Electronic Supplementary Information

Graphene−hemin hybrid nanosheets as a label-free colorimetric platform for DNA and small molecule assays

Cui Hu, Qiang Xi, Jia Ge, Feng-Yan Luo, Li-Juan Tang*, Jian-Hui Jiang and Ru-Qin Yu*

State Key Laboratory of Chemo/Bio–Sensing and Chemometrics, College of Chemistry and Chemical Engineering, Hunan University, Changsha, 410082, P. R. China. E-mail: tanglijuan@hnu.edu.cn; rqyu@hnu.edu.cn. Tel.: 86-731-88822577; Fax: 86-731-88822577.

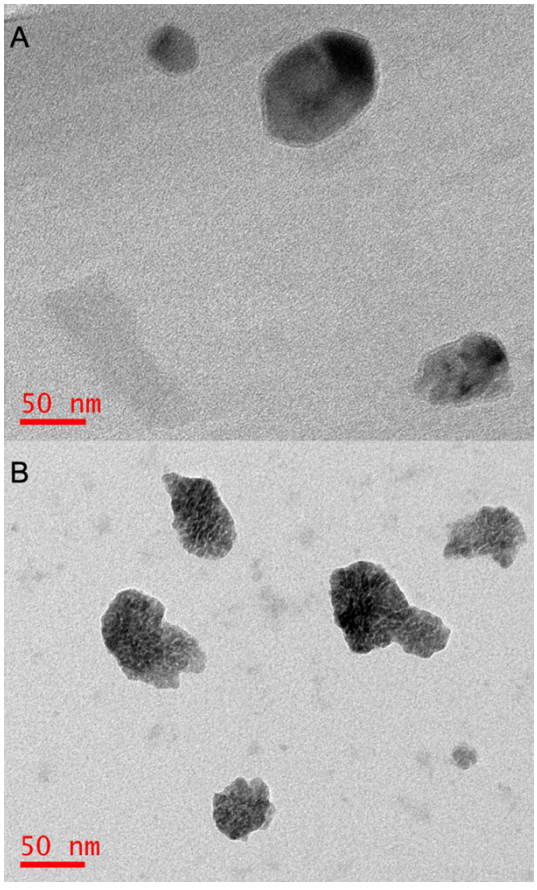

Figure S1. TEM images of RGO (A) and GH (B).

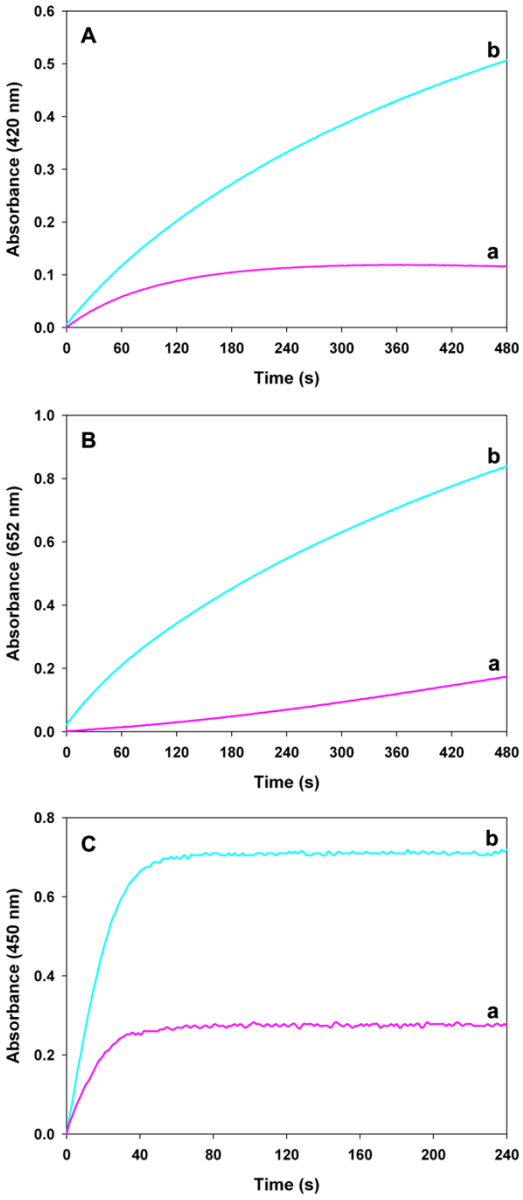

Figure S2. Time-dependent absorbance changes in the presence of different substrates and catalysts. Catalytically oxidized by RGO (a, 1 μg/mL) and GH (b, 1 μg/mL) in the presence of ABTS (A), TMB (B) and OPD (C) respectively.

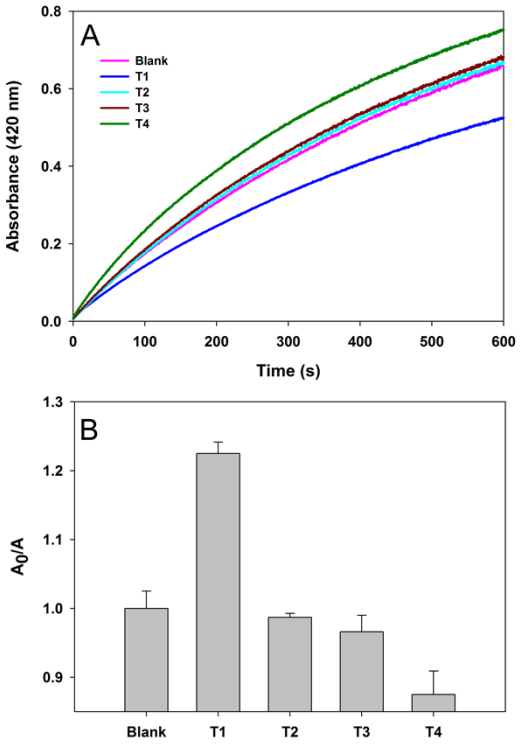

Figure S3. A) Selectivity for DNA assay demonstrated by the absorbance changes at 420 nm. B) The absorbance ratio A_0/A histogram, where A_0 and A were the absorbency in the absence and presence of the target DNA, respectively. The concentration of each DNA was 50 nM. The error bars represented the standard deviation of three measurements.

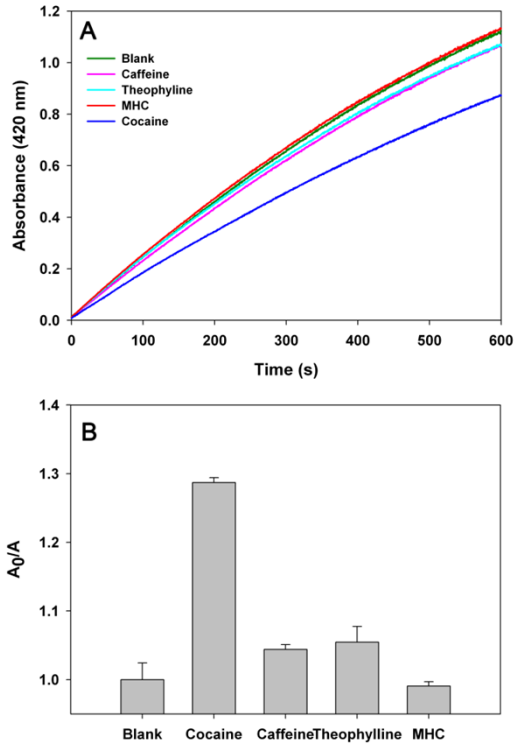

Figure S4. A) Selectivity for cocaine detection demonstrated by the absorbance changes at 420 nm. B) The absorbance ratio A_0/A histogram, where A_0 and A were the absorbency in the absence and presence of the analytes, respectively. The concentration of each analyte was 5 mM. The error bars represented the standard deviation of three measurements.