

Supporting Information

Three-Dimensional $\text{NiCo}_2\text{O}_4@/\text{NiMoO}_4$ Core/Shell Nanowire for Electrochemical Energy Storage

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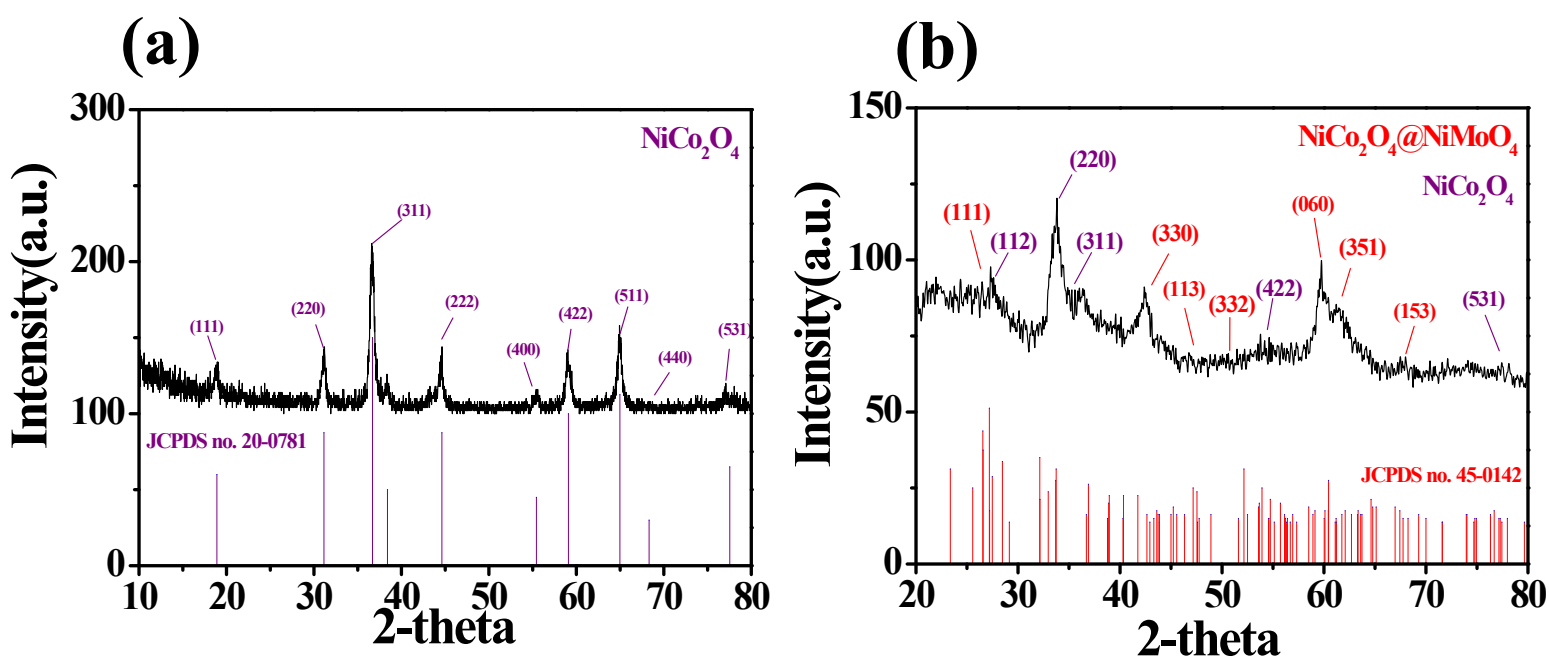


Fig. S1 (a) Typical XRD patterns of the NiCo_2O_4 NWAs (b) XRD pattern of the $\text{NiCo}_2\text{O}_4@/\text{NiMoO}_4$ (4h) core/shell composite scratched from Ni foam.

a

b

c

d

Fig. S2 (a–d) SEM images of the products obtained at different reaction times: (A) 2 h,

(B) 8 h, (C) 12 h, (D) 16 h

a

b

c

d

Fig. S3 (a–d) SEM images of the products obtained at different reaction temperatures :

(a) 80°C,(b) 120°C,(c) 200°C (d) 240 °C

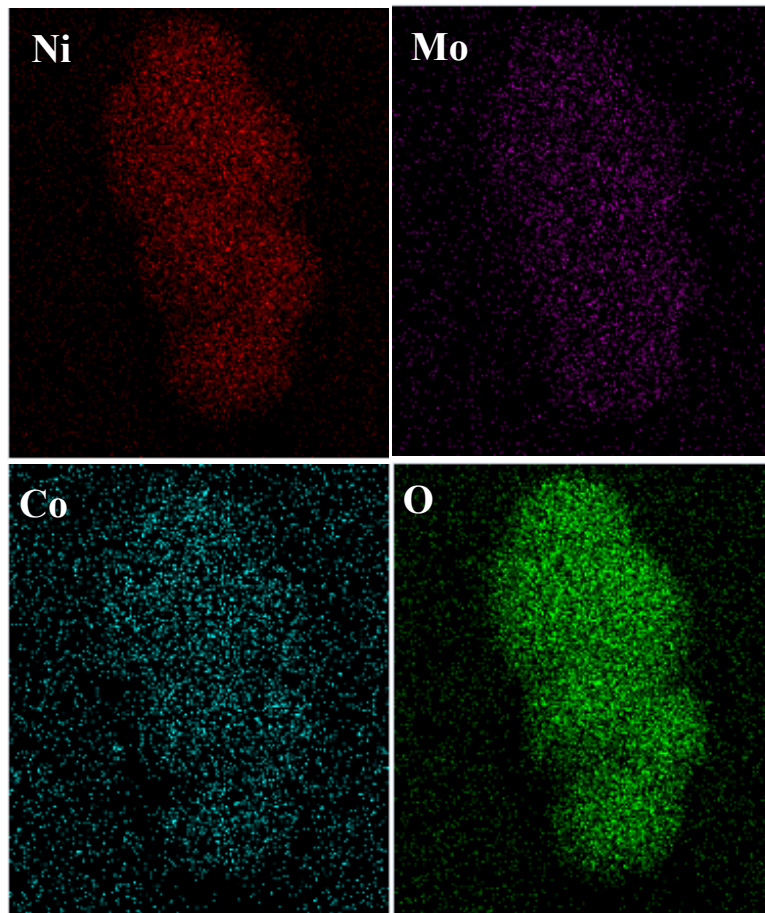


Fig.S4. EDX mapping of the $\text{NiCo}_2\text{O}_4@\text{NiMoO}_4(4\text{h})$ core/shell NWAs.

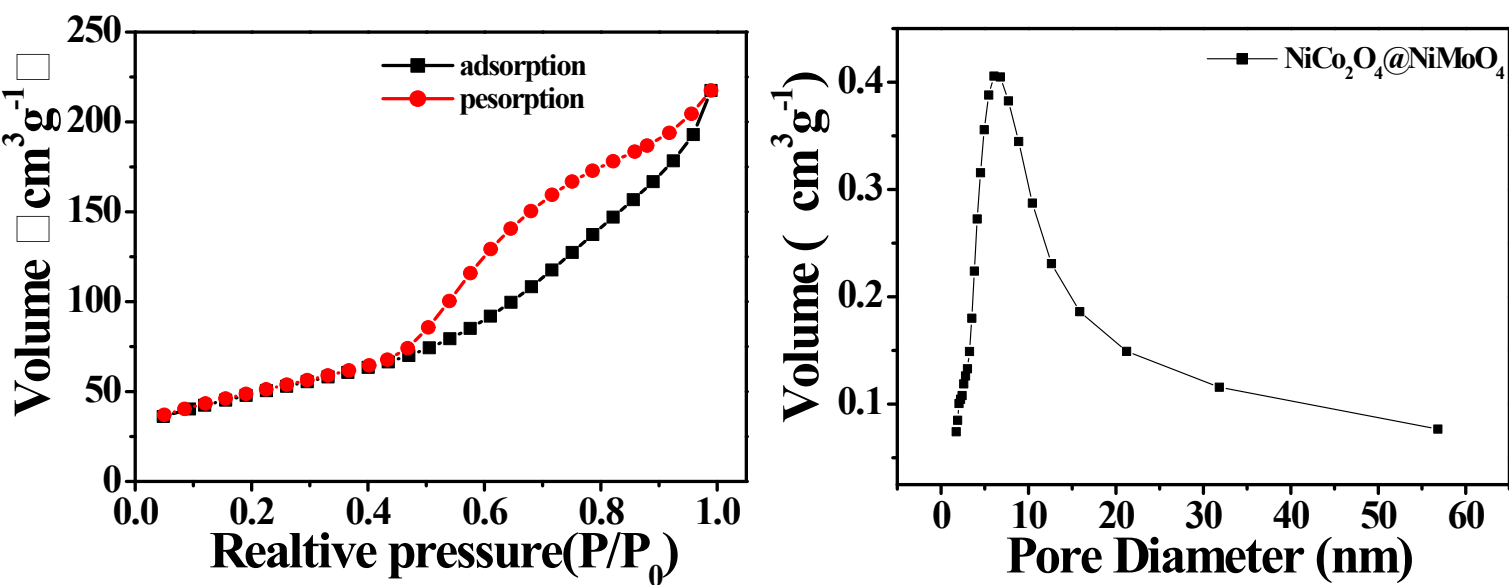


Fig S5. (a) The N₂ adsorption–desorption isotherm of NiCo₂O₄@NiMoO₄ NWAs obtained after heat treatment. (b) The corresponding pore size distributions.

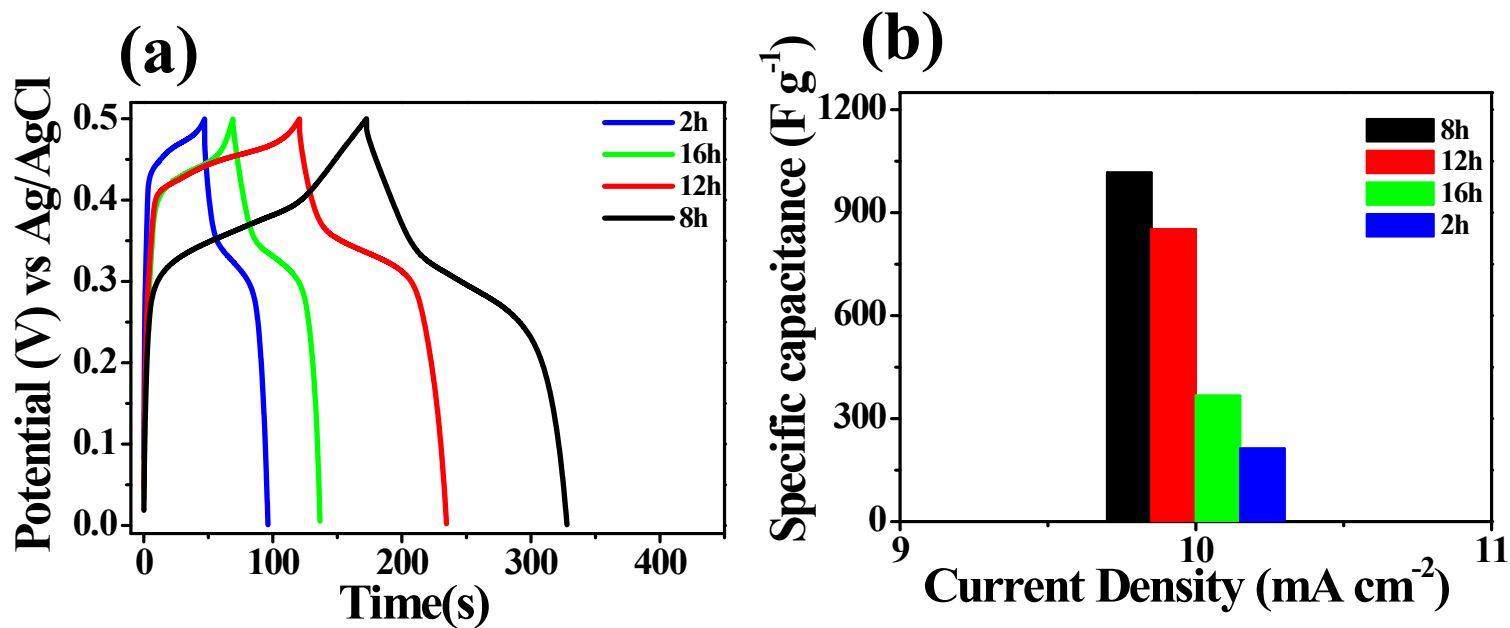


Fig.S6. (a) Galvanostatic charge–discharge curves of NiCo₂O₄ and NiCo₂O₄@NiMoO₄ at different reaction times. (b) Specific capacitance of the NiCo₂O₄@NiMoO₄ electrode at 10 mA cm⁻².

As the amount of active materials increased with the time increasing, while the flake structure grown on the surface connect the stick together and the real active area becomes less than before that influence the contribution of the stick structure to the capacitance. So the capacitance is reduced with the time increasing. There is almost no nanoflakes growth while the reaction time is about 2h. The specific surface area is very small and makes almost no contribution to the capacitance that makes the specific capacitance decrease.

Fig S7. The SEM of the NiCo₂O₄@NiMoO₄ electrode upon 5000 cycles.

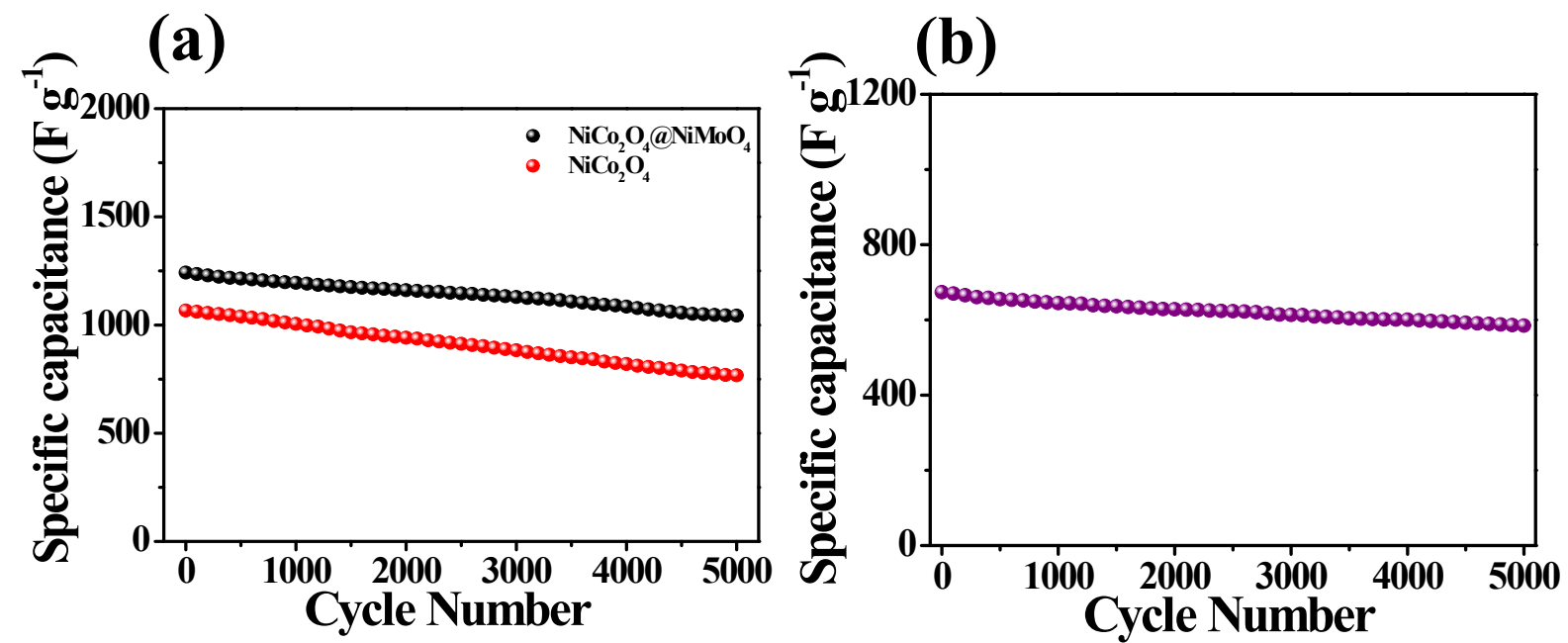


Fig S8. (a-b) Cycling stability of the NiCo₂O₄@NiMoO₄ electrode and the full cell (5000 cycles).