

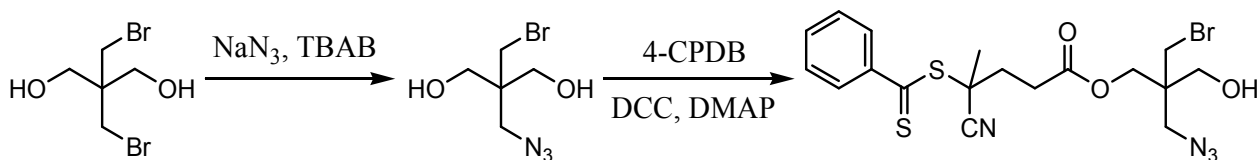
Supporting Information

Synthesis and self-assembly of a dual-responsive monocleavable ABCD star quaterpolymer

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Scheme S1 Synthetic routes to 2-azidomethyl-2-bromomethyl-3-hydroxypropyl 4-(benzodithiioyl)-4-cyanopentanoate (ABCP).

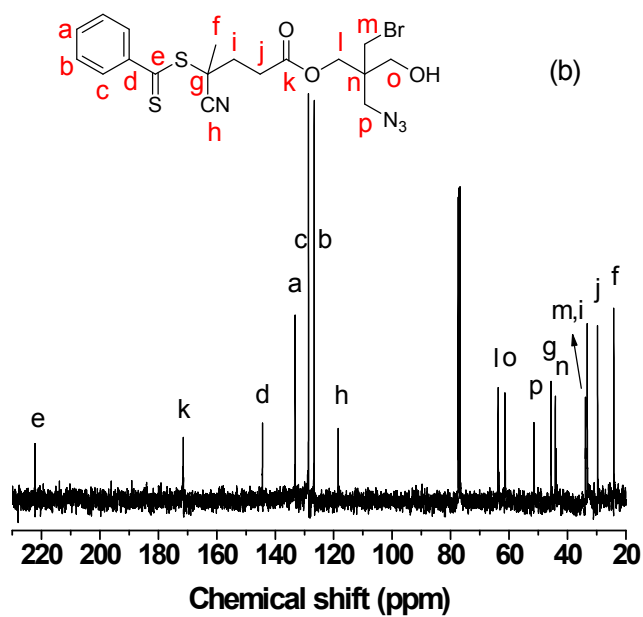
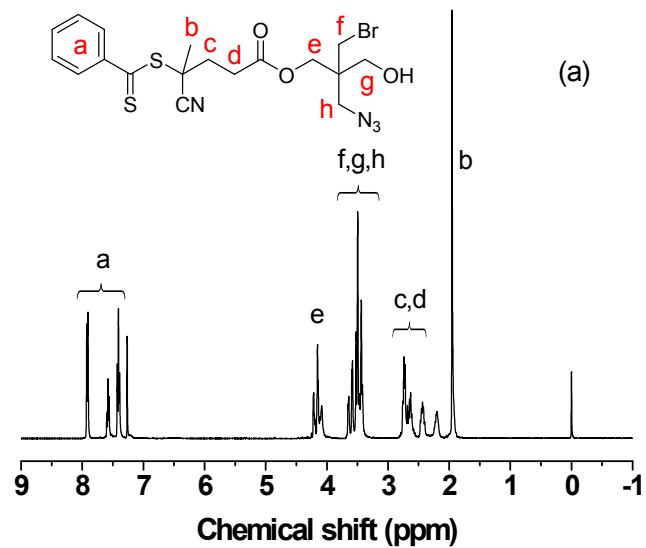


Fig. S1 ^1H (a) and ^{13}C (b) NMR spectra of ABCP.

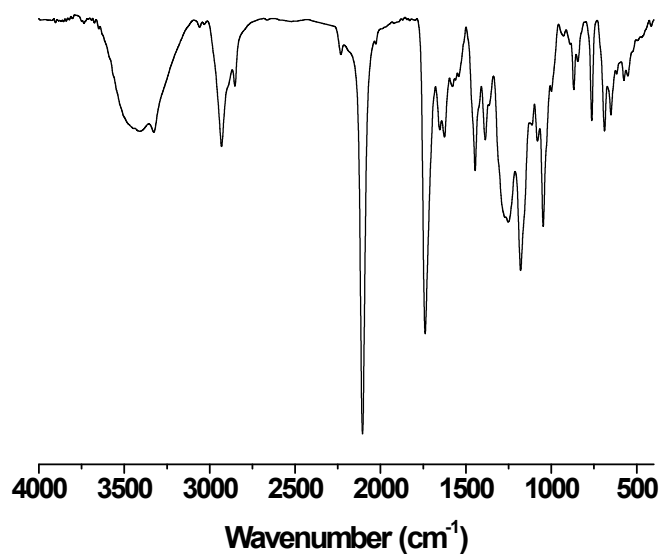


Fig. S2 FT-IR spectrum of ABCP.

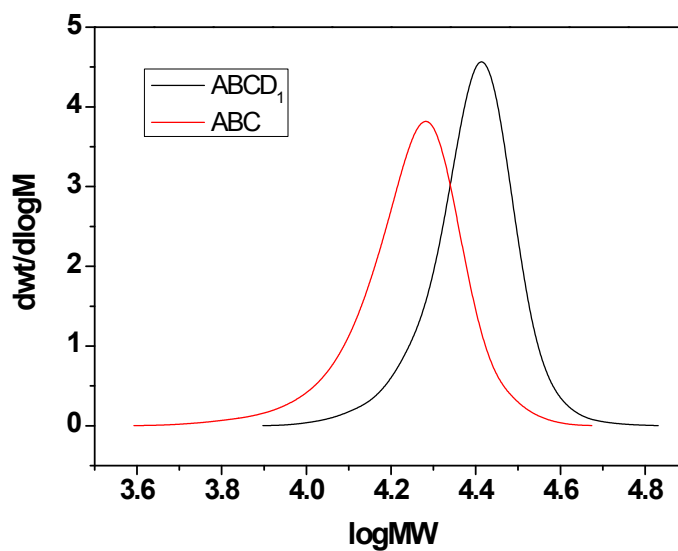


Fig. S3 GPC traces of $ABCD_1$ star ($M_{n,LS} = 24200 \text{ g mol}^{-1}$, $\bar{D} = 1.09$) and ABC star ($M_{n,LS} = 17300 \text{ g mol}^{-1}$, $\bar{D} = 1.10$) obtained by DTT-triggered cleavage of disulfide linkage of $ABCD_2$ star and removal of PAA by precipitation into water, in which A = PEG, B = PSt, C = PCL, $D_1 = PtBA$, and $D_2 = PAA$.

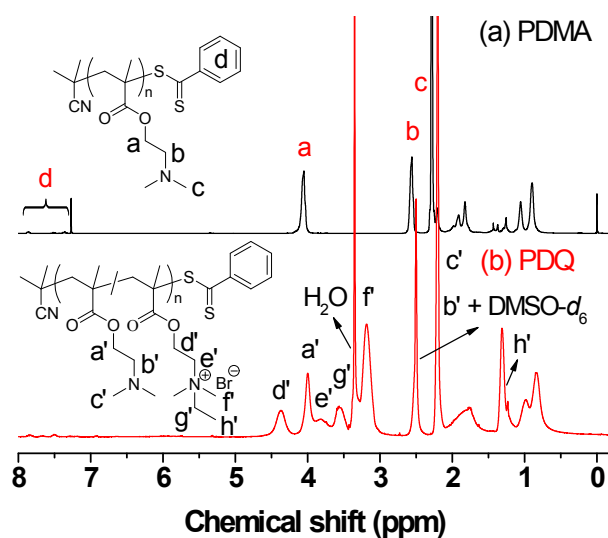


Fig. S4 ^1H NMR spectra of PDMA (a) in CDCl_3 and P(DMA-*co*-QDMA) (abbreviated as PDQ, b) in $\text{DMSO-}d_6$.

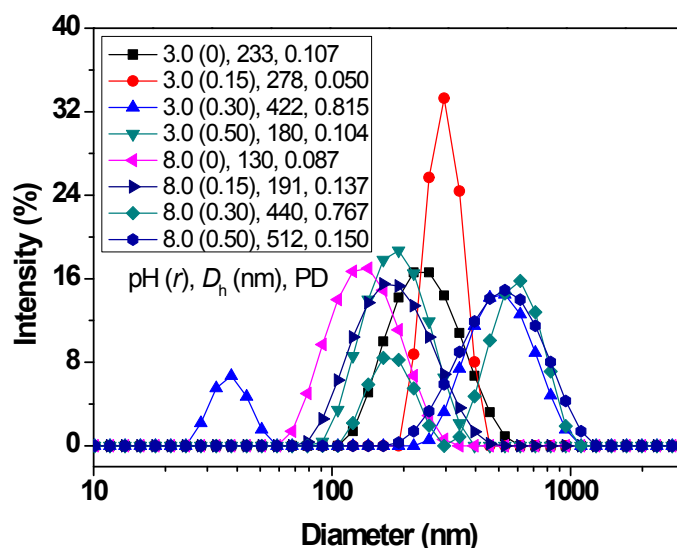


Fig. S5 Influence of $[\text{QDMA}^+]/[\text{COO}^-]$ ratio (r) and pH on DLS plots of copolymer coaggregates formed from PEG-PSt-PCL-PAA star ($c_{\text{star}} = 0.50 \text{ mg mL}^{-1}$) and P(DMA-*co*-QDMA) mixtures in aqueous solution at 25°C .