Supporting information

A Facile Way to Synthesize Pomegranate-Like Porous Carbon Microspheres as an Improved Anode Material for Li-ion Batteries

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Figure S1. SEM image of C@CaCO$_3$.

Figure S2. SEM image of the inside part of PCMs.
**Figure S3.** The SEM images of PCMs in different magnifications after cycling test.

**Figure S4.** SEM image of PCMs after first cycling test (a), and elemental mapping for elements F (b), O (c) and P (d).
**Figure S5.** Equivalent circuit obtained from the EIS curve of PCMs.

**Figure S6.** The cyclic voltammetry curves of PCMs (a) and HCMs (b).
Table S1. Charge resistance and solution resistance of PCMs and HCMs obtained from Nyquist Plots.

<table>
<thead>
<tr>
<th>Samples</th>
<th>PCMs</th>
<th>HCMs</th>
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<tbody>
<tr>
<td>Rct (Ω)</td>
<td>230</td>
<td>410</td>
</tr>
<tr>
<td>Rs (Ω)</td>
<td>4.5</td>
<td>5.7</td>
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