Supplementary information



Figure S1. Top-view FESEM images of NPG/PtNPs hybrid synthesized at a constant potential of -0.6 V for 100 s in H_2PtCl_6 solution of different concentrations, (A) 0.1 mM; (B) 0.5 mM; (C) 1.0 mM.



Figure S2. Top-view FESEM images of NPG/PtNPs hybrid synthesized in $0.5 \text{ mM H}_2\text{PtCl}_6$ solution for 100 s at different potentials, (A) -0.4 V; (B) -0.6 V.



Figure S3. Top-view FESEM images of NPG/PtNPs hybrid synthesized at a constant potential of -0.6 V in 0.5 mM H_2PtCl_6 solution for different time, (A) 10 s; (B) 100 s; (C) 200 s. (D) solid gold/PtNPs hybrid for 100 s.



Figure S4. CV curves of NPG (a) and NPG/PtNPs (b, c) microelectrodes with 2 mM H_2O_2 in deoxygenized PBS at a scan rate of 50 mV/s. (NPG/PtNPs of b and c were prepared in 0.5 mM H_2PtCl_6 solution at -0.6 V for 10 s, 100 s respectively.)



Figure S5. Amperometric response curves of insulated NPG/PtNPs (A) and solid gold/PtNPs (B) microelectrodes to different concentrations of H_2O_2 at a potential of -0.2 V.



Figure S6. Amperometric responses of the insulated NPG/PtNPs microelectrodes to the additions of 0.05 mM H_2O_2 , ascorbic acid (AA), glucose (Glc) and uric acid (UA) respectively in deoxygenized PBS at -0.2 V.