

Electronic Supplementary Information

Alkaline All Solid Supercapacitors based on Anion Conducting Polymer Electrolyte

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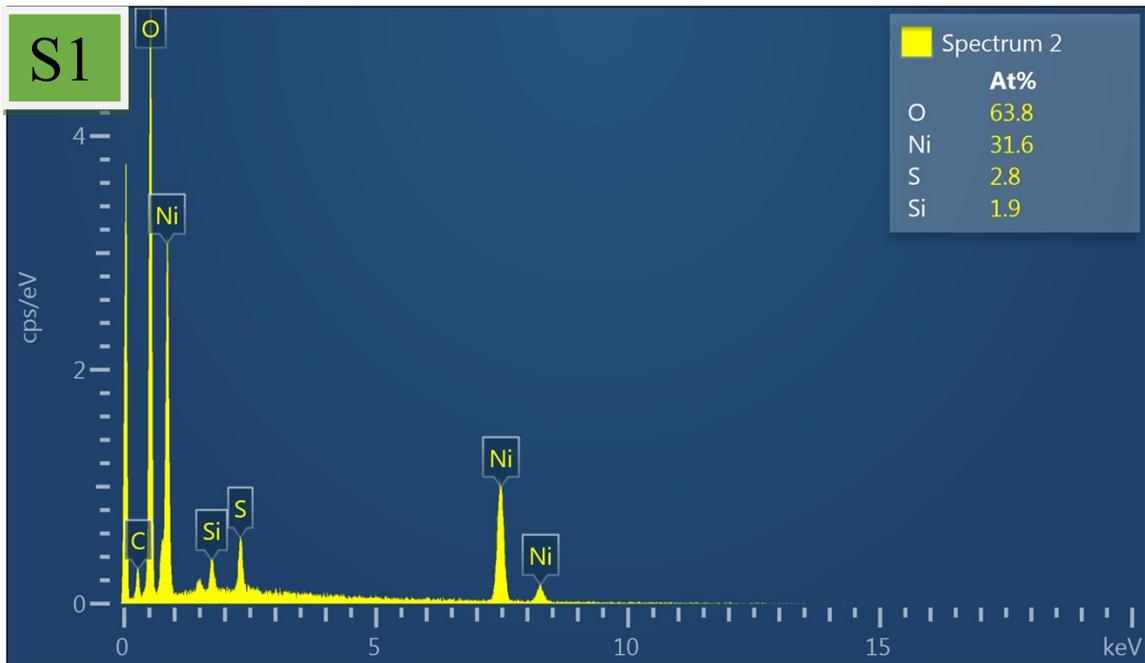


Figure S1. Energy Dispersive X-ray spectroscopy of $\text{Ni}(\text{OH})_2$ spheres with the signal of Si from substrate and the signal of S maybe from the absorbed Ni_2SO_4 during washing process.

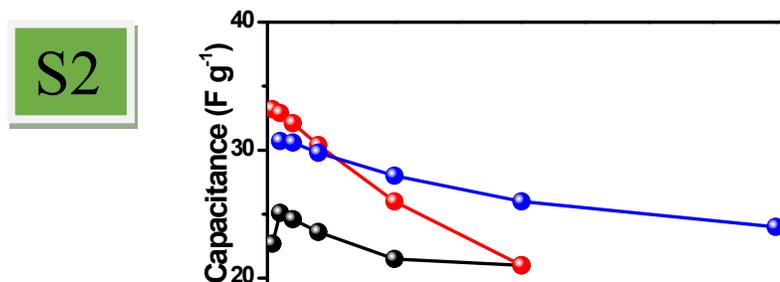


Figure S2. The plotted curves depict in the specific capacitance of all solid supercapacitors (ASSs) with different contents of polybenzimidazole (PBI) as a function of current density. The activated carbon electrodes and PBI separators of the ASSs were soaked in 1 M KOH for 16hrs and 6 M KOH for 20 min, respectively. The loading mass is the sum of AC in two electrodes. No particular trend of the effect of PBI content on device performance is found.

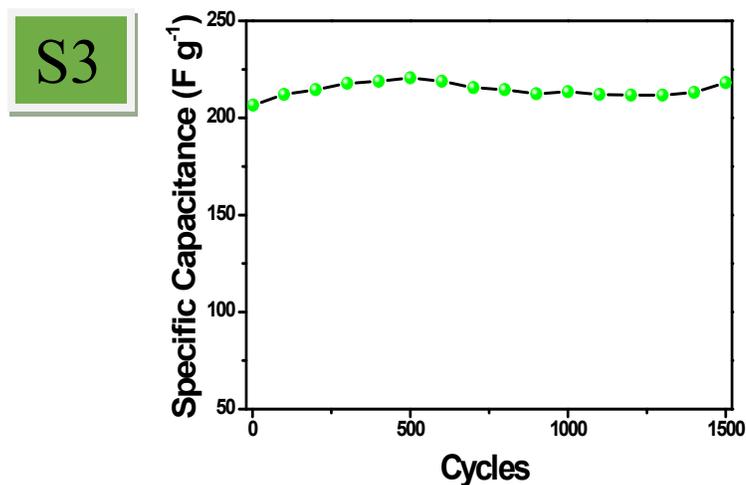


Figure S3. The plot denotes the cycling performance of AC on Nickel foam tested at a current density of 2 A g⁻¹ in 1 M KOH electrolyte using Pt as counter electrode and Ag/AgCl as reference electrode. The loading mass is 1.2 mg and the potential window is from -1 to 0 V.

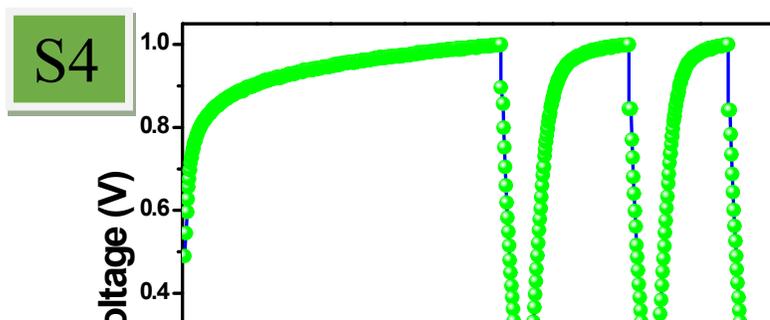


Figure S4. The charge discharge curve of device C4 (see Table 1) obtained at 1 A g^{-1} .

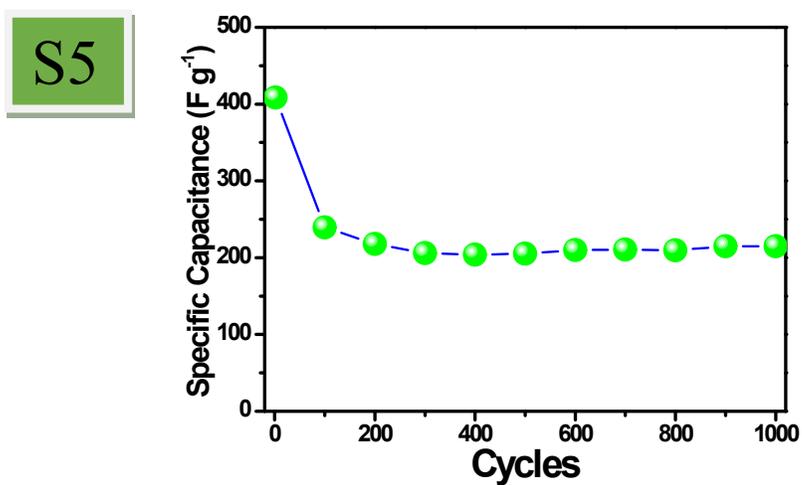


Figure S5. The plot denotes the cycling performance of Ni(OH)_2 spheres on Nickel foam tested at a current density of 5 A g^{-1} in 1 M KOH electrolyte using Pt as counter electrode and Ag/AgCl as reference electrode. The loading mass is 1.3 mg and the potential window is from -0.1 to 0.5 V .