Supplementary Materials to

Nitrogen-doped carbon nanotubes interwind porous carbon with enhanced cathode performance in lithium-sulfur batteries

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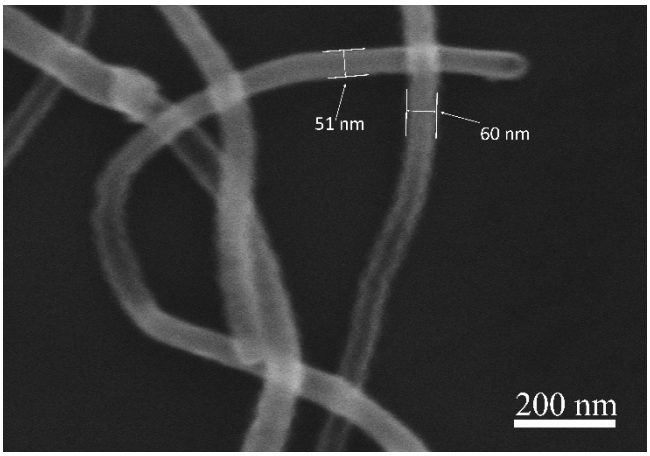

Fig. S1 An SEM image of NCNT.

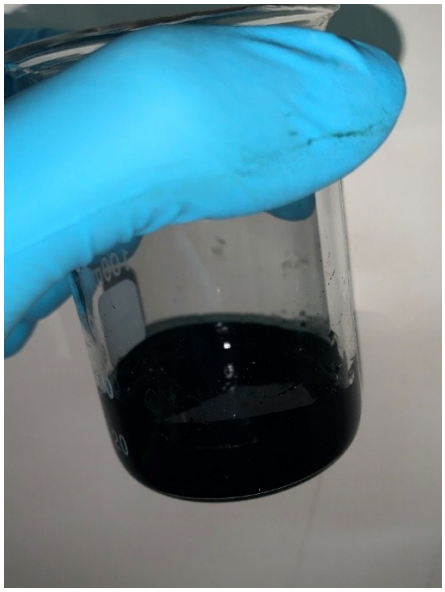

Fig. S2 An optical photo showing the as prepared NCNT@PANI hydrogel.

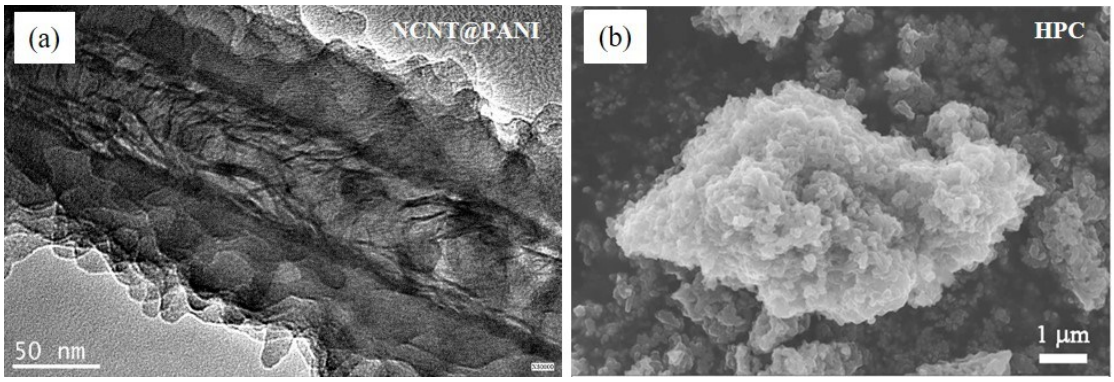

Fig. S3 (a) A high resolution TEM image of NCNT@PANI, (b) An SEM image of HPC derived from PANI hydrogels.

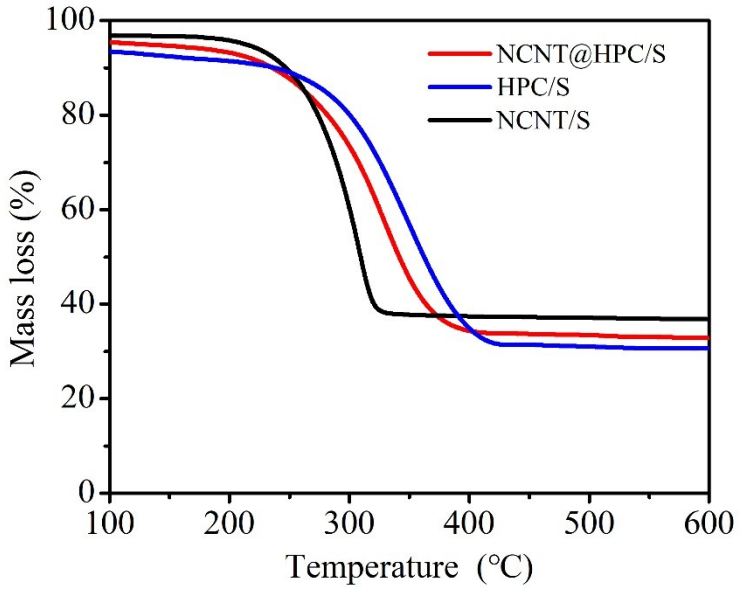

Fig. S4 TG curves of NCNT@HPC/S, HPC/S and NCNT/S composite.

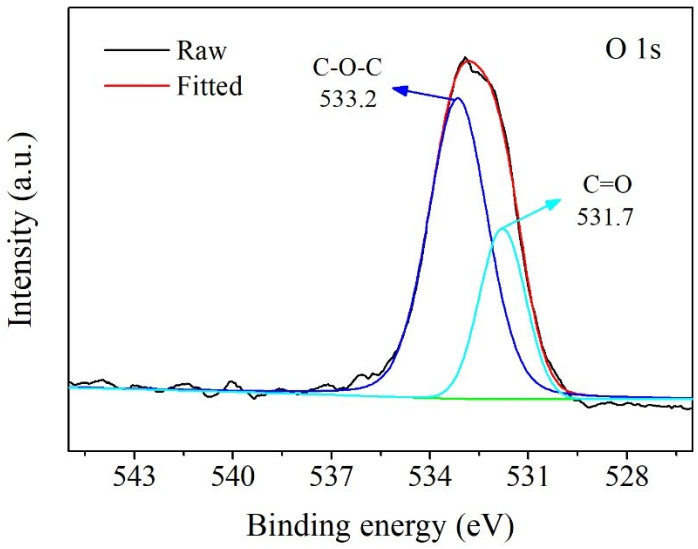

Fig. S5 High resolution XPS spectra of O 1s in NCNT@HPC/S composite. The two peaks at 533.2 and 531.7 eV correspond to the binding energy of bonds C−O−C and C=O, respectively.

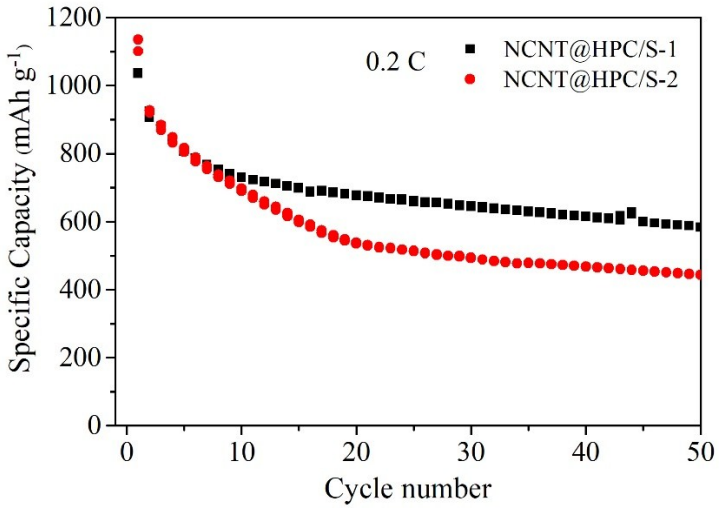

Fig. S6 Cycling performance at 0.2 C of NCNT@HPC/S-1 and NCNT@HPC/S-2 cathodes with the weight ratios of NCNT: aniline = 1:5 and 1:2, respectively.