Supporting Information

Triple-walled SnO_2@N-doped Carbon@SnO_2 Nanotubes as an Advanced Anode Material for Lithium and Sodium Storage

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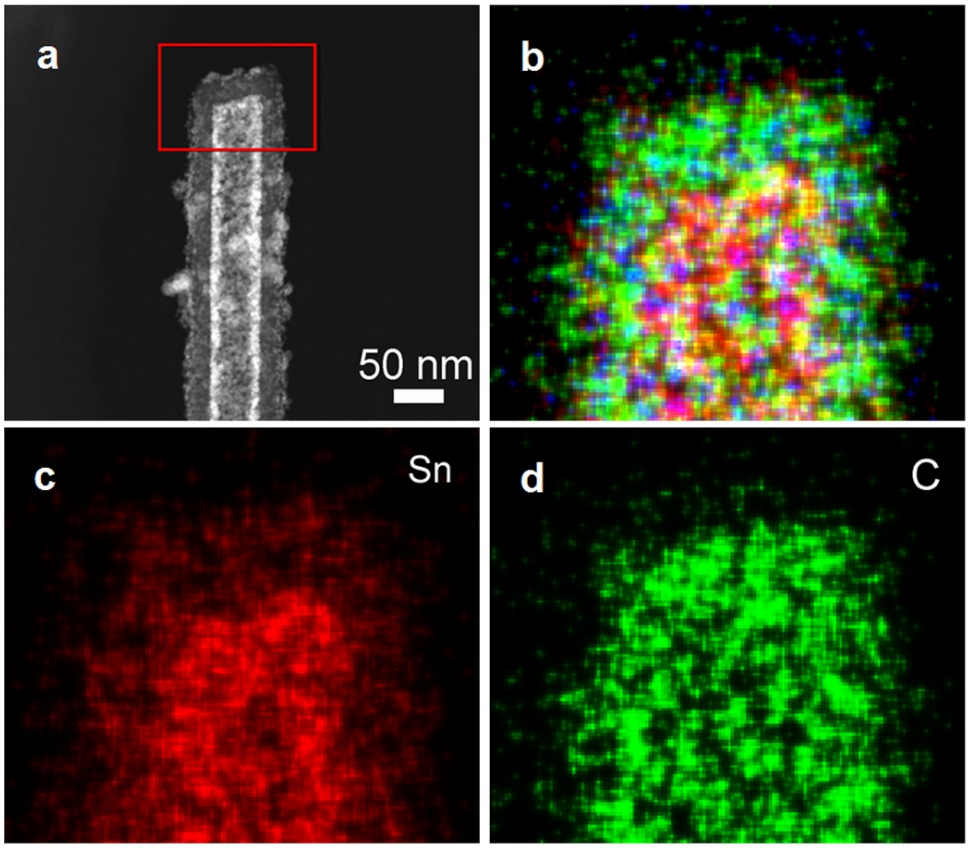

Fig. S1 (a) TEM image and (b-d) elemental mapping of SnO_2@N-doped Carbon@SnO_2 (SCS) nanotubes.

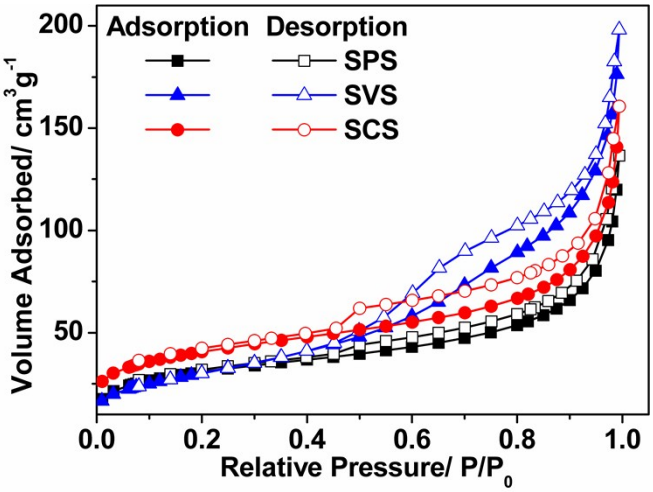

Fig. S2 Nitrogen adsorption-desorption isotherms of SnO_2@PPy@SnO_2 (SPS), SnO_2@N-doped Carbon@SnO_2 (SCS) and SnO_2@Void@SnO_2 (SVS) nanotubes.

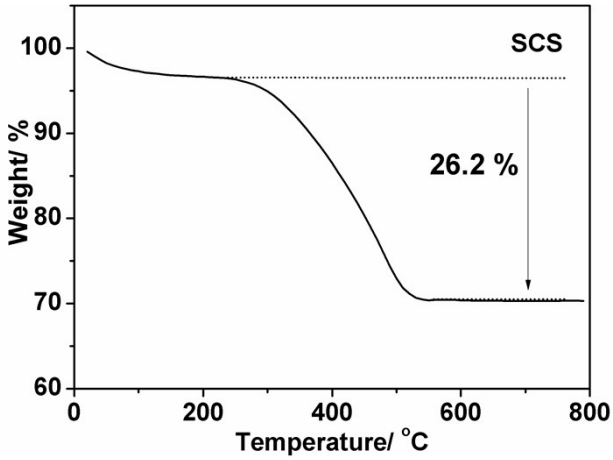

Fig. S3 TG curve of SnO_2@N-doped Carbon@SnO_2 (SCS) nanotubes at a heating rate of 10 ^{o}C min^{-1} in air.

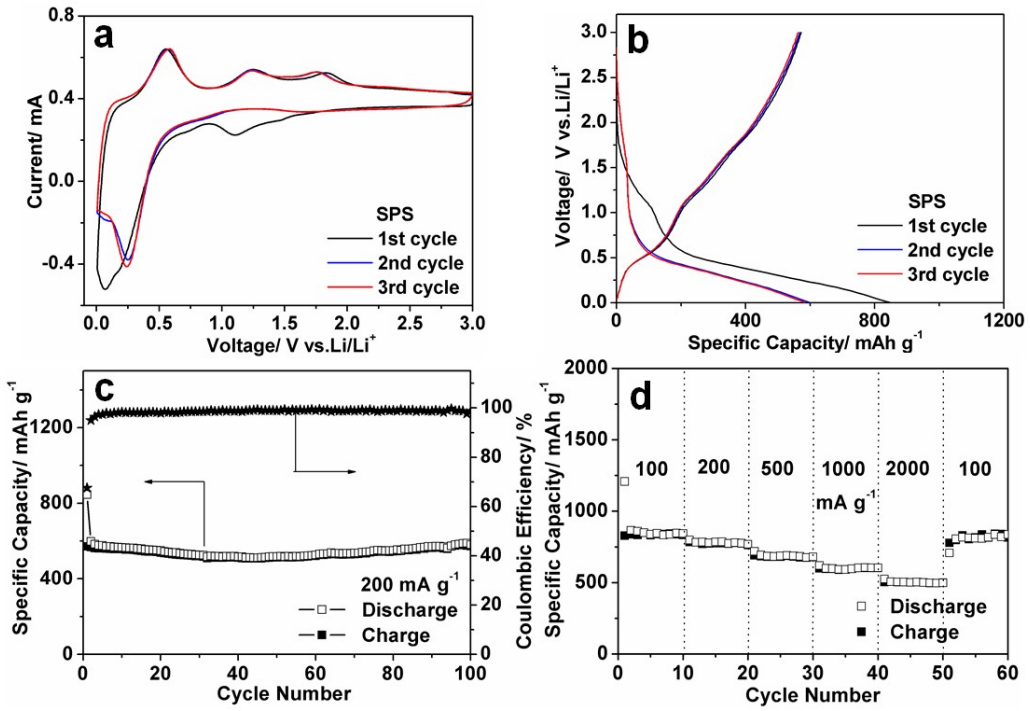

Fig. S4 Electrochemical performance of SnO_2@PPy@SnO_2 (SPS) nanotubes versus Li, tested between 0.005 and 3V. (a) cyclic voltammograms (CVs) of SPS nanotubes at a scanning rate of 0.1 mV s^{-1}. (b) first three discharge-charge curves and (c) cycling performances of SPS at a current density of 200 mA g^{-1}. (d) rate performances of SPS nanotubes.

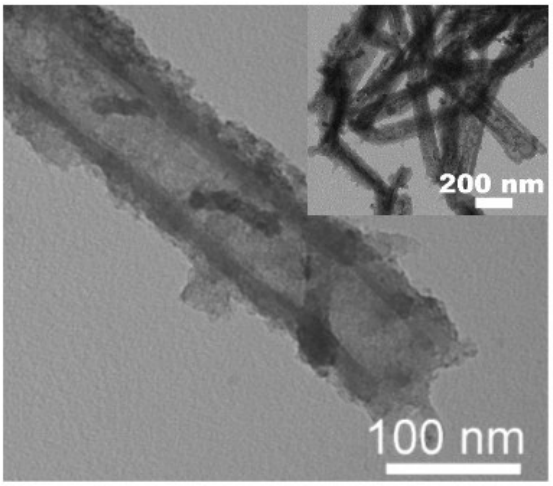

Fig. S5 TEM images of the electrodes made of SnO_2@N-doped Carbon@SnO_2 (SCS) nanotubes after rate capability test versus Li for 60 cycles.

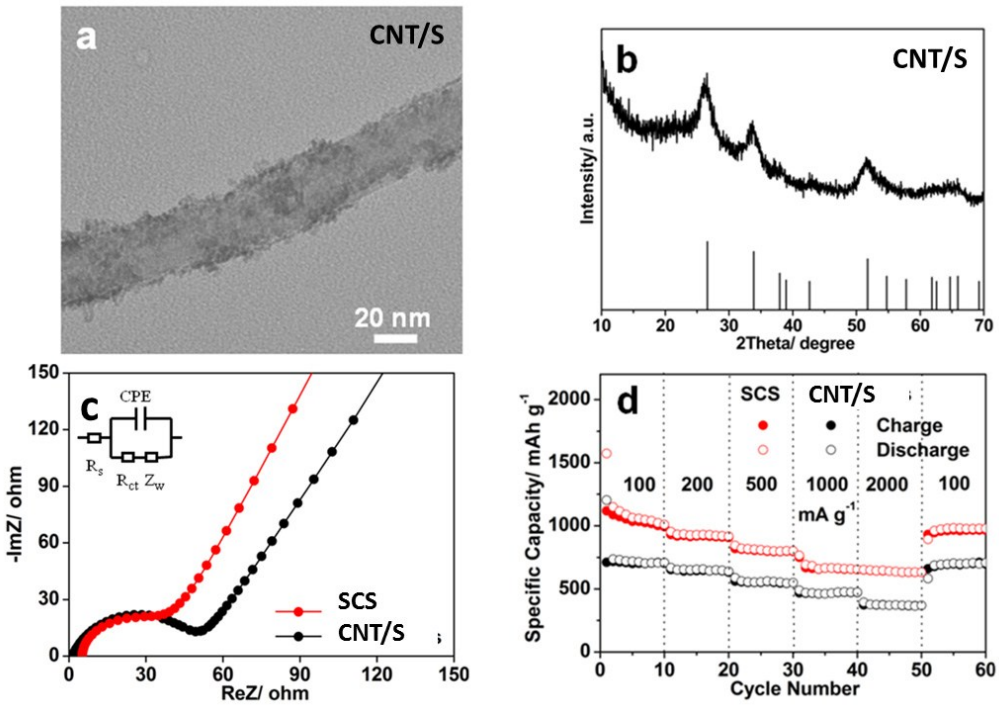

Fig. S6 (a) TEM image and (b) XRD pattern of CNT-supported SnO_2 nanoparticles (CNT/S). (c) EIS spectra and (d) rate performances of SCS and CNT/S.

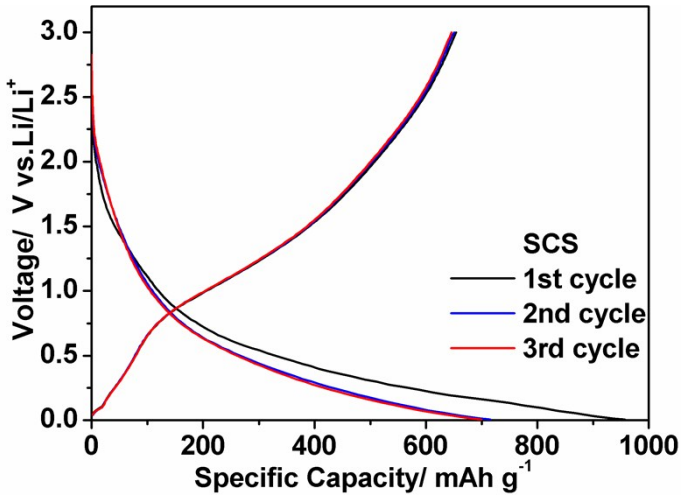

Fig. S7 First three discharge-charge curves SnO_2@N-doped Carbon@SnO_2 (SCS) at a current density of 25 mA g^{-1} in NIBs.