

Jikui Luo

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128
papers

3,518
citations

35
h-index

54
g-index

135
ext. papers

4,379
ext. citations

7.9
avg, IF

5.33
L-index

#	Paper	IF	Citations
128	A self-powered high-performance graphene/silicon ultraviolet photodetector with ultra-shallow junction: breaking the limit of silicon?. <i>Npj 2D Materials and Applications</i> , 2017 , 1,	8.8	144
127	Fully biodegradable triboelectric nanogenerators based on electrospun polylactic acid and nanostructured gelatin films. <i>Nano Energy</i> , 2018 , 45, 193-202	17.1	128
126	Exclusive self-aligned E-phase PVDF films with abnormal piezoelectric coefficient prepared via phase inversion. <i>Chemical Communications</i> , 2015 , 51, 8257-60	5.8	123
125	Fast response and high sensitivity ZnO/glass surface acoustic wave humidity sensors using graphene oxide sensing layer. <i>Scientific Reports</i> , 2014 , 4, 7206	4.9	115
124	Ab initio study of electronic and optical behavior of two-dimensional silicon carbide. <i>Journal of Materials Chemistry C</i> , 2013 , 1, 2131	7.1	111
123	Transient Resistive Switching Devices Made from Egg Albumen Dielectrics and Dissolvable Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 10954-60	9.5	100
122	High performance triboelectric nanogenerators based on phase-inversion piezoelectric membranes of poly(vinylidene fluoride)-zinc stannate (PVDF-ZnSnO ₃) and polyamide-6 (PA6). <i>Nano Energy</i> , 2016 , 30, 470-480	17.1	97
121	Flexible surface acoustic wave resonators built on disposable plastic film for electronics and lab-on-a-chip applications. <i>Scientific Reports</i> , 2013 , 3, 2140	4.9	94
120	Deep reactive ion etching as a tool for nanostructure fabrication. <i>Journal of Vacuum Science & Technology B</i> , 2009 , 27, 1520		91
119	ZnO film thickness effect on surface acoustic wave modes and acoustic streaming. <i>Applied Physics Letters</i> , 2008 , 93, 094105	3.4	85
118	Emulsion Electrospinning of Polytetrafluoroethylene (PTFE) Nanofibrous Membranes for High-Performance Triboelectric Nanogenerators. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 5880-5891	9.5	82
117	High sensitivity flexible Lamb-wave humidity sensors with a graphene oxide sensing layer. <i>Nanoscale</i> , 2015 , 7, 7430-6	7.7	80
116	A Broadband Fluorographene Photodetector. <i>Advanced Materials</i> , 2017 , 29, 1700463	24	72
115	High sensitivity humidity sensors using flexible surface acoustic wave devices made on nanocrystalline ZnO/polyimide substrates. <i>Journal of Materials Chemistry C</i> , 2013 , 1, 6210	7.1	71
114	Waist-wearable wireless respiration sensor based on triboelectric effect. <i>Nano Energy</i> , 2019 , 59, 75-83	17.1	70
113	Conjunction of triboelectric nanogenerator with induction coils as wireless power sources and self-powered wireless sensors. <i>Nature Communications</i> , 2020 , 11, 58	17.4	65
112	Synthesis and Characterization of Polyurethane-Based Shape-Memory Polymers for Tailored T _g around Body Temperature for Medical Applications. <i>Macromolecular Chemistry and Physics</i> , 2011 , 212, 592-602	2.6	62

111	Microfluidic pumps employing surface acoustic waves generated in ZnO thin films. <i>Journal of Applied Physics</i> , 2009 , 105, 024508	2.5	60
110	Moving-part-free microfluidic systems for lab-on-a-chip. <i>Journal of Micromechanics and Microengineering</i> , 2009 , 19, 054001	2	59
109	Microfluidics based on ZnO/nanocrystalline diamond surface acoustic wave devices. <i>Biomicrofluidics</i> , 2012 , 6, 24105-2410511	3.2	55
108	Carbon electrodes enable flat surface PDMS and PA6 triboelectric nanogenerators to achieve significantly enhanced triboelectric performance. <i>Nano Energy</i> , 2019 , 55, 548-557	17.1	55
107	Surface acoustic wave induced streaming and pumping in 128°Y-cut LiNbO ₃ for microfluidic applications. <i>Journal of Micromechanics and Microengineering</i> , 2009 , 19, 035016	2	52
106	Realizing the potential of polyethylene oxide as new positive tribo-material: Over 40 W/m ² high power flat surface triboelectric nanogenerators. <i>Nano Energy</i> , 2018 , 46, 63-72	17.1	51
105	Bipolar resistive switching characteristics of low temperature grown ZnO thin films by plasma-enhanced atomic layer deposition. <i>Applied Physics Letters</i> , 2013 , 102, 012113	3.4	50
104	A general optimization approach for contact-separation triboelectric nanogenerator. <i>Nano Energy</i> , 2019 , 56, 700-707	17.1	44
103	Film bulk acoustic resonators (FBARs) as biosensors: A review. <i>Biosensors and Bioelectronics</i> , 2018 , 116, 1-15	11.8	43
102	Mechanism and Origin of Hysteresis in Oxide Thin-Film Transistor and Its Application on 3-D Nonvolatile Memory. <i>IEEE Transactions on Electron Devices</i> , 2017 , 64, 438-446	2.9	41
101	Triboelectric effect based instantaneous self-powered wireless sensing with self-determined identity. <i>Nano Energy</i> , 2018 , 51, 1-9	17.1	40
100	Uniformity Control of Ni Thin-Film Microstructures Deposited by Through-Mask Plating. <i>Journal of the Electrochemical Society</i> , 2005 , 152, C36	3.9	40
99	Transparent triboelectric generators based on glass and polydimethylsiloxane. <i>Nano Energy</i> , 2016 , 30, 235-241	17.1	40
98	High-performance triboelectric nanogenerator based on electrospun PVDF-graphene nanosheet composite nanofibers for energy harvesting. <i>Nano Energy</i> , 2021 , 80, 105599	17.1	39
97	Designing an Efficient Multimode Environmental Sensor Based on GrapheneSilicon Heterojunction. <i>Advanced Materials Technologies</i> , 2017 , 2, 1600262	6.8	38
96	High Performance Shape Memory Polyurethane Synthesized with High Molecular Weight Polyol as the Soft Segment. <i>Applied Sciences (Switzerland)</i> , 2012 , 2, 535-548	2.6	38
95	Discrete microfluidics based on aluminum nitride surface acoustic wave devices. <i>Microfluidics and Nanofluidics</i> , 2015 , 18, 537-548	2.8	37
94	Replacing the metal electrodes in triboelectric nanogenerators: High-performance laser-induced graphene electrodes. <i>Nano Energy</i> , 2020 , 75, 104958	17.1	35

93	Bendable transparent ZnO thin film surface acoustic wave strain sensors on ultra-thin flexible glass substrates. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 9109-9114	7.1	35
92	Effects of liquid metal particles on performance of triboelectric nanogenerator with electrospun polyacrylonitrile fiber films. <i>Nano Energy</i> , 2019 , 61, 381-388	17.1	34
91	A self-power-transmission and non-contact-reception keyboard based on a novel resonant triboelectric nanogenerator (R-TENG). <i>Nano Energy</i> , 2018 , 50, 16-24	17.1	32
90	Feasibility study of polyurethane shape-memory polymer actuators for pressure bandage application. <i>Science and Technology of Advanced Materials</i> , 2012 , 13, 015006	7.1	31
89	Film bulk acoustic resonators integrated on arbitrary substrates using a polymer support layer. <i>Scientific Reports</i> , 2015 , 5, 9510	4.9	30
88	A Portable Triboelectric Nanogenerator for Real-Time Respiration Monitoring. <i>Nanoscale Research Letters</i> , 2019 , 14, 354	5	30
87	Self-powered transparent glass-based single electrode triboelectric motion tracking sensor array. <i>Nano Energy</i> , 2017 , 34, 442-448	17.1	28
86	Influence of Substrate Temperature on Structural Properties and Deposition Rate of AlN Thin Film Deposited by Reactive Magnetron Sputtering. <i>Journal of Electronic Materials</i> , 2012 , 41, 1948-1954	1.9	28
85	A film bulk acoustic resonator oscillator based humidity sensor with graphene oxide as the sensitive layer. <i>Journal of Micromechanics and Microengineering</i> , 2017 , 27, 055017	2	27
84	Flexible surface acoustic wave strain sensor based on single crystalline LiNbO3 thin film. <i>Applied Physics Letters</i> , 2018 , 112, 093502	3.4	27
83	Crystalline structure effect on the performance of flexible ZnO/polyimide surface acoustic wave devices. <i>Journal of Applied Physics</i> , 2013 , 114, 044502	2.5	27
82	Enhanced performance triboelectric nanogenerators based on solid polymer electrolytes with different concentrations of cations. <i>Nano Energy</i> , 2019 , 64, 103960	17.1	26
81	Flexible surface acoustic wave respiration sensor for monitoring obstructive sleep apnea syndrome. <i>Journal of Micromechanics and Microengineering</i> , 2017 , 27, 115006	2	26
80	A humidity sensor based on quartz crystal microbalance using graphene oxide as a sensitive layer. <i>Vacuum</i> , 2017 , 140, 101-105	3.7	25
79	Significant triboelectric enhancement using interfacial piezoelectric ZnO nanosheet layer. <i>Nano Energy</i> , 2017 , 40, 471-480	17.1	25
78	Thermal annealing effect on ZnO surface acoustic wave-based ultraviolet light sensors on glass substrates. <i>Applied Physics Letters</i> , 2014 , 104, 212107	3.4	25
77	UV sensing using film bulk acoustic resonators based on Au/n-ZnO/piezoelectric-ZnO/Al structure. <i>Scientific Reports</i> , 2015 , 5, 9123	4.9	23
76	Hierarchical Nanotexturing Enables Acoustofluidics on Slippery yet Sticky, Flexible Surfaces. <i>Nano Letters</i> , 2020 , 20, 3263-3270	11.5	23

75	Highly porous polymer cryogel based tribopositive material for high performance triboelectric nanogenerators. <i>Nano Energy</i> , 2020 , 68, 104294	17.1	22
74	Determination of melamine in milk and dairy products by microchip-based high-field asymmetric ion mobility spectrometry combined with solid-phase extraction. <i>Food Chemistry</i> , 2015 , 188, 489-95	8.5	21
73	Bioresorbable Electrode Array for Electrophysiological and Pressure Signal Recording in the Brain. <i>Advanced Healthcare Materials</i> , 2019 , 8, e1801649	10.1	20
72	Surface smoothing effect of an amorphous thin film deposited by atomic layer deposition on a surface with nano-sized roughness. <i>AIP Advances</i> , 2014 , 4, 027120	1.5	19
71	Origami-tessellation-based triboelectric nanogenerator for energy harvesting with application in road pavement. <i>Nano Energy</i> , 2020 , 78, 105177	17.1	19
70	Fully self-powered instantaneous wireless humidity sensing system based on triboelectric nanogenerator. <i>Nano Energy</i> , 2021 , 83, 105814	17.1	19
69	A micro gas chromatography with separation capability enhanced by polydimethylsiloxane stationary phase functionalized by carbon nanotubes and graphene. <i>Talanta</i> , 2016 , 154, 99-108	6.2	18
68	Bendable ZnO thin film surface acoustic wave devices on polyethylene terephthalate substrate. <i>Applied Physics Letters</i> , 2014 , 104, 213504	3.4	18
67	Ab initio study of energy-band modulation in graphene-based two-dimensional layered superlattices. <i>Journal of Materials Chemistry</i> , 2012 , 22, 23821		17
66	A novel rhombic-shaped paper-based triboelectric nanogenerator for harvesting energy from environmental vibration. <i>Sensors and Actuators A: Physical</i> , 2020 , 302, 111806	3.9	17
65	A self-powered radio frequency (RF) transmission system based on the combination of triboelectric nanogenerator (TENG) and piezoelectric element for disaster rescue/relief. <i>Nano Energy</i> , 2018 , 54, 331-340	17.1	17
64	Recent Advances in Porous 3D Cellulose Aerogels for Tissue Engineering Applications: A Review. <i>Journal of Composites Science</i> , 2020 , 4, 152	3	16
63	Three-Dimensional Tetrapodal ZnO Microstructured Network Based Flexible Surface Acoustic Wave Device for Ultraviolet and Respiration Monitoring Applications. <i>ACS Applied Nano Materials</i> , 2020 , 3, 1468-1478	5.6	16
62	Piezoelectric boron nitride nanosheets for high performance energy harvesting devices. <i>Nano Energy</i> , 2021 , 80, 105561	17.1	16
61	Interface modulated 0-D piezoceramic nanoparticles/PDMS based piezoelectric composites for highly efficient energy harvesting application. <i>Nano Energy</i> , 2021 , 82, 105709	17.1	16
60	Ultrafast chemical-free cell lysis by high speed stream collision induced by surface acoustic waves. <i>Applied Physics Letters</i> , 2017 , 110, 143504	3.4	15
59	Significantly Enhanced Performance of Triboelectric Nanogenerator by Incorporating BaTiO ₃ Nanoparticles in Poly(vinylidene fluoride) Film. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2019 , 216, 1900068	1.6	15
58	Development of flexible ZnO thin film surface acoustic wave strain sensors on ultrathin glass substrates. <i>Journal of Micromechanics and Microengineering</i> , 2015 , 25, 115005	2	15

57	Making shape memory polymers reprocessable and reusable by a simple chemical method. <i>Journal of Materials Chemistry</i> , 2012 , 22, 8192		15
56	Biomaterial Gelatin Film Based Crossbar Structure Resistive Switching Devices. <i>IEEE Nanotechnology Magazine</i> , 2018 , 17, 78-83	2.6	14
55	Crosslinked porous three-dimensional cellulose nanofibers-gelatine biocomposite scaffolds for tissue regeneration. <i>International Journal of Biological Macromolecules</i> , 2020 , 164, 1949-1959	7.9	14
54	A Flexible Capacitive 3D Tactile Sensor With Cross-Shaped Capacitor Plate Pair and Composite Structure Dielectric. <i>IEEE Sensors Journal</i> , 2021 , 21, 1378-1385	4	14
53	Vertically aligned smooth ZnO nanorod films for planar device applications. <i>Journal of Materials Chemistry C</i> , 2013 , 1, 2525	7.1	13
52	Expanding the portfolio of tribo-positive materials: Aniline formaldehyde condensates for high charge density triboelectric nanogenerators. <i>Nano Energy</i> , 2020 , 67, 104291	17.1	13
51	Surface-Acoustic-Wave-Based Lab-on-Chip for Rapid Transport of Cryoprotectants across Cell Membrane for Cryopreservation with Significantly Improved Cell Viability. <i>Small</i> , 2019 , 15, e1805361	11	13
50	Graphene-Based Fully Transparent Thin Film Surface Acoustic Wave Devices for Sensing and Lab-on-Chip Applications. <i>Journal of the Electrochemical Society</i> , 2019 , 166, B432-B440	3.9	11
49	Controlling Performance of Organic/Inorganic Hybrid Perovskite Triboelectric Nanogenerators via Chemical Composition Modulation and Electric Field-Induced Ion Migration. <i>Advanced Energy Materials</i> , 2020 , 10, 2002470	21.8	11
48	A model for the triboelectric nanogenerator with inductive load and its energy boost potential. <i>Nano Energy</i> , 2019 , 63, 103883	17.1	10
47	Resistive switching of in situ and ex situ oxygen plasma treated ZnO thin film deposited by atomic layer deposition. <i>Applied Physics A: Materials Science and Processing</i> , 2014 , 116, 663-669	2.6	10
46	Flexible Surface Acoustic Wave Humidity Sensor with on Chip Temperature Compensation. <i>Procedia Engineering</i> , 2015 , 120, 364-367		9
45	Engineering inclined orientations of piezoelectric films for integrated acoustofluidics and lab-on-a-chip operated in liquid environments. <i>Lab on A Chip</i> , 2021 , 21, 254-271	7.2	9
44	Flexible and fully biodegradable resistance random access memory based on a gelatin dielectric. <i>Nanotechnology</i> , 2020 , 31, 255204	3.4	8
43	Flexible film bulk acoustic resonators and filter-like structure made directly on polymer substrates. <i>Integrated Ferroelectrics</i> , 2016 , 168, 157-162	0.8	8
42	Distilling determination of water content in hydraulic oil with a ZnO/glass surface acoustic wave device. <i>Microsystem Technologies</i> , 2017 , 23, 1841-1845	1.7	7
41	Determination of n-alkanes contamination in soil samples by micro gas chromatography functionalized by multi-walled carbon nanotubes. <i>Chemosphere</i> , 2016 , 158, 154-62	8.4	7
40	Flexible dual-mode surface acoustic wave strain sensor based on crystalline LiNbO3 thin film. <i>Journal of Micromechanics and Microengineering</i> , 2019 , 29, 025003	2	7

39	Novel insights from the ultra-thin film, strain-modulated dynamic triboelectric characterizations. <i>Nano Energy</i> , 2021 , 80, 105560	17.1	7
38	High stability fluorinated zinc oxide thin film transistor and its application on high precision active-matrix touch panel 2013 ,		6
37	Emotion Recognition Based on Skin Potential Signals with a Portable Wireless Device. <i>Sensors</i> , 2021 , 21,	3.8	6
36	Fully self-powered instantaneous wireless traffic monitoring system based on triboelectric nanogenerator and magnetic resonance coupling. <i>Nano Energy</i> , 2021 , 89, 106429	17.1	6
35	Significant Effects of Electrode Metal Work Function on Resistive Memory Devices with Gelatin Biodielectric Layer. <i>Journal of the Electrochemical Society</i> , 2018 , 165, G90-G95	3.9	5
34	Fast and sensitive determination of sulfur dioxide in herbal medicines by microchip-based field asymmetric-wave ion mobility spectrometry. <i>Analytical Methods</i> , 2015 , 7, 1036-1045	3.2	4
33	A Flexible Film Bulk Acoustic Resonator Based on -Phase Polyvinylidene Fluoride Polymer. <i>Sensors</i> , 2020 , 20,	3.8	4
32	Triboelectric Nanogenerator-Based Self-Powered Resonant Sensor for Non-Destructive Defect Detection. <i>Sensors</i> , 2019 , 19,	3.8	4
31	Integrated ZnO Surface Acoustic Wave Microfluidic and Biosensor System 2007 ,		4
30	Ultrathin single-crystalline LiNbO ₃ film bulk acoustic resonator for 5G communication. <i>Electronics Letters</i> , 2020 , 56, 1142-1143	1.1	4
29	Triboelectric nanogenerator-enabled fully self-powered instantaneous wireless sensor systems. <i>Nano Energy</i> , 2022 , 92, 106770	17.1	4
28	Mode Analysis of Pt/LGS Surface Acoustic Wave Devices. <i>Sensors</i> , 2020 , 20,	3.8	4
27	Ultra-thin atom layer deposited alumina film enables the precise lifetime control of fully biodegradable electronic devices. <i>Nanoscale</i> , 2019 , 11, 22369-22377	7.7	4
26	Comprehensive theoretical analysis and experimental exploration of ultrafast microchip-based high-field asymmetric ion mobility spectrometry (FAIMS) technique. <i>Journal of Mass Spectrometry</i> , 2015 , 50, 792-801	2.2	3
25	Review on Biomedical Sensors, Technologies and Algorithms for Diagnosis of Sleep Disordered Breathing: Comprehensive Survey. <i>IEEE Reviews in Biomedical Engineering</i> , 2020 , PP,	6.4	3
24	A langasite surface acoustic wave wide-range temperature sensor with excellent linearity and high sensitivity. <i>AIP Advances</i> , 2021 , 11, 015143	1.5	3
23	Bismuth oxyhalide based photo-enhanced triboelectric nanogenerators. <i>Nano Energy</i> , 2021 , 89, 106419	17.1	3
22	Self-powered pumping switched TENG enabled real-time wireless metal tin height and position recognition and counting for production line management. <i>Nano Energy</i> , 2021 , 90, 106544	17.1	3

21	Comparison of sputtering and atomic layer deposition based ultra-thin alumina protective layers for high temperature surface acoustic wave devices. <i>Journal of Materials Research and Technology</i> , 2021 ,	5.5	2
20	Universal Triboelectric Nanogenerator Simulation Based on Dynamic Finite Element Method Model. <i>Sensors</i> , 2020 , 20,	3.8	2
19	Flexible and bendable acoustofluidics for particle and cell patterning. <i>International Journal of Mechanical Sciences</i> , 2021 , 202-203, 106536	5.5	2
18	Flexible surface acoustic wave broadband strain sensors based on ultra-thin flexible glass substrate. <i>MRS Advances</i> , 2016 , 1, 1519-1524	0.7	2
17	Flexible Strain Sensor Based on Ultra-Thin Quartz Plate. <i>IEEE Sensors Journal</i> , 2021 , 21, 18571-18577	4	2
16	Surface electrical properties modulation by multimode polarizations inside hybrid perovskite films investigated through contact electrification effect. <i>Nano Energy</i> , 2021 , 89, 106318	17.1	2
15	Advancement of Electroadhesion Technology for Intelligent and Self-Reliant Robotic Applications. <i>Advanced Intelligent Systems</i> , 2200064	6	2
14	Photodetectors: A Broadband Fluorographene Photodetector (Adv. Mater. 22/2017). <i>Advanced Materials</i> , 2017 , 29,	24	1
13	First-principle approach based bandgap engineering for cubic boron nitride doped with group IIA elements. <i>AIP Advances</i> , 2018 , 8, 035106	1.5	1
12	Quantum and thermo-mechanical noise squeezing in nanoresonators: A comparative study. <i>Applied Physics Letters</i> , 2012 , 100, 023105	3.4	1
11	Novel Adjustable Self-compensation Flipped Voltage Follower of ZnO TFTs for Transparent Pixel Circuits. <i>IEEE Electron Device Letters</i> , 2022 , 1-1	4.4	1
10	High pressure effects in high-field asymmetric waveform ion mobility spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2016 , 30, 1914-22	2.2	1
9	Transparent Floating Gate Memory Based on ZnO Thin Film Transistor With Controllable Memory Window. <i>IEEE Journal of the Electron Devices Society</i> , 2022 , 10, 275-280	2.3	1
8	Fully self-powered instantaneous wireless liquid level sensor system based on triboelectric nanogenerator. <i>Nano Research</i> , 1	10	1
7	Electric-Field-Resonance-Based Wireless Triboelectric Nanogenerators and Sensors.. <i>ACS Applied Materials & Interfaces</i> , 2021 ,	9.5	1
6	Automatic Classification of Normal&Abnormal Heart Sounds Using Convolution Neural Network and Long-Short Term Memory. <i>Electronics (Switzerland)</i> , 2022 , 11, 1246	2.6	1
5	Analytical Study of the Film Bulk Acoustic Resonators Based on Single Crystal LiNbO3 with Different Crystal Orientations. <i>Integrated Ferroelectrics</i> , 2021 , 213, 182-193	0.8	0
4	Silicon-Controlled Rectifier Embedded Diode for 7 nm FinFET Process Electrostatic Discharge Protection. <i>Nanomaterials</i> , 2022 , 12, 1743	5.4	0

- 3 Flexible surface acoustic wave devices and its applications in microfluidics. *Materials Research Society Symposia Proceedings*, **2014**, 1659, 27-33
- 2 High temperature effects on surface acoustic wave strain sensor. *Sensors and Actuators A: Physical*, **2022**, 338, 113464 3.9
- 1 Single Crystal Bulk Acoustic Resonator for 5 GHz and High-Power Applications. *Integrated Ferroelectrics*, **2021**, 221, 64-72 0.8