Supporting information

Controllable Synthesis of Mesoporous Carbon Nanospheres and Fe-N/Carbon Nanospheres as Efficient Oxygen Reduction Electrocatalysts

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Figure S1 SEM images of carbon spheres synthesized with different mass ratios of F127 to resol: a) 1.5; b) 0.75.
Figure S2 SEM images of mesoporous carbon spheres prepared with high concentrations: a, b) 0.6 g of F127 in 50 mL of 2 M HCl (9.5×10^{-4} mol/L); c, d) 1.0 g of F127 in 50 mL of 2 M HCl (1.6×10^{-3} mol/L). The mass ratio of F127 to resol was fixed at 0.9.
Figure S3 SEM images of mesoporous carbon spheres prepared using different concentrations of HCl as a solvent: a, b) 0.1 M; c, d) 5 M.
Figure S4 SEM images of Fe-N/MCNs calcined at different temperatures: a) 600, b) 700, c) 800 °C. All the samples show spherical morphology as that of mesoporous carbon spheres.
Figure S5 a) XRD patterns b) Raman spectra of Fe-N/MCNs calcined at 600, 700 and 800 °C. The increasing of relative peak intensity and narrowing of the half-peak width at about 26 °C reveal the degree of graphitization increases as the temperature increases from 600 to 800 °C.