Supplementary Information

Organohydrogel with Tunable Fluorescence and Shape-memory Property for Advanced Anti-counterfeiting

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Fig. S1 The synthetic route of PyMA.

Fig. S2 The $^1\text{H}$ NMR spectrum of PyMA in CDCl$_3$. 
**Fig. S3** Schematic diagram of the preparation steps of P(DMA-AAc-PyMA)/PSMA organohydrogels.

**Fig. S4** The size of porous structure of (a) P(DMA-AAc-PyMA) hydrogels and P(DMA-AAc-PyMA)/PSMA organohydrogels (b) before and (c) after Fe$^{3+}$ treatment.
Fig. S5 The transmittance of P(DMA-AAc-PyMA) hydrogels and P(DMA-AAc-PyMA)/PSMA organohydrogels before and after Fe$^{3+}$ treatment.

Fig. S6 The fluorescence spectra of organohydrogels before and after Fe$^{3+}$ treatment (0.1 M, 24 h).
Fig. S7. Schematic representation of organohydrogels immersed in Fe$^{3+}$ solution (0.1 M) and digital photos of the organohydrogels with immersion time (scale bar: 1 cm).

Figure S8. DSC curve of (a) P(DMA-AAc-PyMA) hydrogels and (b) P(DMA-AAc-PyMA)/PSMA organohydrogels at the heating rate of 10 °C/min.