Supplementary Material (ESI) for New Journal of Chemistry

Supporting Information

Synthesis and characterization of multifunctional $CdTe/Fe_2O_3@SiO_2$ core/shell nanosensors for Hg^{2+} ions detection

Hengguo Wang[1], Yapeng Li[1], Xiaoliang Fei[1], Lei Sun[1], Ligong Zhang[2], Zhenzhong Zhang[2], Yue Zhang[1], Yaoxian Li[1], Qingbiao Yang[1*]

[1] Department of Chemistry, Jilin University, Changchun, 130021, People's Republic of China

[2] Key Laboratory of Excited State Processes, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, Changchun, 130033, P. R. China.

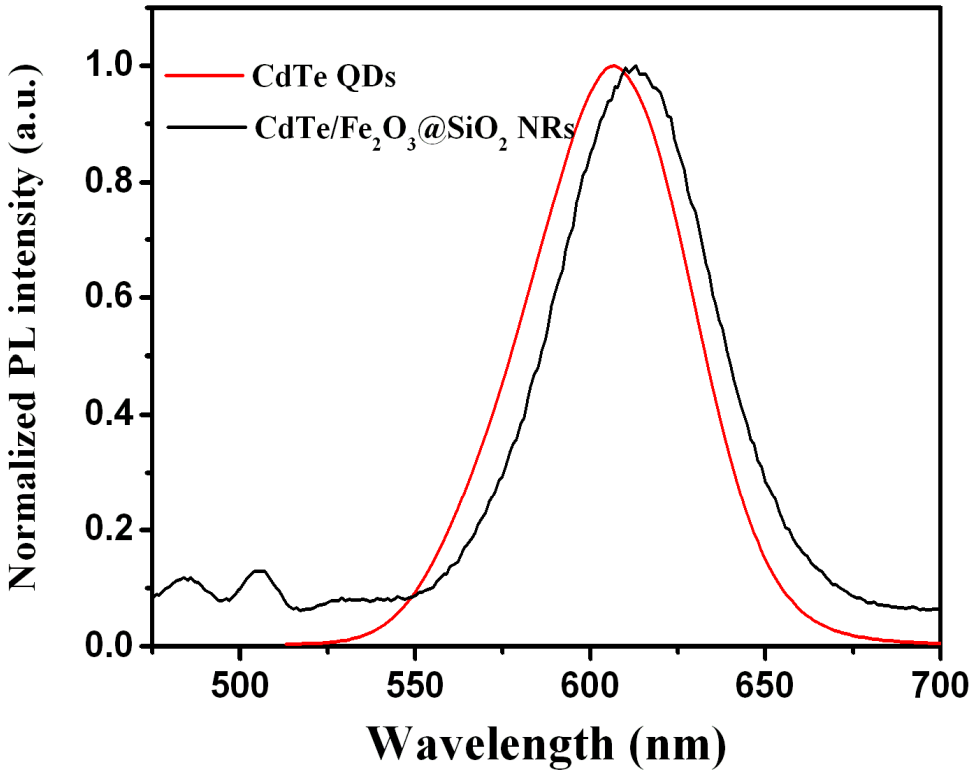

Figure. S1 PL spectra of CdTe QDs (606 nm) and CdTe/Fe_2O_3@SiO_2 core/shell nanostructures (612 nm) under excitation of 370 nm.

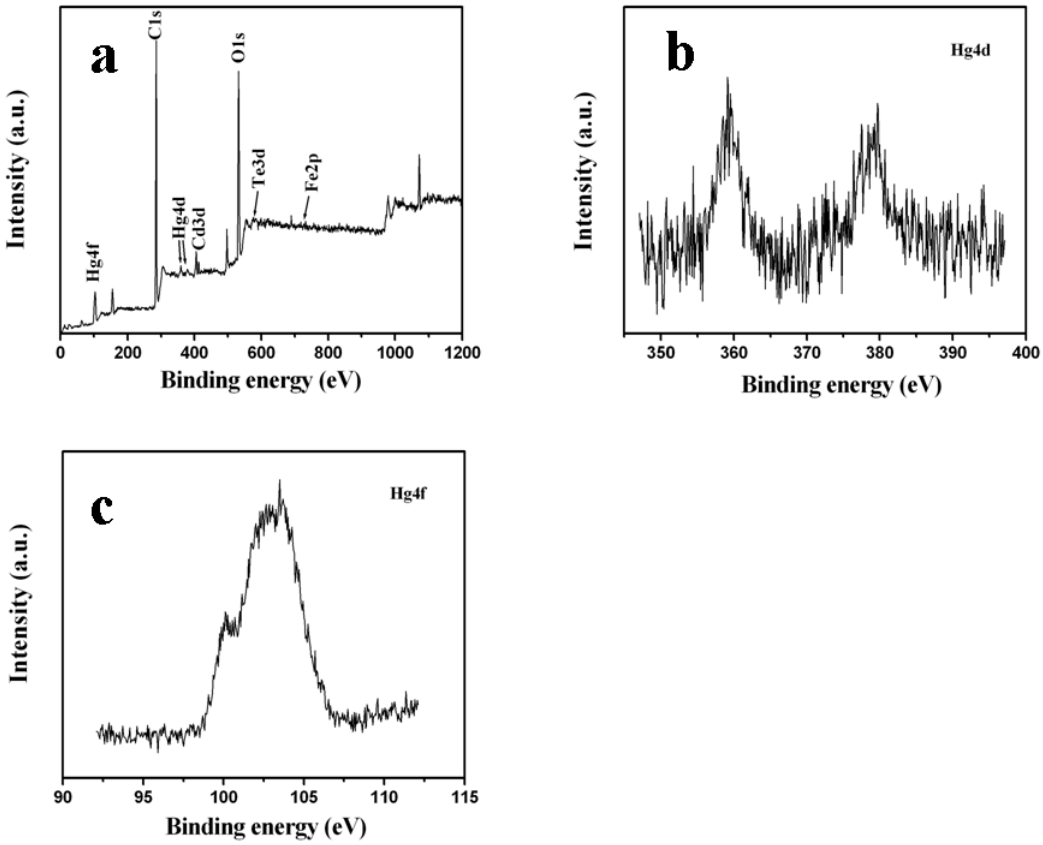

Figure. S2 XPS fully scanned spectra (a), XPS spectra of Hg4d (b) and Hg 4f (c) from $CdTe/Fe_2O_3@SiO_2$ nanocomposites exposed to Hg^{2+} ions.

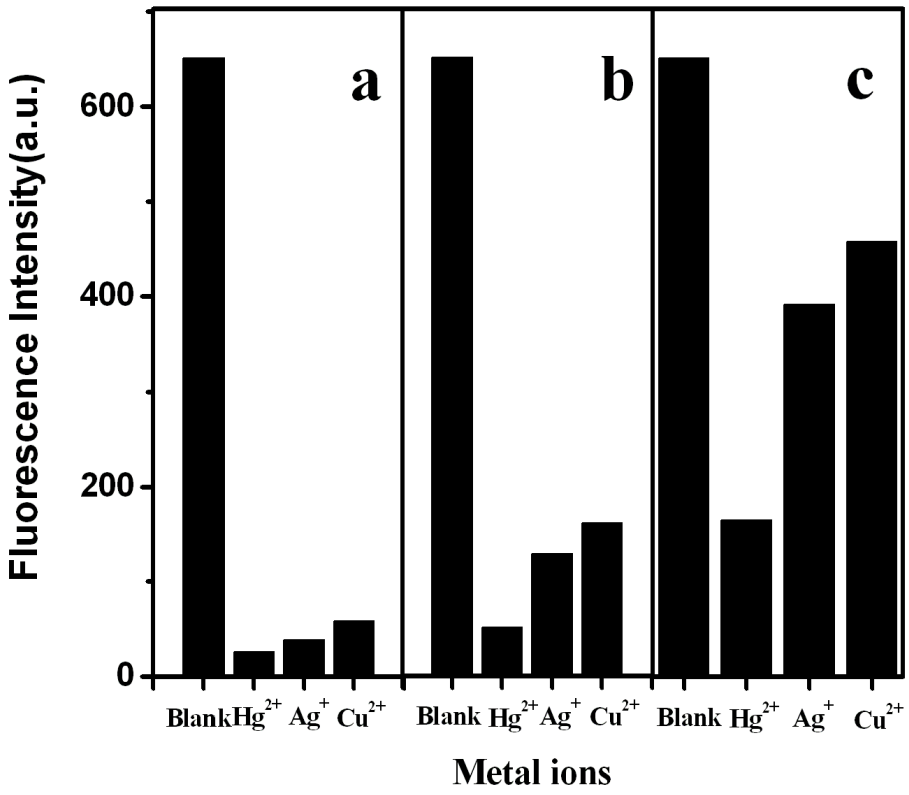

Figure. S3 Fluorescence response of CdTe/Fe_2O_3@SiO_2 core/shell nanosensor in buffered (NaAc-HAc, pH = 7) solution upon different concentrations of metal cations (a 1 mM, b 0.1 mM, c 0.01 mM) with an excitation at 370 nm**.**