Electronic Supplementary Information

Electrochemical performance of reduced graphene oxide surface-modified with 9-anthracene carboxylic acid

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Key words: CV curves, galvanometric charge discharge graph and impedance spectra of MWNT, CV curves and galvanometric charge discharge of ACA-rGO at -1~0 V. FT-IR spectra of ACA-rGO after 10000 cycle. Capacitance value calculated from CV curves in different scan rate in Table S1
Result and discussion

1. Electrochemical performance of MWNT

![CV of MWNTs with different scan rate](image1)

**Fig. S1** CV of MWNTs with different scan rate

![Galvanometric charge-discharge graph of MWNTs](image2)

**Fig. S2** Galvanometric charge-discharge graph of MWNTs
2. Electrochemical performance of ACA-rGO at -1~0 V

**Fig. S3** Impedance spectra of MWNT

**Fig. S4** CV curves of ACA-rGO at -1~0 V in 1M Na₂SO₄
**Fig. S5** Galvanometric charge-discharge of ACA-rGO

**Table S1.** Specific capacitance value (F g⁻¹) calculated from CV curves with different scan rate

<table>
<thead>
<tr>
<th>Sample</th>
<th>10 mV</th>
<th>20 mV</th>
<th>50 mV</th>
<th>75 V</th>
<th>100 mV</th>
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<tbody>
<tr>
<td>ACA-rGO</td>
<td>425.8</td>
<td>375.6</td>
<td>329.8</td>
<td>297.8</td>
<td>271.7</td>
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<tr>
<td>rGO</td>
<td>218.4</td>
<td>203.2</td>
<td>142.7</td>
<td>127.2</td>
<td>110.1</td>
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<tr>
<td>GO</td>
<td>144.4</td>
<td>73.1</td>
<td>51.2</td>
<td>40.1</td>
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