

Supporting Information

Mussel-inspired functionalization of graphene for synthesizing Ag-polydopamine-graphene nanosheets as antibacterial materials

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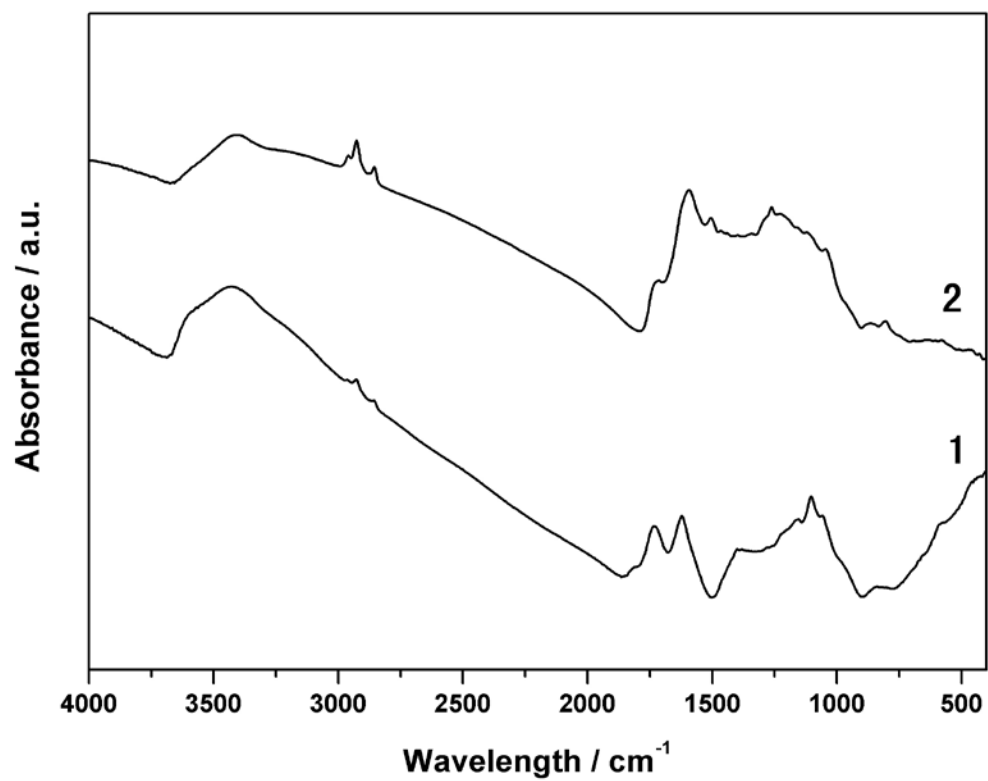


Fig. S1. FTIR spectra of GO (1) and PDA-GNS (2).

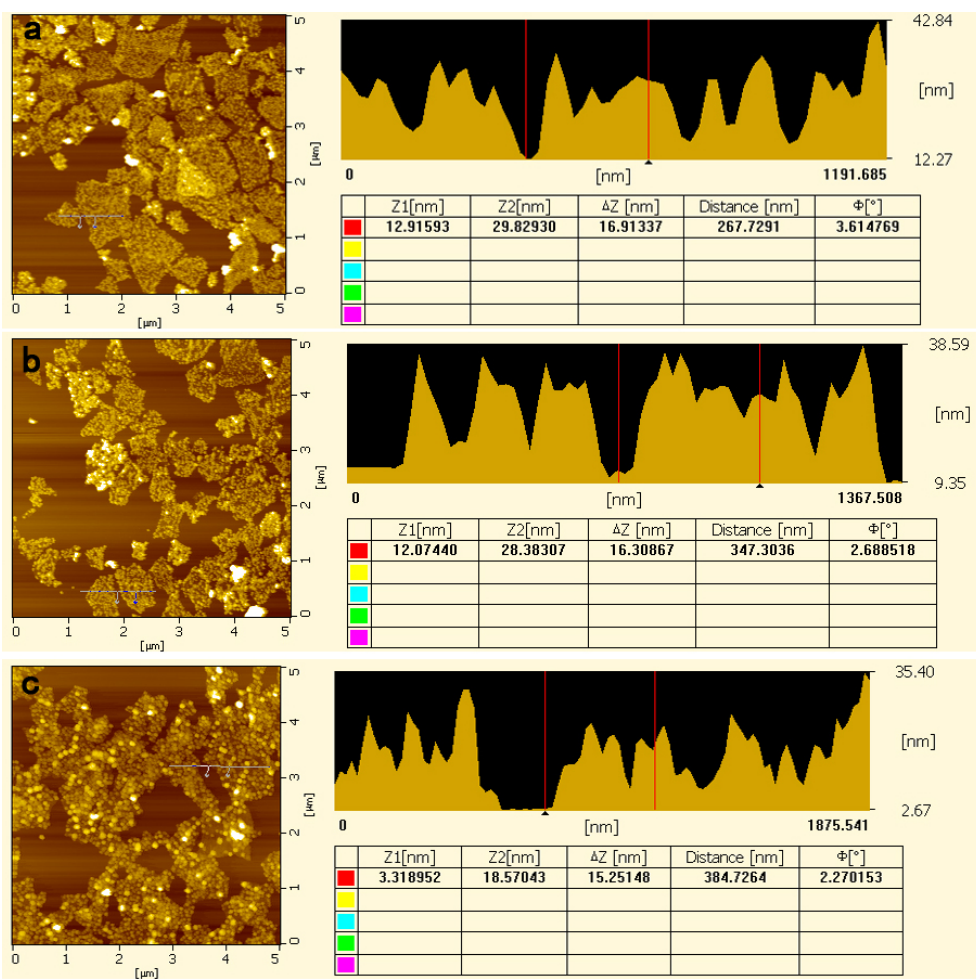


Fig. S2. AFM images of Ag-PDA-GNS-30 (a), Ag-PDA-GNS-40 (b), and Ag-PDA-GNS-50 (c). In right the cross-sections identified by the lines in (a), (b), and (c) show the heights of Ag-PDA-GNS, respectively.

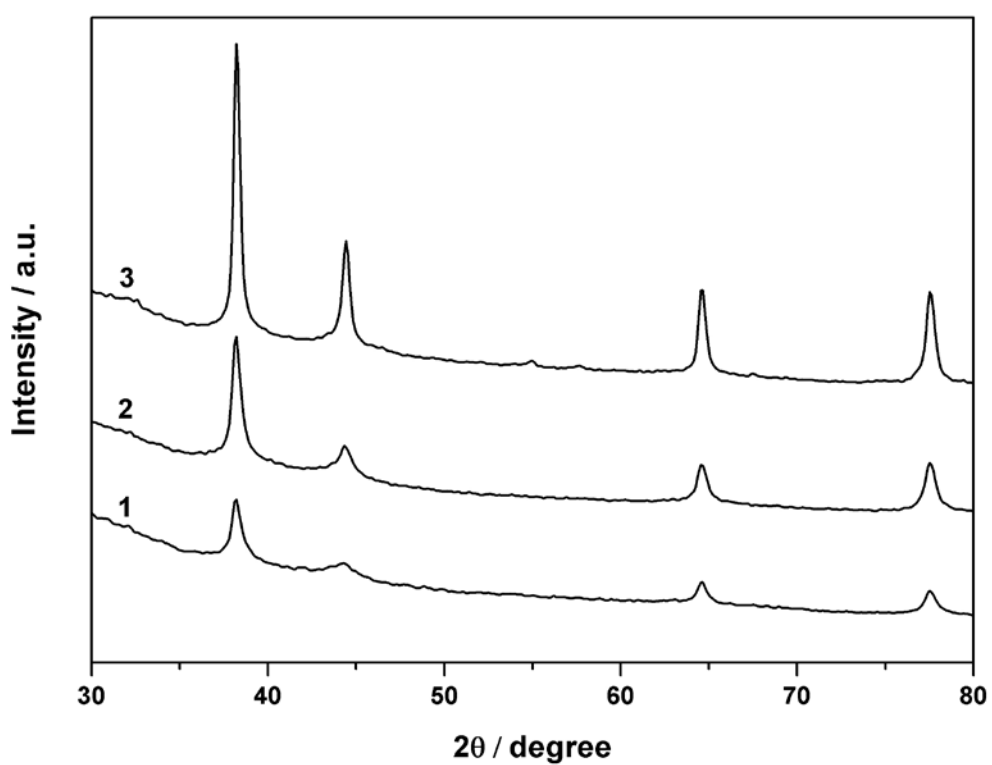


Fig. S3. XRD patterns of Ag-PDA-GNS-30 (1), Ag-PDA-GNS-40 (2), and Ag-PDA-GNS-50 (3).

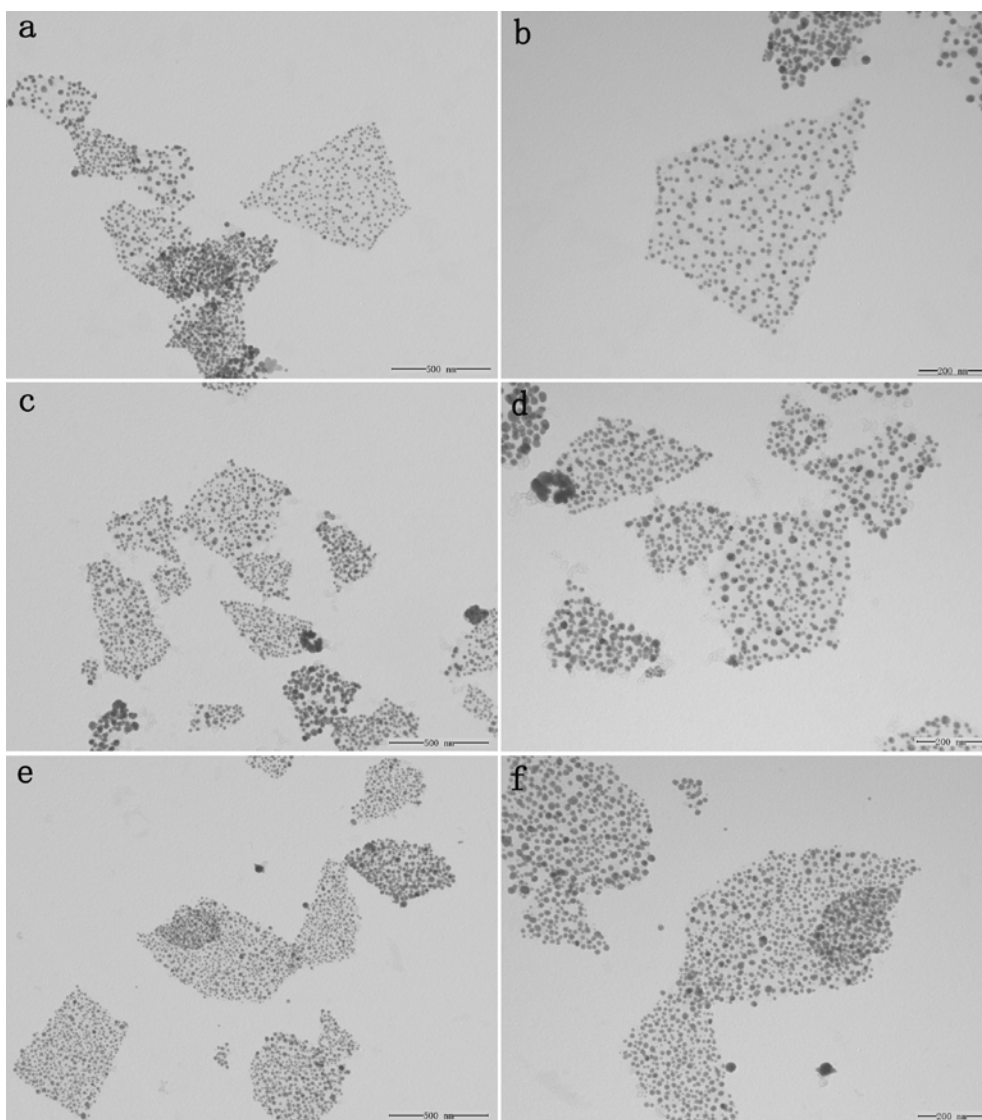


Fig. S4. TEM images of Ag-PDA-GNS-30 (a, b), Ag-PDA-GNS-40 (c, d), and Ag-PDA-GNS-50 (e, f).

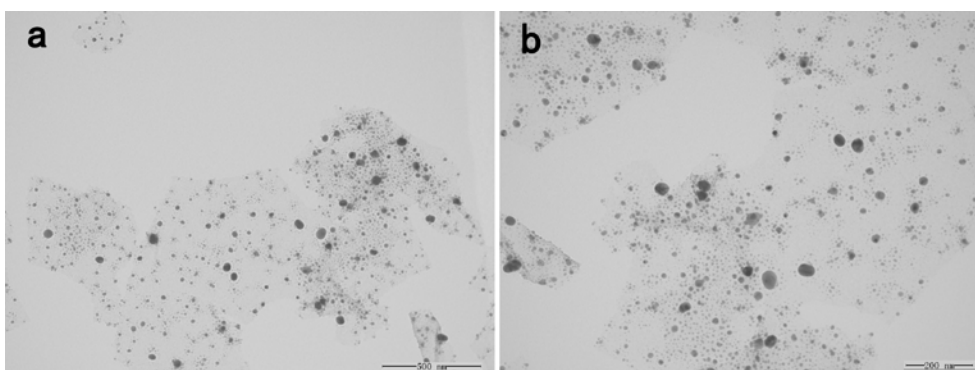


Fig. S5. TEM images of Ag-PDA-GNS synthesized by the PDA layer on the surface of GNS as a reducing agent with 50 mg AgNO₃ added.

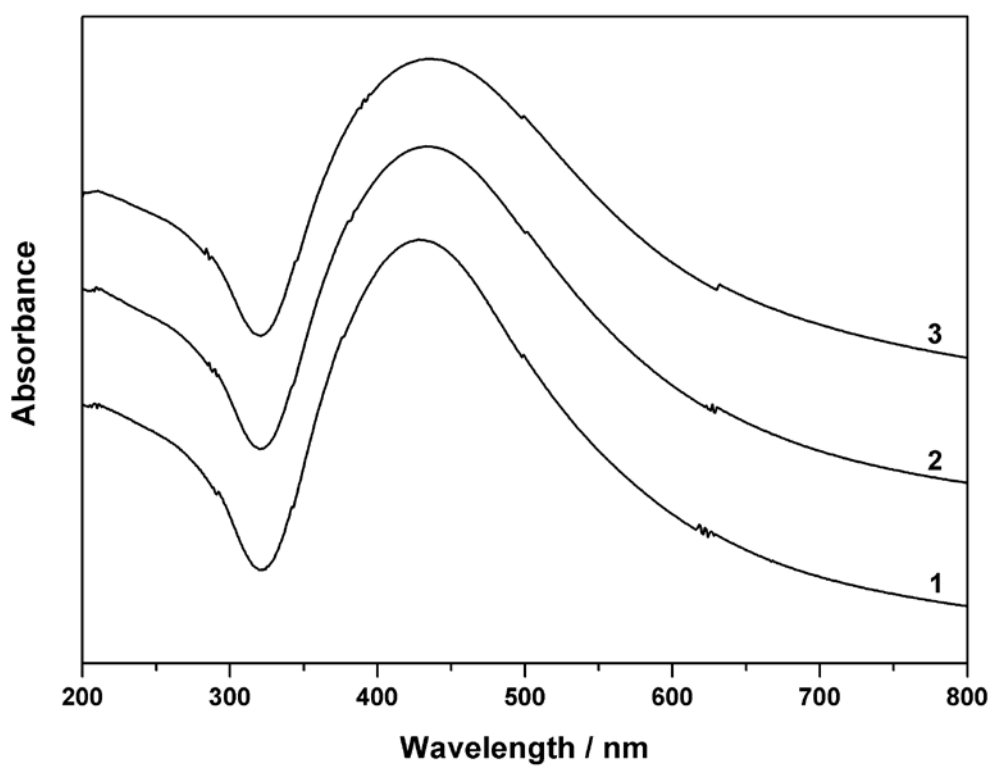


Fig. S6. UV-vis absorption spectra of Ag-PDA-GNS-30 (1), Ag-PDA-GNS-40 (2), and Ag-PDA-GNS-50 (3).

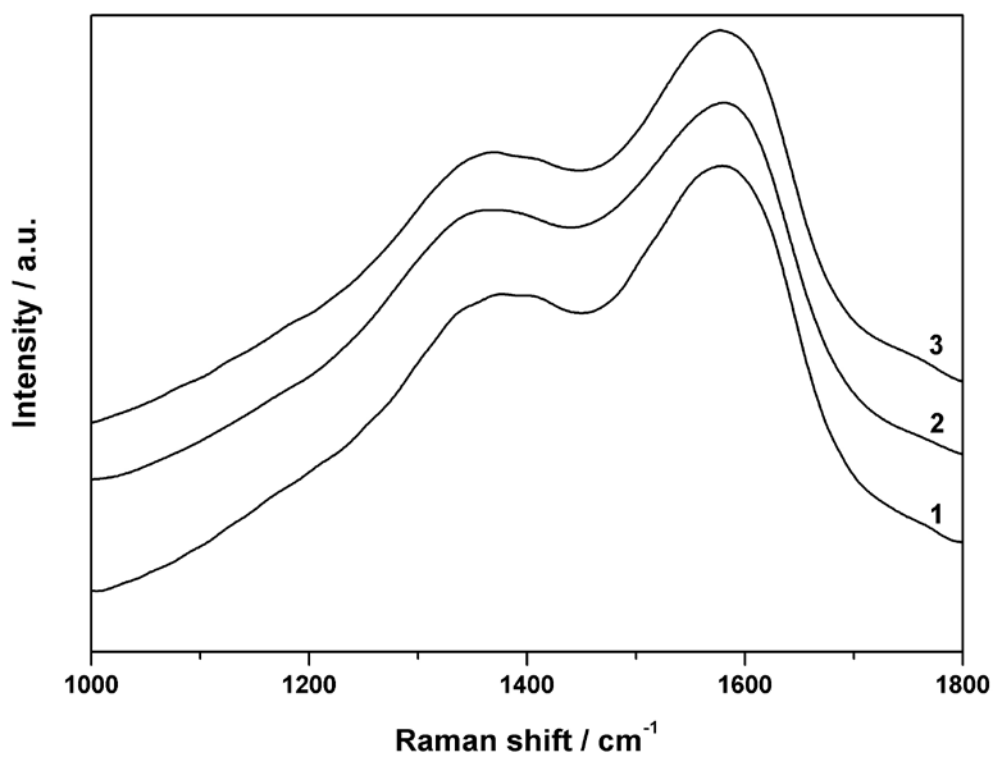


Fig. S7. Raman spectra of Ag-PDA-GNS-30 (1), Ag-PDA-GNS-40 (2), and Ag-PDA-GNS-50 (3).

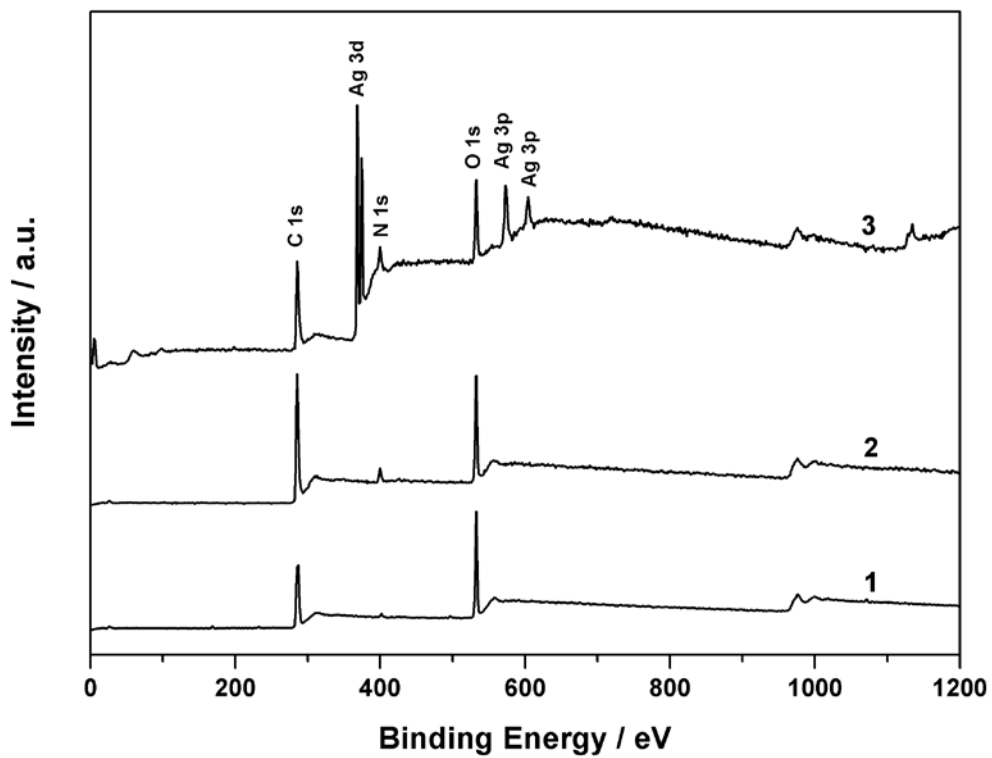


Fig. S8. XPS general spectra of GO (1), PDA-GNS (2), and Ag-PDA-GNS-50 (3).

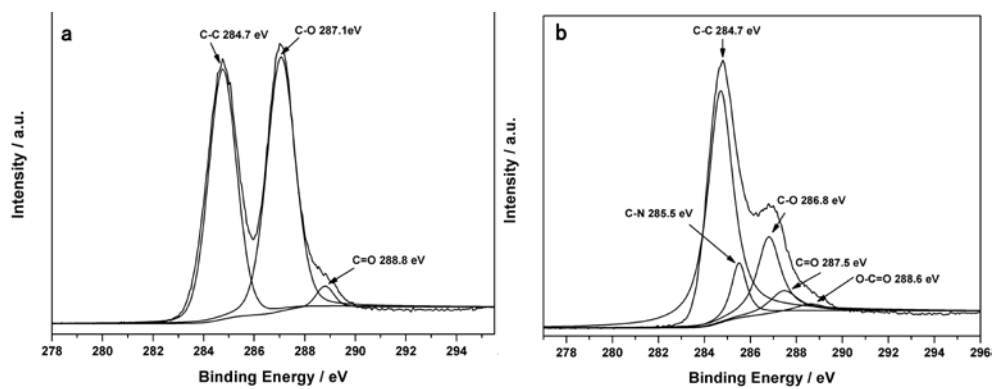


Fig. S9. C 1s XPS spectra of GO (a) and PDA-GNS (b).

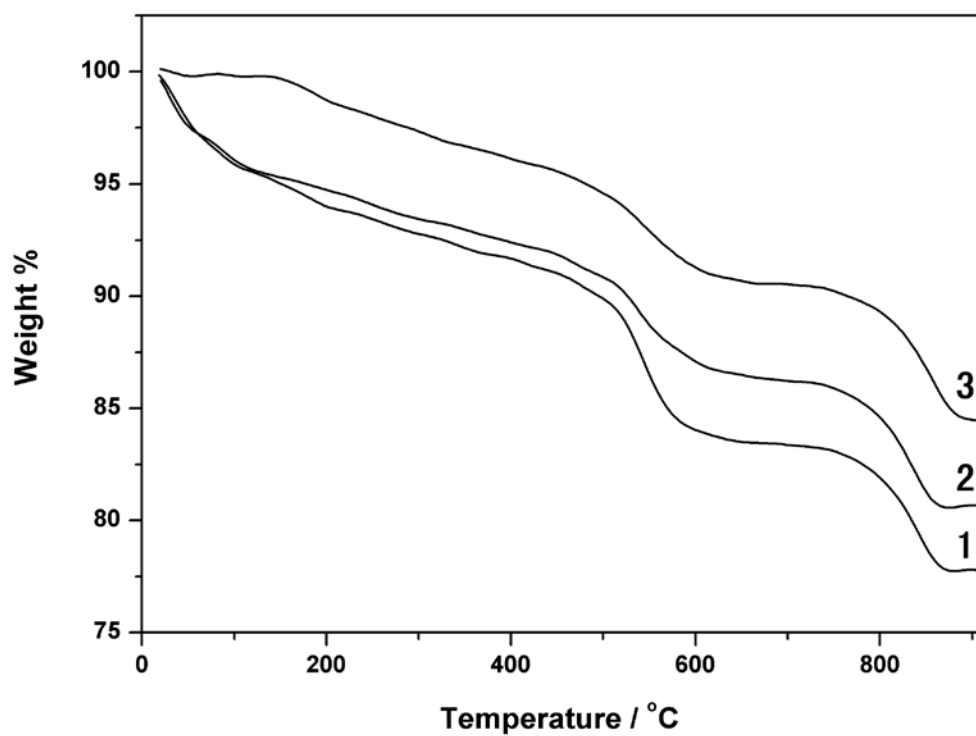


Fig. S10. TGA curves of Ag-PDA-GNS-30 (1), Ag-PDA-GNS-40 (2), and Ag-PDA-GNS-50 (3).

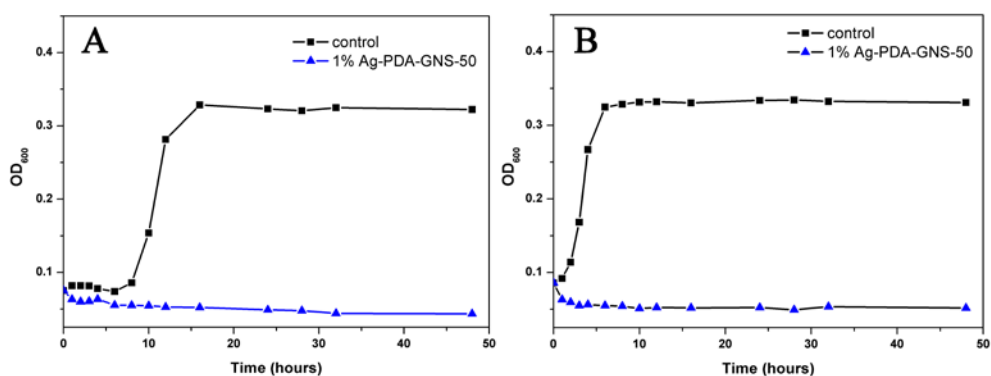


Fig. S11. Bacterial growth curves in LB media with the Ag-PDA-GNS. 1% (v/v) active substances of Ag-PDA-GNS was added to the culture of *E.coli* (A) and *B.subtilis* (B). The growth of the bacteria was measured by the OD at 600 nm wavelength. The initial addition of Ag-PDA-GNS to the LB bacterium suspension was regarded as the starting point.