Supporting Information

Insight on the Sodium Storage Mechanism of Bi_2Te_3 Nanosheets as a Superior Anode for Sodium-ion Batteries

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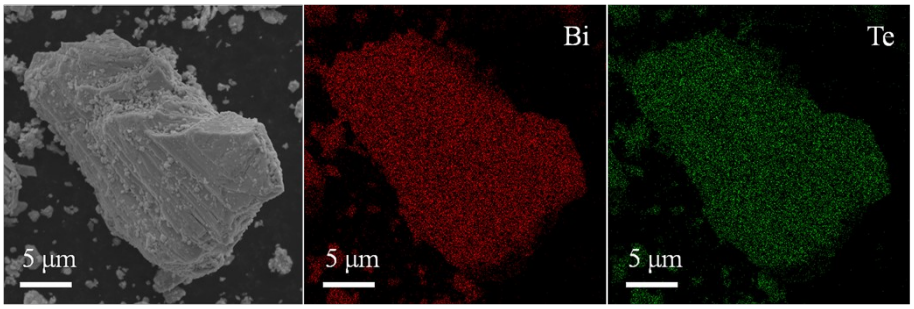

Fig.S1 SEM image of the bulk Bi_2Te_3 and the corresponding EDS maps for Bi and Te.

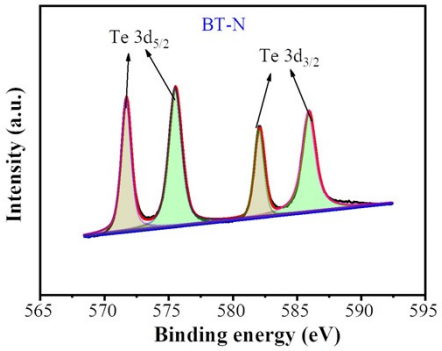

Fig.S2 High-resolution XPS spectrum for the Te 3d in BT-N.

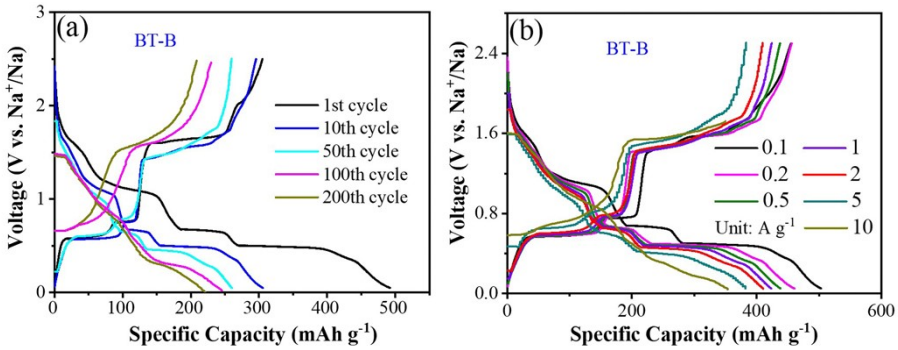

Fig.S3 (a) Galvanostatic charge-discharge profiles of BT-B at current density of 0.1 A g^{-1}, (b) galvanostatic charge-discharge profiles of BT-B at different current densities.

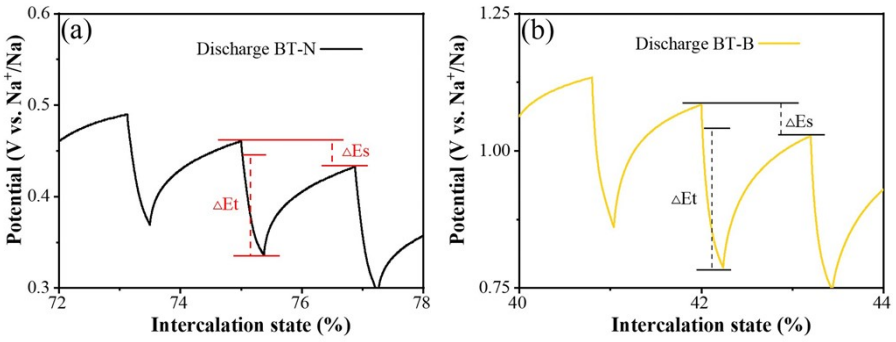

Fig.S4 Partial magnification of the GITT curves of (a) BT-N and (b) BT-B.

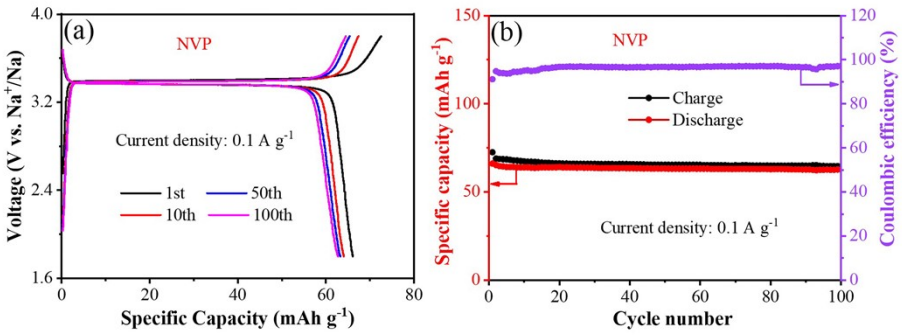

Fig.S5 (a) Galvanostatic charge-discharge curves of $Na_3V_2(PO_4)_3$ cathode at current density of 0.1 A g^{-1}, (b) cyclic performance of $Na_3V_2(PO_4)_3$ cathode at current density of 0.1 A g^{-1}.

Table S1. Summary on synthesis methods and electrochemical performance of the bismuth-based as anode material for SIBs.

Materials	Synthetic method	Cycle capacity [mAh g^{-1}] (cycles, I)	Rate capacity [mAh g^{-1}] C_{I1}, C_{I2}, C_{I3} (I_1-I_2-I_3, A g^{-1})	Ref.
Bi_2Te_3	Solution	364 (1200, 5 A g^{-1})	435.9, 411.7, 339.4 (0.1-0.5-10)	this work
Bi_2Te_3@PPy	Solvothermal	165.3 (1000, 5 A g^{-1})	305, 223.2, 128.3 (0.1-0.5-10)	[1]
Bi_2Te_3@PPy	Hydrothermal	406 (100, 0.1 A g^{-1})	415, 337.6, 231.6 (0.1-0.5-5)	[2]
Bi_2S_3/Graphene	Hydrothermal	348 (120, 1 A g^{-1})	520, 420, 336 (0.1-0.5-2)	[3]
Bi_2S_3/MoS_2	Solvothermal	323.4 (1200, 10 A g^{-1})	427.9, 370.8, 330.4 (0.2-0.5-5)	[4]
Bi_2Se_3/graphene	Ice-bath	323.4 (1200, 10 A g^{-1})	229, 212, 181 (1-5-10)	[5]
Bismuthene nanosheets	Electrochemical exfoliation	200 (2500, 20 A g^{-1})	423, 356, 227 (2.5-5-15)	[6]

References

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