Supplementary Material (ESI) for Chemical Communications

Electronic Supplementary Information

The specific capacitance was measured by the chronopotentiometric measurement technique and calculated by $I \times \Delta t / (\Delta V \times m)$, where I is the constant discharging current, Δt is the discharging time that is measured from –0.1 to 0.50 V, ΔV is the potential drop at a constant discharge current of 400 mA/g, and m is the mass of the corresponding electrode materials measured.

Considering that single electron redox reactions are assumed to take place in all of the bulk material, the theoretical specific capacitance, C_t, was estimated according to the equation: $C_t = n \times F / (\Delta V \times m)$, where n is 1, the mole of charge transferred per mole of $Ni(OH)_2$, F is Faraday's constant, m is the mole mass of electroactive phase $Ni(OH)_2$, and ΔV is the potential sweep range from –0.10 to 0.50 V in current measurement. A theoretical specific capacitance, C_t, of 1735 F/g could be obtained.