

## Electronic Supplementary Information

### Self-assembling Ferrimagnetic fluorescent micelles for bioimaging guided efficient magnetic hyperthermia therapy

Yonghong Song,<sup>‡a</sup> Yueqiang Zhu,<sup>‡c</sup> Kun Jiang,<sup>‡b</sup> Xingyu Liu,<sup>b</sup> Liang Dong,<sup>\*a</sup> Dongdong Li,<sup>c</sup> Sheng Chen,<sup>b</sup> Hanye Xing,<sup>b</sup> Xu Yan,<sup>b</sup> Yang Lu,<sup>b</sup> Xianzhu Yang,<sup>c</sup> Junxia Wang<sup>\*d</sup> and Yunjun Xu<sup>\*a</sup>

a. Department of Radiology, The First Affiliated Hospital of University of Science and Technology of China, Division of Life Sciences and Medicine, Division of Nanomaterials & Chemistry, Department of Chemistry, University of Science and Technology of China, Hefei, Anhui, 230001, China.

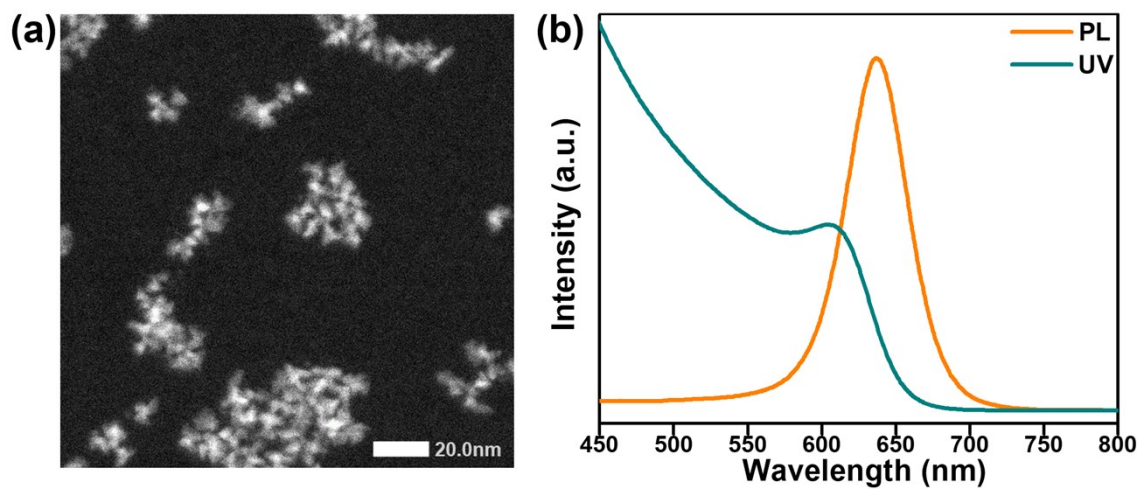
b. Key Laboratory of Advanced Catalytic Materials and Reaction Engineering, School of Chemistry and Chemical Engineering, School of Food and Biological Engineering, Hefei University of Technology, Hefei 230009, PR China.

c. School of Biomedical Sciences and Engineering, South China University of Technology, Guangzhou International Campus, Guangzhou 511442, P. R. China

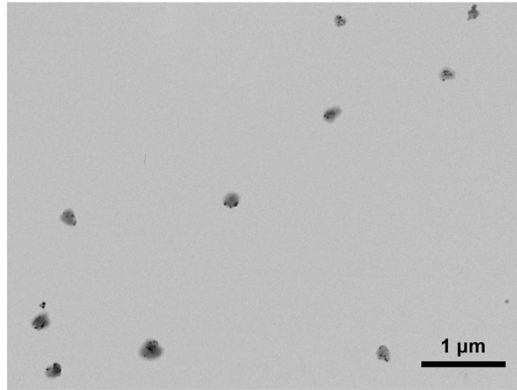
d. Department of Radiology, the Second Affiliated Hospital, School of Medicine, South China University of Technology, 510006 Guangzhou, P. R. China.

\*Corresponding E-mail: xyj23018@ustc.edu.cn, dldisc@ustc.edu.cn and eywangjx@scut.edu.cn

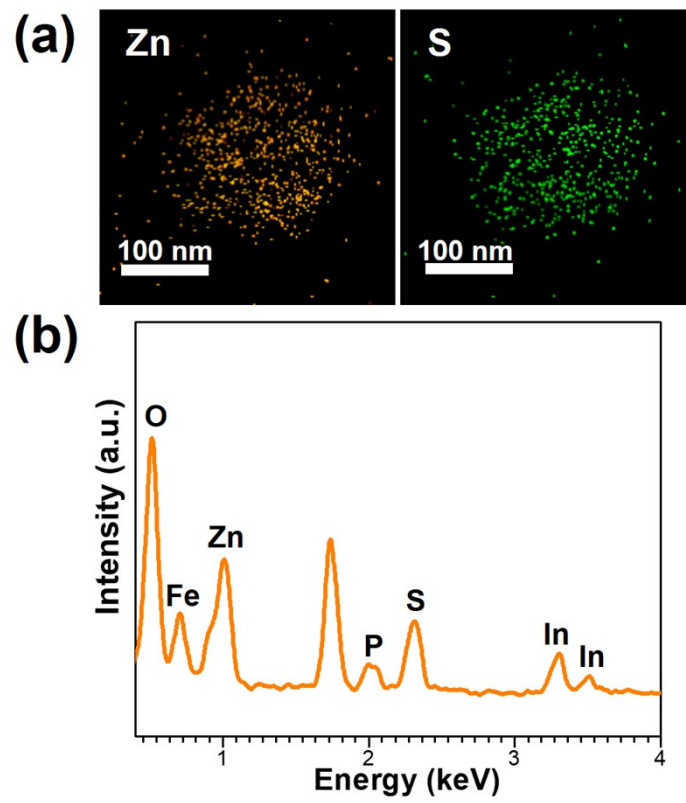
‡These authors contributed equally to this work.



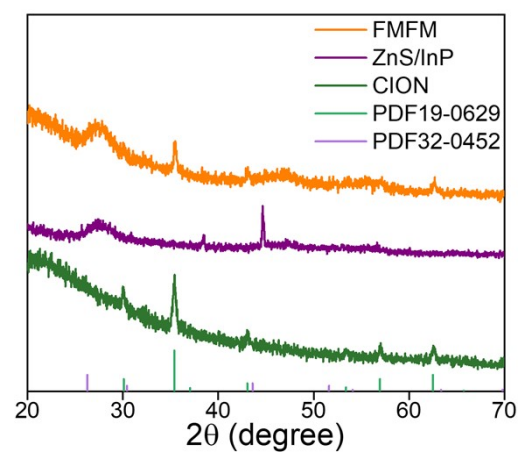
**Fig. S1** (a) The high-resolution TEM images, (b) the UV and photoluminescent spectra of hydrophobic ZnS/InP QDs.



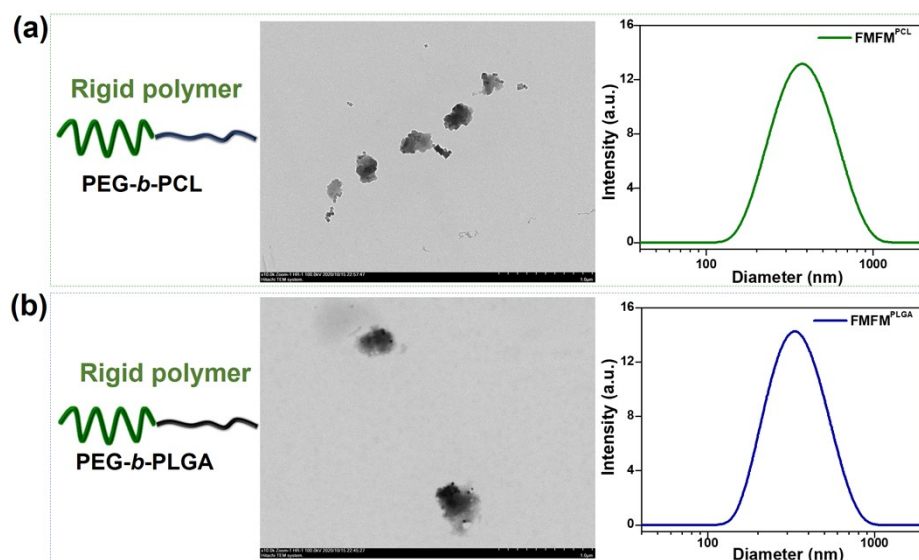
**Fig. S2** The TEM image of FMFM at large scope.



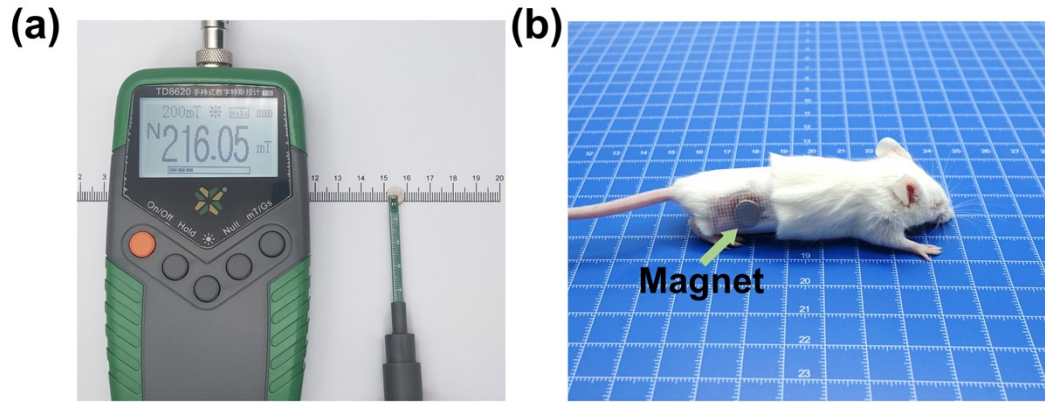
**Fig. S3** (a) Energy dispersive X-ray (EDX) elemental mapping images of FMFM (Zn, S), (b) EDX element analysis of FMFM.



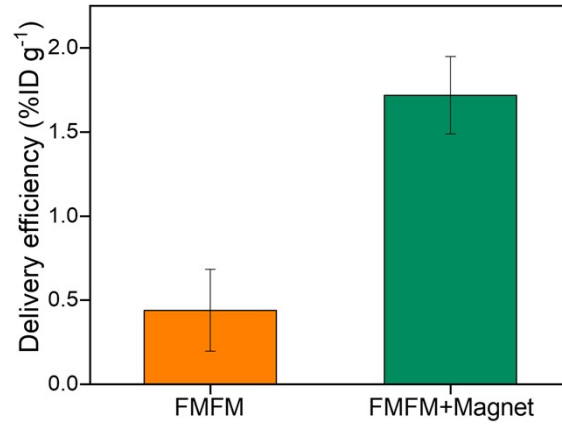
**Fig. S4** X-ray diffraction patterns of hydrophobic ZnS/InP QDs, ClON and obtained FMFM.



**Fig. S5** The hydrodynamic size and TEM images of (a) FMFM<sup>PCL</sup> and (b) FMFM<sup>PLGA</sup>.

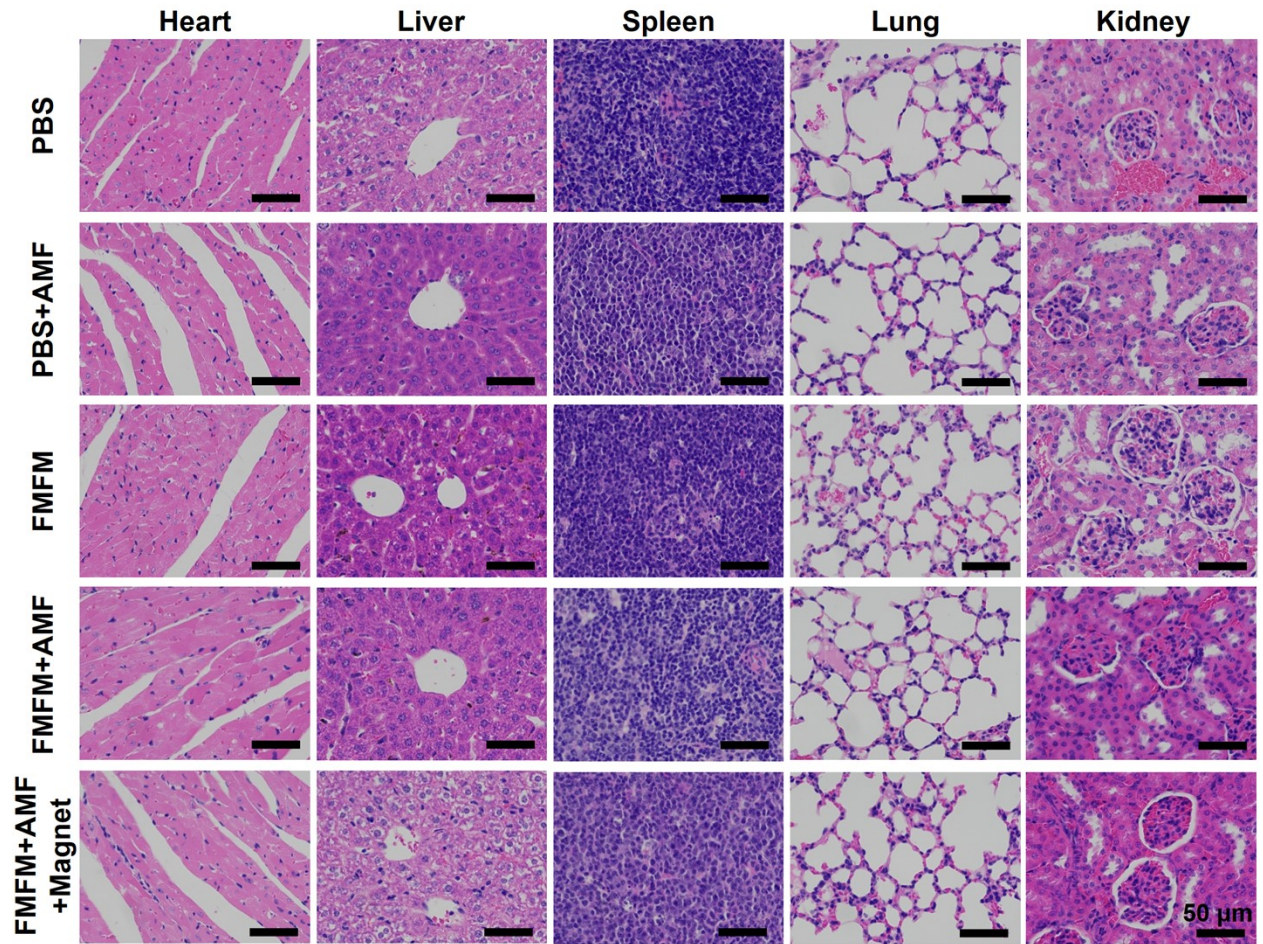


**Fig. S6** (a) The magnetic strength measurement of applied magnet. (b) The photo of magnet-treated mouse.



**Fig. S7** The nanoparticles delivery efficiency at tumor after intravenously injection of 10 mg/kg FMFM.





**Fig. S8** The HE staining images of major organs of mice after various treatments. All the bars are 50  $\mu$ m.

Table S1. The initial tumor volume of every group before treatment.

Group	Volume (mm <sup>3</sup> )					Average Volume (mm <sup>3</sup> )
PBS	28.89	20.39	20.76	25.50	29.56	25.02
PBS+AMF	22.59	18.53	31.74	24.33	27.26	24.89
FMFM	25.04	22.57	31.00	21.18	33.39	26.63
FMFM+AMF	23.83	25.30	35.94	27.19	20.08	26.47
FMFM+AMF+Magnet	26.71	26.75	22.93	28.29	29.51	26.84