Joseph Halim

List of Publications by Year
in descending order

73 papers	14,482 citations	57758 44 h-index	69250 77 g-index
80 all docs	80 docs citations	80 times ranked	9495 citing authors

#	Article	IF	Citations
1	Ultra-high-rate pseudocapacitive energy storage in two-dimensional transition metal carbides. Nature Energy, 2017, 2, .	39.5	1,626
2	New Two-Dimensional Niobium and Vanadium Carbides as Promising Materials for Li-Ion Batteries. Journal of the American Chemical Society, 2013, 135, 15966-15969.	13.7	1,609
3	X-ray photoelectron spectroscopy of select multi-layered transition metal carbides (MXenes). Applied Surface Science, 2016, 362, 406-417.	6.1	1,369
4	Transparent Conductive Two-Dimensional Titanium Carbide Epitaxial Thin Films. Chemistry of Materials, 2014, 26, 2374-2381.	6.7	1,173
5	Synthesis and Characterization of 2D Molybdenum Carbide (MXene). Advanced Functional Materials, 2016, 26, 3118-3127.	14.9	945
6	Fabrication of Ti₃C₂T_x MXene Transparent Thin Films with Tunable Optoelectronic Properties. Advanced Electronic Materials, 2016, 2, 1600050.	5.1	587
7	Two-dimensional Mo1.33C MXene with divacancy ordering prepared from parent 3D laminate with in-plane chemical ordering. Nature Communications, 2017, 8, 14949.	12.8	525
8	Ion-Exchange and Cation Solvation Reactions in Ti₃C₂ MXene. Chemistry of Materials, 2016, 28, 3507-3514.	6.7	499
9	Porous Twoâ€Dimensional Transition Metal Carbide (MXene) Flakes for Highâ€Performance Liâ€Ion Storage. ChemElectroChem, 2016, 3, 689-693.	3.4	452
10	Atomically Resolved Structural and Chemical Investigation of Single MXene Sheets. Nano Letters, 2015, 15, 4955-4960.	9.1	415
11	Synthesis of two-dimensional molybdenum carbide, Mo 2 C, from the gallium based atomic laminate Mo 2 Ga 2 C. Scripta Materialia, 2015, 108, 147-150.	5.2	329
12	Wâ€Based Atomic Laminates and Their 2D Derivative W_{1.33}C MXene with Vacancy Ordering. Advanced Materials, 2018, 30, e1706409.	21.0	240
13	Twoâ€Dimensional Nbâ€Based M₄C₃ Solid Solutions (MXenes). Journal of the American Ceramic Society, 2016, 99, 660-666.	3.8	234
14	On the organization and thermal behavior of functional groups on Ti ₃ C ₂ MXene surfaces in vacuum. 2D Materials, 2018, 5, 015002.	4.4	219
15	Experimental and theoretical characterization of ordered MAX phases Mo2TiAlC2 and Mo2Ti2AlC3. Journal of Applied Physics, 2015, 118, .	2.5	217
16	Two-Dimensional Titanium Carbide MXene As a Cathode Material for Hybrid Magnesium/Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 4296-4300.	8.0	188
17	Alkylammonium Cation Intercalation into Ti₃C₂ (MXene): Effects on Properties and Ion-Exchange Capacity Estimation. Chemistry of Materials, 2017, 29, 1099-1106.	6.7	188
18	2D Transition Metal Carbides (MXenes) for Carbon Capture. Advanced Materials, 2019, 31, e1805472.	21.0	184

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19	Two-Dimensional Molybdenum Carbide (MXene) with Divacancy Ordering for Brackish and Seawater Desalination via Cation and Anion Intercalation. ACS Sustainable Chemistry and Engineering, 2018, 6, 3739-3747.	6.7	183
20	Tailoring Structure, Composition, and Energy Storage Properties of MXenes from Selective Etching of Inâ€Plane, Chemically Ordered MAX Phases. Small, 2018, 14, e1703676.	10.0	174
21	Electronic properties of freestanding Ti3C2Tx MXene monolayers. Applied Physics Letters, 2016, 108, .	3.3	171
22	Interaction of Polar and Nonpolar Polyfluorenes with Layers of Two-Dimensional Titanium Carbide (MXene): Intercalation and Pseudocapacitance. Chemistry of Materials, 2017, 29, 2731-2738.	6.7	170
23	Synthesis of Two-Dimensional Nb_{1.33}C (MXene) with Randomly Distributed Vacancies by Etching of the Quaternary Solid Solution (Nb_{2/3}Sc_{1/3})₂AlC MAX Phase. ACS Applied Nano Materials, 2018, 1, 2455-2460.	5.0	154
24	Mo2TiAlC2: A new ordered layered ternary carbide. Scripta Materialia, 2015, 101, 5-7.	5.2	153
25	Mo₂Ga₂C: a new ternary nanolaminated carbide. Chemical Communications, 2015, 51, 6560-6563.	4.1	141
26	Roomâ€Temperature Carbideâ€Derived Carbon Synthesis by Electrochemical Etching of MAX Phases. Angewandte Chemie - International Edition, 2014, 53, 4877-4880.	13.8	133
27	Boridene: Two-dimensional Mo _{4/3} B _{2-x} with ordered metal vacancies obtained by chemical exfoliation. Science, 2021, 373, 801-805.	12.6	126
28	Polymer-MXene composite films formed by MXene-facilitated electrochemical polymerization for flexible solid-state microsupercapacitors. Nano Energy, 2019, 60, 734-742.	16.0	124
29	Synthesis of the new MAX phase Zr 2 AlC. Journal of the European Ceramic Society, 2016, 36, 1847-1853.	5.7	116
30	New Solid Solution MAX Phases: (Ti_{0.5}, V_{0.5})₃AlC₂, (Nb_{0.5}, V_{0.5})₂AlC, (Nb_{0.5},) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 302 Td (V<sub>0	8.7	111
31	How Much Oxygen Can a MXene Surface Take Before It Breaks?. Advanced Functional Materials, 2020, 30, 1909005.	14.9	111
32	Ultrafast, One-Step, Salt-Solution-Based Acoustic Synthesis of Ti₃C₂ MXene. ACS Nano, 2021, 15, 4287-4293.	14.6	103
33	Synthesis of the novel Zr 3 AlC 2 MAX phase. Journal of the European Ceramic Society, 2016, 36, 943-947.	5.7	98
34	Controlling the conductivity of Ti₃C₂MXenes by inductively coupled oxygen and hydrogen plasma treatment and humidity. RSC Advances, 2017, 7, 13097-13103.	3.6	79
35	Electronic and optical characterization of 2D Ti₂C and Nb₂C (MXene) thin films. Journal of Physics Condensed Matter, 2019, 31, 165301.	1.8	74
36	On the Structural Stability of MXene and the Role of Transition Metal Adatoms. Nanoscale, 2018, 10, 10850-10855.	5.6	71

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37	Variable range hopping and thermally activated transport in molybdenum-based MXenes. Physical Review B, 2018, 98, .	3.2	66
38	Chemical bonding in carbide MXene nanosheets. Journal of Electron Spectroscopy and Related Phenomena, 2018, 224, 27-32.	1.7	64
39	High-Entropy Laminate Metal Carbide (MAX Phase) and Its Two-Dimensional Derivative MXene. Chemistry of Materials, 2022, 34, 2098-2106.	6.7	60
40	Flexible Freeâ€Standing MoO₃/Ti₃C₂T_z MXene Composite Films with High Gravimetric and Volumetric Capacities. Advanced Science, 2021, 8, 2003656.	11.2	59
41	XPS of cold pressed multilayered and freestanding delaminated 2D thin films of Mo2TiC2Tz and Mo2Ti2C3Tz (MXenes). Applied Surface Science, 2019, 494, 1138-1147.	6.1	58
42	Synthesis of (V_{2/3}Sc_{1/3})₂AlC i-MAX phase and V_{2â”x}C MXene scrolls. Nanoscale, 2019, 11, 14720-14726.	5.6	52
43	Electrodeposition and Characterization of Nanocrystalline Ni-Mo Catalysts for Hydrogen Production. Journal of Nanomaterials, 2012, 2012, 1-9.	2.7	49
44	Surface morphology and electrochemical characterization of electrodeposited Niâ€“Mo nanocomposites as cathodes for hydrogen evolution. Journal of Alloys and Compounds, 2012, 530, 85-90.	5.5	49
45	Sodium hydroxide and vacuum annealing modifications of the surface terminations of a Ti₃C₂(MXene) epitaxial thin film. RSC Advances, 2018, 8, 36785-36790.	3.6	49
46	Acoustomicrofluidic Synthesis of Pristine Ultrathin Ti₃C₂T_z MXene Nanosheets and Quantum Dots. ACS Nano, 2021, 15, 12099-12108.	14.6	46
47	Rendering Ti₃C₂T_x (MXene) monolayers visible. Materials Research Letters, 2017, 5, 322-328.	8.7	41
48	MXeneâ€”manganese oxides aqueous asymmetric supercapacitors with high mass loadings, high cell voltages and slow self-discharge. Energy Storage Materials, 2021, 38, 438-446.	18.0	40
49	Firstâ€order Raman scattering in threeâ€layered Moâ€based ternaries: MoAlB, Mo₂Ga₂C and Mo₂GaC. Journal of Raman Spectroscopy, 2017, 48, 631-638.	2.5	37
50	Theoretical Analysis, Synthesis, and Characterization of 2D W_{1.33}C (MXene) with Ordered Vacancies. ACS Applied Nano Materials, 2019, 2, 6209-6219.	5.0	37
51	Investigation of vacancy-ordered <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">M</mml:mi><mml:msub><mml:mi mathvariant="normal">o</mml:mi><mml:mrow><mml:mn>1.33</mml:mn></mml:mrow></mml:msub><mml:mi mathvariant="normal">C</mml:mi></mml:mrow></mml:math> MXene from first principles and x-ray photoelectron spectroscopy. Physical Review Materials, 2017, 1, .	2.4	36
52	Boosting the volumetric capacitance of MoO3-x free-standing films with Ti3C2 MXene. Electrochimica Acta, 2021, 370, 137665.	5.2	34
53	Investigation of 2D Boridene from First Principles and Experiments. Advanced Functional Materials, 2022, 32, .	14.9	31
54	Enhanced supercapacitive performance of Mo1.33C MXene based asymmetric supercapacitors in lithium chloride electrolyte. Energy Storage Materials, 2021, 41, 203-208.	18.0	30

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55	Hydrogen Evolution Reaction for Vacancyâ€Ordered iâ€MXenes and the Impact of Proton Absorption into the Vacancies. Advanced Sustainable Systems, 2021, 5, 2000158.	5.3	27
56	On the Rapid Synthesis of the Ternary Mo₂GaC. Journal of the American Ceramic Society, 2015, 98, 2713-2715.	3.8	23
57	Structure and thermal expansion of (Crx,V1â^'x)n+1AlCn phases measured by X-ray diffraction. Journal of the European Ceramic Society, 2017, 37, 15-21.	5.7	22
58	Tailored synthesis approach of (Mo_{2/3}Y_{1/3})₂AlC i-MAX and its two-dimensional derivative Mo_{1.33}CT_z MXene: enhancing the yield, quality, and performance in supercapacitor applications. Nanoscale, 2021, 13, 311-319.	5.6	22
59	Mixed MXenes: Mo1.33CTz and Ti3C2Tz freestanding composite films for energy storage. Nano Energy, 2021, 88, 106271.	16.0	21
60	Composition Tuning of Nanostructured Binary Copper Selenides through Rapid Chemical Synthesis and Their Thermoelectric Property Evaluation. Nanomaterials, 2020, 10, 854.	4.1	17
61	Mo1.33CTzâ€“Ti3C2Tz mixed MXene freestanding films for zinc-ion hybrid supercapacitors. Materials Today Energy, 2021, 22, 100878.	4.7	17
62	Colorless-to-colorful switching of electrochromic MXene by reversible ion insertion. Nano Research, 2022, 15, 3587-3593.	10.4	16
63	Fabrication of Mo_{1.33}CT_z(MXene)â€“cellulose freestanding electrodes for supercapacitor applications. Materials Advances, 2021, 2, 743-753.	5.4	15
64	Outâ€Ofâ€Plane Ordered Laminate Borides and Their 2D Tiâ€Based Derivative from Chemical Exfoliation. Advanced Materials, 2021, 33, e2008361.	21.0	14
65	Effect of vacancies on the electrochemical behavior of Mo-based MXenes in aqueous supercapacitors. Journal of Power Sources, 2022, 525, 231064.	7.8	13
66	MXene-based Zn-ion hybrid supercapacitors: Effects of anion carriers and MXene surface coatings on the capacities and life span. Journal of Energy Storage, 2022, 52, 104823.	8.1	12
67	Aqueous Electrolytes, MXeneâ€Based Supercapacitors and Their Selfâ€Discharge. Advanced Energy and Sustainability Research, 2022, 3, 2100147.	5.8	11
68	MXene-based symmetric supercapacitors with high voltage and high energy density. Materials Reports Energy, 2022, 2, 100078.	3.2	10
69	Electrode Surface Composition of Dual-Intercalation, All-Graphite Batteries. Journal of Carbon Research, 2017, 3, 5.	2.7	9
70	A Tungsten-Based Nanolaminated Ternary Carbide: (W,Ti)₄C_{4â€“x}. Inorganic Chemistry, 2019, 58, 1100-1106.	4.0	9
71	Exploring the electrochemical behavior of Mo1.33CTz MXene in aqueous sulfates electrolytes: Effect of intercalating cations on the stored charge. Journal of Power Sources, 2022, 531, 231302.	7.8	6
72	MXene//MnO₂ Asymmetric Supercapacitors with High Voltages and High Energy Densities. Batteries and Supercaps, 2022, 5, .	4.7	4

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73	Improved charge storage performance of a layered Mo_{1.33}C MXene/MoS₂/graphene nanocomposite. Nanoscale Advances, 2021, 3, 6689-6695.	4.6	2