Supporting Information

Carbon Coated NASICON Structure Material Embedded in Porous Carbon Enabling Superior Sodium Storage Performance: \( \text{NaTi}_2(\text{PO}_4)_3 \) as An Example

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Figure S1. Thermogravimetry patterns of NTP and NTP@C@PC.

Figure S2. (a) N$_2$ absorption-desorption isotherm of NTP nanocomposites and (b) the pore-size distribution curves of the NTP nanocomposites.

Table S1. The surface parameters of both NTP and NTP@C@PC nanocomposites samples.

<table>
<thead>
<tr>
<th>samples</th>
<th>BET surface Area (m$^2$g$^{-1}$)</th>
<th>BJH pore volume (cm$^3$g$^{-1}$)</th>
<th>Pore size (nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTP</td>
<td>4</td>
<td>0.009</td>
<td>5.9</td>
</tr>
<tr>
<td>NTP@C@PC</td>
<td>133</td>
<td>0.27</td>
<td>5.2</td>
</tr>
</tbody>
</table>
**Figure S3.** The TEM image of the pure NTP.

**Figure S4.** The TEM (a) and HRTEM (b) images of NTP@C@PC anode electrode after 1000 cycles at the rate of 5 C.
Figure S5. The CV curves of the pure carbon matrix in the potential window of 0.005-2.8 V (vs. Na⁺/Na) at a scan rate of 0.2 mV s⁻¹ for the first three cycles.

Figure S6. Specific capacity and the Coulombic efficiency of the NTP@C@PC electrode for 9000 cycles at 20 C. (The first 10 cycles are activation process at 1C).