

Supporting Information

pH-Responsive Aerobic Nanoparticles for Effective Photodynamic Therapy

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1. Supplementary Figures and tables

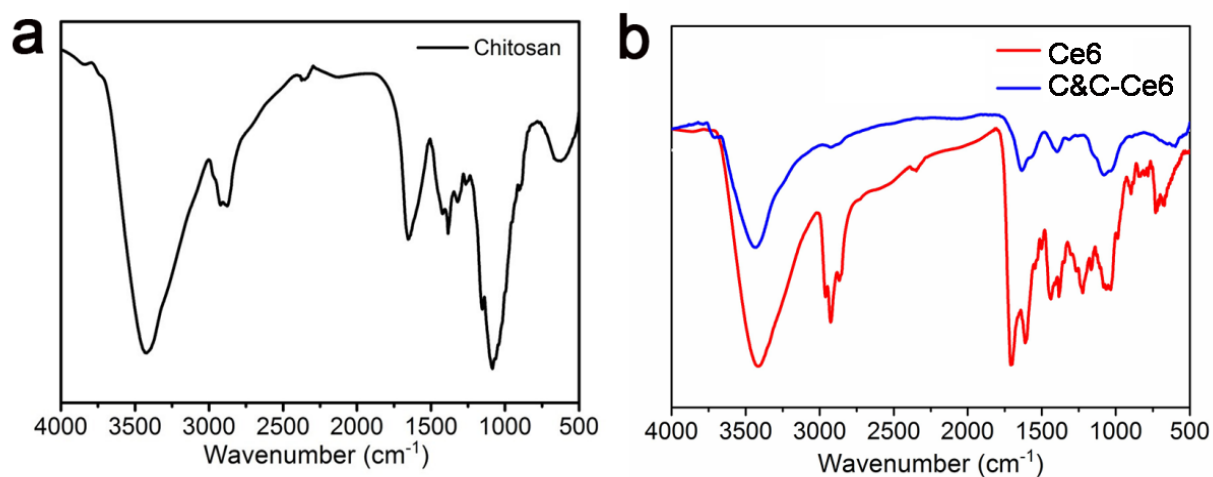


Figure S1. The FTIR absorption spectra of Chitosan (a), Ce6 and C&C-Ce6 nanoparticles (b).

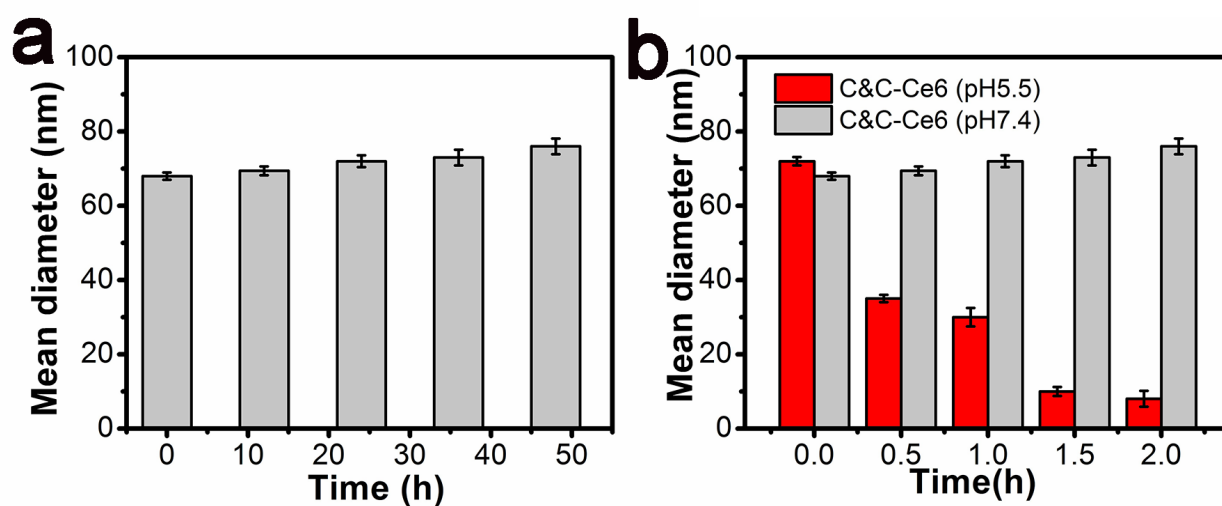


Figure S2. (a) The time-dependent DLS results of C&C-Ce6 nanoparticles under pH 7.4 at 37 °C; (b) the stability of C&C-Ce6 nanoparticles under different pH values (7.4 & 5.5).

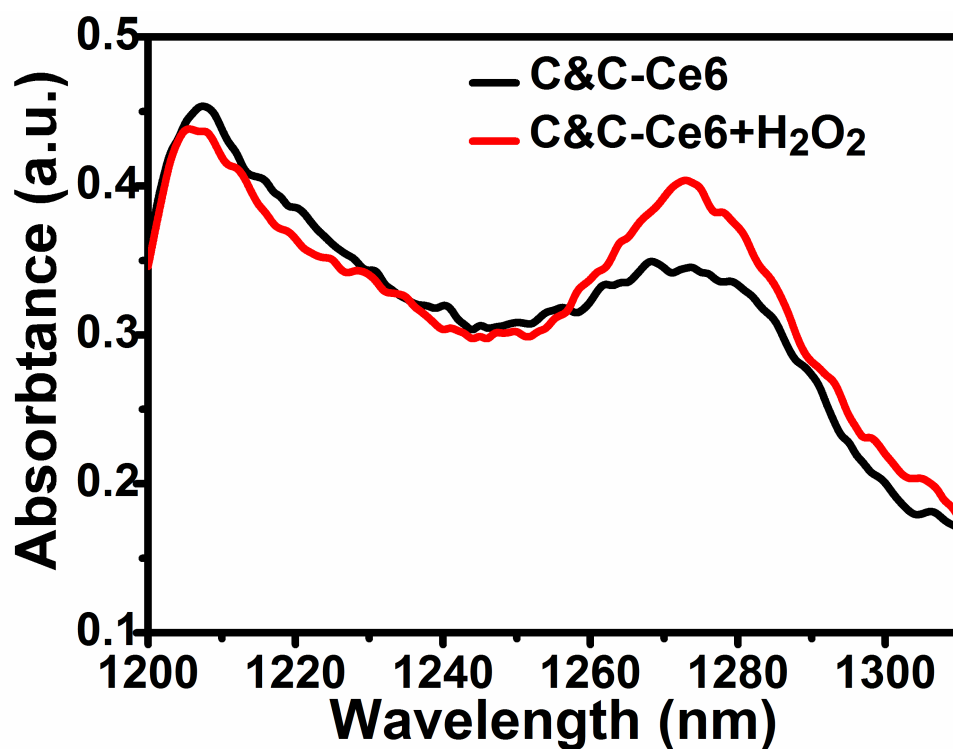


Figure S3. The $^1\text{O}_2$ phosphorescence spectra of C&C-Ce6 and C&C-Ce6+H₂O₂ upon the excitation at 650 nm in the neutral medium.

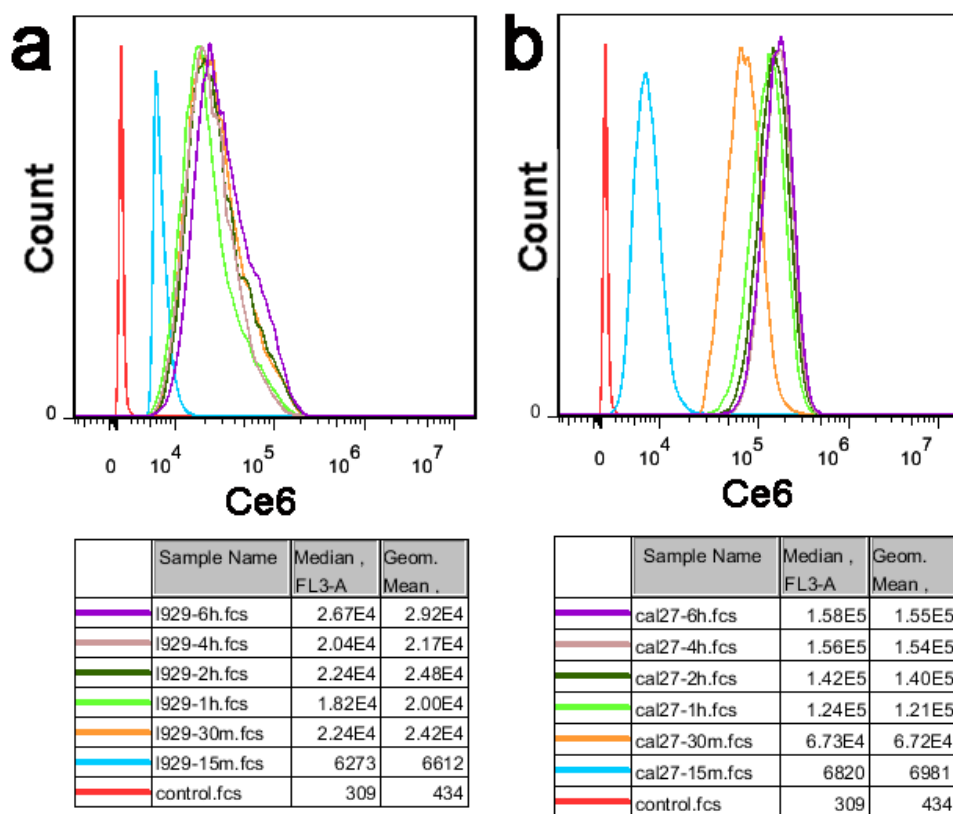


Figure S4. CAL-27 cells uptake (a) and L929 cells uptake (b) of C&C-Ce6 nanoparticles.

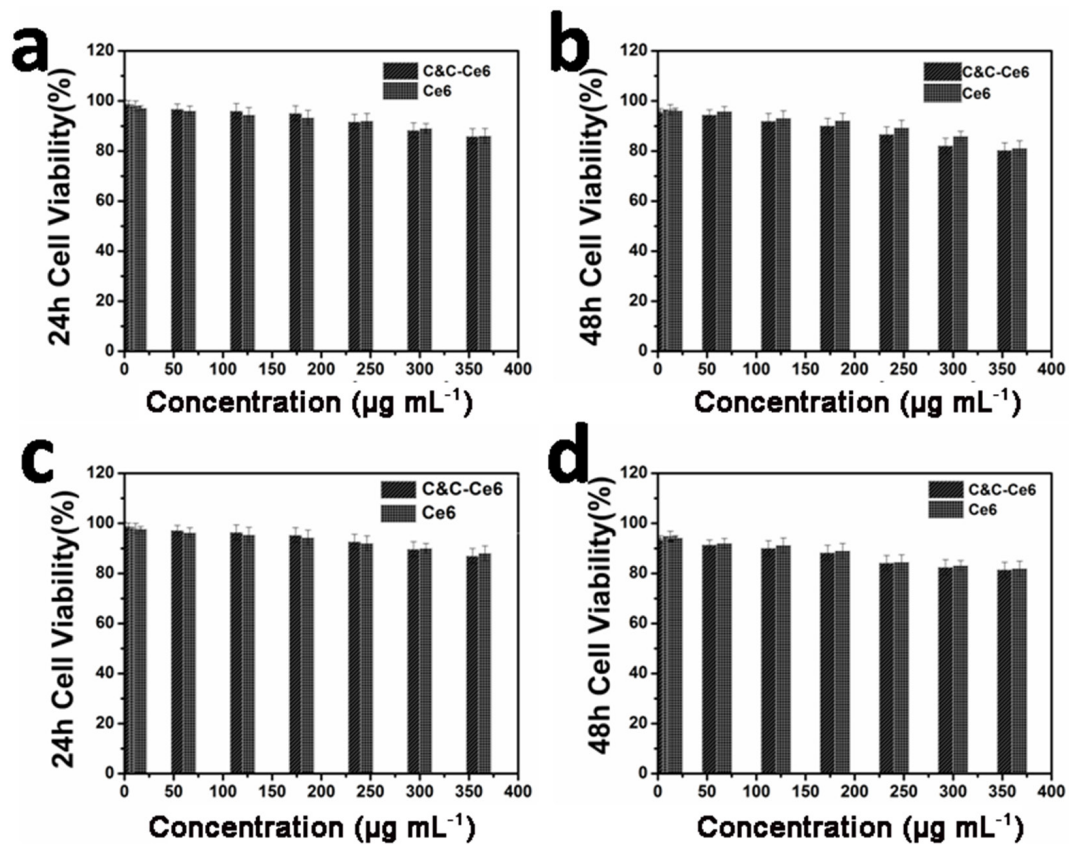


Figure S5. the 24h viabilities of CAL27 cells (a) and L929 cells (b) incubation of free Ce6 and C&C-Ce6 nanoparticles with different concentration of Ce6; the 48h viabilities of CAL27 cells (c) and L929 cells (d) incubation of free Ce6 and C&C-Ce6 nanoparticles with different concentration of Ce6.

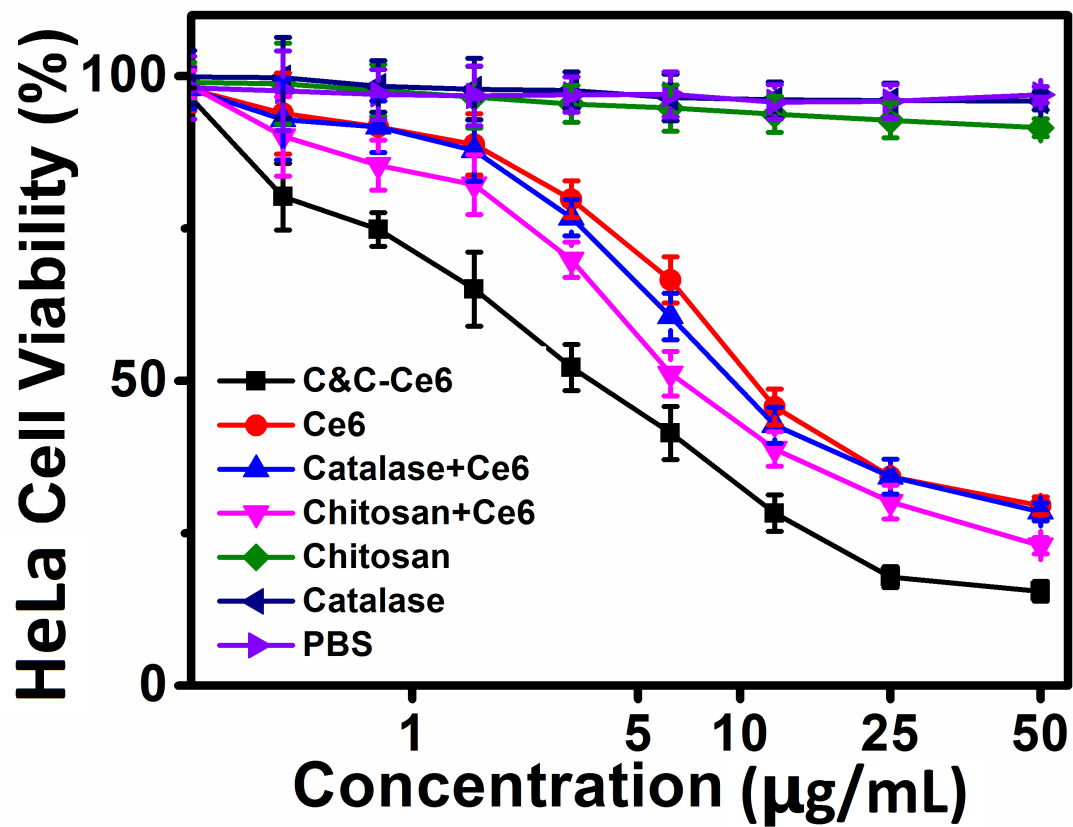


Figure S6. Cell viability of HeLa cells after C&C-Ce6, free Ce6, Catalase+Ce6 mixture, Chitosan+Ce6 nanoparticles, free Chitosan, free Catalase and PBS mediated PDT cultured for 24 h after photo-irradiation. (with different reagents Ce6 concentration at the Ce6 concentration of 1 to 50 $\mu\text{g mL}^{-1}$)

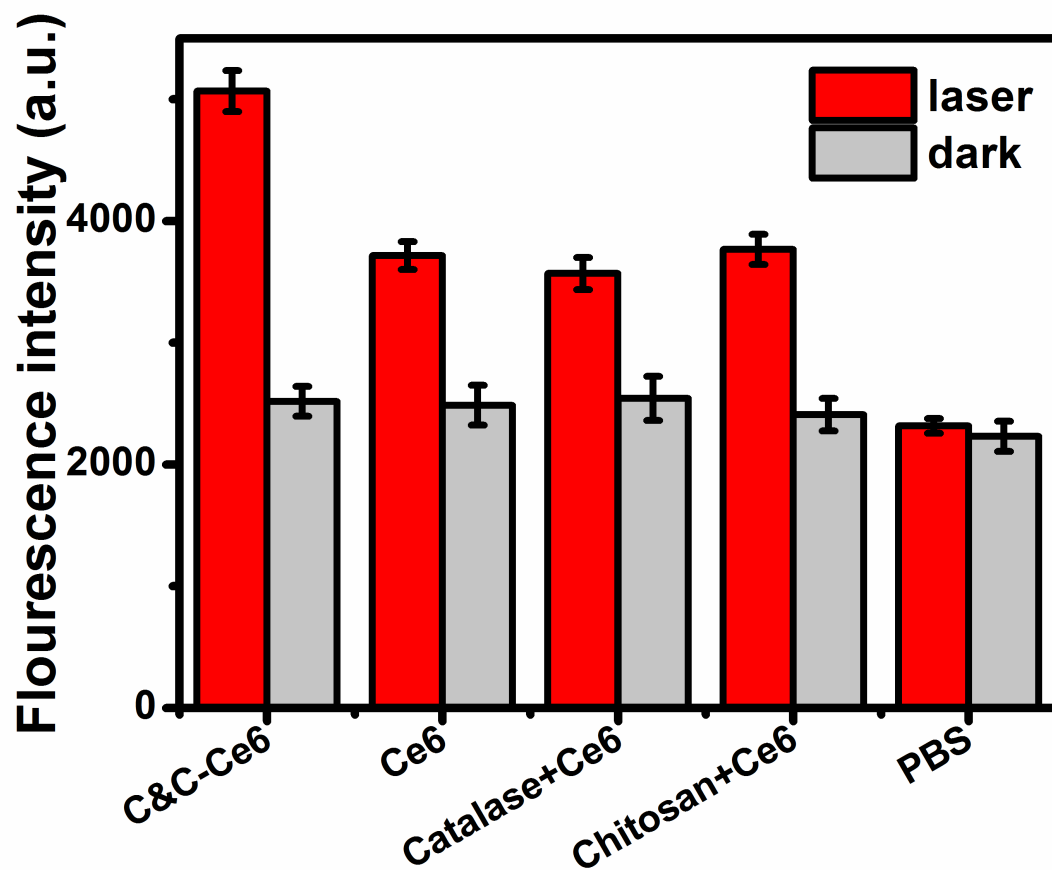


Figure S7. ROS fluorescence intensity of C&C-Ce6, free Ce6, Catalase+Ce6 mixture, Chitosan+Ce6 nanoparticles and PBS mediated PDT in CAL-27 cells.

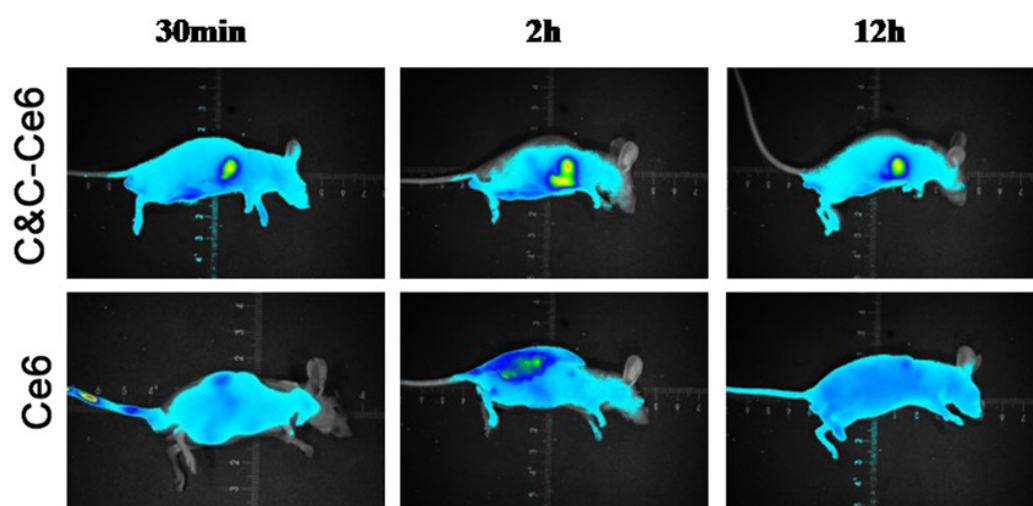


Figure S8. Fluorescence intensity of tumor-burdened mice pretreated with C&C-Ce6 and Ce6, respectively, after intravenously injection of 30 min, 2 h, 12 h.

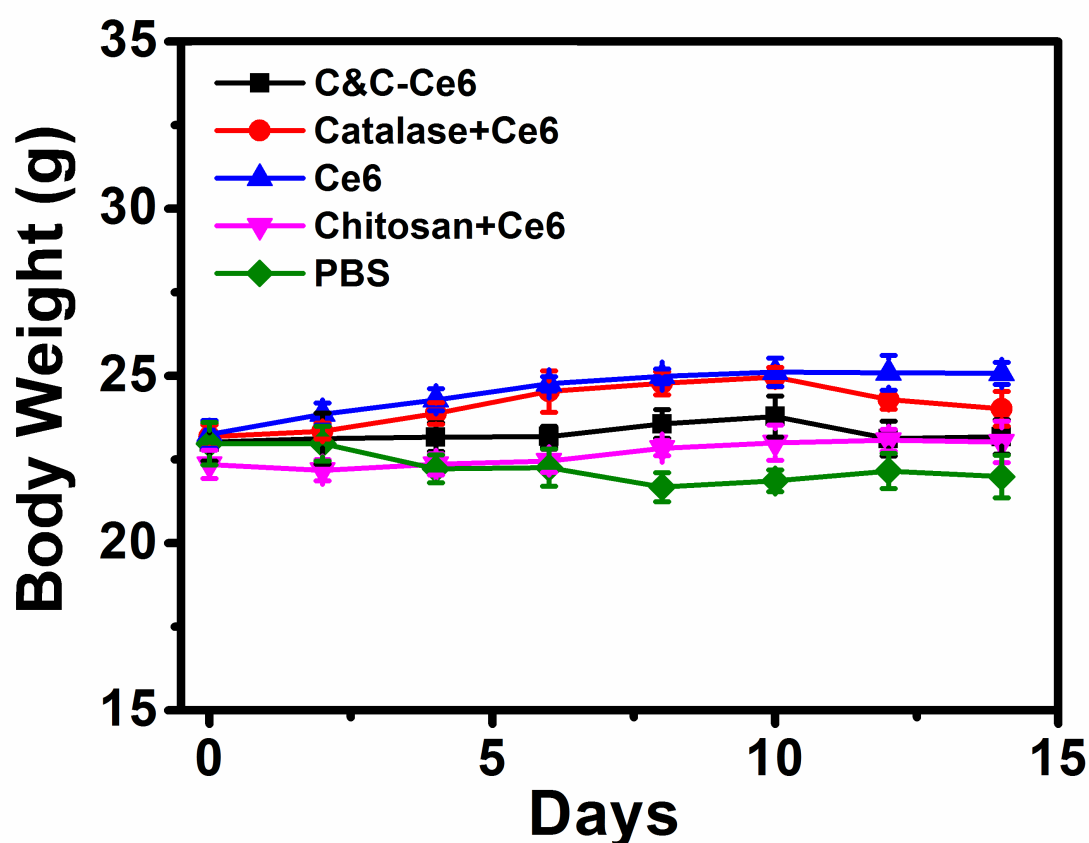


Figure S9. Body weight changes of tumor-bearing mice pretreated with PBS, Chitosan+Ce6 nanoparticles, Catalase+Ce6 mixture, free Ce6 and C&C-Ce6 nanoparticles, respectively, for 14 days after PDT