

Support information for

## Cellulose-Based Self-healing Hydrogel through Boronic Ester Bond with Excellent Biocompatibility and Conductivity

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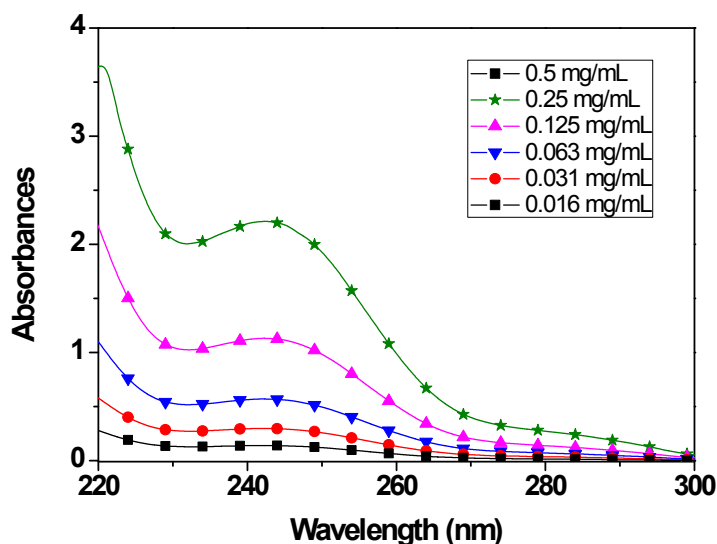


Figure S1. UV absorbance of CMC-B(OH)<sub>2</sub> at various concentrations.

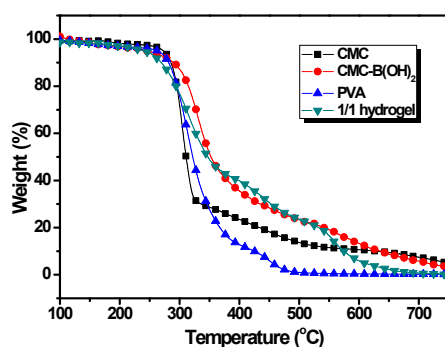
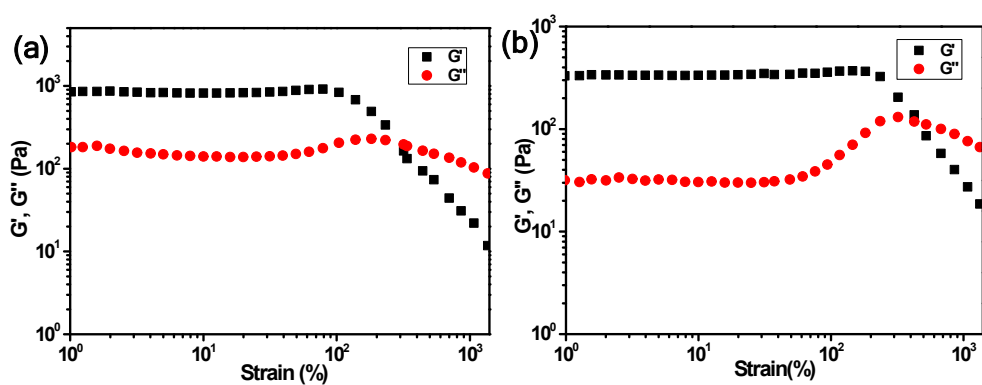
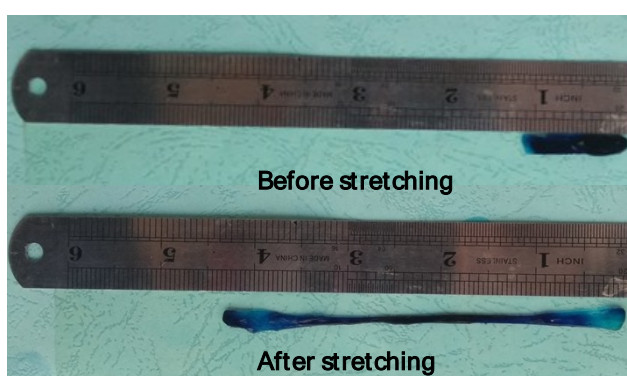


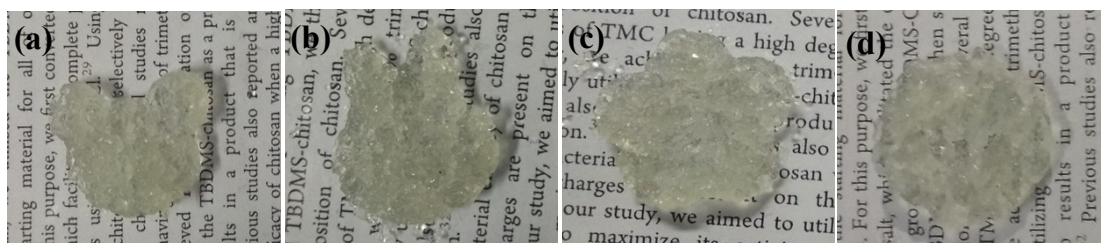
Figure S2. TGA curves of the hydrogel (2%) and its precursors.



**Figure S3.** The strain scan of the 2/1 hydrogels with (a) 2% and (b) 1% gelator concentration.



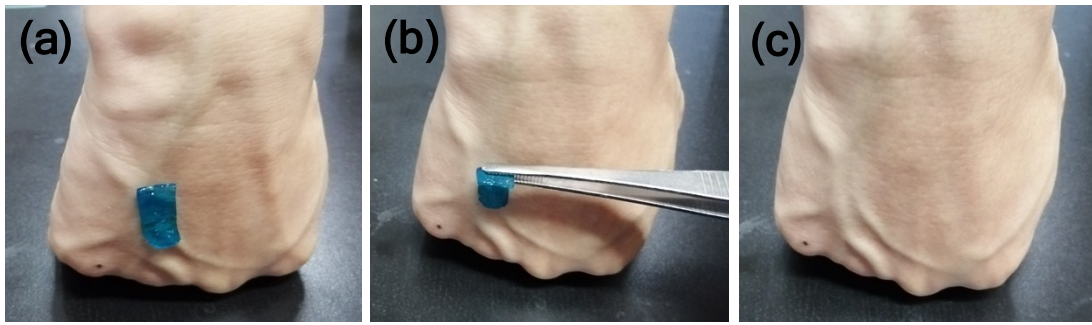
**Figure S4.** The comparison of the 2% hydrogel with 1/1 ratio before and after stretching.



**Figure S5.** Hydrogels self-healed from injected particles with various shapes for 10 min.



**Figure S6.** Phase separation of the hydrogel after addition of HCl.



**Figure S7.** The skin stuck hydrogel can attach onto the skin and removed easily without any residue.