Supplementary material

Impact of Sulfur Infiltration Time and Its Content in an N-doped Mesoporous Carbon for Application in Li-S Batteries

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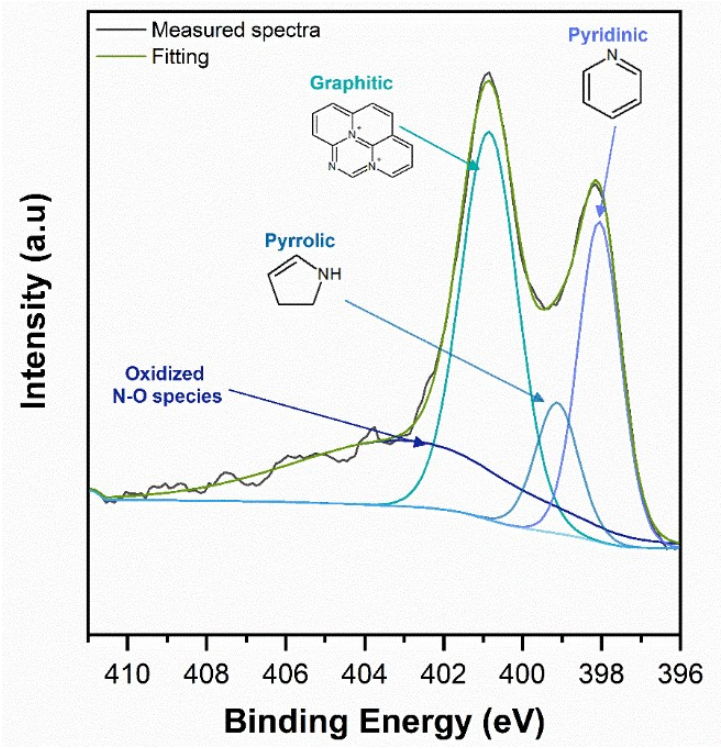

Figure S1. High-resolution XPS spectra of N1s for MC material.

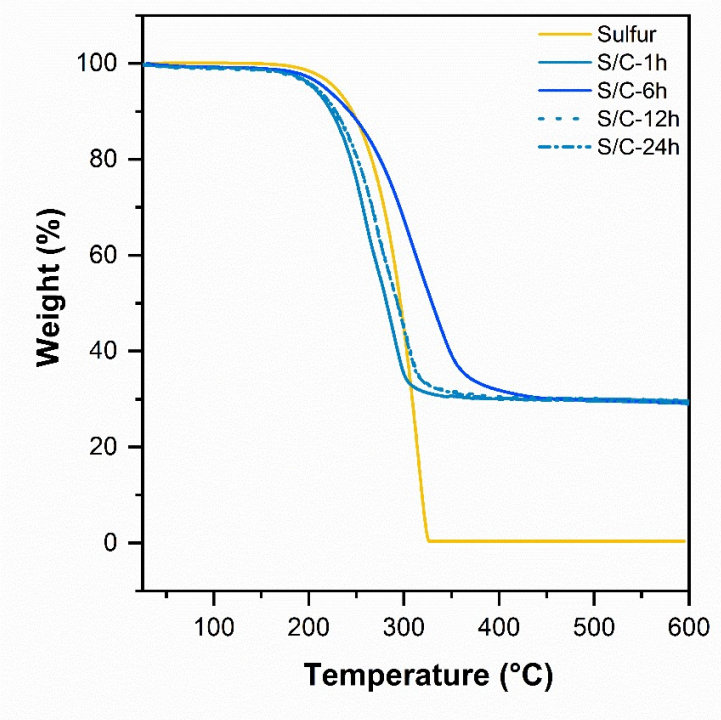

Figure S2. TGA analysis for sulfur sublimation of the S/C composites with 70% of S_8 and modifying the infiltration time.

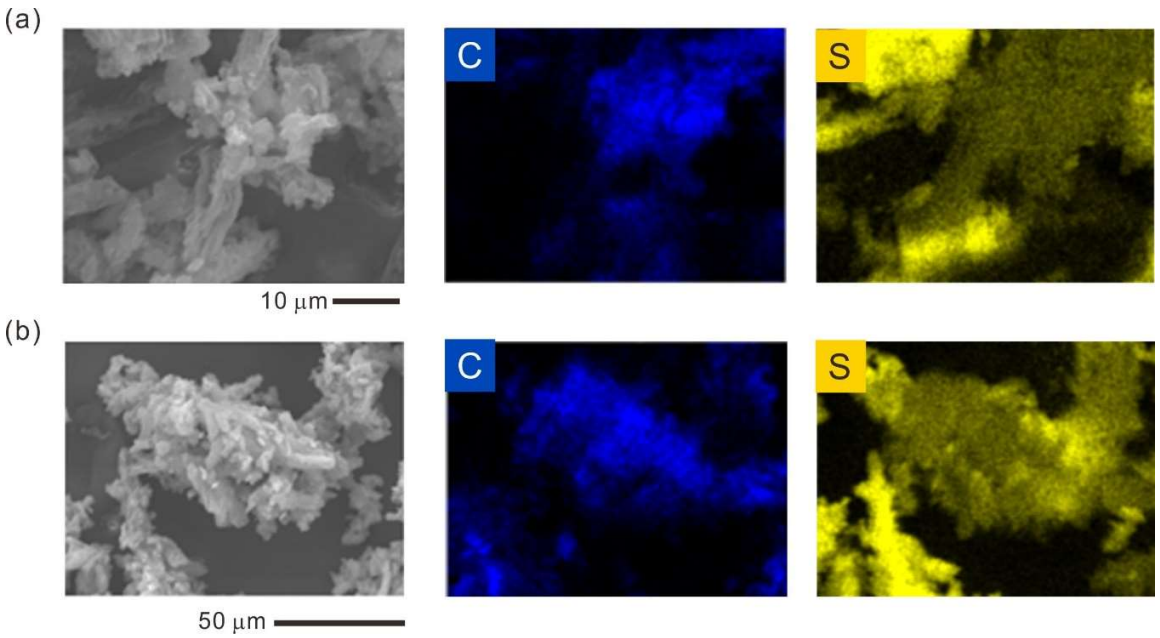

Figure S3. SEM-EDS analysis of **(a)** S/C-1h and **(b)** S/C-24h. EDS mapping includes carbon and sulfur analysis.

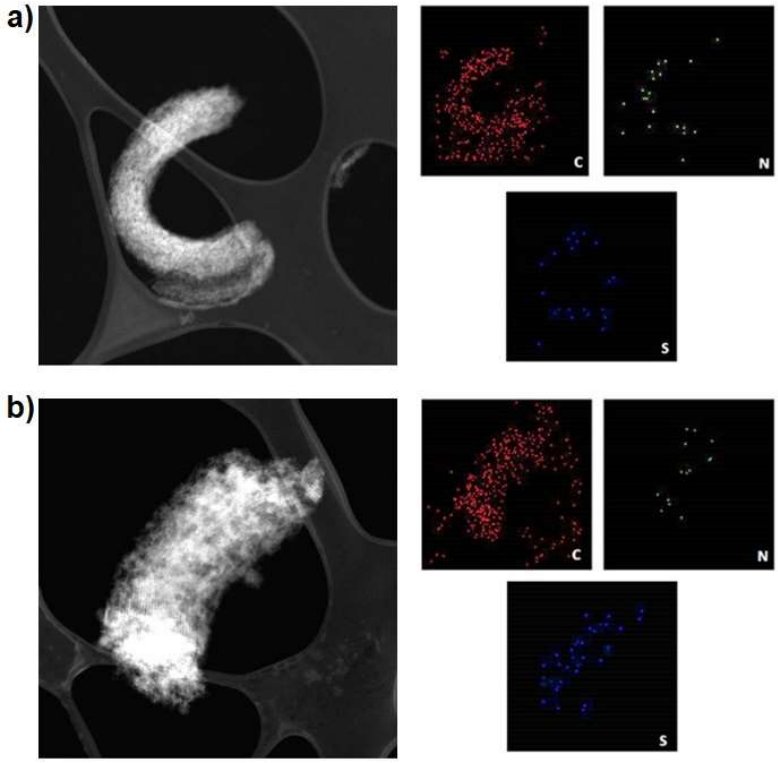

Figure S4. TEM elemental mapping of the **(a)** S/C 70:30, 24h and **(b)** S/C 70:30, 6h composites. Mapping includes sulfur, carbon, and nitrogen analysis.

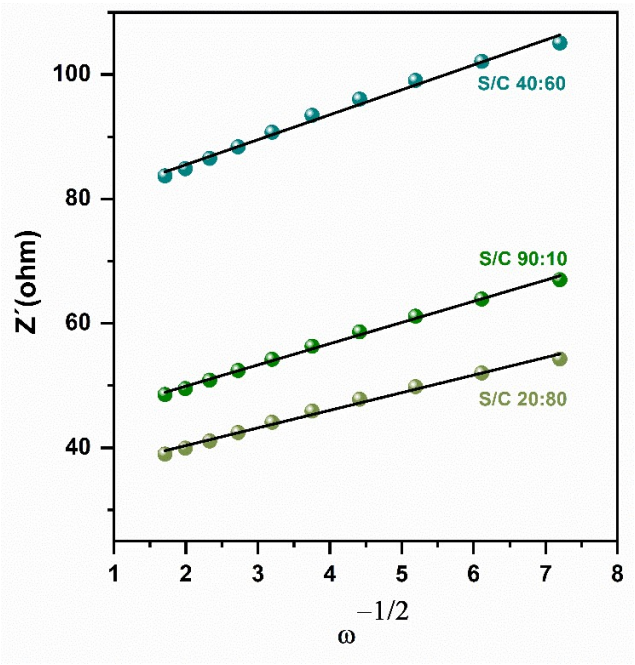

Figure S5. Relationship between Z´ and $\omega^{-1/2}$ in the low-frequency region.

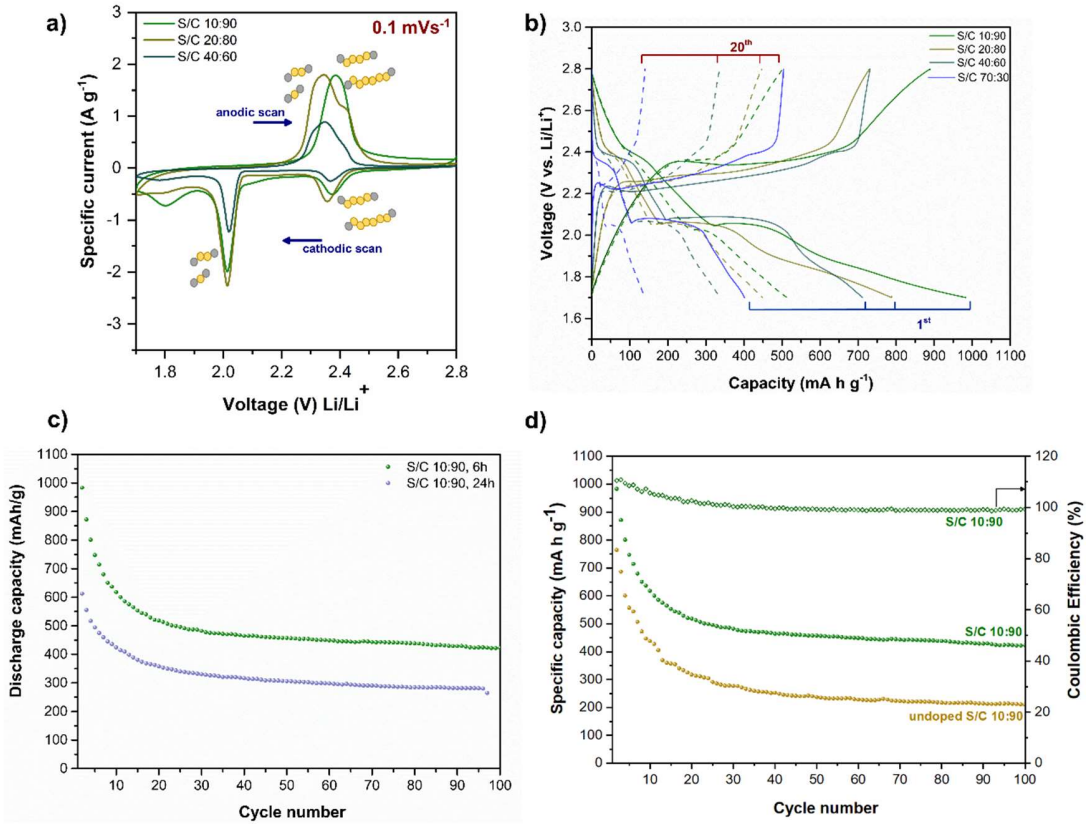

Figure S6. (a) Cyclic voltammetry (CV) curves of 2nd cycle at scan rate of 0.1 mV s^{-1} **(b)** Cycling performance efficiency at 0.1 C for 1st and 20th cycle of the batteries with the composites variating sulfur content, **(c)** S/C 10:90 cycling with different infiltration time, and **(d)** electrochemical comparison of the mesoporous carbon with and without nitrogen functionalization.