

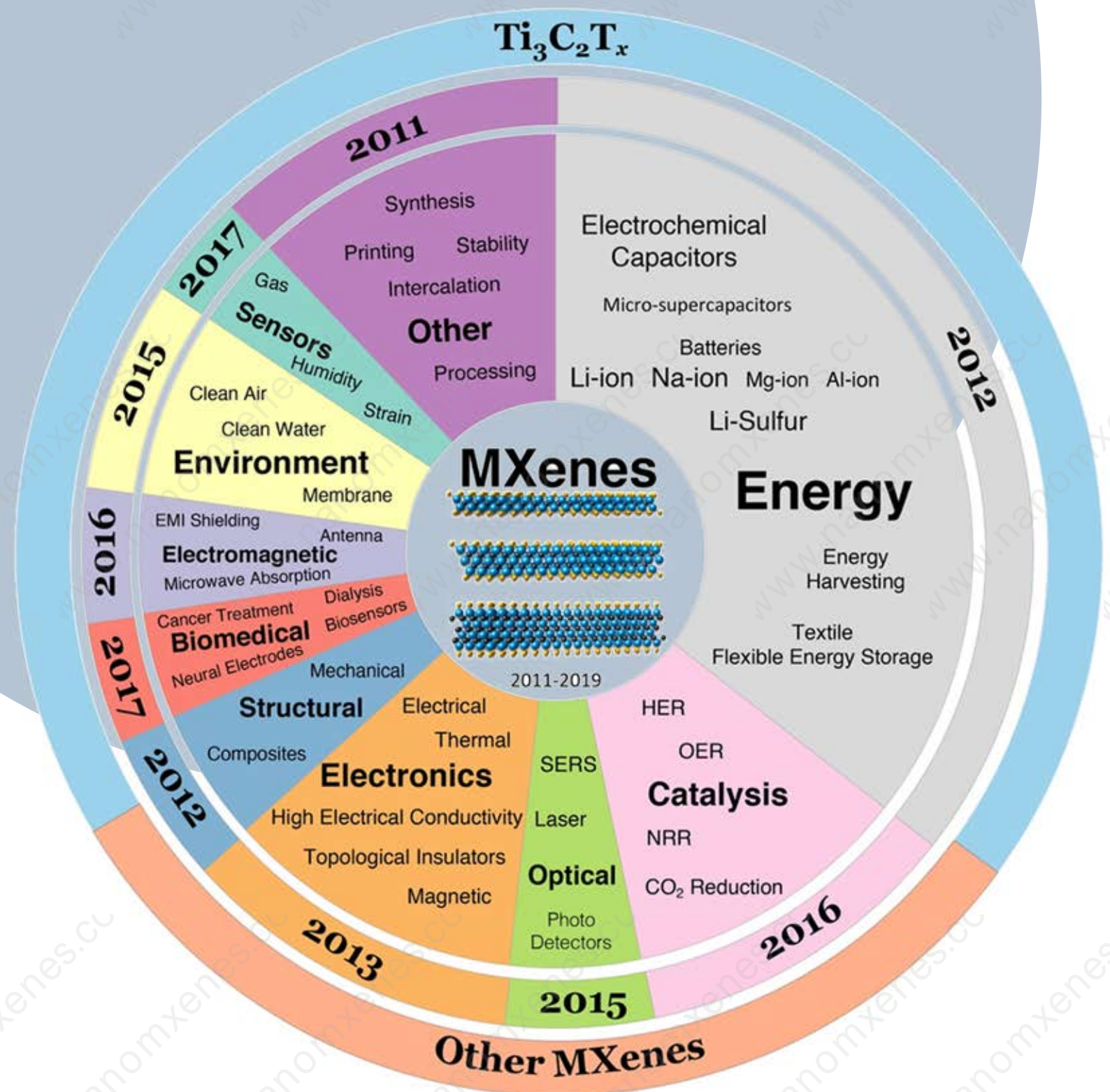
**北科新材**

[www.nanomxenes.com](http://www.nanomxenes.com)

**二维材料专家**

**MXenes  
手册**

# The Rise of MXenes





# Product Presentation

## MXene product 1

high-yield

precursor  $Ti_3AlC_2$

Product Features: It reached a purity of about 99%, after the etching, the multiple organ  $Ti_3C_2$  with good morphology can be made. By adopting the appropriate scheme, we can get a high yield of unilaminar  $Ti_3C_2$ . This method has good repeatability after many experiments.

## MXene product 3

argillaceous  $Ti_3C_2$

Product Features: clay material, after ultrasonic centrifugation, it can be dispersed into a single layer of material, the yield is about 25~35%. The ultrasonic power needs more than 160W, it takes 1.5h~6h.

## MXene product 2

multiple organ  $Ti_3C_2$

Product Features: with good morphology, the multiple organ  $Ti_3C_2$  can be used directly in experiment or can be striped by appropriate scheme.

## MXene product 4

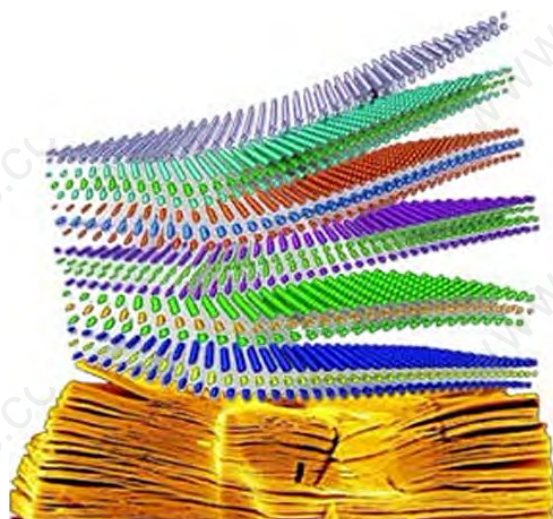
colloidal solution

of unilaminar  $Ti_3C_2$

Product Features: the solution is water, it can be used directly after receiving goods, greatly saves the time of scientific research. stable material technology, reliable quality. the average  $Ti_3C_2$  sheet size is about 500~800 nanometers, meet most customer needs, in addition, you can customize the super-large layer and small layer materials. common products are water solvents, we can provide organic solvent. about the  $Ti_3C_2$ , if you have any other customizations, such as assembly, modification, please contact us.

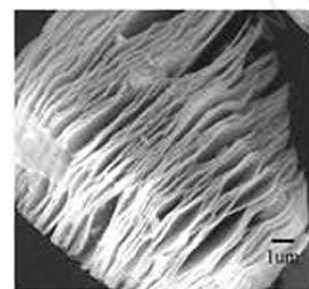
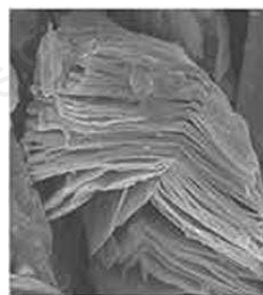
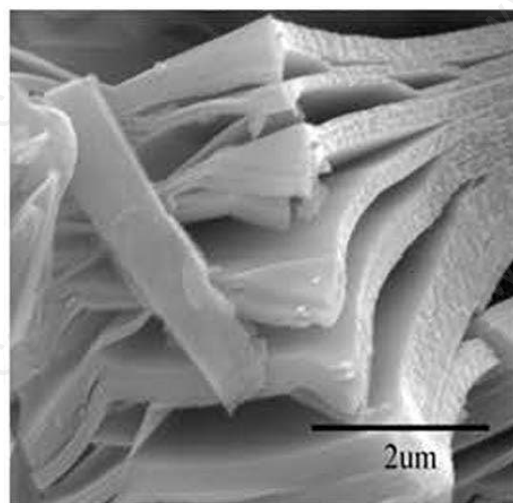


# Product Price List



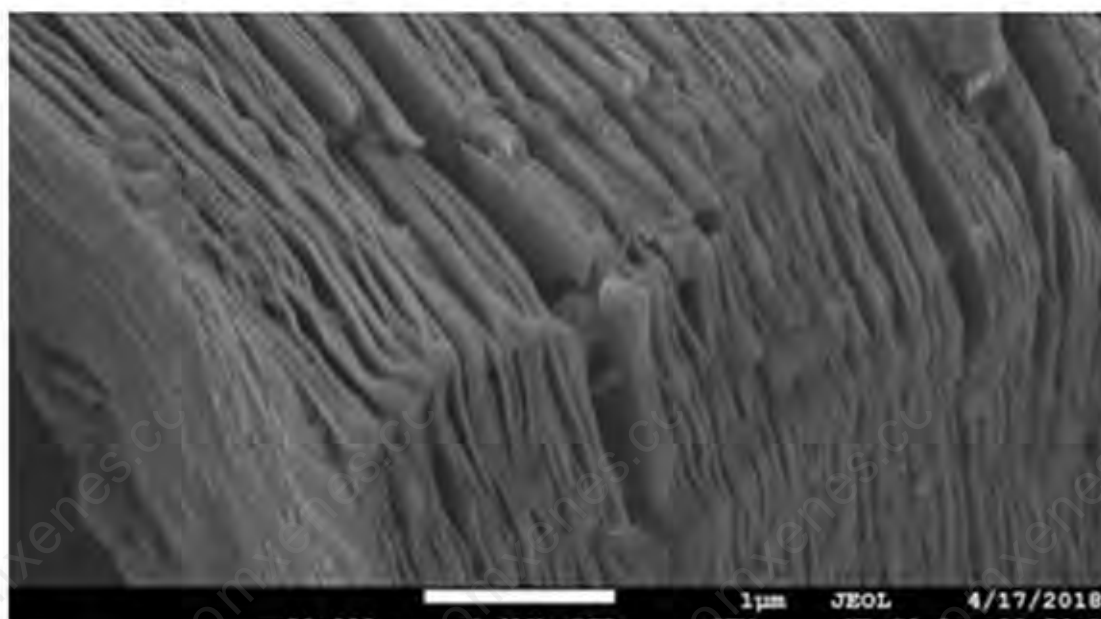
MAX material - MXene's precursor				
Ti <sub>3</sub> AlC <sub>2</sub>	300 mesh	35USD/10g	400 mesh	50USD/10g
Ti <sub>2</sub> AlC	300 mesh	35USD/10g	400 mesh	70USD/10g
Mo <sub>3</sub> AlC <sub>2</sub>	300 mesh	85USD/5g	400 mesh	110USD/5g
Nb <sub>2</sub> AlC <sub>3</sub>	300 mesh	110USD/5g	400 mesh	128USD/5g
V <sub>2</sub> AlC	300 mesh	110USD/5g	400 mesh	130USD/5g
Ti <sub>3</sub> SiC <sub>2</sub>	300 mesh	65USD/10g	400 mesh	70USD/5g
Cr <sub>2</sub> AlC	400 mesh	150USD/5g		
Ta <sub>2</sub> AlC	400 mesh	150USD/5g		
Ta <sub>4</sub> AlC <sub>3</sub>	400 mesh	285USD/5g		
Nb <sub>4</sub> AlC <sub>3</sub>	400 mesh	268USD/5g		
V <sub>4</sub> AlC <sub>3</sub>	400 mesh	435USD/5g		

MXenes material				
	Product name	Technique	Price	Details
Ti <sub>3</sub> C <sub>2</sub>	Organ-like material	HF Treatment	70USD/g	Organ-like material obtained by etching with HF.
	Clay materials	LiF Treatment	115USD/g	Clay material, which can be dispersed as a single layer material by ultrasonic centrifugation, yields about 25-35%. Ultrasound power needs more than 160W, and the time is about 2 h to 6 h.
	Single/Layer Colloidal Solution	5mg/ml	50USD/bottle 10ml/bottle	The colloidal solution of single/few layer village material that has Tindal phenomenon and can be used directly.
	Single/Layer Colloidal Solution	10mg/ml	70USD/bottle 10ml/bottle	The colloidal solution of single/few layer village material that has Tindal phenomenon and can be used directly.
	Single layer colloidal DMF solution	5mg/ml	85USD/bottle 10ml/bottle	The colloidal solution of single/few layer village material that has Tindal phenomenon and can be used directly.
	Self-supporting membrane materials	Vacuum suction filtration	120USD/pcs	Flexible membranes obtained from the colloidal solution of single/small-layer village materials by vacuum filtration.
Ti <sub>2</sub> C	Organ-like material	HF Treatment	120USD/g	Organ-like material obtained by etching with HF.
	Single/Layer Powder Material	Freeze drying	450USD/500mg	Powder obtained by freeze-drying of colloidal solution of single/small layer village material.
Nb <sub>2</sub> C	Organ-like material	HF Treatment	285USD/g	Organ-like material obtained by etching with HF.
	Single/Layer Powder Material	Freeze drying	485USD/500mg	Powder obtained by freeze-drying of colloidal solution of single/small layer village material.
V <sub>2</sub> C	Organ-like material	HF Treatment	270USD/g	Organ-like material obtained by etching with HF.
	Single/Layer Powder Material	Freeze drying	485USD/500mg	Powder obtained by freeze-drying of colloidal solution of single/small layer village material.
Mo <sub>2</sub> C <sub>2</sub>	Single/Layer Powder Material	Freeze drying	600USD/g	Powder obtained by freeze-drying of colloidal solution of single/small layer village material.
Cr <sub>1</sub> C	Single/Layer Powder Material	Freeze drying	500USD/g	Powder obtained by freeze-drying of colloidal solution of single/small layer village material.
Ta <sub>2</sub> C	Single/Layer Powder Material	Freeze drying	550USD/g	Powder obtained by freeze-drying of colloidal solution of single/small layer village material.
Ta <sub>4</sub> C <sub>3</sub>	Single/Layer Powder Material	Freeze drying	600USD/g	Powder obtained by freeze-drying of colloidal solution of single/small layer village material.
Nb <sub>4</sub> C <sub>3</sub>	Single/Layer Powder Material	Freeze drying	675USD/g	Powder obtained by freeze-drying of colloidal solution of single/small layer village material.
V <sub>4</sub> C <sub>3</sub>	Single/Layer Powder Material	Freeze drying	675USD/g	Powder obtained by freeze-drying of colloidal solution of single/small layer village material.

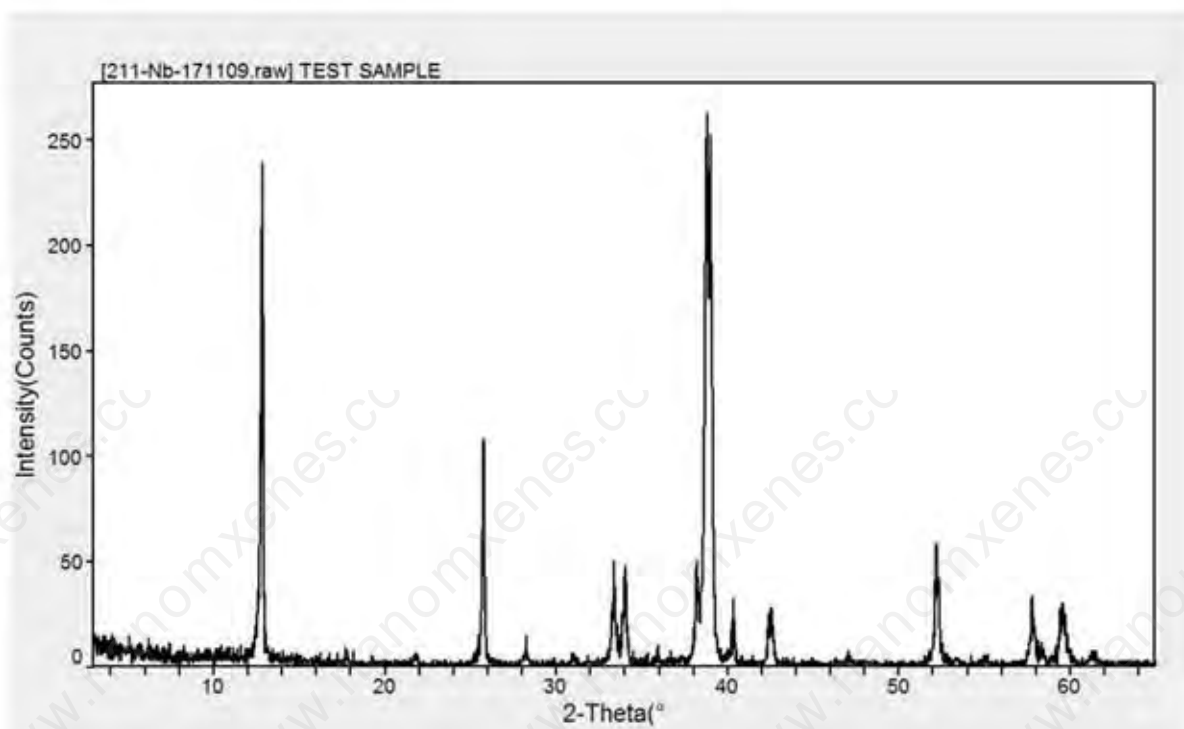


# Nb<sub>2</sub>C MXene Product Characterization

## SEM

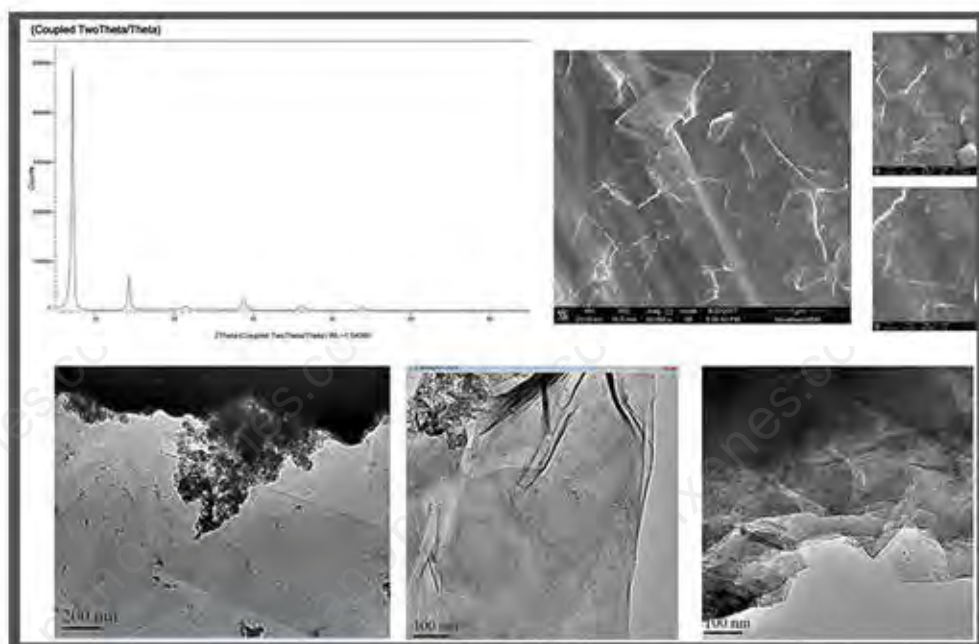


## XRD

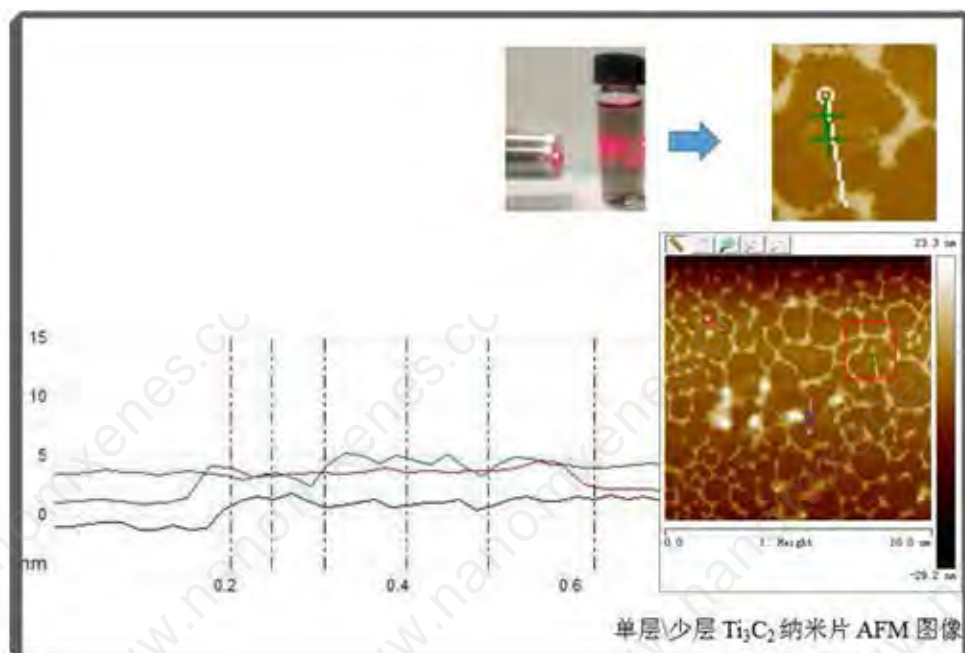


# Ti<sub>3</sub>C<sub>2</sub> MXene Product Characterization

## TEM

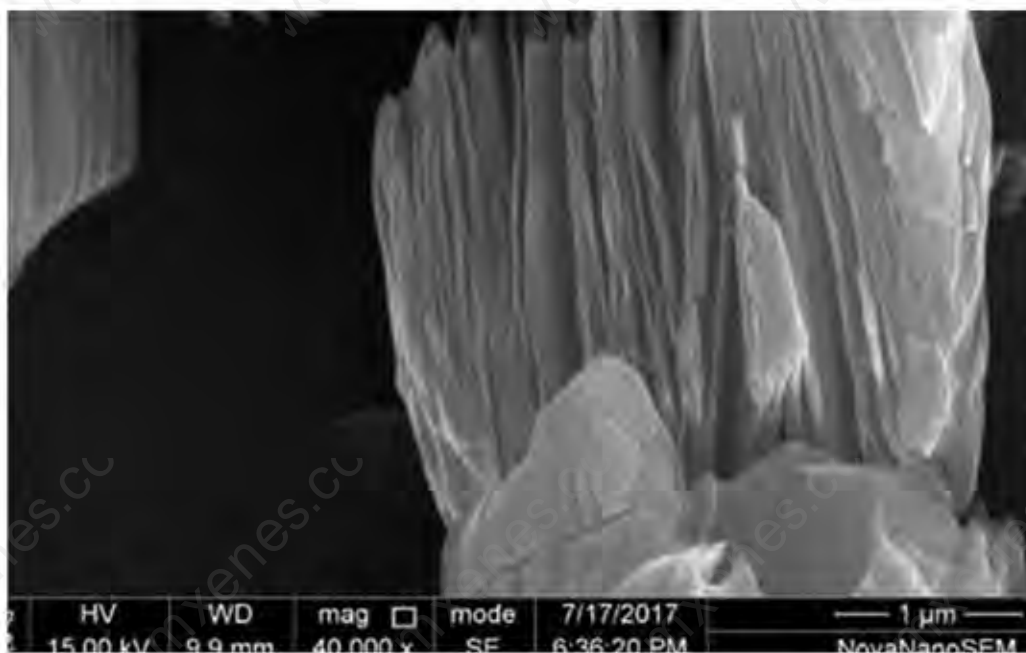


## AFM

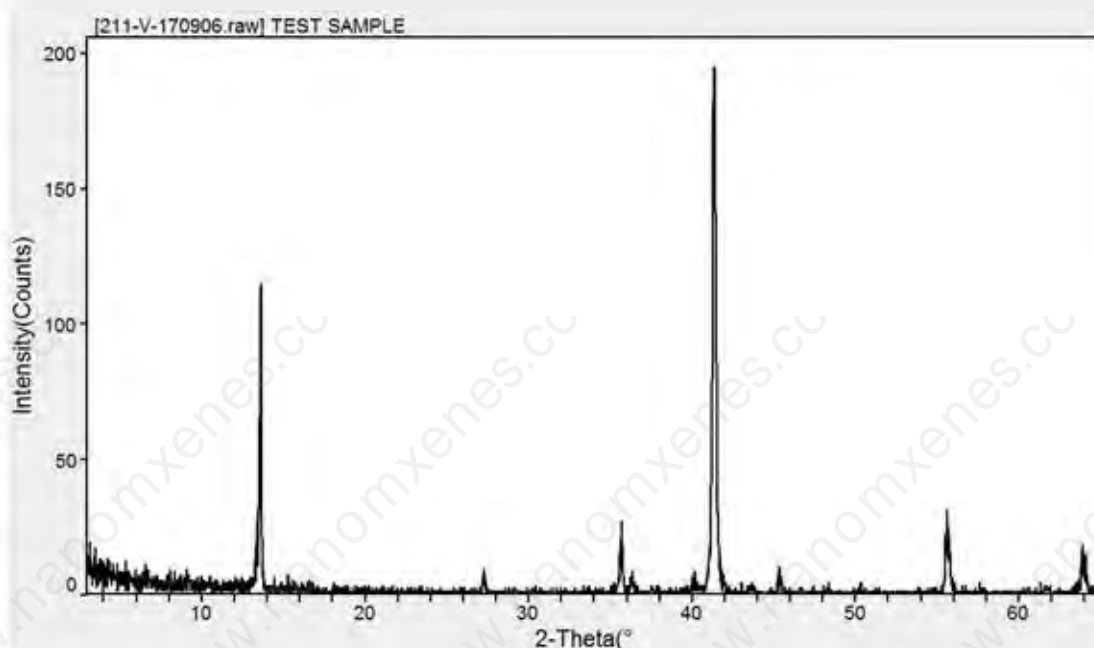


# V<sub>2</sub>C MXene Product Characterization

## SEM

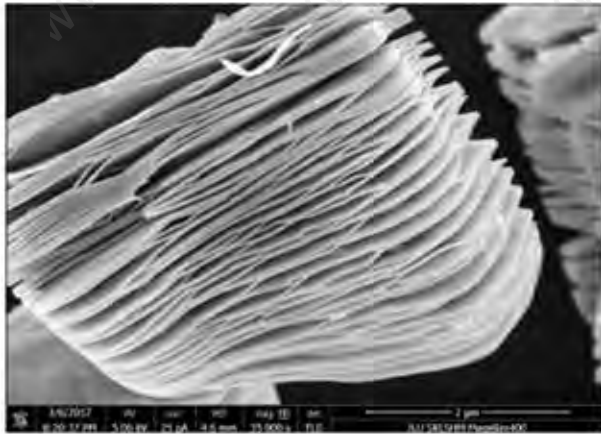


## XRD

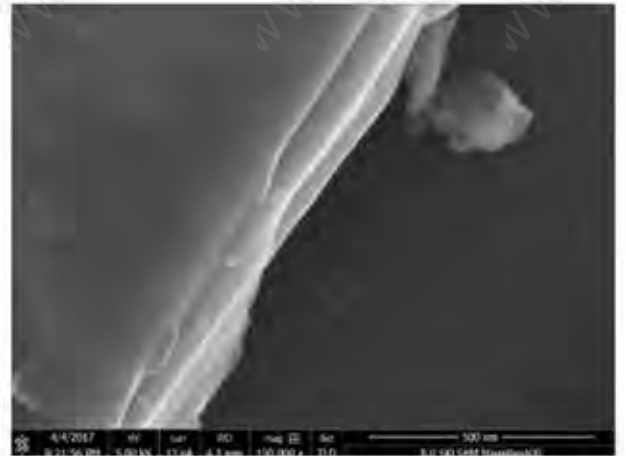




# $\text{Ti}_3\text{C}_2$ free standing film



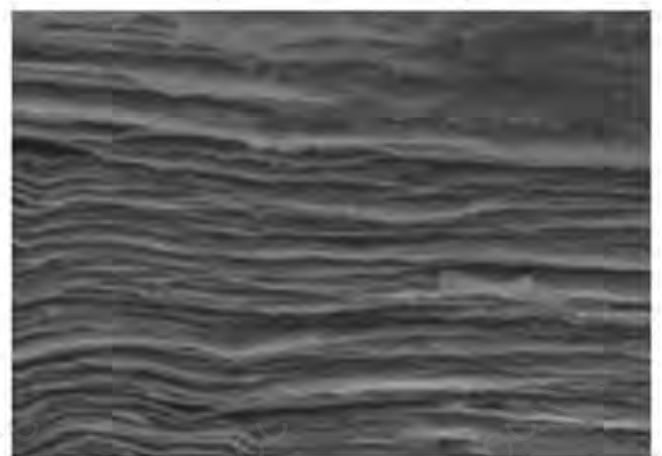
**multilayer**  
 **$\text{Ti}_3\text{C}_2$**



**less layer**  
 **$\text{Ti}_3\text{C}_2$**



**$\text{Ti}_3\text{C}_2$  flexible**  
**membrane**



**flexible section**  
**of  $\text{Ti}_3\text{C}_2$**



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CVD TMDC 2D thin film/heterojunction

MOFs&COFs

Anodic Aluminum Oxide

One-dimensional nanomaterial

Molecular sieve

Mesoporous carbon and carbon nanomaterials

Nanosphere

Perovskite materials

2D crystal material

QDS

Ionic liquid

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