Supporting Information

Nitrogen Doped Graphite Felt Decorated with Porous Ni$_{1.4}$Co$_{1.6}$S$_4$
Nanosheets for 3D Pseudocapacitor Electrodes

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**Figure S1.** Raman spectroscopy of the NGF-0-900 NGF-0.06-900, NGF-0.08-900, NGF-0.1-900 and NGF-0.12-900. The broad peaks of D band and the highest $I_D/I_G$ value (1.37) of the NGF-0.1-900 indicate a largest degree of defects in NGF-0.1-900 compared to other samples.

**Figure S2.** CV curves of the NGF-0.06-900, NGF-0.08-900, NGF-0.1-900 and NGF-0.12-900. The largest enclosed area of the NGF-0.1-900 represents highest capacity.
**Figure S3.** Nitrogen adsorption-desorption isotherm of the NGF-0.1-800, NGF-0.1-900 and NGF-0.1-1000. The hysteresis loops suggest the mesoporous property of all samples.

**Figure S4.** FT-IR spectrum of the NGF-0.1-900 after acidification. The appearance of the oxygen groups absorption peaks demonstrates the successful acidification of the NGF.
Figure S5. CV curves of the NiCo$_{2}$S$_{4}$/NGF, Ni$_{1.4}$Co$_{1.6}$S$_{4}$/NGF and Ni$_{1.8}$Co$_{1.2}$S$_{4}$/NGF at 10 mV s$^{-1}$. The highest redox peaks position along with the largest enclosed area indicate the best electrochemical performance when the molar ratio of Ni : Co is 1.4 : 1.6.

Figure S6. CP curves of the NiCo$_{2}$S$_{4}$/NGF, Ni$_{1.4}$Co$_{1.6}$S$_{4}$/NGF and Ni$_{1.8}$Co$_{1.2}$S$_{4}$/NGF at 1 A g$^{-1}$. This data indicates that the specific capacitance of the Ni$_{1.4}$Co$_{1.6}$S$_{4}$/NGF is the largest compared to those of the other samples on account of the longest discharge time.
Figure S7. SEM image of the Ni$_{1.4}$Co$_{1.6}$S$_4$/NGF after galvanostatic charge/discharge at a current density of 20 A g$^{-1}$ for 2000 cycles. The interconnected sheet-like morphology was well maintained and there only generated a small range of collapse.

Figure S8. SEM image of the pure Ni$_{1.4}$Co$_{1.6}$S$_4$. A wide range of size distribution can be observed.
Table S1. Nitrogen contents of the NGF-0.1-800, NGF-0.1-900, and NGF-0.1-1000.

<table>
<thead>
<tr>
<th>Electrode</th>
<th>Nitrogen content (%)</th>
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<tr>
<td></td>
<td>Graphitic-N</td>
<td>Pyrrolic-N</td>
<td>Pyridinic-N</td>
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<tr>
<td>NGF-0.1-800</td>
<td>10.9</td>
<td>89.1</td>
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<td>NGF-0.1-900</td>
<td>65.6</td>
<td>12.6</td>
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<td>NGF-0.1-1000</td>
<td>74.6</td>
<td>18.2</td>
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Table S2. BET specific surface area, BJH pore volume and pore diameter of the NGF-0.1-800, NGF-0.1-900, and NGF-0.1-1000.

<table>
<thead>
<tr>
<th>Electrode</th>
<th>BET specific surface area (m² g⁻¹)</th>
<th>BJH pore volume (cm³ g⁻¹)</th>
<th>BJH pore diameter (nm)</th>
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<tbody>
<tr>
<td>NGF-0.1-800</td>
<td>56.78</td>
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<td>47.15</td>
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<td>41.42</td>
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