

Supporting information

Chitosan-Based Carbon Nanoparticles for Heavy Metal Indicator and for Wastewater Treatment

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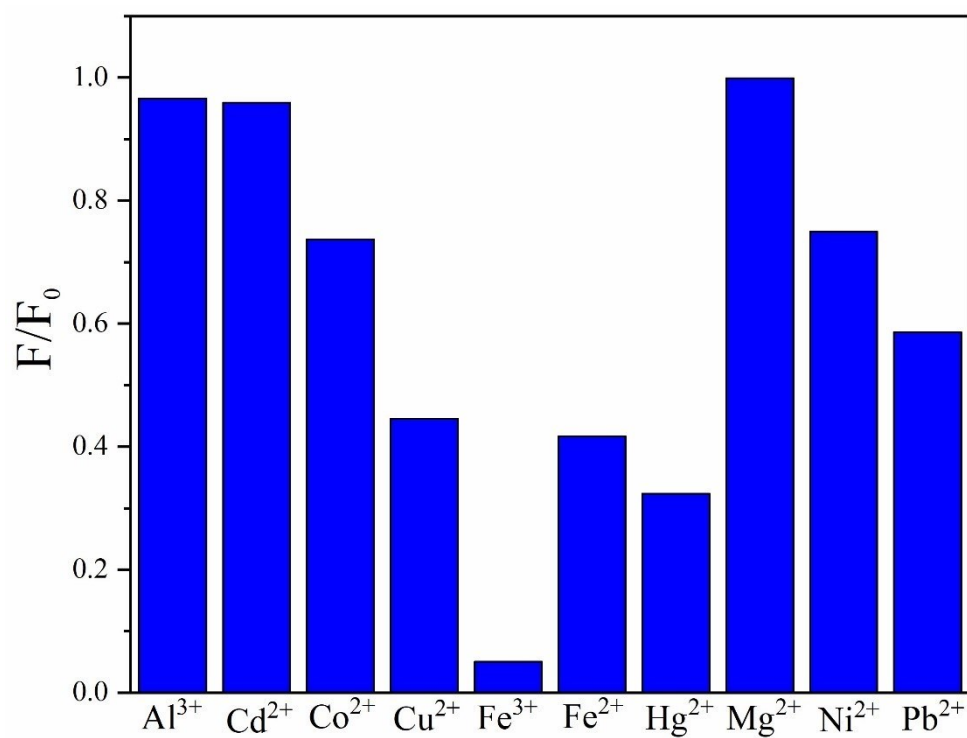


Figure S1. Fluorescence quenching of chi-CNPs after addition of various metal ions.

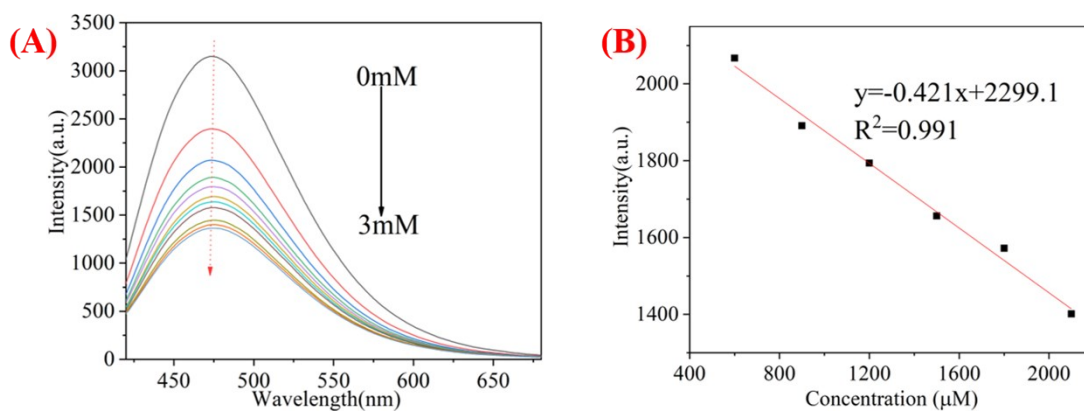


Figure S2. (A) Fluorescence quenching curve of chi-CNPs with copper ion (0 ~ 3 mM); (B) The correlation between chi-CNPs fluorescence intensity and Cu^{2+} at the various concentrations of 0.6 ~ 2.1 mM.

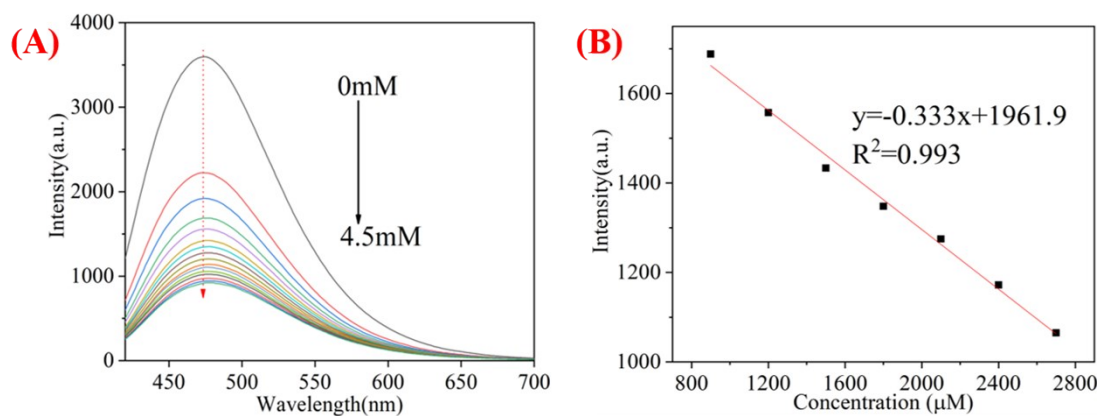


Figure S3. (A) Fluorescence quenching curve of chi-CNPs with ferrous ion (0 ~ 4.5 mM). (B) The correlation between chi-CNPs fluorescence intensity and Fe^{2+} at the various concentrations of 0.9 ~ 2.7 mM.

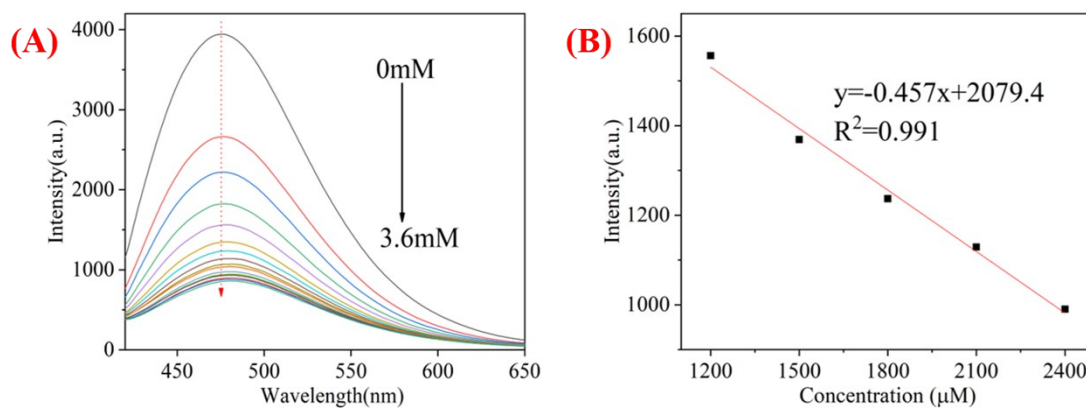


Figure S4. (A) Fluorescence quenching curve of chi-CNPs with mercury ion (0 ~ 3.6 mM); (B) The correlation between chi-CNPs fluorescence intensity and Hg²⁺ at the various concentrations of 1.2 ~ 2.4 mM.

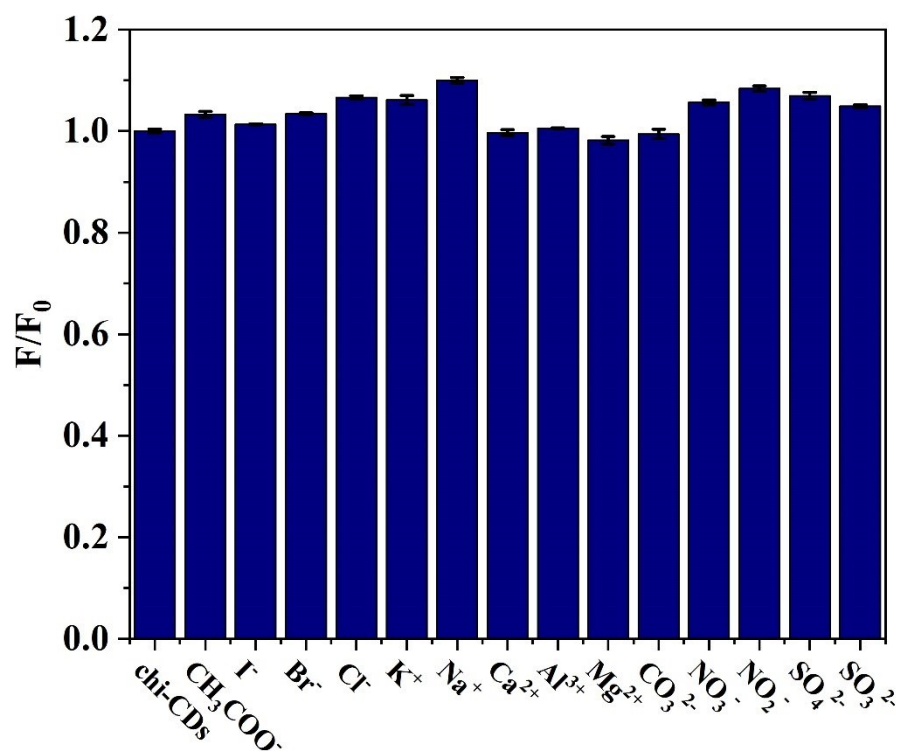


Figure S5. Fluorescence intensity ratios (F/F_0) of various ions to the chi-CNDs. The concentration of Na^+ , K^+ , Ca^{2+} , Al^{3+} , Mg^{2+} , CO_3^{2-} , Cl^- , Br^- , I^- , NO_3^- , NO_2^- , SO_3^{2-} , SO_4^{2-} and CH_3COO^- was $500\mu\text{M}$.

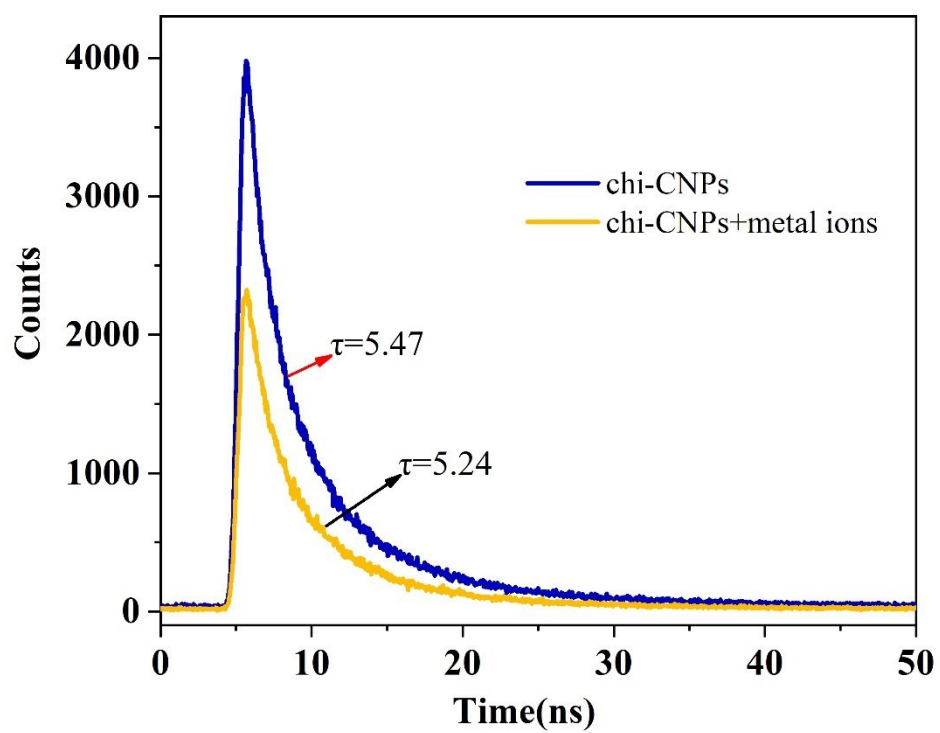


Figure S6. Fluorescence lifetime of the chi-CNPs before and after the addition of metal ions.