Supporting Information

Antibacterial photodynamic peptides for staphylococcal skin infection

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CONTENT

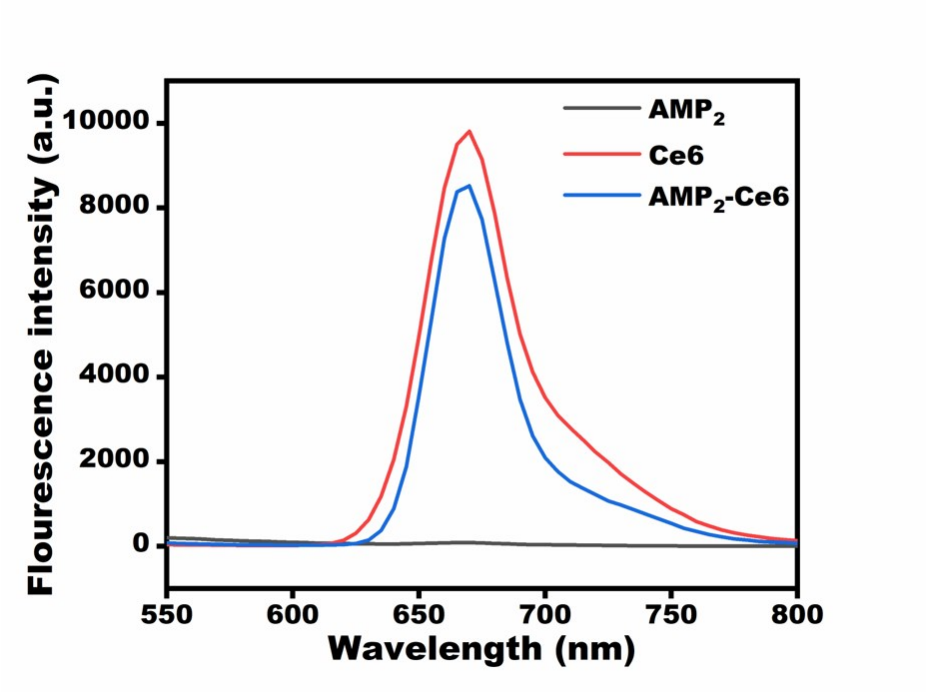

Figure S1. Fluorescence spectra of Ce6 and AMP_2-Ce6 (λ_{ex}=460 nm).

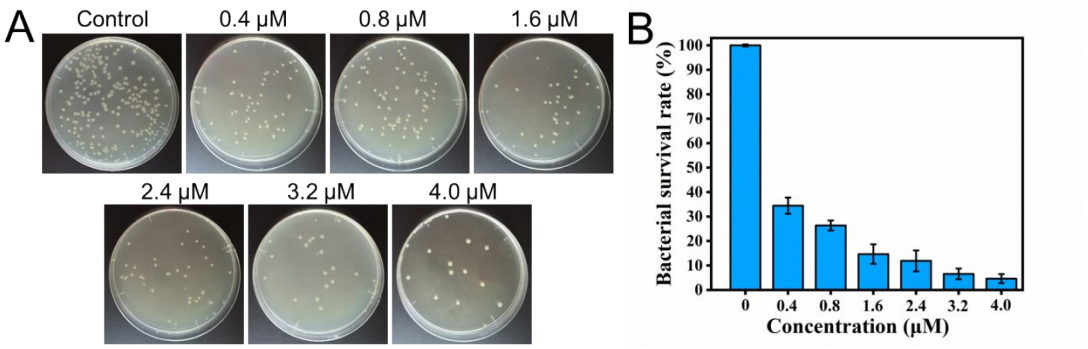

Figure S2. Bactericidal activity of the AMP_2 against *S. aureus* at different concentrations. The bacterial numbers were calculated as CFU, and normalized.

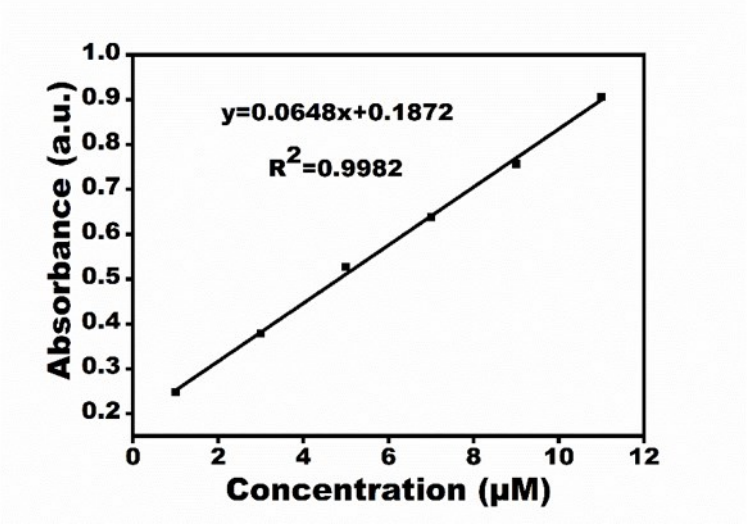

Figure S3. Standard curve of Ce6.

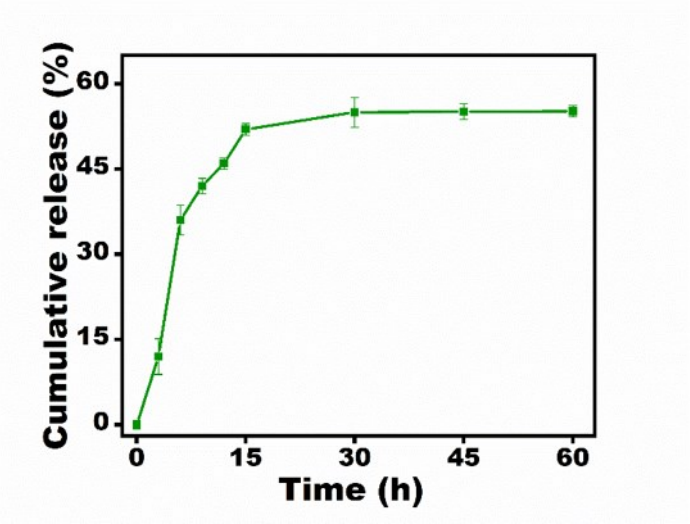

Figure S4. Release curve of AMP_2-Ce6 loaded in the Gel-Col Ⅲ@AMP_2-Ce6 system.

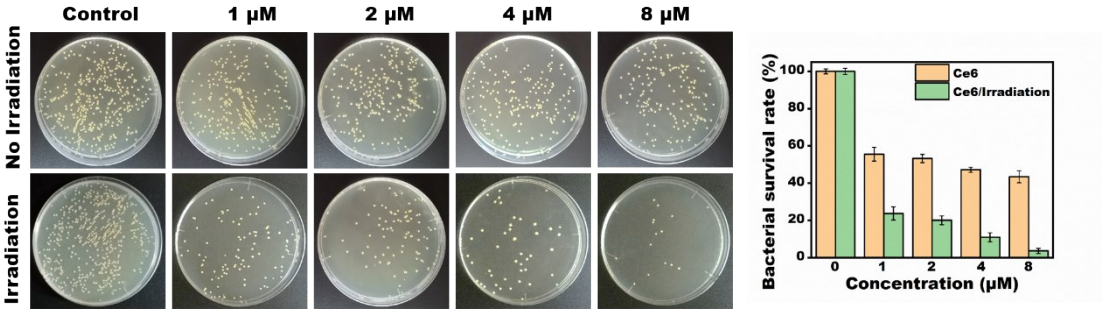

Figure S5. Bactericidal activity of Ce6 with laser illumination at different

concentration. Because Ce6 is not soluble in water, DMF: H_2O=3:1 was used to dissolve Ce6 in the above experiment.

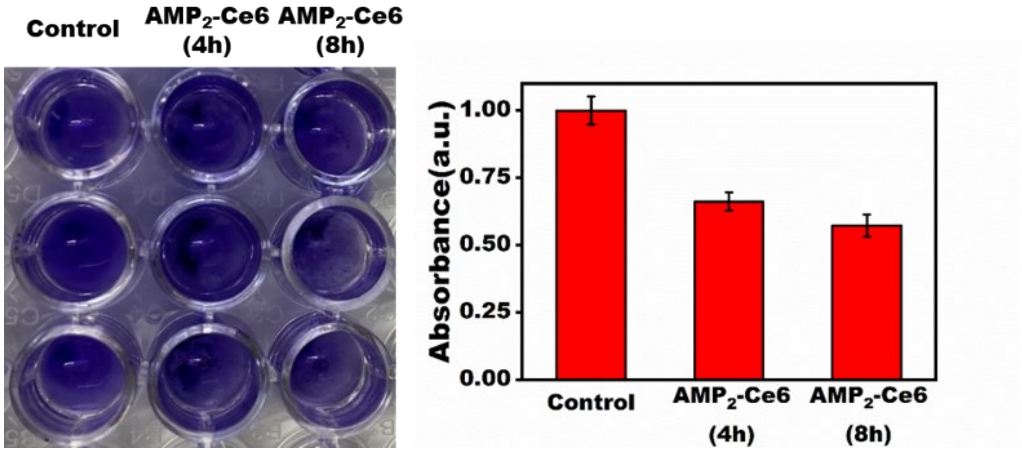

Figure S6. Representative photographs of integrated *S. aureus* biofilm images and corresponding absorbance for integrated *S. aureus* biofilm incubated with AMP_2-Ce6 at scheduled time point of 4 h and 8 h.

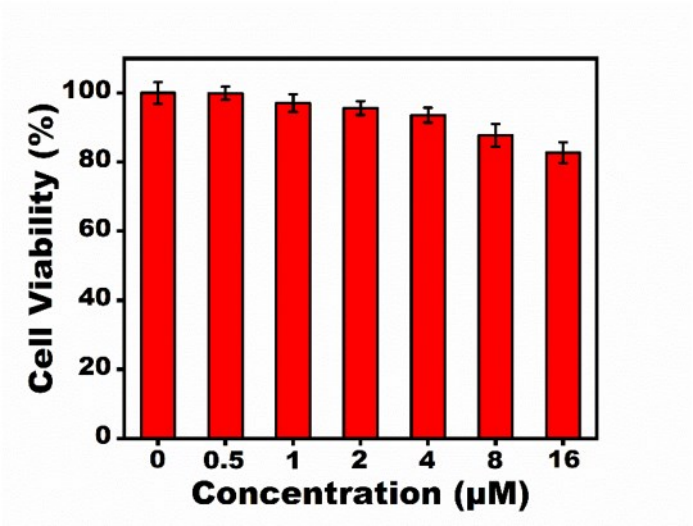

Figure S7. Preliminary toxicity study. Cytotoxicity to L929 with different AMP_2-Ce6 concentrations under laser irradiation (0.8 W/cm^2, 6 min).

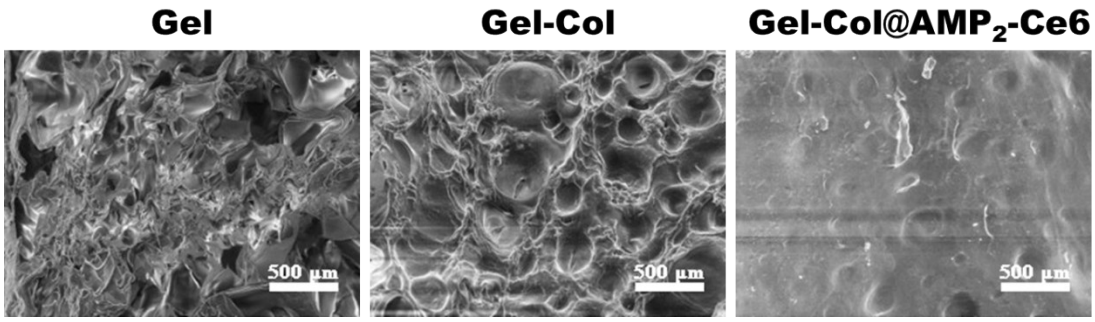

Figure S8. SEM images of hydrogels, scale bar: 500 μm.

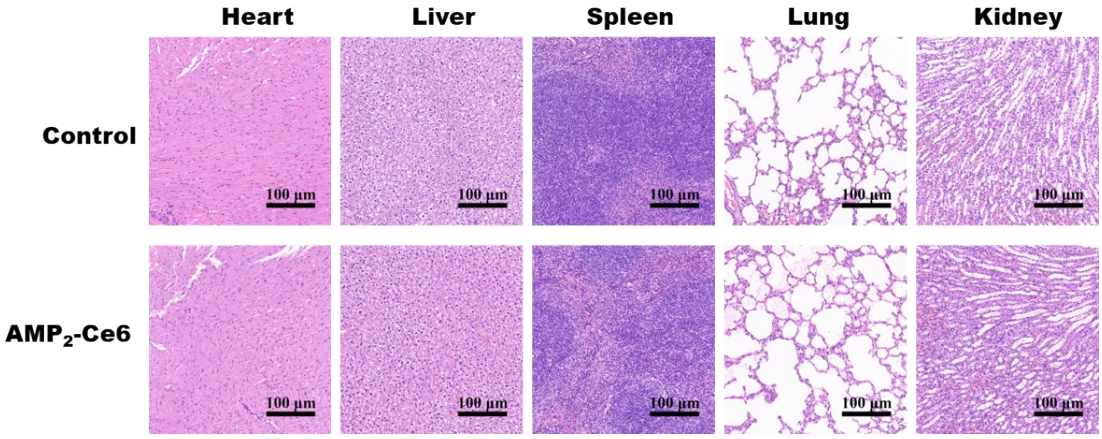

Figure S9. Histological toxicological observation of H&E staining of tissues of major organs (heart, liver, spleen, lung, and kidney; bar = 100 μm).