

## 1,1'-Diphenyl-bis-germatrane with persistent radical cation

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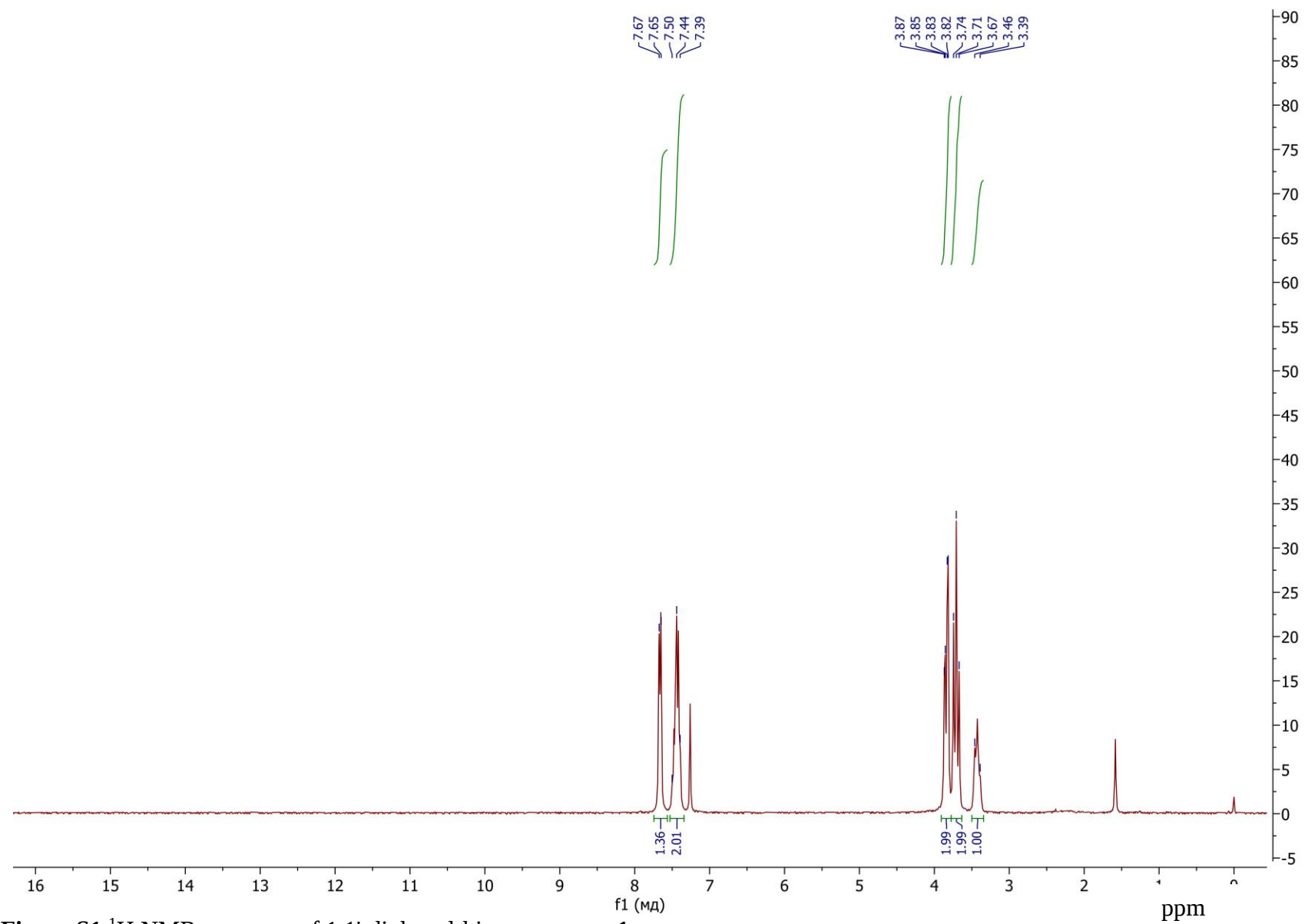
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### General.

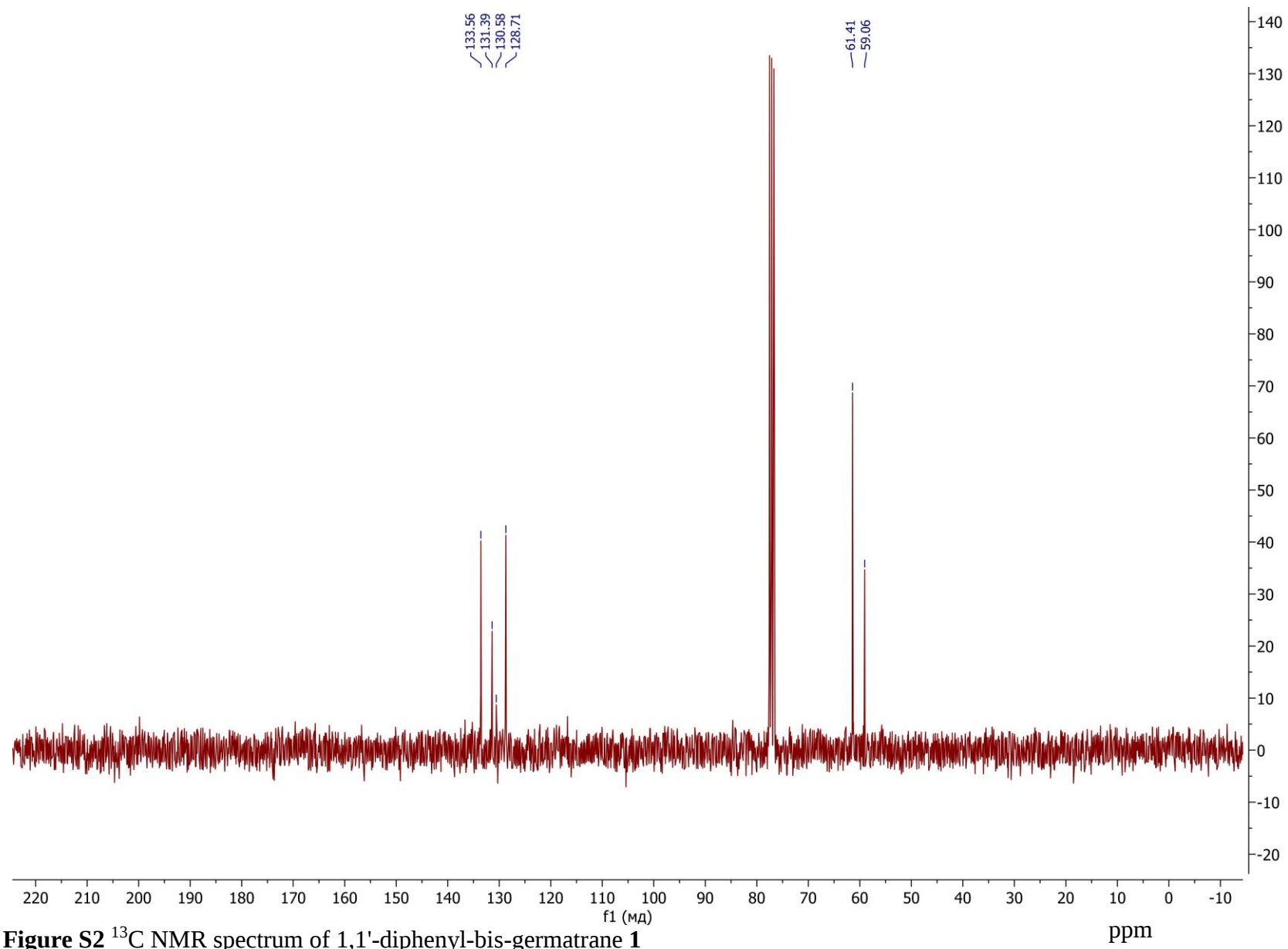
HRMS was performed on a Bruker micrOTOF II in a positive ion electrospray ionization (ESI) mode at 4500 V (m/z 50-1600) with the internal calibration with ESI Tuning Mix, Agilent. Carrier gas (N<sub>2</sub>) flow rate was 3 μl min<sup>-1</sup>, interface temperature 200 °C. NMR spectra were recorded on a Bruker AV300 spectrometer. FTIR spectra were registered using a BRUKER Vertex-70 FTIR spectrometer. Elemental analysis was done using a Vario EL Element Analyzer.

Cyclic voltammetry was performed using a digital potentiostat IPC-Pro-MF (Econix) with a glassy-carbon disk (1.7 mm) and a Pt wire as a working and an auxiliary electrode, respectively. The working electrode was polished before each measurement. Each CV curve was reproduced at least three times. The Ag/AgCl reference electrode was additionally calibrated with ferrocene ( $E^0(\text{Fc}^+/\text{Fc}) = 0.400$  V vs. NHE). All measurements were carried out in an argon-filled glovebox with water and oxygen levels below 1 ppm. Acetonitrile (HPLC grade, Acros), with initial water content <100 ppm, was stored over 4 Å molecular sieves preliminarily dried under oil-pump vacuum at 200-250 °C for 4 hrs. Bu<sub>4</sub>NPF<sub>6</sub> (Acros) was dried under oil-pump vacuum at 80 °C for 4 hrs before using.

**1,1'-Diphenyl-bis-germatrane** (1,7-diphenyl-2,6,8,12,13,17-hexaoxa-18-aza-1,7-digermanatetracyclo[5.5.5.1<sup>4,10</sup>0<sup>15,18</sup>]octadecane) **1**. <sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>): 7.66 (d, 4H,  $J = 6.8$  Hz), 7.5-7.4 (m, 6H, arom. CH), 3.84 (dd, 6H,  $J = 3.2; 11.6$  Hz, OCH<sub>2</sub>), 3.71 (m, 6H, OCH<sub>2</sub>), 3.42 (m, 3H, NCH). <sup>13</sup>C NMR (75 MHz, CDCl<sub>3</sub>): 133.56, 131.39, 130.57 (C arom.), 128.71, 61.41 (CH<sub>2</sub>), 59.06 (CH). HRMS (ESI-MS): m/z [M+H]<sup>+</sup> 534.0195 (experimental), 534.0196 (calculated). IR: 3051, 2949, 2873, 1464, 1434, 1412, 1378, 1102, 1015, 945, 742, 697, 659, 606, 471, 443 cm<sup>-1</sup>. Calc. for C<sub>21</sub>H<sub>25</sub>Ge<sub>2</sub>NO<sub>6</sub>, %: C, 47.35; H, 4.73; N, 2.63. Found, %: C, 47.20; H, 4.80; N, 2.60.



**Figure S1** <sup>1</sup>H NMR spectrum of 1,1'-diphenyl-bis-germatrane **1**



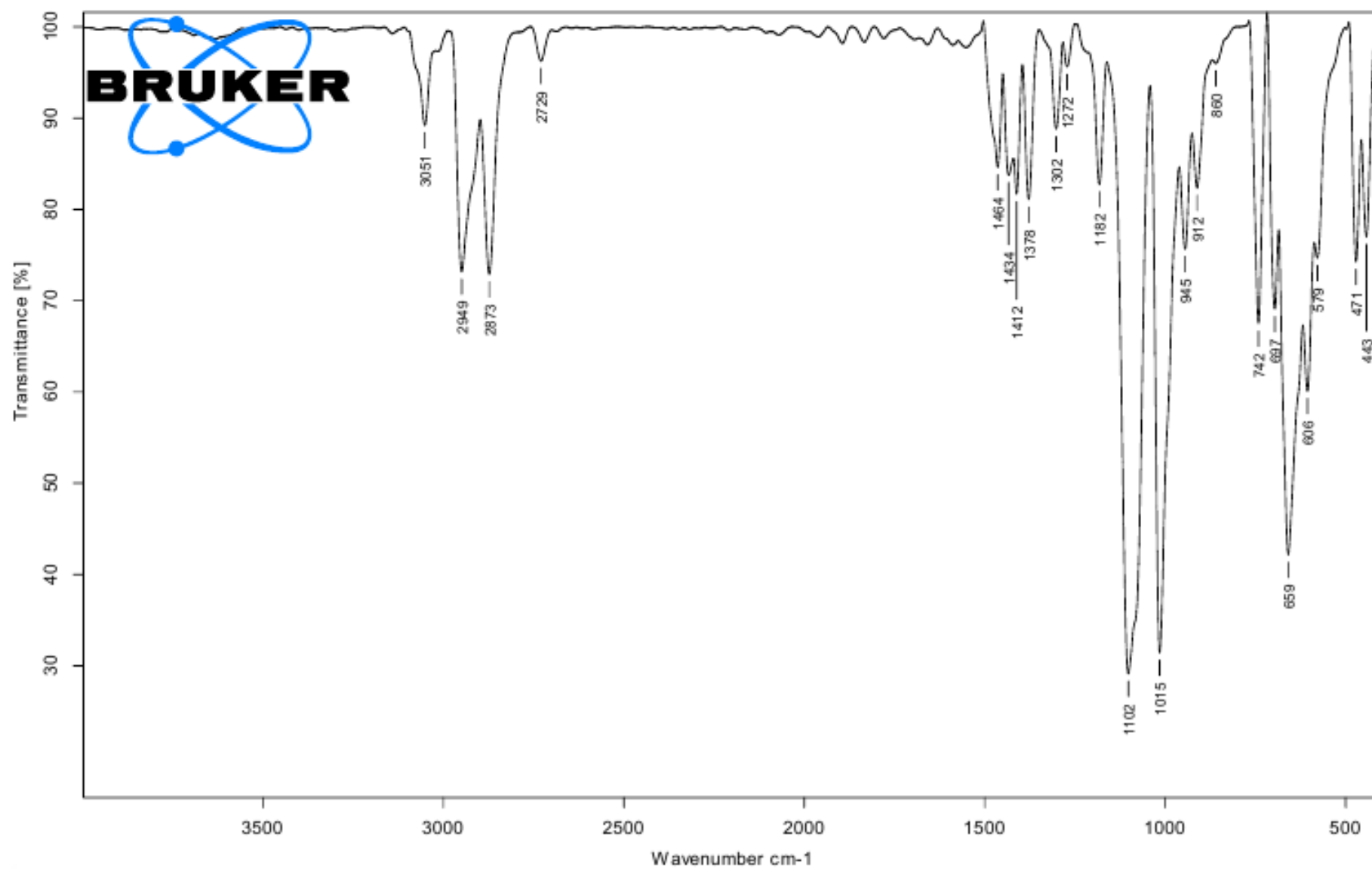
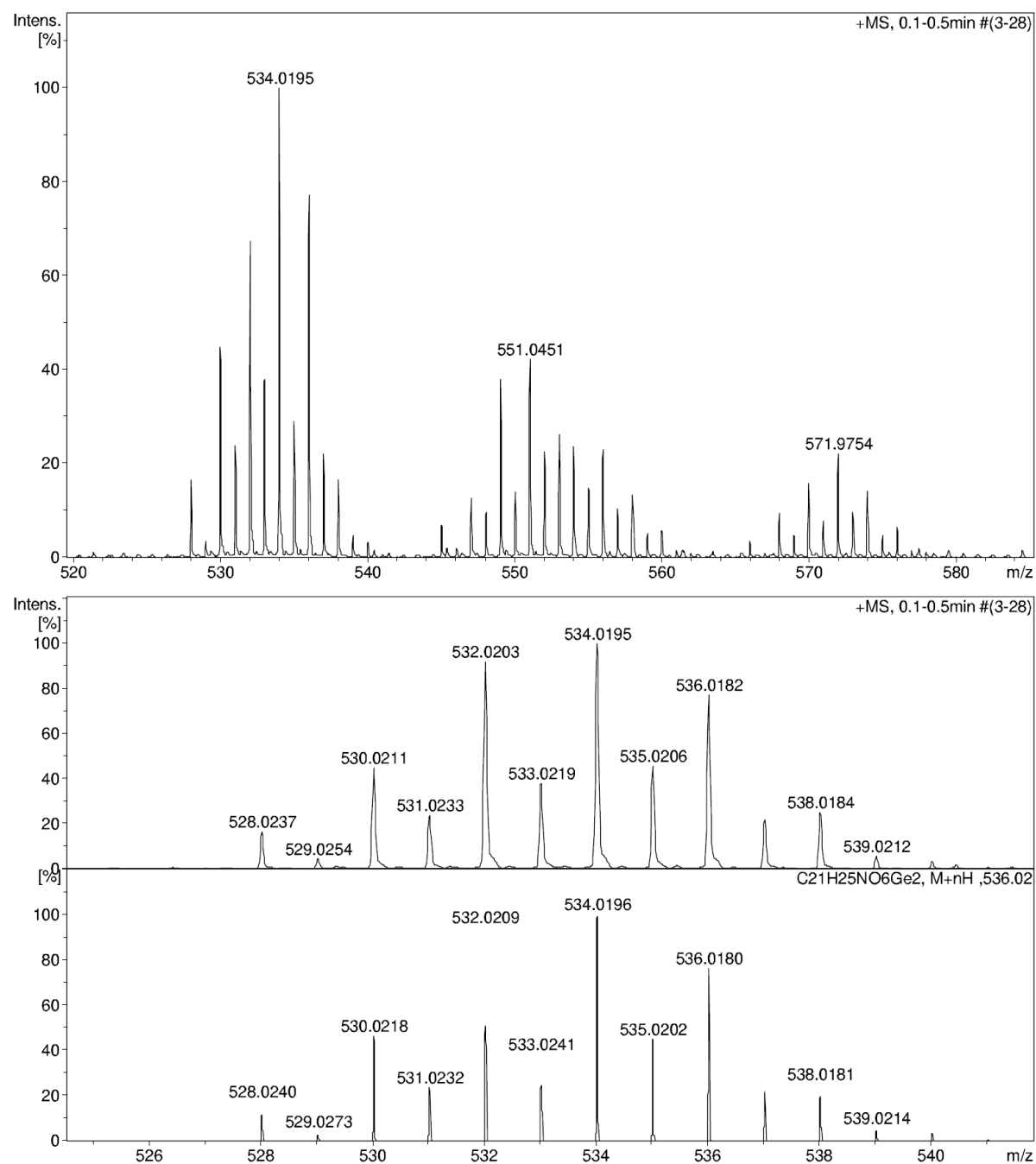


Figure S3 IR spectrum of 1,1'-diphenyl-bis-germatrane **1**



**Figure S4** HRMS (ESI-MS) spectrum of 1,1'-diphenyl-bis-germatrane **1**: Full experimental (top), [M+H]<sup>+</sup> part of experimental (middle), and calculated [M+H]<sup>+</sup> part (bottom).