

Supplementary Materials

Marine Prostanoids with Cytotoxic Activity from Octocoral *Clavularia* spp.

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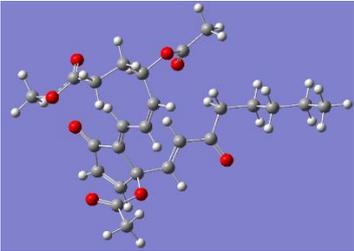
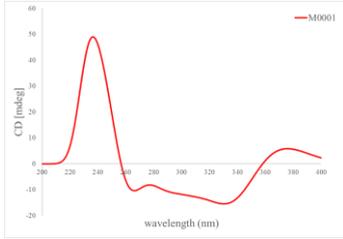
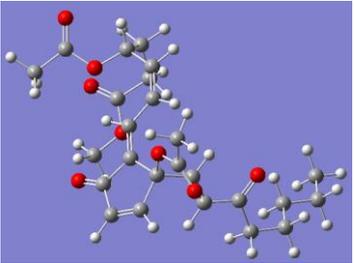
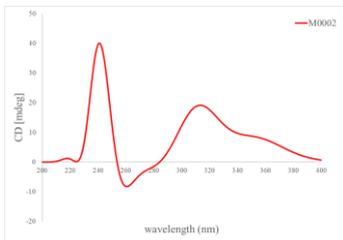
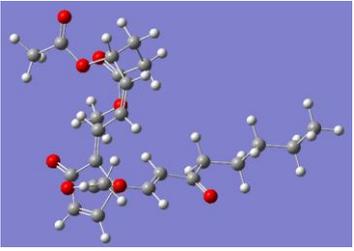
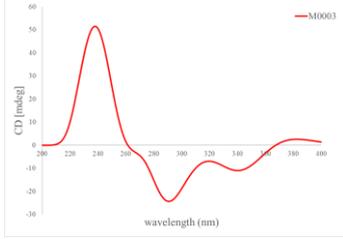
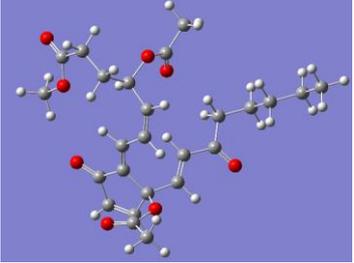
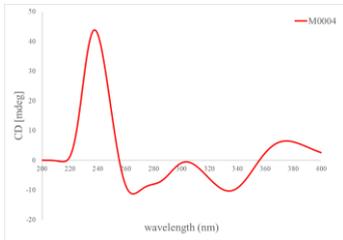
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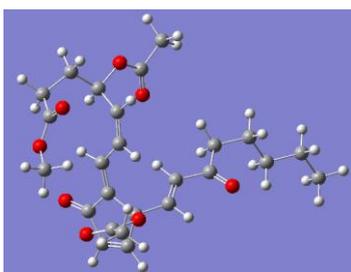
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Table S1. Energy analyses of 4*R*,12*S*-1/4*S*,12*R*-1 (fourteen conformers)

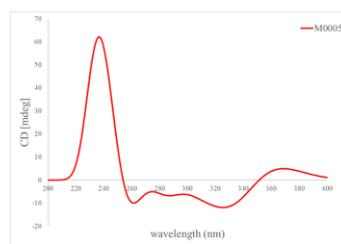
NO.	3D conformers B3LYP/6-31G(d,p)	G (Hartree)	Boltzmann distribution	Calculated ECD spectrum
				4 <i>R</i> ,12 <i>S</i> -1
1		-1573.243097	18.53 %	
2		-1573.242279	7.79 %	
3		-1573.240387	1.05 %	
4		-1573.243648	33.21 %	

5

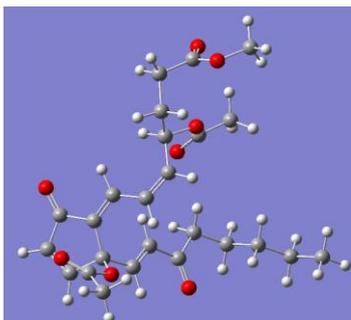


-1573.240860

1.73 %

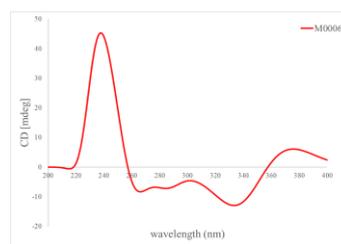


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-1573.241282

2.71 %

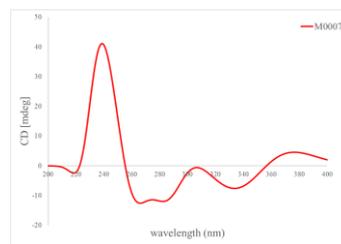


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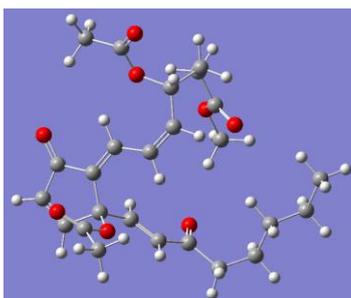


-1573.242657

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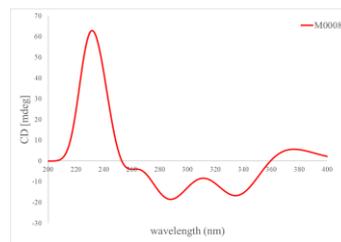


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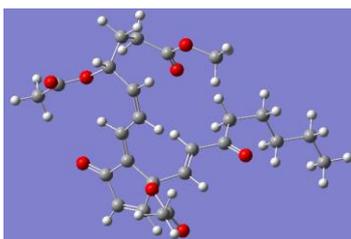


-1573.241846

4.93 %

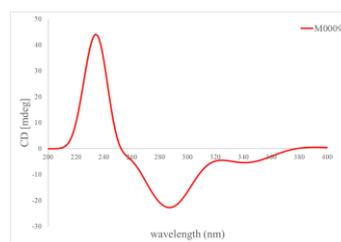


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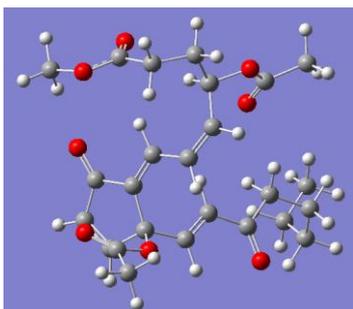


-1573.240792

1.61 %

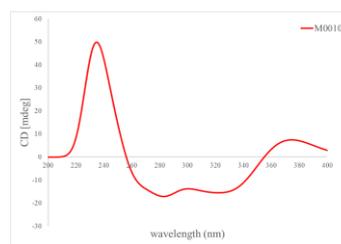


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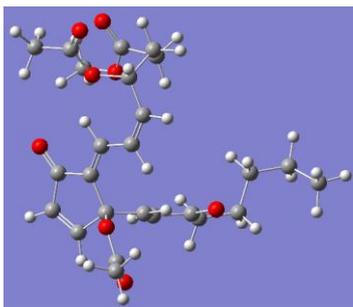


-1573.239958

0.67 %

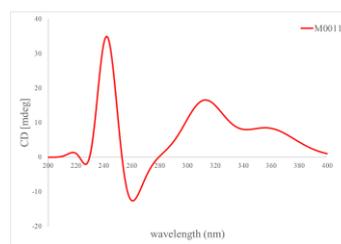


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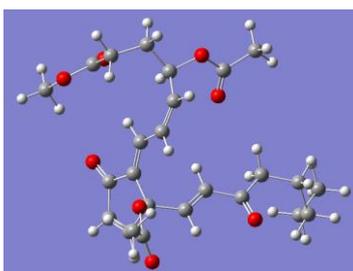


-1573.240849

1.71 %

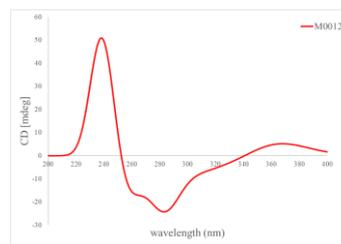


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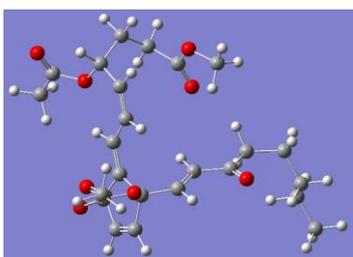


-1573.240968

1.94 %

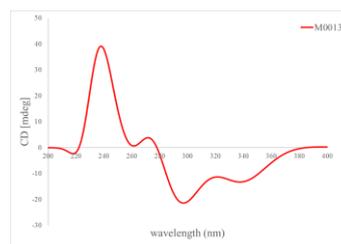


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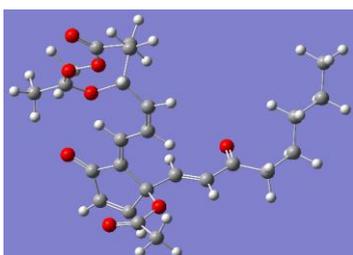


-1573.239961

0.67 %



14



-1573.242638

11.4 %

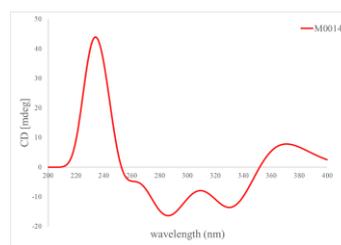


Table S2. Cartesian coordinates of the low-energy re-optimized conformers of 4*R*,12*S*-1/4*S*,12*R*-1 calculated at B3LYP/6-31G(d,p) level of theory.

Conformer 1							
Atomic	Standard Orientation (Å)			Atomic	Standard Orientation (Å)		
Type	X	Y	Z	Type	X	Y	Z
C	-1.133	-3.757	-1.0164	H	-0.7578	-4.7693	-0.9036
C	-0.6894	-2.6582	-0.0532	H	-2.3736	-3.8718	-2.7963
C	-1.4742	-1.4556	-0.5425	H	1.36952	-3.3393	0.3506
C	-2.2508	-1.8671	-1.7517	H	-2.0528	0.51974	-0.6661
C	-1.9483	-3.3045	-1.9767	H	-0.4089	-0.4845	1.78584
O	-2.9916	-1.1606	-2.4181	H	1.01989	-0.7159	-1.2075
C	0.81798	-2.5282	-0.1232	H	-0.0394	1.7951	2.35781
C	-1.4702	-0.1899	-0.0822	H	-1.1386	2.50708	-0.4286
C	-0.7785	0.27955	1.10641	H	-1.7491	3.96149	2.19498
C	1.51177	-1.5581	-0.7293	H	-2.1344	4.52437	0.56486
C	-0.5547	1.56947	1.42423	H	-3.3171	1.99533	1.87642
C	-0.9025	2.77838	0.59942	H	-4.125	3.54291	1.75532
C	-2.0359	3.63076	1.18953	H	3.40045	-0.5878	-2.5698
C	-3.3817	2.90174	1.26441	H	3.19127	0.49955	-1.2262
C	3.008	-1.5825	-0.7479	H	5.61518	-1.3766	-1.5422
C	3.67375	-0.4469	-1.5112	H	5.59935	0.28627	-2.1274
O	3.64369	-2.471	-0.1982	H	5.22337	1.1037	0.22041
C	5.19537	-0.381	-1.3541	H	5.25196	-0.5612	0.7975
C	5.65328	0.10873	0.02668	H	7.6059	-0.8117	-0.0271
C	7.17899	0.18267	0.16496	H	7.58418	0.84375	-0.6149
C	7.63705	0.6765	1.54107	H	8.73031	0.71533	1.61038
O	-0.9218	-3.0267	1.34698	H	7.25463	1.68384	1.7489
O	-3.1768	-3.1888	1.08333	H	7.27576	0.01549	2.33845
C	-2.1923	-3.2679	1.7781	H	-3.192	-3.8705	3.5667
C	-2.1767	-3.6377	3.24401	H	-1.5219	-4.4985	3.41245
C	-3.9319	2.5175	-0.1002	H	-1.7814	-2.8062	3.83709
O	-3.4836	2.89885	-1.1633	H	-6.3949	0.59721	-0.9394
O	-4.9806	1.68674	0.01689	H	-5.8282	2.02745	-1.8668
C	-5.5292	1.19442	-1.2261	H	-4.7895	0.57789	-1.7431
O	0.25841	3.66397	0.56924	H	3.20139	4.03294	-0.8441
O	1.28823	2.30794	-0.9293	H	2.01627	5.3165	-0.4592
C	1.2809	3.30862	-0.2441	H	2.76921	4.40648	0.85129
C	2.39342	4.32898	-0.1743				

Conformer 2							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	-0.8989	-3.2806	1.6654	H	-1.7084	-3.9976	1.71769
C	-0.6039	-2.555	0.35793	H	-0.1062	-3.2457	3.68715
C	0.61684	-1.7123	0.71626	H	-1.783	-1.5109	-1.2043
C	0.88808	-1.8883	2.17177	H	2.22836	-0.4522	0.46223
C	-0.0893	-2.8964	2.66087	H	0.45818	-1.2129	-1.9796
O	1.74829	-1.3228	2.83231	H	-2.7279	-1.282	1.7025
C	-1.7556	-1.7079	-0.134	H	1.754	0.19024	-3.2949
C	1.40898	-0.9384	-0.0547	H	3.99409	0.79208	-2.7031
C	1.27187	-0.6966	-1.4769	H	3.85653	3.0069	-1.7719
C	-2.6933	-1.1302	0.62598	H	2.53062	2.73927	-2.9033
C	2.04025	0.10418	-2.2466	H	1.63996	3.95559	-1.0249
C	3.2381	0.95461	-1.9265	H	0.97601	2.32746	-0.9061
C	2.91519	2.4672	-1.9128	H	-5.3411	-0.5864	1.35073
C	1.90229	2.90455	-0.8452	H	-4.2903	0.72369	1.83131
C	-3.7344	-0.2569	0.00897	H	-6.1484	0.86312	-0.613
C	-4.7967	0.28676	0.95704	H	-6.6292	1.41156	0.99192
O	-3.7428	-0.0146	-1.1896	H	-4.7507	3.08285	0.9798
C	-5.7667	1.28788	0.32323	H	-4.2837	2.53567	-0.6293
C	-5.1428	2.66152	0.04119	H	-6.5209	3.2336	-1.5199
C	-6.1315	3.65458	-0.5823	H	-6.9994	3.77125	0.08295
C	-5.5121	5.02834	-0.8586	H	-6.2408	5.71406	-1.3061
O	-0.1874	-3.483	-0.6975	H	-5.1437	5.49084	0.0656
O	-2.1915	-4.5515	-0.6709	H	-4.6631	4.94747	-1.5485
C	-1.0774	-4.4181	-1.1251	H	-1.1892	-6.012	-2.5417
C	-0.4731	-5.2509	-2.2308	H	-0.2141	-4.6137	-3.0828
C	2.45155	2.83408	0.57085	H	0.45144	-5.7235	-1.8842
O	3.56456	3.19124	0.90095	H	2.29665	1.2176	2.96878
O	1.52128	2.35742	1.42038	H	2.63981	2.97793	3.07472
C	1.89981	2.22279	2.80549	H	0.98162	2.35353	3.38046
O	3.82365	0.56907	-0.6668	H	6.69456	0.34675	0.90493
O	5.88491	1.10394	-1.4469	H	5.31252	1.31159	1.49657
C	5.17297	0.74473	-0.5375	H	5.11722	-0.4328	1.26946
C	5.61012	0.45995	0.87448				

Conformer 3							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	0.41482	-3.7788	1.37924	H	-0.1363	-4.7127	1.42871
C	0.20243	-2.816	0.21177	H	1.54832	-3.7598	3.23236
C	1.2211	-1.7286	0.49583	H	-1.9572	-3.1069	-0.1449
C	1.82273	-1.9986	1.83534	H	2.32147	-0.0054	0.20152
C	1.26572	-3.2973	2.29396	H	0.35531	-1.0135	-1.9888
O	2.60294	-1.2781	2.44264	H	-1.0528	-0.4271	1.05237
C	-1.2452	-2.3693	0.22303	H	0.72026	0.95039	-3.1742
C	1.57027	-0.6521	-0.2364	H	2.65123	2.34731	-2.7802
C	1.02868	-0.2908	-1.5335	H	1.80753	4.15074	-1.3902
C	-1.7171	-1.2027	0.67865	H	0.55845	3.52653	-2.4651
C	1.24716	0.84834	-2.2251	H	-0.4582	3.97463	-0.3209
C	2.0509	2.07714	-1.9038	H	-0.4369	2.22219	-0.5226
C	1.15292	3.29369	-1.5732	H	-3.3405	0.37293	2.34849
C	0.20103	3.09867	-0.3833	H	-2.9577	1.20156	0.86305
C	-3.1857	-0.9238	0.68276	H	-5.6865	-0.1033	1.42279
C	-3.6044	0.41454	1.27937	H	-5.3369	1.58841	1.7746
O	-3.9972	-1.7312	0.254	H	-4.8562	1.99074	-0.6609
C	-5.0862	0.75675	1.10257	H	-5.219	0.30015	-1.0044
C	-5.4667	1.13404	-0.3357	H	-7.5594	0.62884	-0.1695
C	-6.9515	1.4853	-0.4929	H	-7.2041	2.31237	0.18633
C	-7.3316	1.86802	-1.9268	H	-8.3975	2.10982	-2.0078
O	0.33367	-3.4674	-1.0907	H	-6.765	2.7437	-2.2676
O	2.46005	-4.1675	-0.6835	H	-7.1221	1.0473	-2.6238
C	1.50347	-4.0905	-1.4154	H	2.31039	-5.24	-3.0238
C	1.41724	-4.6496	-2.8169	H	0.52042	-5.266	-2.931
C	0.91452	3.00198	0.95505	H	1.34552	-3.8292	-3.5394
O	1.82547	3.72141	1.3082	H	0.20796	1.35098	3.63235
O	0.37362	2.03384	1.7261	H	1.83933	1.17217	2.92518
C	0.97443	1.83305	3.02406	H	1.27259	2.78877	3.45779
O	2.96009	1.82833	-0.8144	H	4.92038	1.25187	0.70687
O	4.40711	3.35738	-1.6559	H	5.86609	2.74853	0.40555
C	4.09991	2.58169	-0.7799	H	4.32824	2.80432	1.31434
C	4.86562	2.32252	0.48979				

Conformer 4							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	-0.5509	-4.0707	-1.2026	H	0.02229	-4.9914	-1.248
C	-0.2338	-3.015	-0.146	H	-1.9123	-4.2388	-2.8876
C	-1.291	-1.9595	-0.4098	H	1.95059	-3.2919	-0.0134
C	-2.0737	-2.3757	-1.6128	H	-2.2994	-0.1715	-0.19
C	-1.5285	-3.6913	-2.0348	H	-0.212	-1.0294	1.95624
O	-2.9756	-1.7504	-2.1509	H	0.9237	-0.6308	-1.15
C	1.20151	-2.5639	-0.3222	H	-0.2273	1.25021	2.69552
C	-1.5057	-0.7909	0.2235	H	-1.6046	1.89781	0.04309
C	-0.7908	-0.3032	1.39135	H	-3.3982	1.61981	1.84241
C	1.62098	-1.4029	-0.8376	H	-2.5933	2.89251	2.75882
C	-0.7817	0.98025	1.79773	H	-4.4252	3.93297	1.55746
C	-1.4584	2.12864	1.09775	H	-2.949	4.48294	0.80231
C	-2.791	2.52465	1.74456	H	3.07102	0.18032	-2.6502
C	-3.5666	3.59315	0.96432	H	2.80724	1.01158	-1.1427
C	3.08221	-1.1095	-0.9768	H	5.49671	-0.2637	-1.9368
C	3.42717	0.23135	-1.6082	H	5.09495	1.42234	-2.2596
O	3.9345	-1.91	-0.6189	H	4.82725	1.82634	0.20702
C	4.91535	0.58947	-1.5665	H	5.2409	0.1423	0.52136
C	5.41803	0.97672	-0.1689	H	7.49424	0.49644	-0.5179
C	6.90633	1.34652	-0.1443	H	7.08806	2.17397	-0.8455
C	7.40755	1.73925	1.24923	H	8.47348	1.99442	1.23545
O	-0.2365	-3.5704	1.21013	H	6.86227	2.60914	1.63666
O	-2.4215	-4.1988	1.10461	H	7.27043	0.91872	1.96421
C	-1.3771	-4.1298	1.70633	H	-2.037	-5.1229	3.47799
C	-1.1336	-4.6356	3.10994	H	-0.2953	-5.3394	3.12102
C	-4.1278	3.19617	-0.3959	H	-0.8684	-3.802	3.76878
O	-4.6424	3.98214	-1.1601	H	-4.2223	0.38132	-2.0083
O	-4.0074	1.8743	-0.6502	H	-5.6245	1.50945	-1.9182
C	-4.5348	1.42125	-1.9175	H	-4.1279	2.02656	-2.7306
O	-0.5979	3.30469	1.17367	H	2.10309	4.61446	-0.1681
O	0.71597	2.46281	-0.4707	H	0.61973	5.48242	0.32606
C	0.46021	3.3398	0.32669	H	1.60768	4.68354	1.54999
C	1.25426	4.61057	0.51627				

Conformer 5							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	0.00029	-3.6393	1.02721	H	-0.4751	-4.5407	0.65351
C	0.18184	-2.429	0.11428	H	0.38181	-4.0944	3.11678
C	0.92711	-1.4535	1.00443	H	-1.6491	-2.5962	-1.1094
C	1.03562	-2.0586	2.36815	H	1.83281	0.3059	1.57067
C	0.43153	-3.4146	2.27418	H	1.11987	-0.1995	-1.4217
O	1.51681	-1.5324	3.35772	H	-1.4174	-0.2073	0.80735
C	-1.1775	-1.9596	-0.3621	H	1.55193	2.10061	-1.8283
C	1.38331	-0.2172	0.72928	H	1.60654	2.45319	1.23184
C	1.34787	0.43388	-0.5679	H	3.4106	3.79288	-0.8657
C	-1.8436	-0.8837	0.07184	H	3.18798	4.34425	0.7981
C	1.57198	1.74141	-0.8007	H	5.23605	3.1113	0.77501
C	1.80995	2.81801	0.22236	H	4.09096	2.03979	1.57518
C	3.20373	3.45667	0.15594	H	-3.9228	0.49564	1.24877
C	4.32693	2.51657	0.61899	H	-3.1593	1.50601	0.05997
C	-3.2014	-0.5517	-0.4613	H	-5.4982	2.03861	-0.1093
C	-3.8647	0.66742	0.16192	H	-5.1785	1.01467	-1.5077
O	-3.7245	-1.2118	-1.3479	H	-6.104	-0.9599	-0.2749
C	-5.2412	1.01438	-0.4122	H	-6.4188	0.05719	1.13002
C	-6.3605	0.06169	0.03056	H	-7.9829	1.46524	-0.2508
C	-7.7322	0.43542	-0.5446	H	-7.6738	0.43755	-1.6422
C	-8.8515	-0.5097	-0.0959	H	-9.8177	-0.2201	-0.5252
O	0.85798	-2.7916	-1.1369	H	-8.6449	-1.5415	-0.4054
O	2.79603	-3.391	-0.1058	H	-8.9585	-0.5078	0.99604
C	2.13401	-3.2606	-1.1095	H	3.57645	-4.0535	-2.4727
C	2.59837	-3.5729	-2.5143	H	1.87918	-4.2238	-3.0203
C	4.68116	1.45749	-0.4121	H	2.66808	-2.6483	-3.098
O	4.821	1.67436	-1.5976	H	4.93138	-1.7471	-0.1823
O	4.84287	0.25084	0.16467	H	4.66477	-0.7529	-1.6552
C	5.20486	-0.8337	-0.7096	H	6.28051	-0.806	-0.909
O	0.88013	3.913	-0.0458	H	-2.2418	4.83934	0.36672
O	-0.8262	2.74554	0.889	H	-0.7708	5.8604	0.30154
C	-0.4098	3.73733	0.32877	H	-1.3088	5.00813	-1.1466
C	-1.2412	4.93922	-0.0552				

Conformer 6							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	4.5987	-1.2215	-0.9099	H	5.56908	-0.7939	-0.678
C	3.39818	-0.9431	-0.0075	H	4.94053	-2.2655	-2.7839
C	2.30344	-1.7694	-0.6547	H	3.86916	1.12347	0.60808
C	2.85428	-2.372	-1.9095	H	0.41347	-2.5241	-0.966
C	4.28223	-1.9644	-1.9775	H	1.08476	-1.0306	1.68672
O	2.24033	-3.0534	-2.7133	H	1.42606	0.69464	-1.2041
C	3.14964	0.55083	0.0243	H	-1.2548	-0.8638	2.09073
C	1.0188	-1.927	-0.2863	H	-1.6342	-1.807	-0.8176
C	0.40608	-1.3874	0.91593	H	-2.2346	-3.6727	0.71363
C	2.17921	1.21231	-0.6167	H	-3.2634	-2.6006	1.66268
C	-0.9166	-1.2779	1.14166	H	-3.7313	-3.1755	-1.33
C	-2.0252	-1.617	0.18426	H	-4.4853	-4.081	-0.0092
C	-2.8868	-2.7937	0.65237	H	1.2587	3.17555	-2.4178
C	-4.0659	-3.1074	-0.2909	H	0.05469	2.75353	-1.2337
C	2.08034	2.70245	-0.5299	H	1.71904	5.34442	-1.1323
C	0.9771	3.3378	-1.3645	H	0.13597	5.24314	-1.9015
O	2.85225	3.36081	0.15293	H	-0.8861	4.58787	0.30083
C	0.75245	4.82775	-1.093	H	0.69906	4.70234	1.06255
C	0.07956	5.11508	0.25631	H	0.81496	7.13433	0.46621
C	-0.1501	6.61025	0.50958	H	-0.7604	7.02832	-0.3041
C	-0.8259	6.8978	1.85413	H	-0.9732	7.97309	2.00763
O	3.67453	-1.2612	1.39584	H	-1.8097	6.41539	1.91525
O	4.06039	-3.4633	0.96979	H	-0.2215	6.52162	2.68869
C	3.99576	-2.5398	1.74466	H	4.55314	-3.6335	3.49226
C	4.24652	-2.6195	3.23343	H	5.02154	-1.905	3.52811
C	-5.1973	-2.0957	-0.2446	H	3.33562	-2.3576	3.78219
O	-5.6252	-1.4689	-1.1901	H	-7.1136	-1.1724	2.19979
O	-5.7106	-2.0057	1.00356	H	-6.4499	-0.0546	0.96432
C	-6.7916	-1.0743	1.16259	H	-7.6108	-1.3139	0.47988
O	-2.9228	-0.4723	0.0926	H	-3.3829	2.3607	-1.5079
O	-1.5431	0.54525	-1.3915	H	-4.5947	1.0739	-1.2082
C	-2.582	0.52257	-0.7672	H	-3.8942	1.95153	0.15828
C	-3.6812	1.55273	-0.8391				

Conformer 7							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	-4.1155	-1.3668	-1.1011	H	-4.8782	-2.1311	-0.991
C	-3.0264	-1.2049	-0.0427	H	-4.5706	-0.4683	-3.0262
C	-2.2469	-0.0067	-0.5545	H	-2.7625	-3.302	0.59106
C	-2.8148	0.38317	-1.8801	H	-0.8066	1.47368	-0.5675
C	-3.9605	-0.5277	-2.1325	H	-1.064	-0.4442	1.88475
O	-2.4106	1.27	-2.6179	H	-0.5023	-2.0034	-1.0258
C	-2.2524	-2.5025	0.05554	H	0.86816	0.65125	2.76324
C	-1.2019	0.63604	0.00455	H	1.30279	1.88629	0.02632
C	-0.5943	0.33131	1.28584	H	-0.3033	3.45788	1.23786
C	-1.056	-2.7641	-0.4823	H	0.8915	3.60154	2.52606
C	0.50233	0.9404	1.7793	H	1.14001	5.53324	1.07206
C	1.2916	2.0338	1.10736	H	2.55734	4.53281	0.84813
C	0.76947	3.43675	1.44868	H	1.11238	-5.3882	-1.0597
C	1.47586	4.56261	0.68369	H	0.90823	-3.9009	-2.0119
C	-0.4397	-4.1218	-0.3514	H	1.8513	-2.5486	-0.0982
C	0.92423	-4.3121	-0.9922	H	2.05035	-4.0291	0.83367
O	-0.998	-5.022	0.25871	H	3.63292	-4.9102	-0.9127
C	2.05004	-3.6251	-0.188	H	3.41922	-3.4373	-1.8504
C	3.43118	-3.8324	-0.8238	H	4.35277	-2.086	0.0403
C	4.56461	-3.1601	-0.0385	H	4.57361	-3.5529	0.98871
C	5.94153	-3.3727	-0.6765	H	6.73242	-2.8854	-0.0942
O	-3.5778	-1.053	1.30501	H	6.18958	-4.4394	-0.7449
O	-4.7211	0.84429	0.78309	H	5.97524	-2.9599	-1.6923
C	-4.3985	-6E-05	1.58344	H	-5.535	0.75484	3.22625
C	-4.8268	-0.0513	3.03216	H	-5.2844	-1.0187	3.26146
C	1.26008	4.6142	-0.8235	H	-3.9535	0.05977	3.68387
O	1.93219	5.28426	-1.5759	H	-0.8823	3.15713	-2.7773
O	0.21689	3.85536	-1.2251	H	-0.407	4.88878	-2.9276
C	-0.0842	3.88534	-2.638	H	0.80286	3.61628	-3.2164
O	2.6698	1.99136	1.5743	H	5.50513	0.3852	1.13445
O	3.10272	0.24729	0.19464	H	5.28655	2.1408	1.39649
C	3.47472	1.04768	1.02549	H	4.84826	1.00918	2.67681
C	4.87174	1.14632	1.59069				

Conformer 8							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	1.91187	3.57864	-1.3514	H	1.5588	4.60285	-1.4165
C	1.23434	2.59467	-0.3984	H	3.51395	3.49304	-2.8141
C	2.05703	1.3266	-0.5995	H	-0.3184	1.90785	-1.7963
C	3.0904	1.60115	-1.6394	H	2.59602	-0.6551	-0.4132
C	2.89789	3.01684	-2.0602	H	0.23289	0.49615	1.2488
O	3.9169	0.81251	-2.0706	H	-1.2214	3.15135	0.8569
C	-0.1965	2.37877	-0.823	H	-0.1828	-1.6149	2.08848
C	1.90004	0.0984	-0.0635	H	1.73955	-3.1824	2.1568
C	0.89452	-0.2933	0.90226	H	0.92551	-4.8979	0.74778
C	-1.2956	2.67982	-0.1176	H	-0.4623	-4.0369	1.41456
C	0.65661	-1.5252	1.40143	H	0.59376	-3.3834	-1.3896
C	1.33015	-2.8504	1.19453	H	-0.4979	-4.722	-1.1237
C	0.36851	-3.956	0.70547	H	-3.5279	2.84867	1.27587
C	-0.1803	-3.7551	-0.7109	H	-4.1589	3.70899	-0.1181
C	-2.6475	2.3175	-0.6266	H	-5.915	2.19654	0.55584
C	-3.8447	2.7135	0.23364	H	-5.2187	1.53441	-0.9227
O	-2.8	1.7331	-1.6929	H	-3.8222	-0.0551	0.48174
C	-5.0157	1.72585	0.13731	H	-4.5686	0.60328	1.93152
C	-4.7457	0.40066	0.864	H	-6.8214	-0.168	1.10239
C	-5.8884	-0.6133	0.72727	H	-6.0584	-0.8192	-0.3394
C	-5.6085	-1.928	1.46357	H	-6.4268	-2.6447	1.32711
O	1.18238	3.09482	0.96535	H	-4.6836	-2.3907	1.10052
O	3.44651	3.16713	1.18526	H	-5.4927	-1.7587	2.54159
C	2.34252	3.32978	1.64405	H	2.96269	4.05352	3.5544
C	2.03096	3.81111	3.04249	H	1.38116	4.69136	3.00877
C	-1.3897	-2.8386	-0.7976	H	1.49869	3.03034	3.59629
O	-2.0718	-2.478	0.14172	H	-2.9206	-1.6956	-3.4105
O	-1.6354	-2.5144	-2.0787	H	-3.6693	-2.0954	-1.8291
C	-2.7882	-1.6851	-2.3282	H	-2.6104	-0.6641	-1.9829
O	2.43634	-2.7411	0.27096	H	5.55934	-3.6453	-0.187
O	3.68243	-4.1708	1.51691	H	4.29701	-3.7068	-1.4442
C	3.56553	-3.4513	0.55093	H	4.72217	-2.1523	-0.7291
C	4.60992	-3.2195	-0.5136				

Conformer 9							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	0.20674	3.58889	1.11238	H	0.94351	4.35221	0.90119
C	-0.0775	2.48282	0.09387	H	-0.4799	4.08757	3.11072
C	-1.1603	1.67605	0.78644	H	1.88176	2.26975	-0.9089
C	-1.4163	2.27631	2.12798	H	-2.5921	0.2269	1.06645
C	-0.5156	3.45144	2.23356	H	-1.1113	0.43604	-1.6579
O	-2.2229	1.88568	2.96056	H	0.94733	-0.0125	0.92365
C	1.19794	1.74288	-0.2477	H	-2.3624	-1.3693	-2.4215
C	-1.8832	0.62491	0.35082	H	-4.5183	-1.8184	-1.3644
C	-1.8164	0.00081	-0.9547	H	-4.0882	-3.9063	-0.2425
C	1.57464	0.55448	0.2409	H	-3.017	-3.7589	-1.6335
C	-2.5508	-1.0416	-1.3994	H	-2.1396	-3.1511	1.25586
C	-3.6155	-1.8824	-0.7455	H	-1.9739	-4.7265	0.48617
C	-3.2164	-3.3677	-0.6307	H	3.26155	-0.9825	1.75078
C	-2.0169	-3.6464	0.29009	H	2.56193	-2.0119	0.53425
C	2.90257	-0.0321	-0.1267	H	4.8347	-2.7821	0.77184
C	3.33513	-1.244	0.68336	H	4.81195	-1.8852	-0.7456
O	3.57921	0.43387	-1.0329	H	5.77296	0.11306	0.4163
C	4.73012	-1.776	0.34322	H	5.79081	-0.7728	1.94001
C	5.87681	-0.8897	0.84862	H	7.36423	-2.4586	0.93089
C	7.26483	-1.4474	0.51002	H	7.35075	-1.5613	-0.5799
C	8.40954	-0.567	1.02182	H	9.38744	-0.9886	0.76185
O	-0.6785	3.0054	-1.1482	H	8.35556	0.44054	0.59161
O	0.97516	4.52457	-1.5234	H	8.37175	-0.4621	2.11334
C	-0.0657	3.99514	-1.846	H	-0.3908	5.16149	-3.6055
C	-0.8708	4.33605	-3.0789	H	-0.9349	3.46347	-3.7374
C	-0.6492	-3.2587	-0.2427	H	-1.8928	4.61029	-2.7994
O	0.24057	-2.7759	0.42646	H	0.70159	-3.6009	-3.1706
O	-0.509	-3.5775	-1.5485	H	0.97925	-2.2087	-2.0728
C	0.77187	-3.2804	-2.1309	H	1.56445	-3.828	-1.6147
O	-3.9687	-1.4262	0.57736	H	-6.3394	0.06973	2.30061
O	-5.9847	-0.6687	-0.1498	H	-5.221	-1.215	2.85147
C	-5.1823	-0.816	0.74223	H	-4.5798	0.37265	2.43064
C	-5.3481	-0.366	2.17204				

Conformer 10							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	-0.1504	3.69269	0.88031	H	0.34934	4.63124	0.66195
C	-0.2233	2.59331	-0.177	H	-0.7553	3.91151	2.95551
C	-1.0275	1.51498	0.5249	H	1.69828	2.91918	-1.2121
C	-1.316	1.98031	1.91575	H	-1.8834	-0.3397	0.81007
C	-0.7063	3.32962	2.04262	H	-0.9046	0.52095	-2.0224
O	-1.9352	1.3718	2.77506	H	1.38312	0.34589	0.43459
C	1.18471	2.20073	-0.5746	H	-1.1342	-1.7488	-2.6949
C	-1.3875	0.29593	0.07942	H	-1.4408	-2.4388	0.2891
C	-1.1807	-0.2104	-1.2669	H	-3.0776	-3.6014	-2.0217
C	1.84651	1.10319	-0.1914	H	-3.0404	-4.1916	-0.3566
C	-1.2948	-1.4979	-1.6464	H	-4.0932	-1.4227	-1.2167
C	-1.5848	-2.6805	-0.7631	H	-5.0894	-2.8166	-0.8614
C	-2.9788	-3.2902	-0.9748	H	3.84134	-0.3493	1.01624
C	-4.1294	-2.3418	-0.6216	H	3.24718	-1.2422	-0.3446
C	3.2548	0.85951	-0.6362	H	5.60438	-1.6872	-0.3373
C	3.90383	-0.3989	-0.0815	H	5.36341	-0.542	-1.6482
O	3.8252	1.61857	-1.407	H	7.35754	0.09831	-0.4603
C	5.33994	-0.6451	-0.5569	H	6.13133	1.33046	-0.2158
C	6.39978	0.29958	0.04102	H	7.32766	0.97525	1.85942
C	6.61631	0.1933	1.56096	H	5.68354	0.42629	2.09344
C	7.14554	-1.1655	2.03544	H	7.34238	-1.1581	3.11375
O	-0.7963	3.07844	-1.4364	H	6.43293	-1.9749	1.83918
O	-2.7996	3.60499	-0.4927	H	8.08411	-1.4217	1.52763
C	-2.0727	3.55676	-1.4557	H	-3.4394	4.42466	-2.8486
C	-2.4332	4.00447	-2.8541	H	-1.7161	4.75022	-3.2116
C	-4.1591	-1.9563	0.84904	H	-2.3907	3.15458	-3.5435
O	-3.4792	-2.4685	1.71632	H	-5.8744	0.28477	2.4282
O	-5.0327	-0.9607	1.07097	H	-5.306	-1.2711	3.12322
C	-5.0792	-0.4609	2.42614	H	-4.1217	-0.0043	2.68925
O	-0.6518	-3.7507	-1.105	H	2.46637	-4.7026	-0.6991
O	1.02389	-2.6791	-0.0143	H	1.00655	-5.7369	-0.7001
C	0.62088	-3.6228	-0.6608	H	1.47278	-4.8883	-2.1749
C	1.45156	-4.8127	-1.0826				

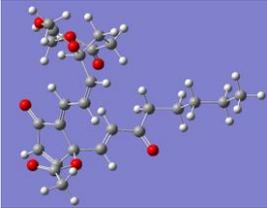
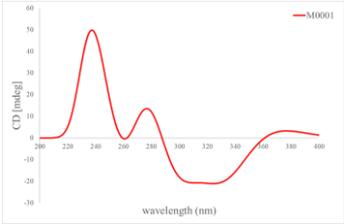
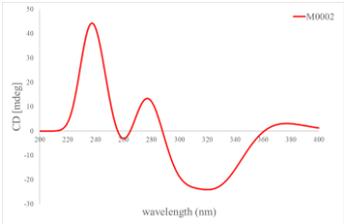
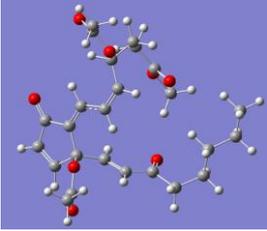
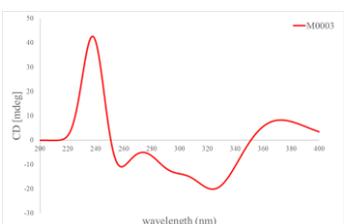
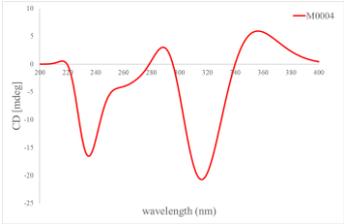
Conformer 11							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	-0.1504	3.69269	0.88031	H	0.34934	4.63124	0.66195
C	-0.2233	2.59331	-0.177	H	-0.7553	3.91151	2.95551
C	-1.0275	1.51498	0.5249	H	1.69828	2.91918	-1.2121
C	-1.316	1.98031	1.91575	H	-1.8834	-0.3397	0.81007
C	-0.7063	3.32962	2.04262	H	-0.9046	0.52095	-2.0224
O	-1.9352	1.3718	2.77506	H	1.38312	0.34589	0.43459
C	1.18471	2.20073	-0.5746	H	-1.1342	-1.7488	-2.6949
C	-1.3875	0.29593	0.07942	H	-1.4408	-2.4388	0.2891
C	-1.1807	-0.2104	-1.2669	H	-3.0776	-3.6014	-2.0217
C	1.84651	1.10319	-0.1914	H	-3.0404	-4.1916	-0.3566
C	-1.2948	-1.4979	-1.6464	H	-4.0932	-1.4227	-1.2167
C	-1.5848	-2.6805	-0.7631	H	-5.0894	-2.8166	-0.8614
C	-2.9788	-3.2902	-0.9748	H	3.84134	-0.3493	1.01624
C	-4.1294	-2.3418	-0.6216	H	3.24718	-1.2422	-0.3446
C	3.2548	0.85951	-0.6362	H	5.60438	-1.6872	-0.3373
C	3.90383	-0.3989	-0.0815	H	5.36341	-0.542	-1.6482
O	3.8252	1.61857	-1.407	H	7.35754	0.09831	-0.4603
C	5.33994	-0.6451	-0.5569	H	6.13133	1.33046	-0.2158
C	6.39978	0.29958	0.04102	H	7.32766	0.97525	1.85942
C	6.61631	0.1933	1.56096	H	5.68354	0.42629	2.09344
C	7.14554	-1.1655	2.03544	H	7.34238	-1.1581	3.11375
O	-0.7963	3.07844	-1.4364	H	6.43293	-1.9749	1.83918
O	-2.7996	3.60499	-0.4927	H	8.08411	-1.4217	1.52763
C	-2.0727	3.55676	-1.4557	H	-3.4394	4.42466	-2.8486
C	-2.4332	4.00447	-2.8541	H	-1.7161	4.75022	-3.2116
C	-4.1591	-1.9563	0.84904	H	-2.3907	3.15458	-3.5435
O	-3.4792	-2.4685	1.71632	H	-5.8744	0.28477	2.4282
O	-5.0327	-0.9607	1.07097	H	-5.306	-1.2711	3.12322
C	-5.0792	-0.4609	2.42614	H	-4.1217	-0.0043	2.68925
O	-0.6518	-3.7507	-1.105	H	2.46637	-4.7026	-0.6991
O	1.02389	-2.6791	-0.0143	H	1.00655	-5.7369	-0.7001
C	0.62088	-3.6228	-0.6608	H	1.47278	-4.8883	-2.1749
C	1.45156	-4.8127	-1.0826				

Conformer 12							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	0.09782	3.57189	1.25349	H	0.72602	4.44535	1.14154
C	-0.0394	2.56369	0.11265	H	-0.6463	3.74085	3.28646
C	-0.9929	1.53703	0.69759	H	1.95014	2.74887	-0.8369
C	-1.3302	1.945	2.09314	H	-2.1047	-0.1947	0.79698
C	-0.5978	3.2116	2.34155	H	-0.9118	0.73363	-1.9249
O	-2.0756	1.36161	2.86702	H	1.23421	0.07969	0.5059
C	1.31946	2.04147	-0.3036	H	-1.3949	-1.4369	-2.7752
C	-1.4925	0.41759	0.13752	H	-1.8982	-2.2978	0.13721
C	-1.2982	-0.0126	-1.2365	H	-3.5763	-3.0602	-2.3077
C	1.81122	0.82591	-0.033	H	-3.6773	-3.7817	-0.6979
C	-1.5598	-1.2443	-1.7151	H	-4.3378	-0.8391	-1.3449
C	-2.0296	-2.4413	-0.9345	H	-5.5167	-2.1169	-1.1483
C	-3.4798	-2.8491	-1.2359	H	3.58265	-0.9455	1.09506
C	-4.5156	-1.7931	-0.8361	H	2.91048	-1.6643	-0.331
C	3.18626	0.43499	-0.4782	H	5.19327	-2.4016	-0.3249
C	3.66125	-0.9295	-0.0027	H	5.12374	-1.1508	-1.5574
O	3.86264	1.16396	-1.1895	H	7.15696	-0.8455	-0.3049
C	5.06507	-1.3223	-0.4761	H	6.08845	0.51144	0.00874
C	6.2216	-0.5596	0.19764	H	7.18845	-0.1272	2.06898
C	6.39231	-0.793	1.70917	H	5.48478	-0.4816	2.24513
C	6.74007	-2.2357	2.0957	H	6.91414	-2.3247	3.17429
O	-0.7157	3.14293	-1.0656	H	5.9373	-2.9353	1.83563
O	0.71834	4.90198	-1.2463	H	7.65015	-2.5722	1.58291
C	-0.2412	4.2773	-1.6414	H	-0.747	5.6001	-3.2399
C	-1.0808	4.64022	-2.8446	H	-0.9776	3.86944	-3.616
C	-4.5601	-1.5345	0.66144	H	-2.1389	4.6906	-2.5704
O	-3.9829	-2.1977	1.4999	H	-6.0762	0.74005	2.38972
O	-5.3191	-0.4626	0.94628	H	-5.7085	-0.9258	2.95058
C	-5.3667	-0.0863	2.34067	H	-4.3765	0.23378	2.67494
O	-1.2265	-3.5943	-1.3305	H	1.72719	-4.9676	-0.8997
O	0.52384	-2.8303	-0.1069	H	0.14991	-5.8017	-1.0328
C	0.03308	-3.6645	-0.8375	H	0.78361	-4.9121	-2.4183
C	0.72431	-4.9167	-1.3248				

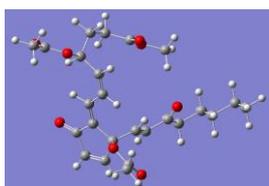
Conformer 13							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	0.57209	3.68637	0.62326	H	1.26914	4.43822	0.26671
C	0.14454	2.53642	-0.2882	H	0.21982	4.26258	2.68761
C	-0.8608	1.79589	0.57226	H	1.985	2.23071	-1.4619
C	-0.8932	2.44569	1.91781	H	-2.2613	0.38243	1.10415
C	0.04382	3.59764	1.85017	H	-1.112	0.44409	-1.7851
O	-1.5622	2.09371	2.87748	H	1.25632	0.08476	0.61069
C	1.37962	1.75779	-0.6898	H	-2.4138	-1.4064	-2.3058
C	-1.6383	0.73262	0.29057	H	-4.4399	-1.7849	-0.9307
C	-1.725	0.04234	-0.9813	H	-3.8861	-3.8714	0.08154
C	1.81448	0.60846	-0.1608	H	-3.0171	-3.7368	-1.4437
C	-2.4855	-1.0315	-1.2854	H	-1.7387	-3.1737	1.30282
C	-3.4463	-1.8533	-0.4713	H	-1.6967	-4.7379	0.49237
C	-3.065	-3.3483	-0.4211	H	3.56899	-0.9508	1.23283
C	-1.7543	-3.6541	0.32196	H	2.79189	-1.972	0.0636
C	3.1058	0.00336	-0.6186	H	5.0631	-2.7663	0.1528
C	3.57938	-1.2104	0.16389	H	4.92789	-1.8806	-1.364
O	3.72108	0.45733	-1.5738	H	7.04238	-1.3068	-0.39
C	4.94084	-1.7614	-0.2743	H	6.01883	0.11439	-0.2872
C	6.15447	-0.898	0.11328	H	5.57837	-0.3988	2.14959
C	6.43981	-0.8287	1.62018	H	6.55966	-1.8486	2.01402
C	7.6888	-0.0044	1.95081	H	7.87401	0.02955	3.03065
O	-0.3741	3.00571	-1.5757	H	8.58054	-0.4281	1.47243
O	-2.0593	4.20832	-0.6298	H	7.58549	1.02884	1.59713
C	-1.4678	3.81886	-1.6075	H	-2.6436	4.86419	-3.0519
C	-1.8253	4.14354	-3.0402	H	-0.9575	4.5482	-3.57
C	-0.4674	-3.2653	-0.3832	H	-2.132	3.23106	-3.5629
O	0.50242	-2.7854	0.16591	H	0.49226	-3.5933	-3.4627
O	-0.4989	-3.5781	-1.6978	H	0.90832	-2.2054	-2.4033
C	0.69581	-3.2771	-2.4393	H	1.5488	-3.8258	-2.0319
O	-3.5597	-1.3571	0.87907	H	-5.741	-0.4974	3.18022
O	-5.8167	-1.5966	0.83781	H	-4.2593	-1.4438	3.48003
C	-4.8096	-1.2631	1.41925	H	-4.1184	0.19704	2.85114
C	-4.7335	-0.7083	2.82023				

Conformer 14							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	-0.4847	-3.5337	1.53607	H	-1.2555	-4.2943	1.60691
C	-0.5688	-2.4572	0.4549	H	0.82079	-3.9631	3.21758
C	0.72644	-1.6809	0.66712	H	-1.7419	-1.044	1.66854
C	1.39623	-2.2255	1.88449	H	2.20092	-0.2786	0.31799
C	0.56183	-3.3636	2.35273	H	-0.3249	-0.3887	-1.4953
O	2.42366	-1.8113	2.40167	H	-2.9642	-2.0281	-0.9658
C	-1.7806	-1.6014	0.73476	H	0.56759	1.33736	-2.7698
C	1.24995	-0.6572	-0.0377	H	2.92984	1.73898	-2.8821
C	0.65996	-0.0304	-1.2048	H	3.33783	3.61685	-1.4335
C	-2.8763	-1.489	-0.0273	H	1.68891	3.6748	-2.0557
C	1.18706	0.96072	-1.9556	H	1.6148	4.33954	0.2599
C	2.50072	1.6876	-1.8748	H	0.86209	2.74705	0.18595
C	2.35477	3.14103	-1.3666	H	-4.8472	-0.402	-1.5659
C	1.80996	3.2772	0.06249	H	-5.6212	-1.6033	-0.5623
C	-4.0093	-0.6131	0.39569	H	-7.2085	0.19576	-0.7203
C	-5.211	-0.5809	-0.5424	H	-6.5344	0.30074	0.90525
O	-3.9807	0.01986	1.44103	H	-4.9896	2.12208	0.15126
C	-6.295	0.42962	-0.1571	H	-5.6499	2.01664	-1.4801
C	-5.9	1.89014	-0.4152	H	-7.9187	2.64758	-0.592
C	-7.0015	2.88745	-0.0349	H	-7.2489	2.76131	1.02842
C	-6.6109	4.34533	-0.2979	H	-7.4153	5.03326	-0.0135
O	-0.7521	-3.0045	-0.8761	H	-5.7167	4.62396	0.27298
O	1.17969	-4.2041	-0.8025	H	-6.3904	4.51196	-1.3598
C	0.19064	-3.8458	-1.3931	H	0.52192	-4.9814	-3.1701
C	-0.1894	-4.2421	-2.8008	H	-1.2043	-4.6511	-2.8248
C	2.79244	2.815	1.12727	H	-0.1737	-3.3611	-3.4516
O	3.97902	3.07479	1.13155	H	2.31907	1.6152	4.05259
O	2.16026	2.11007	2.0846	H	3.23494	0.56047	2.94007
C	2.95943	1.59286	3.16916	H	3.8478	2.20889	3.315
O	3.43478	0.9717	-1.043	H	5.20304	-0.5398	-0.0252
O	5.15314	1.68184	-2.3413	H	6.63189	0.31833	-0.6955
C	4.7587	1.09421	-1.3603	H	5.6236	1.07286	0.57183
C	5.6155	0.4305	-0.316				

Table S3. Energy analyses of 4*S*,12*S*-1/4*R*,12*R*-1 (ten conformers)

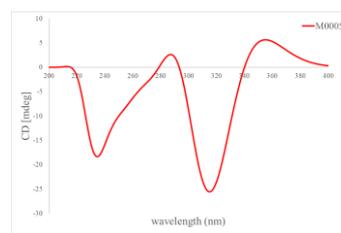
NO.	3D conformers B3LYP/6-31G(d,p)	G (Hartree)	Boltzmann distribution	Calculated ECD spectrum
				4 <i>S</i> ,12 <i>S</i> -1
1		-1573.242744	5.14 %	
2		-1573.242248	3.04 %	
3		-1573.241432	1.28 %	
4		-1573.244033	20.12 %	

5

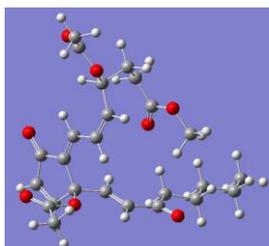


-1573.245111

63.01 %

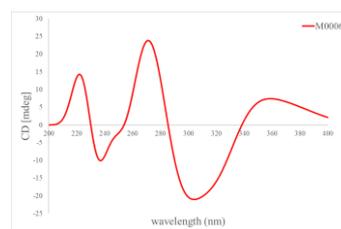


6

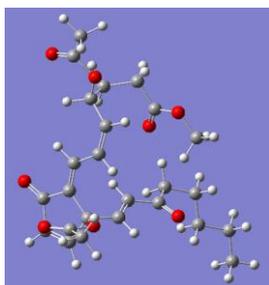


-1573.241519

1.4 %

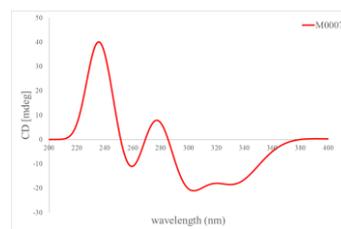


7

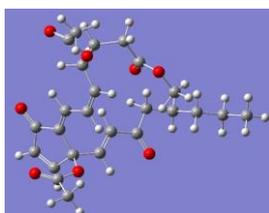


-1573.242182

2.83 %

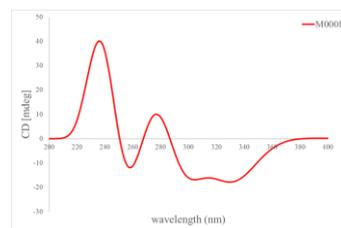


8



-1573.241161

0.96 %

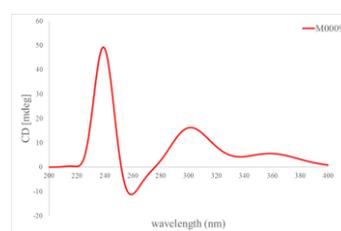


9



-1573.241458

1.32 %



10



-1573.240815

0.67 %

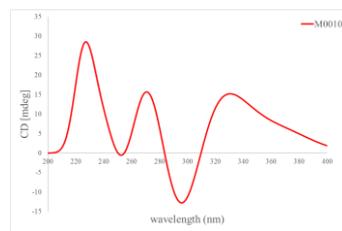


Table S4. Cartesian coordinates of the low-energy re-optimized conformers of 4*S*,12*S*-1/4*R*,12*R*-1 calculated at B3LYP/6-31G(d,p) level of theory.

Conformer 1							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	-0.0539	-4.0445	0.93033	H	-0.6445	-4.9314	0.72414
C	-0.0324	-2.8837	-0.0623	H	0.75433	-4.4235	2.91134
C	0.96889	-1.9346	0.57075	H	-2.0853	-2.9052	-0.876
C	1.32944	-2.4739	1.91741	H	2.17669	-0.2782	0.76761
C	0.65284	-3.7891	2.03878	H	0.56759	-0.7462	-1.8654
O	2.02616	-1.922	2.75694	H	-1.3589	-0.6885	1.12947
C	-1.4399	-2.3409	-0.2044	H	1.27761	1.41429	-2.5588
C	1.47409	-0.7773	0.10282	H	2.8039	1.61434	0.12401
C	1.17436	-0.1631	-1.1771	H	2.14547	3.90915	0.309
C	-1.9531	-1.291	0.44718	H	1.262	3.8636	-1.2219
C	1.56918	1.06597	-1.5686	H	-0.2981	3.8983	0.67738
C	2.34356	2.06258	-0.7561	H	-0.4998	2.42127	-0.2457
C	1.50761	3.28441	-0.3232	H	-3.9054	-0.1508	2.15243
C	0.19673	2.95542	0.40667	H	-3.1123	1.02891	1.15307
C	-3.3829	-0.8965	0.24753	H	-5.9534	-0.0397	0.61692
C	-3.881	0.24408	1.12354	H	-5.6297	1.42189	1.54863
O	-4.1035	-1.473	-0.5553	H	-4.5229	2.45089	-0.4616
C	-5.2529	0.79672	0.728	H	-4.8638	0.99038	-1.3879
C	-5.2357	1.6185	-0.5683	H	-7.3222	1.34727	-1.0539
C	-6.6123	2.17931	-0.9462	H	-6.9922	2.79898	-0.121
C	-6.5942	3.00424	-2.2371	H	-7.5911	3.38826	-2.4823
O	0.29722	-3.3109	-1.4215	H	-5.9188	3.86456	-2.1489
O	2.30837	-4.1839	-0.8131	H	-6.2512	2.40107	-3.0868
C	1.4846	-3.9381	-1.6606	H	2.51478	-4.8467	-3.2955
C	1.60886	-4.2622	-3.1316	H	0.73205	-4.8181	-3.4776
C	0.29169	2.13929	1.68634	H	1.65967	-3.3356	-3.7137
O	-0.6137	1.4497	2.11567	H	2.59376	1.9117	3.94936
O	1.47086	2.29303	2.30859	H	0.8228	1.78296	4.23002
C	1.64417	1.56236	3.54466	H	1.68464	0.48841	3.34642
O	3.41168	2.53611	-1.6276	H	6.51092	3.62958	-1.58
O	4.77547	2.85274	0.15896	H	5.79679	2.49297	-2.7619
C	4.5819	2.88886	-1.0355	H	5.18917	4.14691	-2.6707
C	5.58988	3.32038	-2.0751				

Conformer 2							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	0.15923	-3.9419	1.14684	H	-0.3261	-4.8924	0.94888
C	0.27766	-2.8915	0.04426	H	0.62935	-4.0451	3.26577
C	1.08837	-1.8013	0.72141	H	-1.5958	-3.1683	-1.0923
C	1.24036	-2.1663	2.163	H	2.13482	-0.0392	0.92362
C	0.64145	-3.5148	2.32092	H	1.04807	-0.9104	-1.8693
O	1.73985	-1.4733	3.03778	H	-1.3792	-0.708	0.74181
C	-1.1161	-2.4866	-0.3914	H	1.73159	1.21715	-2.6815
C	1.59328	-0.6611	0.21319	H	2.74107	1.82193	0.17908
C	1.48565	-0.2105	-1.1618	H	1.91817	4.06103	-0.0211
C	-1.8036	-1.4244	0.0429	H	1.32963	3.7847	-1.6653
C	1.86491	0.9994	-1.6225	H	-0.5461	3.88955	-0.0797
C	2.41856	2.13591	-0.8133	H	-0.4867	2.31357	-0.8463
C	1.44456	3.32406	-0.6763	H	-4.0168	-0.2361	1.28742
C	0.04639	2.96698	-0.15	H	-3.2478	0.86762	0.19203
C	-3.2012	-1.1762	-0.4329	H	-5.1498	0.52077	-1.468
C	-3.9192	-0.0032	0.21407	H	-5.9141	-0.5865	-0.3515
O	-3.7273	-1.8795	-1.2836	H	-6.0713	1.26092	1.36945
C	-5.2834	0.31037	-0.4	H	-5.3631	2.3843	0.22058
C	-5.9892	1.48218	0.29546	H	-8.0175	0.89413	-0.175
C	-7.3919	1.79493	-0.2519	H	-7.8612	2.54685	0.39694
C	-7.4103	2.30596	-1.6976	H	-8.4291	2.56039	-2.012
O	0.86724	-3.4262	-1.1824	H	-6.7948	3.20842	-1.8043
O	2.79313	-4.0607	-0.1503	H	-7.0273	1.55817	-2.4008
C	2.11619	-3.9731	-1.146	H	1.75349	-5.0978	-2.9473
C	2.51674	-4.435	-2.5283	H	2.60481	-3.5726	-3.1979
C	-0.0411	2.29713	1.21258	H	3.47494	-4.9523	-2.4706
O	-0.9642	1.58303	1.55507	H	1.82099	2.49683	3.85175
O	0.99389	2.61092	2.00746	H	0.04111	2.24517	3.83244
C	0.98667	2.02765	3.33083	H	1.1343	0.94662	3.26822
O	3.59377	2.60081	-1.5395	H	6.55619	3.953	-1.0947
O	4.59272	3.21715	0.40321	H	6.15002	2.62771	-2.2243
C	4.61469	3.10944	-0.8024	H	5.42541	4.21955	-2.457
C	5.76469	3.50738	-1.698				

Conformer 3							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	2.06977	-3.6832	-1.2463	H	3.11115	-3.9582	-1.1517
C	1.47851	-2.5831	-0.3587	H	1.34927	-4.9632	-2.8424
C	0.02718	-2.5321	-0.8356	H	2.14115	-0.9149	-1.6213
C	-0.1495	-3.5376	-1.9239	H	-1.931	-1.9126	-0.9483
C	1.17379	-4.1892	-2.1037	H	0.0073	-0.6187	1.12681
O	-1.1755	-3.7629	-2.545	H	2.82596	-0.7644	1.36332
C	2.17157	-1.2648	-0.5905	H	-1.7297	0.8771	1.69148
C	-0.9883	-1.7407	-0.4299	H	-3.5214	-0.6355	-0.3248
C	-0.9322	-0.7178	0.59293	H	-4.6497	1.51353	-0.6815
C	2.75732	-0.4761	0.31901	H	-3.3932	2.3729	0.2246
C	-1.9238	0.13609	0.91918	H	-2.6752	0.73688	-2.2732
C	-3.2989	0.21369	0.32474	H	-3.3281	2.34499	-2.4222
C	-3.583	1.52149	-0.437	H	3.62128	1.36086	2.00838
C	-2.7832	1.68588	-1.7341	H	5.05611	1.37616	0.99874
C	3.30721	0.85303	-0.069	H	4.57991	3.69486	1.47524
C	3.9942	1.66794	1.02251	H	4.12433	3.42482	-0.2066
O	3.22417	1.27228	-1.2172	H	1.70445	3.15389	0.52879
C	3.85496	3.1838	0.82818	H	2.19672	3.48431	2.18415
C	2.44151	3.70009	1.13263	H	3.00802	5.76322	1.46971
C	2.27226	5.20249	0.87488	H	2.50903	5.41368	-0.1779
C	0.85917	5.70414	1.19161	H	0.754	6.77226	0.96794
O	1.44629	-2.9496	1.05427	H	0.10993	5.15638	0.60847
O	3.63933	-3.5605	1.14813	H	0.61928	5.56238	2.25299
C	2.55661	-3.4355	1.67278	H	3.14243	-4.0996	3.61718
C	2.22859	-3.8023	3.10188	H	1.75994	-2.9588	3.61811
C	-1.4044	2.30203	-1.558	H	1.51161	-4.6302	3.11457
O	-0.9778	2.79952	-0.5348	H	1.28922	2.26383	-2.1597
O	-0.729	2.26195	-2.7195	H	0.8726	2.90005	-3.7793
C	0.57977	2.86793	-2.7293	H	0.53546	3.87668	-2.3118
O	-4.2039	0.1461	1.46805	H	-7.2168	-0.8448	2.33015
O	-5.8046	-0.8097	0.17518	H	-5.7151	-1.0258	3.2854
C	-5.4268	-0.4001	1.2508	H	-6.3305	0.5893	2.93187
C	-6.2308	-0.4241	2.52976				

Conformer 4							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	-0.8213	3.57712	-1.1011	H	-1.6908	4.15912	-0.8227
C	-0.3372	2.44726	-0.2005	H	-0.2333	4.41125	-3.018
C	0.91852	1.96537	-0.9206	H	-1.1925	0.67964	0.82587
C	1.02462	2.70933	-2.2115	H	2.65269	0.91842	-1.2666
C	-0.0843	3.70114	-2.2124	H	1.15039	0.59342	1.44837
O	1.86456	2.54201	-3.0803	H	-2.5459	1.64855	-1.7499
C	-1.342	1.32991	-0.0344	H	2.73355	-1.0607	2.02826
C	1.85263	1.06803	-0.5427	H	4.01535	-0.5989	-0.7533
C	1.90489	0.34042	0.70875	H	4.7248	-2.9146	-0.6563
C	-2.3402	1.03489	-0.8759	H	3.8736	-3.1797	0.87552
C	2.81132	-0.6003	1.04655	H	2.3275	-2.3592	-1.6475
C	3.92784	-1.1312	0.1958	H	2.76814	-4.0235	-1.3597
C	3.83614	-2.6434	-0.0781	H	-4.9118	0.66949	-1.6726
C	2.58264	-3.0682	-0.8511	H	-3.9659	-0.4832	-2.5819
C	-3.2252	-0.138	-0.6283	H	-6.0245	-1.619	-2.0779
C	-4.3993	-0.3005	-1.5855	H	-4.8181	-2.3302	-1.0081
O	-3.0112	-0.9305	0.28045	H	-5.6197	-0.8732	0.86773
C	-5.3833	-1.4123	-1.2107	H	-6.8221	-0.1518	-0.1992
C	-6.2622	-1.0779	0.00236	H	-7.8854	-2.4115	-0.5144
C	-7.2497	-2.1967	0.35685	H	-6.6895	-3.1203	0.56014
C	-8.1327	-1.8602	1.56275	H	-8.8244	-2.6785	1.79361
O	0.08031	2.93815	1.11555	H	-7.5259	-1.6739	2.45723
O	-2.0143	3.66514	1.60993	H	-8.7318	-0.9602	1.37694
C	-0.8553	3.5094	1.92159	H	0.61699	4.57545	3.06908
C	-0.2366	3.91184	3.23922	H	-0.9865	4.41358	3.85144
C	1.36029	-3.2774	0.02906	H	0.13772	3.02631	3.76365
O	1.37131	-3.3597	1.24018	H	-1.7069	-3.9218	-0.7627
O	0.2513	-3.4049	-0.7225	H	-0.8452	-4.4422	0.72548
C	-0.977	-3.6395	-0.0035	H	-1.3017	-2.7276	0.50207
O	5.14636	-0.879	0.95906	H	8.35722	-0.2849	0.58692
O	6.348	-0.7401	-0.9605	H	7.25192	0.48311	1.76582
C	6.28681	-0.6925	0.24856	H	7.57493	-1.2476	1.87721
C	7.44842	-0.4174	1.17477				

Conformer 5							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	0.63291	3.59675	1.13915	H	1.39186	4.29211	0.80352
C	0.08804	2.54041	0.18565	H	0.3271	4.13163	3.2216
C	-0.9812	1.85326	1.02959	H	0.87874	0.99392	-1.1895
C	-0.9164	2.42192	2.40926	H	-2.5413	0.60458	1.50974
C	0.09489	3.51216	2.3626	H	-1.5205	0.7634	-1.434
O	-1.5751	2.06831	3.37334	H	2.59823	1.79761	1.21925
C	1.13105	1.5555	-0.2915	H	-3.0453	-0.9604	-1.9655
C	-1.8948	0.9196	0.69156	H	-3.8452	-0.9735	1.0268
C	-2.1098	0.3473	-0.6217	H	-4.3773	-3.3194	0.7299
C	2.2855	1.26881	0.32186	H	-3.7947	-3.3075	-0.9439
C	-2.9843	-0.6327	-0.9307	H	-1.8922	-2.6505	1.37503
C	-3.8866	-1.3739	0.01198	H	-2.2463	-4.303	0.93858
C	-3.6298	-2.8912	0.05506	H	5.0368	1.07352	0.45001
C	-2.2293	-3.2792	0.5425	H	4.35211	-0.1026	1.54293
C	3.19986	0.22484	-0.2219	H	4.93419	-1.9555	-0.0809
C	4.54552	0.08786	0.47513	H	5.61247	-0.7779	-1.1816
O	2.89042	-0.4762	-1.1765	H	7.31875	-0.1243	0.56359
C	5.45387	-0.9895	-0.1168	H	6.63667	-1.3066	1.6701
C	6.8038	-1.0961	0.60285	H	7.20715	-3.147	0.05421
C	7.7207	-2.1759	0.0139	H	7.88804	-1.9653	-1.0518
C	9.06946	-2.2806	0.73275	H	9.69989	-3.0594	0.28879
O	-0.5898	3.14117	-0.9664	H	9.62202	-1.3344	0.67927
O	1.32188	4.13141	-1.6919	H	8.93578	-2.5253	1.7938
C	0.14264	3.89623	-1.8294	H	-0.1384	5.03648	-3.6127
C	-0.7259	4.38648	-2.9636	H	-1.1066	3.53566	-3.5385
C	-1.1709	-3.2553	-0.5493	H	-1.5917	4.9283	-2.5703
O	-1.3912	-3.1866	-1.7411	H	2.02776	-3.6889	-0.3768
O	0.06044	-3.3651	-0.0179	H	0.95671	-4.0959	-1.7607
C	1.15585	-3.3843	-0.9564	H	1.31742	-2.3877	-1.3725
O	-5.2375	-1.1544	-0.496	H	-8.3674	-0.9377	0.48261
O	-6.0856	-1.3734	1.59705	H	-7.553	0.07762	-0.745
C	-6.2443	-1.1722	0.41295	H	-7.754	-1.6499	-1.0406
C	-7.5701		-0.9041		-0.2605		

Conformer 6							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	0.27991	3.83798	1.20683	H	0.96669	4.62023	0.89955
C	-0.0648	2.70305	0.24449	H	-0.1807	4.33777	3.26969
C	-1.0953	1.90631	1.03721	H	1.55822	1.39828	0.8995
C	-1.1955	2.50822	2.40295	H	-2.4269	0.39276	1.46077
C	-0.2966	3.69348	2.406	H	-1.1814	0.66048	-1.3894
O	-1.8731	2.09327	3.32793	H	1.40617	2.15563	-2.0835
C	1.1815	1.87837	0.00023	H	-2.1851	-1.4183	-1.9326
C	-1.7785	0.79961	0.68611	H	-3.3042	-1.4699	0.94841
C	-1.7328	0.14515	-0.6075	H	-2.9323	-3.8752	0.94199
C	1.79597	1.70267	-1.1769	H	-2.0885	-3.8041	-0.6103
C	-2.2958	-1.0404	-0.9177	H	-1.075	-2.3819	1.93493
C	-3.0345	-1.9589	0.01002	H	-0.6296	-4.0206	1.4846
C	-2.2719	-3.2607	0.32178	H	3.95621	1.10356	0.5062
C	-0.9494	-3.0512	1.07864	H	3.054	-0.3932	0.34329
C	2.98984	0.83812	-1.3911	H	4.78512	-1.2695	-1.2634
C	3.74015	0.28028	-0.1897	H	5.68775	0.22041	-1.1214
O	3.32966	0.58199	-2.5401	H	6.00794	-0.2024	1.34838
C	5.02739	-0.458	-0.5658	H	5.09644	-1.6972	1.20805
C	5.76549	-1.0216	0.65444	H	6.8129	-2.5905	-0.4003
C	7.05411	-1.7709	0.29148	H	7.7219	-1.095	-0.2613
C	7.79086	-2.3322	1.5118	H	8.70523	-2.8612	1.21959
O	-0.506	3.17978	-1.0508	H	8.07663	-1.5317	2.2053
O	-2.2883	4.29734	-0.1857	H	7.16	-3.0383	2.06587
C	-1.6228	3.96125	-1.1342	H	-2.7428	5.00221	-2.6234
C	-1.8909	4.32324	-2.5762	H	-1.0093	4.79327	-3.023
C	0.22712	-2.5264	0.2729	H	-2.1085	3.41886	-3.1546
O	1.04738	-1.7345	0.6893	H	1.32659	-3.3103	-2.6754
O	0.29627	-3.1023	-0.9457	H	1.38469	-1.6538	-1.9943
C	1.41775	-2.7208	-1.7629	H	2.35742	-2.9478	-1.2531
O	-4.2685	-2.3042	-0.6842	H	-7.3841	-3.1961	-0.1332
O	-5.3132	-2.6474	1.29981	H	-6.8134	-2.0202	-1.3536
C	-5.3396	-2.6166	0.0893	H	-6.3222	-3.7102	-1.48
C	-6.5473	-2.9078	-0.7701				

Conformer 7							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	-1.024	3.86668	-0.6633	H	-1.8251	4.456	-0.2284
C	-0.3943	2.72058	0.12646	H	-0.8146	4.692	-2.6612
C	0.69598	2.23642	-0.8136	H	-2.0209	1.90792	1.37912
C	0.5895	3.00937	-2.0895	H	2.27562	1.07831	-1.4684
C	-0.5146	3.98654	-1.8952	H	1.171	0.77449	1.43702
O	1.26781	2.84967	-3.0905	H	-1.2813	0.37912	-1.1807
C	-1.4618	1.70034	0.46821	H	2.5659	-1.1307	1.66775
C	1.60799	1.26266	-0.6273	H	3.79455	-0.5153	-1.0586
C	1.762	0.47057	0.5771	H	1.88926	-1.8415	-1.7933
C	-1.7993	0.62951	-0.2587	H	3.38408	-2.7722	-1.8637
C	2.55044	-0.614	0.71036	H	1.82481	-4.3127	-0.9744
C	3.39014	-1.2525	-0.3606	H	2.6272	-3.7495	0.49036
C	2.65306	-2.3308	-1.1792	H	-3.5371	-0.7484	-1.8203
C	1.98787	-3.4335	-0.3378	H	-2.5538	-1.9546	-1.0219
C	-2.9201	-0.2627	0.1708	H	-4.775	-2.8994	-1.1368
C	-3.3998	-1.2703	-0.861	H	-4.5287	-2.4416	0.54734
O	-3.3957	-0.1925	1.29669	H	-5.8337	-0.3386	0.17312
C	-4.6635	-2.0383	-0.4641	H	-6.0742	-0.7794	-1.5163
C	-5.9447	-1.1943	-0.5048	H	-7.3065	-2.8503	-0.7912
C	-7.2013	-1.9852	-0.1204	H	-7.0718	-2.3976	0.89026
C	-8.4812	-1.1444	-0.1676	H	-9.3602	-1.7354	0.11444
O	0.07756	3.14906	1.44495	H	-8.419	-0.291	0.51878
O	1.54533	4.66608	0.59354	H	-8.6572	-0.746	-1.1746
C	1.03725	4.11369	1.5389	H	2.07196	5.20011	3.0583
C	1.36701	4.37085	2.9916	H	0.45826	4.60114	3.55621
C	0.61668	-3.0357	0.18002	H	1.81112	3.47419	3.43726
O	-0.2464	-2.513	-0.4968	H	-0.785	-3.3998	3.07766
O	0.45217	-3.3669	1.47539	H	-1.0618	-2.0089	1.97792
C	-0.8423	-3.0773	2.03796	H	-1.6211	-3.6322	1.5084
O	4.51334	-1.8565	0.34437	H	7.67385	-2.6772	-0.0389
O	5.82808	-1.6121	-1.4876	H	6.93132	-1.9341	1.40841
C	5.68211	-1.9643	-0.3383	H	6.43033	-3.5498	0.90751
C	6.75353	-2.5719	0.53624				

Conformer 8							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	-0.3053	-4.3534	-0.6215	H	0.27783	-5.1761	-0.2198
C	-0.3485	-3.0115	0.10852	H	-1.0744	-5.1435	-2.493
C	-1.3242	-2.2134	-0.7361	H	1.70756	-2.9932	0.89791
C	-1.6749	-3.0315	-1.9398	H	-2.5213	-0.636	-1.3068
C	-0.9872	-4.3382	-1.7732	H	-0.9702	-0.5435	1.40308
O	-2.3807	-2.68	-2.8705	H	1.01874	-0.9399	-1.2779
C	1.06528	-2.4752	0.18677	H	-1.7303	1.7003	1.63078
C	-1.8383	-0.9849	-0.5327	H	-3.4906	1.30476	-0.8284
C	-1.5745	-0.1241	0.603	H	-1.412	1.96466	-1.934
C	1.6039	-1.4999	-0.5537	H	-2.6096	3.25852	-1.946
C	-2.0016	1.14768	0.7338	H	-0.5626	4.35839	-1.4617
C	-2.7903	1.93594	-0.2758	H	-1.3149	4.23395	0.13043
C	-1.9265	2.69636	-1.3016	H	3.38242	-0.5558	-2.4208
C	-0.8871	3.65058	-0.6886	H	2.97614	0.75585	-1.3455
C	3.0567	-1.1604	-0.4178	H	5.64308	-0.7767	-1.1856
C	3.59488	-0.1507	-1.4187	H	5.43323	0.65776	-2.1875
O	3.75859	-1.6863	0.43493	H	4.87074	2.00656	-0.1567
C	5.08644	0.16502	-1.2693	H	5.06148	0.57008	0.85152
C	5.41929	1.05601	-0.0647	H	7.46451	0.40419	0.16542
C	6.91796	1.35289	0.07083	H	7.28151	1.82336	-0.8542
C	7.24945	2.25307	1.26545	H	8.32645	2.44302	1.33844
O	-0.7224	-3.1505	1.51749	H	6.74593	3.22461	1.18243
O	-2.7277	-4.1156	1.0406	H	6.92787	1.79328	2.20814
C	-1.9237	-3.7087	1.84372	H	-3.0093	-4.2589	3.59835
C	-2.0918	-3.7264	3.34591	H	-1.2319	-4.2066	3.82284
C	0.36635	2.93378	-0.2207	H	-2.1468	-2.7004	3.72594
O	0.99844	2.14427	-0.8936	H	2.02139	3.0738	2.56076
O	0.71575	3.29765	1.03002	H	1.79728	1.59349	1.56962
C	1.90709	2.68086	1.55034	H	2.77386	2.94105	0.93777
O	-3.5735	2.88433	0.50475	H	-6.402	4.55997	0.46552
O	-5.1814	2.91177	-1.0947	H	-5.6782	3.72278	1.87019
C	-4.7614	3.28068	-0.0207	H	-4.8315	5.08875	1.14227
C	-5.469	4.22667	0.92072				

Conformer 9							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	1.73245	2.75292	1.81792	H	2.49752	3.51407	1.73158
C	0.8893	2.37411	0.60749	H	1.89637	2.08498	3.87841
C	-0.0869	1.355	1.18935	H	1.20033	1.7778	-1.5024
C	0.3246	1.07936	2.59674	H	-1.6876	0.05657	1.26627
C	1.42825	2.02757	2.90215	H	-1.2011	1.77912	-1.2874
O	-0.1456	0.23599	3.34581	H	3.4059	1.10365	0.51476
C	1.68342	1.76841	-0.5267	H	-2.8745	0.4866	-2.3573
C	-1.1566	0.75747	0.62341	H	-3.3161	-0.9826	0.30605
C	-1.6489	0.96517	-0.7242	H	-3.5029	-3.0777	-0.9903
C	2.86659	1.15088	-0.428	H	-2.8944	-2.2725	-2.4407
C	-2.6045	0.23318	-1.3324	H	-1.0638	-3.5505	-1.4517
C	-3.3377	-0.9584	-0.7831	H	-0.6822	-1.8564	-1.2477
C	-2.825	-2.2955	-1.3467	H	5.19491	-0.4469	-2.4311
C	-1.3882	-2.6355	-0.9396	H	5.5382	0.6124	-1.0493
C	3.47881	0.50428	-1.6268	H	5.85963	-1.7359	-0.4097
C	4.8426	-0.1446	-1.4399	H	4.55887	-1.0311	0.5315
O	2.90808	0.49237	-2.7085	H	2.85549	-2.139	-0.9112
C	4.83142	-1.3565	-0.4823	H	4.11624	-2.7627	-1.9633
C	3.89642	-2.4916	-0.9206	H	5.04371	-4.1177	-0.0761
C	4.01232	-3.739	-0.035	H	3.83535	-3.4566	1.01331
C	3.03716	-4.8517	-0.4332	H	3.16315	-5.738	0.19947
O	0.09836	3.50394	0.11624	H	1.99903	-4.5135	-0.3357
O	1.96	4.6992	-0.3996	H	3.19433	-5.1615	-1.4738
C	0.75492	4.59134	-0.3719	H	0.30731	6.50976	-1.1954
C	-0.2328	5.623	-0.8626	H	-0.8205	5.21473	-1.6916
C	-1.2318	-2.8655	0.55392	H	-0.934	5.88508	-0.0641
O	-2.1461	-2.9445	1.34829	H	1.39811	-3.2796	2.39348
O	0.06663	-2.9734	0.89801	H	0.00297	-2.2449	2.85259
C	0.32015	-3.1388	2.31056	H	-0.2132	-4.0119	2.69384
O	-4.7281	-0.8796	-1.2045	H	-7.598	0.50341	-0.3911
O	-5.1886	0.51348	0.52671	H	-6.9753	0.1648	-2.0353
C	-5.5509	-0.1076	-0.4458	H	-7.3447	-1.176	-0.9497
C	-6.9612	-0.1509	-0.9872				

Conformer 10							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	0.26533	3.68237	1.44494	H	0.97792	4.49444	1.34162
C	0.01246	2.73325	0.27645	H	-0.3706	3.81538	3.51851
C	-1.0963	1.83943	0.81867	H	1.49835	1.24724	0.86197
C	-1.2927	2.17566	2.26096	H	-2.4397	0.2778	0.85663
C	-0.4134	3.33784	2.54668	H	-1.0827	1.08205	-1.8289
O	-2.0126	1.58342	3.05187	H	1.78767	2.59134	-1.8989
C	1.26428	1.91423	0.03644	H	-1.7619	-1.0279	-2.6986
C	-1.7354	0.81528	0.22304	H	-2.8419	-1.6623	0.13155
C	-1.5691	0.3827	-1.1538	H	-1.9449	-3.8742	-0.0418
C	2.03045	1.94353	-1.0619	H	-1.3356	-3.5872	-1.6768
C	-1.9367	-0.8182	-1.644	H	0.5118	-3.6349	-0.0586
C	-2.4882	-1.9674	-0.8536	H	0.42412	-2.0618	-0.8321
C	-1.4813	-3.1266	-0.692	H	3.98328	0.82955	0.70715
C	-0.1022	-2.7276	-0.1431	H	2.89809	-0.4374	0.19468
C	3.23672	1.0959	-1.2775	H	4.65656	-1.2823	-1.4159
C	3.7294	0.19185	-0.1537	H	5.74469	-0.0167	-0.8966
O	3.8079	1.14997	-2.3587	H	5.66016	-0.9112	1.46571
C	4.93194	-0.6678	-0.5508	H	4.61151	-2.214	0.93193
C	5.42593	-1.5512	0.60261	H	7.47765	-1.7356	-0.06
C	6.66472	-2.399	0.2682	H	7.0188	-2.8801	1.19003
C	6.4277	-3.4783	-0.795	H	7.32956	-4.0814	-0.9514
O	-0.2825	3.42545	-0.9602	H	5.62164	-4.159	-0.4922
O	-2.1168	4.45514	-0.0965	H	6.1507	-3.0456	-1.7627
C	-1.366	4.25465	-1.0197	H	-2.3076	5.56672	-2.4152
C	-1.476	4.86171	-2.3985	H	-0.545	5.37103	-2.6666
C	-0.0617	-2.0531	1.21917	H	-1.6443	4.07556	-3.1423
O	0.80025	-1.2671	1.56375	H	-1.8934	-2.4284	3.8616
O	-1.0661	-2.4553	2.01449	H	-0.1421	-2.0243	3.83964
C	-1.1044	-1.8854	3.34169	H	-1.3448	-0.8207	3.28988
O	-3.63	-2.4658	-1.6078	H	-6.5671	-3.8935	-1.2341
O	-4.6588	-3.1095	0.31006	H	-6.1513	-2.5809	-2.376
C	-4.6533	-3.005	-0.896	H	-5.3876	-4.1614	-2.5534
C	-5.7659	-3.442	-1.82				

Table S5. Experimental and calculated ^1H NMR data for compound **1**.

No.	1 , exptl. δ_{H} ^a	4 <i>R</i> ,12 <i>S</i> - 1 , calcd. δ_{H} ^b	4 <i>S</i> ,12 <i>S</i> - 1 , calcd. δ_{H} ^b
2	2.38	2.59	2.41
	1.29	2.44	2.28
3	2.05	2.45	2.29
	1.95	1.87	2.15
4	5.75	5.59	5.74
5	5.84	6.16	6.45
6	6.35	6.74	7.09
7	7.39	7.92	7.75
10	6.55	6.82	6.93
11	7.48	7.62	8.38
13	6.77	7.36	7.53
14	6.31	6.54	6.59
16	2.53	2.55	2.62
17	1.59	1.62	1.58
18	1.29	1.02	1.15
19	1.29	1.23	1.34
20	0.88	0.92	0.79
1-OMe	3.7	3.87	3.70
2'	2.04	2.20	2.14
2''	2.09	2.09	2.11

^a Recorded in CDCl_3 at 600 MHz.

^b Calculated in CDCl_3

Table S6. Experimental and calculated ^{13}C NMR data for compound **1**.

No.	1 , exptl. δ_{C} ^a	4 <i>R</i> ,12 <i>S</i> - 1 , calcd. δ_{C} ^b	4 <i>S</i> ,12 <i>S</i> - 1 , calcd. δ_{C} ^b
1	172.9	178.2	179.6
2	29.7	28.2	27.1
3	29.7	26.8	25.5
4	69.3	68.1	66.1
5	140	144.1	144.9
6	124.4	126.2	126.5
7	126.6	129.2	127.7
8	135.7	132.4	131.6
9	192.7	192.9	191.4
10	136.4	139.8	140.3
11	155	156.2	157.3
12	83.5	80.7	79.5
13	141	144.7	143.5
14	129.2	131.0	130.5
15	199.6	204.8	202.6
16	41.2	39.7	42.3
17	23.5	26.4	23.4
18	31.3	30.3	30.3
19	22.4	21.9	22.2
20	13.9	11.0	10.9
1-OMe	51.9	48.4	49.3
1'	170	175.4	174.5
2'	21.3	18.0	17.8
1''	168.8	172.5	174.4
2''	21.2	18.3	18.4

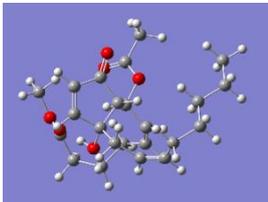
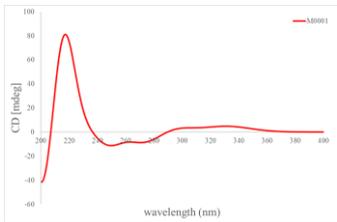
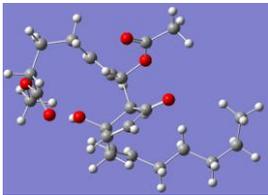
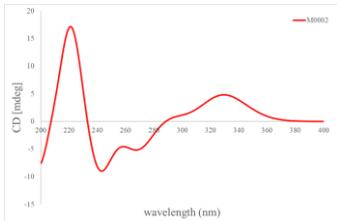
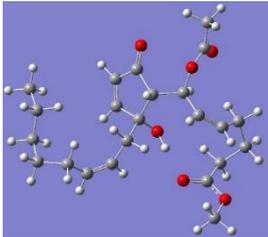
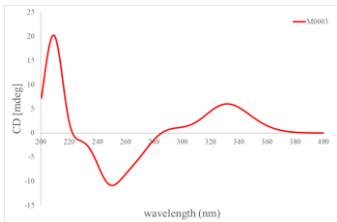
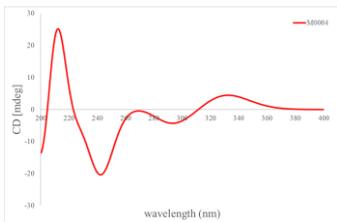
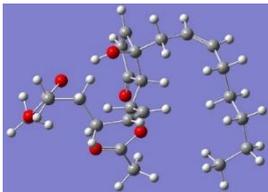
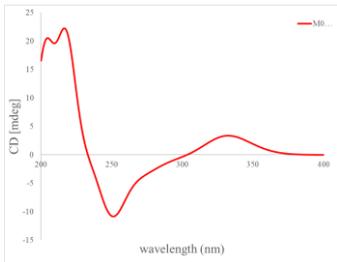
^a Recorded in CDCl₃ at 600 MHz.^b Calculated in CDCl₃

Table S7. DP4+ analyses of calculated and experimental NMR chemical shifts of **1** (unscaled). Isomer 1: 4*R*,12*S*-**1**; Isomer 2: 4*S*,12*S*-**1**

Functional	Solvent?	Basis Set	Type of Data			
mPW1PW91	PCM	6-311+G(d,p)	Unscaled Shifts			
	Isomer 1	Isomer 2	Isomer 3	Isomer 4	Isomer 5	Isomer 6
sDP4+ (H data)	84.32%	15.68%	-	-	-	-
sDP4+ (C data)	99.51%	0.49%	-	-	-	-
sDP4+ (all data)	99.91%	0.09%	-	-	-	-
uDP4+ (H data)	96.66%	3.34%	-	-	-	-
uDP4+ (C data)	99.93%	0.07%	-	-	-	-
uDP4+ (all data)	100.00%	0.00%	-	-	-	-
DP4+ (H data)	99.36%	0.64%	-	-	-	-
DP4+ (C data)	100.00%	0.00%	-	-	-	-
DP4+ (all data)	100.00%	0.00%	-	-	-	-

Functional	Solvent?	Basis Set	Type of Data				
mPW1PW91	PCM	6-311+G(d,p)	Unscaled Shifts				
	DP4+	100.00%	0.00%	-	-	-	
Nuclei	sp2?	Experimenta	Isomer 1	Isomer 2	Isomer 3	Isomer 4	Isomer 5
C	x	172.9	178.2	179.6			
C		29.7	28.2	27.1			
C		29.7	26.8	25.5			
C		69.3	68.1	66.1			
C	x	140.0	144.1	144.9			
C	x	124.4	126.2	126.5			
C	x	126.6	129.2	127.7			
C	x	135.7	132.4	131.6			
C	x	192.7	192.9	191.4			
C	x	136.4	139.8	140.3			
C	x	155.0	156.2	157.3			
C		83.5	80.65	79.53			
C	x	141.0	144.66	143.50			
C	x	129.2	130.97	130.53			
C	x	199.6	204.78	202.58			
C		41.2	39.67	42.29			
C		23.5	26.36	23.41			
C		31.3	30.32	30.25			
C		22.4	21.89	22.18			
C		13.9	10.98	10.91			
C		51.9	48.37	49.26			
C	x	170.0	175.41	174.47			
C		21.3	18.04	17.76			
C	x	168.8	172.50	174.36			
C		21.2	18.30	18.42			
H		2.38	2.58518849	2.41448727			
H		1.29	2.43990968	2.27709942			
H		2.05	2.44954676	2.29200722			
H		1.95	1.87121344	2.1475089			
H		5.75	5.59041485	5.73881978			
H	x	5.84	6.16074762	6.4481194			
H	x	6.35	6.73651802	7.08593171			
H	x	7.39	7.91950138	7.75119996			
H	x	6.55	6.81510378	6.93090113			
H	x	7.48	7.61945923	8.37815606			
H	x	6.77	7.35598783	7.53311107			
H	x	6.31	6.54216996	6.58805942			
H		2.53	2.55168596	2.61700834			
H		1.59	1.61731089	1.57946925			
H		1.29	1.01922143	1.14774555			
H		1.29	1.22741903	1.3361358			
H		0.88	0.91671997	0.79032632			
H		3.70	3.87041314	3.70000147			
H		2.04	2.19913453	2.14469985			
H		2.09	2.08721569	2.10528836			

Table S8. Energy analyses of 7*S*,8*R*,12*R*-2/7*R*,8*S*,12*S*-2 (eleven conformers)

NO.	3D conformers B3LYP/6-31G(d,p)	G (Hartree)	Boltzmann distribution	Calculated ECD spectrum
				7 <i>S</i> ,8 <i>R</i> ,12 <i>R</i> -2
1		-1347.768036	3.55 %	
2		-1347.766188	0.5 %	
3		-1347.766520	0.71 %	
4		-1347.770379	42.49 %	
5		-1347.766810	0.97 %	

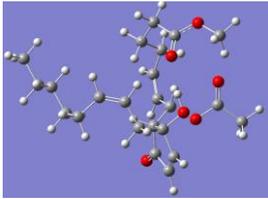
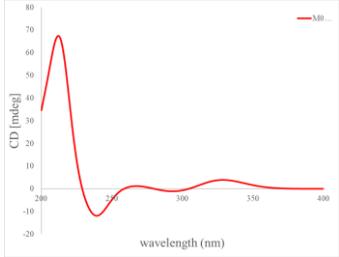
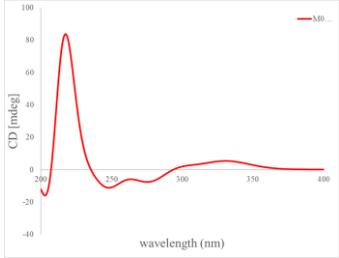
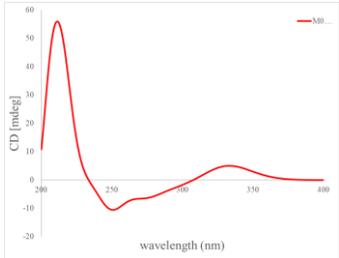
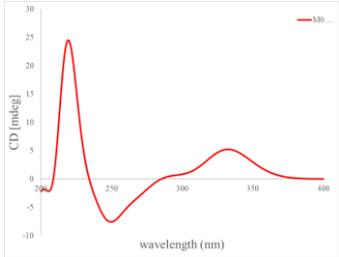
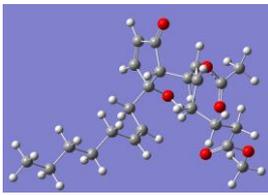
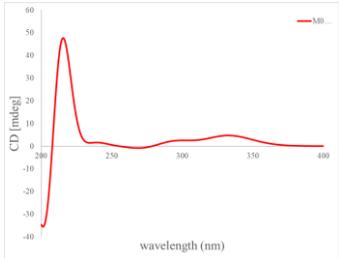
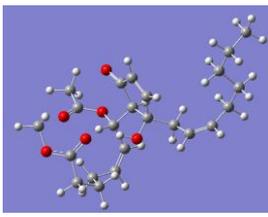
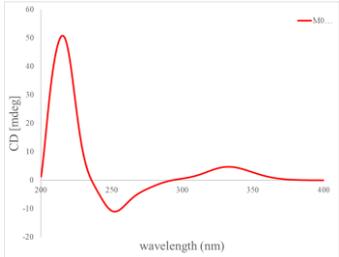
6		-1347.768948	9.33 %	
7		-1347.768453	5.53 %	
8		-1347.770035	29.51 %	
9		-1347.767498	2.01 %	
10		-1347.767665	2.4 %	
11		-1347.767761	2.66 %	

Table S9. Cartesian coordinates of the low-energy re-optimized conformers of *7S,8R,12R-2/7R,8S,12S-2* calculated at B3LYP/6-31G(d,p) level of theory.

Conformer 1							
Atomic	Standard Orientation (Å)			Atomic	Standard Orientation (Å)		
Type	X	Y	Z	Type	X	Y	Z
C	-0.288	-0.0857	3.1934	H	1.17168	-3.3259	1.67923
C	-0.292	-1.3387	2.72446	H	2.21528	-1.9234	1.91488
C	0.194	-1.4659	1.29198	H	1.26167	-2.8627	-0.8733
C	0.48856	0.02354	0.87213	H	3.50041	-2.7117	-1.5765
C	0.21157	0.84465	2.15904	H	4.23048	-1.8664	1.31276
O	0.40106	2.03829	2.31081	H	5.11803	-3.0666	0.38979
C	1.46113	-2.3557	1.24909	H	6.32672	-0.9914	0.23349
C	2.0085	-2.5769	-0.136	H	5.66647	-1.3523	-1.3544
C	3.2869	-2.4894	-0.5284	H	3.78623	0.27084	-0.936
C	4.50677	-2.156	0.29167	H	4.4479	0.62519	0.65312
C	5.38712	-1.0537	-0.333	H	6.55978	1.47502	-0.4191
C	4.7266	0.32951	-0.3699	H	5.89409	1.12395	-2.006
C	5.6176	1.41739	-0.983	H	5.60974	3.55067	-1.4572
C	4.95197	2.79717	-1.0088	H	4.02138	2.77727	-1.5891
O	-0.7858	-2.1463	0.51651	H	4.69957	3.13415	0.00396
C	-0.326	0.53267	-0.341	H	-1.6677	-1.7438	0.65629
C	0.06107	-0.0963	-1.6547	H	-1.3896	0.42627	-0.1407
C	-0.7889	-0.4649	-2.6204	H	1.13061	-0.2168	-1.8158
C	-2.2939	-0.3911	-2.5582	H	-0.3668	-0.8952	-3.5293
O	-0.044	1.96006	-0.4699	H	-2.5956	0.38571	-1.8473
C	-2.9391	-1.7441	-2.1611	H	-2.6885	-0.0737	-3.5326
C	-4.328	-1.5701	-1.5244	H	-2.2863	-2.2604	-1.4528
C	-4.24	-0.8062	-0.2156	H	-3.0278	-2.394	-3.0397
C	-1.0501	2.8264	-0.2331	H	-4.7606	-2.5545	-1.3003
O	-2.2065	2.50414	-0.0371	H	-5.0225	-1.0526	-2.1929
C	-0.5342	4.2431	-0.2269	H	0.05412	4.38382	0.68621
O	-5.1907	0.12426	-0.1028	H	0.12633	4.41977	-1.0806
O	-3.3997	-1.0029	0.65147	H	-1.3714	4.94223	-0.2396
C	-5.126	0.95995	1.07612	H	-5.157	0.34567	1.9789
H	-0.5832	0.25353	4.1803	H	-4.2075	1.54995	1.05312
H	-0.6123	-2.2266	3.26354	H	-6.0038	1.60318	1.01601
H	1.54996	0.15253	0.62824				

Conformer 2							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	0.91394	1.91254	3.04189	H	-0.0374	-1.8135	3.08879
C	0.08211	0.88212	3.22862	H	1.53209	-1.2351	2.53574
C	-0.1366	0.03064	1.99116	H	-0.6077	-2.5774	0.73739
C	0.61839	0.83093	0.86821	H	1.1578	-3.5754	-0.4141
C	1.37834	1.93916	1.6391	H	3.10667	-2.0713	1.46645
O	2.23013	2.67769	1.17891	H	3.30965	-3.7301	0.92645
C	0.49083	-1.3759	2.22908	H	3.43349	-2.9442	-1.4601
C	0.40067	-2.3211	1.05869	H	3.25929	-1.283	-0.9136
C	1.41766	-2.8982	0.40231	H	5.38925	-1.4856	0.40351
C	2.89828	-2.7515	0.63252	H	5.52784	-3.1723	-0.0714
C	3.65178	-2.2657	-0.6218	H	7.03964	-1.8877	-1.4408
C	5.17038	-2.19	-0.4129	H	5.75426	-2.4863	-2.4756
C	5.96907	-1.7792	-1.6612	H	6.34234	-0.0971	-2.9983
C	5.70398	-0.3478	-2.1433	H	4.66408	-0.2065	-2.4579
O	-1.5462	-0.0453	1.82731	H	5.91	0.38066	-1.3492
C	-0.3211	1.41554	-0.2122	H	-1.812	-0.8377	1.32024
C	-0.8689	0.3771	-1.1584	H	-1.1117	1.99248	0.26247
C	-2.0882	0.37444	-1.7112	H	-0.1618	-0.3974	-1.4526
C	-3.2115	1.3489	-1.4753	H	-2.3092	-0.4173	-2.4308
O	0.47102	2.32152	-1.0338	H	-2.9425	2.07352	-0.7006
C	-4.5549	0.68031	-1.1173	H	-3.3683	1.93361	-2.3945
C	-4.5051	-0.2172	0.13943	H	-4.9249	0.09042	-1.9641
C	-3.9259	-1.5968	-0.0946	H	-5.2939	1.47106	-0.9435
C	0.20546	3.64679	-0.941	H	-5.5286	-0.3708	0.5053
O	-0.7114	4.11831	-0.3021	H	-3.9267	0.25494	0.93758
C	1.22414	4.43772	-1.7234	H	2.17994	4.38295	-1.1911
O	-4.6039	-2.2705	-1.041	H	1.37091	4.00669	-2.718
O	-2.9837	-2.0909	0.50405	H	0.90307	5.47732	-1.8007
C	-4.1422	-3.6043	-1.3204	H	-4.8053	-3.984	-2.0978
H	1.2466	2.63655	3.77741	H	-3.1075	-3.585	-1.6721
H	-0.4199	0.61661	4.15483	H	-4.2034	-4.2258	-0.4236
H	1.36307	0.20891	0.35869				

Conformer 3							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	-1.7484	2.08618	-1.1377	H	-1.9614	-0.3392	1.38627
C	-1.6968	0.75066	-1.1901	H	-0.4665	-1.2654	1.34144
C	-0.6533	0.13703	-0.2744	H	-1.3936	-2.5463	-0.7111
C	-0.0486	1.38182	0.47279	H	-3.5423	-3.3692	-0.271
C	-0.7605	2.6032	-0.1681	H	-4.2557	-2.7215	2.14698
O	-0.573	3.77597	0.09948	H	-3.9075	-1.0516	1.74685
C	-1.285	-0.8778	0.71455	H	-5.9494	-2.8722	0.35106
C	-1.9842	-2.0328	0.04564	H	-6.3389	-1.655	1.556
C	-3.2135	-2.4992	0.30186	H	-5.1192	-1.0652	-1.1995
C	-4.2197	-2.0066	1.31008	H	-6.8288	-0.9589	-0.8088
C	-5.647	-1.8872	0.73429	H	-6.3037	0.81358	0.91745
C	-5.8216	-0.8456	-0.3826	H	-4.6158	0.76725	0.42874
C	-5.6396	0.61159	0.06439	H	-5.7895	2.64939	-0.712
C	-5.9277	1.6177	-1.0548	H	-5.2602	1.45905	-1.911
O	0.28042	-0.5065	-1.139	H	-6.9581	1.52188	-1.4193
C	1.48888	1.47008	0.42717	H	0.65356	-1.299	-0.6998
C	2.17925	0.38258	1.21249	H	1.82724	1.49615	-0.606
C	3.33832	-0.2112	0.9006	H	1.70625	0.12631	2.16098
C	4.19611	0.01805	-0.3155	H	3.73446	-0.9387	1.61286
O	1.85689	2.72888	1.06103	H	3.72242	0.7277	-1.0001
C	4.57328	-1.2717	-1.0724	H	5.13341	0.49538	0.00827
C	3.3661	-2.0843	-1.5918	H	5.19417	-1.918	-0.4409
C	2.68008	-2.9323	-0.5412	H	5.19117	-0.9925	-1.9336
C	2.51405	3.64166	0.30653	H	3.71322	-2.7758	-2.3701
O	2.93057	3.43355	-0.8135	H	2.61348	-1.4273	-2.0358
C	2.62735	4.9475	1.05259	H	1.63013	5.39811	1.09975
O	3.52442	-3.8163	0.0173	H	2.96729	4.78107	2.07897
O	1.50068	-2.8758	-0.2291	H	3.31147	5.61493	0.52694
C	2.96011	-4.6829	1.01867	H	2.1596	-5.2909	0.59
H	-2.395	2.74499	-1.7068	H	3.78396	-5.3124	1.3549
H	-2.2936	0.10802	-1.8293	H	2.5579	-4.0966	1.84861
H	-0.3462	1.37449	1.53058				

Conformer 4							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	2.04008	-3.4825	-0.4917	H	-0.493	-1.1765	2.13009
C	2.07755	-3.033	0.76917	H	0.44596	-2.4537	2.89401
C	1.22764	-1.8021	1.0052	H	-0.5188	-4.1549	1.26879
C	0.7731	-1.3995	-0.4395	H	-2.7954	-3.8886	0.81942
C	1.20493	-2.5903	-1.325	H	-3.8499	-1.9315	2.08229
O	0.89989	-2.7584	-2.4919	H	-2.4925	-0.9125	1.62726
C	0.01711	-2.1251	1.9363	H	-3.0803	-1.225	-0.8004
C	-0.9447	-3.1645	1.42909	H	-4.4099	-2.2777	-0.3473
C	-2.2507	-3.01	1.17067	H	-5.4834	-0.3825	0.9182
C	-3.0932	-1.7684	1.29839	H	-4.1581	0.67493	0.45805
C	-3.8228	-1.4106	-0.0113	H	-4.7444	0.35201	-1.9682
C	-4.7461	-0.1935	0.12357	H	-6.0697	-0.7027	-1.5069
C	-5.4813	0.16421	-1.1745	H	-6.9114	1.60968	-1.9754
C	-6.4015	1.38102	-1.0327	H	-7.1717	1.20927	-0.2706
O	2.05463	-0.8463	1.65905	H	-5.8368	2.27342	-0.7349
C	1.35495	-0.067	-0.9484	H	1.49253	-0.0897	1.91375
C	0.65562	0.41128	-2.1964	H	1.29105	0.67624	-0.1613
C	0.2908	1.67614	-2.4477	H	0.41673	-0.3654	-2.9189
C	0.57712	2.91473	-1.6338	H	-0.2575	1.85514	-3.3747
O	2.7775	-0.2855	-1.2078	H	1.39304	2.73728	-0.9267
C	-0.6414	3.50787	-0.8905	H	0.94342	3.68531	-2.3265
C	-1.137	2.66032	0.29574	H	-1.4786	3.63823	-1.5883
C	-0.0903	2.40704	1.36419	H	-0.3751	4.50507	-0.5245
C	3.65544	0.58033	-0.6643	H	-1.4923	1.68059	-0.0352
O	3.35471	1.59926	-0.0727	H	-1.9842	3.16879	0.77611
C	5.07152	0.10193	-0.8794	H	5.25966	-0.7525	-0.2196
O	0.60847	3.50561	1.66963	H	5.21398	-0.2368	-1.9094
O	0.10007	1.32318	1.89672	H	5.77071	0.90423	-0.6402
C	1.70688	3.33003	2.59129	H	2.4701	2.69854	2.13058
H	2.52615	-4.3655	-0.8921	H	2.09388	4.33329	2.7687
H	2.62288	-3.4828	1.59491	H	1.35504	2.88065	3.52265
H	-0.3173	-1.3172	-0.4987				

Conformer 5							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	-0.5913	2.46769	-2.4332	H	1.48808	2.10501	1.45098
C	-0.3889	3.12192	-1.283	H	0.95532	3.73345	1.06818
C	0.05409	2.22433	-0.1384	H	2.36535	3.74417	-1.0383
C	0.32222	0.85302	-0.8462	H	4.46599	2.74463	-0.846
C	-0.2719	1.0315	-2.2665	H	5.07592	1.76636	1.36445
O	-0.4369	0.1656	-3.1067	H	3.41809	1.27019	1.6642
C	1.28151	2.78437	0.61936	H	3.53657	-0.3251	-0.2595
C	2.4979	3.01751	-0.2357	H	5.17562	0.19029	-0.6138
C	3.70483	2.446	-0.1228	H	5.96724	-0.6252	1.58979
C	4.16025	1.40875	0.86939	H	4.3349	-1.0823	2.05104
C	4.45749	0.04761	0.20681	H	5.83436	-2.2916	-0.3374
C	5.0126	-0.9939	1.18817	H	5.82089	-2.9934	1.27131
C	5.22652	-2.3881	0.57376	H	4.14285	-4.1258	-0.1776
C	3.92858	-3.1398	0.25093	H	3.33047	-3.295	1.15762
O	-0.9849	2.202	0.83897	H	3.29989	-2.5978	-0.4644
C	-0.1778	-0.411	-0.1236	H	-1.8184	1.86411	0.45068
C	0.39068	-0.6243	1.25453	H	-1.2644	-0.4238	-0.1081
C	-0.3086	-0.9936	2.33502	H	1.4693	-0.4992	1.34097
C	-1.7997	-1.2184	2.39476	H	0.23633	-1.1199	3.27118
O	0.2645	-1.5351	-0.9501	H	-2.1599	-1.5314	1.40891
C	-2.5774	0.03824	2.86663	H	-2.0164	-2.0558	3.07096
C	-4.0311	0.05808	2.36187	H	-2.0647	0.93381	2.50796
C	-4.0883	0.13315	0.8465	H	-2.5816	0.09205	3.9618
C	-0.6833	-2.3551	-1.4505	H	-4.5451	0.94627	2.75307
O	-1.8594	-2.3187	-1.1451	H	-4.5915	-0.8202	2.69586
C	-0.0824	-3.306	-2.4547	H	0.12893	-2.7399	-3.3685
O	-4.9455	-0.7484	0.32546	H	0.86191	-3.7179	-2.088
O	-3.43	0.90207	0.15925	H	-0.7895	-4.107	-2.6748
C	-4.9952	-0.8117	-1.1185	H	-5.7957	-1.5162	-1.3442
H	-0.964	2.87054	-3.3687	H	-5.2165	0.17358	-1.535
H	-0.5742	4.17821	-1.1048	H	-4.0385	-1.1756	-1.4987
H	1.40576	0.74762	-0.9928				

Conformer 6							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	1.06973	-3.8961	0.1948	H	-0.0623	-1.9381	3.27401
C	1.3071	-3.1948	1.31043	H	-1.1567	-2.5524	2.03481
C	0.73363	-1.7902	1.28487	H	-0.5888	0.45568	2.5299
C	0.26858	-1.6291	-0.2036	H	-2.851	0.83241	2.14908
C	0.3653	-3.053	-0.7951	H	-3.192	-2.2263	1.82978
O	-0.0687	-3.4028	-1.8776	H	-4.3796	-1.1203	2.49831
C	-0.473	-1.7317	2.27506	H	-3.4289	-1.136	-0.418
C	-1.2005	-0.4136	2.29648	H	-4.9148	-1.8581	0.18301
C	-2.506	-0.1993	2.07312	H	-5.7043	0.4251	0.9283
C	-3.5795	-1.2051	1.74654	H	-4.251	1.13789	0.24103
C	-4.2113	-1.0295	0.34644	H	-4.8882	0.25843	-2.0248
C	-4.9515	0.29783	0.13522	H	-6.3461	-0.4419	-1.3416
C	-5.639	0.39279	-1.2334	H	-6.8568	1.75417	-2.4331
C	-6.3769	1.71813	-1.4484	H	-7.1578	1.86493	-0.6919
O	1.77452	-0.9157	1.69632	H	-5.6893	2.57048	-1.382
C	1.09947	-0.6215	-1.0208	H	1.45493	0.00562	1.73085
C	0.44148	-0.2424	-2.3209	H	1.29076	0.26003	-0.4158
C	0.21029	1.02077	-2.7028	H	0.11714	-1.0728	-2.9436
C	0.61009	2.26056	-1.9346	H	-0.3143	1.17684	-3.6456
O	2.39419	-1.2531	-1.2773	H	1.58926	2.09057	-1.4732
C	-0.4073	2.68047	-0.8469	H	0.74524	3.09511	-2.6345
C	0.19634	3.66768	0.17083	H	-0.7571	1.79763	-0.3012
C	1.28322	2.99354	0.98718	H	-1.2915	3.13492	-1.3097
C	3.50347	-0.5125	-1.0983	H	-0.5819	3.99741	0.87073
O	3.51048	0.67372	-0.8313	H	0.60544	4.55509	-0.3206
C	4.74087	-1.3631	-1.2618	H	4.81624	-2.0527	-0.4137
O	2.44216	3.65601	0.9509	H	4.67549	-1.9659	-2.1722
O	1.12215	1.95124	1.60492	H	5.62427	-0.7241	-1.2916
C	3.55478	3.03233	1.63137	H	4.36832	3.75489	1.56718
H	1.32962	-4.9307	-0.0012	H	3.29739	2.83061	2.67372
H	1.82002	-3.5542	2.19859	H	3.81756	2.10414	1.1202
H	-0.7732	-1.2961	-0.257				

Conformer 7							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	1.06973	-3.8961	0.1948	H	-0.0623	-1.9381	3.27401
C	1.3071	-3.1948	1.31043	H	-1.1567	-2.5524	2.03481
C	0.73363	-1.7902	1.28487	H	-0.5888	0.45568	2.5299
C	0.26858	-1.6291	-0.2036	H	-2.851	0.83241	2.14908
C	0.3653	-3.053	-0.7951	H	-3.192	-2.2263	1.82978
O	-0.0687	-3.4028	-1.8776	H	-4.3796	-1.1203	2.49831
C	-0.473	-1.7317	2.27506	H	-3.4289	-1.136	-0.418
C	-1.2005	-0.4136	2.29648	H	-4.9148	-1.8581	0.18301
C	-2.506	-0.1993	2.07312	H	-5.7043	0.4251	0.9283
C	-3.5795	-1.2051	1.74654	H	-4.251	1.13789	0.24103
C	-4.2113	-1.0295	0.34644	H	-4.8882	0.25843	-2.0248
C	-4.9515	0.29783	0.13522	H	-6.3461	-0.4419	-1.3416
C	-5.639	0.39279	-1.2334	H	-6.8568	1.75417	-2.4331
C	-6.3769	1.71813	-1.4484	H	-7.1578	1.86493	-0.6919
O	1.77452	-0.9157	1.69632	H	-5.6893	2.57048	-1.382
C	1.09947	-0.6215	-1.0208	H	1.45493	0.00562	1.73085
C	0.44148	-0.2424	-2.3209	H	1.29076	0.26003	-0.4158
C	0.21029	1.02077	-2.7028	H	0.11714	-1.0728	-2.9436
C	0.61009	2.26056	-1.9346	H	-0.3143	1.17684	-3.6456
O	2.39419	-1.2531	-1.2773	H	1.58926	2.09057	-1.4732
C	-0.4073	2.68047	-0.8469	H	0.74524	3.09511	-2.6345
C	0.19634	3.66768	0.17083	H	-0.7571	1.79763	-0.3012
C	1.28322	2.99354	0.98718	H	-1.2915	3.13492	-1.3097
C	3.50347	-0.5125	-1.0983	H	-0.5819	3.99741	0.87073
O	3.51048	0.67372	-0.8313	H	0.60544	4.55509	-0.3206
C	4.74087	-1.3631	-1.2618	H	4.81624	-2.0527	-0.4137
O	2.44216	3.65601	0.9509	H	4.67549	-1.9659	-2.1722
O	1.12215	1.95124	1.60492	H	5.62427	-0.7241	-1.2916
C	3.55478	3.03233	1.63137	H	4.36832	3.75489	1.56718
H	1.32962	-4.9307	-0.0012	H	3.29739	2.83061	2.67372
H	1.82002	-3.5542	2.19859	H	3.81756	2.10414	1.1202
H	-0.7732	-1.2961	-0.257				

Conformer 8							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	0.47283	-2.0409	2.6413	H	-2.0581	0.68219	0.2691
C	-0.2511	-0.9201	2.74681	H	-2.3085	0.73197	2.00395
C	-0.4857	-0.21	1.42424	H	-2.8206	-1.7881	1.99091
C	0.14771	-1.1888	0.37223	H	-4.2755	-2.4162	0.27645
C	0.81928	-2.2946	1.22519	H	-3.3653	0.10363	-1.2779
O	1.49339	-3.2225	0.81555	H	-3.6946	-1.4672	-1.9977
C	-1.9869	0.07973	1.17898	H	-5.6177	-0.0676	-2.3825
C	-2.8708	-1.1361	1.11786	H	-6.083	-1.3272	-1.2489
C	-3.7022	-1.4981	0.13109	H	-5.7993	0.30107	0.65878
C	-3.981	-0.7975	-1.1729	H	-5.3534	1.55558	-0.4868
C	-5.4678	-0.4211	-1.353	H	-7.6067	1.34964	-1.59
C	-5.9639	0.64711	-0.3711	H	-8.0532	0.09797	-0.442
C	-7.4436	1.00553	-0.5585	H	-8.9928	2.31063	0.26268
C	-7.9334	2.07767	0.42032	H	-7.8157	1.74827	1.46005
O	0.11316	1.08164	1.48444	H	-7.3665	3.00959	0.30365
C	1.09986	-0.5549	-0.6608	H	1.06491	1.00403	1.71276
C	0.45402	0.51605	-1.5053	H	1.99593	-0.1835	-0.1694
C	1.0826	1.54616	-2.0842	H	-0.6163	0.40394	-1.6717
C	2.5528	1.87684	-2.0455	H	0.47271	2.23649	-2.6701
O	1.51124	-1.642	-1.5468	H	3.13569	1.04442	-1.6382
C	2.88702	3.17382	-1.2759	H	2.89728	2.00783	-3.0815
C	2.61511	3.08911	0.23749	H	2.29897	4.0078	-1.6807
C	3.39214	1.99264	0.93923	H	3.94181	3.41882	-1.4395
C	2.81805	-1.9802	-1.5652	H	1.55567	2.91124	0.43802
O	3.70565	-1.3419	-1.033	H	2.88996	4.0421	0.70935
C	3.01819	-3.2671	-2.3247	H	4.07668	-3.4033	-2.5506
O	4.68972	1.99243	0.6177	H	2.66846	-4.0874	-1.6885
O	2.90944	1.18316	1.72029	H	2.42417	-3.2762	-3.2427
C	5.47408	0.89941	1.14743	H	6.49279	1.09113	0.81057
H	0.80305	-2.6947	3.44114	H	5.42228	0.88826	2.23839
H	-0.6218	-0.4801	3.66931	H	5.10165	-0.0449	0.74447
H	-0.6568	-1.6843	-0.1874				

Conformer 9							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	1.38722	2.26044	1.36086	H	1.7097	-0.124	-1.2652
C	1.4393	0.92473	1.3241	H	0.23436	-1.0843	-1.23
C	0.40288	0.29521	0.40915	H	1.15781	-2.4564	0.69872
C	-0.248	1.53653	-0.2995	H	3.40874	-3.0573	0.44671
C	0.32175	2.76	0.46544	H	4.50687	-2.2284	-1.6721
O	-0.0199	3.92183	0.34325	H	3.70831	-0.6727	-1.5085
C	1.04744	-0.6898	-0.602	H	4.93228	-0.2689	0.64023
C	1.77316	-1.8407	0.04531	H	5.71049	-1.8388	0.50754
C	3.06019	-2.1811	-0.1039	H	6.75126	-1.1329	-1.678
C	4.12254	-1.5085	-0.9325	H	6.03408	0.46141	-1.5005
C	5.30681	-1.0036	-0.084	H	8.06092	-0.7894	0.43658
C	6.43134	-0.3923	-0.9309	H	8.45066	0.35492	-0.8362
C	7.66168	0.06459	-0.1294	H	8.32251	1.54738	1.32768
C	7.39899	1.23337	0.82796	H	7.00084	2.10244	0.28912
O	-0.501	-0.3825	1.28077	H	6.6775	0.96899	1.60911
C	-1.7839	1.52349	-0.3862	H	-0.895	-1.1523	0.82466
C	-2.3313	0.37384	-1.19	H	-2.2173	1.55383	0.61119
C	-3.3771	-0.3959	-0.8648	H	-1.8329	0.20251	-2.1447
C	-4.2367	-0.2993	0.37296	H	-3.6537	-1.1776	-1.5747
O	-2.1521	2.74881	-1.0851	H	-4.2168	0.72248	0.76487
C	-3.8593	-1.2678	1.51716	H	-5.2779	-0.4978	0.08031
C	-3.9238	-2.7599	1.15853	H	-4.5575	-1.0948	2.34487
C	-2.7645	-3.2743	0.32892	H	-2.8621	-1.0211	1.89329
C	-3.0622	3.55638	-0.4946	H	-4.8593	-3.0147	0.64848
O	-3.6981	3.26606	0.49718	H	-3.91	-3.3582	2.08124
C	-3.1476	4.87039	-1.2304	H	-2.2205	5.42404	-1.0461
O	-3.1236	-4.3378	-0.4104	H	-3.2292	4.70717	-2.3091
O	-1.6244	-2.8416	0.33846	H	-4.0008	5.44352	-0.8656
C	-2.0744	-4.9545	-1.1801	H	-2.5481	-5.7865	-1.7008
H	1.99415	2.92868	1.96204	H	-1.6546	-4.2412	-1.8937
H	2.1022	0.28936	1.90256	H	-1.278	-5.3129	-0.5231
H	0.13594	1.6177	-1.3267				

Conformer 10							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	0.66841	4.3221	0.04909	H	-1.205	1.98758	-2.5488
C	0.30068	3.73422	-1.0952	H	-1.8826	2.12444	-0.9238
C	0.28502	2.21638	-1.0313	H	-0.3927	-0.3861	-1.9844
C	0.57356	1.92993	0.48276	H	-1.9725	-1.6722	-0.8822
C	0.95726	3.30139	1.08096	H	-3.2269	-0.5377	0.99175
O	1.38629	3.50251	2.20117	H	-3.3119	0.95823	0.07198
C	-1.0822	1.65593	-1.5075	H	-4.7013	-0.1957	-1.6726
C	-1.1707	0.15403	-1.4445	H	-4.5898	-1.7017	-0.7755
C	-2.089	-0.5901	-0.8121	H	-5.7595	-0.6296	1.17917
C	-3.2917	-0.1334	-0.0304	H	-5.8757	0.87838	0.28452
C	-4.6177	-0.6087	-0.6579	H	-7.265	-0.2698	-1.4701
C	-5.8512	-0.2151	0.16393	H	-7.15	-1.7765	-0.5755
C	-7.1739	-0.684	-0.456	H	-9.3294	-0.6364	-0.0988
C	-8.4021	-0.2875	0.36974	H	-8.357	-0.7161	1.37858
O	1.32018	1.80661	-1.925	H	-8.4728	0.80201	0.47722
C	1.55271	0.78953	0.8152	H	1.48437	0.85096	-1.832
C	1.57557	0.41143	2.27501	H	1.31748	-0.0775	0.1976
C	0.9994	-0.6683	2.81749	H	2.10601	1.11571	2.90936
C	0.16855	-1.726	2.13811	H	1.12475	-0.8037	3.8935
O	2.91409	1.21724	0.48935	H	-0.7867	-1.8031	2.6781
C	0.82228	-3.1258	2.14037	H	-0.0815	-1.4505	1.11156
C	2.08963	-3.2385	1.28527	H	0.08457	-3.8565	1.78865
C	1.83734	-3.1887	-0.2112	H	1.07765	-3.4051	3.17117
C	3.56803	0.59425	-0.5028	H	2.62767	-4.169	1.50115
O	3.09275	-0.2962	-1.1884	H	2.79124	-2.4278	1.52439
C	4.95013	1.1669	-0.6887	H	4.86396	2.10112	-1.2558
O	2.94863	-3.5348	-0.8889	H	5.41301	1.39979	0.27324
O	0.79002	-2.8843	-0.7485	H	5.5639	0.46483	-1.2548
C	2.86855	-3.4283	-2.3213	H	2.00998	-3.9873	-2.7015
H	0.77818	5.38452	0.23742	H	2.78528	-2.378	-2.6071
H	0.05779	4.24102	-2.0253	H	3.8003	-3.8539	-2.6961
H	-0.3735	1.64789	0.9615				

Conformer 11							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	1.00313	1.44384	1.42443	H	2.31412	0.17301	-1.6542
C	1.41723	0.23939	1.01189	H	1.11992	-1.0041	-2.2048
C	0.72446	-0.2463	-0.2498	H	2.06953	-2.6942	-0.5156
C	-0.1211	0.99926	-0.6982	H	4.4095	-2.8463	-0.677
C	-0.0034	1.99141	0.48978	H	5.32136	-1.275	-2.5048
O	-0.6023	3.0429	0.62663	H	4.40498	0.04255	-1.7935
C	1.72434	-0.6942	-1.3401	H	6.6127	-1.561	-0.3814
C	2.60796	-1.8395	-0.9202	H	6.82159	0.01281	-1.1351
C	3.94198	-1.9183	-1.0142	H	5.18549	1.01246	0.49045
C	4.91273	-0.8995	-1.5538	H	4.92917	-0.5709	1.20644
C	6.0954	-0.6155	-0.604	H	6.42373	0.65536	2.64688
C	5.68359	0.05631	0.71277	H	7.33934	-0.6503	1.91379
C	6.84172	0.30517	1.69334	H	8.64917	1.49543	1.9701
C	7.88216	1.32138	1.20669	H	8.3944	0.98161	0.29955
O	-0.0445	-1.4052	0.06345	H	7.41333	2.28748	0.98059
C	-1.5725	0.71396	-1.1286	H	-0.6805	-1.2225	0.78552
C	-1.7029	-0.1841	-2.3309	H	-2.1402	0.3317	-0.2843
C	-2.5758	-1.1914	-2.4559	H	-1.0461	0.05528	-3.1671
C	-3.5586	-1.6496	-1.4063	H	-2.5665	-1.7566	-3.3885
O	-2.1443	2.00737	-1.4972	H	-3.8212	-0.8053	-0.7598
C	-3.0164	-2.8215	-0.5474	H	-4.4947	-1.9566	-1.8911
C	-3.6852	-2.8997	0.83641	H	-1.9387	-2.7008	-0.4152
C	-3.3841	-1.6665	1.66958	H	-3.168	-3.7742	-1.0685
C	-3.2075	2.4474	-0.7931	H	-3.2954	-3.7673	1.38546
O	-3.8142	1.78615	0.02733	H	-4.7699	-3.0202	0.75928
C	-3.5222	3.87741	-1.1525	H	-2.7573	4.51428	-0.695
O	-4.4775	-1.1679	2.25233	H	-3.4798	4.02659	-2.235
O	-2.2757	-1.1669	1.80567	H	-4.5058	4.14867	-0.7666
C	-4.2993	0.05991	2.99538	H	-5.2695	0.25937	3.45038
H	1.31213	1.98024	2.31507	H	-3.5307	-0.0673	3.761
H	2.13798	-0.3993	1.51302	H	-4.019	0.86152	2.30909
H	0.37952	1.48666	-1.5468				

Table S10. Energy analyses of 7*S*,8*R*,12*S*-2/7*R*,8*S*,12*R*-2 (five conformers)

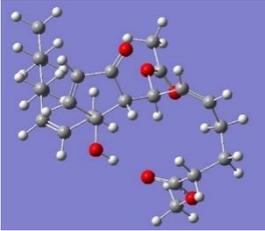
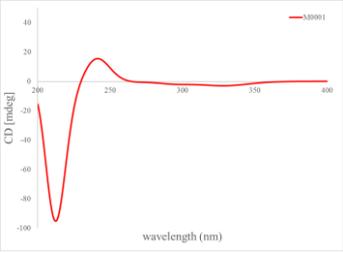
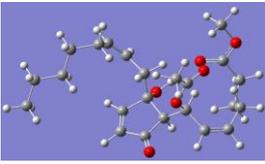
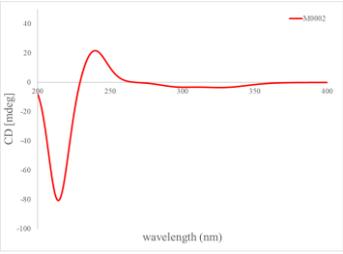
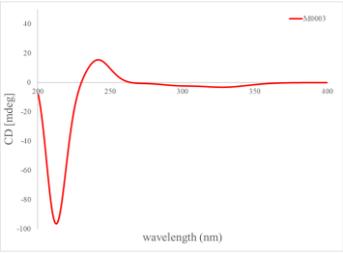
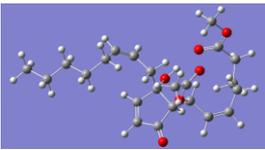
NO.	3D conformers	G (Hartree)	Boltzmann distribution	Calculated ECD spectrum
	B3LYP/6-31G(d,p)			7 <i>S</i> ,8 <i>R</i> ,12 <i>S</i> -2
1		-1347.771487	80.14 %	
2		-1347.768911	5.24 %	
3		-1347.769451	9.28 %	
4		-1347.768154	2.35 %	
5		-1347.768328	2.82 %	

Table S11. Cartesian coordinates of the low-energy re-optimized conformers of *7S,8R,12S-2/7R,8S,12R-2* calculated at B3LYP/6-31G(d,p) level of theory.

Conformer 1							
Atomic	Standard Orientation (Å)			Atomic	Standard Orientation (Å)		
Type	X	Y	Z	Type	X	Y	Z
C	-0.1847	3.67554	1.19432	H	-1.3064	0.7008	0.32669
C	-0.3307	2.64492	2.03732	H	-0.1865	-0.5734	0.80352
C	0.34759	1.37156	1.57032	H	-1.0607	-0.3857	3.21422
C	1.23631	1.88519	0.38482	H	-3.4085	-0.4401	3.28872
C	0.6948	3.29695	0.06811	H	-4.592	1.03998	1.63154
O	0.97972	3.98061	-0.8985	H	-3.4008	0.66479	0.39572
C	-0.7228	0.31588	1.16648	H	-4.1135	-1.7435	0.44264
C	-1.6045	-0.0846	2.32057	H	-5.2809	-1.3809	1.70387
C	-2.943	-0.1047	2.35973	H	-6.4772	0.19783	0.14981
C	-3.9183	0.24843	1.26805	H	-5.3145	-0.1656	-1.1162
C	-4.7754	-0.9543	0.82523	H	-6.0199	-2.5798	-1.0713
C	-5.8204	-0.5952	-0.2383	H	-7.1826	-2.2166	0.19356
C	-6.6764	-1.7881	-0.6832	H	-8.3122	-2.2942	-2.0414
C	-7.7181	-1.422	-1.7455	H	-8.4113	-0.6572	-1.374
O	1.13662	0.8877	2.65085	H	-7.2401	-1.0228	-2.6486
C	1.47626	0.98377	-0.8331	H	1.58475	0.07246	2.34919
C	2.68184	1.42697	-1.6242	H	1.58447	-0.0512	-0.5104
C	3.69691	0.65121	-2.0261	H	2.69521	2.48857	-1.8577
C	3.8768	-0.8376	-1.8649	H	4.51142	1.1488	-2.5564
O	0.28549	1.0569	-1.6819	H	2.92531	-1.3251	-1.6291
C	4.95973	-1.2301	-0.8348	H	4.18371	-1.2414	-2.8395
C	4.53499	-1.0182	0.63087	H	5.87045	-0.645	-1.0154
C	3.37492	-1.8936	1.05882	H	5.22654	-2.2828	-0.9747
C	-0.0595	-0.0567	-2.3642	H	4.24858	0.02048	0.81582
O	0.50692	-1.1263	-2.2685	H	5.38086	-1.2511	1.29119
C	-1.2514	0.21413	-3.253	H	-2.0919	0.58782	-2.6591
O	3.58656	-3.1866	0.77485	H	-1.0004	0.99023	-3.9834
O	2.3546	-1.5061	1.60704	H	-1.5375	-0.7034	-3.7683
C	2.52392	-4.0954	1.12527	H	2.87674	-5.0813	0.82328
H	-0.6136	4.66744	1.28704	H	2.33524	-4.064	2.20099
H	-0.8946	2.64901	2.96464	H	1.60927	-3.831	0.58941
H	2.21918	2.05437	0.84533				

Conformer 2							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	-1.9169	-2.2156	-1.2298	H	-1.2249	0.31534	0.66134
C	-1.7238	-0.986	-1.7281	H	0.20267	1.19552	0.11713
C	-0.4359	-0.3371	-1.2579	H	-1.2486	2.2745	-1.7331
C	0.34126	-1.5658	-0.6743	H	-3.1798	3.2364	-0.8023
C	-0.7398	-2.6367	-0.4364	H	-2.9192	1.20959	1.5245
O	-0.6251	-3.6478	0.23201	H	-3.2719	2.91605	1.74694
C	-0.7568	0.77229	-0.2142	H	-5.3529	1.69844	1.88104
C	-1.6054	1.87974	-0.7833	H	-5.3804	2.68319	0.42592
C	-2.7066	2.42268	-0.2481	H	-4.7849	0.66632	-0.9519
C	-3.3943	2.075	1.04688	H	-4.7424	-0.3187	0.50035
C	-4.9042	1.80313	0.88329	H	-7.174	0.18258	0.91324
C	-5.2284	0.55881	0.04784	H	-7.2173	1.16974	-0.5385
C	-6.7327	0.29161	-0.0879	H	-8.1334	-1.1158	-1.0022
C	-7.0525	-0.952	-0.9239	H	-6.6556	-0.8575	-1.9423
O	0.22315	0.22133	-2.3878	H	-6.6106	-1.8524	-0.4795
C	1.35668	-1.3489	0.45098	H	0.99511	0.73107	-2.0705
C	2.34403	-2.4831	0.55777	H	1.87695	-0.4075	0.28068
C	3.66137	-2.3564	0.35331	H	1.90626	-3.4536	0.77715
C	4.37651	-1.0635	0.02966	H	4.27358	-3.2561	0.40985
O	0.63448	-1.2178	1.7165	H	3.95481	-0.2631	0.64959
C	4.29255	-0.6638	-1.4629	H	5.43188	-1.1433	0.31851
C	4.66352	0.81273	-1.7072	H	3.27527	-0.8242	-1.8356
C	3.66138	1.72174	-1.0242	H	4.949	-1.3042	-2.0636
C	1.11288	-0.3276	2.6101	H	4.62934	1.02671	-2.7823
O	2.05802	0.41117	2.4109	H	5.66993	1.04013	-1.3448
C	0.30642	-0.3692	3.88695	H	-0.7478	-0.1626	3.67551
O	4.22895	2.52489	-0.1192	H	0.35871	-1.3704	4.32681
O	2.45799	1.70991	-1.241	H	0.69666	0.36769	4.58975
C	3.32976	3.33819	0.66759	H	3.97592	3.98512	1.26068
H	-2.7849	-2.8513	-1.367	H	2.68073	3.92794	0.01676
H	-2.4063	-0.4398	-2.3714	H	2.7284	2.69466	1.31401
H	0.91551	-1.9365	-1.5343				

Conformer 3							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	-0.1017	3.84985	-1.183	H	1.34847	1.1338	-0.0234
C	0.32611	2.83743	-1.9486	H	0.53394	-0.3244	-0.5851
C	-0.1955	1.48082	-1.516	H	1.70738	-0.0716	-2.8516
C	-1.3167	1.86919	-0.491	H	4.01365	0.30141	-2.6111
C	-1.0578	3.35762	-0.1685	H	4.62628	2.07686	-0.9255
O	-1.5805	4.00713	0.71902	H	3.41259	1.47259	0.19241
C	0.96368	0.63296	-0.9149	H	5.8539	-0.1005	-0.7979
C	2.05707	0.3562	-1.9136	H	5.76315	0.75284	0.736
C	3.37019	0.58051	-1.7737	H	3.84285	-0.7056	1.43986
C	4.1085	1.16323	-0.5965	H	3.95885	-1.5945	-0.0694
C	5.16095	0.20246	-0.001	H	6.17566	-1.421	2.05055
C	4.55306	-1.0375	0.66813	H	5.03704	-2.7471	1.88817
C	5.57906	-1.9818	1.31635	H	7.18705	-3.3773	0.83834
C	6.51751	-2.6787	0.32341	H	5.94866	-3.2503	-0.4208
O	-0.7307	0.84149	-2.6686	H	7.14548	-1.9629	-0.219
C	-1.5865	0.9683	0.72101	H	-1.0777	-0.0298	-2.3911
C	-2.9484	1.22977	1.3148	H	-1.4843	-0.0775	0.43295
C	-3.8775	0.31024	1.60645	H	-3.1616	2.28055	1.49401
C	-3.7965	-1.1916	1.49309	H	-4.8283	0.68262	1.99317
O	-0.5572	1.24981	1.72342	H	-2.7559	-1.5244	1.4229
C	-4.6351	-1.7803	0.33635	H	-4.1811	-1.6154	2.43098
C	-4.0289	-1.5426	-1.0597	H	-5.6423	-1.3447	0.35119
C	-2.6937	-2.2281	-1.2668	H	-4.7537	-2.858	0.48887
C	-0.1422	0.2199	2.49268	H	-3.8844	-0.4766	-1.2548
O	-0.5152	-0.9286	2.36598	H	-4.7159	-1.9283	-1.8245
C	0.85964	0.69514	3.51953	H	1.73201	1.13201	3.02188
O	-2.7362	-3.527	-0.9384	H	0.41477	1.47861	4.14128
O	-1.6783	-1.6963	-1.689	H	1.17064	-0.1453	4.14103
C	-1.5015	-4.2577	-1.0785	H	-1.7333	-5.2768	-0.7698
H	0.17004	4.89675	-1.264	H	-1.1614	-4.2351	-2.1166
H	1.00668	2.91238	-2.7907	H	-0.7319	-3.8243	-0.4356
H	-2.2362	1.86502	-1.0921				

Conformer 4							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	-1.5075	-2.4158	-1.5313	H	-1.1219	-0.1171	0.7086
C	-1.4961	-1.1123	-1.8449	H	0.15385	1.0295	0.29237
C	-0.2987	-0.3659	-1.2877	H	-1.4548	2.18299	-1.337
C	0.6526	-1.5462	-0.8924	H	-3.544	2.61325	-0.3604
C	-0.2658	-2.7798	-0.811	H	-2.8492	0.47463	1.75774
O	0.00164	-3.8513	-0.299	H	-3.9414	1.83469	1.95888
C	-0.7449	0.52529	-0.0909	H	-4.428	-0.5828	0.13832
C	-1.7567	1.56736	-0.4913	H	-5.1258	-0.3432	1.73604
C	-2.9498	1.80617	0.06932	H	-6.2952	1.73391	0.898
C	-3.5888	1.08812	1.23109	H	-5.6533	1.43254	-0.711
C	-4.7822	0.188	0.83674	H	-6.8373	-0.7836	-0.77
C	-5.9703	0.93372	0.21533	H	-7.4869	-0.4782	0.83249
C	-7.1631	0.01902	-0.093	H	-9.1836	0.08185	-0.9238
C	-8.3495	0.7618	-0.7159	H	-8.72	1.54863	-0.0472
O	0.25166	0.43647	-2.3248	H	-8.0657	1.23962	-1.6618
C	1.65432	-1.3547	0.24969	H	0.95208	0.99861	-1.9378
C	2.79191	-2.3417	0.1849	H	2.03463	-0.3347	0.21852
C	4.0735	-2.0021	-0.0033	H	2.49866	-3.3857	0.26038
C	4.59403	-0.588	-0.135	H	4.80598	-2.8051	-0.0822
O	0.951	-1.512	1.52269	H	4.08082	0.04569	0.59839
C	4.41883	0.00938	-1.5516	H	5.65708	-0.5597	0.13471
C	4.57675	1.54305	-1.5764	H	3.42445	-0.2355	-1.9399
C	3.47543	2.19331	-0.7632	H	5.14219	-0.4384	-2.243
C	1.32108	-0.7016	2.53578	H	4.48765	1.90449	-2.608
O	2.14986	0.18356	2.44458	H	5.55056	1.8537	-1.1877
C	0.556	-1.039	3.79405	H	0.74496	-2.0796	4.07673
O	3.94812	2.92644	0.24931	H	0.86424	-0.3712	4.5992
O	2.28033	2.04543	-0.9759	H	-0.5205	-0.941	3.6193
C	2.96437	3.48186	1.15084	H	3.52917	4.11842	1.83173
H	-2.2823	-3.14	-1.7588	H	2.22531	4.06451	0.59682
H	-2.2609	-0.5781	-2.3996	H	2.47263	2.67283	1.69606
H	1.25228	-1.7052	-1.799				

Conformer 5							
Atomic Type	Standard Orientation (Å)			Atomic Type	Standard Orientation (Å)		
	X	Y	Z		X	Y	Z
C	-0.0578	3.69214	-1.3962	H	1.25863	0.98878	-0.0556
C	0.3247	2.61364	-2.0925	H	0.37855	-0.4612	-0.5301
C	-0.2623	1.31356	-1.5778	H	1.56784	-0.3885	-2.8097
C	-1.3675	1.81919	-0.587	H	3.88777	-0.1421	-2.5622
C	-1.0406	3.31171	-0.3595	H	4.73974	1.52688	-0.9458
O	-1.5364	4.04094	0.48027	H	3.31731	1.36587	0.07091
C	0.85359	0.45236	-0.9172	H	5.16969	0.2795	1.16347
C	1.93595	0.06301	-1.89	H	4.01116	-0.9604	0.69298
C	3.25945	0.21318	-1.7449	H	5.41556	-1.5289	-1.3029
C	4.00207	0.80091	-0.5717	H	6.57662	-0.2878	-0.852
C	4.74336	-0.2427	0.29669	H	5.87284	-2.7486	0.84408
C	5.85159	-1.0072	-0.441	H	7.25841	-2.6264	-0.2263
C	6.59836	-2.0369	0.42443	H	7.98331	-2.2114	2.1008
C	7.43491	-1.4324	1.55867	H	8.17127	-0.7187	1.16779
O	-0.8235	0.6278	-2.6907	H	6.81435	-0.9011	2.28888
C	-1.6824	1.01222	0.67914	H	-1.2098	-0.2079	-2.3606
C	-3.0336	1.37204	1.24543	H	-1.6259	-0.0537	0.46054
C	-4.0034	0.51543	1.59104	H	-3.2006	2.44069	1.35394
C	-3.9884	-0.9928	1.57697	H	-4.9382	0.95382	1.94633
O	-0.6462	1.31262	1.66887	H	-2.9633	-1.3748	1.53569
C	-4.8478	-1.6189	0.45557	H	-4.3951	-1.3366	2.53796
C	-4.226	-1.5007	-0.9488	H	-5.8346	-1.1394	0.43477
C	-2.921	-2.2554	-1.1012	H	-5.0147	-2.678	0.67779
C	-0.2776	0.3164	2.5034	H	-4.0344	-0.4573	-1.2131
O	-0.6938	-0.8227	2.44265	H	-4.9261	-1.9062	-1.6913
C	0.728	0.81663	3.51447	H	1.59164	1.25815	3.00688
O	-3.0203	-3.5258	-0.6852	H	0.27574	1.60283	4.12804
O	-1.8827	-1.7974	-1.5528	H	1.04971	-0.0104	4.14836
C	-1.8177	-4.3164	-0.7681	H	-2.0944	-5.3016	-0.3932
H	0.26361	4.71771	-1.5422	H	-1.4731	-4.3782	-1.803
H	1.01172	2.60234	-2.9326	H	-1.0326	-3.8741	-0.1504
H	-2.2844	1.81855	-1.1922				

Table S12. Experimental and calculated ^1H NMR data for compound **2**.

No.	2 , exptl. δ_{H} ^a	7 <i>S</i> ,8 <i>R</i> ,12 <i>R</i> - 2 , calcd. δ_{H} ^b	7 <i>S</i> ,8 <i>R</i> ,12 <i>S</i> - 2 , calcd. δ_{H} ^b
2	2.34	2.48	2.38
3	1.72	1.88	1.89
4	2.22	2.40	2.46
5	5.57	6.10	6.02
6	5.85	6.55	7.01
7	5.94	5.81	5.90
8	2.55	2.41	2.71
10	6.17	6.40	6.36
11	7.43	7.94	8.09
13	2.56	3.11	2.58
	2.34	2.40	2.48
14	5.36	5.70	6.42
15	5.65	6.01	6.07
16	2	2.25	2.05
17	1.35	1.41	1.31
18	1.27	1.29	1.28
19	1.3	1.38	1.40
20	0.89	1.02	1.02
1-OMe	3.68	4.04	3.94
2'	1.99	2.06	2.02

^a Recorded in CDCl_3 at 600 MHz.

^b Calculated in CDCl_3

Table S13. Experimental and calculated ^{13}C NMR data for compound **2**.

No.	2 , exptl. δ_{C} ^a	7 <i>S</i> ,8 <i>R</i> ,12 <i>R</i> - 2 , calcd. δ_{C} ^b	7 <i>S</i> ,8 <i>R</i> ,12 <i>S</i> - 2 , calcd. δ_{C} ^b
1	174	178.7	180.1
2	33.4	30.5	31.3
3	24.5	23.1	23.1
4	27	24.4	23.9
5	133.3	136.5	134.6
6	129.6	130.8	131.3
7	68.3	65.0	63.7
8	57.2	52.5	61.9
9	204.8	206.9	204.0
10	133.7	134.1	132.6
11	165.4	171.6	172.8
12	79.5	79.0	79.9
13	39.3	36.5	33.4
14	121.8	125.3	126.8
15	135.7	136.7	133.7
16	27.4	26.3	27.1
17	29.1	28.0	28.6
18	31.5	29.6	30.4
19	22.5	21.8	21.9
20	14	10.4	10.4
1-OMe	51.6	48.9	49.8
1'	170.3	170.2	171.9
2'	21.2	17.0	18.0

^a Recorded in CDCl_3 at 600 MHz.

^b Calculated in CDCl_3

Table S14. DP4+ analyses of calculated and experimental NMR chemical shifts of **2** (unscaled). Isomer 1: *7S,8R,12R-2*; Isomer 2: *7S,8R,12S-2*

Functional	Solvent?		Basis Set		Type of Data	
mPW1PW91	PCM		6-311+G(d,p)		Unscaled Shifts	
	Isomer 1	Isomer 2	Isomer 3	Isomer 4	Isomer 5	Isomer 6
sDP4+ (H data)	 83.83%	 16.17%	-	-	-	-
sDP4+ (C data)	 100.00%	 0.00%	-	-	-	-
sDP4+ (all data)	 100.00%	 0.00%	-	-	-	-
uDP4+ (H data)	 99.02%	 0.98%	-	-	-	-
uDP4+ (C data)	 3.91%	 96.09%	-	-	-	-
uDP4+ (all data)	 80.49%	 19.51%	-	-	-	-
DP4+ (H data)	 99.81%	 0.19%	-	-	-	-
DP4+ (C data)	 100.00%	 0.00%	-	-	-	-
DP4+ (all data)	 100.00%	 0.00%	-	-	-	-

Functional		Solvent?		Basis Set		Type of Data	
mPW1PW91		PCM		6-311+G(d,p)		Unscaled Shifts	
		DP4+	100.00%	0.00%	-	-	-
Nuclei	sp2?	Experimenta	Isomer 1	Isomer 2	Isomer 3	Isomer 4	Isomer 5
C	x	174.0	178.7	180.1			
C		33.4	30.5	31.3			
C		24.5	23.1	23.1			
C		27.0	24.4	23.9			
C	x	133.3	136.5	134.6			
C	x	129.6	130.8	131.3			
C		68.3	65.0	63.7			
C		57.2	52.5	61.9			
C	x	204.8	206.9	204.0			
C	x	133.7	134.1	132.6			
C	x	165.4	171.6	172.8			
C		79.5	78.98	79.91			
C		39.3	36.45	33.45			
C	x	121.8	125.30	126.77			
C	x	135.7	136.73	133.75			
C		27.4	26.28	27.10			
C		29.1	27.98	28.59			
C		31.5	29.58	30.36			
C		22.5	21.79	21.89			
C		14.0	10.40	10.36			
C		51.6	48.87	49.75			
C	x	170.3	170.22	171.86			
C		21.2	17.03	17.99			
H		2.3	2.48	2.38			
H		1.7	1.88	1.89			
H		2.22	2.3999751	2.45825543			
H	x	5.57	6.10101227	6.02000694			
H	x	5.85	6.55245404	7.01225953			
H		5.94	5.81206222	5.89869416			
H		2.55	2.4114666	2.71207999			
H	x	6.17	6.40119312	6.35704911			
H	x	7.43	7.94088827	8.0875924			
H		2.56	3.11240124	2.58422038			
H		2.34	2.40440269	2.48382623			
H	x	5.36	5.70232067	6.42483296			
H	x	5.65	6.00938708	6.07013901			
H		2.00	2.2537362	2.05059299			
H		1.35	1.41051741	1.31460266			
H		1.27	1.29085926	1.27875256			
H		1.30	1.37931264	1.39857795			
H		0.89	1.01984823	1.02190545			
H		3.68	4.04144572	3.94368397			
H		1.99	2.05722616	2.02193488			

Table S15. *In silico* prediction of cytotoxicity of the compounds for human tumor cell lines.

	Cell-line	Description	Tissue/Organ	<i>Pa</i>	<i>Pi</i>	IAP
1	A2780cisR	Cisplatin-resistant ovarian carcinoma	Ovary	0.814	0.026	0.838
1	PC-3	Prostate carcinoma	Prostate	0.798	0.005	0.883
2	A2780cisR	Cisplatin-resistant ovarian carcinoma	Ovary	0.928	0.004	0.838
3	A2780cisR	Cisplatin-resistant ovarian carcinoma	Ovary	0.896	0.006	0.838
3	PC-3	Prostate carcinoma	Prostate	0.767	0.007	0.883
4	PC-3	Prostate carcinoma	Prostate	0.911	0.004	0.883
4	A2780cisR	Cisplatin-resistant ovarian carcinoma	Ovary	0.904	0.005	0.838
5	A2780cisR	Cisplatin-resistant ovarian carcinoma	Ovary	0.869	0.011	0.838
5	PC-3	Prostate carcinoma	Prostate	0.858	0.005	0.883
6	PC-3	Prostate carcinoma	Prostate	0.828	0.005	0.883
6	A2780cisR	Cisplatin-resistant ovarian carcinoma	Ovary	0.790	0.035	0.838
7	A2780cisR	Cisplatin-resistant ovarian carcinoma	Ovary	0.869	0.011	0.838
7	PC-3	Prostate carcinoma	Prostate	0.858	0.005	0.883
8	PC-3	Prostate carcinoma	Prostate	0.982	0.003	0.883
8	HT-29	Colon adenocarcinoma	Colon	0.935	0.004	0.888
8	A2780cisR	Cisplatin-resistant ovarian carcinoma	Ovary	0.846	0.017	0.838
9	PC-3	Prostate carcinoma	Prostate	0.854	0.005	0.883
9	A2780cisR	Cisplatin-resistant ovarian carcinoma	Ovary	0.747	0.051	0.838
10	PC-3	Prostate carcinoma	Prostate	0.920	0.004	0.883
10	A2780cisR	Cisplatin-resistant ovarian carcinoma	Ovary	0.904	0.005	0.838
11	PC-3	Prostate carcinoma	Prostate	0.911	0.004	0.883
11	A2780cisR	Cisplatin-resistant ovarian carcinoma	Ovary	0.904	0.005	0.838
12	PC-3	Prostate carcinoma	Prostate	0.879	0.005	0.883
12	A2780cisR	Cisplatin-resistant ovarian carcinoma	Ovary	0.859	0.013	0.838
13	PC-3	Prostate carcinoma	Prostate	0.879	0.005	0.883
13	A2780cisR	Cisplatin-resistant ovarian carcinoma	Ovary	0.859	0.013	0.838

Pa: the probability of “to be active”.

Pi: the probability of “to be inactive”.

IAP: Invariant accuracy of prediction.

Table S16. *In silico* prediction of the nitric oxide (NO) production inhibition activity of the compounds.

	Predictions
1	0.319
2	0.329
3	0.344
4	0.325
5	0.365
6	0.430
7	0.339
8	0.326
9	0.310
10	0.383
11	0.345
12	0.344
13	0.372
Aminoguanidine	0.657
Apigenin	0.621

Predictions: the predicted probabilities of test compounds with the IC₅₀ (inhibition for NO production) < 50 μM in macrophages.

Table S17. The *in silico* predicted water solubility of the compounds.

	ESOL model		Ali model		SILICOS-IT model	
	Log <i>S</i>	Class	Log <i>S</i>	Class	Log <i>S</i>	Class
1	-3.48	Soluble	-4.96	Moderately soluble	-3.79	Soluble
2	-3.61	Soluble	-5.13	Moderately soluble	-3.79	Soluble
3	-4.81	Moderately soluble	-5.82	Moderately soluble	-4.83	Moderately soluble
4	-3.99	Soluble	-5.43	Moderately soluble	-4.20	Moderately soluble
5	-3.39	Soluble	-4.71	Moderately soluble	-3.26	Soluble
6	--	--	--	--	--	--
7	-3.39	Soluble	-4.71	Moderately soluble	-3.26	Soluble
8	-4.70	Moderately soluble	-5.40	Moderately soluble	-4.64	Moderately soluble
9	--	--	--	--	--	--
10	-3.50	Soluble	-4.72	Moderately soluble	-3.58	Soluble
11	-4.35	Moderately soluble	-6.00	Moderately soluble	-4.60	Moderately soluble
12	--	--	--	--	--	--
13	--	--	--	--	--	--

Class: solubility class, Log *S* scale, Insoluble < -10 < Poorly < -6 < Moderately < -4 < Soluble < -2 < Very < 0 < Highly.

--: the compounds were not suitable for the *in silico* tool.

Table S18. The *in silico* predicted pharmacokinetics of the compounds.

	GI absorption	BBB permeant	P-gp substrate	Inhibitors for CYP					Log <i>K_p</i> (cm/s)
				1A2	2C19	2C9	2D6	3A4	
1	High	No	Yes	No	Yes	Yes	Yes	No	-7.04
2	High	No	Yes	No	Yes	Yes	Yes	No	-6.25
3	High	No	Yes	Yes	Yes	No	Yes	Yes	-6.55
4	High	Yes	Yes	Yes	Yes	Yes	Yes	No	-5.56
5	High	No	Yes	Yes	Yes	Yes	Yes	No	-6.45
6	--	--	--	--	--	--	--	--	--
7	High	No	Yes	Yes	Yes	Yes	Yes	No	-6.45
8	High	Yes	Yes	Yes	Yes	Yes	Yes	No	-6.01
9	--	--	--	--	--	--	--	--	--
10	High	Yes	Yes	Yes	Yes	Yes	Yes	No	-5.71
11	High	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-5.26
12	--	--	--	--	--	--	--	--	--
13	--	--	--	--	--	--	--	--	--

GI absorption: Gastrointestinal absorption; **BBB permeation:** blood-brain barrier permeation; **P-gp substrate:** P-glycoprotein substrate; **CYP:** Cytochrome P450; **Log *K_p*:** for skin permeation.

--: the compounds were not suitable for the *in silico* tool.

Table S19. The *in silico* evaluation of the compounds for druglikeness.

	Lipinsk	Ghose	Veber	Egan	Muegge	Bioavailability score
1	Yes	Yes	No; 1 violation: Rotors > 10	Yes	No; 1 violation: Rotors > 15	0.55
2	Yes	Yes	No; 1 violation: Rotors > 10	Yes	Yes	0.55
3	No; 1 violation: MW > 500	No; 1 violation: MW > 480	No; 1 violation: Rotors > 10	Yes	Yes	0.55
4	Yes	Yes	No; 1 violation: Rotors > 10	Yes	Yes	0.55
5	Yes	Yes	No; 1 violation: Rotors > 10	Yes	Yes	0.55
6	--	--	--	--	--	--
7	Yes	Yes	No; 1 violation: Rotors > 10	Yes	Yes	0.55
8	Yes	Yes	No; 1 violation: Rotors > 10	Yes	Yes	0.55
9	--	--	--	--	--	--
10	Yes	Yes	No; 1 violation: Rotors > 10	Yes	Yes	0.55
11	Yes	Yes	No; 1 violation: Rotors > 10	Yes	Yes	0.55
12	--	--	--	--	--	--
13	--	--	--	--	--	--

--: the compounds were not suitable for the *in silico* tool.

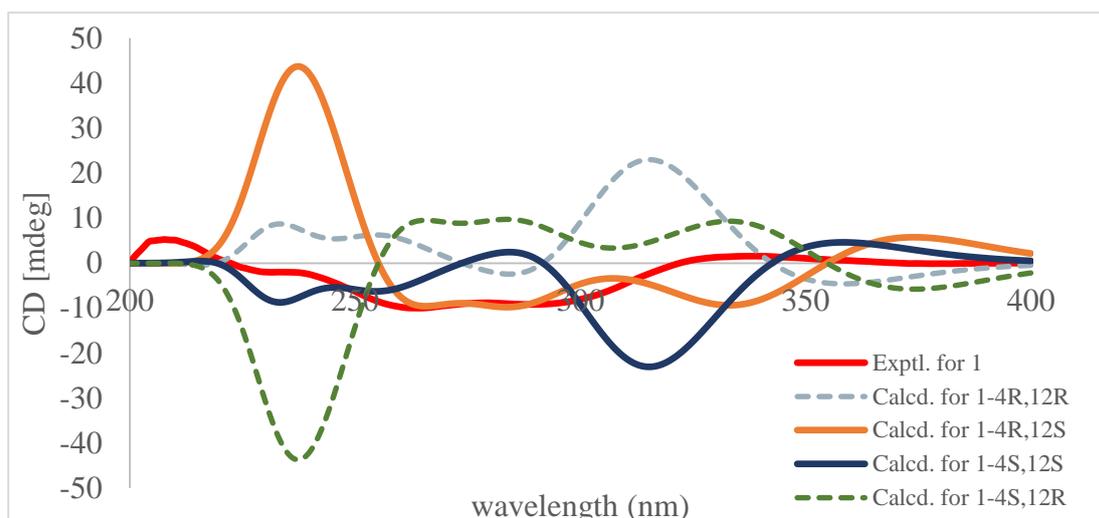
Table S20. The *in silico* evaluation of the compounds for medicinal chemistry.

	PAINS	Brenk	Leadlikeness	Synthetic accessibility
1	0 alert	2 alerts: michael acceptor 1, more than 2 esters	No; 2 violations: MW > 350, Rotors > 7	5.39
2	0 alert	2 alerts: isolated alkene, more than 2 esters	No; 3 violations: MW > 350, Rotors > 7, XLOGP3 > 3.5	5.22
3	1 alert: ene one hal	3 alerts: iodine, isolated alkene, more than 2 esters	No; 3 violations: MW > 350, Rotors > 7, XLOGP3 > 3.5	5.41
4	0 alert	3 alerts: isolated alkene, michael acceptor 1, more than 2 esters	No; 3 violations: MW > 350, Rotors > 7, XLOGP3 > 3.5	4.83
5	0 alert	3 alerts: isolated alkene, michael acceptor 1, more than 2 esters	No; 2 violations: MW > 350, Rotors > 7	5.20
6	--	--	--	--
7	0 alert	3 alerts: isolated alkene, michael acceptor 1, more than 2 esters	No; 2 violations: MW > 350, Rotors > 7	5.20
8	1 alert: ene one hal	3 alerts: iodine, isolated alkene, michael acceptor 1	No; 3 violations: MW > 350, Rotors > 7, XLOGP3 > 3.5	4.78
9	--	--	--	--
10	0 alert	2 alerts: isolated alkene, michael acceptor 1	No; 2 violations: Rotors > 7, XLOGP3 > 3.5	4.58
11	0 alert	3 alerts: isolated alkene, michael acceptor 1, more than 2 esters	No; 3 violations: MW > 350, Rotors > 7, XLOGP3 > 3.5	4.95
12	--	--	--	--
13	--	--	--	--

PAINS: Pan Assay Interference Structures.

Synthetic score: the synthetic accessibility score; from 1 (very easy) to 10 (very difficult).

--: the compounds were not suitable for the *in silico* tool.



Note: The ECD curves of 4*R*,12*S* and 4*S*,12*S* were generated by software calculation. The curves of 4*R*,12*R* and 4*S*,12*R* are directly transformed from their enantiomers 4*R*,12*S* and 4*S*,12*S*.

Figure S1. Experimental and Calculated ECD of 1

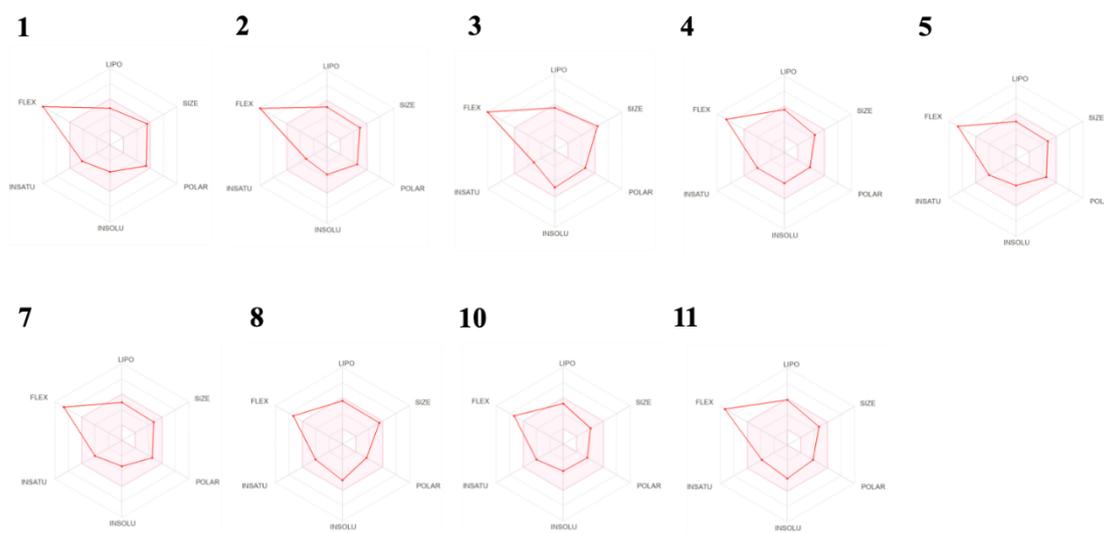


Figure S2. The predicted oral bioavailability of nine compounds.

The colored zone could be the suitable physicochemical space of the ideal compound predicted by the in silico tool SwissADME, and six red spots were the predicted values of the test compound. Lipophilicity (LIPO): $-0.7 < XLOGP3 < +5.0$; size (SIZE): $150\text{g/mol} < MV < 500\text{ g/mol}$; polarity (POLAR): $20 \text{ \AA}^2 < TPSA < 130 \text{ \AA}^2$; insolubility (INSOLU): $-6 < \text{Log S (ESOL)} < 0$; insaturation (INSATU): $0.25 < \text{Fraction Csp3} < 1$; flexibility (FLEX): $0 < \text{Num. rotatable bonds} < 9$. Almost all of the five values of nine compounds were located in the colored zone, but only one value (size) of compound 3 was not located in the colored zone. Only one value (flexibility) of nine compounds was not located in the colored zone.

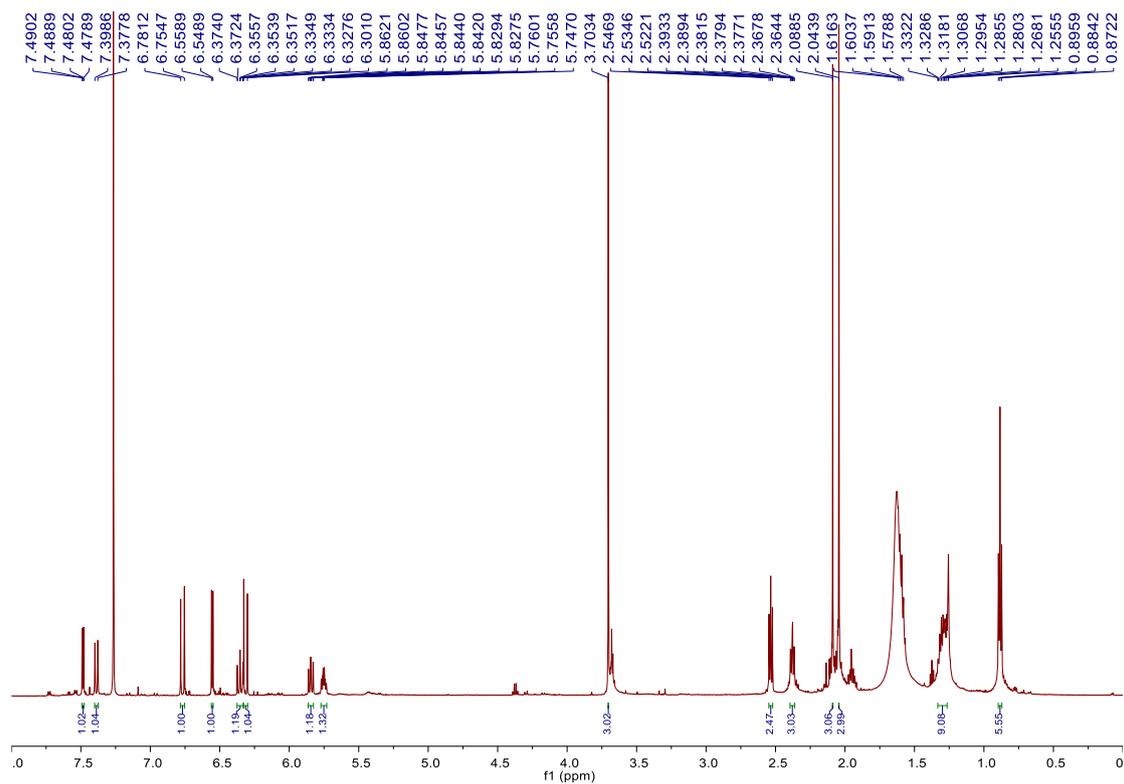


Figure S3. ^1H NMR spectrum of **1** (600 MHz, CDCl_3)

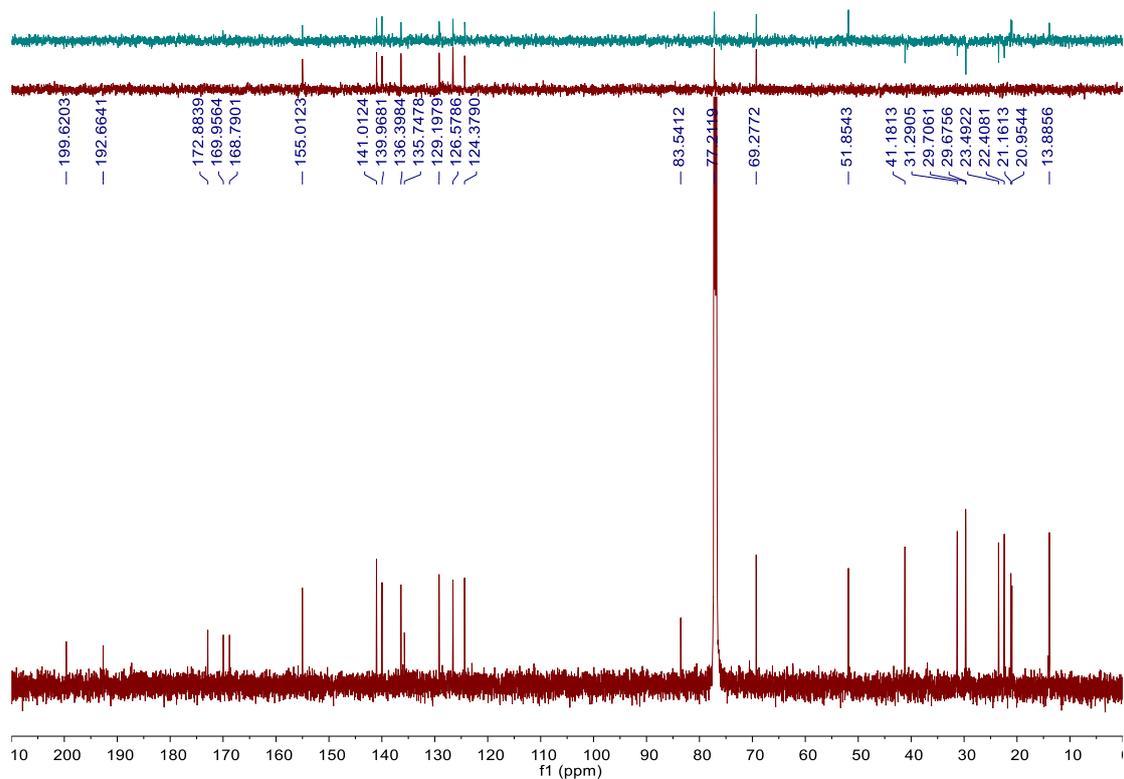


Figure S4. ^{13}C NMR spectrum of **1** (125 MHz, CDCl_3)

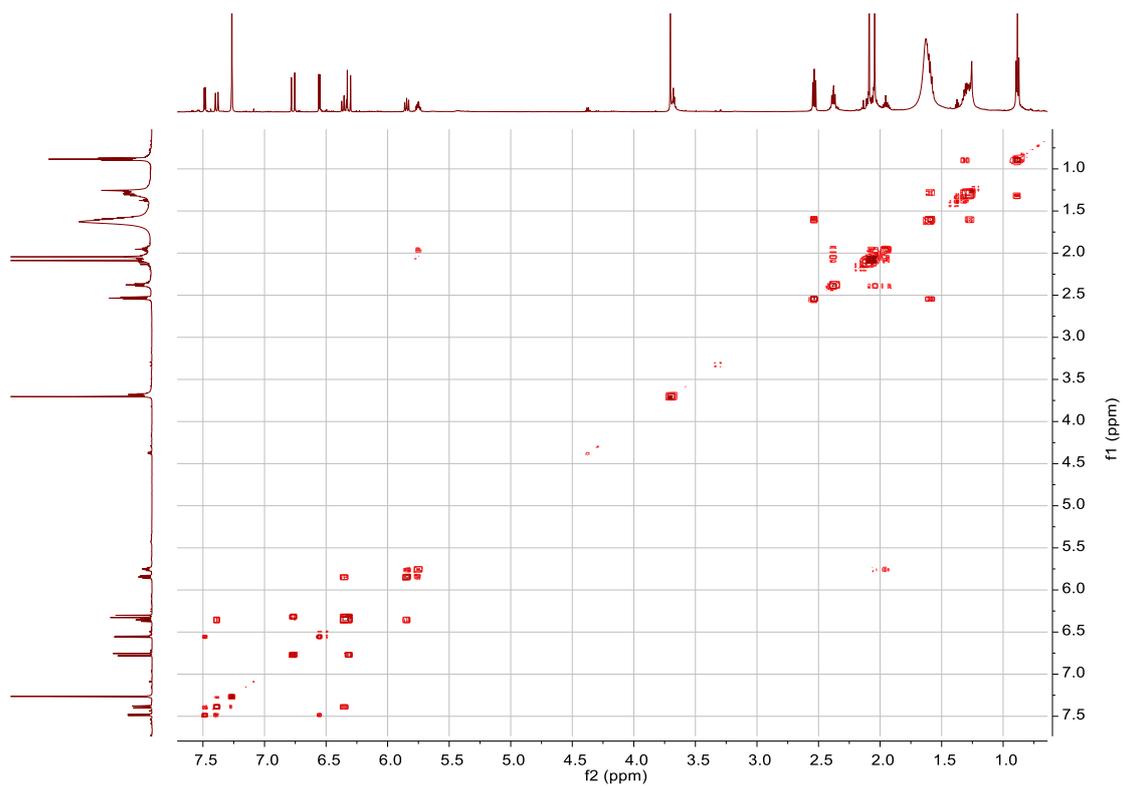


Figure S5. COSY spectrum of **1**

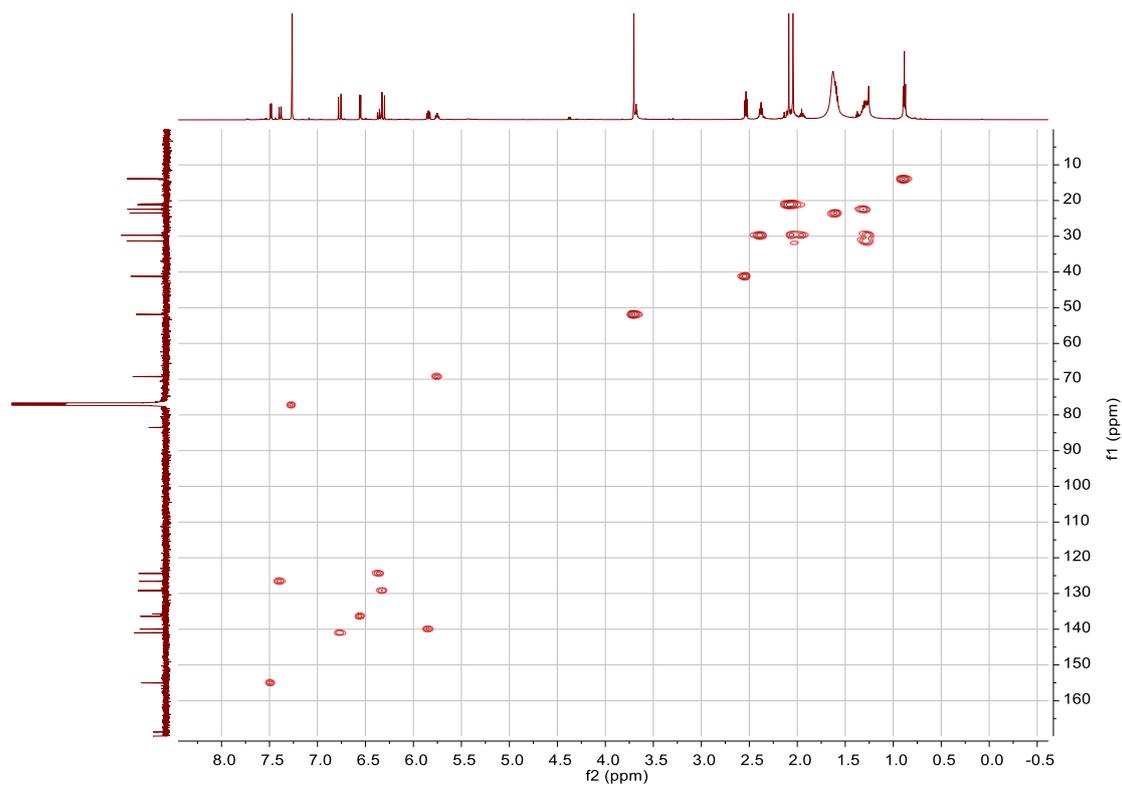


Figure S6. HSQC spectrum of **1**

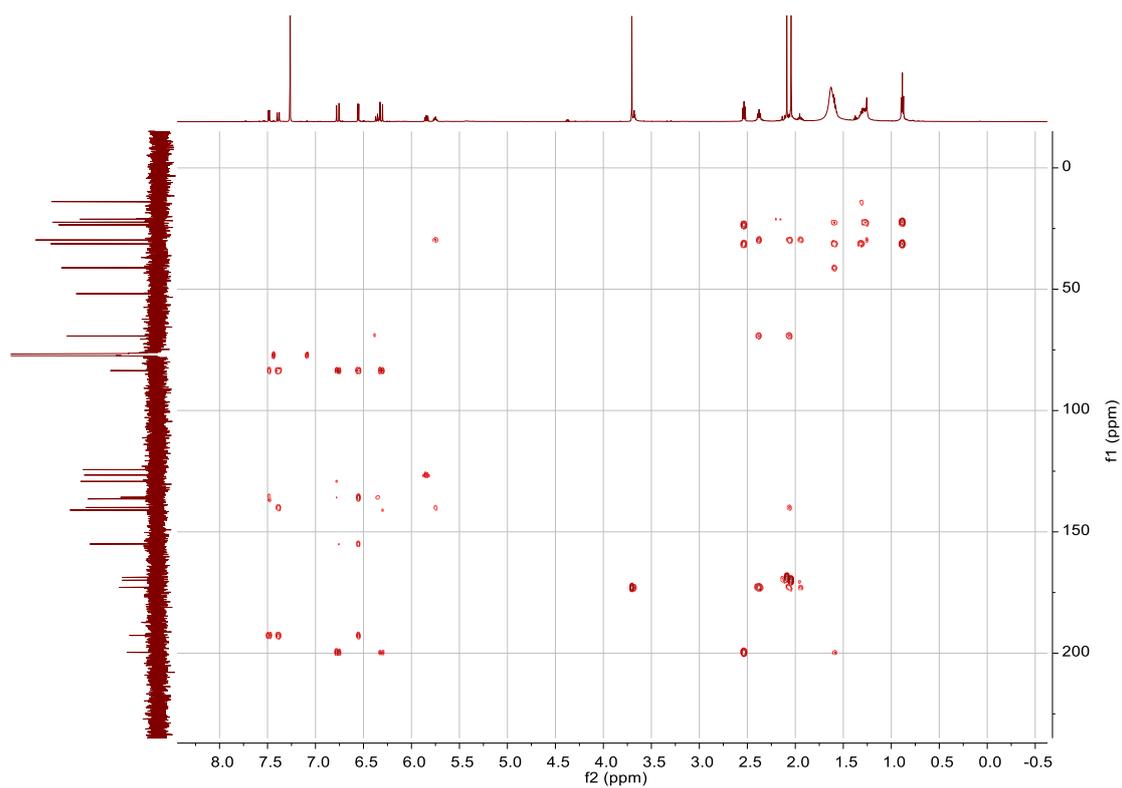


Figure S7. HMBC spectrum of **1**

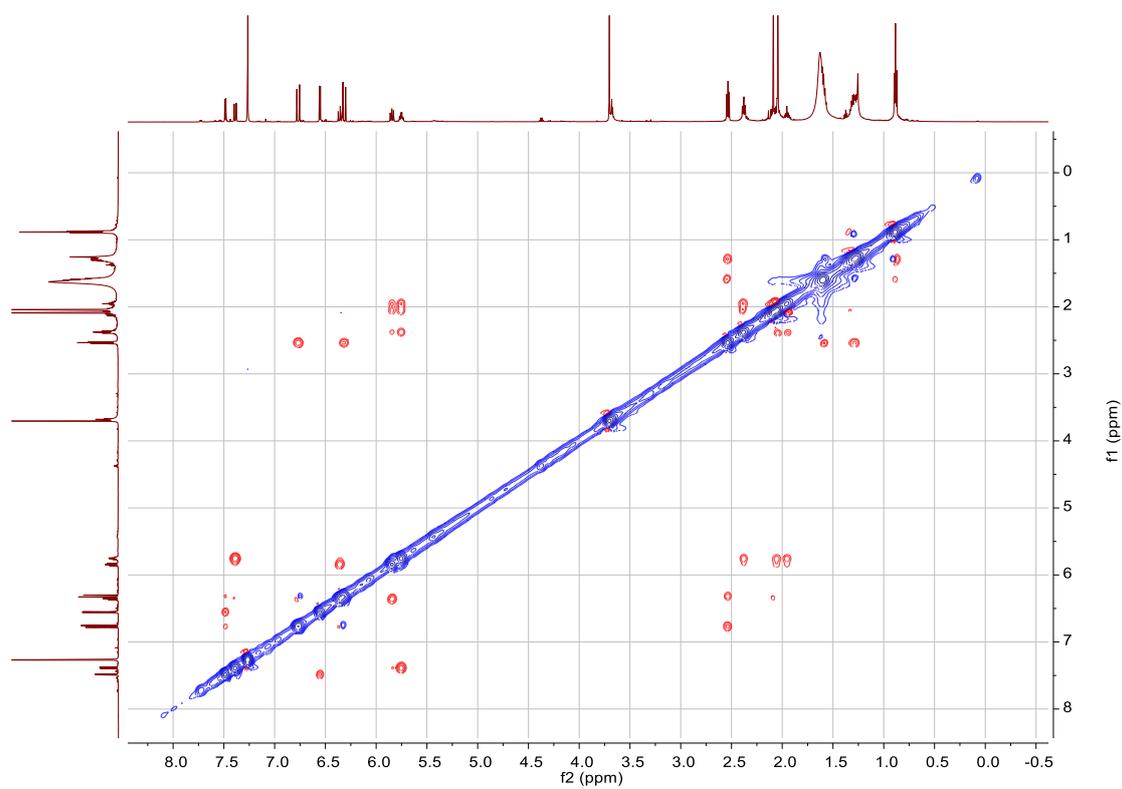


Figure S8. NOESY spectrum of **1**

CI-AU_20230609013709 #17 RT: 0.12 AV: 1 NL: 2.74E8
T: FTMS + p ESI Full ms [100.0000-1000.0000]

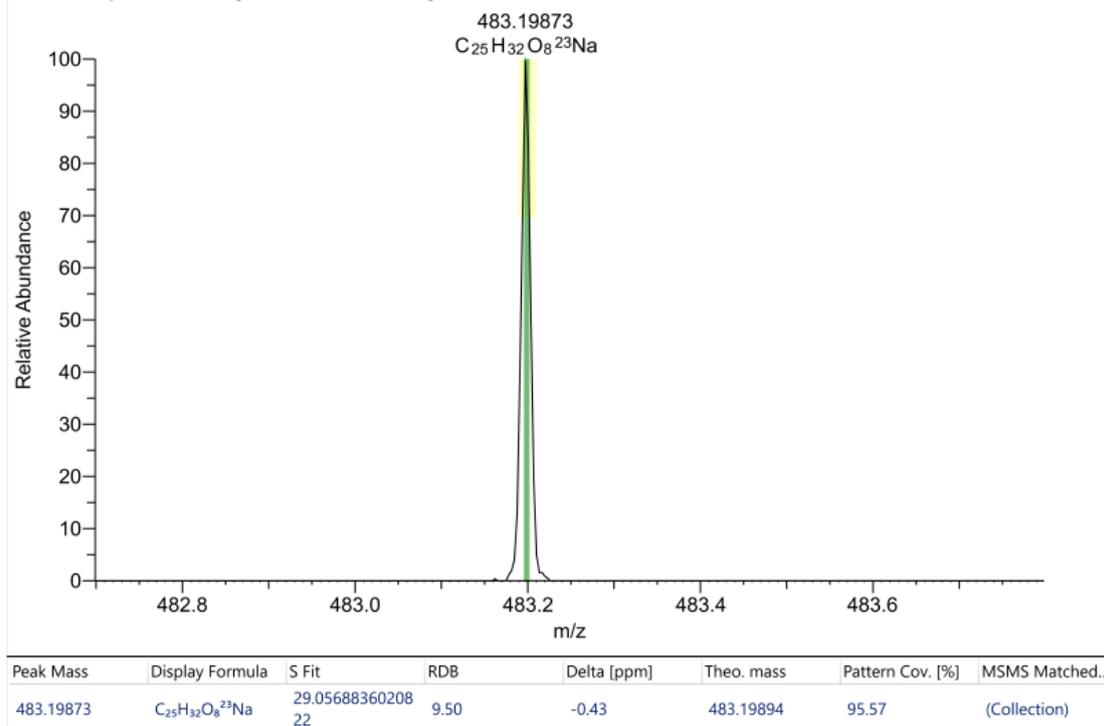


Figure S9. HRESIMS spectrum of **1**

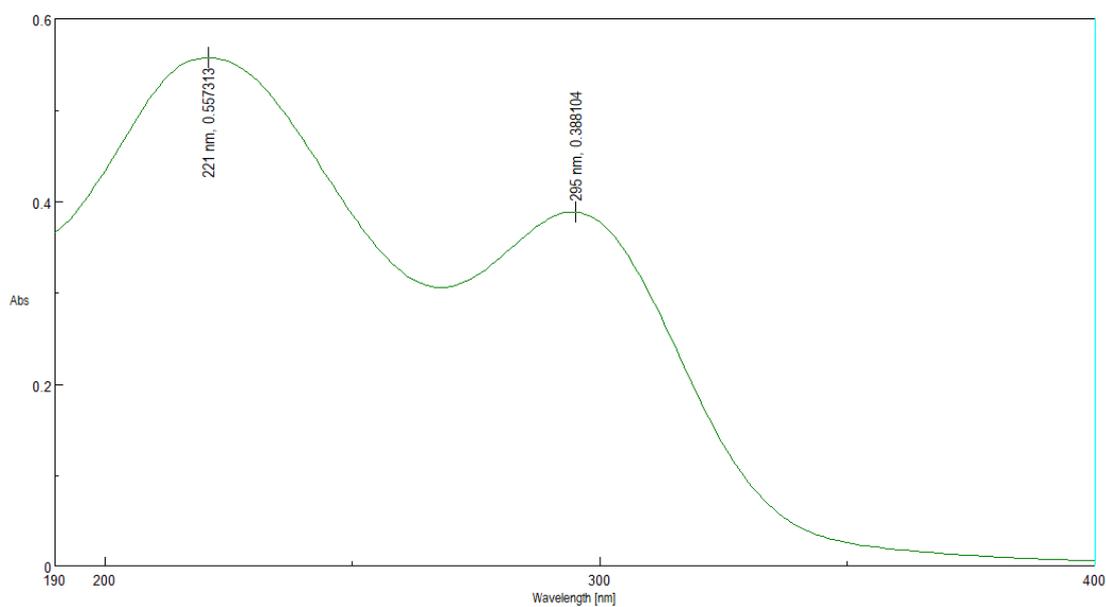


Figure S10. UV spectrum of 1

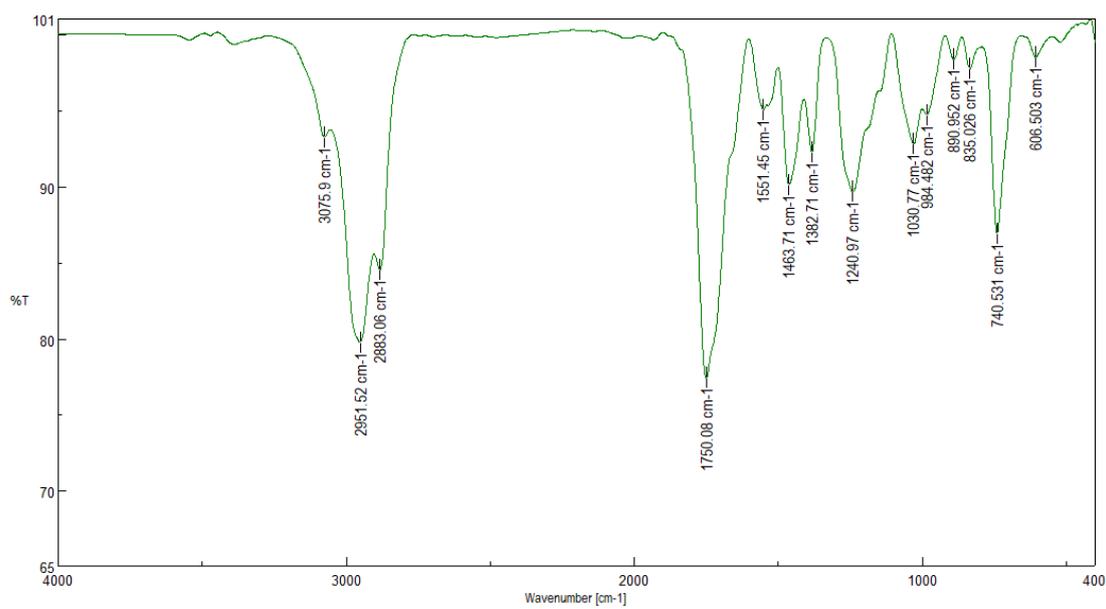


Figure S11. IR spectrum of 1

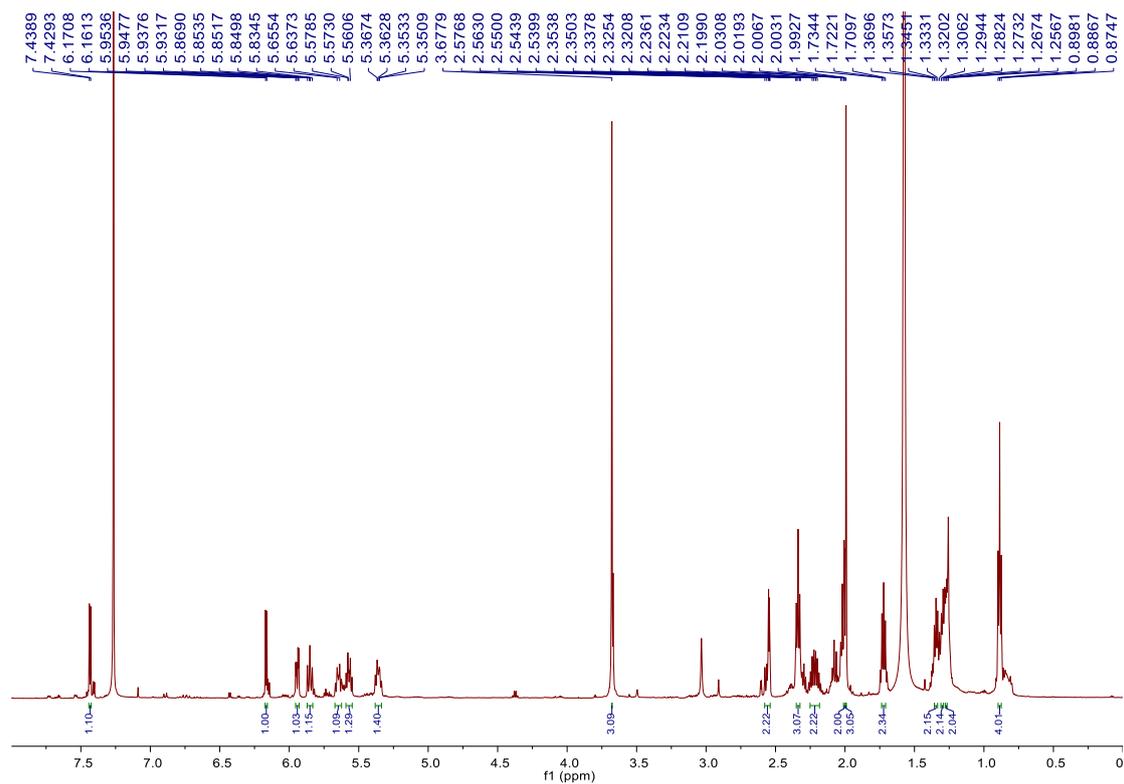


Figure S12. ^1H NMR spectrum of **2** (600 MHz, CDCl_3)

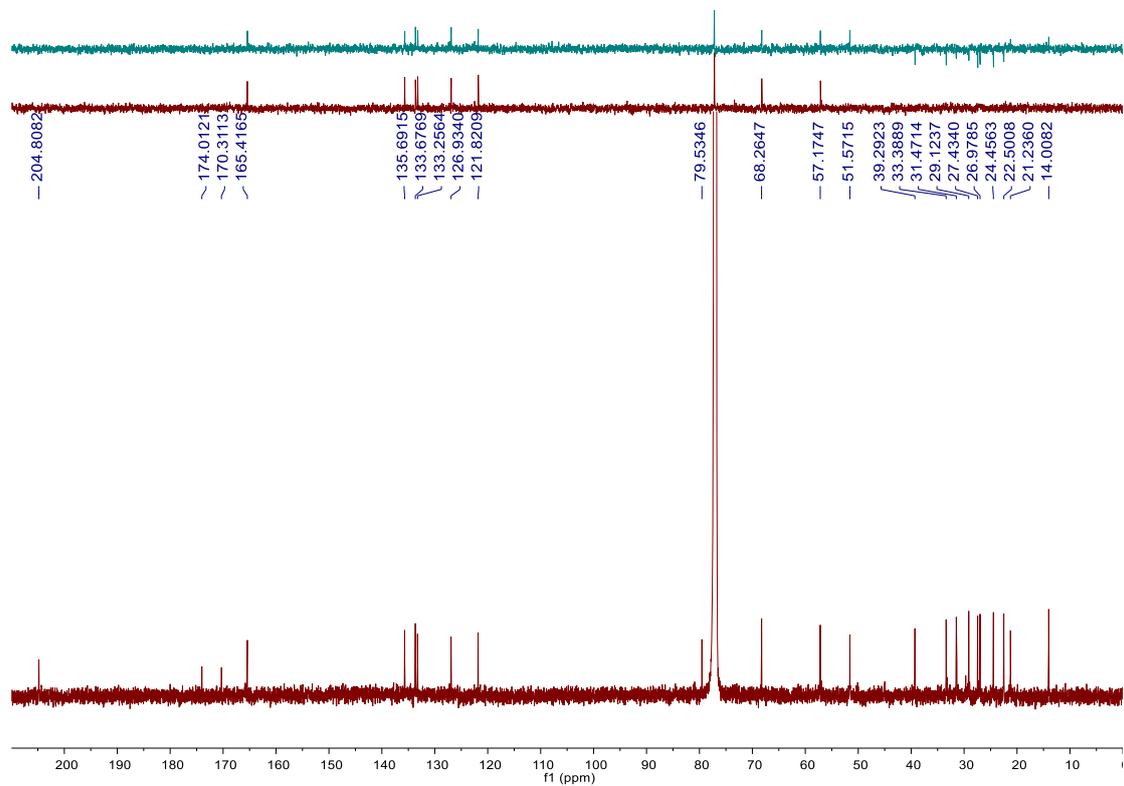


Figure S13. ^{13}C NMR spectrum of **2** (125 MHz, CDCl_3)

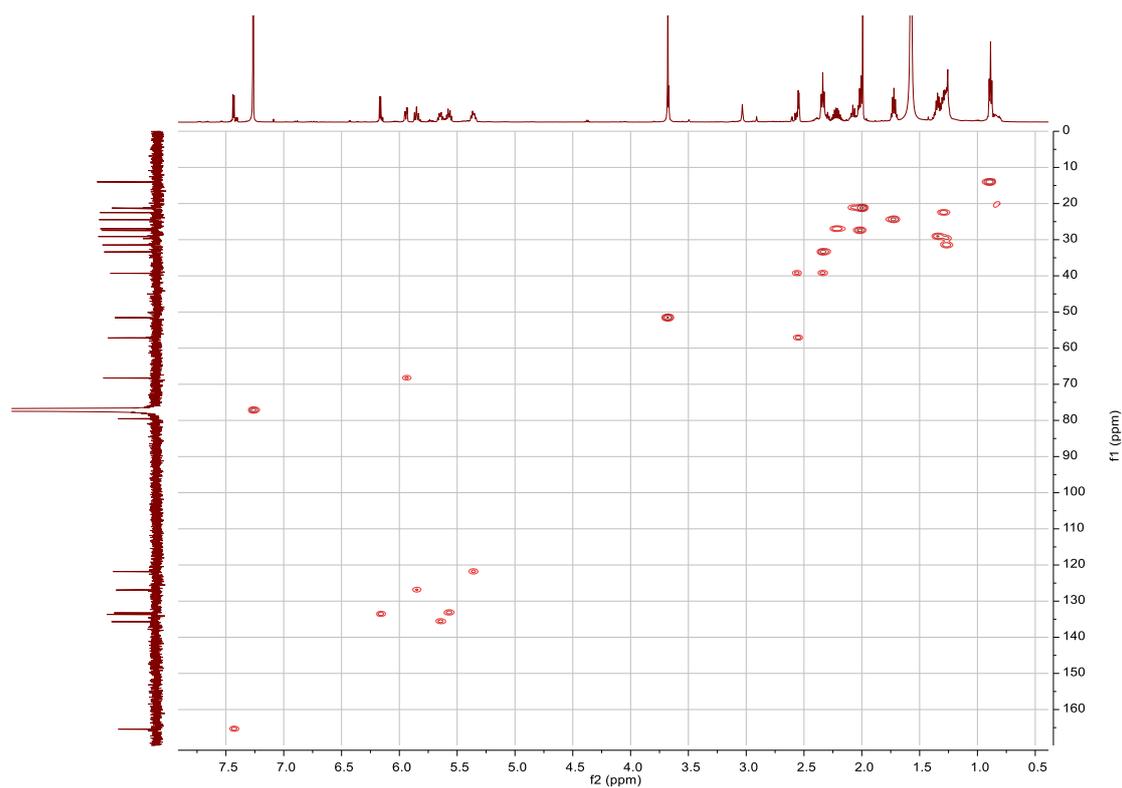


Figure S14. COSY spectrum of **2**

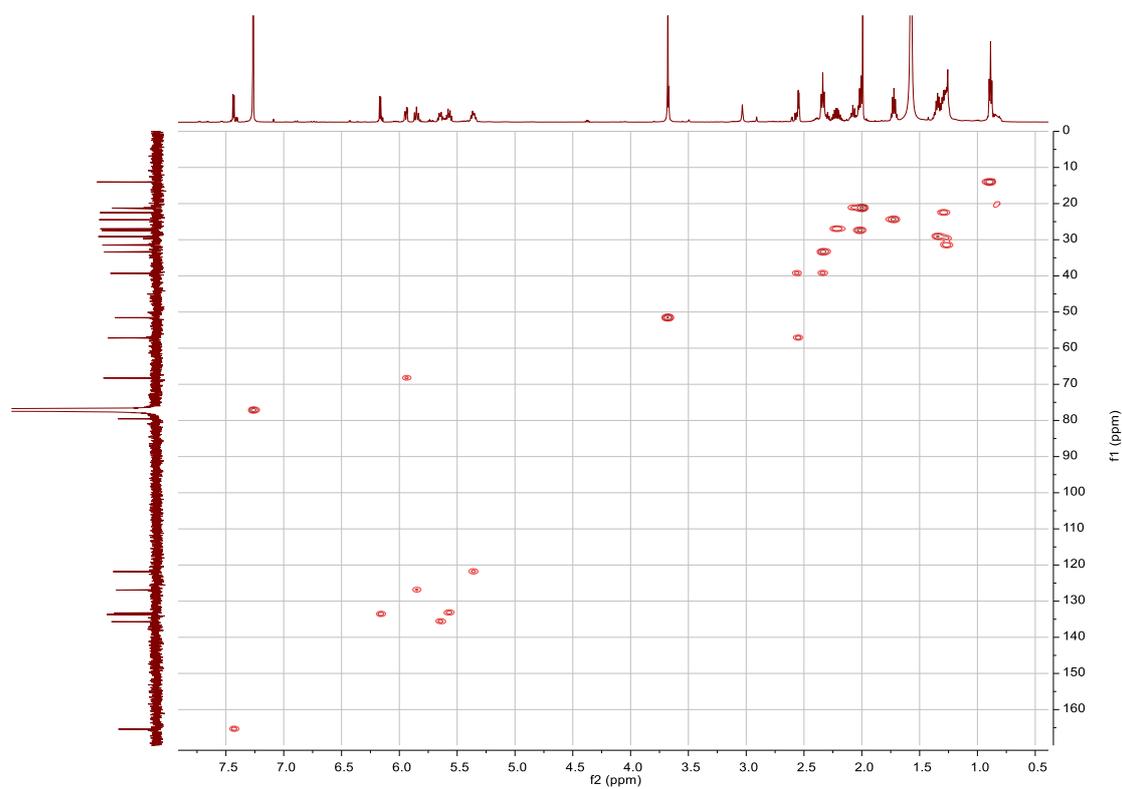


Figure S15. HSQC spectrum of **2**

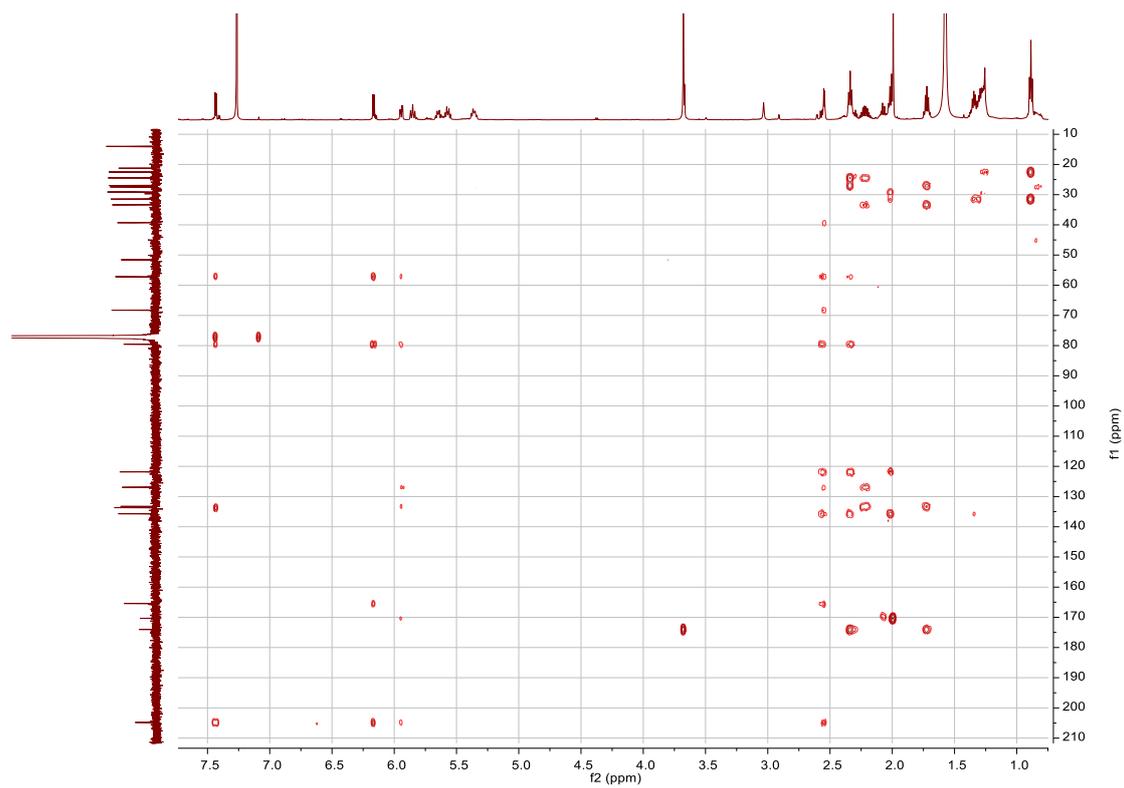


Figure S16. HMBC spectrum of **2**

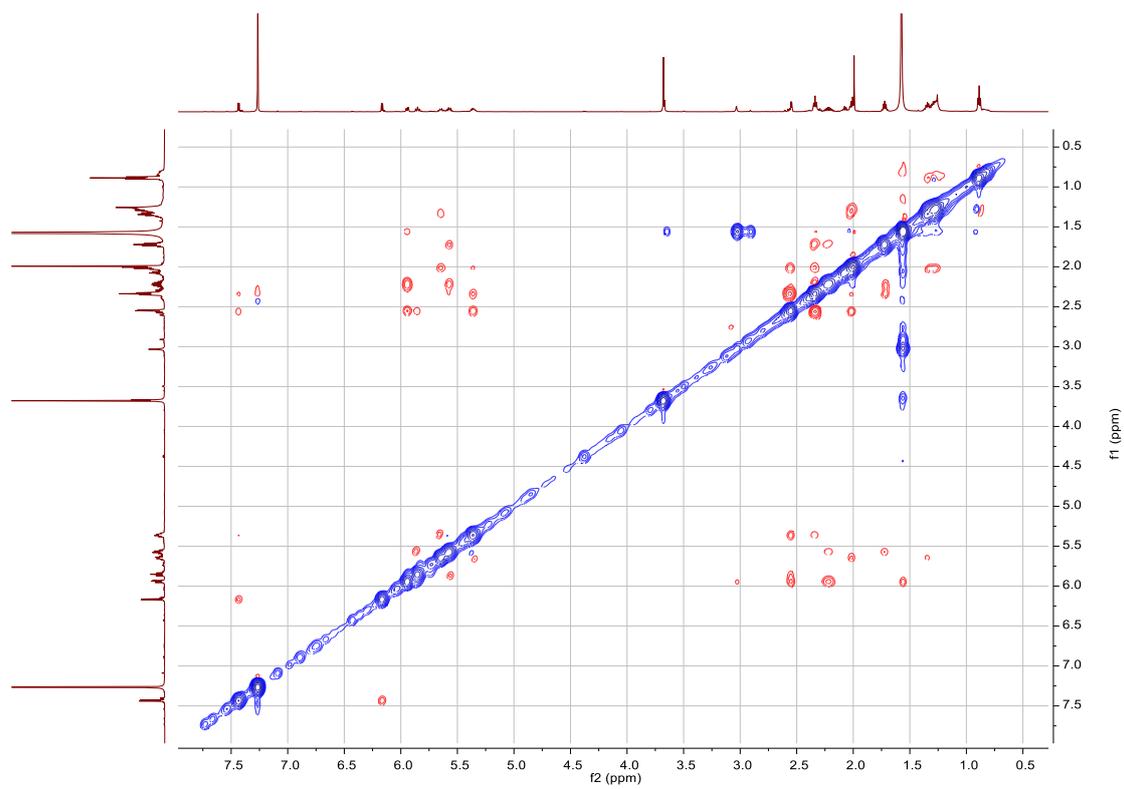


Figure S17. NOESY spectrum of **2**

Mass Spectrum SmartFormula Report

Analysis Info

Analysis Name D:\1107\CIACR.d
Method tune_wide_pos_20220422.m
Sample Name CI-AC
Comment ESI Positive

11/8/2022 2:45:15 PM
Operator: YU HSIAO-CHING
Instrument: BRUKER micrOTOF-Q

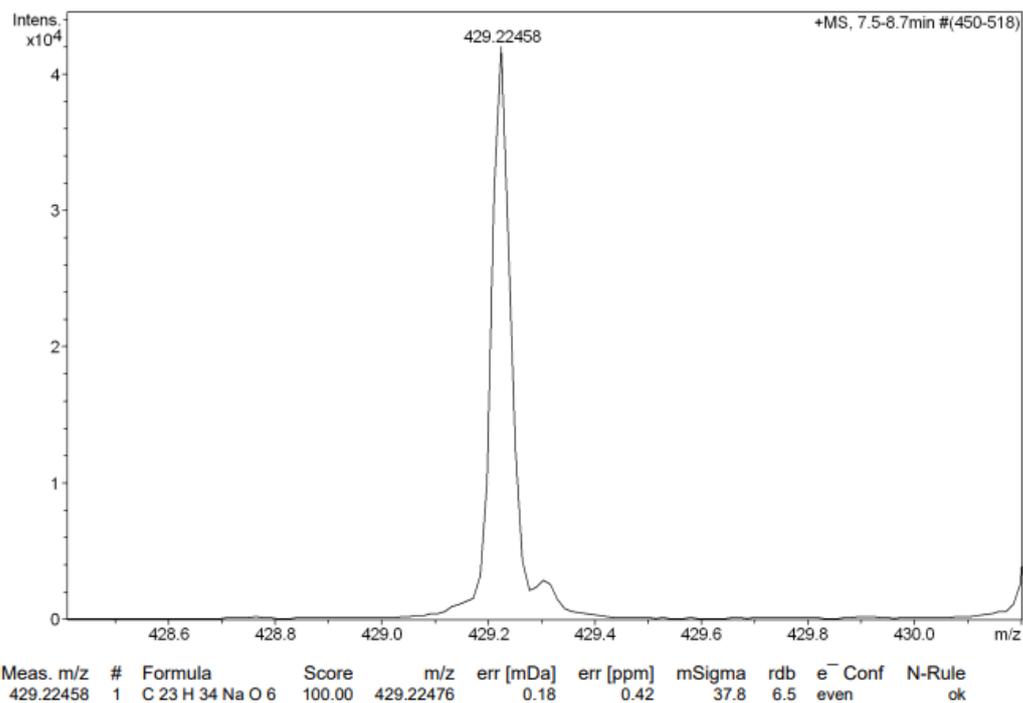


Figure S18. HRESIMS spectrum of **2**

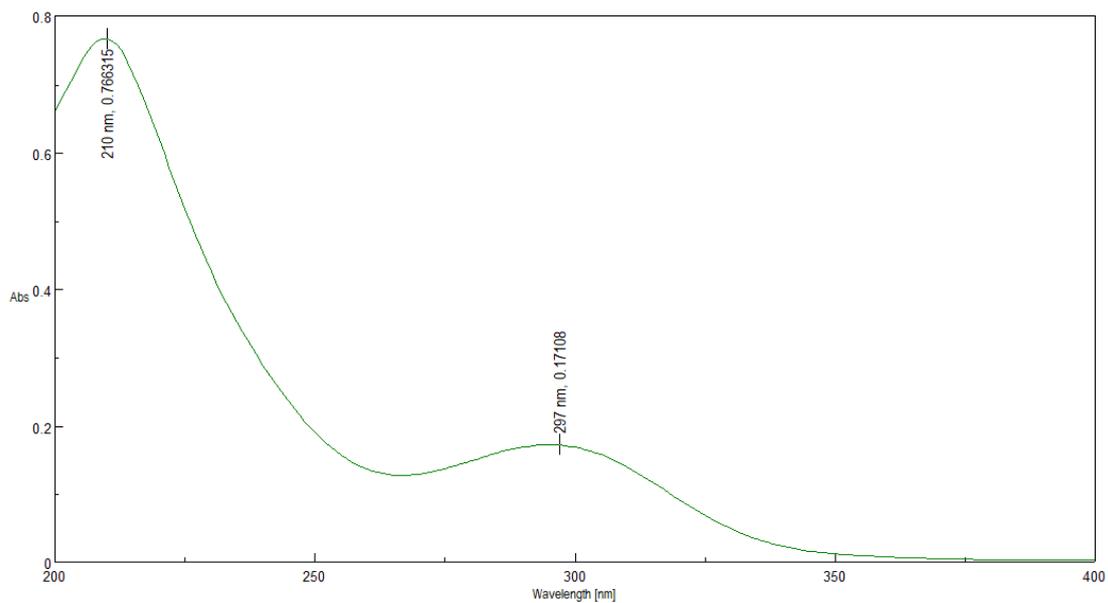


Figure S19. UV spectrum of **2**

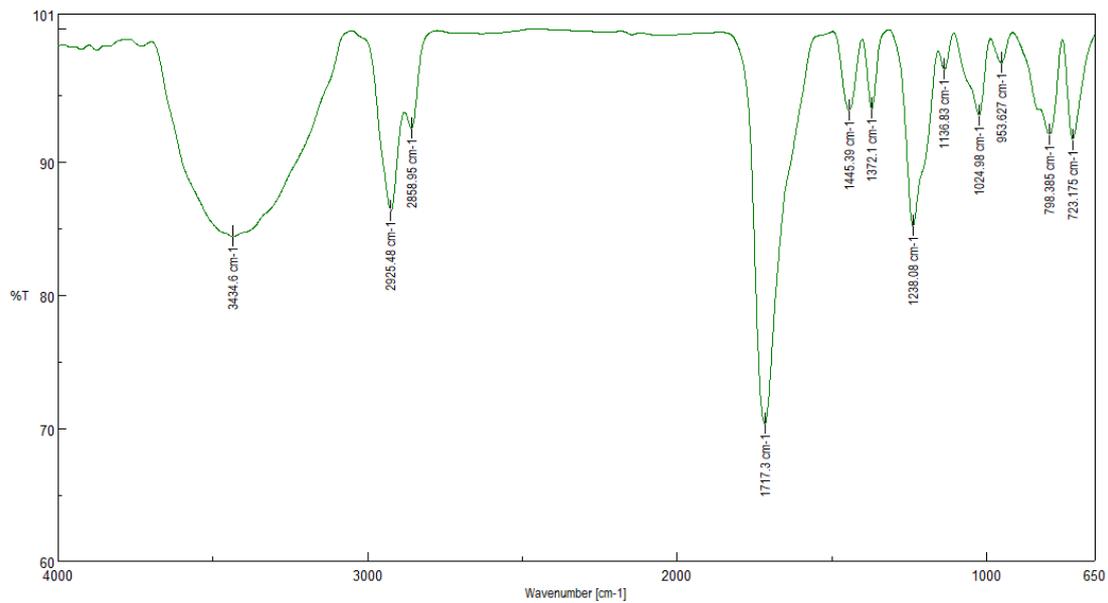


Figure S20. IR spectrum of **2**