

CITATION REPORT

List of articles citing

2D metal carbides and nitrides (MXenes) for energy storage

DOI: 10.1038/natrevmats.2016.98

Nature Reviews Materials, 2017, 2, .

Source: <https://exaly.com/paper-pdf/65991021/citation-report.pdf>

Version: 2024-04-09

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

#	Paper	IF	Citations
2248	Atomic layer deposition of SnO ₂ on MXene for Li-ion battery anodes. 2017 , 34, 249-256		307
2247	Two-Dimensional MXene with Controlled Interlayer Spacing for Electrochemical Energy Storage. 2017 , 11, 2393-2396		123
2246	Binder-free Ti ₃ C ₂ T _x MXene electrode film for supercapacitor produced by electrophoretic deposition method. 2017 , 317, 1026-1036		141
2245	Rendering Ti ₃ C ₂ T _x (MXene) monolayers visible. 2017 , 5, 322-328		26
2244	Charge transfer induced polymerization of EDOT confined between 2D titanium carbide layers. 2017 , 5, 5260-5265		107
2243	Soft exfoliation of 2D SnO with size-dependent optical properties. 2017 , 4, 025110		43
2242	Oxidation Stability of Colloidal Two-Dimensional Titanium Carbides (MXenes). 2017 , 29, 4848-4856		652
2241	Efficient Antibacterial Membrane based on Two-Dimensional TiCT (MXene) Nanosheets. 2017 , 7, 1598		184
2240	Phase transition and in situ construction of lateral heterostructure of 2D superconducting HfMoC with sharp interface by electron beam irradiation. 2017 , 9, 7501-7507		21
2239	Achieving high-rate capacitance of multi-layer titanium carbide (MXene) by liquid-phase exfoliation through Li-intercalation. 2017 , 81, 48-51		27
2238	Laminated and Two-Dimensional Carbon-Supported Microwave Absorbers Derived from MXenes. 2017 , 9, 20038-20045		229
2237	Tunable Magnetism and Transport Properties in Nitride MXenes. 2017 , 11, 7648-7655		190
2236	Two-dimensional heterostructures for energy storage. 2017 , 2,		552
2235	High-Throughput Survey of Ordering Configurations in MXene Alloys Across Compositions and Temperatures. 2017 , 11, 4407-4418		97
2234	Mechanical instability driven self-assembly and architecturing of 2D materials. 2017 , 4, 022002		22
2233	Two-dimensional layered compound based anode materials for lithium-ion batteries and sodium-ion batteries. 2017 , 499, 17-32		59
2232	First-Principles Research on the Structural and Electric Properties of the Graphene-Like Alkali-Metal Absorbed InSe-M. 2017 , 250, 012018		

2231	A highly flexible and sensitive piezoresistive sensor based on MXene with greatly changed interlayer distances. 2017 , 8, 1207	378
2230	Recent advances in ternary two-dimensional materials: synthesis, properties and applications. 2017 , 5, 22855-22876	97
2229	Recent advance in MXenes: A promising 2D material for catalysis, sensor and chemical adsorption. 2017 , 352, 306-327	315
2228	N-Functionalized MXenes: ultrahigh carrier mobility and multifunctional properties. 2017 , 19, 28710-28717	34
2227	Edge-oriented SnS ₂ nanosheet arrays on carbon paper as advanced binder-free anodes for Li-ion and Na-ion batteries. 2017 , 5, 23115-23122	61
2226	Electronic, Magnetic, and Catalytic Properties of Thermodynamically Stable Two-Dimensional Transition-Metal Phosphides. 2017 , 29, 8892-8900	49
2225	Room Temperature Gas Sensing of Two-Dimensional Titanium Carbide (MXene). 2017 , 9, 37184-37190	314
2224	2D Materials with Nanoconfined Fluids for Electrochemical Energy Storage. 2017 , 1, 443-452	69
2223	Theoretical prediction of MXene-like structured TiC as a high capacity electrode material for Na ion batteries. 2017 , 19, 29106-29113	33
2222	Partial Etching of Al from MoAlB Single Crystals To Expose Catalytically Active Basal Planes for the Hydrogen Evolution Reaction. 2017 , 29, 8953-8957	63
2221	Two-Dimensional Vanadium Carbide (MXene) as a High-Capacity Cathode Material for Rechargeable Aluminum Batteries. 2017 , 11, 11135-11144	272
2220	New two-dimensional transition metal borides for Li ion batteries and electrocatalysis. 2017 , 5, 23530-23535	132
2219	Materials Synthesis Insights from Scientific Literature via Text Extraction and Machine Learning. 2017 , 29, 9436-9444	202
2218	Two-Dimensional Titanium Nitride (TiN) MXene: Synthesis, Characterization, and Potential Application as Surface-Enhanced Raman Scattering Substrate. 2017 , 11, 8892-8900	281
2217	Fluorine-free preparation of titanium carbide MXene quantum dots with high near-infrared photothermal performances for cancer therapy. 2017 , 9, 17859-17864	174
2216	A Two-Dimensional Biodegradable Niobium Carbide (MXene) for Photothermal Tumor Eradication in NIR-I and NIR-II Biowindows. 2017 , 139, 16235-16247	656
2215	Guidelines for Synthesis and Processing of Two-Dimensional Titanium Carbide (Ti ₃ C ₂ T _x MXene). 2017 , 29, 7633-7644	1689
2214	Two-Dimensional Titanium Carbide (MXene) as Surface-Enhanced Raman Scattering Substrate. 2017 , 121, 19983-19988	179

2213	High Electrocatalytic Response of a Mechanically Enhanced NbC Nanocomposite Electrode Toward Hydrogen Evolution Reaction. 2017 , 9, 30872-30879	25
2212	2D metal carbides (MXenes) in fibers. 2017 , 20, 481-482	20
2211	Prediction and synthesis of a family of atomic laminate phases with Kagomé-like and in-plane chemical ordering. 2017 , 3, e1700642	104
2210	Highly Concentrated, Ultrathin Nickel Hydroxide Nanosheet Ink for Wearable Energy Storage Devices. 2017 , 29, 1703455	46
2209	Biocompatible 2D Titanium Carbide (MXenes) Composite Nanosheets for pH-Responsive MRI-Guided Tumor Hyperthermia. 2017 , 29, 8637-8652	193
2208	Two-dimensional VS ₂ monolayers as potential anode materials for lithium-ion batteries and beyond: first-principles calculations. 2017 , 5, 21370-21377	114
2207	New Ti ₃ C ₂ aerogel as promising negative electrode materials for asymmetric supercapacitors. 2017 , 364, 234-241	136
2206	Revitalizing carbon supercapacitor electrodes with hierarchical porous structures. 2017 , 5, 17705-17733	332
2205	Hollow MXene Spheres and 3D Macroporous MXene Frameworks for Na-Ion Storage. 2017 , 29, 1702410	465
2204	MXene/Silicon Van Der Waals Heterostructures for High-Speed Self-Driven Photodetectors. 2017 , 3, 1700165	106
2203	Flexible MXene/graphene electrodes with high volumetric capacitance for integrated co-cathode energy conversion/storage devices. 2017 , 5, 17442-17451	150
2202	Transparent, Flexible, and Conductive 2D Titanium Carbide (MXene) Films with High Volumetric Capacitance. 2017 , 29, 1702678	538
2201	Ultrathin MoS ₂ Nanosheets@Metal Organic Framework-Derived N-Doped Carbon Nanowall Arrays as Sodium Ion Battery Anode with Superior Cycling Life and Rate Capability. 2017 , 27, 1702116	373
2200	Metallic MXene Saturable Absorber for Femtosecond Mode-Locked Lasers. 2017 , 29, 1702496	295
2199	Computationally Driven Two-Dimensional Materials Design: What Is Next?. 2017 , 11, 7560-7564	32
2198	Na-Ion Intercalation and Charge Storage Mechanism in 2D Vanadium Carbide. 2017 , 7, 1700959	113
2197	Microwave-assisted synthesis of SnO ₂ -Ti ₃ C ₂ nanocomposite for enhanced supercapacitive performance. 2017 , 209, 122-125	32
2196	Theoretical prediction of robust and intrinsic half-metallicity in Ni ₂ N MXene with different types of surface terminations. 2017 , 426, 804-811	19

2195	An investigation of the in-plane chemically ordered atomic laminates (MoSc)AlC and (MoY)AlC from first principles. 2017 , 19, 21595-21603	11
2194	Alkalized Ti ₃ C ₂ MXene nanoribbons with expanded interlayer spacing for high-capacity sodium and potassium ion batteries. 2017 , 40, 1-8	386
2193	Two-Dimensional Titanium Carbide MXene as a Capacitor-Type Electrode for Rechargeable Aqueous Li-Ion and Na-Ion Capacitor Batteries. 2017 , 4, 3018-3025	41
2192	Two-Dimensional Materials as Prospective Scaffolds for Mixed-Matrix Membrane-Based CO Separation. 2017 , 10, 3304-3316	57
2191	Single-Layer TlO: A Metal-Shrouded 2D Semiconductor with High Electronic Mobility. 2017 , 139, 11694-11697	60
2190	Hydrophobic, Flexible, and Lightweight MXene Foams for High-Performance Electromagnetic-Interference Shielding. 2017 , 29, 1702367	903
2189	TiAuC and TiAuC formed by solid state reaction of gold with TiAlC and TiAlC. 2017 , 53, 9554-9557	35
2188	Designing flexible 2D transition metal carbides with strain-controllable lithium storage. 2017 , 114, E11082-E11091	1091
2187	Molybdenum oxide/carbon composites derived from the CO ₂ oxidation of Mo ₂ CT _x (MXene) for lithium ion battery anodes. 2017 , 258, 979-987	53
2186	Two-Dimensional Tantalum Carbide (MXenes) Composite Nanosheets for Multiple Imaging-Guided Photothermal Tumor Ablation. 2017 , 11, 12696-12712	223
2185	Carbon vacancies in TiCT MXenes: defects or a new opportunity?. 2017 , 19, 31773-31780	57
2184	Tension-Tailored Electronic and Magnetic Switching of 2D Ti ₂ NO ₂ . 2017 , 121, 25729-25735	24
2183	Versatile Cutting Method for Producing Fluorescent Ultrasmall MXene Sheets. 2017 , 11, 11559-11565	90
2182	Knittable energy storing fiber with high volumetric performance made from predominantly MXene nanosheets. 2017 , 5, 24076-24082	126
2181	2D molybdenum and vanadium nitrides synthesized by ammoniation of 2D transition metal carbides (MXenes). 2017 , 9, 17722-17730	192
2180	MXene: an emerging two-dimensional material for future energy conversion and storage applications. 2017 , 5, 24564-24579	291
2179	Selective Molecular Separation on TiCT-Graphene Oxide Membranes during Pressure-Driven Filtration: Comparison with Graphene Oxide and MXenes. 2017 , 9, 44687-44694	116
2178	Faradaic deionization of brackish and sea water via pseudocapacitive cation and anion intercalation into few-layered molybdenum disulfide. 2017 , 5, 15640-15649	117

2177	Thermoelectric Properties of Two-Dimensional Molybdenum-Based MXenes. 2017 , 29, 6472-6479	163
2176	Calorimetric Study of Alkali Metal Ion (K ⁺ , Na ⁺ , Li ⁺) Exchange in a Clay-Like MXene. 2017 , 121, 15145-15153	26
2175	Flexible MXene/Graphene Films for Ultrafast Supercapacitors with Outstanding Volumetric Capacitance. 2017 , 27, 1701264	934
2174	Stacking stability and sliding mechanism in weakly bonded 2D transition metal carbides by van der Waals force. 2017 , 7, 55912-55919	29
2173	2D Ti ₃ C ₂ T _x (MXene)-reinforced polyvinyl alcohol (PVA) nanofibers with enhanced mechanical and electrical properties. 2017 , 12, e0183705	62
2172	Discovery of graphene and beyond. 2017 , 1-15	3
2171	Inorganic analogues of graphene. 2017 , 75-101	2
2170	First-Principles Calculations of Ti ₂ N and Ti ₂ NT ₂ (T = O, F, OH) Monolayers as Potential Anode Materials for Lithium-Ion Batteries and Beyond. 2017 , 121, 13025-13034	99
2169	A polyoxometalate-functionalized two-dimensional titanium carbide composite MXene for effective cancer theranostics. 2018 , 11, 4149-4168	75
2168	Rheological Characteristics of 2D Titanium Carbide (MXene) Dispersions: A Guide for Processing MXenes. 2018 , 12, 2685-2694	155
2167	Synergistically enhanced lithium storage performance based on titanium carbide nanosheets (MXene) backbone and SnO ₂ quantum dots. 2018 , 268, 503-511	54
2166	Recent advances in the nanoengineering of electrocatalysts for CO reduction. 2018 , 10, 6235-6260	109
2165	MXene as a Charge Storage Host. 2018 , 51, 591-599	203
2164	Mechanistic Quantification of Thermodynamic Stability and Mechanical Strength for Two-Dimensional Transition-Metal Carbides. 2018 , 122, 4710-4722	22
2163	Oxide Thin-Film Electronics using All-MXene Electrical Contacts. 2018 , 30, e1706656	113
2162	Expanding frontiers in materials chemistry and physics with multiple anions. 2018 , 9, 772	379
2161	Recent Developments in 2D Nanomaterials for Chemiresistive-Type Gas Sensors. 2018 , 14, 221-260	120
2160	Advanced analytical techniques to characterize materials for electrochemical capacitors. 2018 , 9, 18-25	16

2159	Boosting the Photocatalytic Activity of P25 for Carbon Dioxide Reduction by using a Surface-Alkalinized Titanium Carbide MXene as Cocatalyst. 2018 , 11, 1606-1611	142
2158	Pseudocapacitive Energy Storage in Schiff Base Polymer with Salphen-Type Ligands. 2018 , 122, 5325-5333	19
2157	Thermoswitchable on-chip microsupercapacitors: one potential self-protection solution for electronic devices. 2018 , 11, 1717-1722	55
2156	g-C ₃ N ₄ /Ti ₃ C ₂ T _x (MXenes) composite with oxidized surface groups for efficient photocatalytic hydrogen evolution. 2018 , 6, 9124-9131	162
2155	2D magnetic titanium carbide MXene for cancer theranostics. 2018 , 6, 3541-3548	63
2154	Thermal Instability Induced Oriented 2D Pores for Enhanced Sodium Storage. 2018 , 14, e1800639	33
2153	MXene ^{2D} layered electrode materials for energy storage. 2018 , 28, 133-147	127
2152	Phonon-mediated stabilization and softening of 2D transition metal carbides: case studies of TiCO and MoCO. 2018 , 20, 14608-14618	6
2151	Atomically thin p-n junctions based on two-dimensional materials. 2018 , 47, 3339-3358	158
2150	Two-Dimensional MoS Confined Co(OH) Electrocatalysts for Hydrogen Evolution in Alkaline Electrolytes. 2018 , 12, 4565-4573	225
2149	Maxing Out Water Desalination with MXenes. 2018 , 2, 591-593	17
2148	Bipolar magnetic semiconductors among intermediate states during the conversion from ScC(OH) to ScCO MXene. 2018 , 10, 8763-8771	18
2147	Sandwich-like Co ₃ O ₄ /MXene composite with enhanced catalytic performance for Bisphenol A degradation. 2018 , 347, 731-740	128
2146	Fluorine-Free Synthesis of High-Purity Ti ₃ C ₂ T _x (T=OH, O) via Alkali Treatment. 2018 , 130, 6223-6227	29
2145	Two-dimensional transition metal carbides and nitrides (MXenes) for biomedical applications. 2018 , 47, 5109-5124	450
2144	Functional inks and printing of two-dimensional materials. 2018 , 47, 3265-3300	268
2143	Triaxial Nanocables of Conducting Polypyrrole@SnS@Carbon Nanofiber Enabling Significantly Enhanced Li-Ion Storage. 2018 , 10, 13581-13587	40
2142	Large Dielectric Constant Enhancement in MXene Percolative Polymer Composites. 2018 , 12, 3369-3377	181

2141	The influence of surface functionalization on thermal transport and thermoelectric properties of MXene monolayers. 2018 , 10, 8859-8868	72
2140	2D/2D Heterojunction of Ultrathin MXene/Bi ₂ WO ₆ Nanosheets for Improved Photocatalytic CO ₂ Reduction. 2018 , 28, 1800136	757
2139	Formation of quasi-core-shell In ₂ S ₃ /anatase TiO ₂ @metallic Ti ₃ C ₂ T _x hybrids with favorable charge transfer channels for excellent visible-light-photocatalytic performance. 2018 , 233, 213-225	211
2138	W-Based Atomic Laminates and Their 2D Derivative W C MXene with Vacancy Ordering. 2018 , 30, e1706409	145
2137	Fluorine-Free Synthesis of High-Purity Ti C T (T=OH, O) via Alkali Treatment. 2018 , 57, 6115-6119	387
2136	A novel plane-line-plane nanostructure of the sandwich-like CNTs@SnO ₂ /Ti ₃ C ₂ T _x 3D nanocomposite as a promising anode for lithium-ion batteries. 2018 , 44, 11757-11764	7
2135	Ultrathin 2D Transition Metal Carbides for Ultrafast Pulsed Fiber Lasers. 2018 , 5, 1808-1816	96
2134	Novel Scale-Like Structures of Graphite/TiC/Ti ₃ C ₂ Hybrids for Electromagnetic Absorption. 2018 , 4, 1700617	61
2133	Janus single layers of In ₂ SSe: A first-principles study. 2018 , 97,	65
2132	Computational Screening of 2D Materials and Rational Design of Heterojunctions for Water Splitting Photocatalysts. 2018 , 2, 1700359	96
2131	Highly Self-Healable 3D Microsupercapacitor with MXene-Graphene Composite Aerogel. 2018 , 12, 4224-4232	375
2130	Alkali-induced crumpling of TiCT (MXene) to form 3D porous networks for sodium ion storage. 2018 , 54, 4533-4536	101
2129	Highly negative Poisson's ratio in a flexible two-dimensional tungsten carbide monolayer. 2018 , 20, 18924-18930	30
2128	Effects of etching temperature and ball milling on the preparation and capacitance of Ti ₃ C ₂ MXene. 2018 , 752, 32-39	37
2127	One-step synthesis of 2D-layered carbon wrapped transition metal nitrides from transition metal carbides (MXenes) for supercapacitors with ultrahigh cycling stability. 2018 , 54, 2755-2758	45
2126	Role of the H-containing groups on the structural dynamics of Ti ₃ C ₂ T _x MXene. 2018 , 537, 155-161	12
2125	All-MXene-Based Integrated Electrode Constructed by TiC Nanoribbon Framework Host and Nanosheet Interlayer for High-Energy-Density Li-S Batteries. 2018 , 12, 2381-2388	258
2124	Binder-free 2D titanium carbide (MXene)/carbon nanotube composites for high-performance lithium-ion capacitors. 2018 , 10, 5906-5913	153

2123	Materials for supercapacitors: When Li-ion battery power is not enough. 2018 , 21, 419-436	234
2122	Recently synthesized $(\text{Zr}_{1-x}\text{Ti}_x)_2\text{AlC}$ ($0 \leq x \leq 1$) solid solutions: Theoretical study of the effects of M mixing on physical properties. 2018 , 743, 146-154	45
2121	MBene (MnB): a new type of 2D metallic ferromagnet with high Curie temperature. 2018 , 3, 335-341	99
2120	Emergent Pseudocapacitance of 2D Nanomaterials. 2018 , 8, 1702930	172
2119	Synthesis and Electronic Structure of Boron-Graphdiyne with an sp-Hybridized Carbon Skeleton and Its Application in Sodium Storage. 2018 , 130, 4032-4037	32
2118	Recent Advances in Layered Ti C T MXene for Electrochemical Energy Storage. 2018 , 14, e1703419	478
2117	Towards flexible solid-state supercapacitors for smart and wearable electronics. 2018 , 47, 2065-2129	936
2116	2D Ultrathin MXene-Based Drug-Delivery Nanoplatform for Synergistic Photothermal Ablation and Chemotherapy of Cancer. 2018 , 7, e1701394	181
2115	Synthesis of MoAlB Particulates and Their Porous Derivatives by Selective Deintercalation of Al from MoAlB. 2018 , 535-541	1
2114	Improving the electrochemical properties of MXene Ti_3C_2 multilayer for Li-ion batteries by vacuum calcination. 2018 , 265, 140-150	69
2113	A Strategy for Synthesis of Carbon Nitride Induced Chemically Doped 2D MXene for High-Performance Supercapacitor Electrodes. 2018 , 8, 1703173	128
2112	First-Principle Study of Li-Ion Storage of Functionalized TiC Monolayer with Vacancies. 2018 , 10, 6369-6377	63
2111	CO_2 abatement using two-dimensional MXene carbides. 2018 , 6, 3381-3385	93
2110	Conduction-band valley spin splitting in single-layer $\text{H-Ti}_2\text{O}$. 2018 , 97,	26
2109	Enhancement of the selectivity of MXenes (MC, M = Ti, V, Nb, Mo) via oxygen-functionalization: promising materials for gas-sensing and -separation. 2018 , 20, 6073-6082	51
2108	Two-Dimensional Molybdenum Carbide (MXene) with Divacancy Ordering for Brackish and Seawater Desalination via Cation and Anion Intercalation. 2018 , 6, 3739-3747	127
2107	Synthesis and Electronic Structure of Boron-Graphdiyne with an sp-Hybridized Carbon Skeleton and Its Application in Sodium Storage. 2018 , 57, 3968-3973	111
2106	Fabrication of tunable hierarchical MXene@AuNPs nanocomposites constructed by self-reduction reactions with enhanced catalytic performances. 2018 , 61, 728-736	140

2105	Metal Precursor Dependent Synthesis of NiFe ₂ O ₄ Thin Films for High-Performance Flexible Symmetric Supercapacitor. 2018 , 1, 638-648	66
2104	Ultrahigh-flux and fouling-resistant membranes based on layered silver/MXene (Ti ₃ C ₂ Tx) nanosheets. 2018 , 6, 3522-3533	227
2103	Porous Ti ₃ C ₂ Tx MXene for Ultrahigh-Rate Sodium-Ion Storage with Long Cycle Life. 2018 , 1, 505-511	88
2102	Metal-Organic Frameworks Mediated Synthesis of One-Dimensional Molybdenum-Based/Carbon Composites for Enhanced Lithium Storage. 2018 , 12, 1990-2000	166
2101	Metallic MoN Layer and its Application as Anode for Lithium-ion Batteries. 2018 ,	8
2100	Electrochemical Reduction of TiO ₂ /Al ₂ O ₃ /C to Ti ₃ AlC ₂ and Its Derived Two-Dimensional (2D) Carbides. 2018 , 165, E97-E107	8
2099	Intercalation and delamination of two-dimensional MXene (Ti ₃ C ₂ Tx) and application in sodium-ion batteries. 2018 , 219, 45-50	51
2098	ZrSi: an antiferromagnetic Dirac MXene. 2018 , 20, 3946-3952	10
2097	Structural, magnetic and electrical transport properties of non-conventionally prepared MAX phases V ₂ AlC and (V/Mn) ₂ AlC. 2018 , 2, 483-490	18
2096	Advanced Composite 2D Energy Materials by Simultaneous Anodic and Cathodic Exfoliation. 2018 , 8, 1702794	34
2095	Clay-Inspired MXene-Based Electrochemical Devices and Photo-Electrocatalyst: State-of-the-Art Progresses and Challenges. 2018 , 30, e1704561	301
2094	All Pseudocapacitive MXene-RuO ₂ Asymmetric Supercapacitors. 2018 , 8, 1703043	459
2093	Metallic TiCT MXene Gas Sensors with Ultrahigh Signal-to-Noise Ratio. 2018 , 12, 986-993	664
2092	One-Step Synthesis of Nb O ₂ /C/Nb C (MXene) Composites and Their Use as Photocatalysts for Hydrogen Evolution. 2018 , 11, 688-699	223
2091	Recent progress in 2D group-VA semiconductors: from theory to experiment. 2018 , 47, 982-1021	549
2090	Two-dimensional MXenes for energy storage. 2018 , 338, 27-45	170
2089	MoS ₂ -on-MXene Heterostructures as Highly Reversible Anode Materials for Lithium-Ion Batteries. 2018 , 130, 1864-1868	56
2088	MoS ₂ -on-MXene Heterostructures as Highly Reversible Anode Materials for Lithium-Ion Batteries. 2018 , 57, 1846-1850	375

2087	Designing Carbon Based Supercapacitors with High Energy Density: A Summary of Recent Progress. 2018 , 24, 7312-7329	81
2086	Composites of Proteins and 2D Nanomaterials. 2018 , 28, 1704990	31
2085	Tuning the Basal Plane Functionalization of Two-Dimensional Metal Carbides (MXenes) To Control Hydrogen Evolution Activity. 2018 , 1, 173-180	192
2084	Electrosynthesis of Ti ₃ AlC ₂ from oxides/carbon precursor in molten calcium chloride. 2018 , 735, 1901-1907	15
2083	Highly Broadband Absorber Using Plasmonic Titanium Carbide (MXene). 2018 , 5, 1115-1122	162
2082	MXene molecular sieving membranes for highly efficient gas separation. 2018 , 9, 155	530
2081	Single Pd atomic catalyst on MoCO monolayer (MXene): unusual activity for CO oxidation by trimolecular Eley-Rideal mechanism. 2018 , 20, 3504-3513	56
2080	Saturable Absorption in 2D Ti C MXene Thin Films for Passive Photonic Diodes. 2018 , 30, 1705714	213
2079	Stamping of Flexible, Coplanar Micro-Supercapacitors Using MXene Inks. 2018 , 28, 1705506	322
2078	Modified Brewster angle on conducting 2D materials. 2018 , 5, 025007	8
2077	The S-functionalized TiC Mxene as a high capacity electrode material for Na-ion batteries: a DFT study. 2018 , 10, 3385-3392	89
2076	Facile Synthesis of Crumpled Nitrogen-Doped MXene Nanosheets as a New Sulfur Host for LithiumSulfur Batteries. 2018 , 8, 1702485	354
2075	3D assembly of TiC-MXene directed by water/oil interfaces. 2018 , 10, 3621-3625	60
2074	3D Porous MXene (TiC)/Reduced Graphene Oxide Hybrid Films for Advanced Lithium Storage. 2018 , 10, 3634-3643	185
2073	Ultrathin Titanate Nanosheets/Graphene Films Derived from Confined Transformation for Excellent Na/K Ion Storage. 2018 , 57, 8540-8544	140
2072	A nanoporous MXene film enables flexible supercapacitors with high energy storage. 2018 , 10, 9642-9652	112
2071	Efficient nitrogen fixation to ammonia on MXenes. 2018 , 20, 14504-14512	65
2070	3D Macroporous MoxC@N-C with Incorporated Mo Vacancies as Anodes for High-Performance Lithium-Ion Batteries. 2018 , 2, 1800040	26

2069	Layer-by-layer self-assembled two-dimensional MXene/layered double hydroxide composites as cathode for alkaline hybrid batteries. 2018 , 390, 208-214	37
2068	Self-Assembly of Transition Metal Oxide Nanostructures on MXene Nanosheets for Fast and Stable Lithium Storage. 2018 , 30, e1707334	324
2067	Synthesis of MXene-supported layered MoS ₂ with enhanced electrochemical performance for Mg batteries. 2018 , 29, 1313-1316	29
2066	Internal structure [Na storage mechanisms] Electrochemical performance relations in carbons. 2018 , 97, 170-203	72
2065	2D Titanium Carbide/Reduced Graphene Oxide Heterostructures for Supercapacitor Applications. 2018 , 1, 33-38	52
2064	3D Synergistical MXene/Reduced Graphene Oxide Aerogel for a Piezoresistive Sensor. 2018 , 12, 3209-3216	415
2063	Surface Functional Groups and Interlayer Water Determine the Electrochemical Capacitance of TiC _T MXene. 2018 , 12, 3578-3586	259
2062	Opening Magnesium Storage Capability of Two-Dimensional MXene by Intercalation of Cationic Surfactant. 2018 , 12, 3733-3740	141
2061	Heterostructures of MXenes and N-doped graphene as highly active bifunctional electrocatalysts. 2018 , 10, 10876-10883	154
2060	Layer-by-layer assembly of MXene and carbon nanotubes on electrospun polymer films for flexible energy storage. 2018 , 10, 6005-6013	124
2059	Porous Cryo-Dried MXene for Efficient Capacitive Deionization. 2018 , 2, 778-787	190
2058	Universal Descriptor for Large-Scale Screening of High-Performance MXene-Based Materials for Energy Storage and Conversion. 2018 , 30, 2687-2693	47
2057	MXene-Based Electrode with Enhanced Pseudocapacitance and Volumetric Capacity for Power-Type and Ultra-Long Life Lithium Storage. 2018 , 12, 3928-3937	120
2056	Fe ₃ O ₄ @Ti ₃ C ₂ MXene hybrids with ultrahigh volumetric capacity as an anode material for lithium-ion batteries. 2018 , 6, 11189-11197	165
2055	Robust half-metallicities and perfect spin transport properties in 2D transition metal dichlorides. 2018 , 6, 4087-4094	48
2054	Two-dimensional halide perovskite nanomaterials and heterostructures. 2018 , 47, 6046-6072	244
2053	In-situ construction of hierarchical accordion-like TiO ₂ /Ti ₃ C ₂ nanohybrid as anode material for lithium and sodium ion batteries. 2018 , 271, 165-172	93
2052	Emerging Two-Dimensional Nanomaterials for Electrocatalysis. 2018 , 118, 6337-6408	1057

2051	Band Engineering of Carbon Nitride Monolayers by N-Type, P-Type, and Isoelectronic Doping for Photocatalytic Applications. 2018 , 10, 11143-11151	66
2050	Exploring new two-dimensional monolayers: pentagonal transition metal borides/carbides (penta-TMB/Cs). 2018 , 6, 10226-10232	56
2049	Layered conductive polymer-inorganic anion network for high-performance ultra-loading capacitive electrodes. 2018 , 14, 90-99	15
2048	Graphene-like monolayer InSe-X: several promising half-metallic nanosheets in spintronics. 2018 , 30, 155306	4
2047	Old materials with new properties II: The metal carbides. 2018 , 18, 12-14	17
2046	Broadband Nonlinear Photonics in Few-Layer MXene Ti3C2Tx (T = F, O, or OH). 2018 , 12, 1700229	438
2045	Fabrication and Engineering of Nanostructured Supercapacitor Electrodes Using Electromagnetic Field-Based Techniques. 2018 , 3, 1700168	4
2044	Recent Applications of 2D Inorganic Nanosheets for Emerging Energy Storage System. 2018 , 24, 4757-4773	40
2043	Two-dimensional metal oxide nanosheets for rechargeable batteries. 2018 , 27, 117-127	83
2042	SnS2 nanosheets arrays sandwiched by N-doped carbon and TiO2 for high-performance Na-ion storage. 2018 , 3, 42-49	17
2041	Modifying the electrochemical performance of vertically-oriented few-layered graphene through rotary plasma processing. 2018 , 6, 908-917	40
2040	Asymmetric Flexible MXene-Reduced Graphene Oxide Micro-Supercapacitor. 2018 , 4, 1700339	244
2039	First-principles study of a MXene terahertz detector. 2017 , 10, 69-75	48
2038	Two-dimensional stoichiometric boron carbides with unexpected chemical bonding and promising electronic properties. 2018 , 6, 1651-1658	23
2037	Applications of Phosphorene and Black Phosphorus in Energy Conversion and Storage Devices. 2018 , 8, 1702093	272
2036	A novel two-dimensional coordination polymer-polypyrrole hybrid material as a high-performance electrode for flexible supercapacitor. 2018 , 334, 2547-2557	69
2035	Theranostic 2D Tantalum Carbide (MXene). 2018 , 30, 1703284	279
2034	Reduced graphene oxide as a multi-functional conductive binder for supercapacitor electrodes. 2018 , 12, 128-136	127

2033	Casting a Wider Net: Rational Synthesis Design of Low-Dimensional Bulk Materials. 2018 , 51, 12-20	11
2032	Improved sodium-ion storage performance of Ti ₃ C ₂ T _x MXenes by sulfur doping. 2018 , 6, 1234-1243	104
2031	Atomic layer deposition of nickel carbide for supercapacitors and electrocatalytic hydrogen evolution. 2018 , 6, 4297-4304	69
2030	Ultrathin two-dimensional MXene membrane for pervaporation desalination. 2018 , 548, 548-558	197
2029	Metallic MXenes: A new family of materials for flexible triboelectric nanogenerators. 2018 , 44, 103-110	178
2028	Tracking Ionic Rearrangements and Interpreting Dynamic Volumetric Changes in Two-Dimensional Metal Carbide Supercapacitors: A Molecular Dynamics Simulation Study. 2018 , 11, 1892-1899	24
2027	Recent progress in 2D materials for flexible supercapacitors. 2018 , 27, 57-72	129
2026	Recent progress in two-dimensional inorganic quantum dots. 2018 , 47, 586-625	169
2025	Conductive Nanocrystalline Niobium Carbide as High-Efficiency Polysulfides Tamer for Lithium-Sulfur Batteries. 2018 , 28, 1704865	173
2024	Novel Li ₄ Ti ₅ O ₁₂ /Ti ₃ C ₂ T _x nanocomposite as a high rate anode material for lithium ion batteries. 2018 , 735, 530-535	16
2023	Synthesis of TiN nanostructures by Mg-assisted nitriding TiO ₂ in N ₂ for lithium ion storage. 2018 , 336, 12-19	27
2022	Chemical vapor deposition growth of two-dimensional heterojunctions. 2018 , 61, 1	42
2021	A Red-Phosphorous-Assisted Ball-Milling Synthesis of Few-Layered Ti ₃ C ₂ T _x (MXene) Nanodot Composite. 2018 , 4, 56-60	29
2020	MXene-based materials for electrochemical energy storage. 2018 , 27, 73-85	354
2019	Direct Detection Electron Energy-loss Spectroscopy: Applications in Low-dose Chemical Mapping and In Situ Heating+biasing. 2018 , 24, 452-453	
2018	Topochemical synthesis of 2D materials. 2018 , 47, 8744-8765	142
2017	Low temperature solution synthesis of reduced two dimensional TiC MXenes with paramagnetic behaviour. 2018 , 10, 22429-22438	41
2016	A synergetic stabilization and strengthening strategy for two-dimensional ordered hybrid transition metal carbides. 2018 , 20, 29684-29692	7

2015	Multi-modal, ultrasensitive, wide-range humidity sensing with TiC film. 2018 , 10, 21689-21695	45
2014	3D TiCT aerogels with enhanced surface area for high performance supercapacitors. 2018 , 10, 20828-20835	66
2013	Sodium hydroxide and vacuum annealing modifications of the surface terminations of a TiC (MXene) epitaxial thin film.. 2018 , 8, 36785-36790	32
2012	Polypyrrole-MXene coated textile-based flexible energy storage device.. 2018 , 8, 39742-39748	45
2011	Metal-based nanostructured materials for advanced lithiumSulfur batteries. 2018 , 6, 23127-23168	128
2010	Ti3C2Tx (T = F, OH) MXene nanosheets: conductive 2D catalysts for ambient electrohydrogenation of N2 to NH3. 2018 , 6, 24031-24035	169
2009	A general gelation strategy for 1D nanowires: dynamically stable functional gels for 3D printing flexible electronics. 2018 , 10, 20096-20107	30
2008	Multipolar Surface Plasmons in 2D Ti3C2Tx Flakes: an Ultra-High Resolution EELS with Conventional TEM and In-Situ Heating Study. 2018 , 24, 1578-1579	3
2007	Investigation of SHS-products in titanium and carbon powder mixtures with excess of titanium content. 2018 , 1115, 042051	
2006	Terahertz Spectroscopy of 2D Materials. 2018 ,	1
2005	Two-dimensional nanosheet-based gas separation membranes. 2018 , 6, 23169-23196	70
2004	Optimizing special quasirandom structure (SQS) models for accurate functional property prediction in disordered 2D alloys. 2018 , 30, 485402	1
2003	Oxidized 2D titanium carbide MXene. 2018 , 21, 1064-1065	23
2002	Exfoliation Behavior of van der Waals Strings: Case Study of BiS. 2018 , 10, 42603-42611	23
2001	Two-Dimensional, Ordered, Double Transition Metal Carbides (MXenes): A New Family of Promising Catalysts for the Hydrogen Evolution Reaction. 2018 , 122, 28113-28122	58
2000	First-Principles Studies of Adsorptive Remediation of Water and Air Pollutants Using Two-Dimensional MXene Materials. 2018 , 11,	13
1999	Electronic and Optical Properties of 2D Transition Metal Carbides and Nitrides (MXenes). 2018 , 30, e1804779	464
1998	Emerging materials for tailorable nanophotonic devices. 2018 ,	1

1997	Cu-Fe-Se Ternary Nanosheet-Based Drug Delivery Carrier for Multimodal Imaging and Combined Chemo/Photothermal Therapy of Cancer. 2018 , 10, 43396-43404	31
1996	Effect of Edge Charges on Stability and Aggregation of Ti3C2Tx MXene Colloidal Suspensions. 2018 , 122, 27745-27753	80
1995	Humidity Exposure Enhances Microscopic Mobility in a Room-Temperature Ionic Liquid in MXene. 2018 , 122, 27561-27566	11
1994	Self-Assembled Sandwich-like MXene-Derived Nanocomposites for Enhanced Electromagnetic Wave Absorption. 2018 , 10, 42925-42932	100
1993	A Conductive and Highly Deformable All-Pseudocapacitive Composite Paper as Supercapacitor Electrode with Improved Areal and Volumetric Capacitance. 2018 , 14, e1803786	104
1992	Nano-confined CoSe2/Mo2C nanoparticles encapsulated into porous carbon nanofibers for superior lithium and sodium storage. 2018 , 10, 317-324	14
1991	Recent Progress of MXene-Based Nanomaterials in Flexible Energy Storage and Electronic Devices. 2018 , 1, 183-195	87
1990	Impact of Different Ratios of Fluorine, Oxygen, and Hydroxyl Surface Terminations on Ti3C2Tx MXene as Ammonia Sensor: A First-Principles Study. 2018 ,	8
1989	Polyoxometalate-Derived Hexagonal Molybdenum Nitrides (MXenes) Supported by Boron, Nitrogen Codoped Carbon Nanotubes for Efficient Electrochemical Hydrogen Evolution from Seawater. 2018 , 29, 1805893	31
1988	Atomically Thin 2D-Arsenene by Liquid-Phased Exfoliation: Toward Selective Vapor Sensing. 2018 , 29, 1807004	42
1987	Two dimensional boron nanosheets: synthesis, properties and applications. 2018 , 20, 28964-28978	25
1986	Applications of Conventional Vibrational Spectroscopic Methods for Batteries Beyond Li-Ion. 2018 , 2, 1700332	27
1985	Asymmetric-Layered Tin Thiophosphate: An Emerging 2D Ternary Anode for High-Performance Sodium Ion Full Cell. 2018 , 12, 12902-12911	26
1984	Single-Crystal Nitrogen-Rich Two-Dimensional MoN Nanosheets for Efficient and Stable Seawater Splitting. 2018 , 12, 12761-12769	171
1983	Influences of Compression on the Mechanical Behavior and Electrochemical Performances of Separators for Lithium Ion Batteries. 2018 , 57, 17142-17151	23
1982	Phosphorized MXene-Phase Molybdenum Carbide as an Earth-Abundant Hydrogen Evolution Electrocatalyst. 2018 , 1, 7206-7212	48
1981	Characteristics and performance of two-dimensional materials for electrocatalysis. 2018 , 1, 909-921	348
1980	Single platinum atoms immobilized on an MXene as an efficient catalyst for the hydrogen evolution reaction. 2018 , 1, 985-992	739

1979	Fluoride-Free Synthesis of Two-Dimensional Titanium Carbide (MXene) Using A Binary Aqueous System. 2018 , 130, 15717-15721	93
1978	Automated Scalpel Patterning of Solution Processed Thin Films for Fabrication of Transparent MXene Microsupercapacitors. 2018 , 14, e1802864	62
1977	Enhanced reversible Li-ion storage in Si@Ti ₃ C ₂ MXene nanocomposite. 2018 , 97, 16-21	41
1976	Titanium Carbide (MXene) as a Current Collector for Lithium-Ion Batteries. 2018 , 3, 12489-12494	41
1975	MXene Sorbents for Removal of Urea from Dialysate: A Step toward the Wearable Artificial Kidney. 2018 , 12, 10518-10528	102
1974	MXene Ti ₃ C ₂ T _x saturable absorber for pulsed laser at 1.3 μ m. 2018 , 27, 094214	29
1973	2D titanium carbide (MXene) for wireless communication. 2018 , 4, eaau0920	219
1972	Superior role of MXene nanosheet as hybridization matrix over graphene in enhancing interfacial electronic coupling and functionalities of metal oxide. 2018 , 53, 841-848	27
1971	2D Metal Carbides and Nitrides (MXenes) as High-Performance Electrode Materials for Lithium-Based Batteries. 2018 , 8, 1801897	221
1970	Ti ₃ C ₂ MXene-derived Ti ₃ C ₂ /TiO ₂ nanoflowers for noble-metal-free photocatalytic overall water splitting. 2018 , 13, 217-227	155
1969	Porous MXene Frameworks Support Pyrite Nanodots toward High-Rate Pseudocapacitive Li/Na-Ion Storage. 2018 , 10, 33779-33784	42
1968	Oxidation states and ionicity. 2018 , 17, 958-964	91
1967	Fluoride-Free Synthesis of Two-Dimensional Titanium Carbide (MXene) Using A Binary Aqueous System. 2018 , 57, 15491-15495	195
1966	Self-assembled MXene(Ti ₃ C ₂ T _x)/Fe ₂ O ₃ nanocomposite as negative electrode material for supercapacitors. 2018 , 292, 31-38	53
1965	Transition metal modification and carbon vacancy promoted Cr ₂ CO ₂ (MXenes): a new opportunity for a highly active catalyst for the hydrogen evolution reaction. 2018 , 6, 20956-20965	48
1964	Hydrogel Electrolytes for Flexible Aqueous Energy Storage Devices. 2018 , 28, 1804560	253
1963	Self-Assembly of Large-Area 2D Polycrystalline Transition Metal Carbides for Hydrogen Electrocatalysis. 2018 , 30, e1805188	59
1962	Universal TiC MXenes Based Self-Standard Ratiometric Fluorescence Resonance Energy Transfer Platform for Highly Sensitive Detection of Exosomes. 2018 , 90, 12737-12744	156

1961	A fast approach to the synthesis of MO/CNT/Fe hybrid nanostructures built on MXene for enhanced Li-ion uptake. 2018 , 44, 22456-22461	3
1960	Beyond Graphene Anode Materials for Emerging Metal Ion Batteries and Supercapacitors. 2018 , 10, 70	78
1959	Thermally Reduced Graphene/MXene Film for Enhanced Li-ion Storage. 2018 , 24, 18556-18563	43
1958	Metallic 1T-MoS ₂ nanosheets and their composite materials: Preparation, properties and emerging applications. 2018 , 10, 264-279	39
1957	Enhancing the Photocatalytic Performance of MXenes via Stoichiometry Engineering of Their Electronic and Optical Properties. 2018 , 10, 39879-39889	29
1956	Insight into the catalytic activity of MXenes for hydrogen evolution reaction. 2018 , 63, 1397-1403	29
1955	Superlithiated Polydopamine Derivative for High-Capacity and High-Rate Anode for Lithium-Ion Batteries. 2018 , 10, 38101-38108	40
1954	Two-dimensional vanadium carbide (V ₂ C) MXene as electrode for supercapacitors with aqueous electrolytes. 2018 , 96, 103-107	108
1953	Topochemical Synthesis of 2D Carbon Hybrids through Self-Boosting Catalytic Carbonization of a Metal-Polymer Framework. 2018 , 57, 16436-16441	41
1952	Topochemical Synthesis of 2D Carbon Hybrids through Self-Boosting Catalytic Carbonization of a Metal-Polymer Framework. 2018 , 130, 16674-16679	9
1951	2D Ti ₃ C ₂ MXene/WO ₃ Hybrid Architectures for High-Rate Supercapacitors. 2018 , 5, 1801361	56
1950	Mxene-Directed Dual Amphiphilicity at Liquid, Solid, and Gas Interfaces. 2018 , 13, 3850-3854	2
1949	The Synthesis Process and Thermal Stability of VCl ₂ MXene. 2018 , 11,	80
1948	Insights into the Electrocatalytic Hydrogen Evolution Reaction Mechanism on Two-Dimensional Transition-Metal Carbonitrides (MXene). 2018 , 24, 18479-18486	54
1947	Hybrid Architectures based on 2D MXenes and Low-Dimensional Inorganic Nanostructures: Methods, Synergies, and Energy-Related Applications. 2018 , 14, e1803632	37
1946	Hierarchical Cobalt Borate/MXenes Hybrid with Extraordinary Electrocatalytic Performance in Oxygen Evolution Reaction. 2018 , 11, 3758-3765	40
1945	Fluid-enhanced surface diffusion controls intraparticle phase transformations. 2018 , 17, 915-922	71
1944	Surface Functional Groups and Electrochemical Behavior in Dimethyl Sulfoxide-Delaminated Ti ₃ C ₂ T _x MXene. 2018 , 11, 3719-3723	46

1943	Hierarchical 2 Nanoflowers with Strong Electromagnetic Wave Absorption and Broad Bandwidth. 2018 , 1, 5179-5187	47
1942	Covalent Functionalization of Exfoliated Arsenic with Chlorocarbene. 2018 , 130, 15053-15056	4
1941	Synchronously boosting gravimetric and volumetric performance: Biomass-derived ternary-doped microporous carbon nanosheet electrodes for supercapacitors. 2018 , 140, 664-672	63
1940	Layer-by-Layer Assembly of Cross-Functional Semi-transparent MXene-Carbon Nanotubes Composite Films for Next-Generation Electromagnetic Interference Shielding. 2018 , 28, 1803360	270
1939	Boosting the Electrochemical Performance of Li-S Batteries with a Dual Polysulfides Confinement Strategy. 2018 , 14, e1802516	47
1938	Surface Electrochemical Stability and Strain-Tunable Lithium Storage of Highly Flexible 2D Transition Metal Carbides. 2018 , 28, 1804867	21
1937	Anion Adsorption, Ti3C2Tz MXene Multilayers, and Their Effect on Claylike Swelling. 2018 , 122, 23172-23179	29
1936	Two-Dimensional TiC MXene for High-Resolution Neural Interfaces. 2018 , 12, 10419-10429	82
1935	Two-dimensional materials for miniaturized energy storage devices: from individual devices to smart integrated systems. 2018 , 47, 7426-7451	270
1934	Metal free MoS2 2D sheets as a peroxidase enzyme and visible-light-induced photocatalyst towards detection and reduction of Cr(VI) ions. 2018 , 42, 16919-16929	21
1933	Effectiveness of Sensors Contact Metallization (Ti, Au, and Ru) and Biofunctionalization for Detection. 2018 , 18,	4
1932	Flower-Shaped Self-Assembled Ni0.5Cu0.5Co2O4 Porous Architecture: A Ternary Metal Oxide as a High-Performance Charge Storage Electrode Material. 2018 , 1, 5812-5822	23
1931	Oxidized Ti3C2 MXene nanosheets for dye-sensitized solar cells. 2018 , 42, 16446-16450	42
1930	Astromimetics: The dawn of a new era for (bio)materials science?. 2018 , 5, 1849543518794345	2
1929	The Marriage of the FeN Moiety and MXene Boosts Oxygen Reduction Catalysis: Fe 3d Electron Delocalization Matters. 2018 , 30, e1803220	157
1928	MXene Aerogel Scaffolds for High-Rate Lithium Metal Anodes. 2018 , 130, 15248-15253	37
1927	MXene Aerogel Scaffolds for High-Rate Lithium Metal Anodes. 2018 , 57, 15028-15033	194
1926	Ultrathin MXene Nanosheets Decorated with TiO Quantum Dots as an Efficient Sulfur Host toward Fast and Stable Li-S Batteries. 2018 , 14, e1802443	89

1925	Synthesis mechanisms and thermal stability of ternary carbide Mo ₂ Ga ₂ C. 2018 , 44, 22289-22296	13
1924	2D-Pnictogens: alloy-based anode battery materials with ultrahigh cycling stability. 2018 , 47, 6964-6989	84
1923	Lithium Ion Capacitors in Organic Electrolyte System: Scientific Problems, Material Development, and Key Technologies. 2018 , 8, 1801243	146
1922	Efficient and scalable synthesis of highly aligned and compact two-dimensional nanosheet films with record performances. 2018 , 9, 3484	88
1921	Establishing new scaling relations on two-dimensional MXenes for CO ₂ electroreduction. 2018 , 6, 21885-21890	5
1920	Covalent Functionalization of Exfoliated Arsenic with Chlorocarbene. 2018 , 57, 14837-14840	12
1919	Biofunctionalized two-dimensional TiC MXenes for ultrasensitive detection of cancer biomarker. 2018 , 121, 243-249	187
1918	Effect of Synthesis on Performance of MXene/Iron Oxide Anode Material for Lithium-Ion Batteries. 2018 , 34, 11325-11334	34
1917	Ti ₃ C ₂ T _x MXene as a Janus cocatalyst for concurrent promoted photoactivity and inhibited photocorrosion. 2018 , 237, 43-49	119
1916	Reduced graphene oxide bridged, TiO ₂ modified and Mn ₃ O ₄ intercalated Ti ₃ C ₂ T _x sandwich-like nanocomposite as a high performance anode for enhanced lithium storage applications. 2018 , 762, 643-652	13
1915	Prediction of Isoelectric Point of Manganese and Cobalt Lamellar Oxides: Application to Controlled Synthesis of Mixed Oxides. 2018 , 34, 6670-6677	5
1914	3D hybrid porous Mxene-sponge network and its application in piezoresistive sensor. 2018 , 50, 79-87	264
1913	Modified MXene: promising electrode materials for constructing Ohmic contacts with MoS for electronic device applications. 2018 , 20, 16551-16557	27
1912	MXene encapsulated titanium oxide nanospheres for ultra-stable and fast sodium storage. 2018 , 14, 306-313	77
1911	The Role of Geometric Sites in 2D Materials for Energy Storage. 2018 , 2, 1075-1094	75
1910	On the Structural Stability of MXene and the Role of Transition Metal Adatoms. 2018 , 10, 10850-10855	48
1909	Transition metal anchored C ₂ N monolayers as efficient bifunctional electrocatalysts for hydrogen and oxygen evolution reactions. 2018 , 6, 11446-11452	133
1908	Inherent electrochemistry and charge transfer properties of few-layered two-dimensional TiCT MXene. 2018 , 10, 17030-17037	28

1907	Selective gas diffusion in two-dimensional MXene lamellar membranes: insights from molecular dynamics simulations. 2018 , 6, 11734-11742	61
1906	Two-dimensional nitrides as highly efficient potential candidates for CO capture and activation. 2018 , 20, 17117-17124	33
1905	Insight and control of the chemical vapor deposition growth parameters and morphological characteristics of graphene/Mo ₂ C heterostructures over liquid catalyst. 2018 , 495, 46-53	27
1904	Synthesis of Two-Dimensional Nb _{1.33} C (MXene) with Randomly Distributed Vacancies by Etching of the Quaternary Solid Solution (Nb ₂ /3Sc _{1/3}) ₂ AlC MAX Phase. 2018 , 1, 2455-2460	93
1903	Adsorptive environmental applications of MXene nanomaterials: a review.. 2018 , 8, 19895-19905	186
1902	Recent Progress in Biomass-Derived Electrode Materials for High Volumetric Performance Supercapacitors. 2018 , 8, 1801007	151
1901	Screen-printable microscale hybrid device based on MXene and layered double hydroxide electrodes for powering force sensors. 2018 , 50, 479-488	121
1900	Makroskopische kristalline 2D-Polymere. 2018 , 130, 13942-13959	15
1899	Towards Macroscopic Crystalline 2D Polymers. 2018 , 57, 13748-13763	77
1898	Hierarchical Pore-Patterned Carbon Electrodes for High-Volumetric Energy Density Micro-Supercapacitors. 2018 , 10, 19682-19688	14
1897	Ag-Nanoparticle-Decorated 2D Titanium Carbide (MXene) with Superior Electrochemical Performance for Supercapacitors. 2018 , 6, 7442-7450	70
1896	Reductive Sequestration of Toxic Bromate from Drinking Water using Lamellar Two-Dimensional Ti ₃ C ₂ TX (MXene). 2018 , 6, 7910-7917	39
1895	Thickness-independent capacitance of vertically aligned liquid-crystalline MXenes. 2018 , 557, 409-412	627
1894	In Situ Formed Protective Barrier Enabled by Sulfur@Titanium Carbide (MXene) Ink for Achieving High-Capacity, Long Lifetime Li-S Batteries. 2018 , 5, 1800502	147
1893	MXene nanoribbons as electrocatalysts for the hydrogen evolution reaction with fast kinetics. 2018 , 20, 19390-19397	53
1892	Materials Nanoarchitectonics for Mechanical Tools in Chemical and Biological Sensing. 2018 , 13, 3366-3377	34
1891	Polyester@MXene nanofibers-based yarn electrodes. 2018 , 396, 683-690	88
1890	Cold Sintered Ceramic Nanocomposites of 2D MXene and Zinc Oxide. 2018 , 30, e1801846	104

1889	A Solid-State Fibriform Supercapacitor Boosted by Host-Guest Hybridization between the Carbon Nanotube Scaffold and MXene Nanosheets. 2018 , 14, e1801203	99
1888	Lattice-matched heterojunctions between blue phosphorene and MXene Y ₂ CX ₂ (X = F, O, and Y = Zr, Hf). 2018 , 152, 256-261	4
1887	High-capacitance TiCT MXene obtained by etching submicron TiAlC grains grown in molten salt. 2018 , 54, 8132-8135	24
1886	Extraordinary Areal and Volumetric Performance of Flexible Solid-State Micro-Supercapacitors Based on Highly Conductive Freestanding Ti ₃ C ₂ T _x Films. 2018 , 4, 1800179	68
1885	Electronic and lattice dynamical properties of Ti ₂ SiB MAX phase. 2018 , 5, 076303	25
1884	Quaternary Ti ₃ C ₂ T _x enhanced ionic conduction in quaternized polysulfone membrane for alkaline anion exchange membrane fuel cells. 2018 , 563, 882-887	22
1883	Voltage-Gated Ions Sieving through 2D MXene Ti ₃ C ₂ T _x Membranes. 2018 , 1, 3644-3652	58
1882	Atomic Cobalt Covalently Engineered Interlayers for Superior Lithium-Ion Storage. 2018 , 30, e1802525	129
1881	Controlled synthesis of nickel carbide nanoparticles and their application in lithium storage. 2018 , 352, 940-946	7
1880	Epitaxial growth and physical properties of 2D materials beyond graphene: from monatomic materials to binary compounds. 2018 , 47, 6073-6100	63
1879	Effect of mixed surface terminations on the structural and electrochemical properties of two-dimensional TiCT and VCT MXenes multilayers. 2018 , 10, 13520-13530	67
1878	Size-Dependent Physical and Electrochemical Properties of Two-Dimensional MXene Flakes. 2018 , 10, 24491-24498	150
1877	Preliminary study of the surface reactivity of 2D HfMo ₂ C crystallites. 2018 , 96, 2138-2143	
1876	First-principles study on the electrical and thermal properties of the semiconducting Sc(CN)F MXene.. 2018 , 8, 22452-22459	14
1875	Two-Dimensional Metal Nanomaterials: Synthesis, Properties, and Applications. 2018 , 118, 6409-6455	467
1874	MXene Ti ₃ C ₂ T _x absorber for a 1.06 μ m passively Q-switched ceramic laser. 2018 , 15, 085805	70
1873	3D d-Ti ₃ C ₂ xerogel framework decorated with core-shell SnO ₂ @C for high-performance lithium-ion batteries. 2018 , 285, 94-102	30
1872	MnPO ₄ ·H ₂ O as Electrode Material for Electrochemical Capacitors. 2018 , 165, A2349-A2356	9

1871	Insights into 2D MXenes for Versatile Biomedical Applications: Current Advances and Challenges Ahead. 2018 , 5, 1800518	245
1870	Self-Assemble and In Situ Formation of Ni _{1-x} Fe _x PS ₃ Nanomosaic-Decorated MXene Hybrids for Overall Water Splitting. 2018 , 8, 1801127	131
1869	Moving ions confined between graphene sheets. 2018 , 13, 625-627	15
1868	Few-layer TiCT (T = O, OH, or F) saturable absorber for a femtosecond bulk laser. 2018 , 43, 3862-3865	74
1867	Oxidation-Induced Topological Phase Transition in Monolayer 1T'-WTe. 2018 , 9, 4783-4788	12
1866	Interfacial Chemistry of Low-Dimensional Systems for Applications in Nanocatalysis. 2018 , 2018, 4311-4321	5
1865	Screening Surface Structure of MXenes by High-Throughput Computation and Vibrational Spectroscopic Confirmation. 2018 , 122, 18501-18509	73
1864	Controlling the Dimensions of 2D MXenes for Ultrahigh-Rate Pseudocapacitive Energy Storage. 2018 , 10, 25949-25954	75
1863	Functional MXene Materials: Progress of Their Applications. 2018 , 13, 2742-2757	86
1862	Flexible thermoelectric materials and devices. 2018 , 12, 366-388	286
1861	A visible-light-sensitive siloxene-based composite material with enhanced photocatalytic activity. 2018 , 365, 32-38	1
1860	Aggregation-Resistant 3D MXene-Based Architecture as Efficient Bifunctional Electrocatalyst for Overall Water Splitting. 2018 , 12, 8017-8028	258
1859	The Sub-Nanometer Scale as a New Focus in Nanoscience. 2018 , 30, e1802031	50
1858	Black Phosphorus Quantum Dot/Ti ₃ C ₂ MXene Nanosheet Composites for Efficient Electrochemical Lithium/Sodium-Ion Storage. 2018 , 8, 1801514	170
1857	Two-Dimensional MXene (TiC)-Integrated Cellulose Hydrogels: Toward Smart Three-Dimensional Network Nanoplatfoms Exhibiting Light-Induced Swelling and Bimodal Photothermal/Chemotherapy Anticancer Activity. 2018 , 10, 27631-27643	217
1856	Stability and electronic properties of sulfur terminated two-dimensional early transition metal carbides and nitrides (MXene). 2018 , 153, 303-308	27
1855	Coincident modulation of lattice and electron thermal transport performance in MXenes via surface functionalization. 2018 , 20, 19689-19697	13
1854	Facile and Robust Solvothermal Synthesis of Nanocrystalline CuInS ₂ Thin Films. 2018 , 8,	1

1853	Two-Dimensional Materials for Antimicrobial Applications: Graphene Materials and Beyond. 2018 , 13, 3378-3410	66
1852	High-performance asymmetric supercapacitor based on hierarchical nanocomposites of polyaniline nanoarrays on graphene oxide and its derived N-doped carbon nanoarrays grown on graphene sheets. 2018 , 531, 369-381	39
1851	Origin of Chemically Ordered Atomic Laminates (i-MAX): Expanding the Elemental Space by a Theoretical/Experimental Approach. 2018 , 12, 7761-7770	49
1850	Tunable Multipolar Surface Plasmons in 2D TiC T MXene Flakes. 2018 , 12, 8485-8493	105
1849	Three-dimensional microflowers assembled by carbon-encapsulated-SnS nanosheets for superior Li-ion storage performance. 2018 , 767, 361-367	23
1848	Highly efficient photoelectrocatalytic reduction of CO ₂ on the Ti ₃ C ₂ /g-C ₃ N ₄ heterojunction with rich Ti ³⁺ and pyri-N species. 2018 , 6, 15213-15220	63
1847	Adding a New Member to the MXene Family: Synthesis, Structure, and Electrocatalytic Activity for the Hydrogen Evolution Reaction of V ₄ C ₃ T _x . 2018 , 1, 3908-3914	98
1846	Centimeter-sized 2D β -MoO ₃ single crystal: growth, Raman anisotropy, and optoelectronic properties. 2018 , 5, 045011	28
1845	Two-dimensional Au-1,3,5 triethynylbenzene organometallic lattice: Structure, half-metallicity, and gas sensing. 2018 , 149, 024702	3
1844	Thick and freestanding MXene/PANI pseudocapacitive electrodes with ultrahigh specific capacitance. 2018 , 6, 22123-22133	151
1843	Enhanced lithium and electron diffusion of LiFePO ₄ cathode with two-dimensional Ti ₃ C ₂ MXene nanosheets. 2018 , 53, 11078-11090	25
1842	Ultrathin Titanate Nanosheets/Graphene Films Derived from Confined Transformation for Excellent Na/K Ion Storage. 2018 , 130, 8676-8680	29
1841	Reactive metal-support interactions at moderate temperature in two-dimensional niobium-carbide-supported platinum catalysts. 2018 , 1, 349-355	154
1840	Atomically Thin 2D Multinary Nanosheets for Energy-Related Photo, Electrocatalysis. 2018 , 5, 1800244	39
1839	Easy alloying on flat carbides. 2018 , 1, 316-317	4
1838	TlS: a metal-shrouded two-dimensional semiconductor. 2018 , 20, 14778-14784	11
1837	Modified MXene/Holey Graphene Films for Advanced Supercapacitor Electrodes with Superior Energy Storage. 2018 , 5, 1800750	216
1836	Transition Metal Carbide Complex Architectures for Energy-Related Applications. 2018 , 24, 16716-16736	21

1835	Extent of Pseudocapacitance in High-Surface Area Vanadium Nitrides. 2018 , 1, 171-175	7
1834	Morphology and Crystal Planes Effects on Supercapacitance of CeO ₂ Nanostructures: Electrochemical and Molecular Dynamics Studies. 2018 , 35, 1800176	23
1833	Rationally designing S/TiCT as a cathode material with an interlayer for high-rate and long-cycle lithium-sulfur batteries. 2018 , 10, 16935-16942	33
1832	Efficient U(VI) Reduction and Sequestration by TiCT MXene. 2018 , 52, 10748-10756	147
1831	Tuning the mechanical properties of silicene nanosheet by auxiliary cracks: a molecular dynamics study.. 2018 , 8, 30354-30365	14
1830	Qualitative DFT study of lateral interactions between nitrogen molecules adsorbed on a V ₃ C ₂ MXene sheet. 2018 ,	2
1829	Sodium Ion Capacitor Using Pseudocapacitive Layered Ferric Vanadate Nanosheets Cathode. 2018 , 6, 212-221	53
1828	Electronic and Optical Properties of 2D Materials Constructed from Light Atoms. 2018 , 30, e1801600	24
1827	Bistacked Titanium Carbide (MXene) Anodes for Hybrid Sodium-Ion Capacitors. 2018 , 3, 2094-2100	103
1826	Hexagonal TiB monolayer: a promising anode material offering high rate capability for Li-ion and Na-ion batteries. 2018 , 20, 22168-22178	49
1825	Vertically aligned MoS ₂ on Ti ₃ C ₂ (MXene) as an improved HER catalyst. 2018 , 6, 16882-16889	89
1824	Direct Correlation of MXene Surface Chemistry and Electronic Properties. 2018 , 24, 1606-1607	5
1823	Ag ₃ PO ₄ /Ti ₃ C ₂ MXene interface materials as a Schottky catalyst with enhanced photocatalytic activities and anti-photocorrosion performance. 2018 , 239, 545-554	289
1822	High efficiency photocatalytic hydrogen production over ternary Cu/TiO ₂ @Ti ₃ C ₂ T _x enabled by low-work-function 2D titanium carbide. 2018 , 53, 97-107	187
1821	Solvent-regulated preparation of well-intercalated TiCT MXene nanosheets and application for highly effective electromagnetic wave absorption. 2018 , 29, 355201	47
1820	Effects of Different Surface Functionalization and Doping on the Electronic Transport Properties of M ₂ CT _x M ₂ CO ₂ Heterojunction Devices. 2018 , 122, 14908-14917	15
1819	Two-Dimensional Manganese Nitride Monolayer with Room Temperature Rigid Ferromagnetism under Strain. 2018 , 122, 14918-14927	30
1818	2D MXene Nanofilms with Tunable Gas Transport Channels. 2018 , 28, 1801511	197

1817	Vanadium-Based Cathode Materials for Rechargeable Multivalent Batteries: Challenges and Opportunities. 2018 , 1, 169-199	90
1816	Ultrasmall MoC nanoparticles embedded in 3D frameworks of nitrogen-doped porous carbon as anode materials for efficient lithium storage with pseudocapacitance. 2018 , 6, 13705-13716	30
1815	Preparation of 2D material dispersions and their applications. 2018 , 47, 6224-6266	291
1814	Theoretical investigation of zirconium carbide MXenes as prospective high capacity anode materials for Na-ion batteries. 2018 , 6, 13652-13660	56
1813	MXenes stretch hydrogel sensor performance to new limits. 2018 , 4, eaat0098	334
1812	Topochemical Deintercalation of Al from MoAlB: Stepwise Etching Pathway, Layered Intergrowth Structures, and Two-Dimensional MBene. 2018 , 140, 8833-8840	104
1811	Elastic properties of 2D TiCT MXene monolayers and bilayers. 2018 , 4, eaat0491	380
1810	Tuning Noncollinear Spin Structure and Anisotropy in Ferromagnetic Nitride MXenes. 2018 , 12, 6319-6325	73
1809	Environment-Sensitive Photoresponse of Spontaneously Partially Oxidized TiC MXene Thin Films. 2018 , 12, 6109-6116	132
1808	Layered Hexagonal Oxycarbides, $Mn+1AO_2X_n$ ($M = Sc, Y, La, Cr, \text{ and } Mo; A = Ca; X = C$): Unexpected Photovoltaic Ceramics. 2018 , 122, 14240-14247	2
1807	Metal-Organic Framework-Derived Nickel-Cobalt Sulfide on Ultrathin Mxene Nanosheets for Electrocatalytic Oxygen Evolution. 2018 , 10, 22311-22319	184
1806	MXene-Bonded Activated Carbon as a Flexible Electrode for High-Performance Supercapacitors. 2018 , 3, 1597-1603	265
1805	In situ atomistic insight into the growth mechanisms of single layer 2D transition metal carbides. 2018 , 9, 2266	89
1804	In Situ Growth of Cobalt Nanoparticles Encapsulated Nitrogen-Doped Carbon Nanotubes among Ti_3C_2Tx (MXene) Matrix for Oxygen Reduction and Evolution. 2018 , 5, 1800392	69
1803	On Chip Interdigitated Micro-Supercapacitors Based on Sputtered Bifunctional Vanadium Nitride Thin Films with Finely Tuned Inter- and Intracolumnar Porosities. 2018 , 3, 1800036	46
1802	MXene Nanofibers as Highly Active Catalysts for Hydrogen Evolution Reaction. 2018 , 6, 8976-8982	103
1801	Double transition metal MXenes with wide band gaps and novel magnetic properties. 2018 , 10, 11962-11968	51
1800	Equilibrium and non-equilibrium free carrier dynamics in 2D Ti_3C_2Tx MXenes: THz spectroscopy study. 2018 , 5, 035043	32

1799	Direct Assessment of Nanoconfined Water in 2D TiC Electrode Interspaces by a Surface Acoustic Technique. 2018 , 140, 8910-8917	66
1798	Introduction to Advanced Nanomaterials. 2018 , 1-53	10
1797	Interface-Assisted Synthesis of 2D Materials: Trend and Challenges. 2018 , 118, 6189-6235	358
1796	Electronic structure, bonding characteristics, and mechanical properties in (WSc)AlC and (WY)AlC i-MAX phases from first-principles calculations. 2018 , 30, 305502	3
1795	Origins of possible synergistic effects in the interactions between metal atoms and MoS/graphene heterostructures for battery applications. 2018 , 20, 18671-18677	4
1794	Inkjet Printing of Self-Assembled 2D Titanium Carbide and Protein Electrodes for Stimuli-Responsive Electromagnetic Shielding. 2018 , 28, 1801972	111
1793	Two-Dimensional Tetragonal Titanium Carbide: a High-Capacity and High-Rate Battery Material. 2018 , 122, 15118-15124	31
1792	A comparative study on the oxidation of two-dimensional Ti ₃ C ₂ MXene structures in different environments. 2018 , 6, 12733-12743	124
1791	Applications of Printed 2D Materials. 2019 , 179-216	1
1790	High-throughput computational screening of layered and two-dimensional materials. 2019 , 9, e1385	26
1789	Promising Graphene-Like Half-Metallic Nanosheets TM-InSe (TM = Mn, Fe, and Co) Induced by TM Adsorption. 2019 , 32, 229-235	1
1788	Modeling and theoretical design of next-generation lithium metal batteries. 2019 , 16, 169-193	53
1787	Engineering 2D Architectures toward High-Performance Micro-Supercapacitors. 2019 , 31, e1802793	143
1786	Facile preparation of BiOCl/Ti ₃ C ₂ hybrid photocatalyst with enhanced visible-light photocatalytic activity. 2019 , 12, 1850100	16
1785	Self-lubricating Ti ₃ C ₂ nanosheets/copper composite coatings. 2019 , 770, 1-5	54
1784	Near-Zero Negative Real Permittivity in Far Ultraviolet: Extending Plasmonics and Photonics with B1-MoNx. 2019 , 123, 21120-21129	7
1783	Designing Flexible Quantum Spin Hall Insulators through 2D Ordered Hybrid Transition-Metal Carbides. 2019 , 123, 20664-20674	2
1782	Superfast high-energy storage hybrid device composed of MXene and Chevrel-phase electrodes operated in saturated LiCl electrolyte solution. 2019 , 7, 19761-19773	24

1781	More Ca ²⁺ , Less Na ⁺ : Increase the Desalination Capacity and Performance Stability of Na _x Ca _y CoO ₂ . 2019 , 7, 14561-14568	7
1780	Synthesis and microwave absorption of Ti ₃ C ₂ T _x MXene with diverse reactant concentration, reaction time, and reaction temperature. 2019 , 45, 23600-23610	15
1779	pH-Dependent Distribution of Functional Groups on Titanium-Based MXenes. 2019 , 13, 9171-9181	45
1778	Electrochemical Behavior of Ti ₃ C ₂ T _x MXene in Environmentally Friendly Methanesulfonic Acid Electrolyte. 2019 , 12, 4480-4486	10
1777	Materials nanoarchitectonics at two-dimensional liquid interfaces. 2019 , 10, 1559-1587	25
1776	Multifunctional Nanocomposites with High Strength and Capacitance Using 2D MXene and 1D Nanocellulose. 2019 , 31, e1902977	129
1775	Electrochemically Generated Li ₂ V ₂ O ₇ as Insertion Host for High-Energy Li-Ion Capacitors. 2019 , 14, 4665-4672	9
1774	Novel two-dimensional tetragonal vanadium carbides and nitrides as promising materials for Li-ion batteries. 2019 , 21, 19513-19520	14
1773	Ultra-thin titanium carbide (MXene) sheet membranes for high-efficient oil/water emulsions separation. 2019 , 592, 117361	54
1772	Organic-inorganic all-pseudocapacitive asymmetric energy storage devices. 2019 , 65, 104022	34
1771	A New View of Supercapacitors: Integrated Supercapacitors. 2019 , 9, 1901081	155
1770	2D Crystal-Based Fibers: Status and Challenges. 2019 , 15, e1902691	26
1769	Interfacial Assembly of Ultrathin, Functional MXene Films. 2019 , 11, 32320-32327	46
1768	Functionalization of 2D materials for enhancing OER/ORR catalytic activity in Li ₂ O ₂ batteries. 2019 , 2,	31
1767	Two-Dimensional Conjugated Aromatic Networks as High-Site-Density and Single-Atom Electrocatalysts for the Oxygen Reduction Reaction. 2019 , 131, 14866-14872	15
1766	Two-Dimensional Conjugated Aromatic Networks as High-Site-Density and Single-Atom Electrocatalysts for the Oxygen Reduction Reaction. 2019 , 58, 14724-14730	75
1765	Highly Enhanced Pseudocapacitive Performance of Vanadium-Doped MXenes in Neutral Electrolytes. 2019 , 15, e1902649	23
1764	High-performance flexible sensing devices based on polyaniline/MXene nanocomposites. 2019 , 1, 407-416	208

1763	Electrospun $\text{Mn}_x\text{Co}_{0.5-x}\text{Sn}_{0.5}\text{O}_2$ and SnO_2 porous nanofibers and nanoparticles as anode materials for lithium-ion battery. 2019 , 21, 1	3
1762	Heterostructured MXene and g-C ₃ N ₄ for high-rate lithium intercalation. 2019 , 65, 104030	37
1761	Enhanced low-temperature Li-ion storage in MXene titanium carbide by surface oxygen termination. 2019 , 6, 045025	35
1760	Butyllithium-Treated TiCT MXene with Excellent Pseudocapacitor Performance. 2019 , 13, 9449-9456	65
1759	A Perspective on Recent Advances in 2D Stanene Nanosheets. 2019 , 6, 1900752	26
1758	Recent progress on synthesis, structure and electrocatalytic applications of MXenes. 2019 , 17, 100129	23
1757	Ti C MXene Paper for the Effective Adsorption and Controllable Release of Aroma Molecules. 2019 , 15, e1903281	19
1756	Effects of ultra-low ethylene partial pressure on microstructure and composition of reactively sputter-deposited TaN thin films. 2019 , 688, 137440	8
1755	Creating Sandwich-like Ti ₃ C ₂ /TiO ₂ /rGO as Anode Materials with High Energy and Power Density for Li-Ion Hybrid Capacitors. 2019 , 7, 15394-15403	36
1754	Subatomic-Level Solid/Fluid Boundary of Lennard-Jones Atoms: A Molecular Dynamics Study of Metal-Inert Fluid Interface. 2019 , 9, 2439	2
1753	Heterogeneous, Porous 2D Oxide Sheets via Rapid Galvanic Replacement: Toward Superior HCHO Sensing Application. 2019 , 29, 1903012	30
1752	Multi-layer Ti ₃ C ₂ T _x -nanoparticles (MXenes) as solid lubricants [Role of surface terminations and intercalated water. 2019 , 494, 13-21	58
1751	Formation of new MXene film using spinning coating method with DMSO solution and its application in advanced memristive device. 2019 , 45, 19467-19472	20
1750	Electrocatalytic/photocatalytic properties and aqueous media applications of 2D transition metal carbides (MXenes). 2019 , 23, 100760	23
1749	Highly Efficient Catalytic Performances of Nitro Compounds and Morin via Self-Assembled MXene-Pd Nanocomposites Synthesized through Self-Reduction Strategy. 2019 , 9,	17
1748	Ultrastrong and conductive MXene/cellulose nanofiber films enhanced by hierarchical nano-architecture and interfacial interaction for flexible electromagnetic interference shielding. 2019 , 7, 9820-9829	94
1747	Enhancement of Dielectric Permittivity of TiCT MXene/Polymer Composites by Controlling Flake Size and Surface Termination. 2019 , 11, 27358-27362	36
1746	Laser-sculptured ultrathin transition metal carbide layers for energy storage and energy harvesting applications. 2019 , 10, 3112	48

1745	Self-assembly of single layer V ₂ O ₅ nanoribbon/graphene heterostructures as ultrahigh-performance cathode materials for lithium-ion batteries. 2019 , 154, 24-32	13
1744	Two-Dimensional TiCT MXene Membranes as Nanofluidic Osmotic Power Generators. 2019 , 13, 8917-8925	117
1743	Engineering the morphology of TiO ₂ /carbon hybrids via oxidized Ti ₃ C ₂ T _x MXene and associated electrorheological activities. 2019 , 378, 122170	16
1742	Formation of needle-like porous CoNiS-MnOOH for high performance hybrid supercapacitors with high energy density. 2019 , 554, 125-132	27
1741	Sensitive electrochemical detection of L-cysteine based on a highly stable Pd@Ti ₃ C ₂ T _x (MXene) nanocomposite modified glassy carbon electrode. 2019 , 11, 3851-3856	53
1740	Heterogeneous Fe ₂ CoTi ₃ O ₁₀ -MXene composite catalysts: Synergistic effect of the ternary transition metals in the degradation of 2,4-dichlorophenoxyacetic acid based on peroxymonosulfate activation. 2019 , 378, 122177	33
1739	Adhesion of two-dimensional titanium carbides (MXenes) and graphene to silicon. 2019 , 10, 3014	44
1738	A two-dimensional assembly of ultrafine cobalt oxide nanocrystallites anchored on single-layer TiCT nanosheets with enhanced lithium storage for Li-ion batteries. 2019 , 11, 16755-16766	23
1737	Ti ₃ C ₂ T _x (MXene)-Silicon Heterojunction for Efficient Photovoltaic Cells. 2019 , 9, 1901063	46
1736	Theoretical Investigation of V ₃ C ₂ MXene as Prospective High-Capacity Anode Material for Metal-Ion (Li, Na, K, and Ca) Batteries. 2019 , 123, 18207-18214	46
1735	Tailoring Storage Capacity and Ion Kinetics in Ti ₂ CO ₂ /Graphene Heterostructures by Functionalization of Graphene. 2019 , 12,	14
1734	Ti ₃ C ₂ nanosheets modified Zr-MOFs with Schottky junction for boosting photocatalytic HER performance. 2019 , 188, 750-759	23
1733	MOF Derived High Surface Area Enabled Porous Co ₃ O ₄ Nanoparticles for Supercapacitors. 2019 , 4, 8142-8149	24
1732	Facile Solution Processing of Stable MXene Dispersions towards Conductive Composite Fibers. 2019 , 3, 1900037	38
1731	Effect of Cationic Exchange on the Hydration and Swelling Behavior of Ti ₃ C ₂ T _z MXenes. 2019 , 123, 20044-20050	50
1730	An MnO ₂ @Ti ₃ C ₂ T _x MXene nanohybrid: an efficient and durable electrocatalyst toward artificial N ₂ fixation to NH ₃ under ambient conditions. 2019 , 7, 18823-18827	73
1729	Effects of layer stacking and strain on electronic transport in two-dimensional tin monoxide. 2019 , 28, 077104	3
1728	3D Printing of Freestanding MXene Architectures for Current-Collector-Free Supercapacitors. 2019 , 31, e1902725	184

1727	TiC/CuO heterostructure based signal-off photoelectrochemical sensor for high sensitivity detection of glucose. 2019 , 142, 111535	44
1726	Silicene: Wet-Chemical Exfoliation Synthesis and Biodegradable Tumor Nanomedicine. 2019 , 31, e1903013	77
1725	Emerging Two-Dimensional Nanomaterials for Cancer Therapy. 2019 , 20, 2417-2433	15
1724	A review on recent advancement of electromagnetic interference shielding novel metallic materials and processes. 2019 , 176, 107207	88
1723	Two-dimensional MXene membrane for ethanol dehydration. 2019 , 590, 117300	44
1722	Ultrathin Free-Standing Nanosheets of BiOSe: Room Temperature Ferroelectricity in Self-Assembled Charged Layered Heterostructure. 2019 , 19, 5703-5709	57
1721	Asymmetric Aqueous Supercapacitor Based on p- and n-Type Conducting Polymers. 2019 , 2, 5350-5355	21
1720	Tin+1Cn MXenes with fully saturated and thermally stable Cl terminations. 2019 , 1, 3680-3685	49
1719	Synthesis of (VSc)AlC i-MAX phase and VC MXene scrolls. 2019 , 11, 14720-14726	21
1718	Sodium-ion battery anodes: Status and future trends. 2019 , 1, 100012	116
1717	A Critical Review on Energy Conversion and Environmental Remediation of Photocatalysts with Remodeling Crystal Lattice, Surface, and Interface. 2019 , 13, 9811-9840	196
1716	A facile route to well-dispersed Ru nanoparticles embedded in self-templated mesoporous carbons for high-performance supercapacitors. 2019 , 7, 20208-20222	14
1715	Synergistic Effects between MXenes and Ni Chains in Flexible and Ultrathin Electromagnetic Interference Shielding Films. 2019 , 6, 1900961	37
1714	Creation of two-dimensional layered Zintl phase by dimensional manipulation of crystal structure. 2019 , 5, eaax0390	11
1713	Controlled synthesis of 2D MoC/graphene heterostructure on liquid Au substrates as enhanced electrocatalytic electrodes. 2019 , 30, 385601	28
1712	Exfoliation of Ti ₂ C and Ti ₃ C ₂ MXenes from bulk trigonal phases of titanium carbide: A theoretical prediction. 2019 , 299, 113657	13
1711	Progress Report on Atomic Layer Deposition Toward Hybrid Nanocomposite Electrodes for Next Generation Supercapacitors. 2019 , 6, 1900678	10
1710	In-situ anchoring of Fe ₃ O ₄ /ZIF-67 dodecahedrons in highly compressible wood aerogel with excellent microwave absorption properties. 2019 , 182, 108006	42

1709	MXene with Great Adsorption Ability toward Organic Dye: An Excellent Material for Constructing a Ratiometric Electrochemical Sensing Platform. 2019 , 4, 2058-2064	46
1708	A universal approach for the synthesis of two-dimensional binary compounds. 2019 , 10, 2957	62
1707	MXene Electrode Materials for Electrochemical Energy Storage: First-Principles and Grand Canonical Monte Carlo Simulations. 2019 , 4, 1833-1841	2
1706	A hierarchically porous and hydrophilic 3D nickel/iron/MXene electrode for accelerating oxygen and hydrogen evolution at high current densities. 2019 , 63, 103880	149
1705	Extraordinary Thickness-Independent Electrochemical Energy Storage Enabled by Cross-Linked Microporous Carbon Nanosheets. 2019 , 11, 26946-26955	35
1704	Novel two-dimensional Ti ₃ C ₂ TX/Ni-spheres hybrids with enhanced microwave absorption properties. 2019 , 45, 22880-22888	37
1703	The rationale and emergence of electroconductive biomaterial scaffolds in cardiac tissue engineering. 2019 , 3, 041501	47
1702	Two-dimensional transition-metal dichalcogenides for electrochemical hydrogen evolution reaction. 2019 , 18, 100140	16
1701	Ion Transport in Nanofluidic Devices for Energy Harvesting. 2019 , 3, 2364-2380	109
1700	Ti ₃ C ₂ T _x MXene-graphene composite films for wearable strain sensors featured with high sensitivity and large range of linear response. 2019 , 66, 104134	74
1699	Vapor Deposition Red Phosphorus to Prepare Nitrogen-Doped TiCT MXenes Composites for Lithium-Ion Batteries. 2019 , 10, 6446-6454	29
1698	Interrogating the impact of onion-like carbons on the supercapacitive properties of MXene (Ti ₂ CTX). 2019 , 126, 134301	15
1697	Hybrid plasmonic metasurfaces. 2019 , 126, 140901	13
1696	Ti ₃ C ₂ T _x MXene and polyoxometalate nanohybrid embedded with polypyrrole: Ultra-sensitive platform for the detection of osteopontin. 2019 , 498, 143889	46
1695	Carbon-encapsulated niobium carbonitride with high volumetric capacitance and wide potential windows in aqueous pseudocapacitors. 2019 , 325, 134935	2
1694	CsPbBr Perovskite Nanocrystal Grown on MXene Nanosheets for Enhanced Photoelectric Detection and Photocatalytic CO Reduction. 2019 , 10, 6590-6597	155
1693	Sculpting Liquids with Two-Dimensional Materials: The Assembly of TiCT MXene Sheets at Liquid-Liquid Interfaces. 2019 , 13, 12385-12392	30
1692	Two-dimensional Janus MoSSe as a potential anode material for Na/K-ion batteries: A theoretical study. 2019 , 735, 136777	5

1691	Metallic Nb ₂ S ₂ C Monolayer: A Promising Two-Dimensional Anode Material for Metal-Ion Batteries. 2019 , 123, 26803-26811	22
1690	Design of Lamellar Mo ₂ C Nanosheets Assembled by Mo ₂ C Nanoparticles as an Anode Material toward Excellent Sodium-Ion Capacitors. 2019 , 7, 18375-18383	29
1689	Flexible 3D Porous MXene Foam for High-Performance Lithium-Ion Batteries. 2019 , 15, e1904293	96
1688	Flexible TiCT/PEDOT:PSS films with outstanding volumetric capacitance for asymmetric supercapacitors. 2019 , 48, 1747-1756	69
1687	Topochemical pyrolytic synthesis of quasi-Mxene hybrids via ionic liquid-iron phthalocyanine as a self-template. 2019 , 55, 771-774	1
1686	Two-dimensional Au ₂ B: Robust non-magnetic metallicity independent of the native defects, strain and functional groups. 2019 , 127, 47002	0
1685	Antimonene Engineered Highly Deformable Freestanding Electrode with Extraordinarily Improved Energy Storage Performance. 2019 , 9, 1902462	27
1684	Introduction to 2D Transition Metal Carbides and Nitrides (MXenes). 2019 , 3-12	26
1683	Predicted Magnetic Properties of MXenes. 2019 , 291-300	
1682	Electronic and Mechanical Properties of MXenes Derived from Single-Flake Measurements. 2019 , 301-325	5
1681	MXene Materials as Electrodes for Lithium-Sulfur Batteries. 2019 , 381-398	2
1680	In- and Out-of-Plane Ordered MAX Phases and Their MXene Derivatives. 2019 , 37-52	7
1679	Non-MAX Phase Precursors for MXenes. 2019 , 53-68	5
1678	Top-Down MXene Synthesis (Selective Etching). 2019 , 69-87	6
1677	Bottom-Up Synthesis of 2D Transition Metal Carbides and Nitrides. 2019 , 89-109	10
1676	Effect of Synthesis Methods on the Structure and Defects of Two-Dimensional MXenes. 2019 , 111-123	1
1675	Inhibition of AlF ₃ ·3H ₂ O Impurity Formation in Ti ₃ C ₂ T _x MXene Synthesis under a Unique CoFx/HCl Etching Environment. 2019 , 2, 8145-8152	17
1674	Gas sensing with heterostructures based on two-dimensional nanostructured materials: a review. 2019 , 7, 13367-13383	98

1673	Cellular Graphene: Fabrication, Mechanical Properties, and Strain-Sensing Applications. 2019 , 1, 1148-1202	24
1672	Facile synthesis of MnPO ₄ ·H ₂ O nanosheets/MWCNTs composite as electrode material for high-performance supercapacitors. 2019 , 30, 19813-19825	5
1671	Titanium Carbide MXene as NH ₃ Sensor: Realistic First-Principles Study. 2019 , 123, 29794-29803	31
1670	Rational Design of Flexible Two-Dimensional MXenes with Multiple Functionalities. 2019 , 119, 11980-12031	137
1669	Reversible MoS Origami with Spatially Resolved and Reconfigurable Photosensitivity. 2019 , 19, 7941-7949	33
1668	VO(p)-VC(MXene) Grid Structure as a Lithium Polysulfide Catalytic Host for High-Performance Li-S Battery. 2019 , 11, 44282-44292	58
1667	A nanocomposite prepared from platinum particles, polyaniline and a TiC MXene for amperometric sensing of hydrogen peroxide and lactate. 2019 , 186, 752	42
1666	Cytotoxicity Assessment of Ti-Al-C Based MAX Phases and TiCT MXenes on Human Fibroblasts and Cervical Cancer Cells. 2019 , 5, 6557-6569	32
1665	Photodynamic Therapy Based on Graphene and MXene in Cancer Theranostics. 2019 , 7, 295	56
1664	Beyond Gold: Spin-Coated Ti C -Based MXene Photodetectors. 2019 , 31, e1903271	73
1663	2020 roadmap on two-dimensional materials for energy storage and conversion. 2019 , 30, 2053-2064	108
1662	Ultrafine Pt Nanoparticle-Decorated 3D Hybrid Architectures Built from Reduced Graphene Oxide and MXene Nanosheets for Methanol Oxidation. 2019 , 31, 9277-9287	74
1661	First-Principles Calculations of TiB MBene Monolayers for Hydrogen Evolution. 2019 , 2, 7220-7229	17
1660	Effects of biaxial strain and functional groups on SiC/ti ₃ C ₂ heterostructure: a first principle calculation. 2019 , 6, 125070	
1659	Electrochemical Nitrogen Reduction Reaction Performance of Single-Boron Catalysts Tuned by MXene Substrates. 2019 , 10, 6984-6989	79
1658	TiC MXene-Based Sensors with High Selectivity for NH Detection at Room Temperature. 2019 , 4, 2763-2770	150
1657	Tuning the Electrochemical Performance of Titanium Carbide MXene by Controllable In Situ Anodic Oxidation. 2019 , 131, 18013-18019	17
1656	Tuning the Electrochemical Performance of Titanium Carbide MXene by Controllable In Situ Anodic Oxidation. 2019 , 58, 17849-17855	64

1655	Delaminating Vanadium Carbides for Zinc-Ion Storage: Hydrate Precipitation and H ⁺ /Zn ²⁺ Co-Action Mechanism. 2019 , 3, 1900495	61
1654	The fabrication and electrical properties of polyimide/boron nitride nanosheets composite films. 2019 , 30, 20302-20310	4
1653	Novel Synthesis of Red Phosphorus Nanodot/TiCT MXenes from Low-Cost TiSiC MAX Phases for Superior Lithium- and Sodium-Ion Batteries. 2019 , 11, 42086-42093	30
1652	The Rise of MXenes. 2019 , 13, 8491-8494	597
1651	Phosphorus-doped porous biomass carbon with ultra-stable performance in sodium storage and lithium storage. 2019 , 321, 134698	23
1650	Ultrafast Growth of Thin Hexagonal and Pyramidal Molybdenum Nitride Crystals and Films. 2019 , 1, 383-388	7
1649	Nanostructure of Cr ₂ CO ₂ MXene Supported Single Metal Atom as an Efficient Bifunctional Electrocatalyst for Overall Water Splitting. 2019 , 2, 6851-6859	41
1648	Recent progress in two-dimensional nanomaterials: Synthesis, engineering, and applications. 2019 , 18, 100133	33
1647	Universal Synthesis of Porous Inorganic Nanosheets via Graphene-Cellulose Templating Route. 2019 , 11, 34100-34108	7
1646	A New Free-Standing Aqueous Zinc-Ion Capacitor Based on MnO-CNTs Cathode and MXene Anode. 2019 , 11, 70	71
1645	Ti ₃ C ₂ T _x MXene characterization produced from SHS-ground Ti ₃ AlC ₂ . 2019 , 183, 108143	20
1644	Two-Dimensional Materials in Biosensing and Healthcare: From Diagnostics to Optogenetics and Beyond. 2019 , 13, 9781-9810	142
1643	Holey 2O ₄ Nanoflakes by Carbon Soot Layer Blasting Approach for High Performance Supercapacitors. 2019 , 2, 6693-6704	12
1642	Large out-of-plane piezoelectricity of oxygen functionalized MXenes for ultrathin piezoelectric cantilevers and diaphragms. 2019 , 65, 104058	24
1641	One-step synthesis of few-layer niobium carbide MXene as a promising anode material for high-rate lithium ion batteries. 2019 , 48, 14433-14439	26
1640	Self-assembled TiC /MWCNTs nanocomposites modified glassy carbon electrode for electrochemical simultaneous detection of hydroquinone and catechol. 2019 , 184, 109619	48
1639	Stabilizing Ti ₃ C ₂ T _x -MXenes with TiOF ₂ nanospheres intercalation to improve hydrogen evolution reaction and humidity-sensing performance. 2019 , 496, 143729	31
1638	Design strategies toward catalytic materials and cathode structures for emerging Li ₄ O ₂ batteries. 2019 , 7, 21605-21633	54

- 1637 Synthesis of atomically layered and chemically ordered rare-earth (RE) i-MAX phases; (Mo₂/3RE₁/3)₂GaC with RE = Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu. **2019**, 7, 446-452 22
- 1636 Recent advances in MXene-based electrochemical sensors and biosensors. **2019**, 120, 115643 111
- 1635 Bifunctional N-CoSe₂/3D-MXene as Highly Efficient and Durable Cathode for Rechargeable Zn-Air Battery. **2019**, 1, 432-439 49
- 1634 Ti-based electrode materials for electrochemical sodium ion storage and removal. **2019**, 7, 22163-22188 38
- 1633 An MXene/CNTs@P nanohybrid with stable Ti-DB bonds for enhanced lithium ion storage. **2019**, 7, 21766-21773 45
- 1632 Microstructure and surface control of MXene films for water purification. **2019**, 2, 856-862 142
- 1631 A perspective on two-dimensional materials for planar micro-supercapacitors. **2019**, 7, 090902 18
- 1630 Inkjet-printed MXene micro-scale devices for integrated broadband ultrafast photonics. **2019**, 3, 51
- 1629 MXene-engineered lithium-sulfur batteries. **2019**, 7, 22730-22743 96
- 1628 Synthesis of 2D Li₄Ti₅O₁₂ Nanosheets via the Insertion-Exfoliation-Lithiation Process. **2019**, 2, 7321-7329 6
- 1627 Electrochemical Interaction of Sn-Containing MAX Phase (Nb₂SnC) with Li-Ions. **2019**, 4, 2452-2457 16
- 1626 Comprehensive understanding of intrinsic mobility in the monolayers of III-VI group 2D materials. **2019**, 21, 21898-21907 10
- 1625 Single molybdenum atom anchored on 2D TiNO MXene as a promising electrocatalyst for N fixation. **2019**, 11, 18132-18141 36
- 1624 An emerging Janus MoSeTe material for potential applications in optoelectronic devices. **2019**, 7, 12312-12320 45
- 1623 2D MXenes as Co-catalysts in Photocatalysis: Synthetic Methods. **2019**, 11, 79 92
- 1622 Effect of radiation on the performance of activated carbon base supercapacitor: Part II. Influence of electron irradiation exposure on full cell. **2019**, 158, 4560-4565
- 1621 Recent Advances in Graphene-like 2D Materials for Spintronics Applications. **2019**, 31, 8260-8285 60
- 1620 Photocharge Trapping in Two-Sheet Reduced Graphene Oxide//0.87O₂ Heterostructures and Their Photoreduction and Photomemory Applications. **2019**, 2, 6378-6386 3

1619	Single Site Cobalt Substitution in 2D Molybdenum Carbide (MXene) Enhances Catalytic Activity in the Hydrogen Evolution Reaction. 2019 , 141, 17809-17816	144
1618	Current state of the art on tailoring the MXene composition, structure, and surface chemistry. 2019 , 23, 100774	48
1617	Electrochemical Actuators Based on Two-Dimensional TiCT (MXene). 2019 , 19, 7443-7448	53
1616	Catalytic Effect on CO Electroreduction by Hydroxyl-Terminated Two-Dimensional MXenes. 2019 , 11, 36571-36579	52
1615	Impact of the MoS ₂ Starting Material on the Dispersion Quality and Quantity after Liquid Phase Exfoliation. 2019 , 31, 8424-8431	10
1614	A stretchable high performance all-in-one fiber supercapacitor. 2019 , 440, 227150	25
1613	Flexible Two-Dimensional TiC MXene Films as Thermoacoustic Devices. 2019 , 13, 12613-12620	28
1612	Large-Area MXene Electrode Array for Flexible Electronics. 2019 , 13, 11392-11400	133
1611	Theoretical Analysis, Synthesis, and Characterization of 2D W _{1.33} C (MXene) with Ordered Vacancies. 2019 , 2, 6209-6219	19
1610	Scalable One-Pot Synthesis of Nitrogen and Boron Co-doped Few Layered Graphene by Submerged Liquid Plasma Exfoliation. 2019 , 6,	8
1609	Plate-to-Layer BiMoO ₃ /MXene-Heterostructured Anode for Lithium-Ion Batteries. 2019 , 11, 81	44
1608	Colloidal Gelation in Liquid Metals Enables Functional Nanocomposites of 2D Metal Carbides (MXenes) and Lightweight Metals. 2019 , 13, 12415-12424	31
1607	New application of MXene in polymer composites toward remarkable anti-dripping performance for flame retardancy. 2019 , 127, 105649	35
1606	Highly-dispersed iron oxide nanoparticles anchored on crumpled nitrogen-doped MXene nanosheets as anode for Li-ion batteries with enhanced cyclic and rate performance. 2019 , 439, 227107	24
1605	Introduction to MXenes: synthesis and characteristics. 2019 , 14, 100191	38
1604	New predicted two-dimensional MXenes and their structural, electronic and lattice dynamical properties. 2019 , 303-304, 113739	20
1603	Three-Dimensional Porous Ti ₃ C ₂ T _x MXene/Graphene Hybrid Films for Glucose Biosensing. 2019 , 2, 6537-6545	57
1602	Near-infrared light-responsive hydrogels peroxide-decorated MXene-initiated polymerization. 2019 , 10, 10765-10771	37

1601	Eosin Y-sensitized partially oxidized Ti ₃ C ₂ MXene for photocatalytic hydrogen evolution. 2019 , 9, 310-315	53
1600	van der Waals epitaxy of highly (111)-oriented BaTiO ₃ on MXene. 2019 , 11, 622-630	6
1599	Freestanding nitrogen-doped d-Ti ₃ C ₂ /reduced graphene oxide hybrid films for high performance supercapacitors. 2019 , 300, 349-356	39
1598	Contacting MoS ₂ to MXene: Vanishing p-Type Schottky Barrier and Enhanced Hydrogen Evolution Catalysis. 2019 , 123, 3719-3726	29
1597	Soft material nanoarchitectonics at interfaces: molecular assembly, nanomaterial synthesis, and life control. 2019 , 4, 49-64	28
1596	KTlO: a metal shrouded 2D semiconductor with high carrier mobility and tunable magnetism. 2019 , 11, 1131-1139	25
1595	Heterostructures of Ni ₂ CoAl layered double hydroxide assembled on V ₄ C ₃ MXene for high-energy hybrid supercapacitors. 2019 , 7, 2291-2300	93
1594	Configurable multi-state non-volatile memory behaviors in TiC nanosheets. 2019 , 11, 7102-7110	45
1593	Boosting the Yield of MXene 2D Sheets via a Facile Hydrothermal-Assisted Intercalation. 2019 , 11, 8443-8452	95
1592	Two-Dimensional Hydroxyl-Functionalized and Carbon-Deficient Scandium Carbide, ScC OH, a Direct Band Gap Semiconductor. 2019 , 13, 1195-1203	24
1591	MXene (TiC) Vacancy-Confined Single-Atom Catalyst for Efficient Functionalization of CO. 2019 , 141, 4086-4093	277
1590	Magnesium-Ion Storage Capability of MXenes. 2019 , 2, 1572-1578	53
1589	Control of MXenes' electronic properties through termination and intercalation. 2019 , 10, 522	380
1588	Combined Theoretical and Experimental Studies of Sodium Battery Materials. 2019 , 19, 792	8
1587	2D Early Transition Metal Carbides (MXenes) for Catalysis. 2019 , 15, e1804736	134
1586	Electron-Driven In Situ Transmission Electron Microscopy of 2D Transition Metal Dichalcogenides and Their 2D Heterostructures. 2019 , 13, 978-995	42
1585	Recent progress in flexible non-lithium based rechargeable batteries. 2019 , 7, 4353-4382	64
1584	Electronic and optical characterization of 2D TiC and NbC (MXene) thin films. 2019 , 31, 165301	46

1583	Timeline on the application of intercalation materials in Capacitive Deionization. 2019 , 455, 115-134	81
1582	Understanding the Different Diffusion Mechanisms of Hydrated Protons and Potassium Ions in Titanium Carbide MXene. 2019 , 11, 7087-7095	25
1581	Engineered Exosome-Mediated Near-Infrared-II Region VC Quantum Dot Delivery for Nucleus-Target Low-Temperature Photothermal Therapy. 2019 , 13, 1499-1510	147
1580	Oxygen-Functionalized Ultrathin Ti ₃ C ₂ MXene for Enhanced Electrocatalytic Hydrogen Evolution. 2019 , 12, 1368-1373	104
1579	Self-tunable ultrathin carbon nanocups as the electrode material of sodium-ion batteries with unprecedented capacity and stability. 2019 , 364, 578-588	30
1578	Ultrathin Ti ₃ C ₂ nanosheets based off-on fluorescent nanoprobe for rapid and sensitive detection of HPV infection. 2019 , 286, 222-229	58
1577	Role of Long-Range Dispersion Forces in Modeling of MXenes as Battery Electrode Materials. 2019 , 123, 4064-4071	5
1576	MXene-derived TiO ₂ /reduced graphene oxide composite with an enhanced capacitive capacity for Li-ion and K-ion batteries. 2019 , 7, 5363-5372	121
1575	The Influence of Oxygen Concentration during MAX Phases (Ti ₃ AlC ₂) Preparation on the Al ₂ O ₃ Microparticles Content and Specific Surface Area of Multilayered MXenes (Ti ₃ AlC ₂). 2019 , 12,	24
1574	Electrochemical performance of two-dimensional Ti ₃ C ₂ -Mn ₃ O ₄ nanocomposites and carbonized iron cations for hybrid supercapacitor electrodes. 2019 , 301, 487-499	38
1573	High Sensitivity Surface Plasmon Resonance Sensor Based on Two-Dimensional MXene and Transition Metal Dichalcogenide: A Theoretical Study. 2019 , 9,	65
1572	Duplex printing of all-in-one integrated electronic devices for temperature monitoring. 2019 , 7, 972-978	27
1571	Electrospun MXene/carbon nanofibers as supercapacitor electrodes. 2019 , 7, 269-277	272
1570	Three-dimensional auxetic properties in group V-VI binary monolayer crystals XM (X = S, Se; M = N, P, As). 2019 , 21, 5916-5924	8
1569	Nanogenerators as a Sustainable Power Source: State of Art, Applications, and Challenges. 2019 , 9,	47
1568	NASICON-Structured NaTi(PO) ₃ for Sustainable Energy Storage. 2019 , 11, 44	67
1567	A new paradigm of ultrathin 2D nanomaterial adsorbents in aqueous media: graphene and GO, MoS ₂ , MXenes, and 2D MOFs. 2019 , 7, 16598-16621	57
1566	Hydrochromic full-color MXene quantum dots through hydrogen bonding toward ultrahigh-efficiency white light-emitting diodes. 2019 , 16, 90-101	50

1565	Titanium carbide Ti ₃ C ₂ T _x (MXene) enhanced PAN nanofiber membrane for air purification. 2019 , 586, 162-169	63
1564	Nonlinear Few-Layer MXene-Assisted All-Optical Wavelength Conversion at Telecommunication Band. 2019 , 7, 1801777	64
1563	Niobium carbide/reduced graphene oxide hybrid porous aerogel as high capacity and long-life anode material for Li-ion batteries. 2019 , 43, 4995-5003	26
1562	A Robust, Freestanding MXene-Sulfur Conductive Paper for Long-Lifetime LiB Batteries. 2019 , 29, 1901907	131
1561	Revealing the Pseudo-Intercalation Charge Storage Mechanism of MXenes in Acidic Electrolyte. 2019 , 29, 1902953	101
1560	Steady microwave absorption behavior of two-dimensional metal carbide MXene and Polyaniline composite in X-band. 2019 , 488, 165364	37
1559	Three-dimensional carambola-like MXene/polypyrrole composite produced by one-step co-electrodeposition method for electrochemical energy storage. 2019 , 318, 820-827	43
1558	Galvanic exchange carving growth of CoBe LDHs with enhanced water oxidation. 2019 , 44, 20085-20092	8
1557	ZnFe ₂ O ₄ nanoparticles decorated Ti ₃ C ₂ T _x nanosheet as anode materials for enhanced lithium storage. 2019 , 253, 162-165	7
1556	MXenes for Plasmonic Photodetection. 2019 , 31, e1807658	90
1555	Plasmonic TiCT MXene Enables Highly Efficient Photothermal Conversion for Healable and Transparent Wearable Device. 2019 , 13, 8124-8134	132
1554	Topochemical synthesis of phase-pure MoAlB through staging mechanism. 2019 , 55, 9295-9298	12
1553	Synthesis of novel nanomaterials and their application in efficient removal of radionuclides. 2019 , 62, 933-967	186
1552	Theoretical Prediction of Catalytic Activity of Ti ₂ C MXene as Cathode for LiO ₂ Batteries. 2019 , 123, 17466-17471	25
1551	Synthesis, structure, properties and applications of MXenes: Current status and perspectives. 2019 , 45, 18167-18188	177
1550	Theoretical investigating of graphene/antimonene heterostructure as a promising high cycle capability anodes for fast-charging lithium ion batteries. 2019 , 491, 451-459	22
1549	Tunable stable operating potential window for high-voltage aqueous supercapacitors. 2019 , 63, 103848	43
1548	Horizontal Growth of Lithium on Parallelly Aligned MXene Layers towards Dendrite-Free Metallic Lithium Anodes. 2019 , 31, e1901820	112

1547	Theoretical Investigation of Metal-Shrouded Ti_2O Monolayers: Pudding-Mold-Type Band Structure and Thermoelectric Performance. 2019 , 2, 4061-4066	15
1546	A low-cost and efficient pathway for preparation of 2D MoN nanosheets via Na_2CO_3 -assisted nitridation of MoS_2 with NH_3 . 2019 , 102, 7178-7186	7
1545	Two-Dimensional Arrays of Transition Metal Nitride Nanocrystals. 2019 , 31, e1902393	59
1544	Theoretical Screening of Single Transition Metal Atoms Embedded in MXene Defects as Superior Electrocatalyst of Nitrogen Reduction Reaction. 2019 , 3, 1900337	124
1543	TiC Sheets with an Adjustable Surface and Feature Sizes to Regulate the Chemical Stability. 2019 , 58, 9397-9403	15
1542	Antioxidants Unlock Shelf-Stable $\text{Ti}_3\text{C}_2\text{T}$ (MXene) Nanosheet Dispersions. 2019 , 1, 513-526	210
1541	First-principles explorations of $\text{Li}_2\text{S}@\text{V}_2\text{CTx}$ hybrid structure as cathode material for lithium-sulfur battery. 2019 , 489, 677-683	19
1540	Microwave-Assisted Ultrafast Synthesis of Molybdenum Carbide Nanoparticles Grown on Carbon Matrix for Efficient Hydrogen Evolution Reaction. 2019 , 3, 1900259	30
1539	Two-Dimensional Vanadium Carbide MXene for Gas Sensors with Ultrahigh Sensitivity Toward Nonpolar Gases. 2019 ,	135
1538	Functionalization of MXene Nanosheets for Polystyrene towards High Thermal Stability and Flame Retardant Properties. 2019 , 11,	60
1537	Layer-by-layer self-assembly of pillared two-dimensional multilayers. 2019 , 10, 2558	98
1536	On-Chip MXene Microsupercapacitors for AC-Line Filtering Applications. 2019 , 9, 1901061	64
1535	Exploring the catalytic activity of MXenes $\text{Mn}_{n+1}\text{CnO}_2$ for hydrogen evolution. 2019 , 54, 11378-11389	7
1534	Vacancy-mediated lithium adsorption and diffusion on MXene. 2019 , 488, 578-585	30
1533	Layered Quaternary Germanides-Synthesis and Crystal and Electronic Structures of AELiInGe (AE = Sr, Ba, Eu). 2019 , 58, 7895-7904	7
1532	Etching and Exfoliation Properties of Cr_2AlC into Cr_2CO_2 and the Electrocatalytic Performances of 2D Cr_2CO_2 MXene. 2019 , 123, 15629-15636	18
1531	MXenes: An Introduction of Their Synthesis, Select Properties, and Applications. 2019 , 1, 656-669	164
1530	0D/2D $\text{NiS}_2/\text{V-MXene}$ composite for electrocatalytic H_2 evolution. 2019 , 375, 8-20	85

1529	Deep insights into the exfoliation properties of MAX to MXenes and the hydrogen evolution performances of 2D MXenes. 2019 , 7, 15862-15870	31
1528	Precious-Metal-Free Electrocatalysts for Activation of Hydrogen Evolution with Nonmetallic Electron Donor: Chemical Composition Controllable Phosphorous Doped Vanadium Carbide MXene. 2019 , 29, 1903443	66
1527	In suit growth of CuSe nanoparticles on MXene (Ti3C2) nanosheets as an efficient counter electrode for quantum dot-sensitized solar cells. 2019 , 316, 248-256	32
1526	Quick mass-production of MAX (TiAlC) book with pages separated by stacking faults benefiting removal of "A" layer. 2019 , 55, 7522-7525	2
1525	Fluorine-free Ti3C2Tx as anode materials for Li-ion batteries. 2019 , 104, 106472	21
1524	Equipartition of Energy Defines the Size-Thickness Relationship in Liquid-Exfoliated Nanosheets. 2019 , 13, 7050-7061	71
1523	Recent progress in Co9S8-based materials for hydrogen and oxygen electrocatalysis. 2019 , 7, 16068-16088	66
1522	Elastic Properties of 2D Ultrathin Tungsten Nitride Crystals Grown by Chemical Vapor Deposition. 2019 , 29, 1902663	21
1521	3D Macroscopic Architectures from Self-Assembled MXene Hydrogels. 2019 , 29, 1903960	207
1520	First-principles study of the electronic, optical and transport of few-layer semiconducting MXene. 2019 , 168, 137-143	11
1519	Water treatment and environmental remediation applications of two-dimensional metal carbides (MXenes). 2019 , 30, 80-102	203
1518	Porous MXenes enable high performance potassium ion capacitors. 2019 , 62, 853-860	115
1517	Dense Charge Accumulation in MXene with a Hydrate-Melt Electrolyte. 2019 , 31, 5190-5196	29
1516	Multi-Step Topochemical Pathway to Metastable MoAlB and Related Two-Dimensional Nanosheet Heterostructures. 2019 , 141, 10852-10861	43
1515	MnO2 nanorods/MXene/CC composite electrode for flexible supercapacitors with enhanced electrochemical performance. 2019 , 802, 259-268	58
1514	Faradaic reactions in capacitive deionization for desalination and ion separation. 2019 , 7, 15999-16027	85
1513	Structural features and electronic properties of Group-IIIB pnictides nanosheets and nanoribbons. 2019 , 383, 2744-2750	1
1512	Strain controlling transport properties of heterostructure composed of monolayer CrI3. 2019 , 114, 192405	17

1511	Thermal stress-induced all-optical modulation in MXene-coated polarization maintaining fiber. 2019 , 16, 065107	8
1510	Universal Strategy for HF-Free Facile and Rapid Synthesis of Two-dimensional MXenes as Multifunctional Energy Materials. 2019 , 141, 9610-9616	208
1509	Discovery of hexagonal ternary phase TiInB and its evolution to layered boride TiB. 2019 , 10, 2284	72
1508	Stabilization of 2D graphene, functionalized graphene, and TiCO (MXene) in super-critical CO: a molecular dynamics study. 2019 , 21, 12968-12976	9
1507	Surface Modified MXene-Based Nanocomposites for Electrochemical Energy Conversion and Storage. 2019 , 15, e1901503	98
1506	Achieving high electrical conductivity and excellent electromagnetic interference shielding in poly(lactic acid)/silver nanocomposites by constructing large-area silver nanoplates in polymer matrix. 2019 , 171, 204-213	54
1505	Ordered double-M elements MXenes TiMC: Large in-plane stiffness and ferromagnetism. 2019 , 486, 165280	9
1504	Concentric Advancing Front Corrugations and Multiple Ordered Growth of 2D Mo ₂ C Crystals. 2019 , 19, 3097-3102	6
1503	Strain-induced N-N bonding and magnetic changes in monolayer intrinsic ferromagnetic TmN (Tm = Tc and Nb). 2019 , 31, 335801	3
1502	Intercalation of Layered Materials from Bulk to 2D. 2019 , 31, e1808213	64
1501	A New Memristor with 2D Ti C T MXene Flakes as an Artificial Bio-Synapse. 2019 , 15, e1900107	90
1500	Energy storage: pseudocapacitance in prospect. 2019 , 10, 5656-5666	62
1499	Facile preparation of molybdenum carbide (MoC) nanoparticles and its effective utilization in electrochemical sensing of folic acid via imprinting. 2019 , 140, 111330	36
1498	In-situ decoration of MOF-derived carbon on nitrogen-doped ultrathin MXene nanosheets to multifunctionalize separators for stable Li-S batteries. 2019 , 373, 1309-1318	122
1497	Thermal transport properties in monolayer GeS. 2019 , 383, 2499-2503	2
1496	Pseudocapacitive Storage in Nanolayered Ti ₂ NT _x MXene Using Mg-Ion Electrolyte. 2019 , 2, 2785-2795	53
1495	High Lithium-Ion Storage Performance of Ti ₃ SiC ₂ MAX by Oxygen Doping. 2019 , 4, 5319-5321	3
1494	Facile synthesis of rutile TiO ₂ /carbon nanosheet composite from MAX phase for lithium storage. 2019 , 35, 1977-1981	12

1493	One-step hydrothermal synthesis of fluorescent MXene-like titanium carbonitride quantum dots. 2019 , 105, 151-157	24
1492	Plasmonic Light Illumination Creates a Channel To Achieve Fast Degradation of TiCT Nanosheets. 2019 , 58, 7285-7294	17
1491	2D Laminar Membranes for Selective Water and Ion Transport. 2019 , 29, 1902014	121
1490	Effect of Ti ₃ AlC ₂ MAX Phase on Structure and Properties of Resultant Ti ₃ C ₂ T _x MXene. 2019 , 2, 3368-3376	92
1489	The enhanced ferromagnetism of single-layer CrX (X = Br and I) via van der Waals engineering. 2019 , 21, 11949-11955	14
1488	Computational Discovery of Transparent Conducting In-Plane Ordered MXene (i-MXene) Alloys. 2019 , 31, 4124-4132	5
1487	Computational Discovery and Design of MXenes for Energy Applications: Status, Successes, and Opportunities. 2019 , 11, 24885-24905	65
1486	Precisely monitoring and tailoring 2D nanostructures at the atomic scale. 2019 , 7, 050901	12
1485	Impact of Morphological Effects on the Activity and Stability of Tungsten Carbide Catalysts for Dry Methane Reforming. 2019 , 33, 5544-5550	11
1484	MXene Ti ₃ C ₂ T _x for phase change composite with superior photothermal storage capability. 2019 , 7, 14319-14327	110
1483	Strain-engineered robust and Schottky-barrier-free contact in 2D metal-semiconductor heterostructure. 2019 , 1, 015010	5
1482	High-Energy-Density Hydrogen-Ion-Rocking-Chair Hybrid Supercapacitors Based on TiC T MXene and Carbon Nanotubes Mediated by Redox Active Molecule. 2019 , 13, 6899-6905	82
1481	MXene Ti ₃ C ₂ T _x : A Promising Photothermal Conversion Material and Application in All-Optical Modulation and All-Optical Information Loading. 2019 , 7, 1900060	75
1480	Characterization of an AX Compound Derived from Ti ₂ SC MAX Phase. 2019 , 2019, 2312-2317	1
1479	Insights into the thermal and chemical stability of multilayered VCT MXene. 2019 , 11, 10716-10726	65
1478	MXene-Contacted Silicon Solar Cells with 11.5% Efficiency. 2019 , 9, 1900180	117
1477	H-/dT-MoS ₂ -on-MXene Heterostructures as Promising 2D Anode Materials for Lithium-Ion Batteries: Insights from First Principles. 2019 , 2, 1900045	12
1476	Interface-coupling of CoFe-LDH on MXene as high-performance oxygen evolution catalyst. 2019 , 12, 453-462	77

1475	In situ synthesis of BiOCl nanosheets on three-dimensional hierarchical structures for efficient photocatalysis under visible light. 2019 , 11, 10203-10208	23
1474	A novel high permittivity percolative composite with modified MXene. 2019 , 174, 86-95	28
1473	Advances on three-dimensional electrodes for micro-supercapacitors: A mini-review. 2019 , 1, 74-84	91
1472	Eco-friendly flame retardant and electromagnetic interference shielding cotton fabrics with multi-layered coatings. 2019 , 372, 1077-1090	141
1471	Demonstration of a White Laser with V C MXene-Based Quantum Dots. 2019 , 31, e1901117	53
1470	Alkali-induced 3D crinkled porous Ti ₃ C ₂ MXene architectures coupled with NiCoP bimetallic phosphide nanoparticles as anodes for high-performance sodium-ion batteries. 2019 , 12, 2422-2432	171
1469	Dual effects of the carbon fibers/Ti ₃ C ₂ T _x interlayer on retarding shuttle of polysulfides for stable Lithium-Sulfur batteries. 2019 , 312, 149-156	37
1468	Multivalent metal ion hybrid capacitors: a review with a focus on zinc-ion hybrid capacitors. 2019 , 7, 13810-13833	36
1467	Simultaneous texturing and conductivity tailoring of mesoporous NaTi ₂ (PO ₄) ₃ nanocrystals by gadolinium doping for enhanced Na storage. 2019 , 309, 177-186	11
1466	Layer-Stacking, Defects, and Robust Superconductivity on the Mo-Terminated Surface of Ultrathin MoC Flakes Grown by CVD. 2019 , 19, 3327-3335	15
1465	Additive-free MXene inks and direct printing of micro-supercapacitors. 2019 , 10, 1795	407
1464	MXene-conducting polymer electrochromic microsupercapacitors. 2019 , 20, 455-461	69
1463	Graphene wrapped MXene via plasma exfoliation for all-solid-state flexible supercapacitors. 2019 , 20, 299-306	50
1462	StrainSpintronics: Modulating Electronic and Magnetic Properties of Hf ₂ MnC ₂ O ₂ MXene by Uniaxial Strain. 2019 , 123, 12451-12459	19
1461	High Dielectric Constant and Low Dielectric Loss via Poly(vinyl alcohol)/TiCT MXene Nanocomposites. 2019 , 11, 18599-18608	78
1460	Transition metal-embedded two-dimensional C ₃ N as a highly active electrocatalyst for oxygen evolution and reduction reactions. 2019 , 7, 12050-12059	78
1459	An Ingenious Strategy to Construct Helical Structure with Excellent Electromagnetic Shielding Performance. 2019 , 6, 1900375	28
1458	Sol-gel based synthesis and enhanced processability of MAX phase Cr ₂ GaC. 2019 , 7, 6034-6040	14

1457	Anisotropic MXene Aerogels with a Mechanically Tunable Ratio of Electromagnetic Wave Reflection to Absorption. 2019 , 7, 1900267	138
1456	TiOxNy nanoparticles/C composites derived from MXene as anode material for potassium-ion batteries. 2019 , 369, 828-833	48
1455	Nanostructured metallic transition metal carbides, nitrides, phosphides, and borides for energy storage and conversion. 2019 , 25, 99-121	173
1454	Structural prediction and multilayer Li ⁺ storage in two-dimensional VC ₂ carbide studied by first-principles calculations. 2019 , 7, 8873-8881	20
1453	Significantly enhanced electromagnetic interference shielding in Al ₂ O ₃ ceramic composites incorporated with highly aligned non-woven carbon fibers. 2019 , 45, 12672-12676	6
1452	Hierarchical Ni ₂ P/Cr ₂ CT _x (MXene) composites with oxidized surface groups as efficient bifunctional electrocatalysts for overall water splitting. 2019 , 7, 9324-9334	27
1451	A carbon aerogel with super mechanical and sensing performances for wearable piezoresistive sensors. 2019 , 7, 8092-8100	90
1450	First-principles study of structural, electronic and optical properties of doped Ti ₂ CF ₂ MXenes. 2019 , 561, 90-96	7
1449	Flexible Molybdenum Disulfide (MoS ₂) Atomic Layers for Wearable Electronics and Optoelectronics. 2019 , 11, 11061-11105	146
1448	Electrocatalytic and Optoelectronic Characteristics of the Two-Dimensional Titanium Nitride TiNT MXene. 2019 , 11, 11812-11823	50
1447	Excellent air and water stability of two-dimensional black phosphorene/MXene heterostructure. 2019 , 6, 065504	9
1446	Scalable Synthesis of Ultrathin Mn ₃ N ₂ Exhibiting Room-Temperature Antiferromagnetism. 2019 , 29, 1809001	37
1445	Scalable Manufacturing of Large and Flexible Sheets of MXene/Graphene Heterostructures. 2019 , 4, 1800639	60
1444	Monolayer Zr ₂ B ₂ : A promising two-dimensional anode material for Li-ion batteries. 2019 , 480, 448-453	37
1443	Atomically Layered and Ordered Rare-Earth i-MAX Phases: A New Class of Magnetic Quaternary Compounds. 2019 , 31, 2476-2485	53
1442	Effective Removal of Anionic Re(VII) by Surface-Modified TiCT MXene Nanocomposites: Implications for Tc(VII) Sequestration. 2019 , 53, 3739-3747	94
1441	Single-Molecule Sensing Using Nanopores in Two-Dimensional Transition Metal Carbide (MXene) Membranes. 2019 , 13, 3042-3053	85
1440	The development of 2D materials for electrochemical energy applications: A mechanistic approach. 2019 , 7, 030902	16

1439	Tuning the Electrical Conductivity of Ti ₂ CO ₂ MXene by Varying the Layer Thickness and Applying Strains. 2019 , 123, 6802-6811	25
1438	Electrochromic Effect in Titanium Carbide MXene Thin Films Produced by Dip-Coating. 2019 , 29, 1809223	80
1437	Prediction of Synthesis of 2D Metal Carbides and Nitrides (MXenes) and Their Precursors with Positive and Unlabeled Machine Learning. 2019 , 13, 3031-3041	95
1436	Influences from solvents on charge storage in titanium carbide MXenes. 2019 , 4, 241-248	229
1435	Facile fabrication of 2D stanene nanosheets via a dealloying strategy for potassium storage. 2019 , 55, 3983-3986	11
1434	Capture and Catalytic Conversion of Polysulfides by In Situ Built TiO ₂ -MXene Heterostructures for LithiumSulfur Batteries. 2019 , 9, 1900219	291
1433	Fe ₂ O ₃ nanorods embedded with two-dimensional {0 0 1} facets exposed TiO ₂ flakes derived from Ti ₃ C ₂ TX MXene for enhanced photoelectrochemical water oxidation. 2019 , 370, 314-321	18
1432	Effects of Synthesis and Processing on Optoelectronic Properties of Titanium Carbonitride MXene. 2019 , 31, 2941-2951	98
1431	Exploring the microscopic mechanism of pseudocapacitance with electronic structures in monolayer 1T-MoS ₂ electrodes for supercapacitors. 2019 , 3, 1310-1316	3
1430	Wet/Sono-Chemical Synthesis of Enzymatic Two-Dimensional MnO Nanosheets for Synergistic Catalysis-Enhanced Phototheranostics. 2019 , 31, e1900401	91
1429	An investigation into the factors governing the oxidation of two-dimensional TiC MXene. 2019 , 11, 8387-8393	146
1428	White Photoluminescent TiC MXene Quantum Dots with Two-Photon Fluorescence. 2019 , 6, 1801470	92
1427	Overview of the synthesis of MXenes and other ultrathin 2D transition metal carbides and nitrides. 2019 , 23, 149-163	178
1426	Recent advances in micro-supercapacitors. 2019 , 11, 5807-5821	60
1425	MXetronics: Electronic and photonic applications of MXenes. 2019 , 60, 179-197	128
1424	Ultrafine TiC MXene Nanodots-Interspersed Nanosheet for High-Energy-Density Lithium-Sulfur Batteries. 2019 , 13, 3608-3617	158
1423	Tuning Thermal Transport Through Atomically Thin Ti ₃ C ₂ T _z MXene by Current Annealing in Vacuum. 2019 , 29, 1805693	17
1422	Photonic nanoarchitectonics with stimuli-responsive 2D materials. 2019 , 4, 566-579	12

1421	Simple and Cost-Effective Approach To Dramatically Enhance the Durability and Capability of a Layered MnO_2 Based Electrode for Pseudocapacitors: A Practical Electrochemical Test and Mechanistic Revealing. 2019 , 2, 2743-2750	11
1420	Atomic Layer Tailoring Titanium Carbide MXene To Tune Transport and Polarization for Utilization of Electromagnetic Energy beyond Solar and Chemical Energy. 2019 , 11, 12535-12543	115
1419	A facile method for synthesizing CuS decorated Ti_3C_2 MXene with enhanced performance for asymmetric supercapacitors. 2019 , 7, 8984-8992	150
1418	MXene-Based Composites: Synthesis and Applications in Rechargeable Batteries and Supercapacitors. 2019 , 6, 1802004	124
1417	Interlayer Hydrogen-Bonded Metal Porphyrin Frameworks/MXene Hybrid Film with High Capacitance for Flexible All-Solid-State Supercapacitors. 2019 , 15, e1901351	68
1416	A MXene-Based Wearable Biosensor System for High-Performance In Vitro Perspiration Analysis. 2019 , 15, e1901190	157
1415	Impact of surface oxidation on the structural, electronic transport, and optical properties of two-dimensional titanium nitride (Ti_3N_2) MXene. 2019 , 20, e00382	12
1414	Formation of Two-Dimensional AgTe Monolayer Atomic Crystal on Ag(111) Substrate. 2019 , 36, 028102	13
1413	Coupled and decoupled hierarchical carbon nanomaterials toward high-energy-density quasi-solid-state Na-Ion hybrid energy storage devices. 2019 , 23, 530-538	19
1412	Novel two-dimensional molybdenum carbides as high capacity anodes for lithium/sodium-ion batteries. 2019 , 7, 12145-12153	56
1411	Sputtered tungsten nitride films as pseudocapacitive electrode for on chip micro-supercapacitors. 2019 , 20, 243-252	32
1410	0D/2D AgInS_2 /MXene Z-scheme heterojunction nanosheets for improved ammonia photosynthesis of N_2 . 2019 , 61, 27-35	103
1409	Two-dimensional Ti_2CT_x MXene membranes with integrated and ordered nanochannels for efficient solvent dehydration. 2019 , 7, 12095-12104	61
1408	Low-temperature growth of epitaxial Ti_2AlC MAX phase thin films by low-rate layer-by-layer PVD. 2019 , 7, 244-250	15
1407	Synthesis of $\text{Ti}_3\text{C}_2/\text{TiO}_2$ heterostructure by microwave heating with high electrochemical performance. 2019 , 6, 065056	6
1406	Rainbows in a vial: controlled assembly of 2D colloids in two perpendicular external fields. 2019 , 6, 025031	7
1405	Morphology-dependent third-order optical nonlinearity of a 2D Co-based metal-organic framework with a porphyrinic skeleton. 2019 , 55, 4873-4876	25
1404	Pursuit of a high-capacity and long-life Mg-storage cathode by tailoring sandwich-structured MXene@carbon nanosphere composites. 2019 , 7, 16712-16719	50

1403	Ternary metal sulfides for electrocatalytic energy conversion. 2019 , 7, 9386-9405	135
1402	Ultrathin Molybdenum Carbide MXene with Fast Biodegradability for Highly Efficient Theory-Oriented Photonic Tumor Hyperthermia. 2019 , 29, 1901942	72
1401	Two-dimensional V4C3 MXene as high performance electrode materials for supercapacitors. 2019 , 307, 414-421	55
1400	Composite K2Mo4O13/βMoO3 nanorods: sonochemical preparation and applications for advanced Li+/Na+ pseudocapacitance. 2019 , 7, 10954-10961	4
1399	MXenes and ultrasonication. 2019 , 7, 10843-10857	101
1398	Lattice constant-dependent anchoring effect of MXenes for lithium-sulfur (Li-S) batteries: a DFT study. 2019 , 11, 8485-8493	52
1397	MXenes with tunable work functions and their application as electron- and hole-transport materials in non-fullerene organic solar cells. 2019 , 7, 11160-11169	80
1396	Theory-guided materials design: two-dimensional MXenes in electro- and photocatalysis. 2019 , 4, 809-827	132
1395	Free-standing MXene film modified by amorphous FeOOH quantum dots for high-performance asymmetric supercapacitor. 2019 , 308, 1-8	37
1394	High-Temperature Behavior and Surface Chemistry of Carbide MXenes Studied by Thermal Analysis. 2019 , 31, 3324-3332	162
1393	Surface Termination Dependent Work Function and Electronic Properties of Ti3C2Tx MXene. 2019 , 31, 6590-6597	169
1392	A safe and fast-charging lithium-ion battery anode using MXene supported Li3VO4. 2019 , 7, 11250-11256	65
1391	On the Chemical Diversity of the MAX Phases. 2019 , 1, 210-223	227
1390	Preparation of Self-Assembled Composite Films Constructed by Chemically-Modified MXene and Dyes with Surface-Enhanced Raman Scattering Characterization. 2019 , 9,	62
1389	Plasmon-Enhanced Photoelectrochemical Water Splitting for Efficient Renewable Energy Storage. 2019 , 31, e1805513	111
1388	Enhancing hydrogen evolution on the basal plane of transition metal dichalcogenide van der Waals heterostructures. 2019 , 5,	28
1387	Promoting Role of MXene Nanosheets in Biomedical Sciences: Therapeutic and Biosensing Innovations. 2019 , 8, e1801137	141
1386	All-electrospun flexible triboelectric nanogenerator based on metallic MXene nanosheets. 2019 , 59, 268-276	174

1385	Hydrous RuO ₂ -Decorated MXene Coordinating with Silver Nanowire Inks Enabling Fully Printed Micro-Supercapacitors with Extraordinary Volumetric Performance. 2019 , 9, 1803987	128
1384	Ultrathin MXene/Calcium Alginate Aerogel Film for High-Performance Electromagnetic Interference Shielding. 2019 , 6, 1802040	128
1383	Disorder in MAX phases at the atomic scale. 2019 , 10, 622	13
1382	Asymmetric MXene/monolayer transition metal dichalcogenide heterostructures for functional applications. 2019 , 5,	13
1381	Tetragonal and trigonal MoB monolayers: two new low-dimensional materials for Li-ion and Na-ion batteries. 2019 , 21, 5178-5188	45
1380	Zirconium-Based Materials for Electrochemical Energy Storage. 2019 , 6, 1949-1968	4
1379	Unveiling the Critical Role of Surface Oxidation of Electroresponsive Behaviors in Two-Dimensional Ti ₃ C ₂ T _x MXenes. 2019 , 123, 5479-5487	11
1378	Design of pentagonal NbX monolayers for electronics and electrocatalysis. 2019 , 479, 595-600	11
1377	Prediction of MXene based 2D tunable band gap semiconductors: GW quasiparticle calculations. 2019 , 11, 3993-4000	36
1376	Towards establishing standard performance metrics for batteries, supercapacitors and beyond. 2019 , 48, 1272-1341	461
1375	2D Nanosheets and Their Composite Membranes for Water, Gas, and Ion Separation. 2019 , 131, 17674-17689	32
1374	2D Nanosheets and Their Composite Membranes for Water, Gas, and Ion Separation. 2019 , 58, 17512-17527	111
1373	Atomic Layer Deposition of Cobalt Carbide Thin Films from Cobalt Amidinate and Hydrogen Plasma. 2019 , 1, 444-453	9
1372	Tailoring TiCT nanosheets to tune local conductive network as an environmentally friendly material for highly efficient electromagnetic interference shielding. 2019 , 11, 6080-6088	112
1371	Flexible and ultrathin electrospun regenerate cellulose nanofibers and d-Ti ₃ C ₂ T _x (MXene) composite film for electromagnetic interference shielding. 2019 , 788, 1246-1255	70
1370	Carbon-Coated MoSe/MXene Hybrid Nanosheets for Superior Potassium Storage. 2019 , 13, 3448-3456	242
1369	Element Replacement Approach by Reaction with Lewis Acidic Molten Salts to Synthesize Nanolaminated MAX Phases and MXenes. 2019 , 141, 4730-4737	355
1368	Interface Schottky barrier in HfNT/MSSe (T = F, O, OH; M = Mo, W) heterostructures. 2019 , 21, 5394-5401	11

1367	Recent progress in 2D group IV-IV monochalcogenides: synthesis, properties and applications. 2019 , 30, 252001	52
1366	Investigation of two-dimensional hf-based MXenes as the anode materials for li/na-ion batteries: A DFT study. 2019 , 40, 1352-1359	16
1365	First-principles study of elastic, thermal and optical properties of a metal-shrouded two-dimensional semiconductor Tl ₂ O. 2019 , 293, 40-47	4
1364	Flexible and Freestanding Silicon/MXene Composite Papers for High-Performance Lithium-Ion Batteries. 2019 , 11, 10004-10011	154
1363	High capacity silicon anodes enabled by MXene viscous aqueous ink. 2019 , 10, 849	174
1362	Rational design of free-standing 3D porous MXene/rGO hybrid aerogels as polysulfide reservoirs for high-energy lithium-sulfur batteries. 2019 , 7, 6507-6513	150
1361	Interfacial and electronic properties of heterostructures of MXene and graphene. 2019 , 99,	34
1360	Synchronous Gains of Areal and Volumetric Capacities in Lithium-Sulfur Batteries Promised by Flower-like Porous TiCT Matrix. 2019 , 13, 3404-3412	110
1359	Modelling high-performing batteries with Mxenes: The case of S-functionalized two-dimensional nitride Mxene electrode. 2019 , 58, 877-885	62
1358	Recent progress in the synthesis and applications of 2D metal nanosheets. 2019 , 30, 222001	10
1357	MXene-Derived Ferroelectric Crystals. 2019 , 31, e1806860	26
1356	Fluoride-free synthesis and microstructure evolution of novel two-dimensional Ti ₃ C ₂ (OH) ₂ nanoribbons as high-performance anode materials for lithium-ion batteries. 2019 , 45, 8395-8405	34
1355	A multi-layered Ti ₃ C ₂ /Li ₂ S composite as cathode material for advanced lithium-sulfur batteries. 2019 , 39, 176-181	30
1354	Strain Sensors with a High Sensitivity and a Wide Sensing Range Based on a Ti ₃ C ₂ T _x (MXene) Nanoparticle-Nanosheet Hybrid Network. 2019 , 29, 1807882	110
1353	Macroporous 3D MXene architecture for solar-driven interfacial water evaporation. 2019 , 09, 1950047	7
1352	Preparation of MXene/N, S doped graphene electrode for supercapacitor application. 2019 , 600, 012008	3
1351	Chemical vapor deposition synthesis of two-dimensional freestanding transition metal oxychloride for electronic applications. 2019 , 62, 1	3
1350	Exfoliation of Calcium Germanide by Alkyl Halides. 2019 , 31, 10126-10134	12

1349	Interfacial Dissociation of Contact-Ion-Pair on MXene Electrodes in Concentrated Aqueous Electrolytes. 2019 , 166, A3739-A3744	14
1348	Multilayered stable 2D nano-sheets of TiNT MXene: synthesis, characterization, and anticancer activity. 2019 , 17, 114	34
1347	Facile construction of flower-like MoO ₂ @N, P co-doped carbon on carbon cloth as self-standing anode for high-performance sodium ion battery. 2019 , 852, 113510	6
1346	Silver Chlorobromide Nanocubes: A Class of Reactive Templates for Synthesizing Nanoplates and Nanocages of Silver Thiolates. 2019 , 4, 2087-2094	3
1345	TiC/BiVO Schottky junction as a signal indicator for ultrasensitive photoelectrochemical detection of VEGF. 2019 , 55, 13729-13732	30
1344	Mechanically strong and electrically conductive multilayer MXene nanocomposites. 2019 , 11, 20295-20300	52
1343	Achieving high rate and high energy density in an all-solid-state flexible asymmetric pseudocapacitor through the synergistic design of binder-free 3D ZnCo ₂ O ₄ nano polyhedra and 2D layered Ti ₃ C ₂ T _x -MXenes. 2019 , 7, 24543-24556	33
1342	Carbon/metal compound composite electrodes for capacitive deionization: synthesis, development and applications. 2019 , 7, 26693-26743	39
1341	Alternative electrodes for HTMs and noble-metal-free perovskite solar cells: 2D MXenes electrodes.. 2019 , 9, 34152-34157	20
1340	Monolayer MBenes: prediction of anode materials for high-performance lithium/sodium ion batteries. 2019 , 11, 20307-20314	30
1339	Ambient oxidation of TiC MXene initialized by atomic defects. 2019 , 11, 23330-23337	55
1338	Tunable energy storage capacity of two-dimensional TiCT modified by a facile two-step pillaring strategy for high performance supercapacitor electrodes. 2019 , 11, 21981-21989	14
1337	Two-dimensional group-VA nanomaterials beyond black phosphorus: synthetic methods, properties, functional nanostructures and applications. 2019 , 7, 25712-25771	34
1336	Fabrication of a Novel Antifouling Polysulfone Membrane with in Situ Embedment of Mxene Nanosheets. 2019 , 16,	29
1335	Mass Loading-Independent Energy Storage with Reduced Graphene Oxide and Carbon Fiber. 2019 , 6, 6009-6015	6
1334	Nonpolar Organic Dispersion of 2D TiCT MXene Flakes Simultaneous Interfacial Chemical Grafting and Phase Transfer Method. 2019 , 13, 13818-13828	63
1333	A New Metallic In ₃ O ₄ Sheet as an Anode Material for Sodium-Ion Batteries. 2019 , 123, 30213-30220	8
1332	Energy storage: The future enabled by nanomaterials. 2019 , 366,	564

1331	Broadband multi-wavelength optical sensing based on photothermal effect of 2D MXene films. 2019 , 9, 123-131	20
1330	Strain-driven superplasticity of ultrathin tin (II) oxide films and the modulation of their electronic properties: A first-principles study. 2019 , 100,	8
1329	Environmental Stability of MXenes as Energy Storage Materials. 2019 , 6,	35
1328	Fiber all-optical light control with low-dimensional materials (LDMs): thermo-optic effect and saturable absorption. 2019 , 1, 4190-4206	4
1327	Surface group-modified MXene nano-flake doping of monolayer tungsten disulfides. 2019 , 1, 4783-4789	7
1326	Modulation engineering of 2D MXene-based compounds for metal-ion batteries. 2019 , 11, 23092-23104	24
1325	Formation of toroidal LiO in non-aqueous Li-O batteries with MoCT MXene/CNT composite.. 2019 , 9, 41120-41125	8
1324	Interaction of single- and double-stranded DNA with multilayer MXene by fluorescence spectroscopy and molecular dynamics simulations. 2019 , 10, 10010-10017	29
1323	Single atom-supported MXene: how single-atomic-site catalysts tune the high activity and selectivity of electrochemical nitrogen fixation. 2019 , 7, 27620-27631	81
1322	Methods to Improve Lithium Metal Anode for Li-S Batteries. 2019 , 7, 827	27
1321	Ferromagnetism and microwave absorption properties of Cr-doped MoS2 nanosheets. 2019 , 54, 552-559	13
1320	SnS nanoparticles anchored on Ti3C2 nanosheets matrix via electrostatic attraction method as novel anode for lithium ion batteries. 2019 , 357, 150-158	43
1319	Recent progress in nanostructured transition metal nitrides for advanced electrochemical energy storage. 2019 , 7, 14-37	109
1318	Multiwall carbon nanotubes loaded with MoS2 quantum dots and MXene quantum dots: NonPt bifunctional catalyst for the methanol oxidation and oxygen reduction reactions in alkaline solution. 2019 , 464, 78-87	64
1317	Harnessing the unique properties of 2D materials for advanced lithium-sulfur batteries. 2019 , 4, 77-98	54
1316	Hierarchical Nanoroll-like MoS2/Ti3C2Tx hybrid with high electrocatalytic hydrogen evolution activity. 2019 , 241, 89-94	145
1315	Exploring adsorption behavior and oxidation mechanism of mercury on monolayer Ti2CO2 (MXenes) from first principles. 2019 , 464, 53-60	25
1314	Boosting the cycling stability of transition metal compounds-based supercapacitors. 2019 , 16, 545-573	288

1313	Understanding the Lithium Storage Mechanism of Ti3C2Tx MXene. 2019 , 123, 1099-1109	71
1312	Two-dimensional titanium carbide MXenes as efficient non-noble metal electrocatalysts for oxygen reduction reaction. 2019 , 62, 662-670	44
1311	Electrical promotion of spatially photoinduced charge separation via interfacial-built-in quasi-alloying effect in hierarchical Zn2In2S5/Ti3C2(O, OH)x hybrids toward efficient photocatalytic hydrogen evolution and environmental remediation. 2019 , 245, 290-301	155
1310	Assembling 2D MXenes into Highly Stable Pseudocapacitive Electrodes with High Power and Energy Densities. 2019 , 31, e1806931	160
1309	A BiVO4 film photoanode with re-annealing treatment and 2D thin Ti3C2TX flakes decoration for enhanced photoelectrochemical water oxidation. 2019 , 361, 853-861	36
1308	Stabilities and electronic properties of vacancy-doped Ti2CO2. 2019 , 159, 127-135	10
1307	Influence of composition and grain size on the damage evolution in MAX phases investigated by acoustic emission. 2019 , 743, 114-122	7
1306	Theoretical Investigation: 2D N-Graphdiyne Nanosheets as Promising Anode Materials for Li/Na Rechargeable Storage Devices. 2019 , 2, 127-135	40
1305	MoC/graphene heterostructures: low temperature chemical vapor deposition on liquid bimetallic Sn-Cu and hydrogen evolution reaction electrocatalytic properties. 2019 , 30, 125401	28
1304	Progress and perspective on two-dimensional unilamellar metal oxide nanosheets and tailored nanostructures from them for electrochemical energy storage. 2019 , 19, 281-298	17
1303	Hierarchical MoS2 nanosheets integrated Ti3C2 MXenes for electrocatalytic hydrogen evolution. 2019 , 44, 965-976	76
1302	Hierarchical 3D electrodes for electrochemical energy storage. <i>Nature Reviews Materials</i> , 2019 , 4, 45-60	73.3 360
1301	Colloidally Stable Monolayer Nanosheets with Colorimetric Responses. 2019 , 15, e1804975	23
1300	Hybrid energy storage devices: Advanced electrode materials and matching principles. 2019 , 21, 22-40	105
1299	MXene-Conducting Polymer Asymmetric Pseudocapacitors. 2019 , 9, 1802917	164
1298	Bioinspired Ultrasensitive and Stretchable MXene-Based Strain Sensor via Nacre-Mimetic Microscale "Brick-and-Mortar" Architecture. 2019 , 13, 649-659	202
1297	Hydrophilic and hydrophobic pores in reduced graphene oxide aerogel. 2019 , 26, 1111-1119	11
1296	Hydration of Ti3C2Tx MXene: An Interstratification Process with Major Implications on Physical Properties. 2019 , 31, 454-461	33

1295	Single-layer planar penta-X ₂ N ₄ (X = Ni, Pd and Pt) as direct-bandgap semiconductors from first principle calculations. 2019 , 469, 456-462	23
1294	Mixed ternary transition metal nitrides: A comprehensive review of synthesis, electronic structure, and properties of engineering relevance. 2019 , 53, 1-26	34
1293	Cobalt decorated ultra-thin Ti ₃ C ₂ MXene electrocatalyst for high-efficiency hydrogen evolution reaction. 2019 , 6, 025056	8
1292	Ultra-efficient electromagnetic wave absorption with ethanol-thermally treated two-dimensional NbCT nanosheets. 2019 , 537, 306-315	35
1291	Bipolar carbide-carbon high voltage aqueous lithium-ion capacitors. 2019 , 56, 151-159	50
1290	Three dimensional hierarchical network structure of S-NiFe ₂ O ₄ modified few-layer titanium carbides (MXene) flakes on nickel foam as a high efficient electrocatalyst for oxygen evolution. 2019 , 296, 762-770	42
1289	2D MXenes: Electromagnetic property for microwave absorption and electromagnetic interference shielding. 2019 , 359, 1265-1302	418
1288	Electrocatalysis on ultra-thin 2D electrodes: New concepts and prospects for tailoring reactivity. 2019 , 13, 100-106	10
1287	Nanoindentation of monolayer Ti ₃ C ₂ MXenes via atomistic simulations: The role of composition and defects on strength. 2019 , 157, 168-174	29
1286	Two-dimensional materials for lithium/sodium-ion capacitors. 2019 , 11, 30-45	63
1285	US-Czech conference strengthens bilateral and multidisciplinary collaborations in nanotechnology and chemistry. 2019 , 30, 052501	
1284	Theoretical investigations of TiNbC MXenes as anode materials for Li-ion batteries. 2019 , 778, 53-60	27
1283	Comparative study on electrosorptive behavior of NH ₄ HF ₂ -etched Ti ₃ C ₂ and HF-etched Ti ₃ C ₂ for capacitive deionization. 2019 , 25, 727-735	20
1282	Study on the effect of liquid nitrogen cold-quenching on electrochemical characteristic of TiO ₂ complex flakes with edged-curved derived from MAX as anode for lithium ion batteries. 2019 , 780, 482-490	3
1281	MXene/reduced graphene oxide hydrogel film extraction combined with gas chromatography-tandem mass spectrometry for the determination of 16 polycyclic aromatic hydrocarbons in river and tap water. 2019 , 1584, 24-32	15
1280	MXene-Enabled Electrochemical Microfluidic Biosensor: Applications toward Multicomponent Continuous Monitoring in Whole Blood. 2019 , 29, 1807326	194
1279	Facile mechanism to induce topological transition in MXene. 2019 , 473, 597-602	3
1278	First-principles investigation of native point defects in two-dimensional Ti ₃ C ₂ . 2019 , 1150, 26-39	6

1277	Enhancing Lithium Adsorption and Diffusion toward Extraordinary Lithium Storage Capability of Freestanding Ti ₃ C ₂ Tx MXene. 2019 , 123, 2792-2800	29
1276	Surface-Engineered MXenes: Electric Field Control of Magnetism and Enhanced Magnetic Anisotropy. 2019 , 13, 2831-2839	75
1275	Two-Dimensional Anode Materials for Non-lithium Metal-Ion Batteries. 2019 , 2, 932-955	49
1274	MZI-Based All-Optical Modulator Using MXene Ti ₃ C ₂ Tx (T = F, O, or OH) Deposited Microfiber. 2019 , 4, 1800532	69
1273	Probing the Domain Architecture in 2D E ₁ g MoC via Polarized Raman Spectroscopy. 2019 , 31, e1807160	35
1272	Enhanced electrochemical performances of organ-like Ti ₃ C ₂ MXenes/polypyrrole composites as supercapacitors electrode materials. 2019 , 45, 7328-7337	54
1271	Two-dimensional-related catalytic materials for solar-driven conversion of CO into valuable chemical feedstocks. 2019 , 48, 1972-2010	233
1270	Synthesis and Characterization of Reduced Graphene Oxide and Their Application in Dye-Sensitized Solar Cells. 2019 , 3, 7	17
1269	Hypoxia-Irrelevant Photonic Thermodynamic Cancer Nanomedicine. 2019 , 13, 2223-2235	77
1268	Surface interactions between 2D Ti ₃ C ₂ /Ti ₂ C MXenes and lysozyme. 2019 , 473, 409-418	50
1267	Process Safety Analysis for Ti ₃ C ₂ Tx MXene Synthesis and Processing. 2019 , 58, 1570-1579	44
1266	Achieving Fast Kinetics and Enhanced Li Storage Capacity for Ti ₃ C ₂ O ₂ by Intercalation of Quinone Molecules. 2019 , 2, 1251-1258	15
1265	Two-dimensional metal-organic framework and covalent-organic framework: synthesis and their energy-related applications. 2019 , 12, 34-60	69
1264	Grain Boundaries and Tilt-Angle-Dependent Transport Properties of a 2D MoC Superconductor. 2019 , 19, 857-865	13
1263	Achieving Highly Efficient Catalysts for Hydrogen Evolution Reaction by Electronic State Modification of Platinum on Versatile Ti ₃ C ₂ Tx (MXene). 2019 , 7, 4266-4273	44
1262	Nonmetallic Materials for Plasmonic Hot Carrier Excitation. 2019 , 7, 1800603	32
1261	Density functional investigation on hexagonal nanosheets and bulk thallium nitrides for possible thermoelectric applications. 2019 , 9, 33-42	6
1260	2D Transition Metal Carbides (MXenes) for Carbon Capture. 2019 , 31, e1805472	108

1259	Review of MXenes as new nanomaterials for energy storage/delivery and selected environmental applications. 2019 , 12, 471-487	248
1258	High-Voltage Supercapacitors Based on Aqueous Electrolytes. 2019 , 6, 976-988	79
1257	Review on Nanoarchitected Current Collectors for Pseudocapacitors. 2019 , 3, 1800341	28
1256	Crosslinked P84 copolyimide/MXene mixed matrix membrane with excellent solvent resistance and permselectivity. 2019 , 27, 877-883	26
1255	Termination Effects of Pt/v-Ti C T MXene Surfaces for Oxygen Reduction Reaction Catalysis. 2019 , 11, 1638-1644	53
1254	Strategies and insights towards the intrinsic capacitive properties of MnO ₂ for supercapacitors: Challenges and perspectives. 2019 , 57, 459-472	144
1253	Nonmetallic Atoms Induced Magnetic Anisotropy in Monolayer Chromium Trihalides. 2019 , 123, 691-697	18
1252	Multifunctional Two-Dimensional Core-Shell MXene@Gold Nanocomposites for Enhanced Photo-Radio Combined Therapy in the Second Biological Window. 2019 , 13, 284-294	148
1251	Computational Screening of MXene Electrodes for Pseudocapacitive Energy Storage. 2019 , 123, 315-321	47
1250	High Energy Density Micro-Supercapacitor Based on a Three-Dimensional Bicontinuous Porous Carbon with Interconnected Hierarchical Pores. 2019 , 11, 948-956	26
1249	Hierarchical supercapacitor electrodes based on metallized glass fiber for ultrahigh areal capacitance. 2019 , 20, 315-323	10
1248	Solid-state energy storage devices based on two-dimensional nano-materials. 2019 , 20, 269-290	36
1247	Palladium Dimer Supported on Mo ₂ CO ₂ (MXene) for Direct Methane to Methanol Conversion. 2019 , 2, 1800158	16
1246	Atomic Sn ⁴⁺ Decorated into Vanadium Carbide MXene Interlayers for Superior Lithium Storage. 2019 , 9, 1802977	71
1245	Probing the electrochemistry of MXene (Ti ₂ CTx)/electrolytic manganese dioxide (EMD) composites as anode materials for lithium-ion batteries. 2019 , 297, 961-973	22
1244	Quantum chemistry of the oxygen reduction reaction (ORR) on Fe-G iron doped graphene for fuel cells. 2019 , 44, 12439-12445	12
1243	Preparation and electrochemical performance of modified Ti ₃ C ₂ Tx/polypyrrole composites. 2019 , 136, 47003	8
1242	MXene: A New Trend in 2D Materials Science. 2019 , 319-330	12

1241	Structure and Chemistry of 2D Materials. 2019 , 55-90	3
1240	Structural Design and Electronic Modulation of Transition-Metal-Carbide Electrocatalysts toward Efficient Hydrogen Evolution. 2019 , 31, e1802880	267
1239	Insights Into Interfacial Interaction and Its Influence on the Electronic and Optical Properties of Two-Dimensional WS ₂ /TX ₂ CO ₂ (TX = Ti, Zr) van der Waals Heterostructures. 2019 , 256, 1800377	1
1238	Surface and Heterointerface Engineering of 2D MXenes and Their Nanocomposites: Insights into Electro- and Photocatalysis. 2019 , 5, 18-50	365
1237	Metal Phosphorous Trichalcogenides (MPCh): From Synthesis to Contemporary Energy Challenges. 2019 , 58, 9326-9337	46
1236	Metall-Phosphor-Trichalkogenide (MPCh ₃): von der Synthese zu aktuellen Energieanwendungen. 2019 , 131, 9426-9438	3
1235	Synthesis of Ti ₂ CT MXene as electrode materials for symmetric supercapacitor with capable volumetric capacitance. 2019 , 31, 11-18	46
1234	Graphene and MXene-based transparent conductive electrodes and supercapacitors. 2019 , 16, 102-125	217
1233	Three-dimensional Cu ₂ O nanorods modified by hydrogen treated Ti ₃ C ₂ TX MXene with enriched oxygen vacancies as a photocathode and a tandem cell for unassisted solar water splitting. 2020 , 381, 122001	31
1232	Recent Development of Printed Micro-Supercapacitors: Printable Materials, Printing Technologies, and Perspectives. 2020 , 32, e1805864	82
1231	Confined Synthesis of 2D Nanostructured Materials toward Electrocatalysis. 2020 , 10, 1900486	70
1230	Electrode materials for biomedical patchable and implantable energy storage devices. 2020 , 24, 113-128	23
1229	Hexagonal boron nitride adsorbent: Synthesis, performance tailoring and applications. 2020 , 40, 99-111	30
1228	Strategien für kostengünstige und leistungsstarke Dual-Ionen-Batterien. 2020 , 132, 3830-3861	24
1227	Strategies towards Low-Cost Dual-Ion Batteries with High Performance. 2020 , 59, 3802-3832	155
1226	Carbon nanotubes enhance flexible MXene films for high-rate supercapacitors. 2020 , 55, 1148-1156	38
1225	Intriguing of two-dimensional Janus surface-functionalized MXenes: An ab initio calculation. 2020 , 171, 109231	31
1224	Porous nitrogen-doped MXene-based electrodes for capacitive deionization. 2020 , 25, 731-739	67

1223	Highly efficient catalytic performances of nitro compounds via hierarchical PdNPs-loaded MXene/polymer nanocomposites synthesized through electrospinning strategy for wastewater treatment. 2020 , 31, 992-995	65
1222	Pt immobilized spontaneously on porous MXene/MAX hybrid monolith for hydrogen evolution reaction. 2020 , 31, 988-991	20
1221	Pressure-induced band engineering, work function and optical properties of surface F-functionalized Sc ₂ C MXene. 2020 , 137, 109218	9
1220	Excellent oxidation resistive MXene aqueous ink for micro-supercapacitor application. 2020 , 25, 563-571	124
1219	Ti ₃ C ₂ T _x MXene/graphene nanocomposites: Synthesis and application in electrochemical energy storage. 2020 , 815, 152403	43
1218	Achieving high energy density and high power density with pseudocapacitive materials. <i>Nature Reviews Materials</i> , 2020 , 5, 5-19	73-3 542
1217	Mechanical properties and frictional resistance of Al composites reinforced with Ti ₃ C ₂ T MXene. 2020 , 31, 996-999	37
1216	Mixed analogous heterostructure based on MXene and prussian blue analog derivative for high-performance flexible energy storage. 2020 , 387, 123170	18
1215	MXenes as promising catalysts for water dissociation. 2020 , 260, 118191	49
1214	Catalytic performance of 2D-Mxene nano-sheets for the hydrodeoxygenation (HDO) of lignin-derived model compounds. 2020 , 133, 105833	19
1213	Direct deposition of two-dimensional MXene nanosheets on commercially available filter for fast and efficient dye removal. 2020 , 384, 121367	51
1212	Diffusion-controlled intercalation approach to synthesize the Ti ₂ AlC MAX phase coatings at low temperature of 550 °C. 2020 , 502, 144130	10
1211	2D/2D BiOBr/Ti ₃ C ₂ heterojunction with dual applications in both water detoxification and water splitting. 2020 , 386, 112099	32
1210	W ₁₈ O ₄₉ /Ti ₃ C ₂ T _x Mxene nanocomposites for highly sensitive acetone gas sensor with low detection limit. 2020 , 304, 127274	93
1209	Going green with batteries and supercapacitor: Two dimensional materials and their nanocomposites based energy storage applications. 2020 , 58, 100254	46
1208	Multifunctional Transition Metal-Based Phosphides in Energy-Related Electrocatalysis. 2020 , 10, 1902104	174
1207	2 D MXene-based Energy Storage Materials: Interfacial Structure Design and Functionalization. 2020 , 13, 1409-1419	43
1206	Strongly Coupled MoS Nanocrystal/Ti C Nanosheet Hybrids Enable High-Capacity Lithium-Ion Storage. 2020 , 13, 1485-1490	17

1205	Nb ₂ SiTe ₄ and Nb ₂ GeTe ₄ : Unexplored 2D Ternary Layered Tellurides with High Stability, Narrow Band Gap and High Electron Mobility. 2020 , 49, 959-968	16
1204	Enhancing the magnetism of 2D carbide MXene Ti ₃ C ₂ Tx by H ₂ annealing. 2020 , 157, 90-96	22
1203	Novel room-temperature ferromagnetism in Gd-doped 2-dimensional Ti ₃ C ₂ Tx MXene semiconductor for spintronics. 2020 , 497, 165954	23
1202	Recent nanosheet-based materials for monovalent and multivalent ions storage. 2020 , 25, 382-403	11
1201	Emerging 2D Layered Materials for Perovskite Solar Cells. 2020 , 10, 1902253	40
1200	Non - electrochemical Na ⁺ intercalation from O ₃ NaVO ₂ . 2020 , 121, 110586	3
1199	Converting a thick electrode into vertically aligned thin electrodes by 3D-Printing for designing thickness independent Li-S cathode. 2020 , 24, 682-688	40
1198	Functional Inks for Printable Energy Storage Applications based on 2 D Materials. 2020 , 13, 1330-1353	17
1197	MXene/chitosan nanocoating for flexible polyurethane foam towards remarkable fire hazards reductions. 2020 , 381, 120952	112
1196	2 D Materials for Inhibiting the Shuttle Effect in Advanced Lithium-Sulfur Batteries. 2020 , 13, 1447-1479	30
1195	Recent advances in chemical adsorption and catalytic conversion materials for LiS batteries. 2020 , 42, 144-168	113
1194	1D Supercapacitors for Emerging Electronics: Current Status and Future Directions. 2020 , 32, e1902387	96
1193	2D Nanomaterials for Cancer Theranostic Applications. 2020 , 32, e1902333	193
1192	Wearable Electronics Based on 2D Materials for Human Physiological Information Detection. 2020 , 16, e1901124	52
1191	Recent advances in integration of 2D materials with soft matter for multifunctional robotic materials. 2020 , 7, 54-70	30
1190	A lightweight and conductive MXene/graphene hybrid foam for superior electromagnetic interference shielding. 2020 , 381, 122696	161
1189	Novel FeO/MXene nanocomposite as heterogeneous activator of peroxymonosulfate for the degradation of salicylic acid. 2020 , 382, 121064	97
1188	The correlation between structure, multifunctional properties and application of PVD MAX phase coatings. Part III. Multifunctional applications. 2020 , 36, 303-325	2

1187	Pebax-Based Membrane Filled with Two-Dimensional Mxene Nanosheets for Efficient CO Capture. 2020 , 15, 2364-2370	27
1186	Rolling up MXene sheets into scrolls to promote their anode performance in lithium-ion batteries. 2020 , 46, 256-263	29
1185	Ultrahigh Sensitivity Surface Plasmon ResonanceBased Fiber-Optic Sensors Using Metal-Graphene Layers with Ti3C2Tx MXene Overlayers. 2020 , 15, 457-466	11
1184	Sonochemical self-growth of functionalized titanium carbide nanorods on Ti3C2 nanosheets for high capacity anode for lithium-ion batteries. 2020 , 181, 107583	23
1183	Boosting the photocatalytic activity of CdLa2S4 for hydrogen production using Ti3C2 MXene as a co-catalyst. 2020 , 267, 118379	66
1182	3D TiO2@nitrogen-doped carbon/Fe7S8 composite derived from polypyrrole-encapsulated alkalized MXene as anode material for high-performance lithium-ion batteries. 2020 , 385, 123394	76
1181	Facile fabrication of flexible rGO/MXene hybrid fiber-like electrode with high volumetric capacitance. 2020 , 448, 227398	30
1180	Energy- and cost-efficient NaCl-assisted synthesis of MAX-phase Ti3AlC2 at lower temperature. 2020 , 46, 6934-6939	21
1179	Mass production of 2D materials by intermediate-assisted grinding exfoliation. 2020 , 7, 324-332	50
1178	Formation of Nitrogen-Doped Carbon-Coated CoP Nanoparticles Embedded within Graphene Oxide for Lithium-Ion Batteries Anode. 2020 , 8, 1901089	10
1177	Advanced Materials for Sodium-Ion Capacitors with Superior Energy-Power Properties: Progress and Perspectives. 2020 , 16, e1902843	21
1176	MXene-Supported FeCo-LDHs as Highly Efficient Catalysts for Enhanced Electrocatalytic Oxygen Evolution Reaction. 2020 , 6, 154-159	25
1175	MXene aerogel-based phase change materials toward solar energy conversion. 2020 , 206, 110229	78
1174	One-dimensional and two-dimensional synergized nanostructures for high-performing energy storage and conversion. 2020 , 2, 3-32	116
1173	Free-standing Ti3C2Tx MXene film as binder-free electrode in capacitive deionization with an ultrahigh desalination capacity. 2020 , 384, 123329	79
1172	Water permeability in MXene membranes: Process matters. 2020 , 31, 1665-1669	13
1171	MXenes induce epitaxial growth of size-controlled noble nanometals: A case study for surface enhanced Raman scattering (SERS). 2020 , 40, 119-127	35
1170	Enhanced gas sensing properties at low working temperature of iron molybdate/MXene composite. 2020 , 817, 152785	22

1169	3D hierarchical transition-metal sulfides deposited on MXene as binder-free electrode for high-performance supercapacitors. 2020 , 82, 309-316	50
1168	MXene and MXene-based composites: synthesis, properties and environment-related applications. 2020 , 5, 235-258	240
1167	Rechargeable Mg metal batteries enabled by a protection layer formed in vivo. 2020 , 26, 408-413	38
1166	Sacrificial Agent-Free Photocatalytic Oxygen Evolution from Water Splitting over Ag ₃ PO ₄ /MXene Hybrids. 2020 , 4, 1900434	33
1165	Recent Advances in Electrocatalytic Hydrogen Evolution Using Nanoparticles. 2020 , 120, 851-918	722
1164	Robust and easily retrievable Pd/Ti ₃ C ₂ Tx ₂ graphene hydrogels for efficient catalytic hydrogenation of nitroaromatic compounds. 2020 , 31, 1014-1017	17
1163	Vanadium-Based Nanomaterials: A Promising Family for Emerging Metal-Ion Batteries. 2020 , 30, 1904398	123
1162	Recent Advances in Two-dimensional Materials for Electrochemical Energy Storage and Conversion. 2020 , 36, 10-23	27
1161	A photo catalyst of cuprous oxide anchored MXene nanosheet for dramatic enhancement of synergistic antibacterial ability. 2020 , 386, 124116	52
1160	Designing Atomic Active Centers for Hydrogen Evolution Electrocatalysts. 2020 , 59, 20794-20812	136
1159	Isotropic Li nucleation and growth achieved by an amorphous liquid metal nucleation seed on MXene framework for dendrite-free Li metal anode. 2020 , 26, 223-233	57
1158	TiCT MXene Interface Layer Driving Ultra-Stable Lithium-Iodine Batteries with Both High Iodine Content and Mass Loading. 2020 , 14, 1176-1184	44
1157	Two-dimensional semiconducting LuCT (T = F, OH) MXene with low work function and high carrier mobility. 2020 , 12, 3795-3802	14
1156	A high-performance trace level acetone sensor using an indispensable VCT MXene.. 2020 , 10, 1261-1270	22
1155	From the perspectives of DFT calculations, thermodynamic modeling, and kinetic Monte Carlo simulations: the interaction between hydrogen and ScC monolayers. 2020 , 22, 4387-4401	2
1154	Mo ₂ B, an MBene member with high electrical and thermal conductivities, and satisfactory performances in lithium ion batteries. 2020 , 2, 347-355	11
1153	Predictive theoretical screening of phase stability for chemical order and disorder in quaternary 312 and 413 MAX phases. 2020 , 12, 785-794	22
1152	Interlayer engineering of TiCT MXenes towards high capacitance supercapacitors. 2020 , 12, 763-771	51

1151	Oxidation-resistant titanium carbide MXene films. 2020 , 8, 573-581	90
1150	Distinguishing electronic contributions of surface and sub-surface transition metal atoms in Ti-based MXenes. 2020 , 7, 025015	17
1149	Point-defect-optimized electron distribution for enhanced electrocatalysis: Towards the perfection of the imperfections. 2020 , 31, 100833	35
1148	Boosting gravimetric and volumetric energy density via engineering macroporous MXene films for supercapacitors. 2020 , 395, 124057	40
1147	Phase Transition Induced Unusual Electrochemical Performance of VCT MXene for Aqueous Zinc Hybrid-Ion Battery. 2020 , 14, 541-551	99
1146	3D Printing of Additive-Free 2D TiCT (MXene) Ink for Fabrication of Micro-Supercapacitors with Ultra-High Energy Densities. 2020 , 14, 640-650	142
1145	Rational design of two-dimensional nanomaterials for lithium-sulfur batteries. 2020 , 13, 1049-1075	156
1144	A novel all solid-state asymmetric supercapacitor with superior electrochemical performance in a wide temperature range using a hydroquinone modified graphene xerogel as the cathode and N-doped Ti3C2Tx as the anode. 2020 , 8, 1687-1696	20
1143	Aqueous electrocatalytic N2 reduction for ambient NH3 synthesis: recent advances in catalyst development and performance improvement. 2020 , 8, 1545-1556	158
1142	Electrically conductive aluminum ion-reinforced MXene films for efficient electromagnetic interference shielding. 2020 , 8, 1673-1678	40
1141	Mechanical Exfoliation of Select MAX Phases and Mo Ce Al C Single Crystals to Produce MAXenes. 2020 , 16, e1905784	15
1140	Highly conductive dodecaborate/MXene composites for high performance supercapacitors. 2020 , 13, 196-202	28
1139	Application of atomic layer deposition in fabricating high-efficiency electrocatalysts. 2020 , 41, 227-241	13
1138	Exfoliated Mo2C nanosheets hybridized on CdS with fast electron transfer for efficient photocatalytic H2 production under visible light irradiation. 2020 , 264, 118541	48
1137	Pressure-induced band-gap closure and metallization in two-dimensional transition metal halide CdI2. 2020 , 18, 100532	5
1136	Remarkable hydrogen absorption/desorption behaviors and mechanism of sodium alanates in-situ doped with Ti-based 2D MXene. 2020 , 242, 122529	15
1135	Two-dimensional photocatalyst design: A critical review of recent experimental and computational advances. 2020 , 34, 78-91	116
1134	Scalable, and low-cost treating-cutting-coating manufacture platform for MXene-based on-chip micro-supercapacitors. 2020 , 69, 104431	39

1133	Enhanced Electrochemical Storage Properties of Na- and Mg-Intercalated B-Doped-Graphene Based Heterostructures and Bilayers. 2020 , 124, 1260-1268	4
1132	MXene Surface Terminations Enable Strong Metal-Support Interactions for Efficient Methanol Oxidation on Palladium. 2020 , 12, 2400-2406	38
1131	Pushing Rubbery Polymer Membranes To Be Economic for CO Separation: Embedment with TiCT MXene Nanosheets. 2020 , 12, 3984-3992	43
1130	Solvation-Involved Nanoionics: New Opportunities from 2D Nanomaterial Laminar Membranes. 2020 , 32, e1904562	30
1129	Hollow MXene Sphere/Reduced Graphene Aerogel Composites for Piezoresistive Sensor with Ultra-High Sensitivity. 2020 , 6, 1901064	77
1128	Enhanced Electromagnetic Wave-Absorbing Performance of Magnetic Nanoparticles-Anchored 2D TiCT MXene. 2020 , 12, 2644-2654	98
1127	Ti3C2 MXene-derived carbon-doped TiO2 coupled with g-C3N4 as the visible-light photocatalysts for photocatalytic H2 generation. 2020 , 265, 118539	113
1126	Micromechanical response of two-dimensional transition metal carbonitride (MXene) reinforced epoxy composites. 2020 , 182, 107603	32
1125	Planar supercapacitor with high areal capacitance based on Ti3C2/Polypyrrole composite film. 2020 , 330, 135277	33
1124	Porous MXenes: Synthesis, structures, and applications. 2020 , 30, 100803	115
1123	Pristine Titanium Carbide MXene Films with Environmentally Stable Conductivity and Superior Mechanical Strength. 2020 , 30, 1906996	70
1122	Defect engineering of MnO2 nanosheets by substitutional doping for printable solid-state micro-supercapacitors. 2020 , 68, 104306	47
1121	Quantifying the rigidity of 2D carbides (MXenes). 2020 , 22, 2115-2121	15
1120	Construction of hierarchical VC-MXene/MoS/C nanohybrids for high rate lithium-ion batteries. 2020 , 12, 1144-1154	47
1119	Strain-tunable electronic properties and lithium storage of 2D transition metal carbide (MXene) Ti2CO2 as a flexible electrode. 2020 , 8, 760-769	15
1118	Recent progress in TiO2-based photocatalysts for hydrogen evolution reaction: A review. 2020 , 13, 3653-3671	58
1117	The effects of native defects and carbon dopant on ALP nanosheet. 2020 , 173, 109458	1
1116	Recent Progress in Artificial Synapses Based on Two-Dimensional van der Waals Materials for Brain-Inspired Computing. 2020 , 2, 371-388	51

1115	MXene-derived three-dimensional carbon nanotube network encapsulate CoS ₂ nanoparticles as an anode material for solid-state sodium-ion batteries. 2020 , 8, 3018-3026	19
1114	Hierarchical Porous RGO/PEDOT/PANI Hybrid for Planar/Linear Supercapacitor with Outstanding Flexibility and Stability. 2020 , 12, 17	27
1113	Orderly layer-by-layered TiO ₂ /carbon superstructures based on MXene's defect engineering for efficient hydrogen evolution. 2020 , 590, 117341	27
1112	Recent progress of MXenes as the support of catalysts for the CO oxidation and oxygen reduction reaction. 2020 , 31, 931-936	17
1111	Recent advances of two-dimensional transition metal nitrides for energy storage and conversion applications. 2020 , 19, 100149	31
1110	Mo _{1.33} C MXene-Assisted PEDOT:PSS Hole Transport Layer for High-Performance Bulk-Heterojunction Polymer Solar Cells. 2020 , 2, 163-169	14
1109	All Two-Dimensional Pseudocapacitive Sheet Materials for Flexible Asymmetric Solid-State Planar Microsupercapacitors with High Energy Density. 2020 , 14, 603-610	33
1108	Two-Dimensional Transition Metal Carbides and Nitrides (MXenes): Synthesis, Properties, and Electrochemical Energy Storage Applications. 2020 , 3, 29-55	148
1107	Designing Highly Conductive Functional Groups Improving Guest-Host Interactions in Li/S Batteries. 2020 , 16, e1905585	21
1106	Lattice dynamical and thermo-elastic properties of M ₂ AlB (M' = V, Nb, Ta) MAX phase borides. 2020 , 819, 153256	21
1105	Dynamical Control over Terahertz Electromagnetic Interference Shielding with 2D TiCT MXene by Ultrafast Optical Pulses. 2020 , 20, 636-643	43
1104	Remarkable differences in the voltammetric response towards hydrogen peroxide, oxygen and Ru(NH ₃) ₆ ³⁺ of electrode interfaces modified with HF or LiF-HCl etched TiCT MXene. 2019 , 187, 52	10
1103	Ultrafast kinetics net electrode assembled via MoSe ₂ /MXene heterojunction for high-performance sodium-ion batteries. 2020 , 385, 123839	84
1102	Influence of operating conditions on the desalination performance of a symmetric pre-conditioned Ti ₃ C ₂ T _x -MXene membrane capacitive deionization system. 2020 , 477, 114267	35
1101	Recent Advances in MXenes for Lithium-Ion Capacitors. 2020 , 5, 75-82	30
1100	Ti ₂ CT _x MXene-based all-optical modulator. 2020 , 2, 601-609	28
1099	Highly safe and ionothermal synthesis of Ti ₃ C ₂ MXene with expanded interlayer spacing for enhanced lithium storage. 2020 , 47, 203-209	36
1098	Investigation of adjacent spacing dependent microwave absorption properties of lamellar structural Ti ₃ C ₂ T _x MXenes. 2020 , 31, 808-815	29

1097	Structural, mechanical and electronic properties of two-dimensional chlorine-terminated transition metal carbides and nitrides. 2020 , 32, 135302	6
1096	Synthesis, characterizations, and biocompatibility evaluation of polycaprolactone/MXene electrospun fibers. 2020 , 586, 124282	19
1095	The preparation of V2CTx by facile hydrothermal-assisted etching processing and its performance in lithium-ion battery. 2020 , 9, 984-993	27
1094	Proton Redox and Transport in MXene-Confined Water. 2020 , 12, 763-770	18
1093	Synthesis of MoVAIC MAX Phase and Two-Dimensional MoVC MXene with Five Atomic Layers of Transition Metals. 2020 , 14, 204-217	198
1092	A composite film prepared from titanium carbide TiCT (MXene) and gold nanoparticles for voltammetric determination of uric acid and folic acid. 2019 , 187, 33	25
1091	A facile method to produce MoSe2/MXene hybrid nanoflowers with enhanced electrocatalytic activity for hydrogen evolution. 2020 , 856, 113727	19
1090	Layered Metal Hydroxides and Their Derivatives: Controllable Synthesis, Chemical Exfoliation, and Electrocatalytic Applications. 2020 , 10, 1902535	48
1089	Recent Advances in Chemical Functionalization of 2D Black Phosphorous Nanosheets. 2020 , 7, 1902359	44
1088	Facile CO Oxidation on Oxygen-functionalized MXenes via the Mars-van Krevelen Mechanism. 2020 , 12, 1007-1012	2
1087	Exploits, advances and challenges benefiting beyond Li-ion battery technologies. 2020 , 817, 153261	79
1086	Ultrathin Co-Co LDHs nanosheets assembled vertically on MXene: 3D nanoarrays for boosted visible-light-driven CO2 reduction. 2020 , 391, 123519	61
1085	Ultrastrong and Highly Conductive MXene-Based Films for High-Performance Electromagnetic Interference Shielding. 2020 , 6, 1901094	59
1084	Ti3C2T /PEDOT:PSS hybrid materials for room-temperature methanol sensor. 2020 , 31, 1018-1021	31
1083	Electrospun generation of Ti3C2Tx MXene@graphene oxide hybrid aerogel microspheres for tunable high-performance microwave absorption. 2020 , 391, 123512	91
1082	Interface design based on Ti3C2 MXene atomic layers of advanced battery-type material for supercapacitors. 2020 , 26, 472-482	61
1081	Ultrathin 2D TiCT MXene membrane for effective separation of oil-in-water emulsions in acidic, alkaline, and salty environment. 2020 , 561, 861-869	45
1080	2D MXene-Integrated 3D-Printing Scaffolds for Augmented Osteosarcoma Phototherapy and Accelerated Tissue Reconstruction. 2020 , 7, 1901511	86

1079	A theoretical approach to improve the performance of SPR biosensor using MXene and black phosphorus. 2020 , 203, 163430	39
1078	MXetronics: MXene-Enabled Electronic and Photonic Devices. 2020 , 2, 55-70	78
1077	Nanoscale zero-valent iron intercalated 2D titanium carbides for removal of Cr(VI) in aqueous solution and the mechanistic aspect. 2020 , 388, 121761	30
1076	Tunable electronic and optical properties of SnC/BAs heterostructure by external electric field and vertical strain. 2020 , 384, 126150	5
1075	MXene Tunable Lamellae Architectures for Supercapacitor Electrodes. 2020 , 3, 411-422	21
1074	Super strong 2D titanium carbide MXene-based materials: a theoretical prediction. 2020 , 32, 11LT01	8
1073	Recent advances in 2D MXenes for enhanced cation intercalation in energy harvesting Applications: A review. 2020 , 392, 123678	73
1072	Introduction. 2020 , 1-35	1
1071	MXenesA new class of 2D layered materials: Synthesis, properties, applications as supercapacitor electrode and beyond. 2020 , 18, 100509	44
1070	Emerging Soft Conductors for Bioelectronic Interfaces. 2020 , 30, 1907184	38
1069	MXene-Based Dendrite-Free Potassium Metal Batteries. 2020 , 32, e1906739	130
1068	Thermal-triggered insulating fireproof layers: A novel fire-extinguishing MXene composites coating. 2020 , 391, 123621	65
1067	Nanosheets assembled layered MoS ₂ /MXene as high performance anode materials for potassium ion batteries. 2020 , 449, 227481	76
1066	2D organ-like molybdenum carbide (MXene) coupled with MoS ₂ nanoflowers enhances the catalytic activity in the hydrogen evolution reaction. 2020 , 22, 1395-1403	30
1065	Anomalous lattice thermal conductivity in layered MNCl (M = Zr, Hf) materials driven by lanthanide contraction. 2020 , 8, 3128-3134	7
1064	ReviewRecent Exploration of Two-Dimensional MXenes for Gas Sensing: From a Theoretical to an Experimental View. 2020 , 167, 037515	40
1063	Assembly of MXene/PP Separator and Its Enhancement for Ni-Rich LiNiCoMnO Electrochemical Performance. 2020 , 12,	12
1062	The tunable electric and magnetic properties of 2D MXenes and their potential applications. 2020 , 1, 3104-3121	16

- ¹⁰⁶¹ Free-Standing Nanostructured Architecture as a Promising Platform for High-Performance LithiumSulfur Batteries. **2020**, 1, 2000047 28
- ¹⁰⁶⁰ The Recent Advances in the Mechanical Properties of Self-Standing Two-Dimensional MXene-Based Nanostructures: Deep Insights into the Supercapacitor. **2020**, 10, 28
- ¹⁰⁵⁹ MOF-derived CoFe₂O₄ nanorods anchored in MXene nanosheets for all pseudocapacitive flexible supercapacitors with superior energy storage. **2020**, 534, 147584 27
- ¹⁰⁵⁸ Exploring the Influence of Critical Parameters for the Effective Synthesis of High-Quality 2D MXene. **2020**, 5, 26845-26854 16
- ¹⁰⁵⁷ Interwoven Nanowire Based On-Chip Asymmetric Microsupercapacitor with High Integrability, Areal Energy, and Power Density. **2020**, 10, 2001873 18
- ¹⁰⁵⁶ Using a Dynamic Inhibition Concept to Achieve Content-Controllable Synthesis of N-Coordinated Cu Atoms as Reversible Active Site toward Super Li-Ion Capacitors. **2020**, 10, 2002644 11
- ¹⁰⁵⁵ Effects of functional groups and anion size on the charging mechanisms in layered electrode materials. **2020**, 33, 460-469 12
- ¹⁰⁵⁴ Unique cellular network formation guided by heterostructures based on reduced graphene oxide - TiCT MXene hydrogels. **2020**, 115, 104-115 15
- ¹⁰⁵³ Rational design of vanadium chalcogenides for sodium-ion batteries. **2020**, 478, 228769 9
- ¹⁰⁵² Lithium Metal-Based Composite: An Emerging Material for Next-Generation Batteries. **2020**, 3, 1009-1030 12
- ¹⁰⁵¹ In Situ Dynamics during Heating of Copper-Intercalated Bismuth Telluride. **2020**, 3, 1246-1262 7
- ¹⁰⁵⁰ Black Phosphorus: Degradation Mechanism, Passivation Method, and Application for In Situ Tissue Regeneration. **2020**, 7, 2001538 12
- ¹⁰⁴⁹ High-Performance Flexible Electrochemical Heavy Metal Sensor Based on Layer-by-Layer Assembly of TiCT/MWNTs Nanocomposites for Noninvasive Detection of Copper and Zinc Ions in Human Biofluids. **2020**, 12, 48928-48937 30
- ¹⁰⁴⁸ Structural Engineering and Coupling of Two-Dimensional Transition Metal Compounds for Micro-Supercapacitor Electrodes. **2020**, 6, 1901-1915 17
- ¹⁰⁴⁷ Strong sequentially bridged MXene sheets. **2020**, 117, 27154-27161 50
- ¹⁰⁴⁶ In-situ SEM compression of accordion-like multilayer MXenes. **2020**, 41, 101054 1
- ¹⁰⁴⁵ Durable Supercapattery Film with Dual-Branched Dense Hexagonal Fe(II)-Based Coordination Nanosheets for Flexible Power Sources. **2020**, 3, 10653-10659 1
- ¹⁰⁴⁴ Performance of ion intercalation materials in capacitive deionization/electrochemical deionization: A review. **2020**, 878, 114588 10

1043	On the Capacities of Freestanding Vanadium Pentoxide/Carbon Nanotube/Nanocellulose Paper Electrodes for Charge Storage Applications. 2020 , 8, 2000731	4
1042	An Electrodeposited MXene-TiCT Nanosheets Functionalized by Task-Specific Ionic Liquid for Simultaneous and Multiplexed Detection of Bladder Cancer Biomarkers. 2020 , 16, e2002517	18
1041	Biomimetic, biocompatible and robust silk Fibroin-MXene film with stable 3D cross-link structure for flexible pressure sensors. 2020 , 78, 105252	74
1040	Theoretical and Experimental Studies of TiC MXene for Surface-Enhanced Raman Spectroscopy-Based Sensing. 2020 , 5, 26486-26496	17
1039	Double transition-metal MXenes: Atomistic design of two-dimensional carbides and nitrides. 2020 , 45, 850-861	37
1038	Theoretical study on the electrical and mechanical properties of MXene multilayer structures through strain regulation. 2020 , 760, 137997	6
1037	Self-assembled materials for electrochemical energy storage. 2020 , 45, 815-822	5
1036	Ti3C2 MXene as an Energy band bridge to regulate the heterointerface mass transfer and electron reversible exchange process for LIB batteries. 2020 , 8, 25255-25267	36
1035	Sonication-induced electrostatic assembly of an FeCO3@Ti3C2 nanocomposite for robust lithium storage. 2020 , 8, 23498-23510	10
1034	Faradaic Electrodes Open a New Era for Capacitive Deionization. 2020 , 7, 2002213	28
1033	Polymer Grafting of Boron Nitride Nanosheets via Reduction Chemistry and Their Reinforcement for Polymeric Composite. 2020 , 305, 2000450	1
1032	Two-dimensional organic-inorganic heterostructures of in situ-grown layered COF on Ti3C2 MXene nanosheets for lithium-sulfur batteries. 2020 , 35, 100991	34
1031	Theoretical Prediction and Synthesis of a Family of Atomic Laminate Metal Borides with In-Plane Chemical Ordering. 2020 , 142, 18583-18591	15
1030	Two-dimensional materials as novel co-catalysts for efficient solar-driven hydrogen production. 2020 , 8, 23202-23230	36
1029	Two-Dimensional Near-Atom-Thickness Materials for Emerging Neuromorphic Devices and Applications. 2020 , 23, 101676	21
1028	Noble-metal-free electrocatalysts toward H2O2 production. 2020 , 8, 23123-23141	53
1027	Enhancing the conductivity, stability and flexibility of Ti3C2Tx MXenes by regulating etching conditions. 2020 , 533, 147475	4
1026	Achieving multiplexed functionality in a hierarchical MXene-based sulfur host for high-rate, high-loading lithium-sulfur batteries. 2020 , 33, 147-157	36

1025	Low-Temperature pseudocapacitive energy storage in Ti ₃ C ₂ T MXene. 2020 , 33, 382-389	24
1024	Unlocking photoredox selective organic transformation over metal-free 2D transition metal chalcogenides-MXene heterostructures. 2020 , 391, 485-496	15
1023	Chemical-Combined Ball-Milling Synthesis of Fluorine-Free Porous MXene for High-Performance Lithium Ion Batteries. 2020 , 3, 10234-10241	18
1022	Photocatalytic Applications of Two-Dimensional Ti ₃ C ₂ MXenes: A Review. 2020 , 3, 9581-9603	58
1021	Regulating Electron-Hole Separation to Promote Photocatalytic H Evolution Activity of Nanoconfined Ru/MXene/TiO Catalysts. 2020 , 14, 14181-14189	74
1020	Construction of a hierarchical carbon nanotube/MXene membrane with distinct fusiform channels for efficient molecular separation. 2020 , 8, 22666-22673	11
1019	Flexible freestanding all-MXene hybrid films with enhanced capacitive performance for powering a flex sensor. 2020 , 8, 16649-16660	20
1018	Designing composite solid-state electrolytes for high performance lithium ion or lithium metal batteries. 2020 , 11, 8686-8707	36
1017	Recent Developments on the Single Atom Supported at 2D Materials Beyond Graphene as Catalysts. 2020 , 10, 9634-9648	49
1016	Niobium Carbide MXenes with Broad-Band Nonlinear Optical Response and Ultrafast Carrier Dynamics. 2020 , 14, 10492-10502	37
1015	Strategies for development of nanoporous materials with 2D building units. 2020 ,	16
1014	Screening effective single-atom ORR and OER electrocatalysts from Pt decorated MXenes by first-principles calculations. 2020 , 8, 17065-17077	28
1013	TiCT MXene-Based Light-Responsive Hydrogel Composite for Bendable Bilayer Photoactuator. 2020 , 10,	5
1012	All-Ti ₃ C ₂ T _x MXene Based Flexible On-chip Microsupercapacitor Array. 2020 , 36, 694-698	7
1011	One MAX phase, different MXenes: A guideline to understand the crucial role of etching conditions on Ti ₃ C ₂ T _x surface chemistry. 2020 , 530, 147209	56
1010	Computational Prediction of Boron-Based MAX Phases and MXene Derivatives. 2020 , 32, 6947-6957	34
1009	Titanium Carbide MXene Nucleation Layer for Epitaxial Growth of High-Quality GaN Nanowires on Amorphous Substrates. 2020 , 14, 2202-2211	5
1008	Impact of strain, pressure, and electron correlation on magnetism and crystal structure of MnGaC from first-principles. 2020 , 10, 11384	4

1007	Electro-Synthesis of Ultrafine V ₂ AlC MAX-Phase and Its Conversion Process towards Two-Dimensional V ₂ CTX. 2020 , 167, 122501	6
1006	Multilayer Ion Load and Diffusion on TMD/MXene Heterostructure Anodes for Alkali-Ion Batteries. 2020 , 3, 7699-7709	11
1005	Predicting a Novel Phase of 2D SiTe. 2020 , 5, 16848-16855	3
1004	Ion sieving by a two-dimensional TiCT alginate lamellar membrane with stable interlayer spacing. 2020 , 11, 3540	63
1003	Surface Charge Engineering for Covalently Assembling Three-Dimensional MXene Network for All-Climate Sodium Ion Batteries. 2020 , 12, 39181-39194	28
1002	Electronic structure engineering on two-dimensional (2D) electrocatalytic materials for oxygen reduction, oxygen evolution, and hydrogen evolution reactions. 2020 , 77, 105080	60
1001	Ti ₃ C ₂ MXene nanosheet/TiO ₂ composites for efficient visible light photocatalytic activity. 2020 , 46, 25895-25904	24
1000	Recent advances in bioelectronics chemistry. 2020 , 49, 7978-8035	30
999	A Comprehensive Review on the Synthesis and Energy Applications of Nano-structured Metal Nitrides. 2020 , 7,	16
998	2D MXene-derived Nb ₂ O ₅ /C/Nb ₂ C/g-C ₃ N ₄ heterojunctions for efficient nitrogen photofixation. 2020 , 10, 5964-5972	26
997	Current Trends in Nanomaterials for Metal Oxide-Based Conductometric Gas Sensors: Advantages and Limitations. Part 1: 1D and 2D Nanostructures. 2020 , 10,	30
996	Printing and coating MXenes for electrochemical energy storage devices. 2020 , 2, 031004	28
995	Treatment-dependent surface chemistry and gas sensing behavior of the thinnest member of titanium carbide MXenes. 2020 , 12, 16987-16994	19
994	High performance photocatalytic and thermoelectric two-dimensional asymmetrically ordered Janus-like MXene alloys. 2020 , 1, 1176-1185	2
993	Synergistic effects of heteroatom-decorated MXene catalysts for CO reduction reactions. 2020 , 12, 15880-15887	3
992	Freeze-assisted Tape Casting of Vertically Aligned MXene Films for High Rate Performance Supercapacitors. 2020 , 3, 380-388	13
991	Trifunctional Single-Atomic Ru Sites Enable Efficient Overall Water Splitting and Oxygen Reduction in Acidic Media. 2020 , 16, e2002888	55
990	Emerging bio-applications of two-dimensional nanoheterostructure materials. 2020 , 243-255	2

989	Recent developments of advanced micro-supercapacitors: design, fabrication and applications. 2020 , 4,	53
988	2D Material Based Advanced Membranes for Separations in Organic Solvents. 2020 , 16, e2003400	11
987	0D/2D MXene Quantum Dot/Ni-MOF Ultrathin Nanosheets for Enhanced N ₂ Photoreduction. 2020 , 8, 17791-17799	26
986	Theoretical Insight on the Biosensing Applications of 2D Materials. 2020 , 124, 11098-11122	7
985	Pseudocapacitive Charge Storage in MXene-VO for Asymmetric Flexible Energy Storage Devices. 2020 , 12, 54791-54797	12
984	A high-throughput assessment of the adsorption capacity and Li-ion diffusion dynamics in Mo-based ordered double-transition-metal MXenes as anode materials for fast-charging LIBs. 2020 , 12, 24510-24526	7
983	Temperature-dependent electron-phonon spectral function and the intrinsic resistivity of a metal: A case study of monolayer Ti ₂ N. 2020 , 102,	
982	Ti ₃ C ₂ T _x MXene Quantum Dots with Enhanced Stability for Ultrafast Photonics. 2020 , 3, 11850-11860	15
981	Humidity-Enabled Ionic Conductive Trace Carbon Dioxide Sensing of Nitrogen-Doped TiCT MXene/Polyethyleneimine Composite Films Decorated with Reduced Graphene Oxide Nanosheets. 2020 , 92, 16033-16042	24
980	CO ₂ capture and conversion to value-added products promoted by MXene-based materials. 2020 ,	13
979	Structures and optoelectronic properties of two-dimensional MC ₆ (M = Ti and Hf) predicted by computational approaches. 2020 , 25, 101606	
978	Precisely Tunable Ion Sieving with an Al-TiCT Lamellar Membrane by Controlling Interlayer Spacing. 2020 , 14, 15306-15316	17
977	Fabrication of a High-Energy Flexible All-Solid-State Supercapacitor Using Pseudocapacitive 2D-TiCT-MXene and Battery-Type Reduced Graphene Oxide/Nickel-Cobalt Bimetal Oxide Electrode Materials. 2020 , 12, 52749-52762	25
976	Maximizing ion accessibility in MXene-knotted carbon nanotube composite electrodes for high-rate electrochemical energy storage. 2020 , 11, 6160	71
975	Electronic Structure Sensitivity to Surface Disorder and Nanometer-Scale Impurity of 2D Titanium Carbide MXene Sheets as Revealed by Electron Energy-Loss Spectroscopy. 2020 , 124, 27071-27081	1
974	Polymeric Ti ₃ C ₂ T _x MXene Composites for Room Temperature Ammonia Sensing. 2020 , 3, 12071-12079	32
973	Bare Mo-Based Ordered Double-Transition Metal MXenes as High-Performance Anode Materials for Aluminum-Ion Batteries. 2020 , 124, 25769-25774	4
972	Annealed Ti ₃ C ₂ T _z MXene Films for Oxidation-Resistant Functional Coatings. 2020 , 3, 10578-10585	11

971	2H-MoS on MoCT MXene Nanohybrid for Efficient and Durable Electrocatalytic Hydrogen Evolution. 2020 , 14, 16140-16155	65
970	Conductive coatings of 2D MXene-in water for electronics applications. 2020 ,	
969	Nonlinear Optical Characterization of 2D Materials. 2020 , 10,	12
968	Electronic and structural characterisation of polycrystalline platinum disulfide thin films.. 2020 , 10, 42001-42007	
967	Electrostatic-Assembled MXene@NiAl-LDHs Electrodes with 3D Interconnected Networks Architectures for High-Performance Pseudocapacitor Storage. 2020 , 7, 2000831	12
966	Strain-tunable electronic properties and optical properties of Hf ₂ CO ₂ MXene. 2020 , 120, e26365	6
965	True Meaning of Pseudocapacitors and Their Performance Metrics: Asymmetric versus Hybrid Supercapacitors. 2020 , 16, e2002806	142
964	Chemical vapor deposition of layered two-dimensional MoSiN materials. 2020 , 369, 670-674	198
963	First-principles exploration of superconductivity in MXenes. 2020 , 12, 17354-17361	9
962	Advances on Emerging Materials for Flexible Supercapacitors: Current Trends and Beyond. 2020 , 30, 2002993	39
961	In Situ Formation of Multiple Schottky Barriers in a Ti ₃ C ₂ MXene Film and its Application in Highly Sensitive Gas Sensors. 2020 , 30, 2003998	52
960	A Review of the Effects of Electrode Fabrication and Assembly Processes on the Structure and Electrochemical Performance of 2D MXenes. 2020 , 30, 2005305	21
959	In Situ Electrochemical Synthesis of MXenes without Acid/Alkali Usage in/for an Aqueous Zinc Ion Battery. 2020 , 10, 2001791	56
958	Adjusting Channel Size within PVA-Based Hydrogels via Ice Templating for Enhanced Solar Steam Generation. 2020 , 3, 9216-9225	11
957	Tunable nonlinear optical responses and carrier dynamics of two-dimensional antimonene nanosheets. 2020 , 5, 1420-1429	6
956	Correlated migration of ions in a 2D heterostructure anode: guaranteeing a low barrier for a high site occupancy. 2020 , 8, 17463-17470	2
955	Emerging 2D MXenes for supercapacitors: status, challenges and prospects. 2020 , 49, 6666-6693	168
954	Mechanotribological Aspects of MXene-Reinforced Nanocomposites. 2020 , 32, e2003154	54

953	Room-Temperature Gas Sensors Under Photoactivation: From Metal Oxides to 2D Materials. 2020 , 12, 164	81
952	Unraveling the Charge Storage Mechanism of Ti3C2Tx MXene Electrode in Acidic Electrolyte. 2020 , 5, 2873-2880	51
951	Rational Design of Two-Dimensional Transition Metal Carbide/Nitride (MXene) Hybrids and Nanocomposites for Catalytic Energy Storage and Conversion. 2020 , 14, 10834-10864	152
950	Rational Design of Titanium Carbide MXene Electrode Architectures for Hybrid Capacitive Deionization. 2020 , 3, 398-404	13
949	Harnessing the unique features of MXenes for sulfur cathodes. 2020 , 2, 162-175	12
948	Two-dimensional metal (oxy)hydroxide and oxide ultrathin nanosheets via liquid phase epitaxy. 2020 , 32, 272-280	6
947	A review on MXene-based nanomaterials as adsorbents in aqueous solution. 2020 , 261, 127781	43
946	Electronic, optical and thermoelectric properties of CaO mono- and bi-layers: Theoretical comparative investigation. 2020 , 218, 165115	1
945	Surface-Related Features Responsible for Cytotoxic Behavior of MXenes Layered Materials Predicted with Machine Learning Approach. 2020 , 13,	10
944	2D Materials Decorated with Ultrathin and Porous Graphene Oxide for High Stability and Selective Surface Activity. 2020 , 32, e2002723	18
943	Unprecedented arsenic photo-oxidation behavior of few- and multi-layer Ti3C2Tx nano-sheets. 2020 , 20, 100769	13
942	Significant effect of base assisted intercalates in synthesis of 2D semiconductor Ti3C2O2. 2020 , 20, 100604	0
941	Molten Salt-Directed Catalytic Synthesis of 2D Layered Transition-Metal Nitrides for Efficient Hydrogen Evolution. 2020 , 6, 2382-2394	67
940	Dual channel carrier transfer based on Ti3C2Tx improves carrier utilization of Z-scheme Ag3PO4/AgBr heterojunction photocatalyst. 2020 , 253, 117486	8
939	Bowl-Shaped Polydopamine Nanocapsules: Control of Morphology via Template-Free Synthesis. 2020 , 36, 9333-9342	7
938	Intercalation of Two-dimensional Layered Materials. 2020 , 36, 584-596	10
937	Intercalation of Metal Ions into Ti3C2Tx MXene Electrodes for High-Areal-Capacitance Microsupercapacitors with Neutral Multivalent Electrolytes. 2020 , 30, 2003721	33
936	Graphene aided gelation of MXene with oxidation protected surface for supercapacitor electrodes with excellent gravimetric performance. 2020 , 169, 225-234	28

935	Prediction of Optimal Synthesis Conditions for the Formation of Ordered Double-Transition-Metal MXenes (o-MXenes). 2020 , 124, 18797-18804	3
934	First-Principles Calculations on the Adsorption Behavior of Amino Acids on a Titanium Carbide MXene.. 2020 , 3, 5913-5921	17
933	Low temperature synthesis of plasmonic molybdenum nitride nanosheets for surface enhanced Raman scattering. 2020 , 11, 3889	17
932	Ionic liquid-based synthesis of MXene. 2020 , 56, 11082-11085	33
931	Covalent Triazine Framework Nanosheets for Efficient Energy Storage and Conversion. 2020 , 36, 640-647	12
930	Vertically Aligned Nanopatterns of Amine-Functionalized Ti3C2 MXene via Soft Lithography. 2020 , 7, 2000424	10
929	Assembling free-standing and aligned tungstate/MXene fiber for flexible lithium and sodium-ion batteries with efficient pseudocapacitive energy storage. 2020 , 33, 82-87	17
928	Perspectives for electrochemical capacitors and related devices. 2020 , 19, 1151-1163	493
927	Enhanced Rate Capability of Ion-Accessible Ti3C2Tx-NbN Hybrid Electrodes. 2020 , 10, 2001411	28
926	Effective usage of 2D MXene nanosheets as solid lubricant □Influence of contact pressure and relative humidity. 2020 , 531, 147311	19
925	Properties and potential applications of two-dimensional AlN. 2020 , 176, 109231	12
924	Exploring Lithium Storage Mechanism and Cycling Stability of Bi2Mo3O12 Binary Metal Oxide Anode Compositied with Ti3C2 MXene. 2020 , 3, 1296-1305	0
923	Highly Efficient Photothermal Conversion of TiCT/Ionic Liquid Gel Pen Ink for Smoothly Writing Ultrasensitive, Wide-Range Detecting, and Flexible Thermal Sensors. 2020 , 12, 37637-37646	18
922	Rising from the horizon: three-dimensional functional architectures assembled with MXene nanosheets. 2020 , 8, 18538-18559	37
921	Two-dimensional BP/□AsP van der Waals heterostructures as promising photocatalyst for water splitting. 2020 , 117, 063901	23
920	Large-gap topological insulators in functionalized ordered double transition metal carbide MXenes. 2020 , 102,	7
919	Autonomous MXene-PVDF actuator for flexible solar trackers. 2020 , 77, 105277	12
918	Blood Pressure Sensors: Materials, Fabrication Methods, Performance Evaluations and Future Perspectives. 2020 , 20,	13

917	Theoretical exploration on the vibrational and mechanical properties of M3C2/M3C2T2 MXenes. 2020 , 120, e26409	1
916	Synthesis and recent applications of MXenes with Mo, V or Nb transition metals: a review. 2020 , 2, 176-193	8
915	Promising functional two-dimensional lamellar metal thiophosphates: synthesis strategies, properties and applications. 2020 , 7, 3131-3160	13
914	The preparation of black phosphorus in RP/Sn/I2 system: its nucleation agent and relatively optimal temperature program. 2020 , 31, 19093-19105	2
913	Single Crystal Growth and Structural Characterization of Theoretically Predicted Nanolaminates M2Al2C3, Where M = Sc and Er. 2020 , 20, 7640-7646	1
912	Two-dimensional organic/inorganic superlattice-like heterostructures for energy storage applications. 2020 , 13, 4834-4853	17
911	Mesoporous Titanium Oxynitride Monoliths from Block Copolymer-Directed Self-Assembly of Metal-Urea Additives. 2020 , 36, 10803-10810	8
910	Scale Effects in Nanoscale Heat Transfer for Fourier's Law in a Dissimilar Molecular Interface. 2020 , 5, 26527-26536	10
909	1D/2D Heterostructured Photocatalysts: From Design and Unique Properties to Their Environmental Applications. 2020 , 16, e2005051	38
908	Advances of 3D graphene and its composites in the field of microwave absorption. 2020 , 285, 102281	37
907	Interfacial hybridization of Janus MoSSe and BX (X = P, As) monolayers for ultrathin excitonic solar cells, nanopiezotronics and low-power memory devices. 2020 , 12, 22645-22657	25
906	One-pot synthesis of hierarchical CdS/MoS2/rGO with enhanced (photo)electrocatalytic activities. 2020 , 759, 138047	5
905	Recent advances in two-dimensional layered materials for photoelectrochemical sensing. 2020 , 133, 116089	24
904	Surface Oxidation Modulates the Interfacial and Lateral Thermal Migration of MXene (TiCT) Flakes. 2020 , 11, 9521-9527	5
903	Chromium Carbide Nanosheets Prepared by Selective Etching of Aluminum from Cr2AlC for Hydrazine Detection. 2020 , 3, 11007-11016	4
902	Other Applications. 2020 , 303-404	
901	Recent Advances in Nanostructured Transition Metal Carbide- and Nitride-Based Cathode Electrocatalysts for Li-O Batteries (LOBs): A Brief Review. 2020 , 10,	6
900	Bulk and Surface Chemistry of the Niobium MAX and MXene Phases from Multinuclear Solid-State NMR Spectroscopy. 2020 , 142, 18924-18935	15

899	Assessment of Sulfur-Functionalized MXenes for Li-Ion Battery Applications. 2020 , 124, 21293-21304	8
898	Covalent Organic Frameworks as Negative Electrodes for High-Performance Asymmetric Supercapacitors. 2020 , 10, 2001673	41
897	Magnetron sputtering enabled synthesis of nanostructured materials for electrochemical energy storage. 2020 , 8, 20260-20285	7
896	Synergistic Antimicrobial Titanium Carbide (MXene) Conjugated with Gold Nanoclusters. 2020 , 9, e2001007	23
895	Oxygen Vacancies in the Single Layer of Ti ₂ CO ₂ MXene: Effects of Gating Voltage, Mechanical Strain, and Atomic Impurities. 2020 , 257, 2000343	14
894	Progress and Prospects of Solution-Processed Two-Dimensional Semiconductor Nanocrystals. 2020 , 124, 21895-21908	19
893	A MXene-Based Hierarchical Design Enabling Highly Efficient and Stable Solar-Water Desalination with Good Salt Resistance. 2020 , 30, 2007110	81
892	Recent Progress of Two-Dimensional Metal-Organic Frameworks and Their Derivatives for Oxygen Evolution Electrocatalysis. 2020 , 7, 4695-4712	10
891	Theoretical Study of Transition-Metal-Modified Mo CO MXene as a Catalyst for the Hydrogen Evolution Reaction. 2020 , 13, 6005-6015	17
890	Arbitrary deformable and high-strength electroactive polymer/MXene anti-exfoliative composite films assembled into high performance, flexible all-solid-state supercapacitors. 2020 , 12, 20797-20810	11
889	State of the art recent progress in two dimensional MXenes based gas sensors and biosensors: A comprehensive review. 2020 , 424, 213514	79
888	Challenges and opportunities toward fast-charging of lithium-ion batteries. 2020 , 32, 101837	40
887	Distinct superconducting properties and hydrostatic pressure effects in 2D Hf ₂ Mo ₂ C crystal sheets. 2020 , 12,	4
886	MXene-Coated Air-Permeable Pressure-Sensing Fabric for Smart Wear. 2020 , 12, 46446-46454	42
885	Adsorption of Uremic Toxins Using TiCT MXene for Dialysate Regeneration. 2020 , 14, 11787-11798	35
884	Bandgap engineering of two-dimensional semiconductor materials. 2020 , 4,	152
883	Electrical Conduction Characteristic of a 2D MXene Device with Cu/CrC/TiN Structure Based on Density Functional Theory. 2020 , 13,	4
882	pH, Nanosheet Concentration, and Antioxidant Affect the Oxidation of Ti ₃ C ₂ T _x and Ti ₂ CT _x MXene Dispersions. 2020 , 7, 2000845	31

881	Computational Insights into Charge Storage Mechanisms of Supercapacitors. 2020 , 3, 235-246	19
880	Probing Molecular Interactions at MXene/Organic Heterointerfaces. 2020 , 32, 7884-7894	10
879	Surface Functionalization of TiCT MXene with Highly Reliable Superhydrophobic Protection for Volatile Organic Compounds Sensing. 2020 , 14, 11490-11501	101
878	Pressure-Induced Modulation of Electronic and Optical Properties of Surface O-Functionalized TiC MXene. 2020 , 5, 22248-22254	3
877	Recent Advances in Functional 2D MXene-Based Nanostructures for Next-Generation Devices. 2020 , 30, 2005223	78
876	Retracted: Emerging 2D MXene/Organic Heterostructures for Future Nanodevices. 2020 , 30, 2005238	16
875	Synthesis of Two-dimensional Metallic Nanosheets: From Elemental Metals to Chemically Complex Alloys. 2020 , 6, 1683-1711	9
874	MXene hydrogels: fundamentals and applications. 2020 , 49, 7229-7251	135
873	MXene/N-Doped Carbon Foam with Three-Dimensional Hollow Neuron-like Architecture for Freestanding, Highly Compressible All Solid-State Supercapacitors. 2020 , 12, 44777-44788	41
872	Synthesis of Titanium Carbide by Means of Pressureless Sintering. 2020 , 3, 306-311	4
871	Recent Advances in Nanomaterial-Enabled Wearable Sensors: Material Synthesis, Sensor Design, and Personal Health Monitoring. 2020 , 16, e2002681	55
870	Enhancement of Triboelectric Charge Density by Chemical Functionalization. 2020 , 30, 2004714	63
869	Recent Advances of Emerging 2D MXene for Stable and Dendrite-Free Metal Anodes. 2020 , 30, 2004613	58
868	Aberration-corrected STEM imaging of 2D materials: Artifacts and practical applications of threefold astigmatism. 2020 , 6,	7
867	Bioencapsulated MXene Flakes for Enhanced Stability and Composite Precursors. 2020 , 30, 2004554	19
866	Pseudocapacitive Vanadium-based Materials toward High-Rate Sodium-Ion Storage. 2020 , 3, 221-234	43
865	Tailoring MXene-Based Materials for Sodium-Ion Storage: Synthesis, Mechanisms, and Applications. 2020 , 3, 766-792	41
864	Integrated Biomonitoring Sensing with Wearable Asymmetric Supercapacitors Based on Ti3C2 MXene and 1T-Phase WS2 Nanosheets. 2020 , 30, 2003673	34

863	Synthesis and characterization of SiO ₂ /Ti ₃ C ₂ anode materials for lithium-ion batteries via different methods. 2020 , 26, 5325-5331	10
862	Controlled growth of Mo ₂ C pyramids on liquid Cu surface. 2020 , 41, 082001	3
861	Advanced pillared designs for two-dimensional materials in electrochemical energy storage. 2020 , 2, 5496-5503	7
860	Anchoring CuS nanoparticles on accordion-like Ti ₃ C ₂ as high electrocatalytic activity counter electrodes for QDSSCs. 2020 , 7, 3727-3734	12
859	Recent Progress in the Study of Thermal Properties and Tribological Behaviors of Hexagonal Boron Nitride-Reinforced Composites. 2020 , 4, 116	9
858	Vanadium based carbide-oxide heterogeneous VO@VC nanotube arrays for high-rate and long-life lithium-sulfur batteries. 2020 , 12, 18950-18964	11
857	Electrocatalysts Derived from 2D Mxenes for Oxygen Reduction and Hydrogen Evolution Reactions. 2020 , 167-189	
856	Structural Manipulation of Layered TiS ₂ to TiS ₃ Nanobelts through Niobium Doping for High-Performance Supercapacitors. 2020 , 7, 4985-4989	0
855	Synthesis of submicron titanium carbide in a direct current arc discharge plasma by a vacuumless method. 2020 , 971, 032046	0
854	The compositional dependence of structural stability and resulting properties for Mn _n +1CnT ₂ (M = Sc, Ti, V; T = O, OH, F, Cl, Br and I; n = 1, 2): first-principle investigations. 2020 , 9, 14979-14989	0
853	Recent Advances in 2D MXene Integrated Smart-Textile Interfaces for Multifunctional Applications. 2020 , 32, 10296-10320	30
852	Substrates in the Synthesis of Two-Dimensional Materials via Chemical Vapor Deposition. 2020 , 32, 10321-10342	2
851	TiC 2D MXene: Recent Progress and Perspectives in Photocatalysis. 2020 , 12, 56663-56680	61
850	Core-Shell Structured MXene@Carbon Nanodots as Bifunctional Catalysts for Solar-Assisted Water Splitting. 2020 ,	28
849	Rational Design of Pillared SnS/TiCT MXene for Superior Lithium-Ion Storage. 2020 ,	39
848	Assessment of Tribological Properties of TiC as a Water-Based Lubricant Additive. 2020 , 13,	7
847	First-principles prediction of a room-temperature ferromagnetic and ferroelastic 2D multiferroic MnNX (X = F, Cl, Br, and I). 2020 , 12, 24237-24243	7
846	Electrically Conductive MXene-Coated Glass Fibers for Damage Monitoring in Fiber-Reinforced Composites. 2020 , 6, 64	0

845	Rice Crust-Like ZnO/Ti ₃ C ₂ T _x MXene Hybrid Structures for Improved Photocatalytic Activity. 2020 , 10, 1140	11
844	Novel 1D/2D KWO/Ti ₃ C ₂ T _x Nanocomposite-Based Acetone Sensor for Diabetes Prevention and Monitoring. 2020 , 8, 102	5
843	Binder-Free Ti ₃ C ₂ T _x MXene Doughs with High Redispersibility. 2020 , 2, 1598-1605	13
842	A perspective on MXenes: Their synthesis, properties, and recent applications. 2020 , 128, 170902	30
841	Thermal and corrosion behavior of Ti ₃ C ₂ /Copper composites. 2020 , 22, 100498	8
840	Ti ₃ C ₂ T _x MXene for wearable energy devices: Supercapacitors and triboelectric nanogenerators. 2020 , 8, 110701	15
839	Recent developments of stamped planar micro-supercapacitors: Materials, fabrication and perspectives. 2020 ,	2
838	Fluoride-Free 2D Niobium Carbide MXenes as Stable and Biocompatible Nanoplatfoms for Electrochemical Biosensors with Ultrahigh Sensitivity. 2020 , 7, 2001546	38
837	Covalent Surface Alteration of MXenes and Its Effect on Superconductivity. 2020 , 3, 1397-1399	4
836	First-principles study of heterostructures of MXene and nitrogen-doped graphene as anode materials for Li-ion batteries. 2020 , 21, 100788	2
835	MXenes: New Horizons in Catalysis. 2020 , 10, 13487-13503	87
834	2D Transition Metal Carbides (MXenes): Applications as an Electrically Conducting Material. 2020 , 32, e2002159	79
833	Strain and electric field tuning of semi-metallic character WCrCO MXenes with dual narrow band gap. 2020 , 32, 355504	21
832	Recent Progress in 2D Metal-Organic Frameworks for Optical Applications. 2020 , 8, 2000110	38
831	Femtosecond Laser-Etched MXene Microsupercapacitors with Double-Side Configuration via Arbitrary On- and Through-Substrate Connections. 2020 , 10, 2000470	24
830	Nature of Novel 2D van der Waals Heterostructures for Superior Potassium Ion Batteries. 2020 , 10, 2000884	64
829	Current Trends in MXene-Based Nanomaterials for Energy Storage and Conversion System: A Mini Review. 2020 , 10, 495	39
828	Formation of Ti ₂ AuN from Au-Covered Ti ₂ AlN Thin Films: A General Strategy to Thermally Induce Intercalation of Noble Metals into MAX Phases. 2020 , 20, 4077-4081	7

827	Thermoplastic polyurethane/Ti ₃ C ₂ (Tx) MXene nanocomposite: The influence of functional groups upon the matrix/reinforcement interaction. 2020 , 528, 146526	7
826	Design of novel pentagonal 2D transitional-metal sulphide monolayers for hydrogen evolution reaction. 2020 , 45, 16201-16209	13
825	2D foaming of ultrathin MXene sheets with highly conductive silver nanowires for wearable electromagnetic interference shielding applications owing to multiple reflections within created free space. 2020 , 4, 035002	8
824	Highly air-stabilized black phosphorus on disposable paper substrate as a tunnelling effect-based highly sensitive piezoresistive strain sensor. 2020 , 3, e10099	8
823	Two-Dimensional Titanium and Molybdenum Carbide MXenes as Electrocatalysts for CO Reduction. 2020 , 23, 101181	56
822	Basal Plane Hydrogen Evolution Activity from Mixed Metal Nitride MXenes Measured by Scanning Electrochemical Microscopy. 2020 , 30, 2001136	33
821	Two-dimensional material membranes for critical separations. 2020 , 7, 2560-2581	22
820	Recent advances in photodynamic therapy based on emerging two-dimensional layered nanomaterials. 2020 , 13, 1485-1508	24
819	Comprehensive Design of the High-Sulfur-Loading Li-S Battery Based on MXene Nanosheets. 2020 , 12, 112	30
818	Recent advances in structural engineering of MXene electrocatalysts. 2020 , 8, 10604-10624	94
817	Tunable electronic structures and half-metallicity in two-dimensional InSe functionalized with magnetic superatom. 2020 , 32, 365501	1
816	The synthesis mechanism of Mo ₂ C on Ag-Cu alloy substrates by chemical vapor deposition and the impact of substrate choice. 2020 , 7, 035022	5
815	i-MXenes for Energy Storage and Catalysis. 2020 , 30, 2000894	60
814	MXene-Based Fibers, Yarns, and Fabrics for Wearable Energy Storage Devices. 2020 , 30, 2000739	68
813	2D Titanium Carbide (Ti ₃ C ₂ Tx) in Accommodating Intraocular Lens Design. 2020 , 30, 2000841	9
812	Ultrafast Relaxation Dynamics and Nonlinear Response of Few-Layer Niobium Carbide MXene. 2020 , 4, 2000250	47
811	High-voltage asymmetric MXene-based on-chip micro-supercapacitors. 2020 , 74, 104928	44
810	Highly Stable Two-Dimensional Iron Monocarbide with Planar Hypercoordinate Moiety and Superior Li-Ion Storage Performance. 2020 , 12, 30297-30303	7

809	Interfacial structure design of MXene-based nanomaterials for electrochemical energy storage and conversion. 2020 , 2, 1057-1076	72
808	Synthesis of two-dimensional carbide Mo ₂ CT _x MXene by hydrothermal etching with fluorides and its thermal stability. 2020 , 46, 19550-19556	30
807	Synthesis of 2D layered Nb ₂ SnC at low sintering temperature and its application for high-performance supercapacitors. 2020 , 288, 121425	3
806	MXene/Activated-Carbon Hybrid Capacitive Deionization for Permselective Ion Removal at Low and High Salinity. 2020 , 12, 26013-26025	41
805	Ti ₃ C ₂ MXene Photoexciting Nanoflakes for Localization of Supercontinuum Lasing of Aqueous-Phase Quantum Dots. 2020 , 124, 13385-13392	
804	3D MXene Architectures for Efficient Energy Storage and Conversion. 2020 , 30, 2000842	132
803	In Situ Grown MWCNTs/MXenes Nanocomposites on Carbon Cloth for High-Performance Flexible Supercapacitors. 2020 , 30, 2002739	46
802	MXene Materials for Designing Advanced Separation Membranes. 2020 , 32, e1906697	103
801	Facile preparation of self-assembled MXene@Au@CdS nanocomposite with enhanced photocatalytic hydrogen production activity. 2020 , 63, 2228-2238	71
800	Controllable electrolytic formation of Ti ₂ O as an efficient sulfur host in lithium-sulfur (LiS) batteries. 2020 , 8, 11224-11232	17
799	Sensitivity Analysis of Surface Plasmon Resonance Biosensor Based on Heterostructure of 2D BlueP/MoS ₂ and MXene. 2020 , 103-129	7
798	Nanomembranes for water treatment. 2020 , 207-240	5
797	Morphology and photocatalytic activity of TiO ₂ /MXene composites by in-situ solvothermal method. 2020 , 46, 20088-20096	26
796	H ₂ O ₂ assisted hydrothermal oxidation of partially etched vanadium carbides (MXene) and their electrochemical properties as anode for Li-ion batteries. 2020 , 523, 146387	15
795	MXene: An emerging two-dimensional layered material for removal of radioactive pollutants. 2020 , 397, 125428	44
794	Layer-by-Layer Assembly of Two-Dimensional Materials: Meticulous Control on the Nanoscale. 2020 , 2, 1148-1165	48
793	Properties of 2D Heterostructures. 2020 , 123-141	
792	Rational Catalyst Design for N ₂ Reduction under Ambient Conditions: Strategies toward Enhanced Conversion Efficiency. 2020 , 10, 6870-6899	126

791	Layered rare-earth hydroxides: a new family of anion-exchangeable layered inorganic materials. 2020 , 89, 629-666	10
790	Synergistic effect of MXene on the flame retardancy and thermal degradation of intumescent flame retardant biodegradable poly (lactic acid) composites. 2020 , 28, 1981-1993	18
789	Dispersibility and Photochemical Stability of Delaminated MXene Flakes in Water. 2020 , 16, e2002433	21
788	Tailoring the Electronic Structure of Transition Metals by the VC MXene Support: Excellent Oxygen Reduction Performance Triggered by Metal-Support Interactions. 2020 , 12, 28206-28216	15
787	Physical properties of 2D MXenes: from a theoretical perspective. 2020 , 3, 032006	15
786	A strategy for effective electrochemical detection of hydroquinone and catechol: Decoration of alkalization-intercalated Ti3C2 with MOF-derived N-doped porous carbon. 2020 , 320, 128386	32
785	3D Flexible, Conductive, and Recyclable TiCT MXene-Melamine Foam for High-Areal-Capacity and Long-Lifetime Alkali-Metal Anode. 2020 , 14, 8678-8688	92
784	Two-Dimensional Black Phosphorus: An Emerging Anode Material for Lithium-Ion Batteries. 2020 , 12, 120	26
783	3D macroscopic graphene oxide/MXene architectures for multifunctional water purification. 2020 , 167, 285-295	59
782	Ammonium metal phosphates: Emerging materials for energy storage. 2020 , 21, 351-357	5
781	Heterostructure nanohybrids of Ni-doped MoSe2 coupled with Ti2NTx toward efficient overall water splitting. 2020 , 353, 136598	20
780	A new family of two-dimensional ferroelastic semiconductors with negative Poisson's ratios. 2020 , 12, 14150-14159	11
779	Recent Progress in 3D Printing of 2D Material-Based Macrostructures. 2020 , 5, 1901066	13
778	Synergistic Effect of Surface-Terminated Oxygen Vacancy and Single-Atom Catalysts on Defective MXenes for Efficient Nitrogen Fixation. 2020 , 11, 5051-5058	44
777	High-Mass-Loading Porous Ti3C2Tx Films for Ultrahigh-Rate Pseudocapacitors. 2020 , 5, 2266-2274	43
776	Photothermoelectric Response of TiCT MXene Confined Ion Channels. 2020 , 14, 9042-9049	25
775	A library of ab initio Raman spectra for automated identification of 2D materials. 2020 , 11, 3011	17
774	Lithium incorporation assisted synthesis of ultra-small Mo2C nanodots as efficient photocatalytic H2 evolution cocatalysts. 2020 , 399, 125794	16

773	Flexible and high-sensitivity piezoresistive sensor based on MXene composite with wrinkle structure. 2020 , 46, 23592-23598	31
772	Tunable magnetic and electronic properties of the Cr-based MXene (Cr ₂ C) with functional groups and doping. 2020 , 514, 167141	18
771	MXenes as High-Rate Electrodes for Energy Storage. 2020 , 2, 654-664	40
770	First-principles investigation of ScX (X = Cl, Br, or I) monolayers for flexible spintronic and electronic applications. 2020 , 22, 14781-14786	2
769	An electrochemical sensor for ifosfamide, acetaminophen, domperidone, and sumatriptan based on self-assembled MXene/MWCNT/chitosan nanocomposite thin film. 2020 , 187, 402	32
768	High-performance supercapacitors of ruthenium-based nanohybrid compounds. 2020 , 842, 155798	9
767	Progress in the therapeutic applications of polymer-decorated black phosphorus and black phosphorus analog nanomaterials in biomedicine. 2020 , 8, 7076-7120	25
766	Biodegradable titanium nitride MXene quantum dots for cancer phototheranostics in NIR-I/II biowindows. 2020 , 400, 126009	66
765	Pristine MOF and COF materials for advanced batteries. 2020 , 31, 115-134	65
764	The High-Performance Bifunctional Catalyst Pd/Ti ₃ C ₂ T _x /Carbon Nanotube for Oxygen Reduction Reaction and Hydrogen Evolution Reaction in Alkaline Medium. 2020 , 8, 2000306	17
763	A review on the superb contribution of carbon and graphene quantum dots to electrochemical capacitors performance: Synthesis and application. 2020 , 22, 100171	26
762	High-Efficiency CNNS@NH-MIL(Fe) Electrochemiluminescence Emitters Coupled with TiC Nanosheets as a Matrix for a Highly Sensitive Cardiac Troponin I Assay. 2020 , 92, 8992-9000	28
761	Hydrophilicity-Dependent Distinct Frictional Behaviors of Different Modified MXene Nanosheets. 2020 , 124, 13664-13671	8
760	Bath Electrospinning of Continuous and Scalable Multifunctional MXene-Infiltrated Nanoyarns. 2020 , 16, e2002158	38
759	Room temperature manufacturing photoluminescent graphene quantum dots based on MXene. 2020 , 167, 863-869	8
758	Effect of high-temperature oxidation on Si ₃ N ₄ containing Ti ₃ AlC ₂ . 2020 , 46, 14697-14705	4
757	Recent Advancements and Perspective of High-Performance Printed Power Sources with Multiple Form Factors. 2020 , 3, 581-612	12
756	Realization of ultrathin red 2D carbon nitride sheets to significantly boost the photoelectrochemical water splitting performance of TiO ₂ photoanodes. 2020 , 396, 125267	10

755	MXene-doped epoxy resin to suppress surface charge accumulation on insulators in a DC gas-insulated system. 2020 , 27, 939-946	12
754	Alternating-Current MXene Polymer Light-Emitting Diodes. 2020 , 30, 2001224	15
753	CVD synthesis and characterization of thin Mo ₂ C crystals. 2020 , 103, 5586-5593	12
752	Multifunctional Lateral Transition-Metal Disulfides Heterojunctions. 2020 , 30, 2002939	38
751	Applications of Raman spectroscopy in two-dimensional materials. 2020 , 13, 2030010	3
750	Biomimetic Nanomembranes: An Overview. 2020 , 5,	10
749	Strategies of engineering 2D nanomaterial-based electrocatalysts toward hydrogen evolution reaction. 2020 , 9, 1	10
748	Interface interaction-mediated design of tough and conductive MXene-composited polymer hydrogel with high stretchability and low hysteresis for high-performance multiple sensing.	2
747	A synergistic effect of the ion beam sputtered NiO x hole transport layer and MXene doping on inverted perovskite solar cells. 2022 , 33, 425202	0
746	Thulium/holmium fiber laser with Ti ₂ AlN MAX phase-coated arc-shaped fiber for mode-locked pulse generation. 2022 , 16,	
745	Vacancy manipulating of molybdenum carbide MXenes to enhance faraday reaction for high performance lithium-ion batteries. 2022 ,	16
744	Electronic and optical properties of Nb/V-doped WS ₂ monolayer: A first-principles study.	0
743	In-situ growth of TiO ₂ nanoparticles on crumpled Ti ₃ C ₂ T _x with negative permittivity for electromagnetic interference shielding. 2022 ,	
742	Obtaining Ambient-Stable MXene Ti ₃ C ₂ T _x through Avoidance of Surface Oxidation Active Sites. 2022 , 9, 2200991	0
741	Antiviral Effects of Heparan Sulfate Analogue-Modified Two-Dimensional MXene Nanocomposites on PRRSV and SARS-CoV-2. 2200067	1
740	Nanoscale MXene Interlayer and Substrate Adhesion for Lubrication: A Density Functional Theory Study. 2022 , 5, 10516-10527	2
739	MXenes as Emerging Materials: Synthesis, Properties, and Applications. 2022 , 27, 4909	3
738	Efficient adsorption of anionic azo dyes on porous heterostructured MXene/biomass activated carbon composites: Experiments, characterization, and theoretical analysis via advanced statistical physics models. 2022 , 138735	6

- 737 Construction and performance of CdS/MoO₂@Mo₂C-MXene photocatalyst for H₂ production. 2
- 736 Molecular-switch-embedded Solution-processed Semiconductors. 2203401 0
- 735 First-Principles Investigation of Phase Stability in Substoichiometric Zirconium Carbide under High Pressure. 2200439
- 734 Functional MXene-Based Materials for Next-Generation Rechargeable Batteries. 2204988 3
- 733 Nature-Inspired 3D Spiral Grass Structured Graphene Quantum Dots/MXene Nanohybrids with Exceptional Photothermal-Driven Pseudo-Capacitance Improvement. 2204086 0
- 732 A Family of 2D-MXenes: Synthesis, Properties, and Gas Sensing Applications. **2022**, 7, 2132-2163 2
- 731 MX ene: A Novel Two-Dimensional Membrane Material for Molecular Separation. **2022**, 253-277
- 730 3D Printing Quasi-Solid-State Micro-Supercapacitors with Ultrahigh Areal Energy Density Based on High Concentration MXene Sediment. **2022**, 138686 2
- 729 Label-Free Immunosensor Based on Polyaniline-Loaded MXene and Gold-Decorated β -Cyclodextrin for Efficient Detection of Carcinoembryonic Antigen. **2022**, 12, 657 3
- 728 Transformation of carbon dioxide, a greenhouse gas, into useful components and reducing global warming: A comprehensive review. 1
- 727 Ultrahigh Stable Methanol Oxidation Enabled by a High Hydroxyl Concentration on Pt Clusters/MXene Interfaces. 4
- 726 Cytomembrane-Inspired MXene Ink with Amphiphilic Surfactant for 3D Printed Microsupercapacitors. 1
- 725 Theoretical and Simulation Analysis of Static and Dynamic Properties of MXene-Based Humidity Sensors. **2022**, 12, 8254 1
- 724 Synthesis of Large-Area MXenes with High Yields through Power-Focused Delamination Utilizing Vortex Kinetic Energy. 2202748 1
- 723 Quantum Energy Storage in Dielectric<Ionic Liquid> Porous Clathrates. **2022**, 15, 6069
- 722 MXene-Based Photocatalysts and Electrocatalysts for CO₂ Conversion to Chemicals. 0
- 721 Two Birds with One Stone: Prelithiated Two-Dimensional Nanohybrids as High-Performance Anode Materials for Lithium-Ion Batteries. **2022**, 14, 35673-35681 0
- 720 Fluoride-free synthesis and long-term stabilization of MXenes. 1

719	Hybrid MXene-Graphene/Hexagonal Boron Nitride Structures: Electronic and Molecular Adsorption Properties. 2022 , 12, 2739	0
718	Non-Invasive Rapid Detection of Lung Cancer Biomarker Toluene with a Cataluminescence Sensor Based on the Two-Dimensional Nanocomposite Pt/Ti3C2Tx-CNT. 2022 , 10, 333	0
717	Nanofriction Properties of Mono- and Double-Layer Ti3C2Tx MXenes. 2022 , 14, 36815-36824	1
716	Cellulose Nanofiber-Reinforced MXene Membranes as Stable Friction Layers and Effective Electrodes for High-Performance Triboelectric Nanogenerators. 2022 , 14, 36741-36752	0
715	Mixed-Functionalized Sc2CTx (T=O, OH, F) . 2022 , 18,	1
714	Advances in theoretical calculations of MXenes as HER and OER (water splitting) electrocatalysts.	0
713	Advancements in MXene-Polymer Nanocomposites in Energy Storage and Biomedical Applications. 2022 , 14, 3433	1
712	Amorphous cobalt boride nanoparticles incorporated vanadium carbide MXene composite for asymmetric supercapacitor applications.	
711	All-Solid-State Supercapacitor Based on Advanced 2D Vanadium Disulfide/Black Phosphorus Hybrids for Wearable Electronics. 2022 , 5, 10315-10327	2
710	Strong Optical Excitation and High Thermoelectric Performance in 2D Holey-Phosphorene Monolayer. 2200400	1
709	High-Efficiency Oxygen Reduction to Hydrogen Peroxide Catalyzed by Oxidized Mo2TiC2 MXene. 2022 , 12, 850	1
708	Wearable Fiber-Based Supercapacitors Enabled by Additive-Free Aqueous MXene Inks for Self-Powering Healthcare Sensors.	0
707	A Mini Review on Recent Advances in MXene Based Electrochemical Wearable Sensing Devices.	1
706	A facile pot synthesis of (Ti3AlC2) MAX phase and its derived MXene (Ti3C2Tx). 2022 ,	1
705	On MXene Conducting Polymer Nanocomposites Micro-Supercapacitors and Applications.	
704	N-doped Ti3C2Tx MXene sheet-coated SiOx to boost lithium storage for lithium-ion batteries.	0
703	A review of heteroatomic doped two-dimensional materials as electrocatalysts for hydrogen evolution reaction. 2022 ,	1
702	Noble-Nanoparticle-Decorated Ti3C2Tx MXenes for Highly Sensitive Volatile Organic Compound Detection. 2022 , 7, 29195-29203	1

701	Large-Area Ultrastrong and Stiff Layered MXene Nanocomposites by Shear-Flow-Induced Alignment of Nanosheets. 2022 , 16, 12013-12023	0
700	Bond-order potential for the surface-terminated titanium carbide MXene monolayers $Ti_{n+1}C_nTx$ (. 2022 , 106,	
699	Quantum Dots Compete at the Acme of MXene Family for the Optimal Catalysis. 2022 , 14,	5
698	Dimensional engineering of anode materials for high performance potassium ion hybrid capacitor: A review.	2
697	Shear delamination of multilayer MXenes.	1
696	Influence of morphology and architecture on properties and applications of MXene polymeric nanocomposites. 089270572211220	2
695	Research Progress on MXene-Based Flexible Supercapacitors: A Review. 2022 , 12, 1099	1
694	Advances in Two-Dimensional Materials for Optoelectronics Applications. 2022 , 12, 1087	3
693	Constructing 2D/2D ultrathin Ti_3C_2/SnS_2 Schottky heterojunctions toward efficient tetracycline degradation. 2022 , 136118	0
692	Recent Advancements on Photothermal Conversion and Antibacterial Applications over MXenes-Based Materials. 2022 , 14,	5
691	Electric-field assisted ultrafast synthesis of Ti_3SiC_2 MAX phase.	
690	In Situ Modulation of Al Traces and Interlayer Spacing in Ti_3C_2Tx -A2 MXene: Supercapacitor with Ultrahigh Capacitance and Energy Density. 2200919	
689	Surface functionalization effect on physical properties and quantum capacitance of Ca_2C MXenes. 2022 , 35, 100414	1
688	Sensitive photoelectrochemical biosensors based on AuNPs/MXenes electrode coupled with light-harvesting $UiO-66-NH_2$ probes for protein kinase detection. 2022 , 11, 100204	0
687	Study on the effect of oxidation on the cycling stability of MXene for capacitive deionization. 2022 , 805, 139948	1
686	Carbon dioxide adsorption of two-dimensional Mo_2C MXene. 2022 , 128, 109277	1
685	Z-scheme systems: From fundamental principles to characterization, synthesis, and photocatalytic fuel-conversion applications. 2022 , 983, 1-41	5
684	Designed formation of 2D/2D hierarchical V_2CTx MXene/ NiV layered double hydroxide heterostructure with boosted electrochemical performance for asymmetric supercapacitors. 2022 , 55, 105415	1

- 683 Surface functionalization of two-dimensional boridene family: Enhanced stability, tunable electronic property, and high catalytic activity. **2022**, 602, 154374
- 682 Layer-dependent frictional properties of Ti₃C₂T_x MXene nanosheets. **2022**, 603, 154402 o
- 681 Towards better Mg metal anodes in rechargeable Mg batteries: Challenges, strategies, and perspectives. **2022**, 52, 299-319 2
- 680 Structural evolution and electrical conductivity of Ti₃C₂-SiOC ceramics. **2022**, 285, 115954 o
- 679 Improved NO₂ gas sensing performance of 2D MoS₂/Ti₃C₂T_x MXene nanocomposite. **2022**, 604, 154624 o
- 678 Scalable fabrication of MXene-based flexible micro-supercapacitor with outstanding volumetric capacitance. **2022**, 450, 138456 1
- 677 Metalloporphyrin hemin modified carbon nanotube decorated titanium carbide with redox catalytic ability for electrochemical determination of hydrogen peroxide and uric acid. **2022**, 628, 456-466 o
- 676 Multiple redox-active cyano-substituted organic compound integrated with MXene for high-performance flexible aqueous K-ion battery. **2022**, 450, 138238 1
- 675 Recent advances on semiconductor/MXene hybrids for harvesting light and photoelectrochemical water oxidation: A mini review. **2022**, 450, 138381
- 674 Nitrogen and sulfur co-doped MXene ink without additive for high-performance inkjet-printing micro-supercapacitors. **2022**, 450, 138372 o
- 673 Synthesis of fluorine free MXene through lewis acidic etching for application as electrode of proton supercapacitors. **2022**, 926, 166903 1
- 672 Transition metal dichalcogenide nanospheres for high-refractive-index nanophotonics and biomedical theranostics. **2022**, 119, 1 1
- 671 Controlling the Surface Reactivity of Hybrid Ti₃CNT_x MXene via In-situ Electrocatalysis. o
- 670 High efficiency of self-assembly between exfoliated MXene and layered-double-hydroxide nanosheets in exploring high-performance oxygen evolution reaction electrocatalysts. **2022**, 9, 044005 o
- 669 MXenes and Other Two-Dimensional Materials for Membrane Gas Separation: Progress, Challenges, and Potential of MXene-Based Membranes. o
- 668 Electrospun carbon fibers embedded with core-shell TiC@TiO₂ nanostructures and their epoxy composites for potential EMI shielding in the Ku band. **2022**, 32, 100912 1
- 667 Design and characterization of monolayer Ti₃C₂ MXene/NiCo₂O₄ nanocones hybrid architecture for asymmetric supercapacitors. **2022**, 923, 116787 o
- 666 D-Shaped Fiber Surface Plasmon Resonance Refractive Index Sensor Enhanced By MXene (Ti₃C₂T_x). **2022**, 14, 1-7 1

- 665 Enabling the fast sodium ions diffusion by constructing reduced graphene oxide/TiO₂/MXenes tandem architecture for durable sodium ions battery. **2022**, 922, 116771 0
- 664 Tunable fano resonance-enhanced surface plasmon biosensor based on MXene/MoS₂ heterostructure. **2022**, 133, 112966 0
- 663 Vibrationally-resolved absorption and fluorescence spectra of chemically modified 2D hexagonal boron nitride quantum dots. **2022**, 806, 140025 0
- 662 Micro-electrochemical capacitors: Progress and future status. **2022**, 55, 105702 2
- 661 Ultra-thin metal composites for electromagnetic interference shielding. **2022**, 246, 110269 1
- 660 Zirconia-decorated V₂CT MXene electrodes for supercapacitors. **2022**, 55, 105721 0
- 659 A facile preparation of submicro-sized Ti₂AlC precursor toward Ti₂CT MXene for lithium storage. **2022**, 432, 141152 0
- 658 Investigate the role of V in the Nitrogen-doped hierarchical porous carbon-supported binary transition metal nitrides catalyst for oxygen reduction reactions. **2022**, 927, 166993 0
- 657 Membrane distillation by novel Janus-enhanced membrane featuring hydrophobic-hydrophilic dual-surface for freshwater recovery. **2022**, 302, 122036 1
- 656 Enhanced interfacial heat-transfer of Al₂O₃-MXene-silicone composite via an electrostatic self-assembly strategy. **2022**, 199, 123430 0
- 655 Electronic structure and magnetism of pristine, defected, and strained Ti₂N MXene. **2022**, 563, 169895 0
- 654 Stable carbon encapsulated titanium carbide MXene aqueous ink for fabricating high-performance supercapacitors. **2022**, 53, 51-61 2
- 653 Properties, functions, and challenges: current collectors. **2022**, 26, 101152 3
- 652 The influence of different functional groups on quantum capacitance, electronic and optical properties of Hf₂C MXene. **2022**, 605, 154830 0
- 651 Electrochemical performance of Ti₃C₂T_x MXenes obtained via ultrasound assisted LiF-HCl method. **2022**, 33, 104384 0
- 650 First-principles calculations study of TiS₂/Ti₂CS₂ heterostructure as an anode material for Li/Na/K-ion batteries. **2022**, 215, 111784 0
- 649 MXene coupled graphitic carbon nitride nanosheets based plasmonic photocatalysts for removal of pharmaceutical pollutant. **2022**, 308, 136297 1
- 648 Black phosphorus quantum dots modified monolayer Ti₃C₂T_x nanosheet for field-effect transistor gas sensor. **2022**, 373, 132696 1

- 647 Poly(3,4-ethylenedioxythiophene) decorated MXene as an alternative counter electrode for dye-sensitized solar cells. **2022**, 26, 101113 1
- 646 Molten salt-assisted synthesis of carbo-nitride $\text{TiC}_{0.5}\text{N}_{0.5}$ and MAX phases $\text{Ti}_2\text{AlC}_{0.5}\text{N}_{0.5}$ and Ti_3AlCN at low temperature under different atmospheres. **2022**, 26, 101160 0
- 645 Highly stable $\text{Ti}_3\text{C}_2\text{Tx}$ MXene-based sandwich-like structure via interfacial self-assembly of nitrogen-rich polymer network for superior sodium-ion storage performance. **2023**, 451, 138763 0
- 644 Direct and in situ growth of 1T' MoS_2 and 1T MoSe_2 on electrochemically synthesized MXene as an electrocatalyst for hydrogen generation. **2022**, 103, 107835 4
- 643 Strain tailored electronic structure and magnetic properties of Fe-doped $\text{Zr}_8\text{C}_4\text{T}_8$ ($\text{T}' = \text{F}, \text{O}$) monolayers. **2023**, 145, 115488 0
- 642 Simultaneous regulation of Li-ion intercalation and oxygen termination decoration on $\text{Ti}_3\text{C}_2\text{Tx}$ MXene toward enhanced oxygen electrocatalysis for Li-O₂ batteries. **2023**, 451, 138818 1
- 641 Fabrication and Characterization of a $\text{MnO}_2/\text{Ti}_3\text{C}_2\text{Tx}$ Based Gas Sensor for Highly Sensitive and Selective Detection of Lung Cancer Marker Hexanal. **2023**, 451, 139029 2
- 640 Theoretical investigations of Sc_2C based functionalized MXenes for applications in nanoelectromechanical systems. **2023**, 145, 115491 1
- 639 3D porous structure assembled from MXene via breath figure method for electrochemical detection of dopamine. **2023**, 452, 139414 0
- 638 Surface-confined polymerization to construct binary $\text{Fe}_3\text{N}/\text{Co-N-C}$ encapsulated MXene composites for high-performance zinc-air battery. **2023**, 201, 269-277 1
- 637 Piezoresistive MXene/Silk fibroin nanocomposite hydrogel for accelerating bone regeneration by Re-establishing electrical microenvironment. **2023**, 22, 1-17 3
- 636 Amino-functionalized multilayer $\text{Ti}_3\text{C}_2\text{Tx}$ enabled electrochemical sensor for simultaneous determination of Cd^{2+} and Pb^{2+} in food samples. **2023**, 402, 134269 1
- 635 Surface-Confined Polymerization to Construct Binary $\text{Fe}_3\text{N}/\text{Co-N-C}$ Encapsulated Mxene Composites for High Performance Zinc-Air Battery. 0
- 634 Self-Standing Mxene/Anf Composite Film Electrodes for High-Performance Supercapacitors. 0
- 633 MXene reinforced organohydrogels with ultra-stability, high sensitivity and anti-freezing ability for flexible strain sensors. **2022**, 10, 11914-11923 2
- 632 Two-dimensional MXenes: recent emerging applications. **2022**, 12, 25172-25193 0
- 631 Nanostructured materials for electrochemical capacitors. **2022**, 0
- 630 Ascorbic acid-induced fiber-scrolling of titanium carbide $\text{Ti}_3\text{C}_2\text{Tx}$ MXene. **2022**, 12, 21600-21608 0

- 629 MXenes: promising 2D materials for wound dressing applications [a](#) perspective review. 0
- 628 Upconversion fluorescence of MXene nanosheets and the sensitive detection of l-tryptophan. **2022**, 1, 1080-1087 1
- 627 Hierarchical MXene/transition metal oxide heterostructures for rechargeable batteries, capacitors, and capacitive deionization. **2022**, 14, 11923-11944 2
- 626 Several semiconducting two-dimensional silicon nanosheets assembled from zigzag silicene nanoribbons. **2022**, 14, 14038-14045 0
- 625 A high-performance supercapacitor based on free-standing V4C3TX@NiO-reduced graphene oxide core-shell hierarchical heterostructured hydrogel electrodes. 0
- 624 Biaxial stress and functional groups (T = O, F, and Cl) tuning the structural, mechanical, and electronic properties of monolayer molybdenum carbide. **2022**, 24, 17862-17869 1
- 623 Oxidation-Resistant Vitamin C/Mxene Foam Via Surface Hydrogen Bonding for Stable Electromagnetic Interference Shielding in Air Ambient. 0
- 622 Exfoliation, delamination, and oxidation stability of molten salt etched Nb2CTz MXene nanosheets. **2022**, 58, 10202-10205 0
- 621 2D MXene nanocomposites: electrochemical and biomedical applications. 2
- 620 Industrial applications of MXene nanocomposites. **2022**, 481-503 1
- 619 W4PCL11 monolayer: an unexplored 2D material with moderate direct bandgap and strong visible-light absorption for highly efficient solar cells. **2022**, 14, 12386-12394 0
- 618 Heterostructural TiO2/Ti3C2 MXene aerogel composite for photocatalytic degradation of palm oil mill effluent. **2022**, 1, 570-583 0
- 617 Structural Control with Angstrom-Level Precision: Two-Dimensional Titanium Carbide (Ti ₃C ₂T _x) MXene Produced by Ternary Cations Intercalation. 0
- 616 MXene-Based Nanocomposite Photocatalysts for Wastewater Treatment. **2022**, 53-81 1
- 615 The quest for negative electrode materials for Supercapacitors: 2D materials as a promising family. **2023**, 452, 139455 3
- 614 Advances of graphene-based aerogels and their modifications in lithium-sulfur batteries. **2023**, 201, 679-702 0
- 613 Energetic Stability and Interfacial Complexity of Ti3C2Tx MXenes Synthesized with HF/HCl and CoF2/HCl as Etching Agents. **2022**, 14, 41542-41554 0
- 612 Synthesis of CoSe2/Mxene composites using as high-performance anode materials for lithium-ion batteries. 1

611	Dual Confinement of Si Nanoparticles in a MXene/ZIF-8-Derived Carbon Framework for Lithium-Ion Batteries. 2022 , 5, 12720-12728	0
610	Ruthenium single-atom modulated Ti ₃ C ₂ T _x MXene for efficient alkaline electrocatalytic hydrogen production.	1
609	In Silico Band-Gap Engineering of Cr ₂ C MXenes as Efficient Photocatalysts for Water-Splitting Reactions. 2022 , 126, 14886-14896	0
608	Few-layer Ti ₃ CN MXene for ultrafast photonics applications in visible band. 2022 ,	0
607	Facile self-assembly of sandwich-like MXene V ₂ CT _x /Ag/rGO/MWCNTs layered multiscale structure nanocomposite. 2022 ,	0
606	MXenes in tribology: Current status and perspectives. 2022 , 100092	1
605	Structural and dynamical characterization of water on Ti ₂ C MXene surface: a molecular dynamics approach.	0
604	Deep Learning-Enabled MXene/PEDOT:PSS Acoustic Sensor for Speech Recognition and Skin-Vibration Detection. 2200140	0
603	Construction of an MXene/Organic Superlattice for Flexible Thermoelectric Energy Conversion. 2022 , 5, 11351-11361	0
602	Recent Advances on Membranes for Water Purification Based on Carbon Nanomaterials. 2022 , 12, 915	0
601	Two-Dimensional Nanomaterials: An Overview of Their Properties, Synthesis and Applications.	0
600	MXene, Silicene and Germanene: Preparation and Energy Storage Applications. 2022 , 101144	0
599	Effect of hydrochloric acid and hydrofluoric acid treatment on the morphology, structure and gamma permeability of 2D MXene Ti ₃ C ₂ T _x electrodes. 1-22	0
598	2D Catalysts for CO ₂ Photoreduction: Discussing Structure Efficiency Strategies and Prospects for Scaled Production Based on Current Progress.	0
597	Surface Wrinkling for Flexible and Stretchable Sensors. 2203491	8
596	Free-Standing H ₂ MoO ₃ / Ti ₃ C ₂ MXene Hybrid Electrode in Water-in-Salt Electrolytes.	1
595	Heterointerface effects of lithium intercalation and diffusion in van der Waals heterostructures. 2022 , 6,	0
594	Recent Advances in Titanium Carbide MXene (Ti ₃ C ₂ T _x) Cathode Material for Lithium-Air Battery.	0

593	Recent Advance in Two-Dimensional MXenes: New Horizons in Flexible Batteries and Supercapacitors Technologies. 2022 ,	1
592	Fast and High-Yield Anhydrous Synthesis of Ti ₃ C ₂ T _x MXene with High Electrical Conductivity and Exceptional Mechanical Strength. 2203767	2
591	2D Xenes: Optical and Optoelectronic Properties and Applications in Photonic Devices. 2206507	0
590	Electrically conductive porous Ti ₃ C ₂ T _x MXene-polymer composites from high internal phase emulsions (HIPEs). 2022 , 9, 044004	0
589	Engineering Interlaced Architecture of Pristine Graphene Anchored with 2-Amino-8-Naphthol 6-Sulfonic Acids for Printed Hybrid Micro-Supercapacitors with High Electrochemical Capability. 2022 , 14, 41348-41360	0
588	Overcoming the Limitations of MXene Electrodes for Solution-Processed Optoelectronic Devices. 2206377	5
587	Copper Nanoparticle/N-Doped Ti ₃ C ₂ T _x MXene Hybrids with Enhanced Peroxidase-like Activity for Colorimetric Glucose Sensing.	0
586	Surface Structural Features of Two-Dimensional Layered Materials Ti ₃ C ₂ T _x (T = OH, O, F) Investigated by Infrared and Raman Spectroscopy. 2022 , 89, 644-651	0
585	Mechanical properties of 2D Zr _{n+1} C _n (n = 1, 2) MXenes with and without functionalization. 2022 , 34, 465502	0
584	MXene incorporated nanofluids for energy conversion performance augmentation of a concentrated photovoltaic/thermal solar collector.	0
583	Recent Advancement in Rational Design Modulation of MXene: A Voyage from Environmental Remediation to Energy Conversion and Storage.	1
582	Biomedical Applications of an Ultra-Sensitive Surface Plasmon Resonance Biosensor Based on Smart MXene Quantum Dots (SMQDs). 2022 , 12, 743	2
581	Mechanically Induced Nanoscale Architecture Endows a Titanium Carbide MXene Electrode with Integrated High Areal and Volumetric Capacitance. 2205723	2
580	MXene ink hosting zinc anode for high performance of aqueous zinc metal batteries. 2022 ,	2
579	MXenes in Cancer Nanotheranostics. 2022 , 12, 3360	0
578	Synthesis of One-Dimensional Mo ₂ C-Embedded Carbon Nanofibers with Enhanced Lithium Storage Capacity for Lithium-Ion Batteries. 2022 , 7,	0
577	MXenes for CO ₂ Reduction and H ₂ Generation. 2022 , 187-219	0
576	A Critical Review on New and Efficient 2D Materials for Catalysis. 2200771	0

575	Nitrogen-Doped Ti ₃ C ₂ MXene Quantum Dots/1D CdS Nanorod Heterostructure Photocatalyst of Highly Efficient Hydrogen Evolution. 2022 , 5, 11540-11552	1
574	Strategies and challenges for enhancing performance of MXene-based gas sensors: a review.	1
573	Low-Temperature Photothermal Therapy Based on Borneol-Containing Polymer-Modified MXene Nanosheets.	0
572	Ultra-Stable Titanium Carbide MXene Functionalized with Heterocyclic Aromatic Amines. 2203296	0
571	Boosting Charge Transfer Via Heterostructure Engineering of Ti ₂ CT _x /Na ₂ Ti ₃ O ₇ Nanobelts Array for Superior Sodium Storage Performance. 2203948	0
570	The multiple synthesis of 2D layered Ti ₃ C ₂ T _x /Ag/MWCNTs/Ag composites with enhanced electrochemical properties. 2022 ,	0
569	Ti-based MXenes for Energy Storage Applications: Structure, Properties, Processing Parameters and Stability. 2022 , 11, 093008	0
568	Pressure-Engineered Ti ₃ C ₂ T _x MXene with Enhanced Conductivity and Accelerated Reaction Kinetics of Lithium Storage.	0
567	Positive resolution of the wound-healing response in lens epithelial cells by Ti ₃ C ₂ T _x MXene coatings for use in accommodative intraocular lens devices.	0
566	Recent advances and challenges of current collectors for supercapacitors. 2022 , 142, 107373	4
565	Molecular Engineering Strategies toward Molybdenum Diselenide Design for Energy Storage and Conversion. 2202600	1
564	Nb ₂ CT _x MXene Cathode for High-Capacity Rechargeable Aluminum Batteries with Prolonged Cycle Lifetime.	5
563	Ti ₂ CT ₂ MXene as Anodes for Metal Ion Batteries: From Monolayer to Bilayer to Pillar Structure. 2022 , 38, 11732-11742	1
562	A Review on MXene Synthesis, Stability, and Photocatalytic Applications. 2022 , 16, 13370-13429	4
561	Human Teeth Disease Detection Using Refractive Index Based Surface Plasmon Resonance Biosensor. 2022 , 12, 1398	0
560	Operando X-ray Reflectivity Reveals the Dynamical Response of Ti ₃ C ₂ MXene Film Structure during Electrochemical Cycling. 3612-3617	1
559	Field-induced orientational switching produces vertically aligned Ti ₃ C ₂ T _x MXene nanosheets. 2022 , 13,	2
558	Mxene structure: A key parameter in corrosion barrier performance of organic coatings. 2022 ,	1

557	Design of single-atom catalysts on S-functionalized MXenes for enhanced activity and selectivity in N ₂ electroreduction. 2022 , 646, 118886	1
556	Flexible Mn ₃ O ₄ /MXene Films with 2D/2D Architectures as Stable and Ultrafast Anodes for Li-Ion Batteries.	1
555	Nonlinear optical limiting property of the carboxyl-functionalized Ti ₃ C ₂ MXene nanosheets.	0
554	Critical Analysis of MXene Production with In-Situ HF Forming Agents for Sustainable Manufacturing.	1
553	Role of Competitive Crystallization Kinetics in the Formation of 2D Platelets with Distinct Coronal Surface Patterns via Seeded Growth.	1
552	Influence of hydrochloric acid concentration and type of nitrogen source on the electrochemical performance of TiO ₂ /N-MoS ₂ for energy storage applications. 2022 , 155187	1
551	Tunable Ti ₃ C ₂ T _x MXene-Derived TiO ₂ Nanocrystals at Controlled pH and Temperature.	2
550	β-Mercaptoethanol-Enabled Long-Term Stability and Work Function Tuning of MXene. 2200057	0
549	Non-Negligible Role of Multifunctional MXene Hosts for Li ₂ S Batteries: Anchoring and Electrocatalysis.	1
548	Ti ₃ Al bonds decorated Ti ₂ N ₂ C ₃ MXene towards high-performance lithium-ion batteries. 2023 , 10, 014001	0
547	Removing Roadblocks and Opening New Opportunities for MXenes. 2022 ,	0
546	First-Principles Design of a Highly Active and Selective V ₂ CO ₂ -Based Double-Atom Catalyst for Ethane Dehydrogenation to Ethylene.	0
545	Elucidating the Chemical Order and Disorder in High-Entropy MXenes: A High-Throughput Survey of the Atomic Configurations in TiVNbMoC ₃ and TiVCrMoC ₃ .	2
544	High energy Q-switched Yb-doped fiber laser based on ternary layered structured Ti ₂ AlC saturable absorber.	0
543	Smart Electronic Textile-Based Wearable Supercapacitors. 2203856	3
542	Covalent functionalization of MXenes for tribological purposes - a critical review. 2022 , 102792	0
541	N-doped oxygen vacancy-rich NiCo ₂ O ₄ nanoarrays for supercapacitor and non-enzymatic glucose sensing.	1
540	Graphene and MXene-based porous structures for multifunctional electromagnetic interference shielding.	1

- 539 Recent Progress in the Design of Advanced MXene/Metal Oxides-Hybrid Materials for Energy Storage Devices. **2022**, 1
- 538 Anaerobe Syntrophic Co-culture-Mediated Green Synthesis of Ultrathin Niobium Carbide (NbC) Sheets for Flexoelectricity Generation. 0
- 537 Recent advances in titanium carbide MXene-based nanotextures with influential effect of synthesis parameters for solar CO₂ reduction and H₂ production: A critical review. **2022**, 0
- 536 2D/2D V₂C mediated porous g-C₃N₄ heterojunction with the role of monolayer/multilayer MAX/MXene structures for stimulating photocatalytic CO₂ reduction to fuels. **2022**, 65, 102238 0
- 535 Multifunctional non-woven fabrics based on interfused MXene fibers. **2022**, 223, 111207 1
- 534 Two dimensional (2D) MXenes as an emerging class of materials for antimicrobial applications: properties and mechanisms. **2022**, 10, 108663 0
- 533 The zoology of two-dimensional van der Waals materials. **2022**, 0
- 532 Headway towards contemporary 2D MXene-based hybrid electrodes for alkali-ion batteries. 0
- 531 Two-Dimensional Materials for Electrocatalysis and Energy Storage Applications. 1
- 530 MAX Phases and MXenes. **2022**, 0
- 529 Two-dimensional van der Waals heterostructures (vdWHs) with band alignment transformation in multi-functional devices. **2022**, 12, 31456-31465 0
- 528 Direct Tuning of Large-Gap Quantum Spin Hall Effect in Mono-Transition Metal Carbide MXenes. 0
- 527 2D-Double transition metal MXenes for spintronics applications: surface functionalization induced ferromagnetic half-metallic complexes. 1
- 526 Essential data for industrially relevant development of bifunctional cathodes and biopolymer electrolytes in solid-state zinc-air secondary batteries. 0
- 525 Status review on nickel phosphides for hybrid supercapacitors. 0
- 524 2D Metal Carbides as Components of Photocatalytic Systems for Hydrogen Production: A Review. **2022**, 58, 151-180 0
- 523 Hierarchical Porous and Three-Dimensional MXene/SiO₂ Hybrid Aerogel through a Sol-Gel Approach for Lithium-Sulfur Batteries. **2022**, 27, 7073 0
- 522 One-Step Hydrothermal Reaction Induced Nitrogen-Doped MoS₂/MXene Composites with Superior Lithium-Ion Storage. **2022**, 8, 156 0

- 521 MXene-based flexible sensors: A review. 3, 1
- 520 Ti3C2 MXene Membranes for Gas Separation: Influence of Heat Treatment Conditions on D-Spacing and Surface Functionalization. **2022**, 12, 1025 0
- 519 Emergent Magnetic States and Tunable Exchange Bias at 3d Nitride Heterointerfaces. 2208221 0
- 518 Alpha-Germanium Nanolayers for High-Performance Li-ion Batteries. **2022**, 12, 3760 1
- 517 Exploring 2D Energy Storage Materials: Advances in Structure, Synthesis, Optimization Strategies, and Applications for Monovalent and Multivalent Metal-Ion Hybrid Capacitors. 2205101 0
- 516 Bifunctional Amine- and Thiol-Modified Ti3C2Tx MXene for Trace Detection of Heavy Metals. **2022**, 38, 12924-12934 0
- 515 Synthesis and Chemoresistive Properties of Single-Layer MXene Ti2CTx. **2022**, 67, 1838-1847 1
- 514 Electronic Band Gap Tuning and Calculations of Mechanical Strength and Deformation Potential by Applying Uniaxial Strain on MX2 (M = Cr, Mo, W and X = S, Se) Monolayers and Nanoribbons. 0
- 513 Flexible Solid Supercapacitors of Novel Nanostructured Electrodes Outperform Most Supercapacitors. **2022**, 7, 37825-37833 0
- 512 MXenes in sulfur cathodes for lithium-sulfur batteries. 0
- 511 Advances in Supercapacitor Development: Materials, Processes, and Applications. 0
- 510 Tuning the Self-Assembled Morphology of Ti3C2Tx MXene-Based Hybrids for High-Performance Electromagnetic Interference Shielding. **2022**, 14, 49158-49170 0
- 509 A Ti3C2Tx-Based Composite as Separator Coating for Stable Li-S Batteries. **2022**, 12, 3770 1
- 508 Size Selection and Size-Dependent Optoelectronic and Electrochemical Properties of 2D Titanium Carbide (Ti₃C₂T_x) MXene. 2201457 2
- 507 Nanoarchitectonics of Two-Dimensional Electrochromic Materials: Achievements and Future Challenges. 2200917 0
- 506 MXene Based Electrospun Polymer Electrolyte fibers: Fabrication and Enhanced Ionic Conductivity. **2022**, 7, 0
- 505 Applications of MXene-Containing Polypyrrole Nanocomposites in Electrochemical Energy Storage and Conversion. 2
- 504 Two-Dimensional MXene as a Nanofluidic Anolyte Additive for Enhancing Performance of Vanadium Redox Flow Batteries. 0

503	Theoretical studies for stability, mechanical properties, electronic properties and Debye temperature of novel Cr ₂ C structures. 2022 , 57, 18969-18979	0
502	First-Principles Study on the Structural, Electronic, and Lithium Storage Properties of Ti ₃ C ₂ T ₂ (T = O, F, H, OH) MXene.	0
501	Enhanced Gas Sensing Performance of ZnO/Ti ₃ C ₂ T _x MXene Nanocomposite. 2022 , 13, 1710	1
500	Ti ₃ C ₂ T _x supercapacitors with a hexagonal boron nitride separator manufactured by spray coating.	0
499	Mechanically Ultra-Robust, Elastic, Conductive, and Multifunctional Hybrid Hydrogel for a Triboelectric Nanogenerator and Flexible/Wearable Sensor. 2203956	1
498	Transition metal atom adsorption on the titanium carbide MXene: Trends across the periodic table for the bare and O-terminated surfaces. 2022 , 6,	0
497	MXene Based Nanocomposites for Recent Solar Energy Technologies. 2022 , 12, 3666	0
496	Thermal Percolation of Antiperovskite Superionic Conductor into Porous MXene Scaffold for High-Capacity and Stable Lithium Metal Battery. 2200980	0
495	Anchoring Metal-Organic Framework-Derived ZnTe@C onto Elastic Ti ₃ C ₂ T _x MXene with 0D/2D Dual Confinement for Ultrastable Potassium-Ion Storage. 2203118	1
494	Immune Profiling and Multiplexed Label-Free Detection of 2D MXenes by Mass Cytometry and High-Dimensional Imaging. 2205154	1
493	Highly conductive MXene binder enabling Ge anode for stable sodium storage. 2022 , 121, 153902	0
492	MXene/Ferrite Magnetic Nanocomposites for Electrochemical Supercapacitor Applications. 2022 , 13, 1792	0
491	Bimetal Organic Framework/Ti ₃ C ₂ T _x MXene with Metalloporphyrin Electrocatalyst for Lithium/Oxygen Batteries. 2210702	2
490	Advances in Titanium Carbide (Ti ₃ C ₂ T _x) MXenes and Their Metal/Organic Framework (MOF)-Based Nanotextures for Solar Energy Applications: A Review. 2022 , 7, 38158-38192	1
489	Organics-MXene composites as electrode materials for energy storage.	0
488	Two-dimensional photonic MXene nanomedicine. 2022 ,	1
487	Mechanical characterization of Nanoporous two-dimensional Ti ₃ C ₂ MXene membranes. 2022 ,	0
486	Rational design of 3D porous niobium carbide MXene/rGO hybrid aerogels as promising anode for potassium-ion batteries with ultrahigh rate capability.	0

485	Pseudocapacitance of Vanadium Carbide MXenes in Basic and Acidic Aqueous Electrolytes. 3864-3870	2
484	Formation of V ₂ AlC MAX phase by SHS involving magnesium reduction of V ₂ O ₅ . 2022 ,	0
483	Theoretical Prediction of Two-Dimensional Metal Boride Mg ₄ B ₆ as a High-Capacity Electrode Material for Lithium-Ion Batteries. 2022 , 126, 17474-17481	0
482	Stretchable Electrochemical Sensors: From Electrode Fabrication to Cell Mechanotransduction Monitoring.	0
481	Emergence of MXene and MXene/Polymer Hybrid Membranes as Future- Environmental Remediation Strategies. 2203527	1
480	Metal single atom doped 2D materials for photocatalysis: Current status and future perspectives.	0
479	Recent Progress in Two Dimensional MXene for Photocatalysis: A Critical Review.	0
478	Bioactive inorganic compound MXene and its application in tissue engineering and regenerative medicine. 2022 ,	0
477	Recent Advances in Organic and Inorganic Hole and Electron Transport Layers for Organic Solar Cells: Basic Concept and Device Performance.	3
476	MXene-Based Photocatalysts in Degradation of Organic and Pharmaceutical Pollutants. 2022 , 27, 6939	2
475	Two-dimensional V ₂ CTx in-situ derived porous V ₂ O ₃ @C flakes towards zinc ion capacitors as a competitive cathode material.	0
474	Improved Electrochemical Performance from Nano-Cobalt Oxide: Bifunctional Application in Energy Generation and Storage. 2022 , 5, 12907-12915	0
473	Highly Stretchable and Sensitive Ti ₃ C ₂ Tx MXene/Sodium Alginate/Acrylamide Hydrogel for Flexible Electronic Sensors.	0
472	Three-Dimensionally Conducting Network in Graphene-Based Composite Fibers toward Enhanced Electrochemical and Toughness Performance in Fibrous Supercapacitors.	0
471	MXene catalytic amplification-fluorescence/absorption mode aptamer sensor for the detection of trace Pb ²⁺ in milk. 9,	0
470	Functional two-dimensional MXenes as cancer theranostic agents. 2022 ,	1
469	Facile preparation of Ti ₃ C ₂ Tx sheets by selectively etching in a H ₂ SO ₄ /H ₂ O ₂ mixture. 10,	0
468	Importance of Nuclear Quantum Effects on Aqueous Electrolyte Transport under Confinement in Ti ₃ C ₂ MXenes.	0

467	Bio-Inspired Synthesis of Carbon-Based Nanomaterials and Their Potential Environmental Applications: A State-of-the-Art Review. 2022 , 10, 169	1
466	Recent progress in synthesis and applications of MXene-based nanomaterials (MBNs) for (bio)sensing of microbial toxins, pathogenic bacteria in food matrices. 2022 , 108121	0
465	Disorder anisotropy of layered structure in multi-band MgB ₂ superconducting materials with high critical current performance. 2022 , 167873	0
464	Surface chemistry of MXene quantum dots: Virus mechanism-inspired mini-lab for catalysis. 2022 , 43, 2913-2935	0
463	Synergistically modulating the electronic structure of Cr-doped FeNi LDH nanoarrays by O-vacancy and coupling of MXene for enhanced oxygen evolution reaction. 2022 ,	1
462	Mixed Insulating State for van der Waals CoPS ₃ . 10486-10493	1
461	MXene Nanosheet/Organics Superlattice for Flexible Thermoelectrics.	1
460	Rapid growth of MXene-based membranes for sustainable environmental pollution remediation. 2022 , 137056	1
459	Design and Properties of Antimicrobial Biomaterials Surfaces. 2202073	0
458	Multifunctional polyethylene nanocomposites based on polyethylene-grafted Zirconium phosphate nanoplatelets. 2022 , 261, 125422	0
457	Advances in 2D MXenes-based materials for water purification and disinfection: Synthesis approaches and photocatalytic mechanistic pathways. 2022 , 324, 116387	0
456	Electronic and optical properties of lateral heterostructures within monolayer black phosphorene and group-IV monochalcogenides. 2022 , 454, 128495	0
455	MXenes: An exotic material for hybrid supercapacitors and rechargeable batteries. 2022 , 56, 105914	0
454	A realistic take on MXenes for electrochemical reduction of carbon dioxide. 2022 , 130, 109461	0
453	Room-temperature in situ synthesis of MOF@MXene membrane for efficient hydrogen purification. 2022 , 664, 121097	0
452	MXene based 2D-2D heterostructures for Counter Electrode in third generation Dye Sensitized Solar Cells. 2022 , 808, 140144	1
451	Investigation of interfacial interaction of graphene oxide and Ti ₃ C ₂ T _x (MXene) via atomic force microscopy. 2023 , 609, 155303	0
450	Study of pristine and functionalized V ₂ C and Mo ₂ C MXenes as novel electrode material for supercapacitors. 2023 , 118, 108366	0

- 449 Interfacial properties of polyethylene/Ti₃C₂T_x mxene nanocomposites investigated by first-principles calculations. **2023**, 609, 155344 ○
- 448 A hierarchical porous carbon aerogel embedded with small-sized TiO₂ nanoparticles for high-performance LiB batteries. **2023**, 202, 59-65 ○
- 447 Oxidation-resistant vitamin C/MXene foam via surface hydrogen bonding for stable electromagnetic interference shielding in air ambient. **2023**, 610, 155396 ○
- 446 Aging of 2D MXene nanoparticles in air: An XPS and TEM study. **2023**, 610, 155351 ○
- 445 Ti₃C₂T_x Quantum Dots/ Polyvinyl alcohol Films as Enhanced Long-term Stable Saturable Absorber Device for Ultrafast Photonics. ○
- 444 Enhanced pseudocapacitive energy storage and thermal stability of Sn²⁺ ion-intercalated molybdenum titanium carbide (Mo₂TiC₂) MXene. **2022**, 12, 31923-31934 ○
- 443 Development of nanotechnology-mediated precision radiotherapy for anti-metastasis and radioprotection. 1
- 442 Oppositely Charged MXene Fibers as Highly Efficient Osmotic Power Generator from Sea and River Water. ○
- 441 Cu-MXene: A potential biocide for the next-generation biomedical application. **2023**, 294, 127029 2
- 440 Two-dimensional heterostructures for photocatalytic CO₂ reduction. **2023**, 216, 114699 ○
- 439 Facile fabrication of flexible and ultrathin self-assembled Ti₃C₂T_x /bacterial cellulose composite films with multifunctional electromagnetic shielding and photothermal conversion performances. **2023**, 454, 140288 ○
- 438 Multi-layered MXene V₄C₃T as new low-voltage insertion anode for Na-ion battery applications. **2023**, 437, 141505 ○
- 437 INVESTIGATION OF THE FEATURES OF THE SURFACE STRUCTURE OF TWODIMENSIONAL LAYERED MATERIALS Ti₃C₂T_x (T_{DF}) BY INFRARED SPECTROSCOPY AND RAMAN SPECTROSCOPY METHODS. **2022**, 89, 477-484 ○
- 436 Topological defects and their induced metallicity in monolayer semiconducting ϵ -phase group IV monochalcogenides. ○
- 435 Selectivity for intercalated ions in MXene toward a high-performance capacitive electrode. ○
- 434 Light-induced tumor theranostics based on chemical-exfoliated borophene. **2022**, 11, ○
- 433 Tuning the Work Function of Ti₃C₂T_x MXene by Molecular Doping without Changing its Surface Functional Groups. 2480-2490 ○
- 432 Facile chemical modification of Nb₂C₂T_x MXene with ethylene diamine for sensitive electrochemical detection of dopamine from human serum samples. **2022**, 100232 ○

- 431 MXene-Based Ceramic Nanocomposites Enabled by Pressure-Assisted Sintering. o
- 430 Universal Ligands for Dispersion of Two-Dimensional MXene in Organic Solvents. 1
- 429 2D Transition Metal Carbides (MXenes) for Applications in Electrocatalysis. **2022**, 165-198 o
- 428 Coupling W 18 O 49 /Ti 3 C 2 T x MXene Pseudocapacitive Electrodes with Redox Electrolytes to Construct High-Performance Asymmetric Supercapacitors. 2204829 o
- 427 Ultrahigh Capacity and Rapid Selective Recycling of Gold Ions by Organic Intercalated and Exfoliated Few-Layer Ti3C2Tx Nanosheets. o
- 426 4D printing of MXene hydrogels for high-efficiency pseudocapacitive energy storage. **2022**, 13, 1
- 425 Electronic Nature Transition and Magnetism Creation in Vacancy-Defected Ti2CO2 MXene under Biaxial Strain: A DFTB + U Study. o
- 424 Recent advances in 2D organic/horganic heterostructures for electronics and optoelectronics. o
- 423 Two-dimensional titanium carbide (Ti3C2Tx) MXene produced by ternary cations intercalation via structural control with angstrom-level precision. **2022**, 105562 o
- 422 Recent progress of nanotechnology in the research framework of all-solid-state batteries. **2022**, 107994 o
- 421 Two-Dimensional Half-Metallic and Semiconducting Lanthanide-Based MXenes. **2022**, 7, 40929-40940 o
- 420 Simultaneously tuning interlayer spacing and termination of MXenes by Lewis-basic halides. **2022**, 13, 2
- 419 MXene-Based Composites as Nanozymes in Biomedicine: A Perspective. **2022**, 14, o
- 418 Single-Step Synthesis of Well-Ordered Hierarchical Nickel Nanostructures for Boosting the Oxygen Evolution Reaction. **2022**, 36, 13786-13795 o
- 417 3D conductive material strategies for modulating and monitoring cells. **2022**, 101041 o
- 416 Investigation and understanding of the mechanical properties of MXene by high-throughput computations and interpretable machine learning. **2022**, 101921 o
- 415 Emerging applications of MXenes for photodetection: Recent advances and future challenges. **2022**, o
- 414 Surface Charge Modification on 2D Nanofluidic Membrane for Regulating Ion Transport. 2208959 o

- 413 Quantum water desalination: Water generation through separate pathways for protons and hydroxide ions in membranes. **2022**, 132, 194302 1
- 412 2D layered MXene/TiO₂ nano-heterostructures for photocatalytic H₂ generation. 0
- 411 MXene fibers for electronic textiles: Progress and perspectives. **2022**, 107996 0
- 410 Constructing 2D/2D heterojunction of MnO₂ nanolamellas grown on MXene nanosheets for boosted supercapacitor performance. **2022**, 56, 106105 0
- 409 Deformable lithium-ion batteries for wearable and implantable electronics. **2022**, 9, 041310 0
- 408 Construction of ternary Ag/Ti₃C₂/TiO₂ photocatalysts for rhodamine B degradation under visible light radiation. **2022**, 134, 113201 0
- 407 Metal nitrides as efficient electrode material for supercapacitors: A review. **2022**, 56, 105912 2
- 406 Enhanced electronic and thermoelectric properties of Zr₂CO₂/GaS van der Waals heterostructure: A First-principles study. **2022**, 35, 102453 0
- 405 Electronic properties and storage capability of two-dimensional nitridosilicate MnSi₂N₄ from first-principles. **2022**, 12, 115127 0
- 404 Transition Metal-Doped Boron Nitride Atomic Sheets with an Engineered Bandgap and Magnetization. 0
- 403 Effect of Si on the oxidation behaviors of Ti₃Al_{1-x}Si_xC₂ at 1000 °C. 0
- 402 A flexible zinc ion hybrid capacitor integrated system with layers-dependent V₂CT_x MXene. **2023**, 454, 140360 2
- 401 Emerging carbon-based quantum dots for sustainable photocatalysis. 0
- 400 Interfacial Charge Modulation: An Efficient Strategy for Stable Blue Quantum-Dot Light-Emitting Diodes. 2201802 0
- 399 New horizons of MBenes: highly active catalysts for the CO oxidation reaction. 0
- 398 Fast electrochemical redox kinetics of two-dimensional TiO₂/Ti₃C₂T (MXene) heterostructure for high-performance lithium-ion capacitor. **2023**, 928, 117034 0
- 397 Low-temperature carbonized MXene/protein-based eggshell membrane composite as free-standing electrode for flexible supercapacitors. **2023**, 226, 588-596 0
- 396 MXene-incorporated 1D/2D nano-carbons for electromagnetic shielding: A review. **2023**, 203, 542-560 0

- 395 Cyclocrosslinked polyphosphazene modified MXene as aqueous supercapacitor. **2023**, 439, 141574 o
- 394 Optimized electron/ion transport by constructing radially oriented channels in MXene hybrid fiber electrodes for high-performance supercapacitors at low temperatures. 1
- 393 Improved electrochemical performance for alkali and alkaline metal doped nanostructures as electrode material for energy storage applications. **2023**, 147, 110285 o
- 392 A novel flexible electrode with highly stable trifluoroacetic acid modified Nb₂CT MXene for the sensitive detection of rifampicin. **2023**, 928, 117088 o
- 391 Theoretical prediction of superconductivity in two-dimensional MXenes of molybdenum carbides. **2022**, 25, 580-589 o
- 390 Graphene oxide coated polyaminoanthraquinone@MXene based flexible film electrode for high-performance supercapacitor. **2023**, 57, 106180 o
- 389 Ultrathin Ti₃C₂T_x MXene-based electrochemical transistor for highly sensitive determination of nitrite. **2023**, 928, 117012 o
- 388 Influences of protein-corona on stability and aggregation kinetics of Ti₃C₂T_x nanosheets in aquatic environment. **2023**, 219, 115131 o
- 387 Blade-coated Ti₃C₂T MXene films for pseudocapacitive energy storage and infrared stealth. **2023**, 131, 109587 o
- 386 The origin of selective electro-adsorption of cations by few-layered 2D MXene electrode. **2023**, 548, 116295 o
- 385 Immunoengineered MXene nanosystem for mitigation of alloantigen presentation and prevention of transplant vasculopathy. **2023**, 48, 101706 o
- 384 Materials design and preparation for high energy density and high power density electrochemical supercapacitors. **2023**, 152, 100713 o
- 383 Ti₃C₂T_x MXene@carbon dots hybrid microflowers as a binder-free electrode material toward high capacity capacitive deionization. **2023**, 548, 116267 o
- 382 3D printed smart glove with pyramidal MXene/Ecoflex composite-based toroidal triboelectric nanogenerators for wearable human-machine interaction applications. **2023**, 106, 108110 o
- 381 Formation of buried 2D Aluminium Gallium Nitride structures with enhanced piezoelectric modulus by xenon ion implantation. **2023**, 30, 101710 o
- 380 A review of recent progress in 2D MXenes: Synthesis, properties, and applications. **2023**, 132, 109634 o
- 379 A review on the recent advances in composite membranes for CO₂ capture processes. **2023**, 307, 122752 o
- 378 Two-dimensional nanomaterials: A critical review of recent progress, properties, applications, and future directions. **2023**, 165, 107362 1

- 377 Screening of single transition metal substitution in two-dimensional Mo₂CT MXene electrocatalyst with ultrahigh activity for oxygen reduction reaction. **2023**, 36, 102585 1
- 376 Tailoring surface chemistry of MXenes to boost initial coulombic efficiency for lithium storage. **2023**, 612, 155875 0
- 375 MXene as emerging material for photocatalytic degradation of environmental pollutants. **2023**, 477, 214965 2
- 374 Electrodeposition of Ni - Fe on graphite rod as an efficient and binder-free electrocatalyst for oxygen and hydrogen evolution reactions. **2023**, 937, 168400 1
- 373 Next generation 2D materials for anodes in battery applications. **2023**, 556, 232256 0
- 372 Adsorption and infrared spectra simulations of acrylic acid over (001) surface of molybdenum carbide. **2023**, 566, 111798 0
- 371 Monolithic MXene composites with multi-responsive actuating and energy-storage multi-functions. **2023**, 454, 140513 0
- 370 MXene based activated carbon novel nano-sandwich for efficient CO₂ adsorption in fixed-bed column. **2023**, 68, 102353 0
- 369 Investigating suitable medium for the long-duration storage of Ti₂CTx MXene. **2023**, 938, 168471 0
- 368 Construction of a novel hybrid plasmonic metal-2D MXene catalyst for plasmon-driven photoreduction of nitroaromatics. **2023**, 613, 156055 0
- 367 A rational design of titanium-based heterostructures as electrocatalyst for boosted conversion kinetics of polysulfides in Li-S batteries. **2023**, 633, 432-440 0
- 366 Conductive few-layered 1T-MoSe₂/MXene as a highly-efficient catalyst for accelerating bidirectional sulfur redox kinetics in Li-S batteries. **2023**, 936, 168250 0
- 365 Synergistic effect of NaTi₂(PO₄)₃ and MXene synthesized in situ for high-performance sodium-ion capacitors. **2023**, 612, 155960 0
- 364 One-step construction of Ti₃C₂Tx/MoS₂ hierarchical 3D porous heterostructure for ultrahigh-rate supercapacitor. **2023**, 634, 460-468 0
- 363 Biomass-derived nano-laminated Ti₃SiC₂ MAX phase. **2022**, 12, 32552-32556 0
- 362 Investigating the Local Structure of Ti Based MXene Materials by Temperature Dependent X-Ray Absorption Spectroscopy. 0
- 361 Transition metal pyrophosphate (M_xP₂O₇): A new arrival in hybrid supercapacitors. **2022**, 140639 0
- 360 SnS₂ Nanosheets as a Template for 2D SnO₂ Sensitive Material: Nanostructure and Surface Composition Effects. **2022**, 15, 8213 0

- 359 Ambient-stable MXene with superior performance suitable for widespread applications. **2022**, 140635 0
- 358 Emerging trends in niobium, vanadium, and molybdenum based MXenes applications. 1-22 0
- 357 Structural, thermal and dielectric properties of 2D layered Ti_3C_2Tx (MXene) filled poly (ethylene-co-methyl acrylate) (EMA) nanocomposites. 0
- 356 2D MXene-Based Biosensing: A Review. 2205249 2
- 355 2D rare-earth metal carbides (MXenes) $Mo_2NdC_2T_2$ electronic structure and magnetic properties: A DFT + U study. **2022**, 132, 204301 0
- 354 Strategies toward High-Loading Lithium-Sulfur Batteries. 116-150 2
- 353 Tuning the Surface Chemistry of MXene to Improve Energy Storage: Example of Nitrification by Salt Melt. 2202709 2
- 352 Bioinspired MXene-Based Soft Actuators Exhibiting Angle-Independent Structural Color. **2023**, 15, 2
- 351 Water induced ultrathin Mo_2C nanosheets with high-density grain boundaries for enhanced hydrogen evolution. **2022**, 13, 1
- 350 V_2CT_x MXene: A Promising Catalyst for Low-Temperature Aerobic Oxidative Desulfurization. 0
- 349 Ti_3C_2Tx MXene Nanosheets as Lubricant Additives to Lower Friction under High Loads, Sliding Ratios, and Elevated Temperatures. 0
- 348 Maximizing Ion Dynamics and Electrochemical Performance of Ionic Liquid-Acetonitrile Electrolyte in Ti_3C_2Tx MXene. 0
- 347 Ultrastrong MXene films via the synergy of intercalating small flakes and interfacial bridging. **2022**, 13, 0
- 346 MXene-Based Ink Design for Printed Applications. **2022**, 12, 4346 0
- 345 MXenes for Sulfur-Based Batteries. 2202860 0
- 344 Yttrium incorporation in Cr_2AlC : On the metastable phase formation and decomposition of $(Cr,Y)_2AlC$ MAX phase thin films. 0
- 343 Designing a Functionalized 2D-TMD (MoX_2 , $X = S, Se$) Hosting Half-metallicity for Selective Gas-sensing Applications: Atomic-scale Study. **2022**, 118655 0
- 342 The 2D Semiconductor Library. **2022**, 1-31 0

- 341 Epitaxial Atomic Substitution for MoS₂/MoN Heterostructure Synthesis. 1
- 340 Interlayer Modulation of Layered Transition Metal Compounds for Energy Storage. **2022**, 14, 54369-54388 1
- 339 Bio-Inspired Nanomembranes as Building Blocks for Nanophotonics, Plasmonics and Metamaterials. **2022**, 7, 222 0
- 338 Facile self-assembly of sandwich-like MXene layered multiscale structure nanocomposite. **2023**, 10, 015014 0
- 337 Nanomaterials and nanomaterials-based drug delivery to promote cutaneous wound healing. **2022**, 114670 1
- 336 Fundamentals and Scientific Challenges in Structural Design of Cathode Materials for Zinc-Ion Hybrid Supercapacitors. 2202303 0
- 335 Thermal stability and decomposition behavior of Cr₂TiAlC₂ at elevated temperature. **2022**, 0
- 334 An Integrated Wearable Sweat Sensing Patch for Passive Continuous Analysis of Stress Biomarkers at Rest. 2212083 0
- 333 Universal Capacitance BoostSmart Surface Nanoengineering by Zwitterionic Molecules for 2D MXene Supercapacitor. 2201329 1
- 332 Passively Q-switched fiber laser utilizing Molybdenum Titanium Aluminum Carbide (Mo₂Ti₂AlC₂) for pulsed laser generation. **2022**, 170439 0
- 331 Nanomaterial-Based Electrically Conductive Hydrogels for Cardiac Tissue Repair. Volume 17, 6181-6200 0
- 330 Microwave Absorbing Materials for Stealth Application: A Holistic Overview. 0
- 329 Advanced 2D Nanomaterials for Additive Manufacturing. **2023**, 335-368 0
- 328 MXene-Based Nanomaterials for Biomedical Applications: Healthier Substitute Materials for the Future. 2200123 1
- 327 Fiber-Optic Microfiber: Tracking Activity Enhancement and Suppression of Heterogeneous Photocatalysts. 0
- 326 Two-Dimensional MXenes for Energy Storage: Computational and Experimental Approaches. **2022**, 7, 0
- 325 Single Atom Catalysts Supported on Metallic C₅N Monolayers for Oxygen Reduction/Evolution Reactions with More Active Sites than Loaded Metal Atoms. **2022**, 156048 0
- 324 The highly sensitive ethanol sensor based on nanocomposites of ZnO in situ grown on 2D Ti₃C₂T_x nanosheet. **2023**, 34, 105707 1

- 323 Applications of advanced MXene-based composite membranes for sustainable water desalination. **2022**, 137643 0
- 322 Excitonic Effects in the Optical Properties of Scandium and Hafnium MXene Semiconductors from First-Principles Calculations. 2200469 0
- 321 Electrically Tunable MXene Nanomechanical Resonators Vibrating at Very High Frequencies. 1
- 320 Vertical Arrangement of Ti₂CT_x MXene Nanosheets on Carbon Fibers for High-Performance and Flexible Zn-Ion Supercapacitors. 0
- 319 Biaxial Stretching Array Based on High-Energy-Efficient MXene-Based Al-Ion Micro-supercapacitor Island and Editable Stretchable Bridge. **2022**, 14, 55770-55779 0
- 318 Bismuth oxide modified V₂C MXene as a Schottky catalyst with enhanced photocatalytic oxidation for photo-denitration activities. 1-12 0
- 317 Multiple Dimensional Engineering of MOF-Related Materials in Separators for Lithium-Sulfur Batteries: A Review. **2022**, 169, 120519 0
- 316 Metal Organic Framework-MXene Nanoarchitecture for Fast Responsive and Ultra-Stable Electro-Ionic Artificial Muscles. 2212252 0
- 315 The Ti_{0.2}V_{1.8}C MXene Ink-Prepared Chemiresistor: From Theory to Tests with Humidity versus VOCs. **2023**, 11, 7 5
- 314 Sandwich-Structured MXene/Carbon Hybrid Support Decorated with Pt Nanoparticles for Oxygen Reduction Reaction. **2022**, 5, 14957-14965 0
- 313 Recent Progress of MXene-Based Materials as Anodes in Sodium-Ion Batteries. 0
- 312 Dehydroxylation-assisted self-crosslinking of MXene-based pervaporation membranes for treating high-salinity water. **2022**, 0
- 311 Metal Ion-Induced Porous MXene for All-Solid-State Flexible Supercapacitors. 1
- 310 Nanocellulose-Linked MXene/Polyaniline Aerogel Films for Flexible Supercapacitors. **2022**, 8, 798 0
- 309 Controllable Synthesis of 2D Materials by Electrochemical Exfoliation for Energy Storage and Conversion Application. 2206702 0
- 308 Two-Dimensional Nanomaterials: Synthesis and Applications in Photothermal Catalysis. 0
- 307 Engineered Two-Dimensional Nanostructures as SERS Substrates for Biomolecule Sensing: A Review. **2023**, 13, 102 1
- 306 Two-Dimensional Janus MXene Inks for Versatile Functional Coatings on Arbitrary Substrates. 0

- 305 Study of the interaction mechanism between human serum albumin and Ti₃C₂Tx with different degrees of oxidation by multi-spectroscopic method and molecular docking. **2023**, 100236 ○
- 304 Preparation of C₃N₄/TiO₂ photocatalyst with Ti₃C₂ MXene as precursor by molten salt method and its hydrogen production performance. **2023**, 58, 302-316 ○
- 303 An MXene-doped PVA/PVP hydrogel-based strain sensor applicable in liquid environment. **2023**, 32, 025010 ○
- 302 A review on tailoring the corrosion and oxidation properties of MoS₂-based coatings. ○
- 301 Computational Studies of Auto-Active van der Waals Interaction Molecules on Ultra-Thin Black-Phosphorus Film. **2023**, 28, 681 1
- 300 First-principles Density Functional Theory Elucidation of the Hydrogen Evolution Reaction on TM-promoted TiC₂ (TM=Fe, Co, Ni, Cu, Ru, Rh, Pd, Ag, Os, Ir, Pt, and Au). ○
- 299 Printed Electronics Based on 2D Material Inks: Preparation, Properties, and Applications toward Memristors. 2201156 ○
- 298 An Overview of Flexible Sensors: Development, Application, and Challenges. **2023**, 23, 817 ○
- 297 Spontaneous Formation of MXene-Oxidized Sono/Chemo-Dynamic Sonosensitizer/Nanocatalyst for Antibacteria and Bone-Tissue Regeneration. 1
- 296 Hoya-like Hierarchical Porous Architecture as Multifunctional Phosphorus Anode for Superior Lithium/Sodium Storage. ○
- 295 Recent Advances for the Synthesis and Applications of Two-dimensional Ternary Layered Materials. 1
- 294 Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis of Supercapacitors: A Review. **2023**, ○
- 293 Flexible and ultrathin dopamine modified MXene and cellulose nanofiber composite films with alternating multilayer structure for superior electromagnetic interference shielding performance. **2023**, 18, ○
- 292 Bidirectionally aligned MXene hybrid aerogels assembled with MXene nanosheets and microgels for supercapacitors. ○
- 291 Ion-Selective Separation Using MXene-Based Membranes: A Review. 341-356 ○
- 290 Recovery of oxidized two-dimensional MXenes through high frequency nanoscale electromechanical vibration. **2023**, 14, ○
- 289 Functional Two-Dimensional Materials for Bioelectronic Neural Interfacing. **2023**, 14, 35 ○
- 288 Surface fluorine preservation dependence of Ti₃C₂Tx MXene for high electrochemical properties in ionic liquid electrolytes. ○

- 287 Cathode Materials for Primary Zinc-Air Battery. **2023**, 23-66 o
- 286 Selective Etching of Ti₃AlC₂ MAX Phases Using Quaternary Ammonium Fluorides Directly Yields Ti₃C₂T_z MXene Nanosheets: Implications for Energy Storage. o
- 285 Super-Anti-Freezing, Tough and Adhesive Titanium Carbide and L-Ornithine-Enhanced Hydrogels. **2023**, 1
- 284 Predicting the work function of 2D MXenes using machine-learning methods. o
- 283 Interconnected Metallic Membrane Enabled by MXene Inks Toward High-Rate Anode and High-Voltage Cathode for Li-Ion Batteries. 2213860 o
- 282 Recent Escalations in MXenes: From Fundamental to Applications. **2023**, 205-239 o
- 281 Two-Dimensional HfBe₂C with Hepta-Coordinated Carbons: A Highly Stable Direct-Band-Gap Semiconductor Predicted by First-Principles Calculations. o
- 280 Theoretical proposal and material realization of ferromagnetic negative charge-transfer energy insulator. **2023**, 107, o
- 279 Flexible Two-Dimensional MXene-Based Antennas. o
- 278 Principles of Design and Synthesis of Metal Derivatives from MOFs. 2210166 o
- 277 Fully Sprayed Metal Oxide Transistors Utilizing Ti₃C₂T_x MXene Contacts. o
- 276 Elucidation of the Charging Mechanisms and the Coupled StructuralMechanical Behavior of Ti₃C₂T_x (MXenes) Electrodes by In Situ Techniques. 2203154 o
- 275 Best practices for electrochemical characterization of supercapacitors. **2023**, o
- 274 Surface terminals reconstruction: The way to widen the output voltage of MXene-based aqueous symmetrical micro-supercapacitors. o
- 273 MXenes Antibacterial Properties and Applications: A Review and Perspective. 2206716 1
- 272 Two-dimensional Hg and FBX (X = O, S, Se, and Te) photocatalysts with ultrawide bandgap and enhanced photocatalytic performance for water splitting. **2023**, 13, 2301-2310 o
- 271 Metal halide HgI₂ monolayer with auxetic property and photocatalysis application. **2023**, 219, 112007 o
- 270 Self-generated Schottky barriers in niobium carbide MXene nanocatalysts for theory-oriented sonocatalytic and NIR-II photonic hyperthermia tumor therapy. **2023**, 48, 101750 o

- 269 Effect of preadsorbing gas molecules on the adsorption of SO₂ molecule on Hf₂CO₂ MXene by first-principles study. **2023**, 36, 102639 ○
- 268 TiO₂@Ti₃C₂Tx heterostructure as an environmentally stable saturable absorber for ultrafast photonics. **2023**, 136, 113417 ○
- 267 Recent advances in membrane-based materials for desalination and gas separation. **2023**, 387, 135845 1
- 266 Metal selenides for energy storage and conversion: A comprehensive review. **2023**, 479, 214984 ○
- 265 MXene (Ti₃C₂Tx)/cellulose nanofiber/polyaniline film as a highly conductive and flexible electrode material for supercapacitors. **2023**, 304, 120519 ○
- 264 Influence of N-doped concentration on the electronic properties and quantum capacitance of Hf₂CO₂ MXene. **2023**, 210, 111826 ○
- 263 In-situ grown metal-organic framework derived CoS-MXene pseudocapacitive asymmetric supercapacitors. **2023**, 60, 106537 ○
- 262 Clean water recycling through adsorption via heterogeneous nanocomposites: Silver-based metal-organic framework embellished with graphene oxide and MXene. **2023**, 7, 100296 ○
- 261 Nanostructural Organization in a Biredox Ionic Liquid. **2023**, 14, 101-106 ○
- 260 In Situ Synthesis of MXene with Tunable Morphology by Electrochemical Etching of MAX Phase Prepared in Molten Salt. 2203805 ○
- 259 Hierarchical V₄C₃TX@NiO-reduced graphene oxide heterostructure hydrogel and defective reduced graphene oxide hydrogel as free-standing anode and cathode for high-performance asymmetric supercapacitor. ○
- 258 3D MoS₂/graphene nanoflowers as anode for advanced lithium-ion batteries. **2022**, 32, 4041-4049 ○
- 257 Mo₂TiC₂ MXene-Supported Ru Clusters for Efficient Photothermal Reverse Water-Gas Shift. ○
- 256 Synergistic etching and intercalation enables ultrathin Ti₃C₂Tx and Nb₂CTx MXene nanosheets. ○
- 255 Latest advances and comparative analysis of MXenes as anode and cathode electrodes in secondary batteries. **2023**, 133, 030901 ○
- 254 Thermal and electrical transport conductivities of novel ordered double two-dimensional MXenes via density functional theory. ○
- 253 Strategies to mitigate the shuttle effect in room temperature sodium-sulfur batteries: improving cathode materials. ○
- 252 Green and scalable electrochemical routes for cost-effective mass production of MXenes for supercapacitor electrodes. ○

- 251 Small-size Ti₃C₂T_x MXene nanosheets coated with metal-polyphenol nanodots for enhanced cancer photothermal therapy and anti-inflammation. **2023**, ○
- 250 Two-dimensional nanomaterial MXenes for efficient gas separation: a review. ○
- 249 Recent Developments of MXene-based Catalysts for Hydrogen Production by Water Splitting. ○
- 248 Developments in two-dimensional material-based nanoinks for electronics. **2023**, 277-302 ○
- 247 All-Inkjet-Printed Ti₃C₂ MXene Capacitor for Textile Energy Storage. **2023**, 13, 230 ○
- 246 Ultralight Ppy@Pva/Bc/Mxene Composite Aerogels for High-Performance Supercapacitor Electrodes and Pressure Sensors. ○
- 245 Electrochemically modulated interaction of MXenes with microwaves. 1
- 244 Low-Voltage Driven Ionic Polymer-Metal Composite Actuators: Structures, Materials, and Applications. 2206135 ○
- 243 Two-Dimensional Ordered Double-Transition Metal Carbides for the Electrochemical Nitrogen Reduction Reaction. **2023**, 15, 6797-6806 ○
- 242 Robust and Elastic Bioinspired MXene-Coated Foams with Enhanced Energy Storage and Conversion Capabilities. 2201611 ○
- 241 Interfacial Solid-State Mediator-Based Z-Scheme Heterojunction TiO₂@Ti₃C₂/MgIn₂S₄ Microflower for Efficient Photocatalytic Pharmaceutical Micropollutant Degradation and Hydrogen Generation: Stability, Kinetics, and Mechanistic Insights. ○
- 240 Possible approaches for water purification in industries. **2023**, ○
- 239 Recent progress of transition metal-based catalysts as cathodes in O₂/H₂O-involved and pure Li||O₂ batteries. ○
- 238 Atomic cation-vacancy engineering of two-dimensional nanosheets for energy-related applications. ○
- 237 Applications of MXene-based memristors in neuromorphic intelligence applications. 1-19 ○
- 236 Nanocomposite-based functional materials: Synthesis, properties, and applications. **2023**, 317-365 ○
- 235 Application of 2D MXene in Organic Electrode Materials for Rechargeable Batteries: Recent Progress and Perspectives. 2210184 ○
- 234 Enhanced long-range surface plasmon effect based on Zr₂CO₂ MXene and MoSe₂ heterostructures for SPR biosensors with high FOM. **2023**, 1-1 ○

- 233 2D Supramolecular Organic Framework with Tunable Luminescence via Cucurbit[n]urils-Based Hydrogen Bonds, Outer-Surface Interactions and Host-Guest Interactions. 1
- 232 Recent Advances in the Synthesis of MXene Quantum Dots. 0
- 231 Silicon disulfide for high-performance Li-ion batteries and solid-state electrolytes. 0
- 230 MXenes for energy applications. **2023**, 475-502 0
- 229 Super-elastic and mechanically durable MXene-based nanocomposite aerogels enabled by interfacial engineering with dual crosslinking strategy. 0
- 228 Borophene molecular plasmons. **2023**, 176, 111267 0
- 227 Influence of C-vacancy-line defect on electronic and optical properties and quantum capacitance of Ti₂CO₂ MXene: A first-principles study. **2023**, 176, 111254 0
- 226 Ni-intercalated Mo₂TiC₂T_x free-standing MXene for excellent gravimetric capacitance prepared via electrostatic self-assembly. **2023**, 61, 106662 0
- 225 MXene-based materials for removal of antibiotics and heavy metals from wastewater: A review. **2023**, 29, 100202 0
- 224 Perfluorooctylsilane grafted Ti₃C₂X-based hydrogel liquid marble for controlled movement, self-assembly, light-induced release, and water evaporation system. **2023**, 35, 105529 0
- 223 BaTiO₃/MXene/PVDF-TrFE composite films via an electrospinning method for flexible piezoelectric pressure sensors. **2023**, 11, 4614-4622 0
- 222 Defect engineering of two-dimensional materials for advanced energy conversion and storage. **2023**, 52, 1723-1772 1
- 221 CNT/MXene Ultralight Membranes: Fabrication, Surface Nano/Microstructure, 2D/3D Stacking Architecture, Ion-Transport Mechanism, and Potential Application as Interlayer for Li₂Batteries. 0
- 220 Ga₄C-family crystals, a new generation of star thermoelectric materials, achieved by band degeneracies, valley anisotropy, and strong phonon scattering among others. **2023**, 11, 8013-8023 0
- 219 Nanosensors for detection of volatile organic compounds. **2023**, 273-296 0
- 218 Recent Progress in Emerging Novel MXenes Based Materials and their Fascinating Sensing Applications. 2206147 0
- 217 Flexible Triboelectric Tactile Sensor Based on a Robust MXene/Leather Film for Human-Machine Interaction. **2023**, 15, 13802-13812 0
- 216 Unraveling the Electrochemical Mechanism in Tin Oxide/MXene Nanocomposites as Highly Reversible Negative Electrodes for Lithium-Ion Batteries. 2202484 0

- 215 All-polymer solid state electrochromic device for low voltage and fast modulation between primary colors. **2023**, 137, 113519 ○
- 214 Conductometric Cr₂O₃/TiO₂/Ti₃C₂T_x Gas Sensor for Detecting Triethylamine at Room Temperature. **2023**, 381, 133412 ○
- 213 Narrowing the optical gap of CdPS₃ single crystal via chemical intercalation using liquid ammonia method. **2023**, 363, 115116 ○
- 212 Ti₃C₂T_x MXene/graphene oxide/Co₃O₄ nanorods aerogels with tunable and broadband electromagnetic wave absorption. **2023**, 462, 142042 ○
- 211 Recent progress in conductive electrospun materials for flexible electronics: energy, sensing, and electromagnetic shielding applications. **2023**, 142847 ○
- 210 2023 roadmap for potassium-ion batteries. **2023**, 5, 021502 ○
- 209 MXenes Versatile 2D materials for identification of biomarkers and contaminants in large scale environments A review. **2023**, 115900 ○
- 208 Preparation of Mo₂CT MXene as co-catalyst for H₂ production by etching of pure/mixed HBr solution. **2023**, 109922 ○
- 207 Recent progress of MXene-based membranes for high-performance and efficient gas separation. **2023**, 135, 109883 ○
- 206 Rolling flexible double-MXenes TiCT/VCT hybrid films for microsupercapacitors. **2023**, 464, 142645 ○
- 205 First-principles study of electronic and optical properties of NH₃-adsorbed Sc₂CO₂ monolayer and its application in gas sensors. **2023**, 24, 173-184 ○
- 204 Recent advances in two dimensional nanomaterial-based electrochemical (bio)sensing platforms for trace-level detection of amino acids and pharmaceuticals. **2023**, 162, 117027 ○
- 203 A holistic review of MXenes for solar device applications: Synthesis, characterization, properties and stability. **2023**, 39, 100493 ○
- 202 MXenes: from past to future perspectives. **2023**, 463, 142351 ○
- 201 Thinking green with 2-D and 3-D MXenes: Environment friendly synthesis and industrial scale applications and global impact. **2023**, 178, 113238 ○
- 200 A review on MXene and its Composites for electromagnetic interference (EMI) shielding applications. **2023**, 208, 170-190 ○
- 199 Intrinsically lighting absorptive PANI/MXene aerogel encapsulated PEG to construct PCMs with efficient photothermal energy storage and stable reusability. **2023**, 254, 112282 ○
- 198 Effects of Ti₃C₂T_x MXene on structure, morphology, fluorescence and temperature sensitive properties of Eu³⁺ doped 8YSZ powder. **2023**, 258, 119815 ○

- 197 Construction of bacterial laccase displayed on the microbial surface for ultrasensitive biosensing of phenolic pollutants with nanohybrids-enhanced performance. **2023**, 452, 131265 ○
- 196 Graphite-ring-stacked carbon nanotubes synthesized during the rescue of Ti₃C₂T_x MXene for dual-peak electromagnetic wave absorption. **2023**, 945, 169342 ○
- 195 Fabrication of highly efficient Rh-doped cobalt-bisickel-layered double hydroxide/MXene-based electrocatalyst with rich oxygen vacancies for hydrogen evolution. **2023**, 640, 338-347 ○
- 194 Development of high-capacity surface-engineered MXene composite for heavy metal Cr (VI) removal from industrial wastewater. **2023**, 326, 138448 ○
- 193 Highly boosted homogeneity of polymer matrix composites filled with MXene-derived 2D titanium oxide nanosheet for high-k gate dielectrics. **2023**, 947, 169563 ○
- 192 Directly preparing well-dispersed ultra-hydrophilic NiFeP nanoparticle/Mxene complexes from spent electroless Ni plating solution as efficient hydrogen evolution catalysts. **2023**, 11, 109738 ○
- 191 Advances in MXenes synthesis and MXenes derived electrocatalysts for oxygen electrode in metal-air batteries: A review. **2023**, 292, 116400 ○
- 190 Strain tuning of the electronic structure and optical properties of novel Janus MgBrI monolayer: Insights from first-principles calculations. **2023**, 35, e00802 ○
- 189 Ion transport phenomena in electrode materials. **2023**, 4, 021302 ○
- 188 The effect of electrode thickness and electrode/electrolyte interface on the capacitive deionization behavior of the Ti₃C₂T_x MXene electrodes. **2023**, 947, 169701 ○
- 187 Recent advances and key opportunities on in-plane micro-supercapacitors: From functional microdevices to smart integrated microsystems. **2023**, 81, 410-431 ○
- 186 First-principles prediction of room-temperature half-metallicity in strain- and carrier-tunable monolayer Mn₂Sn₂Te₆. **2023**, 150, 115704 ○
- 185 Ti₃C₂T_x MXene/dopamine-modified polypyrrole flexible composite electrodes with application in energy storage devices. **2023**, 946, 169347 ○
- 184 Photocatalytic oxygen evolution and antibacterial biomimetic repair membrane for diabetes wound repair via HIF1- α pathway. **2023**, 20, 100616 ○
- 183 Enhanced visible light catalytic activity of holey Ti₃C₂ based catalyst for azo dyes. **2023**, 623, 157002 ○
- 182 Lamellar-stacked cobalt-based nanopiles integrated with nitrogen/sulfur co-doped graphene as a bifunctional electrocatalyst for ultralong-term zinc-air batteries. **2023**, 81, 633-641 ○
- 181 Carboxymethylcellulose (CMC)/glutaraldehyde (GA)-modified Ti₃C₂T_x membrane and its efficient ion sieving performance. **2023**, 675, 121541 ○
- 180 Two-dimensional MXene with multidimensional carbonaceous matrix: A platform for general-purpose functional materials. **2023**, 135, 101105 ○

- 179 2.2 V wearable asymmetric supercapacitors based on Co oxide//Mn oxide electrodes and a PVA-KOH-urea-LiClO₄ alkaline gel electrolyte. **2023**, 945, 169285 ○
- 178 Ion diffusion, and hysteresis of magnesium hydride conversion electrode materials. **2023**, 155, 47-53 1
- 177 Application of Ti₃C₂T_x in a C band Er-doped fiber laser. **2023**, 163, 109455 ○
- 176 Insights into the impact of interlayer spacing on MXene-based electrodes for supercapacitors: A review. **2023**, 65, 107341 ○
- 175 Improved lithium ion storage performance of Ti₃C₂T_x MXene@S composite with carboxymethyl cellulose binder. **2023**, 641, 15-25 ○
- 174 Capacitance performance of Ti₃C₂T_x MXene nanosheets on alkaline and neutral electrolytes. **2023**, 163, 112217 ○
- 173 High-performance novel asymmetric MXene@CNT//N-doped CNT flexible hybrid device with large working voltage for energy storage. **2023**, 63, 106975 ○
- 172 Flexible MXene/aramid nanofiber nanocomposite film with high thermal conductivity and flame retardancy. **2023**, 186, 111847 1
- 171 Vertical porous Ti₃CNT_x/rGO hybrid aerogels with enhanced capacitive performance. **2023**, 459, 141528 ○
- 170 Disordered Au Nanoclusters for Efficient Ammonia Electrosynthesis. **2023**, 16, ○
- 169 Mass-Mediated Phase Modulation of Thin Molybdenum Nitride Crystals on a Liquid Cu-Mo Alloy. **2023**, 11, 82 ○
- 168 Theoretical study of M₂CO₂ MXenes stability and adsorption properties for heavy metals ions removal from water. **2023**, 220, 112042 1
- 167 Structural, optical, and mechanical characterization of PMMA-MXene composites functionalized with MEMO silane. **2022**, 8, 215-226 ○
- 166 State-of-the-art progress in Ag₃PO₄-based photocatalysts: Rational design, regulation and perspective. **2023**, 31, 101742 1
- 165 Utilization of two-dimensional multicomponent Quasicrystal for NO₂ gas detection. **2023**, 298, 127449 1
- 164 X-ray Insights into Formation of H Functional Groups on MXenes: Two-Step Dehydrogenation of Adsorbed Water. **2023**, 23, 1401-1408 ○
- 163 Deep ultraviolet optical limiting materials: 2D Ti₃C₂ and Ti₃AlC₂ nanosheets. **2023**, 11, 2355-2363 ○
- 162 First-principles investigation on structural and optoelectronic properties of buckled SnO monolayer for effective solar energy scavenging. **2023**, ○

- 161 2D Transition Metal Carbides (MXenes) for Third Order Nonlinear Optics: Status and Prospects. 2200733 ○
- 160 Electrostatic Interfacial Cross-Linking and Structurally Oriented Fiber Constructed by Surface-Modified 2D MXene for High-Performance Flexible Pseudocapacitive Storage. **2023**, 17, 2487-2496 ○
- 159 MXene-based nanocomposite for electrocatalytic reduction of CO₂: Experimental and theoretical results. **2023**, 38, 100481 ○
- 158 MXene polymeric nanoarchitectures mechanical, deformation, and failure mechanism: A review. **2023**, 62, 443-466 ○
- 157 Iron Single-Atom Catalysts on MXenes for Ultrasensitive Monitoring of Adrenal Tumor Markers and Cellular Dopamine. **2023**, 8, 2202069 ○
- 156 First-Principles Study of Structural and Electronic Properties of Monolayer PtX₂ and Janus PtXY (X, Y = S, Se, and Te) via Strain Engineering. **2023**, 8, 5715-5721 ○
- 155 Surface and Interface Regulation of MXenes: Methods and Properties. 2201530 ○
- 154 Core-shell mechanism of etching V₂AlC MAX phase to V₂CT_z MXenes. **2023**, 38, 1527-1542 ○
- 153 A Thrifty Liquid-Phase Exfoliation (LPE) of MoSe₂ and WSe₂ Nanosheets as Channel Materials for FET Application. **2023**, 52, 2819-2830 ○
- 152 Electrochemical characterization of Ti₃C₂T MXene prepared via a molten salt etching route in an acetonitrile-based electrolyte. **2023**, 148, 107453 ○
- 151 Boosting Charge Transfer Efficiency by Nanofragment MXene for Efficient Photoelectrochemical Water Splitting of NiFe(OH)_x Co-Catalyzed Hematite. ○
- 150 Recent Advancements and Perspectives of Biodegradable Polymers for Supercapacitors. **2023**, 33, ○
- 149 In-situ-foaming synthesis of cheese-like Fe₃S₄/Ti₃C₂T electrode material with both high energy and power density for Al/Zn-ion supercapacitors. **2023**, 23, 3547-3556 ○
- 148 Noble Metal-Based Heterogeneous Catalysts for Electrochemical Hydrogen Evolution Reaction. **2023**, 13, 2177 ○
- 147 Freeing Fluoride Termination of Ti₃C₂T_x via Electrochemical Etching for High-Performance Capacitive Deionization. ○
- 146 Challenges and Future Prospects of the MXene-Based Materials for Energy Storage Applications. **2023**, 9, 126 1
- 145 In-situ partial oxidation of TiVCT_x derived TiO₂ and V₂O₅ nanocrystals functionalized TiVCT_x MXene as anode for lithium-ion batteries. **2023**, 444, 142022 ○
- 144 Reasonable Design of MXene-Supported Dual-Atom Catalysts with High Catalytic Activity for Hydrogen Evolution and Oxygen Evolution Reaction: A First-Principles Investigation. **2023**, 16, 1457 ○

- 143 Tribological behaviour of Ti₃C₂T_x nano-sheets: Substrate-dependent tribo-chemical reactions. o
- 142 Synthesis of Ti₃SiC₂ MAX phase powder through molten salt method. o
- 141 Electrochemical production of two-dimensional atomic layer materials and their application for energy storage devices. **2023**, 4, 011306 o
- 140 Edges of Layered FePSe₃ Exhibit Increased Electrochemical and Electrocatalytic Activity Compared to Basal Planes. **2023**, 5, 928-934 o
- 139 Assessing the Surface Chemistry of 2D Transition Metal Carbides (MXenes): A Combined Experimental/Theoretical ¹³C Solid State NMR Approach. o
- 138 Progress in 2D materials based Nanolubricants: A review. **2023**, 38, 100485 1
- 137 Nanoarchitectonics of Triboelectric Nanogenerator for Conversion of Abundant Mechanical Energy to Green Hydrogen. **2023**, 13, 2203476 o
- 136 Interface modulations of high-performance graphene anticorrosion coatings. **2023**, 178, 107463 o
- 135 Theoretical Analysis of Magnetic Coupling in the Ti₂C Bare MXene. **2023**, 127, 3706-3714 o
- 134 Cytocompatibility of Ti₃C₂T_x MXene with Red Blood Cells and Human Umbilical Vein Endothelial Cells and the Underlying Mechanisms. **2023**, 36, 347-359 o
- 133 First-principles study for discovery of novel synthesizable 2D high-entropy transition metal carbides (MXenes). **2023**, 11, 5681-5695 o
- 132 A New Group of 2D Non-van der Waals Materials with Ultra Low Exfoliation Energies. **2023**, 9, o
- 131 Recent Progress and Challenges in MXene-Based Phase Change Material for Solar and Thermal Energy Applications. **2023**, 16, 1977 1
- 130 Constructing KCu₇S₄/titanium carbide MXene hybrid structure via electrostatic assembly for high-performance supercapacitors. **2023**, 38, 1683-1693 o
- 129 Etching Exfoliated Ti₂CT_x Nanosheets for Photoelectrochemical Photodetectors with Enhanced Performance and Alkaline Stability. **2023**, 52, 3029-3037 o
- 128 Beyond Ti-based MXenes: A review of emerging non-Ti based metal-MXene structure, properties, and applications. **2023**, 63, 313-338 o
- 127 Microbe-Anode Interactions : Comparing the impact of genetic and material engineering approaches to improve the performance of microbial electrochemical systems (MES). o
- 126 Enhancing the Chemical Stability of MXene Through Synergy of Hydrogen Bond and Coordination Bond in Aqueous Solution. **2023**, 7, o

- 125 Lightning Strike Protection: Current Challenges and Future Possibilities. **2023**, 16, 1743 ○
- 124 Fluorine-free mechanochemical synthesis of MXene. 1-5 ○
- 123 Atomic Plasma Grafting: Precise Control of Functional Groups on Ti₃C₂T_x MXene for Room Temperature Gas Sensors. **2023**, 15, 12232-12239 ○
- 122 Improved Mechanical Strength of Dicatechol Crosslinked MXene Films for Electromagnetic Interference Shielding Performance. **2023**, 13, 787 1
- 121 MXene Fiber-based Wearable Textiles in Sensing and Energy Storage Applications. **2023**, 24, 1167-1182 ○
- 120 Ion Irradiation Effects on Two-Dimensional MXene Ti₂C for Applications in Extreme Conditions: Combined Ab Initio and Monte Carlo Simulations. **2023**, 6, 3463-3471 ○
- 119 Advanced structure selenium nanosphere@Ti₃C₂@graphene oxide with dual-channel and multiple protection strategies for AlBe batteries. **2023**, 564, 232827 ○
- 118 Fabrication and properties of the 6-aminocaproic acid-modified MXene-based PA6 nanocomposites. **2023**, 30, 529-541 ○
- 117 Ultrastretchable MXene Microsupercapacitors. 2300386 ○
- 116 Synthesis of Ti₃AlC₂ max phase under vacuum, its structural characterization and using for Ti₃C₂T_x MXene preparation. **2023**, 771, 139759 ○
- 115 Conductive metal/metal phase and built-in electric field of 1T-VSe₂-MXene hetero-structure to accelerate dual-directional sulfur conversion for high-performance Li-S batteries. **2023**, 461, 142100 ○
- 114 Machine learning assisted screening of MXenes pseudocapacitive materials. **2023**, 564, 232834 ○
- 113 One-step laser ablation of Fe clusters supported on Ti₃C₂T_x nanosheets for enhanced NH₃ sensing at room temperature. **2023**, 49, 18353-18362 ○
- 112 Flexible Antiswelling Photothermal-Therapy MXene Hydrogel-Based Epidermal Sensor for Intelligent Human/Machine Interfacing. 2300299 ○
- 111 Electrocapacitive Deionization: Mechanisms, Electrodes, and Cell Designs. 2213578 ○
- 110 Dual-Conductive CoSe₂@TiSe₂-C Heterostructures Promoting Overall Sulfur Redox Kinetics under High Sulfur Loading and Lean Electrolyte. 2300089 ○
- 109 Effect of terminations on the hydrogen evolution reaction mechanism on Ti₃C₂ MXene. **2023**, 11, 6886-6900 ○
- 108 Post-Ammonia-Treated V₂C₂T_x MXene at Different Pressures: Effects on Morphology, Electronic, and Optical Properties. **2023**, 127, 4609-4617 ○

107	Progress in 3D-MXene Electrodes for Lithium/Sodium/Potassium/Magnesium/Zinc/Aluminum-Ion Batteries. 2023 , 6,	o
106	Effect of Substitutional Oxygen on Properties of Ti ₃ C ₂ T _x MXene Produced Using Recycled TiO ₂ Source. 2201715	o
105	Advances on Microsupercapacitors: Real Fast Miniaturized Devices toward Technological Dreams for Powering Embedded Electronics?. 2023 , 8, 8977-8990	o
104	Study on the electromagnetic wave absorption performance of Ti ₃ C ₂ MXene with different etching states. 2023 , 58, 4824-4839	o
103	Recent Advances in Two-Dimensional MXene for Supercapacitor Applications: Progress, Challenges, and Perspectives. 2023 , 13, 919	o
102	Retrospective insights into recent MXene-based catalysts for CO ₂ electro/photoreduction: how far have we gone?. 2023 , 15, 6536-6562	o
101	Swelling-Induced Structural Transformation Strategy: Controllable Synthesis of 2D Porous Polypyrrole/MXene Heterostructures with Tunable Pore Structures. 2023 , 10,	o
100	Two-dimensional transition metal MXene-based gas sensors: A review. 2023 , 108286	o
99	Solvent-free covalent MXene nanofluid: A new lubricant combining the characteristics of solid and liquid lubricants. 2023 , 462, 142238	o
98	Quantum Energy Storage in 2D Heterointerfaces. 2023 , 10,	o
97	2D material-based sensing devices: an update. 2023 , 11, 6016-6063	o
96	Niche Applications of MXene Materials in Photothermal Catalysis. 2023 , 5, 492-510	o
95	Ambipolar Electrochemistry of Pre-Intercalated Ti ₃ C ₂ T _x MXene in Ionic Liquid Electrolyte.	o
94	Ta ₄ C ₃ -Modulated MOF-Derived 3D Crosslinking Network of VO ₂ (B)@Ta ₄ C ₃ for High-Performance Aqueous Zinc Ion Batteries. 2023 , 15, 13554-13564	o
93	Effect of the surface termination on the adsorption of flue gas by the titanium carbide MXene. 2023 , 29, 101441	o
92	Photocatalytic Activity of the Oxidation Stabilized Ti ₃ C ₂ T _x MXene in Decomposing Methylene Blue, Bromocresol Green and Commercial Textile Dye. 2201252	o
91	Enhanced Yield of Large-Sized Ti ₃ C ₂ T _x MXene Polymers Nanosheets via Cyclic Ultrasonic-Centrifugal Separation. 2023 , 15, 1330	o
90	Unlocking the full energy densities of carbon-based supercapacitors. 2023 , 11, 517-546	o

- 89 Hierarchical V4C3TX@NiO-reduced graphene oxide heterostructure hydrogels and defective reduced graphene oxide hydrogels as free-standing anodes and cathodes for high-performance asymmetric supercapacitors. **2023**, 25, 9140-9151 ○
- 88 Enhanced Photocatalytic Hydrogen Production of ZnIn2S4 by Using Surface-Engineered Ti3C2Tx MXene as a Cocatalyst. **2023**, 16, 2168 ○
- 87 Retrospective on Exploring MXene-Based Nanomaterials: Photocatalytic Applications. **2023**, 28, 2495 ○
- 86 Asymmetric Janus functionalization induced magnetization and switchable out-of-plane polarization in 2D MXene Mo2CXX?. **2023**, 25, 8676-8683 ○
- 85 Two-dimensional MXenes. **2023**, 48, 238-244 ○
- 84 Band Structure Engineering of MXenes for Low-Loss Visible Epsilon-Near-Zero Properties by First-Principles Calculation. 2201119 ○
- 83 Degradation of Methylene Blue by Hot Electrons Transfer in SnSe. **2023**, 10, ○
- 82 2D Layered Nanomaterials as Fillers in Polymer Composite Electrolytes for Lithium Batteries. **2023**, 13, ○
- 81 The Rise of MXene: A Wonder 2D Material, from Its Synthesis and Properties to Its Versatile ApplicationsA Comprehensive Review. **2023**, 381, ○
- 80 Decreased spin-resolved anti-bonding states filling to accelerate CHO conversion into CH2O in transitional metal-doped Mo2C monolayers during CO2 reduction. ○
- 79 Computational studies of MXenes. **2023**, 48, 253-260 ○
- 78 Gamma irradiated structural modification of Ti3C2Tx for high performance supercapacitors and the hydrogen evolution reaction. **2023**, 47, 7205-7210 ○
- 77 Stability and electronic properties of hydrogenated C 3 B structure. **2023**, 123, ○
- 76 Enhancing the electrochemical performance of d-Mo2CTx MXene in lithium-ion batteries and supercapacitors by sulfur decoration. **2023**, ○
- 75 Recent Advances and Perspectives of Lewis Acidic Etching Route: An Emerging Preparation Strategy for MXenes. **2023**, 15, ○
- 74 Nitrogen and sulfur co-doped Ti3C2Tx MXenes for high-rate lithium-ion batteries. **2023**, 25, 10635-10646 ○
- 73 One-step topochemical transformation of MoAlB into metastable Mo2AlB2 using a metal chloride salt reaction. **2023**, 59, 4814-4817 ○
- 72 Vanadium MXenes materials for next-generation energy storage devices. **2023**, 34, 252001 ○

- 71 Non-van der Waals 2D Materials for Electrochemical Energy Storage. 2209360 o
- 70 A systematic computational investigation of lithiation-induced structural phase transitions of O-functionalized MXenes. **2023**, 25, 9428-9436 o
- 69 Amperometric Miniaturised Portable Enzymatic Nanobiosensor for the Ultrasensitive Analysis of a Prostate Cancer Biomarker. **2023**, 14, 161 o
- 68 Interfacial Designs of MXenes for Mild Aqueous Zinc-Ion Storage. 2201683 o
- 67 MXene-Based Materials for Multivalent Metal-Ion Batteries. **2023**, 9, 174 o
- 66 Recent advances in two-dimensional MXenes for zinc-ion batteries. o
- 65 Novel MXene-Modified Polyphenyl Sulfone Membranes for Functional Nanofiltration of Heavy Metals-Containing Wastewater. **2023**, 13, 357 o
- 64 Metal-organic frameworks for fast electrochemical energy storage: Mechanisms and opportunities. **2023**, 9, 798-822 o
- 63 Direct synthesis and chemical vapor deposition of 2D carbide and nitride MXenes. **2023**, 379, 1242-1247 o
- 62 Emerging 2D Materials for Supercapacitors: MXenes. **2023**, 65-88 o
- 61 A direct and clean route to MXenes. **2023**, 379, 1189-1190 o
- 60 Recent Advances in MXene-Based Nanocomposites for Wastewater Purification and Water Treatment: A Review. **2023**, 15, 1267 o
- 59 Improving the intrinsic activity of ultrathin 2D/2D heterostructures by bridge-bonded Ni₃C₂ ligands for efficient oxygen evolution. **2023**, 34, 255402 o
- 58 Facile fabrication of Mxene coated metal mesh-based material for oil /water emulsion separation. **2023**, 255, 114824 o
- 57 Ti₃CNT MXene/rGO scaffolds directing the formation of a robust, layered SEI toward high-rate and long-cycle lithium metal batteries. **2023**, 58, 322-331 o
- 56 Emerging MXene-Based Flexible Tactile Sensors for Health Monitoring and Haptic Perception. o
- 55 Gas-sensing properties and applications of MXenes. **2023**, 48, 261-270 o
- 54 Vibrational signature of hydrated protons confined in MXene interlayers. **2023**, 14, o

- 53 Directly Using Ti3C2Tx MXene for a Solid-Contact Potentiometric pH Sensor toward Wearable Sweat pH Monitoring. **2023**, 13, 376 ○
- 52 Two-Dimensional Mesoporous Materials for Energy Storage and Conversion: Current Status, Chemical Synthesis and Challenging Perspectives. **2023**, 6, ○
- 51 Synthesis and applications of MXene-based composites: a review. **2023**, 34, 262001 ○
- 50 Microcrack Arrays in Dense Graphene Films for Fast-Ion-Diffusion Supercapacitors. ○
- 49 Influence of bistacked polyvinylidene fluoride-2D Ti3C2Tx MXene nanocomposite concentration for solution-processed piezoelectric nanogenerators. **2023**, 34, ○
- 48 Shearing-force-driven delamination of waste residue into oxidatively stable MXene composites for high-performance Si anode. ○
- 47 Fabrication and applications of van der Waals heterostructures. **2023**, 5, 022007 ○
- 46 Ultralight PPy@PVA/BC/MXene composite aerogels for high-performance supercapacitor electrodes and pressure sensors. **2023**, 624, 157138 ○
- 45 Nanotechnology for Heat Transfer. **2023**, 71-97 ○
- 44 Growth and applications of two-dimensional single crystals. **2023**, 10, 032001 ○
- 43 Recent advances in two-dimensional nanomaterials for bone tissue engineering. **2023**, ○
- 42 Effect of vacancies and edges in promoting water chemisorption on titanium-based MXenes. **2023**, 10, ○
- 41 Antibacterial effect and photothermal sterilization of low dose two-dimensional vanadium carbide. **2023**, 129, ○
- 40 ??????????????????. **2023**, 52, 20220371 ○
- 39 In Situ Selenization of Ti3C2Tx Assisted by Cu2+ with Superior Performance for Aluminum Ion Batteries. **2023**, 37, 6220-6229 ○
- 38 Insight into the effects of S-vacancy and O-doping in monolayer VS2 as lithium-ion battery anodes from first-principles calculations. **2023**, 38, 102851 ○
- 37 Status and Prospects of MXene-Based Lithium-Oxygen Batteries: Theoretical Prediction and Experimental Modulation. ○
- 36 MXene-Based Flexible Sensors: Materials, Preparation, and Applications. ○

- 35 Insertion of MXene-Based Materials into CuPd 3D Aerogels for Electroreduction of CO₂ to Formate. ○
- 34 Strain effects on the electronic and magnetic properties of Cr₂TaC₂ and Cr₂TaC₂O₂ monolayers. **2023**, 122, 151901 ○
- 33 Design and advanced manufacturing of electromagnetic interference shielding materials. **2023**, ○
- 32 Asymmetrically Coordinated Cu₂Ni_{1-x}C₂ Single-Atom Catalyst Immobilized on Ti₃C₂T_x MXene as Separator Coating for Lithium-Sulfur Batteries. ○
- 31 Current trends and strategies in the development of green MXene-based photoelectrochemical sensing application. **2023**, 163, 117059 ○
- 30 MXene: From synthesis to Environment remediation. **2023**, ○
- 29 Neuromorphic visual artificial synapse in-memory computing systems based on GeO_x-coated MXene nanosheets. **2023**, 112, 108441 ○
- 28 Work function and energy level alignment tuning at Ti₃C₂T_x MXene surfaces and interfaces using (metal-)organic donor/acceptor molecules. **2023**, 7, ○
- 27 Self-Healing MXene- and Graphene-Based Composites: Properties and Applications. **2023**, 15, ○
- 26 Preparation of Polyethylene/Zirconium Phosphate Nanocomposites via a Well-Controlled Polyethylene-Grafted Interface. ○
- 25 Fabrication of Polyelectrolyte Sheets of Unimolecular Thickness via MOF-Templated Polymerization. ○
- 24 Ultrasonically compactified thick MoS₂ films with reduced nanosheet size for high performance compact energy storage. **2023**, 571, 233060 ○
- 23 Recent Advances, Properties, Fabrication and Opportunities in Two-Dimensional Materials for their Potential Sustainable Applications. **2023**, 102780 ○
- 22 EGraphene: A Graphene Allotrope with Desirable Auxeticity and Dirac Cone. ○
- 21 Promising M₂CO₂/MoX₂ (M = Hf, Zr; X = S, Se, Te) Heterostructures for Multifunctional Solar Energy Applications. **2023**, 28, 3525 ○
- 20 Synergy of Small Antiviral Molecules on a Black-Phosphorus Nanocarrier: Machine Learning and Quantum Chemical Simulation Insights. **2023**, 28, 3521 ○
- 19 Advances in the Field of Two-Dimensional Crystal-Based Photodetectors. **2023**, 13, 1379 ○
- 18 Engineering A New Member of MXenes M₅C₄ Phases Nanoplatfoms as Synergistically Photothermal and Chemodynamic Therapeutics for Methicillin-Resistant Staphylococcus Aureus. **2023**, 143004 ○

- 17 Recent advances in the development of MXenes/cellulose based composites: A review. **2023**, 240, 124477 ○
- 16 Progression in the Oxidation Stability of MXenes. **2023**, 15, ○
- 15 Effective Surface Modification of 2D MXene toward Thermal Energy Conversion and Management. ○
- 14 MXene nanomaterials in biomedicine: A bibliometric perspective. 11, ○
- 13 Nb₂CTx-Based MXenes Most Recent Developments: From Principles to New Applications. **2023**, 16, 3520 ○
- 12 Engineering strategies and active site identification of MXene-based catalysts for electrochemical conversion reactions. ○
- 11 MXene/NiO Composites for Chemiresistive-Type Room Temperature Formaldehyde Sensor. **2023**, 11, 258 ○
- 10 Recent advances in the development, design and mechanism of negative electrodes for asymmetric supercapacitor applications. 1-36 ○
- 9 Two-Dimensional MXenes Derived from Medium/High-Entropy MAX Phases M₂GaC (M = Ti/V/Nb/Ta/Mo) and their Electrochemical Performance. ○
- 8 Regulating d-Band Center of Ti₂C MXene Via Nb Alloying for Stable and High-Efficient Supercapacitive Performances. ○
- 7 The review of MXenes for osmotic energy harvesting: Synthesis and properties. **2023**, 136, 109971 ○
- 6 Theoretical study on the electronic properties and quantum capacitance of Zr₂CO₂ MXene with atomic swap. ○
- 5 Tracking the Explosive Boiling Dynamics at the Alcohol/MXene Interface. **2023**, 14, 4142-4149 ○
- 4 Wetting of MXenes and Beyond. **2023**, 15, ○
- 3 Hydrosoluble diacetone acrylamide as an electrolyte additive for high-capacity Zn-ion hybrid supercapacitors. **2023**, 670, 131602 ○
- 2 Investigation of the optical and electronic properties of functionalized Ti₃C₂ MXene with halid atoms using DFT calculation. **2023**, 35, 106136 ○
- 1 Active site rich MXene as a sensing interface for brain neurotransmitter's and pharmaceuticals: One decade, many sensors. **2023**, 117096 ○