Supporting Information

Nanoflower-Like N-Doped C/CoS_2 as High-Performance Anode Materials for Na-Ion Batteries

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The file includes Fig. S1-S9.

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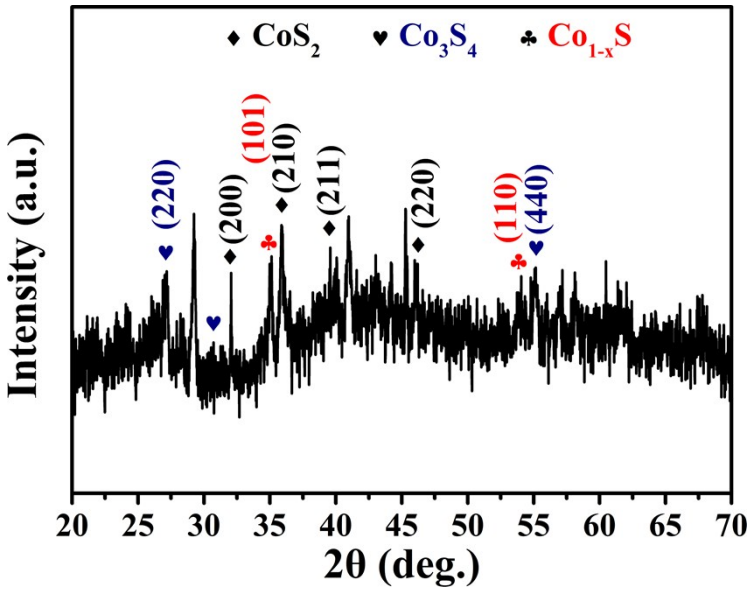

Fig. S1 XRD pattern of the obtained N-C/CoS_x hybrid composites after solvothermal process.

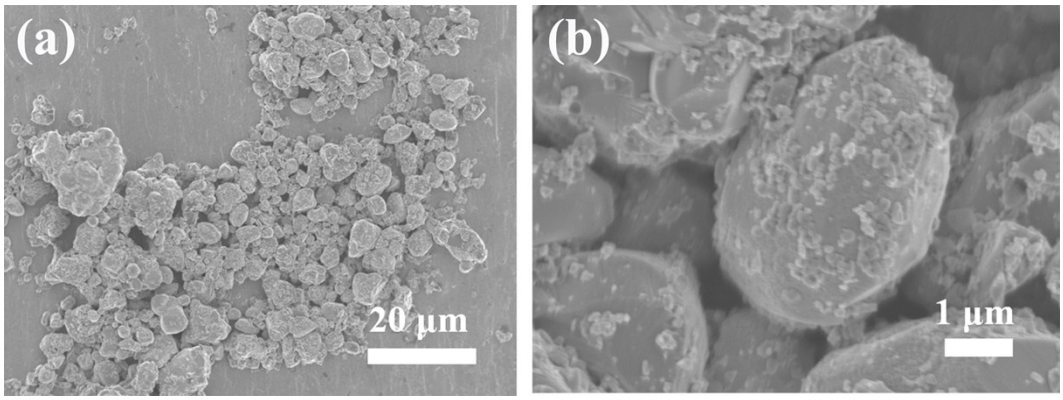

Fig. S2 SEM images of bare CoS_2.

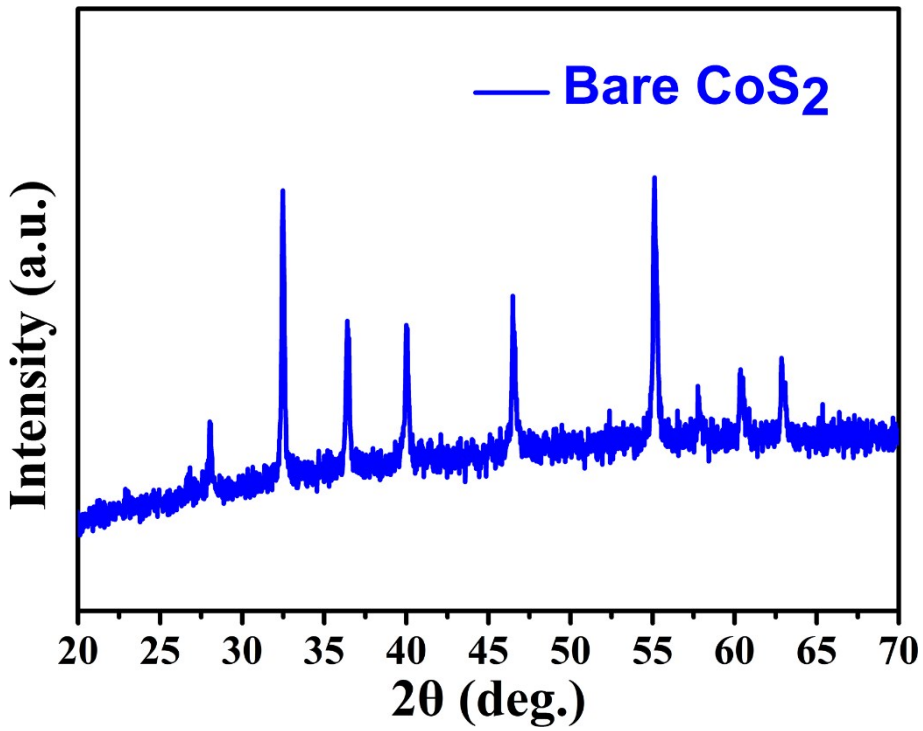

Fig. S3 XRD pattern of the bare CoS_2.

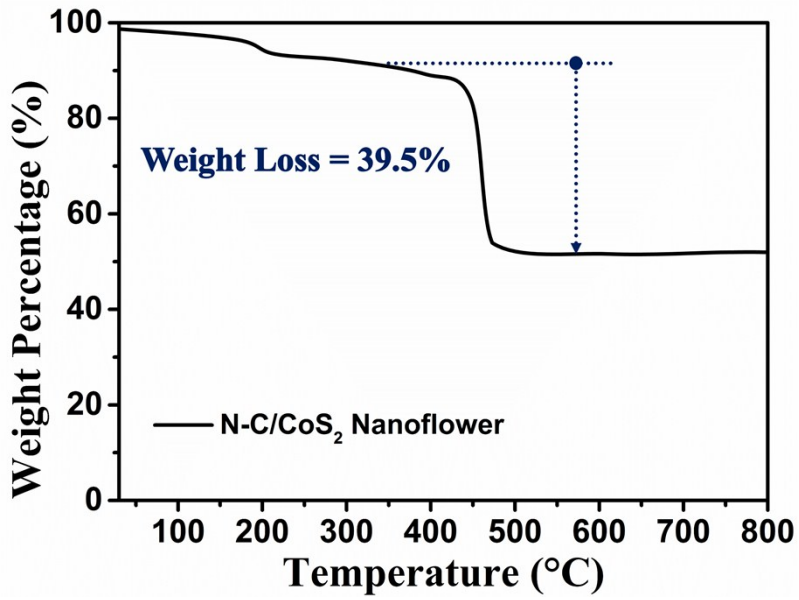

Fig. S4 TG curve of nanoflower-like N-C/CoS_2 composites to determine the carbon

content in the composites. The carbon mass loss is assigned to the temperature ranging from 400 to 500 °C.

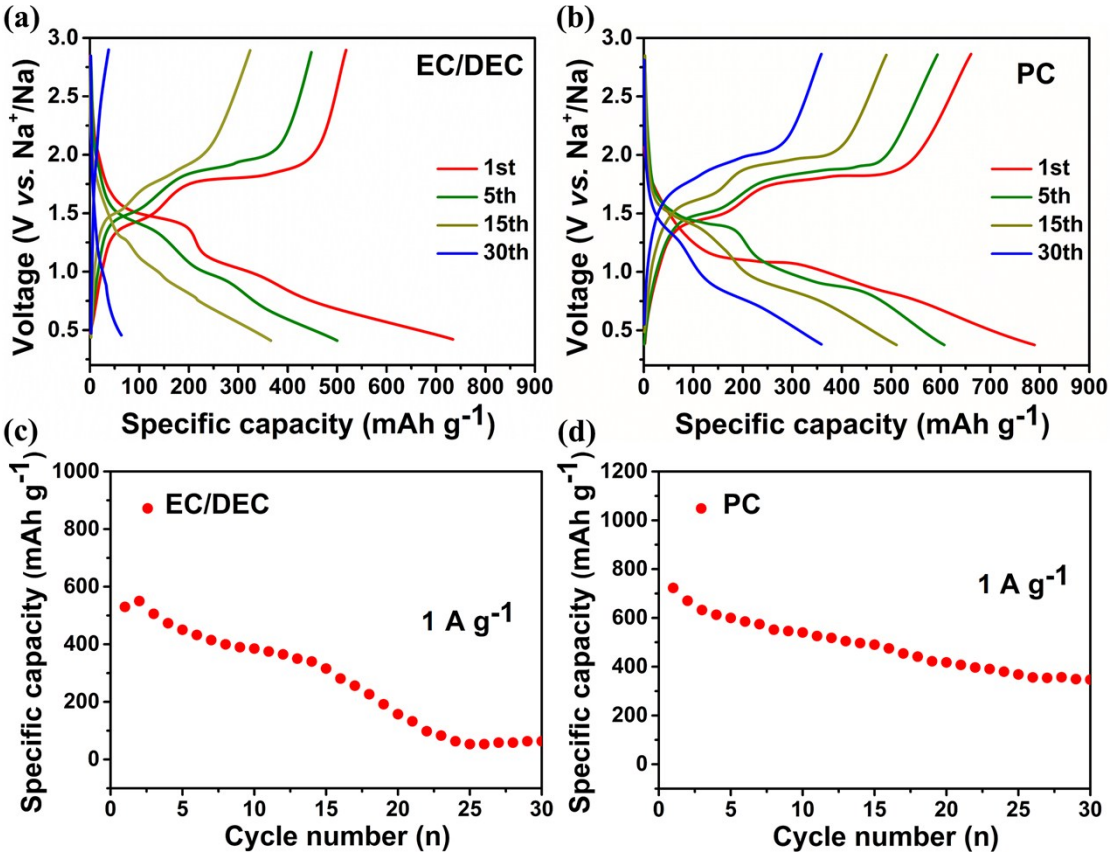

Fig. S5 Charge-discharge curves of N-C/CoS_2 electrodes using 1 M $NaCF_3SO_3$ in (a) EC/DEC, (b) PC at 1 A g^{-1} in potential range of 0.4-2.9 V and (c, d) cycling performance in the two different solvents.

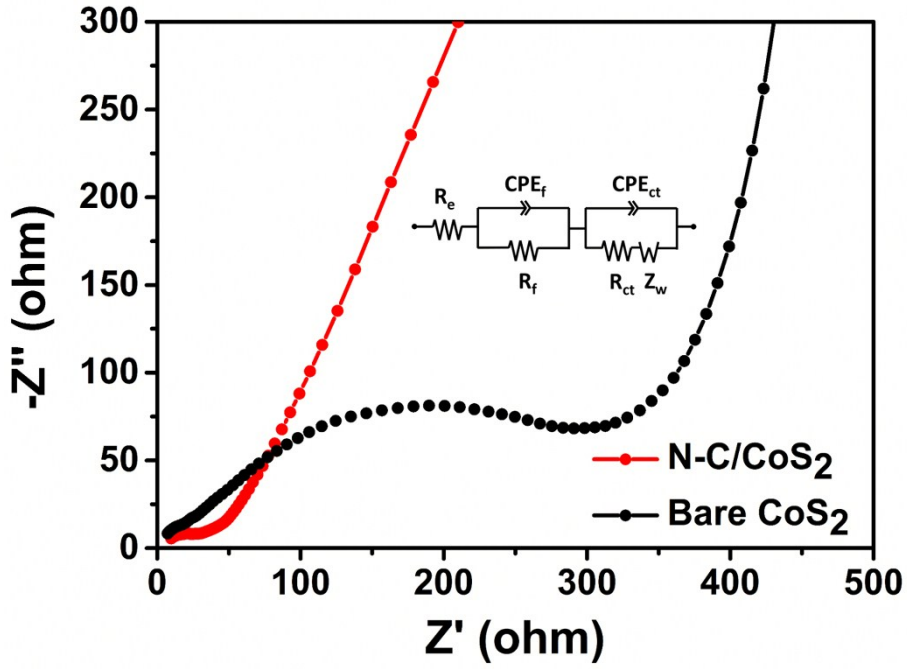

Fig. S6 Electrochemical impedance spectra of N-C/CoS_2 and bare CoS_2.

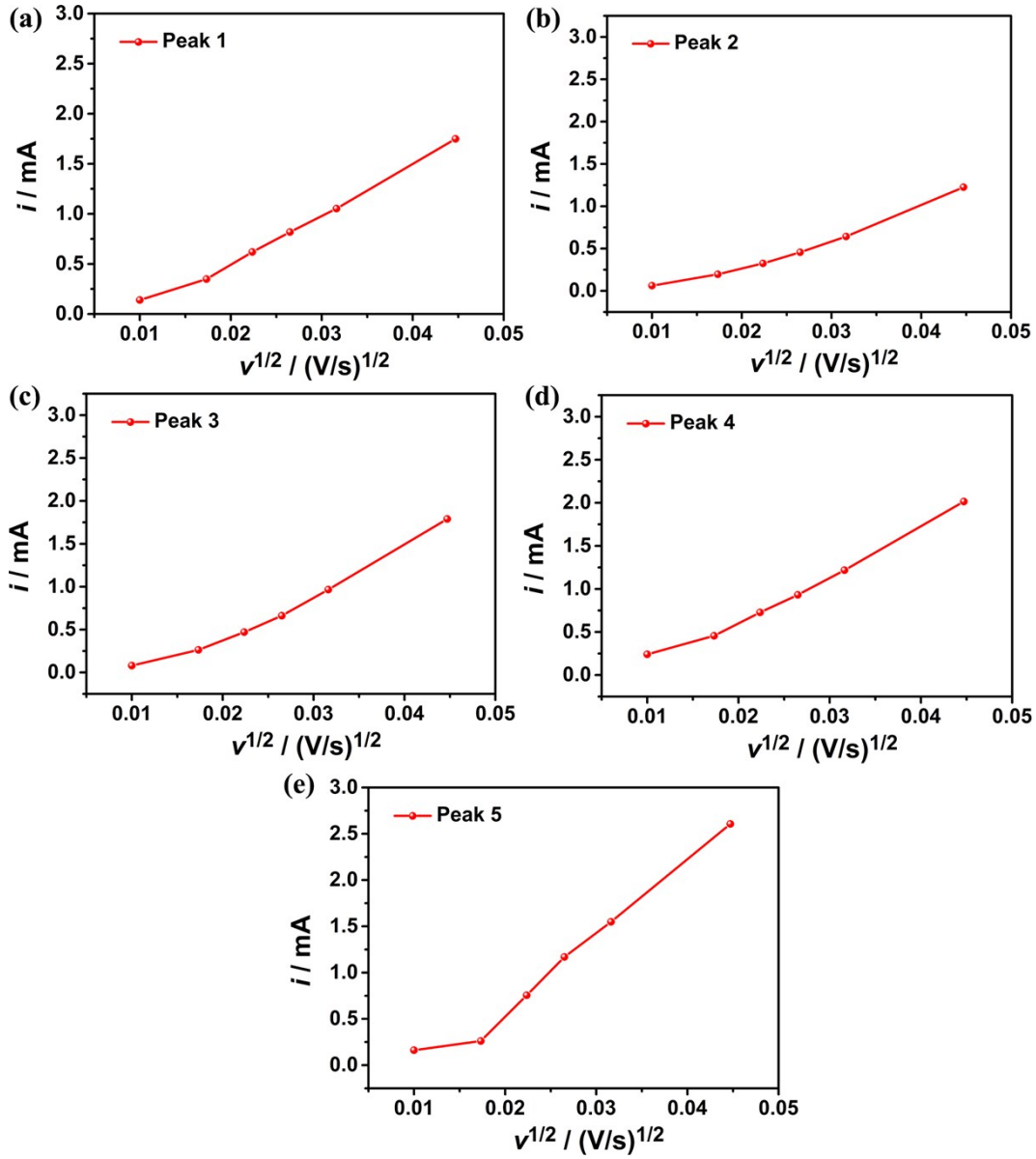

Fig. S7 *i* vs. $v^{1/2}$ plots at each redox peak of CV curves (peak current *i*, scan *v*): Peak 1, Peak 2, Peak 3, Peak 4, Peak 5, respectively.

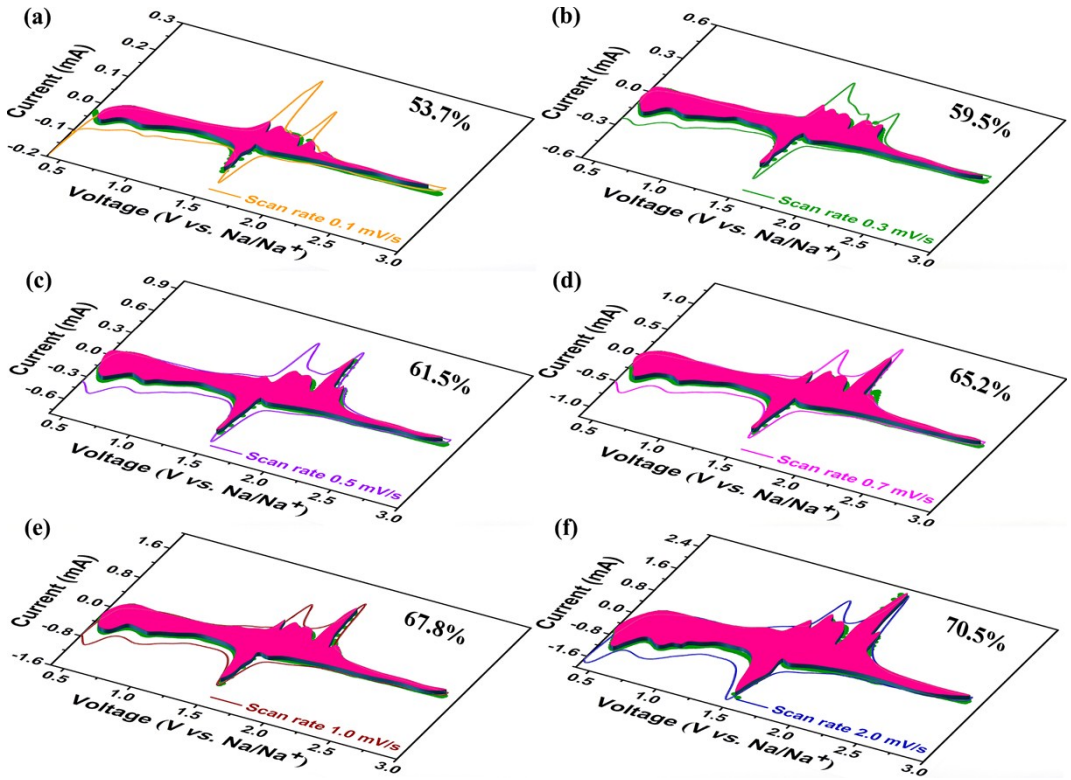

Fig. S8 CV curves with the pseudocapacitive fraction shown by the red region at various scan rates: (a) scan rate =0.1 mV/s, (b) scan rate =0.3 mV/s, (c) scan rate =0.5 mV/s, (d) scan rate =0.7 mV/s, (e) scan rate =1.0 mV/s, (f) scan rate =2.0 mV/s.

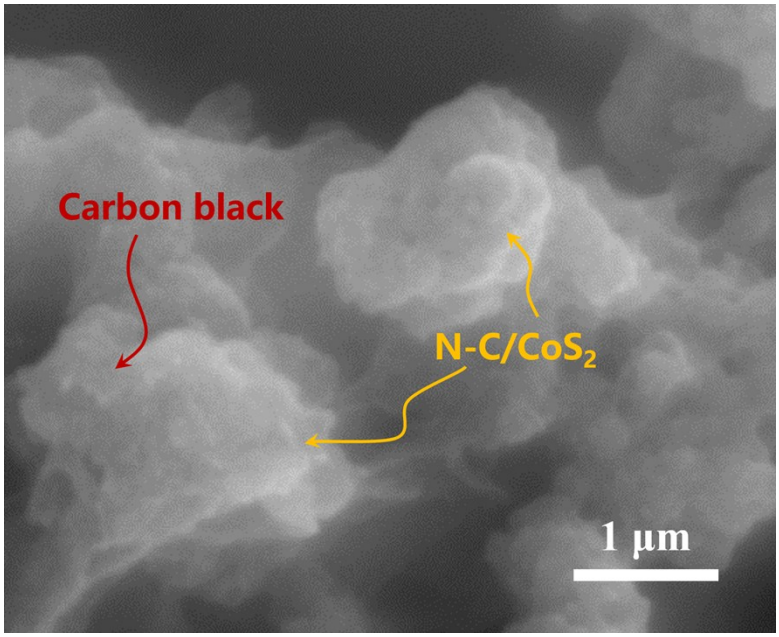

Fig. S9 SEM image of nanoflower-like N-C/CoS_2 electrode after 50 cycles.