Xiaohui Wang

List of Publications by Year
in descending order

98 papers	9,112 citations	61687 45 h-index	45040 94 g-index
103 all docs	103 docs citations	103 times ranked	9232 citing authors

#	Article	IF	Citations
1	A novel strategy for synthesizing the large size Co9S8@C nanosheets as anode for lithium-ion batteries with superior performance. Journal of Alloys and Compounds, 2022, 895, 162668.	2.8	13
2	Intercalation-deintercalation design in MXenes for high-performance supercapacitors. Nano Research, 2022, 15, 3213-3221.	5.8	17
3	Effects of pellet surface roughness and pre-oxidation temperature on CMAS corrosion behavior of Ti2AlC. Journal of Advanced Ceramics, 2022, 11, 945-960.	8.9	23
4	Submicron Ti₂CT_{<i>x</i>}MXene particulates as high-rate intercalation anode materials for Li-ion batteries. Journal of Materials Chemistry A, 2022, 10, 15474-15484.	5.2	7
5	High-efficiency ultraviolet shielding and high transparency of Ti3C2T MXene/poly(vinyl alcohol) nanocomposite films. Composites Communications, 2022, 33, 101235.	3.3	14
6	Understanding charge storage in Nb₂CT_{<i>x</i>} MXene as an anode material for lithium ion batteries. Physical Chemistry Chemical Physics, 2021, 23, 23173-23183.	1.3	12
7	Raman Spectroscopy of Layered Compound YbB2C2. Acta Metallurgica Sinica (English Letters), 2021, 34, 1021-1027.	1.5	0
8	Preparation and properties of CMAS resistant bixbyite structured high-entropy oxides RE2O3 (RE = Sm,) Tj ETQq0 0 0 rgBT /Overlock 10 Journal of Advanced Ceramics, 2021, 10, 596-613.	8.9	79
9	Realizing stability of magnetic response under bending in flexible CoFeMnSi films with a sponge-like Ti3C2 MXene buffer layer. Applied Surface Science, 2021, 546, 149167.	3.1	0
10	Controlled Hydrothermal/Solvothermal Synthesis of Highâ€Performance LiFePO₄ for Liâ€Ion Batteries. Small Methods, 2021, 5, e2100193.	4.6	52
11	Zero Lithium Miscibility Gap Enables High-Rate Equimolar Li(Mn_,Fe)PO₄ Solid Solution. Nano Letters, 2021, 21, 5091-5097.	4.5	9
12	MXene Enables Stable Solidâ€Electrolyte Interphase for Si@MXene Composite with Enhanced Cycling Stability. ChemElectroChem, 2021, 8, 3089-3094.	1.7	8
13	Enabling highly efficient and broadband electromagnetic wave absorption by tuning impedance match in high-entropy transition metal diborides (HE TMB2). Journal of Advanced Ceramics, 2021, 10, 1299-1316.	8.9	46
14	Unraveling surface functionalization of Cr2B2T2 (TÂ=ÂOH, O, Cl, H) MBene by first-principles calculations. Computational Materials Science, 2021, 199, 110810.	1.4	14
15	From structural ceramics to 2D materials with multi-applications: A review on the development from MAX phases to MXenes. Journal of Advanced Ceramics, 2021, 10, 1194-1242.	8.9	122
16	Structural defects in MAX phases and their derivative MXenes: A look forward. Journal of Materials Science and Technology, 2020, 38, 205-220.	5.6	55
17	Pt immobilized spontaneously on porous MXene/MAX hybrid monolith for hydrogen evolution reaction. Chinese Chemical Letters, 2020, 31, 988-991.	4.8	45
18	MXenes induce epitaxial growth of size-controlled noble nanometals: A case study for surface enhanced Raman scattering (SERS). Journal of Materials Science and Technology, 2020, 40, 119-127.	5.6	73

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19	Interlayer engineering of Ti₃C₂T_x MXenes towards high capacitance supercapacitors. Nanoscale, 2020, 12, 763-771.	2.8	73
20	Quantifying the rigidity of 2D carbides (MXenes). Physical Chemistry Chemical Physics, 2020, 22, 2115-2121.	1.3	52
21	Emerging 2D MXenes for supercapacitors: status, challenges and prospects. Chemical Society Reviews, 2020, 49, 6666-6693.	18.7	466
22	High-entropy (Nd0.2Sm0.2Eu0.2Y0.2Yb0.2)4Al2O9 with good high temperature stability, low thermal conductivity, and anisotropic thermal expansivity. Journal of Advanced Ceramics, 2020, 9, 595-605.	8.9	89
23	MXene-Carbon Nanotube Hybrid Membrane for Robust Recovery of Au from Trace-Level Solution. ACS Applied Materials & Interfaces, 2020, 12, 43032-43041.	4.0	53
24	Femtosecond Laserâ€Etched MXene Microsupercapacitors with Doubleâ€Side Configuration via Arbitrary Onâ€•and Throughâ€Substrate Connections. Advanced Energy Materials, 2020, 10, 2000470.	10.2	40
25	Ultrastable MXene@Pt/SWCNTs' Nanocatalysts for Hydrogen Evolution Reaction. Advanced Functional Materials, 2020, 30, 2000693.	7.8	164
26	High entropy defective fluorite structured rare-earth niobates and tantalates for thermal barrier applications. Journal of Advanced Ceramics, 2020, 9, 303-311.	8.9	126
27	Mechanical and thermal properties of light weight boronâ€mullite Al₅BO₉. Journal of the American Ceramic Society, 2020, 103, 5939-5951.	1.9	11
28	One-Step Incorporation of Nitrogen and Vanadium between Ti₃C₂<i>T</i>_{<i>x</i>} MXene Interlayers Enhances Lithium Ion Storage Capability. Journal of Physical Chemistry C, 2020, 124, 6012-6021.	1.5	24
29	Two-Dimensional Titanium Carbide (Ti3C2Tx) MXenes of Different Flake Sizes Studied by Scanning Electrochemical Microscopy in Different Electrolytes. Journal of Electronic Materials, 2020, 49, 4028-4044.	1.0	9
30	Dual Bond Enhanced Multidimensional Constructed Composite Silicon Anode for High-Performance Lithium Ion Batteries. ACS Nano, 2019, 13, 8854-8864.	7.3	91
31	Novel two-dimensional Ti3C2TX/Ni-spheres hybrids with enhanced microwave absorption properties. Ceramics International, 2019, 45, 22880-22888.	2.3	69
32	Atomic Repartition in MXenes by Electron Probes. Chemistry of Materials, 2019, 31, 4385-4391.	3.2	17
33	High-Energy-Density Hydrogen-Ion-Rocking-Chair Hybrid Supercapacitors Based on Ti₃C₂<i>T</i>_{<i>x</i>} MXene and Carbon Nanotubes Mediated by Redox Active Molecule. ACS Nano, 2019, 13, 6899-6905.	7.3	129
34	Understanding the Lithium Storage Mechanism of Ti₃C₂T_{<i>x</i>} MXene. Journal of Physical Chemistry C, 2019, 123, 1099-1109.	1.5	115
35	All-MXene-Based Integrated Electrode Constructed by Ti₃C₂ Nanoribbon Framework Host and Nanosheet Interlayer for High-Energy-Density Liâ€“S Batteries. ACS Nano, 2018, 12, 2381-2388.	7.3	340
36	Orientation-Dependent Lithium Miscibility Gap in LiFePO₄. Chemistry of Materials, 2018, 30, 874-878.	3.2	33

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37	2D transition metal carbide MXene as a robust biosensing platform for enzyme immobilization and ultrasensitive detection of phenol. Biosensors and Bioelectronics, 2018, 107, 69-75.	5.3	251
38	Surface Functional Groups and Interlayer Water Determine the Electrochemical Capacitance of Ti₃C₂<i>T</i>_{<i>x</i>} MXene. ACS Nano, 2018, 12, 3578-3586.	7.3	353
39	Partial dislocation in carbon-vacancy-ordered Nb12Al3C8. Scripta Materialia, 2018, 145, 85-89.	2.6	3
40	MXene-coated silk-derived carbon cloth toward flexible electrode for supercapacitor application. Journal of Energy Chemistry, 2018, 27, 161-166.	7.1	122
41	Green synthesis of high-performance LiFePO₄ nanocrystals in pure water. Green Chemistry, 2018, 20, 5215-5223.	4.6	25
42	Ti₃C₂T_{<i>x</i>} MXene Catalyzed Ethylbenzene Dehydrogenation: Active Sites and Mechanism Exploration from both Experimental and Theoretical Aspects. ACS Catalysis, 2018, 8, 10051-10057.	5.5	79
43	High-capacitance Ti₃C₂<i>T</i>_xMXene obtained by etching submicron Ti₃AlC₂grains grown in molten salt. Chemical Communications, 2018, 54, 8132-8135.	2.2	34
44	Screening Surface Structure of MXenes by High-Throughput Computation and Vibrational Spectroscopic Confirmation. Journal of Physical Chemistry C, 2018, 122, 18501-18509.	1.5	130
45	Precursorâ€Directed Nucleation and Selfâ€Assembly Growth: From Hollow Microprisms to Nanoplatelets. ChemNanoMat, 2017, 3, 292-297.	1.5	3
46	Ti₃C₂ MXene-Derived Sodium/Potassium Titanate Nanoribbons for High-Performance Sodium/Potassium Ion Batteries with Enhanced Capacities. ACS Nano, 2017, 11, 4792-4800.	7.3	544
47	Atomicâ€scale microstructure of Hf₂Al₄C₅ ceramic synthesized by spark plasma sintering. Journal of the American Ceramic Society, 2017, 100, 3208-3216.	1.9	3
48	Allâ€Solidâ€State Flexible Fiberâ€Based MXene Supercapacitors. Advanced Materials Technologies, 2017, 2, 1700143.	3.0	156
49	Alkalized Ti3C2 MXene nanoribbons with expanded interlayer spacing for high-capacity sodium and potassium ion batteries. Nano Energy, 2017, 40, 1-8.	8.2	549
50	Chemical Origin of Termination-Functionalized MXenes: Ti₃C₂<i>T</i>₂ as a Case Study. Journal of Physical Chemistry C, 2017, 121, 19254-19261.	1.5	194
51	Carbon vacancies in Ti₂CT₂MXenes: defects or a new opportunity?. Physical Chemistry Chemical Physics, 2017, 19, 31773-31780.	1.3	81
52	Copolymerization-Assisted Preparation of Porous LiMn2O4 Hollow Microspheres as High Power Cathode of Lithium-ion Batteries. Journal of Materials Science and Technology, 2017, 33, 781-787.	5.6	18
53	Influence of ordered carbonâ€vacancy networks on the electronic structures and elastic properties of Nb₄AlC_{3âˆ’<i>x</i>}. Journal of the American Ceramic Society, 2017, 100, 724-731.	1.9	14
54	Friction and Wear of Cemented Carbides. , 2017, , 533-541.		1

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55	On the small angle twist sub-grain boundaries in Ti3AlC2. Scientific Reports, 2016, 6, 23943.	1.6	8
56	Interlayer coupling in two-dimensional titanium carbide MXenes. Physical Chemistry Chemical Physics, 2016, 18, 20256-20260.	1.3	120
57	High-Capacitance Mechanism for Ti₃C₂<i>T</i>_{<i>x</i>} MXene by <i>in Situ</i> Electrochemical Raman Spectroscopy Investigation. ACS Nano, 2016, 10, 11344-11350.	7.3	455
58	[100]-Oriented LiFePO₄ Nanoflakes toward High Rate Li-Ion Battery Cathode. Nano Letters, 2016, 16, 795-799.	4.5	81
59	Anisotropic electronic conduction in stacked two-dimensional titanium carbide. Scientific Reports, 2015, 5, 16329.	1.6	107
60	Discovery of carbon-vacancy ordering in Nb4AlC3â€“x under the guidance of first-principles calculations. Scientific Reports, 2015, 5, 14192.	1.6	37
61	Insights into Highâ€Temperature Uniaxial Compression Deformation Behavior of Ti₃AlC₂. Journal of the American Ceramic Society, 2015, 98, 3332-3337.	1.9	23
62	A Costâ€Efficient Fabrication Strategy for Conductive Ti₂AlC Honeycomb Monolith Using Elemental Powders. Advanced Engineering Materials, 2015, 17, 1344-1350.	1.6	6
63	On the Faceted and Inclined Twin Boundary of Titanium Carbide Derived from Nanolaminated Ti₃AlC₂. Journal of the American Ceramic Society, 2015, 98, 1664-1667.	1.9	4
64	Covalency-Dependent Vibrational Dynamics in Two-Dimensional Titanium Carbides. Journal of Physical Chemistry A, 2015, 119, 12977-12984.	1.1	34
65	Self-assembled Ti₃C₂T_xMXene film with high gravimetric capacitance. Chemical Communications, 2015, 51, 13531-13533.	2.2	148
66	Vibrational properties of Ti₃C₂and Ti₃C₂T₂(T = O, F, OH) monosheets by first-principles calculations: a comparative study. Physical Chemistry Chemical Physics, 2015, 17, 9997-10003.	1.3	455
67	Electrically Conductive Honeycomb Monolith of Nanolaminated Ti3AlC2: Preparation and Characterization. Journal of Materials Science and Technology, 2015, 31, 125-128.	5.6	8
68	Al stabilized TiC twinning platelets. Journal of Materials Research, 2014, 29, 1113-1121.	1.2	15
69	A novel Ni2AlTi-containing composite with excellent wear resistance and anomalous flexural strength. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 597, 70-74.	2.6	21
70	Morphological and orientational diversity of LiFePO₄crystallites: remarkable reaction path dependence in hydrothermal/solvothermal syntheses. CrystEngComm, 2014, 16, 10112-10122.	1.3	23
71	Reciprocating Wear Performance and Interfacial Microstructure of a TiCâ€“Ni2AlTi Cermet. Tribology Letters, 2014, 55, 211-218.	1.2	3
72	Physical insight of superconductivity of Nb₂AlC: <i>in situ</i> Raman spectrometry investigation. Journal of Raman Spectroscopy, 2013, 44, 485-488.	1.2	10

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73	Crystal structure determination of nanolaminated Ti5Al2C3 by combined techniques of XRPD, TEM and ab initio calculations. Journal of Advanced Ceramics, 2012, 1, 268-273.	8.9	18
74	Hydrothermal synthesis of sodium niobate with controllable shape and structure. CrystEngComm, 2012, 14, 411-416.	1.3	38
75	Insights into high temperature oxidation of Al2O3-forming Ti3AlC2. Corrosion Science, 2012, 58, 95-103.	3.0	52
76	Corrosion behavior of selected Mn+1AXn phases in hot concentrated HCl solution: Effect of A element and MX layer. Corrosion Science, 2012, 60, 129-135.	3.0	50
77	<scp><scp>Ti</scp></scp>₅<scp><scp>Al</scp></scp>₂<scp><scp>C</scp></scp>₃: A New Ternary Carbide Belonging to <scp>MAX</scp> Phases in the <scp><scp>Ti</scp></scp>â€“<scp><scp>Al</scp></scp>â€“<scp><scp>C</scp></scp> System. Journal of the American Ceramic Society, 2012, 95, 1508-1510.	1.9	29
78	Hydrothermally synthesized LiFePO4 crystals with enhanced electrochemical properties: simultaneous suppression of crystal growth along [010] and antisite defect formation. Physical Chemistry Chemical Physics, 2012, 14, 2669.	1.3	126
79	Strengthening <scp><scp>Ti</scp></scp>₃<scp><scp>AlC</scp></scp>₂ by <i>In Situ</i> Synthesizing <scp><scp>Ti</scp></scp>₃<scp><scp>AlC</scp></scp>₂â€“<scp><scp>Y</scp></scp>₄<scp> Composites. Journal of the American Ceramic Society, 2012, 95, 2314-2321.	1.9	7
80	Raman spectrometry study of phase stability and phonon anharmonicity of Al3BC3 at elevated temperatures and high pressures. Journal of Applied Physics, 2011, 110, .	1.1	11
81	Hierarchically porous and conductive LiFePO4 bulk electrode: binder-free and ultrahigh volumetric capacity Li-ion cathode. Journal of Materials Chemistry, 2011, 21, 12444.	6.7	47
82	Mechanism for Hydrothermal Synthesis of LiFePO₄ Platelets as Cathode Material for Lithium-Ion Batteries. Journal of Physical Chemistry C, 2010, 114, 16806-16812.	1.5	127
83	Layered Machinable and Electrically Conductive Ti2AlC and Ti3AlC2 Ceramics: a Review. Journal of Materials Science and Technology, 2010, 26, 385-416.	5.6	499
84	Mechanical and Thermal Properties of Antiperovskite Ti₃AlC Prepared by an <i>In Situ</i> Reaction/Hotâ€Pressing Route. Journal of the American Ceramic Society, 2009, 92, 2698-2703.	1.9	28
85	Energy Transfer Enables 1.53 Î¼m Photoluminescence from Erbium-Doped TiO2Semiconductor Nanocrystals Synthesized by Ar/O2Radio-Frequency Thermal Plasma. Journal of the American Ceramic Society, 2008, 91, 2032-2035.	1.9	12
86	<i>In Situ</i> Reaction Synthesis and Mechanical Properties of V₂AlC. Journal of the American Ceramic Society, 2008, 91, 4029-4035.	1.9	78
87	Characterization of in situ synthesized TiC particle reinforced Fe-based composite coatings produced by multi-pass overlapping GTAW melting process. Surface and Coatings Technology, 2007, 201, 5899-5905.	2.2	79
88	Thermal shock behavior of Ti3AlC2 from between 200Â°C and 1300Â°C. Journal of the European Ceramic Society, 2005, 25, 3367-3374.	2.8	80
89	Growth of crack-free GaN films on Si(111) substrate by using Al-rich AlN buffer layer. Journal of Applied Physics, 2004, 96, 4982-4988.	1.1	10
90	Dislocation scattering in a two-dimensional electron gas of an AlxGa1â^'xN/GaN heterostructure. Physica Status Solidi (B): Basic Research, 2004, 241, 3000-3008.	0.7	2

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91	High-Temperature Oxidation Behavior of Ti2AlC in Air. Oxidation of Metals, 2003, 59, 303-320.	1.0	254
92	Oxidation behavior of Ti3AlC2 at 1000â€“1400 Â°C in air. Corrosion Science, 2003, 45, 891-907.	3.0	311
93	Solidâ€“liquid reaction synthesis of layered machinable Ti3AlC2 ceramic. Journal of Materials Chemistry, 2002, 12, 455-460.	6.7	231
94	Solid-Liquid Reaction Synthesis and Simultaneous Densification of Polycrystalline Ti₂AlC. International Journal of Materials Research, 2002, 93, 66-71.	0.8	125
95	Preparation of Ti2SnC by solidâ€"liquid reaction synthesis and simultaneous densification method. Materials Research Innovations, 2002, 6, 219-225.	1.0	41
96	Microstructure and properties of Ti3AlC2 prepared by the solidâ€“liquid reaction synthesis and simultaneous in-situ hot pressing process. Acta Materialia, 2002, 50, 3143-3151.	3.8	231
97	Indium doping effect on GaN in the initial growth stage. Journal of Electronic Materials, 2001, 30, 977-979.	1.0	2
98	GaN m-i-n LED grown by MOVPE. MRS Internet Journal of Nitride Semiconductor Research, 1996, 1, 1.	1.0	0