Jikui Luo

List of Publications by Year in descending order

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134 papers	5,471 citations	61857 43 h-index	95083 68 g-index
135 all docs	135 docs citations	135 times ranked	5991 citing authors

#	Article	IF	Citations
1	Fully biodegradable triboelectric nanogenerators based on electrospun polylactic acid and nanostructured gelatin films. Nano Energy, 2018, 45, 193-202.	8.2	226
2	A self-powered high-performance graphene/silicon ultraviolet photodetector with ultra-shallow junction: breaking the limit of silicon?. Npj 2D Materials and Applications, 2017, 1, .	3.9	211
3	Exclusive self-aligned Î²-phase PVDF films with abnormal piezoelectric coefficient prepared via phase inversion. Chemical Communications, 2015, 51, 8257-8260.	2.2	172
4	Fast Response and High Sensitivity ZnO/glass Surface Acoustic Wave Humidity Sensors Using Graphene Oxide Sensing Layer. Scientific Reports, 2014, 4, 7206.	1.6	149
5	Ab initio study of electronic and optical behavior of two-dimensional silicon carbide. Journal of Materials Chemistry C, 2013, 1, 2131.	2.7	148
6	High-performance triboelectric nanogenerator based on electrospun PVDF-graphene nanosheet composite nanofibers for energy harvesting. Nano Energy, 2021, 80, 105599.	8.2	142
7	Emulsion Electrospinning of Polytetrafluoroethylene (PTFE) Nanofibrous Membranes for High-Performance Triboelectric Nanogenerators. ACS Applied Materials & Interfaces, 2018, 10, 5880-5891.	4.0	137
8	High performance triboelectric nanogenerators based on phase-inversion piezoelectric membranes of poly(vinylidene fluoride)-zinc stannate (PVDF-ZnSnO3) and polyamide-6 (PA6). Nano Energy, 2016, 30, 470-480.	8.2	134
9	Transient Resistive Switching Devices Made from Egg Albumen Dielectrics and Dissolvable Electrodes. ACS Applied Materials & Interfaces, 2016, 8, 10954-10960.	4.0	129
10	Deep reactive ion etching as a tool for nanostructure fabrication. Journal of Vacuum Science & Technology B, 2009, 27, 1520-1526.	1.3	119
11	Waist-wearable wireless respiration sensor based on triboelectric effect. Nano Energy, 2019, 59, 75-83.	8.2	117
12	Flexible surface acoustic wave resonators built on disposable plastic film for electronics and lab-on-a-chip applications. Scientific Reports, 2013, 3, 2140.	1.6	116
13	Conjunction of triboelectric nanogenerator with induction coils as wireless power sources and self-powered wireless sensors. Nature Communications, 2020, 11, 58.	5.8	114
14	A Broadband Fluorographene Photodetector. Advanced Materials, 2017, 29, 1700463.	11.1	110
15	ZnO film thickness effect on surface acoustic wave modes and acoustic streaming. Applied Physics Letters, 2008, 93, .	1.5	99
16	High sensitivity flexible Lamb-wave humidity sensors with a graphene oxide sensing layer. Nanoscale, 2015, 7, 7430-7436.	2.8	95
17	High sensitivity humidity sensors using flexible surface acoustic wave devices made on nanocrystalline ZnO/polyimide substrates. Journal of Materials Chemistry C, 2013, 1, 6210.	2.7	88
18	Carbon electrodes enable flat surface PDMS and PA6 triboelectric nanogenerators to achieve significantly enhanced triboelectric performance. Nano Energy, 2019, 55, 548-557.	8.2	85

#	Article	IF	Citations
19	Realizing the potential of polyethylene oxide as new positive tribo-material: Over 40â€¯W/m2 high power flat surface triboelectric nanogenerators. Nano Energy, 2018, 46, 63-72.	8.2	84
20	Replacing the metal electrodes in triboelectric nanogenerators: High-performance laser-induced graphene electrodes. Nano Energy, 2020, 75, 104958.	8.2	76
21	Microfluidic pumps employing surface acoustic waves generated in ZnO thin films. Journal of Applied Physics, 2009, 105, .	1.1	74
22	Synthesis and Characterization of Polyurethaneâ€Based Shapeâ€Memory Polymers for Tailored T_g around Body Temperature for Medical Applications. Macromolecular Chemistry and Physics, 2011, 212, 592-602.	1.1	71
23	Moving-part-free microfluidic systems for lab-on-a-chip. Journal of Micromechanics and Microengineering, 2009, 19, 054001.	1.5	70
24	A general optimization approach for contact-separation triboelectric nanogenerator. Nano Energy, 2019, 56, 700-707.	8.2	70
25	Film bulk acoustic resonators (FBARs) as biosensors: A review. Biosensors and Bioelectronics, 2018, 116, 1-15.	5.3	66
26	Surface acoustic wave induced streaming and pumping in 128Â° Y-cut LiNbO₃for microfluidic applications. Journal of Micromechanics and Microengineering, 2009, 19, 035016.	1.5	65
27	Effects of liquid metal particles on performance of triboelectric nanogenerator with electrospun polyacrylonitrile fiber films. Nano Energy, 2019, 61, 381-388.	8.2	62
28	A Portable Triboelectric Nanogenerator for Real-Time Respiration Monitoring. Nanoscale Research Letters, 2019, 14, 354.	3.1	61
29	Enhanced performance triboelectric nanogenerators based on solid polymer electrolytes with different concentrations of cations. Nano Energy, 2019, 64, 103960.	8.2	59
30	Microfluidics based on ZnO/nanocrystalline diamond surface acoustic wave devices. Biomicrofluidics, 2012, 6, 24105-2410511.	1.2	58
31	Bipolar resistive switching characteristics of low temperature grown ZnO thin films by plasma-enhanced atomic layer deposition. Applied Physics Letters, 2013, 102, .	1.5	56
32	Triboelectric effect based instantaneous self-powered wireless sensing with self-determined identity. Nano Energy, 2018, 51, 1-9.	8.2	56
33	Designing an Efficient Multimode Environmental Sensor Based on Grapheneâ€“Silicon Heterojunction. Advanced Materials Technologies, 2017, 2, 1600262.	3.0	55
34	Uniformity Control of Ni Thin-Film Microstructures Deposited by Through-Mask Plating. Journal of the Electrochemical Society, 2005, 152, C36.	1.3	52
35	Mechanism and Origin of Hysteresis in Oxide Thin-Film Transistor and Its Application on 3-D Nonvolatile Memory. IEEE Transactions on Electron Devices, 2017, 64, 438-446.	1.6	52
36	Interface modulated 0-D piezoceramic nanoparticles/PDMS based piezoelectric composites for highly efficient energy harvesting application. Nano Energy, 2021, 82, 105709.	8.2	51

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37	High Performance Shape Memory Polyurethane Synthesized with High Molecular Weight Polyol as the Soft Segment. Applied Sciences (Switzerland), 2012, 2, 535-548.	1.3	49
38	Flexible surface acoustic wave strain sensor based on single crystalline LiNbO3 thin film. Applied Physics Letters, 2018, 112, .	1.5	49
39	Piezoelectric boron nitride nanosheets for high performance energy harvesting devices. Nano Energy, 2021, 80, 105561.	8.2	49
40	Fully self-powered instantaneous wireless humidity sensing system based on triboelectric nanogenerator. Nano Energy, 2021, 83, 105814.	8.2	49
41	Transparent triboelectric generators based on glass and polydimethylsiloxane. Nano Energy, 2016, 30, 235-241.	8.2	47
42	Highly porous polymer cryogel based tribopositive material for high performance triboelectric nanogenerators. Nano Energy, 2020, 68, 104294.	8.2	47
43	Discrete microfluidics based on aluminum nitride surface acoustic wave devices. Microfluidics and Nanofluidics, 2015, 18, 537-548.	1.0	46
44	Origami-tessellation-based triboelectric nanogenerator for energy harvesting with application in road pavement. Nano Energy, 2020, 78, 105177.	8.2	46
45	Bendable transparent ZnO thin film surface acoustic wave strain sensors on ultra-thin flexible glass substrates. Journal of Materials Chemistry C, 2014, 2, 9109-9114.	2.7	44
46	A self-power-transmission and non-contact-reception keyboard based on a novel resonant triboelectric nanogenerator (R-TENG). Nano Energy, 2018, 50, 16-24.	8.2	44
47	Bioresorbable Electrode Array for Electrophysiological and Pressure Signal Recording in the Brain. Advanced Healthcare Materials, 2019, 8, e1801649.	3.9	44
48	Film bulk acoustic resonators integrated on arbitrary substrates using a polymer support layer. Scientific Reports, 2015, 5, 9510.	1.6	43
49	A film bulk acoustic resonator oscillator based humidity sensor with graphene oxide as the sensitive layer. Journal of Micromechanics and Microengineering, 2017, 27, 055017.	1.5	42
50	Flexible surface acoustic wave respiration sensor for monitoring obstructive sleep apnea syndrome. Journal of Micromechanics and Microengineering, 2017, 27, 115006.	1.5	42
51	Feasibility study of polyurethane shape-memory polymer actuators for pressure bandage application. Science and Technology of Advanced Materials, 2012, 13, 015006.	2.8	40
52	Self-powered transparent glass-based single electrode triboelectric motion tracking sensor array. Nano Energy, 2017, 34, 442-448.	8.2	40
53	Significant triboelectric enhancement using interfacial piezoelectric ZnO nanosheet layer. Nano Energy, 2017, 40, 471-480.	8.2	39
54	Influence of Substrate Temperature on Structural Properties and Deposition Rate of AlN Thin Film Deposited by Reactive Magnetron Sputtering. Journal of Electronic Materials, 2012, 41, 1948-1954.	1.0	38

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55	Crystalline structure effect on the performance of flexible ZnO/polyimide surface acoustic wave devices. Journal of Applied Physics, 2013, 114, .	1.1	38
56	Hierarchical Nanotexturing Enables Acoustofluidics on Slippery yet Sticky, Flexible Surfaces. Nano Letters, 2020, 20, 3263-3270.	4.5	38
57	UV sensing using film bulk acoustic resonators based on Au/n-ZnO/piezoelectric-ZnO/Al structure. Scientific Reports, 2015, 5, 9123.	1.6	36
58	Significantly Enhanced Performance of Triboelectric Nanogenerator by Incorporating BaTiO₃ Nanoparticles in Poly(vinylidene fluoride) Film. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900068.	0.8	35
59	A humidity sensor based on quartz crystal microbalance using graphene oxide as a sensitive layer. Vacuum, 2017, 140, 101-105.	1.6	33
60	Three-Dimensional Tetrapodal ZnO Microstructured Network Based Flexible Surface Acoustic Wave Device for Ultraviolet and Respiration Monitoring Applications. ACS Applied Nano Materials, 2020, 3, 1468-1478.	2.4	33
61	Bendable ZnO thin film surface acoustic wave devices on polyethylene terephthalate substrate. Applied Physics Letters, 2014, 104, .	1.5	31
62	A novel rhombic-shaped paper-based triboelectric nanogenerator for harvesting energy from environmental vibration. Sensors and Actuators A: Physical, 2020, 302, 111806.	2.0	30
63	Thermal annealing effect on ZnO surface acoustic wave-based ultraviolet light sensors on glass substrates. Applied Physics Letters, 2014, 104, .	1.5	29
64	Crosslinked porous three-dimensional cellulose nanofibers-gelatine biocomposite scaffolds for tissue regeneration. International Journal of Biological Macromolecules, 2020, 164, 1949-1959.	3.6	29
65	Recent Advances in Porous 3D Cellulose Aerogels for Tissue Engineering Applications: A Review. Journal of Composites Science, 2020, 4, 152.	1.4	29
66	Surface smoothing effect of an amorphous thin film deposited by atomic layer deposition on a surface with nano-sized roughness. AIP Advances, 2014, 4, .	0.6	26
67	A micro gas chromatography with separation capability enhanced by polydimethylsiloxane stationary phase functionalized by carbon nanotubes and graphene. Talanta, 2016, 154, 99-108.	2.9	26
68	Expanding the portfolio of tribo-positive materials: Aniline formaldehyde condensates for high charge density triboelectric nanogenerators. Nano Energy, 2020, 67, 104291.	8.2	26
69	Biomaterial Gelatin Film Based Crossbar Structure Resistive Switching Devices. IEEE Nanotechnology Magazine, 2018, 17, 78-83.	1.1	25
70	A Flexible Capacitive 3D Tactile Sensor With Cross-Shaped Capacitor Plate Pair and Composite Structure Dielectric. IEEE Sensors Journal, 2021, 21, 1378-1385.	2.4	24
71	Determination of melamine in milk and dairy products by microchip-based high-field asymmetric ion mobility spectrometry combined with solid-phase extraction. Food Chemistry, 2015, 188, 489-495.	4.2	23
72	A self-powered radio frequency (RF) transmission system based on the combination of triboelectric nanogenerator (TENG) and piezoelectric element for disaster rescue/relief. Nano Energy, 2018, 54, 331-340.	8.2	23

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73	Fully self-powered instantaneous wireless traffic monitoring system based on triboelectric nanogenerator and magnetic resonance coupling. Nano Energy, 2021, 89, 106429.	8.2	23
74	Development of flexible ZnO thin film surface acoustic wave strain sensors on ultrathin glass substrates. Journal of Micromechanics and Microengineering, 2015, 25, 115005.	1.5	21
75	Bismuth oxyhalide based photo-enhanced triboelectric nanogenerators. Nano Energy, 2021, 89, 106419.	8.2	21
76	Triboelectric nanogenerator-enabled fully self-powered instantaneous wireless sensor systems. Nano Energy, 2022, 92, 106770.	8.2	21
77	Ultrafast chemical-free cell lysis by high speed stream collision induced by surface acoustic waves. Applied Physics Letters, 2017, 110, .	1.5	20
78	A model for the triboelectric nanogenerator with inductive load and its energy boost potential. Nano Energy, 2019, 63, 103883.	8.2	20
79	Engineering inclined orientations of piezoelectric films for integrated acoustofluidics and lab-on-a-chip operated in liquid environments. Lab on A Chip, 2021, 21, 254-271.	3.1	20
80	Review on Biomedical Sensors, Technologies and Algorithms for Diagnosis of Sleep Disordered Breathing: Comprehensive Survey. IEEE Reviews in Biomedical Engineering, 2022, 15, 4-22.	13.1	20
81	Controlling Performance of Organicâ€“Inorganic Hybrid Perovskite Triboelectric Nanogenerators via Chemical Composition Modulation and Electric Fieldâ€Induced Ion Migration. Advanced Energy Materials, 2020, 10, 2002470.	10.2	19
82	Ab initio study of energy-band modulation in graphene-based two-dimensional layered superlattices. Journal of Materials Chemistry, 2012, 22, 23821.	6.7	18
83	Electric-Field-Resonance-Based Wireless Triboelectric Nanogenerators and Sensors. ACS Applied Materials & Interfaces, 2022, 14, 794-804.	4.0	18
84	Surfaceâ€Acousticâ€Waveâ€Based Labâ€onâ€Chip for Rapid Transport of Cryoprotectants across Cell Membrane for Cryopreservation with Significantly Improved Cell Viability. Small, 2019, 15, e1805361.	5.2	17
85	Flexible dual-mode surface acoustic wave strain sensor based on crystalline LiNbO₃ thin film. Journal of Micromechanics and Microengineering, 2019, 29, 025003.	1.5	17
86	Making shape memory polymers reprocessable and reusable by a simple chemical method. Journal of Materials Chemistry, 2012, 22, 8192.	6.7	15
87	Graphene-Based Fully Transparent Thin Film Surface Acoustic Wave Devices for Sensing and Lab-on-Chip Applications. Journal of the Electrochemical Society, 2019, 166, B432-B440.	1.3	15
88	A Flexible Film Bulk Acoustic Resonator Based on Î²-Phase Polyvinylidene Fluoride Polymer. Sensors, 2020, 20, 1346.	2.1	14
89	Emotion Recognition Based on Skin Potential Signals with a Portable Wireless Device. Sensors, 2021, 21, 1018.	2.1	14
90	Self-powered pumping switched TENG enabled real-time wireless metal tin height and position recognition and counting for production line management. Nano Energy, 2021, 90, 106544.	8.2	14

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91	Vertically aligned smooth ZnO nanorod films for planar device applications. Journal of Materials Chemistry C, 2013, 1, 2525.	2.7	13
92	Flexible film bulk acoustic resonators and filter-like structure made directly on polymer substrates. Integrated Ferroelectrics, 2016, 168, 157-162.	0.3	13
93	Novel insights from the ultra-thin film, strain-modulated dynamic triboelectric characterizations. Nano Energy, 2021, 80, 105560.	8.2	13
94	Flexible and fully biodegradable resistance random access memory based on a gelatin dielectric. Nanotechnology, 2020, 31, 255204.	1.3	12
95	A langasite surface acoustic wave wide-range temperature sensor with excellent linearity and high sensitivity. AIP Advances, 2021, 11, .	0.6	12
96	Flexible Strain Sensor Based on Ultra-Thin Quartz Plate. IEEE Sensors Journal, 2021, 21, 18571-18577.	2.4	12
97	Ultrathin singleâ€crystalline LiNbO ₃ film bulk acoustic resonator for 5G communication. Electronics Letters, 2020, 56, 1142-1143.	0.5	12
98	Fully self-powered instantaneous wireless liquid level sensor system based on triboelectric nanogenerator. Nano Research, 2022, 15, 5425-5434.	5.8	12
99	Flexible Surface Acoustic Wave Humidity Sensor with on Chip Temperature Compensation. Procedia Engineering, 2015, 120, 364-367.	1.2	11
100	Distilling determination of water content in hydraulic oil with a ZnO/glass surface acoustic wave device. Microsystem Technologies, 2017, 23, 1841-1845.	1.2	11
101	Advancement of Electroadhesion Technology for Intelligent and Selfâ€Reliant Robotic Applications. Advanced Intelligent Systems, 2022, 4, .	3.3	11
102	Resistive switching of in situ and ex situ oxygen plasma treated ZnO thin film deposited by atomic layer deposition. Applied Physics A: Materials Science and Processing, 2014, 116, 663-669.	1.1	10
103	Triboelectric Nanogenerator-Based Self-Powered Resonant Sensor for Non-Destructive Defect Detection. Sensors, 2019, 19, 3262.	2.1	10
104	Flexible and bendable acoustofluidics for particle and cell patterning. International Journal of Mechanical Sciences, 2021, 202-203, 106536.	3.6	10
105	Automatic Classification of Normalâ€“Abnormal Heart Sounds Using Convolution Neural Network and Long-Short Term Memory. Electronics (Switzerland), 2022, 11, 1246.	1.8	10
106	Universal Triboelectric Nanogenerator Simulation Based on Dynamic Finite Element Method Model. Sensors, 2020, 20, 4838.	2.1	9
107	Comparison of sputtering and atomic layer deposition based ultra-thin alumina protective layers for high temperature surface acoustic wave devices. Journal of Materials Research and Technology, 2021, 15, 4714-4724.	2.6	9
108	Integrated ZnO Surface Acoustic Wave Microfluidic and Biosensor System. , 2007, , .		8

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109	Significant Effects of Electrode Metal Work Function on Resistive Memory Devices with Gelatin Biodielectric Layer. Journal of the Electrochemical Society, 2018, 165, G90-G95.	1.3	8
110	Coexistence of Contact Electrification and Dynamic pâ€“n Junction Modulation Effects in Triboelectrification. ACS Applied Materials & Interfaces, 2022, 14, 30410-30419.	4.0	8
111	High stability fluorinated zinc oxide thin film transistor and its application on high precision active-matrix touch panel. , 2013, , .		7
112	Determination of n-alkanes contamination in soil samples by micro gas chromatography functionalized by multi-walled carbon nanotubes. Chemosphere, 2016, 158, 154-162.	4.2	7
113	Ultra-thin atom layer deposited alumina film enables the precise lifetime control of fully biodegradable electronic devices. Nanoscale, 2019, 11, 22369-22377.	2.8	7
114	Mode Analysis of Pt/LGS Surface Acoustic Wave Devices. Sensors, 2020, 20, 7111.	2.1	5
115	Transparent Floating Gate Memory Based on ZnO Thin Film Transistor With Controllable Memory Window. IEEE Journal of the Electron Devices Society, 2022, 10, 275-280.	1.2	5
116	Comprehensive theoretical analysis and experimental exploration of ultrafast microchipâ€based highâ€field asymmetric ion mobility spectrometry (FAIMS) technique. Journal of Mass Spectrometry, 2015, 50, 792-801.	0.7	4
117	Fast and sensitive determination of sulfur dioxide in herbal medicines by microchip-based field asymmetric-wave ion mobility spectrometry. Analytical Methods, 2015, 7, 1036-1045.	1.3	4
118	Surface electrical properties modulation by multimode polarizations inside hybrid perovskite films investigated through contact electrification effect. Nano Energy, 2021, 89, 106318.	8.2	4
119	High temperature effects on surface acoustic wave strain sensor. Sensors and Actuators A: Physical, 2022, 338, 113464.	2.0	4
120	Silicon-Controlled Rectifier Embedded Diode for 7 nm FinFET Process Electrostatic Discharge Protection. Nanomaterials, 2022, 12, 1743.	1.9	4
121	First-principle approach based bandgap engineering for cubic boron nitride doped with group IIA elements. AIP Advances, 2018, 8, .	0.6	3
122	Quantum and thermo-mechanical noise squeezing in nanoresonators: A comparative study. Applied Physics Letters, 2012, 100, .	1.5	2
123	Flexible surface acoustic wave broadband strain sensors based on ultra-thin flexible glass substrate. MRS Advances, 2016, 1, 1519-1524.	0.5	2
124	High pressure effects in high-field asymmetric waveform ion mobility spectrometry. Rapid Communications in Mass Spectrometry, 2016, 30, 1914-1922.	0.7	2
125	Numerical Investigation of Phononic Crystal Based Film Bulk Acoustic Wave Resonators. Nanomaterials, 2021, 11, 2547.	1.9	2
126	Analytical Study of the Film Bulk Acoustic Resonators Based on Single Crystal LiNbO3 with Different Crystal Orientations. Integrated Ferroelectrics, 2021, 213, 182-193.	0.3	2

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127	Photodetectors: A Broadband Fluorographene Photodetector (Adv. Mater. 22/2017). Advanced Materials, 2017, 29, .	11.1	1
128	High performance triboelectric generator using high dielectric constant poly(vinylidene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 702 Td (fl		1
129	Novel Adjustable Self-Compensation Flipped Voltage Follower of ZnO TFTs for Transparent Pixel Circuits. IEEE Electron Device Letters, 2022, 43, 398-401.	2.2	1
130	Single Crystal Bulk Acoustic Resonator for 5â€‰GHz and High-Power Applications. Integrated Ferroelectrics, 2021, 221, 64-72.	0.3	1
131	Magnetoresistance studies of two-dimensional Fe₃GeTe₂ nano-flake. Journal of Physics Condensed Matter, 2022, 34, 345701.	0.7	1
132	Flexible surface acoustic wave devices and its applications in microfluidics. Materials Research Society Symposia Proceedings, 2014, 1659, 27-33.	0.1	0
133	Smart digital micro-capacitor based on doped nanocrystalline silicon with HFO2 high K insulator. , 2016, , .		0
134	Wireless Sensors Are To Be Self-Powered And Self-Identified Instantaneously When Triggered MechanicallyÂ. , 2018, , .		0