Supplementary information for

Dual Color Fluorescence Quantitative Detection for Mercury in Soil with Graphene Oxide and Dye-labeled Nucleic Acids

Kun Zhai [a,b] ,   Yonghong Liu [a],   Dongshan Xiang [b],   Guangguang Guo [a],   Tianying Wan [a],

Hongqing Hu [a]*

[a] College of Resources and Environment, Huazhong Agricultural University, Wuhan 430070, China

[b] School of Chemical and Environmental Engineering, Hubei University for Nationalities, Enshi 445000, China
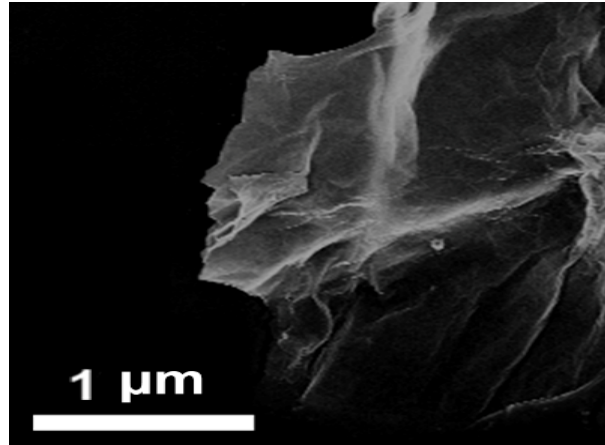
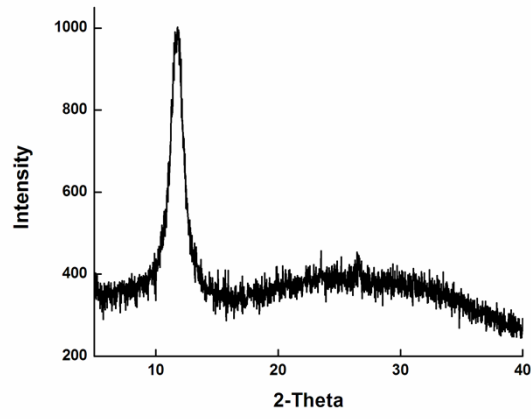Fig.S1 The image of scanning electron microscopy (SEM) of GO

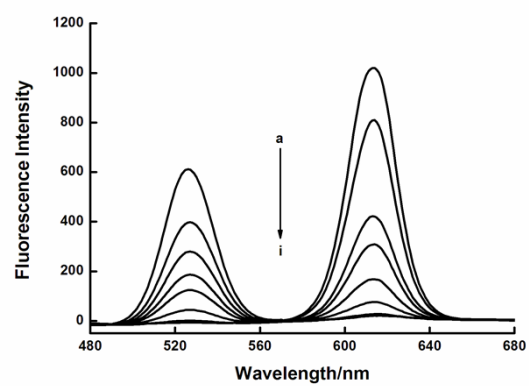Fig.S2 The X-ray diffraction (XRD) spectrum of GO

Fig.S3 Fluorescence quenching of free fluorescence probes (P1 and P2, $4×10^{-8}$ mol·L^{-1}) in the presence of GO with a series of concentrations (a→i: 0, 1, 2, 3, 4, 5, 6, 8, 10 μg·mL^{-1})
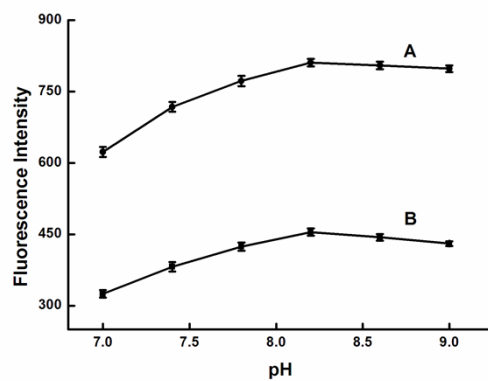
Fig. S4 Effect of different pH on the fluorescence intensity (A-FAM; B-ROX). Concentration of fluorescence probes: 4×10^{-8} mol·L^{-1}; Concentration of Hg^{2+}: 8×10^{-8} mol·L^{-1}.
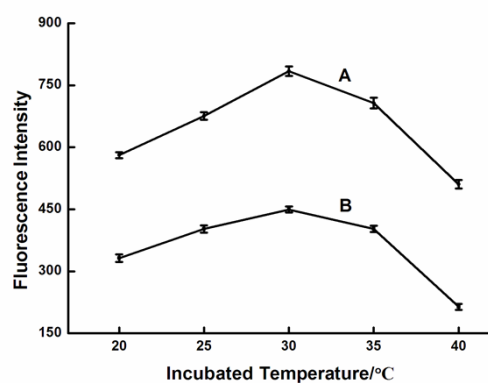
Fig. S5 Effect of different incubated temperature on the fluorescence intensity (A-FAM; B-ROX). Concentration of fluorescence probes: 4×10^{-8} mol·L^{-1}; Concentration of Hg^{2+}: 8×10^{-8} mol·L^{-1}.
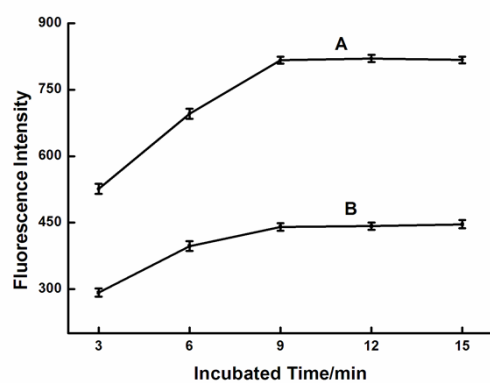
Fig. S6 Effect of different incubated time on the fluorescence intensity (A-FAM; B-ROX). Concentration of fluorescence probes: 4×10^{-8} mol·L^{-1}; Concentration of Hg^{2+}: 8×10^{-8} mol·L^{-1}.
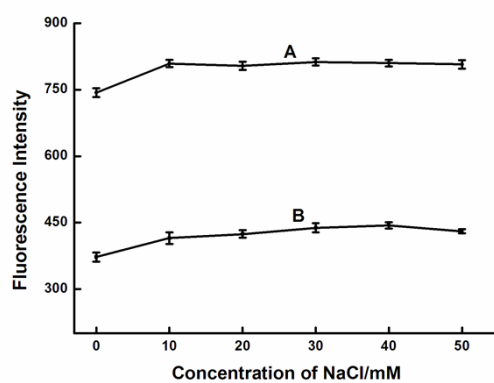
Fig. S7 Effect of different ionic strength of buffer solution on the fluorescence intensity (A-FAM; B-ROX). Concentration of fluorescence probes: 4×10^{-8} mol·L^{-1}; Concentration of Hg^{2+}: 8×10^{-8} mol·L^{-1}.