

Supplementary Material

# Hydrogel-Based Electrodeposition of Copper Nanoparticles for Selective Detection for Hydrogen Peroxide

Jihun Han <sup>1,†</sup>, Jihyeon Kim <sup>1,†</sup>, Byung-Kwon Kim <sup>2,\*</sup> and Kyungsoon Park <sup>1,\*</sup>

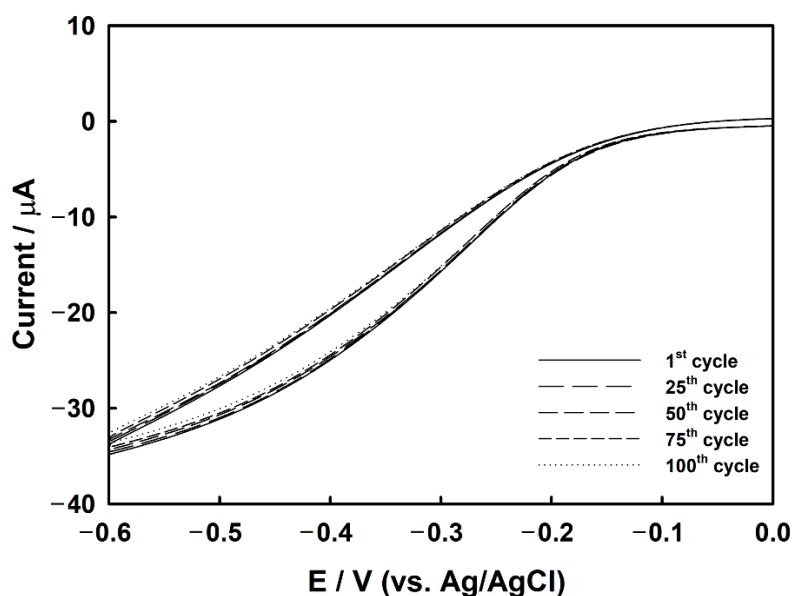
<sup>1</sup> Department of Chemistry and Cosmetics, Jeju National University, Jeju 63243 Republic of Korea; hanjihun@stu.jejunu.ac.kr (J.H.); harry9626@jejunu.ac.kr (J.K.)

<sup>2</sup> Department of Chemistry and Nanoscience, Ewha Womans University, Seoul 03760, Republic of Korea

\* Correspondence: kimb@ewha.ac.kr (B.-K.K.); kspark895@jejunu.ac.kr (K.P.); Tel.: +82-2-3277-6578 (B.-K.K.); +82-64-754-3545 (K.P.); Fax: +82-2-3277-2385 (B.-K.K.); +82-64-756-3561 (K.P.)

† These authors contributed equally to this work.

## Stability measurement of Cu-modified ITO electrode



**Figure S1.** CV curves of Cu nanoparticle on ITO electrode containing 5.0 mM H<sub>2</sub>O<sub>2</sub> in phosphate buffer (pH 7.4) after each of the 25 cycles. Scan rate: 100 mV/s.

The stability of the Cu-modified ITO electrode is evaluated using CV measurements for up to 100 cycles at a scan rate of 100 mV/s. The CV response remains constant throughout each cycle, displaying no apparent deviations, thus indicating good stability of Cu nanoparticles for long-term electrochemical analysis.