

Ordered multimodal porous carbon with hierarchical nanostructure for high Li storage capacity and good cycling performance†

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Supporting Information

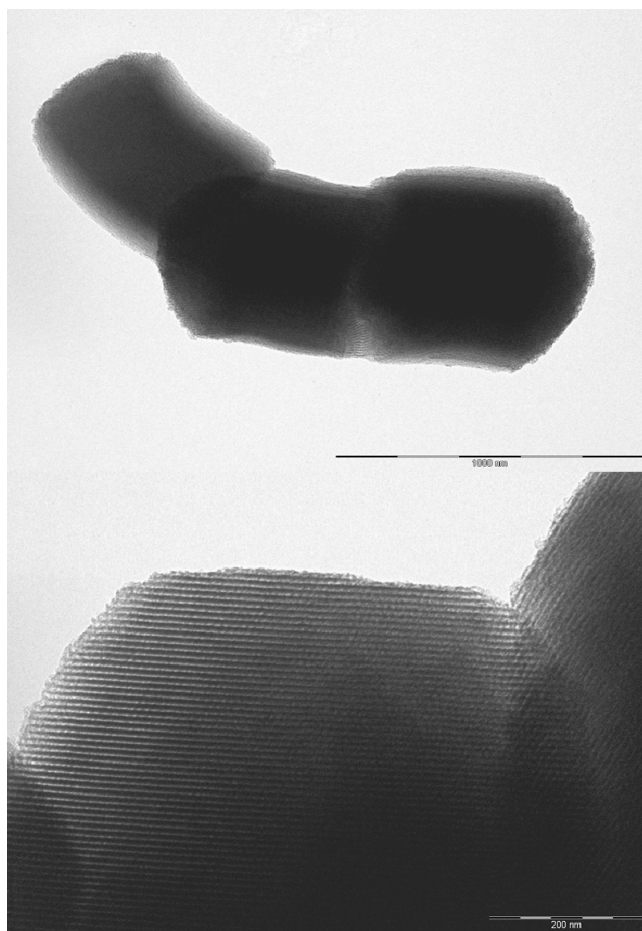


Fig. S1. Representative TEM images for CMK-3.

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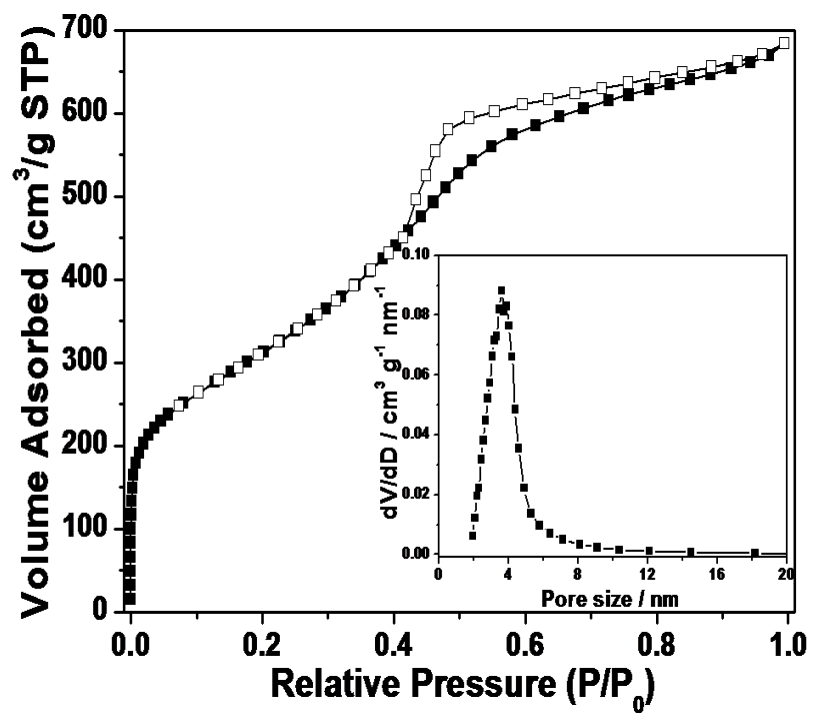


Fig. S2. Typical nitrogen adsorption-desorption isotherms at -196 °C and the derived PSD for CMK-3.

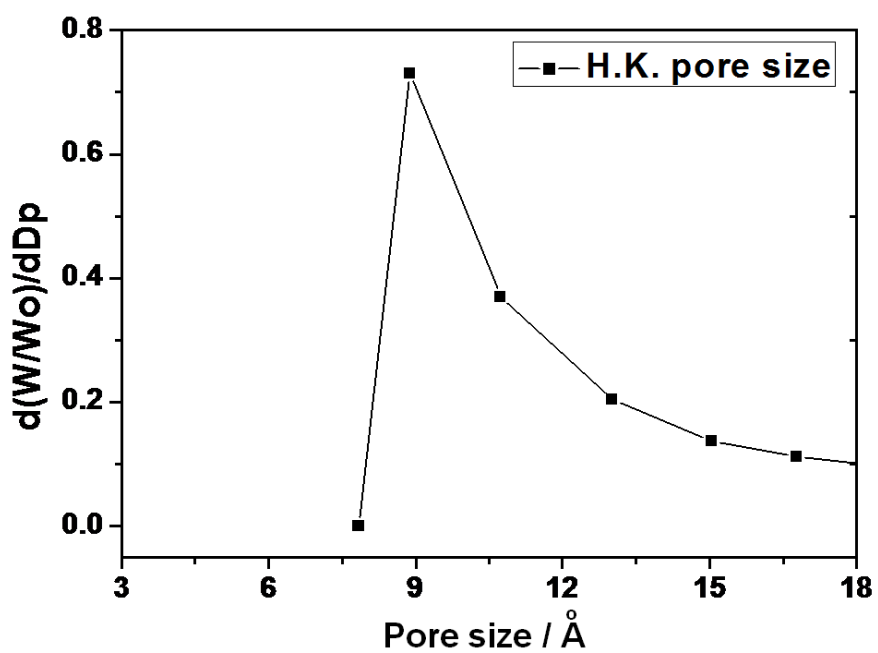


Fig. S3. Micropore size distribution curve of OMPC obtained by using the Horvath-Kawazoe method

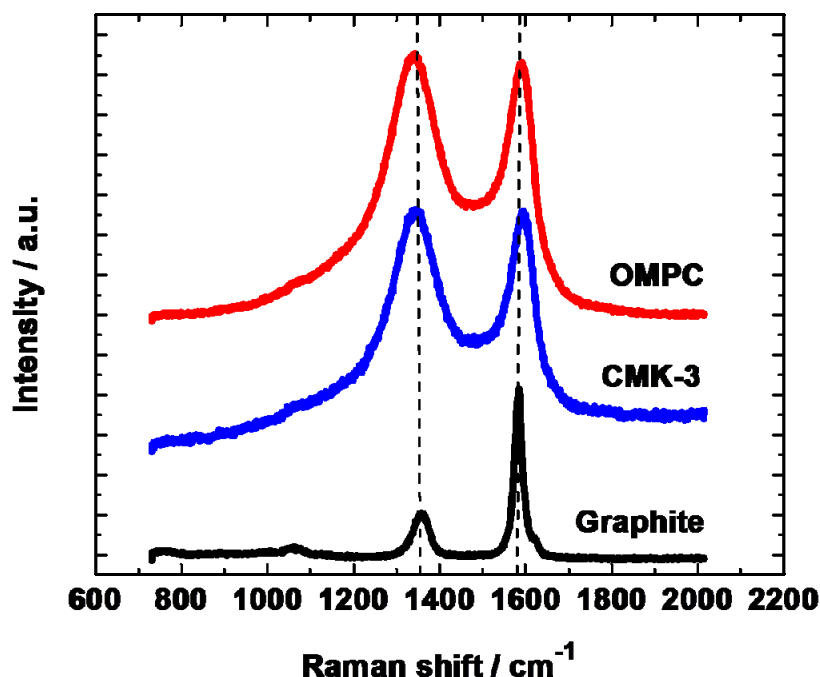


Fig. S4. Micro-Raman scattering spectra for various carbon materials.

Table S1. The derived parameters from the Raman spectra shown in Fig. S4 for various carbon materials.

Material	FWHM / cm^{-1}		I_D/I_G
	D band (1358 cm^{-1})	G band (1583 cm^{-1})	
Graphite	45	20	0.366
OMPC	167	98	1.79
CMK-3	159	83	1.92

FWHM stands for full width at half maximum, and I_D and I_G the integrated intensities of D and G bands, respectively.

Raman spectrum of the commercial graphite exhibits two well-defined and clearly separated peaks corresponding to the D and G bands of graphitic carbon (D at 1358 cm^{-1} , G at 1583 cm^{-1}), while OMPC and CMK-3 show low and close graphitization degree compared with the commercial graphite according to their Raman spectra shown in Fig. S4 and the derived parameters listed in Table S1.

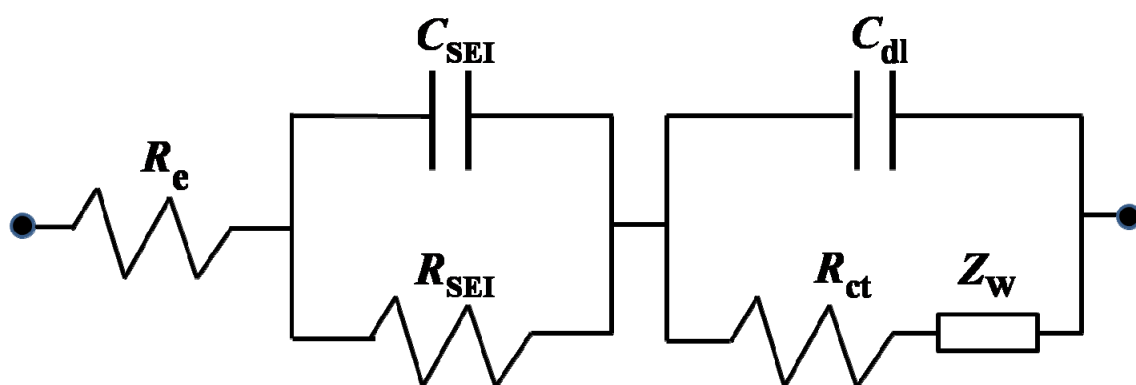


Fig. S5. Equivalent circuit proposed for analysis of Nyquist plots of OMPC and CMK-3 electrode/electrolyte interfaces. R_e stands for the electrolyte resistance, C_{SEI} and R_{SEI} the capacitance and resistance of the surface film, respectively, C_{dl} the double-layer capacitance, R_{ct} charge-transfer resistance, and Z_w the Warburg impedance related to the diffusion of lithium.