

Supporting Information for:

**Stabilization of propene complexes by intramolecular coordination of thioether  
function**

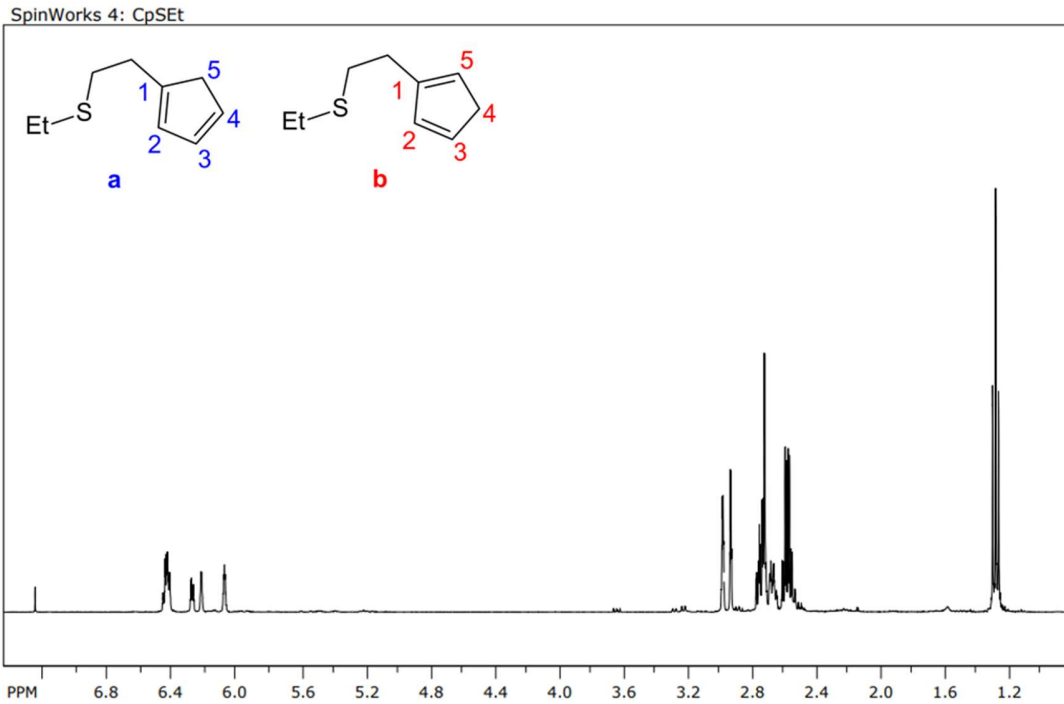
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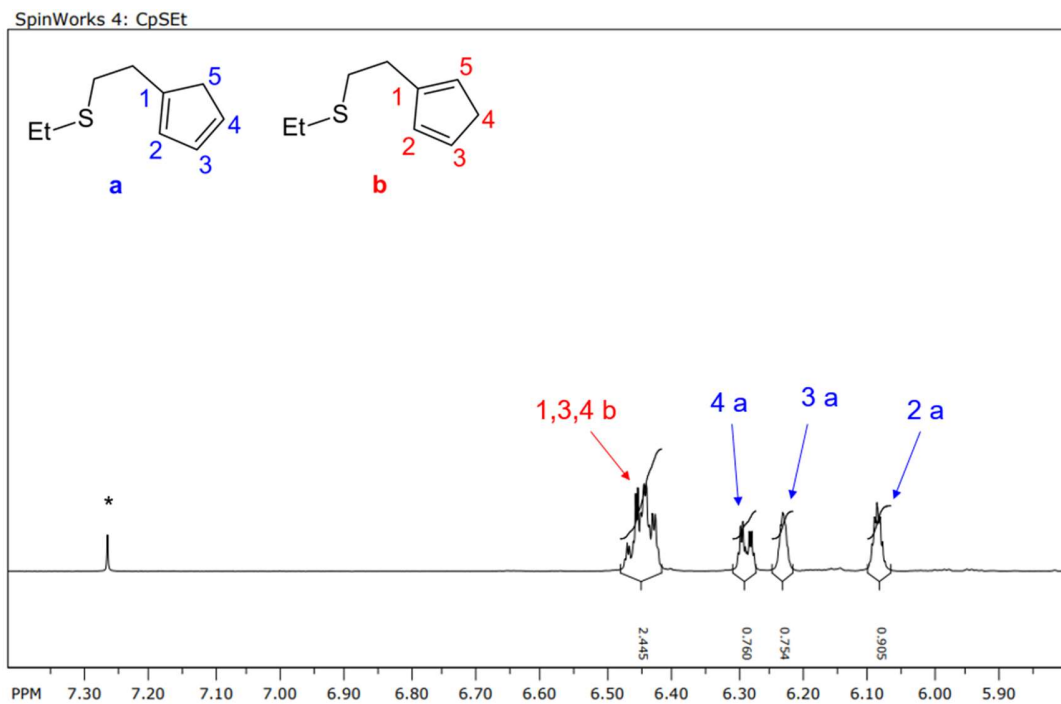
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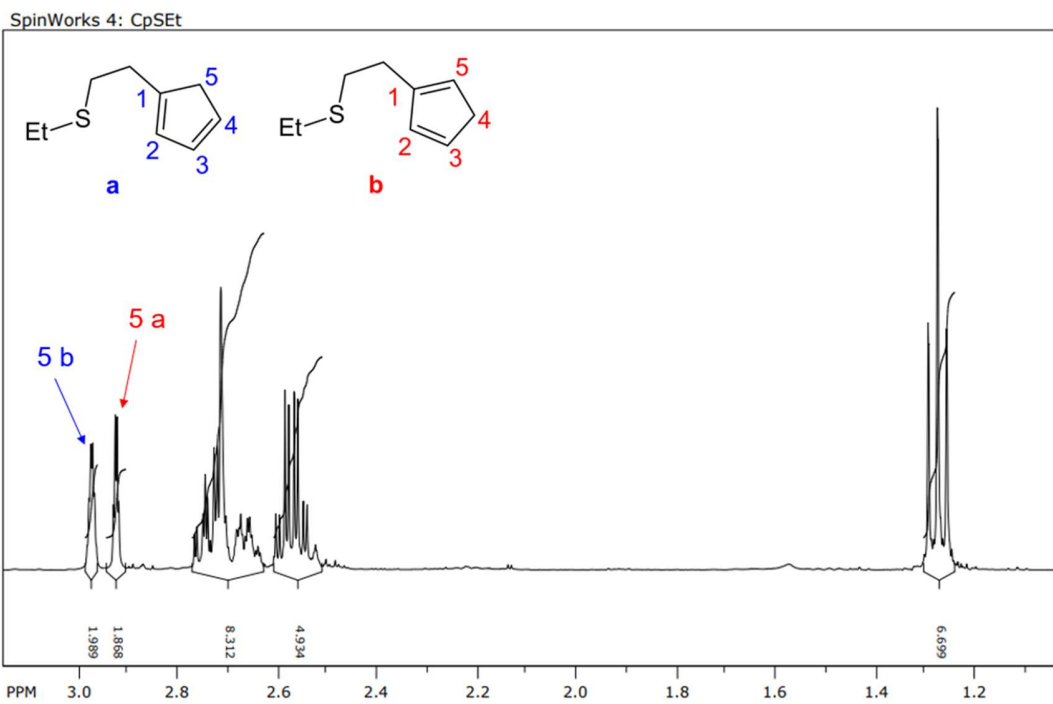
<sup>d</sup>Institute of Chemistry and Technology of Macromolecular Materials, Faculty of  
Chemical Technology, University of Pardubice, Studentská 573, 532 10 Pardubice,  
Czech Republic.



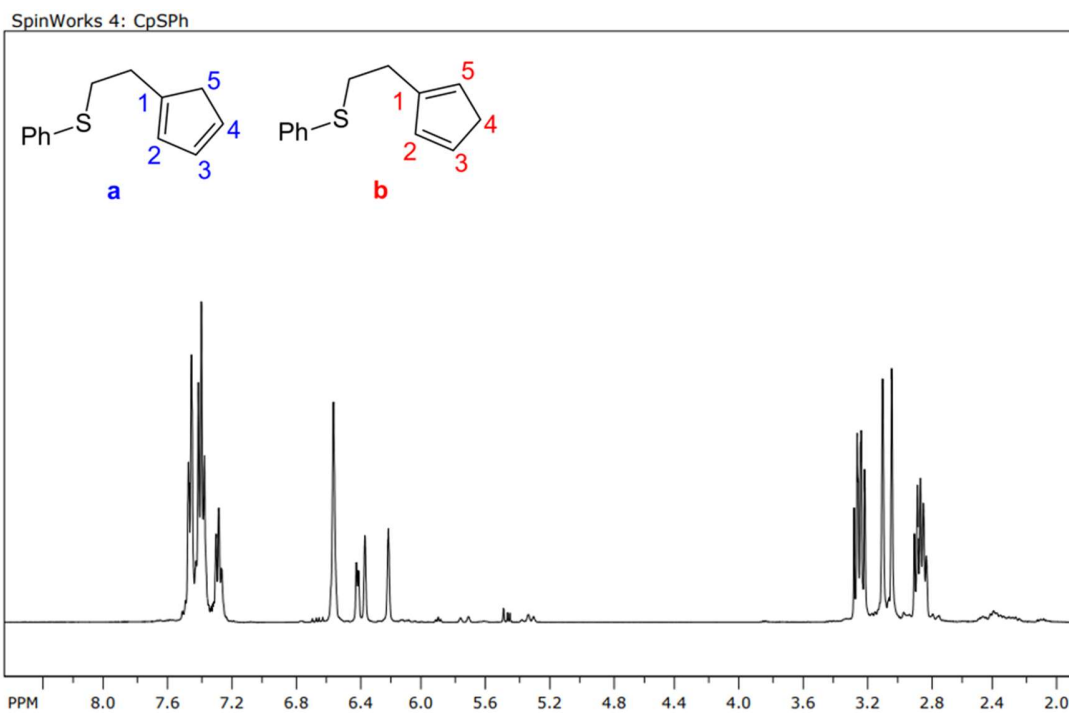
**Figure S1:**  $^1\text{H}$  NMR spectrum of  $\text{C}_5\text{H}_4(\text{CH}_2)_2\text{SEt}$  in  $\text{CDCl}_3$  (400 MHz)



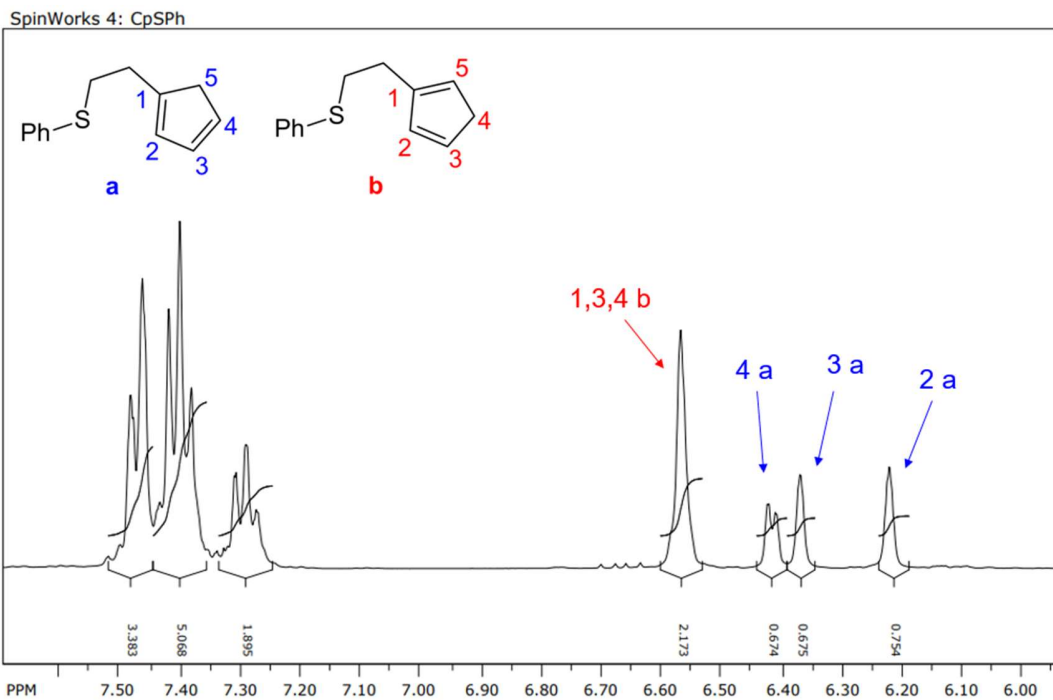
**Figure S2:**  $^1\text{H}$  NMR spectrum of  $\text{C}_5\text{H}_4(\text{CH}_2)_2\text{SEt}$  in  $\text{CDCl}_3$  (400 MHz), close-up of the aromatic section



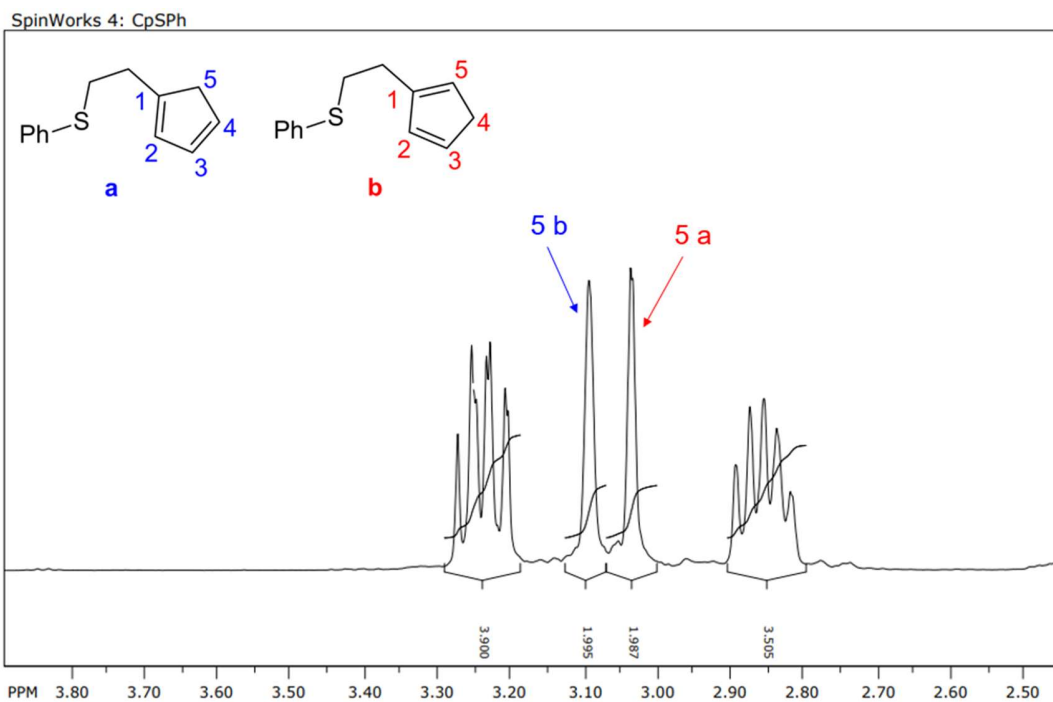
**Figure S3:**  $^1\text{H}$  NMR spectrum of  $\text{C}_5\text{H}_4(\text{CH}_2)_2\text{SEt}$  in  $\text{CDCl}_3$  (400 MHz), close-up of the aliphatic section



**Figure S4:**  $^1\text{H}$  NMR spectrum of  $\text{C}_5\text{H}_4(\text{CH}_2)_2\text{SPh}$  in  $\text{CDCl}_3$  (400 MHz)

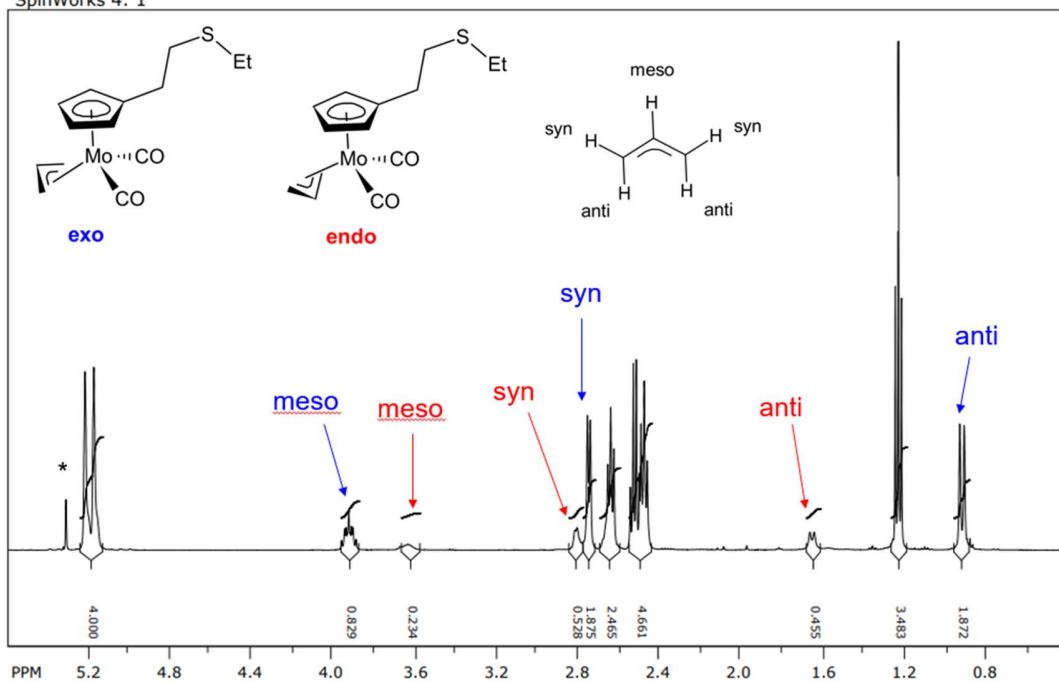


**Figure S5:**  $^1\text{H}$  NMR spectrum of  $\text{C}_5\text{H}_4(\text{CH}_2)_2\text{SPh}$  in  $\text{CDCl}_3$  (400 MHz), close-up of the aromatic section



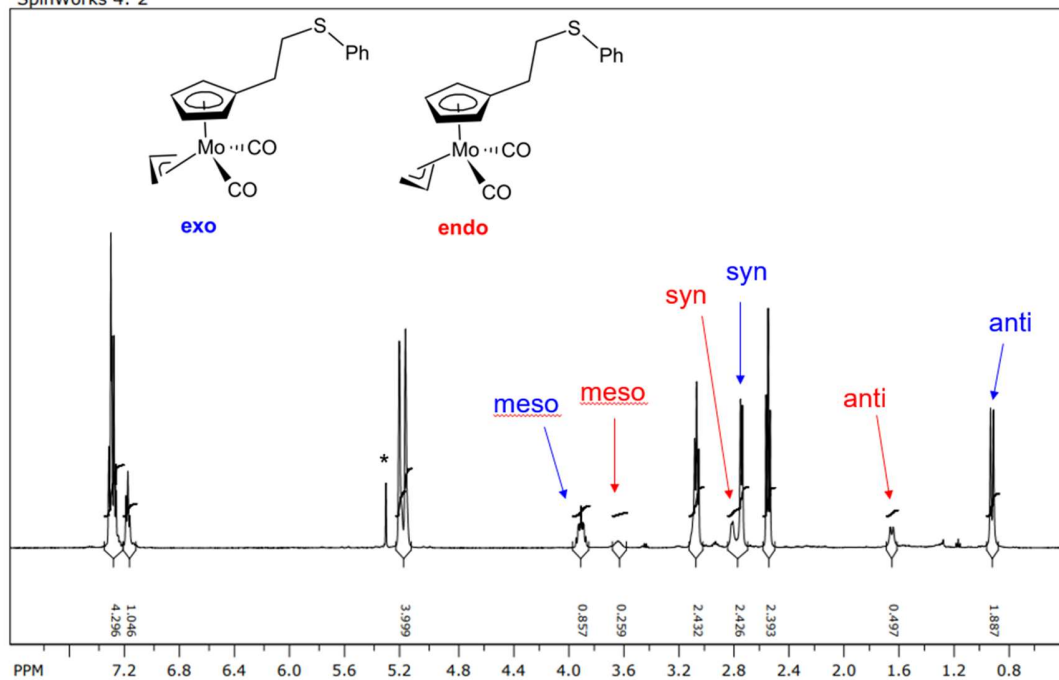
**Figure S6:**  $^1\text{H}$  NMR spectrum of  $\text{C}_5\text{H}_4(\text{CH}_2)_2\text{SPh}$  in  $\text{CDCl}_3$  (400 MHz), close-up of the aliphatic section

SpinWorks 4: 1



**Figure S7:**  $^1\text{H}$  NMR spectrum of **1** in  $\text{CD}_2\text{Cl}_2$  (500 MHz)

SpinWorks 4: 2



**Figure S8:**  $^1\text{H}$  NMR spectrum of **2** in  $\text{CD}_2\text{Cl}_2$  (500 MHz)

SpinWorks 4: 3

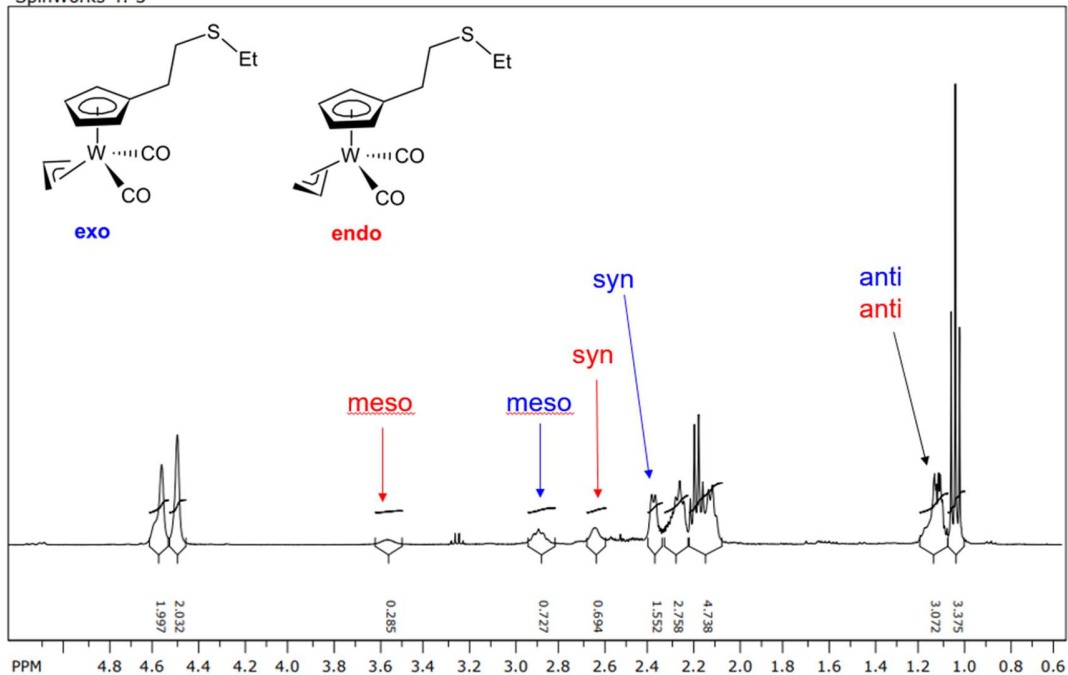


Figure S9:  $^1\text{H}$  NMR spectrum of **3** in  $\text{C}_6\text{D}_6$  (400 MHz)

SpinWorks 4: 4

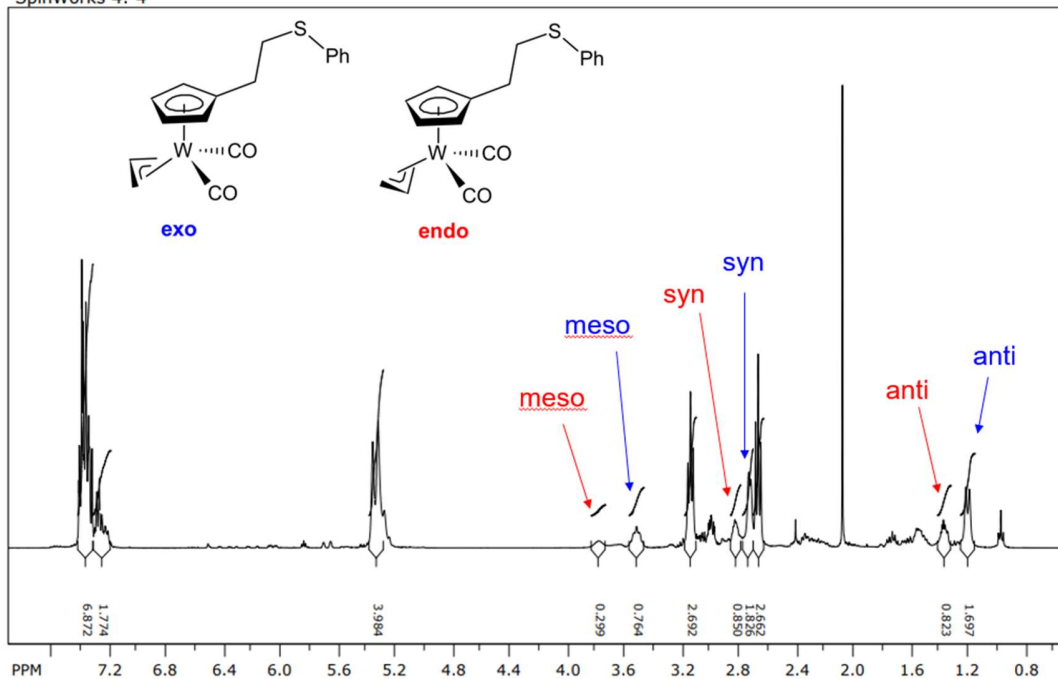
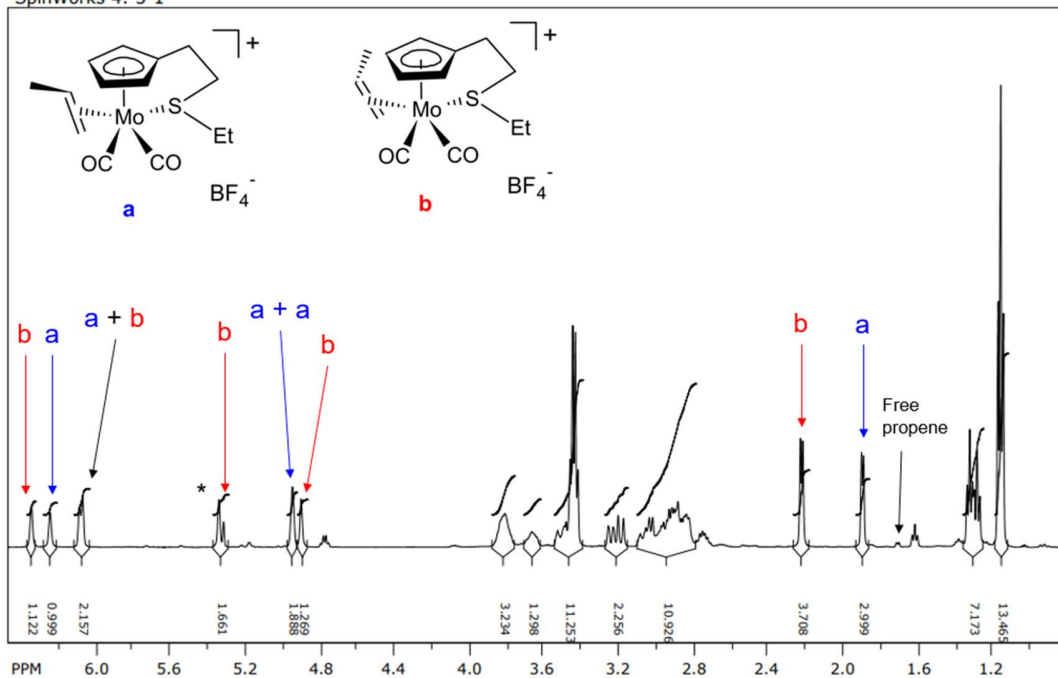


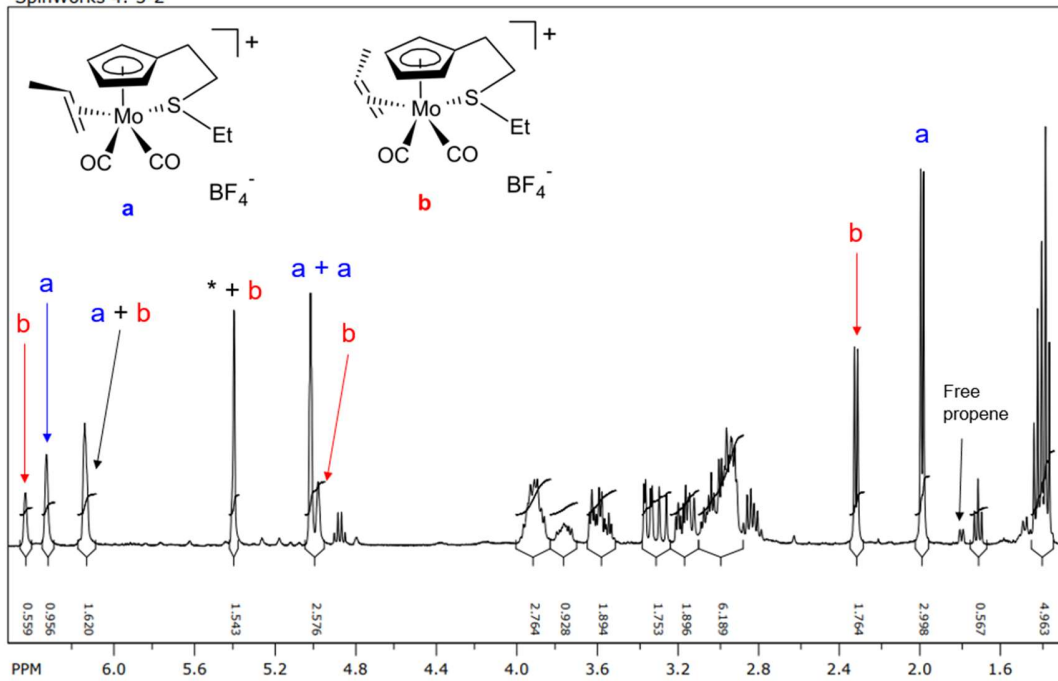
Figure S10:  $^1\text{H}$  NMR spectrum of **4** in  $\text{CDCl}_3$  (400 MHz)

SpinWorks 4: 5-1



**Figure S11:**  $^1\text{H}$  NMR spectrum of **5** in  $\text{CD}_2\text{Cl}_2$  (500 MHz) measured directly after the preparation of the sample.

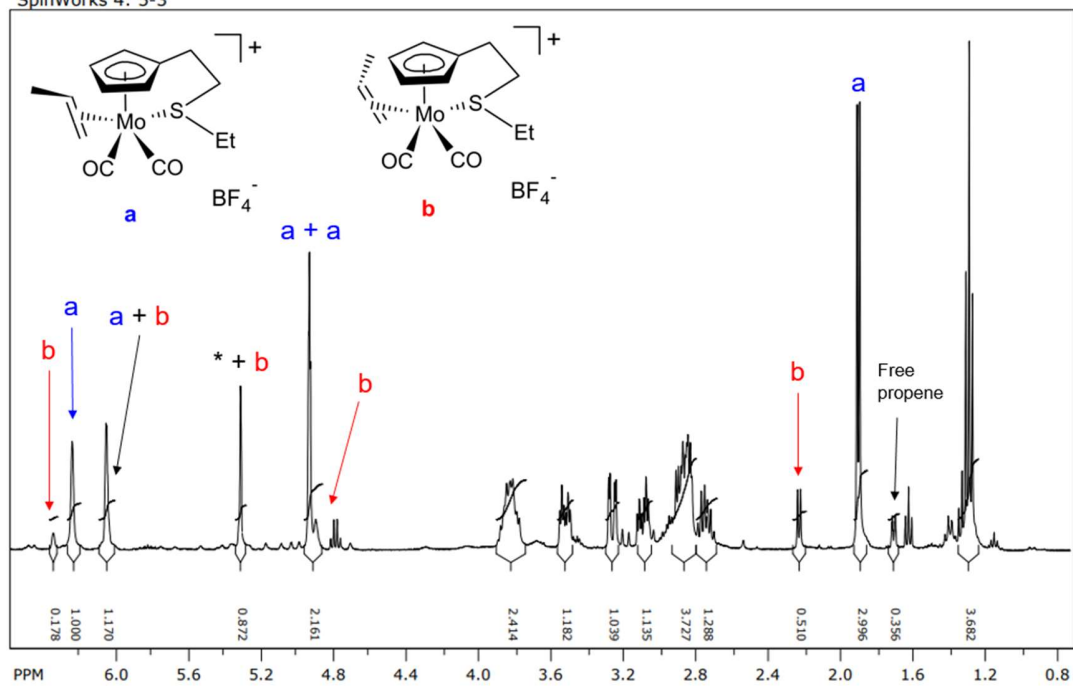
SpinWorks 4: 5-2



**Figure S12:**  $^1\text{H}$  NMR spectrum of **5** in  $\text{CD}_2\text{Cl}_2$  (500 MHz) measured after preparation with the internal standard.

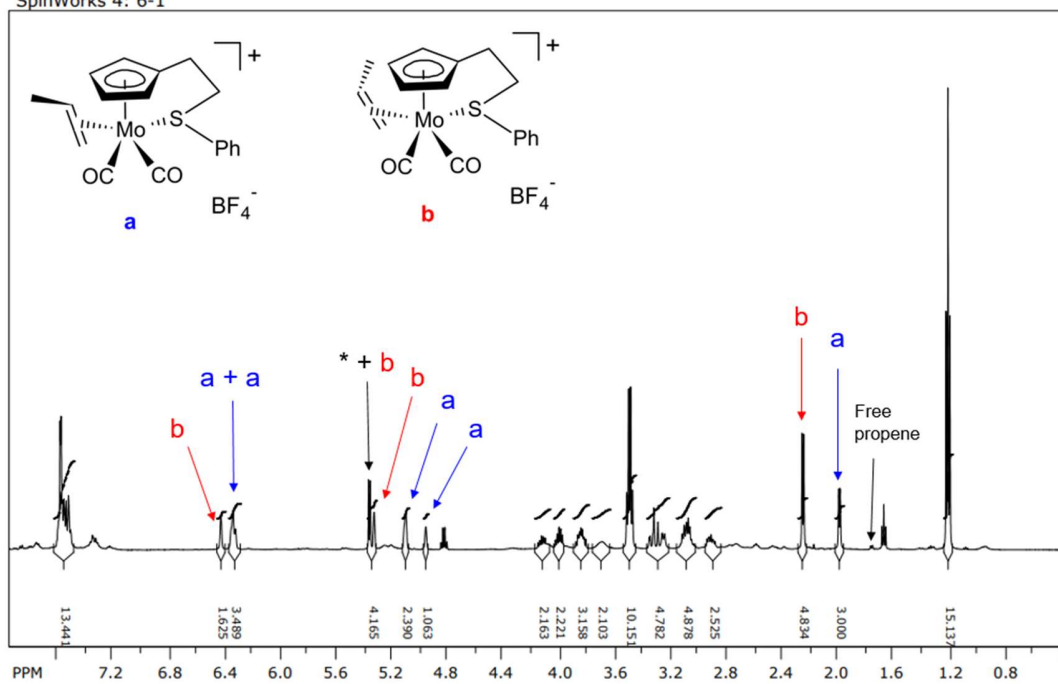


SpinWorks 4: 5-3



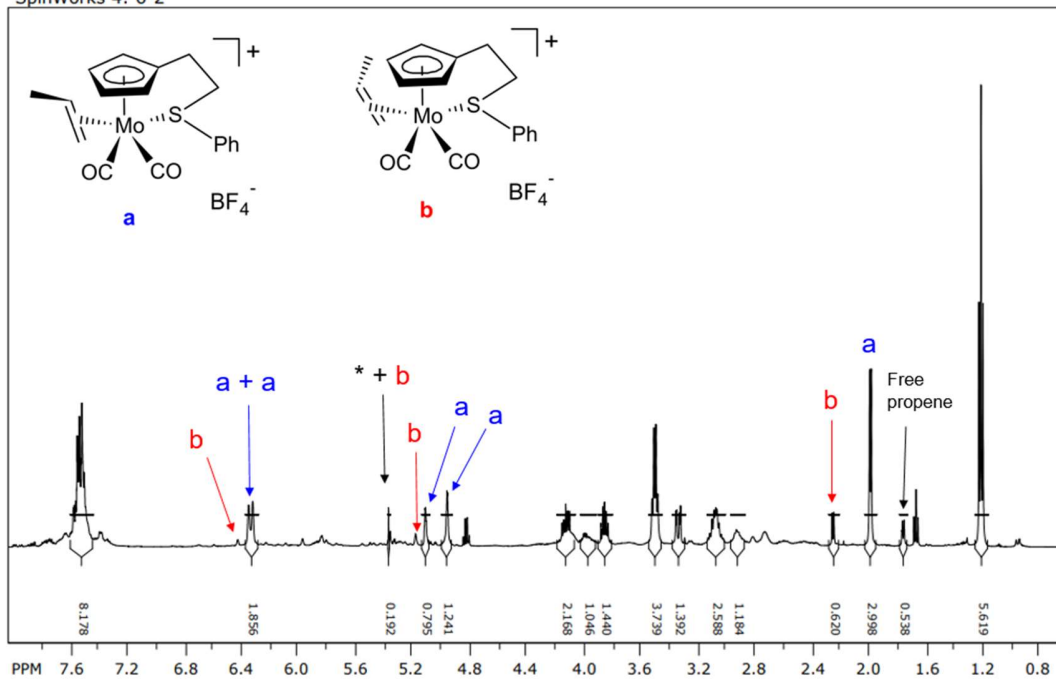
**Figure S13:**  $^1\text{H}$  NMR spectrum of **5** in  $\text{CD}_2\text{Cl}_2$  (500 MHz) measured after sitting at room temperature for two hours with the internal standard measured.

SpinWorks 4: 6-1

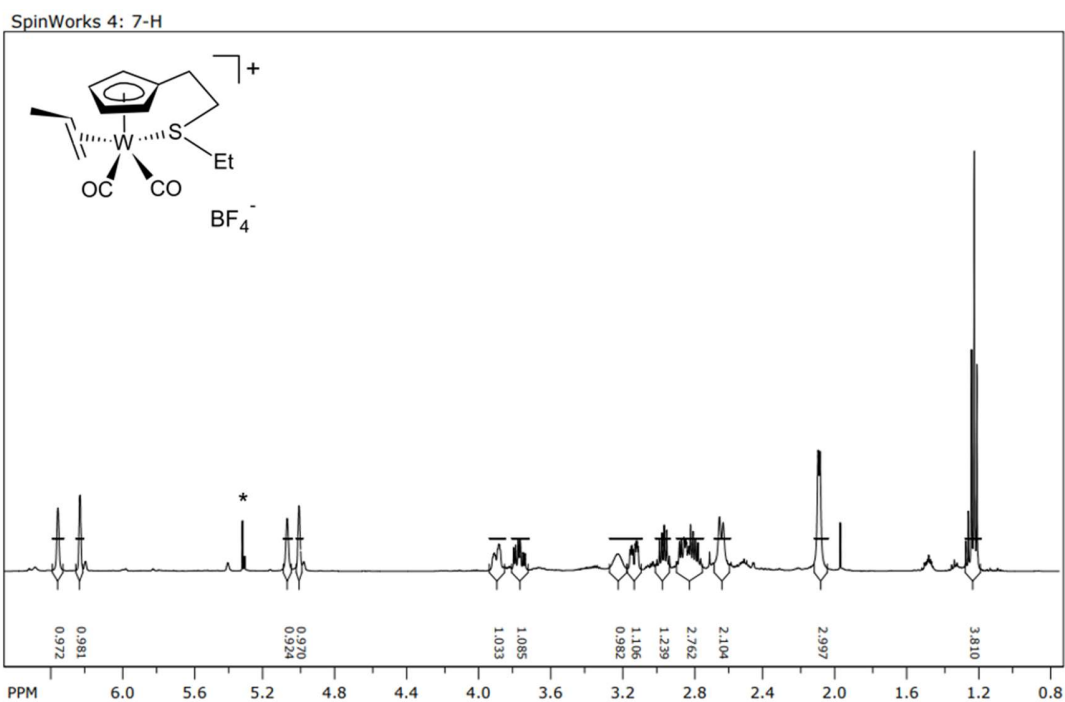


**Figure S14:**  $^1\text{H}$  NMR spectrum of **6** in  $\text{CD}_2\text{Cl}_2$  (500 MHz) measured directly after the preparation of the sample with the internal standard.

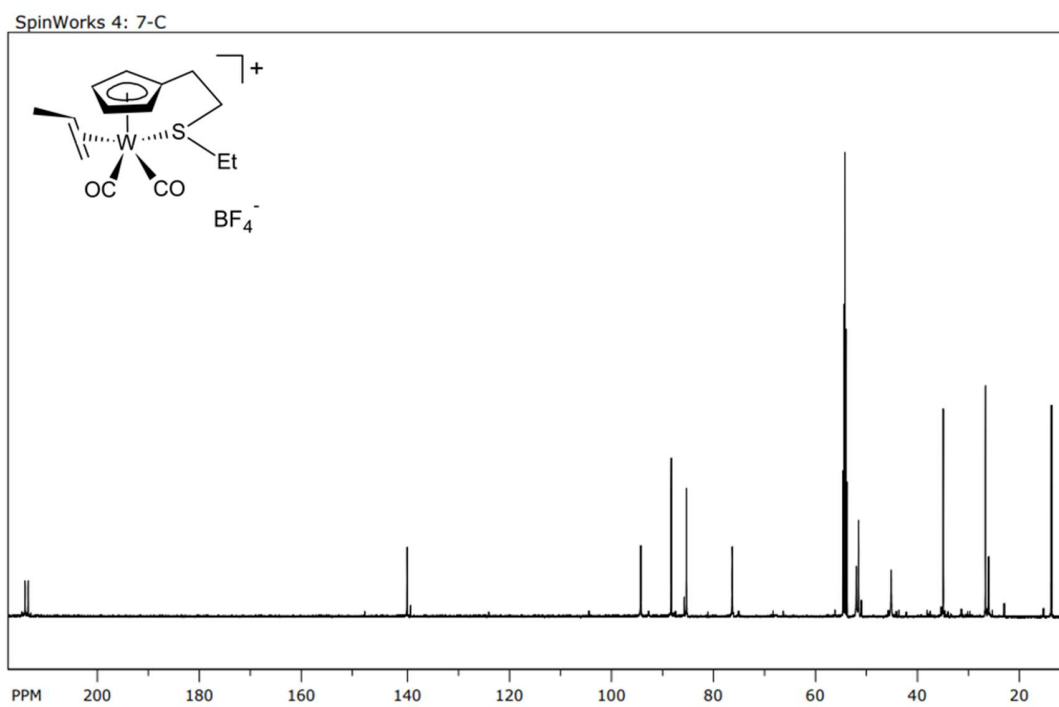
SpinWorks 4: 6-2



**Figure S15:**  $^1\text{H}$  NMR spectrum of **6** in  $\text{CD}_2\text{Cl}_2$  (500 MHz) measured after sitting at room temperature for two hours with the internal standard.

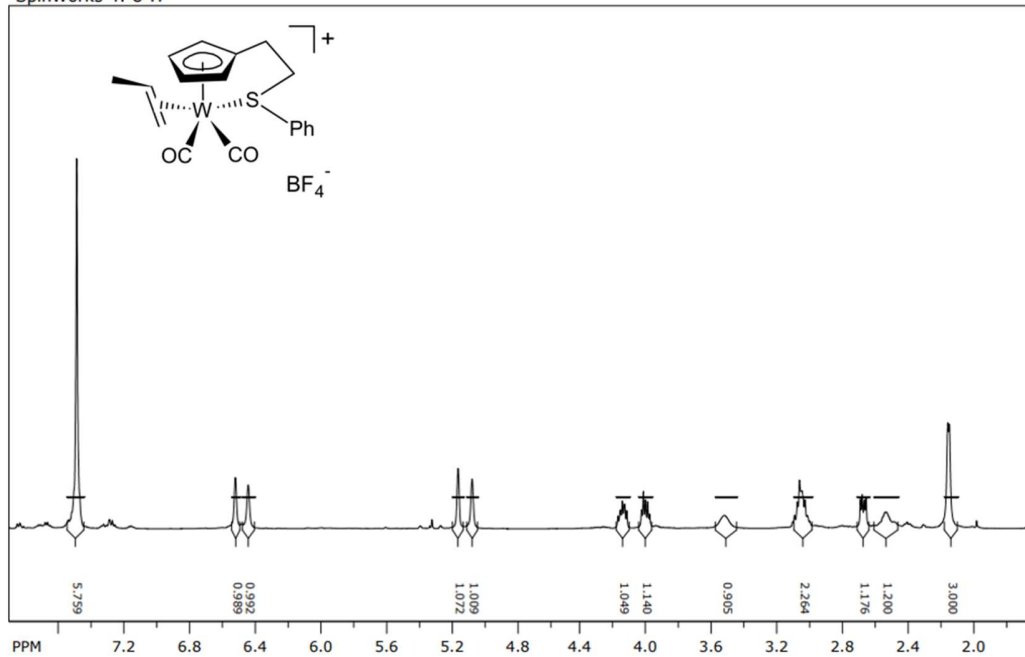


**Figure S16:** <sup>1</sup>H NMR spectrum of **7** in CD<sub>2</sub>Cl<sub>2</sub> (500 MHz).



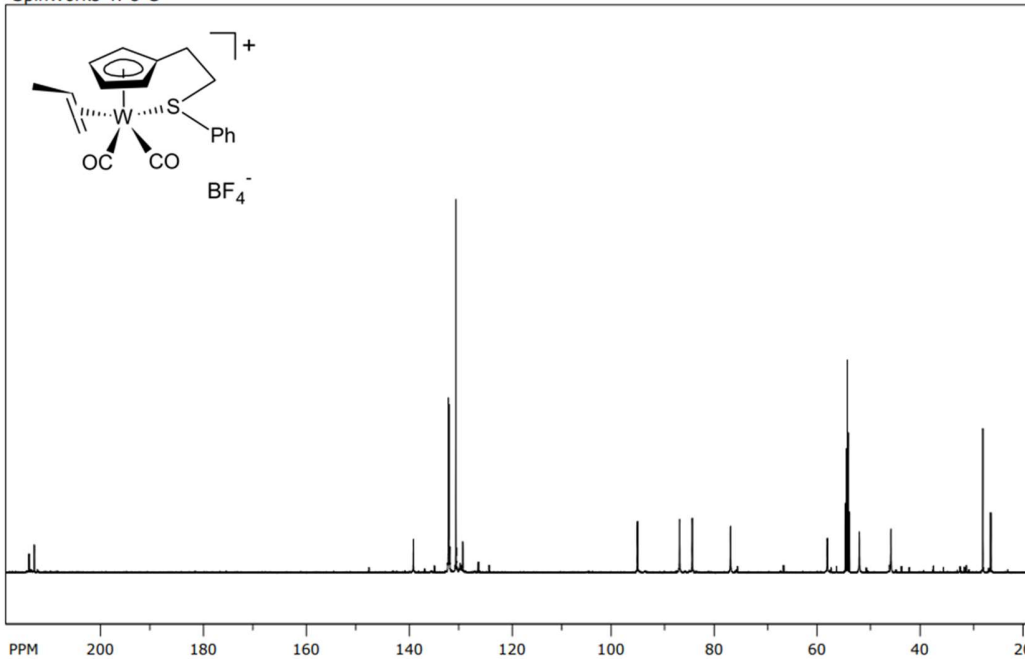
**Figure S17:** <sup>13</sup>C{<sup>1</sup>H} NMR spectrum of **7** in CD<sub>2</sub>Cl<sub>2</sub> (126 MHz).

SpinWorks 4: 8-H



**Figure S18:**  $^1\text{H}$  NMR spectrum of **8** in  $\text{CD}_2\text{Cl}_2$  (500 MHz).

SpinWorks 4: 8-C



**Figure S19:**  $^{13}\text{C}\{^1\text{H}\}$  NMR spectrum of **8** in  $\text{CD}_2\text{Cl}_2$  (126 MHz).

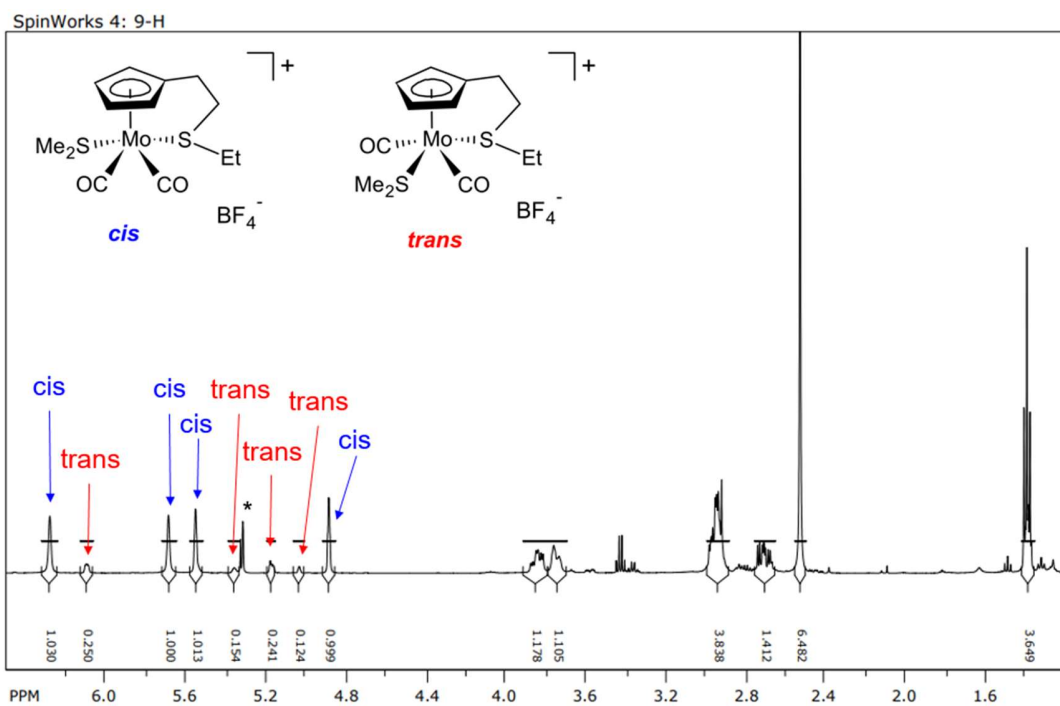


Figure S20:  $^1\text{H}$  NMR spectrum of **9** in  $\text{CD}_2\text{Cl}_2$  (500 MHz).

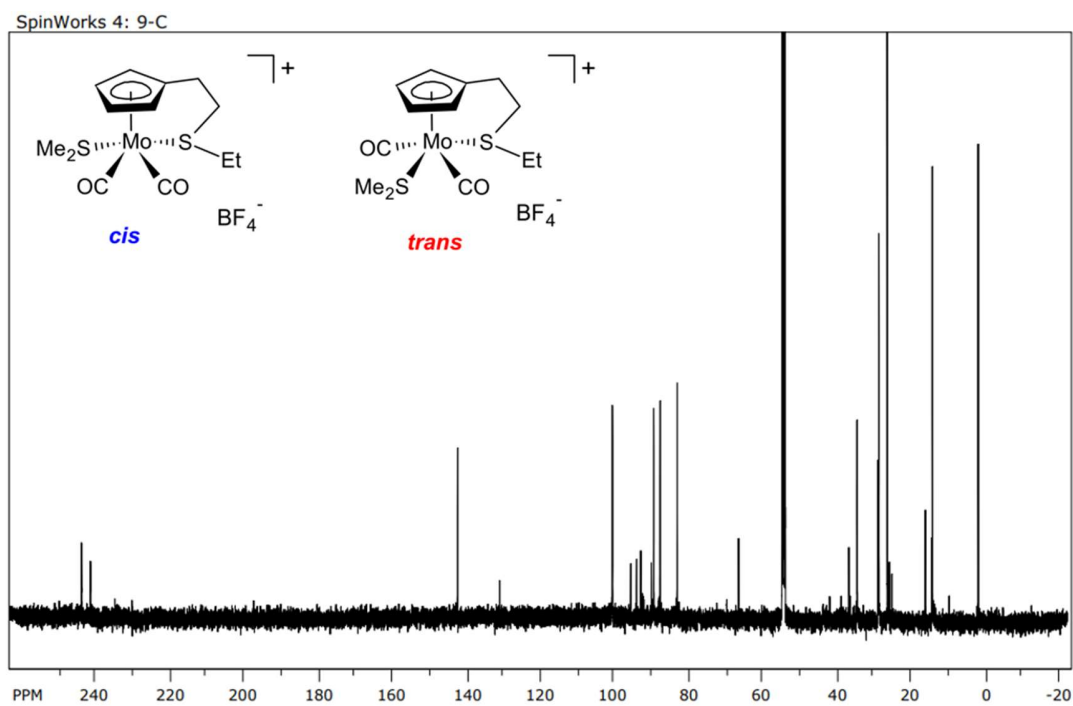


Figure S21:  $^{13}\text{C}\{^1\text{H}\}$  NMR spectrum of **9** in  $\text{CD}_2\text{Cl}_2$  (126 MHz).

SpinWorks 4: 10-H

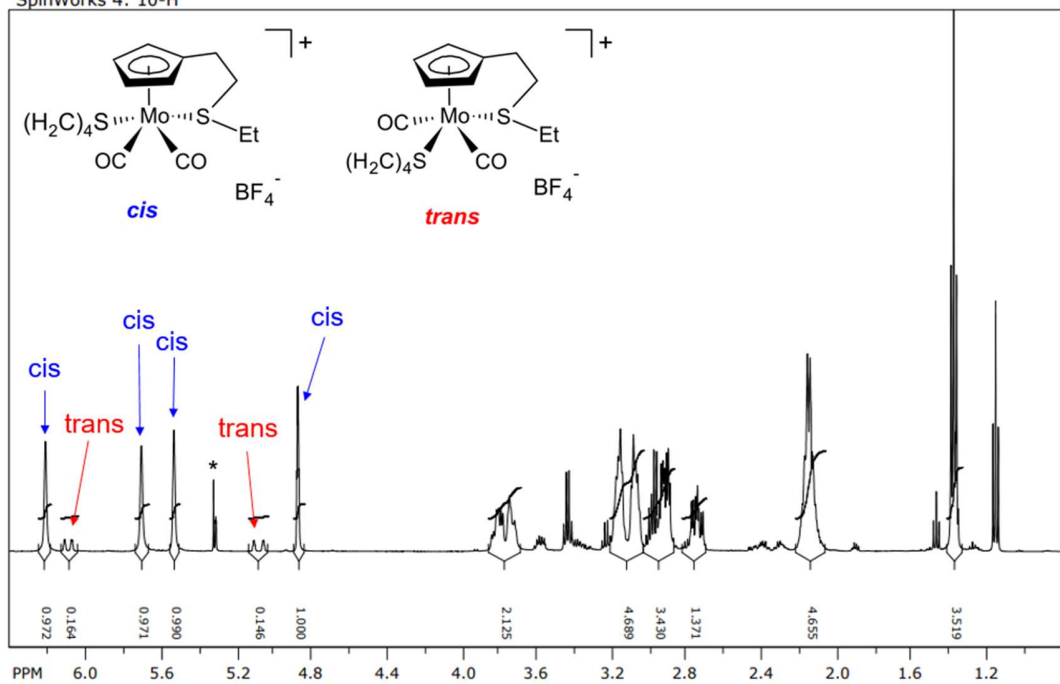


Figure S22:  $^1\text{H}$  NMR spectrum of **10** in  $\text{CD}_2\text{Cl}_2$  (500 MHz).

SpinWorks 4: 10-C

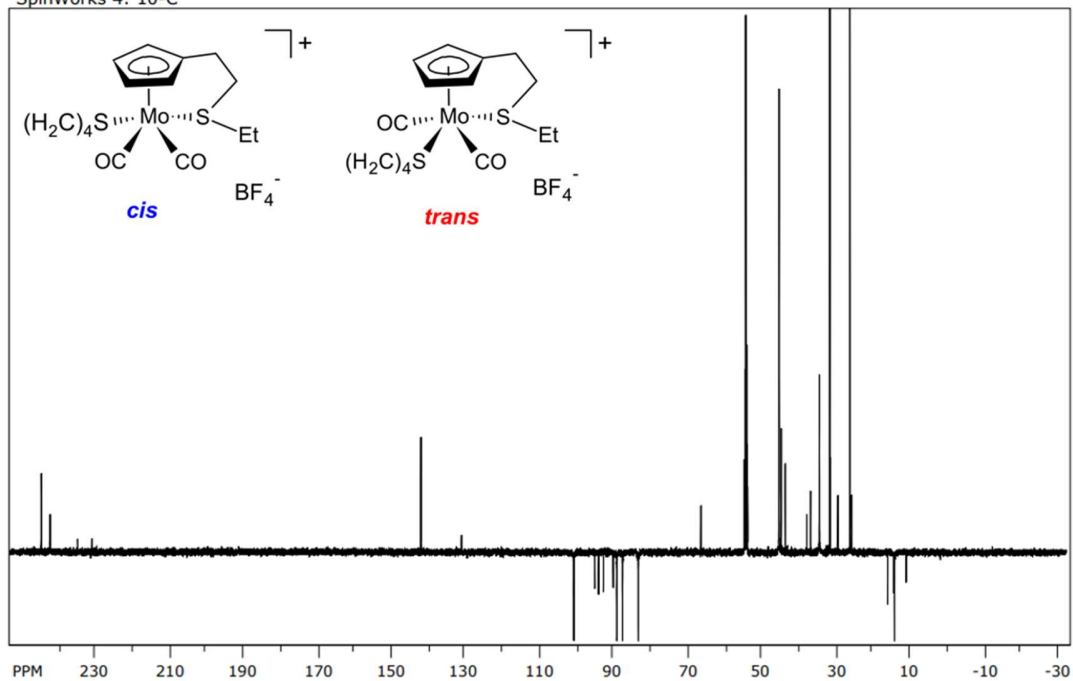
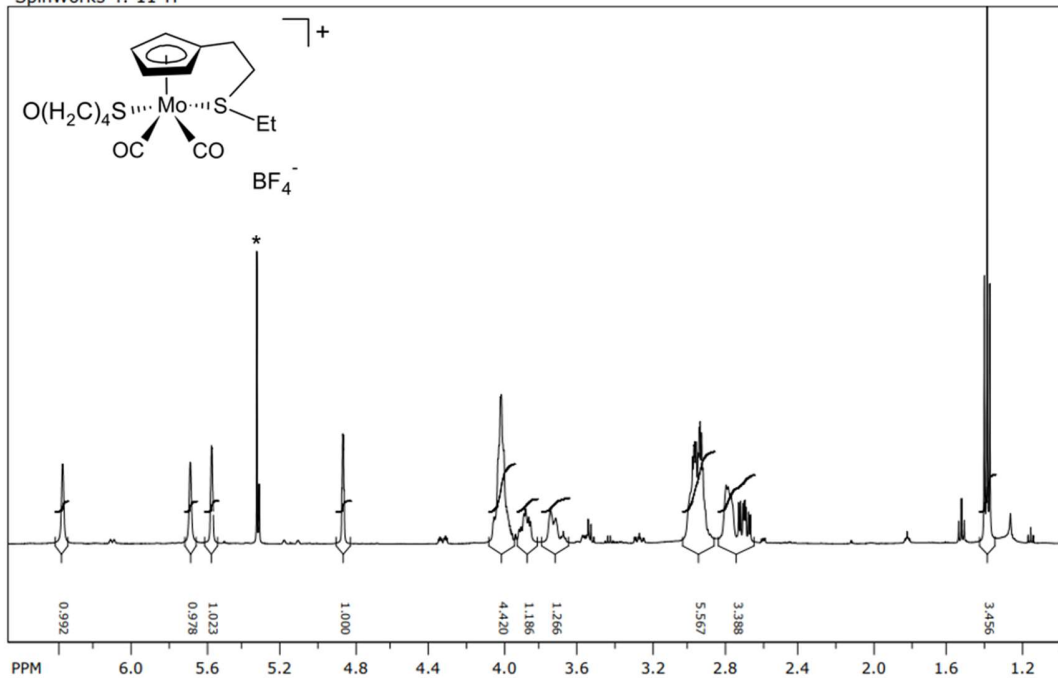


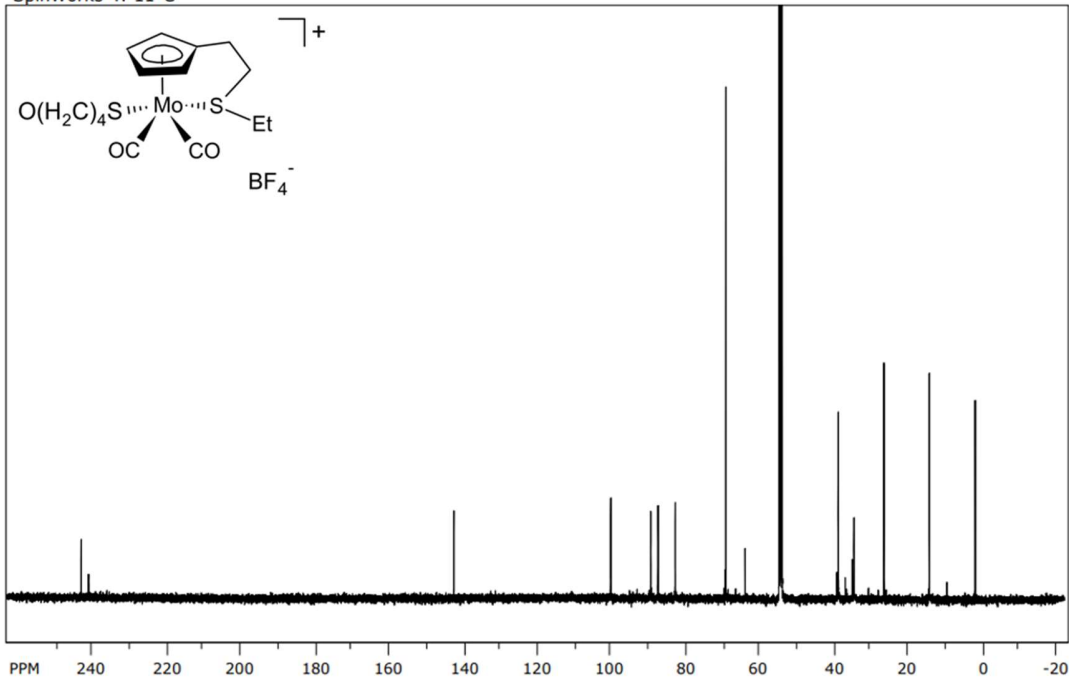
Figure 23:  $^{13}\text{C}$  APT NMR spectrum of **10** in  $\text{CD}_2\text{Cl}_2$  (126 MHz).

SpinWorks 4: 11-H



**Figure S24:** <sup>1</sup>H NMR spectrum of **11** in CD<sub>2</sub>Cl<sub>2</sub> (500 MHz).

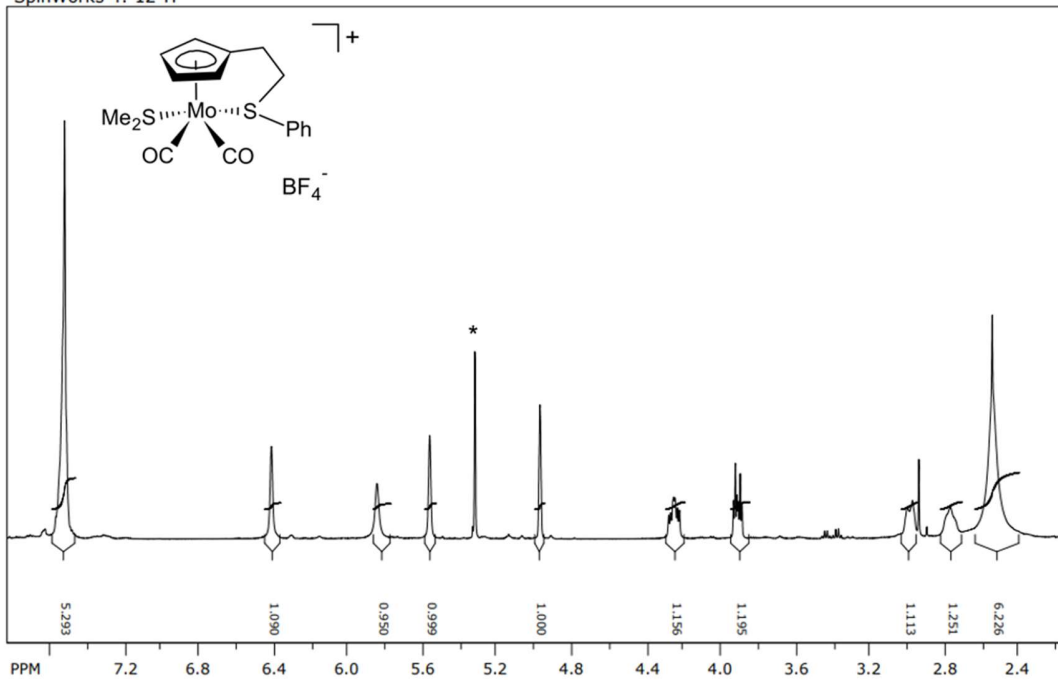
SpinWorks 4: 11-C



**Figure S25:** <sup>13</sup>C{<sup>1</sup>H} NMR spectrum of **11** in CD<sub>2</sub>Cl<sub>2</sub> (126 MHz).

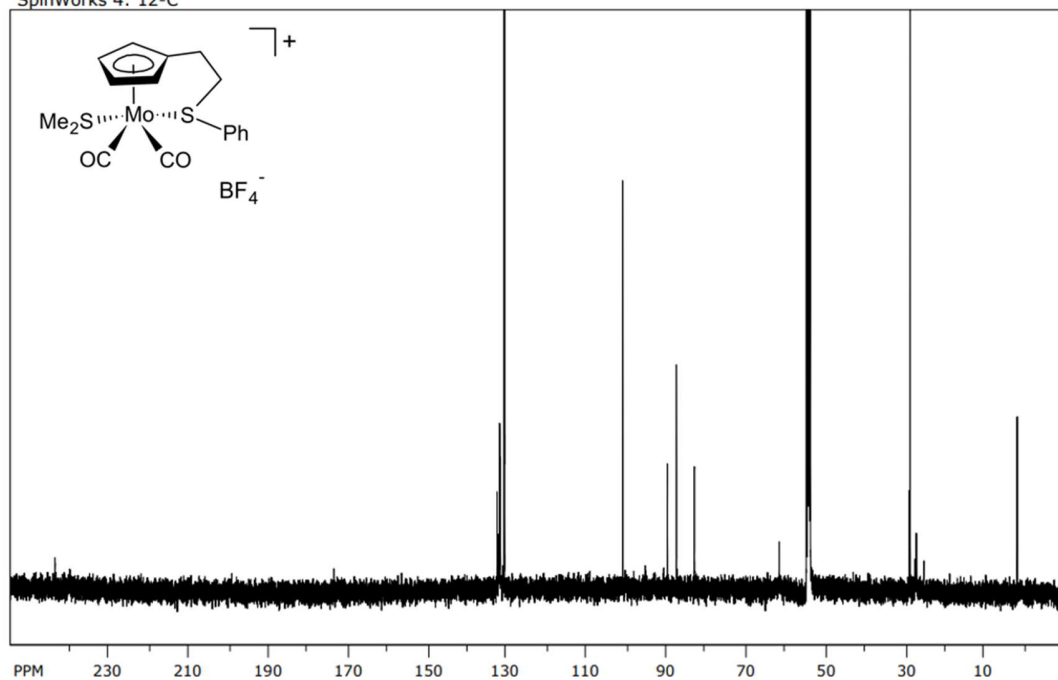


SpinWorks 4: 12-H



**Figure S26:** <sup>1</sup>H NMR spectrum of **12** in CD<sub>2</sub>Cl<sub>2</sub> (400 MHz).

SpinWorks 4: 12-C



**Figure S27:** <sup>13</sup>C{<sup>1</sup>H} NMR spectrum of **12** in CD<sub>2</sub>Cl<sub>2</sub> (126 MHz).

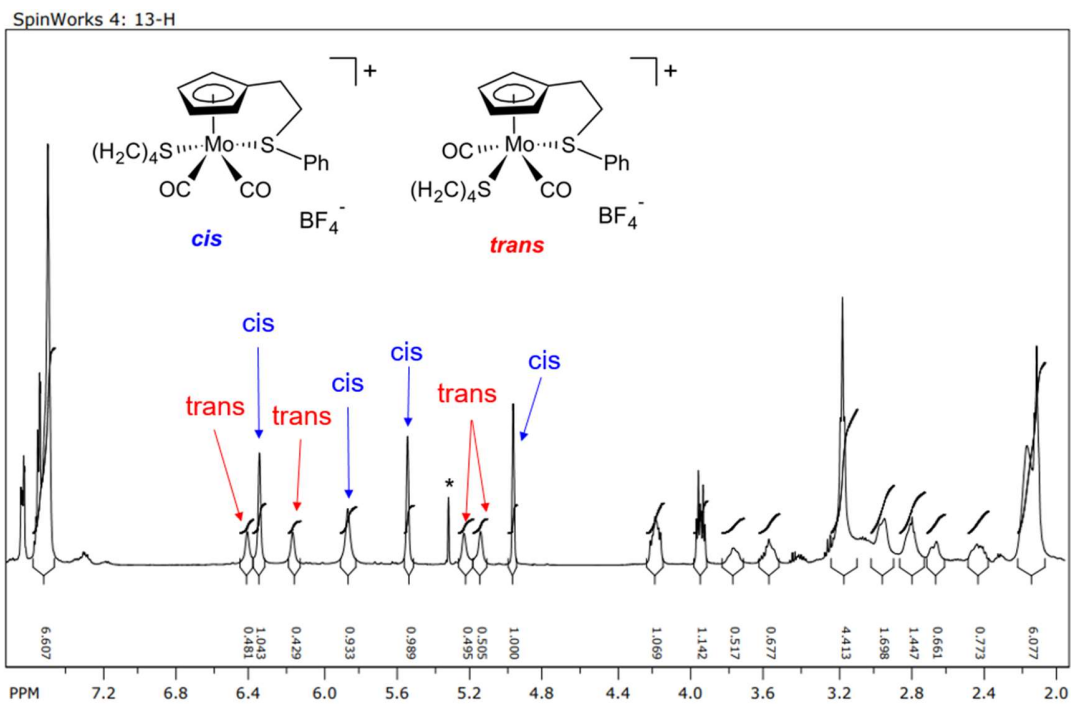


Figure S28:  $^1\text{H}$  NMR spectrum of **13** in  $\text{CD}_2\text{Cl}_2$  (500 MHz).

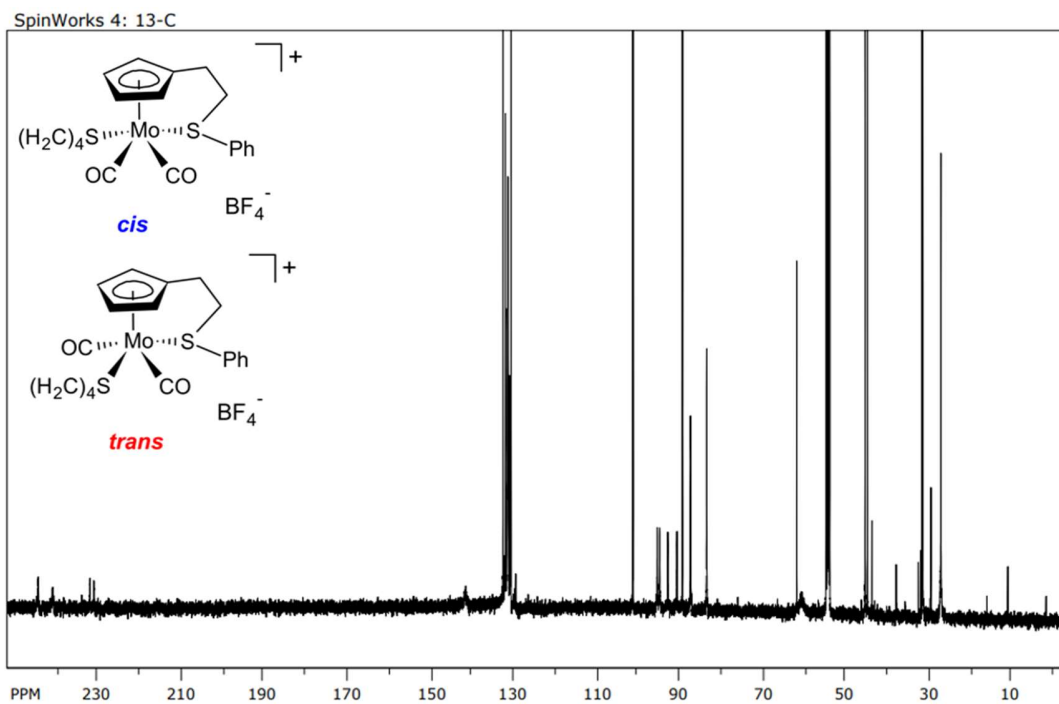
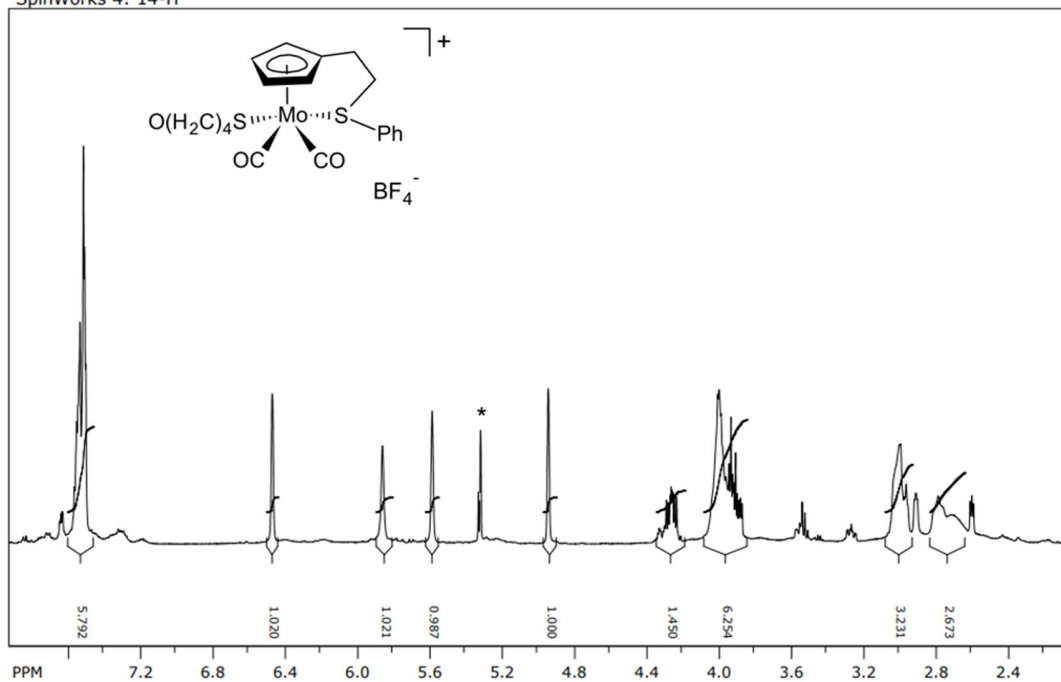


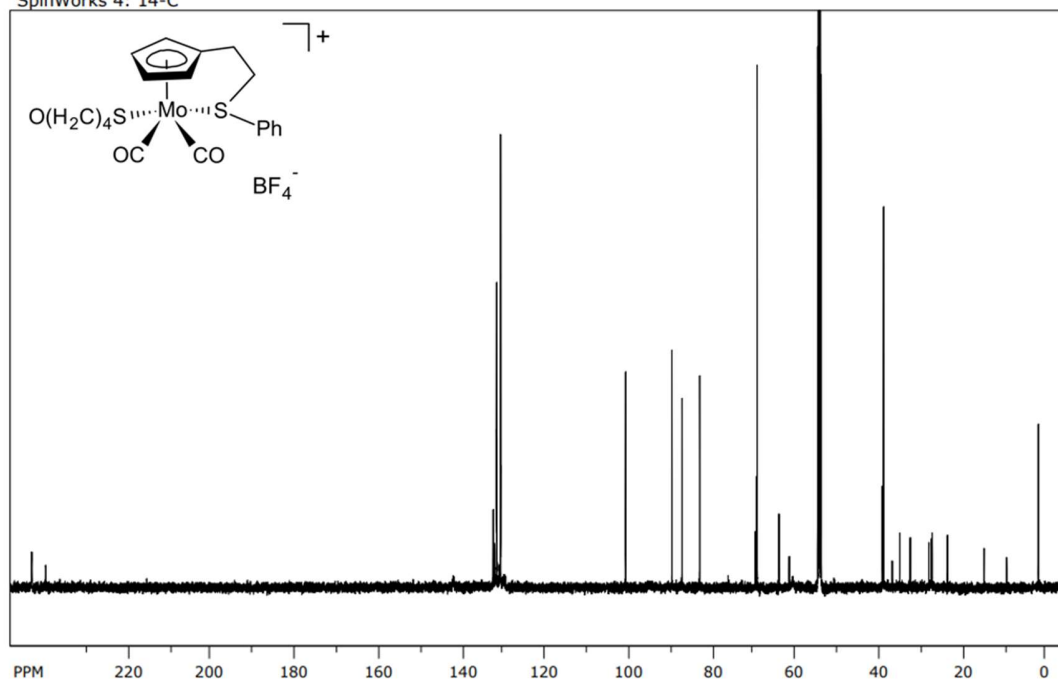
Figure S29:  $^{13}\text{C}\{^1\text{H}\}$  NMR spectrum of **13** in  $\text{CD}_2\text{Cl}_2$  (126 MHz).

SpinWorks 4: 14-H



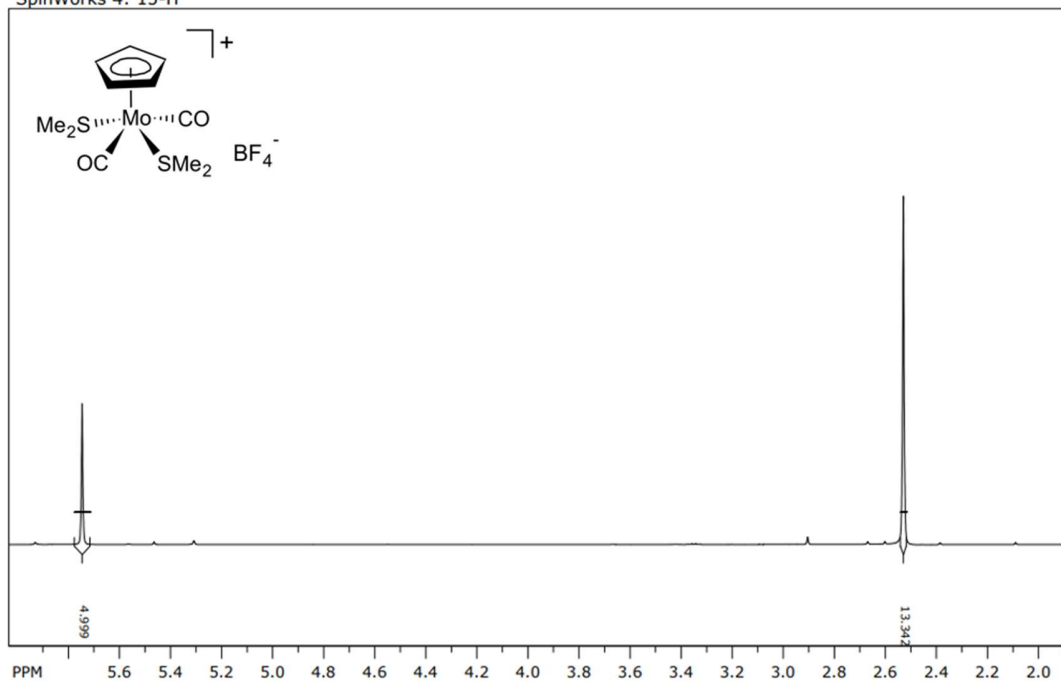
**Figure S30:** <sup>1</sup>H NMR spectrum of **14** in CD<sub>2</sub>Cl<sub>2</sub> (500 MHz).

SpinWorks 4: 14-C



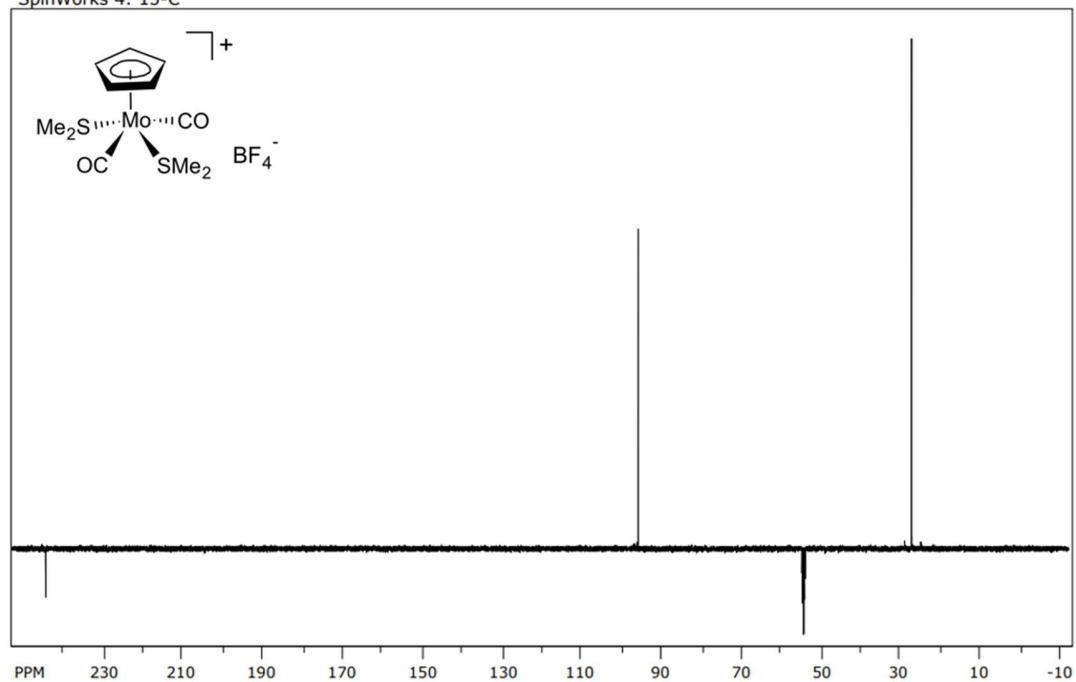
**Figure S31:** <sup>13</sup>C{<sup>1</sup>H} NMR spectrum of **14** in CD<sub>2</sub>Cl<sub>2</sub> (126 MHz).

SpinWorks 4: 15-H

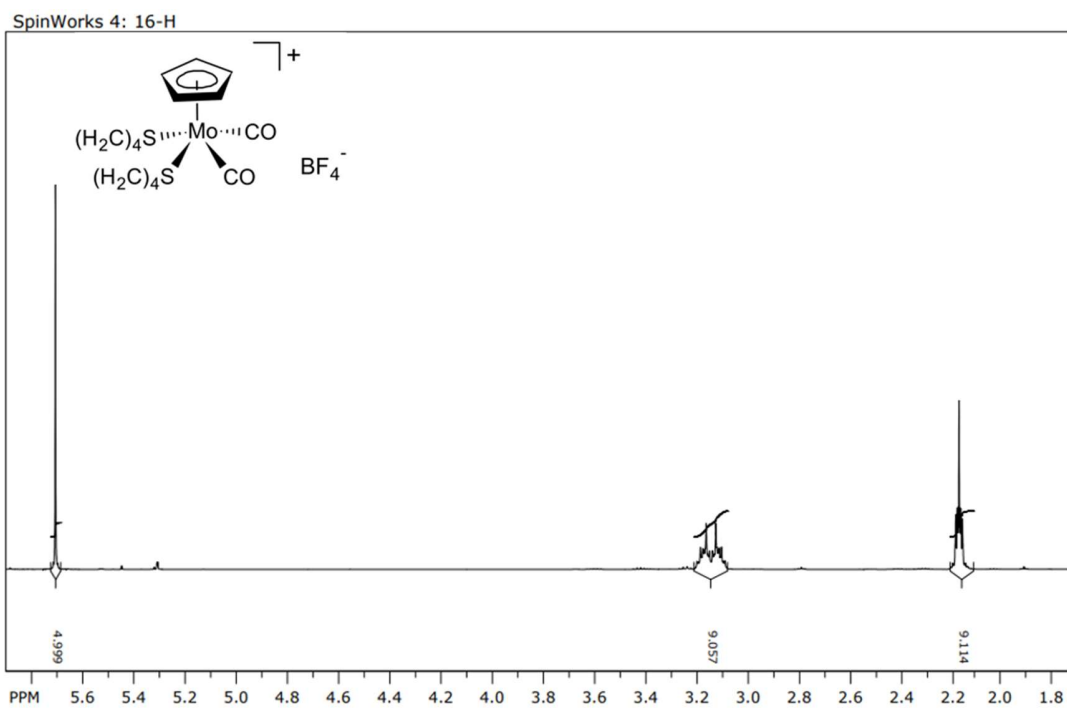


**Figure S32:**  $^1\text{H}$  NMR spectrum of **15** in  $\text{CD}_2\text{Cl}_2$  (500 MHz).

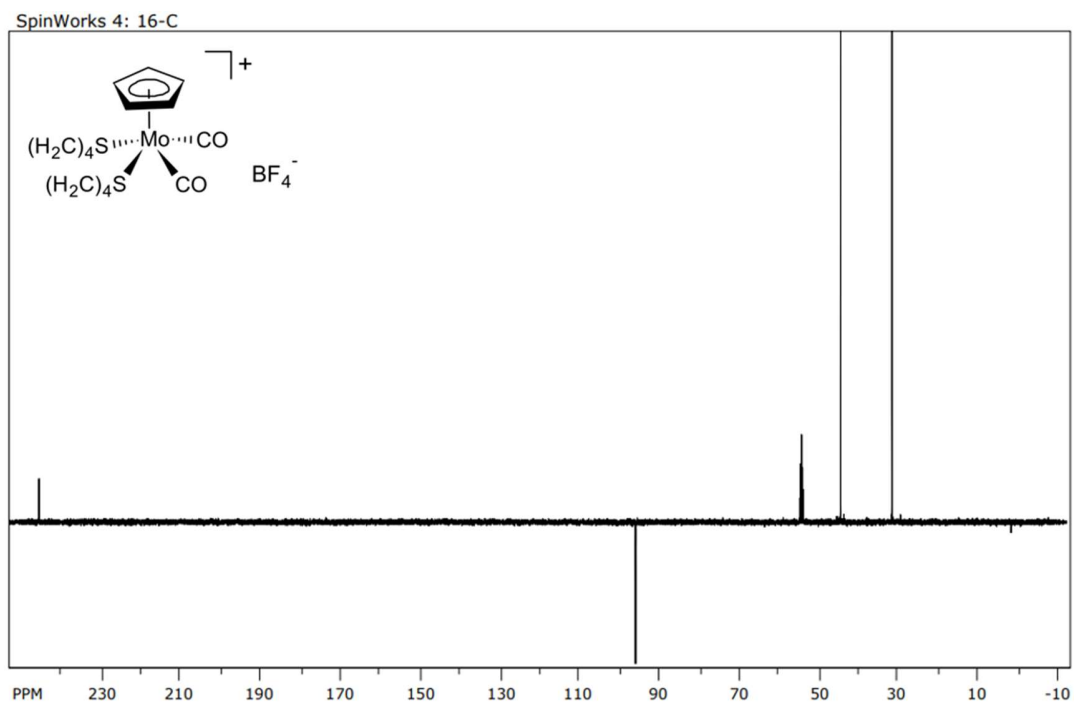
SpinWorks 4: 15-C



**Figure S33:**  $^{13}\text{C}$  APT NMR spectrum of **15** in  $\text{CD}_2\text{Cl}_2$  (126 MHz).

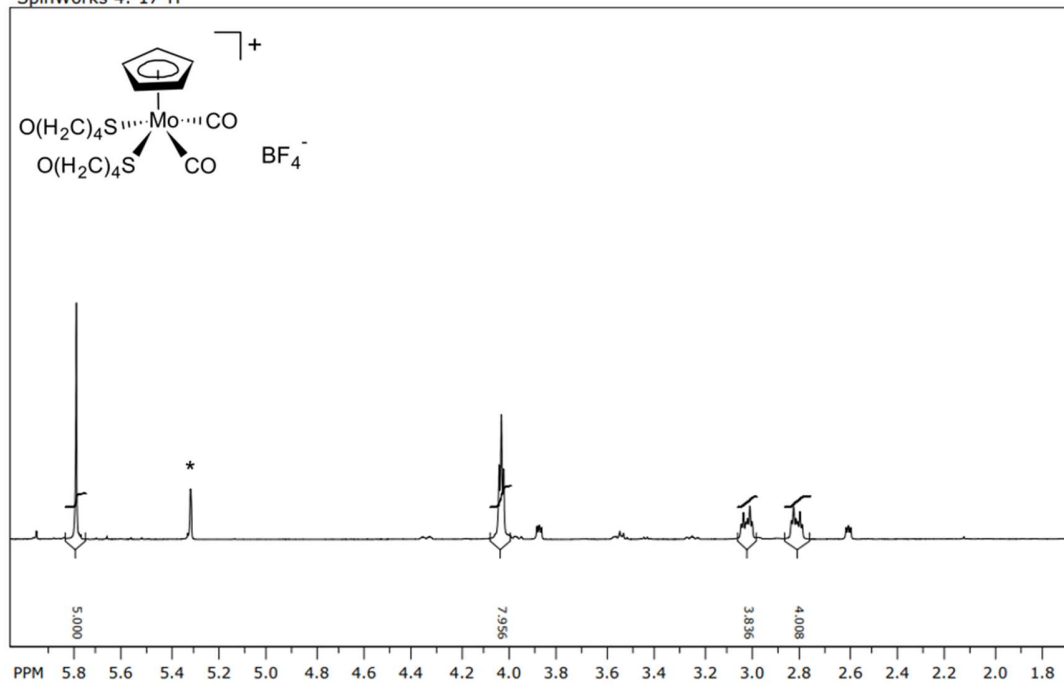


**Figure S34:**  $^1\text{H}$  NMR spectrum of **16** in  $\text{CD}_2\text{Cl}_2$  (500 MHz).



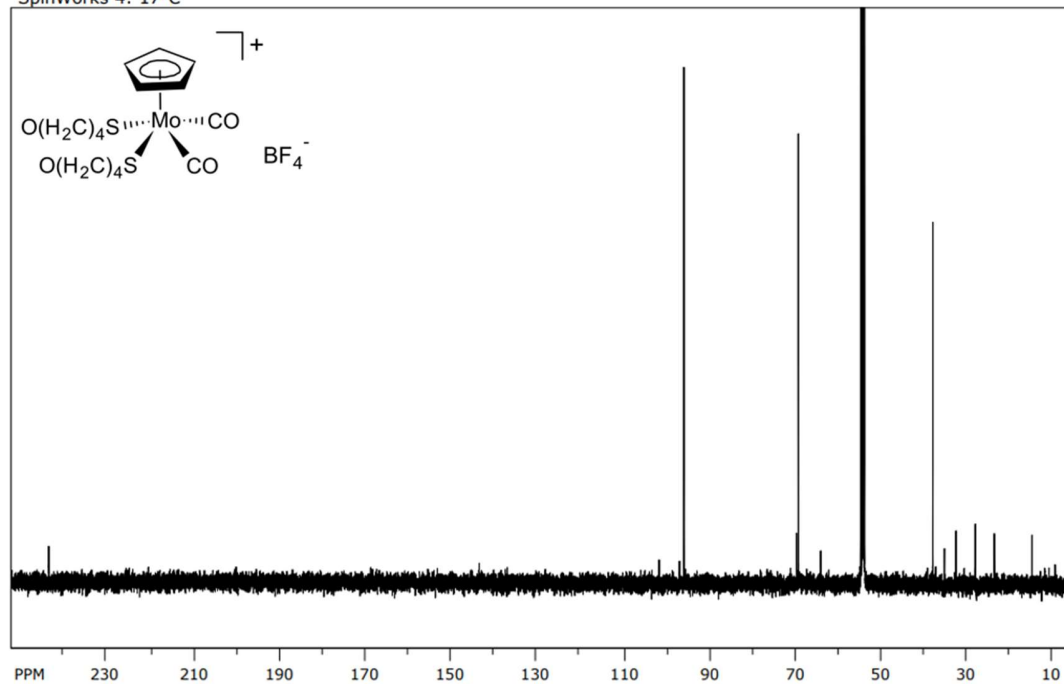
**Figure S35:**  $^{13}\text{C}$  APT NMR spectrum of **16** in  $\text{CD}_2\text{Cl}_2$  (126 MHz).

SpinWorks 4: 17-H



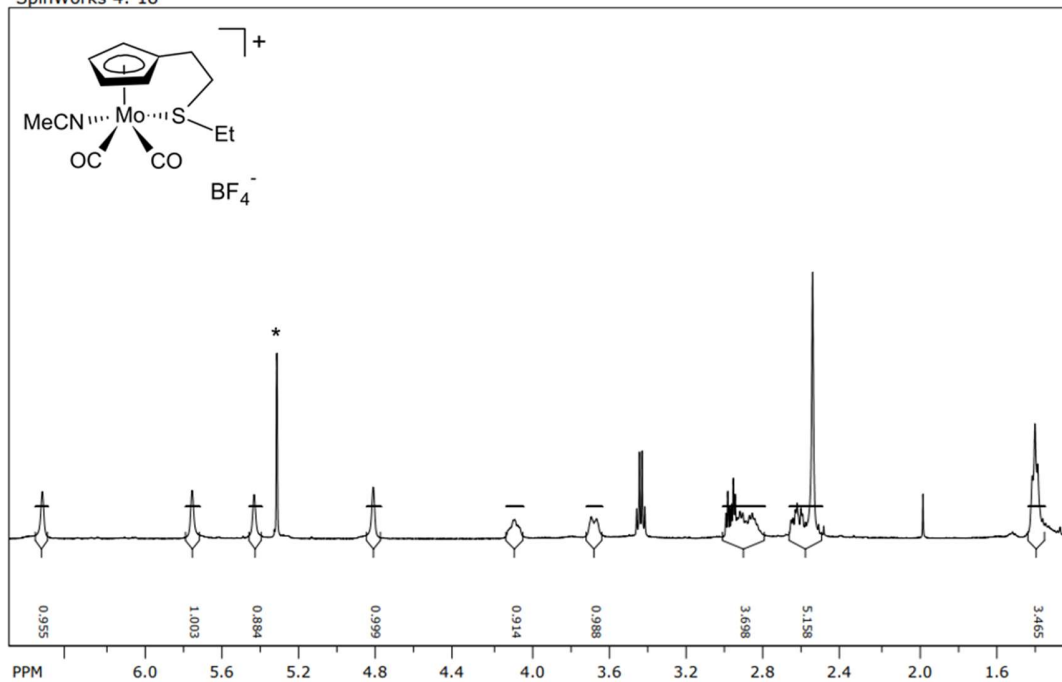
**Figure S36:** <sup>1</sup>H NMR spectrum of **17** in CD<sub>2</sub>Cl<sub>2</sub> (500 MHz).

SpinWorks 4: 17-C



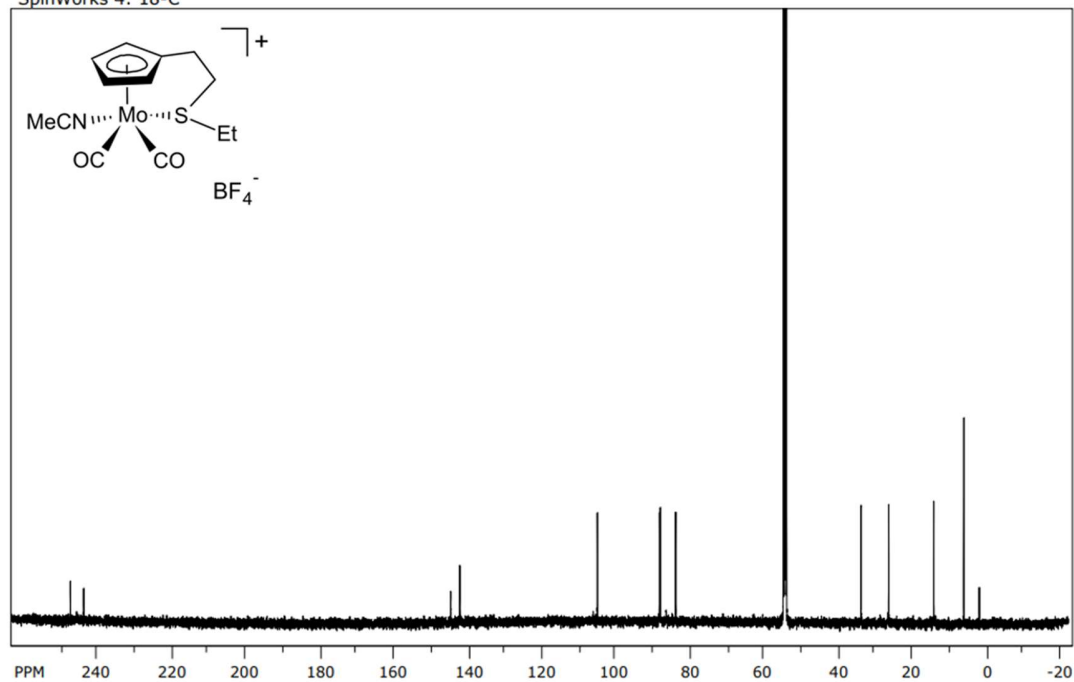
**Figure S37:** <sup>13</sup>C{<sup>1</sup>H} NMR spectrum of **17** in CD<sub>2</sub>Cl<sub>2</sub> (126 MHz).

SpinWorks 4: 18



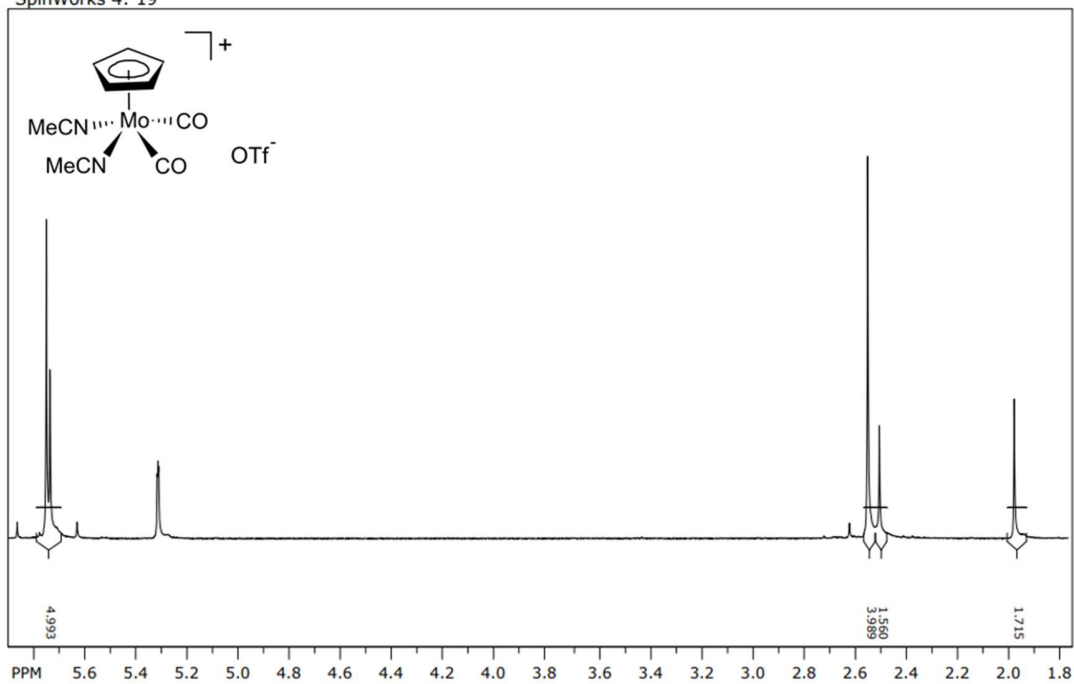
**Figure S38:**  $^1\text{H}$  NMR spectrum of **18** in  $\text{CD}_2\text{Cl}_2$  (500 MHz).

SpinWorks 4: 18-C



**Figure S39:**  $^{13}\text{C}\{^1\text{H}\}$  NMR spectrum of **18** in  $\text{CD}_2\text{Cl}_2$  (126 MHz).

SpinWorks 4: 19



**Figure S40:**  $^1\text{H}$  NMR spectrum of **19** in  $\text{CD}_2\text{Cl}_2$  (400 MHz).