Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supplementary information for

Synthesis of comb-like poly(ethyleneimine)s and their application in biomimetic silicification

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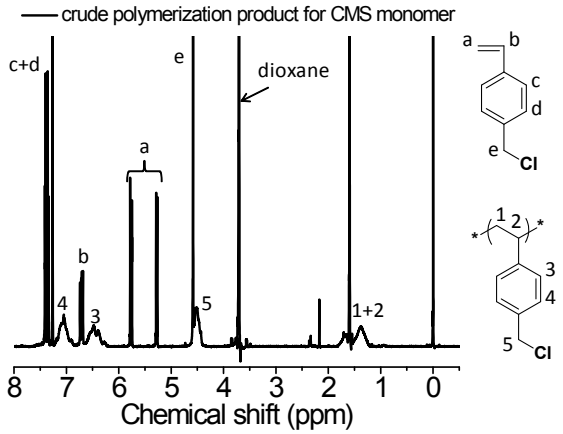

Fig. S1 ^{1}H NMR spectrum of crude polymerization product of CMS monomer before precipitation.

In detail, the conversion was calculated according to the relative integral area (***S***) by following formula: %Conv. = $\boldsymbol{S}_{poly.}/(\boldsymbol{S}_a+\boldsymbol{S}_{poly.})$ *100% = 63.7%, here, $\boldsymbol{S}_{poly.} = [(\boldsymbol{S}_4+\boldsymbol{S}_3+\boldsymbol{S}_b)-0.5\boldsymbol{S}_a]/2$.

Combined with the initial molar ratio of CMS monomer and RAFT agent CDB (100:1), the polymeric degree of PCMS was denoted as 64.

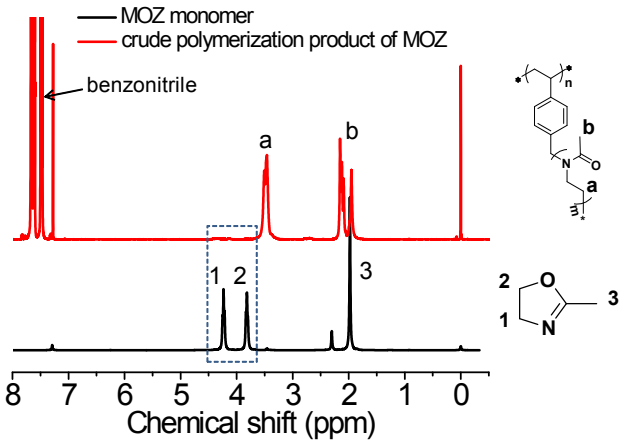

Fig. S2 ^{1}H NMR spectrum of crude polymerization product of MOZ (red line). In comparison, we also gave ^{1}H NMR data of pure MOZ monomer (black line). The proton signal disappeared in dash line part (red line), which indicated that the MOZ monomer reacted completely in this polymerization system.

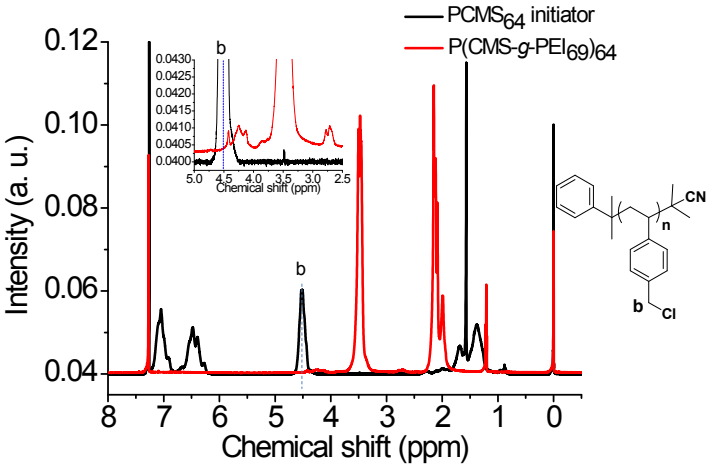

Fig. S3 ^{1}H NMR spectra of PCMS initiator and P(CMS-*g*-PEI$_{69}$)$_{64}$ comb polymer. The proton signal b of initiating group (-CH_2Cl at 4.5 ppm) nearly completely disappeared after polymerization reaction for MOZ monomer.