

# Electronic Supplementary Information

## Synthesis of Functional Building Blocks for Type III-B Rotaxane Dendrimer

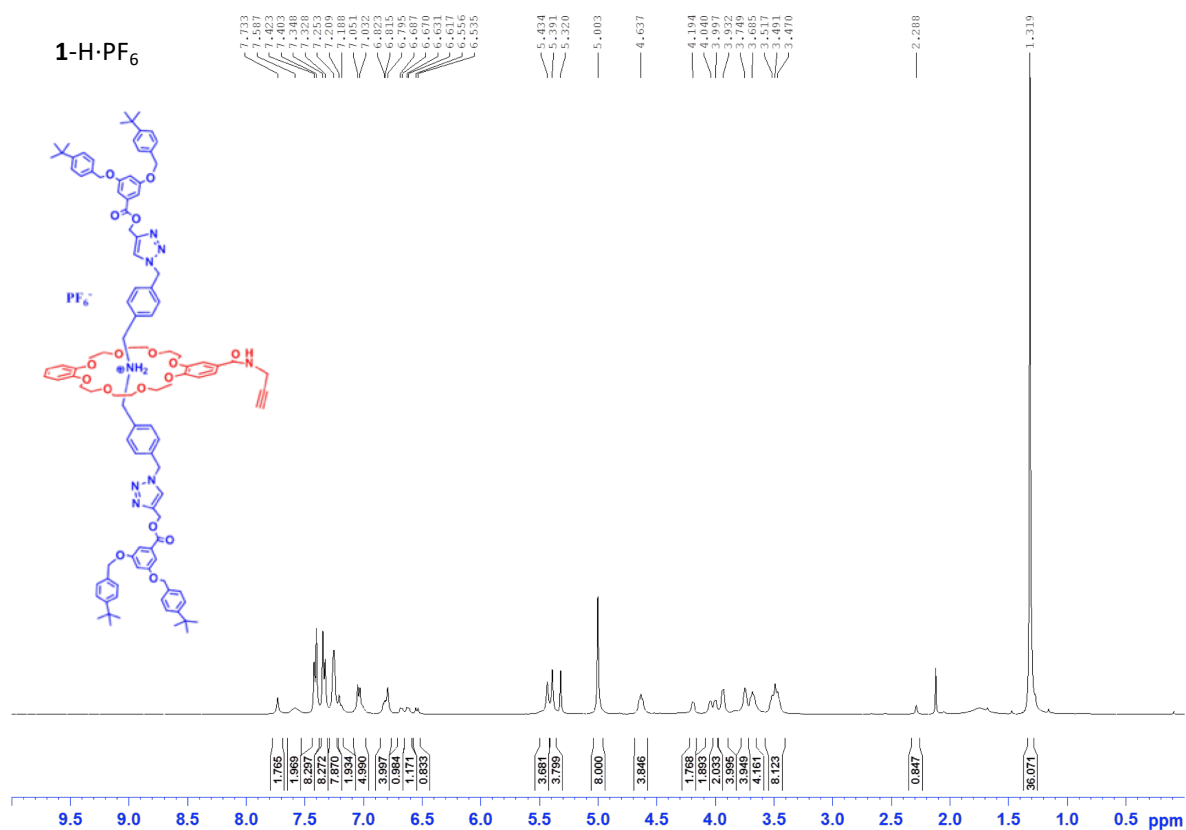
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Leung\*<sup>1</sup>

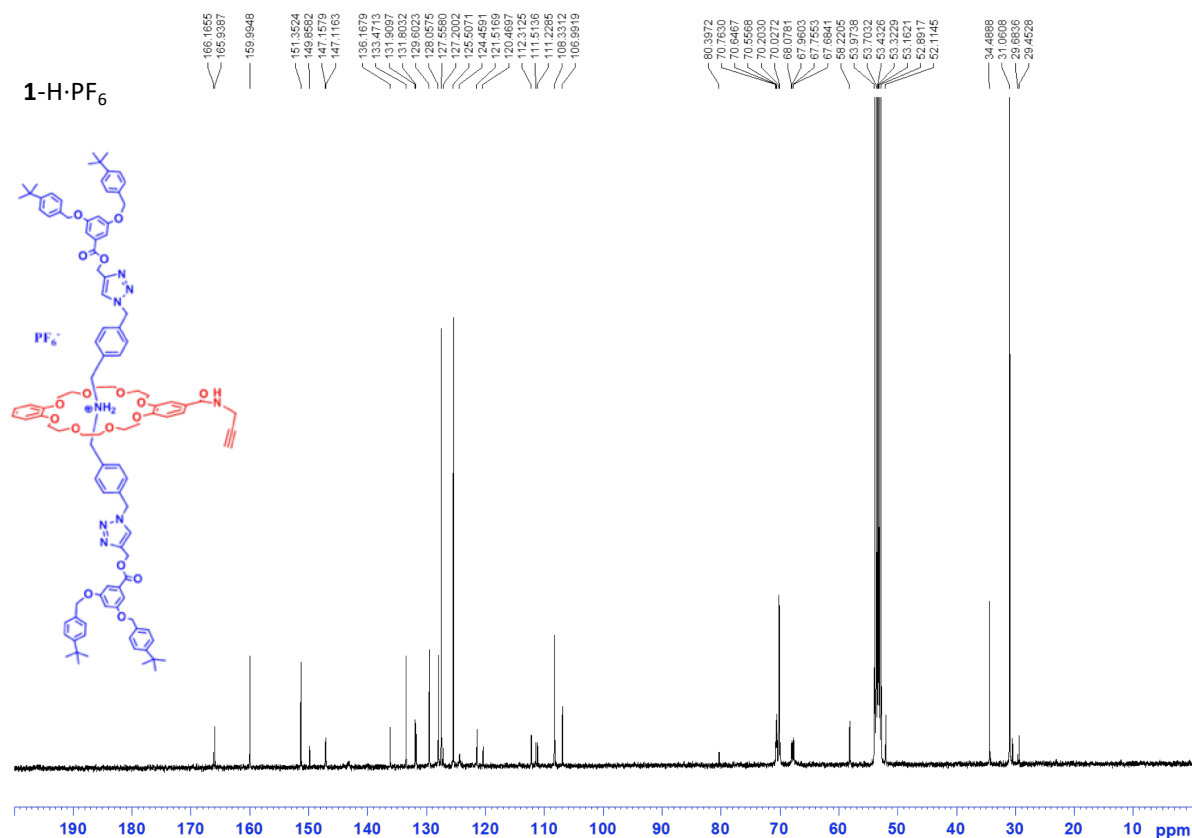
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The Hong Kong Baptist University, Kowloon Tong, Kowloon, P. R. China.

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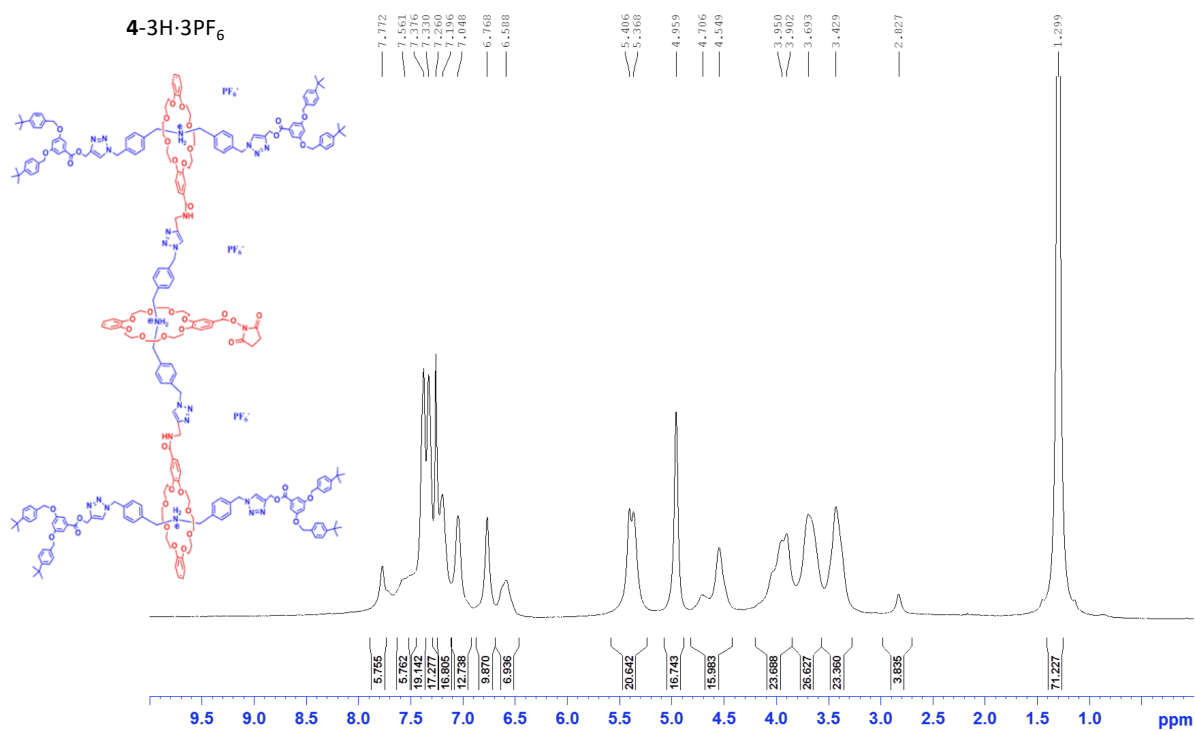
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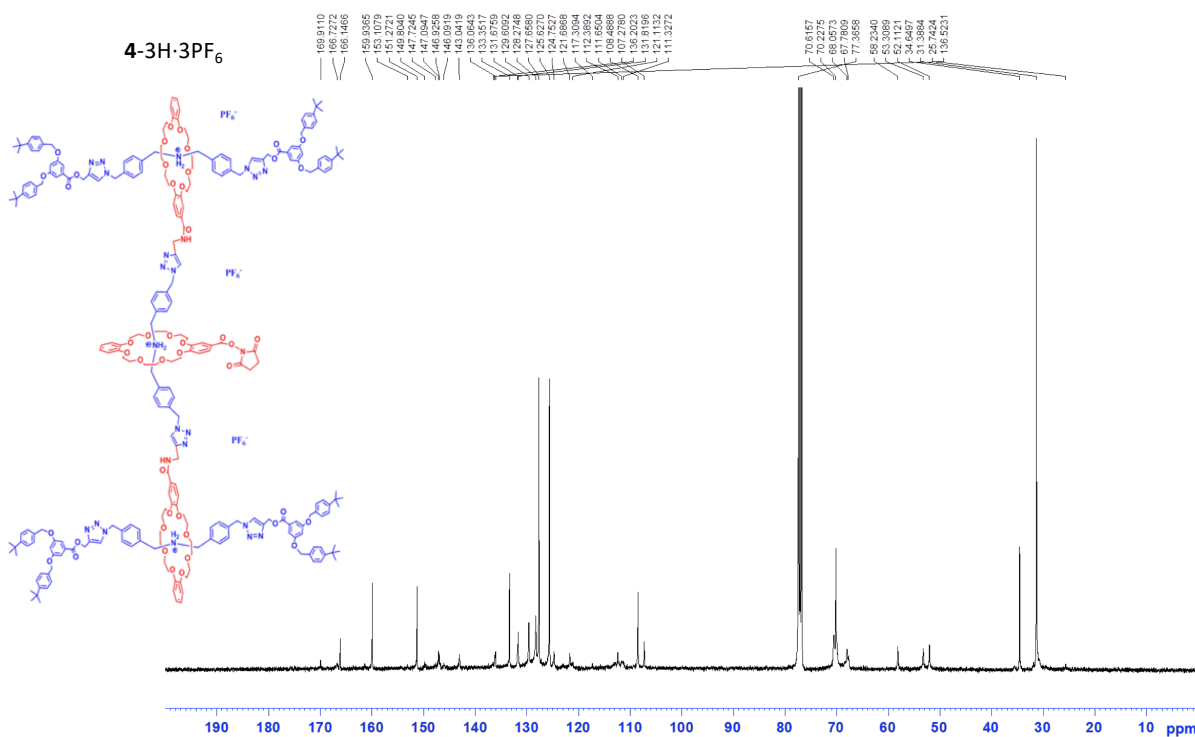
**Figure S1.** <sup>1</sup>H NMR spectrum of the G1 rotaxane dendron-acetylene **1-H·PF<sub>6</sub>**.



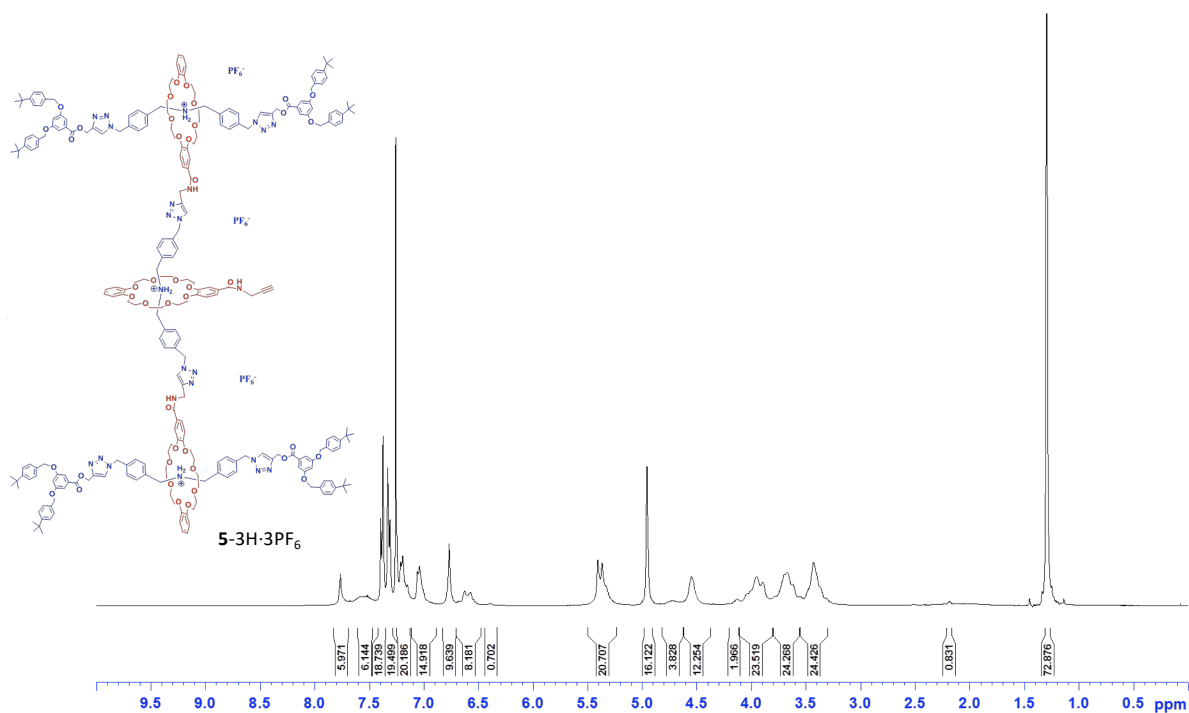
**Figure S2.** <sup>13</sup>C NMR spectrum of the G1 rotaxane dendron-acetylene **1-H·PF<sub>6</sub>**.



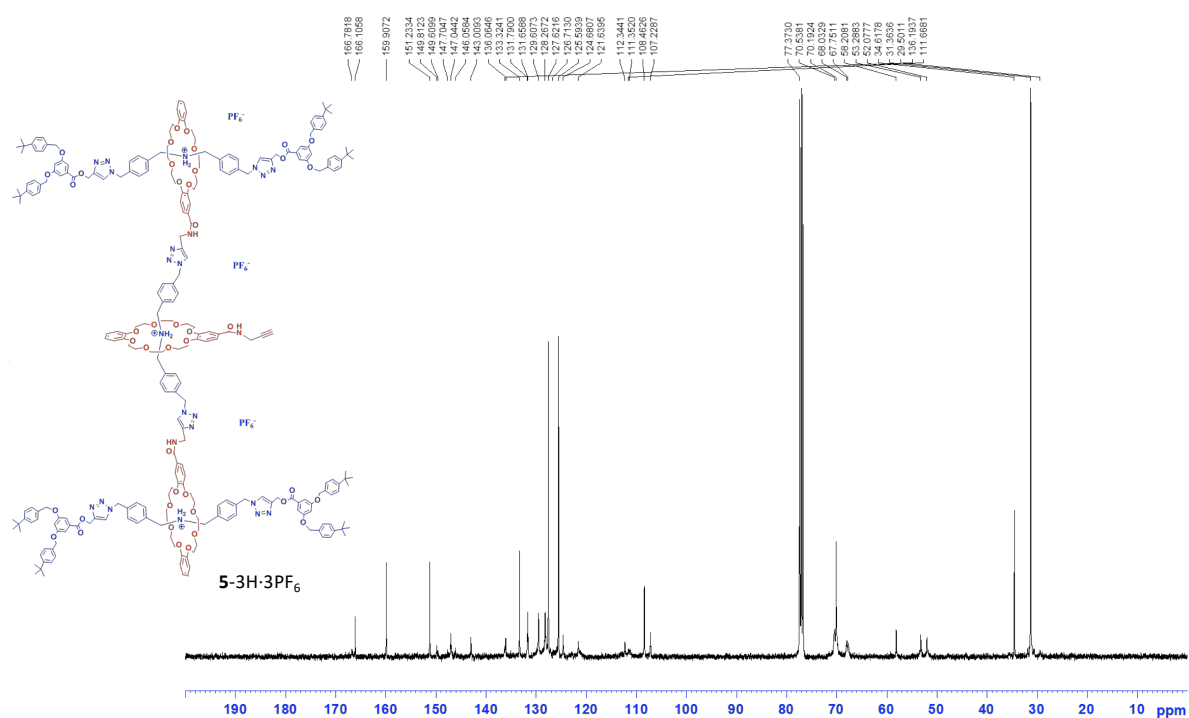
**Figure S3.** <sup>1</sup>H NMR spectrum of the G2 rotaxane dendron-OSu 4-3H·3PF<sub>6</sub>.



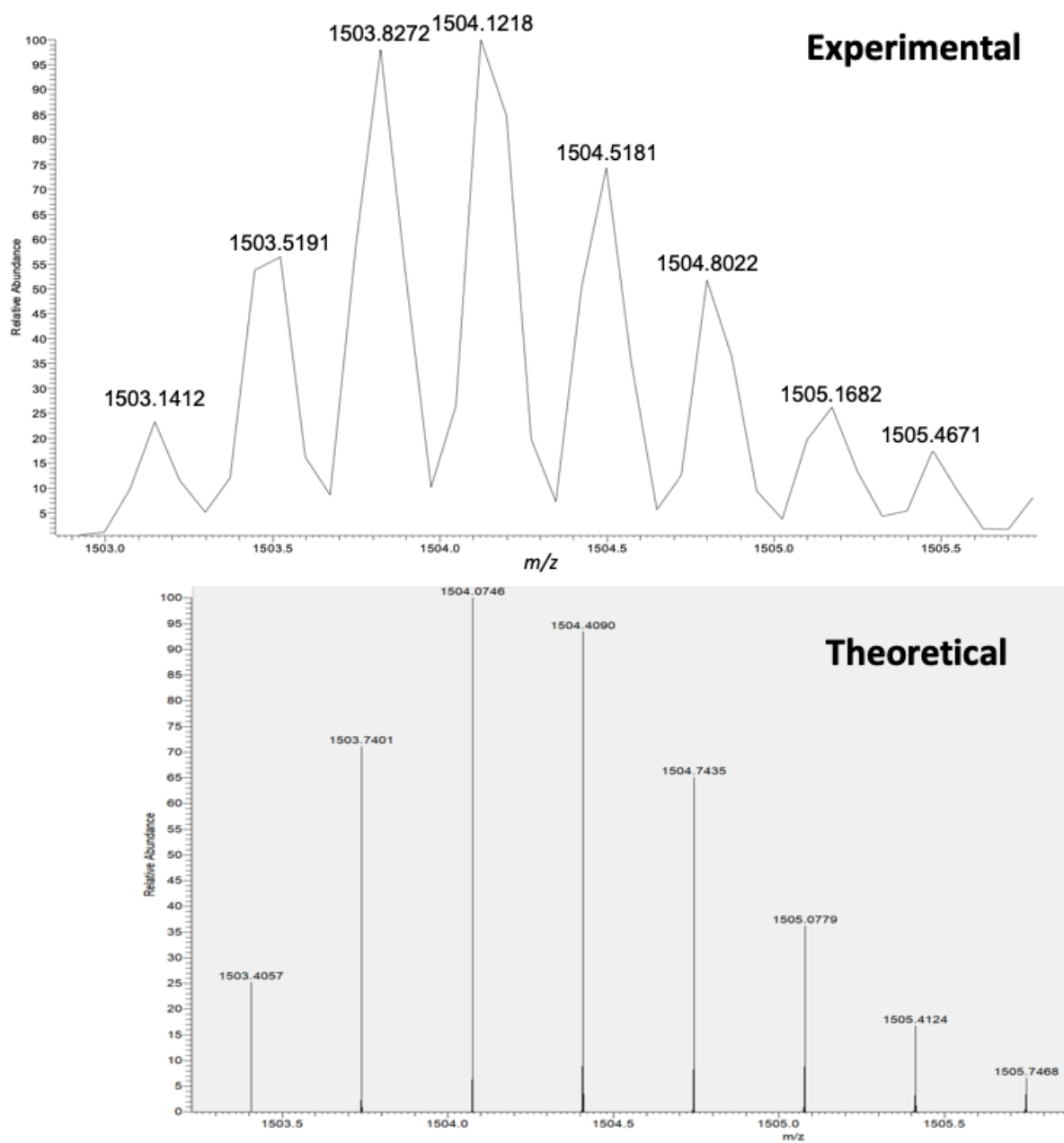
**Figure S4.** <sup>13</sup>C NMR spectrum of the G2 rotaxane dendron-OSu 4-3H·3PF<sub>6</sub>.



**Figure S5.**  $^1\text{H}$  NMR spectrum of the G2 rotaxane dendron-acetylene  $5\text{-}3\text{H}\cdot 3\text{PF}_6$ .



**Figure S6.**  $^{13}\text{C}$  NMR spectrum of the G2 rotaxane dendron-acetylene  $5\text{-}3\text{H}\cdot 3\text{PF}_6$ .



**Figure S7.** Expanded mass spectrum of the molecular ion signal of the G2 rotaxane dendron-OSu 4-3H·3PF<sub>6</sub> and comparison between the experimental result (top) and the theoretical analysis (bottom).