

**Supplementary Information (SI)**

**Fabrication of Different Copper Nanostructures on Indium-Tin-Oxide  
Electrode: Shape Dependent Electrocatalytic Activity**

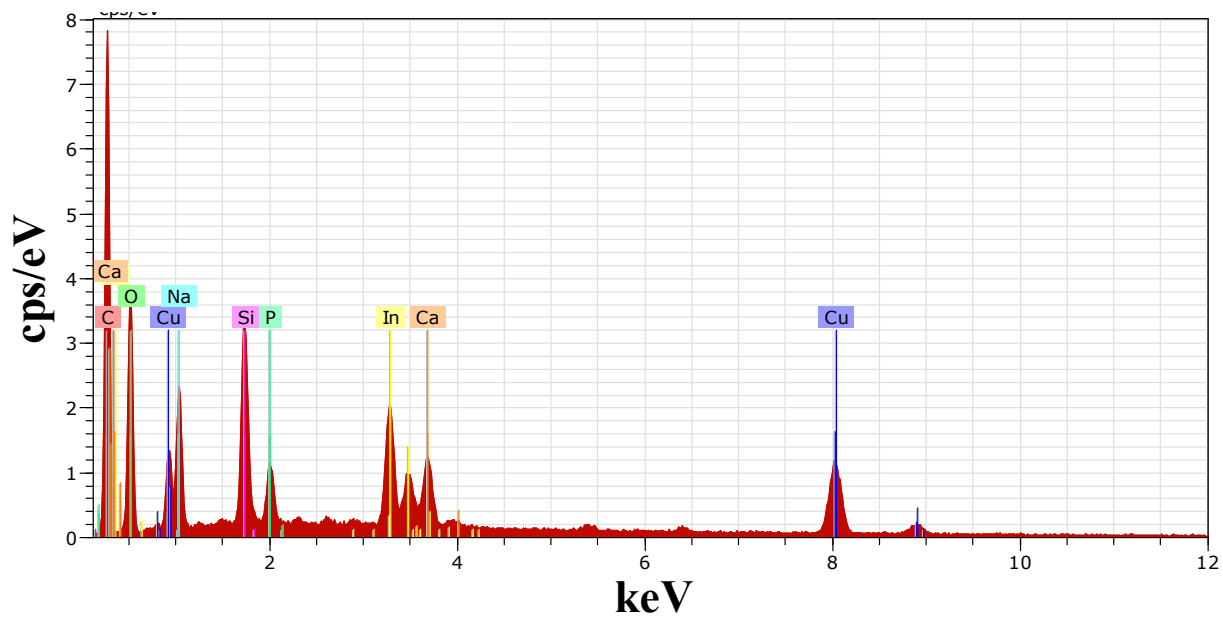
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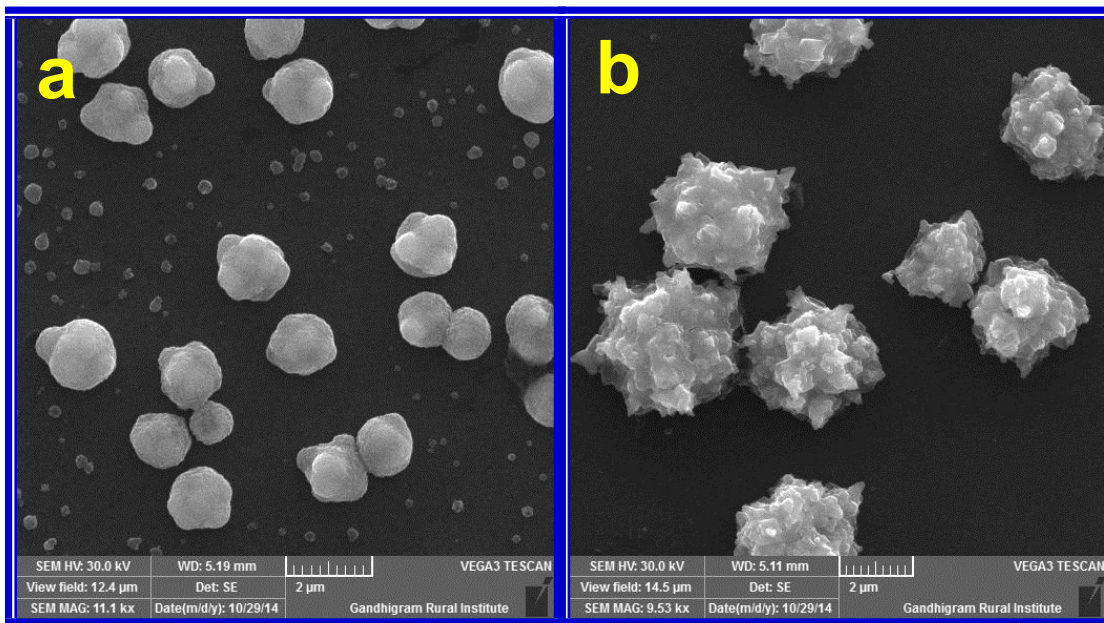
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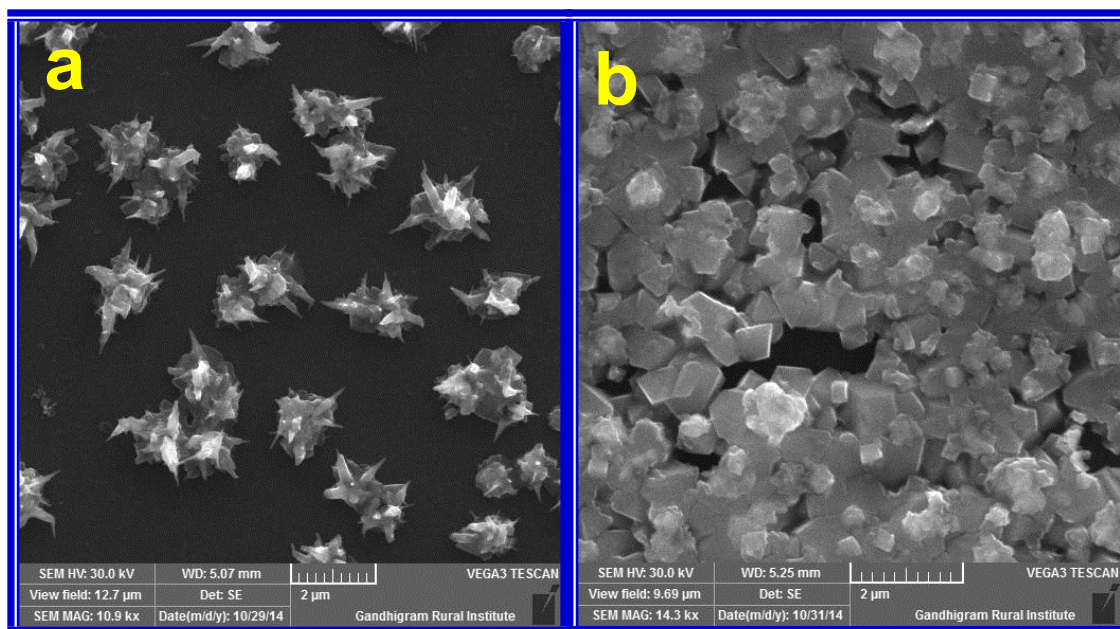
**Figure S1.**

EDAX spectrum obtained for dendritic-CuNS modified ITO substrate.



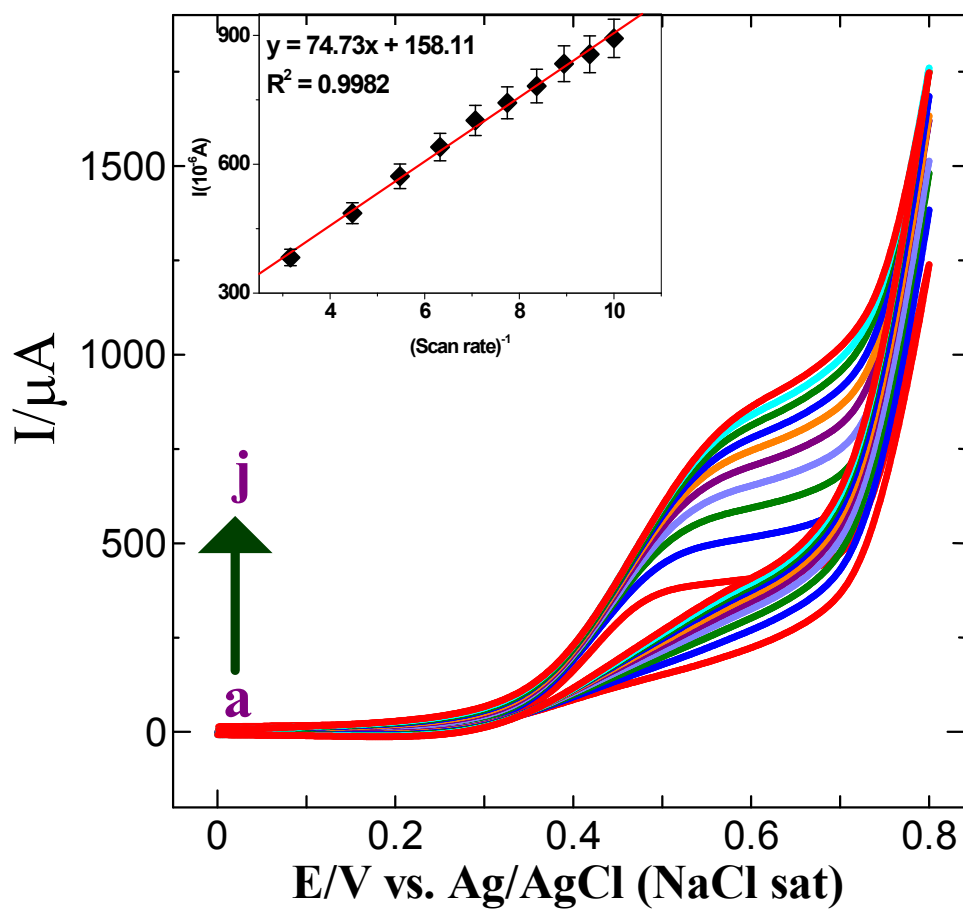
**Figure S2.**

SEM images obtained for ITO/CuNS at the deposition potential of -0.30 V for 400 s using 10 mM CuSO<sub>4</sub> in 0.1 M (a) HNO<sub>3</sub> and (b) HClO<sub>4</sub> medium.

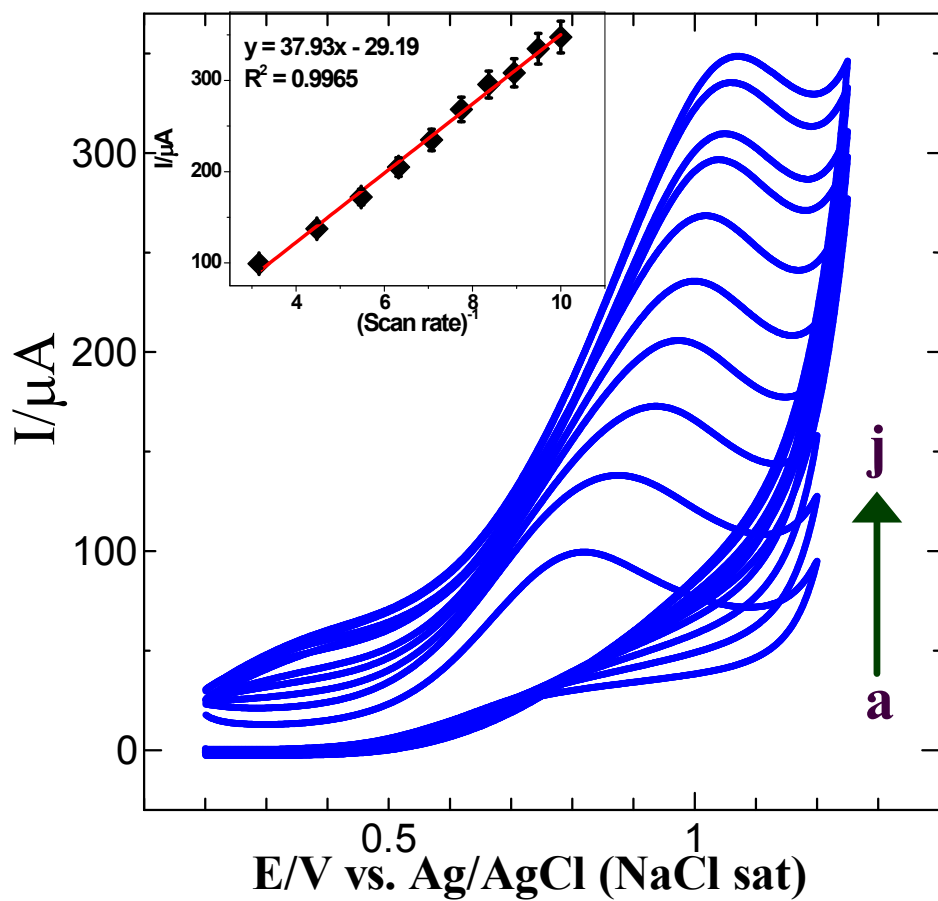


**Figure S3.**

SEM images obtained for ITO/CuNS at the deposition potential of  $-0.30$  V for 400 s using 10 mM  $\text{CuNO}_3$  in 0.1 M  $\text{H}_2\text{SO}_4$  containing (a) 10 mM  $\text{Na}_2\text{SO}_4$  and (b) 50 mM  $\text{Na}_2\text{SO}_4$ .



**Figure S4.** CVs obtained for 1mM glucose at dendritic CuNS modified ITO electrode at different scan rates of 10-100  $\text{mV s}^{-1}$  (a-j) in 0.1 M NaOH. Inset: corresponding calibration plot obtained for current vs. square root of scan rate.



**Figure S5.**

CVs obtained for 0.5 mM hydrazine at ITO/dendritic-CuNS in 0.2 M PBS at pH 7.2 at different scan rates from 10 to 100  $\text{mV s}^{-1}$  (a-f). Inset: the corresponding calibration plot obtained for current vs. square root of scan rate.

Parameter	Bare ITO	CuNS			
		cubes	spherical	dendrites	prickles
$R_s$ (k $\Omega$ )	0.089	0.090	0.0853	0.0876	0.090
CPE ( $\mu$ F)	$4.789 \times 10^{-5}$	$6.173 \times 10^{-5}$	$4.563 \times 10^{-5}$	$9.212 \times 10^{-5}$	$9.827 \times 10^{-5}$
$R_{CT}$ (k $\Omega$ )	4.939	1.486	1.021	0.719	1.237
$k_{et}$ (cm s $^{-1}$ )	$5.39 \times 10^{-8}$	$1.79 \times 10^{-7}$	$2.77 \times 10^{-7}$	$3.70 \times 10^{-7}$	$2.15 \times 10^{-7}$

**Table S1. Impedance spectral data**