# Yan Zhang

## List of Publications by Year in Descending Order



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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 | Triboelectric nanogenerator and artificial intelligence to promote precision medicine for cancer. *Nano Energy*, **2022**, 92, 106783 | 17.1 | 3 |
| 173 | A self-powered wearable body-detecting/brain-stimulating system for improving sports endurance performance. *Nano Energy*, **2022**, 93, 106851 | 17.1 | 6 |
| 172 | A self-powered closed-loop brain-machine-interface system for real-time detecting and rapidly adjusting blood glucose concentration. *Nano Energy*, **2022**, 93, 106817 | 17.1 | 4 |
| 171 | Piezo-phototronic intersubband terahertz devices based on layer-dependent van der Waals quantum well. *Nano Energy*, **2022**, 94, 106912 | 17.1 | 1 |
| 170 | Piezo-phototronic spin laser based on wurtzite quantum wells. *Nano Energy*, **2022**, 96, 107100 | 17.1 | 0 |
| 169 | High performance quantum piezotronic tunneling transistor based on edge states of MoS2 nanoribbon. *Nano Energy*, **2022**, 98, 107275 | 17.1 | 1 |
| 168 | Ultrahigh Sensitivity and Ultrafast Piezotronic and Piezophototronic Avalanche Devices. *Nano Energy*, **2022**, 107450 | 17.1 | |
| 167 | Constructing nanocomposites with robust covalent connection between nanoparticles and polymer for high discharged energy density and excellent tensile properties. *Journal of Energy Chemistry*, **2021**, 68, 195-195 | 12 | 1 |
| 166 | High-Performance Piezo-Phototronic Devices Based on Intersubband Transition of Wurtzite Quantum Well. *Small*, **2021**, 17, e2008106 | 11 | 3 |
| 165 | Piezoelectric tunability and topological insulator transition in a GaN/InN/GaN quantum-well device. *JPhys Materials*, **2021**, 4, 034008 | 4.2 | |
| 164 | Construction of Bio-Piezoelectric Platforms: From Structures and Synthesis to Applications. *Advanced Materials*, **2021**, 33, e2008452 | 24 | 25 |
| 163 | Triboelectric nanogenerator based self-powered sensor for artificial intelligence. *Nano Energy*, **2021**, 84, 105887 | 17.1 | 47 |
| 162 | Edge-state transport in circular quantum point contact quantum piezotronic transistors. *Nano Energy*, **2021**, 85, 106002 | 17.1 | |
| 161 | Nanogenerator-based self-powered sensors for data collection. *Beilstein Journal of Nanotechnology* , **2021**, 12, 680-693 | 3 | 4 |
| 160 | Combining triboelectric nanogenerator with piezoelectric effect for optimizing Schottky barrier height modulation. *Science Bulletin*, **2021**, 66, 1409-1418 | 10.6 | 3 |
| 159 | Polarization Field on Edge States of Single-layered MoS2. *Journal of Physics: Conference Series*, **2021** , 2002, 012053 | 0.3 | |
| 158 | Polarization-induced ultrahigh Rashba spin-orbit interaction in ZnO/CdO quantum well. *Nano Energy*, **2021**, 88, 106310 | 17.1 | 1 |

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| 157 | A chemically self-charging aqueous zinc-ion battery. *Nature Communications*, **2020**, 11, 2199 | 17.4 | 101 |
| 156 | Triboelectric-polarization-enhanced high sensitive ZnO UV sensor. *Nano Today*, **2020**, 33, 100873 | 17.9 | 20 |
| 155 | Polarization-Driven Edge-State Transport in Transition-Metal Dichalcogenides. *Physical Review Applied*, **2020**, 13, | 4.3 | 5 |
| 154 | Demonstration of Enhanced Piezo-Catalysis for Hydrogen Generation and Water Treatment at the Ferroelectric Curie Temperature. *IScience*, **2020**, 23, 101095 | 6.1 | 41 |
| 153 | Triboelectric Nanogenerator Enhanced Schottky Nanowire Sensor for Highly Sensitive Ethanol Detection. *Nano Letters*, **2020**, 20, 4968-4974 | 11.5 | 38 |
| 152 | Piezotronic spin and valley transistors based on monolayer MoS2. *Nano Energy*, **2020**, 72, 104678 | 17.1 | 7 |
| 151 | High-performance piezo-phototronic multijunction solar cells based on single-type two-dimensional materials. *Nano Energy*, **2020**, 76, 105091 | 17.1 | 6 |
| 150 | Piezo-phototronic effect enhanced photodetectors based on MAPbI3 perovskite. *Journal of Materials Chemistry C*, **2020**, 8, 2709-2718 | 7.1 | 13 |
| 149 | Dynamical charge transfer model for high surface charge density triboelectric nanogenerators. *Nano Energy*, **2020**, 70, 104513 | 17.1 | 15 |
| 148 | Flexible sensor and energy storage device based on piezoelectric nanogenerator. *Wuli Xuebao/Acta Physica Sinica*, **2020**, 69, 170701 | 0.6 | 3 |
| 147 | C-V characteristics of piezotronic metal-insulator-semiconductor transistor. *Science Bulletin*, **2020**, 65, 161-168 | 10.6 | 3 |
| 146 | Self-powered, wireless-control, neural-stimulating electronic skin for in vivo characterization of synaptic plasticity. *Nano Energy*, **2020**, 67, 104182 | 17.1 | 35 |
| 145 | ReviewEnergy Autonomous Wearable Sensors for Smart Healthcare: A Review. *Journal of the Electrochemical Society*, **2020**, 167, 037516 | 3.9 | 44 |
| 144 | Reversible Conversion between Schottky and Ohmic Contacts for Highly Sensitive, Multifunctional Biosensors. *Advanced Functional Materials*, **2020**, 30, 1907999 | 15.6 | 39 |
| 143 | Piezoelectric Materials for Controlling Electro-Chemical Processes. *Nano-Micro Letters*, **2020**, 12, 149 | 19.5 | 38 |
| 142 | Quantum piezotronic devices based on ZnO/CdO quantum well topological insulator. *Nano Energy*, **2020**, 77, 105154 | 17.1 | 6 |
| 141 | Dynamical charge transfer for high-performance triboelectric nanogenerators. *Nano Select*, **2020**, 1, 461-470 | 3.1 | 3 |
| 140 | Piezo-phototronic effect on quantum well terahertz photodetector for continuously modulating wavelength. *Nano Energy*, **2019**, 65, 104091 | 17.1 | 2 |

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|---|---|---|---|
| 139 | Enhanced thermoelectric performance of twisted bilayer graphene nanoribbons junction. *Carbon*, **2019**, 145, 622-628 | 10.4 | 16 |
| 138 | Study on electronic and optical properties of the twisted and strained MoS2/PtS2 heterogeneous interface. *Applied Surface Science*, **2019**, 476, 308-316 | 6.7 | 16 |
| 137 | Optical and Piezoelectric Properties of Strained Orthorhombic PdS2. *IEEE Nanotechnology Magazine*, **2019**, 18, 358-364 | 2.6 | 3 |
| 136 | Quantum information memory based on reconfigurable topological insulators by piezotronic effect. *Nano Energy*, **2019**, 60, 36-42 | 17.1 | 5 |
| 135 | A self-powered flexibly-arranged gas monitoring system with evaporating rainwater as fuel for building atmosphere big data. *Nano Energy*, **2019**, 60, 52-60 | 17.1 | 40 |
| 134 | Two-dimensional electron gas in piezotronic devices. *Nano Energy*, **2019**, 59, 667-673 | 17.1 | 7 |
| 133 | A self-powered wearable sweat-evaporation-biosensing analyzer for building sports big data. *Nano Energy*, **2019**, 59, 754-761 | 17.1 | 75 |
| 132 | Piezoelectric Nanotopography Induced Neuron-Like Differentiation of Stem Cells. *Advanced Functional Materials*, **2019**, 29, 1900372 | 15.6 | 36 |
| 131 | High performance piezotronic devices based on non-uniform strain. *Nano Energy*, **2019**, 60, 649-655 | 17.1 | 12 |
| 130 | Enhanced thermoelectric performance of monolayer MoSSe, bilayer MoSSe and graphene/MoSSe heterogeneous nanoribbons. *Physical Chemistry Chemical Physics*, **2019**, 21, 18161-18169 | 3.6 | 18 |
| 129 | Study of the Application of Deep Convolutional Neural Networks (CNNs) in Processing Sensor Data and Biomedical Images. *Sensors*, **2019**, 19, | 3.8 | 7 |
| 128 | An artificial triboelectricity-brain-behavior closed loop for intelligent olfactory substitution. *Nano Energy*, **2019**, 63, 103884 | 17.1 | 26 |
| 127 | A water-evaporation-induced self-charging hybrid power unit for application in the Internet of Things. *Science Bulletin*, **2019**, 64, 1409-1417 | 10.6 | 27 |
| 126 | Piezo-phototronic solar cell based on 2D monochalcogenides materials. *Journal Physics D: Applied Physics*, **2019**, 52, 204001 | 3 | 10 |
| 125 | Micro-scale to nano-scale generators for energy harvesting: Self powered piezoelectric, triboelectric and hybrid devices. *Physics Reports*, **2019**, 792, 1-33 | 27.7 | 80 |
| 124 | High-efficiency and stable piezo-phototronic organic perovskite solar cell.. *RSC Advances*, **2018**, 8, 8694-8698 | 3.7 | 12 |
| 123 | Piezoelectric Polyacrylonitrile Nanofiber Film-Based Dual-Function Self-Powered Flexible Sensor. *ACS Applied Materials & Interfaces*, **2018**, 10, 15855-15863 | 9.5 | 83 |
| 122 | A Self-Powered Brain-Linked Vision Electronic-Skin Based on Triboelectric-Photodetecing Pixel-Addressable Matrix for Visual-Image Recognition and Behavior Intervention. *Advanced Functional Materials*, **2018**, 28, 1800275 | 15.6 | 52 |

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| 121 | Strain Modulated Electronic, Mechanical, and Optical Properties of the Monolayer PdS2, PdSe2, and PtSe2 for Tunable Devices. *ACS Applied Nano Materials*, **2018**, 1, 1932-1939 | 5.6 | 57 |
| 120 | Piezotronic analog-to-digital converters based on strain-gated transistors. *Nano Energy*, **2018**, 46, 423-427 | 17.1 | 11 |
| 119 | Piezotronic Effect on Rashba Spin-Orbit Coupling in a ZnO/P3HT Nanowire Array Structure. *ACS Nano*, **2018**, 12, 1811-1820 | 16.7 | 44 |
| 118 | Piezotronic Transistor Based on Topological Insulators. *ACS Nano*, **2018**, 12, 779-785 | 16.7 | 36 |
| 117 | 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. *Nanoscale*, **2018**, 10, 2099-2107 | 7.7 | 38 |
| 116 | Atomic-thick 2D MoS2/insulator interjection structures for enhancing nanogenerator output. *Journal of Materials Chemistry C*, **2018**, 6, 899-906 | 7.1 | 6 |
| 115 | Dynamic model for piezotronic and piezo-phototronic devices under low and high frequency external compressive stresses. *Journal of Applied Physics*, **2018**, 123, 025709 | 2.5 | 13 |
| 114 | Linear humidity response of carbon dot-modified molybdenum disulfide. *Physical Chemistry Chemical Physics*, **2018**, 20, 4083-4091 | 3.6 | 15 |
| 113 | Magnetic-Induced-Piezopotential Gated MoS Field-Effect Transistor at Room Temperature. *Advanced Materials*, **2018**, 30, 1704524 | 24 | 33 |
| 112 | Strain Magnitude and Direction Effect on the Energy Band Structure of Hexagonal and Orthorhombic Monolayer MoS$_2$. *IEEE Nanotechnology Magazine*, **2018**, 17, 419-423 | 2.6 | 5 |
| 111 | Piezotronic effect on the luminescence of quantum dots for micro/nano-newton force measurement. *Nano Research*, **2018**, 11, 1977-1986 | 10 | 9 |
| 110 | Pulse sensor based on single-electrode triboelectric nanogenerator. *Sensors and Actuators A: Physical*, **2018**, 280, 326-331 | 3.9 | 17 |
| 109 | Flexible Electronics Based on Micro/Nanostructured Paper. *Advanced Materials*, **2018**, 30, e1801588 | 24 | 185 |
| 108 | Enhanced Efficiency of Flexible GaN/Perovskite Solar Cells Based on the Piezo-Phototronic Effect. *ACS Applied Energy Materials*, **2018**, 1, 3063-3069 | 6.1 | 17 |
| 107 | Self-powered wearable sensing-textiles for real-time detecting environmental atmosphere and body motion based on surface-triboelectric coupling effect. *Nanotechnology*, **2018**, 29, 405504 | 3.4 | 23 |
| 106 | A self-powered electronic-skin for real-time perspiration analysis and application in motion state monitoring. *Journal of Materials Chemistry C*, **2018**, 6, 9624-9630 | 7.1 | 35 |
| 105 | High performance piezotronic logic nanodevices based on GaN/InN/GaN topological insulator. *Nano Energy*, **2018**, 50, 544-551 | 17.1 | 23 |
| 104 | A self-powered brain multi-perception receptor for sensory-substitution application. *Nano Energy*, **2018**, 44, 43-52 | 17.1 | 36 |

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| 103 | A self-powered brain-linked biosensing electronic-skin for actively tasting beverage and its potential application in artificial gustation. *Nanoscale*, **2018**, 10, 19987-19994 | 7.7 | 18 |
| 102 | A Self-Powered Breath Analyzer Based on PANI/PVDF Piezo-Gas-Sensing Arrays for Potential Diagnostics Application. *Nano-Micro Letters*, **2018**, 10, 76 | 19.5 | 51 |
| 101 | Theory of piezotronics and piezo-phototronics. *MRS Bulletin*, **2018**, 43, 928-935 | 3.2 | 50 |
| 100 | Pyroelectric Energy Harvesting: Materials and Applications **2018**, 203-229 | | 3 |
| 99 | Enhanced H2 Production of TiO2/ZnO Nanowires Co-Using Solar and Mechanical Energy through Piezo-Photocatalytic Effect. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 10162-10172 | 8.3 | 67 |
| 98 | Ultra-high sensitivity strain sensor based on piezotronic bipolar transistor. *Nano Energy*, **2018**, 50, 744-749 | 17.1 | 19 |
| 97 | High-performance piezo-phototronic solar cell based on two-dimensional materials. *Nano Energy*, **2017**, 32, 448-453 | 17.1 | 53 |
| 96 | A self-powered flexible vision electronic-skin for image recognition based on a pixel-addressable matrix of piezophototronic ZnO nanowire arrays. *Journal of Materials Chemistry C*, **2017**, 5, 6005-6013 | 7.1 | 26 |
| 95 | Piezotronic PIN diode for microwave and piezophototronic devices. *Semiconductor Science and Technology*, **2017**, 32, 044002 | 1.8 | 5 |
| 94 | Controlling the luminescence of monolayer MoS2 based on the piezoelectric effect. *Nano Research*, **2017**, 10, 2527-2534 | 10 | 24 |
| 93 | Piezo-phototronic Effect Enhanced Responsivity of Photon Sensor Based on Composition-Tunable Ternary CdSxSe1⊠ Nanowires. *ACS Photonics*, **2017**, 4, 2495-2503 | 6.3 | 40 |
| 92 | All-solid-state flexible self-charging power cell basing on piezo-electrolyte for harvesting/storing body-motion energy and powering wearable electronics. *Nano Energy*, **2017**, 39, 590-600 | 17.1 | 68 |
| 91 | BaTiO3 nanocrystal-mediated micro pseudo-electrochemical cells with ultrasound-driven piezotronic enhancement for polymerization. *Nano Energy*, **2017**, 39, 461-469 | 17.1 | 54 |
| 90 | A Self-Powered Wearable Noninvasive Electronic-Skin for Perspiration Analysis Based on Piezo-Biosensing Unit Matrix of Enzyme/ZnO Nanoarrays. *ACS Applied Materials & Interfaces*, **2017**, 9, 29526-29537 | 9.5 | 86 |
| 89 | Control of electro-chemical processes using energy harvesting materials and devices. *Chemical Society Reviews*, **2017**, 46, 7757-7786 | 58.5 | 98 |
| 88 | A flexible self-powered T-ZnO/PVDF/fabric electronic-skin with multi-functions of tactile-perception, atmosphere-detection and self-clean. *Nano Energy*, **2017**, 31, 37-48 | 17.1 | 123 |
| 87 | In-situ synthesized polypyrrole-cellulose conductive networks for potential-tunable foldable power paper. *Nano Energy*, **2017**, 31, 174-182 | 17.1 | 93 |
| 86 | Simulation of wavelength selection using ZnO nanowires array. *Journal of Applied Physics*, **2017**, 121, 214302 | 2.5 | 7 |

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| 85 | High thermostable ordered mesoporous SiO2–TiO2 coated circulating-bed biofilm reactor for unpredictable photocatalytic and biocatalytic performance. *Applied Catalysis B: Environmental*, **2016**, 180, 521-529 | 21.8 | 88 |
| 84 | Outputting Olfactory Bionic Electric Impulse by PANI/PTFE/PANI Sandwich Nanostructures and their Application as Flexible, Smelling Electronic Skin. *Advanced Functional Materials*, **2016**, 26, 3128-3138 | 15.6 | 80 |
| 83 | Theoretical study on two-dimensional MoS2 piezoelectric nanogenerators. *Nano Research*, **2016**, 9, 800-807 | 10 | 67 |
| 82 | Ballistic transport in single-layer MoS2 piezotronic transistors. *Nano Research*, **2016**, 9, 282-290 | 10 | 15 |
| 81 | Theoretical study of output of piezoelectric nanogenerator based on composite of PZT nanowires and polymers. *Journal of Alloys and Compounds*, **2016**, 675, 306-310 | 5.7 | 15 |
| 80 | Piezophototronic effect enhanced luminescence of zinc oxide nanowires. *Nano Energy*, **2016**, 22, 533-538 | 17.1 | 14 |
| 79 | Lattice Strain Induced Remarkable Enhancement in Piezoelectric Performance of ZnO-Based Flexible Nanogenerators. *ACS Applied Materials & Interfaces*, **2016**, 8, 1381-7 | 9.5 | 102 |
| 78 | Progress in Piezo-Phototronic-Effect-Enhanced Light-Emitting Diodes and Pressure Imaging. *Advanced Materials*, **2016**, 28, 1535-52 | 24 | 93 |
| 77 | In Situ Fabrication of Vertical Multilayered MoS2/Si Homotype Heterojunction for High-Speed Visible-Near-Infrared Photodetectors. *Small*, **2016**, 12, 1062-71 | 11 | 142 |
| 76 | Theoretical study on the top- and enclosed-contacted single-layer MoS2 piezotronic transistors. *Applied Physics Letters*, **2016**, 108, 181603 | 3.4 | 9 |
| 75 | Self-powered electronic-skin for detecting glucose level in body fluid basing on piezo-enzymatic-reaction coupling process. *Nano Energy*, **2016**, 26, 148-156 | 17.1 | 51 |
| 74 | Density functional studies on wurtzite piezotronic transistors: influence of different semiconductors and metals on piezoelectric charge distribution and Schottky barrier. *Nanotechnology*, **2016**, 27, 205204 | 3.4 | 10 |
| 73 | Piezo-potential enhanced photocatalytic degradation of organic dye using ZnO nanowires. *Nano Energy*, **2015**, 13, 414-422 | 17.1 | 249 |
| 72 | Detecting Liquefied Petroleum Gas (LPG) at Room Temperature Using ZnSnO3/ZnO Nanowire Piezo-Nanogenerator as Self-Powered Gas Sensor. *ACS Applied Materials & Interfaces*, **2015**, 7, 10482-90 | 9.5 | 50 |
| 71 | Enhanced ferroelectric-nanocrystal-based hybrid photocatalysis by ultrasonic-wave-generated piezophototronic effect. *Nano Letters*, **2015**, 15, 2372-9 | 11.5 | 308 |
| 70 | Density functional studies on edge-contacted single-layer MoS2 piezotronic transistors. *Applied Physics Letters*, **2015**, 107, 083105 | 3.4 | 17 |
| 69 | On the mechanism and optimization of triboelectric nanogenerators. *Nanotechnology*, **2015**, 26, 425401 | 3.4 | 2 |
| 68 | Piezoelectricity and electronic structures of ZnO thin films: A density functional theory study. *Surface Science*, **2015**, 642, 45-50 | 1.8 | 2 |

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| 67 | Self-powered acoustic source locator in underwater environment based on organic film triboelectric nanogenerator. *Nano Research*, **2015**, 8, 765-773 | 10 | 56 |
| 66 | Piezotronic transistors in nonlinear circuit: Model and simulation. *Science China Technological Sciences*, **2015**, 58, 1348-1354 | 3.5 | 2 |
| 65 | A Streaming Potential/Current-Based Microfluidic Direct Current Generator for Self-Powered Nanosystems. *Advanced Materials*, **2015**, 27, 6482-7 | 24 | 71 |
| 64 | Flexible, Stretchable and Wearable Multifunctional Sensor Array as Artificial Electronic Skin for Static and Dynamic Strain Mapping. *Advanced Electronic Materials*, **2015**, 1, 1500142 | 6.4 | 177 |
| 63 | Engineering nanoscale stem cell niche: direct stem cell behavior at cell-matrix interface. *Advanced Healthcare Materials*, **2015**, 4, 1900-14 | 10.1 | 34 |
| 62 | A tactile sensor translating texture and sliding motion information into electrical pulses. *Nanoscale*, **2015**, 7, 10801-6 | 7.7 | 13 |
| 61 | First principle simulations of piezotronic transistors. *Nano Energy*, **2015**, 14, 355-363 | 17.1 | 40 |
| 60 | Fundamental theories of piezotronics and piezo-phototronics. *Nano Energy*, **2015**, 14, 257-275 | 17.1 | 118 |
| 59 | Low frequency wideband nano generators for energy harvesting from natural environment. *Nano Energy*, **2014**, 6, 66-72 | 17.1 | 29 |
| 58 | Pt/ZnO nanoarray nanogenerator as self-powered active gas sensor with linear ethanol sensing at room temperature. *Nanotechnology*, **2014**, 25, 115502 | 3.4 | 63 |
| 57 | Flexible Self-Charging Power Cell for One-Step Energy Conversion and Storage. *Advanced Energy Materials*, **2014**, 4, 1301329 | 21.8 | 74 |
| 56 | PVDF-PZT nanocomposite film based self-charging power cell. *Nanotechnology*, **2014**, 25, 105401 | 3.4 | 53 |
| 55 | PVDF mesoporous nanostructures as the piezo-separator for a self-charging power cell. *Nano Energy*, **2014**, 10, 44-52 | 17.1 | 74 |
| 54 | Room-temperature self-powered ethanol sensing of a Pd/ZnO nanoarray nanogenerator driven by human finger movement. *Nanoscale*, **2014**, 6, 4604-10 | 7.7 | 103 |
| 53 | Synthesis of CdS nanorod arrays and their applications in flexible piezo-driven active H2S sensors. *Nanotechnology*, **2014**, 25, 075501 | 3.4 | 16 |
| 52 | 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 H2S sensor. *Nanotechnology*, **2014**, 25, 265501 | 3.4 | 47 |
| 51 | Theoretical study of electric energy consumption for self-powered chaos signal generator. *Science China Technological Sciences*, **2014**, 57, 1063-1067 | 3.5 | 3 |
| 50 | Fiber-based generator for wearable electronics and mobile medication. *ACS Nano*, **2014**, 8, 6273-80 | 16.7 | 453 |

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| 49 | Portable room-temperature self-powered/active H2 sensor driven by human motion through piezoelectric screening effect. *Nano Energy*, **2014**, 8, 34-43 | 17.1 | 60 |
| 48 | A self-powered AC magnetic sensor based on piezoelectric nanogenerator. *Nanotechnology*, **2014**, 25, 455503 | 3.4 | 10 |
| 47 | Magnetic-mechanical-electrical-optical coupling effects in GaN-based LED/rare-earth terfenol-D structures. *Advanced Materials*, **2014**, 26, 6767-72 | 24 | 49 |
| 46 | Biomolecule-adsorption-dependent piezoelectric output of ZnO nanowire nanogenerator and its application as self-powered active biosensor. *Biosensors and Bioelectronics*, **2014**, 57, 269-75 | 11.8 | 62 |
| 45 | Finger typing driven triboelectric nanogenerator and its use for instantaneously lighting up LEDs. *Nano Energy*, **2013**, 2, 491-497 | 17.1 | 222 |
| 44 | CuO/PVDF nanocomposite anode for a piezo-driven self-charging lithium battery. *Energy and Environmental Science*, **2013**, 6, 2615 | 35.4 | 90 |
| 43 | One-to-Many Chaotic Synchronization with Application in Wireless Sensor Network. *IEEE Communications Letters*, **2013**, 17, 1782-1785 | 3.8 | 10 |
| 42 | Piezotronics and piezo-phototronics □From single nanodevices to array of devices and then to integrated functional system. *Nano Today*, **2013**, 8, 619-642 | 17.9 | 129 |
| 41 | Theoretical study of piezotronic heterojunction. *Science China Technological Sciences*, **2013**, 56, 2615-2621 | 3.5 | 10 |
| 40 | Modeling the open circuit output voltage of piezoelectric nanogenerator. *Science China Technological Sciences*, **2013**, 56, 2622-2629 | 3.5 | 14 |
| 39 | A self-powered piezotronic strain sensor based on single ZnSnO3 microbelts. *RSC Advances*, **2013**, 3, 25184 | 3.7 | 44 |
| 38 | An elastic-spring-substrated nanogenerator as an active sensor for self-powered balance. *Energy and Environmental Science*, **2013**, 6, 1164 | 35.4 | 47 |
| 37 | Transparent flexible nanogenerator as self-powered sensor for transportation monitoring. *Nano Energy*, **2013**, 2, 75-81 | 17.1 | 147 |
| 36 | Effect of geometrical rotation on conductance fluctuations in graphene quantum dots. *Journal of Physics Condensed Matter*, **2013**, 25, 105802 | 1.8 | 5 |
| 35 | A Cu/ZnO Nanowire/Cu Resistive Switching Device. *Nano-Micro Letters*, **2013**, 5, 159-162 | 19.5 | 15 |
| 34 | Nano-Newton transverse force sensor using a vertical GaN nanowire based on the piezotronic effect. *Advanced Materials*, **2013**, 25, 883-8 | 24 | 81 |
| 33 | Surface free-carrier screening effect on the output of a ZnO nanowire nanogenerator and its potential as a self-powered active gas sensor. *Nanotechnology*, **2013**, 24, 225501 | 3.4 | 132 |
| 32 | Replacing a battery by a nanogenerator with 20 V output. *Advanced Materials*, **2012**, 24, 110-4 | 24 | 224 |

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| 31 | Nanowire piezo-phototronic photodetector: theory and experimental design. *Advanced Materials*, **2012**, 24, 1410-7 | 24 | 107 |
| 30 | Piezo-phototronic effect on electroluminescence properties of p-type GaN thin films. *Nano Letters*, **2012**, 12, 3851-6 | 11.5 | 52 |
| 29 | Lead-free nanogenerator made from single ZnSnO3 microbelt. *ACS Nano*, **2012**, 6, 4335-40 | 16.7 | 111 |
| 28 | Nanogenerator as an active sensor for vortex capture and ambient wind-velocity detection. *Energy and Environmental Science*, **2012**, 5, 8528 | 35.4 | 69 |
| 27 | Hybridizing energy conversion and storage in a mechanical-to-electrochemical process for self-charging power cell. *Nano Letters*, **2012**, 12, 5048-54 | 11.5 | 210 |
| 26 | Electricity generation based on vertically aligned PbZr0.2Ti0.8O3 nanowire arrays. *Nano Energy*, **2012**, 1, 424-428 | 17.1 | 40 |
| 25 | Piezo-phototronic effect of CdSe nanowires. *Advanced Materials*, **2012**, 24, 5470-5 | 24 | 72 |
| 24 | Flexible and transparent nanogenerators based on a composite of lead-free ZnSnO3 triangular-belts. *Advanced Materials*, **2012**, 24, 6094-9 | 24 | 100 |
| 23 | Pyroelectric nanogenerators for driving wireless sensors. *Nano Letters*, **2012**, 12, 6408-13 | 11.5 | 183 |
| 22 | Piezo-phototronic effect enhanced visible and ultraviolet photodetection using a ZnO-CdS core-shell micro/nanowire. *ACS Nano*, **2012**, 6, 9229-36 | 16.7 | 164 |
| 21 | Piezo-phototronics effect on nano/microwire solar cells. *Energy and Environmental Science*, **2012**, 5, 6850 | 35.4 | 111 |
| 20 | Strain-gated piezotronic transistors based on vertical zinc oxide nanowires. *ACS Nano*, **2012**, 6, 3760-6 | 16.7 | 99 |
| 19 | Ultrahigh sensitive piezotronic strain sensors based on a ZnSnO3 nanowire/microwire. *ACS Nano*, **2012**, 6, 4369-74 | 16.7 | 148 |
| 18 | Vertically aligned CdSe nanowire arrays for energy harvesting and piezotronic devices. *ACS Nano*, **2012**, 6, 6478-82 | 16.7 | 79 |
| 17 | Theory of piezo-phototronics for light-emitting diodes. *Advanced Materials*, **2012**, 24, 4712-8 | 24 | 50 |
| 16 | Pyroelectric nanogenerators for harvesting thermoelectric energy. *Nano Letters*, **2012**, 12, 2833-8 | 11.5 | 510 |
| 15 | Self-powered system with wireless data transmission. *Nano Letters*, **2011**, 11, 2572-7 | 11.5 | 349 |
| 14 | Polar charges induced electric hysteresis of ZnO nano/microwire for fast data storage. *Nano Letters* , **2011**, 11, 2829-34 | 11.5 | 94 |

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| 13 | Anisotropic outputs of a nanogenerator from oblique-aligned ZnO nanowire arrays. *ACS Nano*, **2011**, 5, 6707-13 | 16.7 | 53 |
| 12 | Fundamental theory of piezotronics. *Advanced Materials*, **2011**, 23, 3004-13 | 24 | 372 |
| 11 | Self-heating and external strain coupling induced phase transition of VO nanobeam as single domain switch. *Advanced Materials*, **2011**, 23, 3536-41 | 24 | 58 |
| 10 | A nanogenerator for energy harvesting from a rotating tire and its application as a self-powered pressure/speed sensor. *Advanced Materials*, **2011**, 23, 4068-71 | 24 | 200 |
| 9 | Piezotronic effect on the output voltage of P3HT/ZnO micro/nanowire heterojunction solar cells. *Nano Letters*, **2011**, 11, 4812-7 | 11.5 | 122 |
| 8 | High output nanogenerator based on assembly of GaN nanowires. *Nanotechnology*, **2011**, 22, 475401 | 3.4 | 63 |
| 7 | Optimizing the power output of a ZnO photocell by piezopotential. *ACS Nano*, **2010**, 4, 4220-4 | 16.7 | 102 |
| 6 | Enhancing sensitivity of a single ZnO micro-/nanowire photodetector by piezo-phototronic effect. *ACS Nano*, **2010**, 4, 6285-91 | 16.7 | 381 |
| 5 | High-output nanogenerator by rational unipolar assembly of conical nanowires and its application for driving a small liquid crystal display. *Nano Letters*, **2010**, 10, 5025-31 | 11.5 | 214 |
| 4 | Effects of piezopotential spatial distribution on local contact dictated transport property of ZnO micro/nanowires. *Applied Physics Letters*, **2010**, 97, 033509 | 3.4 | 16 |
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