Supporting information

Iron-nitrogen co-doped hollow carbon sphere with mesoporous structure for enhanced oxygen reduction reaction

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<table>
<thead>
<tr>
<th>Sample</th>
<th>BET surface area(m²g⁻¹)</th>
<th>Total pore volume(ccg⁻¹)</th>
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<tbody>
<tr>
<td>Fe@FeN-CS</td>
<td>25.736</td>
<td>0.1232</td>
</tr>
<tr>
<td>Fe@FeN-CS-900</td>
<td>54.382</td>
<td>0.1935</td>
</tr>
<tr>
<td>FeN-HCS</td>
<td>103.735</td>
<td>0.5266</td>
</tr>
</tbody>
</table>

Table S1. The BET surface area and total pore volume of Fe@FeN-CS, Fe@FeN-CS-900 and FeN-HCS

![Figure S1. Calibration of SCE to RHE](image-url)
**Figure S2.** (a) SEM image and (b) XRD pattern of Fe₃O₄

**Figure S3.** TEM images of (a) Fe@FeN-CS, (b) Fe@FeN-CS-900 and (c) FeN-HCS

**Figure S4.** SEM image of Fe/C prepared from citric acid
Figure S5. LSV with different rotation speeds for (a) Fe@FeN-CS and (b) Pt/C catalysts and the Koutecky-Levich plots at the different potential (insert)

Figure S6. RRDE Polarization plots measured in O₂-saturated 0.1 M KOH at with rotation at 1600 rpm, ring current (top) and disk current (bottom)
Figure S7. ORR polarization plots of Pt/C catalyst before and after accelerated degradation tests (ADT)