

# Aiguo Zhou

## List of Publications by Citations

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papers

6,570  
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80  
g-index

103  
ext. papers

8,267  
ext. citations

5.3  
avg, IF

6.11  
L-index

#	Paper	IF	Citations
100	Hydrophobic, Flexible, and Lightweight MXene Foams for High-Performance Electromagnetic-Interference Shielding. <i>Advanced Materials</i> , <b>2017</b> , 29, 1702367	24	903
99	Unique lead adsorption behavior of activated hydroxyl group in two-dimensional titanium carbide. <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 4113-6	16.4	813
98	Synthesis and thermal stability of two-dimensional carbide MXene Ti <sub>3</sub> C <sub>2</sub> . <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , <b>2015</b> , 191, 33-40	3.1	370
97	Two-dimensional Ti <sub>3</sub> C <sub>2</sub> as anode material for Li-ion batteries. <i>Electrochemistry Communications</i> , <b>2014</b> , 47, 80-83	5.1	316
96	MXene: a new family of promising hydrogen storage medium. <i>Journal of Physical Chemistry A</i> , <b>2013</b> , 117, 14253-60	2.8	298
95	Preparation of Ti <sub>3</sub> C <sub>2</sub> and Ti <sub>2</sub> C MXenes by fluoride salts etching and methane adsorptive properties. <i>Applied Surface Science</i> , <b>2017</b> , 416, 781-789	6.7	213
94	Preparation, mechanical and anti-friction performance of MXene/polymer composites. <i>Materials and Design</i> , <b>2016</b> , 92, 682-689	8.1	183
93	Preparation of High-Purity V <sub>2</sub> C MXene and Electrochemical Properties as Li-Ion Batteries. <i>Journal of the Electrochemical Society</i> , <b>2017</b> , 164, A709-A713	3.9	169
92	Hydrothermal synthesis of TiO <sub>2</sub> /Ti <sub>3</sub> C <sub>2</sub> nanocomposites with enhanced photocatalytic activity. <i>Materials Letters</i> , <b>2015</b> , 150, 62-64	3.3	157
91	Synthesis and electrochemical performance of Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> with hydrothermal process. <i>Electronic Materials Letters</i> , <b>2016</b> , 12, 702-710	2.9	157
90	Enhanced supercapacitive performance of delaminated two-dimensional titanium carbide/carbon nanotube composites in alkaline electrolyte. <i>Journal of Power Sources</i> , <b>2015</b> , 284, 38-43	8.9	154
89	TiC MXene-Based Sensors with High Selectivity for NH <sub>3</sub> Detection at Room Temperature. <i>ACS Sensors</i> , <b>2019</b> , 4, 2763-2770	9.2	150
88	Kirigami Patterning of MXene/Bacterial Cellulose Composite Paper for All-Solid-State Stretchable Micro-Supercapacitor Arrays. <i>Advanced Science</i> , <b>2019</b> , 6, 1900529	13.6	143
87	Synthesis of urchin-like rutile titania carbon nanocomposites by iron-facilitated phase transformation of MXene for environmental remediation. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 489-499	13.9	123
86	Structural Transformation of MXene (V <sub>2</sub> C, Cr <sub>2</sub> C, and Ta <sub>2</sub> C) with O Groups during Lithiation: A First-Principles Investigation. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 74-81	9.5	120
85	Two-dimensional Sc <sub>2</sub> C: A reversible and high-capacity hydrogen storage material predicted by first-principles calculations. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 10606-10612	6.7	120
84	High photoluminescence quantum yield of 18.7% by using nitrogen-doped Ti <sub>3</sub> C <sub>2</sub> MXene quantum dots. <i>Journal of Materials Chemistry C</i> , <b>2018</b> , 6, 6360-6369	7.1	104

83	A possible mechanism on synthesis of Ti <sub>3</sub> AlC <sub>2</sub> . <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2003</b> , 352, 333-339	5.3	96
82	Incipient and regular kink bands in fully dense and 10vol.% porous Ti <sub>2</sub> AlC. <i>Acta Materialia</i> , <b>2006</b> , 54, 1638-1639	8.4	94
81	Microstructure and mechanical properties of porous TiSiC. <i>Acta Materialia</i> , <b>2005</b> , 53, 4359-4366	8.4	88
80	Microscale modeling of kinking nonlinear elastic solids. <i>Physical Review B</i> , <b>2005</b> , 71,	3.3	87
79	The Synthesis Process and Thermal Stability of V <sub>2</sub> C MXene. <i>Materials</i> , <b>2018</b> , 11,	3.5	80
78	Synthesis and mechanical properties of Ti <sub>3</sub> AlC <sub>2</sub> by spark plasma sintering. <i>Journal of Materials Science</i> , <b>2003</b> , 38, 3111-3115	4.3	75
77	Preparation of MXene-Cu <sub>2</sub> O nanocomposite and effect on thermal decomposition of ammonium perchlorate. <i>Solid State Sciences</i> , <b>2014</b> , 35, 62-65	3.4	71
76	Kinking nonlinear elasticity, damping and microyielding of hexagonal close-packed metals. <i>Acta Materialia</i> , <b>2008</b> , 56, 60-67	8.4	66
75	Preparation of Ti <sub>3</sub> AlC <sub>2</sub> and Ti <sub>2</sub> AlC by self-propagating high-temperature synthesis. <i>Journal of Materials Science Letters</i> , <b>2001</b> , 20, 1971-1973		65
74	Synthesis and Electrochemical Properties of Two-Dimensional RGO/Ti <sub>3</sub> AlC <sub>2</sub> Nanocomposites. <i>Nanomaterials</i> , <b>2018</b> , 8,	5.4	58
73	Mechanical damping in porous Ti <sub>3</sub> SiC <sub>2</sub> . <i>Acta Materialia</i> , <b>2006</b> , 54, 5261-5270	8.4	58
72	Carbon dioxide adsorption of two-dimensional carbide MXenes. <i>Journal of Advanced Ceramics</i> , <b>2018</b> , 7, 237-245	10.7	58
71	Electrochemical performance of Ti <sub>3</sub> C <sub>2</sub> supercapacitors in KOH electrolyte. <i>Journal of Advanced Ceramics</i> , <b>2015</b> , 4, 130-134	10.7	57
70	Effects of 2-D transition metal carbide Ti <sub>2</sub> CT <sub>x</sub> on properties of epoxy composites. <i>RSC Advances</i> , <b>2016</b> , 6, 87341-87352	3.7	57
69	Preparation and methane adsorption of two-dimensional carbide Ti <sub>2</sub> C. <i>Adsorption</i> , <b>2016</b> , 22, 915-922	2.6	57
68	MoS <sub>2</sub> -Decorated Ti <sub>3</sub> C <sub>2</sub> MXene Nanosheet as Anode Material in Lithium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , <b>2017</b> , 164, A2654-A2659	3.9	52
67	Polyaniline-Decorated Supramolecular Hydrogel with Tough, Fatigue-Resistant, and Self-Healable Performances for All-In-One Flexible Supercapacitors. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 9736-9745	9.5	52
66	Synthesis and elastic and mechanical properties of Cr <sub>2</sub> GeC. <i>Journal of Materials Research</i> , <b>2008</b> , 23, 2157-2165	2.5	50

65	Quantitative phase analysis in the TiAlC ternary system by X-ray diffraction. <i>Powder Diffraction</i> , <b>2005</b> , 20, 218-223	1.8	46
64	Self-Assembled 3D MnO <sub>2</sub> [email[protected]] <sub>3</sub> C <sub>2</sub> Aerogel as Sulfur Host for Lithium-Sulfur Battery Cathodes. <i>ACS Applied Energy Materials</i> , <b>2019</b> , 2, 705-714	6.1	44
63	Pressure difference-induced synthesis of P-doped carbon nanobowls for high-performance supercapacitors. <i>Chemical Engineering Journal</i> , <b>2020</b> , 385, 123858	14.7	39
62	Two-dimensional vanadium carbide (V <sub>2</sub> CT) MXene as supercapacitor electrode in seawater electrolyte. <i>Chinese Chemical Letters</i> , <b>2020</b> , 31, 984-987	8.1	37
61	Synthesis and oxidation resistance of V <sub>2</sub> AlC powders by molten salt method. <i>International Journal of Applied Ceramic Technology</i> , <b>2017</b> , 14, 873-879	2	36
60	Tribological properties of Ti <sub>3</sub> SiC <sub>2</sub> coupled with different counterfaces. <i>Ceramics International</i> , <b>2015</b> , 41, 6950-6955	5.1	35
59	Kinking Nonlinear Elasticity and the Deformation of Magnesium. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2009</b> , 40, 1741-1756	2.3	32
58	Reversible dislocation motion under contact loading in LiNbO <sub>3</sub> single crystal. <i>Journal of Materials Research</i> , <b>2008</b> , 23, 1334-1338	2.5	32
57	Synthesis of high pure Ti <sub>3</sub> AlC <sub>2</sub> and Ti <sub>2</sub> AlC powders from TiH <sub>2</sub> powders as Ti source by tube furnace. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , <b>2013</b> , 28, 882-887	1	31
56	Synthesis of two-dimensional carbide Mo <sub>2</sub> CT <sub>x</sub> MXene by hydrothermal etching with fluorides and its thermal stability. <i>Ceramics International</i> , <b>2020</b> , 46, 19550-19556	5.1	30
55	Synthesis and electrochemical properties of V <sub>2</sub> C MXene by etching in opened/closed environments. <i>Journal of Advanced Ceramics</i> , <b>2020</b> , 9, 749-758	10.7	30
54	Synthesis of NaV <sub>6</sub> O <sub>15</sub> nanorods via thermal oxidation of sodium-intercalated 2D V <sub>2</sub> CT <sub>x</sub> and their electrochemical properties as anode for lithium-ion batteries. <i>Electrochimica Acta</i> , <b>2017</b> , 248, 178-187	6.7	28
53	Seawater electrolyte-mediated high volumetric MXene-based electrochemical symmetric supercapacitors. <i>Dalton Transactions</i> , <b>2018</b> , 47, 8676-8682	4.3	27
52	The preparation of V <sub>2</sub> CT <sub>x</sub> by facile hydrothermal-assisted etching processing and its performance in lithium-ion battery. <i>Journal of Materials Research and Technology</i> , <b>2020</b> , 9, 984-993	5.5	27
51	Microwave-assisted synthesis of flower-like AgBiOCl nanocomposite with enhanced visible-light photocatalytic activity. <i>Materials Letters</i> , <b>2014</b> , 136, 295-297	3.3	22
50	Non-isothermal crystallization and thermal degradation kinetics of MXene/linear low-density polyethylene nanocomposites. <i>E-Polymers</i> , <b>2017</b> , 17, 373-381	2.7	20
49	The effect of two-dimensional d-Ti <sub>3</sub> C <sub>2</sub> on the mechanical and thermal conductivity properties of thermoplastic polyurethane composites. <i>Polymer Composites</i> , <b>2020</b> , 41, 350-359	3	19
48	Novel Hierarchical TiO <sub>2</sub> /C Nanocomposite with Enhanced Photocatalytic Performance. <i>Nano</i> , <b>2015</b> , 10, 1550064	1.1	18

47	Facile preparation of BiOCl/Ti <sub>3</sub> C <sub>2</sub> hybrid photocatalyst with enhanced visible-light photocatalytic activity. <i>Functional Materials Letters</i> , <b>2019</b> , 12, 1850100	1.2	16
46	Hysteresis in kinking nonlinear elastic solids and the Preisach-Mayergoyz model. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	16
45	Novel Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> /Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> nanocomposite as a high rate anode material for lithium ion batteries. <i>Journal of Alloys and Compounds</i> , <b>2018</b> , 735, 530-535	5.7	16
44	Synthesis and characterization of novel Ti <sub>3</sub> SiC <sub>2</sub> /BN composites. <i>Diamond and Related Materials</i> , <b>2014</b> , 43, 29-33	3.5	15
43	Thermal conductivity and electrical transport properties of double-A-layer MAX phase Mo <sub>2</sub> Ga <sub>2</sub> C. <i>Materials Research Letters</i> , <b>2020</b> , 8, 158-164	7.4	14
42	In situ synthesis of cBN/Ti <sub>3</sub> AlC <sub>2</sub> composites by high-pressure and high-temperature technology. <i>Diamond and Related Materials</i> , <b>2012</b> , 29, 8-12	3.5	14
41	Synthesis mechanisms and thermal stability of ternary carbide Mo <sub>2</sub> Ga <sub>2</sub> C. <i>Ceramics International</i> , <b>2018</b> , 44, 22289-22296	5.1	13
40	Synthesis and Mechanism of Tetracalcium Phosphate from Nanocrystalline Precursor. <i>Journal of Nanomaterials</i> , <b>2014</b> , 2014, 1-11	3.2	12
39	Effects of FeNi-phosphorus-carbon system on crystal growth of diamond under high pressure and high temperature conditions. <i>Chinese Physics B</i> , <b>2015</b> , 24, 038101	1.2	11
38	Preparation and tribological properties of surface-modified ZnS nanoparticles. <i>Lubrication Science</i> , <b>2015</b> , 27, 241-250	1.3	11
37	Corrosion behavior of Ti <sub>3</sub> AlC <sub>2</sub> in molten KOH at 700 °C. <i>Journal of Advanced Ceramics</i> , <b>2013</b> , 2, 313-317	10.7	11
36	Mo <sub>2</sub> C-MXene/CdS Heterostructures as Visible-Light Photocatalysts with an Ultrahigh Hydrogen Production Rate. <i>ACS Applied Energy Materials</i> ,	6.1	10
35	Preparation, mechanical and thermal characteristics of d-Ti <sub>3</sub> C <sub>2</sub> /PVA film. <i>Materials Today Communications</i> , <b>2020</b> , 22, 100799	2.5	10
34	Research progress on construction and energy storage performance of MXene heterostructures. <i>Journal of Energy Chemistry</i> , <b>2021</b> , 62, 220-242	12	10
33	Affecting mechanism of chitosan on water resistance of magnesium phosphate cement. <i>International Journal of Applied Ceramic Technology</i> , <b>2018</b> , 15, 514-521	2	9
32	Electrochemical impedance spectroscopy (EIS) used to evaluate influence of different external pressures, curing ages and self-healing environments on the self-healing behavior of engineered cementitious composites (ECC). <i>Construction and Building Materials</i> , <b>2018</b> , 188, 153-160	6.7	9
31	V <sub>2</sub> C <sub>Tx</sub> and Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> MXenes Nanosheets for Gas Sensing. <i>ACS Applied Nano Materials</i> , <b>2021</b> , 4, 6257-6268	5.6	9
30	From structural ceramics to 2D materials with multi-applications: A review on the development from MAX phases to MXenes. <i>Journal of Advanced Ceramics</i> , <b>2021</b> , 10, 1194-1242	10.7	8

29	Enhanced Reversible Capacity and Cyclic Performance of Lithium-Ion Batteries Using SnO <sub>2</sub> Interpenetrated MXene V <sub>2</sub> C Architecture as Anode Materials. <i>Energy Technology</i> , <b>2021</b> , 9, 2000753	3.5	8
28	High-Performance Wearable Strain Sensor Based on MXene@Cotton Fabric with Network Structure. <i>Nanomaterials</i> , <b>2021</b> , 11,	5.4	8
27	Ground-state structures, physical properties and phase diagram of carbon-rich nitride CN. <i>Journal of Physics Condensed Matter</i> , <b>2018</b> , 30, 385402	1.8	7
26	Preparation and Photocatalytic Performance of Ti <sub>3</sub> C <sub>2</sub> /TiO <sub>2</sub> /CuO Ternary Nanocomposites. <i>Journal of Nanomaterials</i> , <b>2017</b> , 2017, 1-5	3.2	7
25	The influence of carbon spheres on thermal and mechanical properties of epoxy composites. <i>Journal of Polymer Research</i> , <b>2018</b> , 25, 1	2.7	7
24	Surface reformation of 2D MXene by in situ LaF <sub>3</sub> -decorated and enhancement of energy storage in lithium-ion batteries. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2020</b> , 31, 6735-6743	2.1	6
23	Self-Assemble and In-Situ Formation of Laponite RDS-Decorated d-Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> Hybrids for Application in Lithium-ion Battery. <i>ChemistrySelect</i> , <b>2019</b> , 4, 10694-10700	1.8	5
22	Effect of MXene (Nano-Ti <sub>3</sub> C <sub>2</sub> ) on Early-Age Hydration of Cement Paste. <i>Journal of Nanomaterials</i> , <b>2015</b> , 2015, 1-8	3.2	5
21	SnO <sub>2</sub> Quantum Dots Interspersed d-Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> MXene Heterostructure with Enhanced Performance for Lithium Ion Battery. <i>Journal of the Electrochemical Society</i> , <b>2020</b> , 167, 116522	3.9	5
20	Effect of electrolyte on supercapacitor performance of two-dimensional molybdenum carbide (Mo <sub>2</sub> CT <sub>x</sub> ) MXene prepared by hydrothermal etching. <i>Applied Surface Science</i> , <b>2021</b> , 568, 150971	6.7	5
19	High temperature oxidation resistance of Ti <sub>3</sub> SiC <sub>2</sub> in air and low oxygen atmosphere. <i>International Journal of Applied Ceramic Technology</i> , <b>2017</b> , 14, 851-859	2	4
18	Bioactive tetracalcium phosphate/magnesium phosphate composite bone cement for bone repair. <i>Journal of Biomaterials Applications</i> , <b>2019</b> , 34, 239-249	2.9	2
17	Responses to comments on the paper "Two-dimensional Sc <sub>2</sub> C: A reversible and high capacity hydrogen storage material predicted by first-principles calculations" <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 7257-7262	6.7	2
16	Mechanical hysteresis of hexagonal boron nitride. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , <b>2011</b> , 26, 935-938	1	2
15	Density-functional-theory predictions of mechanical behaviour and thermal properties as well as experimental hardness of the Ga-bilayer Mo <sub>2</sub> Ga <sub>2</sub> C. <i>Journal of Advanced Ceramics</i> , <b>2022</b> , 11, 273-282	10.7	2
14	Hot-pressing Sintering of Double-A-layer MAX Phase Mo <sub>2</sub> Ga <sub>2</sub> C. <i>Wuji Cailiao Xuebao/Journal of Inorganic Materials</i> , <b>2019</b> , 296	1	2
13	First-principles calculations of stabilities and physical properties of ternary niobium borocarbides and tantalum borocarbides. <i>Wuli Xuebao/Acta Physica Sinica</i> , <b>2020</b> , 69, 116201	0.6	2
12	Synthesis and Gas Adsorption Properties of Carbide-Derived Carbons from Titanium Tin Carbide. <i>Nano</i> , <b>2016</b> , 11, 1650040	1.1	2

11	Unexpected ground-state structures and properties of carbon nitride C <sub>3</sub> N at ambient and high pressures. <i>Materials and Design</i> , <b>2018</b> , 140, 45-53	8.1	2
10	Comment on MoS <sub>2</sub> /Ti <sub>3</sub> C <sub>2</sub> heterostructure for efficient visible-light photocatalytic hydrogen generation. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 13559-13562	6.7	1
9	Structural Characterization of Microwave-Assisted Solution-Synthesized Strontium-Substituted Hydroxyapatite. <i>Nano</i> , <b>2016</b> , 11, 1650115	1.1	1
8	Effects of water purifying material waste and red mud on performance of magnesium phosphate cement. <i>Construction and Building Materials</i> , <b>2021</b> , 303, 124563	6.7	1
7	Facile Preparation of MXene/Poly(vinyl alcohol)/N-(2-Hydroxyethyl Acrylamide) Hydrogels with High Tensile Strength for Strain Sensors. <i>Journal of Nanoelectronics and Optoelectronics</i> , <b>2021</b> , 16, 1834-1843	1.3	0
6	Simple Method to Construct a Directional Strain Sensor Based on d-Mo <sub>2</sub> CTX@Orthotropic Textile Network Structure. <i>Materials Letters</i> , <b>2022</b> , 132559	3.3	0
5	MXenes for K-Ion Batteries <b>2020</b> , 293-312		
4	Preparation and Microstructure Analysis of TiC-Derived Carbons with Hierarchical Pore Structure. <i>Journal of Nanomaterials</i> , <b>2015</b> , 2015, 1-7	3.2	
3	Nonlinear elastic deformation of magnesium and cobalt by Preisach-Mayergoyz model. <i>Transactions of Nonferrous Metals Society of China</i> , <b>2012</b> , 22, 2220-2225	3.3	
2	Responses to comments on the paper Two-dimensional Sc <sub>2</sub> C: A reversible and high capacity hydrogen storage material predicted by first-principles calculations. <i>International Journal of Hydrogen Energy</i> , <b>2022</b> , 47, 9829-9834	6.7	
1	Theoretical calculations of stabilities and properties of transition metal borocarbides TM <sub>3</sub> B <sub>3</sub> C and TM <sub>4</sub> B <sub>3</sub> C <sub>2</sub> compound. <i>Wuli Xuebao/Acta Physica Sinica</i> , <b>2019</b> , 68, 096201	0.6	