

Supplementary Information

Rational construction of yolk-shell CoP/N,P co-doped mesoporous carbon nanowires as anode for ultralong sodium-ion battery

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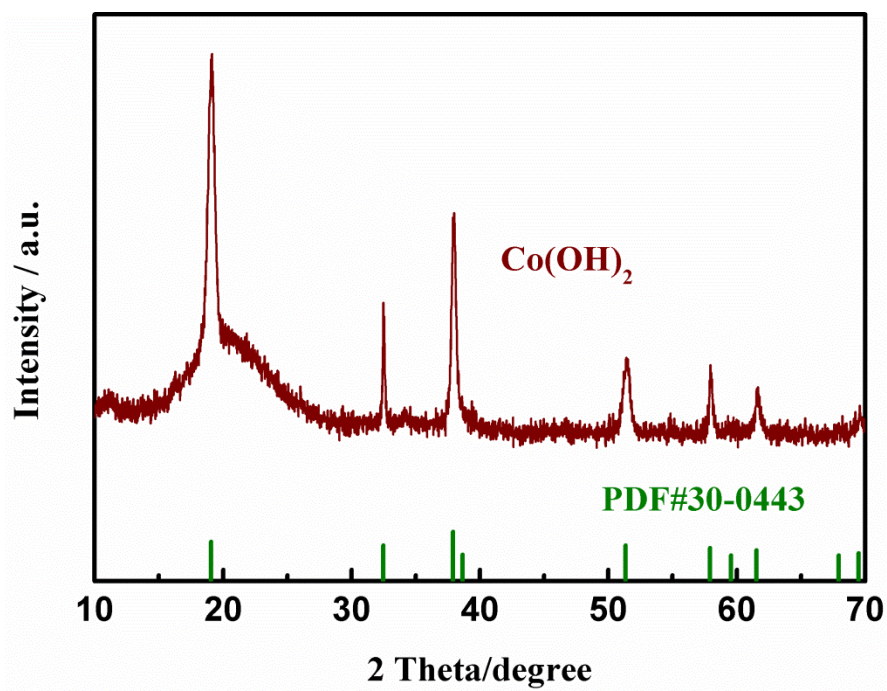


Fig. S1 XRD patterns of Co(OH)_2 (Co-Pre) powders.

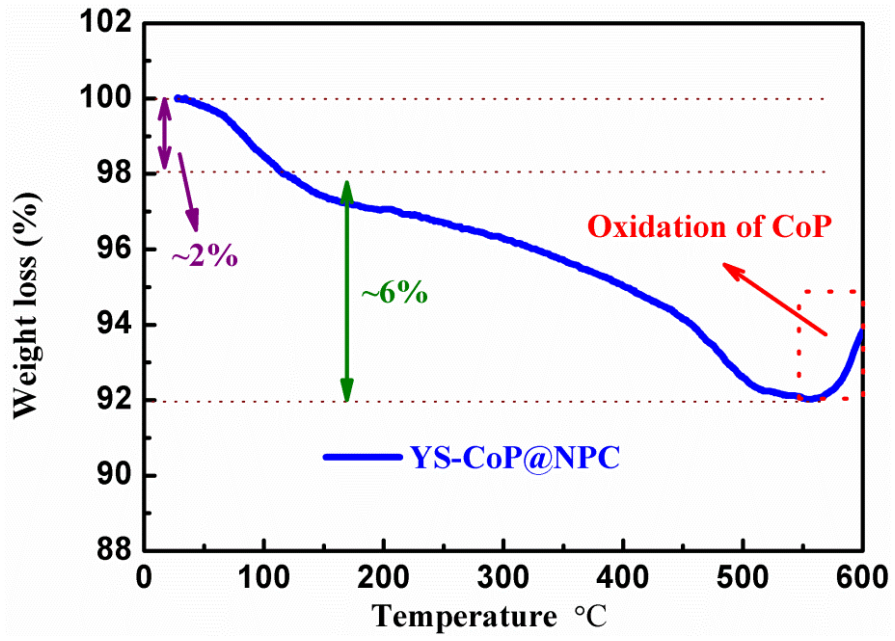


Fig. S2 TG curves of YS-CoP@NPC.

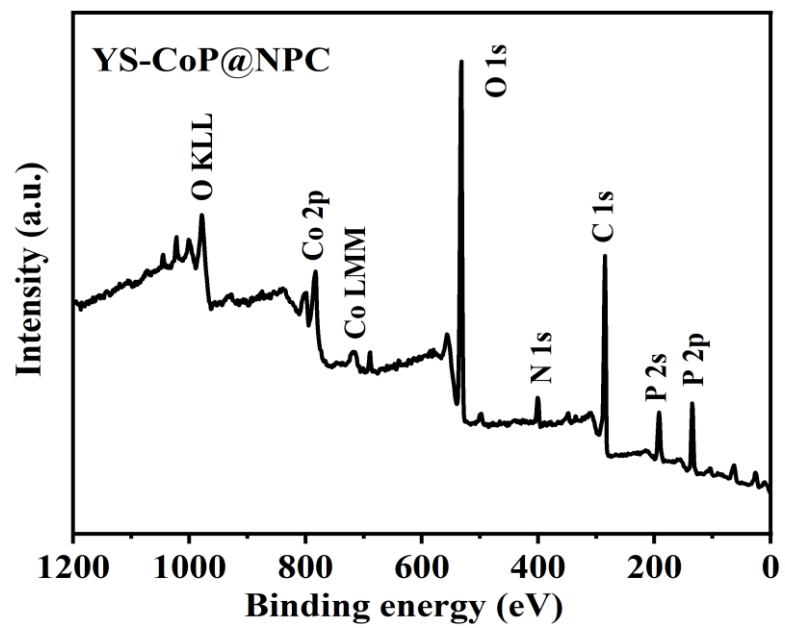


Fig. S3 The full survey scan spectrum of YS-CoP@NPC samples.

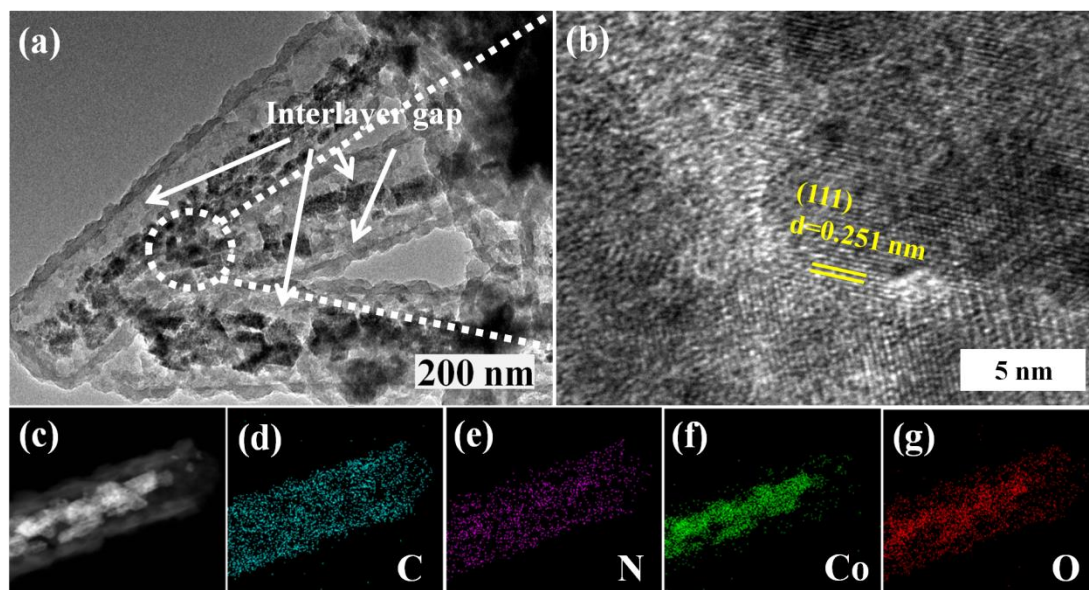


Fig. S4 TEM images (a,b) and element maps (c-g) of YS-CoO@NC.

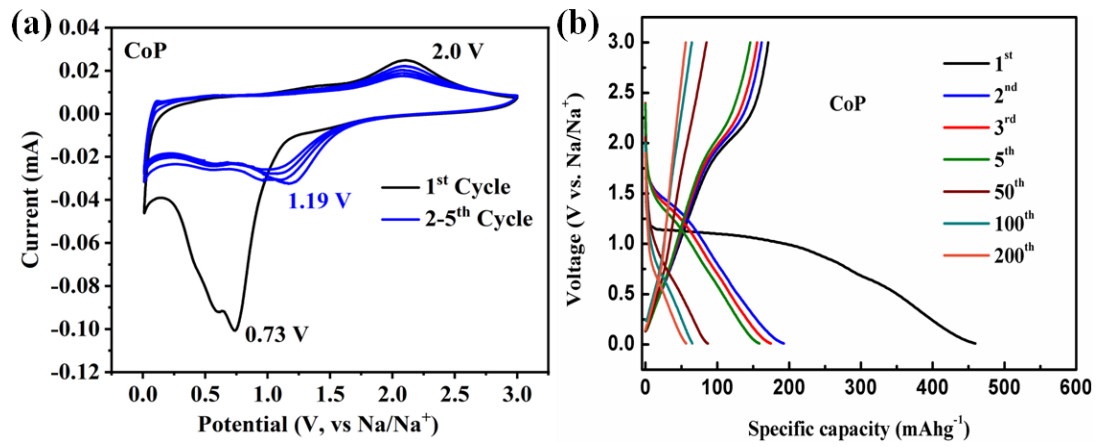


Fig. S5 The (a) CV and (b) galvanostatic charge-discharge curves of CoP.

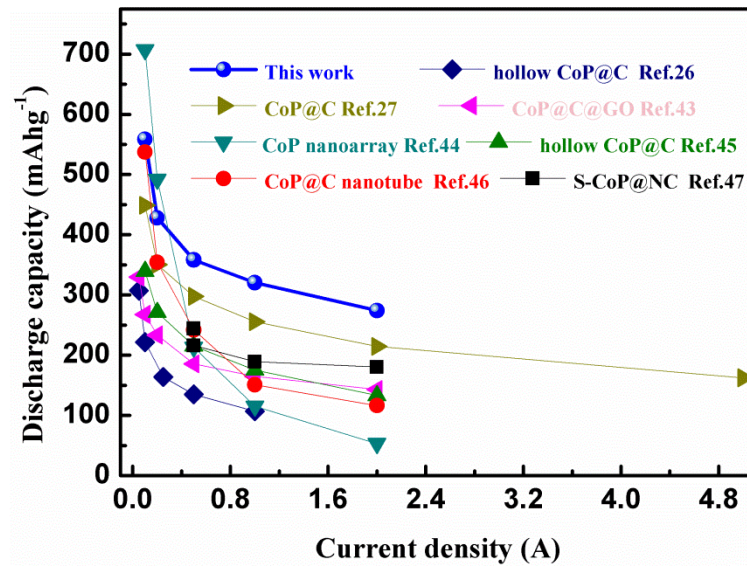


Fig. S6 The comparison of SIBs performances between our work and other reports.

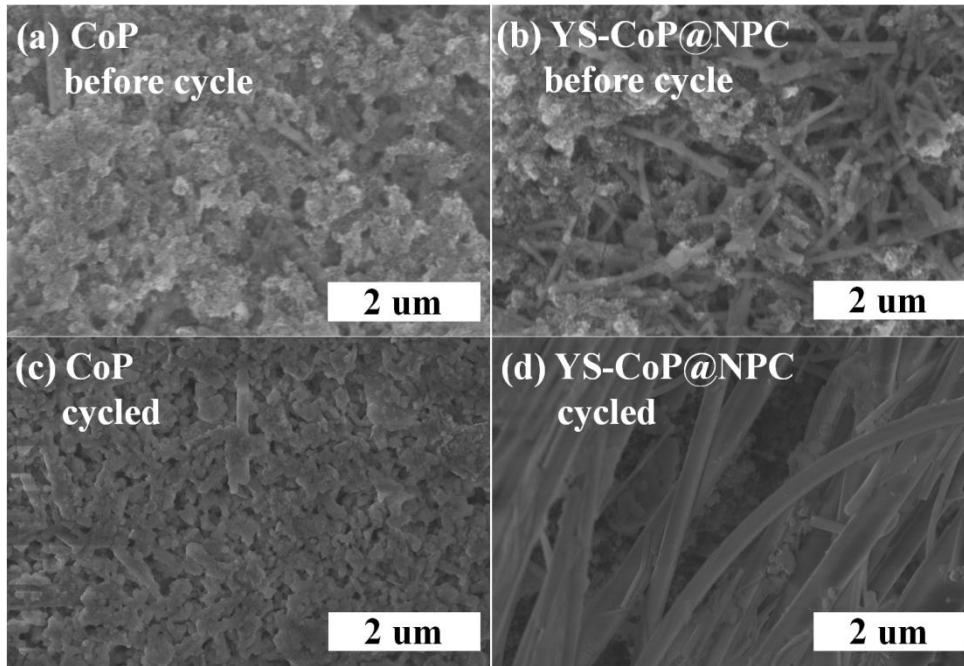


Fig. S7 The surface morphologies of pristine (a) CoP, (b) YS-CoP@NPC electrodes and (c) CoP, (d) YS-CoP@NPC electrodes after 50 cycles.

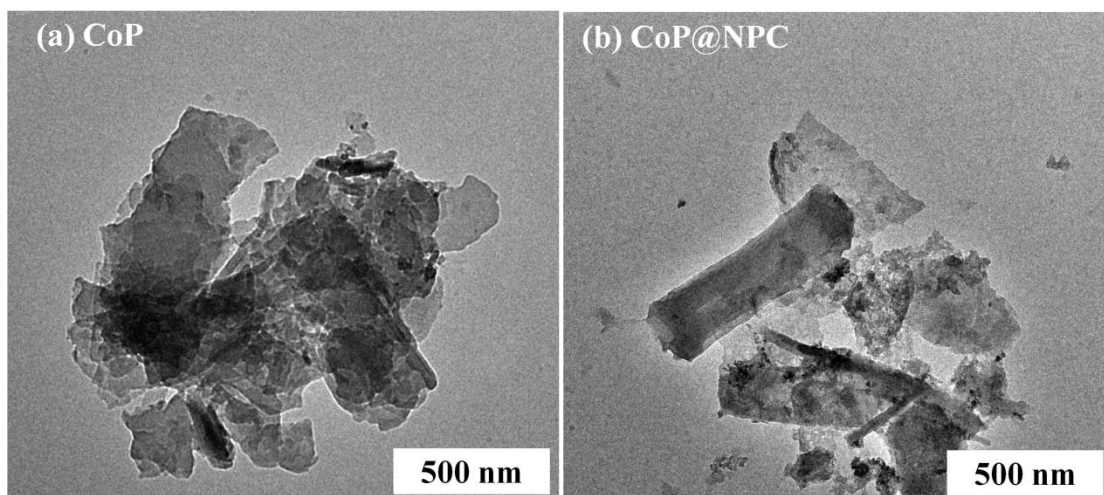


Fig. S8 The TEM images of (a) CoP and (b) YS-CoP@NPC powders after 50 cycles.

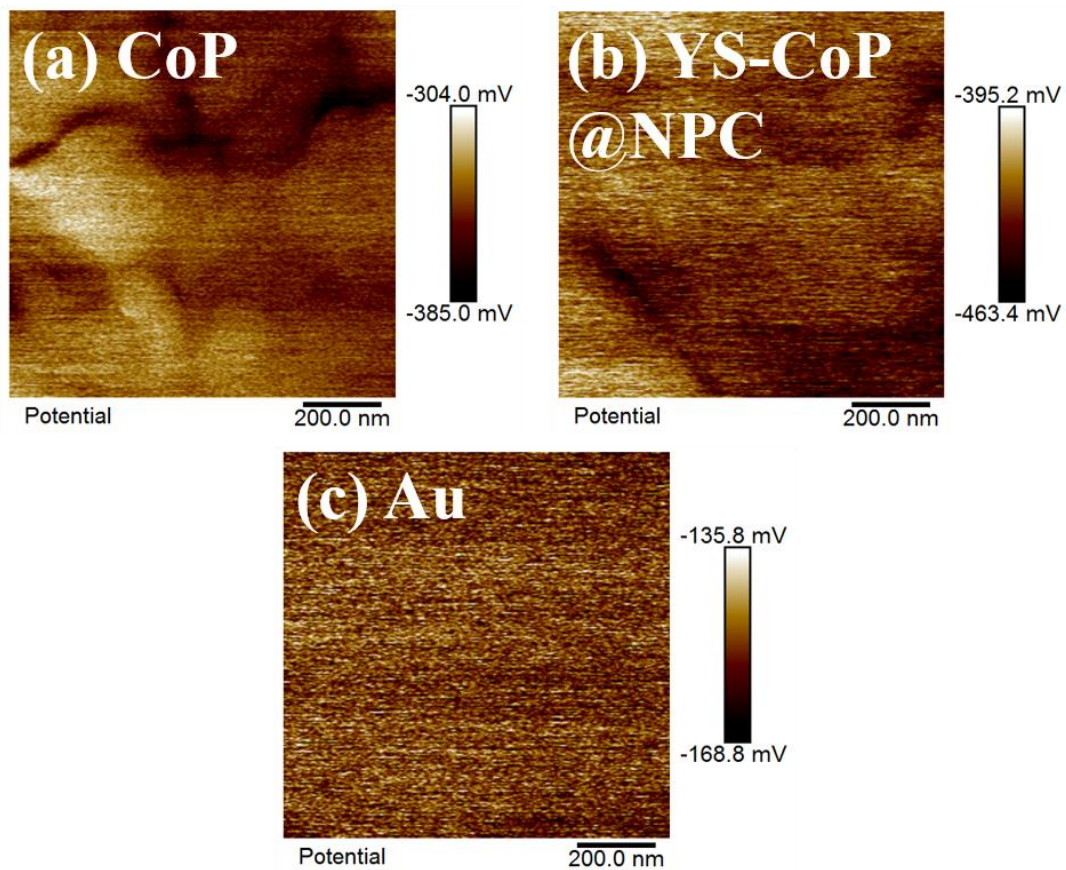


Fig. S9 The surface potential maps of (a) CoP and (b) YS-CoP@NPC electrodes; (c) the surface potential map of Au as a reference sample.

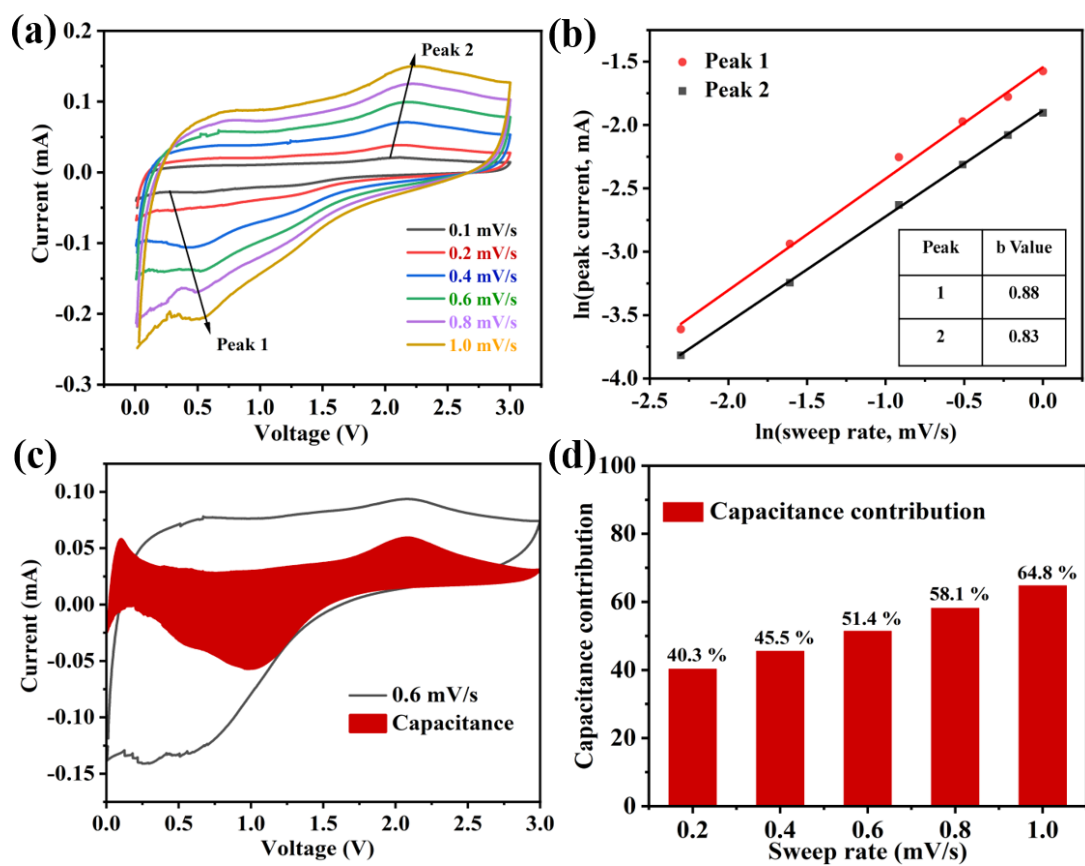


Fig. S10 (a) CV curves and (b) corresponding log(i) plots at each redox peak of the YS-CoP@NPC electrode at various sweep rates; (c) Pseudocapacitive contribution shadow diagram in a CV curve at 0.6 mV s^{-1} ; (d) Percentage bar chart of pseudocapacitive contribution at different sweep rates.