

# Two-Dimensional Transition Metal Carbides

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Citation Report

#	ARTICLE	IF	CITATIONS
4	Are MXenes Promising Anode Materials for Li Ion Batteries? Computational Studies on Electronic Properties and Li Storage Capability of $Ti_3C_2$ and $Ti_3C_2X_2$ ( $X = F, OH$ ) Monolayer. Journal of the American Chemical Society, 2012, 134, 16909-16916.	6.6	1,768
5	A Non-Aqueous Asymmetric Cell with a $Ti_2C$ -Based Two-Dimensional Negative Electrode. Journal of the Electrochemical Society, 2012, 159, A1368-A1373.	1.3	332
6	Challenges in Ceramic Science: A Report from the Workshop on Emerging Research Areas in Ceramic Science. Journal of the American Ceramic Society, 2012, 95, 3699-3712.	1.9	59
7	Two-Dimensional Tetragonal $TiC$ Monolayer Sheet and Nanoribbons. Journal of the American Chemical Society, 2012, 134, 19326-19329.	6.6	186
8	Graphene-like titanium carbides and nitrides $Ti_{n+1}C_n$ , $Ti_{n+1}N_n$ ( $n=1, 2, \text{ and } 3$ ) from de-intercalated MAX phases: First-principles probing of their structural, electronic properties and relative stability. Computational Materials Science, 2012, 65, 104-114.	1.4	286
9	First principles study of two-dimensional early transition metal carbides. MRS Communications, 2012, 2, 133-137.	0.8	429
10	MXene: a promising transition metal carbide anode for lithium-ion batteries. Electrochemistry Communications, 2012, 16, 61-64.	2.3	1,252
11	Recent advances in free-standing two-dimensional crystals with atomic thickness: design, assembly and transfer strategies. Chemical Society Reviews, 2013, 42, 8187.	18.7	386
12	New Two-Dimensional Niobium and Vanadium Carbides as Promising Materials for Li-Ion Batteries. Journal of the American Chemical Society, 2013, 135, 15966-15969.	6.6	1,609
13	Cation Intercalation and High Volumetric Capacitance of Two-Dimensional Titanium Carbide. Science, 2013, 341, 1502-1505.	6.0	3,329
14	Liquid Exfoliation of Layered Materials. Science, 2013, 340, .	6.0	3,109
15	Synthesis of a new graphene-like transition metal carbide by de-intercalating $Ti_3AlC_2$ . Materials Letters, 2013, 109, 295-298.	1.3	136
16	Shape Memory and Superelastic Ceramics at Small Scales. Science, 2013, 341, 1505-1508.	6.0	236
17	Oxygen adsorption and dissociation during the oxidation of monolayer $Ti_2C$ . Journal of Materials Chemistry A, 2013, 1, 13672.	5.2	77
18	An extraordinarily stable catalyst: Pt NPs supported on two-dimensional $Ti_3C_2X_2$ ( $X = OH, F$ ) nanosheets for oxygen reduction reaction. Chemical Communications, 2013, 49, 10112.	2.2	284
19	High temperature solution growth and characterization of $Cr_2AlC$ single crystals. Journal of Crystal Growth, 2013, 384, 88-95.	0.7	46
20	Two-dimensional titanium carbonitrides and their hydroxylated derivatives: Structural, electronic properties and stability of MXenes $Ti_3C_2\hat{a}^{\sim}xN_x(OH)_2$ from DFTB calculations. Journal of Solid State Chemistry, 2013, 207, 42-48.	1.4	154
21	Study of structural and electronic properties of functionalized $Ti_3C_2$		

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22	Ultralight and Highly Compressible Graphene Aerogels. <i>Advanced Materials</i> , 2013, 25, 2219-2223.	11.1	1,249
23	Intercalation and delamination of layered carbides and carbonitrides. <i>Nature Communications</i> , 2013, 4, 1716.	5.8	2,095
24	Graphene-analogous low-dimensional materials. <i>Progress in Materials Science</i> , 2013, 58, 1244-1315.	16.0	684
25	Novel Electronic and Magnetic Properties of Two-Dimensional Transition Metal Carbides and Nitrides. <i>Advanced Functional Materials</i> , 2013, 23, 2185-2192.	7.8	1,418
26	First-principles analysis of MoS <sub>2</sub> /TiC and MoS <sub>2</sub> /C. <i>Journal of Physical Chemistry C</i> , 2013, 117, 14125-14129.	1.1	166
27	The New Skinny in Two-Dimensional Nanomaterials. <i>ACS Nano</i> , 2013, 7, 3739-3743.	7.3	336
28	Kinetics of aluminum extraction from Ti <sub>3</sub> AlC <sub>2</sub> in hydrofluoric acid. <i>Materials Chemistry and Physics</i> , 2013, 139, 147-152.	2.0	348
29	Structural and Electronic Properties and Stability of MXenes Ti <sub>2</sub> C and Ti <sub>3</sub> C <sub>2</sub> Functionalized by Methoxy Groups. <i>Journal of Physical Chemistry C</i> , 2013, 117, 13637-13643.	1.5	194
30	MXene: A New Family of Promising Hydrogen Storage Medium. <i>Journal of Physical Chemistry A</i> , 2013, 117, 14253-14260.	1.1	389
31	Corrosion behavior of Ti <sub>3</sub> AlC <sub>2</sub> in molten KOH at 700 °C. <i>Journal of Advanced Ceramics</i> , 2013, 2, 313-317.	8.9	14
32	Electronic Properties of $\pi$ -Conjugated Nickel Bis(dithiolene) Network and Its Addition Reactivity with Ethylene. <i>Journal of Physical Chemistry C</i> , 2013, 117, 14125-14129.	1.5	33
33	Graphene-like transition-metal nanocarbitides and nanonitrides. <i>Russian Chemical Reviews</i> , 2013, 82, 735-746.	2.5	79
34	Graphene-like nanocarbitides and nanonitrides of d metals (MXenes): synthesis, properties and simulation. <i>Micro and Nano Letters</i> , 2013, 8, 59-62.	0.6	84
35	Correlation effects and spin-orbit interactions in two-dimensional hexagonal 5d transition metal carbides, Ta <sub>n+1</sub> C <sub>n</sub> (n = 1,2,3). <i>Europhysics Letters</i> , 2013, 101, 57004.	0.7	54
36	Ultrathin Nanosheets of MAX Phases with Enhanced Thermal and Mechanical Properties in Polymeric Compositions: Ti <sub>3</sub> Si <sub>0.75</sub> Al <sub>0.25</sub> C <sub>2</sub> . <i>Angewandte Chemie - International Edition</i> , 2013, 52, 4361-4365.	7.2	113
38	SHS of MAX compounds in the Ti-Si-C system: Influence of mechanical activation. <i>International Journal of Self-Propagating High-Temperature Synthesis</i> , 2014, 23, 141-144.	0.2	11
39	Synthesis and Decomposition of Ti <sub>3</sub> SiC <sub>2</sub> under 1-5GPa at 1400°C. <i>Key Engineering Materials</i> , 2014, 602-603, 499-502.	0.4	6
40	Synthesis, characterization, and tribological properties of two-dimensional Ti <sub>3</sub> C <sub>2</sub> . <i>Crystal Research and Technology</i> , 2014, 49, 926-932.	0.6	102

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41	Formation of nanolaminate structures in the Ti-Si-C system: A crystallochemical study. International Journal of Self-Propagating High-Temperature Synthesis, 2014, 23, 217-221.	0.2	20
42	Trends in electronic structures and structural properties of MAX phases: a first-principles study on $M_2AlC$ ( $M = Sc, Ti, Cr, Zr, Nb, Mo, Hf, \text{ or } Ta$ ), $M_2AlN$ , and hypothetical $M_2AlB$ phases. Journal of Physics Condensed Matter, 2014, 26, 505503.	0.7	116
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46	Microstructure and phase transformation of $Ti_3AC_2$ ( $A = Al, Si$ ) in hydrofluoric acid solution. Crystal Research and Technology, 2014, 49, 813-819.	0.6	17
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48	Tailoring mechanical properties and electrical conductivity of flexible niobium carbide nanocomposite thin films. RSC Advances, 2014, 4, 61355-61362.	1.7	41
49	Achieving a direct band gap in oxygen functionalized-monolayer scandium carbide by applying an electric field. Physical Chemistry Chemical Physics, 2014, 16, 26273-26278.	1.3	82
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60	Flexible and conductive MXene films and nanocomposites with high capacitance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 16676-16681.	3.3	1,713
61	The effect of the interlayer element on the exfoliation of layered $\text{Mo}_2\text{AC}$ (A = Al, Si, P, Ga). <i>Journal of Applied Physics</i> , 2014, 116, 044301.	2.8	78
62	First principles investigation of point defect-related properties in $\text{Ti}_2\text{AlN}$ . <i>RSC Advances</i> , 2014, 4, 42014-42021.	1.7	17
63	Investigations on $\text{V}_2\text{C}$ and $\text{V}_2\text{CX}_2$ (X = F, OH) Monolayer as a Promising Anode Material for Li Ion Batteries from First-Principles Calculations. <i>Journal of Physical Chemistry C</i> , 2014, 118, 24274-24281.	1.5	301
64	In situ environmental transmission electron microscopy study of oxidation of two-dimensional $\text{Ti}_3\text{C}_2$ and formation of carbon-supported $\text{TiO}_2$ . <i>Journal of Materials Chemistry A</i> , 2014, 2, 14339.	5.2	287
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66	Exfoliated layered copper phosphonate showing enhanced adsorption capability towards Pb ions. <i>Chemical Communications</i> , 2014, 50, 10622.	2.2	20
67	Dye adsorption and decomposition on two-dimensional titanium carbide in aqueous media. <i>Journal of Materials Chemistry A</i> , 2014, 2, 14334-14338.	5.2	602
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70	Preparation of MXene-Cu <sub>2</sub> O nanocomposite and effect on thermal decomposition of ammonium perchlorate. <i>Solid State Sciences</i> , 2014, 35, 62-65.	1.5	92
71	Role of Strain and Concentration on the Li Adsorption and Diffusion Properties on $\text{Ti}_2\text{C}$ Layer. <i>Journal of Physical Chemistry C</i> , 2014, 118, 14983-14990.	1.5	88
72	Two-dimensional $\text{Ti}_3\text{C}_2$ as anode material for Li-ion batteries. <i>Electrochemistry Communications</i> , 2014, 47, 80-83.	2.3	414
73	Edge and confinement effects allow in situ measurement of size and thickness of liquid-exfoliated nanosheets. <i>Nature Communications</i> , 2014, 5, 4576.	5.8	432
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78	What Nano Can Do for Energy Storage. <i>ACS Nano</i> , 2014, 8, 5369-5371.	7.3	191
79	Two-dimensional molybdenum carbides: potential thermoelectric materials of the MXene family. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 7841-7849.	1.3	395
80	Electronic and optical properties of 2D graphene-like compounds titanium carbides and nitrides: DFT calculations. <i>Solid State Communications</i> , 2014, 195, 61-69.	0.9	177
81	Transparent Conductive Two-Dimensional Titanium Carbide Epitaxial Thin Films. <i>Chemistry of Materials</i> , 2014, 26, 2374-2381.	3.2	1,173
82	Unique Lead Adsorption Behavior of Activated Hydroxyl Group in Two-Dimensional Titanium Carbide. <i>Journal of the American Chemical Society</i> , 2014, 136, 4113-4116.	6.6	1,068
83	Role of Surface Structure on Li-Ion Energy Storage Capacity of Two-Dimensional Transition-Metal Carbides. <i>Journal of the American Chemical Society</i> , 2014, 136, 6385-6394.	6.6	1,164
84	Interpenetrating network V <sub>2</sub> O <sub>5</sub> nanosheets/carbon nanotubes nanocomposite for fast lithium storage. <i>RSC Advances</i> , 2014, 4, 46624-46630.	1.7	31
85	Solid solution effects in the Ti <sub>2</sub> Al(C,N) MAX phases: Synthesis, microstructure, electronic structure and transport properties. <i>Acta Materialia</i> , 2014, 80, 421-434.	3.8	51
86	Graphene, inorganic graphene analogs and their composites for lithium ion batteries. <i>Journal of Materials Chemistry A</i> , 2014, 2, 12104.	5.2	251
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90	Synthesis and tribological properties of TiC micro and nanoparticles. <i>International Journal of Surface Science and Engineering</i> , 2015, 9, 69.	0.4	1
91	Phase-engineered transition-metal dichalcogenides for energy and electronics. <i>MRS Bulletin</i> , 2015, 40, 585-591.	1.7	71
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94	Large-gap two-dimensional topological insulator in oxygen functionalized MXene. <i>Physical Review B</i> , 2015, 92, .	1.1	229

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96	Innovation and discovery of graphene-like materials via density-functional theory computations. <i>Wiley Interdisciplinary Reviews: Computational Molecular Science</i> , 2015, 5, 360-379.	6.2	205
97	Effect of MXene (Nano-Ti <sub>3</sub> C <sub>2</sub> ) on Early-Age Hydration of Cement Paste. <i>Journal of Nanomaterials</i> , 2015, 2015, 1-8.	1.5	7
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99	Carbon nanofiber bridged two-dimensional titanium carbide as a superior anode for lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2015, 3, 14096-14100.	5.2	152
100	First-principles design of silicene/Sc <sub>2</sub> CF <sub>2</sub> heterojunction as a promising candidate for field effect transistor. <i>Journal of Applied Physics</i> , 2015, 117, .	1.1	27
101	Direct Measurement of Surface Termination Groups and Their Connectivity in the 2D MXene V <sub>2</sub> CT <sub>x</sub> Using NMR Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2015, 119, 13713-13720.	1.5	169
102	Synthesis and Structural Characterization of Ti <sub>2</sub> C Nanosheets. <i>Materials Science Forum</i> , 0, 833, 44-47.	0.3	5
103	Covalency-Dependent Vibrational Dynamics in Two-Dimensional Titanium Carbides. <i>Journal of Physical Chemistry A</i> , 2015, 119, 12977-12984.	1.1	34
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107	Sulfur Cathodes Based on Conductive MXene Nanosheets for High-Performance Lithium-Sulfur Batteries. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 3907-3911.	7.2	1,006
108	Atomic-Scale Recognition of Surface Structure and Intercalation Mechanism of Ti <sub>3</sub> C <sub>2</sub> X. <i>Journal of the American Chemical Society</i> , 2015, 137, 2715-2721.	6.6	516
109	Computational studies on structural and electronic properties of functionalized MXene monolayers and nanotubes. <i>Journal of Materials Chemistry A</i> , 2015, 3, 4960-4966.	5.2	141
110	How to get between the sheets: a review of recent works on the electrochemical exfoliation of graphene materials from bulk graphite. <i>Nanoscale</i> , 2015, 7, 6944-6956.	2.8	320
111	Highly Efficient Photothermal Effect by Atomic-Thickness Confinement in Two-Dimensional ZrNCl Nanosheets. <i>ACS Nano</i> , 2015, 9, 1683-1691.	7.3	48
112	Two-Dimensional Titanium Carbide for Efficiently Reductive Removal of Highly Toxic Chromium(VI) from Water. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 1795-1803.	4.0	510

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115	Self-propagating high-temperature synthesis in the Ti-Si-C system: Features of product patterning. <i>Nanotechnologies in Russia</i> , 2015, 10, 67-74.	0.7	19
116	Intriguing electronic properties of two-dimensional MoS <sub>2</sub> /TM <sub>2</sub> CO <sub>2</sub> (TM = Ti, Zr, or Hf) hetero-bilayers: type-II semiconductors with tunable band gaps. <i>Nanotechnology</i> , 2015, 26, 135703.	1.3	57
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118	Aqueous dispersions of few-layer-thick chemically modified magnesium diboride nanosheets by ultrasonication assisted exfoliation. <i>Scientific Reports</i> , 2015, 5, 10522.	1.6	77
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121	Two-dimensional titanium carbide electrode with large mass loading for supercapacitor. <i>Journal of Power Sources</i> , 2015, 294, 354-359.	4.0	199
122	Atomically Resolved Structural and Chemical Investigation of Single MXene Sheets. <i>Nano Letters</i> , 2015, 15, 4955-4960.	4.5	415
123	Origin of Al Deficient Ti <sub>2</sub> AlN and Pathways of Vacancy-Assisted Diffusion. <i>Journal of Physical Chemistry C</i> , 2015, 119, 16606-16613.	1.5	13
124	Recent advances in MXene: Preparation, properties, and applications. <i>Frontiers of Physics</i> , 2015, 10, 276-286.	2.4	734
125	Amine-Assisted Delamination of Nb <sub>2</sub> C MXene for Li-ion Energy Storage Devices. <i>Advanced Materials</i> , 2015, 27, 3501-3506.	11.1	749
126	Large-scale delamination of multi-layers transition metal carbides and carbonitrides "MXenes". <i>Dalton Transactions</i> , 2015, 44, 9353-9358.	1.6	662
127	Mg intercalation into Ti <sub>2</sub> C building block. <i>Chemical Physics Letters</i> , 2015, 629, 36-39.	1.2	16
128	Microscopic origin of MXenes derived from layered MAX phases. <i>RSC Advances</i> , 2015, 5, 25403-25408.	1.7	61
129	Two-dimensional materials and their prospects in transistor electronics. <i>Nanoscale</i> , 2015, 7, 8261-8283.	2.8	552
130	Binder-free layered Ti <sub>3</sub> C <sub>2</sub> /CNTs nanocomposite anodes with enhanced capacity and long-cycle life for lithium-ion batteries. <i>Dalton Transactions</i> , 2015, 44, 7123-7126.	1.6	91
131	Achieving Type I, II, and III Heterojunctions Using Functionalized MXene. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 7163-7169.	4.0	120



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133	A novel nitrite biosensor based on the direct electrochemistry of hemoglobin immobilized on MXene-Ti <sub>3</sub> C <sub>2</sub> . <i>Sensors and Actuators B: Chemical</i> , 2015, 218, 60-66.	4.0	377
134	Vibrational properties of Ti <sub>3</sub> C <sub>2</sub> and Ti <sub>3</sub> C <sub>2</sub> T <sub>2</sub> (T = O, F, OH) monosheets by first-principles calculations: a comparative study. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 9997-10003.	1.3	455
135	Pseudocapacitance of MXene nanosheets for high-power sodium-ion hybrid capacitors. <i>Nature Communications</i> , 2015, 6, 6544.	5.8	873
136	Hydrothermal synthesis of TiO <sub>2</sub> /Ti <sub>3</sub> C <sub>2</sub> nanocomposites with enhanced photocatalytic activity. <i>Materials Letters</i> , 2015, 150, 62-64.	1.3	223
137	Electrochemistry of Nanostructured Layered Transition-Metal Dichalcogenides. <i>Chemical Reviews</i> , 2015, 115, 11941-11966.	23.0	719
138	Novel Hierarchical TiO <sub>2</sub> /C Nanocomposite with Enhanced Photocatalytic Performance. <i>Nano</i> , 2015, 10, 1550064.	0.5	26
139	Ultrathin Two-Dimensional Nanomaterials. <i>ACS Nano</i> , 2015, 9, 9451-9469.	7.3	1,726
140	Surface group modification and carrier transport properties of layered transition metal carbides (Ti <sub>2</sub> CT <sub>x</sub> , T: OH, F and O). <i>Nanoscale</i> , 2015, 7, 19390-19396.	2.8	285
141	Recent Advances in Two-Dimensional Materials beyond Graphene. <i>ACS Nano</i> , 2015, 9, 11509-11539.	7.3	2,069
142	Enhancement of the electrical properties of MXene Ti <sub>3</sub> C <sub>2</sub> nanosheets by post-treatments of alkalization and calcination. <i>Materials Letters</i> , 2015, 160, 537-540.	1.3	208
143	Effect of lithium and sodium ion adsorption on the electronic transport properties of Ti <sub>3</sub> C <sub>2</sub> MXene. <i>Applied Surface Science</i> , 2015, 359, 153-157.	3.1	50
144	Synthesis and Characterization of Novel AlF <sub>3</sub> Cubes. <i>Nano</i> , 2015, 10, 1550071.	0.5	2
145	Noncovalent Molecular Doping of Two-Dimensional Materials. <i>ChemNanoMat</i> , 2015, 1, 542-557.	1.5	41
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1279	Single Faceted Two-Dimensional Mo <sub>2</sub> C Electro catalyst for Highly Efficient Nitrogen Fixation. <i>ACS Catalysis</i> , 2020, 10, 7864-7870.	5.5	80
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1551	2D High- $\epsilon'$ Dielectric Ceramic Nanoplatelets for Polymer Nanocomposite Capacitors. <i>Inorganic Materials Series</i> , 2021, , 1-51.	0.5	0
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1698	Exploring MXene-based materials for next-generation rechargeable batteries. <i>JPhys Energy</i> , 2021, 3, 032009.	2.3	22
1699	Cationic intermediates assisted self-assembly two-dimensional Ti <sub>3</sub> C <sub>2</sub> T/rGO hybrid nanoflakes for advanced lithium-ion capacitors. <i>Science Bulletin</i> , 2021, 66, 914-924.	4.3	161
1700	Photocatalytic H <sub>2</sub> O <sub>2</sub> production using Ti <sub>3</sub> C <sub>2</sub> MXene as a non-noble metal cocatalyst. <i>Applied Catalysis A: General</i> , 2021, 618, 118127.	2.2	42
1701	Functionalized Germanene-Based Nanomaterials for the Detection of Single Nucleotide Polymorphism. <i>ACS Applied Nano Materials</i> , 2021, 4, 5164-5175.	2.4	17
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1703	Manganese dioxide nanosheets decorated on MXene (Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> ) with enhanced performance for asymmetric supercapacitors. <i>Ceramics International</i> , 2021, 47, 12211-12220.	2.3	18
1704	Structure and electromagnetic properties of Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> MXene derived from Ti <sub>3</sub> AlC <sub>2</sub> with different microstructures. <i>Ceramics International</i> , 2021, 47, 13628-13634.	2.3	31
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1707	Rapid production of mixed metal oxy-fluoride nanoplates as superior oxygen evolution electrocatalysts. <i>Materials Letters</i> , 2021, 291, 129530.	1.3	0

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1733	Morphological Evolutions of Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> Nanosheets and Fe <sub>3</sub> O <sub>4</sub> /Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> Nanocomposites under Potential Cycling Investigated Using In Situ Electrochemical Atomic Force Microscopy. Journal of Physical Chemistry C, 2021, 125, 12811-12818.	1.5	5
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1746	Recent Advances in Immunosafety and Nanoinformatics of Two-Dimensional Materials Applied to Nano-imaging. <i>Frontiers in Immunology</i> , 2021, 12, 689519.	2.2	5
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1749	Experimental and Computational Analysis of MnO <sub>2</sub> @V <sub>2</sub> C-MXene for Enhanced Energy Storage. <i>Nanomaterials</i> , 2021, 11, 1707.	1.9	18
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1754	Carbon-Dots-Initiated Photopolymerization: An <i>In Situ</i> Synthetic Approach for MXene/Poly(norepinephrine)/Copper Hybrid and its Application for Mitigating Water Pollution. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 31038-31050.	4.0	73
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1758	Prospects challenges and stability of 2D MXenes for clean energy conversion and storage applications. <i>Npj 2D Materials and Applications</i> , 2021, 5, .	3.9	163
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1763	A theoretical investigation of quantum spin Hall state in ordered M <sup>2+</sup> M <sup>3+</sup> C <sub>3</sub> MXenes (M <sup>2+</sup> = V, Nb, Ta and M <sup>3+</sup> ) <i>Tj ETQq1 1 0.78</i>	0.7	3

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1765	High-Throughput Screening of Atomic Defects in MXenes for $\text{CO}_2$ Capture, Activation, and Dissociation. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 35585-35594.	4.0	30
1766	Review on <i>MXene</i> synthesis, properties, and recent research exploring electrode architecture for supercapacitor applications. <i>International Journal of Energy Research</i> , 2021, 45, 19746-19771.	2.2	51
1767	Structure Dependent Water Transport in Membranes Based on Two-Dimensional Materials. <i>Industrial &amp; Engineering Chemistry Research</i> , 2021, 60, 10917-10959.	1.8	12
1768	2D MXene Nanomaterials for Versatile Biomedical Applications: Current Trends and Future Prospects. <i>Small</i> , 2021, 17, e2100946.	5.2	57
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1771	Lamellar MXene: A novel 2D nanomaterial for electrochemical sensors. <i>Journal of Applied Electrochemistry</i> , 2021, 51, 1509-1522.	1.5	27
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1776	Flexible Photodriven Actuator Based on Gradientâ€“Paraffin-Wax-Filled $\text{Ti}_3\text{C}_2\text{T}_x$ MXene Film for Bionic Robots. <i>ACS Nano</i> , 2021, 15, 12826-12835.	7.3	52
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1778	Sandwich-like N-doped carbon nanotube@Nb <sub>2</sub> C MXene composite for high performance alkali ion batteries. <i>Ceramics International</i> , 2021, 47, 20610-20616.	2.3	18
1779	Controlling the Defect Density of Perovskite Films by MXene/SnO <sub>2</sub> Hybrid Electron Transport Layers for Efficient and Stable Photovoltaics. <i>Journal of Physical Chemistry C</i> , 2021, 125, 15210-15222.	1.5	34
1780	Insight into two-dimensional MXenes for environmental applications: Recent progress, challenges, and prospects. <i>FlatChem</i> , 2021, 28, 100256.	2.8	35
1781	Tuning Schottky Barrier and Contact Type of Metalâ€“Semiconductor in $\text{Ti}_3\text{C}_2\text{T}_x/\text{MoS}_2$ (T = F, O, OH) by Strain: A First-Principles Study. <i>Journal of Physical Chemistry C</i> , 2021, 125, 16200-16210.	1.5	29

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1784	MXenes: Emerging 2D materials for hydrogen storage. <i>Nano Energy</i> , 2021, 85, 105989.	8.2	132
1785	Recent Progress of Two-Dimensional Materials for Ultrafast Photonics. <i>Nanomaterials</i> , 2021, 11, 1778.	1.9	31
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1787	Prospects and Challenges of MXenes as Emerging Sensing Materials for Flexible and Wearable Breath-Based Biomarker Diagnosis. <i>Advanced Healthcare Materials</i> , 2021, 10, e2100970.	3.9	41
1788	Rapid CO <sub>2</sub> exfoliation of Zintl phase CaSi <sub>2</sub> -derived ultrathin free-standing Si/SiO <sub>x</sub> /C nanosheets for high-performance lithium storage. <i>Science China Materials</i> , 2022, 65, 51-58.	3.5	18
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1791	Emerging applications of MXene materials in CO <sub>2</sub> photocatalysis. <i>FlatChem</i> , 2021, 28, 100252.	2.8	31
1792	Electroanalytical overview: utilising micro- and nano-dimensional sized materials in electrochemical-based biosensing platforms. <i>Mikrochimica Acta</i> , 2021, 188, 268.	2.5	28
1793	Tuning of anisotropic electrical conductivity and enhancement of EMI shielding of polymer composite foam via CO <sub>2</sub> -assisted delamination and orientation of MXene. <i>Chemical Engineering Journal</i> , 2021, 415, 128930.	6.6	54
1794	Fermiology of two-dimensional titanium carbide and nitride MXenes. <i>Physical Review B</i> , 2021, 104, .	1.1	5
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1796	Recent Advances in the Synthesis and Energy Applications of 2D MXenes. <i>ChemElectroChem</i> , 2021, 8, 3804-3826.	1.7	18
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1799	A theoretical investigation of topological phase modulation in carbide MXenes: Role of image potential states. <i>Carbon</i> , 2021, 181, 370-378.	5.4	6
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1802	Regulating the Coordination Environment of Ruthenium Cluster Catalysts for the Alkaline Hydrogen Evolution Reaction. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 8016-8023.	2.1	21
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1804	Amino-Functionalized Ti <sub>3</sub> C <sub>2</sub> MXene Quantum Dots as Photoluminescent Sensors for Diagnosing Histidine in Human Serum. <i>ACS Applied Nano Materials</i> , 2021, 4, 8192-8199.	2.4	34
1805	118 nm-wavelength-tunable Er <sup>3+</sup> -doped ZBLAN passively mode-locked fiber laser. , 2021, , .		0
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1808	2D Titanium Carbide (MXene) Based Films: Expanding the Frontier of Functional Film Materials. <i>Advanced Functional Materials</i> , 2021, 31, 2105043.	7.8	50
1809	Carbon Capture and Usage by MXenes. <i>ACS Catalysis</i> , 2021, 11, 11248-11255.	5.5	40
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1817	Cr <sub>2</sub> NX <sub>2</sub> MXene (X = O, F, OH): A 2D ferromagnetic half-metal. <i>Applied Physics Letters</i> , 2021, 119, .	1.5	32
1818	Recent Advances and Need of Green Synthesis in Two-Dimensional Materials for Energy Conversion and Storage Applications. <i>Current Nanoscience</i> , 2021, 17, 554-571.	0.7	8

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1820	High-rate electrospun Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> MXene/carbon nanofiber electrodes for flexible supercapacitors. <i>Applied Surface Science</i> , 2021, 556, 149710.	3.1	61
1821	Computational study of mechanical stability and phonon properties of MXenes Mo <sub>2</sub> ScC <sub>2</sub> T <sub>2</sub> (Ti <sub>1-x</sub> Al <sub>x</sub> O <sub>2</sub> ) <sub>2</sub> BT / Ov	1.1	0
1822	MXene (Ti <sub>3</sub> C <sub>2</sub> ) Based Pesticide Delivery System for Sustained Release and Enhanced Pest Control. <i>ACS Applied Bio Materials</i> , 2021, 4, 6912-6923.	2.3	38
1823	Direct Growth of van der Waals Tin Diodide Monolayers. <i>Advanced Science</i> , 2021, 8, e2100009.	5.6	10
1824	Challenges and opportunities in tailoring MAX phases as a starting materials for MXenes development. <i>Materials Technology</i> , 2022, 37, 1639-1650.	1.5	4
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1831	Design single nonmetal atom doped 2D Ti <sub>2</sub> CO <sub>2</sub> electrocatalyst for hydrogen evolution reaction by coupling electronic descriptor. <i>Applied Surface Science</i> , 2021, 556, 149778.	3.1	15
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1841	Recent Advancements in Energy Storage Based on Sodium Ion and Zinc Ion Hybrid Supercapacitors. <i>Energy &amp; Fuels</i> , 2021, 35, 14241-14264.	2.5	17
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1876	Synthesis, characterization, photocatalytic and antibacterial properties of copper Ferrite/MXene (CuFe <sub>2</sub> O <sub>4</sub> /Ti <sub>3</sub> C <sub>2</sub> ) nanohybrids. <i>Ceramics International</i> , 2021, 47, 28874-28883.	2.3	71
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1882	MXene-based designer nanomaterials and their exploitation to mitigate hazardous pollutants from environmental matrices. <i>Chemosphere</i> , 2021, 283, 131293.	4.2	28
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1886	Research progress on construction and energy storage performance of MXene heterostructures. <i>Journal of Energy Chemistry</i> , 2021, 62, 220-242.	7.1	45
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1890	CoS nanowires grown on Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> are promising electrodes for supercapacitors: High capacitance and remarkable cycle capability. <i>Journal of Colloid and Interface Science</i> , 2021, 602, 123-130.	5.0	13

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1892	Tribological properties of Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> MXene reinforced interpenetrating polymers network coating. <i>Tribology International</i> , 2021, 163, 107196.	3.0	33
1893	Hierarchical Sb <sub>2</sub> S <sub>3</sub> @m-Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> composite anode with enhanced Na-ion storage properties. <i>Journal of Alloys and Compounds</i> , 2021, 887, 161318.	2.8	8
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1895	Enhanced catalytic properties of cobaltic oxide through constructing MXene-supported nanocomposites for ammonium perchlorate thermal decomposition. <i>Applied Surface Science</i> , 2021, 570, 151224.	3.1	21
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1897	Electrochemical and optical biosensors based on multifunctional MXene nanoplateforms: Progress and prospects. <i>Talanta</i> , 2021, 235, 122726.	2.9	46
1898	Enhancement mechanism of photocatalytic activity for MoS <sub>2</sub> /Ti <sub>3</sub> C <sub>2</sub> Schottky junction: Experiment and DFT calculation. <i>Journal of Alloys and Compounds</i> , 2021, 887, 161411.	2.8	17
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1904	Flexible MXene-Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> bond few-layers transition metal dichalcogenides MoS <sub>2</sub> /C spheres for fast and stable sodium storage. <i>Chemical Engineering Journal</i> , 2022, 427, 130960.	6.6	15
1905	Preparation of 2D Graphene/MXene nanocomposite for the electrochemical determination of hazardous bisphenol A in plastic products. <i>Chemosphere</i> , 2022, 287, 132106.	4.2	39
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1917	Synthesis of new M-layer solid-solution 312 MAX phases (Ta<sub>1-x</sub>Ti<sub>x</sub>)<sub>3</sub>AlC<sub>2</sub> (<i>x</i> = 0.4, 0.62,) Tj ETQq070 0 rgBT4 Overlock	0.7	0
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1929	Synthesis and optical nonlinearity investigation of novel Fe <sub>3</sub> O <sub>4</sub> @Ti <sub>3</sub> C <sub>2</sub> MXene hybrid nanomaterials from 1 to 2 ¼m. <i>Journal of Materials Chemistry C</i> , 2021, 9, 1772-1777.	2.7	13
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1934	Ferromagnetic TM <sub>2</sub> BC (TM = Cr, Mn) monolayers for spintronic devices with high Curie temperature. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 6107-6115.	1.3	29
1935	MXene derivatives: synthesis and applications in energy convention and storage. <i>RSC Advances</i> , 2021, 11, 16065-16082.	1.7	25
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1945	Ti-enhanced exfoliation of V <sub>2</sub> AlC into V <sub>2</sub> C MXene for lithium-ion battery anodes. <i>Ceramics International</i> , 2017, 43, 11450-11454.	2.3	85

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1952	Recent progress and advances in the environmental applications of MXene related materials. Nanoscale, 2020, 12, 3574-3592.	2.8	186
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1955	Electronic structures and electron-phonon superconductivity of Nb <sub>2</sub> C-based MXenes. Journal Physics D: Applied Physics, 2020, 53, 485301.	1.3	9
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