

Supplementary Information For

Aligned nickel-cobalt hydroxide nanorod arrays for electrochemical pseudocapacitor applications

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The data include Figures S1, S2, S3, S4 and Table S1.

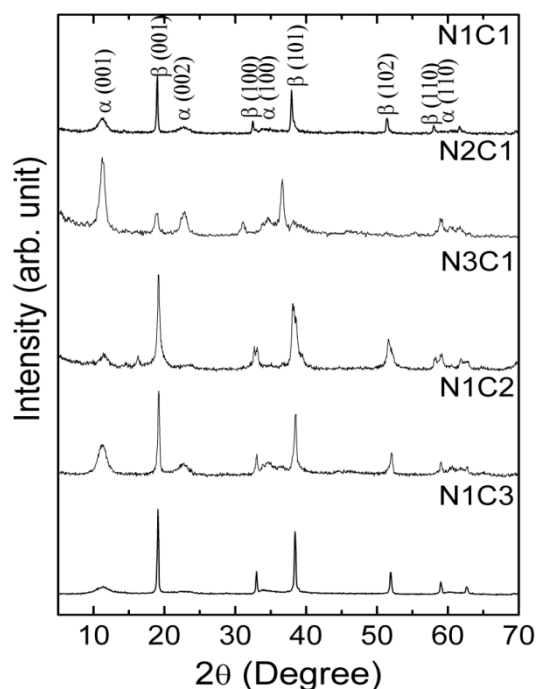


Figure S1. XRD patterns of nickel-cobalt binary hydroxides prepared using the CBD method at 70°C with different Ni-Co composition ratios (N-nickel, C-cobalt).

The X-ray diffraction peaks for various compositions of nickel and cobalt hydroxide are shown in the figure. The peaks contain contributions from both nickel hydroxide (α and β) and cobalt hydroxide (α and β). Since the peak position of these two are very close to each other, it is difficult to distinguish between them.^{1,2} The obtained peaks were compared with standard peak positions (JCPDs data cards: 30-0443, 14-0117 for β -peak of cobalt and nickel

hydroxide, respectively.) Whereas, α -peak positions were confirmed by comparing the results with previously reported data.¹

1. V. Gupta, S. Gupta and N. Miura, *J. Power Sources* 2008, 175, 680.
2. Y. Liang, S. Bao and H. Li, *J. Solid State Electrochem.* 2007, 11, 571.

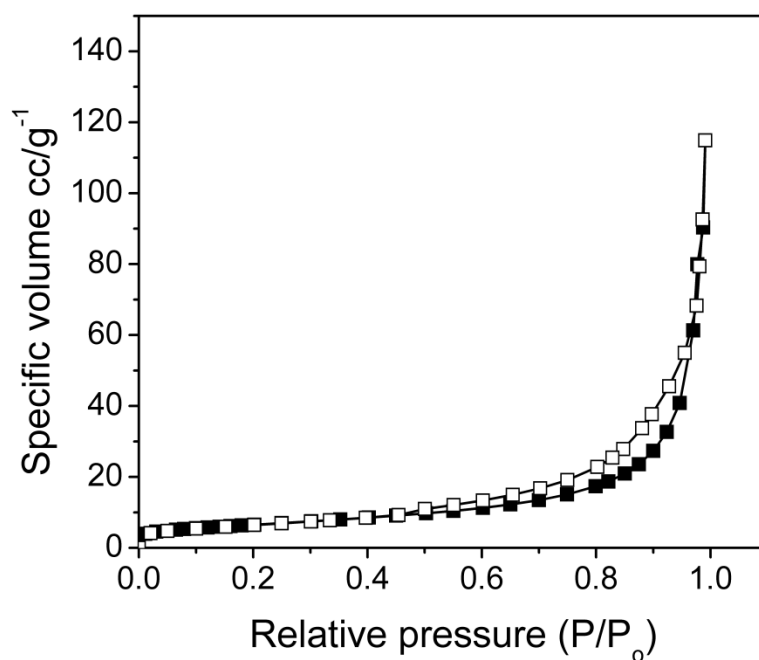


Figure S2. Nitrogen adsorption/desorption isotherms of the Ni-Co hydroxide nanorods.

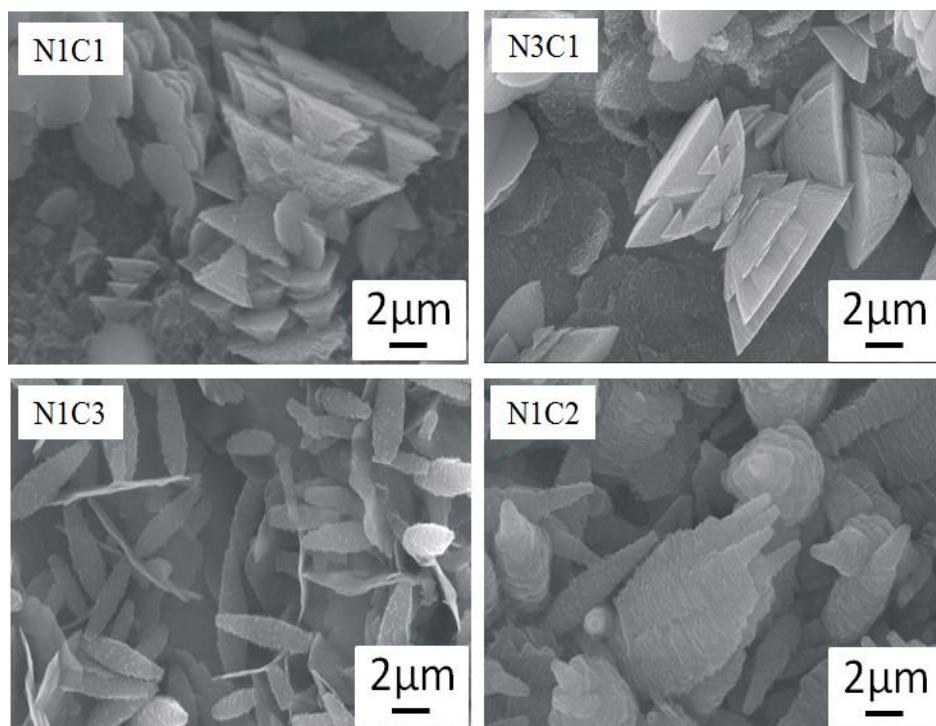


Figure S3. FESEM images of nickel-cobalt hydroxide at different compositions of nickel and cobalt (N1C1, N3C1, N1C3 and N1C2).

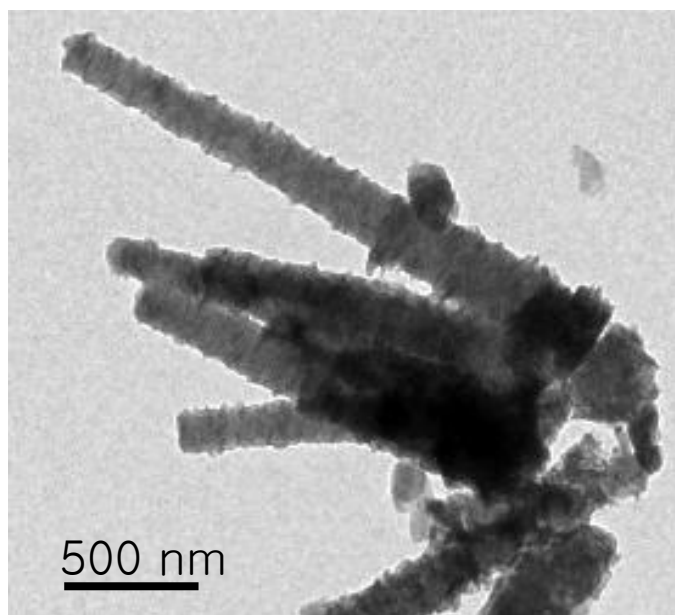


Figure S4. Bright field TEM image of nickel-cobalt hydroxide nanorods (N2C1 sample).

Table S1. Energy dispersive X-ray (EDX) analysis of nickel and cobalt at various compositions of cobalt chloride and nickel nitrate.

(Nickel : Cobalt) ratio	Nickel (Atomic %)	Cobalt (Atomic %)
N1C3	23.56	76.44
N1C2	30.20	69.80
N1C1	44.44	55.56
N2C1	68.66	31.34
N3C1	78.80	21.20