

Supporting Information

Facile engineering of ECM-mimetic injectable dual crosslinking hydrogels with excellent mechanical resilience, tissue adhesion, and biocompatibility

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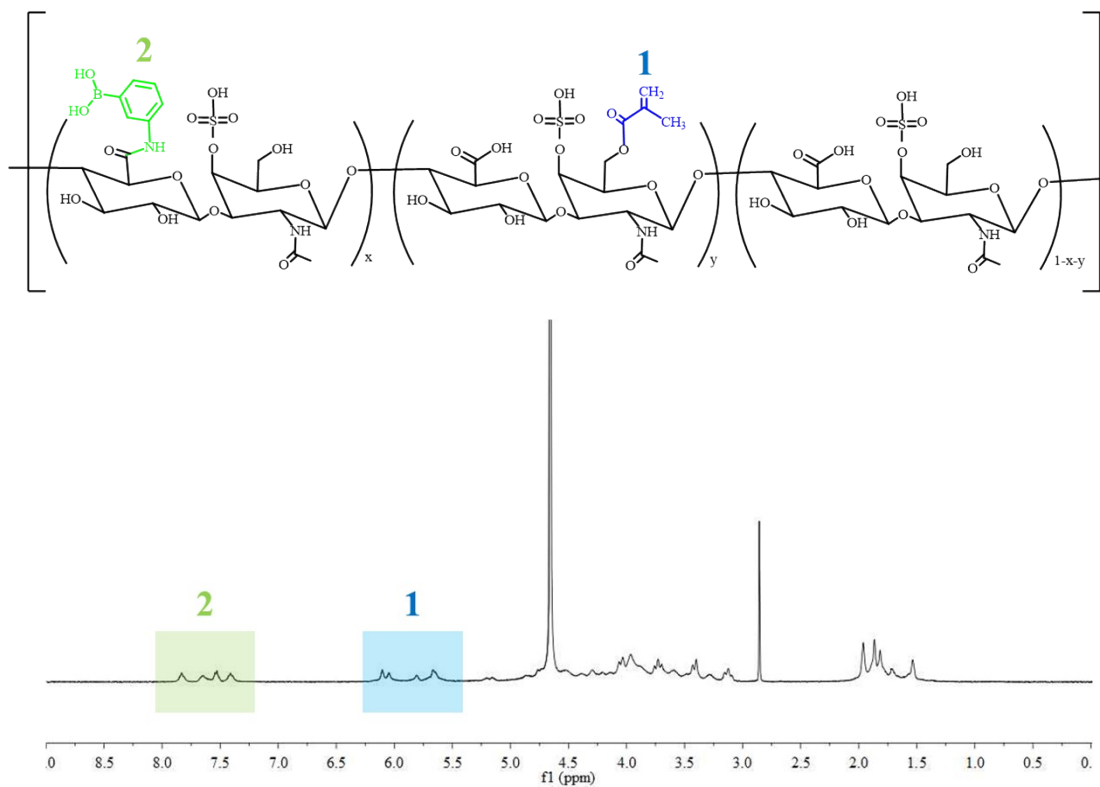


Figure S1. Chemical structure of CSMA-PBA and its ¹H NMR spectrum in D₂O.

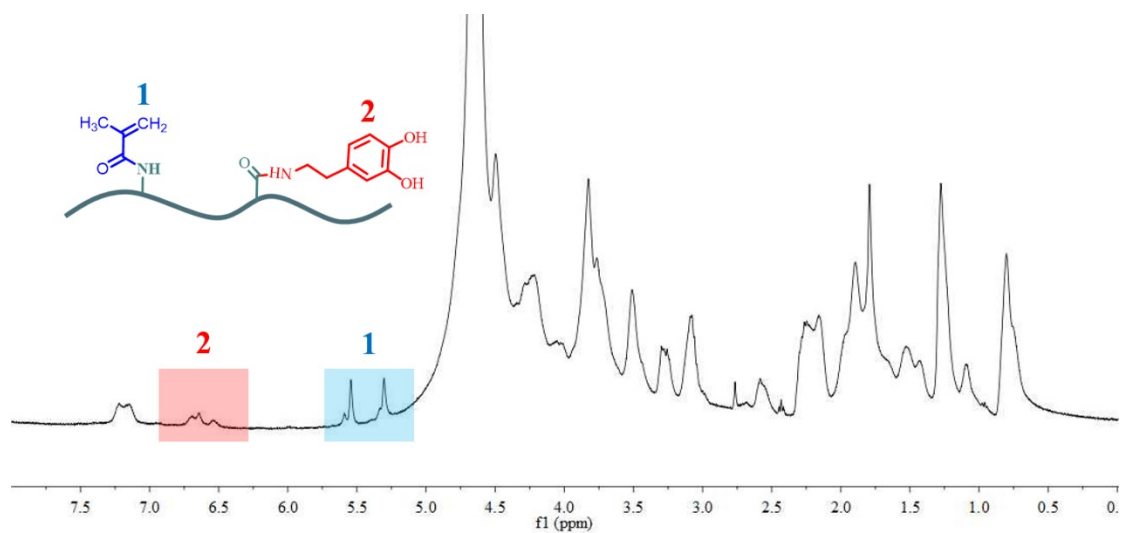


Figure S2. ¹H NMR spectrum of GelMA-DA in D₂O.

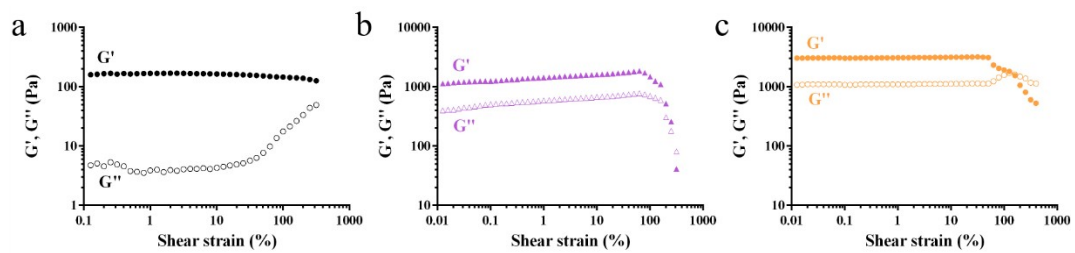


Figure S3. Oscillatory strain sweeps of in vitro formed DC (A) hydrogel crosslinked for 2 h (a), 10 h (b), and 24 h (c). G' represents storage modulus, G'' represents loss modulus.

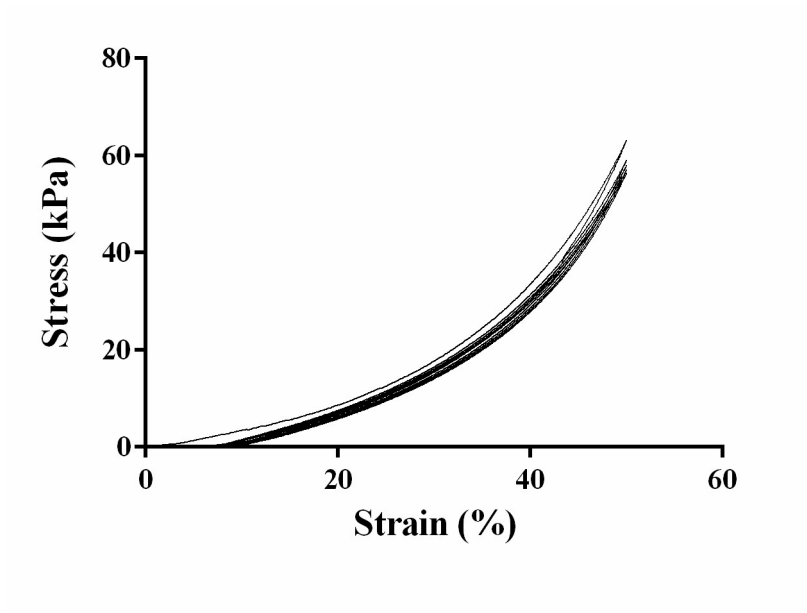


Figure S4. Cyclic compression profile of GelMA-CSMA hydrogel.

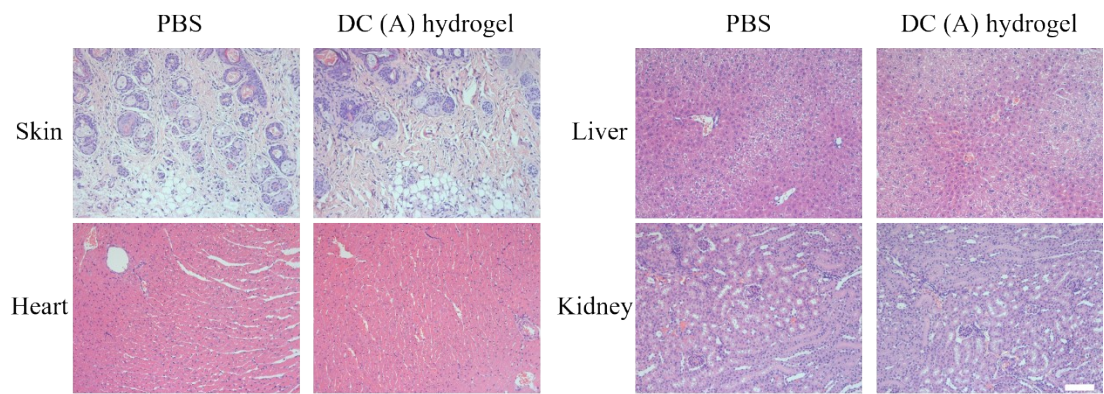


Figure S5. H&E staining of essential tissues (skin, heart, liver, and kidney) in each group (PBS and DC(A) hydrogel) (scale bar 20 μ m).

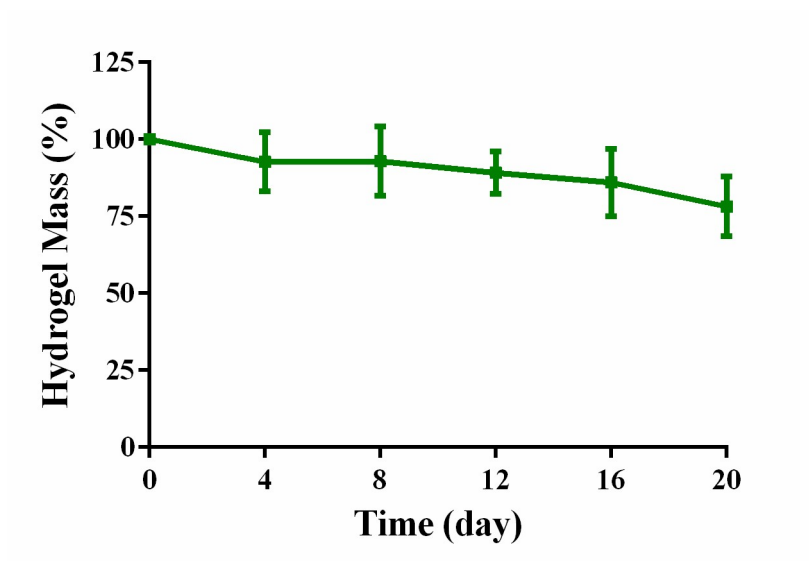


Figure S6. The degradation profile of DC (B) hydrogels (20 s photocrosslinking).

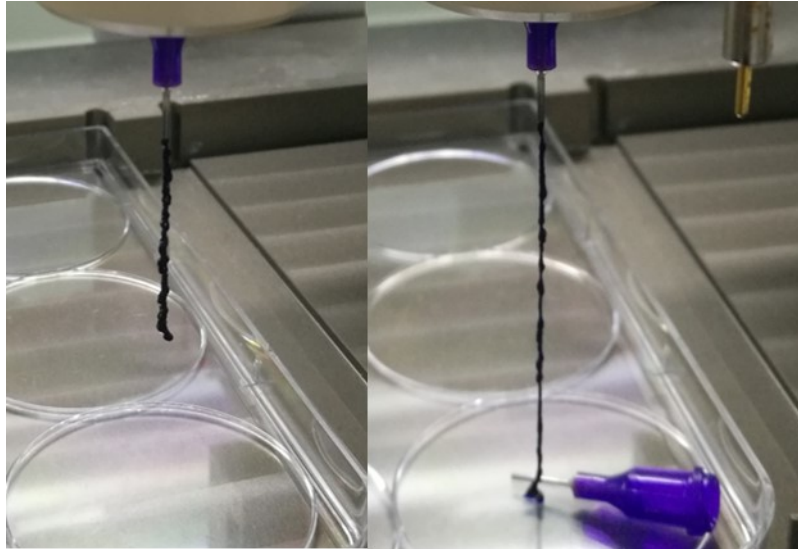


Figure S7. A stained DC (B) hydrogel (about 5 s photocrosslinking) was extruded from a commercial 3D printer and maintained its stretchability.

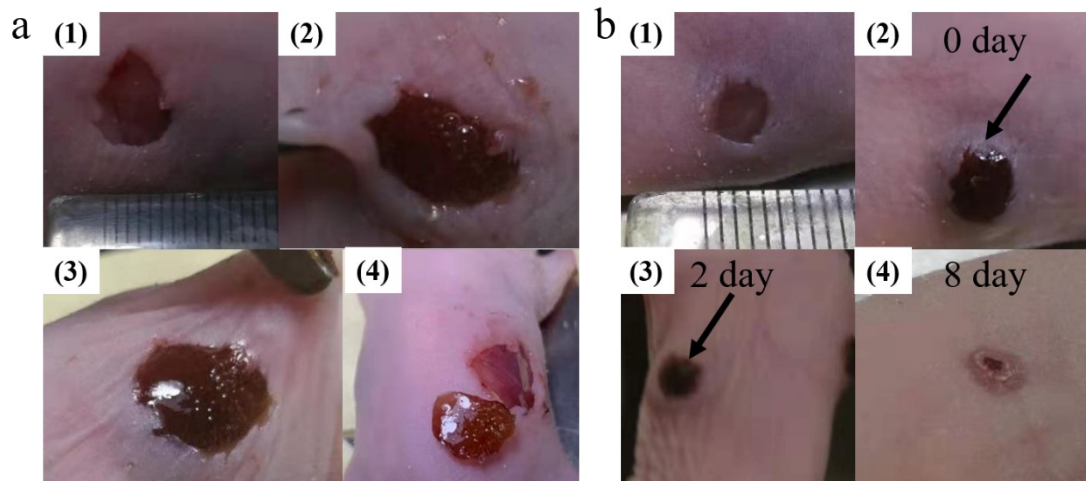


Figure S8. (a) (1) Representative photograph of macroscopic appearance of full thickness wound on the back of male nude mice. (2) DC (B) hydrogel precursors were extruded onto the wound surface. (3) In situ gelation within 20 s. (4) The formed hydrogel retained its shape after being dissected from the wound site. (b) Wound healing over time (arrowheads refer to the DC (B) hydrogels).