Supplementary Information (SI) for New Journal of Chemistry.

Cellulose nanocrystal reinforced thermal responsive dynamic hydrogel

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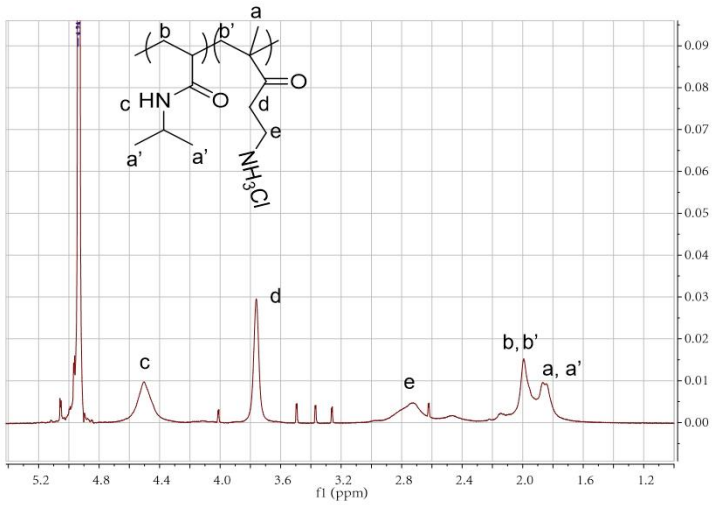

Fig. S1 ^{1}H NMR of PNIPAM-co-PAMAH copolymer

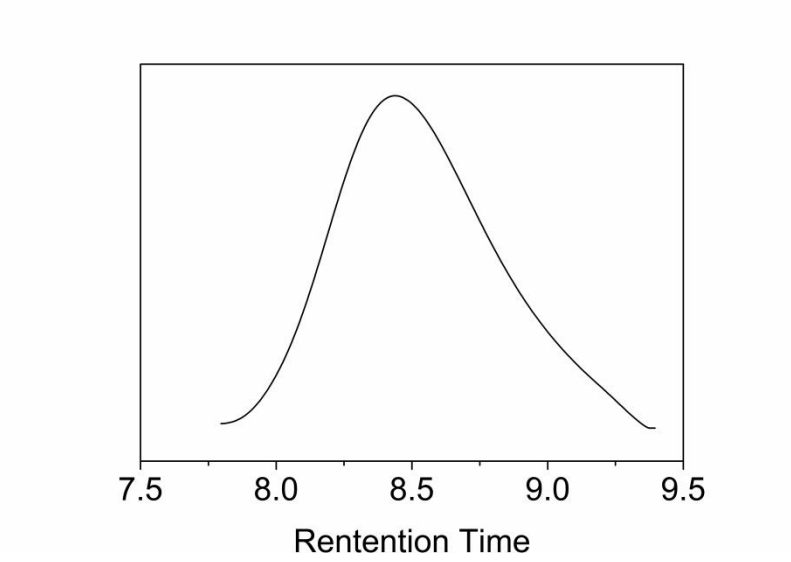

Fig. S2 SEC curve of PNIPAM-co-PAMAH copolymer

Table S1. Molecule weight of PNIPAM-co-PAMAH copolymer

Sample	M_n	M_w	$D=M_w/M_n$
PNIPAM-co-PAMAH	6153	8692	1.41

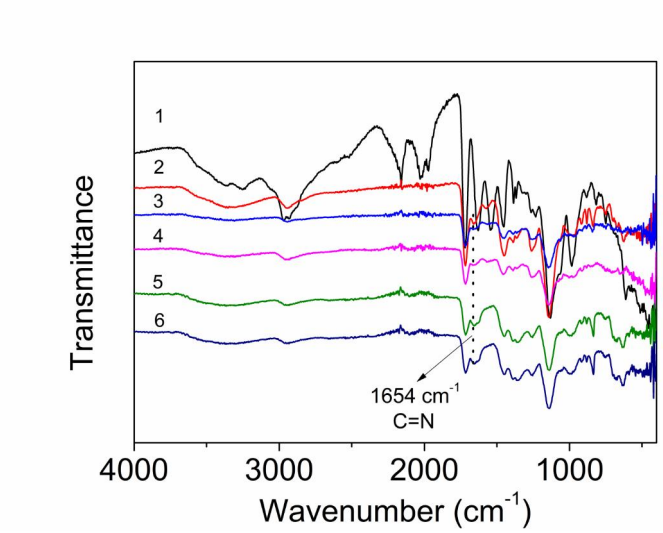

Fig. S3 FT-IR of PNIPAM-co-PAMAH (1), HG (2), HG-1.0wt% CNCs (3), HG-5.0wt% CNCs (4), HG-10.0wt% CNCs (5) and HG-100wt% CNCs (6)

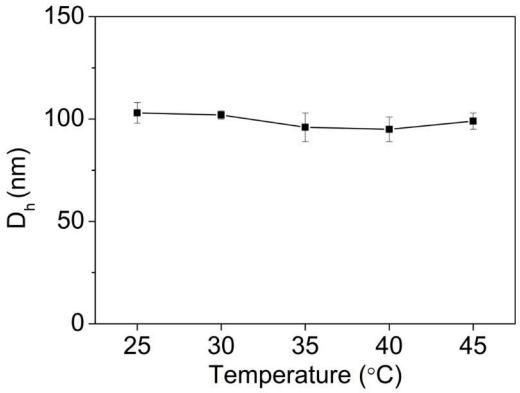

Fig. S4 Hydrodynamic diameter of CNCs (1.0 mg/mL) at different temperature

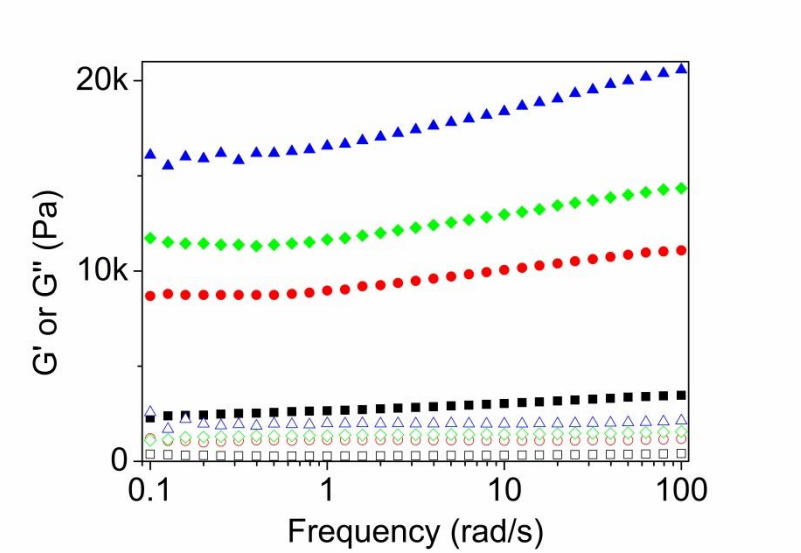

Fig. S5 A) Dynamic frequency sweeps for HG (black), HG-1.0wt% CNCs (red), HG-5.0wt% CNCs (green) and HG-10.0wt% CNCs (blue). The storage modulus, G', and loss modulus, G", are shown in close and open symbols, respectively.

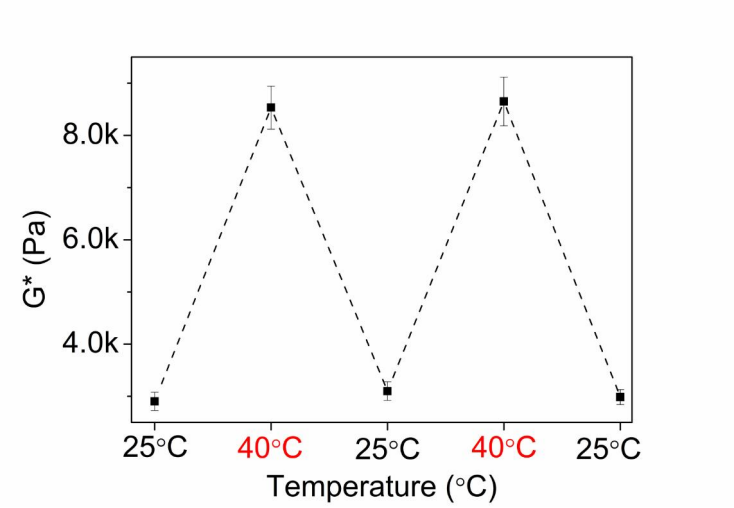

Fig. S6 Complex modulus of hydrogel at 25 °C and 40 °C from cycling experiment.

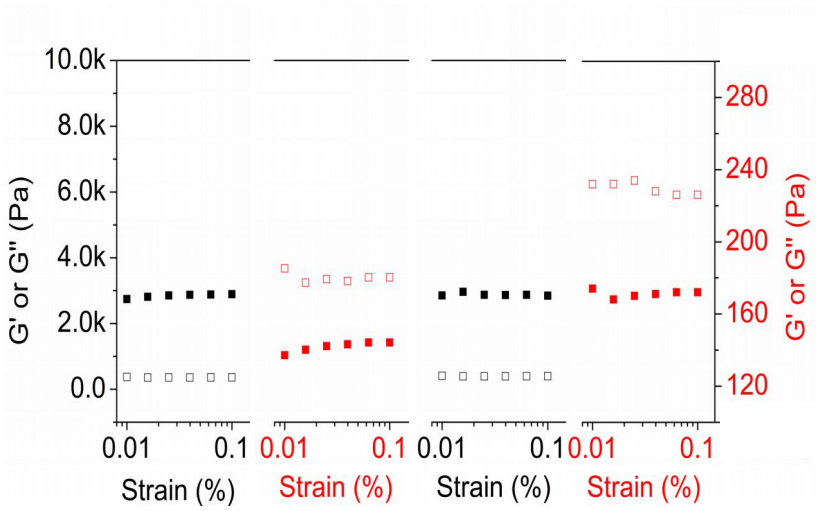

Fig. S7 Dynamic strain sweeps of HG at pH 7.0 (black) and 4.0 (red).

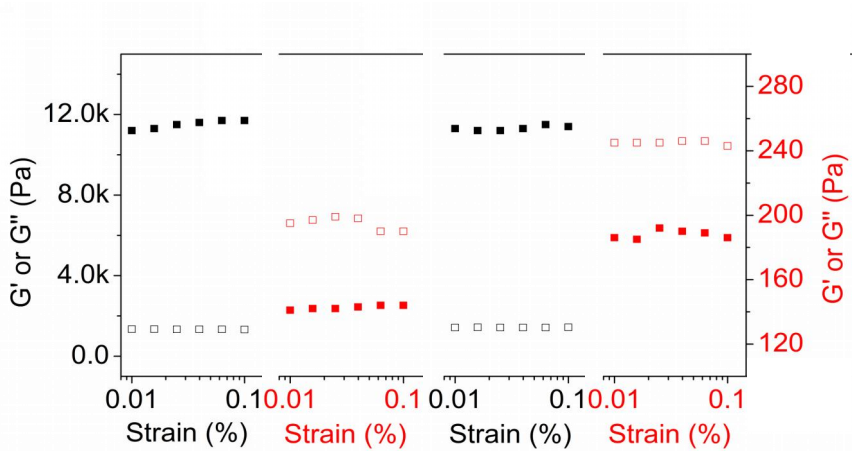

Fig. S8 Dynamic strain sweeps of HG with 1.0 wt% CNCs at pH 7.0 (black) and 4.0 (red).

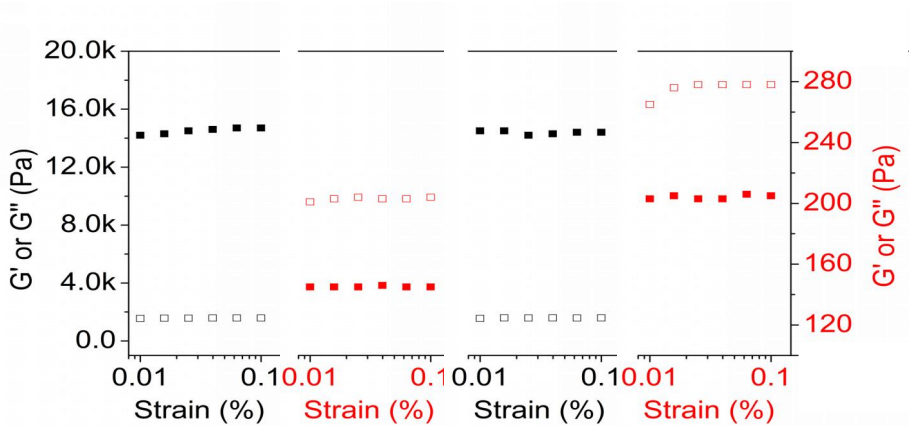

Fig. S9 Dynamic strain sweeps of HG with 5.0 wt% CNCs at pH 7.0 (black) and 4.0 (red).