

Supporting Information

Mercaptothiadiazole capped gold nanoparticles as fluorophore for the determination of nanomolar mercury (II) in aqueous solution in the presence of 50,000-fold major interferents

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Scheme S1. Possible complexation mode between DMT-AuNPs and Hg(II) (Not up to the scale)

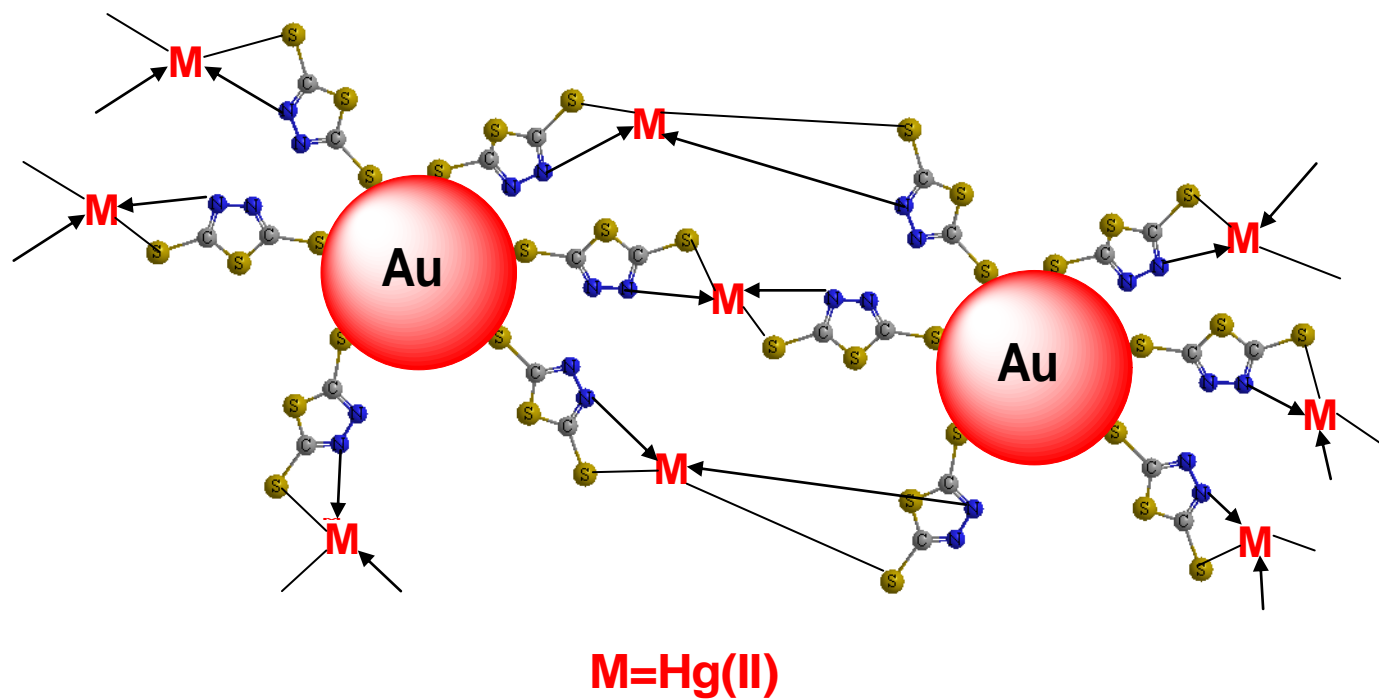


Fig. S1. UV-visible spectra of DMT-AuNPs in different concentrations of Hg(II) (a) 0, (b) 10, (c) 20, (d) 30, (e) 40, (f) 50, (g) 60, (h) 70, (i) 80, (j) 90, (k) 100, (l) 110 and (m) 120×10^{-6} mol L⁻¹.

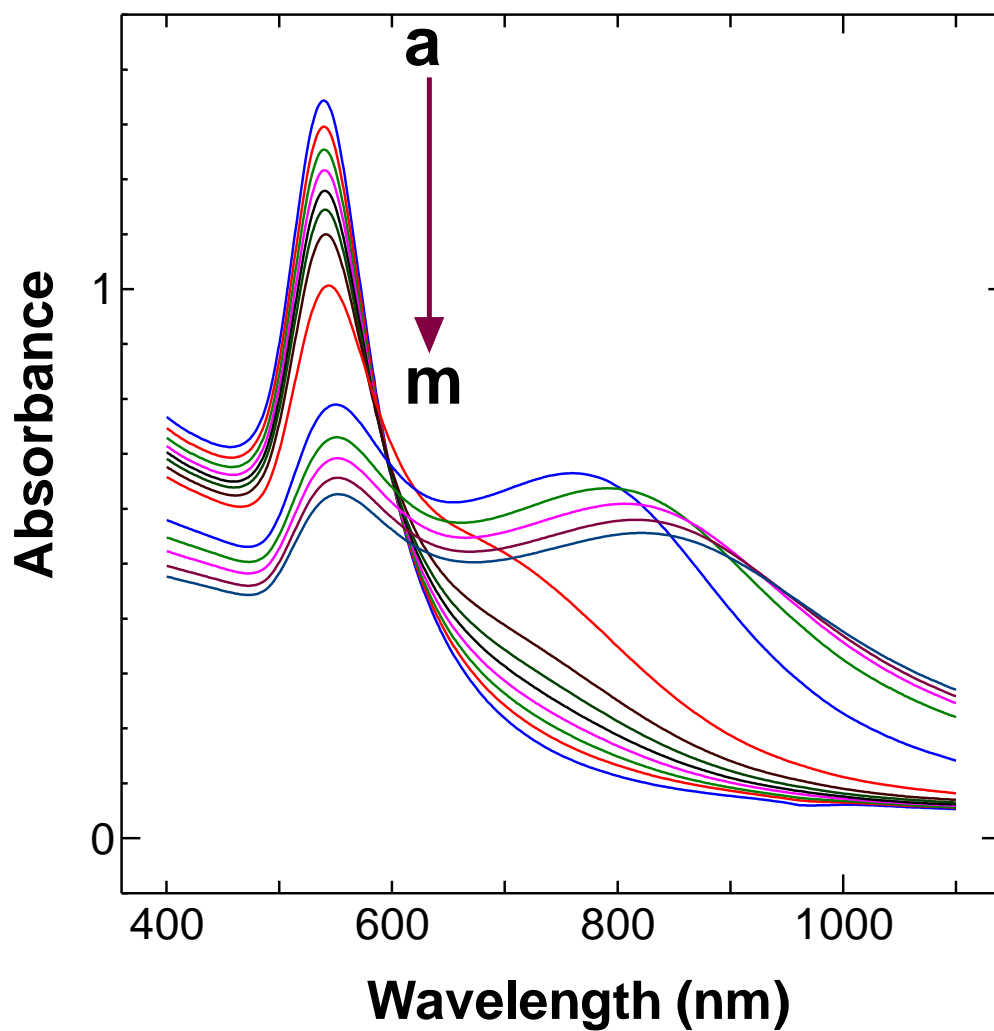


Fig. S2. Emission spectra of DMT-AuNPs in different concentrations of Hg(II) (a) 0, (b) 1, (c) 2, (d) 3, (e) 4, (f) 5, (g) 6, (h) 7, (i) 8, (j) 9 and (k) 10×10^{-6} mol L⁻¹ (λ_{ex} : 514; λ_{em} : 773 nm). **Inset:** Emission spectra of (a) DMT capped AuNPs and (b) DMT free AuNPs (λ_{ex} : 330; λ_{em} : 435 nm).

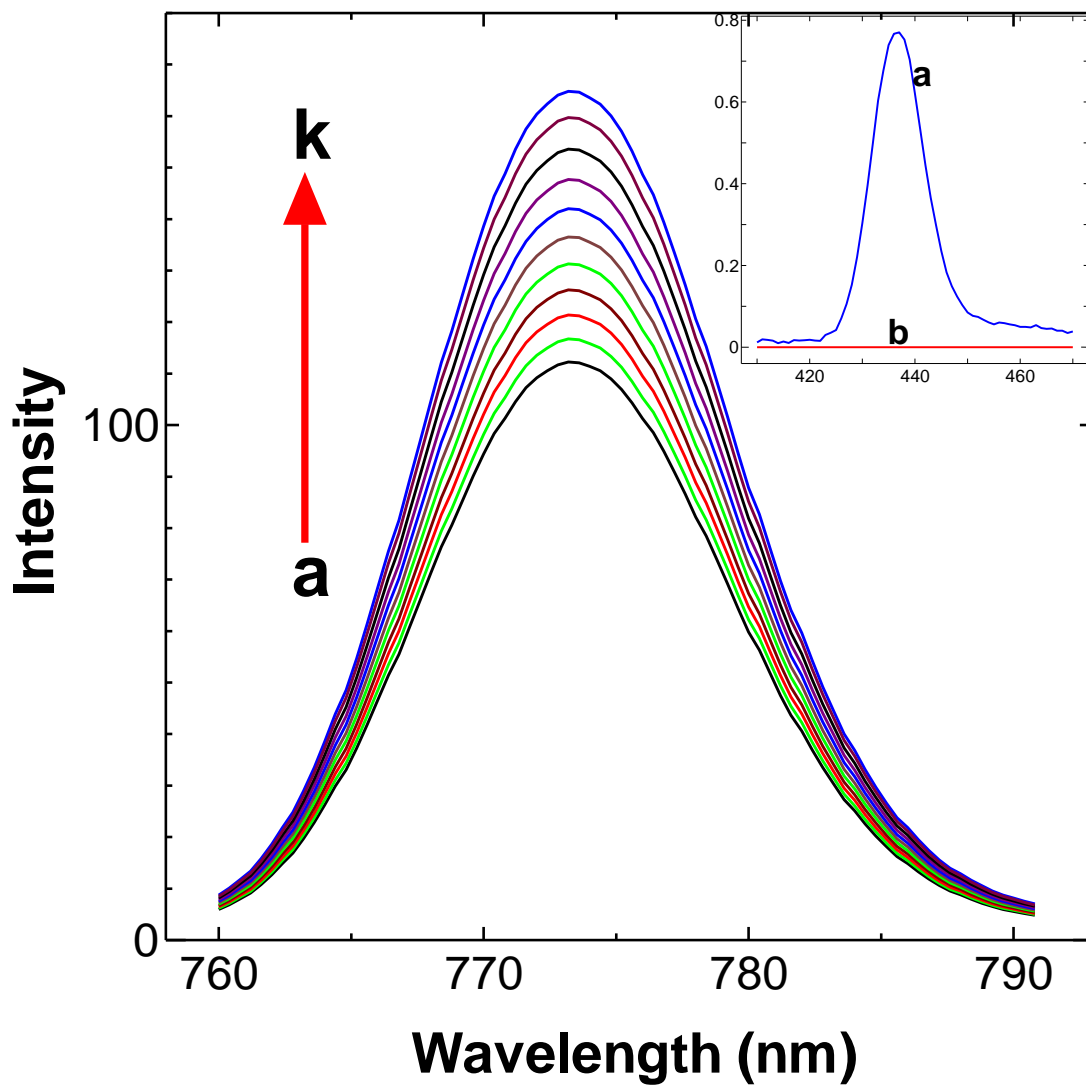


Fig. S3. Linearity plot for DMT-AuNPs in 1×10^{-12} to 1×10^{-7} M/L concentrations of Hg(II). **Inset:** Expanded linearity plot for DMT-AuNPs in 1×10^{-12} to 1×10^{-9} M/L concentrations of Hg(II).

