Electronic Supplementary Material (ESI) for Nanoscale.

Supplementary Information

$NiCo_2S_4$ Nanosheet-Decorated 3D, Porous Ni Film@Ni Wire Electrode Materials for All Solid-State Asymmetric Supercapacitor Applications

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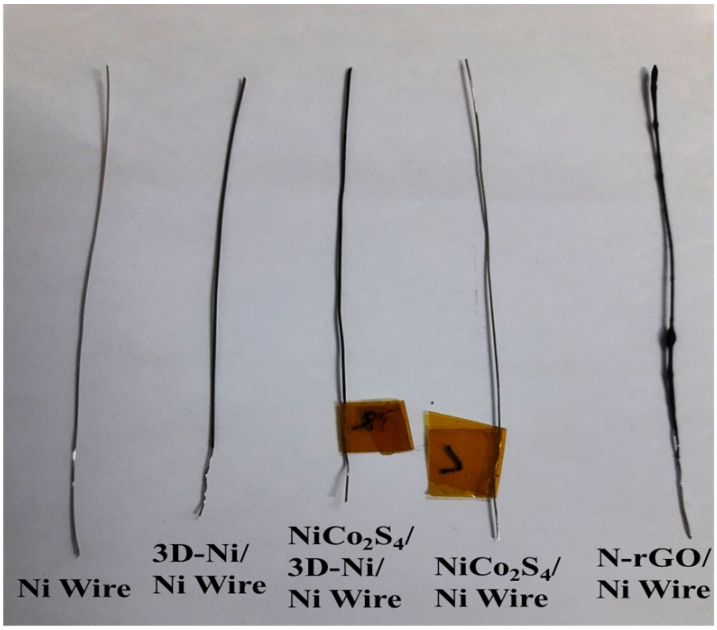

Fig. S1. Digital image of the bare Ni wire based various different kinds of electrode.

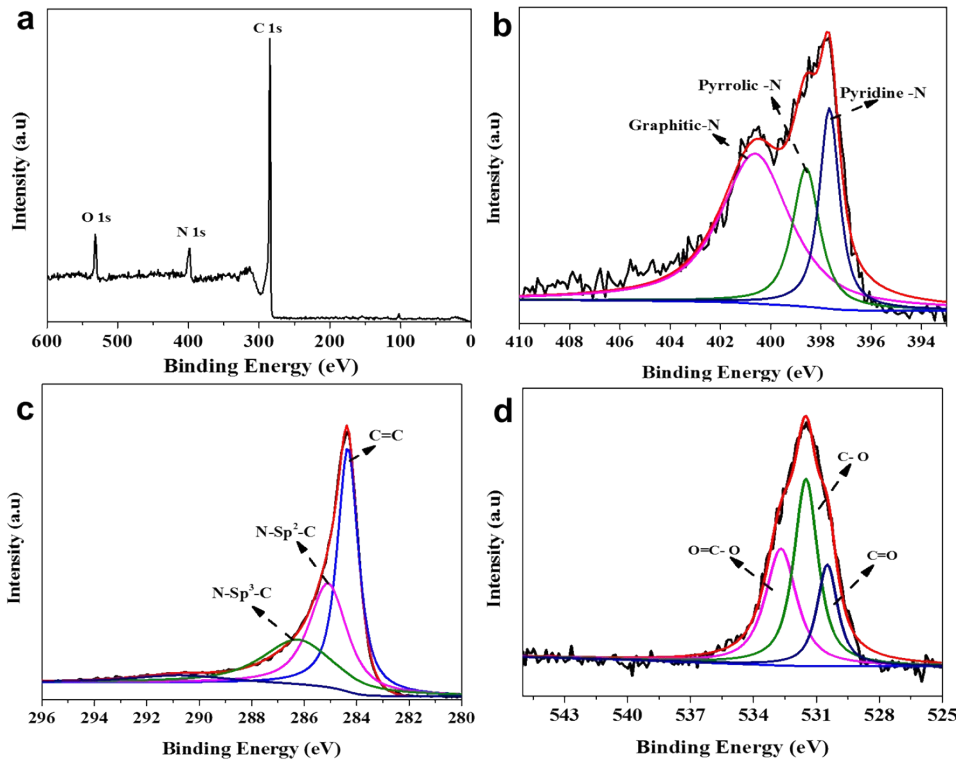

Fig. S2. XPS spectrum of N-doped reduced graphene oxide, a) survey curve, b)N 1s curve, c) C 1s curve, d) O 1s curve.

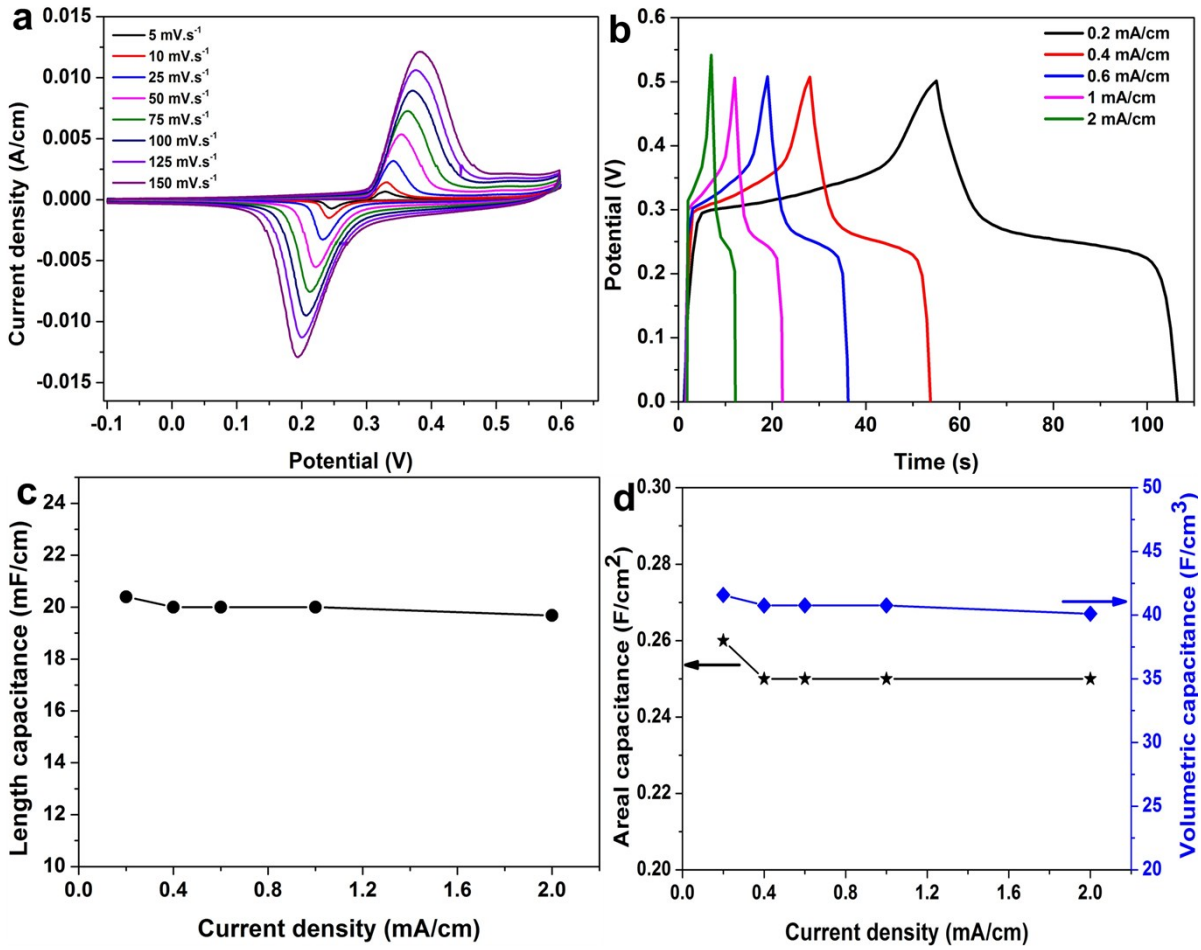

Fig. S3. 3D-Ni/Ni wire, a) CV curve at different scan rates, b) galvanostatic charge-discharge curve at different current densities, c) Length capacitance, d) areal and volumetric capacitance at different current densities.

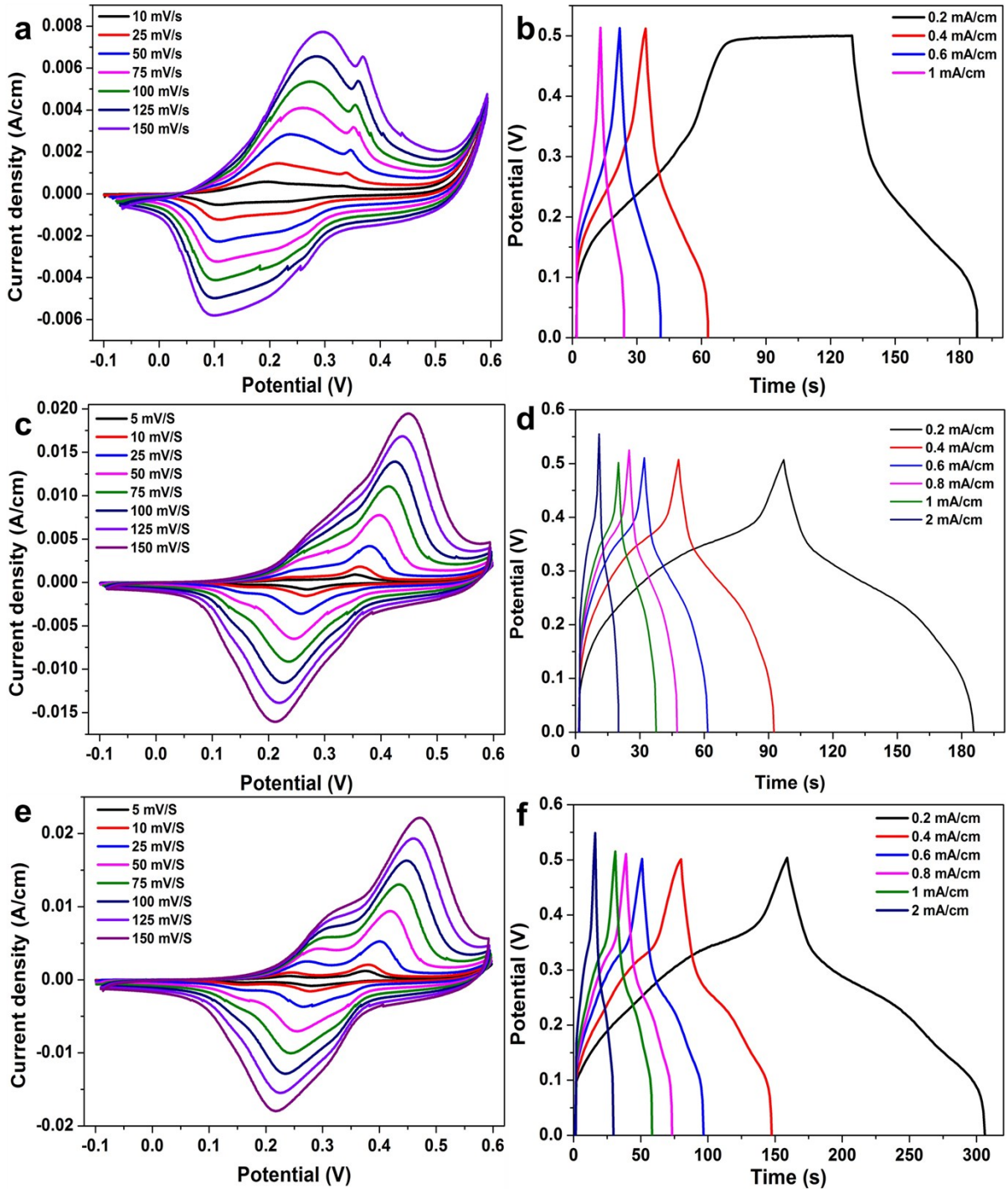

Fig. S4. Electrochemical performance a) CV curve at different scan rates, b) galvanostatic charge-discharge curve at different current densities of $NiCo_2S_4$. c) CV curve at different scan rates, d) galvanostatic charge-discharge curve at different current densities of 3D-Ni/$NiCo_2S_4$ -1. e) CV curve at different scan rates, f) galvanostatic charge-discharge curve at different current densities of 3D-Ni/$NiCo_2S_4$ -2.

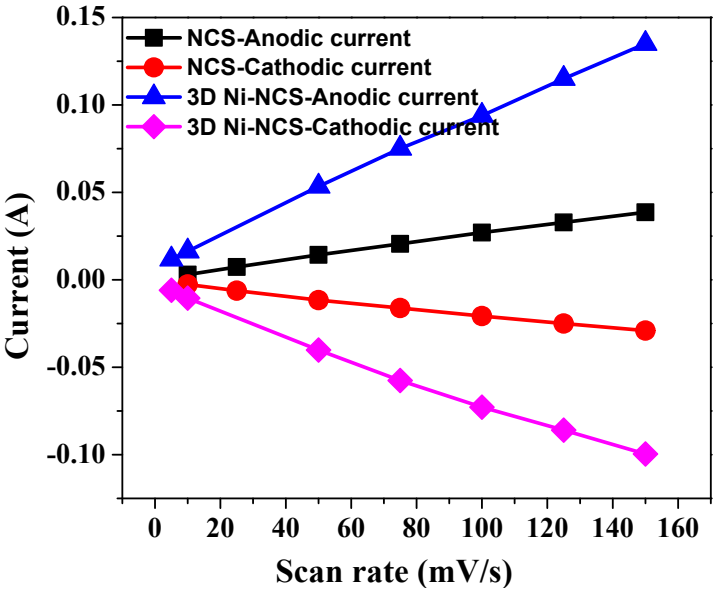

Fig. S5. Anodic and cathodic currents vs scan rates of 3D-Ni-NCS and NCS.

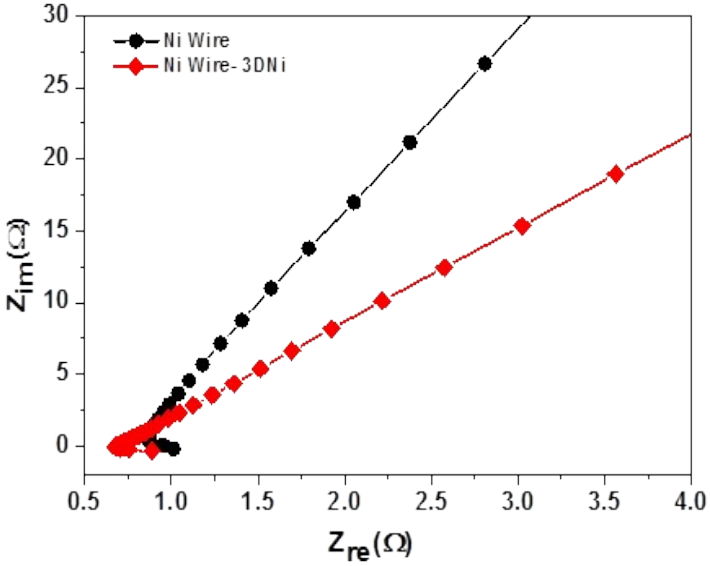

Fig. S6. Nyquist plot of bare Ni wire and 3-DNi/Ni wire.

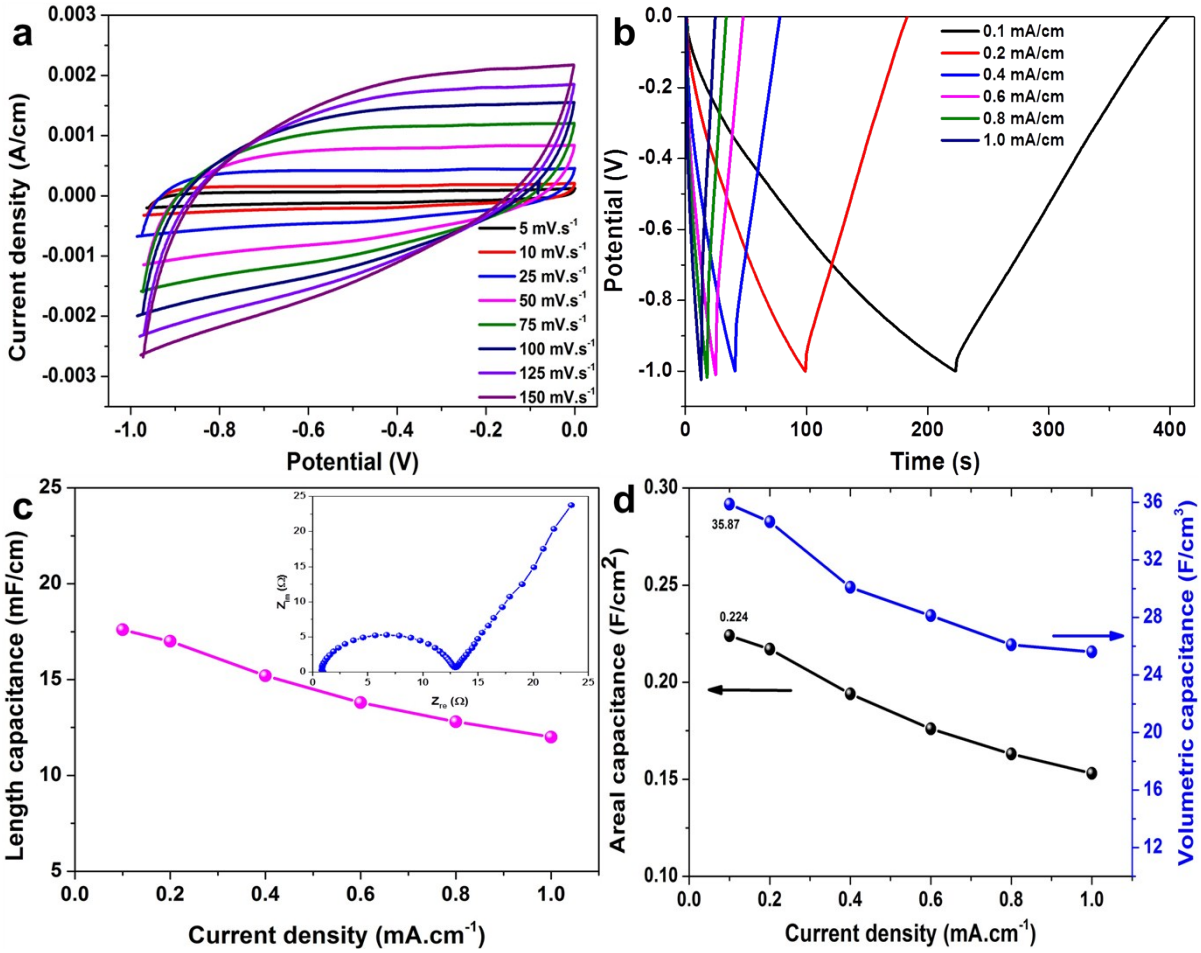

Fig. S7. a) CV curve at different scan rates, b) galvanostatic charge-discharge curve at different current densities, c) length capacitance; inset: Nyquist plot, d) areal and volumetric capacitance at different current densities of N-doped reduce graphene oxide (N-rGO).

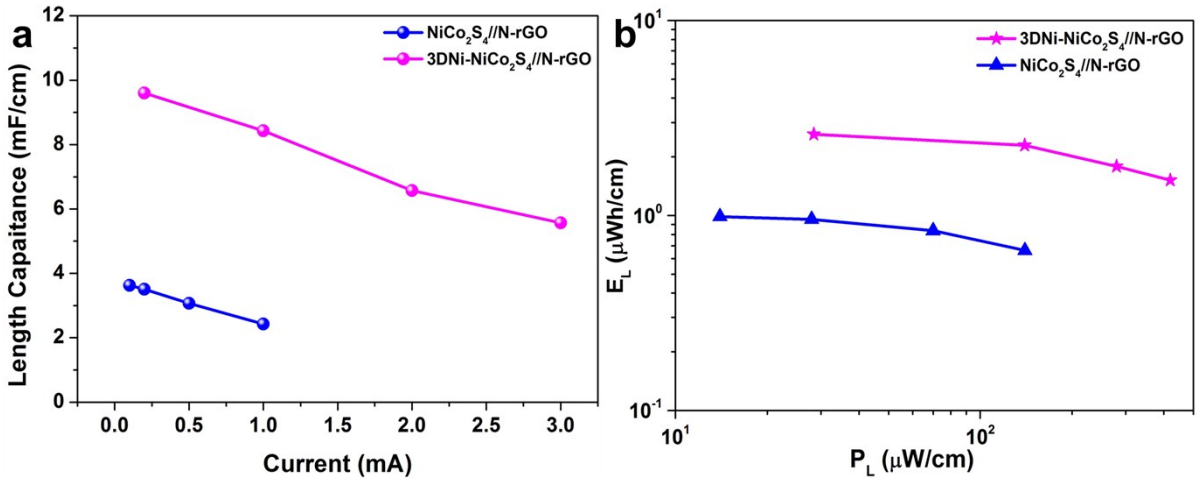

Fig. S8. a) Length capacitance and b) Ragone plot of 3DNi-$NiCo_2S_4$//N-doped rGO and $NiCo_2S_4$//N-doped rGO asymmetric supercapacitor devices.