Supplementary Materials

Ultrathin Nanosheet Interconnected $Ni_xS_6/Ni(OH)_2$ Hybrid Nanocages: Successive Self-sacrifice Template Fabrication and Exceptional Performance in Supercapacitors

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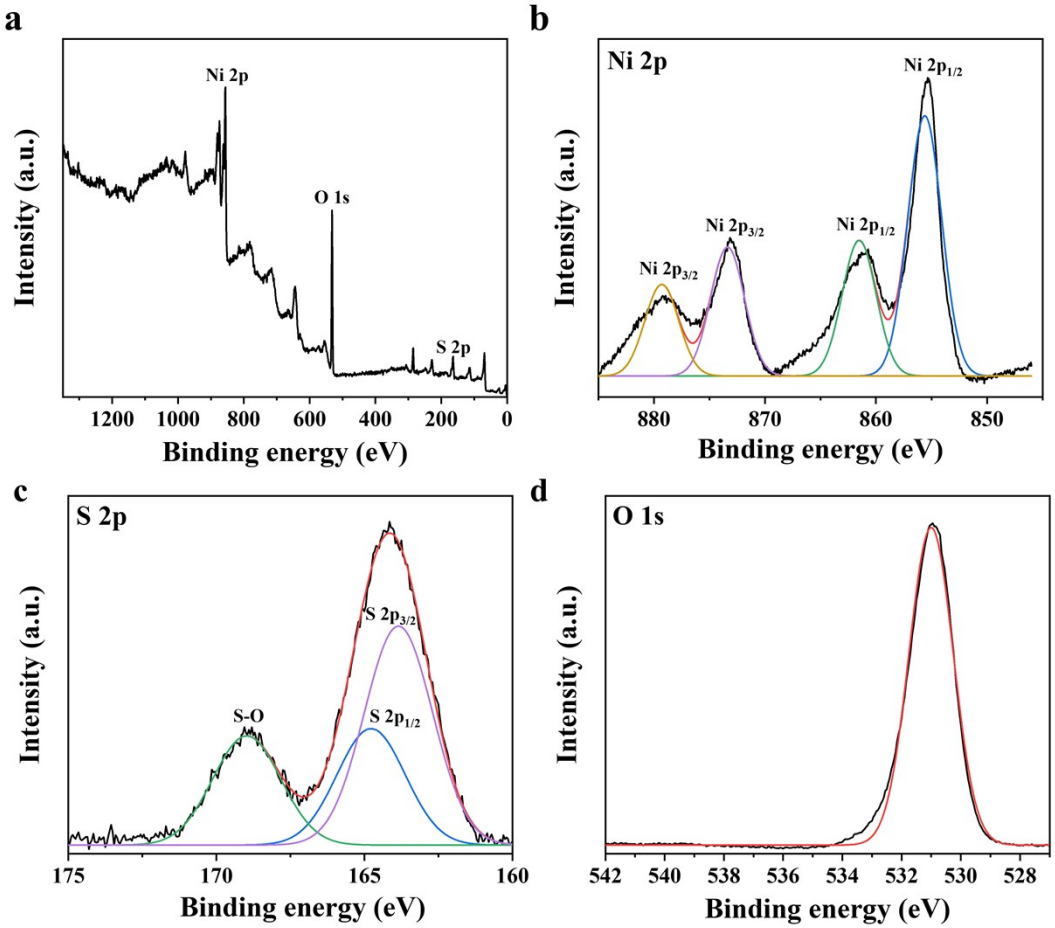

Fig. S1. XPS spectra of (a) broad scan spectrum, arrow scan of (b) Ni 2p, (c) S 2p and (d) O 1s of $Ni_xS_6/Ni(OH)_2$ hybrid material.

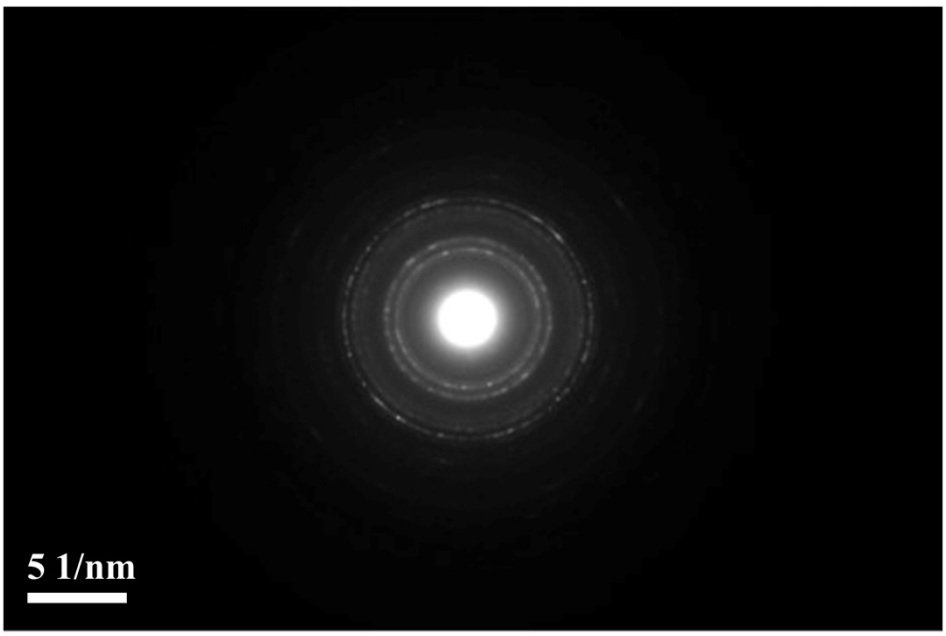

Fig. S2. Selected area electron diffraction (SAED) pattern of $Ni_xS_6/Ni(OH)_2$ hybrid material.

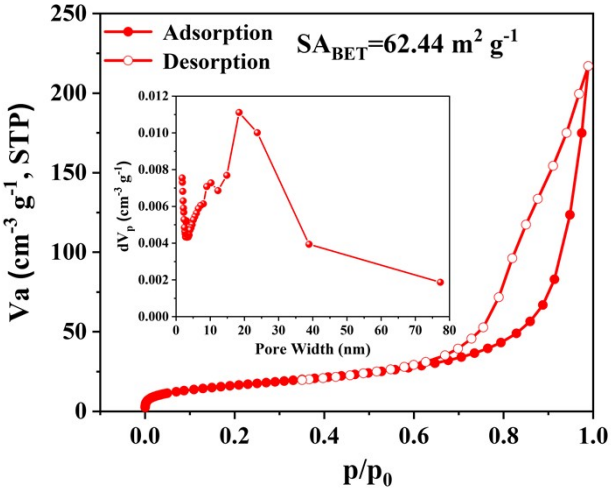

Fig. S3. Nitrogen adsorption−desorption isotherms with corresponding insert pore size distribution curves of $Ni_xS_6/Ni(OH)_2$ hybrid material.

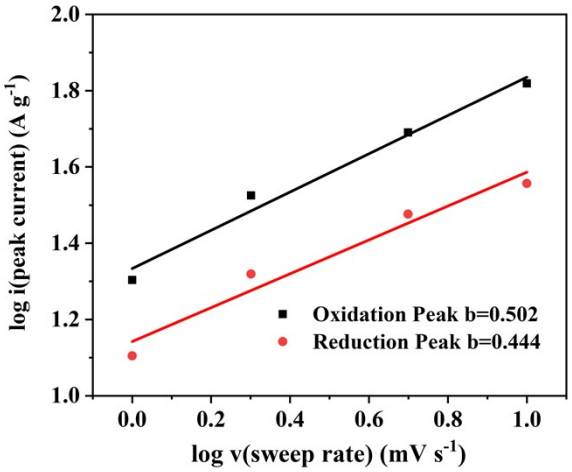

Fig. S4. Plot of rate law (log i vs. log v) for the redox couple from 1 to 10 mV s^{-1} of $Ni_xS_6/Ni(OH)_2$ hybrid material.

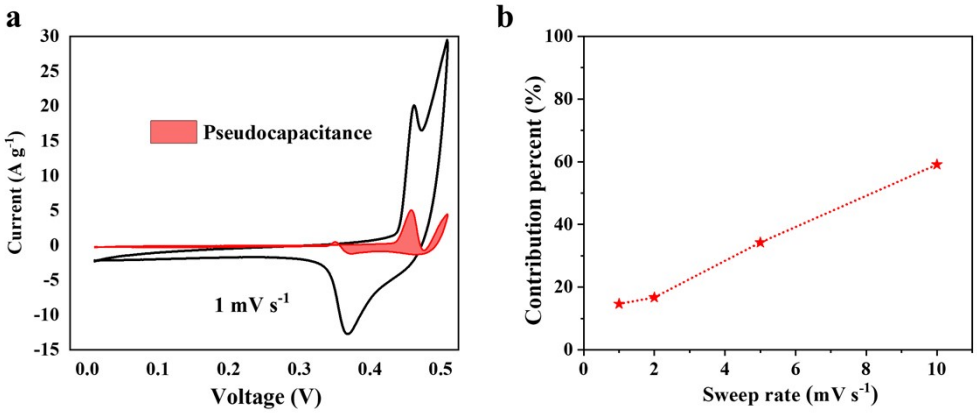

Fig. S5. (a) Capacitive contribution to charge storage at 1 mV s^{-1}, (b) the percentages of capacitive capacities at different scan rates of $Ni_xS_6/Ni(OH)_2$ hybrid material.

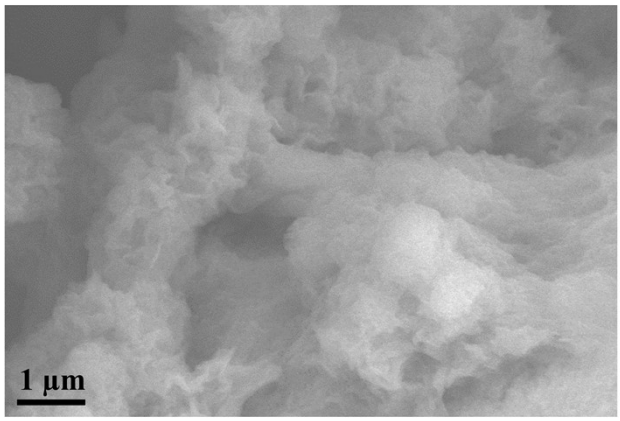

Fig. S6. SEM images of $Ni_xS_6/Ni(OH)_2$ hybrid material after GCD cycles.

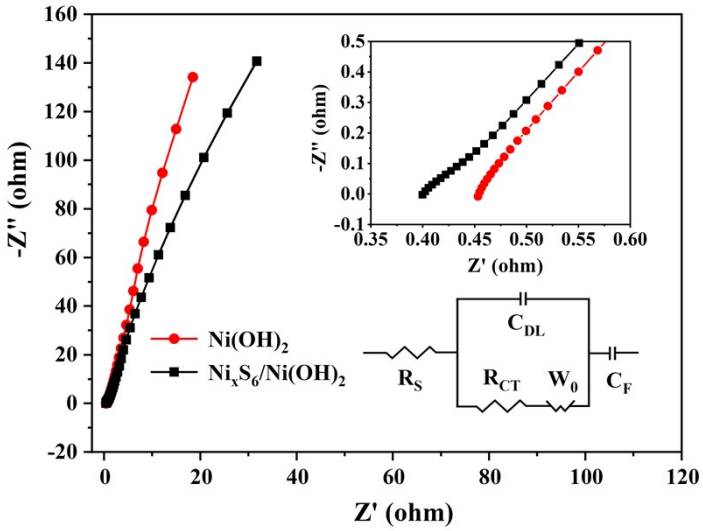

Fig. S7. EIS of the $Ni(OH)_2$ and $Ni_xS_6/Ni(OH)_2$ hybrid (the insets show the enlarged EIS at the high frequency region and the equivalent circuit corresponding the impedance spectra).

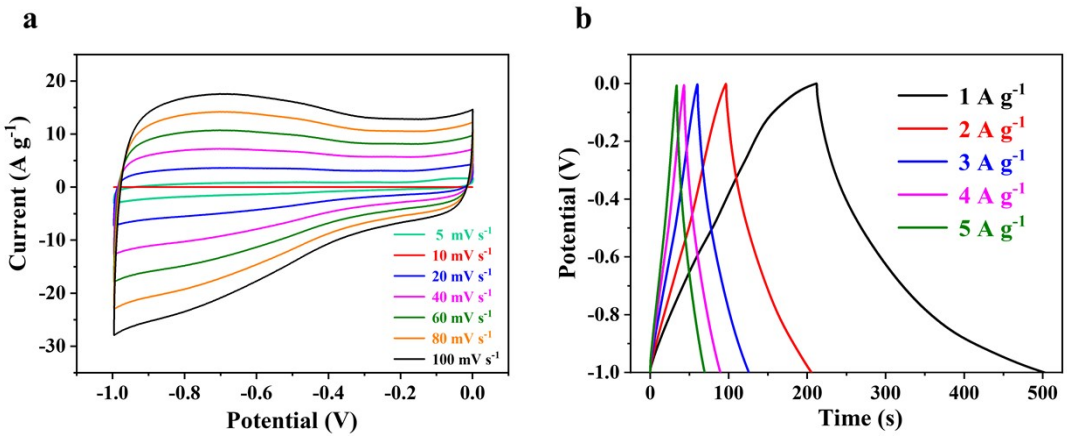

Fig. S8. (a) CV curves at various scan rates, (b) GCD curves at various current densities of active carbon in 6 M KOH aqueous electrolyte.

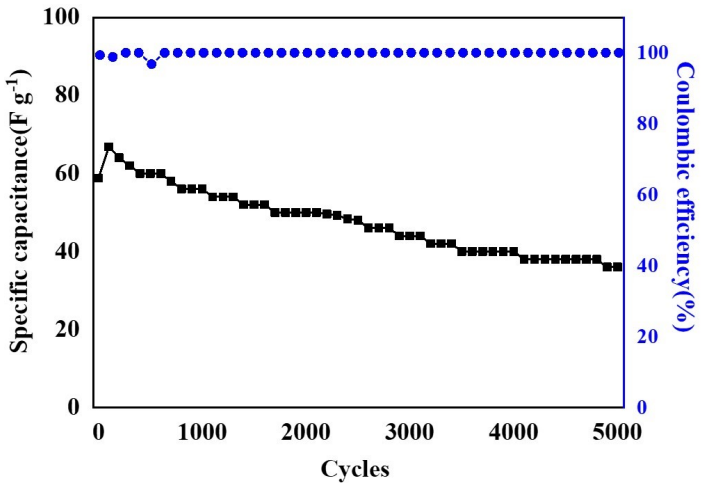

Fig. S9. Cyclic performance of the $Ni_xS_6/Ni(OH)_2$//AC asymmetric supercapacitor at a constant current density of 4 A g^{-1}.