

Supporting Information

for

Colorimetric detection of Copper ions in sub-micromolar concentrations using a triarylamine-linked resin bead

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Figure S1. Cyclic voltammograms of Cu^{2+} in ACN/water mixtures

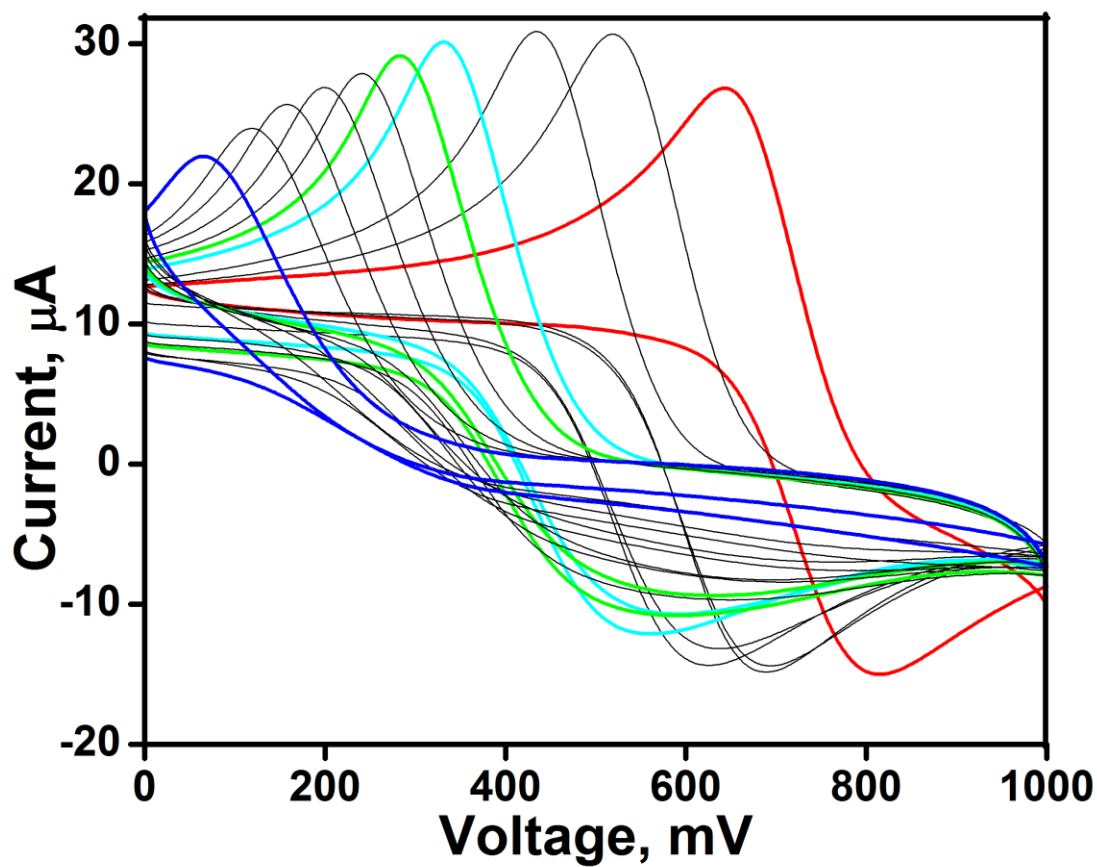


Figure S2. Plot of redox potential of $\text{Cu}^{2+}/\text{Cu}^{+}$ vs. water content in ACN

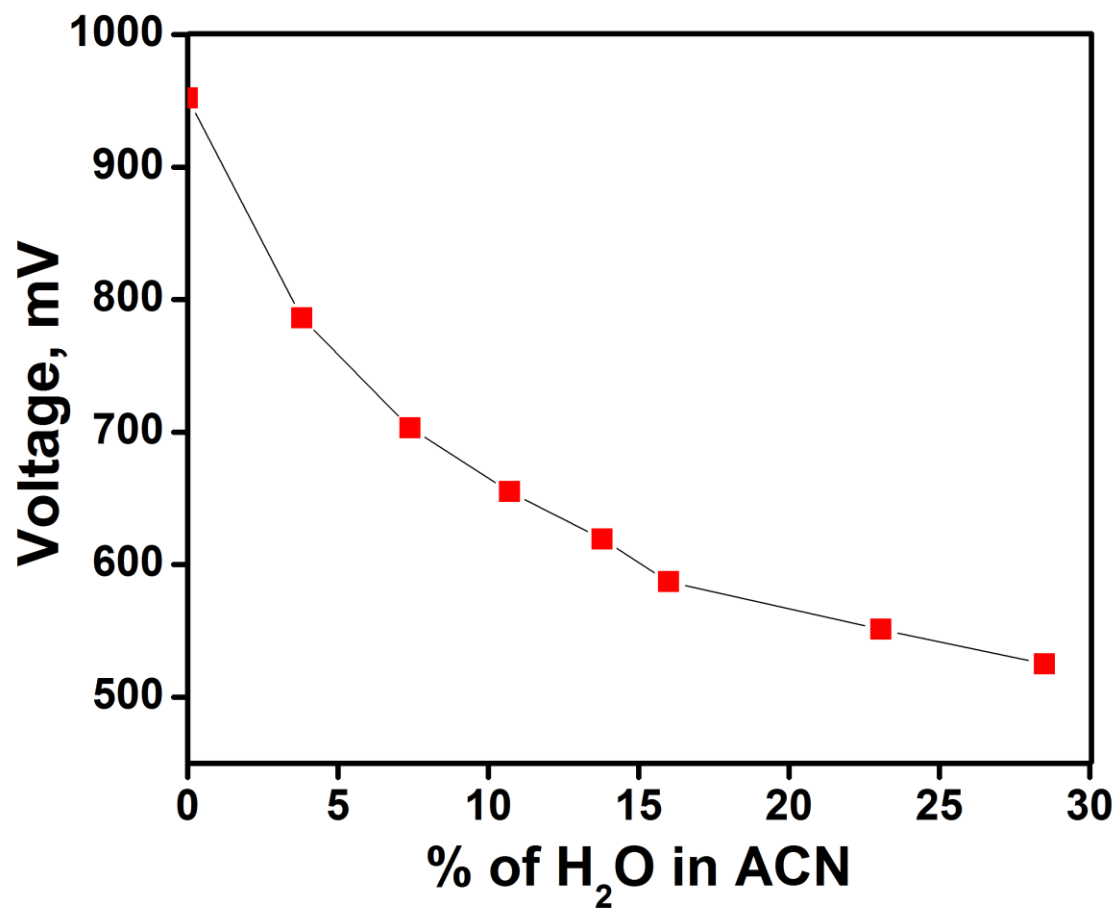
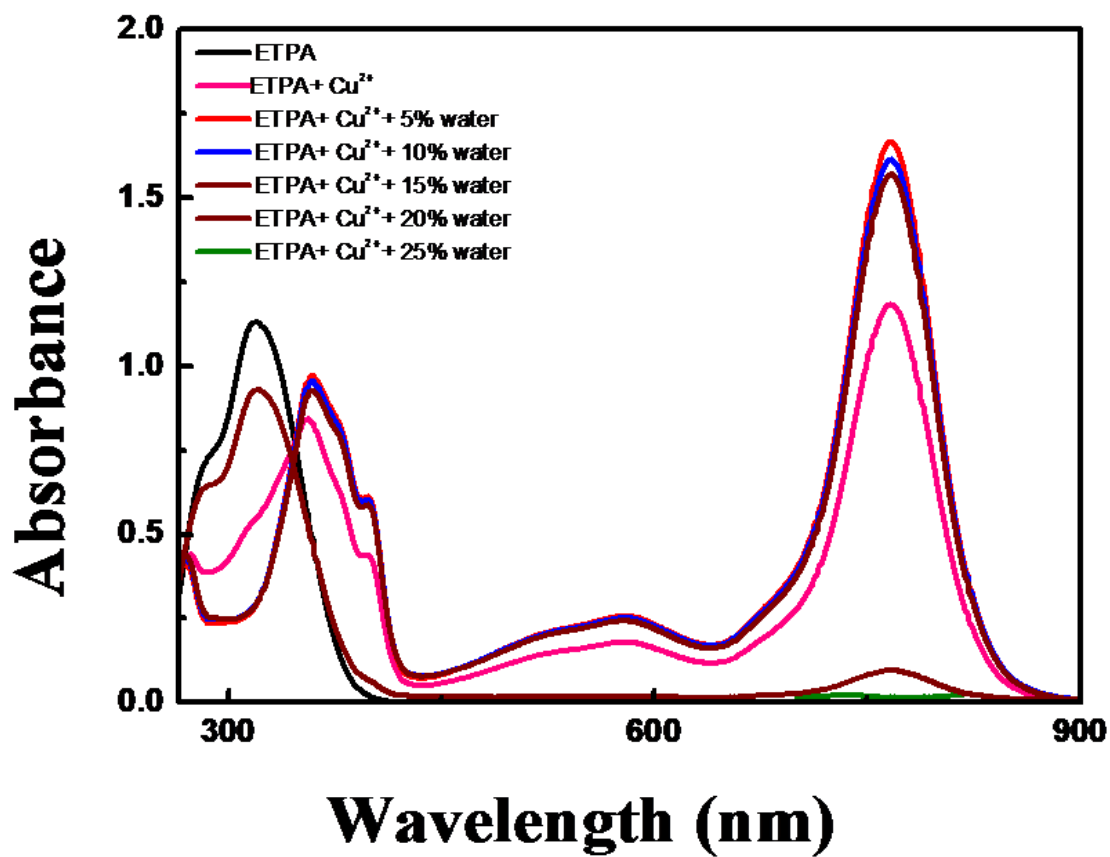
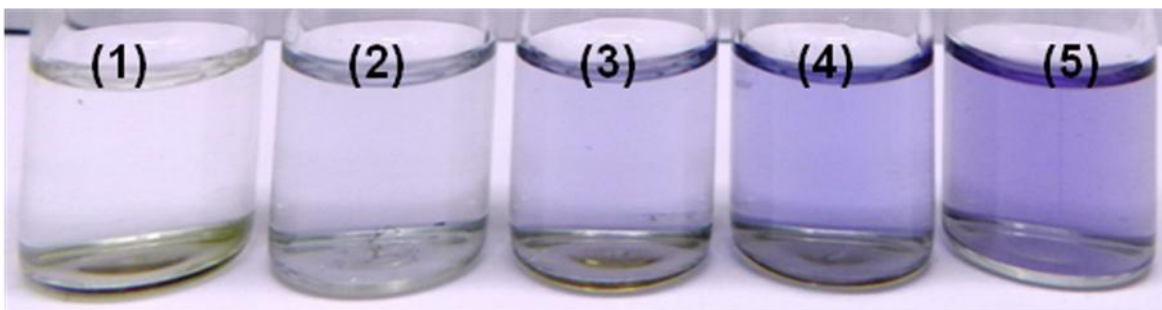


Figure S3. Effect of addition of water to ETPA^{•+} solution in ACN



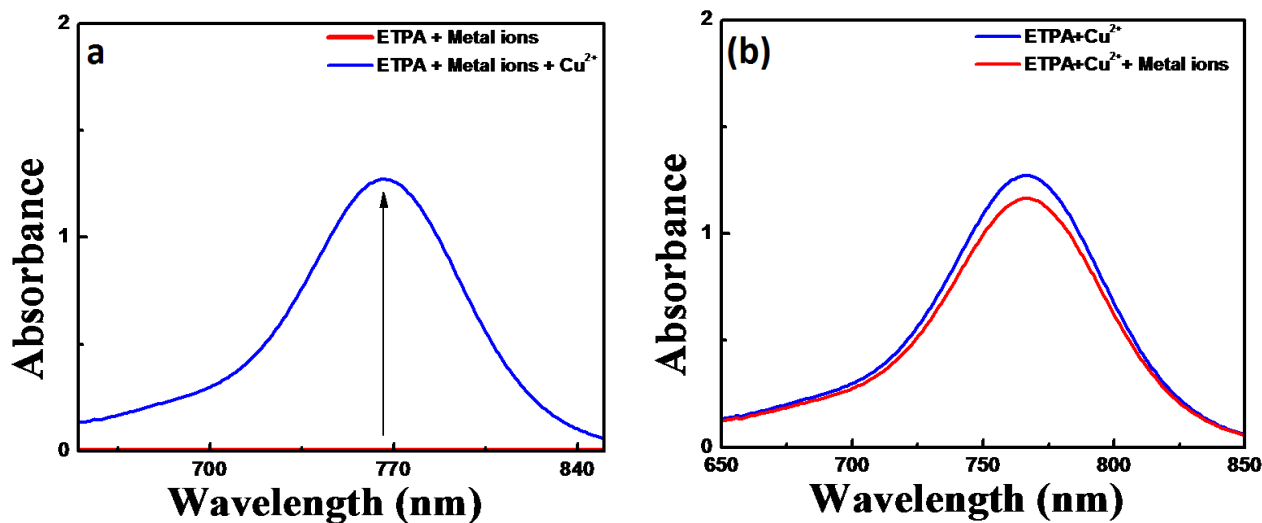
The plot shows addition of water to a solution containing 3×10^{-5} M ETPA and 1 equiv of Cu²⁺.

Figure S4. Photograph of ETPA solutions in the presence of varying amounts of Cu^{2+}



Cu^{2+} concentrations were 0, 0.25, 0.5, 0.75, and 1.0 equiv for solutions 1-5.

Figure S5. Plot showing the interference of other metal ions



Plot (a) shows the change in absorbance when Cu^{2+} is added to a solution ETPA + 5 Metal ions (Co^{3+} , Cd^{2+} , Pb^{2+} , Fe^{2+} , Na^+). Plot (b) shows the change in absorbance when Metal ions (Co^{3+} , Cd^{2+} , Pb^{2+} , Fe^{2+} , Na^+) are added to solution of ETPA + Cu^{2+} .

Figure S6. Photograph showing the reusability of the device



The Photograph shows the device dipped in ACN solution in the 21st run (the second method as described in the “Device for naked eye detection of Cu²⁺ in water” section of the manuscript was employed).

Figure S7. Photograph of Tentagel without ETPA after treatment with Cu²⁺



Figure S8. Photograph of the device dipped in millimolar solutions of various metal ions in ACN/water mixtures

