

Electrochemically Tuned Cobalt Hydroxide Carbonate with abundant Grain Boundaries for Highly Efficient Electro-Oxidation of Hydrazine

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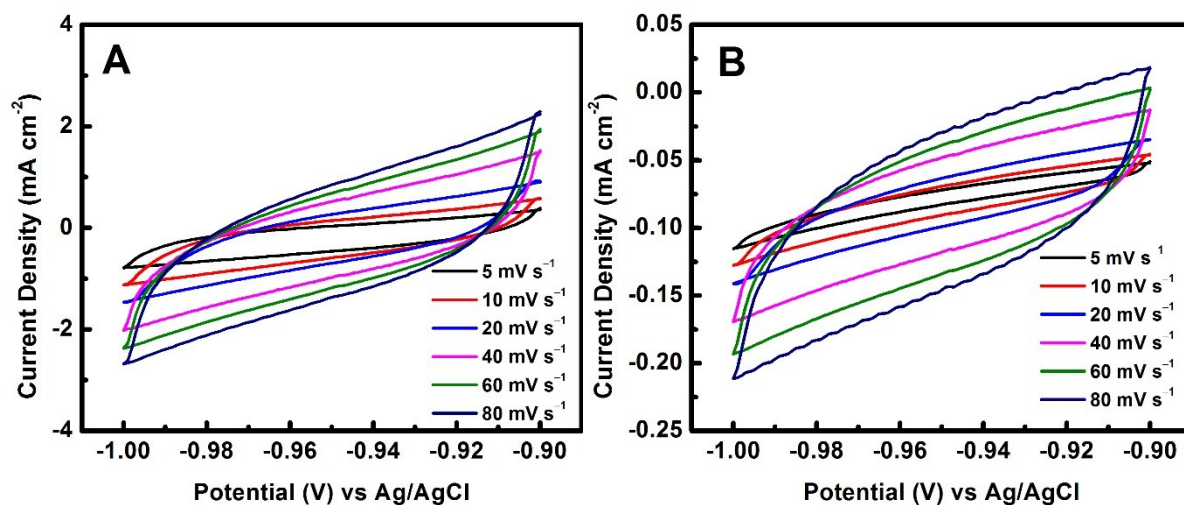


Fig. S1 Voltammograms of the (A) ECT-Co(OH)_x(CO₃)_{0.5(2-x)} and (B) pristine Co(OH)_x(CO₃)_{0.5(2-x)} electrodes collected at varied scan rates of 5, 10, 20, 40, 60, and 80 mV s⁻¹ in 1.0 M KOH.

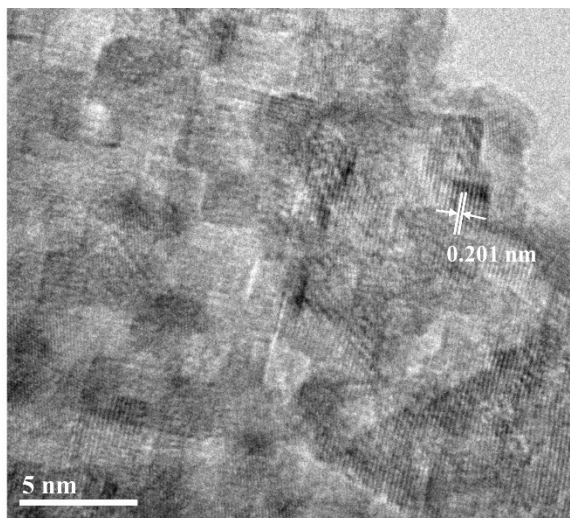


Fig. S2 HTREM image of ECT- $\text{Co(OH)}_x(\text{CO}_3)_{0.5(2-x)}$.

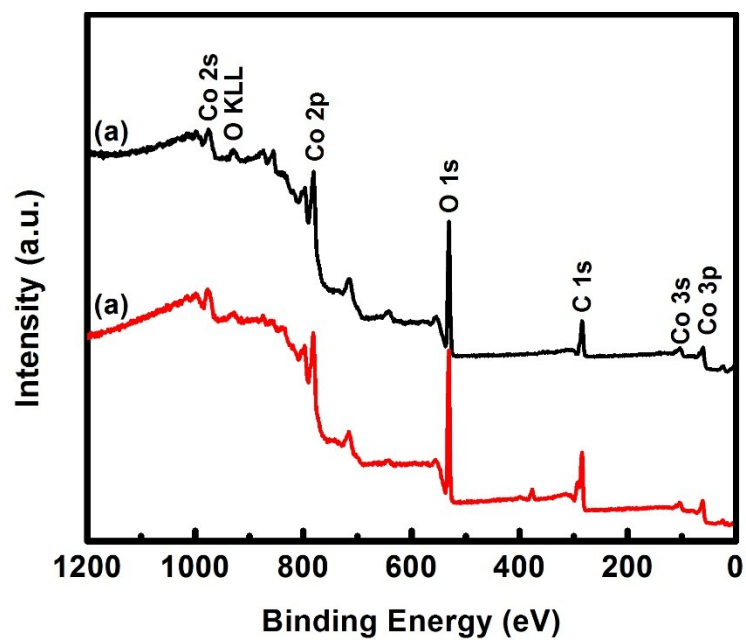


Fig. S3 XPS survey spectra of the $\text{Co(OH)}_x(\text{CO}_3)_{0.5(2-x)}$ (a) and ECT- $\text{Co(OH)}_x(\text{CO}_3)_{0.5(2-x)}$ (b).

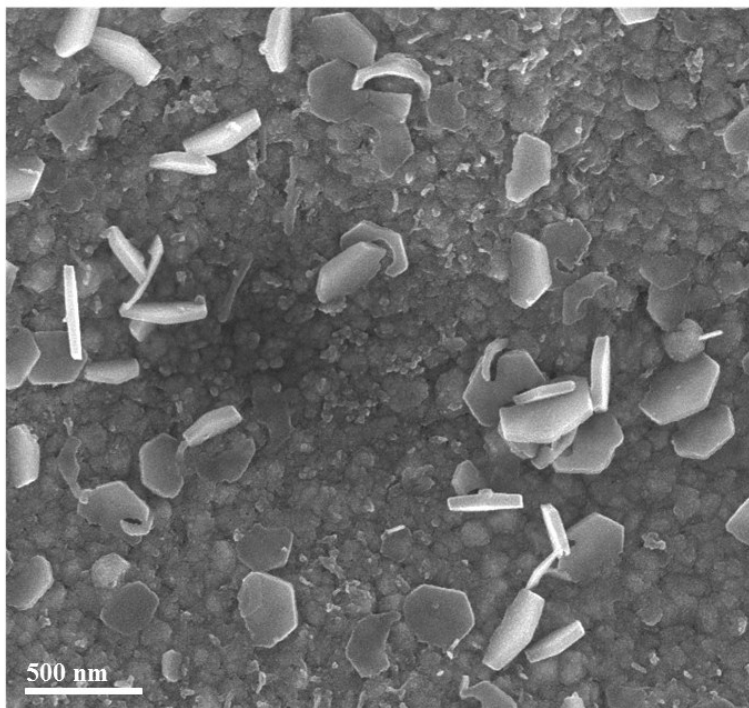


Fig. S4 SEM image of the ECT- $\text{Co(OH)}_x(\text{CO}_3)_{0.5(2-x)}$ electrode after 350 cycles.

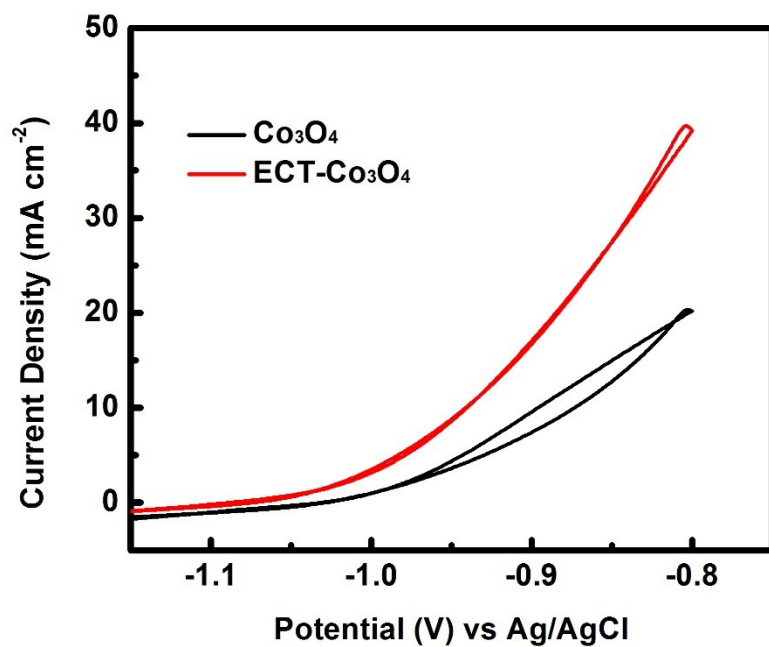


Fig. S5 Voltammograms of the Co_3O_4 and ECT- Co_3O_4 electrodes at a scan rate of 20 mV s^{-1} in $0.5 \text{ M N}_2\text{H}_4$ aqueous solution with 1.0 M KOH .

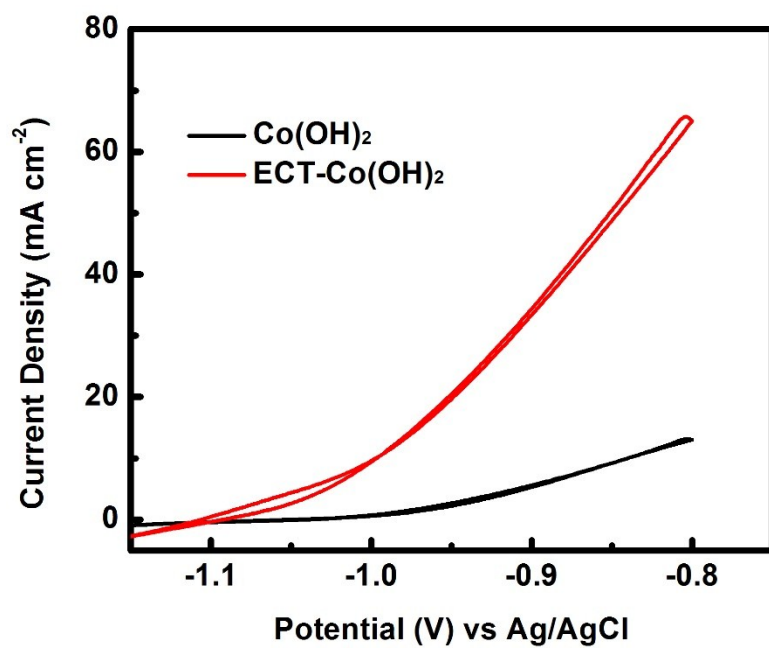


Fig. S6 Voltammograms of the Co(OH)₂ and ECT-Co(OH)₂ electrodes at a scan rate of 20 mV s⁻¹ in 0.5 M N₂H₄ aqueous solution with 1.0 M KOH.

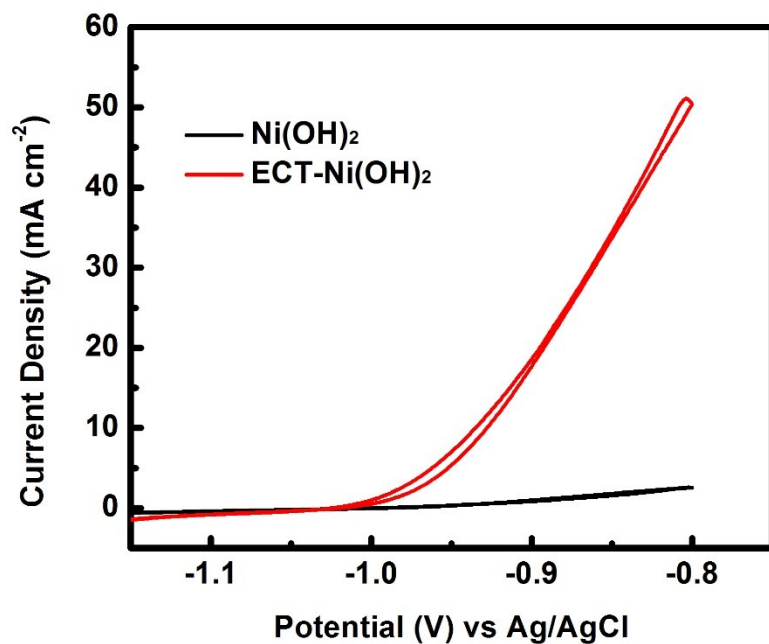


Fig. S7 Voltammograms of the Ni(OH)₂ and ECT-Ni(OH)₂ electrodes at a scan rate of 20 mV s⁻¹ in 0.5 M N₂H₄ aqueous solution with 1.0 M KOH.