Supporting Information

Hierarchical $Co_{1.4}Ni_{0.6}P$@C hollow nanoflowers assembled by ultrathin nanosheets as an anode material for high-performance lithium-ion batteries

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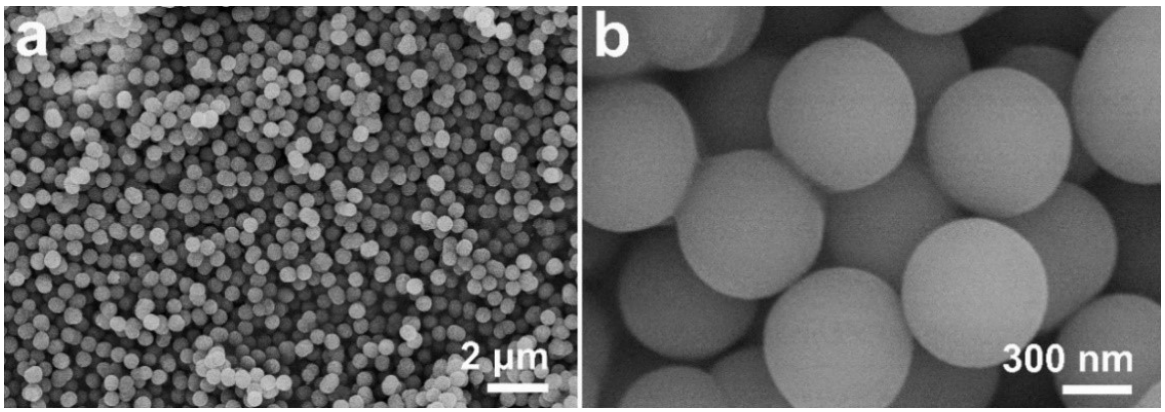

Fig. S1 (a) and (b) SEM image and Enlarged image of the NiCo-glycerate nanospheres.

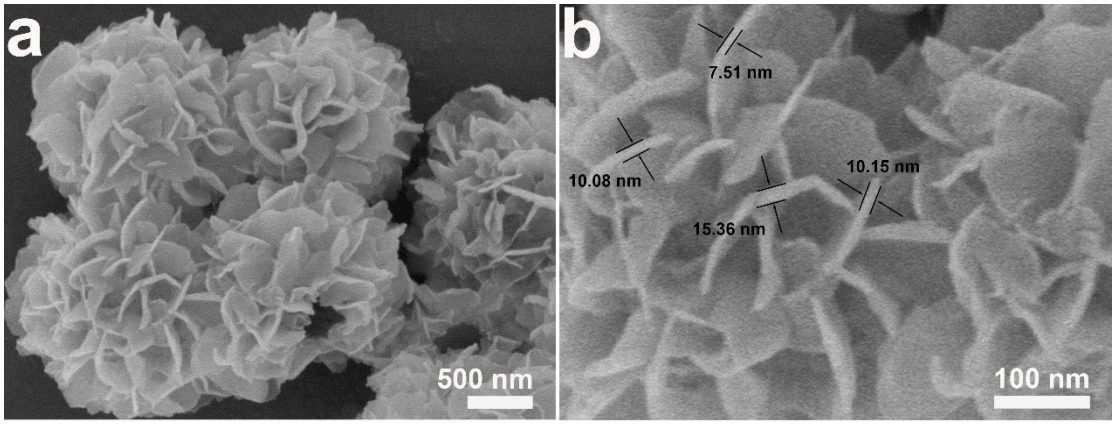

Fig. S2 (a) and (b) SEM images of the $NiCo(OH)_x$.

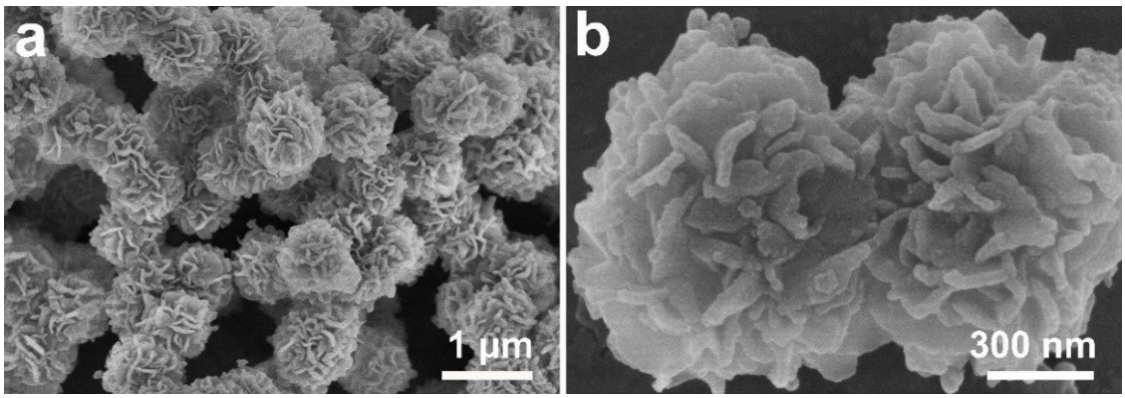

Fig. S3 (a) and (b) SEM images of the $NiCo(OH)_x$@PDA at different magnification.

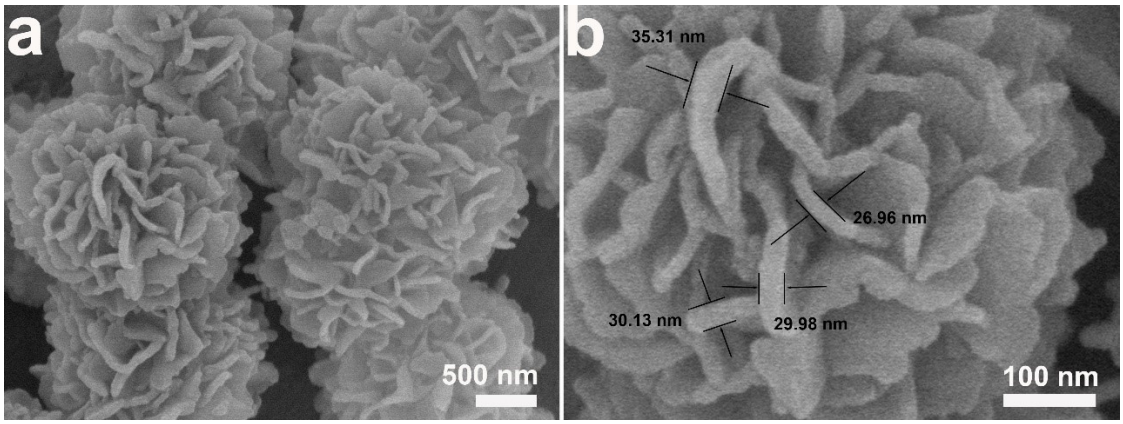

Fig. S4 (a) and (b) SEM images of the $Co_{1.4}Ni_{0.6}P$@C HNFs.

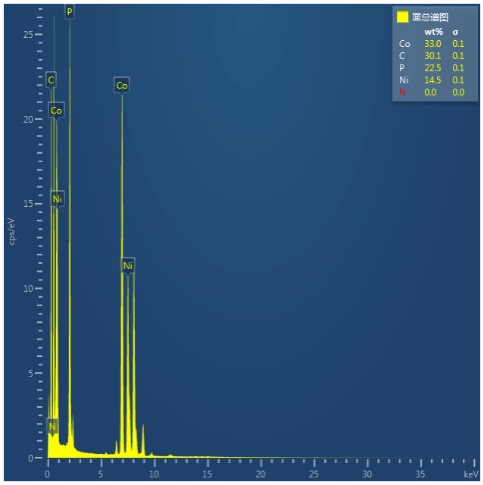

Fig. S5 EDX spectrum of the $Co_{1.4}Ni_{0.6}P$@C HNFs.

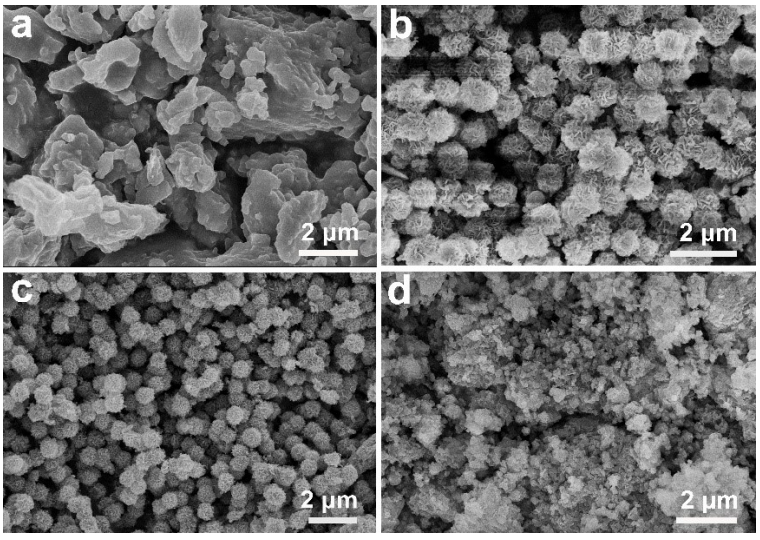

Fig. S6 SEM images of the Ni_2P@C (a), $Ni_{1.4}Co_{0.6}P$@C (b), NiCoP@C (c) and CoP@C (d).

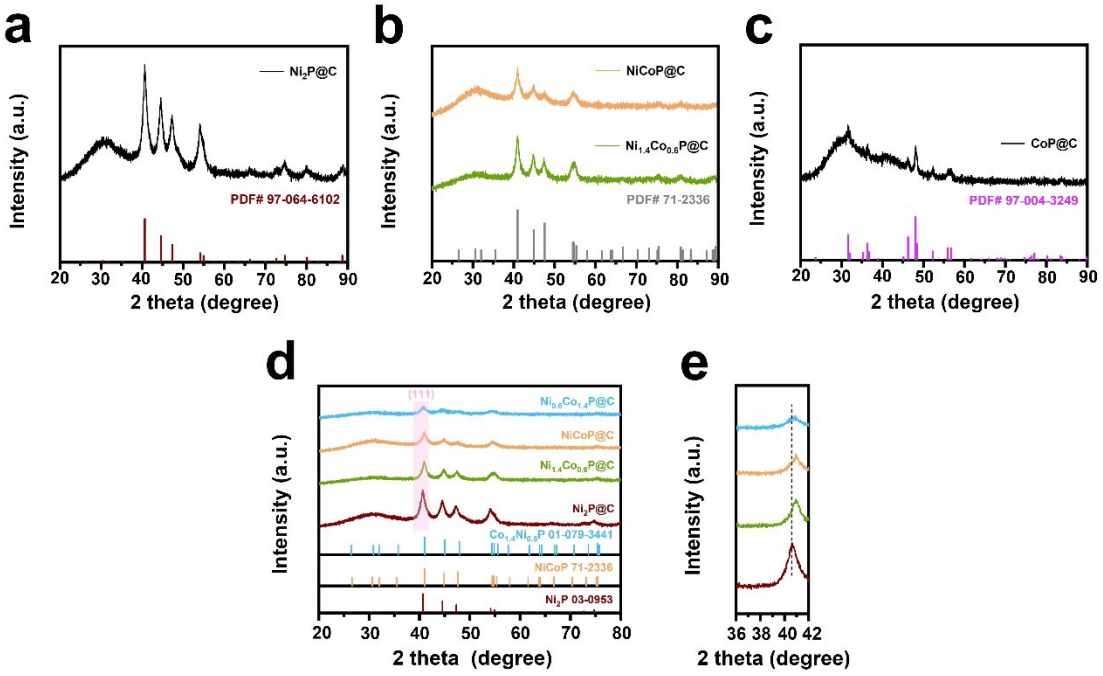

Fig. S7 XRD patterns of the Ni_2P@C (a), $Ni_{1.4}Co_{0.6}P$@C and NiCoP@C (b), CoP@C (c), Ni_2P@C, $Ni_{1.4}Co_{0.6}P$@C, NiCoP@C and $Ni_{0.6}Co_{1.4}P$@C (d), the corresponding partial magnification patterns in a 2θ range of 36-42° (e).

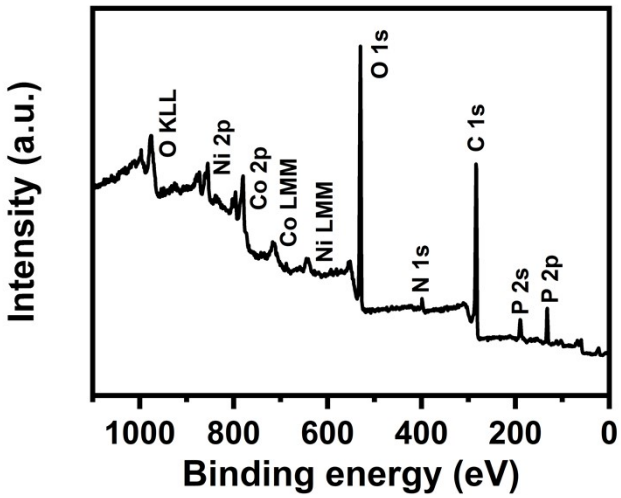

Fig. S8 XPS full-spectrum of the $Co_{1.4}Ni_{0.6}P$@C HNFs.

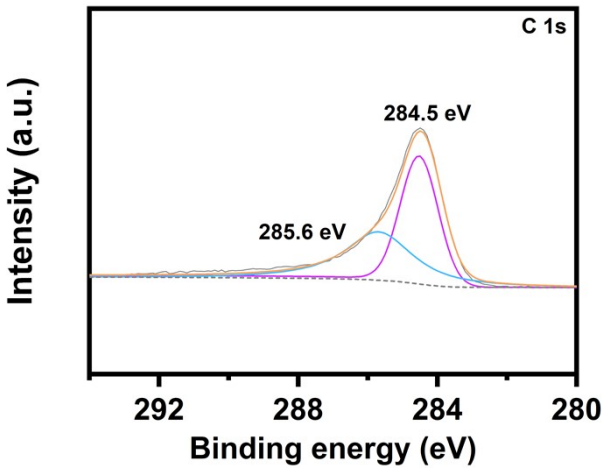

Fig. S9 High-resolution XPS spectra of C 1s in $Co_{1.4}Ni_{0.6}P$@C HNFs.

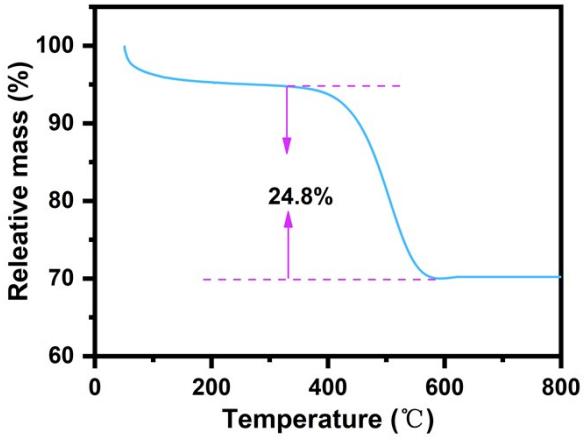

Fig. S10 TGA pattern of the $Co_{1.4}Ni_{0.6}P$@C HNFs.

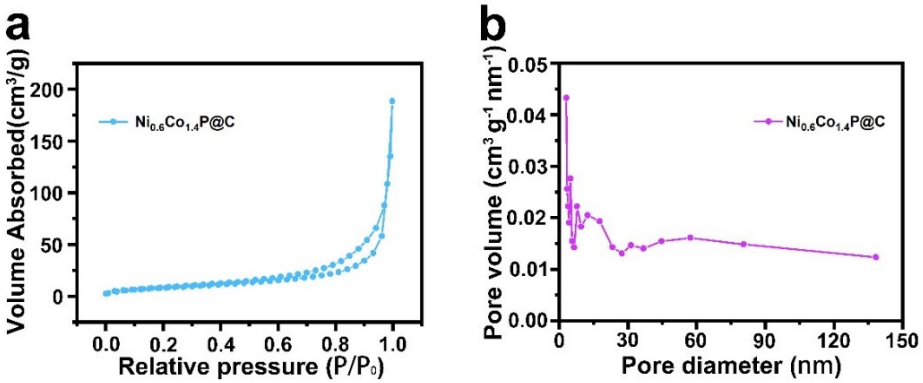

Fig. S11 (a) and (b) Nitrogen adsorption and desorption isotherms of the $Co_{1.4}Ni_{0.6}P$@C HNFs.

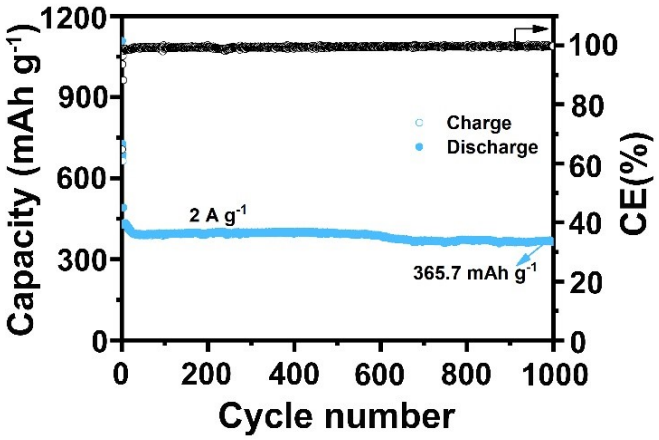

Fig. S12 Long-term cycling performance of the $Co_{1.4}Ni_{0.6}P$@C electrode at 2.0 A g^{-1}.

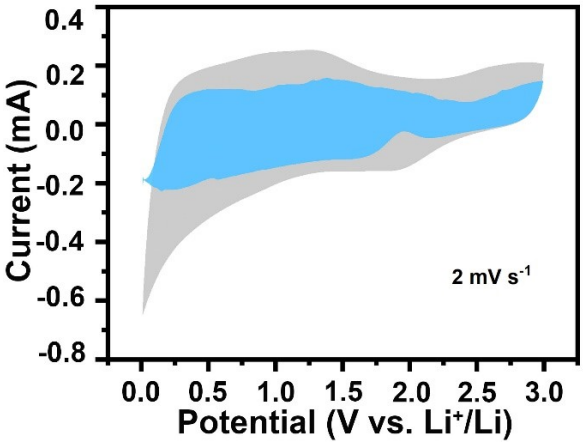

Fig. S13 CV curve of the $Co_{1.4}Ni_{0.6}P$@C electrode at 2 mV s^{-1}, the shaded area shows the capacitive controlled regions.

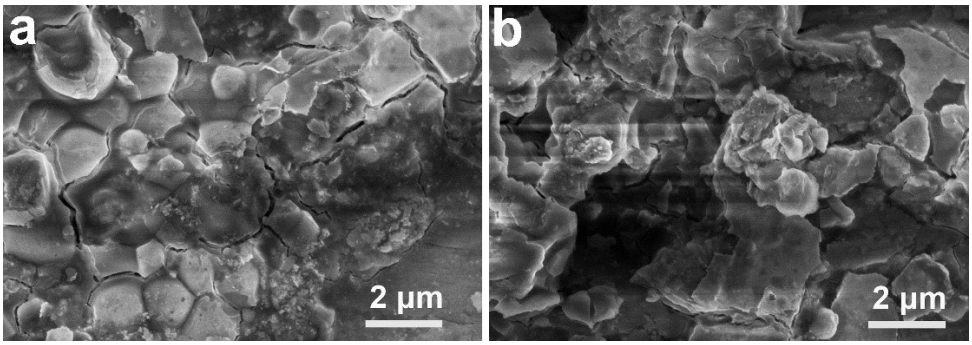

Fig. S14 (a) NiCoP@C electrode after 2000 cycles at the current density of 10 A g^{-1}. (b) $Ni_{1.4}Co_{0.6}P$@C electrode after 2000 cycles at the current density of 10 A g^{-1}.