

## Electronic Supplementary Information

# Facile integration of multiple magnetite nanoparticles and carboxylic graphene oxide for theranostics combined efficient MRI and thermal therapy

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Xiaomin Wang,<sup>b</sup> Zhong Chen,<sup>c</sup> and Jinhao Gao<sup>\*a</sup>

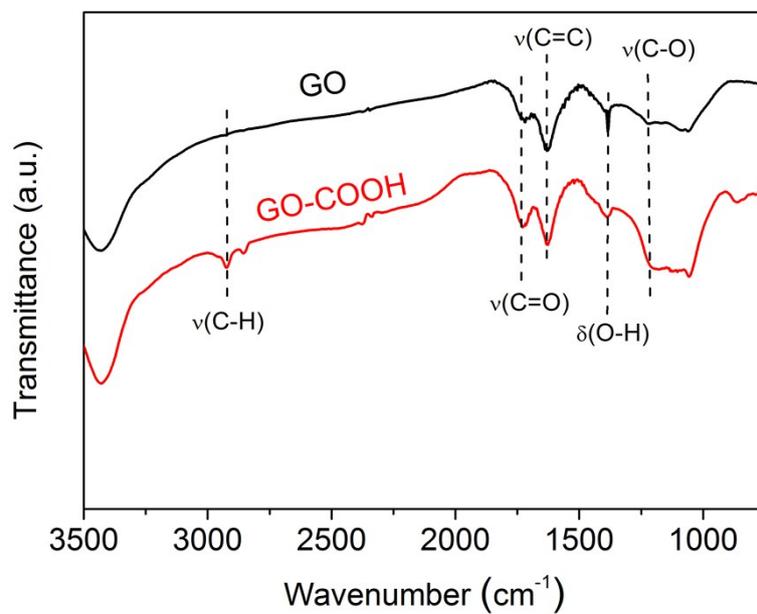
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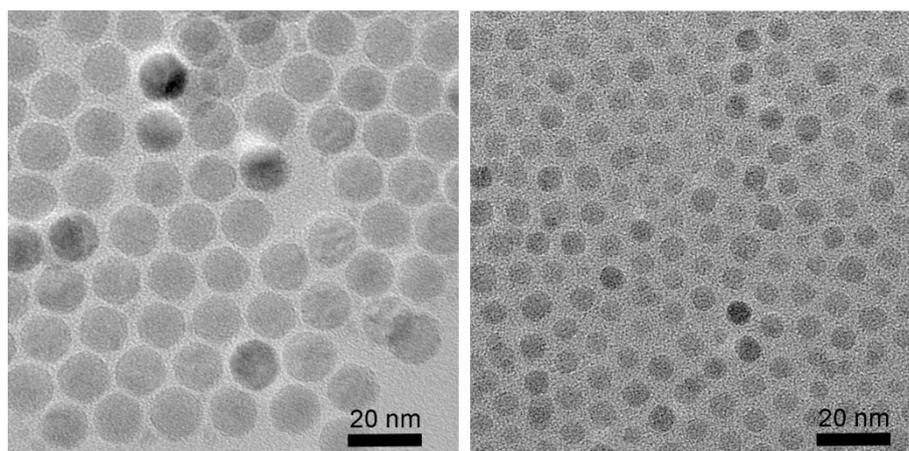
<sup>c</sup> *Department of Electronic Science, Fujian Key Laboratory of Plasma and Magnetic Resonance, Xiamen University, Xiamen 361005, China*

‡ These authors contributed equally to this work.

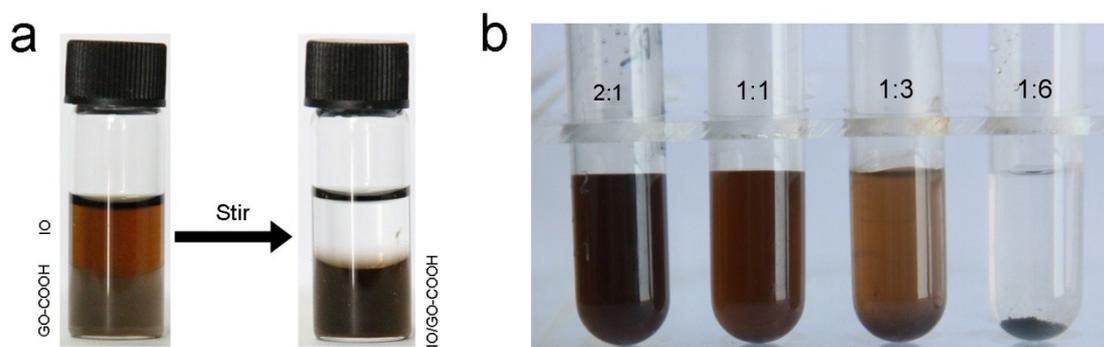
\*Email: [jhgao@xmu.edu.cn](mailto:jhgao@xmu.edu.cn)



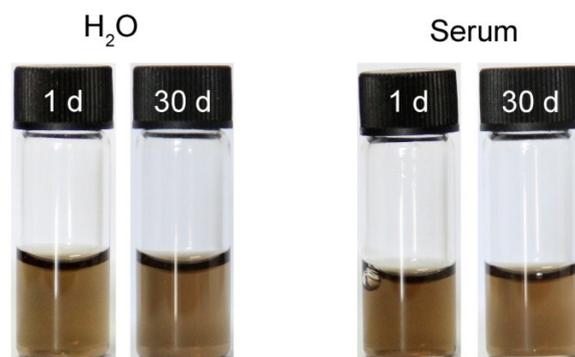
**Figure S1.** FTIR spectra of GO and GO-COOH.



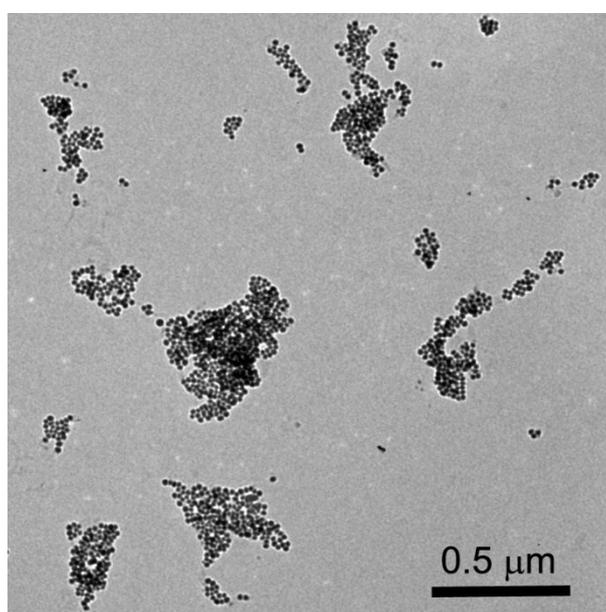
**Figure S2.** TEM images of IO-13 (left) and IO-7 (right).



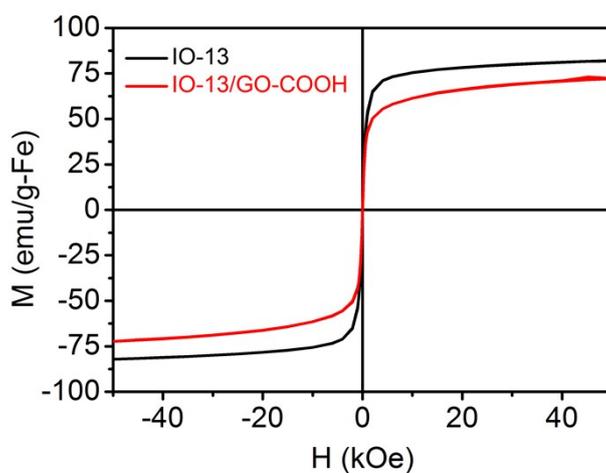
**Figure S3.** Photographs of (a) the transferring process and (b) IO-13/GO-COOH aqueous solution obtained by different weight ratios of GO-COOH to IO-13.



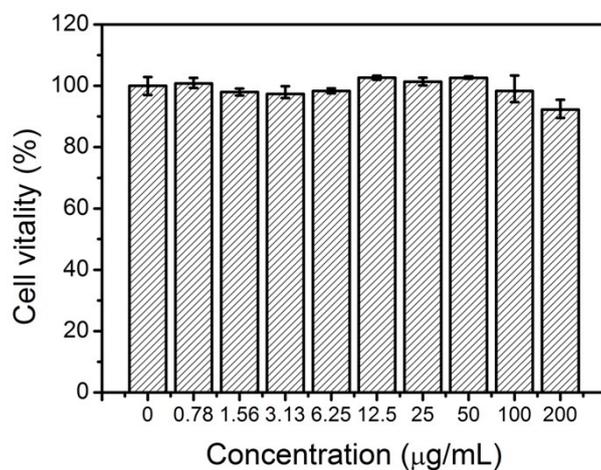
**Figure S4.** Photographs of IO-13/GO-COOH dispersed in water and 10% fetal bovine serum (FBS). The solutions are stable without aggregation over 30 days.



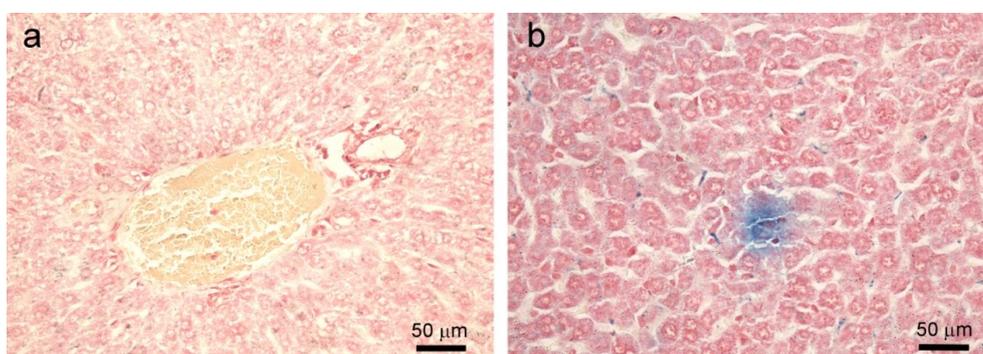
**Figure S5.** Low-magnification TEM image of IO-13/GO-COOH.



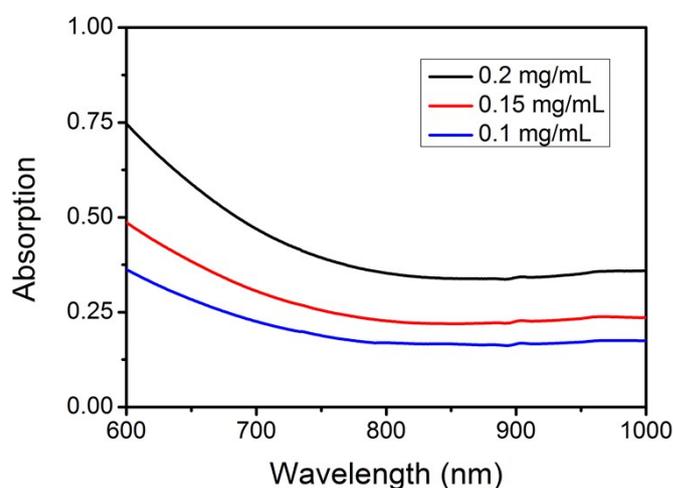
**Figure S6.** Magnetic hysteresis loops (at 300 K) of IO-13/GO-COOH and IO-13, respectively. The  $M_s$  values were calculated by the mass of Fe.



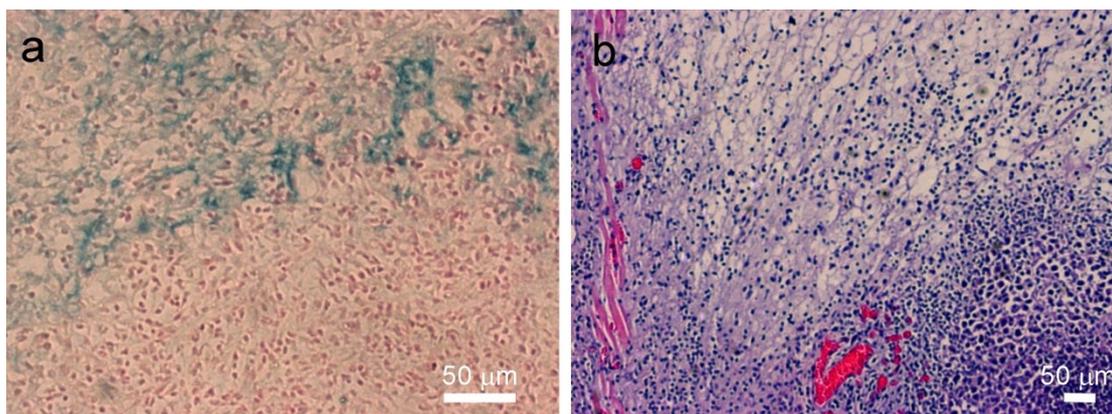
**Figure S7.** Cell viability of HeLa cells after incubated with IO-13/GO-COOH of different Fe concentrations at 37 °C for 24 h.



**Figure S8.** Prussian blue staining images of liver tissues from ICR mice (a) without and (b) with intravenous injection of the IO-13/GO-COOH (2.0 mg [Fe] kg<sup>-1</sup>, collected at 0.5 h after the injection).



**Figure S9.** Absorption spectra of IO-13/GO-COOH aqueous solutions with different concentrations.



**Figure S10.** Representative (a) Prussian blue staining and (b) hematoxylin and eosin (H&E) staining histology images of tumor tissues after the photothermal treatment of IO-13/GO-COOH.