Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supporting Information

Facile strategy for manipulating micellar size and morphology through intramolecular cross-linking of amphiphilic block copolymers

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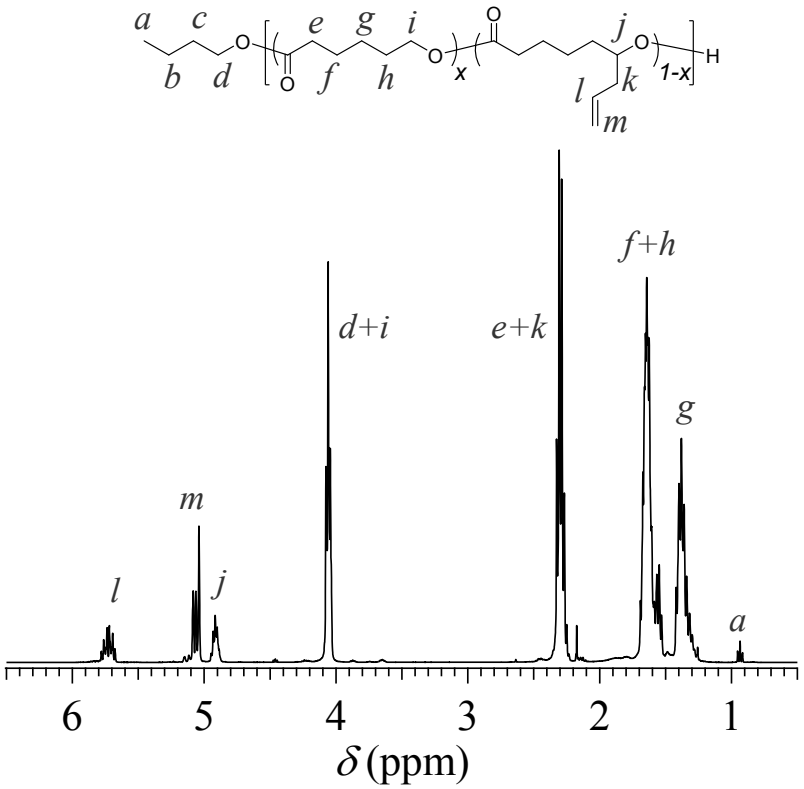

Figure S1. ^{1}H NMR spectrum of **P1** ($CDCl_3$, 400 MHz).

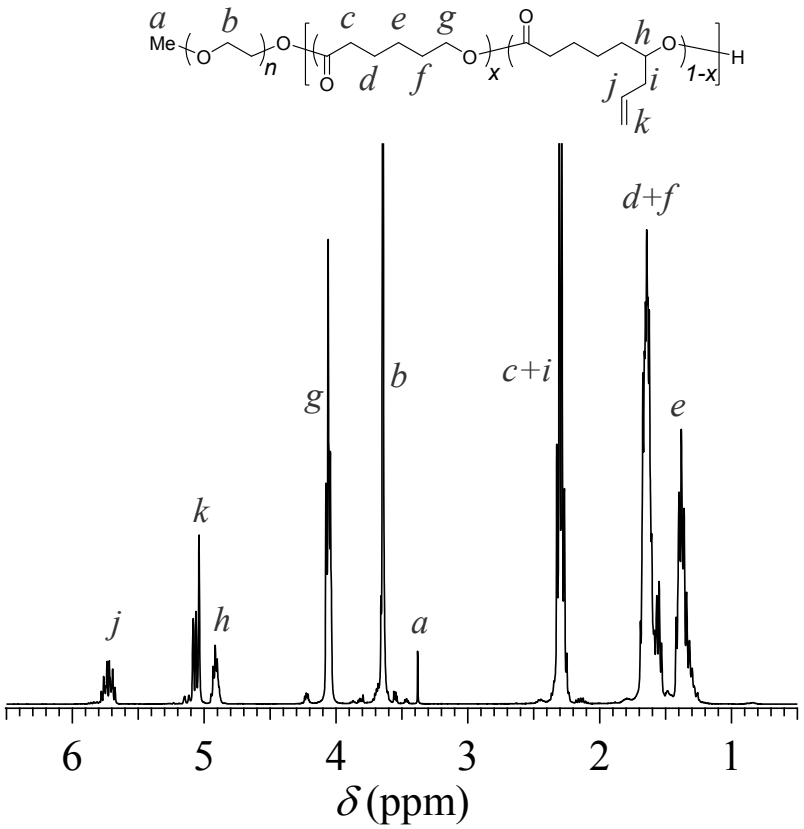

Figure S2. ^{1}H NMR spectrum of **P2** ($CDCl_3$, 400 MHz).

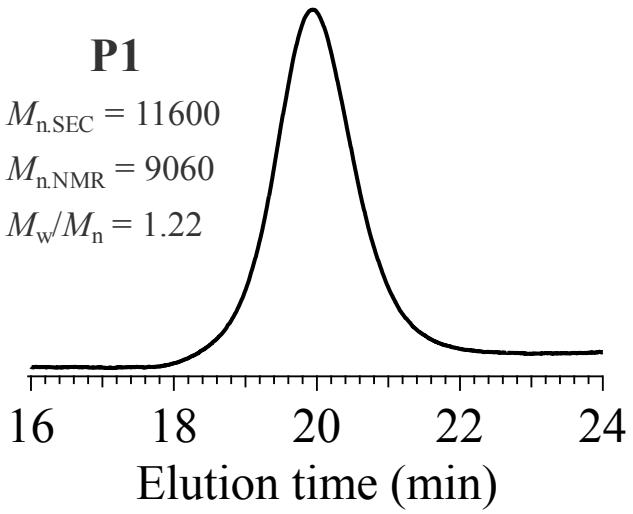

Figure S3. SEC trace of **P1** (eluent, DMF containing 0.01 M LiCl; flow rate, 0.6 mL min^{-1}).

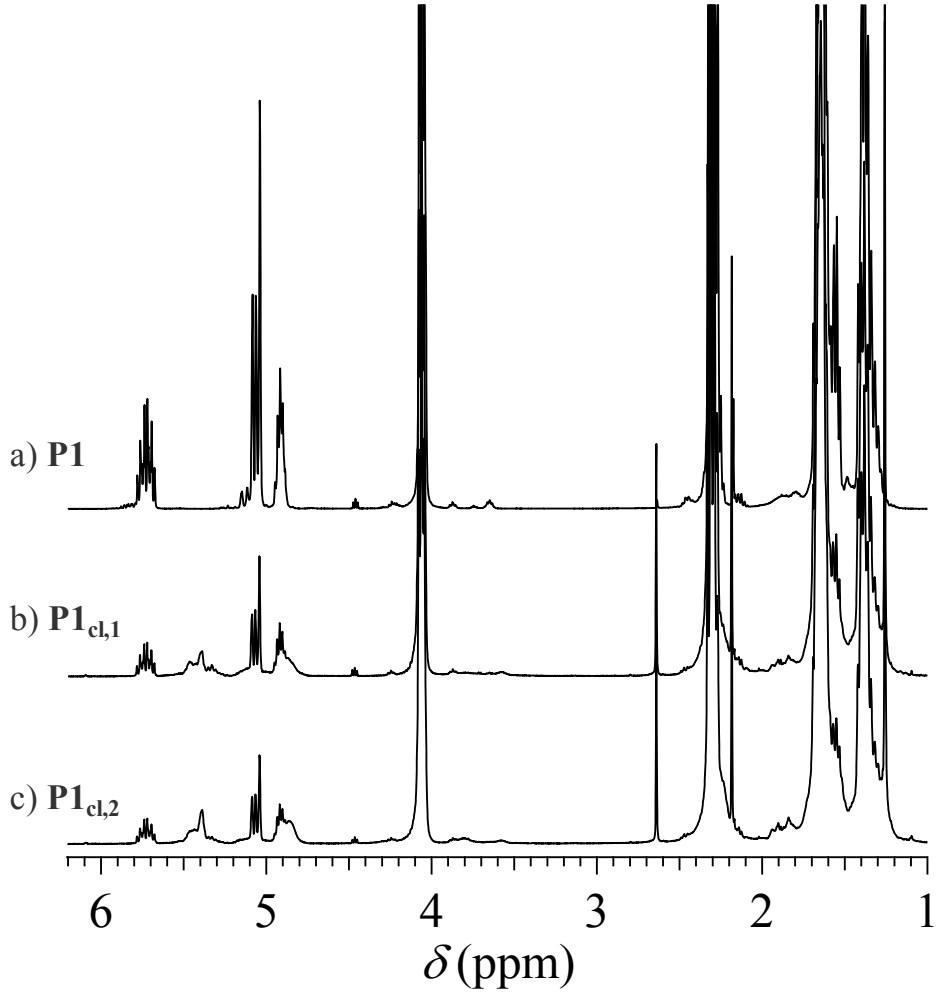

Figure S4. ^{1}H NMR spectra of a) **P1**, b) $\mathbf{P1_{cl,1}}$, and c) $\mathbf{P1_{cl,2}}$, respectively ($CDCl_3$, 400 MHz).

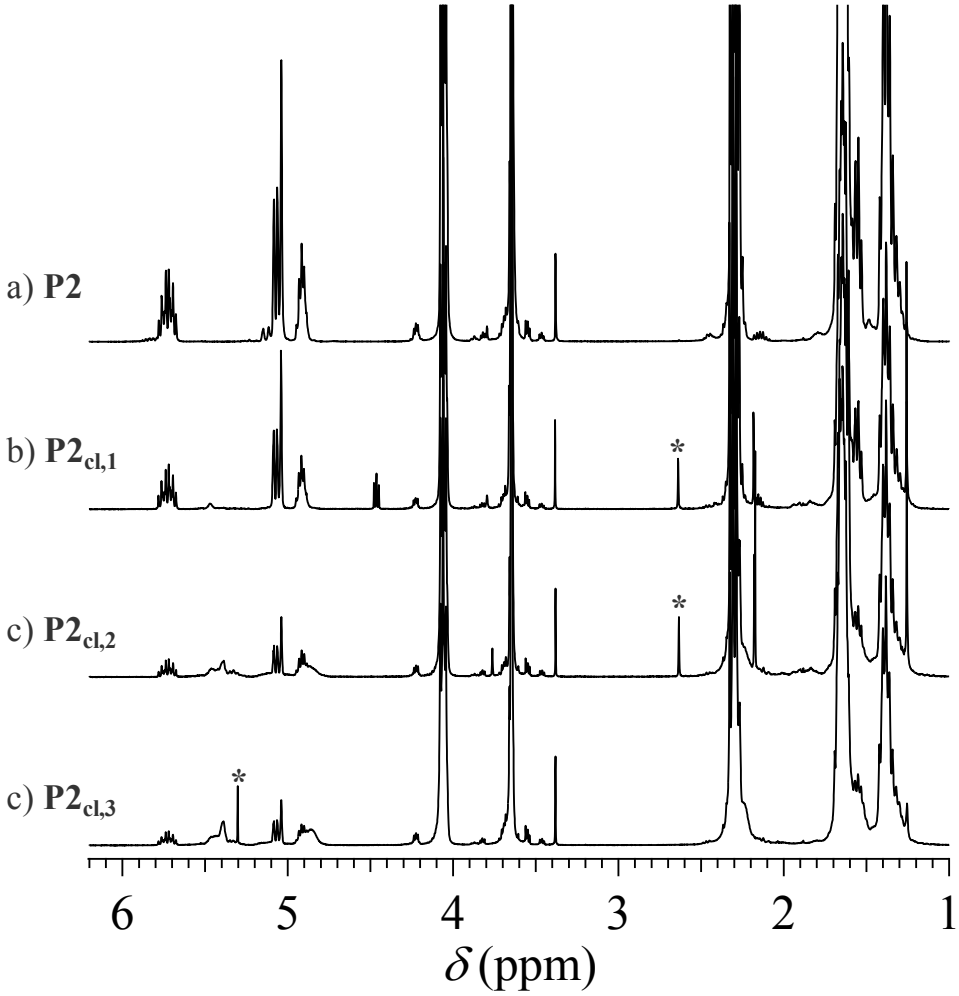

Figure S5. ^{1}H NMR spectra of a) **P2**, b) $\mathbf{P2_{cl,1}}$, c) $\mathbf{P2_{cl,2}}$, and d) $\mathbf{P2_{cl,3}}$, respectively ($CDCl_3$, 400 MHz). Asterisks denote residual solvent.

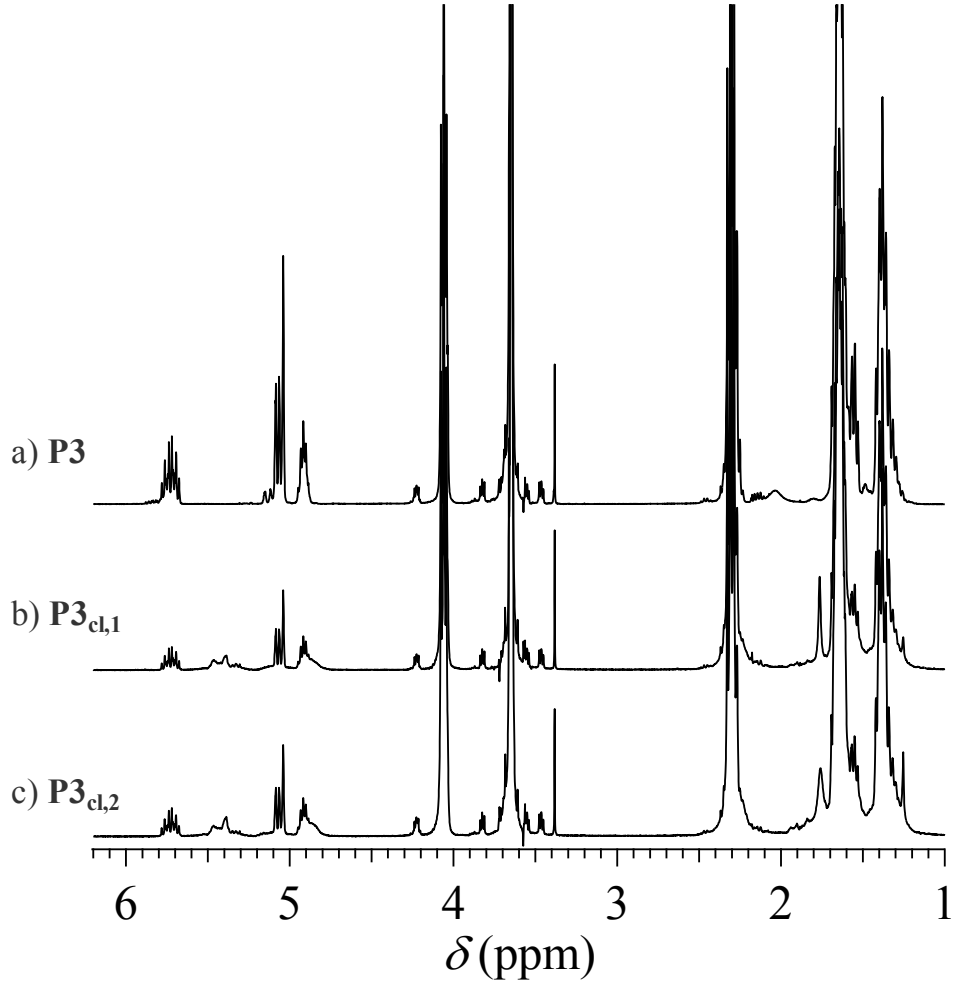

Figure S6. ^{1}H NMR spectra of a) **P3**, b) **P3$_{cl,1}$**, and c) **P3$_{cl,2}$**, respectively ($CDCl_3$, 400 MHz).

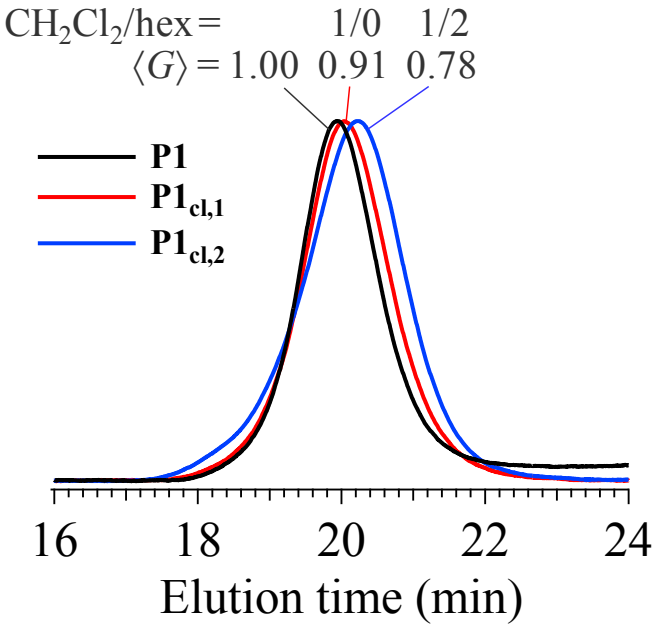

Figure S7. SEC traces of **P1** (black), **P1**$_{cl,1}$ (red), and **P1**$_{cl,2}$ (blue) (eluent, DMF containing 0.01 M LiCl; flow rate, 0.6 mL min^{-1}).

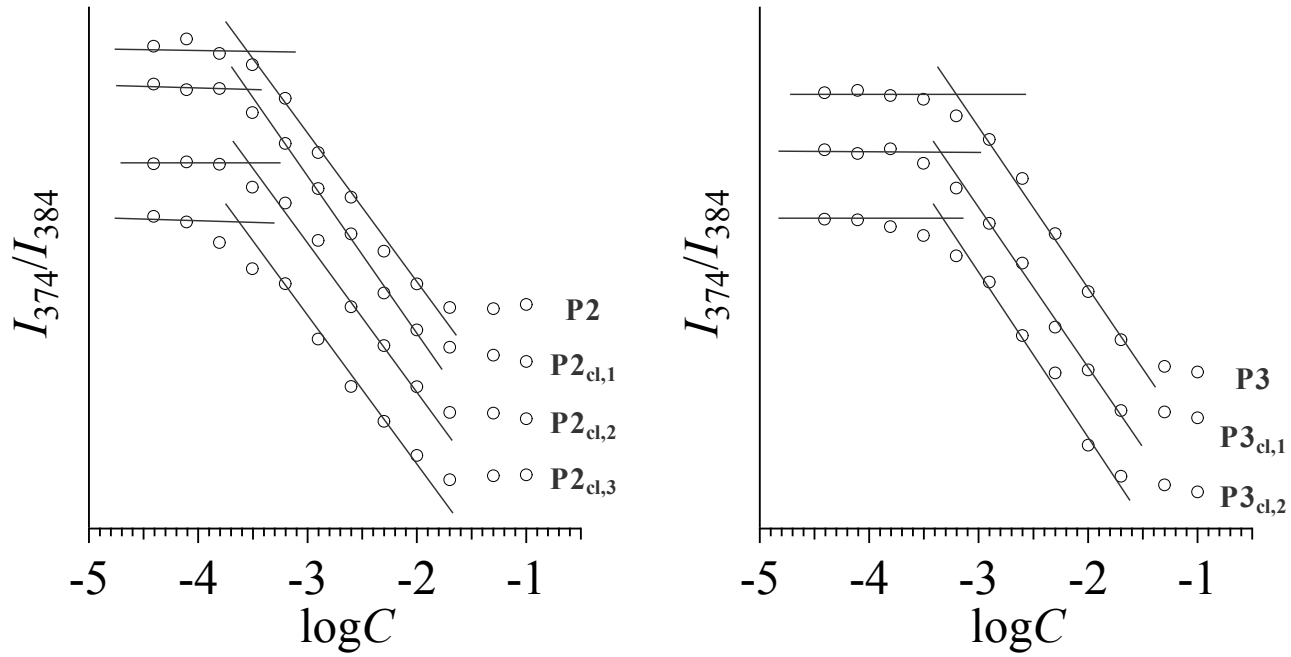

Figure S8. Plot of I_{374}/I_{384} versus log C for (left) **P2**, **P2$_{cl,1}$**, **P2$_{cl,2}$**, and **P2$_{cl,3}$**, and (right) **P3**, **P3$_{cl,1}$**, and **P3$_{cl,2}$** at 15 °C.

Table S1. Thermal properties, critical micelle concentration (CMC), and hydrodynamic diameter (D_h) of self-assembles.

polymer	$T_{g,P(CL\text{-}co\text{-}ACL)}$[a] (°C)	T_m[a] (°C)		D_h[b] (nm)	CMC [c] (mg L^{-1})
		P(CL-*co*-ACL)	PEG		
P1	−68.8	14.4	-	-	-
P1$_{cl,1}$	−64.9	n.d.	-	-	-
P1$_{cl,2}$	−61.9	n.d.	-	-	-
P2	−66.4	3.9	35.1	36.6	0.38
P2$_{cl,1}$	−63.9	n.d.	33.6	26.2	0.45
P2$_{cl,2}$	−57.8	n.d.	37.7	16.7	0.44
P2$_{cl,3}$	−54.0	n.d.	36.9	20.1	0.41
P3	−66.7	3.3	52.7	13.0	0.76
P3$_{cl,1}$	−54.1	n.d.	51.6	16.3, 69.5	0.63
P3$_{cl,2}$	−53.0	n.d.	51.8	19.0, 114	0.66

[a] Determined by DSC measurements at the heating and cooling rates of 10 °C min^{-1}. [b] Determined by DLS measurement in water (concentration, 0.1 g L^{-1}; temperature, 25 °C). [c] Determined by steady-state fluorescence method using pyrene as a probe at 15 °C. [d] Not determined.