

## **MoS<sub>2</sub>-Functionalized Chitosan Hydrogel with Antibacterial and Antioxidant Functions Promotes Healing of Infected Diabetic Wounds**

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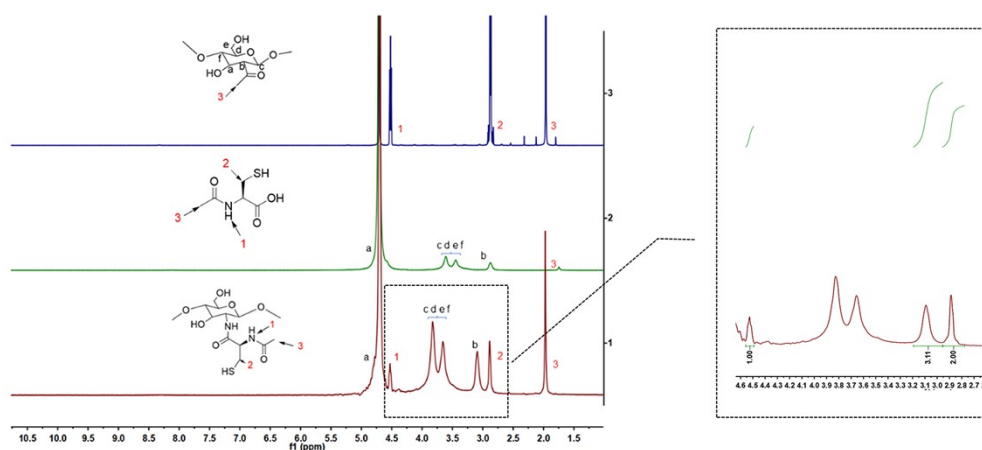
# These authors contributed equally to this work.

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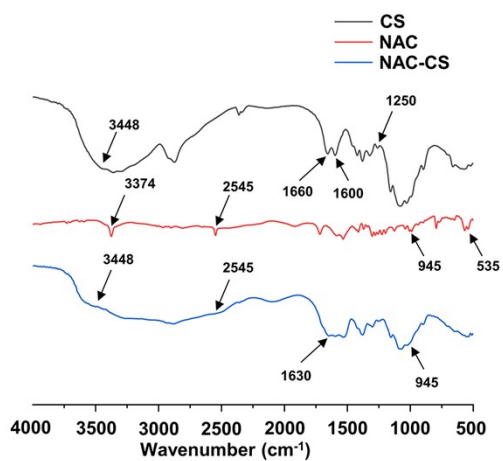
**Table S1.** Parameters of MoS<sub>2</sub>@Gel hydrogel samples.

Molar ratio of CHO/NH <sub>2</sub> (R) <sup>a</sup>	Mass of CHO and CS-MoS <sub>2</sub> (mg)		Solid content (S) [wt%]	Sample <sup>b</sup>
	CHO	CS-MoS <sub>2</sub>		
0.2	12.6	7.4	5	MoS <sub>2</sub> @Gel (R=0.2, S=5)
0.5	16.2	3.8		MoS <sub>2</sub> @Gel (R=0.5, S=5 )
1.0	17.9	2.1		MoS <sub>2</sub> @Gel (R=1.0, S=5)
0.2	18.9	11.1	7.5	MoS <sub>2</sub> @Gel (R=0.2, S=7.5 )
0.5	24.3	5.7		MoS <sub>2</sub> @Gel (R=0.5, S=7.5)
1.0	26.8	3.2		MoS <sub>2</sub> @Gel (R=1.0,S=7.5 )
0.2	25.2	14.8	10	MoS <sub>2</sub> @Gel (R=0.2, S=10)
0.5	32.4	7.6		MoS <sub>2</sub> @Gel (R=0.5, S=10)
1.0	35.8	4.2		MoS <sub>2</sub> @Gel (R=1.0, S=10)

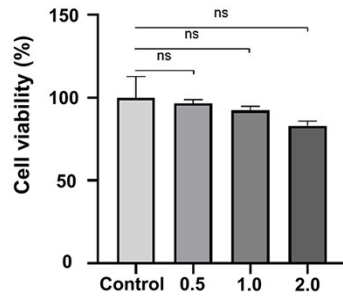
a. Molar ratio of CHO/NH<sub>2</sub> was calculated based on <sup>1</sup>H NMR of POSS-PEG-CHO and CS-MoS<sub>2</sub>, there are 0.47 mmol CHO in 1 g POSS-PEG-CHO and 4.0 mmol NH<sub>2</sub> in 1 g CS-MoS<sub>2</sub>. b. The hydrogels with MoS<sub>2</sub> concentration of 1.0 mg/mL were selected for physicochemical characterization.



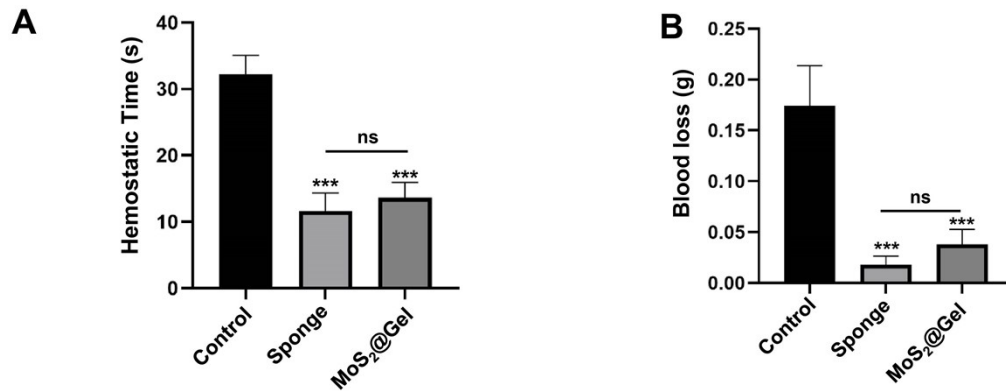
**Figure S1.**  $^1\text{H}$  NMR spectra of NAC-CS and its precursors.



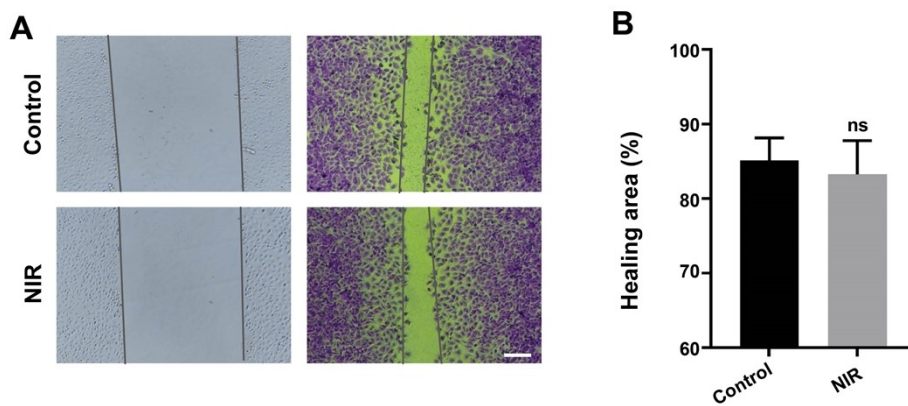
**Figure S2.** FTIR spectra of NAC-CS and its precursors.



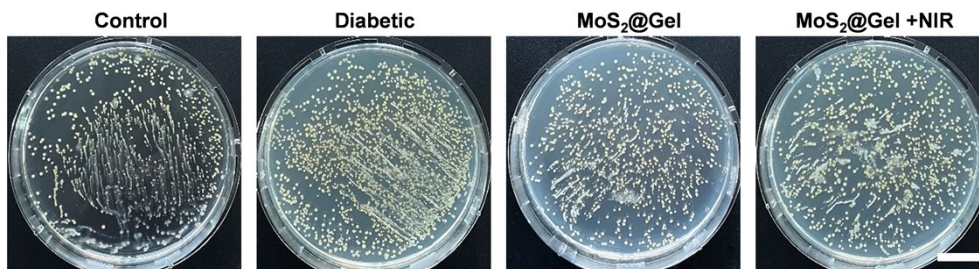
**Figure S3.** Cell viability at different nanosheet concentrations.



**Figure S4:** (A) Hemostasis time statistics. (B) Blood loss statistics. Error bars indicated means  $\pm$  SD.\*\*\* $p < 0.005$ .



**Figure S5:** (A) Cell migration image under NIR (or Natural light) illumination (The Scale bar: 50  $\mu$ m). (B) Statistical analysis of Cell migration under NIR (or Natural light) illumination.



**Figure S6:** Bacterial plate images of mouse wounds (The Scale bar: 10 mm).

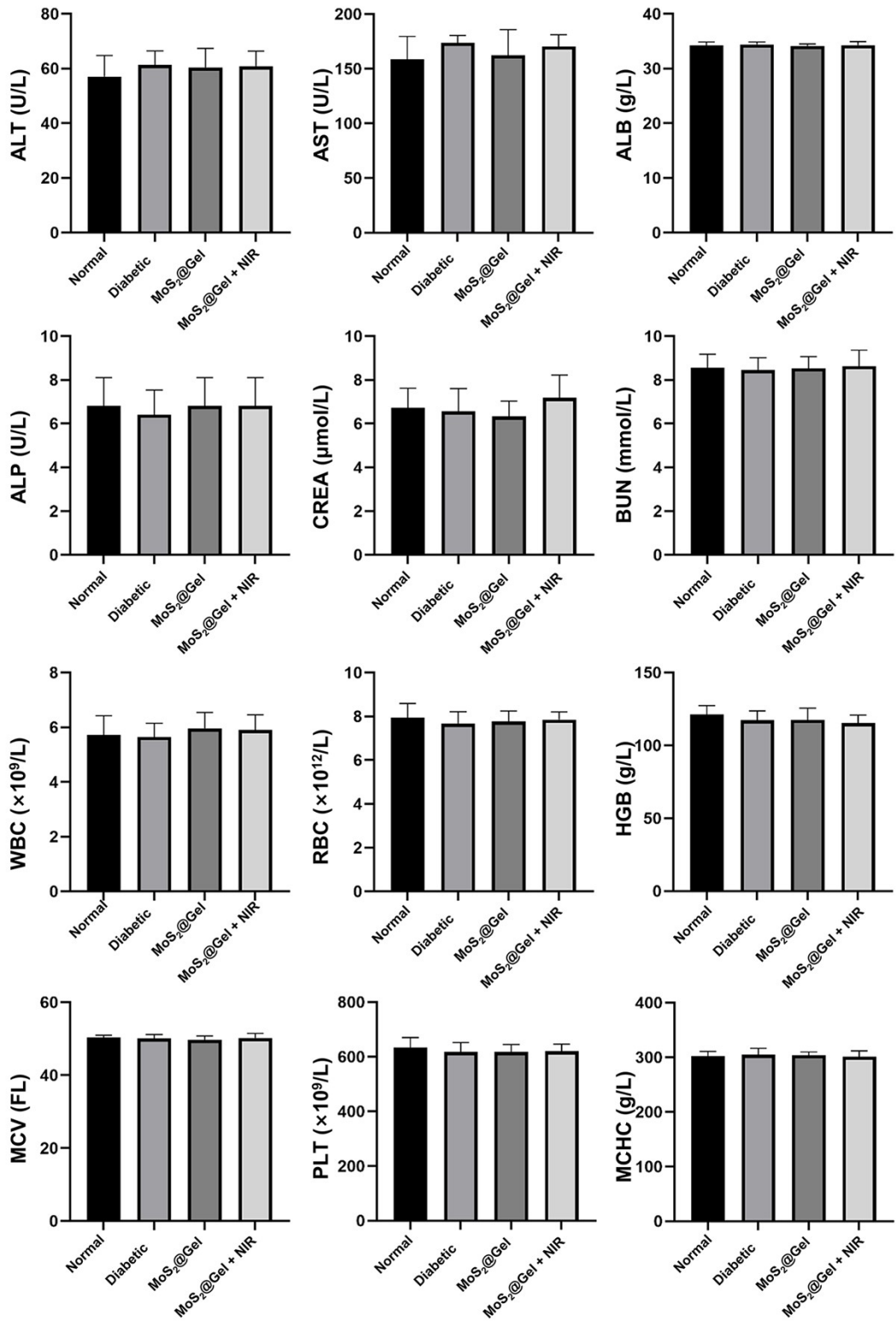
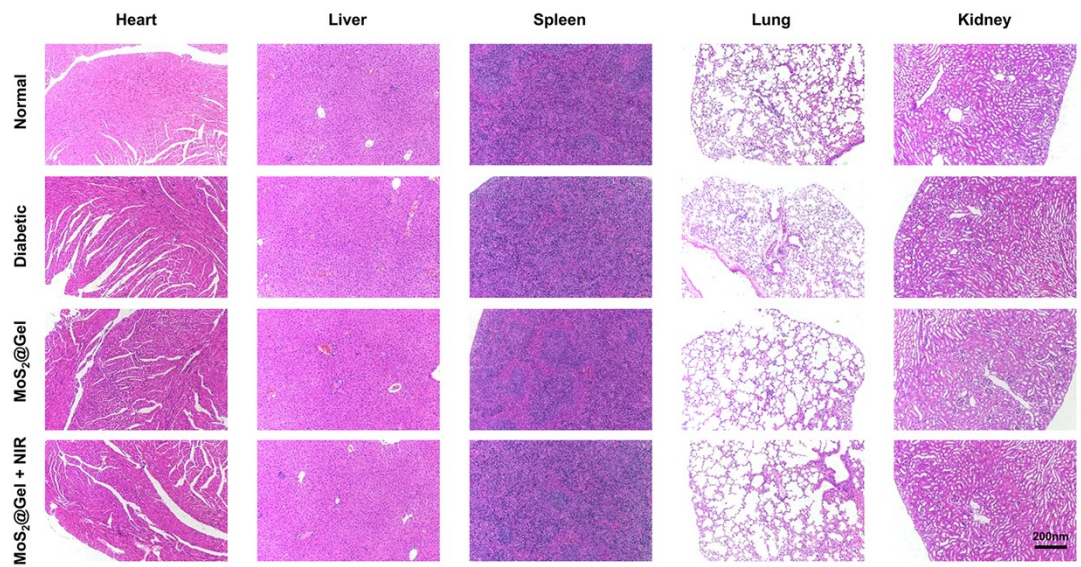


Figure S7. Mouse blood sample analysis.



**Figure S8.** H&E staining results for main organs.