

Supporting Information

Metal-organic frameworks complex for enhancing tumor treatment effect through synergistic attack of chemotherapy and photodynamic therapy

Xiang Jiang^{1,2}, Yuewu Zhao^{*1}, Shengkai Sun¹, Li Wang¹, Lina Sun¹, Wenjing Li¹, Zheng Wang¹,

Jine Wang^{*1,2,3}, and Renjun Pei^{*1}

¹CAS Key Laboratory of Nano-Bio Interface, Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences, Suzhou, 215123, China.

²College of Mechanics and Materials, Hohai University, Nanjing, 210098, China.

³Jiangxi Institute of Nanotechnology, Nanchang, 330200, China.

*Corresponding author: ywzhao2017@sinano.ac.cn;

jewang2012@sinano.ac.cn;

rjpei2011@sinano.ac.cn

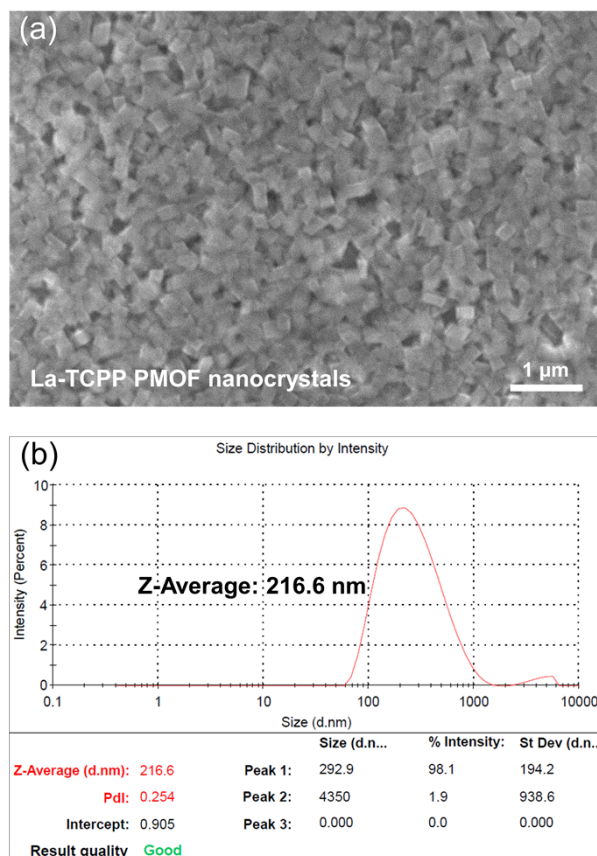


Figure S1. (a) SEM image and (b) DLS analysis of the prepared La-TCPP PMOF nanocrystals.

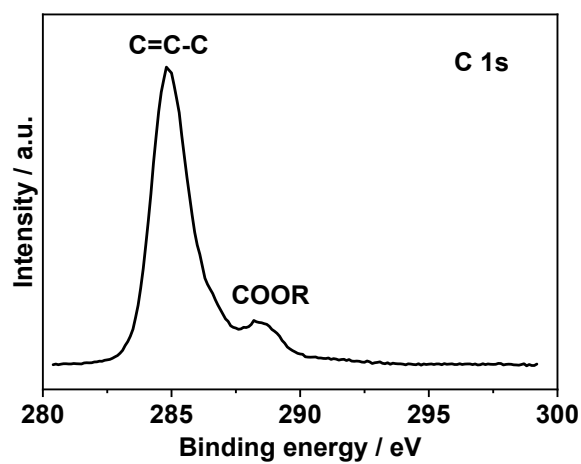


Figure S2. C 1s spectra of the prepared La-TCPP PMOF nanocrystals.

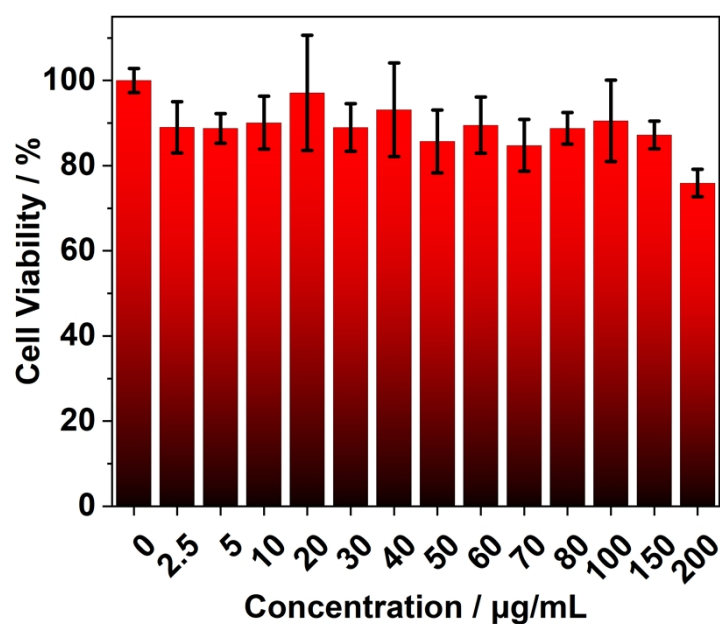


Figure S3. Cytotoxicity induced by La-TCPP PMOF nanocrystals in 4T1 cells.

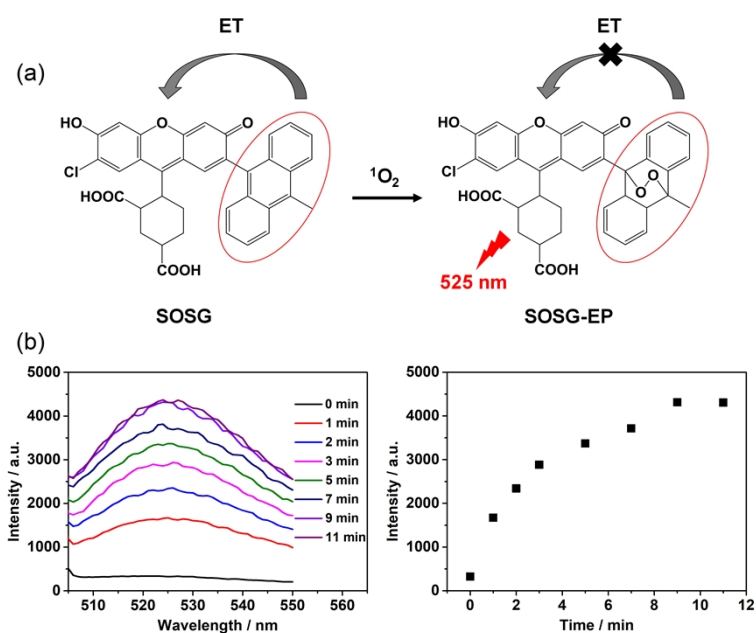


Figure S4. (a) The corresponding reaction formula and (b) fluorescence intensity curve of SOSG (2 $\mu\text{mol/L}$) were obtained in the presence of La-TCPP (5 $\mu\text{g/mL}$) at 660 nm light with a power density of 100 mW/cm^2 .

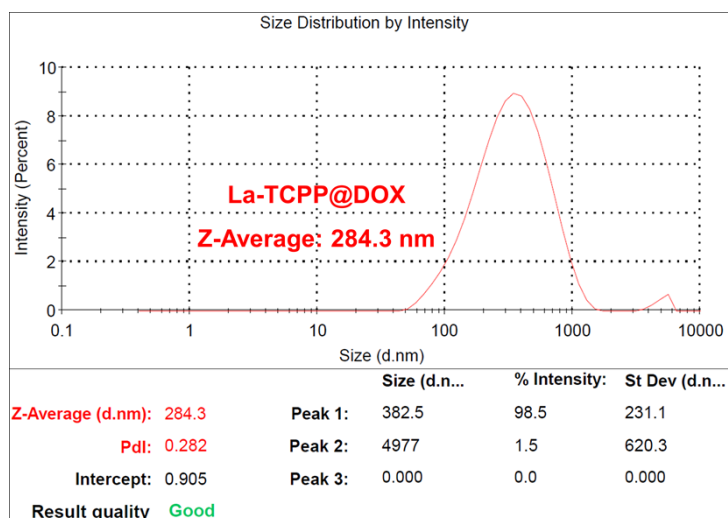


Figure S5. DLS analysis of the obtained La-TCPP@DOX nanocrystals.

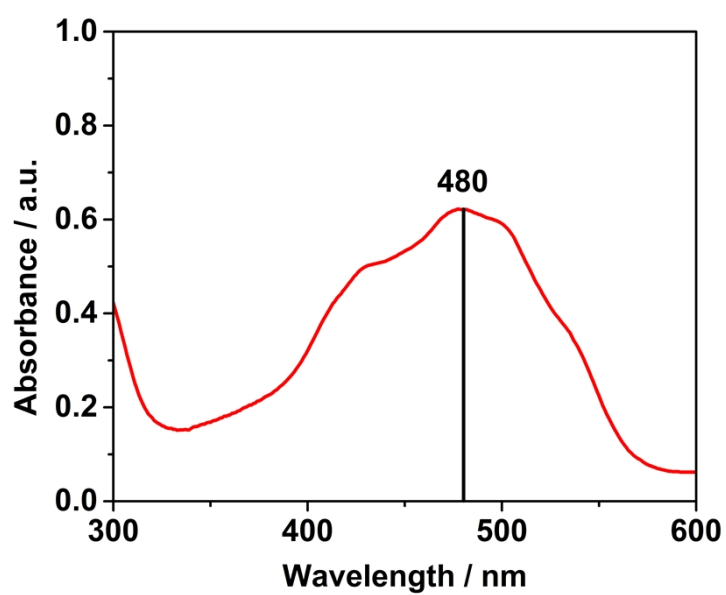


Figure S6. The UV-vis absorption of residual fluid obtained after DOX adsorption with La-TCPP PMOF nanocrystals.

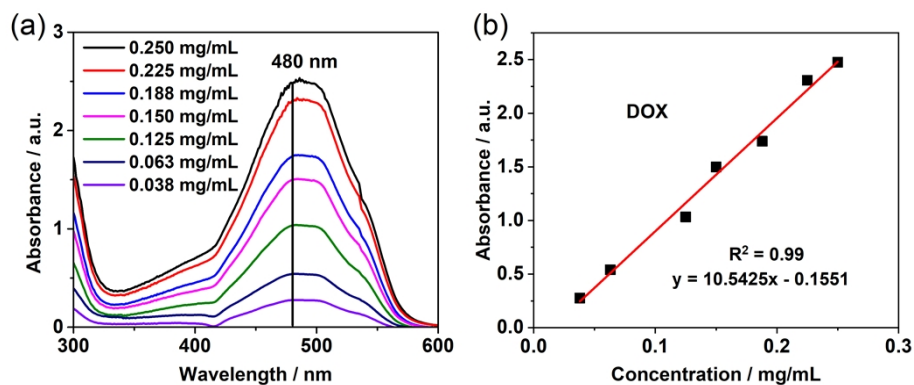


Figure S7. (a) UV-vis absorption curves and (b) correlation linearity of the DOX with different concentrations.

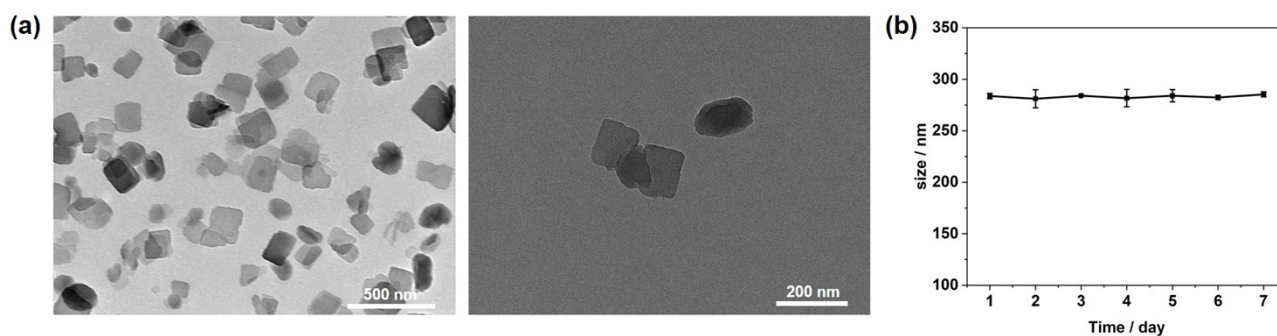


Figure S8. (a) TEM images of La-TCPP@DOX PMOF after 7 days of DOX loading. (b) DLS analysis of the long-term hydrodynamic size of La-TCPP@DOX PMOF nanocrystals.

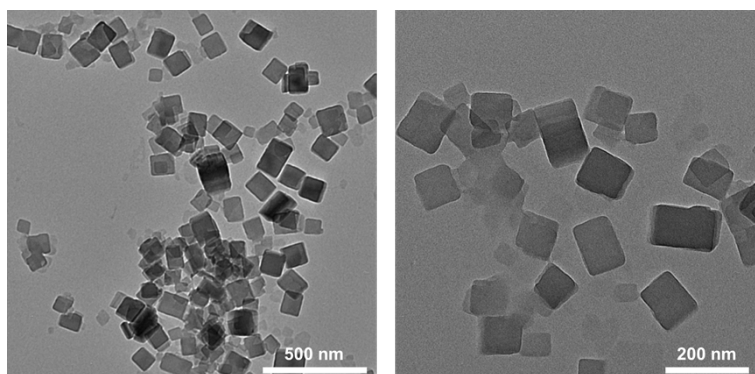


Figure S9. TEM images of La-TCPP PMOF obtained after mechanical stirring. It can be seen that the stirred PMOF nanocrystals have obvious lamellar detachment phenomenon, and the ultra-thin lamellar structure is relatively increased.

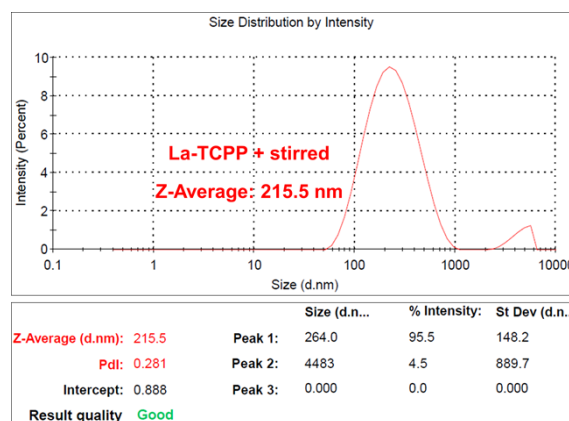


Figure S10. DLS analysis of the stirred La-TCPP PMOF nanocrystals.

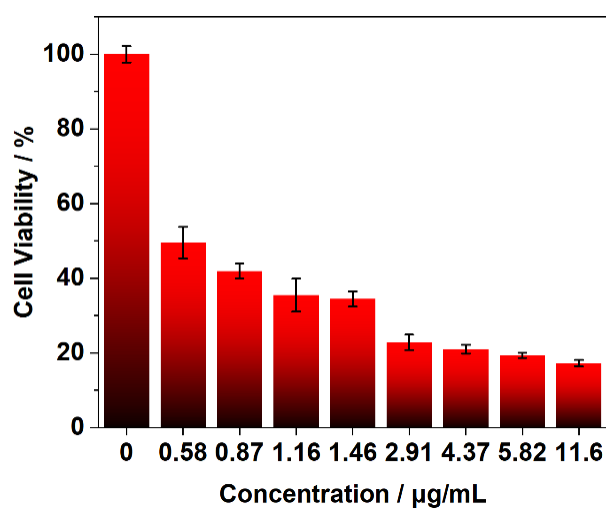


Figure S11. Cytotoxicity induced by free DOX in 4T1 cells.

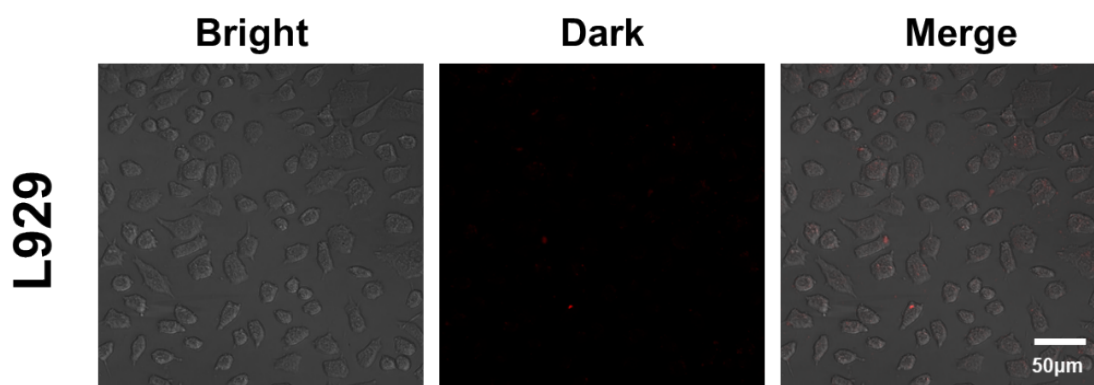


Figure S12. Cellular uptake of La-TCPP@DOX@Apt in L929 cells incubation with 6 hours.

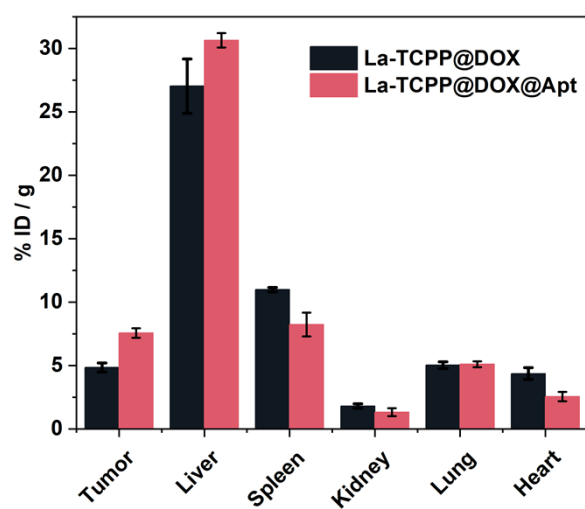


Figure S13. Histogram of biological distribution of La-TCPP@DOX and La-TCPP@DOX@Apt in major tissues of mice at 24 hours after injection.

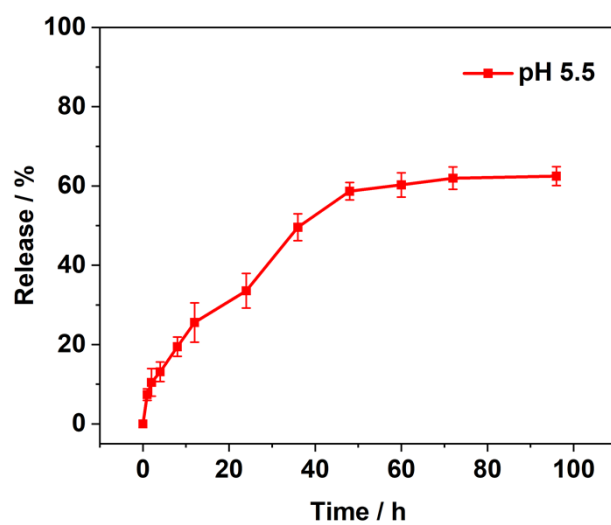


Figure S14. The release profiles of DOX in La-TCPP@DOX PMOF under pH 5.5 at 37 °C.