

Supporting information

Near-infrared light-responsive shape memory hydrogels with remolding and excellent mechanical performance

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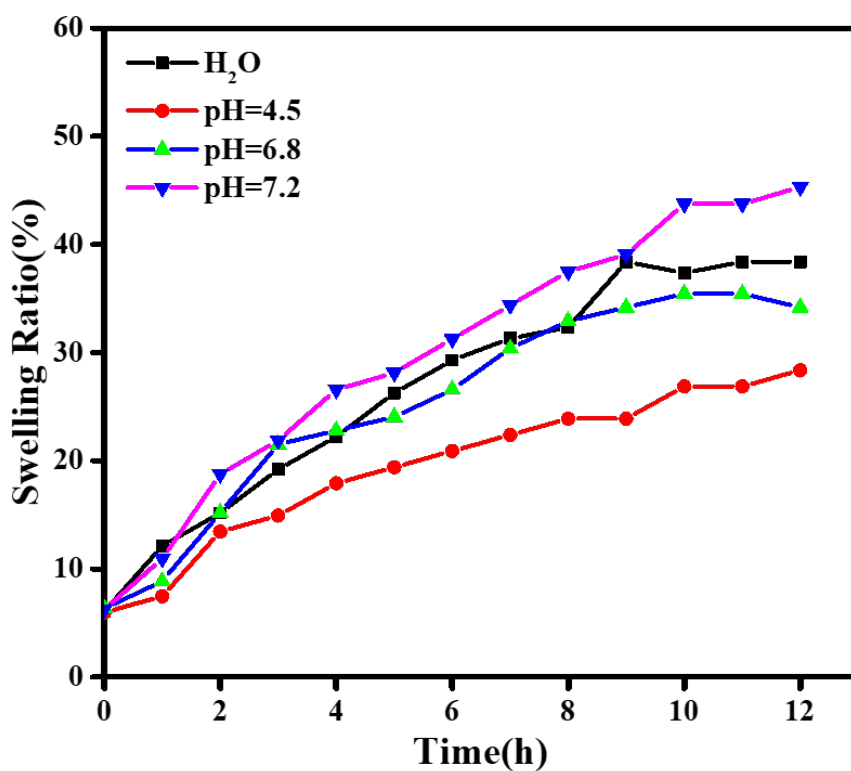


Figure S1. Swelling curves of PVA/TA-Fe³⁺ hydrogels in DI water and PBS solution with different pH value.

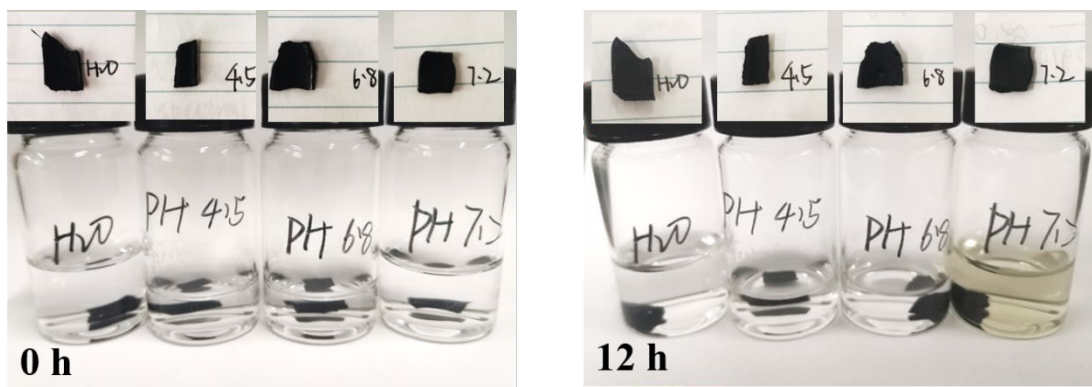


Figure S2. Swelling ratio test of PVA/TA-Fe³⁺ hydrogels in PBS solutions with different pH value within 12 h.

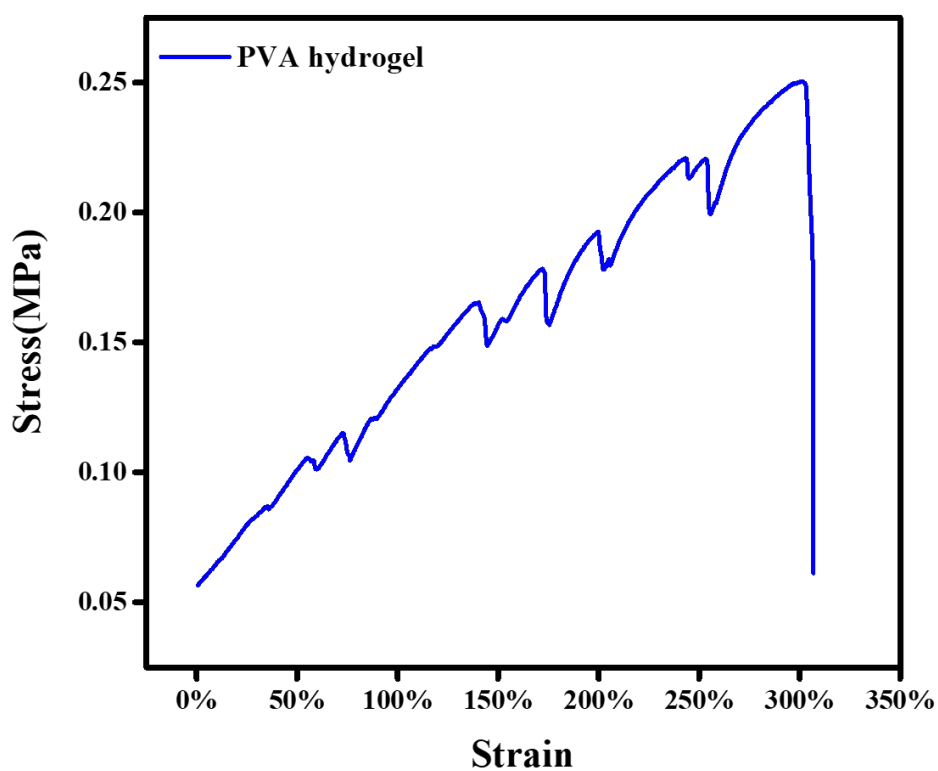


Figure S3. Strain-stress curve of the 10% wt PVA hydrogel after three freeze-thaw.

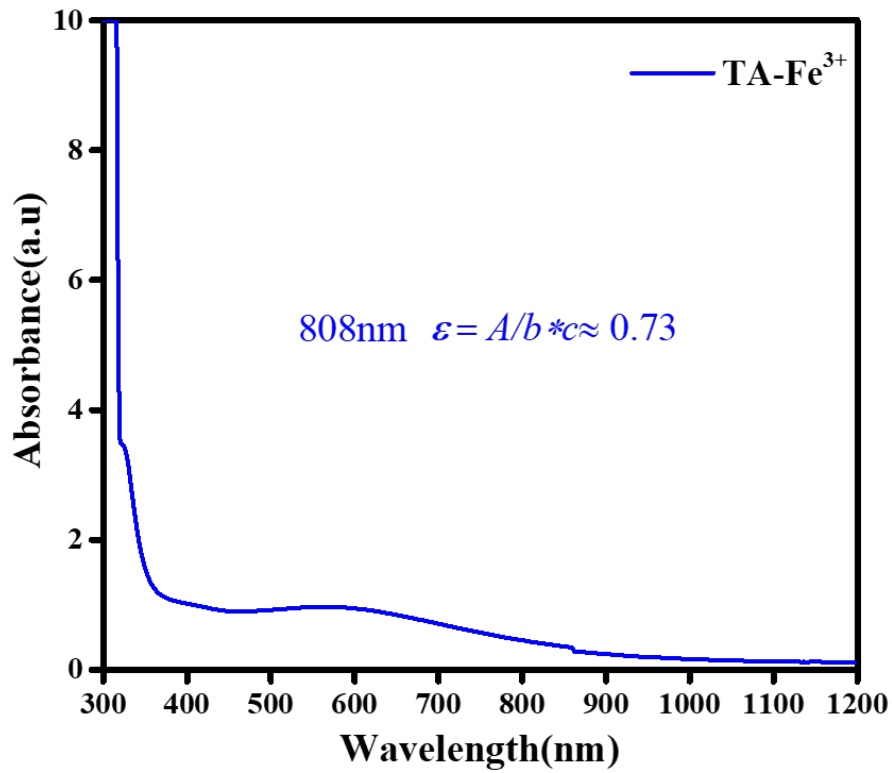


Figure S4. UV-vis-NIR spectrum of TA-Fe³⁺ complex solutions.

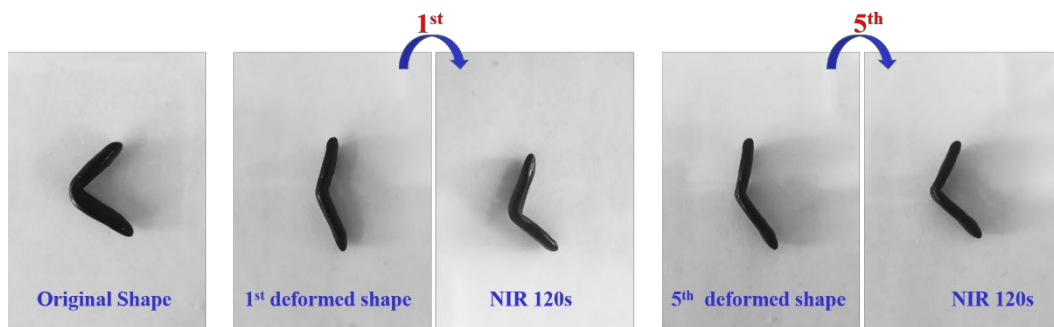


Figure S5. Original shape deformed shape and recovery shape of PVA/TA-Fe³⁺ hydrogel after 1 and 5 shape-memory cycles.

Video S1 is the photothermal response of a PVA/TA-Fe³⁺ hydrogel irradiated under 808 nm laser (0.75 W/cm²) and the cooling trend after switching off the laser.

Video S2 for the shape recovery of a PVA/TA-Fe³⁺ hydrogel bending deformed into flatting under 808 nm laser (0.75 W/cm²) for 120 s.

Video S3 for the shape recovery of a PVA/TA-Fe³⁺ hydrogel strip deformed into a helix under 808 nm laser (0.75 W/cm²) for 180 s.