

Supporting Information

For

Pd corolla-human serum albumin-indocyanine green nanocomposite for photothermal/photodynamic combination therapy of cancer

Duo Sun,^{‡a} Yizhuan Huang,^{‡a} Xianhua Zhang,^c Jian Peng,^a Jingchao Li,^a
Jiang Ming,^a Jingping Wei,^a Xiaolan Chen,^{*ab} and Nanfeng Zheng^{*a}

^aState Key Laboratory for Physical Chemistry of Solid Surfaces, Collaborative Innovation Center of Chemistry for Energy Materials, National & Local Joint Engineering Research Center of Preparation Technology of Nanomaterials, College of Chemistry and Chemical Engineering, Xiamen University, Xiamen 361005, China

^bState Key Laboratory for Chemistry and Molecular Engineering of Medicinal Resources, Guangxi Normal University, Guilin 541004, China

^cDepartment of Pharmacy, Xiamen University Hospital, Xiamen 361005, China

No conflict of interest was reported by the authors of this article.

* Corresponding Author:

Prof. Xiaolan Chen; Prof. Nanfeng Zheng

Results

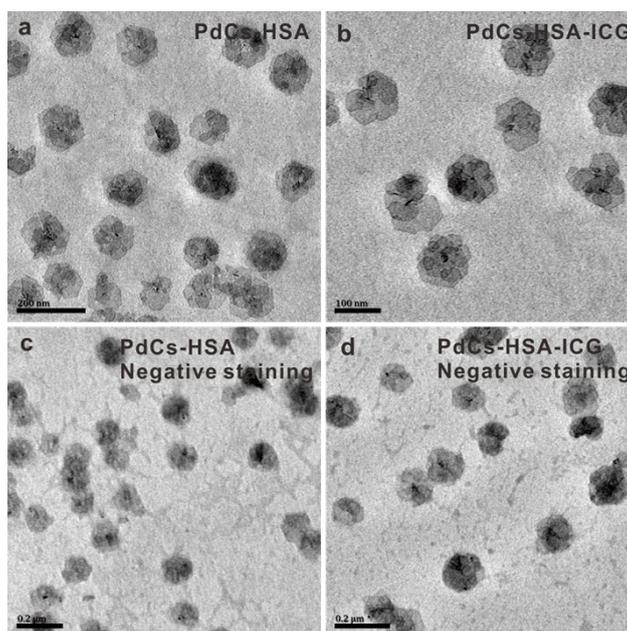


Figure S1. TEM images of PdCs-HSA (a), PdCs-HSA-ICG (b), and the corresponding negative staining of PdCs-HSA (c) and PdCs-HSA-ICG (d) using phosphotungstic acid.

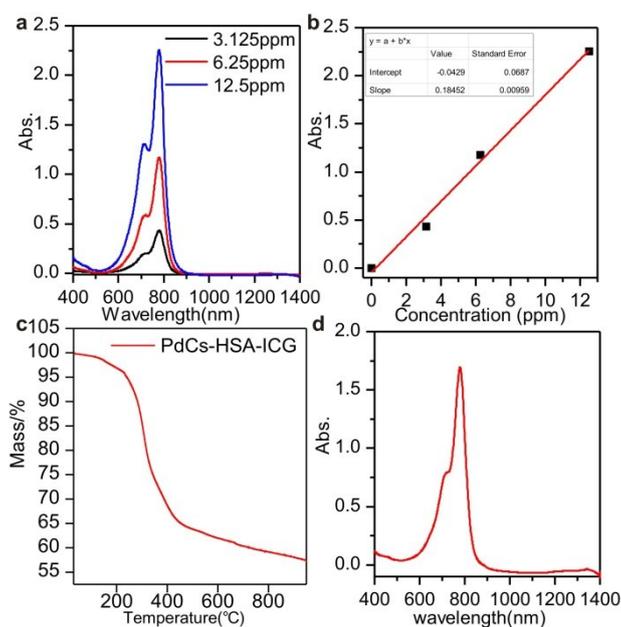


Figure S2. (a) UV-Vis-NIR absorption spectra of indocyanine green (ICG). (b) The work curve of ICG. (c) Thermogravimetric analysis of PdCs-HSA-ICG. (d) The absorption spectrum of ICG in supernatant after reacting with PdCs-HSA.

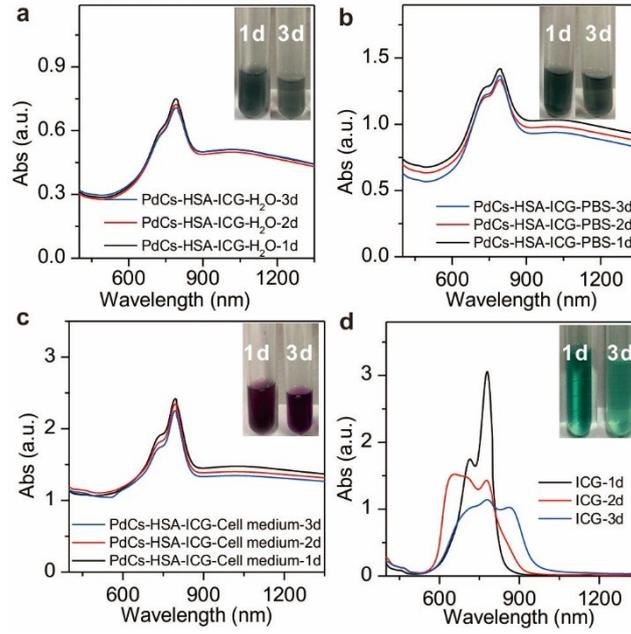


Figure S3. UV-Vis-NIR absorption spectra of PdCs-HSA-ICG dispersed in H₂O (a), PBS (b) and cell medium including 10% FBS (c) for 1 day and 3 days. (d) UV-Vis-NIR adsorption spectra of ICG dispersed in water for 1 day and 3 days. Insets in a-d: the corresponding photos of PdCs-HSA-ICG dispersed in H₂O, PBS and cell medium including 10% FBS at 1d and 3d, respectively.

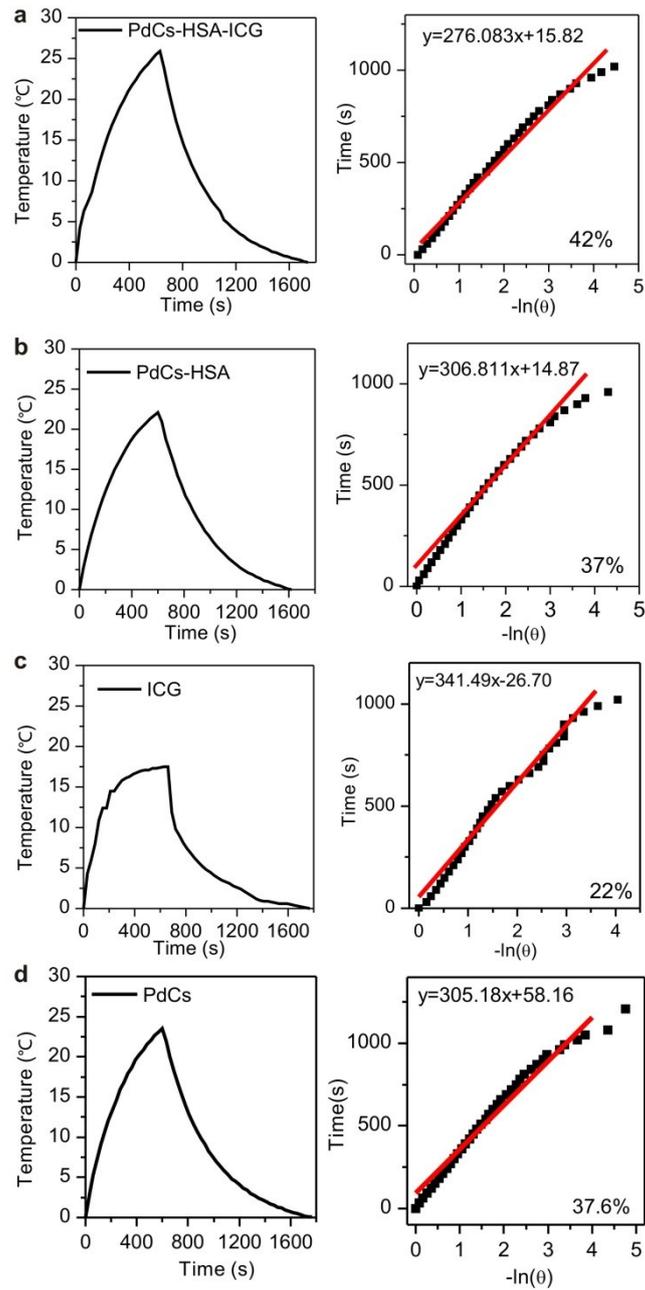


Figure S4. Photothermal effects and the corresponding time constants for heat transfer by applying the linear time data from the cooling period versus negative natural logarithm of driving force temperature. (a)-(d): PdCs-HSA-ICG, PdCs-HSA, ICG and PdCs, respectively.

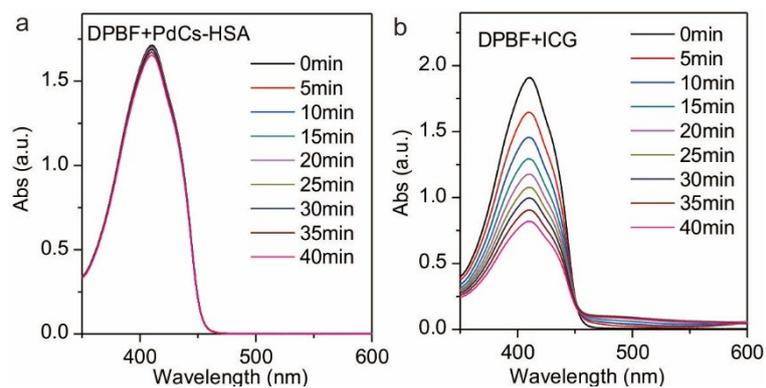


Figure S5. Typical absorption spectra of DPBF in the presence of PdCs-HSA (a) and ICG (b) after irradiation for different times with an 808 nm laser at 30 mW/cm².

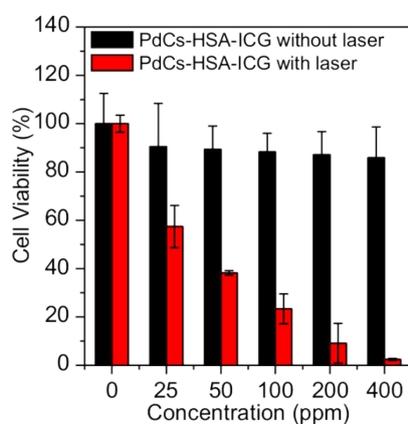


Figure S6. The cytotoxicity of different concentrations of PdCs-HSA-ICG on HeLa cells without or with exposure to 808 nm laser (1 W/cm²) for 5 min (n=8 for each group).