

Supporting Information

Physical and Chemical Dual-Confinement of Polysulfides within Hierarchically Meso-microporous Nitrogen-Doped Carbon Nanocages for Advanced Li-S Batteries

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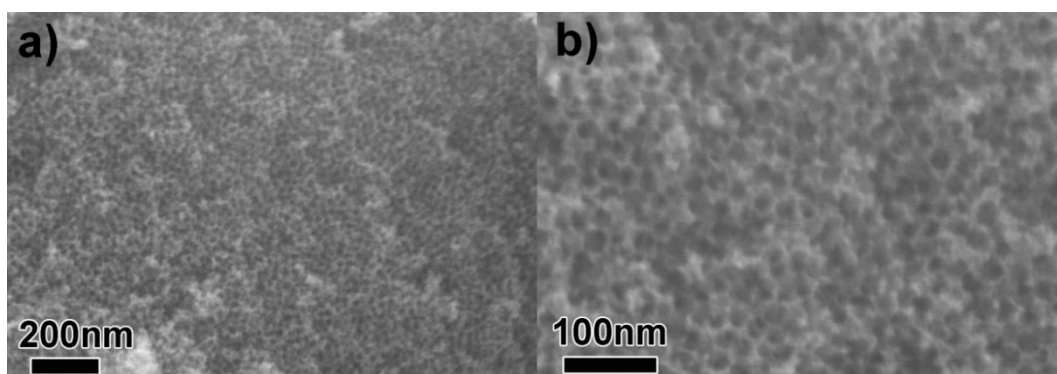


Fig. S1 SEM images of N-MMC.

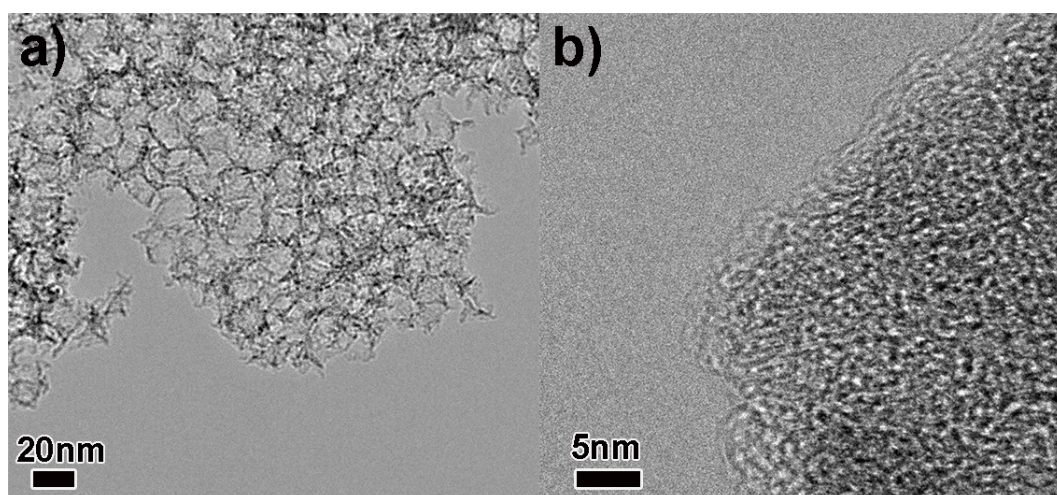


Fig. S2 TEM images of (a) N-MesoC, (b) N-MicroC.

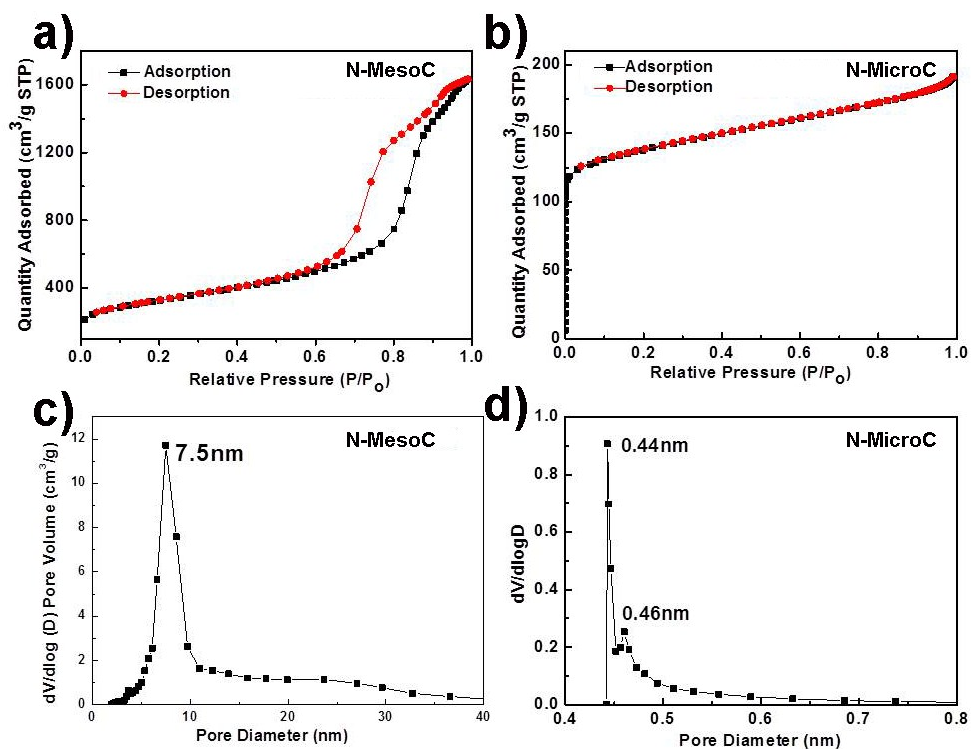


Fig. S3 (a) N_2 adsorption-desorption isotherm plot of N-MesoC. (b) N_2 adsorption-desorption isotherm plot of N-MicroC. (c) BJH pore size distribution N-MesoC. (d) t-plot pore size distribution of N-MicroC.

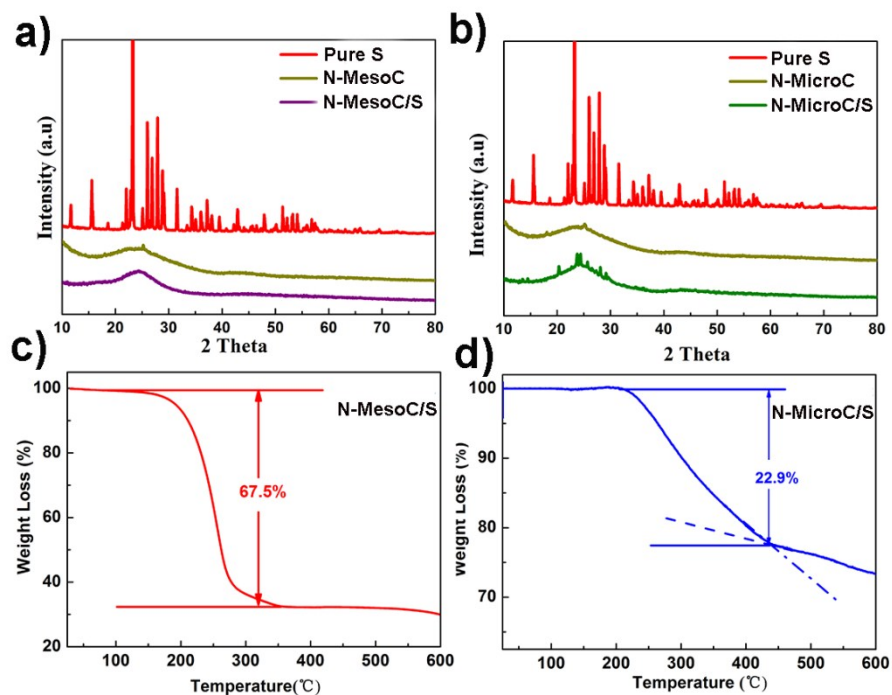


Fig. S4 (a) XRD patterns of N-MesoC/S. (b) XRD patterns of N-MicroC/S. (c) TG curves of N-MesoC/S. (d) TG curves of N-MicroC/S.

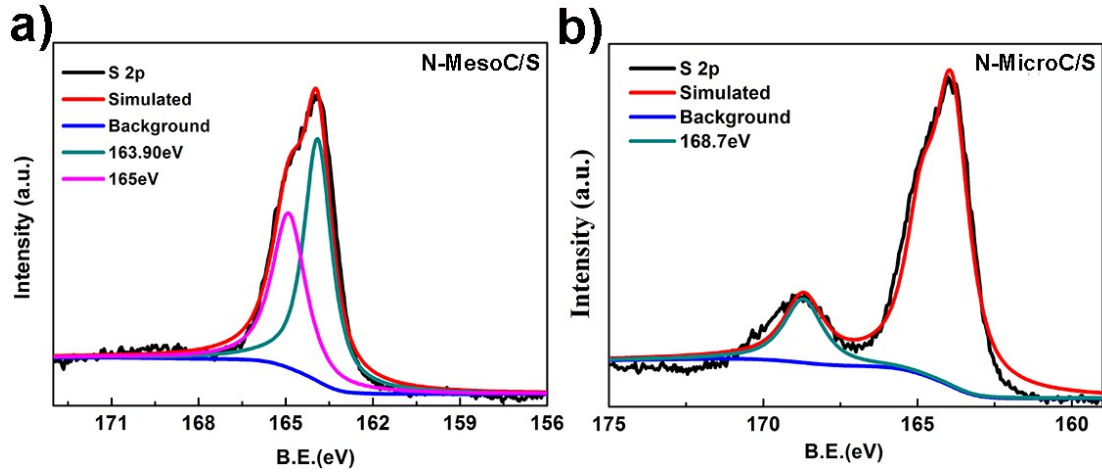


Fig. S5 XPS survey (a) S 2p spectra of N-MesoC/S, (b) S 2p spectra of N-MicroC/S.

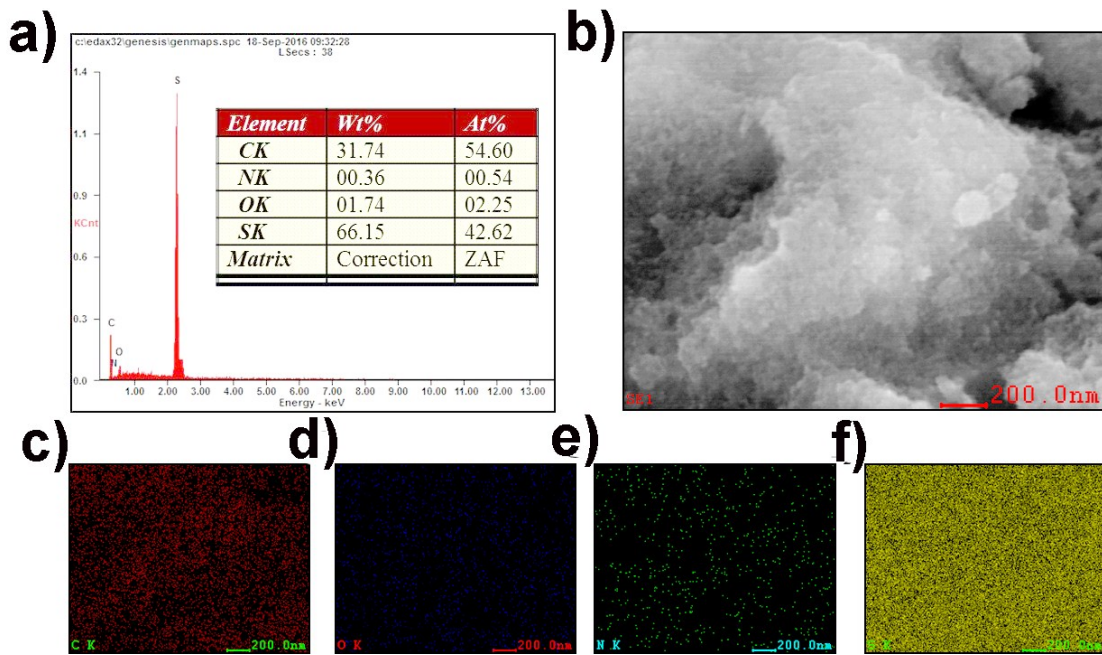


Fig. S6 (a-b) EDX patterns of N-MMC/S and corresponding elemental mapping across the selected area, (c-f) of N-MMC/S.

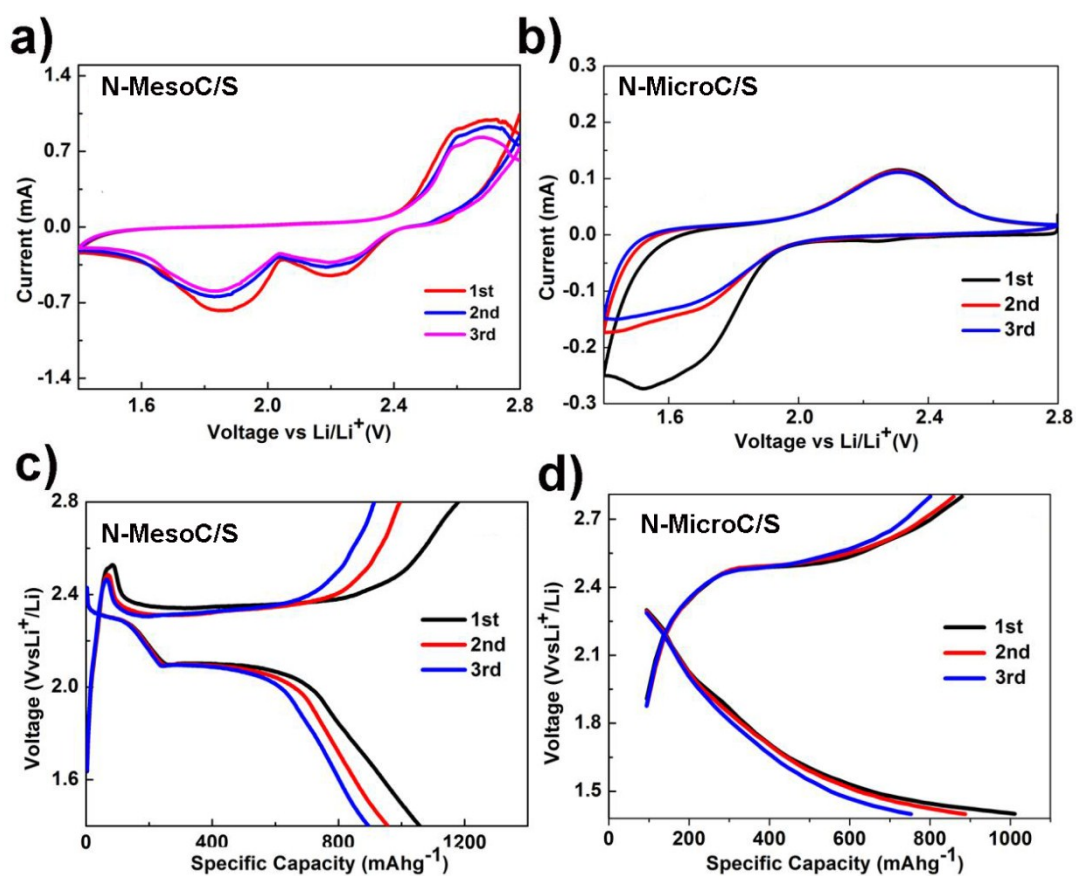


Fig. S7 (a) CV curves of (a) N-MesoC/S, (b) N-MicroC/S electrode at a sweep rate of 0.2 mV/s in the potential range from 2.80V to 1.40 V vs Li/Li+. (c) The discharge/charge profiles of (c) N-MesoC/S, (d)

N-MicroC/S electrode cycled at 0.2C current density.

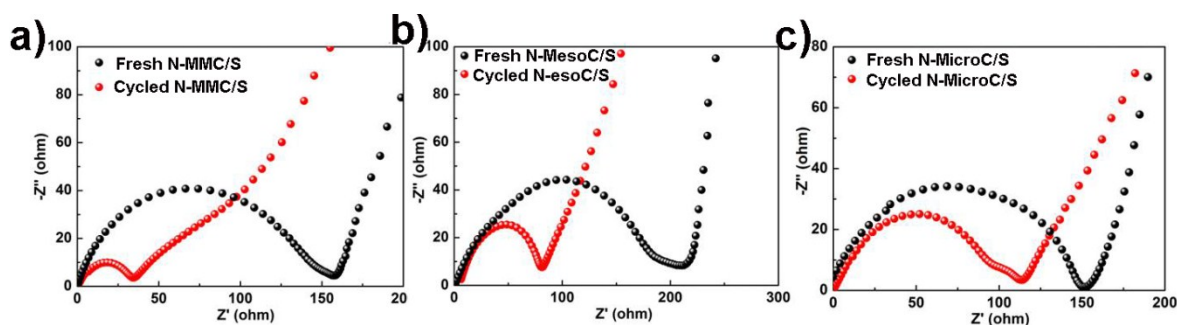


Fig. S8 EIS spectra of (a) N-MMC/S, (b) N-MesoC/S, (c) N-MicroC/S electrodes before and after

cycles from 1 mHz to 100 mHz at room temperature.