

Electronic Supplementary Material (ESI) for Polymer Chemistry.
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Mussel-Inspired Zwitterionic Copolyethers for Antifouling Biomedical Surfaces

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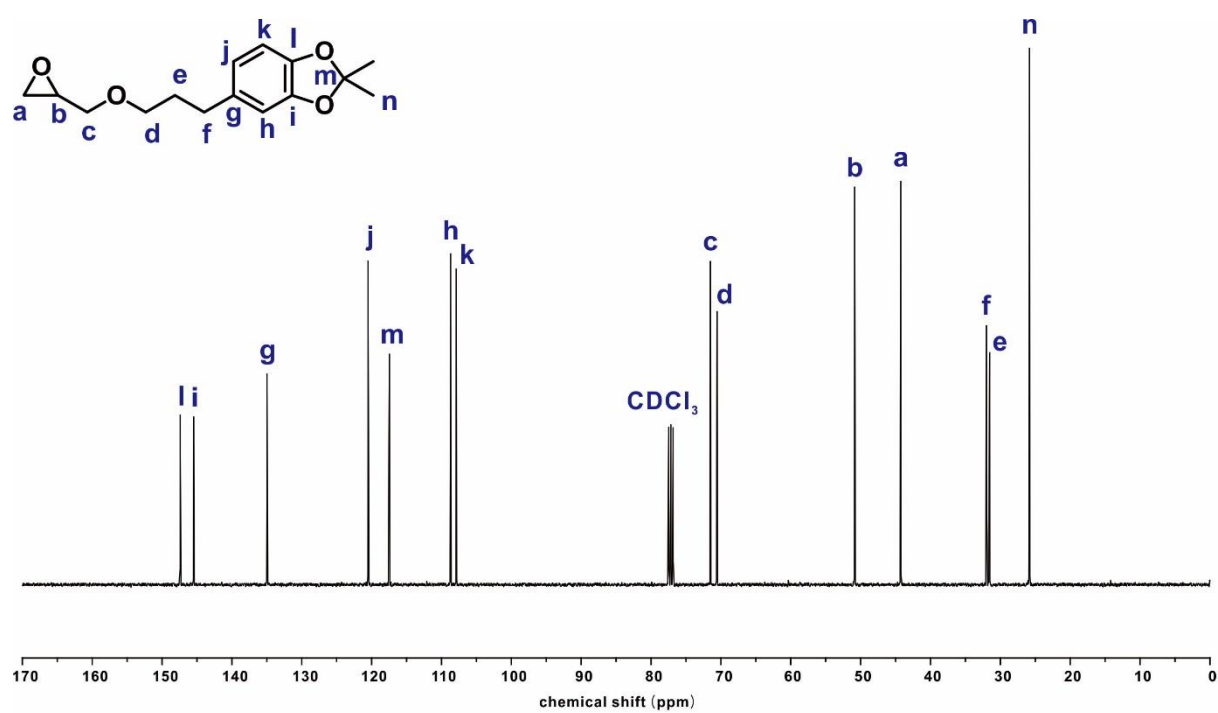


Fig. S1 ^{13}C NMR spectrum of CAGE (101 MHz, CDCl_3).

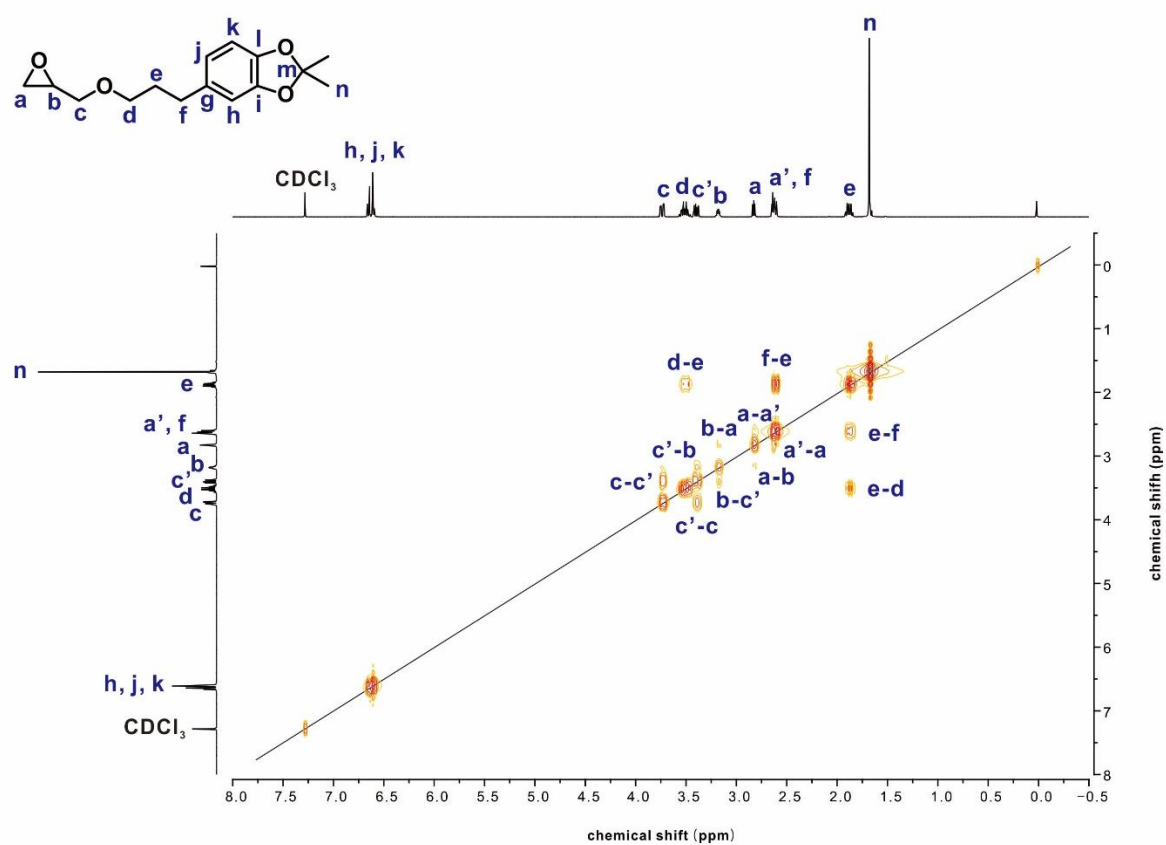


Fig. S2 COSY NMR spectrum of CAGE (400 MHz, CDCl₃).

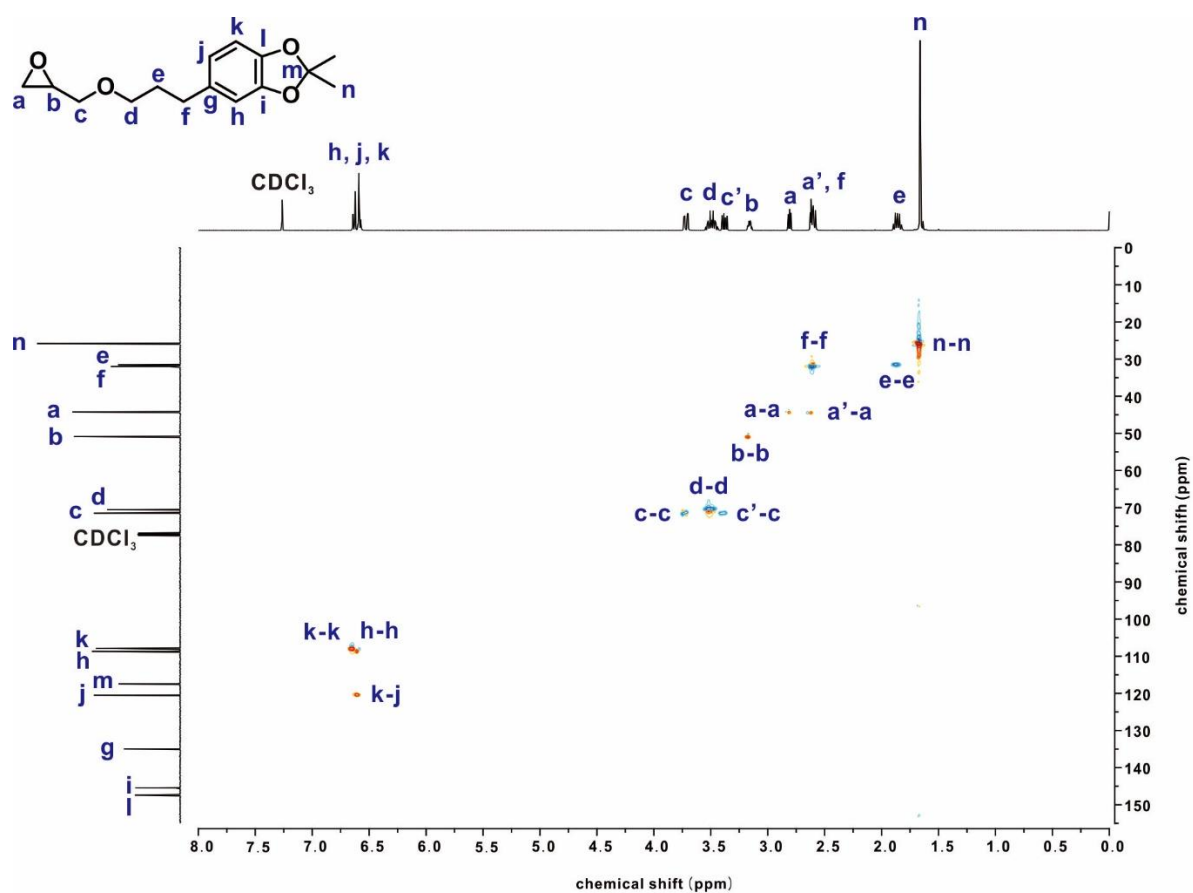


Fig. S3 HSQC NMR spectrum of CAGE measured in CDCl_3 .

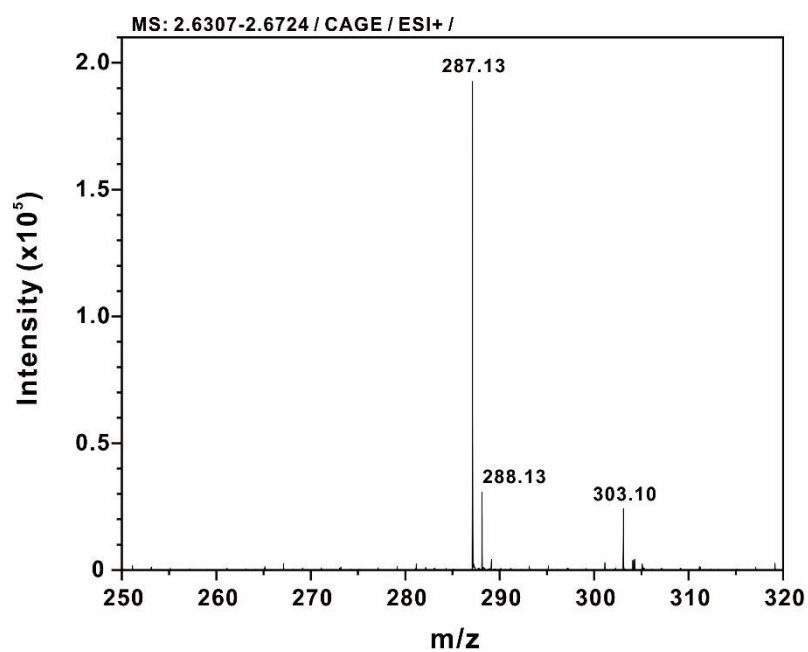


Fig. S4 ESI-MS spectrum of CAGE (m/z): $C_{15}H_{20}O_4Na$ ($[M + Na]^+$), calcd. 287.31, found. 287.13.

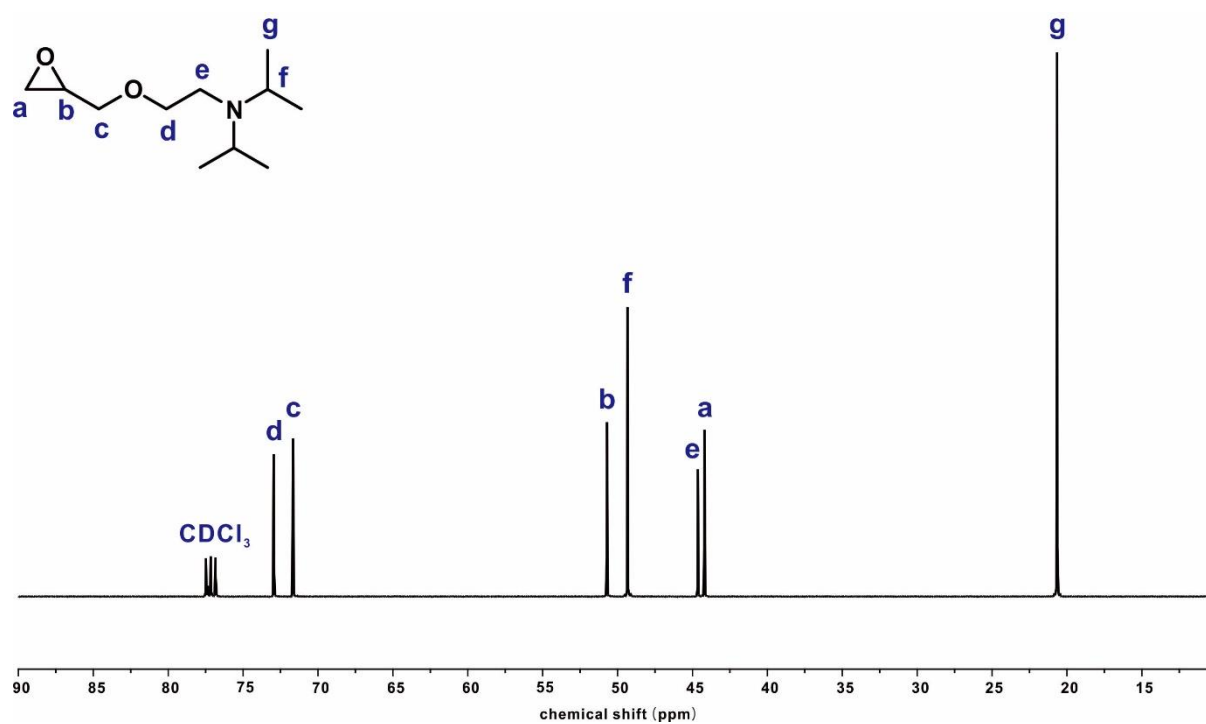


Fig. S5 ¹³C NMR spectrum of DEGE (101 MHz, CDCl₃).

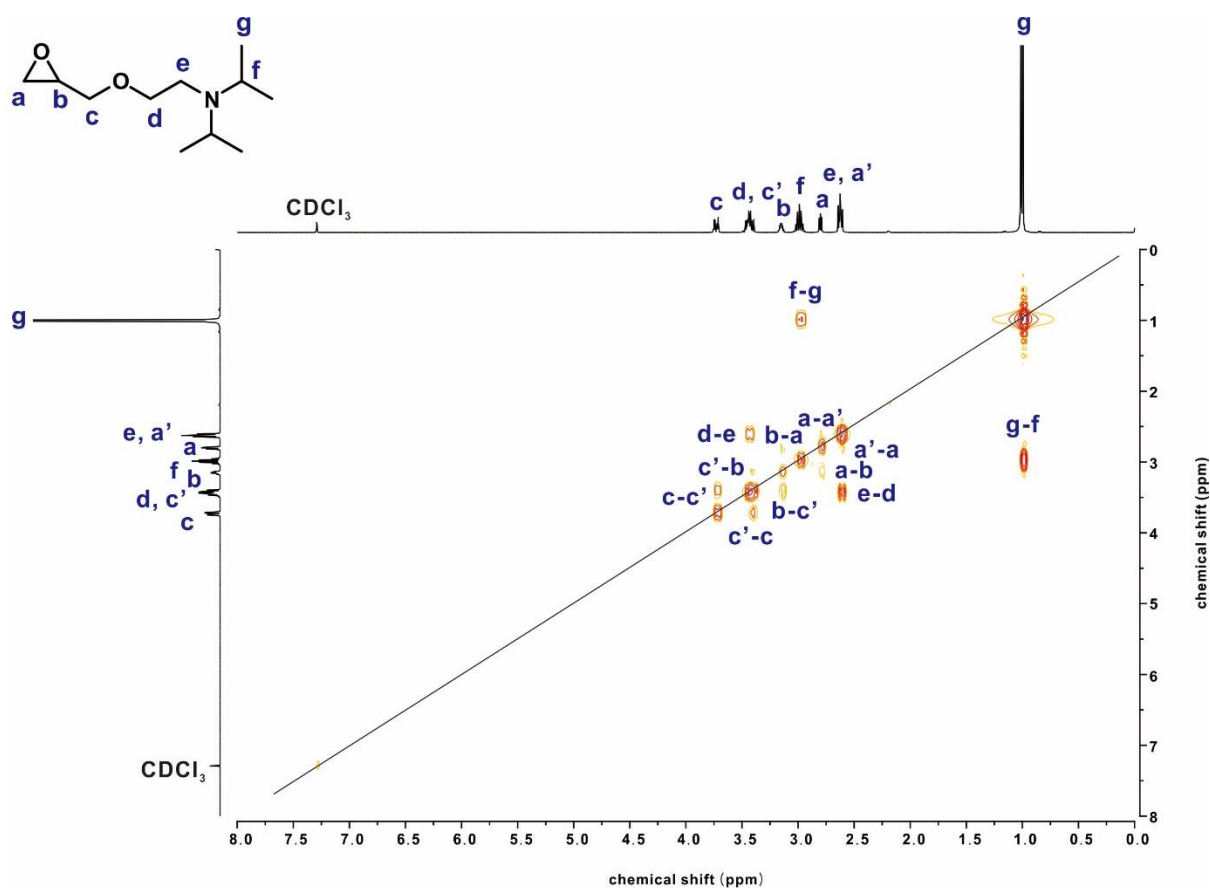


Fig. S6 COSY NMR spectrum of DEGE (400 MHz, CDCl_3).

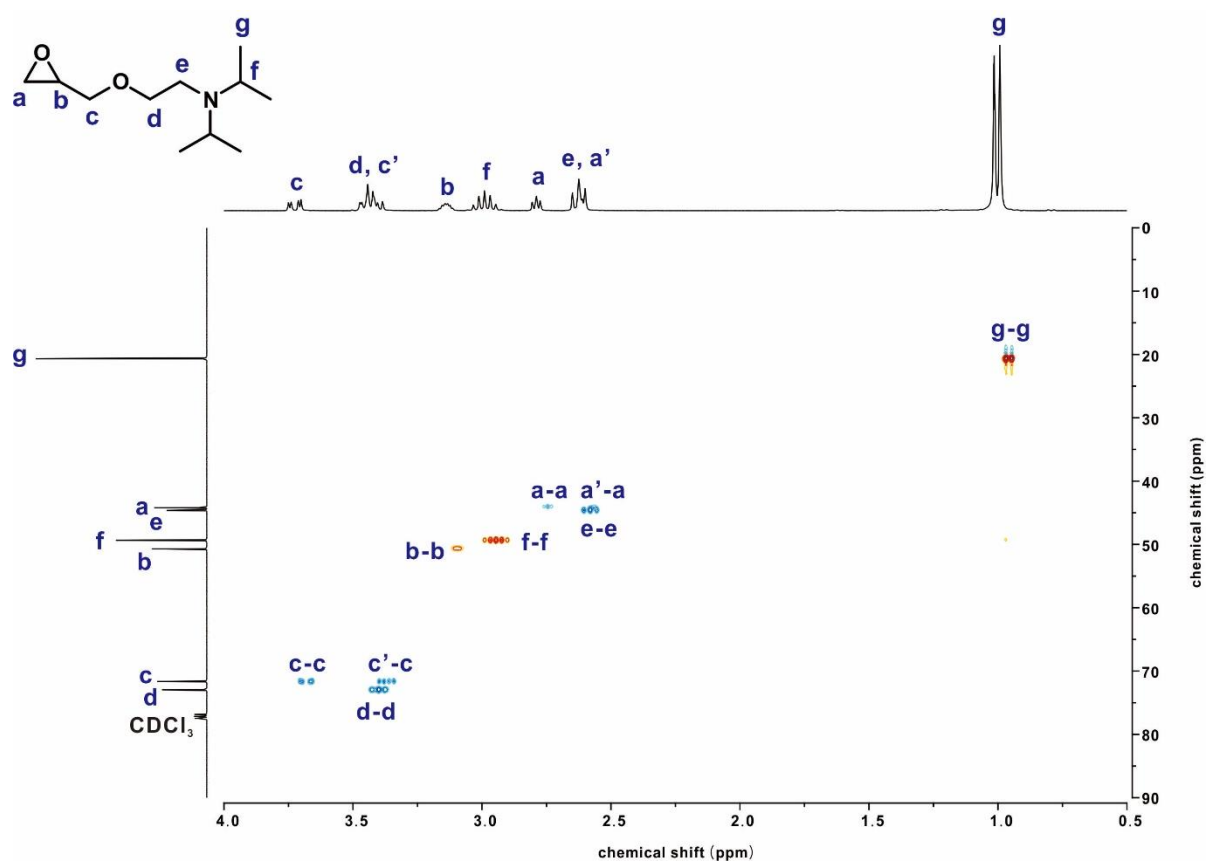


Fig. S7 HSQC NMR spectrum of DEGE in CDCl_3 .

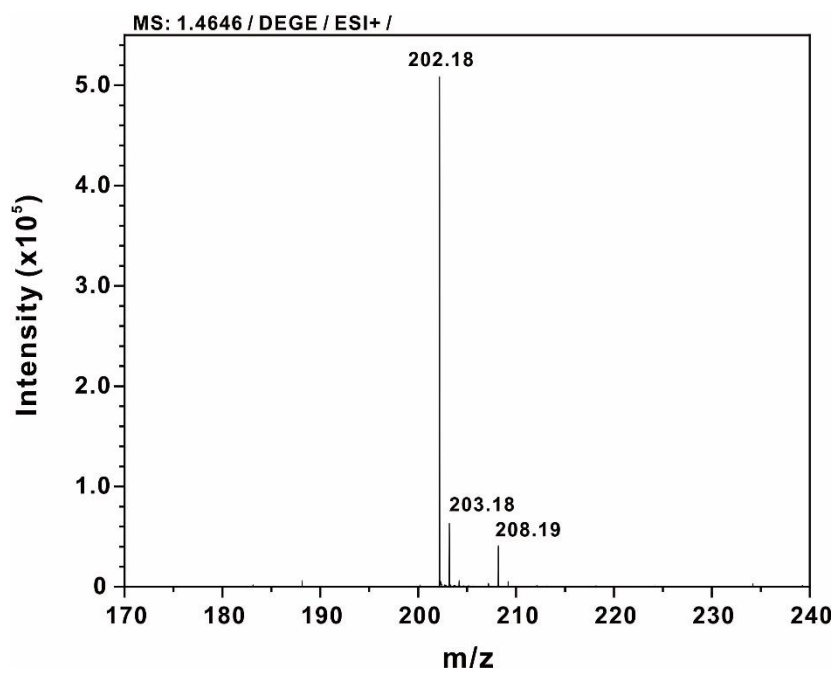


Fig. S8 ESI-MS spectrum of DEGE (m/z): $C_{11}H_{23}NO_2H$ ($[M + H]^+$), calcd. 202.32, found. 202.18.

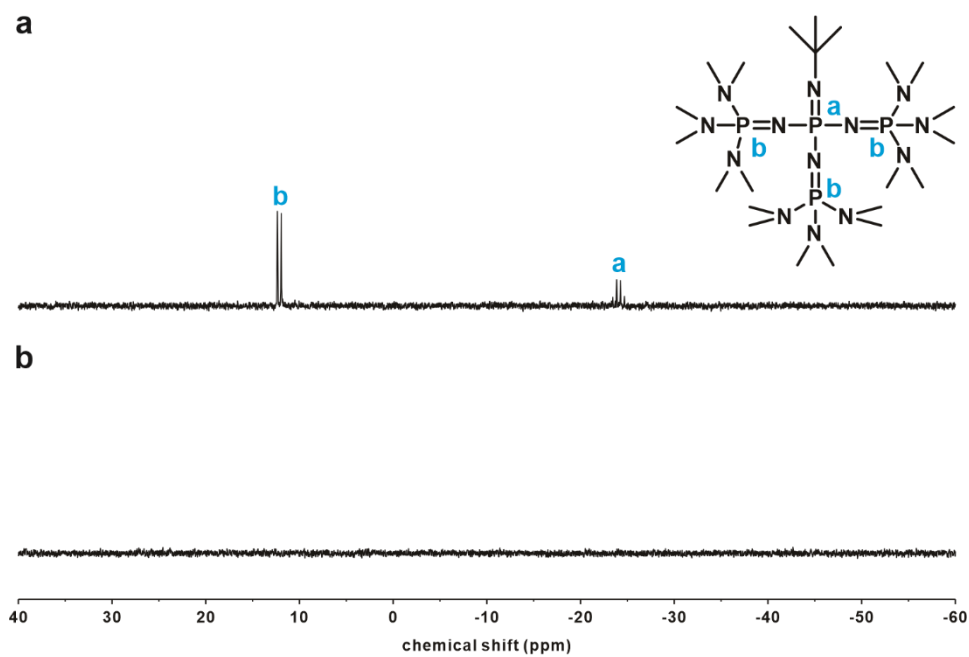


Fig. S9 ^{31}P NMR spectrum of (a) polymer mixture with $t\text{-BuP}_4$ and (b) polymer sample after purification steps (122 MHz, CDCl_3).

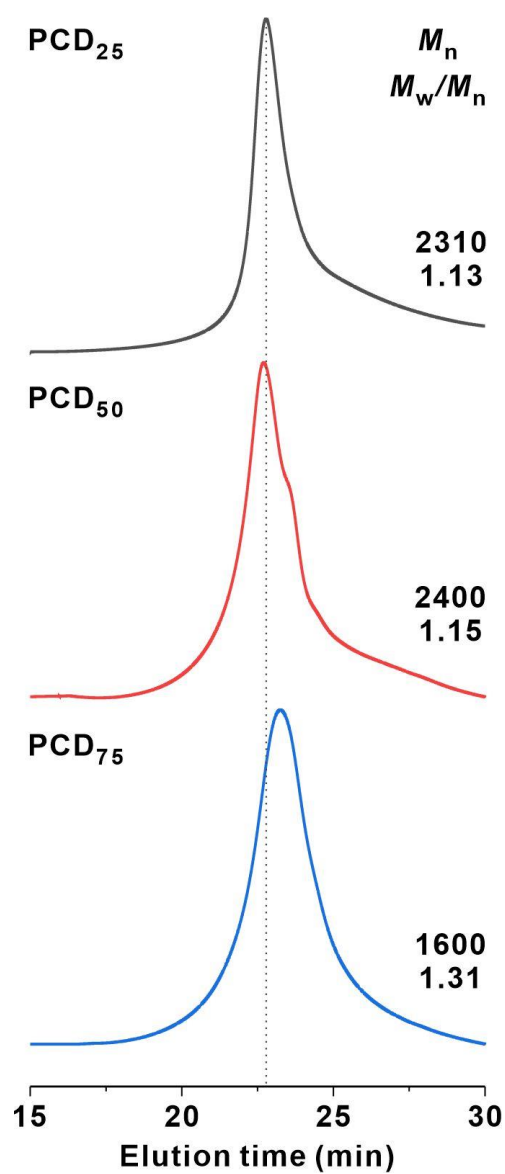


Fig. S10 GPC elution traces of P(CAGE-*b*-DEGE) block copolymers (PCD₂₅, PCD₅₀, and PCD₇₅ in Table 1).

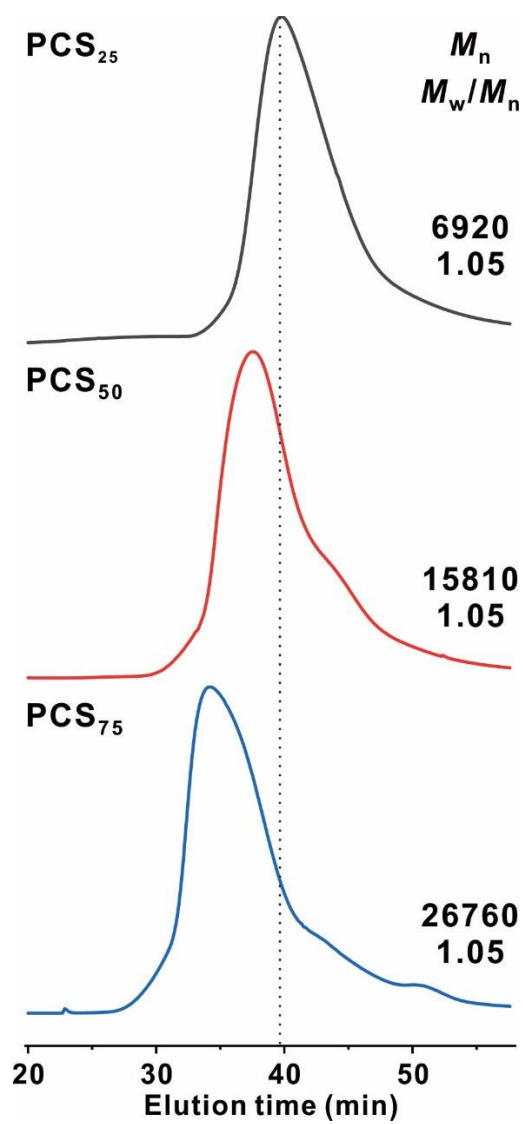


Fig. S11 GPC elution traces of P(CGE-*b*-SB) block copolymers (PCS₂₅, PCS₅₀, and PCS₇₅ in Table 1).

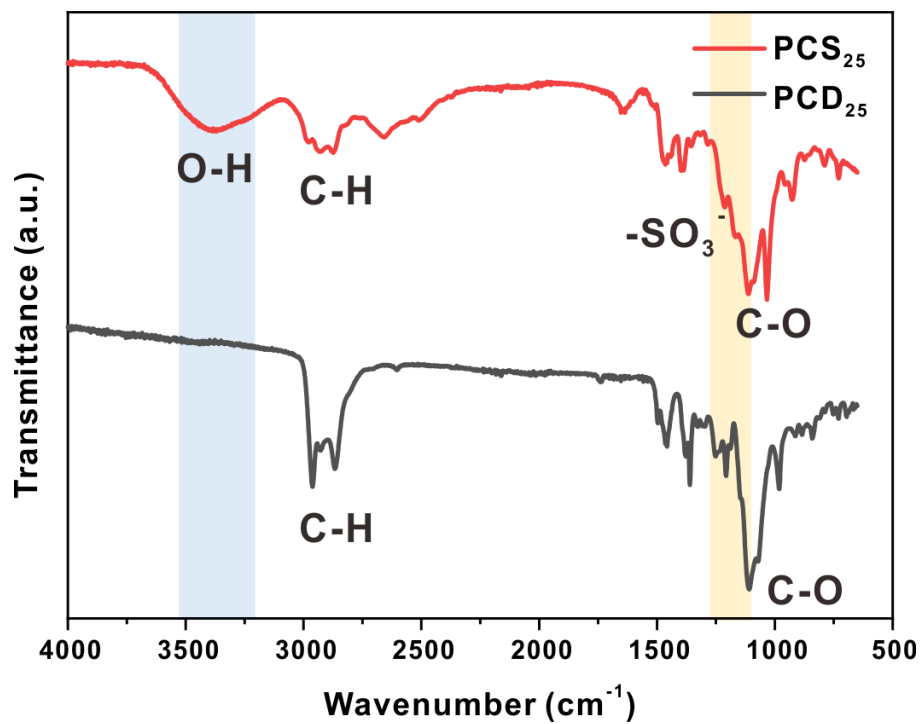


Fig. S12 FT-IR spectra of (black) $\text{P}(\text{CAGE}_5\text{-}b\text{-DEGE}_{20})$ and (red) $\text{P}(\text{CGE}_5\text{-}b\text{-SB}_{20})$ block copolymers (PCD_{25} and PCS_{25} in Table 1).

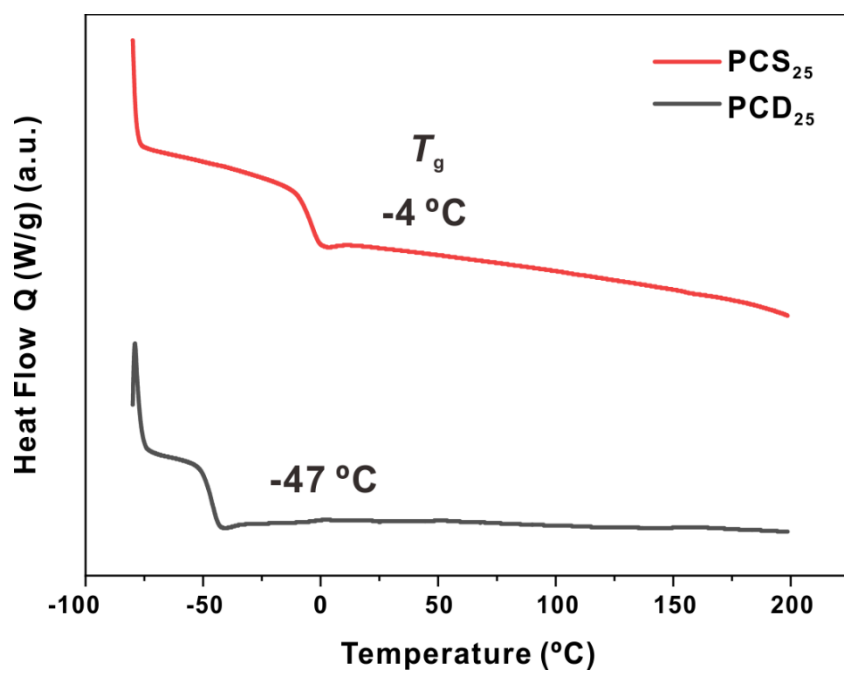


Fig. S13 DSC thermograms of (black) P(CAGE₅-*b*-DEGE₂₀) and (red) P(CGE₅-*b*-SB₂₀) block copolymers (PCD₂₅ and PCS₂₅ in Table 1).

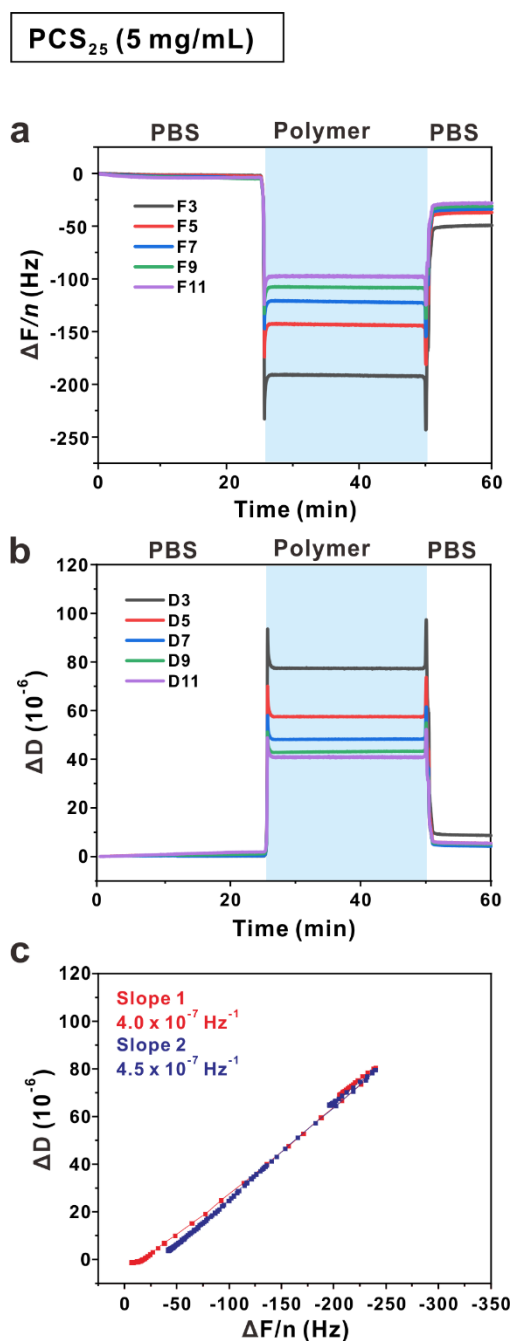


Fig. S14 (a) Frequency shift, (b) dissipation shift, and (c) $\Delta D/(\Delta F/n)$ plot of the adsorption of the PCS₂₅ on QCM-D gold substrate. The sections where the polymer was coated and washed are the red section and the blue section, respectively. Slope 1 and slope 2 means the slope of the coating section and washing section, respectively.

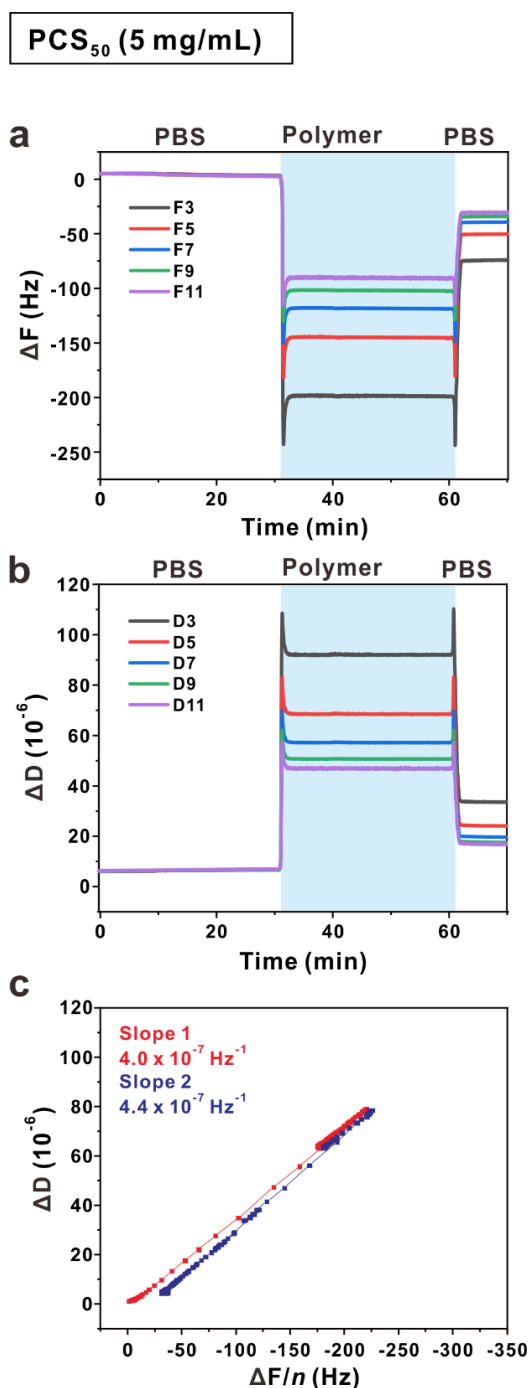


Fig. S15 (a) Frequency shift, (b) dissipation shift, and (c) $\Delta D/(\Delta F/n)$ plot of the adsorption of the PCS₅₀ on QCM-D gold substrate. The sections where the polymer was coated and washed are the red section and the blue section, respectively. Slope 1 and slope 2 means the slope of the coating section and washing section, respectively.

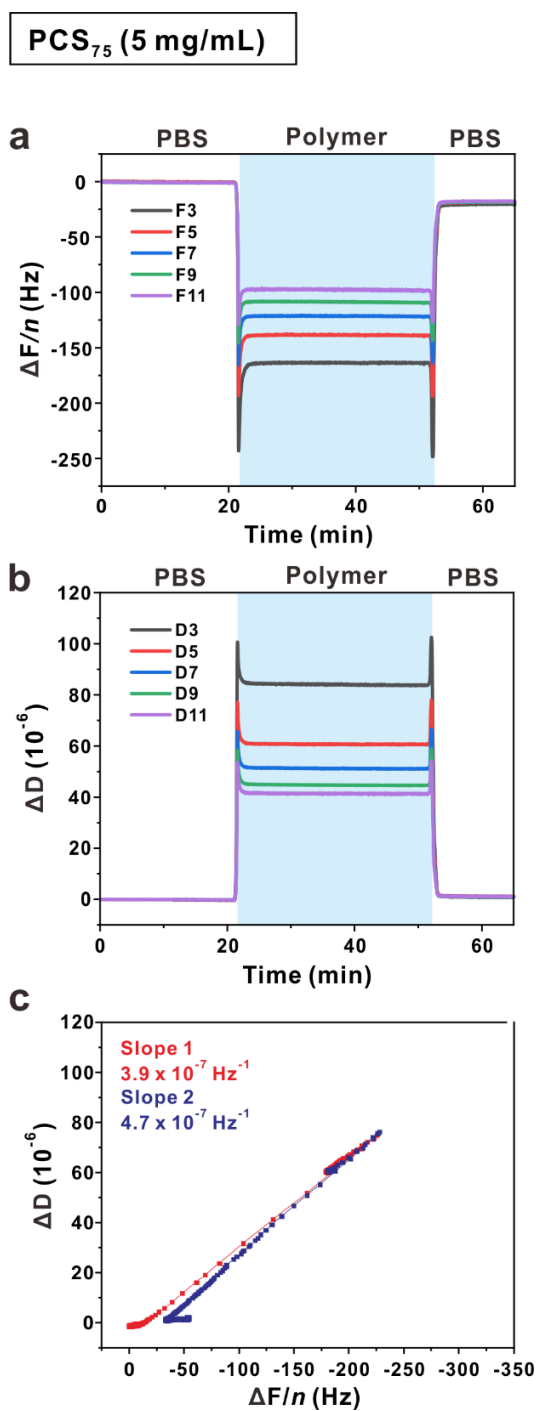


Fig. S16 (a) Frequency shift, (b) dissipation shift, and (c) $\Delta D/(\Delta F/n)$ plot of the adsorption of the PCS₇₅ on QCM-D gold substrate. The sections where the polymer was coated and washed are the red section and the blue section, respectively. Slope 1 and slope 2 means the slope of the coating section and washing section, respectively.