

## Electronic supplementary information

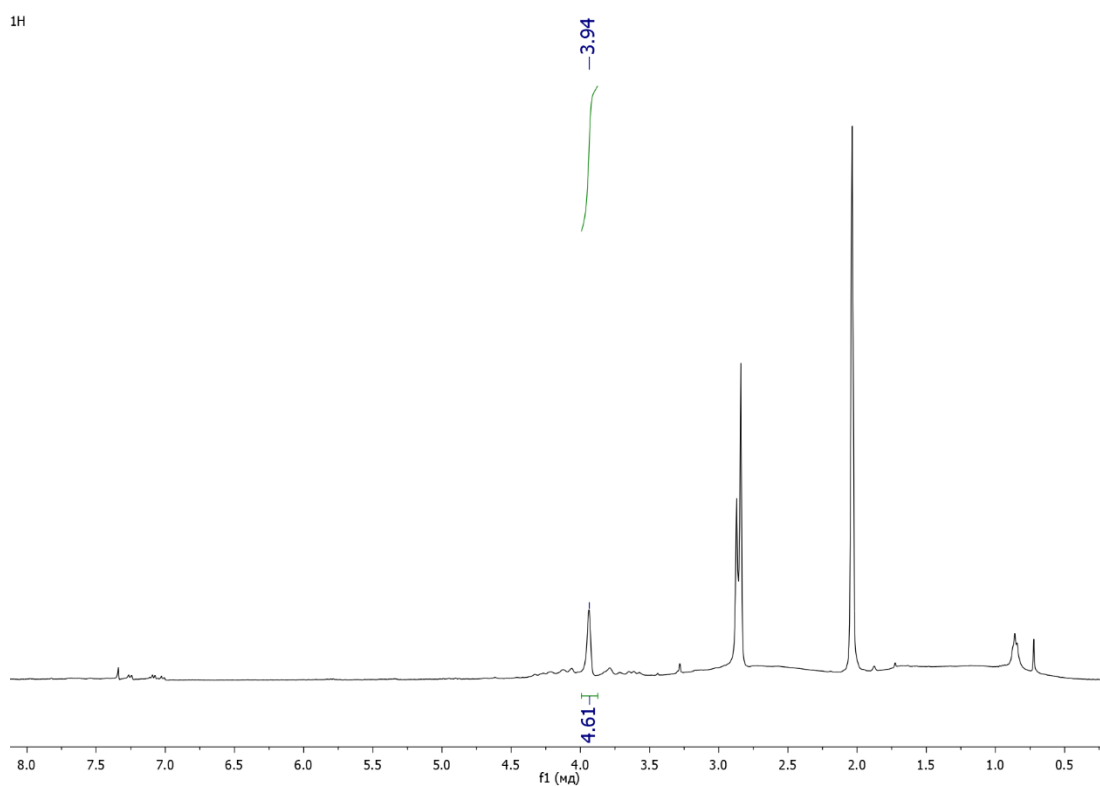
### 8,8'- $\mu$ -AMMONIUM DERIVATIVE OF COBALT BIS(DICARBOLLIDE) [8,8'- $\mu$ -NH<sub>2</sub>-3,3'-Co(1,2-C<sub>2</sub>B<sub>9</sub>H<sub>10</sub>)<sub>2</sub>]

E. V. Bogdanova,<sup>\*a</sup> M. Yu. Stogniy,<sup>a,b</sup> and S. A. Anufriev<sup>a</sup>

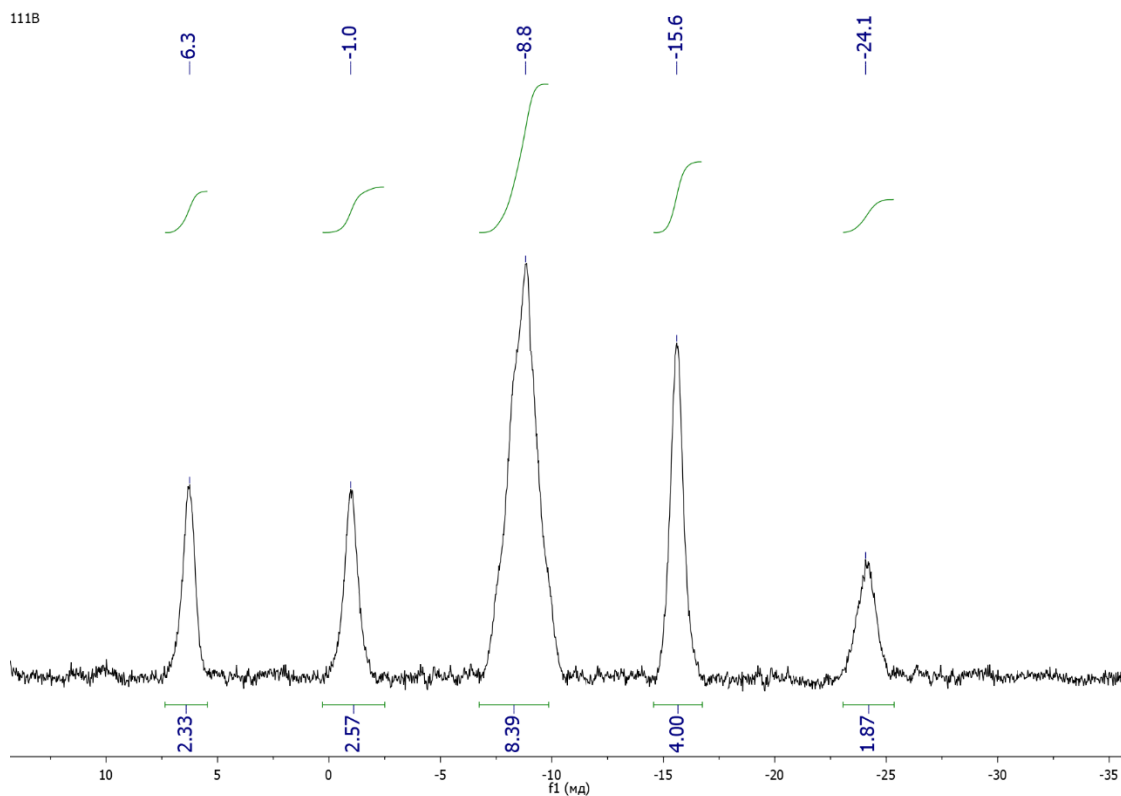
<sup>a</sup> Nesmeyanov Institute of Organoelement Compounds, Russian Academy of Sciences,  
ul. Vavilova 28, str. 1, Moscow, 119334 Russia

<sup>b</sup> Lomonosov Institute of Fine Chemical Technologies, MIREA–Russian Technological  
University, pr. Vernadskogo 86, Moscow, 119571 Russia

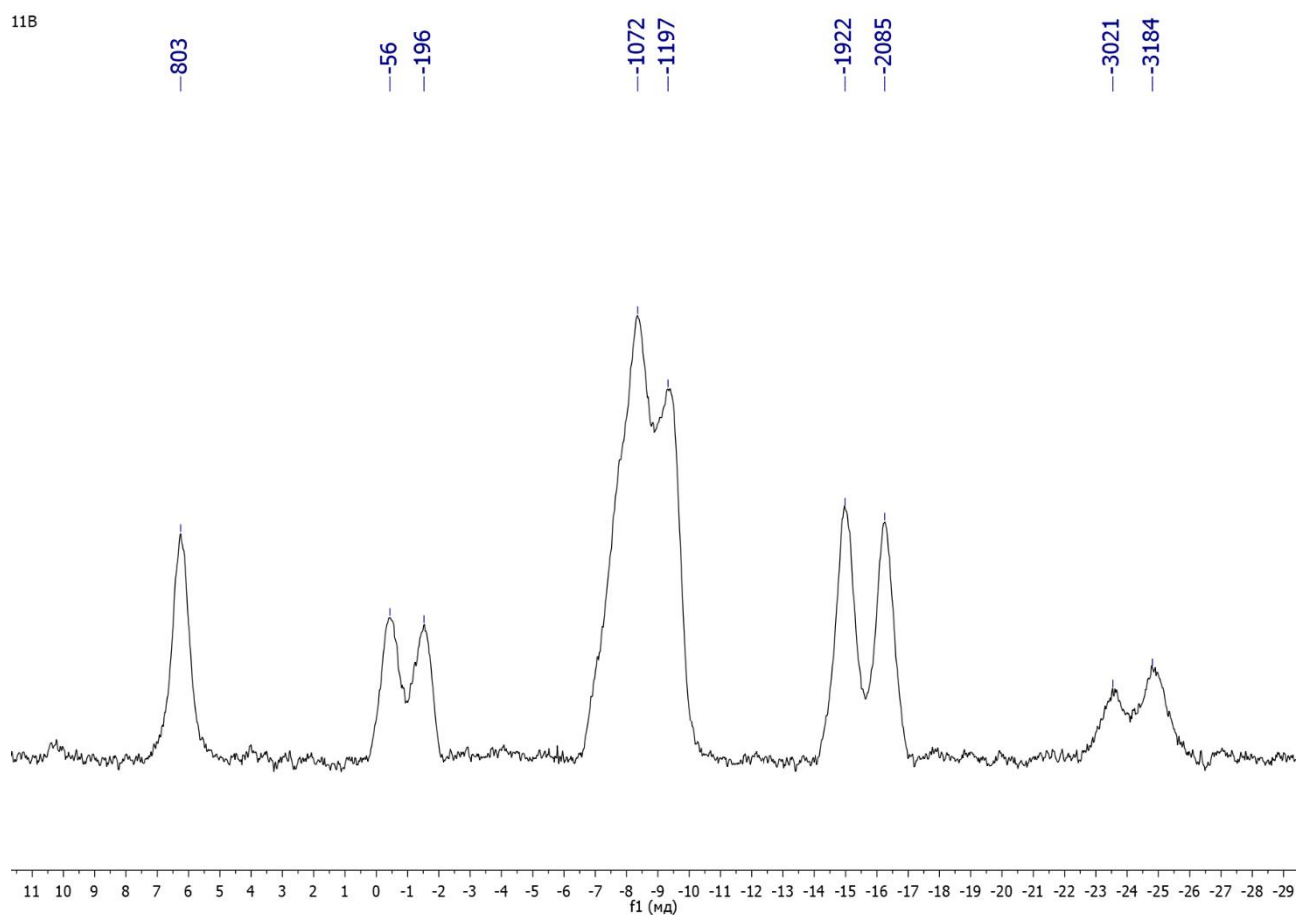
#### Multinuclear NMR spectra of compound [8,8'- $\mu$ -NH<sub>2</sub>-3,3'-Co(1,2-C<sub>2</sub>B<sub>9</sub>H<sub>10</sub>)<sub>2</sub>]



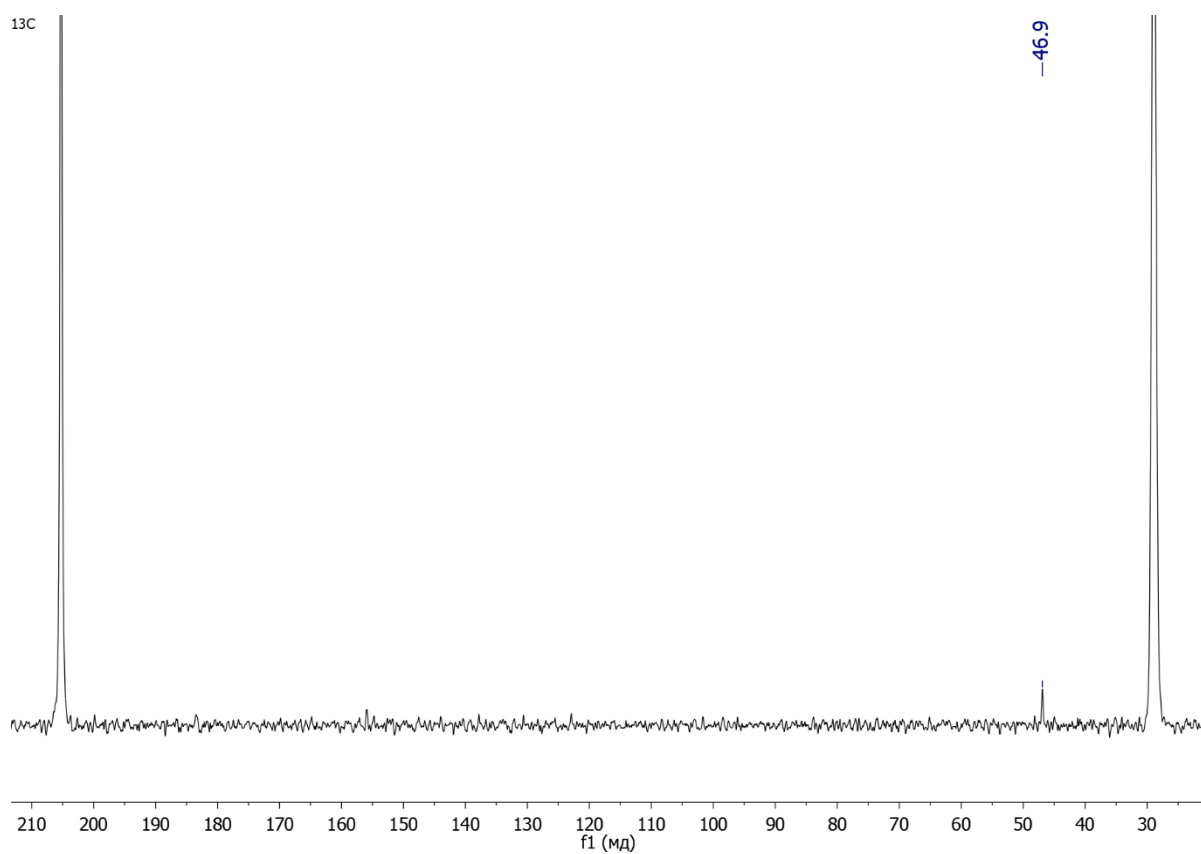
**Figure S1.** <sup>1</sup>H NMR spectrum of compound **2** (acetone-*d*<sub>6</sub>).



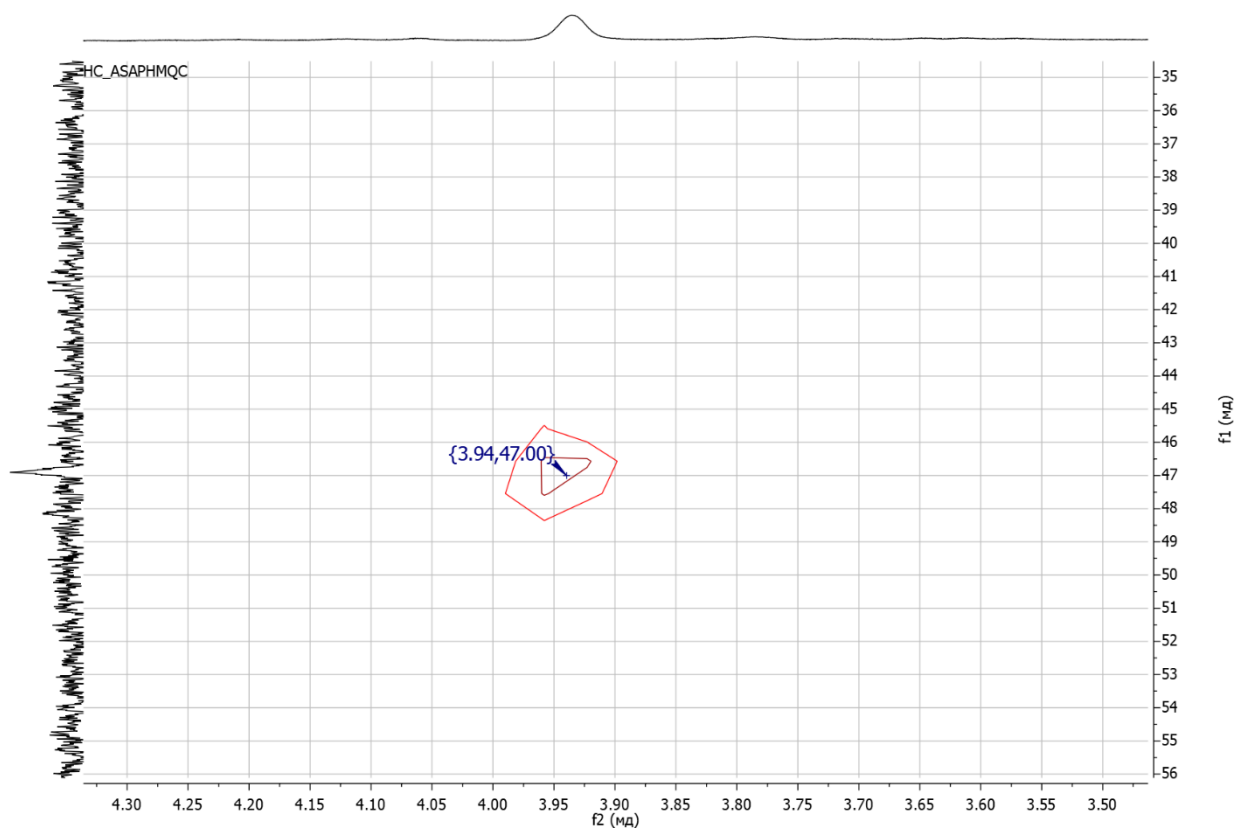
**Figure S2.**  $^{11}\text{B}\{^1\text{H}\}$  NMR spectrum of compound **2** (acetone- $d_6$ ).



**Figure S3.**  $^{11}\text{B}$  NMR spectrum of compound **2** (acetone- $d_6$ ).



**Figure S4.**  $^{13}\text{C}$  NMR spectrum of compound **2** (acetone- $d_6$ ).



**Figure S5.**  $^1\text{H}$ - $^{13}\text{C}$  NMR HMQC spectrum of compound **2** (acetone- $d_6$ ).

**Proposed reaction mechanism**