

Supporting Information

Experimental Section

General experimental details

All procedures were performed under argon using standard vacuum-line, Schlenk and cannula techniques, with solvents being distilled over standard drying agents and degassed before use. Deuterated solvents were dried and stored over 4 Å molecular sieves. ^1H and ^{13}C NMR spectra were recorded in CDCl_3 on Bruker Avance 300 instrument at 300.13 MHz (^1H) and 75.47 MHz (^{13}C), respectively. Mass spectra were measured on a Nermag R10-10 spectrometer by CI (NH_3 or CH_4). Melting points were determined on a Leitz microscope heating stage 250. Elemental analyses were performed by the “Service de Microanalyse de l’Ecole de Chimie de Toulouse”. The yields of the obtained compounds were calculated from the starting precursor $\text{Mes}_2\text{Ge}(\text{F})\text{-CHR}_2$.

For the ^1H and ^{13}C NMR study, the carbon atoms of the fluorenyl group are numbered as shown in Chart 1.

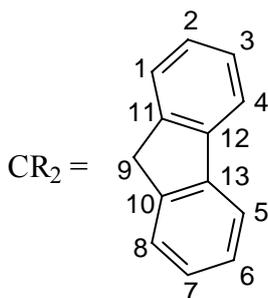


Chart 1

Synthetic procedures

Synthesis of Germene 1. Germene **1** was prepared as previously described^{S1} by the addition of 1 molar equiv. of *tert*-butyllithium (1.7 in pentane) to a solution of the fluorogermane $\text{Mes}_2\text{Ge}(\text{F})\text{-CHR}_2$ (1.00 g, 2.02 mmol) in Et_2O (20 mL) cooled to -78°C . Warming to RT afforded an orange solution of **1**, which is produced in nearly quantitative yield, with a precipitate of LiF. Crude solution of **1** was used without further purification.

Synthesis of 2 and 3. To the crude solution of **1** cooled to -78°C was slowly added via cannula 0.5 equiv. of the 1,4-naphthoquinone dissolved in 10 mL of Et_2O . A green coloration appeared immediately, which progressively turned to red by warming to RT. After 1 h stirring at RT, the solvents were removed under vacuum and 50 mL of pentane were added. After filtration of LiF and concentration of the solution, the products **2** and **3** were separated by fractional crystallization in a sealed tube at -20°C using $\text{Et}_2\text{O}/\text{THF}$ as solvent.

2: Yield: 38 % (0.42 g) of red crystals (m.p. 278°C). ¹H NMR (300.13 MHz): δ 1.20 and 1.36 (2s, 2 × 12H, *o*-Me of Mes), 2.01 and 2.12 (2s, 2 × 6H, *p*-Me of Mes), 3.51 (s, 2H, CH-CR₂), 4.87 (d, ³J_{HH} = 7.5 Hz, 2H, among H1,4,5,8 of CR₂), 5.59-5.63 (m, 2H), 6.08 and 6.82 (2t, ³J_{HH} = 7.5 Hz, 2 × 2H, among H2,3,6,7 of CR₂), 6.45 (s, 4H, arom H of Mes), 7.22-7.29 (m, 8H), 7.52-7.55 (m, 2H), 7.79-7.82 (m, 2H); 4 arom H could not be observed. ¹³C NMR (75.47 MHz): δ 20.88, 21.96, 22.58, 23.09, 23.24 (*o*- and *p*-Me of Mes), 50.26 (CH-CR₂), 60.67 (CR₂), 118.73, 119.72, 120.24, 122.17, 124.32, 124.99, 126.14, 126.50, 126.57, 127.07, 128.85, 129.07 (CH of CR₂, *m*-CH of Mes, CH=CH-CH=CH), 132.63, 134.47, 138.96, 139.12, 142.09, 142.22, 142.49, 143.41, 143.98, 144.97 (*ipso*-, *o*- and *p*-C of Mes, C10-13, C-O, and C=C-O). Anal. Calcd for C₇₂H₆₆Ge₂O₂ (1108.571) C, 78.00; H, 6.00%. Found: C, 78.14; H, 6.05%.

3: Yield: 40 % (0.45 g) of white crystals (m.p. 365°C). ¹H NMR (300.13 MHz): δ 0.61 and 2.50 (2s, 2 × 6H, *o*-Me of Mes), as (the signals of 2 mesityl groups could not be observed due to a coalescence phenomenon caused by their slow rotation), 2.07 and 2.21 (2s, 2 × 6H, *p*-Me of Mes), 4.15 (s, 2H, CH-CR₂), 4.18 (s, 2H, =CH-CH-CR₂), 6.34 (broad s, 2H, arom H of Mes), 6.37 and 6.45 (2d, ³J_{HH} = 7.8 Hz, 2 × 2H, among H1,4,5,8 of CR₂), 6.68 (broad s, 6H, arom H of Mes), 6.78, 6.88, 7.12 and 7.21 (4t, ³J_{HH} = 7.5 Hz, 4 × 2H, H2,3,6,7 of CR₂), 6.91 (s, 2H, CHCO), 7.61 (d, ³J_{HH} = 7.8 Hz, 4H, among H1,4,5,8 of CR₂). ¹³C NMR (75.47 MHz): δ 20.81 and 21.03 (*p*-Me of Mes), 22.81, 23.27, 23.54 (*o*-Me of Mes), 39.58 (CH-CR₂), 55.51 (CR₂), 119.09, 119.26, 119.40, 123.92, 124.79, 125.78, 126.27, 126.32, 126.41, 126.72, 127.82 and 129.51 (CH of CR₂, *m*-CH of Mes, CHCO, =CH-CH-CR₂), 123.85, 133.55, 135.75, 138.81, 139.36, 141.07, 141.93, 141.97, 144.24, 144.37, 144.69, 145.99 and 149.96 (*ipso*-, *o*-, and *p*-C of Mes, C10-13, C-O, and C=C-O). MS (*m/z* %): 1108 (M, 10), 989 (M - Mes, 8), 634 (M - Mes₂Ge=CR₂, 6), 477 (Mes₂Ge=CR₂ + H⁺, 20), 311 (Mes₂Ge-H, 30). Anal. Calcd for C₇₂H₆₆Ge₂O₂ (1108.571) C, 78.00; H, 6.00%. Found: C, 78.09; H, 6.12%.

Synthesis of 4. The mixture of **2** and **3** obtained as described above was left in contact with air. The reaction mixture gradually turned from dark red to light yellow; the ¹H and ¹³C NMR study of the solution showed the complete reaction of **2** with air oxygen. Derivative **4** was isolated by crystallization at -20°C in Et₂O. Yield: 36 % (0.41g) of white crystals (m.p. 247°C). ¹H NMR (300.13 MHz): δ 0.58, 0.73 and 2.88 (3s, 3 × 3H, *o*-Me of Mes), 0.88 (broad s, 3H, *o*-Me of Mes), 1.75 and 2.54 (2s, 2 × 6H, *o*-Me of Mes), 2.09, 2.10, 2.16 and 2.17 (4s, 4 × 3H, *p*-Me of Mes), 2.93 and 4.07 (2d, ³J_{HH} = 7.8 Hz, 2 × 1H, CH-CR₂), 5.05, 5.12, 5.88, 6.94, 7.85 and 8.72 (6d, ³J_{HH} = 7.6 Hz, 6 × 1H, among H1,4,5,8 of CR₂), 6.12-6.23 (m, 3H), 6.41-6.86 (m, 11H), 7.11 (t, ³J_{HH} = 7.6 Hz, 1H, among H2,3,6,7), 7.21-7.58 (m, 7H). ¹³C NMR (75.47 MHz): δ 20.72, 20.74, 20.86, 20.92, 22.37, 22.91, 23.58, 23.98, 24.40 (*o*- and *p*-Me of Mes), 54.28 and 56.64 (CH-CR₂), 58.31 and 59.20 (CH-CR₂), 107.03 and 107.04 (O-C-O), 118.28, 118.96, 120.01, 120.72, 121.34, 121.79, 122.42, 123.00, 124.86, 125.16, 125.59, 125.72, 126.25,

126.54, 127.24, 127.80, 128.18, 128.19, 128.59, 128.78, 129.21, 129.47, 130.19 (CH of CR₂, *m*-CH of Mes, arom CH of the former quinonic moiety), 133.15, 134.44, 134.78, 135.33, 137.81, 137.97, 138.42, 138.83, 139.10, 139.18, 139.64, 141.89, 141.94, 142.15, 142.32, 142.41, 143.00, 143.99, 144.16, 144.64, 144.68, 144.87 (*ipso*-, *o*-, and *p*-C of Mes, C10-13, arom C of the former quinonic moiety). MS (*m/z* %): 1141 (M + H⁺, 5), 1109 (M + H⁺ - O₂, 7), 494 (Mes₂Ge=CR₂ + NH₄⁺, 56), 477 (Mes₂Ge=CR₂ + H⁺, 100). Anal. Calcd for C₇₂H₆₆Ge₂O₄ (1140.569) C, 75.82; H, 5.83%. Found: C, 75.66; H, 5.95%.

Synthesis of 5. To mixture of **2** and **3** obtained as described above was added 24.5 mg (0.25 mmol) of maleic anhydride. The reaction mixture gradually turned from dark red to light brown; the ¹H and ¹³C NMR study of the solution showed the complete reaction of **2** with maleic anhydride. The obtained compound **5** was isolated by crystallization at -20°C in Et₂O/pentane (80/20) and some drops of CH₂Cl₂. Yield: 35 % (0.43 g) of white crystals (m.p. 386°C). ¹H NMR (300.13 MHz): δ 0.56, 0.71, 0.96, 2.65, 2.70 and 2.99 (6s, 6 × 3H, *o*-Me of Mes), (the signals of one mesityl group could not be observed due to a coalescence phenomenon caused by its slow rotation), 2.05, 2.10, 2.12 and 2.13 (4s, 4 × 3H, *p*-Me of Mes), 2.90 and 3.45 (2d, ³J_{HH} = 8.4 Hz, 2 × 1H, CH-CR₂), 3.68 and 4.02 (2d, ³J_{HH} = 9.3 Hz, 2 × 1H, CH-C=O), 5.02, 5.09, 5.14, 6.88 and 7.79 (5d, ³J_{HH} = 7.8 Hz, 5 × 1H, among H1,4,5,8 of CR₂), 6.03 and 6.07 (2t, ³J_{HH} = 7.8 Hz, 2 × 1H, among H2,3,6,7 of CR₂), 6.16, 6.36, 6.47 (3s, 3 × 1H, arom H of Mes), 6.60, 6.68, 6.70 (3t, ³J_{HH} = 7.5 Hz, 3 × 1H, among H2,3,6,7 of CR₂), 6.77, 6.78, 6.79, 6.80 (4s, 4 × 1H, arom H of Mes), 7.02-7.06 (m, 2H arom H), 7.13-7.23 (m, 2H arom H), 7.41-7.50 (m, 5H arom H). ¹³C NMR (75.47 MHz): δ 20.76, 20.78, 20.86 and 20.89 (*p*-Me of Mes), 22.79, 22.89, 23.50, 23.79, 24.34, 24.61 (*o*-Me of Mes), 51.63 and 52.52 (CH-C=O), 56.55 and 57.20 (CH-CR₂), 58.91 and 59.09 (CR₂), 81.96 and 82.17 (CH-C-O), 118.63, 118.73, 120.53, 122.00, 122.20, 122.22, 122.69, 124.05, 124.44, 125.28, 125.51, 125.61, 125.89, 126.36, 126.55, 126.66, 128.02, 128.18, 128.38, 128.49, 128.60, 129.74, 129.95 (CH of CR₂, *m*-CH of Mes, arom CH of the former quinonic moiety), 134.00, 134.01, 135.29, 135.87, 136.93, 137.73, 138.01, 138.85, 138.88, 138.92, 139.07, 139.72, 141.26, 141.55, 141.95, 142.43, 142.57, 143.33, 143.89, 144.05, 144.33, 144.59, 145.78, 145.83 (*ipso*-, *o*-, and *p*-C of Mes, C10-13, arom C of the former quinonic moiety), 168.41 and 168.63 (CH-C=O). MS (*m/z* %): 1224 (M + NH₄⁺, 12), 1207 (M + H⁺, 16), 256 (M - 2Mes₂Ge=CR₂, 100). Anal. Calcd for C₇₆H₆₈Ge₂O₅ (1206.627) C, 75.65; H, 5.68%. Found: C, 75.59; H, 5.76%.

Experimental crystallographic data for **2**, **3**, **4** and **5**

Details of the crystal data for all structures are presented in Table 1. All data were collected at low temperatures using an oil-coated shock-cooled crystal on a Bruker-AXS CCD 1000 diffractometer with MoK α radiation ($\lambda = 0.71073 \text{ \AA}$). The structures were solved by direct methods^{S2} and all non hydrogen atoms were refined anisotropically using the least-squares method on F^2 ^{S3}. All structures presented in the manuscript show disorders. In **2** and in **4** a molecule of ether is located on a special position and the whole molecule has been refined by ignoring the symmetry operation by the use of PART -1 in SHELXL with an occupation of 0.5. In **3** all four THF molecules show a disorder of the whole molecules and each of them is refined anisotropically on two positions with the help of ADP- and distances-restraints. In the case of **5**, a disordered molecule of dichloromethane is located next to a special position. This molecule has been refined on two positions with the help of ADP- and distances-restraints by ignoring the symmetry by using PART -1 with an overall occupancy of 0.5.

CCDC 713322 (**2**), 713321 (**3**), 713324 (**4**) and 713323 (**5**) contain the supplementary crystallographic data for all compounds presented in this paper. These data can be obtained free of charge from The Cambridge Crystallographic Data Centre via www.ccdc.cam.ac.uk/data_request/cif.

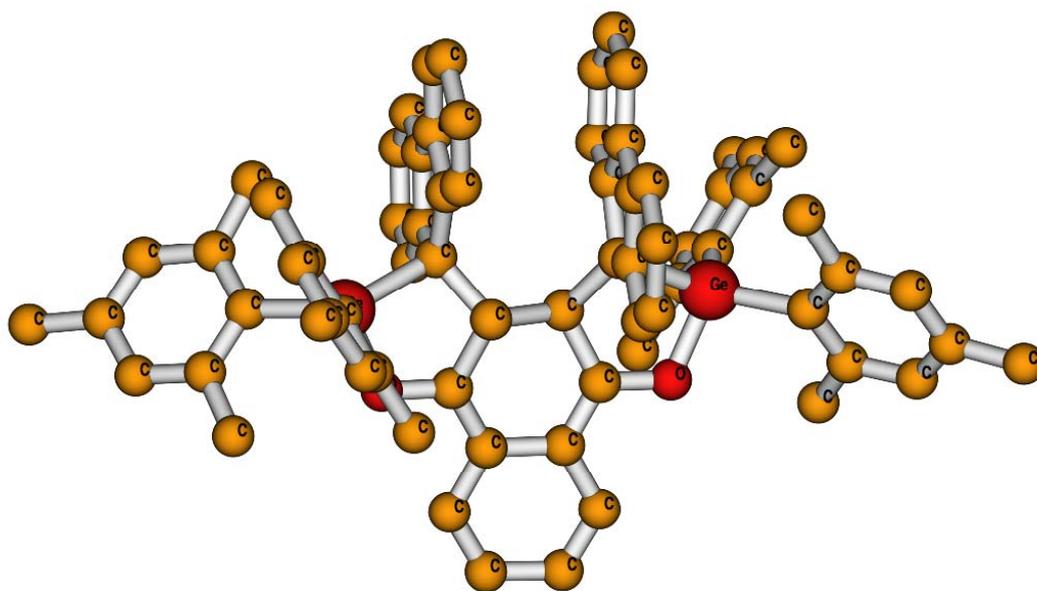
Table 1. Crystal data for **2**, **3**, **4**, and **5**.

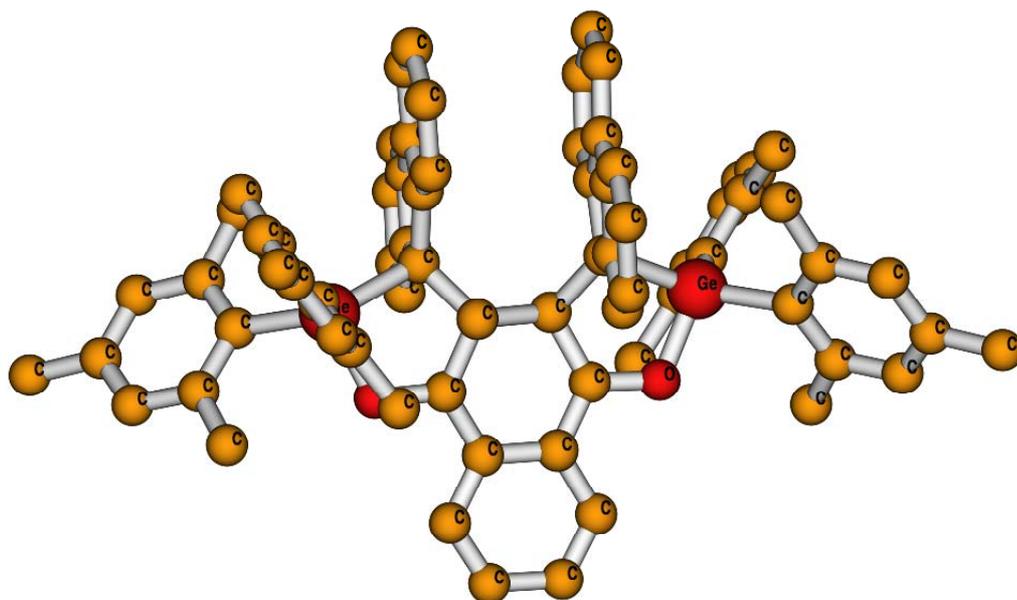
	2 •½Et ₂ O	3 •4THF	4 •1½Et ₂ O	5 •½CH ₂ Cl ₂ •Et ₂ O
Empirical formula	C ₇₄ H ₇₁ Ge ₂ O _{2.5}	C ₈₈ H ₉₈ Ge ₂ O ₆	C ₇₈ H ₈₁ Ge ₂ O _{5.5}	C _{80.5} H ₇₉ ClGe ₂ O ₆
Formula weight	1145.49	1396.84	1251.61	1323.07
Temperature [K]	173(2)	173(2)	193(2)	193(2)
Crystal system	Monoclinic	Triclinic	Triclinic	Monoclinic
Space group	<i>P</i> 2 ₁ / <i>c</i>	<i>P</i> $\bar{1}$	<i>P</i> $\bar{1}$	<i>P</i> 2 ₁ / <i>n</i>
<i>a</i> [Å]	10.504(1)	14.744(1)	9.855(1)	13.998(1)
<i>b</i> [Å]	21.208(2)	17.069(1)	14.957(1)	24.175(1)
<i>c</i> [Å]	26.522(2)	17.647(1)	23.137(2)	19.932(1)
α [°]	-	67.084(1)	71.149(1)	-
β [°]	95.893(2)	66.935(1)	83.026(1)	99.962(3)
γ [°]	-	67.844(1)	81.414(1)	-
Volume [Å ³]	5877.2(9)	3629.0(4)	3181.5(3)	6643.3(6)
<i>Z</i>	4	2	2	4
Reflections collected	8361	21106	18888	65912
Independent reflections	8361	14464	12781	12500
<i>R</i> (<i>int</i>)	merged	0.0292	0.0537	0.1046
Restraints	142	1216	34	49
Parameters	742	1061	807	862
Goodness-of-fit on <i>F</i> ²	1.019	0.998	0.978	1.093
<i>R</i> 1 [<i>I</i> > 2σ(<i>I</i>)]	0.0868	0.0495	0.0612	0.0645
<i>wR</i> 2 (all data)	0.1976	0.1368	0.1376	0.1593
Largest diff. Peak and hole [eÅ ⁻³]	1.678/-0.749	0.786/-0.468	0.803/-0.703	1.321/-0.677

Theoretical Section

All calculations were performed with the program system Turbomole-5.7^{S4}. Structures were optimized without any symmetry constraint at RI-BP86 level^{S5} utilizing the SVP basis set^{S6}. Corresponding ball and stick models of the equilibrium geometries of the fully substituted **2** are shown in Figure S1.

Figure S1. Ball and stick models of the equilibrium geometries of **2**, obtained with the Molden program^{S7}; energy lowest singlet (top) and triplet state (bottom).





For clarity hydrogen atoms are omitted.

The cartesian coordinates resulting from optimization of the two electronic states are given as follows:

a) singlet

C	-1.6317891	-4.4969650	1.2770919
C	-2.5538535	-3.4410718	1.3728126
C	-2.0741041	-2.1244927	1.4966978
C	-0.6737739	-1.8653271	1.5292438
C	0.2430660	-2.9276158	1.4403878
C	-0.2444284	-4.2424049	1.3114796
C	-2.7843139	-0.8490287	1.6226338
C	-1.8200003	0.2019186	1.6529484
C	-0.4257538	-0.3840063	1.6747527
C	-4.1575413	-0.5633921	1.7285841
C	-4.5674455	0.7751866	1.8449427
C	-3.6174419	1.8162697	1.8378205
C	-2.2413575	1.5384421	1.7411170
C	0.7008652	0.2217748	0.7587379
C	0.7007146	-0.2220582	-0.7585732
C	2.0599958	0.0414722	-1.4249518

C	3.2538970	0.0686889	-0.7342924
C	3.2539264	-0.0703284	0.7342842
C	2.0600655	-0.0425106	1.4250209
C	4.5338346	-0.1822099	1.4101847
C	5.7157986	-0.1016553	0.7176463
C	5.7157731	0.0986141	-0.7178944
C	4.5337883	0.1798304	-1.4103163
O	2.0632349	0.1273206	-2.7769457
Ge	0.3982092	-0.0442060	-3.5625892
C	-0.4256511	0.3843177	-1.6744870
C	-0.6729048	1.8657647	-1.5289193
C	-2.0731065	2.1256149	-1.4963043
C	-2.7839629	0.8505059	-1.6222323
C	-1.8201705	-0.2009137	-1.6526046
C	-4.1573355	0.5655331	-1.7281364
C	-4.5678831	-0.7728687	-1.8444790
C	-3.6183741	-1.8144039	-1.8373985
C	-2.2421521	-1.5372326	-1.7407546
O	2.0634028	-0.1283690	2.7771282
Ge	0.3984010	0.0440777	3.5627658
C	0.2444656	2.9275648	-1.4400398
C	-0.2423752	4.2425847	-1.3110704
C	-2.5522096	3.4424234	-1.3723888
C	-1.6296112	4.4978436	-1.2766445
H	4.5294654	0.3206516	-2.5020566
H	4.5295042	-0.3230255	2.5019575
H	6.6768756	-0.1813199	1.2528726
H	6.6768412	0.1777480	-1.2532128
H	0.5521647	-1.3327128	-0.7668235
H	0.5529146	1.3325233	0.7670379
C	0.0721835	-1.9326787	-4.1341431
C	0.5833031	1.1485794	-5.1542971
C	0.0734183	1.9328392	4.1341408
C	0.5829174	-1.1489669	5.1543424
H	-4.9020055	1.3781052	-1.7190123

H	-5.6410960	-1.0107994	-1.9324242
H	-3.9534682	-2.8618413	-1.9144706
H	-1.5153286	-2.3636990	-1.7467176
H	-3.6354335	3.6458519	-1.3486366
H	-1.9915730	5.5345538	-1.1747187
H	0.4698732	5.0810424	-1.2383857
H	1.3297289	2.7394339	-1.4769239
H	1.3284478	-2.7400100	1.4772586
H	0.4674199	-5.0812107	1.2388185
H	-1.9942687	-5.5334953	1.1752041
H	-3.6371787	-3.6439637	1.3490982
H	-1.5141339	2.3645609	1.7470568
H	-3.9520341	2.8638621	1.9149081
H	-5.6405385	1.0136179	1.9329487
H	-4.9025995	-1.3756099	1.7194810
C	1.7158364	0.9149767	-5.9970406
C	1.9067095	1.7307736	-7.1283030
C	1.0181928	2.7674861	-7.4728348
C	-0.1008688	2.9591139	-6.6495236
C	-0.3365723	2.1718351	-5.4999859
C	2.7224339	-0.1884877	-5.7433198
H	2.7834514	1.5382766	-7.7717004
C	1.2702210	3.6349571	-8.6859037
H	-0.8285560	3.7497135	-6.9047099
C	-1.5716752	2.4869138	-4.6902073
C	-1.0818542	-2.1782688	-4.9387137
C	-1.3425192	-3.4801309	-5.4062853
C	-0.4958923	-4.5640433	-5.1102423
C	0.6319624	-4.3061343	-4.3143107
C	0.9387823	-3.0200585	-3.8155189
C	-2.0569132	-1.0799813	-5.3074161
H	-2.2429316	-3.6504016	-6.0227803
C	-0.7879086	-5.9482772	-5.6452311
H	1.3109702	-5.1401001	-4.0637484
C	2.1860198	-2.8890297	-2.9644142

H	-2.9252134	-1.4896283	-5.8654566
H	-2.4645204	-0.5740914	-4.4028460
H	-1.5818892	-0.3038563	-5.9477343
H	-0.1356920	-6.7153262	-5.1758531
H	-1.8466230	-6.2402543	-5.4648407
H	-0.6236673	-5.9977222	-6.7465465
H	2.8748562	-2.1051259	-3.3400845
H	1.9499771	-2.6128245	-1.9134748
H	2.7386290	-3.8515865	-2.9328675
H	-1.9363294	1.6178637	-4.1064526
H	-1.3754682	3.3073303	-3.9646950
H	-2.4045325	2.8200257	-5.3473658
H	3.4828369	-0.2217097	-6.5516538
H	3.2475903	-0.0421335	-4.7758881
H	2.2326907	-1.1870366	-5.7013829
H	0.3905007	4.2693652	-8.9264863
H	2.1378979	4.3146628	-8.5206158
H	1.5082981	3.0221412	-9.5838181
C	-1.0804588	2.1792046	4.9387961
C	-1.3403833	3.4812302	5.4061112
C	-0.4933103	4.5647279	5.1095833
C	0.6344819	4.3060146	4.3139500
C	0.9406161	3.0196250	3.8153733
C	-2.0558983	1.0814184	5.3079473
H	-2.2404925	3.6519985	6.0229211
C	-0.7866086	5.9496524	5.6420826
H	1.3141150	5.1395028	4.0635329
C	2.1879816	2.8877348	2.9645590
C	-0.3379492	-2.1714938	5.5004598
C	-0.1030608	-2.9583318	6.6502028
C	1.0167020	-2.7677734	7.4731880
C	1.9056652	-1.7317549	7.1286035
C	1.7153635	-0.9159148	5.9969974
C	-1.5733779	-2.4855058	4.6907166
H	-0.8319906	-3.7475927	6.9060823

C	1.2701816	-3.6401385	8.6823945
H	2.7821138	-1.5393190	7.7723711
C	2.7224524	0.1872259	5.7436706
H	-2.9238932	1.4915383	5.8661235
H	-2.4639395	0.5756013	4.4035273
H	-1.5810685	0.3051574	5.9482643
H	2.8763641	2.1035816	3.3406022
H	1.9519977	2.6112750	1.9136551
H	2.7410607	3.8500117	2.9328061
H	-0.1130408	6.7117897	5.1954819
H	-1.8363939	6.2535248	5.4309288
H	-0.6556425	5.9928054	6.7479665
H	-1.3775813	-3.3055713	3.9647051
H	-2.4062696	-2.8186622	5.3477916
H	-1.9377508	-1.6159902	4.1074477
H	2.2331465	1.1860017	5.7018493
H	3.4827705	0.2199436	6.5520878
H	3.2476797	0.0408098	4.7762575
H	1.5931235	-3.0383170	9.5605644
H	0.3636514	-4.2136047	8.9719590
H	2.0807563	-4.3786152	8.4812956

b) triplet

C	-1.4441397	-4.5839233	1.2513545
C	-2.4158394	-3.5719863	1.3414556
C	-1.9999193	-2.2365158	1.4881574
C	-0.6122823	-1.9136106	1.5438125
C	0.3541032	-2.9327002	1.4681853
C	-0.0706811	-4.2665687	1.3165450
C	-2.7687979	-0.9961160	1.6232022
C	-1.8535666	0.0961365	1.6766939
C	-0.4339413	-0.4242874	1.6986660

C	-4.1543571	-0.7724784	1.7214853
C	-4.6239955	0.5444743	1.8551867
C	-3.7217076	1.6273424	1.8696668
C	-2.3343938	1.4119604	1.7787938
C	0.6527297	0.2340136	0.7557368
C	0.6517187	-0.2361461	-0.7550210
C	2.0153568	-0.0491685	-1.4043674
C	3.2695248	-0.0090848	-0.7222917
C	3.2696263	-0.0036312	0.7226252
C	2.0157392	0.0418585	1.4048858
C	4.5092814	-0.0242146	1.4092873
C	5.7308353	-0.0239343	0.7021457
C	5.7308014	0.0005549	-0.7021204
C	4.5091690	0.0061334	-1.4091093
O	2.0537628	-0.0246447	-2.7535380
Ge	0.3826265	-0.0653807	-3.5627962
C	-0.4325367	0.4262017	-1.6978392
C	-0.6049979	1.9162221	-1.5430877
C	-1.9913290	2.2446014	-1.4872741
C	-2.7651066	1.0072246	-1.6221162
C	-1.8542007	-0.0886415	-1.6756615
C	-4.1515441	0.7890486	-1.7202088
C	-4.6263857	-0.5260504	-1.8537902
C	-3.7283854	-1.6124823	-1.8683678
C	-2.3402180	-1.4025698	-1.7776684
O	2.0542399	0.0172148	2.7540359
Ge	0.3833665	0.0640813	3.5635252
C	0.3654265	2.9314778	-1.4676750
C	-0.0540523	4.2670366	-1.3161691
C	-2.4019447	3.5817311	-1.3407070
C	-1.4262378	4.5898330	-1.2508916
H	4.5045266	0.0131867	-2.5092432
H	4.5047469	-0.0312426	2.5094215
H	6.6827151	-0.0368399	1.2587086
H	6.6826600	0.0093398	-1.2587989

H	0.4124844	-1.3292341	-0.7388708
H	0.4176346	1.3280007	0.7397032
C	-0.0423350	-1.9262716	-4.1546151
C	0.6628865	1.1354008	-5.1315419
C	-0.0351316	1.9266650	4.1545884
C	0.6596081	-1.1381507	5.1318488
H	-4.8567046	1.6358839	-1.6938620
H	-5.7104308	-0.7107221	-1.9363330
H	-4.1145304	-2.6412910	-1.9576552
H	-1.6535934	-2.2623810	-1.8017821
H	-3.4732522	3.8387570	-1.2972707
H	-1.7346166	5.6419271	-1.1325147
H	0.6997274	5.0691495	-1.2516704
H	1.4393868	2.6909772	-1.5295309
H	1.4290169	-2.6964608	1.5299516
H	0.6799067	-5.0716550	1.2518529
H	-1.7567065	-5.6347638	1.1328211
H	-3.4881575	-3.8247536	1.2980903
H	-1.6443665	2.2690397	1.8027835
H	-4.1037855	2.6576628	1.9590230
H	-5.7072910	0.7334153	1.9378848
H	-4.8628558	-1.6165256	1.6951879
C	1.7960699	0.8536138	-5.9586122
C	2.0529298	1.6777699	-7.0704078
C	1.2301568	2.7691965	-7.4099258
C	0.1066605	3.0064244	-6.6045031
C	-0.1949159	2.2123360	-5.4753006
C	2.7349702	-0.3085440	-5.7068092
H	2.9291072	1.4481240	-7.7022285
C	1.5548804	3.6464646	-8.5983176
H	-0.5725011	3.8394092	-6.8586738
C	-1.4321240	2.5759304	-4.6887069
C	-1.1892566	-2.0956519	-4.9883550
C	-1.5121039	-3.3745134	-5.4801920
C	-0.7359611	-4.5085992	-5.1796515

C	0.3823705	-4.3263852	-4.3498364
C	0.7499219	-3.0668162	-3.8257637
C	-2.0946587	-0.9400428	-5.3592441
H	-2.4059192	-3.4853234	-6.1193250
C	-1.0863410	-5.8660232	-5.7470114
H	1.0036362	-5.2017377	-4.0908416
C	1.9745666	-3.0216500	-2.9342292
H	-2.9692749	-1.2921620	-5.9459987
H	-2.4970756	-0.4300316	-4.4545813
H	-1.5635912	-0.1787936	-5.9727846
H	-0.5560825	-6.6831719	-5.2127596
H	-2.1791313	-6.0652204	-5.6850592
H	-0.8061364	-5.9361593	-6.8238150
H	2.7269357	-2.2850217	-3.2830000
H	1.7202628	-2.7336862	-1.8904823
H	2.4594801	-4.0194808	-2.8891392
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H	-1.2201117	3.3934332	-3.9642819
H	-2.2404165	2.9342763	-5.3632172
H	3.4912246	-0.3866515	-6.5159554
H	3.2696122	-0.1938506	-4.7401909
H	2.1873218	-1.2764617	-5.6640752
H	0.7033506	4.3085455	-8.8643692
H	2.4326048	4.3000762	-8.3865704
H	1.8137898	3.0406064	-9.4950000
C	-1.1816776	2.1004710	4.9886027
C	-1.4998547	3.3802382	5.4799567
C	-0.7200948	4.5119297	5.1779662
C	0.3984110	4.3251275	4.3501157
C	0.7615215	3.0637737	3.8261281
C	-2.0901504	0.9477175	5.3608294
H	-2.3922307	3.4940169	6.1206596
C	-1.0779688	5.8727940	5.7323954
H	1.0241659	5.1978218	4.0931561
C	1.9874077	3.0140445	2.9365344

C	-0.2023121	-2.2119653	5.4757399
C	0.0965250	-3.0073394	6.6045546
C	1.2216919	-2.7749487	7.4093710
C	2.0481944	-1.6864971	7.0700547
C	1.7939279	-0.8608420	5.9585657
C	-1.4413698	-2.5702656	4.6895825
H	-0.5861786	-3.8373260	6.8591172
C	1.5450878	-3.6572894	8.5943361
H	2.9251864	-1.4601304	7.7018820
C	2.7367798	0.2982336	5.7073501
H	-2.9630217	1.3026232	5.9485071
H	-2.4951748	0.4389892	4.4565982
H	-1.5608037	0.1848002	5.9737771
H	2.7363543	2.2742817	3.2860132
H	1.7334840	2.7275755	1.8922737
H	2.4763017	4.0099804	2.8925639
H	-0.4121790	6.6665863	5.3318309
H	-2.1275114	6.1497259	5.4846283
H	-0.9946419	5.8912788	6.8432838
H	-1.2329715	-3.3883499	3.9647672
H	-2.2507794	-2.9256051	5.3643352
H	-1.8447517	-1.7168882	4.1084191
H	2.1924722	1.2680567	5.6650874
H	3.4932867	0.3733515	6.5165389
H	3.2710592	0.1821490	4.7406943
H	1.8676519	-3.0583942	9.4745925
H	0.6717919	-4.2736473	8.8974963
H	2.3795350	-4.3573449	8.3566343

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