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# $TiO_2$(B)@Carbon Composite Nanowires as Anode for Lithium Ion Batteries with Enhanced Reversible Capacity and Cyclic Performance

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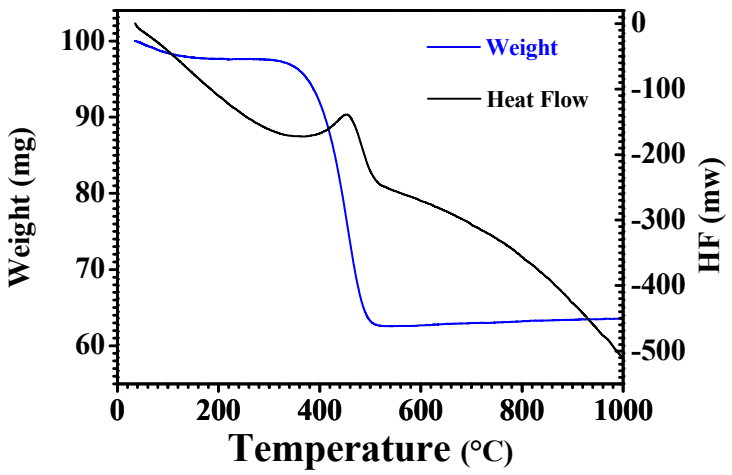



**Fig. S1** TGA/DSC curves of $TiO_2$(B)@Carbon composite nanowires.

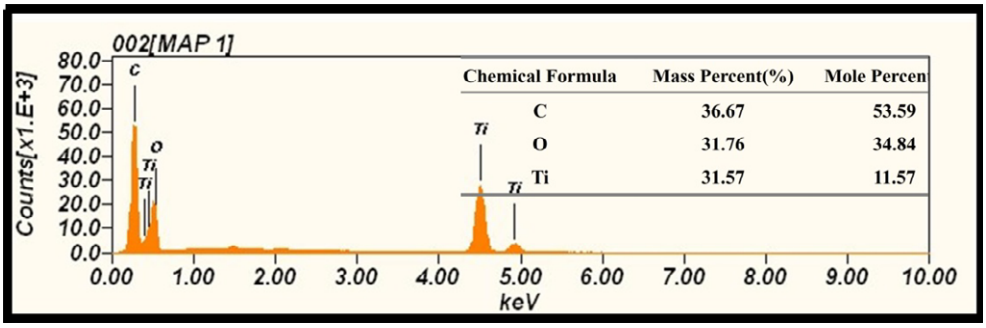
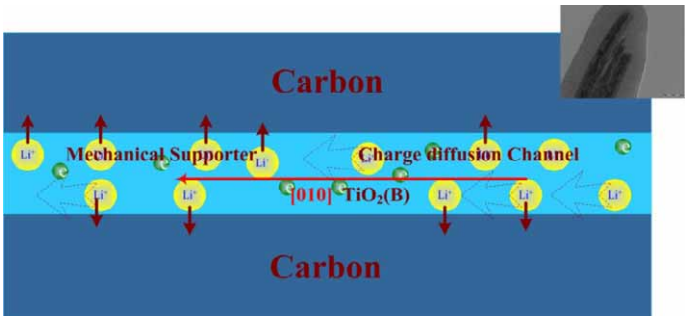



**Fig. S2** EDX spectrum of $TiO_2$(B)@Carbon composite nanowires and corresponding content table for the sample (inset).




**Scheme S1** Charge diffusion and conducting mechanism of $TiO_2$(B)@Carbon composite nanowires during charge/discharge processes. The inset shows a high resolution TEM image of $TiO_2$(B)@Carbon composite nanowire.

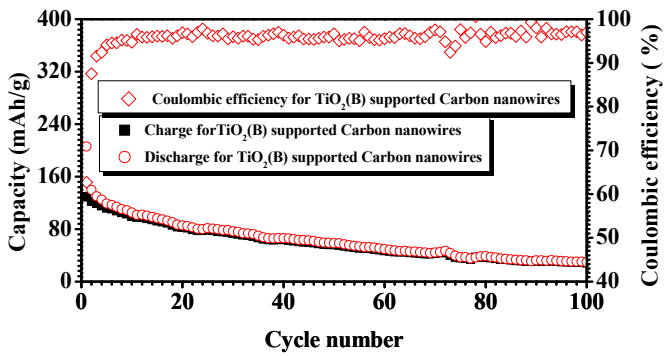



**Fig. S3** Capacity–cycle number curves from the first cycle to the 100$^{th}$ cycle of anatase $TiO_2$(B)@C nanowires between 1.0 and 3.0 V vs. $Li^+$/Li at the current density of 30 $mAg^{-1}$.

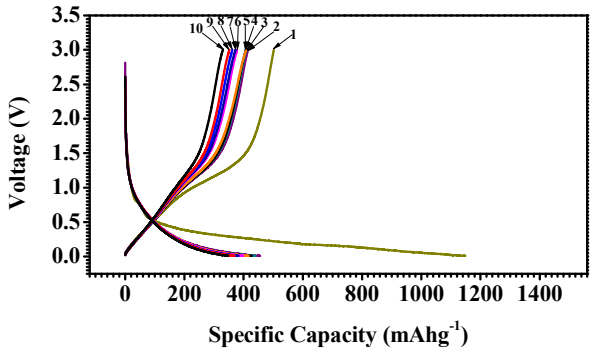



**Fig. S4** Voltage profiles for selected cycles of glucose-hydrothermal derived carbon electrode between 0.01 and 3.0 V vs. $Li^+/Li$ at the current density of 30 $mAg^{-1}$.