

Supplementary Information

Embedded Au Nanoparticles-Based Ratiometric Electrochemical Sensing Strategy for Sensitive and Reliable Detection of Copper Ions

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Contents

- 1. CV Plot of the Bulk Au Electrode in a Solution of 0.6 M NaCl**
- 2. Calibration Curve of $I_{Cu^{2+}}$ vs $C_{Cu^{2+}}$**
- 3. DPV Plot of the AuNPs@CRS-TrGNO/GCE in the Presence of Interferences**
- 4. Repeatability, Reproducibility and Stability Test Results**
- 5. DPV Plot Obtained From the AuNPs@CRS-TrGNO/GCE in Seawater**

Samples

1. CV Plot of the Bulk Au Electrode in a Solution of 0.6 M NaCl

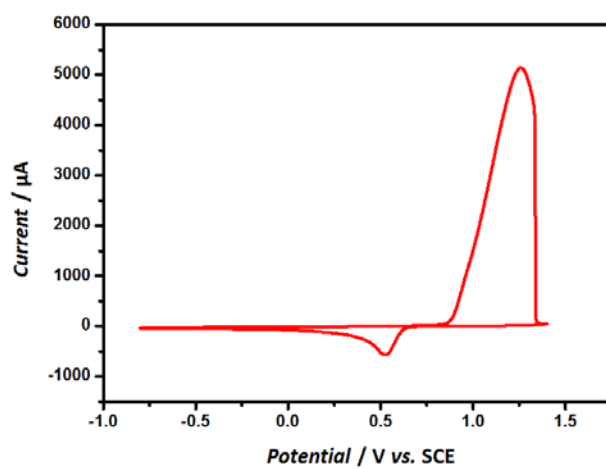


Figure S1 CV plot of the bulk Au electrode in a solution of 0.6 M NaCl.

2. Calibration Curve of $I_{Cu^{2+}}$ vs $C_{Cu^{2+}}$

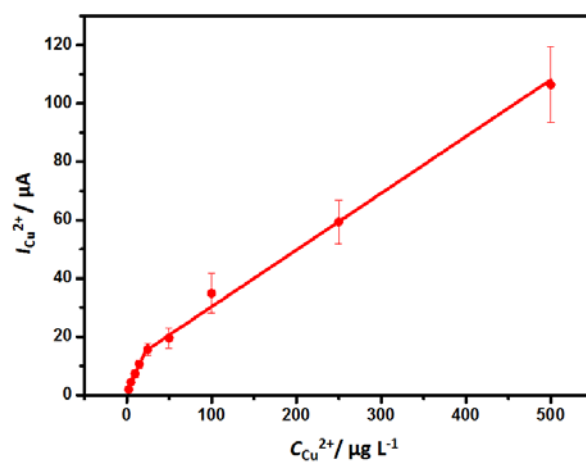


Figure S2 Calibration curve of $I_{Cu^{2+}}$ vs $C_{Cu^{2+}}$. Results of three parallel experiments.

3. DPV Plot of the AuNPs@CRS-TrGNO/GCE in the Presence of Interferences

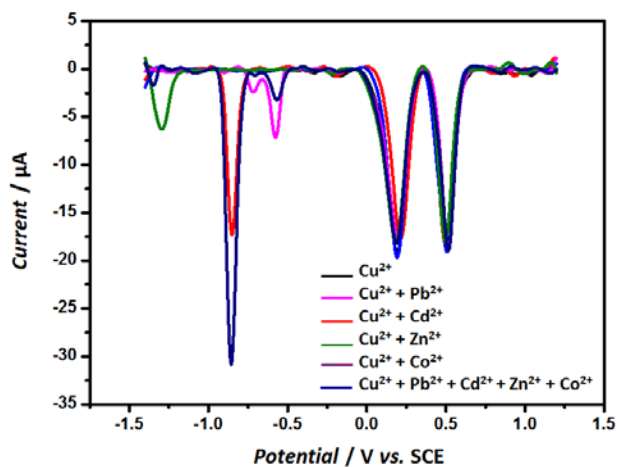


Figure S3 DPV plot obtained from the AuNPs@CRS-TrGNO/GCE in solutions of 0.6 M NaCl (pH 5) containing Cu^{2+} and different interferences. The concentration of each interfering ion is $500 \mu\text{g L}^{-1}$, which is 10-fold more than that of target Cu^{2+} ($50 \mu\text{g L}^{-1}$).

4. Repeatability, Reproducibility and Stability Test Results

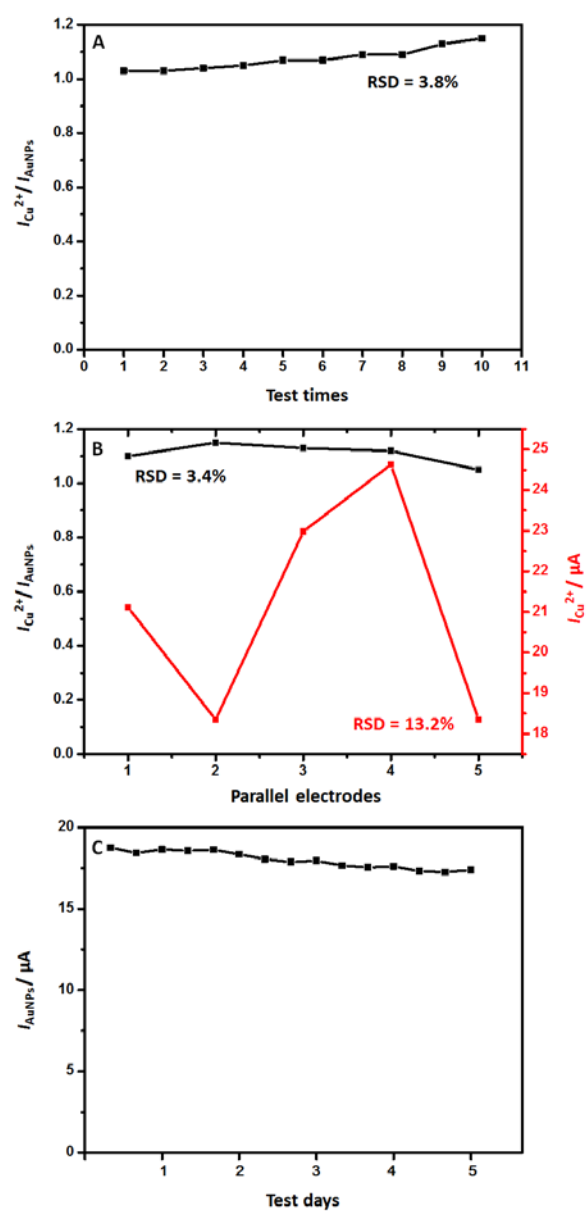


Figure S4 Repeatability (A), reproducibility (B) and stability (C) test results.

5. DPV Plot Obtained From the AuNPs@CRS-TrGNO/GCE in Seawater Samples

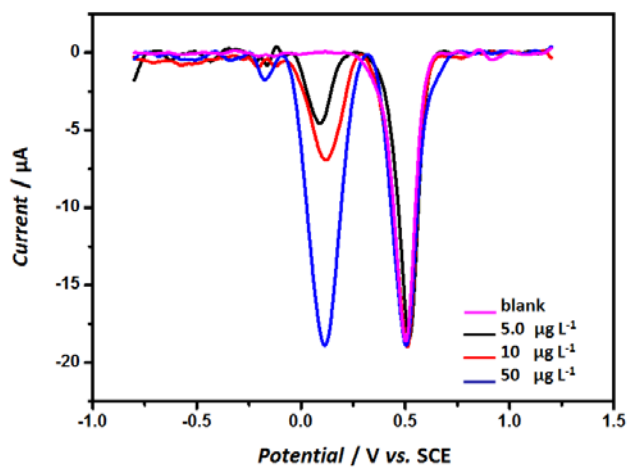


Figure S5 DPV plot obtained from the AuNPs@CRS-TrGNO/GCE in seawater samples with different concentration of Cu^{2+} .