Electronic Supplementary Material (ESI) for Materials Chemistry Frontiers.

Supporting information

A thermally responsive host–guest conductive hydrogel with self-healing properties

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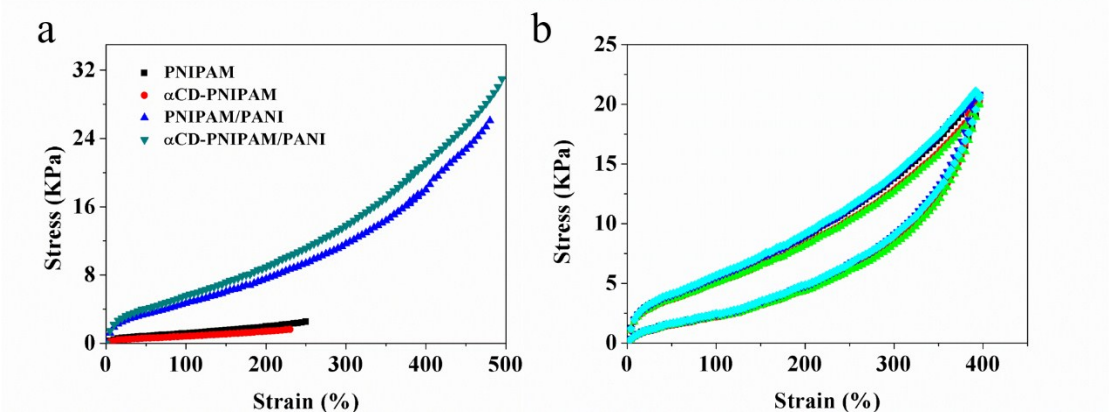

Fig. S1 a) Tensile strain-stress behavior of PNIPAM, αCD-PNIPAM, PNIPAM/PANI, and αCD-PNIPAM/PANI hydrogels. b) Tensile stretching-releasing cycles of αCD-PNIPAM/PANI hydrogel (n=5).

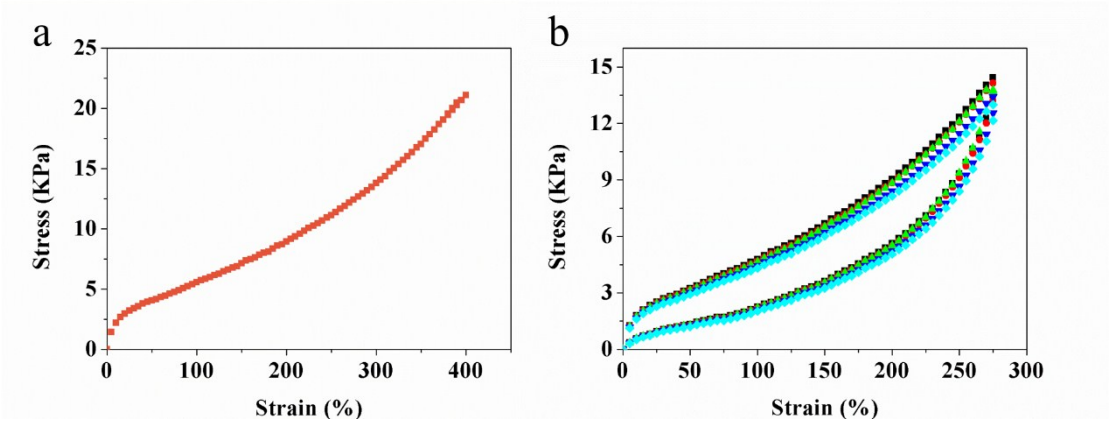

Fig. S2 a) Tensile strain-stress behavior of repaired αCD-PNIPAM/PANI hydrogel. b) Tensile stretching-releasing cycles of repaired αCD-PNIPAM/PANI hydrogel (n=5).

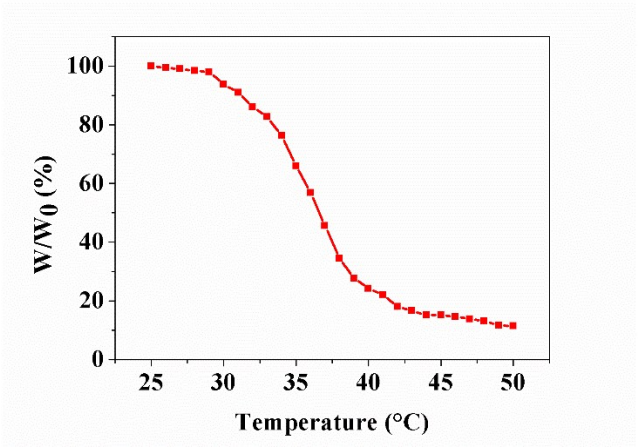

Fig. S3 The thermal-responsive behavior of the repaired αCD-PNIPAM/PANI hydrogel under different temperatures.

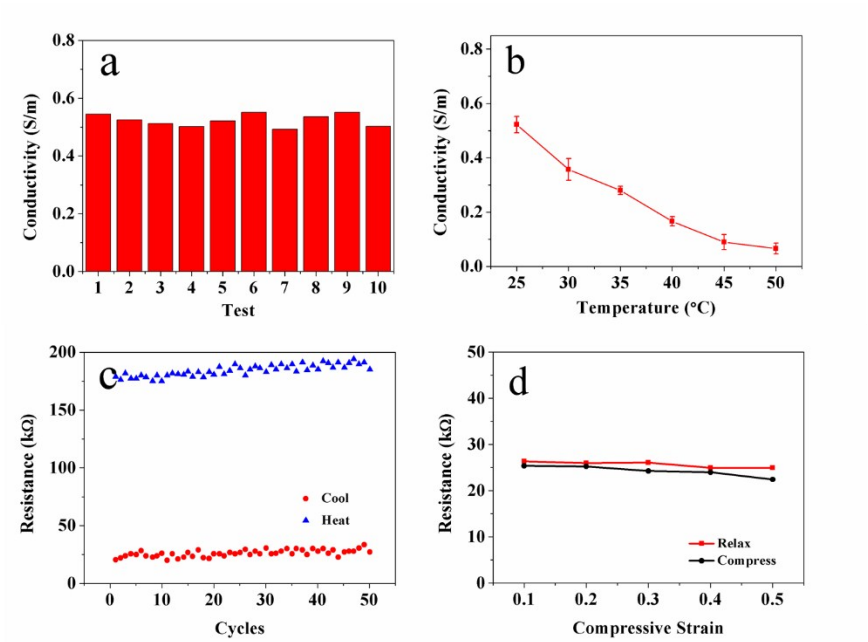

Fig. S4 a) The conductivities of ten PNIPAM/PANI hydrogel samples. b) The temperature-dependent conductivity of the PNIPAM/PANI hydrogel in the gel state. c) Cycling performance of the PNIPAM/PANI hydrogel. d) Resistance of PNIPAM/PANI cylinder-shaped hybrid hydrogels at different strains.