

Supplementary Information

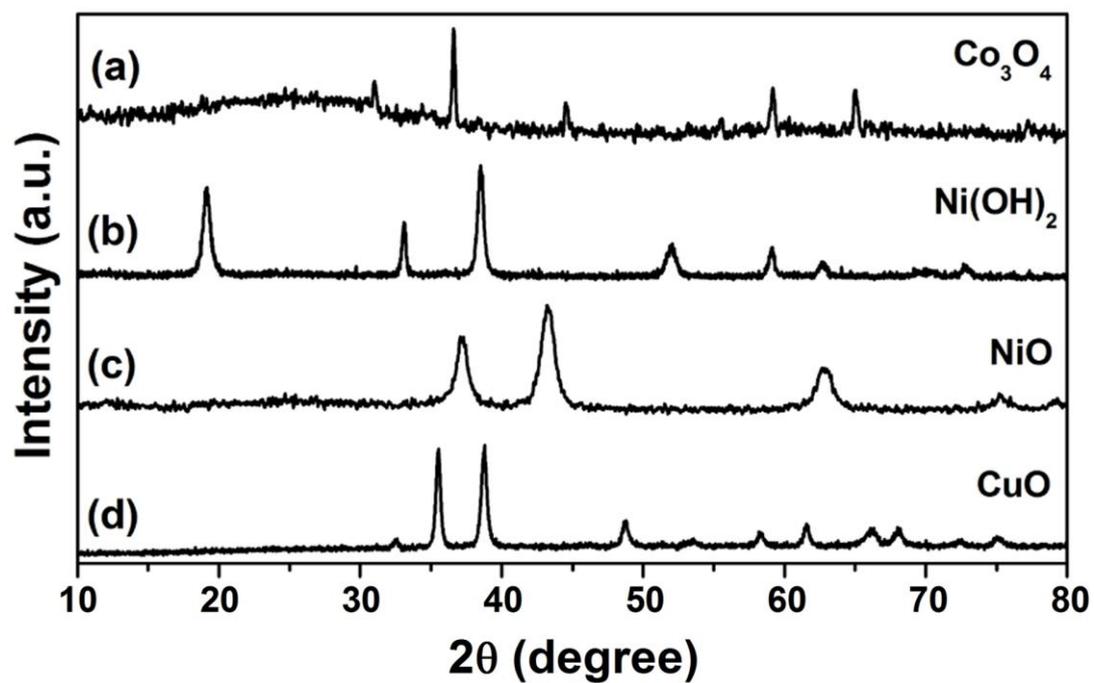


Fig. S1

Fig. S1 XRD patterns of as-synthesized transition metal oxide/ hydroxide samples, (a) Co₃O₄, (b) Ni(OH)₂, (c) NiO, and (d) CuO.

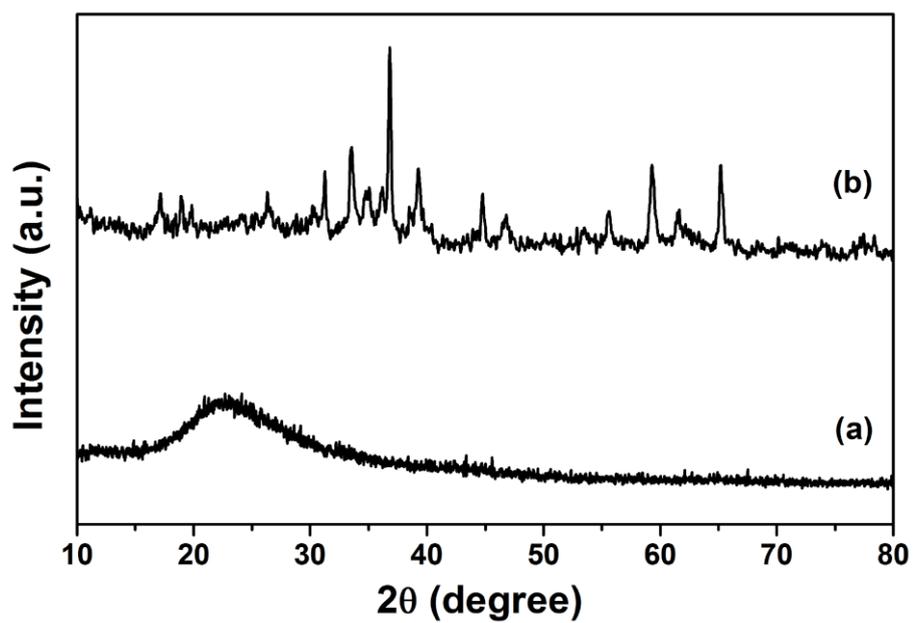


Fig. S2

Fig. S2 XRD patterns of Co-based products synthesized at 160 °C for different reaction time: (a) 3 and (b) 6.0 hours.

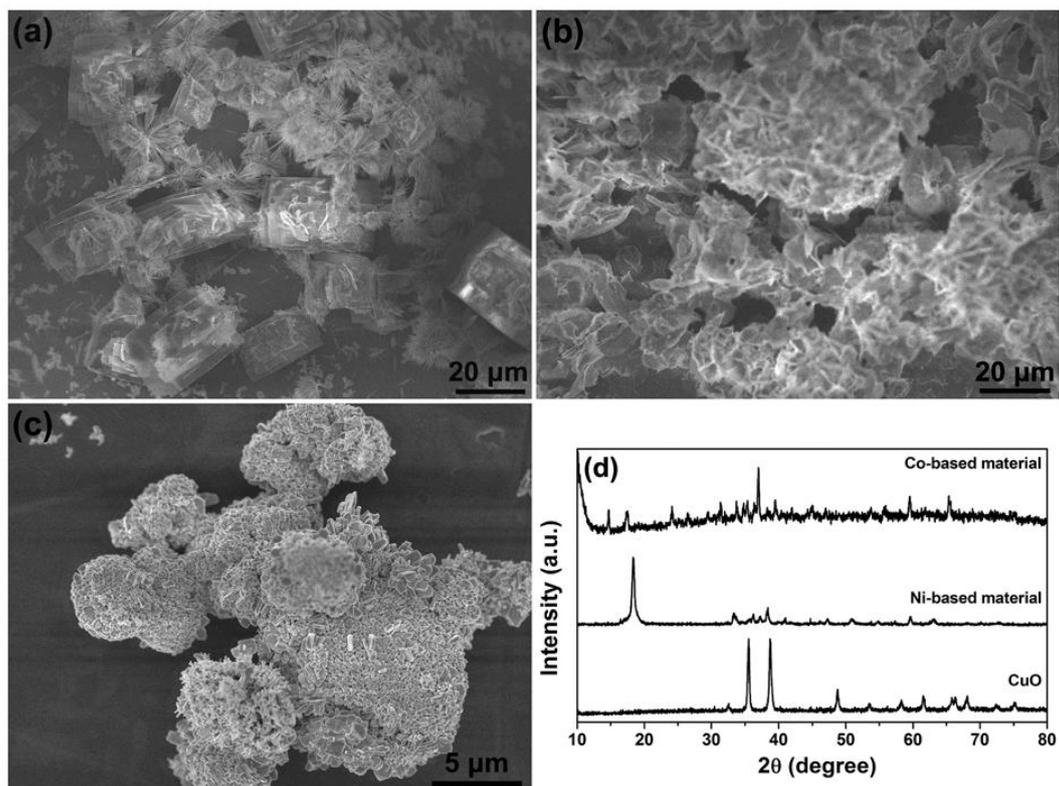


Fig. S3

Fig. S3 SEM images of (a) Co-based, (b) Ni-based, and (c) CuO products obtained by the conventional hydrothermal method and (d) corresponding XRD patterns for these products.

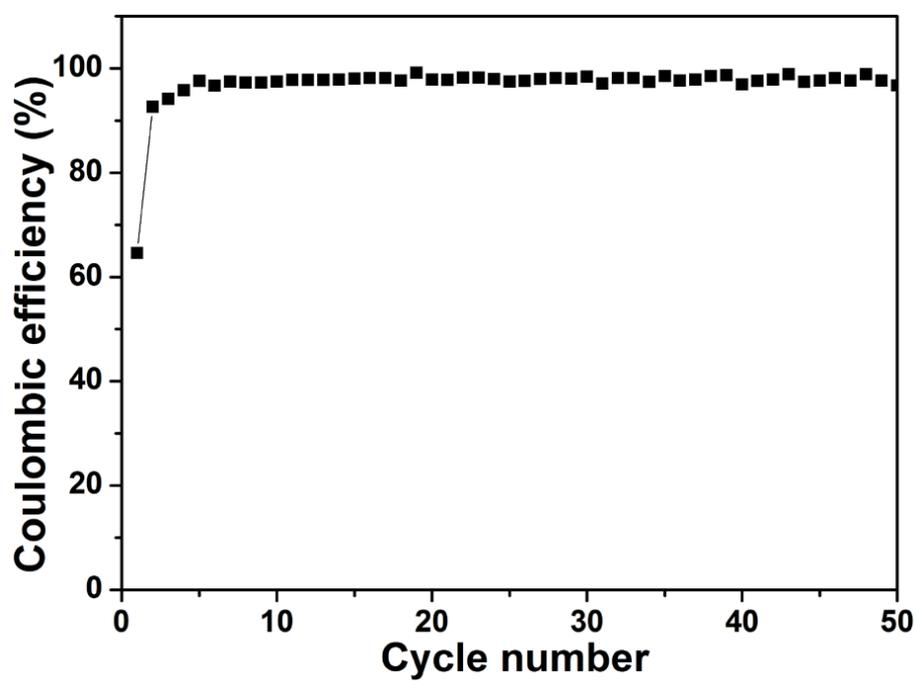


Fig. S4

Fig. S4 Coulombic efficiency of Co_3O_4 hierarchical structures at the current density of 89 mA/g with a voltage window of 0.01–3.0 V.

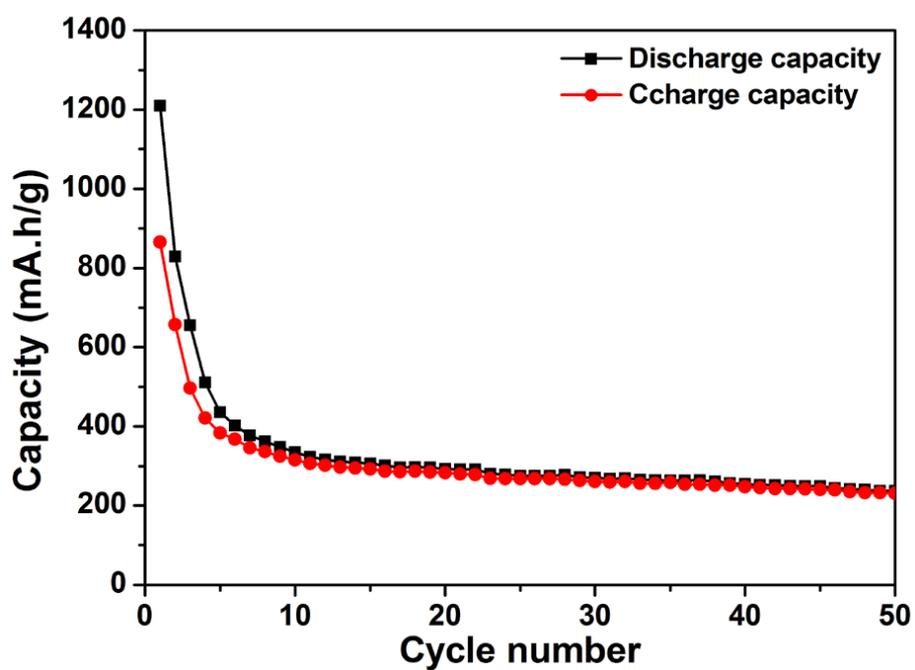


Fig. S5

Fig. S5 Cycling performance of Co-based material prepared by the conventional hydrothermal method at a current density of 89 mA/g with a voltage window of 0.01–3.0 V.

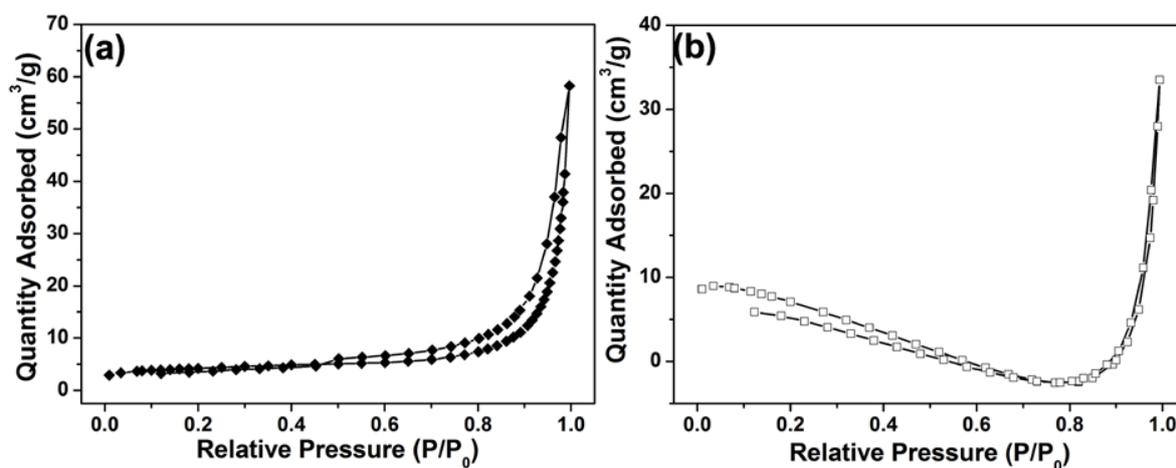


Fig. S6

Fig. S6 Nitrogen adsorption and desorption isotherms for (a) the Co₃O₄ hierarchical structures synthesized through the modified hydrothermal process; (b) Co₃O₄ obtained through the conventional hydrothermal method.

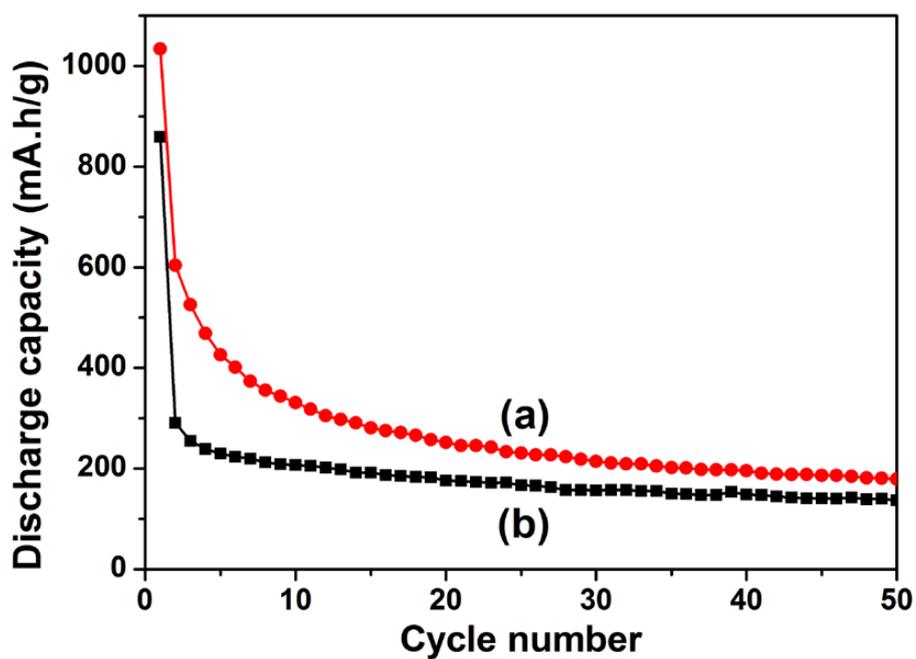


Fig. S7

Fig. S7 Cycling performances of (a) NiO and (b) CuO samples, obtained through the conventional hydrothermal method, at 0.1 C, e.g (a) 72 mA/g and (b) 67 mA/g, within a voltage window of 0.01–3.0 V, respectively.