Supporting information

Hollow carbon cage with nanocapsules of graphitic shell/nickel core as an anode material for high rate lithium ion batteries

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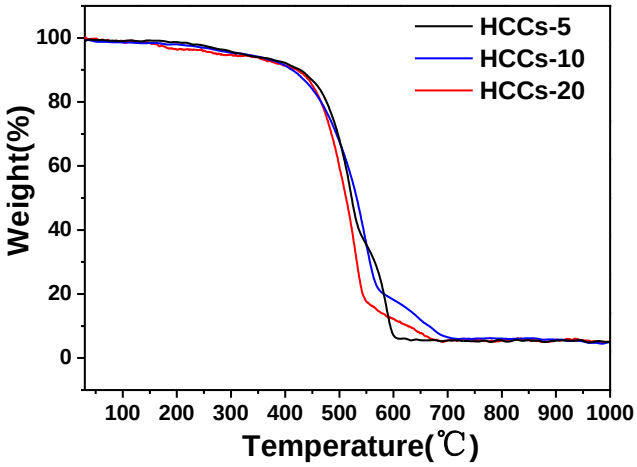

Figure S1. Thermogravimetric (TG) curves of HCCs-5, HCCs-10 and HCCs-20 in air with a heating rate of 10 ºC/min, showing a nickel content of 3.9 wt% (calculated from the weight loss of TG result plus the weight gain of NiO transformed from Ni).

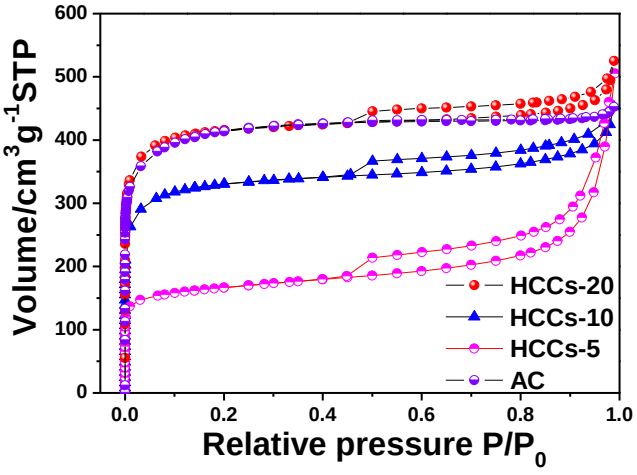

Figure S2. Nitrogen adsorption/desorption isotherms of the HCCs-5, HCCs-10, HCCs-20 and AC.

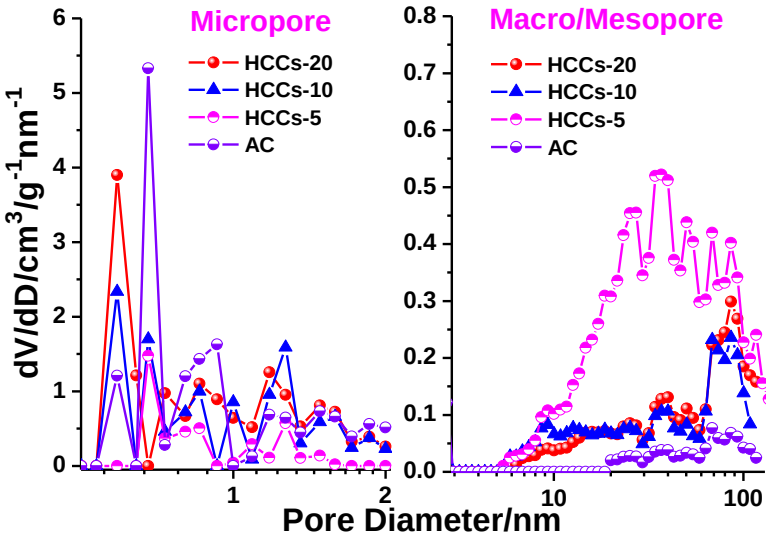

Figure S3. Pore size distributions of the HCCs-5, HCCs-10, HCCs-20 and AC.

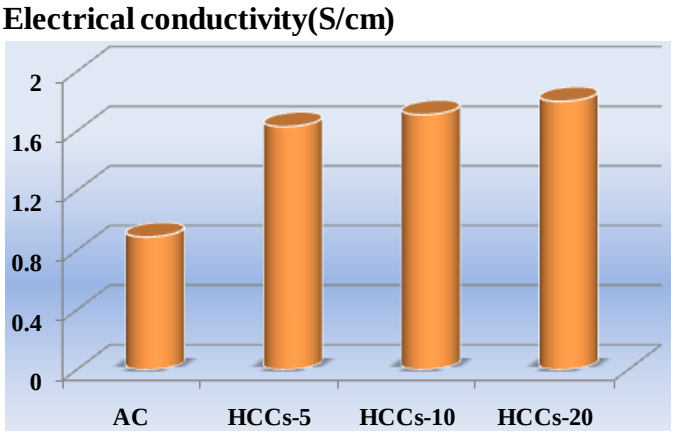

Figure S4. The electrical conductivity of AC, HCCs-5, HCCs-10, and HCCs-20.

Table S1. Porosity parameters of the HCCs-5, HCCs-10, HCCs-20 and AC.

Samples	BET surface area [$m^2 g^{-1}$]	Total pore volume [$cm^3 g^{-1}$]	Micropore volume [$cm^3 g^{-1}$]	Micropore content [%]
HCCs-5	566	0.60	0.18	30.0
HCCs-10	1120	0.64	0.39	60.9
HCCs-20	1405	0.74	0.53	71.6
AC	1410	0.68	0.46	67.8