Haixia Zhang

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/9367118/publications.pdf

Version: 2024-02-01

156 papers	8,862 citations	44069 48 h-index	42399 92 g-index
174 all docs	174 docs citations	174 times ranked	7426 citing authors

#	Article	IF	Citations
1	Design, manufacturing and applications of wearable triboelectric nanogenerators. Nano Energy, 2021, 81, 105627.	16.0	86
2	Double-Sided Laser-Induced Graphene Based Smart Bracelet for Sensing and Energy. , 2021, , .		2
3	Conductive composite-based tactile sensor. , 2021, , 67-90.		0
4	A Flexible Pain Sensor Based on PDMS-AgNWs. IEEE Nanotechnology Magazine, 2021, 20, 137-142.	2.0	2
5	Self-Powered Wearable Biosensors. Accounts of Materials Research, 2021, 2, 184-197.	11.7	118
6	Portable and wearable self-powered systems based on emerging energy harvesting technology. Microsystems and Nanoengineering, 2021, 7, 25.	7.0	194
7	Self-Powered Intelligent Human-Machine Interaction for Handwriting Recognition. Research, 2021, 2021, 4689869.	5.7	21
8	Efficient Manufacturing of Microdome Array for Advanced Electronic and Optical Devicesâ€. , 2021, , .		0
9	Magnetic, conductive textile for multipurpose protective clothing and hybrid energy harvesting. Applied Physics Letters, 2021, 118, .	3.3	7
10	Soft Humanâ€“Machine Interface with Triboelectric Patterns and Archimedes Spiral Electrodes for Enhanced Motion Detection. Advanced Functional Materials, 2021, 31, 2103075.	14.9	26
11	Wearable and self-cleaning hybrid energy harvesting system based on micro/nanostructured haze film. Nano Energy, 2020, 67, 104243.	16.0	77
12	Localized modulus-controlled PDMS substrate for 2D and 3D stretchable electronics. Journal of Micromechanics and Microengineering, 2020, 30, 045001.	2.6	9
13	A laser-engraved wearable sensor for sensitive detection of uric acid and tyrosine in sweat. Nature Biotechnology, 2020, 38, 217-224.	17.5	683
14	A three-electrode multi-module sensor for accurate bodily-kinesthetic monitoring. Nano Energy, 2020, 68, 104316.	16.0	21
15	Wireless battery-free wearable sweat sensor powered by human motion. Science Advances, 2020, 6, .	10.3	372
16	What Will We Carry Forward from This Time?. ACS Nano, 2020, 14, 14253-14254.	14.6	4
17	A flexible hybridized electromagnetic-triboelectric nanogenerator and its application for 3D trajectory sensing. Nano Energy, 2020, 74, 104878.	16.0	46
18	Hybrid energy cells based on triboelectric nanogenerator: From principle to system. Nano Energy, 2020, 75, 104980.	16.0	71

#	Article	IF	Citations
19	Self-Powered Multifunctional Electronic Skin for a Smart Anti-Counterfeiting Signature System. ACS Applied Materials & Interfaces, 2020, 12, 22357-22364.	8.0	51
20	Self-powered flexible and transparent smart patch for temperature sensing. Applied Physics Letters, 2020, 116, .	3.3	32
21	Liquid Assembly of Floating Nanomaterial Sheets for Transparent Electronics. Advanced Materials Technologies, 2019, 4, 1900398.	5.8	4
22	Stamp-Assisted Gravure Printing of Micro-Supercapacitors with General Flexible Substrates. , 2019, , .		6
23	Skin-Inspired Humidity and Pressure Sensor with a Wrinkle-on-Sponge Structure. ACS Applied Materials & Interfaces, 2019, 11, 39219-39227.	8.0	82
24	Power management and effective energy storage of pulsed output from triboelectric nanogenerator. Nano Energy, 2019, 61, 517-532.	16.0	135
25	Self-cleaning organic solar cells based on micro/nanostructured haze films with optical enhancement effect. Applied Physics Letters, 2019, 115, .	3.3	4
26	Self-powered electronic skin based on the triboelectric generator. Nano Energy, 2019, 56, 252-268.	16.0	205
27	Self-powered digital-analog hybrid electronic skin for noncontact displacement sensing. Nano Energy, 2019, 58, 121-129.	16.0	48
28	High-efficiency self-charging smart bracelet for portable electronics. Nano Energy, 2019, 55, 29-36.	16.0	116
29	All-in-one self-powered flexible microsystems based on triboelectric nanogenerators. Nano Energy, 2018, 47, 410-426.	16.0	249
30	GPS-Inspired Stretchable Self-Powered Electronic Skin. IEEE Nanotechnology Magazine, 2018, 17, 460-466.	2.0	6
31	Hybrid generator based on freestanding magnet as all-direction in-plane energy harvester and vibration sensor. Nano Energy, 2018, 49, 51-58.	16.0	63
32	Selfâ€Powered Noncontact Electronic Skin for Motion Sensing. Advanced Functional Materials, 2018, 28, 1704641.	14.9	83
33	Fabrication of controlled hierarchical wrinkle structures on polydimethylsiloxane via one-step C₄F₈plasma treatment. Journal of Micromechanics and Microengineering, 2018, 28, 015007.	2.6	9
34	Fabric-based self-powered noncontact smart gloves for gesture recognition. Journal of Materials Chemistry A, 2018, 6, 20277-20288.	10.3	36
35	Waterproof and stretchable triboelectric nanogenerator for biomechanical energy harvesting and self-powered sensing. Applied Physics Letters, 2018, 112, .	3.3	67
36	Fingerprint-inspired triboelectrific sliding sensor. , 2018, , .		2

#	Article	IF	Citations
37	Hybrid porous micro structured finger skin inspired self-powered electronic skin system for pressure sensing and sliding detection. Nano Energy, 2018, 51, 496-503.	16.0	131
38	All-in-one piezoresistive-sensing patch integrated with micro-supercapacitor. Nano Energy, 2018, 53, 189-197.	16.0	79
39	Self-powered wireless smart patch for healthcare monitoring. Nano Energy, 2017, 32, 479-487.	16.0	90
40	Controlled fabrication of nanoscale wrinkle structure by fluorocarbon plasma for highly transparent triboelectric nanogenerator. Microsystems and Nanoengineering, 2017, 3, 16074.	7.0	54
41	Freestanding solid-state micro-supercapacitor based on laser-patterned nanofibers. , 2017, , .		0
42	Triboelectrification based active sensor for liquid flow and bubble detetecting. , 2017, , .		1
43	Stretchable, transparent and wearable sensor for multifunctional smart skins. , 2017, , .		4
44	Bioinspired microporous elastomer with enhanced and tunable stretchability for strain sensing device. , 2017, , .		1
45	An ultrathin stretchable triboelectric nanogenerator with coplanar electrode for energy harvesting and gesture sensing. Journal of Materials Chemistry A, 2017, 5, 12361-12368.	10.3	86
46	Flexible fiber-based hybrid nanogenerator for biomechanical energy harvesting and physiological monitoring. Nano Energy, 2017, 38, 43-50.	16.0	201
47	High efficiency power management and charge boosting strategy for a triboelectric nanogenerator. Nano Energy, 2017, 38, 438-446.	16.0	174
48	Omnidirectional Bending and Pressure Sensor Based on Stretchable CNT-PU Sponge. Advanced Functional Materials, 2017, 27, 1604434.	14.9	148
49	A wave-shaped hybrid piezoelectric and triboelectric nanogenerator based on P(VDF-TrFE) nanofibers. Nanoscale, 2017, 9, 1263-1270.	5.6	111
50	Digitalized self-powered strain gauge for static and dynamic measurement. Nano Energy, 2017, 42, 129-137.	16.0	31
51	Microsphereâ€Assisted Robust Epidermal Strain Gauge for Static and Dynamic Gesture Recognition. Small, 2017, 13, 1702108.	10.0	26
52	Fingertip-inspired electronic skin based on triboelectric sliding sensing and porous piezoresistive pressure detection. Nano Energy, 2017, 40, 65-72.	16.0	120
53	All-fabric-based wearable self-charging power cloth. Applied Physics Letters, 2017, 111, .	3.3	62
54	Highly Compressible Integrated Supercapacitorâ€“Piezoresistanceâ€Sensor System with CNTâ€“PDMS Sponge for Health Monitoring. Small, 2017, 13, 1702091.	10.0	261

#	Article	IF	Citations
55	Asymmetrical Triboelectric Nanogenerator with Controllable Direct Electrostatic Discharge. Advanced Functional Materials, 2016, 26, 5524-5533.	14.9	43
56	Single-Step Fluorocarbon Plasma Treatment-Induced Wrinkle Structure for High-Performance Triboelectric Nanogenerator. Small, 2016, 12, 229-236.	10.0	134
57	A Flexible and Transparent Graphene-Based Triboelectric Nanogenerator. IEEE Nanotechnology Magazine, 2016, 15, 435-441.	2.0	42
58	Ultra-sensitive transparent and stretchable pressure sensor with single electrode. , 2016, , .		8
59	High performance triboelectric nanogenerators with aligned carbon nanotubes. Nanoscale, 2016, 8, 18489-18494.	5.6	107
60	Highly compressionâ€tolerant folded carbon nanotube/paper as solidâ€state supercapacitor electrode. Micro and Nano Letters, 2016, 11, 586-590.	1.3	12
61	Integrated self-charging power unit with flexible supercapacitor and triboelectric nanogenerator. Journal of Materials Chemistry A, 2016, 4, 14298-14306.	10.3	117
62	A flexible large-area triboelectric generator by low-cost roll-to-roll process for location-based monitoring. Sensors and Actuators A: Physical, 2016, 247, 206-214.	4.1	35
63	Self-Powered Analogue Smart Skin. ACS Nano, 2016, 10, 4083-4091.	14.6	153
64	A flexible and wearable generator with fluorocarbon plasma induced wrinkle structure. , 2016, , .		4
65	A single-electrode wearable triboelectric nanogenerator based on conductive & stretchable fabric. , 2016, , .		13
66	Liquid metal droplet based tube-shaped electrostatic energy harvester. , 2016, , .		2
67	Implantable and self-powered blood pressure monitoring based on a piezoelectric thinfilm: Simulated, in vitro and in vivo studies. Nano Energy, 2016, 22, 453-460.	16.0	149
68	Gold nanoparticle-coated silicon cone array for surface-enhanced Raman spectroscopy. Spectroscopy Letters, 2016, 49, 51-55.	1.0	3
69	Fabrication and characterization analysis of flexible porous nitrogen-doped carbon-based supercapacitor electrodes. Chinese Science Bulletin, 2016, 61, 1314-1322.	0.7	2
70	A Keyboard-Based r-Shaped Triboelectric Generator for Active Noise-Free Recording. Materials Research Society Symposia Proceedings, 2015, 1782, 29-34.	0.1	0
71	Rollâ€toâ€Roll Green Transfer of CVD Graphene onto Plastic for a Transparent and Flexible Triboelectric Nanogenerator. Advanced Materials, 2015, 27, 5210-5216.	21.0	273
72	Coupling of Piezoelectric and Triboelectric Effects: from Theoretical Analysis to Experimental Verification. Advanced Electronic Materials, 2015, 1, 1500187.	5.1	50

#	ARTICLE	IF	CITATIONS
73	A three-step model of black silicon formation in Deep Reactive Ion Etching process. , 2015, , .		1
74	Wafer-level fabrication of a triboelectric energy harvester. , 2015, , .		0
75	Electrification based devices with encapsulated liquid for energy harvesting, multifunctional sensing, and self-powered visualized detection. Journal of Materials Chemistry A, 2015, 3, 7382-7388.	10.3	39
76	A novel discharge system based on jagged electrodes with controllable spacing. , 2015, , .		0
77	Jagged discharge electrodes powered by triboelectric generator. Micro and Nano Letters, 2015, 10, 537-540.	1.3	2
78	A flexible and transparent graphene based triboelectric nanogenerator. , 2015, , .		1
79	Wearable electrode-free triboelectric generator for harvesting biomechanical energy. Nano Energy, 2015, 12, 19-25.	16.0	127
80	A flexible and implantable piezoelectric generator harvesting energy from the pulsation of ascending aorta: in vitro and in vivo studies. Nano Energy, 2015, 12, 296-304.	16.0	148
81	Formation mechanism of multi-functional black silicon based on optimized deep reactive ion etching technique with SF6/C4F8. Science China Technological Sciences, 2015, 58, 381-389.	4.0	9
82	A cubic triboelectric generator as a self-powered orientation sensor. Science China Technological Sciences, 2015, 58, 842-847.	4.0	16
83	A super-flexible and lightweight membrane for energy harvesting. , 2015, , .		1
84	A high-efficiency transparent electrification-based generator for harvesting droplet energy. , 2015, , .		5
85	Improvement of DRIE simulation method for process development application. , 2015, , .		0
86	Floor-based large-area triboelectric generator for active security monitoring. , 2015, , .		0
87	Design and modeling of a continuously variable piezoelectric RF MEMS switch. Microsystem Technologies, 2015, 21, 1293-1300.	2.0	7
88	High performance triboelectric nanogenerators based on large-scale mass-fabrication technologies. Nano Energy, 2015, 11, 304-322.	16.0	191
89	Self-assembly of colloid nano particle by evaporation-induced method. , 2014, , .		1
90	Note: A cubic electromagnetic harvester that convert vibration energy from all directions. Review of Scientific Instruments, 2014, 85, 076109.	1.3	9

#	Article	IF	Citations
91	Microfluidic sterilization. Biomicrofluidics, 2014, 8, 034119.	2.4	3
92	An unmovable single-layer triboloelectric generator driven by sliding friction. Nano Energy, 2014, 9, 401-407.	16.0	18
93	Switchable wetting and flexible SiC thin film with nanostructures for microfluidic surface-enhanced Raman scattering sensors. Sensors and Actuators A: Physical, 2014, 208, 166-173.	4.1	17
94	High-performance triboelectric nanogenerator with enhanced energy density based on single-step fluorocarbon plasma treatment. Nano Energy, 2014, 4, 123-131.	16.0	287
95	The fabrication of PDMS-based functional surface mimicking the namib desert beetle back for collecting water vapor in the air. , 2014, , .		1
96	3D nanostructure reconstruction based on the SEM imaging principle, and applications. Nanotechnology, 2014, 25, 185705.	2.6	19
97	Design and Fabrication of Integrated Magnetic MEMS Energy Harvester for Low Frequency Applications. Journal of Microelectromechanical Systems, 2014, 23, 204-212.	2.5	82
98	Springless cubic harvester for converting three dimensional vibration energy. , 2014, , .		5
99	Analysis of an in-plane electromagnetic energy harvester with integrated magnet array. Sensors and Actuators A: Physical, 2014, 219, 38-46.	4.1	29
100	Fabrication of spiral-shaped PVDF cantilever based vibration energy harvester. , 2014, , .		3
101	Single-friction-surface triboelectric generator with human body conduit. Applied Physics Letters, 2014, 104, .	3.3	47
102	Low frequency wide bandwidth MEMS energy harvester based on spiral-shaped PVDF cantilever. Science China Technological Sciences, 2014, 57, 1068-1072.	4.0	34
103	A 3-D Stacked High-Q PI-Based MEMS Inductor for Wireless Power Transmission System in Bio-Implanted Applications. Journal of Microelectromechanical Systems, 2014, 23, 888-898.	2.5	9
104	Parylene-based 3D high performance folded multilayer inductors for wireless power transmission in implanted applications. Sensors and Actuators A: Physical, 2014, 208, 141-151.	4.1	17
105	Fabrication of silicon hierarchical nanopillar arrays based on nanosphere lithography. Micro and Nano Letters, 2014, 9, 655-659.	1.3	3
106	Magnetic-assisted triboelectric nanogenerators as self-powered visualized omnidirectional tilt sensing system. Scientific Reports, 2014, 4, 4811.	3.3	89
107	Nanofluidic crystal: a facile, high-efficiency and high-power-density scaling up scheme for energy harvesting based on nanofluidic reverse electrodialysis. Nanotechnology, 2013, 24, 345401.	2.6	56
108	High-Q polyimide-based spiral inductors with magnetic core for RF telemetry applications. , 2013, , .		0

#	Article	IF	Citations
109	Low-frequency wide-band hybrid energy harvester based on piezoelectric and triboelectric mechanism. Science China Technological Sciences, 2013, 56, 1835-1841.	4.0	66
110	A transparent single-friction-surface triboelectric generator and self-powered touch sensor. Energy and Environmental Science, 2013, 6, 3235.	30.8	367
111	r-Shaped Hybrid Nanogenerator with Enhanced Piezoelectricity. ACS Nano, 2013, 7, 8554-8560.	14.6	225
112	Investigation of power generation based on stacked triboelectric nanogenerator. Nano Energy, 2013, 2, 1164-1171.	16.0	87
113	Low frequency PVDF piezoelectric energy harvester with combined d31 and d33 operating modes. , 2013, , .		6
114	Self-Cleaning Poly(dimethylsiloxane) Film with Functional Micro/Nano Hierarchical Structures. Langmuir, 2013, 29, 10769-10775.	3.5	47
115	Investigation and characterization of an arc-shaped piezoelectric generator. Science China Technological Sciences, 2013, 56, 2636-2641.	4.0	9
116	Self-powered flexible printed circuit board with integrated triboelectric generator. Nano Energy, 2013, 2, 1101-1106.	16.0	108
117	A low-cost, high-efficiency and high-output-power nanofluidic energy harvester. , 2013, , .		2
118	Stacked flexible parylene-based 3D inductors with Ni<inf>80</inf>Fe<inf>20</inf> core for wireless power transmission system. , 2013, , .		3
119	High aspect ratio etching of nanopores in PECVD SiC through AAO mask. , 2013, , .		0
120	Effect of RF sputtering parameters on PZT crystal growth. , 2013, , .		1
121	Silicon carbide capacitive pressure sensors with arrayed sensing membranes. , 2013, , .		1
122	Growth of arrayed ZnO nanowires using a solution method. , 2013, , .		0
123	Flexible MEMS inductors based on Parylene-FeNi Compound Substrate for wireless power transmission system. , 2013, , .		0
124	Frequency-Multiplication High-Output Triboelectric Nanogenerator for Sustainably Powering Biomedical Microsystems. Nano Letters, 2013, 13, 1168-1172.	9.1	591
125	Superhydrophobic Micro/Nano Dual-Scale Structures. Journal of Nanoscience and Nanotechnology, 2013, 13, 1539-1542.	0.9	19
126	Contactless RF MEMS switch using PZT actuation. , 2013, , .		2

#	Article	IF	Citations
127	Flexible parylene-based folded inductors with magnetic core. , 2013, , .		2
128	Effects of crystal defects on the electrokinetics of nanofluidic crystal. , 2013, , .		0
129	Growth of ZnO nanowires on flexible polyimide substrates. , 2013, , .		0
130	Microstructure and magnetic properties of micro NiFe alloy arrays for MEMS application. Journal of Micromechanics and Microengineering, 2013, 23, 085013.	2.6	7
131	Tunable wetting behavior of nanostructured poly(dimethylsiloxane) by plasma combination treatments. Applied Physics Letters, 2012, 101, .	3.3	19
132	Electrodeposition and characterization of CoNiMnP permanent magnet arrays for MEMS sensors and actuators. Sensors and Actuators A: Physical, 2012, 188, 190-197.	4.1	19
133	Fabrication and characterization of squama-shape micro/nano multi-scale silicon material. Science China Technological Sciences, 2012, 55, 3395-3400.	4.0	21
134	Simulation studies on PECVD SiO<inf>2</inf> process aiming at TSV application. , 2011, , .		0
135	Design and microfabrication of integrated magnetic MEMS energy harvester for low frequency application. , 2011, , .		4
136	Development of TSV simulator: FASTsv. , 2011, , .		0
137	Fabrication and characteristics of tunable band pass filter using MetalMumps technology. , 2011, , .		2
138	Complementary metal-oxide semiconductor-compatible silicon carbide pressure sensors based on bulk micromachining. Micro and Nano Letters, 2011, 6, 265.	1.3	12
139	Wideband anti-reflective micro/nano dual-scale structures: fabrication and optical properties. Micro and Nano Letters, 2011, 6, 947.	1.3	35
140	Robust PECVD SiC membrane made for stencil lithography. Microelectronic Engineering, 2011, 88, 2790-2793.	2.4	9
141	Electrodeposition and characterization of CoNiMnP permanent magnet arrays for MEMS applications. , 2011, , .		4
142	A continuous-time voltage readout for SiC micromechanical capacitive pressure sensor. , 2010, , .		0
143	High efficiency coupling with stacked MEMS coils. , 2010, , .		0
144	Wireless energy and signal transmission system for micro implantable medical system. , 2010, , .		0

#	Article	IF	Citations
145	Fabrication of micro/nano dual-scale structures by improved deep reactive ion etching. Journal of Micromechanics and Microengineering, 2010, 20, 075028.	2.6	42
146	Effect of etch holes on the capacitance and pull-in voltage in MEMS tunable capacitors. International Journal of Electronics, 2010, 97, 1439-1448.	1.4	25
147	RF MEMS filter based on one step of copper electroplating. , 2010, , .		0
148	Electro-thermally actuated RF MEMS switch for wireless communication. , 2010, , .		8
149	Novel Applications of Pulse Laser Annealing in Micro Structures by Boundary Control. Procedia Chemistry, 2009, 1, 786-791.	0.7	6
150	Electronic design for an implantable wireless power and data transmission system. , 2008, , .		3
151	Fabrication of SiC MEMS Pressure Sensor by Anodic Bonding. , 2008, , .		2
152	Study on a PECVD SiC-coated pressure sensor. Journal of Micromechanics and Microengineering, 2007, 17, 426-431.	2.6	35
153	Application of PECVD SiC in glass micromachining. Journal of Micromechanics and Microengineering, 2007, 17, 775-780.	2.6	26
154	Fabrication and Test of PECVD SiC Resonator. , 2007, , .		2
155	Modeling and simulation of the lag effect in a deep reactive ion etching process. Journal of Micromechanics and Microengineering, 2006, 16, 2570-2575.	2.6	32
156	Simulation of the Bosch process with a stringâ€“cell hybrid method. Journal of Micromechanics and Microengineering, 2004, 14, 851-858.	2.6	54