

Supporting Information for

Ferrocenyl Glycidyl Ether: A Versatile Ferrocene Monomer for Copolymerization with Ethylene Oxide to Water-Soluble, Thermo-Responsive Copolymers

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330.

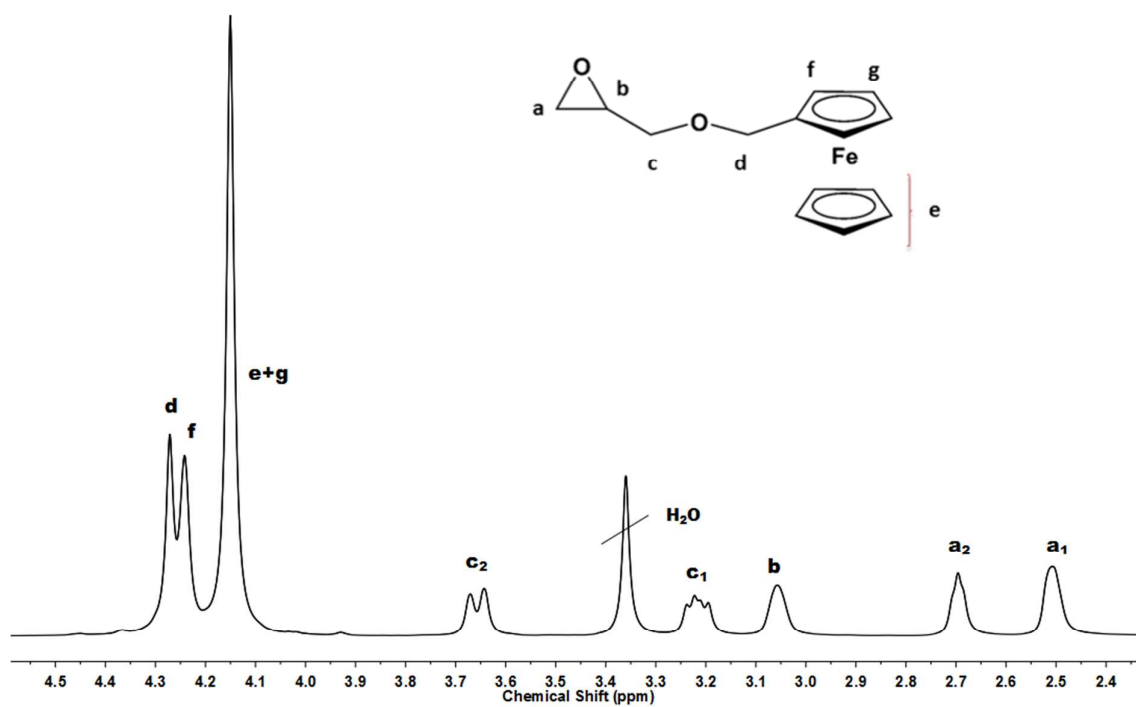


Figure S1: ^1H NMR (400 MHz, $\text{DMSO}-d_6$) of fcGE (1).

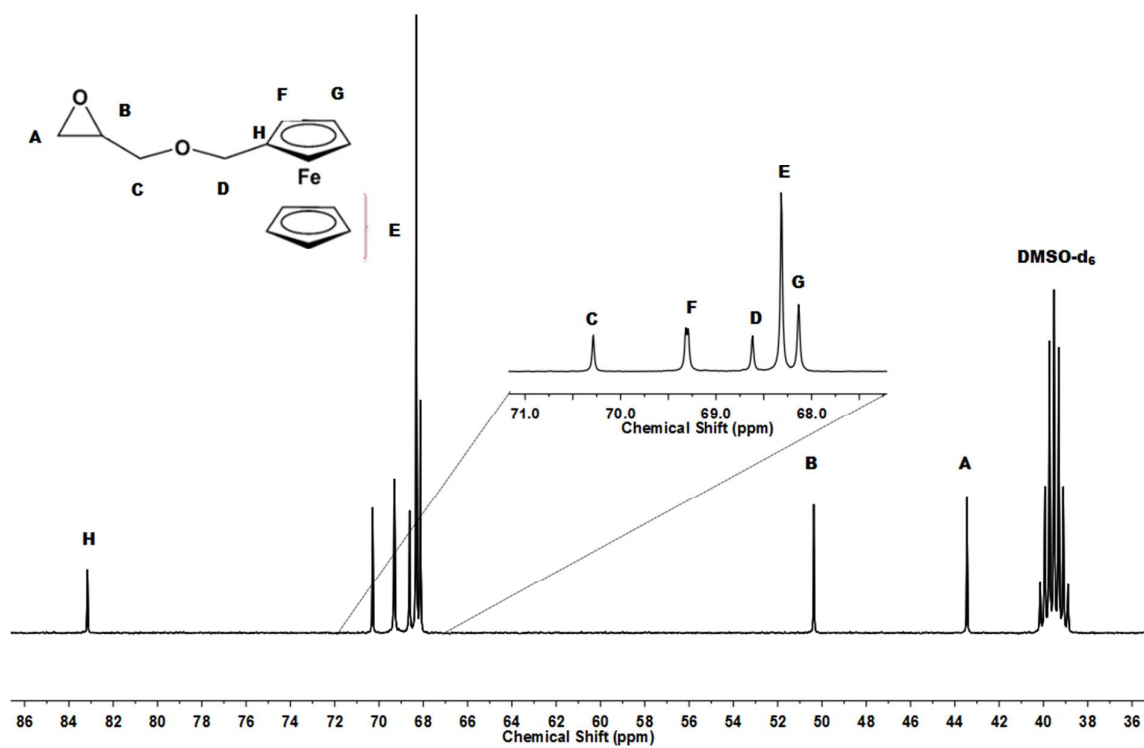


Figure S2: ^{13}C NMR (400 MHz, $\text{DMSO}-d_6$) of fcGE.

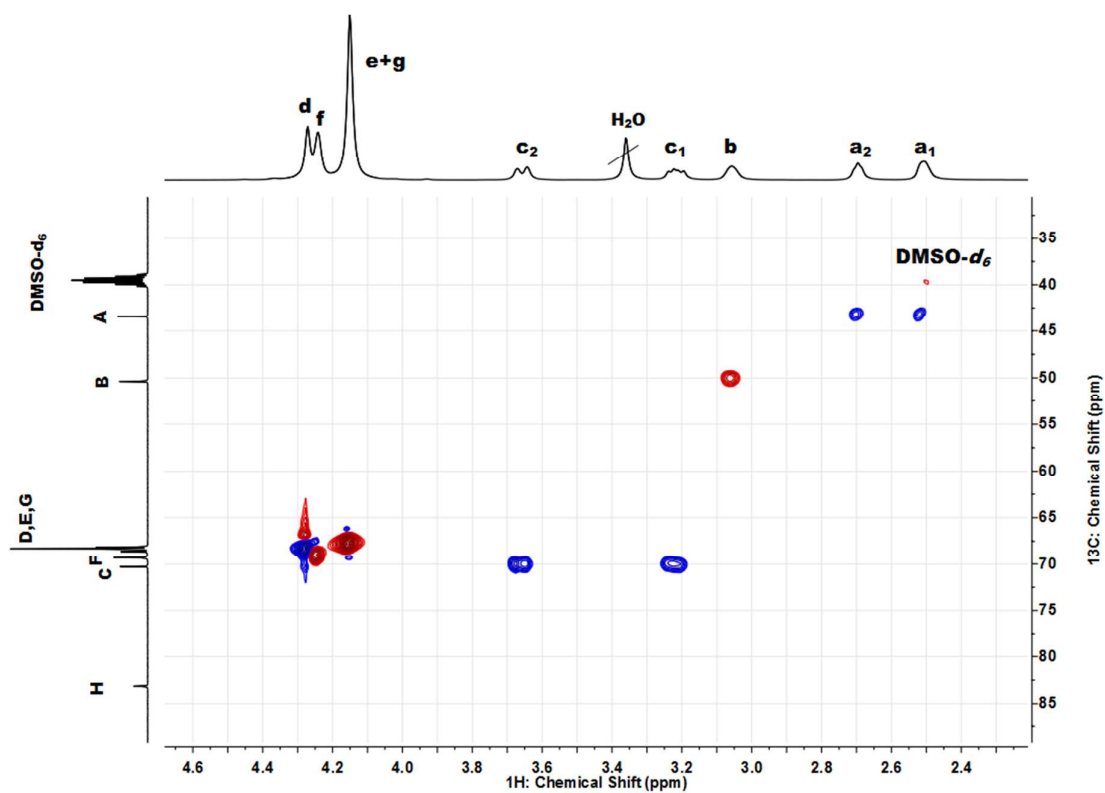


Figure S3: HSQC NMR (400 MHz, DMSO- d_6) of fcGE.

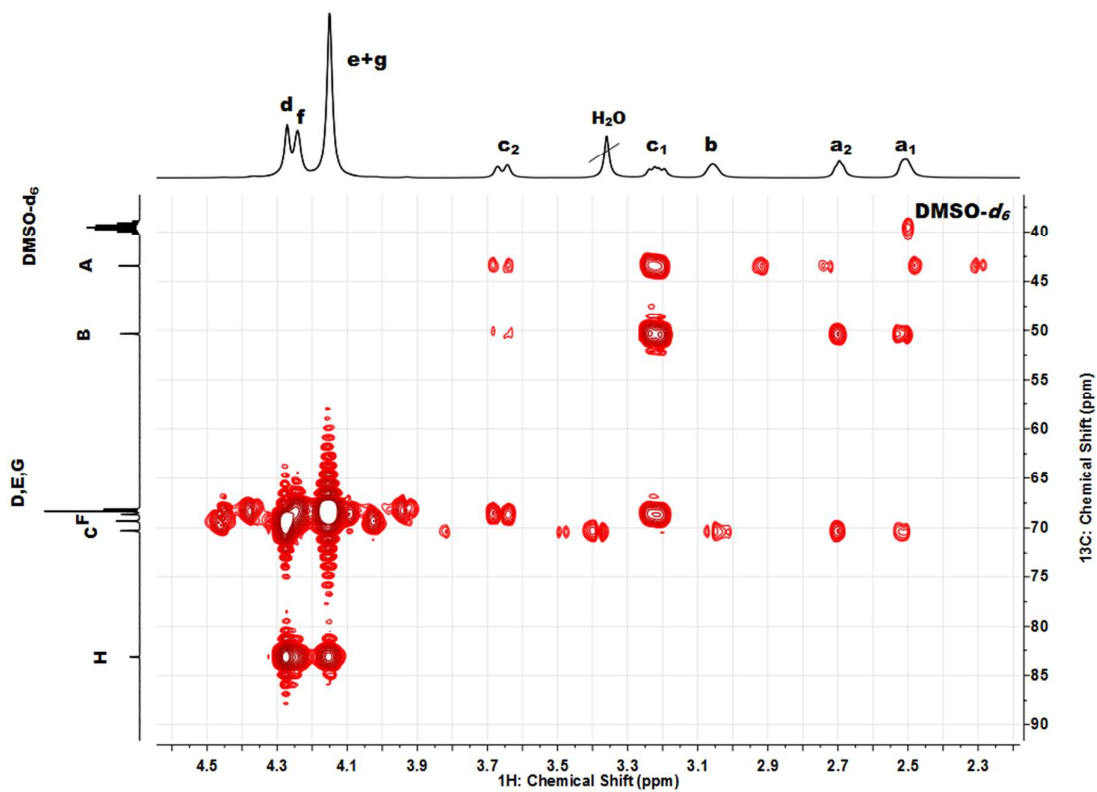


Figure S4: HMBC NMR (400 MHz, DMSO- d_6) of fcGE.

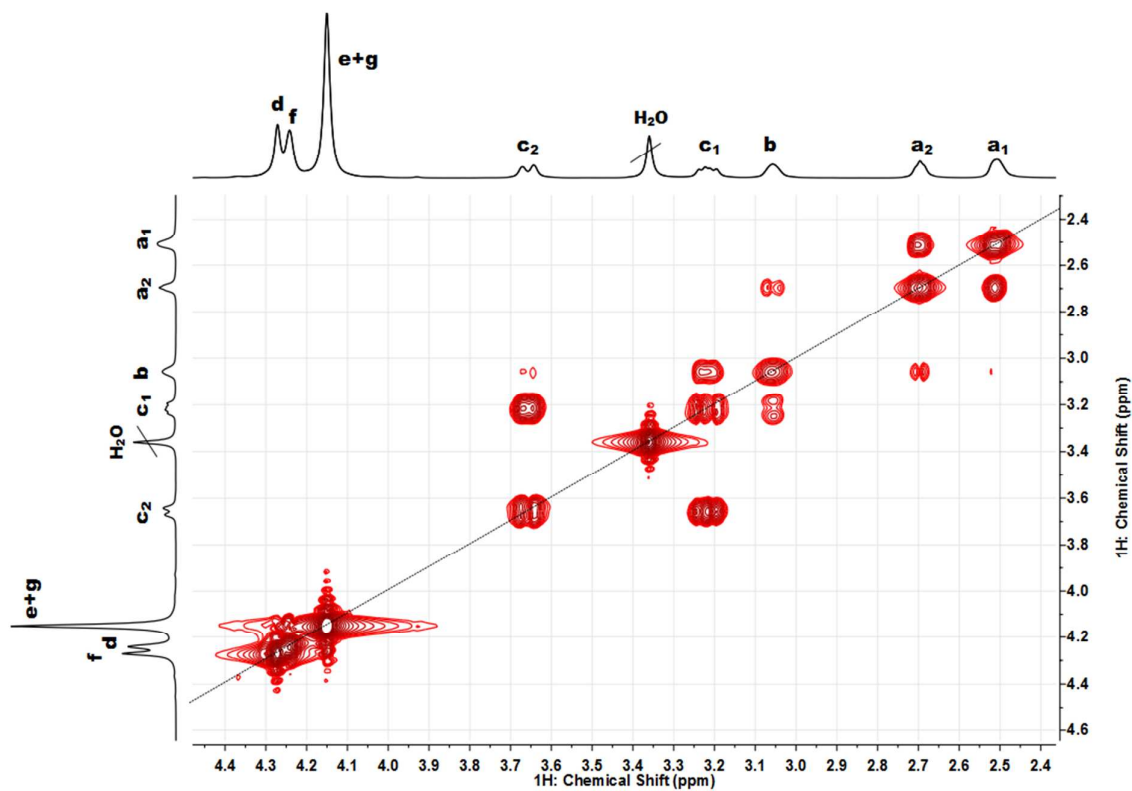


Figure S5: COSY NMR (400 MHz, DMSO- d_6) of fcGE.

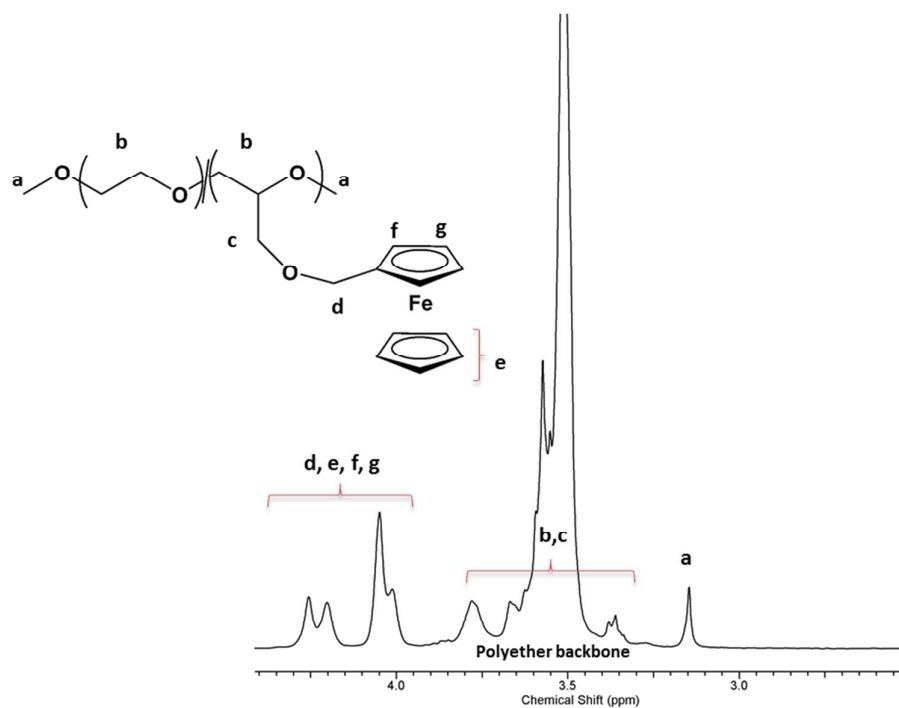


Figure S6. Peak assignment of P(EO-co-fcGE)/sample **P3** in ^1H NMR.

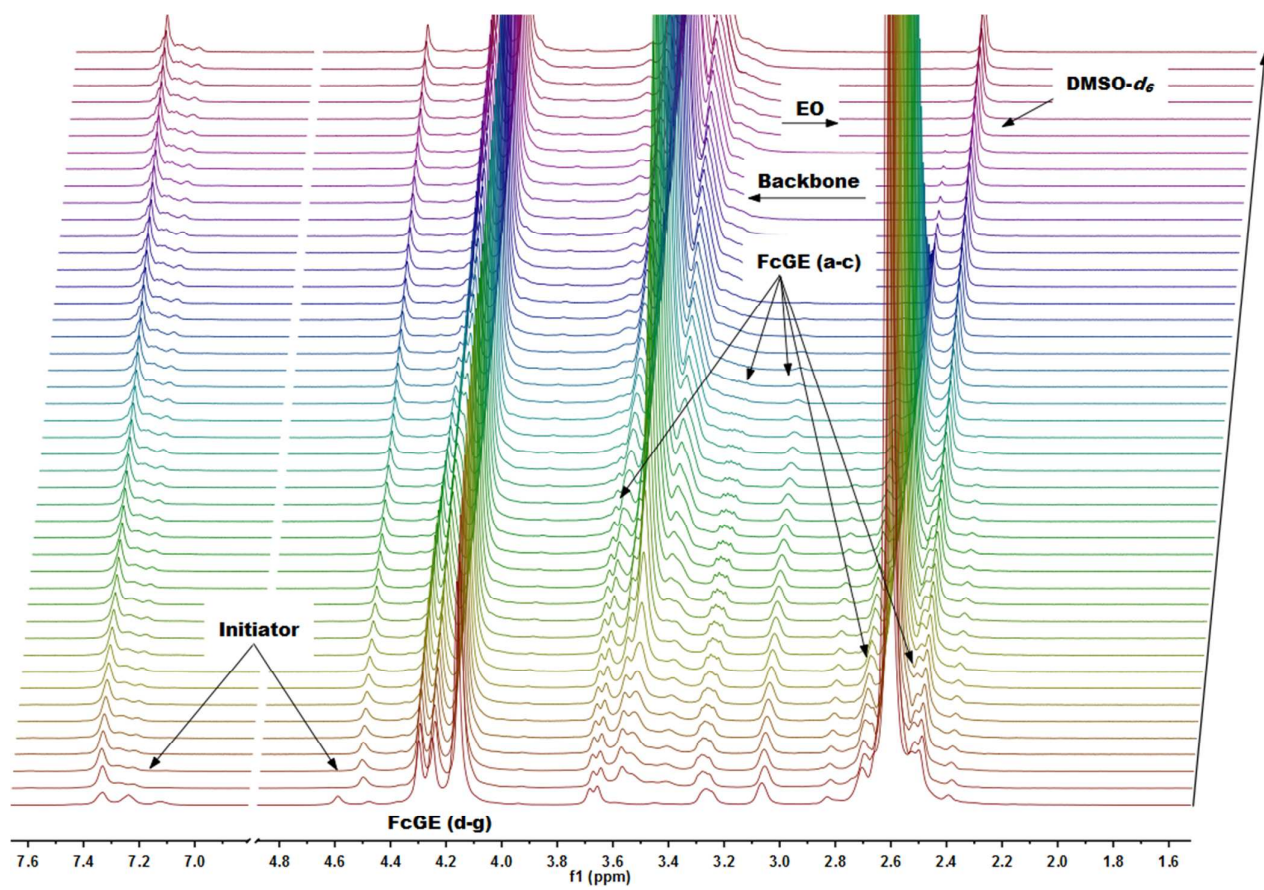


Figure S7: ^1H NMR (400 MHz, $\text{DMSO-}d_6$) kinetics of the copolymerization of EO and fcGE at 40°C with benzyl alcohol as initiator.

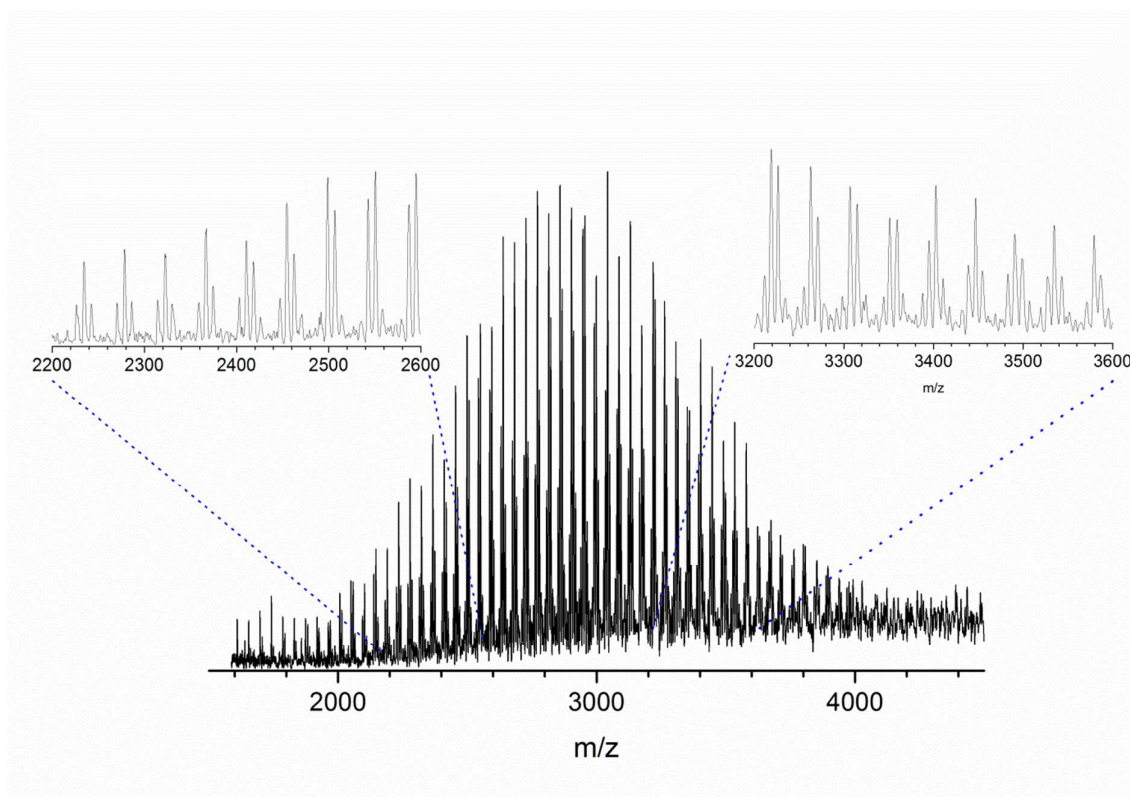


Figure S8: MALDI ToF mass spectrum of P(EO-*co*-fcGE)/sample **P5**.

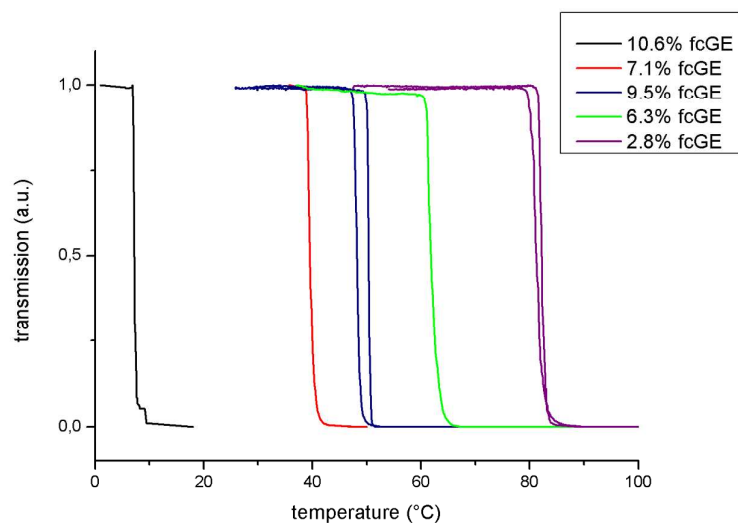


Figure S9. Cloud point measurements exhibit reversible LCST behavior.

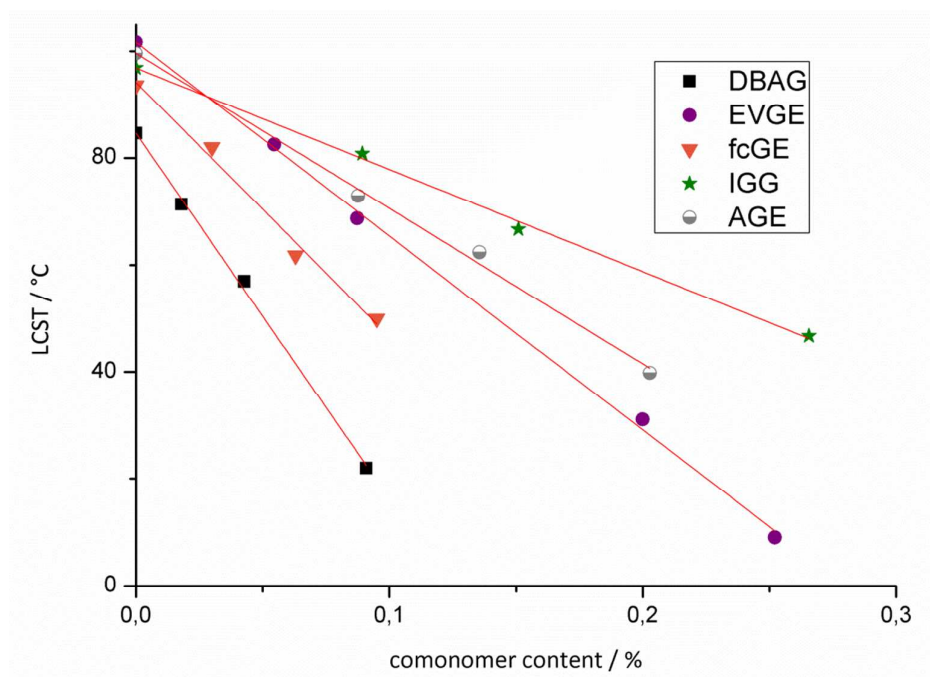


Figure S10. LCST temperature versus comonomer content of P(EO-*co*-fcGE) copolymer and other previously described copolyethers.³⁰

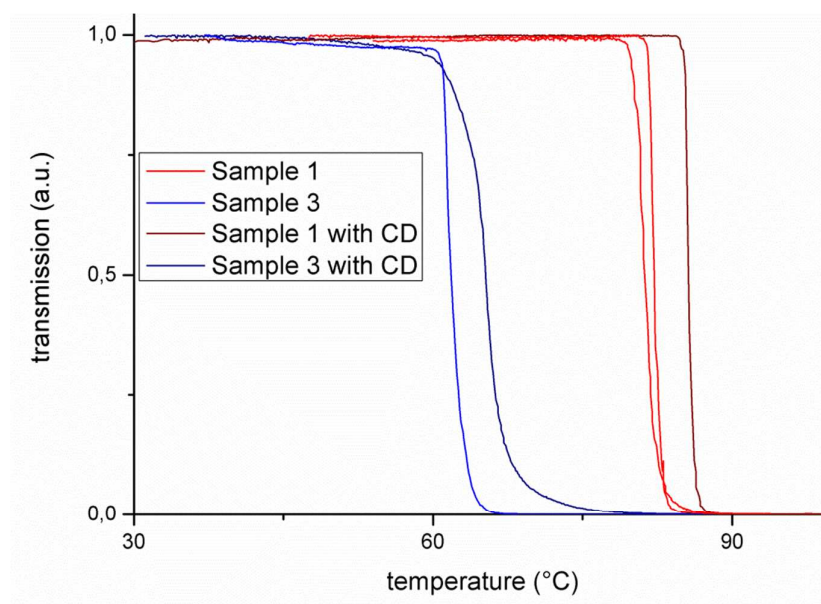


Figure S11. Cloud point measurements before and after treatment with β -cyclodextrin.

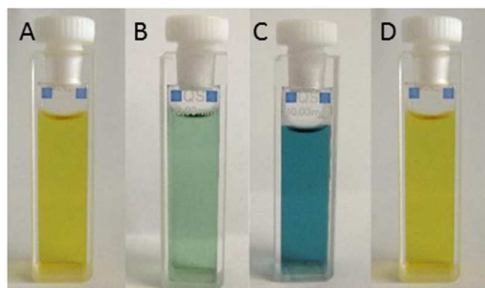


Figure S12. **P2** in aqueous solution (A). **P2** in aqueous solution after partly oxidation (B) and complete oxidation (C) with silver(I)triflate. Oxidized **P2** reduced with sodium thiosulfate (D).

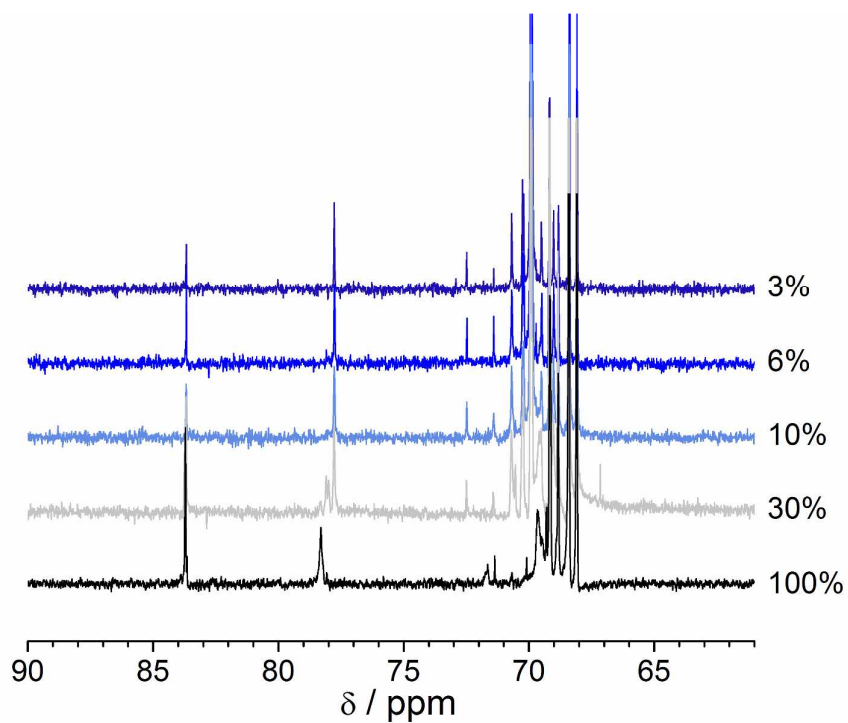


Figure S13. A) Complete ^{13}C NMR spectra of the (co)polymers synthesized in this study and B) zoom on carbon H showing splitting of the signals with increasing amount of fcGE into the copolymers.

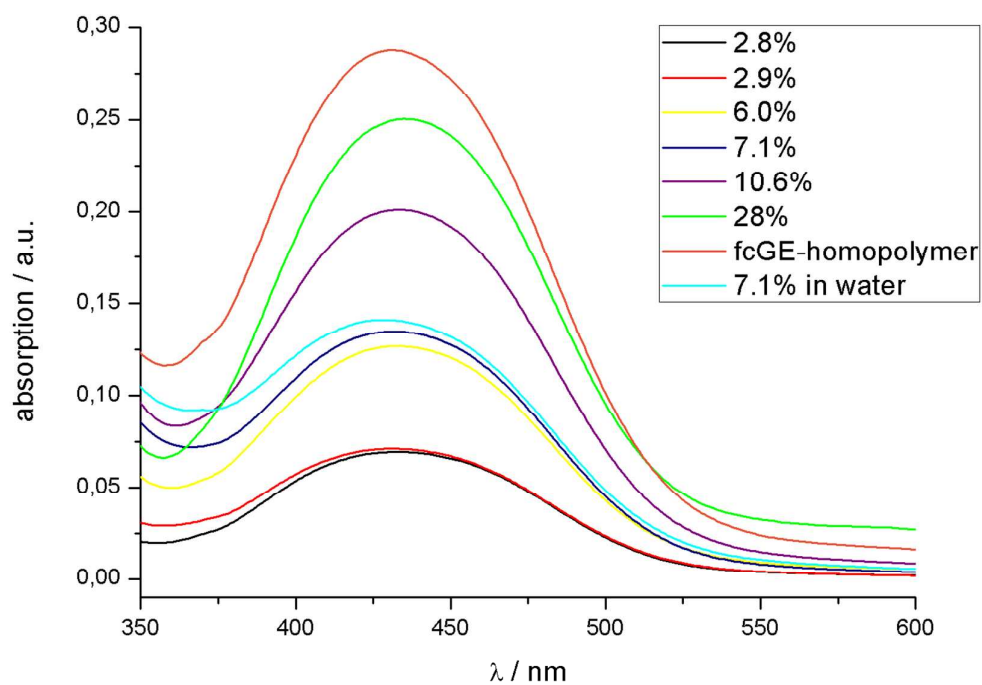


Figure S14. UV spectra of (co)polymers in THF (1 g/L) and of **P4** in water.

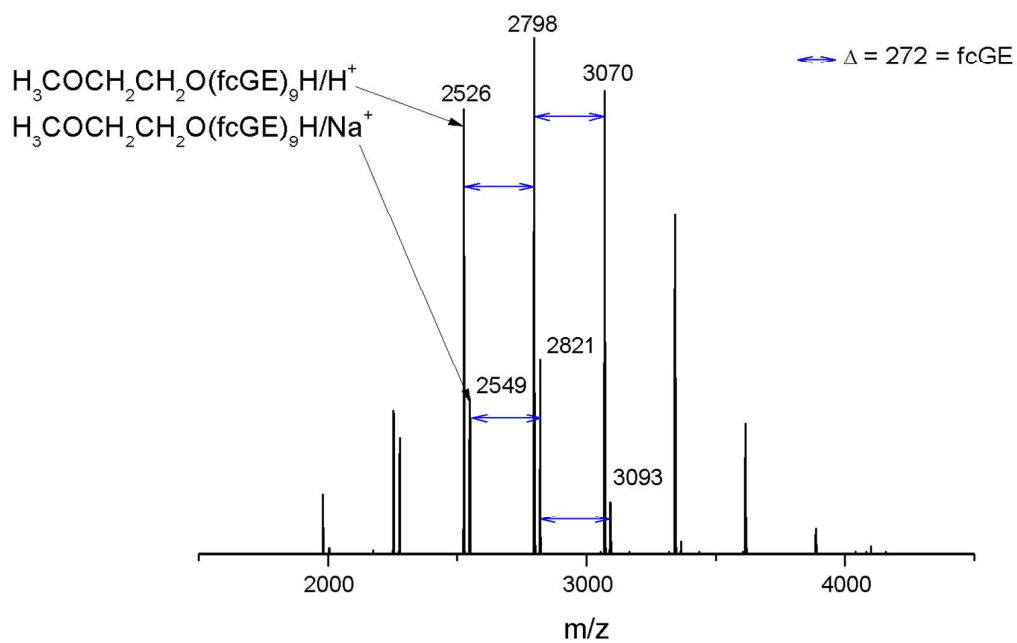


Figure S15. MALDI ToF of a fcGE-homopolymer (**P8**).