

Electronic Supplementary Materials for

## **Enzymatic Crosslinking to Fabricate Antioxidant Peptide-based Supramolecular Hydrogel for Improving Cutaneous Wound Healing**

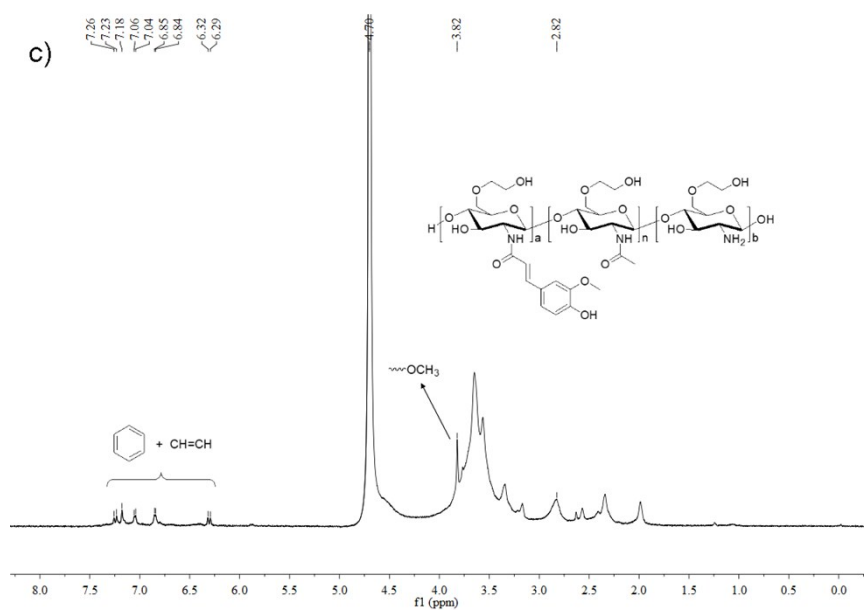
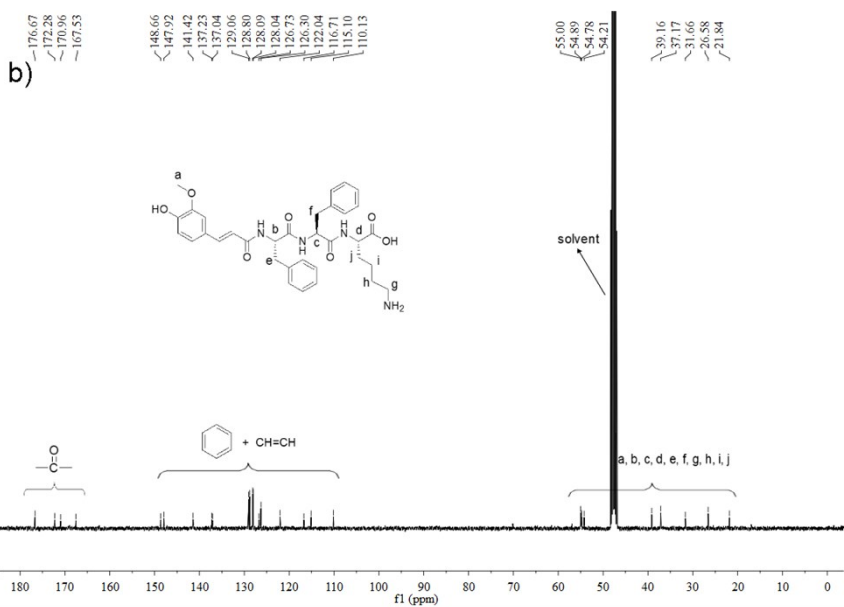
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### **1. Experimental section**

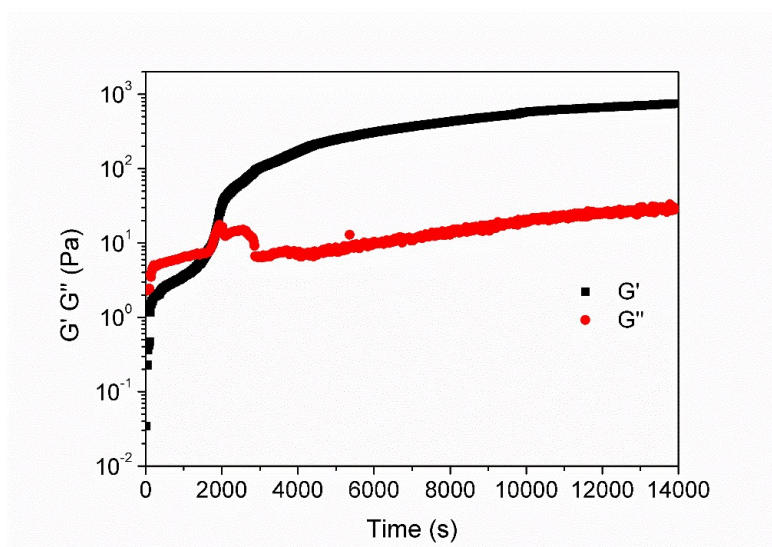
#### **The crosslinking ratio between FerFFK and GC-Fer**

In a control test, 10 mg FerFFK was dissolved in CD<sub>3</sub>OD with DMSO as internal standard substance. Then 1 mL FerFFK/GC gel (containing 10 mg FerFFK) was pestled and dispersed in NaOH(aq) (pH = 10). The resulting mixture was stirred violently for 4 hours and then filtered. The filtrate was centrifuged at 10000 rpm for 30 min and the supernatant was acidized by 1M HCl solution to pH 2-3. The white precipitate was obtained by centrifuging, then it was dried and dissolved in the same amount of CD<sub>3</sub>OD with the same amount of DMSO as internal standard substance compared to the control. Three parallel experiments were taken and the results were presented as mean values  $\pm$  Standard Deviation. The crosslinking ratio between FerFFK and GC-Fer was 86.6 %  $\pm$  3.1 %.

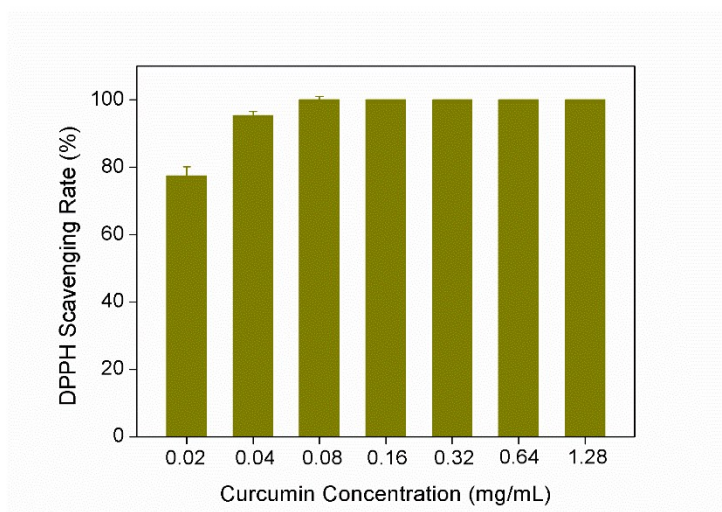
### **2. Figures**



**Fig. S1** (a)  $^1\text{H}$  NMR spectra (400 MHz) of FerFFK in  $\text{CD}_3\text{OD}$ . (b)  $^{13}\text{C}$  NMR spectra (100.6 MHz) of FerFFK in  $\text{CD}_3\text{OD}$ . (c)  $^1\text{H}$  NMR spectra (400 MHz) of GC-furoyl in  $\text{D}_2\text{O}$ .



**Fig. S2** Dynamic time sweep measurement at a constant strain of 0.1 % and a constant frequency of 1 Hz.



**Fig. S3** DPPH scavenging rate of FerFFK/GC gel at different concentrations. Error bars represent mean  $\pm$  s.d. (n=3).