Electronic Supplementary Information

Colorimetric Detection of Hg²⁺ Using Thioctic acid

Functionalized Gold Nanoparticles



Fig. S1. Plot of $A_{700/525}$ versus the concentrations of Hg²⁺ in the range of 0.01-20 μ M. The error bars represent standard deviations based on three independent measurements.



Fig. S2. UV-Vis spectra of TA-GNPs containing 50 μ M anions compared with Hg²⁺ 20 μ M.



Fig. S3. Photo images of samples of TA-GNPs containing different concentrations of Hg^{2+} in lake water (orientation of the arrowhead: 10nM, 50nM, 100nM, 500nM, 1µM, 2µM, 3µM, 5µM, 10µM, 15µM and 20µM.)



Fig. S4. Photo images of samples of TA-GNPs containing 50 μ M other metal ions (Ba²⁺, Co²⁺, Ca²⁺, Zn²⁺, Cu²⁺, Fe²⁺, Pb²⁺, Ni²⁺, Cr³⁺, Mg²⁺, Mn²⁺, Cd²⁺) compared with Hg²⁺ 15 μ M in lake water.