

Supporting Information

Ultralight and Thermally Conductive $\text{Ti}_3\text{C}_2\text{T}_x$ MXene-Silver Nanowires Cellular Composite Film for High-Performance Electromagnetic Interference Shielding

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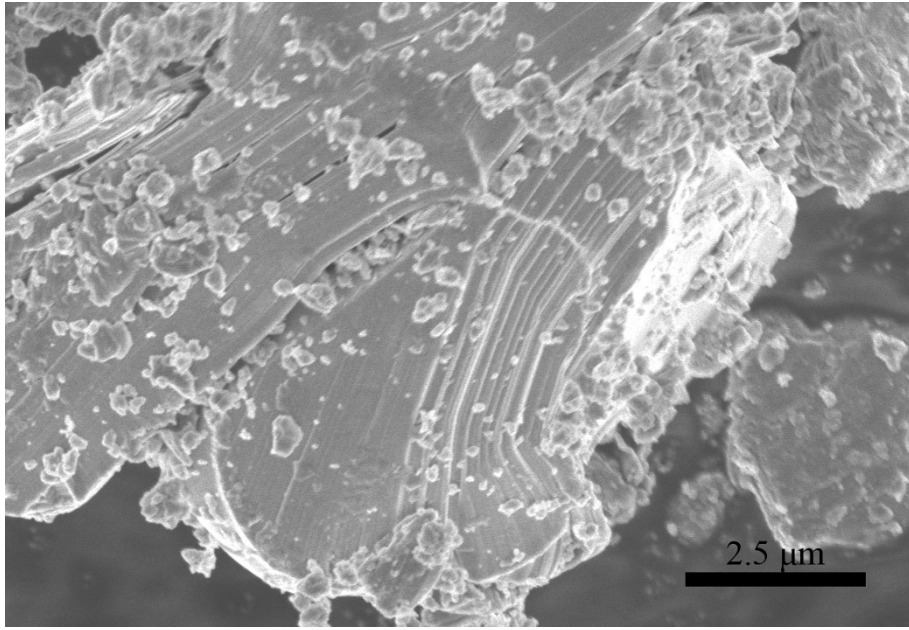


Figure S1. SEM image of Ti₃AlC₂ MAX.

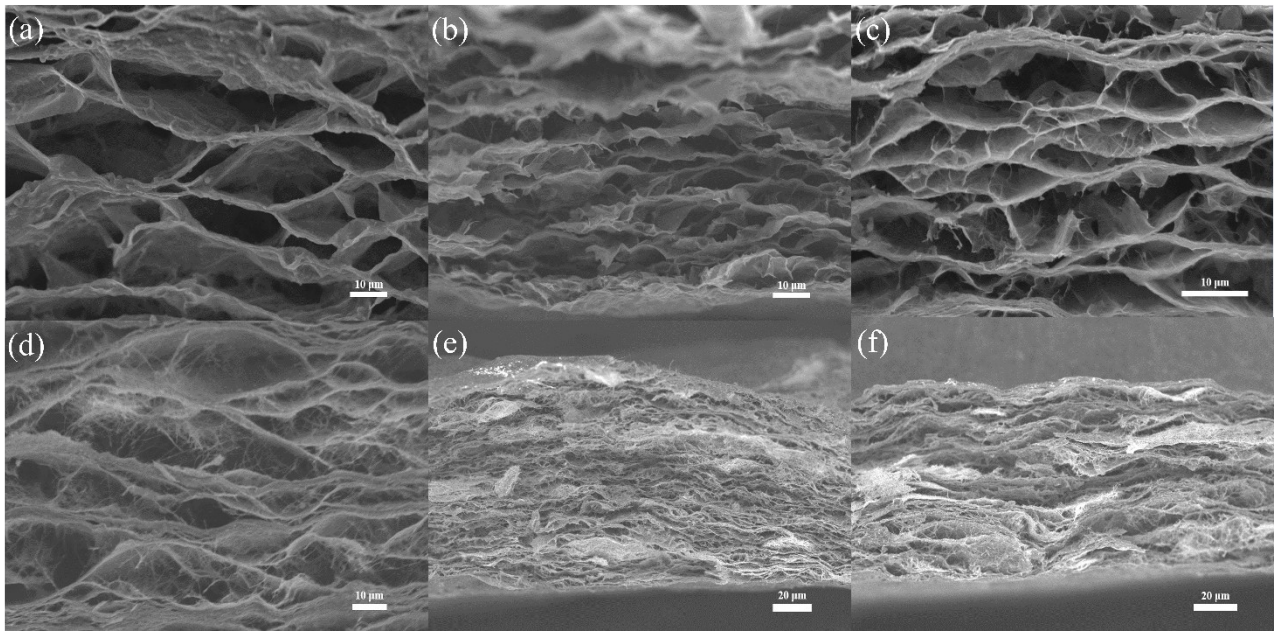


Figure S2. Cross-sectional SEM images of (a) PM, (b) MA_{0.2}, (c) MA_{0.25}, (d) MA_{0.5}, (e) MA_{0.75} and (f) MA_{0.8}.

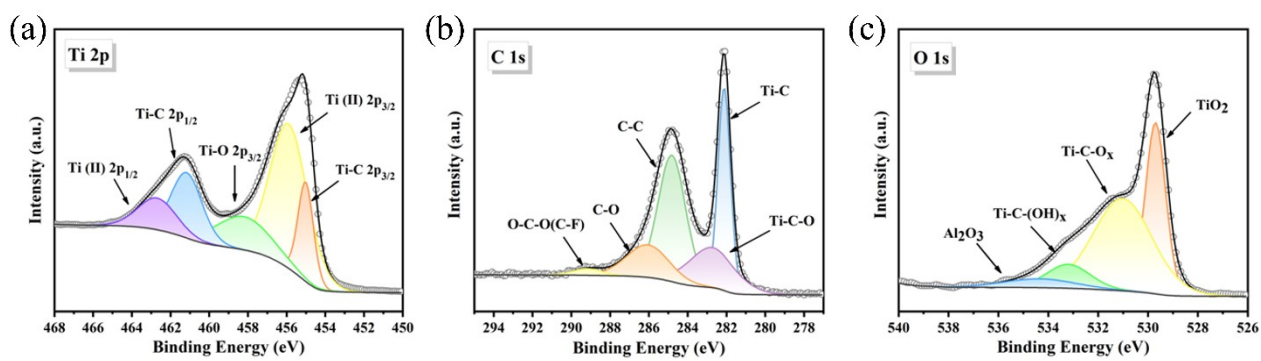


Figure S3. High-resolution Ti 2p, C 1s and O 1s spectrum of Ti₃C₂T_x MXene.

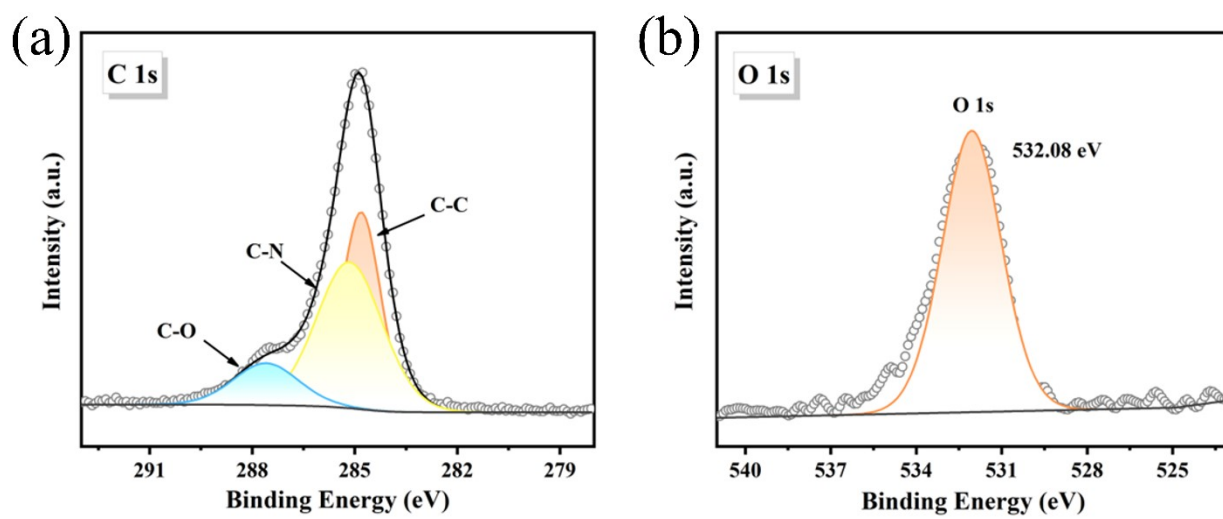


Figure S4. High-resolution C 1s and O 1s spectrum of Ag NWs.

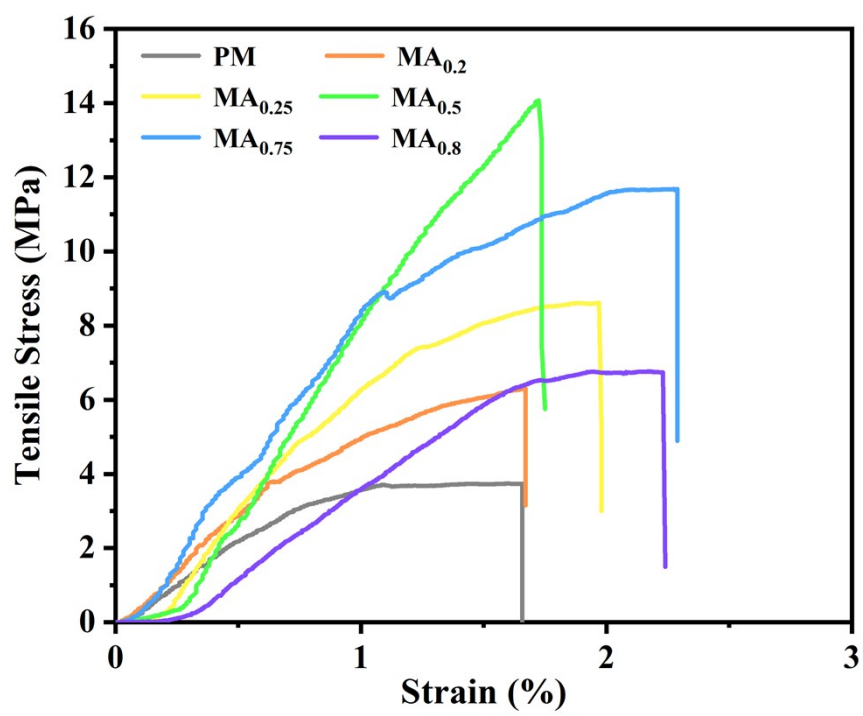


Figure S5. The mechanical properties of the composite films.

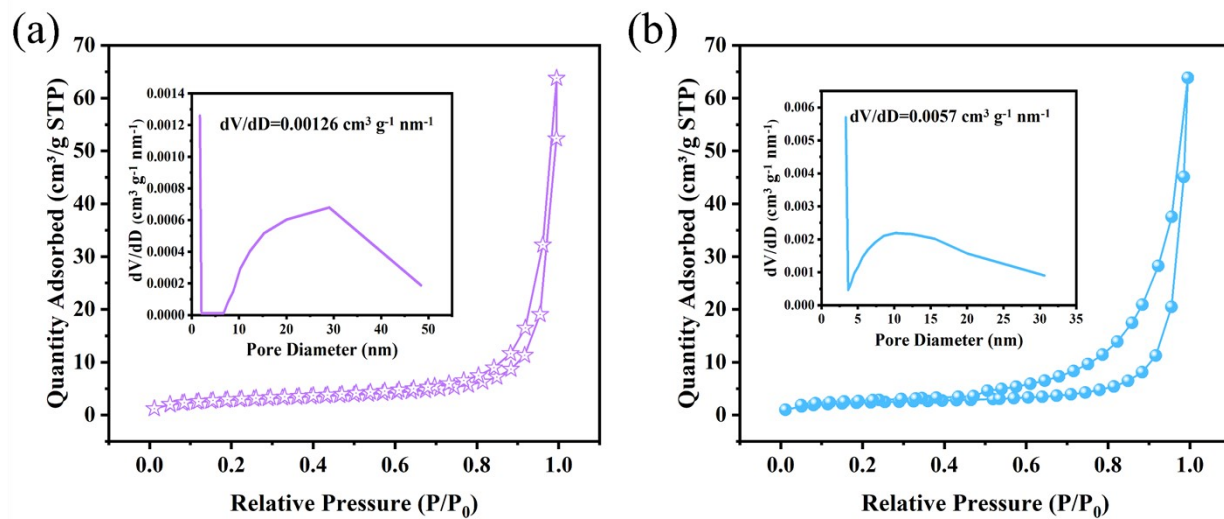


Figure S6. N_2 adsorption and desorption isotherms and pore size distribution of (a) $MA_{0.5}$ and (b)

$MA_{0.8}$.

Table S1. Comparison of electromagnetic interference shielding performance for typical materials.

Materials	Thickness (mm)	EMI SE (dB)	SSE/t (dB cm ² g ⁻¹)	Refs.
CMF/rGO/Ag	5	63.6	7617	1
PVDF/Ni	2	26.8	128	2
POM/PLLA/MWCNT	2	48.1	177.8	3
Ti ₃ C ₂ T _x /PEDOT : PSS	0.013	21.6	9170	4
d-Ti ₃ C ₂ T _x /CNF	0.074	26	2154	5
Ti ₃ C ₂ T _x /ANF	0.017	20	11554	6
Ti ₃ C ₂ T _x /CNTs/CNF	0.038	38.4	7874	7
Ti ₃ C ₂ T _x /SA	0.026	54.3	17586	8
Ti ₃ C ₂ T _x /PVA	0.1	26	4770	9
Ag/CNTs/PDMS	1.5	56	373	10
AgNW	5	35	2416	11
AgNW/PVDF	0.3	23.25	989	12
CNT/Chitosan aerogel	2.5	37.6	8556	13
CNT/PS	0.12	18.5	275	14
rGO	2.5	45.1	692	15
rGO/Fe ₃ O ₄	0.3	24	1033	16
rGO-PEDOT	0.8	70	841	17
MA _{0.5}	0.101	69.36	13861	This work
MA _{0.8}	0.104	81.11	16250	This work

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