

**A light-activated Fe<sup>2+</sup> release nanosystem for enhanced chemodynamic/chemo  
therapy *via* cascade amplification of ROS generation**

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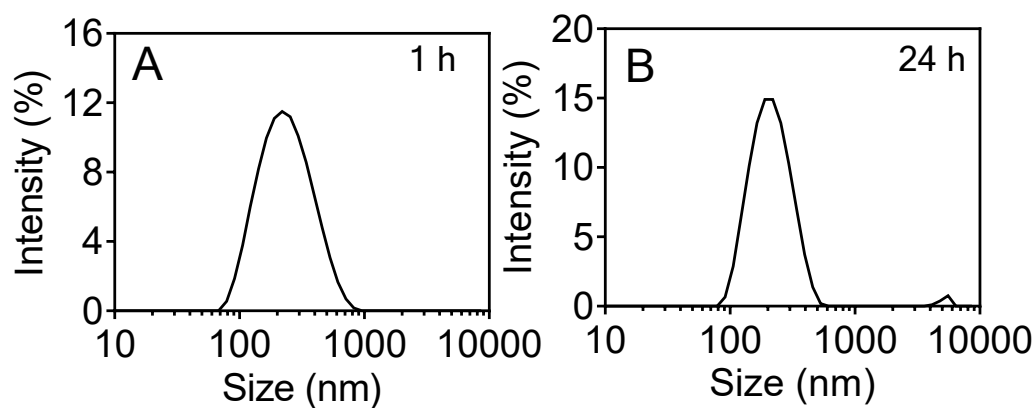
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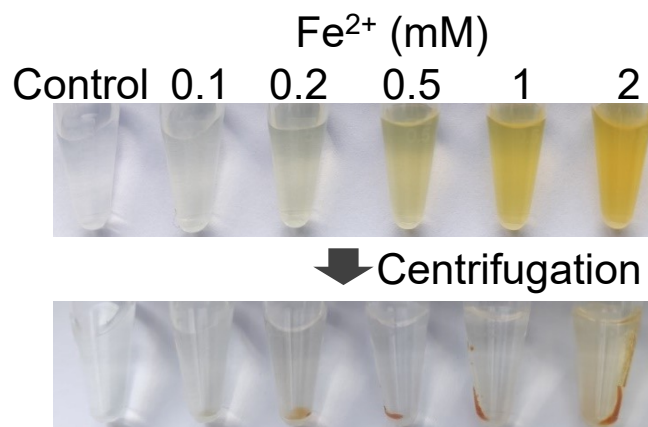
E-mail addresses: mengyc@csu.edu.cn (Y. Meng)



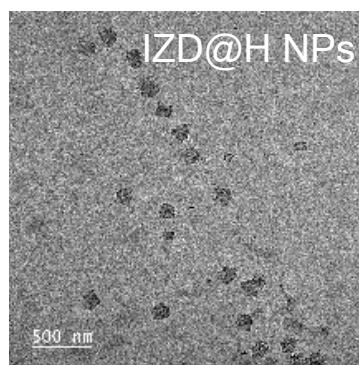
**Figure S1.** Dynamic light scattering analysis of IZ@H NPs after incubation in 1640 culture medium containing 10% FBS for 1 h and 24 h.



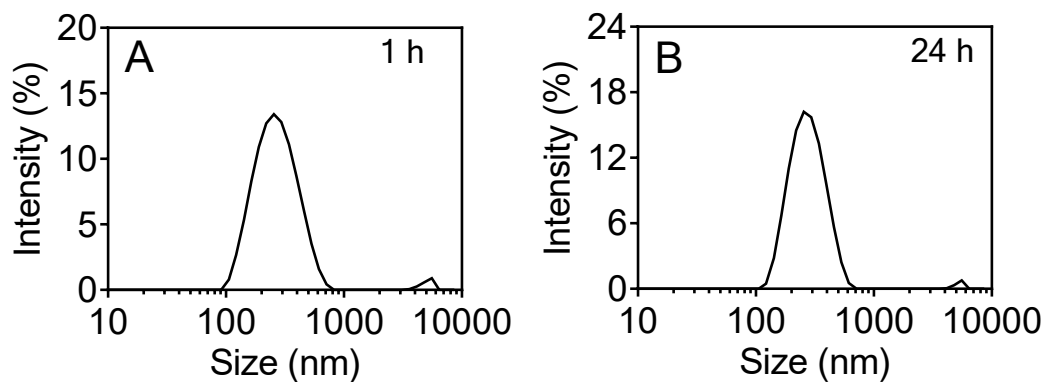
**Figure S2.** Digital photo of light instrument (Shanghai Zhuolong Electronics Co., Ltd, Shanghai, China), which can irradiate 450 nm light with same power density of 100 mW/cm<sup>2</sup>.



**Figure S3.** Digital photos showing various concentrations of Fe<sup>2+</sup> mixing with 500 nM FAM-A<sub>15</sub> DNA at pH 7.4 for 30 min incubation and then centrifugation for collecting IDCs.

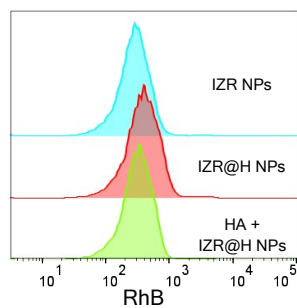


**Figure S4.** TEM showing the morphology of IZD@H NPs.

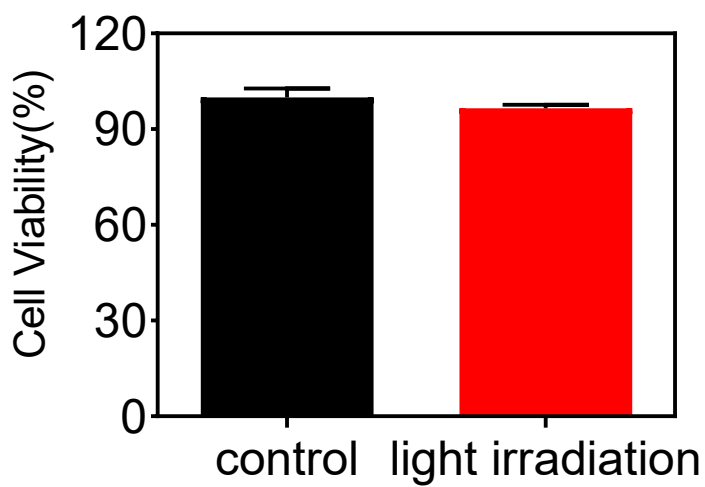


**Figure S5.** Dynamic light scattering analysis of IZD@H NPs after incubation in 1640

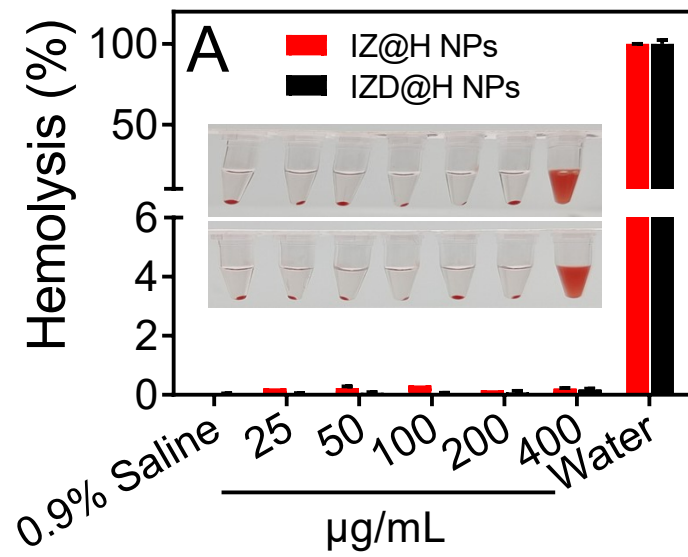
culture medium containing 10% FBS for 1 h and 24 h.



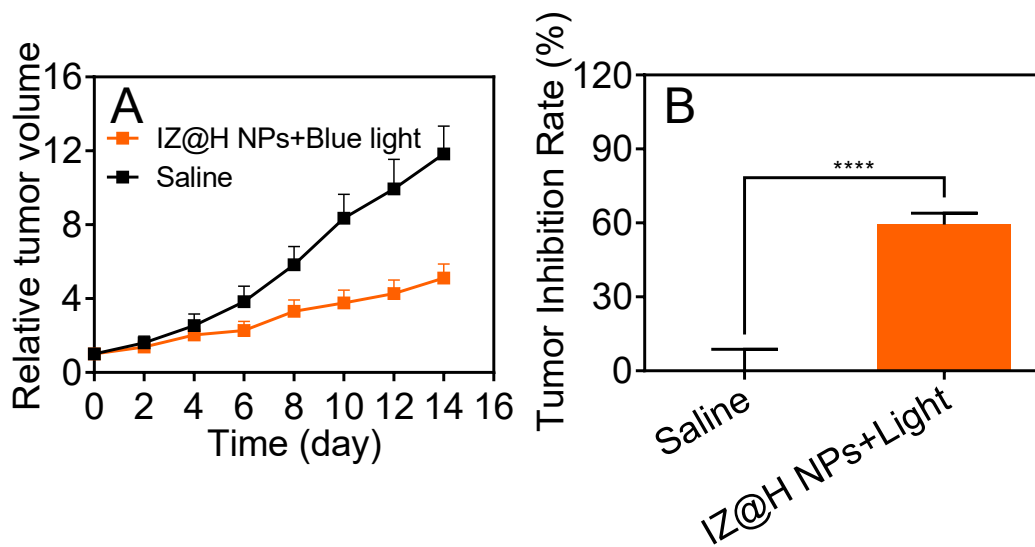
**Figure S6.** Flow cytometry analysis of 4T1 cells after 6 h incubation of IZR NPs, IZR@H NPs and HA + IZR@H NPs.



**Figure S7.** Cell viability of 4T1 cells after 450 nm light irradiation for 30 min.

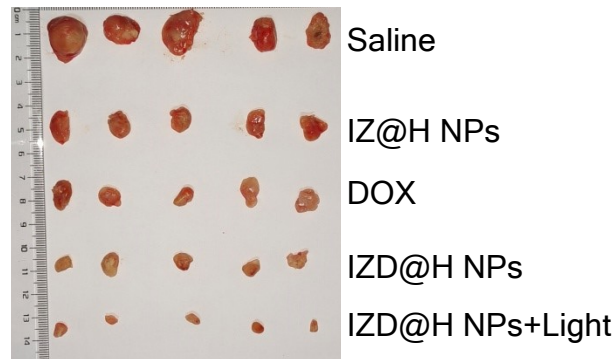


**Figure S8.** Hemolysis activity of IZ@H NPs and IZD@H NPs.

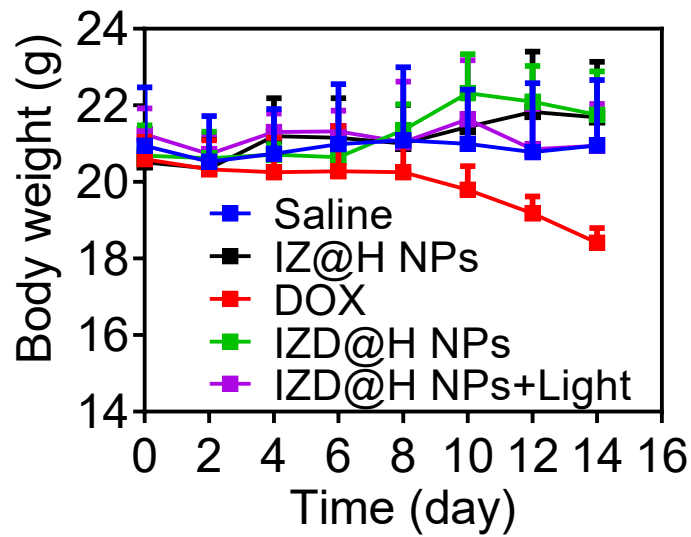


**Figure S9.** (A) Average tumor volume in groups of Saline and IZ@H NPs + Light. (B)

Tumor inhibition rate at day 14.



**Figure S10.** Tumor tissues collected on day 14 after different treatments.



**Figure S11.** Body weights of tumor-bearing mice during different treatments.