

Cao-Feng Pan

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/635399/publications.pdf>

Version: 2024-02-01

249
papers

23,063
citations

5876

81
h-index

9839

141
g-index

254
all docs

254
docs citations

254
times ranked

17807
citing authors

#	ARTICLE	IF	CITATIONS
1	Skin-inspired highly stretchable and conformable matrix networks for multifunctional sensing. Nature Communications, 2018, 9, 244.	5.8	1,034
2	Toward Large-Scale Energy Harvesting by a Nanoparticle-Enhanced Triboelectric Nanogenerator. Nano Letters, 2013, 13, 847-853.	4.5	979
3	Triboelectric-Generator-Driven Pulse Electrodeposition for Micropatterning. Nano Letters, 2012, 12, 4960-4965.	4.5	874
4	Recent Progress in Electronic Skin. Advanced Science, 2015, 2, 1500169.	5.6	789
5	High-resolution electroluminescent imaging of pressure distribution using a piezoelectric nanowire LED array. Nature Photonics, 2013, 7, 752-758.	15.6	641
6	Dynamic Pressure Mapping of Personalized Handwriting by a Flexible Sensor Matrix Based on the Mechanoluminescence Process. Advanced Materials, 2015, 27, 2324-2331.	11.1	468
7	Linear-Grating Triboelectric Generator Based on Sliding Electrification. Nano Letters, 2013, 13, 2282-2289.	4.5	442
8	Progress in nanogenerators for portable electronics. Materials Today, 2012, 15, 532-543.	8.3	417
9	Rectangular Bunched Rutile TiO ₂ Nanorod Arrays Grown on Carbon Fiber for Dye-Sensitized Solar Cells. Journal of the American Chemical Society, 2012, 134, 4437-4441.	6.6	349
10	Self-Powered High-Resolution and Pressure-Sensitive Triboelectric Sensor Matrix for Real-Time Tactile Mapping. Advanced Materials, 2016, 28, 2896-2903.	11.1	344
11	Lightweight, Superelastic, and Hydrophobic Polyimide Nanofiber /MXene Composite Aerogel for Wearable Piezoresistive Sensor and Oil/Water Separation Applications. Advanced Functional Materials, 2021, 31, 2008006.	7.8	340
12	A Highly Stretchable Transparent Self-Powered Triboelectric Tactile Sensor with Metallized Nanofibers for Wearable Electronics. Advanced Materials, 2018, 30, e1706738.	11.1	315
13	Transparent and stretchable triboelectric nanogenerator for self-powered tactile sensing. Nano Energy, 2019, 59, 302-310.	8.2	285
14	Light-induced pyroelectric effect as an effective approach for ultrafast ultraviolet nanosensing. Nature Communications, 2015, 6, 8401.	5.8	261
15	Stretchable conductive nonwoven fabrics with self-cleaning capability for tunable wearable strain sensor. Nano Energy, 2019, 66, 104143.	8.2	249
16	Flexible, Stretchable and Wearable Multifunctional Sensor Array as Artificial Electronic Skin for Static and Dynamic Strain Mapping. Advanced Electronic Materials, 2015, 1, 1500142.	2.6	226
17	A Single ZnO Nanofiber-Based Highly Sensitive Amperometric Glucose Biosensor. Journal of Physical Chemistry C, 2010, 114, 9308-9313.	1.5	213
18	Piezotronics and Piezo-phototronics of Third Generation Semiconductor Nanowires. Chemical Reviews, 2019, 119, 9303-9359.	23.0	213

#	ARTICLE	IF	CITATIONS
19	In Situ Quantitative Study of Nanoscale Triboelectrification and Patterning. <i>Nano Letters</i> , 2013, 13, 2771-2776.	4.5	210
20	Significant Enhancement of Triboelectric Charge Density by Fluorinated Surface Modification in Nanoscale for Converting Mechanical Energy. <i>Advanced Functional Materials</i> , 2015, 25, 5691-5697.	7.8	210
21	Bioinspired Self-Healing Human-Machine Interactive Touch Pad with Pressure-Sensitive Adhesiveness on Targeted Substrates. <i>Advanced Materials</i> , 2020, 32, e2004290.	11.1	210
22	Largely Enhanced Efficiency in ZnO Nanowire/p-Polymer Hybridized Inorganic/Organic Ultraviolet Light-Emitting Diode by Piezo-Phototronic Effect. <i>Nano Letters</i> , 2013, 13, 607-613.	4.5	209
23	Flexible and Controllable Piezo-Phototronic Pressure Mapping Sensor Matrix by ZnO NW/p-Polymer LED Array. <i>Advanced Functional Materials</i> , 2015, 25, 2884-2891.	7.8	200
24	A Universal high accuracy wearable pulse monitoring system via high sensitivity and large linearity graphene pressure sensor. <i>Nano Energy</i> , 2019, 59, 422-433.	8.2	198
25	Recent progress in flexible pressure sensor arrays: from design to applications. <i>Journal of Materials Chemistry C</i> , 2018, 6, 11878-11892.	2.7	194
26	Networks of High Performance Triboelectric Nanogenerators Based on Liquid-Solid Interface Contact Electrification for Harvesting Low-Frequency Blue Energy. <i>Advanced Energy Materials</i> , 2018, 8, 1800705.	10.2	182
27	Printable Skin-Driven Mechanoluminescence Devices via Nanodoped Matrix Modification. <i>Advanced Materials</i> , 2018, 30, e1800291.	11.1	178
28	Full Dynamic-Range Pressure Sensor Matrix Based on Optical and Electrical Dual-Mode Sensing. <i>Advanced Materials</i> , 2017, 29, 1605817.	11.1	176
29	Black Phosphorus Quantum Dots with Tunable Memory Properties and Multilevel Resistive Switching Characteristics. <i>Advanced Science</i> , 2017, 4, 1600435.	5.6	175
30	Enhanced Cu ₂ S/CdS Coaxial Nanowire Solar Cells by Piezo-Phototronic Effect. <i>Nano Letters</i> , 2012, 12, 3302-3307.	4.5	174
31	Enhanced Performance of a ZnO Nanowire-Based Self-Powered Glucose Sensor by Piezotronic Effect. <i>Advanced Functional Materials</i> , 2013, 23, 5868-5874.	7.8	174
32	Flexible Photodetector Arrays Based on Patterned CH ₃ NH ₃ PbI ₃ Perovskite Film for Real-Time Photosensing and Imaging. <i>Advanced Materials</i> , 2019, 31, e1805913.	11.1	174
33	Ultra-stretchable triboelectric nanogenerator as high-sensitive and self-powered electronic skins for energy harvesting and tactile sensing. <i>Nano Energy</i> , 2020, 70, 104546.	8.2	171
34	Piezotronics and piezo-phototronics - From single nanodevices to array of devices and then to integrated functional system. <i>Nano Today</i> , 2013, 8, 619-642.	6.2	141
35	Dynamic Triboelectrification-Induced Electroluminescence and its Use in Visualized Sensing. <i>Advanced Materials</i> , 2016, 28, 6656-6664.	11.1	140
36	Piezoelectric Polyacrylonitrile Nanofiber Film-Based Dual-Function Self-Powered Flexible Sensor. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 15855-15863.	4.0	132

#	ARTICLE	IF	CITATIONS
37	A vertically layered MoS ₂ /Si heterojunction for an ultrahigh and ultrafast photoresponse photodetector. <i>Journal of Materials Chemistry C</i> , 2018, 6, 3233-3239.	2.7	132
38	Recent progress in tactile sensors and their applications in intelligent systems. <i>Science Bulletin</i> , 2020, 65, 70-88.	4.3	132
39	Highly Sensitive Amperometric Cholesterol Biosensor Based on Pt-Incorporated Fullerene-like ZnO Nanospheres. <i>Journal of Physical Chemistry C</i> , 2010, 114, 243-250.	1.5	131
40	Piezo-Phototronic Effect for Enhanced Flexible MoS ₂ /WSe ₂ van der Waals Photodiodes. <i>Advanced Functional Materials</i> , 2018, 28, 1802849.	7.8	130
41	Detection of non-joint areas tiny strain and anti-interference voice recognition by micro-cracked metal thin film. <i>Nano Energy</i> , 2017, 34, 578-585.	8.2	128
42	Nanowire-Based High-Performance Micro Fuel Cells: One Nanowire, One Fuel Cell. <i>Advanced Materials</i> , 2008, 20, 1644-1648.	11.1	126
43	Piezo-Phototronic Effect Modulated Deep UV Photodetector Based on ZnO/Ga ₂ O ₃ Heterojunction Microwire. <i>Advanced Functional Materials</i> , 2018, 28, 1706379.	7.8	126
44	Piezophotonic effect based on mechanoluminescent materials for advanced flexible optoelectronic applications. <i>Nano Energy</i> , 2019, 55, 389-400.	8.2	126
45	Mechanically Induced Light Emission and Infrared-Laser-Induced Upconversion in the Er-Doped CaZnOS Multifunctional Piezoelectric Semiconductor for Optical Pressure and Temperature Sensing. <i>Journal of Physical Chemistry C</i> , 2015, 119, 28136-28142.	1.5	123
46	Self-Powered Tactile Sensor Array Systems Based on the Triboelectric Effect. <i>Advanced Functional Materials</i> , 2019, 29, 1806379.	7.8	122
47	Optimizing Performance of Silicon-Based p-n Junction Photodetectors by the Piezo-Phototronic Effect. <i>ACS Nano</i> , 2014, 8, 12866-12873.	7.3	120
48	Achieving high-resolution pressure mapping via flexible GaN/ ZnO nanowire LEDs array by piezo-phototronic effect. <i>Nano Energy</i> , 2019, 58, 633-640.	8.2	120
49	Enhanced performances of flexible ZnO/perovskite solar cells by piezo-phototronic effect. <i>Nano Energy</i> , 2016, 23, 27-33.	8.2	119
50	Piezo-Phototronic Enhanced UV Sensing Based on a Nanowire Photodetector Array. <i>Advanced Materials</i> , 2015, 27, 7963-7969.	11.1	115
51	Piezotronic Effect on the Transport Properties of GaN Nanobelts for Active Flexible Electronics. <i>Advanced Materials</i> , 2012, 24, 3532-3537.	11.1	114
52	Progress in Piezo-Phototronic Effect-Enhanced Light-Emitting Diodes and Pressure Imaging. <i>Advanced Materials</i> , 2016, 28, 1535-1552.	11.1	110
53	High performance of ZnO nanowire protein sensors enhanced by the piezotronic effect. <i>Energy and Environmental Science</i> , 2013, 6, 494.	15.6	108
54	Anisotropic magnetic liquid metal film for wearable wireless electromagnetic sensing and smart electromagnetic interference shielding. <i>Nano Energy</i> , 2022, 92, 106700.	8.2	108

#	ARTICLE	IF	CITATIONS
55	Hierarchical TiO ₂ nanowire/graphite fiber photoelectrocatalysis setup powered by a wind-driven nanogenerator: A highly efficient photoelectrocatalytic device entirely based on renewable energy. Nano Energy, 2015, 11, 19-27.	8.2	107
56	Bioinspired Multifunctional Photonic-Electronic Smart Skin for Ultrasensitive Health Monitoring, for Visual and Self-Powered Sensing. Advanced Materials, 2021, 33, e2102332.	11.1	107
57	A Three Dimensional Multi-Layered Sliding Triboelectric Nanogenerator. Advanced Energy Materials, 2014, 4, 1301592.	10.2	106
58	Tunable Tribotronic Dual-Gate Logic Devices Based on 2D MoS ₂ and Black Phosphorus. Advanced Materials, 2018, 30, e1705088.	11.1	105
59	Electrochemical Cathodic Protection Powered by Triboelectric Nanogenerator. Advanced Functional Materials, 2014, 24, 6691-6699.	7.8	104
60	A Streaming Potential/Current-Based Microfluidic Direct Current Generator for Self-Powered Nanosystems. Advanced Materials, 2015, 27, 6482-6487.	11.1	104
61	Electronic Skin for Closed-Loop Systems. ACS Nano, 2019, 13, 12287-12293.	7.3	103
62	Recent advances of wearable and flexible piezoresistivity pressure sensor devices and its future prospects. Journal of Materiomics, 2020, 6, 86-101.	2.8	102
63	Piezotronic Effect on the Sensitivity and Signal Level of Schottky Contacted Proactive Micro/Nanowire Nanosensors. ACS Nano, 2013, 7, 1803-1810.	7.3	100
64	Highly-efficient all-inorganic lead-free 1D CsCu ₂ I ₃ single crystal for white-light emitting diodes and UV photodetection. Nano Energy, 2021, 81, 105570.	8.2	100
65	Generating Electricity from Biofluid with a Nanowire-Based Biofuel Cell for Self-Powered Nanodevices. Advanced Materials, 2010, 22, 5388-5392.	11.1	99
66	Hybrid cells for simultaneously harvesting multi-type energies for self-powered micro/nanosystems. Nano Energy, 2012, 1, 259-272.	8.2	97
67	ZnO nanowire based CIGS solar cell and its efficiency enhancement by the piezo-phototronic effect. Nano Energy, 2018, 49, 508-514.	8.2	95
68	Large and Ultrastable All-Inorganic CsPbBr ₃ Monocrystalline Films: Low-Temperature Growth and Application for High-Performance Photodetectors. Advanced Materials, 2018, 30, e1802110.	11.1	94
69	Tribotronic Transistor of MoS ₂ . Advanced Materials, 2019, 31, e1806905.	11.1	93
70	Fiber-Based Hybrid Nanogenerators for/as Self-Powered Systems in Biological Liquid. Angewandte Chemie - International Edition, 2011, 50, 11192-11196.	7.2	92
71	Enhanced emission intensity of vertical aligned flexible ZnO nanowire/p-polymer hybridized LED array by piezo-phototronic effect. Nano Energy, 2015, 14, 364-371.	8.2	92
72	High Br ⁻ Content CsPb(Cl _y Br _{1-y}) ₃ Perovskite Nanocrystals with Strong Mn ²⁺ Emission through Diverse Cation/Anion Exchange Engineering. ACS Applied Materials & Interfaces, 2018, 10, 11739-11746.	4.0	92

#	ARTICLE	IF	CITATIONS
73	Vertically Aligned CdSe Nanowire Arrays for Energy Harvesting and Piezotronic Devices. ACS Nano, 2012, 6, 6478-6482.	7.3	91
74	Recent Progress in Optoelectronic Synapses for Artificial Visual Perception System. Small Structures, 2020, 1, 2000029.	6.9	90
75	Photoluminescence Tuning in Stretchable PDMS Film Grafted Doped Core/Multishell Quantum Dots for Anticounterfeiting. Advanced Functional Materials, 2017, 27, 1700051.	7.8	89
76	Ultrahigh, Ultrafast, and Self-Powered Visible-Near-Infrared Optical Position-Sensitive Detector Based on a CVD-Prepared Vertically Standing Few-Layer MoS ₂ /Si Heterojunction. Advanced Science, 2018, 5, 1700502.	5.6	87
77	MoS ₂ Negative-Capacitance Field-Effect Transistors with Subthreshold Swing below the Physics Limit. Advanced Materials, 2018, 30, e1800932.	11.1	87
78	Ultrathin and Conformable Lead Halide Perovskite Photodetector Arrays for Potential Application in Retina-Like Vision Sensing. Advanced Materials, 2021, 33, e2006006.	11.1	87
79	Enhancing Photoresponsivity of Self-Aligned MoS ₂ Field-Effect Transistors by Piezo-Phototronic Effect from GaN Nanowires. ACS Nano, 2016, 10, 7451-7457.	7.3	86
80	Flexible Conductive Polyimide Fiber/MXene Composite Film for Electromagnetic Interference Shielding and Joule Heating with Excellent Harsh Environment Tolerance. ACS Applied Materials & Interfaces, 2021, 13, 50368-50380.	4.0	85
81	Development and progress in piezotronics. Nano Energy, 2015, 14, 276-295.	8.2	84
82	Piezoelectricity in Multilayer Black Phosphorus for Piezotronics and Nanogenerators. Advanced Materials, 2020, 32, e1905795.	11.1	84
83	Triboelectric Nanogenerators as a Self-Powered Motion Tracking System. Advanced Functional Materials, 2014, 24, 5059-5066.	7.8	83
84	Force-induced charge carrier storage: a new route for stress recording. Light: Science and Applications, 2020, 9, 182.	7.7	83
85	Piezo-phototronic Effect Enhanced Efficient Flexible Perovskite Solar Cells. ACS Nano, 2019, 13, 4507-4513.	7.3	82
86	Piezotronic effect enhanced Schottky-contact ZnO micro/nanowire humidity sensors. Nano Research, 2014, 7, 1083-1091.	5.8	81
87	Enhancing Light Emission of ZnO Nanofilm/Si Micropillar Heterostructure Arrays by Piezo-Phototronic Effect. Advanced Materials, 2015, 27, 4447-4453.	11.1	81
88	Significance of Flexible Substrates for Wearable and Implantable Devices: Recent Advances and Perspectives. Advanced Materials Technologies, 2022, 7, .	3.0	81
89	Optical Fiber-Based Core-Shell Coaxially Structured Hybrid Cells for Self-Powered Nanosystems. Advanced Materials, 2012, 24, 3356-3361.	11.1	80
90	Flexible quantum dot-sensitized solar cells employing CoS nanorod arrays/graphite paper as effective counter electrodes. Journal of Materials Chemistry A, 2014, 2, 13661.	5.2	80

#	ARTICLE	IF	CITATIONS
91	Tactile Sensors for Advanced Intelligent Systems. <i>Advanced Intelligent Systems</i> , 2019, 1, 1900090.	3.3	80
92	Electrochemical determination of L-Cysteine by an elbow shaped, Sb-doped ZnO nanowire-modified electrode. <i>Journal of Materials Chemistry</i> , 2010, 20, 7169.	6.7	79
93	Enhancing the Efficiency of Silicon-Based Solar Cells by the Piezo-Phototronic Effect. <i>ACS Nano</i> , 2017, 11, 1894-1900.	7.3	79
94	Multifunctional and superhydrophobic cellulose composite paper for electromagnetic shielding, hydraulic triboelectric nanogenerator and Joule heating applications. <i>Chemical Engineering Journal</i> , 2021, 420, 129864.	6.6	79
95	CdS nanorods/organic hybrid LED array and the piezo-phototronic effect of the device for pressure mapping. <i>Nanoscale</i> , 2016, 8, 8078-8082.	2.8	78
96	Piezo-Phototronic Effect of CdSe Nanowires. <i>Advanced Materials</i> , 2012, 24, 5470-5475.	11.1	77
97	Self-powered Real-time Movement Monitoring Sensor Using Triboelectric Nanogenerator Technology. <i>Scientific Reports</i> , 2017, 7, 10521.	1.6	77
98	Controllable Growth of Aligned Monocrystalline CsPbBr ₃ Microwire Arrays for Piezoelectric-Induced Dynamic Modulation of Single-Mode Lasing. <i>Advanced Materials</i> , 2019, 31, e1900647.	11.1	76
99	Investigation of Hydrogen Storage Capabilities of ZnO-Based Nanostructures. <i>Journal of Physical Chemistry C</i> , 2010, 114, 2560-2565.	1.5	75
100	Tuning Light Emission of a Pressure-Sensitive Silicon/ZnO Nanowires Heterostructure Matrix through Piezo-phototronic Effects. <i>ACS Nano</i> , 2016, 10, 6074-6079.	7.3	75
101	Piezotronic effect enhanced detection of flammable/toxic gases by ZnO micro/nanowire sensors. <i>Nano Energy</i> , 2015, 12, 588-596.	8.2	74
102	A Stretchable Nanogenerator with Electric/Light Dual-Mode Energy Conversion. <i>Advanced Energy Materials</i> , 2016, 6, 1600829.	10.2	74
103	Self-powered high-performance flexible GaN/ZnO heterostructure UV photodetectors with piezo-phototronic effect enhanced photoresponse. <i>Nano Energy</i> , 2022, 94, 106945.	8.2	73
104	CVD growth of perovskite/graphene films for high-performance flexible image sensor. <i>Science Bulletin</i> , 2020, 65, 343-349.	4.3	72
105	Piezotronic effect enhanced performance of Schottky-contacted optical, gas, chemical and biological nanosensors. <i>Nano Energy</i> , 2015, 14, 312-339.	8.2	71
106	A self-powered system based on triboelectric nanogenerators and supercapacitors for metal corrosion prevention. <i>Journal of Materials Chemistry A</i> , 2015, 3, 22663-22668.	5.2	70
107	Triboelectrification-enabled touch sensing for self-powered position mapping and dynamic tracking by a flexible and area-scalable sensor array. <i>Nano Energy</i> , 2017, 41, 387-393.	8.2	69
108	Real-time pressure mapping smart insole system based on a controllable vertical pore dielectric layer. <i>Microsystems and Nanoengineering</i> , 2020, 6, 62.	3.4	69

#	ARTICLE	IF	CITATIONS
109	Tunable and Nacre-Mimetic Multifunctional Electronic Skins for Highly Stretchable Contact-Noncontact Sensing. <i>Small</i> , 2021, 17, e2100542.	5.2	69
110	A method for quantitatively separating the piezoelectric component from the as-received piezoelectric signal. <i>Nature Communications</i> , 2022, 13, 1391.	5.8	68
111	Wafer-Scale High-Throughput Ordered Arrays of Si and Coaxial Si/Si _{1-x} Ge _x Wires: Fabrication, Characterization, and Photovoltaic Application. <i>ACS Nano</i> , 2011, 5, 6629-6636.	7.3	67
112	Piezo-phototronic Effect Enhanced Photodetector Based on CH ₃ NH ₃ PbI ₃ Single Crystals. <i>ACS Nano</i> , 2018, 12, 10501-10508.	7.3	67
113	Light-Emission Enhancement in a Flexible and Size-Controllable ZnO Nanowire/Organic Light-Emitting Diode Array by the Piezotronic Effect. <i>ACS Photonics</i> , 2017, 4, 1344-1349.	3.2	65
114	Dynamic real-time imaging of living cell traction force by piezo-phototronic light nano-antenna array. <i>Science Advances</i> , 2021, 7, .	4.7	65
115	Asymmetric Superhydrophobic Textiles for Electromagnetic Interference Shielding, Photothermal Conversion, and Solar Water Evaporation. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 28996-29007.	4.0	65
116	Energy Conversion Analysis of Multilayered Triboelectric Nanogenerators for Synergistic Rain and Solar Energy Harvesting. <i>Advanced Materials</i> , 2022, 34, e2202238.	11.1	63
117	Progress in piezotronic and piezo-phototronic effect of 2D materials. <i>2D Materials</i> , 2018, 5, 042003.	2.0	62
118	Mechanoluminescence materials for advanced artificial skin. <i>Science Bulletin</i> , 2020, 65, 1147-1149.	4.3	62
119	Reversible Conversion between Schottky and Ohmic Contacts for Highly Sensitive, Multifunctional Biosensors. <i>Advanced Functional Materials</i> , 2020, 30, 1907999.	7.8	61
120	Piezo-Phototronic UV/Visible Photosensing with Optical-Fiber Nanowire Hybridized Structures. <i>Advanced Materials</i> , 2015, 27, 1553-1560.	11.1	60
121	Bioinspired Electronic Whisker Arrays by Pencil-Drawn Paper for Adaptive Tactile Sensing. <i>Advanced Electronic Materials</i> , 2016, 2, 1600093.	2.6	59
122	Visualization Recording and Storage of Pressure Distribution through a Smart Matrix Based on the Piezotronic Effect. <i>Advanced Materials</i> , 2017, 29, 1701253.	11.1	59
123	Optical-fiber/TiO ₂ -nanowire-arrays hybrid structures with tubular counterelectrode for dye-sensitized solar cell. <i>Nano Energy</i> , 2012, 1, 176-182.	8.2	58
124	Piezophototronic Effect Enhanced Photoresponse of the Flexible Cu(In,Ga)Se ₂ (CIGS) Heterojunction Photodetectors. <i>Advanced Functional Materials</i> , 2018, 28, 1707311.	7.8	58
125	The Exploration of Carrier Behavior in the Inverted Mixed Perovskite Single-Crystal Solar Cells. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800224.	1.9	58
126	Triboelectric Nanogenerator Enhanced Schottky Nanowire Sensor for Highly Sensitive Ethanol Detection. <i>Nano Letters</i> , 2020, 20, 4968-4974.	4.5	58

#	ARTICLE	IF	CITATIONS
127	Flexible sliding sensor for simultaneous monitoring deformation and displacement on a robotic hand/arm. <i>Nano Energy</i> , 2020, 73, 104764.	8.2	58
128	Enhanced photoresponsivity of the MoS ₂ -GaN heterojunction diode via the piezo-phototronic effect. <i>NPG Asia Materials</i> , 2017, 9, e418-e418.	3.8	57
129	Flexible Ag Microparticle/MXene-Based Film for Energy Harvesting. <i>Nano-Micro Letters</i> , 2021, 13, 201.	14.4	57
130	Self-powered photodetector for ultralow power density UV sensing. <i>Nano Today</i> , 2022, 43, 101399.	6.2	57
131	Transparent conducting oxide-free and Pt-free flexible dye-sensitized solar cells employing CuS-nanosheet networks as counter electrodes. <i>Journal of Materials Chemistry A</i> , 2016, 4, 6569-6576.	5.2	56
132	Dynamically Modulated GaN Whispering Gallery Lasing Mode for Strain Sensor. <i>Advanced Functional Materials</i> , 2019, 29, 1905051.	7.8	56
133	Piezotronics in two-dimensional materials. <i>Informa[®] Materials</i> , 2021, 3, 987-1007.	8.5	54
134	Bimodal Tactile Sensor without Signal Fusion for User-Interactive Applications. <i>ACS Nano</i> , 2022, 16, 2789-2797.	7.3	54
135	Capping Modes in PVP-Directed Silver Nanocrystal Growth: Multi-Twinned Nanorods versus Single-Crystalline Nano-Hexapods. <i>Crystal Growth and Design</i> , 2008, 8, 1916-1923.	1.4	53
136	A nanowire based triboelectric nanogenerator for harvesting water wave energy and its applications. <i>APL Materials</i> , 2017, 5, .	2.2	53
137	Flexible Light Emission Diode Arrays Made of Transferred Si Microwires-ZnO Nanofilm with Piezo-Phototronic Effect Enhanced Lighting. <i>ACS Nano</i> , 2017, 11, 3883-3889.	7.3	53
138	Mechanoluminescent hybrids from a natural resource for energy-related applications. <i>Informa[®] Materials</i> , 2021, 3, 1272-1284.	8.5	53
139	High-performance Sb-doped p-ZnO NW films for self-powered piezoelectric strain sensors. <i>Nano Energy</i> , 2020, 73, 104744.	8.2	52
140	Controlled synthesis of high-quality crystals of monolayer MoS ₂ for nanoelectronic device application. <i>Science China Materials</i> , 2016, 59, 182-190.	3.5	51
141	Piezoelectric Effect Tuning on ZnO Microwire Whispering-Gallery Mode Lasing. <i>ACS Nano</i> , 2018, 12, 11899-11906.	7.3	51
142	The syntheses, properties and applications of Si, ZnO, metal, and heterojunction nanowires. <i>Journal of Materials Chemistry</i> , 2009, 19, 869.	6.7	50
143	Temperature Dependence of the Piezophototronic Effect in CdS Nanowires. <i>Advanced Functional Materials</i> , 2015, 25, 5277-5284.	7.8	50
144	Mechanoluminescence enhancement of ZnS:Cu,Mn with piezotronic effect induced trap-depth reduction originated from PVDF ferroelectric film. <i>Nano Energy</i> , 2019, 63, 103861.	8.2	50

#	ARTICLE	IF	CITATIONS
145	Recent Advances in Large-Scale Tactile Sensor Arrays Based on a Transistor Matrix. <i>Advanced Materials Interfaces</i> , 2018, 5, 1801061.	1.9	48
146	WS ₂ /CsPbBr ₃ van der Waals heterostructure planar photodetectors with ultrahigh on/off ratio and piezo-phototronic effect-induced strain-gated characteristics. <i>Nano Energy</i> , 2019, 65, 104001.	8.2	48
147	High precision epidermal radio frequency antenna via nanofiber network for wireless stretchable multifunction electronics. <i>Nature Communications</i> , 2020, 11, 5629.	5.8	48
148	Spherical Triboelectric Nanogenerator with Dense Point Contacts for Harvesting Multidirectional Water Wave and Vibration Energy. <i>ACS Energy Letters</i> , 2021, 6, 2809-2816.	8.8	48
149	Highly flexible, conductive and catalytic Pt networks as transparent counter electrodes for wearable dye-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , 2015, 3, 23028-23034.	5.2	47
150	Progress in piezo-phototronic effect enhanced photodetectors. <i>Journal of Materials Chemistry C</i> , 2016, 4, 11341-11354.	2.7	47
151	Strain-Insensitive Self-Powered Tactile Sensor Arrays Based on Intrinsically Stretchable and Patternable Ultrathin Conformal Wrinkled Graphene-Elastomer Composite. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	47
152	Piezo-phototronic Boolean Logic and Computation Using Photon and Strain Dual-Gated Nanowire Transistors. <i>Advanced Materials</i> , 2015, 27, 940-947.	11.1	46
153	CoS NWs/Au Hybridized Networks as Efficient Counter Electrodes for Flexible Sensitized Solar Cells. <i>Advanced Energy Materials</i> , 2015, 5, 1500141.	10.2	46
154	Oxygen-assisted preparation of mechanoluminescent ZnS:Mn for dynamic pressure mapping. <i>Nano Research</i> , 2018, 11, 1967-1976.	5.8	45
155	Ferro-Pyro-Phototronic Effect in Monocrystalline 2D Ferroelectric Perovskite for High-Sensitive, Self-Powered, and Stable Ultraviolet Photodetector. <i>ACS Nano</i> , 2022, 16, 1280-1290.	7.3	45
156	Nano-porous anodic aluminium oxide membranes with 6-19 nm pore diameters formed by a low-potential anodizing process. <i>Nanotechnology</i> , 2007, 18, 345302.	1.3	44
157	MXene enhanced self-powered alternating current electroluminescence devices for patterned flexible displays. <i>Nano Energy</i> , 2021, 86, 106077.	8.2	44
158	Enhanced performance of GaN nanobelt-based photodetectors by means of piezotronic effects. <i>Nano Research</i> , 2013, 6, 758-766.	5.8	42
159	Mechanically induced strong red emission in samarium ions doped piezoelectric semiconductor CaZnOS for dynamic pressure sensing and imaging. <i>Optics Communications</i> , 2017, 395, 24-28.	1.0	40
160	Fabrication of Large-Area Bimodal Sensors by All-Inkjet Printing. <i>Advanced Materials Technologies</i> , 2019, 4, 1800703.	3.0	40
161	Metal Halide Perovskite Arrays: From Construction to Optoelectronic Applications. <i>Advanced Functional Materials</i> , 2021, 31, 2005230.	7.8	40
162	Plasmon-Induced Accelerated Exciton Recombination Dynamics in ZnO/Ag Hybrid Nanolasers. <i>ACS Photonics</i> , 2017, 4, 2419-2424.	3.2	38

#	ARTICLE	IF	CITATIONS
163	Piezo-phototronic effect on optoelectronic nanodevices. MRS Bulletin, 2018, 43, 952-958.	1.7	38
164	A high performance CsPbBr ₃ microwire based photodetector boosted by coupling plasmonic and piezo-phototronic effects. Nano Energy, 2021, 85, 105951.	8.2	38
165	Piezopotential-Programmed Multilevel Nonvolatile Memory As Triggered by Mechanical Stimuli. ACS Nano, 2016, 10, 11037-11043.	7.3	37
166	Performance Limits of the Self-Aligned Nanowire Top-Gated MoS ₂ Transistors. Advanced Functional Materials, 2017, 27, 1602250.	7.8	37
167	Ferroelectricity-induced performance enhancement of V-doped ZnO/Si photodetector by direct energy band modulation. Nano Energy, 2019, 65, 104046.	8.2	36
168	Energy Relay Center for doped mechanoluminescence materials: a case study on Cu-doped and Mn-doped CaZnOS. Physical Chemistry Chemical Physics, 2017, 19, 1190-1208.	1.3	35
169	Voltage-Driven Room-Temperature Resistance and Magnetization Switching in Ceramic TiO ₂ /PAA Nanoporous Composite Films. ACS Applied Materials & Interfaces, 2019, 11, 21661-21667.	4.0	35
170	Biologically Inspired Stretchable, Multifunctional, and 3D Electronic Skin by Strain Visualization and Triboelectric Pressure Sensing. Small Science, 2022, 2, 2100083.	5.8	34
171	Effect of Pb-doping on the morphology, structural and optical properties of ZnO nanowires synthesized via modified thermal evaporation. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2010, 174, 55-58.	1.7	33
172	Ultrabroadband, Large Sensitivity Position Sensitivity Detector Based on a Bi ₂ Te _{2.7} Se _{0.3} /Si Heterojunction and Its Performance Improvement by Pyro-Phototronic Effect. Advanced Electronic Materials, 2019, 5, 1900786.	2.6	33
173	Controlled fabrication, lasing behavior and excitonic recombination dynamics in single crystal CH ₃ NH ₃ PbBr ₃ perovskite cuboids. Science Bulletin, 2019, 64, 698-704.	4.3	33
174	Triboelectric-polarization-enhanced high sensitive ZnO UV sensor. Nano Today, 2020, 33, 100873.	6.2	33
175	In ₂ O ₃ Nanowire Field-Effect Transistors with Sub-60 mV/dec Subthreshold Swing Stemming from Negative Capacitance and Their Logic Applications. ACS Nano, 2018, 12, 9608-9616.	7.3	32
176	Dynamic regulating of single-mode lasing in ZnO microcavity by piezoelectric effect. Materials Today, 2019, 24, 33-40.	8.3	32
177	A Self-Powered Photodetector Based on MAPbI ₃ Single-Crystal Film/n-Si Heterojunction with Broadband Response Enhanced by Pyro-Phototronic and Piezo-Phototronic Effects. Small, 2021, 17, e2101572.	5.2	32
178	Visually aided tactile enhancement system based on ultrathin highly sensitive crack-based strain sensors. Applied Physics Reviews, 2020, 7, .	5.5	30
179	Bidirectional Photoresponse in Perovskite-ZnO Heterostructure for Fully Optical-Controlled Artificial Synapse. Advanced Optical Materials, 2022, 10, .	3.6	30
180	Features of the piezo-phototronic effect on optoelectronic devices based on wurtzite semiconductor nanowires. Physical Chemistry Chemical Physics, 2014, 16, 2790.	1.3	28

#	ARTICLE	IF	CITATIONS
181	Lateral bipolar photoresistance effect in the CIGS heterojunction and its application in position sensitive detector and memory device. <i>Science Bulletin</i> , 2020, 65, 477-485.	4.3	28
182	Piezophototronic Effect in Nanosensors. <i>Small Science</i> , 2021, 1, 2000060.	5.8	28
183	Biodegradable, Breathable Leaf Vein-Based Tactile Sensors with Tunable Sensitivity and Sensing Range. <i>Small</i> , 2022, 18, e2106906.	5.2	28
184	Coupled Ion-Gel Channel-Width Gating and Piezotronic Interface Gating in ZnO Nanowire Devices. <i>Advanced Functional Materials</i> , 2019, 29, 1807837.	7.8	27
185	Mechanoluminescent materials for athletic analytics in sports science. <i>Science Bulletin</i> , 2021, 66, 206-209.	4.3	27
186	Electron irradiation effect and photoluminescence properties of ZnO-tetrapod nanostructures. <i>Materials Chemistry and Physics</i> , 2010, 120, 319-322.	2.0	26
187	Flexibly and Repeatedly Modulating Lasing Wavelengths in a Single Core-Shell Semiconductor Microrod. <i>ACS Nano</i> , 2017, 11, 5808-5814.	7.3	26
188	Piezotronic Synapse Based on a Single GaN Microwire for Artificial Sensory Systems. <i>Nano Letters</i> , 2020, 20, 3761-3768.	4.5	26
189	Stable Ultrathin Perovskite/Polyvinylidene Fluoride Composite Films for Imperceptible Multi-Color Fluorescent Anti-Counterfeiting Labels. <i>Advanced Materials Technologies</i> , 2021, 6, 2100229.	3.0	26
190	Single-mode lasing of CsPbBr ₃ perovskite NWs enabled by the Vernier effect. <i>Nanoscale</i> , 2021, 13, 4432-4438.	2.8	25
191	Ordered arrays of high-quality single-crystalline β -Si ₃ N ₄ nanowires: Synthesis, properties and applications. <i>Journal of Crystal Growth</i> , 2009, 311, 4486-4490.	0.7	24
192	Bulk synthesis route of the oriented arrays of tip-shape ZnO nanowires and an investigation of their sensing capabilities. <i>Chemical Physics Letters</i> , 2009, 480, 105-109.	1.2	24
193	A Bamboo-Like GaN Microwire-Based Piezotronic Memristor. <i>Advanced Functional Materials</i> , 2016, 26, 5307-5314.	7.8	24
194	Laser-induced photoresistance effect in Si-based vertical standing MoS ₂ nanoplate heterojunctions for self-powered high performance broadband photodetection. <i>Journal of Materials Chemistry C</i> , 2019, 7, 10642-10651.	2.7	24
195	Activating MoS ₂ basal planes for hydrogen evolution through direct CVD morphology control. <i>Journal of Materials Chemistry A</i> , 2019, 7, 27603-27611.	5.2	24
196	Synthesis and characterization of Nafion®-115 nanowire arrays. <i>Nanotechnology</i> , 2005, 16, 2242-2244.	1.3	22
197	Controlled synthesis and methanol sensing capabilities of Pt-incorporated ZnO nanospheres. <i>Electrochimica Acta</i> , 2010, 55, 6885-6891.	2.6	22
198	Ultrahigh secondary electron emission of carbon nanotubes. <i>Applied Physics Letters</i> , 2010, 96, .	1.5	22

#	ARTICLE	IF	CITATIONS
199	Piezotronics and piezo-phototronics based on <i>a</i> -axis nano/microwires: fundamentals and applications. <i>Semiconductor Science and Technology</i> , 2017, 32, 043005.	1.0	22
200	Recent progress in piezo-phototronics with extended materials, application areas and understanding. <i>Semiconductor Science and Technology</i> , 2017, 32, 053002.	1.0	22
201	A titanium dioxide nanorod array as a high-affinity nano-bio interface of a microfluidic device for efficient capture of circulating tumor cells. <i>Nano Research</i> , 2017, 10, 776-784.	5.8	22
202	Crystal-Orientation-Related Dynamic Tuning of the Lasing Spectra of CdS Nanobelts by Piezoelectric Polarization. <i>ACS Nano</i> , 2019, 13, 5049-5057.	7.3	21
203	Molten Salt Shielded Synthesis of Monodisperse Layered CaZnOS ₂ -Based Semiconductors for Piezophotonic and X-ray Detection Applications. <i>Small</i> , 2022, 18, e2107437.	5.2	20
204	Flexible and Stretchable Strategies for Electronic Skins: Materials, Structure, and Integration. <i>ACS Applied Electronic Materials</i> , 2022, 4, 1-26.	2.0	20
205	Interface-Free Area-Scalable Self-Powered Electroluminescent System Driven by Triboelectric Generator. <i>Scientific Reports</i> , 2015, 5, 13658.	1.6	18
206	Facile access to shape-controlled growth of WS ₂ monolayer via environment-friendly method. <i>2D Materials</i> , 2019, 6, 015007.	2.0	18
207	Mechanism of magnetic field-modulated luminescence from lanthanide ions in inorganic crystal: a review. <i>Rare Metals</i> , 2020, 39, 1113-1126.	3.6	18
208	Epitaxial lift-off for controllable single-crystalline perovskites. <i>Science Bulletin</i> , 2021, 66, 6-8.	4.3	18
209	Interfacial-engineering enhanced performance and stability of ZnO nanowire-based perovskite solar cells. <i>Nanotechnology</i> , 2021, 32, 475204.	1.3	18
210	Rational design of an ITO/CuS nanosheet network composite film as a counter electrode for flexible dye sensitized solar cells. <i>Journal of Materials Chemistry C</i> , 2016, 4, 8130-8134.	2.7	17
211	Piezo-phototronic effect enhanced performance of a p-ZnO NW based UV-Vis-NIR photodetector. <i>Nano Energy</i> , 2021, 86, 106090.	8.2	17
212	Wavelength-tunable infrared light emitting diode based on ordered ZnO nanowire/Si _{1-x} Ge _x alloy heterojunction. <i>Nano Research</i> , 2015, 8, 2676-2685.	5.8	16
213	CuS nanotrough-networks for highly stable transparent conducting electrodes. <i>Journal of Materials Chemistry C</i> , 2016, 4, 4733-4739.	2.7	16
214	Progress in piezo-phototronic effect modulated photovoltaics. <i>Journal of Physics Condensed Matter</i> , 2016, 28, 433001.	0.7	16
215	Investigating the interlayer electron transport and its influence on the whole electric properties of black phosphorus. <i>Science Bulletin</i> , 2019, 64, 254-260.	4.3	16
216	Recent advances in curved image sensor arrays for bioinspired vision system. <i>Nano Today</i> , 2022, 42, 101366.	6.2	16

#	ARTICLE	IF	CITATIONS
217	Adjusting the Layer Charges of Host Phyllosilicates To Prevent Luminescence Quenching of Fluorescence Dyes. <i>Journal of Physical Chemistry C</i> , 2015, 119, 22625-22631.	1.5	14
218	CdS@SiO ₂ Core-Shell Electroluminescent Nanorod Arrays Based on a Metal-Insulator-Semiconductor Structure. <i>Small</i> , 2016, 12, 5734-5740.	5.2	14
219	Wavelength-Tunable Micro/Nanolasers. <i>Advanced Optical Materials</i> , 2019, 7, 1900275.	3.6	13
220	Flexible GaN microwire-based piezotronic sensory memory device. <i>Nano Energy</i> , 2020, 78, 105312.	8.2	13
221	Surface decoration of anodic aluminium oxide in synthesis of Nafion [®] -115 nanowire arrays. <i>Nanotechnology</i> , 2007, 18, 015302.	1.3	12
222	One-step synthesis route of the aligned and non-aligned single crystalline β -Si ₃ N ₄ nanowires. <i>Science in China Series D: Earth Sciences</i> , 2009, 52, 1-5.	0.9	12
223	Carbon Nanotube Reinforced CdSe Inverse Opal with Crack-Free Structure and High Conductivity for Photovoltaic Applications. <i>Advanced Materials Interfaces</i> , 2015, 2, 1400464.	1.9	12
224	Fiber-Integrated Reversibly Wavelength-Tunable Nanowire Laser Based on Nanocavity Mode Coupling. <i>ACS Nano</i> , 2019, 13, 9965-9972.	7.3	11
225	Wavelength tunable single-mode lasing from cesium lead halide perovskite microwires. <i>Applied Physics Letters</i> , 2021, 118, .	1.5	11
226	Anisotropic Carrier Mobility from 2H WSe ₂ . <i>Advanced Materials</i> , 2022, 34, e2108615.	11.1	11
227	Recent Progress in Ohmic/Schottky-Contacted ZnO Nanowire Sensors. <i>Journal of Nanomaterials</i> , 2015, 2015, 1-20.	1.5	10
228	From proton conductive nanowires to nanofuel cells: A powerful candidate for generating electricity for self-powered nanosystems. <i>Nano Research</i> , 2011, 4, 1099-1109.	5.8	9
229	Flexible electrically pumped random lasing from ZnO nanowires based on metal-insulator-semiconductor structure. <i>Chinese Physics B</i> , 2017, 26, 067301.	0.7	9
230	Self-selection mechanism of Fabry-Pérot micro/nanoscale wire cavity for single-mode lasing. <i>Optics Express</i> , 2017, 25, 21025.	1.7	9
231	Detection and quantification of phenol in liquid and gas phases using a clay/dye composite. <i>Journal of Industrial and Engineering Chemistry</i> , 2018, 62, 284-290.	2.9	9
232	Two Photon-Pumped Whispering-Gallery Mode Lasing and Dynamic Regulation. <i>Advanced Science</i> , 2019, 6, 1900916.	5.6	9
233	Growth of GaN micro/nanolaser arrays by chemical vapor deposition. <i>Nanotechnology</i> , 2016, 27, 355201.	1.3	8
234	A novel visible light sensing and recording system enabled by integration of photodetector and electrochromic devices. <i>Nanoscale</i> , 2021, 13, 9177-9184.	2.8	8

#	ARTICLE	IF	CITATIONS
235	Quantifying electron-transfer in liquid-solid contact electrification. Science Bulletin, 2020, 65, 868-869.	4.3	7
236	Tunable single-mode lasing in a single semiconductor microrod. Optics Express, 2018, 26, 30021.	1.7	6
237	Research Progress on Hydrogelâ€Elastomer Adhesion. Materials, 2022, 15, 2548.	1.3	6
238	Impact of Pb Doping on the Optical and Electrical Properties of ZnO Nanowires. Journal of Nanoscience and Nanotechnology, 2011, 11, 1950-1957.	0.9	5
239	Effect of anneal pre-treatment of polycrystalline aluminum sheets on synthesis of highly-ordered anodic aluminum oxide membranes. Science in China Series D: Earth Sciences, 2008, 51, 1838-1842.	0.9	2
240	Recent progress of ZnO hierarchical nanostructure for photovoltaic application. International Journal of Nanomanufacturing, 2016, 12, 336.	0.3	2
241	A multimodal ion electronic skin for decoupling temperature and strain. Science Bulletin, 2021, 66, 2437-2437.	4.3	2
242	Front Cover Image. InformaÄnÄ-MateriÄly, 2021, 3, .	8.5	2
243	53â€5: Lateâ€News Paper: aâ€GZO TFT Based Active Matrix Pressure Sensor by Integrating ZnO Nanowires as Sensing Unit. Digest of Technical Papers SID International Symposium, 2020, 51, 789-791.	0.1	1
244	Human spinal reflex like strain-controlled power devices based on piezotronic effect. Science Bulletin, 2020, 65, 1228-1230.	4.3	1
245	Efficiency enhance the photoluminescence of ZnO nanowires array by the surface plasmonic effect of Au nanoparticles. International Journal of Nanomanufacturing, 2016, 12, 308.	0.3	0
246	Functional Devices for Clean Energy and Advanced Sensor Applications. Journal of Nanomaterials, 2016, 2016, 1-2.	1.5	0
247	Strain-modulated high-quality ZnO cavity modes on different crystal orientations. Nanotechnology, 2020, 31, 225202.	1.3	0
248	Enhanced Cu2S/CdS Coaxial Nanowire Solar Cells by Piezo-Phototronic Effect. , 2013, , .		0
249	Mapping strain/pressure with nanowire light-emitting-diode arrays by piezo-phototronic effect. , 2015, , .		0