Electronic Supplementary Material (ESI) for Nanoscale

Stimuli-responsive self-assembling peptide made from antibacterial peptide

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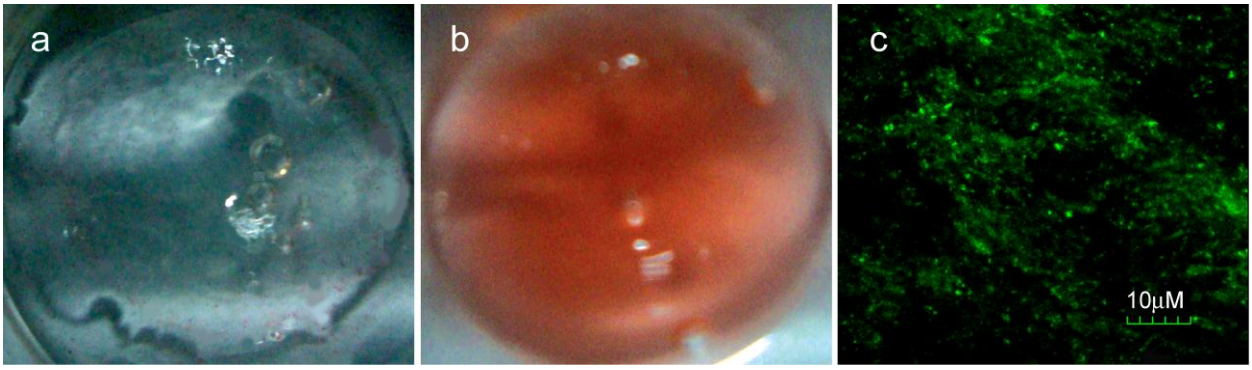

Fig. S1 (a) Photographs of ASCP1 hydrogel at 10 mg/mL (pH 11, 25 mM borate) and (b) hydrogel stained by 200 μM Congo red at RT. The staining solution was removed after 2 days and replaced with borate buffer (pH 11). (c) Confocal laser scanning photograph of Congo red stained ASCP1 hydrogel.

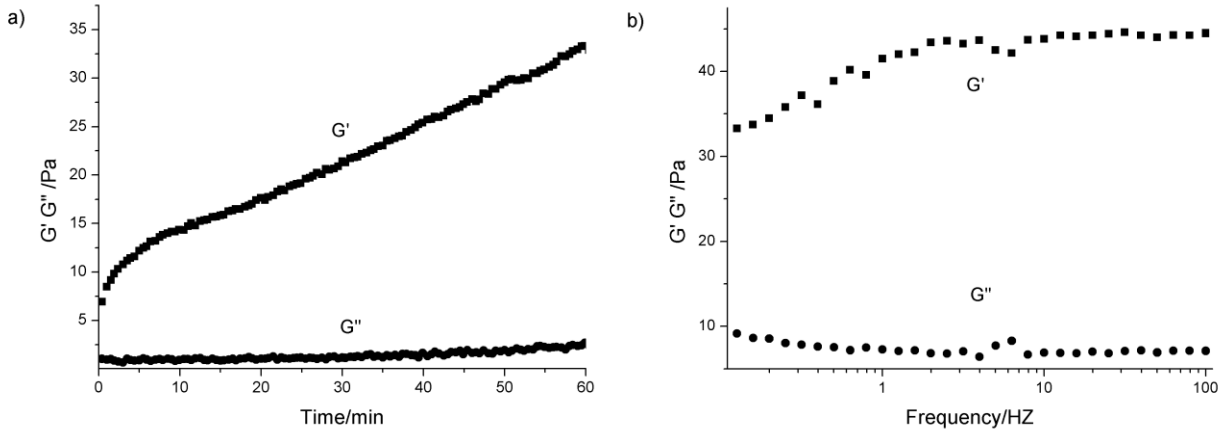

Fig. S2 Rheology of the peptide ASCP1 hydrogel at 5 mg/mL (pH 11). (a) Hydrogel formation (0.5% strain, 1 Hz) monitored as a function of time by increase in storage modulus (G') and loss modulus (G") at 25 °C. (b) Frequency sweep (0.5% strain) of the hydrogel at 25 °C after 90 min of gelation.

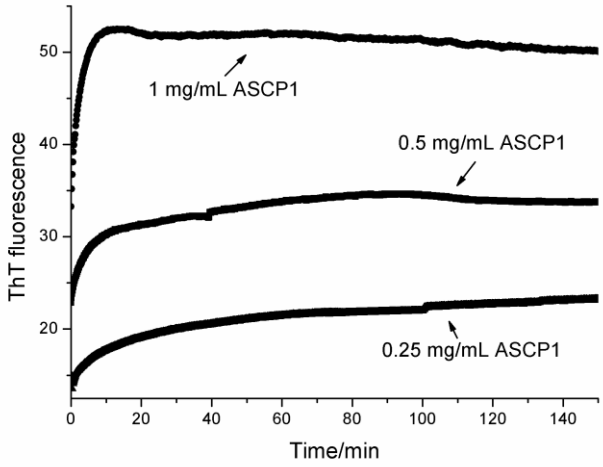

Fig. S3 The fluorescence emission (λ_{exc}=440 nm and λ_{em}=480 nm) of 100 μM ThT as a function of incubation time in buffer solutions of pH 11 with 1 mg/mL, 0.5 mg/mL and 0.25 mg/mL of ASCP1.

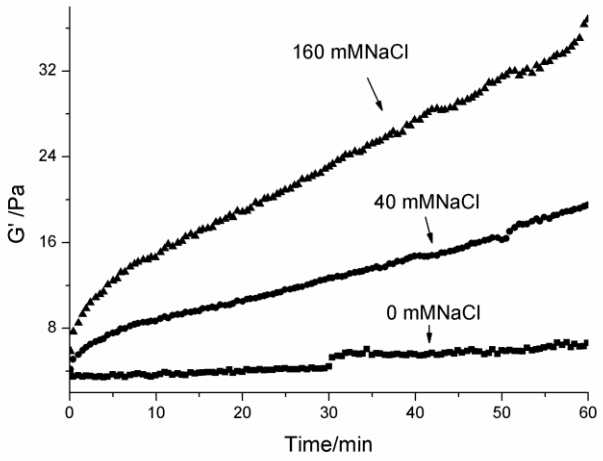

Fig. S4 Dynamic time sweep (0.5% strain, 1Hz) of 5 mg/mL ASCP1, pH 9.0 solution with 0 mM, 40 mM and 160 mM NaCl at 25 °C.

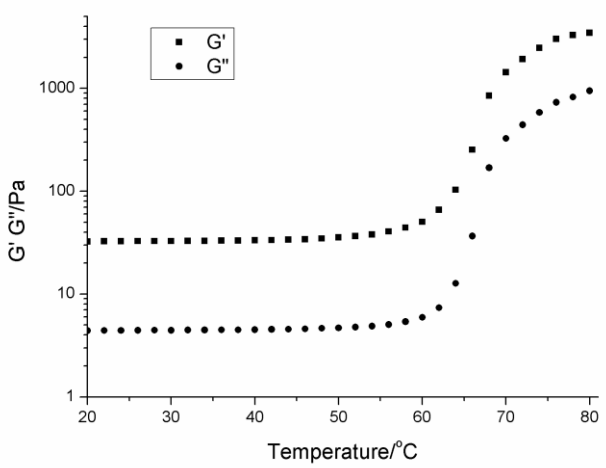

Fig. S5 Temperature-dependency (0.5% strain, 1 Hz) of the storage modulus (G') and loss modulus (G") for 5 mg/mL ASCP1 hydrogel. The results show that the storage modulus increases quickly after heating to higher temperature (>60 °C).