Electronic Supplementary Material (ESI) for Nanoscale

Supporting Information

Highly Reversible Lithium Storage in Si (core)-Hollow Carbon Nanofibers (sheath) Nanocomposites

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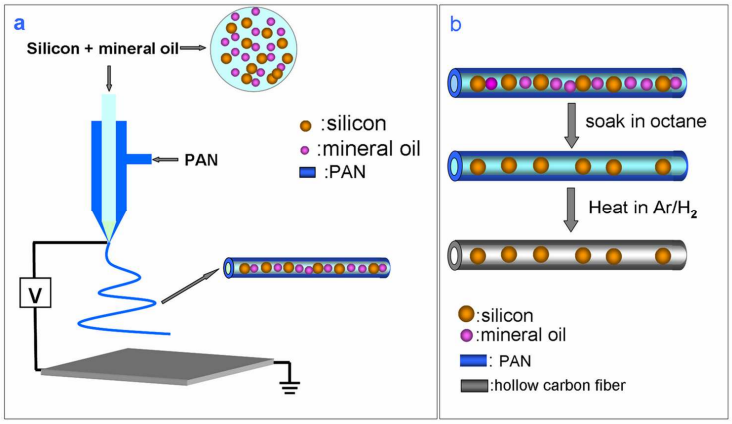

Fig.S1 a) Schematic illustration for design of a coaxial electrospinning spinneret used for preparing PAN/TBT core−sheath nanofibers. SEM micrographs of porous as-collected PAN/TBT nanofibers obtained via coaxial electrospinning.

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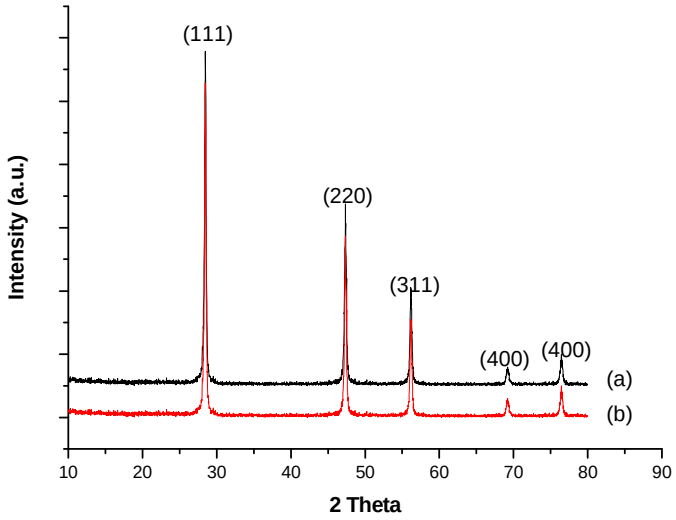

Fig. S2 X-ray diffraction patterns of a) Si nanoparticles;b) Si-hollow carbon nanofibers heated at 800^{o}C in Ar/H_2. The diffraction peaks from silicon (JCPDS 00-027-1402) are indexed in the patterns.

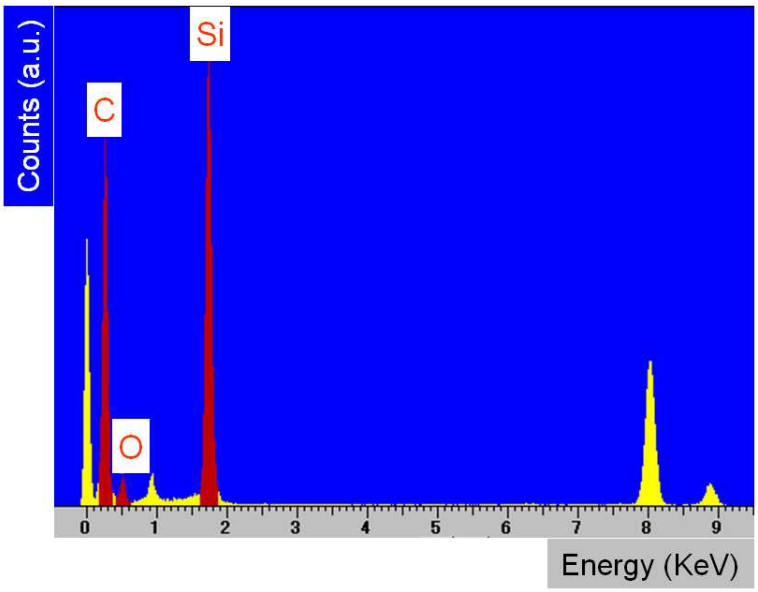

Fig. S3 An EDX spectrum of Si- hollow carbon nanofibers. The spectrum was acquired using a JEOL 2010F microscope operated in image mode. The sample was dispersed on a bare copper substrate to quantify the Si and C concentration. Detailed composition results are shown in Tab. S1.

Table S1: Detailed chemical composition analyses of Sn@carbon nanoparticles in hollow carbon nanofibers.

Elements	Wt.%	Uncertainty (wt.%)
C	62.3	3.1
O	3.0	0.2
Si	34.7	1.7