Changsheng Wu

List of Publications by Year
in descending order

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53	7,474	66234	168136
papers	citations	42 h-index	53 g-index

53	53	53	6552
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Triboelectric Nanogenerator: A Foundation of the Energy for the New Era. Advanced Energy Materials, 2019, 9, 1802906.	10.2	1,086
2	A highly sensitive, self-powered triboelectric auditory sensor for social robotics and hearing aids. Science Robotics, 2018, 3, .	9.9	573
3	Achieving ultrahigh triboelectric charge density for efficient energy harvesting. Nature Communications, 2017, 8, 88.	5.8	495
4	MXene electrochemical microsupercapacitor integrated with triboelectric nanogenerator as a wearable self-charging power unit. Nano Energy, 2018, 45, 266-272.	8.2	333
5	A Highly Stretchable Fiberâ€Based Triboelectric Nanogenerator for Selfâ€Powered Wearable Electronics. Advanced Functional Materials, 2017, 27, 1604378.	7.8	296
6	All-in-One Shape-Adaptive Self-Charging Power Package for Wearable Electronics. ACS Nano, 2016, 10, 10580-10588.	7.3	290
7	Electric Eelâ€Skinâ€Inspired Mechanically Durable and Superâ€Stretchable Nanogenerator for Deformable Power Source and Fully Autonomous Conformable Electronicâ€Skin Applications. Advanced Materials, 2016, 28, 10024-10032.	11.1	273
8	Self-Powered Wind Sensor System for Detecting Wind Speed and Direction Based on a Triboelectric Nanogenerator. ACS Nano, 2018, 12, 3954-3963.	7.3	224
9	Triboelectric microplasma powered by mechanical stimuli. Nature Communications, 2018, 9, 3733.	5.8	212
10	Paper-Based Triboelectric Nanogenerators Made of Stretchable Interlocking Kirigami Patterns. ACS Nano, 2016, 10, 4652-4659.	7.3	197
11	Fully Packaged Blue Energy Harvester by Hybridizing a Rolling Triboelectric Nanogenerator and an Electromagnetic Generator. ACS Nano, 2016, 10, 11369-11376.	7.3	181
12	Keystroke dynamics enabled authentication and identification using triboelectric nanogenerator array. Materials Today, 2018, 21, 216-222.	8.3	176
13	Nanogenerator-based dual-functional and self-powered thin patch loudspeaker or microphone for flexible electronics. Nature Communications, 2017, 8, 15310.	5.8	169
14	Humanâ€“Machine Interfacing Enabled by Triboelectric Nanogenerators and Tribotronics. Advanced Materials Technologies, 2019, 4, 1800487.	3.0	169
15	A spring-based resonance coupling for hugely enhancing the performance of triboelectric nanogenerators for harvesting low-frequency vibration energy. Nano Energy, 2017, 32, 287-293.	8.2	164
16	Selfâ€Powered Si/CdS Flexible Photodetector with Broadband Response from 325 to 1550 nm Based on Pyroâ€phototronic Effect: An Approach for Photosensing below Bandgap Energy. Advanced Materials, 2018, 30, 1705893.	11.1	163
17	Silicon Nanowire/Polymer Hybrid Solar Cell-Supercapacitor: A Self-Charging Power Unit with a Total Efficiency of 10.5%. Nano Letters, 2017, 17, 4240-4247.	4.5	149
18	Maximized Effective Energy Output of Contactâ€Separationâ€Triggered Triboelectric Nanogenerators as Limited by Air Breakdown. Advanced Functional Materials, 2017, 27, 1700049.	7.8	144

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19	Sustainable and Biodegradable Wood Sponge Piezoelectric Nanogenerator for Sensing and Energy Harvesting Applications. ACS Nano, 2020, 14, 14665-14674.	7.3	124
20	Signal Output of Triboelectric Nanogenerator at Oilâ€“Waterâ€“Solid Multiphase Interfaces and its Application for Dualâ€Signal Chemical Sensing. Advanced Materials, 2019, 31, e1902793.	11.1	120
21	A Selfâ€Powered Dynamic Displacement Monitoring System Based on Triboelectric Accelerometer. Advanced Energy Materials, 2017, 7, 1700565.	10.2	117
22	Self-Powered Multifunctional Motion Sensor Enabled by Magnetic-Regulated Triboelectric Nanogenerator. ACS Nano, 2018, 12, 5726-5733.	7.3	109
23	Selfâ€Powered Iontophoretic Transdermal Drug Delivery System Driven and Regulated by Biomechanical Motions. Advanced Functional Materials, 2020, 30, 1907378.	7.8	105
24	Quantitative Prediction of ParavalvularÂLeak in Transcatheter AorticÂValve Replacement Based onÂTissue-Mimicking 3D Printing. JACC: Cardiovascular Imaging, 2017, 10, 719-731.	2.3	102
25	Rational Structure Optimized Hybrid Nanogenerator for Highly Efficient Water Wave Energy Harvesting. Advanced Energy Materials, 2019, 9, 1802892.	10.2	92
26	A transient, closed-loop network of wireless, body-integrated devices for autonomous electrotherapy. Science, 2022, 376, 1006-1012.	6.0	90
27	Selfâ€Powered Electrochemical Synthesis of Polypyrrole from the Pulsed Output of a Triboelectric Nanogenerator as a Sustainable Energy System. Advanced Functional Materials, 2016, 26, 3542-3548.	7.8	87
28	Piezoâ€Phototronic Effect on Selective Electron or Hole Transport through Depletion Region of Visâ€“NIR Broadband Photodiode. Advanced Materials, 2017, 29, 1701412.	11.1	82
29	Concurrent Harvesting of Ambient Energy by Hybrid Nanogenerators for Wearable Self-Powered Systems and Active Remote Sensing. ACS Applied Materials & Interfaces, 2018, 10, 14708-14715.	4.0	78
30	Contact-Electrification between Two Identical Materials: Curvature Effect. ACS Nano, 2019, 13, 2034-2041.	7.3	78
31	TriboPump: A Lowâ€Cost, Handâ€Powered Water Disinfection System. Advanced Energy Materials, 2019, 9, 1901320.	10.2	74
32	Polymer nanogenerators: Opportunities and challenges for largeâ€scale applications. Journal of Applied Polymer Science, 2018, 135, 45674.	1.3	73
33	Dual-material 3D printed metamaterials with tunable mechanical properties for patient-specific tissue-mimicking phantoms. Additive Manufacturing, 2016, 12, 31-37.	1.7	71
34	Self-powered wireless optical transmission of mechanical agitation signals. Nano Energy, 2018, 47, 566-572.	8.2	66
35	Functionalized wood with tunable tribopolarity for efficient triboelectric nanogenerators. Matter, 2021, 4, 3049-3066.	5.0	66
36	Electrohydrodynamic Jet Printing Driven by a Triboelectric Nanogenerator. Advanced Functional Materials, 2019, 29, 1901102.	7.8	59

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37	Largely Improved Near-Infrared Silicon-Photosensing by the Piezo-Phototronic Effect. ACS Nano, 2017, 11, 7118-7125.	7.3	57
38	Simultaneously Enhancing Light Emission and Suppressing Efficiency Droop in GaN Microwire-Based Ultraviolet Light-Emitting Diode by the Piezo-Phototronic Effect. Nano Letters, 2017, 17, 3718-3724.	4.5	55
39	A wireless, skin-interfaced biosensor for cerebral hemodynamic monitoring in pediatric care. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 31674-31684.	3.3	55
40	Differential cardiopulmonary monitoring system for artifact-canceled physiological tracking of athletes, workers, and COVID-19 patients. Science Advances, 2021, 7, .	4.7	55
41	Enhanced performances of Si/CdS heterojunction near-infrared photodetector by the piezo-phototronic effect. Nano Energy, 2018, 44, 311-318.	8.2	54
42	Field Emission of Electrons Powered by a Triboelectric Nanogenerator. Advanced Functional Materials, 2018, 28, 1800610.	7.8	44
43	Sub-nanoliter metabolomics via mass spectrometry to characterize volume-limited samples. Nature Communications, 2020, 11, 5625.	5.8	39
44	Bioprinting: an assessment based on manufacturing readiness levels. Critical Reviews in Biotechnology, 2017, 37, 333-354.	5.1	36
45	Ferroelectricityâ€Enhanced Piezoâ€Phototronic Effect in 2D Vâ€Doped ZnO Nanosheets. Advanced Science, 2019, 6, 1900314.	5.6	33
46	Pop-Up Conducting Large-Area Biographene Kirigami. ACS Nano, 2018, 12, 9714-9720.	7.3	27
47	Thermally switchable, crystallizable oil and silicone composite adhesives for skin-interfaced wearable devices. Science Advances, 2022, 8, .	4.7	27
48	A facile method for integrating direct-write devices into three-dimensional printed parts. Smart Materials and Structures, 2015, 24, 065008.	1.8	23
49	Wireless implantable optical probe for continuous monitoring of oxygen saturation in flaps and organ grafts. Nature Communications, 2022, 13, .	5.8	22
50	Implantable, wireless, self-fixing thermal sensors for continuous measurements of microvascular blood flow in flaps and organ grafts. Biosensors and Bioelectronics, 2022, 206, 114145.	5.3	18
51	Bitter Flavored, Soft Composites for Wearables Designed to Reduce Risks of Choking in Infants. Advanced Materials, 2021, 33, e2103857.	11.1	17
52	Sunlightâ€Triggerable Transient Energy Harvester and Sensors Based on Triboelectric Nanogenerator Using Acidâ€Sensitive Poly(phthalaldehyde). Advanced Electronic Materials, 2019, 5, 1900725.	2.6	15
53	Large-Area Triboelectric Nanogenerator Mass Spectrometry: Expanded Coverage, Double-Bond Pinpointing, and Supercharging. Journal of the American Society for Mass Spectrometry, 2020, 31, 727-734.	1.2	10