Carbon nanorods derived from natural based nanocrystalline cellulose for highly-efficient capacitive deionization

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Fig. S1. The comparison of densities between CNR1200, CAs, CNTs and AC powders (1 g power in each vial).

Fig. S1 shows the comparison of densities between CNR1200, CAs, CNTs and AC powders. In each vial, 1 g of CNR1200, CAs, CNTs and AC powders was contained, respectively. Obviously, CNR1200 powder has a very low density, which is even ~1/2 lower than that of CAs, only ~1/5 of CNTs and ~1/6 of AC.

![Pore size distribution of CNR1200](image)

**Fig. S2.** Pore size distribution of CNR1200.
**Fig.** S3. Electrosorption capacities for AC, CNTs, CAs and CNR1200 electrodes in NaCl solutions with an initial concentration of 500 mg l$^{-1}$.

**Table** S1 Specific surface areas, square resistances, electrode thickness and electrosorption capacities of AC, CNTs, CAs and CNR1200.

<table>
<thead>
<tr>
<th>Samples</th>
<th>CNTs</th>
<th>CAs</th>
<th>AC</th>
<th>CNR1200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific surface area (m$^2$ g$^{-1}$)</td>
<td>400</td>
<td>948.20$^1$</td>
<td>1500-1850</td>
<td>864.10</td>
</tr>
<tr>
<td>Square resistance (mΩ)</td>
<td>74</td>
<td>104</td>
<td>209</td>
<td>70</td>
</tr>
<tr>
<td>Electrodes thickness (μm)</td>
<td>203</td>
<td>199</td>
<td>206</td>
<td>205</td>
</tr>
<tr>
<td>Electrosorption capacity (mg g$^{-1}$)</td>
<td>2.64</td>
<td>5.276</td>
<td>11.09</td>
<td>15.12</td>
</tr>
</tbody>
</table>

$^1$) the specific surface area of CAs is obtained from our previous works.$^1$

**References:**