Electronic Supplementary Material (ESI) for Biomaterials Science.

Electronic Supplementary Information

Sea Urchin-like Bi_2S_3/Curcumin Heterojunction Rapidly Kills Bacteria and Promotes Wound Healing under Near-Infrared Light

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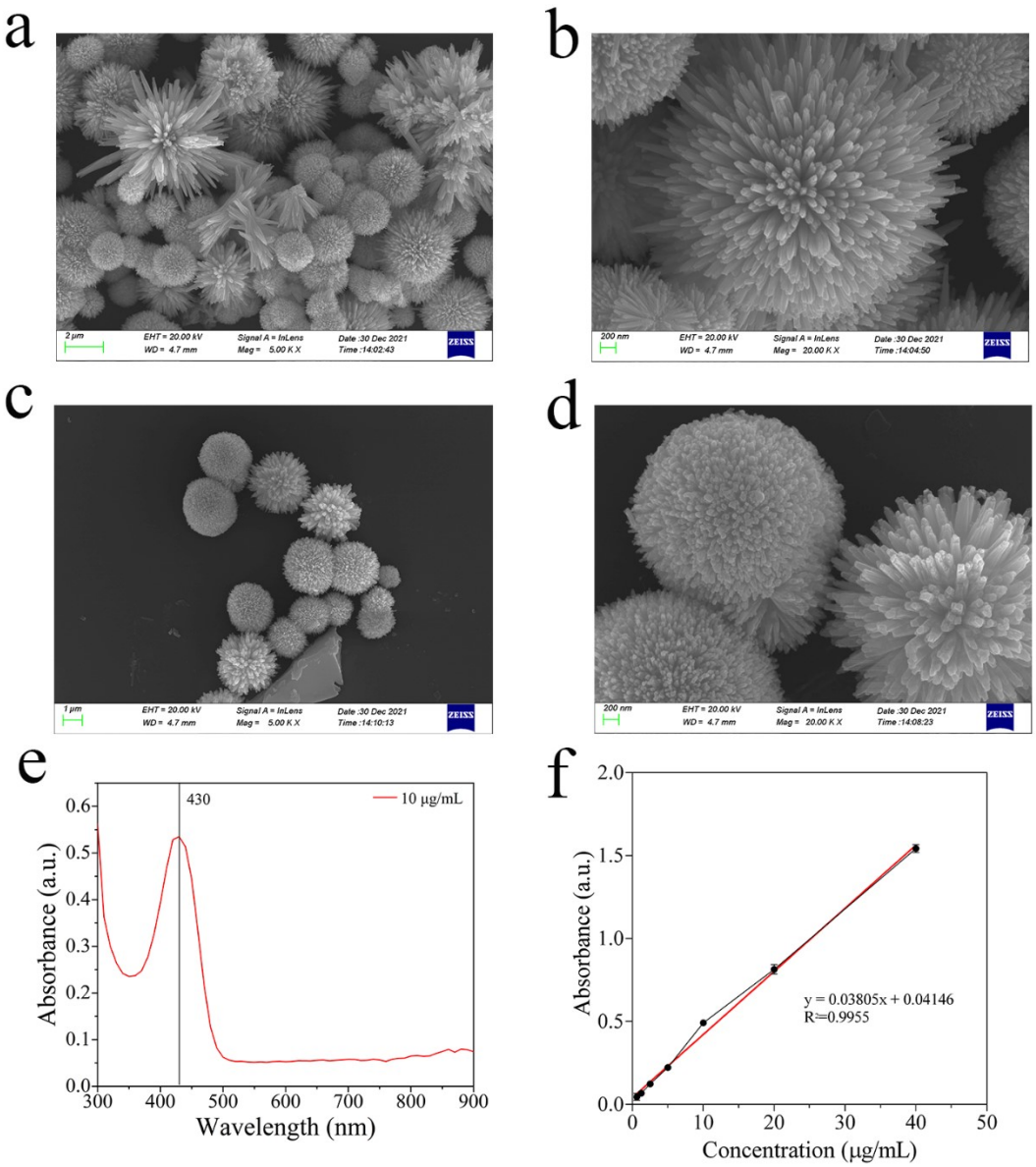

Fig. S1 Morphology of synthetic sample. (a,b) Sea urchin-like Bi_2S_3/Cur (a) and high magnification SEM images (b). (c,d) Sea urchin-like Bi_2S_3 morphology (c) and high magnification SEM image (d). (e) Absorption (300-900 nm) of 10 μg/mL Cur dissolved in ethanol. (f)The standard curve of Cur in ethanol solution.

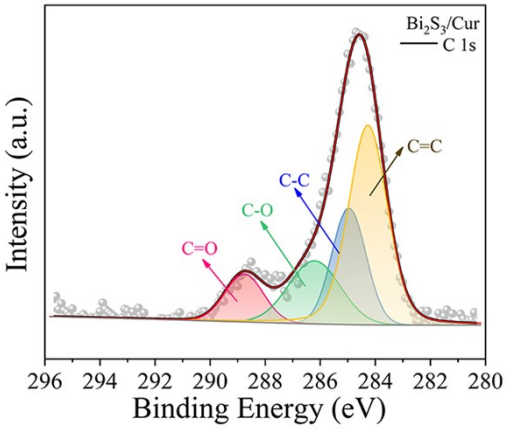

Fig. S2 XPS spectrum of C1s of Bi_2S_3/Cur.

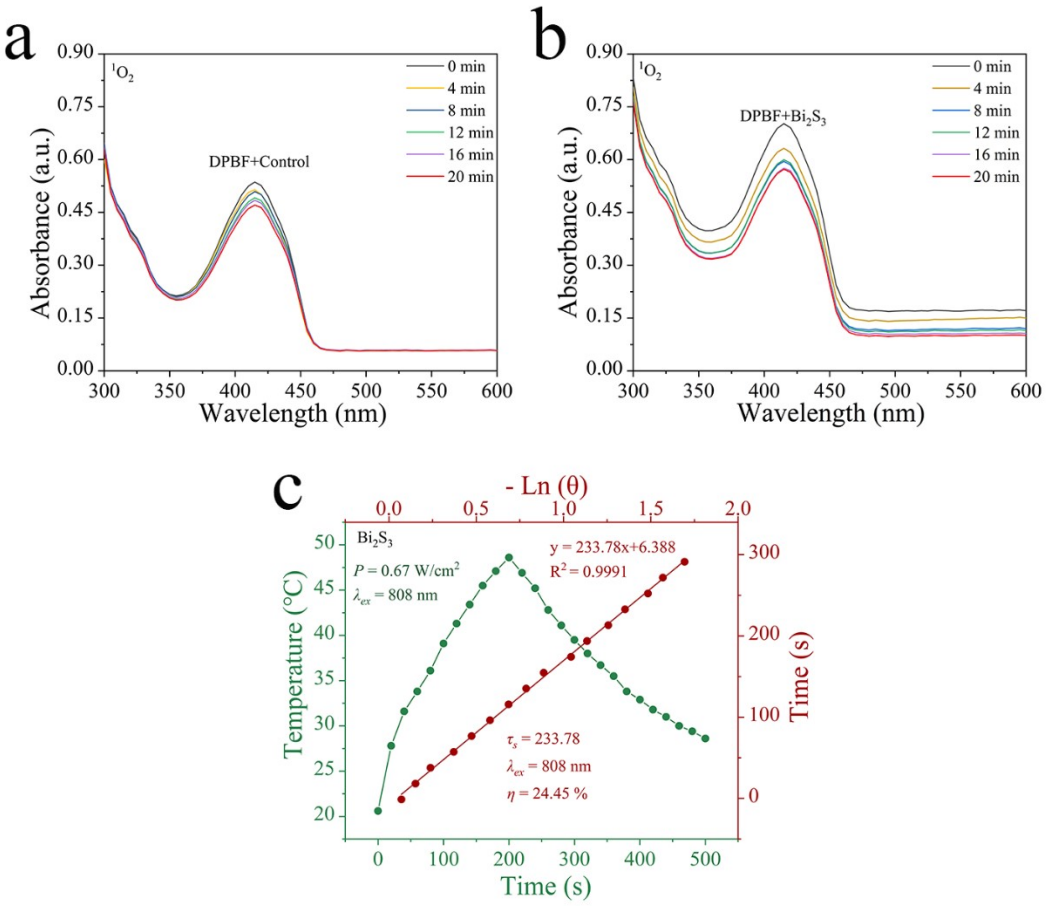

Fig. S3 The $^1O_2$ produced by the control (a) and Bi_2S_3 (b) was detected by DPBF under 808 nm light irradiation. (c) Calculate the photothermal conversion efficiency (η) of Bi_2S_3 at 808 nm. Green line: heating and cooling curves of Bi_2S_3 in a specific period of time. Brown line: The time constant τ_s of the cooling cycle is calculated using linear time data.

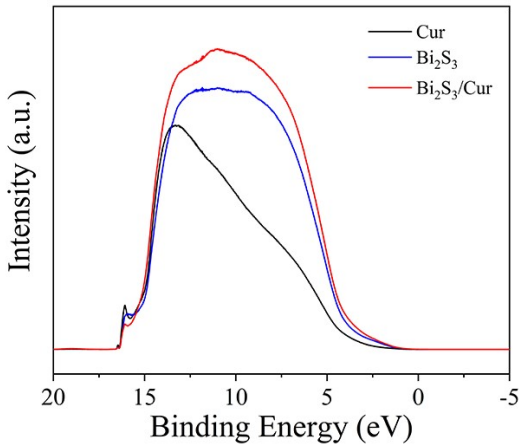

Fig. S4 UPS spectra of Cur, Bi_2S_3 and Bi_2S_3/Cur.

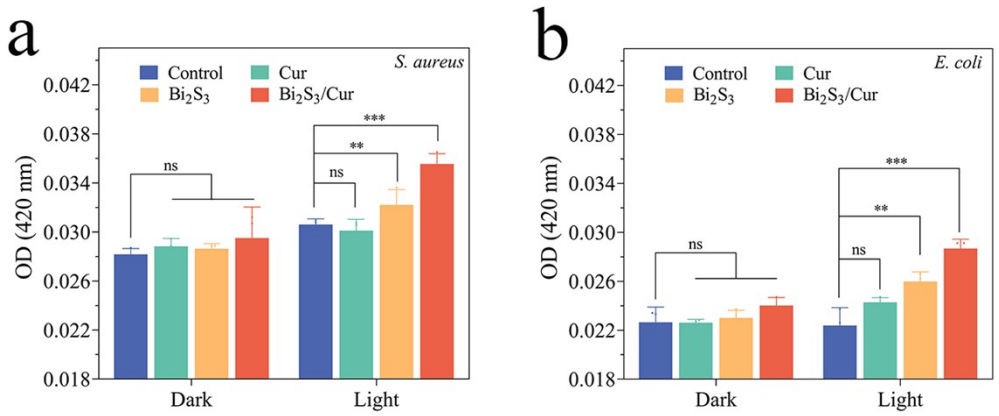

Fig. S5 Detection of membrane permeability of *S. aureus* (a) and *E. coli* (b) by ONPG.

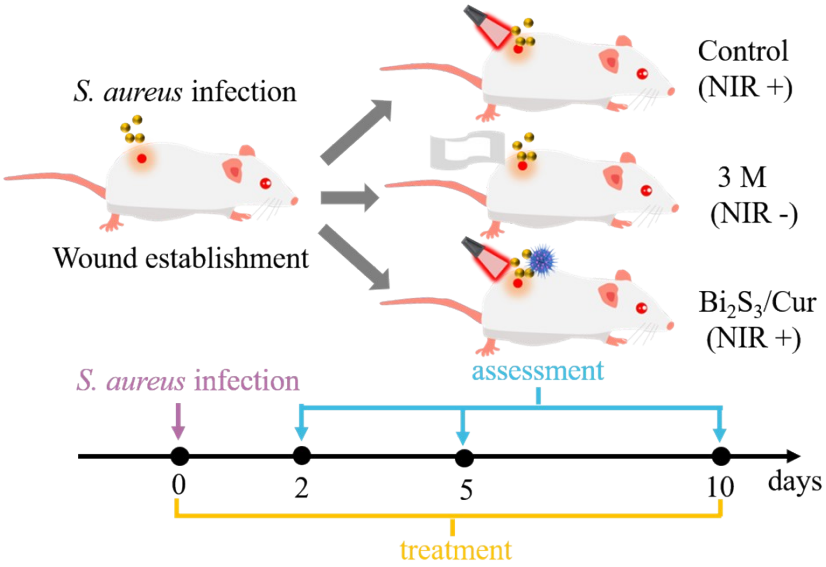

Fig. S6 Diagram of the experimental design for testing the antibacterial effect of Bi_2S_3/Cur *in vivo*.