Electronic Supplementary Material (ESI) for Materials Chemistry Frontiers.

Supporting Information

Ultrasmall SnO_2 nanocrystals sandwiched into polypyrrole and $Ti_3C_2T_x$ MXene for high-effective sodium storage

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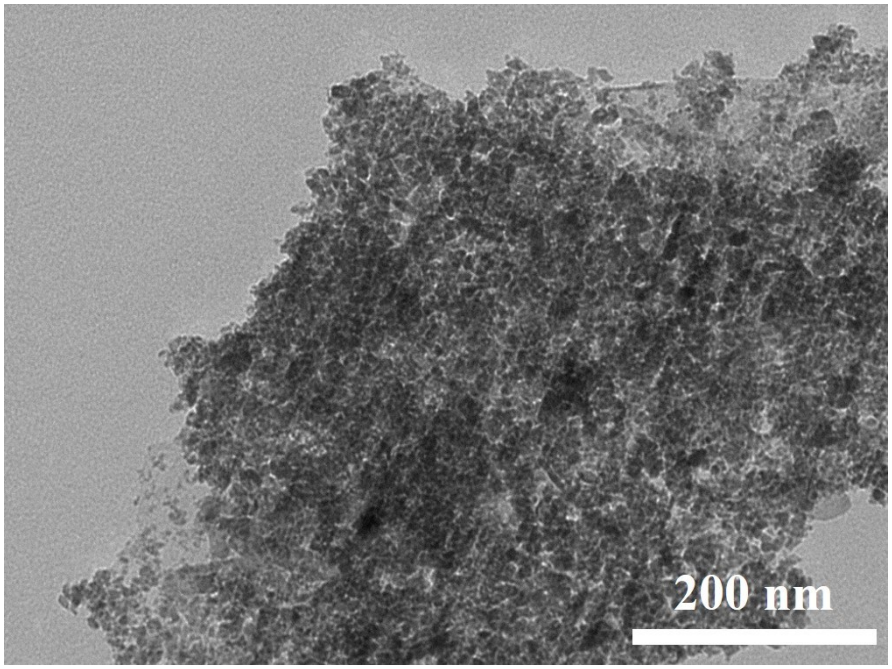

Figure S1. TEM image of SnO_2/Ti_3C_2.

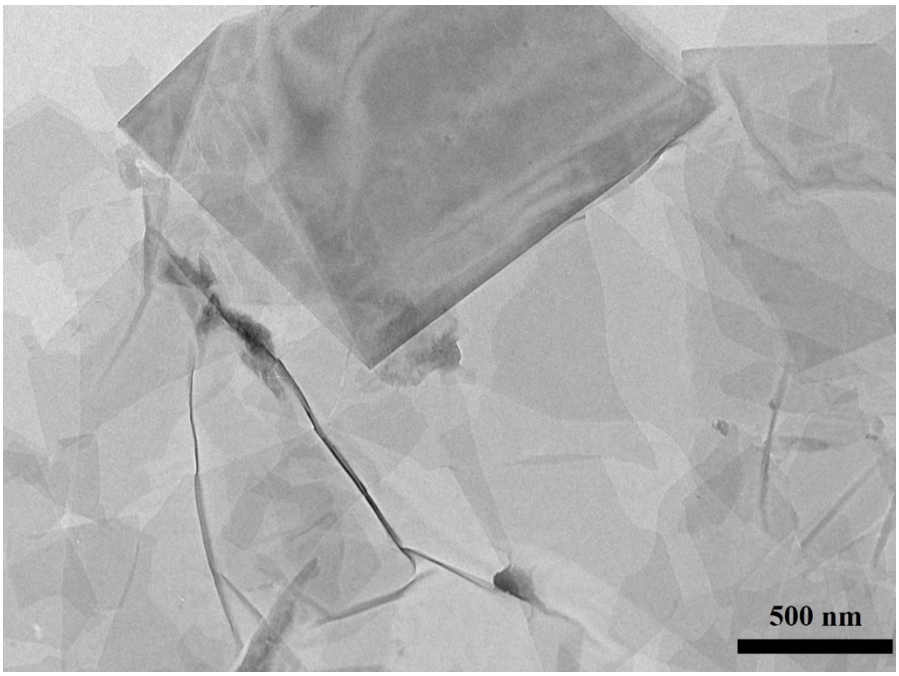

Figure S2. TEM image of $Ti_3C_2T_x$ MXene.

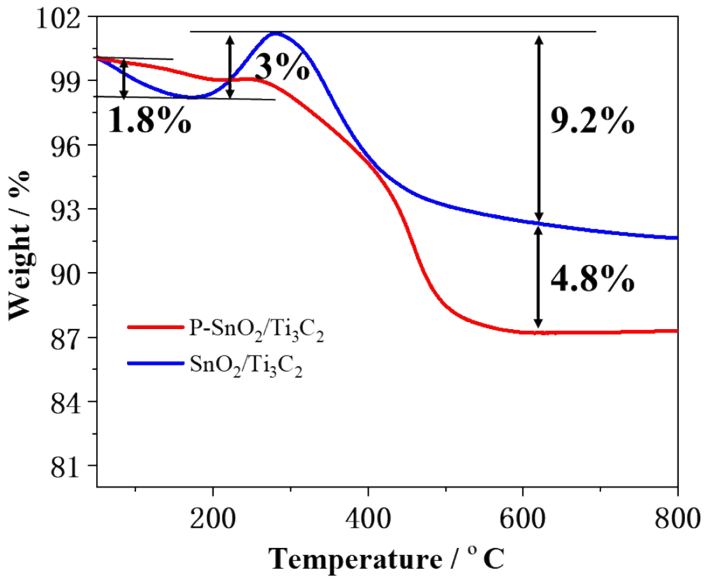

Figure S3. TGA curves of P-SnO_2/Ti_3C_2 and SnO_2/Ti_3C_2 composites.

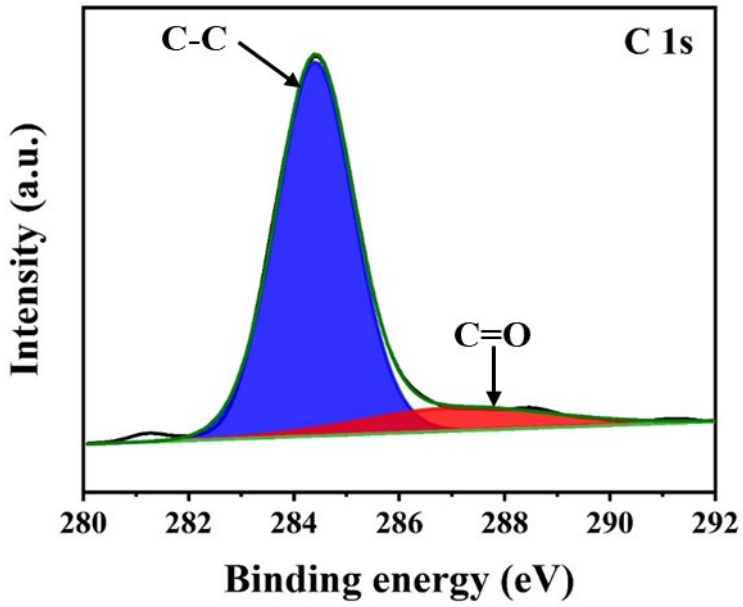

Figure S4. High-resolution XPS spectra of C 1s for P-SnO_2/Ti_3C_2.

Table S1. The electrochemical performance comparison of MXene-based materials.

Electrode materials	Current density ($mA\ g^{-1}$)	Gravimetric capacity ($mAh\ g^{-1}$)	Battery	Cycle number	Ref.
P-SnO_2/Ti_3C_2	100	345.3	SIBs	200	This work
MX/SnS_2_1:5	100	322	SIBs	200	[1]
SnS/$Ti_3C_2T_x$	500	310	SIBs	50	[2]
SnS/PDDA-Ti_3C_2	100	640	LIBs	100	[3]
SnO_2-Ti_3C_2	100	360	LIBs	200	[4]
SnO_2/$Ti_3C_2T_x$	200	697	LIBs	520	[5]
MoS_2/$Ti_3C_2T_x$	100	251	SIBs	100	[6]
MoS_2/$Mo_2TiC_2T_x$-500	100	509	LIBs	100	[7]
$MoSe_2$/MXene	200	355	KIBs	100	[8]
MoS_2/$Ti_3C_2T_x$	100	330	SIBs	70	[9]
Ti_2C/TiO_2	100	389	LIBs	50	[10]
SnO_2@C/d-Ti_3C_2	500	470	LIBs	100	[11]
SnO_2/MXene	100	663	LIBs	100	[12]
SnS_2/Sn_3S_4-Ti_3C_2	100	462.3	LIBs	100	[13]

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