Three-dimensional α -Fe₂O₃/carbon nanotube sponge as flexible supercapacitor electrode

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Supporting Information



Figure S1. TGA of CNT@FeOOH sponge in air from 20 to 800 °C at 20°C/min.



Figure S2. SEM images of the CNT@ Fe_2O_3 sponges grown at different FeCl₃ precursor concentration. (a) 0.01 mol/L, (b) 0.1 mol/L, (c) 1.0 mol/L.



Figure S3. SEM images of the CNT@Fe₂O₃ sponges prepared at different hydrothermal time. (a) 0.5 h, (b) 4 h, (c) 10 h.



Figure S4. Galvanostatic charge/discharge curves of $CNT@Fe_2O_3$ sponge at different current density from 1 to 20 A/g.



Figure S5. Nyquist plot of CNT@Fe2O3 sponge recorded before and after 1,000 compression cycles (ϵ = 50%) at 5 mV/s.



Figure S6. (a) CV cures and (b) Nyquist plot of CNT@Fe2O3 sponge recorded before and after 1,000 compression cycles (ϵ = 50%) at 100 mV/s.



Figure S7. Compressive stress-strain curves of $CNT@Fe_2O_3$ sponge at different strain of 30%, 50% and 70%.



Figure S8. XRD patterns of $CNT@Fe_2O_3$ sponge for the state at initial and after 1000 CV cycles.