Jun Lu

List of Publications by Year
in descending order

118 papers	22,113 citations	46918 47 h-index	19136 118 g-index
122 all docs	122 docs citations	122 times ranked	15885 citing authors

#	Article	IF	Citations
1	Twoâ€Dimensional Nanocrystals Produced by Exfoliation of Ti₃AlC₂. Advanced Materials, 2011, 23, 4248-4253.	11.1	7,931
2	Two-Dimensional Transition Metal Carbides. ACS Nano, 2012, 6, 1322-1331.	7.3	3,453
3	Two-Dimensional, Ordered, Double Transition Metals Carbides (MXenes). ACS Nano, 2015, 9, 9507-9516.	7.3	1,395
4	Transparent Conductive Two-Dimensional Titanium Carbide Epitaxial Thin Films. Chemistry of Materials, 2014, 26, 2374-2381.	3.2	1,173
5	A general Lewis acidic etching route for preparing MXenes with enhanced electrochemical performance in non-aqueous electrolyte. Nature Materials, 2020, 19, 894-899.	13.3	870
6	Element Replacement Approach by Reaction with Lewis Acidic Molten Salts to Synthesize Nanolaminated MAX Phases and MXenes. Journal of the American Chemical Society, 2019, 141, 4730-4737.	6.6	811
7	Two-dimensional Mo1.33C MXene with divacancy ordering prepared from parent 3D laminate with in-plane chemical ordering. Nature Communications, 2017, 8, 14949.	5.8	525
8	Efficient metal ion sieving in rectifying subnanochannels enabled by metalâ€“organic frameworks. Nature Materials, 2020, 19, 767-774.	13.3	275
9	Long Electronâ€“Hole Diffusion Length in Highâ€Quality Leadâ€Free Double Perovskite Films. Advanced Materials, 2018, 30, e1706246.	11.1	242
10	Wâ€Based Atomic Laminates and Their 2D Derivative W_{1.33}C MXene with Vacancy Ordering. Advanced Materials, 2018, 30, e1706409.	11.1	240
11	Experimental and theoretical characterization of ordered MAX phases Mo2TiAlC2 and Mo2Ti2AlC3. Journal of Applied Physics, 2015, 118, .	1.1	217
12	Effect of (3â€glycidyloxypropyl)trimethoxysilane (GOPS) on the electrical properties of PEDOT:PSS films. Journal of Polymer Science, Part B: Polymer Physics, 2017, 55, 814-820.	2.4	190
13	Linkers Having a Crucial Role in Antibodyâ€“Drug Conjugates. International Journal of Molecular Sciences, 2016, 17, 561.	1.8	187
14	Theoretical stability and materials synthesis of a chemically ordered MAX phase, Mo2ScAlC2, and its two-dimensional derivate Mo2ScC2 MXene. Acta Materialia, 2017, 125, 476-480.	3.8	185
15	Halogenated Ti₃C₂ MXenes with Electrochemically Active Terminals for High-Performance Zinc Ion Batteries. ACS Nano, 2021, 15, 1077-1085.	7.3	183
16	Ultrathin water-stable metal-organic framework membranes for ion separation. Science Advances, 2020, 6, eaay3998.	4.7	179
17	Prediction and synthesis of a family of atomic laminate phases with KagomÃ©-like and in-plane chemical ordering. Science Advances, 2017, 3, e1700642.	4.7	156
18	Mo2TiAlC2: A new ordered layered ternary carbide. Scripta Materialia, 2015, 101, 5-7.	2.6	153

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19	Synthesis of Ti3AuC2, Ti3Au2C2 and Ti3IrC2 by noble metal substitution reaction in Ti3SiC2 for high-temperature-stable Ohmic contacts to SiC. Nature Materials, 2017, 16, 814-818.	13.3	142
20	Synthesis and Characterization of an Alumina Forming Nanolaminated Boride: MoAlB. Scientific Reports, 2016, 6, 26475.	1.6	141
21	Synthesis, structural characterization and photocatalytic application of ZnO@ZnS coreâ€“shell nanoparticles. RSC Advances, 2014, 4, 36940-36950.	1.7	117
22	Nano-layer based 1T-rich MoS2/g-C3N4 co-catalyst system for enhanced photocatalytic and photoelectrochemical activity. Applied Catalysis B: Environmental, 2020, 268, 118466.	10.8	112
23	Cathepsin K: The Action in and Beyond Bone. Frontiers in Cell and Developmental Biology, 2020, 8, 433.	1.8	111
24	Origin of Chemically Ordered Atomic Laminates (i-MAX): Expanding the Elemental Space by a Theoretical/Experimental Approach. ACS Nano, 2018, 12, 7761-7770.	7.3	99
25	Metal versus rare-gas ion irradiation during Ti1â^'xAlxN film growth by hybrid high power pulsed magnetron/dc magnetron co-sputtering using synchronized pulsed substrate bias. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, .	0.9	98
26	Present Advances and Future Perspectives of Molecular Targeted Therapy for Osteosarcoma. International Journal of Molecular Sciences, 2016, 17, 506.	1.8	93
27	On the Topotactic Transformation of <scp><scp>Ti₂AlC</scp></scp> into a <scp><scp>Tiâ€“Câ€“Oâ€“F</scp></scp> Cubic Phase by Heating in Molten Lithium Fluoride in Air. Journal of the American Ceramic Society, 2011, 94, 4556-4561.	1.9	91
28	Atomically Layered and Ordered Rare-Earth i-MAX Phases: A New Class of Magnetic Quaternary Compounds. Chemistry of Materials, 2019, 31, 2476-2485.	3.2	89
29	Atomic structure and lattice defects in nanolaminated ternary transition metal borides. Materials Research Letters, 2017, 5, 235-241.	4.1	86
30	Anomalously high thermoelectric power factor in epitaxial ScN thin films. Applied Physics Letters, 2011, 99, .	1.5	84
31	Multielemental singleâ€“atom-thick A layers in nanolaminated V ₂ (Sn, A) C () Tj ETQq1 1 0.784314 rgBT / Sciences of the United States of America, 2020, 117, 820-825.	3.3	84
32	Progress and Challenges in Developing Aptamer-Functionalized Targeted Drug Delivery Systems. International Journal of Molecular Sciences, 2015, 16, 23784-23822.	1.8	75
33	Advances in the discovery of exosome inhibitors in cancer. Journal of Enzyme Inhibition and Medicinal Chemistry, 2020, 35, 1322-1330.	2.5	74
34	Nanostructural Tailoring to Induce Flexibility in Thermoelectric Ca₃Co₄O₉ Thin Films. ACS Applied Materials & Interfaces, 2017, 9, 25308-25316.	4.0	70
35	Carbon-based materials for photo- and electrocatalytic synthesis of hydrogen peroxide. Nanoscale, 2020, 12, 16008-16027.	2.8	63
36	Theoretical Prediction and Synthesis of (Cr_{2/3}Zr_{1/3})₂AlC i-MAX Phase. Inorganic Chemistry, 2018, 57, 6237-6244.	1.9	59

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37	Single-Atom-Thick Active Layers Realized in Nanolaminated Ti₃(Al_xCu_{1â€“x})C₂ and Its Artificial Enzyme Behavior. ACS Nano, 2019, 13, 9198-9205.	7.3	59
38	Synthesis of MAX phases Nb₂CuC and Ti₂(Al_{0.1}Cu_{0.9})N by A-site replacement reaction in molten salts. Materials Research Letters, 2019, 7, 510-516.	4.1	58
39	Synthesis of MAX Phases in the Hfâ€“Alâ€“C System. Inorganic Chemistry, 2016, 55, 10922-10927.	1.9	57
40	A GaNâ€“SiC hybrid material for high-frequency and power electronics. Applied Physics Letters, 2018, 113, .	1.5	56
41	Theoretical prediction, synthesis, and crystal structure determination of new MAX phase compound V2SnC. Journal of Advanced Ceramics, 2020, 9, 481-492.	8.9	56
42	Synthesis and characterization of magnetic (Cr0.5Mn0.5)2GaC thin films. Journal of Materials Science, 2015, 50, 4495-4502.	1.7	55
43	Nanoporous Ca₃Co₄O₉ Thin Films for Transferable Thermoelectrics. ACS Applied Energy Materials, 2018, 1, 2261-2268.	2.5	54
44	Ultraselective Monovalent Metal Ion Conduction in a Three-Dimensional Sub-1 nm Nanofluidic Device Constructed by Metalâ€“Organic Frameworks. ACS Nano, 2021, 15, 1240-1249.	7.3	52
45	Surface-energy triggered phase formation and epitaxy in nanometer-thick Ni1âˆ’xPtx silicide films. Applied Physics Letters, 2010, 96, .	1.5	51
46	Advances in the discovery of cathepsin K inhibitors on bone resorption. Journal of Enzyme Inhibition and Medicinal Chemistry, 2018, 33, 890-904.	2.5	51
47	Superhard NbB2âˆ’ thin films deposited by dc magnetron sputtering. Surface and Coatings Technology, 2014, 257, 295-300.	2.2	50
48	Synthesis of a new nanocrystalline titanium aluminum fluoride phase by reaction of Ti2AlC with hydrofluoric acid. RSC Advances, 2011, 1, 1493.	1.7	49
49	Ultrafast rectifying counter-directional transport of proton and metal ions in metal-organic frameworkâ€“based nanochannels. Science Advances, 2022, 8, eabl5070.	4.7	48
50	Hard and elastic epitaxial ZrB2 thin films on Al2O3(0001) substrates deposited by magnetron sputtering from a ZrB2 compound target. Acta Materialia, 2016, 111, 166-172.	3.8	47
51	Novel strategy for low-temperature, high-rate growth of dense, hard, and stress-free refractory ceramic thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, .	0.9	45
52	Strategy for simultaneously increasing both hardness and toughness in ZrB2-rich Zr1âˆ’xTaxBy thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	0.9	42
53	3D-to-2D Morphology Manipulation of Sputter-Deposited Nanoscale Silver Films on Weakly Interacting Substrates via Selective Nitrogen Deployment for Multifunctional Metal Contacts. ACS Applied Nano Materials, 2020, 3, 4728-4738.	2.4	38
54	Direct current magnetron sputtered ZrB2 thin films on 4H-SiC(0001) and Si(100). Thin Solid Films, 2014, 550, 285-290.	0.8	35

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55	Stoichiometric, epitaxial ZrB2 thin films with low oxygen-content deposited by magnetron sputtering from a compound target: Effects of deposition temperature and sputtering power. Journal of Crystal Growth, 2015, 430, 55-62.	0.7	33
56	Experimental and theoretical investigation of Cr1-xScxN solid solutions for thermoelectrics. Journal of Applied Physics, 2016, 120, .	1.1	33
57	Triptolide delivery: Nanotechnology-based carrier systems to enhance efficacy and limit toxicity. Pharmacological Research, 2021, 165, 105377.	3.1	33
58	Phase stability of Cr_{n+ 1}GaC_n MAX phases from first principles and Cr₂GaC thinâ€film synthesis using magnetron sputtering from elemental targets. Physica Status Solidi - Rapid Research Letters, 2013, 7, 971-974.	1.2	32
59	Mechanism of Formation of the Thermoelectric Layered Cobaltate Ca₃Co₄O₉ by Annealing of CaOâ€“CoO Thin Films. Advanced Electronic Materials, 2015, 1, 1400022.	2.6	31
60	Effect of ion-implantation-induced defects and Mg dopants on the thermoelectric properties of ScN. Physical Review B, 2018, 98, .	1.1	31
61	Atomic-Scale Tuning of Graphene/Cubic SiC Schottky Junction for Stable Low-Bias Photoelectrochemical Solar-to-Fuel Conversion. ACS Nano, 2020, 14, 4905-4915.	7.3	31
62	Phonon thermal conductivity of scandium nitride for thermoelectrics from first-principles calculations and thin-film growth. Physical Review B, 2017, 96, .	1.1	30
63	Theoretical stability, thin film synthesis and transport properties of the Mo_{n+1}GaC_n MAX phase. Physica Status Solidi - Rapid Research Letters, 2015, 9, 197-201.	1.2	28
64	Exosomal transfer of osteoclast-derived miRNAs to chondrocytes contributes to osteoarthritis progression. Nature Aging, 2021, 1, 368-384.	5.3	28
65	Emerging porous framework material-based nanofluidic membranes toward ultimate ion separation. Matter, 2021, 4, 2810-2830.	5.0	27
66	Thermally induced substitutional reaction of Fe into Mo₂GaC thin films. Materials Research Letters, 2017, 5, 533-539.	4.1	26
67	Bioinspired Selfâ€Gating Nanofluidic Devices for Autonomous and Periodic Ion Transport and Cargo Release. Advanced Functional Materials, 2019, 29, 1806416.	7.8	26
68	Strontium Diffusion in Magnetron Sputtered Gadoliniaâ€Doped Ceria Thin Film Barrier Coatings for Solid Oxide Fuel Cells. Advanced Energy Materials, 2013, 3, 923-929.	10.2	25
69	High-temperature nanoindentation of epitaxial ZrB2 thin films. Scripta Materialia, 2016, 124, 117-120.	2.6	25
70	Magnetic properties and structural characterization of layered (Cr0.5Mn0.5)2AuC synthesized by thermally induced substitutional reaction in (Cr0.5Mn0.5)2GaC. APL Materials, 2018, 6, .	2.2	25
71	Enhanced Ti0.84Ta0.16N diffusion barriers, grown by a hybrid sputtering technique with no substrate heating, between Si(001) wafers and Cu overlayers. Scientific Reports, 2018, 8, 5360.	1.6	25
72	Transmorphic epitaxial growth of AlN nucleation layers on SiC substrates for high-breakdown thin GaN transistors. Applied Physics Letters, 2019, 115, .	1.5	25

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73	Efficient and Tunable Electroluminescence from In Situ Synthesized Perovskite Quantum Dots. Small, 2019, 15, e1804947.	5.2	23
74	Electrochemical Lithium Storage Performance of Molten Salt Derived V2SnC MAX Phase. Nano-Micro Letters, 2021, 13, 158.	14.4	23
75	Activation of mitochondrial-associated apoptosis signaling pathway and inhibition of PI3K/Akt/mTOR signaling pathway by voacamine suppress breast cancer progression. Phytomedicine, 2022, 99, 154015.	2.3	23
76	Magnetron sputtering of epitaxial Zr<scp>B</scp>₂ thin films on 4<scp>H</scp>â€<scp>S</scp>i<scp>C</scp>(0001) and Si(111). Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 636-640.	0.8	22
77	Growth and Structure of ZnO Nanorods on a Sub-Micrometer Glass Pipette and Their Application as Intracellular Potentiometric Selective Ion Sensors. Materials, 2010, 3, 4657-4667.	1.3	21
78	Phase-stabilization and substrate effects on nucleation and growth of (Ti,V)n+1GeCn thin films. Journal of Applied Physics, 2011, 110, .	1.1	20
79	On Different Process Schemes for MOSFETs With a Controllable NiSi-Based Metallic Source/Drain. IEEE Transactions on Electron Devices, 2011, 58, 1898-1906.	1.6	19
80	Control over the Phase Formation in Metastable Transition Metal Nitride Thin Films by Tuning the Al+ Subplantation Depth. Coatings, 2019, 9, 17.	1.2	19
81	A thermally reduced graphene oxide membrane interlayered with anin situsynthesized nanospacer for water desalination. Journal of Materials Chemistry A, 2020, 8, 25951-25958.	5.2	17
82	Decoration of ZnO Nanorods with Coral Reefs like NiO Nanostructures by the Hydrothermal Growth Method and Their Luminescence Study. Materials, 2014, 7, 430-440.	1.3	15
83	Highâ€Temperature Neutron Diffraction, Raman Spectroscopy, and Firstâ€Principles Calculations of Ti₃SnC₂ and Ti₂SnC. Journal of the American Ceramic Society, 2016, 99, 2233-2242.	1.9	15
84	Growth and mechanical properties of 111-oriented V0.5Mo0.5Nx/Al2O3(0001) thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	0.9	15
85	Outâ€Ofâ€Plane Ordered Laminate Borides and Their 2D Tiâ€Based Derivative from Chemical Exfoliation. Advanced Materials, 2021, 33, e2008361.	11.1	14
86	Near-room temperature ferromagnetic behavior of single-atom-thick 2D iron in nanolaminated ternary MAX phases. Applied Physics Reviews, 2021, 8, .	5.5	14
87	Recent advances of N-heterocyclic carbenes in the applications of constructing carbo- and heterocyclic frameworks with potential biological activity. RSC Advances, 2021, 11, 38060-38078.	1.7	14
88	Formation of Ti₂AuN from Au-Covered Ti₂AlN Thin Films: A General Strategy to Thermally Induce Intercalation of Noble Metals into MAX Phases. Crystal Growth and Design, 2020, 20, 4077-4081.	1.4	13
89	Growth of dense, hard yet low-stress Ti0.40Al0.27W0.33N nanocomposite films with rotating substrate and no external substrate heating. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	0.9	13
90	Comment on â€œ<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> Systemâ€. Journal of the American Ceramic Society, 2012, 95, 3352-3354.	1.9	12

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91	Flexible Thermoelectric Doubleâ€Layer Inorganic/Organic Composites Synthesized by Additive Manufacturing. Advanced Electronic Materials, 2020, 6, 2000214.	2.6	12
92	Growth, Structural and Optical Characterization of ZnO Nanotubes on Disposable-Flexible Paper Substrates by Low-Temperature Chemical Method. Journal of Nanotechnology, 2012, 2012, 1-6.	1.5	11
93	Beam-induced crystallization of amorphous Meâ€“Siâ€“C (Me = Nb or Zr) thin films during transmission electron microscopy. MRS Communications, 2013, 3, 151-155.	0.8	11
94	Formation mechanism and thermoelectric properties of CaMnO3 thin films synthesized by annealing of Ca0.5Mn0.5O films. Journal of Materials Science, 2019, 54, 8482-8491.	1.7	11
95	Thermal Stability and Dopant Segregation for Schottky Diodes With Ultrathin Epitaxial $hbox{NiSi}_{2 - y}$. IEEE Electron Device Letters, 2011, 32, 1029-1031.	2.2	10
96	Thermal stability and mechanical properties of amorphous coatings in the Ti-B-Si-Al-N system grown by cathodic arc evaporation from TiB2, Ti33Al67, and Ti85Si15 cathodes. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, .	0.9	9
97	ZrB2 thin films deposited on GaN(0001) by magnetron sputtering from a ZrB2 target. Journal of Crystal Growth, 2016, 453, 71-76.	0.7	9
98	A Tungsten-Based Nanolaminated Ternary Carbide: (W,Ti)₄C_{4â€“x}. Inorganic Chemistry, 2019, 58, 1100-1106.	1.9	9
99	Model for electron-beam-induced crystallization of amorphous Meâ€“Siâ€“C (Me = Nb or Zr) thin films. Journal of Materials Research, 2014, 29, 2854-2862.	1.2	8
100	Atomic layer deposition of Zr<scp>O</scp>₂ for grapheneâ€based multilayer structures: In situ and ex situ characterization of growth process. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 397-402.	0.8	8
101	Effects of N2 Partial Pressure on Growth, Structure, and Optical Properties of GaN Nanorods Deposited by Liquid-Target Reactive Magnetron Sputter Epitaxy. Nanomaterials, 2018, 8, 223.	1.9	8
102	Compositional dependence of epitaxial Tin+1SiCn MAX-phase thin films grown from a Ti3SiC2 compound target. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	0.9	8
103	Crystallization of NiSi_x in a Body-Centered Cubic Structure during Solid-State Reaction between an Ultrathin Ni Film and Si(001) Substrate at 150â€“350 Â°C. Crystal Growth and Design, 2013, 13, 1801-1806.	1.4	7
104	Reactive sputtering of Î´-ZrH2 thin films by high power impulse magnetron sputtering and direct current magnetron sputtering. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, .	0.9	7
105	Novel hard, tough HfAlSiN multilayers, defined by alternating Si bond structure, deposited using modulated high-flux, low-energy ion irradiation of the growing film. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, .	0.9	7
106	Construction of multi-substituted pyrazoles via potassium carbonate-mediated [3 + 2] cycloaddition of in situ generated nitrile imines with cinnamic aldehydes. RSC Advances, 2022, 12, 13087-13092.	1.7	6
107	Engineering thermoelectric and mechanical properties by nanoporosity in calcium cobaltate films from reactions of Ca(OH)₂/Co₃O₄ multilayers. Nanoscale Advances, 2022, 4, 3353-3361.	2.2	5
108	Epitaxial growth of Î³-Al2O3 on Ti2AlC(0001) by reactive high-power impulse magnetron sputtering. AIP Advances, 2014, 4, 017138.	0.6	4

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109	Growth of CaxCoO2 Thin Films by A Two-Stage Phase Transformation from CaOâ€“CoO Thin Films Deposited by Rf-Magnetron Reactive Cosputtering. Nanomaterials, 2019, 9, 443.	1.9	4
110	Nanowires-assembled CuO Interpenetrated-leaf Architecture by () Twinning. Materials Research Letters, 2013, 1, 32-38.	4.1	3
111	Cathodoluminescence characterization of ZnO nanorods synthesized by chemical solution and of its conversion to ellipsoidal morphology. Journal of Materials Research, 2014, 29, 2425-2431.	1.2	3
112	Influence of Si doping and O2 flow on arc-deposited (Al,Cr)2O3 coatings. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, 061516.	0.9	3
113	Single Crystal Growth and Structural Characterization of Theoretically Predicted Nanolaminates M2Al2C3, Where M = Sc and Er. Crystal Growth and Design, 2020, 20, 7640-7646.	1.4	3
114	Phase evolution of radio frequency magnetron sputtered Cr-rich (Cr,Zr)2O3 coatings studied by in situ synchrotron X-ray diffraction during annealing in air or vacuum. Journal of Materials Research, 2019, 34, 3735-3746.	1.2	2
115	Phase Transformation and Superstructure Formation in (Ti0.5, Mg0.5)N Thin Films through High-Temperature Annealing. Coatings, 2021, 11, 89.	1.2	2
116	A Novel Strategy Conjugating PD-L1 Polypeptide With Doxorubicin Alleviates Chemotherapeutic Resistance and Enhances Immune Response in Colon Cancer. Frontiers in Oncology, 2021, 11, 737323.	1.3	2
117	Deposition of Ti-Si-C-Ag Nanocomposite Coatings as Electrical Contact Material. , 2010, , .		1
118	Synthesis of textured discontinuous-nanoisland Ca₃Co₄O₉ thin films. Nanoscale Advances, 0, , .	2.2	1