Electronic Supplementary Information (ESI) for

Silicon@Porous Nitrogen-doped Carbon Spheres Through a Bottom-up Approach Are Highly Robust Lithium-ion Battery Anodes

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**SEM image of Si NPs**

![SEM image of Si NPs](image)

**Fig. S1** A SEM image of Si NPs indicates that the diameters of Si NPs are ~30 nm.
Elemental contents of Si@NCS and NCS by XPS measurements

**Table SI** Elemental contents for Si@NCS and NCS samples.

<table>
<thead>
<tr>
<th>Sample</th>
<th>C wt.%</th>
<th>N wt.%</th>
<th>O wt.%</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCS</td>
<td>87.46</td>
<td>8.03</td>
<td>4.51</td>
</tr>
<tr>
<td>Si@NCS</td>
<td>76.88</td>
<td>7.78</td>
<td>15.34</td>
</tr>
</tbody>
</table>
Pore size distribution of NCS and Si@NCS

**Fig. S2** Pore size distributions of (a) NCS and (b) Si@NCS calculated by a DFT method
Cyclic voltammetric measurements

**Fig. S3** Cyclic voltammetric data for Si@NCS at a scanning rate of 0.025 mV s\(^{-1}\).
Thermal behavior of Si@NCS

![Thermogravimetric analysis graph]

**Fig. S4** Thermogravimetric analysis of Si@NCS in air indicates that Si accounts for ~50 wt.%.