Electroresponsive Homogeneous Polyelectrolyte Complex Hydrogels from Naturally Derived Polysaccharides

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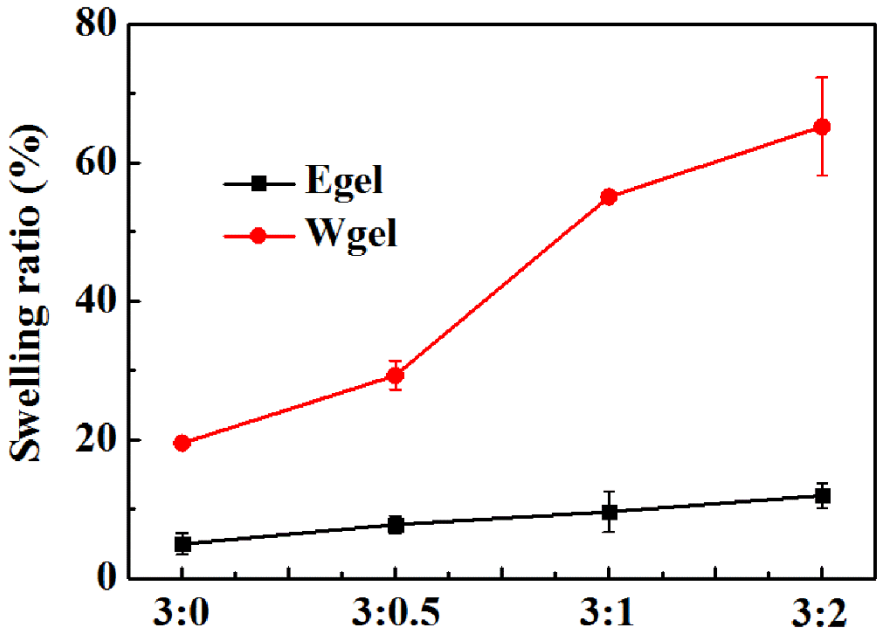

Figure S1. Swelling ratios of the original CHI/CMC polyelectrolyte hydrogels obtained from 70% ethanol solution (Egels) and deionized water (Wgels).

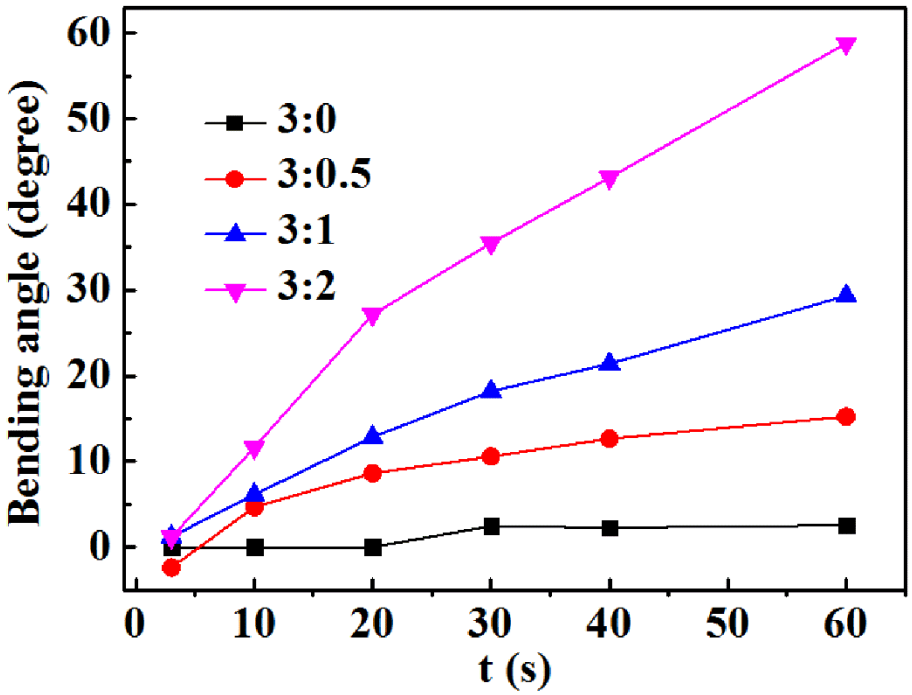

Figure S2. Time-dependence of bending angles for the hydrogel strips with different CHI/CMC weight ratios in 0.1M NaCl solution at the dc voltage of 18 V.

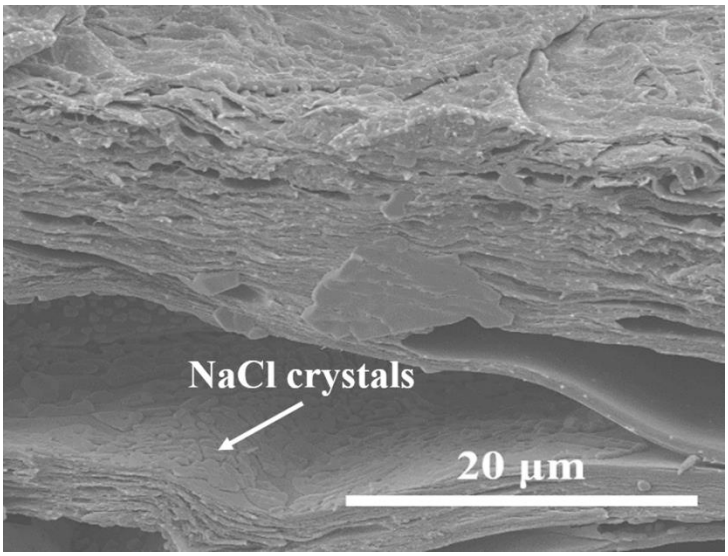

Figure S3. SEM image of cross-sectional structures of CHI/CMC hydrogel strip under the reversible dc electrical stimulus in 0.1M NaCl solution for 20 min. The existed NaCl crystals in the hydrogel matrix were indicated by arrow.

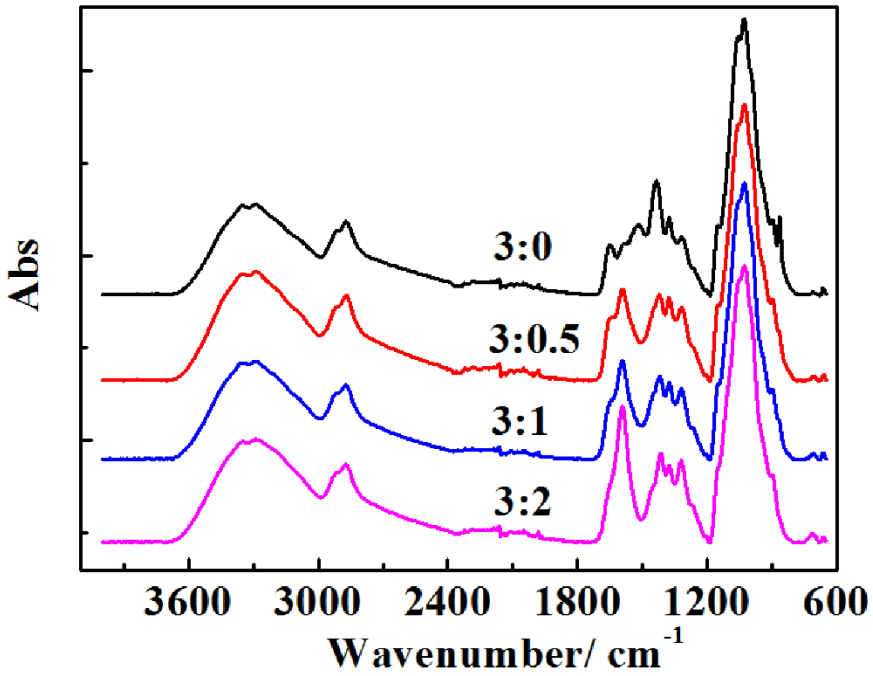

Figure S4. ATR-FTIR spectra of CHI/CMC polyelectrolyte hydrogel with different weight ratios.

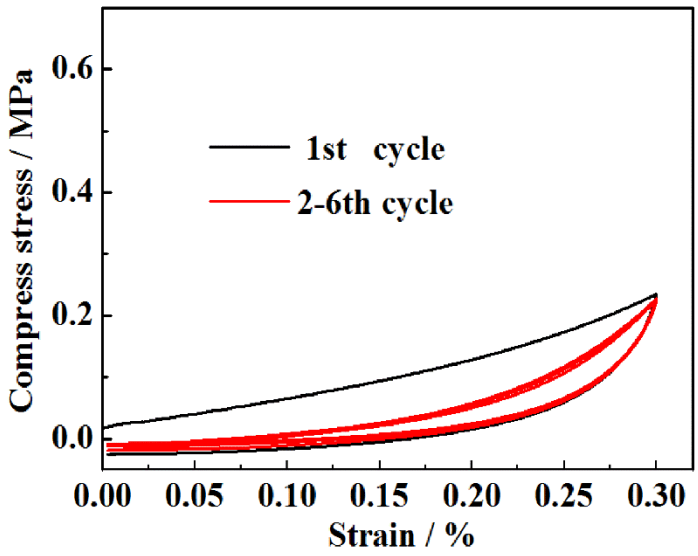

Figure S5. Representative loading-unloading compression curves (6 runs) of Egel with 30% maximum strain.

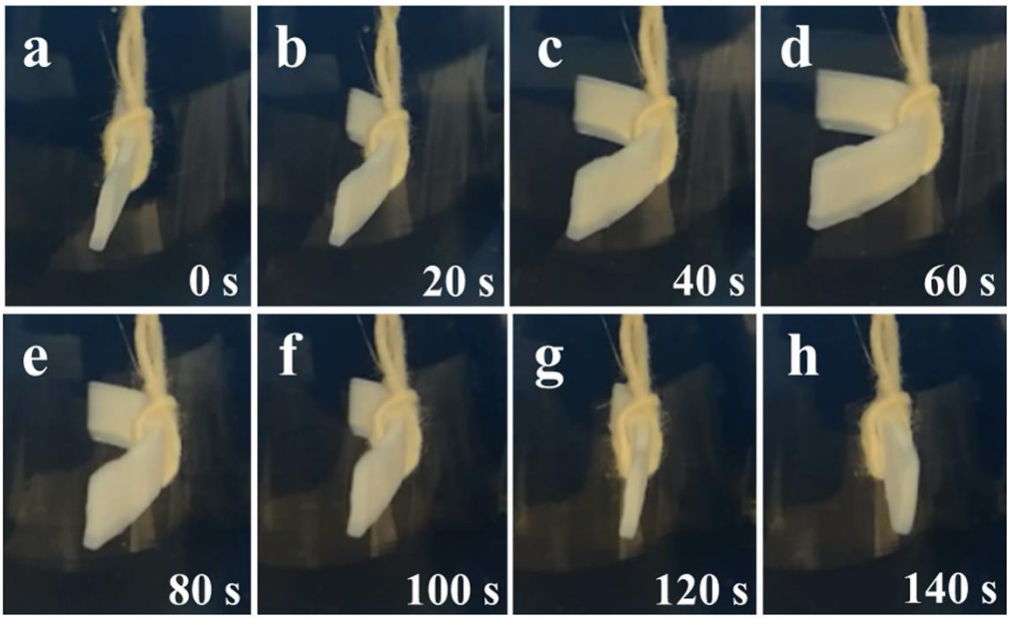

Figure S6. Reversible bending behaviors of CHI/CMC (3:2) polyelectrolyte hydrogel strip in 70% v/v ethanol aqueous solution with the NaCl concentration of 0.1 M at the dc voltage of 18 V.