

SUPPORTING INFORMATION

Tryptophanhydroxamic Acid-Stabilized Ultrasmall Gold Nanoclusters: Tuning the Selectivity for Metal Ion Sensing

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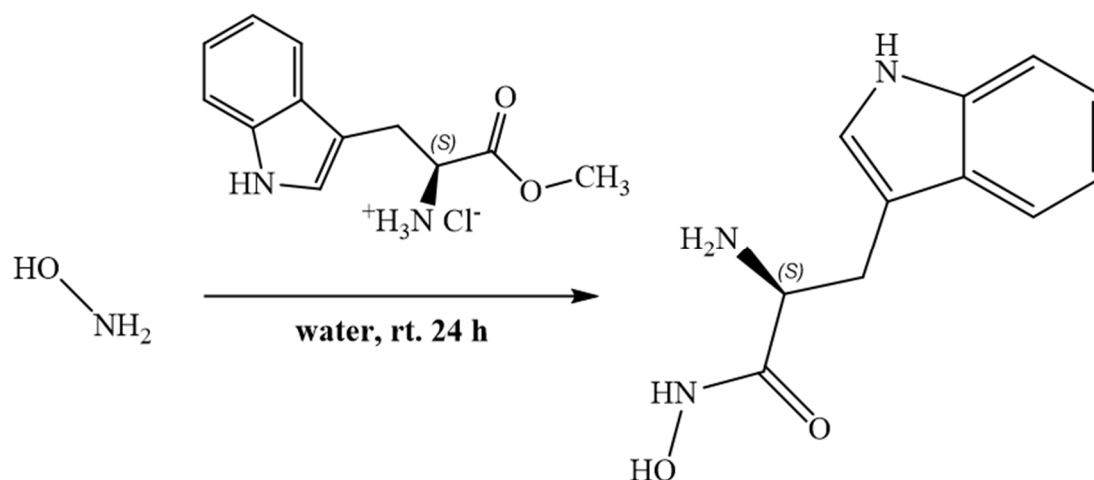


Figure S1. Synthesis protocol of the TrpHA ligand.

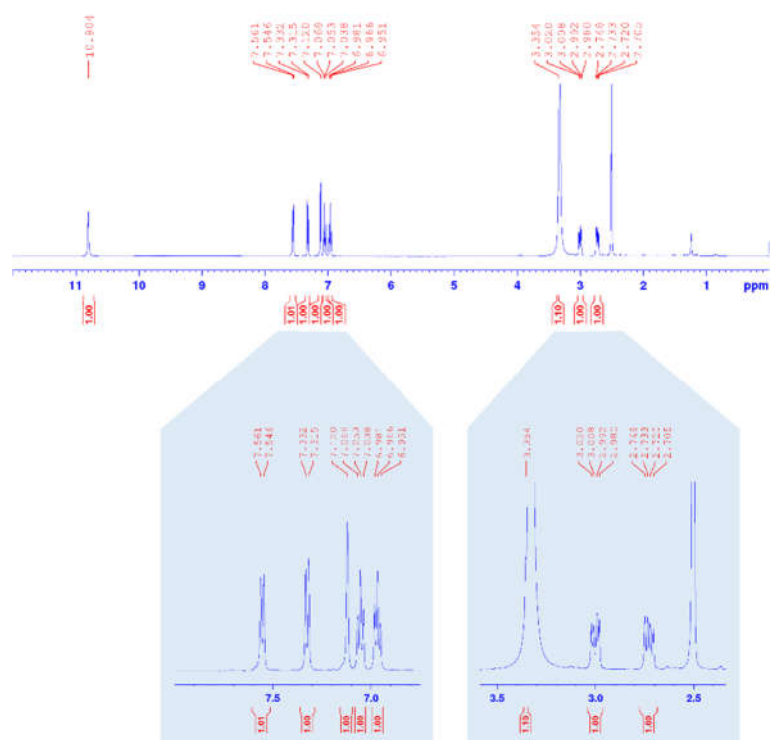


Figure S2. ^1H -NMR spectrum of TrpHA.

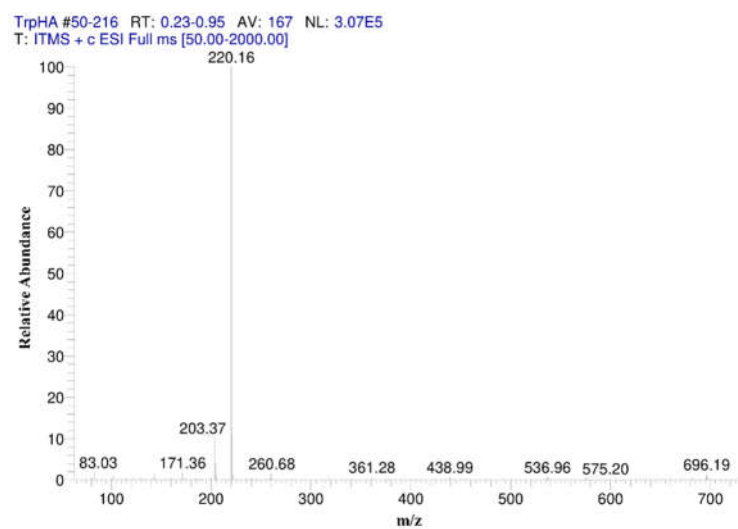


Figure S3. ESI-MS spectrum of TrpHA.

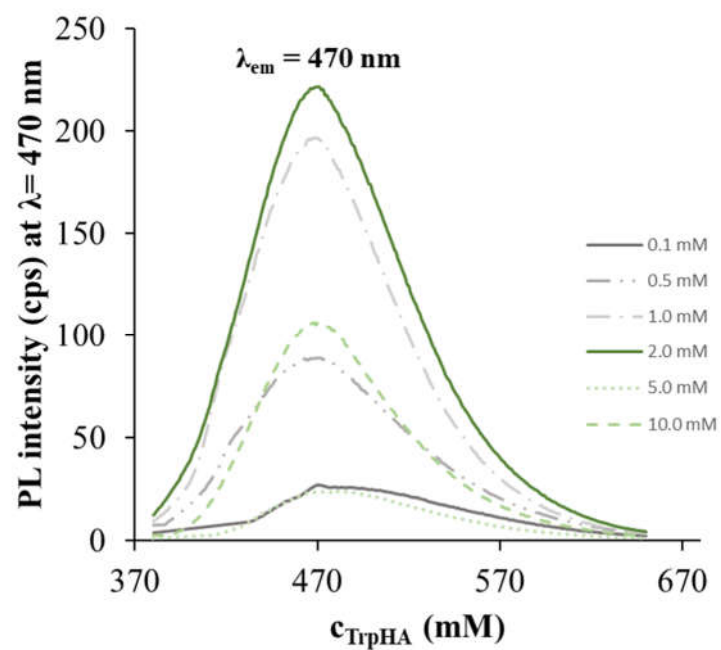


Figure S4. Representative emission spectra of TrpHA-Au NCs-containing dispersions using different TrpHA concentration ($c_{\text{Au}} = 1.0$ mM, pH = 7.0).

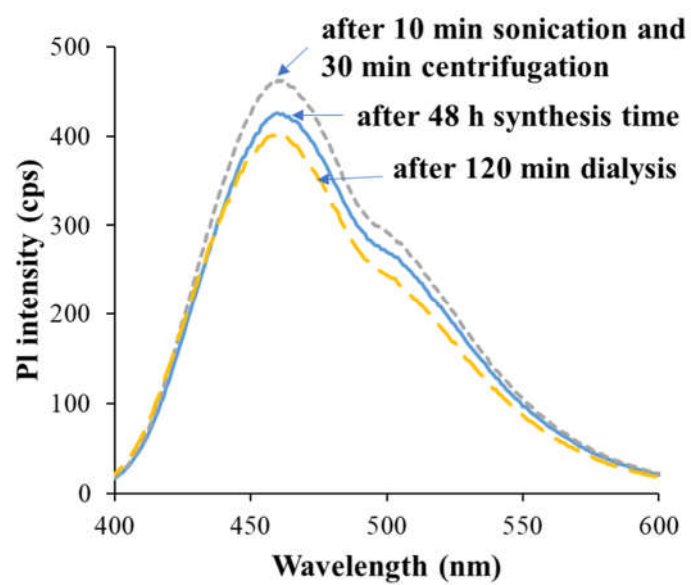


Figure S5. Emission spectra of the TrpHA-Au NCs after different treatments ($c_{\text{Au}} = 1.0 \text{ mM}$, after 48 h synthesis time)

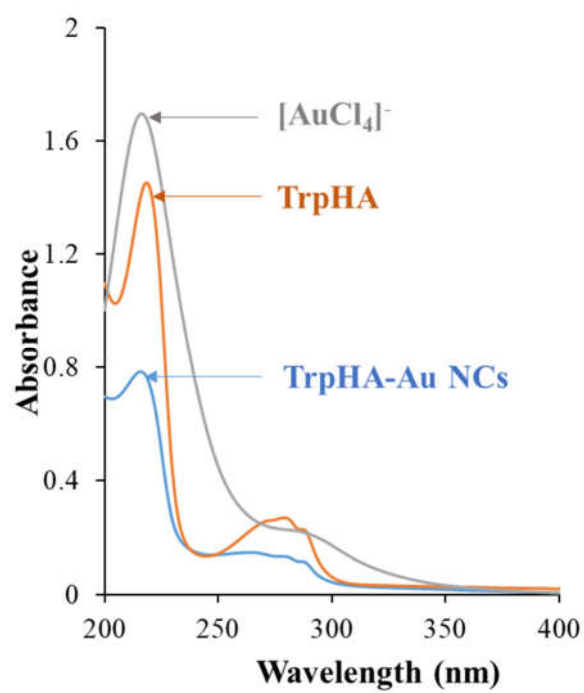


Figure S6. Absorbance spectra of the $[\text{AuCl}_4]^-$ ($c = 0.1 \text{ mM}$), the pure TrpHA ligand ($c = 1.0 \text{ mM}$) and the TrpHA-Au NCs ($c_{\text{Au}} = 1.0 \text{ mM}$).

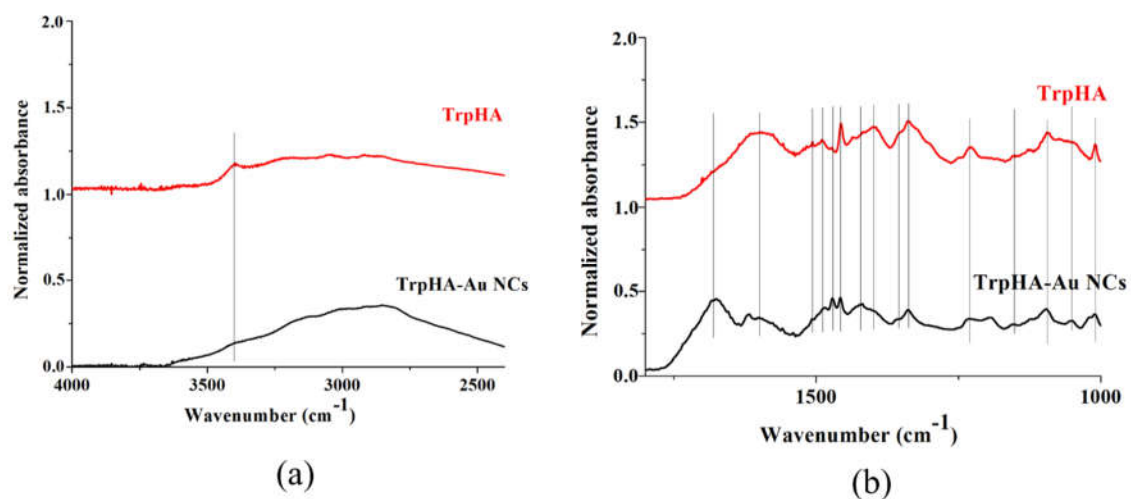


Figure S7. FT-IR spectra of the lyophilized powder form of the TrpHA and TrpHA-Au NCs in the range of 4000-2400 cm^{-1} (a) and 1800-1000 cm^{-1} (b) under same pH.

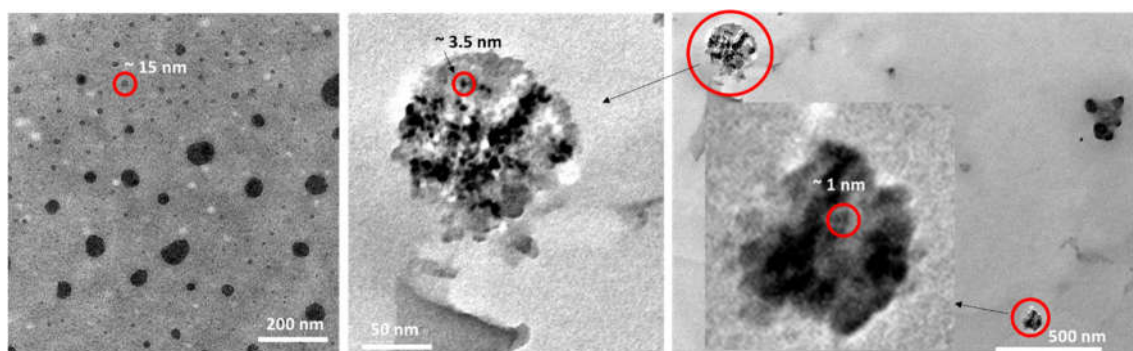


Figure S8. Representative HRTEM images of TrpHA-Au NCs-containing aqueous dispersion at different enlargements.

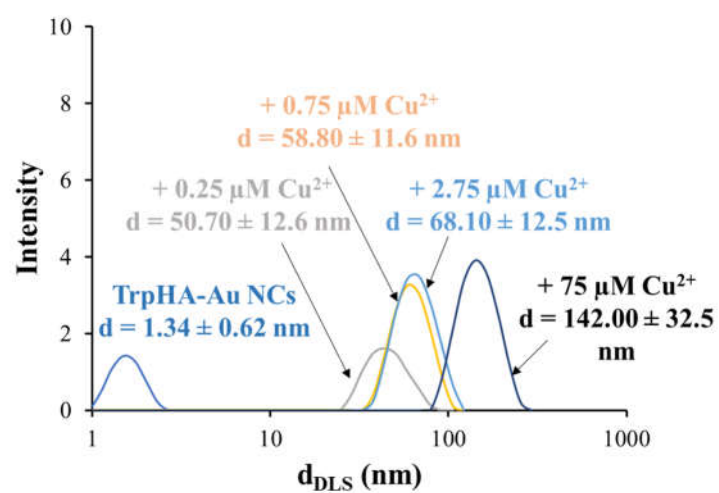


Figure S9. DLS curves of the TrpHA-Au NCs in the absence and in the presence of increasing concentration of Cu^{2+} -ions

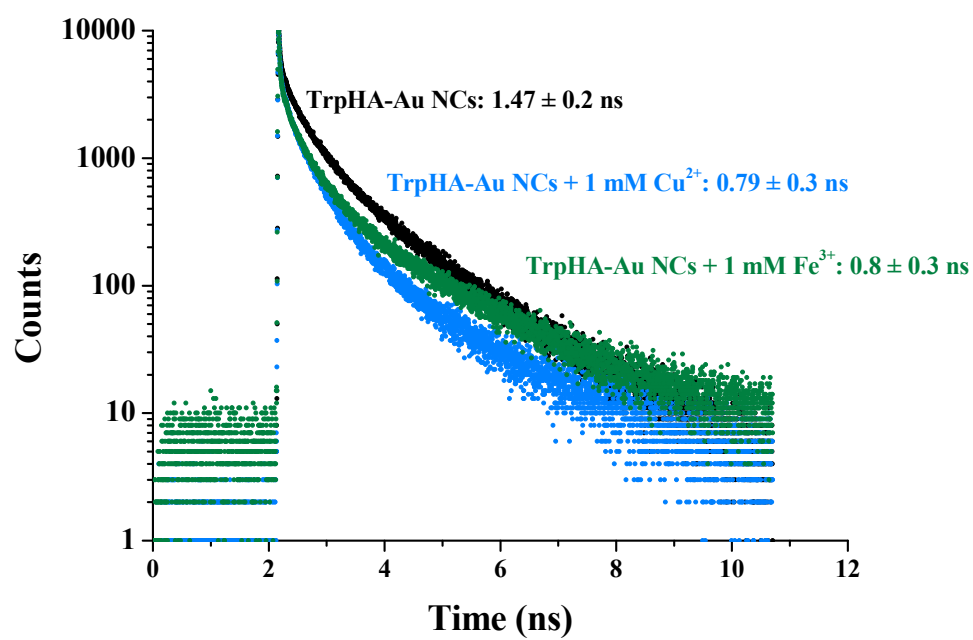


Figure S10. The typical fluorescence decay curves of the TrpHA-Au NCs before (black) and after the addition of Cu^{2+} - (blue) and Fe^{3+} - (green) ions using 1 mM metal ion concentration ($c_{\text{Au}} = 0.25$ mM)