

## Electronic Supplementary Material

### Large-scale production of hierarchically micro-macroporous carbon from cotton and its application in the lithium-sulfur battery

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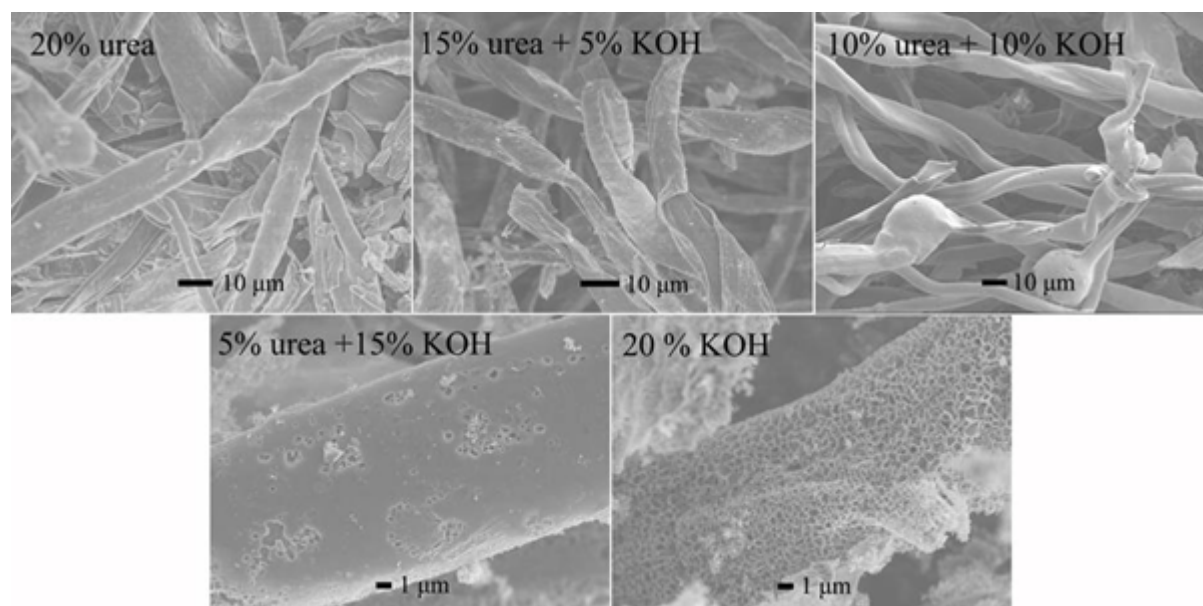


Fig. S1 SEM images of porous carbon derived from cotton under different treatment conditions.

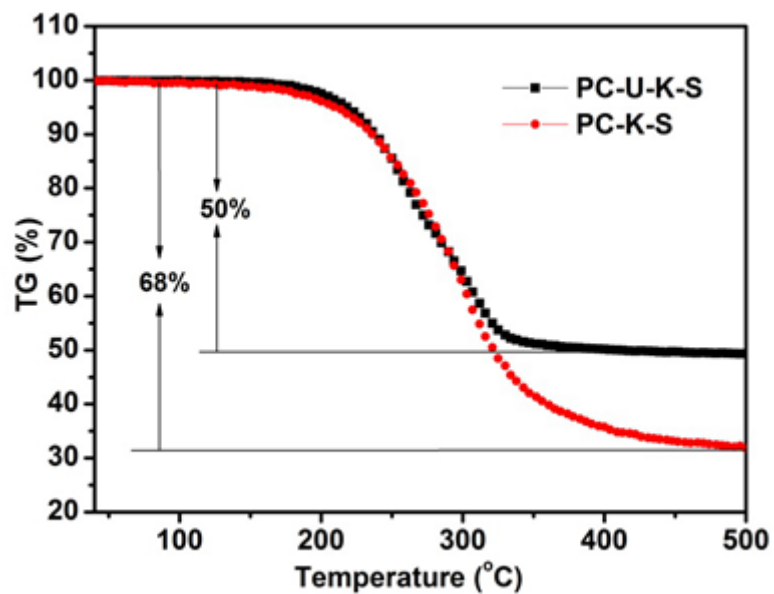


Fig. S2 TG curves of the PC-U-K-S and PC-K-S composites under argon atmosphere.

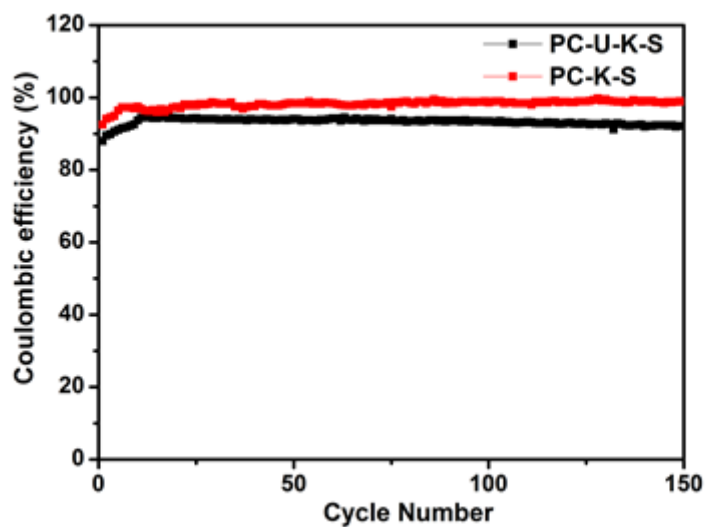


Fig. S3 The efficiency of PC-U-K-S and PC-K-S cells as function of cycle number.

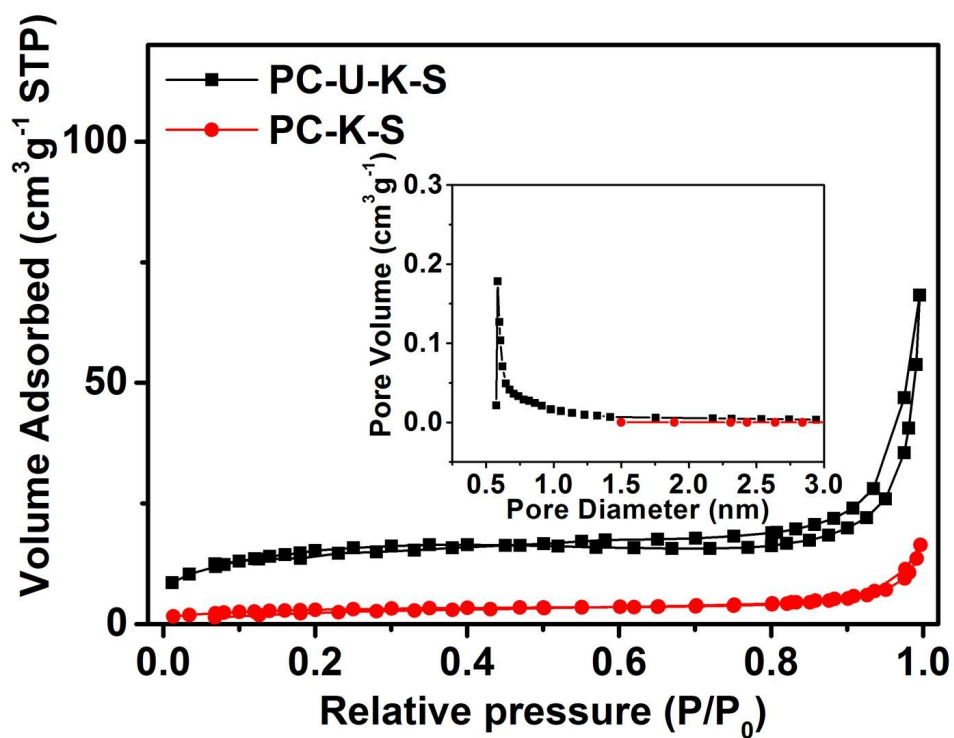


Fig. S4 N<sub>2</sub> sorption isotherms of the PC-U-K-S and PC-K-S composites. Inset shows the pore-size distributions for the composites.

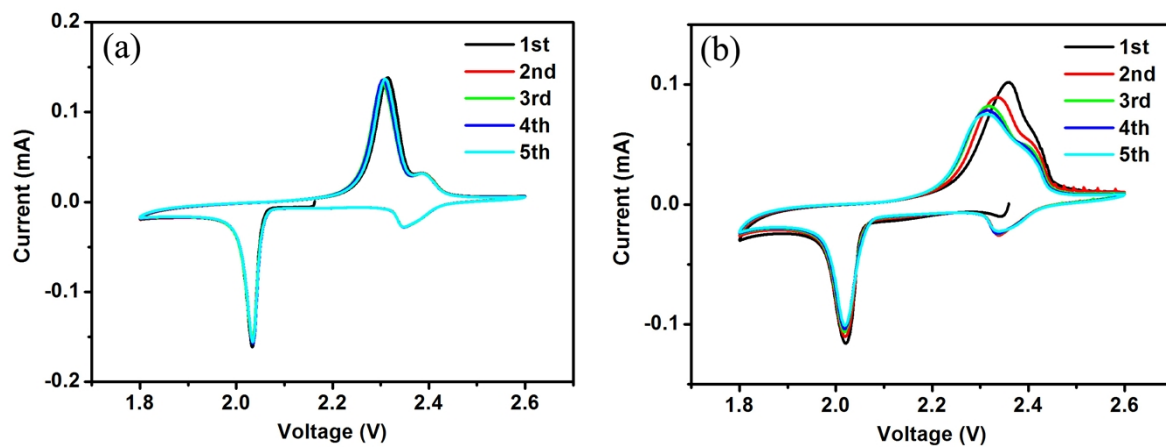


Fig. S5 CV curves of the cell with (a) PC-K-S and (b) PC-U-K-S composites after cycles.

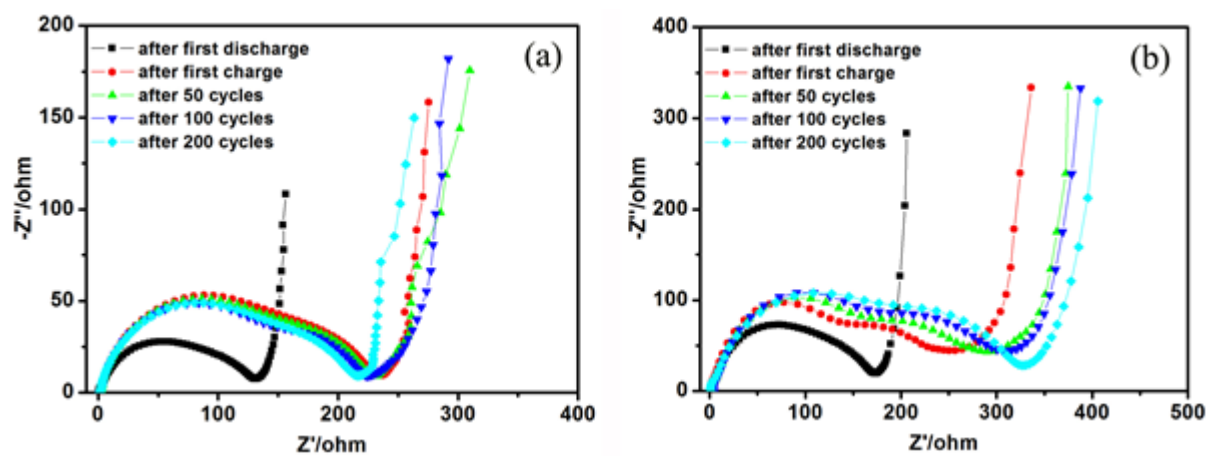


Fig. S6 EIS spectra of the cell with (a) PC-K-S and (b) PC-U-K-S composites after cycles.