Electronic Supplementary Information for

High-Performance Asymmetric Supercapacitors with Lithium Intercalation Reaction Using Metal Oxide-Based Composites as Electrode Materials

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**Fig. S1** TEM images of (a) Pure FeOOH, (b) FeOOH/GNS, (c) and (d) FeOOH/GNS/CNTs.
Fig. S2 Pore-size-distribution (PSD) curves of FeOOH/GNS/CNTs.
Fig. S3 (a) CV profiles of FeOOH, FeOOH/GNS and FeOOH/GNS/CNTs at 10 mV s\(^{-1}\). (b) Galvanostatic charge/discharge profiles of FeOOH, FeOOH/GNS and FeOOH/GNS/CNTs at 1 A g\(^{-1}\).
Fig. S4 (a) SEM image of pure MnO$_2$. (b) CV comparison of pure MnO$_2$ and MnO$_2$/GNS at 50 mV s$^{-1}$. (c) Galvanostatic charge/discharge curves of MnO$_2$/GNS at various current densities. (d) Specific capacitance of MnO$_2$ and MnO$_2$/GNS.
Table 1 Physicochemical characterization of FeOOH and FeOOH/GNS/CNTs.

<table>
<thead>
<tr>
<th>Samples</th>
<th>$S_{BET}^a$ (m² g⁻¹)</th>
<th>$V_T^b$ (cm³ g⁻¹)</th>
<th>$d_M^c$ (nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FeOOH</td>
<td>35</td>
<td>0.22</td>
<td>25.2</td>
</tr>
<tr>
<td>FeOOH/GNS/CNTs</td>
<td>274</td>
<td>0.20</td>
<td>2.8</td>
</tr>
</tbody>
</table>

$^a$ Total specific surface area.

$^b$ Total pore volume.

$^c$ Average pore size.