Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supporting Information

Core-crosslinked diblock terpolymer micelles – taking a closer look on crosslinking efficiency

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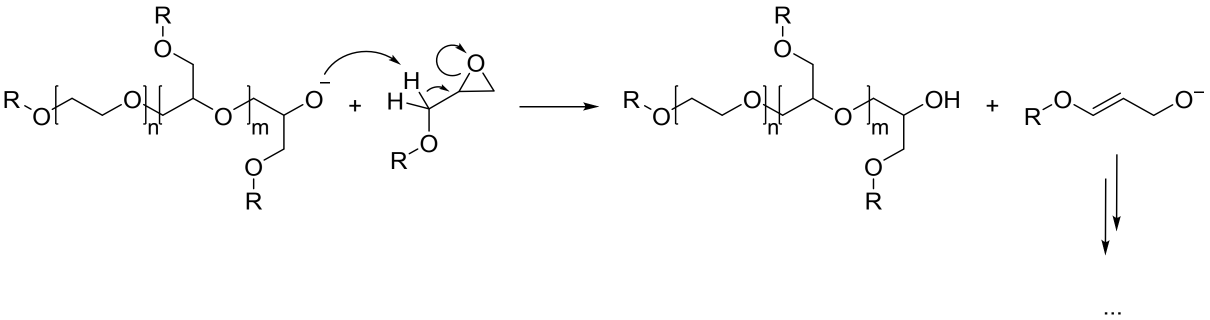
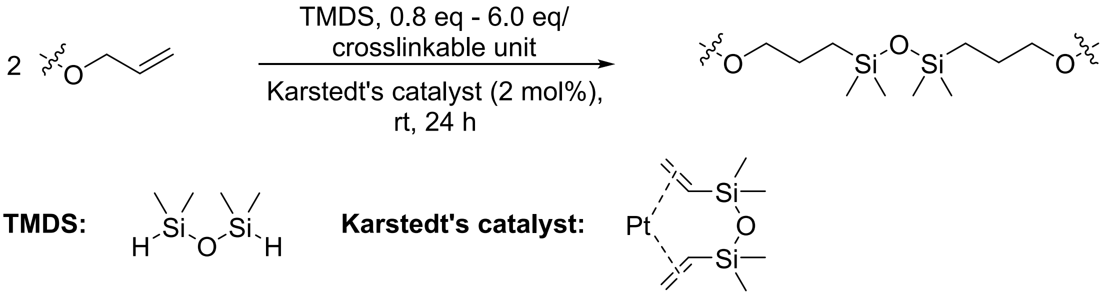


Scheme S1 Common side reaction in poly(glycidyl ether) synthesis, as reported by Hans et al.[1] Proton abstraction next to the oxirane ring by an oxoanion causes transfer of the negative charge from the growing diblock terpolymer to a monomer which performs rearrangement to an unsaturated species starting new polymer chains.



Scheme S2 Crosslinking *via* hydrosilylation of allyl units, catalyzed by the Pt(0) species Karstedt's catalyst. The amount of TMDS was varied between 0.8 equivalents and 6.0 equivalents of Si-H/allyl unit.

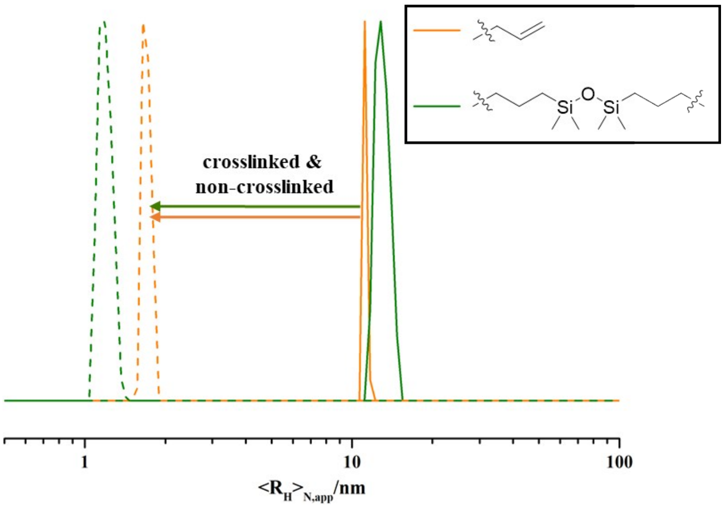


Figure S1 Number weighted DLS CONTIN plots of non-crosslinked PEO$_{0.18}$-*b*-P(AGE-*co*-*t*BGE)$_{0.82}$-based micelles and micelles crosslinked with 0.8 eq TMDS. The dashed lines show measurements in water/THF, indicating disassembly of the micelles in both crosslinked and non-crosslinked samples upon addition of the non-selective solvent.

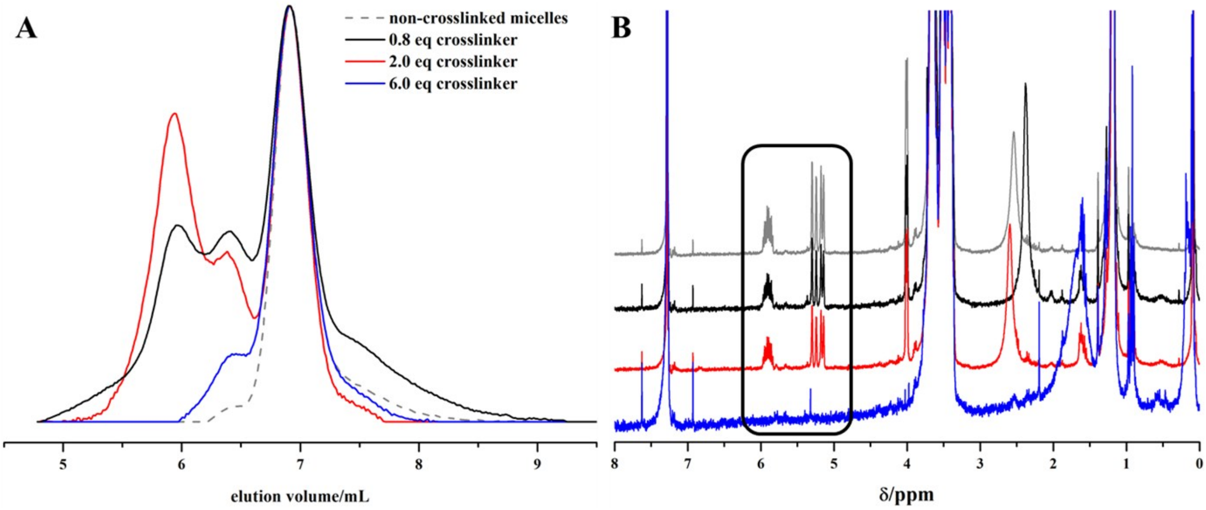


Figure S2 A: SEC traces of PEO$_{0.18}$-*b*-P(AGE-*co*-*t*BGE)$_{0.82}$-based micelles, crosslinked with different amounts of TMDS. For this method, only the formation of di- and trimers is observable. B: Corresponding ^{1}H NMR spectra. It is visible that with increasing amount of TMDS used in crosslinking reactions, the amount of unreacted allyl units is decreasing (highlighted signals).

References

1. Hans, M.; Keul, H.; Moeller, M., *Polymer* **2009,** *50* (5), 1103-1108.