Supporting Information

Calcium-peroxide-mediated cascades of oxygen production and glutathione consumption induced efficient photodynamic and photothermal synergistic therapy

Lanfang Zhang [a #], Hui Lu [a #], Yu Tang [a], Xiaojie Lu [a], Zhendong Zhang [a], Yan Zhang [a], Ying Liu [b] *, Chenhui Wang [a] *

[a] *Chongqing Key Laboratory of Natural Product Synthesis and Drug Research, School of Pharmaceutical Sciences, Chongqing University, 55 South Daxuecheng Road, Chongqing 401331, P. R. China*

[b] *Department of pharmacy, Fuwai Central China Cardiovascular Hospital & Central China Branch of National Center for Cardiovascular Diseases, Zhengzhou, Henan, 451464, P. R. China.*

[#] These authors contributed equally to this work.

*Corresponding author.

E-mail address: wangchenhui@cqu.edu.cn

Results and Discussion

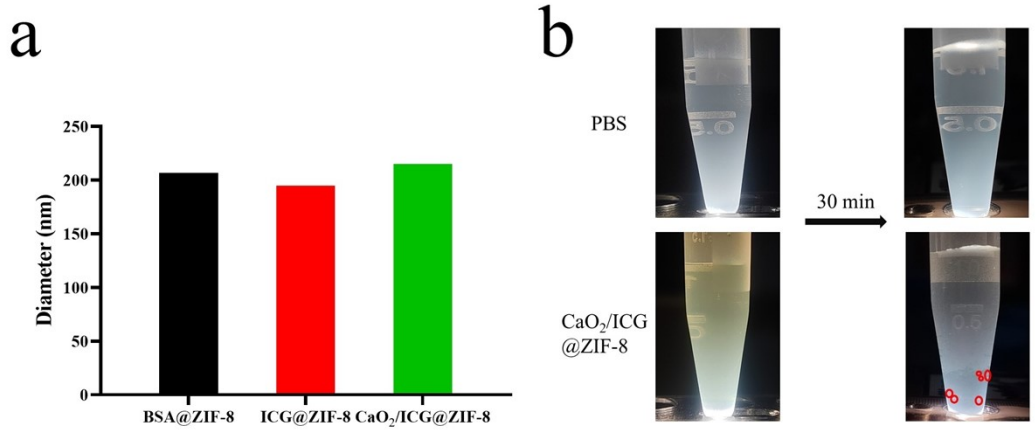

Figure S1. a) the hydrodynamic sizes of BSA@ZIF-8, ICG@ZIF-8 and CaO_2/ICG@ZIF-8; b) the production of oxygen by CaO_2/ICG@ZIF-8 in PBS (pH = 6.5).

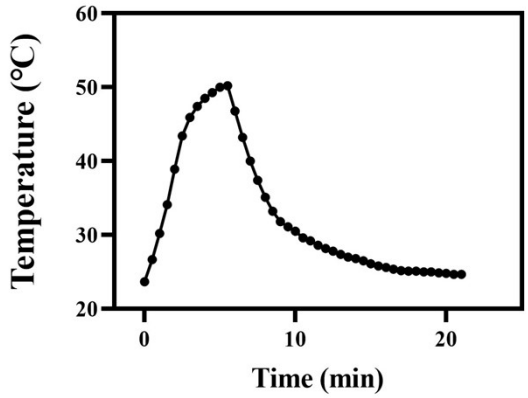

Figure S2. Photothermal response of the CaO_2/ICG@ZIF-8 (containing 200 μg/mL) in aqueous solution with near infrared (NIR) laser (808 nm, 0.92 W/cm^2), and then the laser was turned off.

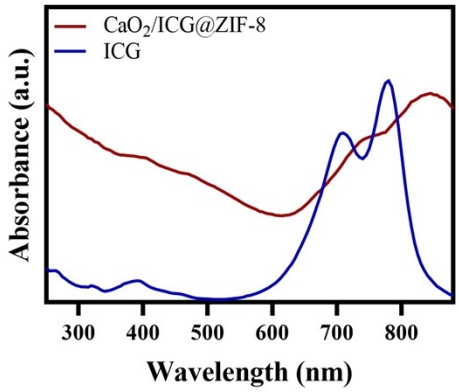

Figure S3. Ultraviolet-visible (UV-vis) absorbance spectrum of the CaO_2/ICG@ZIF-8 and ICG.

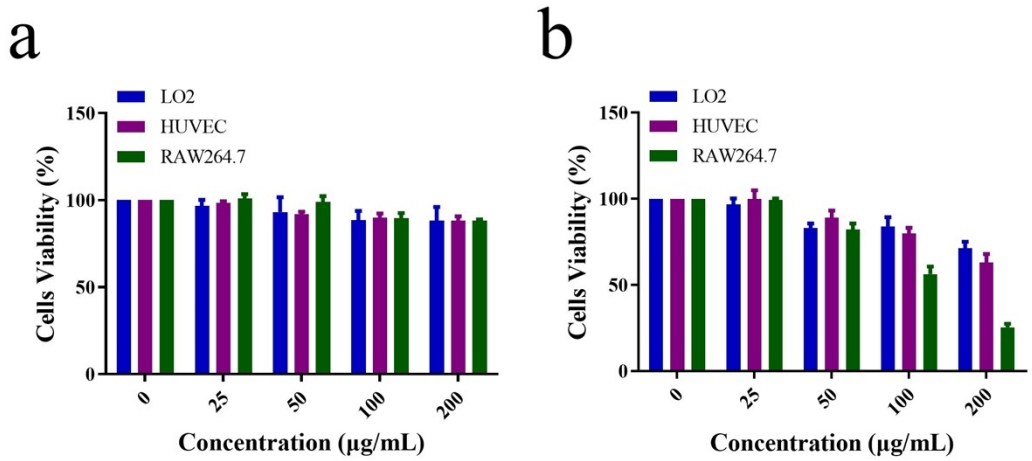

Figure S4. In vitro cytotoxicity of a) BSA@ZIF-8 and b) CaO_2/ICG@ZIF-8 on different cells in the absence of laser irradiation.

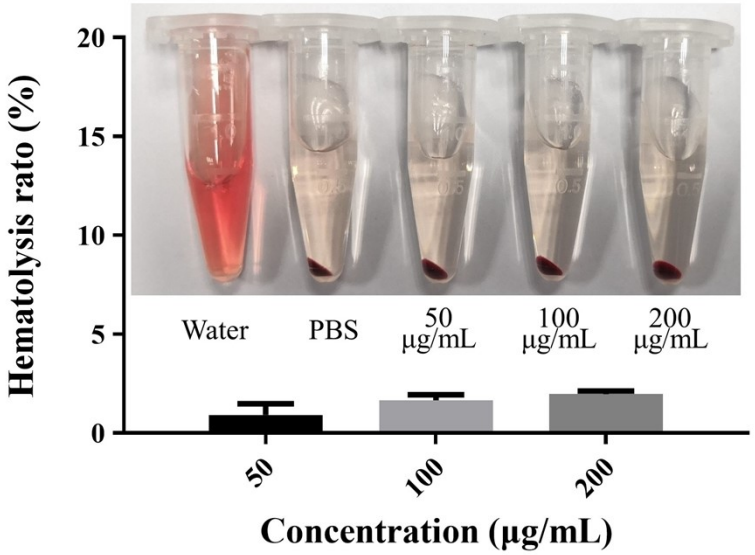

Figure S5. Hemolysis ratio of CaO_2/ICG@ZIF-8 at different concentrations. The inset shows the corresponding hemolysis images.

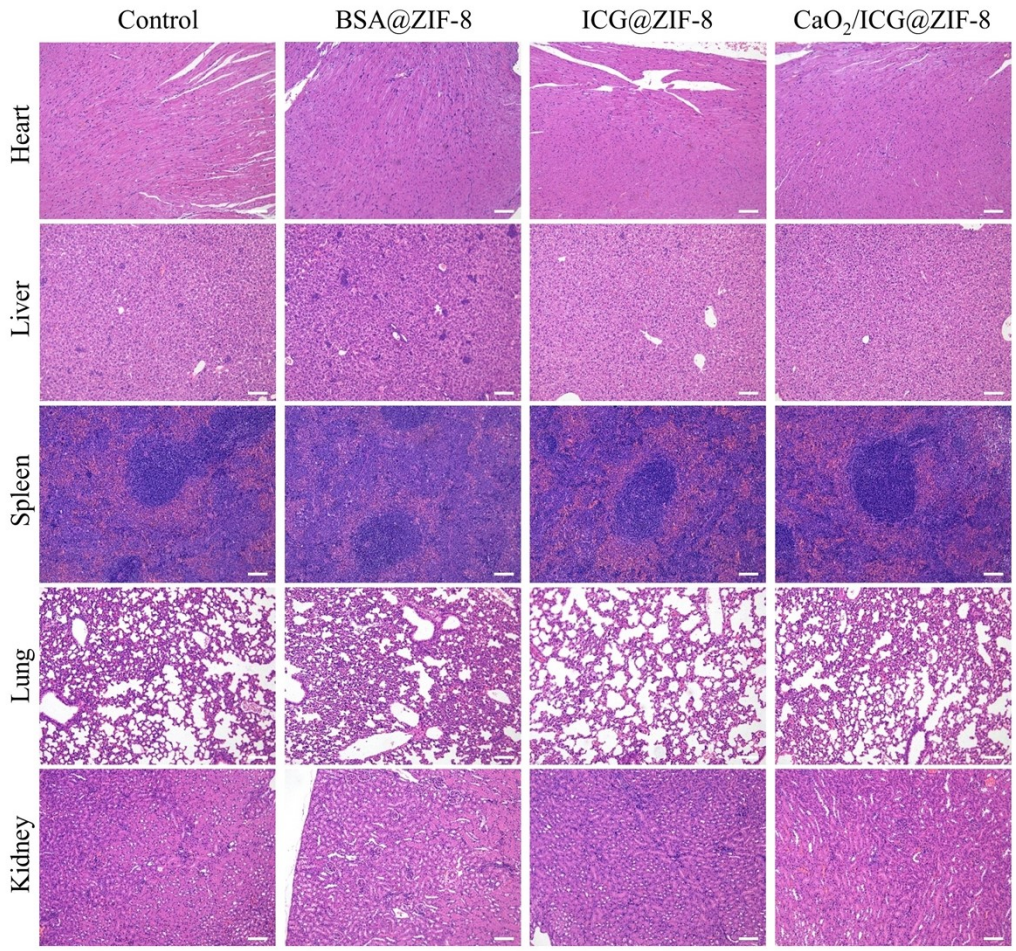

Figure S6. H&E-staining of heart, liver, spleen, lung, and kidney of the mice.

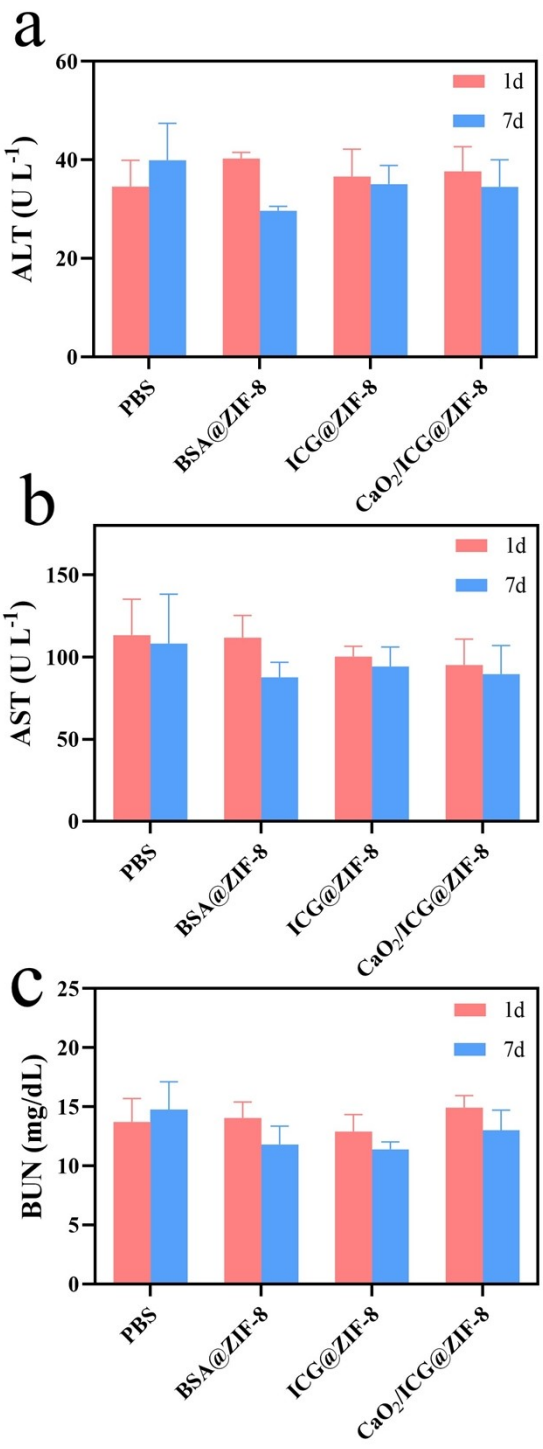

Figure S7. The analysis of a) ALT b) AST and c) BUN test on the blood samples collected from the mice. The normal range: ALT: 10.06-96.47 U/L; AST: 36.31-235.48 U/L; BUN: 10.81-34.74 mg/dL.