Supporting Information

Biphase-Interface Enhanced Sodium Storage and Accelerated Charge Transfer: Flower-like Anatase/Bronze TiO_2/C as an Advanced Anode Material for Na-Ion Batteries

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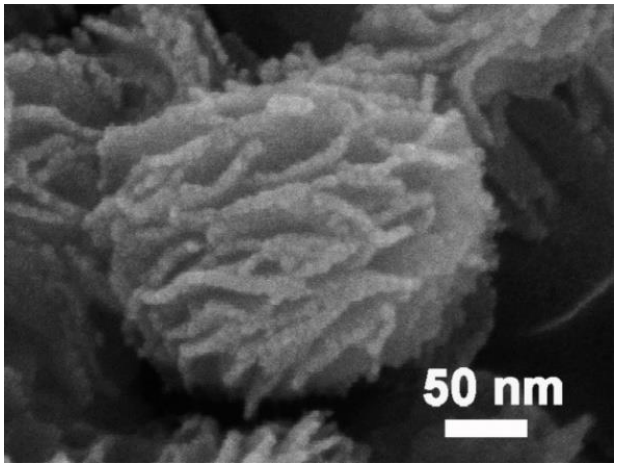

Fig. S1. SEM image of TiO_2(A)/TiO_2(B)/C.

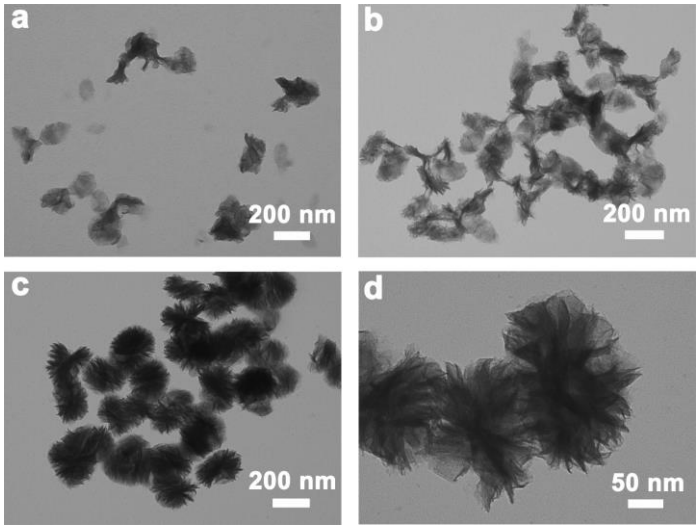

Fig. S2. TEM images of the products obtained at different times by the solvothermal reaction.

(a) 1.9 h, (b) 2.7 h, (c, d) 4 h.

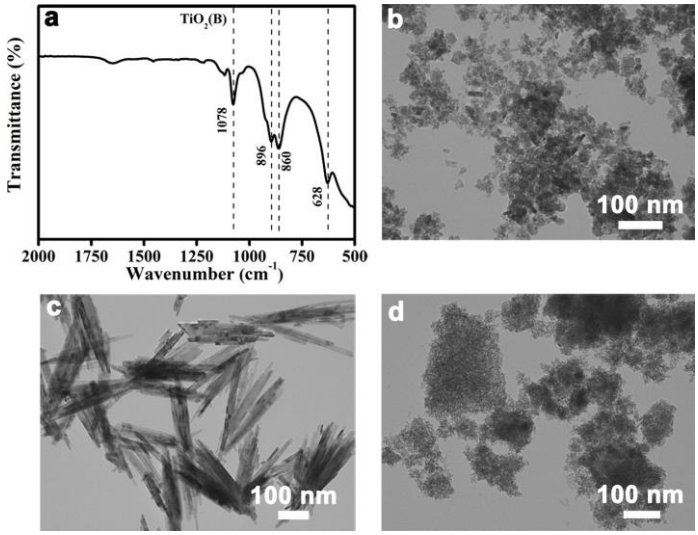

Fig. S3. (a) FTIR spectrum of flower-like nanosheets obtained by solvothermal reaction using ethylene glycol as the solvent. (b-d) TEM images of the products obtained by solvothermal reaction, using other solvents. (b) ethyl alcohol, (c) DMF, (d) THF.

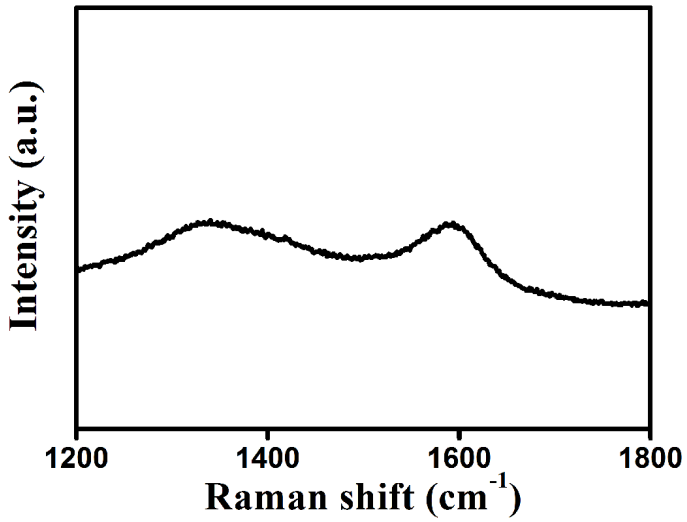

Fig. S4. Raman spectrum of TiO_2(A)/TiO_2(B)/C.

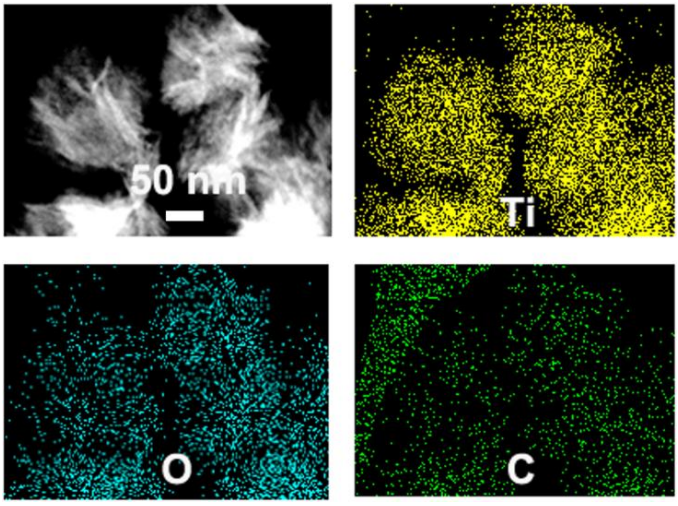

Fig. S5. Element mapping of TiO_2(A)/TiO_2(B)/C.

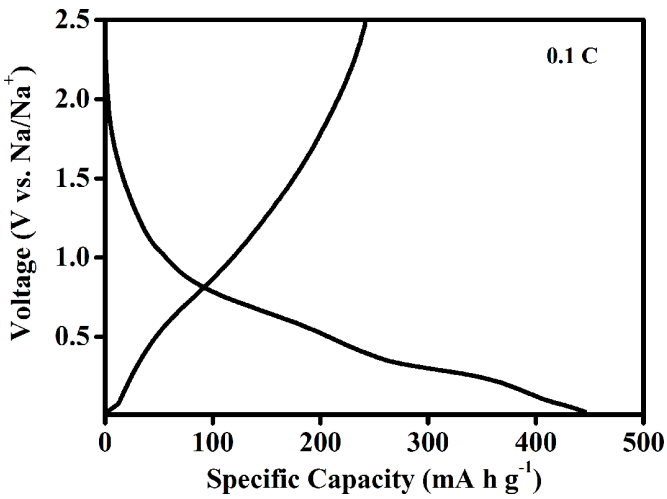

Fig. S6. Initial galvanostatic curves of TiO_2(A)/TiO_2(B)/C at 0.1 C, exhibiting a high coulombic efficiency of 54.3% using sodium trifluoromethanesulfonate as the electrolyte.

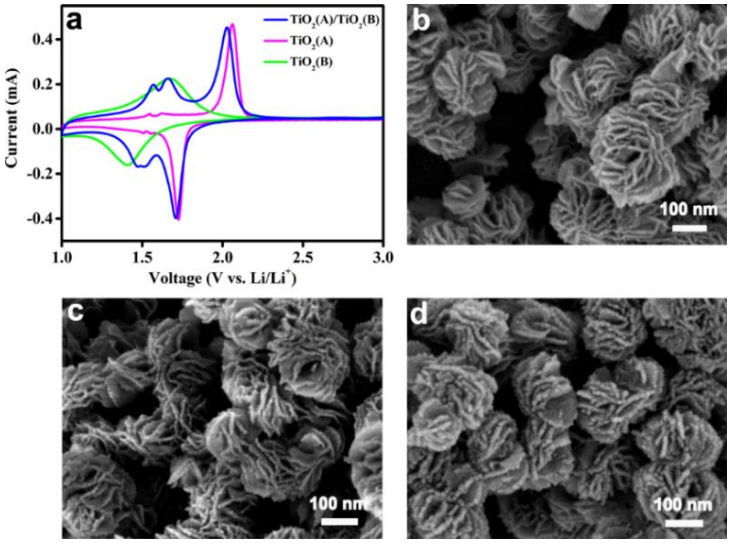

Fig. S7. (a) CV curves of TiO_2(A)/TiO_2(B), TiO_2(A) and TiO_2(B) at 0.1 mV s^{-1}. SEM images of (b) TiO_2(B), (c) TiO_2(A)/TiO_2(B) and (d) TiO_2(A).

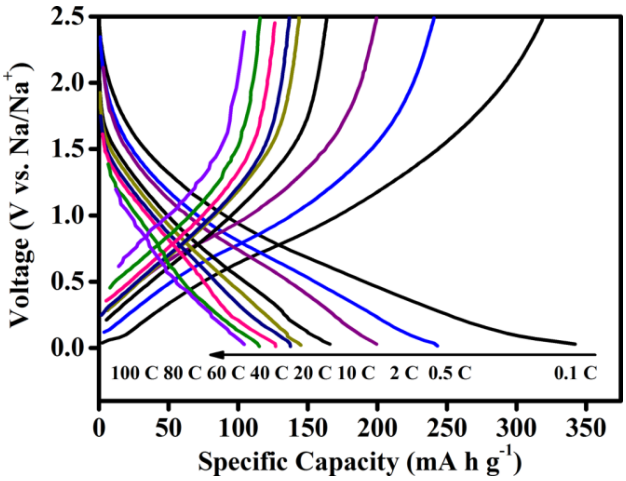

Fig. S8. Galvanostatic discharge/charge profiles of TiO_2(A)/TiO_2(B)/C at different rates.

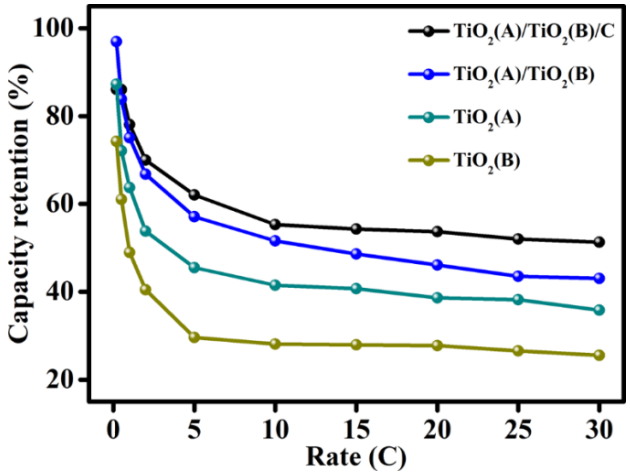

Fig. S9. Capacity retentions of TiO_2(A)/TiO_2(B)/C, TiO_2(A)/TiO_2(B), TiO_2(A) and TiO_2(B) at different rates.

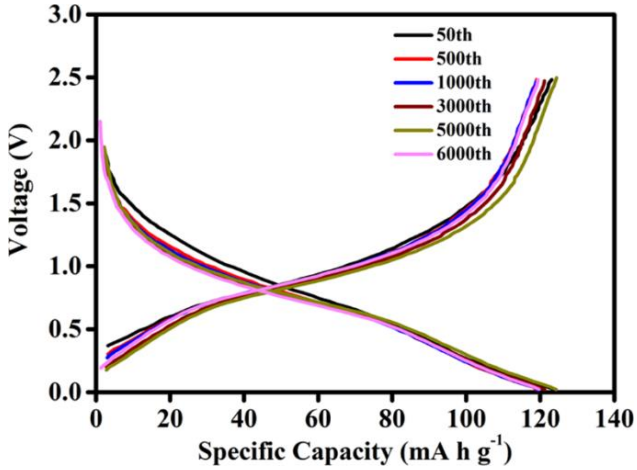

Fig. S10. Discharge/charge profiles for TiO_2(A)/TiO_2(B)/C at the selected cycles.

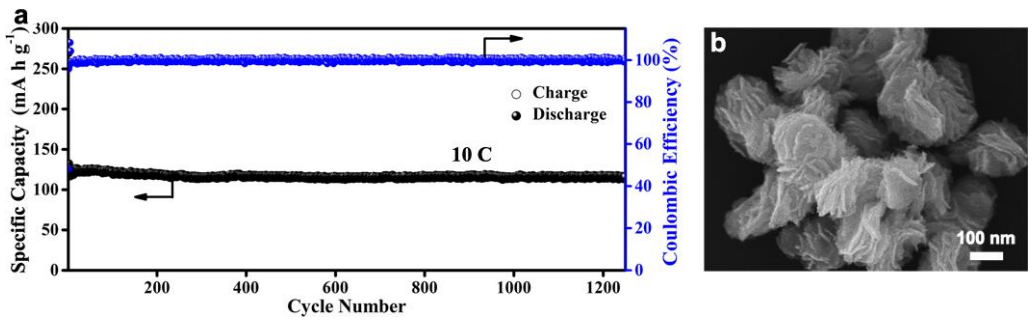

Fig. S11. (a) Long-term cycling performance of TiO_2(A)/TiO_2(B)/C at 10 C. (b) SEM images of TiO_2(A)/TiO_2(B)/C electrodes after 1200 cycles at 10 C.

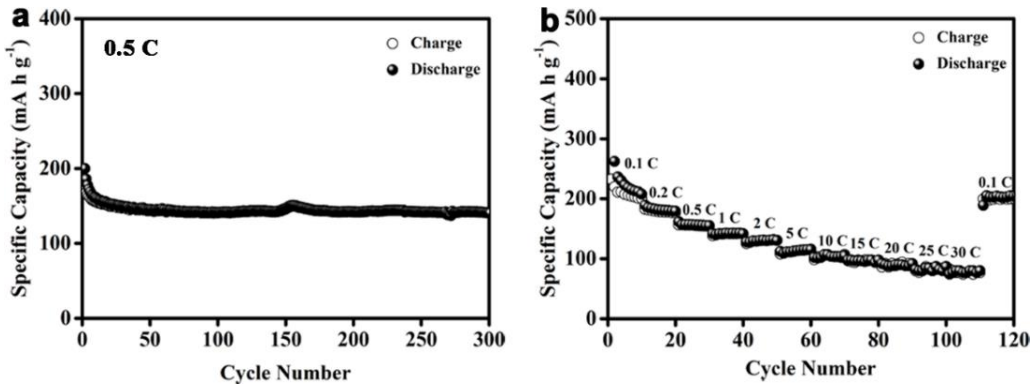

Fig. S12. (a) cycle performance and (b) rate performance of TiO_2(A)/TiO_2(B)/C at a mass loading about 2.5 mg cm^{-2}.

Table S1 Initial coulombic efficiencies, discharge and charge capacities of TiO_2(A)/TiO_2(B)/C, TiO_2(A)/TiO_2(B), TiO_2(A) and TiO_2(B) at the first cycle in a current density of 0.1 C.

Sample	Initial Coulombic Efficiency (%)	Charge Capacity (mA h g^{-1})	Discharge Capacity (mA h g^{-1})
TiO_2(A)/TiO_2(B)/C	37.3	353.4	946.8
TiO_2(A)/TiO_2(B)	42.3	291.8	689.1
TiO_2(A)	29.3	136.7	466.9
TiO_2(B)	19.9	143.4	724.5

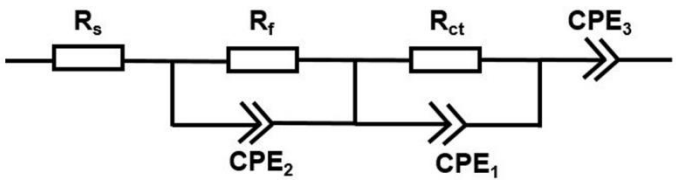

Table S2 Fitted elements in the equivalent circuit.

Sample	R_s/Ω	R_{ct}/Ω	R_f/Ω
TiO_2(A)/TiO_2(B)/C	5.18	45.4	21.9
TiO_2(A)/TiO_2(B)	5.61	63.9	14.3
TiO_2(A)	5.57	110	19.1
TiO_2(B)	5.39	107	30.6

Table S3 Charge distribution at the interface of TiO_2(A)/TiO_2(B) with and without Na.

Slab	Interfacial Na	O	Ti	Doped Na
TiO_2(B)	Undoped	-0.96	1.83	-
TiO_2(B)	Doped	-0.98	1.80	0.77
TiO_2(A)	Undoped	-1.04	1.37	-
TiO_2(A)	Doped	-1.07	1.34	-