

Supplementary information

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Results and discussion

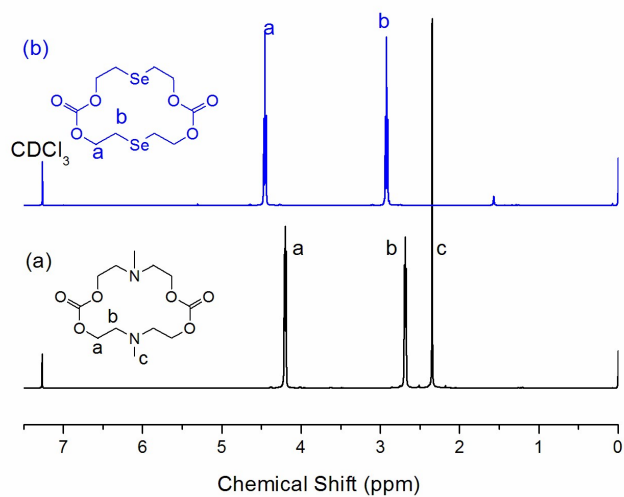


Fig. S1 The typical ¹H-NMR spectrum of MN and MSe in CDCl₃

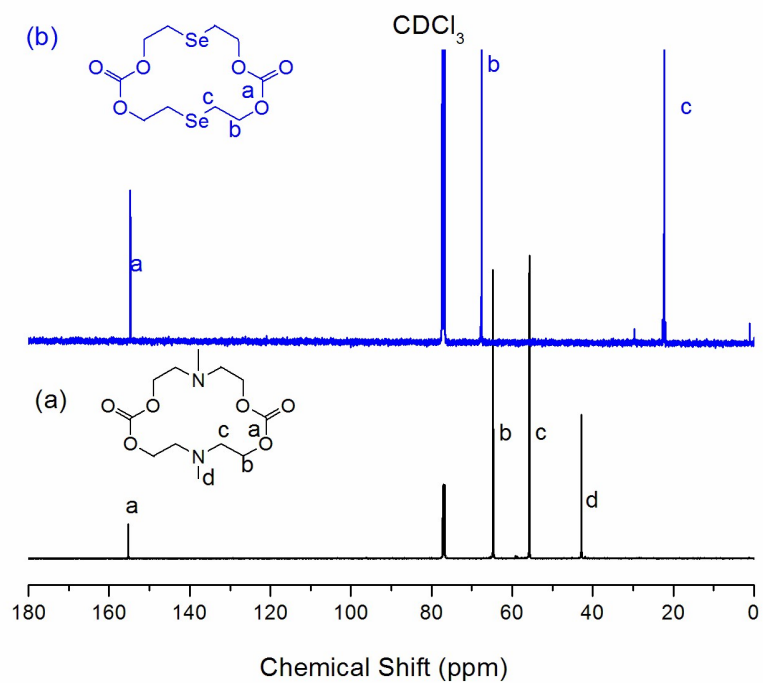


Fig. S2 The typical ¹³C-NMR spectrum of MN and MSe in CDCl₃

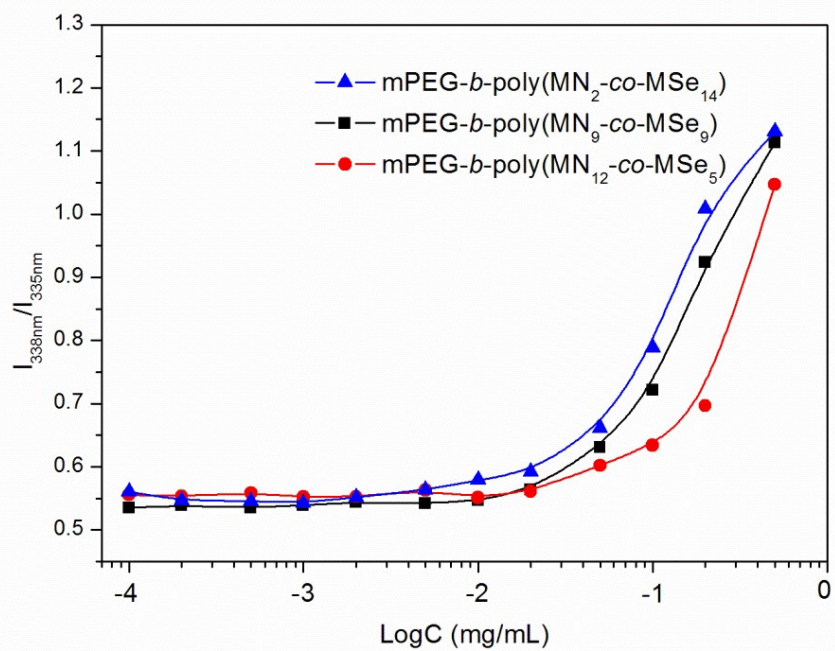


Fig. S3 The CMC determination of the mPEG-*b*-poly(MN-*co*-MSe) copolymers using the fluorescence method with pyrene as a probe

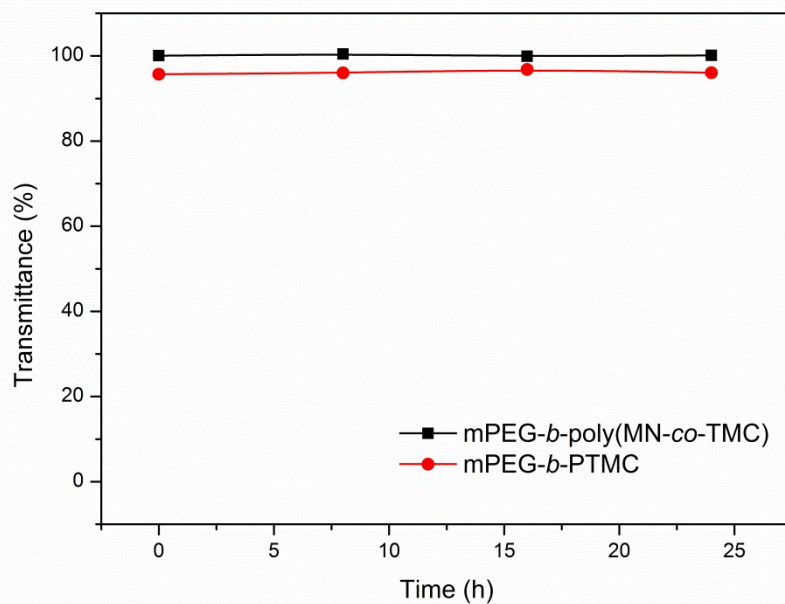


Fig. S4 Turbidity measurements of mPEG-*b*-poly(MN-*co*-TMC) and mPEG-*b*-PTMC copolymers at the presence of 50 mM H₂O₂ in aqueous solution for 24 h

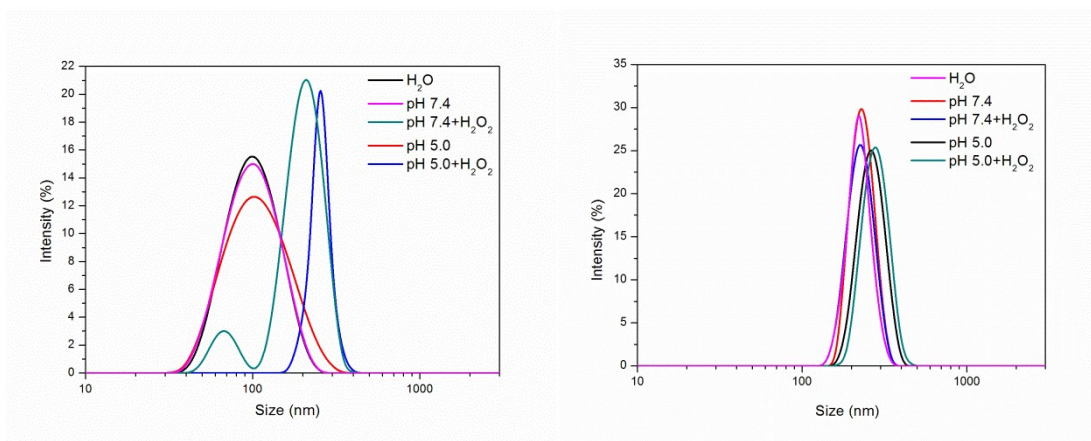


Fig. S5 DLS results of the mPEG-*b*-poly(MSe-*co*-TMC) (left) and mPEG-*b*-PTMC (right) copolymers with different pH or 50 mM H₂O₂ at 37 °C for 12 h

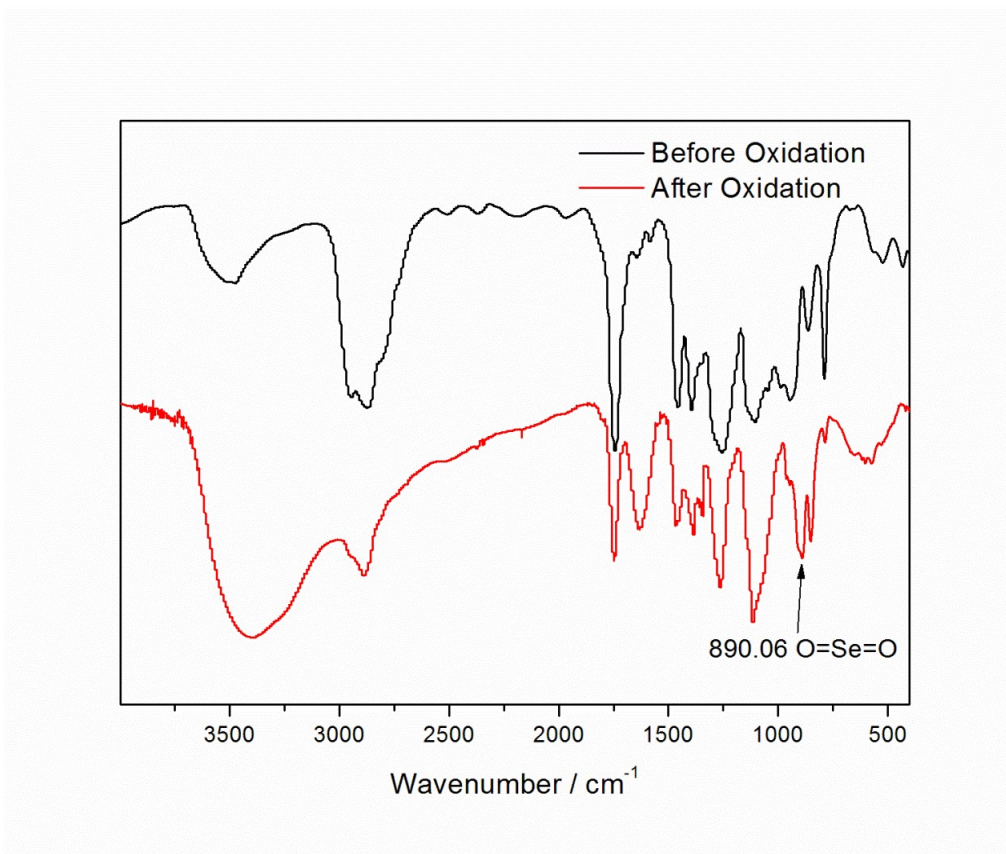


Fig. S6 The FT-IR spectra of mPEG-*b*-poly(MN₉-*co*-MSe₉) and mPEG-*b*-poly(MN₉-*co*-OSe₉)

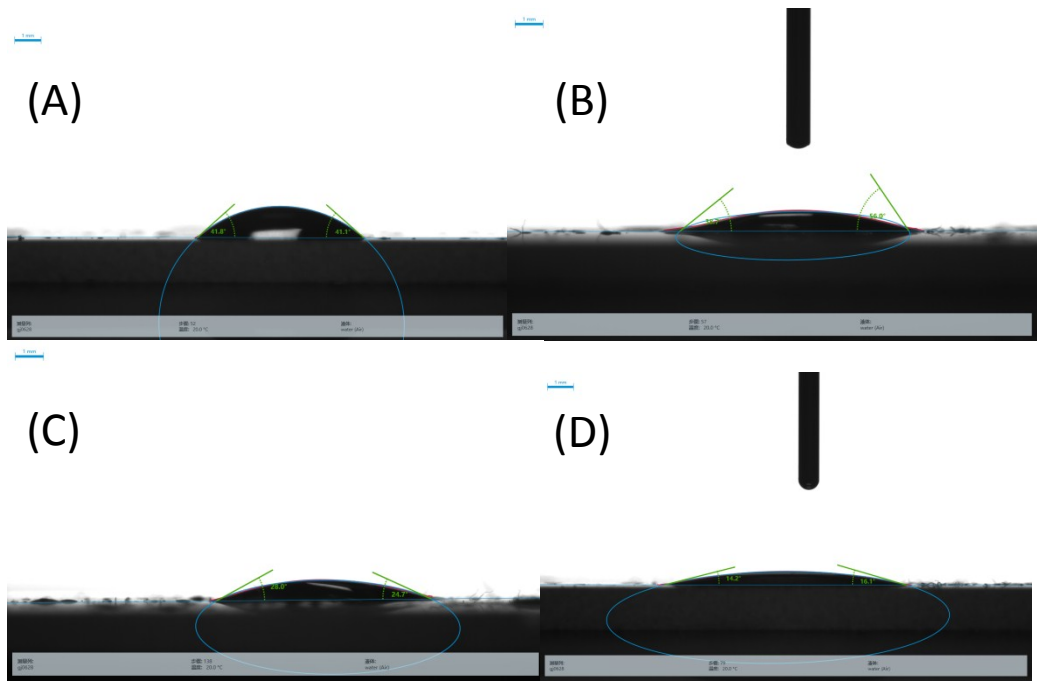


Fig. S7 The water contact angle of mPEG-*b*-poly(MN₉-*co*-MSe₉) at different environments.

(A) water (B) pH 5.0 (C) pH 7.4 + H₂O₂ (D) pH 5.0 + H₂O₂

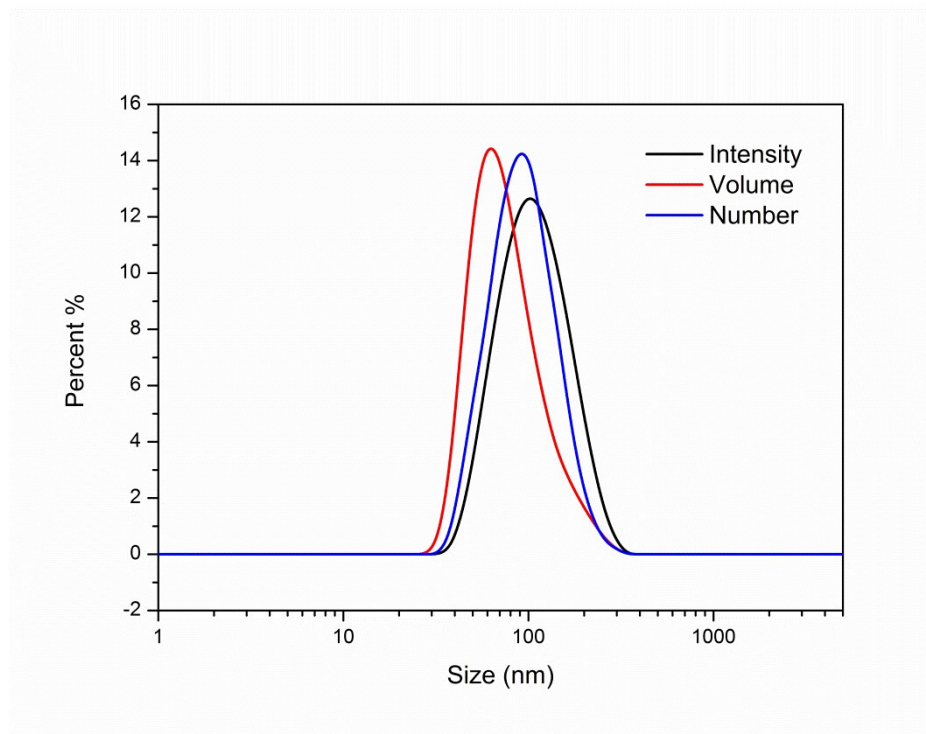


Fig. S8 DLS curve of DOX-loaded mPEG-*b*-poly(MN₉-*co*-MSe₉) micelles in aqueous solution

(Size_{intensity} = 110.4 nm, PDI = 0.159)

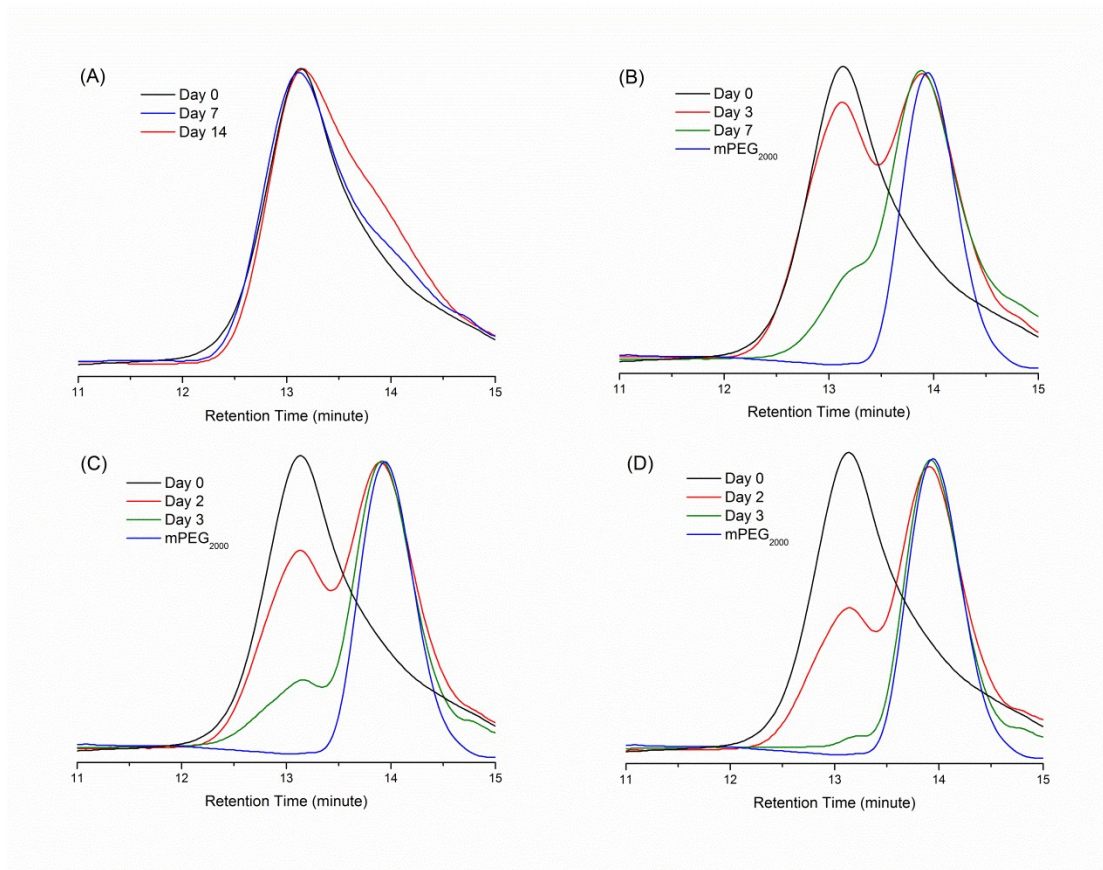


Fig. S9 SEC curves of mPEG-*b*-poly(MN₉-*co*-MSe₉) in 0.02 M PBS at 37 °C at marked degradation time. (A) pH 7.4 (B) pH 5.0 (c) pH 7.4 + 50 mM H₂O₂ (D) pH 5.0 + 50 mM H₂O₂

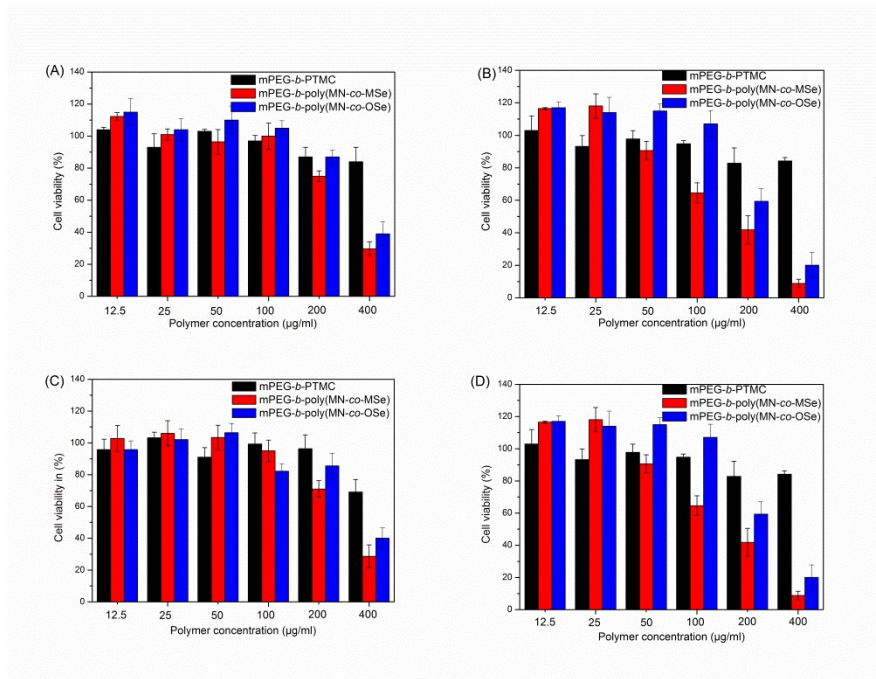


Fig. S10 Cell viability of (A&B) HEK293 cells and (C&D) A549 cells cultured with mPEG₄₅-*b*-poly(MN₉-*co*-MSe₉) and mPEG₄₅-*b*-poly(MN₉-*co*-OSe₉) in 48 h and 72 h, respectively.