

Supplementary Information

Self-Healable Hydrogels with Cross-Linking Induced Thermo-Responsiveness and Multi-Triggered Gel-Sol-Gel Transition

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Fig. S5 Hydrogel from P(DMA₉₆-*stat*-DAA₅₀) cross-linked by 2.5:1 ratio of PEO₂₃ dihydrazide dissolved by addition of HCl (a) and hydrogel reobtained by further addition of triethylamine (b).

Fig. S6 The DTT reduced hydrogel after addition of (left) H₂O₂ and (right) Fe₂O₃.

Fig. S7 Hydrogel from P(DMA₉₃-*stat*-DAA₃₀) cross-linked by DTDPH did not show gel-sol transition by DTT reduction.



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Fig. S2 Repeated self-healing of hydrogel prepared from P(DMA₉₆-*stat*-DAA₅₀) cross-linked by 5:2 ratio of PEO₂₃ dihydrazide in 12 h.



Fig. S3 Photograph of hydrogel prepared from P(DMA₉₀-*co*-DAA₁₀) with ADH cross-linking. (a: after incubated for 12 h; the pH was regulated to 2 by HCl; c: the HCl was neutralized by TEA) (Credit form Hebei University)

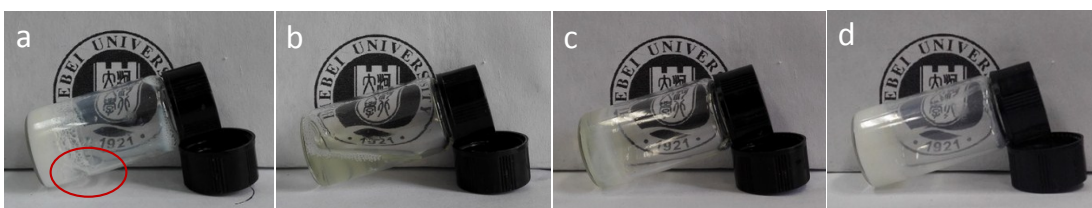


Fig. S4 Photograph of hydrogel prepared from P(DMA₉₆-*co*-DAA₅₀) with 1 : 1 ratio ADH cross-linking. (a: after incubated for 12 h; the pH was regulated to 2 by HCl; c: the HCl was neutralized by TEA; d: after 4 cycles) (Credit form Hebei University)

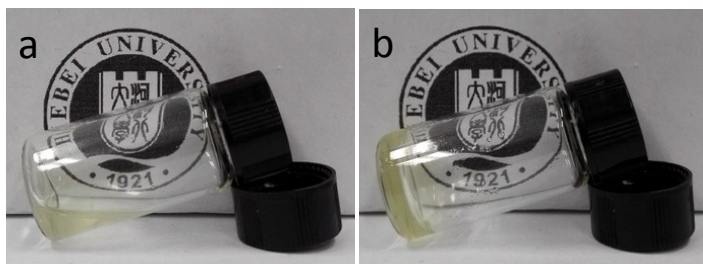


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