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Supporting Information

Determination of Chemical Oxygen Demand (COD) Using Nanoparticle-Modified Voltammetric Sensors and Electronic Tongue Principles

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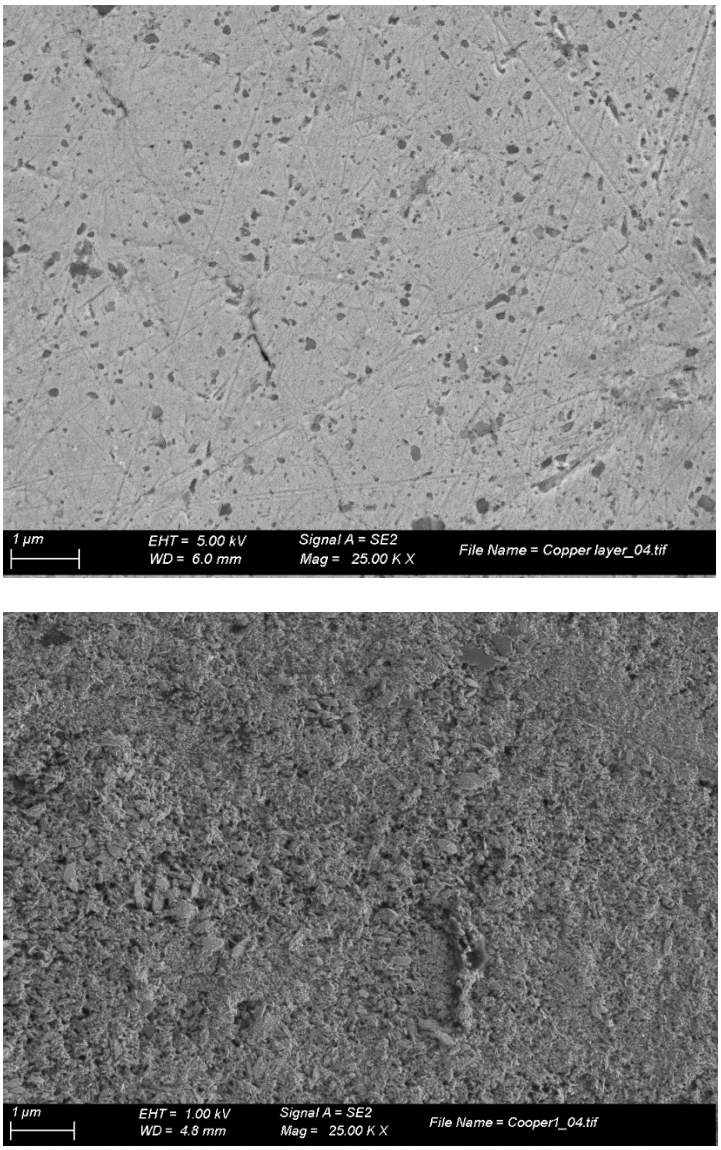

Figure S1. Scanning Electron Microscopy (SEM) characterization of bare polished Cu electrode (top) and electrodeposited electrode **E1** (bottom).

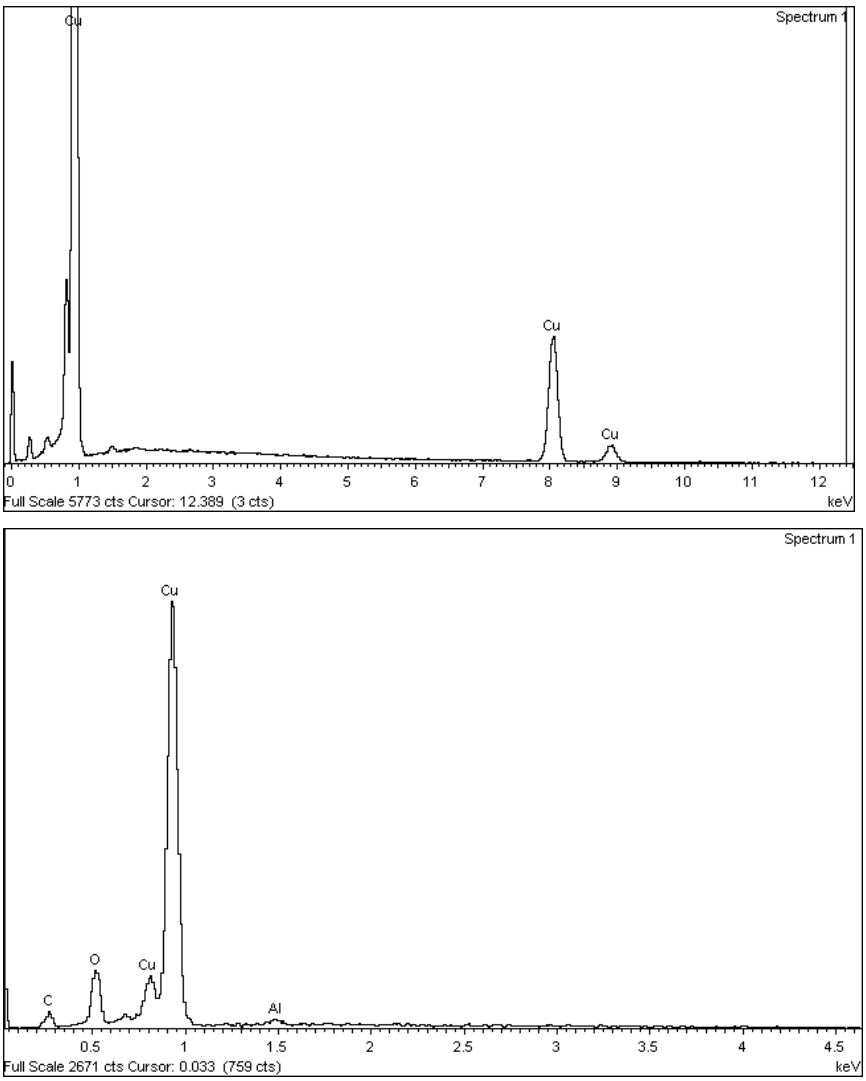

Figure S2. Electron Dispersive Spectroscopy (EDS) characterization of bare polished Cu electrode (top) and electrodeposited electrode **E1** (bottom).

Table S1. Relative abundance of elements in the electron dispersive spectroscopy (EDS) sample of Electrode **E1**.

	Bare polished Cu Electrode		**Electrodeposited Electrode E1**	
Element	**Weight%**	Atomic%	Weight%	Atomic%
C K	-	-	2.89	2.66
O K	-	-	15.92	11.02
Al K	-	-	16.56	6.80
Cu L	100.00	100.00	456.32	79.52
Totals	100.00		491.69	

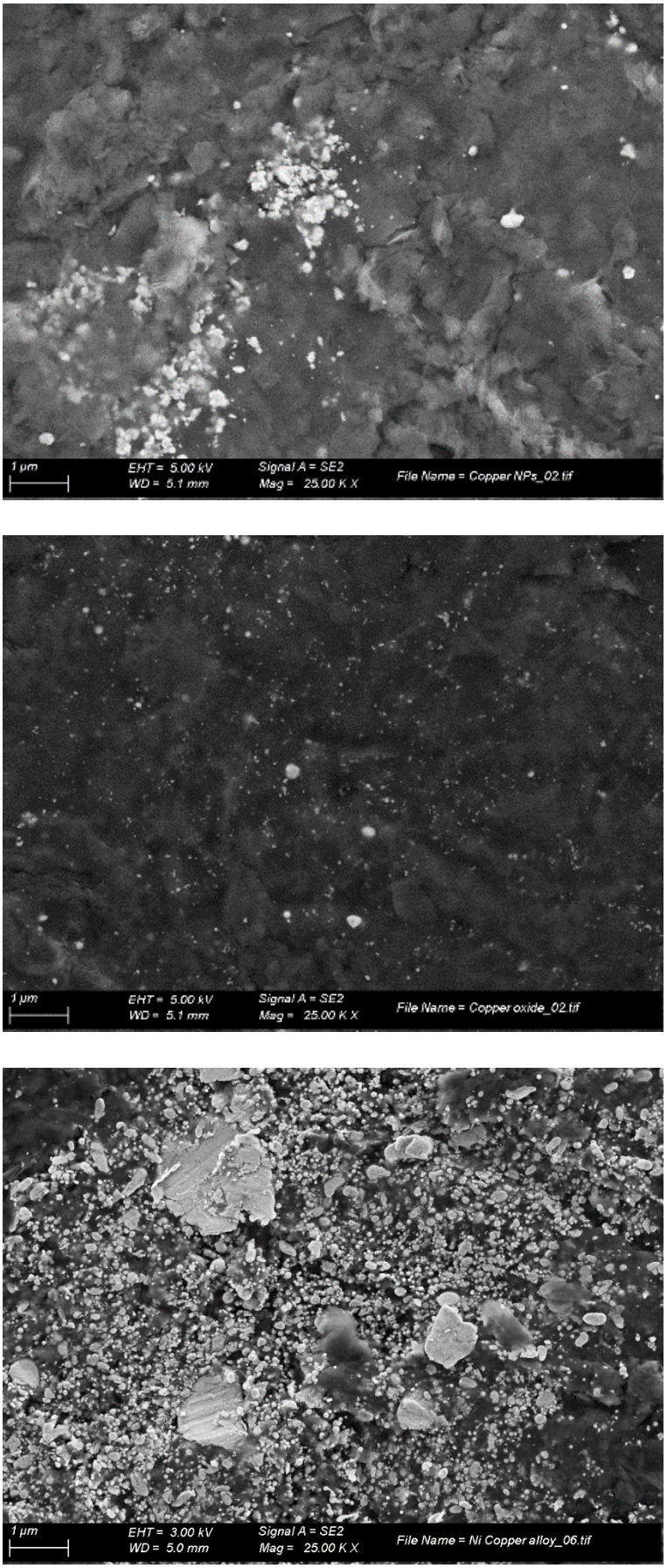

Figure S3. Scanning Electron Microscopy (SEM) characterization of electrodes **E2** (with Cu nanoparticles), **E3** (with CuO nanoparticles) and **E4** (with Ni Cu alloy nanoparticles).

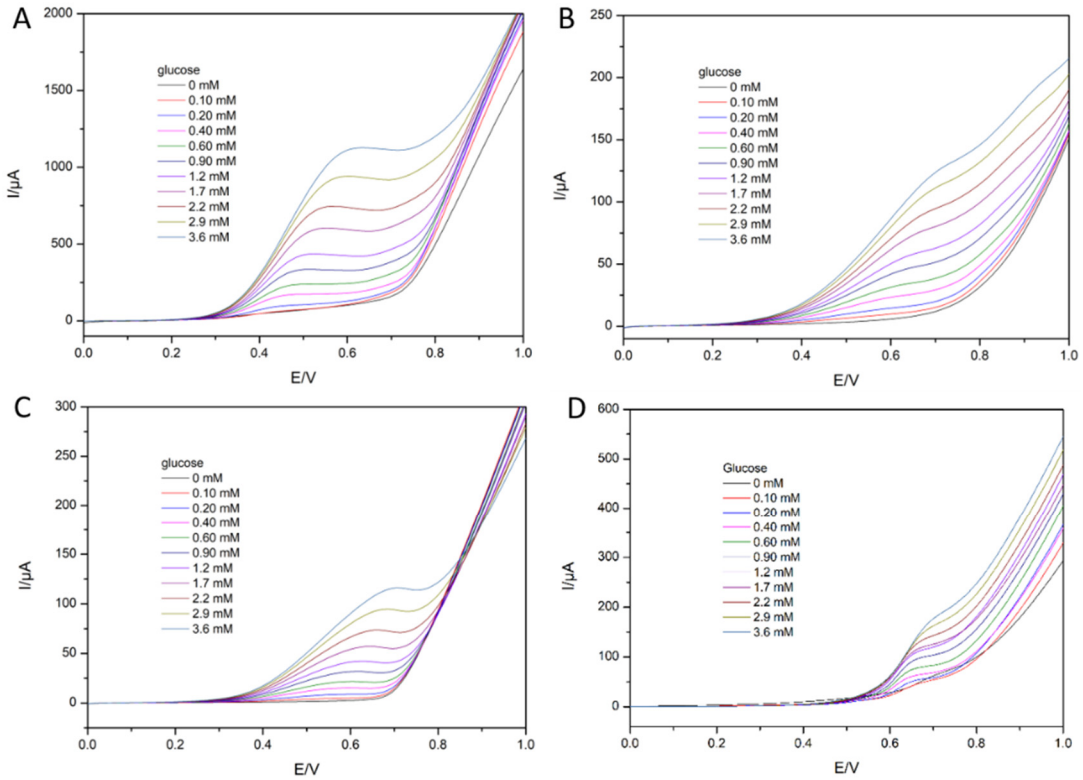

Figure S4. Oxidation curves of cyclic voltammograms of electrodes **E1** (A), **E2** (B), E3 (C) and E4 (D) responding to glucose. Scan rate: 50 mV/s.

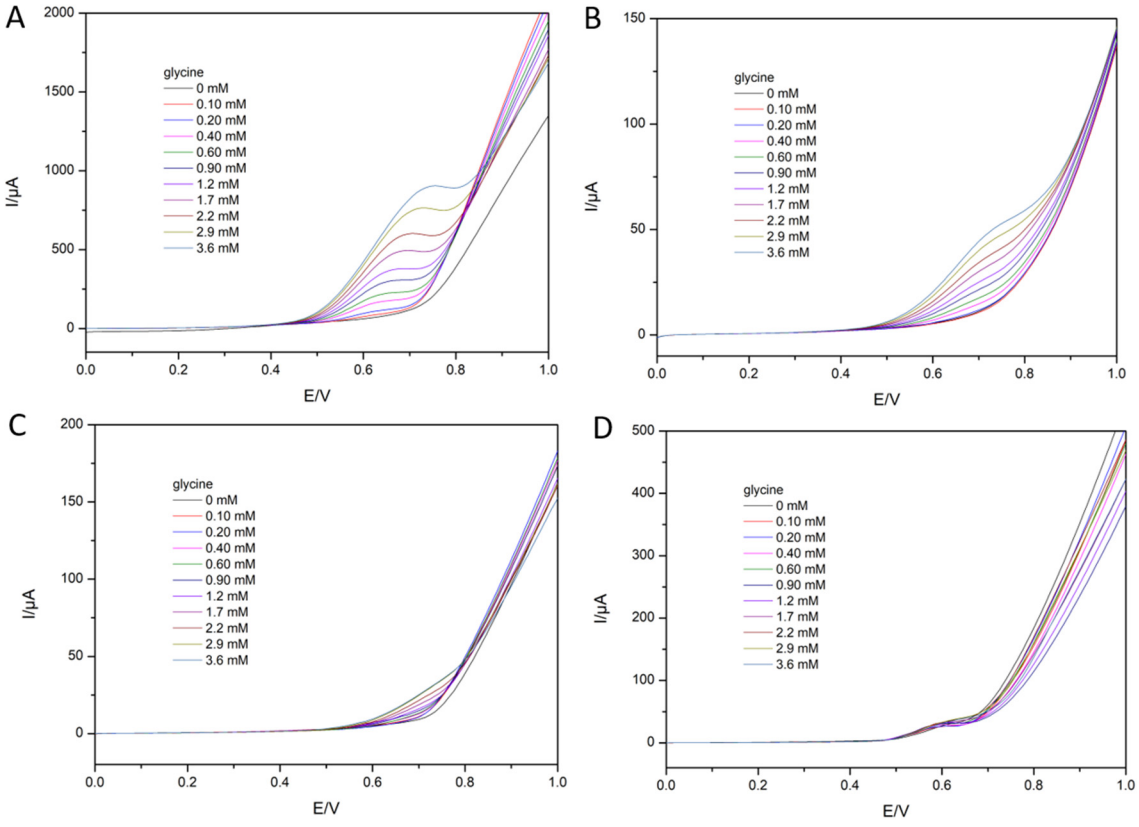

Figure S5. Oxidation curves of cyclic voltammograms of electrodes **E1** (A), **E2** (B), **E3** (C) and **E4** (D) responding to glycine. Scan rate: 50 mV/s.

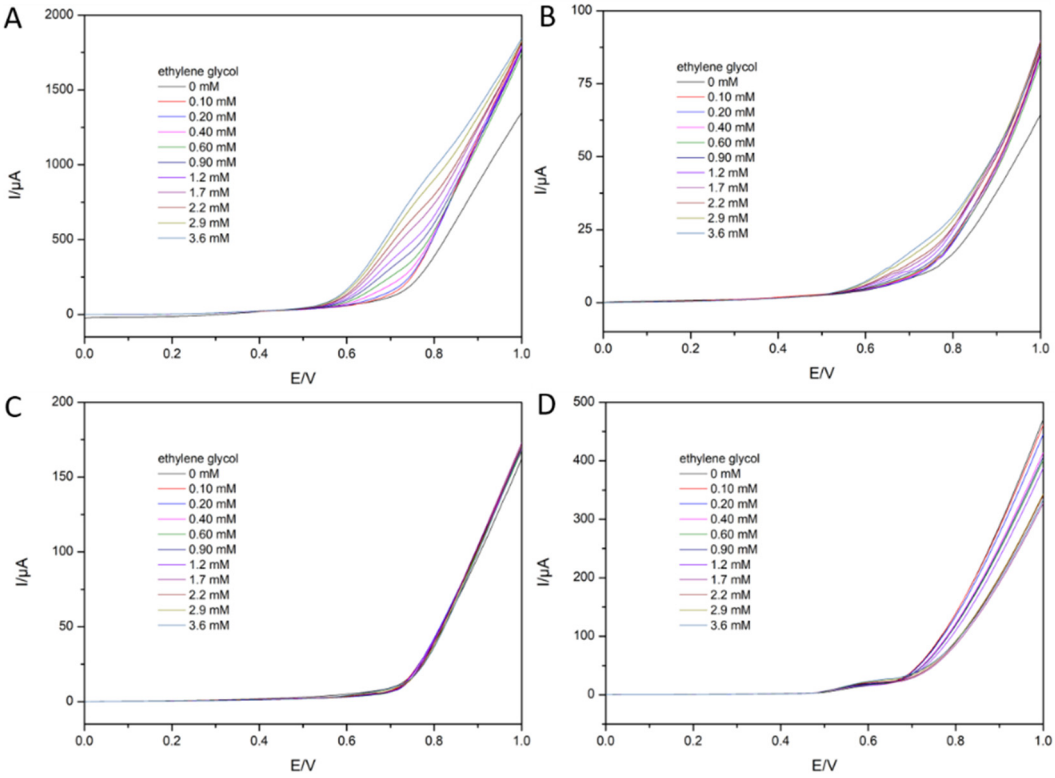

Figure S6. Oxidation curves of cyclic voltammograms of electrodes **E1** (A), **E2** (B), **E3** (C) and **E4** (D) **r**esponding to ethylene glycol. Scan rate: 50 mV/s.

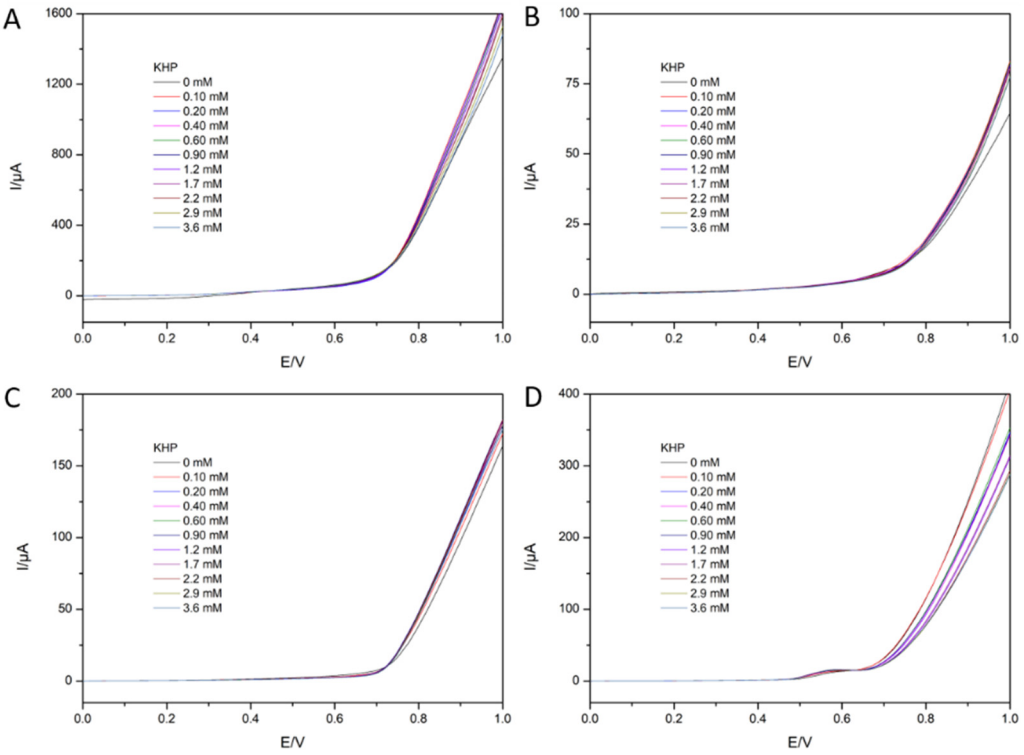

Figure S7. Oxidation curves of cyclic voltammograms of electrodes **E1** (A), **E2** (B), **E3** (C) and **E4** (D) responding to KHP. Scan rate: 50 mV/s.