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Supplementary Material

Electrochemical Oxidation of Sodium Metabisulfite for Sensing Zinc Oxide Nanoparticles Deposited on Graphite Electrode

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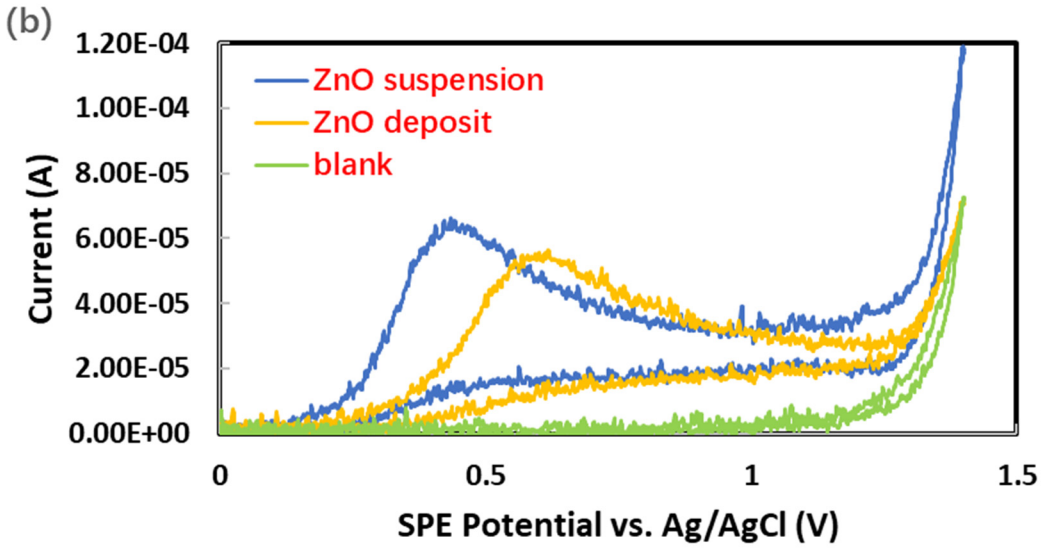

Figure S1. Cyclic voltammograms of ascorbic acid (both 0.003 M in 1.0 M KCl) on graphite electrode with ZnO suspension versus ZnO deposited on graphite electrode. Suspended ZnO concentration was 0.21 mg/ml for metabisulfite and 0.25 mg/ml for ascorbic acid. ZnO deposit on SPE used 150 µL of each ZnO suspension. $E_{initial}$ = 0.0 V, E_{final} = 1.4 V, scan rate = 0.10 V/s, scan direction = positive.

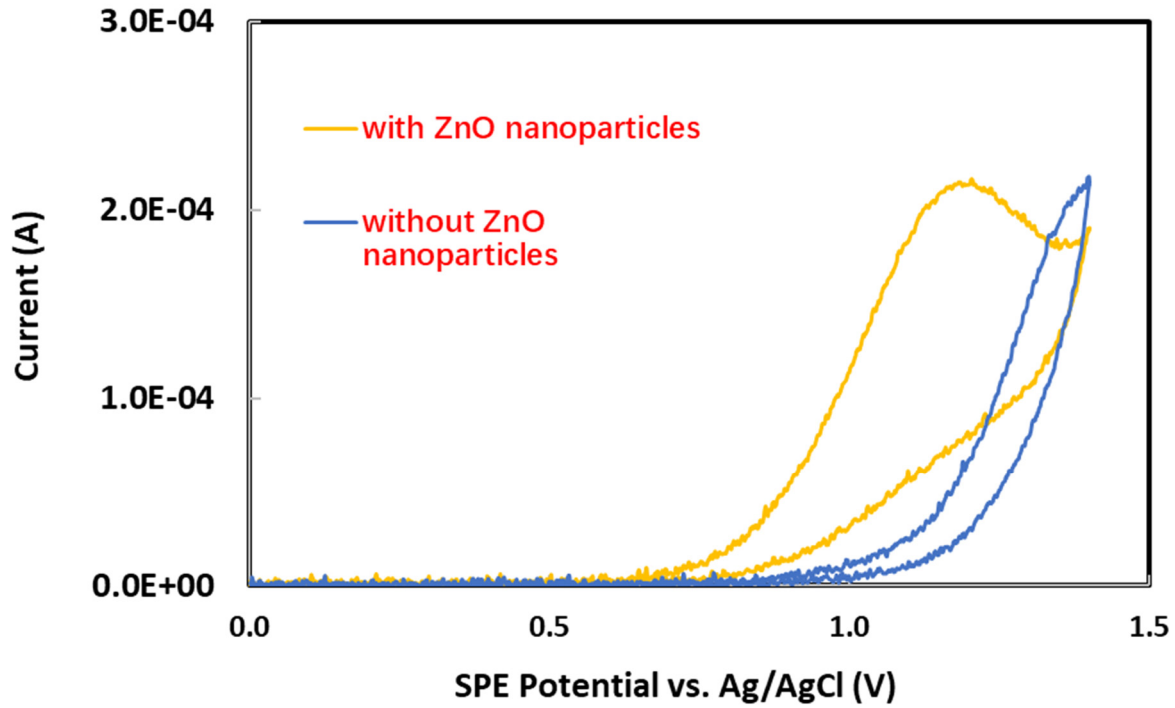

Figure S2. Cyclic voltammograms of sodium metabisulfite (0.0057 M) for 0 µg and 115 µg of ZnO nanoparticles deposited on graphite electrode. $E_{initial}$ = 0.0 V, E_{final} = 1.4 V, scan rate = 0.10 V/s, scan direction = positive.

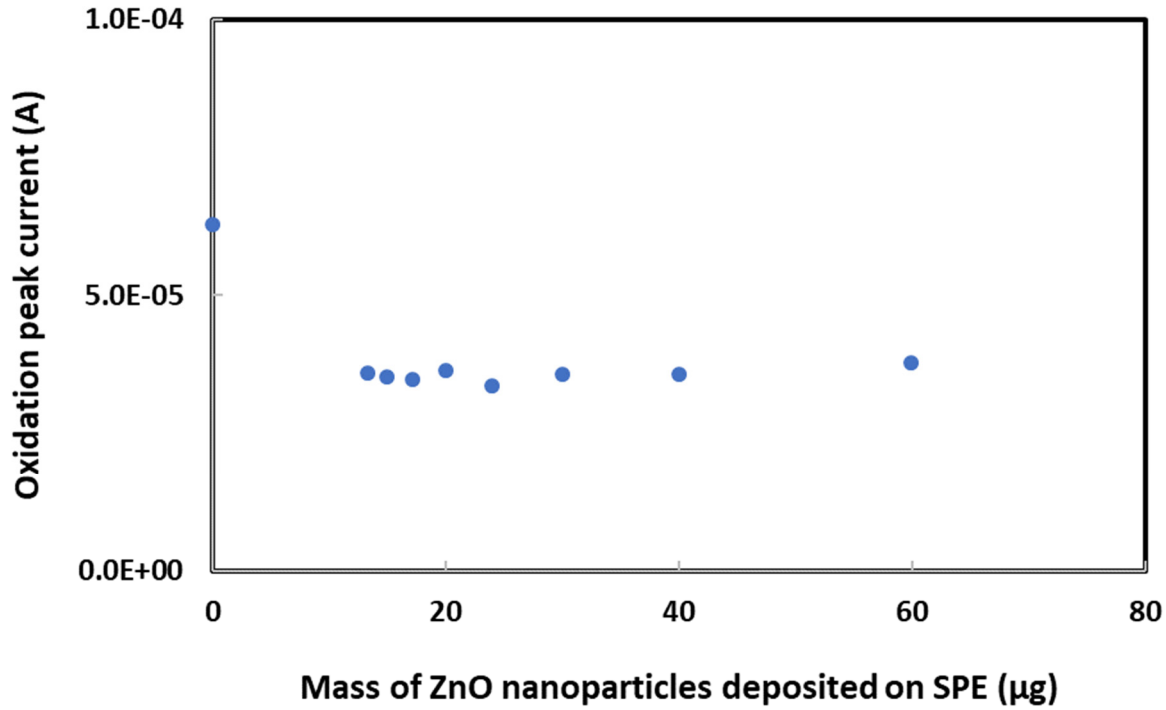

Figure S3. Cyclic voltammetric measurement results of potassium ferricyanide (0.006 M in 1.0 M KCl) oxidation peak current vs. mass of ZnO nanoparticles deposited on graphite electrode.

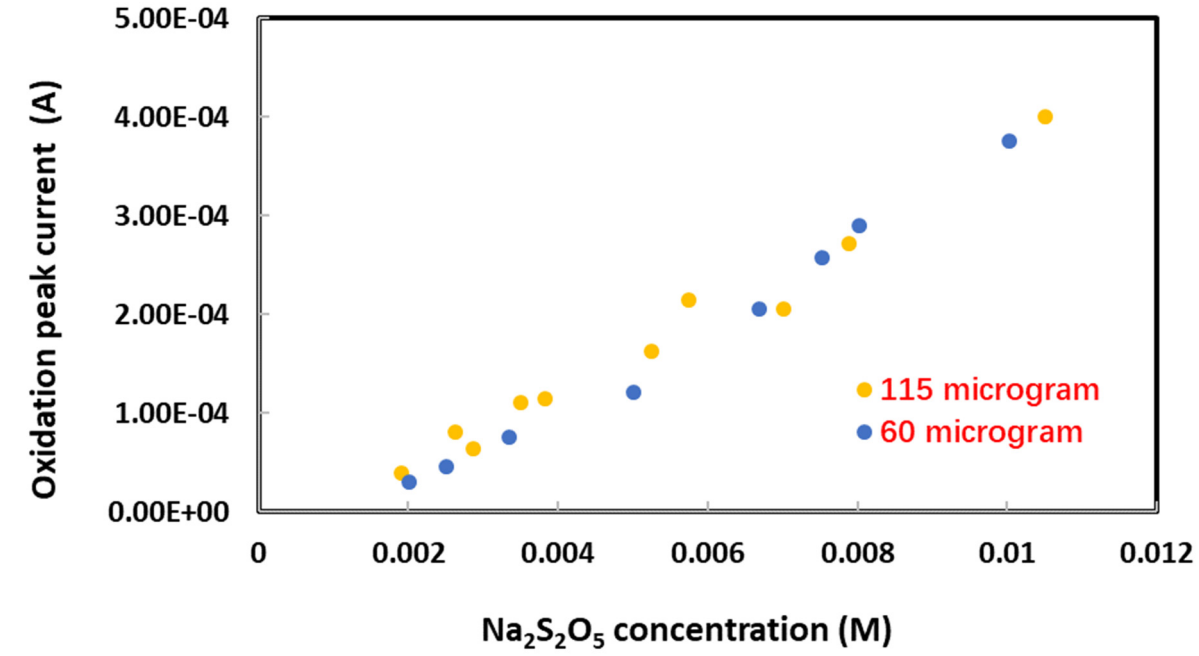

Figure S4. Cyclic voltammetric measurement results of oxidation peak current vs. sodium metabisulfite concentration in 1.0 M KCl. Mass of ZnO nanoparticles deposited on graphite electrode = 60 µg or 115 µg.

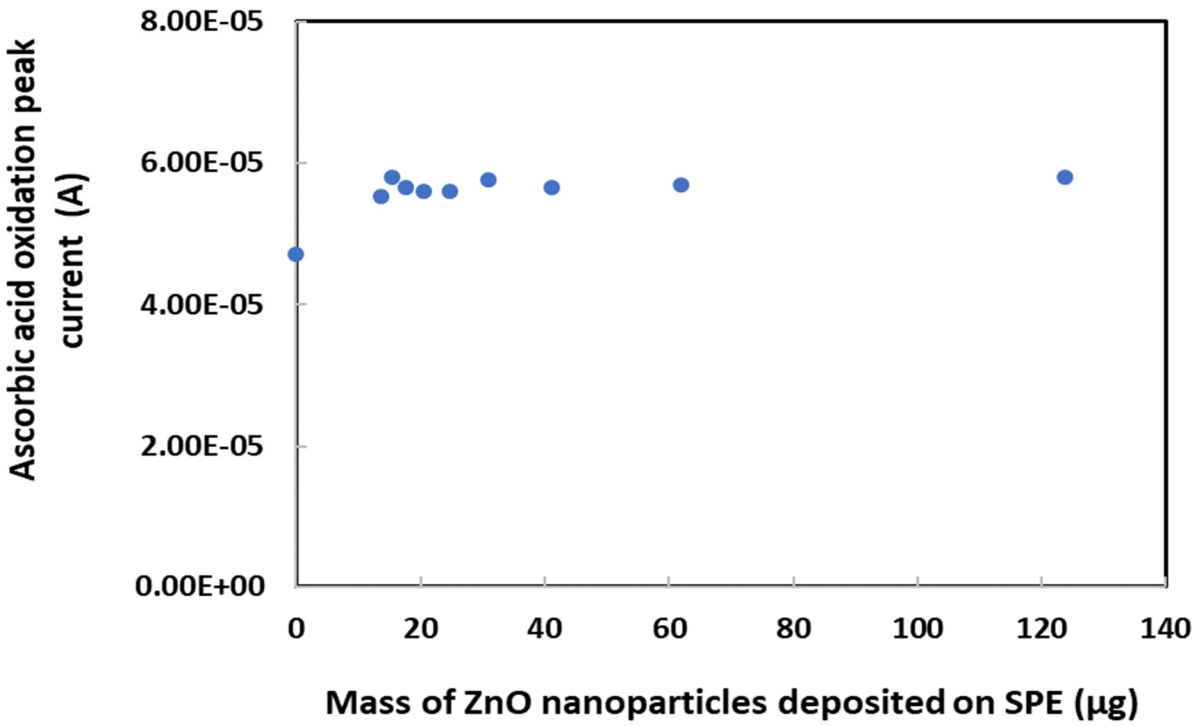

Figure S5. Cyclic voltammetric measurement results of ascorbic acid (0.003 M in 1.0 M KCl) oxidation peak current vs. mass of ZnO nanoparticles deposited on graphite electrode.

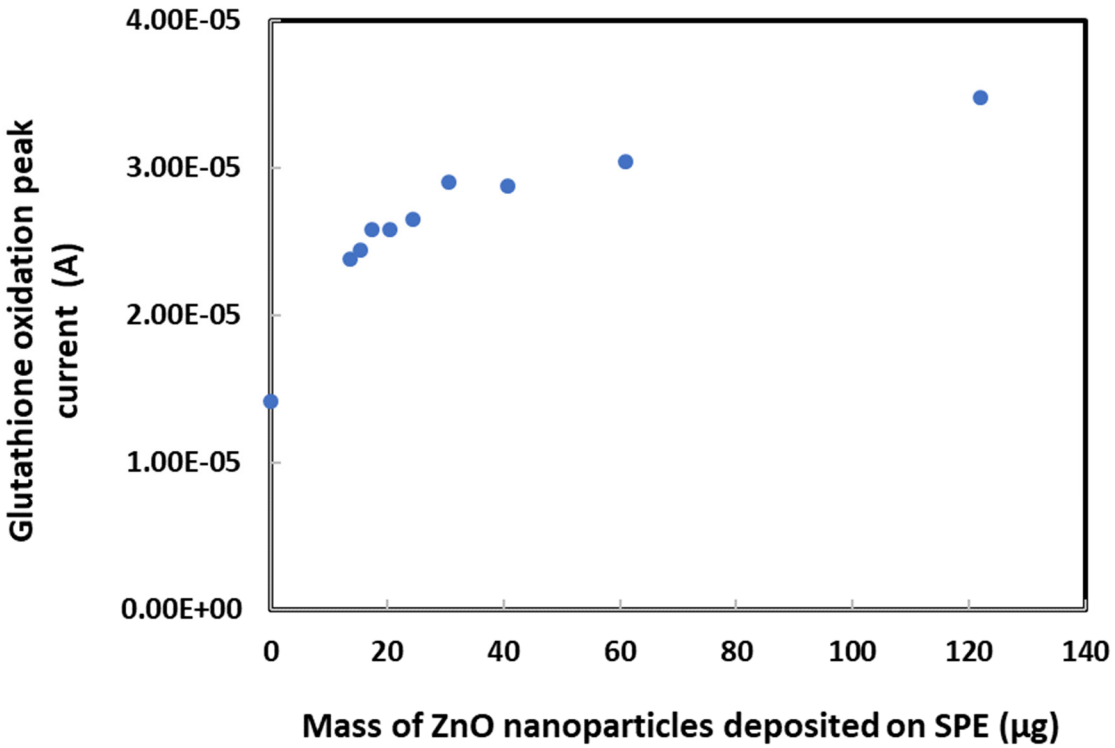

Figure S6. Cyclic voltammetric measurement results of glutathione (0.003 M in 1.0 M KCl) oxidation peak current vs. mass of ZnO nanoparticles deposited on graphite electrode. Each data point represents the average current measured between 1.19 V and 1.21 V versus Ag/AgCl reference electrode.