Supplementary Information for

Ultrafast and Reversible Thermochromism of Conjugated Polymer Material Based on Assembling of Peptide Amphiphiles

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Additional Data:

Fig. S1 Mechanical properties of PA-PDA fibres and gels.

Fig. S2 Color transition between temperatures 25 - 100 °C and 25 - 200 °C.

Fig. S3 Raman spectra of PA-PDA membrane at temperatures 30 °C and 80 °C, red 6 times, blue 6 times.

Fig. S4 Thermogravimetry analysis (TGA) of PA-PDA materials.

Fig. S5 DSC data of PA-PDA (C_{25}-GAGAGAGY) at temperature from -80 °C to 200 °C.

Fig. S6 DSC data of PA-PDA (C_{23}-GAGAGAGY), with heating and cooling rate 10 K/s.

Video S1 was taken with a hot air blow moving left and right over a PA-PDA fibre.

Video S2 was taken with PA-PDA membrane attached on a piece of aluminum foil.

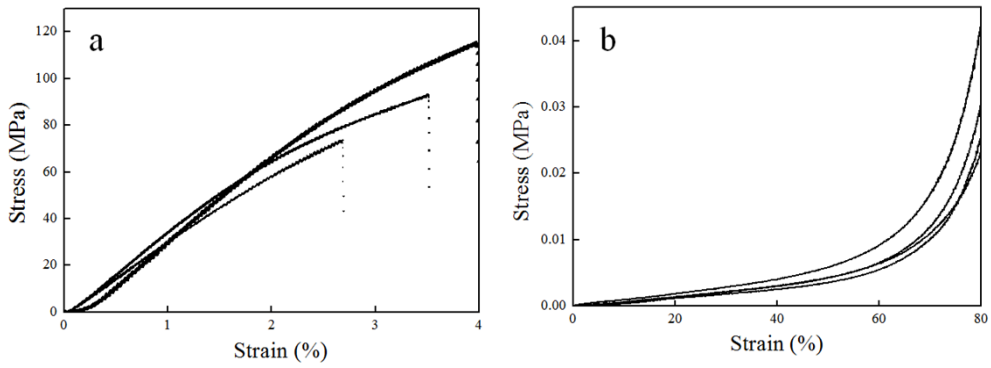

Fig. S1 Mechanical properties of PA-PDA fibres (a, tensile test, tensile modulus 3 GPa) and gels (b, compression test, compression modulus 10 kPa). Different curves in a) and b) mean multiple measurements.

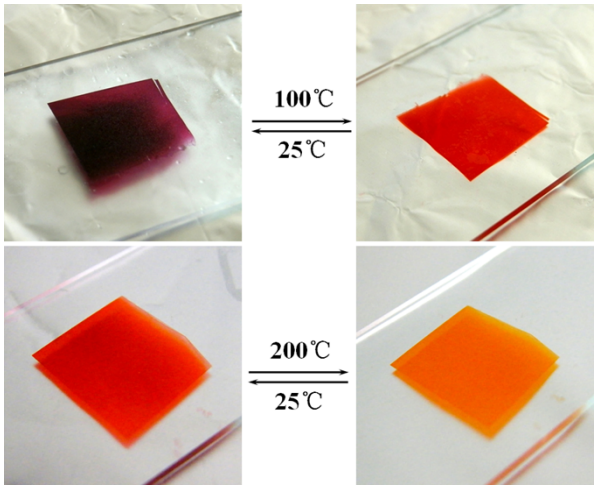

Fig. S2 Color transition between temperatures 25 - 100 °C and 25 - 200 °C. The materials still have obvious reversibility even heated to 200 °C.

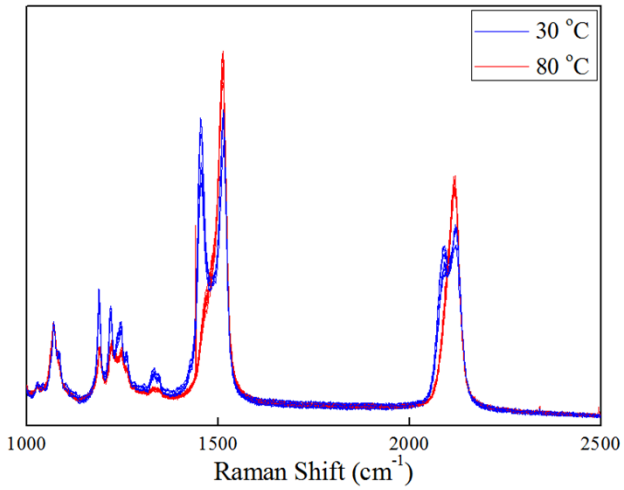

Fig. S3 Raman spectra of PA-PDA membrane at temperatures 30 °C and 80 °C, red 6 times, blue 6 times.

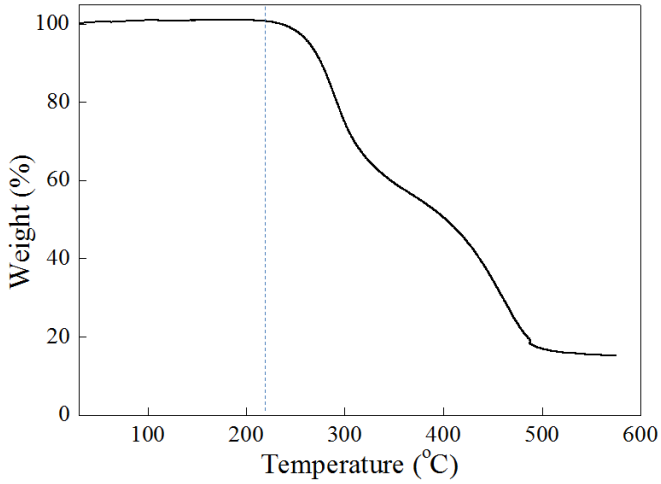

Fig. S4 Thermogravimetry analysis (TGA) of PA-PDA materials, indicating no thermal degradation below 200 °C.

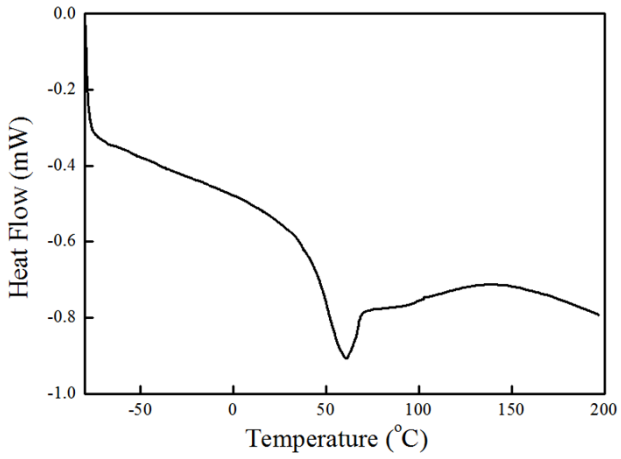

Fig. S5 DSC data of PA-PDA (C_{25}-GAGAGAGY) at temperature from -80 °C to 200 °C. Only one peak (excluding water peak) at 60 °C appeared.

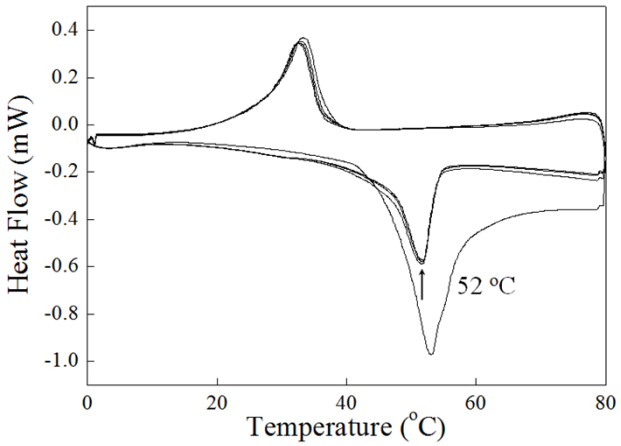

Fig. S6 DSC data of PA-PDA (C_{23}-GAGAGAGY), with heating and cooling rate 10 K/s. The repeated endothermic peaks appeared at 52 °C.