

Supporting Information

Contents:

1. NMR spectra
2. MALDI-TOFMS
3. SEC charts
4. FT-IR spectra
5. Thermal properties
6. Film appearance

1. NMR spectra

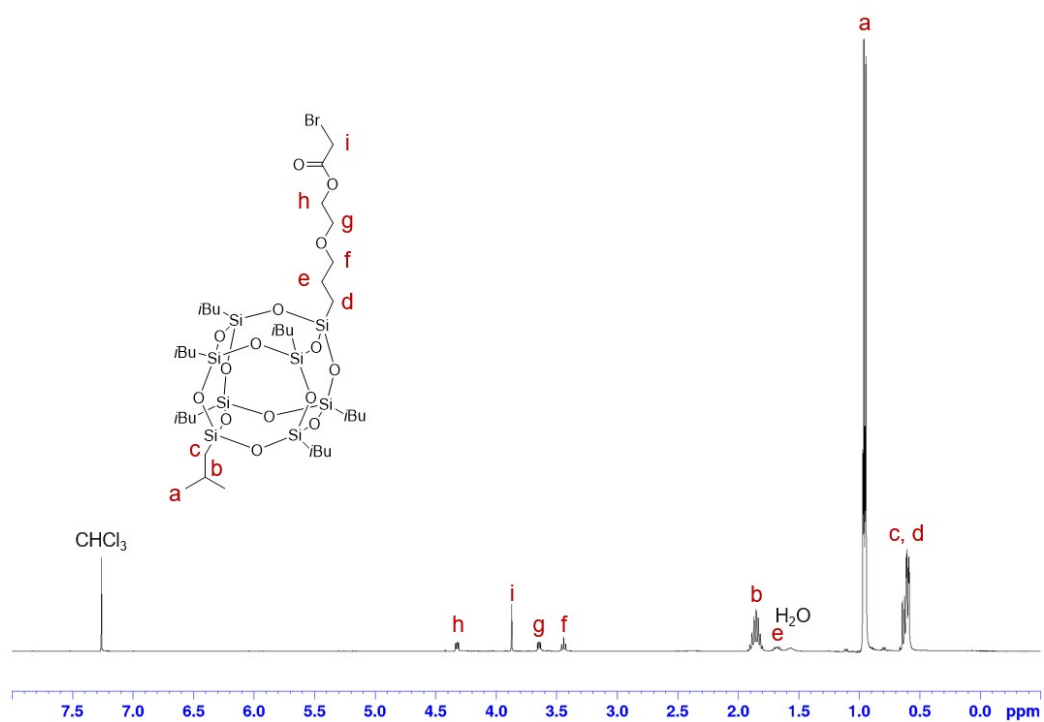


Figure S1. $^1\text{H-NMR}$ spectrum (400 MHz) of **2** in CDCl_3 .

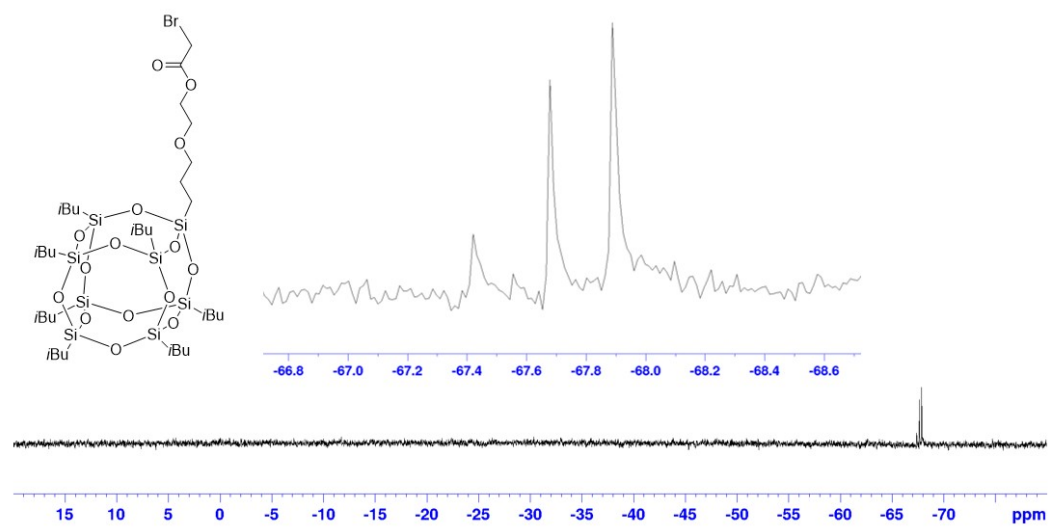


Figure S2. ^{29}Si -NMR spectrum (80 MHz, inverse-gated decoupling) of **2** in CDCl_3 .

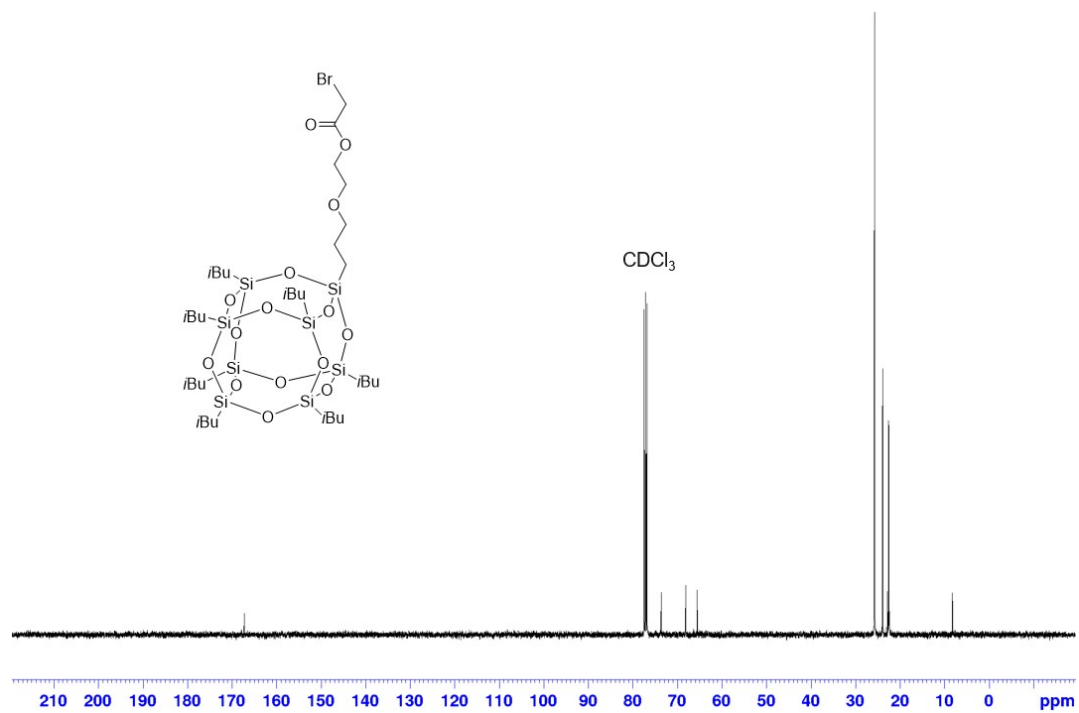


Figure S3. ^{13}C -NMR spectrum (100 MHz) of **2** in CDCl_3 .

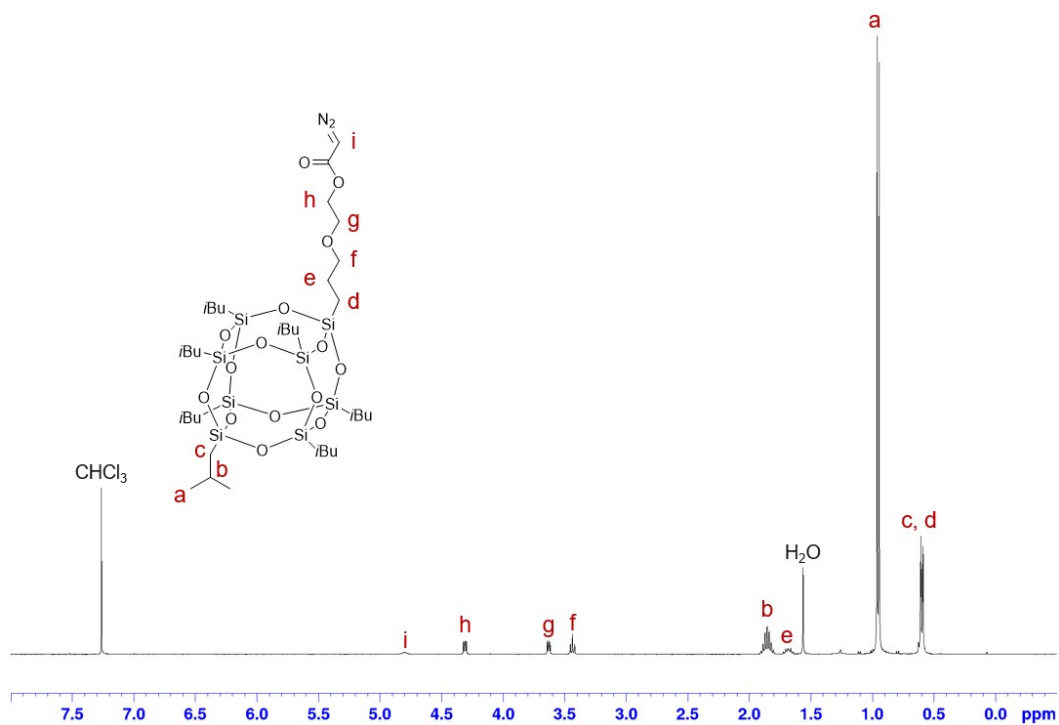


Figure S4. $^1\text{H-NMR}$ spectrum (400 MHz) of **3** in CDCl_3 .

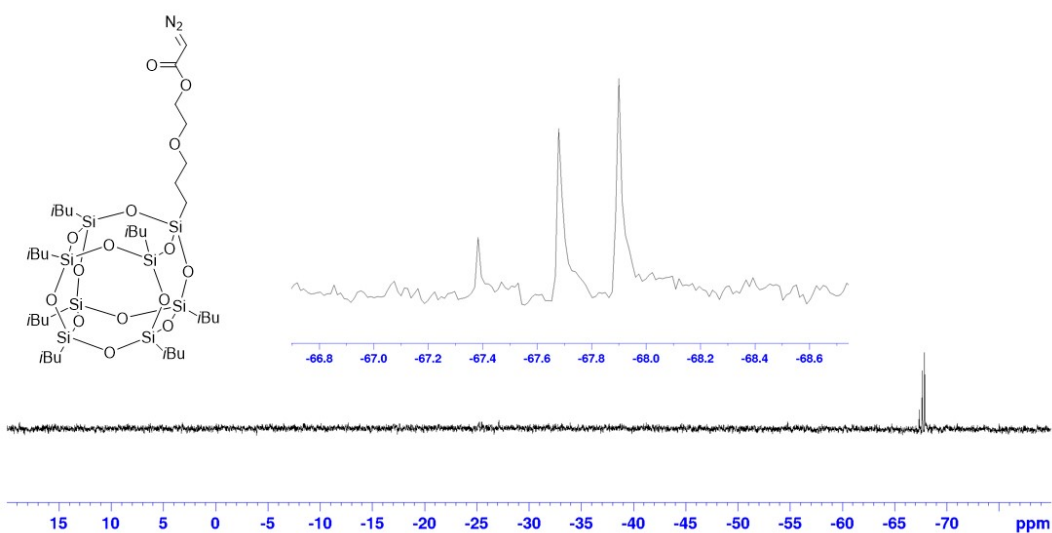


Figure S5. $^{29}\text{Si-NMR}$ spectrum (80 MHz, inverse-gated decoupling) of **3** in CDCl_3 .

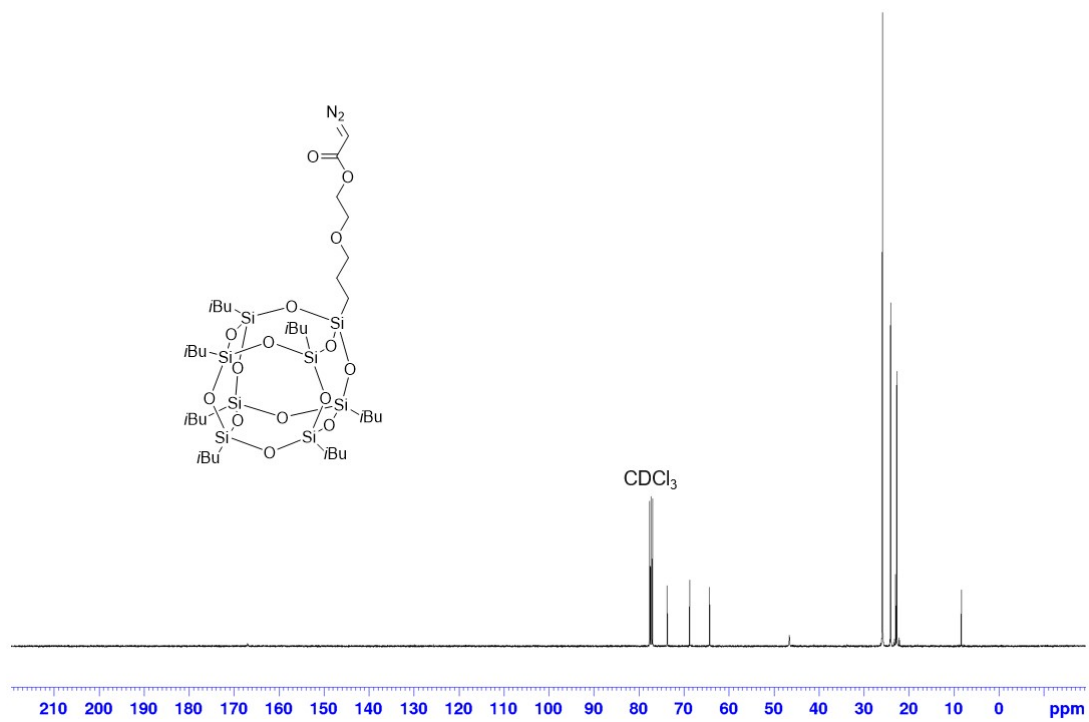


Figure S6. ^{13}C -NMR spectrum (100 MHz) of **3** in CDCl_3 .

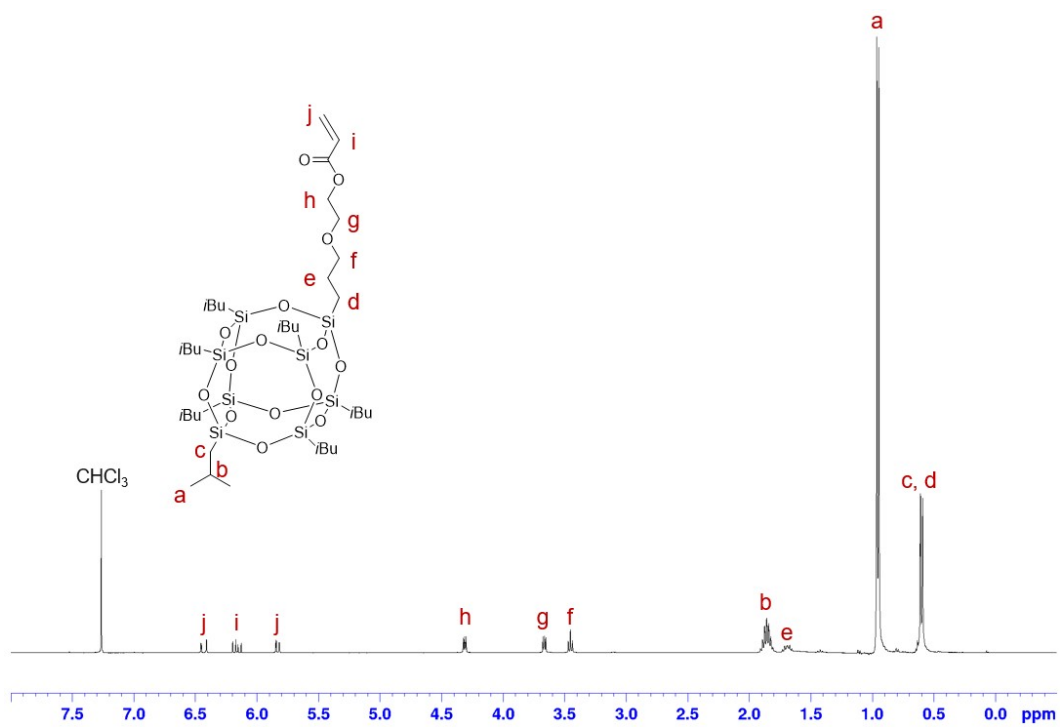


Figure S7. ^1H -NMR spectrum (400 MHz) of **4** in CDCl_3 .

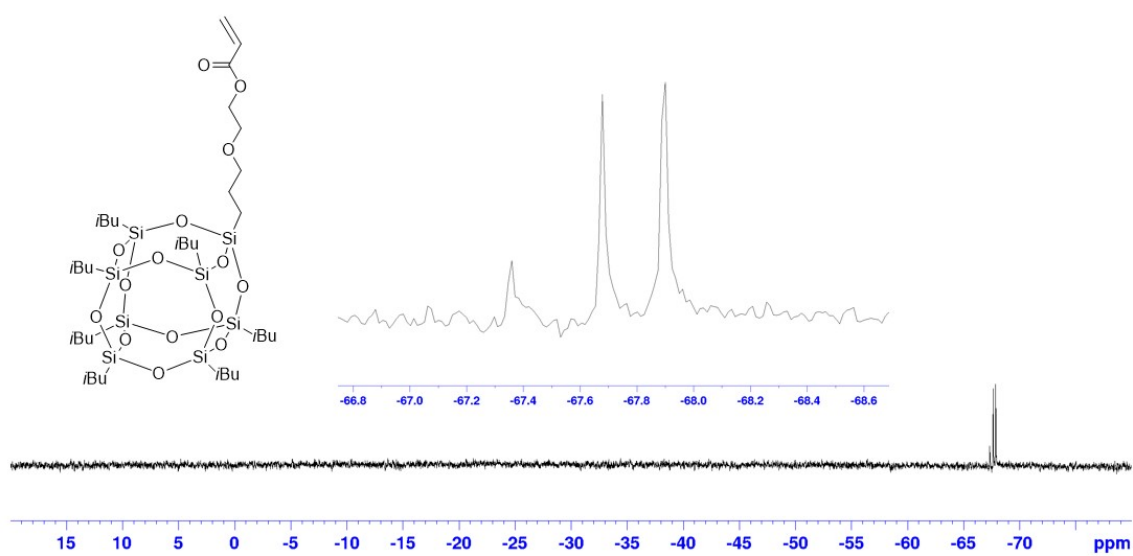


Figure S8. ^{29}Si -NMR spectrum (80 MHz, inverse-gated decoupling) of **4** in CDCl_3 .

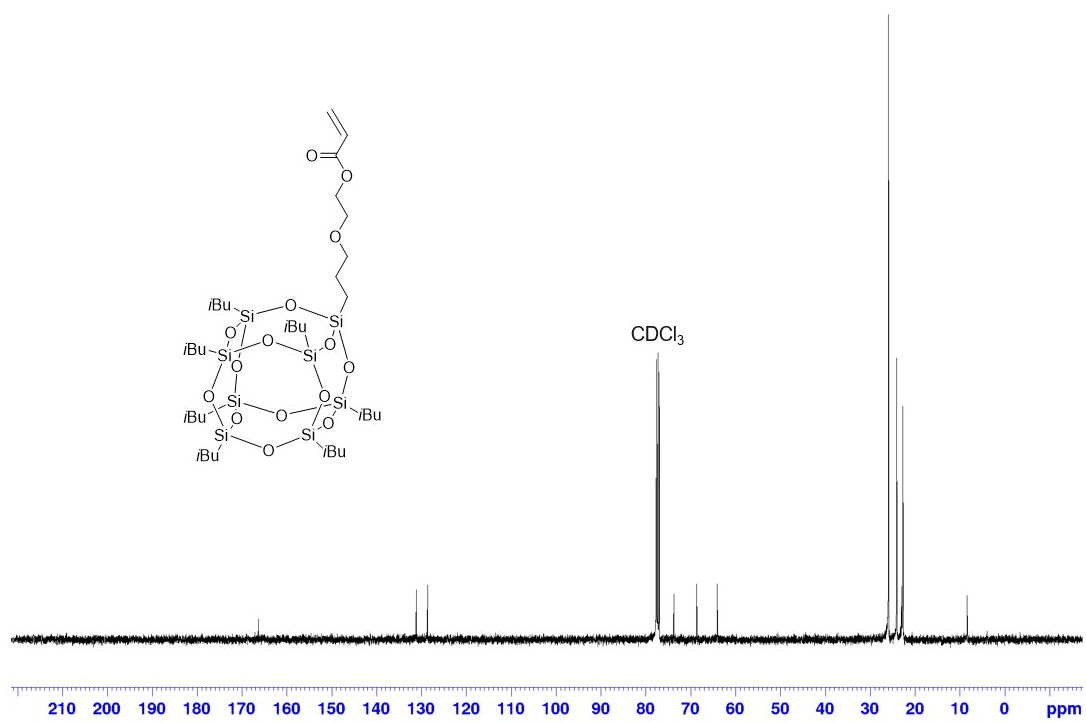


Figure S9. ^{13}C -NMR spectrum (100 MHz) of **4** in CDCl_3 .

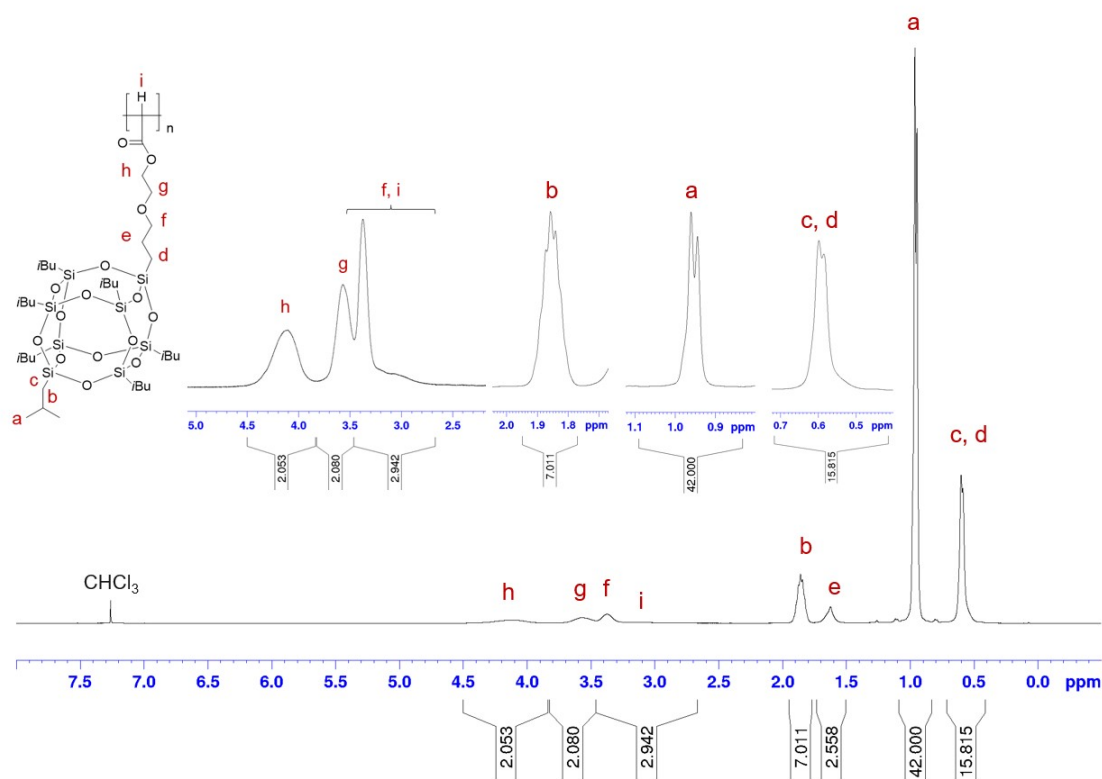


Figure S10. ^1H -NMR spectrum (400 MHz) of **P1** in CDCl_3 .

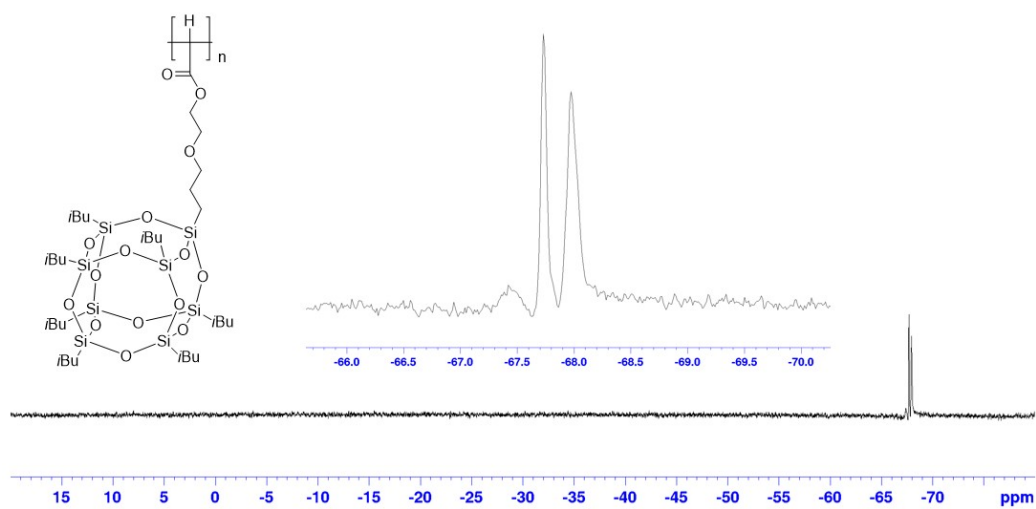


Figure S11. ^{29}Si -NMR spectrum (80 MHz, inverse-gated decoupling, NS=87) of **P1** in CDCl_3 .

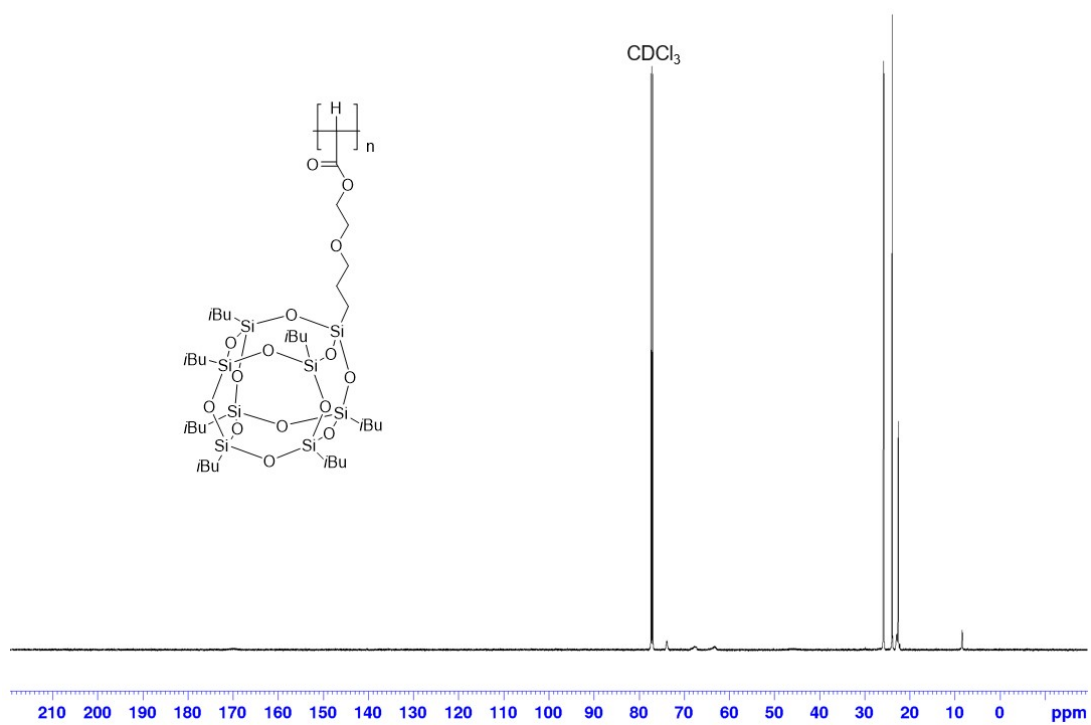


Figure S12. ^{13}C -NMR spectrum (100 MHz) of **P1** in CDCl_3 .

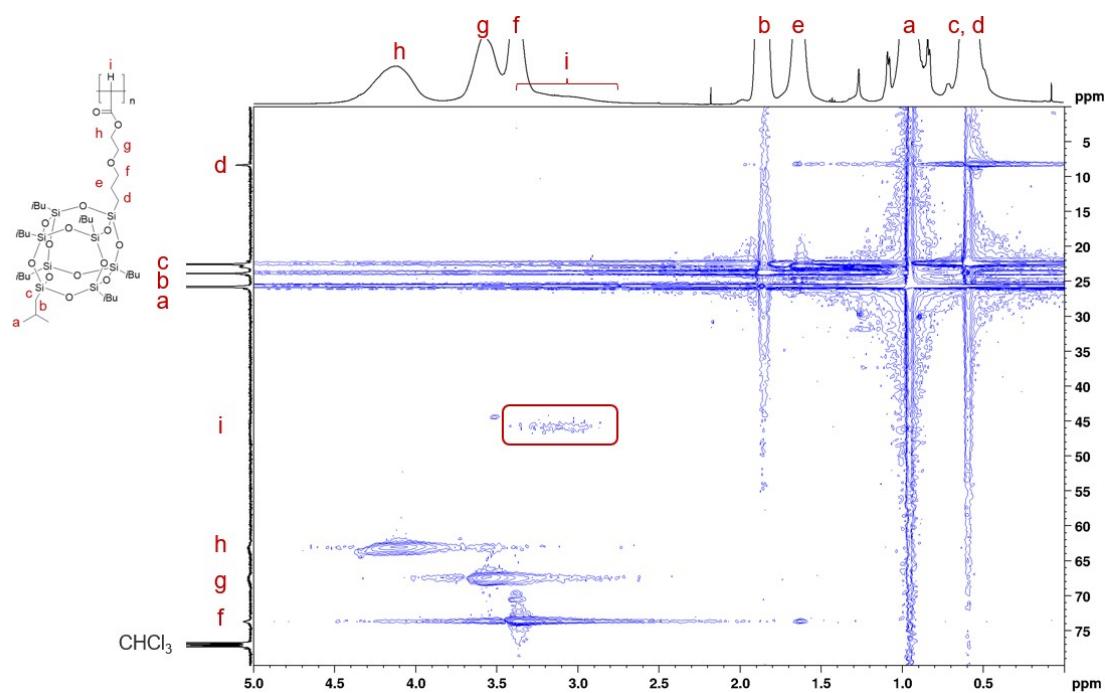


Figure S13. ^1H - ^{13}C HSQC NMR spectrum of **P1** in CDCl_3 , 500 MHz for ^1H .

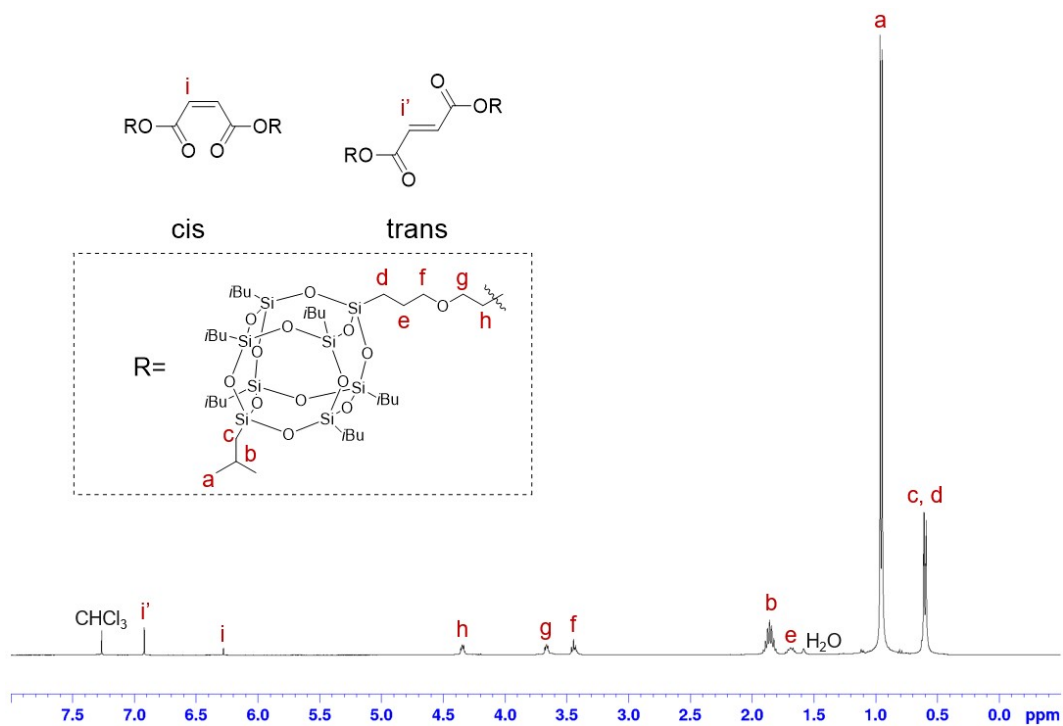


Figure S14. ^1H -NMR spectrum (400 MHz) of **D1** in CDCl_3 .

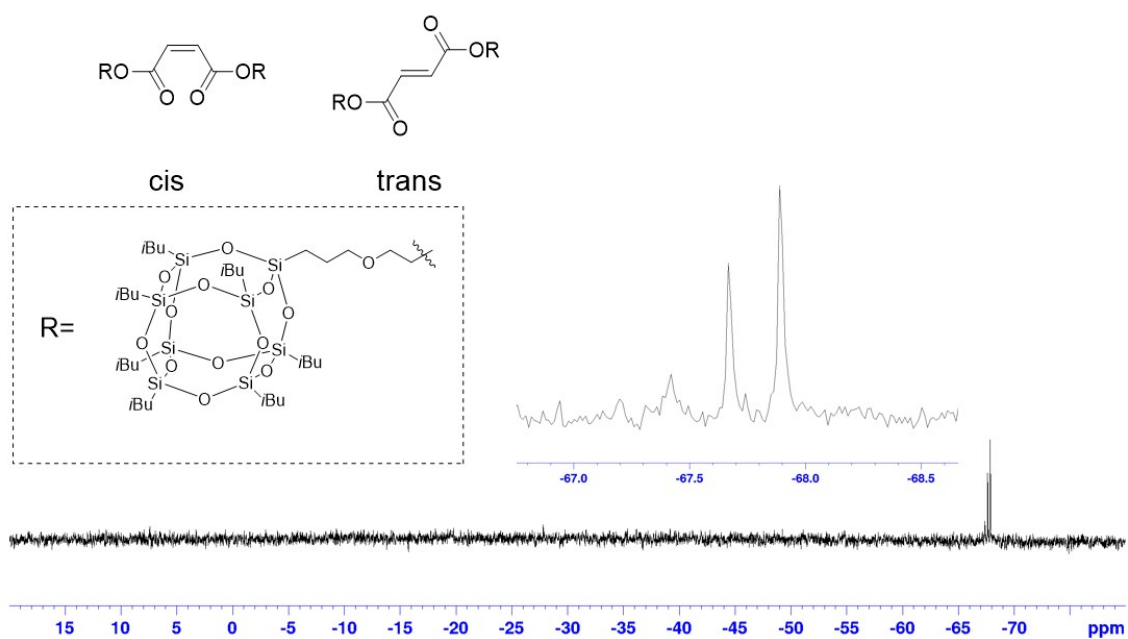


Figure S15. ^{29}Si -NMR spectrum (80 MHz, inverse-gated decoupling) of **D1** in CDCl_3 .

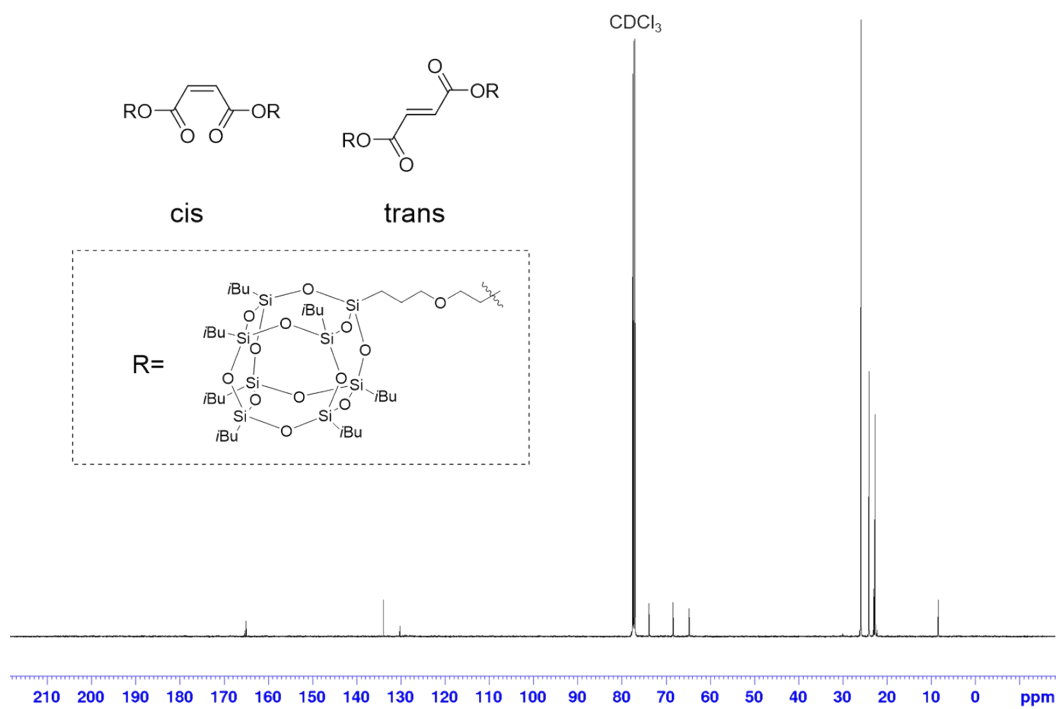


Figure S16. ^{13}C -NMR spectrum (125 MHz) of **D1** in CDCl_3 .

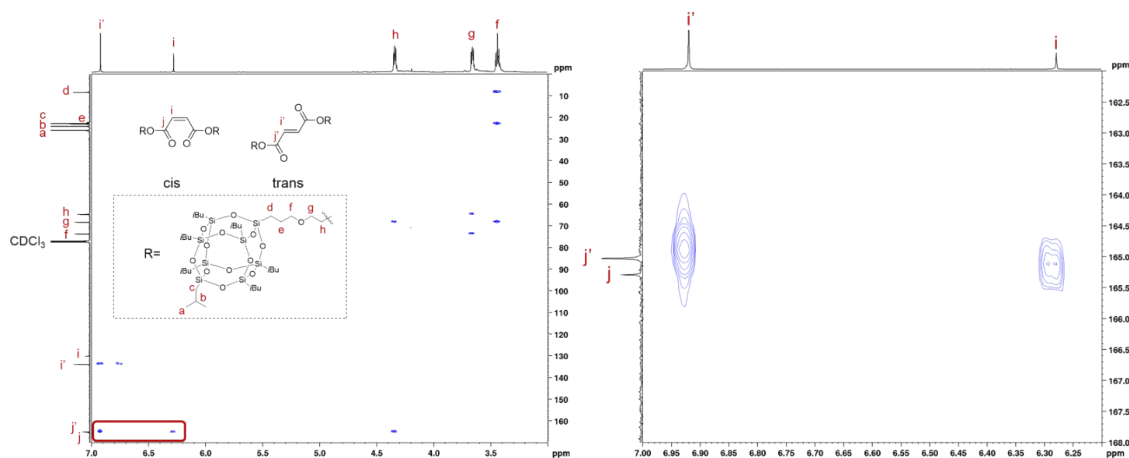


Figure S17. ^1H - ^{13}C HMBC NMR spectra of **D1** in CDCl_3 , 500 MHz for ^1H (left: full spectrum and right: expanded view).

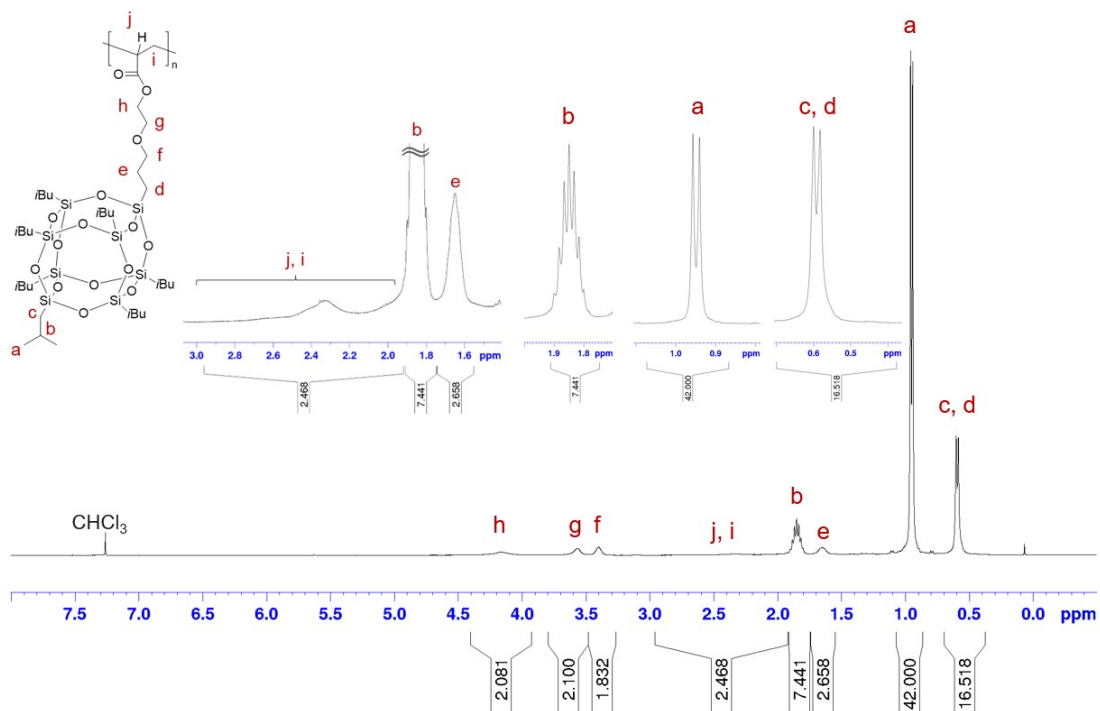


Figure S18. ^1H -NMR spectrum (400 MHz) of **P2** in CDCl_3 .

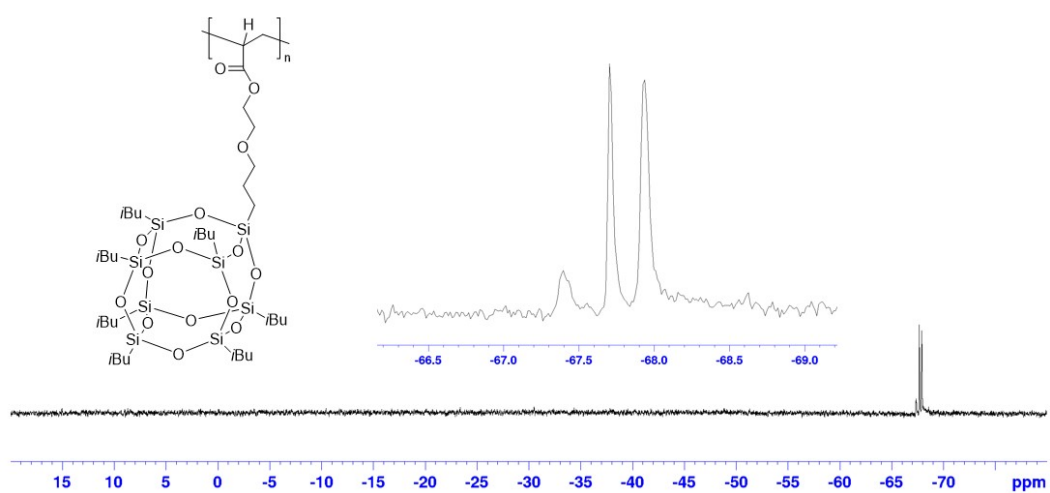


Figure S19. ^{29}Si -NMR spectrum (80 MHz, inverse-gated decoupling, NS=128) of **P2** in CDCl_3 .

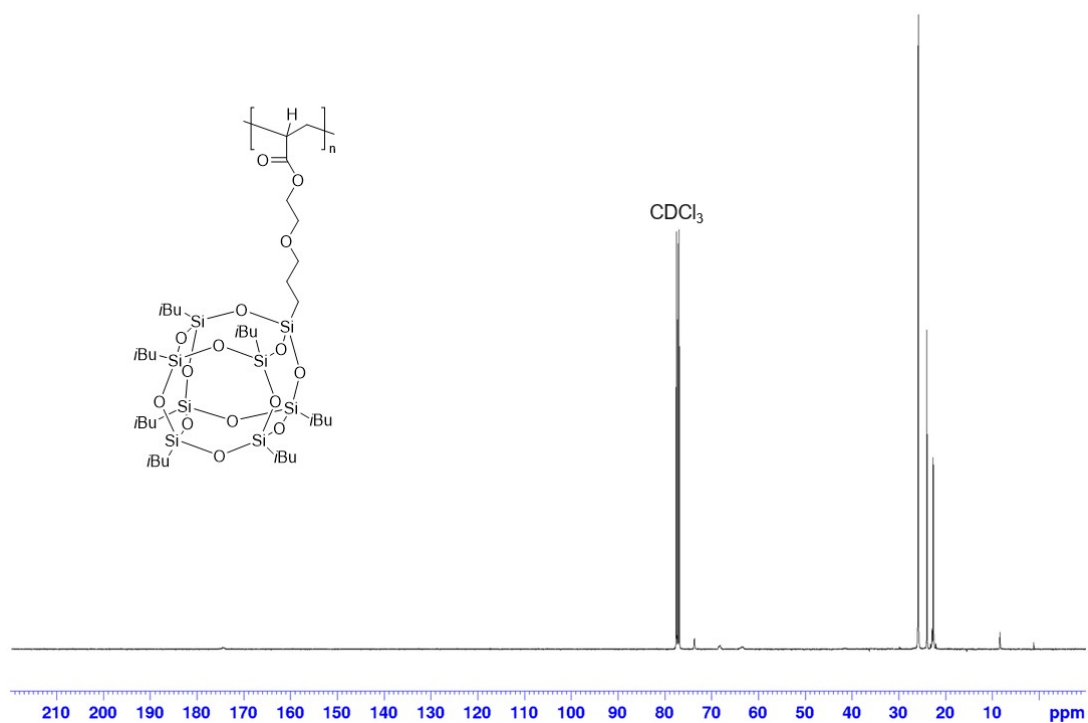


Figure S20. ^{13}C -NMR spectrum (100 MHz) of **P2** in CDCl_3 .

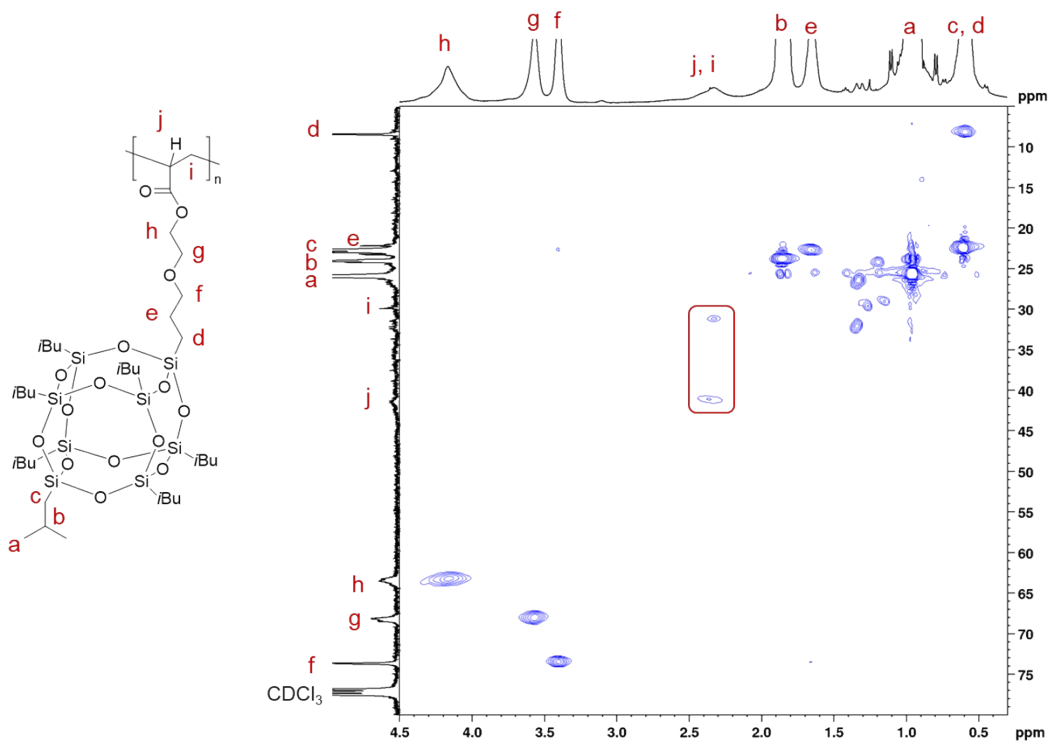


Figure S21. ^1H - ^{13}C HSQC NMR spectrum of **P2** in CDCl_3 , 500 MHz for ^1H .

2. MALDI-TOFMS

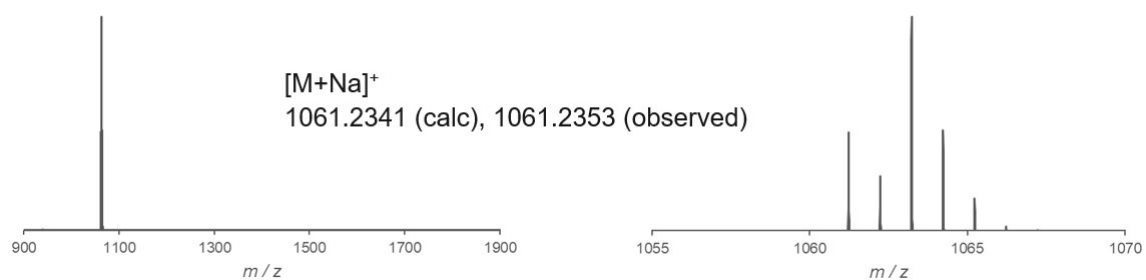


Figure S22. MALDI-TOF-MS spectra of **2** (left: full spectrum and right: expanded view).

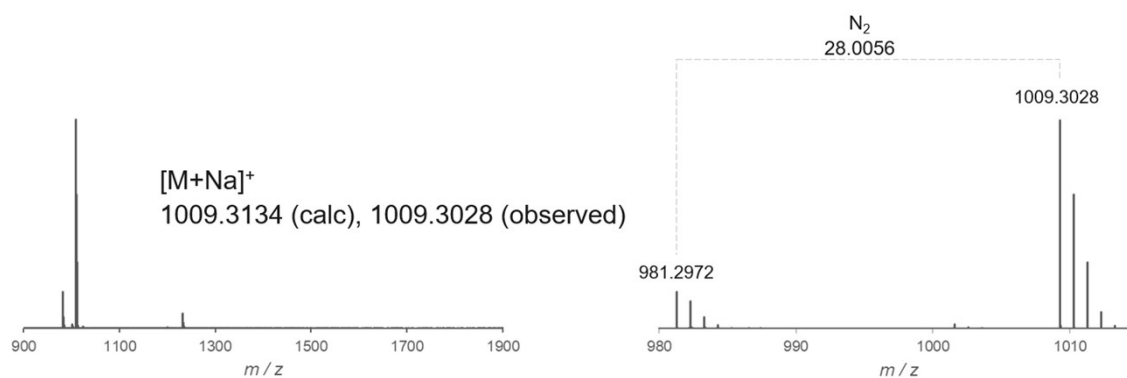


Figure S23. MALDI-TOF-MS spectra of **3** (left: full spectrum and right: expanded view).

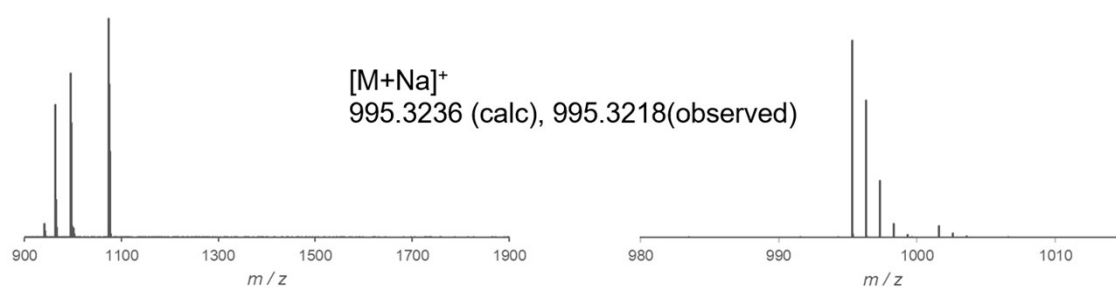


Figure S24. MALDI-TOF-MS spectra of **4** (left: full spectrum and right: expanded view).

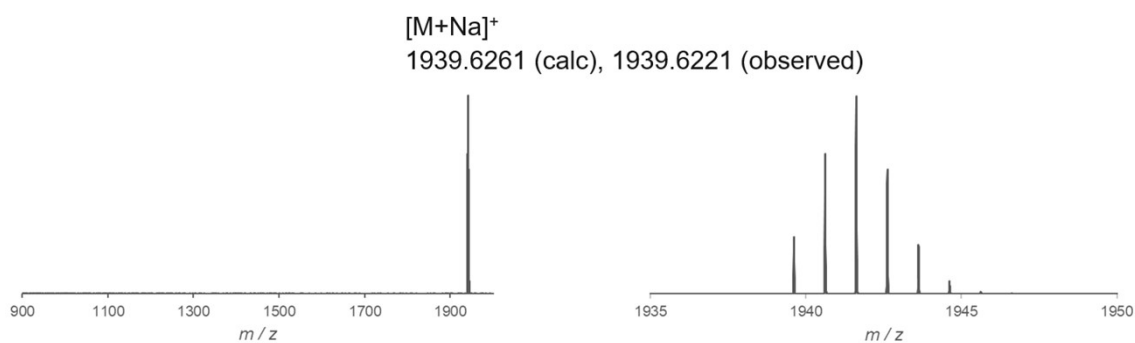


Figure S25. MALDI-TOF-MS spectra of **D1** (left: full spectrum and right: expanded view).

3. SEC charts

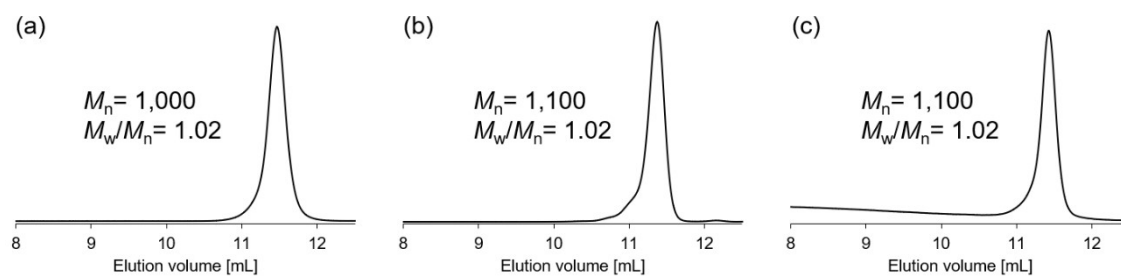


Figure S26. SEC charts of (a) **2**, (b) **3**, and (c) **4** (1.0 mL/min in THF, RI detector).

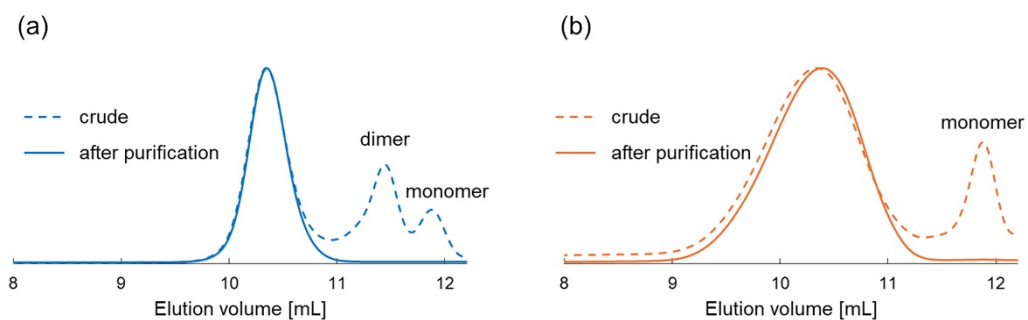


Figure S27. SEC charts (1.0 mL/min in THF, RI detector) of (a) **P1** and (b) **P2** before and after purification with preparative HPLC.

4. FT-IR spectra

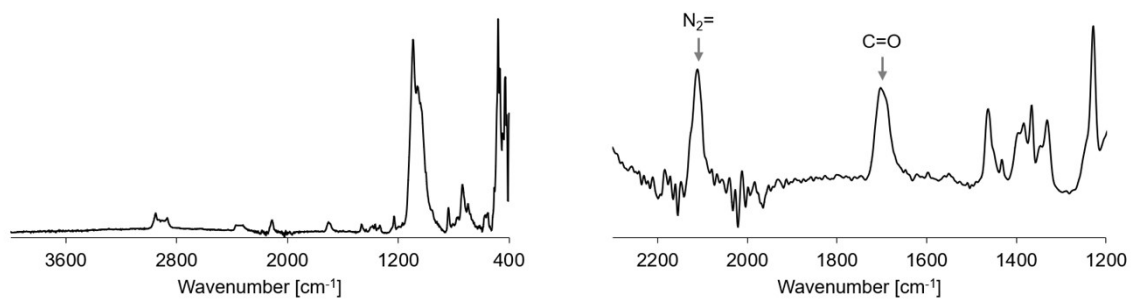


Figure S28. FT-IR spectra of **3** (left: full spectrum and right: expanded view).

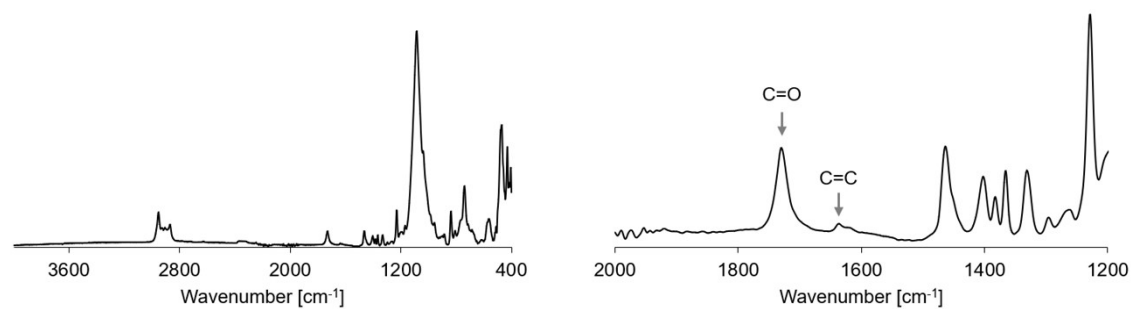


Figure S29. FT-IR spectra of **4** (left: full spectrum and right: expanded view).

5. Thermal properties

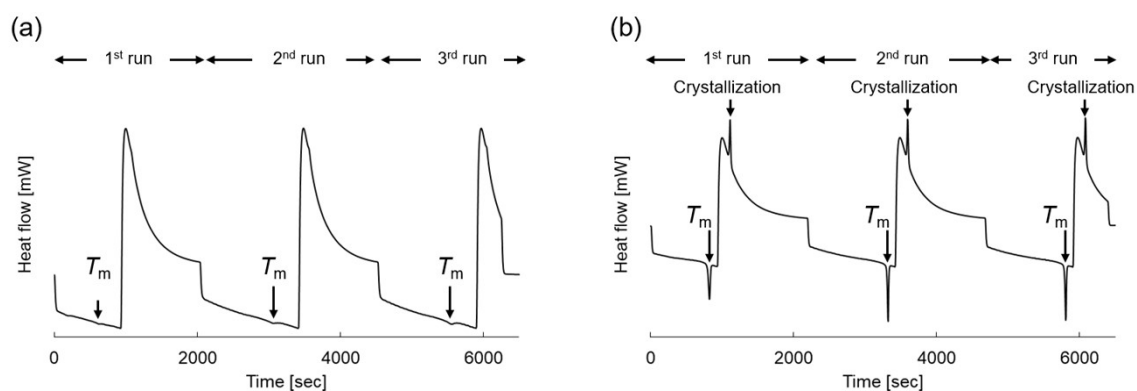


Figure S30. DSC curves of (a) P1 and (b) P2 (under N₂, 10 °C/min).

6. Film appearance

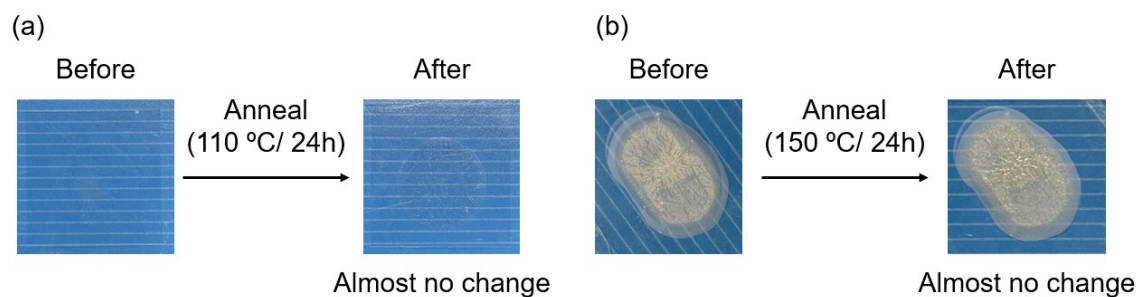


Figure S31. Photographs before and after annealing of (a) P1 and (b) P2.