

Wenbo Peng

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44
papers

1,710
citations

23
h-index

41
g-index

46
ext. papers

1,999
ext. citations

10.8
avg, IF

4.78
L-index

#	Paper	IF	Citations
44	Electric Eel-Skin-Inspired Mechanically Durable and Super-Stretchable Nanogenerator for Deformable Power Source and Fully Autonomous Conformable Electronic-Skin Applications. <i>Advanced Materials</i> , 2016 , 28, 10024-10032	24	212
43	Actively Perceiving and Responsive Soft Robots Enabled by Self-Powered, Highly Extensible, and Highly Sensitive Triboelectric Proximity- and Pressure-Sensing Skins. <i>Advanced Materials</i> , 2018 , 30, e1801114	24.1	180
42	Enhanced Performance of a Self-Powered Organic/Inorganic Photodetector by Pyro-Phototronic and Piezo-Phototronic Effects. <i>Advanced Materials</i> , 2017 , 29, 1606698	24	107
41	Sustainable Energy Source for Wearable Electronics Based on Multilayer Elastomeric Triboelectric Nanogenerators. <i>Advanced Energy Materials</i> , 2017 , 7, 1602832	21.8	104
40	Self-Powered Si/CdS Flexible Photodetector with Broadband Response from 325 to 1550 nm Based on Pyro-phototronic Effect: An Approach for Photosensing below Bandgap Energy. <i>Advanced Materials</i> , 2018 , 30, 1705893	24	95
39	Piezotronic Effect Modulated Heterojunction Electron Gas in AlGa _N /AlN/GaN Heterostructure Microwire. <i>Advanced Materials</i> , 2016 , 28, 7234-42	24	83
38	All-Elastomer-Based Triboelectric Nanogenerator as a Keyboard Cover To Harvest Typing Energy. <i>ACS Nano</i> , 2016 , 10, 7973-81	16.7	72
37	Study of the photoconductive ZnO UV detector based on the electrically floated nanowire array. <i>Sensors and Actuators A: Physical</i> , 2012 , 181, 6-12	3.9	70
36	Piezo-Phototronic Effect on Selective Electron or Hole Transport through Depletion Region of Vis-NIR Broadband Photodiode. <i>Advanced Materials</i> , 2017 , 29, 1701412	24	62
35	Temperature dependence of pyro-phototronic effect on self-powered ZnO/perovskite heterostructured photodetectors. <i>Nano Research</i> , 2016 , 9, 3695-3704	10	60
34	Temperature Dependence of the Piezotronic and Piezophototronic Effects in a-axis GaN Nanobelts. <i>Advanced Materials</i> , 2015 , 27, 8067-74	24	51
33	Surface acoustic wave ultraviolet detector based on zinc oxide nanowire sensing layer. <i>Sensors and Actuators A: Physical</i> , 2012 , 184, 34-40	3.9	47
32	Largely Improved Near-Infrared Silicon-Photosensing by the Piezo-Phototronic Effect. <i>ACS Nano</i> , 2017 , 11, 7118-7125	16.7	46
31	Simultaneously Enhancing Light Emission and Suppressing Efficiency Droop in GaN Microwire-Based Ultraviolet Light-Emitting Diode by the Piezo-Phototronic Effect. <i>Nano Letters</i> , 2017 , 17, 3718-3724	11.5	44
30	A dual-electrolyte based air-breathing regenerative microfluidic fuel cell with 1.76 V open-circuit-voltage and 0.74 V water-splitting voltage. <i>Nano Energy</i> , 2016 , 27, 619-626	17.1	43
29	Temperature Dependence of the Piezophototronic Effect in CdS Nanowires. <i>Advanced Functional Materials</i> , 2015 , 25, 5277-5284	15.6	37
28	Piezotronic Effect in Strain-Gated Transistor of a-Axis GaN Nanobelt. <i>ACS Nano</i> , 2015 , 9, 9822-9	16.7	36

27	Enhanced performances of Si/CdS heterojunction near-infrared photodetector by the piezo-phototronic effect. <i>Nano Energy</i> , 2018 , 44, 311-318	17.1	36
26	Optimization of Si/ZnO/PEDOT:PSS tri-layer heterojunction photodetector by piezo-phototronic effect using both positive and negative piezoelectric charges. <i>Nano Energy</i> , 2018 , 48, 27-34	17.1	32
25	Investigation into anomalous total secondary electron yield for micro-porous Ag surface under oblique incidence conditions. <i>Journal of Applied Physics</i> , 2013 , 114, 104905	2.5	29
24	Theoretical Study of Triboelectric-Potential Gated/Driven Metal-Oxide-Semiconductor Field-Effect Transistor. <i>ACS Nano</i> , 2016 , 10, 4395-402	16.7	29
23	Carrier concentration-dependent piezotronic and piezo-phototronic effects in ZnO thin-film transistor. <i>Nano Energy</i> , 2018 , 49, 529-537	17.1	26
22	Nanosecond X-ray detector based on high resistivity ZnO single crystal semiconductor. <i>Applied Physics Letters</i> , 2016 , 108, 171103	3.4	26
21	Piezo-Phototronic Effect on Performance Enhancement of Anisotype and Isotype Heterojunction Photodiodes. <i>Advanced Functional Materials</i> , 2018 , 28, 1706897	15.6	21
20	Analytic Passive Intermodulation Model for Flange Connection Based on Metallic Contact Nonlinearity Approximation. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2017 , 65, 2279-2287 ^{4.1}	4.1	19
19	Piezotronics and piezo-phototronics based on a-axis nano/microwires: fundamentals and applications. <i>Semiconductor Science and Technology</i> , 2017 , 32, 043005	1.8	19
18	Performance improvement of ZnO nanowire based surface acoustic wave ultraviolet detector via poly(3,4-ethylenedioxythiophene) surface coating. <i>Sensors and Actuators A: Physical</i> , 2013 , 199, 149-155 ^{3.9}	3.9	17
17	Pyro-phototronic effect enhanced ZnO nanowire-based tri-layer heterojunction for visible light sensing and communication. <i>Nano Energy</i> , 2020 , 78, 105268	17.1	12
16	Study on the performance of ZnO nanomaterial-based surface acoustic wave ultraviolet detectors. <i>Journal of Micromechanics and Microengineering</i> , 2013 , 23, 125008	2	11
15	A ZnO-Based Programmable UV Detection Integrated Circuit Unit. <i>IEEE Sensors Journal</i> , 2016 , 16, 7919-7923 ^{4.23}	4.23	11
14	Secondary electron emission characteristics of nanostructured silver surfaces. <i>Journal of Applied Physics</i> , 2017 , 122, 153302	2.5	10
13	Electrical and optical characterization of AgxO films deposited by RF reactive magnetron sputtering. <i>Thin Solid Films</i> , 2017 , 636, 333-338	2.2	9
12	Characterizations of an X-ray detector based on a Zn2SiO4 film. <i>Sensors and Actuators A: Physical</i> , 2015 , 236, 98-103	3.9	9
11	Study of ZnO photoconductive X-ray detector. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2014 , 63, 098502	0.6	9
10	Thermal evaporated hyperbranched Ag nanostructure as an effective secondary-electron trapping surface coating. <i>AIP Advances</i> , 2016 , 6, 025122	1.5	8

9	Theoretical Study of Sliding-Electrification-Gated Tribotronic Transistors and Logic Device. <i>Advanced Electronic Materials</i> , 2018 , 4, 1700337	6.4	8
8	On the Piezo-Phototronic Effect in Si/ZnO Heterojunction Photodiode: The Effect of the Fermi-Level Difference. <i>Advanced Functional Materials</i> , 2020 , 30, 2005996	15.6	7
7	Dramatically Enhanced Broadband Photodetection by Dual Inversion Layers and Fowler-Nordheim Tunneling. <i>ACS Nano</i> , 2019 , 13, 2289-2297	16.7	6
6	Photoconductive UV detector based on high-resistance ZnO thin film. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2015 , 64, 198501	0.6	2
5	Study of a neutron-resistant p+-Si/n-ZnO photodetector with avalanching gain. <i>Sensors and Actuators A: Physical</i> , 2021 , 318, 112375	3.9	2
4	High sensitivity X-ray detector based on a 25 μ m-thick ZnO film. <i>Sensors and Actuators A: Physical</i> , 2022 , 334, 113310	3.9	1
3	Demonstration of an n-ZnO/p-Si/n-Si heterojunction bipolar phototransistor for X-ray detection. <i>Solid-State Electronics</i> , 2022 , 188, 108221	1.7	1
2	Rationally designed piezoelectric charge polarity at interfaces for largely improving photodiode performance by piezo-phototronic effects. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 16057-16066	7.1	1
1	Annealing Effect on a (0001)-Oriented ZnO Single-Crystal Bulk-Acoustic-Wave X-Ray Detector. <i>IEEE Transactions on Electron Devices</i> , 2022 , 1-4	2.9	0