

# Yan Zhang

## List of Publications by Citations

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174  
papers

10,821  
citations

58  
h-index

100  
g-index

181  
ext. papers

12,435  
ext. citations

12.8  
avg. IF

6.59  
L-index

#	Paper	IF	Citations
174	Pyroelectric nanogenerators for harvesting thermoelectric energy. <i>Nano Letters</i> , <b>2012</b> , 12, 2833-8	11.5	510
173	Fiber-based generator for wearable electronics and mobile medication. <i>ACS Nano</i> , <b>2014</b> , 8, 6273-80	16.7	453
172	Enhancing sensitivity of a single ZnO micro-/nanowire photodetector by piezo-phototronic effect. <i>ACS Nano</i> , <b>2010</b> , 4, 6285-91	16.7	381
171	Fundamental theory of piezotronics. <i>Advanced Materials</i> , <b>2011</b> , 23, 3004-13	24	372
170	Self-powered system with wireless data transmission. <i>Nano Letters</i> , <b>2011</b> , 11, 2572-7	11.5	349
169	Enhanced ferroelectric-nanocrystal-based hybrid photocatalysis by ultrasonic-wave-generated piezophototronic effect. <i>Nano Letters</i> , <b>2015</b> , 15, 2372-9	11.5	308
168	Piezo-potential enhanced photocatalytic degradation of organic dye using ZnO nanowires. <i>Nano Energy</i> , <b>2015</b> , 13, 414-422	17.1	249
167	Replacing a battery by a nanogenerator with 20 V output. <i>Advanced Materials</i> , <b>2012</b> , 24, 110-4	24	224
166	Finger typing driven triboelectric nanogenerator and its use for instantaneously lighting up LEDs. <i>Nano Energy</i> , <b>2013</b> , 2, 491-497	17.1	222
165	High-output nanogenerator by rational unipolar assembly of conical nanowires and its application for driving a small liquid crystal display. <i>Nano Letters</i> , <b>2010</b> , 10, 5025-31	11.5	214
164	Hybridizing energy conversion and storage in a mechanical-to-electrochemical process for self-charging power cell. <i>Nano Letters</i> , <b>2012</b> , 12, 5048-54	11.5	210
163	A nanogenerator for energy harvesting from a rotating tire and its application as a self-powered pressure/speed sensor. <i>Advanced Materials</i> , <b>2011</b> , 23, 4068-71	24	200
162	Flexible Electronics Based on Micro/Nanostructured Paper. <i>Advanced Materials</i> , <b>2018</b> , 30, e1801588	24	185
161	Pyroelectric nanogenerators for driving wireless sensors. <i>Nano Letters</i> , <b>2012</b> , 12, 6408-13	11.5	183
160	Flexible, Stretchable and Wearable Multifunctional Sensor Array as Artificial Electronic Skin for Static and Dynamic Strain Mapping. <i>Advanced Electronic Materials</i> , <b>2015</b> , 1, 1500142	6.4	177
159	Piezo-phototronic effect enhanced visible and ultraviolet photodetection using a ZnO-CdS core-shell micro/nanowire. <i>ACS Nano</i> , <b>2012</b> , 6, 9229-36	16.7	164
158	Ultrahigh sensitive piezotronic strain sensors based on a ZnSnO <sub>3</sub> nanowire/microwire. <i>ACS Nano</i> , <b>2012</b> , 6, 4369-74	16.7	148

157	Transparent flexible nanogenerator as self-powered sensor for transportation monitoring. <i>Nano Energy</i> , <b>2013</b> , 2, 75-81	17.1	147
156	In Situ Fabrication of Vertical Multilayered MoS <sub>2</sub> /Si Homotype Heterojunction for High-Speed Visible-Near-Infrared Photodetectors. <i>Small</i> , <b>2016</b> , 12, 1062-71	11	142
155	Surface free-carrier screening effect on the output of a ZnO nanowire nanogenerator and its potential as a self-powered active gas sensor. <i>Nanotechnology</i> , <b>2013</b> , 24, 225501	3.4	132
154	Piezotronics and piezo-phototronics [From single nanodevices to array of devices and then to integrated functional system. <i>Nano Today</i> , <b>2013</b> , 8, 619-642	17.9	129
153	A flexible self-powered T-ZnO/PVDF/fabric electronic-skin with multi-functions of tactile-perception, atmosphere-detection and self-clean. <i>Nano Energy</i> , <b>2017</b> , 31, 37-48	17.1	123
152	Piezotronic effect on the output voltage of P3HT/ZnO micro/nanowire heterojunction solar cells. <i>Nano Letters</i> , <b>2011</b> , 11, 4812-7	11.5	122
151	Fundamental theories of piezotronics and piezo-phototronics. <i>Nano Energy</i> , <b>2015</b> , 14, 257-275	17.1	118
150	Lead-free nanogenerator made from single ZnSnO <sub>3</sub> microbelt. <i>ACS Nano</i> , <b>2012</b> , 6, 4335-40	16.7	111
149	Piezo-phototronics effect on nano/microwire solar cells. <i>Energy and Environmental Science</i> , <b>2012</b> , 5, 6850-54	15.4	111
148	Nanowire piezo-phototronic photodetector: theory and experimental design. <i>Advanced Materials</i> , <b>2012</b> , 24, 1410-7	24	107
147	Room-temperature self-powered ethanol sensing of a Pd/ZnO nanoarray nanogenerator driven by human finger movement. <i>Nanoscale</i> , <b>2014</b> , 6, 4604-10	7.7	103
146	Lattice Strain Induced Remarkable Enhancement in Piezoelectric Performance of ZnO-Based Flexible Nanogenerators. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 1381-7	9.5	102
145	Optimizing the power output of a ZnO photocell by piezopotential. <i>ACS Nano</i> , <b>2010</b> , 4, 4220-4	16.7	102
144	A chemically self-charging aqueous zinc-ion battery. <i>Nature Communications</i> , <b>2020</b> , 11, 2199	17.4	101
143	Flexible and transparent nanogenerators based on a composite of lead-free ZnSnO <sub>3</sub> triangular-belts. <i>Advanced Materials</i> , <b>2012</b> , 24, 6094-9	24	100
142	Strain-gated piezotronic transistors based on vertical zinc oxide nanowires. <i>ACS Nano</i> , <b>2012</b> , 6, 3760-6	16.7	99
141	Control of electro-chemical processes using energy harvesting materials and devices. <i>Chemical Society Reviews</i> , <b>2017</b> , 46, 7757-7786	58.5	98
140	Polar charges induced electric hysteresis of ZnO nano/microwire for fast data storage. <i>Nano Letters</i> , <b>2011</b> , 11, 2829-34	11.5	94

139	In-situ synthesized polypyrrole-cellulose conductive networks for potential-tunable foldable power paper. <i>Nano Energy</i> , <b>2017</b> , 31, 174-182	17.1	93
138	Progress in Piezo-Phototronic-Effect-Enhanced Light-Emitting Diodes and Pressure Imaging. <i>Advanced Materials</i> , <b>2016</b> , 28, 1535-52	24	93
137	CuO/PVDF nanocomposite anode for a piezo-driven self-charging lithium battery. <i>Energy and Environmental Science</i> , <b>2013</b> , 6, 2615	35.4	90
136	High thermostable ordered mesoporous SiO <sub>2</sub> /TiO <sub>2</sub> coated circulating-bed biofilm reactor for unpredictable photocatalytic and biocatalytic performance. <i>Applied Catalysis B: Environmental</i> , <b>2016</b> , 180, 521-529	21.8	88
135	A Self-Powered Wearable Noninvasive Electronic-Skin for Perspiration Analysis Based on Piezo-Biosensing Unit Matrix of Enzyme/ZnO Nanoarrays. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 29526-29537	9.5	86
134	Piezoelectric Polyacrylonitrile Nanofiber Film-Based Dual-Function Self-Powered Flexible Sensor. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 15855-15863	9.5	83
133	Nano-Newton transverse force sensor using a vertical GaN nanowire based on the piezotronic effect. <i>Advanced Materials</i> , <b>2013</b> , 25, 883-8	24	81
132	Outputting Olfactory Bionic Electric Impulse by PANI/PTFE/PANI Sandwich Nanostructures and their Application as Flexible, Smelling Electronic Skin. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 3128-3138	15.6	80
131	Micro-scale to nano-scale generators for energy harvesting: Self powered piezoelectric, triboelectric and hybrid devices. <i>Physics Reports</i> , <b>2019</b> , 792, 1-33	27.7	80
130	Vertically aligned CdSe nanowire arrays for energy harvesting and piezotronic devices. <i>ACS Nano</i> , <b>2012</b> , 6, 6478-82	16.7	79
129	A self-powered wearable sweat-evaporation-biosensing analyzer for building sports big data. <i>Nano Energy</i> , <b>2019</b> , 59, 754-761	17.1	75
128	Flexible Self-Charging Power Cell for One-Step Energy Conversion and Storage. <i>Advanced Energy Materials</i> , <b>2014</b> , 4, 1301329	21.8	74
127	PVDF mesoporous nanostructures as the piezo-separator for a self-charging power cell. <i>Nano Energy</i> , <b>2014</b> , 10, 44-52	17.1	74
126	Piezo-phototronic effect of CdSe nanowires. <i>Advanced Materials</i> , <b>2012</b> , 24, 5470-5	24	72
125	A Streaming Potential/Current-Based Microfluidic Direct Current Generator for Self-Powered Nanosystems. <i>Advanced Materials</i> , <b>2015</b> , 27, 6482-7	24	71
124	Nanogenerator as an active sensor for vortex capture and ambient wind-velocity detection. <i>Energy and Environmental Science</i> , <b>2012</b> , 5, 8528	35.4	69
123	All-solid-state flexible self-charging power cell basing on piezo-electrolyte for harvesting/storing body-motion energy and powering wearable electronics. <i>Nano Energy</i> , <b>2017</b> , 39, 590-600	17.1	68
122	Theoretical study on two-dimensional MoS <sub>2</sub> piezoelectric nanogenerators. <i>Nano Research</i> , <b>2016</b> , 9, 800-807	67	67

121	Enhanced H <sub>2</sub> Production of TiO <sub>2</sub> /ZnO Nanowires Co-Using Solar and Mechanical Energy through Piezo-Photocatalytic Effect. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2018</b> , 6, 10162-10172	8.3	67
120	Pt/ZnO nanoarray nanogenerator as self-powered active gas sensor with linear ethanol sensing at room temperature. <i>Nanotechnology</i> , <b>2014</b> , 25, 115502	3.4	63
119	High output nanogenerator based on assembly of GaN nanowires. <i>Nanotechnology</i> , <b>2011</b> , 22, 475401	3.4	63
118	Biomolecule-adsorption-dependent piezoelectric output of ZnO nanowire nanogenerator and its application as self-powered active biosensor. <i>Biosensors and Bioelectronics</i> , <b>2014</b> , 57, 269-75	11.8	62
117	Portable room-temperature self-powered/active H <sub>2</sub> sensor driven by human motion through piezoelectric screening effect. <i>Nano Energy</i> , <b>2014</b> , 8, 34-43	17.1	60
116	Self-heating and external strain coupling induced phase transition of VO <sub>2</sub> nanobeam as single domain switch. <i>Advanced Materials</i> , <b>2011</b> , 23, 3536-41	24	58
115	Strain Modulated Electronic, Mechanical, and Optical Properties of the Monolayer PdS <sub>2</sub> , PdSe <sub>2</sub> , and PtSe <sub>2</sub> for Tunable Devices. <i>ACS Applied Nano Materials</i> , <b>2018</b> , 1, 1932-1939	5.6	57
114	Self-powered acoustic source locator in underwater environment based on organic film triboelectric nanogenerator. <i>Nano Research</i> , <b>2015</b> , 8, 765-773	10	56
113	BaTiO <sub>3</sub> nanocrystal-mediated micro pseudo-electrochemical cells with ultrasound-driven piezotronic enhancement for polymerization. <i>Nano Energy</i> , <b>2017</b> , 39, 461-469	17.1	54
112	High-performance piezo-phototronic solar cell based on two-dimensional materials. <i>Nano Energy</i> , <b>2017</b> , 32, 448-453	17.1	53
111	PVDF-PZT nanocomposite film based self-charging power cell. <i>Nanotechnology</i> , <b>2014</b> , 25, 105401	3.4	53
110	Anisotropic outputs of a nanogenerator from oblique-aligned ZnO nanowire arrays. <i>ACS Nano</i> , <b>2011</b> , 5, 6707-13	16.7	53
109	A Self-Powered Brain-Linked Vision Electronic-Skin Based on Triboelectric-Photodetecting Pixel-Addressable Matrix for Visual-Image Recognition and Behavior Intervention. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1800275	15.6	52
108	Piezo-phototronic effect on electroluminescence properties of p-type GaN thin films. <i>Nano Letters</i> , <b>2012</b> , 12, 3851-6	11.5	52
107	Self-powered electronic-skin for detecting glucose level in body fluid basing on piezo-enzymatic-reaction coupling process. <i>Nano Energy</i> , <b>2016</b> , 26, 148-156	17.1	51
106	A Self-Powered Breath Analyzer Based on PANI/PVDF Piezo-Gas-Sensing Arrays for Potential Diagnostics Application. <i>Nano-Micro Letters</i> , <b>2018</b> , 10, 76	19.5	51
105	Detecting Liquefied Petroleum Gas (LPG) at Room Temperature Using ZnSnO <sub>3</sub> /ZnO Nanowire Piezo-Nanogenerator as Self-Powered Gas Sensor. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 10482-90	9.5	50
104	Theory of piezo-phototronics for light-emitting diodes. <i>Advanced Materials</i> , <b>2012</b> , 24, 4712-8	24	50

103	Theory of piezotronics and piezo-phototronics. <i>MRS Bulletin</i> , <b>2018</b> , 43, 928-935	3.2	50
102	Magnetic-mechanical-electrical-optical coupling effects in GaN-based LED/rare-earth terfenol-D structures. <i>Advanced Materials</i> , <b>2014</b> , 26, 6767-72	24	49
101	The conversion of PN-junction influencing the piezoelectric output of a CuO/ZnO nanoarray nanogenerator and its application as a room-temperature self-powered active HB sensor. <i>Nanotechnology</i> , <b>2014</b> , 25, 265501	3.4	47
100	An elastic-spring-substrated nanogenerator as an active sensor for self-powered balance. <i>Energy and Environmental Science</i> , <b>2013</b> , 6, 1164	35.4	47
99	Triboelectric nanogenerator based self-powered sensor for artificial intelligence. <i>Nano Energy</i> , <b>2021</b> , 84, 105887	17.1	47
98	Piezotronic Effect on Rashba Spin-Orbit Coupling in a ZnO/P3HT Nanowire Array Structure. <i>ACS Nano</i> , <b>2018</b> , 12, 1811-1820	16.7	44
97	A self-powered piezotronic strain sensor based on single ZnSnO <sub>3</sub> microbelts. <i>RSC Advances</i> , <b>2013</b> , 3, 25184	3.7	44
96	Review Energy Autonomous Wearable Sensors for Smart Healthcare: A Review. <i>Journal of the Electrochemical Society</i> , <b>2020</b> , 167, 037516	3.9	44
95	Demonstration of Enhanced Piezo-Catalysis for Hydrogen Generation and Water Treatment at the Ferroelectric Curie Temperature. <i>IScience</i> , <b>2020</b> , 23, 101095	6.1	41
94	A self-powered flexibly-arranged gas monitoring system with evaporating rainwater as fuel for building atmosphere big data. <i>Nano Energy</i> , <b>2019</b> , 60, 52-60	17.1	40
93	Piezo-phototronic Effect Enhanced Responsivity of Photon Sensor Based on Composition-Tunable Ternary CdSxSe <sub>1-x</sub> Nanowires. <i>ACS Photonics</i> , <b>2017</b> , 4, 2495-2503	6.3	40
92	First principle simulations of piezotronic transistors. <i>Nano Energy</i> , <b>2015</b> , 14, 355-363	17.1	40
91	Electricity generation based on vertically aligned PbZr <sub>0.2</sub> Ti <sub>0.8</sub> O <sub>3</sub> nanowire arrays. <i>Nano Energy</i> , <b>2012</b> , 1, 424-428	17.1	40
90	Reversible Conversion between Schottky and Ohmic Contacts for Highly Sensitive, Multifunctional Biosensors. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1907999	15.6	39
89	Triboelectric Nanogenerator Enhanced Schottky Nanowire Sensor for Highly Sensitive Ethanol Detection. <i>Nano Letters</i> , <b>2020</b> , 20, 4968-4974	11.5	38
88	Self-powered implantable electronic-skin for in situ analysis of urea/uric-acid in body fluids and the potential applications in real-time kidney-disease diagnosis. <i>Nanoscale</i> , <b>2018</b> , 10, 2099-2107	7.7	38
87	Piezoelectric Materials for Controlling Electro-Chemical Processes. <i>Nano-Micro Letters</i> , <b>2020</b> , 12, 149	19.5	38
86	Piezoelectric Nanotopography Induced Neuron-Like Differentiation of Stem Cells. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1900372	15.6	36

85	Piezotronic Transistor Based on Topological Insulators. <i>ACS Nano</i> , <b>2018</b> , 12, 779-785	16.7	36
84	A self-powered brain multi-perception receptor for sensory-substitution application. <i>Nano Energy</i> , <b>2018</b> , 44, 43-52	17.1	36
83	A self-powered electronic-skin for real-time perspiration analysis and application in motion state monitoring. <i>Journal of Materials Chemistry C</i> , <b>2018</b> , 6, 9624-9630	7.1	35
82	Self-powered, wireless-control, neural-stimulating electronic skin for in vivo characterization of synaptic plasticity. <i>Nano Energy</i> , <b>2020</b> , 67, 104182	17.1	35
81	Engineering nanoscale stem cell niche: direct stem cell behavior at cell-matrix interface. <i>Advanced Healthcare Materials</i> , <b>2015</b> , 4, 1900-14	10.1	34
80	Magnetic-Induced-Piezopotential Gated MoS Field-Effect Transistor at Room Temperature. <i>Advanced Materials</i> , <b>2018</b> , 30, 1704524	24	33
79	Diversity of rationality affects the evolution of cooperation. <i>Physical Review E</i> , <b>2009</b> , 79, 055101	2.4	31
78	Generalized projective synchronization in time-delayed chaotic systems. <i>Chaos, Solitons and Fractals</i> , <b>2008</b> , 38, 743-747	9.3	30
77	Low frequency wideband nano generators for energy harvesting from natural environment. <i>Nano Energy</i> , <b>2014</b> , 6, 66-72	17.1	29
76	A water-evaporation-induced self-charging hybrid power unit for application in the Internet of Things. <i>Science Bulletin</i> , <b>2019</b> , 64, 1409-1417	10.6	27
75	A self-powered flexible vision electronic-skin for image recognition based on a pixel-addressable matrix of piezophototronic ZnO nanowire arrays. <i>Journal of Materials Chemistry C</i> , <b>2017</b> , 5, 6005-6013	7.1	26
74	An artificial triboelectricity-brain-behavior closed loop for intelligent olfactory substitution. <i>Nano Energy</i> , <b>2019</b> , 63, 103884	17.1	26
73	Construction of Bio-Piezoelectric Platforms: From Structures and Synthesis to Applications. <i>Advanced Materials</i> , <b>2021</b> , 33, e2008452	24	25
72	Controlling the luminescence of monolayer MoS <sub>2</sub> based on the piezoelectric effect. <i>Nano Research</i> , <b>2017</b> , 10, 2527-2534	10	24
71	Self-powered wearable sensing-textiles for real-time detecting environmental atmosphere and body motion based on surface-triboelectric coupling effect. <i>Nanotechnology</i> , <b>2018</b> , 29, 405504	3.4	23
70	High performance piezotronic logic nanodevices based on GaN/InN/GaN topological insulator. <i>Nano Energy</i> , <b>2018</b> , 50, 544-551	17.1	23
69	Triboelectric-polarization-enhanced high sensitive ZnO UV sensor. <i>Nano Today</i> , <b>2020</b> , 33, 100873	17.9	20
68	Ultra-high sensitivity strain sensor based on piezotronic bipolar transistor. <i>Nano Energy</i> , <b>2018</b> , 50, 744-749	17.1	19

67	Enhanced thermoelectric performance of monolayer MoSSe, bilayer MoSSe and graphene/MoSSe heterogeneous nanoribbons. <i>Physical Chemistry Chemical Physics</i> , <b>2019</b> , 21, 18161-18169	3.6	18
66	A self-powered brain-linked biosensing electronic-skin for actively tasting beverage and its potential application in artificial gustation. <i>Nanoscale</i> , <b>2018</b> , 10, 19987-19994	7.7	18
65	Density functional studies on edge-contacted single-layer MoS2 piezotronic transistors. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 083105	3.4	17
64	Pulse sensor based on single-electrode triboelectric nanogenerator. <i>Sensors and Actuators A: Physical</i> , <b>2018</b> , 280, 326-331	3.9	17
63	Enhanced Efficiency of Flexible GaN/Perovskite Solar Cells Based on the Piezo-Phototronic Effect. <i>ACS Applied Energy Materials</i> , <b>2018</b> , 1, 3063-3069	6.1	17
62	Enhanced thermoelectric performance of twisted bilayer graphene nanoribbons junction. <i>Carbon</i> , <b>2019</b> , 145, 622-628	10.4	16
61	Study on electronic and optical properties of the twisted and strained MoS2/PtS2 heterogeneous interface. <i>Applied Surface Science</i> , <b>2019</b> , 476, 308-316	6.7	16
60	Synthesis of CdS nanorod arrays and their applications in flexible piezo-driven active H2S sensors. <i>Nanotechnology</i> , <b>2014</b> , 25, 075501	3.4	16
59	Effects of piezopotential spatial distribution on local contact dictated transport property of ZnO micro/nanowires. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 033509	3.4	16
58	Dynamical charge transfer model for high surface charge density triboelectric nanogenerators. <i>Nano Energy</i> , <b>2020</b> , 70, 104513	17.1	15
57	Linear humidity response of carbon dot-modified molybdenum disulfide. <i>Physical Chemistry Chemical Physics</i> , <b>2018</b> , 20, 4083-4091	3.6	15
56	Ballistic transport in single-layer MoS2 piezotronic transistors. <i>Nano Research</i> , <b>2016</b> , 9, 282-290	10	15
55	Theoretical study of output of piezoelectric nanogenerator based on composite of PZT nanowires and polymers. <i>Journal of Alloys and Compounds</i> , <b>2016</b> , 675, 306-310	5.7	15
54	A Cu/ZnO Nanowire/Cu Resistive Switching Device. <i>Nano-Micro Letters</i> , <b>2013</b> , 5, 159-162	19.5	15
53	Piezophototronic effect enhanced luminescence of zinc oxide nanowires. <i>Nano Energy</i> , <b>2016</b> , 22, 533-538	7.1	14
52	Modeling the open circuit output voltage of piezoelectric nanogenerator. <i>Science China Technological Sciences</i> , <b>2013</b> , 56, 2622-2629	3.5	14
51	Piezo-phototronic effect enhanced photodetectors based on MAPbI3 perovskite. <i>Journal of Materials Chemistry C</i> , <b>2020</b> , 8, 2709-2718	7.1	13
50	Dynamic model for piezotronic and piezo-phototronic devices under low and high frequency external compressive stresses. <i>Journal of Applied Physics</i> , <b>2018</b> , 123, 025709	2.5	13

49	A tactile sensor translating texture and sliding motion information into electrical pulses. <i>Nanoscale</i> , <b>2015</b> , 7, 10801-6	7.7	13
48	High performance piezotronic devices based on non-uniform strain. <i>Nano Energy</i> , <b>2019</b> , 60, 649-655	17.1	12
47	High-efficiency and stable piezo-phototronic organic perovskite solar cell.. <i>RSC Advances</i> , <b>2018</b> , 8, 8694-8698	3.7	12
46	Piezotronic analog-to-digital converters based on strain-gated transistors. <i>Nano Energy</i> , <b>2018</b> , 46, 423-427	17.1	11
45	One-to-Many Chaotic Synchronization with Application in Wireless Sensor Network. <i>IEEE Communications Letters</i> , <b>2013</b> , 17, 1782-1785	3.8	10
44	Theoretical study of piezotronic heterojunction. <i>Science China Technological Sciences</i> , <b>2013</b> , 56, 2615-2621	3.5	10
43	A self-powered AC magnetic sensor based on piezoelectric nanogenerator. <i>Nanotechnology</i> , <b>2014</b> , 25, 455503	3.4	10
42	Density functional studies on wurtzite piezotronic transistors: influence of different semiconductors and metals on piezoelectric charge distribution and Schottky barrier. <i>Nanotechnology</i> , <b>2016</b> , 27, 205204	3.4	10
41	Piezo-phototronic solar cell based on 2D monochalcogenides materials. <i>Journal Physics D: Applied Physics</i> , <b>2019</b> , 52, 204001	3	10
40	Piezotronic effect on the luminescence of quantum dots for micro/nano-newton force measurement. <i>Nano Research</i> , <b>2018</b> , 11, 1977-1986	10	9
39	Theoretical study on the top- and enclosed-contacted single-layer MoS2 piezotronic transistors. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 181603	3.4	9
38	Two-dimensional electron gas in piezotronic devices. <i>Nano Energy</i> , <b>2019</b> , 59, 667-673	17.1	7
37	Piezotronic spin and valley transistors based on monolayer MoS2. <i>Nano Energy</i> , <b>2020</b> , 72, 104678	17.1	7
36	Study of the Application of Deep Convolutional Neural Networks (CNNs) in Processing Sensor Data and Biomedical Images. <i>Sensors</i> , <b>2019</b> , 19,	3.8	7
35	Simulation of wavelength selection using ZnO nanowires array. <i>Journal of Applied Physics</i> , <b>2017</b> , 121, 214302	2.5	7
34	High-performance piezo-phototronic multijunction solar cells based on single-type two-dimensional materials. <i>Nano Energy</i> , <b>2020</b> , 76, 105091	17.1	6
33	Atomic-thick 2D MoS2/insulator interjection structures for enhancing nanogenerator output. <i>Journal of Materials Chemistry C</i> , <b>2018</b> , 6, 899-906	7.1	6
32	A self-powered wearable body-detecting/brain-stimulating system for improving sports endurance performance. <i>Nano Energy</i> , <b>2022</b> , 93, 106851	17.1	6

31	Quantum piezotronic devices based on ZnO/CdO quantum well topological insulator. <i>Nano Energy</i> , <b>2020</b> , 77, 105154	17.1	6
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29	Quantum information memory based on reconfigurable topological insulators by piezotronic effect. <i>Nano Energy</i> , <b>2019</b> , 60, 36-42	17.1	5
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26	Effect of geometrical rotation on conductance fluctuations in graphene quantum dots. <i>Journal of Physics Condensed Matter</i> , <b>2013</b> , 25, 105802	1.8	5
25	A self-powered closed-loop brain-machine-interface system for real-time detecting and rapidly adjusting blood glucose concentration. <i>Nano Energy</i> , <b>2022</b> , 93, 106817	17.1	4
24	Nanogenerator-based self-powered sensors for data collection. <i>Beilstein Journal of Nanotechnology</i> , <b>2021</b> , 12, 680-693	3	4
23	Optical and Piezoelectric Properties of Strained Orthorhombic PdS <sub>2</sub> . <i>IEEE Nanotechnology Magazine</i> , <b>2019</b> , 18, 358-364	2.6	3
22	Theoretical study of electric energy consumption for self-powered chaos signal generator. <i>Science China Technological Sciences</i> , <b>2014</b> , 57, 1063-1067	3.5	3
21	Triboelectric nanogenerator and artificial intelligence to promote precision medicine for cancer. <i>Nano Energy</i> , <b>2022</b> , 92, 106783	17.1	3
20	Flexible sensor and energy storage device based on piezoelectric nanogenerator. <i>Wuli Xuebao/Acta Physica Sinica</i> , <b>2020</b> , 69, 170701	0.6	3
19	C-V characteristics of piezotronic metal-insulator-semiconductor transistor. <i>Science Bulletin</i> , <b>2020</b> , 65, 161-168	10.6	3
18	Dynamical charge transfer for high-performance triboelectric nanogenerators. <i>Nano Select</i> , <b>2020</b> , 1, 461-470	3.1	3
17	High-Performance Piezo-Phototronic Devices Based on Intersubband Transition of Wurtzite Quantum Well. <i>Small</i> , <b>2021</b> , 17, e2008106	11	3
16	Pyroelectric Energy Harvesting: Materials and Applications <b>2018</b> , 203-229		3
15	Combining triboelectric nanogenerator with piezoelectric effect for optimizing Schottky barrier height modulation. <i>Science Bulletin</i> , <b>2021</b> , 66, 1409-1418	10.6	3
14	Piezo-phototronic effect on quantum well terahertz photodetector for continuously modulating wavelength. <i>Nano Energy</i> , <b>2019</b> , 65, 104091	17.1	2

13	On the mechanism and optimization of triboelectric nanogenerators. <i>Nanotechnology</i> , <b>2015</b> , 26, 425401	3.4	2
12	Piezoelectricity and electronic structures of ZnO thin films: A density functional theory study. <i>Surface Science</i> , <b>2015</b> , 642, 45-50	1.8	2
11	Piezotronic transistors in nonlinear circuit: Model and simulation. <i>Science China Technological Sciences</i> , <b>2015</b> , 58, 1348-1354	3.5	2
10	Constructing nanocomposites with robust covalent connection between nanoparticles and polymer for high discharged energy density and excellent tensile properties. <i>Journal of Energy Chemistry</i> , <b>2021</b> , 68, 195-195	12	1
9	Piezo-phototronic intersubband terahertz devices based on layer-dependent van der Waals quantum well. <i>Nano Energy</i> , <b>2022</b> , 94, 106912	17.1	1
8	Piezophototronic Effect Enhanced Perovskite Solar Cell Based on P(VDF-TrFE). <i>Solar Rrl</i> , 2100692	7.1	1
7	Polarization-induced ultrahigh Rashba spin-orbit interaction in ZnO/CdO quantum well. <i>Nano Energy</i> , <b>2021</b> , 88, 106310	17.1	1
6	High performance quantum piezotronic tunneling transistor based on edge states of MoS2 nanoribbon. <i>Nano Energy</i> , <b>2022</b> , 98, 107275	17.1	1
5	Piezo-phototronic spin laser based on wurtzite quantum wells. <i>Nano Energy</i> , <b>2022</b> , 96, 107100	17.1	0
4	Piezoelectric tunability and topological insulator transition in a GaN/InN/GaN quantum-well device. <i>JPhys Materials</i> , <b>2021</b> , 4, 034008	4.2	
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2	Polarization Field on Edge States of Single-layered MoS2. <i>Journal of Physics: Conference Series</i> , <b>2021</b> , 2002, 012053	0.3	
1	Ultrahigh Sensitivity and Ultrafast Piezotronic and Piezophototronic Avalanche Devices. <i>Nano Energy</i> , <b>2022</b> , 107450	17.1	