Electronic Supplementary Material (ESI) for Analytical Methods.

Supplimentary Information

A facile electrochemical synthesis strategy of Cu_2O (cubes, sheets and flowers) microstructured materials for sensitive detection of 4-nitrophenol†

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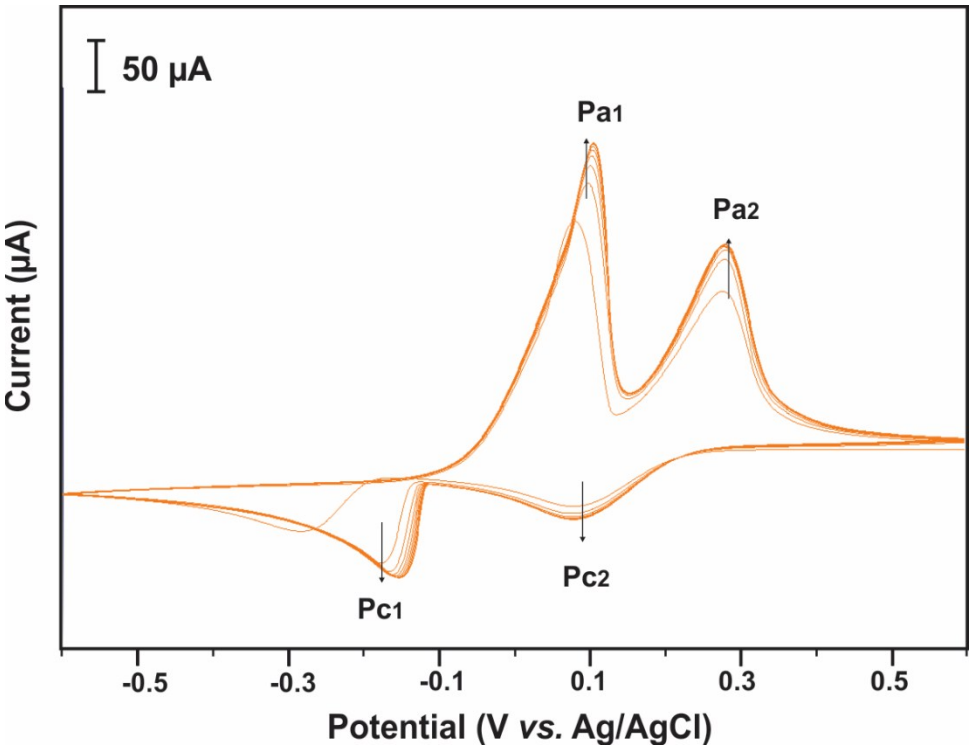

Fig. S1 Consecutive cyclic voltammograms for 10 cycles deposition of Cu_2O on the GCE using 10 mM KCl containing 5 mM of $CuCl_2$ at a scan rate of 50 mV s^{-1}.

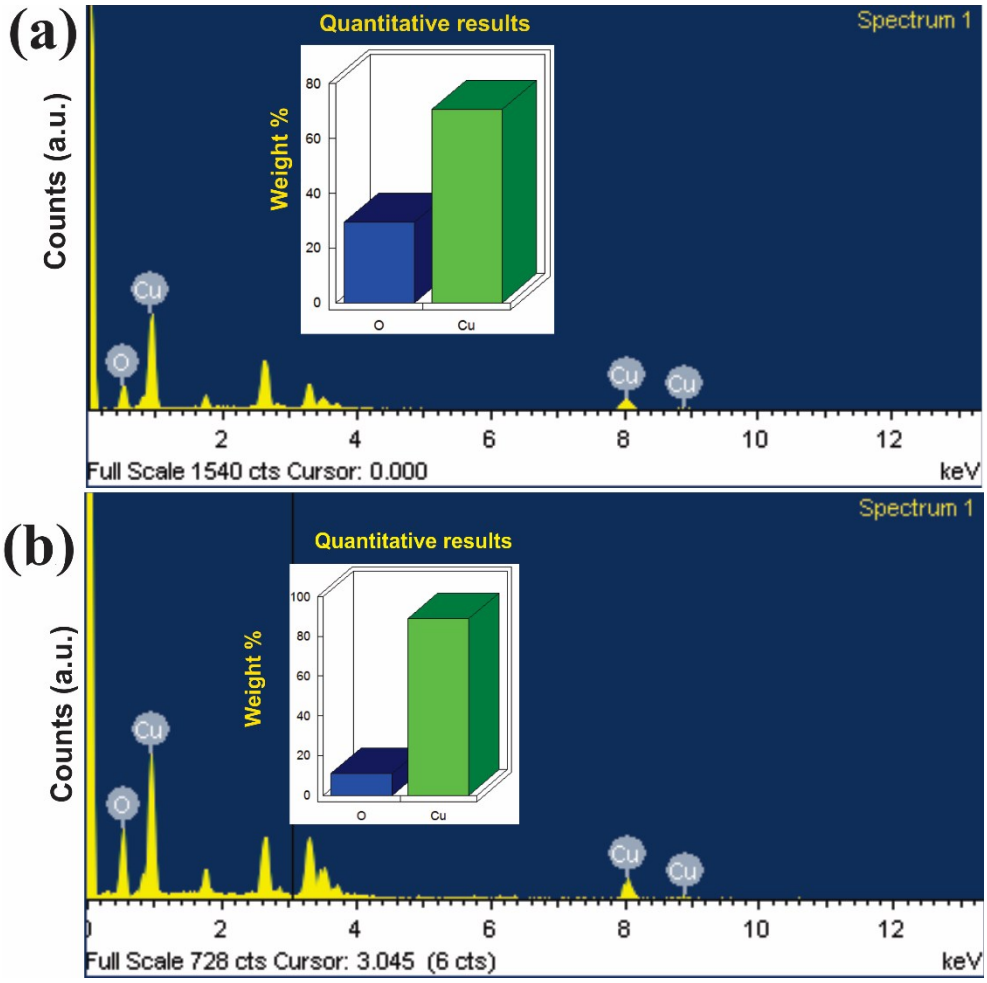

Fig. S2. The EDX spectra for Cu_2O-cubes (a) and Cu_2O-flowers (b). Inset: the corresponding bar diagram.

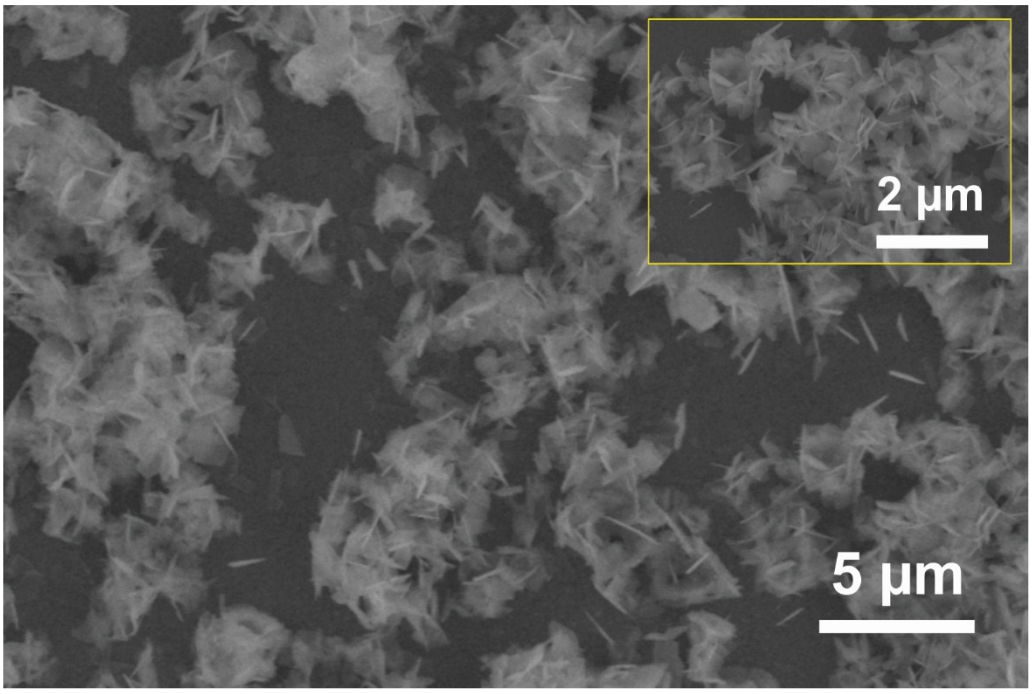

Fig. S3. SEM images of the electrochemically prepared Cu_2O-cubes at 20 cycles.

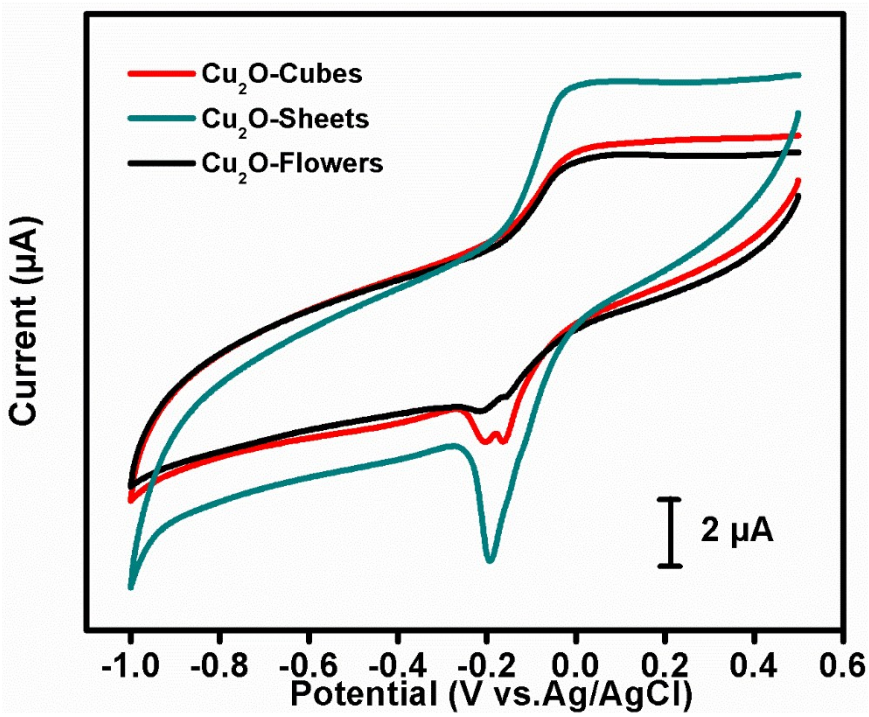

Fig. S4. (a) CV capacitive current profiles for different modified electrodes in absence of 4-NP concentrations in 0.05 M PBS solutions (pH 5.0).

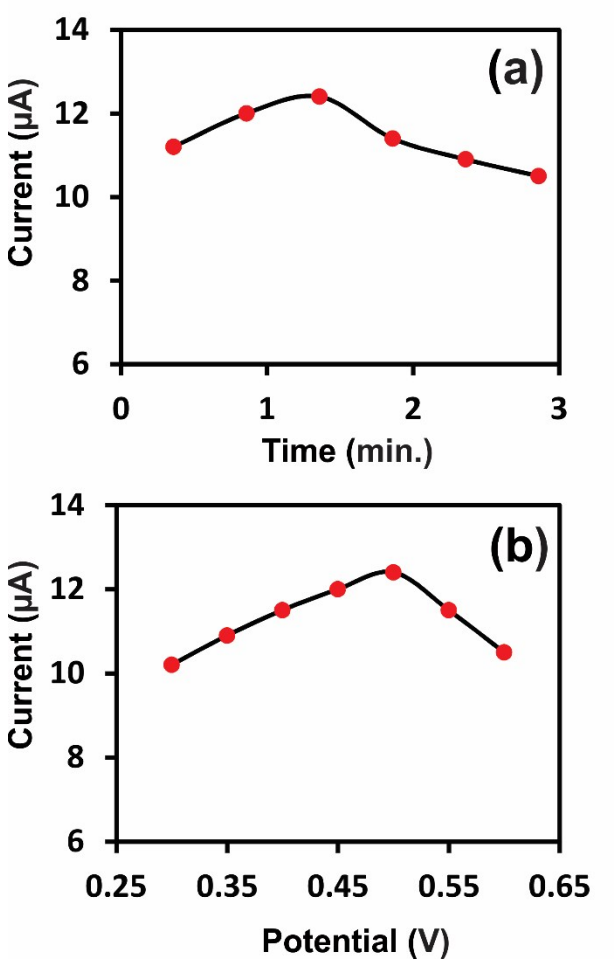

Fig. S4. The Cu_2O modified electrodes during the detection of 150 μM of 4-NP, (a) Accumulated potential and (b) with variations of peak current.

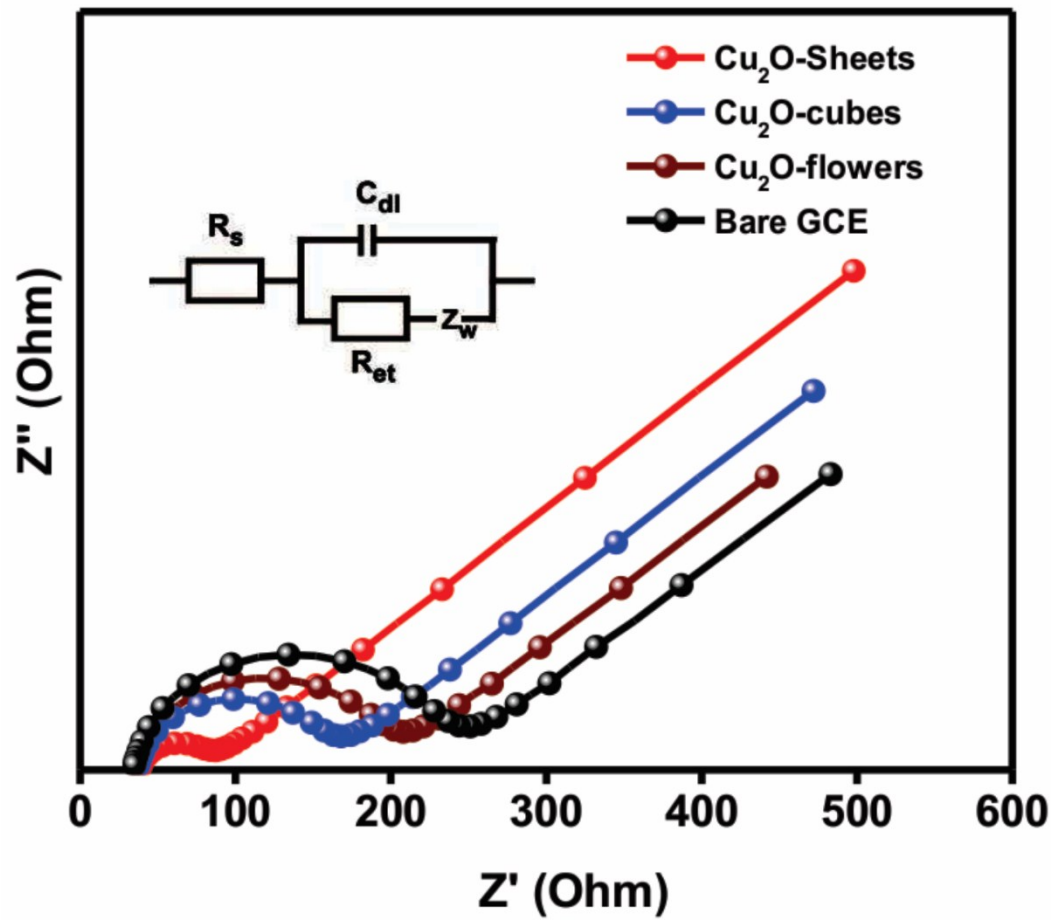

Fig. S5. (a) Nyquist plots at different electrodes by using 5 mM Fe $(CN)_6^{3-/4-}$ containing in 0.1 M KCl as a supporting electrolyte solutions.

Table S1. Determination of 4-NP in various real samples using DPV.

Real samples	Analyte	Added (µM)	Found (µM)	Recovery (%)
Tap water	4-NP	50 140	49.1 138.9	98.2 99.2
River water	4-NP	50 140	48.9 139.5	97.8 99.5