

Low Cost Facile Synthesis of Large-Area Cobalt Hydroxide

Nanorods with Remarkable Pseudocapacitance

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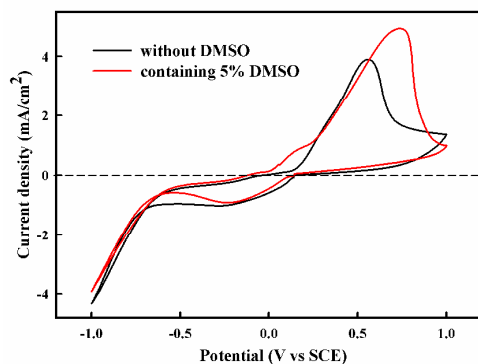


Figure S1. CV curves of the nickel foam electrode in a plating solution (NiSO_4 0.5 M, NiCl_2 0.5 M, CuSO_4 0.01 M, H_3BO_3 1 M, containing DMSO 5%, or without DMSO).

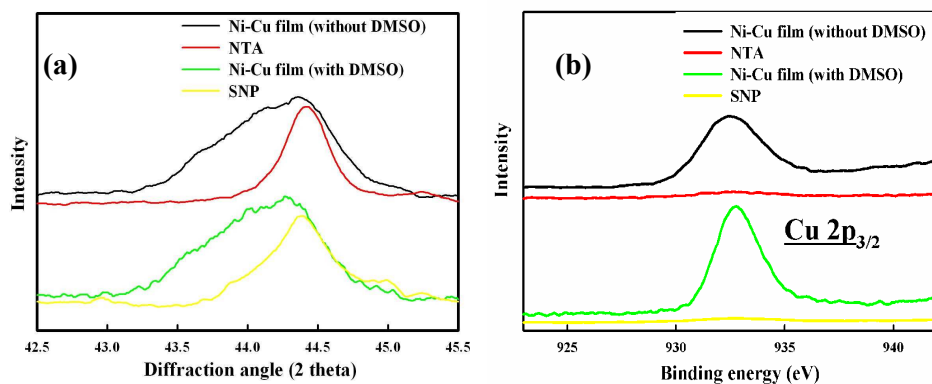


Figure S2. (a) X-ray diffraction patterns of Ni–Cu films deposited in solution (without and with DMSO) before and after etching Cu. (b) $\text{Cu } 2p_{3/2}$ XPS spectra recorded from the Ni–Cu film as deposited at -0.78 V, and the film etched at 0.8 V. The electrodeposition and selective dissolution were performed in a plating solution (NiSO_4 0.5 M, NiCl_2 0.5 M, CuSO_4 0.01 M, H_3BO_3 1 M, containing DMSO 5%, or without DMSO).

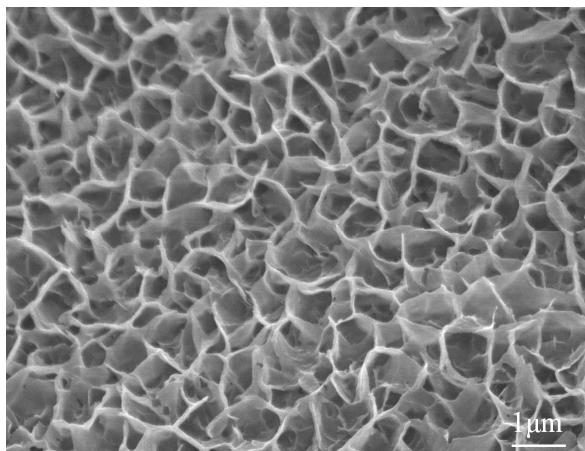


Figure S3. SEM images of the Co(OH)_2 nanoflakes grown on nickel foam.

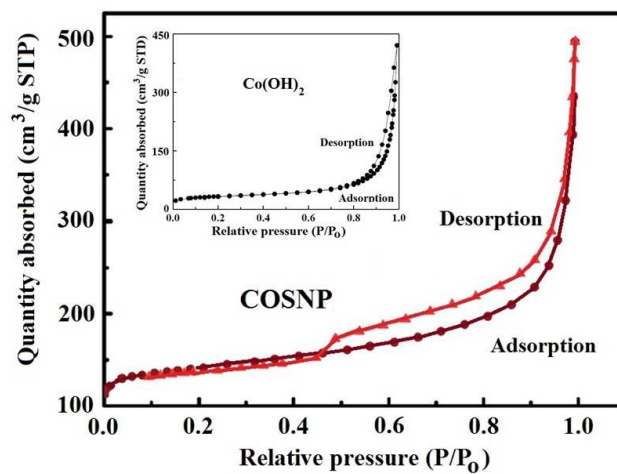


Figure S4. Nitrogen adsorption and desorption isotherms measured at standard temperature and pressure on the COSNP electrode; the inset shows the Co(OH)_2 electrode.

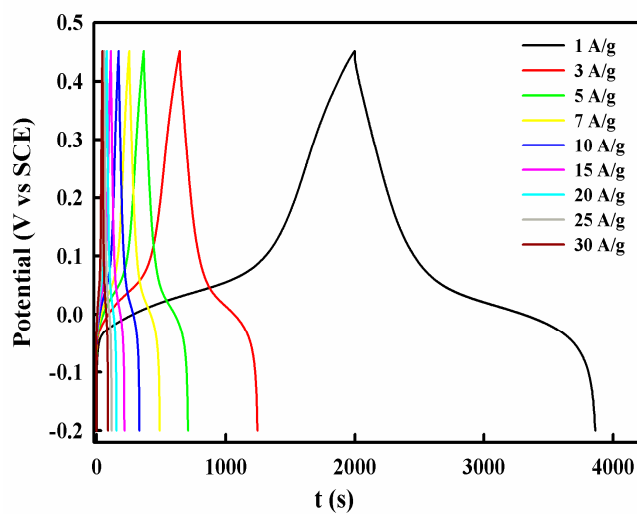


Figure S5. Galvanostatic charge–discharge curves of COSNP electrodes at various current densities (1 to 30 A g⁻¹).

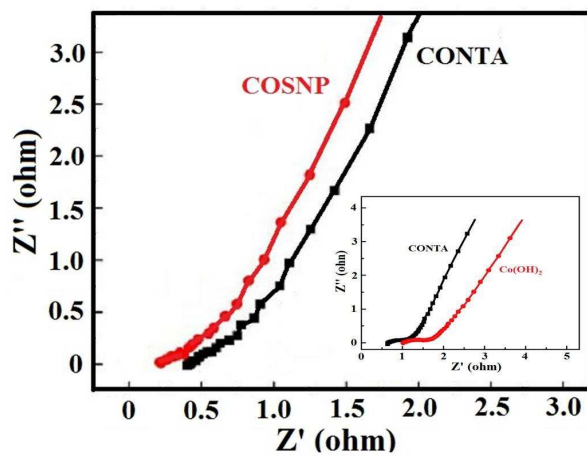


Figure S6. Nyquist plots of CONTA and COSNP electrodes; the inset shows the Nyquist plots of CONTA and Co(OH)₂ electrodes.

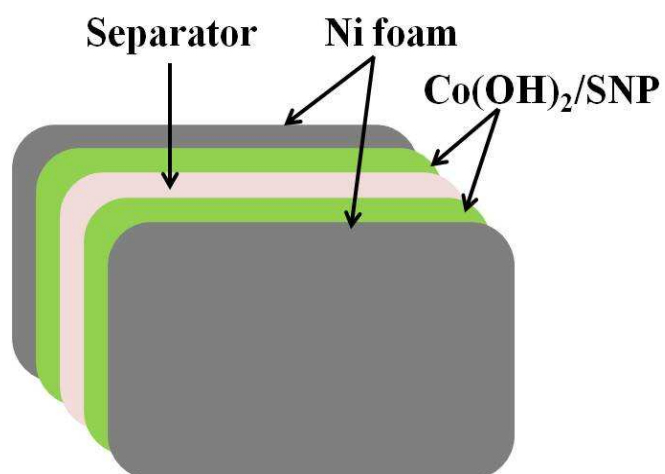


Figure S7. Schematic illustration of the symmetric supercapacitor based on the COSNP as electrodes configuration.