Guang Zhu

List of Publications by Year
in descending order

74 papers	13,084 citations	46918 47 h-index	71532 76 g-index
77 all docs	77 docs citations	77 times ranked	9158 citing authors

#	Article	IF	Citations
1	Toward Large-Scale Energy Harvesting by a Nanoparticle-Enhanced Triboelectric Nanogenerator. Nano Letters, 2013, 13, 847-853.	4.5	979
2	Triboelectric-Generator-Driven Pulse Electrodeposition for Micropatterning. Nano Letters, 2012, 12, 4960-4965.	4.5	874
3	Radial-arrayed rotary electrification for high performance triboelectric generator. Nature Communications, 2014, 5, 3426.	5.8	734
4	Flexible High-Output Nanogenerator Based on Lateral ZnO Nanowire Array. Nano Letters, 2010, 10, 3151-3155.	4.5	713
5	High-resolution electroluminescent imaging of pressure distribution using a piezoelectric nanowire LED array. Nature Photonics, 2013, 7, 752-758.	15.6	641
6	Flexible Nanocomposite Generator Made of BaTiO₃ Nanoparticles and Graphitic Carbons. Advanced Materials, 2012, 24, 2999-3004.	11.1	601
7	Triboelectric nanogenerators as a new energy technology: From fundamentals, devices, to applications. Nano Energy, 2015, 14, 126-138.	8.2	574
8	Integrated Multilayered Triboelectric Nanogenerator for Harvesting Biomechanical Energy from Human Motions. ACS Nano, 2013, 7, 3713-3719.	7.3	538
9	Harvesting Water Wave Energy by Asymmetric Screening of Electrostatic Charges on a Nanostructured Hydrophobic Thin-Film Surface. ACS Nano, 2014, 8, 6031-6037.	7.3	471
10	Linear-Grating Triboelectric Generator Based on Sliding Electrification. Nano Letters, 2013, 13, 2282-2289.	4.5	442
11	Progress in nanogenerators for portable electronics. Materials Today, 2012, 15, 532-543.	8.3	417
12	A Shapeâ€Adaptive Thinâ€Filmâ€Based Approach for 50% Highâ€Efficiency Energy Generation Through Microâ€Grating Sliding Electrification. Advanced Materials, 2014, 26, 3788-3796.	11.1	415
13	Self-Powered, Ultrasensitive, Flexible Tactile Sensors Based on Contact Electrification. Nano Letters, 2014, 14, 3208-3213.	4.5	405
14	Functional Electrical Stimulation by Nanogenerator with 58 V Output Voltage. Nano Letters, 2012, 12, 3086-3090.	4.5	288
15	Enhanced Triboelectric Nanogenerators and Triboelectric Nanosensor Using Chemically Modified TiO₂ Nanomaterials. ACS Nano, 2013, 7, 4554-4560.	7.3	276
16	3D Stack Integrated Triboelectric Nanogenerator for Harvesting Vibration Energy. Advanced Functional Materials, 2014, 24, 4090-4096.	7.8	263
17	Membraneâ€Based Selfâ€Powered Triboelectric Sensors for Pressure Change Detection and Its Uses in Security Surveillance and Healthcare Monitoring. Advanced Functional Materials, 2014, 24, 5807-5813.	7.8	250
18	Polymer Materials for Highâ€Performance Triboelectric Nanogenerators. Advanced Science, 2020, 7, 2000186.	5.6	230

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19	In Situ Quantitative Study of Nanoscale Triboelectrification and Patterning. Nano Letters, 2013, 13, 2771-2776.	4.5	210
20	Significant Enhancement of Triboelectric Charge Density by Fluorinated Surface Modification in Nanoscale for Converting Mechanical Energy. Advanced Functional Materials, 2015, 25, 5691-5697.	7.8	210
21	Harvesting vibration energy by a triple-cantilever based triboelectric nanogenerator. Nano Research, 2013, 6, 880-886.	5.8	209
22	Dipole-moment-induced effect on contact electrification for triboelectric nanogenerators. Nano Research, 2014, 7, 990-997.	5.8	180
23	Enhanced Performance of a ZnO Nanowireâ€Based Selfâ€Powered Glucose Sensor by Piezotronic Effect. Advanced Functional Materials, 2013, 23, 5868-5874.	7.8	174
24	Stretchable Porous Carbon Nanotubeâ€Elastomer Hybrid Nanocomposite for Harvesting Mechanical Energy. Advanced Materials, 2017, 29, 1603115.	11.1	172
25	Ultracomfortable Hierarchical Nanonetwork for Highly Sensitive Pressure Sensor. ACS Nano, 2020, 14, 9605-9612.	7.3	166
26	Highly Adaptive Solidâ€"Liquid Interfacing Triboelectric Nanogenerator for Harvesting Diverse Water Wave Energy. ACS Nano, 2018, 12, 4280-4285.	7.3	156
27	Highly Robust, Transparent, and Breathable Epidermal Electrode. ACS Nano, 2018, 12, 9326-9332.	7.3	153
28	Dynamic Triboelectrificationâ€Induced Electroluminescence and its Use in Visualized Sensing. Advanced Materials, 2016, 28, 6656-6664.	11.1	140
29	Self-powered thin-film motion vector sensor. Nature Communications, 2015, 6, 8031.	5.8	127
30	A Selfâ€Powered Implantable Drugâ€Delivery System Using Biokinetic Energy. Advanced Materials, 2017, 29, 1605668.	11.1	122
31	Triboelectric Charging at the Nanostructured Solid/Liquid Interface for Area-Scalable Wave Energy Conversion and Its Use in Corrosion Protection. ACS Nano, 2015, 9, 7671-7677.	7.3	119
32	A self-powered electrochromic device driven by a nanogenerator. Energy and Environmental Science, 2012, 5, 9462.	15.6	117
33	Fully Rollable Lead-Free Poly(vinylidene fluoride)-Niobate-Based Nanogenerator with Ultra-Flexible Nano-Network Electrodes. ACS Nano, 2018, 12, 4803-4811.	7.3	106
34	Self-powered, on-demand transdermal drug delivery system driven by triboelectric nanogenerator. Nano Energy, 2019, 62, 610-619.	8.2	99
35	Boosting the Power and Lowering the Impedance of Triboelectric Nanogenerators through Manipulating the Permittivity for Wearable Energy Harvesting. ACS Nano, 2021, 15, 7513-7521.	7.3	90
36	Small-Sized, Lightweight, and Flexible Triboelectric Nanogenerator Enhanced by PTFE/PDMS Nanocomposite Electret. ACS Applied Materials & Interfaces, 2019, 11, 20370-20377.	4.0	75

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37	Synthesis of vertically aligned ultra-long ZnO nanowires on heterogeneous substrates with catalyst at the root. Nanotechnology, 2012, 23, 055604.	1.3	74
38	Surface-charge engineering for high-performance triboelectric nanogenerator based on identical electrification materials. Nano Energy, 2014, 10, 83-89.	8.2	70
39	Facile Fabrication of Flexible Pressure Sensor with Programmable Lattice Structure. ACS Applied Materials & Interfaces, 2021, 13, 10388-10396.	4.0	70
40	Triboelectrification-enabled touch sensing for self-powered position mapping and dynamic tracking by a flexible and area-scalable sensor array. Nano Energy, 2017, 41, 387-393.	8.2	69
41	Nanofiberâ€Reinforced Silver Nanowires Network as a Robust, Ultrathin, and Conformable Epidermal Electrode for Ambulatory Monitoring of Physiological Signals. Small, 2019, 15, e1900755.	5.2	62
42	Triboelectricâ€“Thermoelectric Hybrid Nanogenerator for Harvesting Energy from Ambient Environments. Advanced Materials Technologies, 2018, 3, 1800166.	3.0	61
43	Keystroke Dynamics Identification Based on Triboelectric Nanogenerator for Intelligent Keyboard Using Deep Learning Method. Advanced Materials Technologies, 2019, 4, 1800167.	3.0	57
44	All-Fabric Ultrathin Capacitive Sensor with High Pressure Sensitivity and Broad Detection Range for Electronic Skin. ACS Applied Materials & Interfaces, 2021, 13, 24062-24069.	4.0	56
45	Multilayered flexible nanocomposite for hybrid nanogenerator enabled by conjunction of piezoelectricity and triboelectricity. Nano Research, 2017, 10, 785-793.	5.8	50
46	A flexible dual parameter sensor with hierarchical porous structure for fully decoupled pressureâ€“temperature sensing. Chemical Engineering Journal, 2022, 430, 133158.	6.6	50
47	Ultraâ€robust stretchable electrode for eâ€skin: In situ assembly using a nanofiber scaffold and liquid metal to mimic waterâ€toâ€net interaction. InformaÄnÃ-MateriÃ¡ly, 2022, 4, .	8.5	47
48	Largeâ€Area Integrated Triboelectric Sensor Array for Wireless Static and Dynamic Pressure Detection and Mapping. Small, 2020, 16, e1906352.	5.2	43
49	<i>In Situ</i> Active Poling of Nanofiber Networks for Gigantically Enhanced Particulate Filtration. ACS Applied Materials & Interfaces, 2018, 10, 24332-24338.	4.0	42
50	Flexible Porous Polydimethylsiloxane/Lead Zirconate Titanate-Based Nanogenerator Enabled by the Dual Effect of Ferroelectricity and Piezoelectricity. ACS Applied Materials & Interfaces, 2018, 10, 33105-33111.	4.0	38
51	Nanowire-array-based gene electro-transfection system driven by human-motion operated triboelectric nanogenerator. Nano Energy, 2019, 64, 103901.	8.2	33
52	Enhanced High-Resolution Triboelectrification-Induced Electroluminescence for Self-Powered Visualized Interactive Sensing. ACS Applied Materials & Interfaces, 2019, 11, 13796-13802.	4.0	31
53	A Flexible and Ultra-Highly Sensitive Tactile Sensor through a Parallel Circuit by a Magnetic Aligned Conductive Composite. ACS Nano, 2022, 16, 746-754.	7.3	31
54	Triboelectrification-enabled thin-film tactile matrix for self-powered high-resolution imaging. Nano Energy, 2018, 50, 497-503.	8.2	30

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55	Highâ€Intensity Triboelectrificationâ€Induced Electroluminescence by Microsized Contacts for Selfâ€Powered Display and Illumination. Advanced Materials Interfaces, 2018, 5, 1701063.	1.9	29
56	Fully-integrated motion-driven electroluminescence enabled by triboelectrification for customized flexible display. Nano Energy, 2019, 61, 158-164.	8.2	29
57	Nanocomposite electret with surface potential self-recovery from water dipping for environmentally stable energy harvesting. Nano Energy, 2019, 64, 103913.	8.2	27
58	Selfâ€Powered Optical Switch Based on Triboelectrificationâ€Triggered Liquid Crystal Alignment for Wireless Sensing. Advanced Functional Materials, 2019, 29, 1808633.	7.8	27
59	Highly conductive, stretchable, and breathable epidermal electrode based on hierarchically interactive nano-network. Nanoscale, 2020, 12, 16053-16062.	2.8	26
60	Selfâ€Powered Electrowetting Valve for Instantaneous and Simultaneous Actuation of Paperâ€Based Microfluidic Assays. Advanced Functional Materials, 2019, 29, 1808974.	7.8	25
61	High sensitivity and broad linearity range pressure sensor based on hierarchical in-situ filling porous structure. Npj Flexible Electronics, 2022, 6, .	5.1	23
62	Stretchable shape-adaptive liquid-solid interface nanogenerator enabled by in-situ charged nanocomposite membrane. Nano Energy, 2020, 69, 104414.	8.2	22
63	A Contactâ€Slidingâ€Triboelectrificationâ€Driven Dynamic Optical Transmittance Modulator for Selfâ€Powered Information Covering and Selective Visualization. Advanced Materials, 2020, 32, e1904988.	11.1	21
64	Triboelectricâ€Potentialâ€Regulated Charge Transport Through pâ€“n Junctions for Areaâ€Scalable Conversion of Mechanical Energy. Advanced Materials, 2016, 28, 668-676.	11.1	20
65	Triboelectric nanogenerator based on direct image lithography and surface fluorination for biomechanical energy harvesting and self-powered sterilization. Nano Energy, 2022, 98, 107279.	8.2	20
66	Differentiation of Multiple Mechanical Stimuli by a Flexible Sensor Using a Dual-Interdigital-Electrode Layout for Bodily Kinesthetic Identification. ACS Applied Materials & Interfaces, 2021, 13, 26394-26403.	4.0	16
67	Triboelectrification-Induced Self-Assembly of Macro-Sized Polymer Beads on a Nanostructured Surface for Self-Powered Patterning. ACS Nano, 2018, 12, 441-447.	7.3	15
68	Wide-spectrum manipulation of triboelectrification-induced electroluminescence by long afterglow phosphors in elastomeric zinc sulfide composites. Journal of Materials Chemistry C, 2019, 7, 4567-4572.	2.7	15
69	Electret-induced electric field assisted luminescence modulation for interactive visualized sensing in a non-contact mode. Materials Horizons, 2020, 7, 1144-1149.	6.4	14
70	Stretchable Hybrid Bilayered Luminescent Composite Based on the Combination of Strain-Induced and Triboelectrification-Induced Electroluminescence. ACS Omega, 2019, 4, 20470-20475.	1.6	13
71	Effects of rosin-type nucleating agent on polypropylene crystallization. Journal of Applied Polymer Science, 2002, 83, 1069-1073.	1.3	12
72	Layerâ€byâ€Layer Assembly of Nanofiber/Nanoparticle Artificial Skin for Strainâ€Insensitive UV Shielding and Visualized UV Detection. Advanced Materials Technologies, 2020, 5, 1900976.	3.0	12

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73	Functional Nanomaterials for Sustainable Energy Technologies. Journal of Nanomaterials, 2016, 2016, 1-2.	1.5	5
74	Charge Distribution and Stability of SiO 2 Nanoarray Electret. ChemNanoMat, 2020, 6, 212-217.	1.5	2