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.
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 mg·mL$^{-1}$) and PPy NPs. In this experiment, $Y$ is calculated as $1.209-1.08365=0.12535$, $X = 1.1218$ 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 mg·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).