

Supplementary Information for

Bio-fabricated nanocomposite hydrogel with ROS scavenging and local oxygenation accelerates diabetic wounds healing

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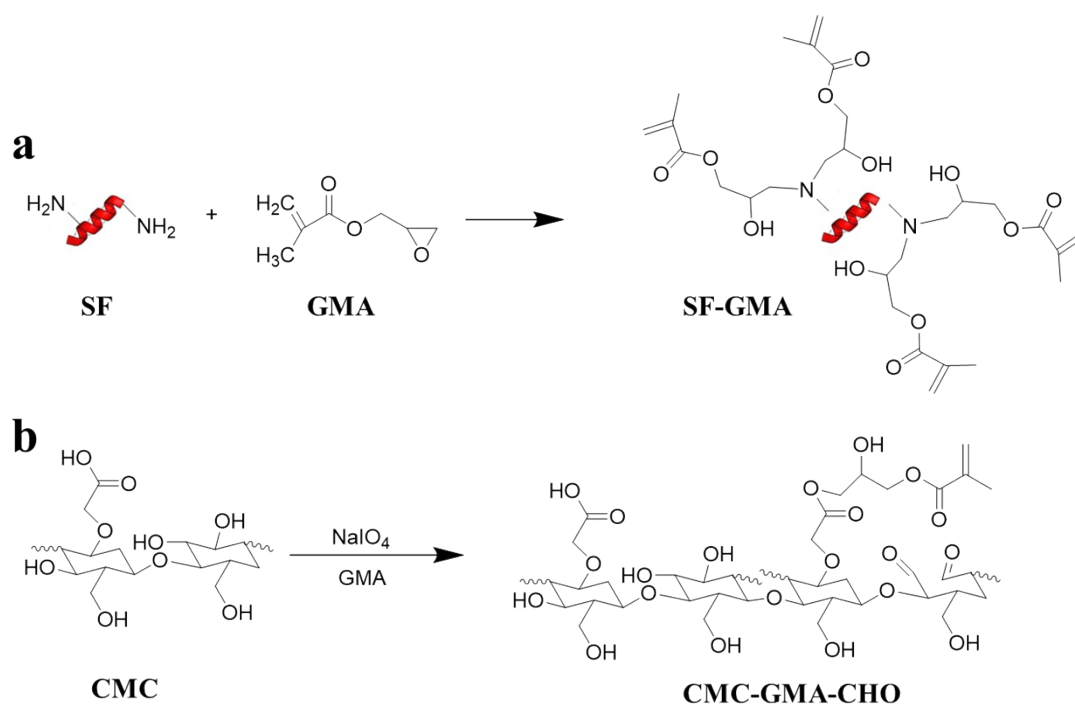


Figure S1. Reaction on SF and GMA leading to the formation of SF-GMA and the formation of CMC-GMA-CHO.

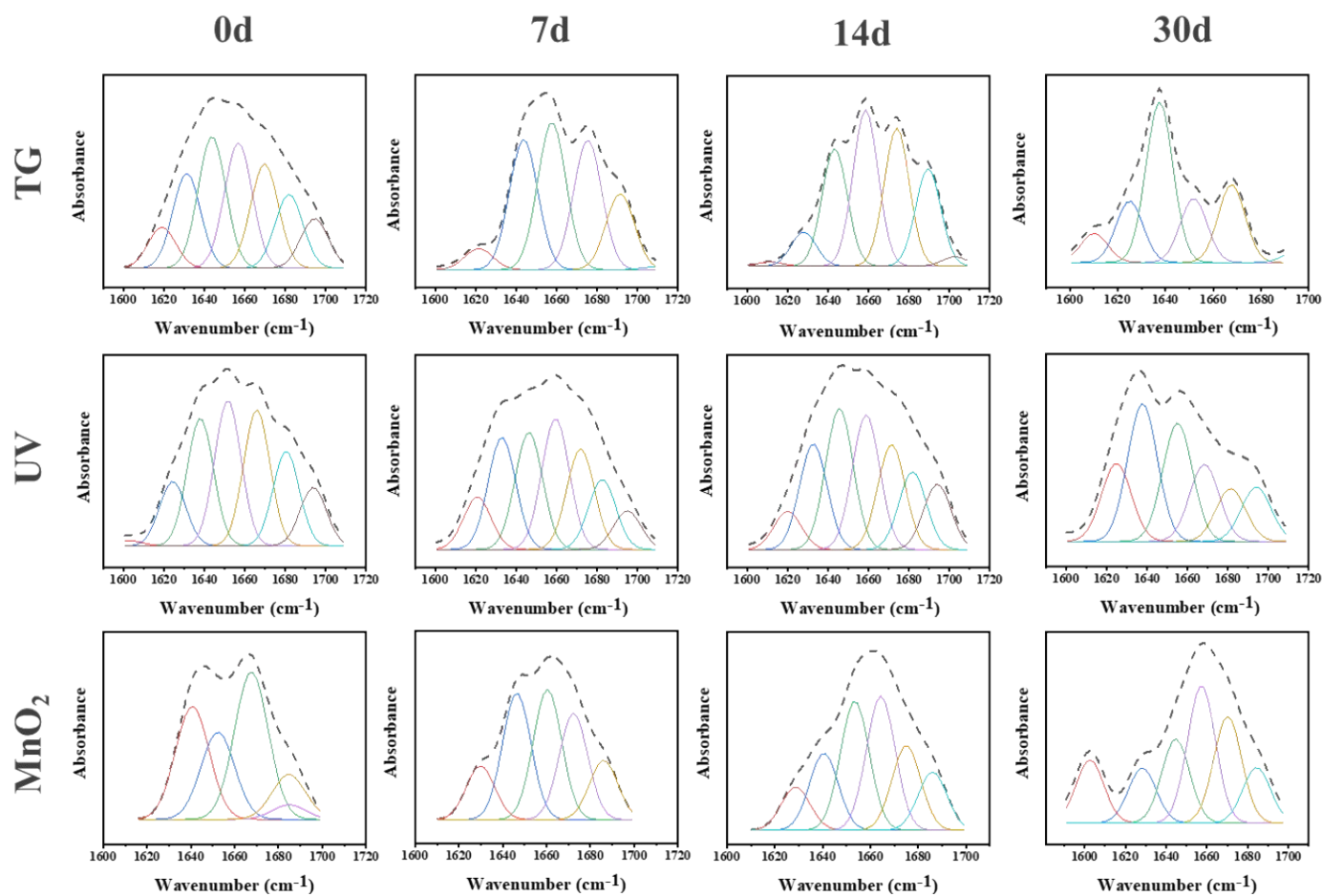


Figure S2. Secondary structures analysis of different freeze-dried hydrogel samples from amide I region of FTIR spectra. TG: SF/CMC hydrogels prepared only by enzymatic reaction; UV: SF/CMC hydrogels prepared by enzymatic reaction and UV-crosslinking reaction, MnO₂: SF/CMC@MnO₂ hydrogels prepared by enzymatic reaction and UV-crosslinking reaction.

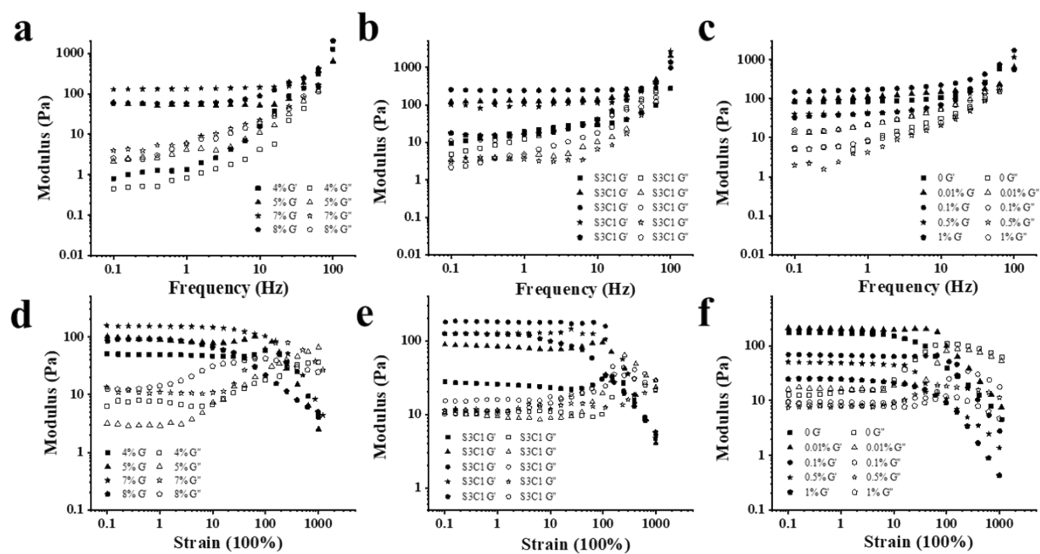


Figure S3. Rheological evaluation of SF/CMC and SF/CMC@MnO₂ hydrogels. Rheological properties of different hydrogel scaffolds SF/CMC and SF/CMC@MnO₂: Frequency scanning and stress strain scanning of: a, d) Different solid content; b, e) Different proportioning; c, f) Different content of nanosheets.

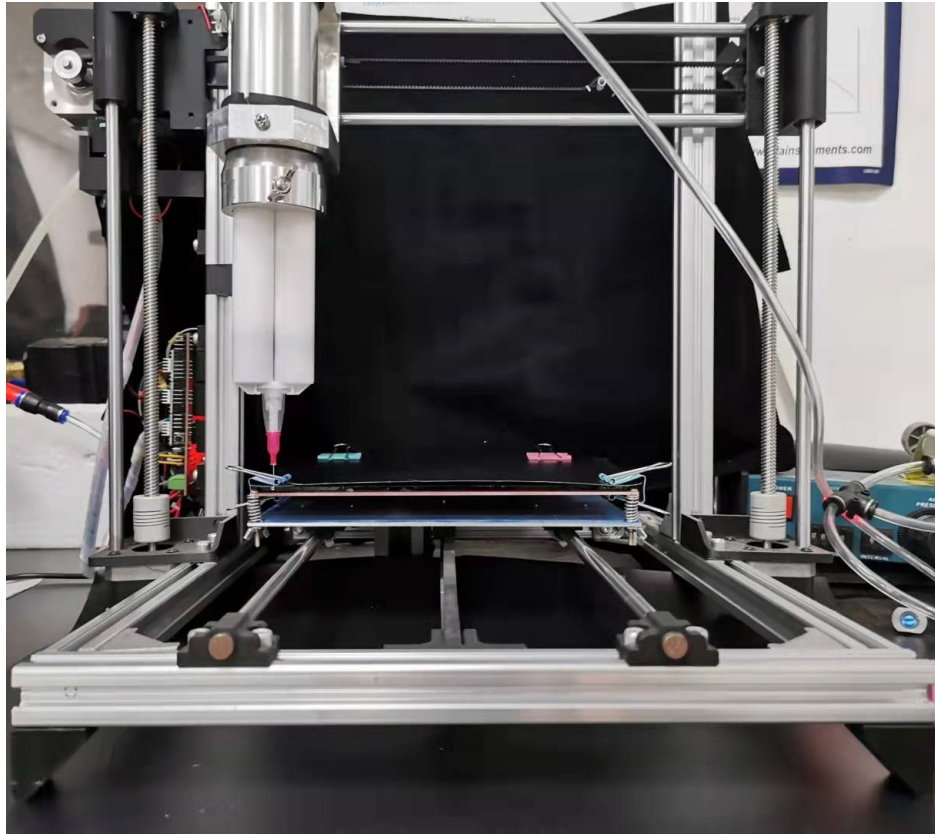


Figure S4. Image of 3D printer.

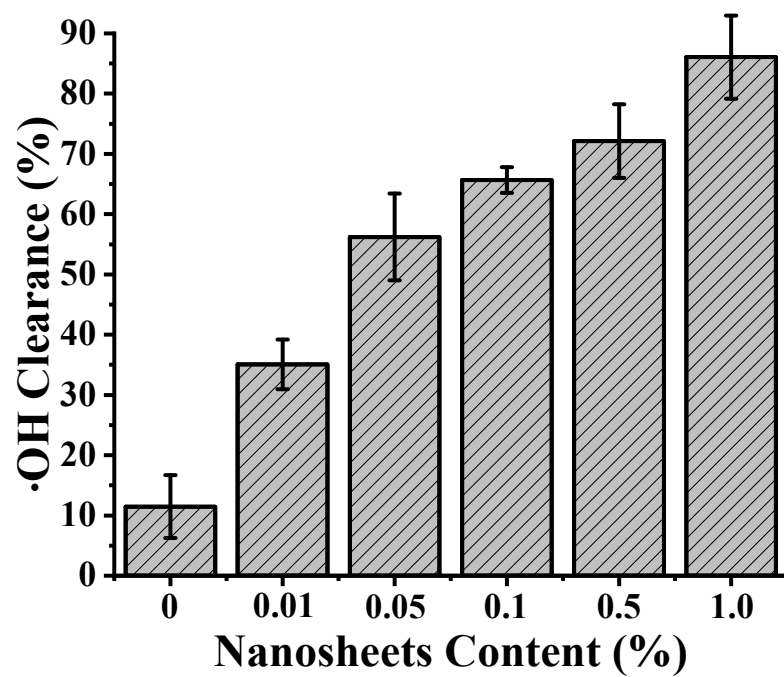


Figure S5. Display of clearance results of SF/CMC@MnO₂ hydrogels on hydroxyl radicals.

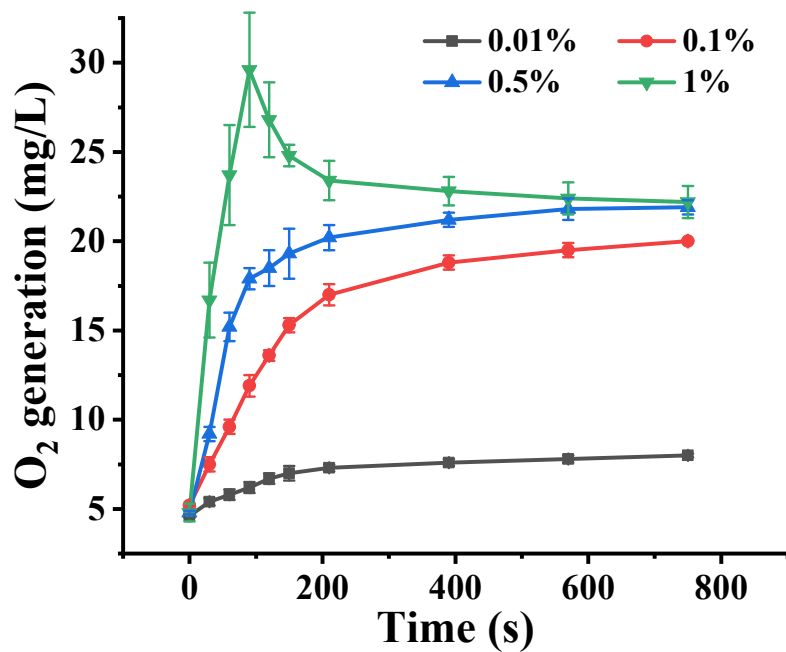


Figure S6. O₂ generation performance of the SF/CMC@MnO₂ hydrogels with different content of nanosheets.

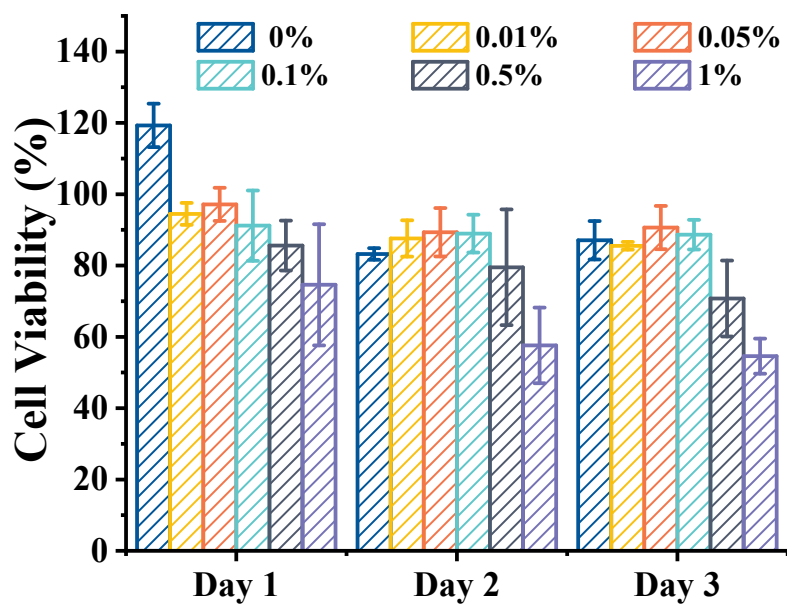


Figure S7. Evaluation of the cytocompatibility performance of hydrogels with different content of nanosheets.

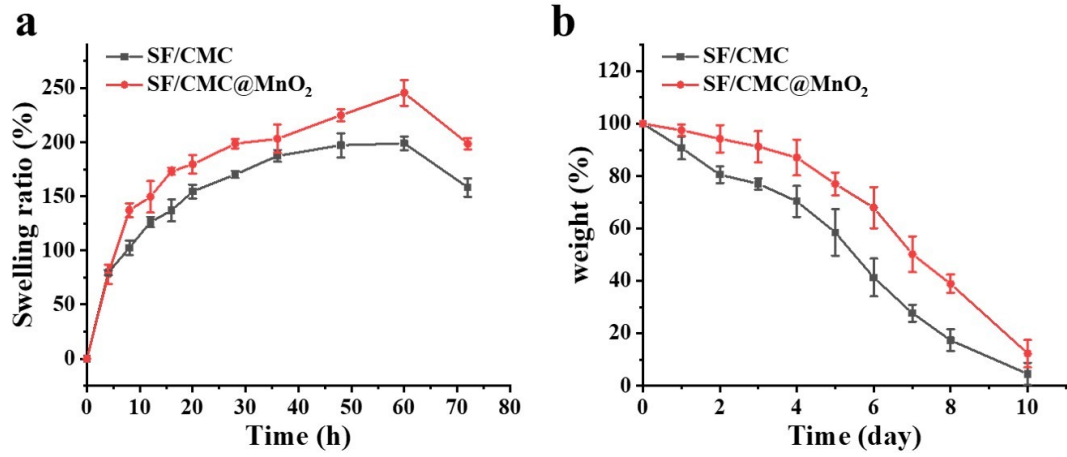


Figure S8. a) Swelling ratio of SF/CMC and SF/CMC@MnO₂ hydrogels; b) Degradation of SF/CMC and SF/CMC@MnO₂ hydrogels.