Supporting Information for

Polyvinylchloride-derived N, S-co-doped carbon as efficient sulfur host for high-performance Li-S battery

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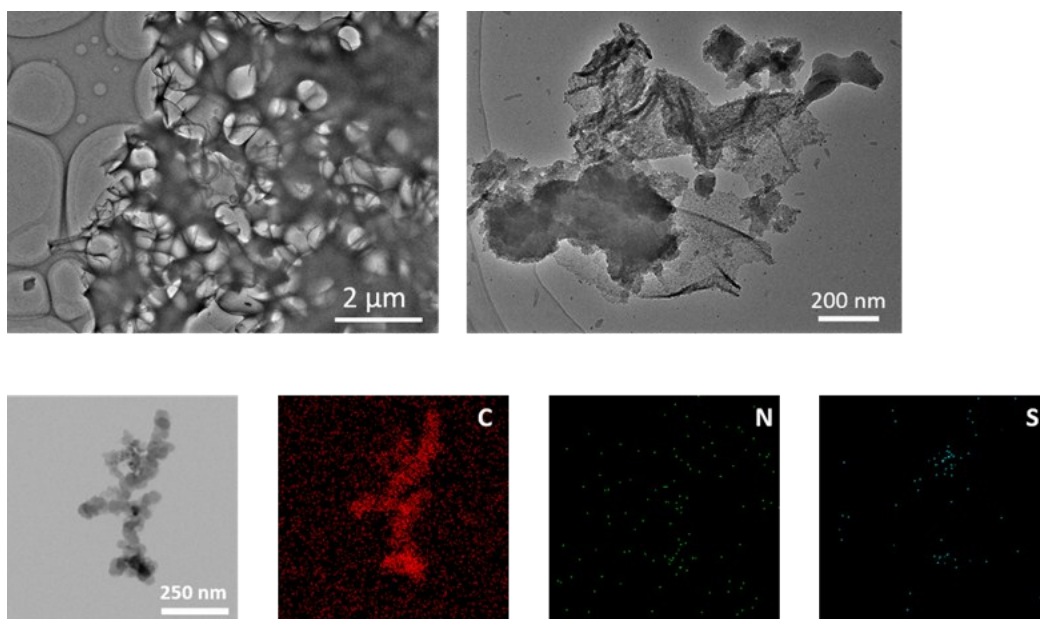E-mail: zhanggx@sdust.edu.cn; wenliu@mail.buct.edu.cn

Figure S1: TEM images of A) NS-C, B) PC samples and C) Elemental mapping of C, N, S elements in NS-C sample.
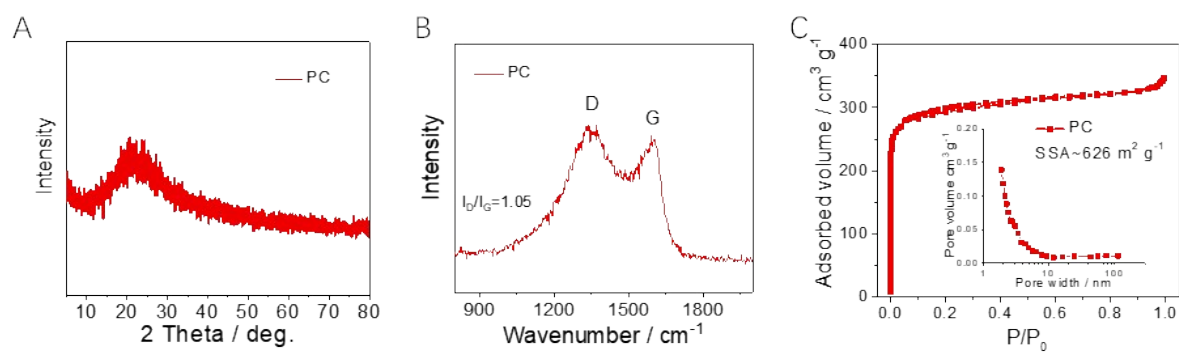

Figure S2: Physical properties of the PC sample. A) XRD pattern. B) Raman spectra and C) Pore size distribution of the NS-C samples.
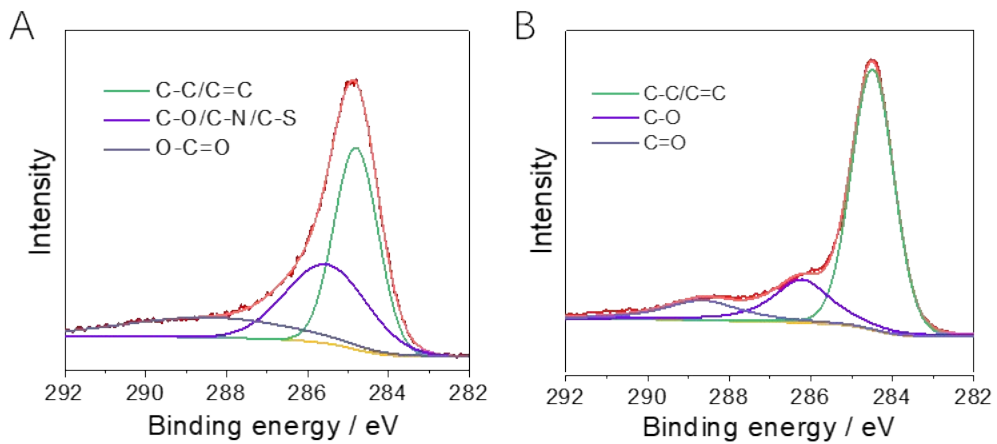
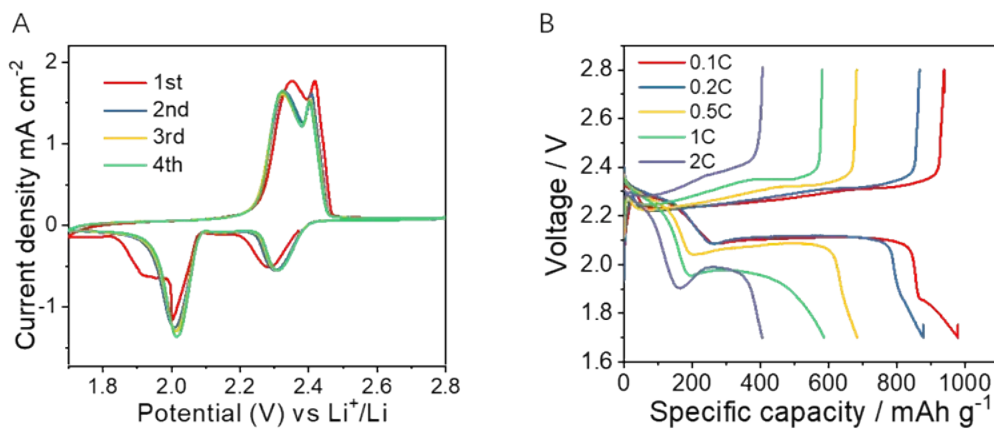**Figure S3:** XPS surveys. A) C 1s XPS spectrum of NS-C. B) C 1s spectrum of PC sample.

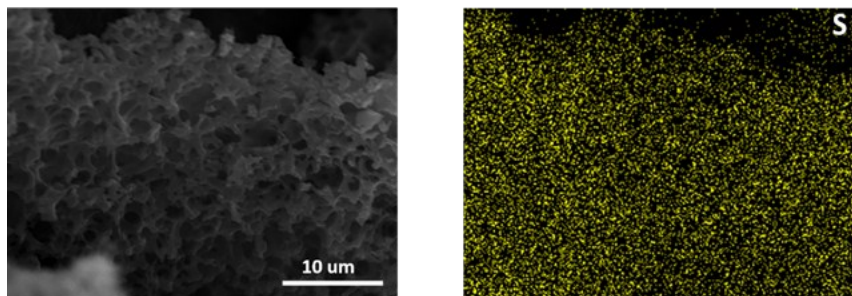**Figure S4:** Elemental mapping of S in NS-C/S composite.

Figure S5: Electrochemical performance. A) CV curves of PC/S electrode. B) Discharge-charge profiles of PC/S electrode from 0.1C to 2C
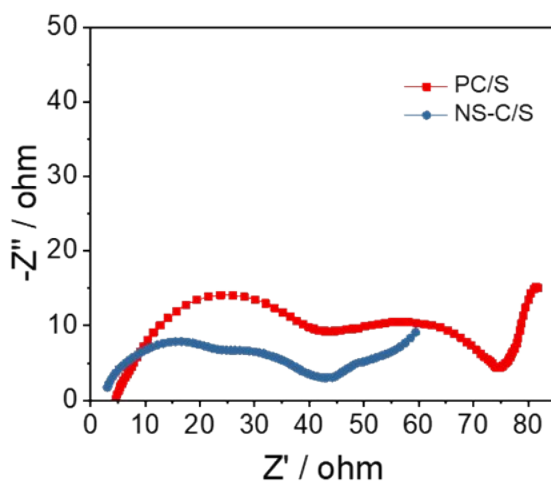

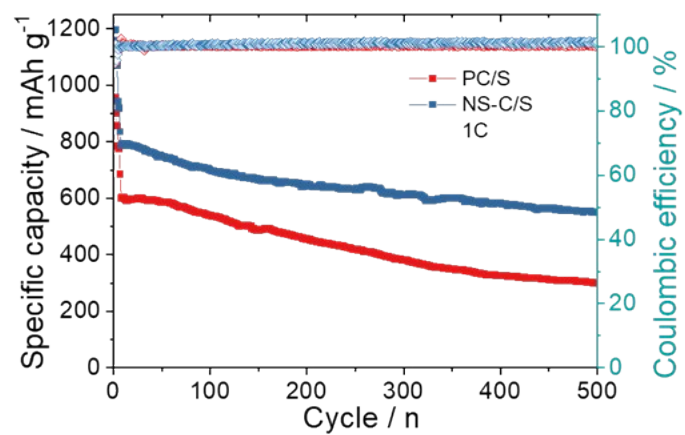**Figure S6:** EIS patterns of sulfur electrodes of PC/S, and NS-C/S.

Figure S7: Long cycling performance and Coulombic efficiency of different sulfur electrodes at 1

C for 500 cycles