

Electronic Supplementary Information

The graphene oxide derived graphene quantum dots with different photoluminescence properties and peroxidase-like catalytic activity

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Electronic Supplementary Information for:

Fig. S1 The topographic analysis of GO;

Fig. S2 The TEM and HRTEM image of GO;

Fig. S3 The photostability tests of b-GQDs and g-GQDs;

Fig. S4 The typical photographs of the TMB-H₂O₂ color reaction under different conditions;

Fig. S5 The photographs of the g-GQDs catalyzed TMB-H₂O₂ color reaction for different concentrations of H₂O₂.

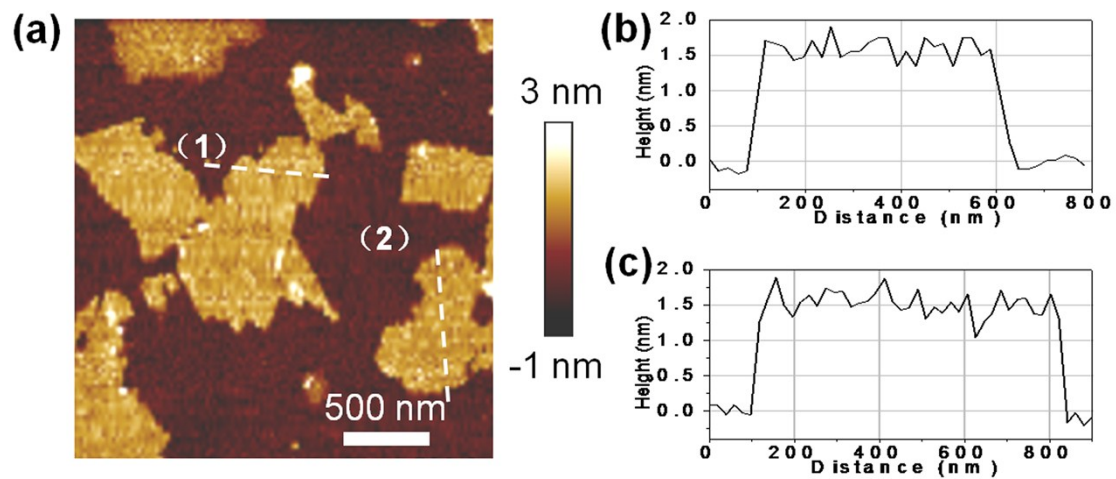


Fig. S1 Topographic analysis of GO. (a) AFM image of GO distributed on a mica substrate. (b) and (c) The height profile along the line (1) and line (2) of panel (a).

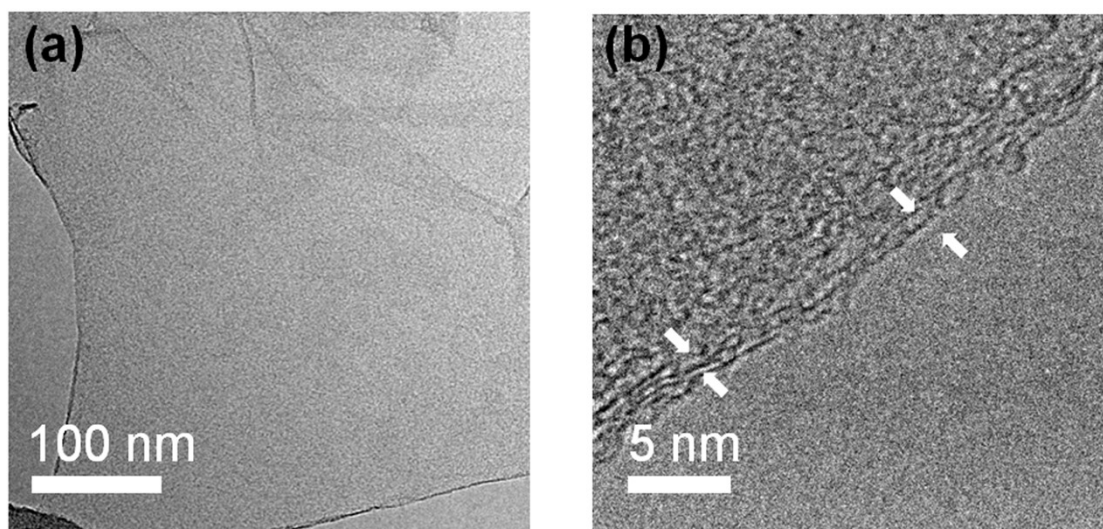


Fig. S2 (a) TEM image of GO. (b) HRTEM image of GO edges.

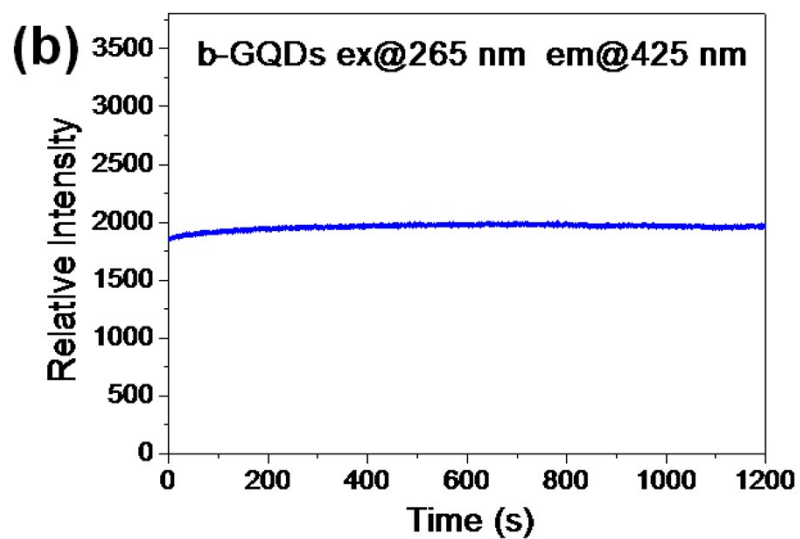
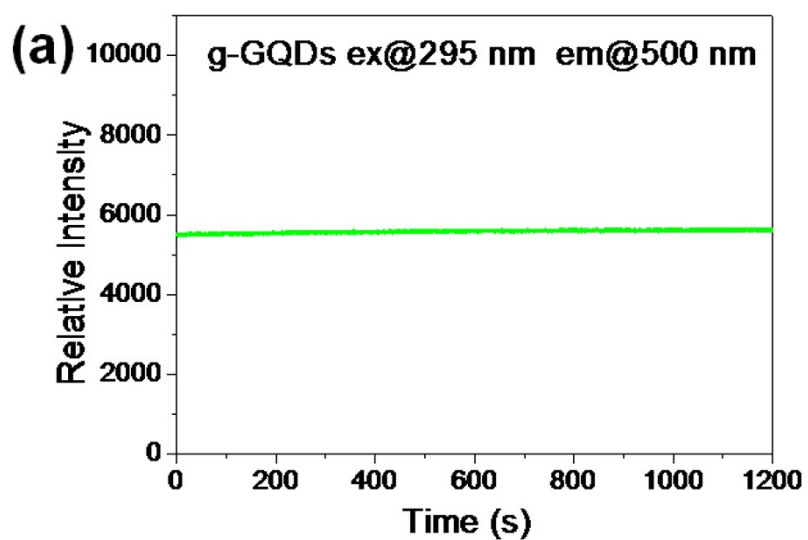


Fig. S3 (a) and (b) Photostability tests of b-GQDs and g-GQDs in a fluorescence spectrophotometer using their optimal excitation and emission, respectively.

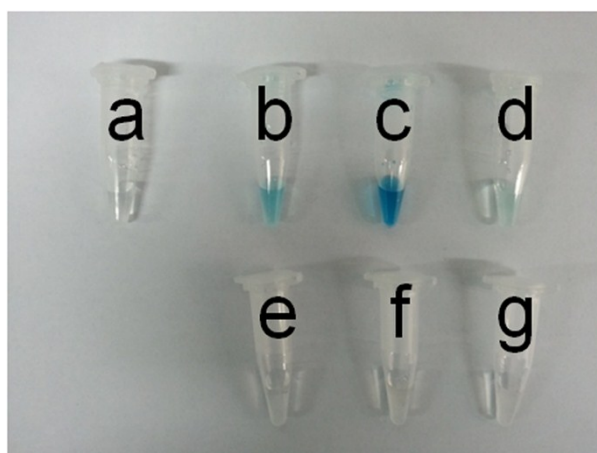


Fig. S4 Typical photographs of the system under different conditions: (a) H_2O_2 +TMB (b) H_2O_2 +TMB+b-GQDs (c) H_2O_2 +TMB+g-GQDs (d) H_2O_2 +TMB+GO (e) TMB +b-GQDs (f) TMB+g-GQDs (g) TMB+GO.

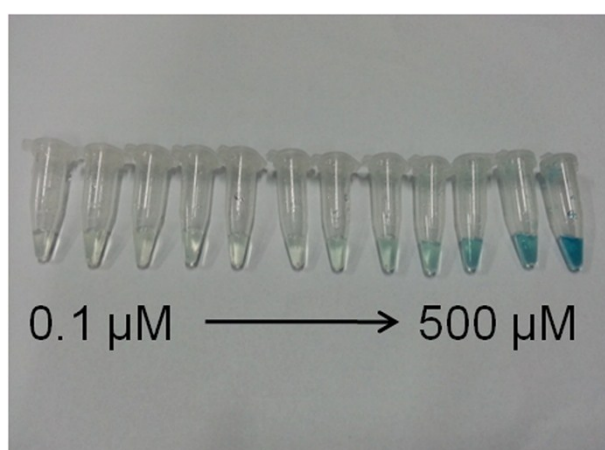


Fig. S5 Photographs of the colored supernatant of reaction mixtures for different concentrations of H_2O_2 (from left to right: 0.1, 0.2, 0.5, 1, 2, 5, 10, 20, 50, 100, 200, and 500 μM).