## SUPPORTING INFORMATION

## Fe<sub>3</sub>O<sub>4</sub>-Au-Polydopamine Hybrid Nanocapsules for Photothermal-Photodynamic

## Synergistic Anti-bacterial Performance

Qunling Fang<sup>a,\*</sup>, Kezhu Xu<sup>a</sup>, Qingshan Xiong<sup>a</sup>, Yunqi Xu<sup>b</sup>, Ailing Hui<sup>a</sup>, Shouhu Xuan<sup>b,\*</sup>

 <sup>a</sup> School of Food and Biological Engineering, Key Laboratory of Metabolism and Regulation for Major Diseases of Anhui Higher Education Institutes, Hefei University of Technology, Hefei, 230009, PR China
<sup>b</sup> CAS Key Laboratory of Mechanical Behavior and Design of Materials, Department of Modern Mechanics, University of Science and Technology of China, Hefei 230027, PR China

\*Corresponding author: Asso. Prof. Qunling Fang E-mail: fql.good@hfut.edu.cn Tel: 86-551-62904353 Fax: 86-551-62904353

Prof. Shouhu Xuan E-mail: xuansh@ustc.edu.cn Tel: 86-551-63601702 Fax: 86-551-63606382

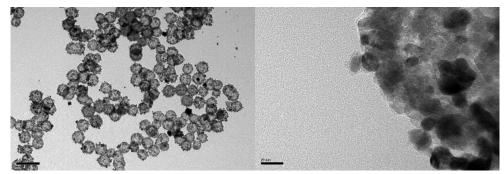


Figure SI1. TEM image of the  $Fe_3O_4$ -Au-PDA hybrid microcapsules with different magnifications.

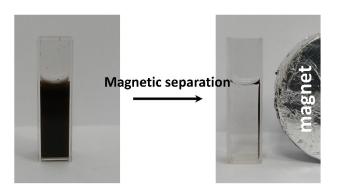


Figure SI2. Magnetic separation process of the suspension with  $Fe_3O_4$ -Au-PDA hybrid microcapsule in water.

**Table SI1**. The weight percentage of the Au and Fe elements in the  $Fe_3O_4$  hollow microspheres,  $Fe_3O_4@Au/PDA$  core/shell microspheres, and  $Fe_3O_4$ -Au-PDA hybrid microcapsules.

	Au (wt%)	Fe (wt%)
Fe <sub>3</sub> O <sub>4</sub>		68.778
Fe <sub>3</sub> O <sub>4</sub> @Au/PDA core shell microsphere	14.8	43.62
Fe <sub>3</sub> O <sub>4</sub> -Au-PDA hybrid microcapsule	16.35	38.81