

# Zhiyong Fan

## List of Publications by Year in descending order

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226  
papers

23,309  
citations

5876

81  
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147  
g-index

232  
all docs

232  
docs citations

232  
times ranked

26044  
citing authors

#	ARTICLE	IF	CITATIONS
1	Three-dimensional nanopillar-array photovoltaics on low-cost and flexible substrates. <i>Nature Materials</i> , 2009, 8, 648-653.	13.3	997
2	ZnO nanowire field-effect transistor and oxygen sensing property. <i>Applied Physics Letters</i> , 2004, 85, 5923-5925.	1.5	766
3	Recent advances in synthesis, physical properties and applications of conducting polymer nanotubes and nanofibers. <i>Progress in Polymer Science</i> , 2011, 36, 1415-1442.	11.8	763
4	Zinc Oxide Nanostructures: Synthesis and Properties. <i>Journal of Nanoscience and Nanotechnology</i> , 2005, 5, 1561-1573.	0.9	675
5	Wafer-Scale Assembly of Highly Ordered Semiconductor Nanowire Arrays by Contact Printing. <i>Nano Letters</i> , 2008, 8, 20-25.	4.5	542
6	Quasi-one-dimensional metal oxide materials—Synthesis, properties and applications. <i>Materials Science and Engineering Reports</i> , 2006, 52, 49-91.	14.8	526
7	All-printable band-edge modulated ZnO nanowire photodetectors with ultra-high detectivity. <i>Nature Communications</i> , 2014, 5, 4007.	5.8	494
8	Gate-refreshable nanowire chemical sensors. <i>Applied Physics Letters</i> , 2005, 86, 123510.	1.5	412
9	High Mobility MoS <sub>2</sub> Transistor with Low Schottky Barrier Contact by Using Atomic Thick h-BN as a Tunneling Layer. <i>Advanced Materials</i> , 2016, 28, 8302-8308.	11.1	398
10	A biomimetic eye with a hemispherical perovskite nanowire array retina. <i>Nature</i> , 2020, 581, 278-282.	13.7	392
11	Negative magnetoresistance in Dirac semimetal Cd <sub>3</sub> As <sub>2</sub> . <i>Nature Communications</i> , 2016, 7, 10301.	5.8	376
12	Toward the Development of Printable Nanowire Electronics and Sensors. <i>Advanced Materials</i> , 2009, 21, 3730-3743.	11.1	363
13	Diameter-Dependent Electron Mobility of InAs Nanowires. <i>Nano Letters</i> , 2009, 9, 360-365.	4.5	353
14	Silver Nanodisks: Synthesis, Characterization, and Self-Assembly. <i>Journal of Physical Chemistry B</i> , 2002, 106, 10777-10781.	1.2	340
15	ZnO Nanowires Synthesized by Vapor Trapping CVD Method. <i>Chemistry of Materials</i> , 2004, 16, 5133-5137.	3.2	340
16	Highly Efficient Flexible Perovskite Solar Cells with Antireflection and Self-Cleaning Nanostructures. <i>ACS Nano</i> , 2015, 9, 10287-10295.	7.3	335
17	Photoluminescence and polarized photodetection of single ZnO nanowires. <i>Applied Physics Letters</i> , 2004, 85, 6128-6130.	1.5	330
18	Controlled nanoscale doping of semiconductors via molecular monolayers. <i>Nature Materials</i> , 2008, 7, 62-67.	13.3	311

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19	Efficient Photoelectrochemical Water Splitting with Ultrathin films of Hematite on Three-Dimensional Nanophotonic Structures. <i>Nano Letters</i> , 2014, 14, 2123-2129.	4.5	307
20	Recent advances in large-scale assembly of semiconducting inorganic nanowires and nanofibers for electronics, sensors and photovoltaics. <i>Chemical Society Reviews</i> , 2012, 41, 4560.	18.7	282
21	Nanomaterials and nanostructures for efficient light absorption and photovoltaics. <i>Nano Energy</i> , 2012, 1, 57-72.	8.2	270
22	Ordered Arrays of Dual-Diameter Nanopillars for Maximized Optical Absorption. <i>Nano Letters</i> , 2010, 10, 3823-3827.	4.5	269
23	Single InAs Nanowire Room-Temperature Near-Infrared Photodetectors. <i>ACS Nano</i> , 2014, 8, 3628-3635.	7.3	238
24	Large-scale, heterogeneous integration of nanowire arrays for image sensor circuitry. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 11066-11070.	3.3	233
25	Lead-Free Perovskite Nanowire Array Photodetectors with Drastically Improved Stability in Nanoengineering Templates. <i>Nano Letters</i> , 2017, 17, 523-530.	4.5	232
26	3D Arrays of 1024â€œPixel Image Sensors based on Lead Halide Perovskite Nanowires. <i>Advanced Materials</i> , 2016, 28, 9713-9721.	11.1	228
27	Bionic Single-Electrode Electronic Skin Unit Based on Piezoelectric Nanogenerator. <i>ACS Nano</i> , 2018, 12, 8588-8596.	7.3	226
28	High-performance ZnO nanowire field effect transistors. <i>Applied Physics Letters</i> , 2006, 89, 133113.	1.5	223
29	Challenges and prospects of nanopillar-based solar cells. <i>Nano Research</i> , 2009, 2, 829.	5.8	223
30	Synthesis and Enhanced Electrochemical Catalytic Performance of Monolayer WS <sub>2</sub> (1â€œx</i></sub>Se<sub>2</sub> with a Tunable Band Gap. <i>Advanced Materials</i> , 2015, 27, 4732-4738.	11.1	214
31	Recent advances in solar cells based on one-dimensional nanostructure arrays. <i>Nanoscale</i> , 2012, 4, 2783.	2.8	211
32	All Inorganic Cesium Lead Iodide Perovskite Nanowires with Stabilized Cubic Phase at Room Temperature and Nanowire Array-Based Photodetectors. <i>Nano Letters</i> , 2017, 17, 4951-4957.	4.5	210
33	Large-Scale Integration of Semiconductor Nanowires for High-Performance Flexible Electronics. <i>ACS Nano</i> , 2012, 6, 1888-1900.	7.3	202
34	Fabrication of efficient planar perovskite solar cells using a one-step chemical vapor deposition method. <i>Scientific Reports</i> , 2015, 5, 14083.	1.6	200
35	Palladium Diselenide Long-Wavelength Infrared Photodetector with High Sensitivity and Stability. <i>ACS Nano</i> , 2019, 13, 2511-2519.	7.3	198
36	ZnO Quantum Dot Decorated Zn<sub>2</sub>SnO<sub>4</sub> Nanowire Heterojunction Photodetectors with Drastic Performance Enhancement and Flexible Ultraviolet Image Sensors. <i>ACS Nano</i> , 2017, 11, 4067-4076.	7.3	190

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37	A Fully Integrated and Self-Powered Smartwatch for Continuous Sweat Glucose Monitoring. ACS Sensors, 2019, 4, 1925-1933.	4.0	184
38	Efficient metal halide perovskite light-emitting diodes with significantly improved light extraction on nanophotonic substrates. Nature Communications, 2019, 10, 727.	5.8	179
39	Low Temperature Growth of Boron Nitride Nanotubes on Substrates. Nano Letters, 2005, 5, 2528-2532.	4.5	176
40	Low-Cost, Flexible, and Self-Cleaning 3D Nanocone Anti-Reflection Films for High-Efficiency Photovoltaics. Advanced Materials, 2014, 26, 2805-2811.	11.1	170
41	Efficient Photon Capturing with Ordered Three-Dimensional Nanowell Arrays. Nano Letters, 2012, 12, 3682-3689.	4.5	168
42	Integrated Photo-Supercapacitor Based on Bipolar TiO <sub>2</sub> Nanotube Arrays with Selective One-Side Plasma-Assisted Hydrogenation. Advanced Functional Materials, 2014, 24, 1840-1846.	7.8	163
43	A self-powered flexible hybrid piezoelectric-pyroelectric nanogenerator based on non-woven nanofiber membranes. Journal of Materials Chemistry A, 2018, 6, 3500-3509.	5.2	161
44	Printable Fabrication of a Fully Integrated and Self-Powered Sensor System on Plastic Substrates. Advanced Materials, 2019, 31, e1804285.	11.1	148
45	Light Management with Nanostructures for Optoelectronic Devices. Journal of Physical Chemistry Letters, 2014, 5, 1479-1495.	2.1	147
46	High Efficiency and Stable Perovskite Solar Cell Using ZnO/rGO QDs as an Electron Transfer Layer. Advanced Materials Interfaces, 2016, 3, 1500790.	1.9	143
47	Nanopillar photovoltaics: Materials, processes, and devices. Nano Energy, 2012, 1, 132-144.	8.2	142
48	When Nanowires Meet Ultrahigh Ferroelectric Field-High-Performance Full-Depleted Nanowire Photodetectors. Nano Letters, 2016, 16, 2548-2555.	4.5	135
49	Tailoring surface plasmons of high-density gold nanostar assemblies on metal films for surface-enhanced Raman spectroscopy. Nanoscale, 2014, 6, 616-623.	2.8	131
50	Electrical properties of ZnO nanowire field effect transistors characterized with scanning probes. Applied Physics Letters, 2005, 86, 032111.	1.5	129
51	Enhanced supercapacitance in anodic TiO <sub>2</sub> nanotube films by hydrogen plasma treatment. Nanotechnology, 2013, 24, 455401.	1.3	127
52	Printable Fabrication of Nanocoral-Structured Electrodes for High-Performance Flexible and Planar Supercapacitor with Artistic Design. Advanced Materials, 2017, 29, 1701736.	11.1	125
53	Palladium/silicon nanowire Schottky barrier-based hydrogen sensors. Sensors and Actuators B: Chemical, 2010, 145, 232-238.	4.0	124
54	Wearable Sweat Band for Noninvasive Levodopa Monitoring. Nano Letters, 2019, 19, 6346-6351.	4.5	121

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55	A calibration-free self-powered sensor for vital sign monitoring and finger tap communication based on wearable triboelectric nanogenerator. <i>Nano Energy</i> , 2019, 58, 536-542.	8.2	121
56	Porous Enzymatic Membrane for Nanotextured Glucose Sweat Sensors with High Stability toward Reliable Noninvasive Health Monitoring. <i>Advanced Functional Materials</i> , 2019, 29, 1902521.	7.8	120
57	$\text{In}^{2+}$ -Ga $_{2}\text{O}_3$ nanowires: Synthesis, characterization, and p-channel field-effect transistor. <i>Applied Physics Letters</i> , 2005, 87, 222102.	1.5	118
58	Large scale, highly ordered assembly of nanowire parallel arrays by differential roll printing. <i>Applied Physics Letters</i> , 2007, 91, .	1.5	117
59	Transferable self-welding silver nanowire network as high performance transparent flexible electrode. <i>Nanotechnology</i> , 2013, 24, 335202.	1.3	116
60	Large-Grain Tin-Rich Perovskite Films for Efficient Solar Cells via Metal Alloying Technique. <i>Advanced Materials</i> , 2018, 30, 1705998.	11.1	116
61	Controlled p- and n-type doping of $\text{Fe}_2\text{O}_3$ nanobelt field effect transistors. <i>Applied Physics Letters</i> , 2005, 87, 013113.	1.5	114
62	Electrical and photoconductive properties of vertical ZnO nanowires in high density arrays. <i>Applied Physics Letters</i> , 2006, 89, 213110.	1.5	114
63	Efficient Light Absorption with Integrated Nanopillar/Nanowell Arrays for Three-Dimensional Thin-Film Photovoltaic Applications. <i>ACS Nano</i> , 2013, 7, 2725-2732.	7.3	106
64	Flexible photovoltaic technologies. <i>Journal of Materials Chemistry C</i> , 2014, 2, 1233.	2.7	106
65	Parallel Array InAs Nanowire Transistors for Mechanically Bendable, Ultrahigh Frequency Electronics. <i>ACS Nano</i> , 2010, 4, 5855-5860.	7.3	105
66	Self-Gating Effect Induced Large Performance Improvement of ZnO Nanocomb Gas Sensors. <i>ACS Nano</i> , 2013, 7, 9318-9324.	7.3	104
67	Transparent, High-Performance Thin-Film Transistors with an InGaZnO/Aligned $\text{SnO}_2$ Nanowire Composite and their Application in Photodetectors. <i>Advanced Materials</i> , 2014, 26, 7399-7404.	11.1	104
68	A three-dimensional hexagonal fluorine-doped tin oxide nanocone array: a superior light harvesting electrode for high performance photoelectrochemical water splitting. <i>Energy and Environmental Science</i> , 2014, 7, 3651-3658.	15.6	103
69	Current progress in developing metal oxide nanoarrays-based photoanodes for photoelectrochemical water splitting. <i>Science Bulletin</i> , 2019, 64, 1348-1380.	4.3	101
70	Efficient, flexible and mechanically robust perovskite solar cells on inverted nanocone plastic substrates. <i>Nanoscale</i> , 2016, 8, 4276-4283.	2.8	99
71	Critical kinetic control of non-stoichiometric intermediate phase transformation for efficient perovskite solar cells. <i>Nanoscale</i> , 2016, 8, 12892-12899.	2.8	98
72	Stacking-mode confined growth of 2H-MoTe $_2$ /MoS $_2$ bilayer heterostructures for UV-vis-IR photodetectors. <i>Nano Energy</i> , 2018, 49, 200-208.	8.2	96

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73	Synthesis of Magnesium Borate (Mg <sub>2</sub> B <sub>2</sub> O <sub>5</sub> ) Nanowires by Chemical Vapor Deposition Method. <i>Chemistry of Materials</i> , 2004, 16, 2512-2514.	3.2	92
74	Optical Properties of Metal-Molybdenum Disulfide Hybrid Nanosheets and Their Application for Enhanced Photocatalytic Hydrogen Evolution. <i>ACS Nano</i> , 2014, 8, 6979-6985.	7.3	92
75	Wireless Self-Powered High-Performance Integrated Nanostructured-Gas-Sensor Network for Future Smart Homes. <i>ACS Nano</i> , 2021, 15, 7659-7667.	7.3	90
76	Designing nanobowl arrays of mesoporous TiO <sub>2</sub> as an alternative electron transporting layer for carbon cathode-based perovskite solar cells. <i>Nanoscale</i> , 2016, 8, 6393-6402.	2.8	89
77	Ultra-Low-Power Smart Electronic Nose System Based on Three-Dimensional Tin Oxide Nanotube Arrays. <i>ACS Nano</i> , 2018, 12, 6079-6088.	7.3	88
78	Flexible Quasi-2D Perovskite/IGZO Phototransistors for Ultrasensitive and Broadband Photodetection. <i>Advanced Materials</i> , 2020, 32, e1907527.	11.1	88
79	Ferroelectric Localized Field-Enhanced ZnO Nanosheet Ultraviolet Photodetector with High Sensitivity and Low Dark Current. <i>Small</i> , 2018, 14, e1800492.	5.2	85
80	Rational Design of Amorphous Indium Zinc Oxide/Carbon Nanotube Hybrid Film for Unique Performance Transistors. <i>Nano Letters</i> , 2012, 12, 3596-3601.	4.5	83
81	Integrated Flexible, Waterproof, Transparent, and Self-Powered Tactile Sensing Panel. <i>ACS Nano</i> , 2016, 10, 7696-7704.	7.3	83
82	Semiconductor Nanocrystals as Luminescent Down-Shifting Layers To Enhance the Efficiency of Thin-Film CdTe/CdS and Crystalline Si Solar Cells. <i>Journal of Physical Chemistry C</i> , 2014, 118, 16393-16400.	1.5	82
83	High-Performance Hybrid Phenyl-C <sub>61</sub> -Butyric Acid Methyl Ester/Cd <sub>3</sub> P <sub>2</sub> Nanowire Ultraviolet-Visible-Near Infrared Photodetectors. <i>ACS Nano</i> , 2014, 8, 787-796.	7.3	82
84	A fast-response/recovery ZnO hierarchical nanostructure based gas sensor with ultra-high room-temperature output response. <i>Sensors and Actuators B: Chemical</i> , 2015, 206, 764-771.	4.0	82
85	Chemical sensing with ZnO nanowire field-effect transistor. <i>IEEE Nanotechnology Magazine</i> , 2006, 5, 393-396.	1.1	80
86	Inverted Nanocone-Based Thin Film Photovoltaics with Omnidirectionally Enhanced Performance. <i>ACS Nano</i> , 2014, 8, 6484-6490.	7.3	80
87	Design constraints and guidelines for CdS/CdTe nanopillar based photovoltaics. <i>Applied Physics Letters</i> , 2010, 96, .	1.5	78
88	Performance enhancement of thin-film amorphous silicon solar cells with low cost nanodent plasmonic substrates. <i>Energy and Environmental Science</i> , 2013, 6, 2965.	15.6	77
89	Strong Light Absorption of Self-Organized 3-D Nanospire Arrays for Photovoltaic Applications. <i>ACS Nano</i> , 2011, 5, 9291-9298.	7.3	76
90	Rational Design of ZnO:H/ZnO Bilayer Structure for High-Performance Thin-Film Transistors. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 7862-7868.	4.0	76

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91	Efficient photon management with nanostructures for photovoltaics. <i>Nanoscale</i> , 2013, 5, 6627.	2.8	75
92	Perovskite/organic-semiconductor heterojunctions for ultrasensitive photodetection. <i>Light: Science and Applications</i> , 2017, 6, e17090-e17090.	7.7	73
93	Single-Crystal Atomic-Layered Molybdenum Disulfide Nanobelts with High Surface Activity. <i>ACS Nano</i> , 2015, 9, 6478-6483.	7.3	72
94	Roll-to-roll fabrication of large scale and regular arrays of three-dimensional nanospikes for high efficiency and flexible photovoltaics. <i>Scientific Reports</i> , 2014, 4, 4243.	1.6	71
95	Synthesis, contact printing, and device characterization of Ni-catalyzed, crystalline InAs nanowires. <i>Nano Research</i> , 2008, 1, 32-39.	5.8	70
96	Monolayer Resist for Patterned Contact Printing of Aligned Nanowire Arrays. <i>Journal of the American Chemical Society</i> , 2009, 131, 2102-2103.	6.6	70
97	Wireless Single-Electrode Self-Powered Piezoelectric Sensor for Monitoring. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 8288-8295.	4.0	70
98	A Wearable Nutrition Tracker. <i>Advanced Materials</i> , 2021, 33, e2006444.	11.1	70
99	Black Ge Based on Crystalline/Amorphous Core/Shell Nanoneedle Arrays. <i>Nano Letters</i> , 2010, 10, 520-523.	4.5	68
100	Fabrication of $\text{CuFe}_2\text{O}_4/\text{Fe}_2\text{O}_3$ Composite Thin Films on FTO Coated Glass and 3-D Nanospine Structures for Efficient Photoelectrochemical Water Splitting. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 35315-35322.	4.0	67
101	Highly efficient and stable inverted perovskite solar cells using down-shifting quantum dots as a light management layer and moisture-assisted film growth. <i>Journal of Materials Chemistry A</i> , 2019, 7, 14753-14760.	5.2	67
102	Increasing Photoluminescence Quantum Yield by Nanophotonic Design of Quantum-Confined Halide Perovskite Nanowire Arrays. <i>Nano Letters</i> , 2019, 19, 2850-2857.	4.5	67
103	High performance thin film solar cells on plastic substrates with nanostructure-enhanced flexibility. <i>Nano Energy</i> , 2016, 22, 539-547.	8.2	66
104	Broadband omnidirectional light detection in flexible and hierarchical ZnO/Si heterojunction photodiodes. <i>Nano Research</i> , 2017, 10, 22-36.	5.8	66
105	Single electrode piezoelectric nanogenerator for intelligent passive daytime radiative cooling. <i>Nano Energy</i> , 2021, 82, 105695.	8.2	64
106	Scalable Integration of Indium Zinc Oxide/Photosensitive Nanowire Composite Thin Film Transistors for Transparent Multicolor Photodetectors Array. <i>Advanced Materials</i> , 2014, 26, 2919-2924.	11.1	62
107	Formation and Characterization of $\text{Ni}_x\text{InAs}/\text{InAs}$ Nanowire Heterostructures by Solid Source Reaction. <i>Nano Letters</i> , 2008, 8, 4528-4533.	4.5	61
108	Significantly improved black phase stability of $\text{FAPbI}_3$ nanowires via spatially confined vapor phase growth in nanoporous templates. <i>Nanoscale</i> , 2018, 10, 15164-15172.	2.8	61

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109	Recent progress on printable power supply devices and systems with nanomaterials. Nano Research, 2018, 11, 3065-3087.	5.8	60
110	Constructing optimized wire electrodes for fiber supercapacitors. Nano Energy, 2014, 10, 99-107.	8.2	59
111	Smart gas sensor arrays powered by artificial intelligence. Journal of Semiconductors, 2019, 40, 111601.	2.0	59
112	Next-generation machine vision systems incorporating two-dimensional materials: Progress and perspectives. Informa Mater, 2022, 4, .	8.5	58
113	Patterned p-Doping of InAs Nanowires by Gas-Phase Surface Diffusion of Zn. Nano Letters, 2010, 10, 509-513.	4.5	57
114	Rational geometrical design of multi-diameter nanopillars for efficient light harvesting. Nano Energy, 2013, 2, 951-957.	8.2	57
115	Three-dimensional metal/oxide nanocone arrays for high-performance electrochemical pseudocapacitors. Nanoscale, 2014, 6, 3626-3631.	2.8	57
116	Dual-Layer Nanostructured Flexible Thin-Film Amorphous Silicon Solar Cells with Enhanced Light Harvesting and Photoelectric Conversion Efficiency. ACS Applied Materials & Interfaces, 2016, 8, 10929-10936.	4.0	57
117	Room-Temperature Sputtered SnO <sub>2</sub> as Robust Electron Transport Layer for Air-Stable and Efficient Perovskite Solar Cells on Rigid and Flexible Substrates. Scientific Reports, 2019, 9, 6963.	1.6	57
118	Three-Dimensional Perovskite Nanophotonic Wire Array-Based Light-Emitting Diodes with Significantly Improved Efficiency and Stability. ACS Nano, 2020, 14, 1577-1585.	7.3	57
119	Particle-in-Film Plasmons on Periodic Silver Film over Nanosphere (AgFON): A Hybrid Plasmonic Nanoarchitecture for Surface-Enhanced Raman Spectroscopy. ACS Applied Materials & Interfaces, 2016, 8, 634-642.	4.0	56
120	Large-scale planar and spherical light-emitting diodes based on arrays of perovskite quantum wires. Nature Photonics, 2022, 16, 284-290.	15.6	56
121	Structures and Electrical Properties of Ag-Tetracyanoquinodimethane Organometallic Nanowires. IEEE Nanotechnology Magazine, 2005, 4, 238-241.	1.1	53
122	Highly flexible and transferable supercapacitors with ordered three-dimensional MnO <sub>2</sub> /Au/MnO <sub>2</sub> nanospire arrays. Journal of Materials Chemistry A, 2015, 3, 10199-10204.	5.2	53
123	Efficient and Flexible Thin Film Amorphous Silicon Solar Cells on Nanotextured Polymer Substrate Using Sol-gel Based Nanoimprinting Method. Advanced Functional Materials, 2017, 27, 1604720.	7.8	53
124	A non-catalytic vapor growth regime for organohalide perovskite nanowires using anodic aluminum oxide templates. Nanoscale, 2017, 9, 5828-5834.	2.8	53
125	Down-Scalable and Ultra-fast Memristors with Ultra-high Density Three-Dimensional Arrays of Perovskite Quantum Wires. Nano Letters, 2021, 21, 5036-5044.	4.5	53
126	Light Out-Coupling Management in Perovskite LEDs—What Can We Learn from the Past?. Advanced Functional Materials, 2020, 30, 2002570.	7.8	52



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127	Fabrication of one dimensional superfine polymer fibers by double-spinning. Journal of Materials Chemistry, 2011, 21, 13159.	6.7	51
128	Quasi Core/Shell Lead Sulfide/Graphene Quantum Dots for Bulk Heterojunction Solar Cells. Journal of Physical Chemistry C, 2015, 119, 18886-18895.	1.5	50
129	Spray Pyrolysis Deposition of ZnFe <sub>2</sub> O <sub>4</sub> /Fe <sub>2</sub> O <sub>3</sub> Composite Thin Films on Hierarchical 3-D Nanospikes for Efficient Photoelectrochemical Oxidation of Water. Journal of Physical Chemistry C, 2017, 121, 18360-18368.	1.5	48
130	Hybrid WSe <sub>2</sub> /In <sub>2</sub> O <sub>3</sub> Phototransistor with Ultrahigh Detectivity by Efficient Suppression of Dark Currents. ACS Applied Materials & Interfaces, 2017, 9, 34489-34496.	4.0	47
131	Anisotropic Triboelectric Nanogenerator Based on Ordered Electrospinning. ACS Applied Materials & Interfaces, 2020, 12, 46205-46211.	4.0	47
132	Progress and Design Concerns of Nanostructured Solar Energy Harvesting Devices. Small, 2016, 12, 2536-2548.	5.2	46
133	Hybrid zinc oxide/graphene electrodes for depleted heterojunction colloidal quantum-dot solar cells. Physical Chemistry Chemical Physics, 2015, 17, 24412-24419.	1.3	45
134	Fast Single-Cell Patterning for Study of Drug-Induced Phenotypic Alterations of HeLa Cells Using Time-of-Flight Secondary Ion Mass Spectrometry. Analytical Chemistry, 2016, 88, 12196-12203.	3.2	44
135	Large scale, flexible and three-dimensional quasi-ordered aluminum nanospikes for thin film photovoltaics with omnidirectional light trapping and optimized electrical design. Energy and Environmental Science, 2014, 7, 3611-3616.	15.6	43
136	Broad-band three dimensional nanocave ZnO thin film photodetectors enhanced by Au surface plasmon resonance. Nanoscale, 2016, 8, 8924-8930.	2.8	43
137	Perovskite Nanowire Extrusion. Nano Letters, 2017, 17, 6557-6563.	4.5	42
138	Chemical processing of three-dimensional graphene networks on transparent conducting electrodes for depleted-heterojunction quantum dot solar cells. Chemical Communications, 2016, 52, 323-326.	2.2	40
139	Scalable All-Evaporation Fabrication of Efficient Light-Emitting Diodes with Hybrid 2D-3D Perovskite Nanostructures. Advanced Functional Materials, 2020, 30, 2002913.	7.8	40
140	Self-powered and wearable biosensors for healthcare. Materials Today Energy, 2022, 23, 100900.	2.5	39
141	Phosphine Oxide Monolayers on SiO <sub>2</sub> Surfaces. Angewandte Chemie - International Edition, 2008, 47, 4440-4442.	7.2	37
142	Solar cells on curtains. Nature Materials, 2008, 7, 835-836.	13.3	37
143	Preparation and electrical/optical bistable property of potassium tetracyanoquinodimethane thin films. Thin Solid Films, 2003, 436, 259-263.	0.8	36
144	A non-toxic triboelectric nanogenerator for baby care applications. Journal of Materials Chemistry A, 2020, 8, 22745-22753.	5.2	36

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145	Physicochemical properties of hybrid graphene-lead sulfide quantum dots prepared by supercritical ethanol. <i>Journal of Nanoparticle Research</i> , 2015, 17, 1.	0.8	35
146	Morphology Defects Guided Pore Initiation during the Formation of Porous Anodic Alumina. <i>ACS Applied Materials &amp; Interfaces</i> , 2014, 6, 2285-2291.	4.0	34
147	A Highly Controllable Electrochemical Anodization Process to Fabricate Porous Anodic Aluminum Oxide Membranes. <i>Nanoscale Research Letters</i> , 2015, 10, 495.	3.1	34
148	Recent Progress on Interface Engineering for High-Performance, Stable Perovskites Solar Cells. <i>Advanced Materials Interfaces</i> , 2020, 7, 2000118.	1.9	34
149	High-quality organohalide lead perovskite films fabricated by layer-by-layer alternating vacuum deposition for high efficiency photovoltaics. <i>Materials Chemistry Frontiers</i> , 2017, 1, 1520-1525.	3.2	33
150	Polarization-Resolved Broadband MoS <sub>2</sub> /Black Phosphorus/MoS <sub>2</sub> Optoelectronic Memory with Ultralong Retention Time and Ultrahigh Switching Ratio. <i>Advanced Functional Materials</i> , 2021, 31, 2100781.	7.8	33
151	Halide-exchanged perovskite photodetectors for wearable visible-blind ultraviolet monitoring. <i>Nano Energy</i> , 2022, 100, 107516.	8.2	33
152	Performance optimization of flexible a-Si:H solar cells with nanotextured plasmonic substrate by tuning the thickness of oxide spacer layer. <i>Nano Energy</i> , 2015, 11, 78-87.	8.2	31
153	Nanotextured Spikes of Fe <sub>2</sub> O <sub>3</sub> /NiFe <sub>2</sub> O <sub>4</sub> Composite for Efficient Photoelectrochemical Oxidation of Water. <i>Langmuir</i> , 2018, 34, 3555-3564.	1.6	31
154	Efficient Mixed-Cation Mixed-Halide Perovskite Solar Cells by All-Vacuum Sequential Deposition Using Metal Oxide Electron Transport Layer. <i>Solar Rrl</i> , 2019, 3, 1900050.	3.1	31
155	Scalable Indium Phosphide Thin-Film Nanophotonics Platform for Photovoltaic and Photoelectrochemical Devices. <i>ACS Nano</i> , 2017, 11, 5113-5119.	7.3	30
156	Multifunctional Optoelectronic Device Based on an Asymmetric Active Layer Structure. <i>Advanced Functional Materials</i> , 2019, 29, 1807894.	7.8	30
157	Shape-Controlled Synthesis of Single-Crystalline Nanopillar Arrays by Template-Assisted Vapor-Liquid-Solid Process. <i>Journal of the American Chemical Society</i> , 2010, 132, 13972-13974.	6.6	29
158	Three-dimensional perovskite nanowire array-based ultrafast resistive RAM with ultralong data retention. <i>Science Advances</i> , 2021, 7, eabg3788.	4.7	29
159	Microheater Integrated Nanotube Array Gas Sensor for Parts-Per-Trillion Level Gas Detection and Single Sensor-Based Gas Discrimination. <i>ACS Nano</i> , 2022, 16, 10968-10978.	7.3	29
160	Moth eye-inspired highly efficient, robust, and neutral-colored semitransparent perovskite solar cells for building-integrated photovoltaics. <i>EcoMat</i> , 2021, 3, e12117.	6.8	28
161	Anisotropic nanogenerator for anticounterfeiting and information encrypted transmission. <i>Nano Energy</i> , 2020, 71, 104572.	8.2	27
162	Programmable nanoengineering templates for fabrication of three-dimensional nanophotonic structures. <i>Nanoscale Research Letters</i> , 2013, 8, 268.	3.1	26

#	ARTICLE	IF	CITATIONS
163	Energy Regulation in White-Light-Emitting Diodes. ACS Energy Letters, 2022, 7, 2173-2188.	8.8	26
164	Influence of hydration water on CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite films prepared through one-step procedure. Optics Express, 2016, 24, A1431.	1.7	25
165	Coupled optical and electrical modeling of thin-film amorphous silicon solar cells based on nanodent plasmonic substrates. Nano Energy, 2014, 8, 141-149.	8.2	24
166	Low-cost, flexible, disinfectant-free and regular-array three-dimensional nanopyramid antibacterial films for clinical applications. Nanoscale, 2018, 10, 10436-10442.	2.8	24
167	Substitutionally Doped MoSe <sub>2</sub> for High-Performance Electronics and Optoelectronics. Small, 2021, 17, e2102855.	5.2	24
168	Nanoscale Structural Engineering via Phase Segregation: Au-Ge System. Nano Letters, 2010, 10, 393-397.	4.5	23
169	Three-dimensional nanotube electrode arrays for hierarchical tubular structured high-performance pseudocapacitors. Nanoscale, 2016, 8, 13280-13287.	2.8	23
170	Sliding non-contact inductive nanogenerator. Nano Energy, 2019, 63, 103878.	8.2	23
171	Cost-Effective and Semi-Transparent PbS Quantum Dot Solar Cells Using Copper Electrodes. ACS Applied Materials & Interfaces, 2020, 12, 818-825.	4.0	23
172	Organic Halides and Nanocone Plastic Structures Enhance the Energy Conversion Efficiency and Self-Cleaning Ability of Colloidal Quantum Dot Photovoltaic Devices. Journal of Physical Chemistry C, 2017, 121, 9757-9765.	1.5	22
173	Facile and Efficient Atomic Hydrogenation Enabled Black TiO <sub>2</sub> with Enhanced Photoelectrochemical Activity via a Favorably Low-Energy Barrier Pathway. Advanced Energy Materials, 2019, 9, 1900725.	10.2	21
174	High performance charge-transfer induced homojunction photodetector based on ultrathin ZnO nanosheet. Applied Physics Letters, 2019, 114, .	1.5	21
175	A nanostructured anti-biofilm surface widens the efficacy against spindle-shaped and chain-forming rod-like bacteria. Nanoscale, 2020, 12, 18864-18874.	2.8	21
176	Optically tunable ultra-fast resistive switching in lead-free methyl-ammonium bismuth iodide perovskite films. Nanoscale, 2021, 13, 6184-6191.	2.8	21
177	A Humidity-Insensitive NO <sub>2</sub> Gas Sensor With High Selectivity. IEEE Electron Device Letters, 2016, 37, 92-95.	2.2	20
178	Vapor phase fabrication of three-dimensional arrayed BiI <sub>3</sub> nanosheets for cost-effective solar cells. Information Materials, 2020, 2, 975-983.	8.5	20
179	Strongly Quantum-Confined Perovskite Nanowire Arrays for Color-Tunable Blue-Light-Emitting Diodes. ACS Nano, 2022, 16, 8388-8398.	7.3	19
180	Fabrication of stable organometallic halide perovskite NWs based optoelectronic devices. Science Bulletin, 2017, 62, 645-647.	4.3	18

#	ARTICLE	IF	CITATIONS
181	Vertical Heterogeneous Integration of Metal Halide Perovskite Quantum-Wires/Nanowires for Flexible Narrowband Photodetectors. <i>Nano Letters</i> , 2022, 22, 3062-3070.	4.5	18
182	Performance improvement of solution-processed CdS/CdTe solar cells with a thin compact TiO <sub>2</sub> buffer layer. <i>Science Bulletin</i> , 2016, 61, 86-91.	4.3	17
183	Enhanced Charge Collection for Splitting of Water Enabled by an Engineered Three-Dimensional Nanospine Array. <i>Journal of Physical Chemistry C</i> , 2014, 118, 22465-22472.	1.5	16
184	Enhanced Photoelectrochemical Behavior of H-TiO <sub>2</sub> Nanorods Hydrogenated by Controlled and Local Rapid Thermal Annealing. <i>Nanoscale Research Letters</i> , 2017, 12, 336.	3.1	16
185	Recent Progress on Semi-transparent Perovskite Solar Cell for Building-integrated Photovoltaics. <i>Chemical Research in Chinese Universities</i> , 2020, 36, 366-376.	1.3	16
186	Substantial Improvement of Operating Stability by Strengthening Metal-Halogen Bonds in Halide Perovskites. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	16
187	A-Site Cation Effect on Growth Thermodynamics and Photoconductive Properties in Ultrapure Lead Iodine Perovskite Monocrystalline Wires. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 25985-25994.	4.0	14
188	Nanobowl optical concentrator for efficient light trapping and high-performance organic photovoltaics. <i>Science Bulletin</i> , 2015, 60, 109-115.	4.3	13
189	Electric field enhanced 3D scalable low-voltage nano-spike electroporation system. <i>Sensors and Actuators A: Physical</i> , 2017, 255, 10-20.	2.0	13
190	Schottky-Contacted WSe <sub>2</sub> Hot-Electron Photodetectors with Fast Response and High Sensitivity. <i>ACS Photonics</i> , 2022, 9, 132-137.	3.2	13
191	Accelerating ion diffusion with unique three-dimensionally interconnected nanopores for self-membrane high-performance pseudocapacitors. <i>Nanoscale</i> , 2017, 9, 18311-18317.	2.8	12
192	Breath Level Acetone Discrimination Through Temperature Modulation of a Hierarchical ZnO Gas Sensor. , 2017, 1, 1-4.		12
193	High output achieved by sliding electrification of an electrospun nano-grating. <i>Nanoscale</i> , 2021, 13, 17417-17427.	2.8	12
194	Self-assembly of one-dimensional nanomaterials for cost-effective photovoltaics. <i>International Journal of Nanoparticles</i> , 2011, 4, 164.	0.1	11
195	High performance amorphous ZnMgO/carbon nanotube composite thin-film transistors with a tunable threshold voltage. <i>Nanoscale</i> , 2013, 5, 2830.	2.8	10
196	A biomimetic approach to evaluate mineralization of bioactive glass-loaded resin composites. <i>Journal of Prosthodontic Research</i> , 2022, 66, 572-581.	1.1	10
197	In situ doping control and electrical transport investigation of single and arrayed CdS nanopillars. <i>Nanoscale</i> , 2013, 5, 7213.	2.8	9
198	Preface to the Special Issue on Flexible Energy Devices. <i>Journal of Semiconductors</i> , 2021, 42, 100101.	2.0	9

#	ARTICLE	IF	CITATIONS
199	Large-scale, adhesive-free and omnidirectional 3D nanocone anti-reflection films for high performance photovoltaics. <i>Journal of Semiconductors</i> , 2019, 40, 042601.	2.0	8
200	Silver-tetracyanoquinodimethane (Ag-TCNQ) nanostructures and nanodevice. , 0, , .		7
201	Supercapacitors: Integrated Photo-supercapacitor Based on Bi-polar TiO <sub>2</sub> Nanotube Arrays with Selective One-Side Plasma-Assisted Hydrogenation ( <i>Adv. Funct. Mater.</i> 13/2014). <i>Advanced Functional Materials</i> , 2014, 24, 1814-1814.	7.8	7
202	Low-Cost Energy-Efficient 3-D Nano-Spikes-Based Electric Cell Lysis Chips. <i>Journal of Microelectromechanical Systems</i> , 2017, 26, 910-920.	1.7	7
203	Surface recombination velocity of methylammonium lead bromide nanowires in anodic aluminium oxide templates. <i>Molecular Systems Design and Engineering</i> , 2018, 3, 723-728.	1.7	7
204	Recent progress of efficient flexible solar cells based on nanostructures. <i>Journal of Semiconductors</i> , 2021, 42, 101604.	2.0	7
205	Monolayer WS <sub>2</sub> Lateral Homosuperlattices with Two-dimensional Periodic Localized Photoluminescence. <i>ACS Nano</i> , 2022, 16, 597-603.	7.3	7
206	MoS <sub>2</sub> Homojunctions Transistors Enabled by Dimension Tailoring Strategy. <i>Advanced Electronic Materials</i> , 2021, 7, 2100703.	2.6	5
207	Image processing with a multi-level ultra-fast three dimensionally integrated perovskite nanowire array. <i>Nanoscale Horizons</i> , 2022, 7, 759-769.	4.1	5
208	Robust Lead-Free Perovskite Nanowire Array-Based Artificial Synapses Exemplifying Gestalt Principle of Closure via a Letter Recognition Scheme. <i>Advanced Intelligent Systems</i> , 2022, 4, .	3.3	5
209	A hierarchical ZnO nanostructure gas sensor for human breath-level acetone detection. , 2016, , .		4
210	Chemical Sensing with ZnO Nanowire. , 0, , .		3
211	Chemical sensing with ZnO nanowire. , 0, , .		3
212	Transparent megahertz circuits from solution-processed composite thin films. <i>Nanoscale</i> , 2016, 8, 7978-7983.	2.8	3
213	Multifunctional Optoelectronic Devices: Multifunctional Optoelectronic Device Based on an Asymmetric Active Layer Structure ( <i>Adv. Funct. Mater.</i> 17/2019). <i>Advanced Functional Materials</i> , 2019, 29, 1970114.	7.8	3
214	High transparency low resistance oxidized Ni/Au-ZnO contacts to p-GaN for high performance LED applications. <i>Physica Status Solidi A</i> , 2004, 201, 2827-2830.	1.7	2
215	Metal Oxide Nanowires: Fundamentals and Sensor Applications. , 2013, , 287-319.		2
216	Solar Energy: Progress and Design Concerns of Nanostructured Solar Energy Harvesting Devices ( <i>Small</i> 19/2016). <i>Small</i> , 2016, 12, 2530-2530.	5.2	2

#	ARTICLE	IF	CITATIONS
217	Design of a Horizontally Aligned Perovskite Nanowire LED With Improved Light Extraction. IEEE Journal of the Electron Devices Society, 2021, 9, 1215-1221.	1.2	2
218	Chemical sensing with ZnO nanowire FETs. , 2005, , .		1
219	Simulation study of open circuit voltage loss at Schottky top contact in ultra-shallow junction silicon solar cells. , 2011, , .		1
220	A Design of Horizontal Perovskite Nanowire LED for Better Light Extraction. , 2021, , .		1
221	Programmable Nanoarchitectonics of Pore Array for Electronic-Nose-Based Early Disease Diagnose. IEEE Transactions on Electron Devices, 2022, 69, 4514-4520.	1.6	1
222	Heterogeneous integration of 1-D nanomaterials for electronic circuitry. , 2010, , .		0
223	Fabrication of a low power CMOS-compatible ZnO nanocomb-based gas sensor. , 2012, , .		0
224	FLEXIBLE SOLAR CELLS. , 2016, , 365-409.		0
225	Solar Cells: Efficient and Flexible Thin Film Amorphous Silicon Solar Cells on Nanotextured Polymer Substrate Using Sol-gel Based Nanoimprinting Method (Adv. Funct. Mater. 13/2017). Advanced Functional Materials, 2017, 27, .	7.8	0
226	Opto-Electric resistive switching and synaptic emulation in lead-free perovskite film. , 2021, , .		0