

Supporting Information

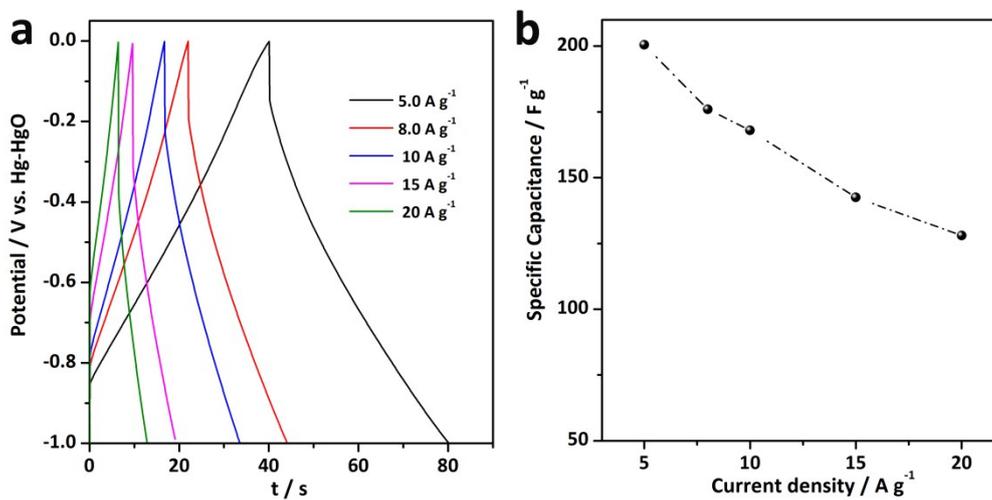


Fig. S1 (a) GCD curves and (b) Specific capacitance of AC electrode under various current densities in 3.0 M KOH + 0.10 M K₄[Fe(CN)₆] electrolyte.

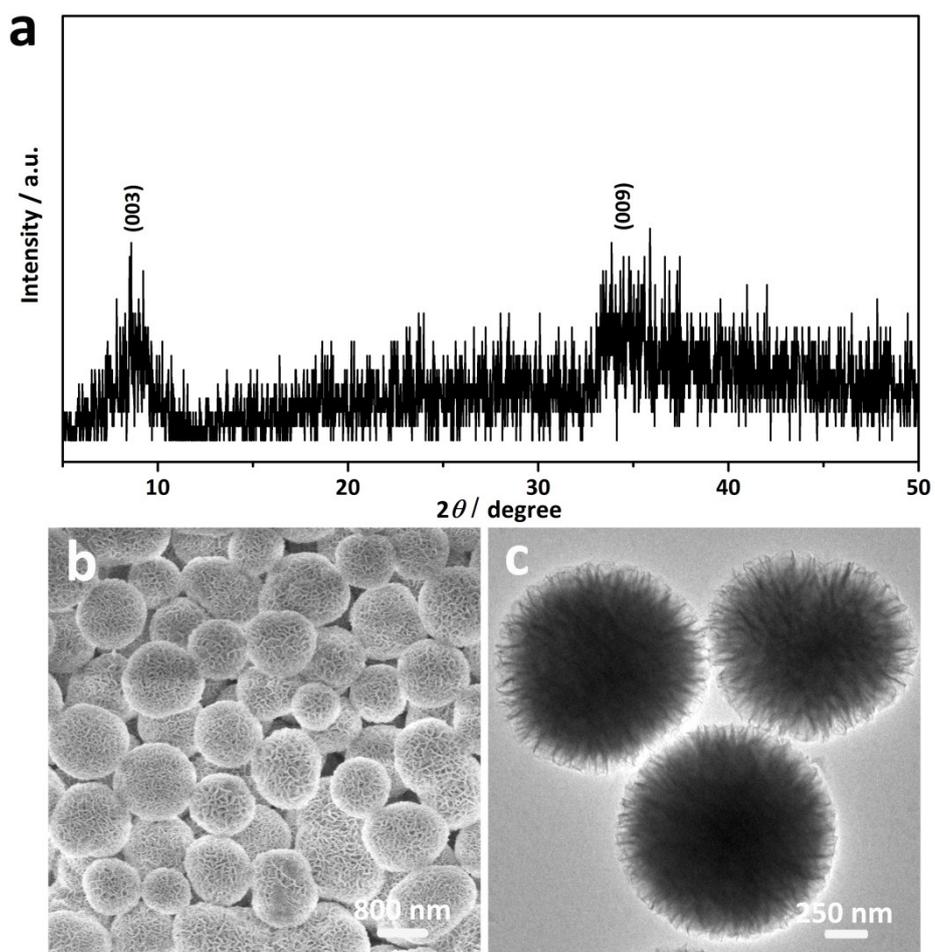


Fig. S2 (a) XRD pattern of the as-synthesized Ni-Co-LDH, (b) SEM and (c) TEM images of the Ni-Co-LDH.

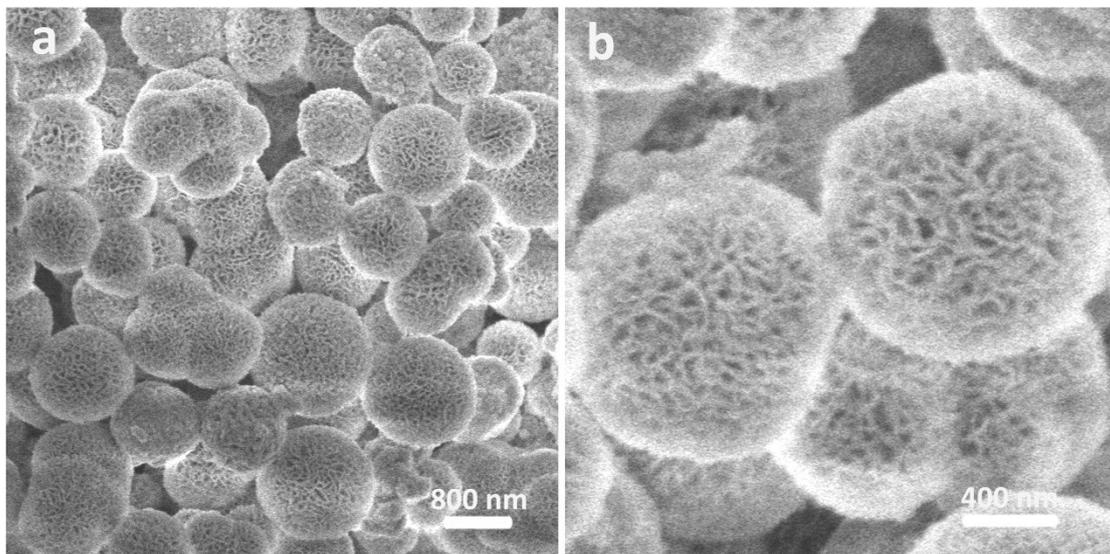


Fig. S3 SEM images of the Ni-Co-Ce-hydroxide.

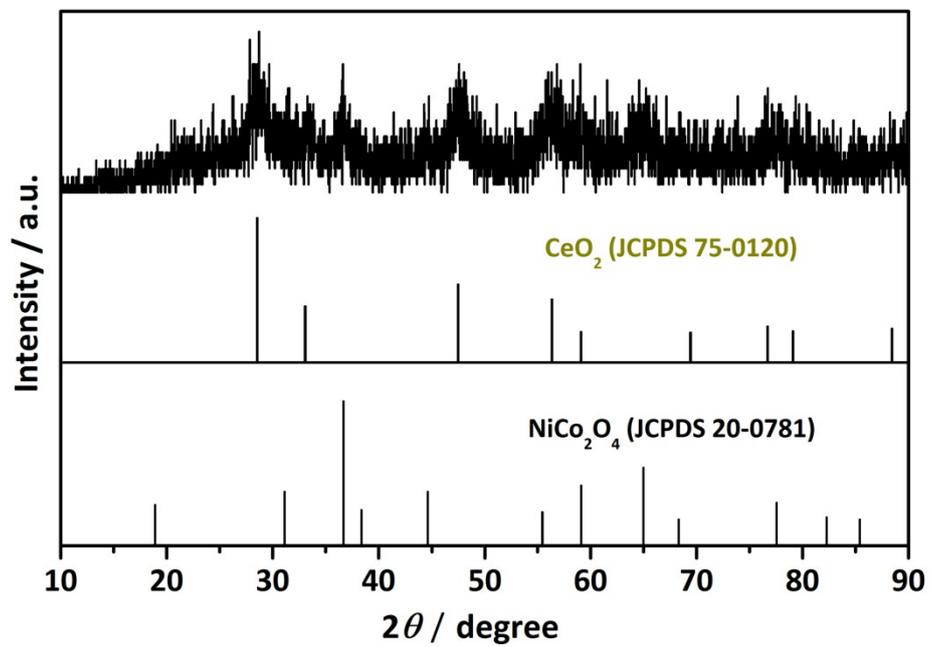


Fig. S4 XRD pattern of the as synthesized NiCo₂O₄/CeO₂ hybrid materials.

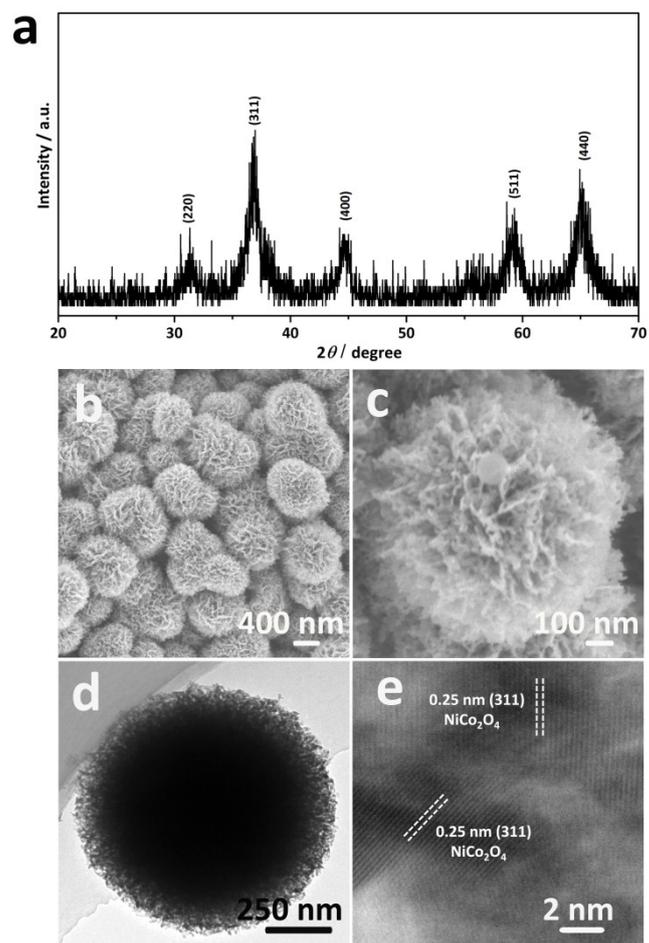


Fig. S5 (a) XRD pattern of the as synthesized NiCo_2O_4 , SEM (b,c) and TEM (d) images of the hierarchical NiCo_2O_4 , (e) HRTEM image of the hierarchical NiCo_2O_4 .

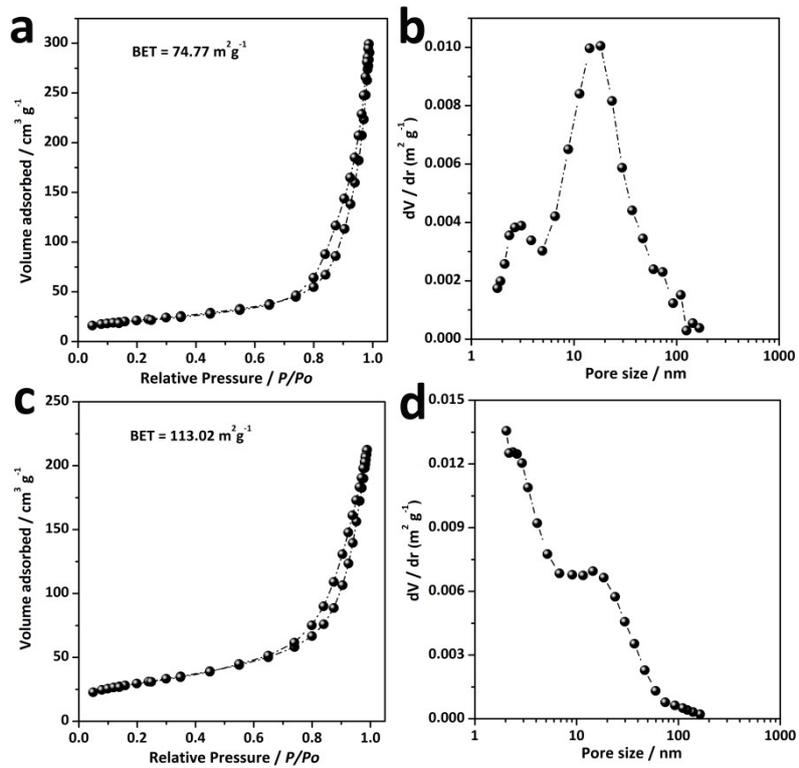


Fig. S6 N_2 adsorption-desorption isotherms and pore size distribution curves of the synthesized samples: (a, b) hierarchical $NiCo_2O_4$, (c, d) hierarchical porous $NiCo_2O_4/CeO_2$ hybrid materials.

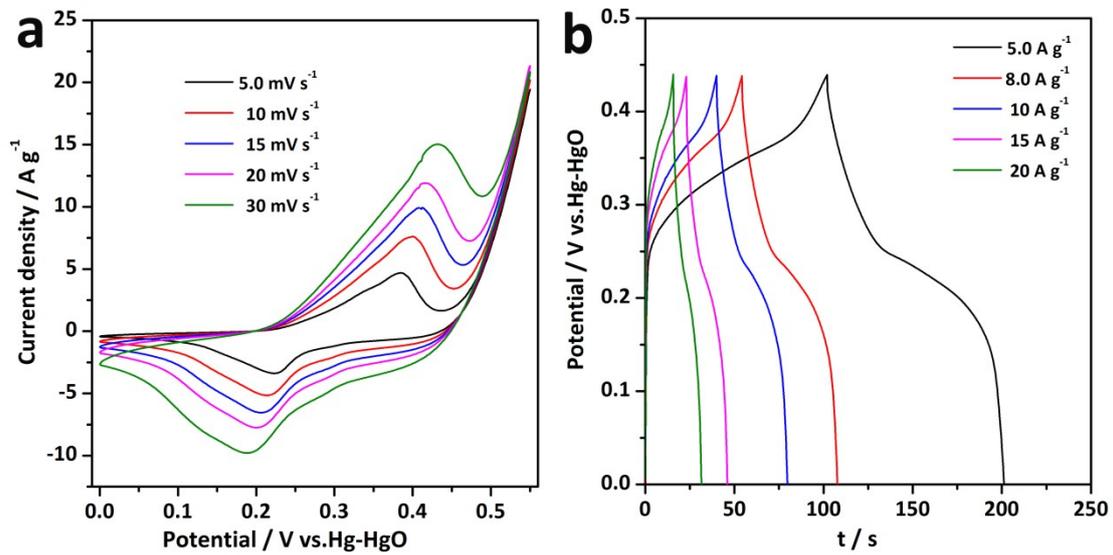


Fig. S7 (a) CV and (b) GCD curves of the NiCo₂O₄/CeO₂ electrode in 3.0 M KOH electrolyte.

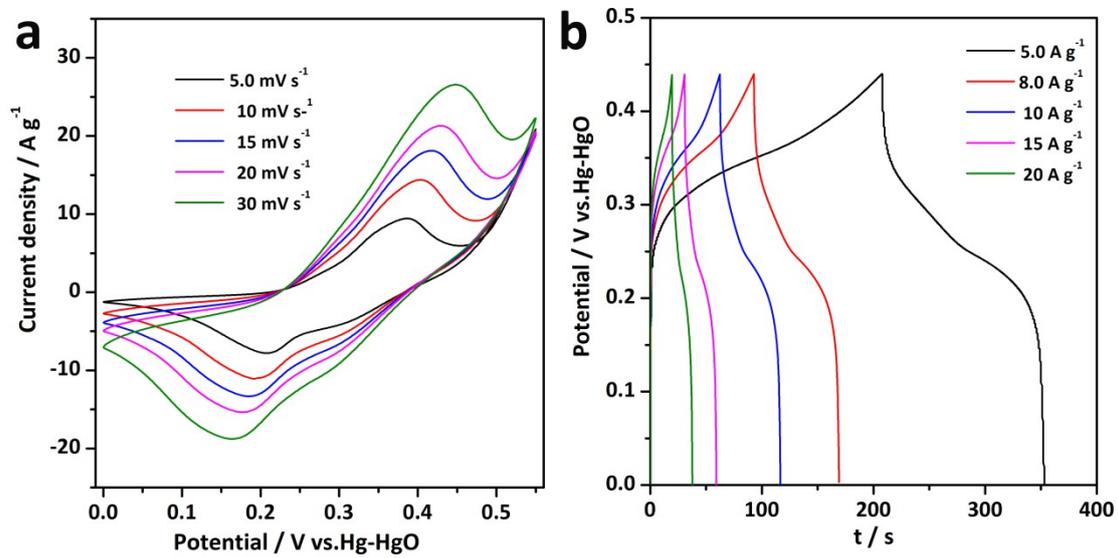


Fig. S8 (a) CV and (b) GCD curves of the NiCo₂O₄/CeO₂ electrode in 3.0 M KOH + 0.05 M K₄[Fe(CN)₆] electrolyte.

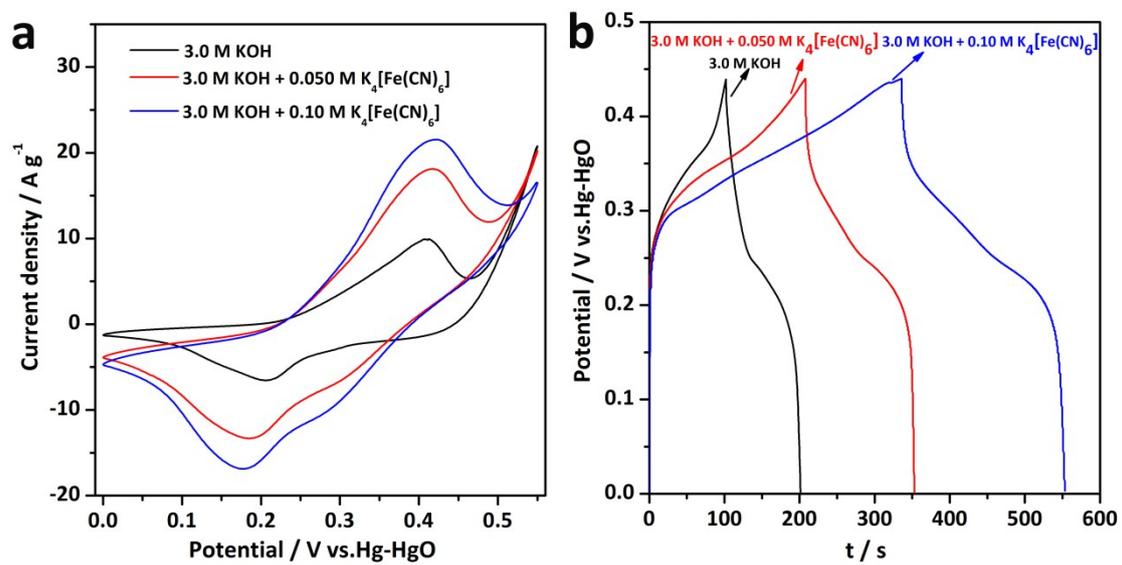


Fig. S9 (a) CV curves of the NiCo₂O₄/CeO₂ electrode in different electrolytes at 15 mV s⁻¹, (b) GCD curves of the NiCo₂O₄/CeO₂ electrode in different electrolytes at 5.0 A g⁻¹.

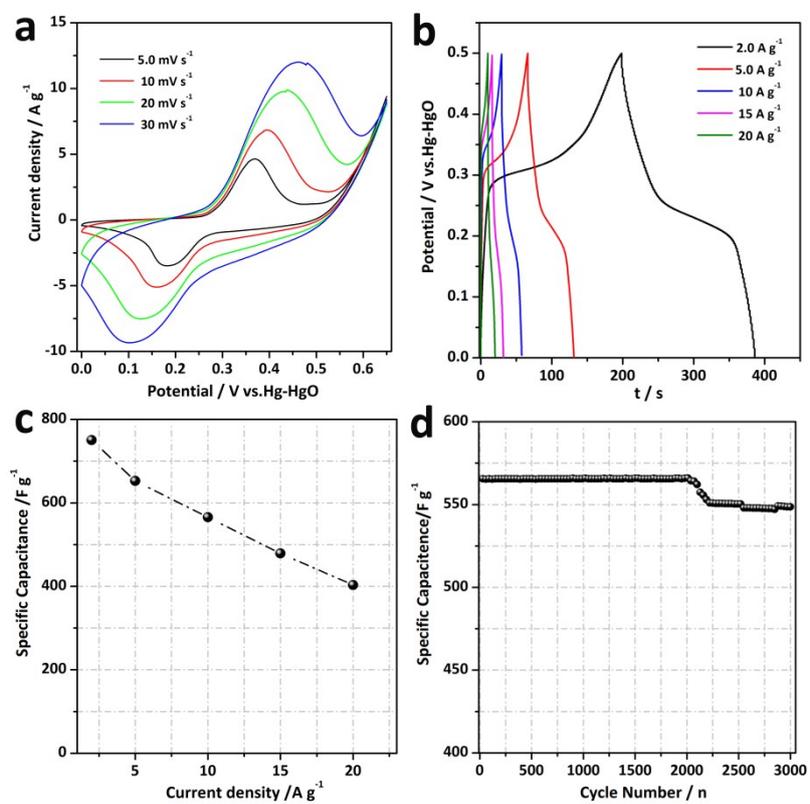


Fig. S10 Electrochemical measurements of the NiCo₂O₄: (a) CV curves; (b) GCD curves; (c) Specific capacitance of NiCo₂O₄ electrode under various current densities; (d) Cycling measurements for NiCo₂O₄ electrode at 10 A g⁻¹.

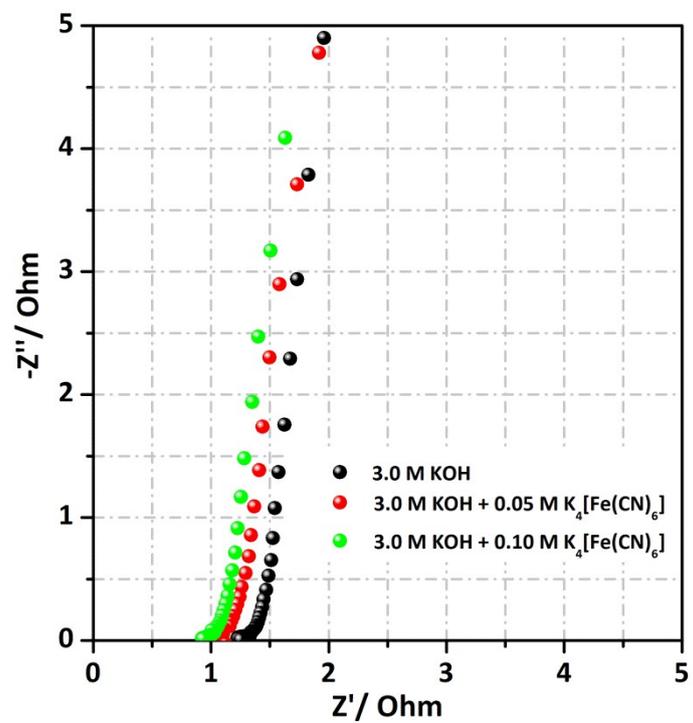


Fig. S11 Electrochemical impedance spectra of NiCo₂O₄/CeO₂ electrode in various electrolytes.

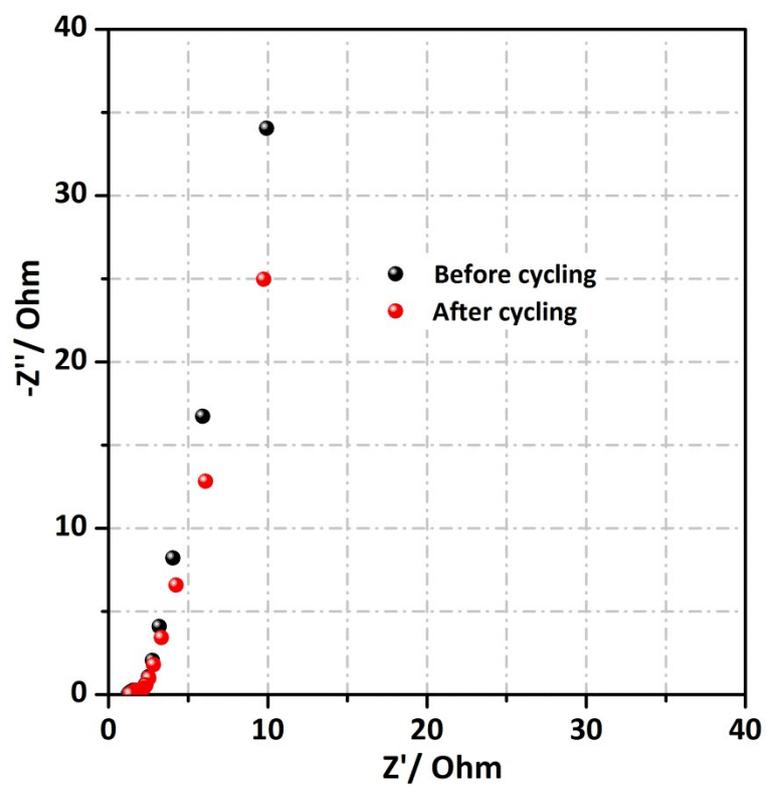


Fig. S12 Electrochemical impedance spectra of the NiCo₂O₄/CeO₂//AC-ASC device before and after cycling.