Supporting Online Material for

Hemin-Graphene Hybrid Nanosheets with Intrinsic Peroxidase-like activity for Label-Free Colorimetric Detection of Single-Nucleotide Polymorphism

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Figures

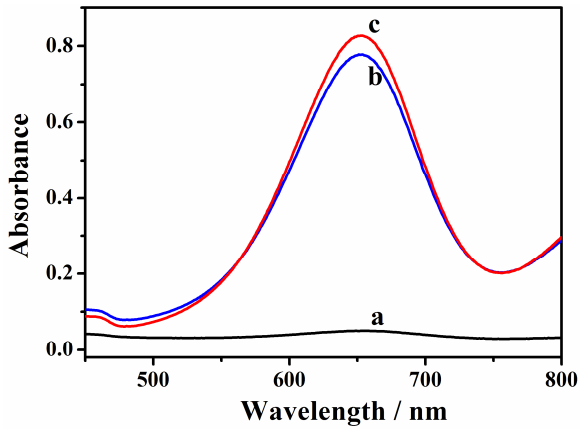

Figure S1 Typical absorption curves of TMB (0.8 mM) reaction solutions catalytically oxidized by a. G (1 μg/mL); b. H-G (1 μg/mL) and c. Hemin (0.4 μg/mL) in the presence of 10 mM H_2O_2 at room temperature in phosphate buffer (25 mM pH 5.0) after reaction for 10 min.

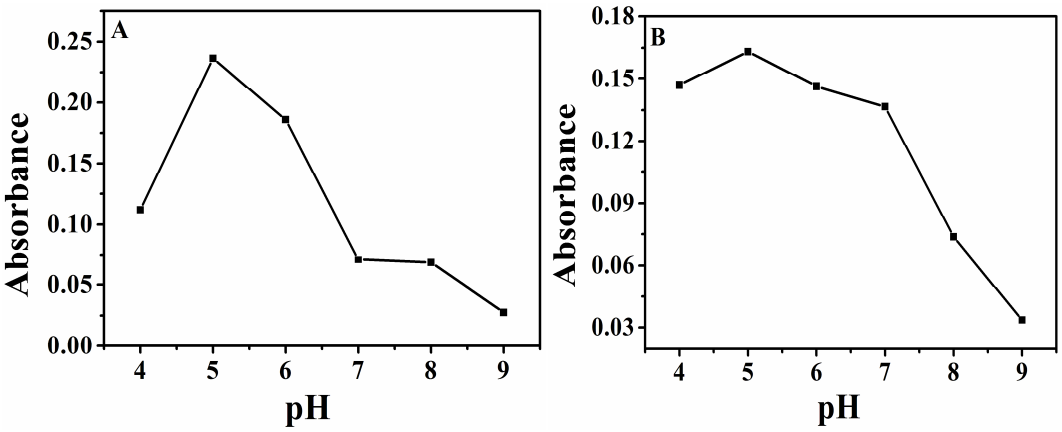

Figure S2 The effect of pH on the peroxidase-like activity of the Hemin (A) and H-GNs (B) with 1mM ABTS as the substrate. Experiments were carried out using 0.4 μg/mL hemin or 1 μg/mL H-GNs in 1 mL phosphate buffer (25 mM) at room temperature. The concentration of H_2O_2 was 10 mM.

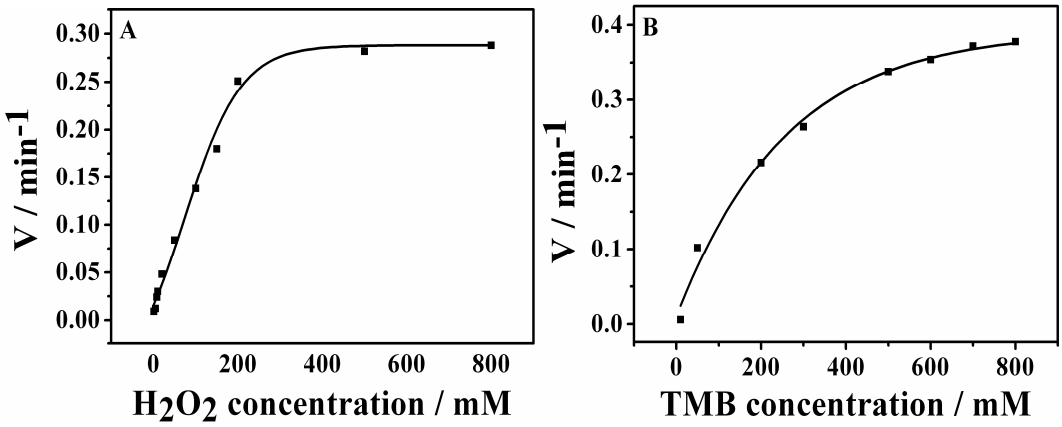

Figure S3 Steady-state kinetic assay and catalytic mechanism of Hemin. The velocity (v) of the reaction was measured using 0.4 μg hemin in 1 ml of 25 mM phosphate buffer (pH 5.0) at room temprature. A) The concentration of TMB was 0.8 mM and the H_2O_2 concentration was varied. B) The concentration of H_2O_2 was 10 mM and the TMB concentration was varied.

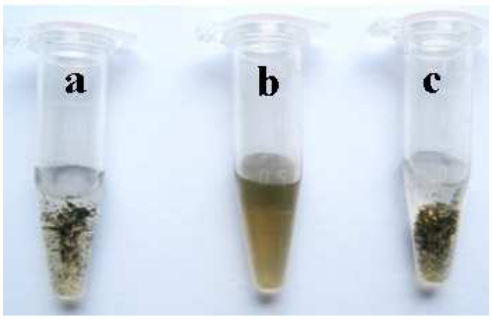

Figure S4 Photographs of 2 μg/mL H-GNs in 0.6 M NaCl solution: a) absence of DNA; b) presence of 200 nM ssDNA; (c) presence of 200 nM dsDNA