

# Supplementary Information

## Synthesis and anticancer properties of dendritic glycoconjugates containing multiple *o*-carborane clusters

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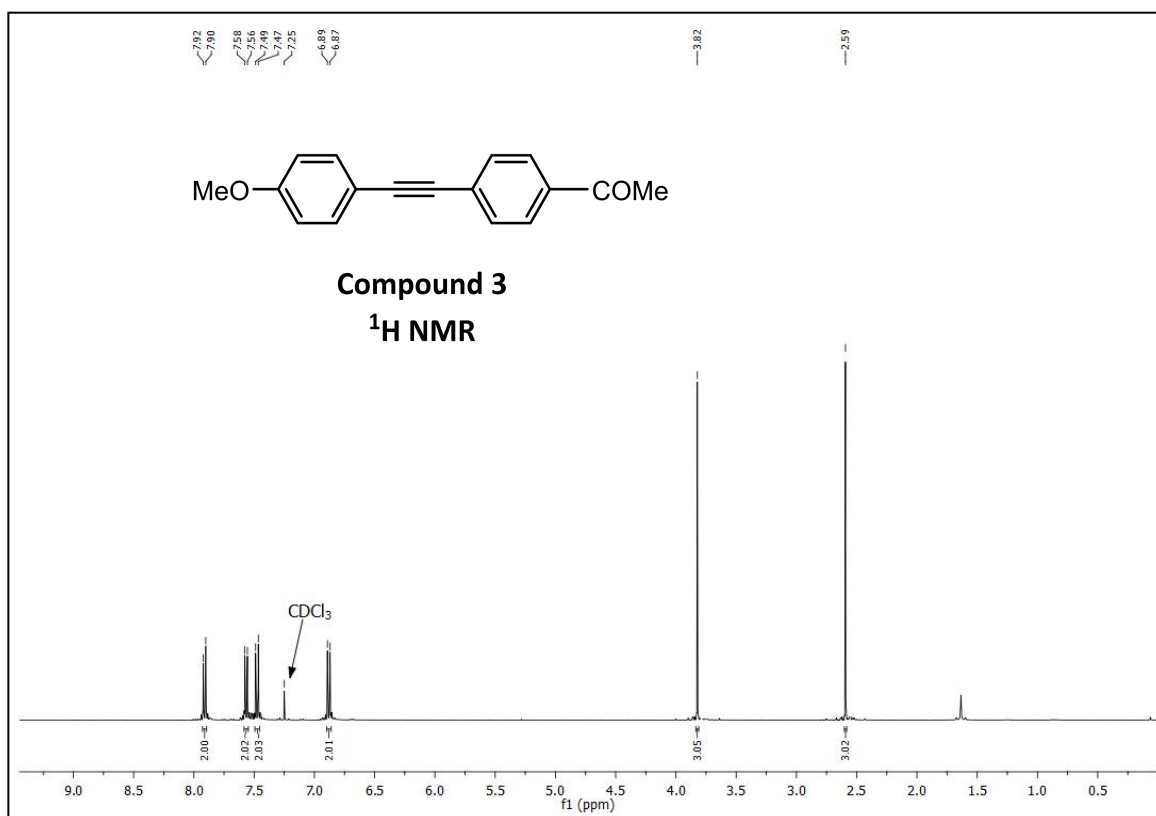
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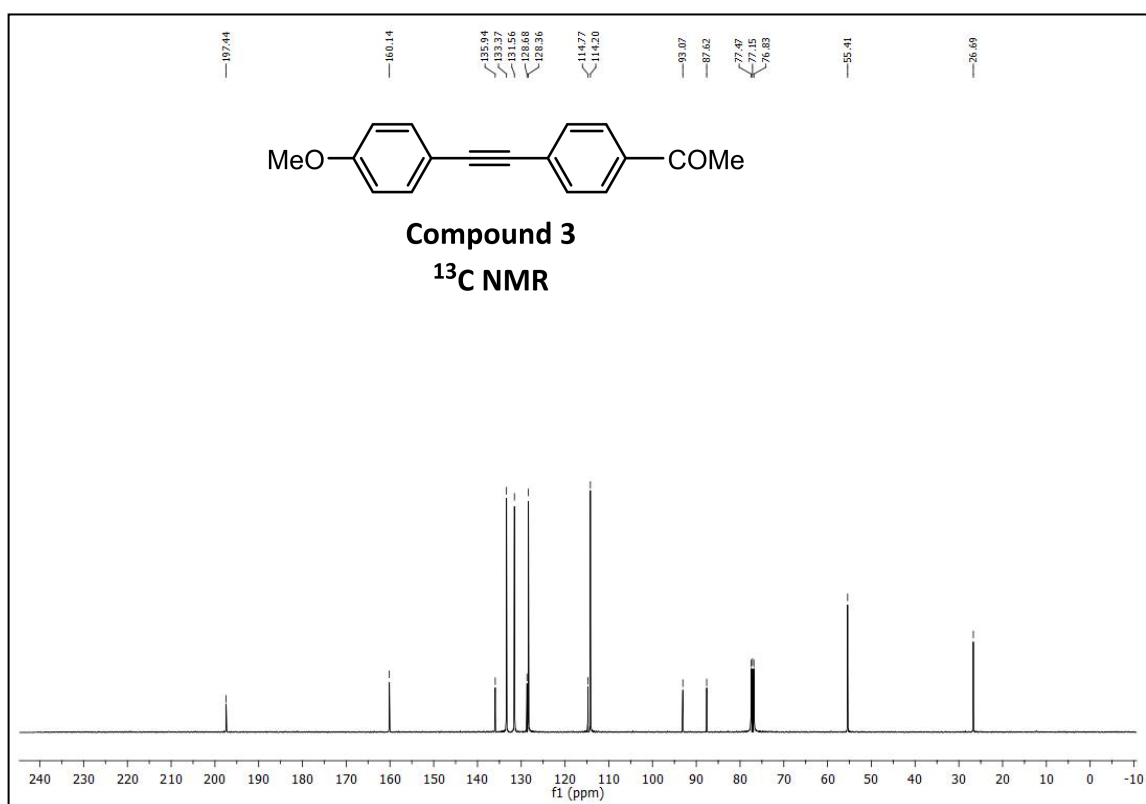
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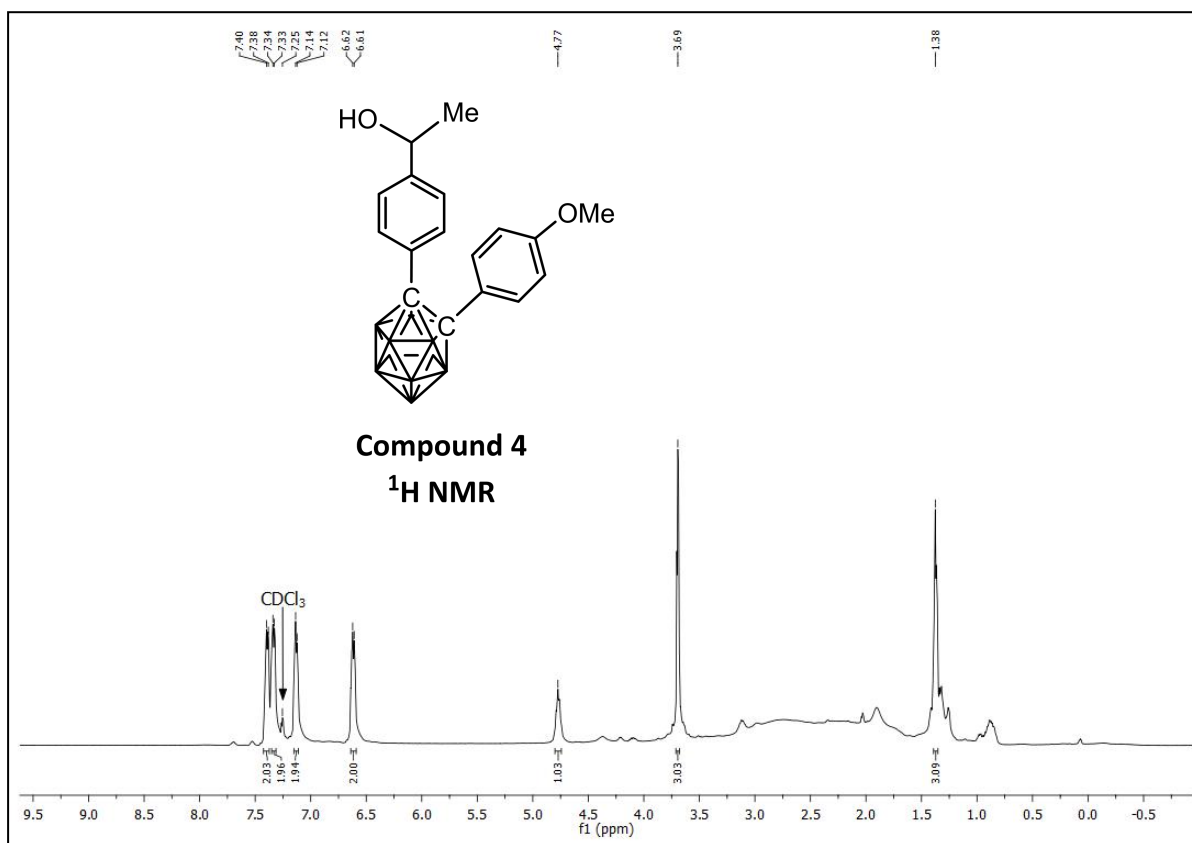
## NMR Spectra of Synthesized Compounds



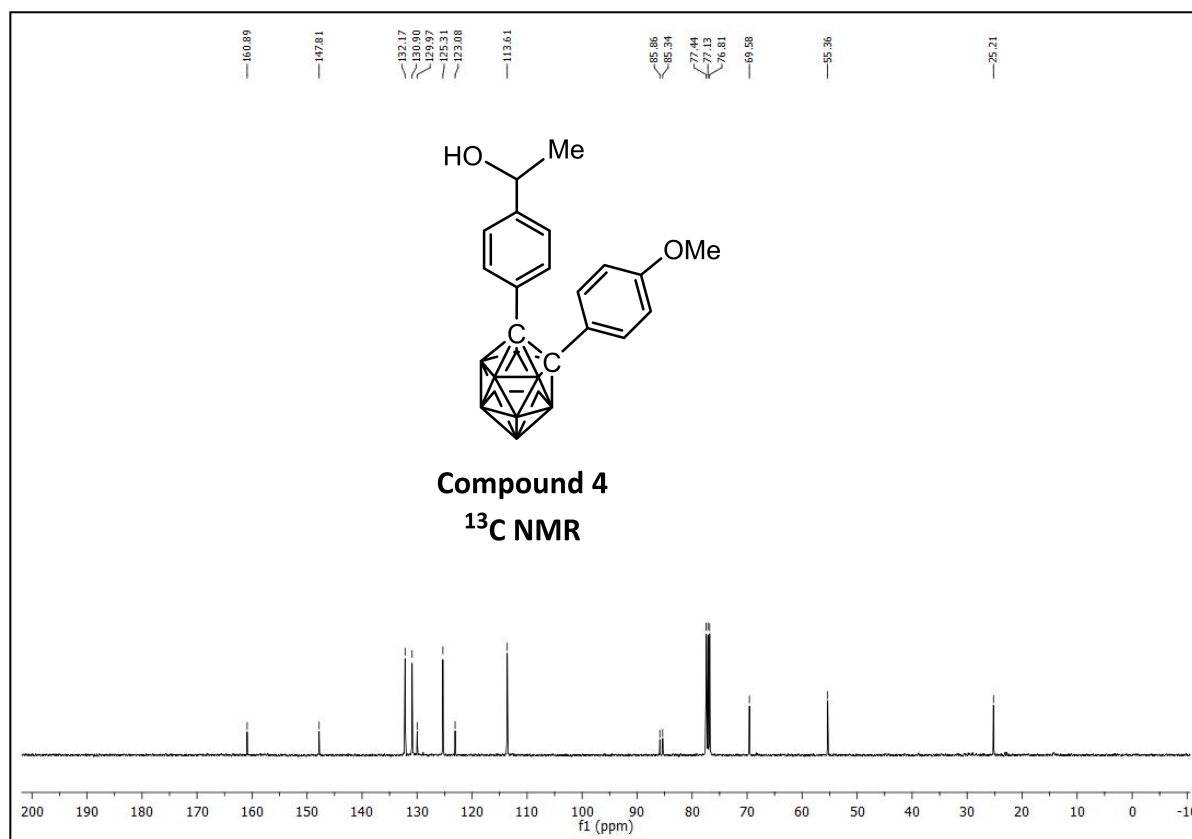
**Figure S1:** <sup>1</sup>H NMR spectra of compound 3 (400 MHz, CDCl<sub>3</sub>)



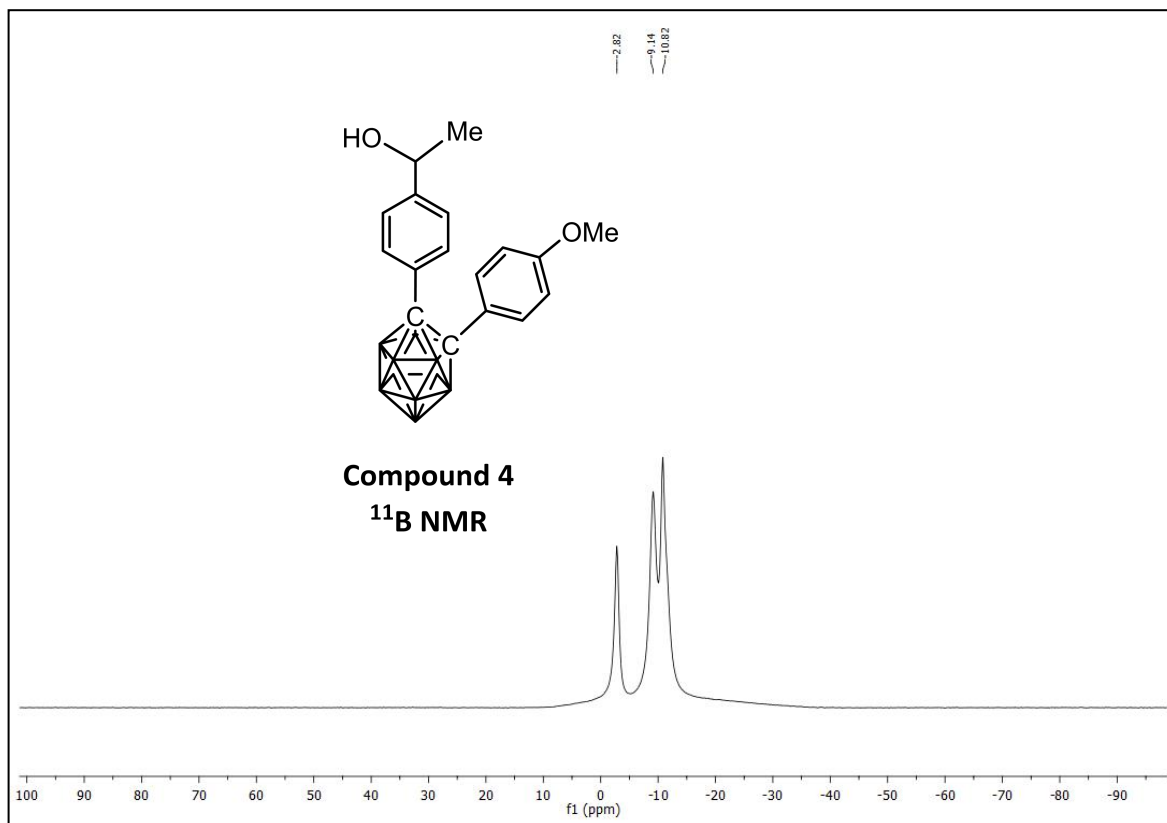
**Figure S2:** <sup>13</sup>C NMR spectra of compound 3 (100 MHz, CDCl<sub>3</sub>)



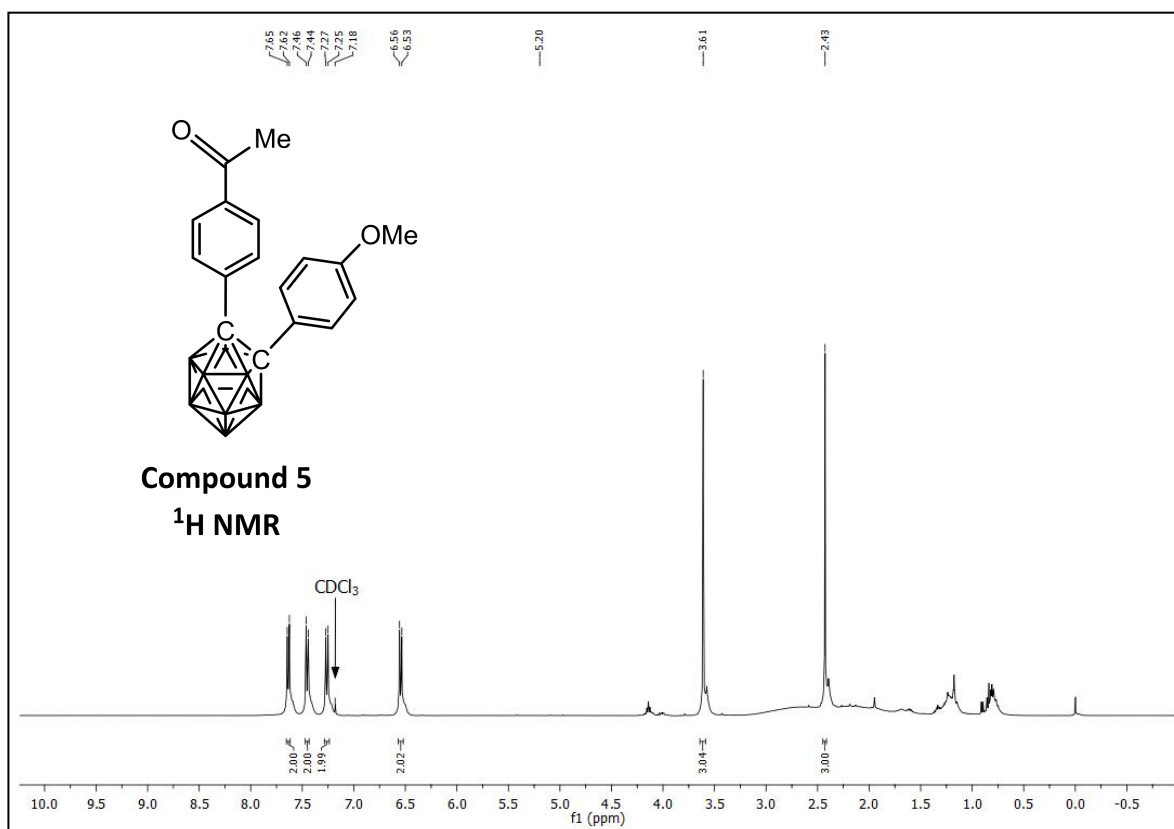
**Figure S3:** <sup>1</sup>H NMR spectra of compound **4** (400 MHz, CDCl<sub>3</sub>)



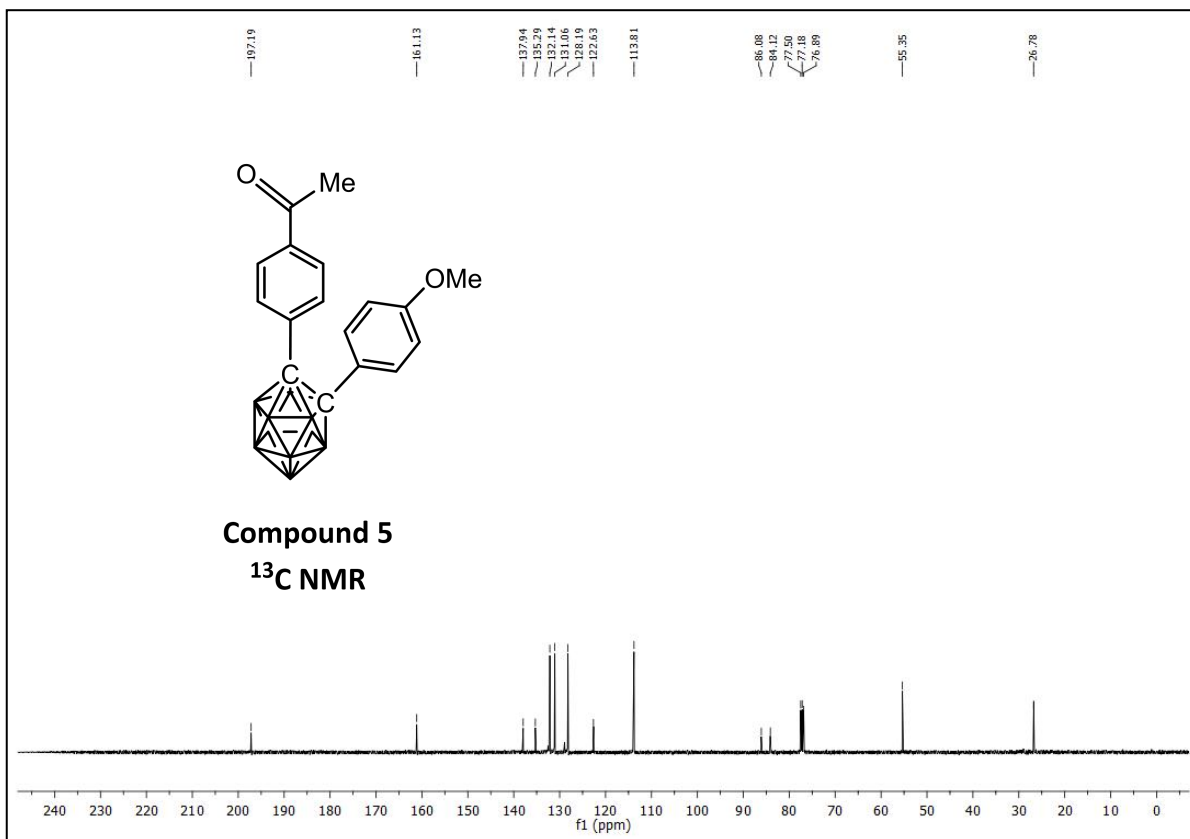
**Figure S4:** <sup>13</sup>C NMR spectra of compound **4** (100 MHz, CDCl<sub>3</sub>)



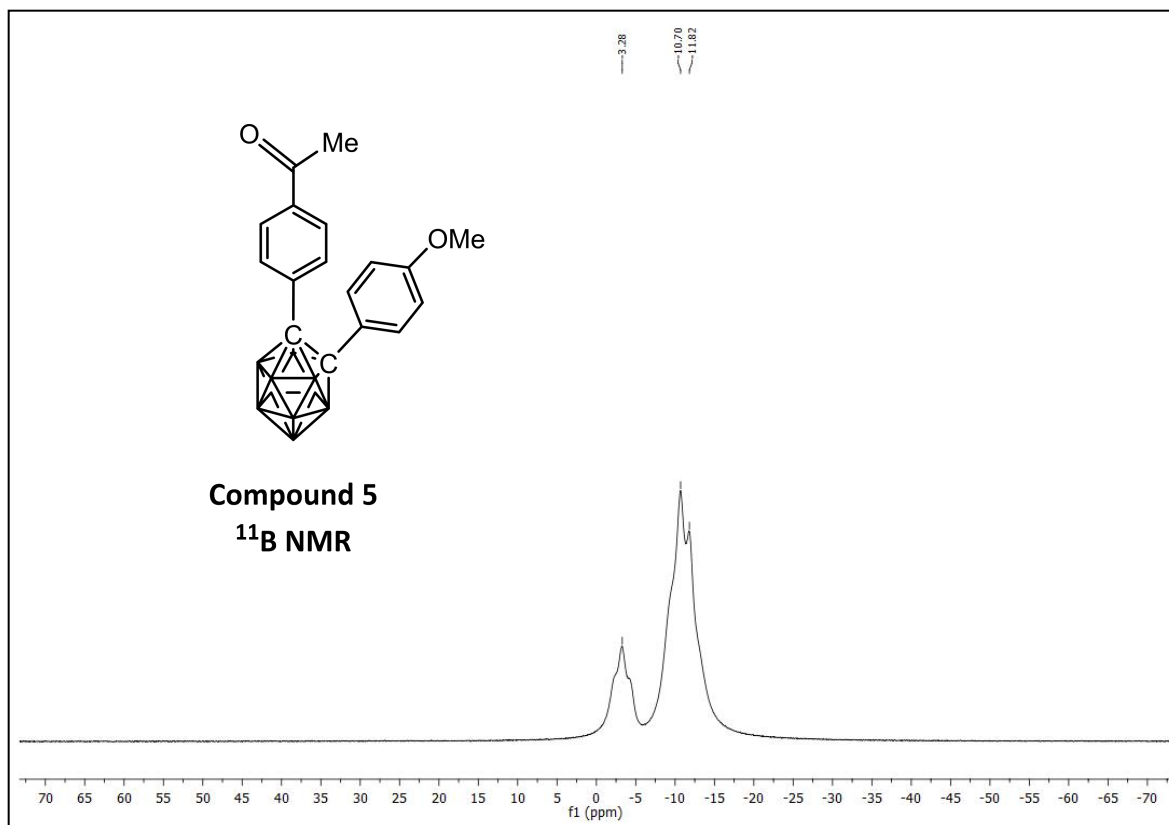
**Figure S5:** <sup>11</sup>B NMR spectra of compound **4** (128 MHz, CDCl<sub>3</sub>)



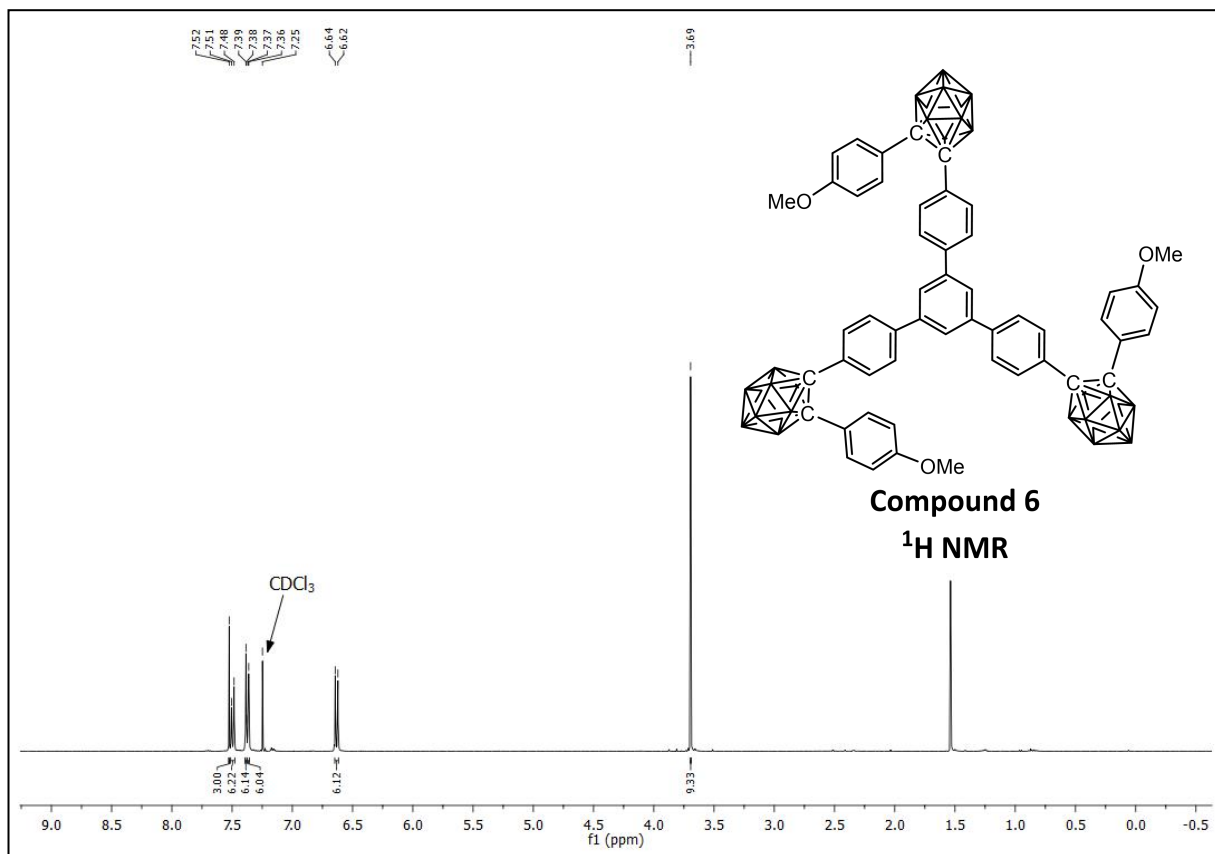
**Figure S6:** <sup>1</sup>H NMR spectra of compound **5** (400 MHz, CDCl<sub>3</sub>)



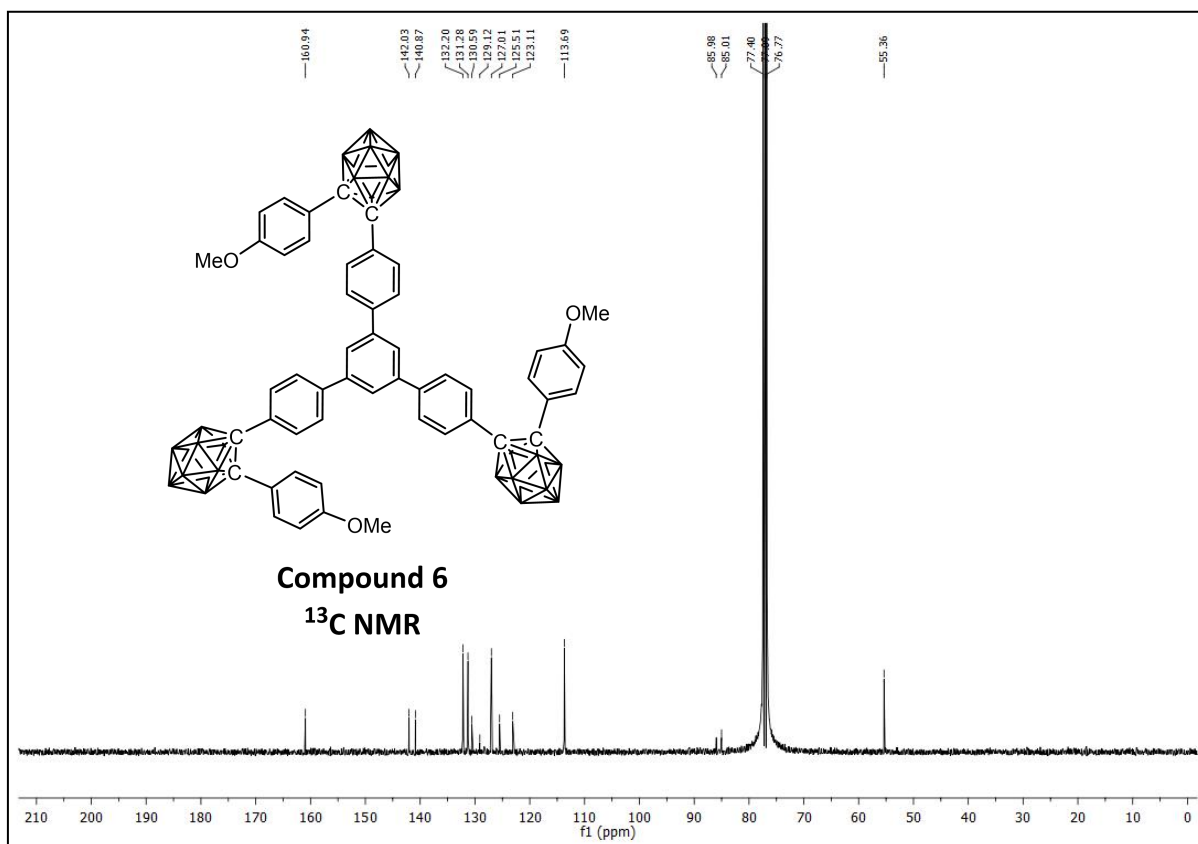
**Figure S7:** <sup>13</sup>C NMR spectra of compound **5** (100 MHz, CDCl<sub>3</sub>)



**Figure S8:** <sup>11</sup>B NMR spectra of compound **5** (128 MHz, CDCl<sub>3</sub>)



**Figure S9:** <sup>1</sup>H NMR spectra of compound **6** (400 MHz, CDCl<sub>3</sub>)



**Figure S10:** <sup>13</sup>C NMR spectra of compound **6** (100 MHz, CDCl<sub>3</sub>)

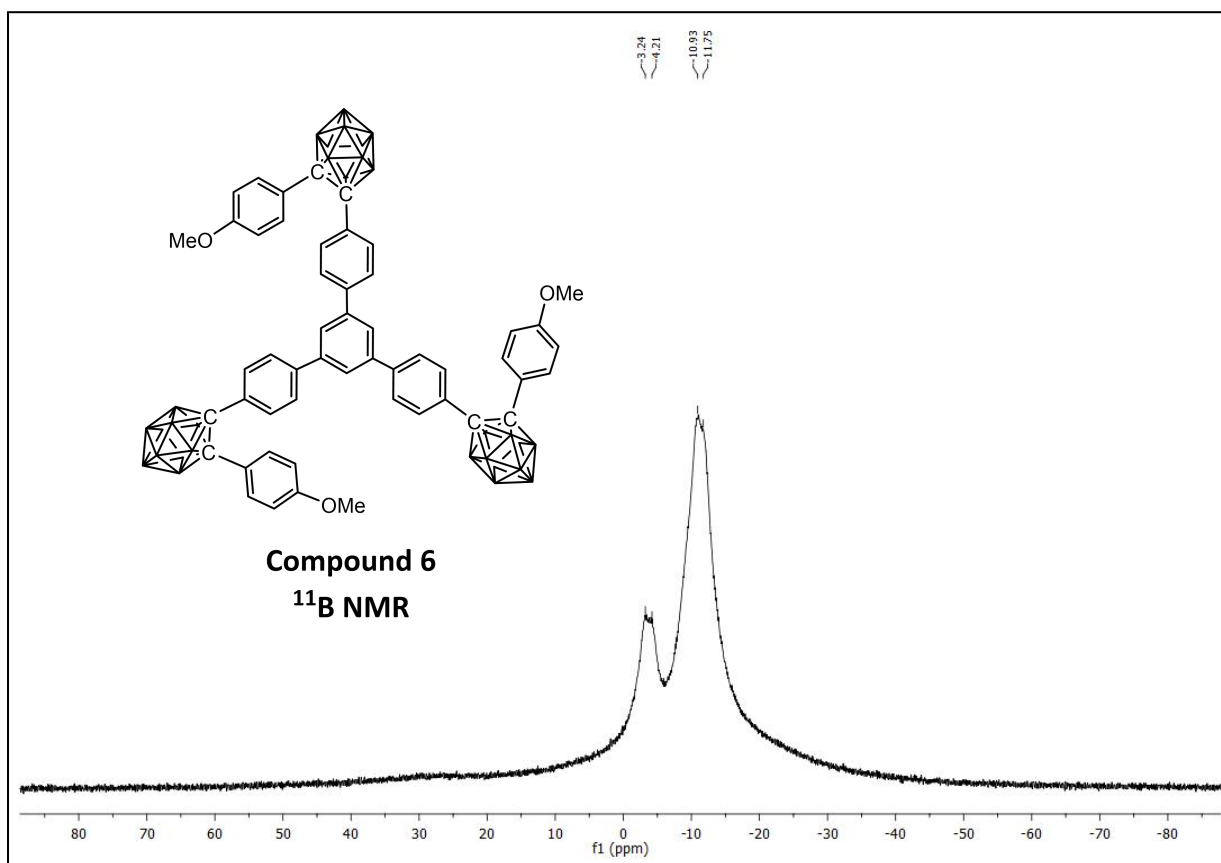


Figure S11:  $^{11}\text{B}$  NMR spectra of compound 6 (128 MHz,  $\text{CDCl}_3$ )

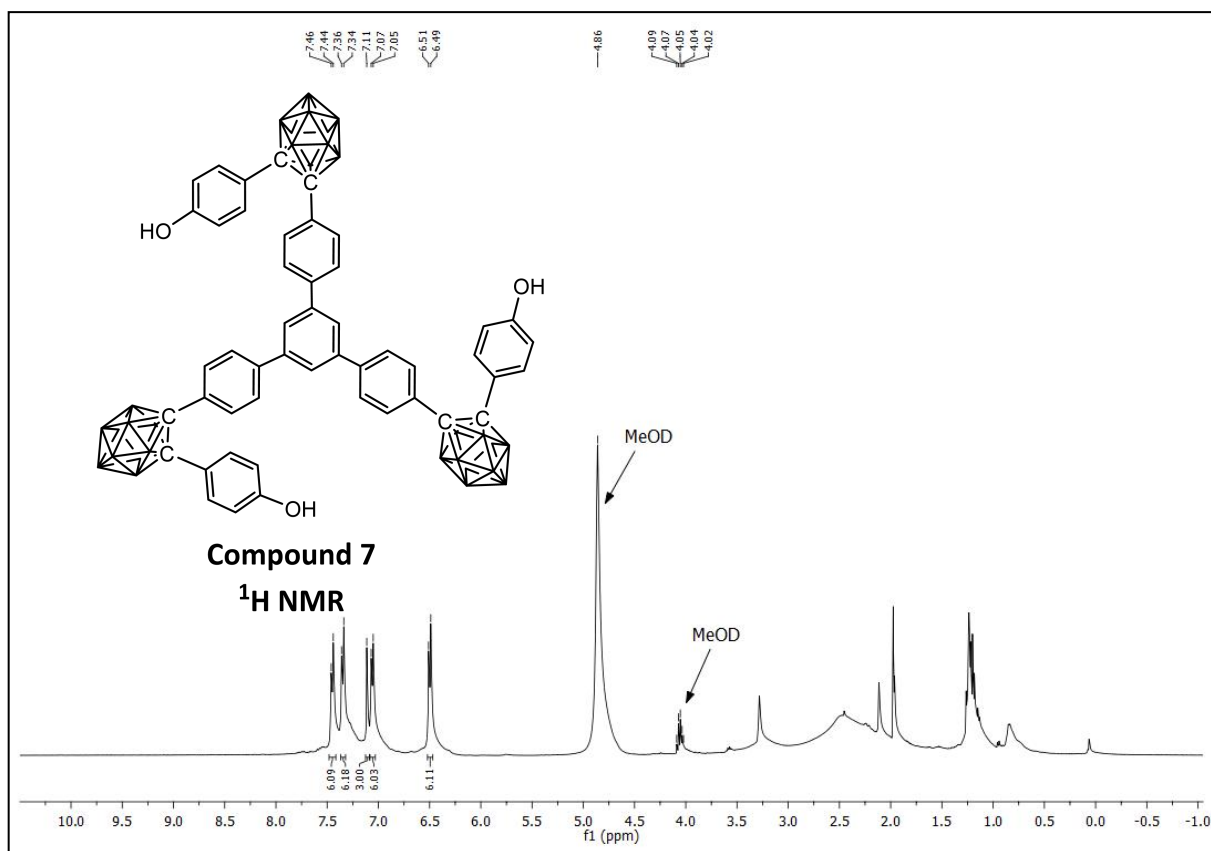
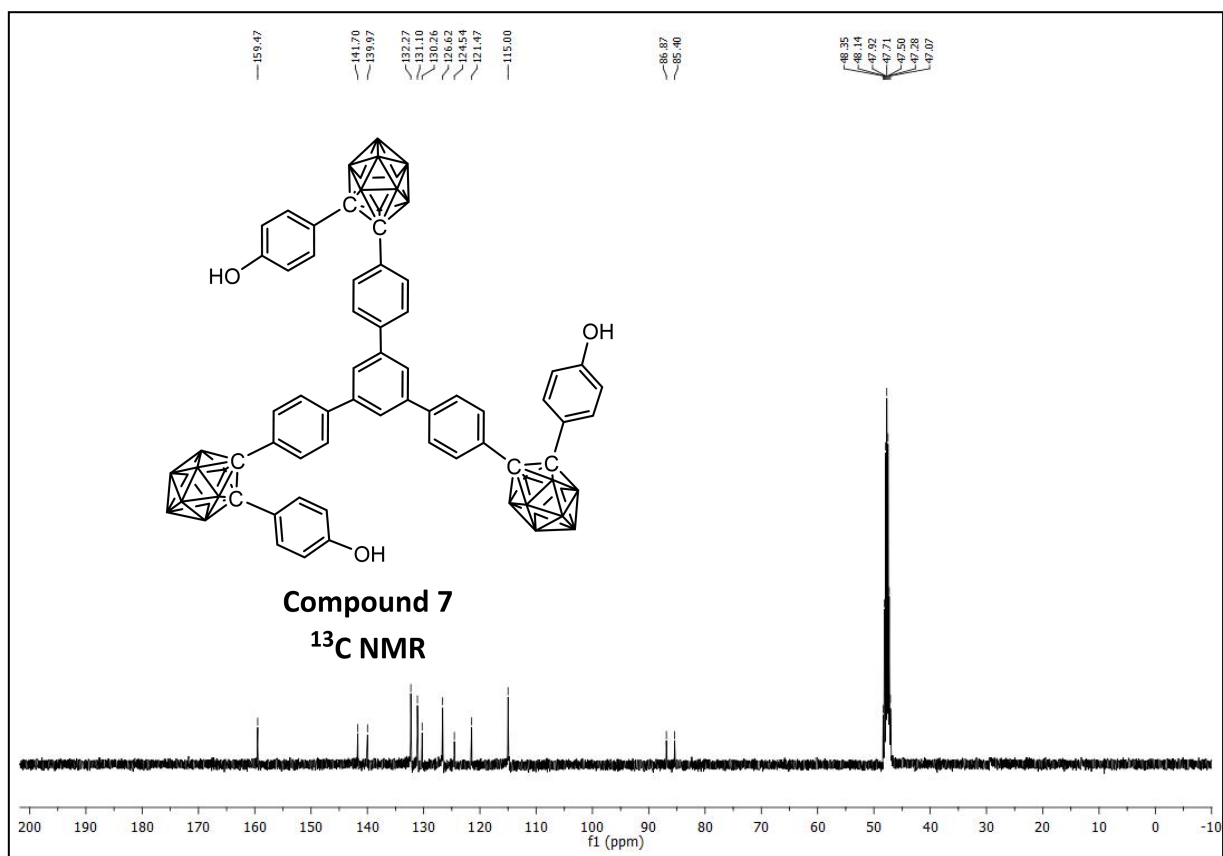
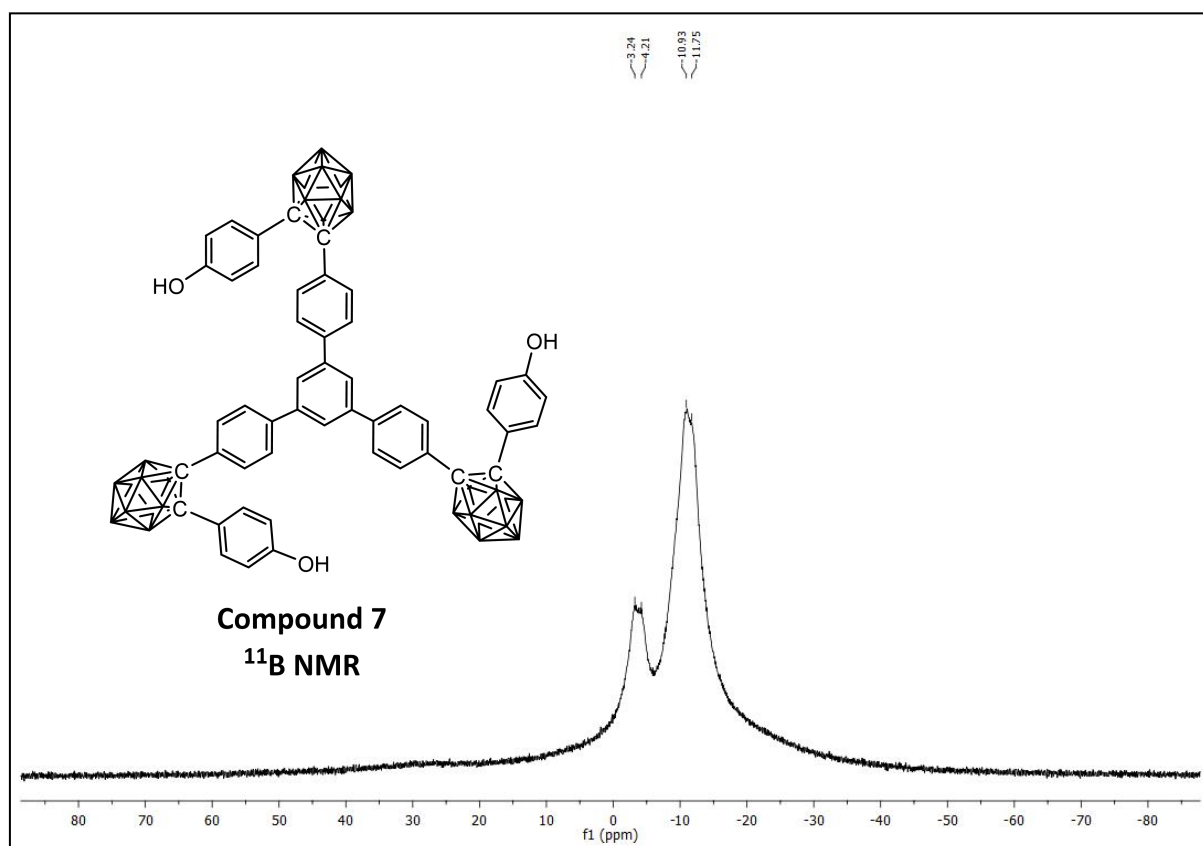


Figure S12:  $^1\text{H}$  NMR spectra of compound 7 (400 MHz,  $\text{CD}_3\text{OD}$ )

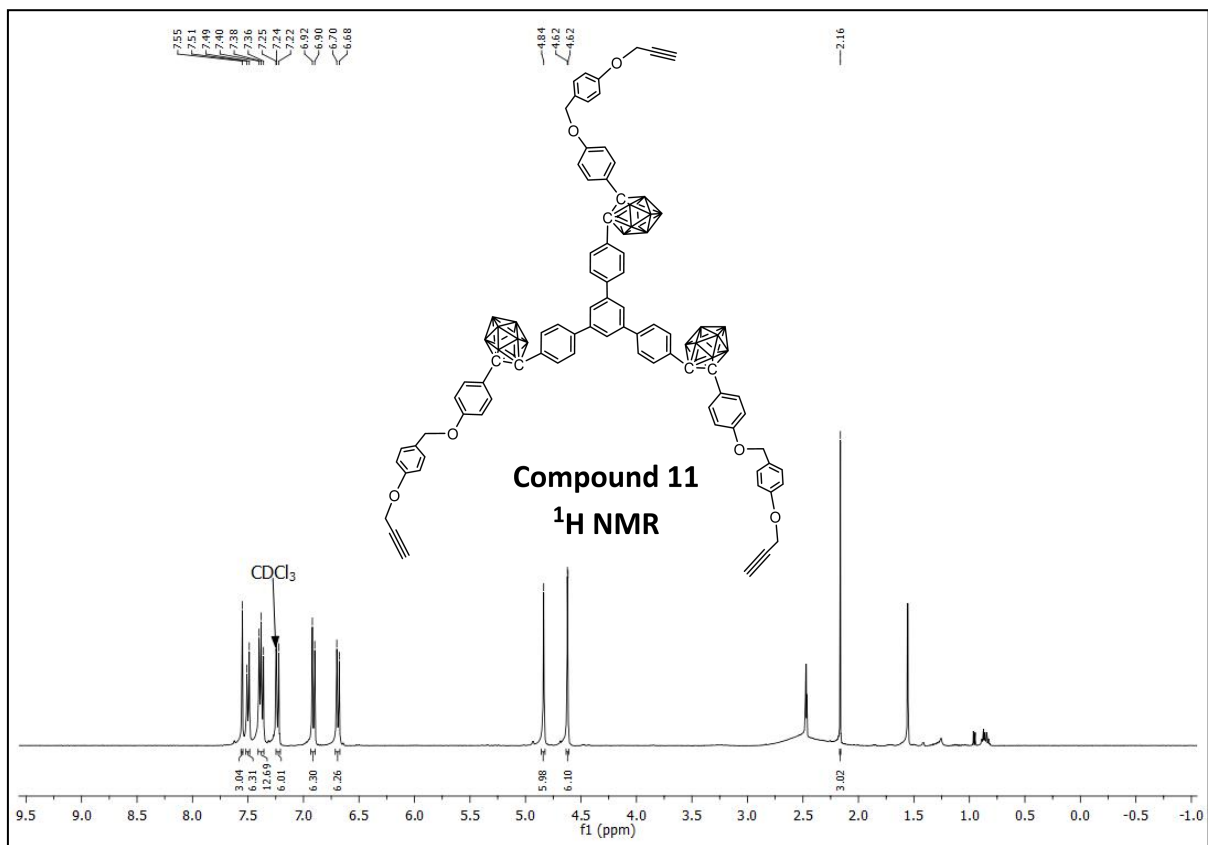


**Figure S13:** <sup>13</sup>C NMR spectra of compound 7 (100 MHz, CD<sub>3</sub>OD)

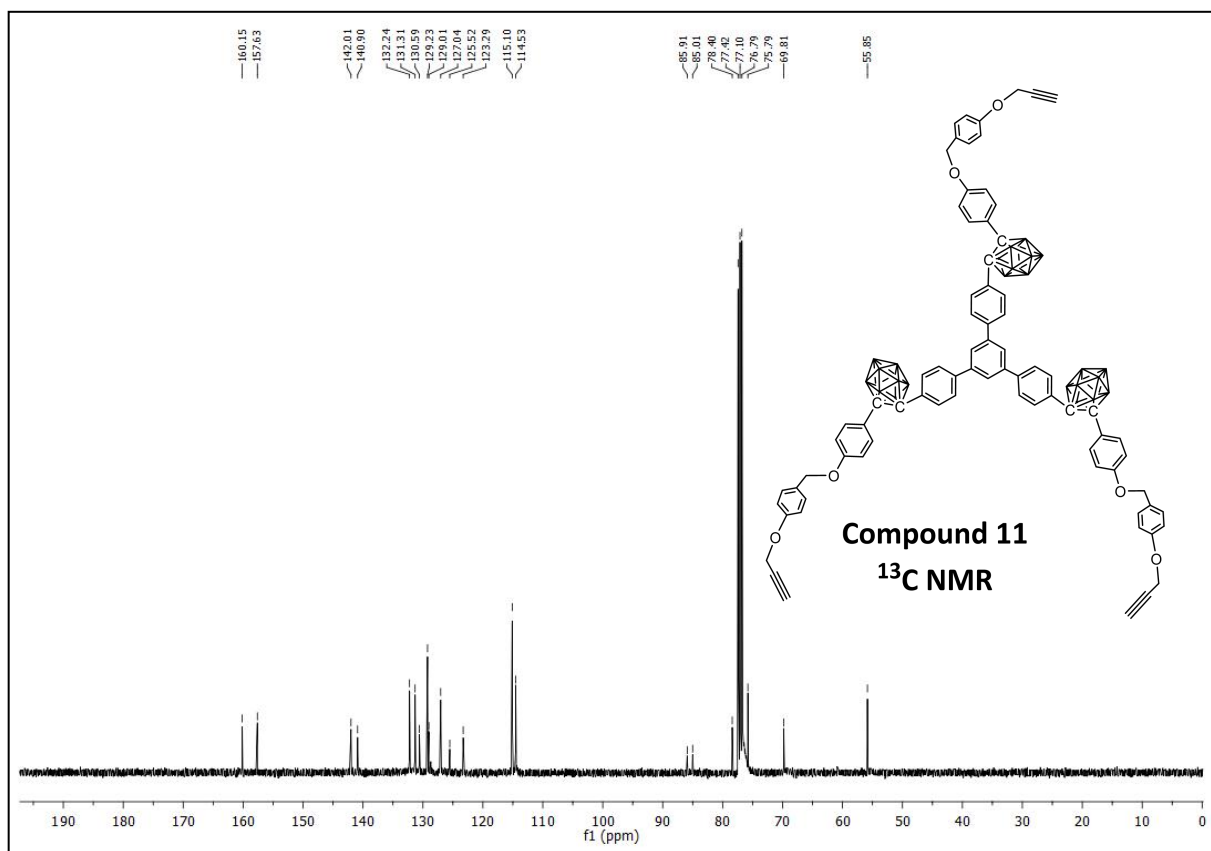


**Figure S14:** <sup>11</sup>B NMR spectra of compound 7 (128 MHz, CD<sub>3</sub>OD)

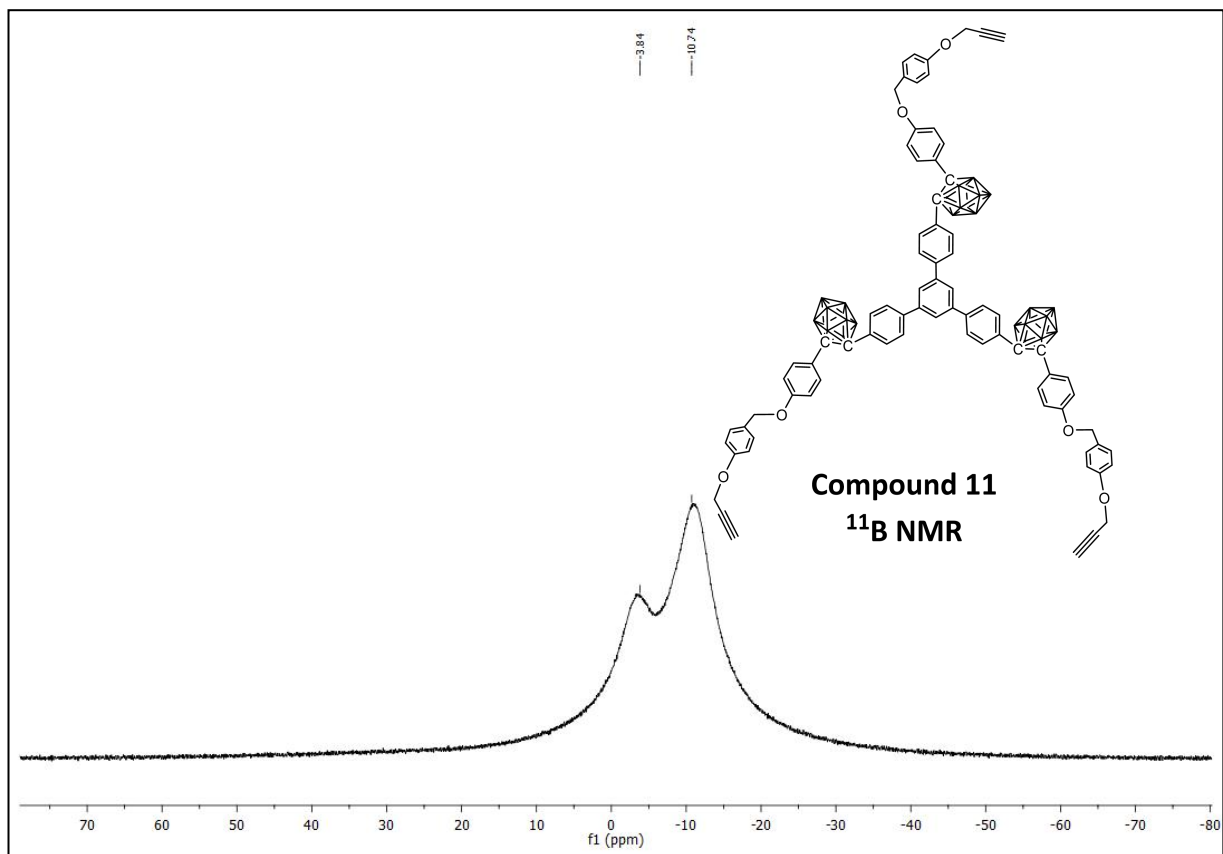




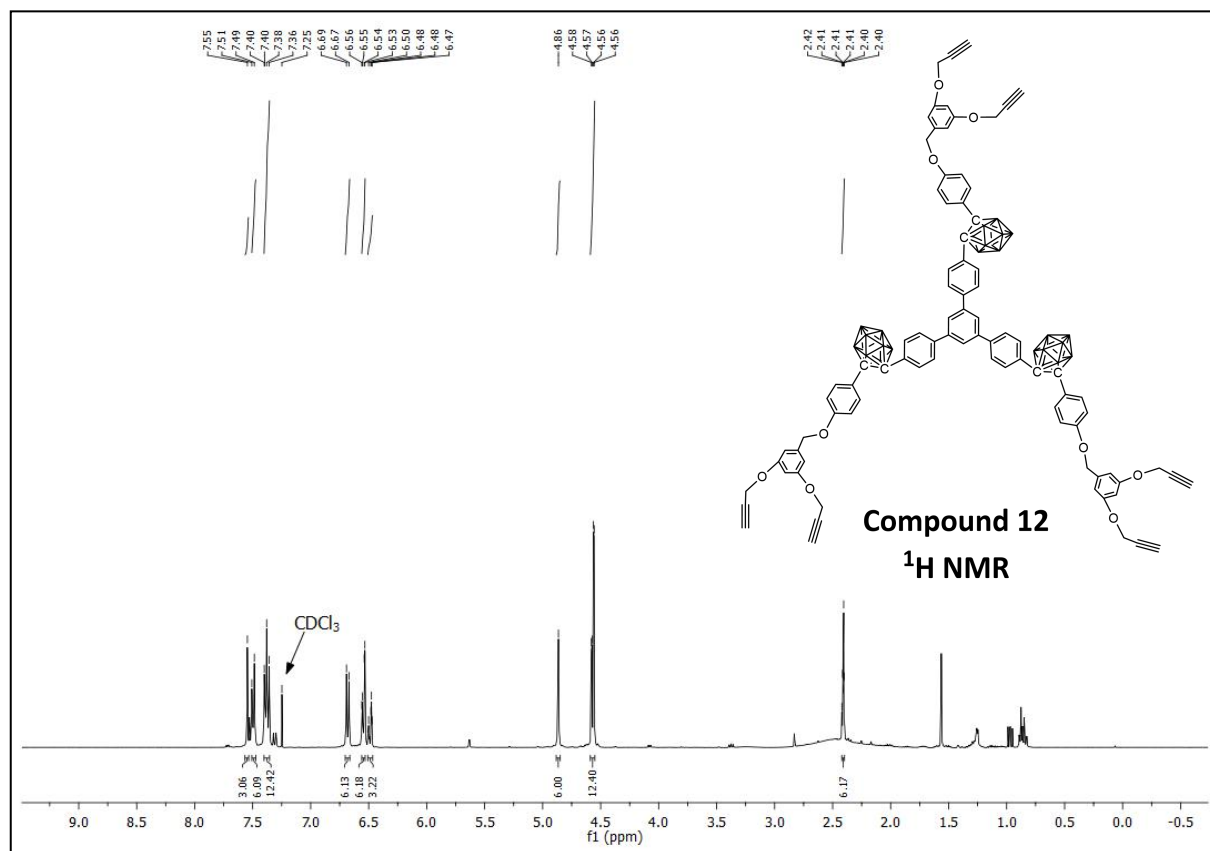
**Figure S15:** <sup>1</sup>H NMR spectra of compound **11** (400 MHz, CDCl<sub>3</sub>)



**Figure S16:** <sup>13</sup>C NMR spectra of compound **11** (100 MHz, CDCl<sub>3</sub>)



**Figure S16:** <sup>11</sup>B NMR spectra of compound **11** (128 MHz, CDCl<sub>3</sub>)



**Figure S18:** <sup>1</sup>H NMR spectra of compound **12** (400 MHz, CDCl<sub>3</sub>)

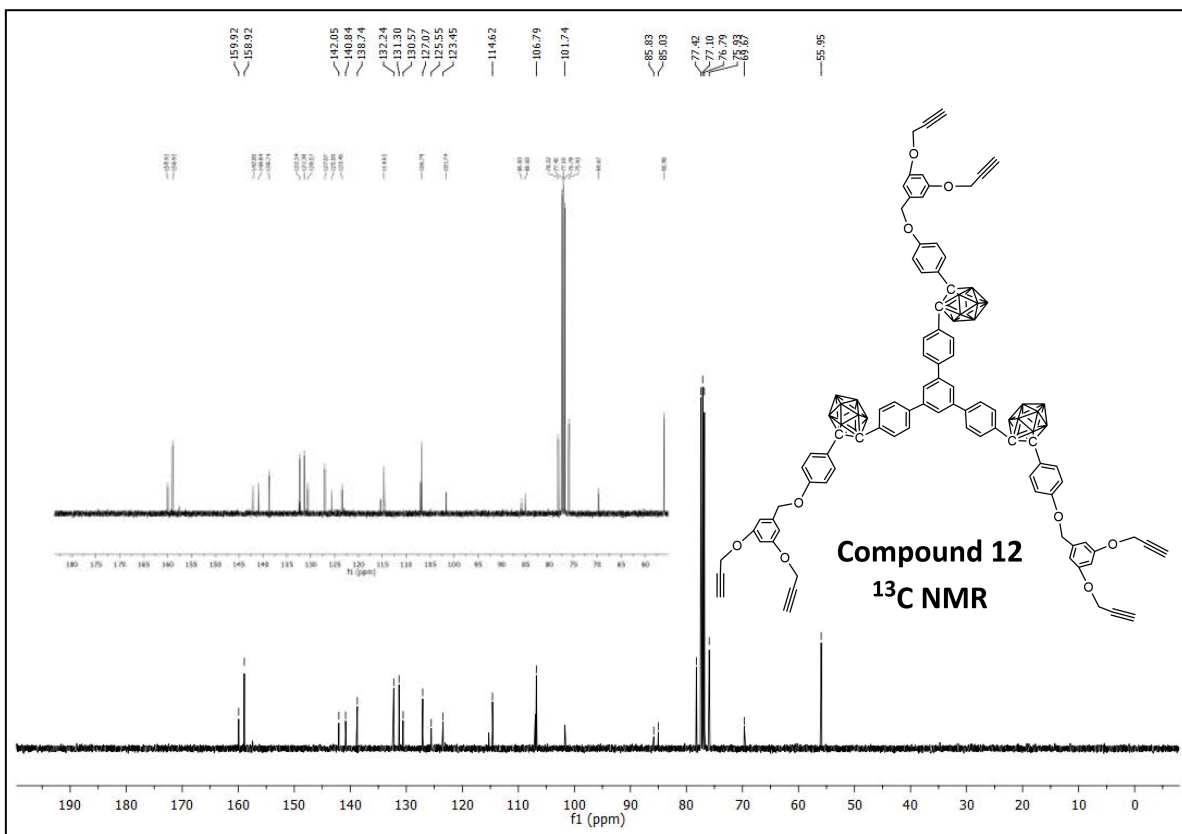


Figure S19: <sup>13</sup>C NMR spectra of compound 12 (100 MHz, CDCl<sub>3</sub>)

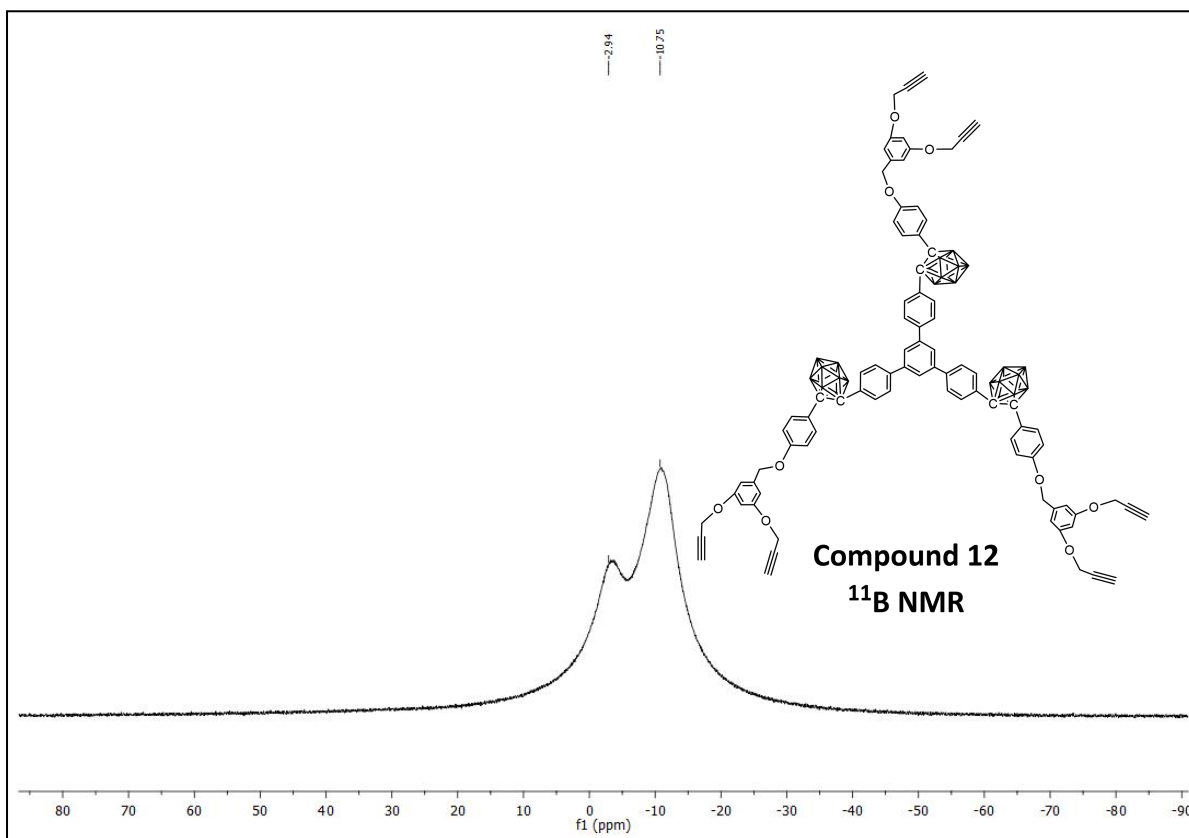
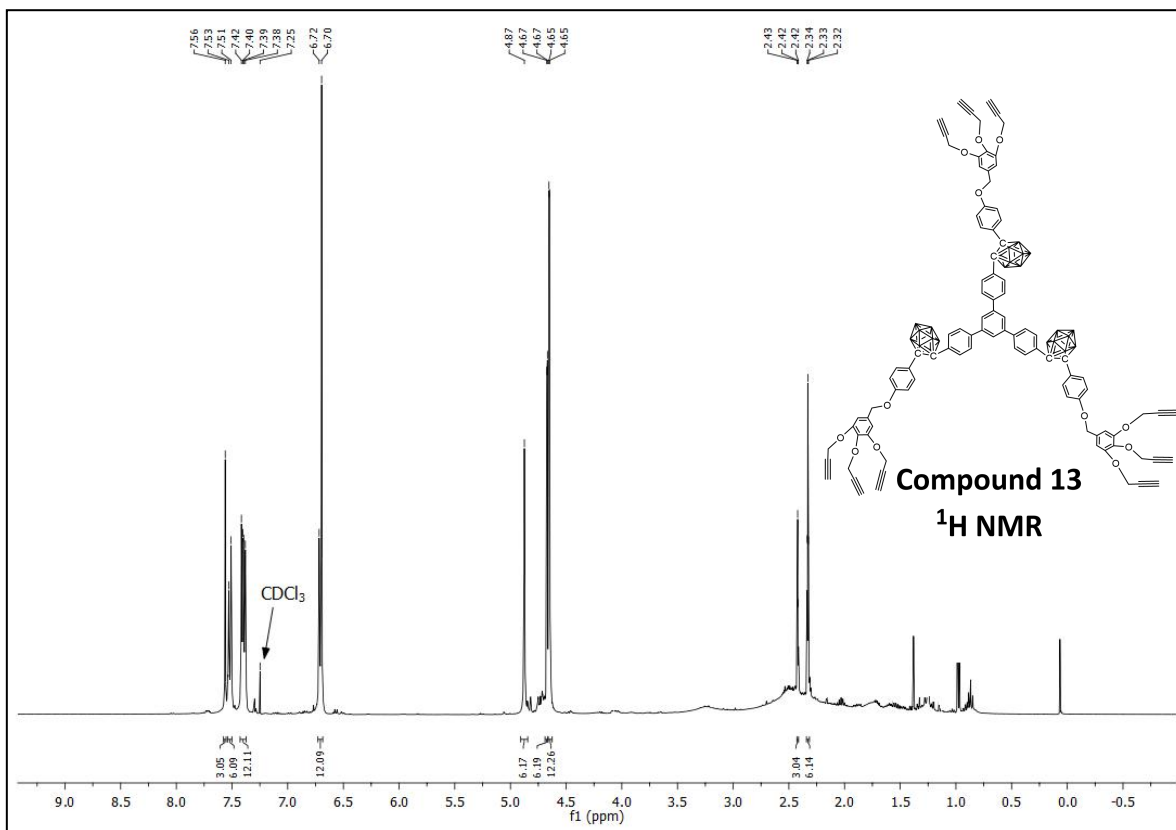
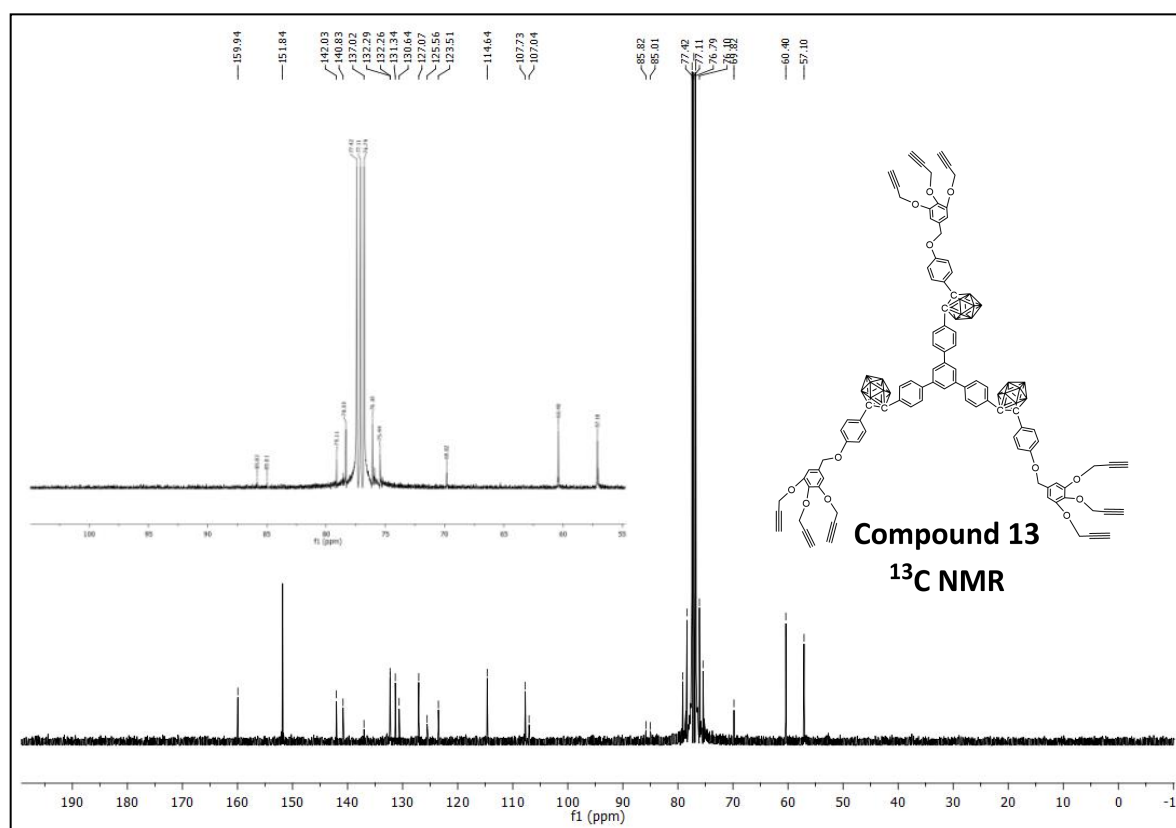


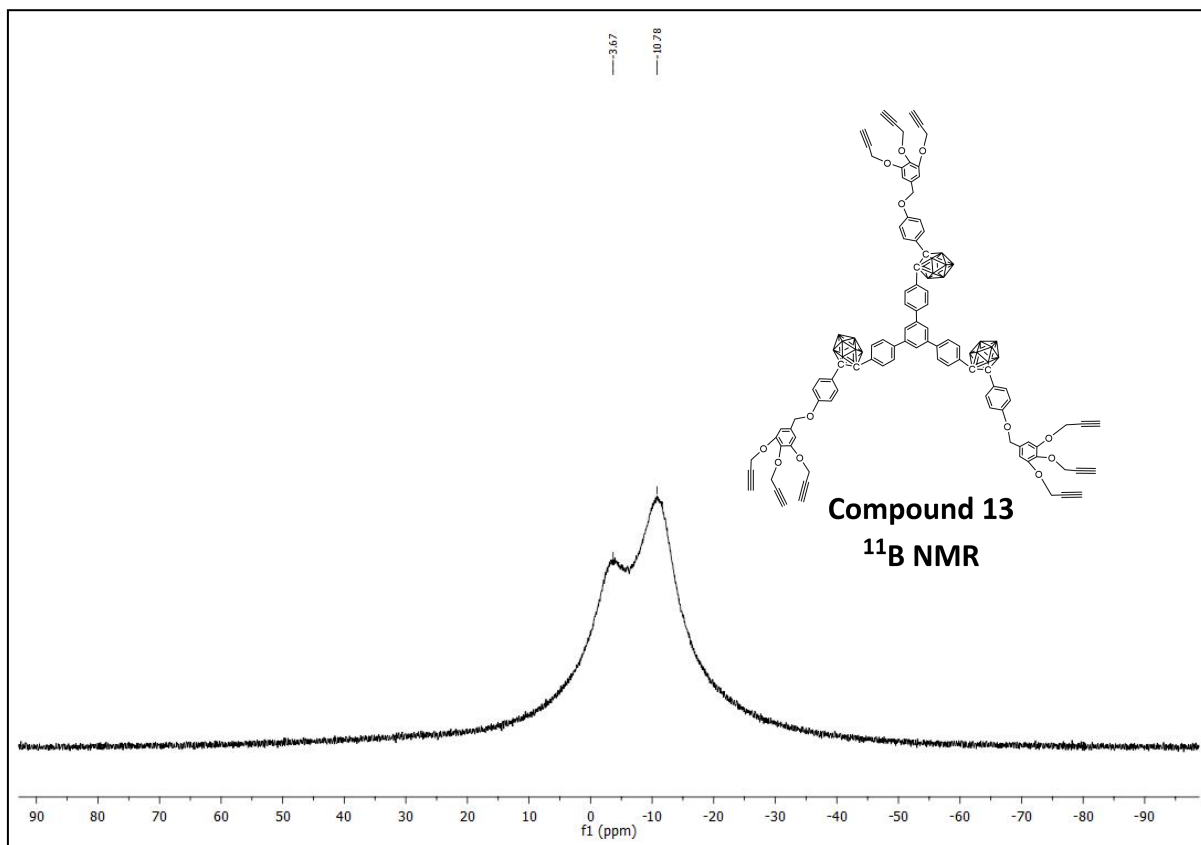
Figure S20: <sup>11</sup>B NMR spectra of compound 12 (128 MHz, CDCl<sub>3</sub>)



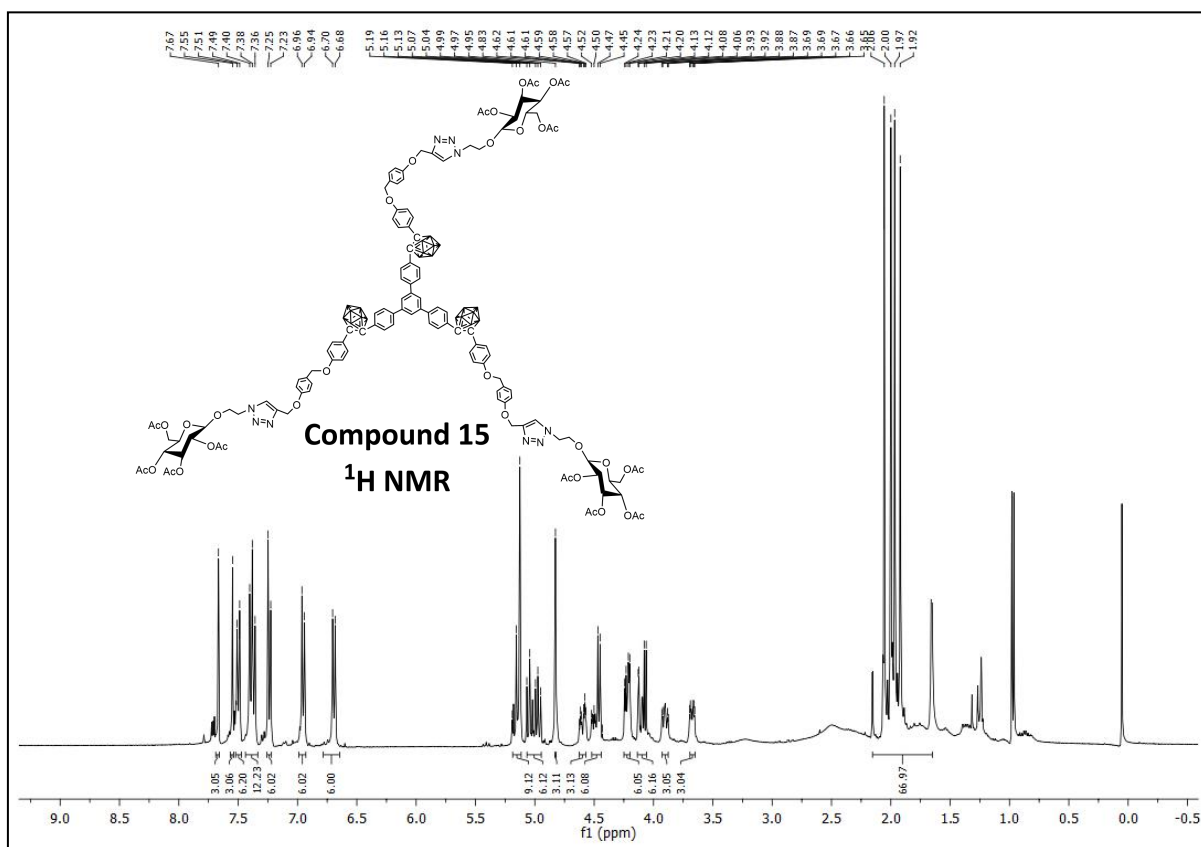
**Figure S21:** <sup>1</sup>H NMR spectra of compound **13** (400 MHz, CDCl<sub>3</sub>)



**Figure S22:** <sup>13</sup>C NMR spectra of compound **13** (100 MHz, CDCl<sub>3</sub>)



**Figure S23:** <sup>11</sup>B NMR spectra of compound 13 (128 MHz, CDCl<sub>3</sub>)



**Figure S24:** <sup>1</sup>H NMR spectra of compound 15 (400 MHz, CDCl<sub>3</sub>)

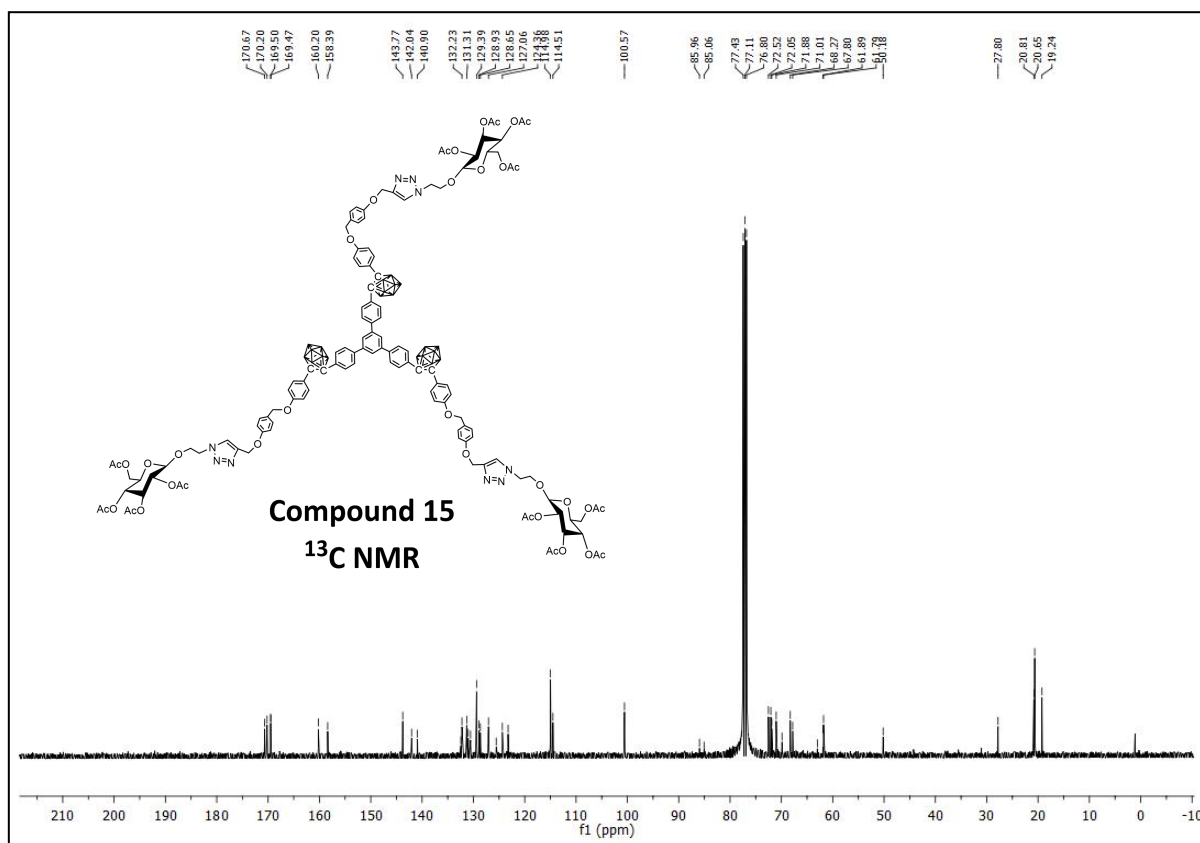


Figure S25: <sup>13</sup>C NMR spectra of compound 15 (100 MHz, CDCl<sub>3</sub>)

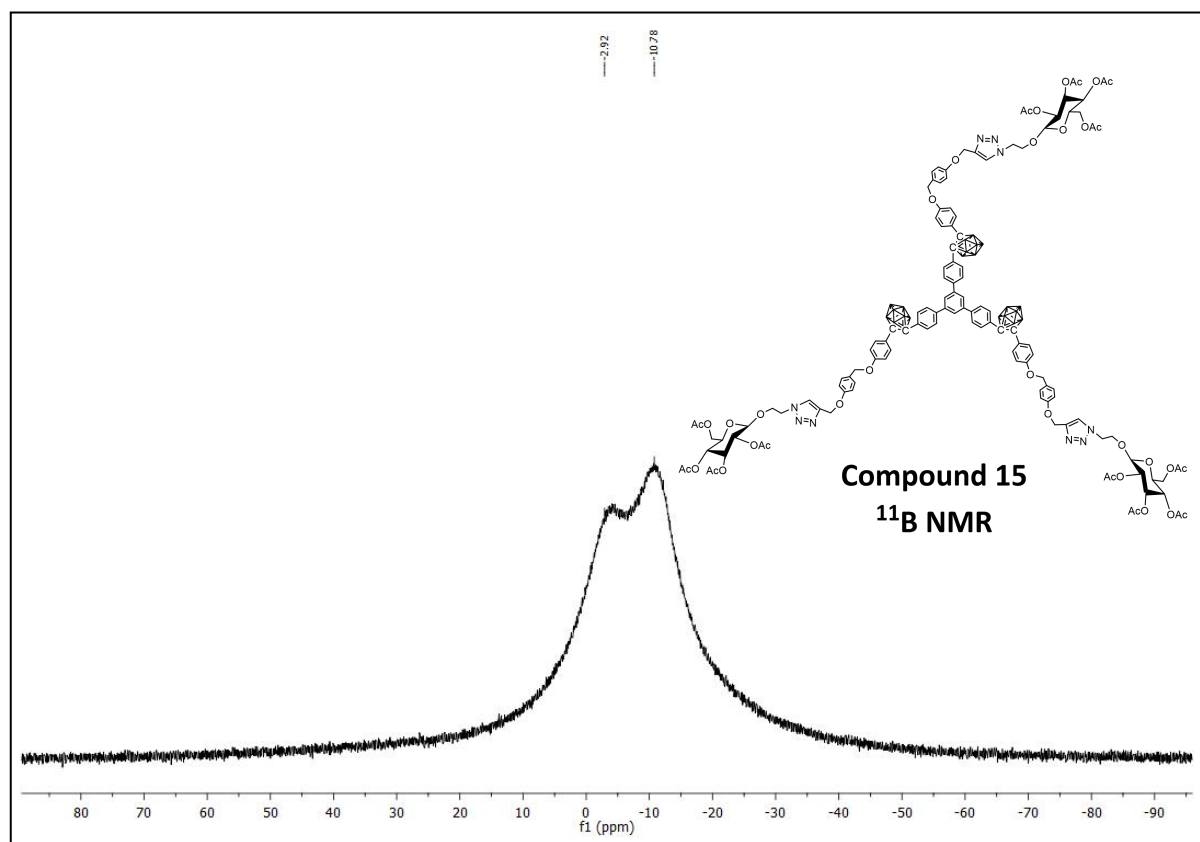


Figure S26: <sup>11</sup>B NMR spectra of compound 15 (128 MHz, CDCl<sub>3</sub>)

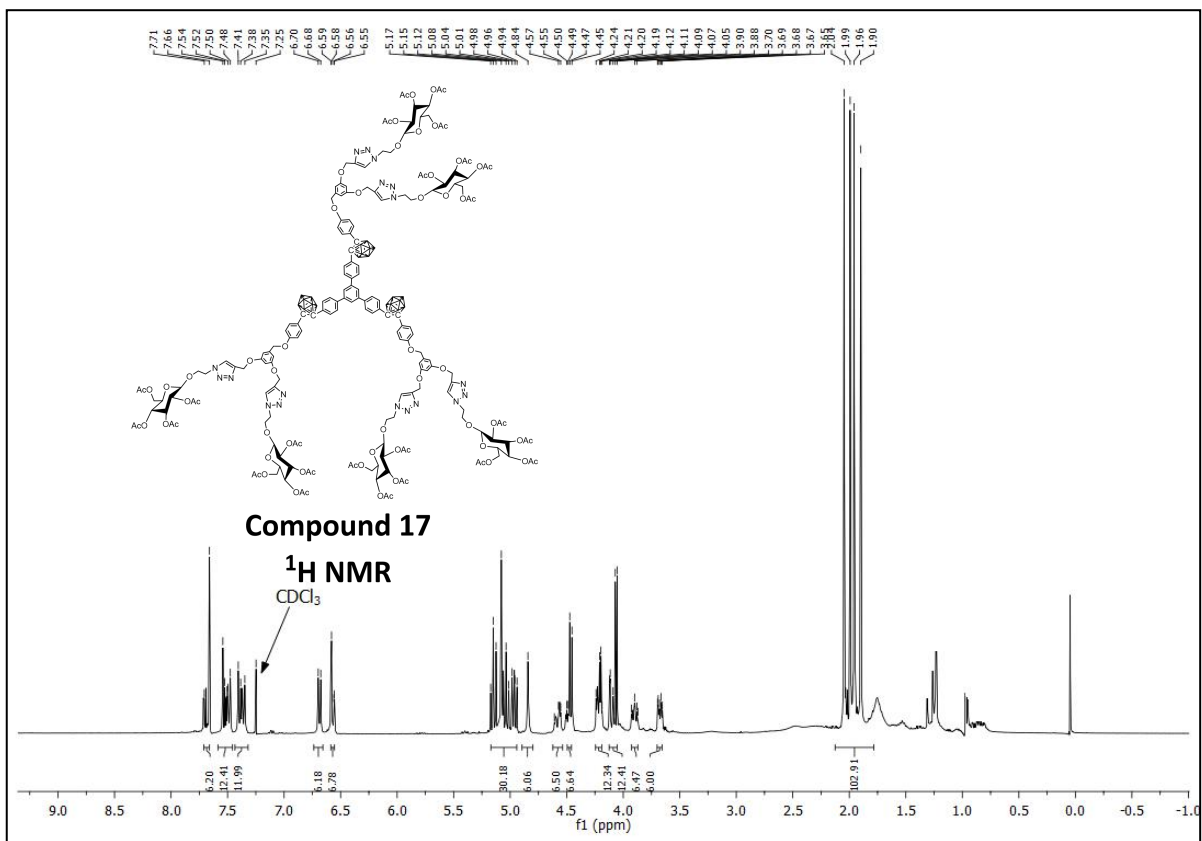


Figure S27: <sup>1</sup>H NMR spectra of compound 17 (400 MHz, CDCl<sub>3</sub>)

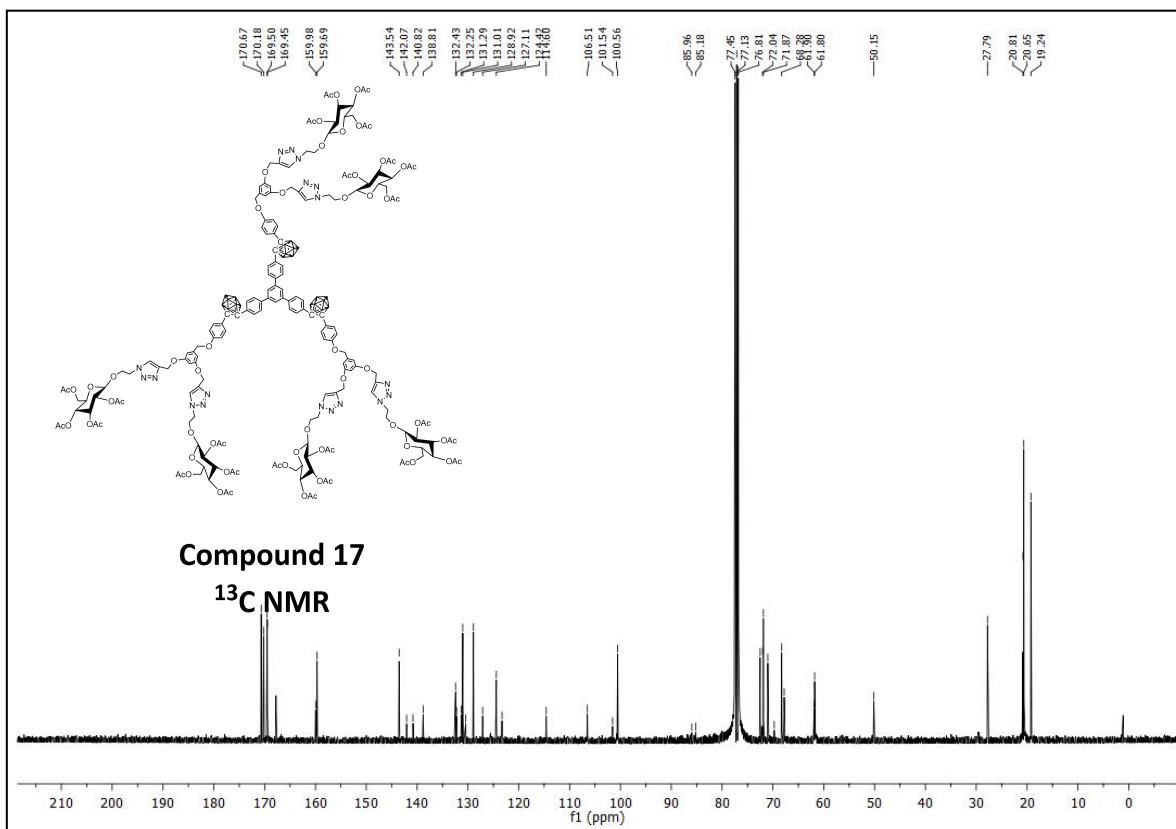
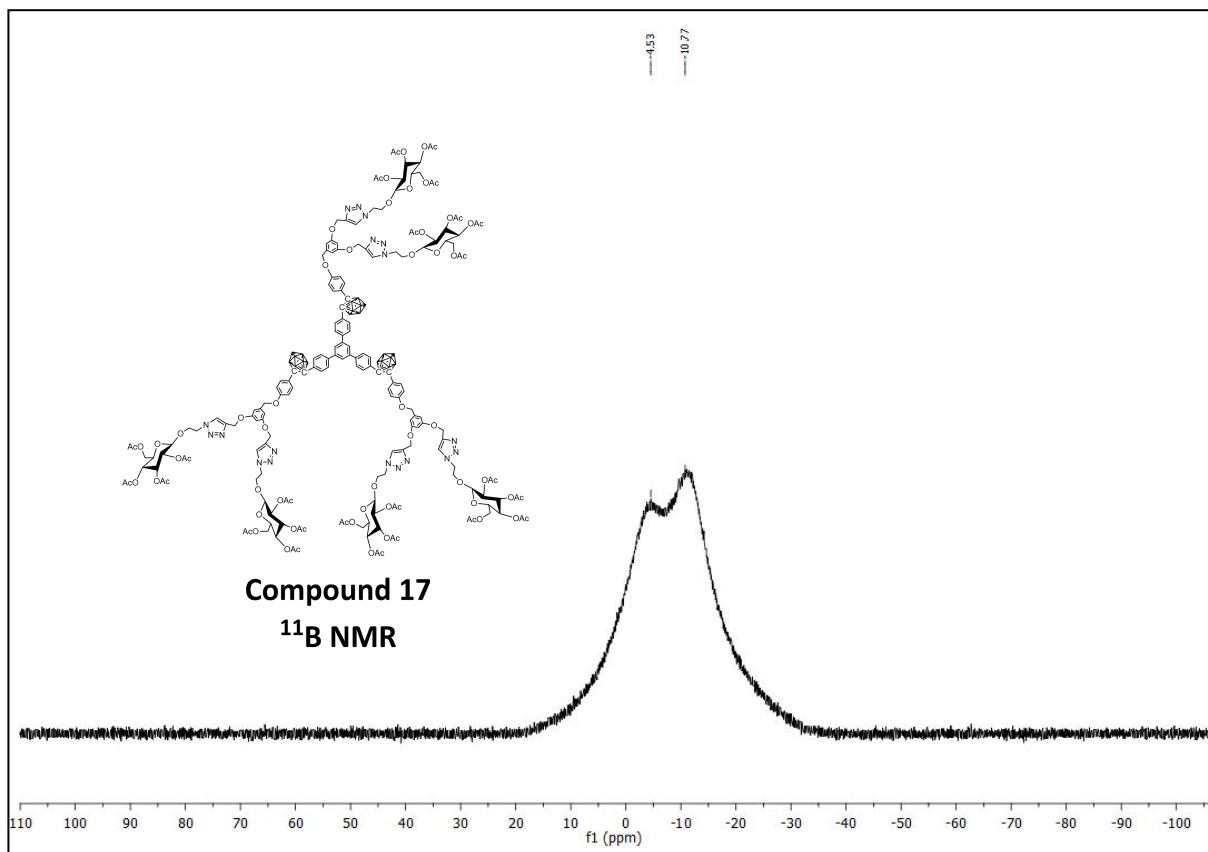
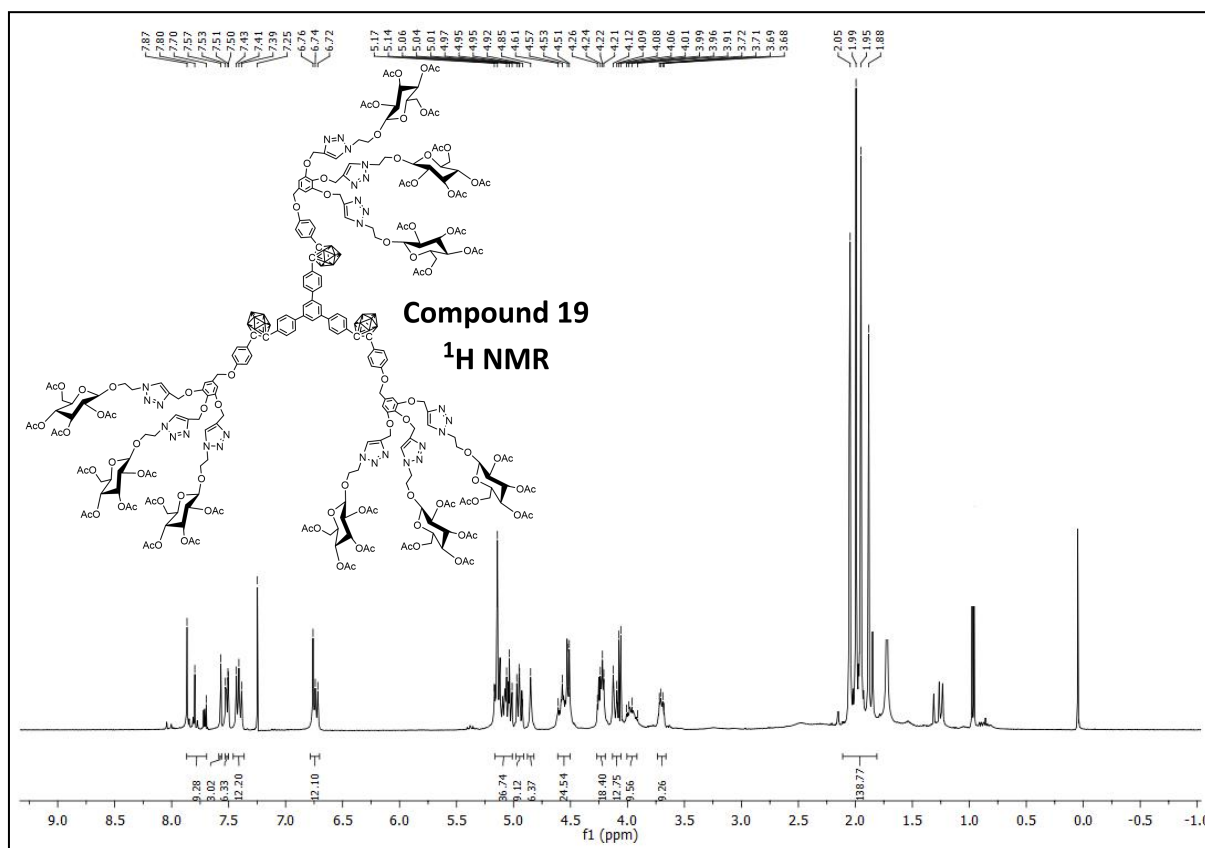


Figure S28: <sup>13</sup>C NMR spectra of compound 17 (100 MHz, CDCl<sub>3</sub>)

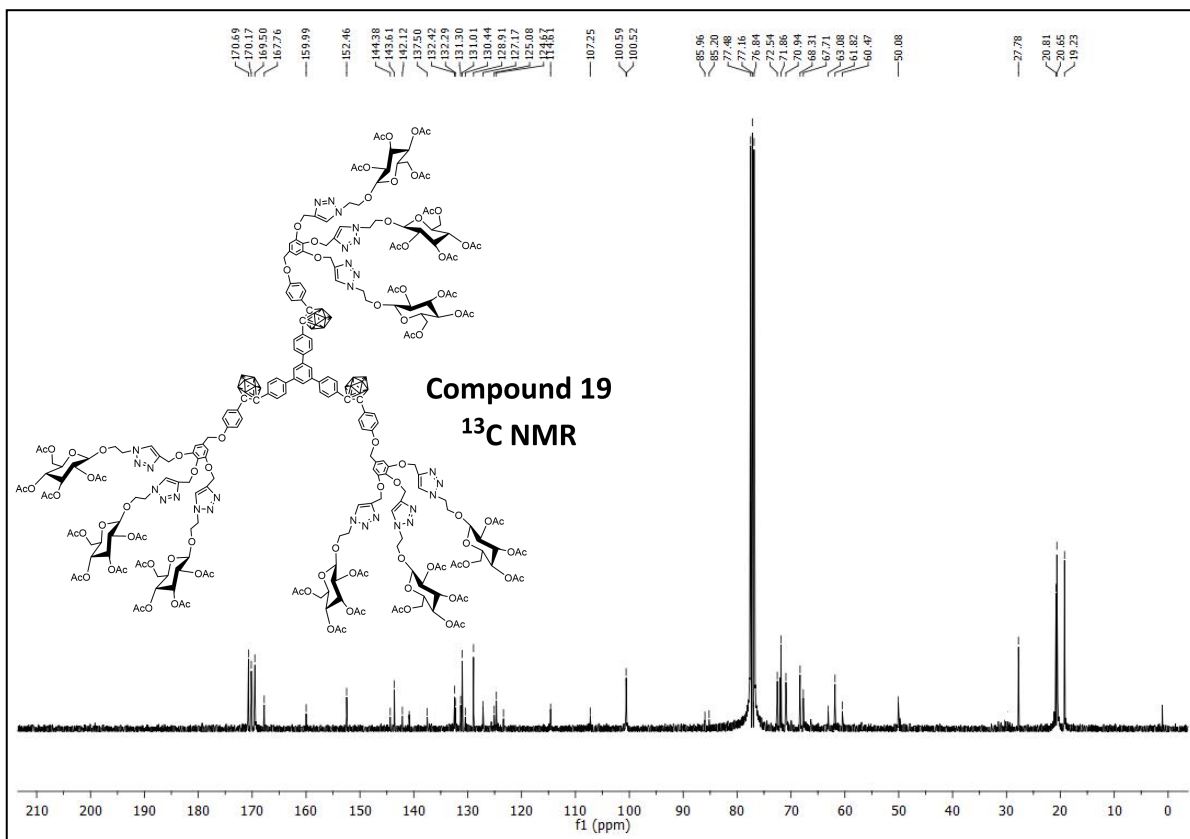


**Figure S29:** <sup>11</sup>B NMR spectra of compound **17** (128 MHz, CDCl<sub>3</sub>)

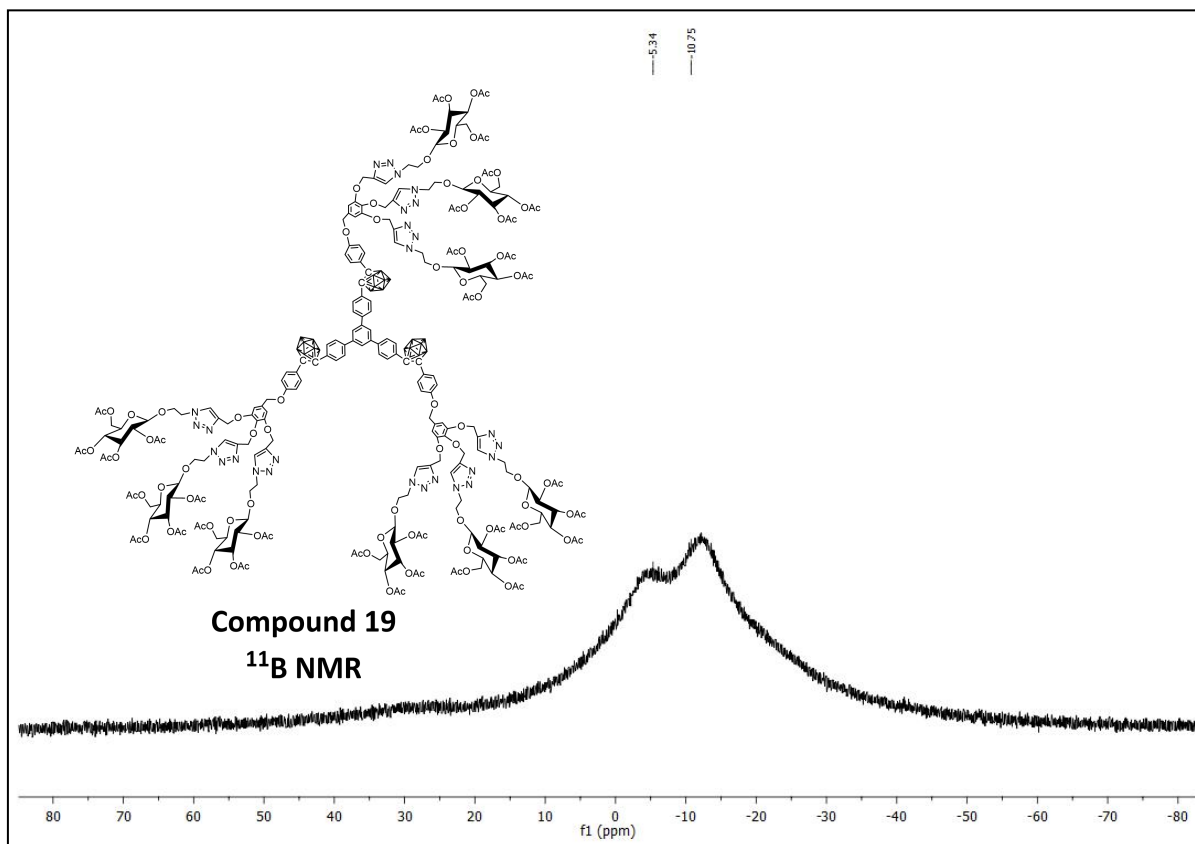


**Figure S30:** <sup>1</sup>H NMR spectra of compound **19** (400 MHz, CDCl<sub>3</sub>)

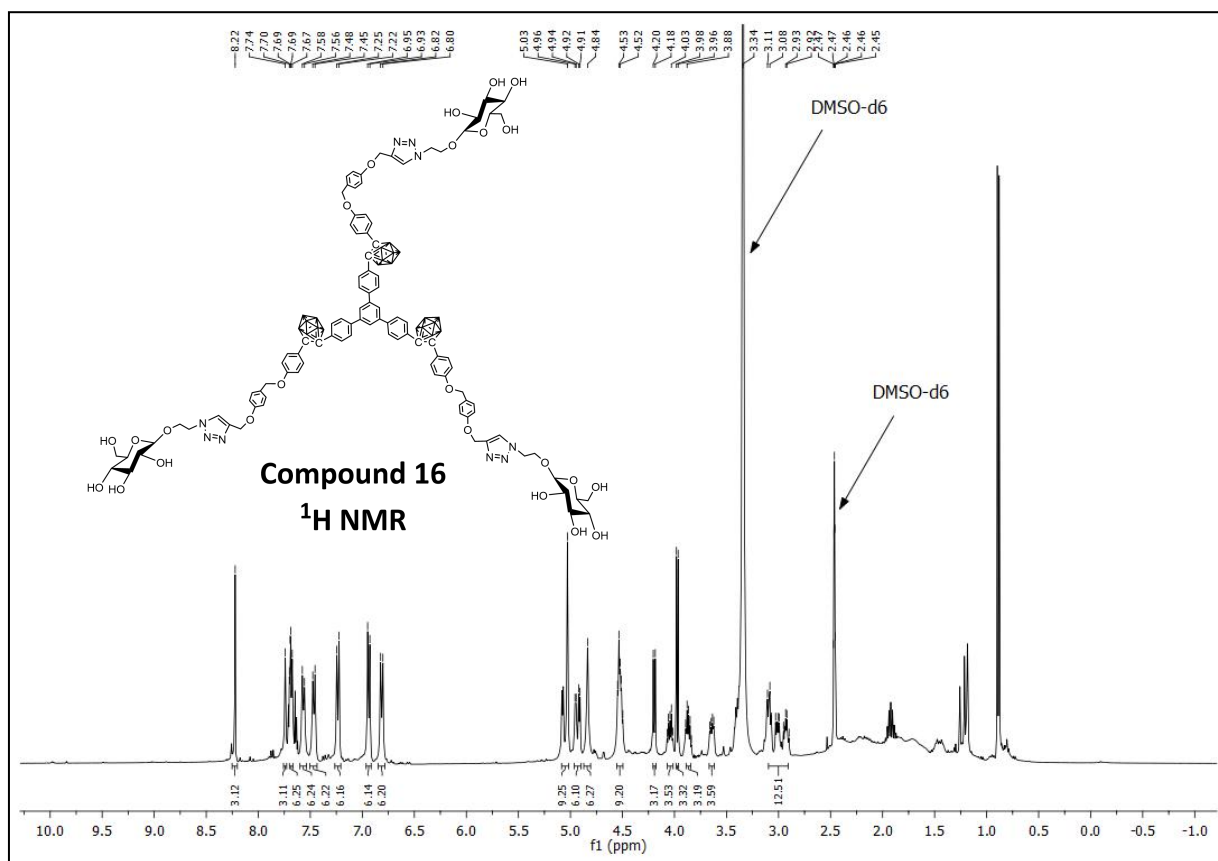




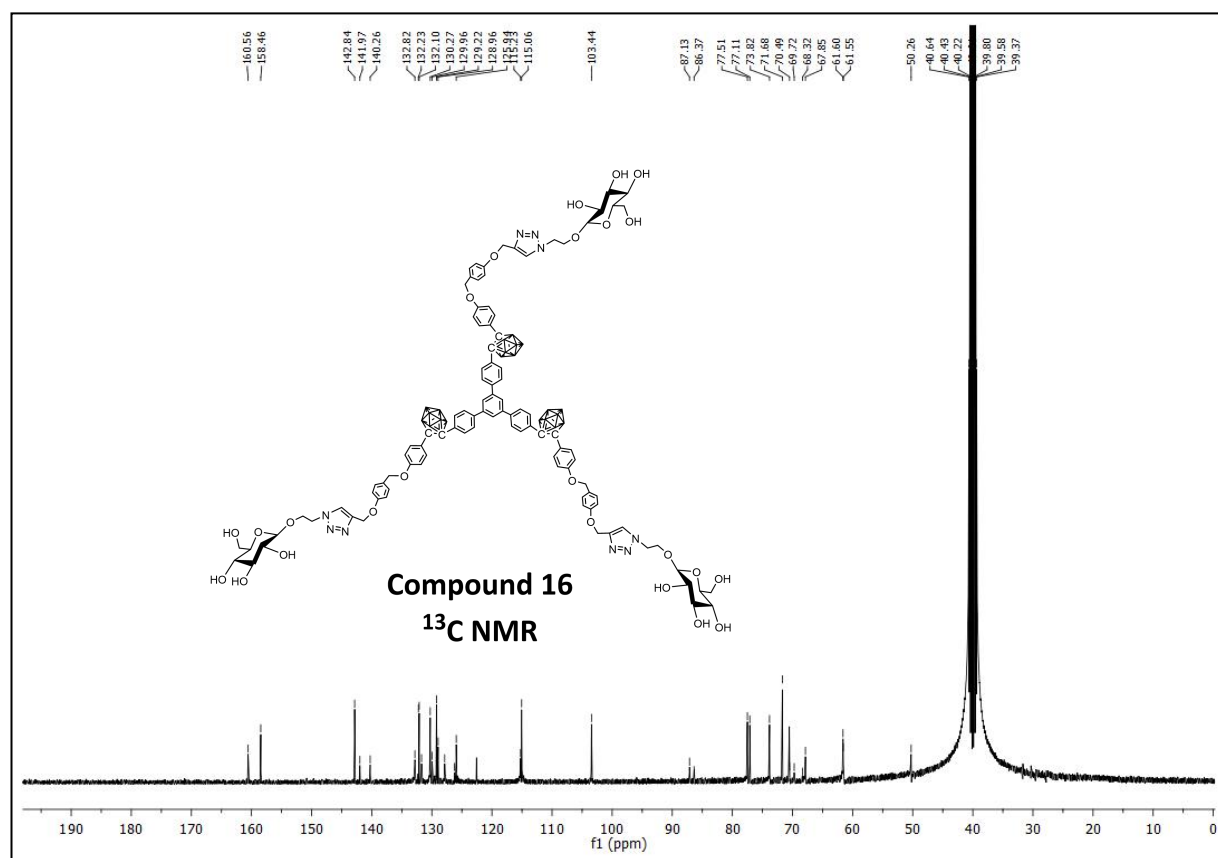
**Figure S31:** <sup>13</sup>C NMR spectra of compound **19** (100 MHz, CDCl<sub>3</sub>)



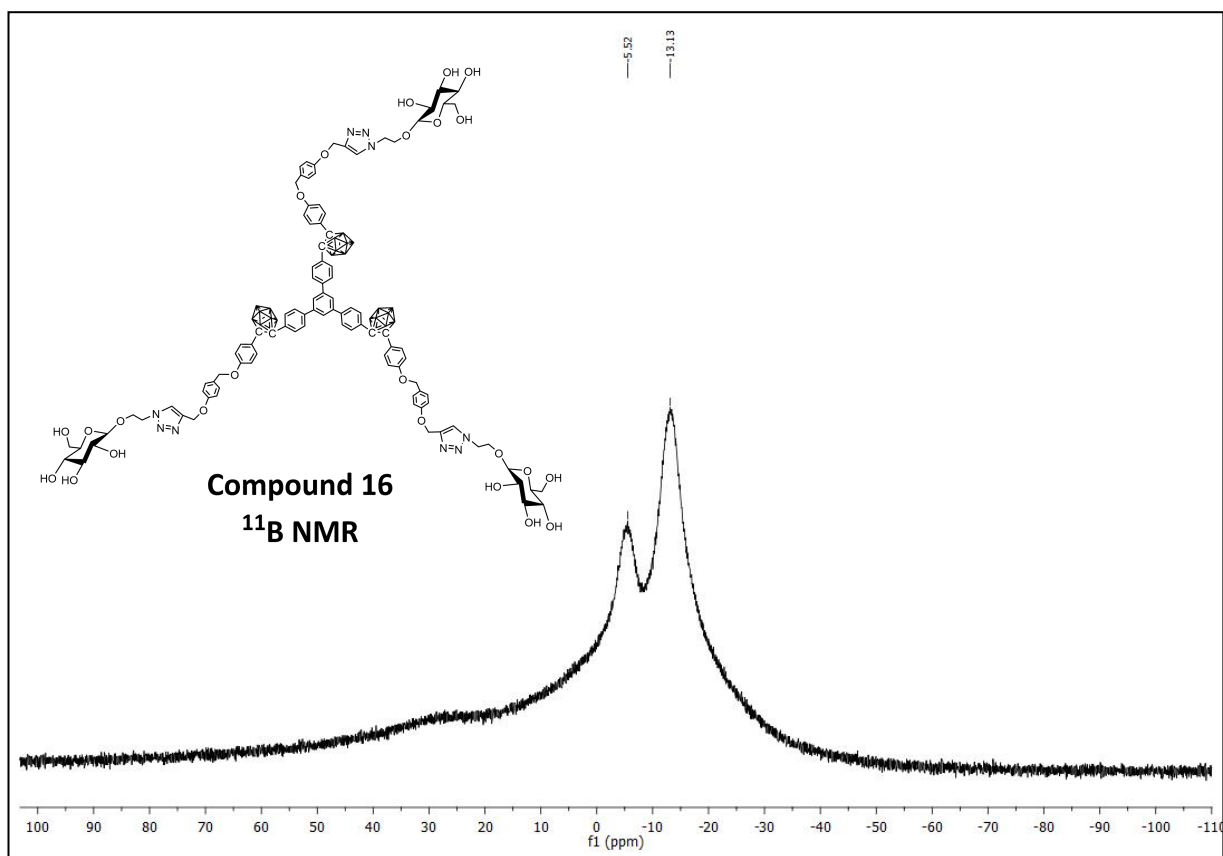
**Figure S32:** <sup>11</sup>B NMR spectra of compound **19** (128 MHz, CDCl<sub>3</sub>)



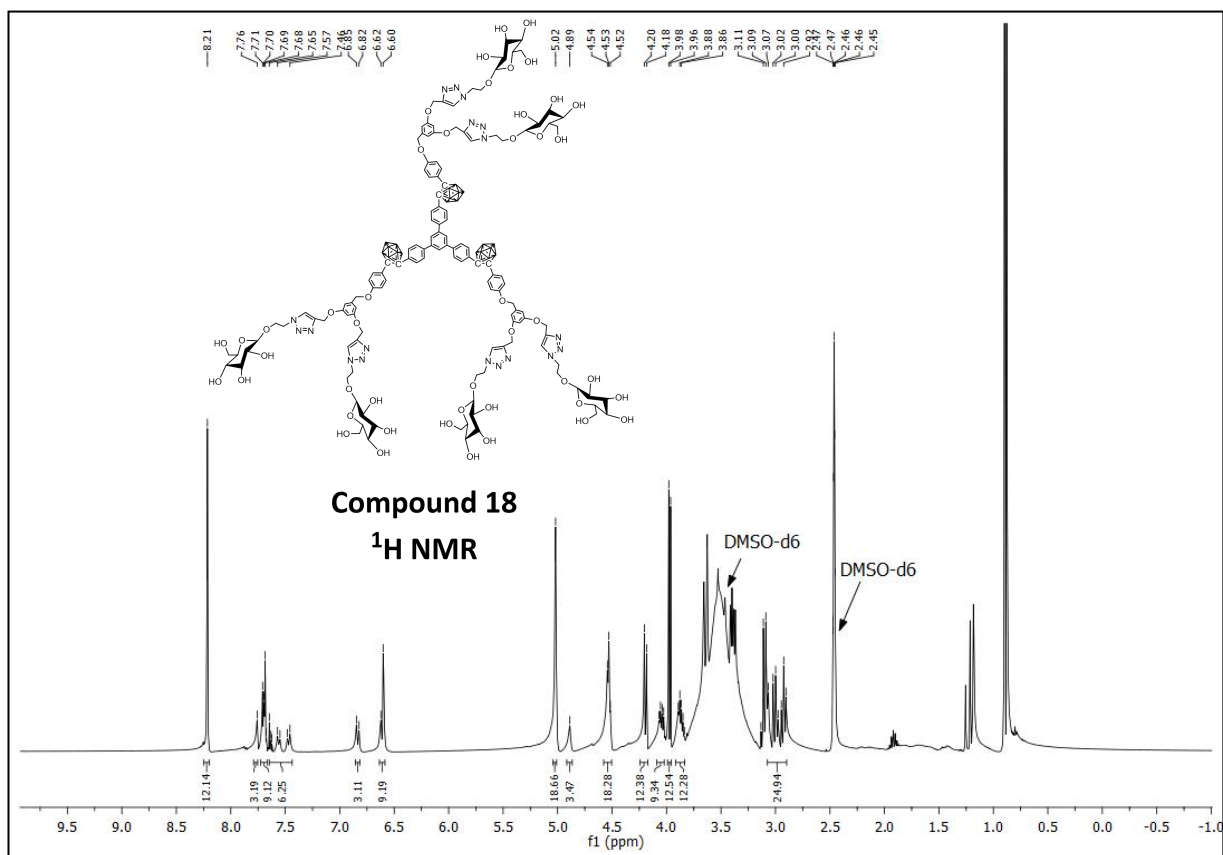
**Figure S33:** <sup>1</sup>H NMR spectra of compound **16** (400 MHz, DMSO-d<sub>6</sub>)



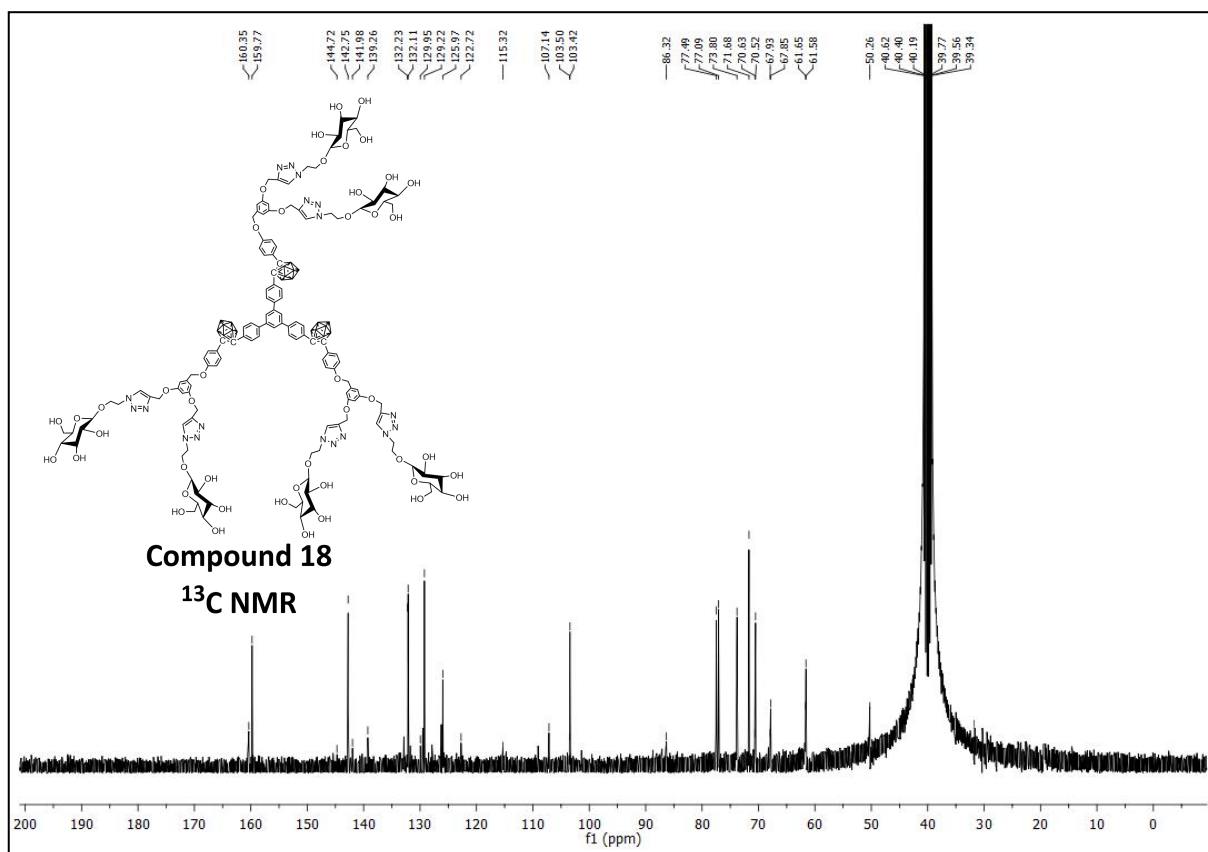
**Figure S34:** <sup>13</sup>C NMR spectra of compound **16** (100 MHz, DMSO-d<sub>6</sub>)



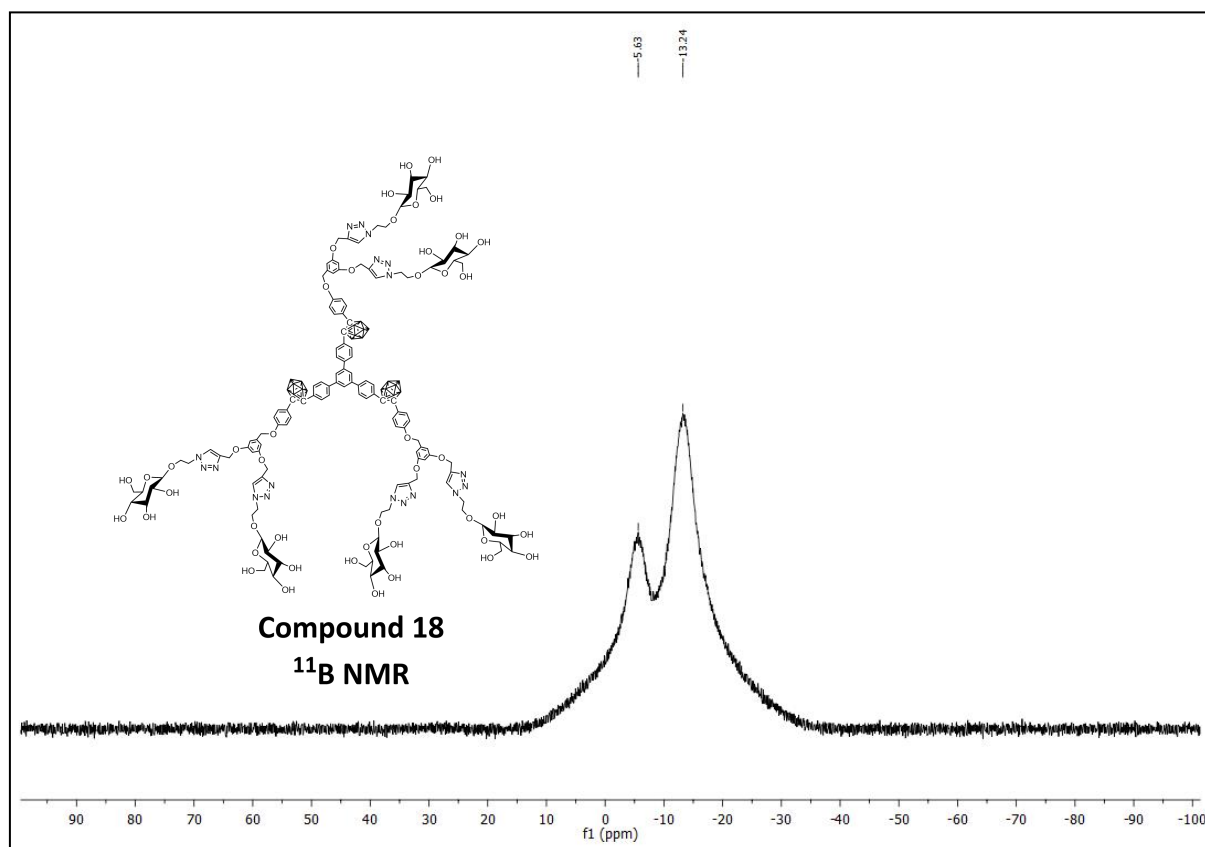
**Figure S35:** <sup>11</sup>B NMR spectra of compound **16** (128 MHz, DMSO-d<sub>6</sub>)



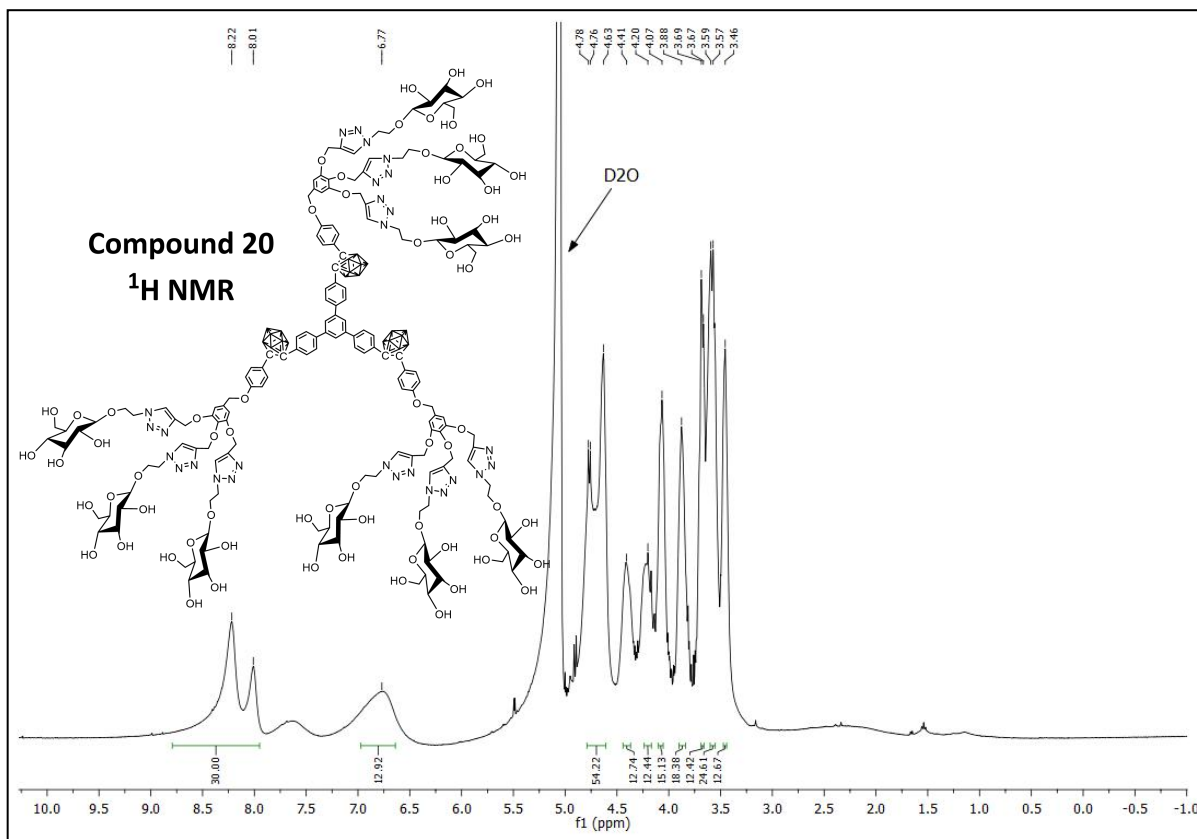
**Figure S36:** <sup>1</sup>H NMR spectra of compound **18** (400 MHz, DMSO-d<sub>6</sub>)



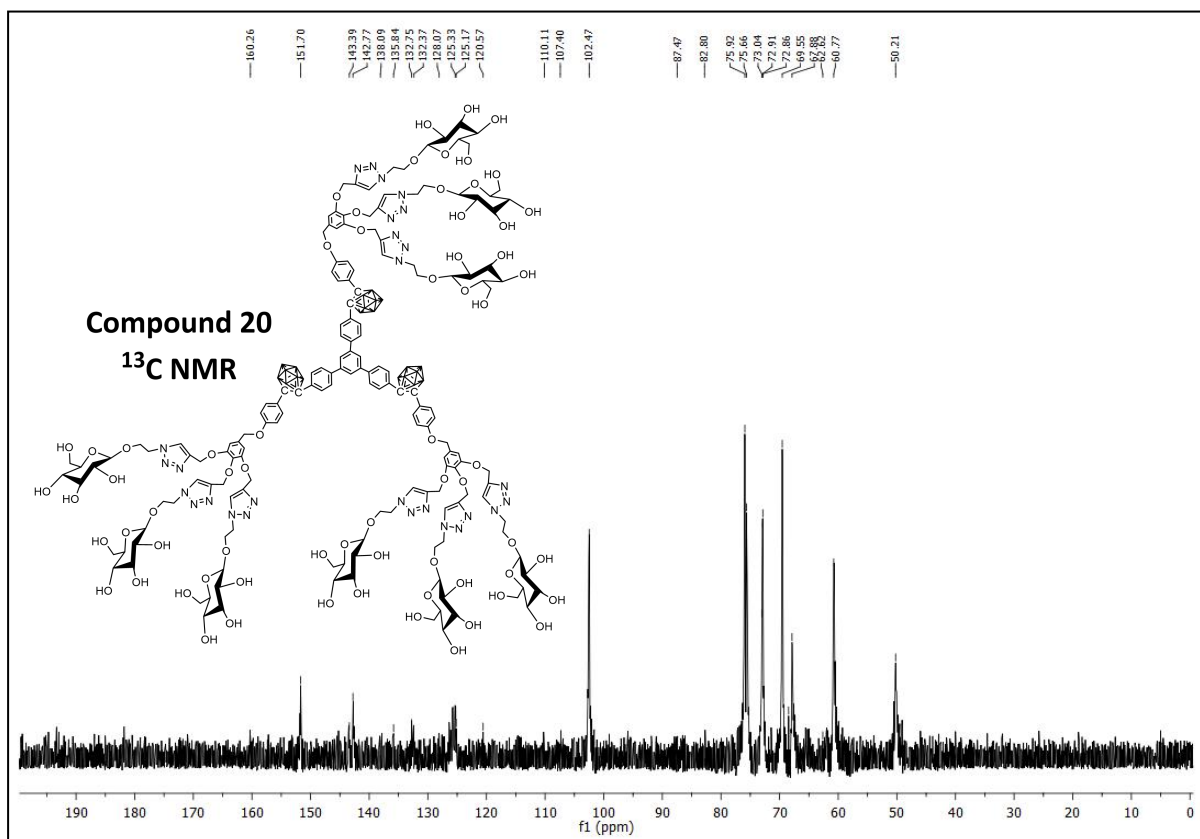
**Figure S37:** <sup>13</sup>C NMR spectra of compound **18** (100 MHz, DMSO-d<sub>6</sub>)



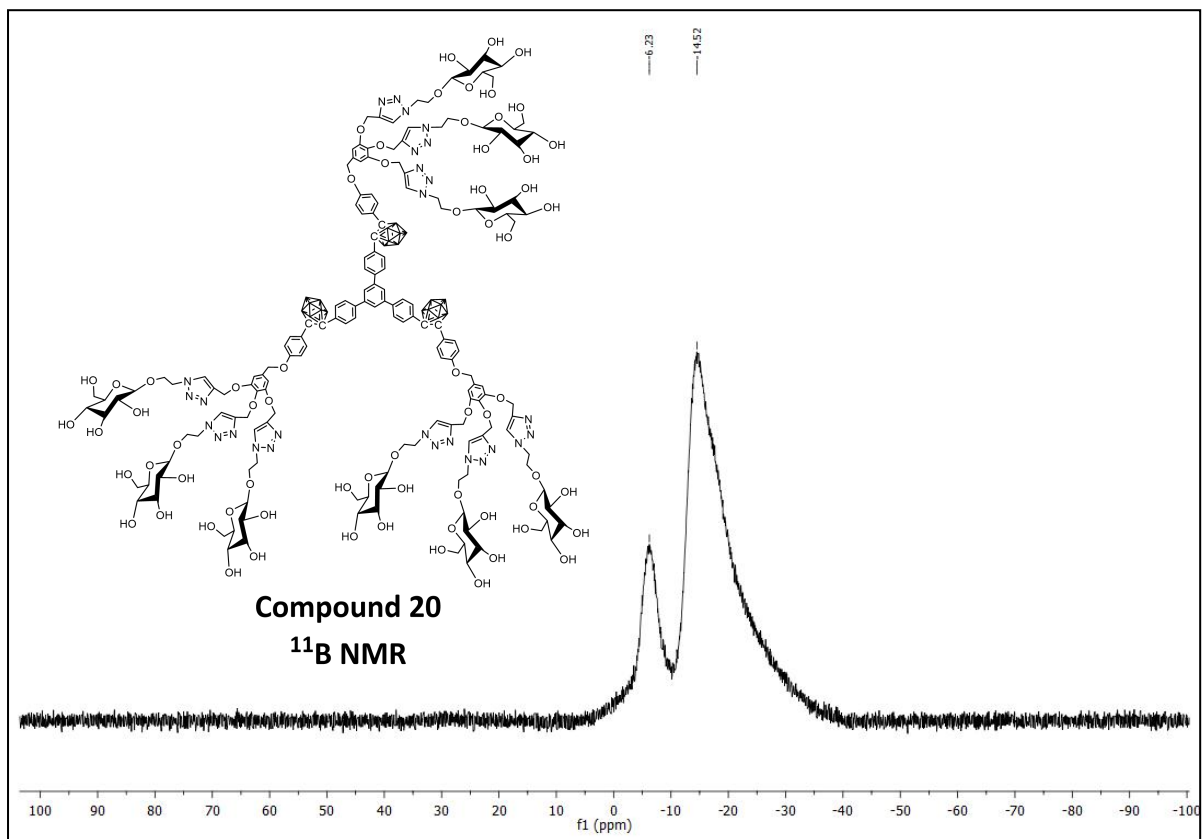
**Figure S38:** <sup>11</sup>B NMR spectra of compound **18** (128 MHz, DMSO-d<sub>6</sub>)



**Figure S39:** <sup>1</sup>H NMR spectra of compound **20** (400 MHz, D<sub>2</sub>O)



**Figure S40:** <sup>13</sup>C NMR spectra of compound **20** (400 MHz, D<sub>2</sub>O)



**Figure S41:** <sup>11</sup>B NMR spectra of compound **20** (400 MHz, D<sub>2</sub>O)

## Mass Spectra of Synthesized Compounds

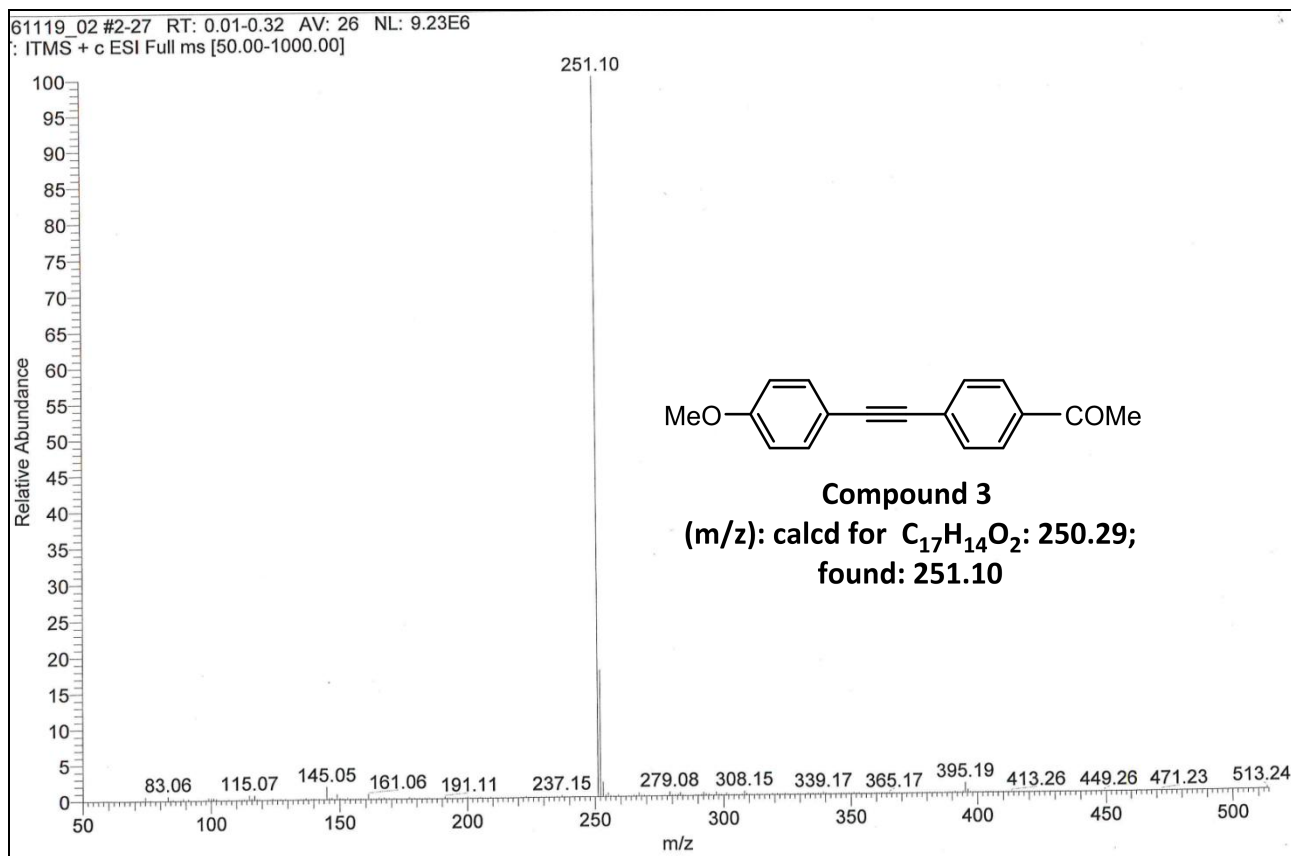


Figure S42: Mass spectra of compound 3

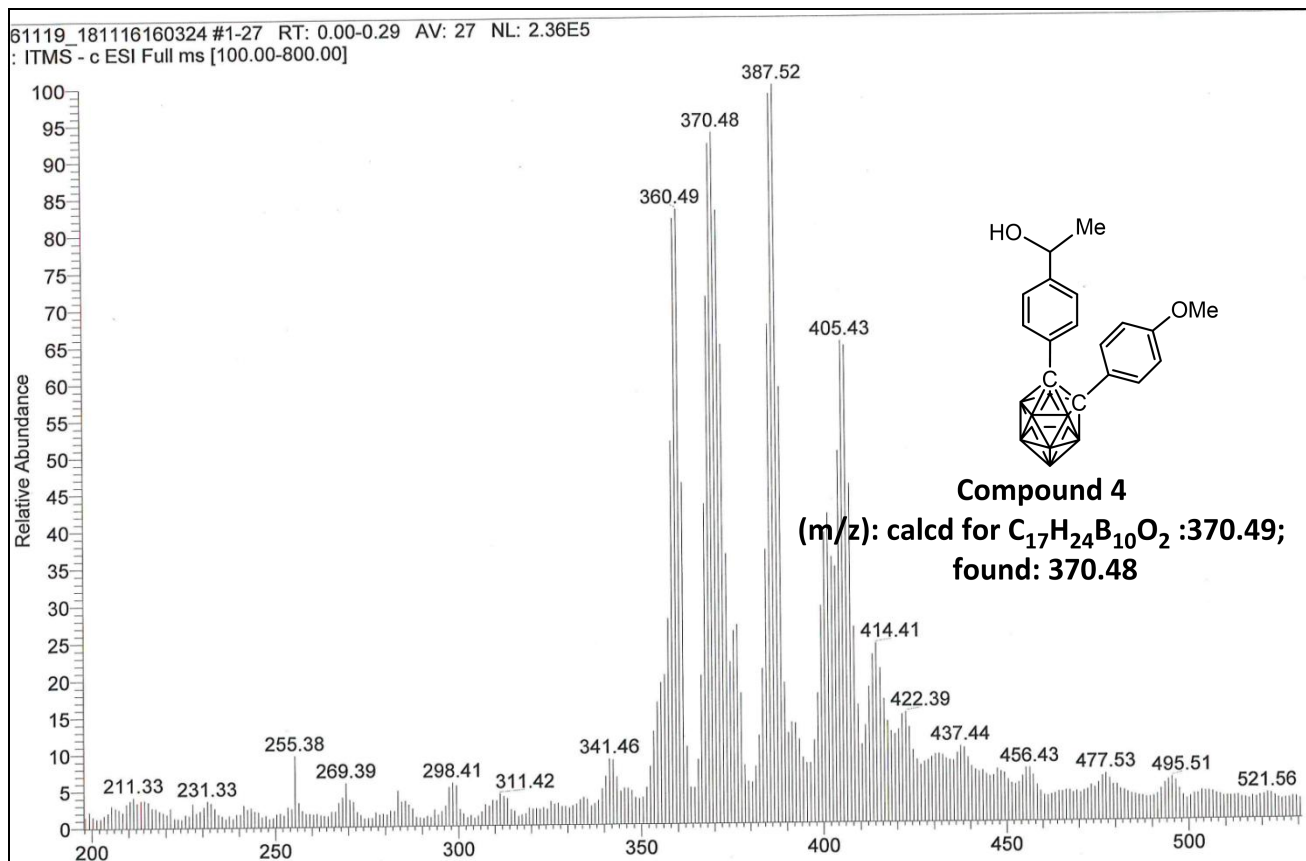


Figure S43: Mass spectra of compound 4

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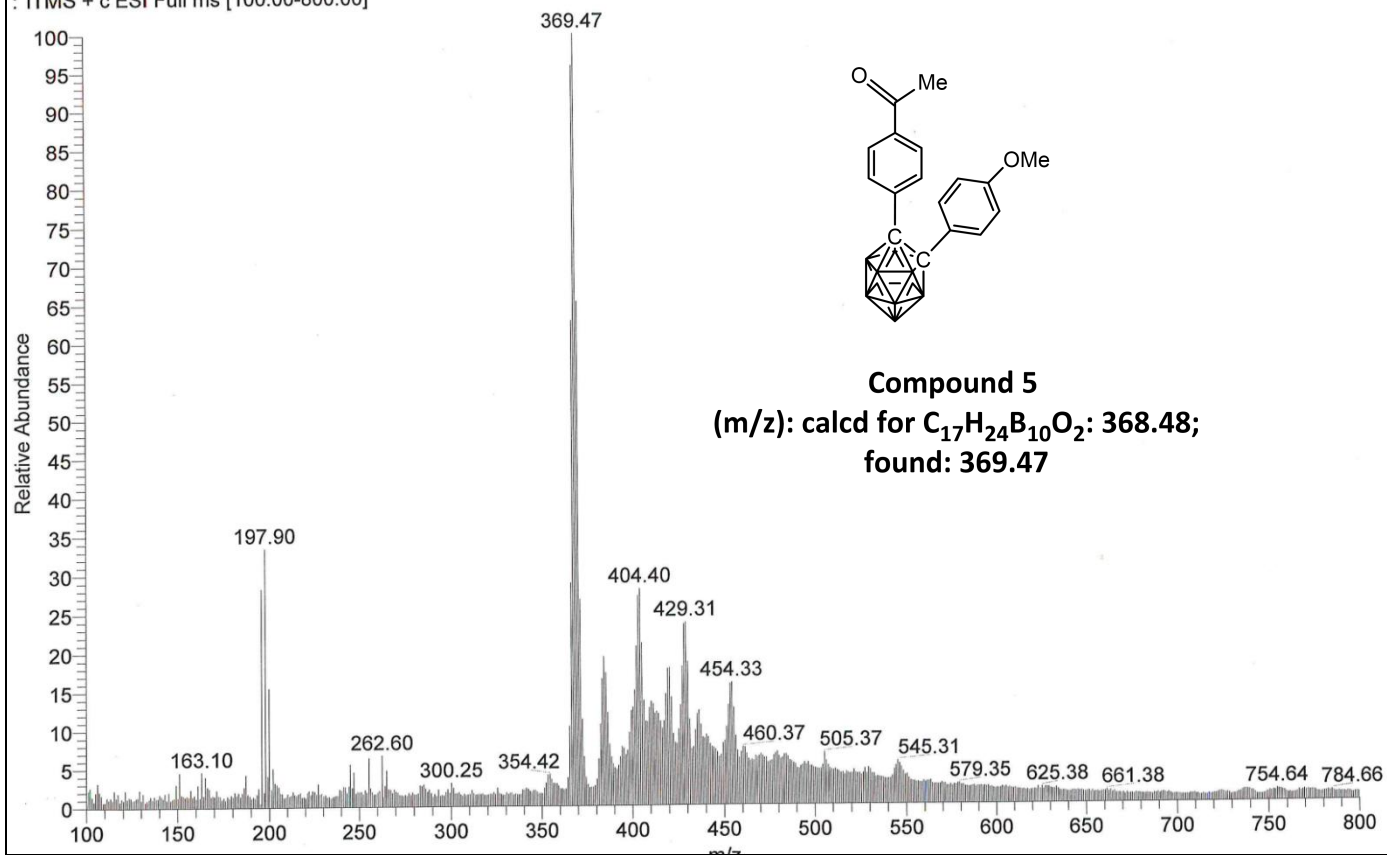


Figure S44: Mass spectra of compound 5

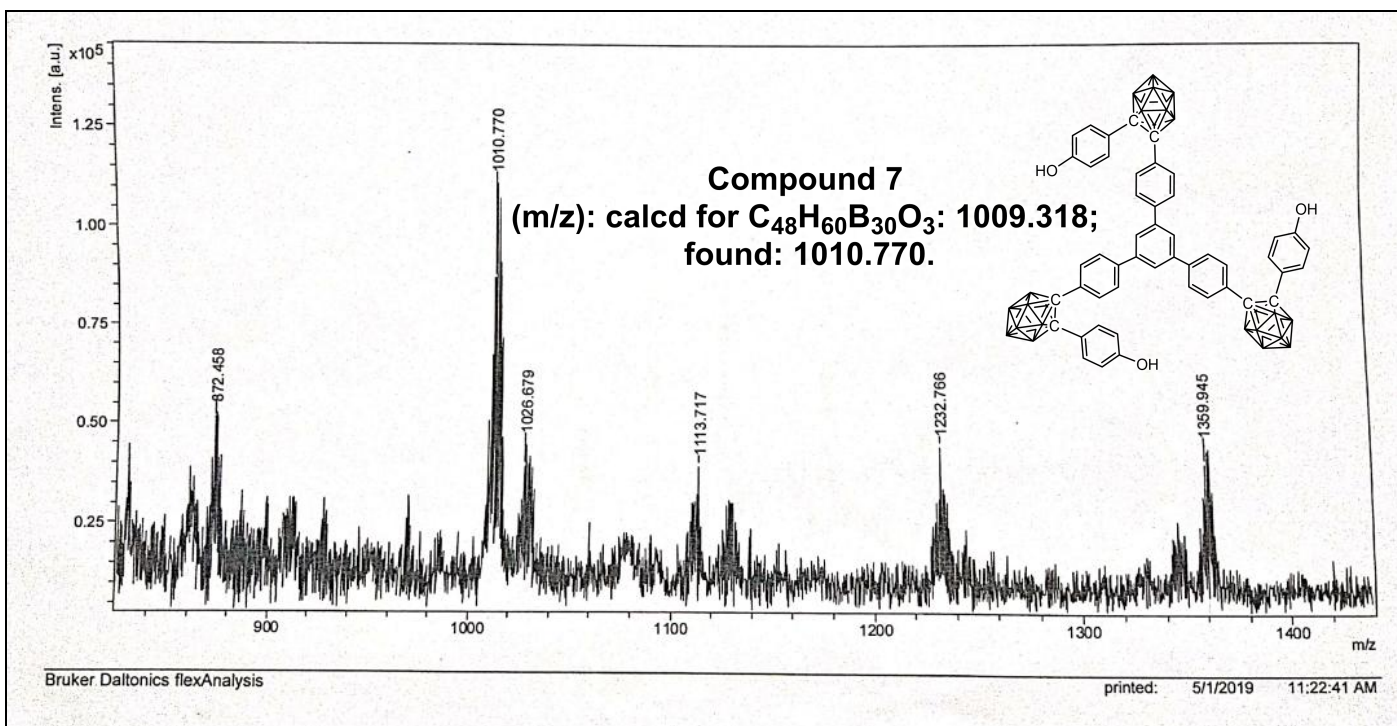




Figure S46: Mass spectra of compound 7

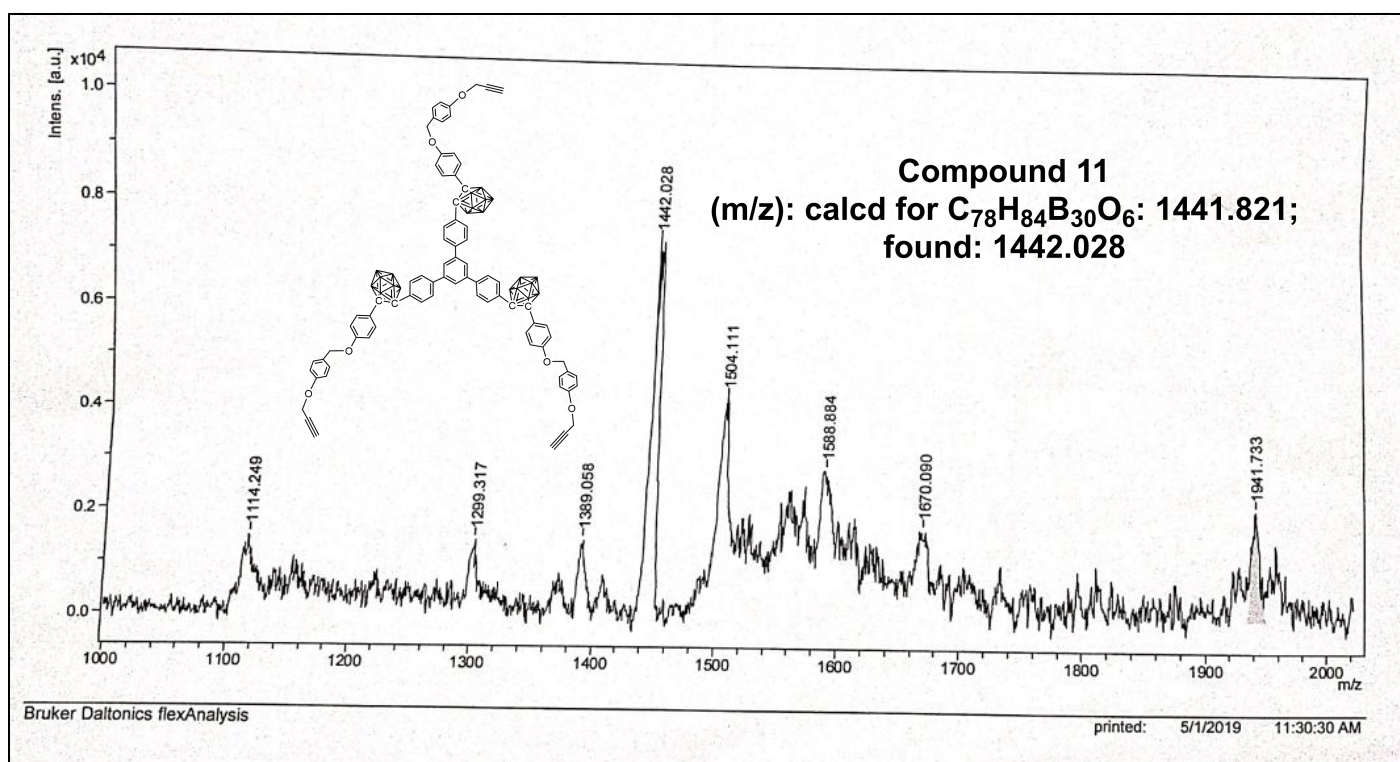


Figure S47: Mass spectra of compound 11

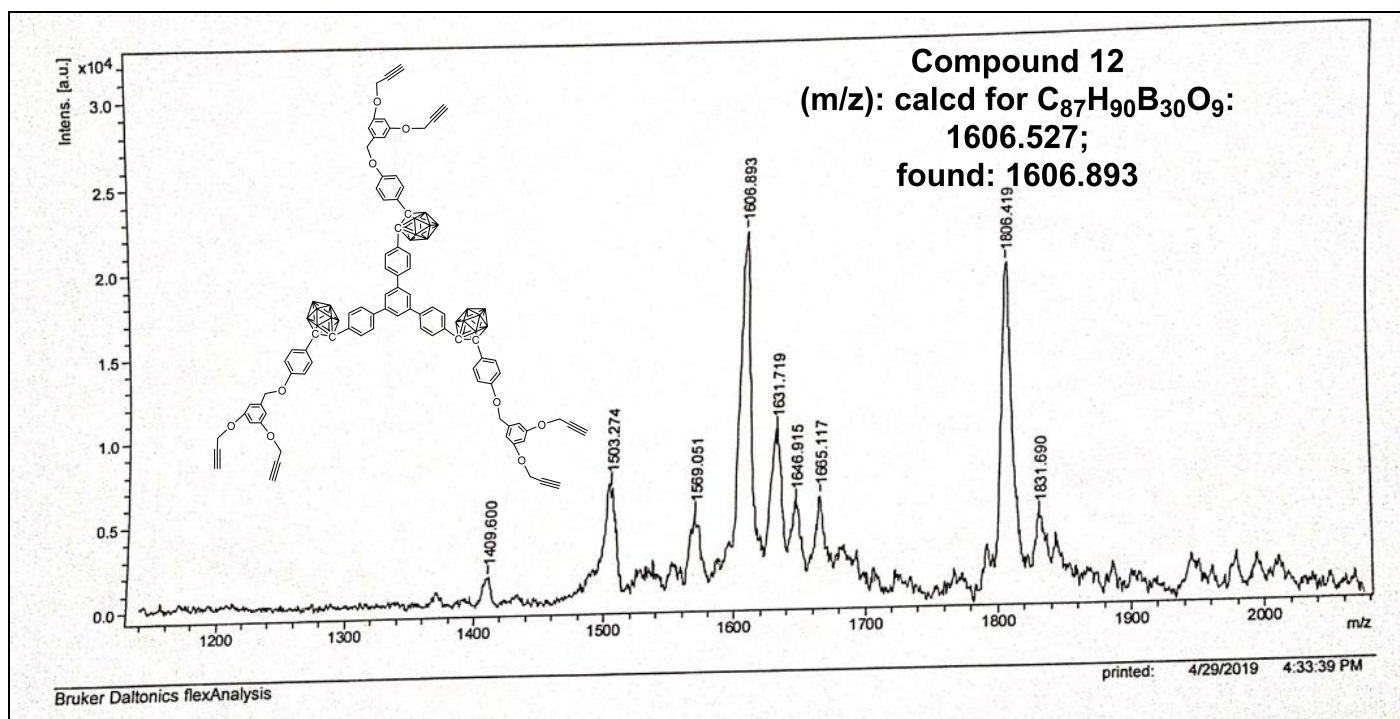


Figure S48: Mass spectra of compound 12

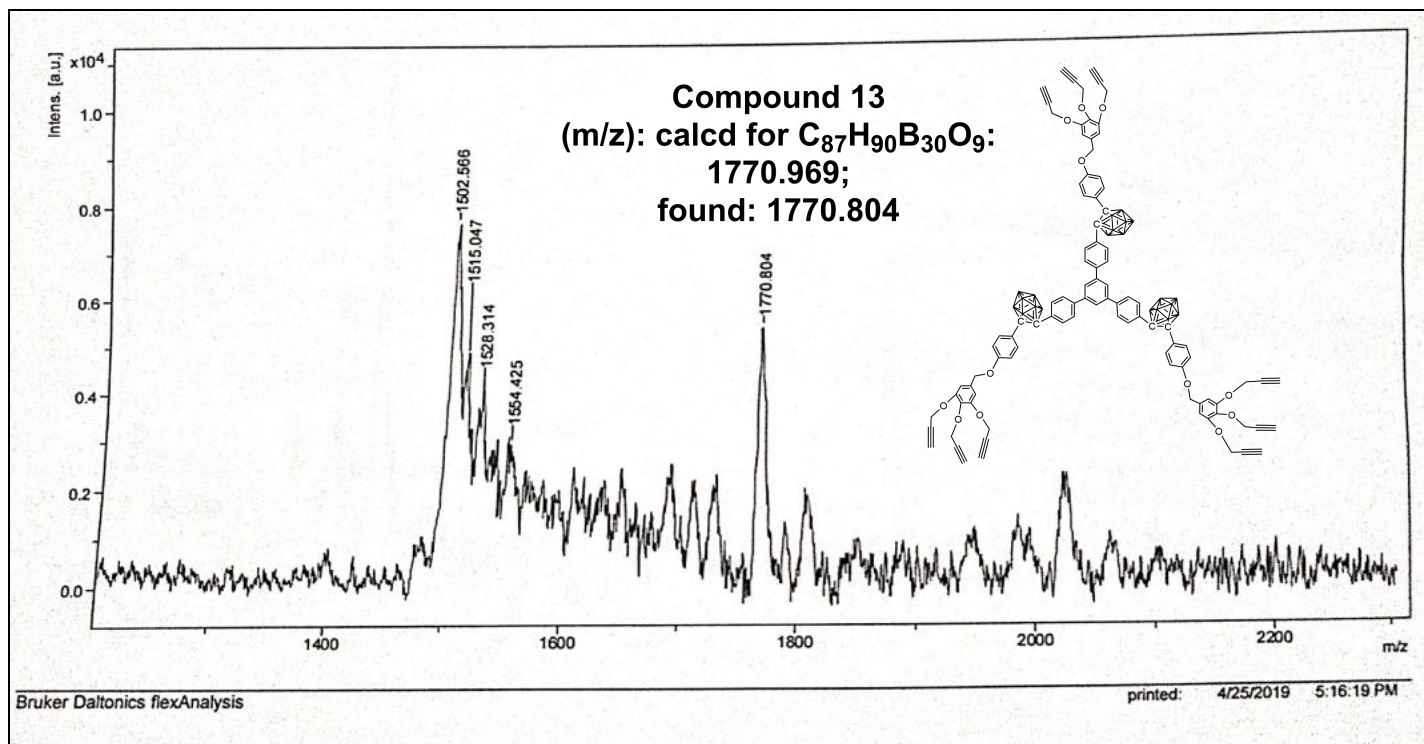


Figure S49: Mass spectra of compound 13

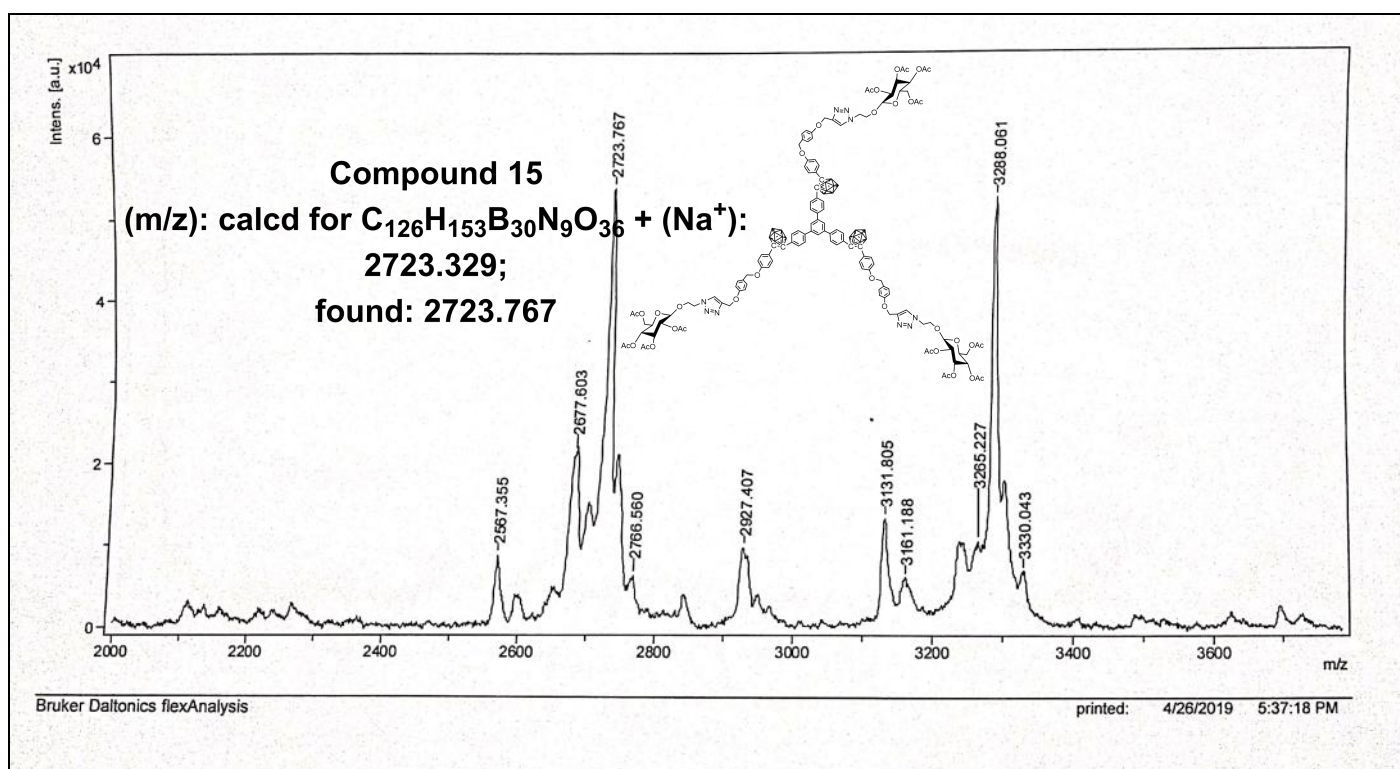


Figure S50: Mass spectra of compound 15

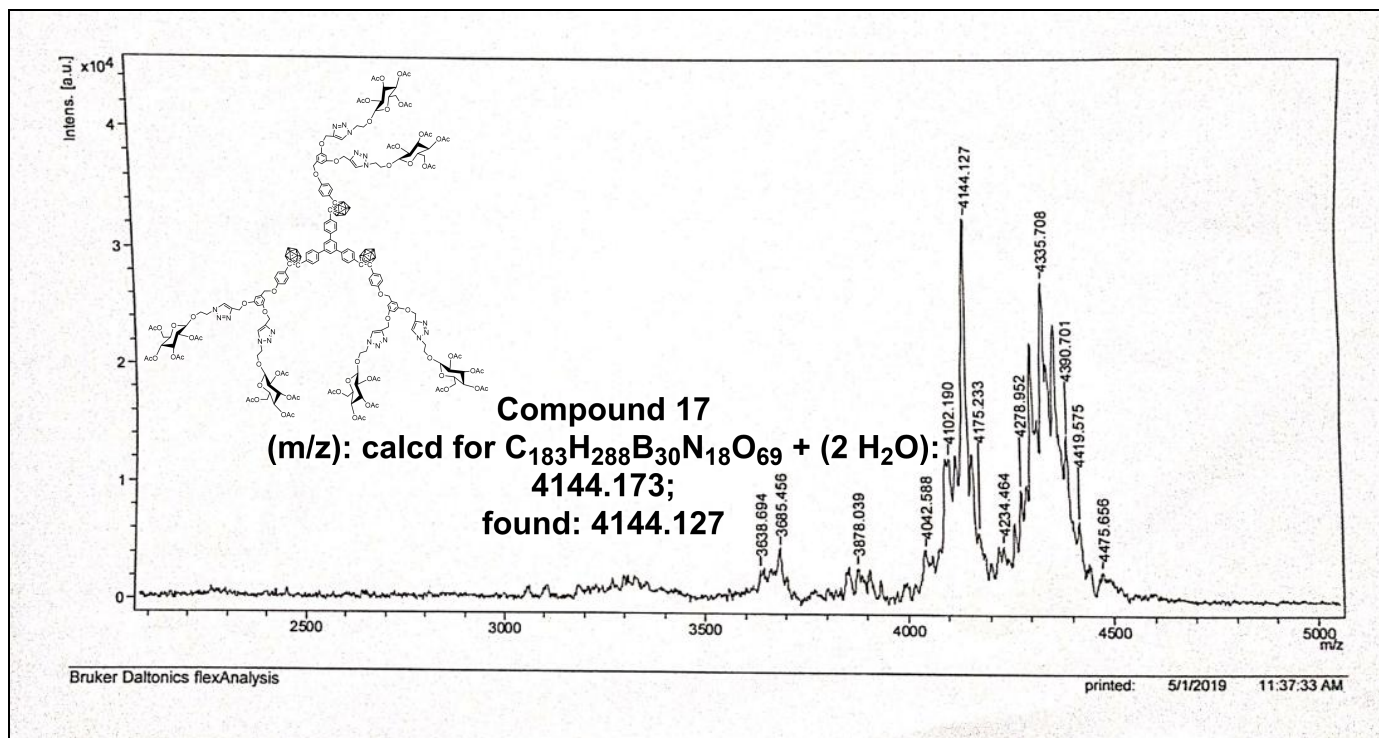


Figure S51: Mass spectra of compound 17

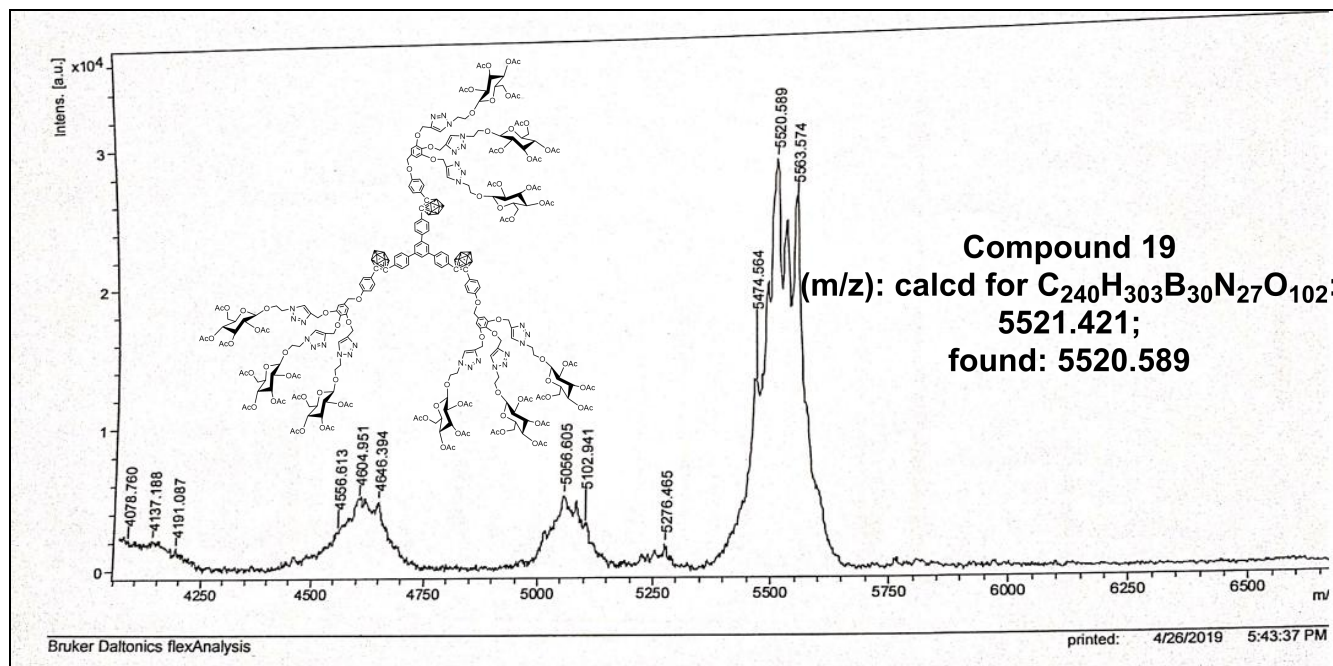
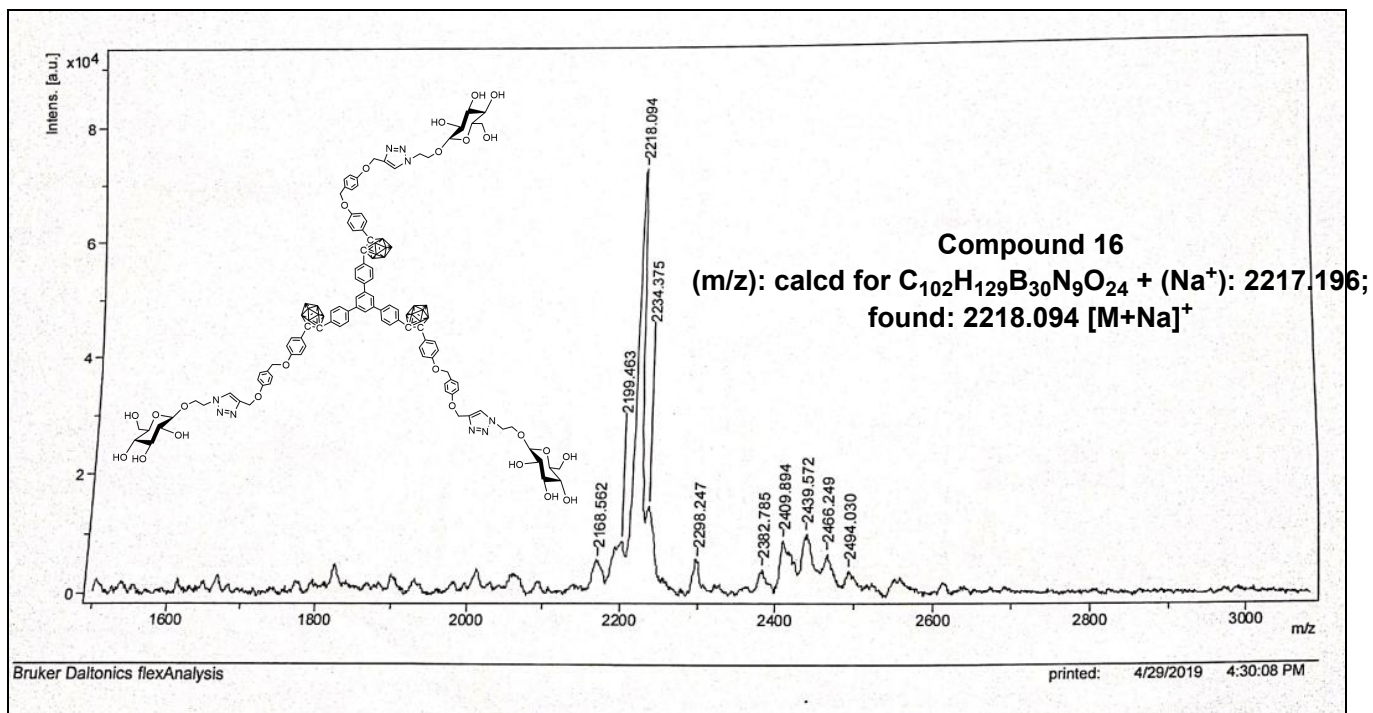
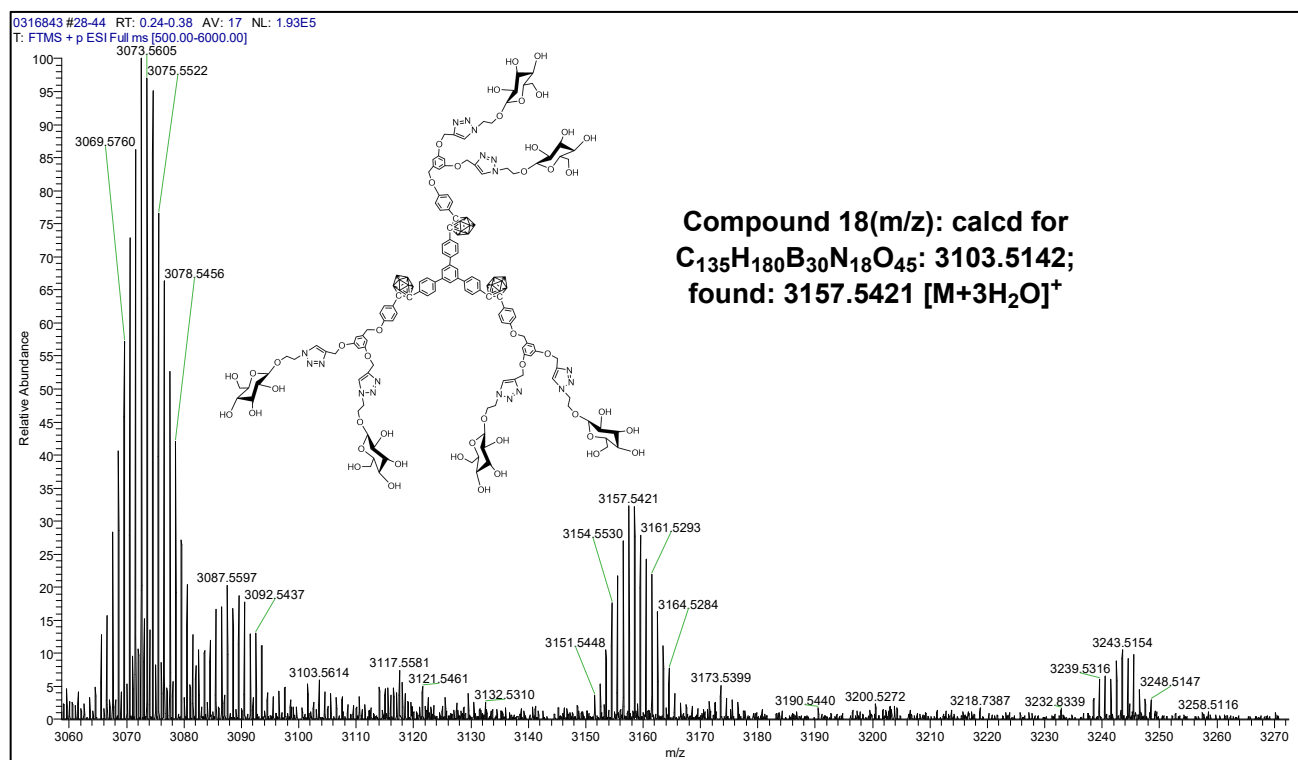


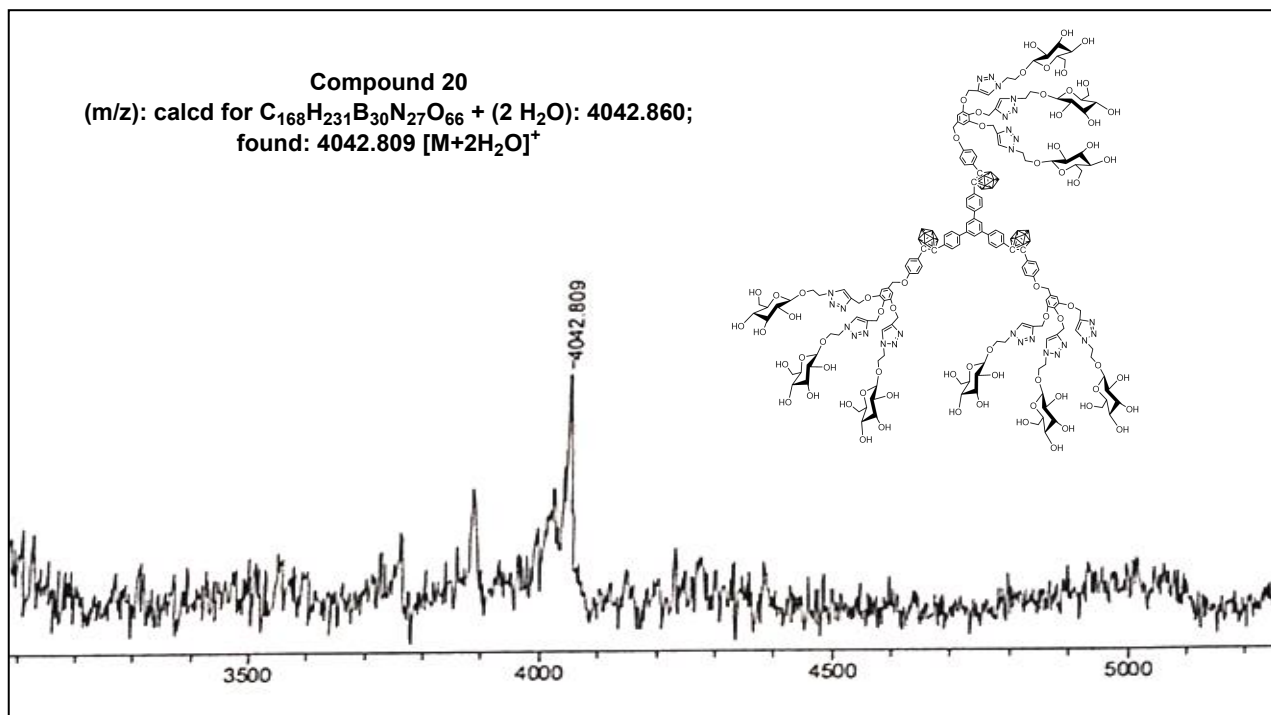
Figure S52: Mass spectra of compound 19



**Figure S53: Mass spectra of compound 16**



**Figure S54: Mass spectra of compound 18**



**Figure S55:** Mass spectra of compound 20