2	0
20	A	826	CLA	1	0
22	9	614	XAT	5	0
20	2	603	CLA	10	0
20	B	834	CLA	7	0
20	1	613	CLA	1	0
20	B	806	CLA	3	0
24	1	619	LHG	1	0
20	1	609	CLA	3	0
20	A	809	CLA	4	0
26	3	423	SQD	1	0
23	G	4005	BCR	2	0
32	A	803	CL0	8	0
20	A	832	CLA	7	0
20	A	831	CLA	8	0
20	A	840	CLA	5	0
21	1	615	LUT	7	0
23	A	850	BCR	5	0
20	L	305	CLA	5	0
24	9	619	LHG	3	0
25	H	202	PTY	2	0
20	F	5008	CLA	3	0
20	A	825	CLA	6	0
20	7	310	CLA	2	0
20	9	611	CLA	2	0
20	B	838	CLA	4	0
20	G	4003	CLA	1	0
23	B	845	BCR	2	0
20	B	817	CLA	2	0
20	7	312	CLA	2	0
20	8	311	CLA	4	0
20	A	827	CLA	12	0
23	L	309	BCR	1	0
24	J	4004	LHG	1	0
21	9	613	LUT	4	0
20	7	314	CLA	3	0
20	A	805	CLA	10	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
31	A	857	LMU	1	0
19	2	601	CHL	4	0
20	7	313	CLA	5	0
20	B	836	CLA	1	0
20	A	844	CLA	2	0
24	1	618	LHG	1	0
23	B	847	BCR	5	0
24	H	203	LHG	2	0
20	B	840	CLA	6	0
20	2	607	CLA	1	0
20	F	5003	CLA	1	0
20	B	812	CLA	2	0
20	B	818	CLA	4	0
23	B	849	BCR	6	0
20	A	812	CLA	12	0
20	2	608	CLA	4	0
20	3	403	CLA	1	0
23	1	617	BCR	2	0
24	I	201	LHG	6	0
20	A	814	CLA	4	0
19	7	306	CHL	3	0
20	B	821	CLA	7	0
23	A	847	BCR	4	0
20	A	835	CLA	6	0
20	3	404	CLA	1	0
20	A	806	CLA	2	0
24	F	5002	LHG	4	0
25	1	622	PTY	2	0
20	9	605	CLA	2	0
20	3	407	CLA	8	0
20	B	825	CLA	5	0
19	7	307	CHL	7	0
20	A	818	CLA	7	0
20	B	828	CLA	4	0
20	B	810	CLA	2	0
24	1	621	LHG	2	0
24	7	320	LHG	3	0
20	F	5006	CLA	3	0
23	L	303	BCR	5	0
20	2	609	CLA	1	0
20	K	202	CLA	4	0
20	8	307	CLA	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
20	8	313	CLA	1	0
20	B	835	CLA	2	0
20	3	412	CLA	2	0
24	7	325	LHG	2	0
20	K	201	CLA	1	0
23	A	851	BCR	8	0
19	2	606	CHL	4	0
20	A	822	CLA	5	0
20	1	603	CLA	3	0
20	3	406	CLA	2	0
20	3	405	CLA	2	0
21	3	415	LUT	2	0
20	8	310	CLA	2	0
24	1	620	LHG	1	0
31	A	856	LMU	2	0
20	B	811	CLA	3	0
23	A	848	BCR	7	0
23	3	418	BCR	5	0
20	B	814	CLA	8	0
20	3	402	CLA	2	0
20	B	824	CLA	10	0
20	1	610	CLA	2	0
20	B	842	CLA	3	0
23	B	802	BCR	7	0
29	B	850	DGD	8	0
20	7	311	CLA	1	0
20	G	4004	CLA	3	0
20	3	408	CLA	2	0
28	A	801	LMG	2	0
20	1	614	CLA	1	0
34	C	101	SF4	1	0
20	B	807	CLA	5	0
20	1	608	CLA	5	0
20	B	819	CLA	8	0
20	B	839	CLA	1	0
29	L	311	DGD	4	0
20	A	804	CLA	6	0
36	A	859	4RF	2	0
21	2	616	LUT	10	0
23	K	205	BCR	5	0
20	B	843	CLA	6	0
19	1	601	CHL	5	0

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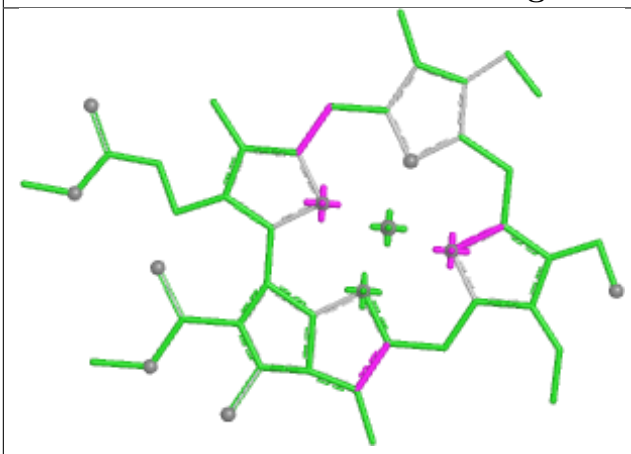
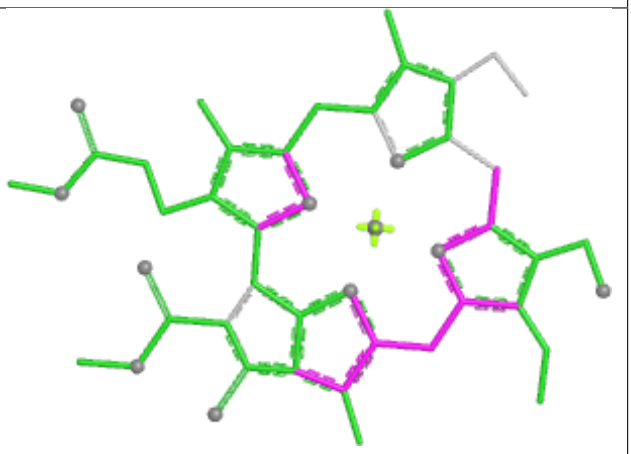
Mol	Chain	Res	Type	Clashes	Symm-Clashes
20	7	324	CLA	3	0
20	A	836	CLA	6	0
25	H	201	PTY	4	0
23	B	848	BCR	3	0
20	J	4002	CLA	6	0
20	A	838	CLA	4	0
23	G	4001	BCR	3	0
28	7	319	LMG	2	0
19	1	606	CHL	3	0
20	2	604	CLA	1	0
20	B	827	CLA	6	0
24	2	621	LHG	3	0
23	7	318	BCR	4	0
23	A	849	BCR	12	0

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.

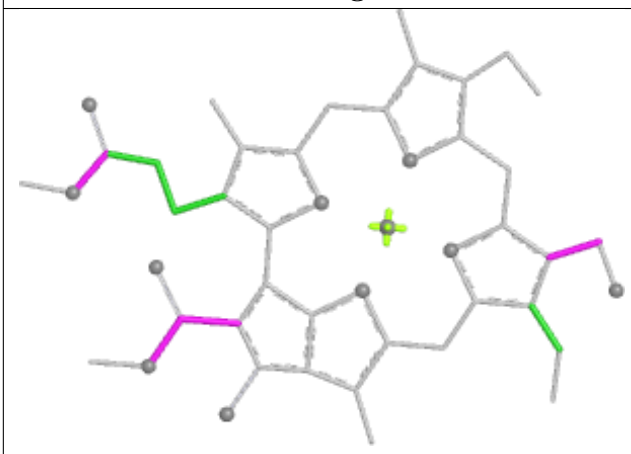
Ligand CHL 8 304



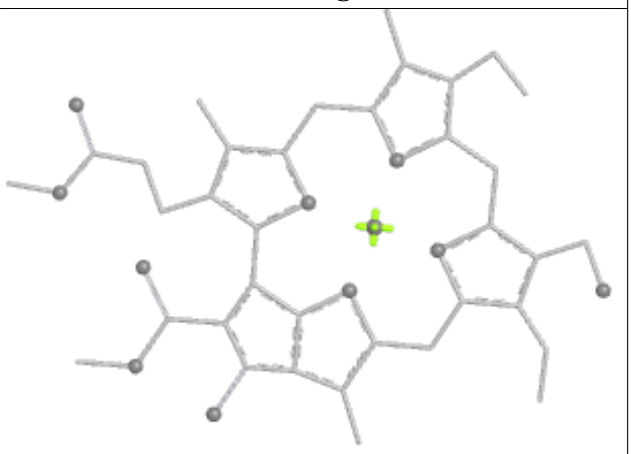
Bond lengths



Bond angles

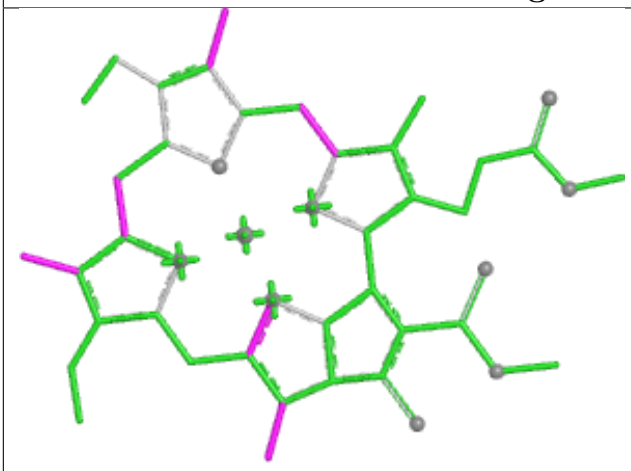


Torsions

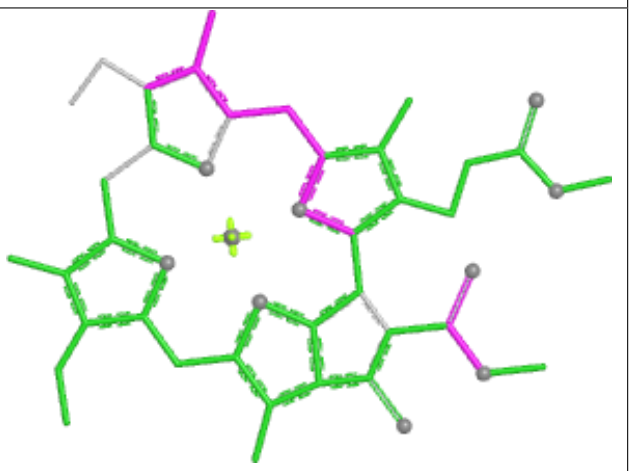


Rings

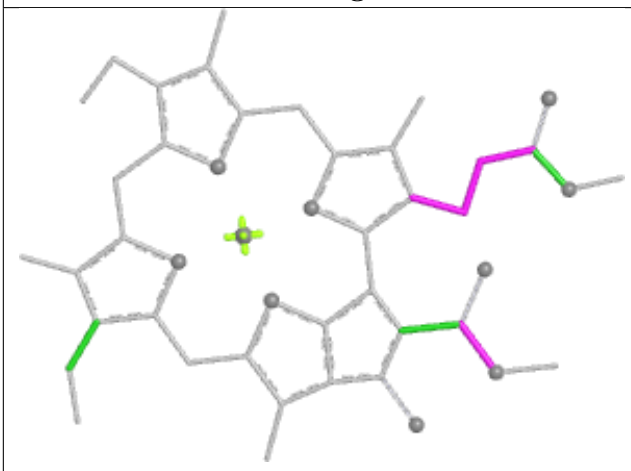
Ligand CLA 2 610



Bond lengths



Bond angles



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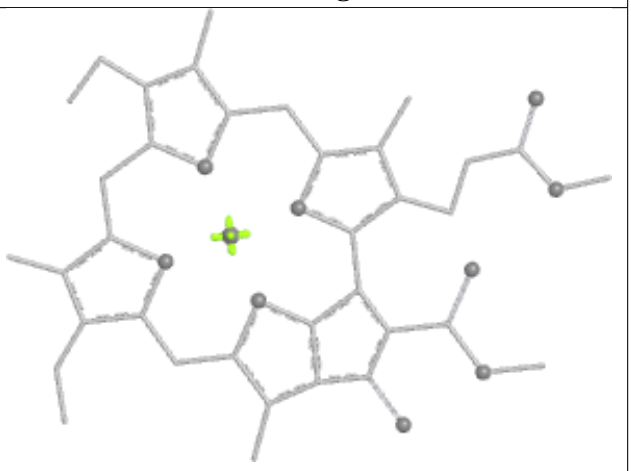
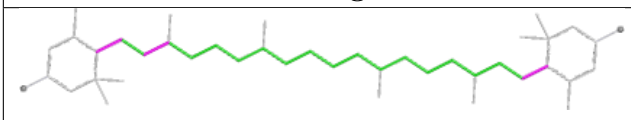


Rings

Ligand LUT 2 615

Bond lengths

Bond angles



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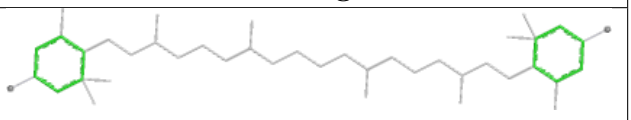
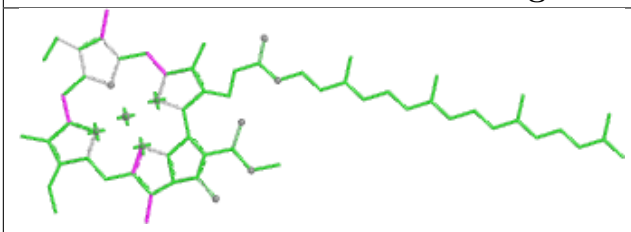
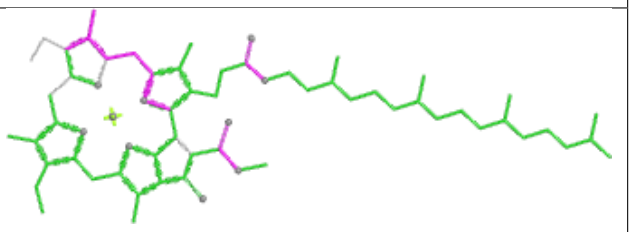


Rings

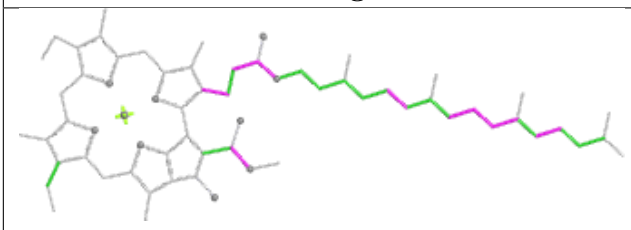
Ligand CLA 1 607



Bond lengths



Bond angles



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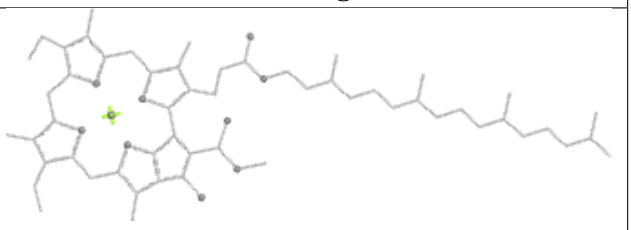
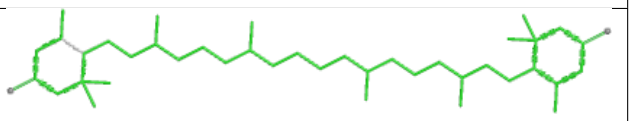


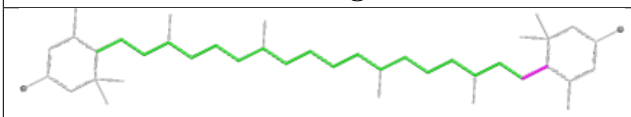
Rings

Ligand LUT 8 314

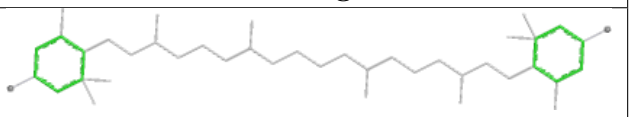
Bond lengths



Bond angles

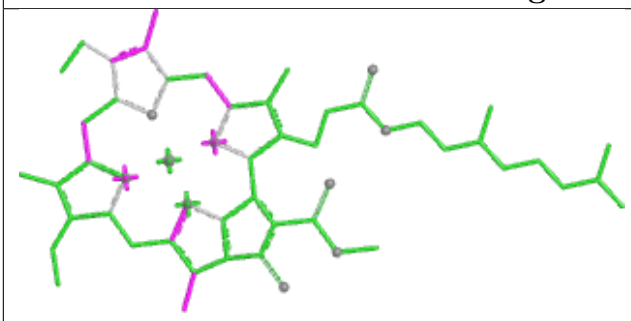


Torsions

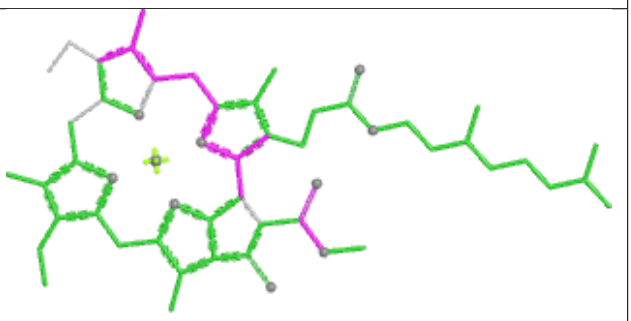


Rings

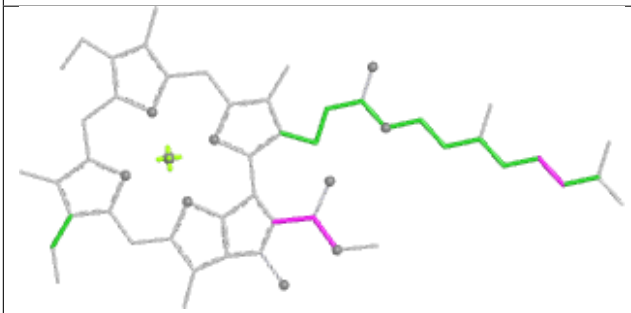
Ligand CLA 9 603



Bond lengths



Bond angles



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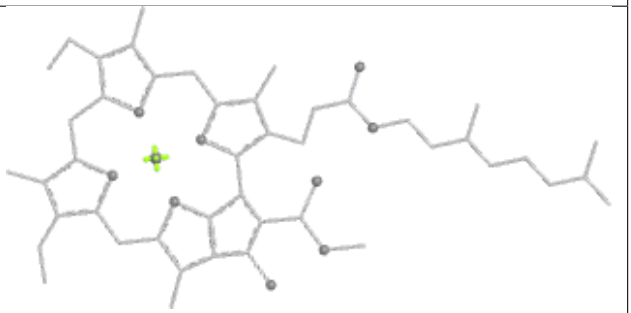
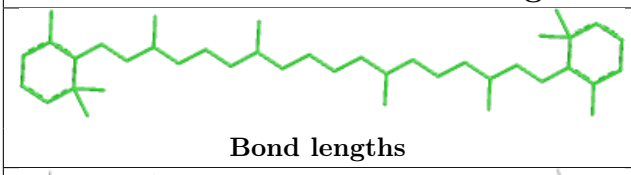
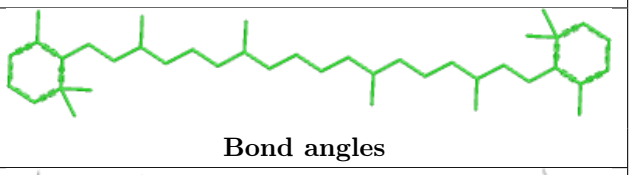


Rings

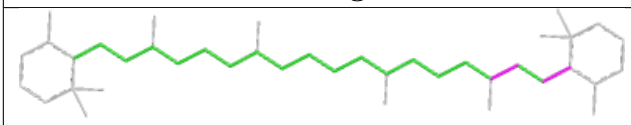
Ligand BCR L 308



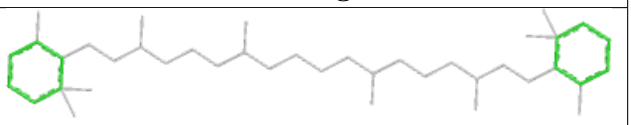
Bond lengths



Bond angles

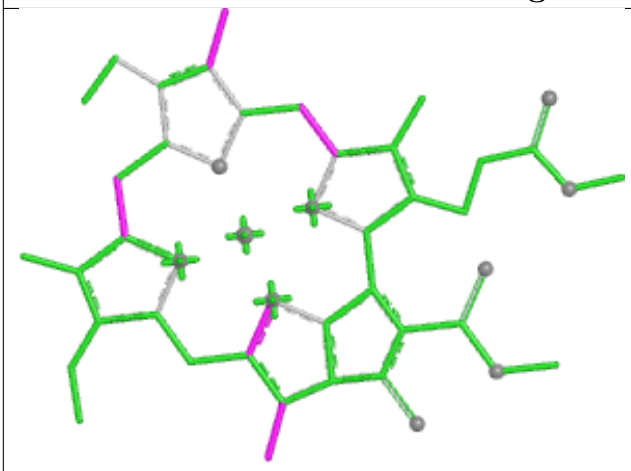


Torsions

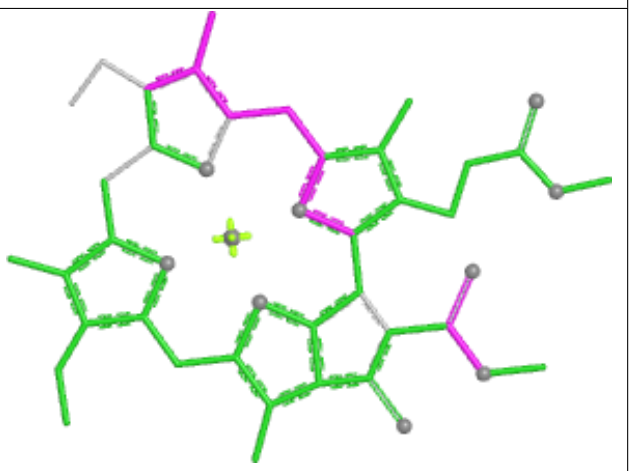


Rings

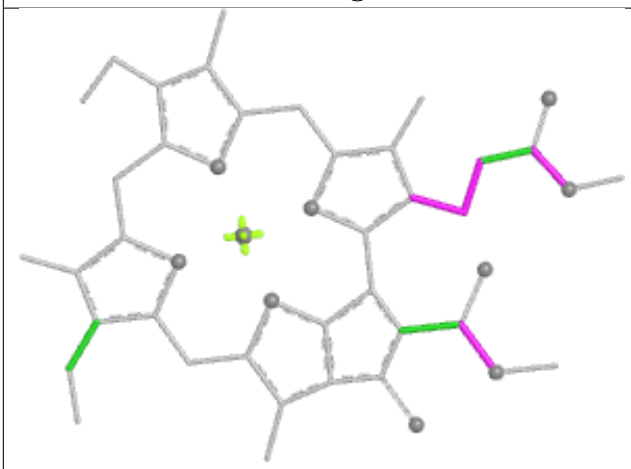
Ligand CLA 3 414



Bond lengths



Bond angles



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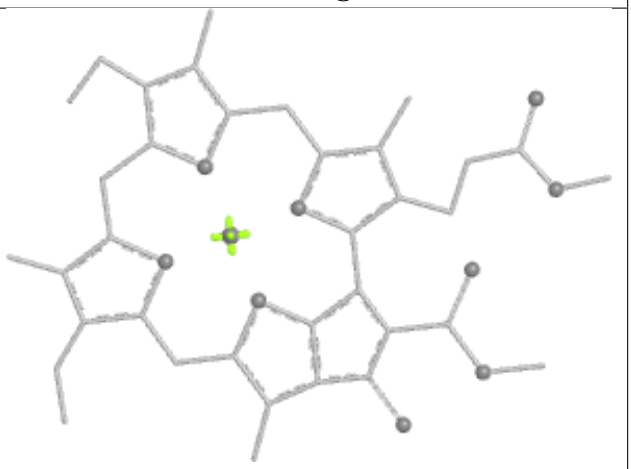
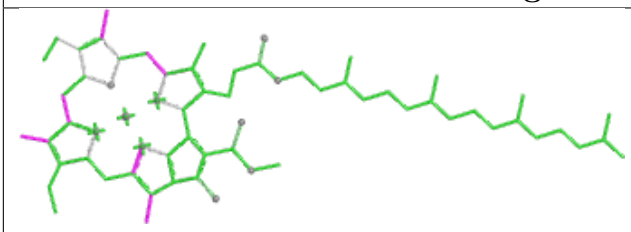
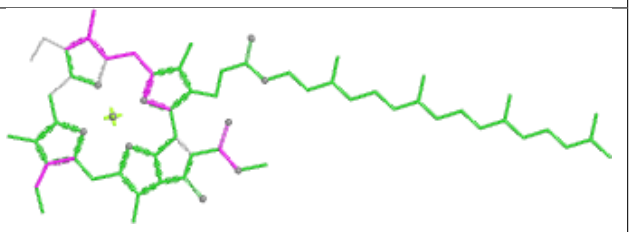


Rings

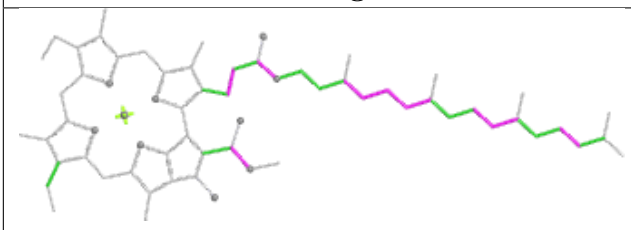
Ligand CLA A 821



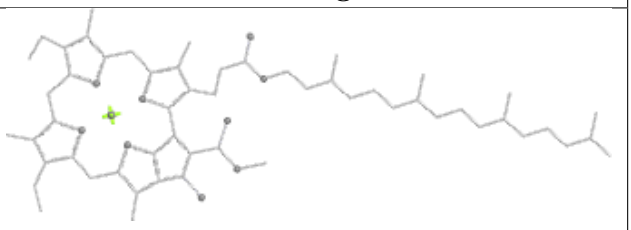
Bond lengths



Bond angles

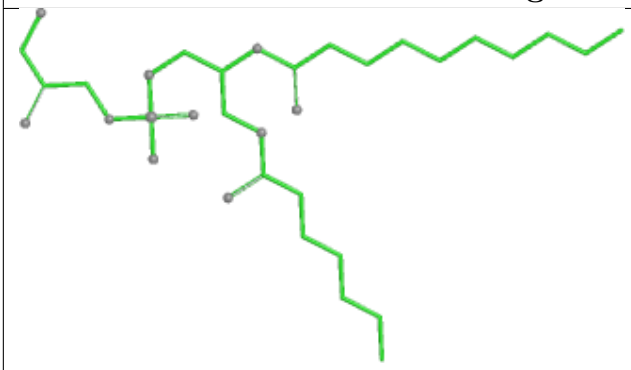


Torsions

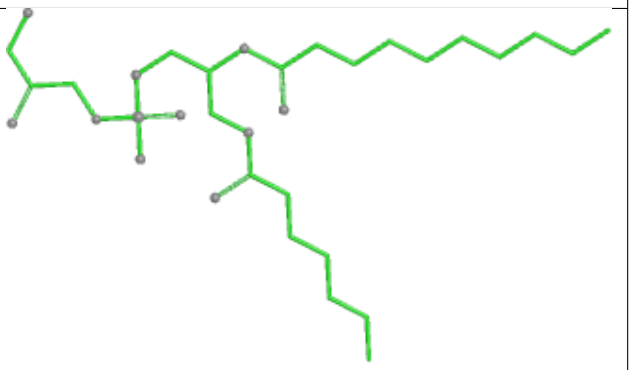


Rings

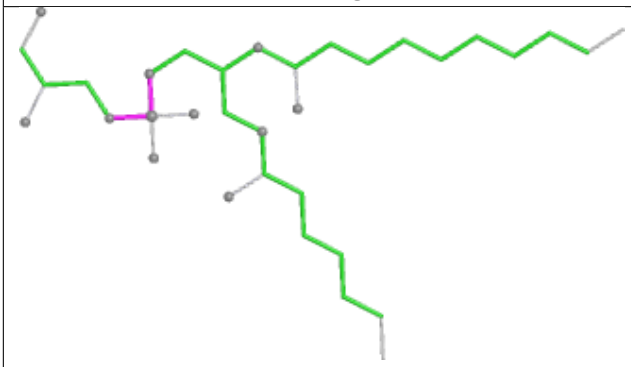
Ligand LHG 8 319



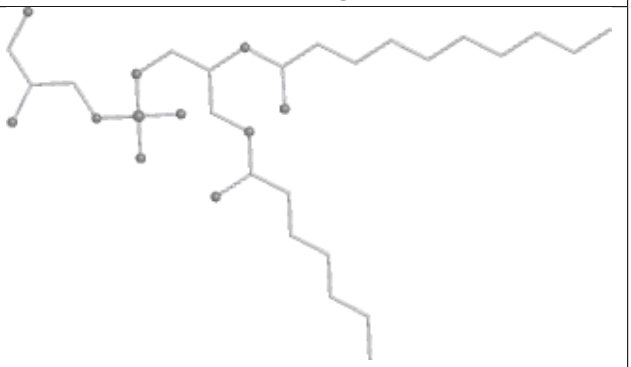
Bond lengths



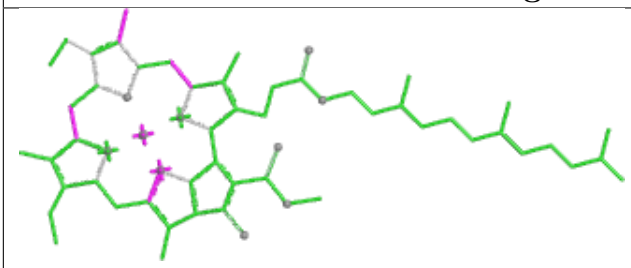
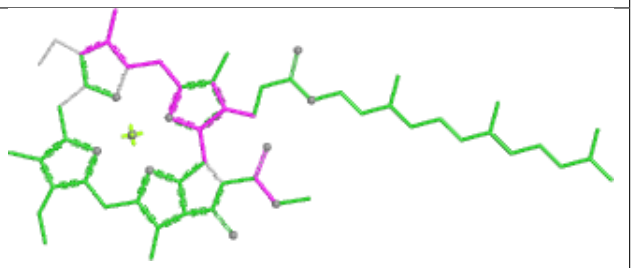
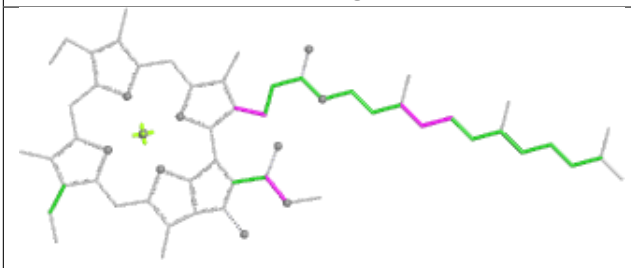
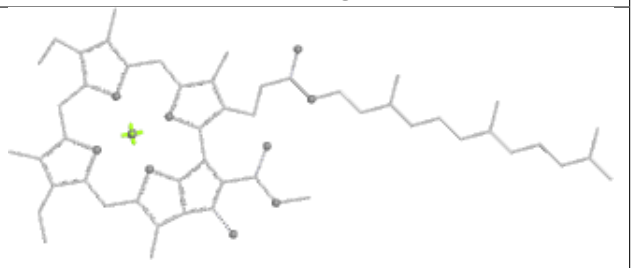
Bond angles

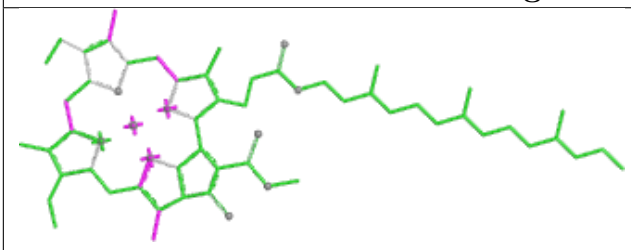
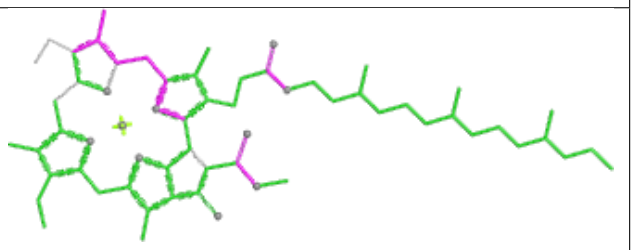
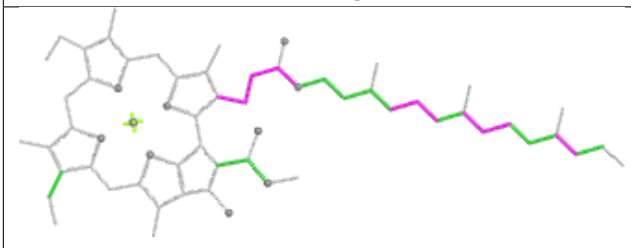
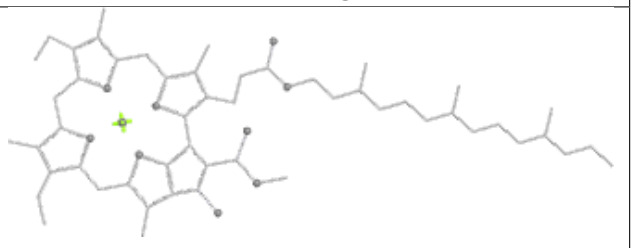


Torsions

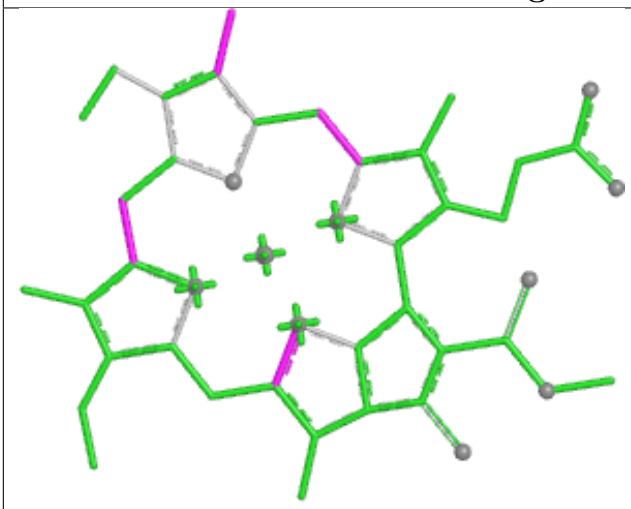


Rings

Ligand CLA A 810	
	
Bond lengths	**Bond angles**
	
Torsions	**Rings**

Ligand CLA A 815	
	
Bond lengths	**Bond angles**
	
Torsions	**Rings**

Ligand CLA 1 605



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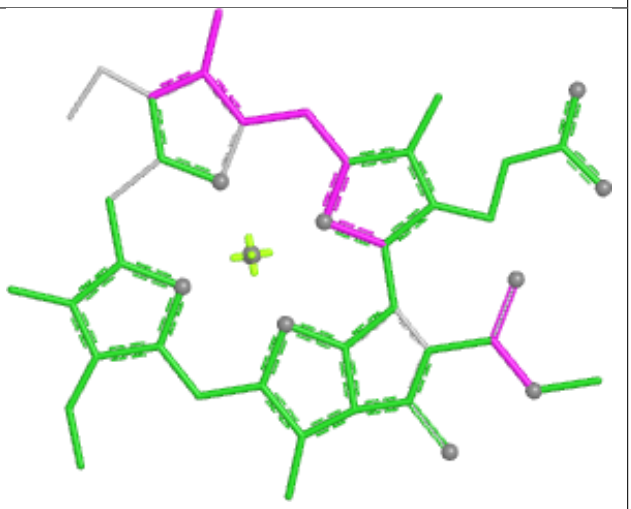
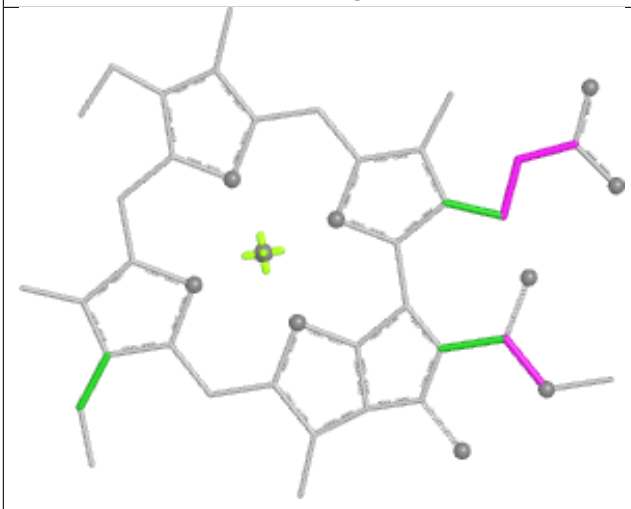


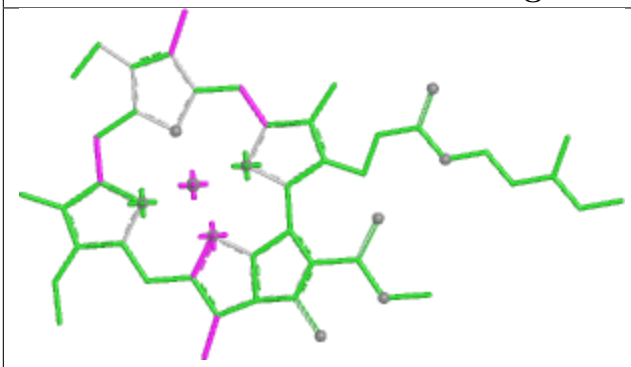
Bond angles



Torsions

Rings

Ligand CLA B 837



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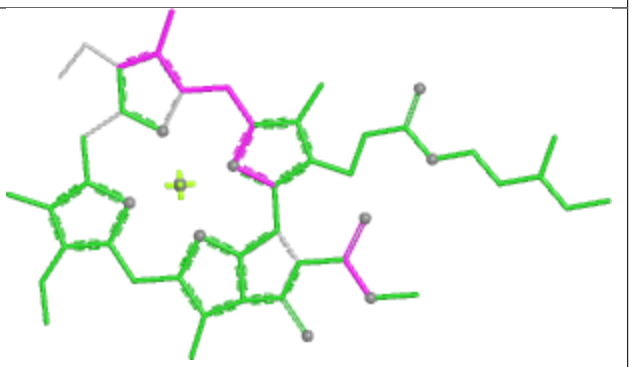
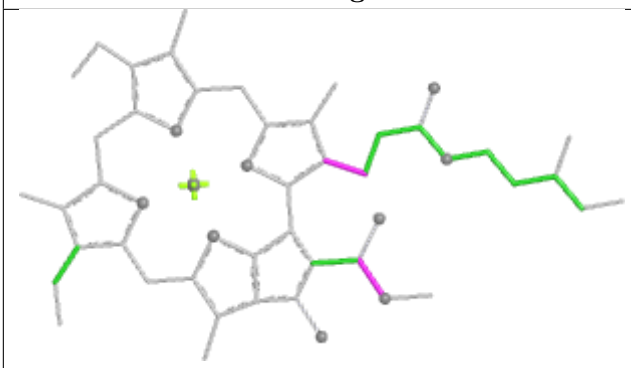


Bond angles



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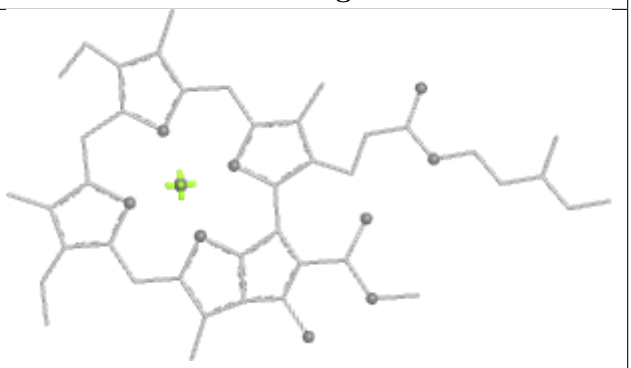
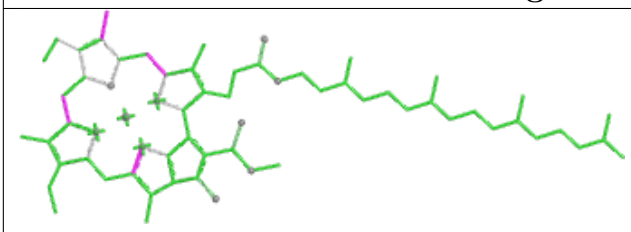


Rings

Ligand CLA L 304



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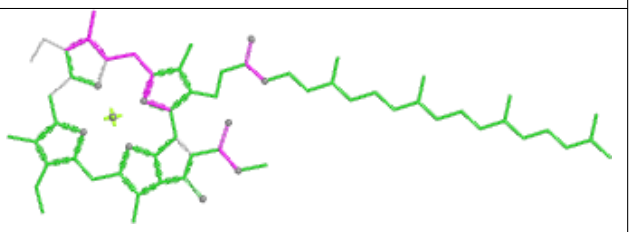
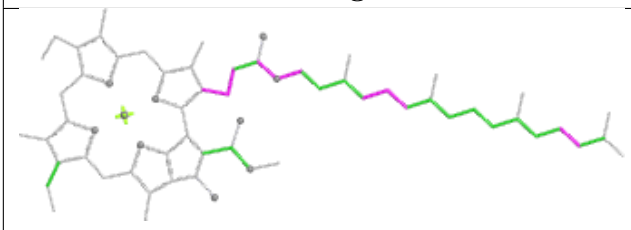
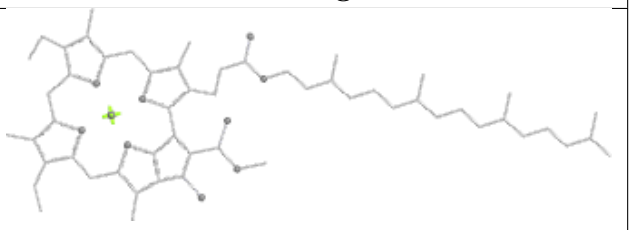


Bond angles

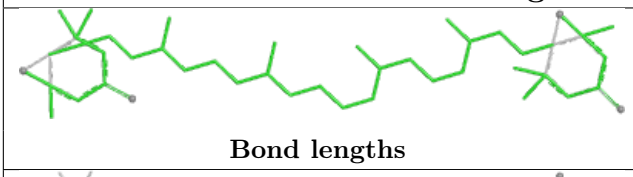


Torsions

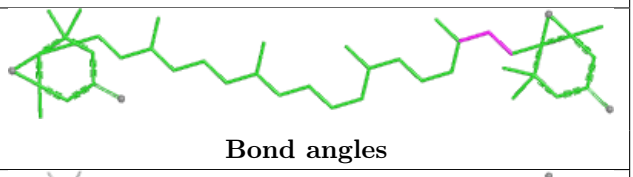


Rings

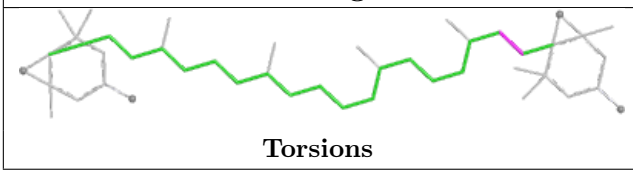
Ligand XAT 8 315



Bond lengths



Bond angles



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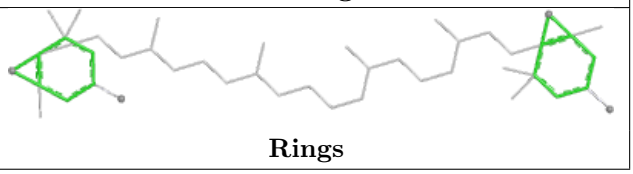
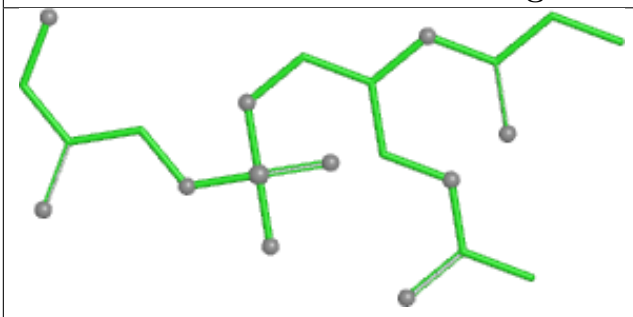


Rings

Ligand LHG 7 323



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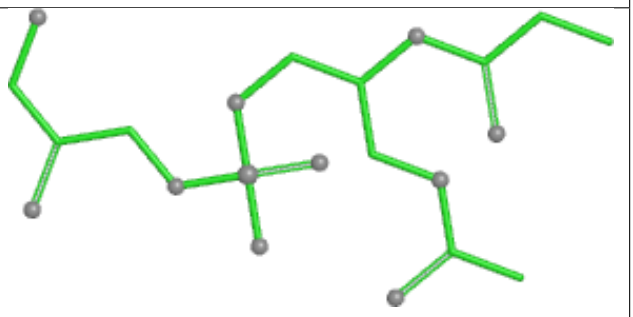
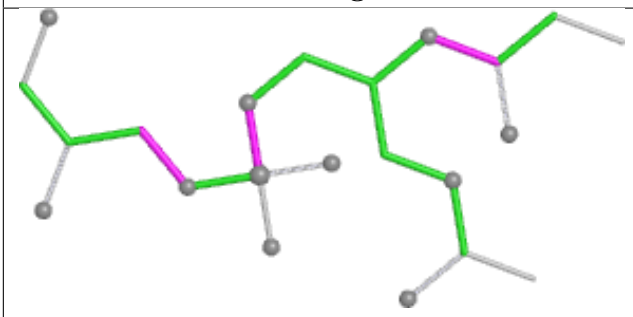
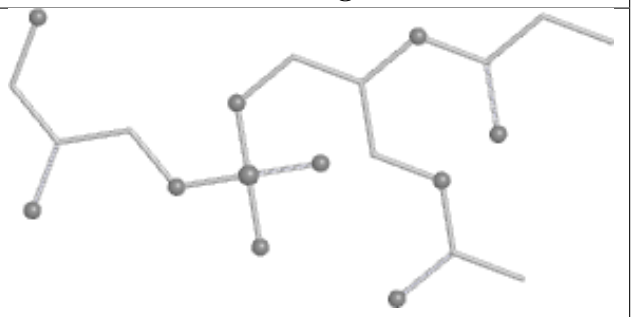


Bond angles

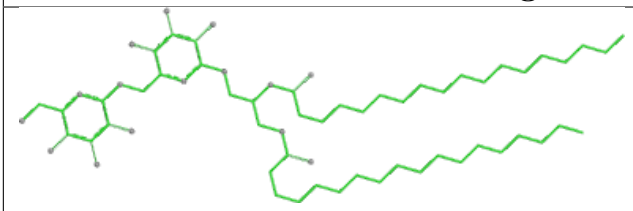


Torsions

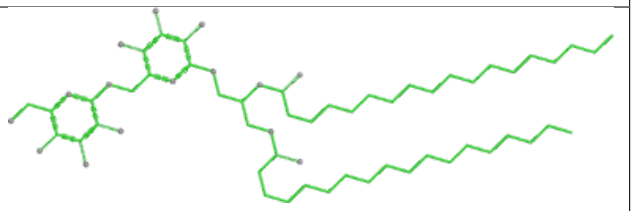


Rings

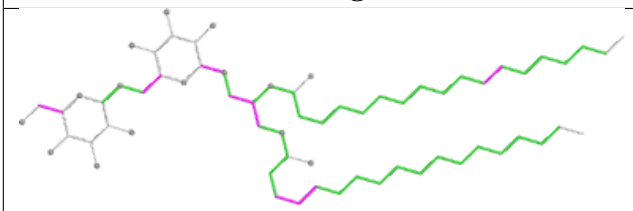
Ligand DGD A 802



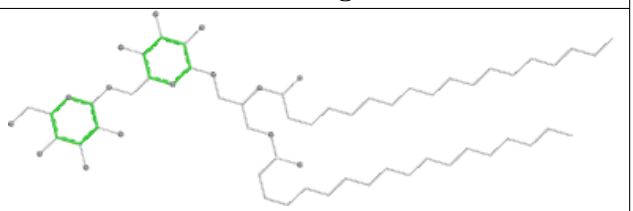
Bond lengths



Bond angles

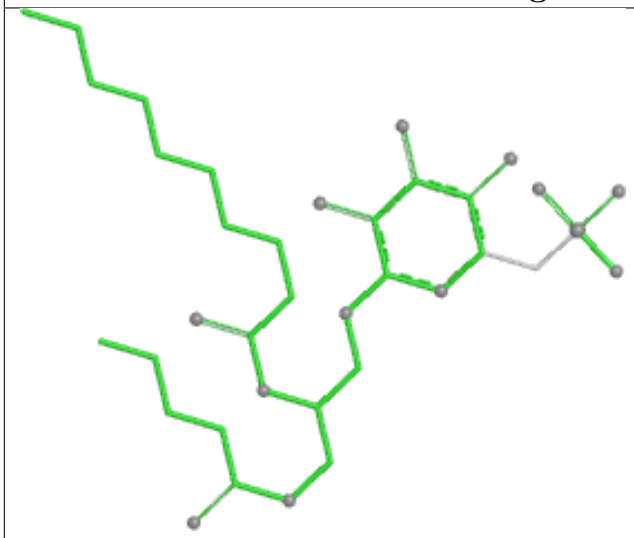


Torsions

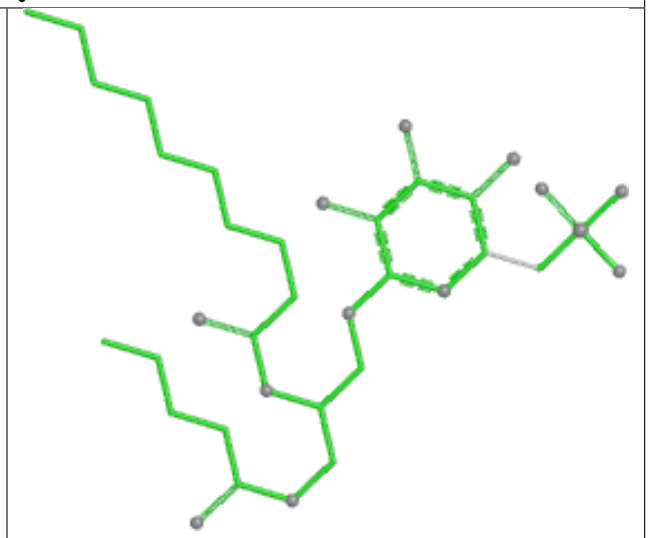


Rings

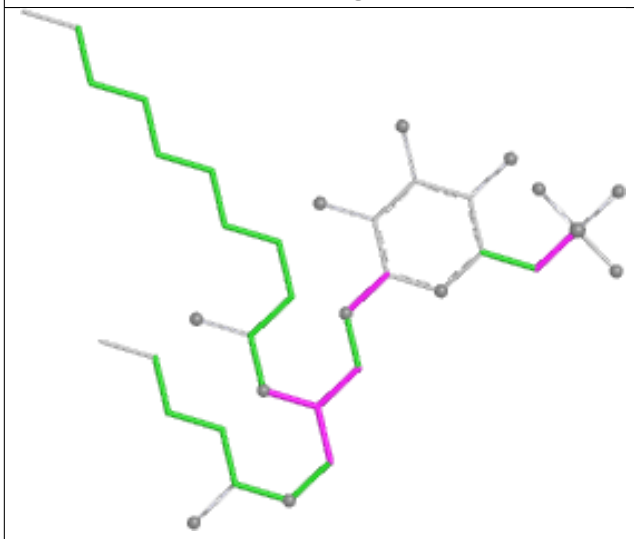
Ligand SQD 9 618



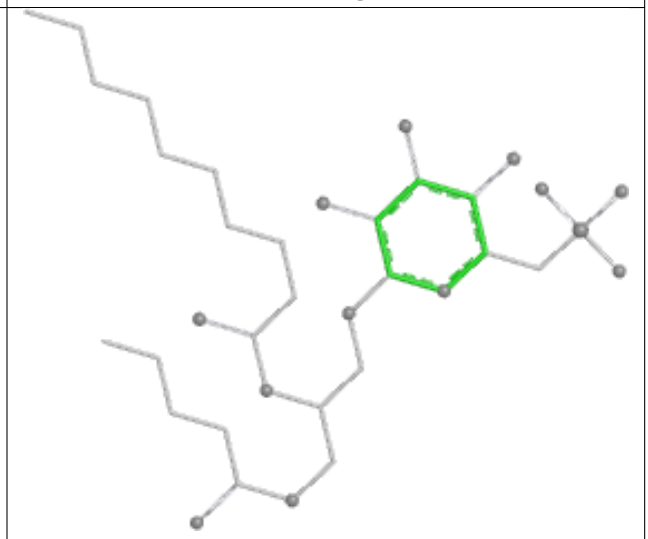
Bond lengths



Bond angles

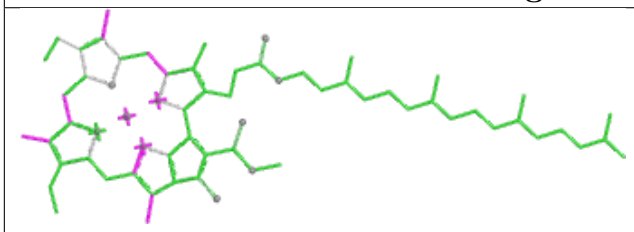


Torsions

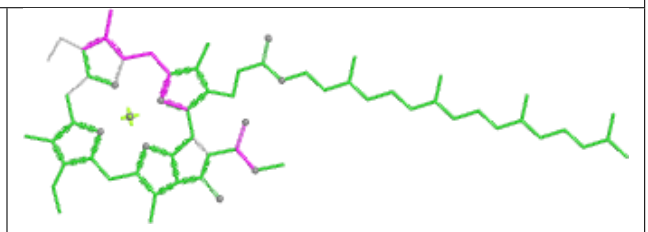


Rings

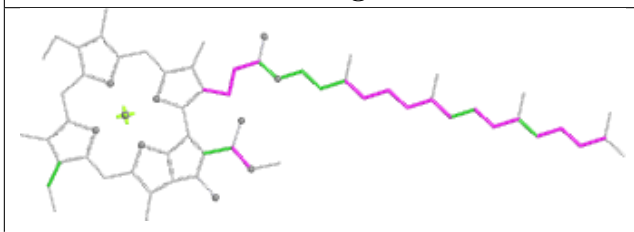
Ligand CLA B 829



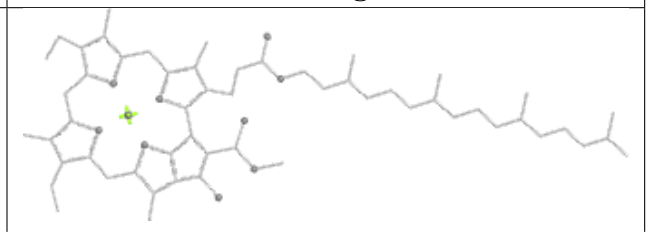
Bond lengths



Bond angles

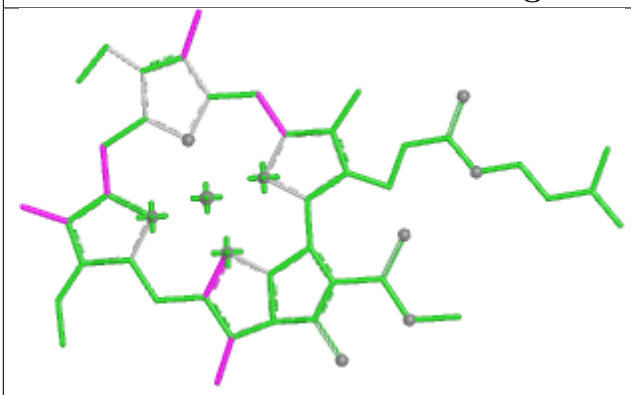


Torsions



Rings

Ligand CLA A 843



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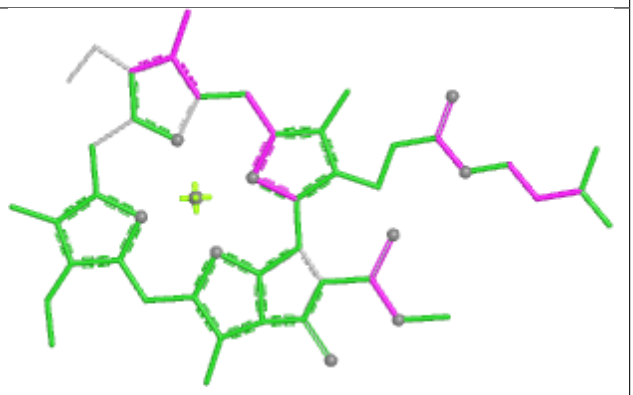
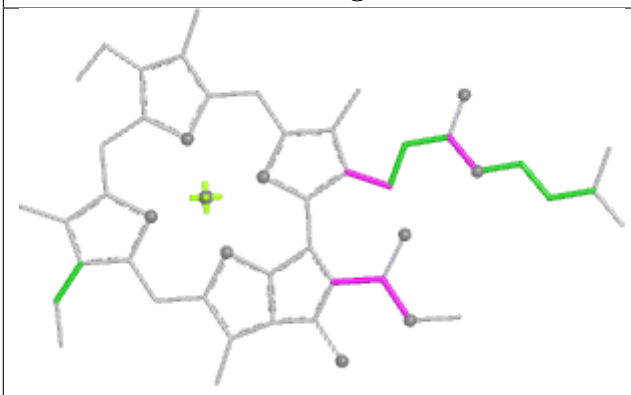
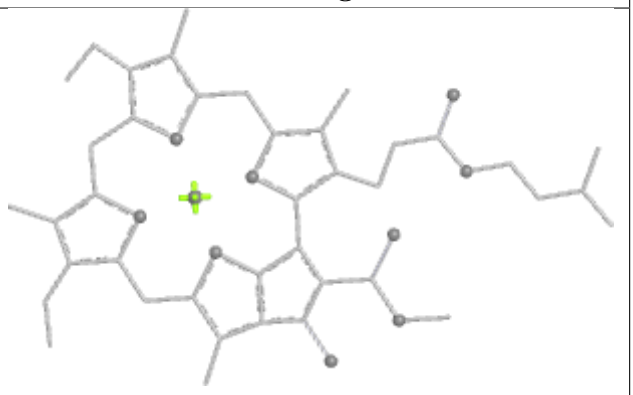


Bond angles



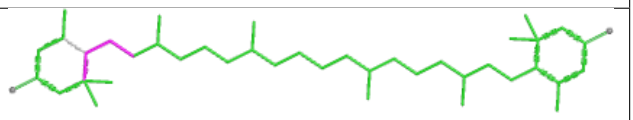
Torsions



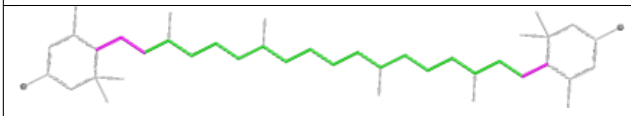
Rings

Ligand LUT 2 614

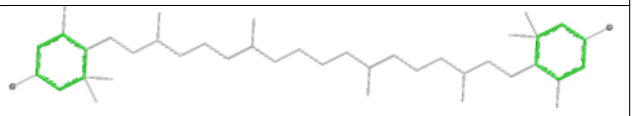
Bond lengths



Bond angles

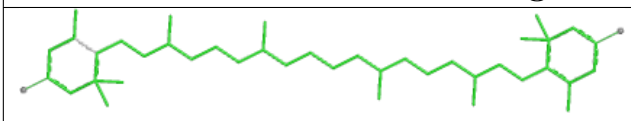


Torsions

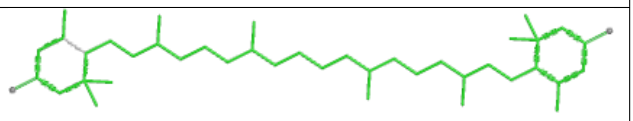


Rings

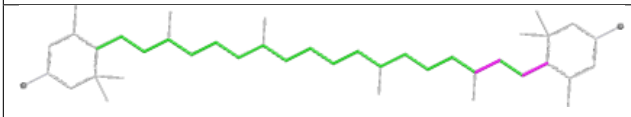
Ligand LUT 2 617



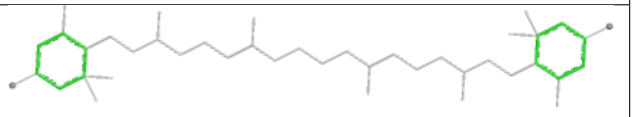
Bond lengths



Bond angles

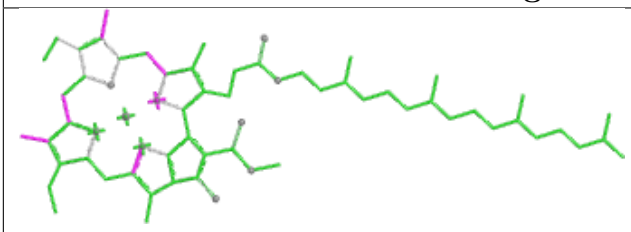


Torsions

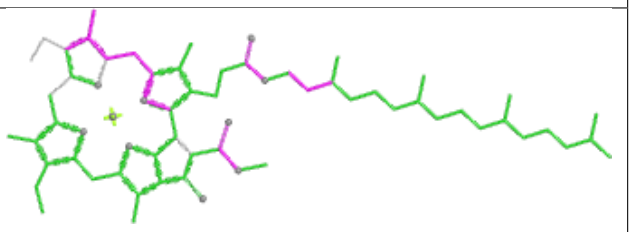


Rings

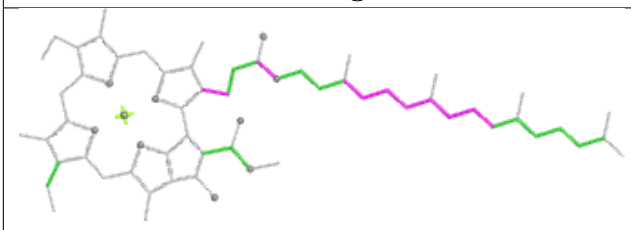
Ligand CLA A 830



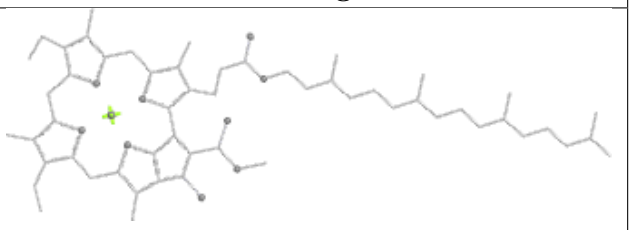
Bond lengths



Bond angles

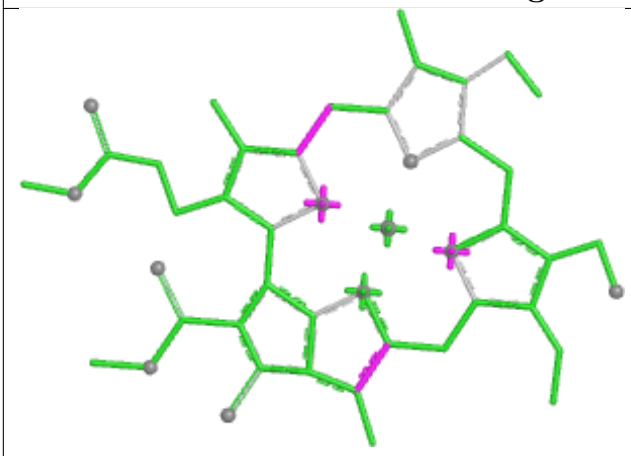


Torsions

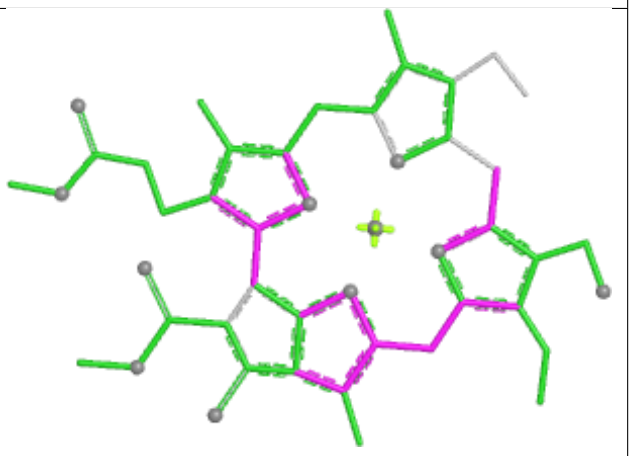


Rings

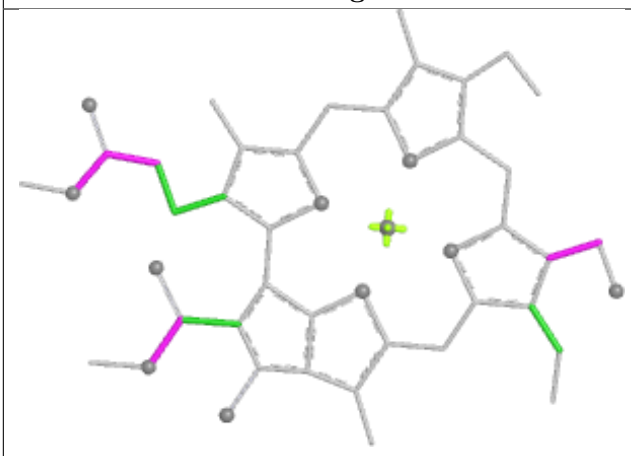
Ligand CHL 8 305



Bond lengths

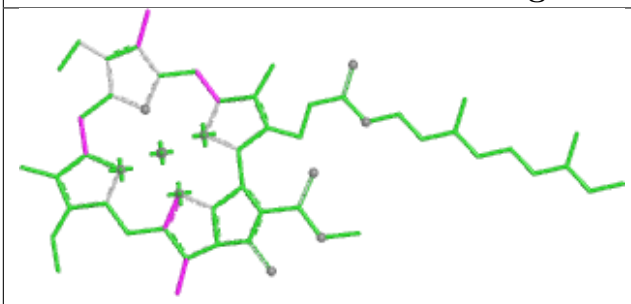
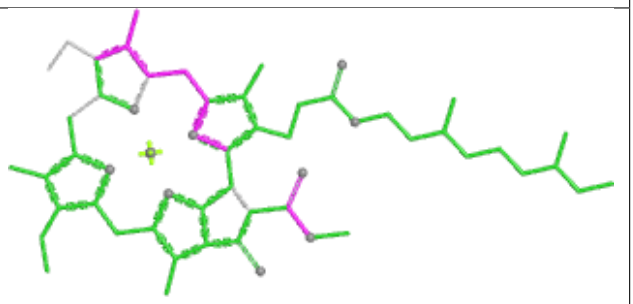
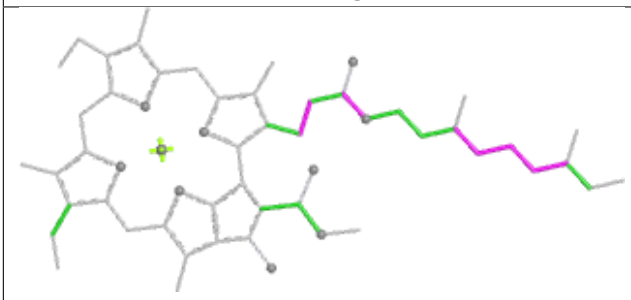
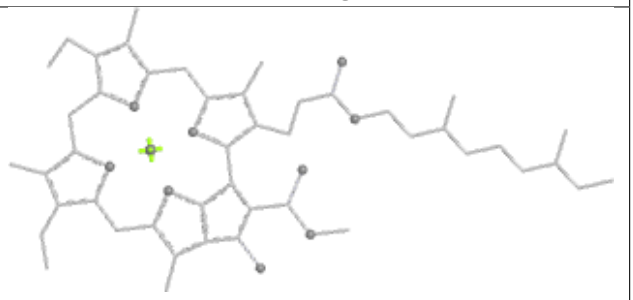


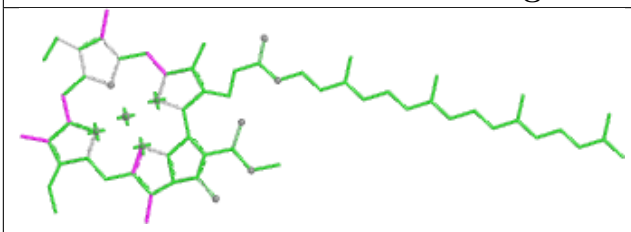
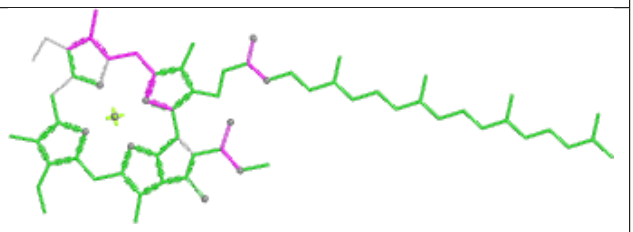
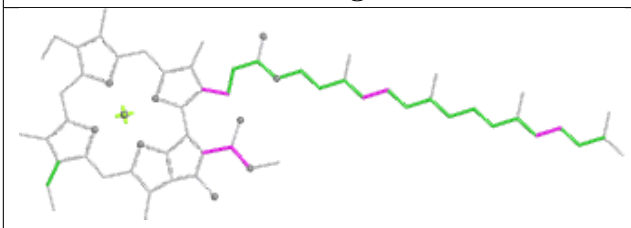
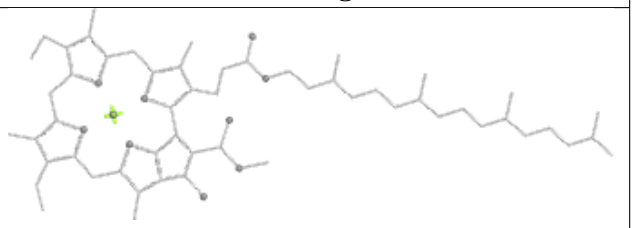
Bond angles



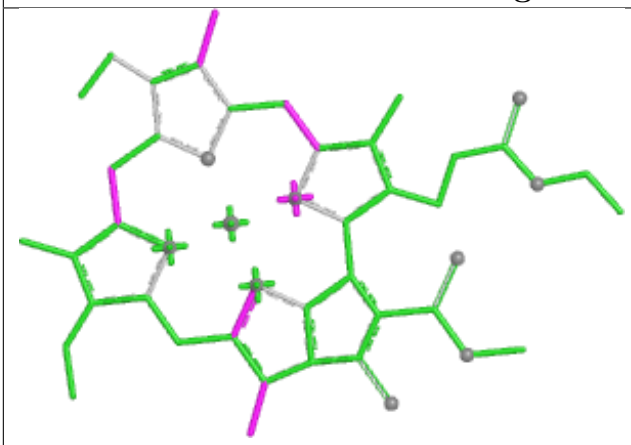
Torsions

Rings

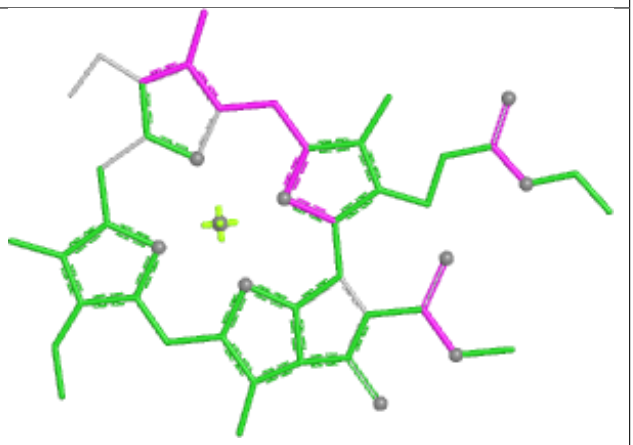
Ligand CLA 2 602	
	
Bond lengths	Bond angles
	
Torsions	Rings

Ligand CLA A 833	
	
Bond lengths	Bond angles
	
Torsions	Rings

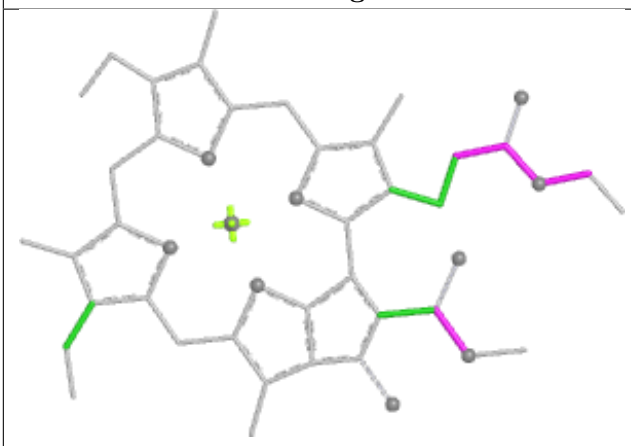
Ligand CLA G 4002



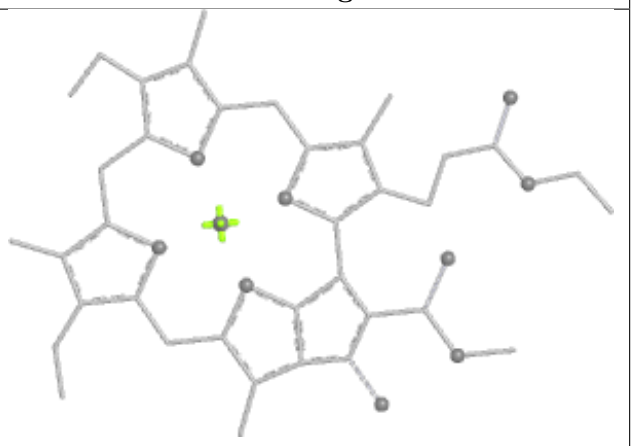
Bond lengths



Bond angles

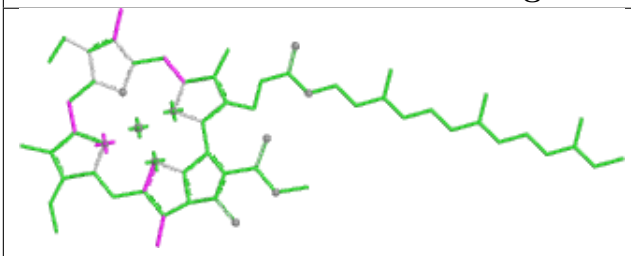


Torsions

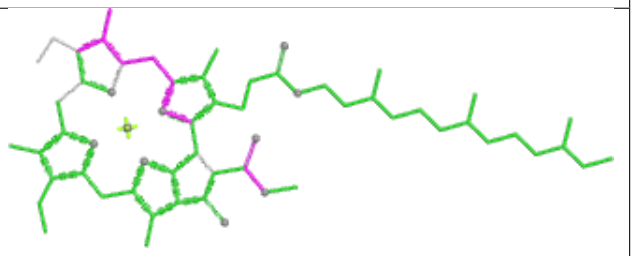


Rings

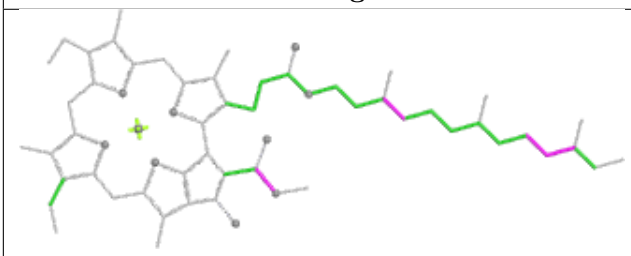
Ligand CLA A 842



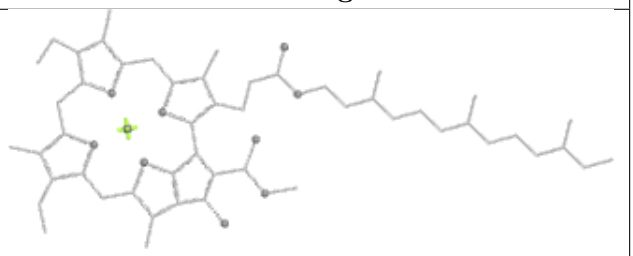
Bond lengths



Bond angles

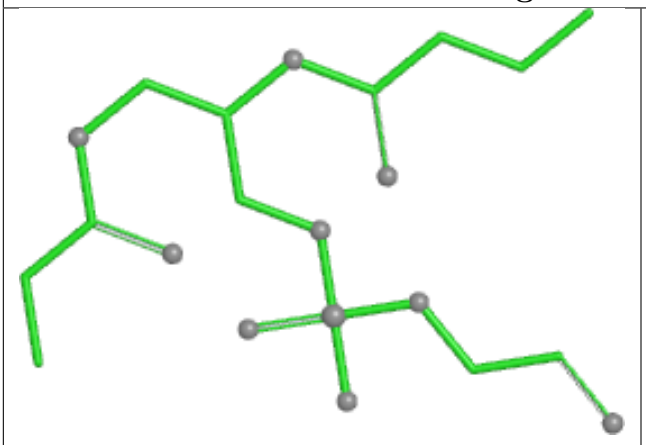


Torsions

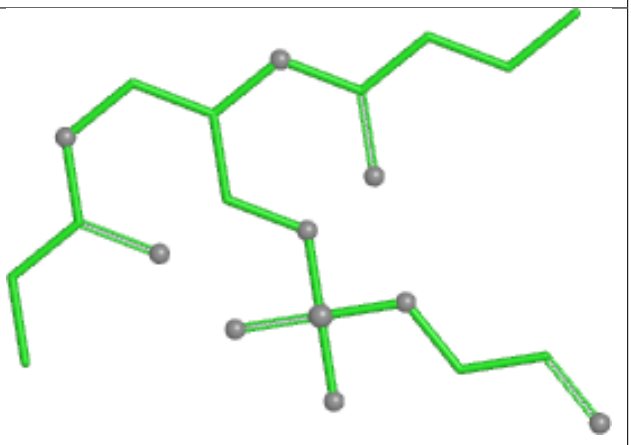


Rings

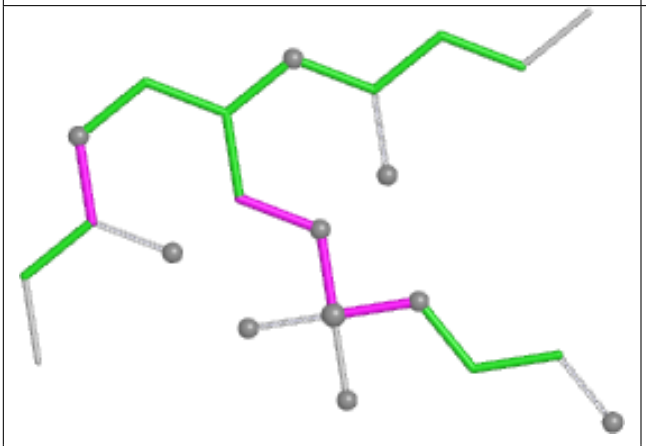
Ligand PTY F 5010



Bond lengths



Bond angles



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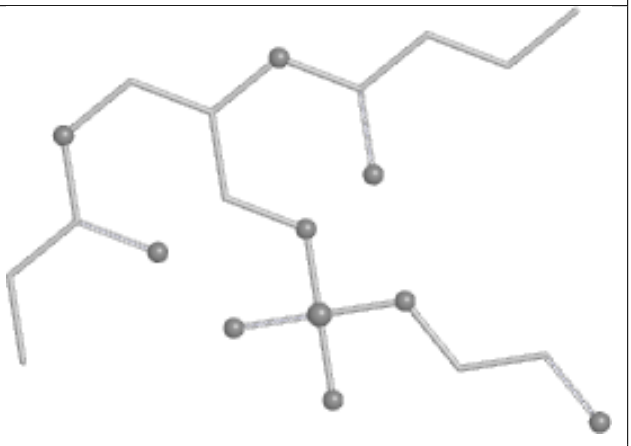
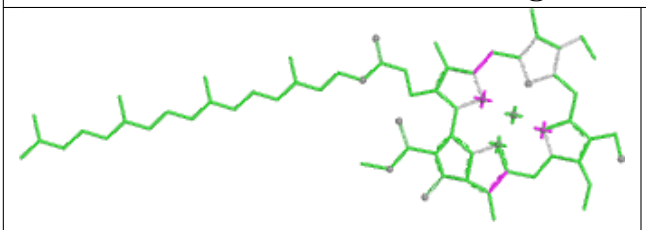


Rings

Ligand CHL 7 302



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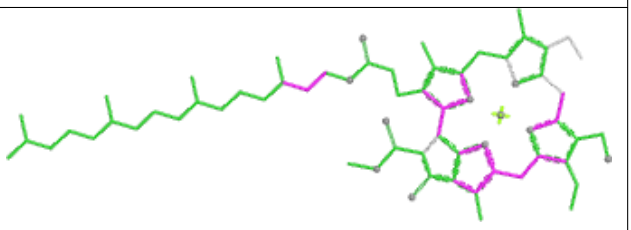
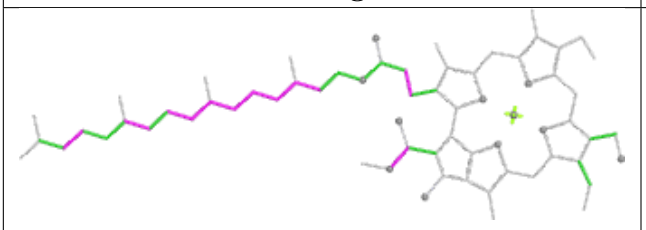


Bond angles



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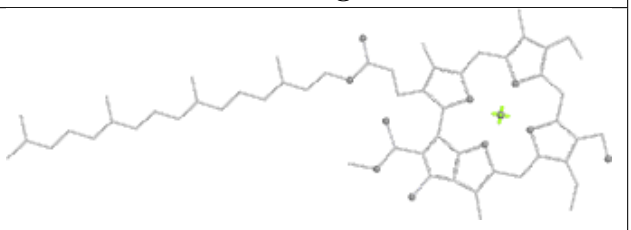
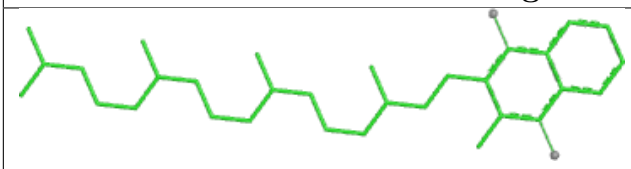
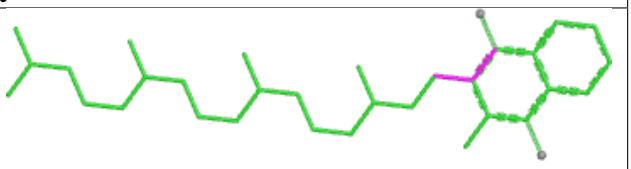


Rings

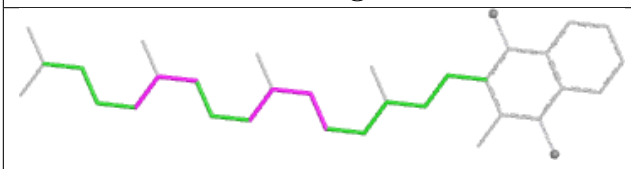
Ligand PQN B 844



Bond lengths



Bond angles



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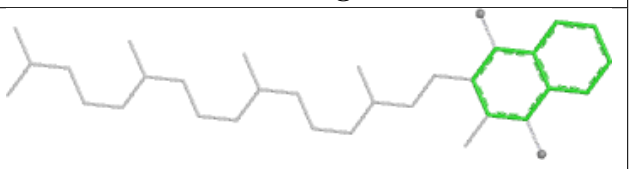
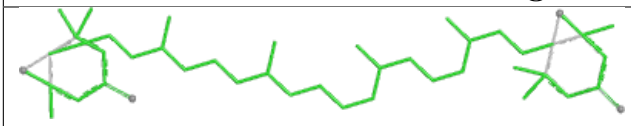


Rings

Ligand XAT 1 616



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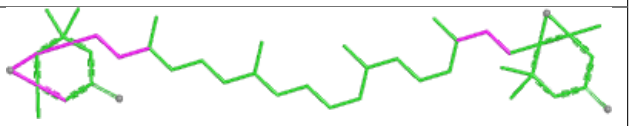
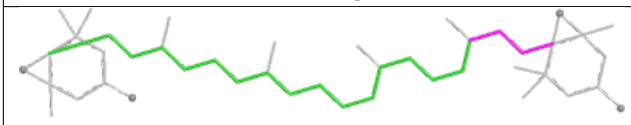
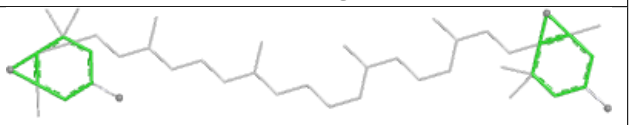


Bond angles

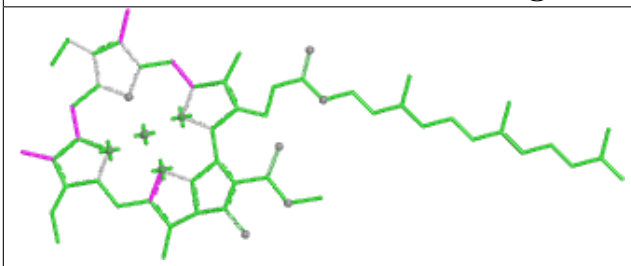


Torsions

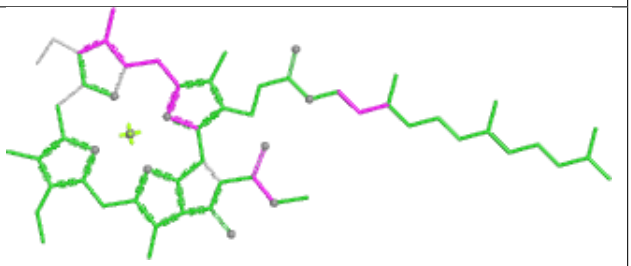


Rings

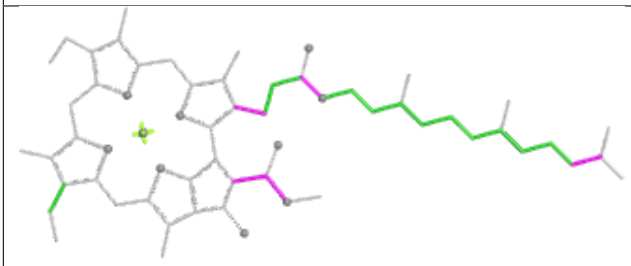
Ligand CLA 7 303



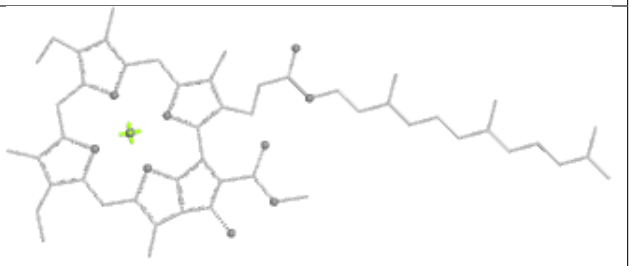
Bond lengths



Bond angles

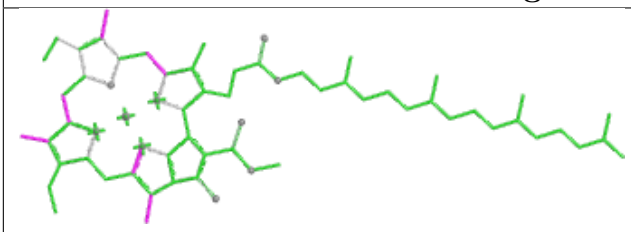


Torsions

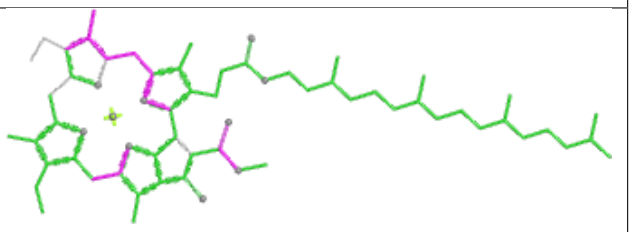


Rings

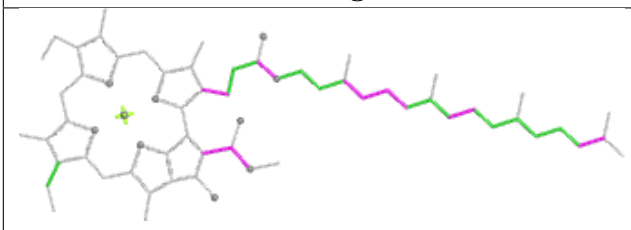
Ligand CLA A 808



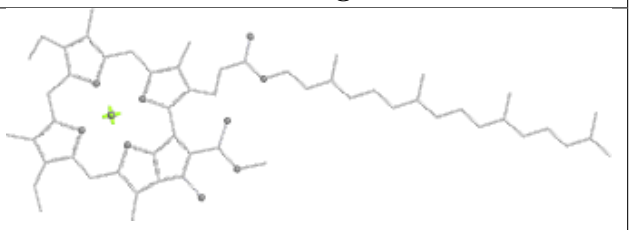
Bond lengths



Bond angles



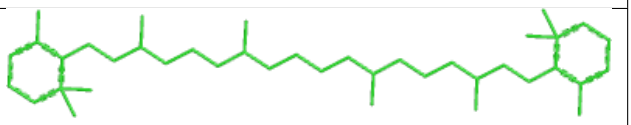
Torsions



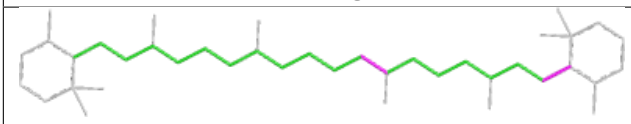
Rings

Ligand BCR F 5009

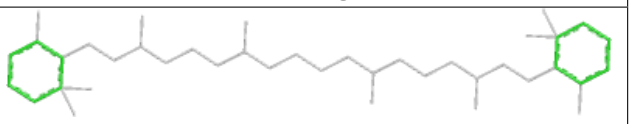
Bond lengths



Bond angles

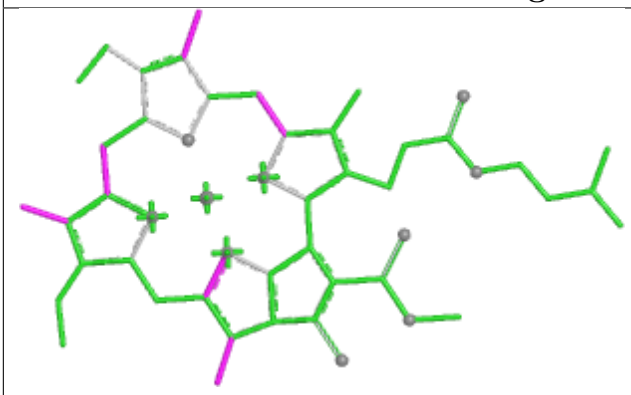


Torsions



Rings

Ligand CLA 2 613



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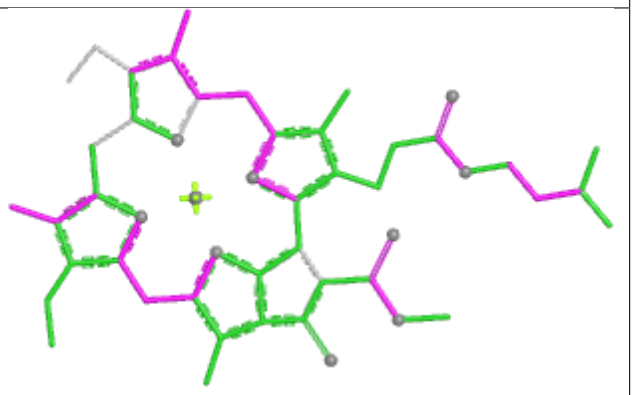
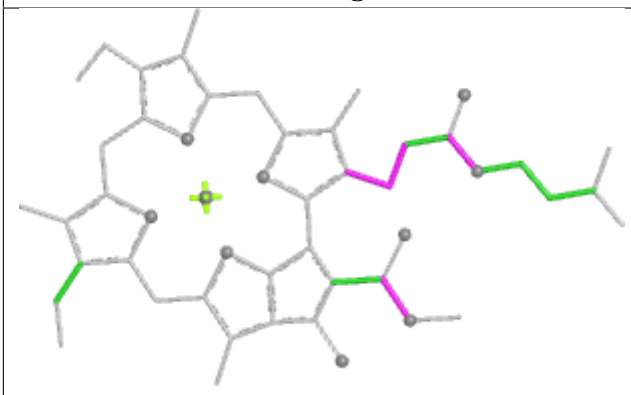
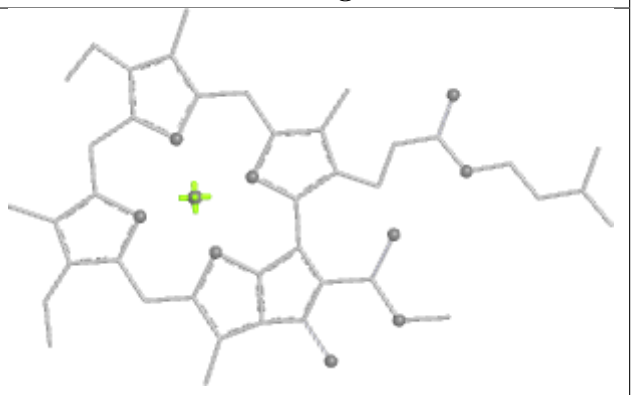


Bond angles

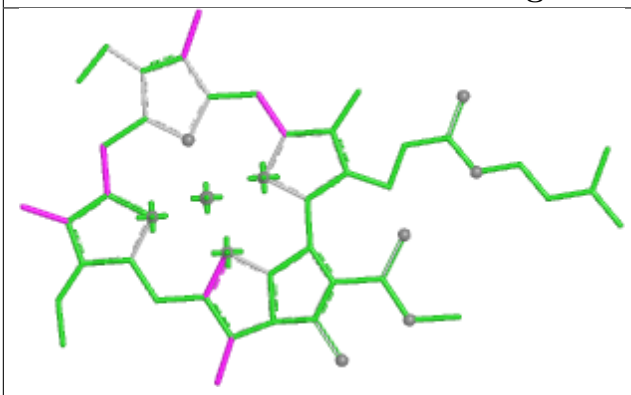


Torsions

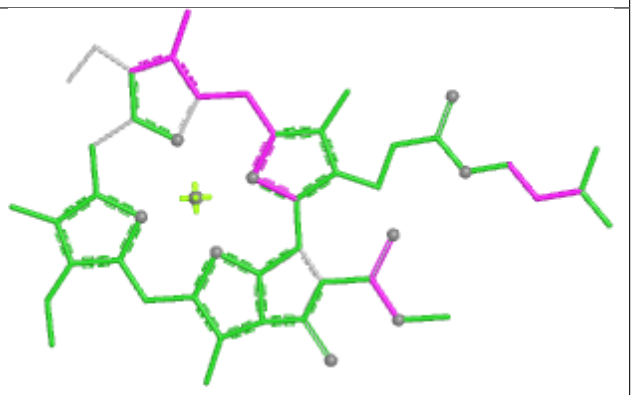


Rings

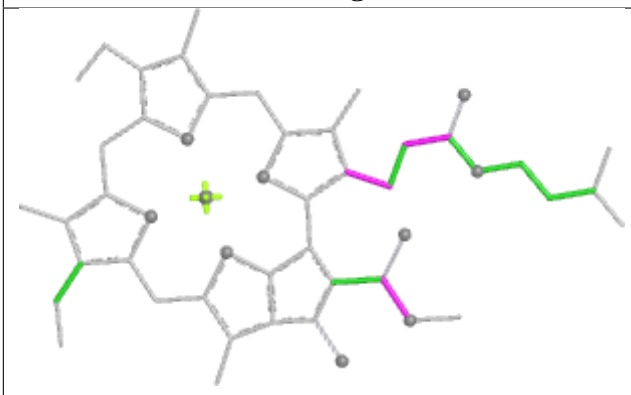
Ligand CLA L 306



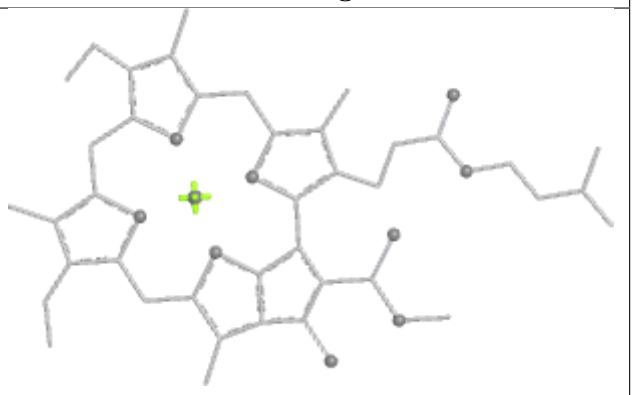
Bond lengths



Bond angles

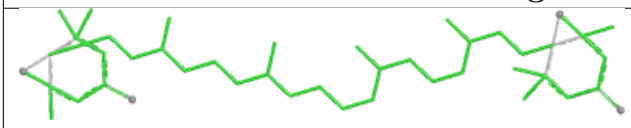


Torsions

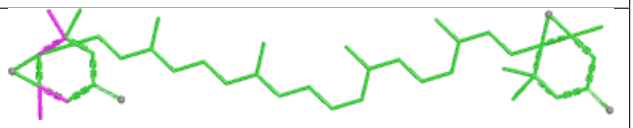


Rings

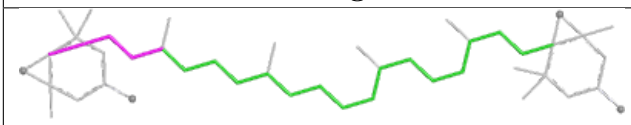
Ligand XAT 7 317



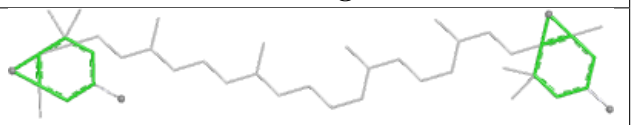
Bond lengths



Bond angles

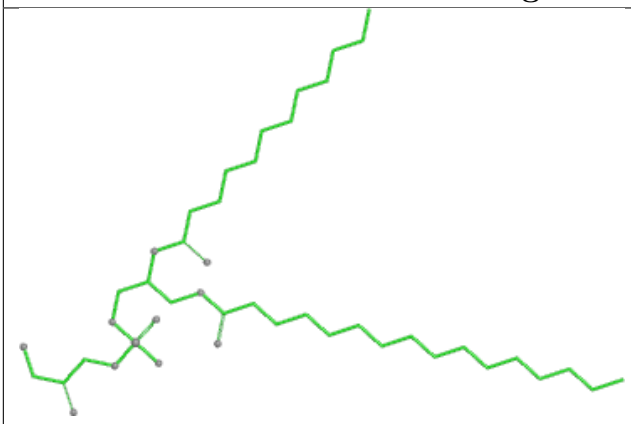


Torsions

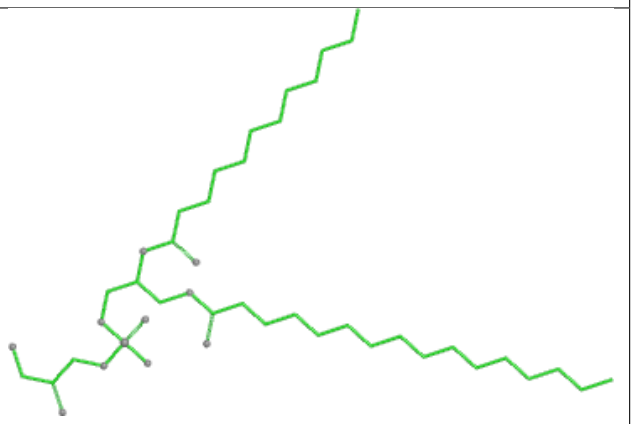


Rings

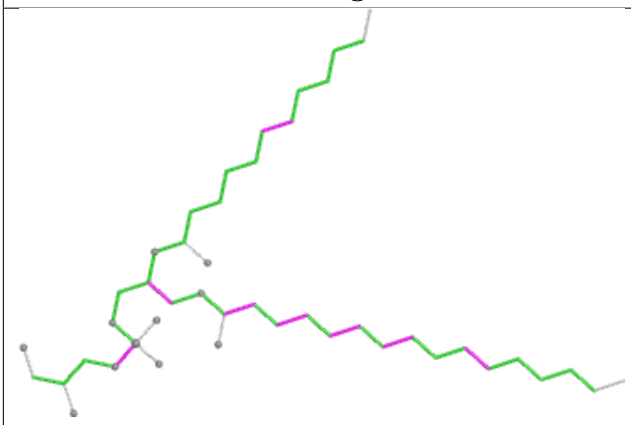
Ligand LHG A 854



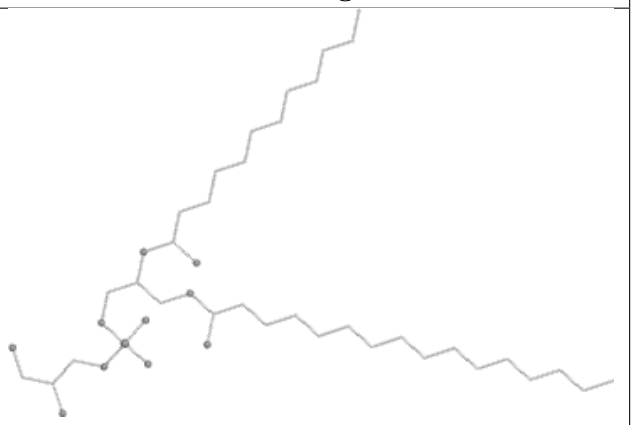
Bond lengths



Bond angles

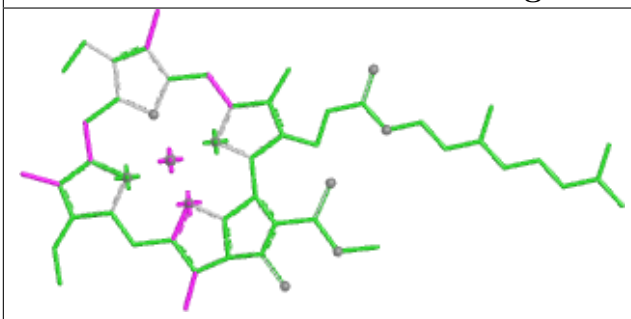


Torsions

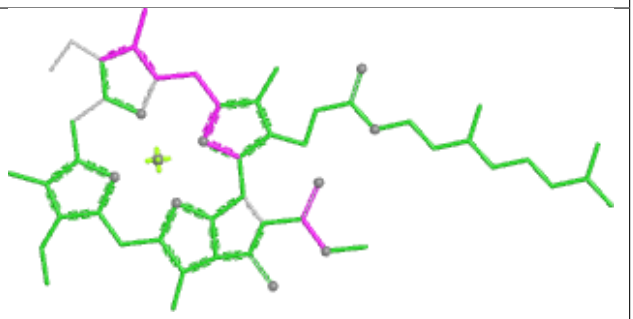


Rings

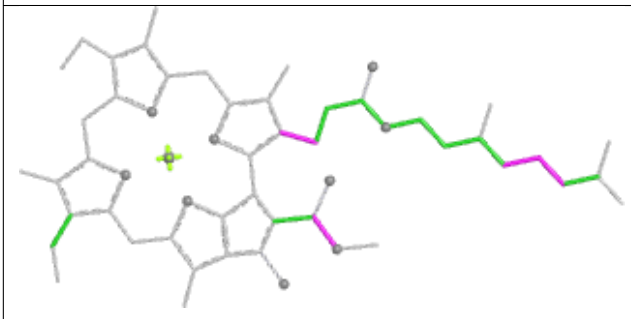
Ligand CLA B 816



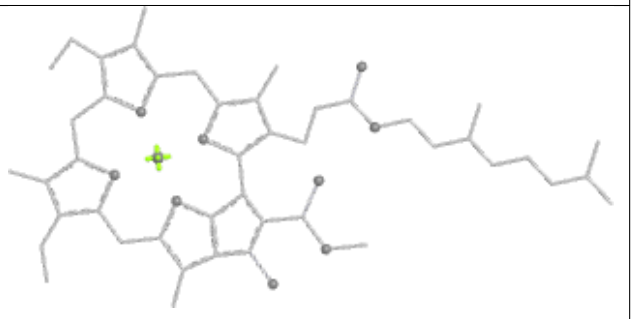
Bond lengths



Bond angles

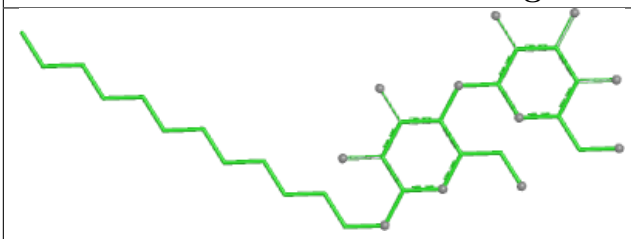


Torsions

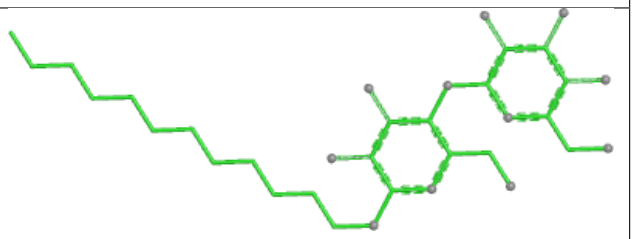


Rings

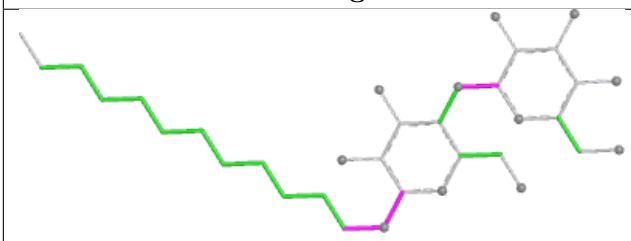
Ligand LMU 9 616



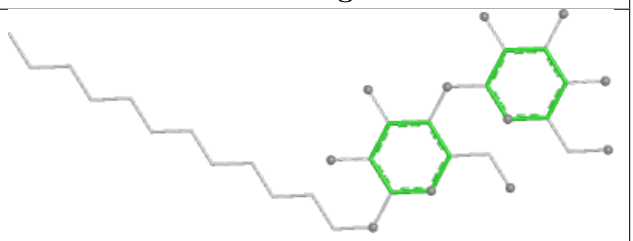
Bond lengths



Bond angles

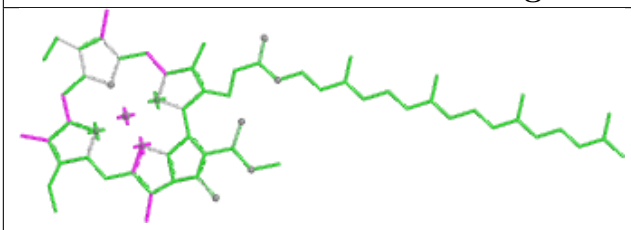


Torsions

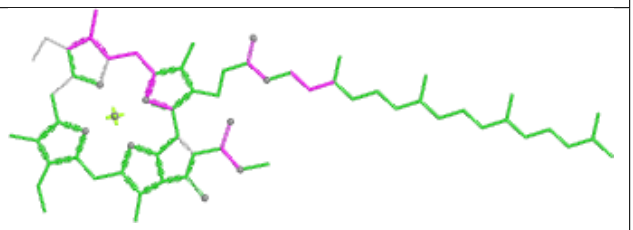


Rings

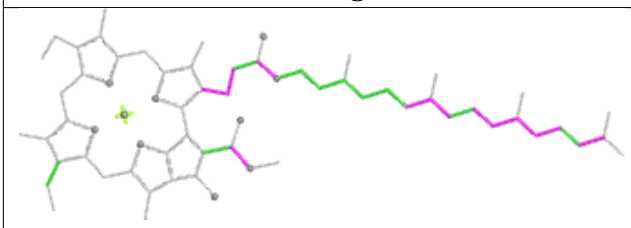
Ligand CLA B 803



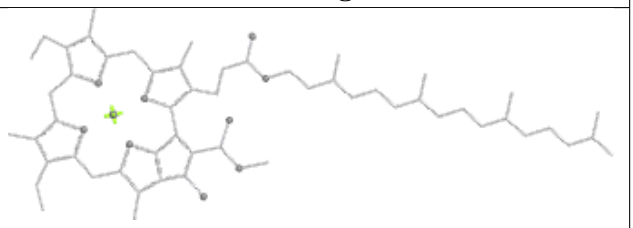
Bond lengths



Bond angles

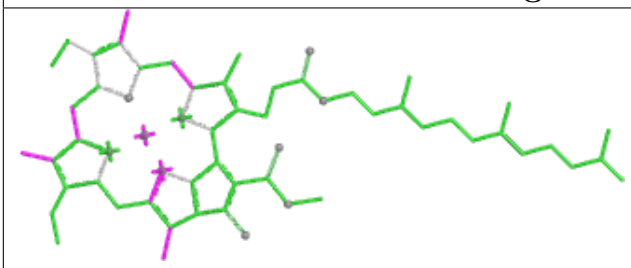


Torsions

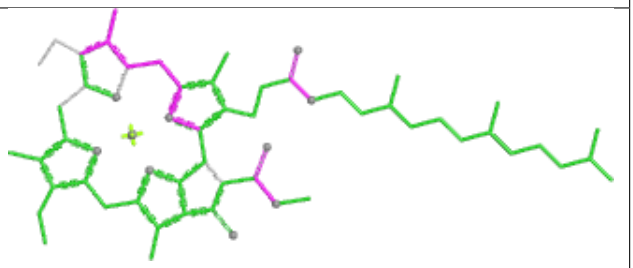


Rings

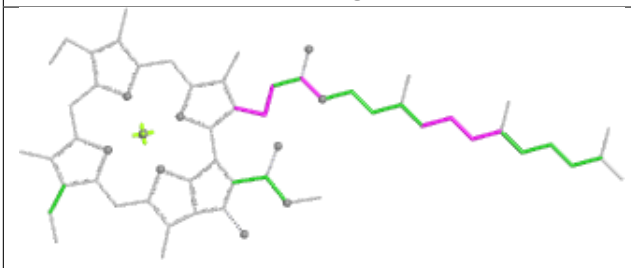
Ligand CLA B 832



Bond lengths



Bond angles



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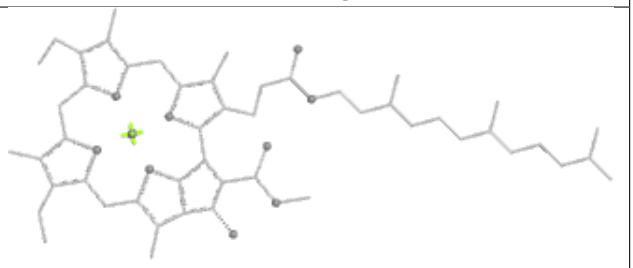
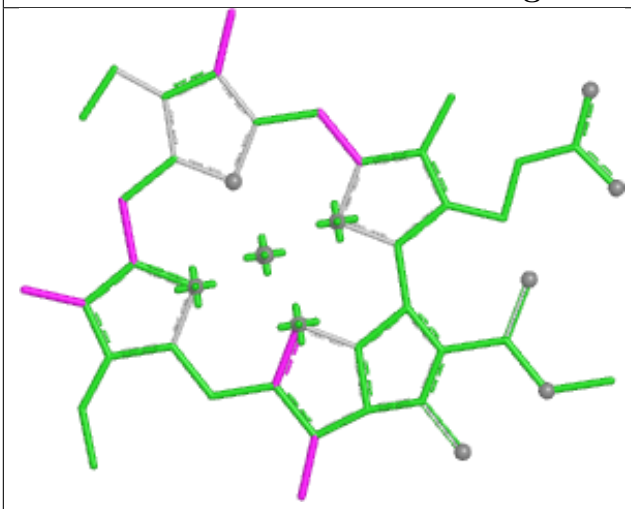


Rings

Ligand CLA H 204



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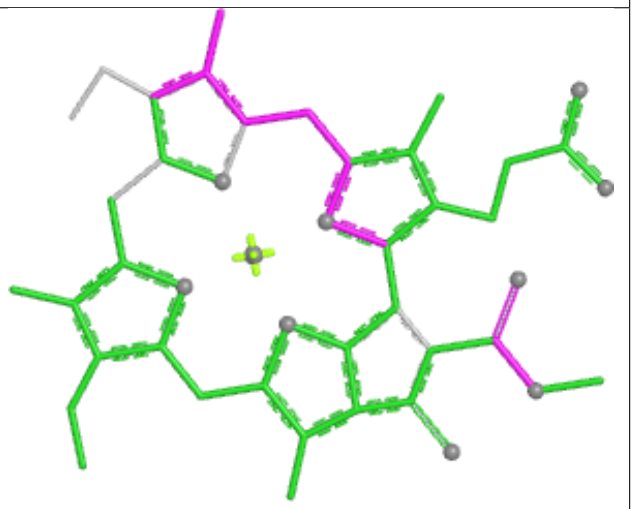
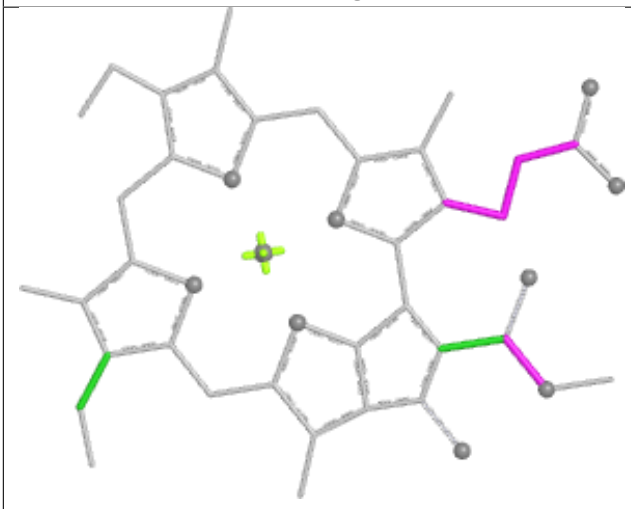


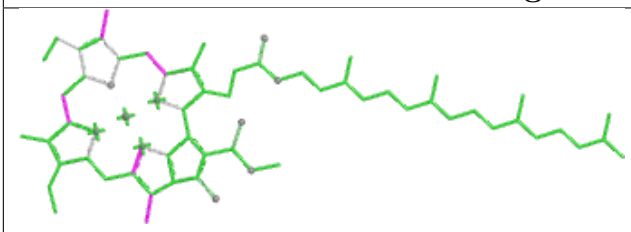
Bond angles



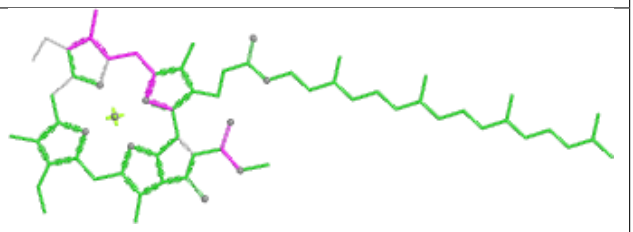
Torsions

Rings

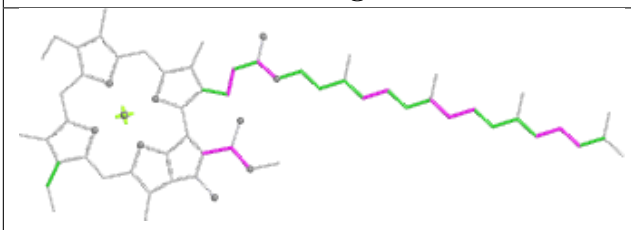
Ligand CLA B 808



Bond lengths



Bond angles



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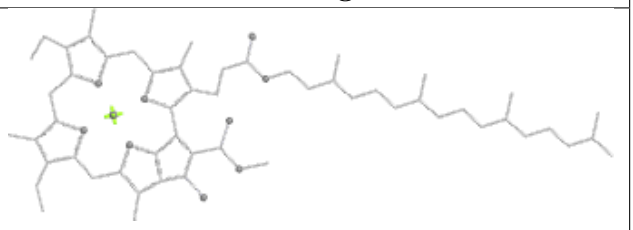
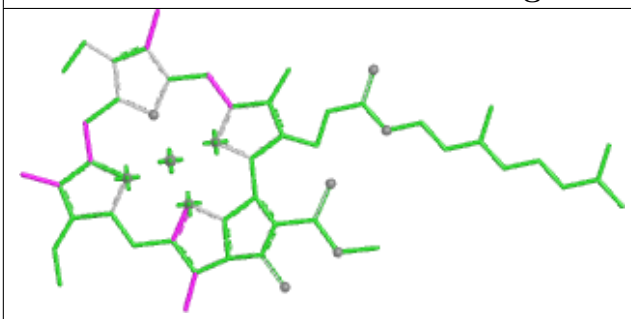
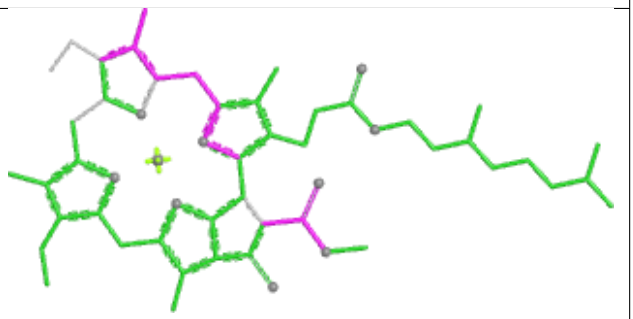


Rings

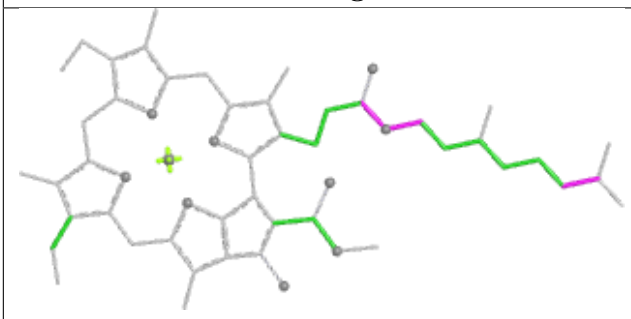
Ligand CLA A 834



Bond lengths



Bond angles



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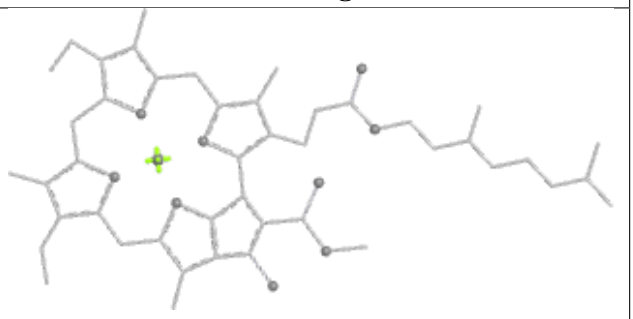
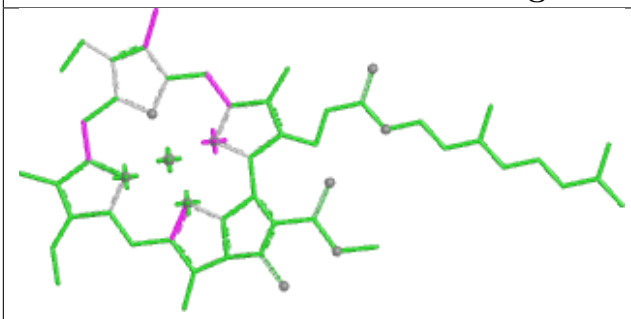
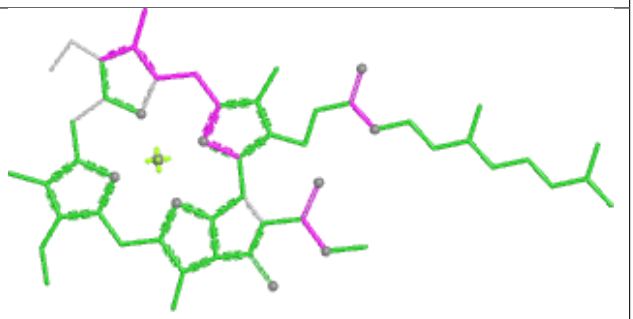


Rings

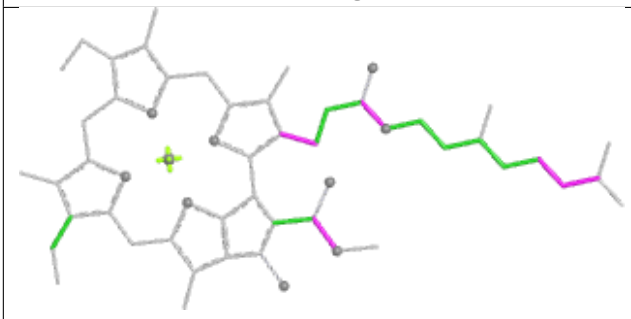
Ligand CLA 7 304



Bond lengths



Bond angles



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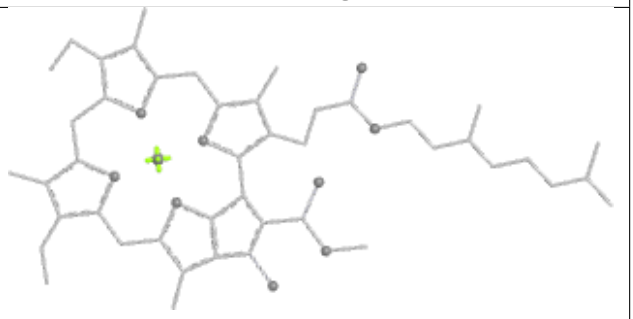
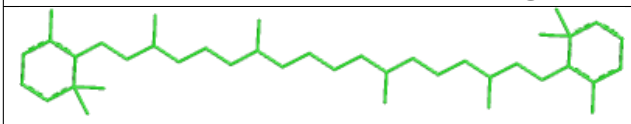
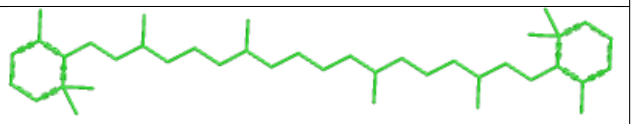


Rings

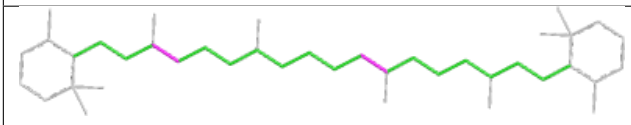
Ligand BCR A 852



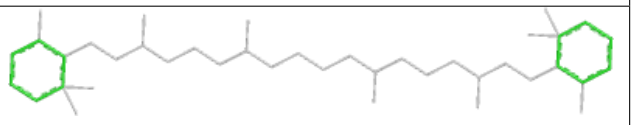
Bond lengths



Bond angles

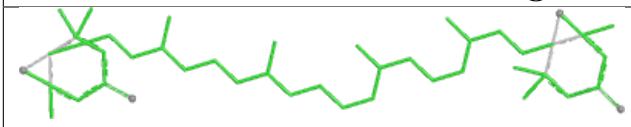


Torsions



Rings

Ligand XAT 3 416



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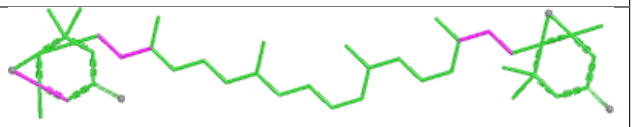
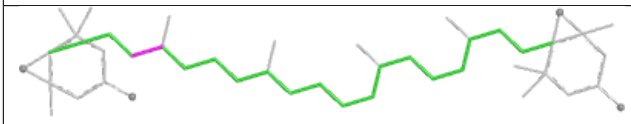
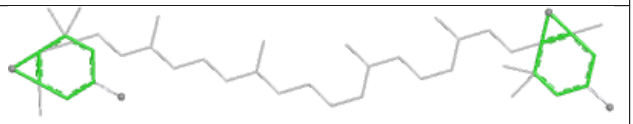


Bond angles

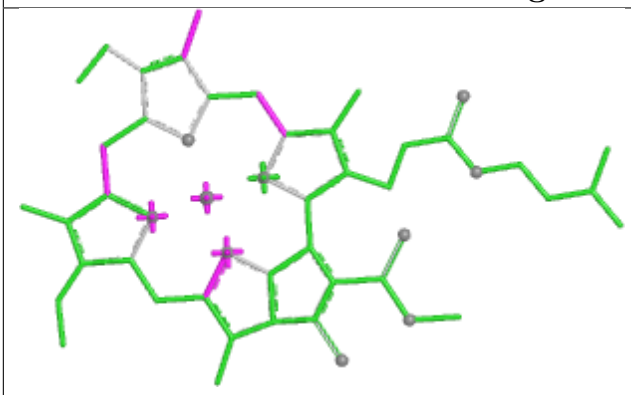


Torsions



Rings

Ligand CLA 9 610



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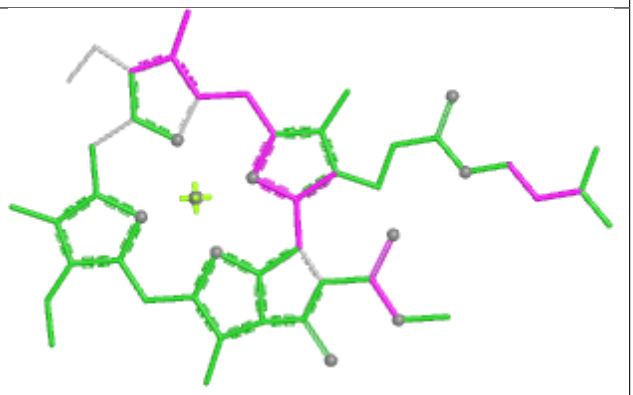
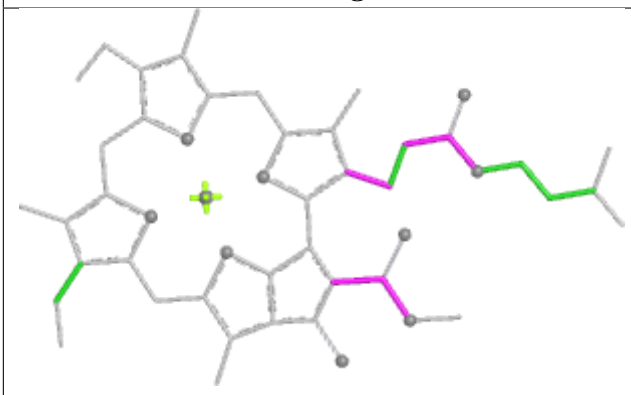
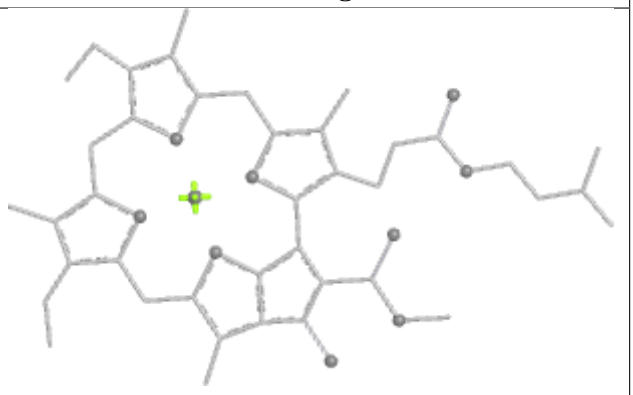


Bond angles



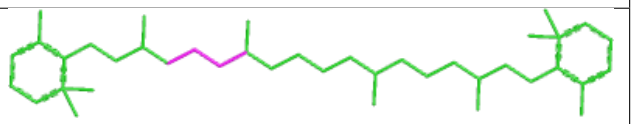
Torsions



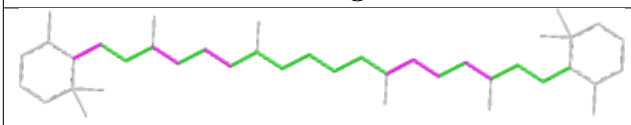
Rings

Ligand BCR H 205

Bond lengths



Bond angles



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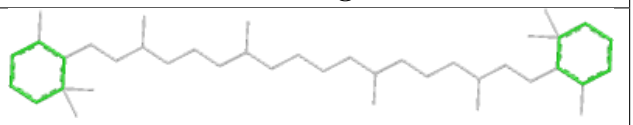
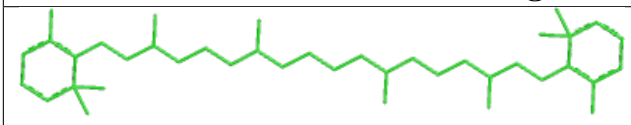
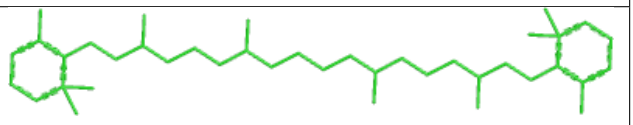


Rings

Ligand BCR 3 417

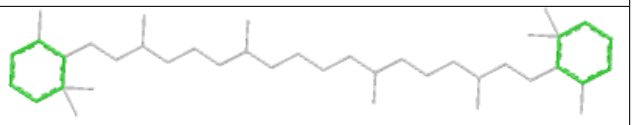


Bond lengths



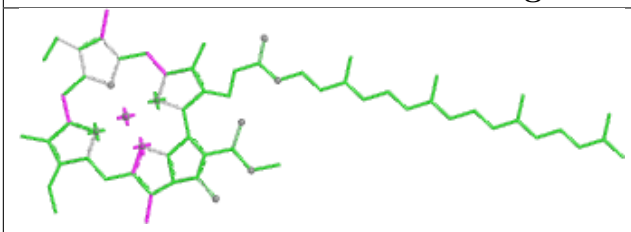
Bond angles

Torsions

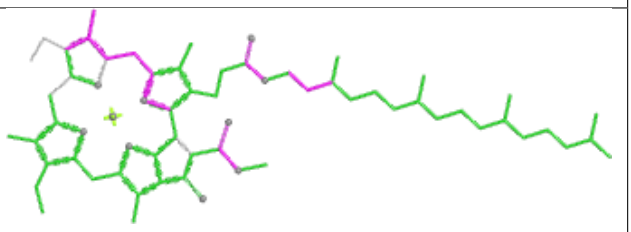


Rings

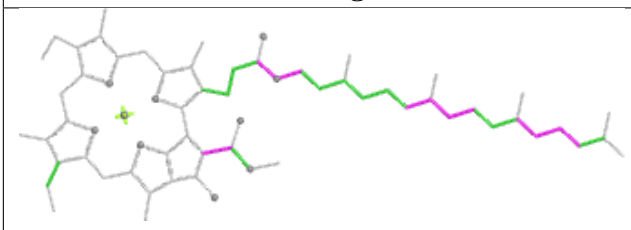
Ligand CLA B 831



Bond lengths



Bond angles



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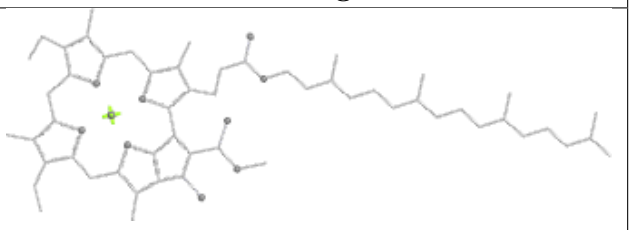
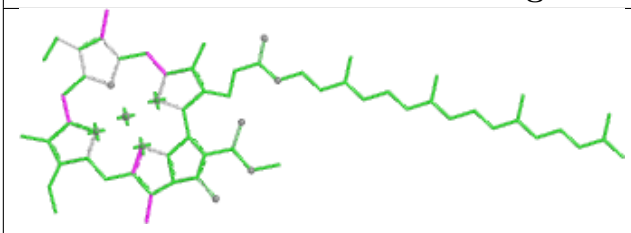
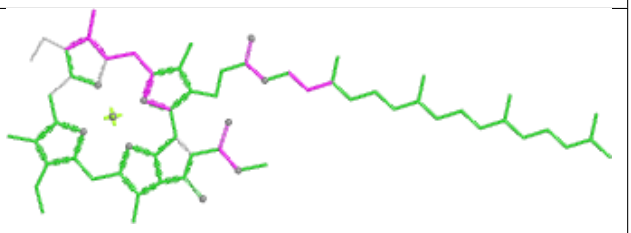


Rings

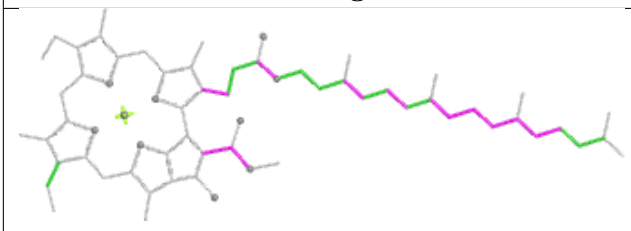
Ligand CLA L 302



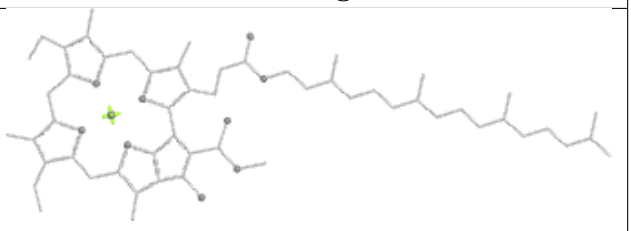
Bond lengths



Bond angles

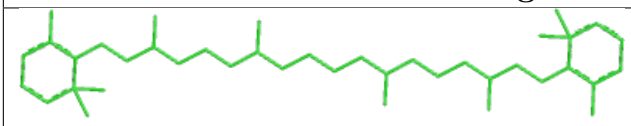


Torsions

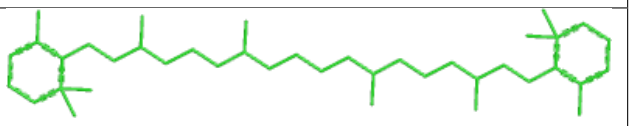


Rings

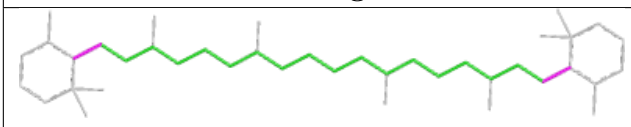
Ligand BCR J 4003



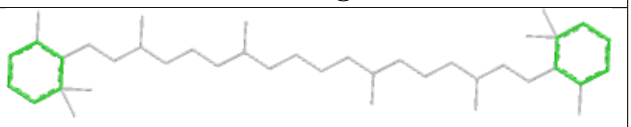
Bond lengths



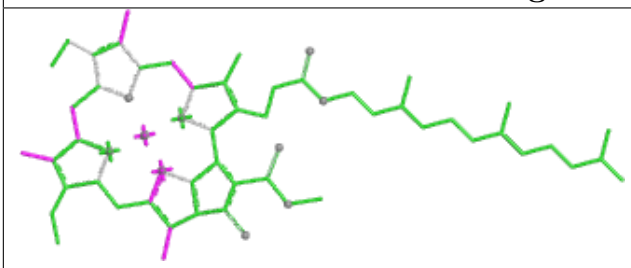
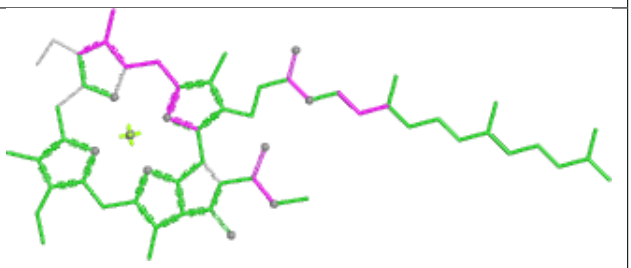
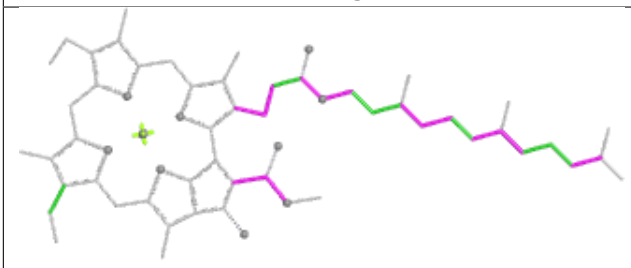
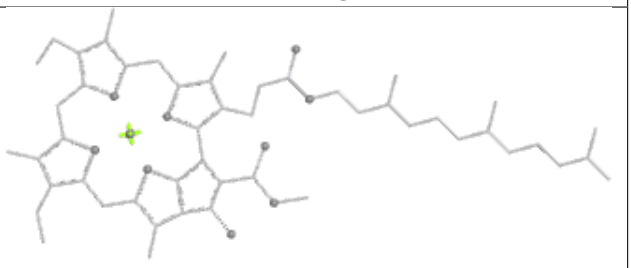
Bond angles

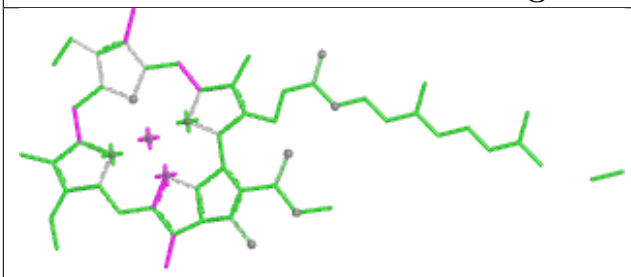
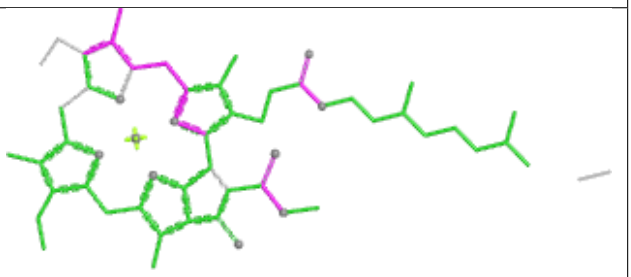
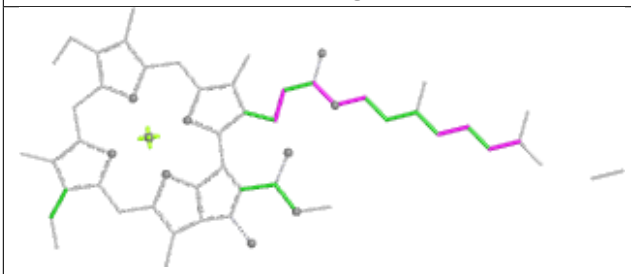
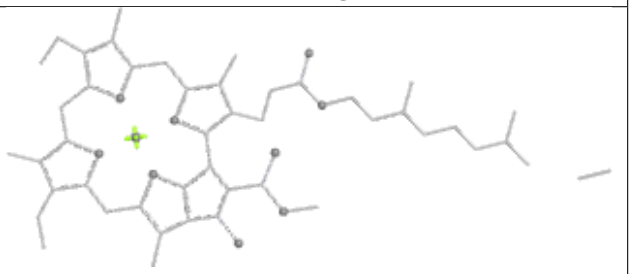


Torsions

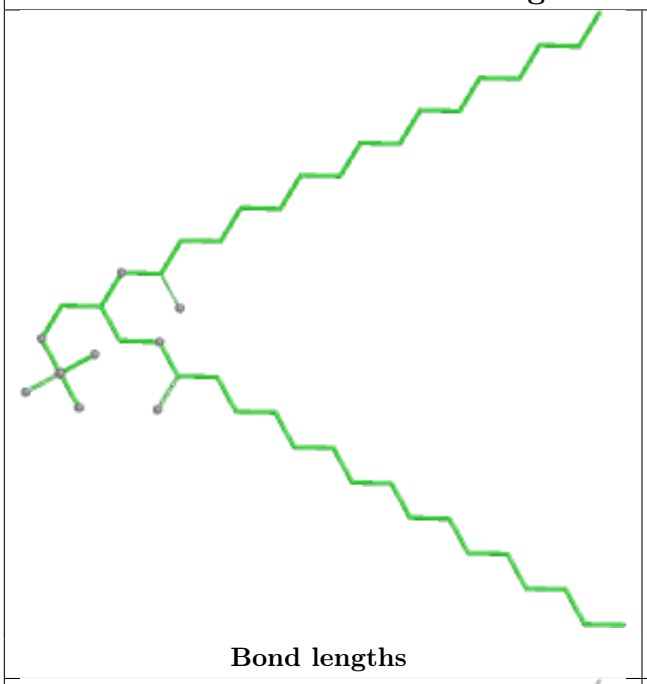


Rings

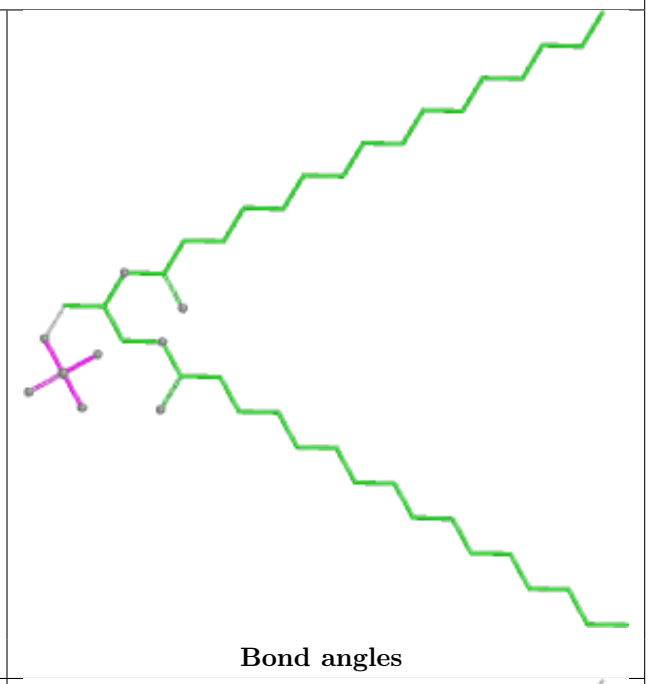
Ligand CLA 9 602	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand CLA 3 411	
 Bond lengths	 Bond angles
 Torsions	 Rings

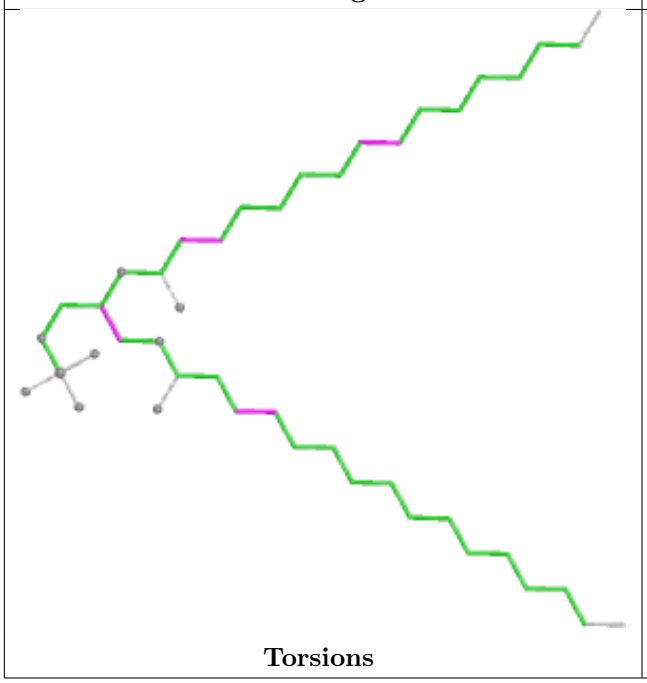
Ligand LHG 2 618



Bond lengths



Bond angles



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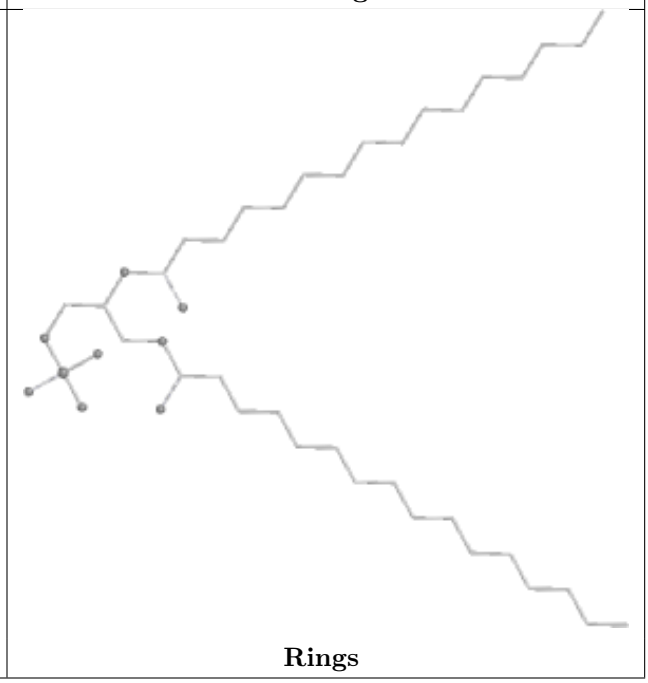
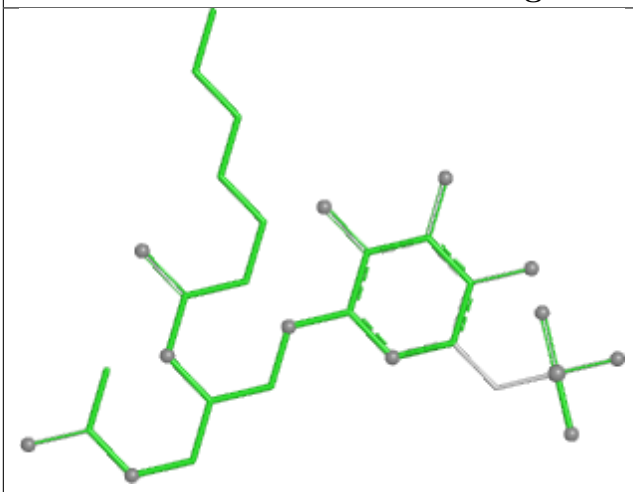


Rings

Ligand SQD B 851



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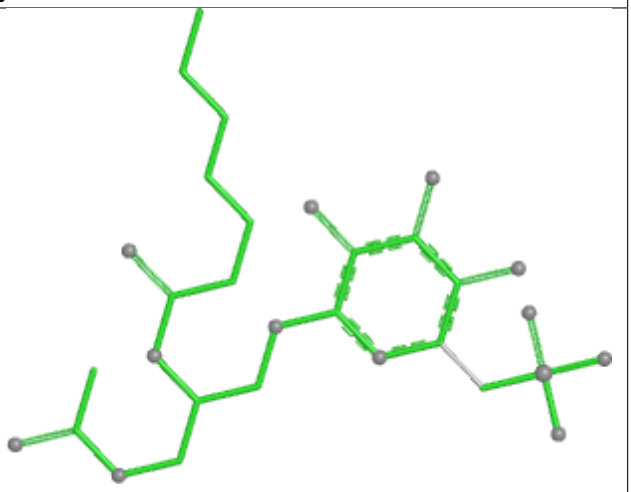
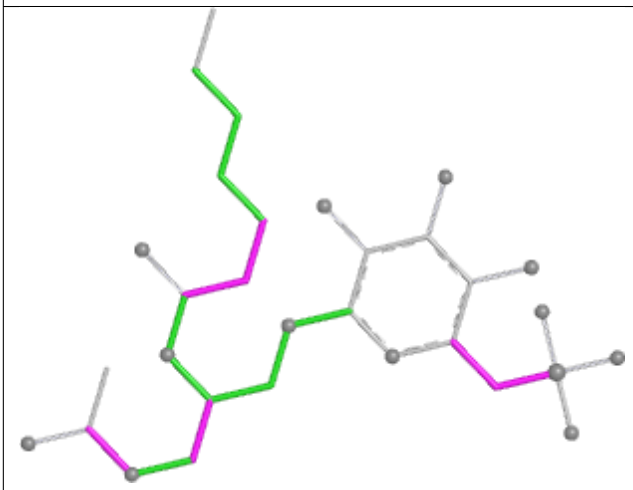


Bond angles



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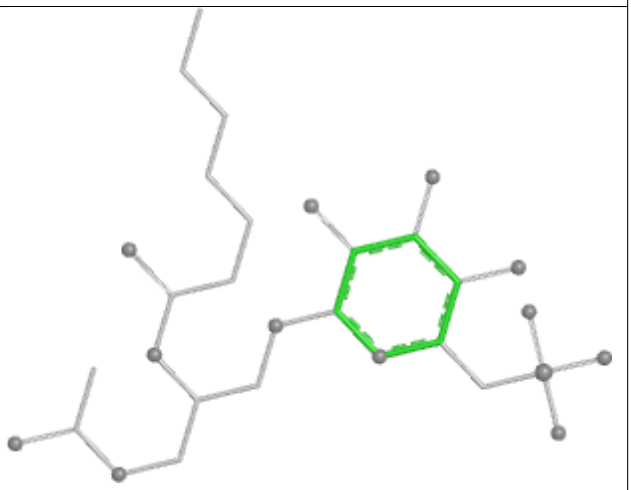
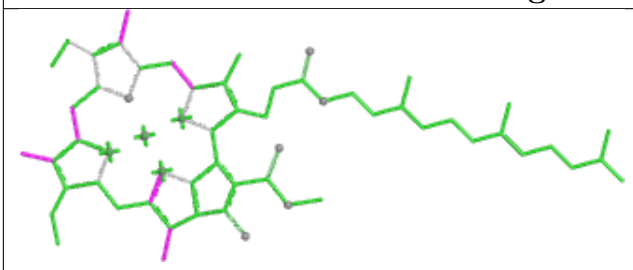


Rings

Ligand CLA 9 608



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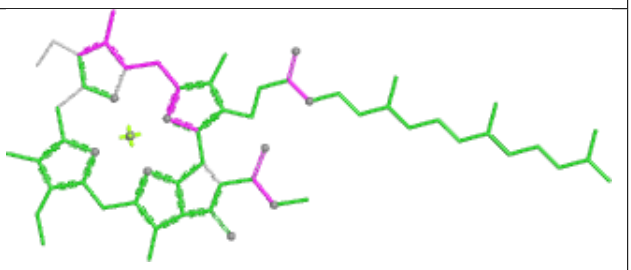
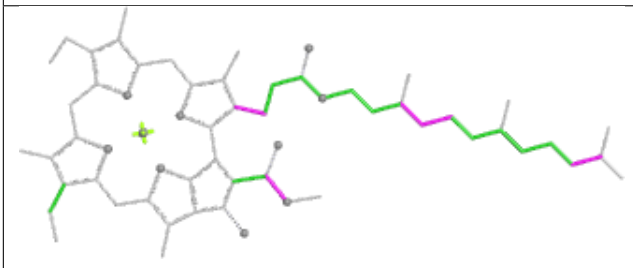


Bond angles



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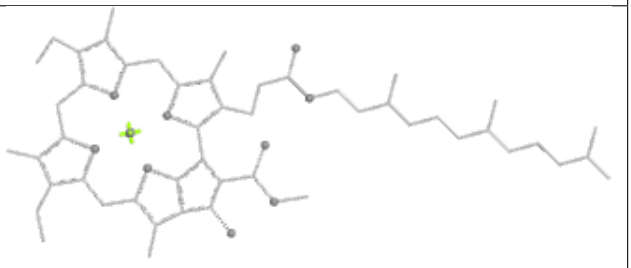
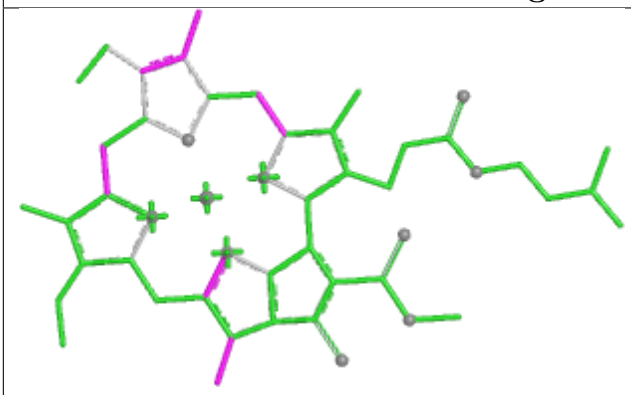


Rings

Ligand CLA 1 604



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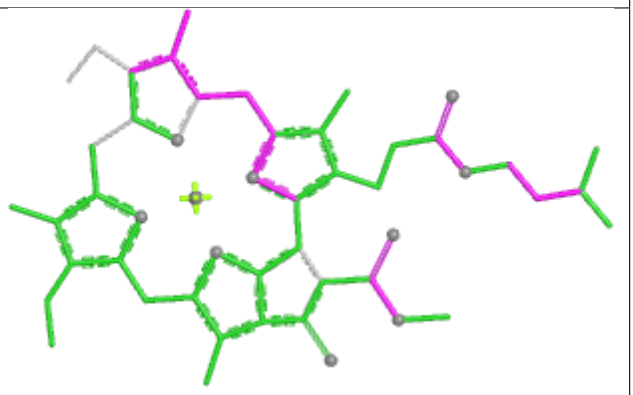
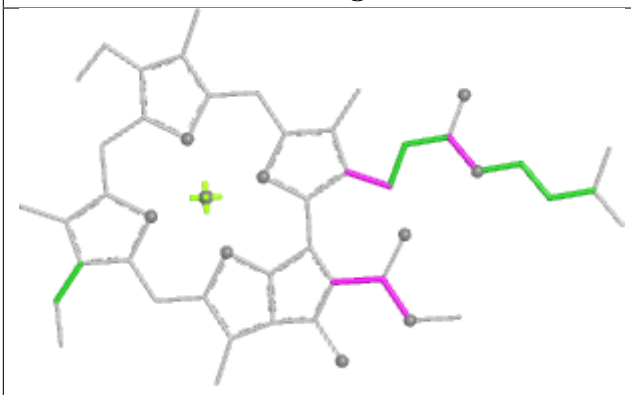


Bond angles



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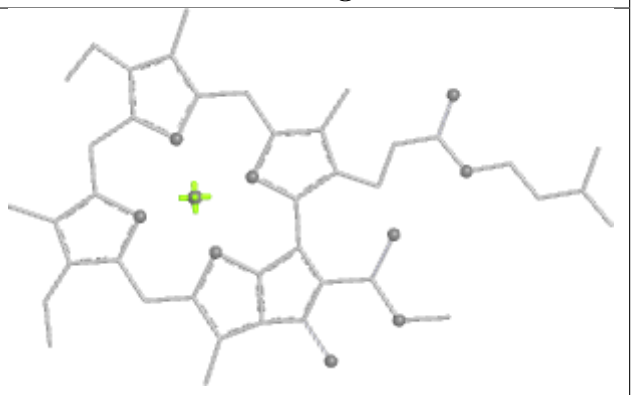
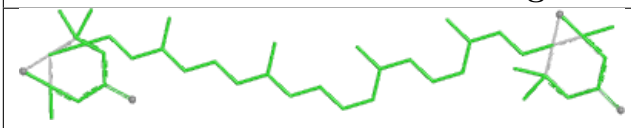
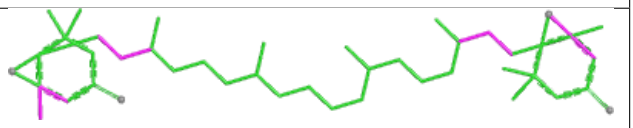


Rings

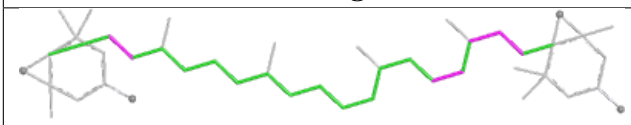
Ligand XAT 9 615



Bond lengths



Bond angles



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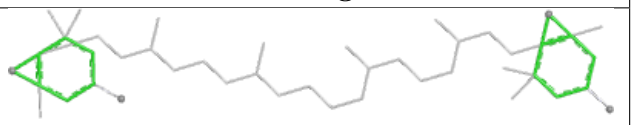
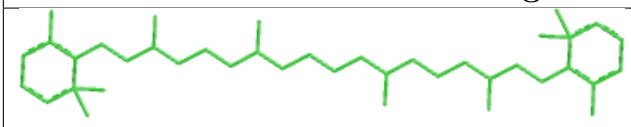


Rings

Ligand BCR B 846



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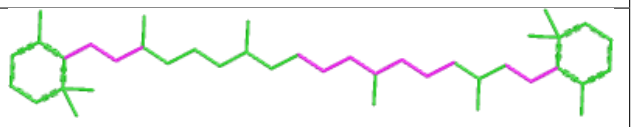
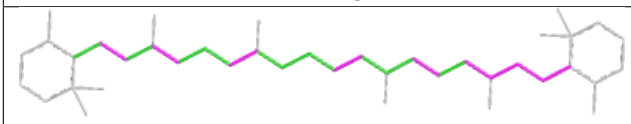


Bond angles



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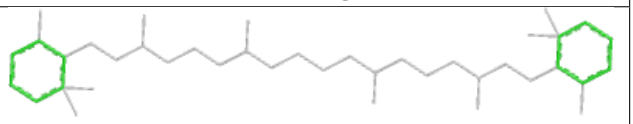
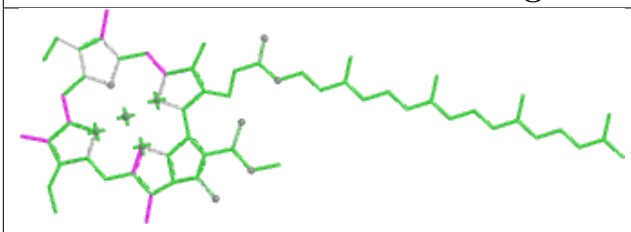
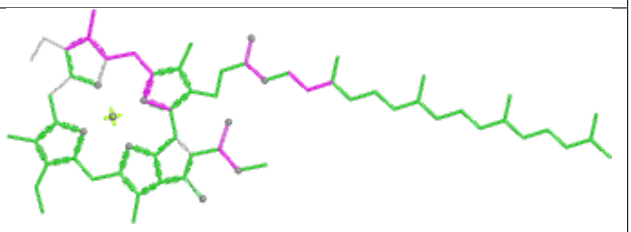


Rings

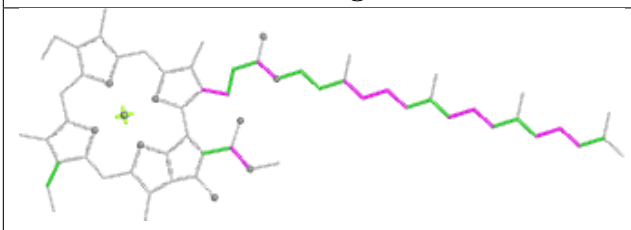
Ligand CLA B 823



Bond lengths



Bond angles



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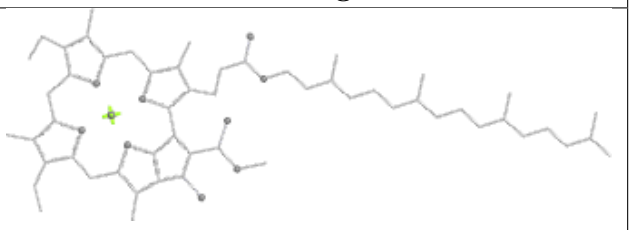
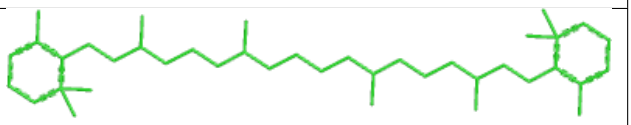


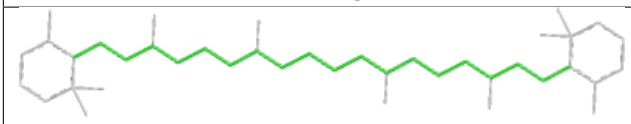
Rings

Ligand BCR F 5004

Bond lengths



Bond angles



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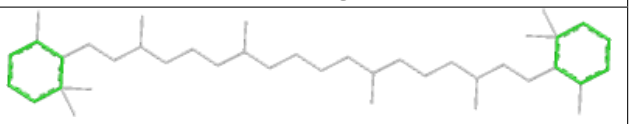
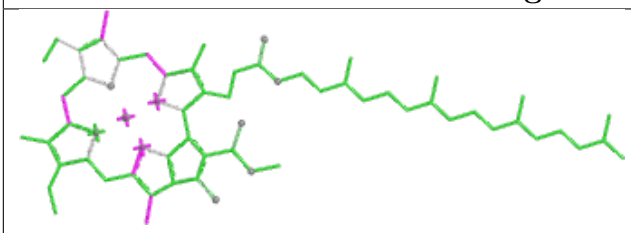
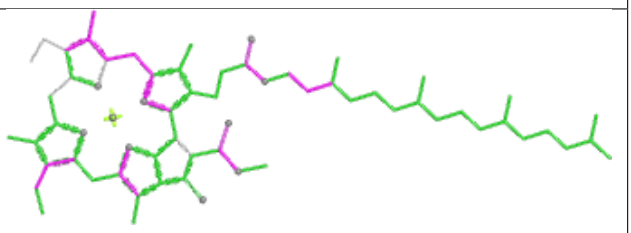


Rings

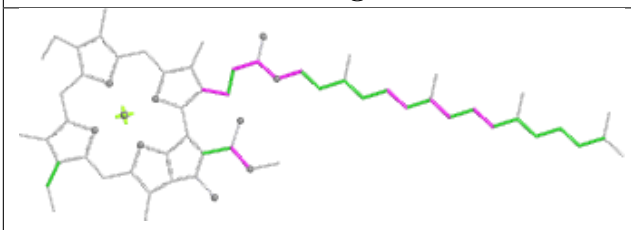
Ligand CLA B 830



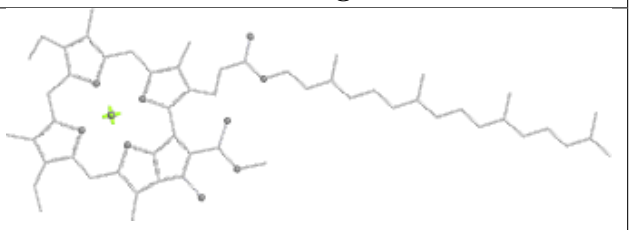
Bond lengths



Bond angles

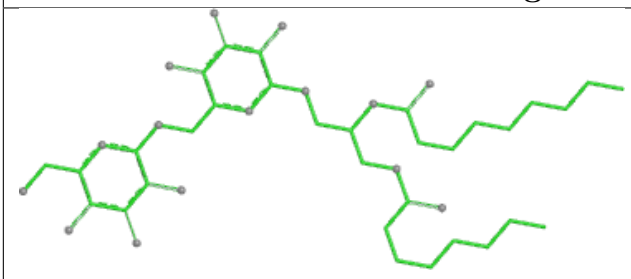


Torsions

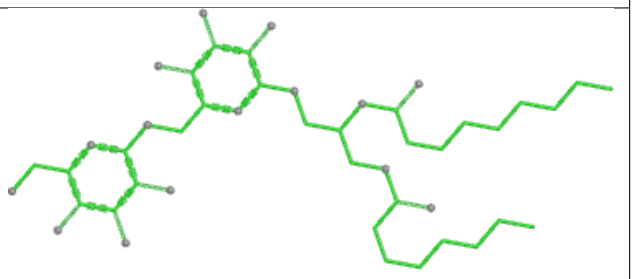


Rings

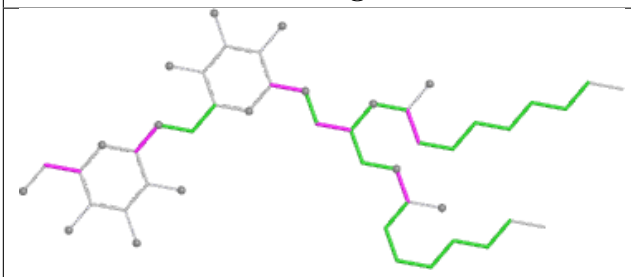
Ligand DGD 7 321



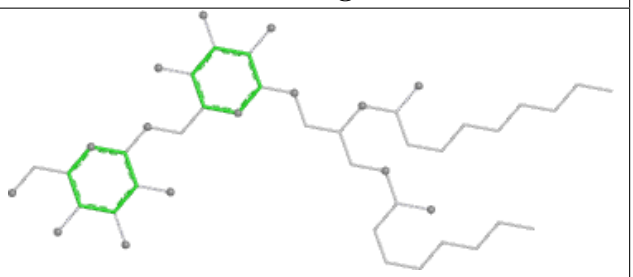
Bond lengths



Bond angles

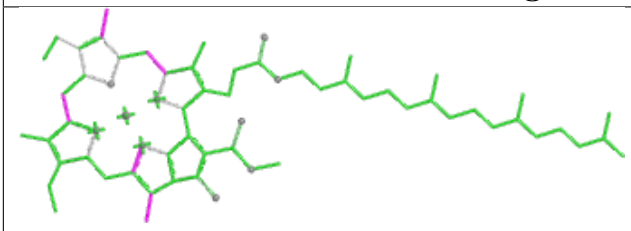


Torsions

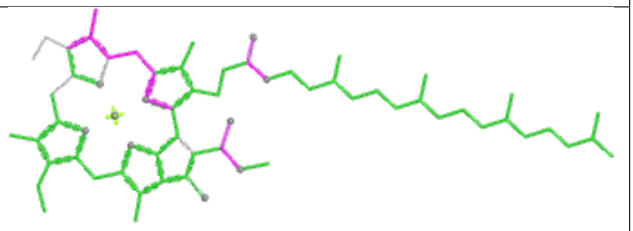


Rings

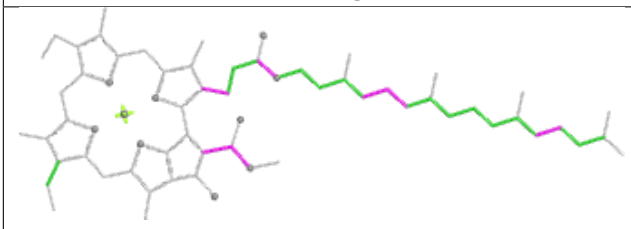
Ligand CLA A 811



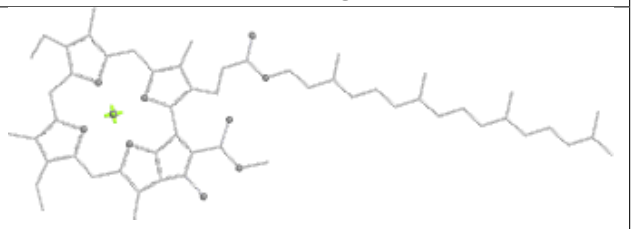
Bond lengths



Bond angles

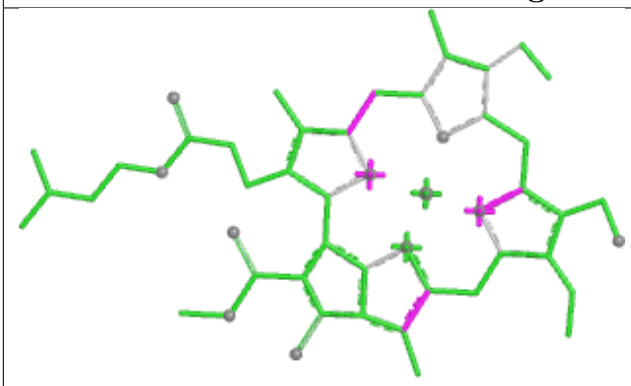


Torsions



Rings

Ligand CHL 8 306



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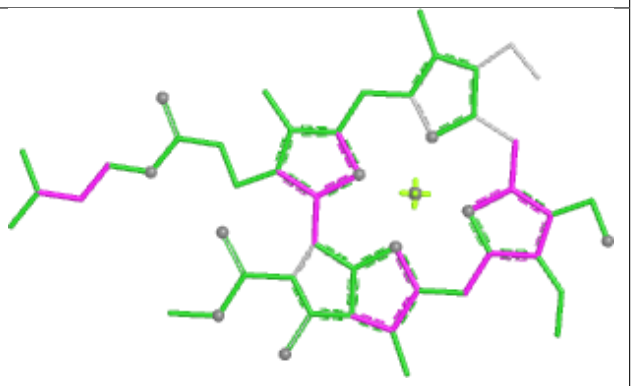
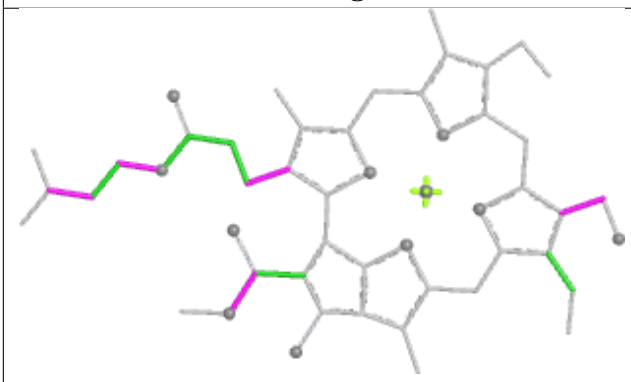
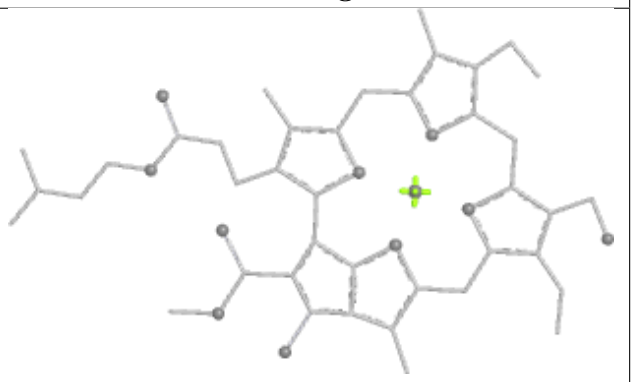


Bond angles

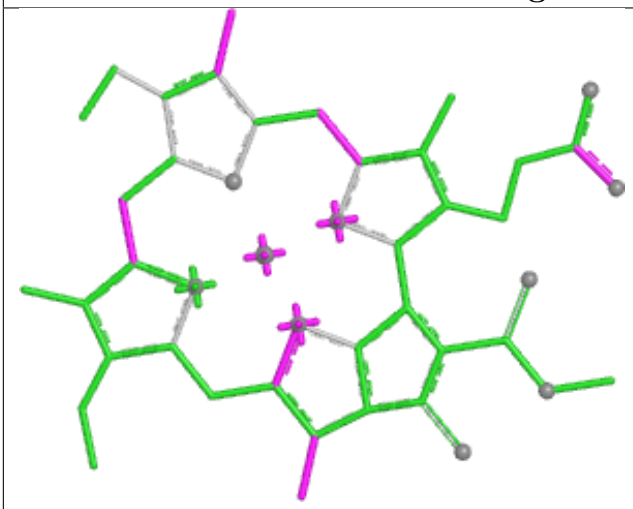


Torsions

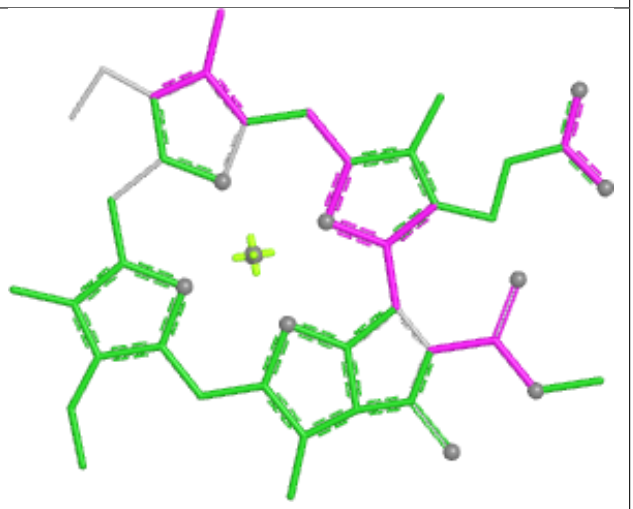


Rings

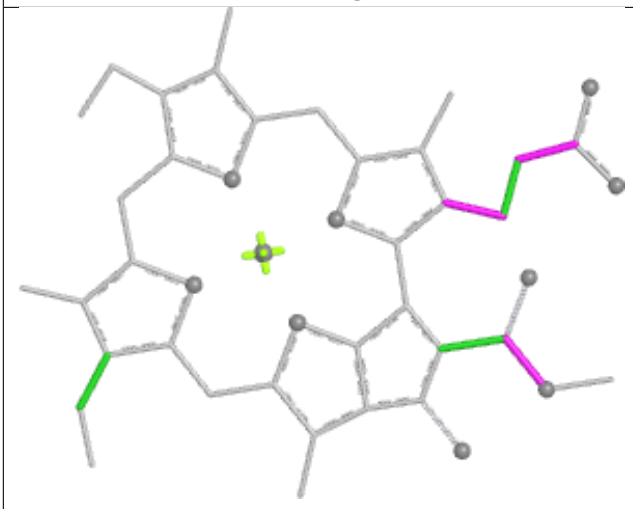
Ligand CLA 9 612



Bond lengths



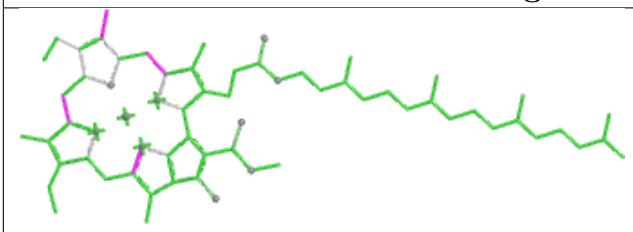
Bond angles



Torsions

Rings

Ligand CLA A 807



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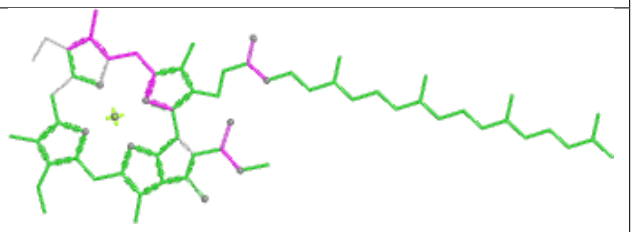
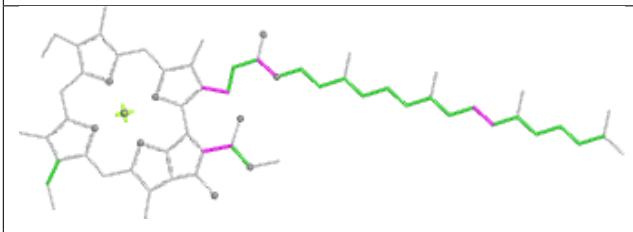
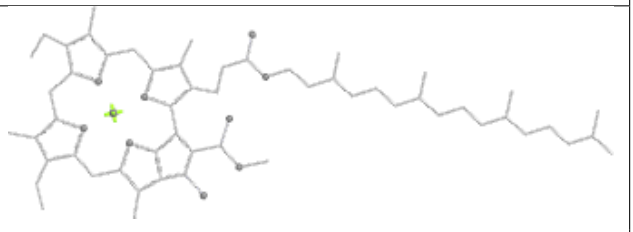


Bond angles

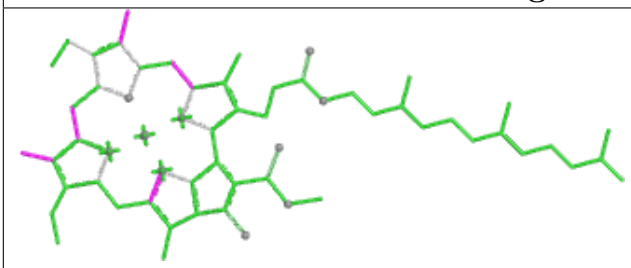


Torsions

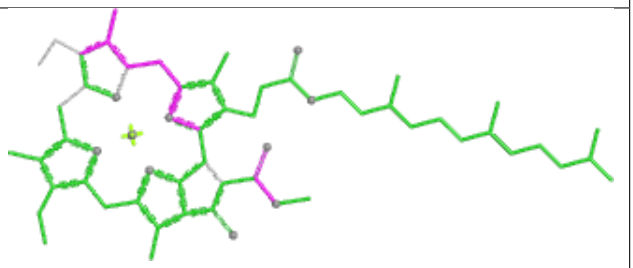


Rings

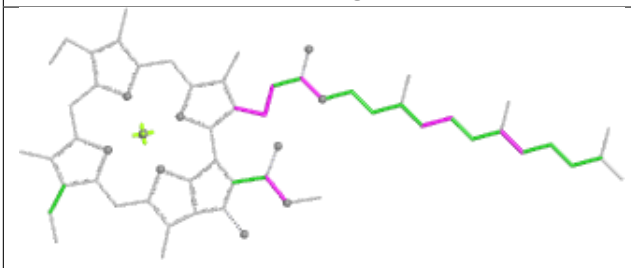
Ligand CLA 2 611



Bond lengths



Bond angles



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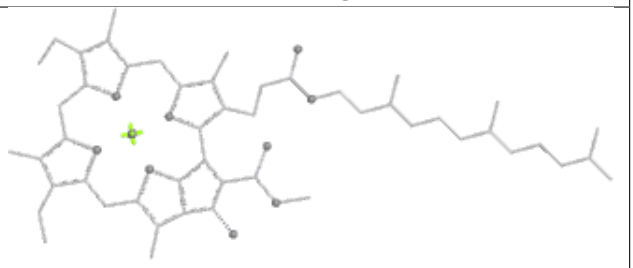
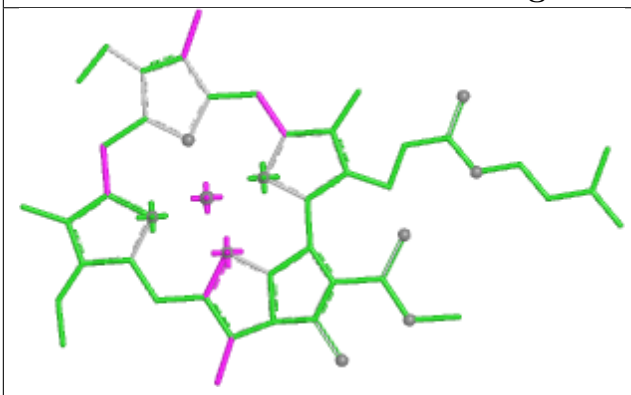
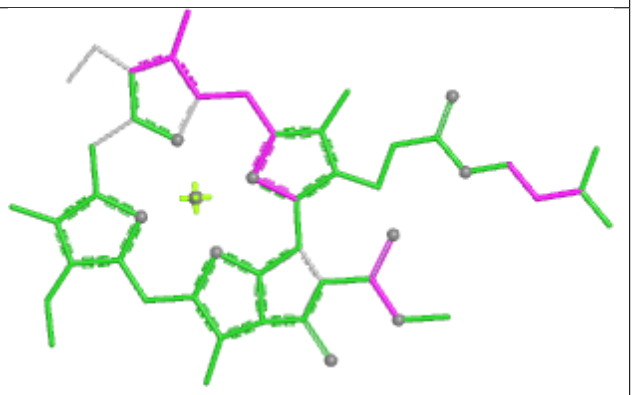


Rings

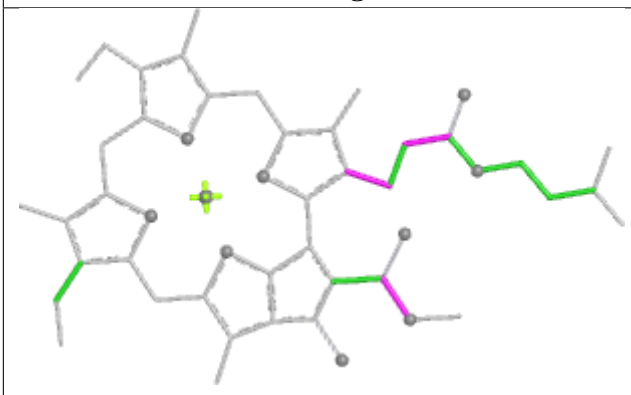
Ligand CLA 9 604



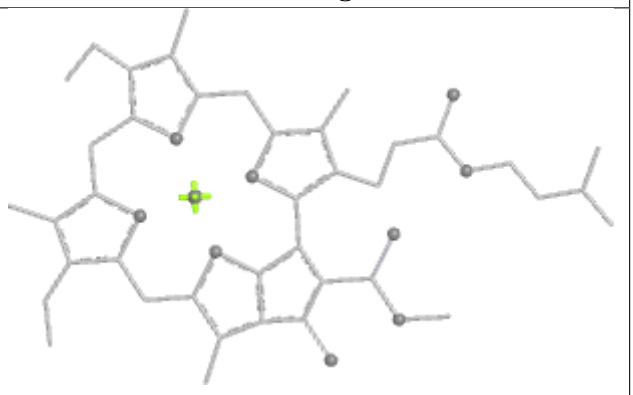
Bond lengths



Bond angles

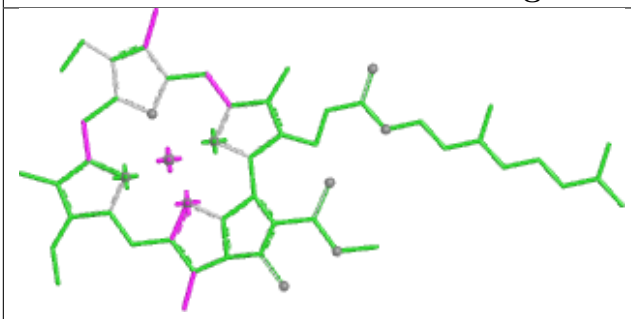


Torsions



Rings

Ligand CLA A 837



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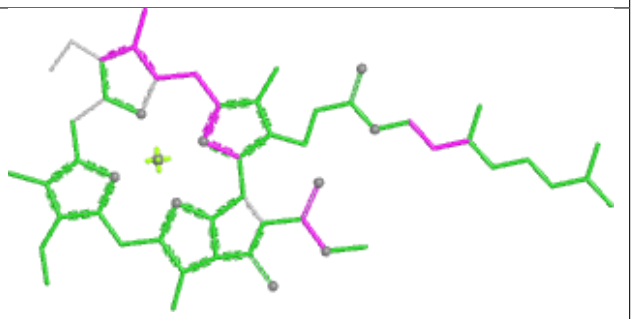
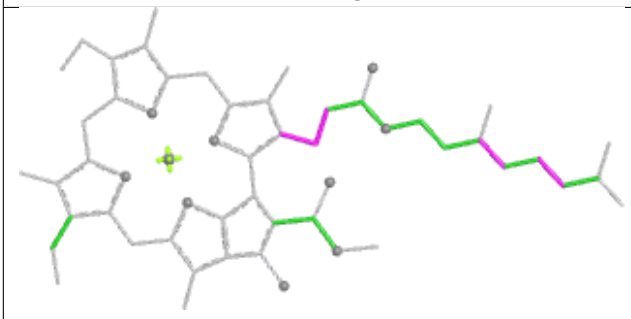
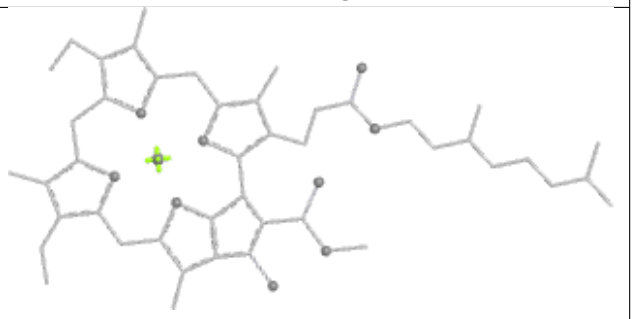


Bond angles

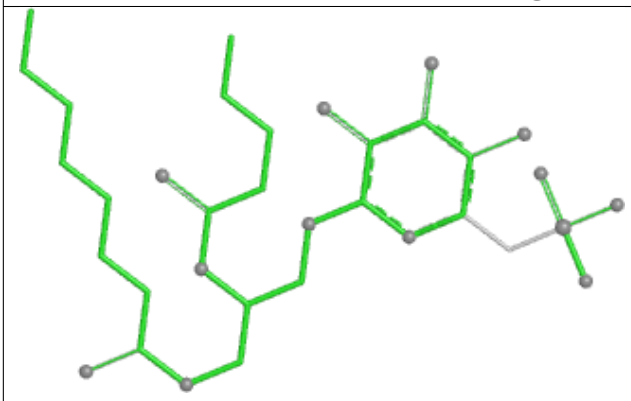


Torsions



Rings

Ligand SQD 3 421



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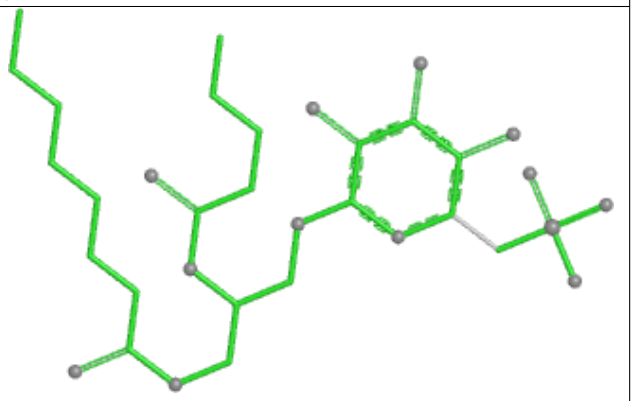
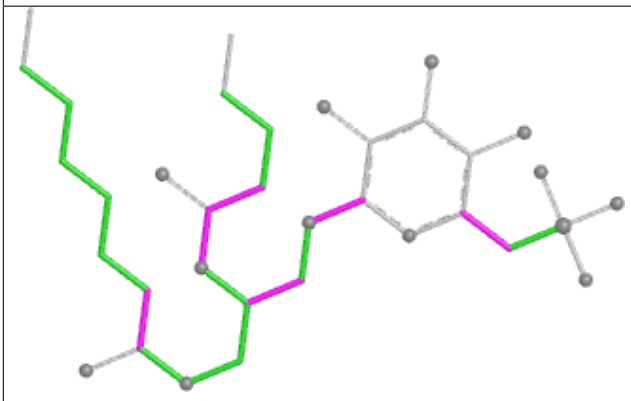
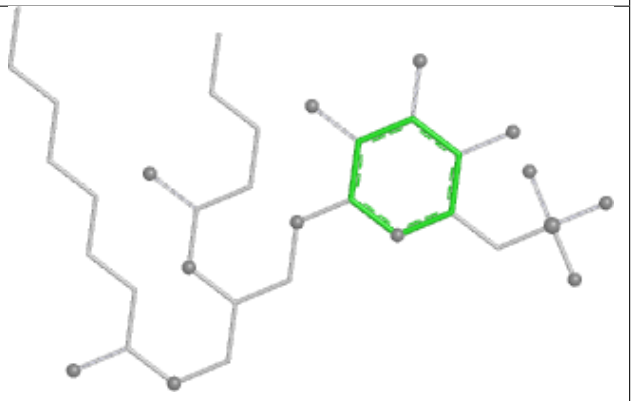


Bond angles

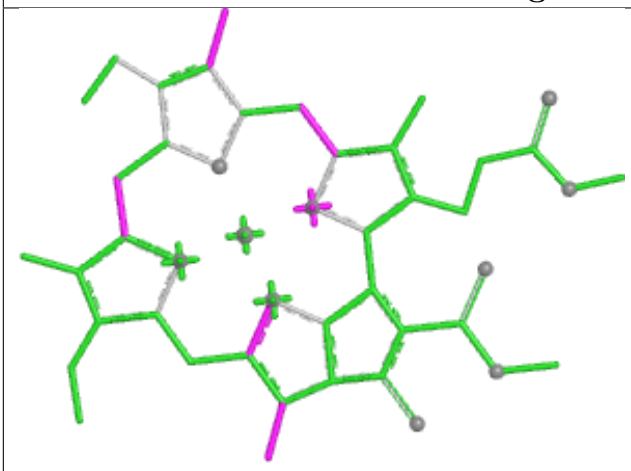


Torsions



Rings

Ligand CLA 9 601



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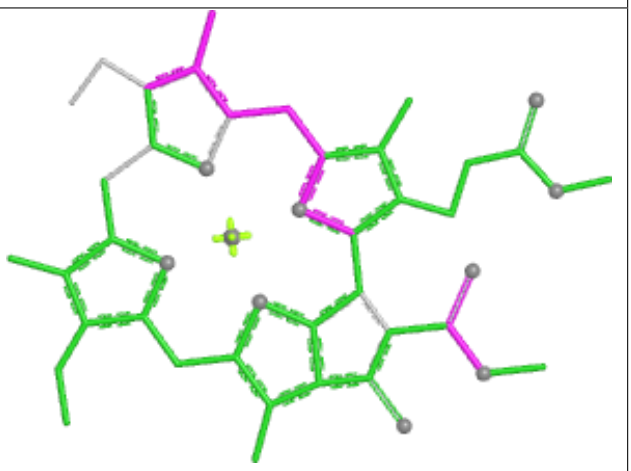
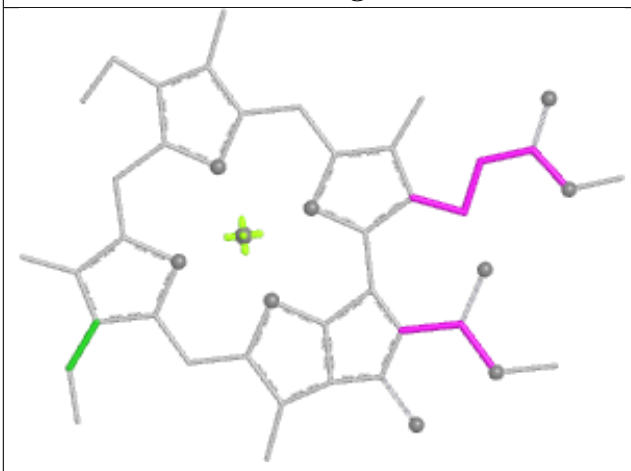


Bond angles



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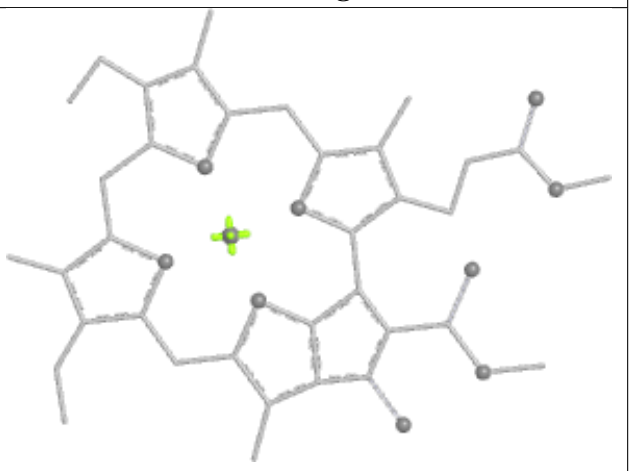
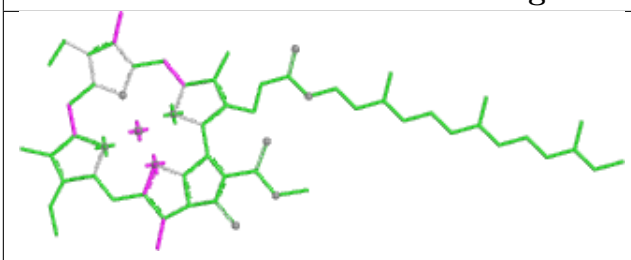


Rings

Ligand CLA 1 602



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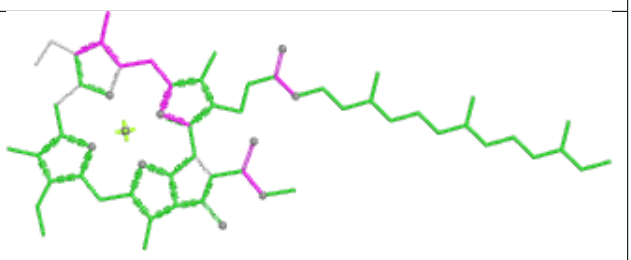
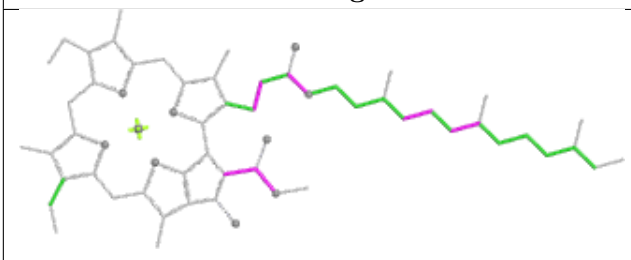


Bond angles



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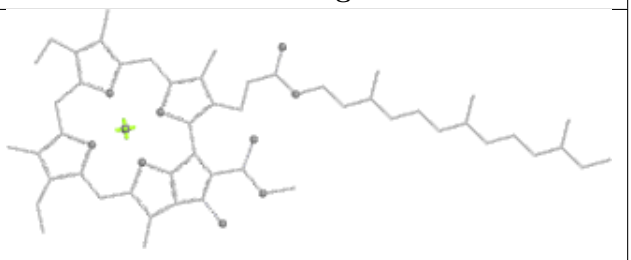
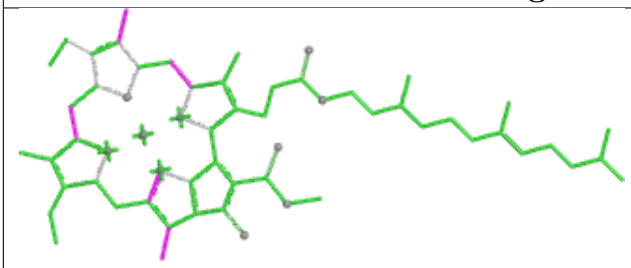


Rings

Ligand CLA 9 609



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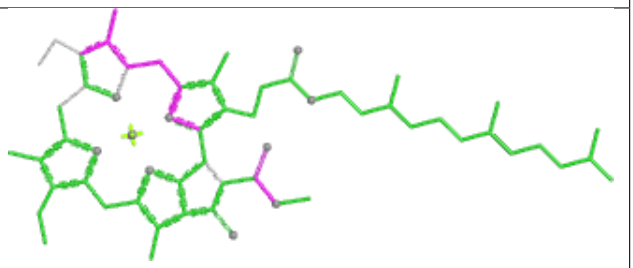
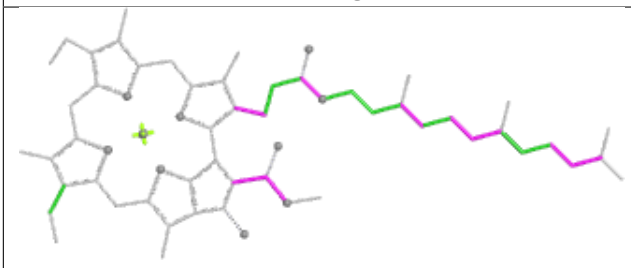


Bond angles



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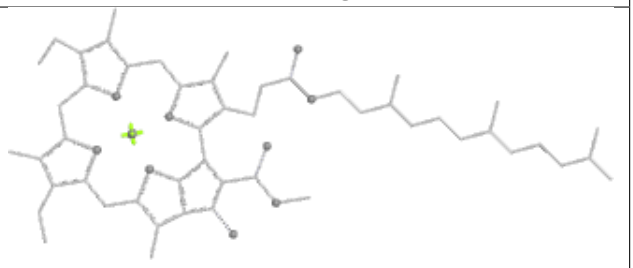
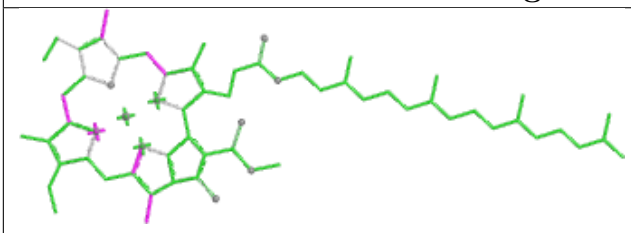


Rings

Ligand CLA A 841



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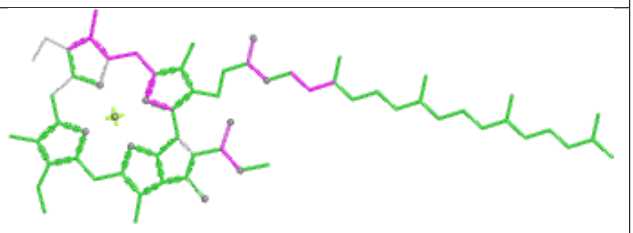
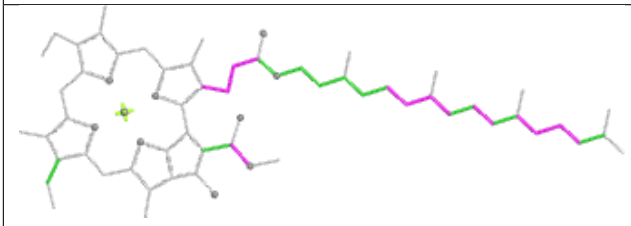


Bond angles



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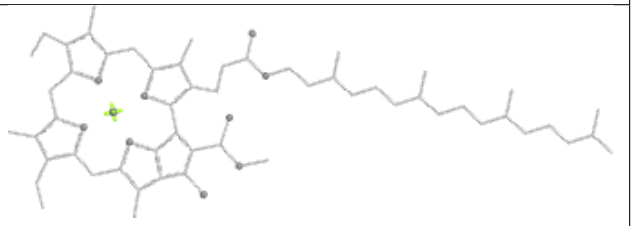
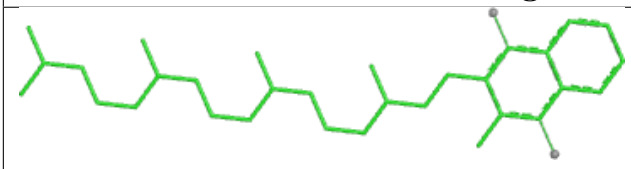
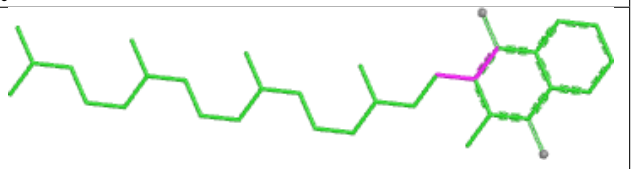


Rings

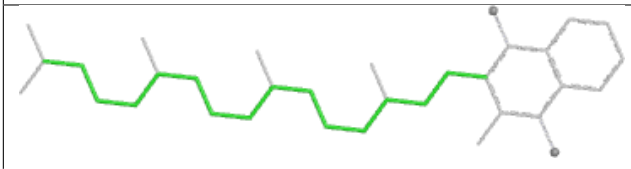
Ligand PQN A 845



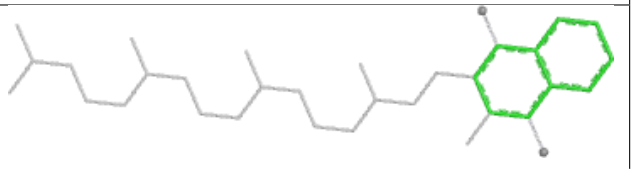
Bond lengths



Bond angles

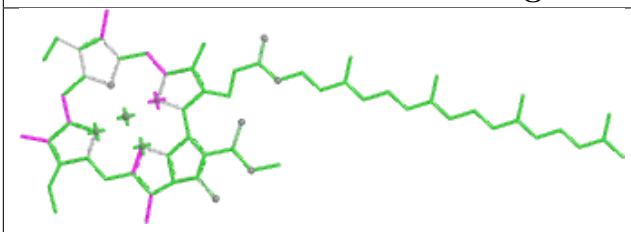


Torsions

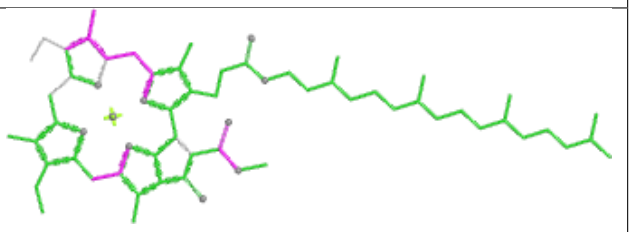


Rings

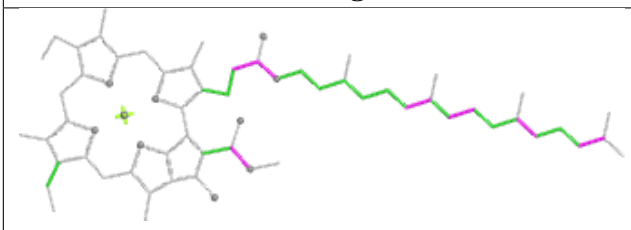
Ligand CLA B 804



Bond lengths



Bond angles



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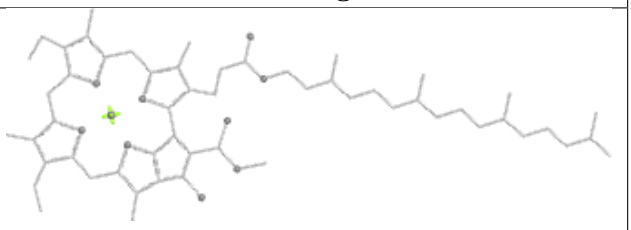
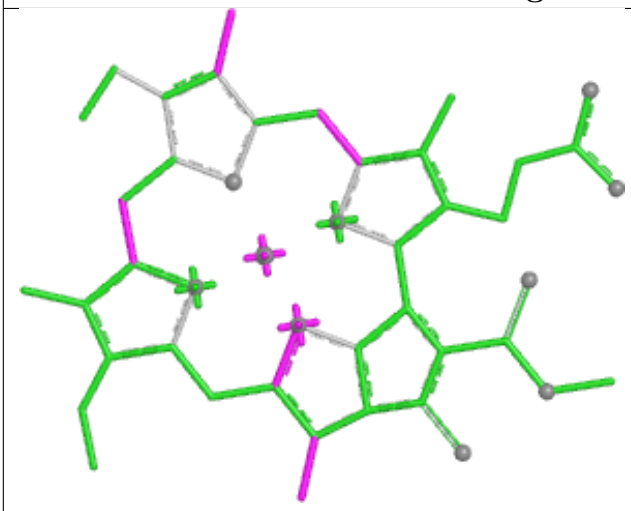


Rings

Ligand CLA L 301



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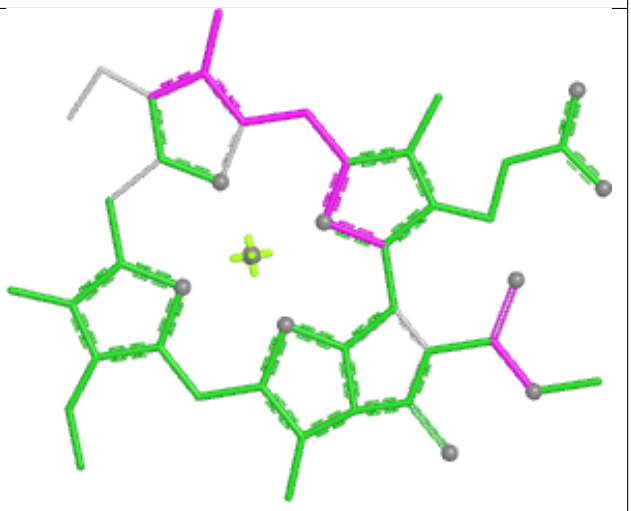
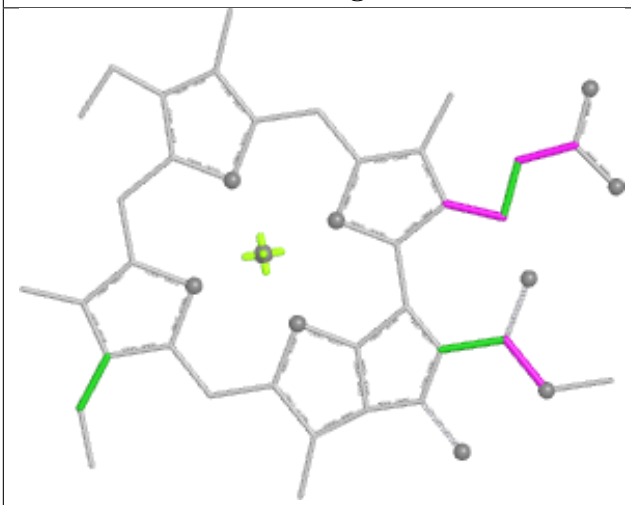


Bond angles



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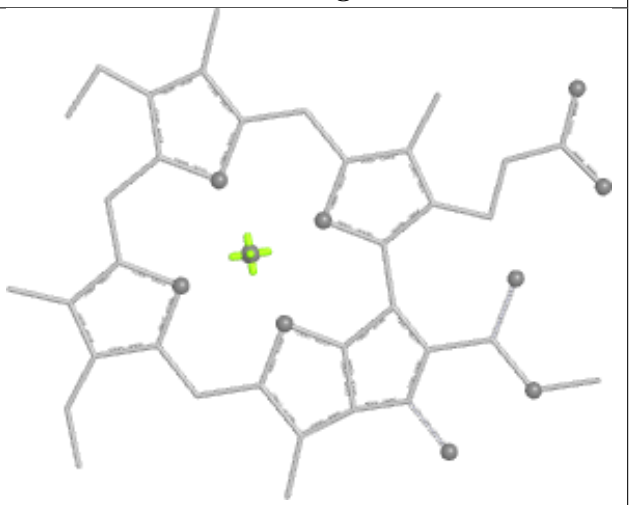
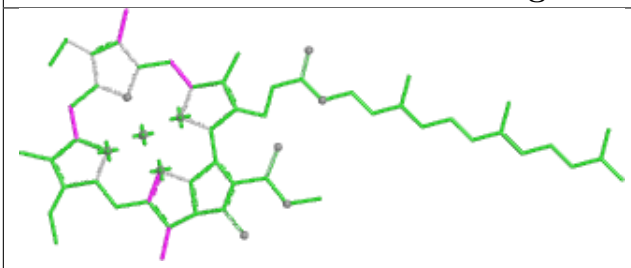


Rings

Ligand CLA 8 302



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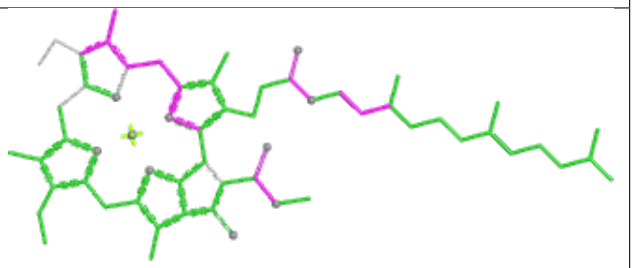
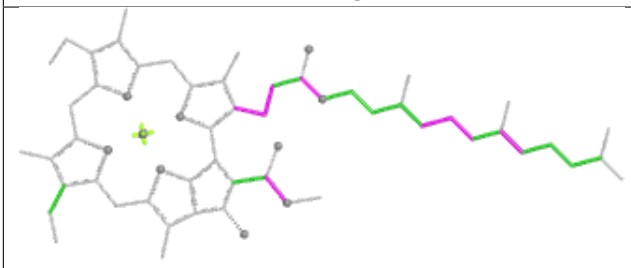


Bond angles



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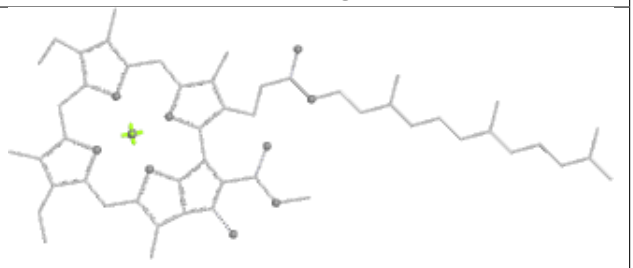
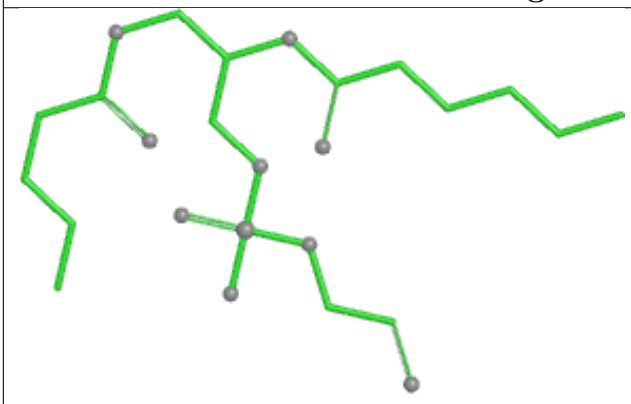
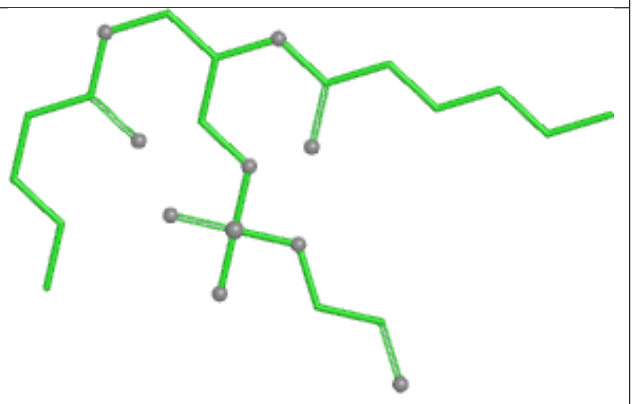


Rings

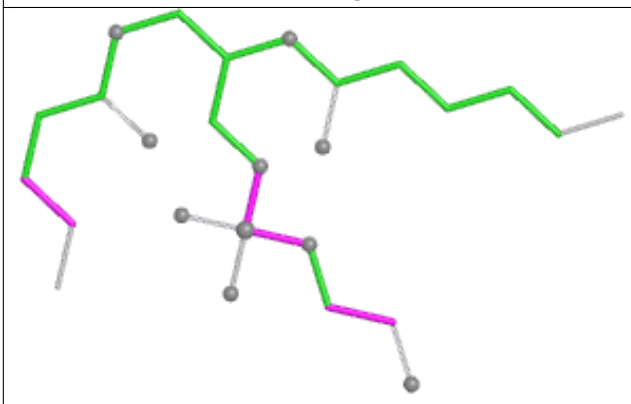
Ligand PTY 3 422



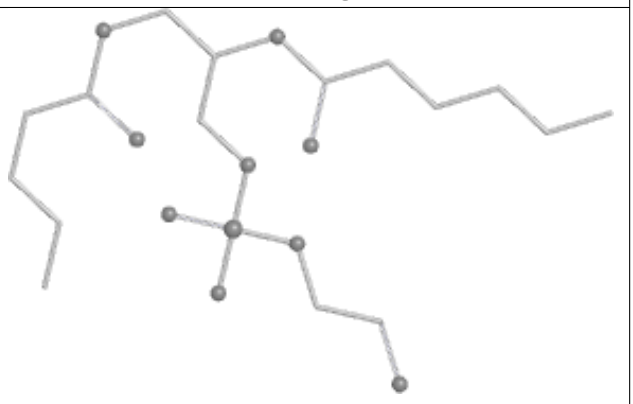
Bond lengths



Bond angles

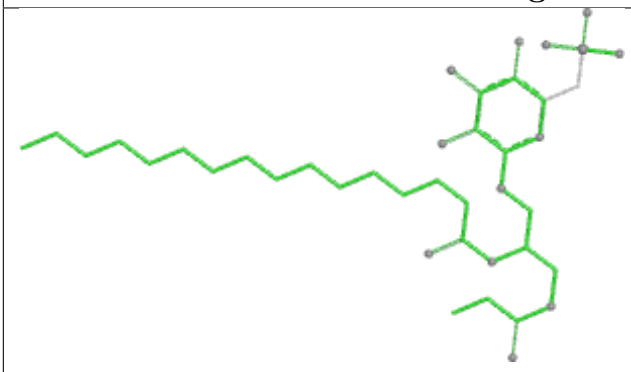


Torsions

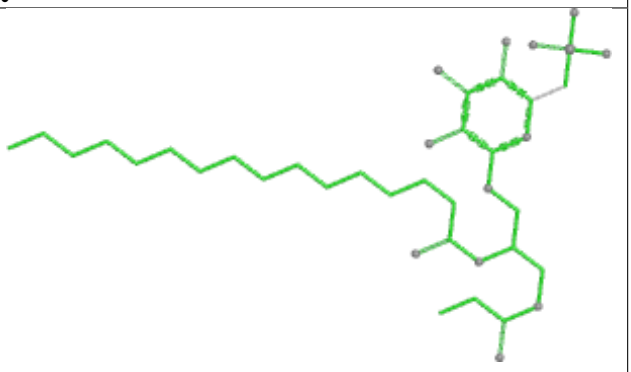


Rings

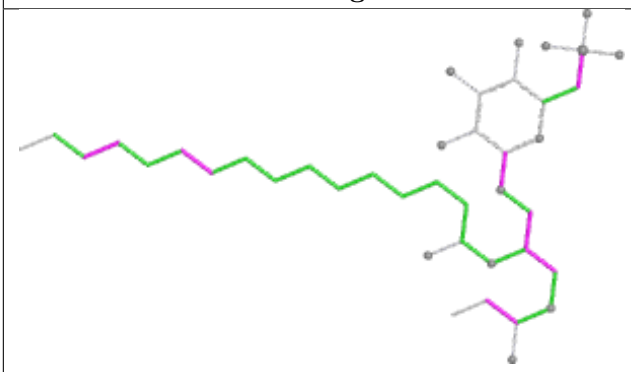
Ligand SQD 2 619



Bond lengths



Bond angles



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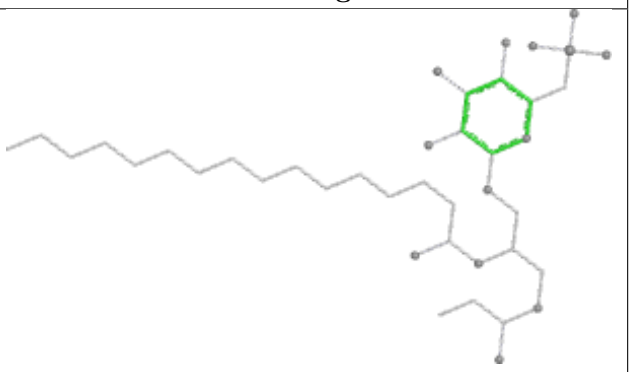
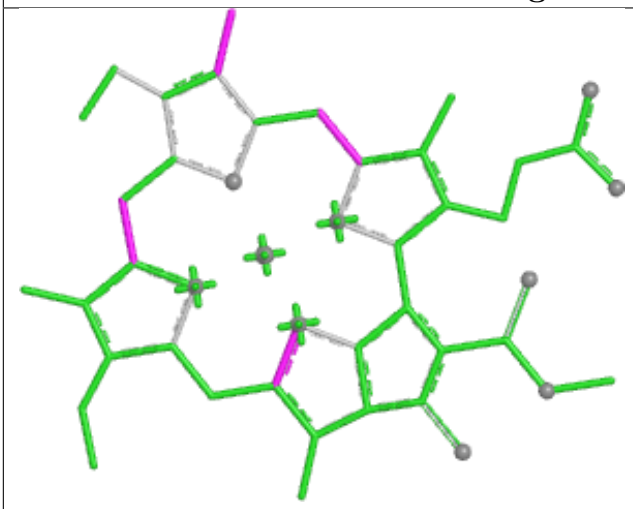


Rings

Ligand CLA 2 605



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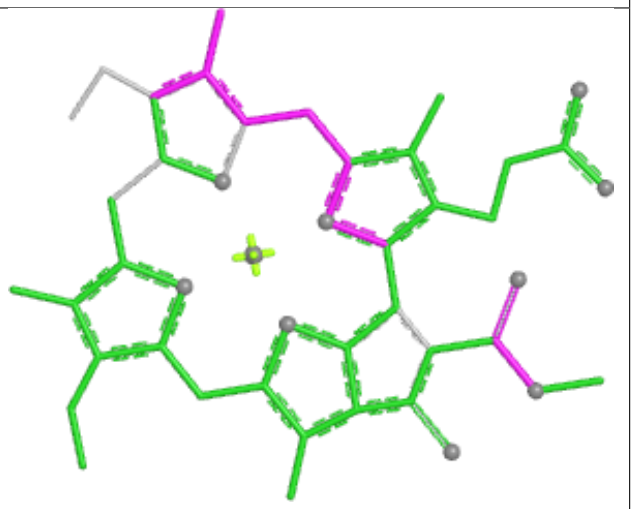
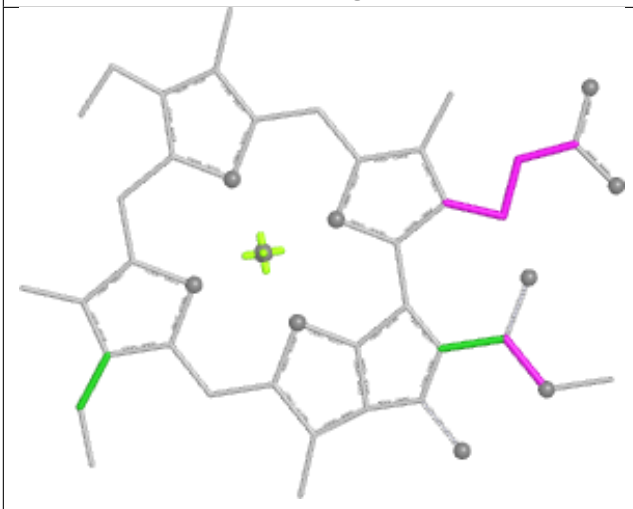


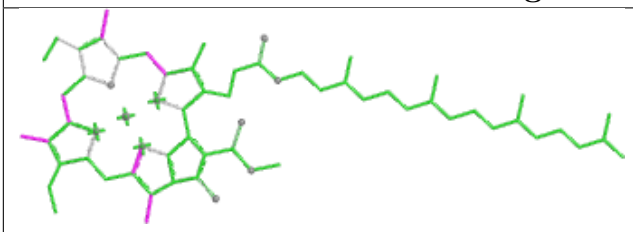
Bond angles



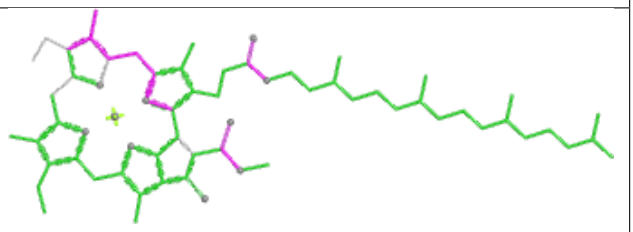
Torsions

Rings

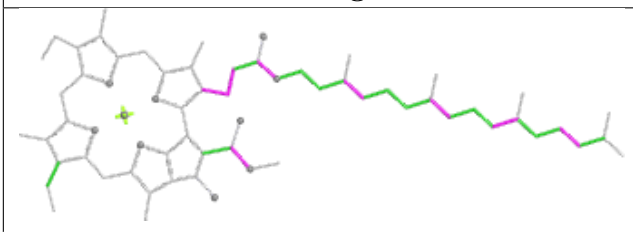
Ligand CLA B 815



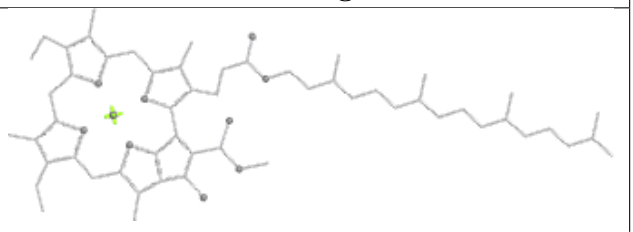
Bond lengths



Bond angles

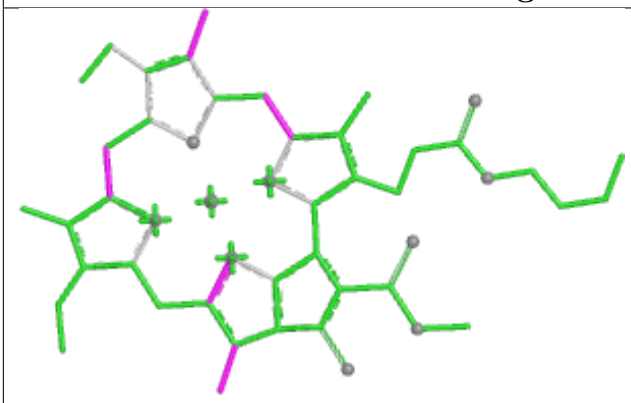


Torsions



Rings

Ligand CLA F 5007



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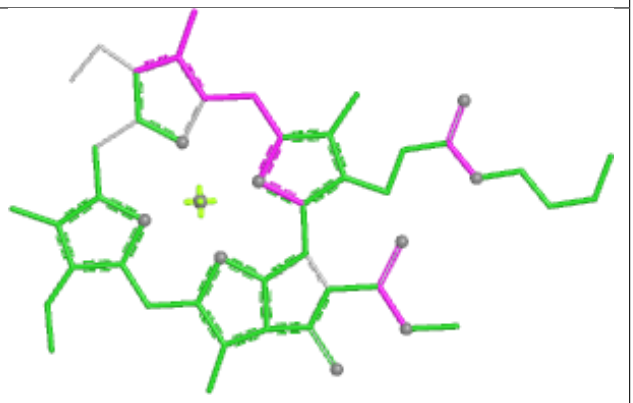

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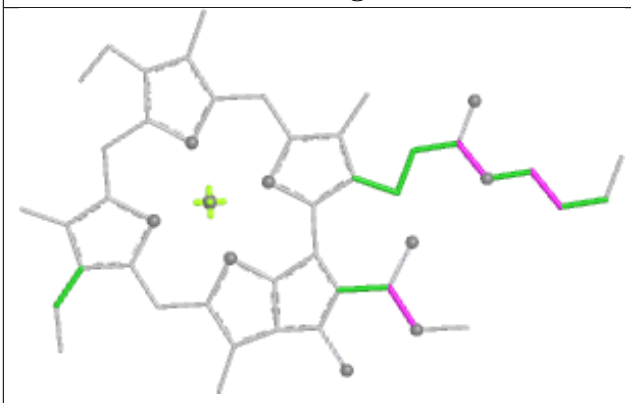
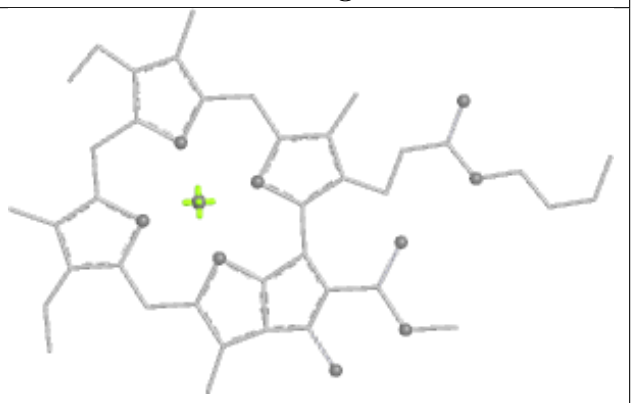
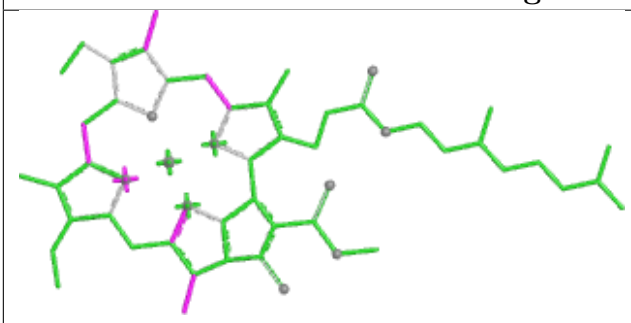


Torsions



Rings

Ligand CLA A 813



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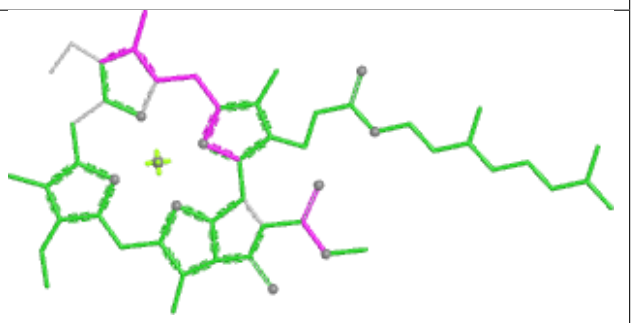
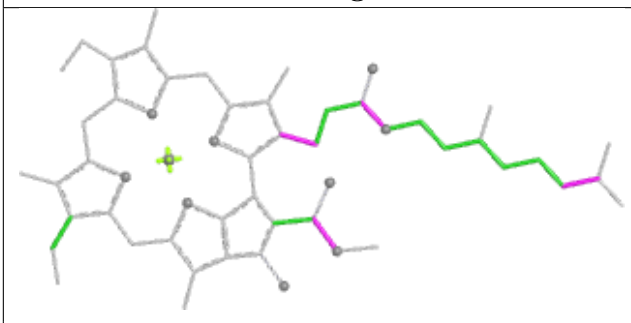
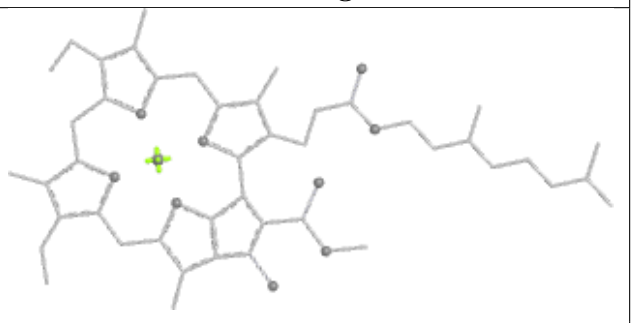


Bond angles

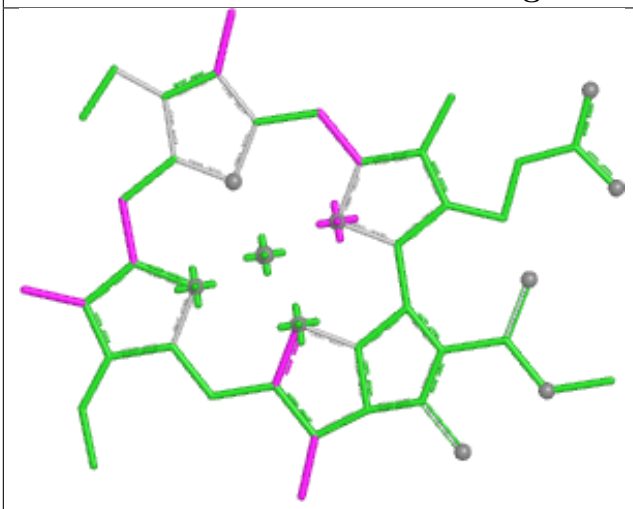


Torsions



Rings

Ligand CLA K 203



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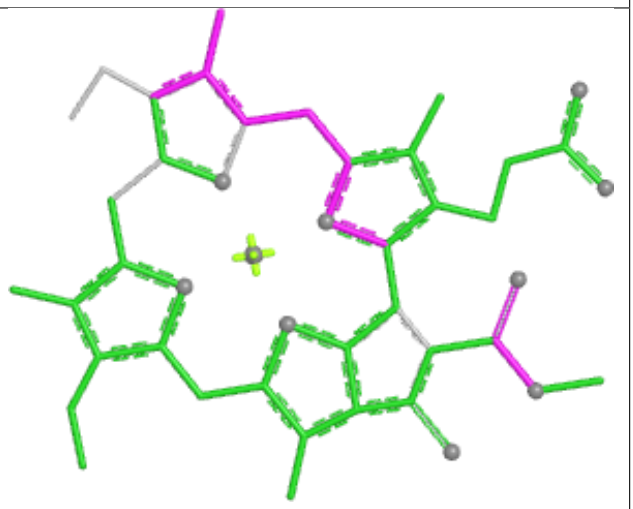
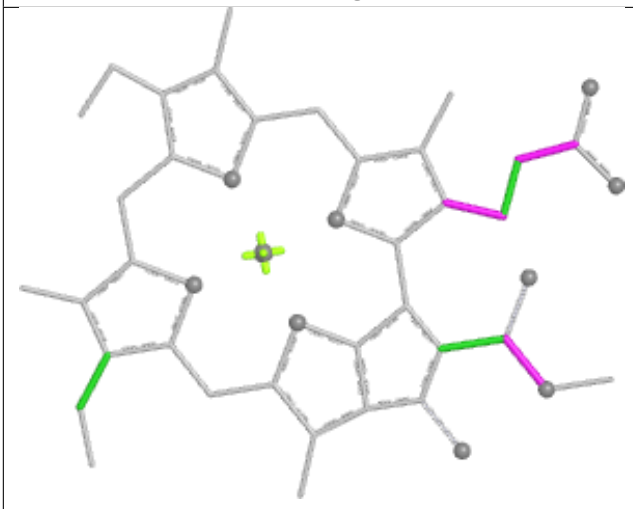


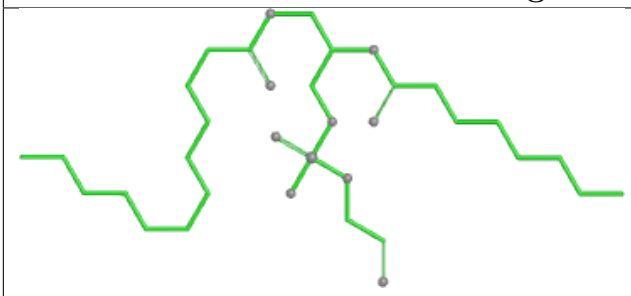
Bond angles



Torsions

Rings

Ligand PTY 1 623



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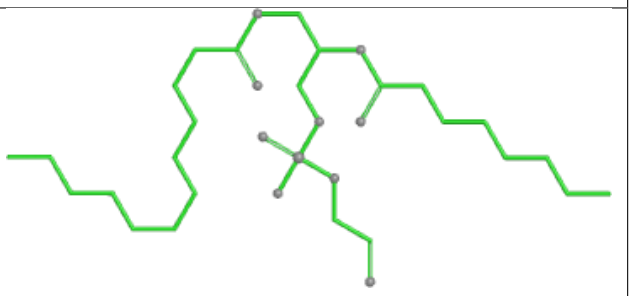

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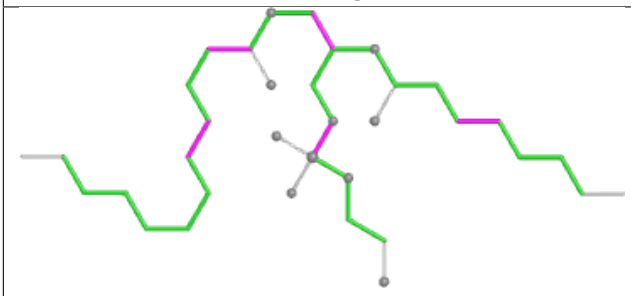

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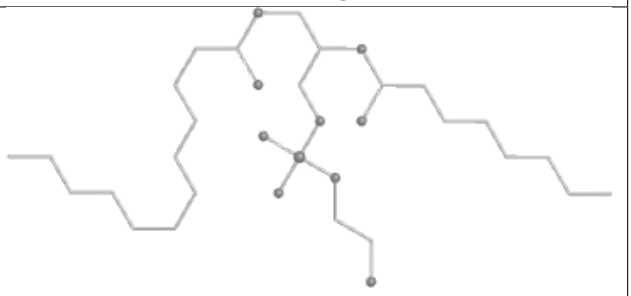
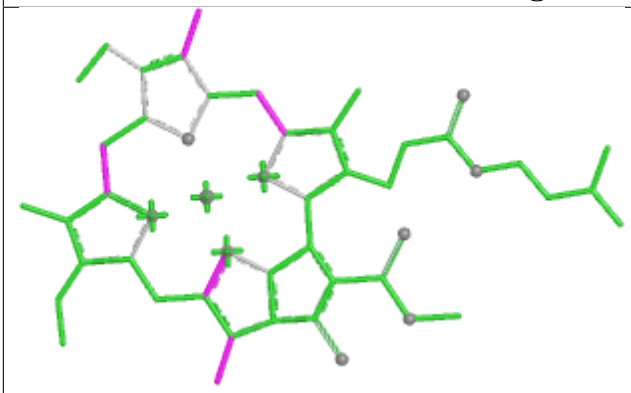


Rings

Ligand CLA 7 305



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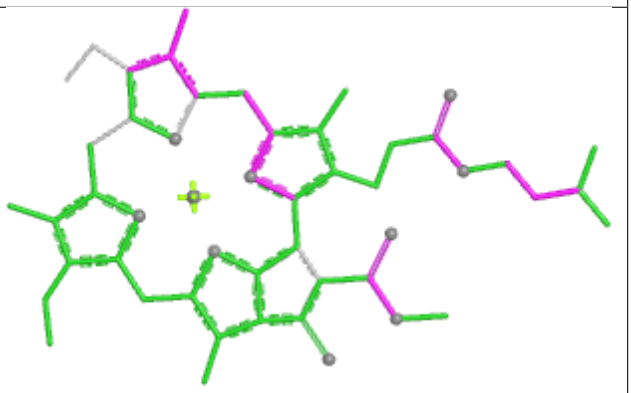
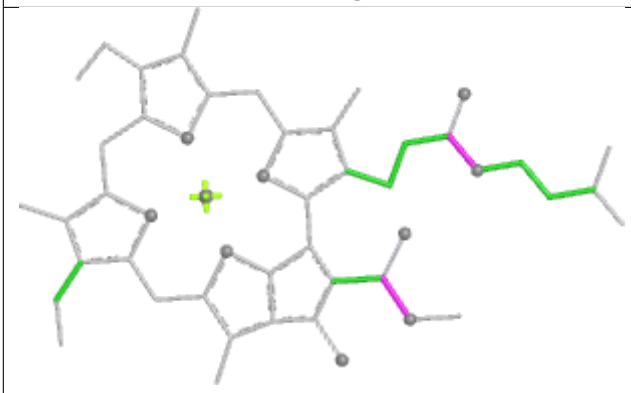


Bond angles



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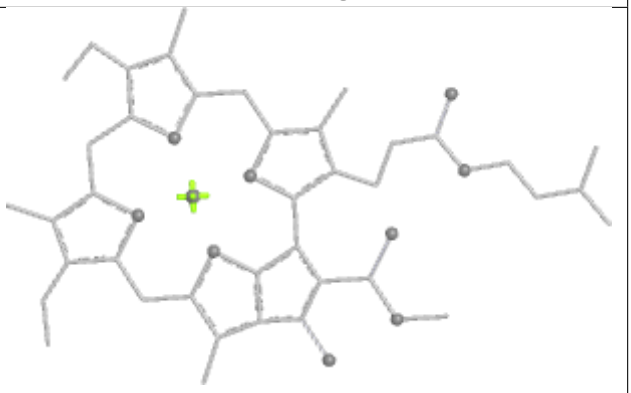
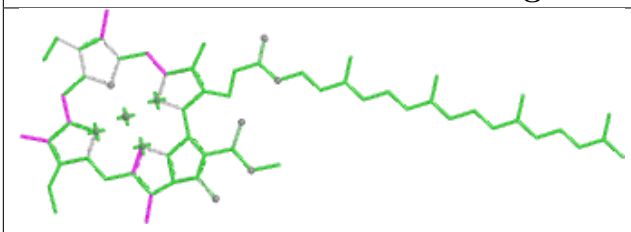
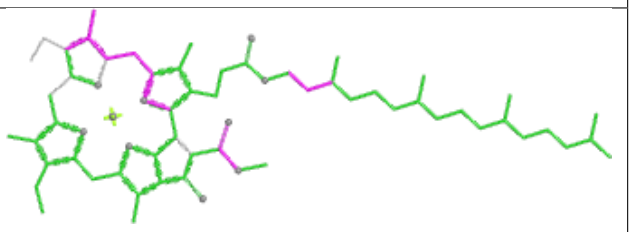
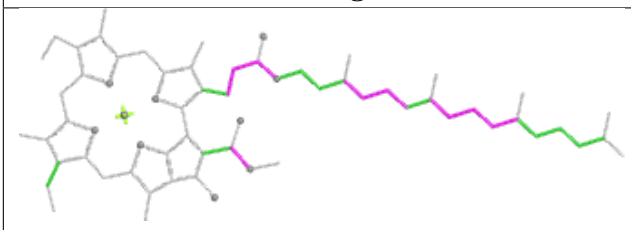
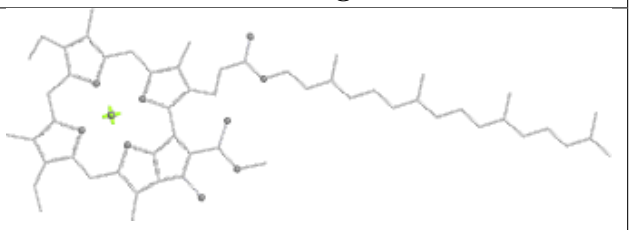


Rings

Ligand CLA A 823	
	
Bond lengths	Bond angles
	
Torsions	Rings

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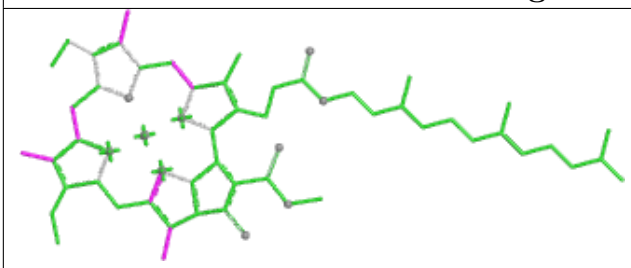
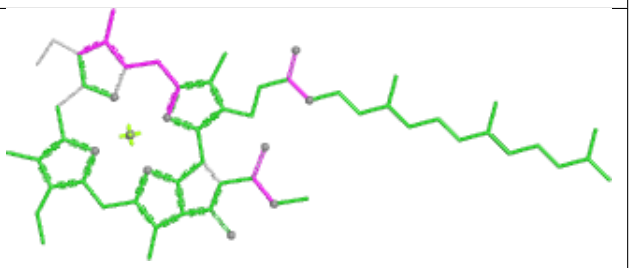
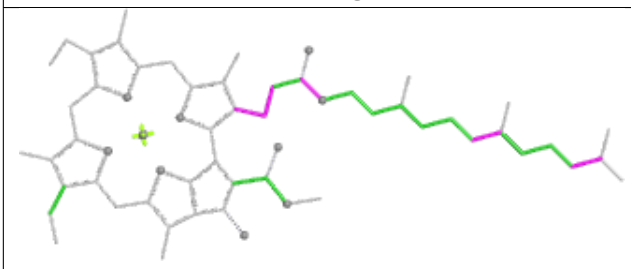
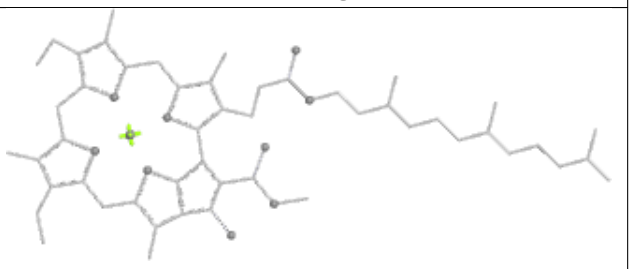
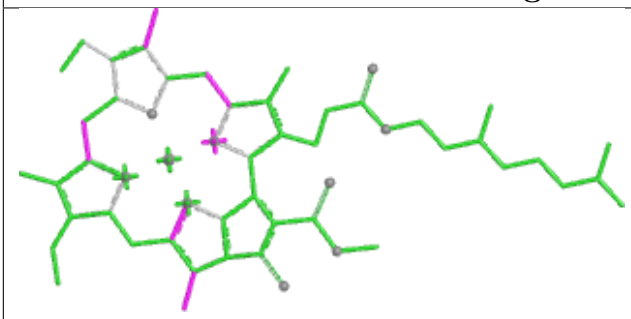
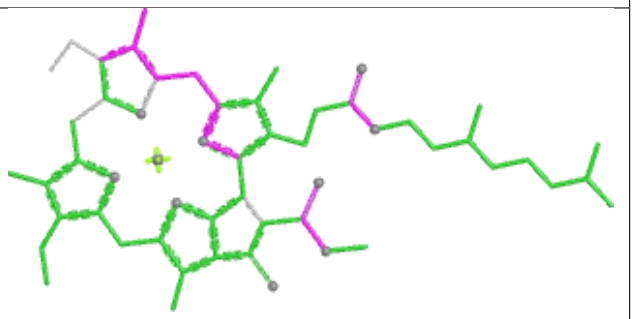
	
Bond lengths	Bond angles
	
Torsions	Rings

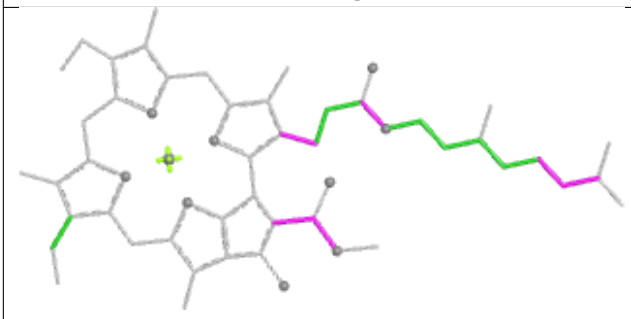
Ligand CLA A 819



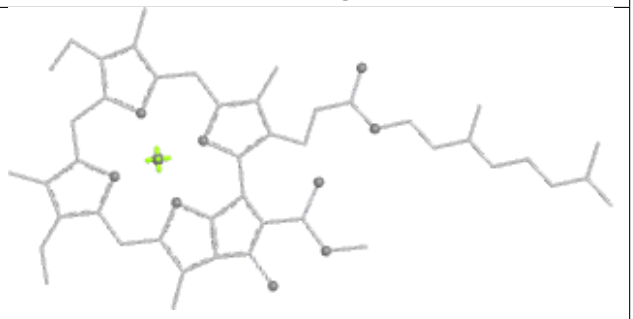
Bond lengths



Bond angles

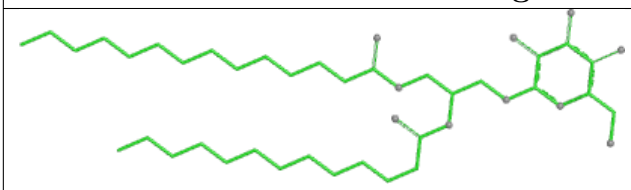


Torsions



Rings

Ligand LMG F 5001



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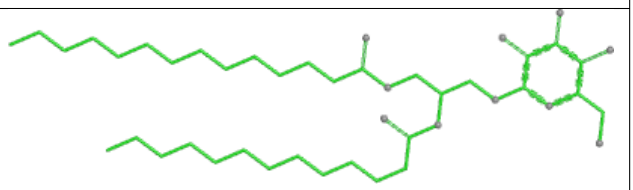
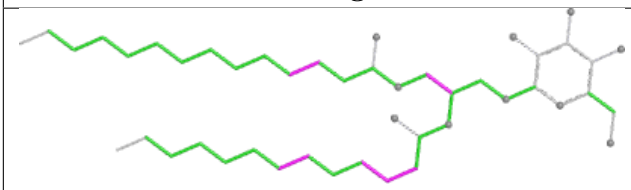
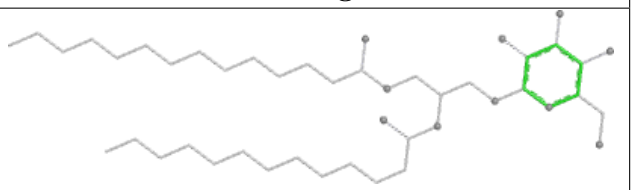


Bond angles

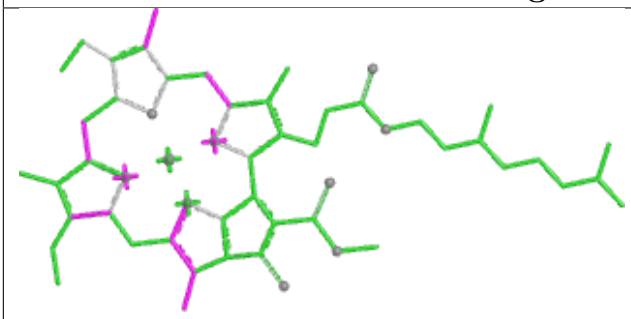


Torsions



Rings

Ligand CLA 1 612



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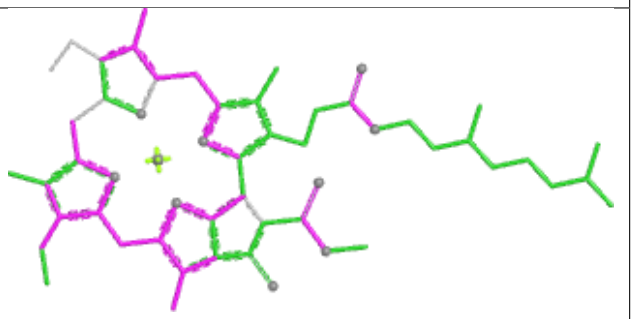
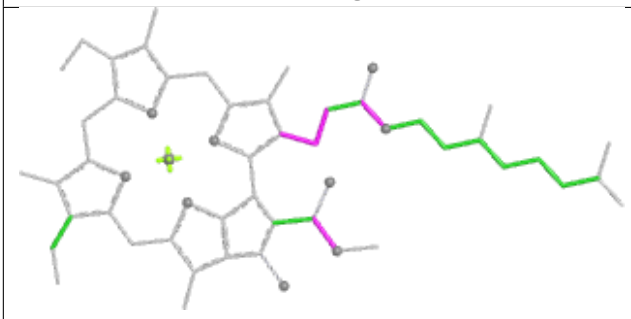
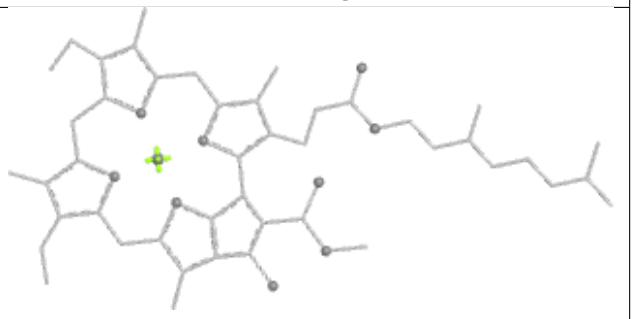


Bond angles

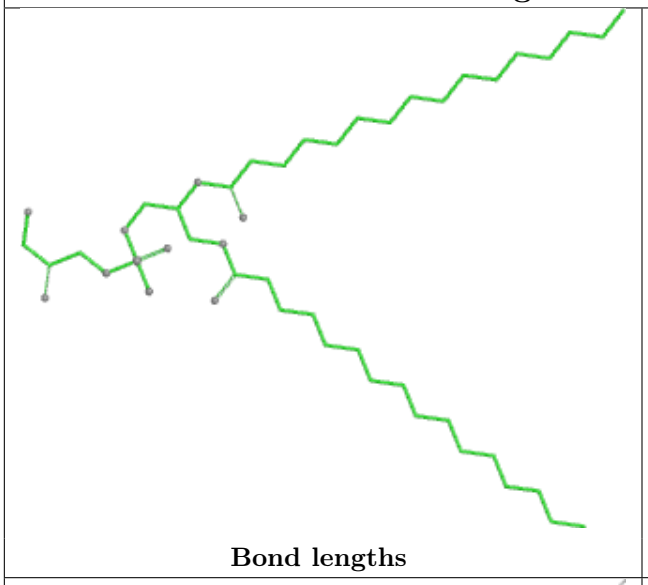


Torsions



Rings

Ligand LHG G 4006



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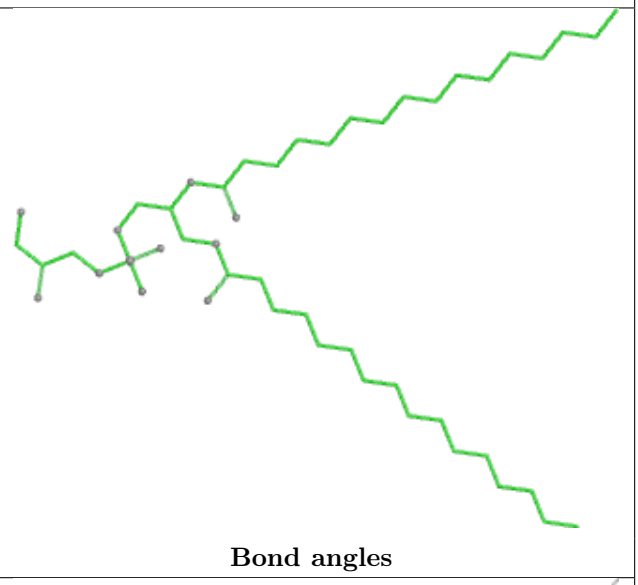
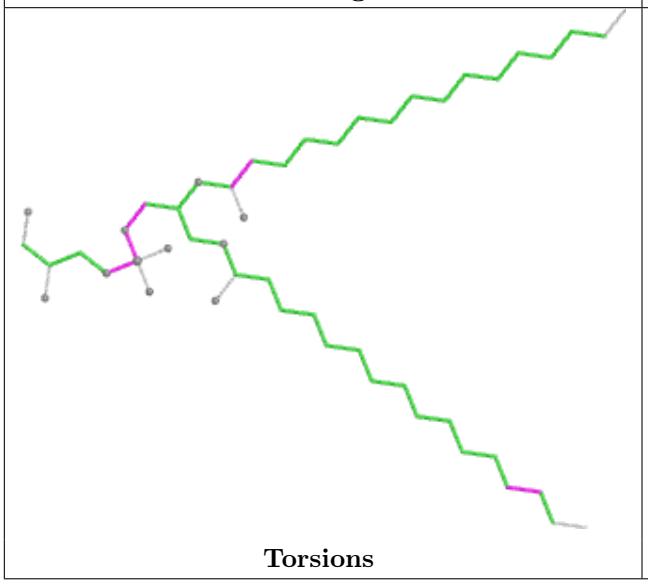


Bond angles



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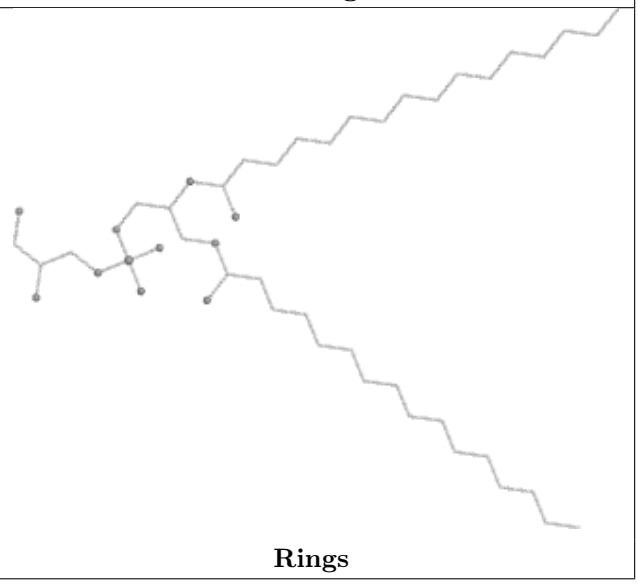
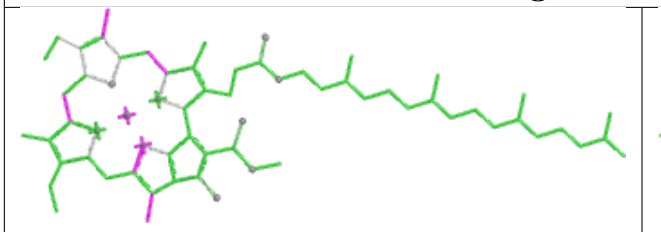


Rings

Ligand CLA 9 607



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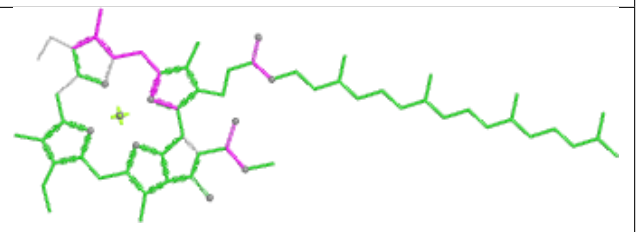
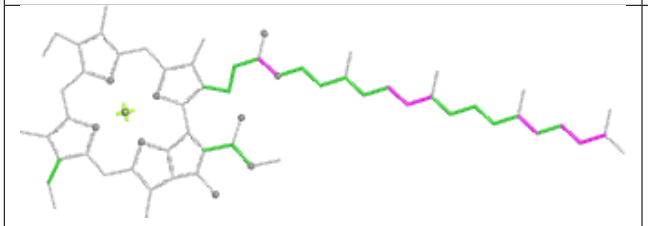
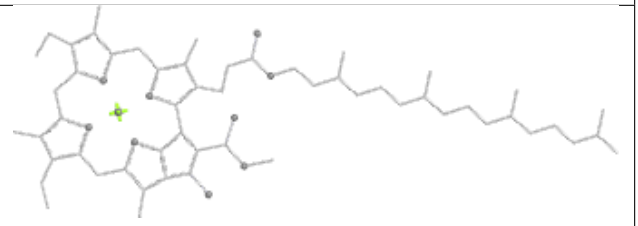


Bond angles

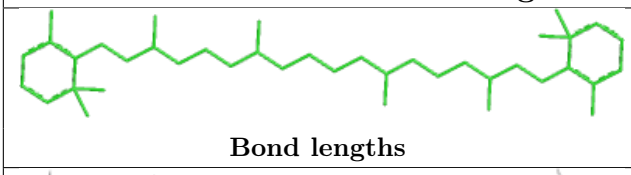


Torsions



Rings

Ligand BCR J 4001



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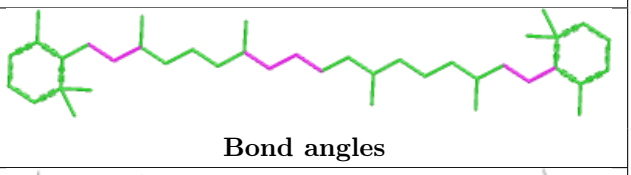
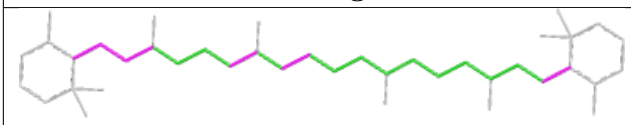


Bond angles



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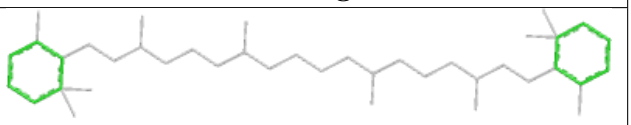
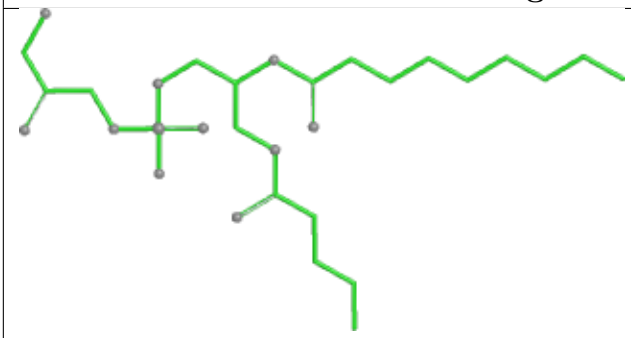


Rings

Ligand LHG 8 321



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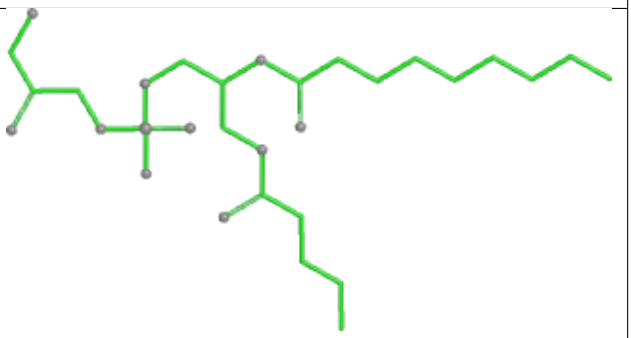
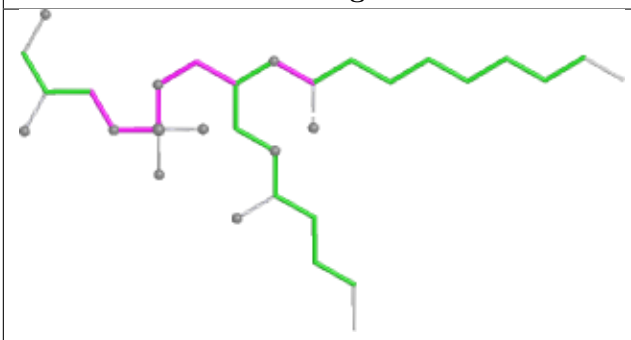
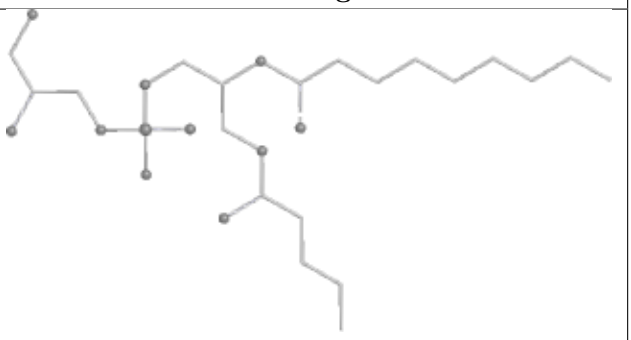


Bond angles

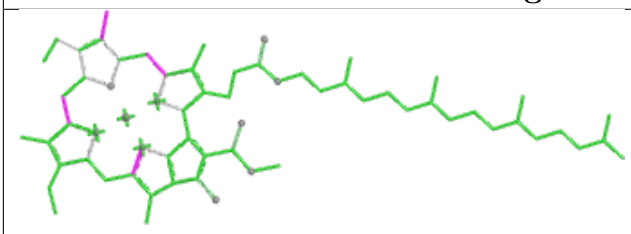


Torsions

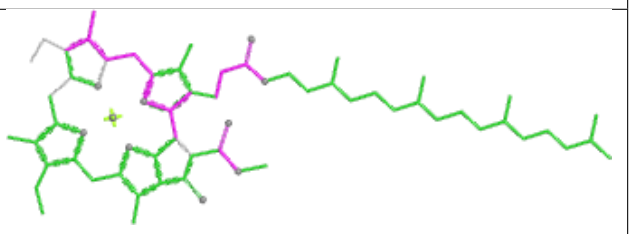


Rings

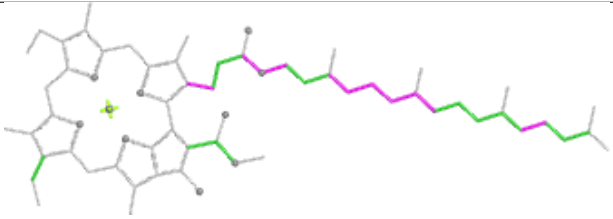
Ligand CLA B 833



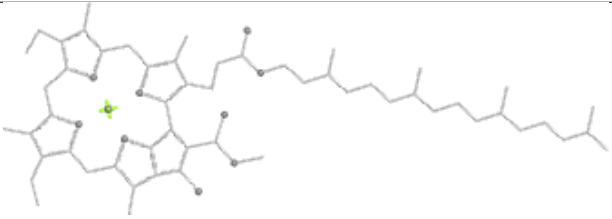
Bond lengths



Bond angles

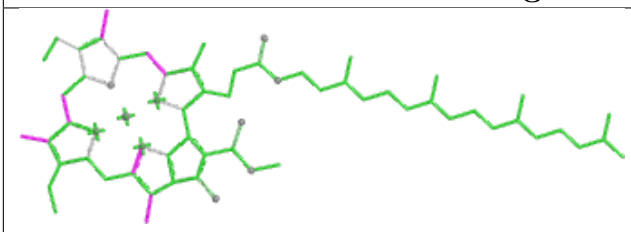


Torsions

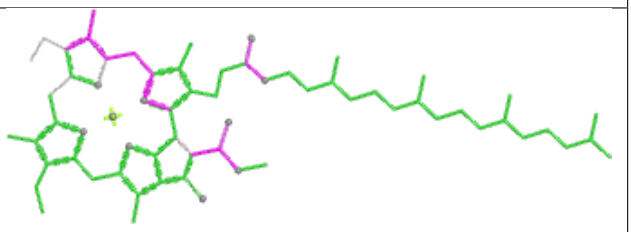


Rings

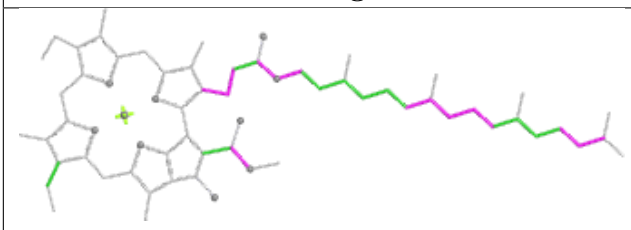
Ligand CLA A 816



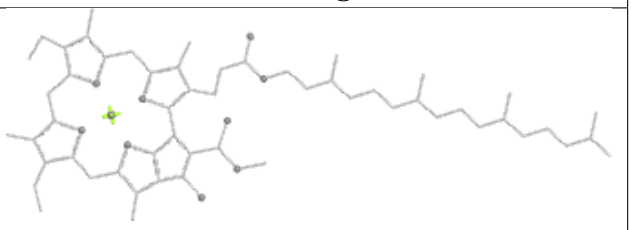
Bond lengths



Bond angles

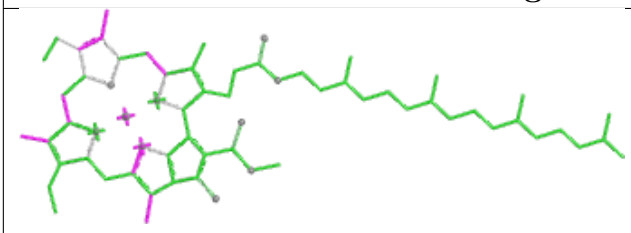


Torsions

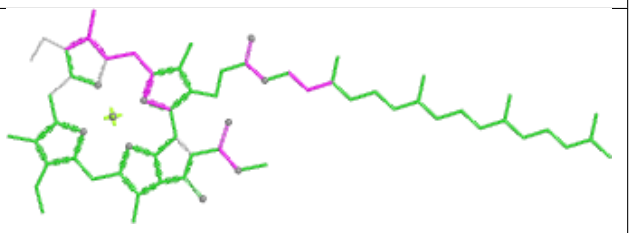


Rings

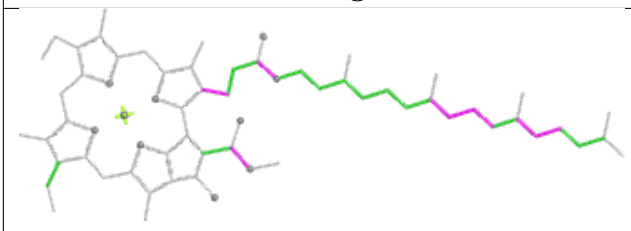
Ligand CLA B 820



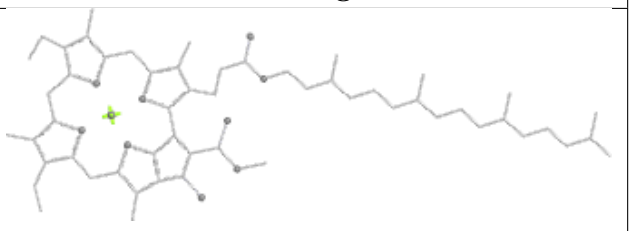
Bond lengths



Bond angles

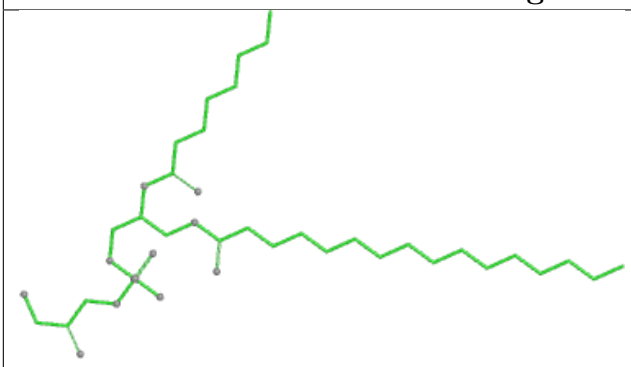


Torsions

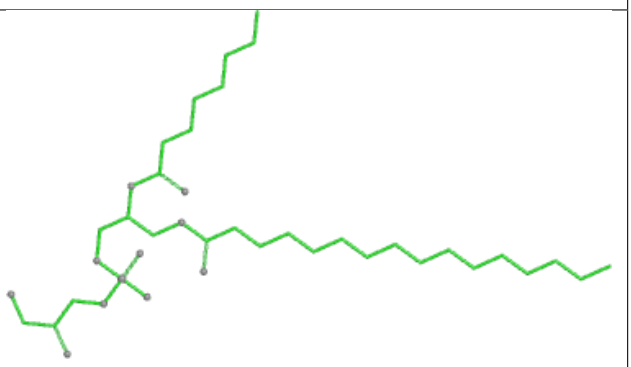


Rings

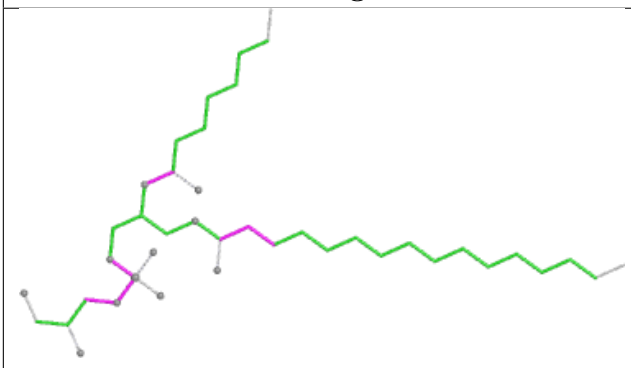
Ligand LHG 9 617



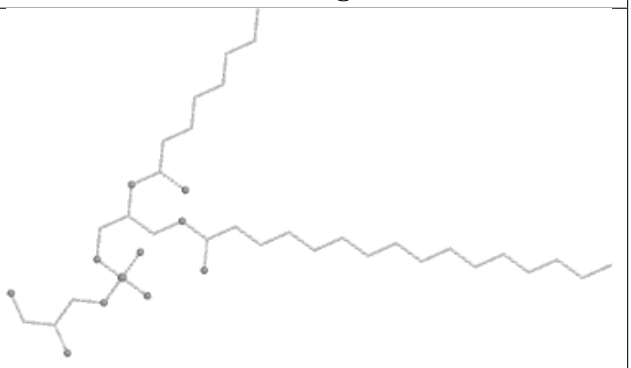
Bond lengths



Bond angles

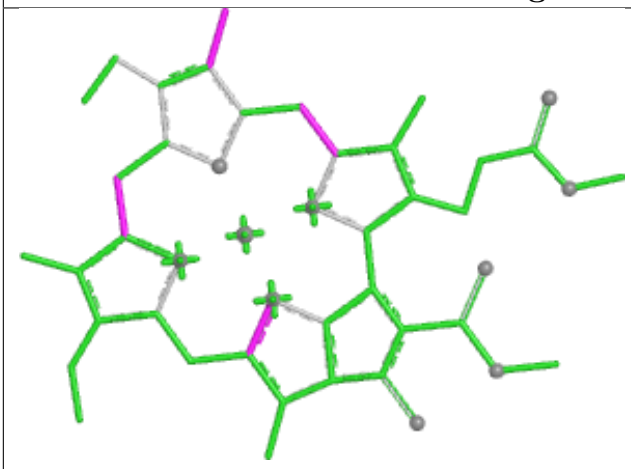


Torsions

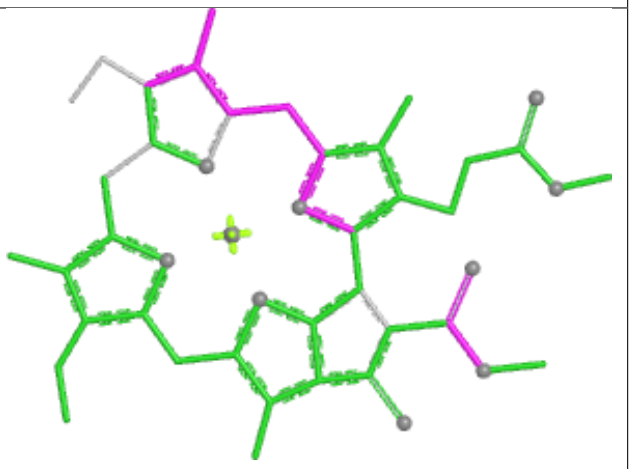


Rings

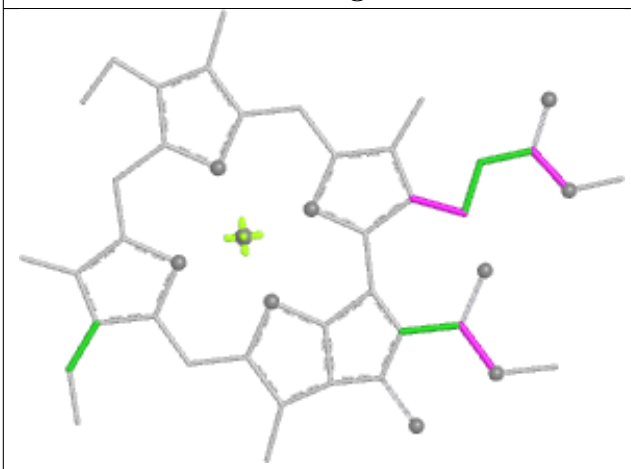
Ligand CLA 8 312



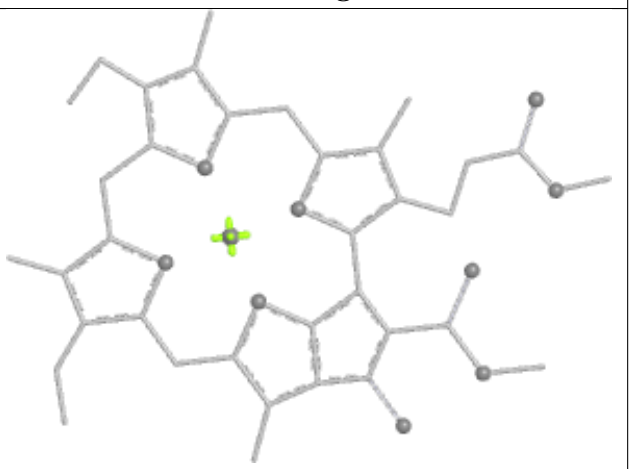
Bond lengths



Bond angles

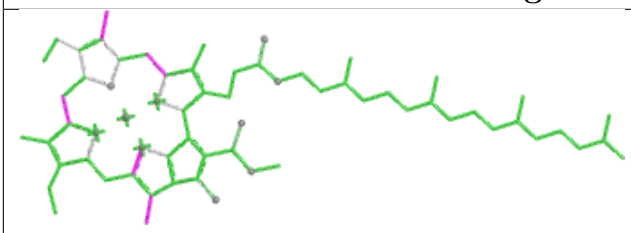


Torsions

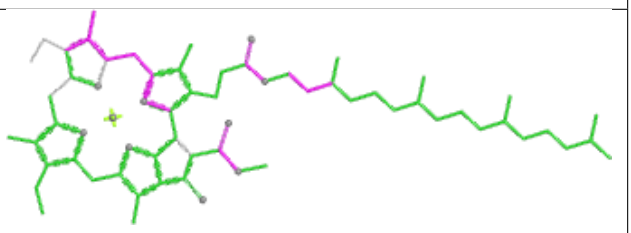


Rings

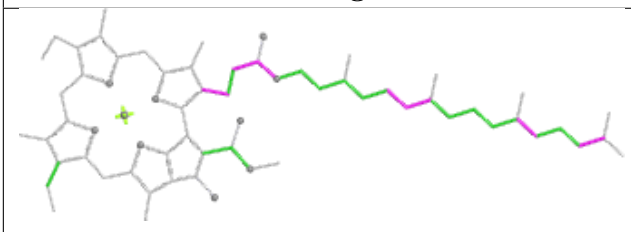
Ligand CLA B 841



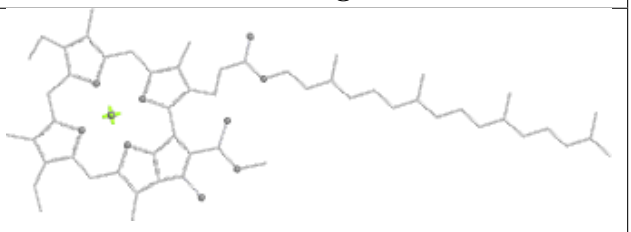
Bond lengths



Bond angles

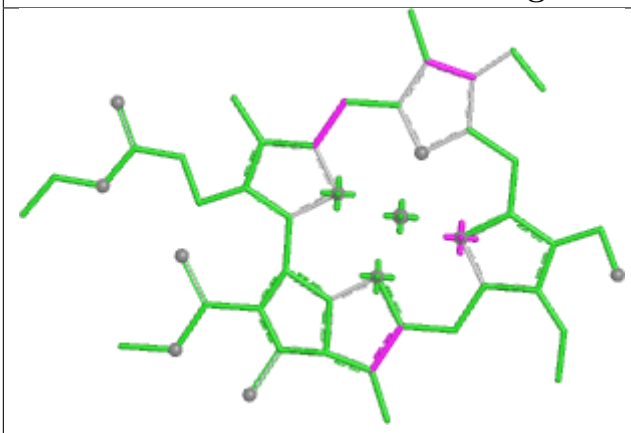


Torsions

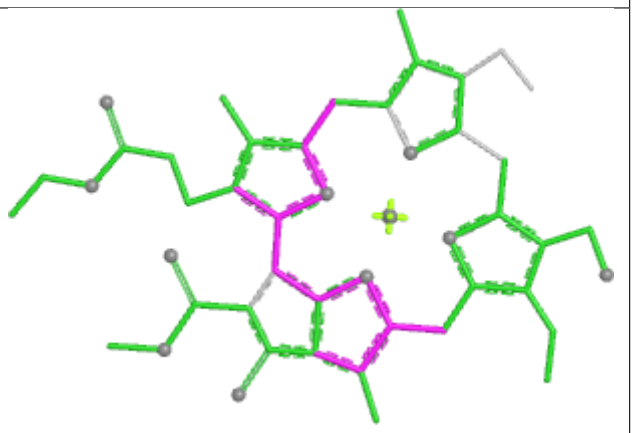


Rings

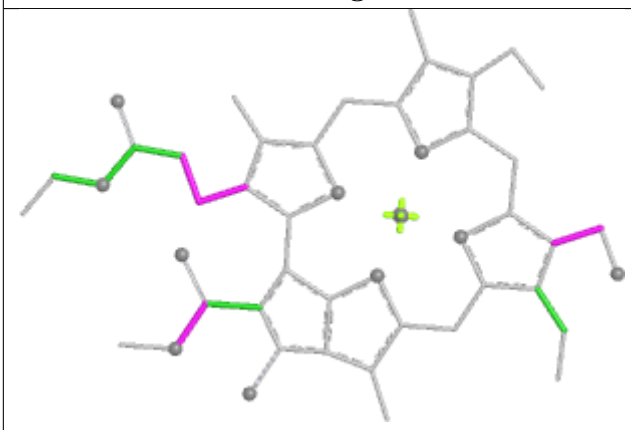
Ligand CHL 7 308



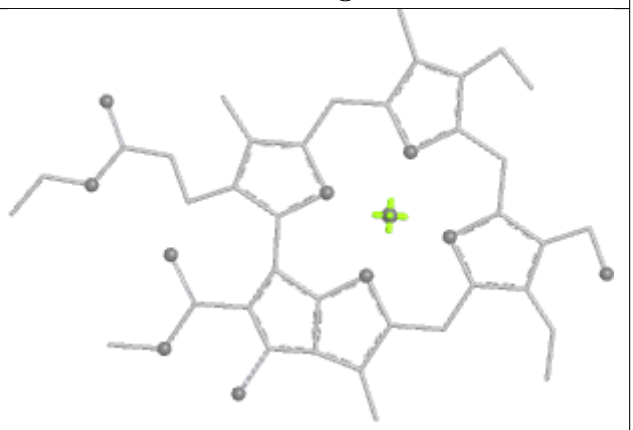
Bond lengths



Bond angles

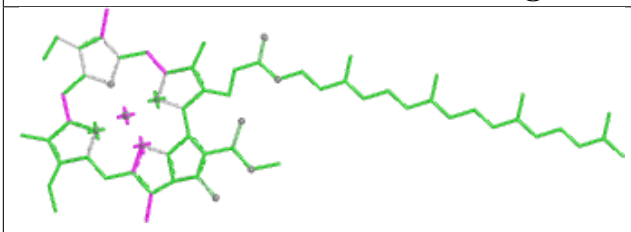


Torsions

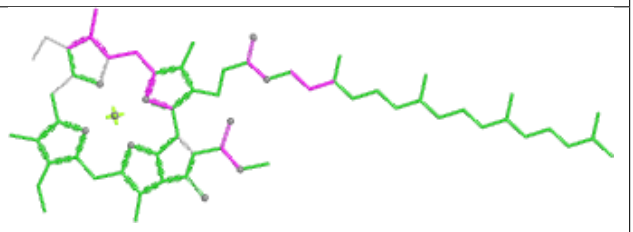


Rings

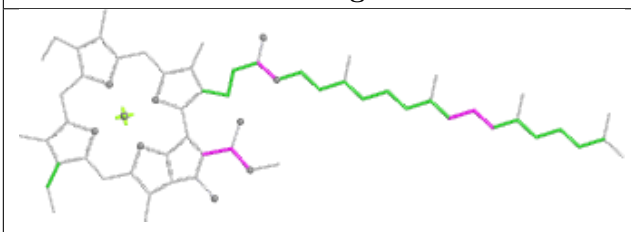
Ligand CLA B 826



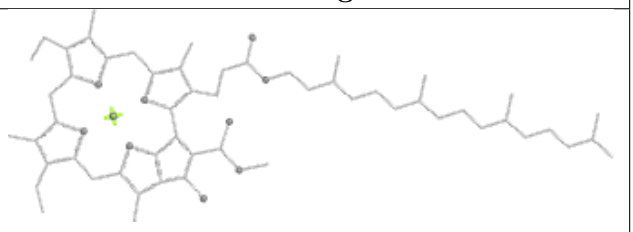
Bond lengths



Bond angles

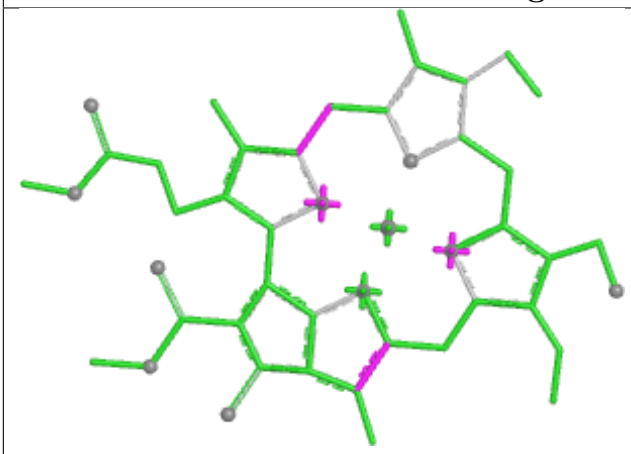


Torsions

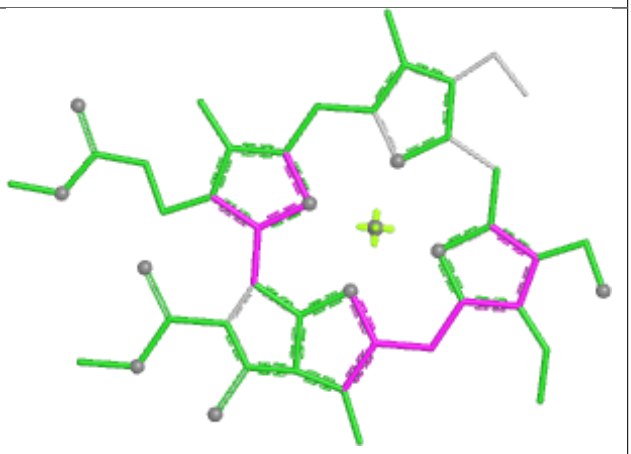


Rings

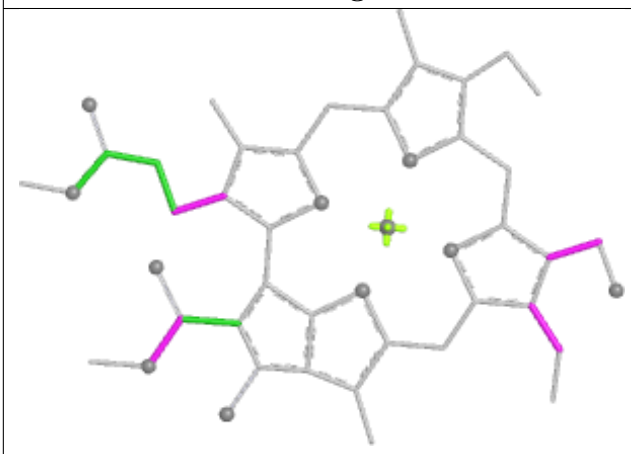
Ligand CHL 9 606



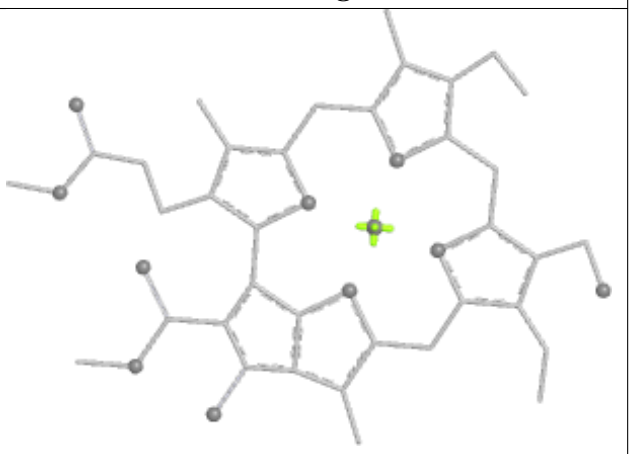
Bond lengths



Bond angles

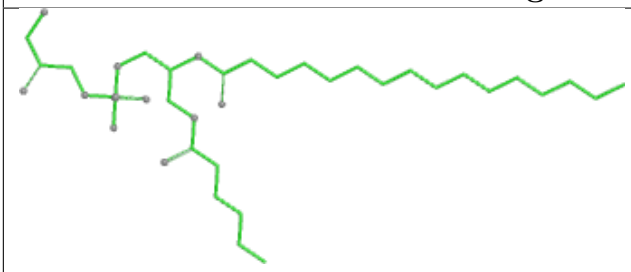


Torsions

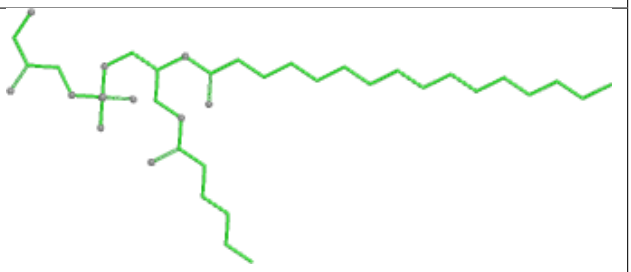


Rings

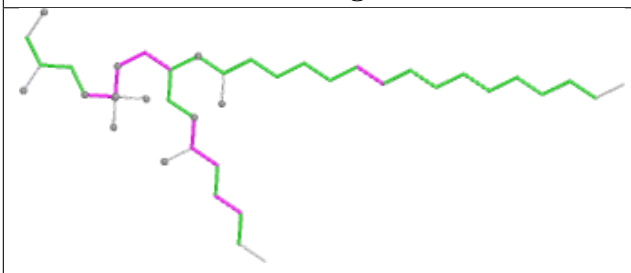
Ligand LHG 3 424



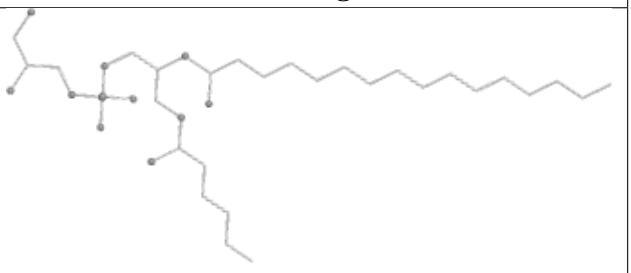
Bond lengths



Bond angles

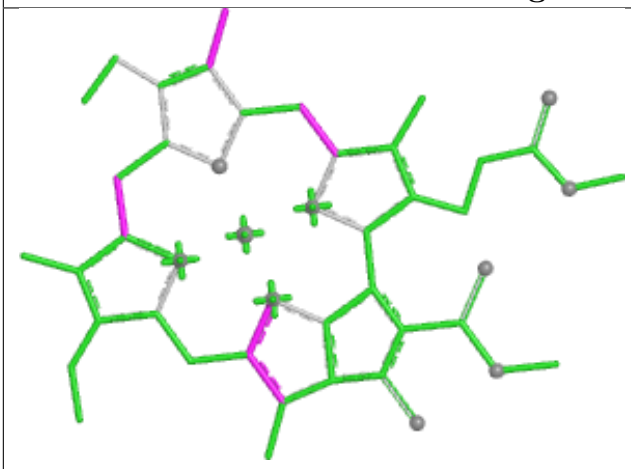


Torsions

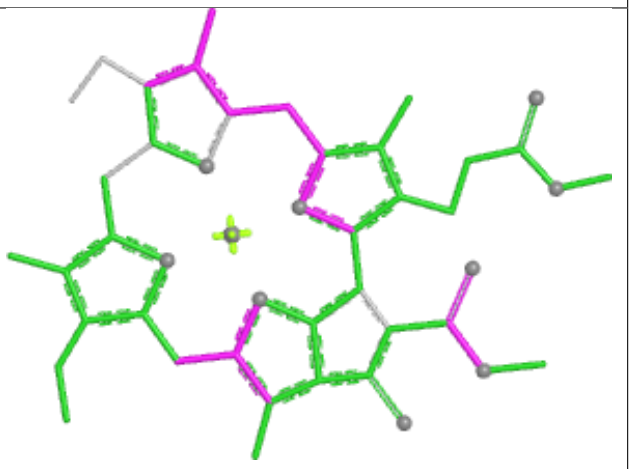


Rings

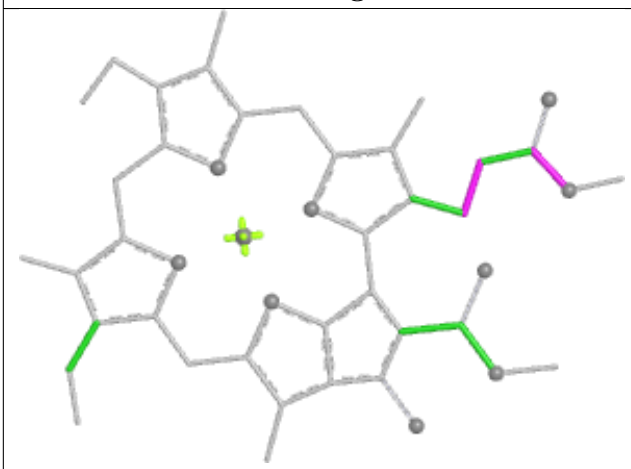
Ligand CLA 2 622



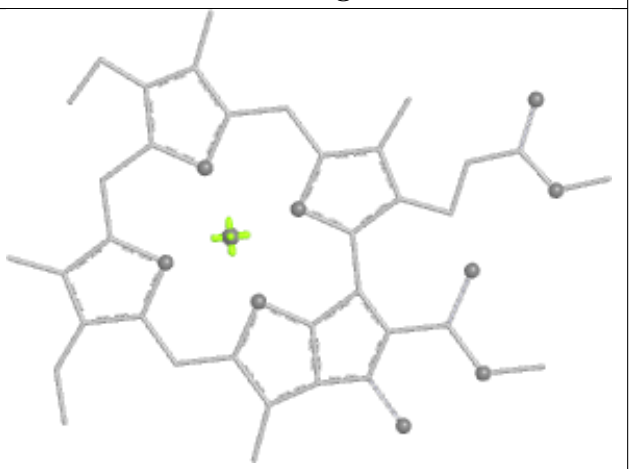
Bond lengths



Bond angles

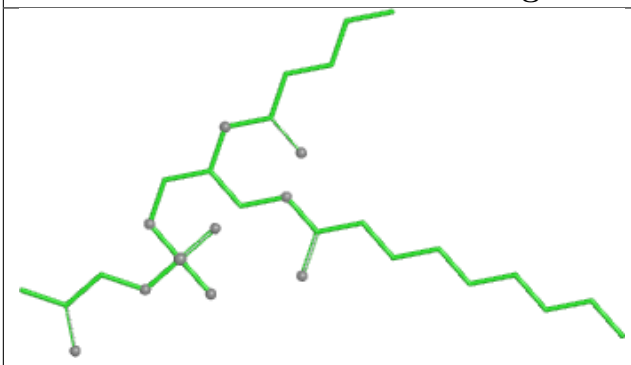


Torsions

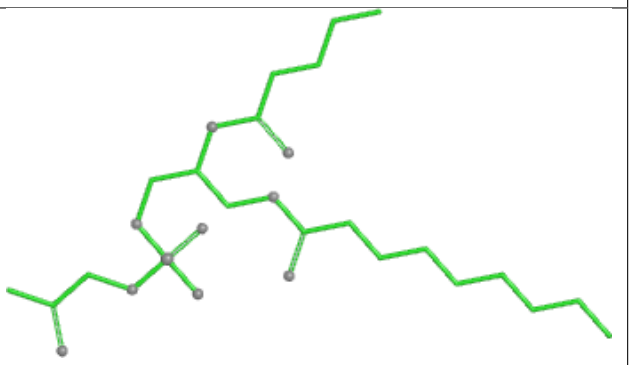


Rings

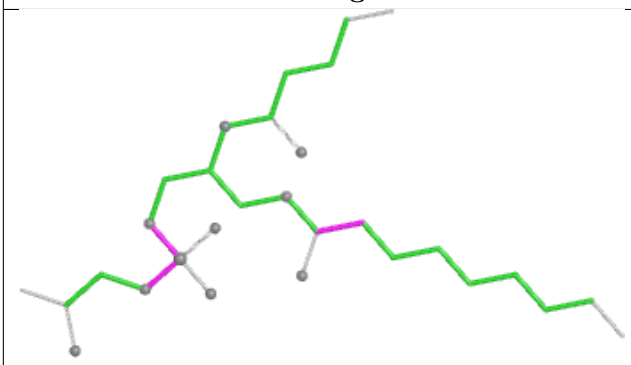
Ligand LHG A 853



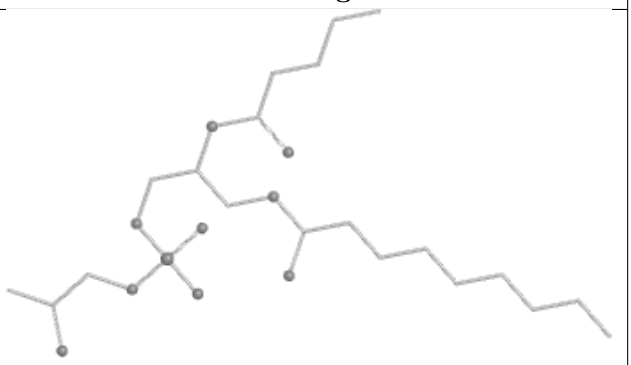
Bond lengths



Bond angles

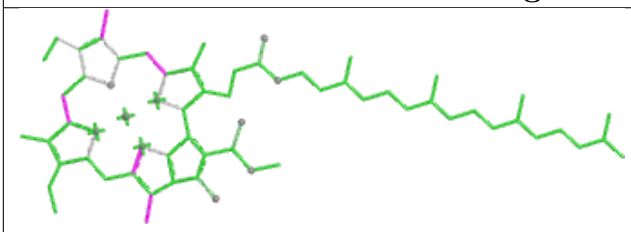


Torsions

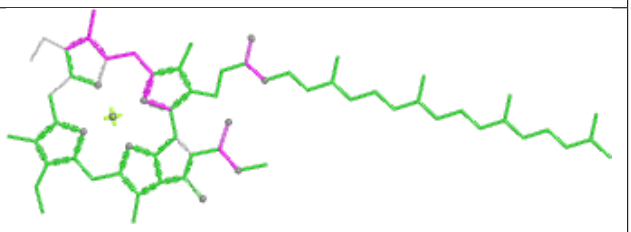


Rings

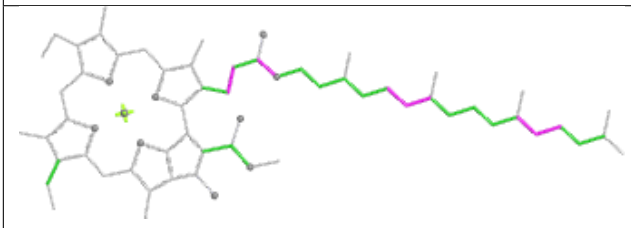
Ligand CLA A 839



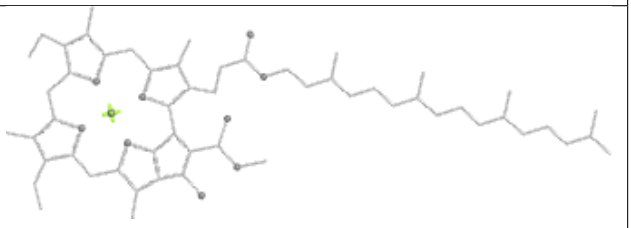
Bond lengths



Bond angles

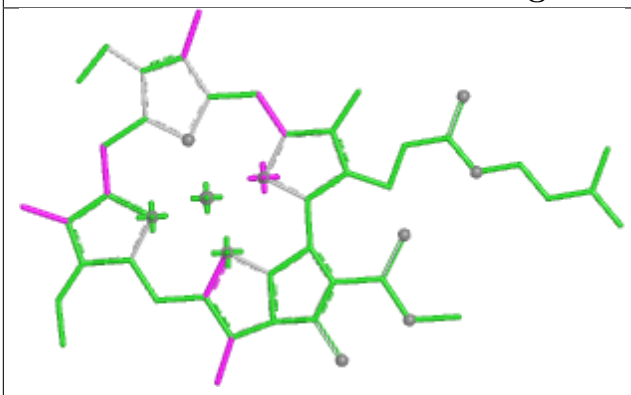


Torsions

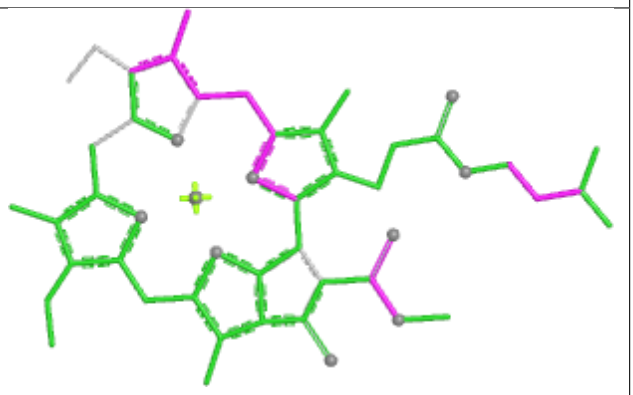


Rings

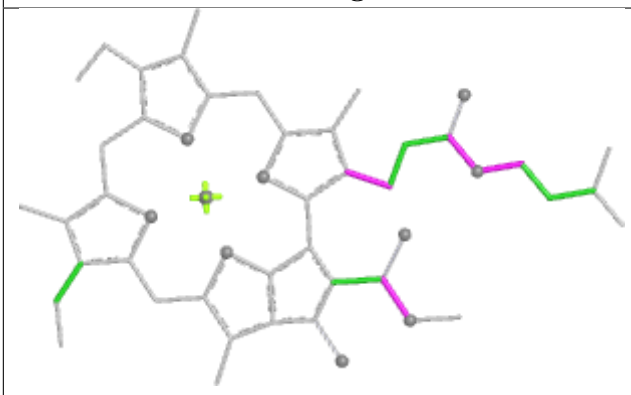
Ligand CLA 8 303



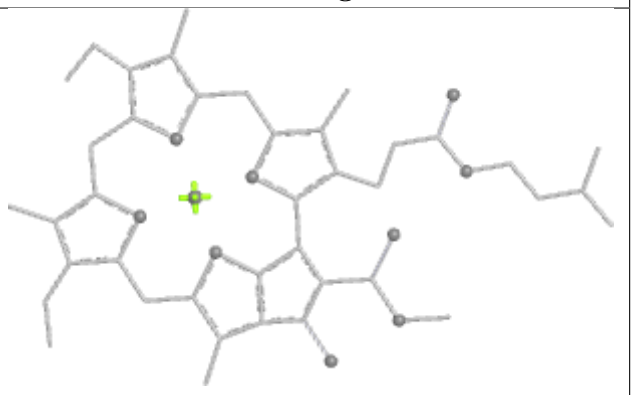
Bond lengths



Bond angles

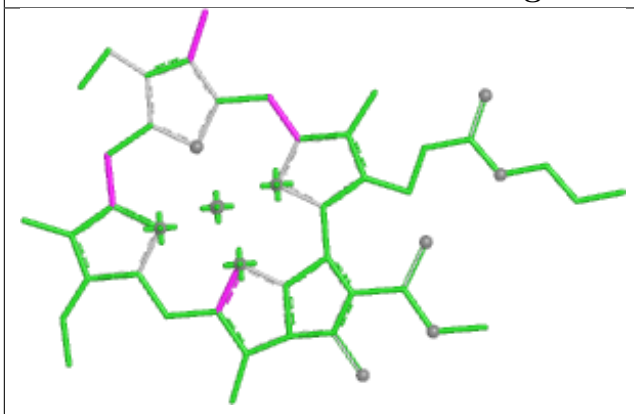


Torsions

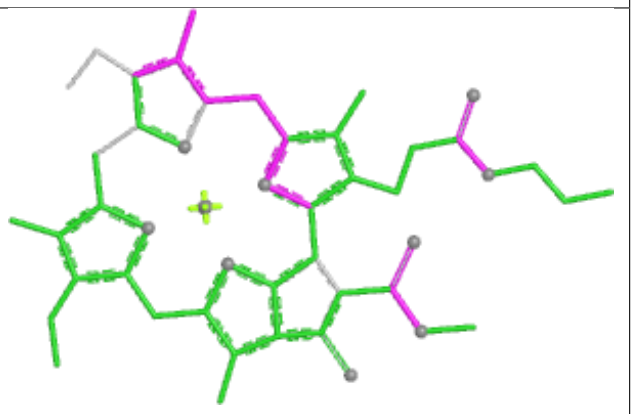


Rings

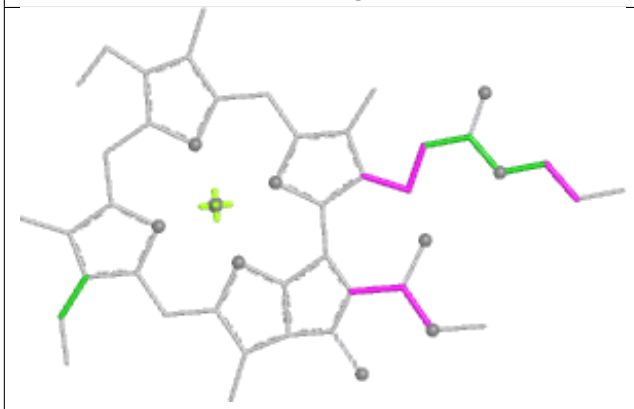
Ligand CLA K 204



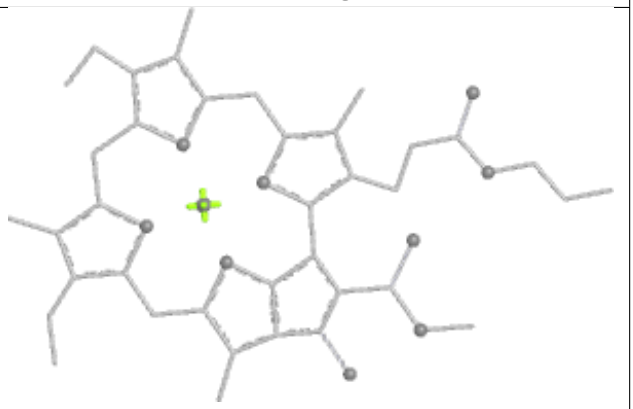
Bond lengths



Bond angles

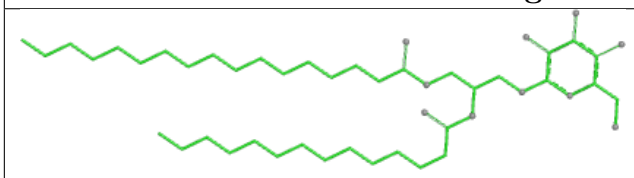


Torsions

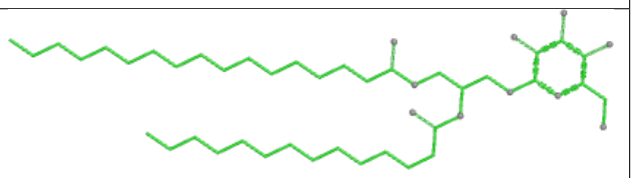


Rings

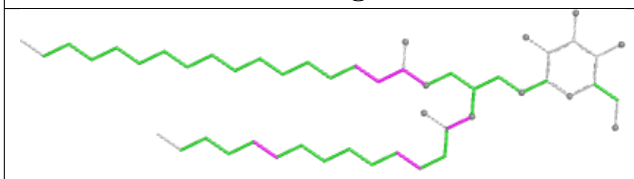
Ligand LMG 8 301



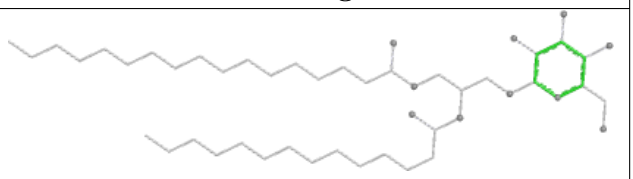
Bond lengths



Bond angles

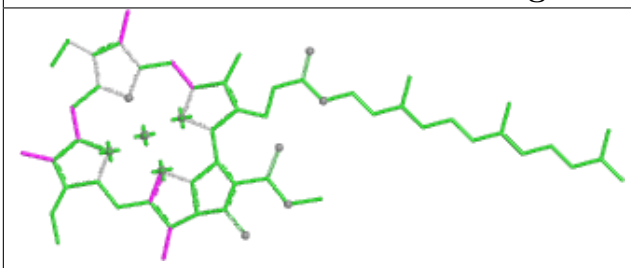


Torsions

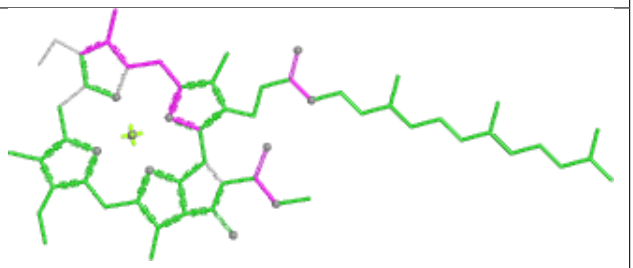


Rings

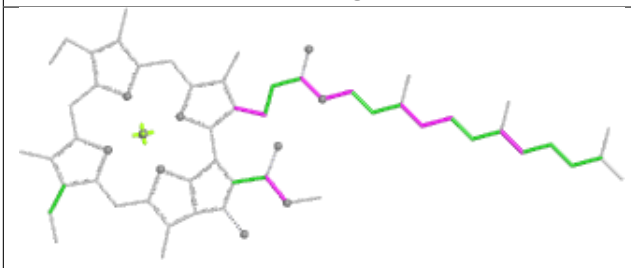
Ligand CLA 8 309



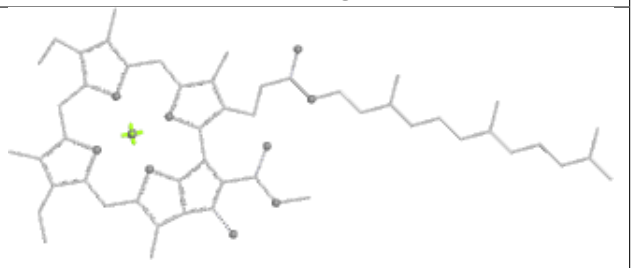
Bond lengths



Bond angles

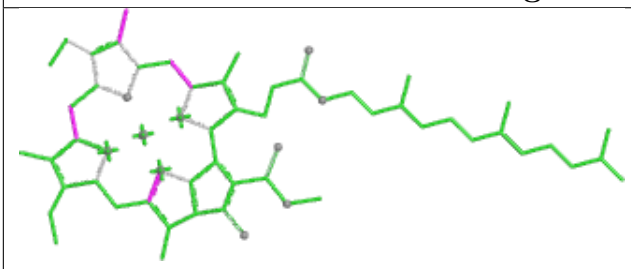


Torsions



Rings

Ligand CLA A 820



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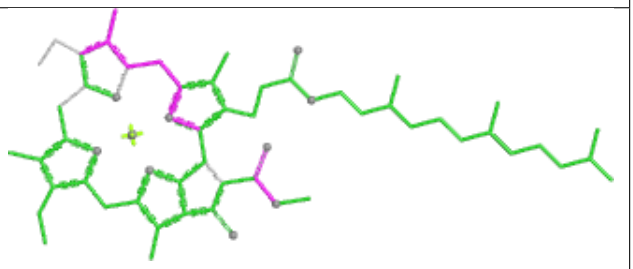
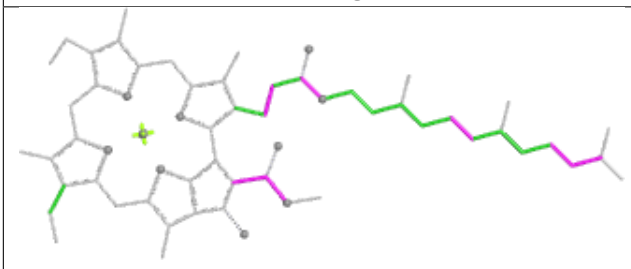
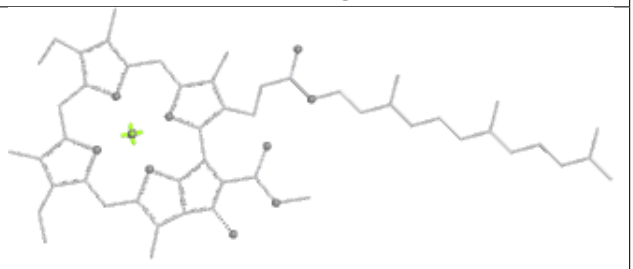


Bond angles

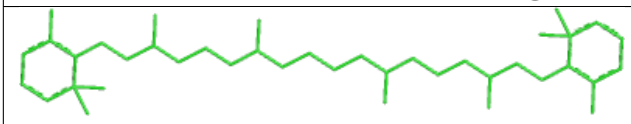


Torsions



Rings

Ligand BCR 8 316



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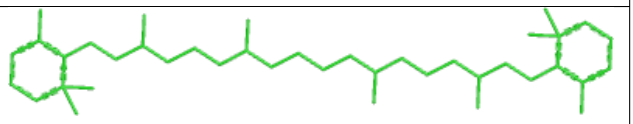
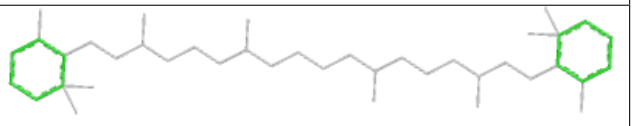


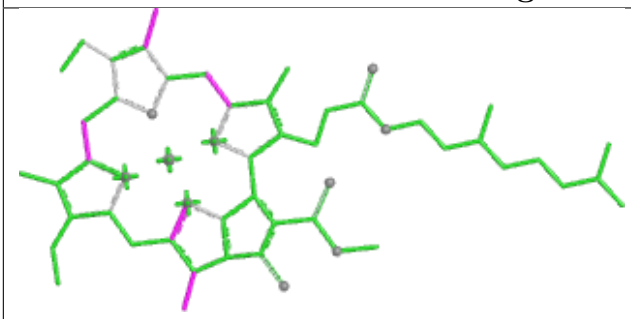
Bond angles

Torsions

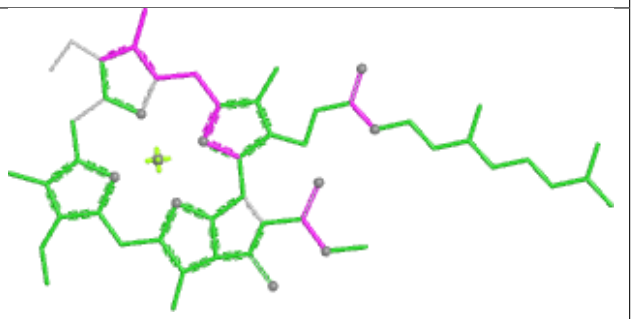


Rings

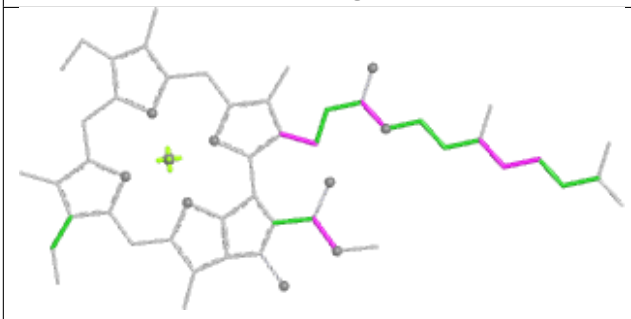
Ligand CLA F 5005



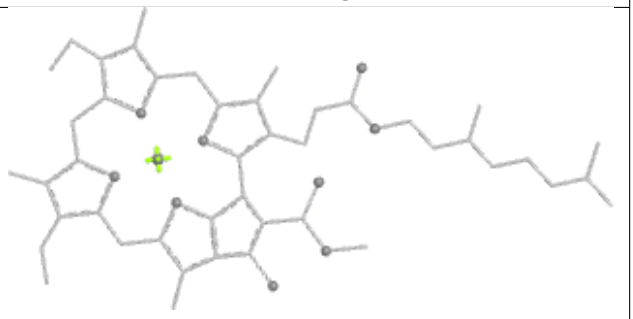
Bond lengths



Bond angles

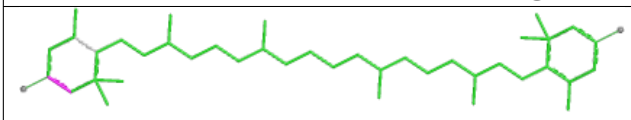


Torsions

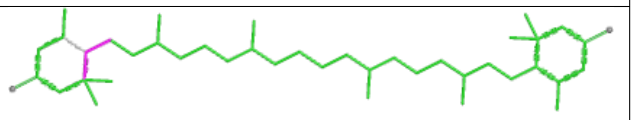


Rings

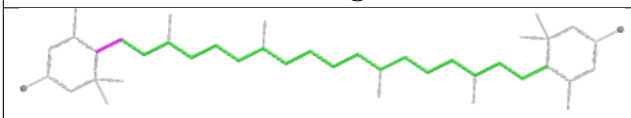
Ligand LUT 7 316



Bond lengths



Bond angles



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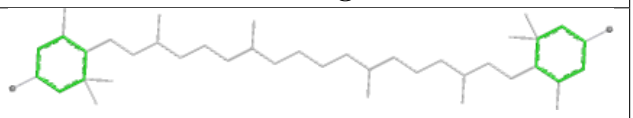
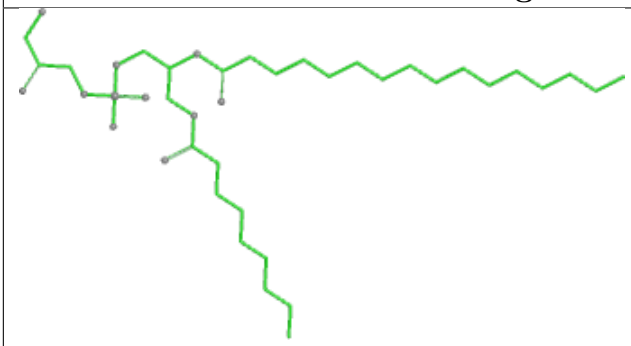


Rings

Ligand LHG F 5011



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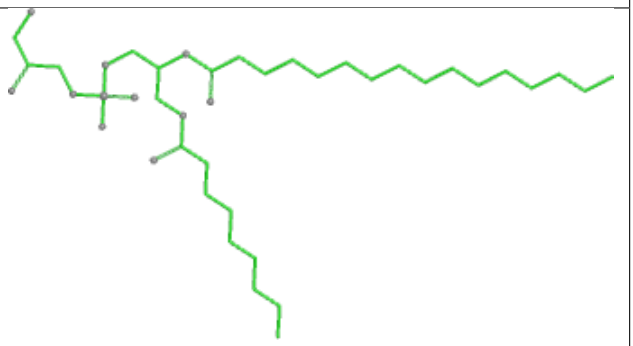
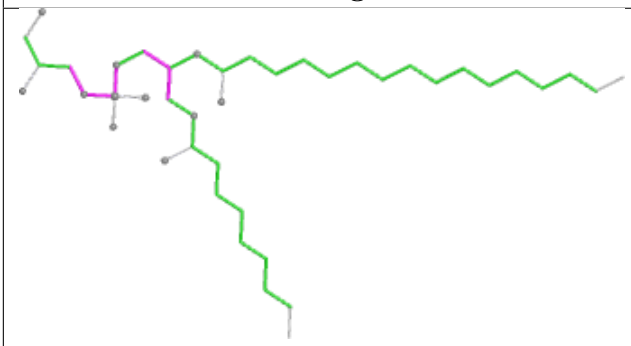


Bond angles



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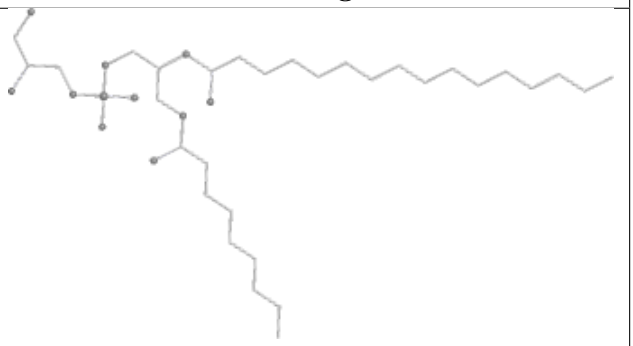
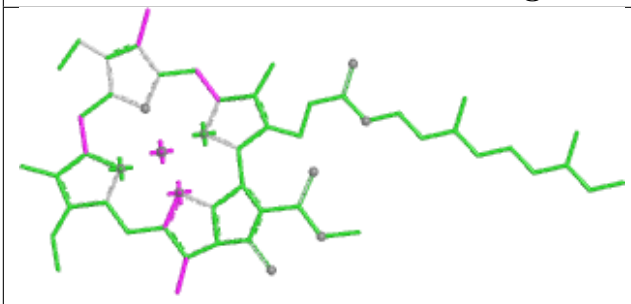
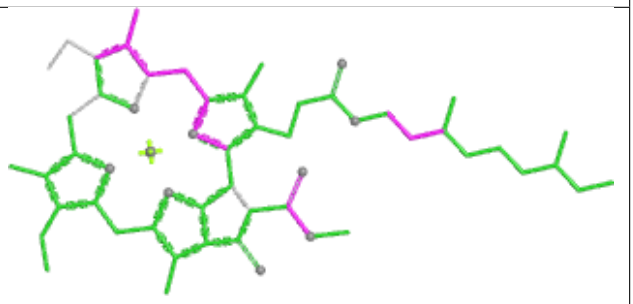


Rings

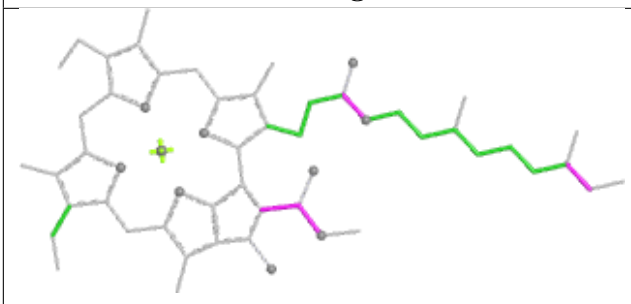
Ligand CLA A 829



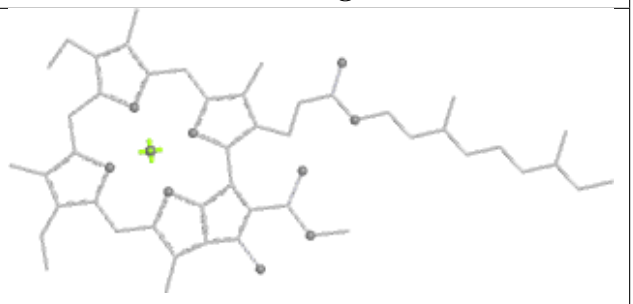
Bond lengths



Bond angles

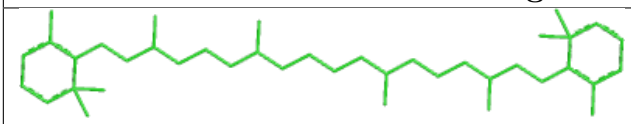


Torsions



Rings

Ligand BCR 3 419



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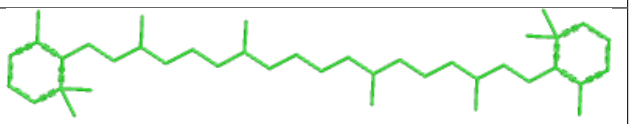
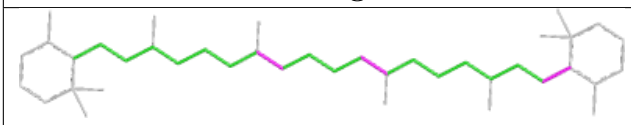
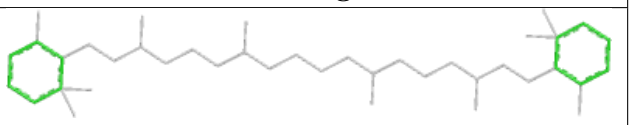


Bond angles

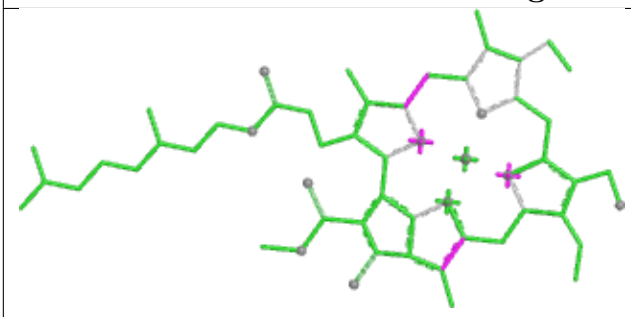


Torsions

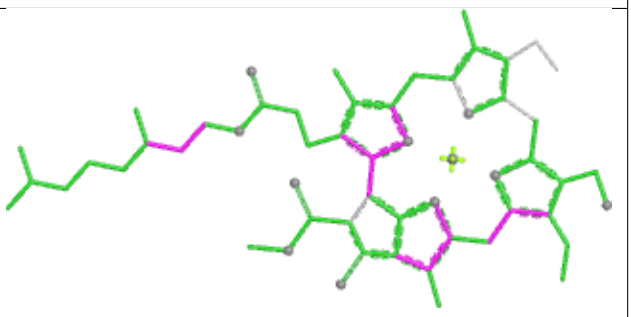


Rings

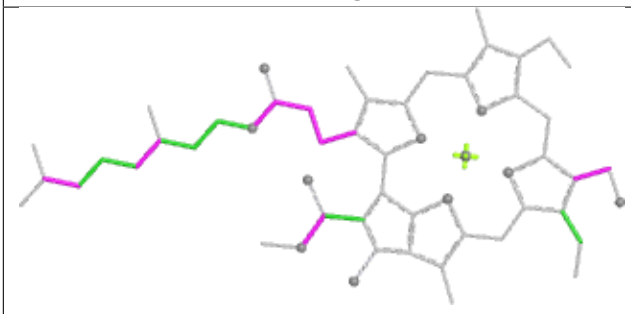
Ligand CHL 3 401



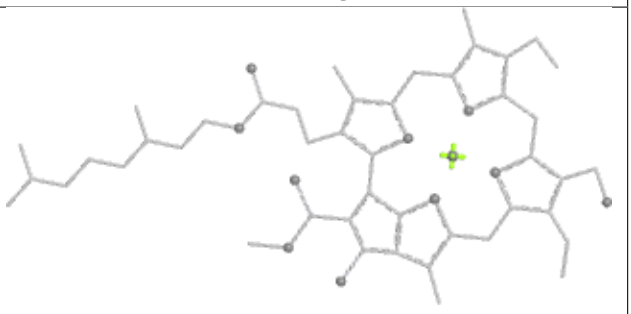
Bond lengths



Bond angles

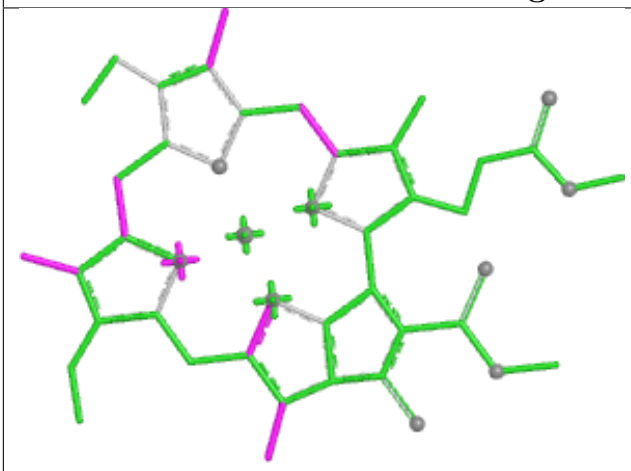


Torsions

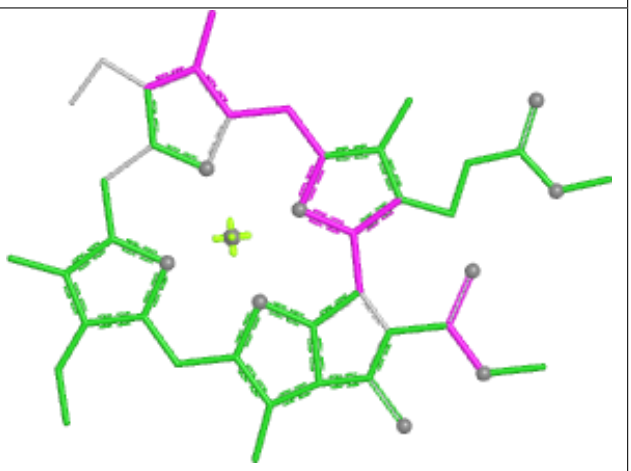


Rings

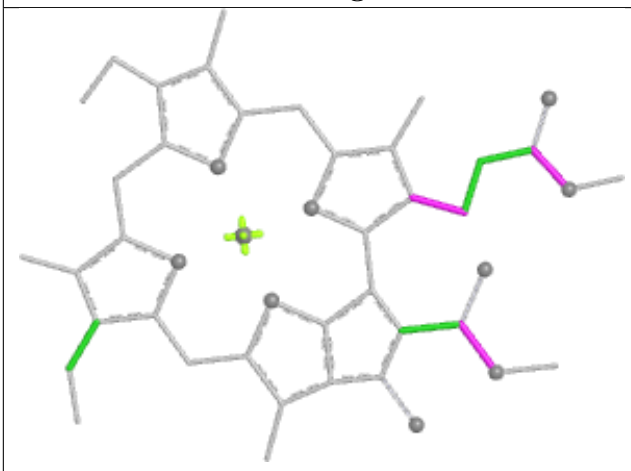
Ligand CLA 1 611



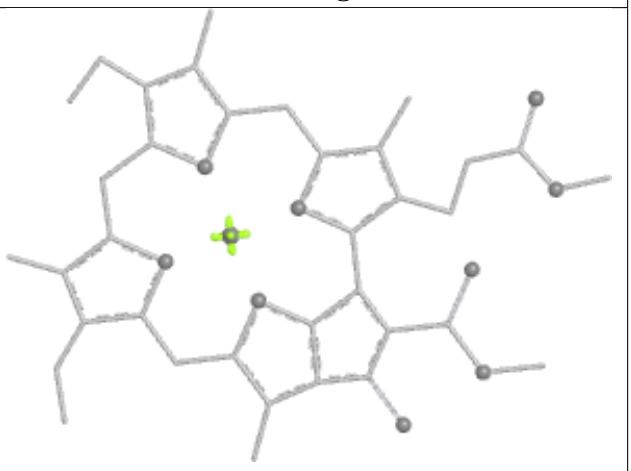
Bond lengths



Bond angles

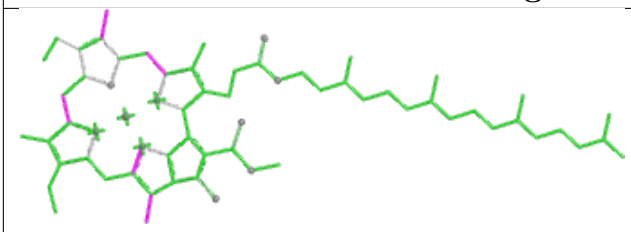


Torsions

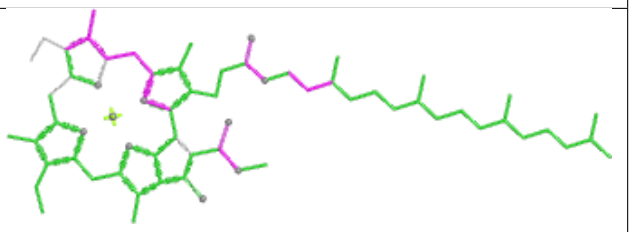


Rings

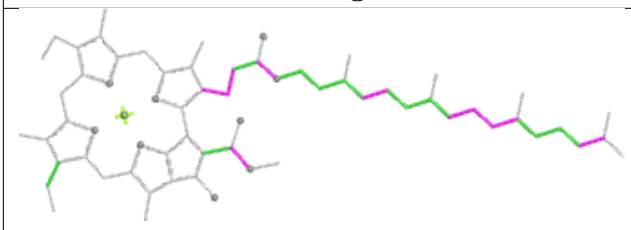
Ligand CLA B 822



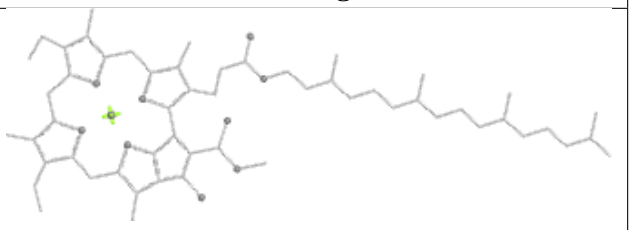
Bond lengths



Bond angles

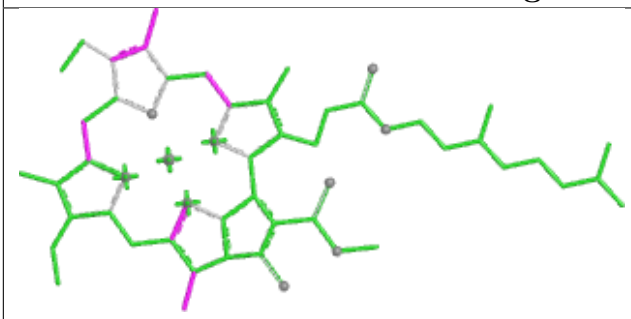


Torsions



Rings

Ligand CLA A 817



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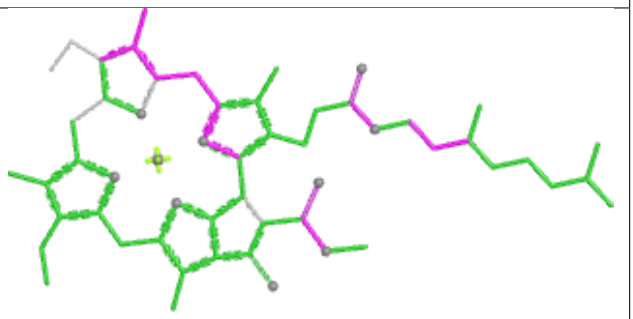
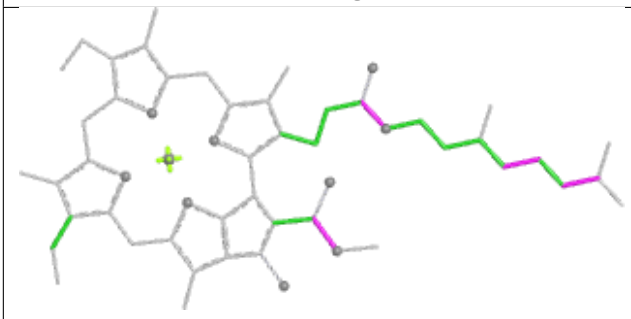
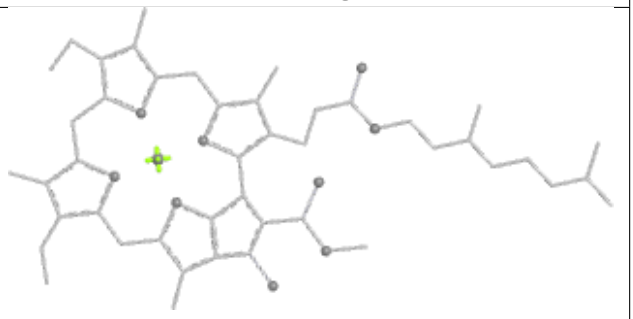


Bond angles

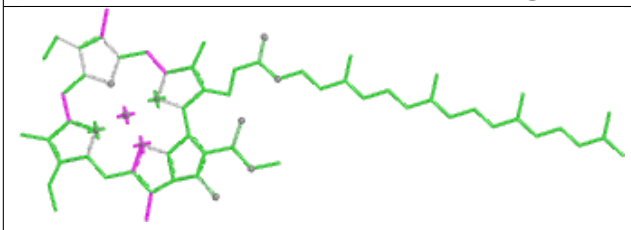


Torsions

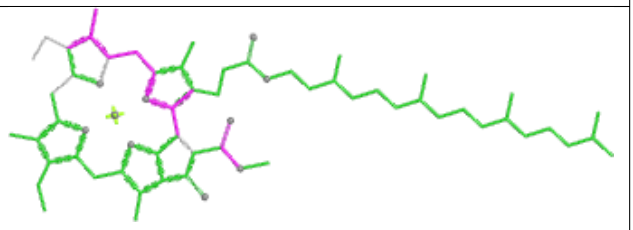


Rings

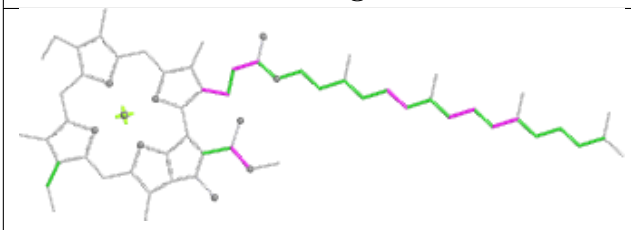
Ligand CLA A 828



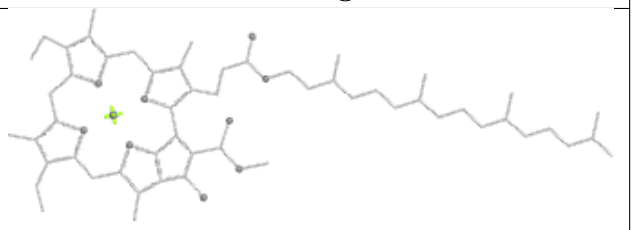
Bond lengths



Bond angles

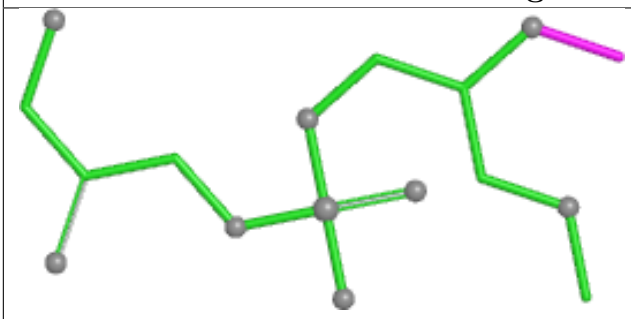


Torsions

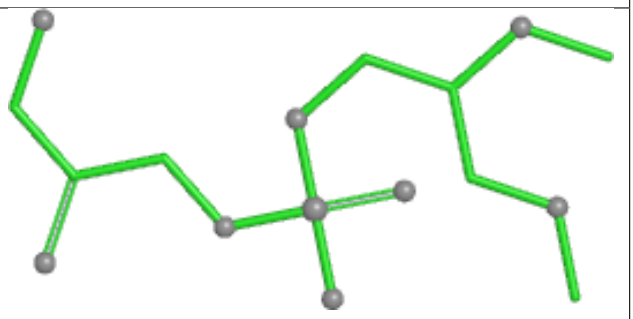


Rings

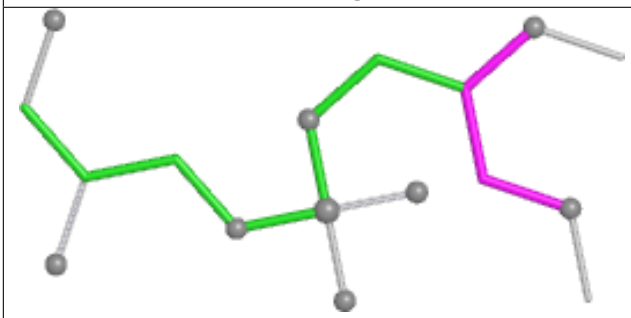
Ligand LHG 3 420



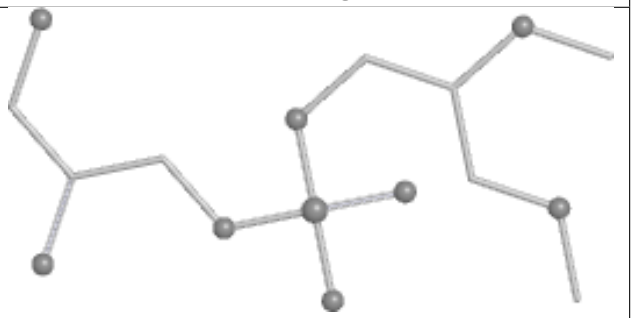
Bond lengths



Bond angles

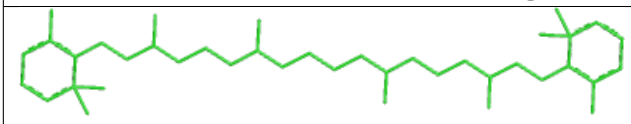


Torsions

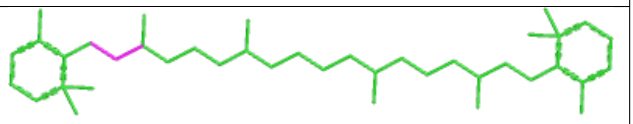


Rings

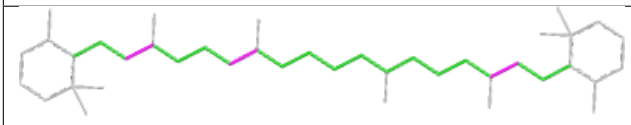
Ligand BCR A 858



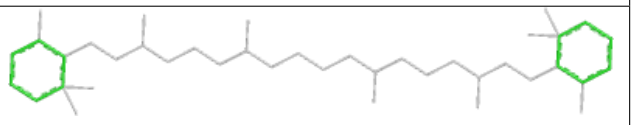
Bond lengths



Bond angles

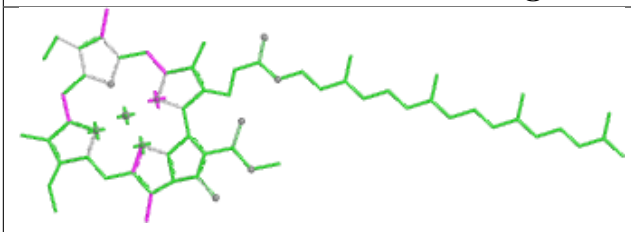


Torsions

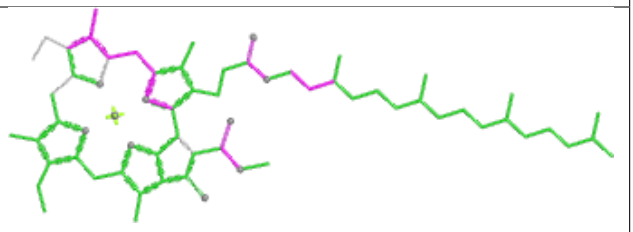


Rings

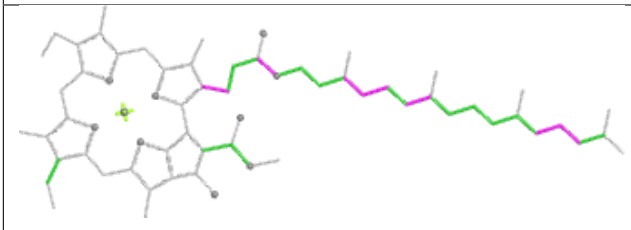
Ligand CLA B 813



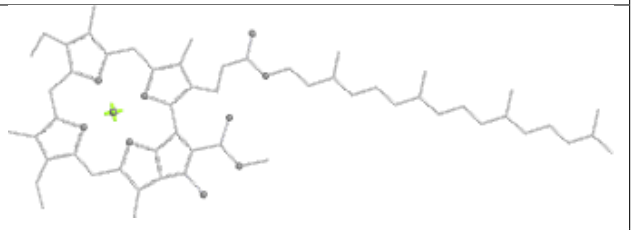
Bond lengths



Bond angles

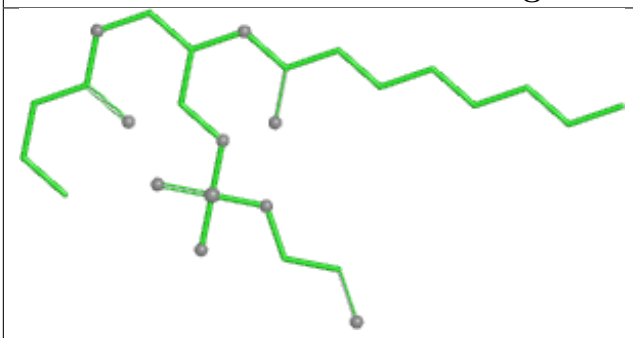


Torsions

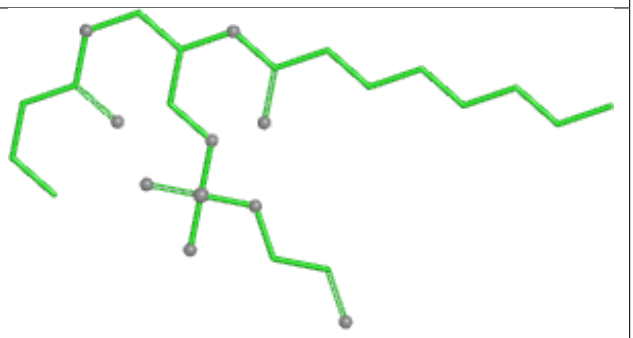


Rings

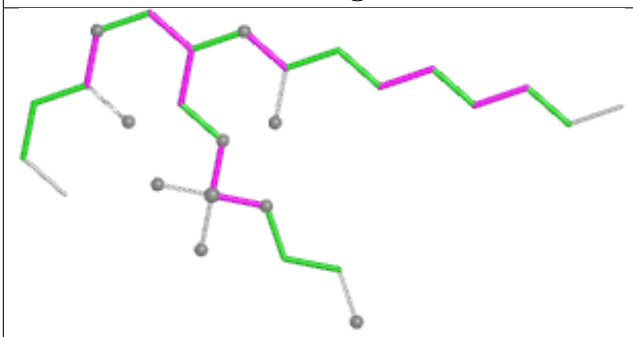
Ligand PTY B 801



Bond lengths



Bond angles



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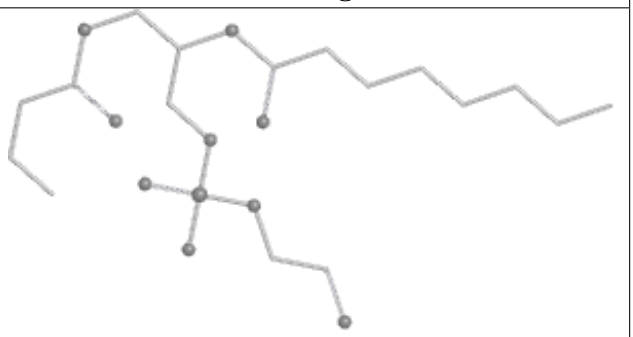
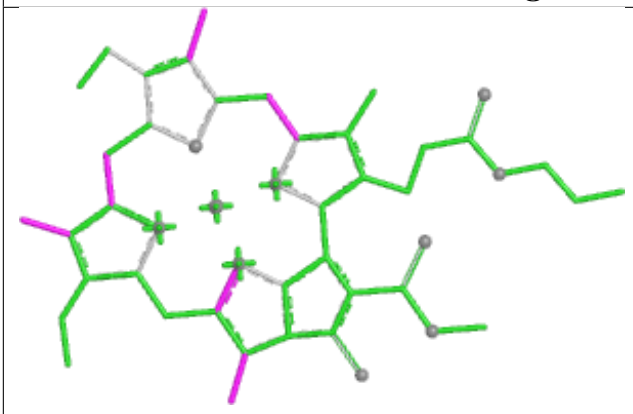
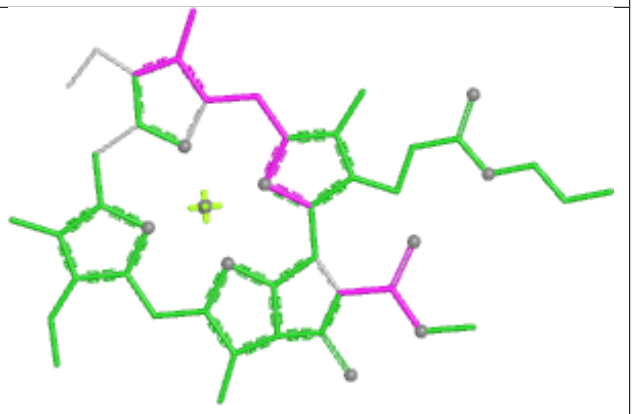


Rings

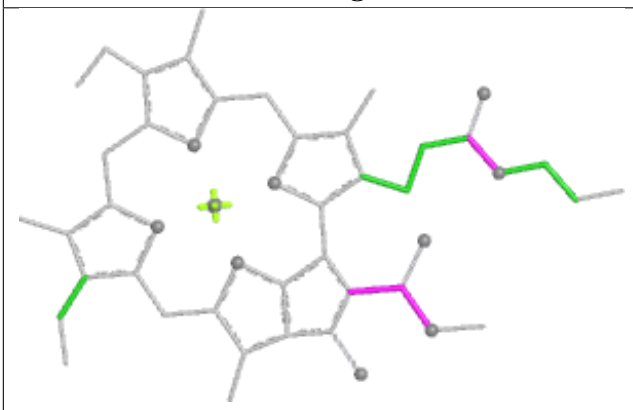
Ligand CLA B 805



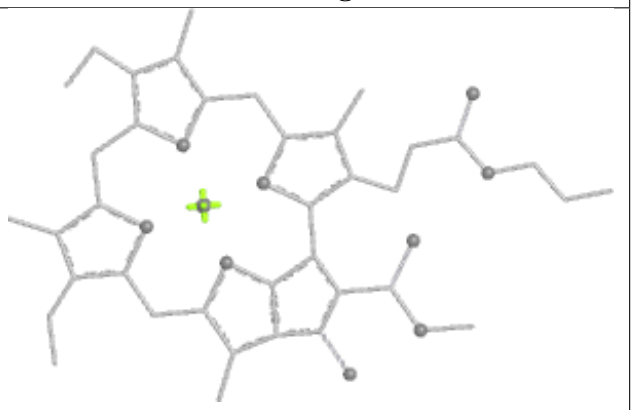
Bond lengths



Bond angles

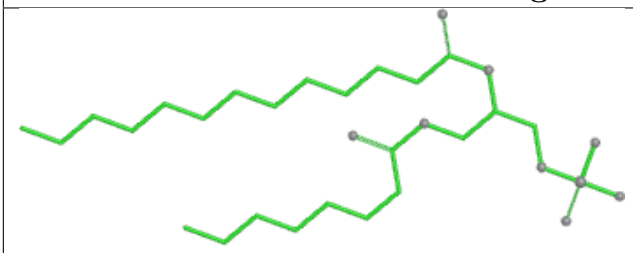


Torsions



Rings

Ligand 3PH 2 620



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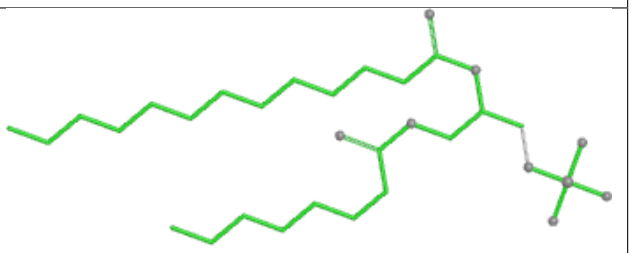
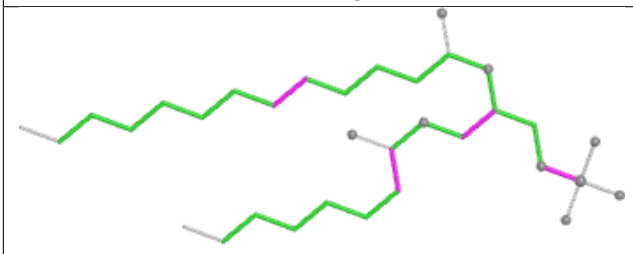
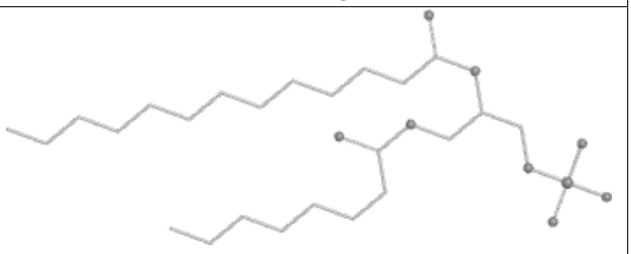


Bond angles

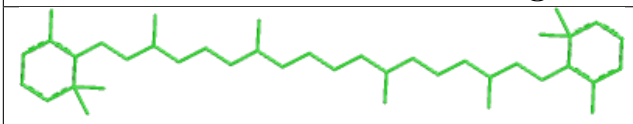


Torsions

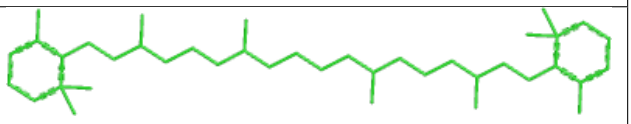


Rings

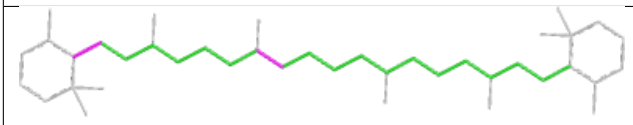
Ligand BCR I 202



Bond lengths



Bond angles



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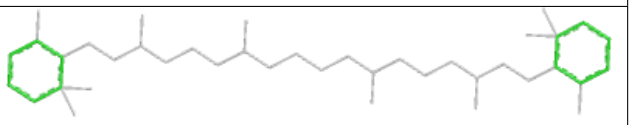
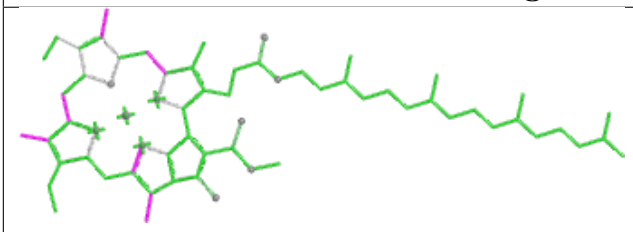


Rings

Ligand CLA A 824



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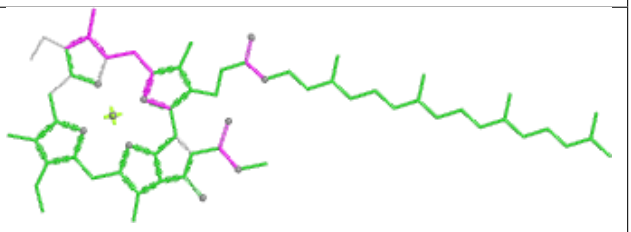
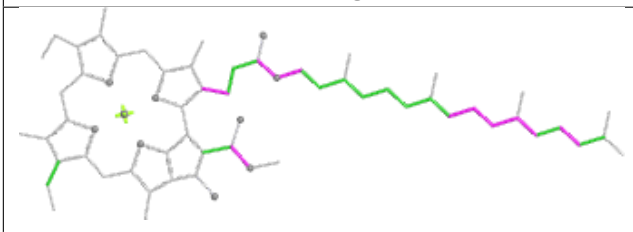


Bond angles



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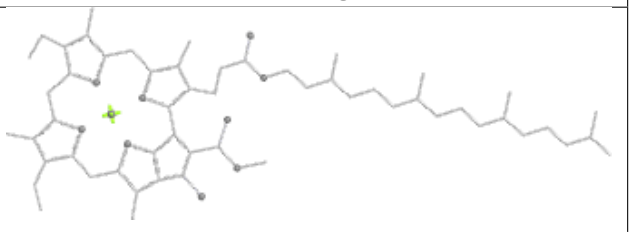
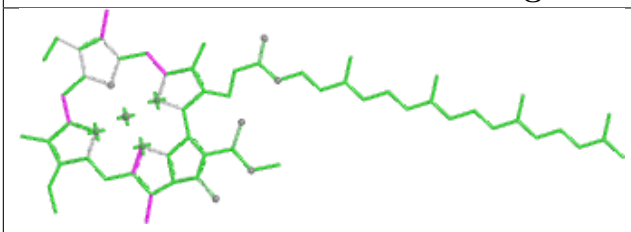


Rings

Ligand CLA B 809



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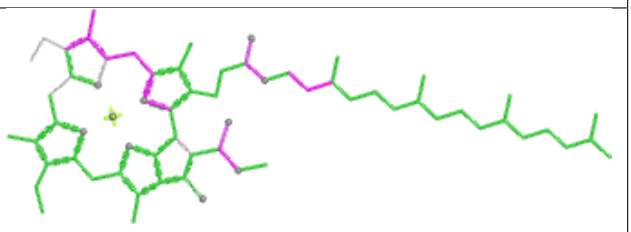
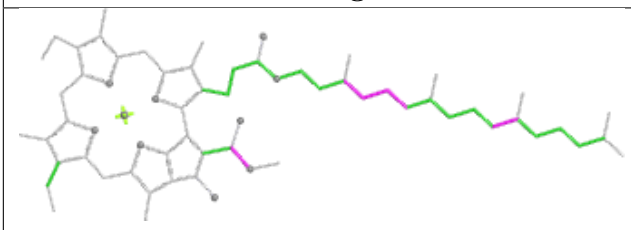


Bond angles



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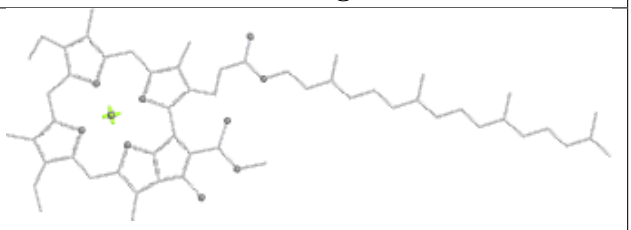
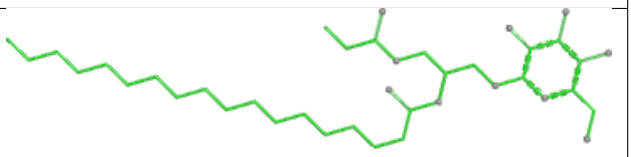


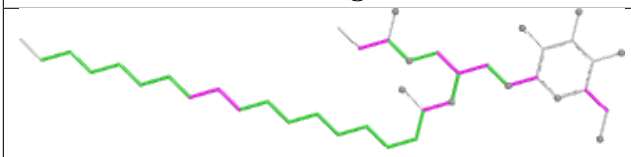
Rings

Ligand LMG 7 301

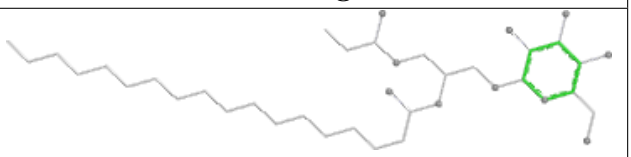
Bond lengths



Bond angles

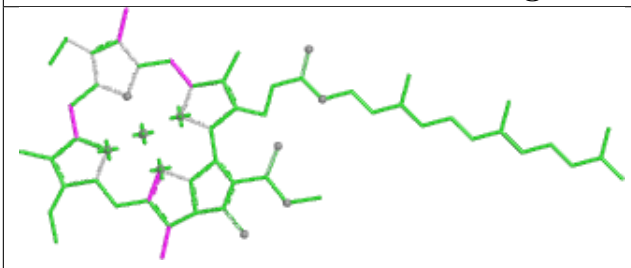


Torsions

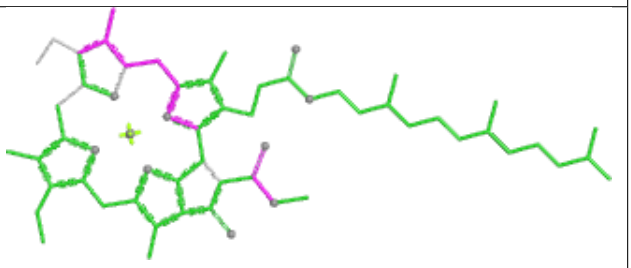


Rings

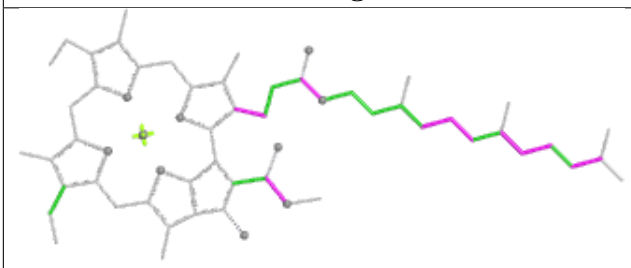
Ligand CLA A 826



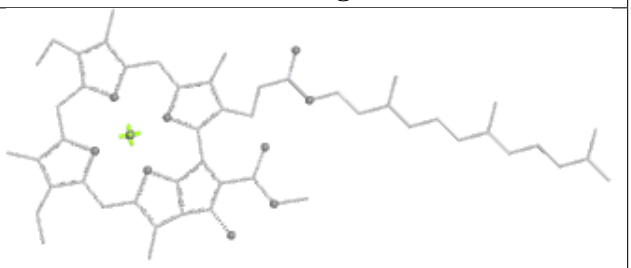
Bond lengths



Bond angles

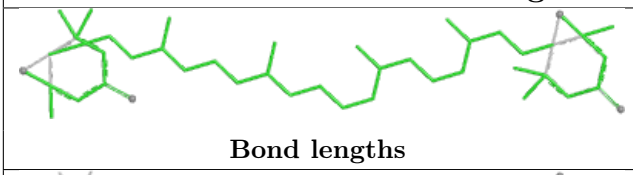


Torsions

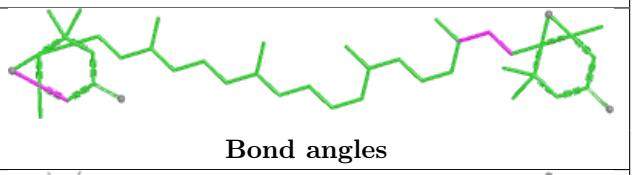


Rings

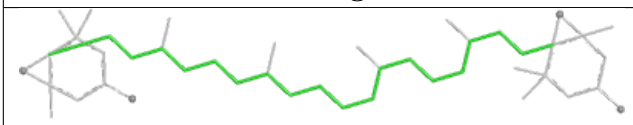
Ligand XAT 9 614



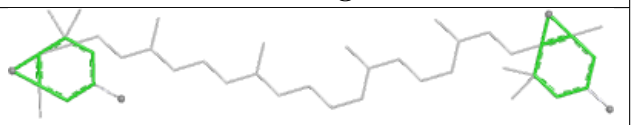
Bond lengths



Bond angles

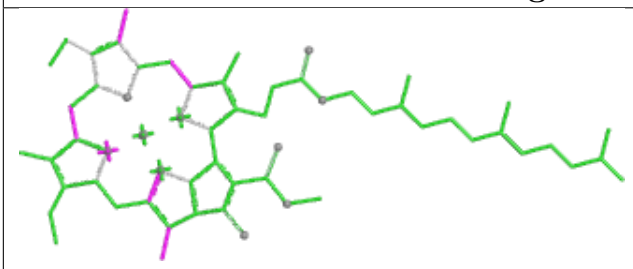


Torsions



Rings

Ligand CLA 2 603



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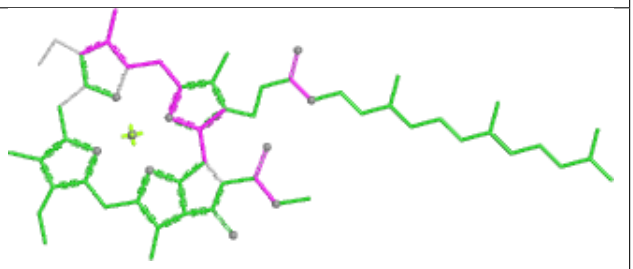
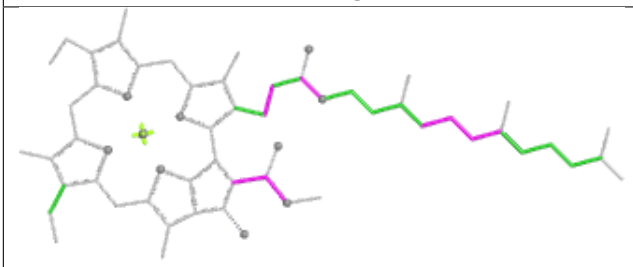
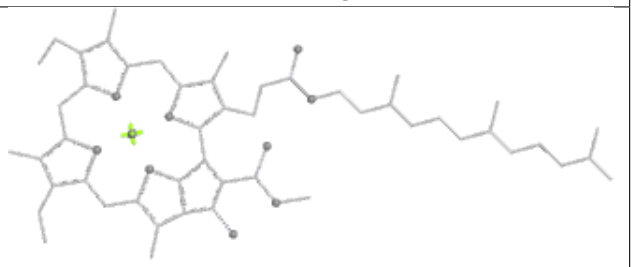


Bond angles

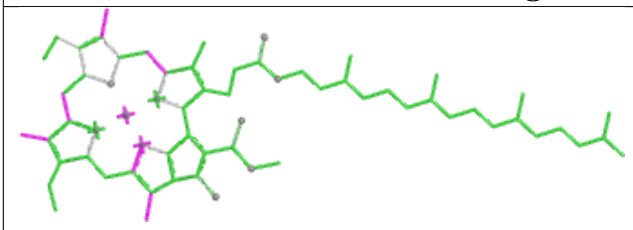


Torsions



Rings

Ligand CLA B 834



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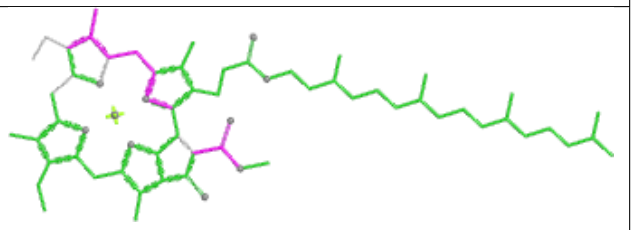
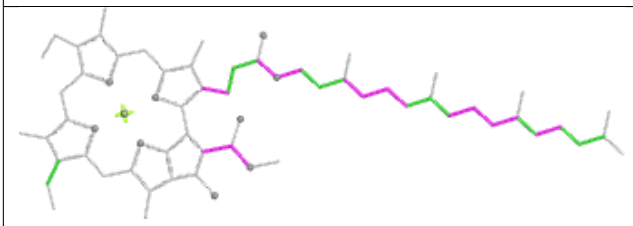
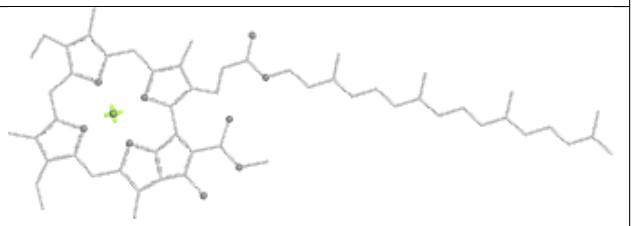


Bond angles

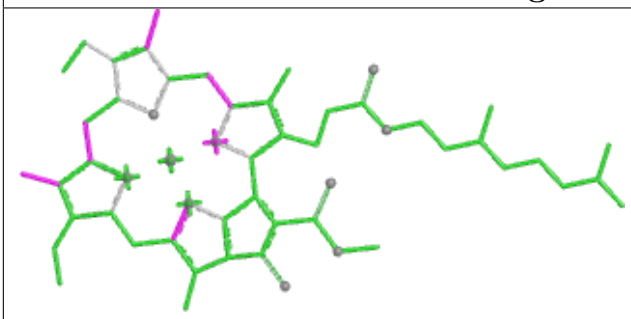


Torsions



Rings

Ligand CLA 1 613



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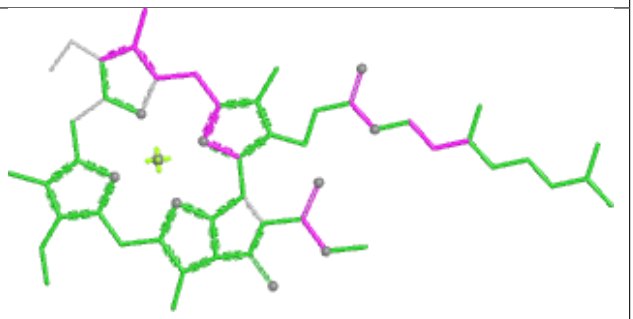
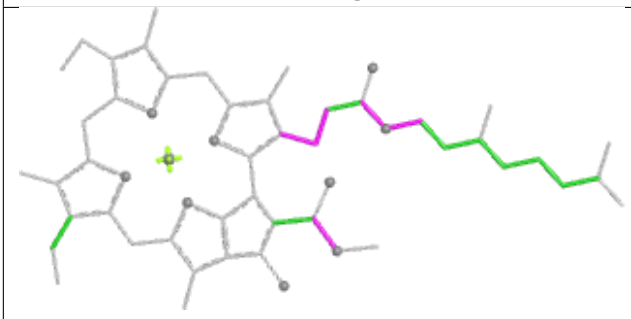
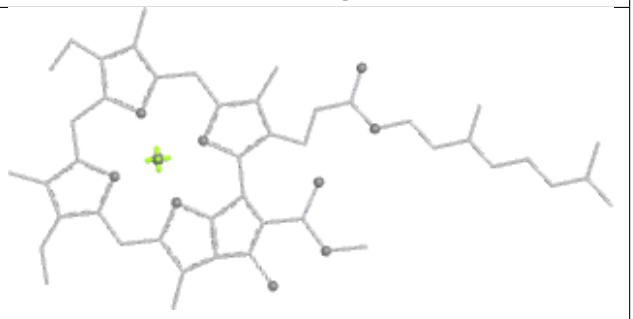


Bond angles

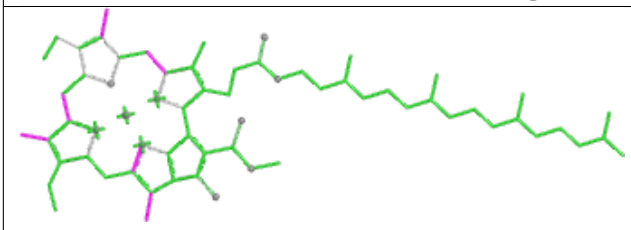


Torsions

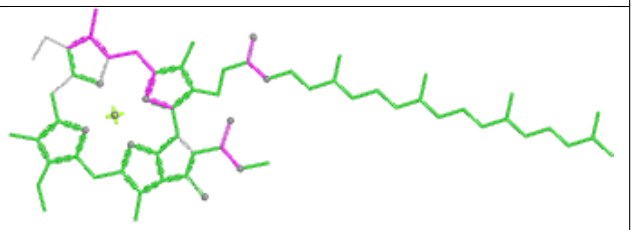


Rings

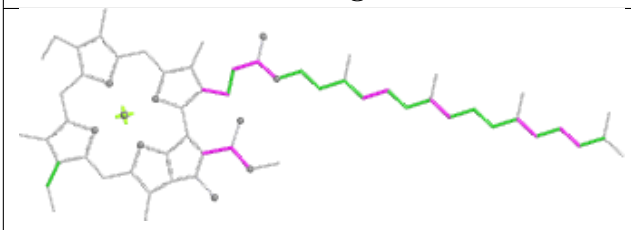
Ligand CLA B 806



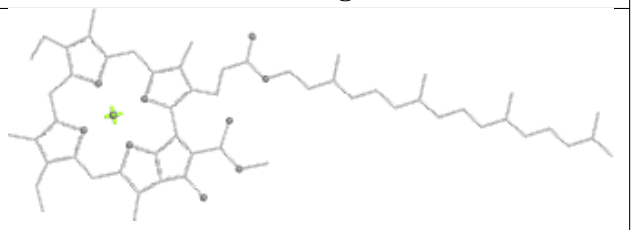
Bond lengths



Bond angles

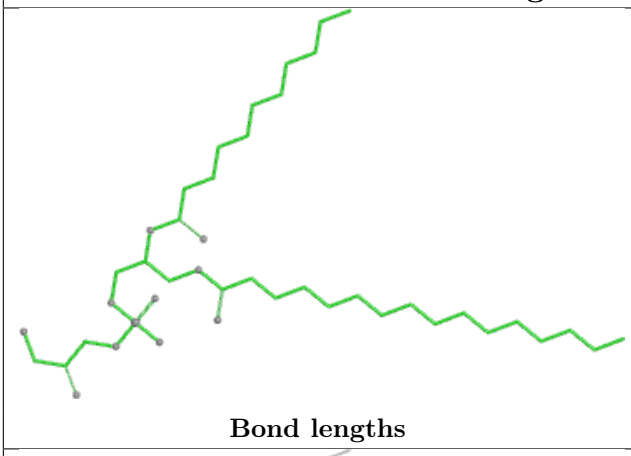


Torsions



Rings

Ligand LHG 1 619



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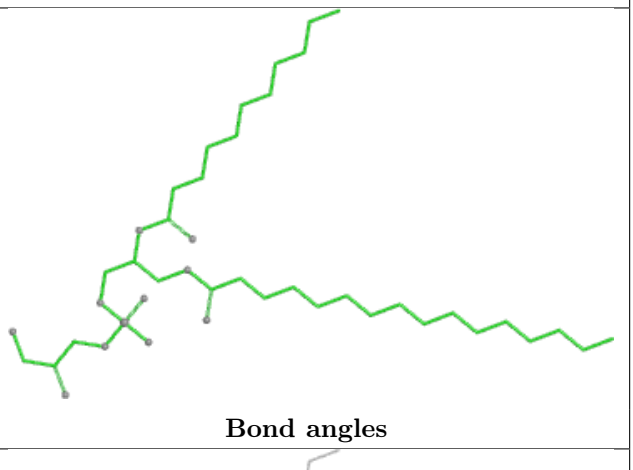
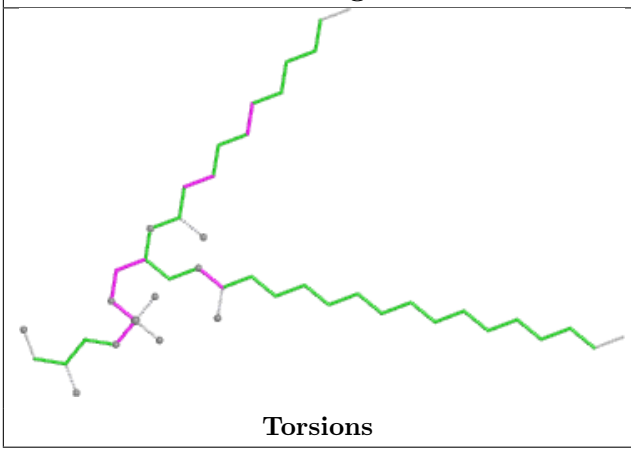
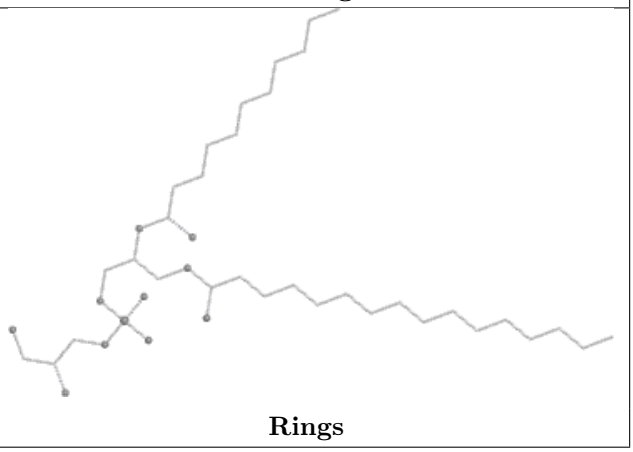


Bond angles

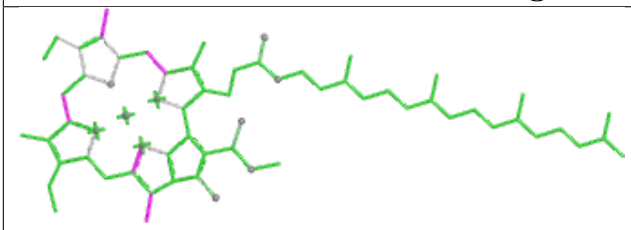


Torsions

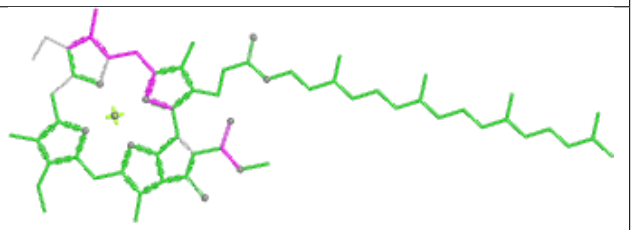


Rings

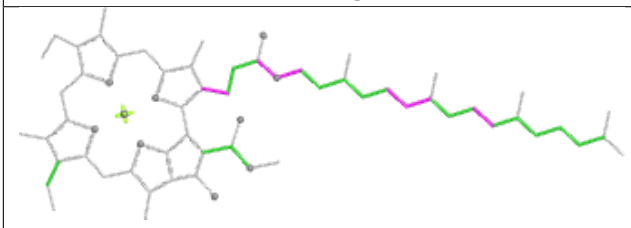
Ligand CLA 1 609



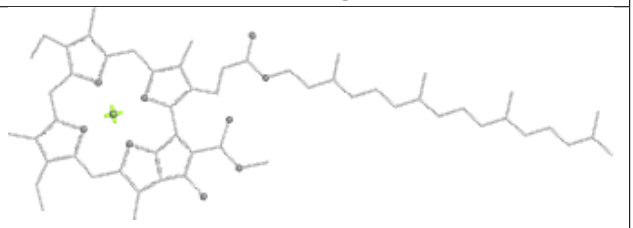
Bond lengths



Bond angles

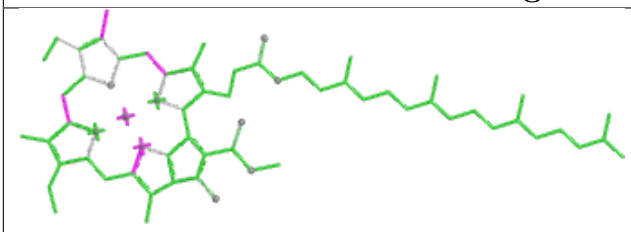


Torsions

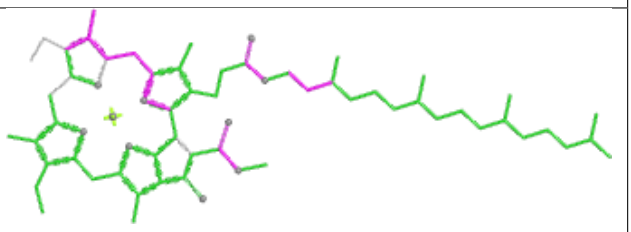


Rings

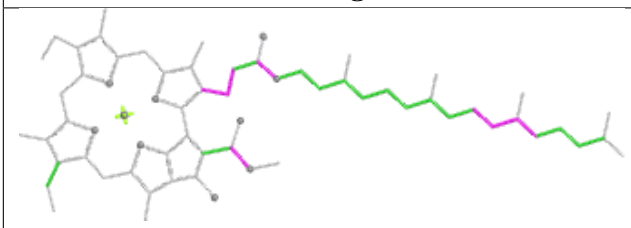
Ligand CLA A 809



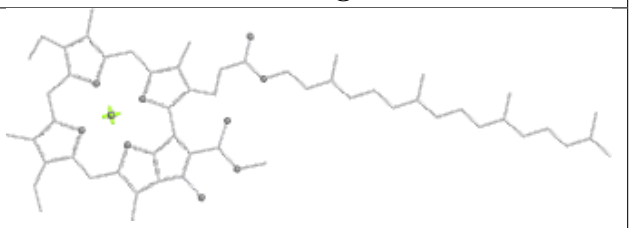
Bond lengths



Bond angles

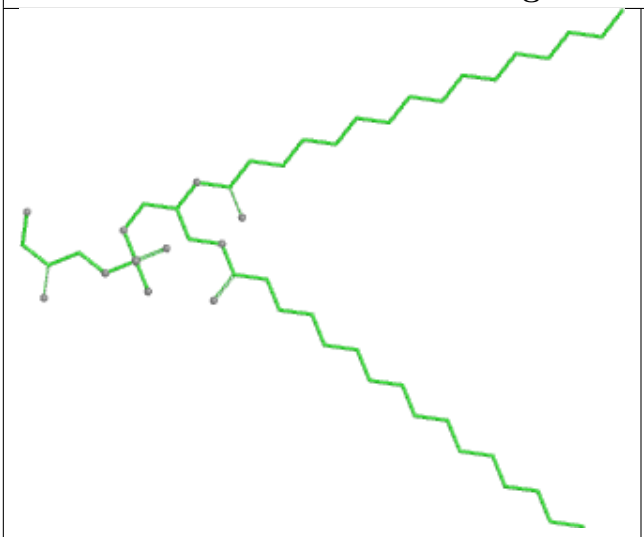


Torsions

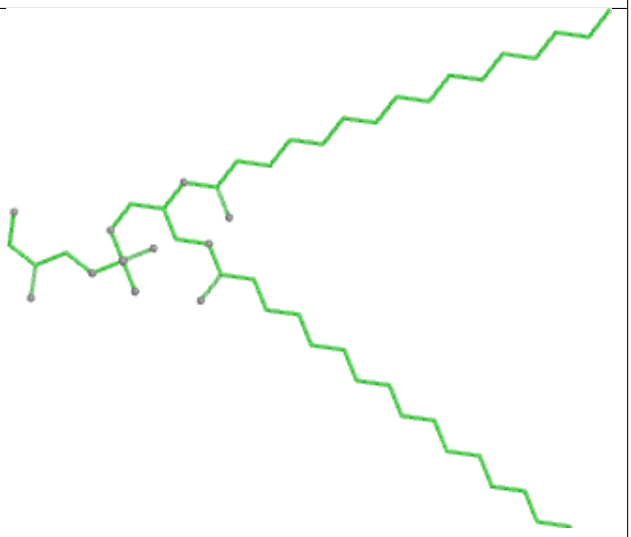


Rings

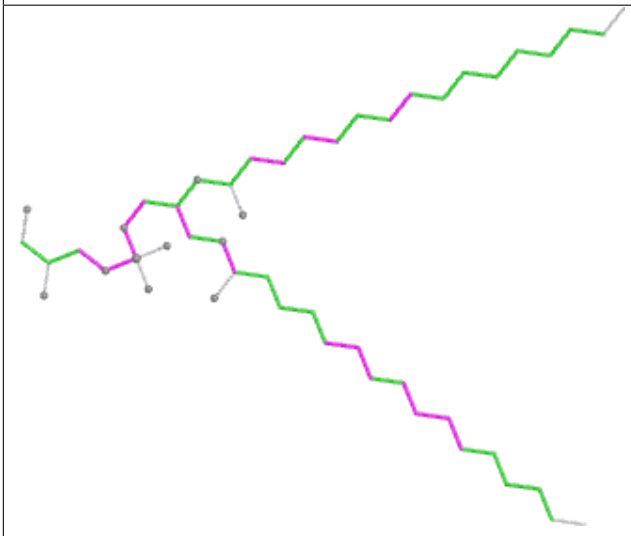
Ligand LHG B 852



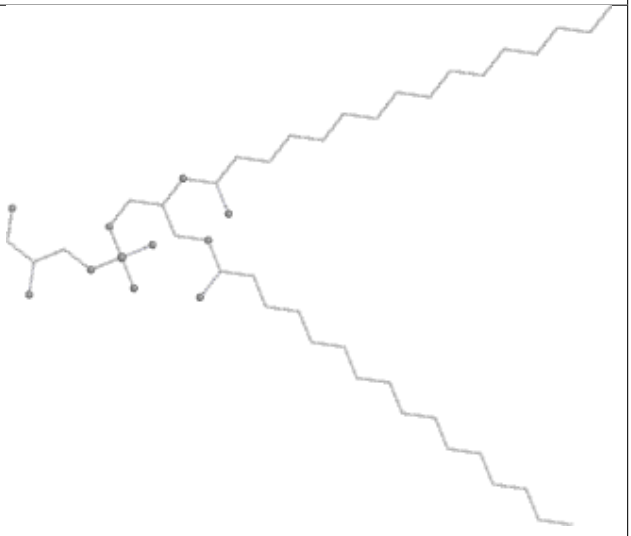
Bond lengths



Bond angles

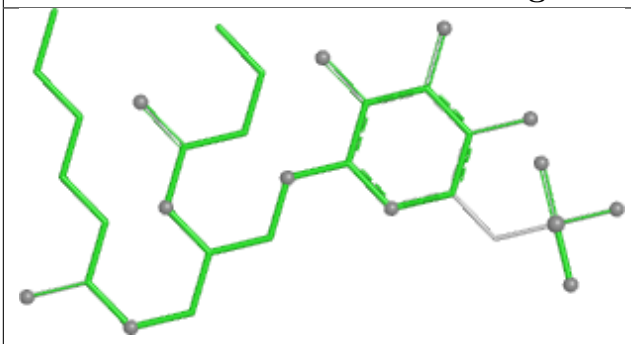


Torsions

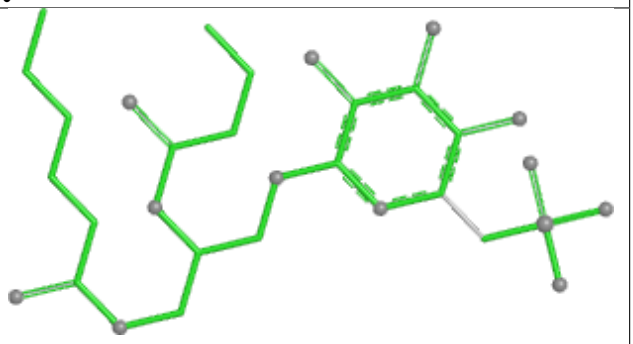


Rings

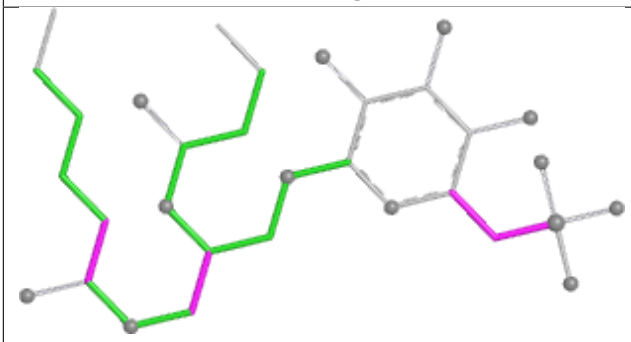
Ligand SQD 3 423



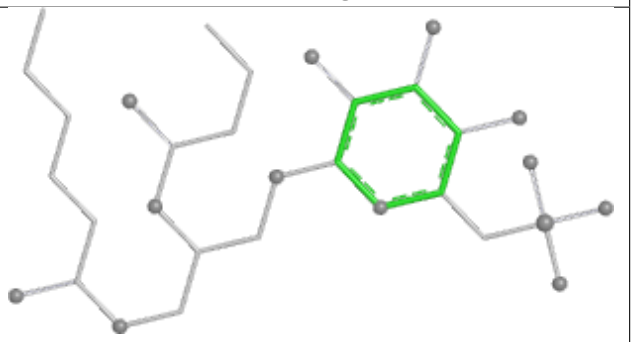
Bond lengths



Bond angles



Torsions



Rings

Ligand OCD A 855

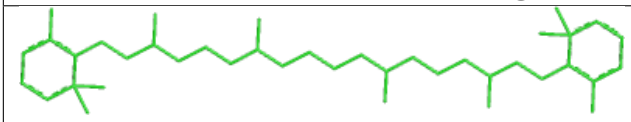
Bond lengths

Bond angles

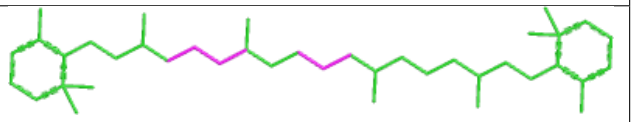
Torsions

Rings

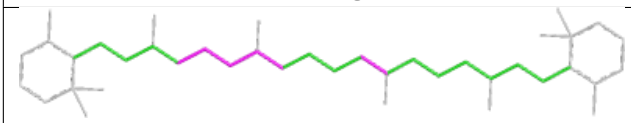
Ligand BCR G 4005



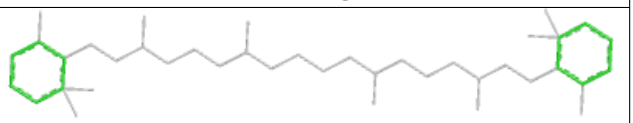
Bond lengths



Bond angles

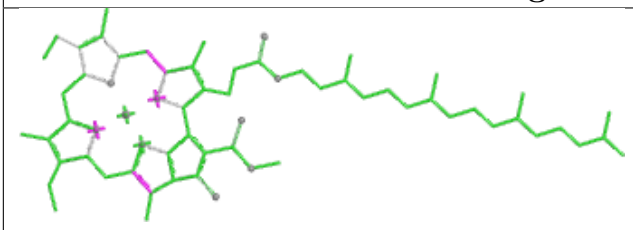


Torsions

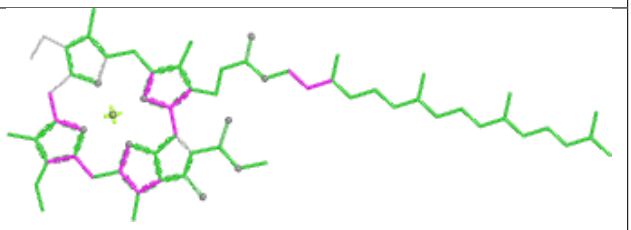


Rings

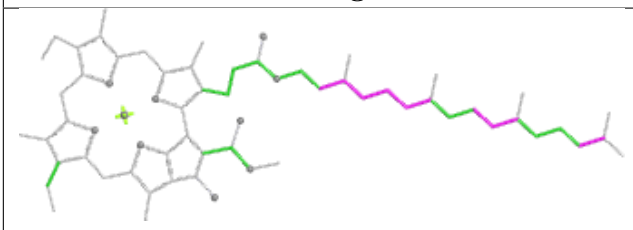
Ligand CL0 A 803



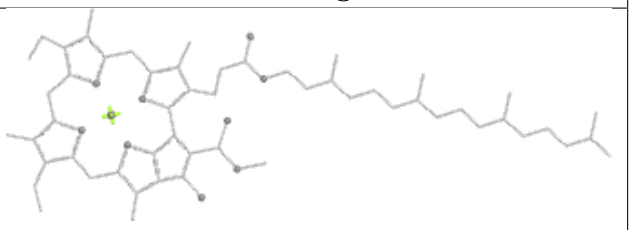
Bond lengths



Bond angles

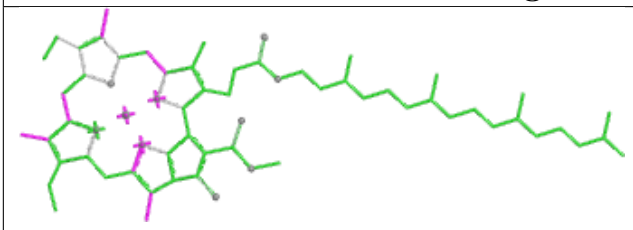


Torsions

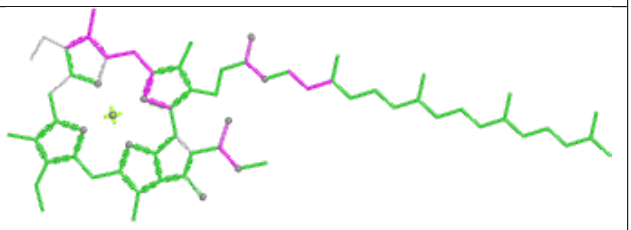


Rings

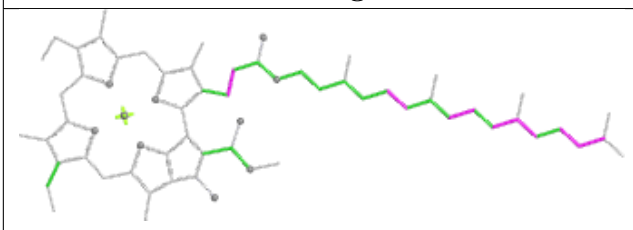
Ligand CLA A 832



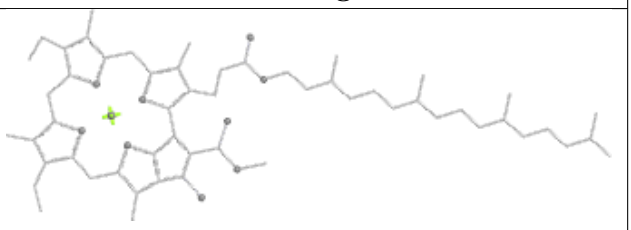
Bond lengths



Bond angles

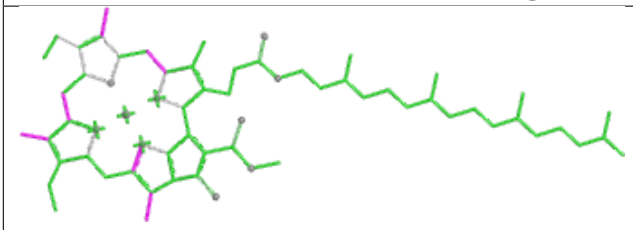


Torsions

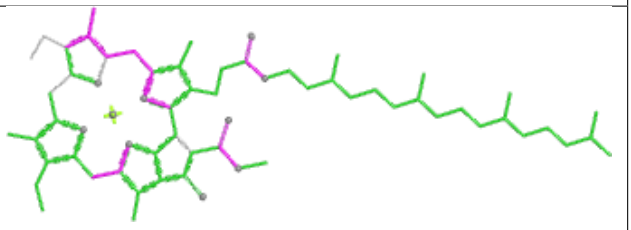


Rings

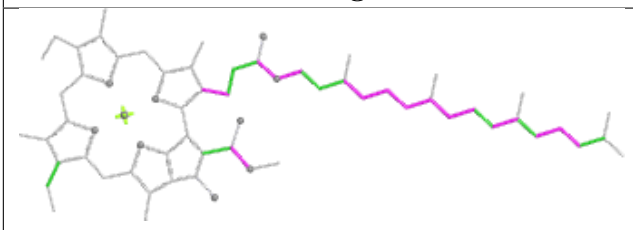
Ligand CLA A 831



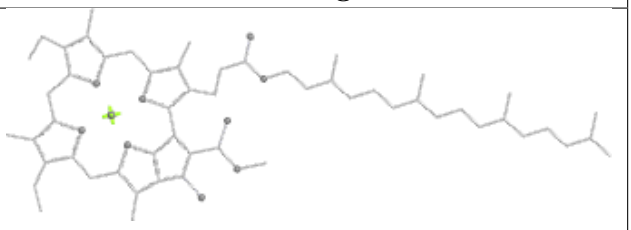
Bond lengths



Bond angles

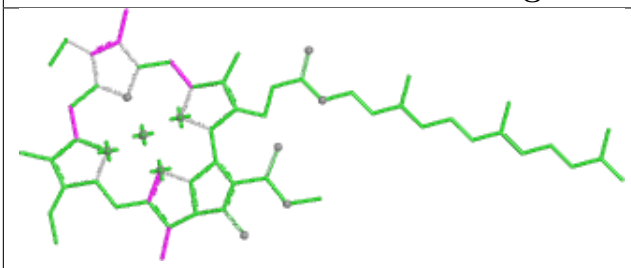


Torsions

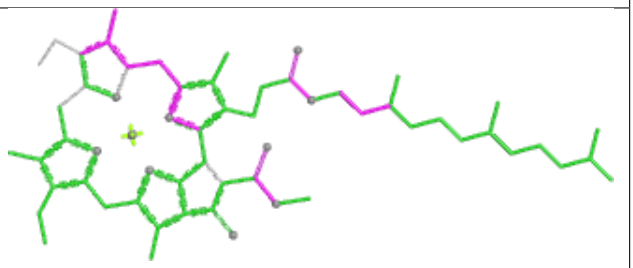


Rings

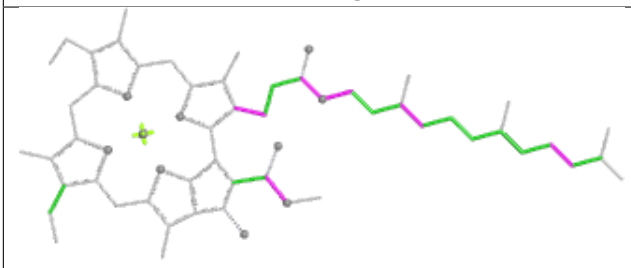
Ligand CLA A 840



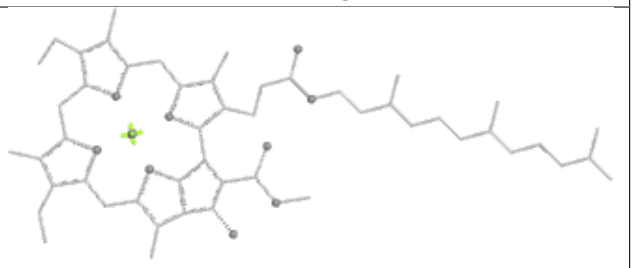
Bond lengths



Bond angles

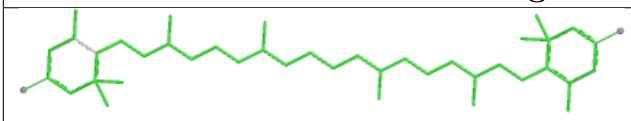


Torsions

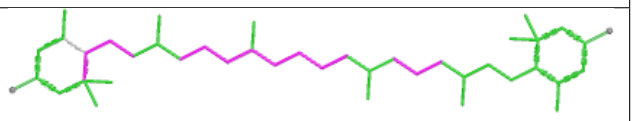


Rings

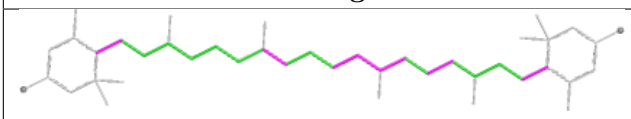
Ligand LUT 1 615



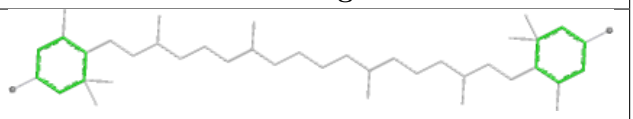
Bond lengths



Bond angles

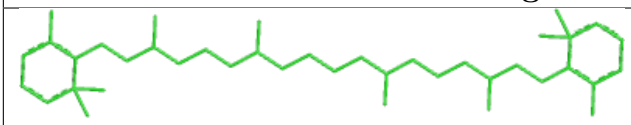


Torsions

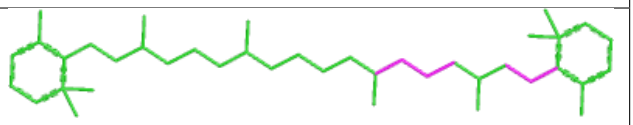


Rings

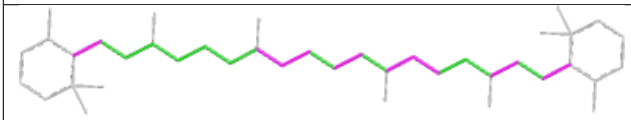
Ligand BCR A 850



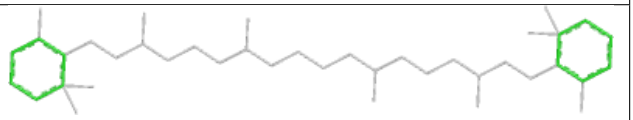
Bond lengths



Bond angles

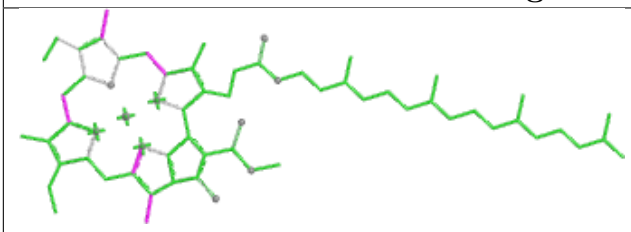


Torsions

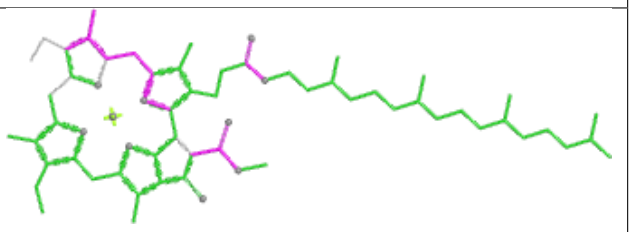


Rings

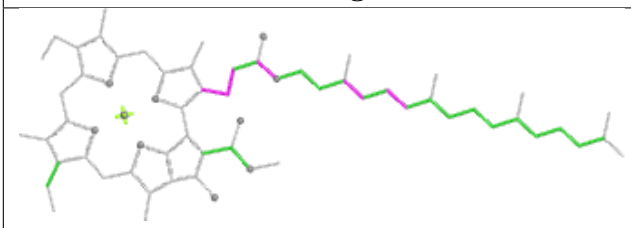
Ligand CLA L 305



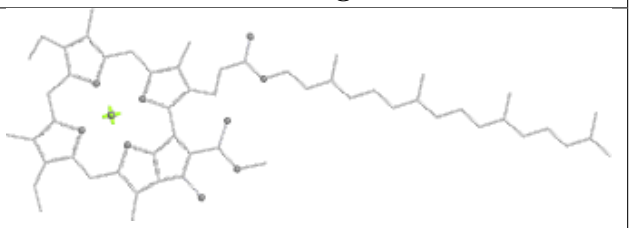
Bond lengths



Bond angles

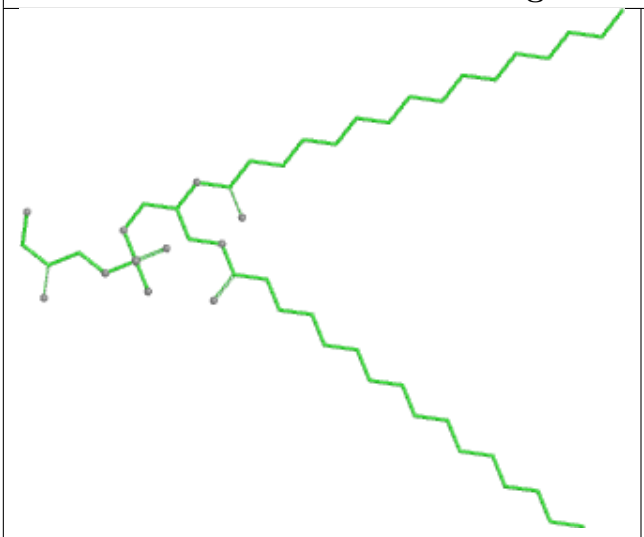


Torsions

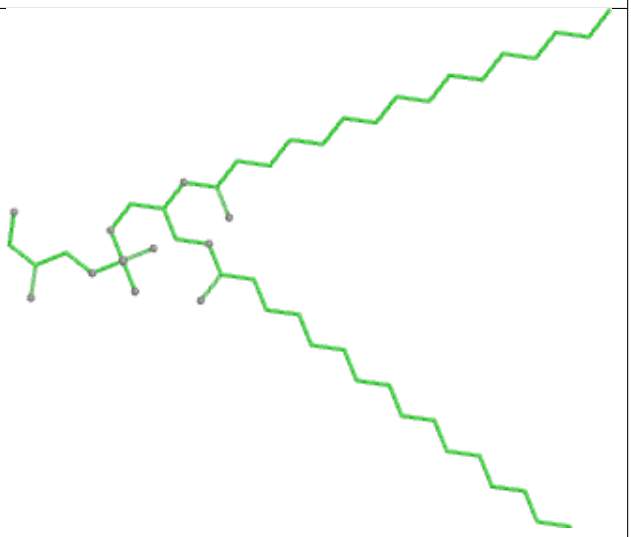


Rings

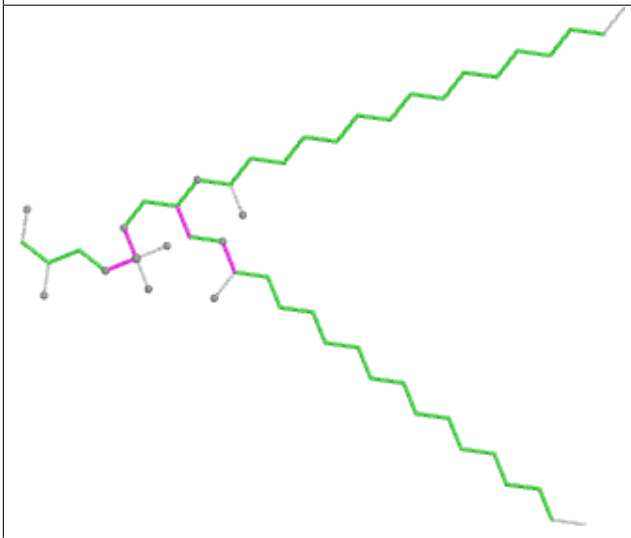
Ligand LHG 9 619



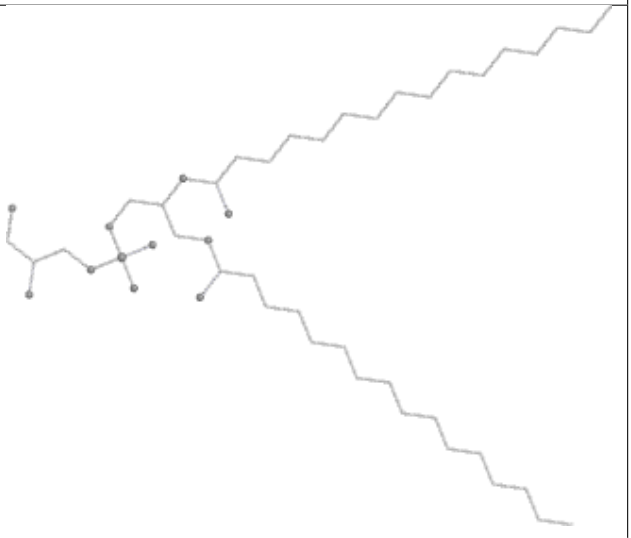
Bond lengths



Bond angles

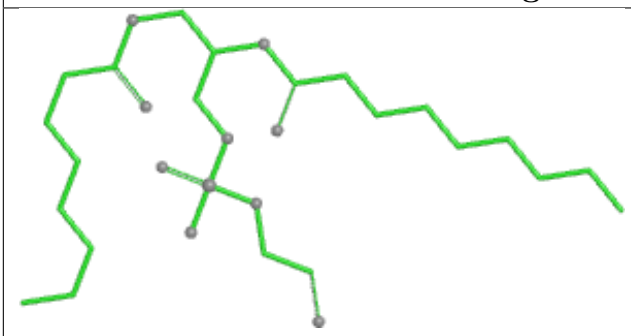


Torsions

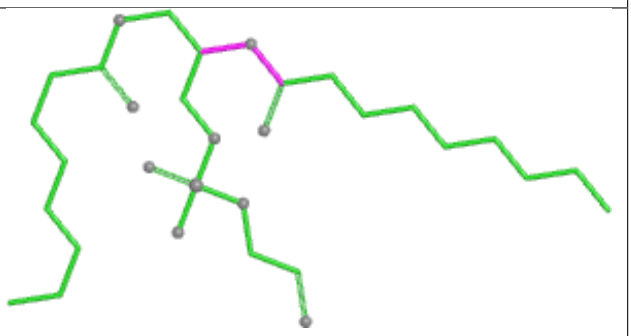


Rings

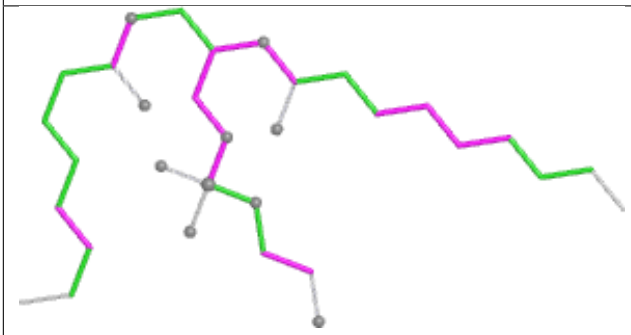
Ligand PTY H 202



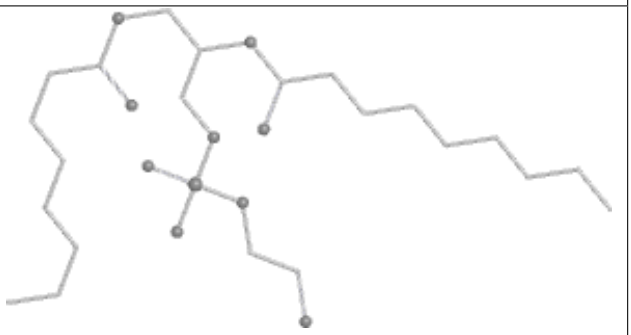
Bond lengths



Bond angles

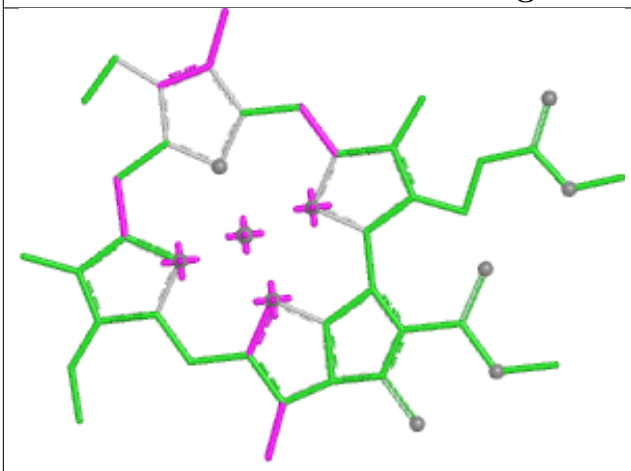


Torsions

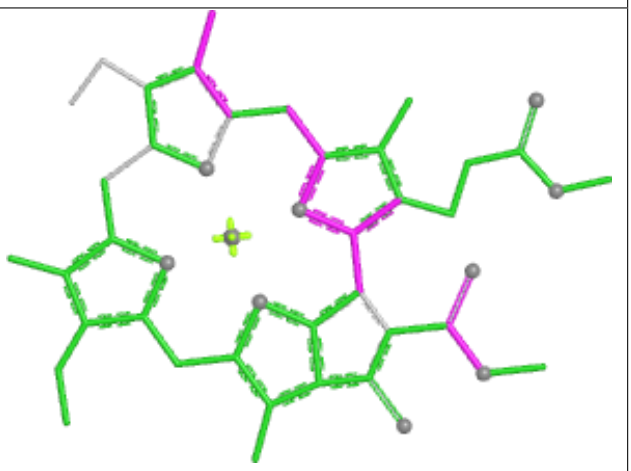


Rings

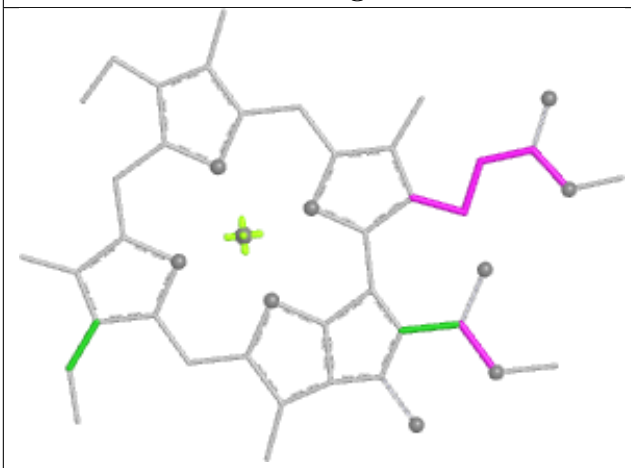
Ligand CLA F 5008



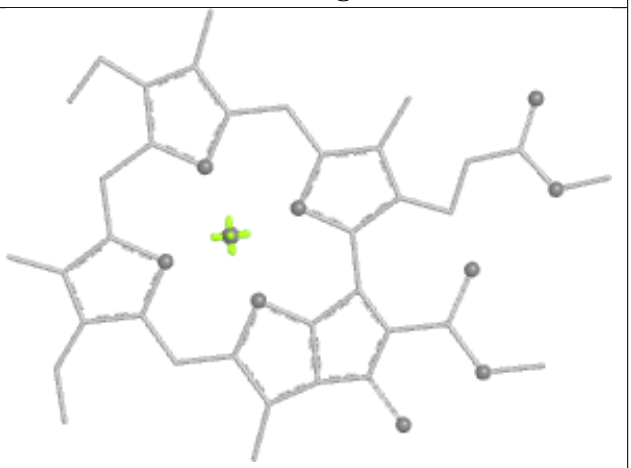
Bond lengths



Bond angles

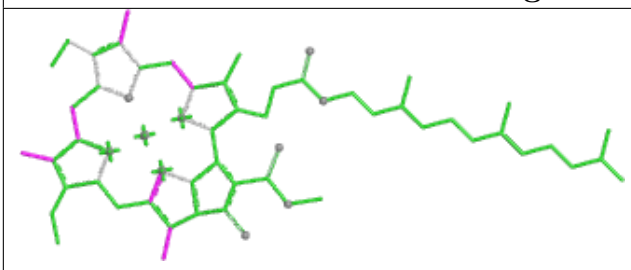


Torsions

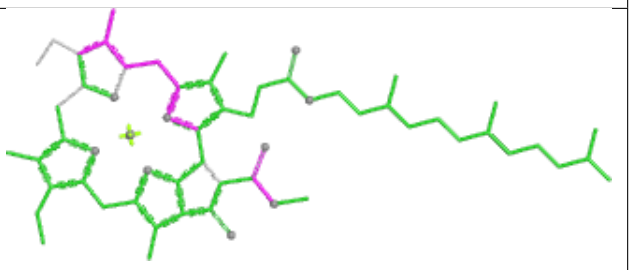


Rings

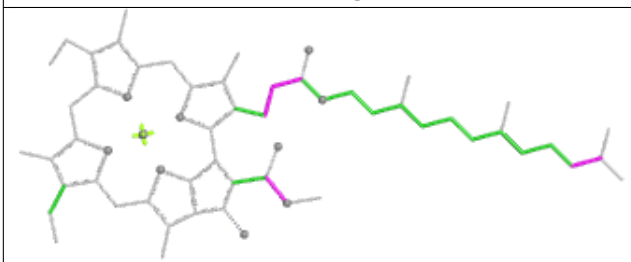
Ligand CLA A 825



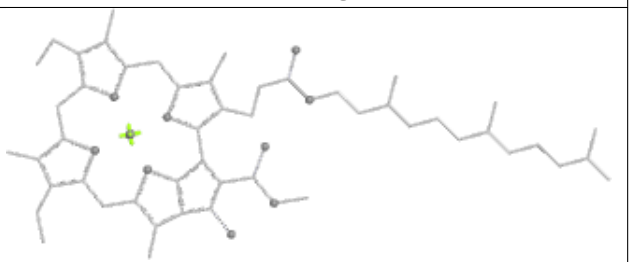
Bond lengths



Bond angles

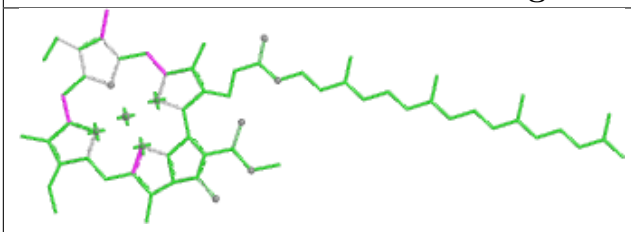


Torsions

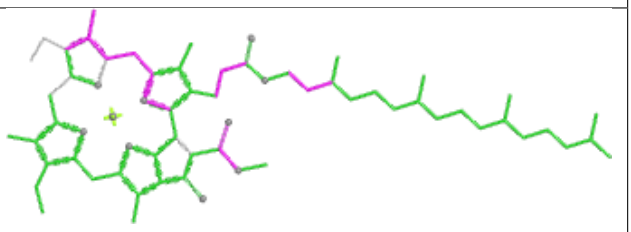


Rings

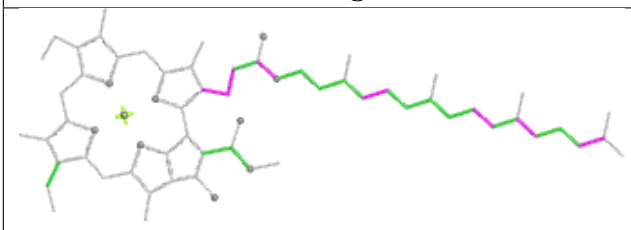
Ligand CLA 7 310



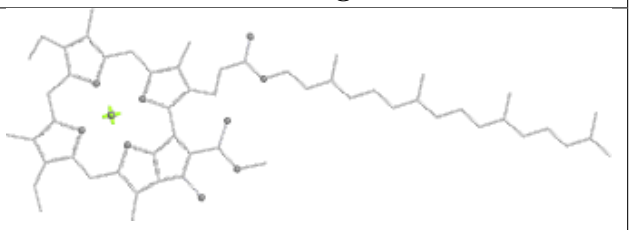
Bond lengths



Bond angles

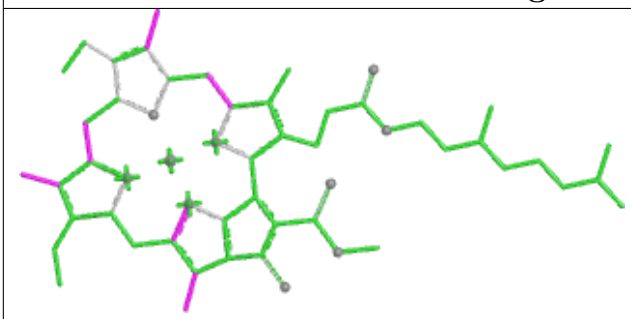


Torsions

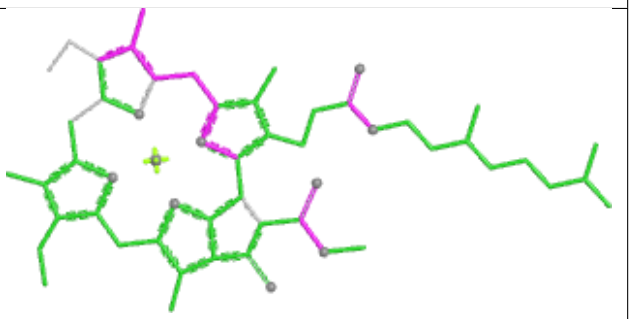


Rings

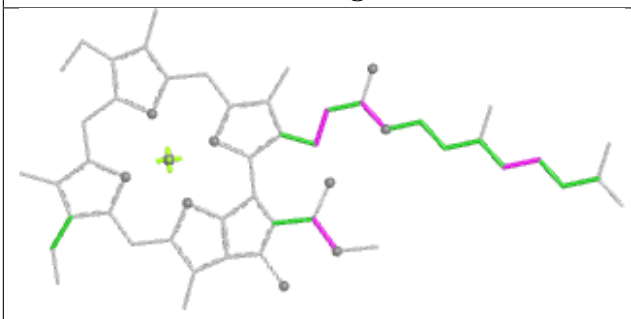
Ligand CLA 9 611



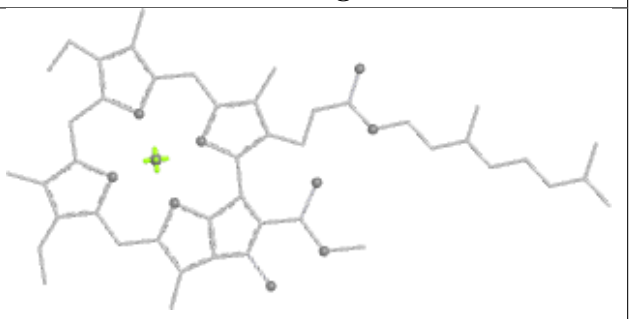
Bond lengths



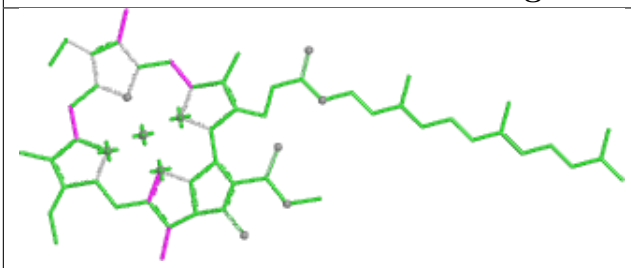
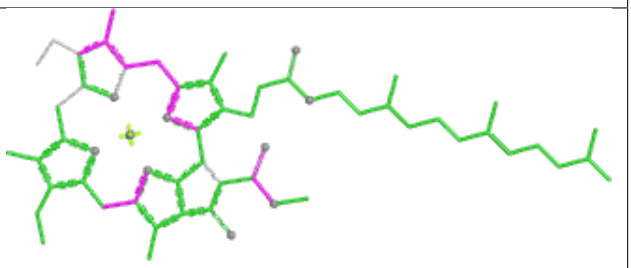
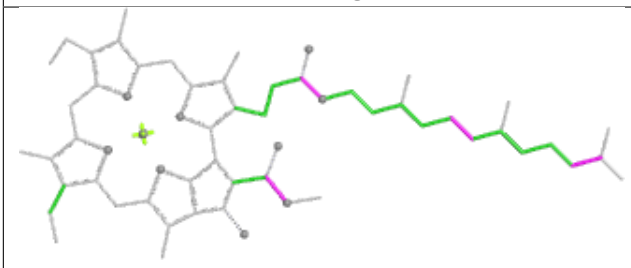
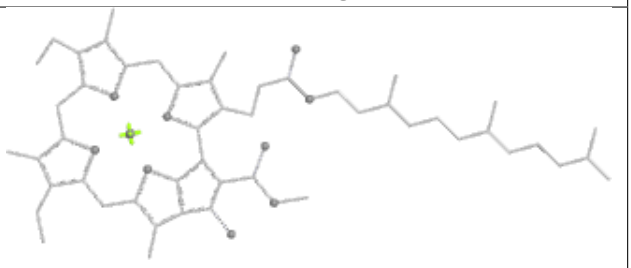
Bond angles

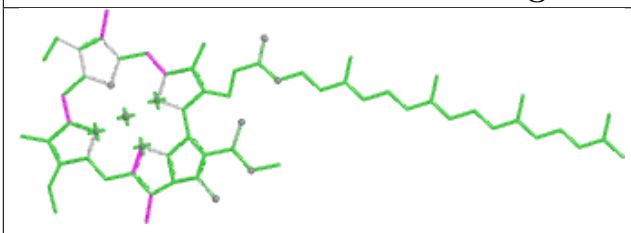
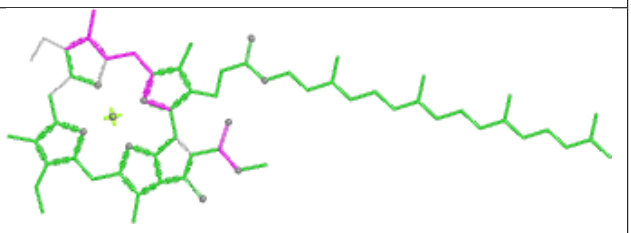
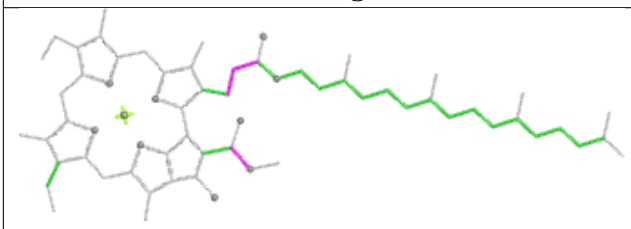
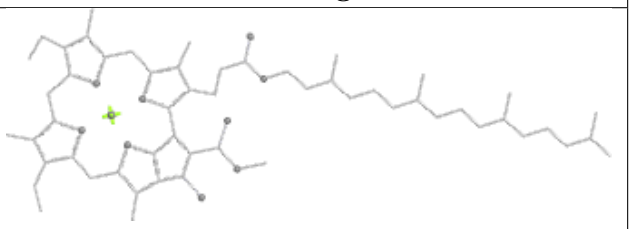


Torsions

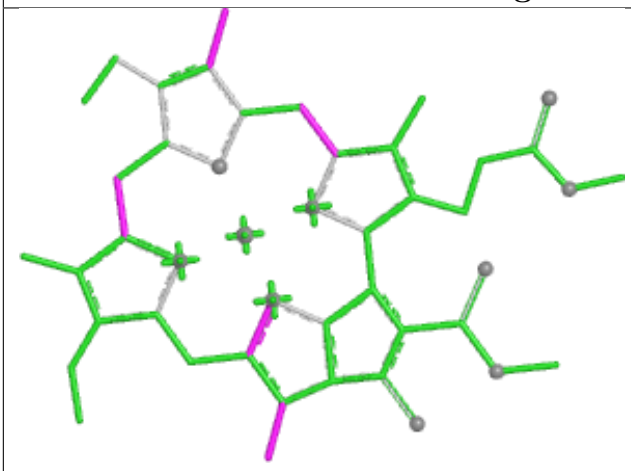


Rings

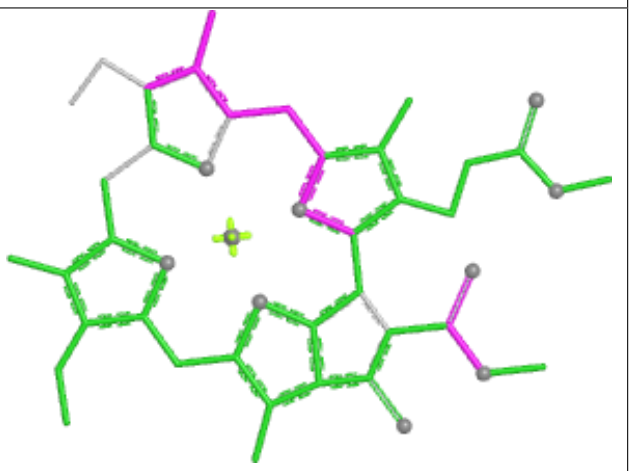
Ligand CLA B 838	
	
Bond lengths	**Bond angles**
	
Torsions	**Rings**

Ligand CLA 7 315	
	
Bond lengths	**Bond angles**
	
Torsions	**Rings**

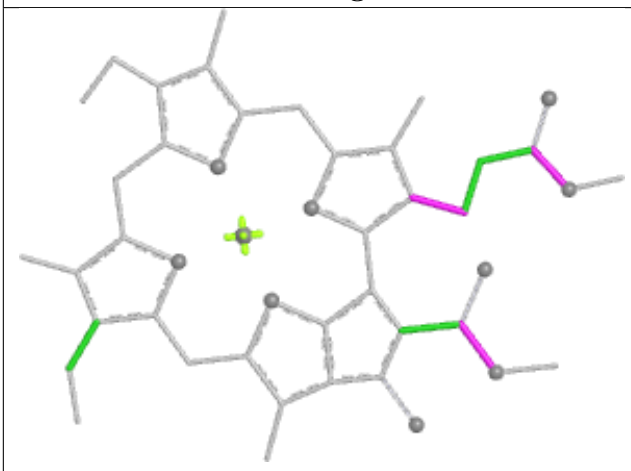
Ligand CLA G 4003



Bond lengths



Bond angles



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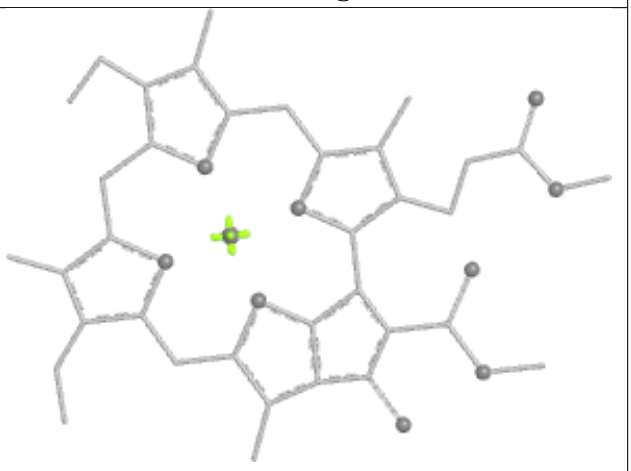
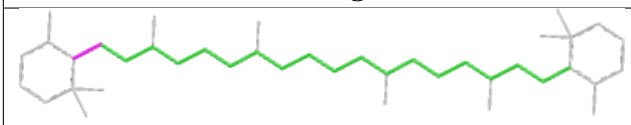


Rings

Ligand BCR B 845

Bond lengths

Bond angles



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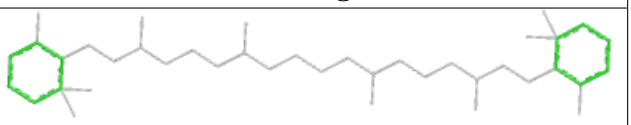
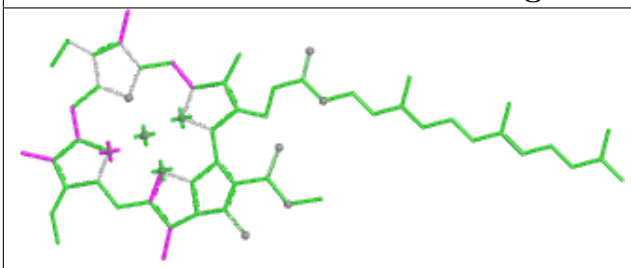
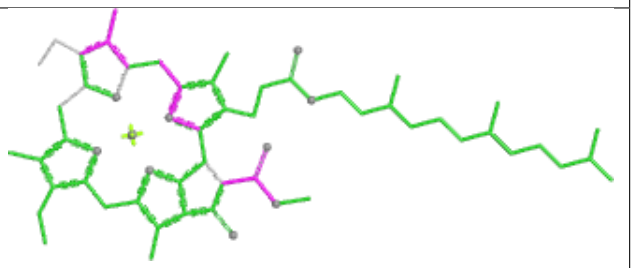


Rings

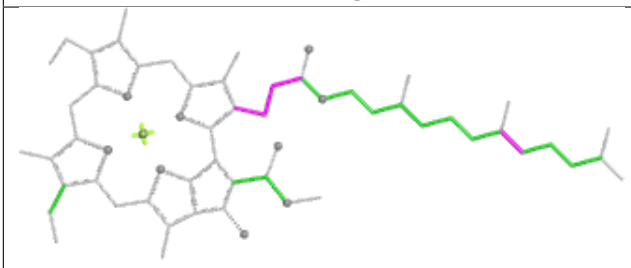
Ligand CLA B 817



Bond lengths



Bond angles



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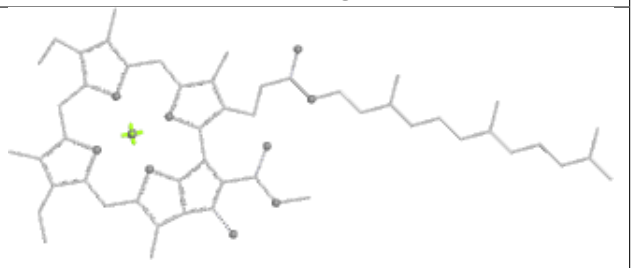
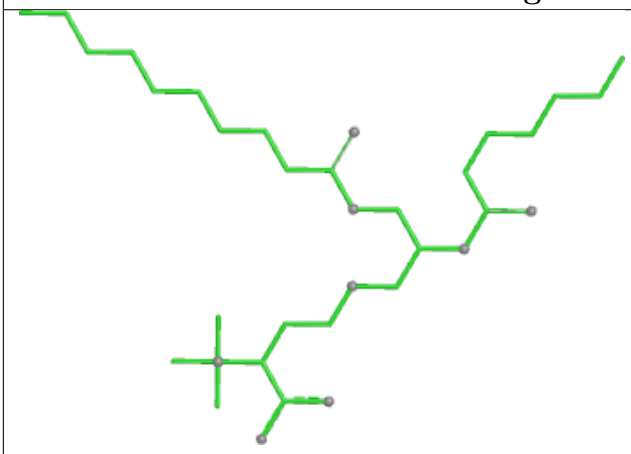
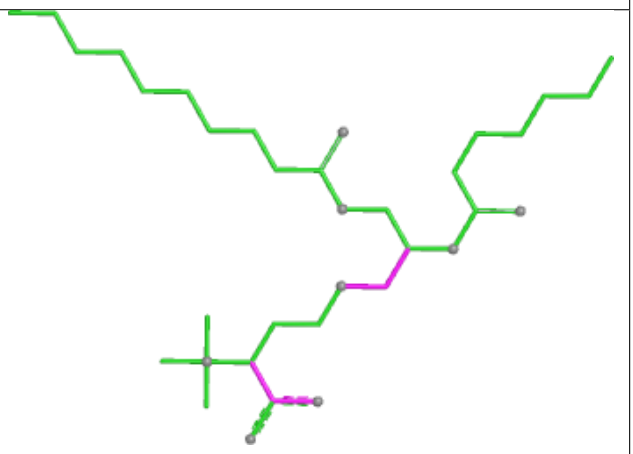


Rings

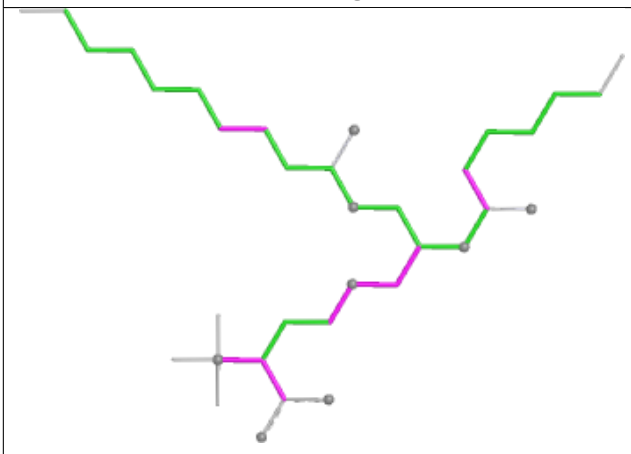
Ligand LMK 8 320



Bond lengths



Bond angles



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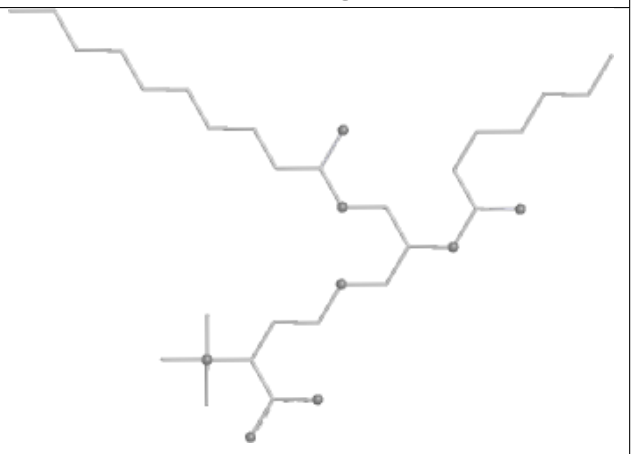
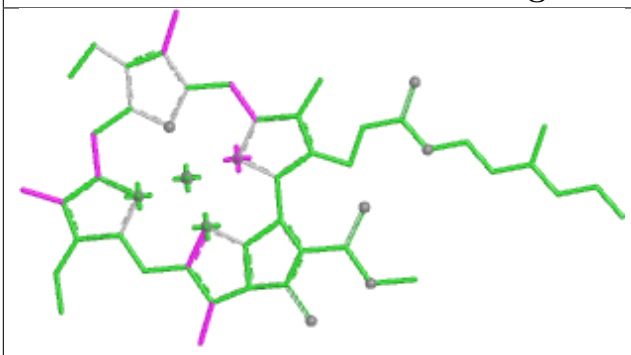
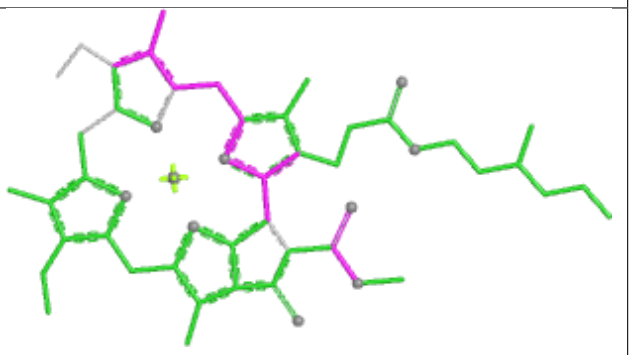


Rings

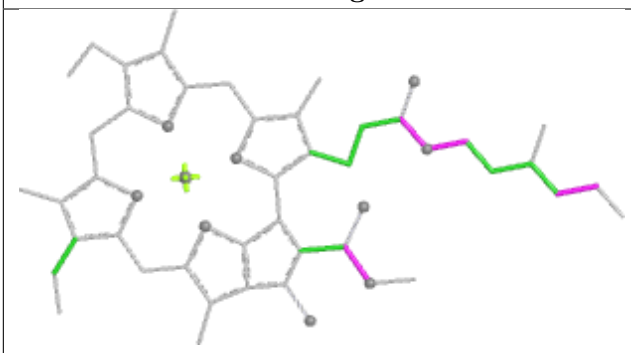
Ligand CLA 7 312



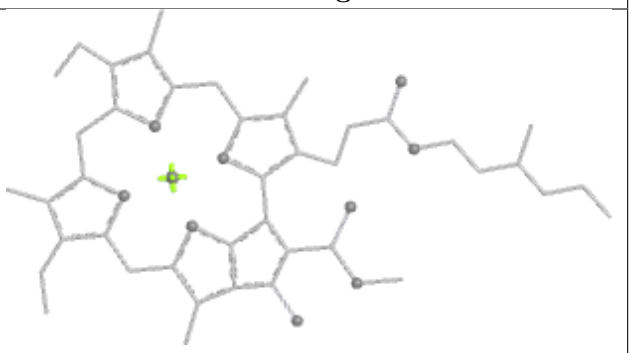
Bond lengths



Bond angles

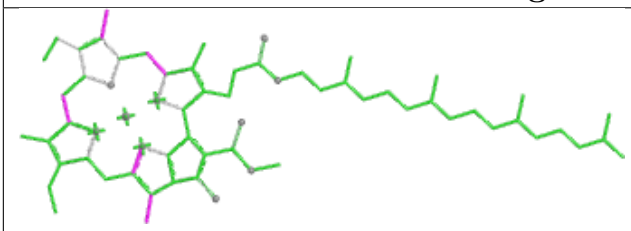


Torsions

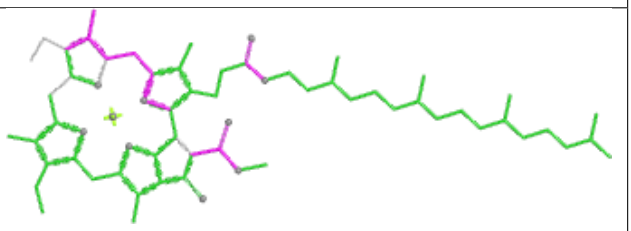


Rings

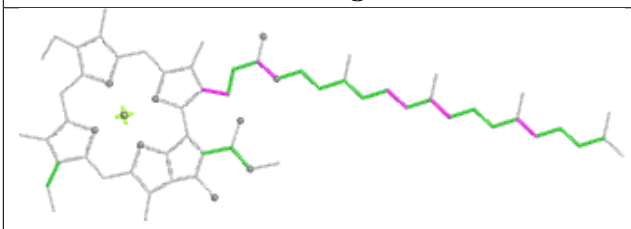
Ligand CLA 7 309



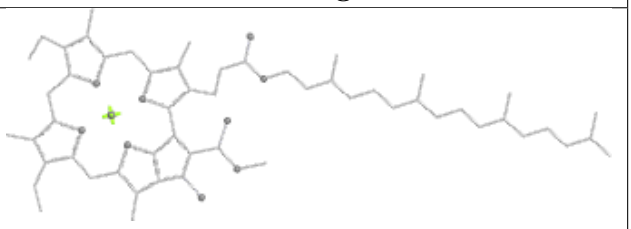
Bond lengths



Bond angles

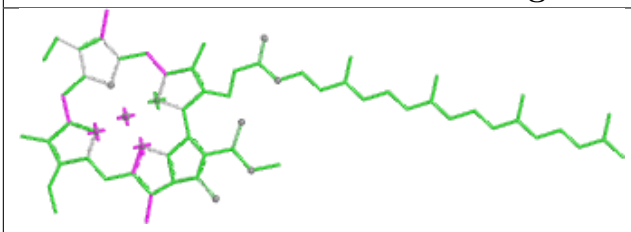


Torsions



Rings

Ligand CLA 8 311



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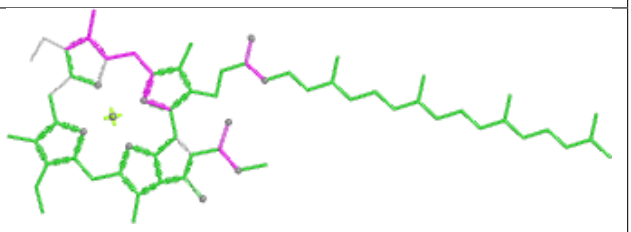
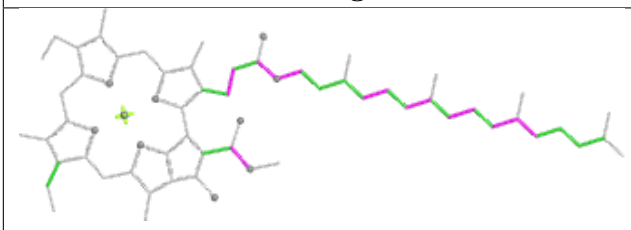
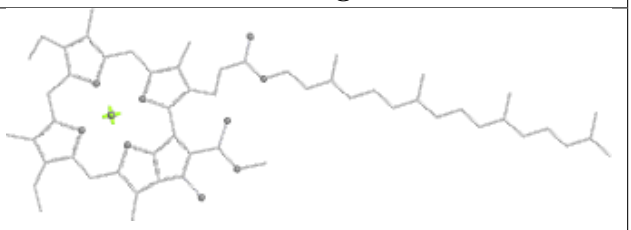


Bond angles

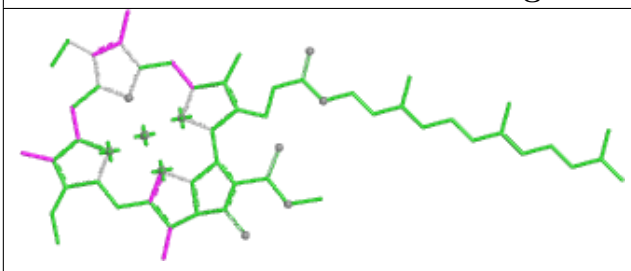


Torsions



Rings

Ligand CLA A 827



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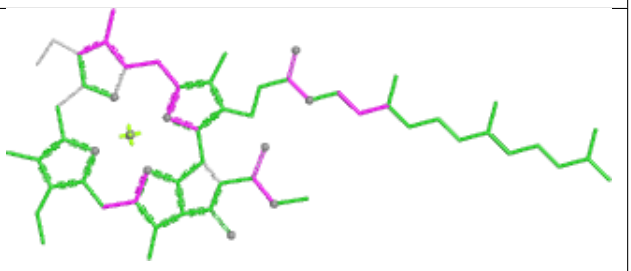
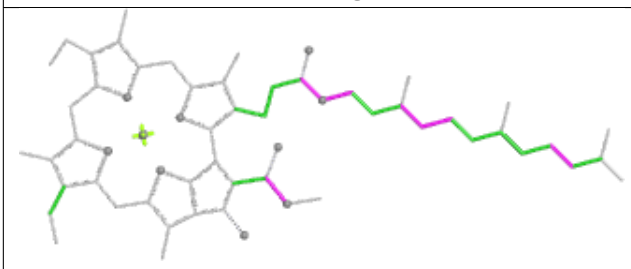


Bond angles



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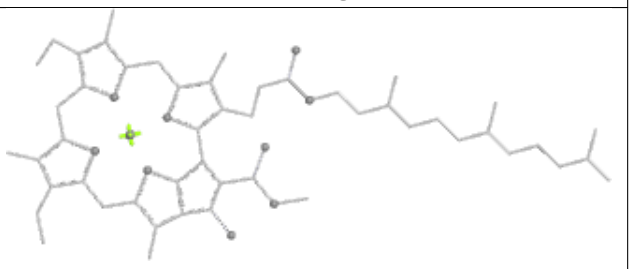
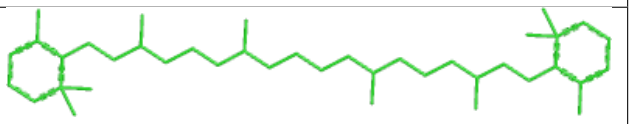


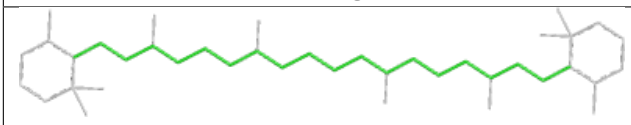
Rings

Ligand BCR L 309

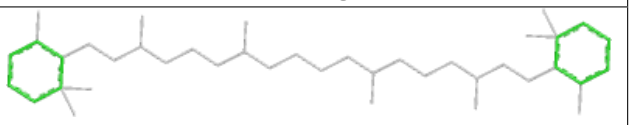
Bond lengths



Bond angles

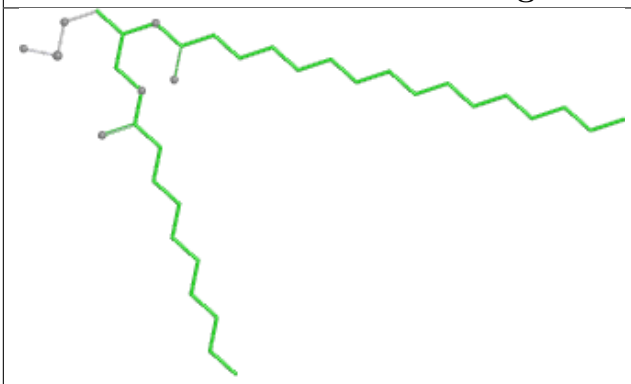


Torsions

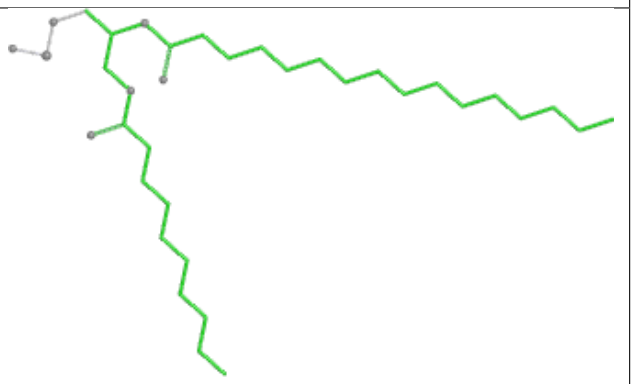


Rings

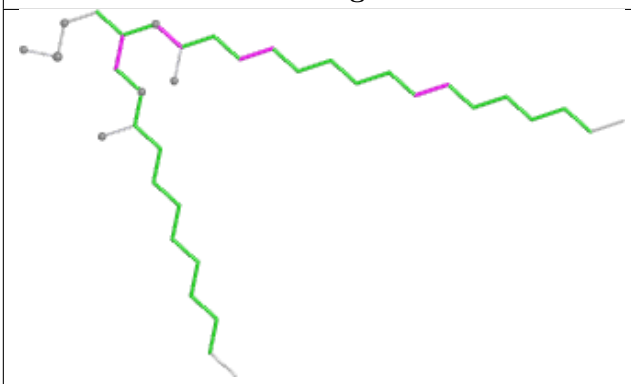
Ligand LHG J 4004



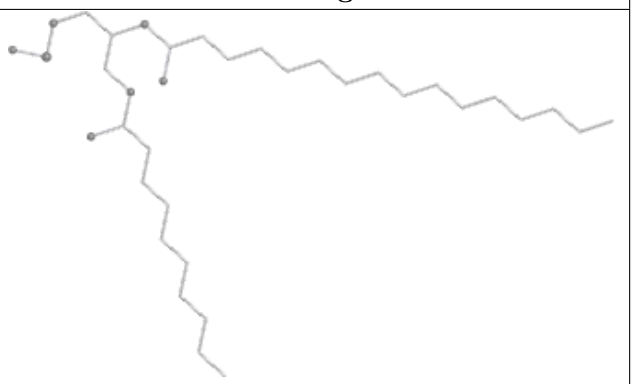
Bond lengths



Bond angles

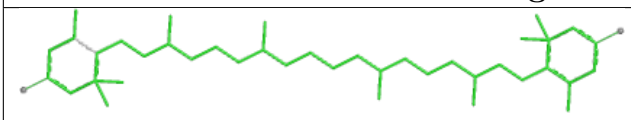


Torsions

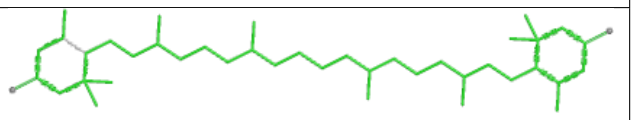


Rings

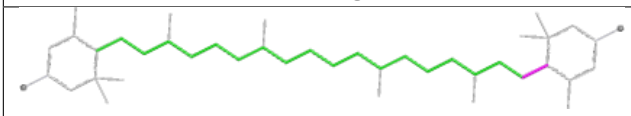
Ligand LUT 9 613



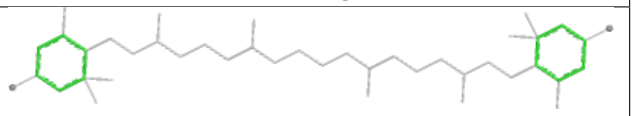
Bond lengths



Bond angles

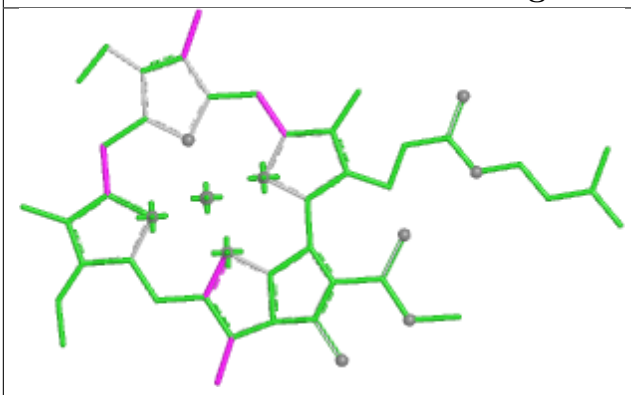


Torsions

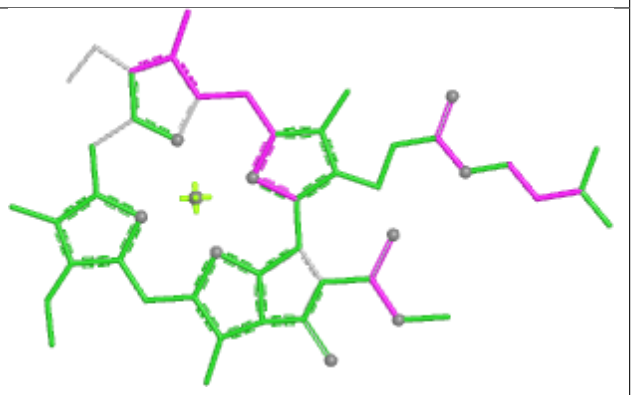


Rings

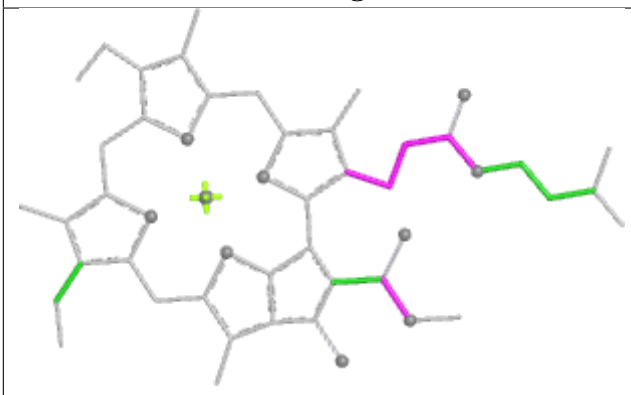
Ligand CLA 7 314



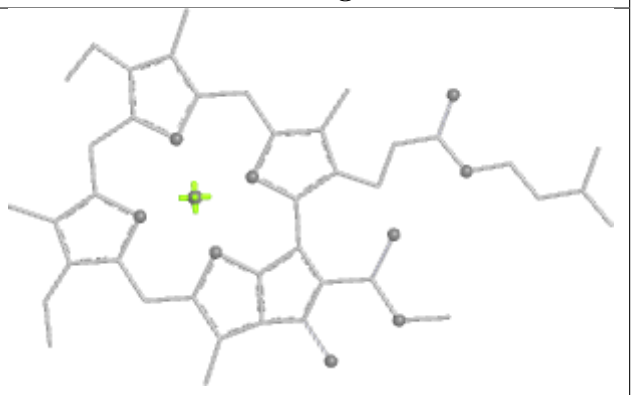
Bond lengths



Bond angles

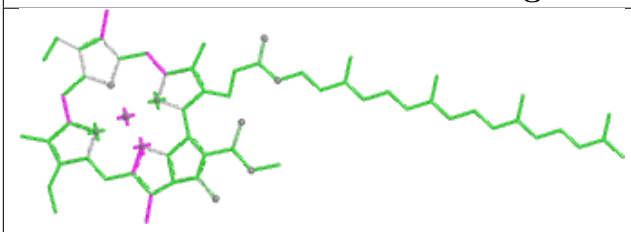


Torsions

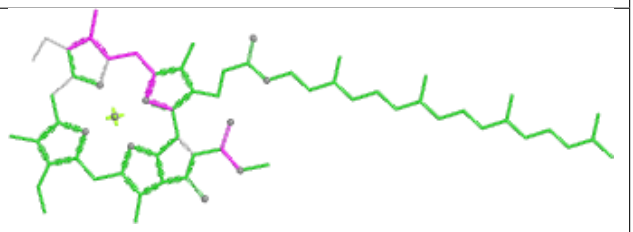


Rings

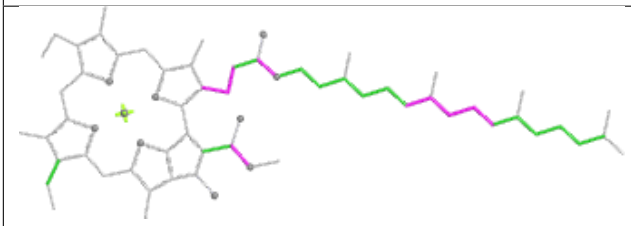
Ligand CLA A 805



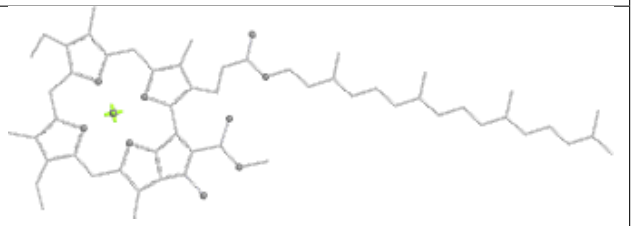
Bond lengths



Bond angles

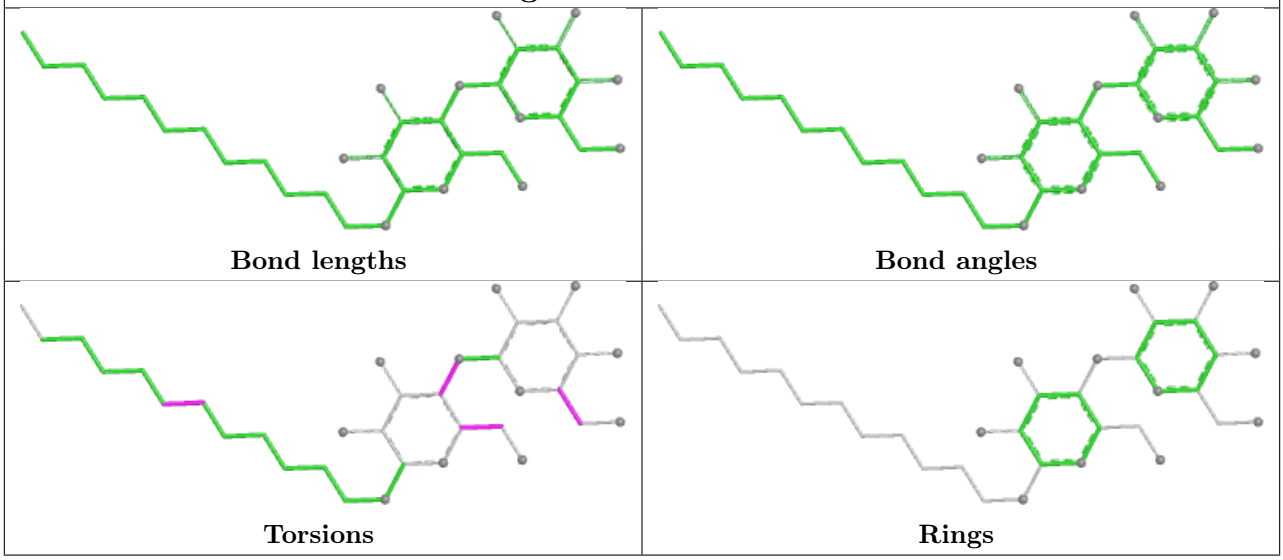


Torsions

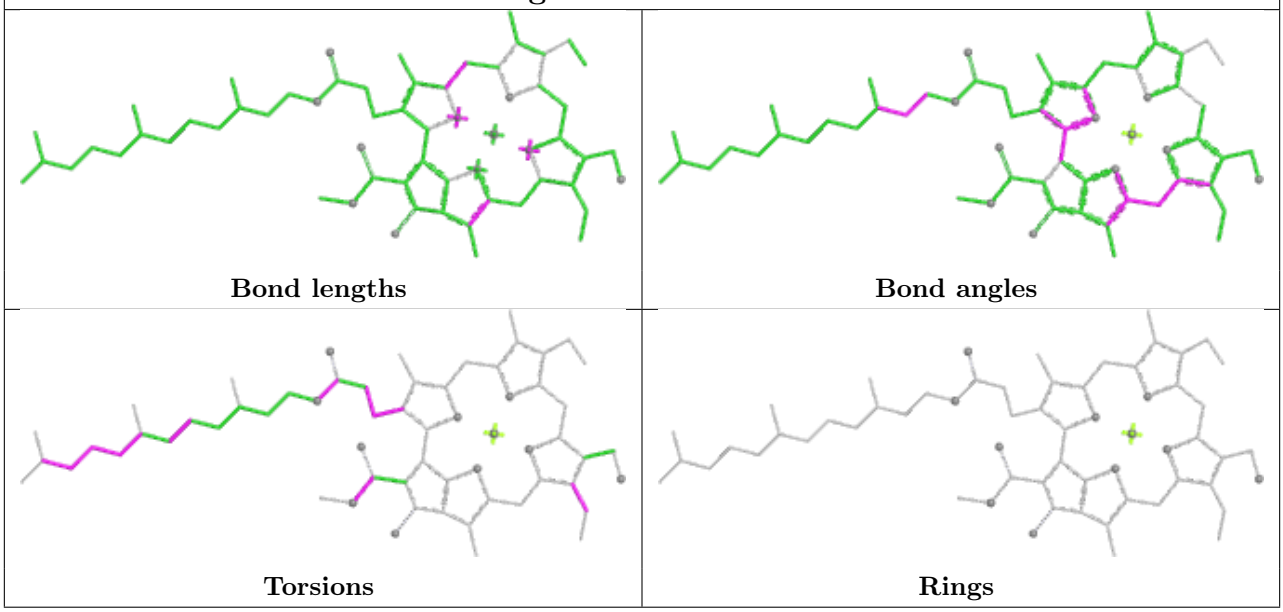


Rings

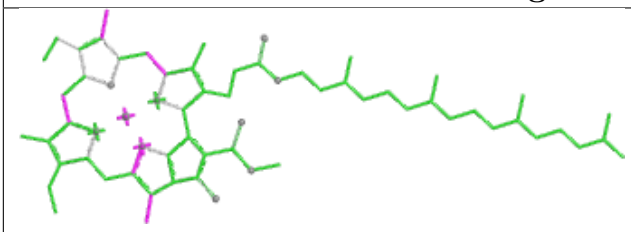
Ligand LMU A 857



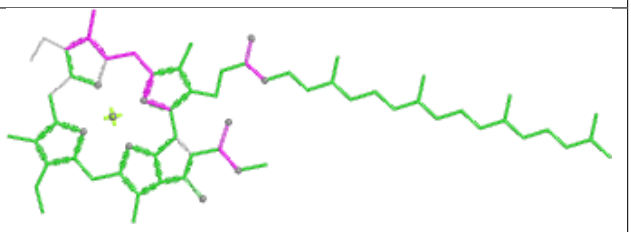
Ligand CHL 2 601



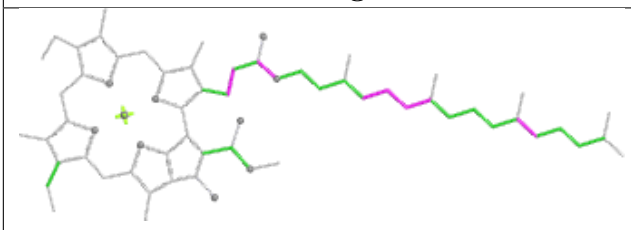
Ligand CLA 7 313



Bond lengths



Bond angles



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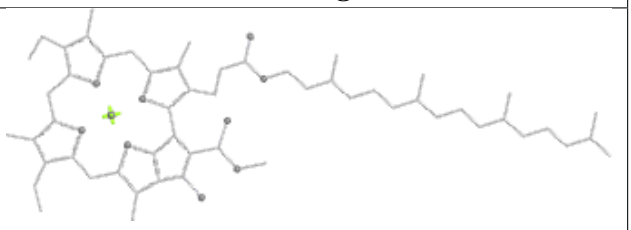
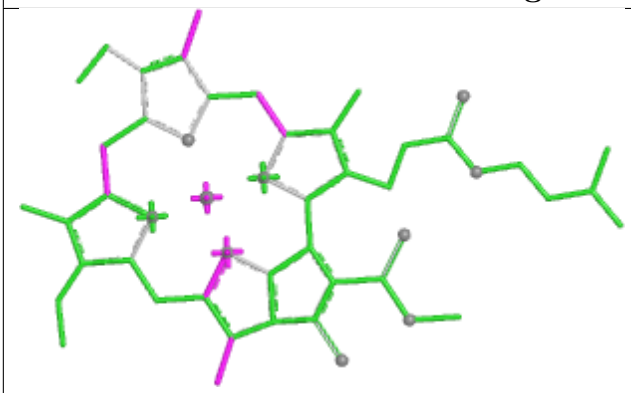
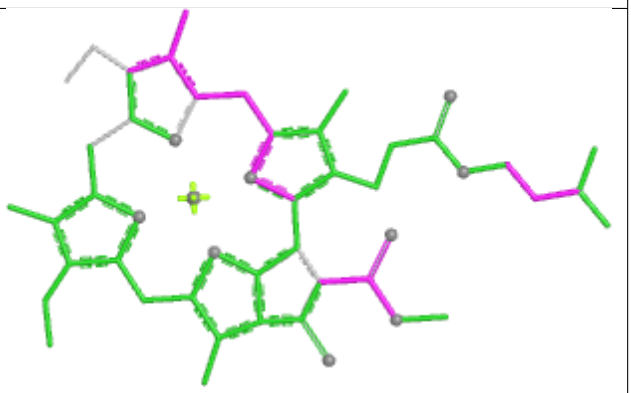


Rings

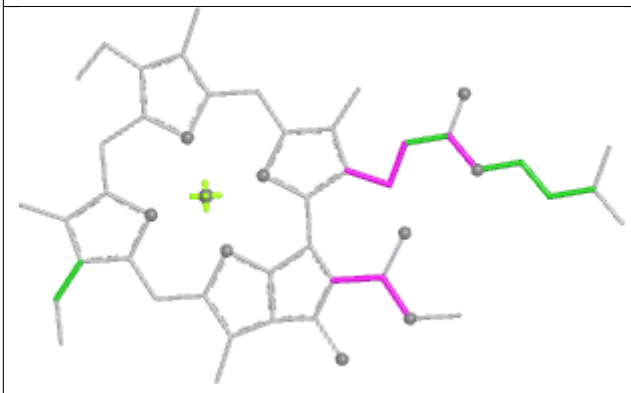
Ligand CLA B 836



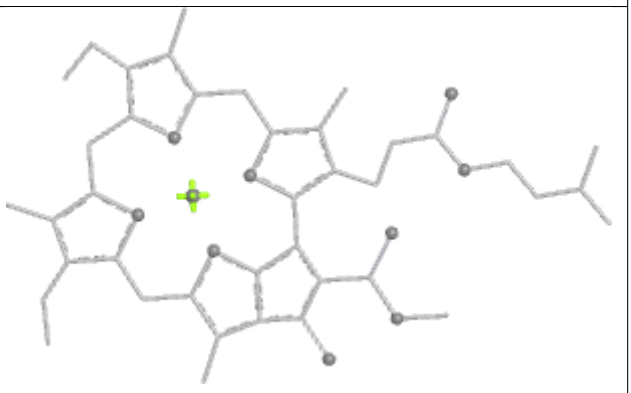
Bond lengths



Bond angles

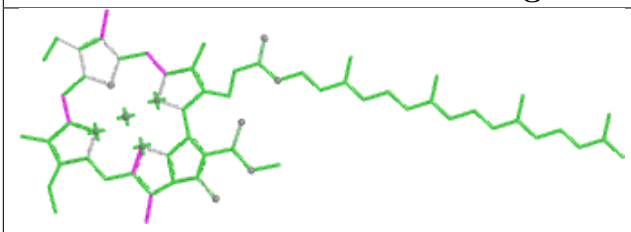


Torsions

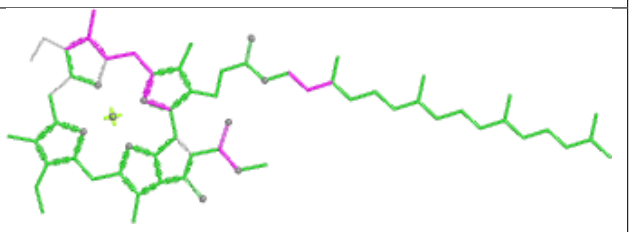


Rings

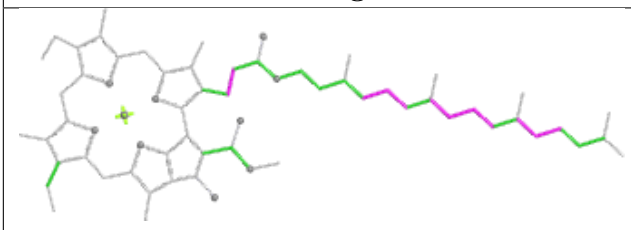
Ligand CLA A 844



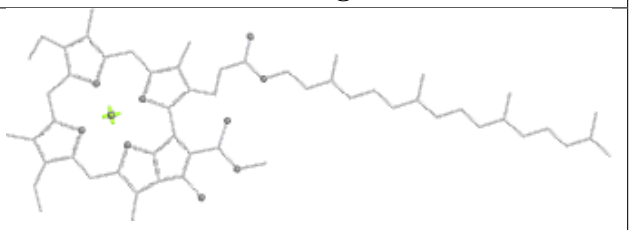
Bond lengths



Bond angles

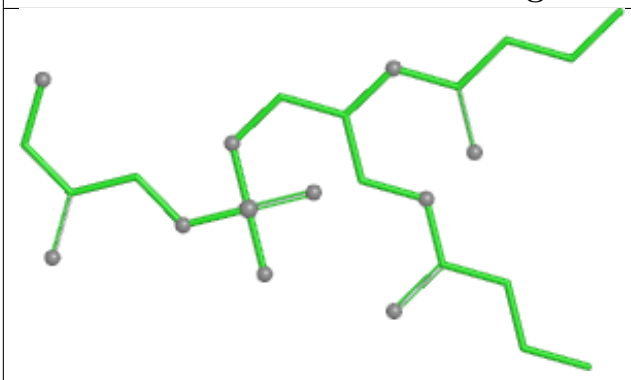


Torsions

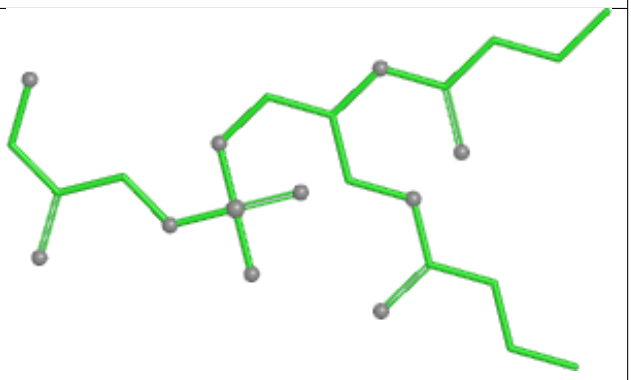


Rings

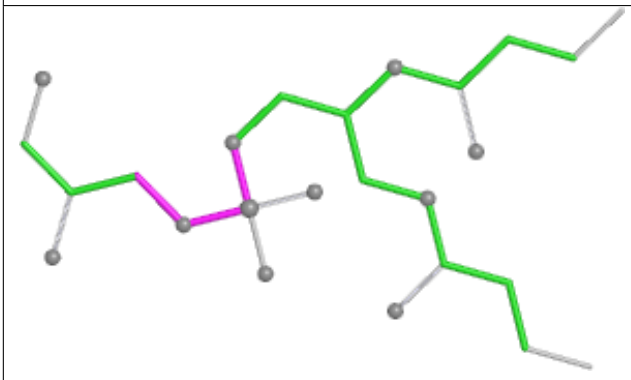
Ligand LHG 1 618



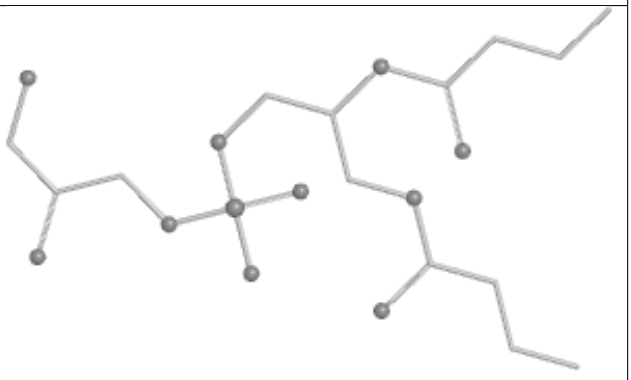
Bond lengths



Bond angles

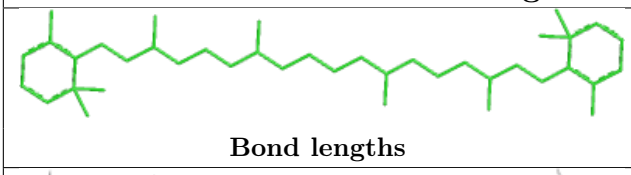


Torsions

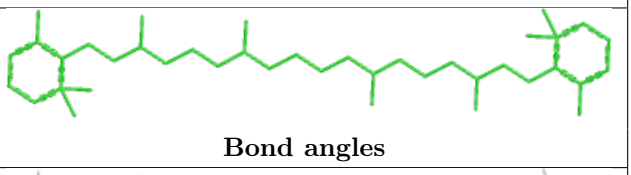


Rings

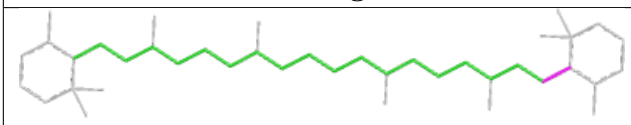
Ligand BCR B 847



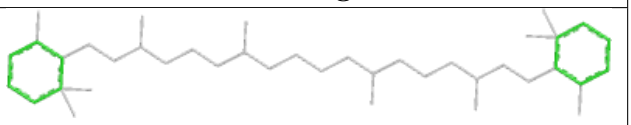
Bond lengths



Bond angles

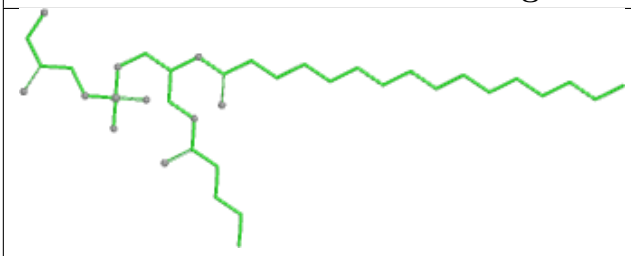


Torsions

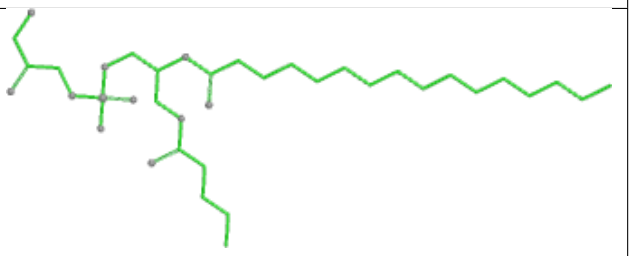


Rings

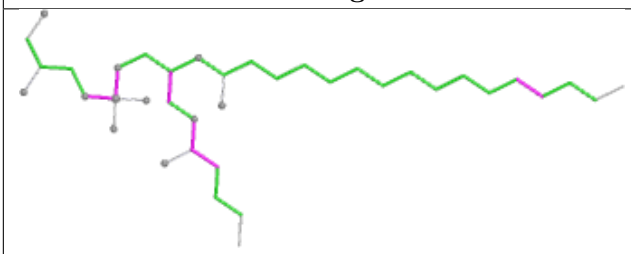
Ligand LHG H 203



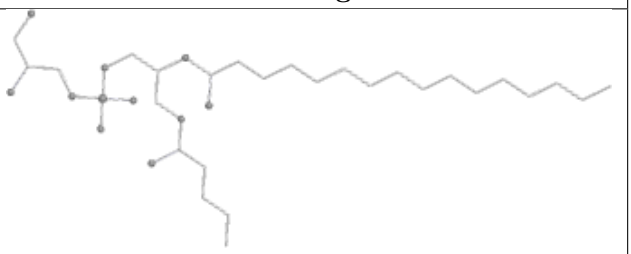
Bond lengths



Bond angles

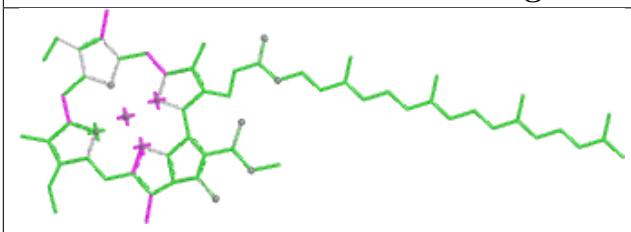


Torsions

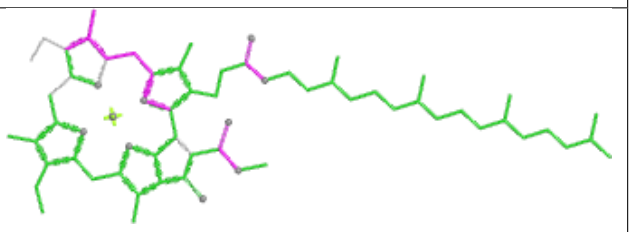


Rings

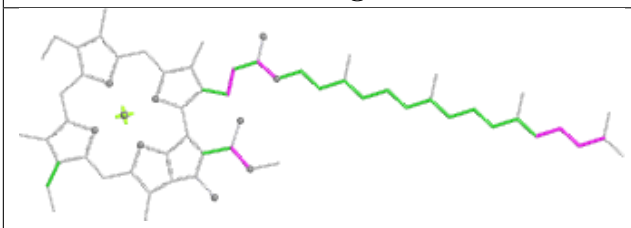
Ligand CLA B 840



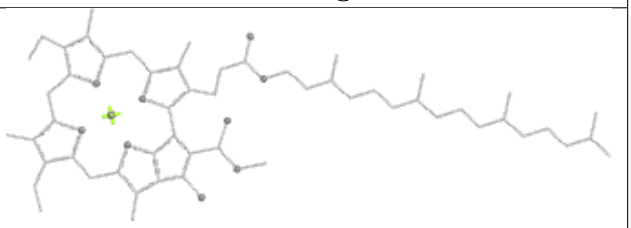
Bond lengths



Bond angles

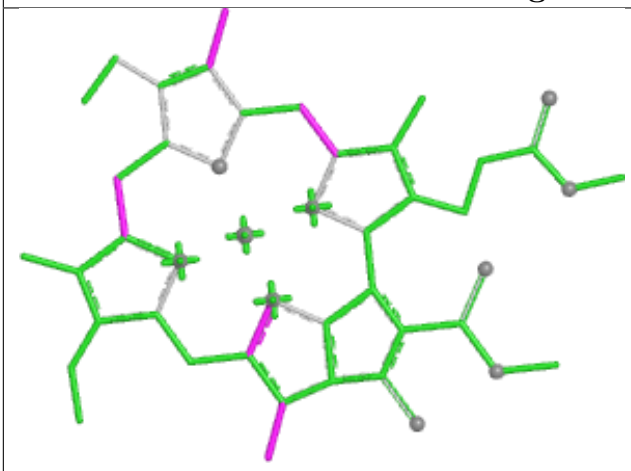


Torsions

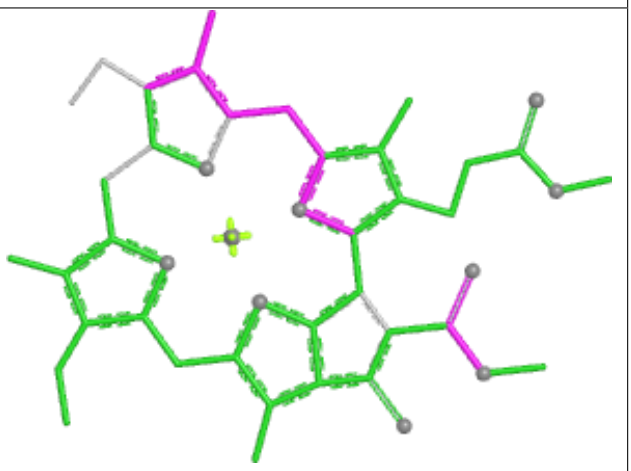


Rings

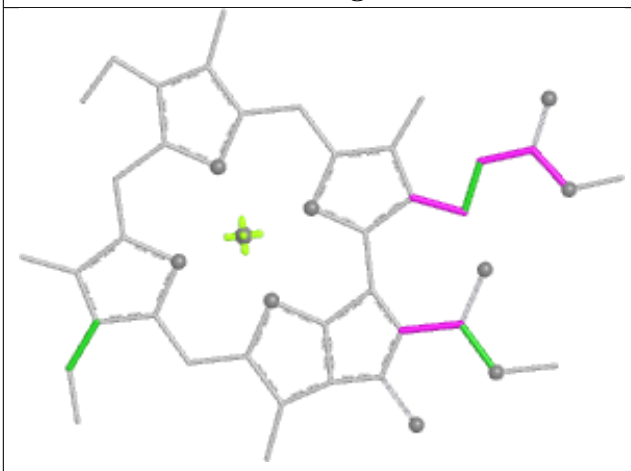
Ligand CLA 2 607



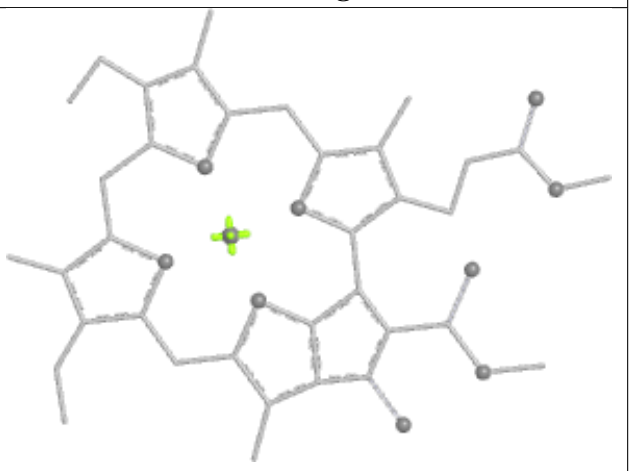
Bond lengths



Bond angles

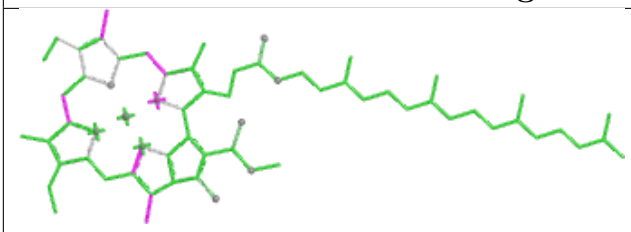


Torsions

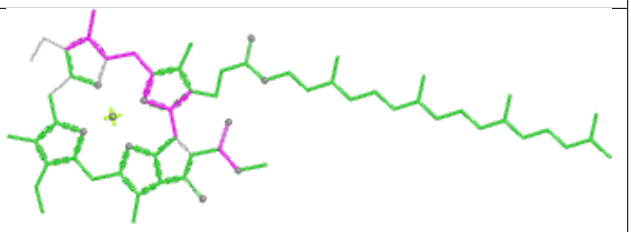


Rings

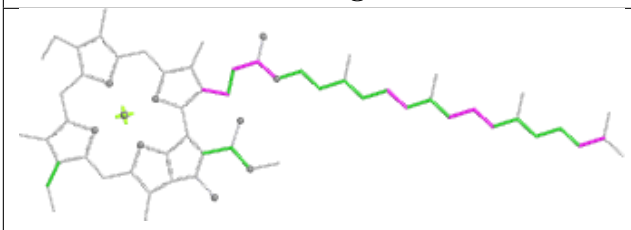
Ligand CLA F 5003



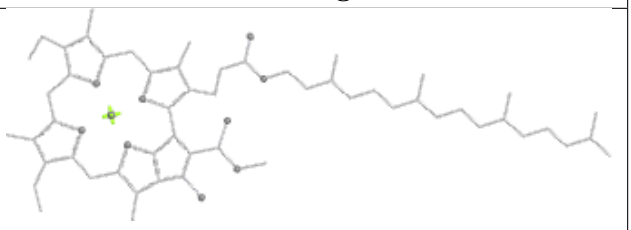
Bond lengths



Bond angles

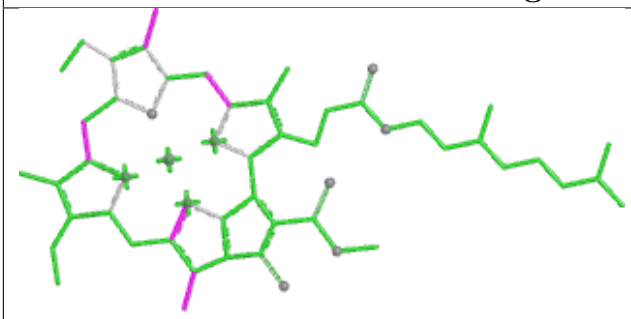


Torsions

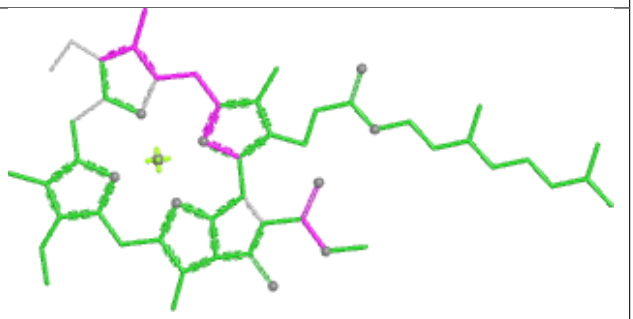


Rings

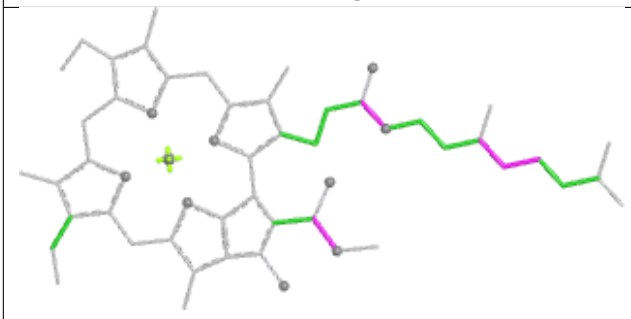
Ligand CLA B 812



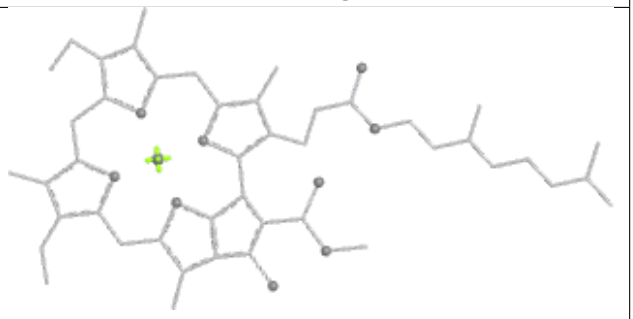
Bond lengths



Bond angles

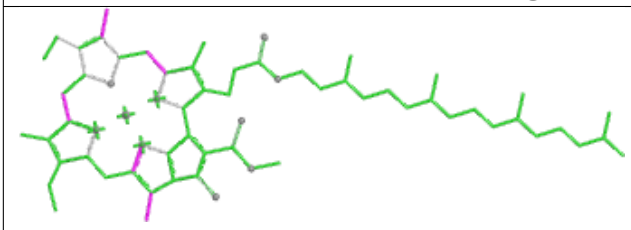


Torsions

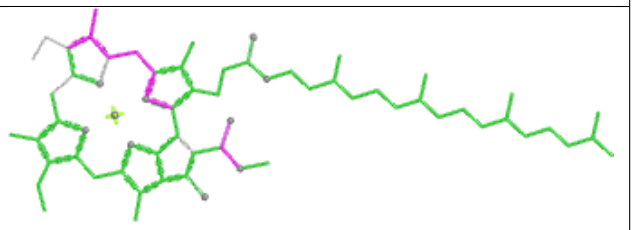


Rings

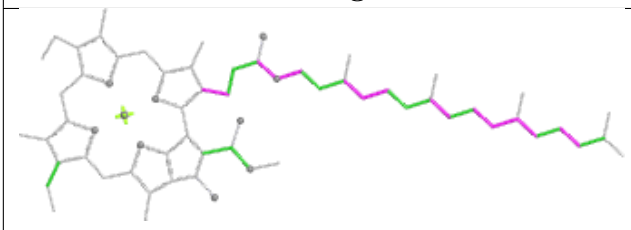
Ligand CLA B 818



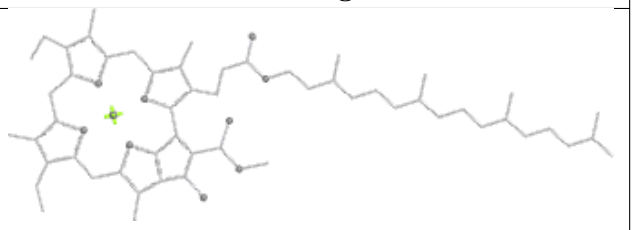
Bond lengths



Bond angles

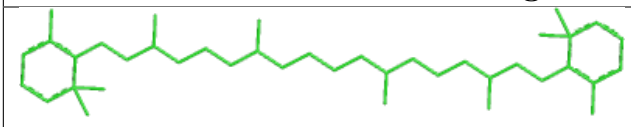


Torsions

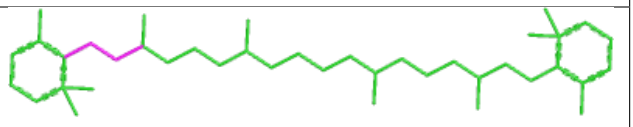


Rings

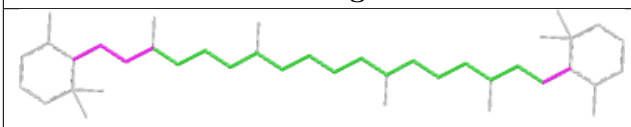
Ligand BCR B 849



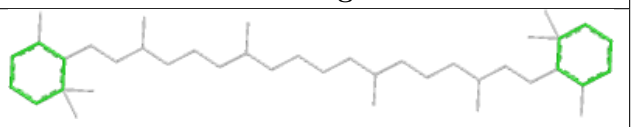
Bond lengths



Bond angles

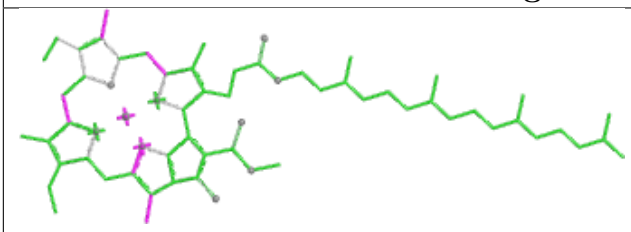


Torsions

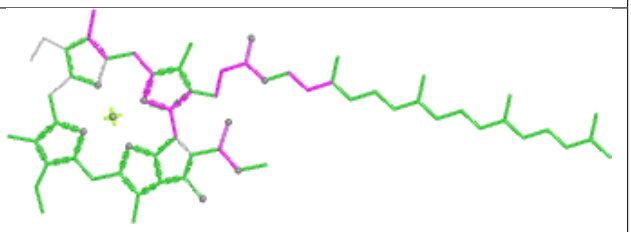


Rings

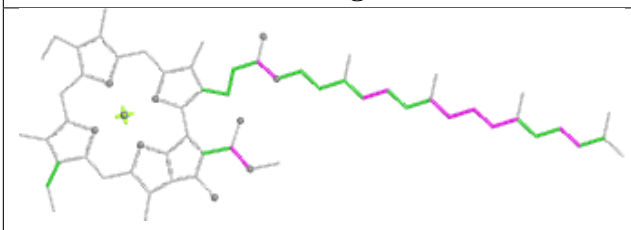
Ligand CLA A 812



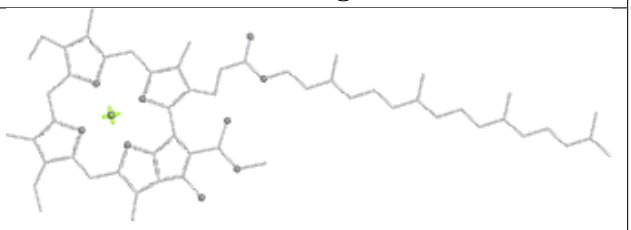
Bond lengths



Bond angles

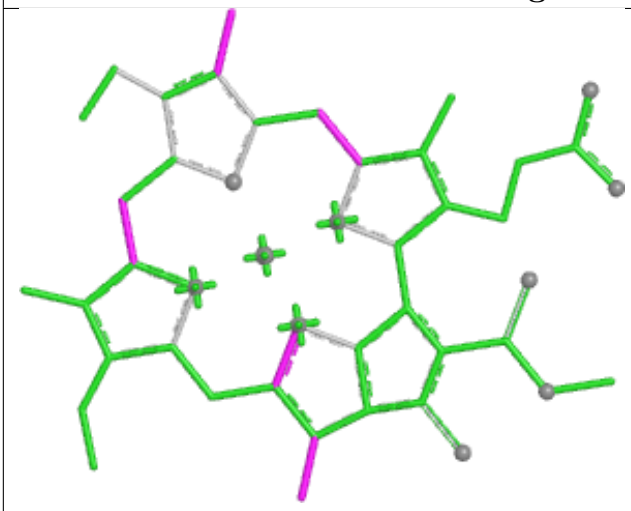


Torsions

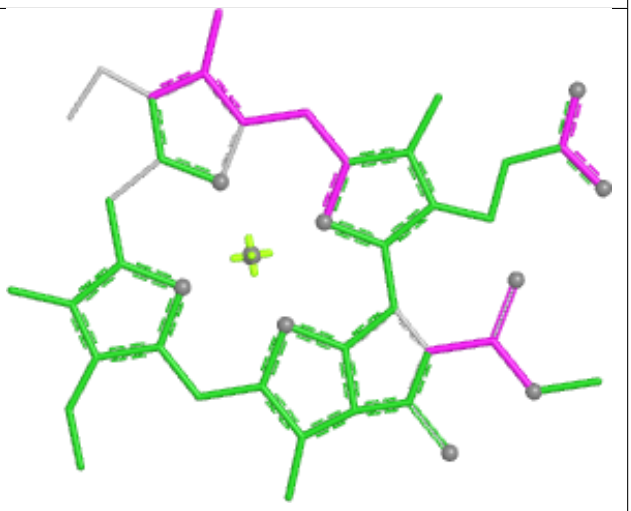


Rings

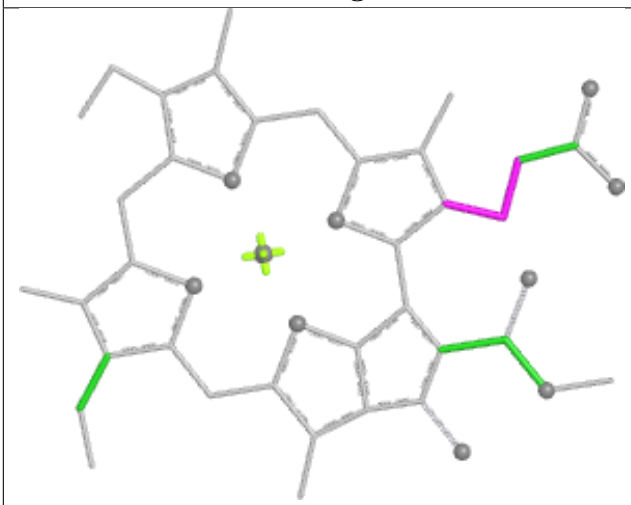
Ligand CLA 2 608



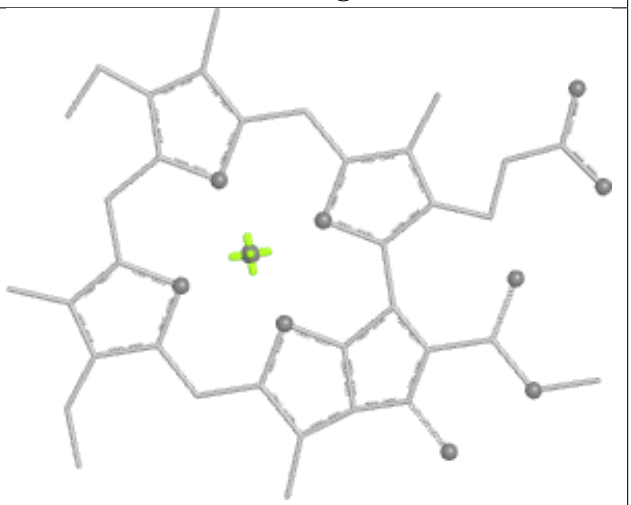
Bond lengths



Bond angles

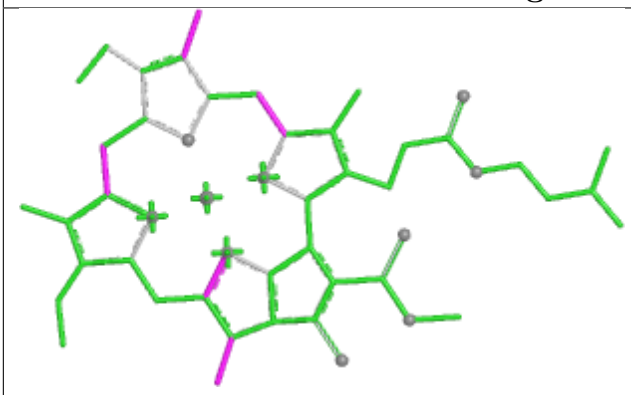


Torsions

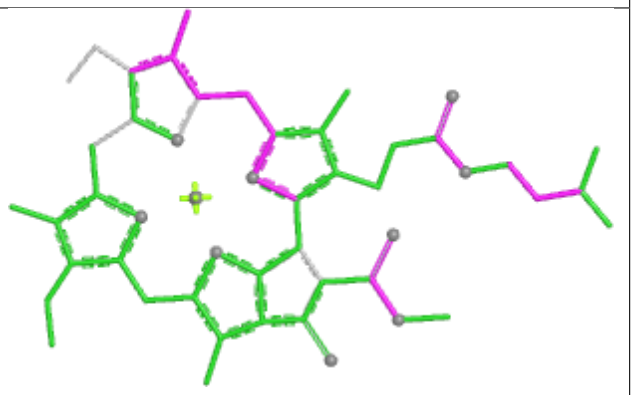


Rings

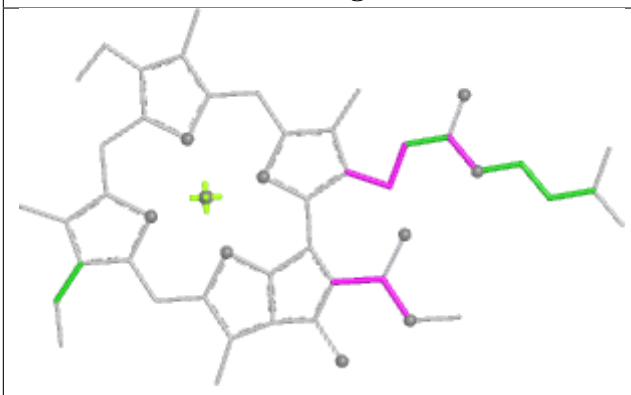
Ligand CLA L 307



Bond lengths



Bond angles



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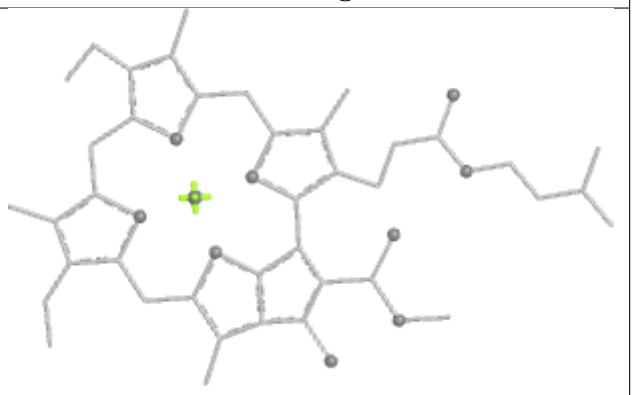
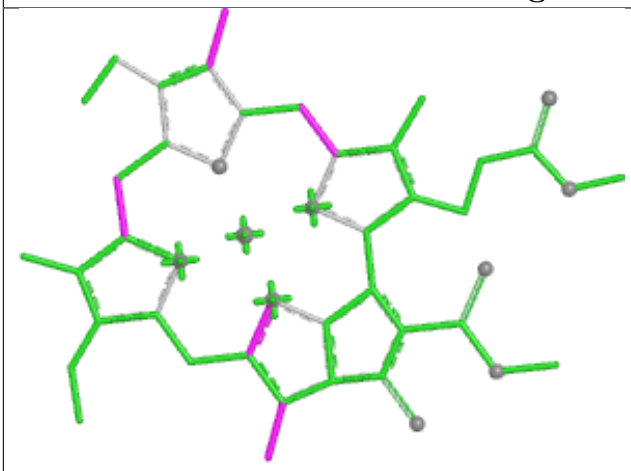
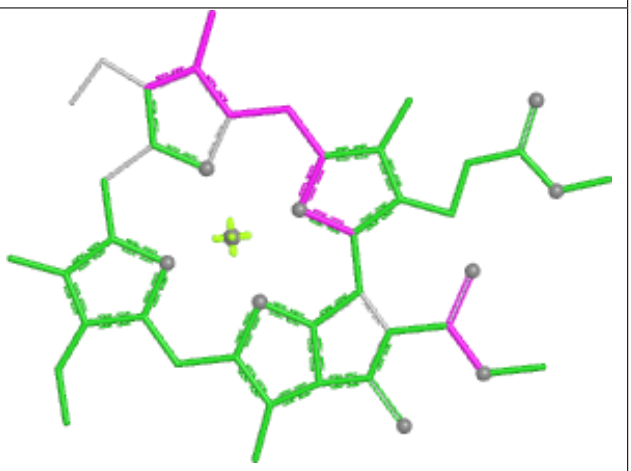


Rings

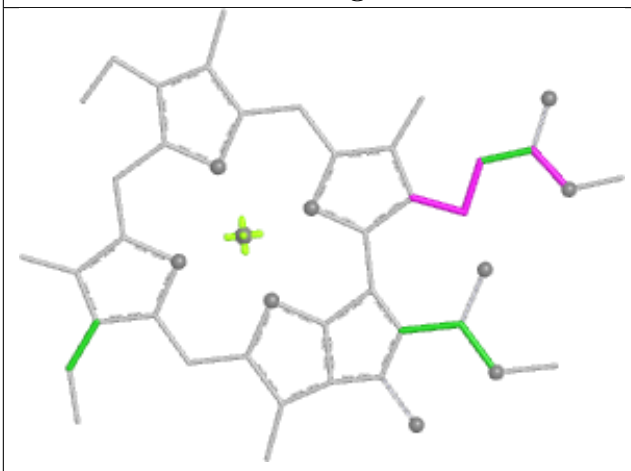
Ligand CLA 3 403



Bond lengths



Bond angles



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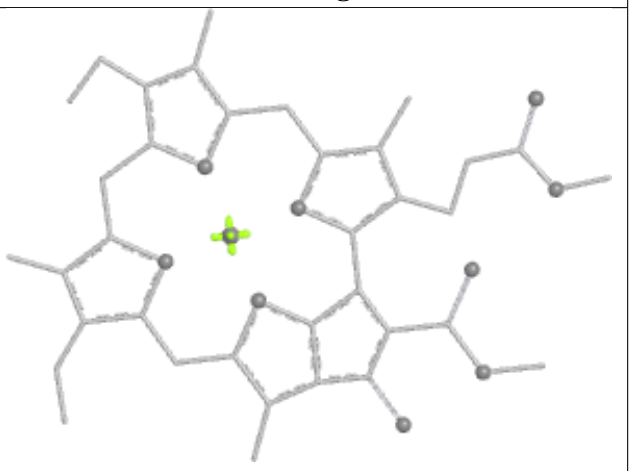
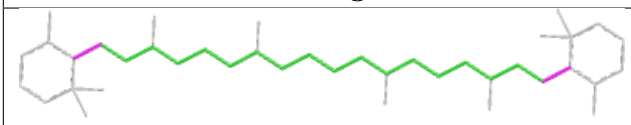


Rings

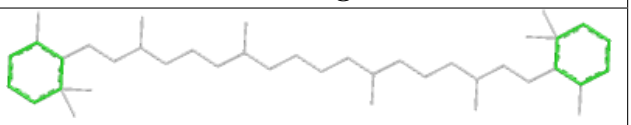
Ligand BCR 1 617

Bond lengths

Bond angles

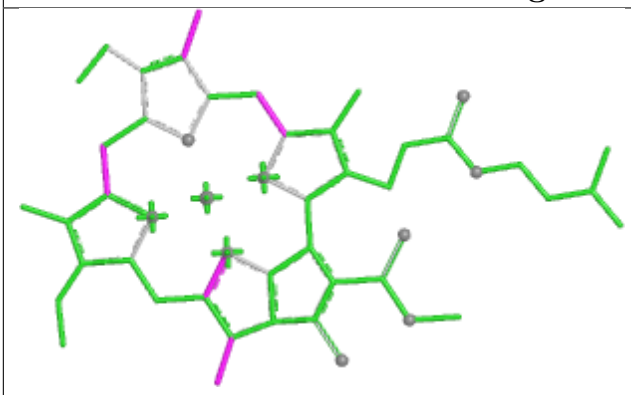


Torsions

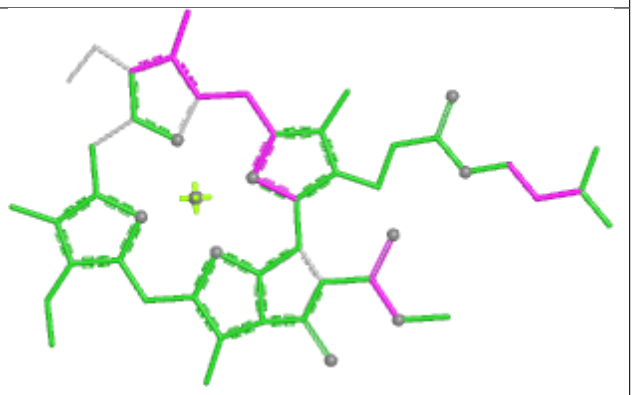


Rings

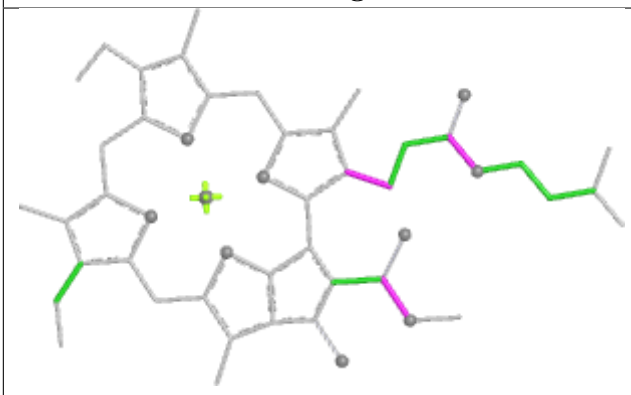
Ligand CLA 3 409



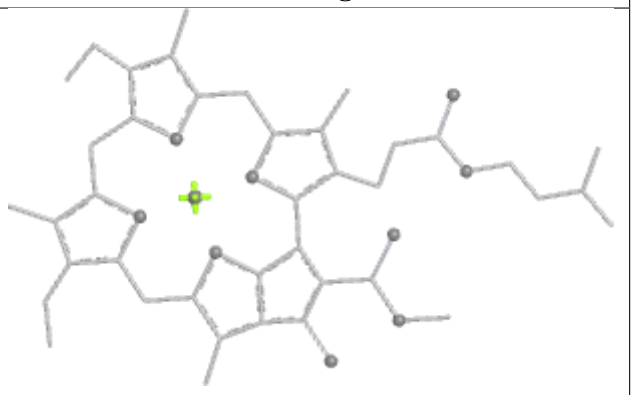
Bond lengths



Bond angles

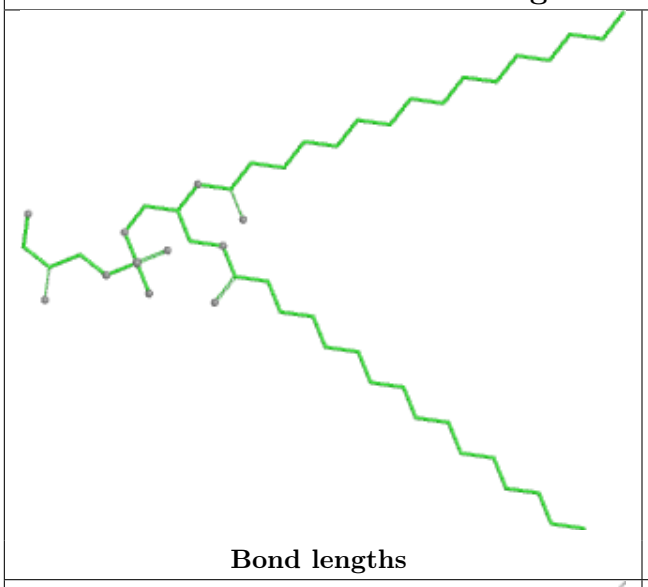


Torsions

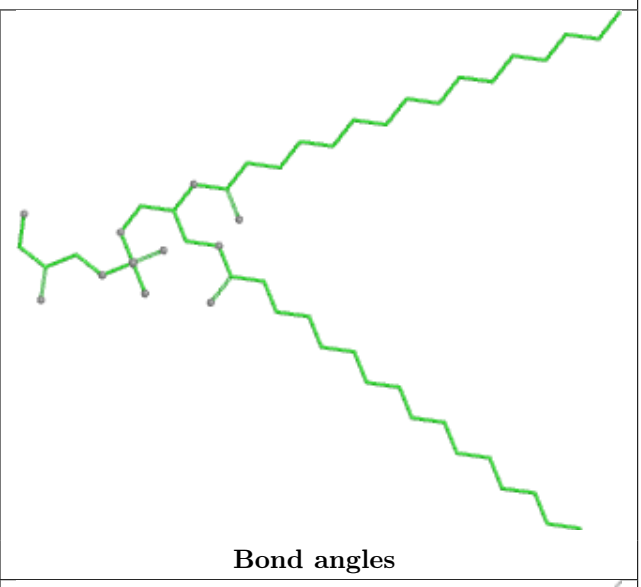


Rings

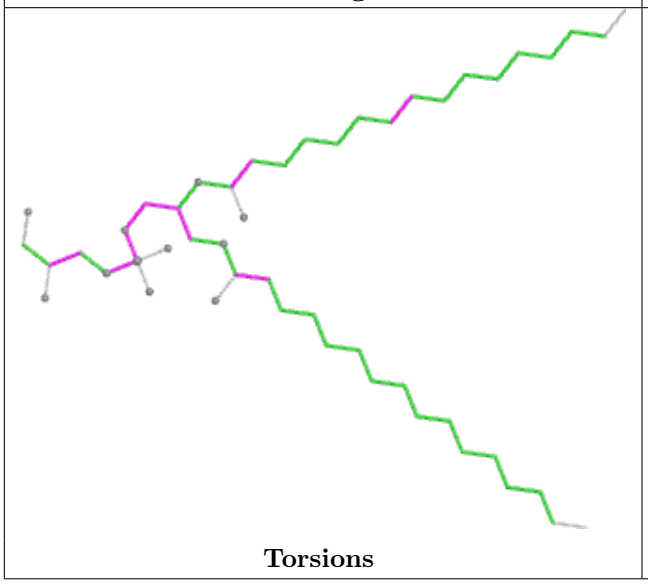
Ligand LHG I 201



Bond lengths



Bond angles



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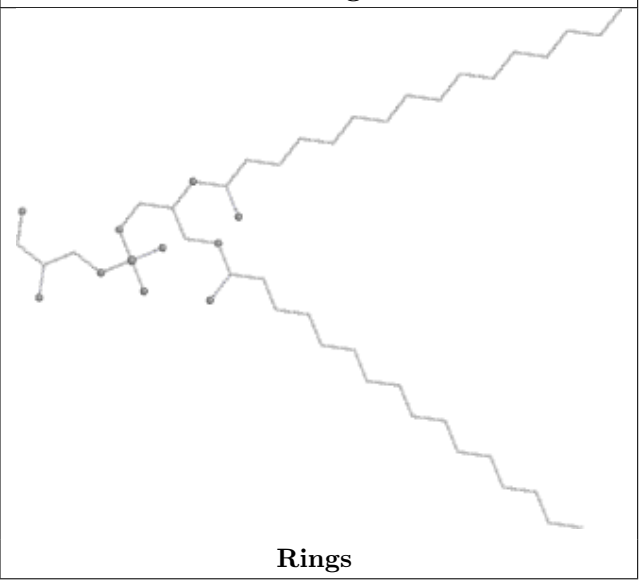
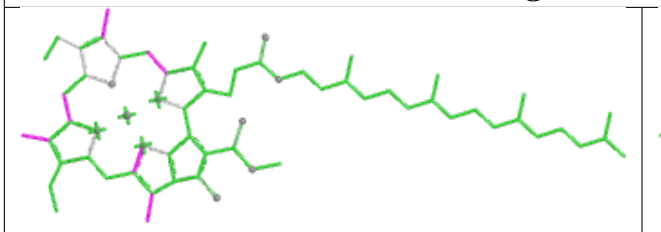
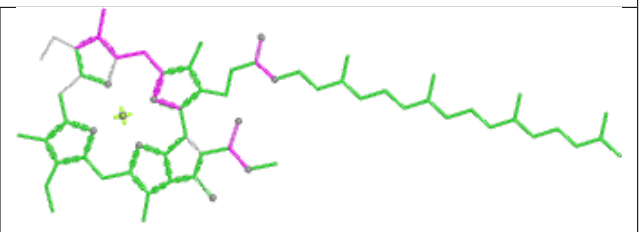


Rings

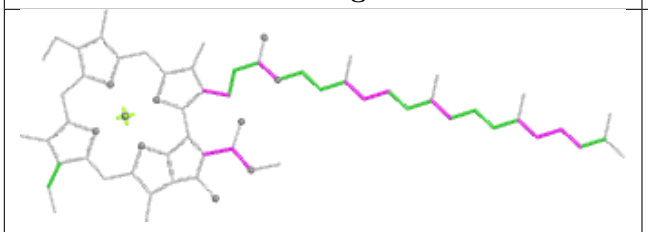
Ligand CLA A 814



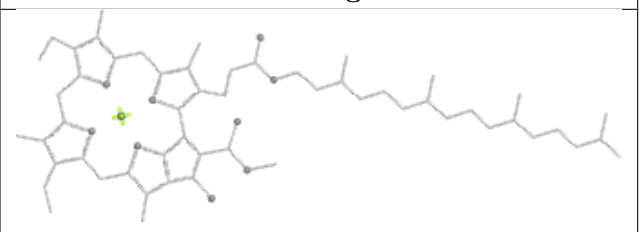
Bond lengths



Bond angles

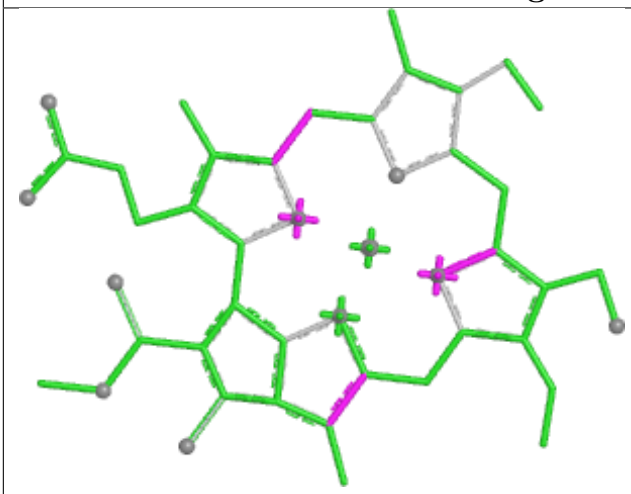


Torsions

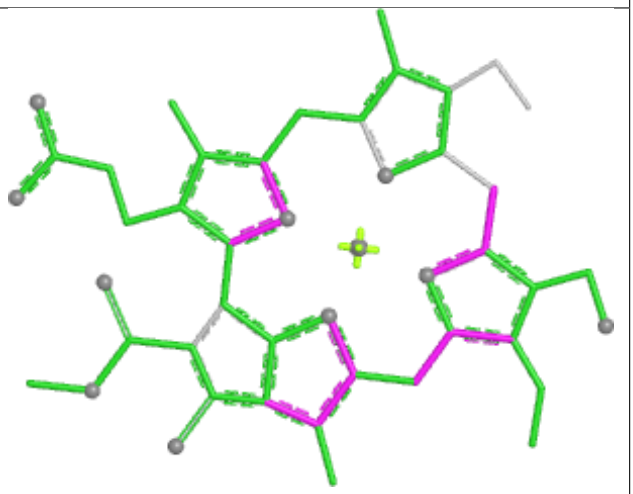


Rings

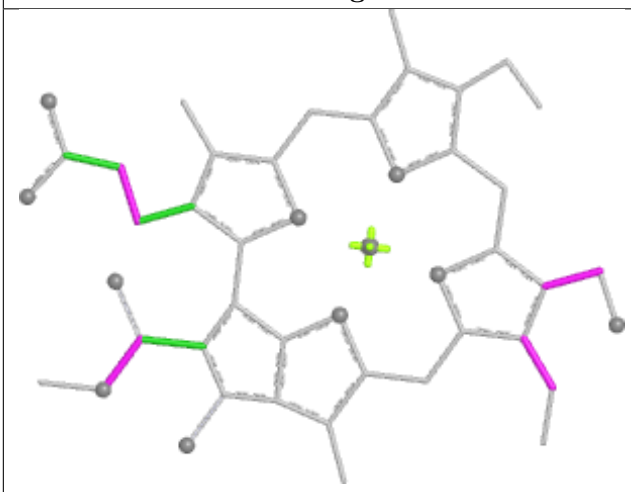
Ligand CHL 7 306



Bond lengths



Bond angles



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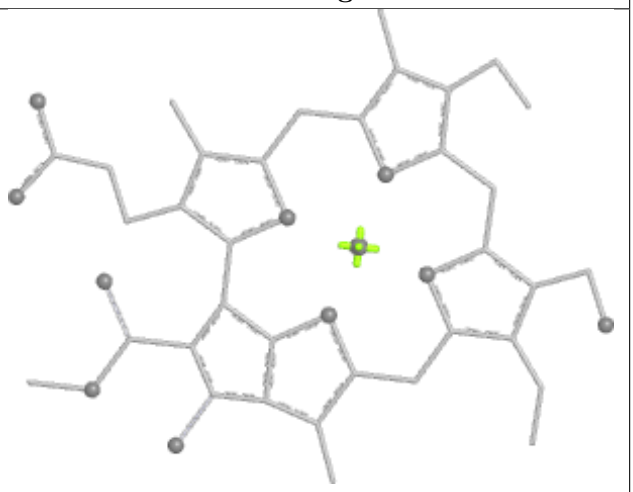
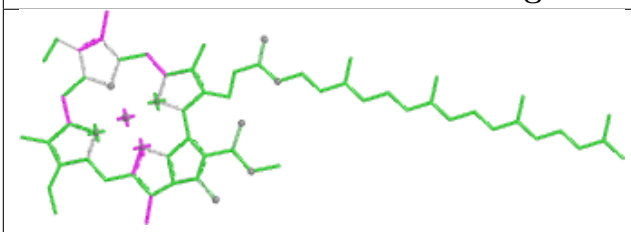
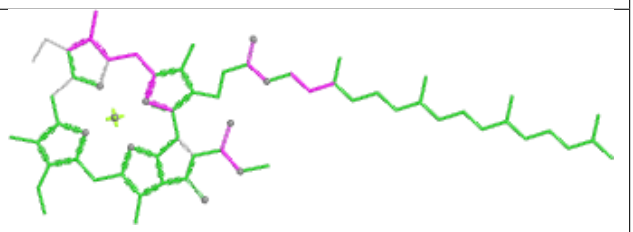


Rings

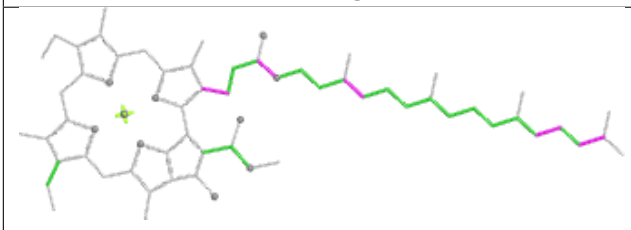
Ligand CLA B 821



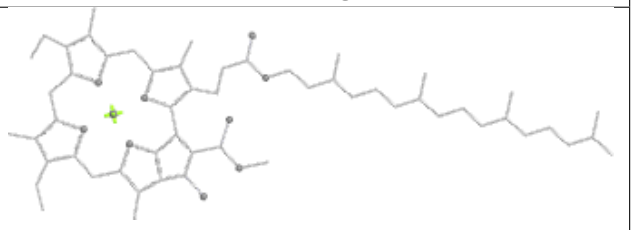
Bond lengths



Bond angles

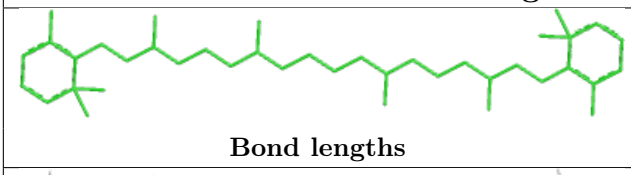


Torsions

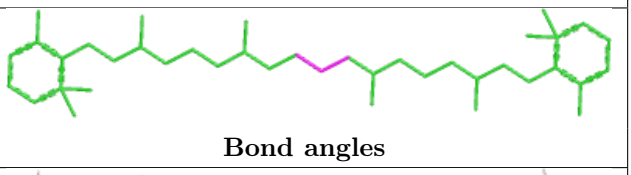


Rings

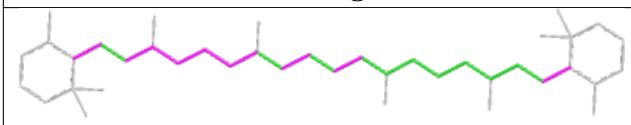
Ligand BCR A 847



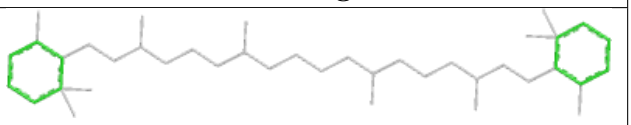
Bond lengths



Bond angles

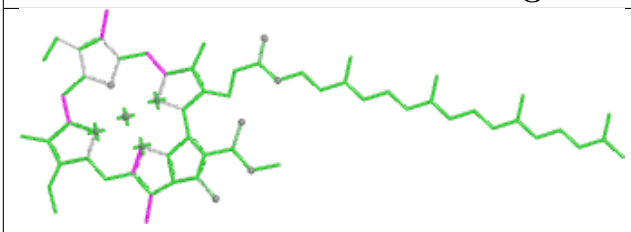


Torsions

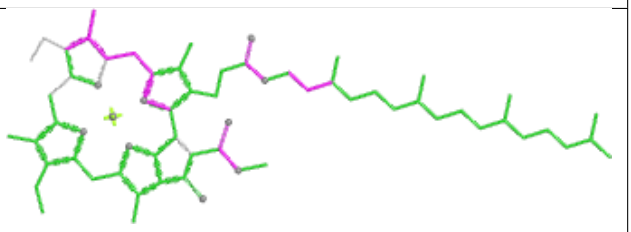


Rings

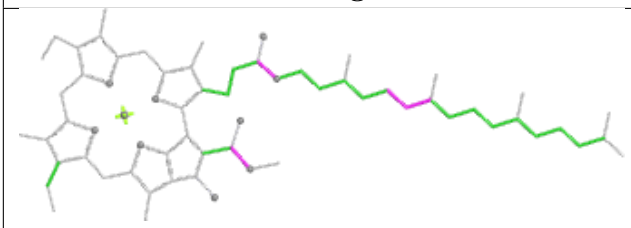
Ligand CLA A 835



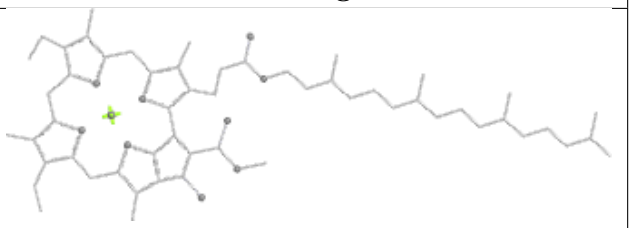
Bond lengths



Bond angles

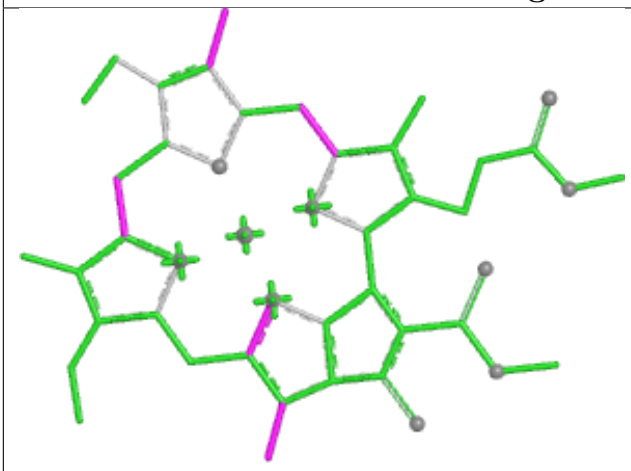


Torsions

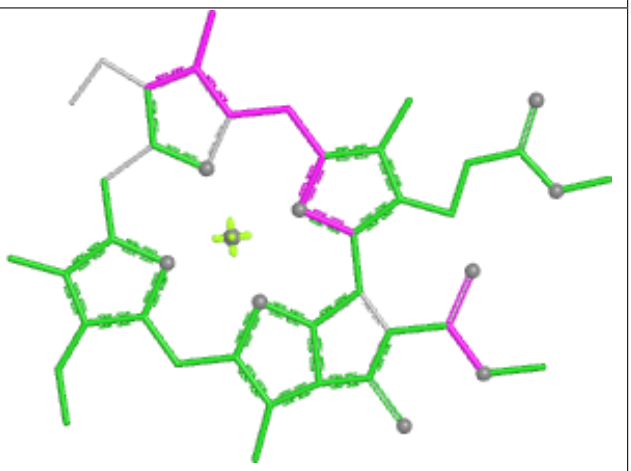


Rings

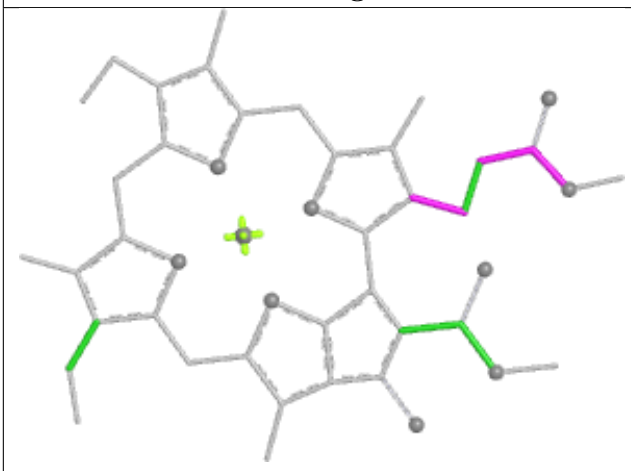
Ligand CLA 3 404



Bond lengths



Bond angles



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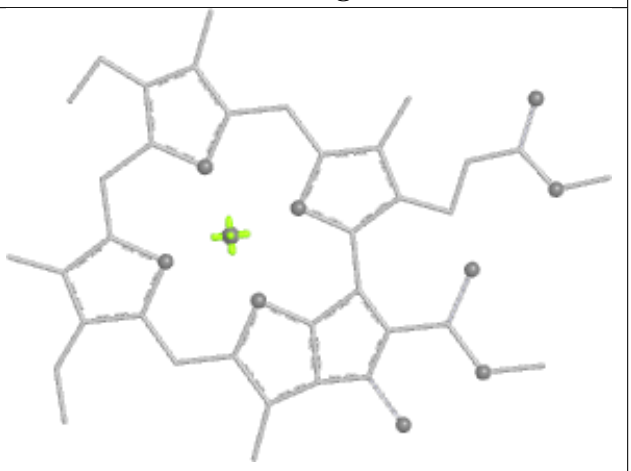
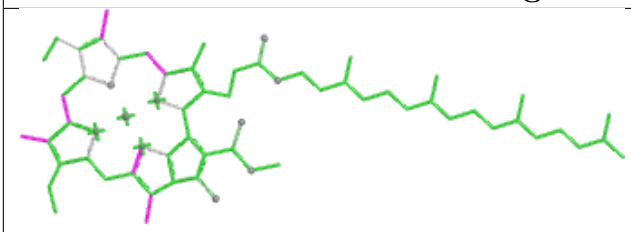


Rings

Ligand CLA A 806



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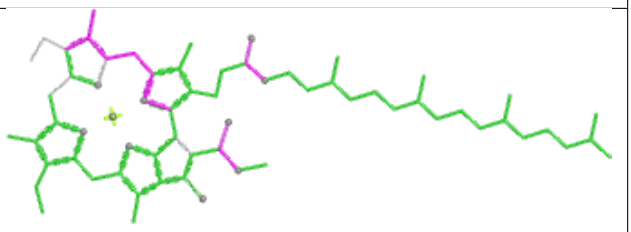
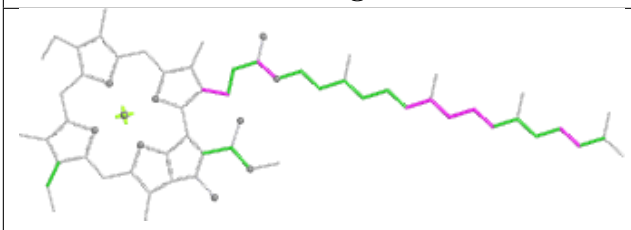


Bond angles



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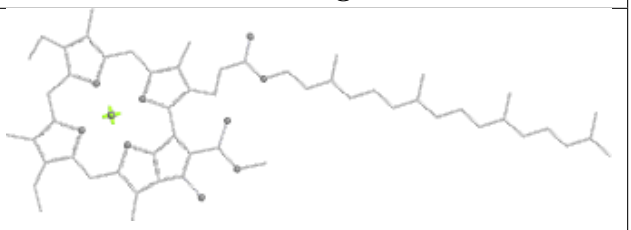
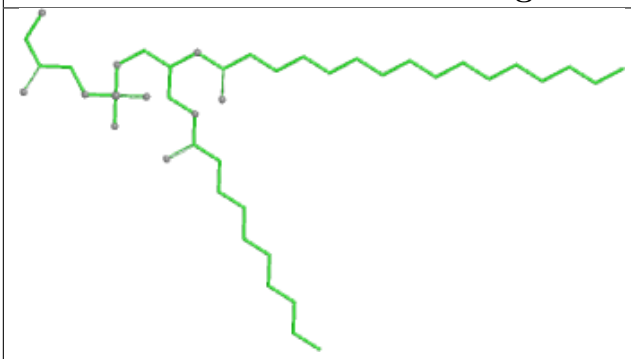
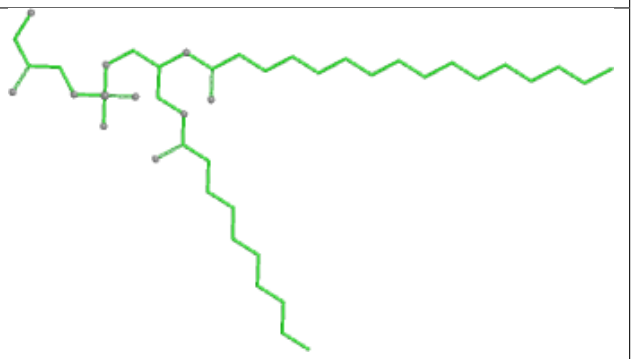


Rings

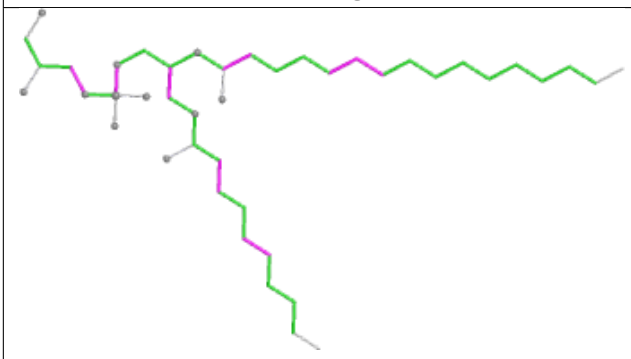
Ligand LHG F 5002



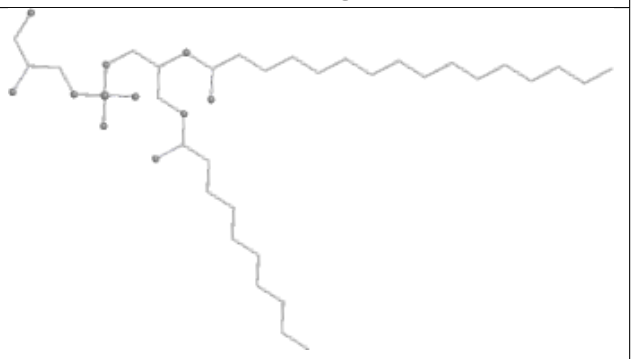
Bond lengths



Bond angles

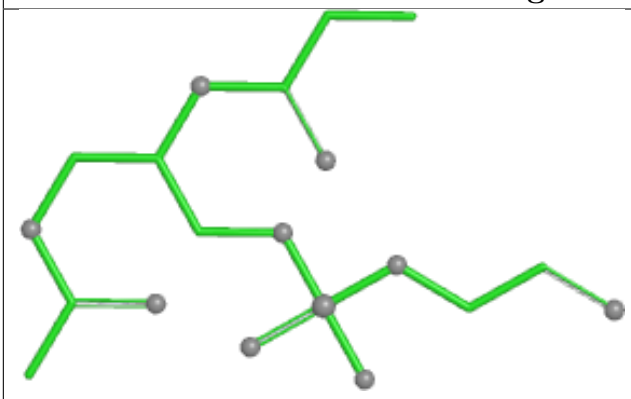


Torsions

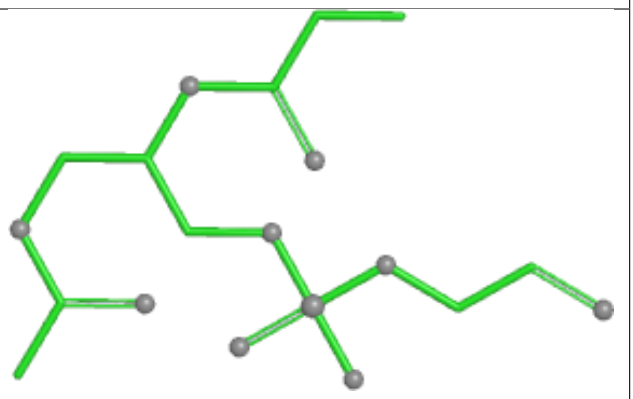


Rings

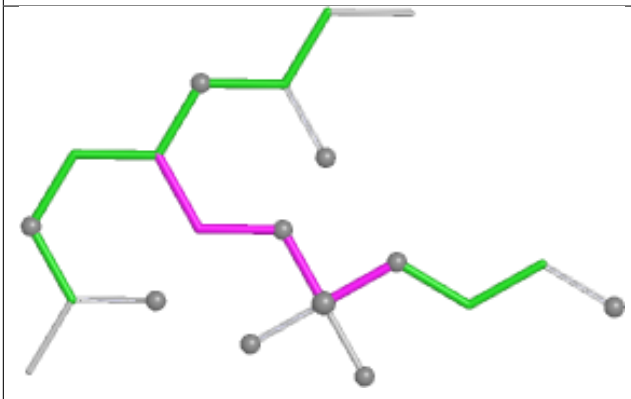
Ligand PTY 1 622



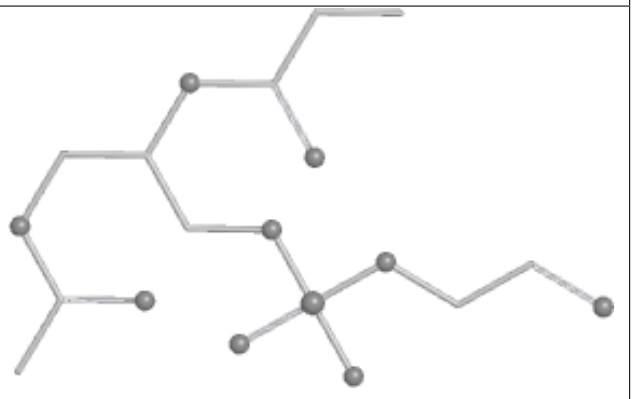
Bond lengths



Bond angles

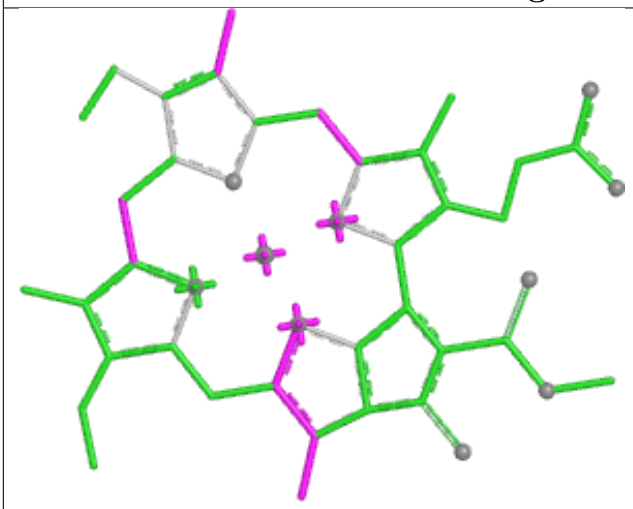


Torsions

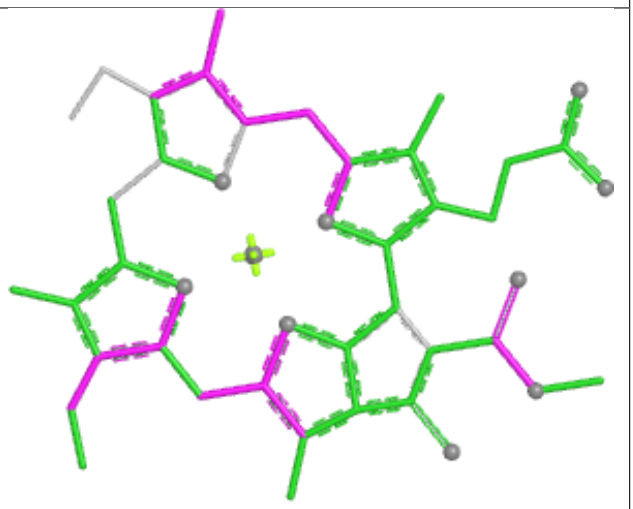


Rings

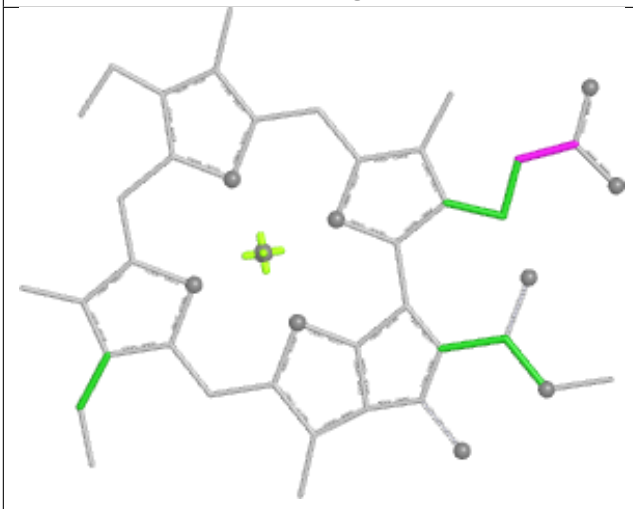
Ligand CLA 9 605



Bond lengths



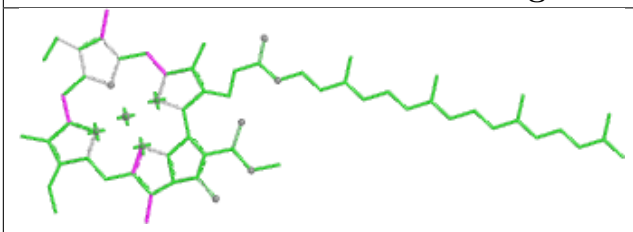
Bond angles



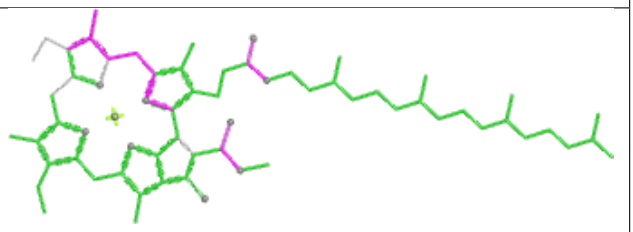
Torsions

Rings

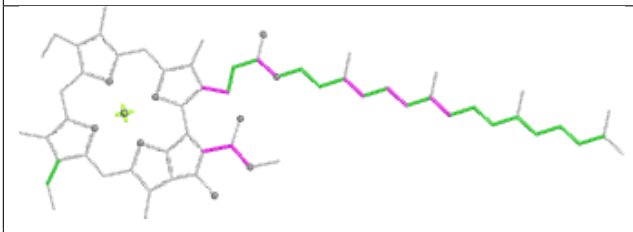
Ligand CLA 3 407



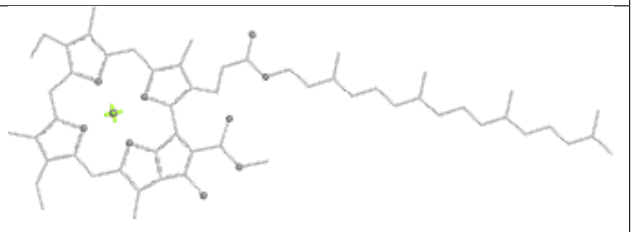
Bond lengths



Bond angles

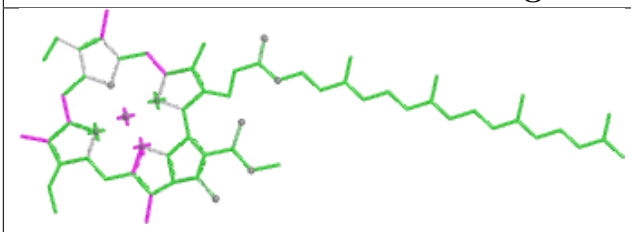


Torsions



Rings

Ligand CLA B 825



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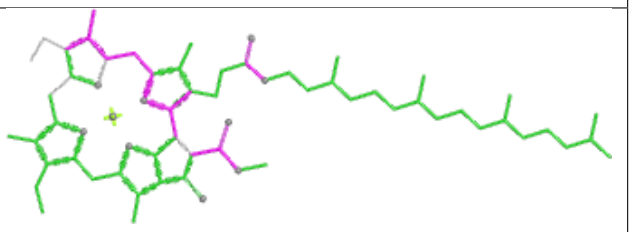
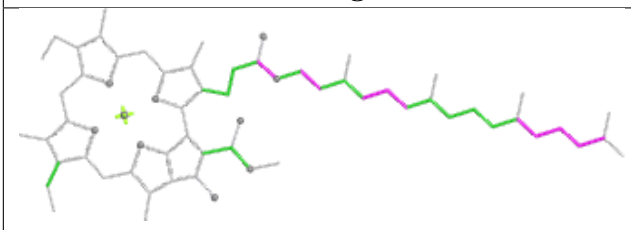
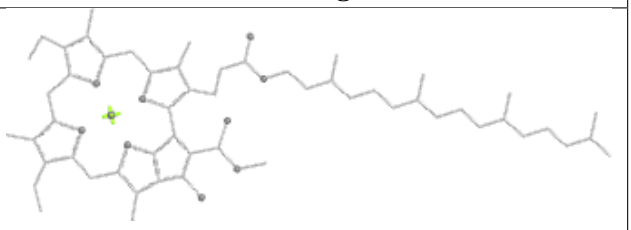


Bond angles

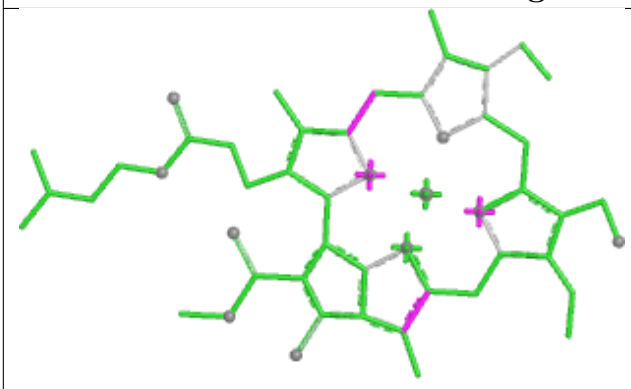


Torsions



Rings

Ligand CHL 7 307



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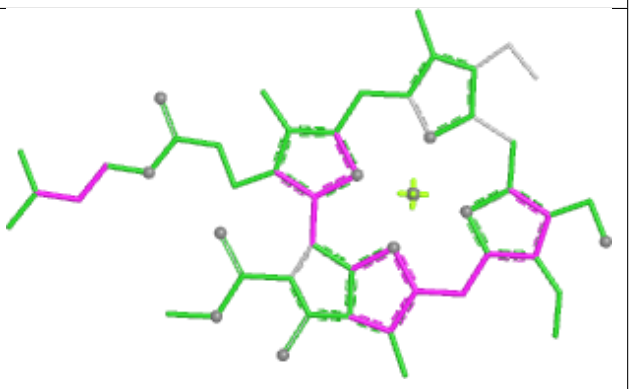
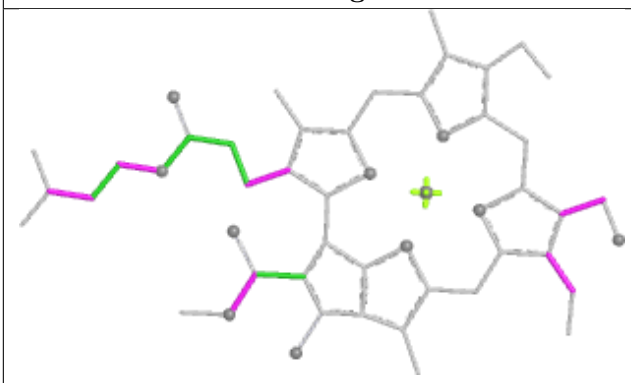
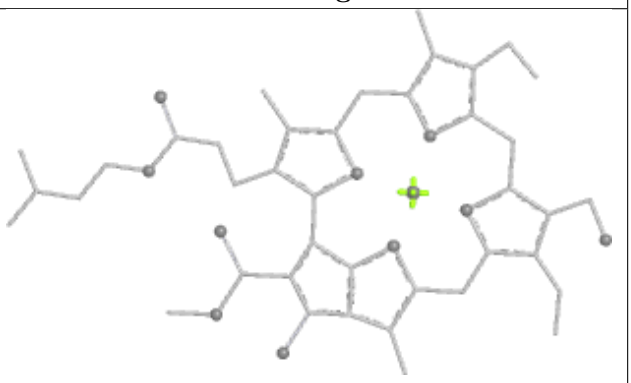


Bond angles

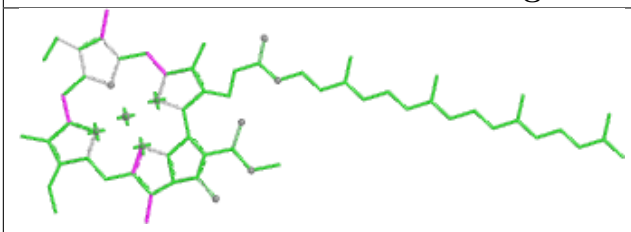


Torsions



Rings

Ligand CLA A 818



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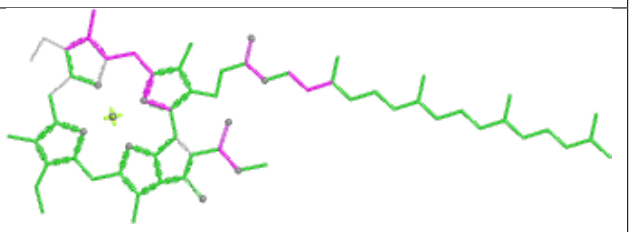
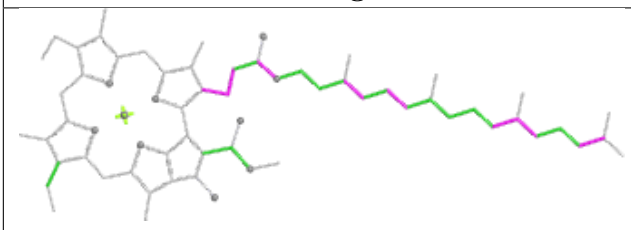
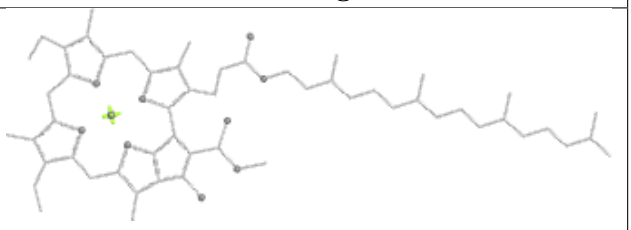


Bond angles

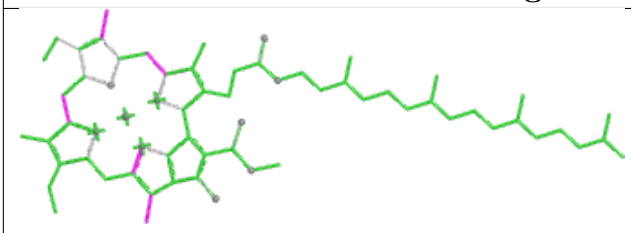


Torsions

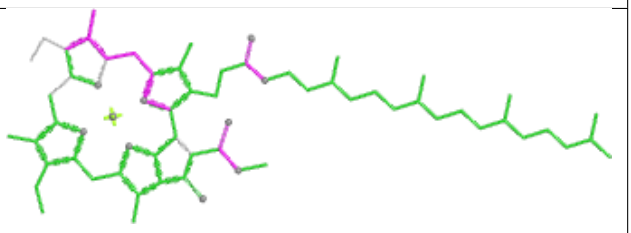


Rings

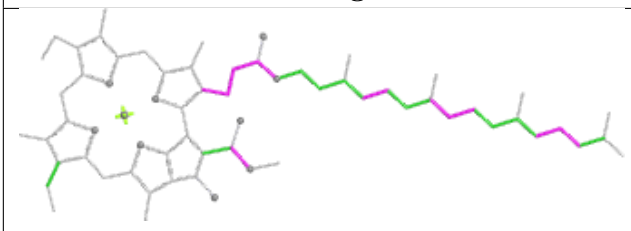
Ligand CLA B 828



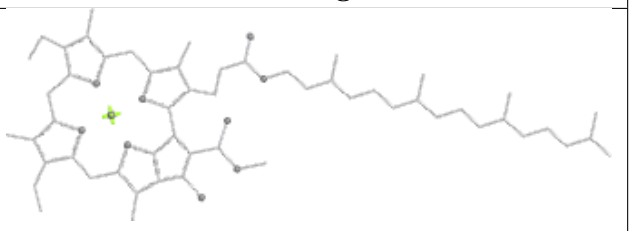
Bond lengths



Bond angles

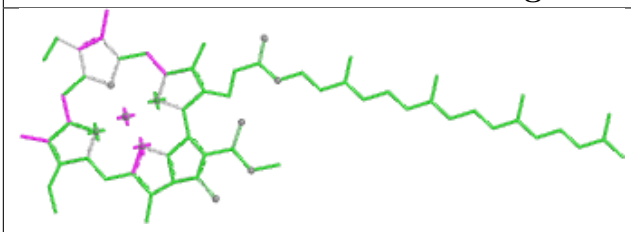


Torsions

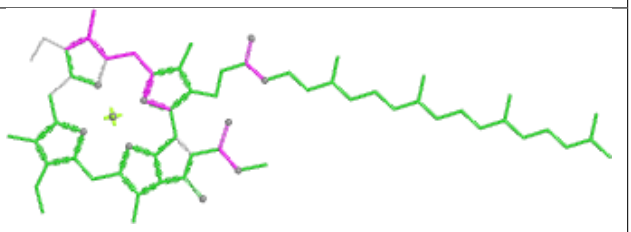


Rings

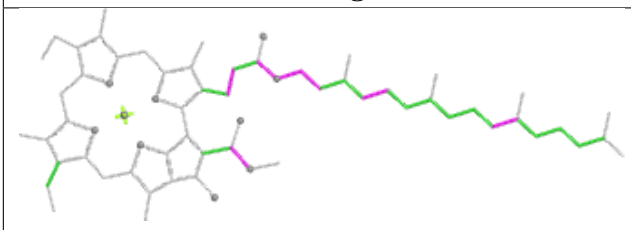
Ligand CLA B 810



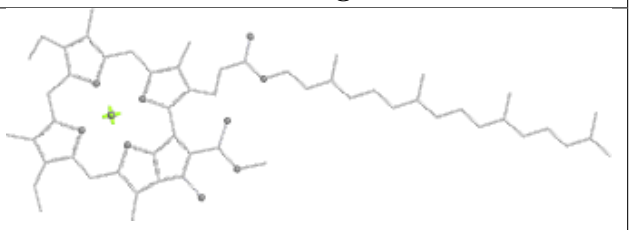
Bond lengths



Bond angles

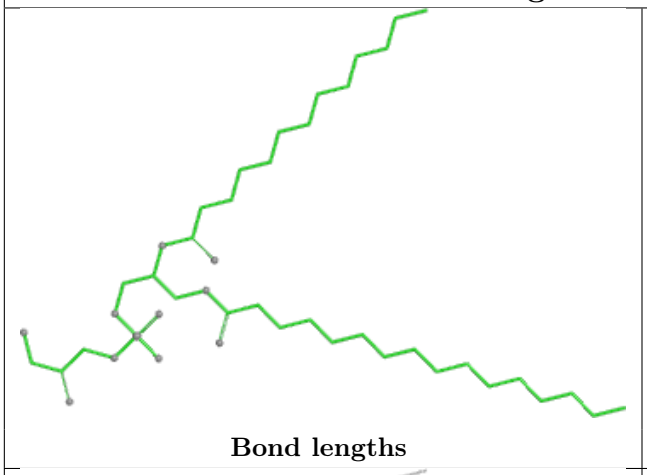


Torsions



Rings

Ligand LHG 1 621



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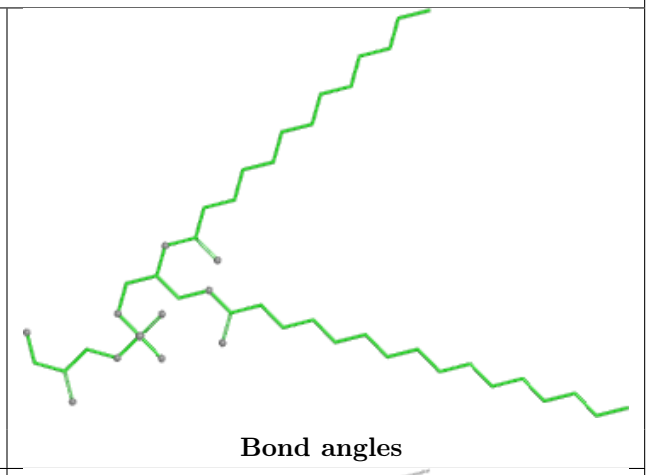
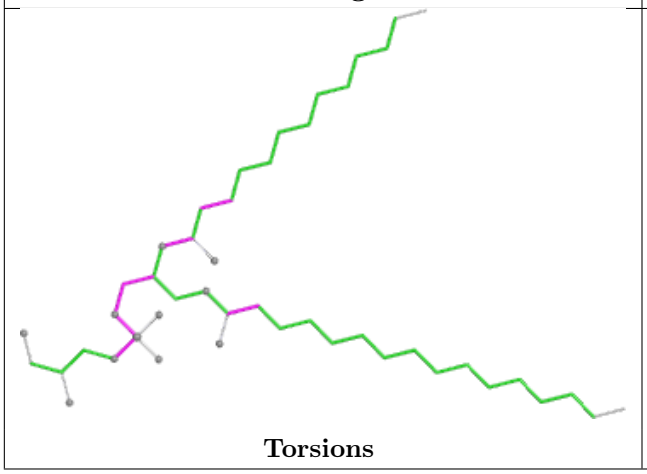


Bond angles



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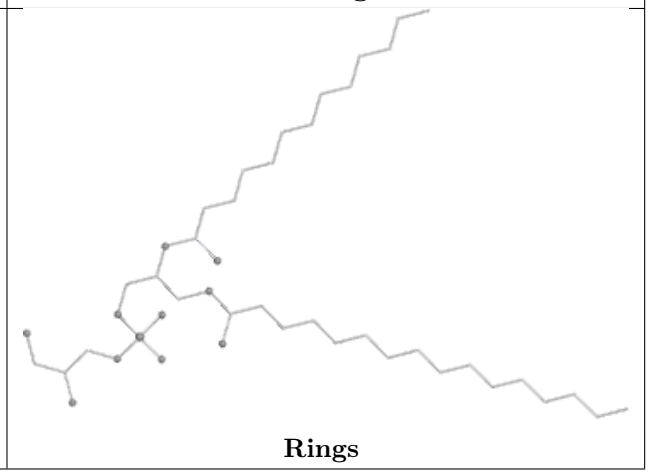
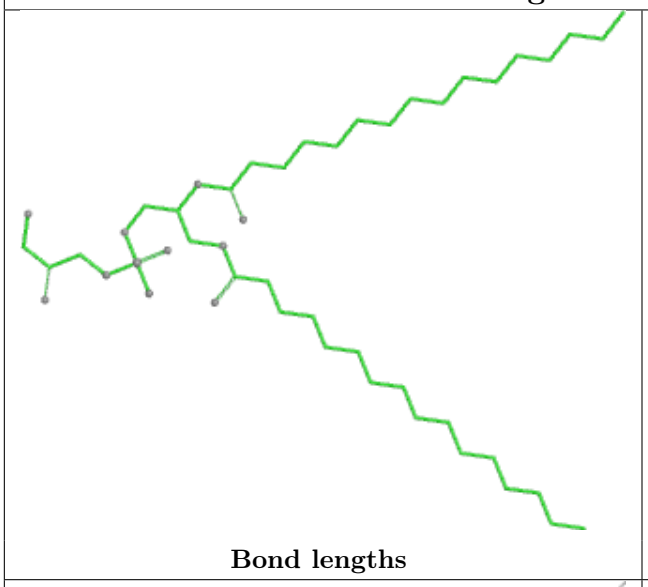


Rings

Ligand LHG 7 320



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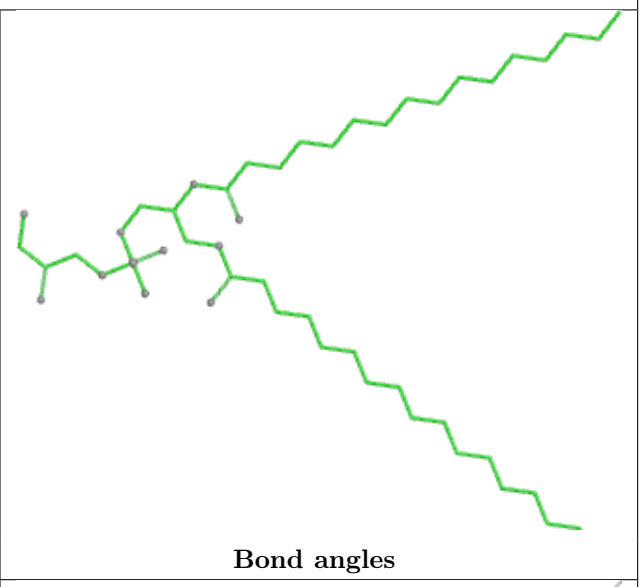
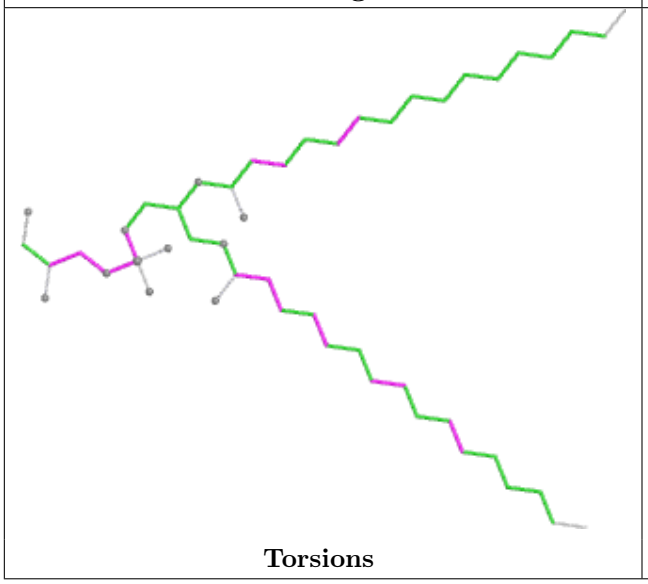


Bond angles



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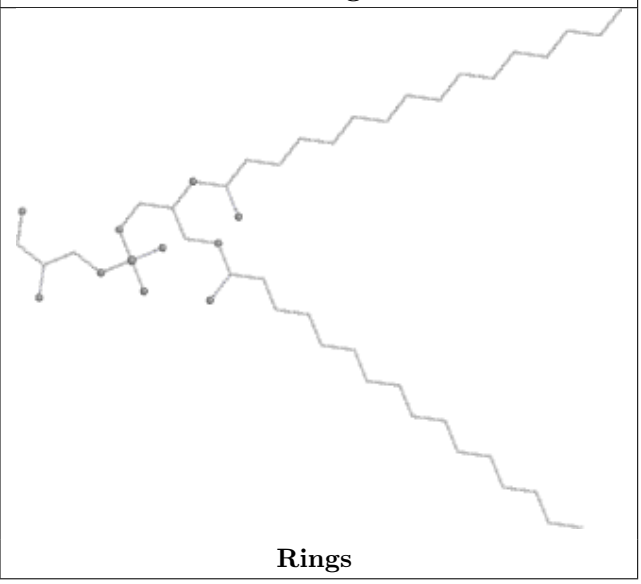
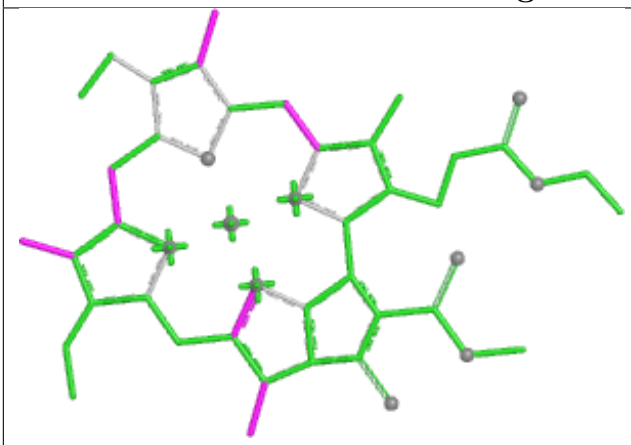
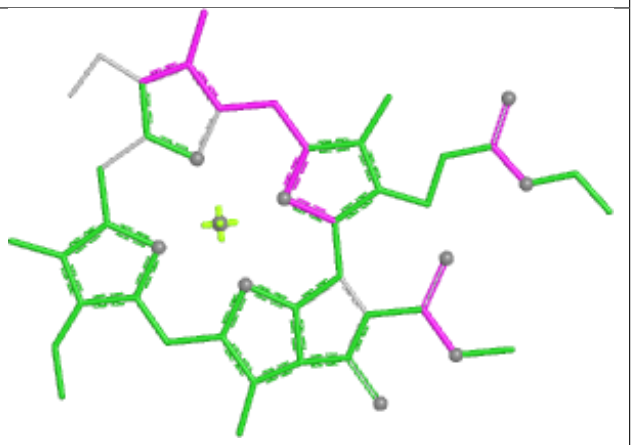


Rings

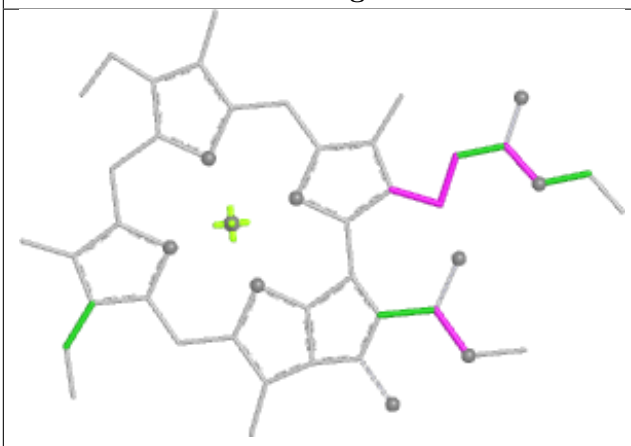
Ligand CLA F 5006



Bond lengths



Bond angles



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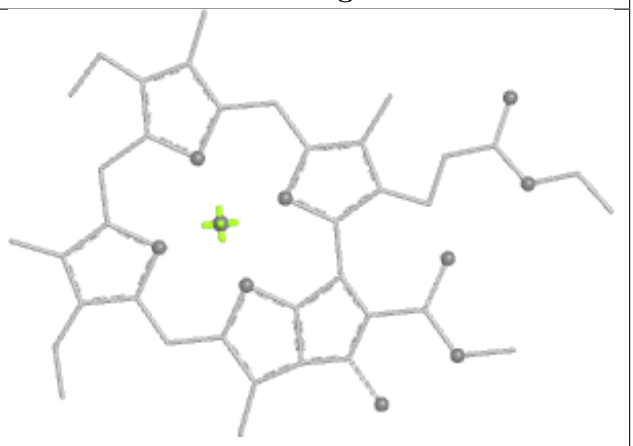
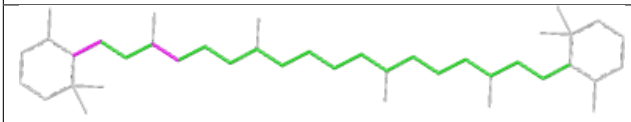


Rings

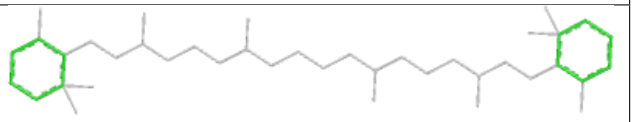
Ligand BCR L 303

Bond lengths

Bond angles

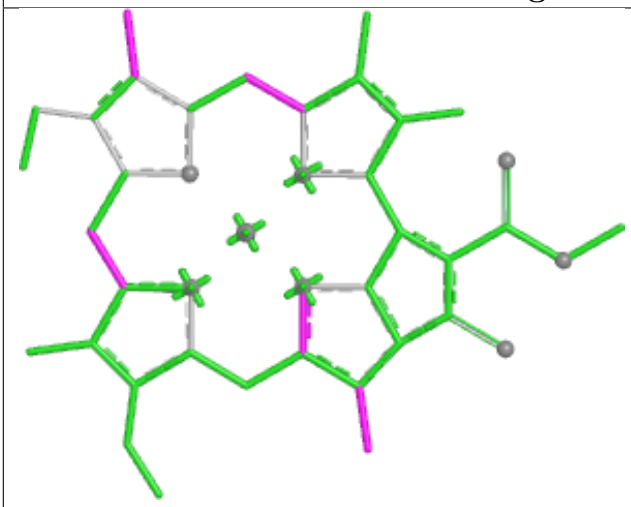


Torsions

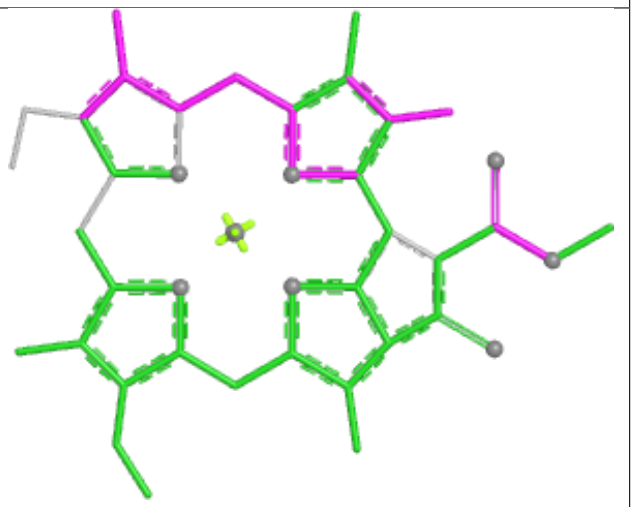


Rings

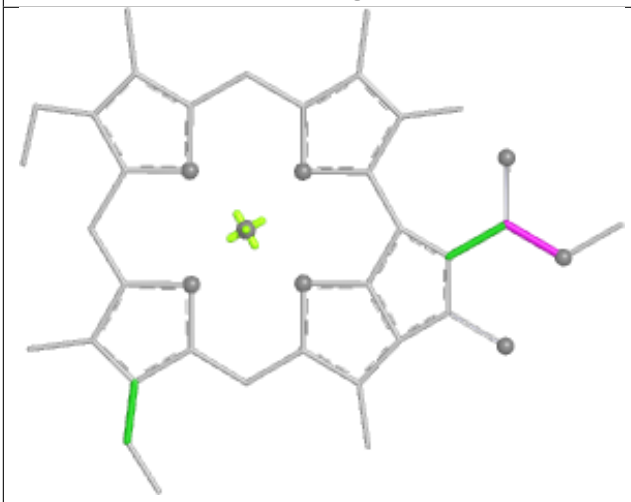
Ligand CLA 2 609



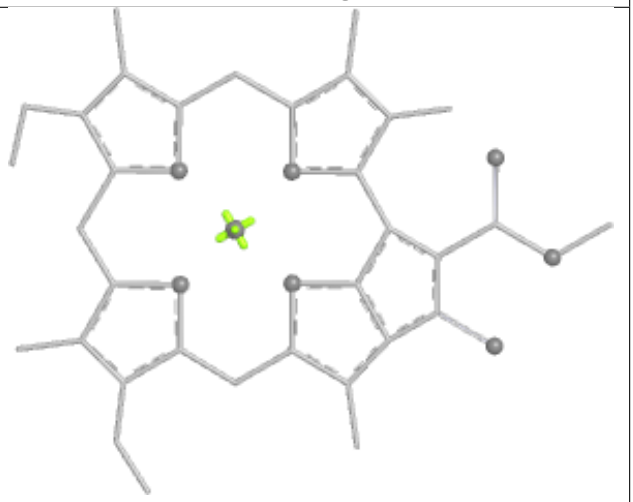
Bond lengths



Bond angles

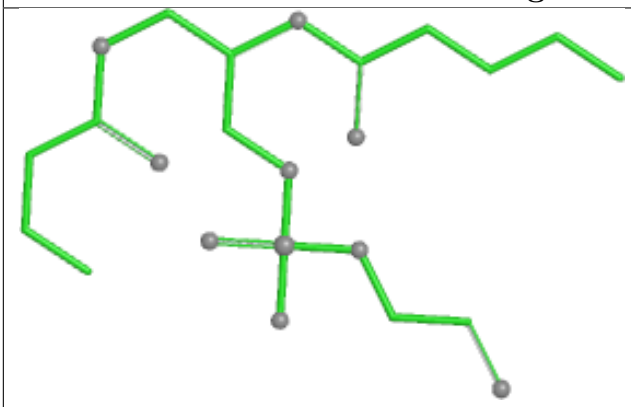


Torsions



Rings

Ligand PTY 8 317



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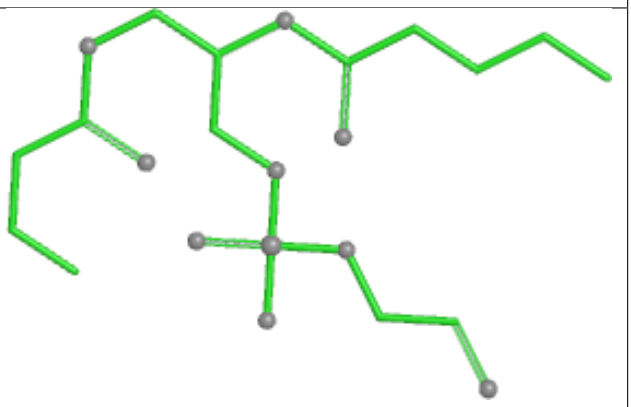
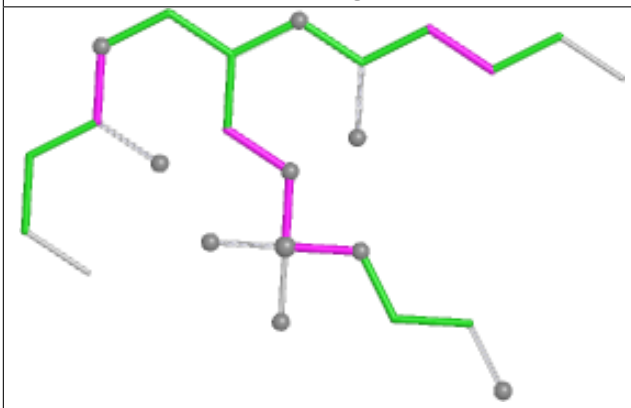
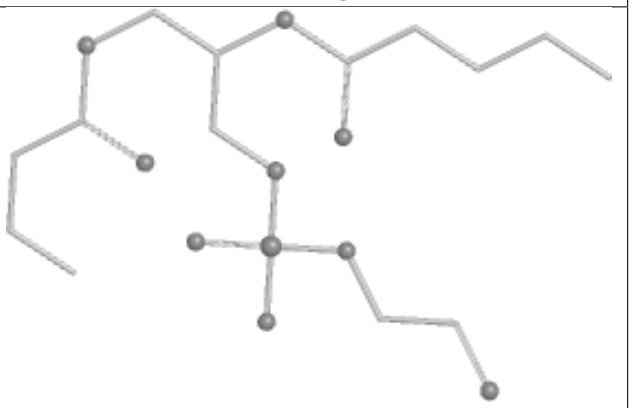


Bond angles

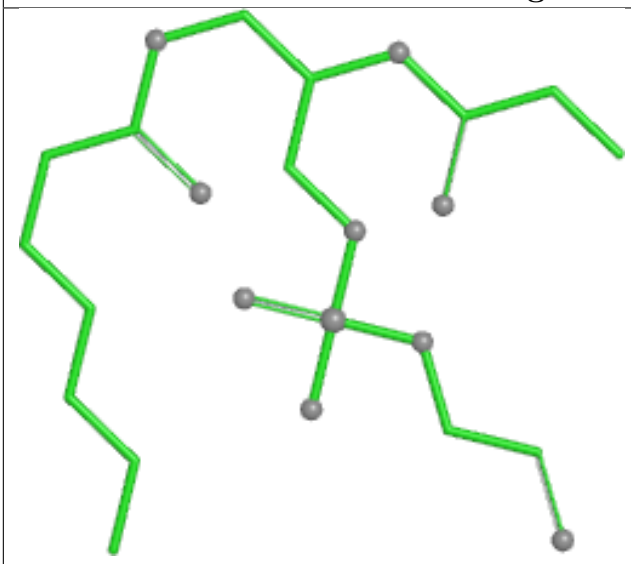


Torsions



Rings

Ligand PTY 7 322



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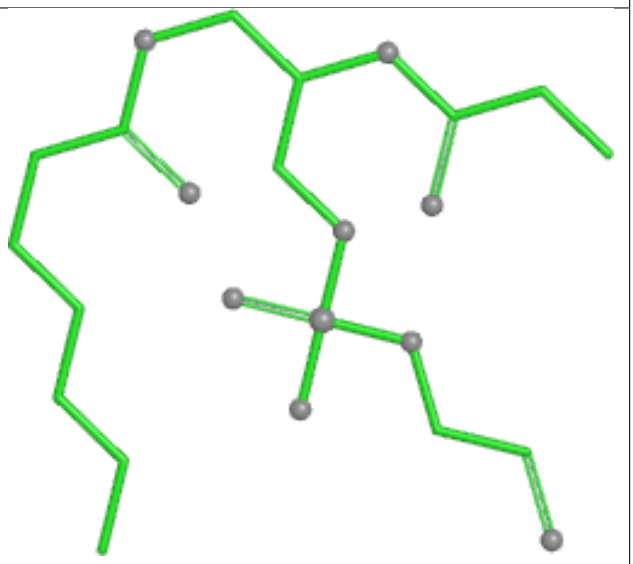
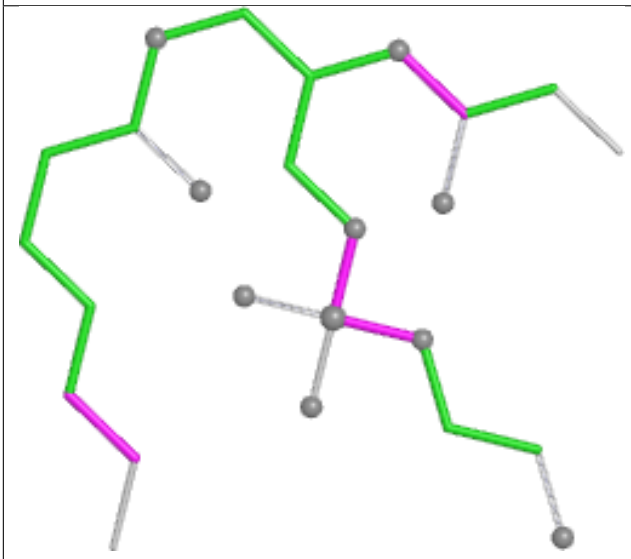
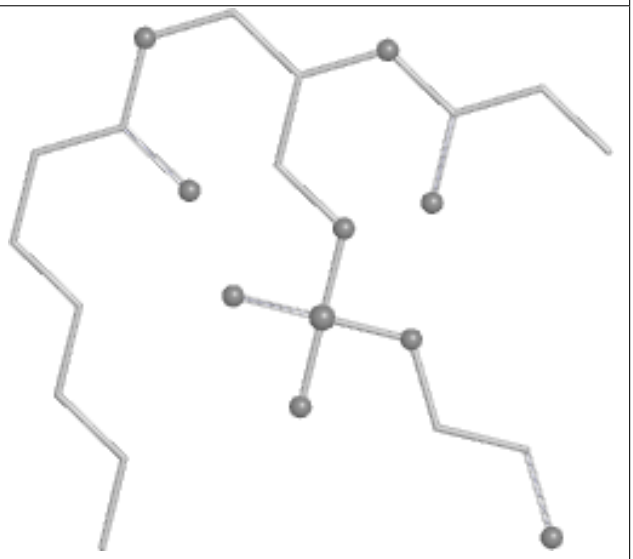


Bond angles

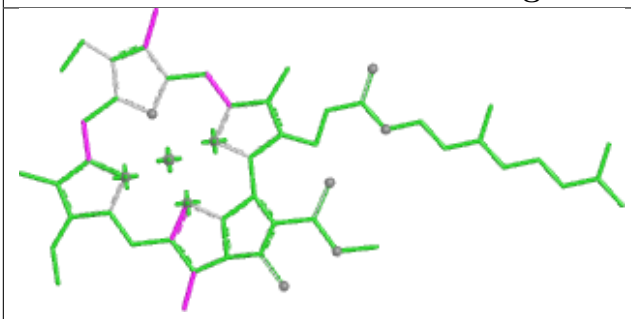


Torsions

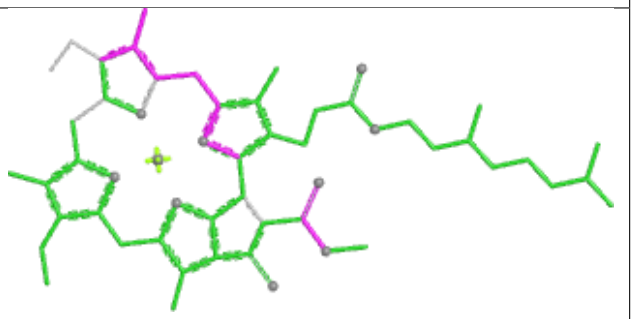


Rings

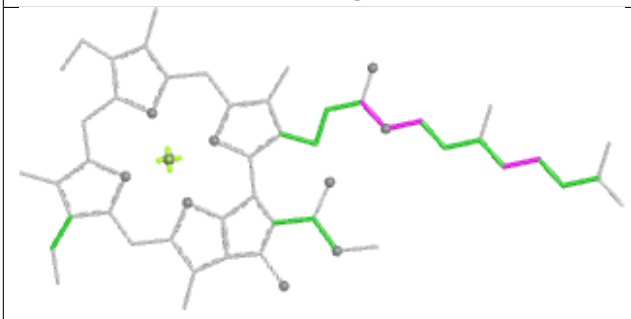
Ligand CLA K 202



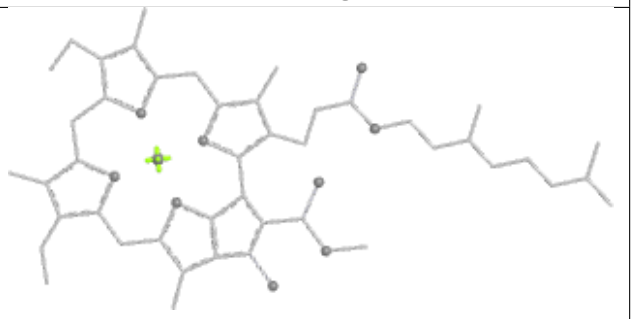
Bond lengths



Bond angles

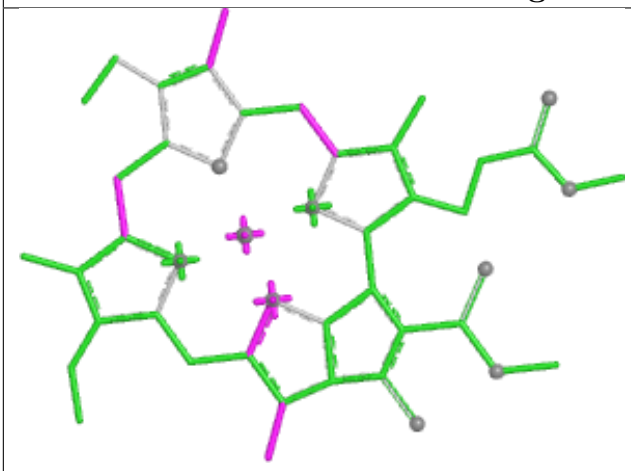


Torsions



Rings

Ligand CLA 8 307



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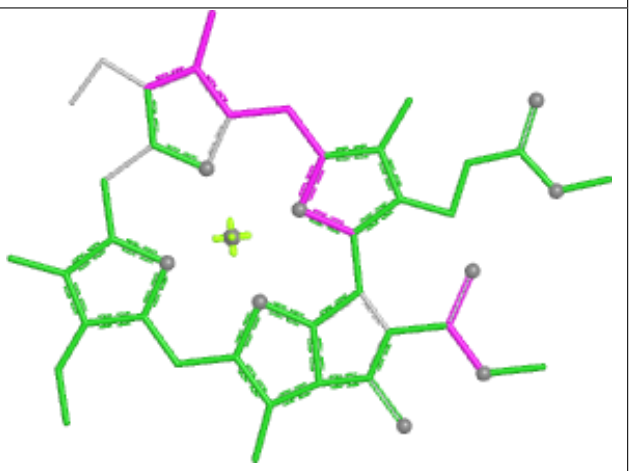
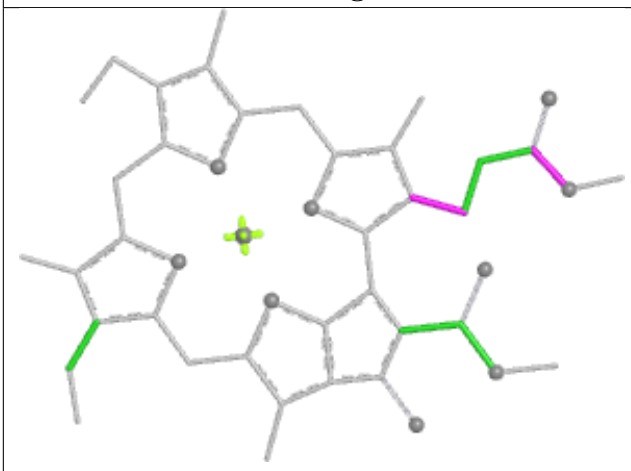
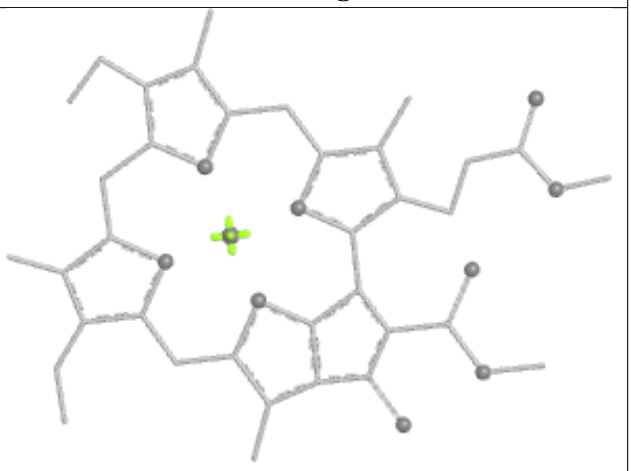


Bond angles

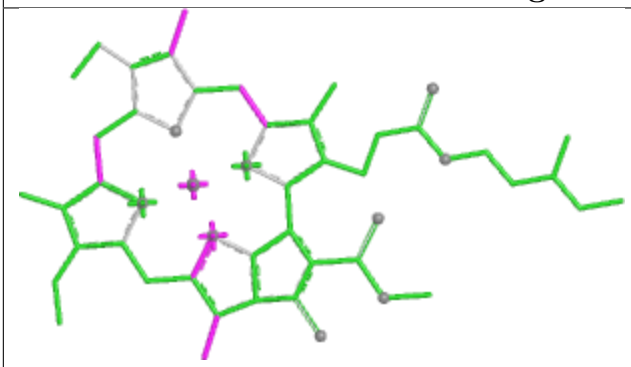


Torsions

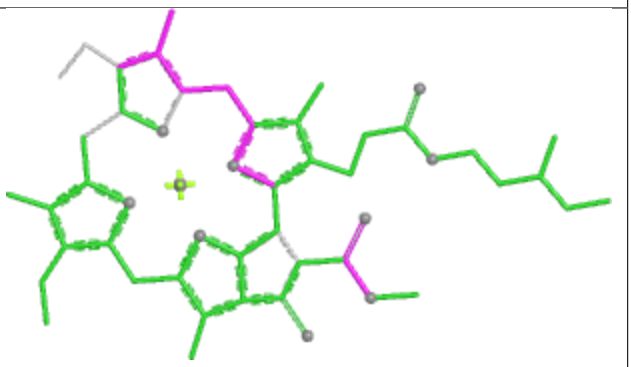


Rings

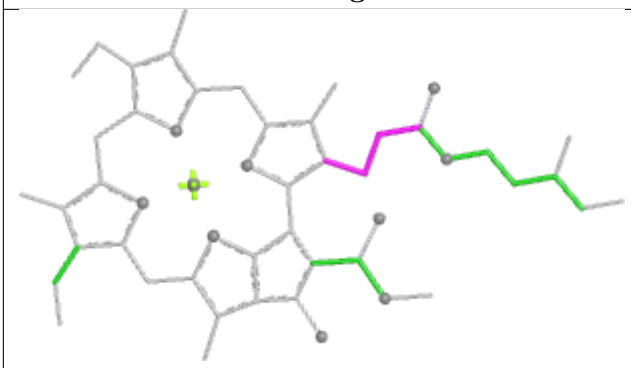
Ligand CLA 8 313



Bond lengths



Bond angles



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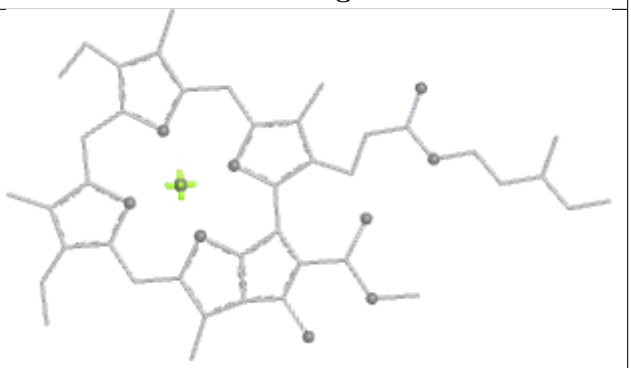
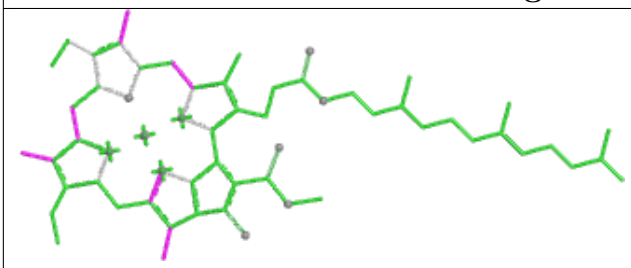
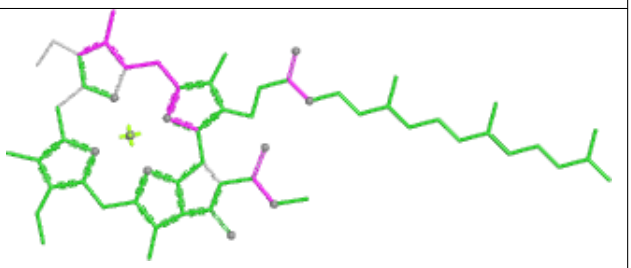


Rings

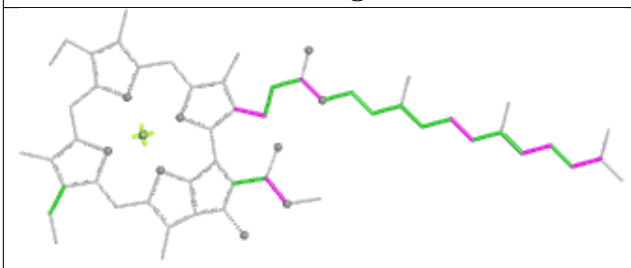
Ligand CLA B 835



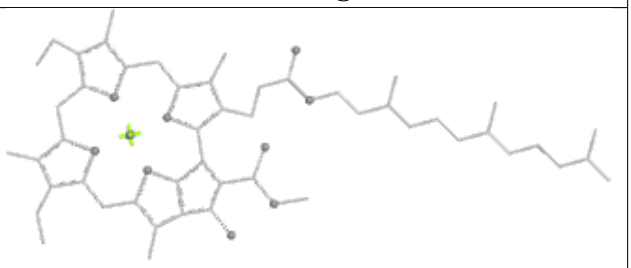
Bond lengths



Bond angles

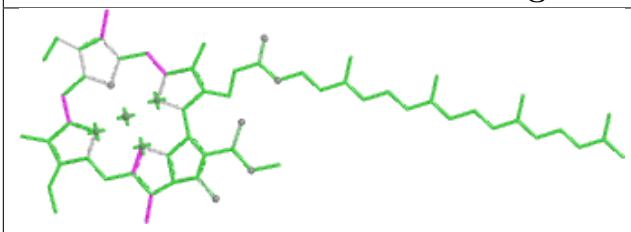


Torsions

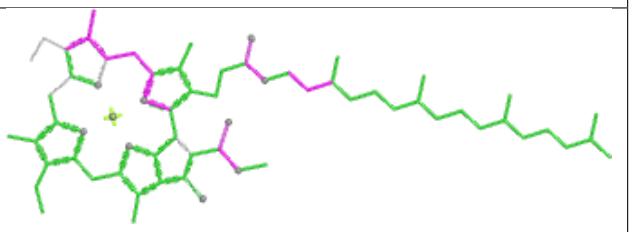


Rings

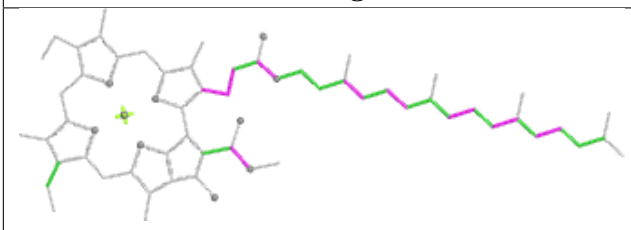
Ligand CLA 3 412



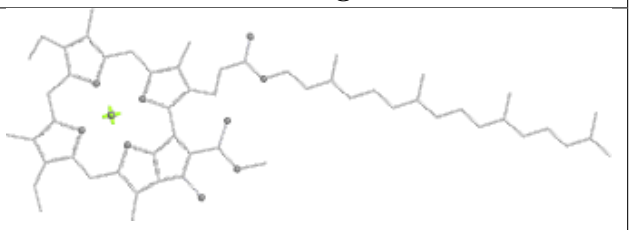
Bond lengths



Bond angles

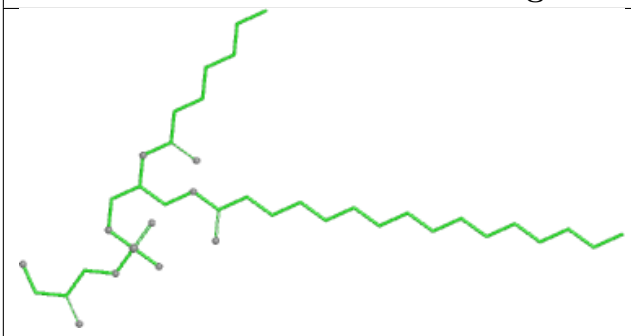


Torsions



Rings

Ligand LHG 7 325



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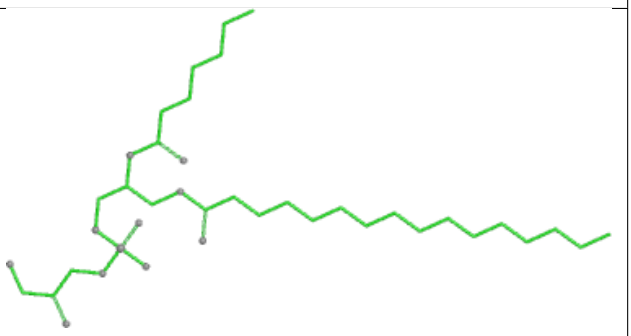
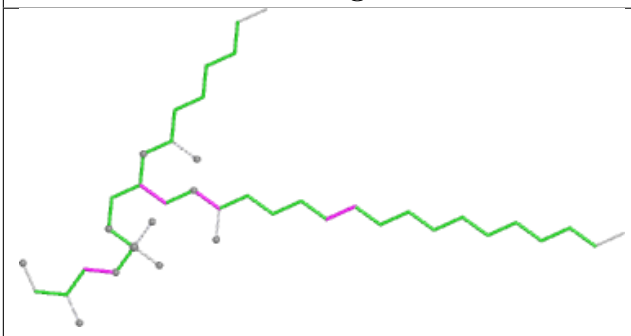


Bond angles



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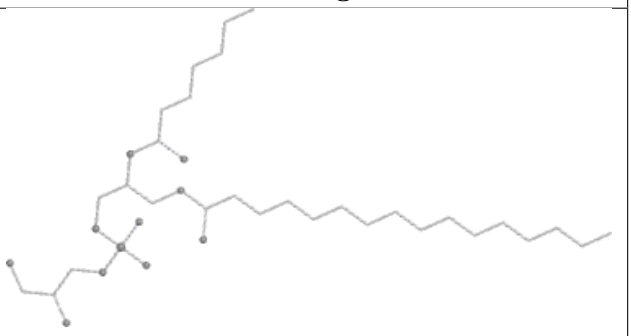
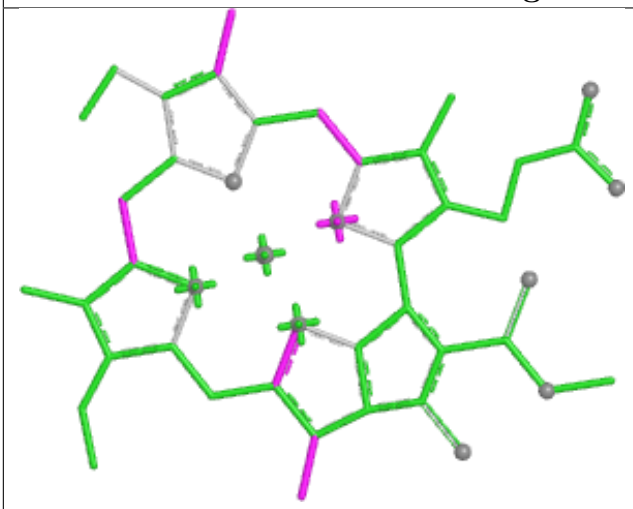


Rings

Ligand CLA K 201



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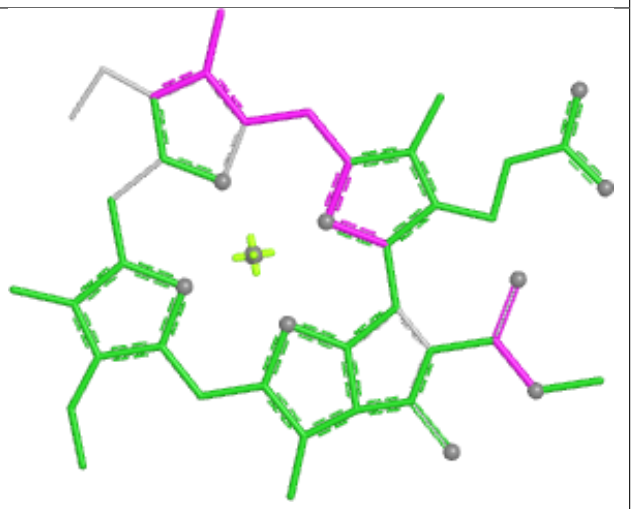
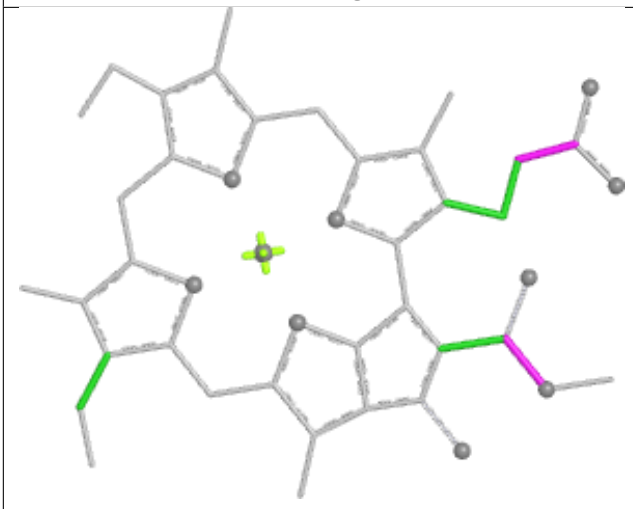


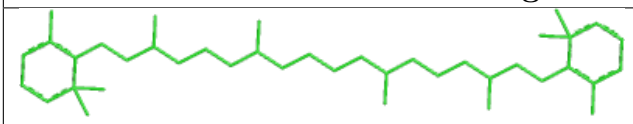
Bond angles



Torsions

Rings

Ligand BCR A 851



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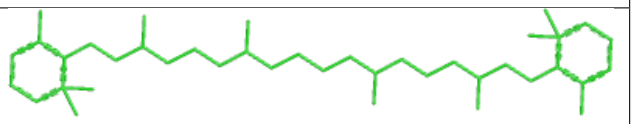
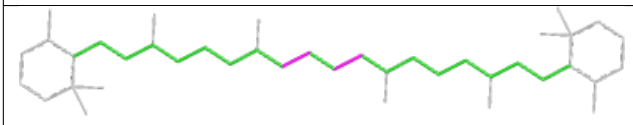


Bond angles



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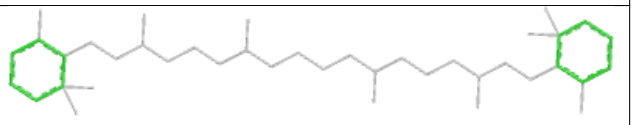
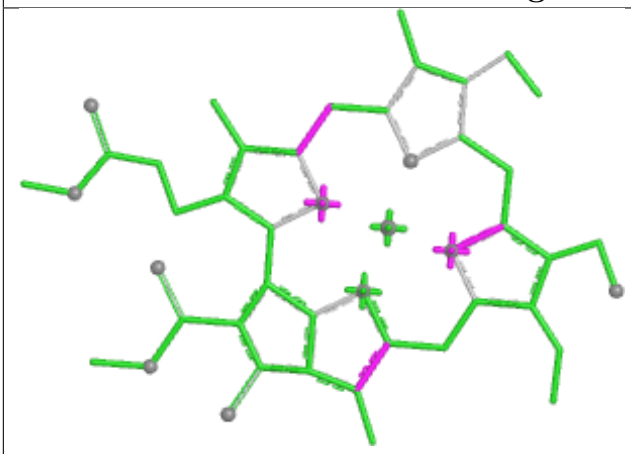


Rings

Ligand CHL 2 606



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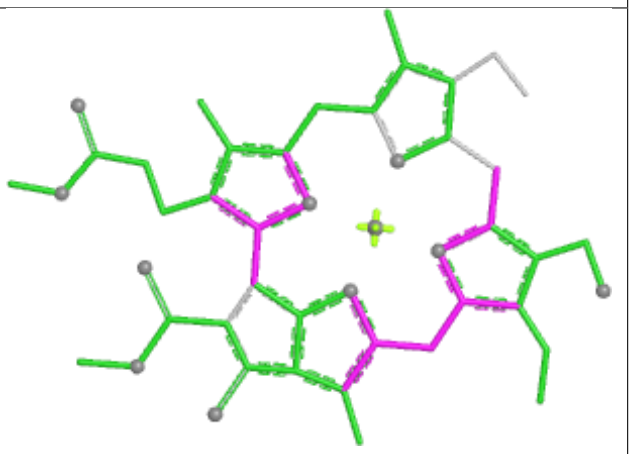
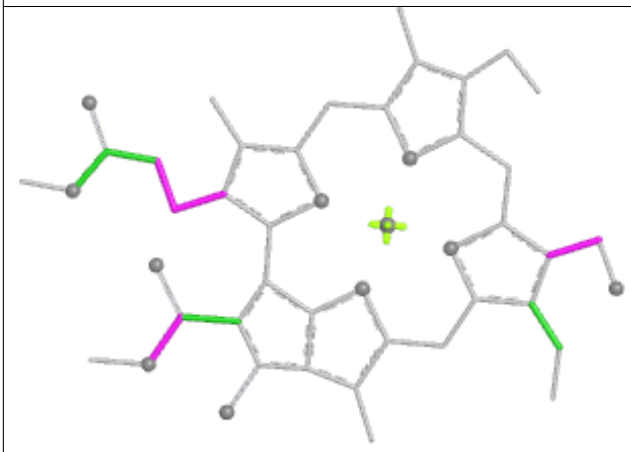


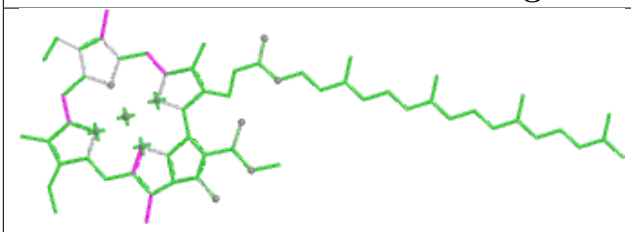
Bond angles



Torsions

Rings

Ligand CLA A 822



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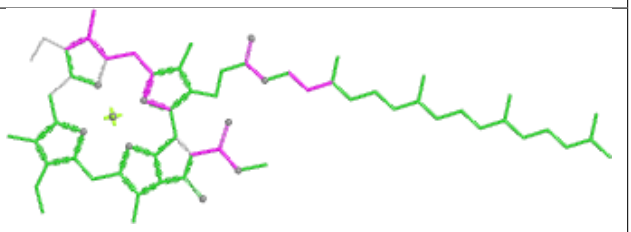
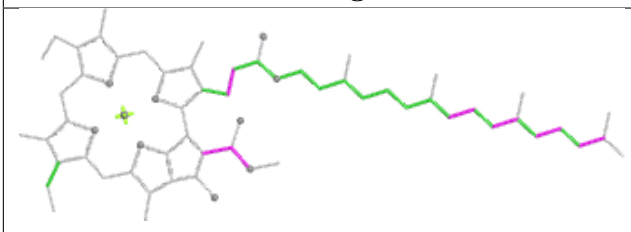


Bond angles



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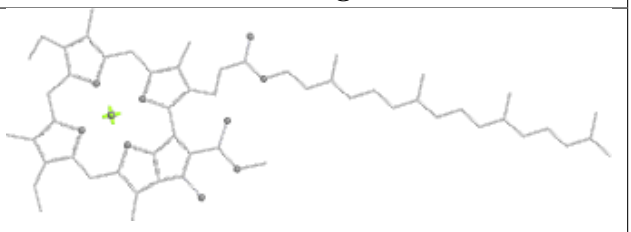
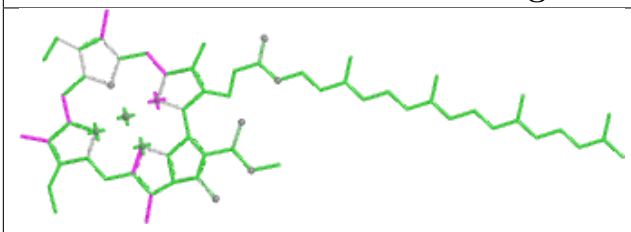


Rings

Ligand CLA 1 603



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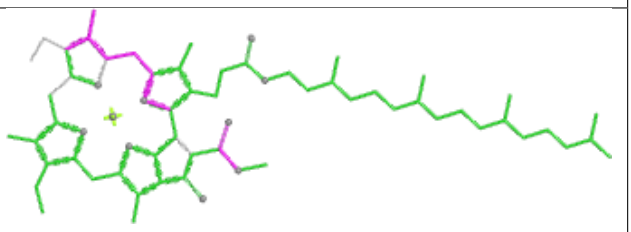
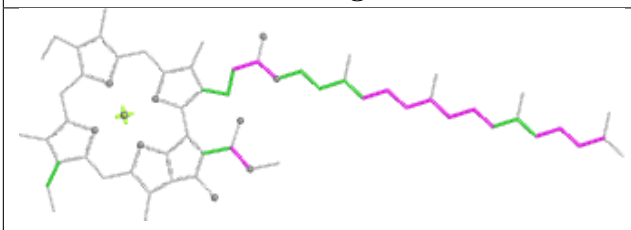
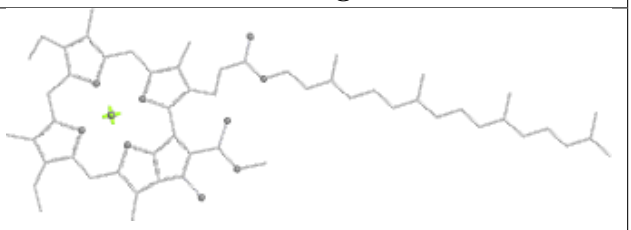


Bond angles

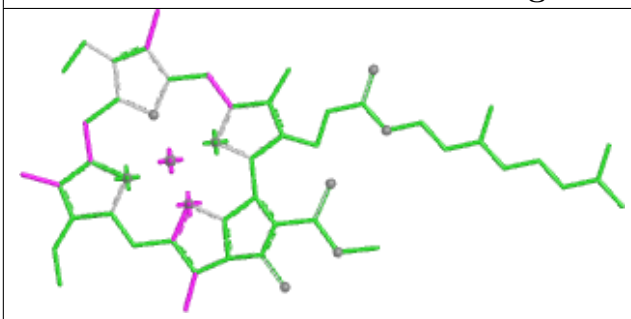


Torsions



Rings

Ligand CLA 3 406



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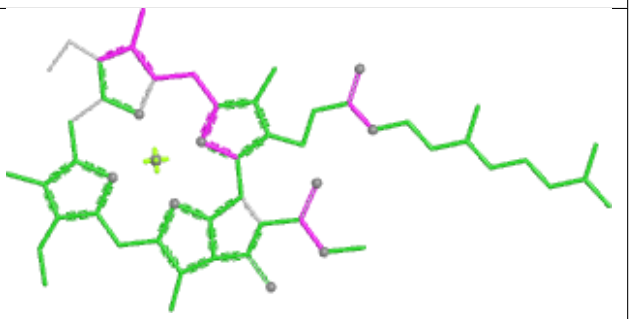
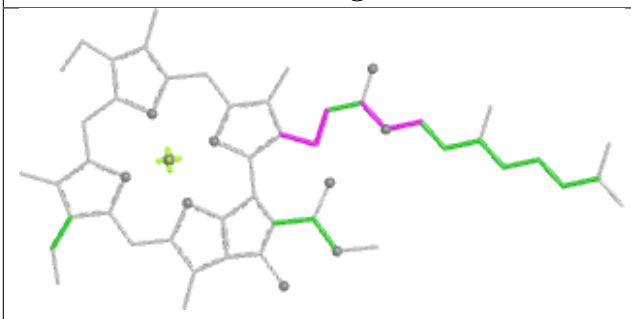


Bond angles



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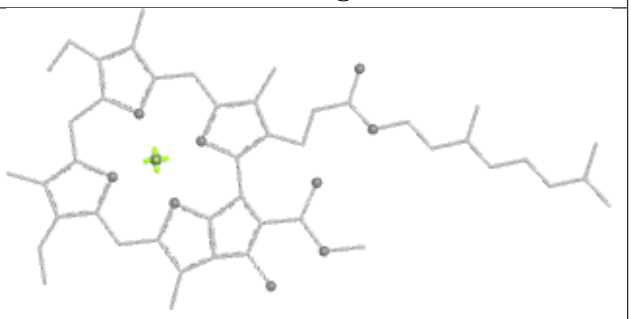

Rings

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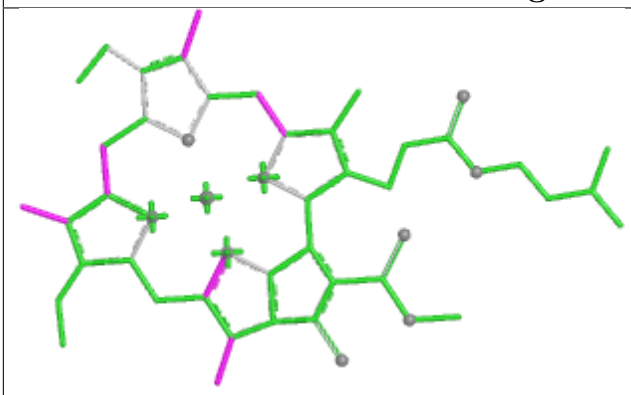

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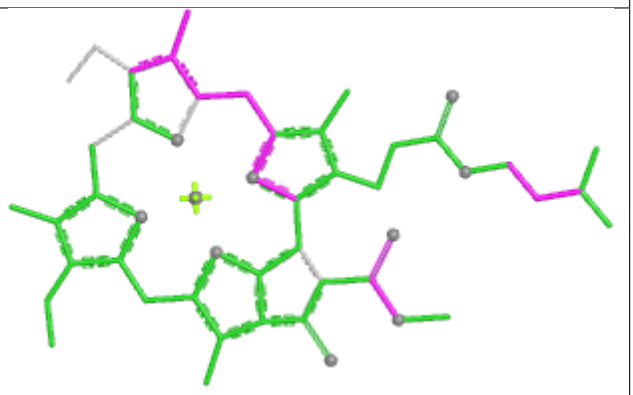
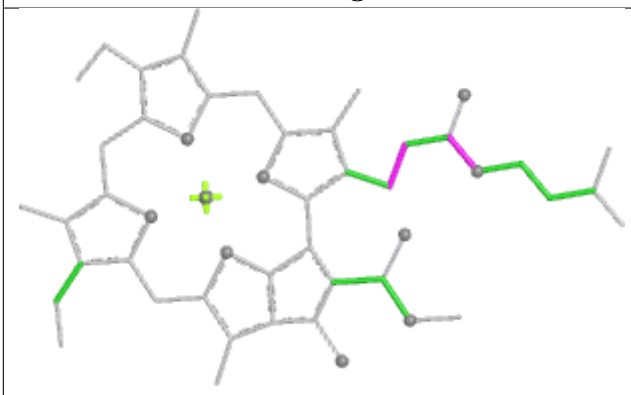
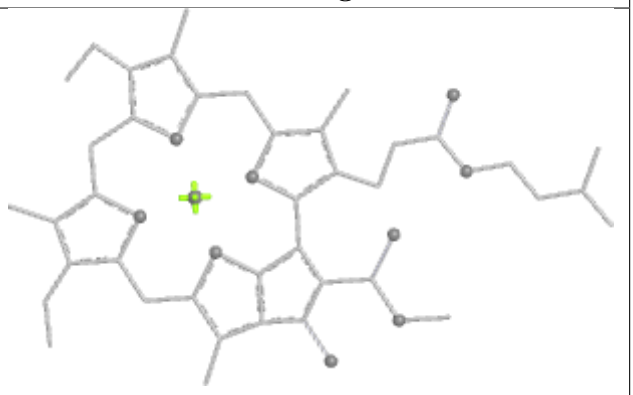


Bond angles



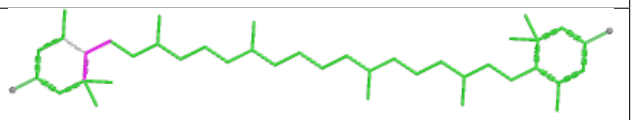
Torsions



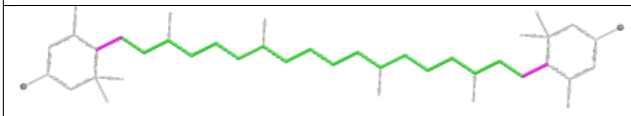
Rings

Ligand LUT 3 415

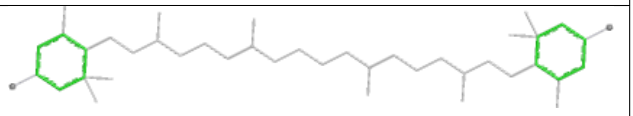
Bond lengths



Bond angles

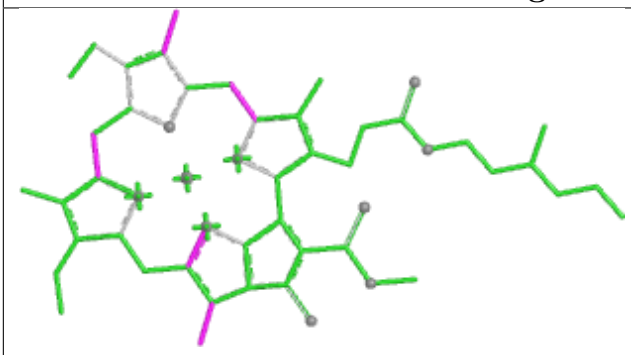


Torsions



Rings

Ligand CLA 3 410



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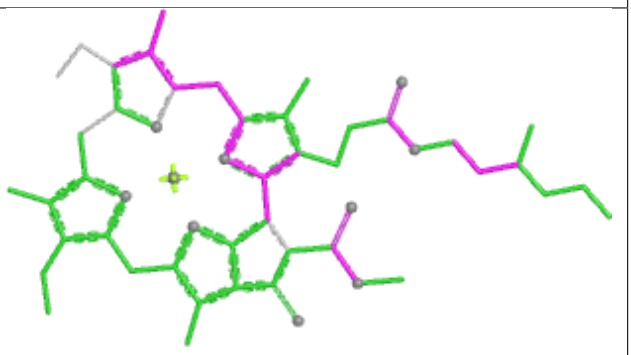
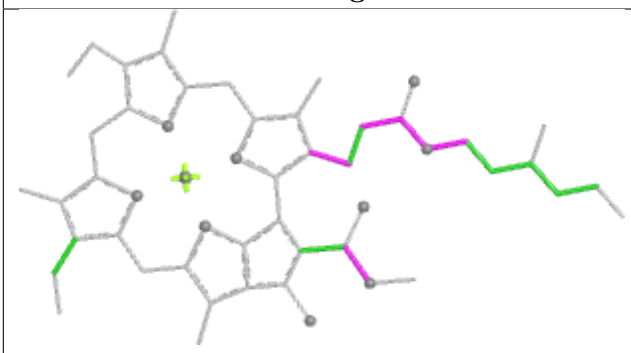
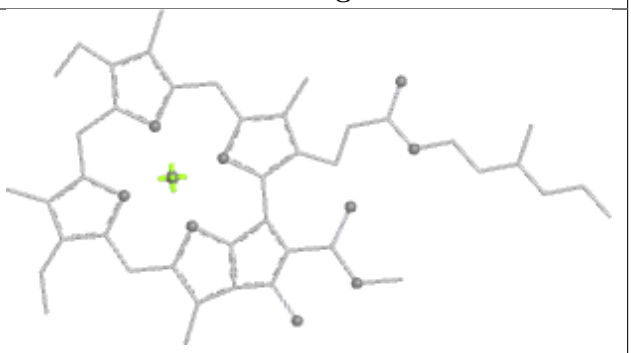


Bond angles

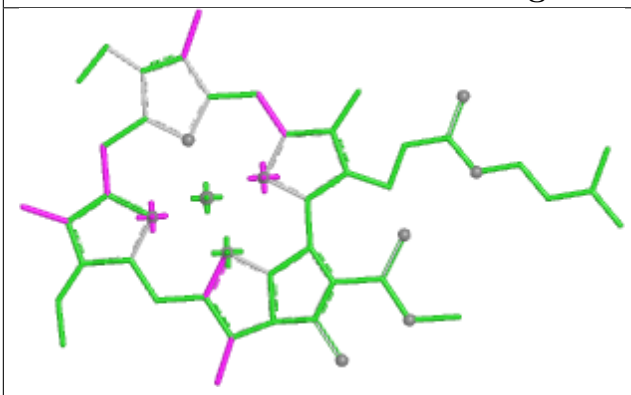


Torsions



Rings

Ligand CLA 8 310



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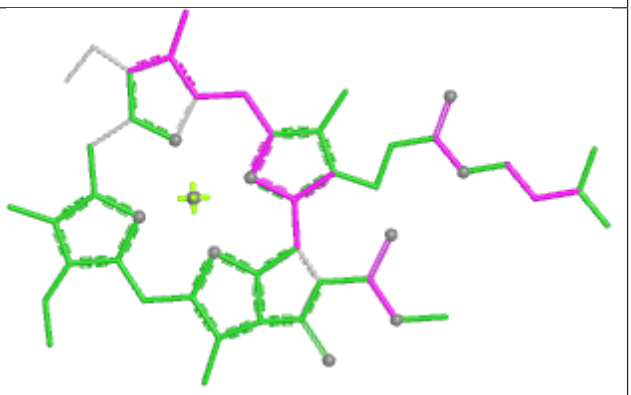
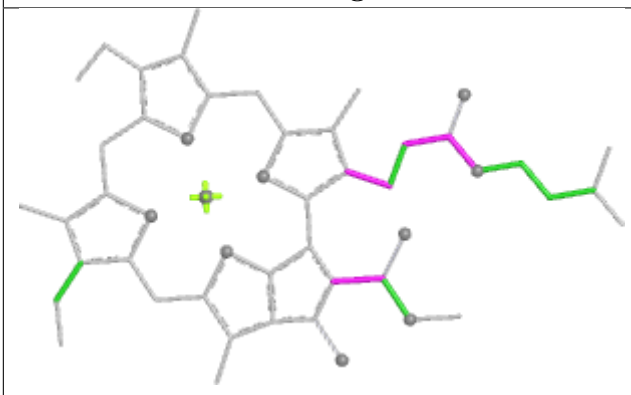
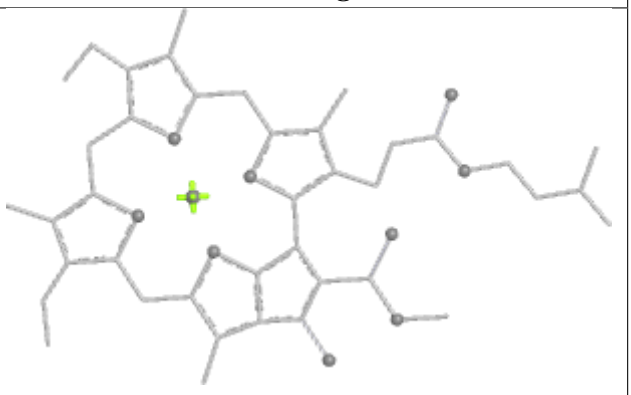


Bond angles

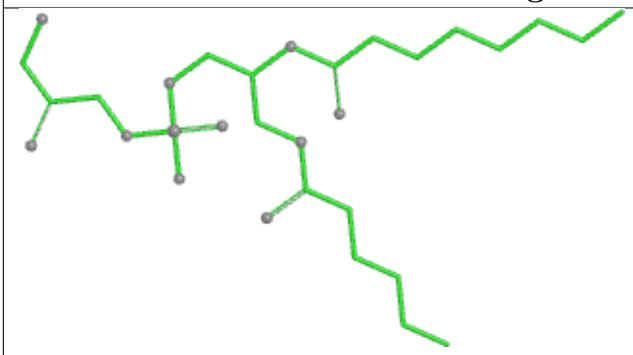


Torsions



Rings

Ligand LHG 1 620



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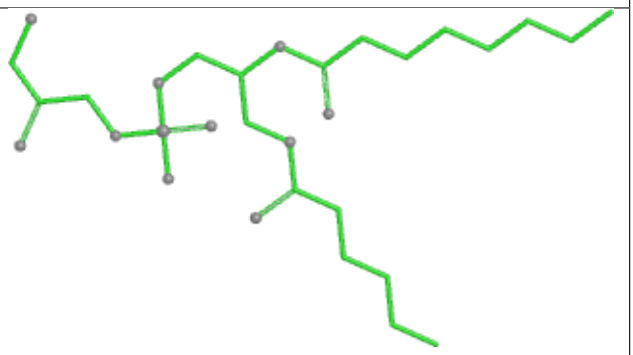
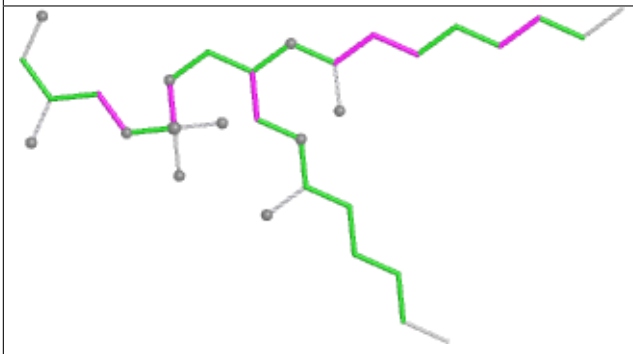
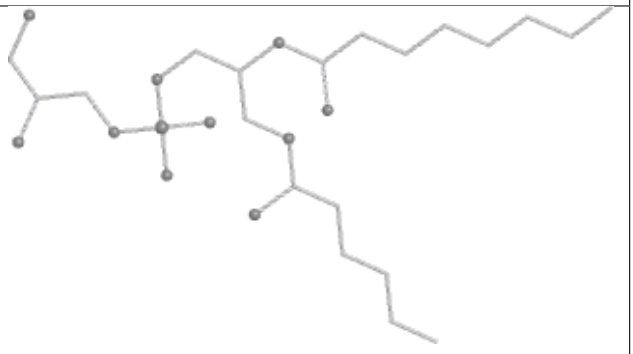


Bond angles

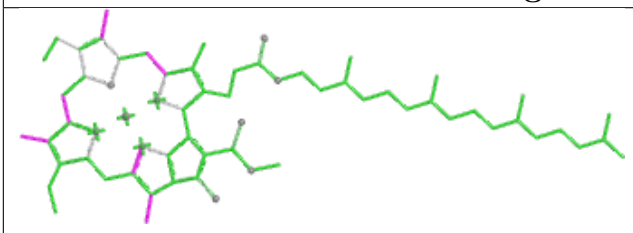


Torsions

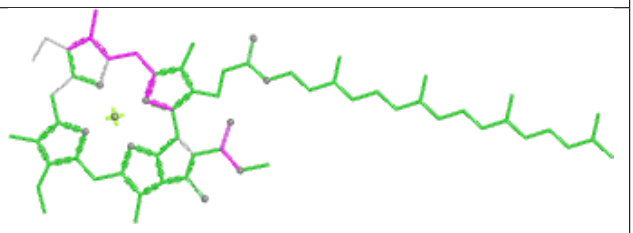


Rings

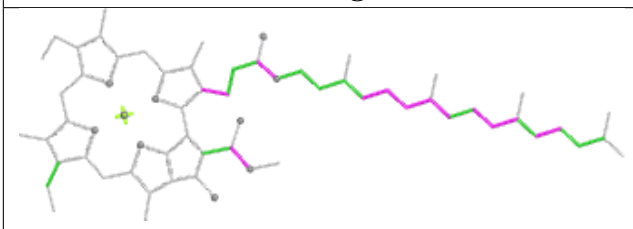
Ligand CLA B 811



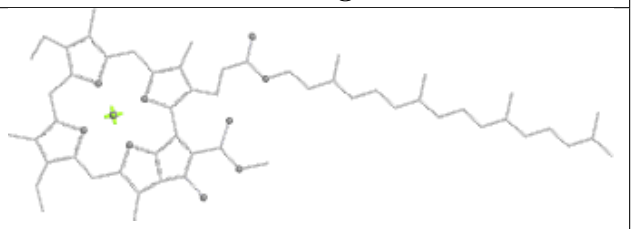
Bond lengths



Bond angles

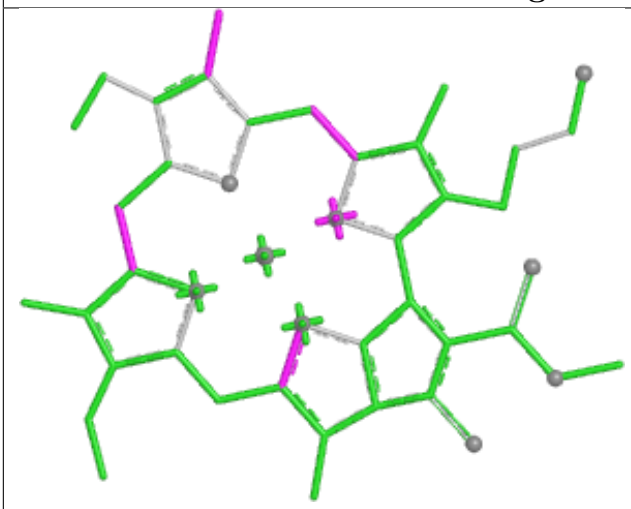


Torsions

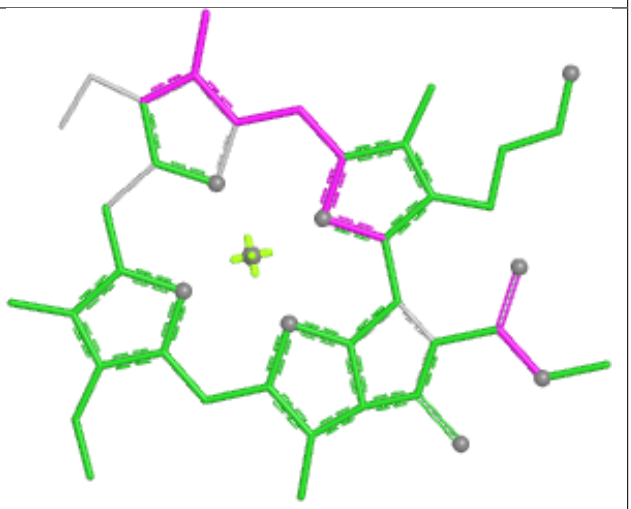


Rings

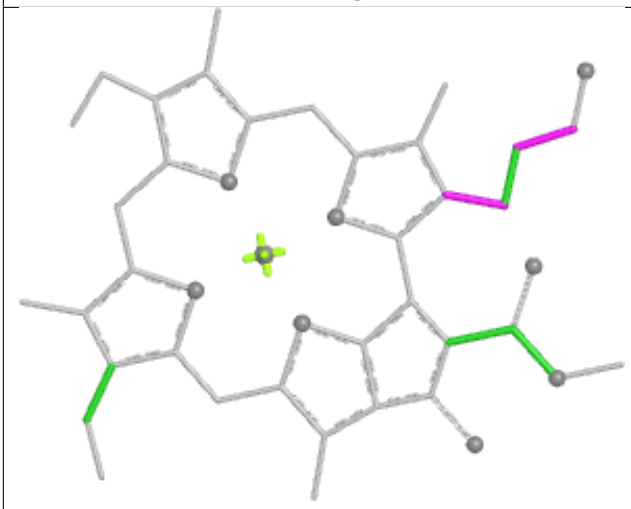
Ligand CLA 2 612



Bond lengths



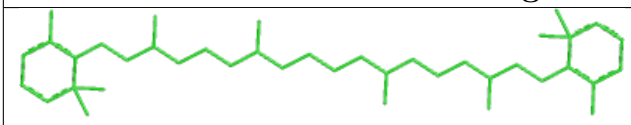
Bond angles



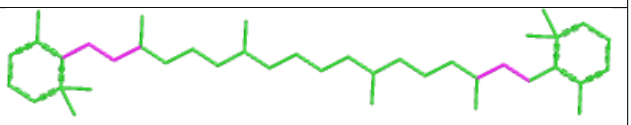
Torsions

Rings

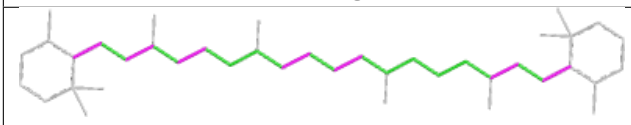
Ligand BCR A 848



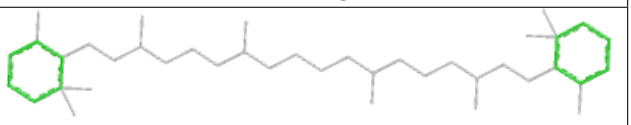
Bond lengths



Bond angles

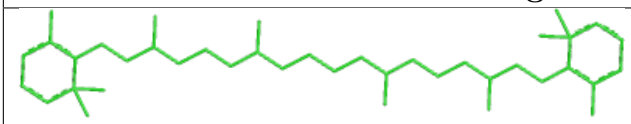


Torsions

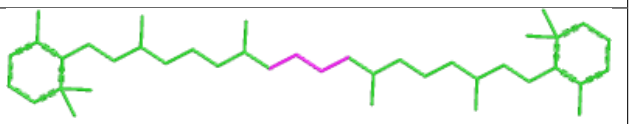


Rings

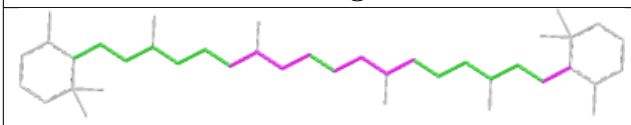
Ligand BCR 3 418



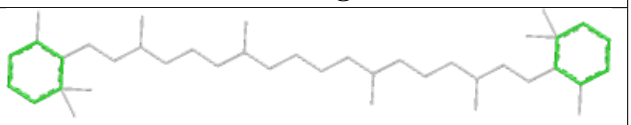
Bond lengths



Bond angles

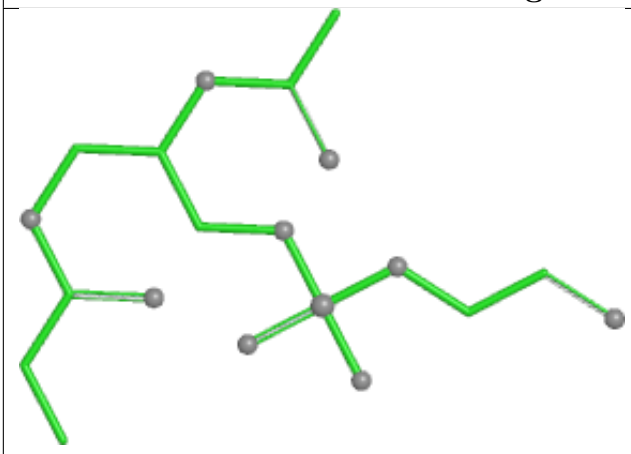


Torsions

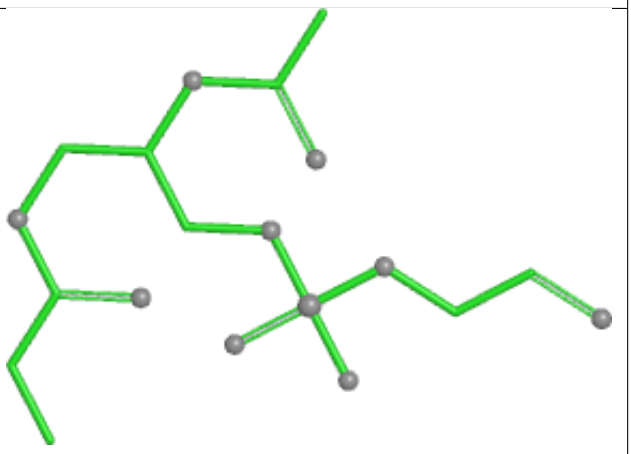


Rings

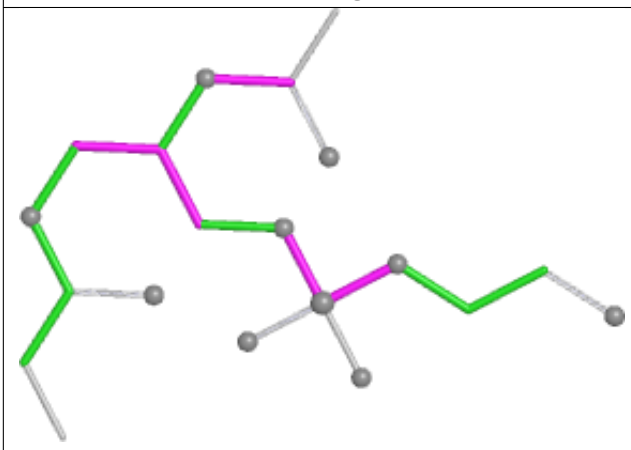
Ligand PTY L 310



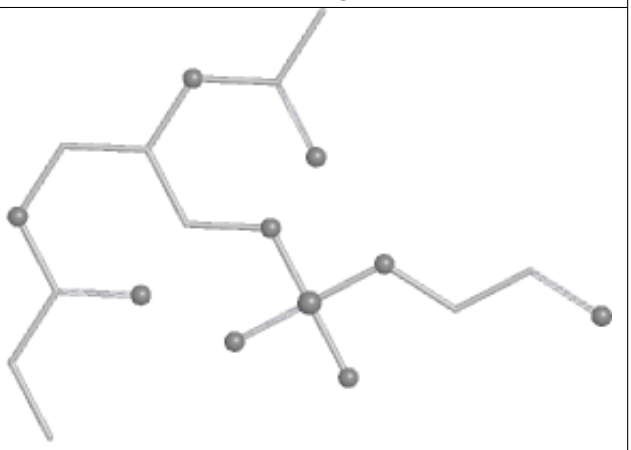
Bond lengths



Bond angles

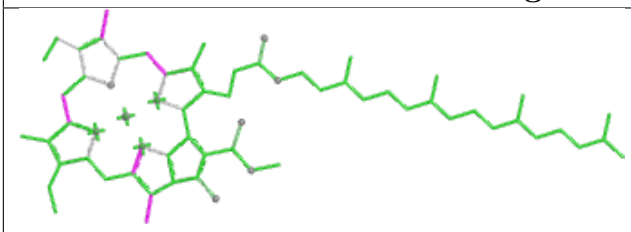


Torsions

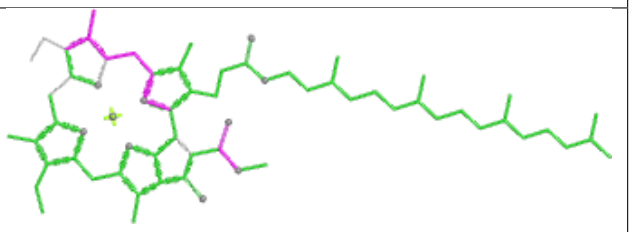


Rings

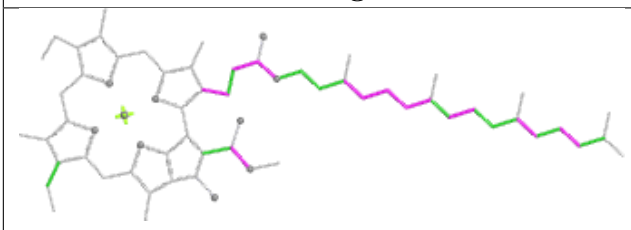
Ligand CLA B 814



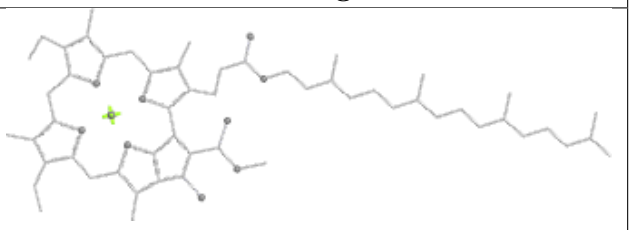
Bond lengths



Bond angles

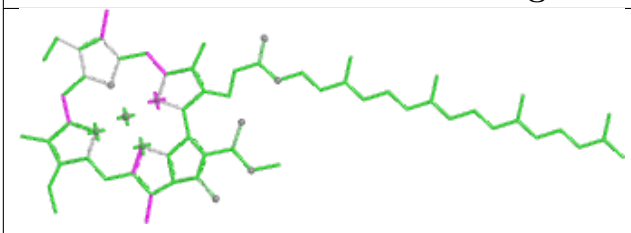


Torsions

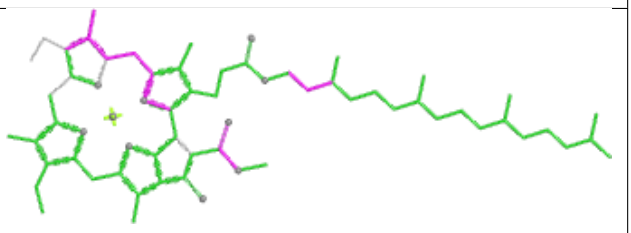


Rings

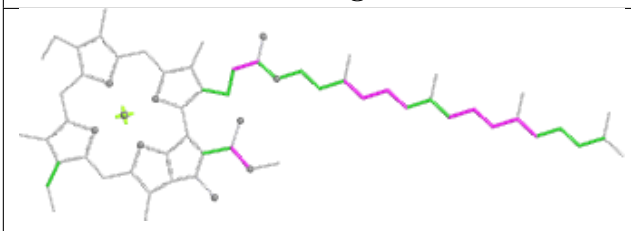
Ligand CLA 3 402



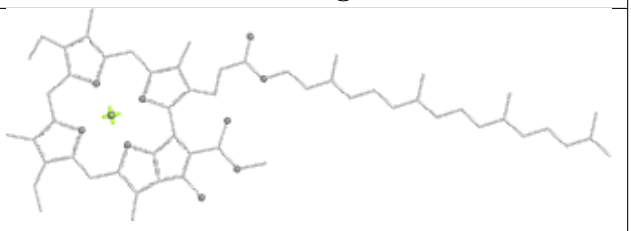
Bond lengths



Bond angles

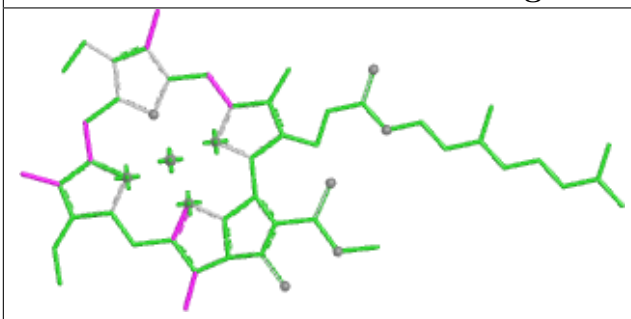


Torsions

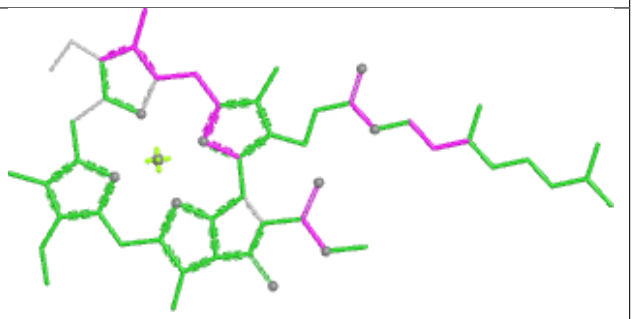


Rings

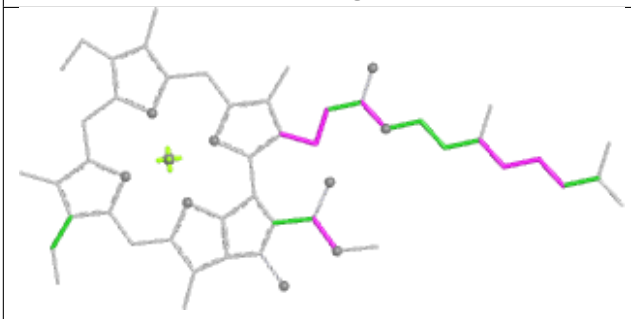
Ligand CLA B 824



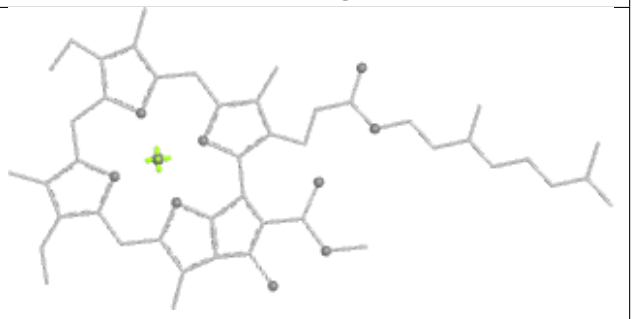
Bond lengths



Bond angles

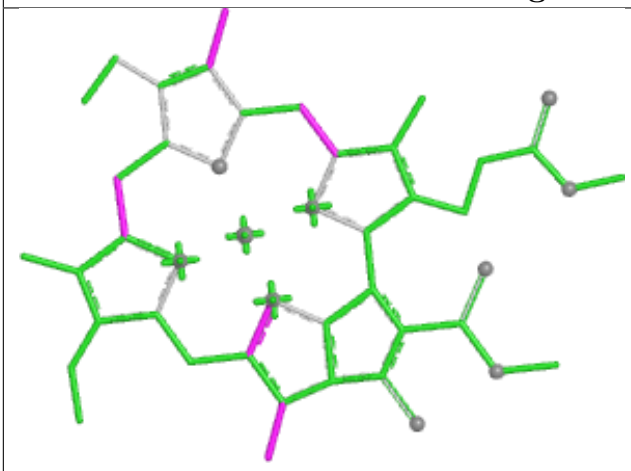


Torsions



Rings

Ligand CLA 1 610



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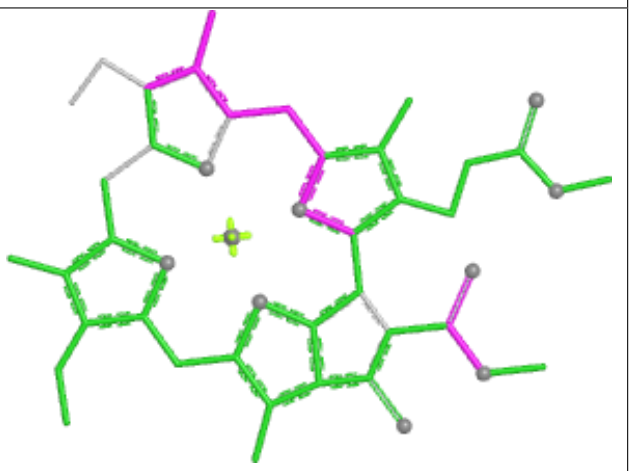
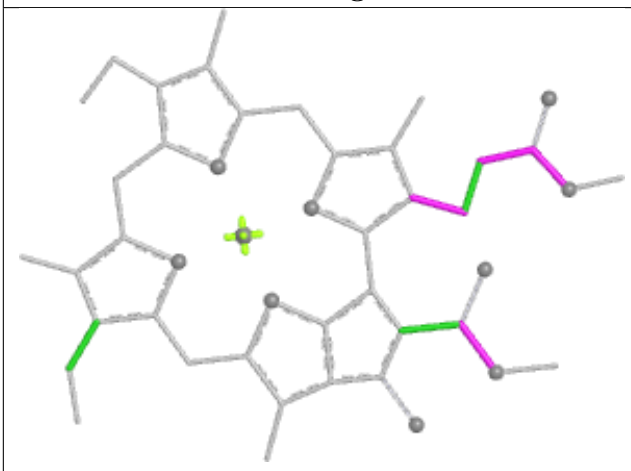
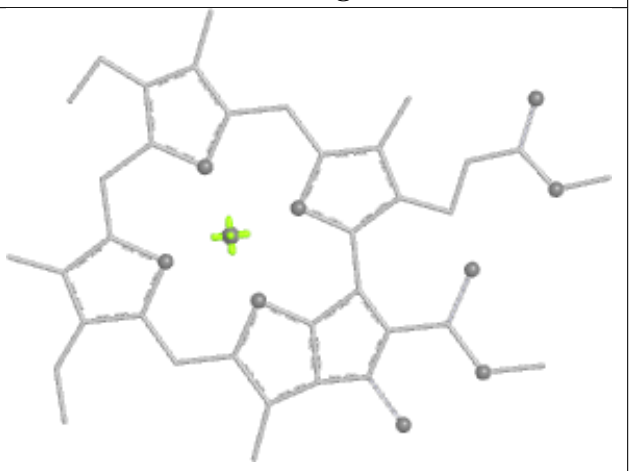


Bond angles

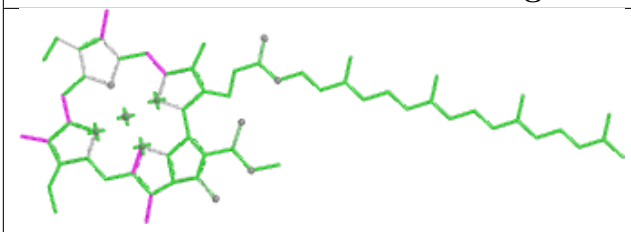


Torsions

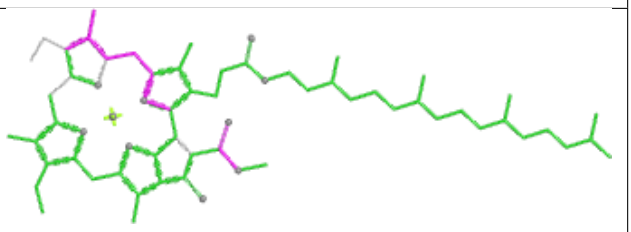


Rings

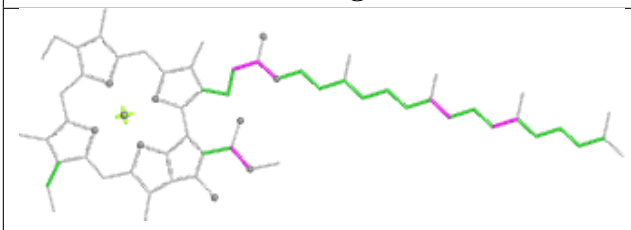
Ligand CLA B 842



Bond lengths



Bond angles



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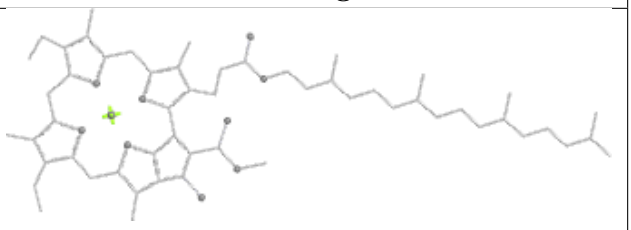
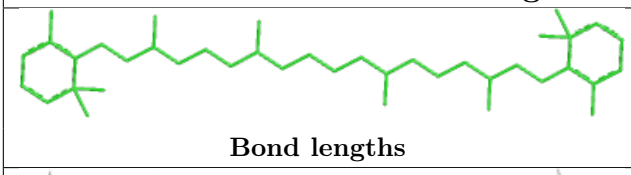
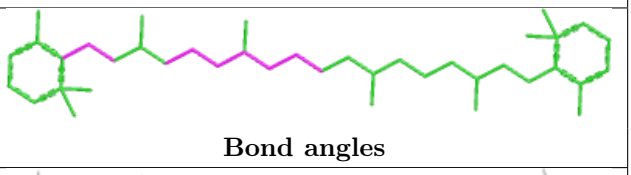


Rings

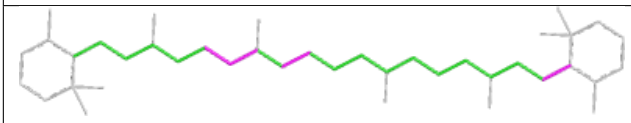
Ligand BCR B 802



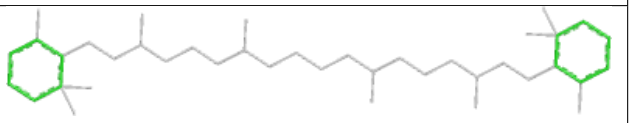
Bond lengths



Bond angles

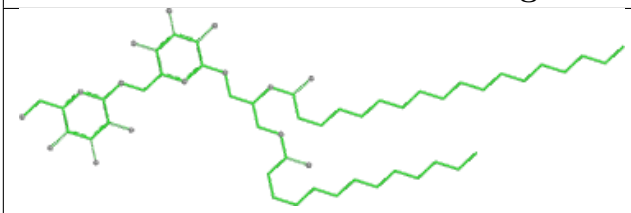


Torsions

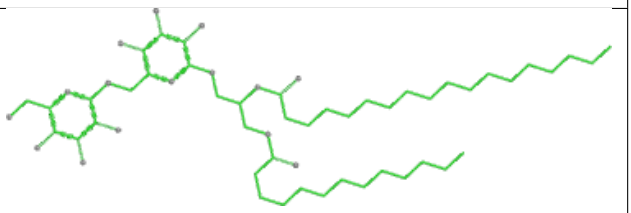


Rings

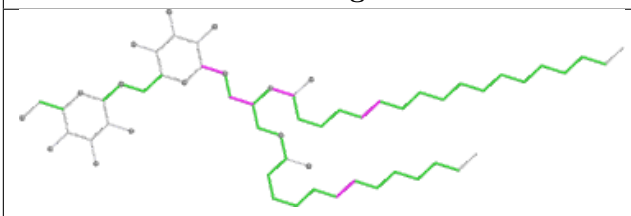
Ligand DGD B 850



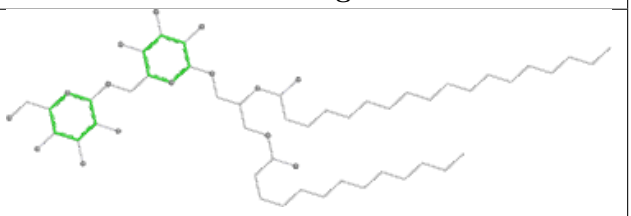
Bond lengths



Bond angles

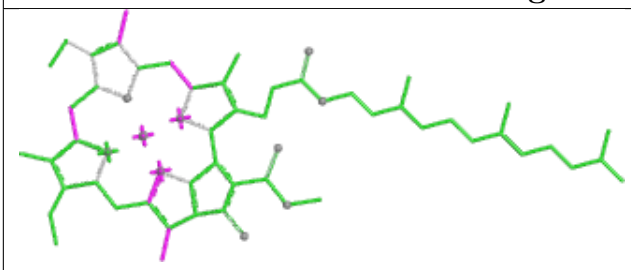


Torsions

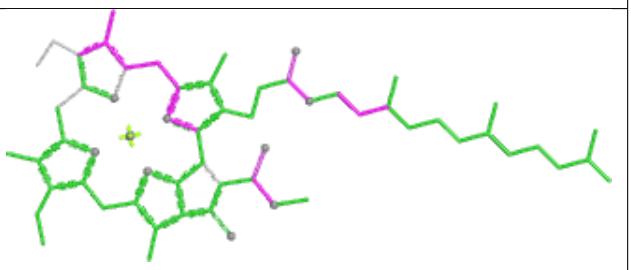


Rings

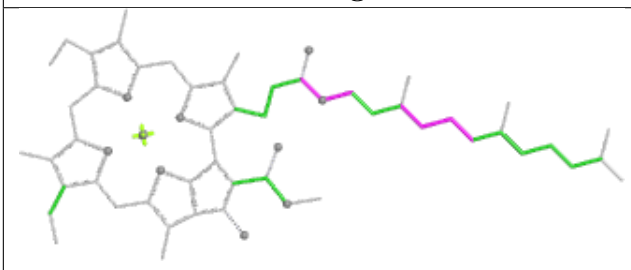
Ligand CLA 7 311



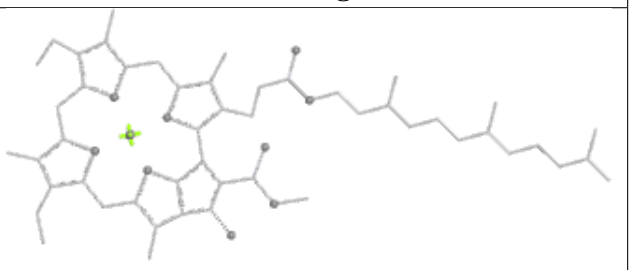
Bond lengths



Bond angles

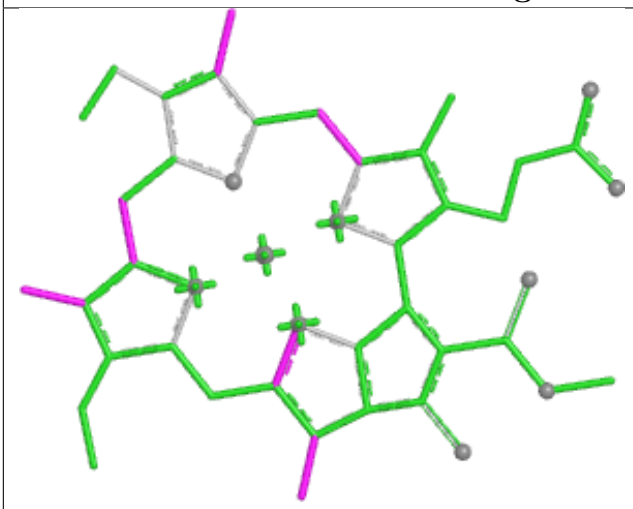


Torsions

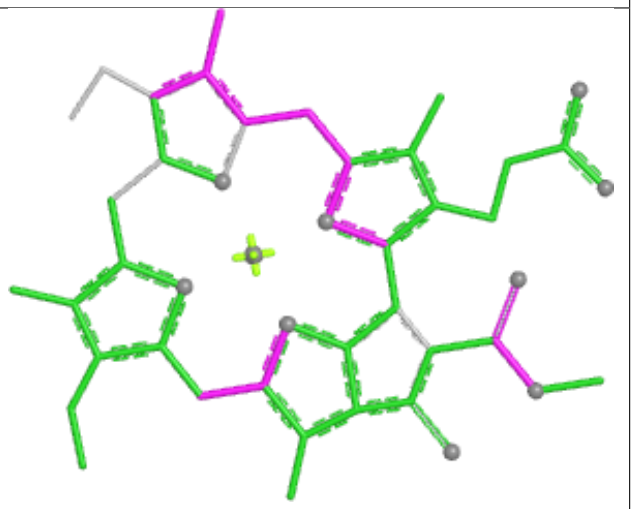


Rings

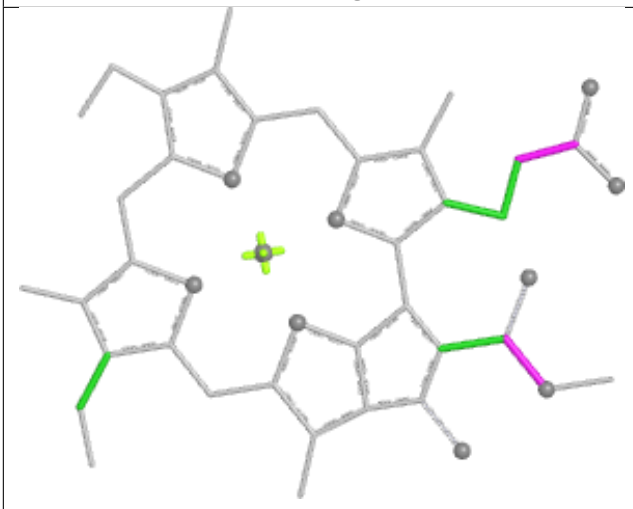
Ligand CLA G 4004



Bond lengths



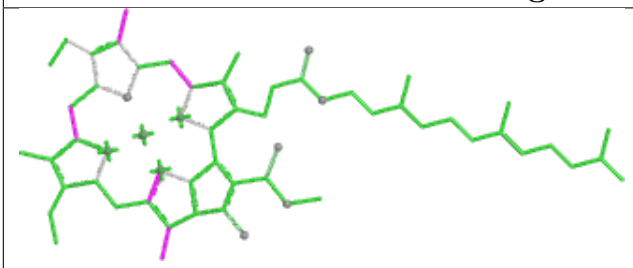
Bond angles



Torsions

Rings

Ligand CLA 3 408



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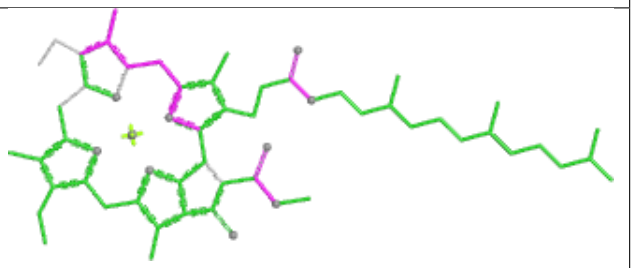
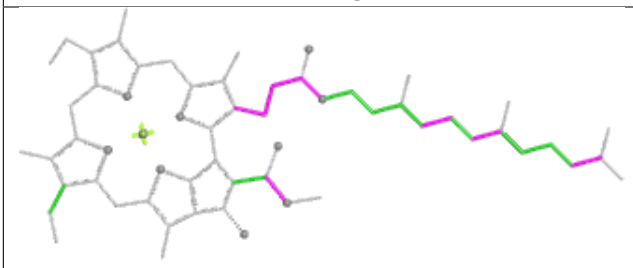
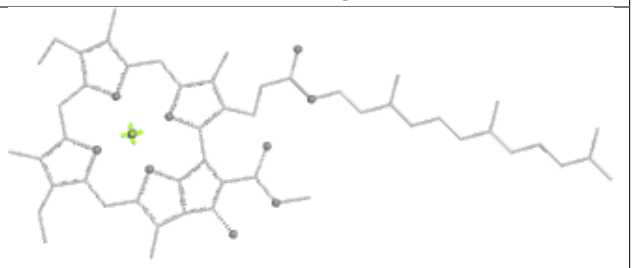


Bond angles

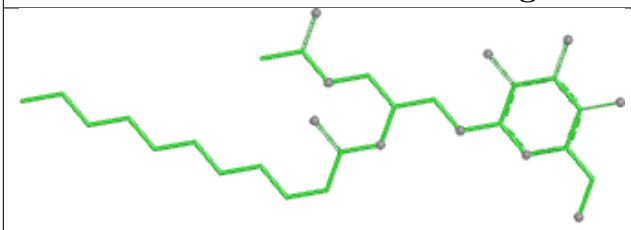


Torsions

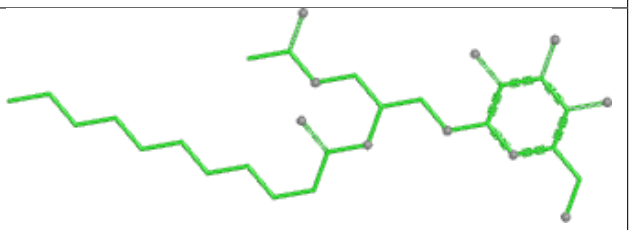


Rings

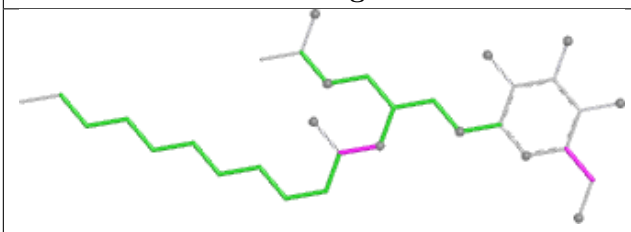
Ligand LMG A 801



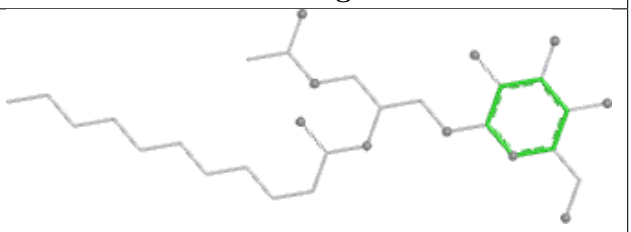
Bond lengths



Bond angles

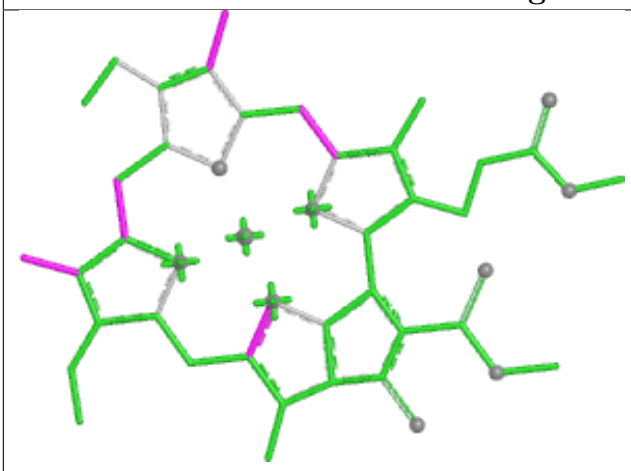


Torsions

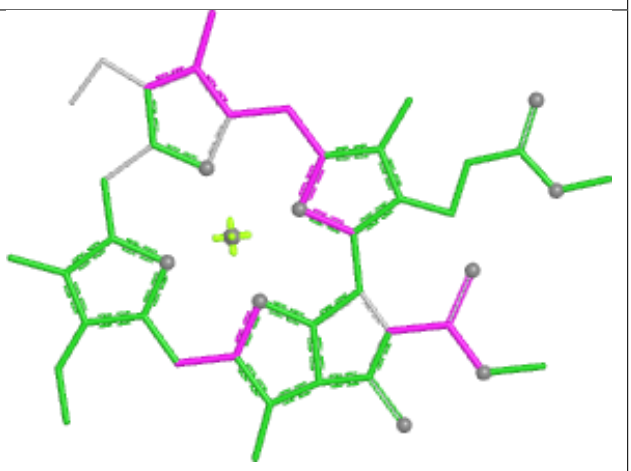


Rings

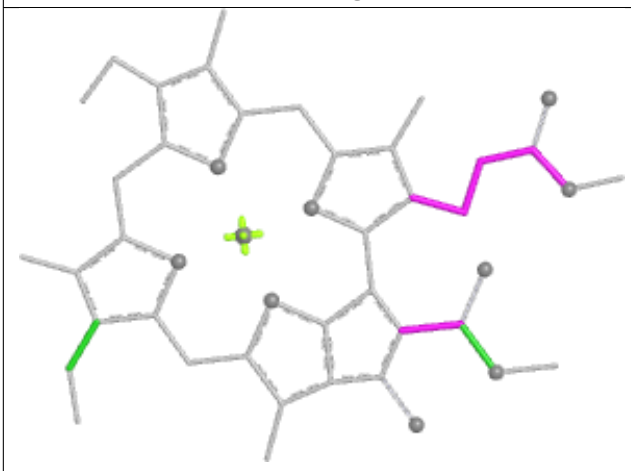
Ligand CLA 1 614



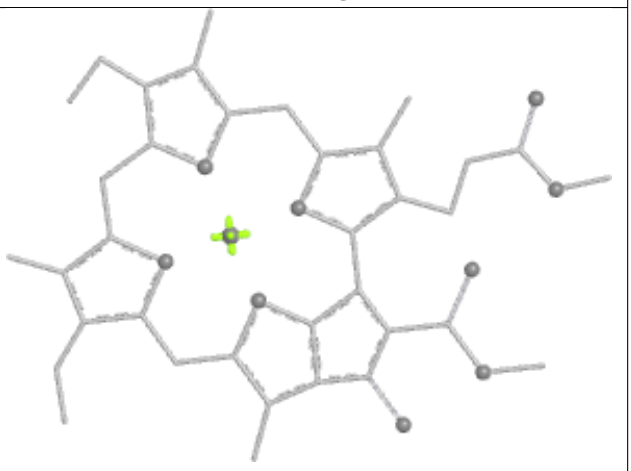
Bond lengths



Bond angles

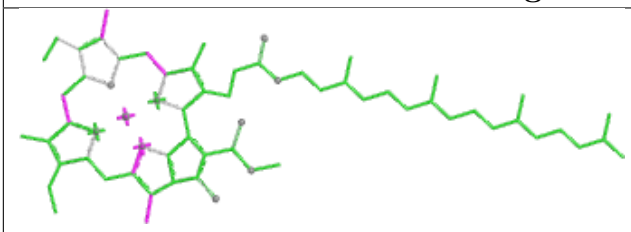


Torsions

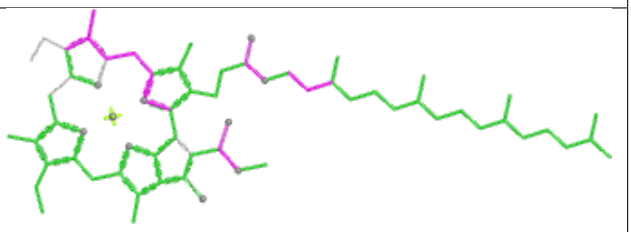


Rings

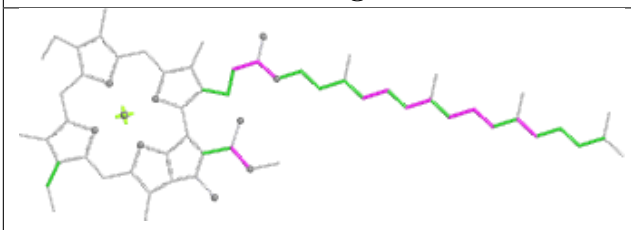
Ligand CLA B 807



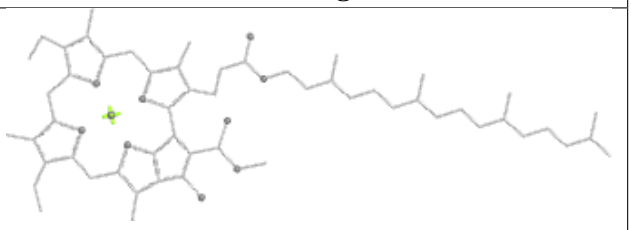
Bond lengths



Bond angles

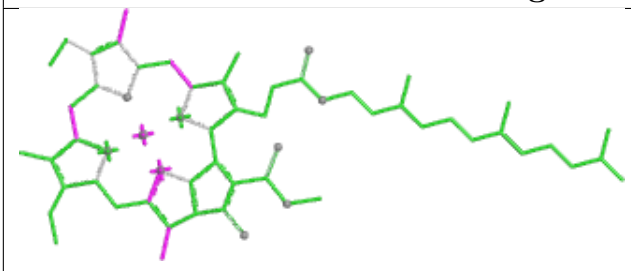


Torsions

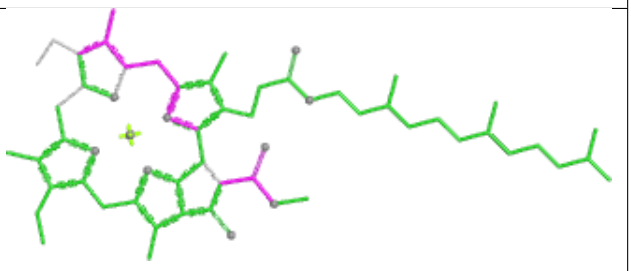


Rings

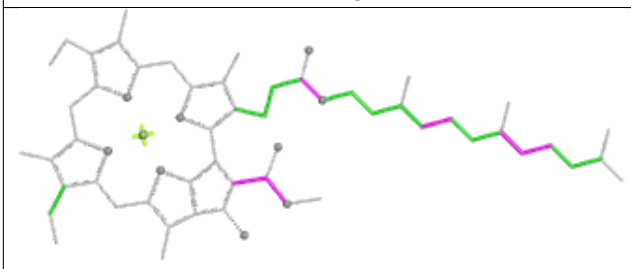
Ligand CLA 1 608



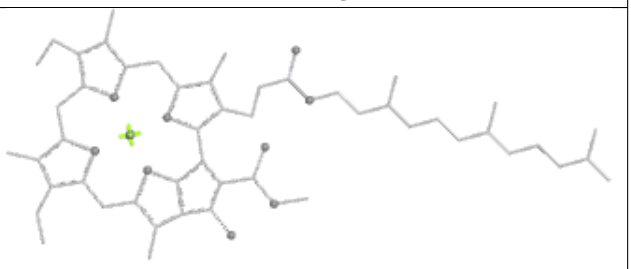
Bond lengths



Bond angles

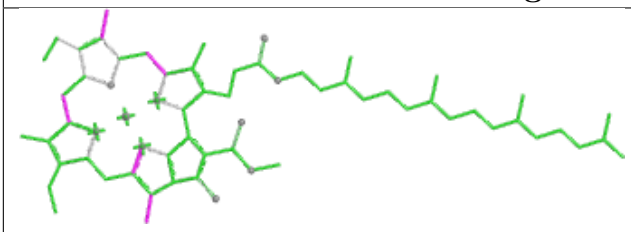


Torsions

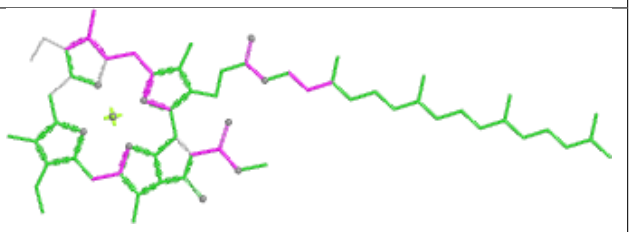


Rings

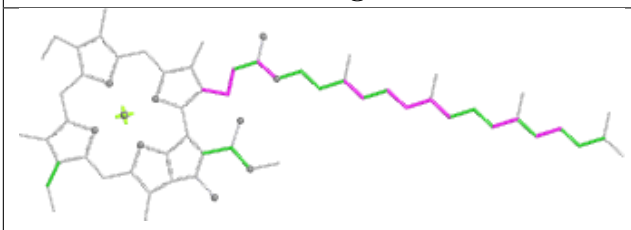
Ligand CLA B 819



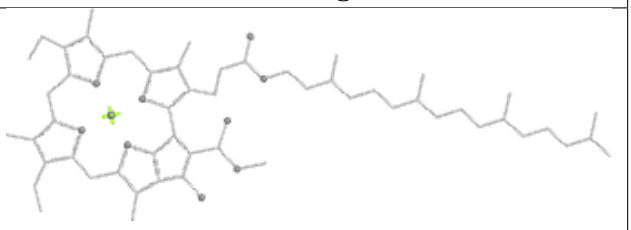
Bond lengths



Bond angles

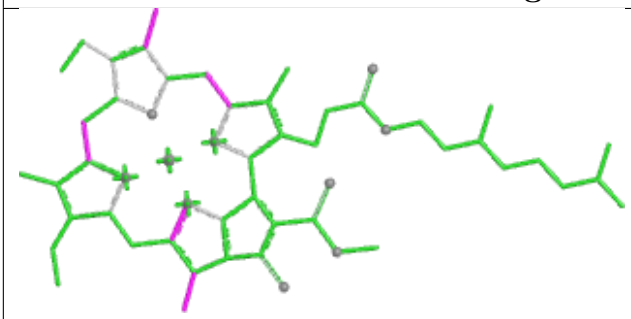


Torsions

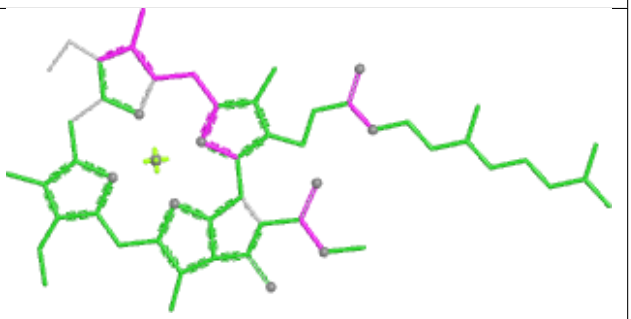


Rings

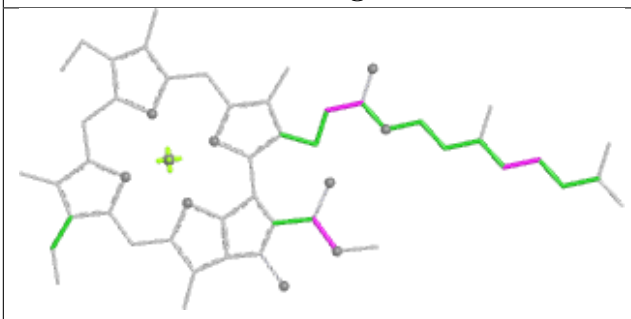
Ligand CLA B 839



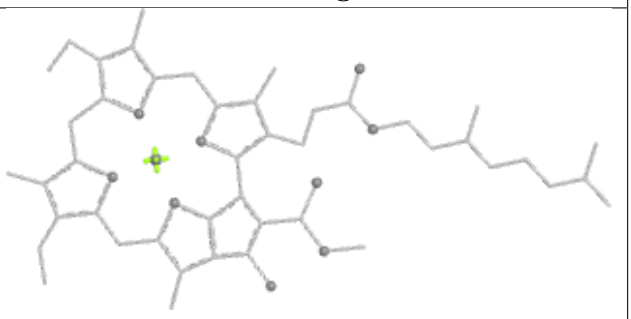
Bond lengths



Bond angles

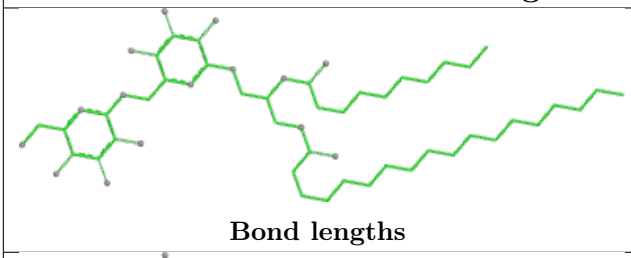


Torsions

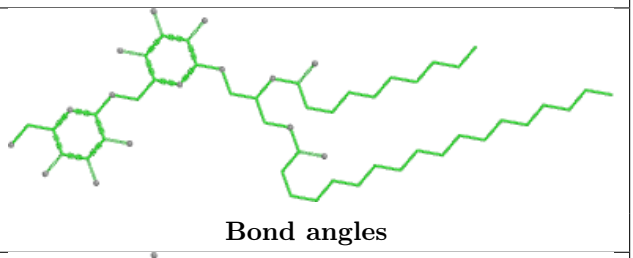


Rings

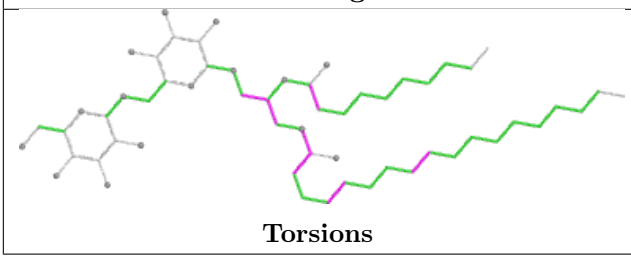
Ligand DGD L 311



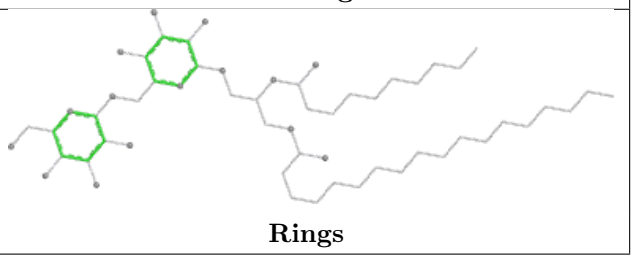
Bond lengths



Bond angles

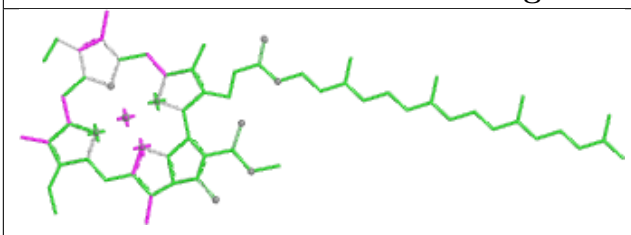


Torsions

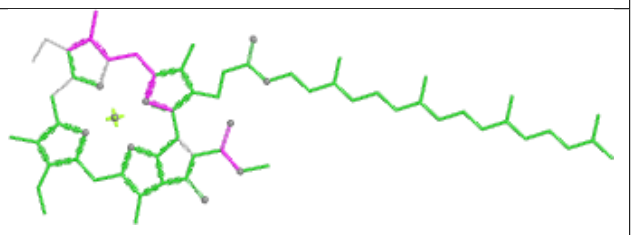


Rings

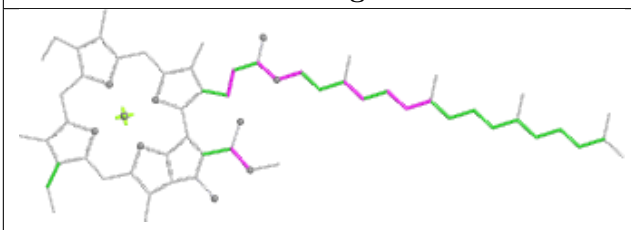
Ligand CLA A 804



Bond lengths



Bond angles



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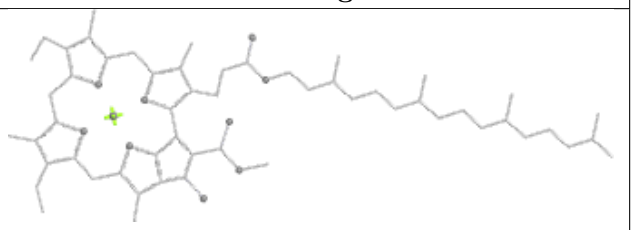
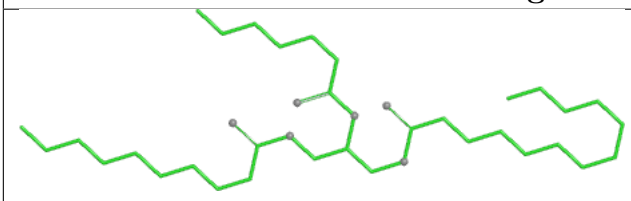
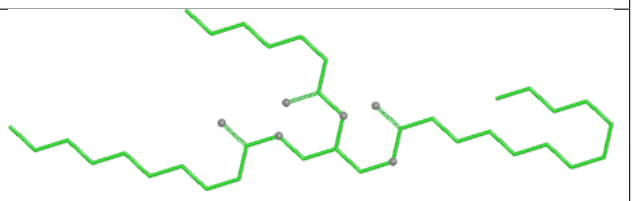


Rings

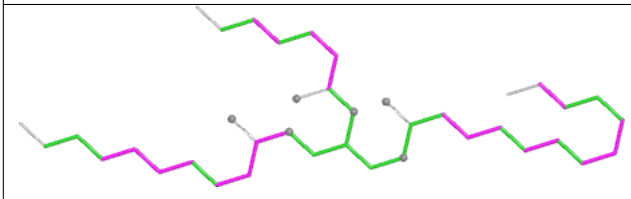
Ligand 4RF A 859



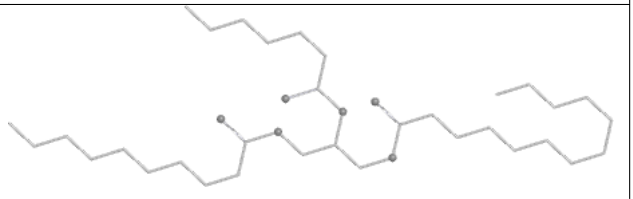
Bond lengths



Bond angles

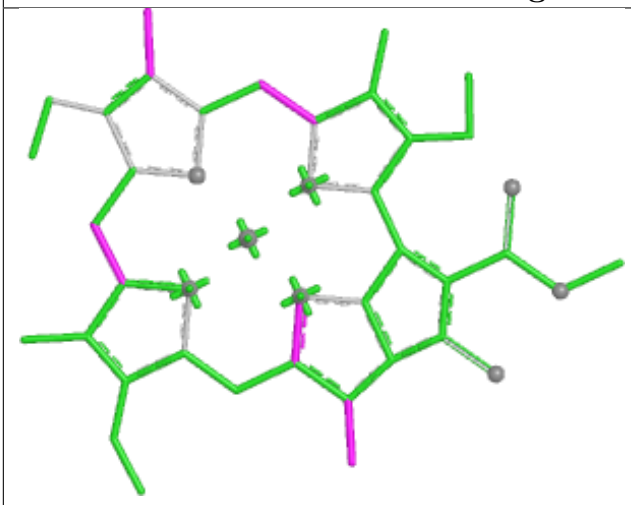


Torsions

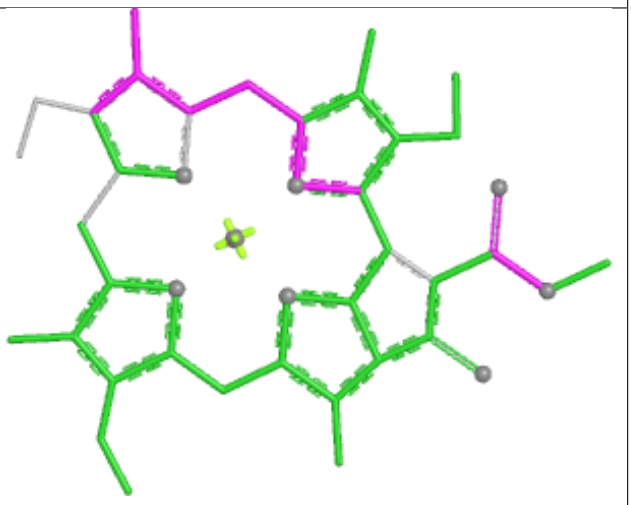


Rings

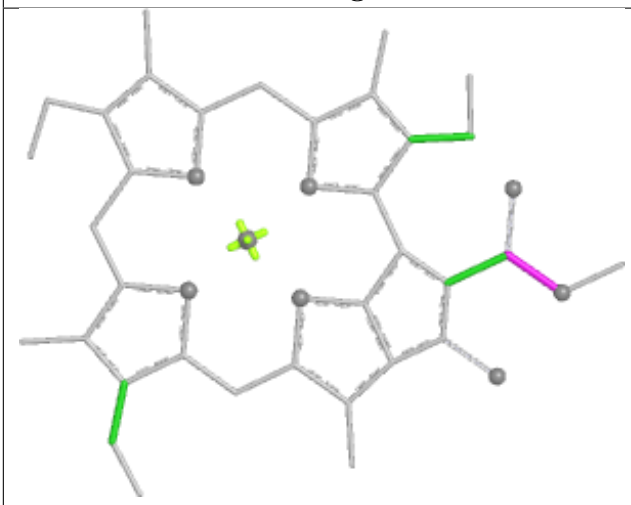
Ligand CLA 3 413



Bond lengths



Bond angles

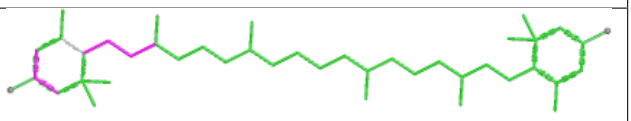


Torsions

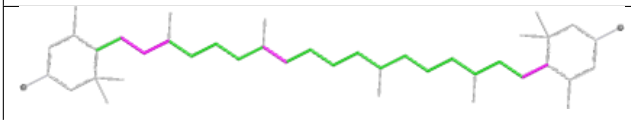
Rings

Ligand LUT 2 616

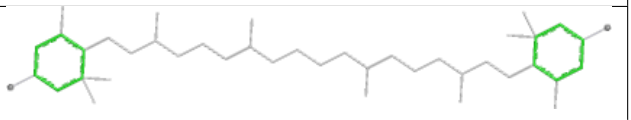
Bond lengths



Bond angles

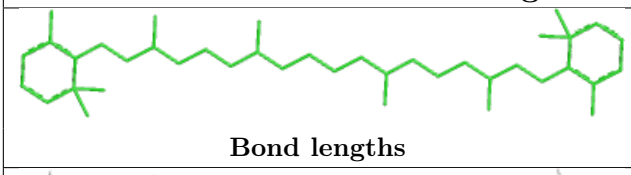


Torsions

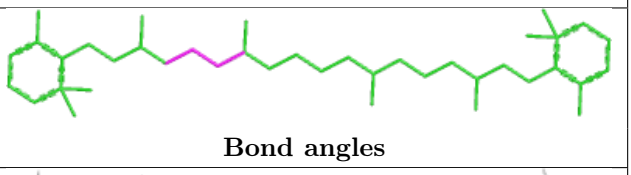


Rings

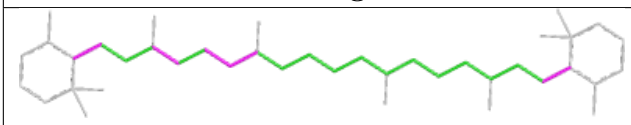
Ligand BCR K 205



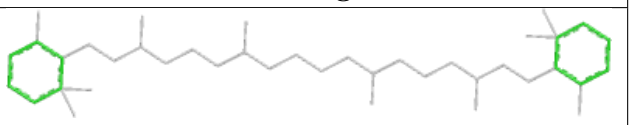
Bond lengths



Bond angles

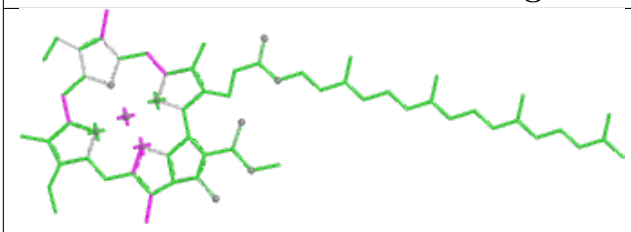


Torsions

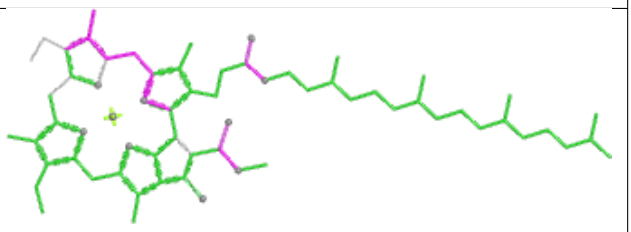


Rings

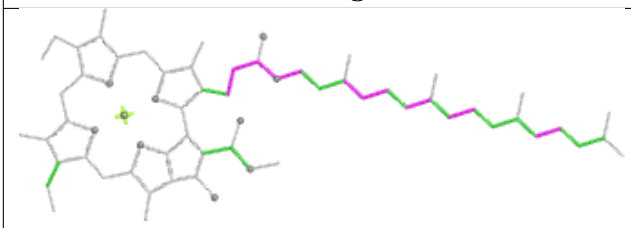
Ligand CLA B 843



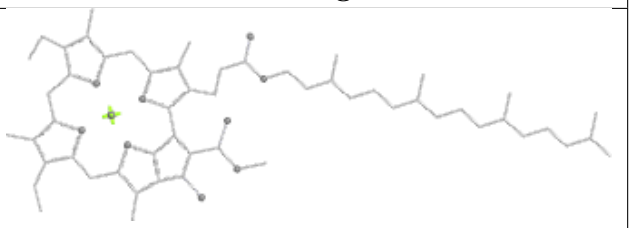
Bond lengths



Bond angles

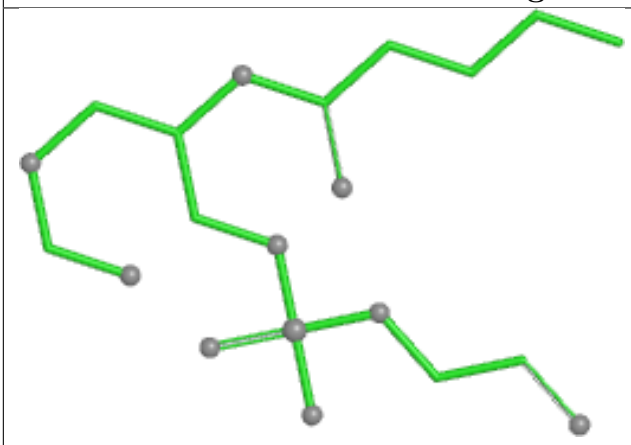


Torsions

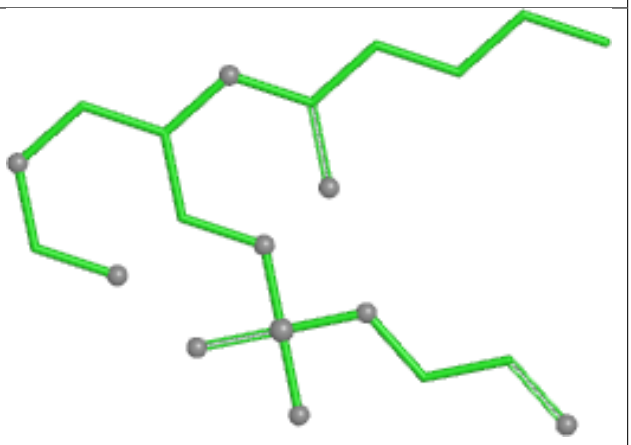


Rings

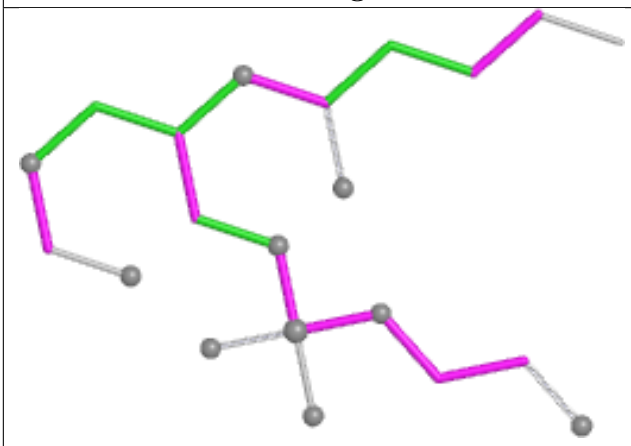
Ligand PTY 8 318



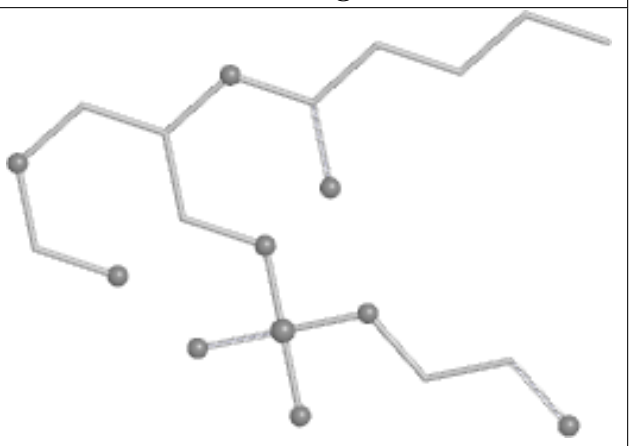
Bond lengths



Bond angles

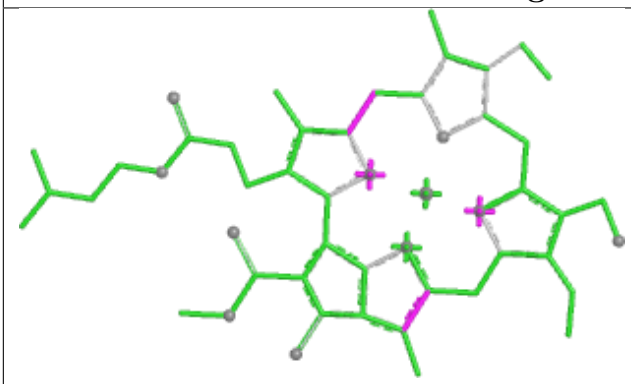


Torsions



Rings

Ligand CHL 1 601



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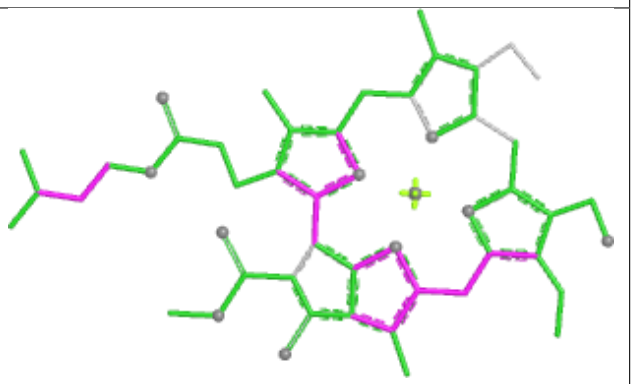
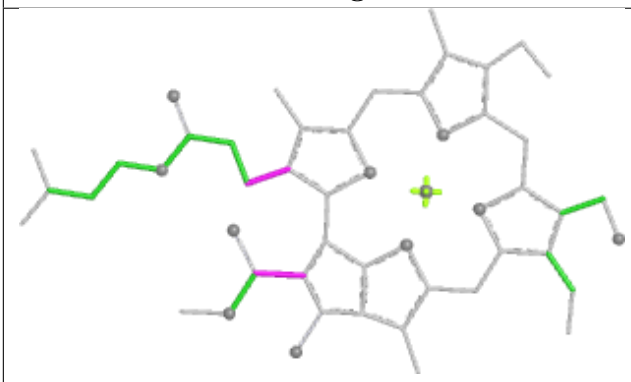
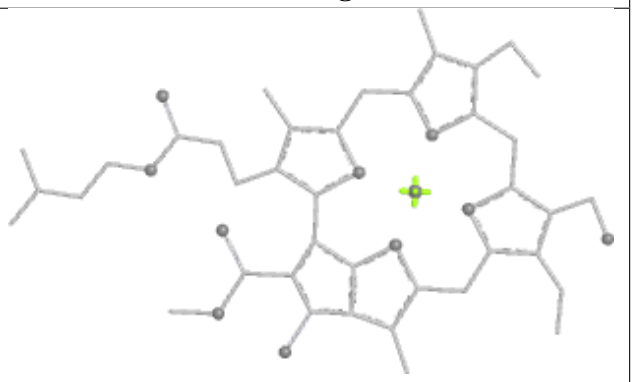


Bond angles

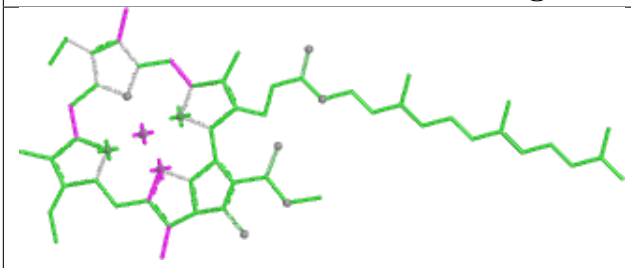


Torsions

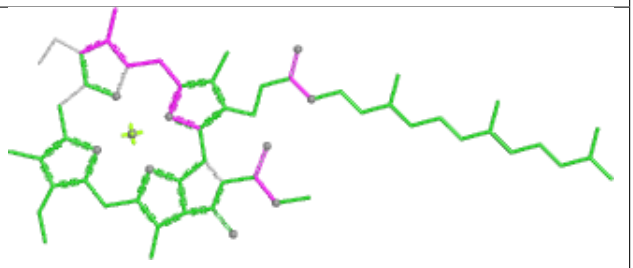


Rings

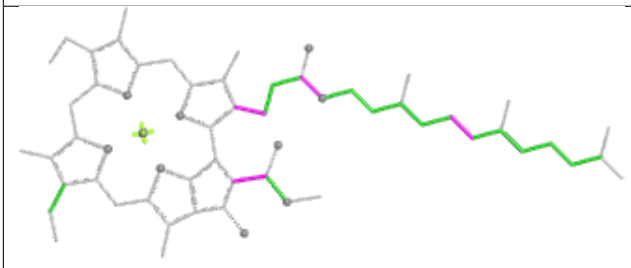
Ligand CLA 7 324



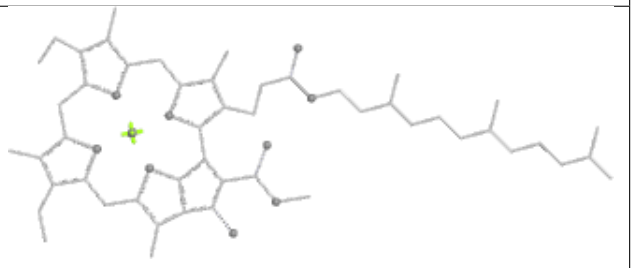
Bond lengths



Bond angles

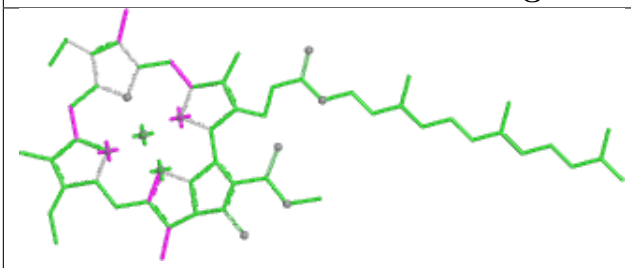


Torsions

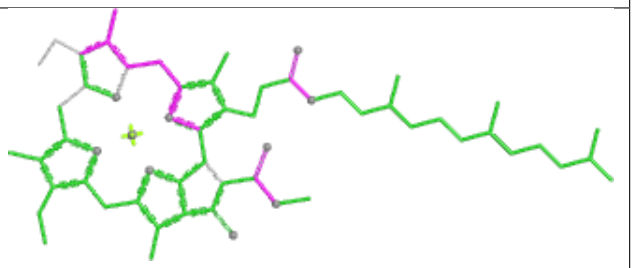


Rings

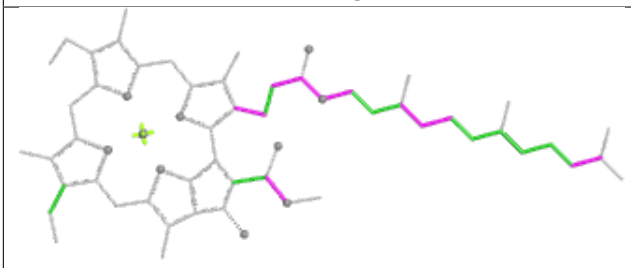
Ligand CLA A 836



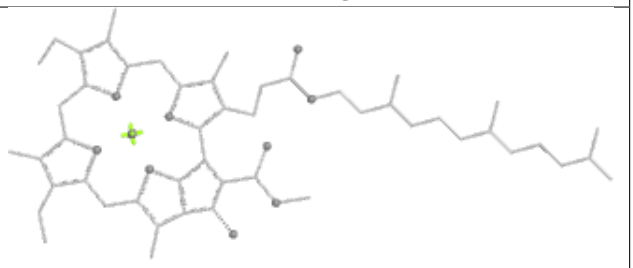
Bond lengths



Bond angles

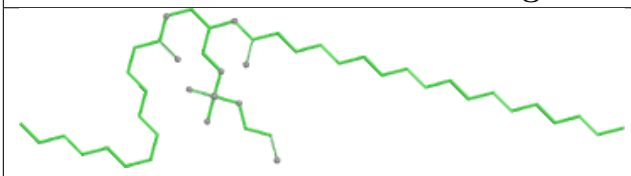


Torsions

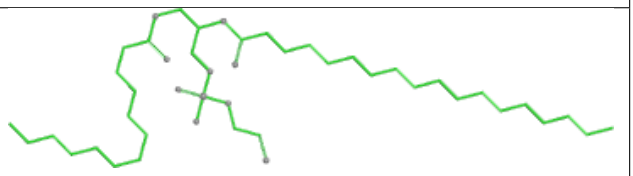


Rings

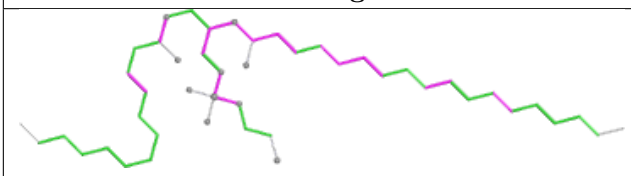
Ligand PTY H 201



Bond lengths



Bond angles



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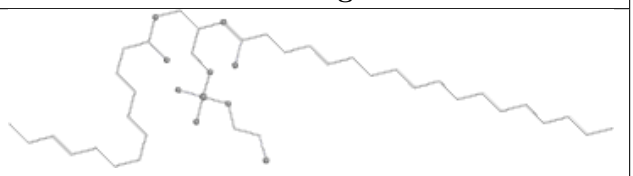
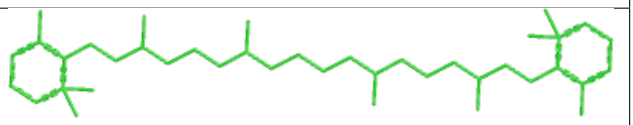


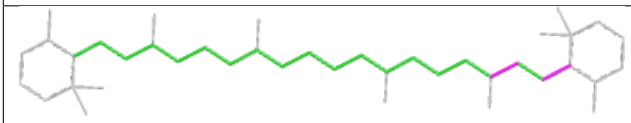
Rings

Ligand BCR B 848

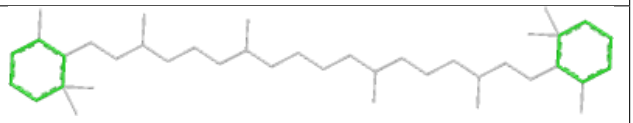
Bond lengths



Bond angles

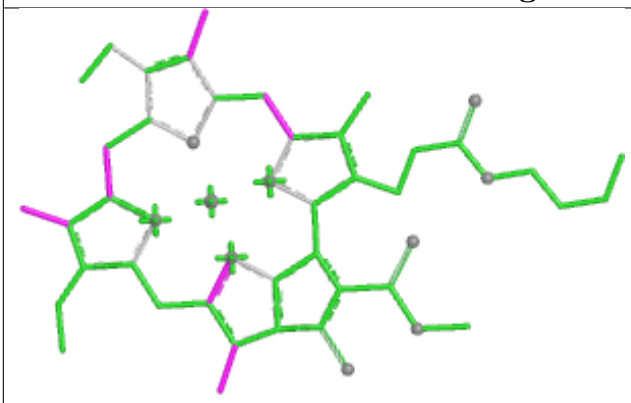


Torsions

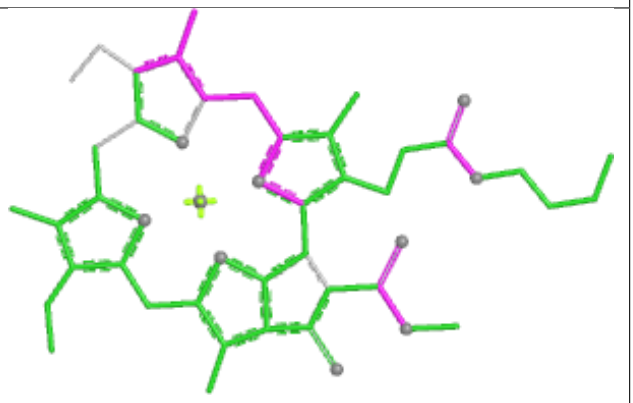


Rings

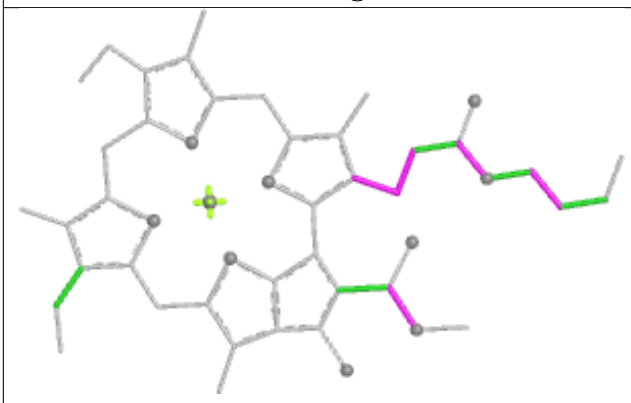
Ligand CLA J 4002



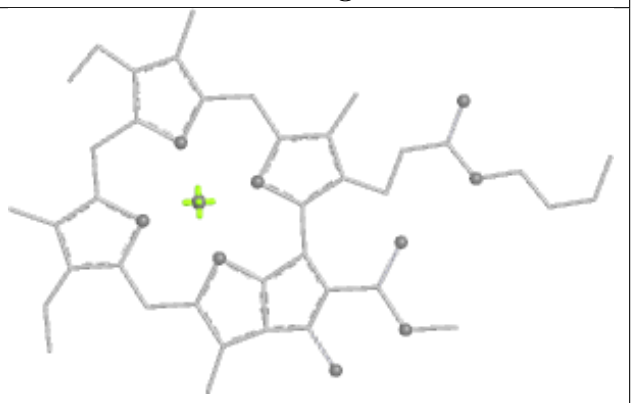
Bond lengths



Bond angles

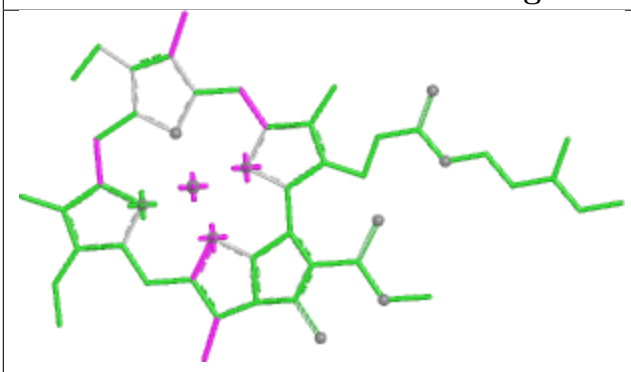


Torsions

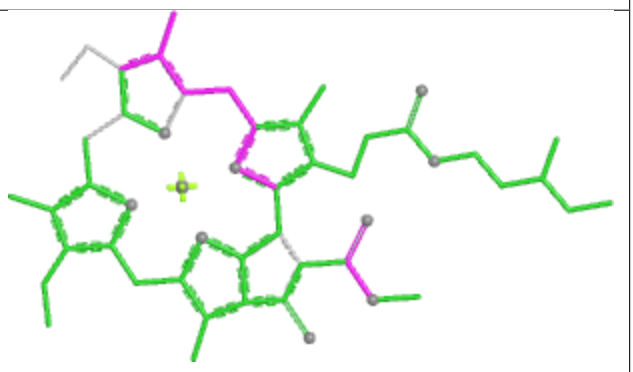


Rings

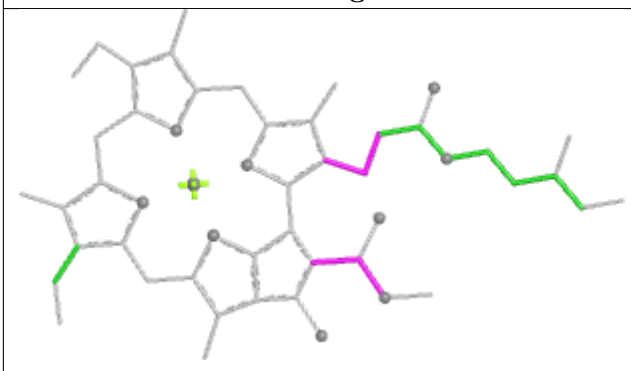
Ligand CLA A 838



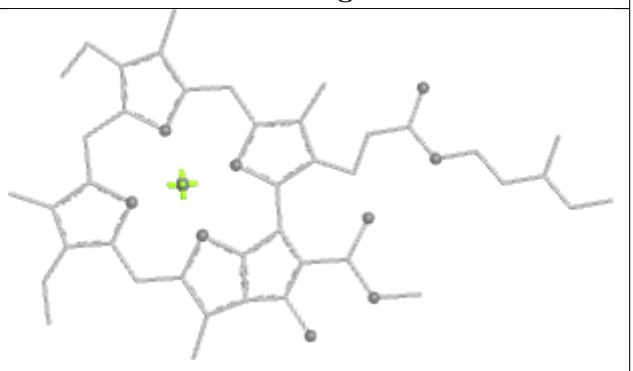
Bond lengths



Bond angles

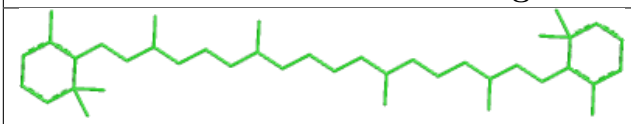


Torsions

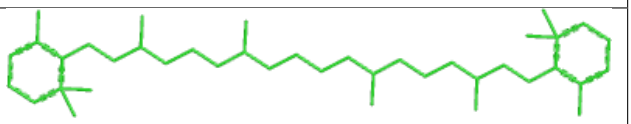


Rings

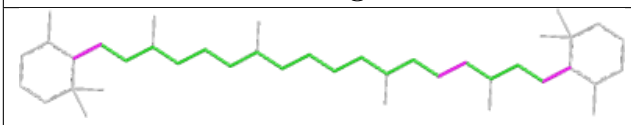
Ligand BCR G 4001



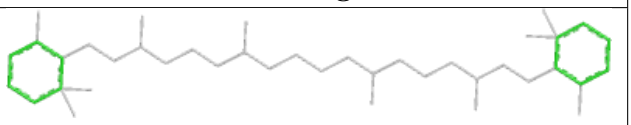
Bond lengths



Bond angles



Torsions

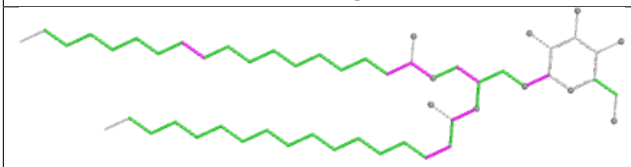


Rings

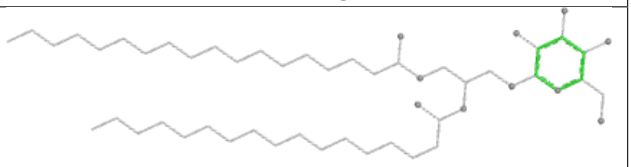
Ligand LMG 7 319

Bond lengths

Bond angles

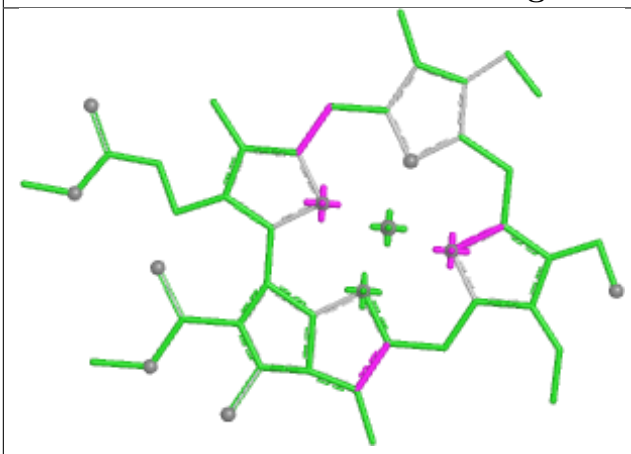


Torsions

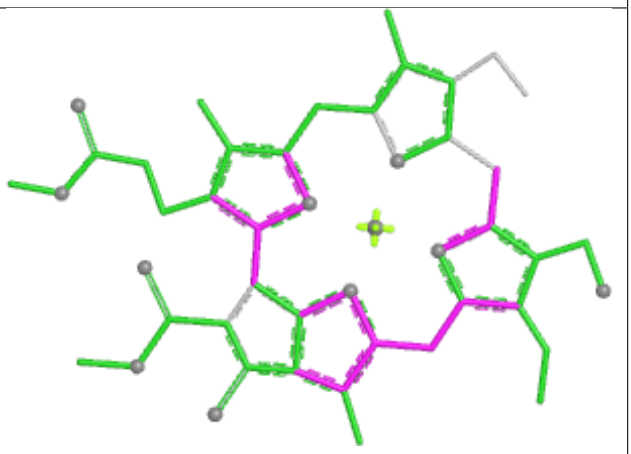


Rings

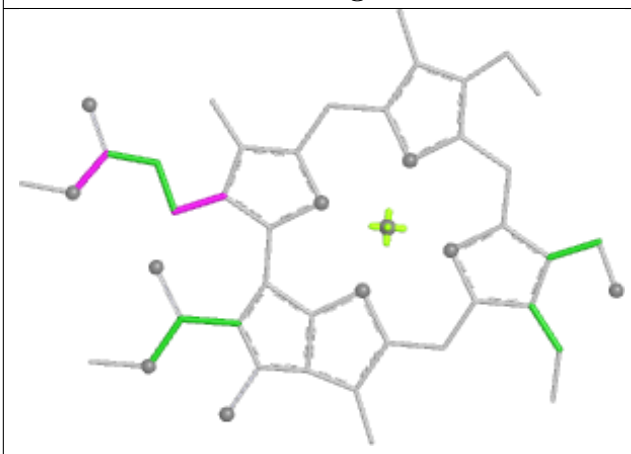
Ligand CHL 1 606



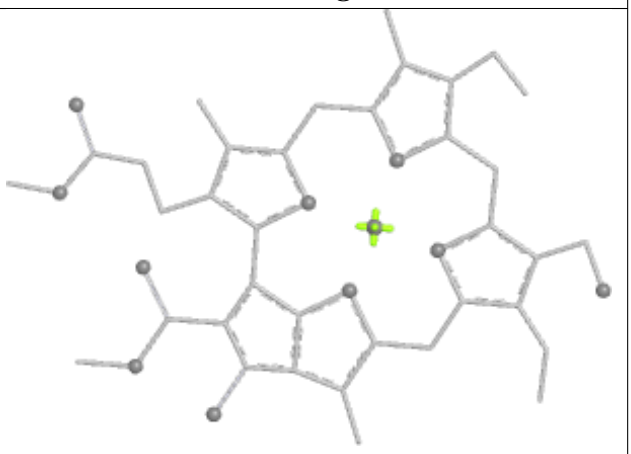
Bond lengths



Bond angles

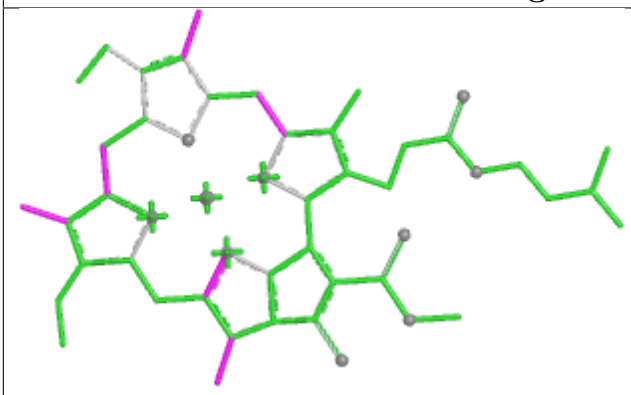


Torsions

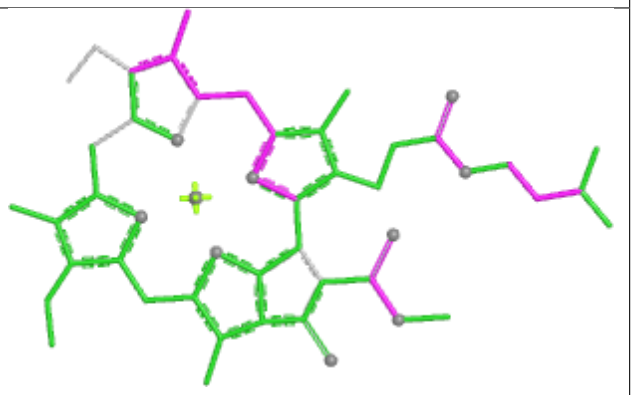


Rings

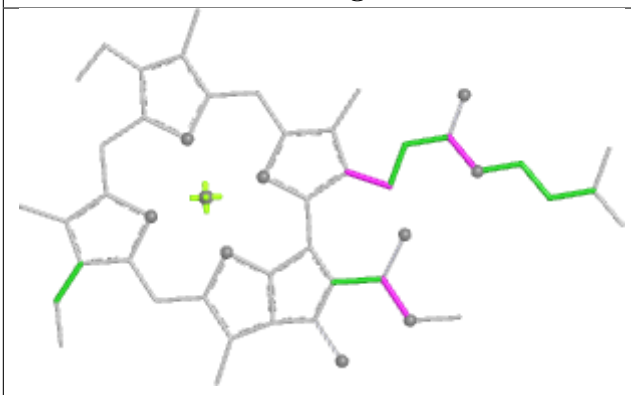
Ligand CLA 2 604



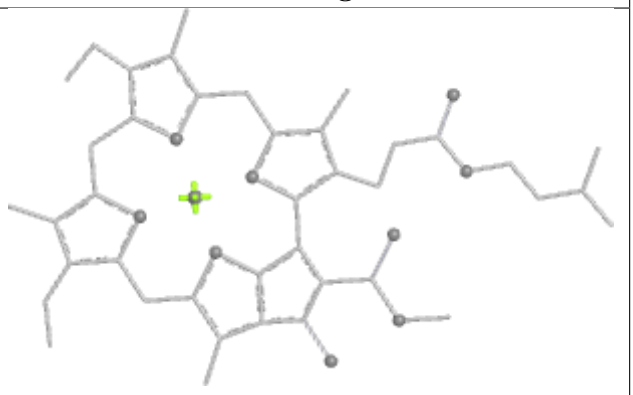
Bond lengths



Bond angles

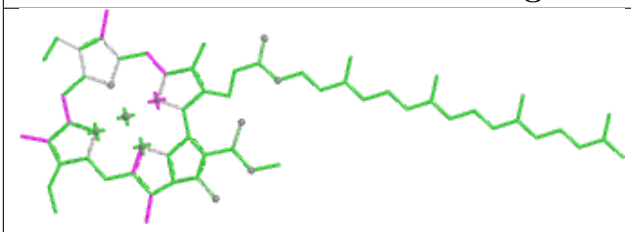


Torsions

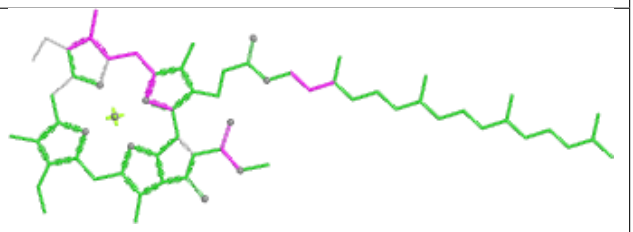


Rings

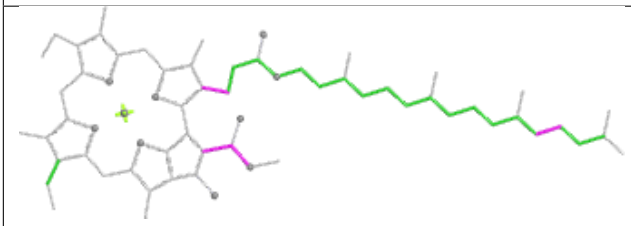
Ligand CLA B 827



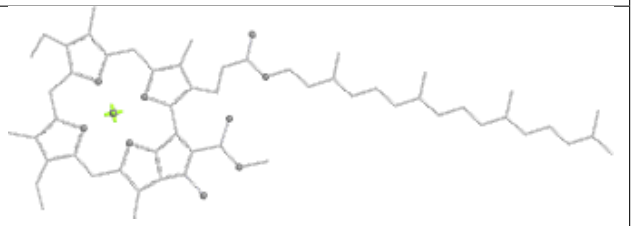
Bond lengths



Bond angles

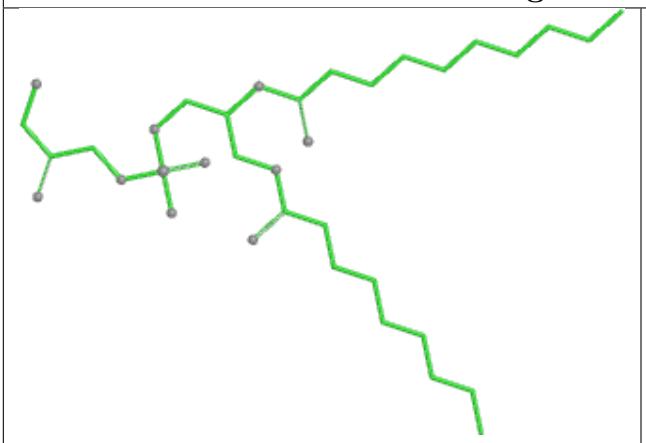


Torsions

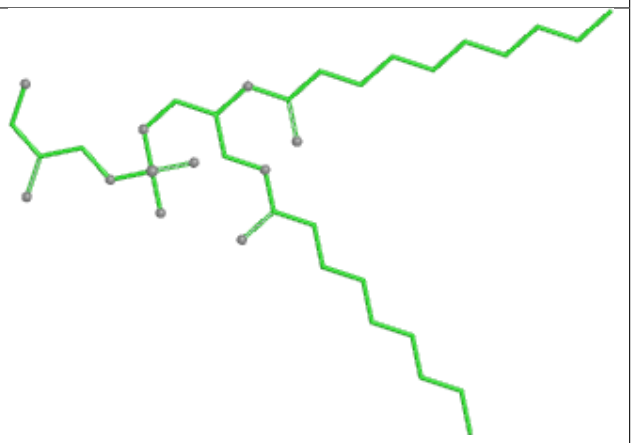


Rings

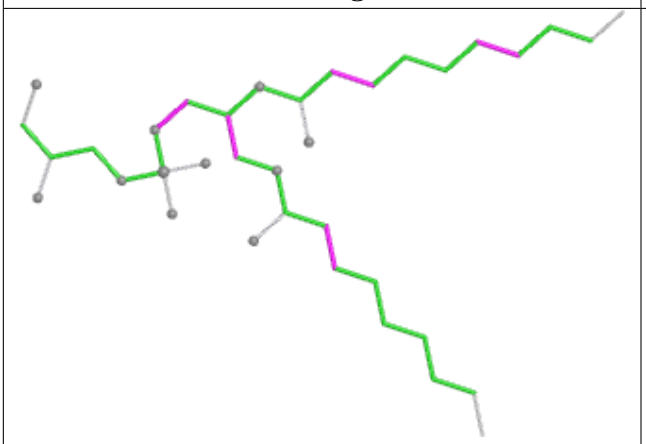
Ligand LHG 2 621



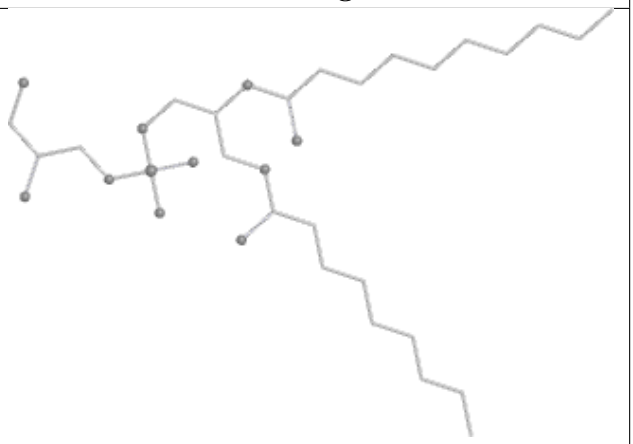
Bond lengths



Bond angles



Torsions

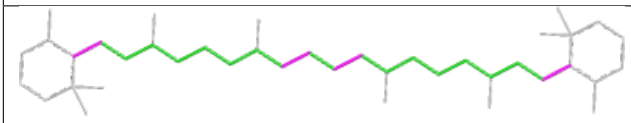


Rings

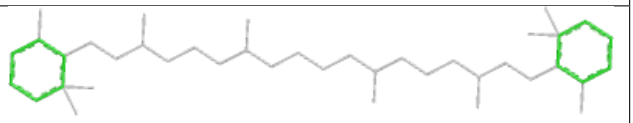
Ligand BCR 7 318

Bond lengths

Bond angles

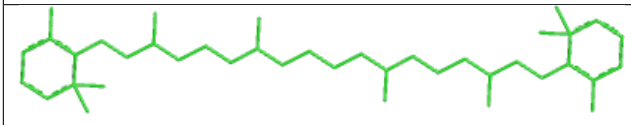


Torsions

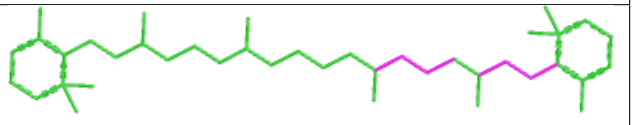


Rings

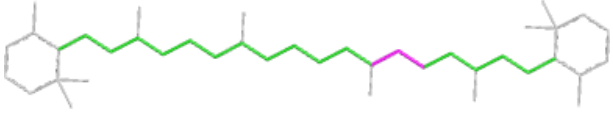
Ligand BCR A 849



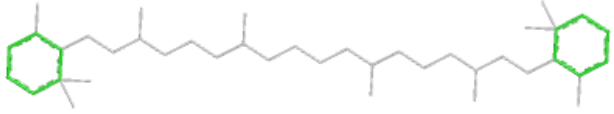
Bond lengths



Bond angles



Torsions



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.

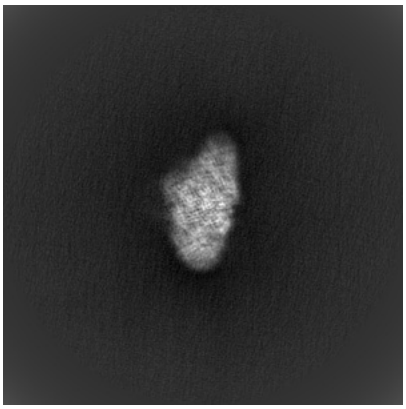
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-48265. These allow visual inspection of the internal detail of the map and identification of artifacts.

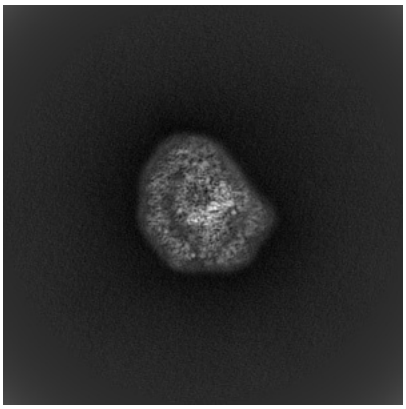
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

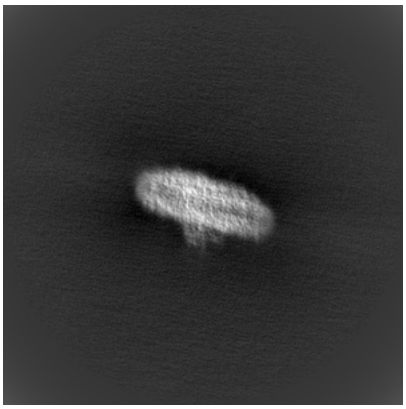
6.1.1 Primary map



X

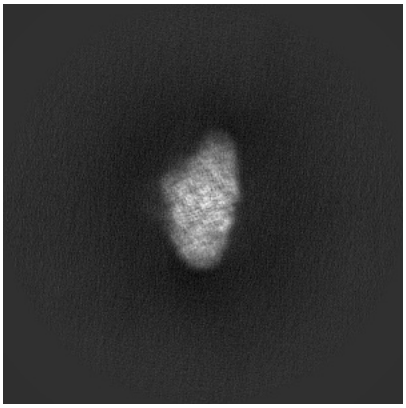


Y

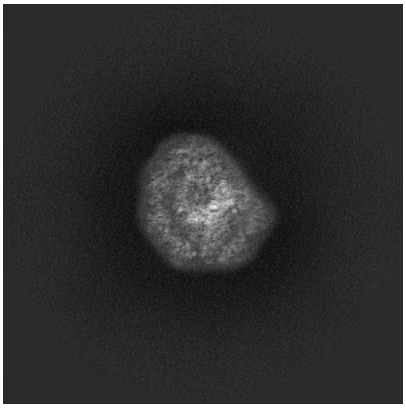


Z

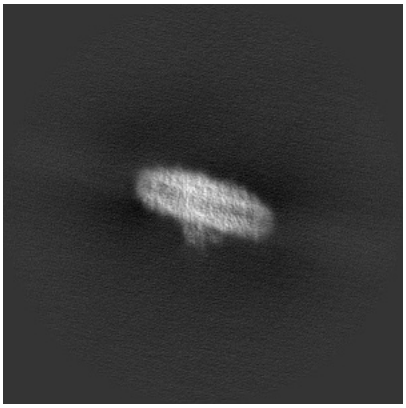
6.1.2 Raw map



X



Y

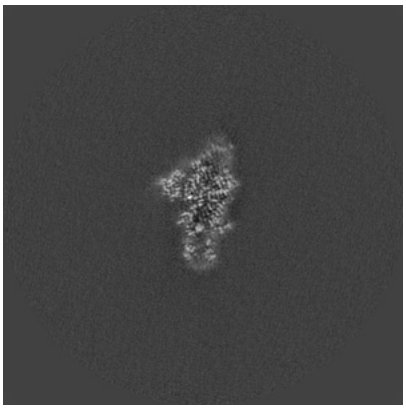


Z

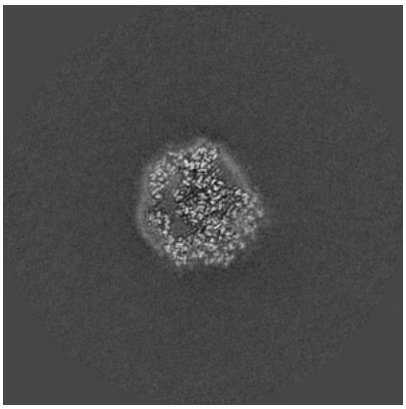
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

6.2.1 Primary map



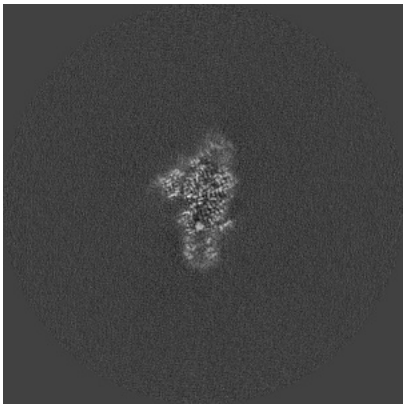
X Index: 240



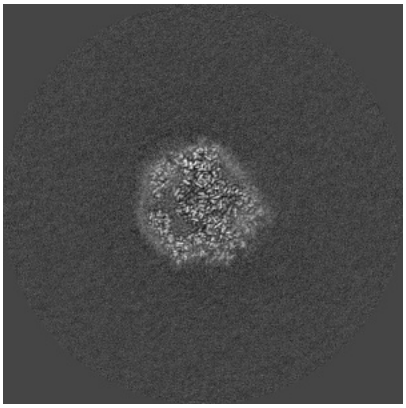
Y Index: 240

Z Index: 240

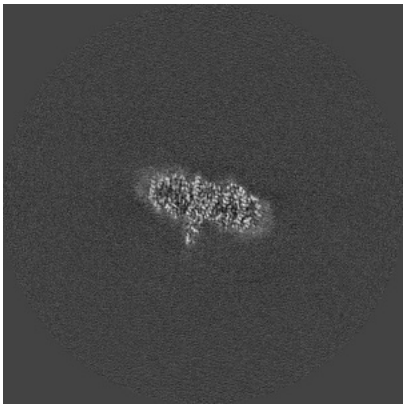
6.2.2 Raw map



X Index: 240



Y Index: 240



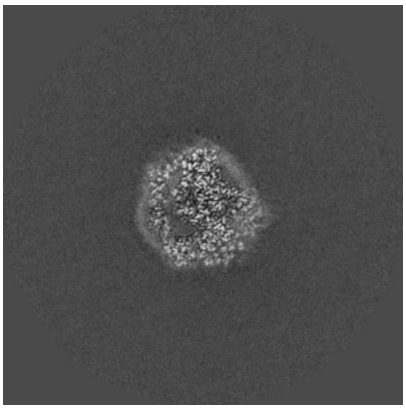
Z Index: 240

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

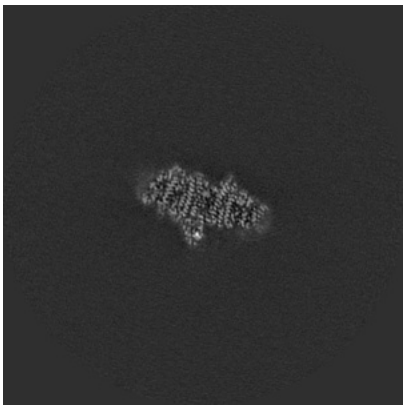
6.3 Largest variance slices (i)

6.3.1 Primary map

X Index: 235

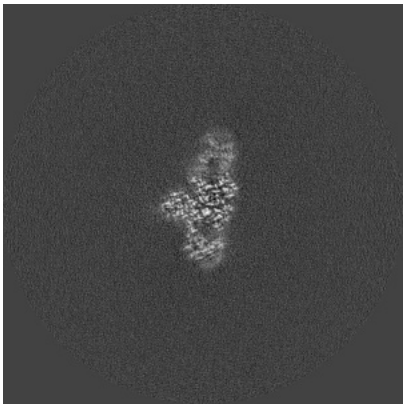


Y Index: 242

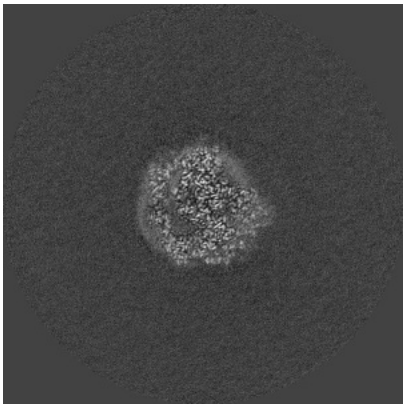


Z Index: 246

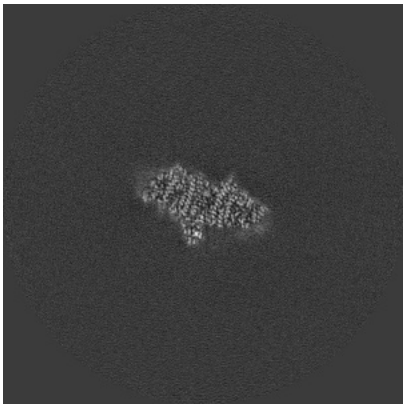
6.3.2 Raw map



X Index: 221



Y Index: 242

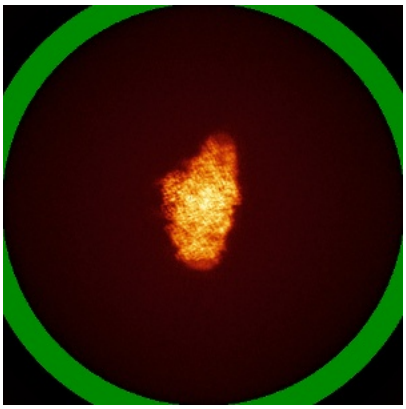


Z Index: 247

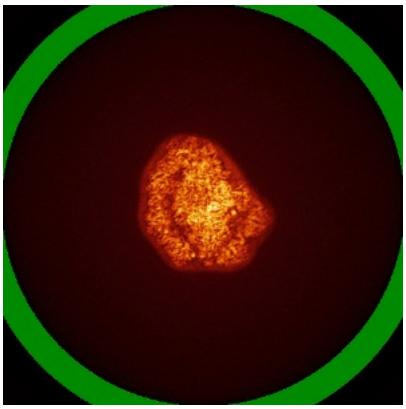
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1 Primary map



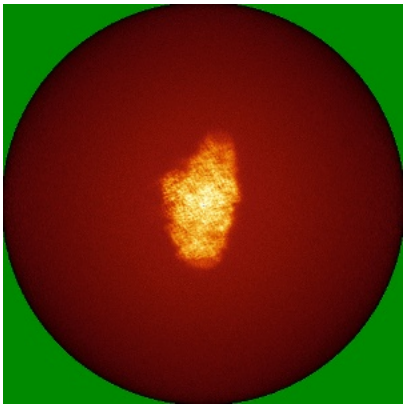
X



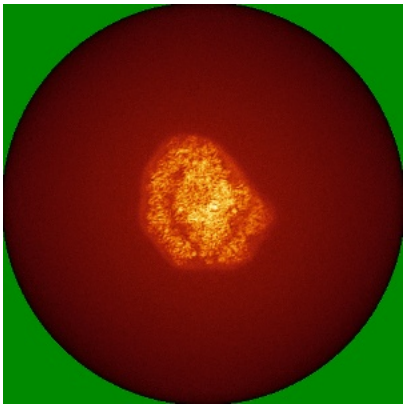
Y

Z

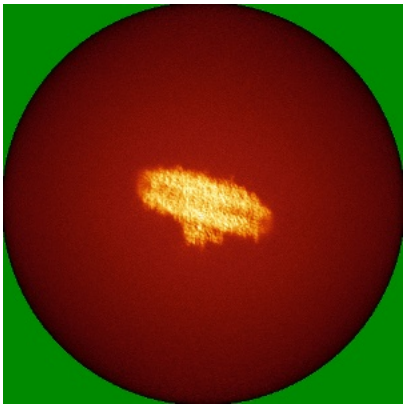
6.4.2 Raw map



X



Y

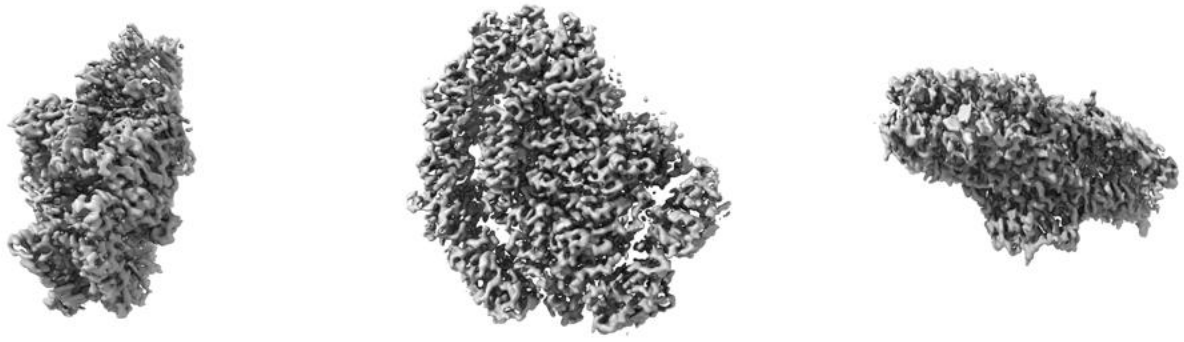


Z

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

6.5 Orthogonal surface views (i)

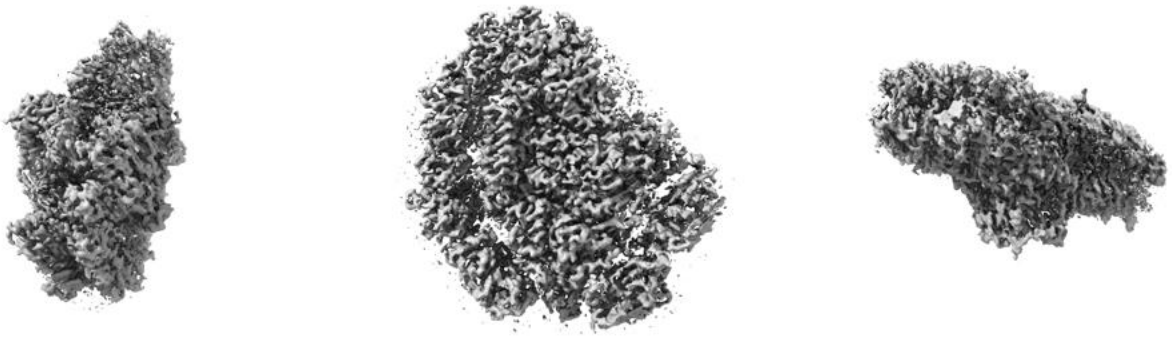
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.0165. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

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

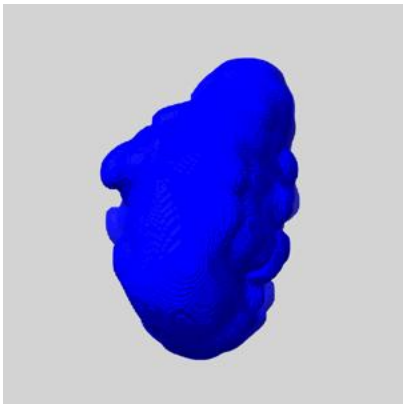
6.6 Mask visualisation

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

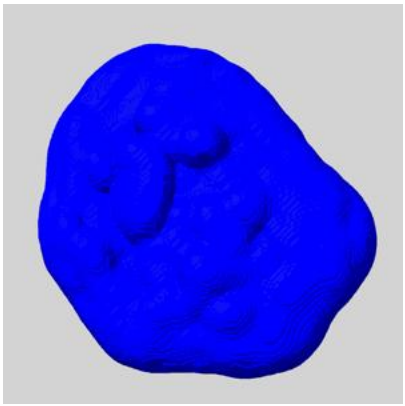
A mask typically either:

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

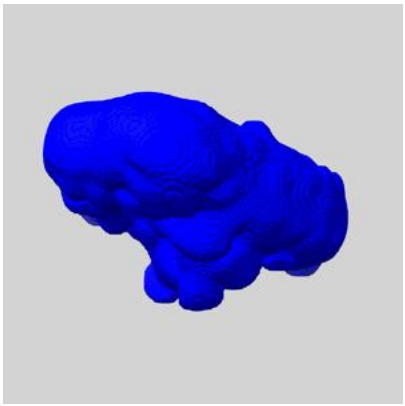
6.6.1 emd_48265_msk_1.map



X



Y

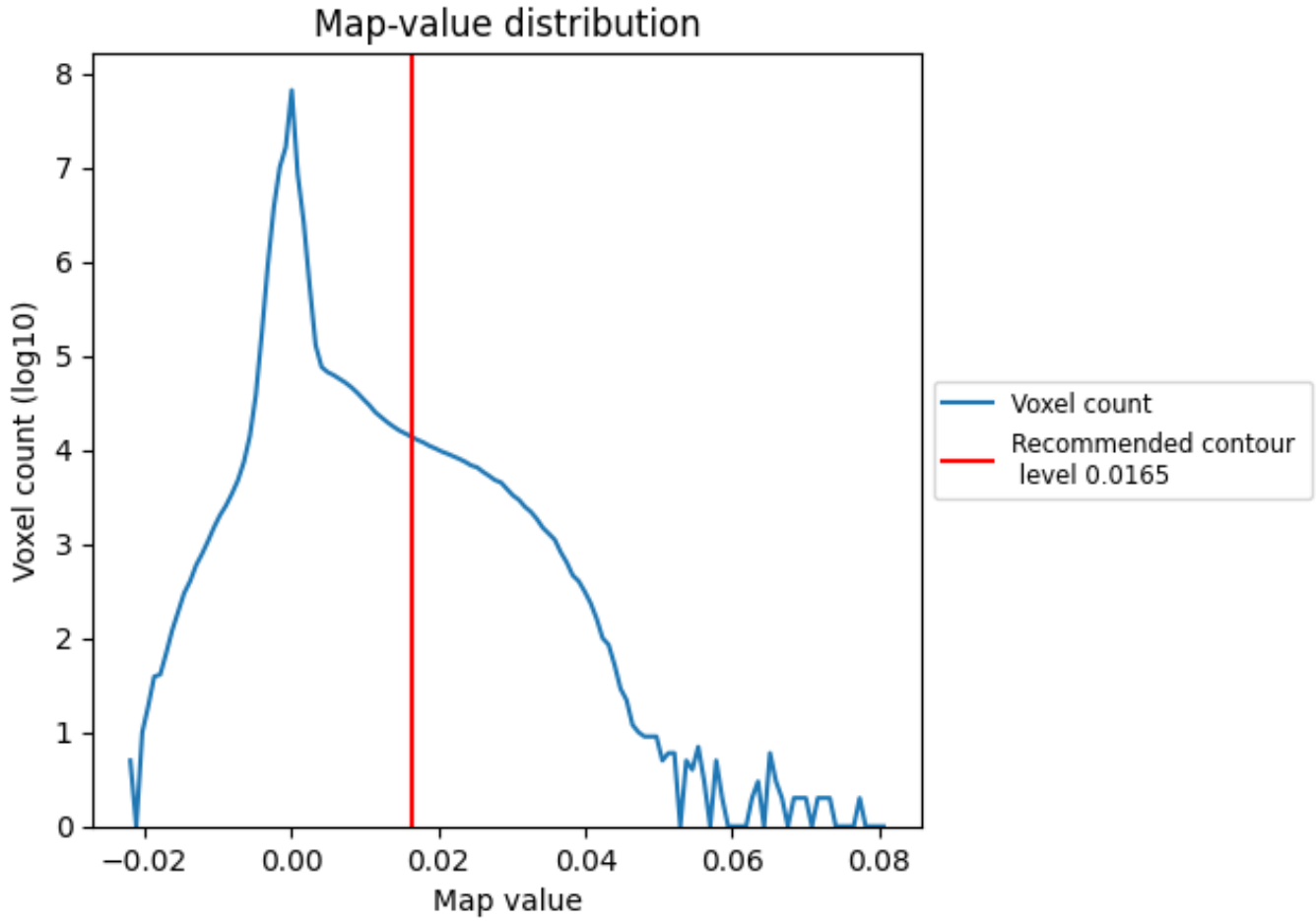


Z

7 Map analysis

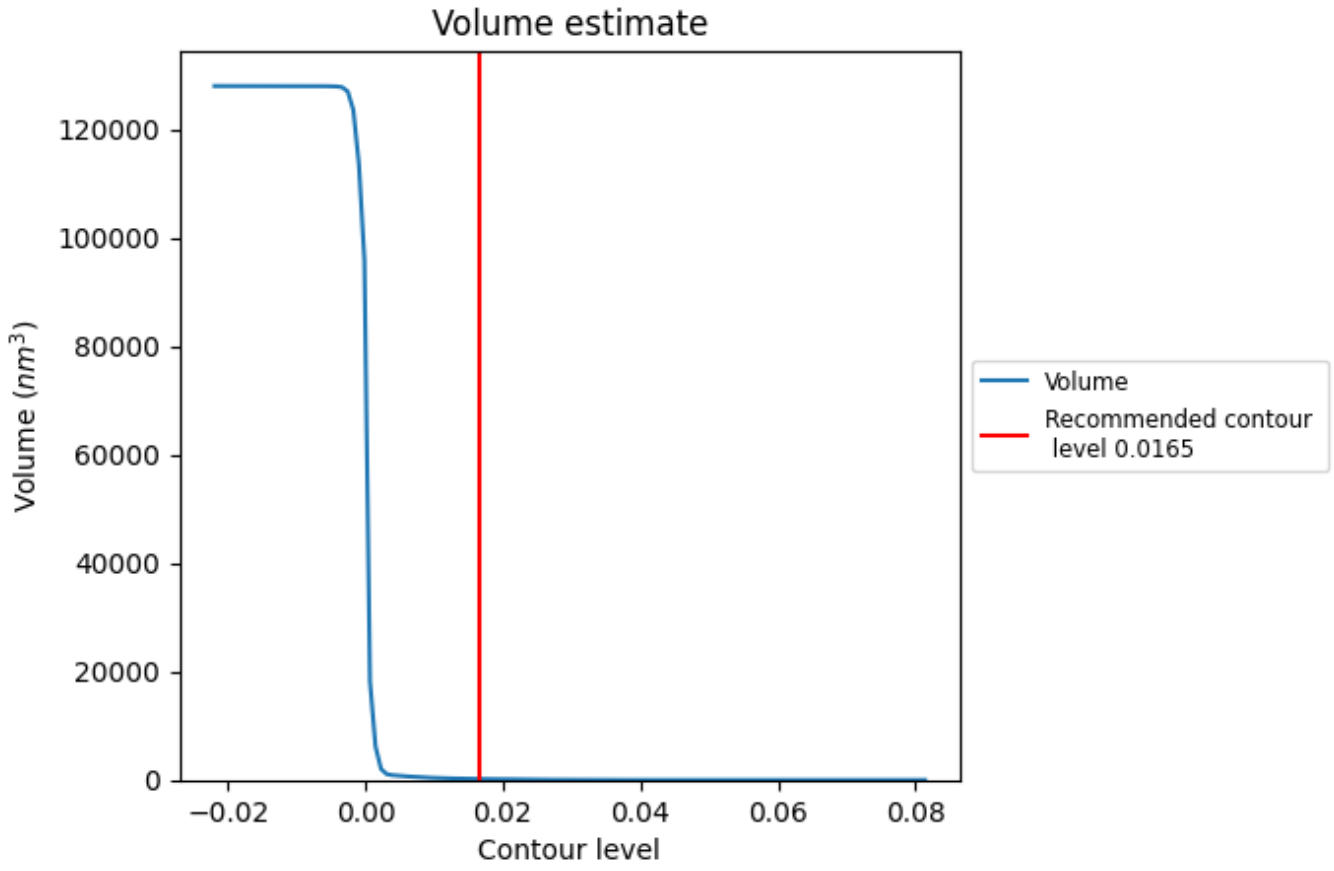
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

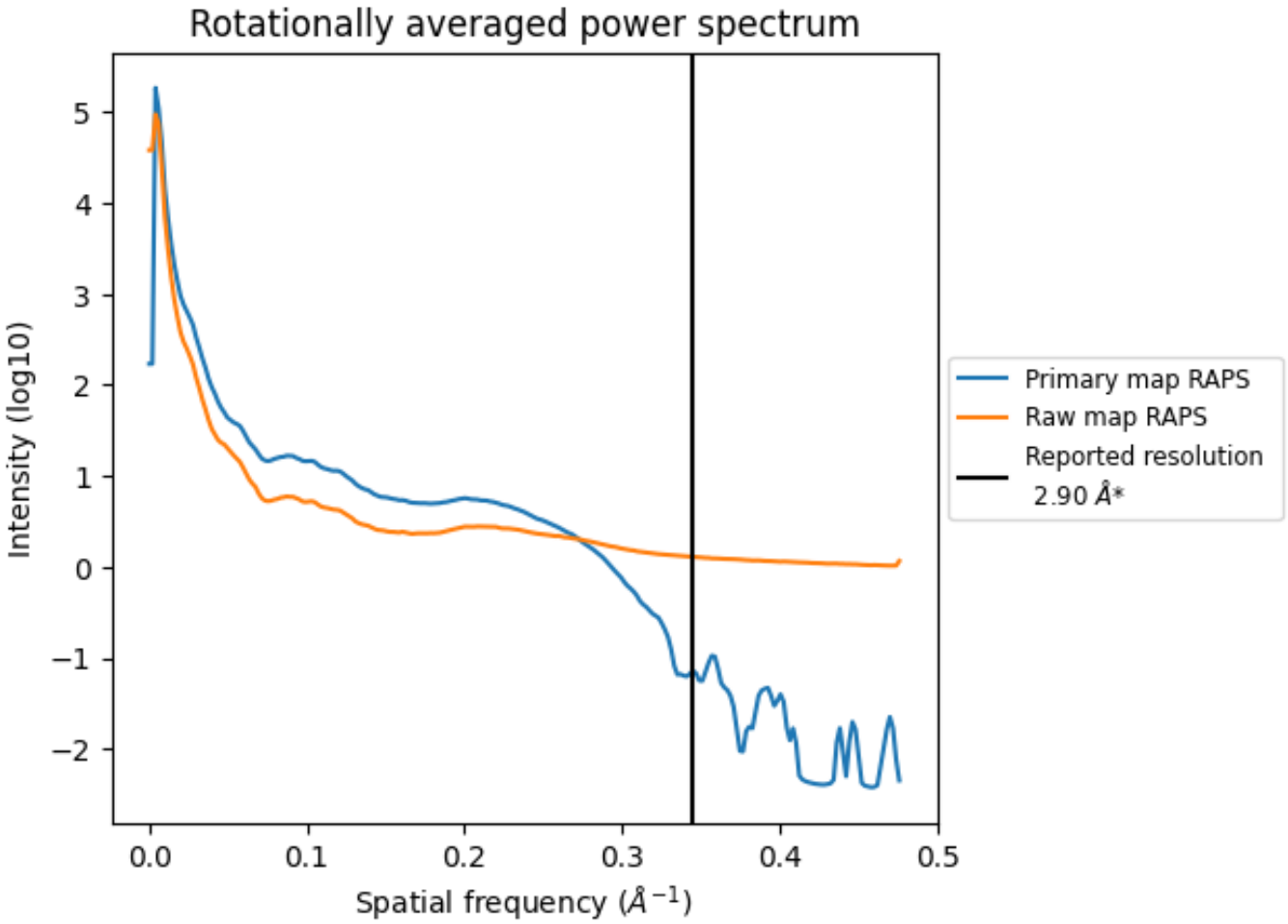
7.2 Volume estimate (i)



The volume at the recommended contour level is 183 nm^3; this corresponds to an approximate mass of 165 kDa.

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

7.3 Rotationally averaged power spectrum (i)

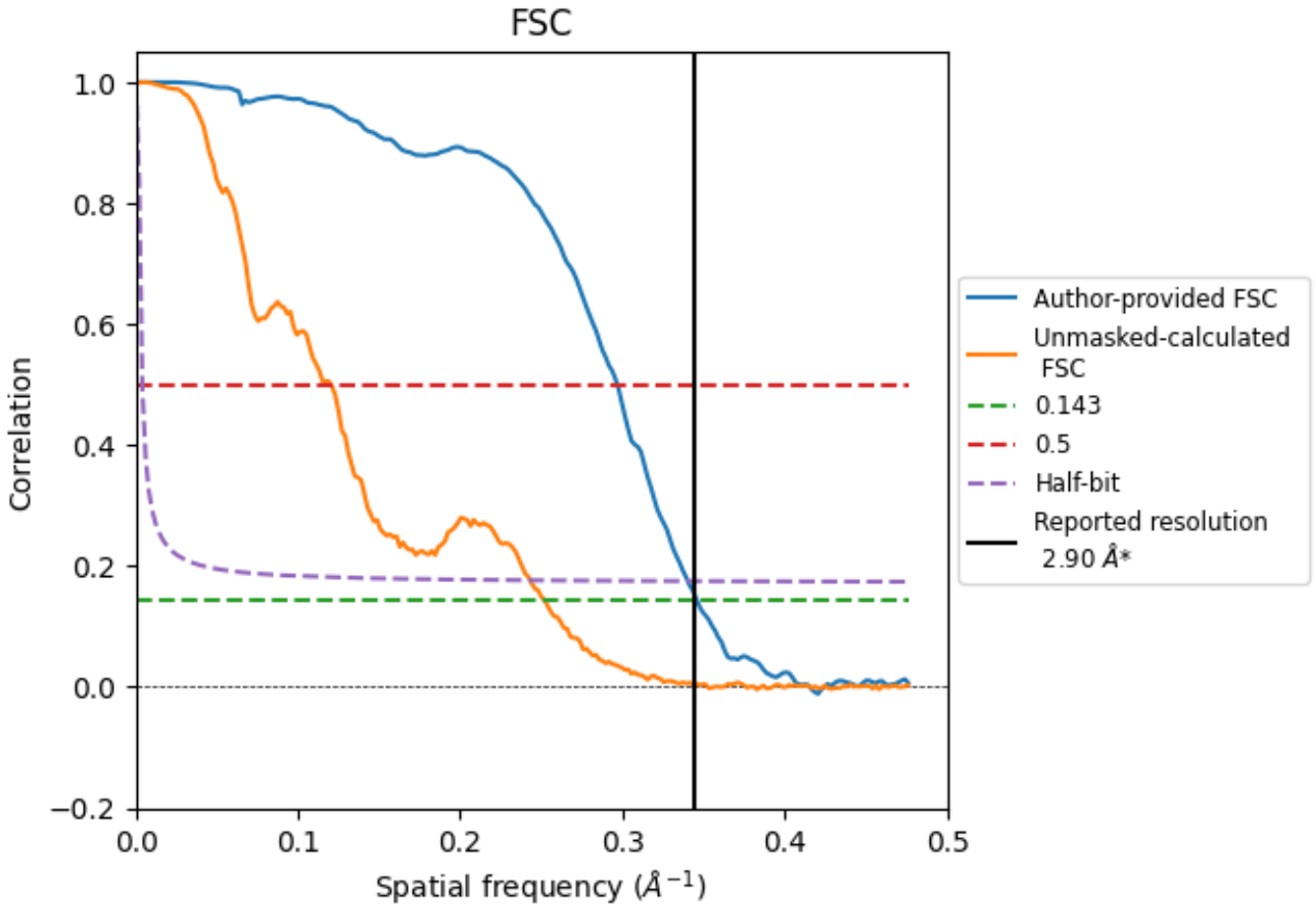


*Reported resolution corresponds to spatial frequency of 0.345 Å^{-1}

8 Fourier-Shell correlation

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

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.345 Å^{-1}

8.2 Resolution estimates (i)

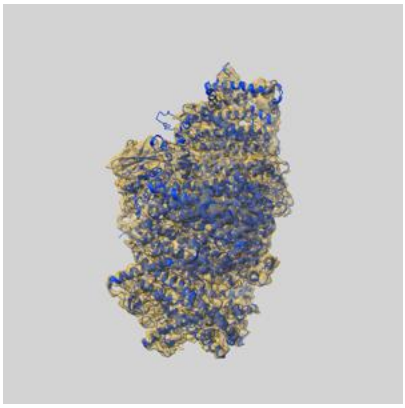
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.90	-	-
Author-provided FSC curve	2.89	3.37	2.94
Unmasked-calculated*	3.97	8.32	4.11

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.97 differs from the reported value 2.9 by more than 10 %

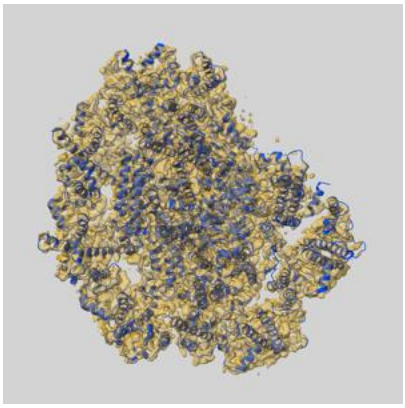
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-48265 and PDB model 9MH0. Per-residue inclusion information can be found in section 3 on page 35.

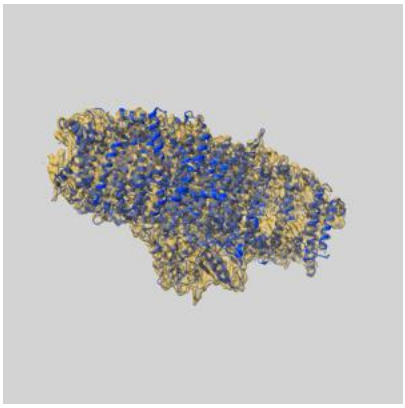
9.1 Map-model overlay



X



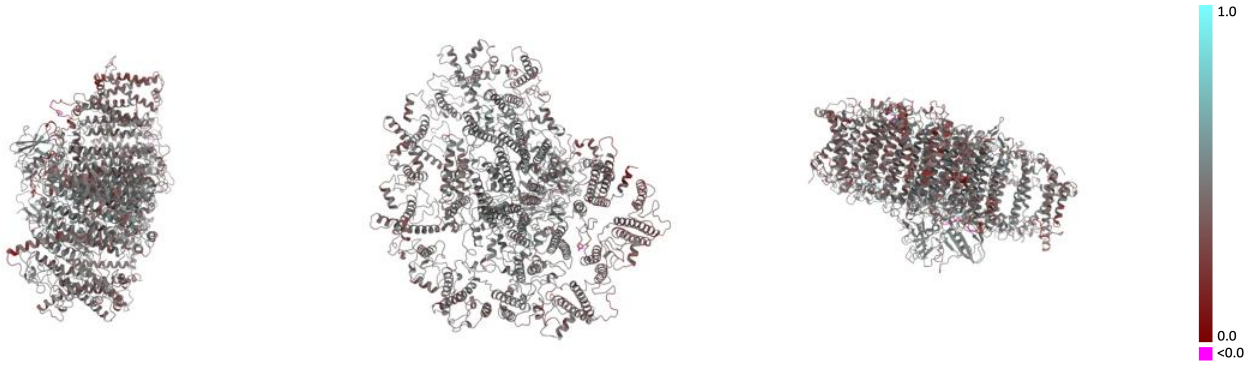
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0165 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

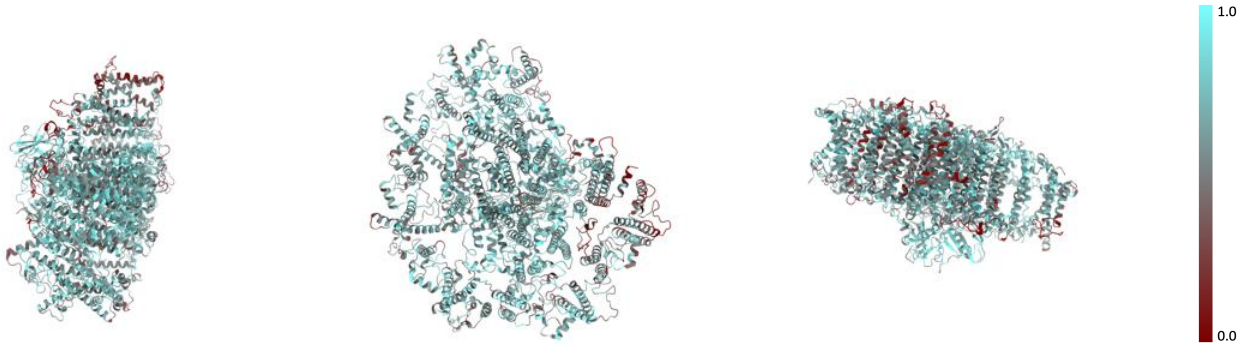
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

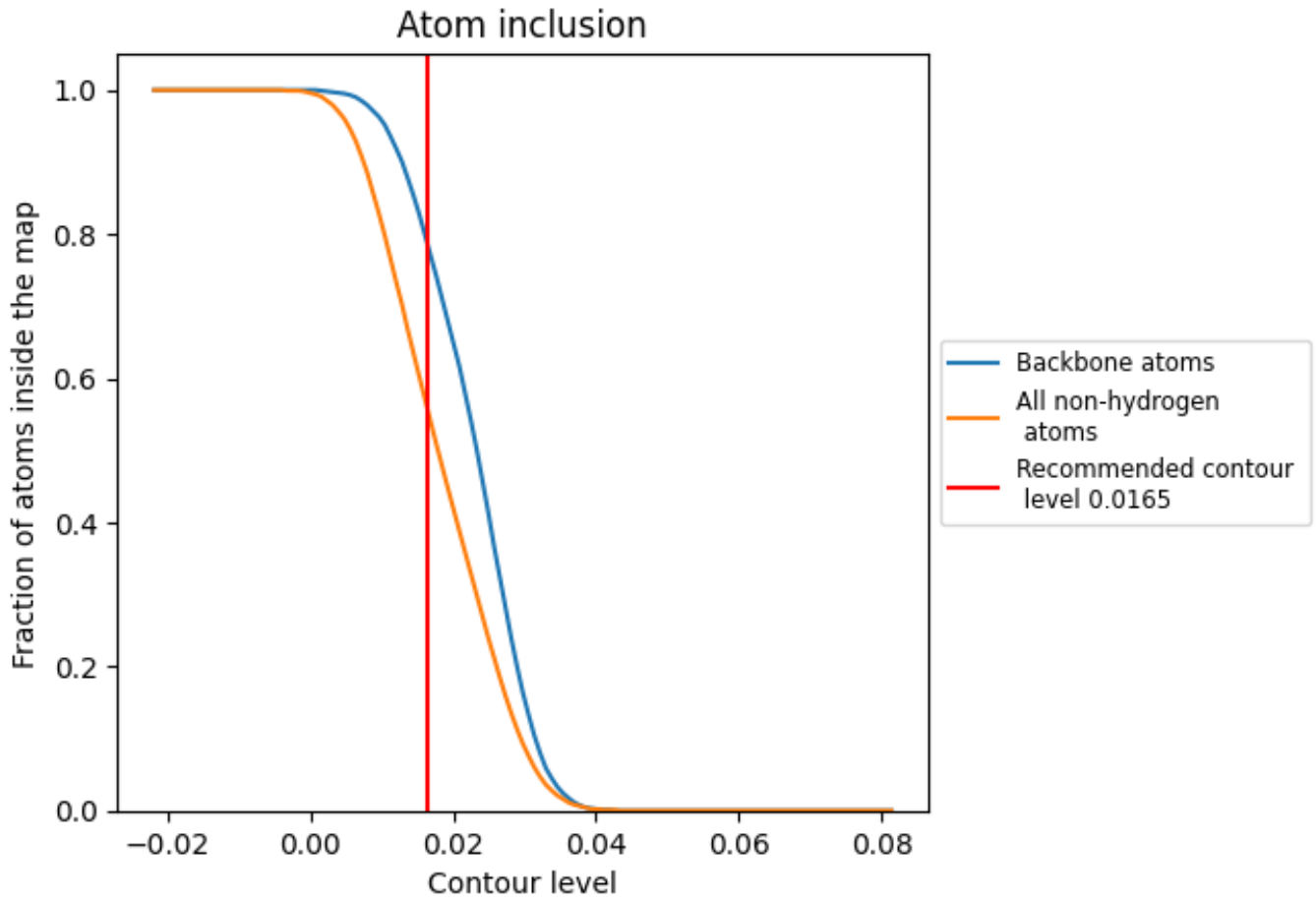
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.0165).

9.4 Atom inclusion (i)



At the recommended contour level, 78% of all backbone atoms, 55% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.0165) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5520	0.4360
1	0.5350	0.4200
2	0.3820	0.3660
3	0.5090	0.4240
7	0.5390	0.4240
8	0.5410	0.4220
9	0.5120	0.3960
A	0.6160	0.4740
B	0.6130	0.4740
C	0.7690	0.4800
D	0.7210	0.4760
E	0.6830	0.4800
F	0.5400	0.4330
G	0.5270	0.4380
H	0.2550	0.3310
I	0.4580	0.3700
J	0.4670	0.4080
K	0.3270	0.3070
L	0.4200	0.3670