

Supporting Information

SiO₂@AuAg/PDA Hybrid Nanosphere with Photo-thermally Enhanced Synergistic Antibacterial and Catalytic Activity

Dazheng Ci, ^a Ning Wang, ^{a,} Yunqi Xu, ^b Shanshan Wu, ^c Jing Wang, ^a Haoran Li, ^c
Shouhu Xuan, ^b Qunling Fang ^{a,*}*

*^a School of Food and Biological Engineering, Hefei University of Technology, Hefei,
230009, PR China*

*^b 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*

*^c School of Materials and Chemical Engineering, Anhui Jianzhu University, Hefei, PR
China*

***Corresponding author:**

Asso. Prof. **Ning Wang**

E-mail: nwangcn@hfut.edu.cn

Tel: [15155934837](tel:15155934837)

Asso. Prof. **Qunling Fang**

E-mail: fql.good@hfut.edu.cn

Tel: [86-551-62904353](tel:86-551-62904353)

Fax: [86-551-62904353](tel:86-551-62904353)

Figure S1

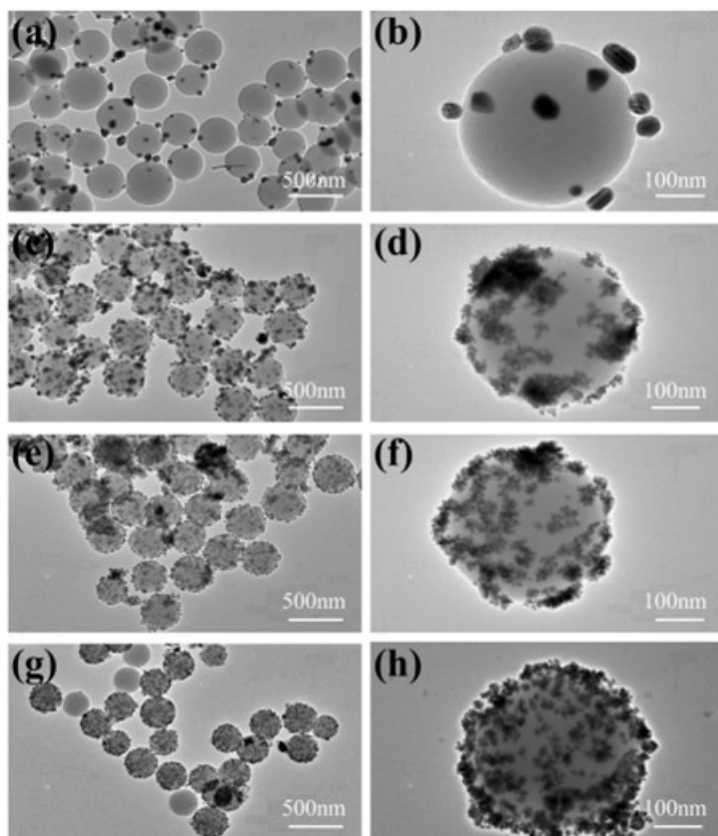


Figure S1. TEM images of the SiO₂@AuAg/PDA prepared with different concentration of chloroauric acid: 0 mM (a, b), 5.94 × 10⁻³ mM (c, d), 8.82 × 10⁻³ mM (e, f), 1.17 × 10⁻² mM (g, h). The concentration of AgNO₃ was kept at 2.0 × 10⁻² mM as a constant.

Figure S2

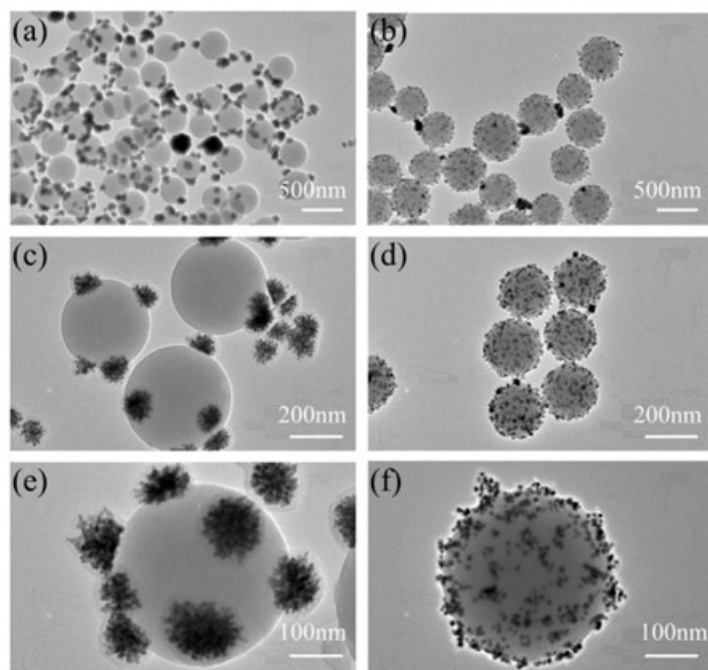


Figure S2. TEM images of SiO₂@Au/PDA without APTES modification (a, c, e) and SiO₂@Au/PDA with APTES modification with the same Au content (b, d, f).

Figure S3

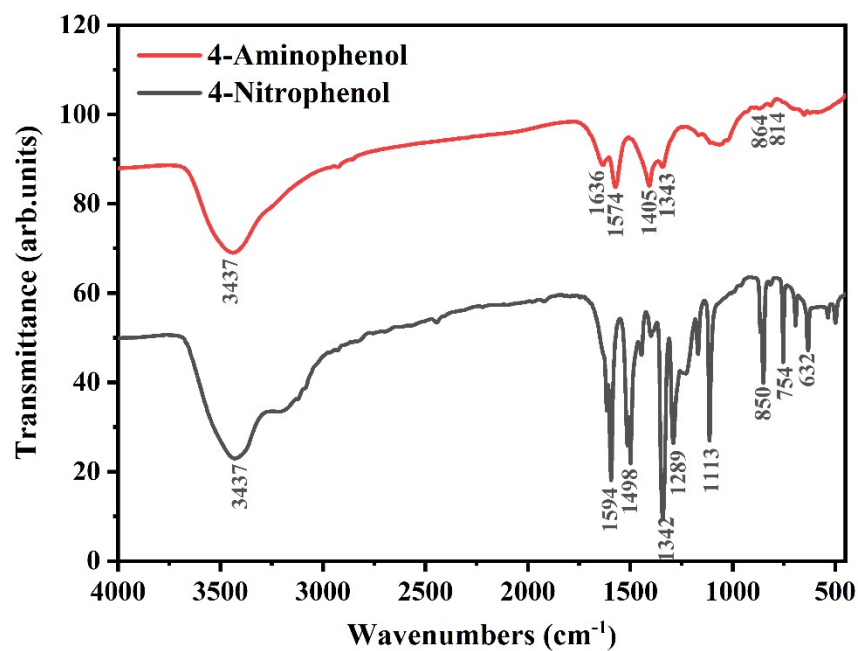


Figure S3. Infrared spectra before and after the catalytic 4-nitrophenol reaction.