

Detection of glutathione utilizing a “off-on” fluorescent biosensor based on N-acetyl-L-cysteine capped CdTe QDs

Xuanping Tan ^a, Jidong Yang^{*a b c}, Qin Li ^d, Qiong Yang ^c,

^a School of Chemistry and Chemical Engineering, Southwest University, Chongqing, 400715, China; ^b School of Chemistry and Environmental Engineering, Chongqing Three Gorges University, Wanzhou, Chongqing 404000, China; ^c School of Chemistry and Chemical Engineering, Yangtze Normal University, Chongqing, Fuling 408100, China; ^d Chongqing Medical and Health school, Fuling, Chongqing 408100, P. R. China;

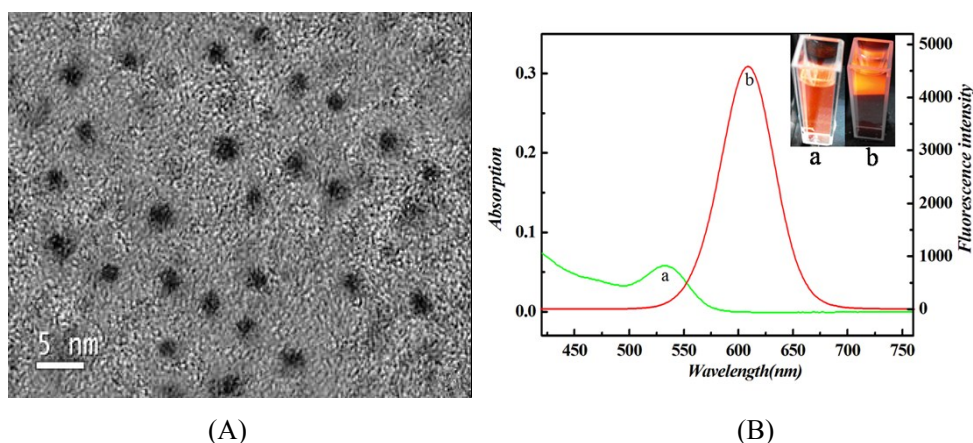


Fig.S1 (A) TEM image; (B) UV-vis absorption (curve a) and fluorescence (curve b) spectra of as-prepared NALC-capped CdTe QDs.

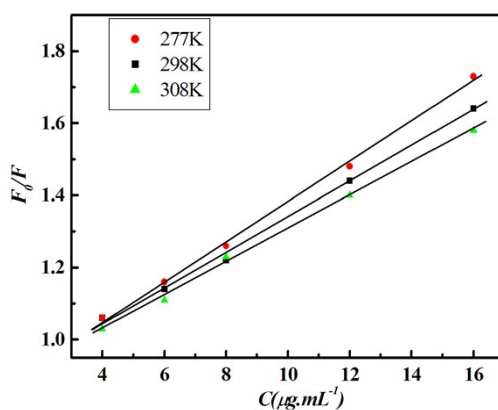


Fig.S2 Stern-Volmer curves for the NALC-CdTe QDs-Hg²⁺ solution system at three different temperatures (NALC-capped CdTe QDs, 1.425×10^{-4} mol·L⁻¹; Tris-HCl buffer solution, 0.5 mL, pH=7.4)

*Corresponding author at: School of Chemistry and Chemical Engineering,
Southwest University, Chongqing, Beibei 400715, China. Tel.: +86 18996678896.
E-mail address: flyjd6400@163.com (J. Yang).

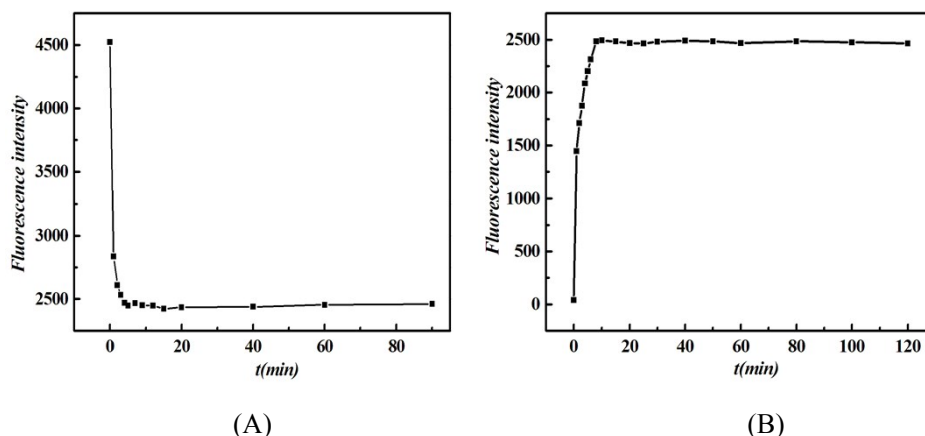


Fig S3 The effect of time on the NALC-capped CdTe QDs-Hg²⁺ system (A) and NALC-capped CdTe QDs-Hg²⁺-GSH system (B). (NALC-capped CdTe QDs, 1.425×10^{-4} mol·L⁻¹; Tris-HCl buffer solution, 0.5 mL, pH=7.4)

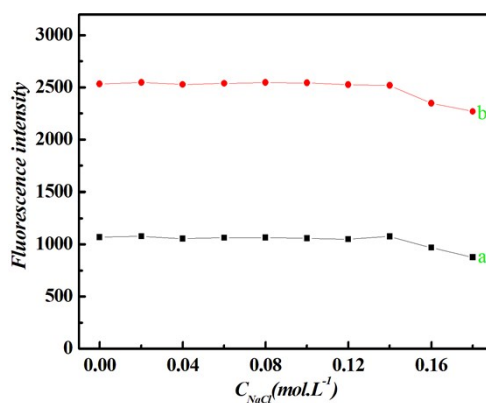


Fig S4 The effect of ionic strength on the NALC-capped CdTe QDs-Hg²⁺ system (curve a) and NALC-capped CdTe QDs-Hg²⁺-GSH system (curve b). (NALC-capped CdTe QDs: 1.425×10^{-4} mol·L⁻¹; HgCl₂: 24 μg·mL⁻¹; GSH: 64 μg·mL⁻¹; 0.5 mL Tris-HCl buffer solution (7.4)).