Supplementary Information for:

Electromechanical Polyaniline /Cellulose Hydrogels with High Compressive Strength

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Experimental Section

Hydrogels without cross-linker were prepared and tested by using the same process and condition of crosslinking hydrogels. The same mass of PANI powder with hydrogels was added to 100 g of the mixture solution with NaOH/urea/H_2O ratio of 7:12:81 by weight, and then 4 mL ECH as cross-linker was added to the suspension solution, stirred at room temperature for 25 min to obtain a solution, and were centrifuged to obtain the wet powder, The wet powder was wash with alcohol and distilled water to remove superfluous epichlorohydrin and residue. The powder sample was dried under vacuum at 55^{o}C for 24 h to remove any moisture before use.

Characterization

Infrared spectra of pure polyaniline and polyaniline dealt with cross-linker were recorded with a Fourier transform infrared (FT-IR) spectrometer (Thermo Nicolet iS10).

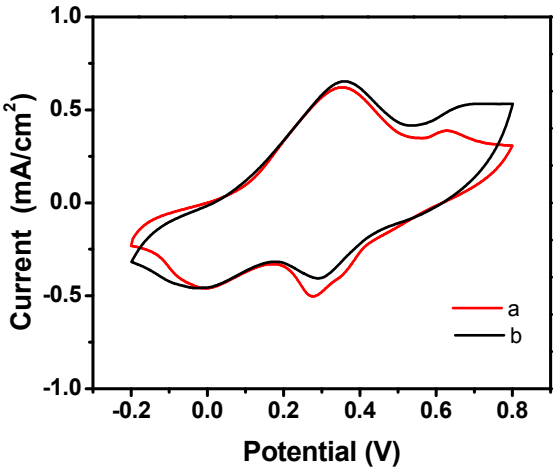

Figure S1. Cyclic voltammograms of H25 hydrogels (a) and PANI/cellulose hydrogels without the cross-linker (b) in 1 M H_2SO_4 solution, at a scan rate = 100 mVs^{-1}.

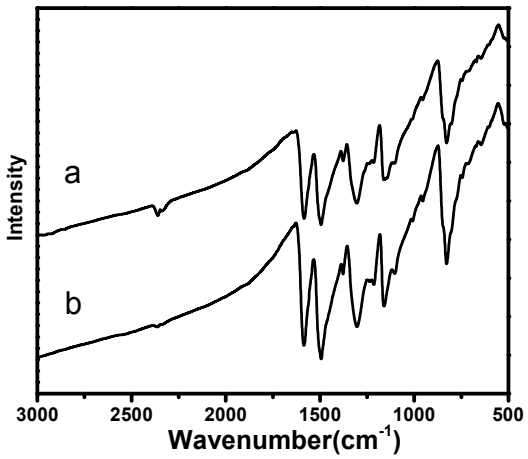

Figure S2. FT-IR spectra of pure PANI (a), and PANI dealt with cross-linker (b).