

## Supporting Information

### Synthesis and Photoresponsive Behaviors of Azobenzene-Tethered Polyhedral Oligomeric Silsesquioxane

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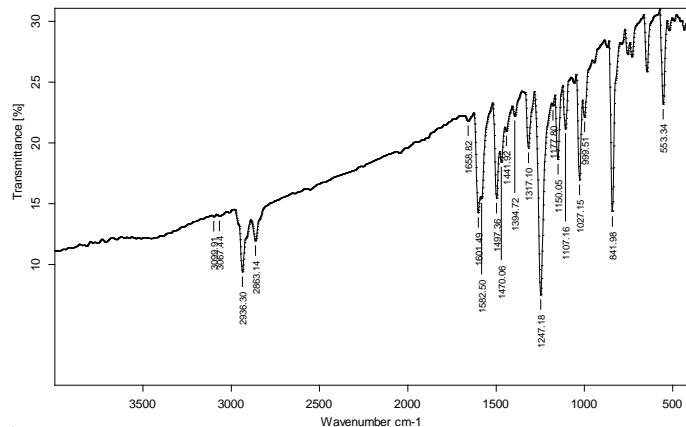
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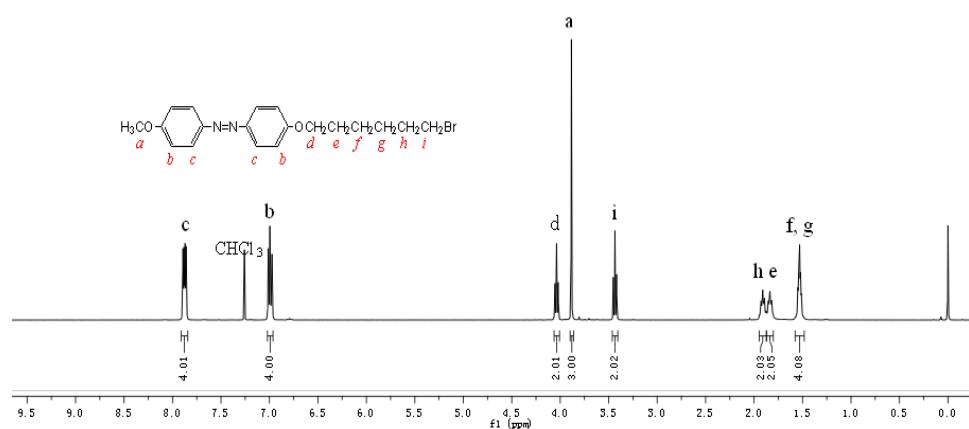
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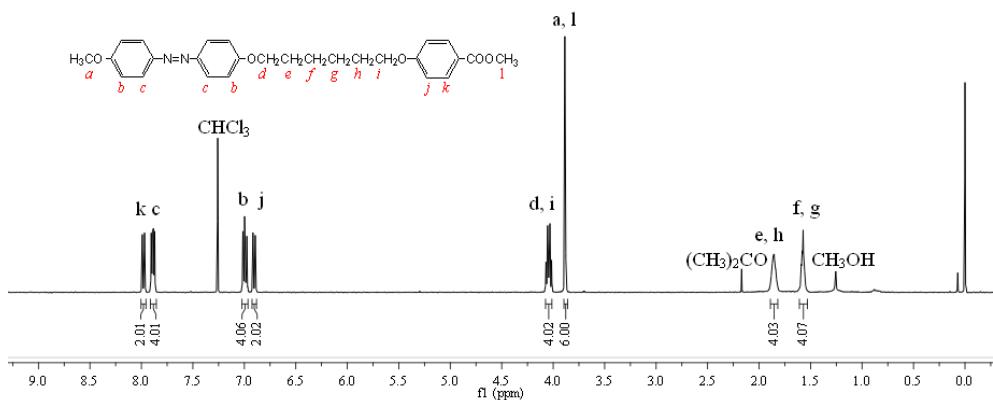
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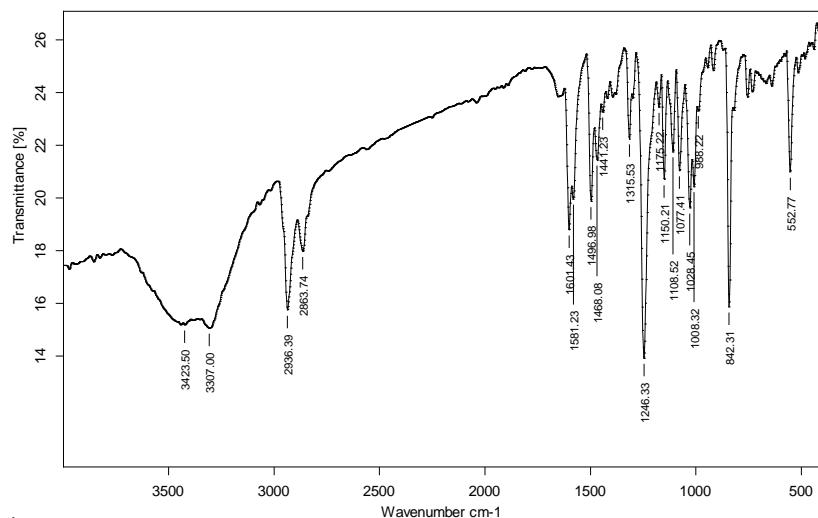
**Figure S1.** FT-IR spectrum of **BrMAB**



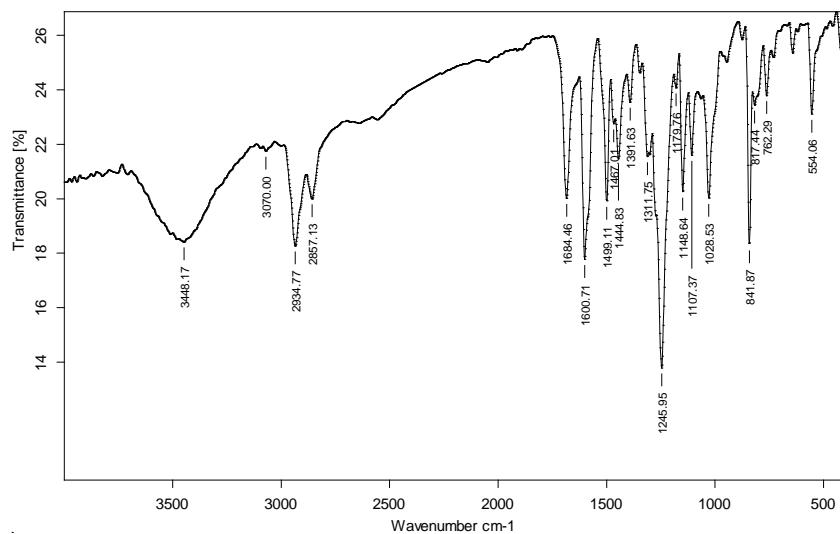
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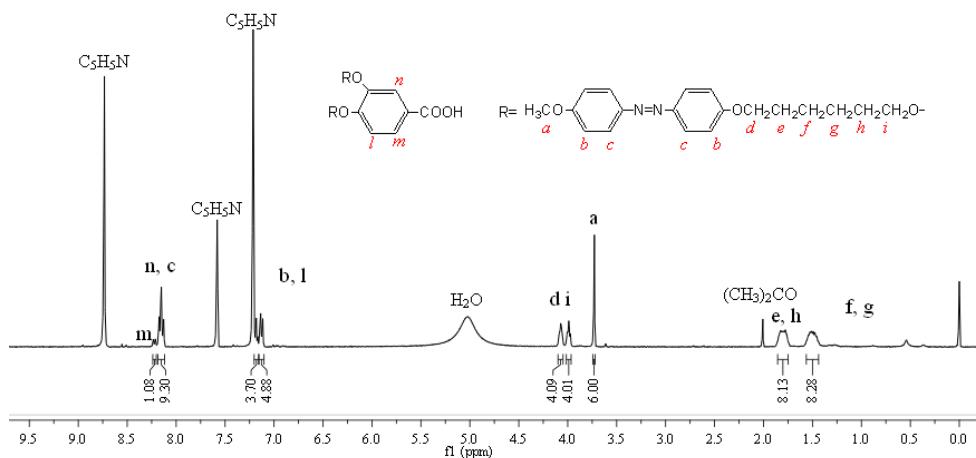
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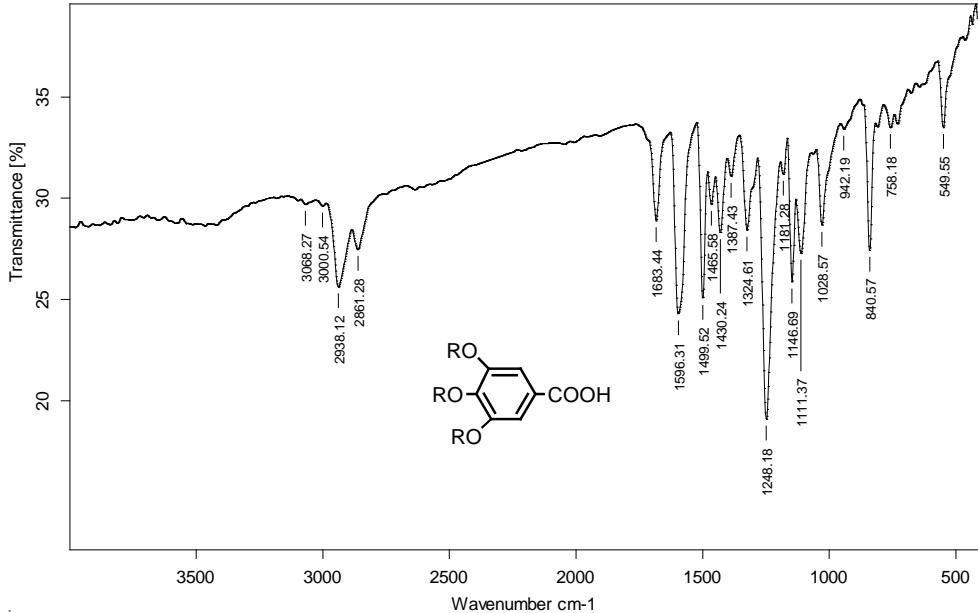


Figure S7. FT-IR spectrum of Azom3

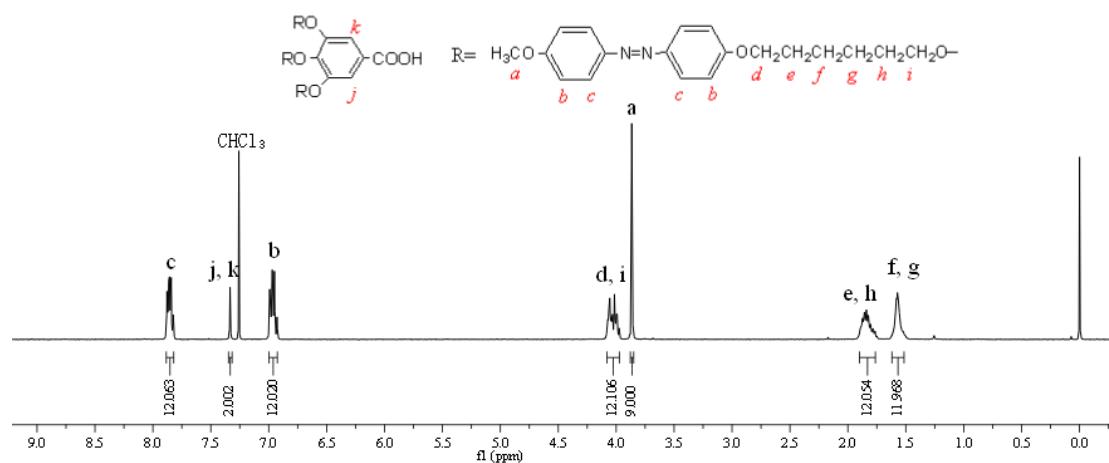


Figure S8. <sup>1</sup>H NMR spectrum of Azom3

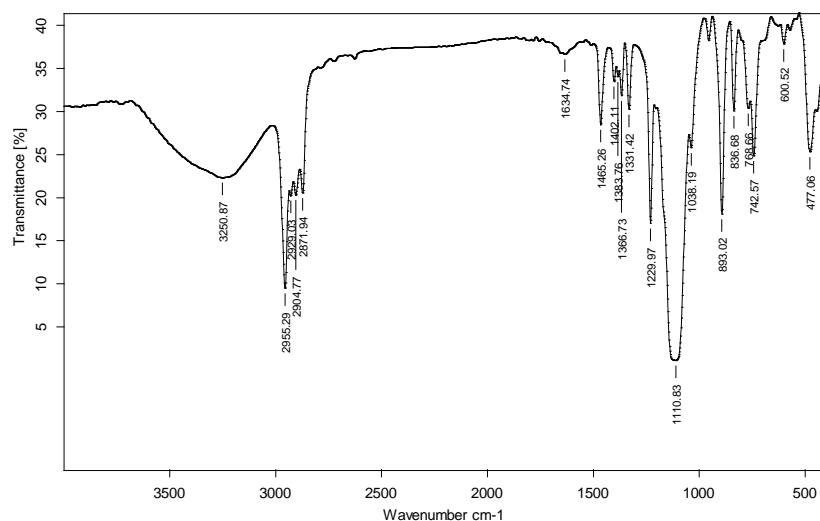
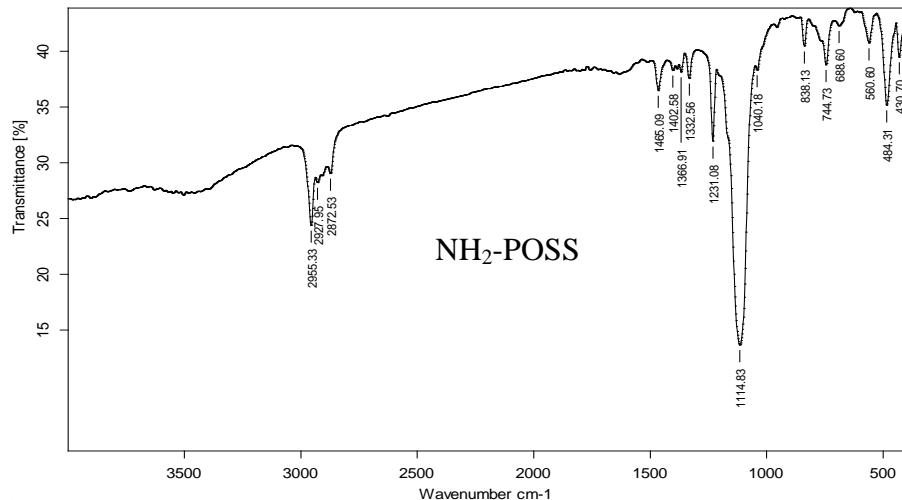
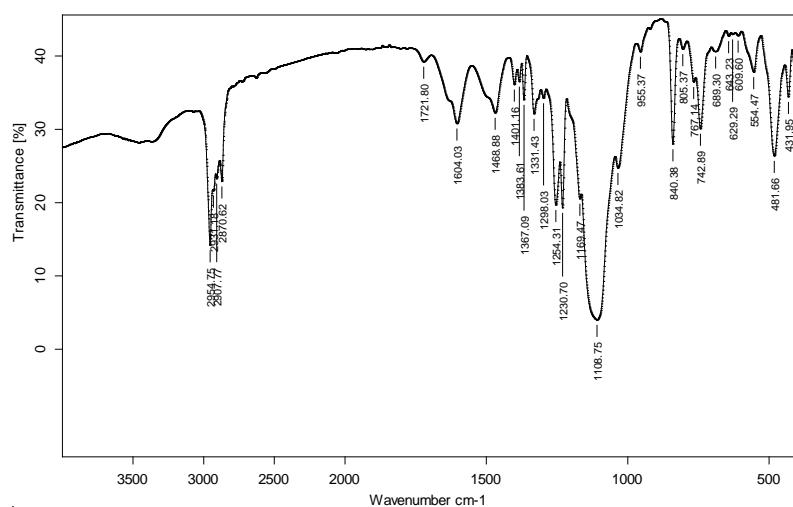


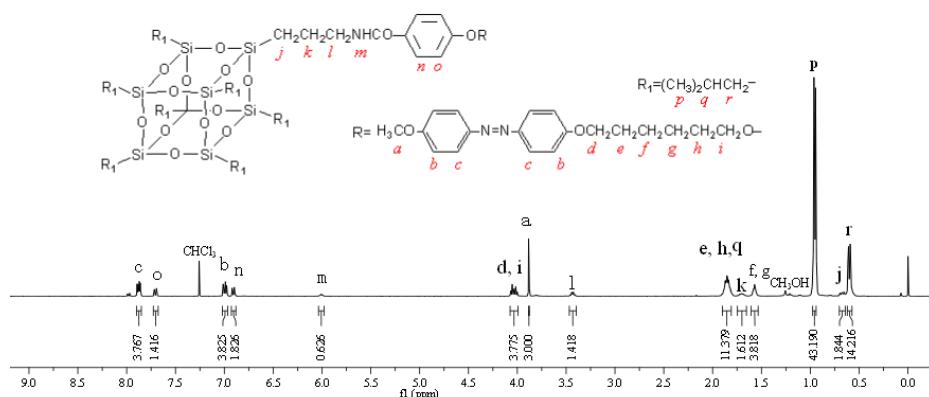
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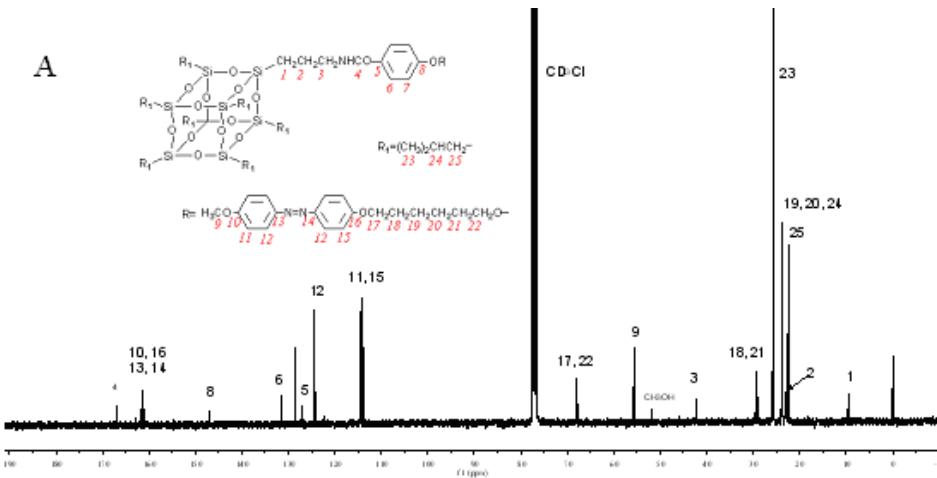


Figure 13.  $^{13}\text{C}$  NMR spectrum of MonoAzo-POSS

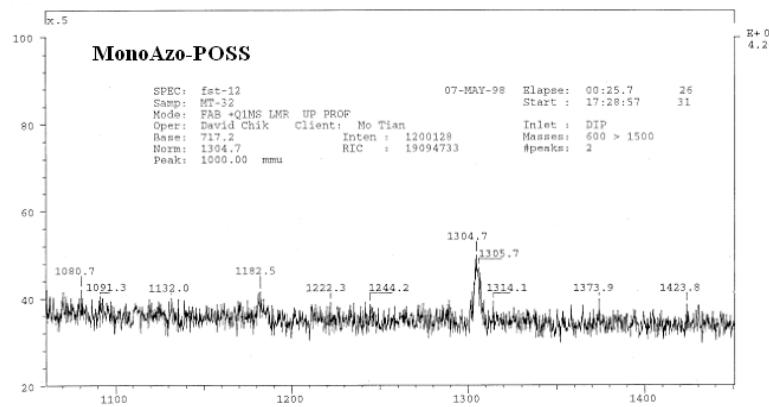


Figure 14. FAB-MS spectrum of MonoAzo-POSS

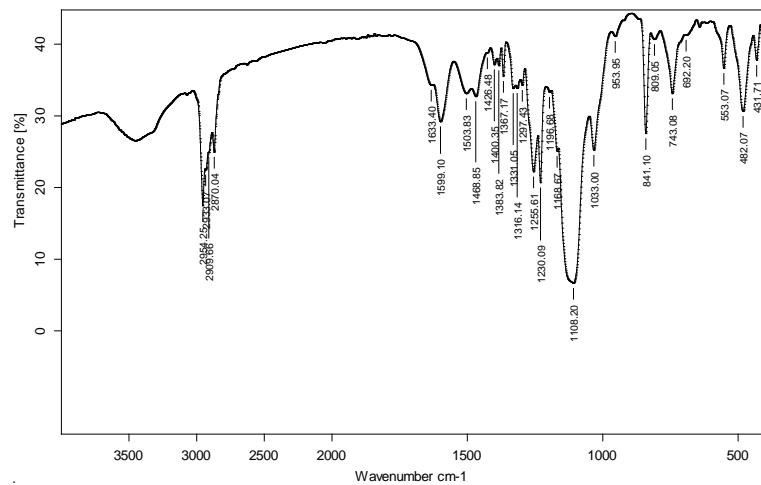
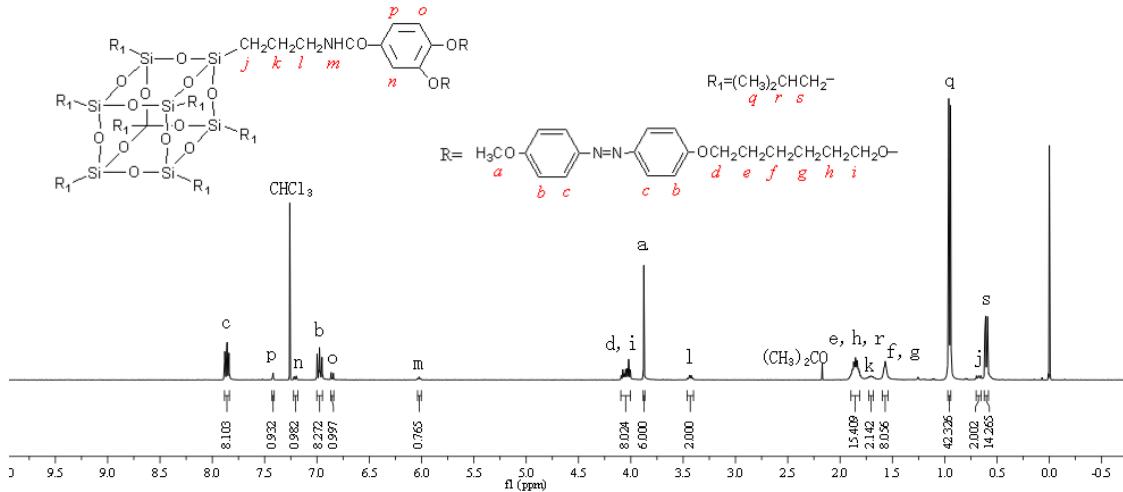
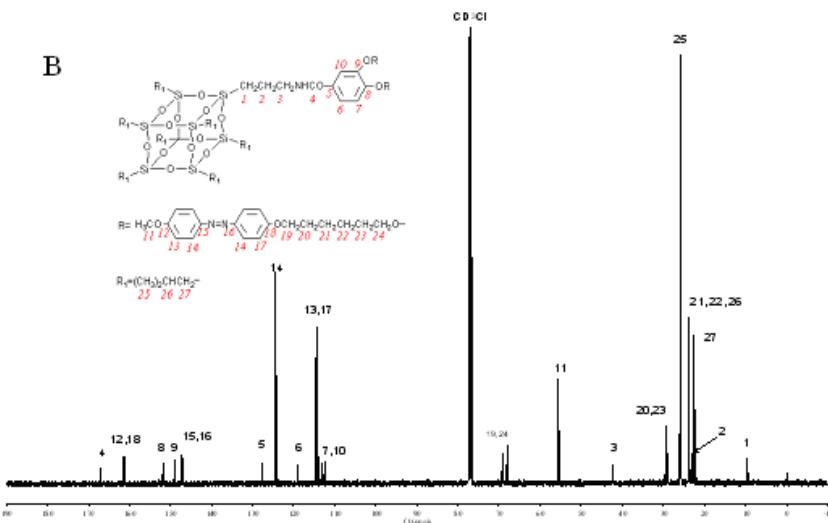


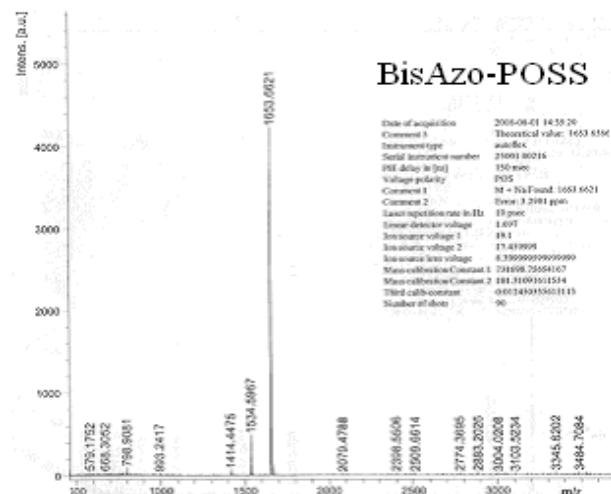
Figure 15. FT-IR spectrum of BisAzo-POSS



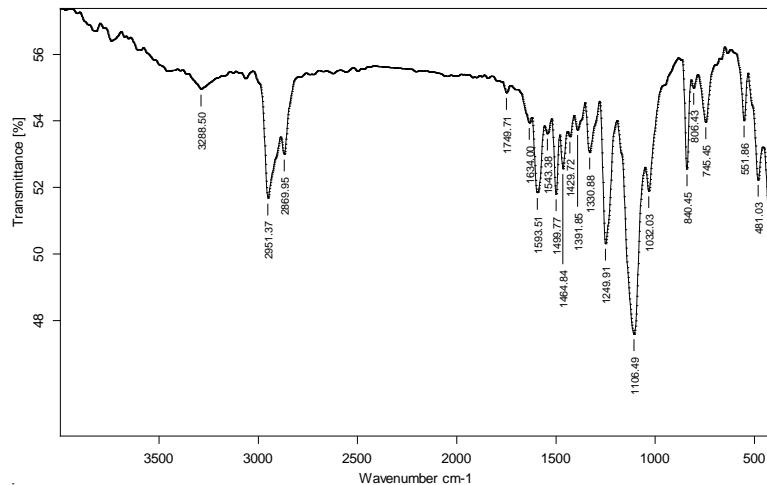
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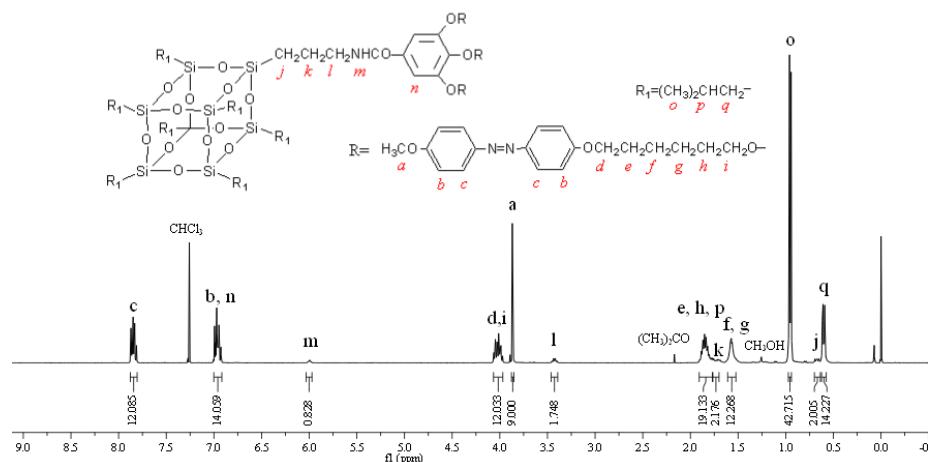
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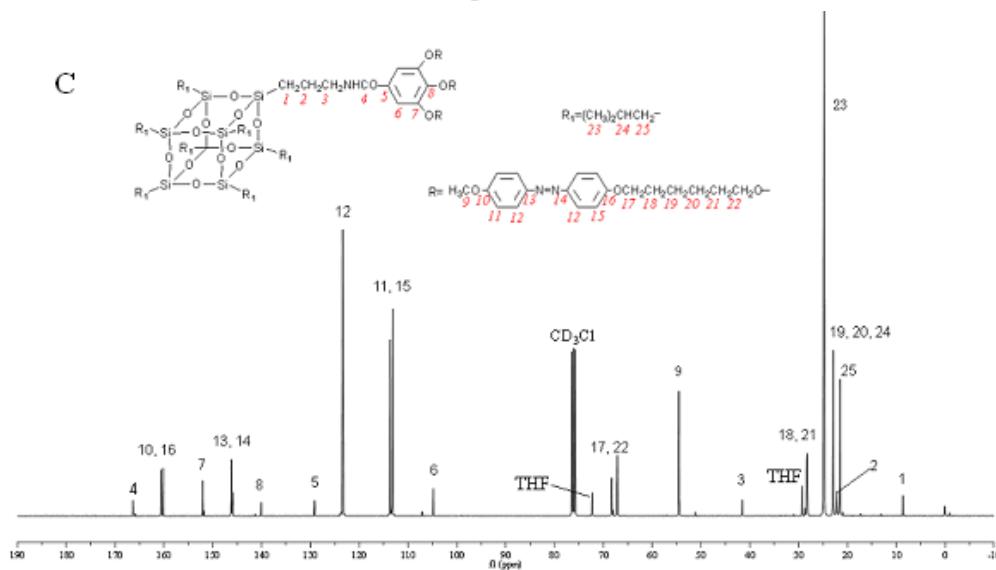
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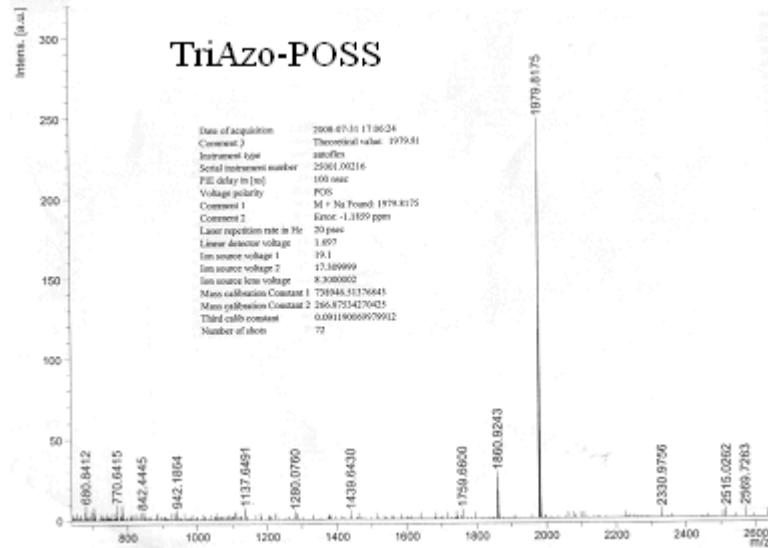
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**Figure 20.** <sup>1</sup>H NMR spectrum of TriAzo-POSS



**Figure 21.** <sup>13</sup>C NMR spectrum of TriAzo-POSS



**Figure 22.** ESI-HRMS spectrum of **TriAzo-POSS**