

Supporting Information

A multiple coating route to hollow carbon spheres with foam-like shells and their applications in supercapacitor and confined catalysis

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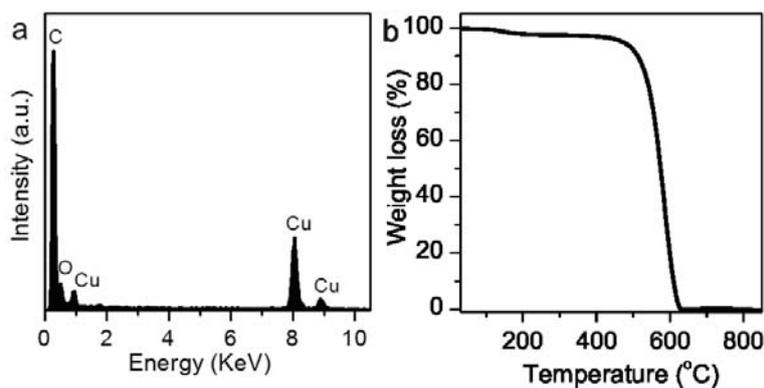


Fig. S1 (a) The EDX spectrum of HCSF (the Cu signals are attributed to the TEM grid of copper used for the EDX experiment), (b) The TG curve of HCSF obtained under air atmosphere with a heating rate of $10\text{ }^{\circ}\text{C min}^{-1}$.

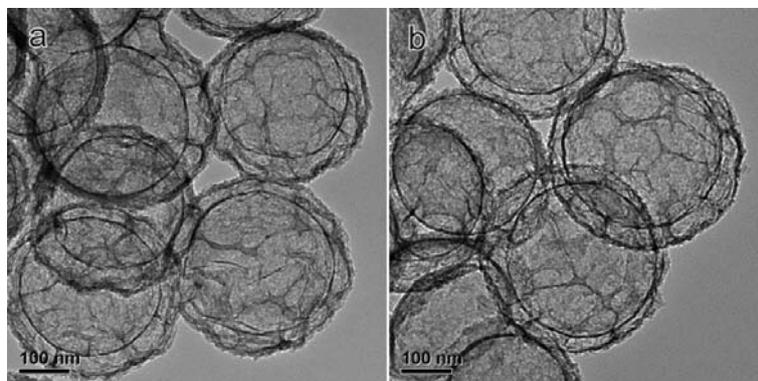


Fig. S2 Typical TEM images of HCSF obtained at 700 (a) and 900 °C (b).

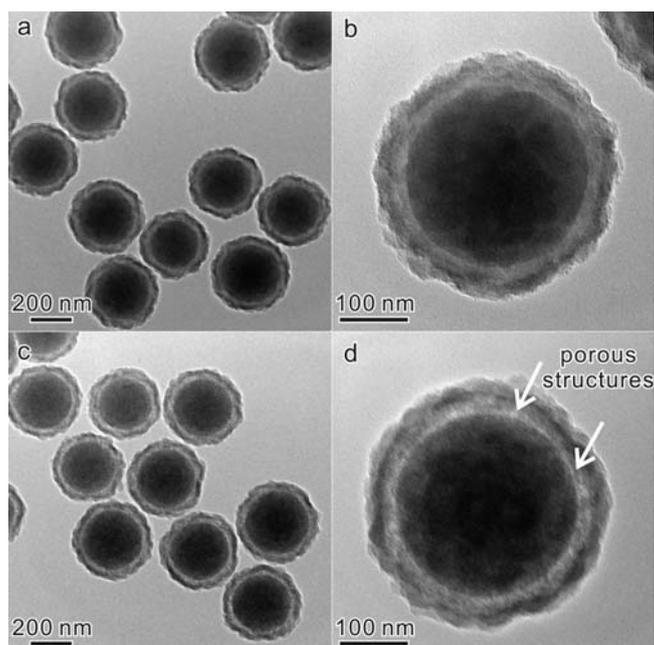


Fig. S3 TEM images of the intermediates quenched during the carbonization process: (a, b) the samples obtained after the carbonization of the as-synthesized $\text{SiO}_2\text{@RF/CTAB@SiO}_2$ spheres at 350 °C for 2 h, (a, b) the samples obtained after the carbonization temperature reaching 550 °C.

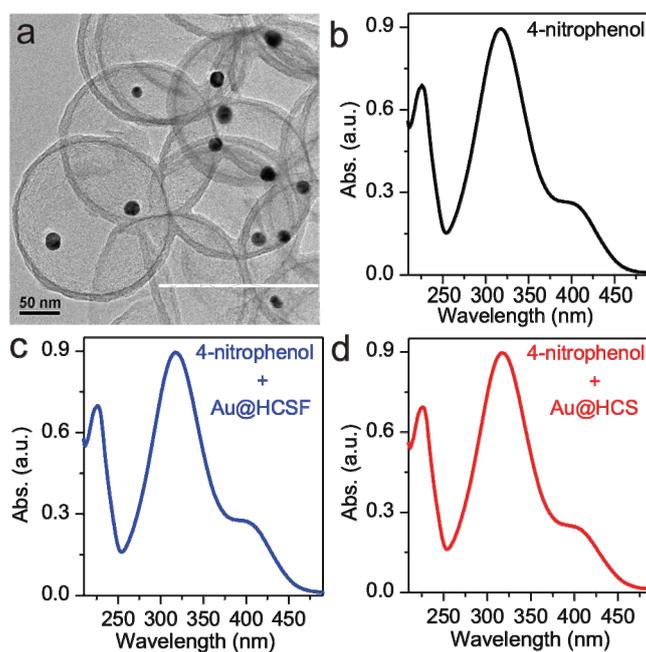


Fig. S4 (a) typical TEM image of Au@HCS, (b-d) the UV-vis spectra of 4-nitrophenol aqueous solution (b) mixed with (c) Au@HCSF and (d) Au@HCS (adsorption time: 1h).