## Degradable Fe<sub>3</sub>O<sub>4</sub>-Based Nanocomposite for Cascade

## **Reaction-Enhanced Anti-Tumor Therapy**

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Fig. S1 FTIR spectra of Fe<sub>3</sub>O<sub>4</sub>-PLGA, PLGA and F127



Fig. S2 TEM images (a-c) and AFM images (d-f) of Fe<sub>3</sub>O<sub>4</sub>-PLGA nanocomposites with different PLGA/Fe<sub>3</sub>O<sub>4</sub> mass ratio (2:1(a, d),3:1(b, e) 4:1(c, f))



Fig. S3 VSM for Fe<sub>3</sub>O<sub>4</sub>-OA and Fe<sub>3</sub>O<sub>4</sub>-PLGA



Fig. S4 Time-course absorbance of Fe<sub>3</sub>O<sub>4</sub>-PLGA-H<sub>2</sub>O<sub>2</sub>-TMB systems upon the addition of varied concentrations of  $H_2O_2$ 



Fig. S5 EPR spectra of •OH trapped by DMPO under different conditions: (1) control,
(2) Fe<sub>3</sub>O<sub>4</sub>-PLGA nanocomposite with 10 mM H<sub>2</sub>O<sub>2</sub> at pH 5.0, (3) Fe<sub>3</sub>O<sub>4</sub>/GOx-PLGA nanocomposite with 5 mM β-D-glucose at pH 5.0



Fe<sub>3</sub>O<sub>4</sub>/GOx-PLGA NPs

Fig. S6 Fluorescence images of viable and dead cell distributions after separate incubation with Fe<sub>3</sub>O<sub>4</sub>-PLGA and Fe<sub>3</sub>O<sub>4</sub>/GOx-PLGA nanocomposites under neutral (pH = 7.4) at varied concentrations for 6 h



Fig. S7 CLSM images of HeLa cells after co-incubation with  $Fe_3O_4/GOx-PLGA$  nanocomposite under neutral (pH = 7.4) conditions at varied concentrations for 6 h



Fig. S8 CLSM images of HeLa cells after co-incubation with  $Fe_3O_4/GOx-PLGA$  nanocomposite under acidic (pH = 6.0) conditions at varied concentrations for 6 h