Supporting Information

A Polypeptide Micelles Template Method to Prepare Polydopamine Composite Nanoparticles for Synergistic Photothermal-Chemotherapy

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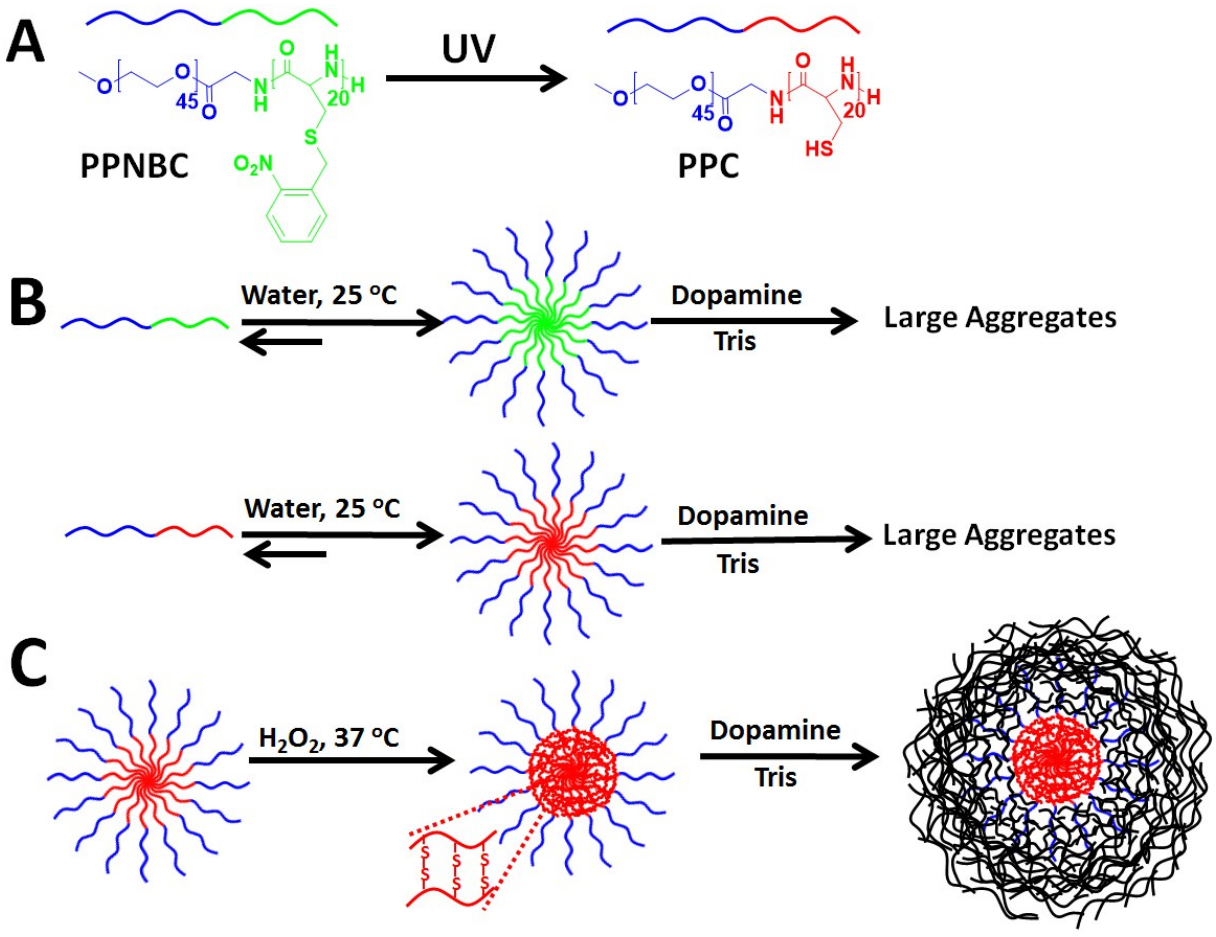

Figure S1. **(A)** the chemical structures of PPNBC and PPC; (B) the uncross-linked micelles of PPNBC and PPC were stirred with DA to form large aggregates; (C) the disulfide-bond cross-linked micelles of PPC were stirred with DA to form the nanocomposites.

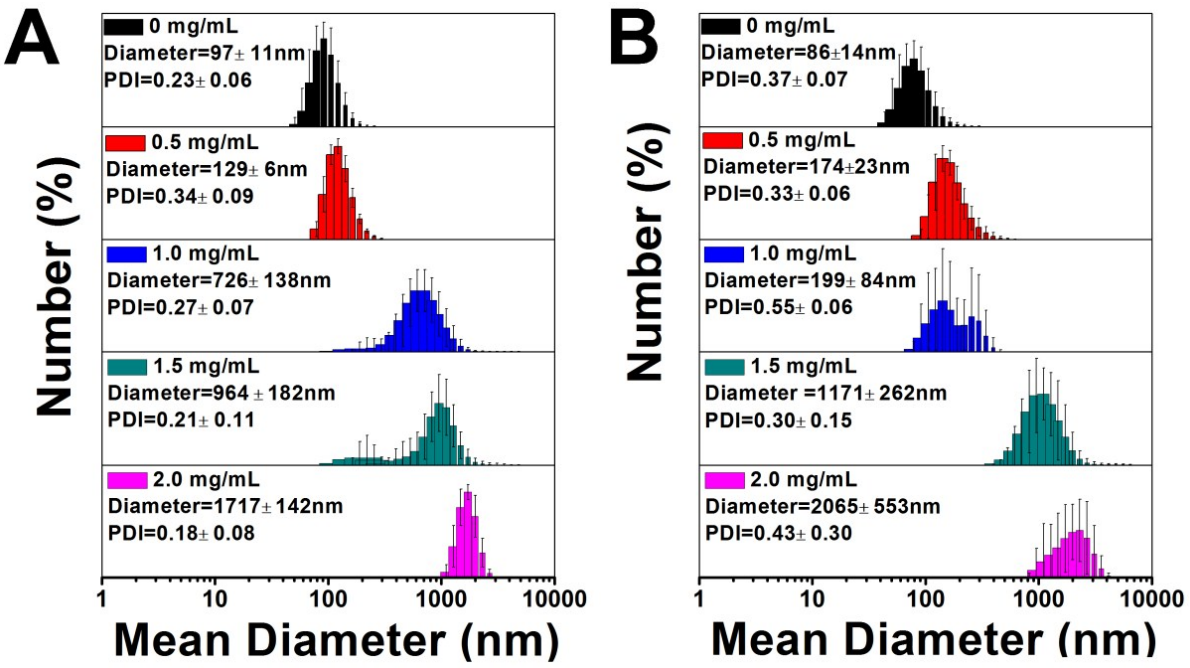

Figure S2. DLS data monitoring for the uncross-linked micelles of PPNBC (A) and/or PPC (B) stirring with different concentrations of DA for 4 h and at room temperature.

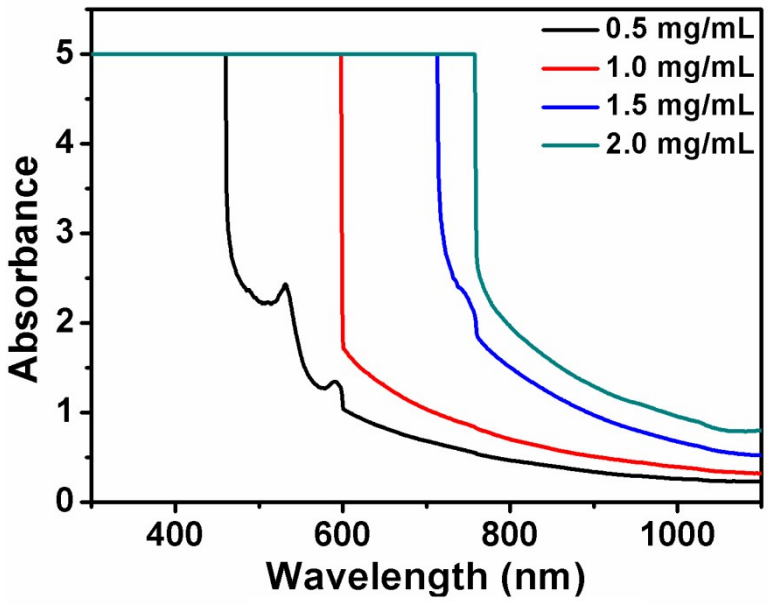

Figure S3. The NIR-vis spectra of the PPC@PDA composite nanoparticles (dispersed in 1 mL PBS, 0.35 – 1.08 mg/mL) that was prepared by PPC micelles (1 mL, 0.24 mg/mL) with DA (1 mL, 0.5 – 2.0 mg/mL) for 4 h.

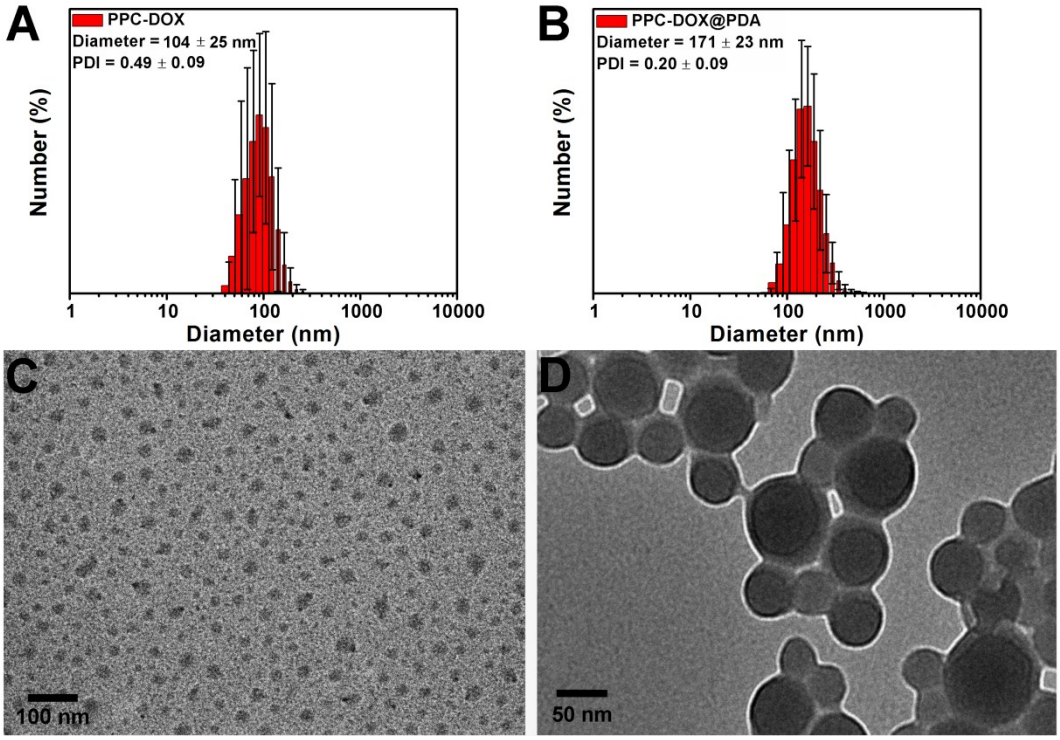

Figure S4. DLS (A, B) and TEM (C, D) data for the precusor DOX-loaded PPC micelles (i.e., PPC-DOX) and the resulting DOX-loaded nanocomposites (i.e., PPC-DOX@PDA).

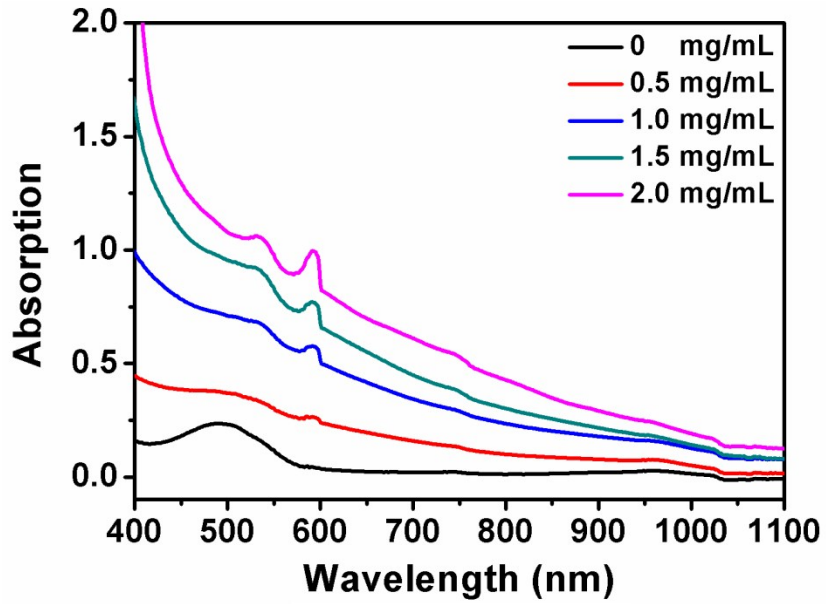

Figure S5. The Vis-NIR spectra of the PPC-DOX@PDA nanocomposites (dispersed in 5 mL PBS, 0.06 – 0.18) that was prepared by the DOX-loaded PPC micelles (1 mL, 0.28 mg/mL) with DA (1 mL, 0.5 – 2.0 mg/mL) for 4 h and at room temperature.

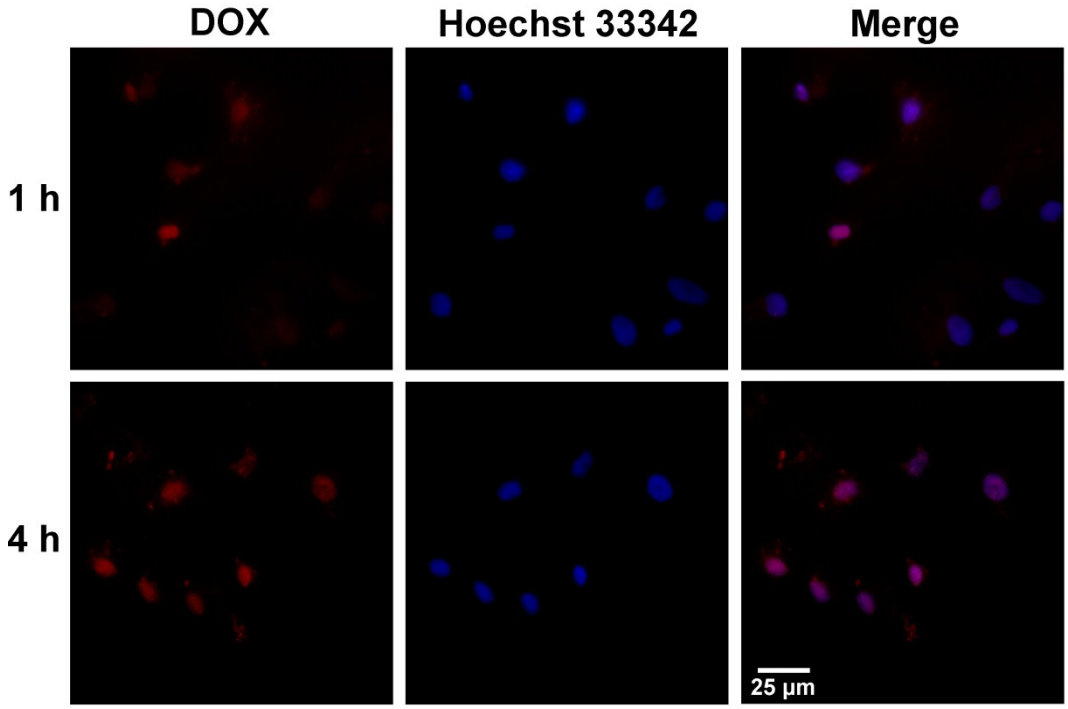

Figure S6. Fluorescence microscope images of HeLa cells incubated with the DOX-loaded PPC-DOX@PDA nanocomposites for different times and at 37 °C.

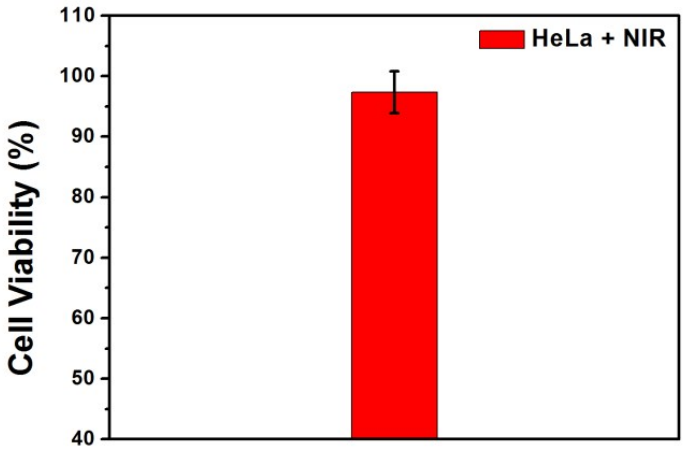

Figure S7. The cytotoxicity of the NIR laser irradiation (5 min, 808 nm, 2 W·cm^{-2}) on HeLa cells. The cell viability was > 95%, which means that the NIR laser irradiation nearly induced no cytotoxicity.

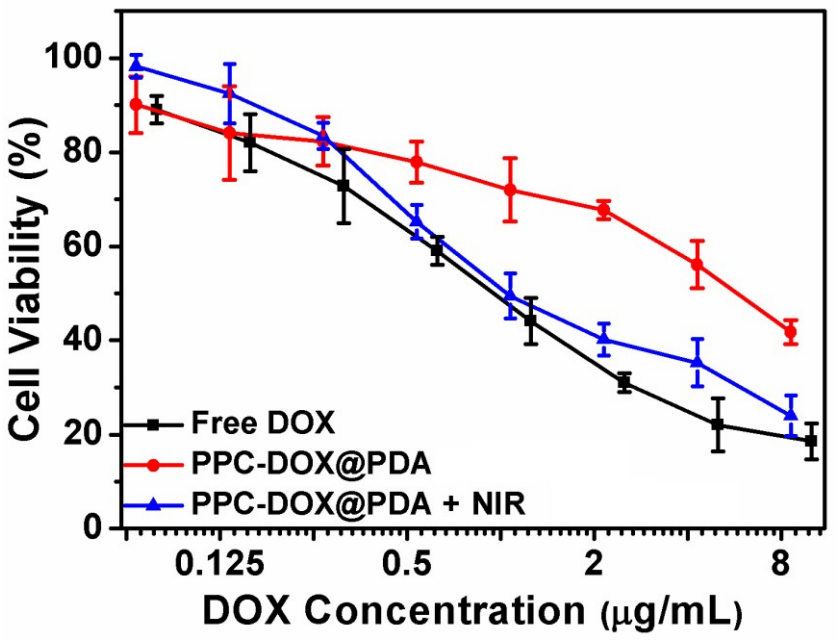

Figure S8. Cytotoxicity of free DOX or PPC-DOX@PDA incubated with HeLa cells under different treatments.