

## Supplementary Information

### Eco-Friendly Development of Ultrasmall IONP-loaded Nanoplatfom for Bimodal Imaging-guided Cancer Theranostics

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### Supplementary Figures and Tables

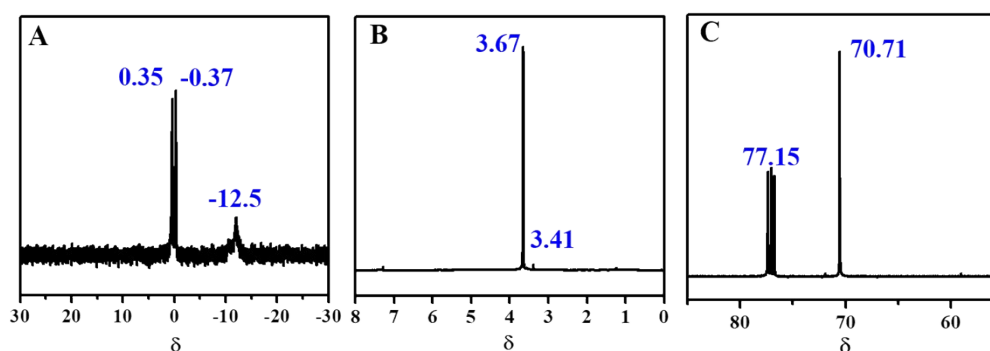


Figure S1. Nuclear magnetic resonance spectra (<sup>31</sup>P-NMR (A), <sup>1</sup>H-NMR (B), <sup>13</sup>C-NMR (C)) of PO-PEG sample.

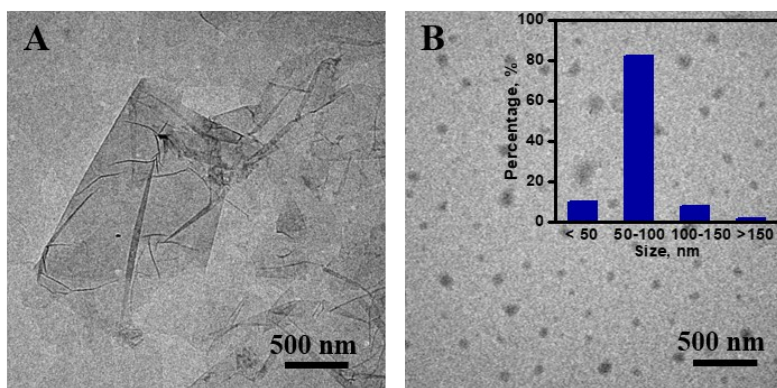


Figure S2. TEM images of pristine GO (a) and small-sized GO nanosheets (b) after ultrasonic treatment.

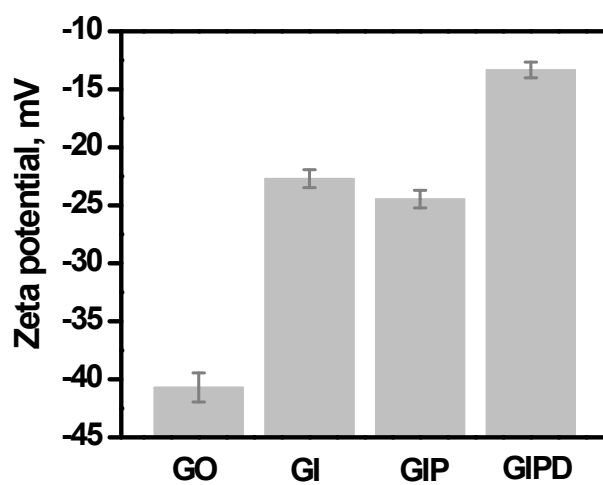


Figure S3. Zeta potentials of GO, GI, GIP and GIPD nanoparticles.

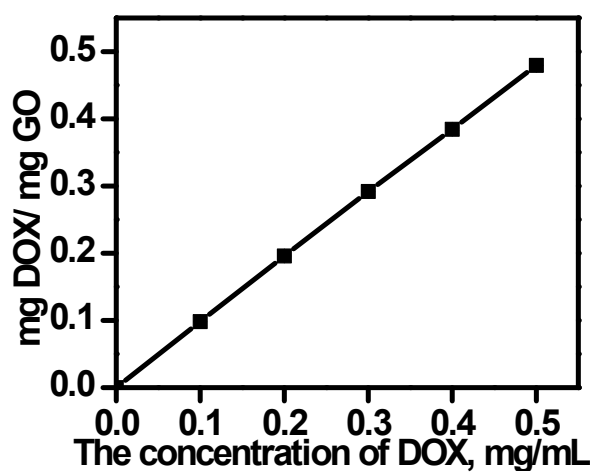


Figure S4. Drug content of GIP as a function of DOX concentration (from 0.1 mg/mL to 0.5 mg/mL)

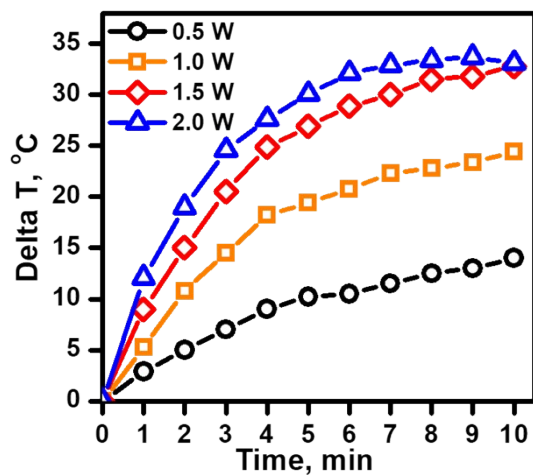


Figure S5. Temperature change of GIP solution after NIR irradiation at different power densities (0.5 W/cm<sup>2</sup>, 1.0 W/cm<sup>2</sup>, 1.5 W/cm<sup>2</sup>, 2.0 W/cm<sup>2</sup>) as a function of treatment time.

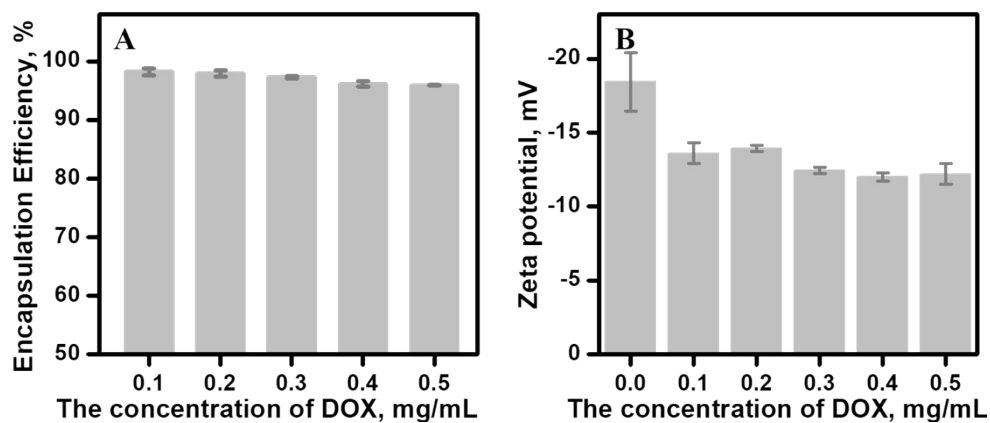


Figure S6. Encapsulation efficiency(A) and Zeta potential (B) of GIP nanoparticles when different amount of DOX was used for loading.

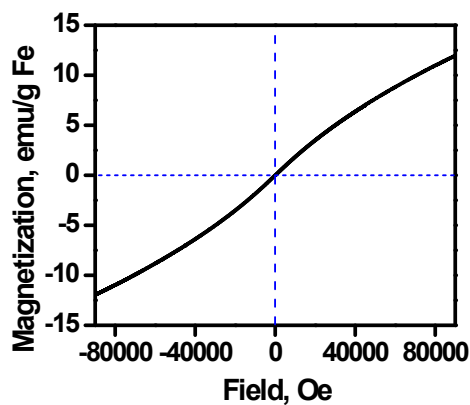


Figure S7. Magnetization curves of the GIPD nanoparticles with field values of  $\pm 9$  T at the temperature of 300 K.

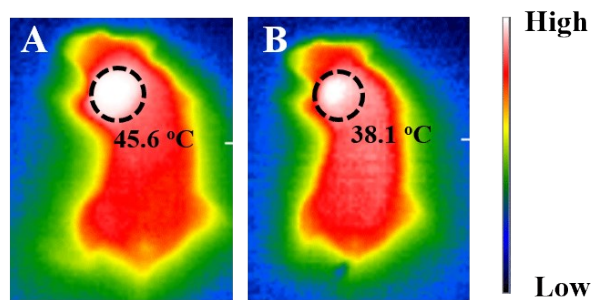


Figure S8. The surface photothermal images of tumor immediately (A) upon 5 min NIR irradiation and 2 min later after irradiation removal (B).