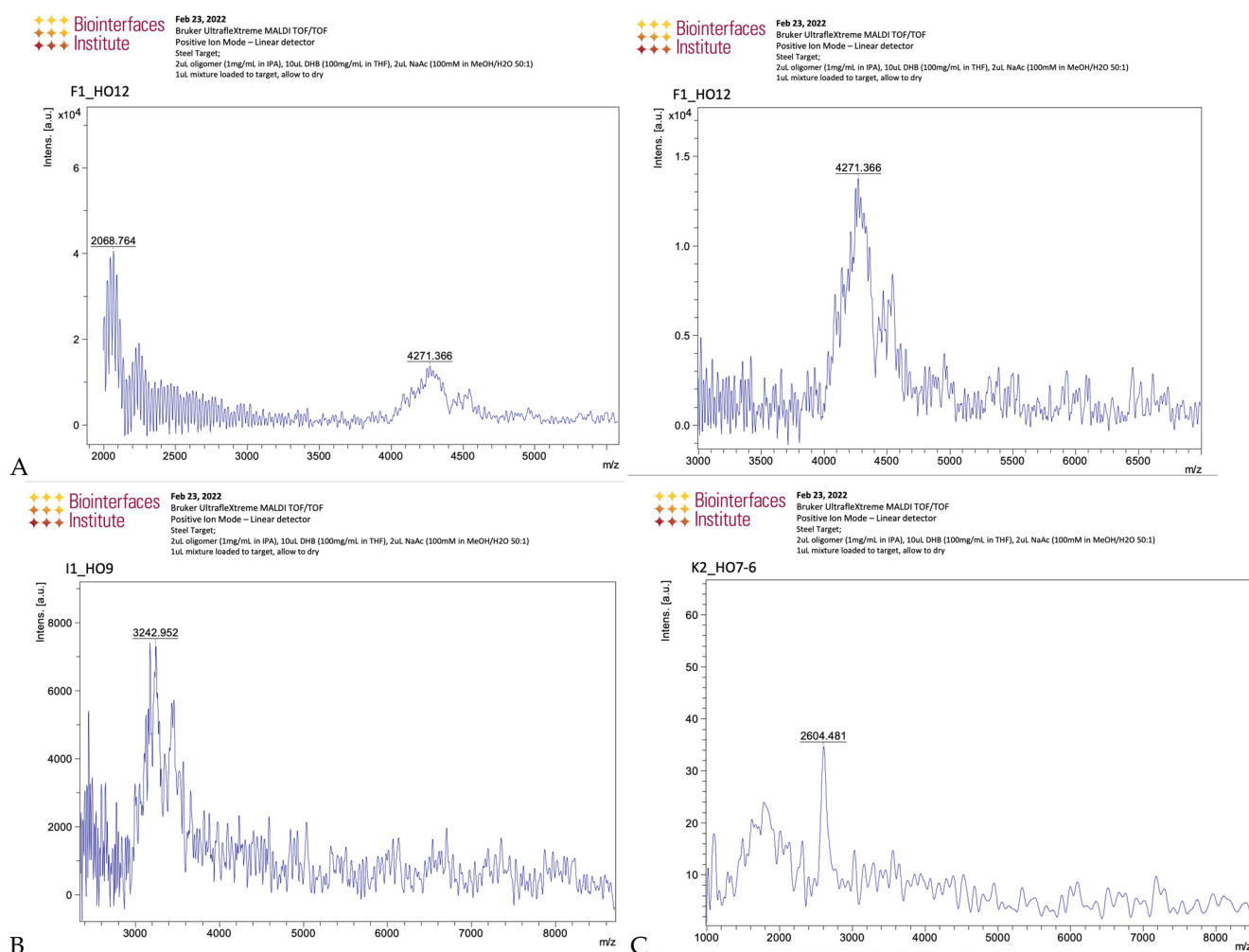


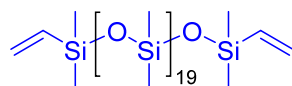
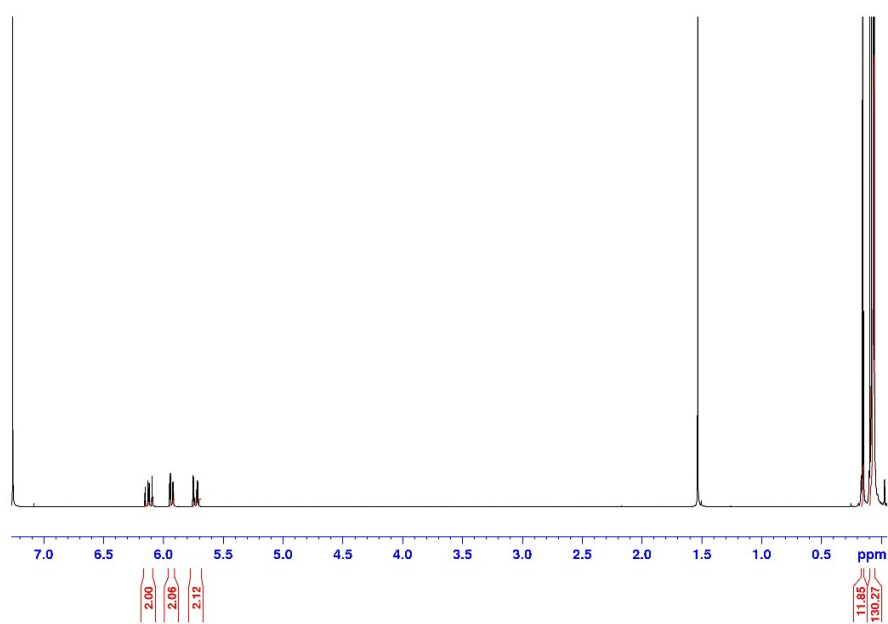
# Chelating Silicone Dendrons: Trying to Impact Organisms by Disrupting Ions at Interfaces

Miguel Melendez-Zamudio <sup>1</sup>, Kevina Chavda <sup>1</sup> and Michael A. Brook <sup>1,\*</sup>

## Supporting Information

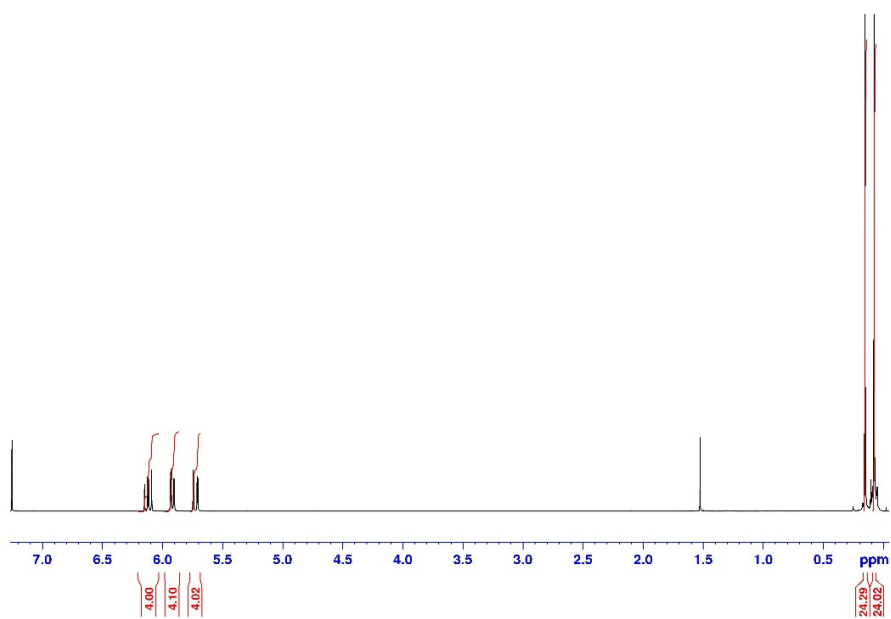


**Figure S1.** MALDI mass spectra (Bruker UltrafleXtreme MALDI TOF/TOF; 2  $\mu$ L oligomer (1 mg/mL in IPA, (isopropanol)), 10  $\mu$ L DHB (2,5-dihydroxybenzoic acid, 100 mg/mL in THF), 2  $\mu$ L NaOAc (100 mM in MeOH/H<sub>2</sub>O 50:1) 1  $\mu$ L mixture loaded to target, allowed to dry.) of A) HO12, B) HO12, and C) HO7-6.

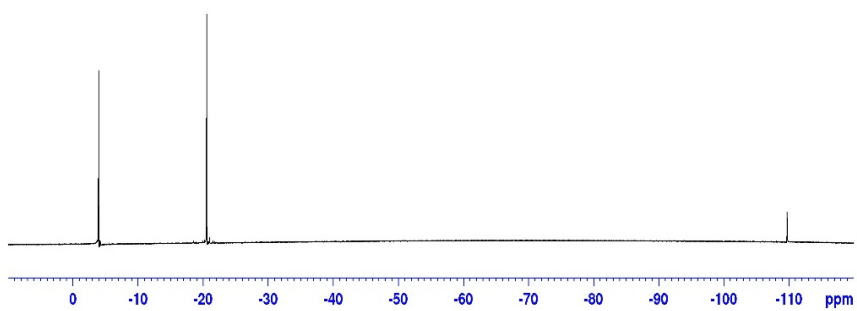


**Figure S2.**  $^1\text{H}$  NMR for **2-Vi** in  $\text{CDCl}_3$ .

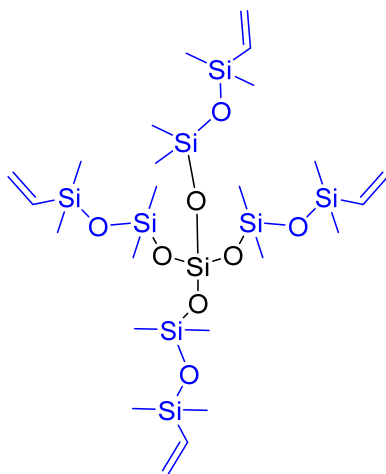




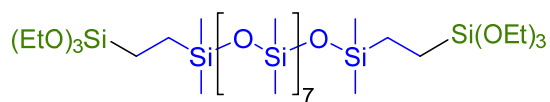
A

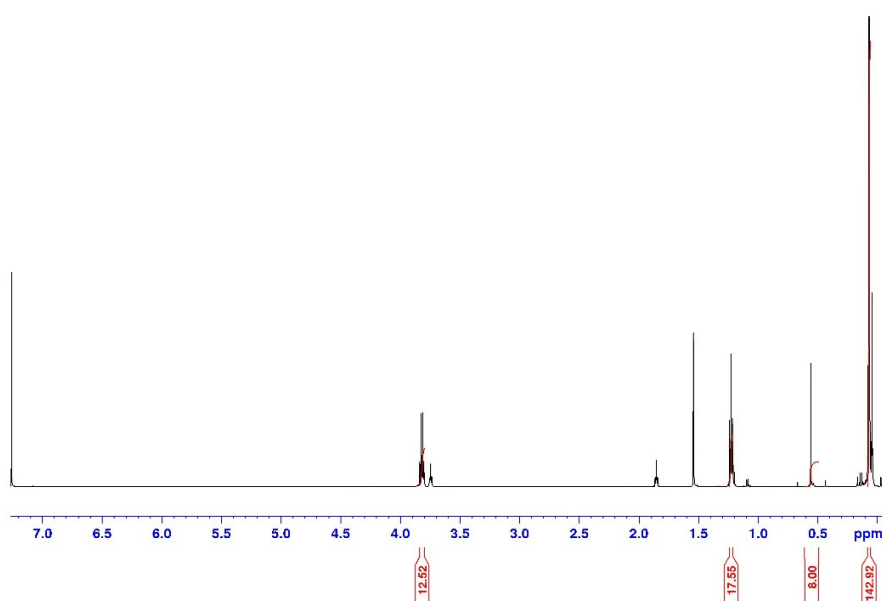


B

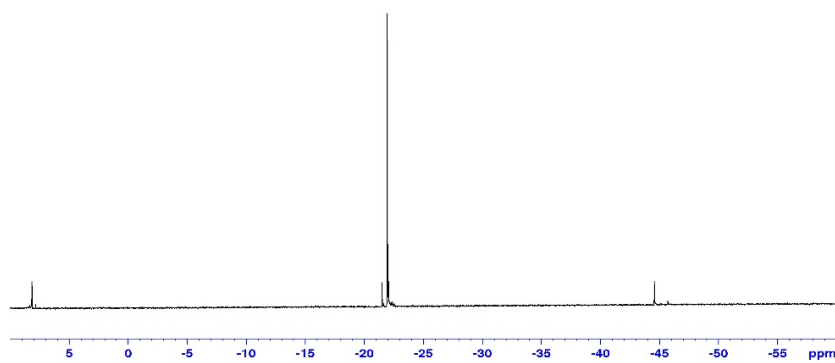


**Figure S4.** A) <sup>1</sup>H NMR and B) <sup>29</sup>Si NMR for 4-Vi in CDCl<sub>3</sub>.

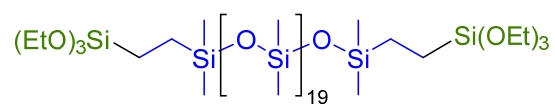




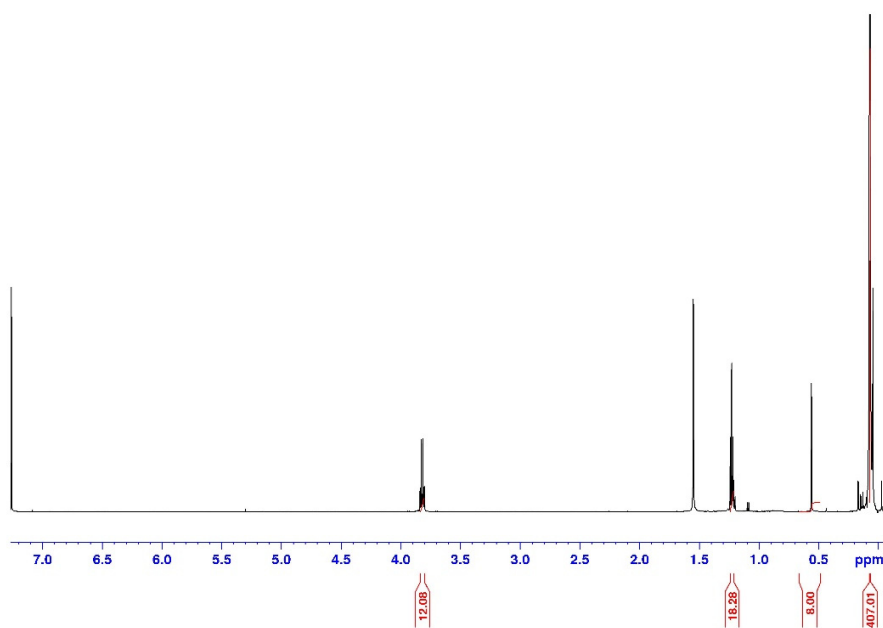
A



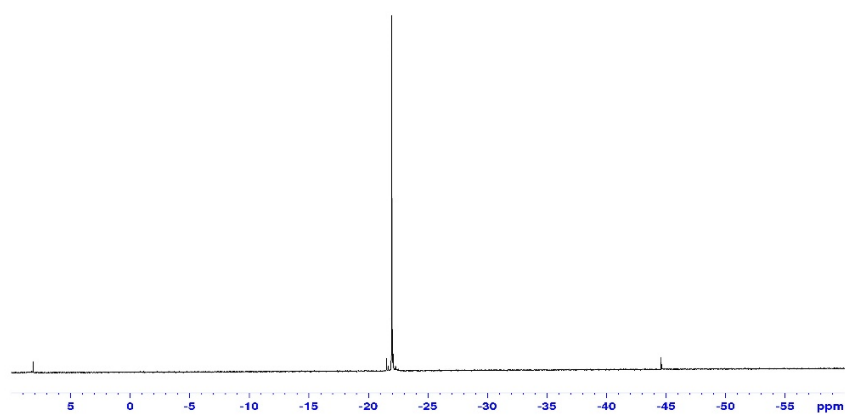
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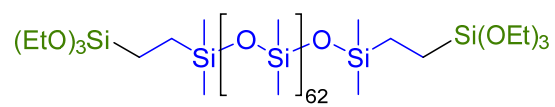
**Figure S6.** A)  $^1\text{H}$  NMR and B)  $^{29}\text{Si}$  NMR for **19-6OEt** in  $\text{CDCl}_3$ .



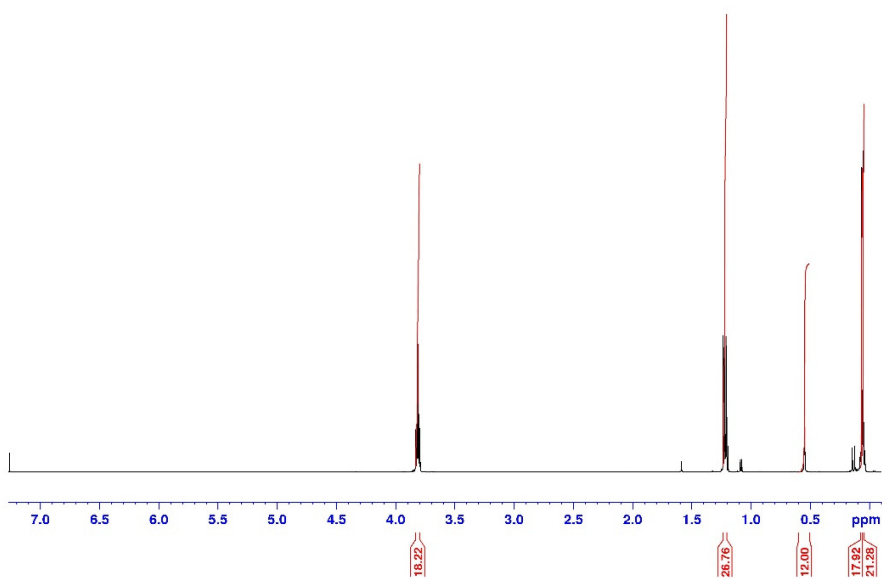
A



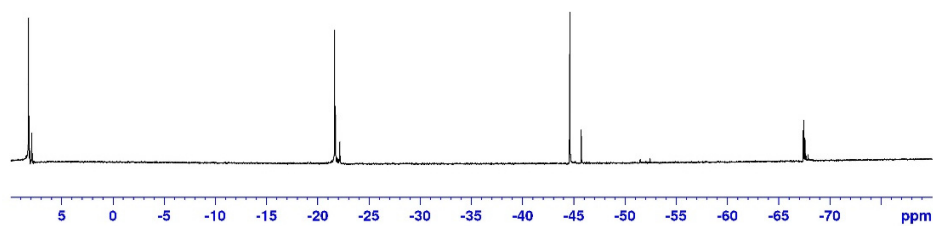
B



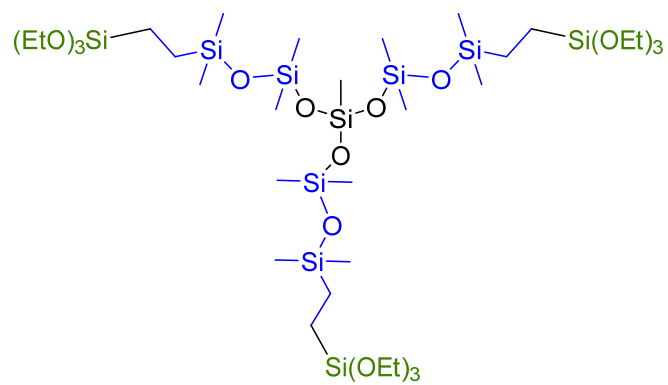
**Figure S7.** A)  $^1\text{H}$  NMR and B)  $^{29}\text{Si}$  NMR for **62-6OEt** in  $\text{CDCl}_3$ .



A

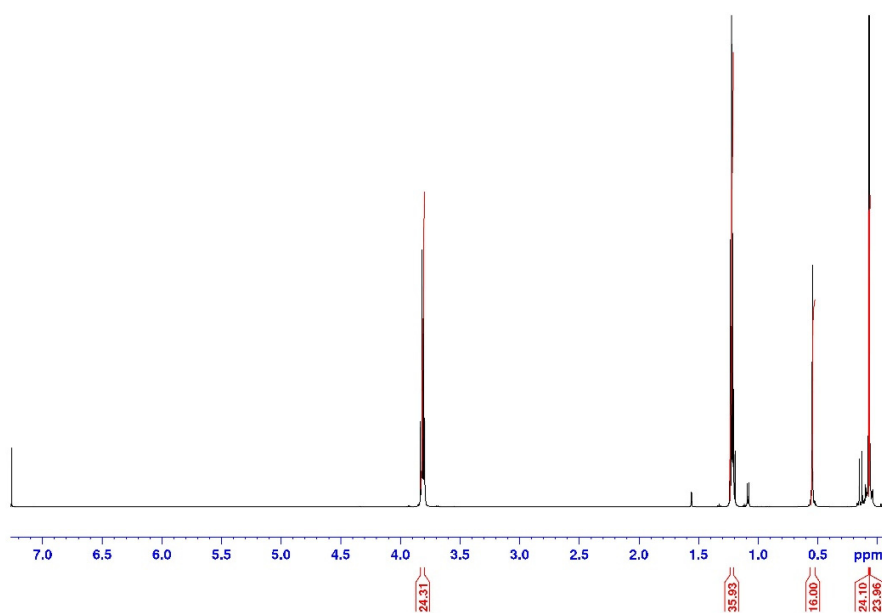


B

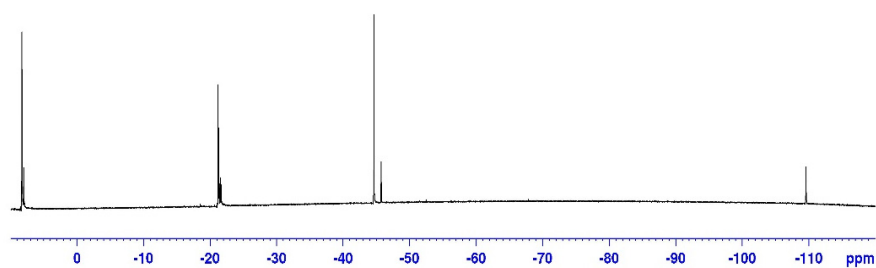


**Figure S8.** A) <sup>1</sup>H NMR and B) <sup>29</sup>Si NMR for 9OEt in CDCl<sub>3</sub>.

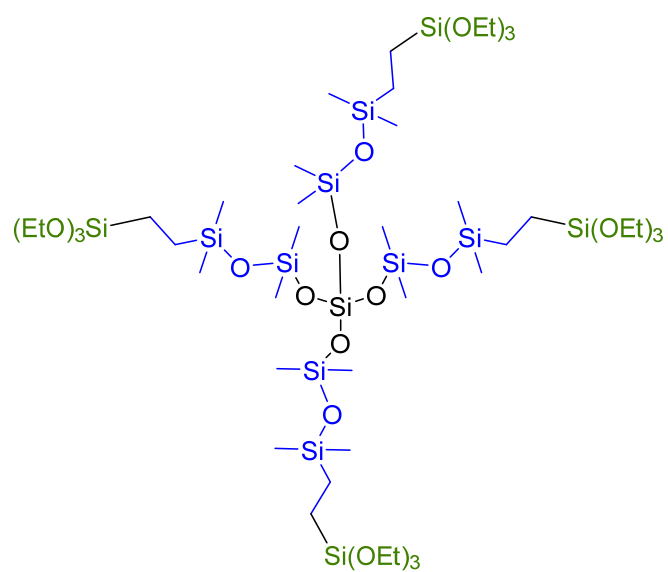




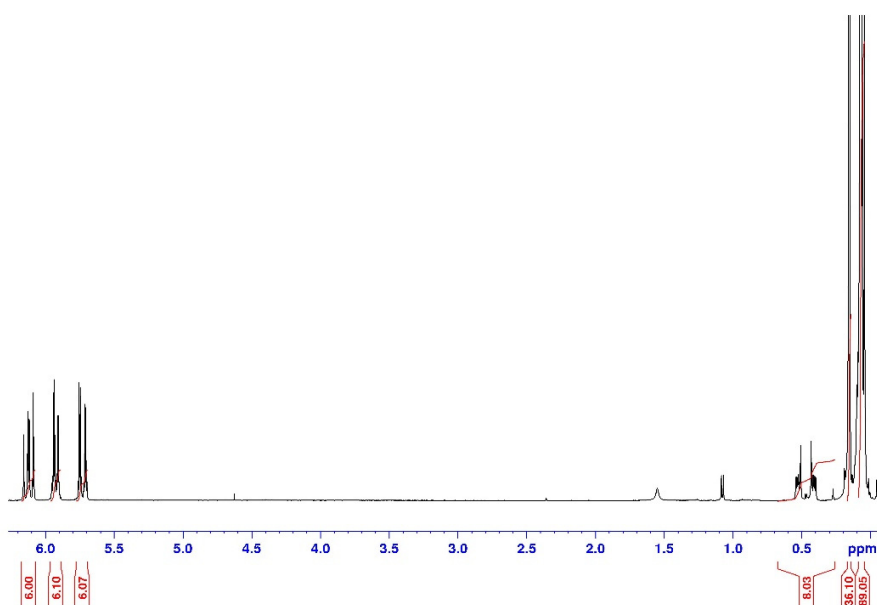
A



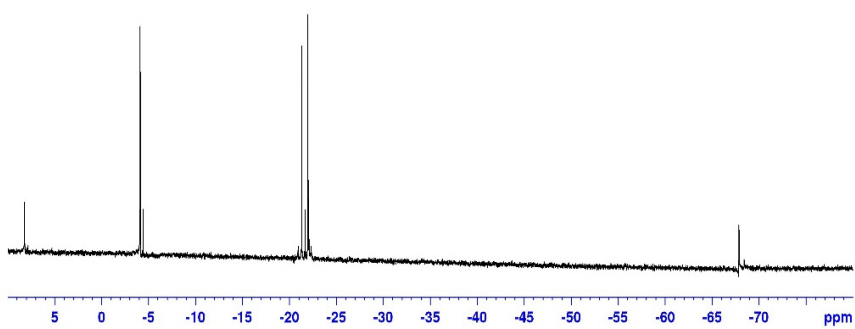
B



**Figure S9.** A) <sup>1</sup>H NMR and B) <sup>29</sup>Si NMR for **12OEt** in CDCl<sub>3</sub>.



A



B

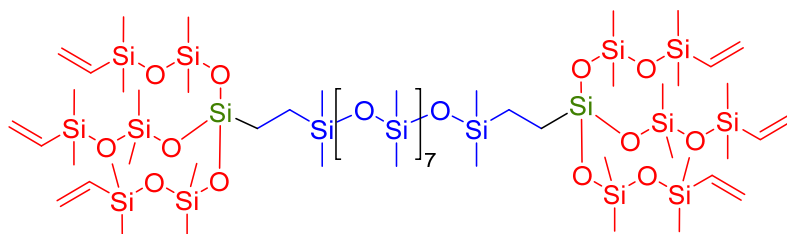
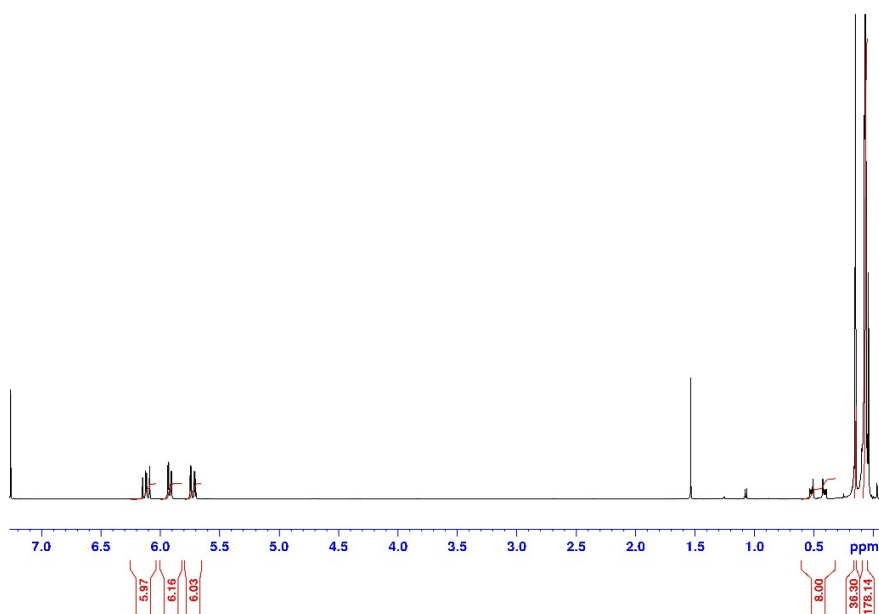
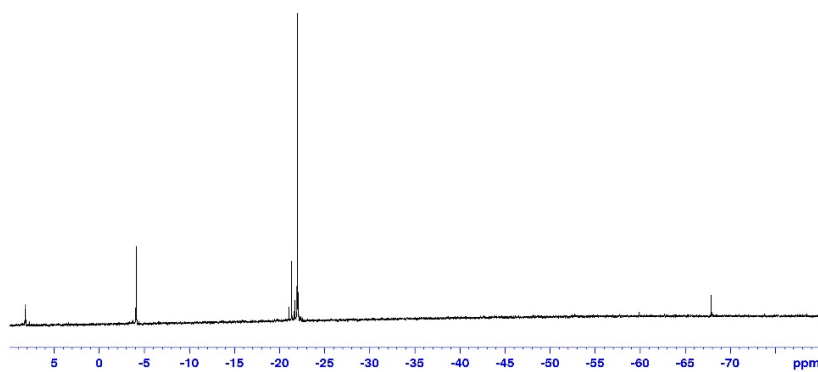


Figure S10. A)  $^1\text{H}$  NMR and B)  $^{29}\text{Si}$  NMR for **7-6Vi** in  $\text{CDCl}_3$ .



A



B

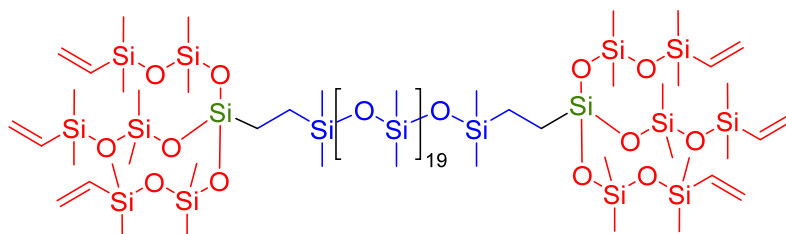
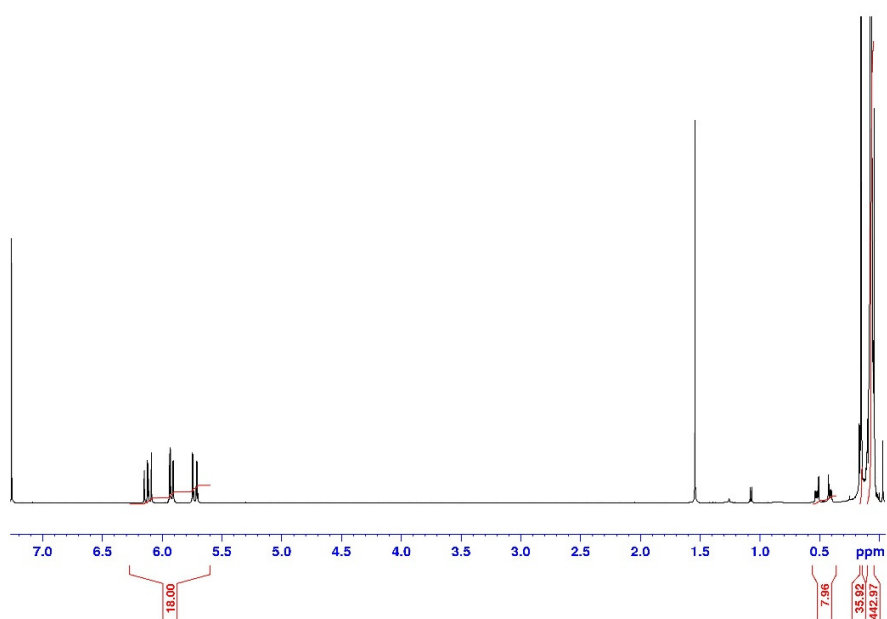
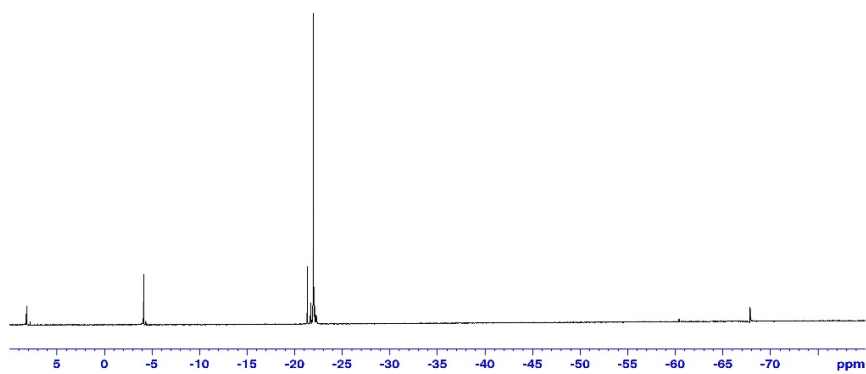


Figure S11. A)  $^1\text{H}$  NMR and B)  $^{29}\text{Si}$  NMR for **19-60Vi** in  $\text{CDCl}_3$ .



A



B

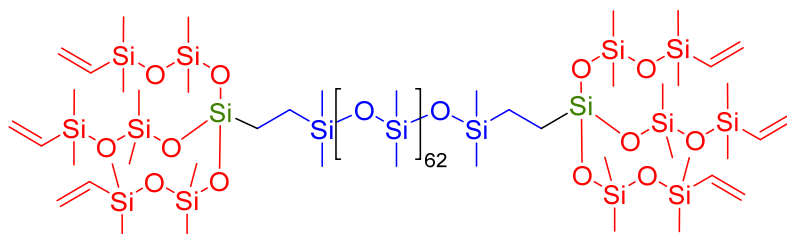
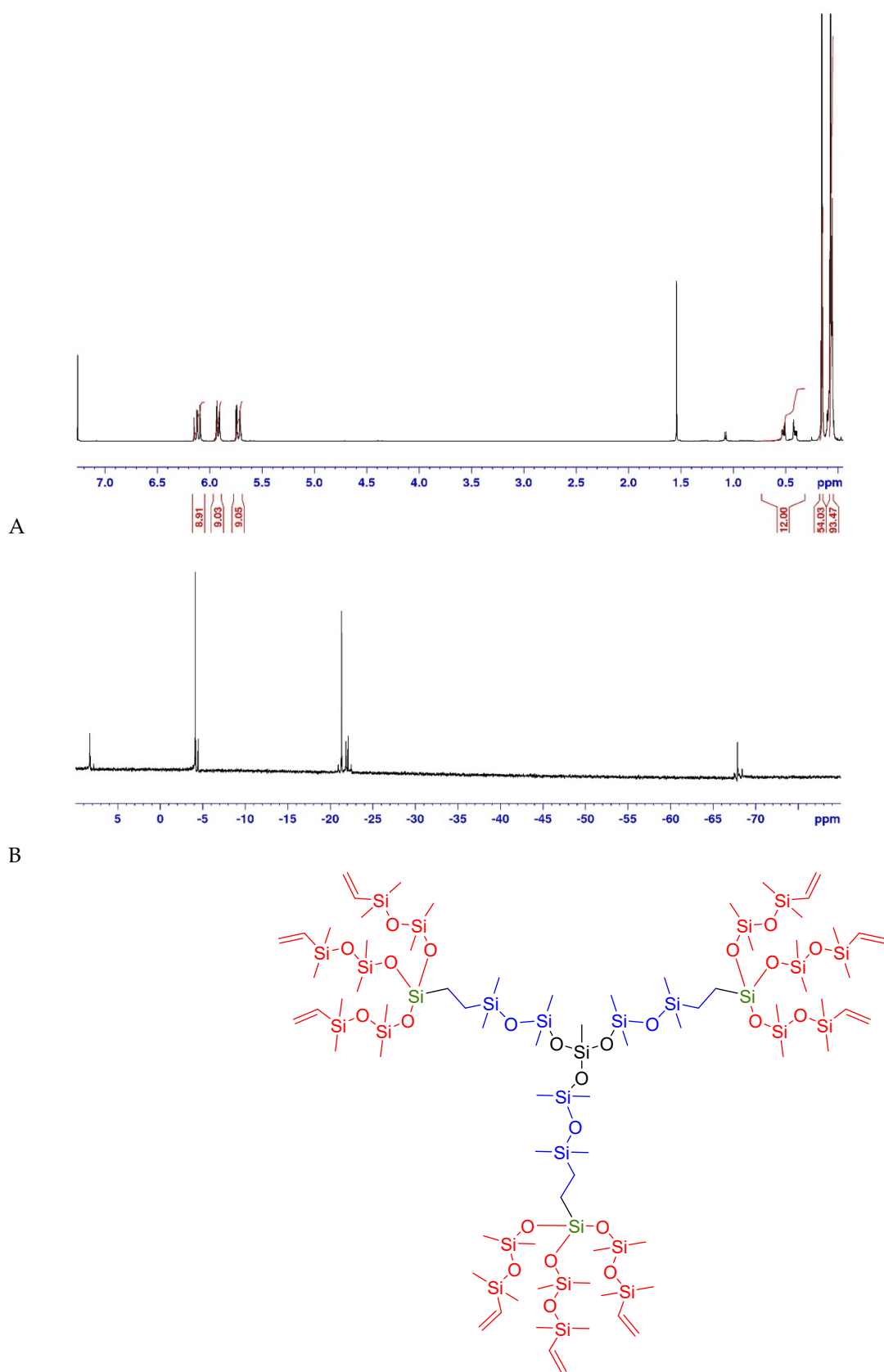
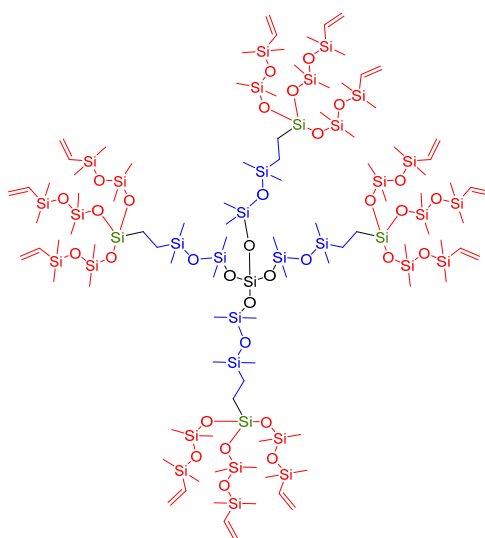
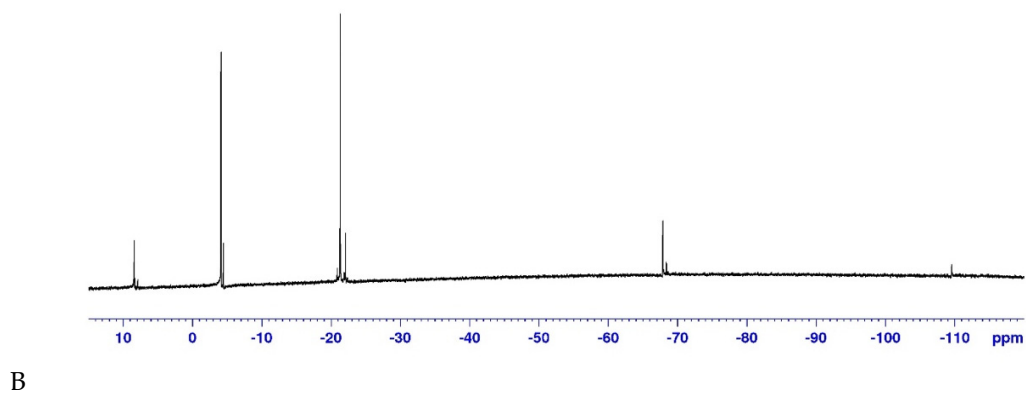
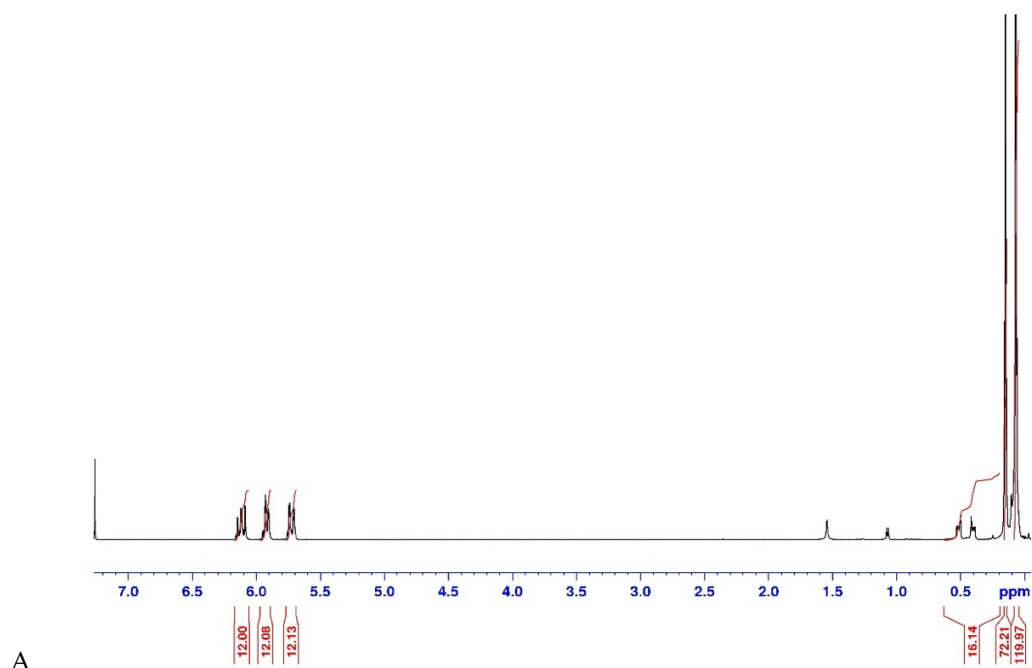


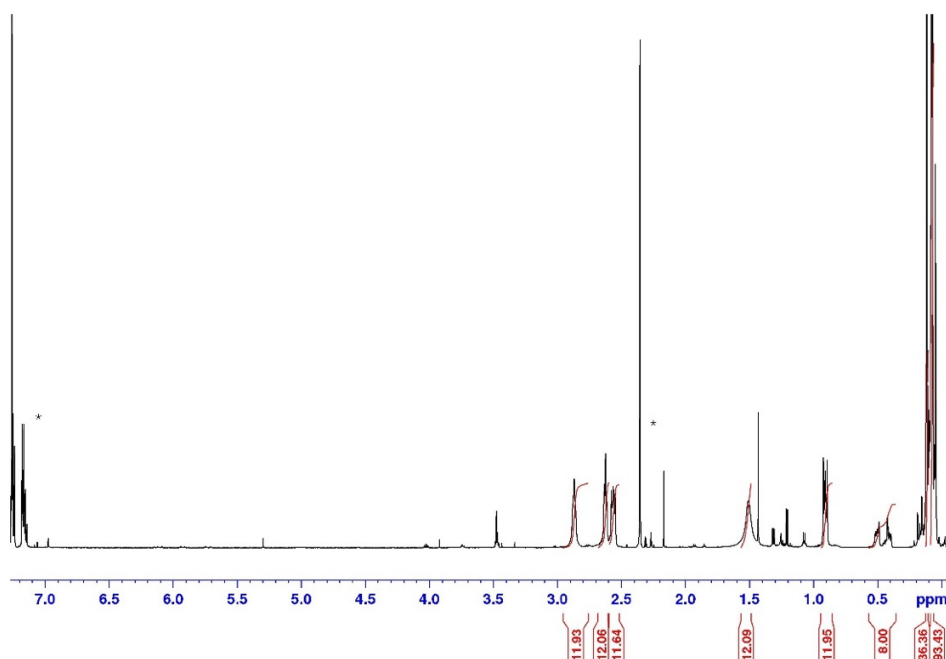
Figure S12. A)  $^1\text{H}$  NMR and B)  $^{29}\text{Si}$  NMR for **62-6Vi** in  $\text{CDCl}_3$ .



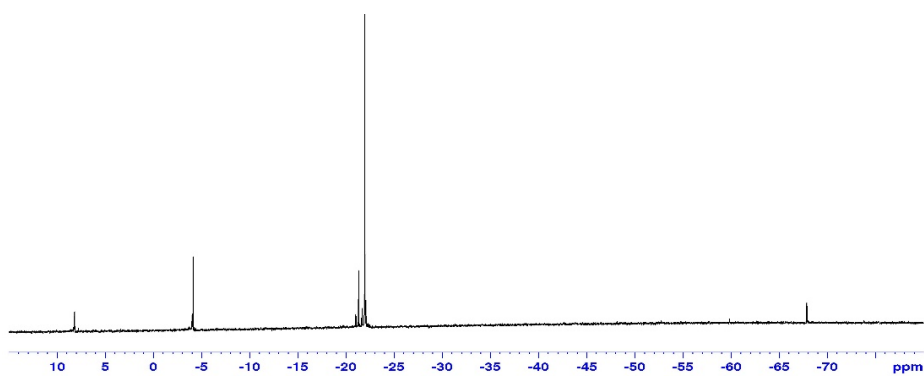
**Figure S13.** A)  $^1\text{H}$  NMR and B)  $^{29}\text{Si}$  NMR for **9Vi** in  $\text{CDCl}_3$ .



**Figure S14.** A) <sup>1</sup>H NMR and B) <sup>29</sup>Si NMR for **12Vi** in CDCl<sub>3</sub>.



A



B

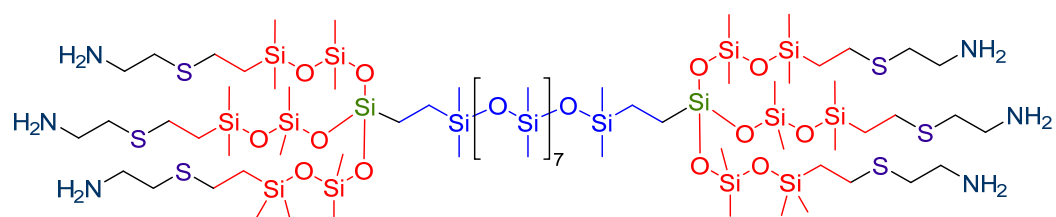
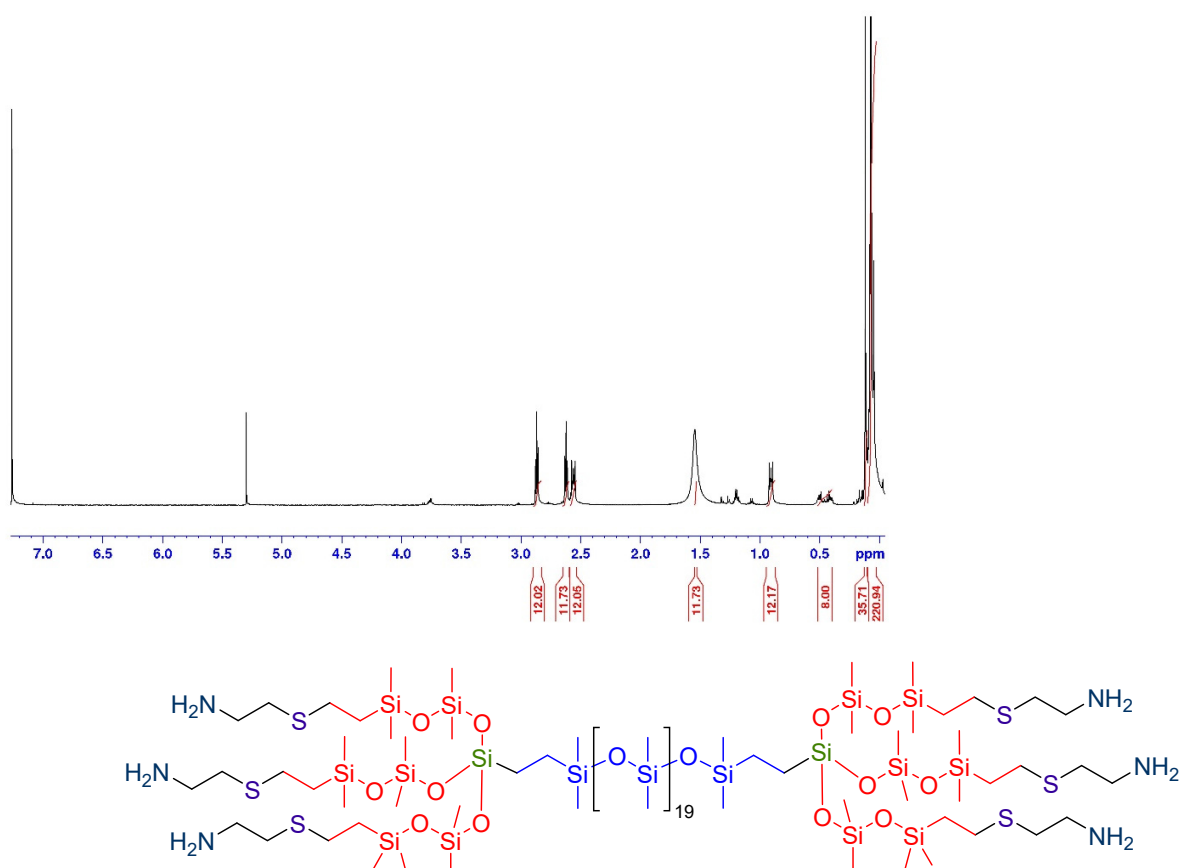
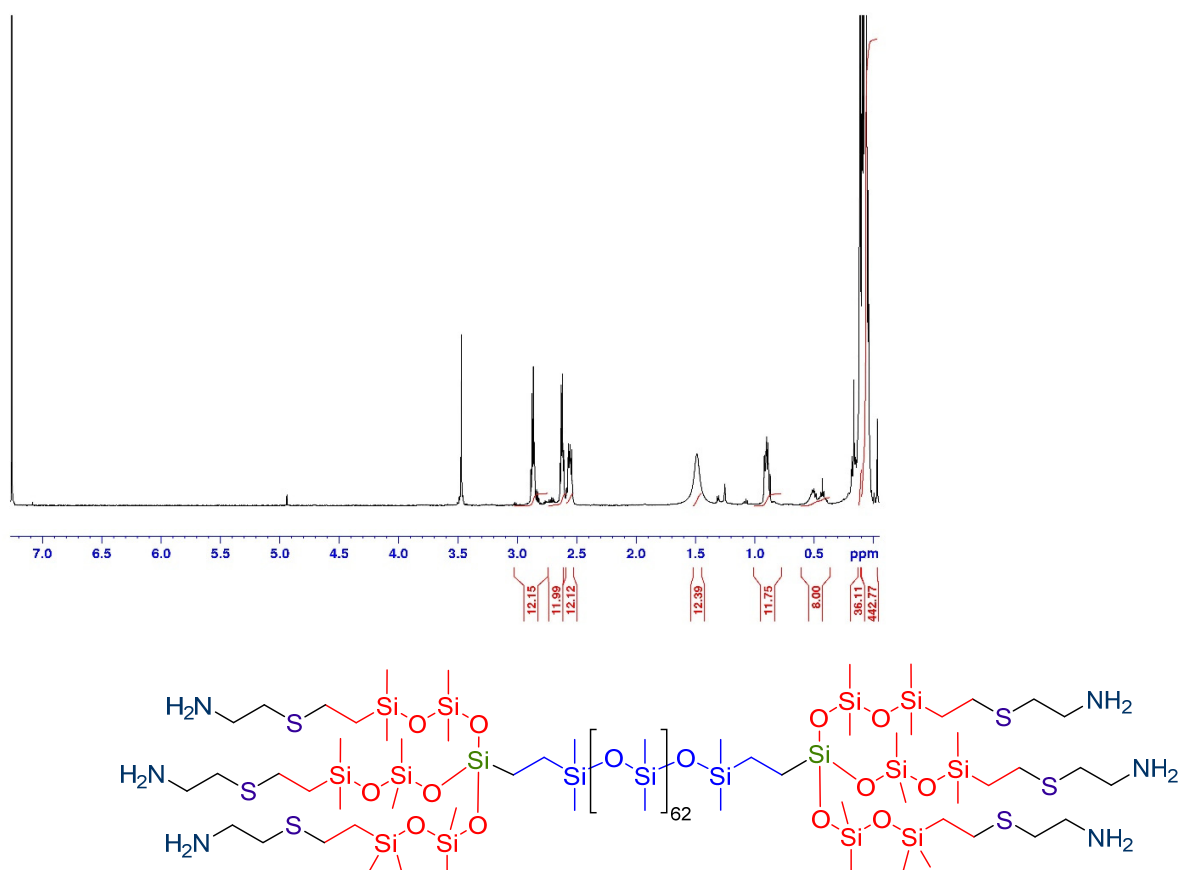


Figure S15. A)  $^1\text{H}$  NMR and B)  $^{29}\text{Si}$  NMR for N 7-6 in  $\text{CDCl}_3$ .

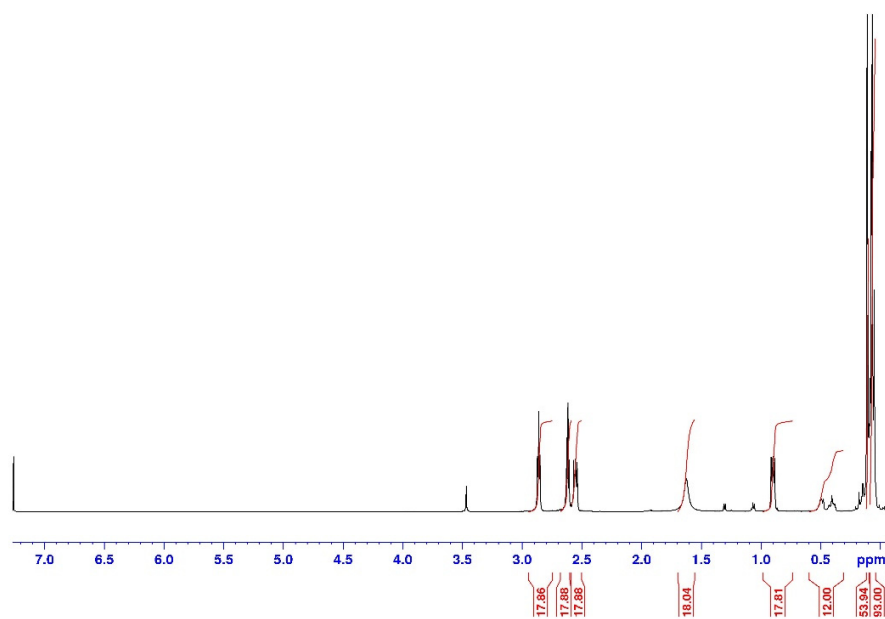


**Figure S16.**  $^1\text{H}$  NMR for **N 19-6** in  $\text{CDCl}_3$ .

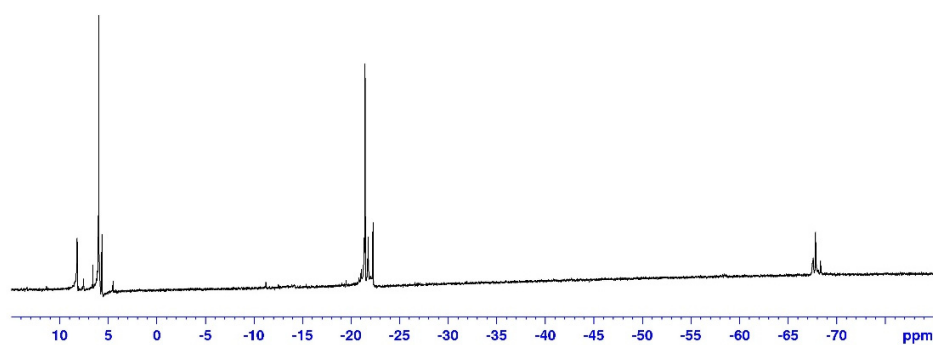




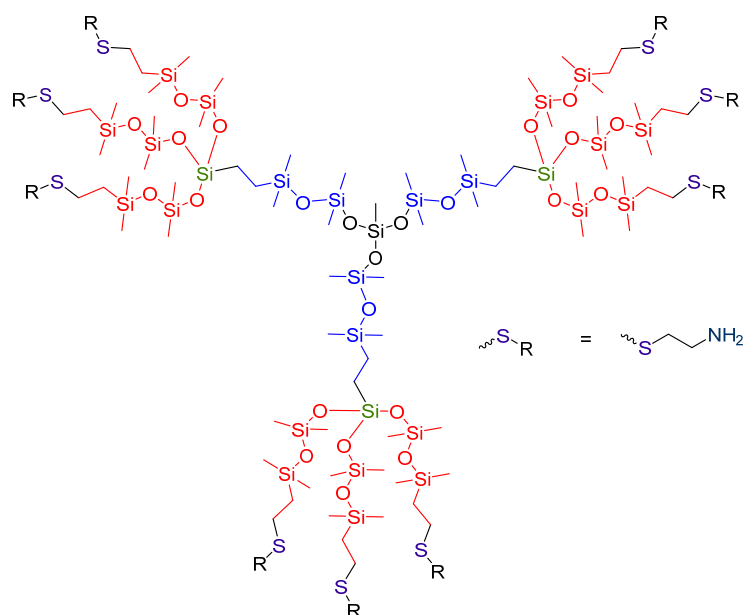
**Figure S17.**  $^1\text{H}$  NMR for **N 62-6** in  $\text{CDCl}_3$ .



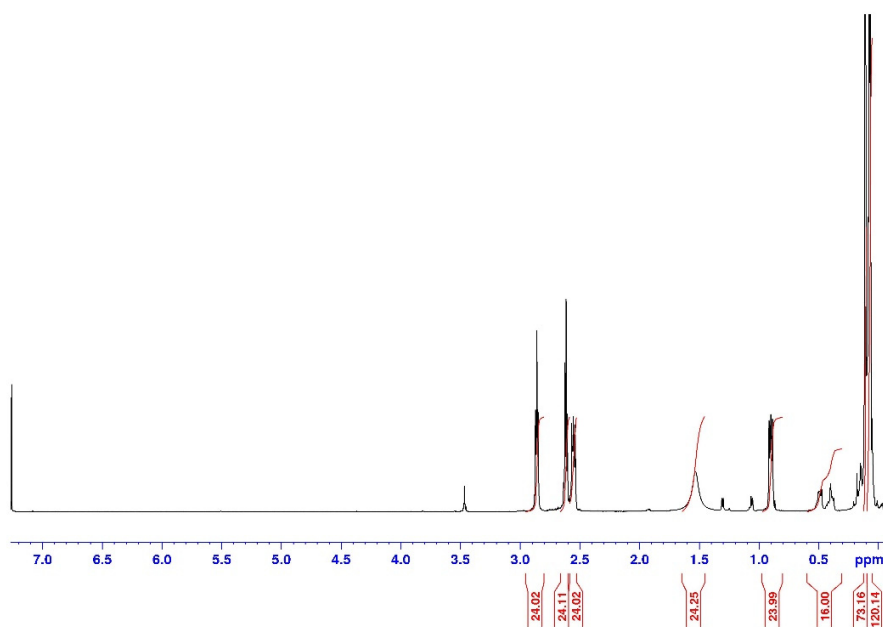
A



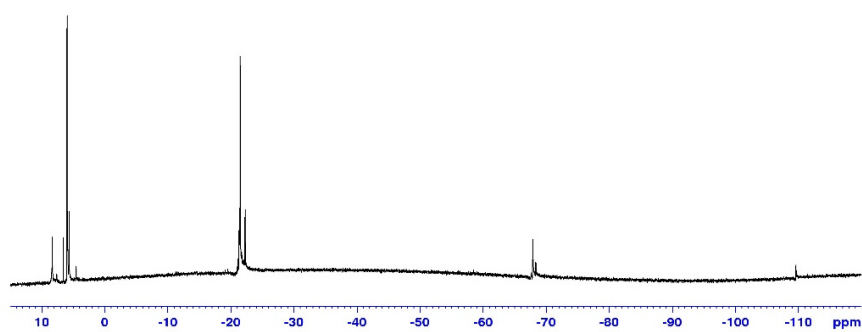
B



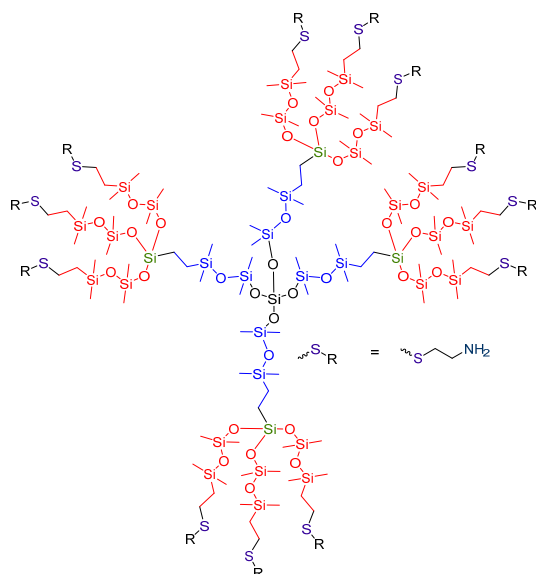
**Figure S18.** A) <sup>1</sup>H NMR and B) <sup>29</sup>Si NMR for N9 in CDCl<sub>3</sub>.



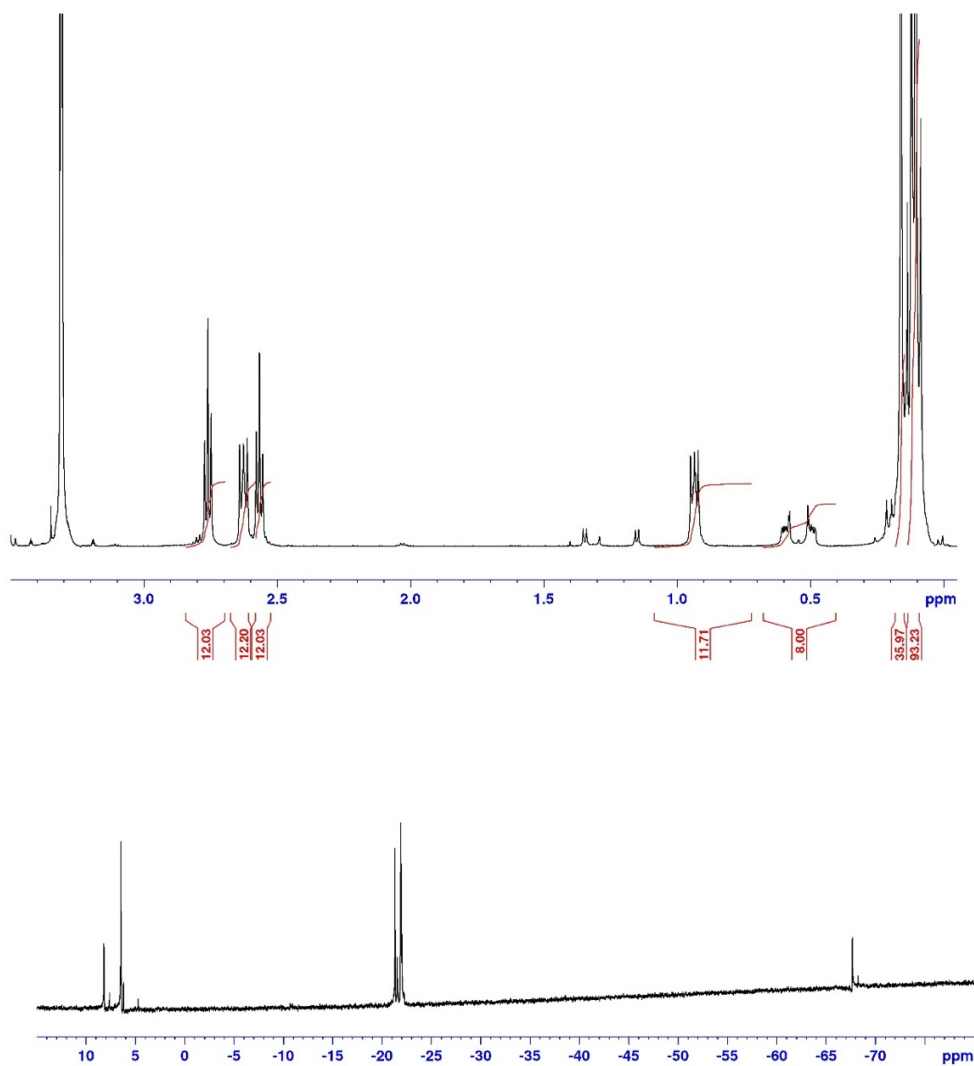
A



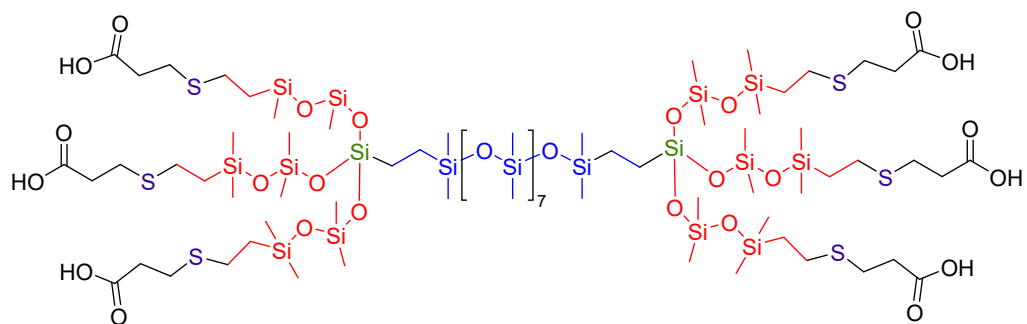
B



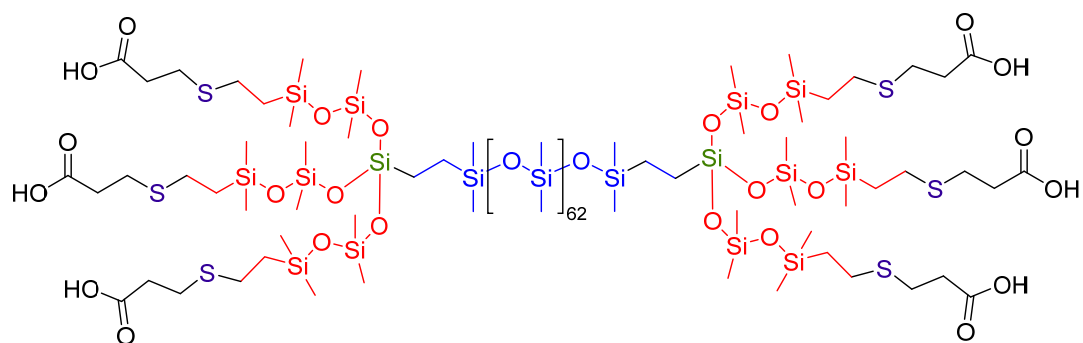
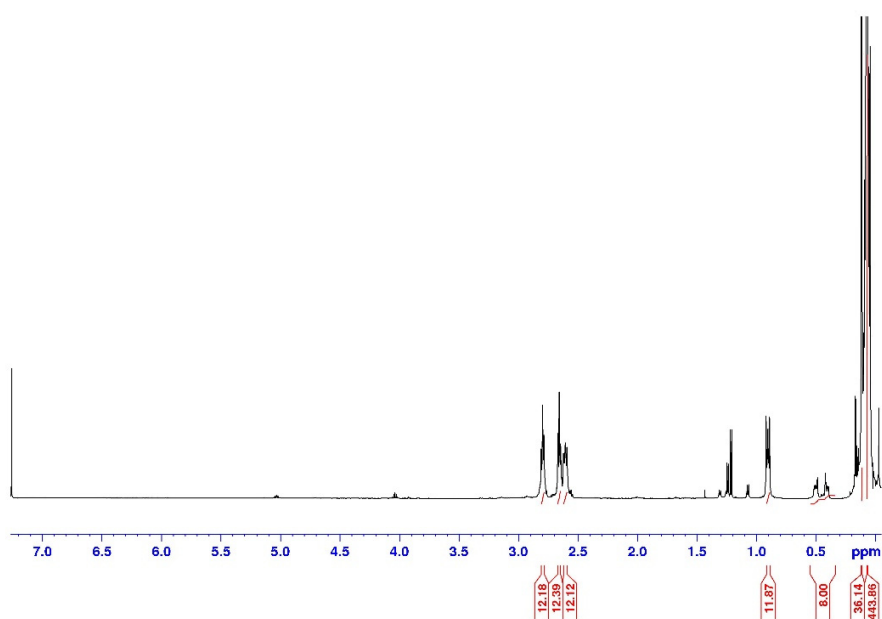
**Figure S19.** A)  $^1\text{H}$  NMR and B)  $^{29}\text{Si}$  NMR for **N12** in  $\text{CDCl}_3$ .



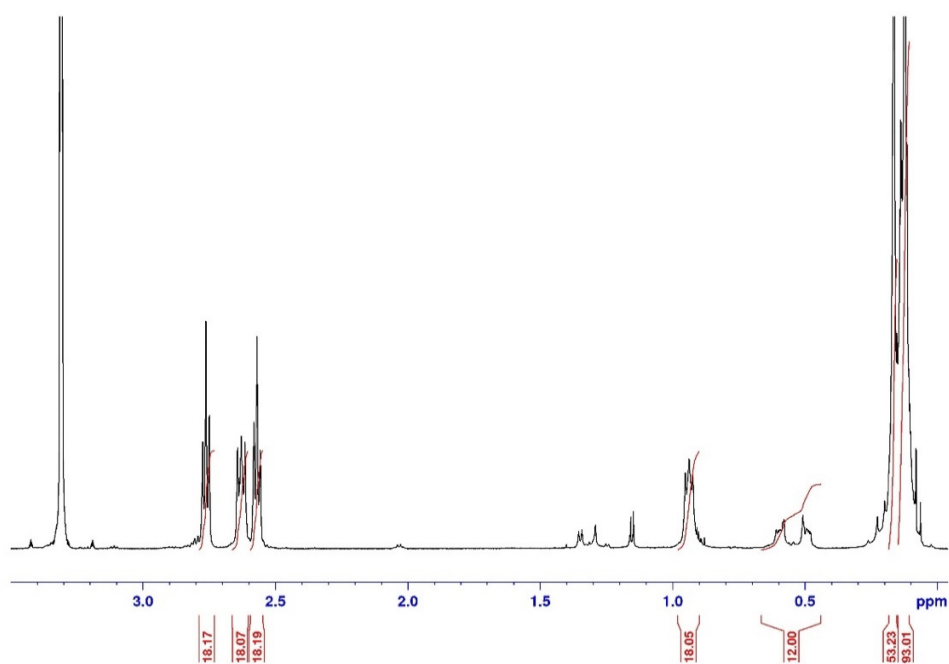
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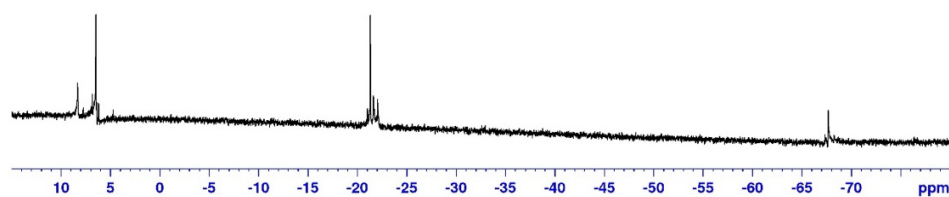
**Figure S20.** A)  $^1\text{H}$  NMR and B)  $^{29}\text{Si}$  NMR for **HO7-6** in  $\text{MeOH-}d_4$ .



**Figure S21.**  $^1\text{H}$  NMR for **HO62-6** in  $\text{CDCl}_3$ .



A



B

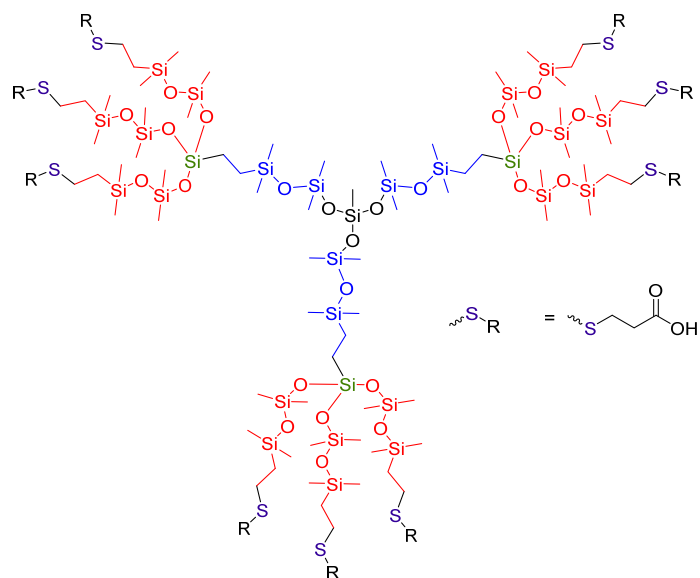
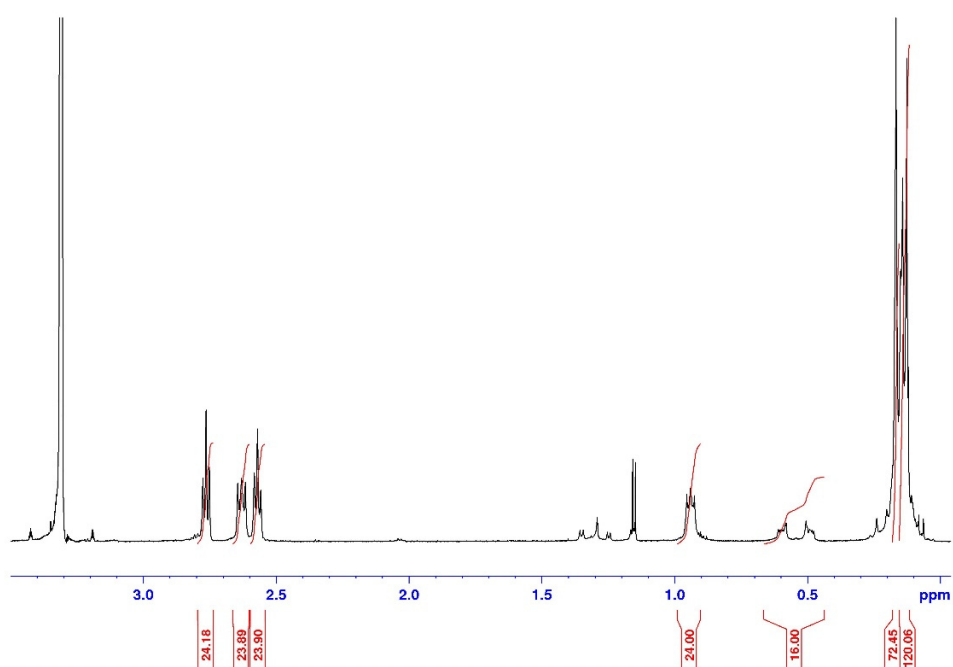
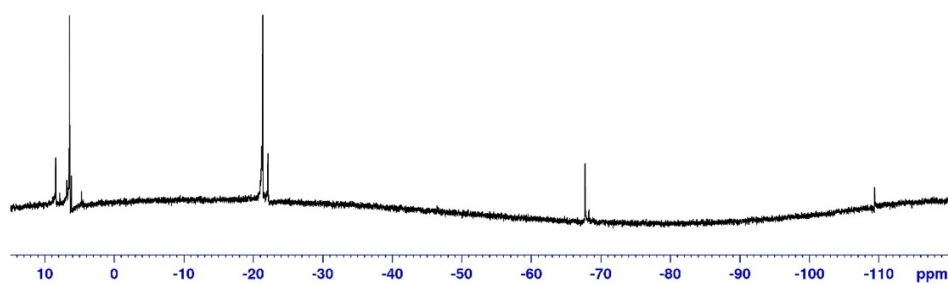


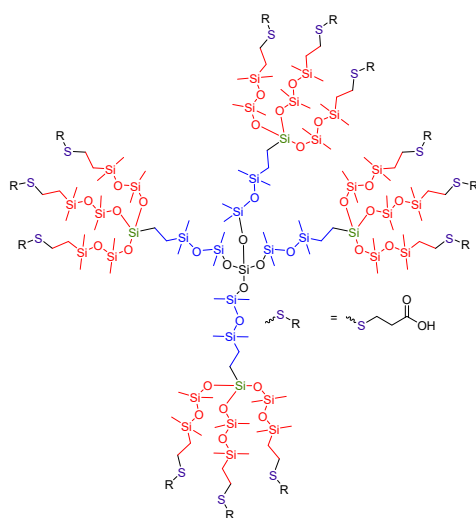
Figure S22. A)  $^1\text{H}$  NMR and B)  $^{29}\text{Si}$  NMR for **HO9** in  $\text{MeOH-}d_4$ .



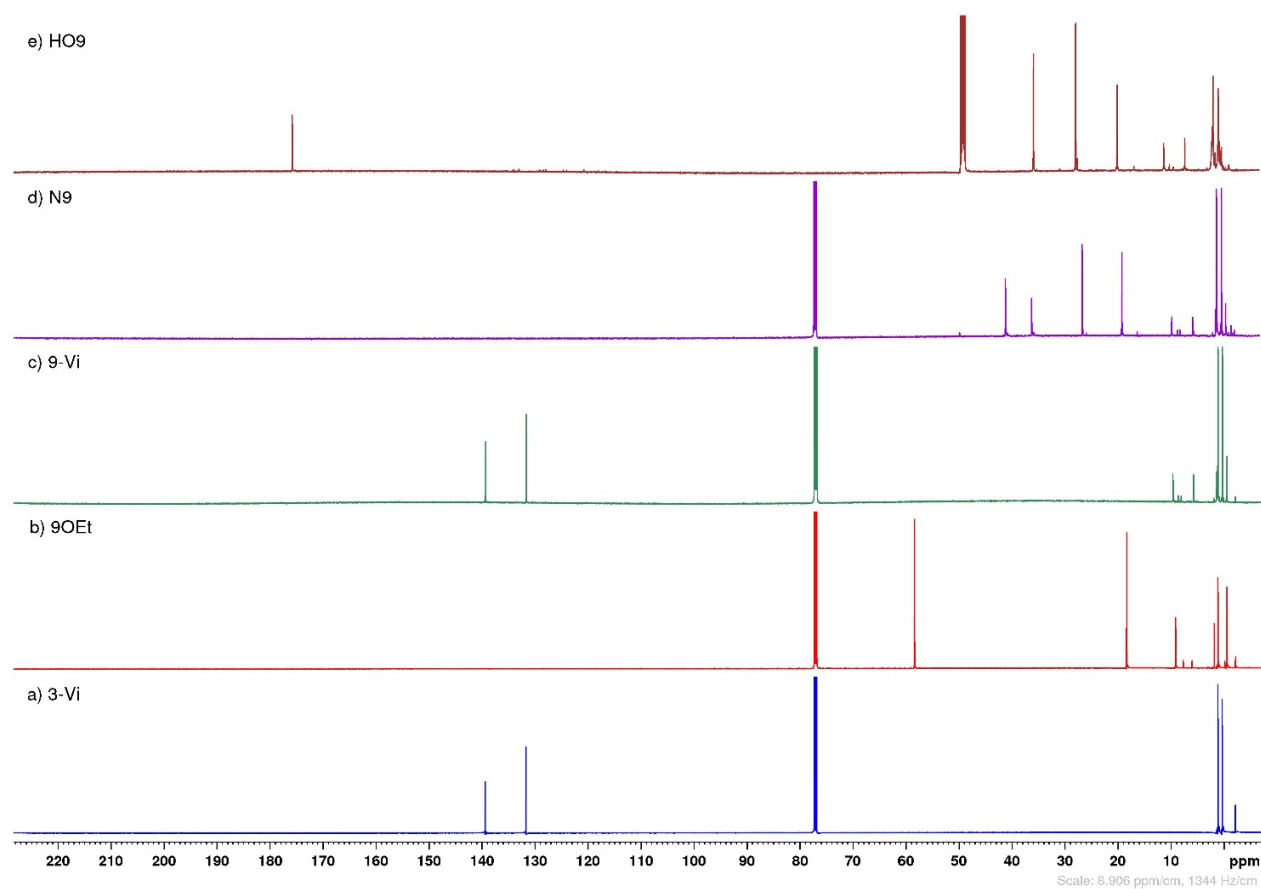
A



B

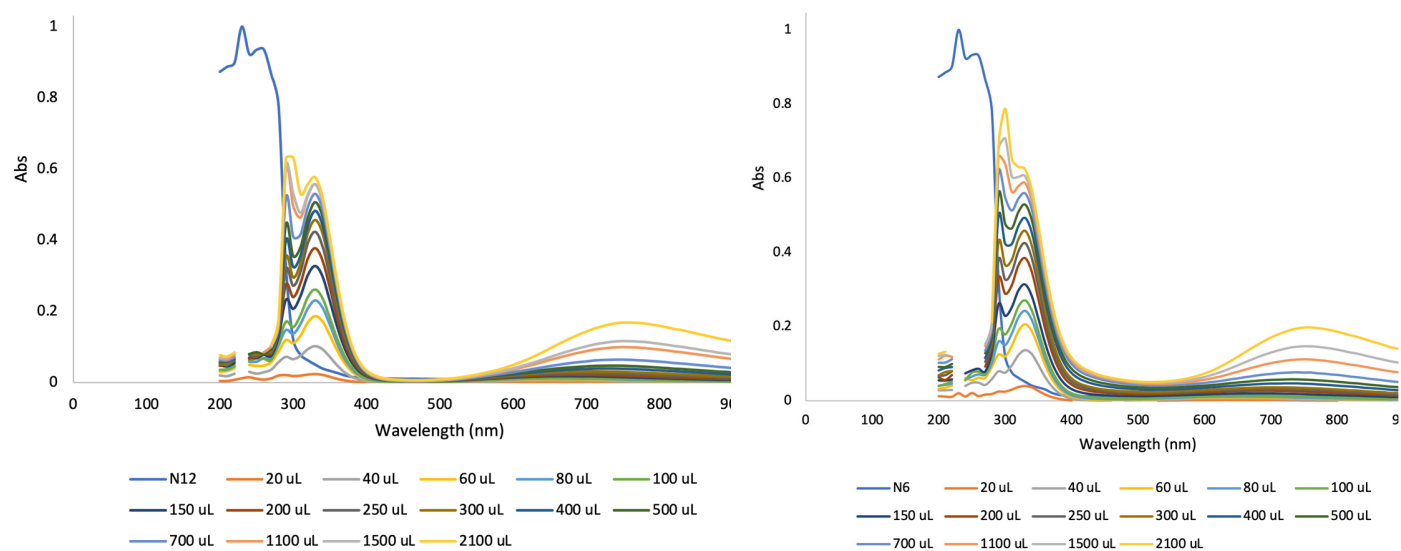


**Figure S23.** A) <sup>1</sup>H NMR and B) <sup>29</sup>Si NMR for **HO12** in MeOH-*d*<sub>4</sub>.

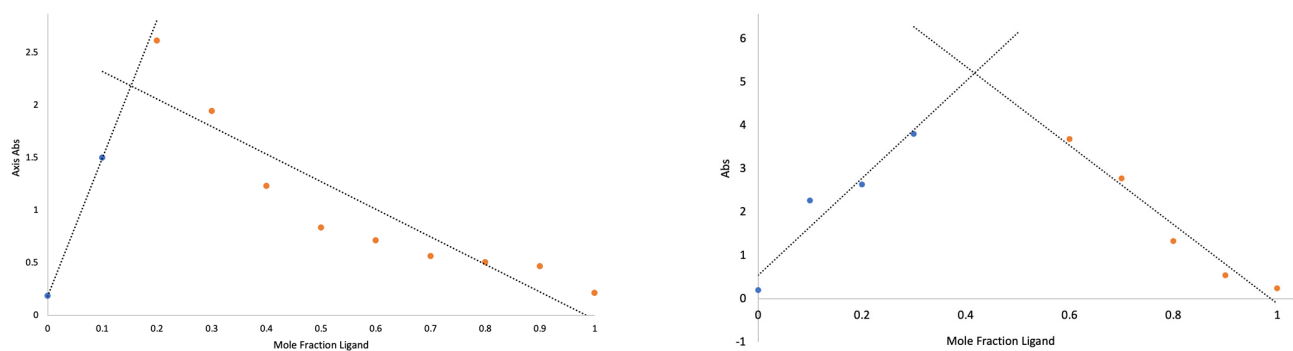


**Figure S24.**  $^{13}\text{C}$  NMR for a) **3-Vi**, b) **9OEt**, c) **9-Vi**, d) **N9** in  $\text{CDCl}_3$  and e) **HO9** in  $\text{MeOH-}d_4$

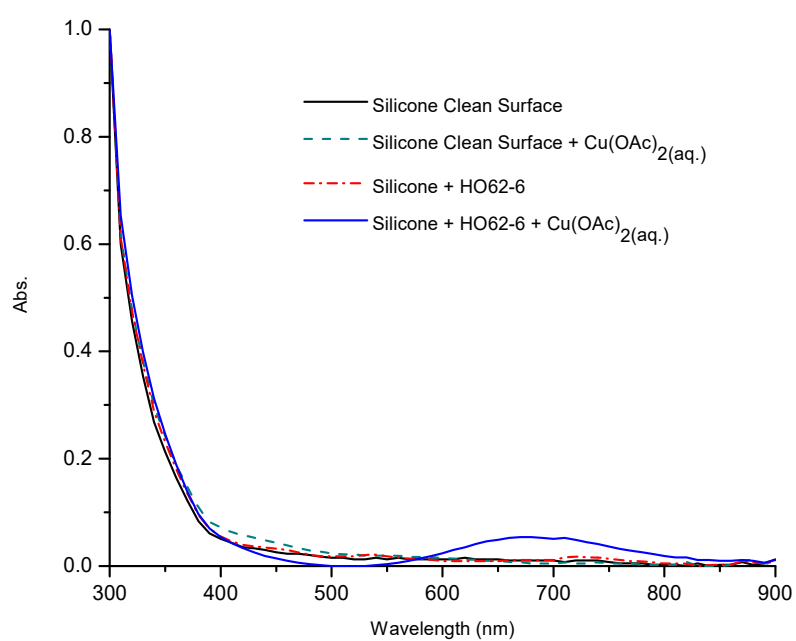




**Figure S25.** Titration by copper (II) of (a) N12. (b) N6.



**Figure S26.** Job Plots of (a) N12. (b) N6.



**Figure S27.** Adsorption of  $\text{Cu}^{2+}$  into a thin film of **HO62-6** coated on a silicone elastomer slab.