

Supplementary Materials

Restoring the Oxidase-Like Activity of His@AuNCs for the Determination of Alkaline Phosphatase

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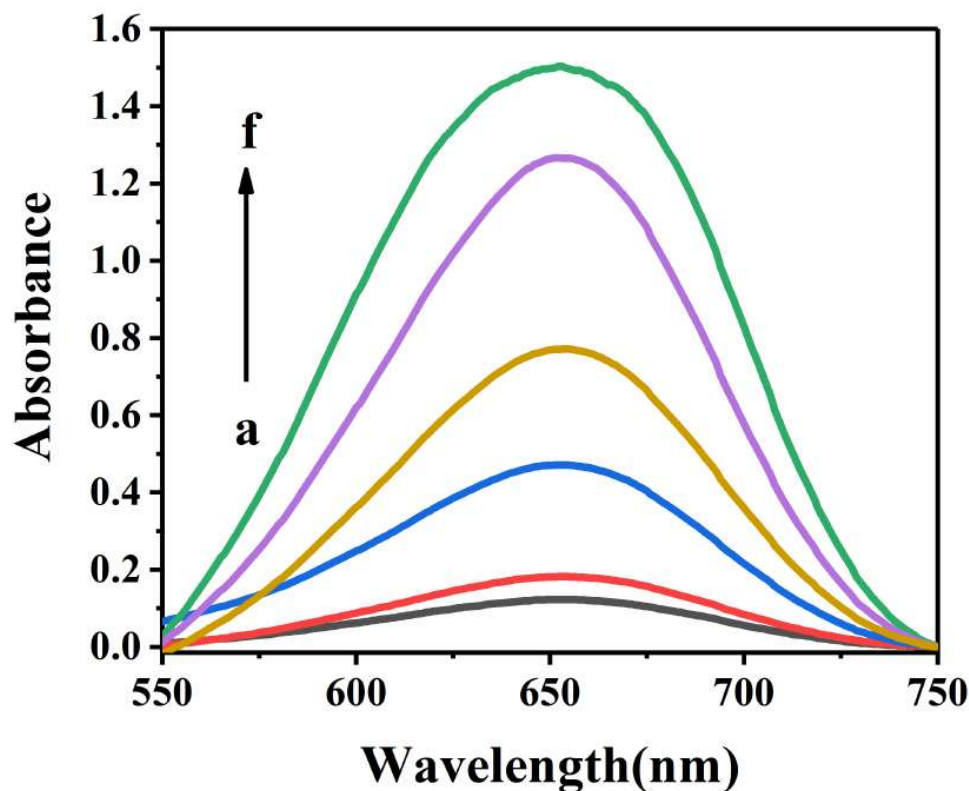


Figure S1. UV-Vis absorption spectra of His@AuNCs/GO-TMB system with different incubation ratios of His@AuNCs and PDDA-GO (from a to f: 1:10,1:20,1:30,1:40,1:50,1:100).

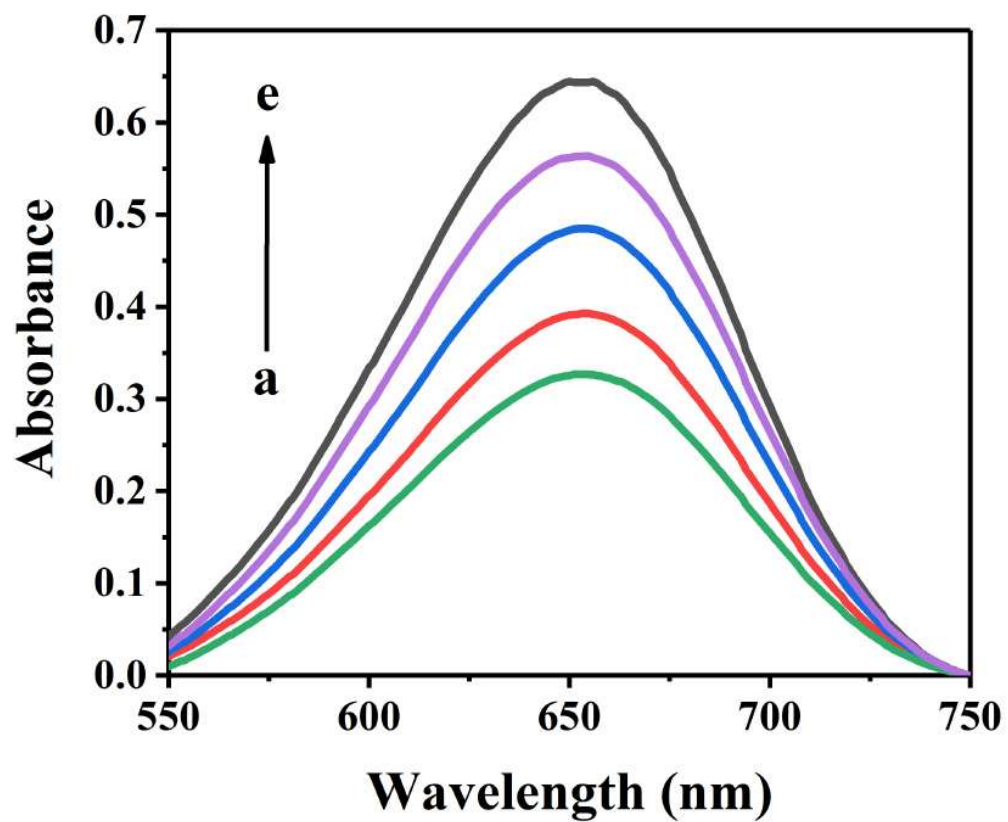


Figure S2. UV-Vis absorption spectra of His@AuNCs/GO-TMB system in different concentrations of His@AuNCs/GO (from a to e: 0.002, 0.003, 0.004, 0.005, 0.006 mg/mL).

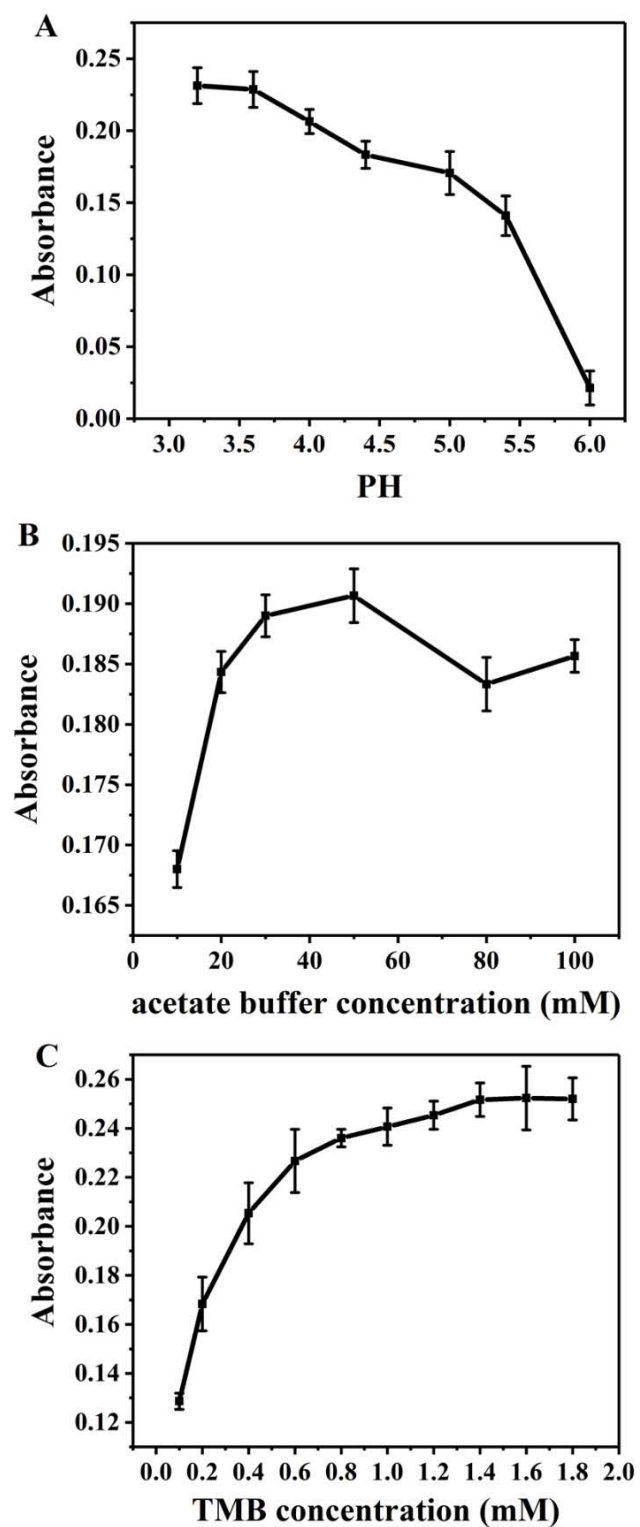


Figure S3. Effect of pH (a), acetate buffer (b) and TMB concentration on the oxidase-like activity of His@AuNCs/GO.

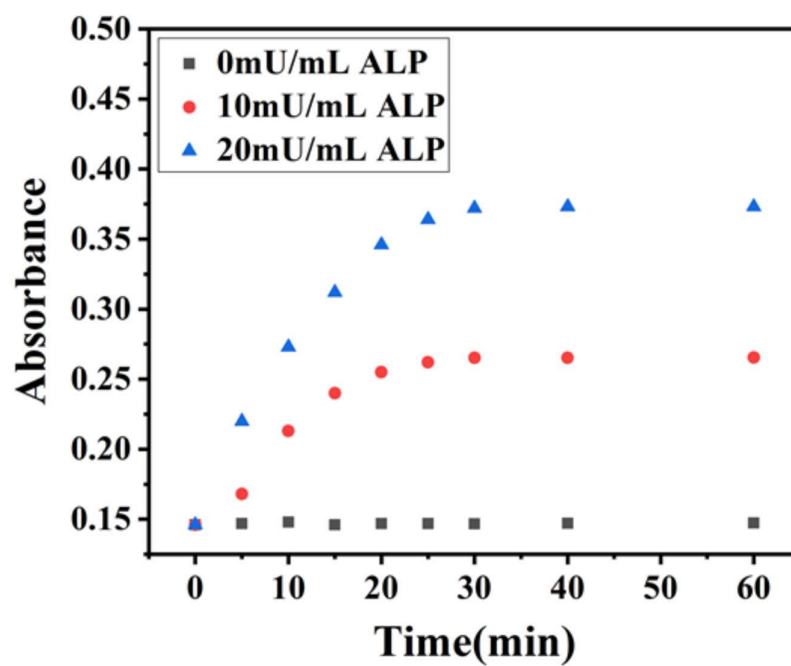


Figure S4. The absorbance of the sensing system as a function of the enzymatic reaction time (0, 5, 10, 15, 20, 25, 30, 40, 60 min) in the presence of 0, 10, and 20 mU/mL ALP individually, with PPi as the substrate.

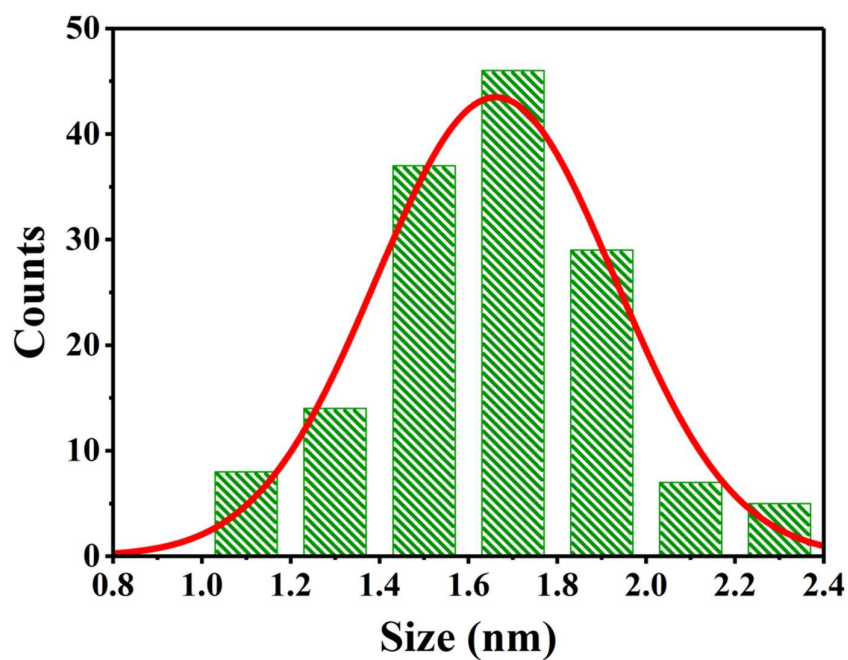


Figure S5. The size statistical histograms of His@AuNCs.

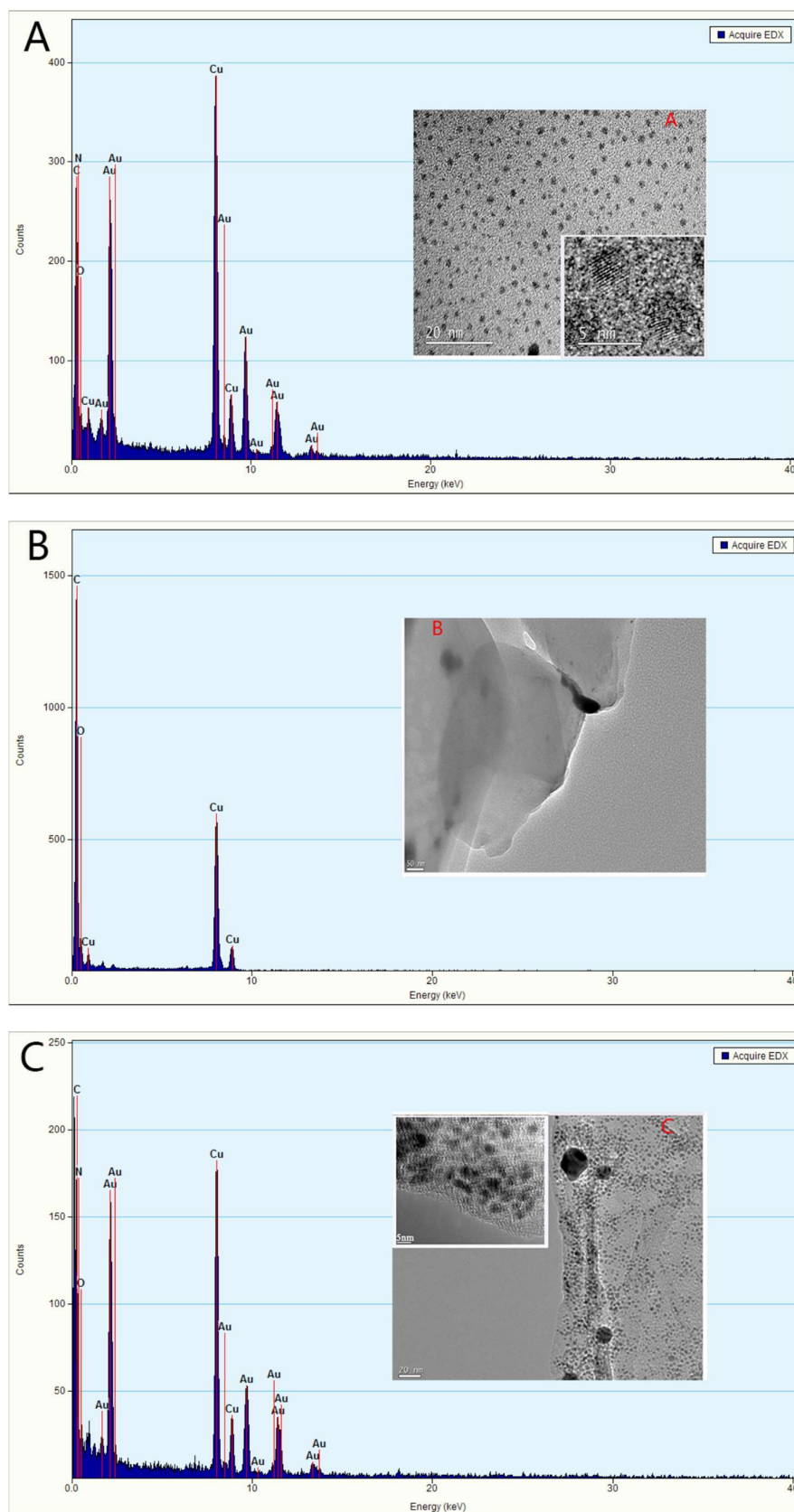


Figure S6. EDX of His@AuNCs (A), GO (B) and His@AuNCs/GO (C).

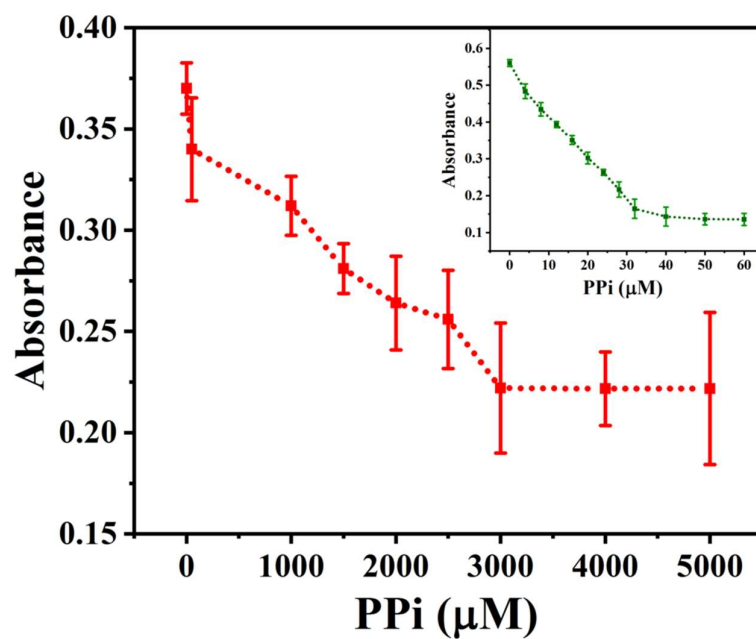


Figure S7. The absorbance of the sensing His@AuNCs-TMB system with PPI as the substrate. Inset is the inhibitory effect of PPI on His@AuNCs/GO-TMB system.

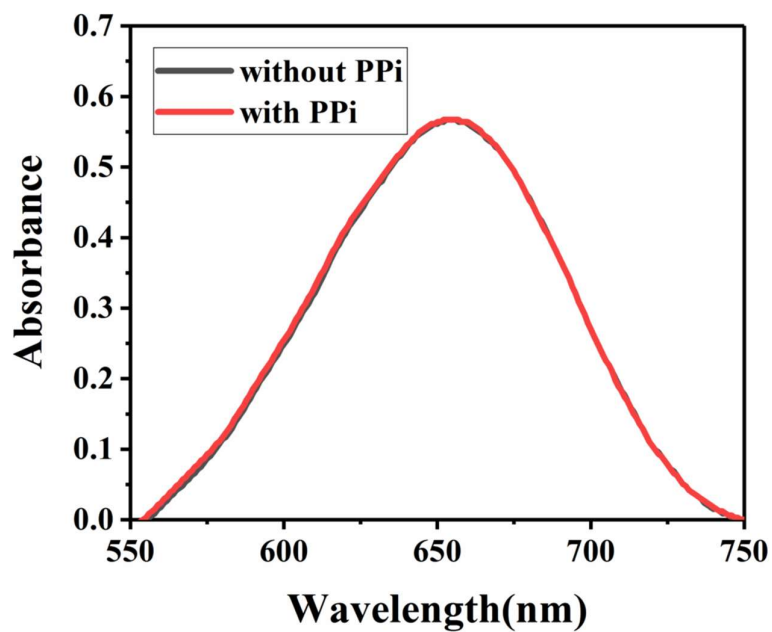


Figure S8. Comparison of the UV-Vis absorption spectra of the His@AuNCs/GO-TMB system after 5 min of reaction with PPI and without PPI.

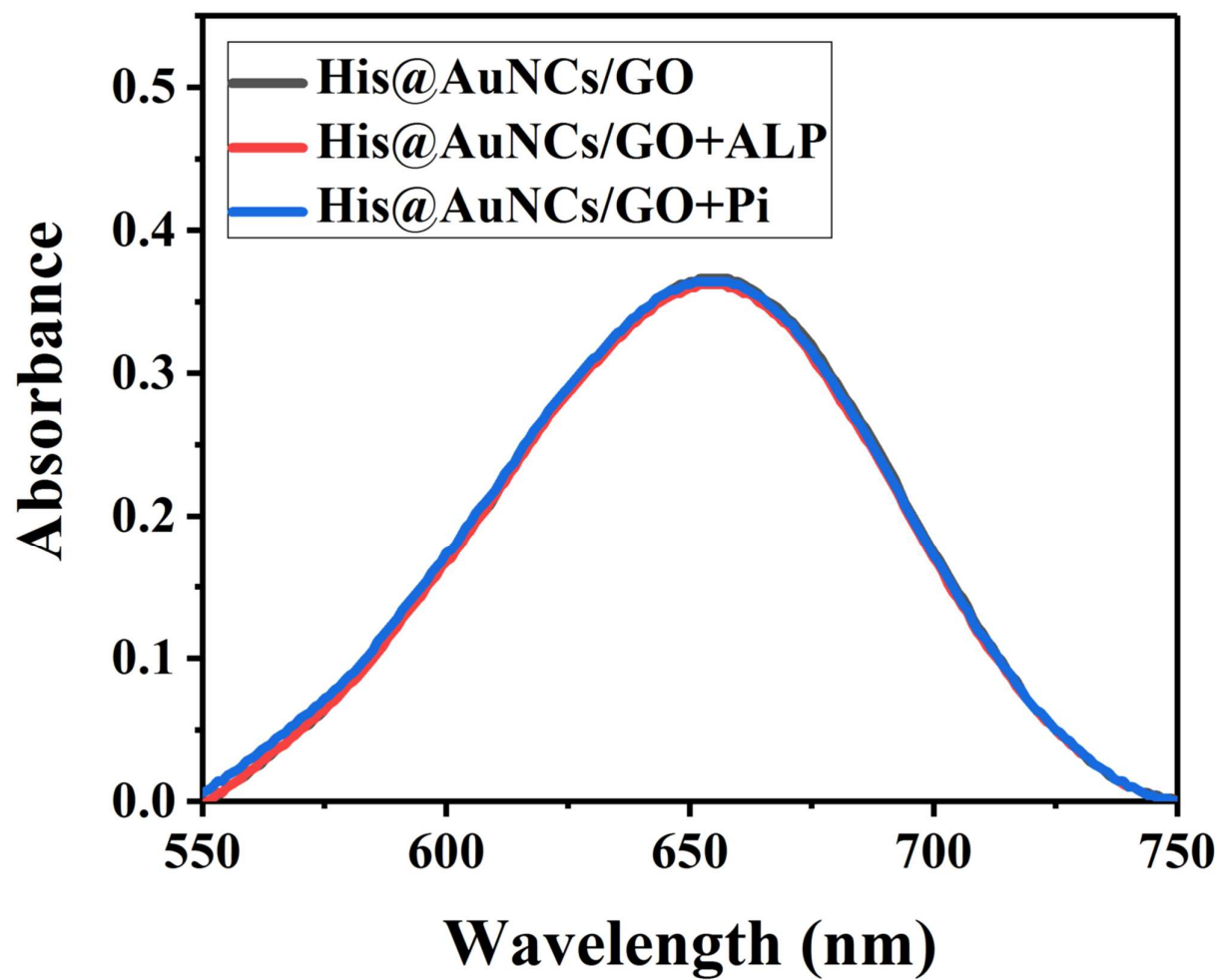


Figure S9. UV-vis absorption spectra of His@AuNCs/GO-TMB system in the presence of ALP and Pi.

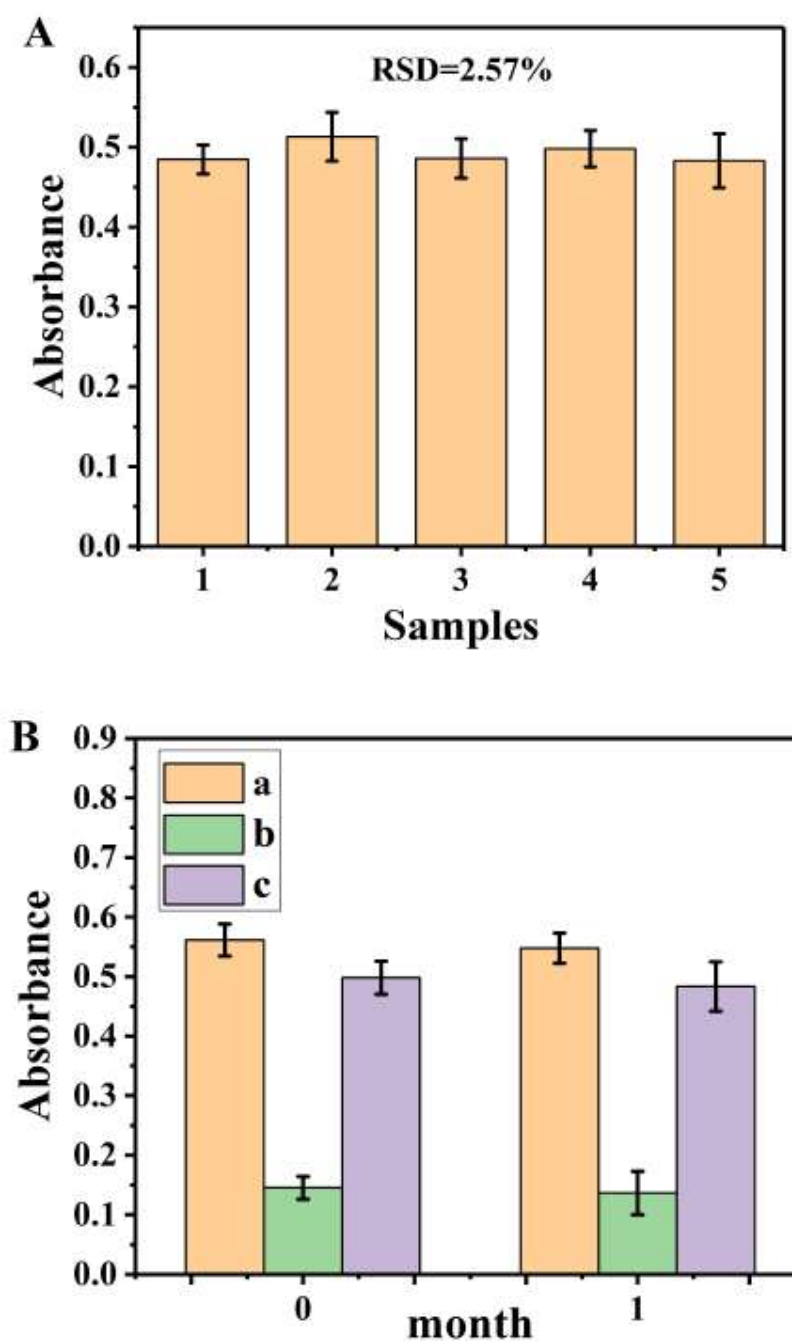


Figure S10. (A) Detection of ALP activity by colorimetric sensor established by different batches of His@AuNCs/GO. (B) a represents the oxidase-like activity of His@AuNCs/GO, b and c respectively represent the detection of PPI and ALP by the sensor.