Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supporting Information

Post-Synthesis Strategy to Integrate Porphyrinic Metal-Organic Frameworks with CuS NPs for Synergistic Enhanced Photo-therapy

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[#]. *Contribute equally to this work*

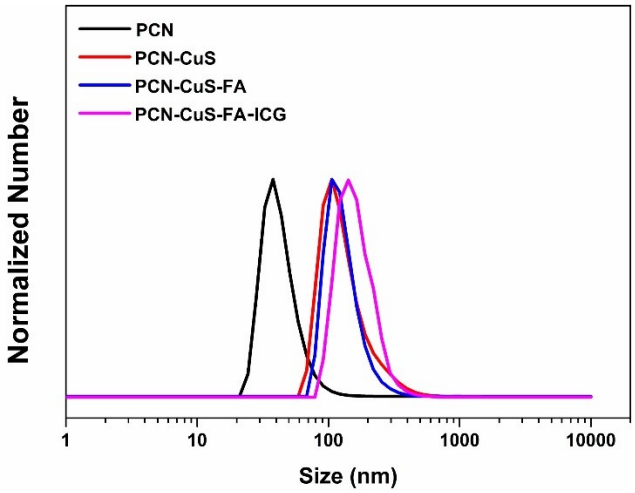

Figure S1. Hydrodynamic size of PCN, PCN-CuS, PCN-CuS-FA and PCN-CuS-FA-ICG.

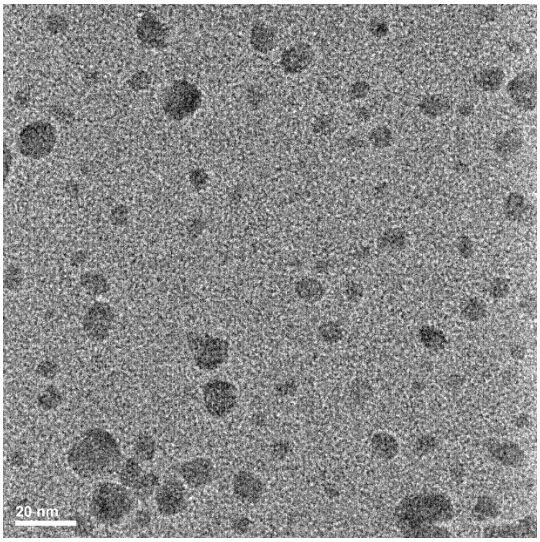

Figure S2. TEM image of PVP-stabilized CuS NPs

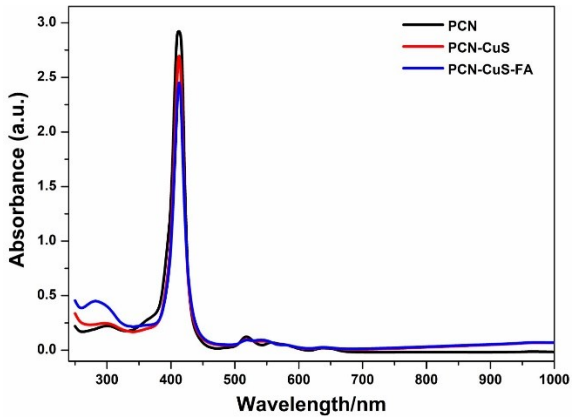

Figure S3. UV-Vis-NIR spectra of PCN, PCN-CuS and PCN-CuS-FA.

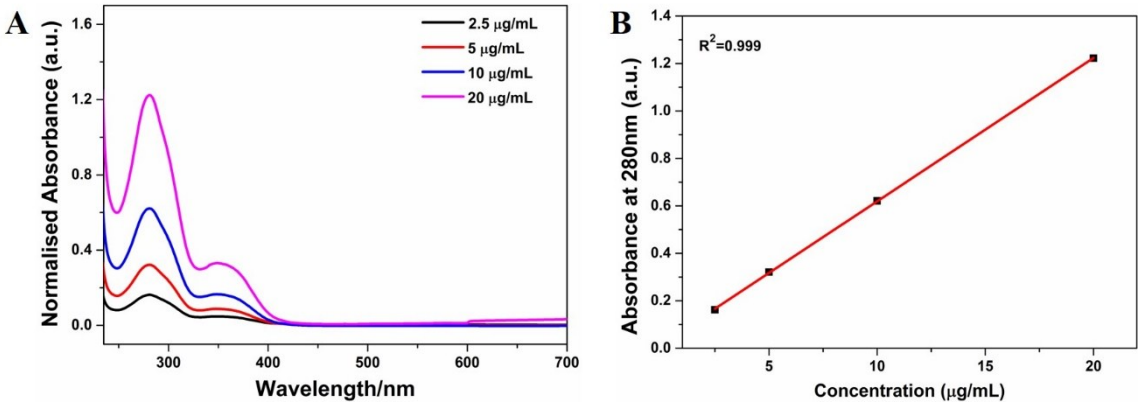

Figure S4. (A) UV-Vis spectra of folic acid DMSO/Water (v/v, 1/99) solution at various concentrations. (B) Calibration curve of folic acid at 280 nm.

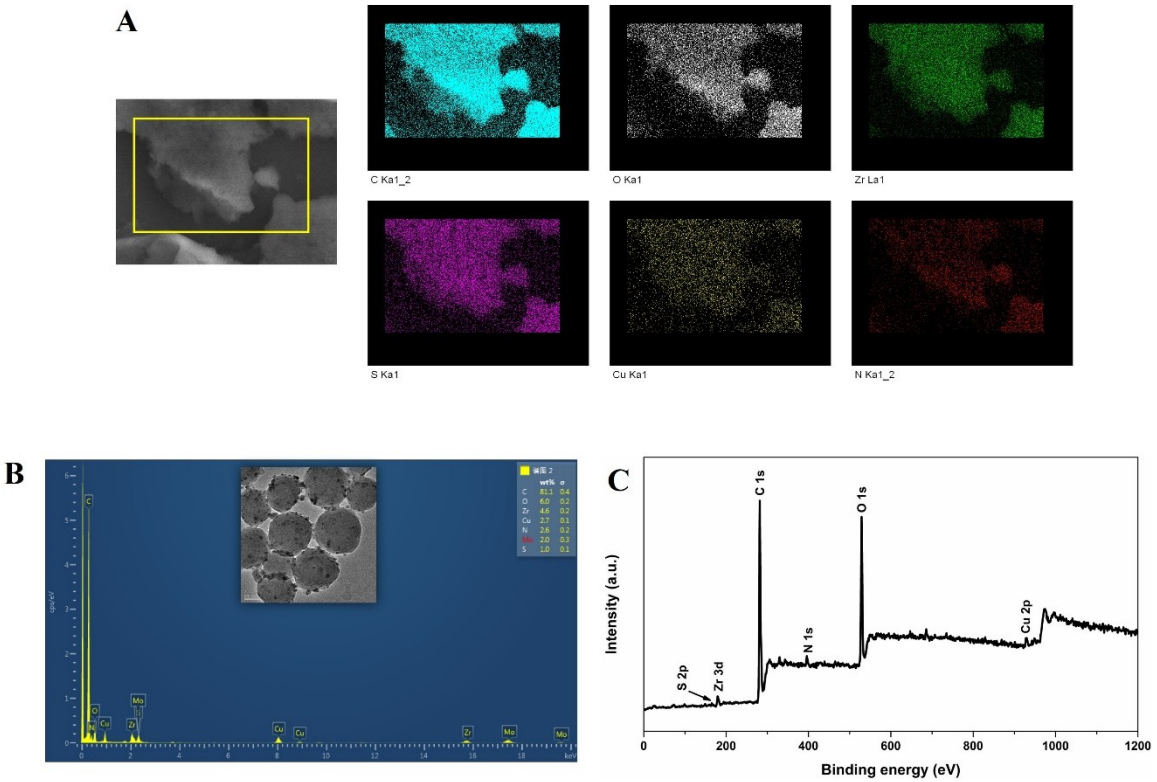

Figure S5. (A) The overall SEM-EDX mapping images of C, O, Zr, S, Cu and N elements. (B) TEM energy dispersive spectrum of PCN-CuS-FA-ICG. Herein, Mo came from the molybdenum net with support film. (C) XPS spectrum of PCN-CuS-FA-ICG.

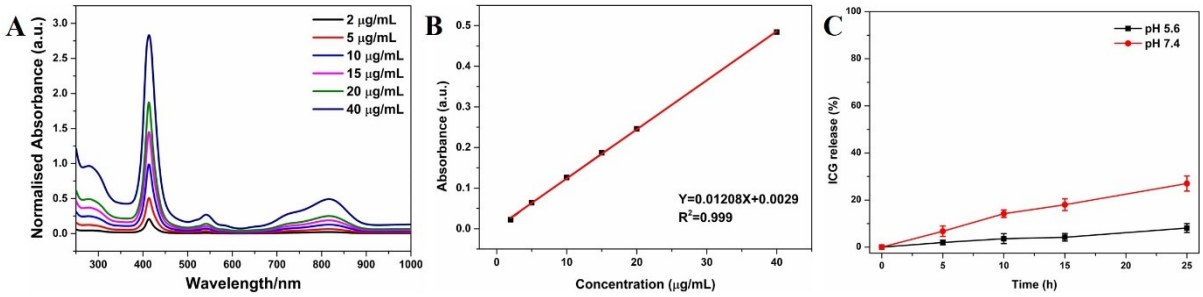

Figure S6. (A) UV-Vis-NIR absorption spectra for aqueous dispersions of PCN-CuS-FA-ICG NPs with various concentrations. (B) Plots of linear fitting absorbance at 808 nm versus concentration for aqueous dispersions of PCN-CuS-FA-ICG NPs. (C) The cumulative ICG release from PCN-CuS-FA-ICG NPs in phosphate-buffer saline (pH 7.4 or pH 5.6).

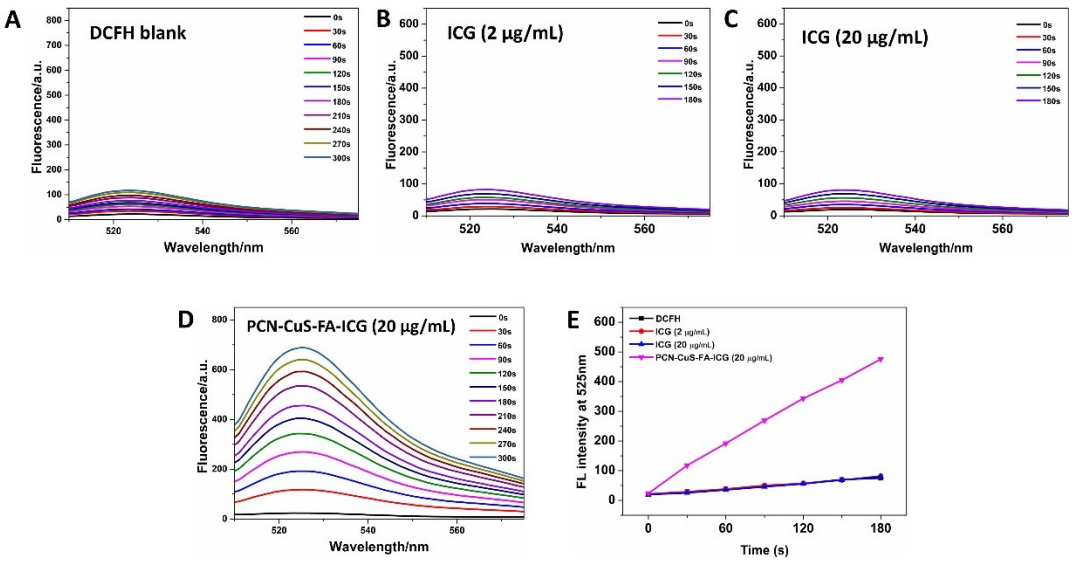

Figure S7. Time-dependent emission spectra of DCFH upon 650 nm laser irradiation for DCFH blank (A), and the spectra in the presence of (B) ICG NPs (2 μg/mL), (C) ICG NPs (20 μg/mL), and PCN-CuS-FA-ICG (20 μg/mL). (D) Comparison of the average increase rate of DCFH in the presence of different component at 30 s intervals under 650 nm irradiation (50 mW/cm^2).

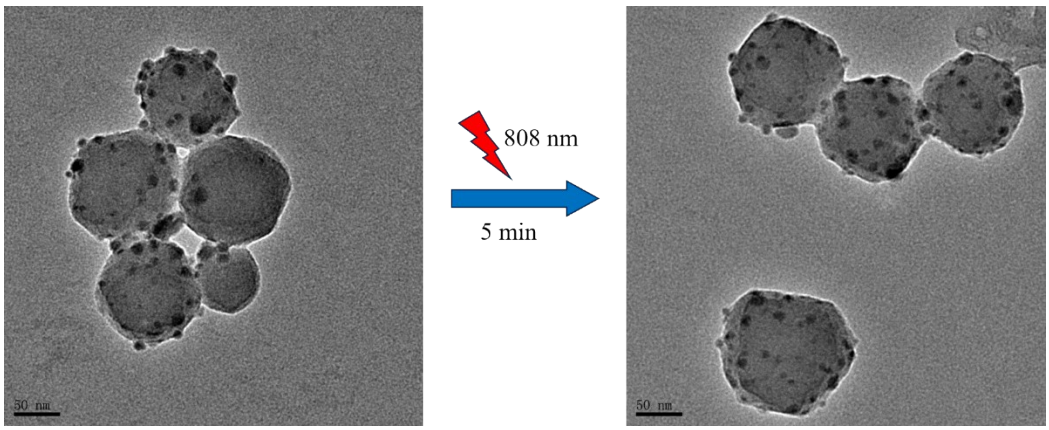

Figure S8. TEM images of PCN-CuS-FA-ICG NPs before (left) and after (right) 808 nm laser irradiation (1.0 W/cm^2, 5 min).

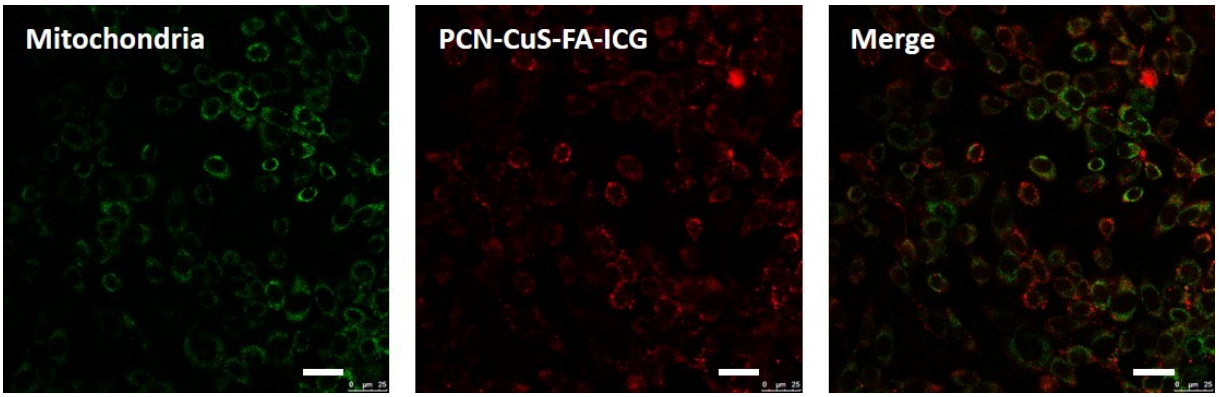

Figure S9. Confocal fluorescence images of MDA-MB-231 cells with mitochondria marked after incubated with PCN-CuS-FA-ICG for 6 h (25 μg/mL).

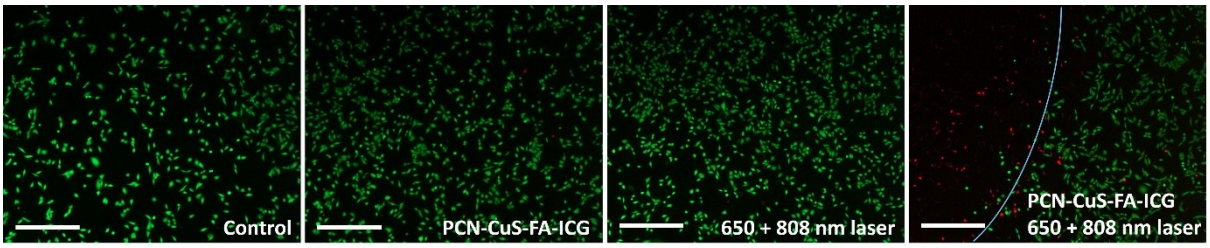

Figure S10. Fluorescence images of MDA-MB-231 cells after various treatments (PCN-CuS-FA-ICG: 200 μg/mL) via live/dead cell staining assay. The cells were co-stained with calcein AM (green, living cells) and propidium iodide (red, dead cells). The scale bar is 100 μm.