

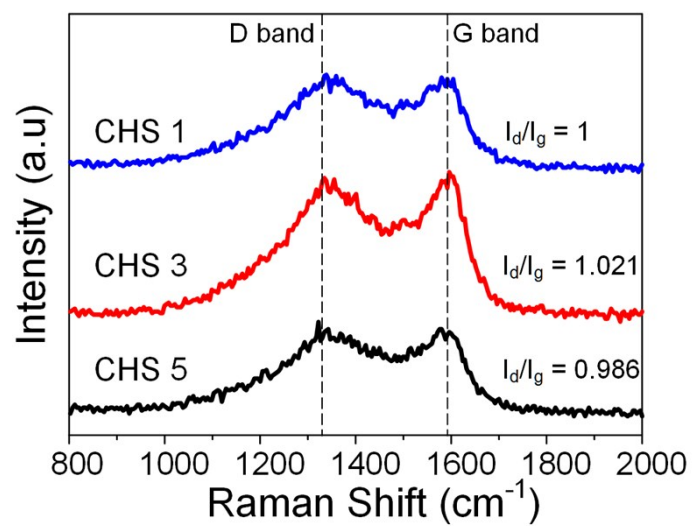
## **Supplementary information**

### **Porous carbon hollow spheres synthesized via a modified Stöber method for capacitive deionization**

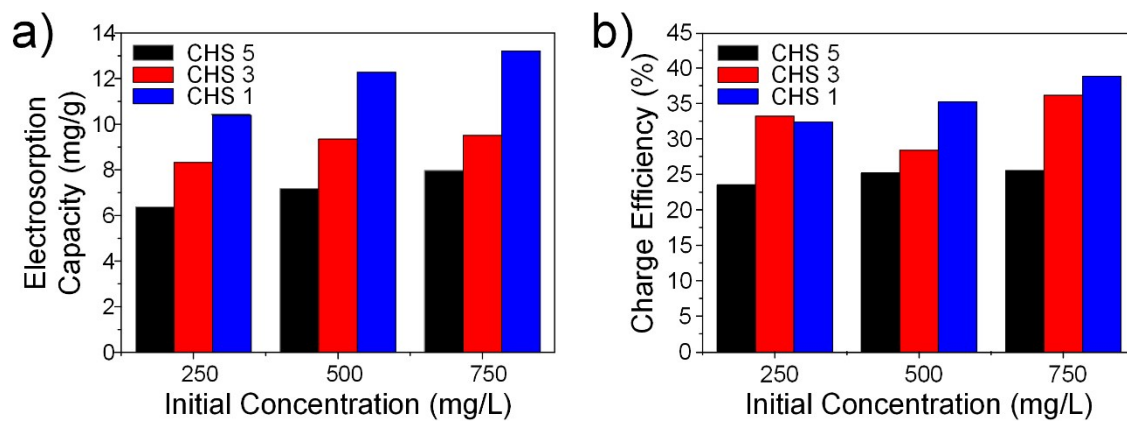
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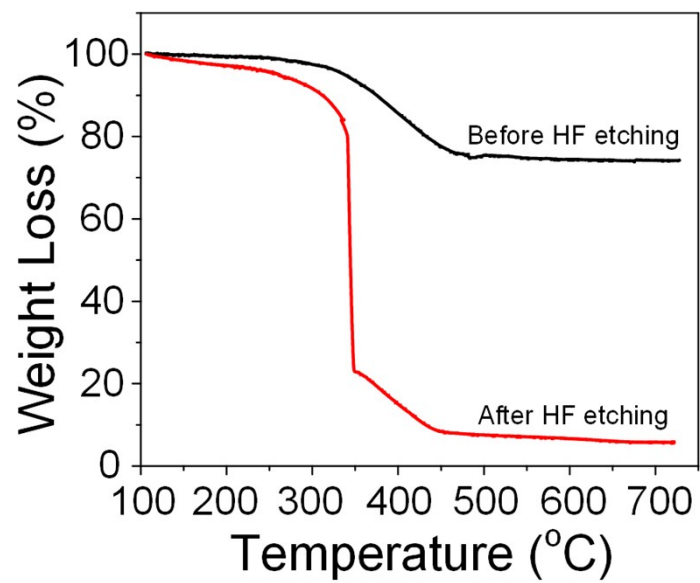
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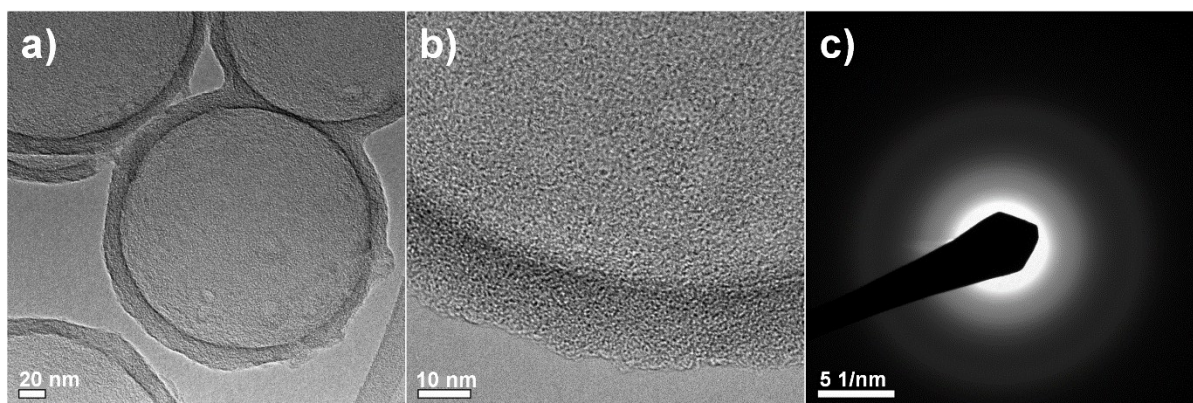
**Fig. S1** Raman spectra of CHS 1, CHS 3 and CHS 5.



**Fig. S2** (a) Electrodesorption capacity and (b) charge efficiency of CHS 5, CHS 3, CHS 1 in 250, 500, 750 mg L<sup>-1</sup> NaCl solutions at 1.2 V.



**Fig. S3** TGA of CHS 1 before and after HF etching..



**Fig. S4** (a) and (b) HRTEM images of CHS 1. (c) SAED pattern of CHS 1.

| Sample            | Applied Voltage (V) | Initial Salt Concentration (mg L <sup>-1</sup> ) | Electrosorption Capacity (mg g <sup>-1</sup> ) | Ref.      |
|-------------------|---------------------|--|--|-----------|
| CNT-RGO Composite | 1.6                 | 50   | 0.88   | 42        |
| ACC-ZnO Composite | 1.6                 | 993.5  | 3.6  | 43        |
| 3DMGA             | 1.6                 | 52.5   | 3.9  | 44        |
| NP-3DG            | 1.6                 | 500  | 17.1   | 45        |
| HPC               | 1.6                 | 26   | -  | 10        |
| CHS 1             | 1.6                 | 250  | 18.8   | This work |

**Table. S1** Comparison of electrosorption data between our work and others at 1.6 V