Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B. This journal is © The Royal Society of Chemistry 2021

## **Supporting Information**

## Fe<sub>3</sub>O<sub>4</sub> assembly for tumor accurate diagnosis by endogenous GSH responsive $T_2/T_1$ magnetic relaxation conversion

Chengbin Wang<sup>a,b</sup>, Chenglin Yan<sup>a</sup>, Lu An<sup>a</sup>, Huifeng Zhao<sup>a</sup>, Shaoli Song\*<sup>b</sup> and Shiping Yang\*<sup>a</sup>

- a The Key Laboratory of Resource Chemistry of the Ministry of Education, the Shanghai Key Laboratory of Rare Earth Functional Materials, and the Shanghai Municipal Education Committee Key Laboratory of Molecular Imaging Probes and Sensors, Shanghai Normal University, Shanghai, 200234 China
- b Fudan Univ, Dept Nucl Med, Shanghai Canc Ctr, 270 Dongan Rd, Shanghai 200032, Peoples R China.
- \* Corresponding authors

Email-addresses: shaoli-song@163.com (S.L. Song) <a href="mailto:shipingy@shnu.edu.cn">shipingy@shnu.edu.cn</a> (S.P. Yang)

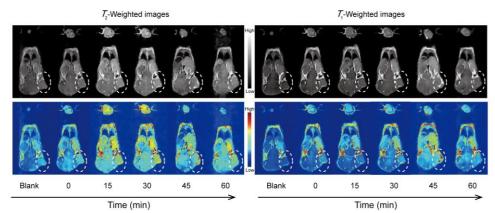


Fig. S1  $T_1$  and  $T_2$ -weighted MRI images of tumor-bearing mice before and after intravenous injection with ultra-small Fe<sub>3</sub>O<sub>4</sub> self-assembly at an iron dose of 50 mM. The time points after injection for investigation are 0, 15, 30, 45 and 60 min. White dotted circles indicate the location of tumor tissue.

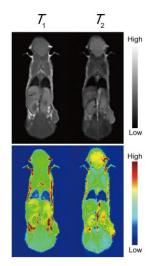


Fig. S2  $T_1$  and  $T_2$ -weighted MRI images of tumor-bearing mice before intravenous injection with ultra-small Fe<sub>3</sub>O<sub>4</sub> self-assembly.