

## Supporting Information

### Fluorescent Imaging and Precise Suppression of Bacterial Infection in Chronic Wounds by Porphyrin-Based Metal-Organic Framework Nanorod

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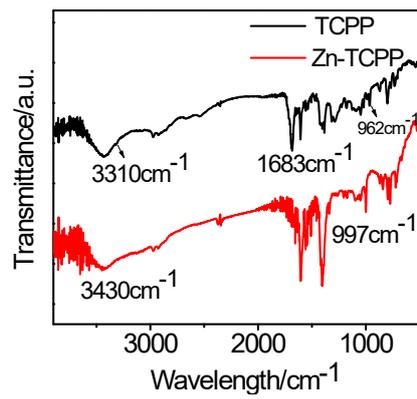
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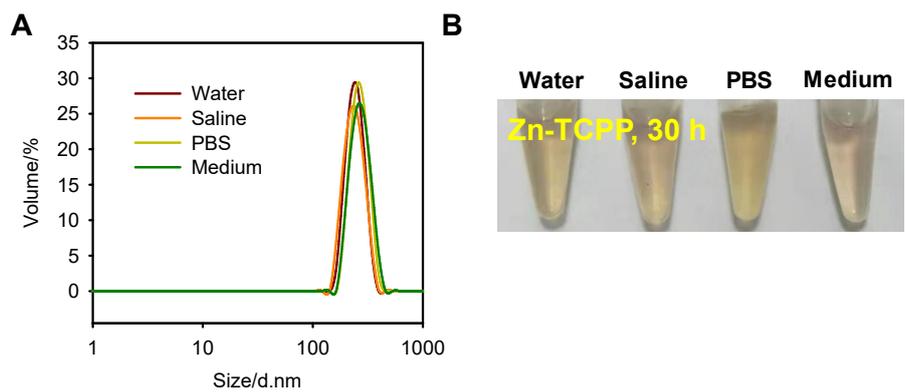
Lihua Zhang, Minzhi Ouyang and Yufei Zhang contributed equally to this work.

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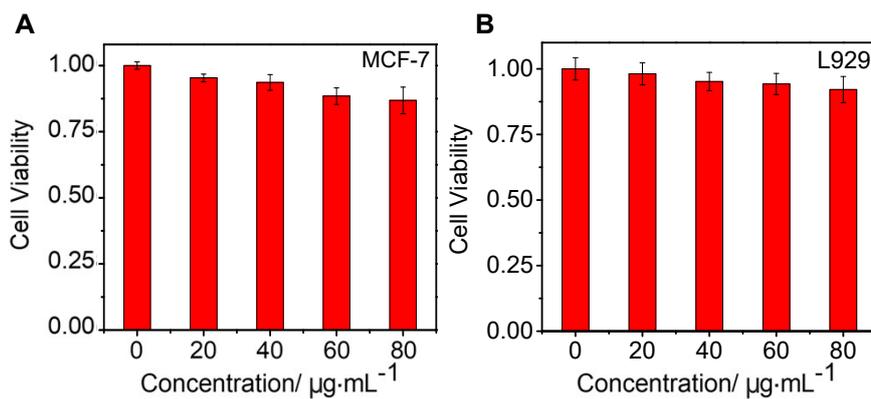
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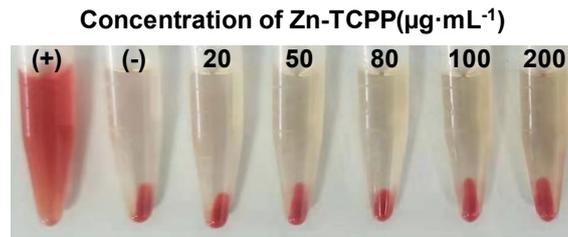
**Figure S1** The FTIR of TCP and Zn-TCP nanorods.



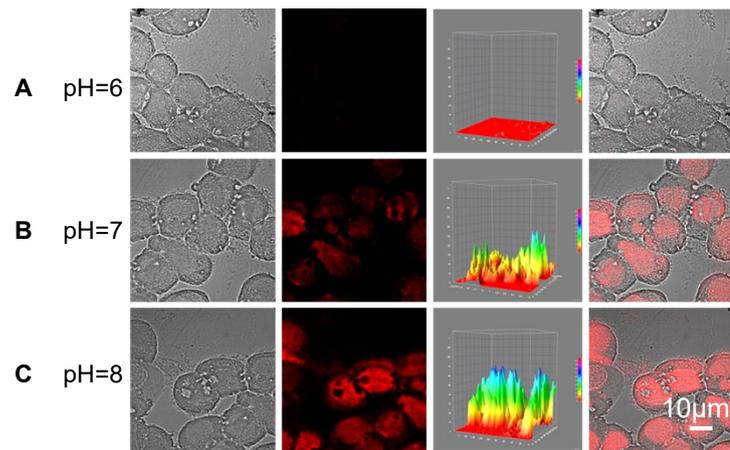
**Figure S2** (A) Size distribution (B) photographs of Zn-TCPP in various aqueous media incubated for 30 h at 37°C.



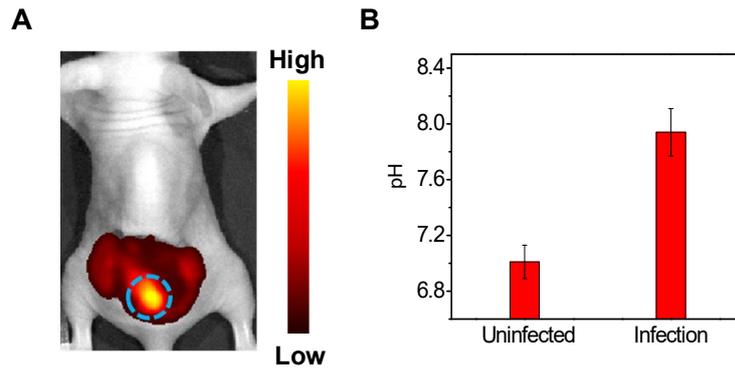
**Figure S3** MTT assay of (A) MCF-7 and (B) L929 cells treated with Zn-TCPP nanorods of different concentrations for 24 h. The error bars were the standard deviations from five independent measures.



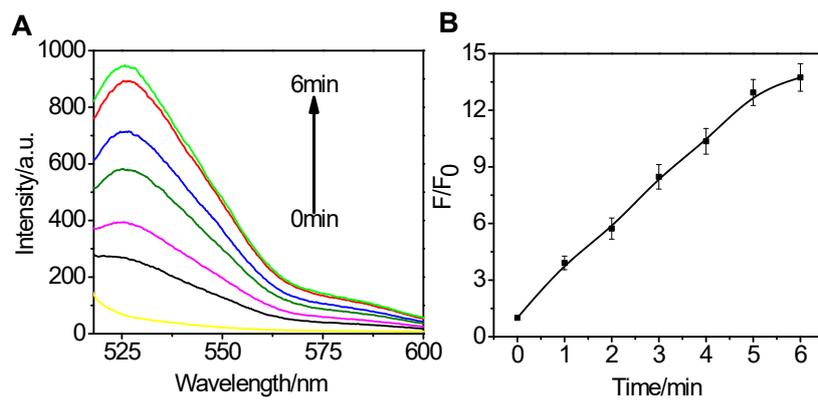
**Figure S4** Hemolytic tests of Zn-TCPP with different concentrations. Ultrapure water and PBS were also used for positive and negative control.



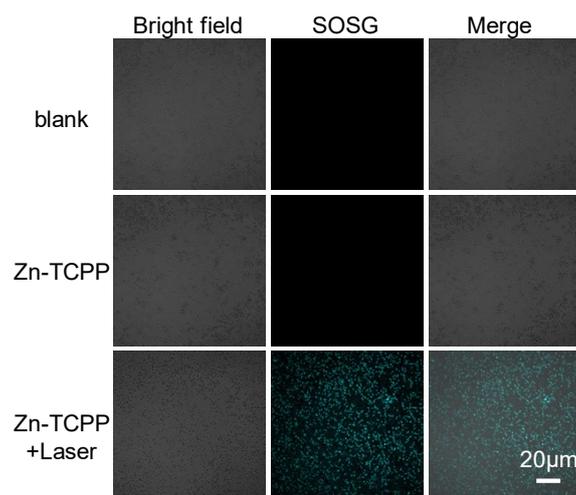
**Figure S5** Fluorescence images of MCF-7 cells of incubation with different pH. (A) pH=6, (B) pH=7, (C) pH=8.



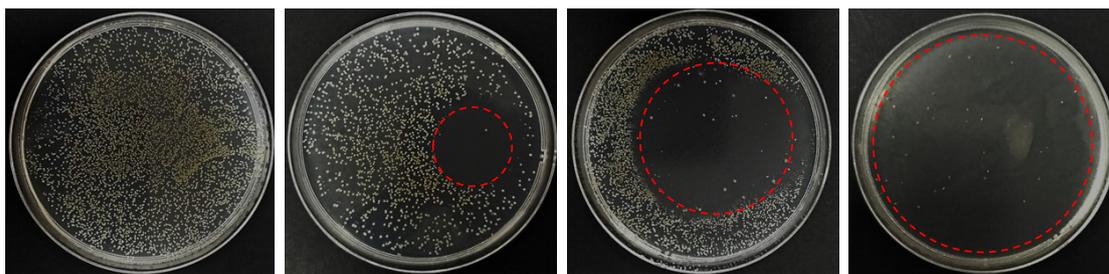
**Figure S6** (A) Fluorescence images of in vivo model with extend chronic wound, the circle area was inoculated with 50  $\mu\text{L}$  *S. aureus* of  $1 \times 10^6$  CFU  $\text{mL}^{-1}$ . (B) The measurement results of pH glass electrodes on different areas of the chronic wound.



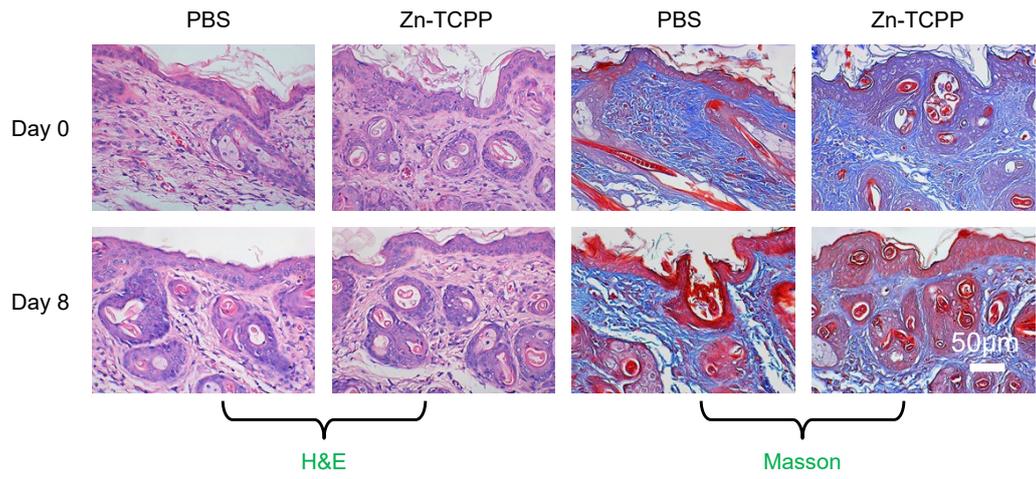
**Figure S7** (A) Fluorescence spectrum and (B) signal-to-back ratio trend of SOSG fluorescent probe treatment with Zn-TCPP nanorods under illumination of near-infrared light ( $\lambda_{ex} = 660$  nm).



**Figure S8** CLSM of SOSG fluorescent probe treatment with Zn-TCPP nanorods under illumination of near-infrared light ( $\lambda_{ex} = 660 \text{ nm}$ ).



**Figure S9** Local photodynamic inactivation of *Staphylococcus aureus*. The red dotted line range is the illumination range.



**Figure S10** H&E and Masson images of the normal tissues on the first day and eighth day.