Supporting Information

Colorimetric detection of *Escherichia coli* O157:H7 using functionalized Au@Pt nanoparticles as peroxidase mimetics

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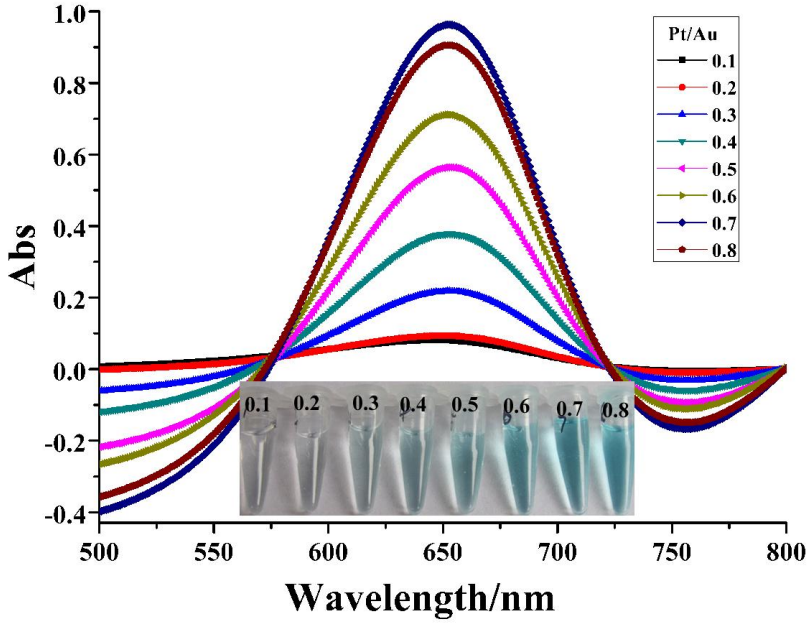

Fig. 1S UV-vis absorption spectra change for the TMB oxidation by Au@Pt NPs with various Pt/Au molar ratios. (Inset: color evolution of TMB oxidation in the presence of H_2O_2 under the catalysis of Au@Pt with various Pt/Au molar ratios (from left to right: 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8). Experiments were carried out in PBS (pH 5)

containing 10 μL Au@Pt NPs, 10 mM H_2O_2, and 0.08 mM TMB. The photos were taken at 5 min after adding Au@Pt.

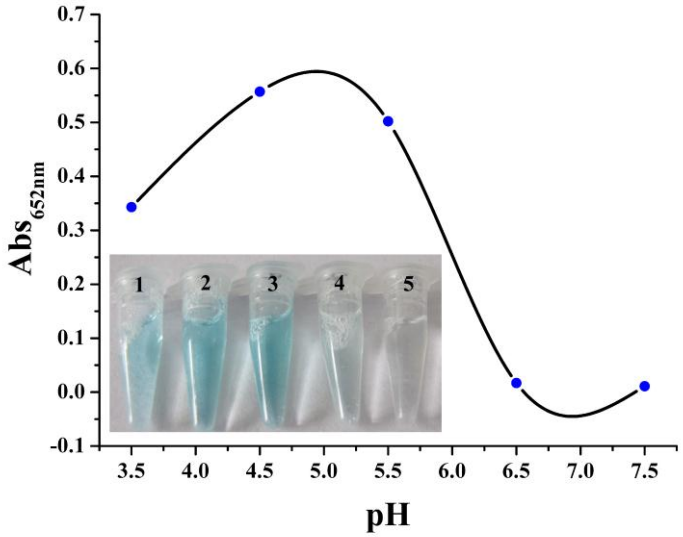

Fig. 2S Effects of media pH on the catalytic activities for TMB oxidation catalyzed by Au@Pt. (Inset: the corresponding photographs). The experimental conditions were the same.

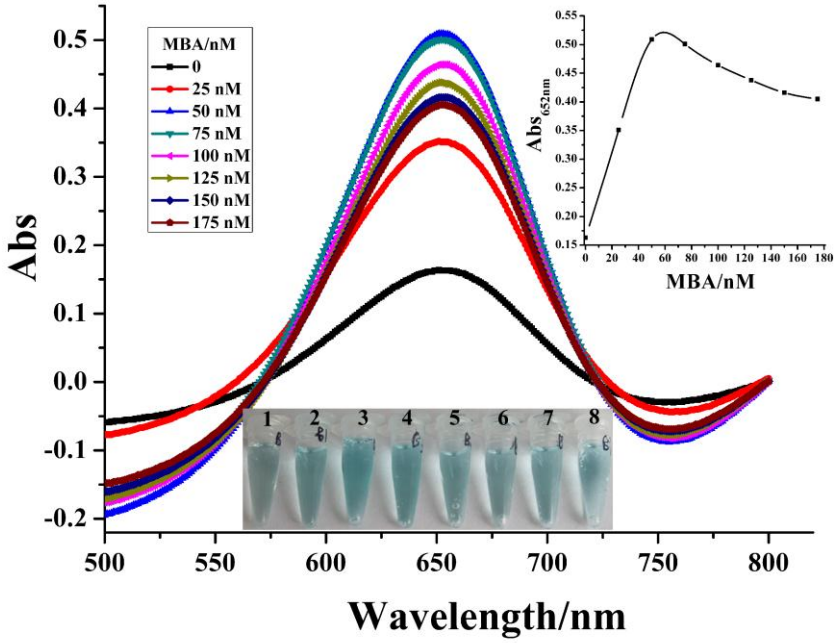

Fig. 3S TMB oxidation catalyzed by Au@Pt capped with different concentrations of 4-mercaptophenylboronic acid.