

## Supplementary Materials

### **Sand/carbon composites as low-cost lithium storage materials with superior electrochemical performance**

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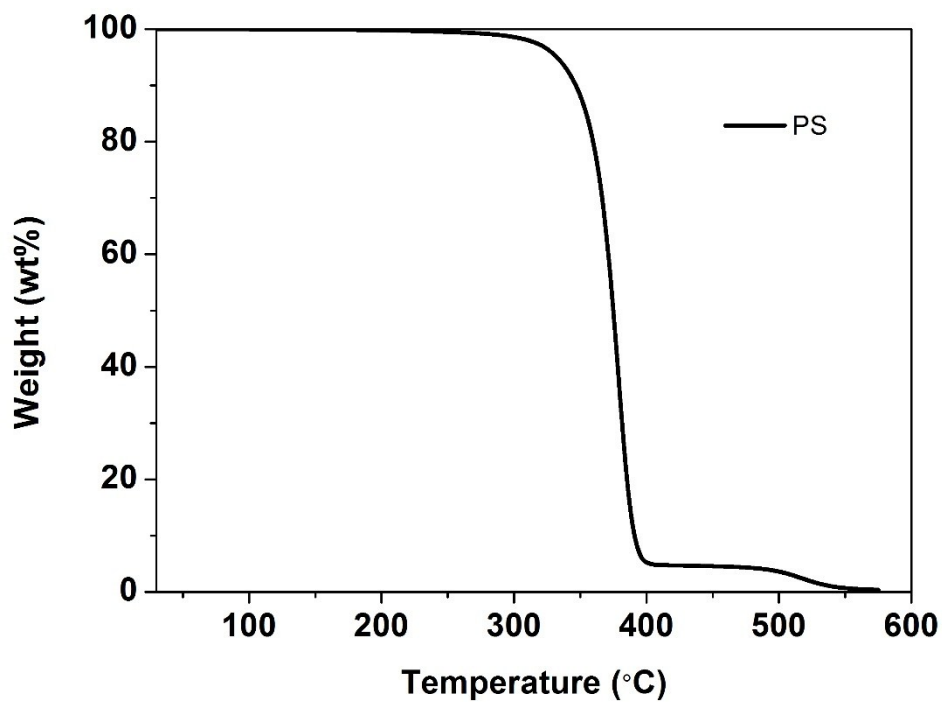


Fig. S1 TG curves of PS heated at a rate of  $5\text{ }^{\circ}\text{C min}^{-1}$  under Ar atmosphere

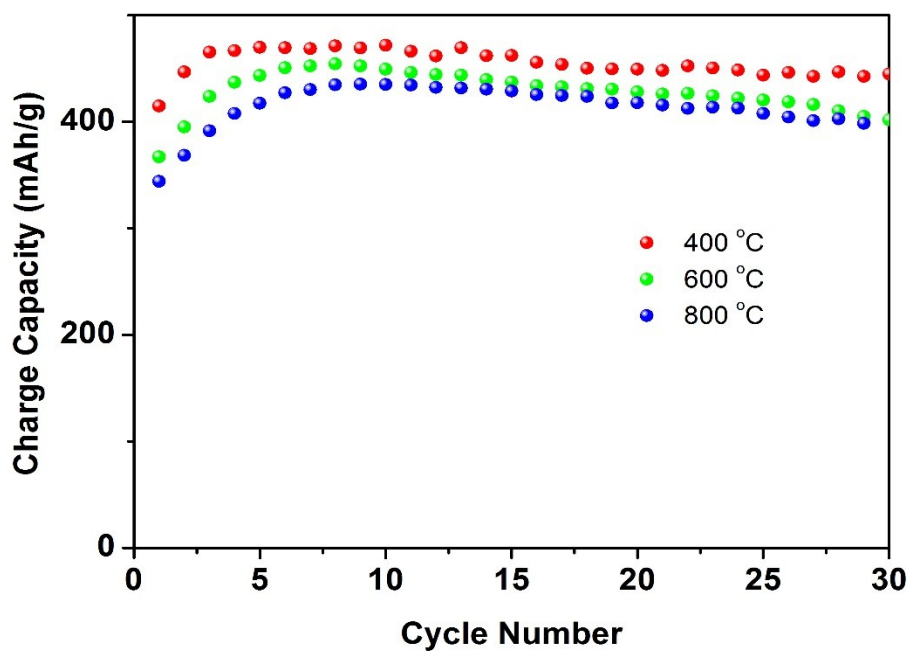
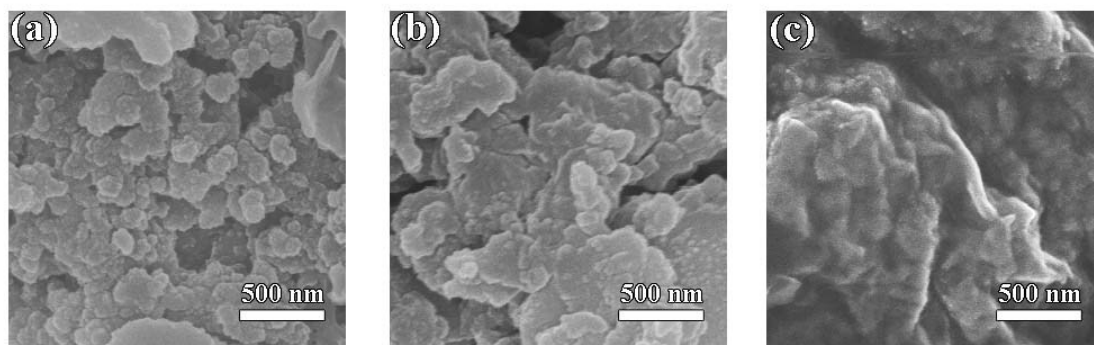


Fig. S2 Cycling performance of sand/carbon composite with 12 wt.% carbon at different temperature.



**Fig. S3** SEM images of the electrodes discharged/charged 200 cycles. (a) sand/carbon composite with 2 wt.% carbon; (b) sand/carbon composite with 5.5 wt.% carbon; (c) sand/carbon composite with 12 wt.% carbon.