

Supporting Information

Facile synthesis of polypyrrole-rhodamine B nanoparticles for self-monitored photothermal therapy of cancer cells

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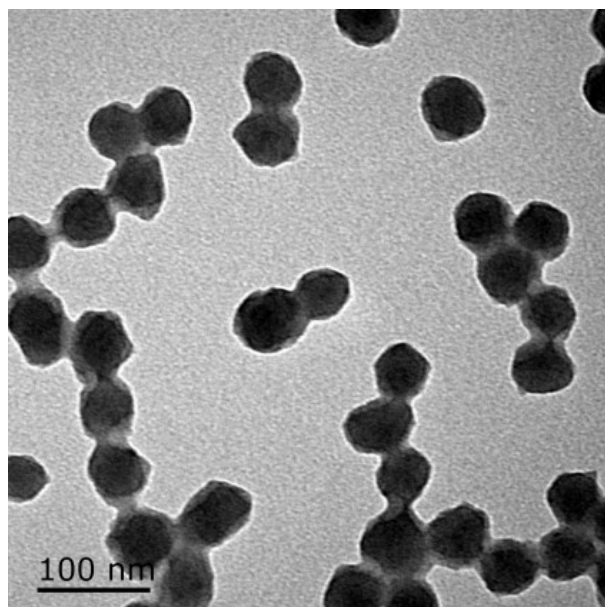


Fig. S1 TEM images of PPy nanoparticles without rhodamine B.

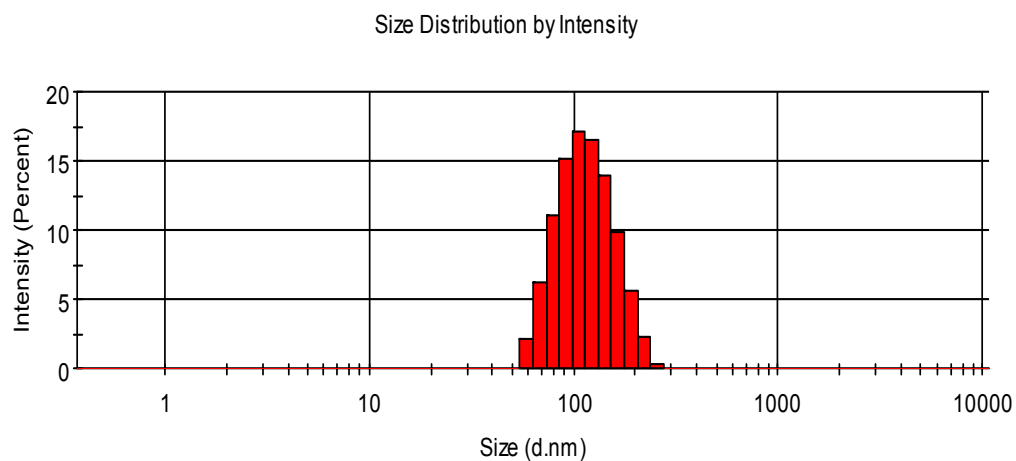


Fig. S2 The particle size of PPy-RB NPs measured by dynamic light scattering.

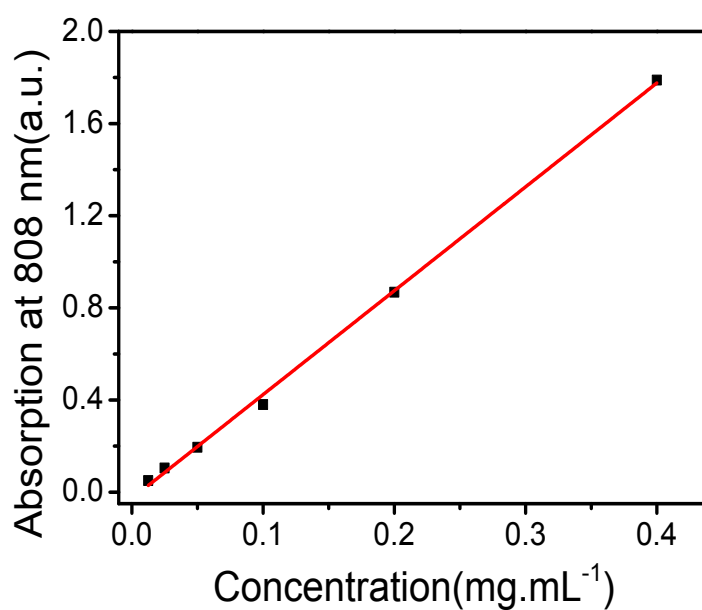


Fig. S3 Linear fitting curve of the absorption intensity of PPy-RB NPs solution at 808 nm versus the sample concentrations.

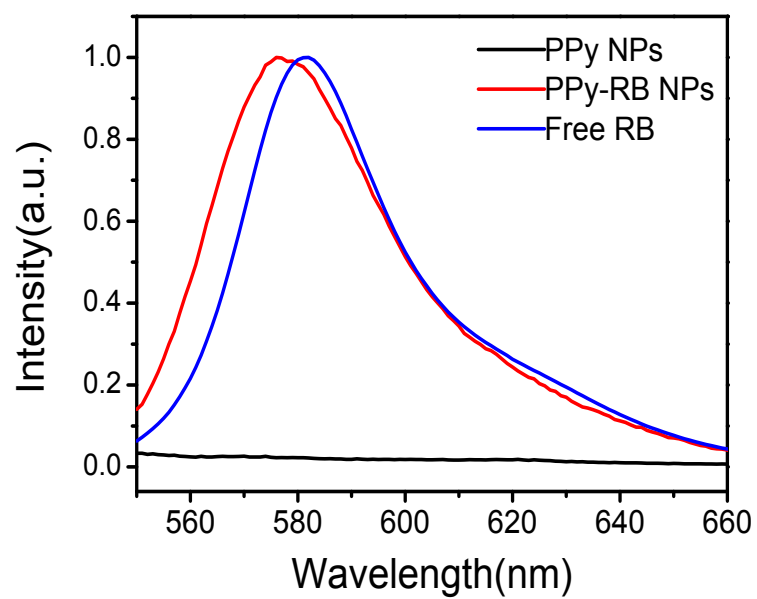
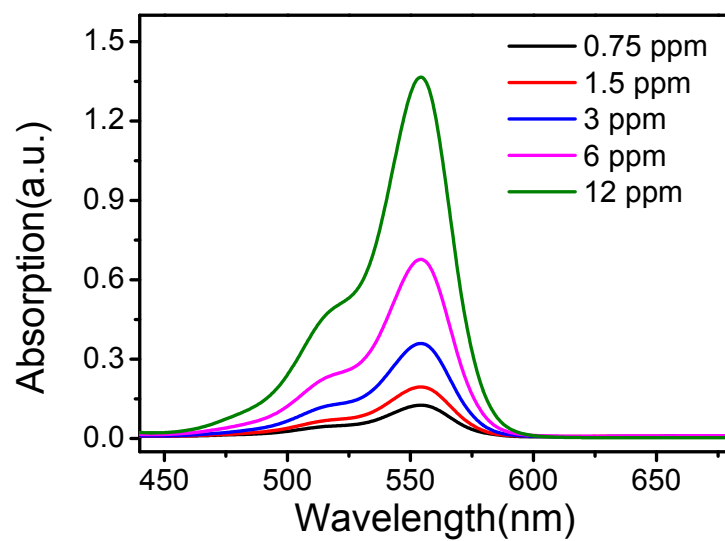
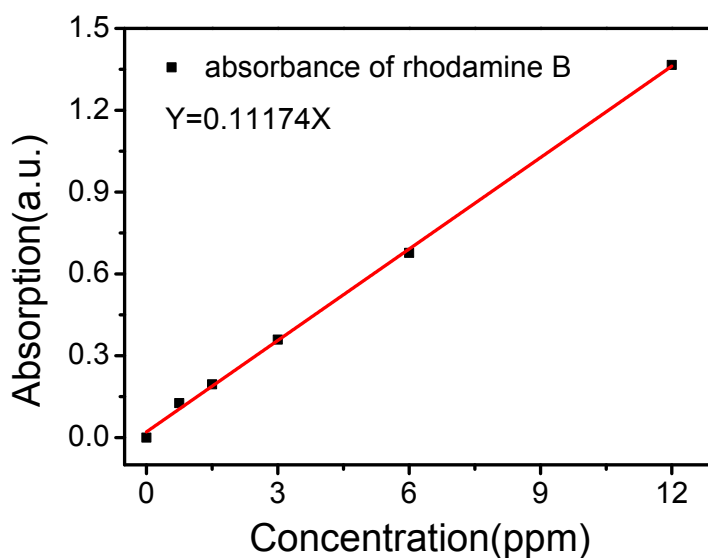


Fig. S4 Fluorescence emission spectra of rhodamine B, PPy NPs and PPy-RB NPs aqueous dispersion under 530 nm excitation, respectively.

A



B



C

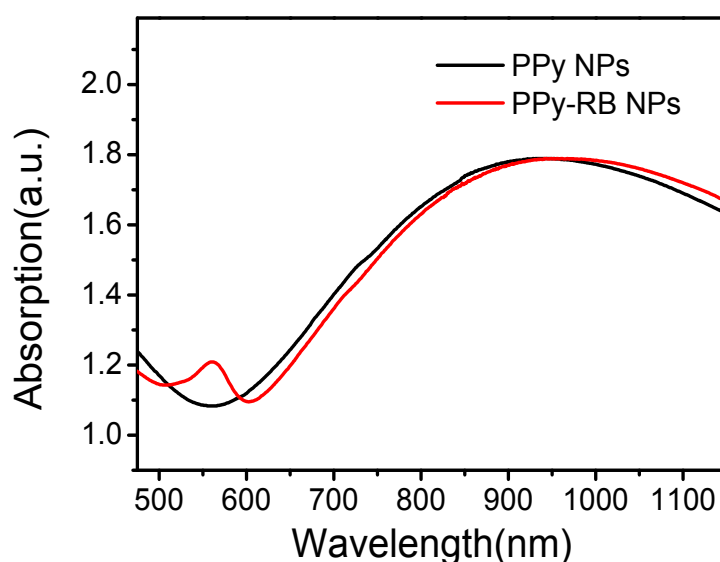


Fig. S5. (A) Absorption spectra of rhodamine B at various concentrations. (B) Absorption peak intensity of rhodamine B in Fig.S5A is plotted against the concentrations, which fits to the line $Y=0.11174X$ with $R^2=0.9988$ (Y represents the absorbance peak intensity, X represents the rhodamine B concentration). (C) The absorption spectra of PPy-RB NPs ($0.4 \text{ mg}\cdot\text{mL}^{-1}$) and PPy NPs. In this experiment, Y is calculated as $1.209-1.08365=0.12535$, $X = 1.1218 \text{ ppm}$. The loading efficiency of rhodamine B on PPy-RB NPs is calculated as $1.1218 \times 10^{-6}/(0.4 \times 10^{-3}) \approx 0.3\%$.



Fig. S6 Photographs of the PPy-RB NPs ($0.1 \text{ mg}\cdot\text{mL}^{-1}$) dispersed in PBS (left) before and (right) after stored for one week.

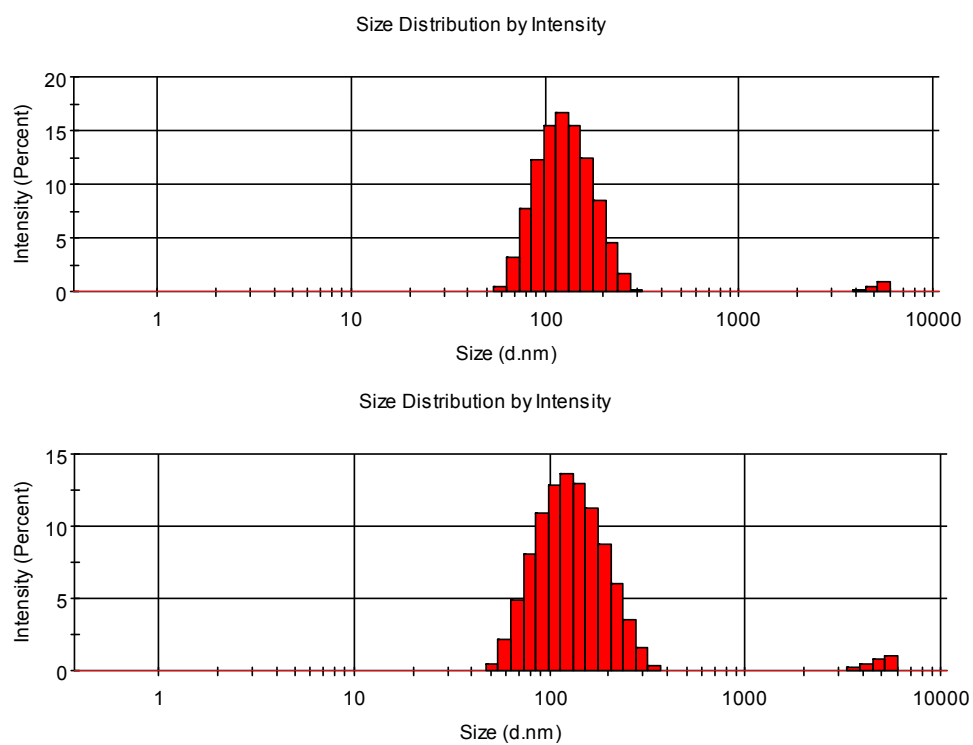


Fig. S7 Particle size of PPy-RB NPs dispersed in PBS (upper) before and (lower) after one week by dynamic light scattering analysis.

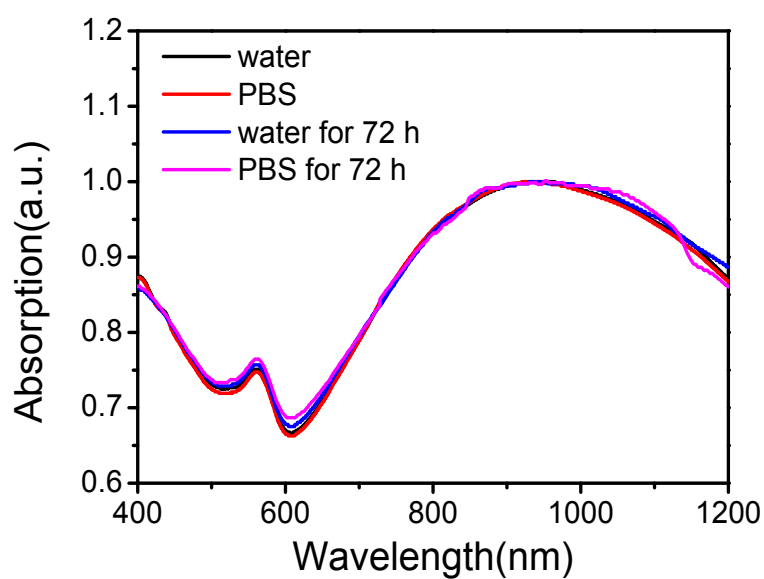


Fig. S8 The absorption spectra of the PPy-RB NPs dispersed in water and PBS before and after stored for 72 h.

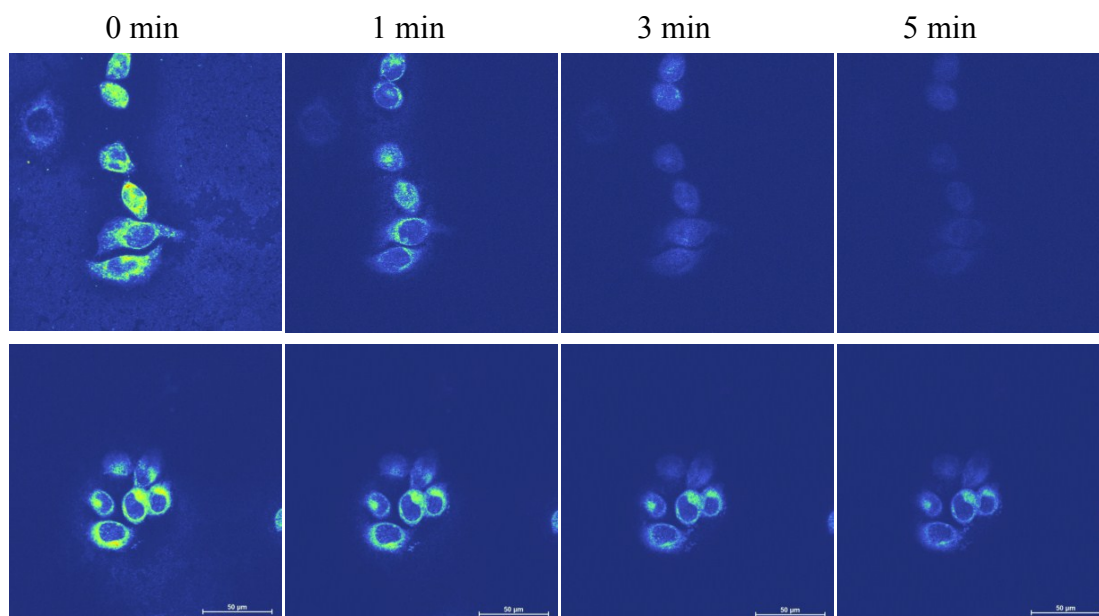


Fig. S9 Pseudocolor luminescence intensity images of HepG2 cells incubated with PPy-RB NPs irradiated by 808 nm (upper) and 405 nm (lower) lasers for different times (from 0 to 5 min).