

## Degenerate [2]Rotaxanes with Electrostatic Barriers

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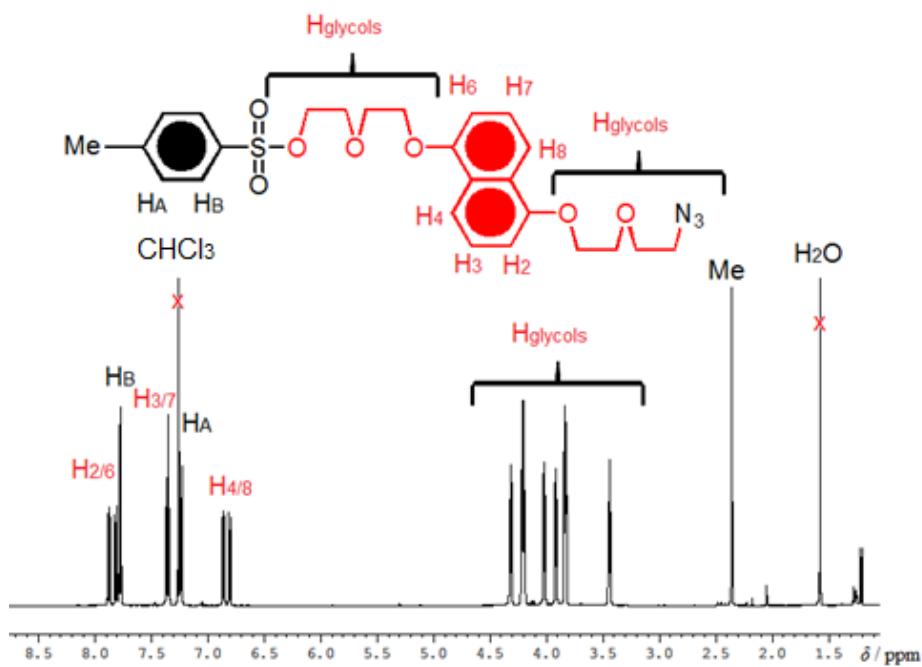
<sup>†</sup> These authors contributed equally to this work.

## Electronic Supplementary Information

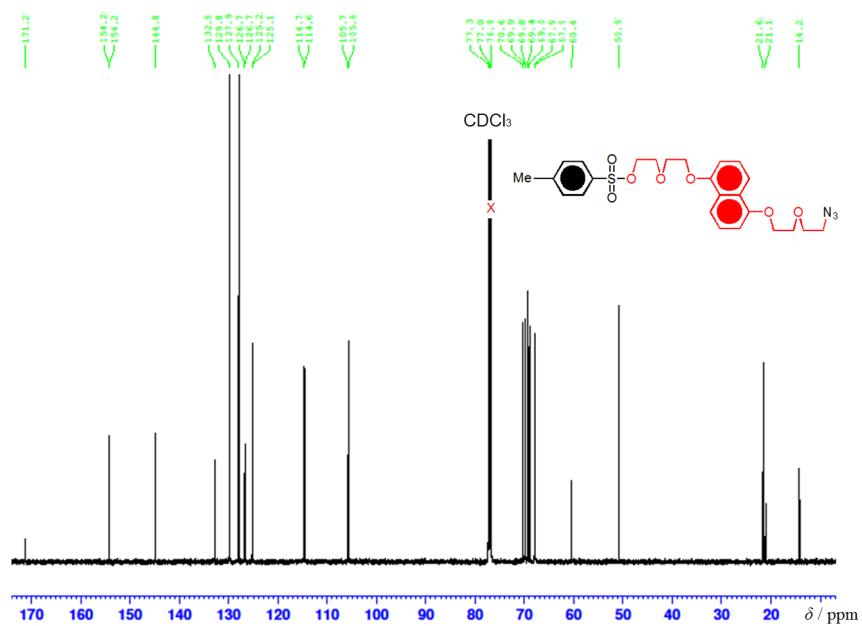
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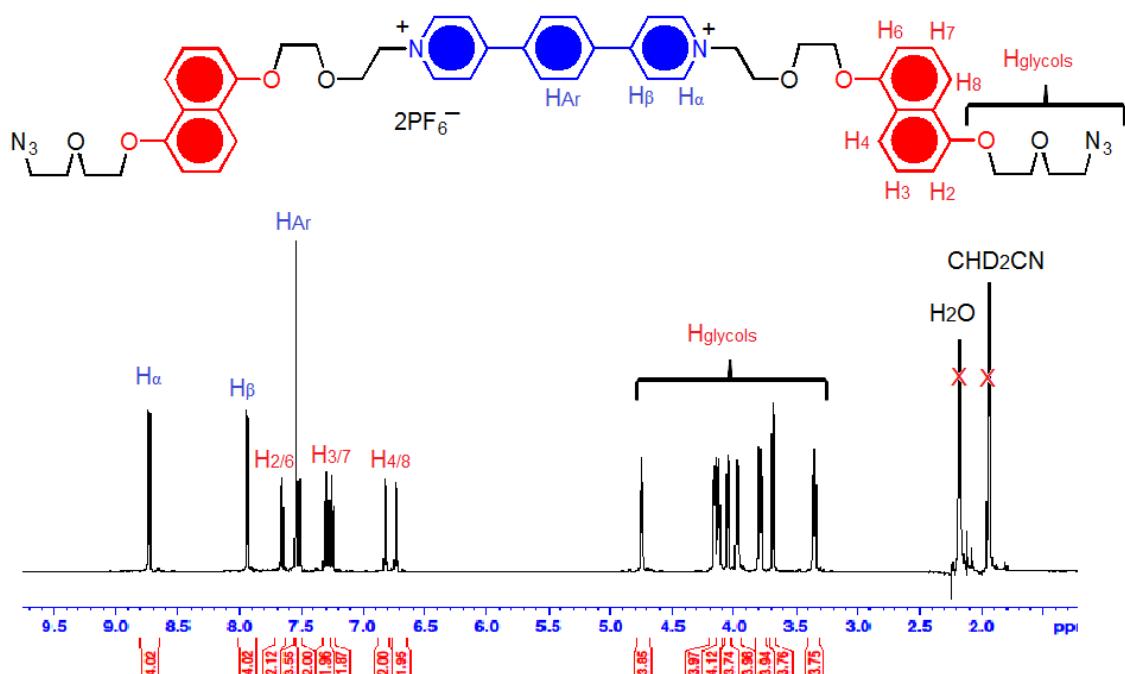
# Collection of NMR Spectroscopic Data



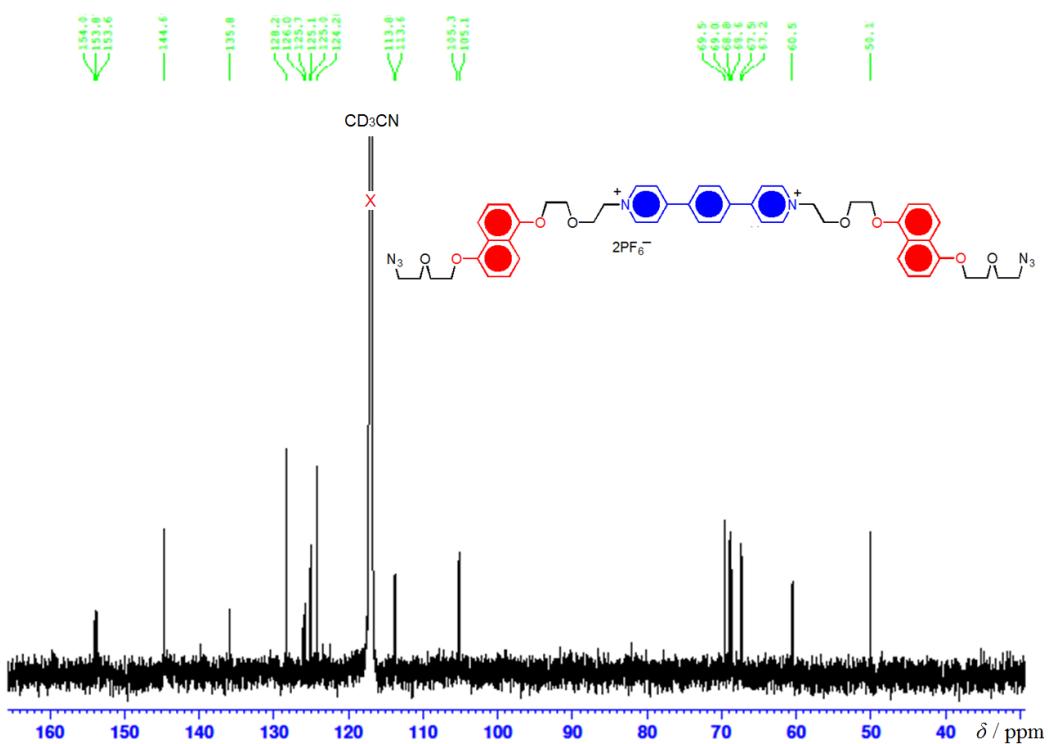
**Figure S1:**  $^1\text{H}$  NMR spectrum of **17** (500 MHz, 298 K,  $\text{CDCl}_3$ )



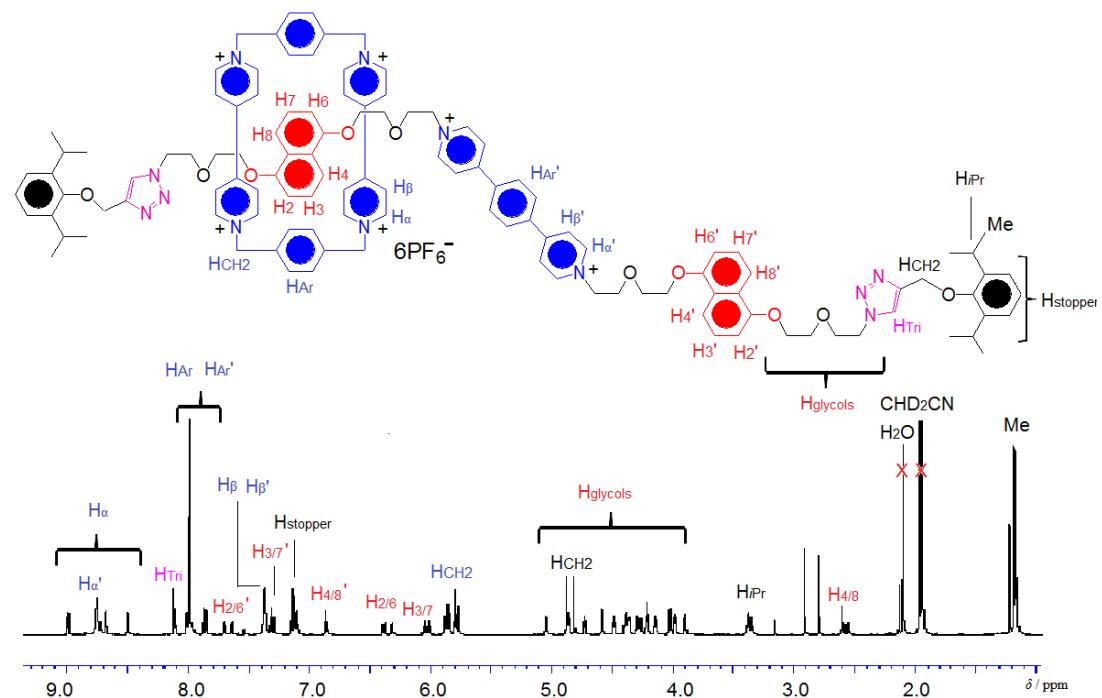
**Figure S2:**  $^{13}\text{C}$  NMR spectrum of **17** (125 MHz, 298 K,  $\text{CDCl}_3$ )



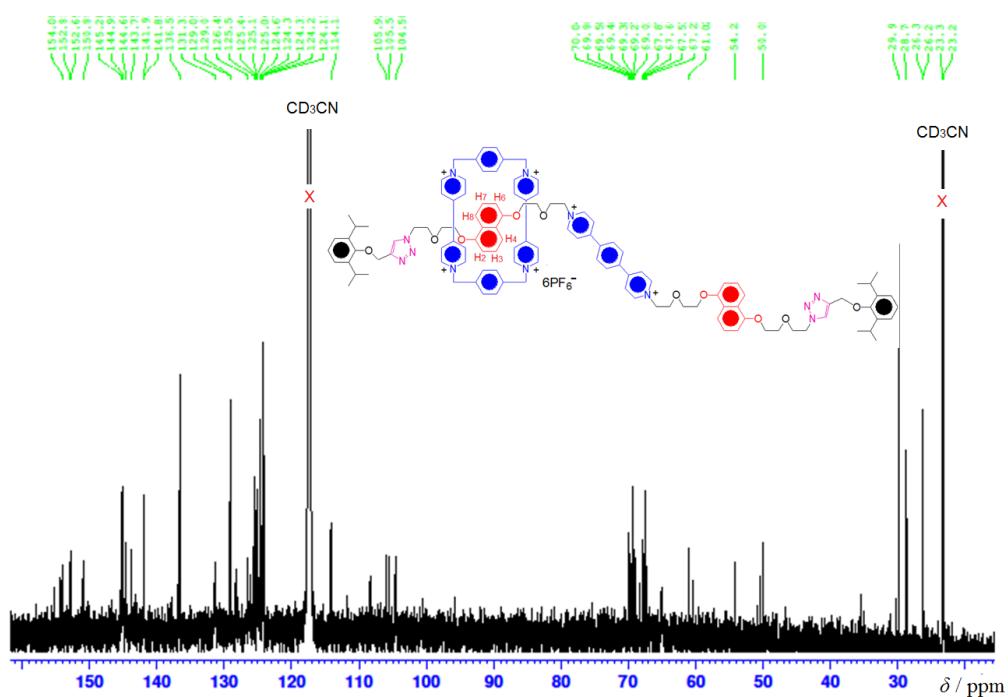
**Figure S3:**  $^1\text{H}$  NMR spectrum of  $\mathbf{18}\bullet\text{2PF}_6$  (500 MHz, 298 K,  $\text{CD}_3\text{CN}$ )



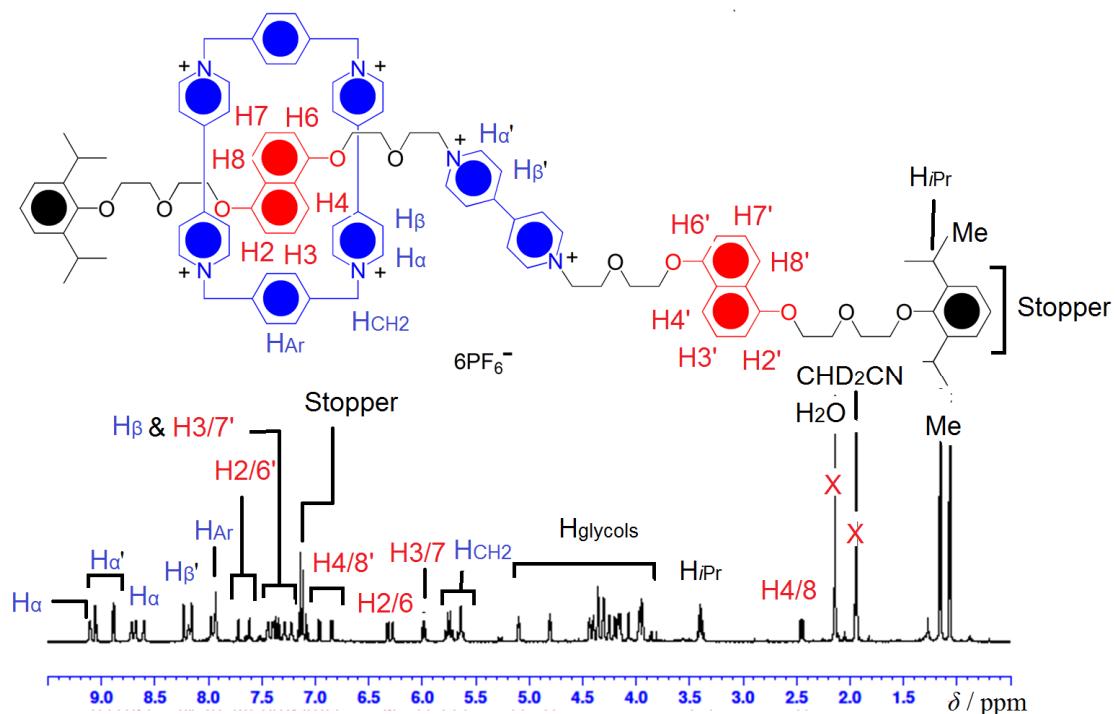
**Figure S4:**  $^{13}\text{C}$  NMR spectrum of  $\mathbf{18}\bullet\text{2PF}_6$  (125 MHz, 298 K,  $\text{CD}_3\text{CN}$ )



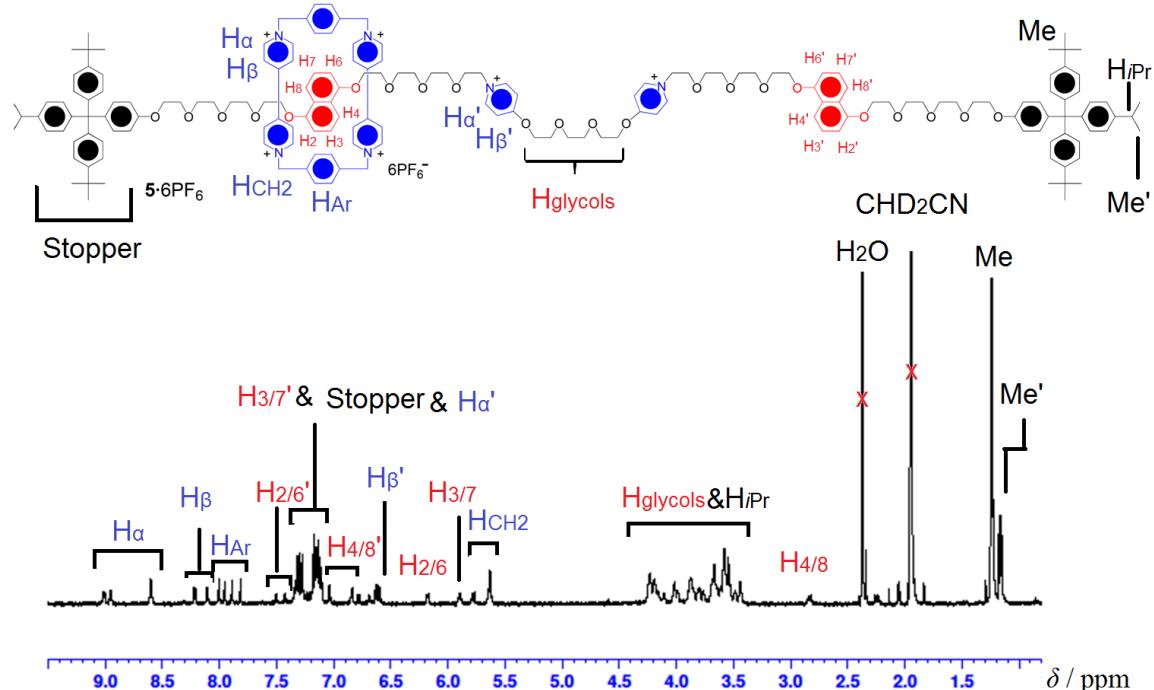
**Figure S5:**  $^1\text{H}$  NMR spectrum of **3**•6PF<sub>6</sub> (600 MHz, 340 K, CD<sub>3</sub>CN)



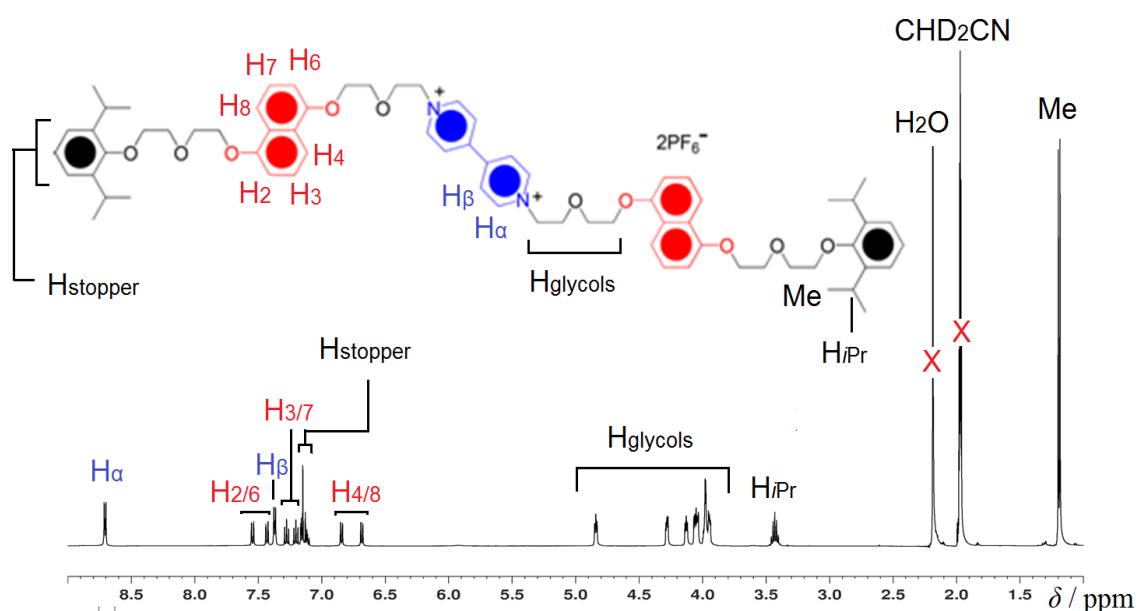
**Figure S6:**  $^{13}\text{C}$  NMR spectrum of **3**•6PF<sub>6</sub> (150 MHz, 340 K, CD<sub>3</sub>CN)



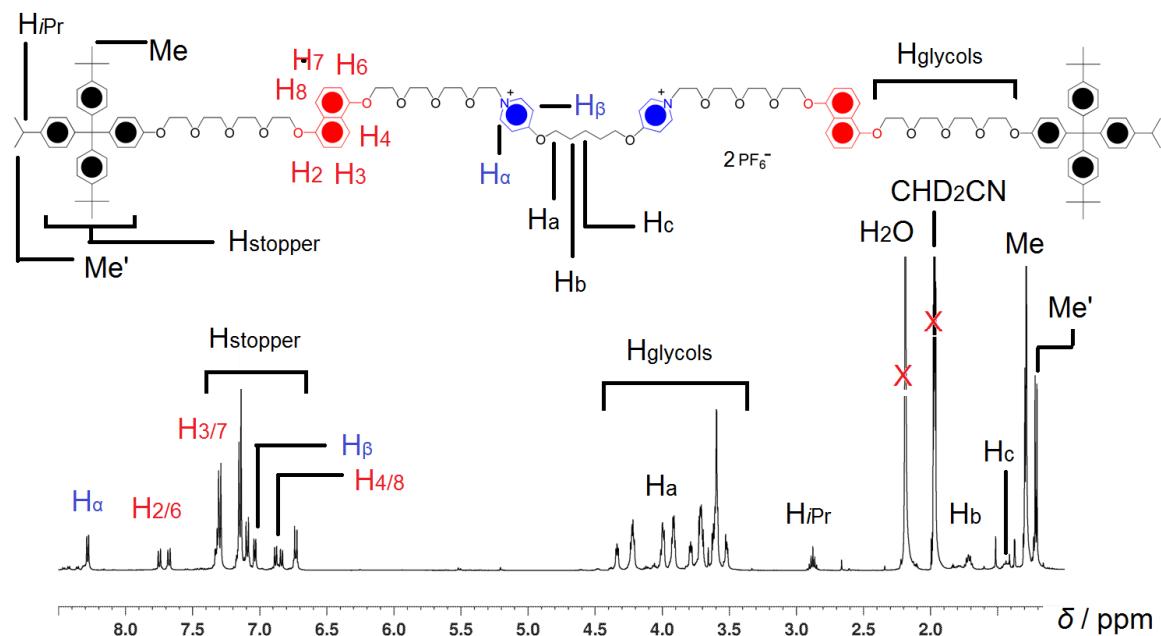
**Figure S7:** <sup>1</sup>H NMR spectrum of **1**• $6\text{PF}_6^-$  (600 MHz, 298 K, CD<sub>3</sub>CN)



**Figure S8:** <sup>1</sup>H NMR spectrum of **5**• $6\text{PF}_6^-$  (600 MHz, 298 K, CD<sub>3</sub>CN)



**Figure S9:**  $^1\text{H}$  NMR spectrum of  $\mathbf{7}\bullet 2\text{PF}_6$  (500 MHz, 298 K,  $\text{CD}_3\text{CN}$ )



**Figure S10:**  $^1\text{H}$  NMR spectrum of  $\mathbf{14}\bullet 2\text{PF}_6$  (500 MHz, 298 K,  $\text{CD}_3\text{CN}$ )