

Hetero-nuclear Coordinated Compounds for Use In High-Performance Supercapacitor Electrode Materials Design

Supporting information

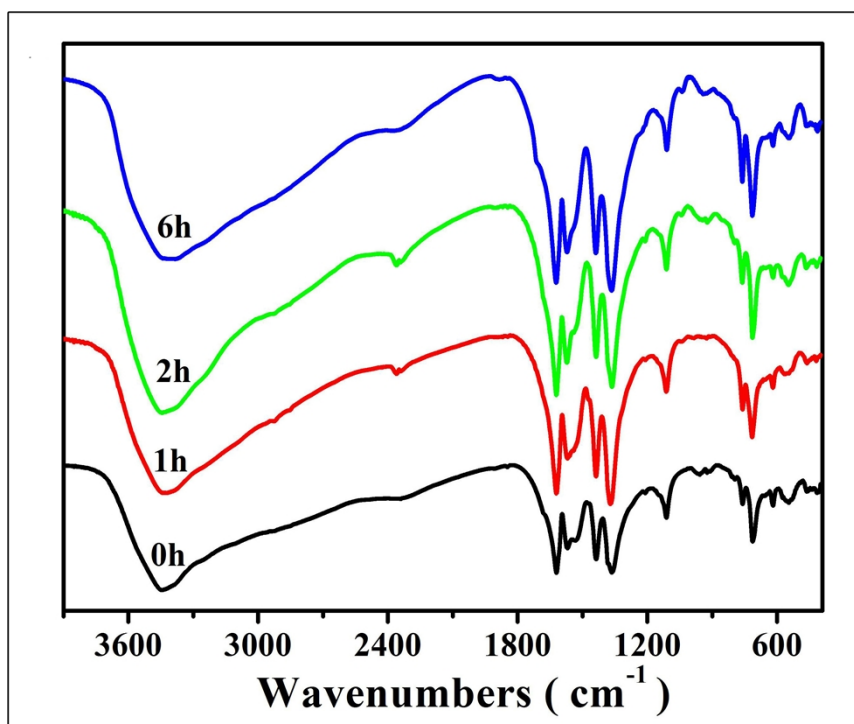


Fig. S1. (a) The IR spectra of single crystals of 1, and Ni²⁺-exchanged single crystals for 1 h, 2 h, and 6 h.

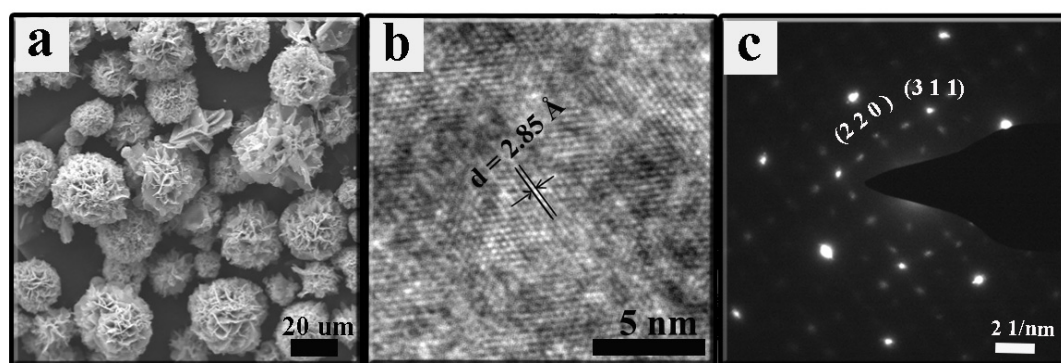


Fig. S2 (a) SEM image of Ni_xCo_{3-x}S₄. (b) HRTEM image of Ni_{0.42}Co_{2.58}S₄. (c) SAED pattern of Ni_{0.42}Co_{2.58}S₄.

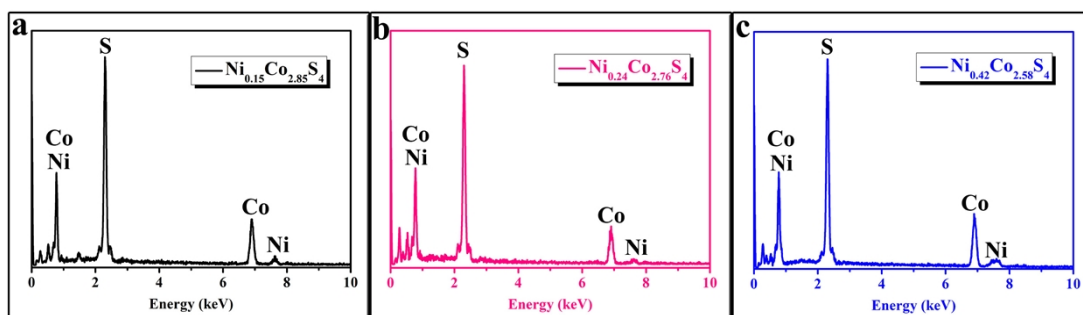


Fig. S3 EDX spectra of (a) $\text{Ni}_{0.15}\text{Co}_{2.85}\text{S}_4$, (b) $\text{Ni}_{0.24}\text{Co}_{2.76}\text{S}_4$, (c) $\text{Ni}_{0.42}\text{Co}_{2.58}\text{S}_4$.

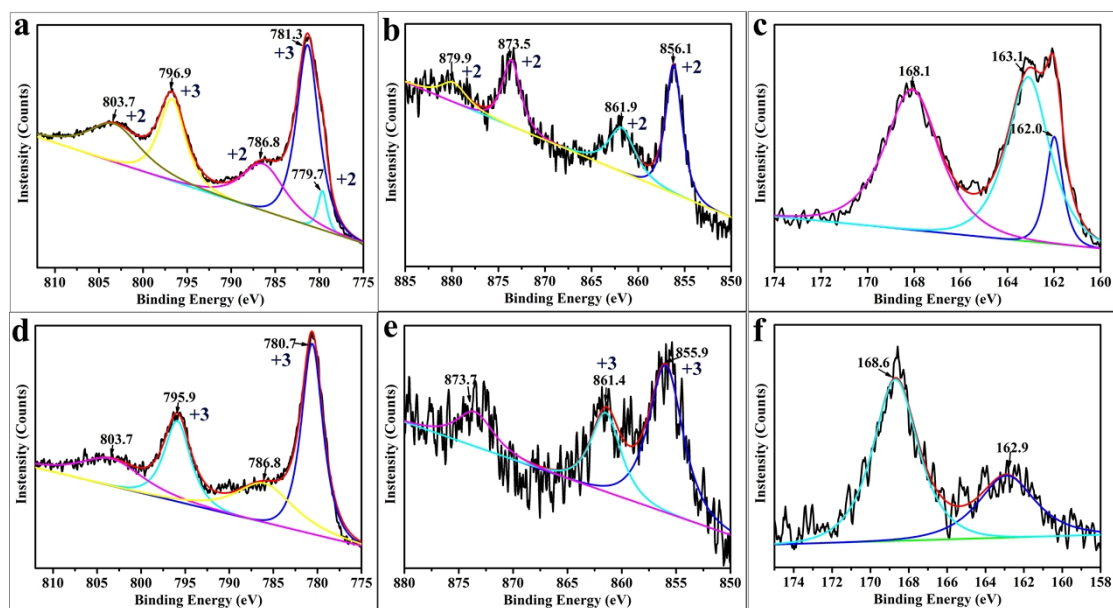


Fig. S4 The XPS spectra of (a) Co 2p, (b) Ni 2p, (c) S 2p for $\text{Ni}_{0.42}\text{Co}_{2.58}\text{S}_4$. And the XPS spectra of (d) Co 2p, (e) Ni 2p, (f) S 2p for $\text{Ni}_{0.42}\text{Co}_{2.58}\text{S}_4$ after the oxidation reaction during the CV test at the scan rate of 0.5 mV/s.

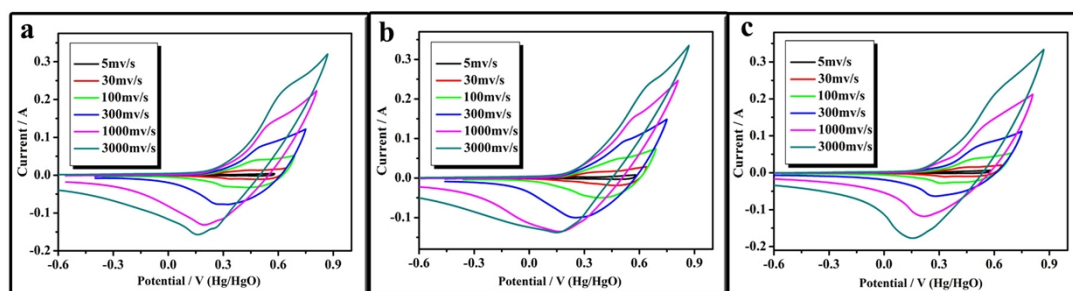


Fig. S5 CV curves of (a) $\text{Ni}_{0.15}\text{Co}_{2.85}\text{S}_4$, (b) $\text{Ni}_{0.24}\text{Co}_{2.76}\text{S}_4$, (c) $\text{Ni}_{0.42}\text{Co}_{2.58}\text{S}_4$ at various scan rates.

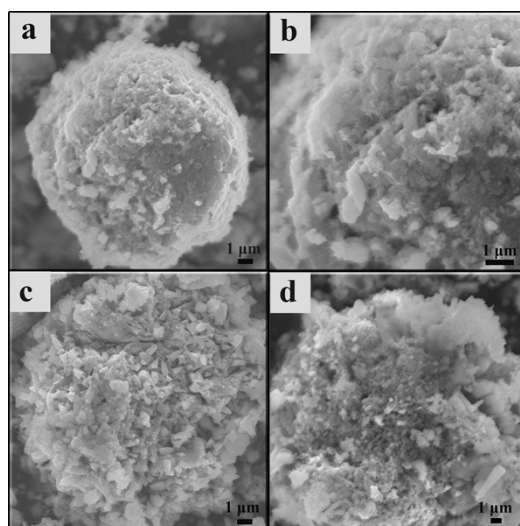


Fig. S6 (a to d) Scanning electron microscopy (SEM) images $\text{Ni}_{0.24}\text{Co}_{2.76}\text{S}_4$ after 2 cycles CV test.

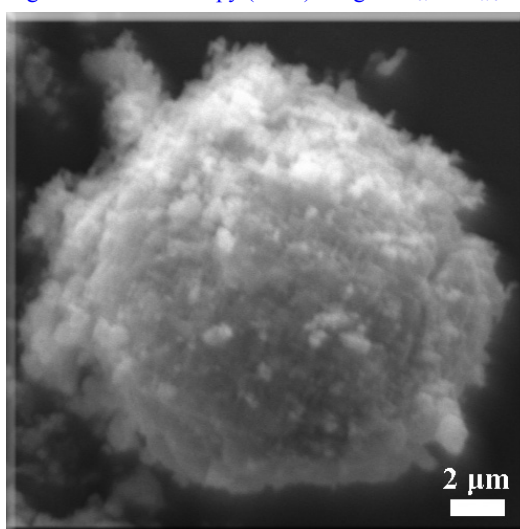


Fig. S7 Scanning electron microscopy (SEM) images $\text{Ni}_{0.24}\text{Co}_{2.76}\text{S}_4$ after 100 cycles CV test.