

Laipan Zhu

List of Publications by Year in descending order

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papers

2,648
citations

201575

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docs citations

55
times ranked

2569
citing authors

#	ARTICLE	IF	CITATIONS
1	A Flexible Multifunctional Triboelectric Nanogenerator Based on MXene/PVA Hydrogel. <i>Advanced Functional Materials</i> , 2021, 31, 2104928.	7.8	259
2	Three-dimensional ultraflexible triboelectric nanogenerator made by 3D printing. <i>Nano Energy</i> , 2018, 45, 380-389.	8.2	178
3	Flexoelectronics of centrosymmetric semiconductors. <i>Nature Nanotechnology</i> , 2020, 15, 661-667.	15.6	175
4	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
5	High-performance triboelectric nanogenerators for self-powered, in-situ and real-time water quality mapping. <i>Nano Energy</i> , 2019, 66, 104117.	8.2	127
6	Piezo-Phototronic Effect Enhanced Flexible Solar Cells Based on ZnO/p-SnS Core-Shell Nanowire Array. <i>Advanced Science</i> , 2017, 4, 1600185.	5.6	110
7	Comprehensive Pyro-Phototronic Effect Enhanced Ultraviolet Detector with ZnO/Ag Schottky Junction. <i>Advanced Functional Materials</i> , 2019, 29, 1807111.	7.8	95
8	Piezoelectric Nanogenerator Based on In Situ Growth All-Inorganic CsPbBr ₃ Perovskite Nanocrystals in PVDF Fibers with Long-Term Stability. <i>Advanced Functional Materials</i> , 2021, 31, 2011073.	7.8	95
9	Scanning Probing of the Tribovoltaic Effect at the Sliding Interface of Two Semiconductors. <i>Advanced Materials</i> , 2020, 32, e2000928.	11.1	93
10	Electron Transfer in Nanoscale Contact Electrification: Photon Excitation Effect. <i>Advanced Materials</i> , 2019, 31, e1901418.	11.1	84
11	Contact-electro-catalysis for the degradation of organic pollutants using pristine dielectric powders. <i>Nature Communications</i> , 2022, 13, 130.	5.8	83
12	Harsh-Environmental-Resistant Triboelectric Nanogenerator and Its Applications in Autodrive Safety Warning. <i>Advanced Energy Materials</i> , 2018, 8, 1801898.	10.2	82
13	Enhancing the Efficiency of Silicon-Based Solar Cells by the Piezo-Phototronic Effect. <i>ACS Nano</i> , 2017, 11, 1894-1900.	7.3	79
14	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
15	Ultrathin Piezotronic Transistors with 2 nm Channel Lengths. <i>ACS Nano</i> , 2018, 12, 4903-4908.	7.3	63
16	Piezotronic Effect on Rashba Spin-Orbit Coupling in a ZnO/P3HT Nanowire Array Structure. <i>ACS Nano</i> , 2018, 12, 1811-1820.	7.3	61
17	2D piezotronics in atomically thin zinc oxide sheets: Interfacing gating and channel width gating. <i>Nano Energy</i> , 2019, 60, 724-733.	8.2	60
18	Recent Progress in Piezo-Phototronic Effect Enhanced Solar Cells. <i>Advanced Functional Materials</i> , 2019, 29, 1808214.	7.8	57

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19	Ultra-Stable and Durable Piezoelectric Nanogenerator with All-Weather Service Capability Based on NADoped 4H-SiC Nanohole Arrays. Nano-Micro Letters, 2022, 14, 30.	14.4	57
20	Piezoelectric nanogenerators with high performance against harsh conditions based on tunable N doped 4H-SiC nanowire arrays. Nano Energy, 2021, 83, 105826.	8.2	56
21	Tunable WSe ₂ –CdS mixed-dimensional van der Waals heterojunction with a piezo-phototronic effect for an enhanced flexible photodetector. Nanoscale, 2018, 10, 14472-14479.	2.8	53
22	Self-Powered High-Responsivity Photodetectors Enhanced by the Pyro-Phototronic Effect Based on a BaTiO ₃ /GaN Heterojunction. Nano Letters, 2021, 21, 8808-8816.	4.5	51
23	Ultrasensitive Vertical Piezotronic Transistor Based on ZnO Twin Nanoplatelet. ACS Nano, 2017, 11, 4859-4865.	7.3	45
24	Flexible Piezoelectric Nanogenerators Based on P(VDF-TrFE)/CsPbBr ₃ Quantum Dot Composite Films. ACS Applied Electronic Materials, 2021, 3, 2136-2144.	2.0	33
25	Observation of Unusual Optical Band Structure of CH ₃ NH ₃ PbI ₃ Perovskite Single Crystal. ACS Photonics, 2018, 5, 1583-1590.	3.2	32
26	Tribovoltaic Nanogenerators Based on MXene–Silicon Heterojunctions for Highly Stable Self-Powered Speed, Displacement, Tension, Oscillation Angle, and Vibration Sensors. Advanced Functional Materials, 2022, 32, .	7.8	32
27	Piezo-phototronic effect enhanced polarization-sensitive photodetectors based on cation-mixed organic–inorganic perovskite nanowires. Materials Today, 2020, 37, 56-63.	8.3	28
28	Flexible Piezoelectric Nanogenerators Based on P(VDF–TrFE)/GeSe Nanocomposite Films. ACS Applied Electronic Materials, 2020, 2, 2369-2374.	2.0	25
29	Progress in Piezoelectric Nanogenerators Based on PVDF Composite Films. Micromachines, 2021, 12, 1278.	1.4	24
30	Effects of Temperature on the Tribovoltaic Effect at Liquid–Solid Interfaces. Advanced Materials Interfaces, 2022, 9, .	1.9	24
31	Progress in piezotronics and piezo-phototronics of quantum materials. Journal Physics D: Applied Physics, 2019, 52, 343001.	1.3	23
32	Piezo-phototronic and pyro-phototronic effects to enhance Cu(In, Ga)Se ₂ thin film solar cells. Nano Research, 2018, 11, 3877-3885.	5.8	22
33	Highly Sensitive Photoelectric Detection and Imaging Enhanced by the Pyro–Phototronic Effect Based on a Photoinduced Dynamic Schottky Effect in 4H–SiC. Advanced Materials, 2022, 34, .	11.1	21
34	Defect repair for enhanced piezo-phototronic MoS ₂ flexible phototransistors. Journal of Materials Chemistry C, 2019, 7, 14731-14738.	2.7	20
35	Evaluation of DLC, MoS ₂ , and Ti ₃ C ₂ T thin films for triboelectric nanogenerators. Nano Energy, 2022, 97, 107185.	8.2	20
36	Enhanced Spin–Orbit Coupled Photoluminescence of Perovskite CsPbBr ₃ Quantum Dots by Piezo-Phototronic Effect. Nano Letters, 2020, 20, 8298-8304.	4.5	19

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37	Optical bandgap energy of CH ₃ NH ₃ PbI ₃ perovskite studied by photoconductivity and reflectance spectroscopy. Science China Technological Sciences, 2018, 61, 886-892.	2.0	17
38	Enhanced Flexible Poly(vinylidene fluoride-trifluorethylene) Piezoelectric Nanogenerators by SnSe Nanosheet Doping and Solvent Treatment. ACS Applied Materials & Interfaces, 2021, 13, 32278-32285.	4.0	16
39	Flexible Difunctional (Pressure and Light) Sensors Based on ZnO Nanowires/Graphene Heterostructures. Advanced Materials Interfaces, 2020, 7, 1901932.	1.9	16
40	Triboelectric Leakage-Field-Induced Electroluminescence Based on ZnS:Cu. ACS Applied Materials & Interfaces, 2022, 14, 4775-4782.	4.0	15
41	Spin transport in undoped InGaAs/AlGaAs multiple quantum well studied via spin photocurrent excited by circularly polarized light. Nanoscale Research Letters, 2016, 11, 8.	3.1	14
42	Flexible and wearable piezoelectric nanogenerators based on P(VDF-TrFE)/SnS nanocomposite micropillar array. Journal of Applied Physics, 2021, 129, .	1.1	14
43	Angular Dependence of the Spin Photocurrent in a $\text{CoFeB}/\text{MgO}/\text{InGaAs}$ Quantum Well Structure. Physical Review Applied, 2017, 8, .		
44	Spin depolarization under low electric fields at low temperatures in undoped InGaAs/AlGaAs multiple quantum well. Applied Physics Letters, 2014, 105, 152103.	1.5	11
45	Temperature dependence of spin photocurrent spectra induced by Rashba- and Dresselhaus-type circular photogalvanic effect at inter-band excitation in InGaAs/AlGaAs quantum wells. Optics Express, 2015, 23, 27250.	1.7	11
46	Identifying different mechanisms of circular photogalvanic effect in GaAs/Al _{0.3} Ga _{0.7} As two dimensional electron gas by photo-modulation technique. Applied Physics Letters, 2013, 102, .	1.5	8
47	Piezotronic effect on Rashba spin-orbit coupling based on MAPbI ₃ /ZnO heterostructures. Applied Physics Letters, 2020, 117, 071601.	1.5	7
48	Reflectance difference spectroscopy microscope for circular defects on InN films. Optics Express, 2016, 24, 15059.	1.7	6
49	Observation of interface dependent spin polarized photocurrents in InAs/GaSb superlattice. Applied Physics Letters, 2015, 106, 192402.	1.5	5
50	Observation of linear and quadratic magnetic field-dependence of magneto-photocurrents in InAs/GaSb superlattice. Nanoscale Research Letters, 2014, 9, 279.	3.1	4
51	New method for thickness determination and microscopic imaging of graphene-like two-dimensional materials. Journal of Semiconductors, 2016, 37, 013002.	2.0	3
52	Polarization-Sensitive Light Sensors Based on a Bulk Perovskite MAPbBr ₃ Single Crystal. Materials, 2021, 14, 1238.	1.3	3
53	Comparison of spin photocurrent in devices based on in-plane or out-of-plane magnetized CoFeB spin detectors. Physical Review B, 2019, 100, .	1.1	2
54	Observation of anomalous linear photogalvanic effect and its dependence on wavelength in undoped InGaAs/AlGaAs multiple quantum well. Nanoscale Research Letters, 2014, 9, 493.	3.1	1

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55	Giant in-plane optical anisotropy of <i>a</i> -plane ZnO on <i>r</i> -plane sapphire. Journal of Semiconductors, 2013, 34, 122003.	2.0	0