Xiangfeng Duan

List of Publications by Year
in descending order

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363 papers	79,897 citations	506 128 h-index	418 276 g-index
386 all docs	386 docs citations	386 times ranked	61573 citing authors

#	Article	IF	Citations
1	Indium phosphide nanowires as building blocks for nanoscale electronic and optoelectronic devices. Nature, 2001, 409, 66-69.	13.7	3,256
2	Single-nanowire electrically driven lasers. Nature, 2003, 421, 241-245.	13.7	2,344
3	Directed Assembly of One-Dimensional Nanostructures into Functional Networks. Science, 2001, 291, 630-633.	6.0	2,105
4	Logic Gates and Computation from Assembled Nanowire Building Blocks. Science, 2001, 294, 1313-1317.	6.0	2,056
5	Van der Waals heterostructures and devices. Nature Reviews Materials, 2016, 1, .	23.3	1,897
6	Highly Polarized Photoluminescence and Photodetection from Single Indium Phosphide Nanowires. Science, 2001, 293, 1455-1457.	6.0	1,744
7	High-performance transition metalâ€“doped Pt ₃ Ni octahedra for oxygen reduction reaction. Science, 2015, 348, 1230-1234.	6.0	1,623
8	General synthesis and definitive structural identification of MN4C4 single-atom catalysts with tunable electrocatalytic activities. Nature Catalysis, 2018, 1, 63-72.	16.1	1,476
9	General Synthesis of Compound Semiconductor Nanowires. Advanced Materials, 2000, 12, 298-302.	11.1	1,334
10	Ultrafine jagged platinum nanowires enable ultrahigh mass activity for the oxygen reduction reaction. Science, 2016, 354, 1414-1419.	6.0	1,292
11	Approaching the Schottkyâ€“Mott limit in van der Waals metalâ€“semiconductor junctions. Nature, 2018, 557, 696-700.	13.7	1,279
12	Graphene nanomesh. Nature Nanotechnology, 2010, 5, 190-194.	15.6	1,276
13	Progress, challenge and perspective of heterogeneous photocatalysts. Chemical Society Reviews, 2013, 42, 2568-2580.	18.7	1,255
14	Three-dimensional holey-graphene/niobia composite architectures for ultrahigh-rate energy storage. Science, 2017, 356, 599-604.	6.0	1,229
15	Holey graphene frameworks for highly efficient capacitive energy storage. Nature Communications, 2014, 5, 4554.	5.8	1,161
16	High-speed graphene transistors with a self-aligned nanowire gate. Nature, 2010, 467, 305-308.	13.7	1,156
17	Lateral epitaxial growth of two-dimensional layered semiconductor heterojunctions. Nature Nanotechnology, 2014, 9, 1024-1030.	15.6	1,056
18	Flexible Solid-State Supercapacitors Based on Three-Dimensional Graphene Hydrogel Films. ACS Nano, 2013, 7, 4042-4049.	7.3	1,037

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19	Highly efficient gate-tunable photocurrent generation in vertical heterostructures of layered materials. Nature Nanotechnology, 2013, 8, 952-958.	15.6	1,017
20	Van der Waals integration before and beyond two-dimensional materials. Nature, 2019, 567, 323-333.	13.7	946
21	Electroluminescence and Photocurrent Generation from Atomically Sharp WSe₂/MoS₂ Heterojunction pâ€“n Diodes. Nano Letters, 2014, 14, 5590-5597.	4.5	937
22	Two-dimensional transition metal dichalcogenides as atomically thin semiconductors: opportunities and challenges. Chemical Society Reviews, 2015, 44, 8859-8876.	18.7	917
23	High-performance thin-film transistors using semiconductor nanowires and nanoribbons. Nature, 2003, 425, 274-278.	13.7	895
24	Doping and Electrical Transport in Silicon Nanowires. Journal of Physical Chemistry B, 2000, 104, 5213-5216.	1.2	885
25	Gallium Nitride Nanowire Nanodevices. Nano Letters, 2002, 2, 101-104.	4.5	871
26	Vertically stacked multi-heterostructures of layered materials for logic transistors and complementary inverters. Nature Materials, 2013, 12, 246-252.	13.3	812
27	Laser-Assisted Catalytic Growth of Single Crystal GaN Nanowires. Journal of the American Chemical Society, 2000, 122, 188-189.	6.6	797
28	Graphene: An Emerging Electronic Material. Advanced Materials, 2012, 24, 5782-5825.	11.1	718
29	Covalent Organic Frameworks with High Charge Carrier Mobility. Chemistry of Materials, 2011, 23, 4094-4097.	3.2	659
30	Solution-processable 2D semiconductors for high-performance large-area electronics. Nature, 2018, 562, 254-258.	13.7	644
31	Plasmon resonance enhanced multicolour photodetection by graphene. Nature Communications, 2011, 2, 579.	5.8	639
32	New Porous Crystals of Extended Metal-Catecholates. Chemistry of Materials, 2012, 24, 3511-3513.	3.2	618
33	Nanowires for Integrated Multicolor Nanophotonics. Small, 2004, 1, 142-147.	5.2	606
34	Functionalized Graphene Hydrogelâ€Based Highâ€Performance Supercapacitors. Advanced Materials, 2013, 25, 5779-5784.	11.1	577
35	Hierarchical 3D electrodes for electrochemical energy storage. Nature Reviews Materials, 2019, 4, 45-60.	23.3	554
36	Promises and prospects of two-dimensional transistors. Nature, 2021, 591, 43-53.	13.7	548

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37	Robust epitaxial growth of two-dimensional heterostructures, multiheterostructures, and superlattices. Science, 2017, 357, 788-792.	6.0	518
38	Chemical vapour deposition growth of large single crystals of monolayer and bilayer graphene. Nature Communications, 2013, 4, 2096.	5.8	493
39	Nanoscale Structure Design for Highâ€Performance Ptâ€Based ORR Catalysts. Advanced Materials, 2019, 31, e1802234.	11.1	478
40	Large-area graphene-nanomesh/carbon-nanotube hybrid membranes for ionic and molecular nanofiltration. Science, 2019, 364, 1057-1062.	6.0	475
41	Single-atom tailoring of platinum nanocatalysts for high-performance multifunctional electrocatalysis. Nature Catalysis, 2019, 2, 495-503.	16.1	464
42	A fundamental look at electrocatalytic sulfur reduction reaction. Nature Catalysis, 2020, 3, 762-770.	16.1	455
43	Interlayer Transition and Infrared Photodetection in Atomically Thin Type-II MoTe₂/MoS₂ van der Waals Heterostructures. ACS Nano, 2016, 10, 3852-3858.	7.3	453
44	Iridium single-atom catalyst on nitrogen-doped carbon for formic acid oxidation synthesized using a general hostâ€“guest strategy. Nature Chemistry, 2020, 12, 764-772.	6.6	452
45	Growth of Alloy MoS_{2x}Se_{2(1â€“x)} Nanosheets with Fully Tunable Chemical Compositions and Optical Properties. Journal of the American Chemical Society, 2014, 136, 3756-3759.	6.6	444
46	Self-Assembled Three-Dimensional Graphene Macrostructures: Synthesis and Applications in Supercapacitors. Accounts of Chemical Research, 2015, 48, 1666-1675.	7.6	441
47	Single atom electrocatalysts supported on graphene or graphene-like carbons. Chemical Society Reviews, 2019, 48, 5207-5241.	18.7	441
48	A low-temperature method to produce highly reduced graphene oxide. Nature Communications, 2013, 4, 1539.	5.8	436
49	Double-negative-index ceramic aerogels for thermal superinsulation. Science, 2019, 363, 723-727.	6.0	429
50	Solution Processable Holey Graphene Oxide and Its Derived Macrostructures for High-Performance Supercapacitors. Nano Letters, 2015, 15, 4605-4610.	4.5	426
51	Few-layer molybdenum disulfide transistors and circuits for high-speed flexible electronics. Nature Communications, 2014, 5, 5143.	5.8	408
52	Towards highly efficient photocatalysts using semiconductor nanoarchitectures. Energy and Environmental Science, 2012, 5, 6732.	15.6	400
53	General synthesis of two-dimensional van der Waals heterostructure arrays. Nature, 2020, 579, 368-374.	13.7	393
54	High-yield self-limiting single-nanowire assembly with dielectrophoresis. Nature Nanotechnology, 2010, 5, 525-530.	15.6	375

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55	Large Area Growth and Electrical Properties of p-Type WSe₂ Atomic Layers. Nano Letters, 2015, 15, 709-713.	4.5	372
56	Van der Waals epitaxial growth and optoelectronics of large-scale WSe2/SnS2 vertical bilayer pâ€“n junctions. Nature Communications, 2017, 8, 1906.	5.8	369
57	Rational Fabrication of Graphene Nanoribbons Using a Nanowire Etch Mask. Nano Letters, 2009, 9, 2083-2087.	4.5	362
58	Toward Barrier Free Contact to Molybdenum Disulfide Using Graphene Electrodes. Nano Letters, 2015, 15, 3030-3034.	4.5	362
59	Inhibiting Polysulfide Shuttling with a Graphene Composite Separator for Highly Robust Lithium-Sulfur Batteries. Joule, 2018, 2, 2091-2104.	11.7	345
60	Plasmonic Modulation of the Upconversion Fluorescence in NaYF₄:Yb/Tm Hexaplate Nanocrystals Using Gold Nanoparticles or Nanoshells. Angewandte Chemie - International Edition, 2010, 49, 2865-2868.	7.2	343
61	Black phosphorus composites with engineered interfaces for high-rate high-capacity lithium storage. Science, 2020, 370, 192-197.	6.0	336
62	Chemical vapor deposition growth of monolayer MoSe2 nanosheets. Nano Research, 2014, 7, 511-517.	5.8	331
63	Nonvolatile Memory and Programmable Logic from Molecule-Gated Nanowires. Nano Letters, 2002, 2, 487-490.	4.5	330
64	Electrically Conductive and Optically Active Porous Silicon Nanowires. Nano Letters, 2009, 9, 4539-4543.	4.5	324
65	Monolayer atomic crystal molecular superlattices. Nature, 2018, 555, 231-236.	13.7	323
66	High-frequency self-aligned graphene transistors with transferred gate stacks. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11588-11592.	3.3	312
67	Grapheneâ€Supported Hemin as a Highly Active Biomimetic Oxidation Catalyst. Angewandte Chemie - International Edition, 2012, 51, 3822-3825.	7.2	309
68	Contacts between Two- and Three-Dimensional Materials: Ohmic, Schottky, and pâ€“n Heterojunctions. ACS Nano, 2016, 10, 4895-4919.	7.3	308
69	Synthesis of WS_{2x}Se_{2â€“2x} Alloy Nanosheets with Composition-Tunable Electronic Properties. Nano Letters, 2016, 16, 264-269.	4.5	308
70	Two-dimensional transistors beyond graphene and TMDCs. Chemical Society Reviews, 2018, 47, 6388-6409.	18.7	301
71	Highly active and stable stepped Cu surface for enhanced electrochemical CO2 reduction to C2H4. Nature Catalysis, 2020, 3, 804-812.	16.1	298
72	Functional Three-Dimensional Graphene/Polymer Composites. ACS Nano, 2016, 10, 7231-7247.	7.3	296

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73	Transferred wrinkled Al2O3 for highly stretchableÂand transparent grapheneâ€“carbon nanotube transistors. Nature Materials, 2013, 12, 403-409.	13.3	295
74	Molecular Design of Singleâ€Atom Catalysts for Oxygen Reduction Reaction. Advanced Energy Materials, 2020, 10, 1903815.	10.2	295
75	Three-dimensional macro-structures of two-dimensional nanomaterials. Chemical Society Reviews, 2016, 45, 5541-5588.	18.7	280
76	Synthesis and optical properties of gallium arsenide nanowires. Applied Physics Letters, 2000, 76, 1116-1118.	1.5	279
77	Combined anodic and cathodic hydrogen production from aldehyde oxidation and hydrogen evolution reaction. Nature Catalysis, 2022, 5, 66-73.	16.1	276
78	Valence oscillation and dynamic active sites in monolayer NiCo hydroxides for water oxidation. Nature Catalysis, 2021, 4, 1050-1058.	16.1	272
79	Wafer-scale growth of large arrays of perovskite microplate crystals for functional electronics and optoelectronics. Science Advances, 2015, 1, e1500613.	4.7	265
80	Plasma-engineered MoS₂ thin-film as an efficient electrocatalyst for hydrogen evolution reaction. Chemical Communications, 2015, 51, 7470-7473.	2.2	263
81	Confined Pyrolysis within Metalâ€“Organic Frameworks To Form Uniform Ru₃ Clusters for Efficient Oxidation of Alcohols. Journal of the American Chemical Society, 2017, 139, 9795-9798.	6.6	258
82	Very large magnetoresistance in graphene nanoribbons. Nature Nanotechnology, 2010, 5, 655-659.	15.6	253
83	High-Yield Chemical Vapor Deposition Growth of High-Quality Large-Area AB-Stacked Bilayer Graphene. ACS Nano, 2012, 6, 8241-8249.	7.3	246
84	Microwaveâ€Assisted Rapid Synthesis of Grapheneâ€Supported Single Atomic Metals. Advanced Materials, 2018, 30, e1802146.	11.1	244
85	A rational design of cosolvent exfoliation of layered materials by directly probing liquidâ€“solid interaction. Nature Communications, 2013, 4, 2213.	5.8	235
86	A Facile Strategy to Pt₃Ni Nanocrystals with Highly Porous Features as an Enhanced Oxygen Reduction Reaction Catalyst. Advanced Materials, 2013, 25, 2974-2979.	11.1	232
87	Porous, Conductive Metalâ€Triazolates and Their Structural Elucidation by the Chargeâ€Flipping Method. Chemistry - A European Journal, 2012, 18, 10595-10601.	1.7	227
88	Synthesis of PtPd Bimetal Nanocrystals with Controllable Shape, Composition, and Their Tunable Catalytic Properties. Nano Letters, 2012, 12, 4265-4270.	4.5	227
89	Mechanically Shaped Two-Dimensional Covalent Organic Frameworks Reveal Crystallographic Alignment and Fast Li-Ion Conductivity. Journal of the American Chemical Society, 2016, 138, 9767-9770.	6.6	227
90	Selfâ€Optimization of the Active Site of Molybdenum Disulfide by an Irreversible Phase Transition during Photocatalytic Hydrogen Evolution. Angewandte Chemie - International Edition, 2017, 56, 7610-7614.	7.2	221

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91	Nanoscale Morphology, Dimensional Control, and Electrical Properties of Oligoanilines. Journal of the American Chemical Society, 2010, 132, 10365-10373.	6.6	217
92	Efficient strain modulation of 2D materials via polymer encapsulation. Nature Communications, 2020, 11, 1151.	5.8	215
93	A self-powered high-performance graphene/silicon ultraviolet photodetector with ultra-shallow junction: breaking the limit of silicon?. Npj 2D Materials and Applications, 2017, 1, .	3.9	211
94	Nanowire Electronics: From Nanoscale to Macroscale. Chemical Reviews, 2019, 119, 9074-9135.	23.0	210
95	Self-trapped state enabled filterless narrowband photodetections in 2D layered perovskite single crystals. Nature Communications, 2019, 10, 806.	5.8	207
96	Size-dependent phase transition in methylammonium lead iodide perovskite microplate crystals. Nature Communications, 2016, 7, 11330.	5.8	206
97	Van der Waals epitaxial growth of air-stable CrSe2 nanosheets with thickness-tunable magnetic order. Nature Materials, 2021, 20, 818-825.	13.3	206
98	Uniform and ultrathin high-Îº gate dielectrics for two-dimensional electronic devices. Nature Electronics, 2019, 2, 563-571.	13.1	204
99	Large-Scale Integration of Semiconductor Nanowires for High-Performance Flexible Electronics. ACS Nano, 2012, 6, 1888-1900.	7.3	202
100	One-step strategy to graphene/Ni(OH)2 composite hydrogels as advanced three-dimensional supercapacitor electrode materials. Nano Research, 2013, 6, 65-76.	5.8	202
101	Layer-by-Layer Degradation of Methylammonium Lead Tri-iodide Perovskite Microplates. Joule, 2017, 1, 548-562.	11.7	199
102	Lateral Growth of Composition Graded Atomic Layer MoS_{2(1â€“x)}Se_{2x} Nanosheets. Journal of the American Chemical Society, 2015, 137, 5284-5287.	6.6	191
103	High- Îº oxide nanoribbons as gate dielectrics for high mobility top-gated graphene transistors. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 6711-6715.	3.3	187
104	2D Heterostructures for Ubiquitous Electronics and Optoelectronics: Principles, Opportunities, and Challenges. Chemical Reviews, 2022, 122, 6514-6613.	23.0	187
105	van der Waals Heterojunction Devices Based on Organohalide Perovskites and Two-Dimensional Materials. Nano Letters, 2016, 16, 367-373.	4.5	185
106	Synthesis of Ultrathin Metallic MTe₂ (M = V, Nb, Ta) Singleâ€Crystalline Nanoplates. Advanced Materials, 2018, 30, e1801043.	11.1	183
107	Gate-tunable frequency combs in grapheneâ€“nitride microresonators. Nature, 2018, 558, 410-414.	13.7	182
108	Biomimetic Synthesis of an Ultrathin Platinum Nanowire Network with a High Twin Density for Enhanced Electrocatalytic Activity and Durability. Angewandte Chemie - International Edition, 2013, 52, 12577-12581.	7.2	174

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109	A rational design of carbon-supported dispersive Pt-based octahedra as efficient oxygen reduction reaction catalysts. Energy and Environmental Science, 2014, 7, 2957-2962.	15.6	172
110	Silver nanoparticles boost charge-extraction efficiency in Shewanella microbial fuel cells. Science, 2021, 373, 1336-1340.	6.0	171
111	Sub-100 nm Channel Length Graphene Transistors. Nano Letters, 2010, 10, 3952-3956.	4.5	167
112	Three-dimensional graphene framework with ultra-high sulfur content for a robust lithiumâ€“sulfur battery. Nano Research, 2016, 9, 240-248.	5.8	165
113	High-order superlattices by rolling up van der Waals heterostructures. Nature, 2021, 591, 385-390.	13.7	163
114	Roles of Mo Surface Dopants in Enhancing the ORR Performance of Octahedral PtNi Nanoparticles. Nano Letters, 2018, 18, 798-804.	4.5	162
115	Top-Gated Graphene Nanoribbon Transistors with Ultrathin High-k Dielectrics. Nano Letters, 2010, 10, 1917-1921.	4.5	160
116	Significantly Enhanced Visible Light Photoelectrochemical Activity in TiO₂ Nanowire Arrays by Nitrogen Implantation. Nano Letters, 2015, 15, 4692-4698.	4.5	159
117	Unveiling the Formation Pathway of Single Crystalline Porous Silicon Nanowires. ACS Applied Materials & Interfaces, 2011, 3, 261-270.	4.0	156
118	Building two-dimensional materials one row at a time: Avoiding the nucleation barrier. Science, 2018, 362, 1135-1139.	6.0	155
119	Direct Room Temperature Welding and Chemical Protection of Silver Nanowire Thin Films for High Performance Transparent Conductors. Journal of the American Chemical Society, 2018, 140, 193-199.	6.6	153
120	Doping-free complementary WSe2 circuit via van der Waals metal integration. Nature Communications, 2020, 11, 1866.	5.8	153
121	Plasmonic and Catalytic AuPd Nanowheels for the Efficient Conversion of Light into Chemical Energy. Angewandte Chemie - International Edition, 2013, 52, 6063-6067.	7.2	152
122	Sensitive pressure sensors based on conductive microstructured air-gap gates and two-dimensional semiconductor transistors. Nature Electronics, 2020, 3, 59-69.	13.1	150
123	Thickness Scaling Effect on Interfacial Barrier and Electrical Contact to Two-Dimensional MoS₂ Layers. ACS Nano, 2014, 8, 12836-12842.	7.3	149
124	Palladiumâ€Based Nanostructures with Highly Porous Features and Perpendicular Pore Channels as Enhanced Organic Catalysts. Angewandte Chemie - International Edition, 2013, 52, 2520-2524.	7.2	147
125	Thickness-Tunable Synthesis of Ultrathin Type-II Dirac Semimetal PtTe₂ Single Crystals and Their Thickness-Dependent Electronic Properties. Nano Letters, 2018, 18, 3523-3529.	4.5	147
126	pH-Operated Mechanized Porous Silicon Nanoparticles. Journal of the American Chemical Society, 2011, 133, 8798-8801.	6.6	146

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127	High Surface Area Tunnels in Hexagonal WO₃. Nano Letters, 2015, 15, 4834-4838.	4.5	144
128	Toward Tunable Band Gap and Tunable Dirac Point in Bilayer Graphene with Molecular Doping. Nano Letters, 2011, 11, 4759-4763.	4.5	142
129	A Highly Active Star Decahedron Cu Nanocatalyst for Hydrocarbon Production at Low Overpotentials. Advanced Materials, 2019, 31, e1805405.	11.1	134
130	Beyond Extended Surfaces: Understanding the Oxygen Reduction Reaction on Nanocatalysts. Journal of the American Chemical Society, 2020, 142, 17812-17827.	6.6	134
131	Highâ€Performance Topâ€Gated Grapheneâ€Nanoribbon Transistors Using Zirconium Oxide Nanowires as Highâ€Dielectricâ€Constant Gate Dielectrics. Advanced Materials, 2010, 22, 1941-1945.	11.1	132
132	Electric-field-induced strong enhancement of electroluminescence in multilayer molybdenum disulfide. Nature Communications, 2015, 6, 7509.	5.8	132
133	Chemical synthesis of two-dimensional atomic crystals, heterostructures and superlattices. Chemical Society Reviews, 2018, 47, 3129-3151.	18.7	132
134	Highly Flexible Electronics from Scalable Vertical Thin Film Transistors. Nano Letters, 2014, 14, 1413-1418.	4.5	131
135	Van der Waals thin-film electronics. Nature Electronics, 2019, 2, 378-388.	13.1	131
136	Porous silicon nanowires. Nanoscale, 2011, 3, 4060.	2.8	129
137	Broadband gate-tunable terahertz plasmons in graphene heterostructures. Nature Photonics, 2018, 12, 22-28.	15.6	127
138	Solvated Graphene Frameworks as Highâ€Performance Anodes for Lithiumâ€Ion Batteries. Angewandte Chemie - International Edition, 2015, 54, 5345-5350.	7.2	124
139	Silver nanoparticles protected by monolayer graphene as a stabilized substrate for surface enhanced Raman spectroscopy. Carbon, 2014, 66, 713-719.	5.4	123
140	Broken Symmetry Induced Strong Nonlinear Optical Effects in Spiral WS₂ Nanosheets. ACS Nano, 2017, 11, 4892-4898.	7.3	123
141	Hypocrystalline ceramic aerogels for thermal insulation at extreme conditions. Nature, 2022, 606, 909-916.	13.7	123
142	Plasmonic Enhancements of Photocatalytic Activity of Pt/n-Si/Ag Photodiodes Using Au/Ag Core/Shell Nanorods. Journal of the American Chemical Society, 2011, 133, 16730-16733.	6.6	121
143	Real-time electrical detection of nitric oxide in biological systems with sub-nanomolar sensitivity. Nature Communications, 2013, 4, 2225.	5.8	121
144	Photocatalytic properties of porous silicon nanowires. Journal of Materials Chemistry, 2010, 20, 3590.	6.7	120

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145	Unusually efficient photocurrent extraction in monolayer van der Waals heterostructure by tunnelling through discretized barriers. Nature Communications, 2016, 7, 13278.	5.8	120
146	Three-dimensional graphene/polyimide composite-derived flexible high-performance organic cathode for rechargeable lithium and sodium batteries. Journal of Materials Chemistry A, 2017, 5, 2710-2716.	5.2	119
147	Synthetic Control of Two-Dimensional NiTe₂ Single Crystals with Highly Uniform Thickness Distributions. Journal of the American Chemical Society, 2018, 140, 14217-14223.	6.6	119
148	Metal@semiconductor core-shell nanocrystals with atomically organized interfaces for efficient hot electron-mediated photocatalysis. Nano Energy, 2018, 48, 44-52.	8.2	118
149	Synthesis of Stable Shape-Controlled Catalytically Active Î²-Palladium Hydride. Journal of the American Chemical Society, 2015, 137, 15672-15675.	6.6	117
150	Pushing the Performance Limit of Sub-100 nm Molybdenum Disulfide Transistors. Nano Letters, 2016, 16, 6337-6342.	4.5	117
151	Omnidirectional enhancement of photocatalytic hydrogen evolution over hierarchical â€œcauline leafâ€• nanoarchitectures. Applied Catalysis B: Environmental, 2016, 186, 88-96.	10.8	117
152	Electronic and Ionic Transport Dynamics in Organolead Halide Perovskites. ACS Nano, 2016, 10, 6933-6941.	7.3	115
153	Highly-anisotropic optical and electrical properties in layered SnSe. Nano Research, 2018, 11, 554-564.	5.8	114
154	Graphene for radio frequency electronics. Materials Today, 2012, 15, 328-338.	8.3	112
155	Ultrafine Graphene Nanomesh with Large On/Off Ratio for Highâ€Performance Flexible Biosensors. Advanced Functional Materials, 2017, 27, 1604096.	7.8	111
156	Holey graphene hydrogel with in-plane pores for high-performance capacitive desalination. Nano Research, 2016, 9, 2458-2466.	5.8	110
157	A Broadband Fluorographene Photodetector. Advanced Materials, 2017, 29, 1700463.	11.1	110
158	Room-Temperature Dual-Wavelength Lasing from Single-Nanoribbon Lateral Heterostructures. Journal of the American Chemical Society, 2012, 134, 12394-12397.	6.6	109
159	High Density Catalytic Hot Spots in Ultrafine Wavy Nanowires. Nano Letters, 2014, 14, 3887-3894.	4.5	107
160	Robust Flexible Pressure Sensors Made from Conductive Micropyramids for Manipulation Tasks. ACS Nano, 2020, 14, 12866-12876.	7.3	106
161	Fewâ€Layer GeAs Fieldâ€Effect Transistors and Infrared Photodetectors. Advanced Materials, 2018, 30, e1705934.	11.1	100
162	Composition-Modulated Two-Dimensional Semiconductor Lateral Heterostructures via Layer-Selected Atomic Substitution. ACS Nano, 2017, 11, 961-967.	7.3	99

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163	Composition modulation in one-dimensional and two-dimensional chalcogenide semiconductor nanostructures. Chemical Society Reviews, 2018, 47, 7504-7521.	18.7	99
164	van der Waals Epitaxial Growth of Atomically Thin 2D Metals on Danglingâ€Bondâ€Free WSe₂ and WS₂. Advanced Functional Materials, 2019, 29, 1806611.	7.8	99
165	Grapheneâ€“dielectric integration for graphene transistors. Materials Science and Engineering Reports, 2010, 70, 354-370.	14.8	97
166	A Solution Processable Highâ€Performance Thermoelectric Copper Selenide Thin Film. Advanced Materials, 2017, 29, 1606662.	11.1	96
167	Chemical vapor deposition growth of single-crystalline cesium lead halide microplatelets and heterostructures for optoelectronic applications. Nano Research, 2017, 10, 1223-1233.	5.8	96
168	Highly stretchable van der Waals thin films for adaptable and breathable electronic membranes. Science, 2022, 375, 852-859.	6.0	96
169	Highly spectral dependent enhancement of upconversion emission with sputtered gold island films. Chemical Communications, 2011, 47, 979-981.	2.2	95
170	In Situ Transmission Electron Microscopy for Energy Materials and Devices. Advanced Materials, 2019, 31, e1900608.	11.1	95
171	Bacteria-Derived Biological Carbon Building Robust Liâ€“S Batteries. Nano Letters, 2019, 19, 4384-4390.	4.5	95
172	Nanocrystalline Silver Particles: Synthesis, Agglomeration, and Sputtering Induced by Electron Beam. Journal of Colloid and Interface Science, 1999, 209, 347-349.	5.0	94
173	PtCuNi Tetrahedra Catalysts with Tailored Surfaces for Efficient Alcohol Oxidation. Nano Letters, 2019, 19, 5431-5436.	4.5	93
174	Layered Intercalation Materials. Advanced Materials, 2021, 33, e2004557.	11.1	92
175	The Effect of Thermal Annealing on Charge Transport in Organolead Halide Perovskite Microplate Fieldâ€Effect Transistors. Advanced Materials, 2017, 29, 1601959.	11.1	91
176	Integration of molecular and enzymatic catalysts on graphene for biomimetic generation of antithrombotic species. Nature Communications, 2014, 5, 3200.	5.8	90
177	A molecular cross-linking approach for hybrid metal oxides. Nature Materials, 2018, 17, 341-348.	13.3	90
178	Top-Gated Chemical Vapor Deposition Grown Graphene Transistors with Current Saturation. Nano Letters, 2011, 11, 2555-2559.	4.5	88
179	Single-layer graphene on Al₂O₃/Si substrate: better contrast and higher performance of graphene transistors. Nanotechnology, 2010, 21, 015705.	1.3	87
180	Wavelength-Converted/Selective Waveguiding Based on Composition-Graded Semiconductor Nanowires. Nano Letters, 2012, 12, 5003-5007.	4.5	87

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181	High-Performance Organic Vertical Thin Film Transistor Using Graphene as a Tunable Contact. ACS Nano, 2015, 9, 11102-11108.	7.3	85
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