Jun Lou

List of Publications by Year
in descending order

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357	46,069	2538	1928
papers	citations	96 h-index	207 g-index

365	365	365	45062
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High-efficiency two-dimensional Ruddlesdenâ€“Popper perovskite solar cells. Nature, 2016, 536, 312-316.	13.7	2,767
2	Large Scale Growth and Characterization of Atomic Hexagonal Boron Nitride Layers. Nano Letters, 2010, 10, 3209-3215.	4.5	2,317
3	Vertical and in-plane heterostructures from WS2/MoS2 monolayers. Nature Materials, 2014, 13, 1135-1142.	13.3	1,918
4	Intrinsic Structural Defects in Monolayer Molybdenum Disulfide. Nano Letters, 2013, 13, 2615-2622.	4.5	1,766
5	Vapour phase growth and grain boundary structure of molybdenum disulphide atomic layers. Nature Materials, 2013, 12, 754-759.	13.3	1,590
6	Largeâ€Area Vaporâ€Phase Growth and Characterization of MoS₂ Atomic Layers on a SiO₂ Substrate. Small, 2012, 8, 966-971.	5.2	1,556
7	Black Phosphorusâ€“Monolayer MoS₂ van der Waals Heterojunction pâ€“n Diode. ACS Nano, 2014, 8, 8292-8299.	7.3	1,125
8	Janus Monolayer Transition-Metal Dichalcogenides. ACS Nano, 2017, 11, 8192-8198.	7.3	1,001
9	In-plane heterostructures of graphene and hexagonal boron nitride with controlled domain sizes. Nature Nanotechnology, 2013, 8, 119-124.	15.6	796
10	Chemical Vapor Deposition Growth of Crystalline Monolayer MoSe₂. ACS Nano, 2014, 8, 5125-5131.	7.3	694
11	High Efficiency Photocatalytic Water Splitting Using 2D Î±â€Fe₂O₃/gâ€C₃N₄ Zâ€Scheme Catalysts. Advanced Energy Materials, 2017, 7, 1700025.	10.2	664
12	Composites with carbon nanotubes and graphene: An outlook. Science, 2018, 362, 547-553.	6.0	662
13	Large In-Plane and Vertical Piezoelectricity in Janus Transition Metal Dichalchogenides. ACS Nano, 2017, 11, 8242-8248.	7.3	599
14	Fracture toughness of graphene. Nature Communications, 2014, 5, 3782.	5.8	567
15	Achieving Highly Efficient, Selective, and Stable CO₂ Reduction on Nitrogen-Doped Carbon Nanotubes. ACS Nano, 2015, 9, 5364-5371.	7.3	546
16	Second harmonic microscopy of monolayer MoS<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2013, 87, .	1.1	539
17	Ultrathin high-temperature oxidation-resistant coatings of hexagonal boron nitride. Nature Communications, 2013, 4, 2541.	5.8	536
18	Evolution of the Electronic Band Structure and Efficient Photo-Detection in Atomic Layers of InSe. ACS Nano, 2014, 8, 1263-1272.	7.3	534

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19	Plasmonic Hot Electron Induced Structural Phase Transition in a MoS₂ Monolayer. Advanced Materials, 2014, 26, 6467-6471.	11.1	516
20	A metal-free electrocatalyst for carbon dioxide reduction to multi-carbon hydrocarbons and oxygenates. Nature Communications, 2016, 7, 13869.	5.8	505
21	Two-Step Growth of Two-Dimensional WSe₂/MoSe₂ Heterostructures. Nano Letters, 2015, 15, 6135-6141.	4.5	479
22	Direct Growth of Graphene/Hexagonal Boron Nitride Stacked Layers. Nano Letters, 2011, 11, 2032-2037.	4.5	466
23	Band Gap Engineering and Layer-by-Layer Mapping of Selenium-Doped Molybdenum Disulfide. Nano Letters, 2014, 14, 442-449.	4.5	463
24	Strain and structure heterogeneity in MoS2 atomic layers grown by chemical vapour deposition. Nature Communications, 2014, 5, 5246.	5.8	453
25	Liquid Phase Exfoliation of Two-Dimensional Materials by Directly Probing and Matching Surface Tension Components. Nano Letters, 2015, 15, 5449-5454.	4.5	436
26	Incorporation of Nitrogen Defects for Efficient Reduction of CO₂ via Two-Electron Pathway on Three-Dimensional Graphene Foam. Nano Letters, 2016, 16, 466-470.	4.5	435
27	Cold welding of ultrathin gold nanowires. Nature Nanotechnology, 2010, 5, 218-224.	15.6	432
28	Chemical Vapor Deposition of Thin Crystals of Layered Semiconductor SnS₂ for Fast Photodetection Application. Nano Letters, 2015, 15, 506-513.	4.5	430
29	Facile Fabrication of Nitrogenâ€Doped Porous Carbon as Superior Anode Material for Potassiumâ€Ion Batteries. Advanced Energy Materials, 2018, 8, 1802386.	10.2	393
30	Porous Spinel Zn_xCo_{3â€“x}O₄ Hollow Polyhedra Templated for High-Rate Lithium-Ion Batteries. ACS Nano, 2014, 8, 6297-6303.	7.3	392
31	Nitrogenâ€Doped Carbon Nanotube Arrays for Highâ€Efficiency Electrochemical Reduction of CO₂: On the Understanding of Defects, Defect Density, and Selectivity. Angewandte Chemie - International Edition, 2015, 54, 13701-13705.	7.2	382
32	Synthesis and Photoresponse of Large GaSe Atomic Layers. Nano Letters, 2013, 13, 2777-2781.	4.5	381
33	Oxygenated monolayer carbon nitride for excellent photocatalytic hydrogen evolution and external quantum efficiency. Nano Energy, 2016, 27, 138-146.	8.2	379
34	Self-optimizing, highly surface-active layeredÂmetal dichalcogenide catalysts for hydrogen evolution. Nature Energy, 2017, 2, .	19.8	336
35	Dynamic mechanical behavior of multilayer graphene via supersonic projectile penetration. Science, 2014, 346, 1092-1096.	6.0	329
36	Ultrafast formation of interlayer hot excitons in atomically thin MoS2/WS2 heterostructures. Nature Communications, 2016, 7, 12512.	5.8	313

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37	Controlled Propulsion and Cargo Transport of Rotating Nickel Nanowires near a Patterned Solid Surface. ACS Nano, 2010, 4, 6228-6234.	7.3	269
38	Prediction of Enhanced Catalytic Activity for Hydrogen Evolution Reaction in Janus Transition Metal Dichalcogenides. Nano Letters, 2018, 18, 3943-3949.	4.5	267
39	Long-lived nanosecond spin relaxation and spin coherence of electrons in monolayer MoS2 andÂWS2. Nature Physics, 2015, 11, 830-834.	6.5	253
40	An Atomically Layered InSe Avalanche Photodetector. Nano Letters, 2015, 15, 3048-3055.	4.5	253
41	High performance agar/graphene oxide composite aerogel for methylene blue removal. Carbohydrate Polymers, 2017, 155, 345-353.	5.1	251
42	Unveiling Active Sites for the Hydrogen Evolution Reaction on Monolayer MoS₂. Advanced Materials, 2017, 29, 1701955.	11.1	249
43	Nitrogen-Doped Graphene with Pyridinic Dominance as a Highly Active and Stable Electrocatalyst for Oxygen Reduction. ACS Applied Materials & Interfaces, 2015, 7, 14763-14769.	4.0	248
44	Facile Synthesis of Single Crystal Vanadium Disulfide Nanosheets by Chemical Vapor Deposition for Efficient Hydrogen Evolution Reaction. Advanced Materials, 2015, 27, 5605-5609.	11.1	241
45	2D heterostructure comprised of metallic 1T-MoS2/Monolayer O-g-C3N4 towards efficient photocatalytic hydrogen evolution. Applied Catalysis B: Environmental, 2018, 220, 379-385.	10.8	231
46	Switching Mechanism in Single-Layer Molybdenum Disulfide Transistors: An Insight into Current Flow across Schottky Barriers. ACS Nano, 2014, 8, 1031-1038.	7.3	224
47	Thermal effects on the characteristic Raman spectrum of molybdenum disulfide (MoS2) of varying thicknesses. Applied Physics Letters, 2012, 100, .	1.5	220
48	Binary and Ternary Atomic Layers Built from Carbon, Boron, and Nitrogen. Advanced Materials, 2012, 24, 4878-4895.	11.1	219
49	Boron- and Nitrogen-Substituted Graphene Nanoribbons as Efficient Catalysts for Oxygen Reduction Reaction. Chemistry of Materials, 2015, 27, 1181-1186.	3.2	219
50	Enhancing the photocurrent and photoluminescence of single crystal monolayer MoS₂ with resonant plasmonic nanoshells. Applied Physics Letters, 2014, 104, 031112.	1.5	208
51	Three-Dimensional Metalâ€“Grapheneâ€“Nanotube Multifunctional Hybrid Materials. ACS Nano, 2013, 7, 58-64.	7.3	202
52	Electrical performance of monolayer MoS2 field-effect transistors prepared by chemical vapor deposition. Applied Physics Letters, 2013, 102, .	1.5	201
53	Temperature-dependent phonon shifts in monolayer MoS2. Applied Physics Letters, 2013, 103, .	1.5	199
54	Plasmonic Pumping of Excitonic Photoluminescence in Hybrid MoS₂â€“Au Nanostructures. ACS Nano, 2014, 8, 12682-12689.	7.3	198

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55	Direct chemical conversion of graphene to boron- and nitrogen- and carbon-containing atomic layers. Nature Communications, 2014, 5, 3193.	5.8	198
56	Statistical Study of Deep Submicron Dual-Gated Field-Effect Transistors on Monolayer Chemical Vapor Deposition Molybdenum Disulfide Films. Nano Letters, 2013, 13, 2640-2646.	4.5	197
57	Surface functionalization of two-dimensional metal chalcogenides by Lewis acidâ€“base chemistry. Nature Nanotechnology, 2016, 11, 465-471.	15.6	197
58	CVD-grown monolayered MoS ₂ as an effective photosensor operating at low-voltage. 2D Materials, 2014, 1, 011004.	2.0	195
59	Cobalt-Modulated Molybdenumâ€“Dinitrogen Interaction in MoS₂ for Catalyzing Ammonia Synthesis. Journal of the American Chemical Society, 2019, 141, 19269-19275.	6.6	189
60	Photoluminescence Quenching and Charge Transfer in Artificial Heterostacks of Monolayer Transition Metal Dichalcogenides and Few-Layer Black Phosphorus. ACS Nano, 2015, 9, 555-563.	7.3	183
61	Efficient hydrogen evolution in transition metal dichalcogenides via a simple one-step hydrazine reaction. Nature Communications, 2016, 7, 11857.	5.8	179
62	Three-Dimensional Printed Graphene Foams. ACS Nano, 2017, 11, 6860-6867.	7.3	172
63	Laminated Object Manufacturing of 3Dâ€Printed Laserâ€Induced Graphene Foams. Advanced Materials, 2018, 30, e1707416.	11.1	172
64	Optoelectronic Memory Using Two-Dimensional Materials. Nano Letters, 2015, 15, 259-265.	4.5	163
65	Metallic 1T phase source/drain electrodes for field effect transistors from chemical vapor deposited MoS2. APL Materials, 2014, 2, .	2.2	155
66	High Strain Tolerant EMI Shielding Using Carbon Nanotube Network Stabilized Rubber Composite. Advanced Materials Technologies, 2017, 2, 1700078.	3.0	153
67	MOFs-derived copper sulfides embedded within porous carbon octahedra for electrochemical capacitor applications. Chemical Communications, 2015, 51, 3109-3112.	2.2	145
68	Conversion of non-van der Waals solids to 2D transition-metal chalcogenides. Nature, 2020, 577, 492-496.	13.7	145
69	Nanomechanical cleavage of molybdenum disulphide atomic layers. Nature Communications, 2014, 5, 3631.	5.8	144
70	High performance graphene oxide nanofiltration membrane prepared by electrospraying for wastewater purification. Carbon, 2018, 130, 487-494.	5.4	144
71	Graphene oxide based membrane intercalated by nanoparticles for high performance nanofiltration application. Chemical Engineering Journal, 2018, 347, 12-18.	6.6	143
72	Defectâ€Engineeringâ€Enabled Highâ€Efficiency Allâ€Inorganic Perovskite Solar Cells. Advanced Materials, 2019, 31, e1903448.	11.1	143

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73	Synthesis and Defect Investigation of Two-Dimensional Molybdenum Disulfide Atomic Layers. Accounts of Chemical Research, 2015, 48, 31-40.	7.6	140
74	Brittle Fracture of 2D MoSe₂. Advanced Materials, 2017, 29, 1604201.	11.1	138
75	Exfoliated 2D Transition Metal Disulfides for Enhanced Electrocatalysis of Oxygen Evolution Reaction in Acidic Medium. Advanced Materials Interfaces, 2016, 3, 1500669.	1.9	136
76	A large-area free-standing graphene oxide multilayer membrane with high stability for nanofiltration applications. Chemical Engineering Journal, 2018, 345, 536-544.	6.6	136
77	Recent advances in alternative cathode materials for iodine-free dye-sensitized solar cells. Energy and Environmental Science, 2013, 6, 2003.	15.6	135
78	Tailoring the Physical Properties of Molybdenum Disulfide Monolayers by Control of Interfacial Chemistry. Nano Letters, 2014, 14, 1354-1361.	4.5	129
79	Three-dimensional mesostructures as high-temperature growth templates, electronic cellular scaffolds, and self-propelled microrobots. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E9455-E9464.	3.3	129
80	Gold Nanoparticles and gâ€C₃N₄â€Intercalated Graphene Oxide Membrane for Recyclable Surface Enhanced Raman Scattering. Advanced Functional Materials, 2017, 27, 1701714.	7.8	129
81	Surface Tension Components Based Selection of Cosolvents for Efficient Liquid Phase Exfoliation of 2D Materials. Small, 2016, 12, 2741-2749.	5.2	128
82	Nanostructure on Taro Leaves Resists Fouling by Colloids and Bacteria under Submerged Conditions. Langmuir, 2011, 27, 10035-10040.	1.6	124
83	Synthesis of large-scale atomic-layer SnS2 through chemical vapor deposition. Nano Research, 2017, 10, 2386-2394.	5.8	124
84	Strain-Induced Electronic Structure Changes in Stacked van der Waals Heterostructures. Nano Letters, 2016, 16, 3314-3320.	4.5	122
85	Electrical Transport Properties of Polycrystalline Monolayer Molybdenum Disulfide. ACS Nano, 2014, 8, 7930-7937.	7.3	121
86	Boron Nitrideâ€“Graphene Nanocapacitor and the Origins of Anomalous Size-Dependent Increase of Capacitance. Nano Letters, 2014, 14, 1739-1744.	4.5	120
87	Carbon Nitrogen Nanotubes as Efficient Bifunctional Electrocatalysts for Oxygen Reduction and Evolution Reactions. ACS Applied Materials & Interfaces, 2015, 7, 11991-12000.	4.0	120
88	Bio-derived ultrathin membrane for solar driven water purification. Nano Energy, 2019, 60, 567-575.	8.2	116
89	Nanoantenna-Enhanced Lightâ€“Matter Interaction in Atomically Thin WS₂. ACS Photonics, 2015, 2, 1260-1265.	3.2	114
90	Flexible all-solid-state supercapacitors based on freestanding, binder-free carbon nanofibers@polypyrrole@graphene film. Chemical Engineering Journal, 2018, 334, 184-190.	6.6	113

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91	Enhanced performance of in-plane transition metal dichalcogenides monolayers by configuring local atomic structures. Nature Communications, 2020, 11, 2253.	5.8	112
92	Fracture of Subâ€20nm Ultrathin Gold Nanowires. Advanced Functional Materials, 2011, 21, 3982-3989.	7.8	111
93	Core-shell structured carbon nanofibers yarn@polypyrrole@graphene for high performance all-solid-state fiber supercapacitors. Carbon, 2018, 138, 264-270.	5.4	110
94	Selective membranes in water and wastewater treatment: Role of advanced materials. Materials Today, 2021, 50, 516-532.	8.3	106
95	Intrinsic toughening and stable crack propagation in hexagonal boron nitride. Nature, 2021, 594, 57-61.	13.7	105
96	On the measurement of the plasticity length scale parameter in LIGA nickel foils. Mechanics of Materials, 2003, 35, 233-243.	1.7	103
97	Metal diselenide nanoparticles as highly active and stable electrocatalysts for the hydrogen evolution reaction. Nanoscale, 2015, 7, 14813-14816.	2.8	103
98	Hierarchical layer-by-layer porous FeCo₂S₄@Ni(OH)₂ arrays for all-solid-state asymmetric supercapacitors. Journal of Materials Chemistry A, 2018, 6, 20480-20490.	5.2	102
99	Enhancing graphene reinforcing potential in composites by hydrogen passivation induced dispersion. Scientific Reports, 2013, 3, 2086.	1.6	96
100	Growth-substrate induced performance degradation in chemically synthesized monolayer MoS2 field effect transistors. Applied Physics Letters, 2014, 104, .	1.5	96
101	Band Engineering for Novel Twoâ€Dimensional Atomic Layers. Small, 2015, 11, 1868-1884.	5.2	96
102	Lithium-conducting covalent-organic-frameworks as artificial solid-electrolyte-interphase on silicon anode for high performance lithium ion batteries. Nano Energy, 2020, 72, 104657.	8.2	93
103	3D-printed silica with nanoscale resolution. Nature Materials, 2021, 20, 1506-1511.	13.3	93
104	Indentation size effects in the nano- and micro-hardness of fcc single crystal metals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 434, 178-187.	2.6	92
105	A flexible solar cell/supercapacitor integrated energy device. Nano Energy, 2017, 42, 181-186.	8.2	92
106	Interface Toughness of Carbon Nanotube Reinforced Epoxy Composites. ACS Applied Materials & Interfaces, 2011, 3, 129-134.	4.0	91
107	Toward a Mechanistic Understanding of Vertical Growth of van der Waals Stacked 2D Materials: A Multiscale Model and Experiments. ACS Nano, 2017, 11, 12780-12788.	7.3	89
108	Vertically Aligned Single-Walled Carbon Nanotubes as Low-cost and High Electrocatalytic Counter Electrode for Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2011, 3, 3157-3161.	4.0	88

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109	Multifunctional nanocoated membranes for high-rate electrothermal desalination of hypersaline waters. Nature Nanotechnology, 2020, 15, 1025-1032.	15.6	88
110	TaC Nanowire/Activated Carbon Microfiber Hybrid Structures from Bamboo Fibers. Advanced Energy Materials, 2011, 1, 534-539.	10.2	87
111	Synthesis of reduced graphene oxideâ€“Fe3O4 multifunctional freestanding membranes and their temperature dependent electronic transport properties. Carbon, 2012, 50, 1338-1345.	5.4	87
112	Potassium gluconate-derived N/S Co-doped carbon nanosheets as superior electrode materials for supercapacitors and sodium-ion batteries. Journal of Power Sources, 2019, 414, 308-316.	4.0	87
113	High Electrocatalytic Activity of Vertically Aligned Single-Walled Carbon Nanotubes towards Sulfide Redox Shuttles. Scientific Reports, 2012, 2, 368.	1.6	83
114	A printed, recyclable, ultra-strong, and ultra-tough graphite structural material. Materials Today, 2019, 30, 17-25.	8.3	83
115	Enhanced nucleate boiling on horizontal hydrophobic-hydrophilic carbon nanotube coatings. Applied Physics Letters, 2013, 102, .	1.5	81
116	A fast and zero-biased photodetector based on GaTeâ€“InSe vertical 2D pâ€“n heterojunction. 2D Materials, 2018, 5, 025008.	2.0	81
117	Quantitative analysis of the temperature dependency in Raman active vibrational modes of molybdenum disulfide atomic layers. Nanoscale, 2013, 5, 9758.	2.8	80
118	Surface dislocation nucleation mediated deformation and ultrahigh strength in sub-10-nm gold nanowires. Nano Research, 2011, 4, 1261-1267.	5.8	79
119	Towards controlled synthesis of 2D crystals by chemical vapor deposition (CVD). Materials Today, 2020, 40, 132-139.	8.3	79
120	MoS₂atomic layers with artificial active edge sites as transparent counter electrodes for improved performance of dye-sensitized solar cells. Nanoscale, 2014, 6, 5279-5283.	2.8	78
121	A Hybrid Metalâ€“Organic Frameworkâ€“Reduced Graphene Oxide Nanomaterial for Selective Removal of Chromate from Water in an Electrochemical Process. Environmental Science & Technology, 2020, 54, 13322-13332.	4.6	78
122	An investigation of fatigue in LIGA Ni MEMS thin films. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 371, 256-266.	2.6	76
123	A generic bamboo-based carbothermal method for preparing carbide (SiC, B4C, TiC, TaC, NbC, TixNb1â^'xC,) Tj ETQq1 1 0.784314 rgBT	6.7	76
124	Synthesis of Highâ€Quality Graphene and Hexagonal Boron Nitride Monolayer Inâ€Plane Heterostructure on Cuâ€“Ni Alloy. Advanced Science, 2017, 4, 1700076.	5.6	76
125	Multiscale Geometric Design Principles Applied to 3D Printed Schwarzites. Advanced Materials, 2018, 30, 1704820.	11.1	76
126	TiC Nanorods Derived from Cotton Fibers: Chloride-Assisted VLS Growth, Structure, and Mechanical Properties. Crystal Growth and Design, 2011, 11, 4422-4426.	1.4	74

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127	Self-supported multidimensional Niâ€“Fe phosphide networks with holey nanosheets for high-performance all-solid-state supercapacitors. Journal of Materials Chemistry A, 2019, 7, 17386-17399.	5.2	72
128	Nitrogen and sulfur co-doped porous carbon fibers film for flexible symmetric all-solid-state supercapacitors. Carbon, 2020, 158, 456-464.	5.4	72
129	Elastic modulus of biopolymer matrix in nacre measured using coupled atomic force microscopy bending and inverse finite element techniques. Materials Science and Engineering C, 2011, 31, 1852-1856.	3.8	71
130	Taming Active Material-Solid Electrolyte Interfaces with Organic Cathode for All-Solid-State Batteries. Joule, 2019, 3, 1349-1359.	11.7	70
131	Low Contact Barrier in 2H/1Tâ€² MoTe₂ In-Plane Heterostructure Synthesized by Chemical Vapor Deposition. ACS Applied Materials & Interfaces, 2019, 11, 12777-12785.	4.0	70
132	Doping Nanoscale Graphene Domains Improves Magnetism in Hexagonal Boron Nitride. Advanced Materials, 2019, 31, e1805778.	11.1	69
133	A Critical Review on Enhancement of Photocatalytic Hydrogen Production by Molybdenum Disulfide: From Growth to Interfacial Activities. Small, 2019, 15, e1900578.	5.2	69
134	Sizeâ€Đependent Fracture Mode Transition in Copper Nanowires. Small, 2012, 8, 1889-1894.	5.2	67
135	Effect of Nitrogen Doping on the Mechanical Properties of Carbon Nanotubes. ACS Nano, 2010, 4, 7637-7643.	7.3	65
136	High-performance red phosphorus/carbon nanofibers/graphene free-standing paper anode for sodium ion batteries. Journal of Materials Chemistry A, 2018, 6, 1574-1581.	5.2	65
137	Monolayer MoS₂ Nanoribbon Transistors Fabricated by Scanning Probe Lithography. Nano Letters, 2019, 19, 2092-2098.	4.5	64
138	Aligned carbon nanotube-reinforced silicon carbide composites produced by chemical vapor infiltration. Carbon, 2011, 49, 2475-2482.	5.4	63
139	Layer Engineering of 2D Semiconductor Junctions. Advanced Materials, 2016, 28, 5126-5132.	11.1	63
140	In Situ Synthesis of Lead-Free Halide Perovskiteâ€“COF Nanocomposites as Photocatalysts for Photoinduced Polymerization in Both Organic and Aqueous Phases. , 2022, 4, 464-471.		63
141	Development and Application of a Novel Microfabricated Device for the In Situ Tensile Testing of 1-D Nanomaterials. Journal of Microelectromechanical Systems, 2010, 19, 675-682.	1.7	62
142	An electrochemically stable homogeneous glassy electrolyte formed at room temperature for all-solid-state sodium batteries. Nature Communications, 2022, 13, .	5.8	62
143	In situ electro-mechanical experiments and mechanics modeling of tensile cracking in indium tin oxide thin films on polyimide substrates. Journal of Applied Physics, 2011, 109, .	1.1	61
144	Quantitativein situTEM tensile testing of an individual nickel nanowire. Nanotechnology, 2011, 22, 355702.	1.3	61

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145	Mechanisms of fatigue in LIGA Ni MEMS thin films. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 444, 39-50.	2.6	60
146	Spatially Resolved Photoexcited Charge-Carrier Dynamics in Phase-Engineered Monolayer MoS₂. ACS Nano, 2015, 9, 840-849.	7.3	58
147	Discovering superior basal plane active two-dimensional catalysts for hydrogen evolution. Materials Today, 2019, 25, 28-34.	8.3	58
148	A Multi-step Method for In Situ Mechanical Characterization of 1-D Nanostructures Using a Novel Micromechanical Device. Experimental Mechanics, 2010, 50, 47-54.	1.1	56
149	Lightweight Hexagonal Boron Nitride Foam for CO₂ Absorption. ACS Nano, 2017, 11, 8944-8952.	7.3	56
150	Leadâ€Free Double Perovskite Cs₂SnX₆: Facile Solution Synthesis and Excellent Stability. Small, 2019, 15, e1901650.	5.2	56
151	Spiral Growth of SnSe₂ Crystals by Chemical Vapor Deposition. Advanced Materials Interfaces, 2016, 3, 1600383.	1.9	55
152	Opto-valleytronic imaging of atomically thin semiconductors. Nature Nanotechnology, 2017, 12, 329-334.	15.6	55
153	Artificial Solid Electrolyte Interphase Coating to Reduce Lithium Trapping in Silicon Anode for High Performance Lithiumâ€Ion Batteries. Advanced Materials Interfaces, 2019, 6, 1901187.	1.9	54
154	Hierarchical Grapheneâ€Based Films with Dynamic Selfâ€Stiffening for Biomimetic Artificial Muscle. Advanced Functional Materials, 2016, 26, 7003-7010.	7.8	53
155	Sandwichâ€Like FeCl₃@C as Highâ€Performance Anode Materials for Potassiumâ€Ion Batteries. Advanced Materials Interfaces, 2018, 5, 1800606.	1.9	53
156	Toughening Graphene by Integrating Carbon Nanotubes. ACS Nano, 2018, 12, 7901-7910.	7.3	52
157	Temperature-Dependent Plasmonâ€“Exciton Interactions in Hybrid Au/MoSe₂ Nanostructures. ACS Photonics, 2017, 4, 1653-1660.	3.2	51
158	Lateral Monolayer MoSe₂â€“WSe₂ pâ€“n Heterojunctions with Giant Builtâ€In Potentials. Small, 2020, 16, e2002263.	5.2	50
159	Spin Coherence and Dephasing of Localized Electrons in Monolayer MoS₂. Nano Letters, 2015, 15, 8250-8254.	4.5	49
160	Nanoindentation study of plasticity length scale effects in LIGA Ni microelectromechanical systems structures. Journal of Materials Research, 2003, 18, 719-728.	1.2	48
161	Vertically Aligned Carbon Nanotubes/Graphene Hybrid Electrode as a TCO- and Pt-Free Flexible Cathode for Application in Solar Cells. Journal of Materials Chemistry A, 2014, 2, 20902-20907.	5.2	47
162	A multiscale experiment on the tribological behavior of aligned carbon nanotube/ceramic composites. Scripta Materialia, 2008, 58, 223-226.	2.6	46

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163	Three-Dimensional Rebar Graphene. ACS Applied Materials & Interfaces, 2017, 9, 7376-7384.	4.0	46
164	Quantitative in-situ nanomechanical characterization of metallic nanowires. Jom, 2011, 63, 35-42.	0.9	45
165	Anomalous high capacitance in a coaxial single nanowire capacitor. Nature Communications, 2012, 3, 879.	5.8	45
166	Role of Biochar in Improving Sandy Soil Water Retention and Resilience to Drought. Water (Switzerland), 2021, 13, 407.	1.2	44
167	Ternary CuIn₇Se₁₁: Towards Ultraâ€Thin Layered Photodetectors and Photovoltaic Devices. Advanced Materials, 2014, 26, 7666-7672.	11.1	43
168	Electrical transport and low-frequency noise in chemical vapor deposited single-layer MoS₂ devices. Nanotechnology, 2014, 25, 155702.	1.3	43
169	Water Molecule-Induced Stiffening in ZnO Nanobelts. Nano Letters, 2011, 11, 2845-2848.	4.5	42
170	Strain rate dependent mechanical properties in single crystal nickel nanowires. Applied Physics Letters, 2013, 102, .	1.5	42
171	Investigation of hexagonal boron nitride as an atomically thin corrosion passivation coating in aqueous solution. Nanotechnology, 2016, 27, 364004.	1.3	42
172	Microstructure engineering of solid-state composite cathode via solvent-assisted processing. Joule, 2021, 5, 1845-1859.	11.7	42
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