Short Communication

Puff Pastry-like $\text{Co}(\text{OH})_2$ Nano-flakes Grown on Nickel Foams for High-performance Supercapacitors

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The unique puff pastry-like $\text{Co}(\text{OH})_2$ nano-flakes were potentiostatic electrodeposited on the surface of Ni foams. The nano-flakes in the composite provides sufficient contact of active material with electrolyte and facilitates the adsorption/desorption of ions in the electrode solution. It exhibits a high specific capacitance of 2138 F/g at 5 mV/s, and the resistance is only 0.65 Ω . It also shows a good long-term stability of 80.5 % capacitance retention over 10000 charge/discharge cycles at 5 A/g.

Keywords: supercapacitors; cobalt hydroxide; electrodeposition; nanoflakes; energy storage and conversion

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