

Supplementary Information

A flexible nanostructured sulphur-carbon nanotube cathode with high rate performance for Li-S batteries

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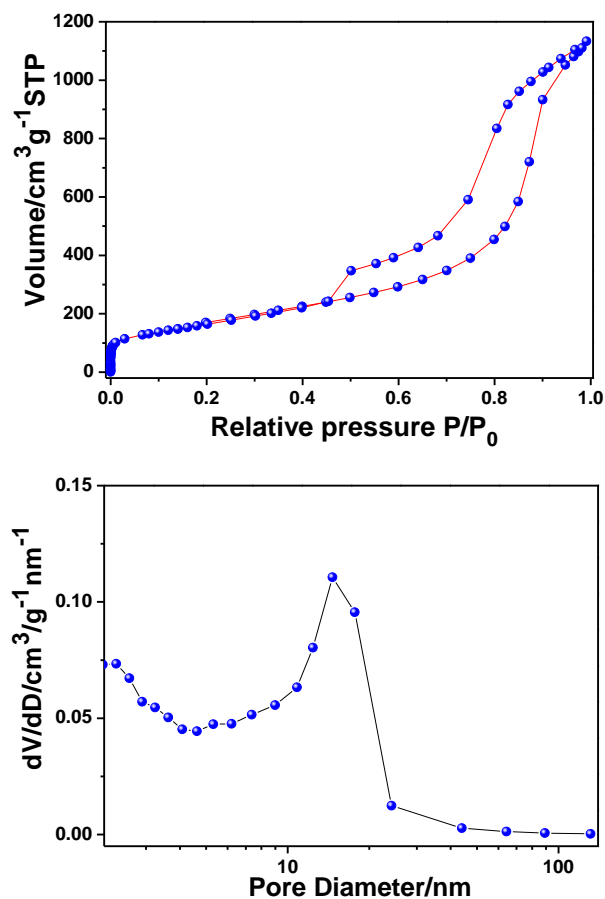


Fig. S1 N₂ adsorption/desorption isotherm and pore size distribution of the S-CNT-23. Pore size distribution plots were obtained by the Barrett-Joyner-Halenda method.

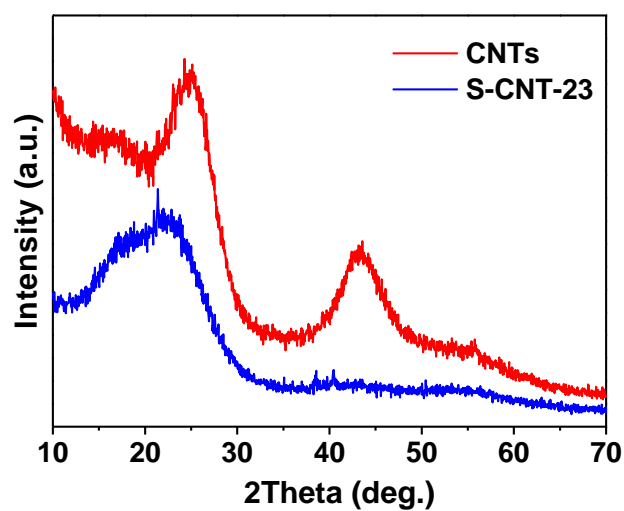


Fig. S2 XRD patterns of the S-CNT-23 and CNTs.

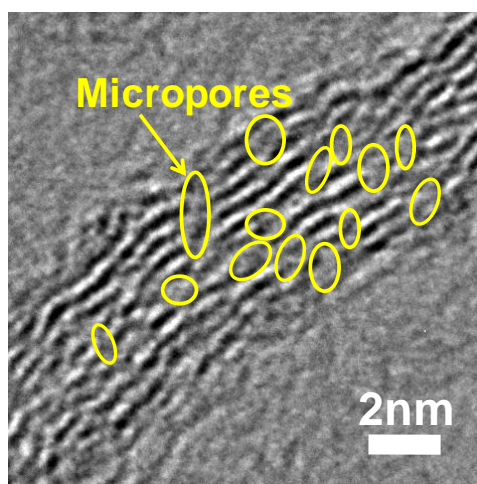


Fig. S3 HRTEM image of the S-CNT showing pores (circled) that host sulphur.

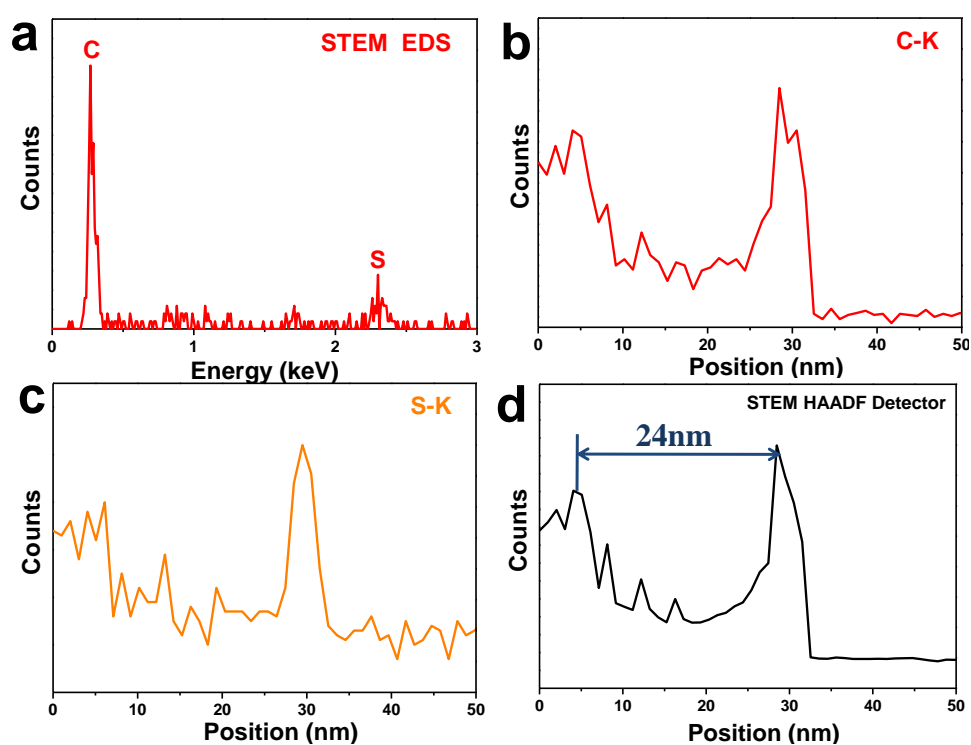


Fig. S4 (a) EDS analysis of the S-CNT-23, showing the presence of carbon and sulphur. (b-d) EDS line scans across the S-CNT-23, showing elemental composition as a function of beam position.

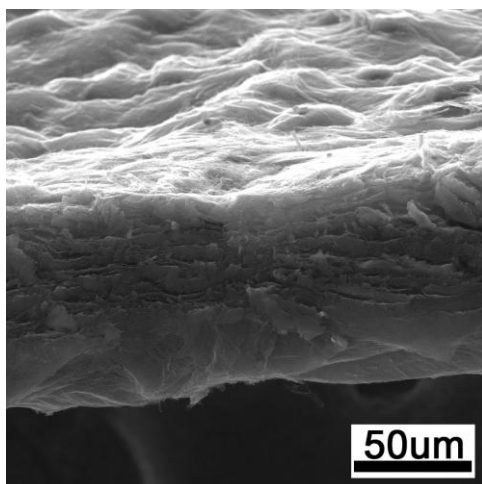


Fig. S5 SEM image of a cross-sectional view of the S-CNT-23 membrane.

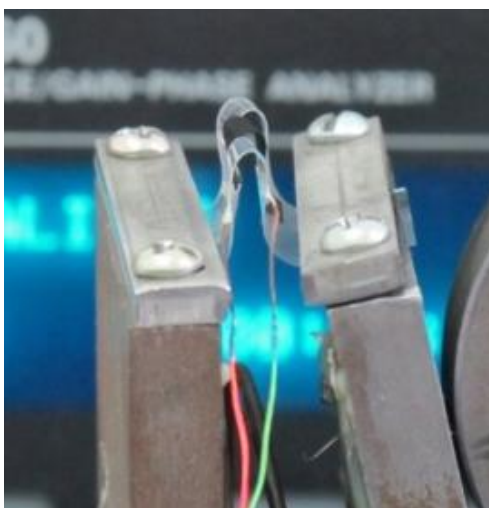


Fig. S6 Apparatus for bending conductivity test.

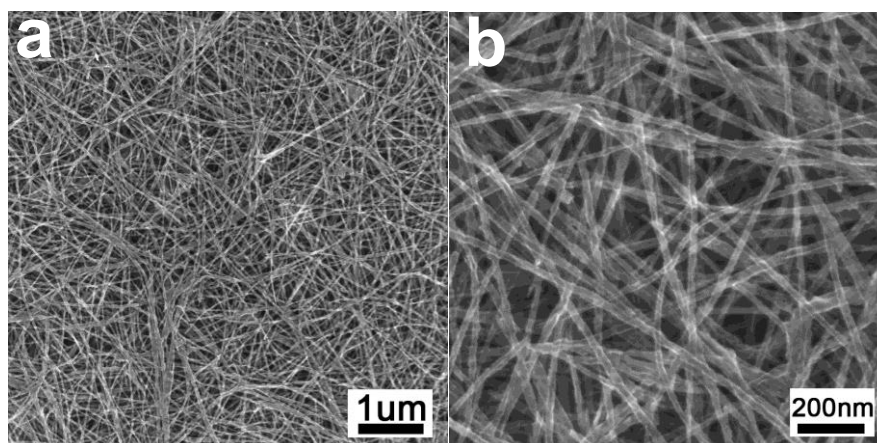


Fig. S7 (a, b) SEM images of the S-CNT-50 membrane cathode after 100 charge/discharge cycles.

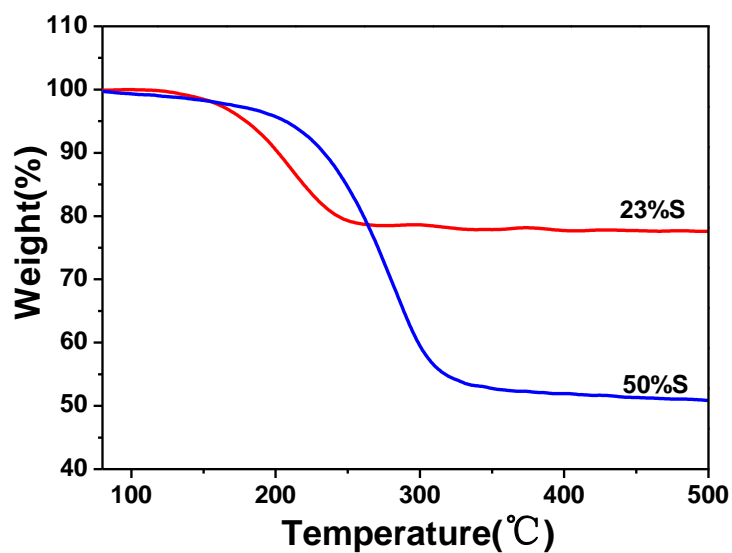


Fig. S8 Thermogravimetric curve of the S-CNTs in Ar with a heating rate of $10\text{ }^{\circ}\text{C min}^{-1}$, indicating the sulphur content of 23.0 and 50.0 wt%.