

Rapid Preparation of Ag/CoO/rGO Composite for Electrochemical Detection of Hydrogen Peroxid

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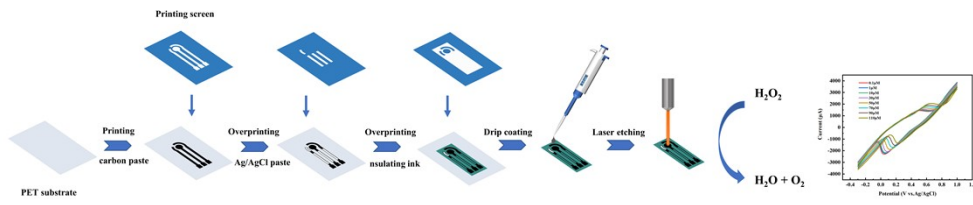


Fig.S1. H₂O₂ detection scheme using the Ag / CoO /rGO/SPE

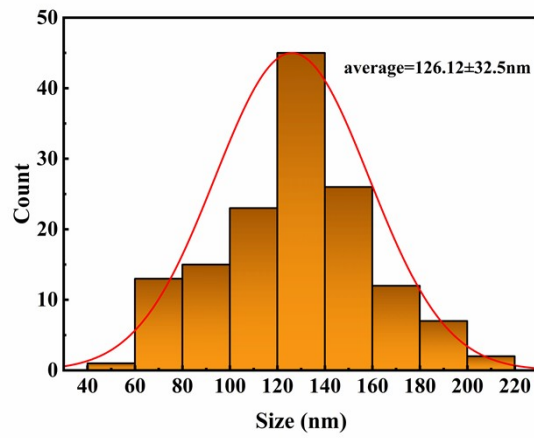


Fig.S2. Ag/CoO/rGO aperture size

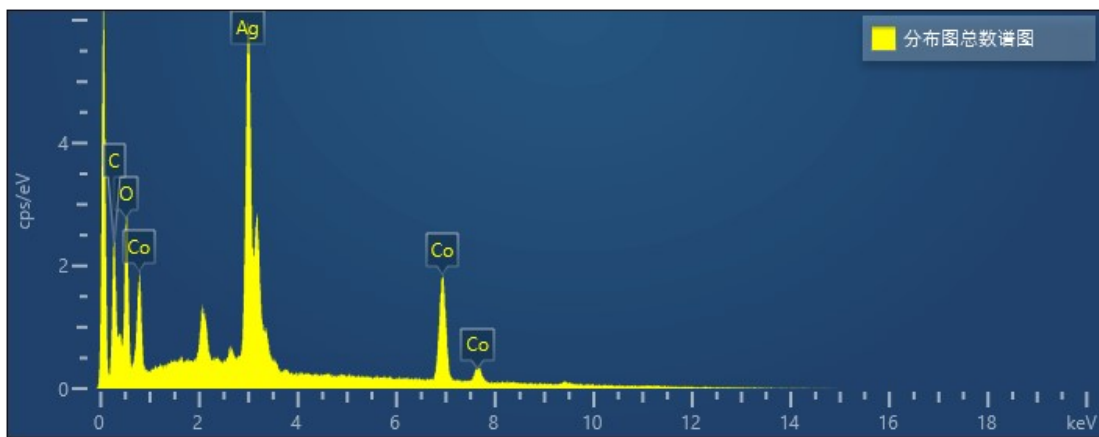


Fig.S3. Total spectrum of Ag/CoO/rGO distribution

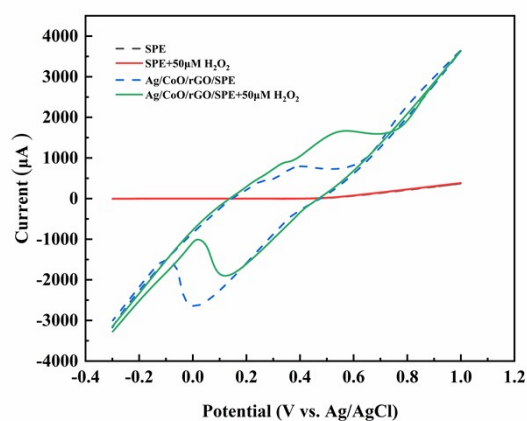


Fig.S4. CV curves of different electrodes (dotted line: blank NaOH solution, Solid Line:50 μM H₂O₂ NaOH solution).

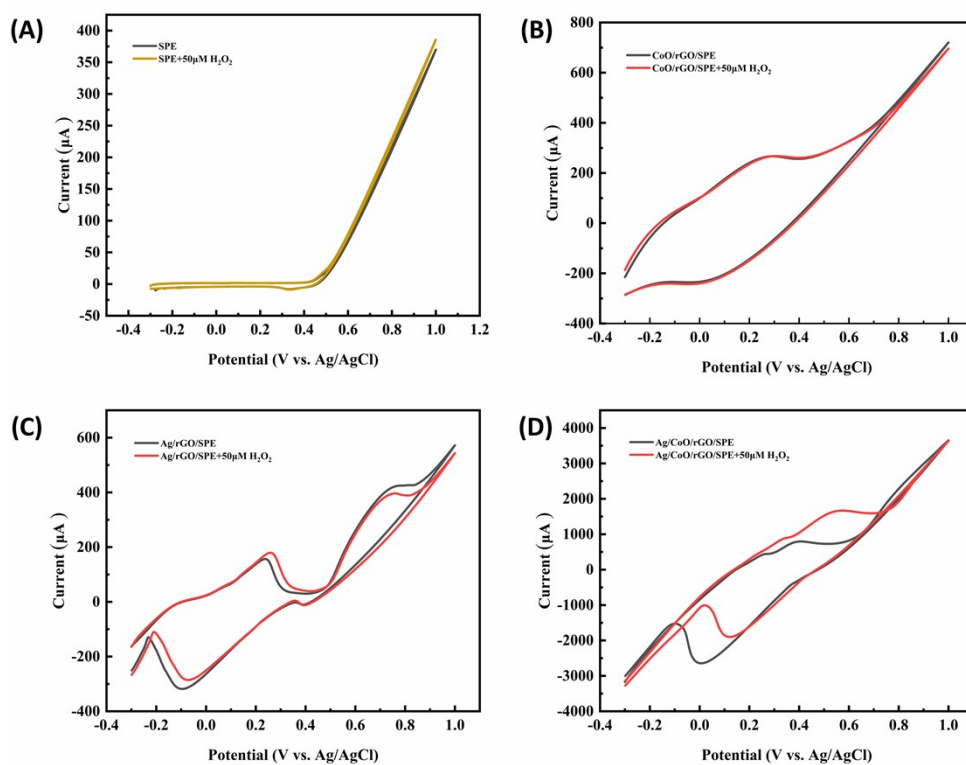


Fig.S5. CV curves of (A)SPE , (B)CoO/rGO/SPE , (C)Ag/rGO/SPE and (D) Ag/CoO/rGO/SPE in 50 μM H₂O₂ NaOH solution.

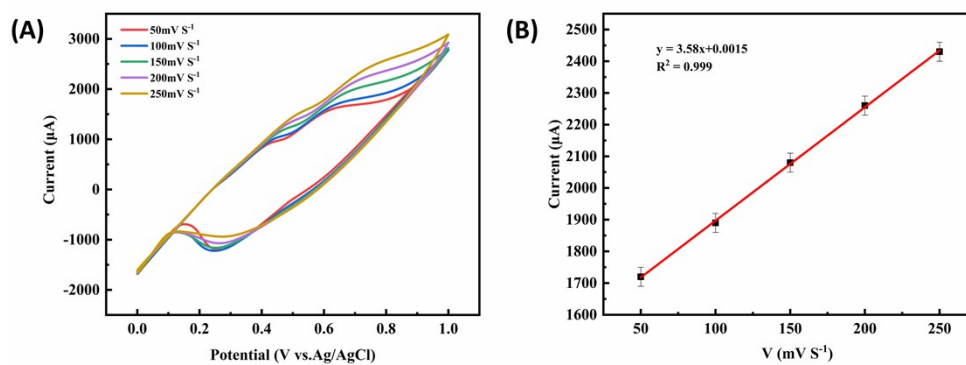


Fig.S6.(A)CV curves of the Ag/ Co₃O₄/rGO/SPE at different scanning rates in 0.1 mol/L NaOH and (B) its linear fitting graph.

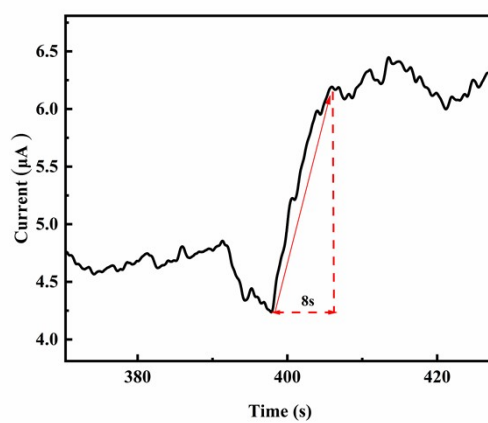


Fig.S7. Ag/ CoO/rGO/SPE response time

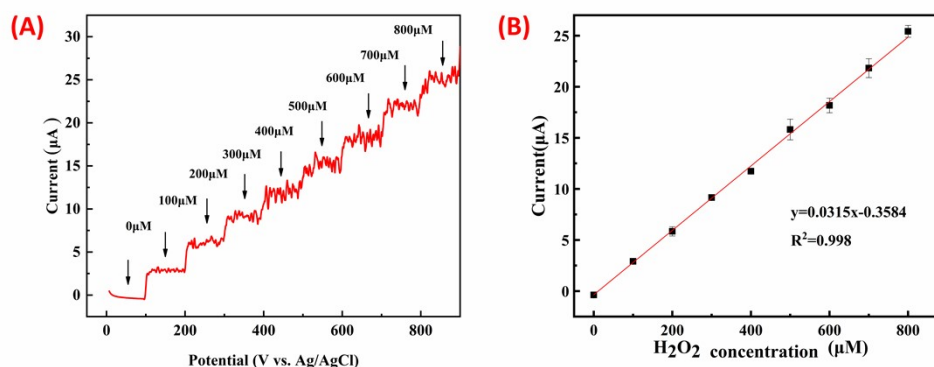


Fig.S8. (A) i-t curves of Ag/CoO/rGO/SPE in artificial urine species with continuous addition of H₂O₂ (0-800 μM) at 0.2 V applied potential; (B) Calibration curve for i-t curve of (A)

The limit of detection (LOD) of the sensor can be determined using the

following equation: $cL = \frac{xL \cdot b}{m} = K \cdot Sb/m$. The LOD is 0.185 μM. In the equation above, as per the guidelines provided by the International Union of Pure and Applied Chemistry (IUPAC), "m" represents the slope of the linear range correction curve, "b" stands for the average background current of the blank solution, and "Sb" denotes the standard deviation of the background current of the blank solution. According to the recommended value "K = 3," the measurement was performed 11 times.