Supporting Information

Few-layer Large $Ti_3C_2T_x$ Sheets Exfoliated by $NaHF_2$ and Applied to Sodium-Ion Battery

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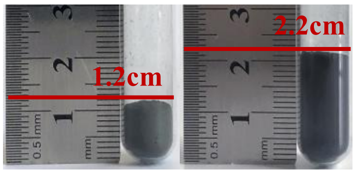

Figure S1. Optical images of Ti_3AlC_2 and Na-$Ti_3C_2T_x$ powder: (a) Ti_3AlC_2 powder; (b) multilayered $Ti_3C_2T_x$ powder etched by $NaHF_2$.

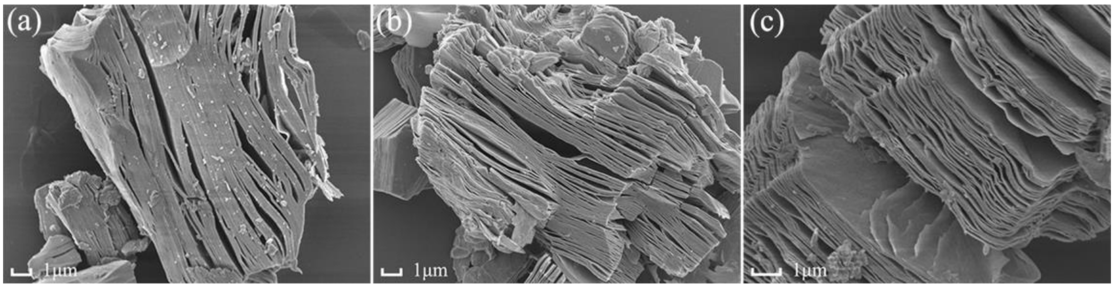

Figure S2. SEM images of $Ti_3C_2T_x$ etched in: (a) NH_4HF_2 solution; (b) HF solution; and (c) $NaHF_2$ solution.

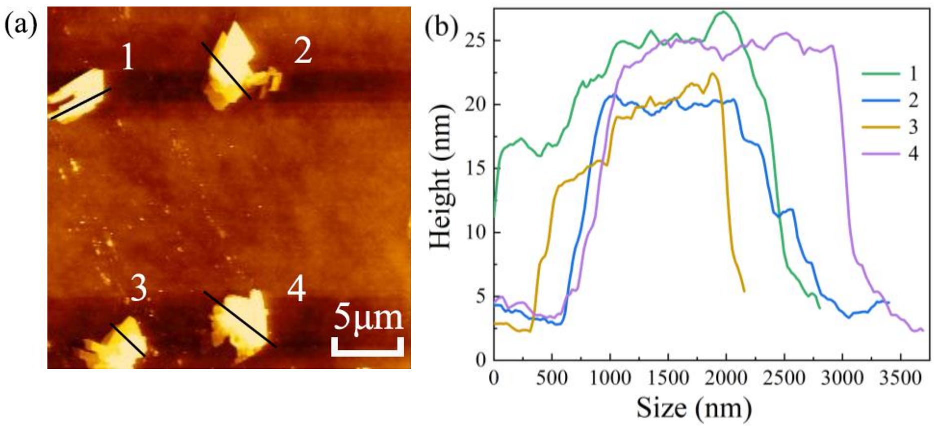

Figure S3. (a) AFM image and (b) height-profile.

(a) (b)

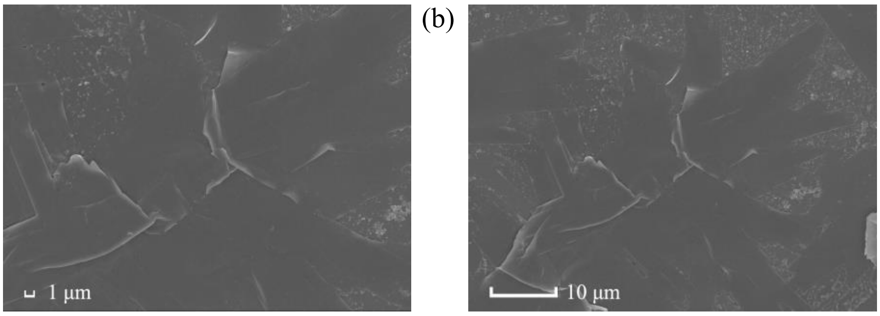

Figure S4. SEM images of Na-$Ti_3C_2T_x$: after bath sonication for 10 min and centrifugation for 1 h at 3500 rpm, (a) × 3000; (b) × 2000.

Figure S5. Flexible $Ti_3C_2T_x$ MXene film.

Table S1. Comparison of performances of different MXenes

MXenes	Current Density ($A\cdot g^{-1}$)	Cycle Number	Specific Capacity ($mAh\cdot g^{-1}$)	Refs
Black phosphorus/Ti_3C_2 (HF)	1	10	67.3	(1)
$NaTi_2(PO_4)_3$/ Ti_3C_2	1	10	166	(2)
Ti_3C_2 (HF)	0.02	50	103	(3)
	0.5	10	60	
Ti_3C_2 (HF)	0.02	100	100	(4)
	0.5	10	60	
Ti_3C_2 (HF)	0.1	120	80	(5)
a-Ti_3C_2 MNRs (HF)	0.2	500	53	(6)
Ti_3C_2 (HCl + LiF)	0.1	75	87	(7)
Ti_3C_2 (HCl + LiF)	1	100	102	(8)
Ti_3C_2 (HF)	0.2	1000	68.3	(9)
Ti_3C_2 ($NaHF_2$)	1	900	70	this work
	1	1000	120	

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