Supporting Information

Nitrogen-Doped Carbon-Coated Ti–Fe–O Nanocomposites with Enhanced Reversible Capacity and Rate Capability for High-Performance Lithium-Ion Batteries

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Fig. S1 Raman spectra of the as-sintered products of S2–1, S1–1 and S1–2.

Fig. S2 Photographs of S2–1, S1–1, and S1–2.
**Fig. S3** TGA curves of S2–1C, S1–1C, and S1–2C.

**Fig. S4** XPS spectra of O 1s of S1–2C.
Table S1 Mass fractions of TiO$_2$, Fe$_3$O$_4$, and FeTiO$_3$ in S2–1C, S1–1C, and S1–2C.

<table>
<thead>
<tr>
<th>Samples</th>
<th>TiO$_2$ (wt%)</th>
<th>Fe$_3$O$_4$ (wt%)</th>
<th>FeTiO$_3$ (wt%)</th>
<th>Carbon (wt%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S2–1C</td>
<td>31.1</td>
<td>20.0</td>
<td>40.7</td>
<td>8.2</td>
</tr>
<tr>
<td>S1–1C</td>
<td>22.1</td>
<td>43.8</td>
<td>25.8</td>
<td>8.3</td>
</tr>
<tr>
<td>S1–2C</td>
<td>7.0</td>
<td>46.9</td>
<td>35.0</td>
<td>11.1</td>
</tr>
</tbody>
</table>

Fig. S5 Cycling performance of TiO$_2$@C at 100 mA g$^{-1}$.

Fig. S6 Equivalent circuit fitting to the EIS.