Electronic supplementary information (ESI)

Facile Construction of Mitochondria-Targeting Nanoparticles for Enhanced Phototherapeutic Effects

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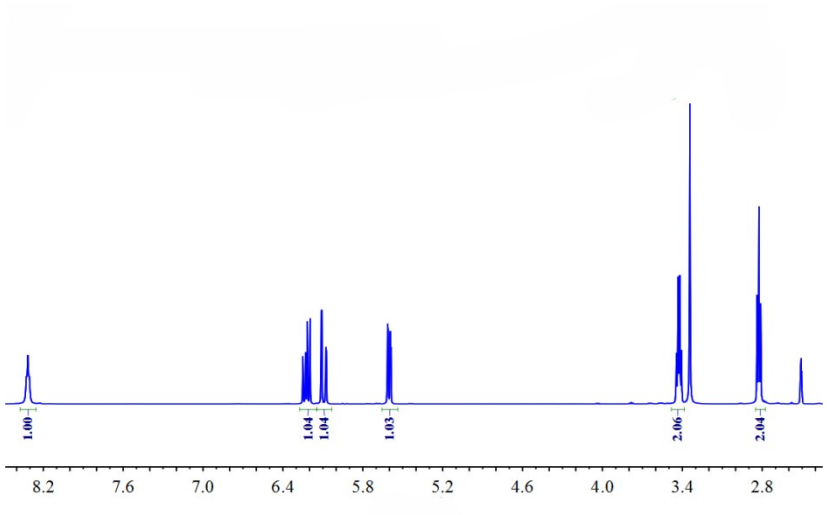

Fig. S1 ^{1}H NMR spectra of CBA in DMSO-d_6.

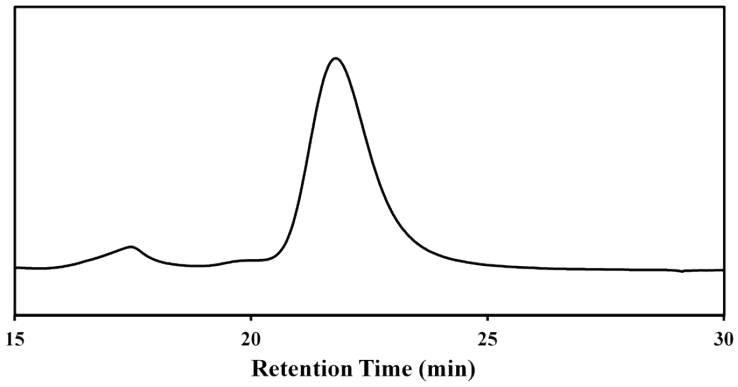

Fig. S2 Gel permeation chromatography (GPC) curve of rPAA. The instrument and column were from Waters company (Massachusetts, USA). The solvent is DMF, and the elution rate is 1 mL/min.

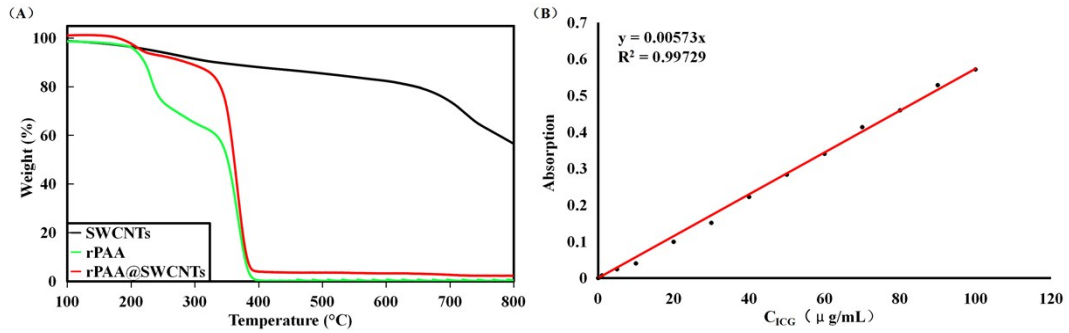

Fig. S3 (A) The thermal gravimetric analysis of SWCNTs, rPAA, rPAA@SWCNTs. (B)The standard curve of ICG.

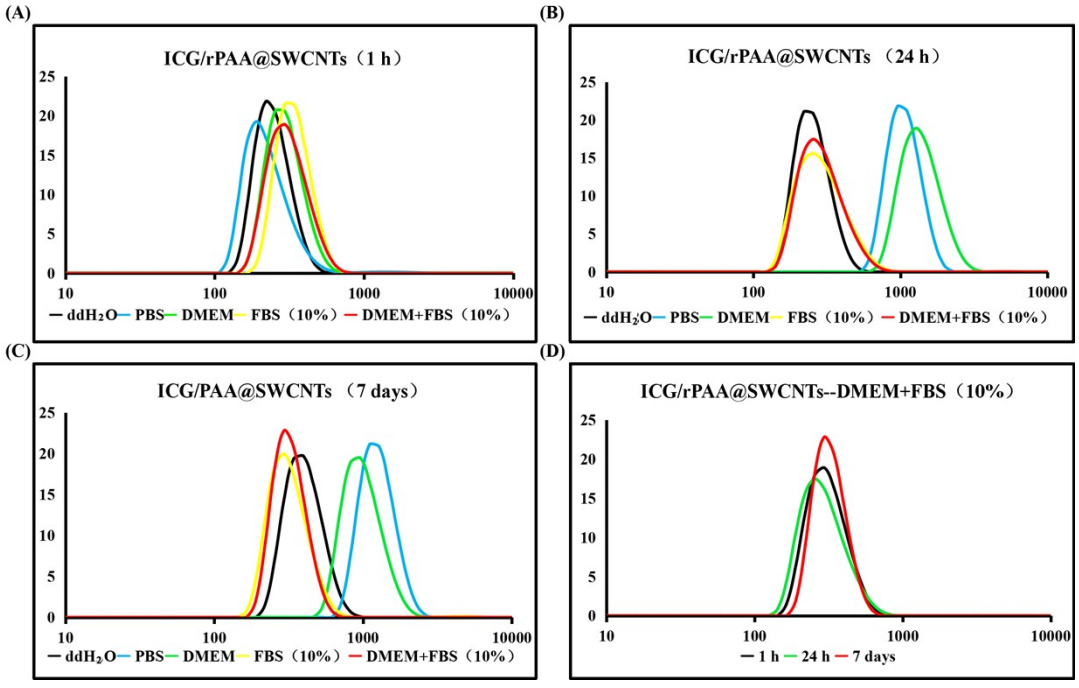

Fig. S4 Hydrodynamic diameter of ICG/rPAA@SWCNTs in different solutions at 1 h (A), 24 h (B), and 7 days (C). (D) Hydrodynamic diameter of ICG/rPAA@SWCNTs in DMEM + FBS (10%) at different time.

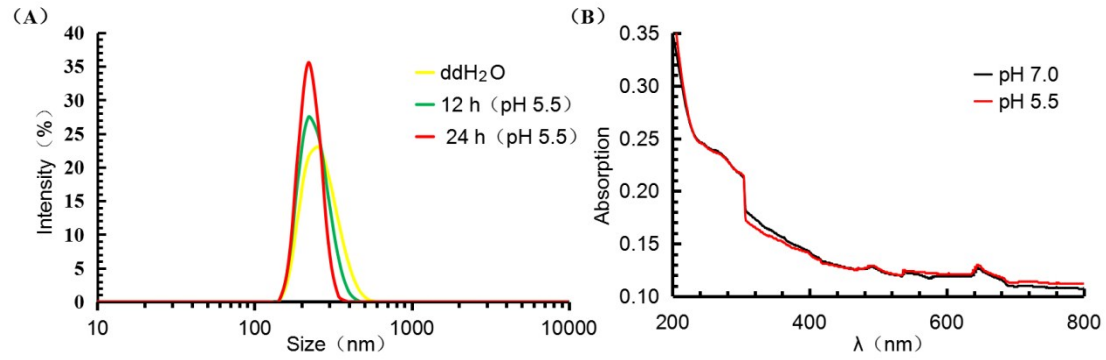

Fig. S5 (A) Hydrodynamic diameter of rPAA@SWCNTs-Cy5 at different pH. (B) UV-vis absorption curve of rPAA@SWCNTs-Cy5 at different pH after 24-h incubation.

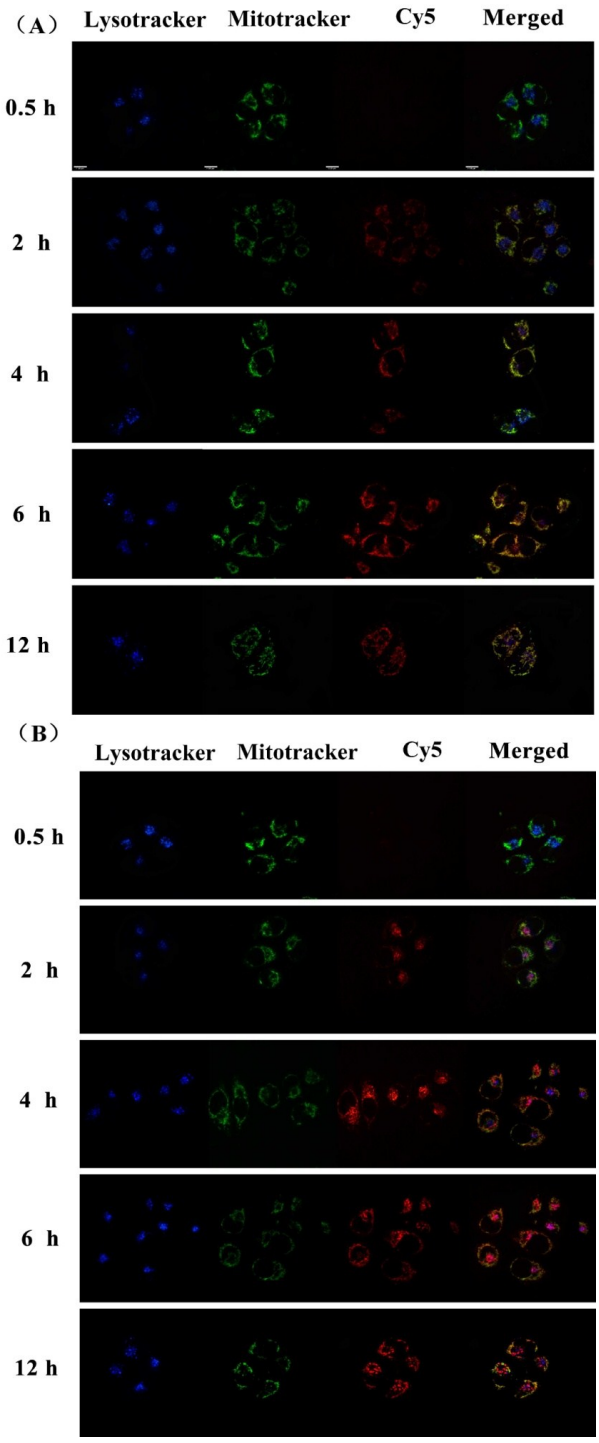

Fig. S6 Cellular localization of the nanoparticles under confocal imaging. HeLa cells were incubated with rPAA@SWCNTs-Cy5 (A) or ICG/rPAA@SWCNTs-Cy5 (B) for 0.5-12 h. Scale bar = 10 μm.

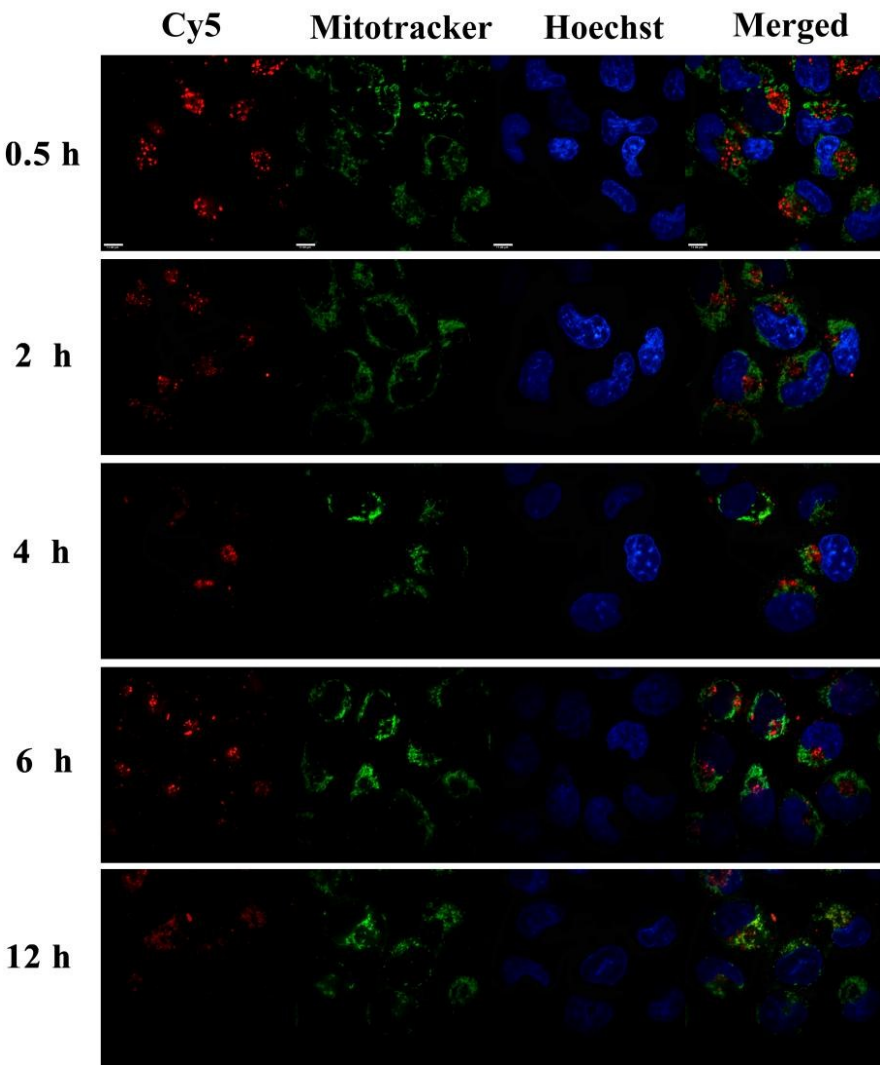

Fig. S7 Cellular localization of rPAA-Cy5 under confocal imaging. HeLa cells were incubated with rPAA-Cy5 for 0.5-12 h. Scale bar = 10 μm.

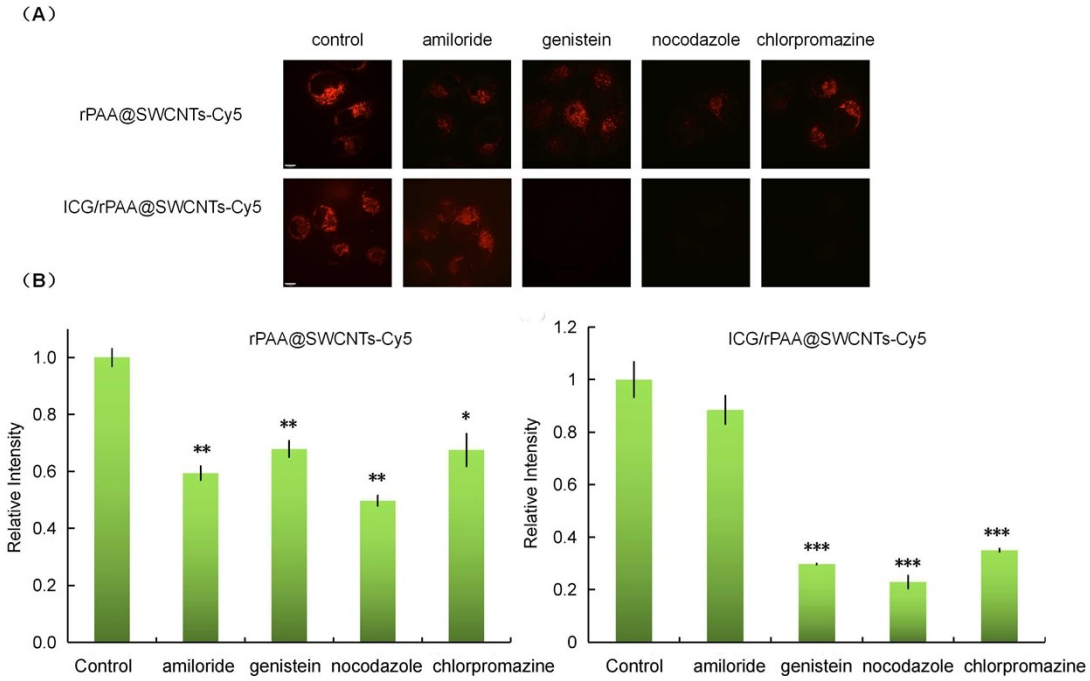

Fig. S8 (A) Confocal imaging of HeLa cells treated with amiloride, genistein, chlorpromazine, and nocodazole before incubating with rPAA@SWCNTs-Cy5 (50 μg/mL) or ICG/rPAA@SWCNTs-Cy5 (50 μg/mL). Scale bar = 10 μm. (B) Quantitative analysis of cellular fluorescence. * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

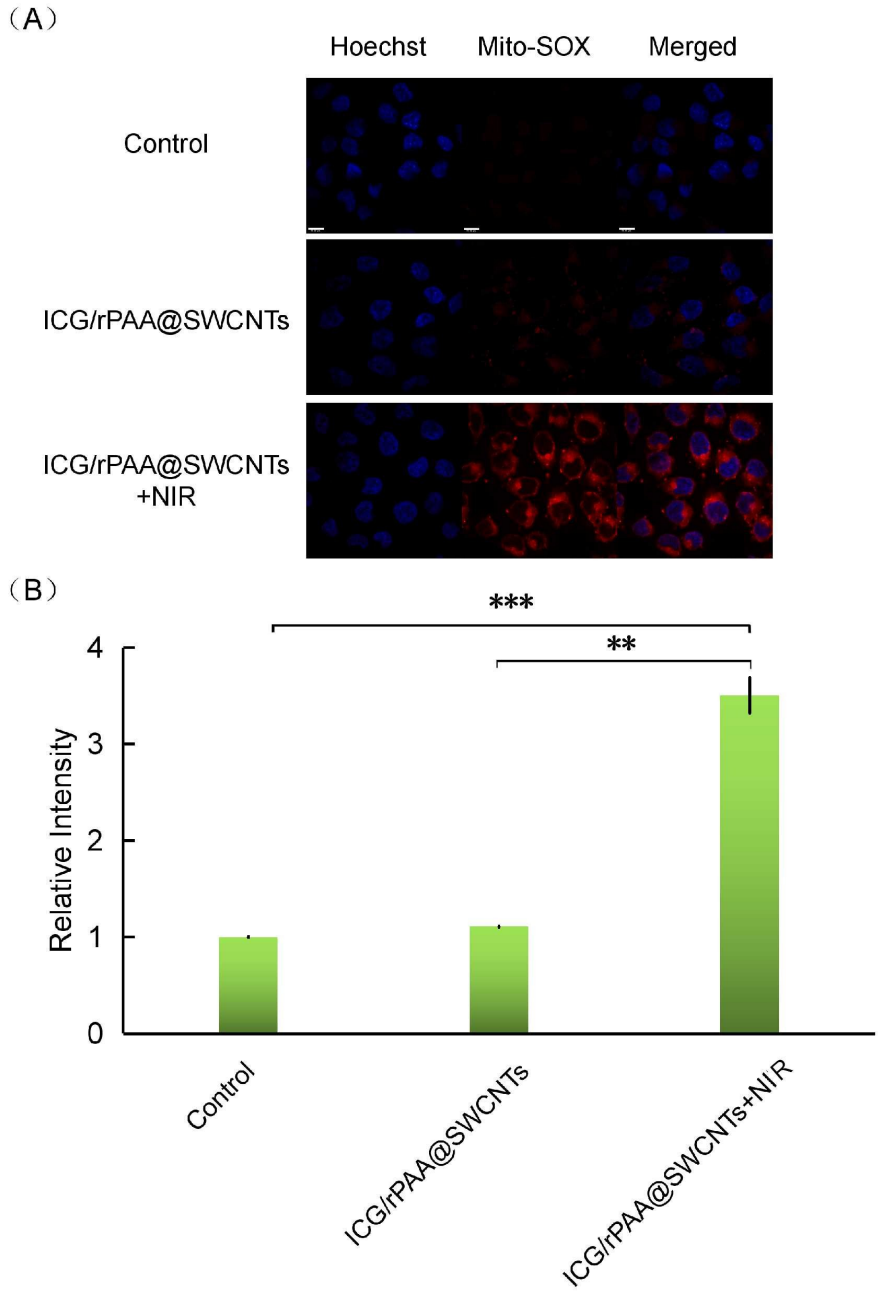

Fig. S9 (A) Mito-SOX imaging in HeLa cells treated with or without ICG/rPAA@SWCNTs. Scale bar = 10 μm. (B) Quantitative analysis of cellular fluorescence. ** $P < 0.01$, *** $P < 0.001$.

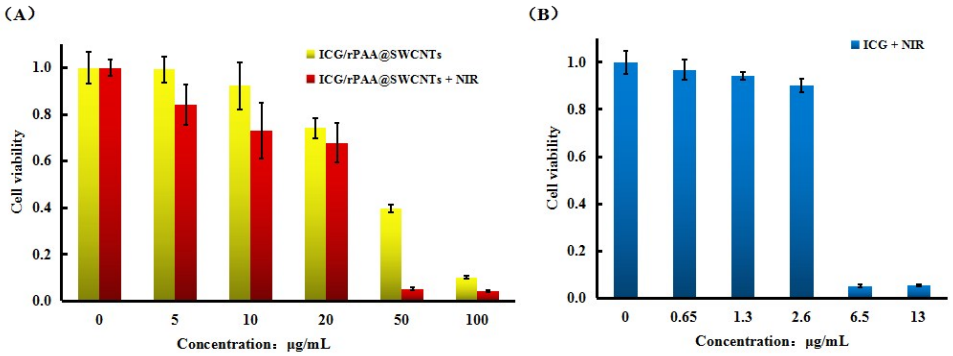

Fig. S10 (A) Cell viability of SH-SY5Y cells after being incubated with various concentrations of ICG/rPAA@SWCNTs in dark or upon 808 nm laser. (B) Cell viability of SH-SY5Y cells with various concentrations of free ICG upon 808 nm laser.