Supporting information

Economically viable sensitive and selective luminescent sensor for the determination of Au(III) in environmental samples

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Fig. S1. Effect of (A) DMT (B) AMT and (C) MMT concentrations on the fluorescence intensity in the presence of 8 nM Au(III).
**Fig. S2.** Effect of pH on the fluorescence intensity of 0.5 mM of (A) DMT, (B) AMT and (C) MMT in the presence of 8 nM Au(III).
**Fig. S3.** Job’s plot of (A) DMT, (B) AMT and (C) MMT with Au(III) in water (pH: 5.0). The total concentrations of ligands and Au(III) was 10 µM. The molar fraction was given by $[\text{Au}^{3+}]/([\text{Au}^{3+}]+[\text{ligand}])$. 

- (A) DMT
- (B) AMT
- (C) MMT
Scheme S1. Possible binding sites of DMT, AMT and MMT ligands with Au(III).
**Fig. S4.** Emission spectra of 0.5 mM DMT in the presence of different concentrations of Au(III): (A): (a)-(z) each increment 100 pM of Au(III) and (B): (a)-(z) each increment 10 pM of Au(III) ($\lambda_{\text{ex}}/\lambda_{\text{em}}$: 330/435 nm).