

Supplementary Information

Electrode Material Containing Graphite Incorporated to an Amino-Functionalized Polydimethylsiloxane Network for the Detection of Copper

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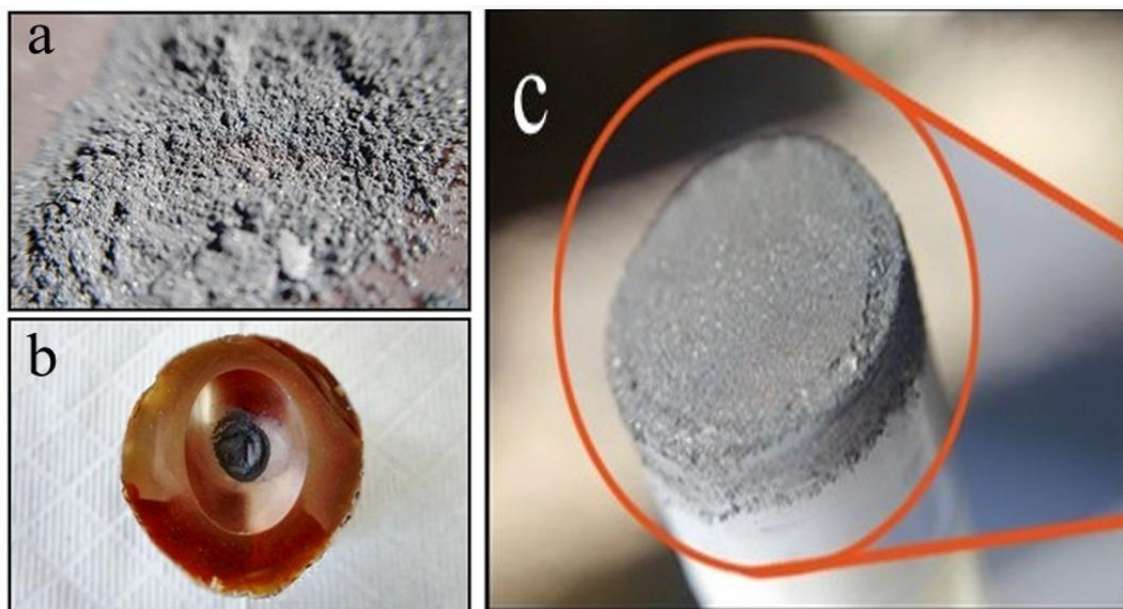


Figure S1. Electrode preparation (a) as prepared composite; (b) pulverized composite; and (c) electrode surface.

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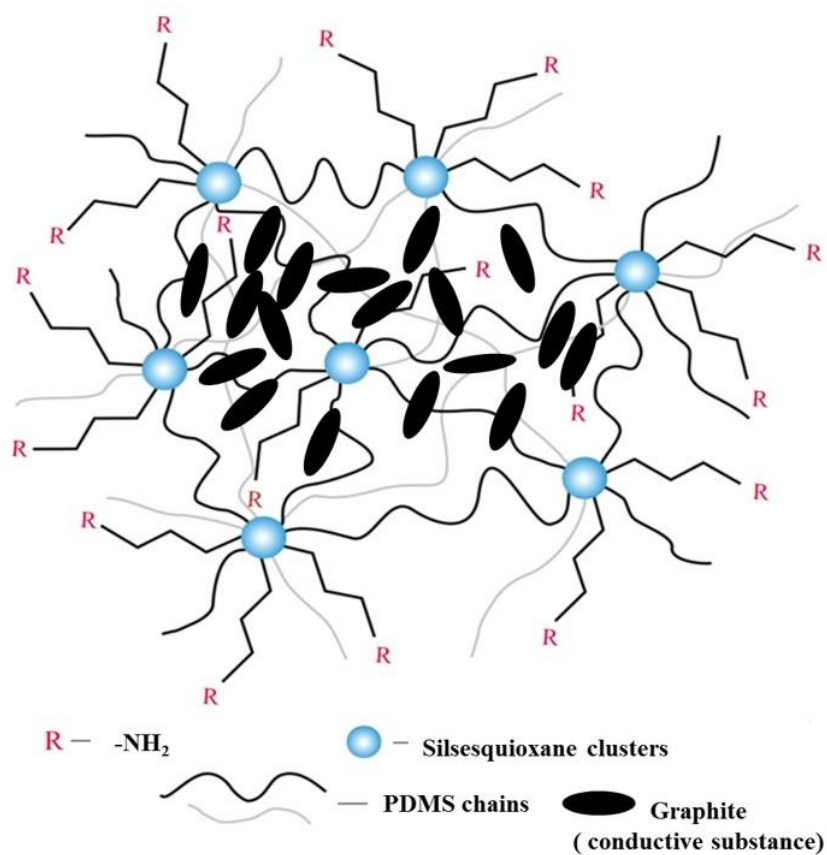
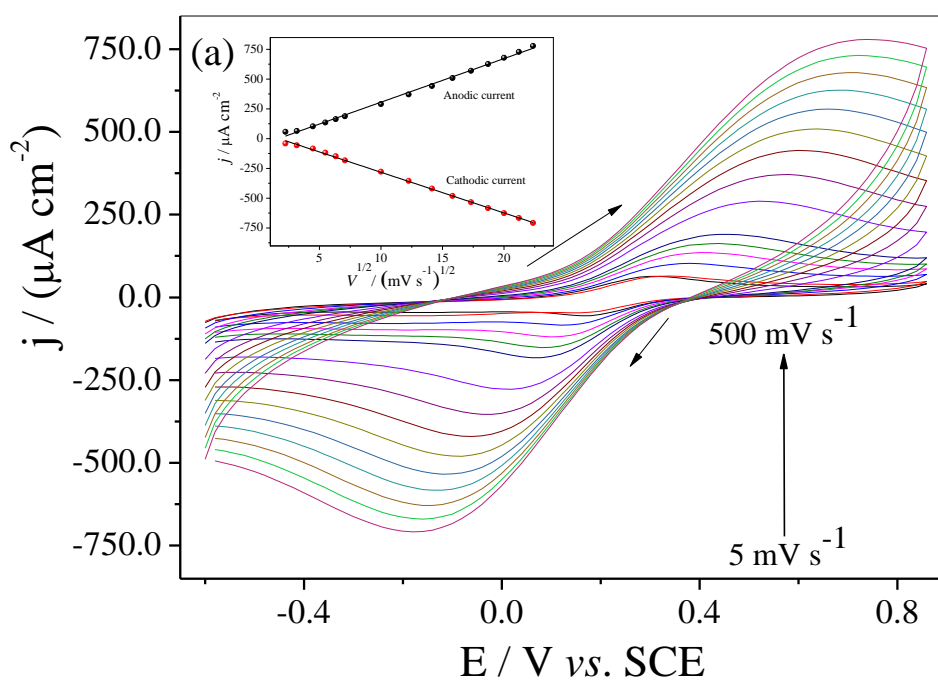
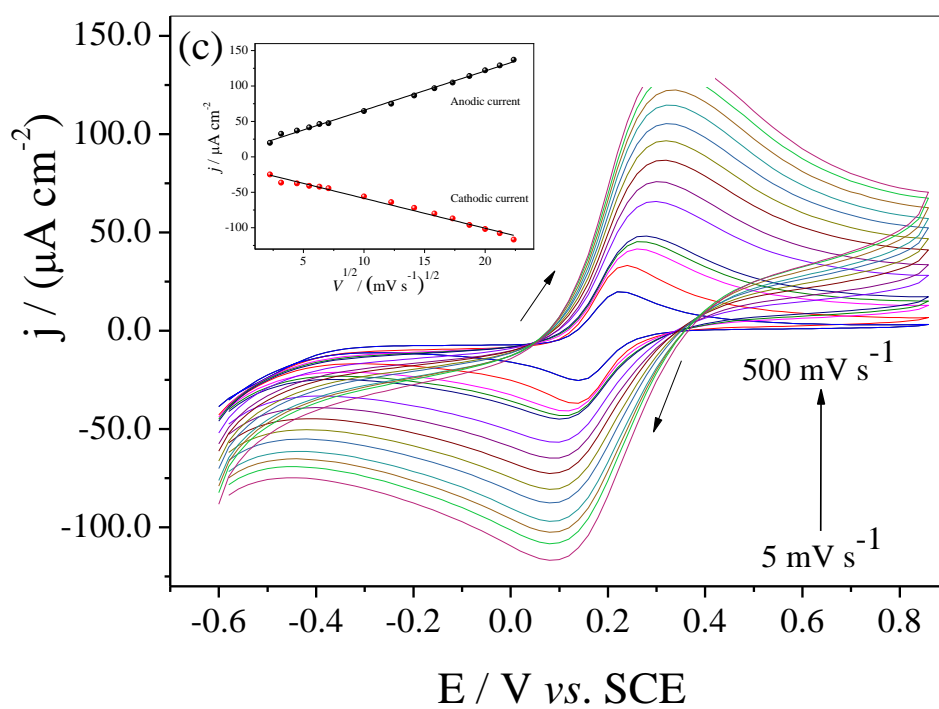
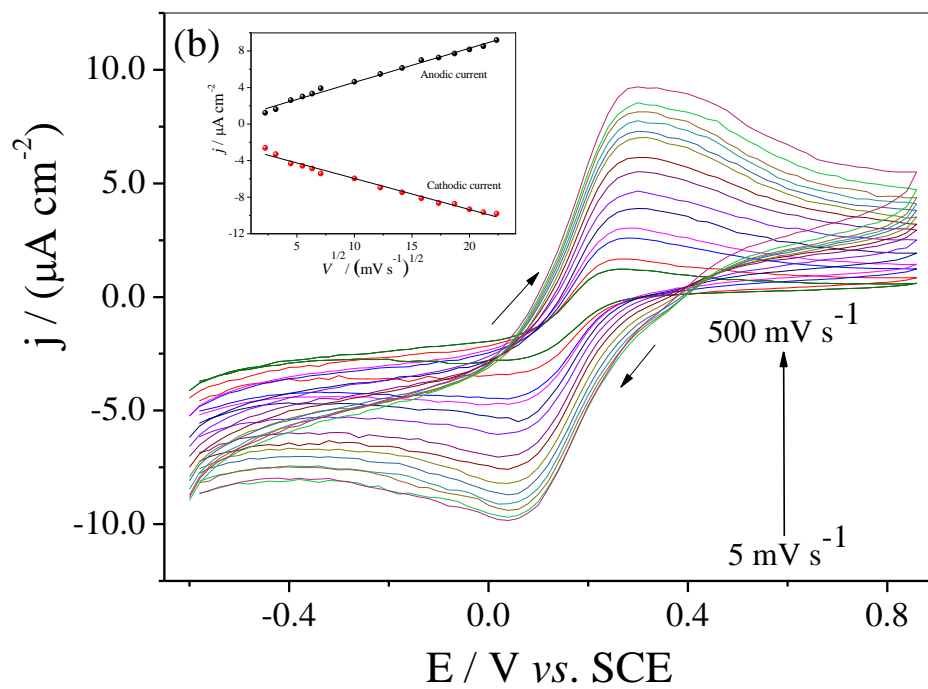


Figure S2. Schematic representation of the graphite into a polydimethylsiloxane network functionalized with amino groups.





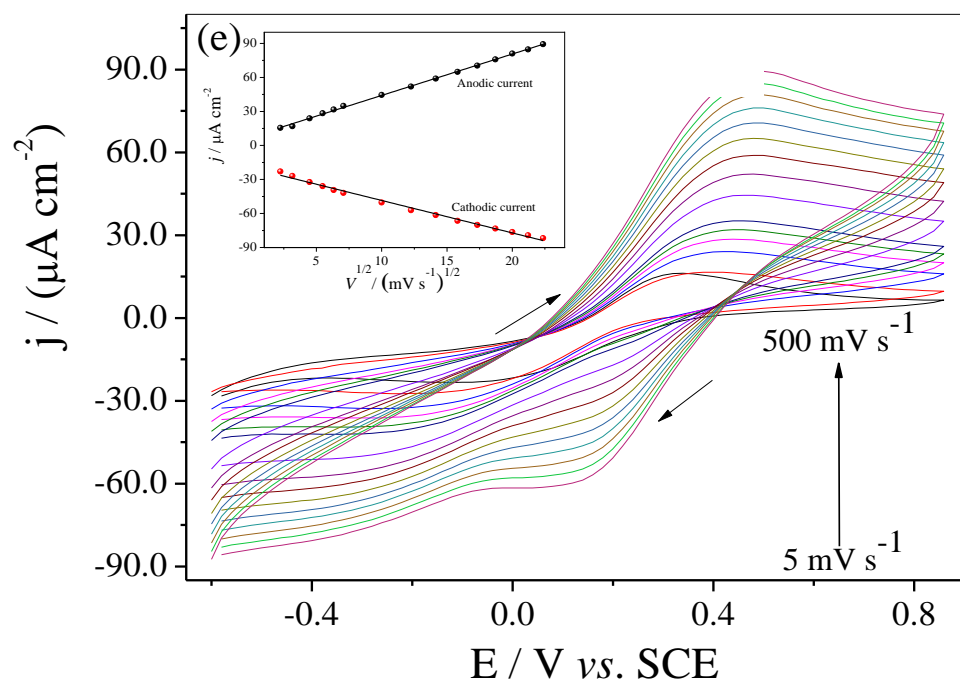
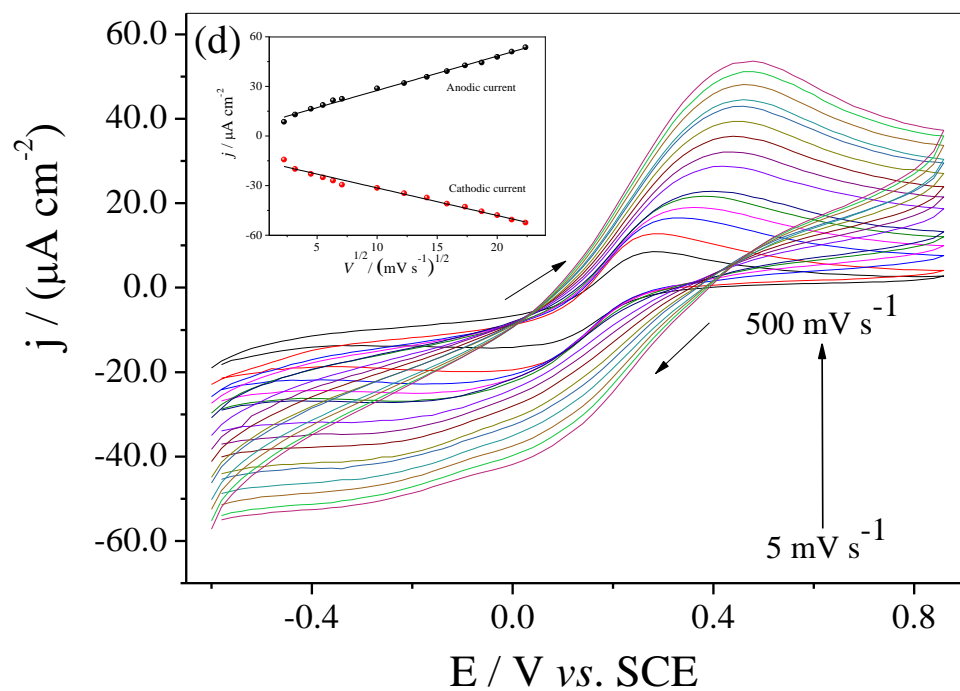


Figure S3. Cyclic voltammograms of the electrodes (a) E0; (b) E3; (c) E6; (d) E12 and (e) E18 in a 0.1 mol L^{-1} KCl medium containing 0.99 mmol L^{-1} $\text{K}_3\text{Fe}(\text{CN})_6$. The sweeping speed was varied from 5-500 mV s^{-1} . The inset plots show the peak current dependency on the square root of the potential sweeping speed.

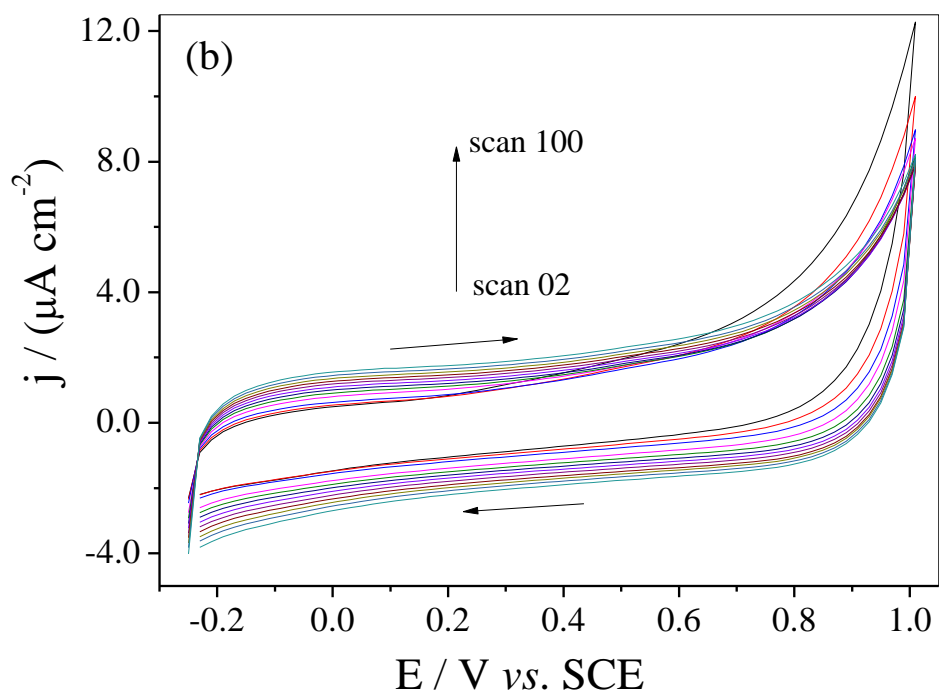
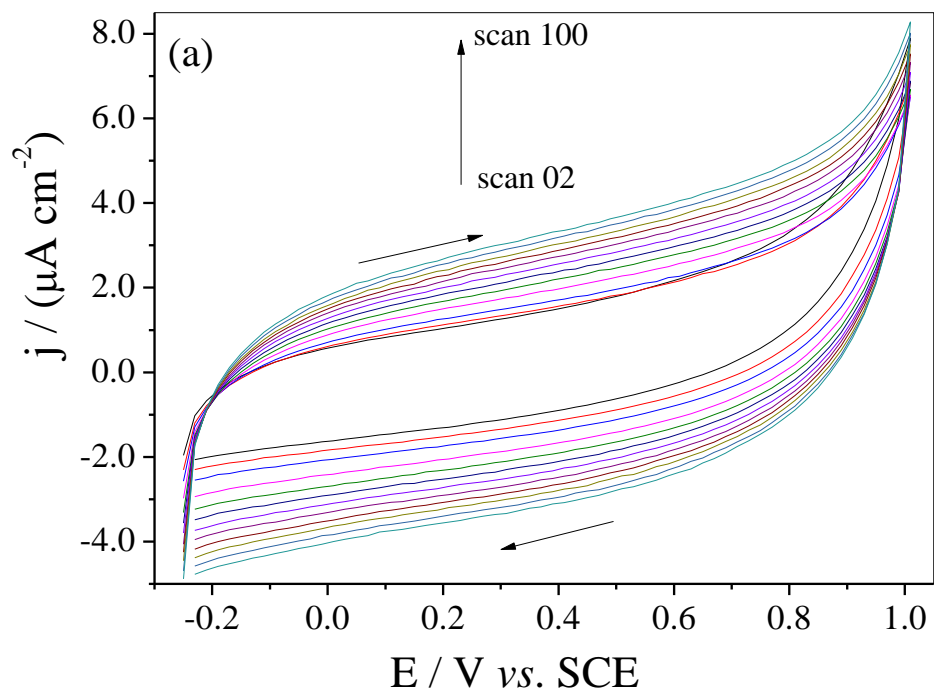


Figure S4. Cyclic voltammograms of the electrodes (a) E0 and (b) E6 in a 0.1 mol L^{-1} KCl medium after 100 consecutive cycles at a potential sweep speed of 50 mV s^{-1} .

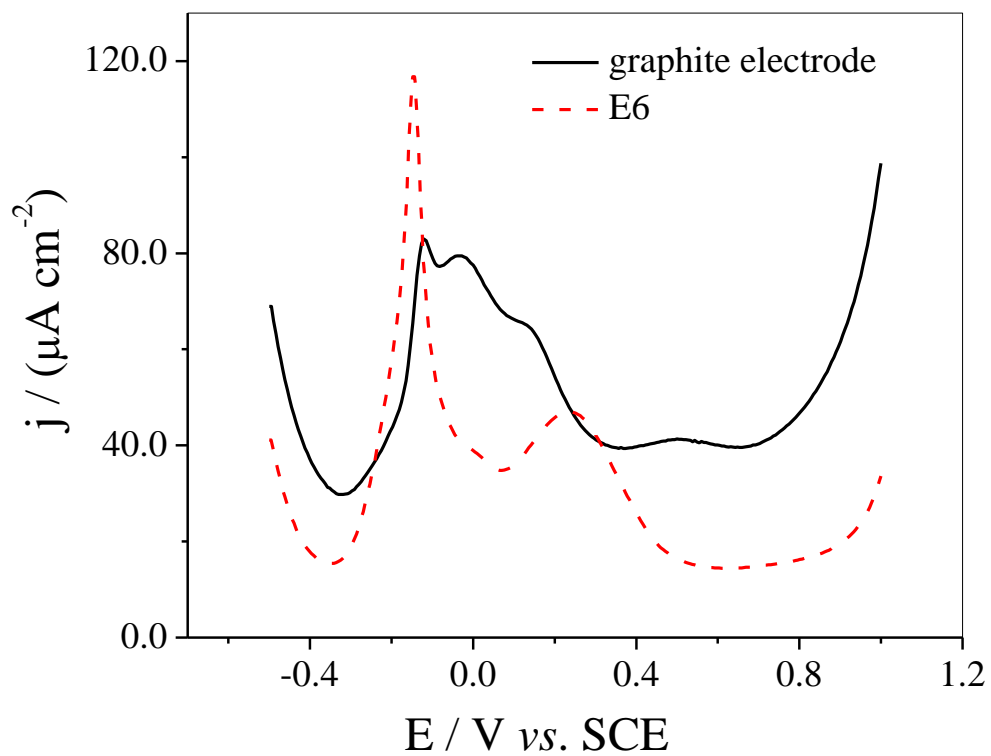


Figure S5. Square wave voltammetry measurements for the electrode E6 and the graphite electrode, containing copper(II) chloride (CuCl_2) in concentration $50 \mu\text{mol L}^{-1}$, at a potential sweep speed of 50 mV s^{-1} ; 5 mV potential step; 0.1 V square wave pulse height; frequency 10 Hz .

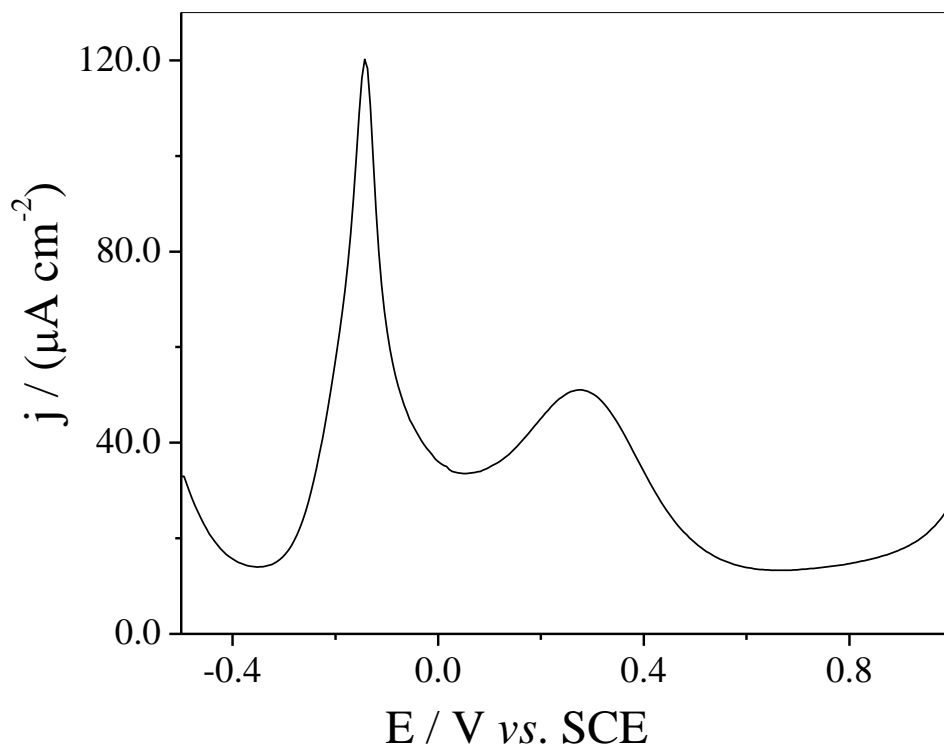


Figure S6. Square wave voltammogram for the electrode E6 containing $47.62 \mu\text{mol L}^{-1}$ of copper chloride II, after successive additions of Zn^{2+} , Co^{2+} and Ni^{2+} ions varying from $9.9\text{-}91 \mu\text{mol L}^{-1}$, at a potential sweep speed of 50 mV s^{-1} ; 5 mV potential step; 0.1 V square wave pulse height; frequency 10 Hz .