

Tao Jiang

List of Publications by Year in descending order

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90
papers

9,442
citations

28190

55
h-index

46693

89
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90
docs citations

90
times ranked

4818
citing authors

#	ARTICLE	IF	CITATIONS
1	Toward the blue energy dream by triboelectric nanogenerator networks. <i>Nano Energy</i> , 2017, 39, 9-23.	8.2	913
2	Liquidâ€Metal Electrode for Highâ€Performance Triboelectric Nanogenerator at an Instantaneous Energy Conversion Efficiency of 70.6%. <i>Advanced Functional Materials</i> , 2015, 25, 3718-3725.	7.8	427
3	Flexible and durable wood-based triboelectric nanogenerators for self-powered sensing in athletic big data analytics. <i>Nature Communications</i> , 2019, 10, 5147.	5.8	335
4	Universal power management strategy for triboelectric nanogenerator. <i>Nano Energy</i> , 2017, 37, 168-176.	8.2	312
5	Coupled Triboelectric Nanogenerator Networks for Efficient Water Wave Energy Harvesting. <i>ACS Nano</i> , 2018, 12, 1849-1858.	7.3	299
6	Spherical triboelectric nanogenerator integrated with power management module for harvesting multidirectional water wave energy. <i>Energy and Environmental Science</i> , 2020, 13, 277-285.	15.6	252
7	Triboelectric Nanogenerator Enhanced Nanofiber Air Filters for Efficient Particulate Matter Removal. <i>ACS Nano</i> , 2017, 11, 6211-6217.	7.3	242
8	Fully Packaged Selfâ€Powered Triboelectric Pressure Sensor Using Hemispheresâ€Array. <i>Advanced Energy Materials</i> , 2016, 6, 1502566.	10.2	212
9	Robust Swingâ€Structured Triboelectric Nanogenerator for Efficient Blue Energy Harvesting. <i>Advanced Energy Materials</i> , 2020, 10, 2000064.	10.2	212
10	Structural Optimization of Triboelectric Nanogenerator for Harvesting Water Wave Energy. <i>ACS Nano</i> , 2015, 9, 12562-12572.	7.3	192
11	Triboelectric Nanogenerator Networks Integrated with Power Management Module for Water Wave Energy Harvesting. <i>Advanced Functional Materials</i> , 2019, 29, 1807241.	7.8	190
12	Superâ€Durable, Lowâ€Wear, and Highâ€Performance Furâ€Brush Triboelectric Nanogenerator for Wind and Water Energy Harvesting for Smart Agriculture. <i>Advanced Energy Materials</i> , 2021, 11, 2003066.	10.2	189
13	Spring-assisted triboelectric nanogenerator for efficiently harvesting water wave energy. <i>Nano Energy</i> , 2017, 31, 560-567.	8.2	181
14	Three-dimensional ultraflexible triboelectric nanogenerator made by 3D printing. <i>Nano Energy</i> , 2018, 45, 380-389.	8.2	178
15	Spherical Triboelectric Nanogenerators Based on Springâ€Assisted Multilayered Structure for Efficient Water Wave Energy Harvesting. <i>Advanced Functional Materials</i> , 2018, 28, 1802634.	7.8	168
16	Integration of micro-supercapacitors with triboelectric nanogenerators for a flexible self-charging power unit. <i>Nano Research</i> , 2015, 8, 3934-3943.	5.8	164
17	Integrated triboelectric nanogenerator array based on air-driven membrane structures for water wave energy harvesting. <i>Nano Energy</i> , 2017, 31, 351-358.	8.2	162
18	Self-Powered Electrostatic Adsorption Face Mask Based on a Triboelectric Nanogenerator. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 7126-7133.	4.0	157

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19	Multilayer wavy-structured robust triboelectric nanogenerator for harvesting water wave energy. <i>Nano Energy</i> , 2016, 22, 87-94.	8.2	154
20	Triboelectric Nanogenerator Network Integrated with Charge Excitation Circuit for Effective Water Wave Energy Harvesting. <i>Advanced Energy Materials</i> , 2020, 10, 2002123.	10.2	154
21	Nanopillar Arrayed Triboelectric Nanogenerator as a Self-Powered Sensitive Sensor for a Sleep Monitoring System. <i>ACS Nano</i> , 2016, 10, 8097-8103.	7.3	145
22	Theoretical Study of Rotary Freestanding Triboelectric Nanogenerators. <i>Advanced Functional Materials</i> , 2015, 25, 2928-2938.	7.8	142
23	Robust Thin Films-Based Triboelectric Nanogenerator Arrays for Harvesting Bidirectional Wind Energy. <i>Advanced Energy Materials</i> , 2016, 6, 1501799.	10.2	136
24	Removal of Particulate Matter Emissions from a Vehicle Using a Self-Powered Triboelectric Filter. <i>ACS Nano</i> , 2015, 9, 12552-12561.	7.3	133
25	Soft-contact cylindrical triboelectric-electromagnetic hybrid nanogenerator based on swing structure for ultra-low frequency water wave energy harvesting. <i>Nano Energy</i> , 2021, 81, 105625.	8.2	132
26	High-performance triboelectric nanogenerators for self-powered, in-situ and real-time water quality mapping. <i>Nano Energy</i> , 2019, 66, 104117.	8.2	127
27	Self-power electroreduction of N ₂ into NH ₃ by 3D printed triboelectric nanogenerators. <i>Materials Today</i> , 2019, 28, 17-24.	8.3	127
28	Inductor-Free Wireless Energy Delivery via Maxwell's Displacement Current from an Electrodeless Triboelectric Nanogenerator. <i>Advanced Materials</i> , 2018, 30, 1704077.	11.1	124
29	Direct-Current Triboelectric Nanogenerator Realized by Air Breakdown Induced Ionized Air Channel. <i>Advanced Energy Materials</i> , 2018, 8, 1800889.	10.2	111
30	On-Skin Triboelectric Nanogenerator and Self-Powered Sensor with Ultrathin Thickness and High Stretchability. <i>Small</i> , 2017, 13, 1702929.	5.2	108
31	Stimulating Acrylic Elastomers by a Triboelectric Nanogenerator – Toward Self-Powered Electronic Skin and Artificial Muscle. <i>Advanced Functional Materials</i> , 2016, 26, 4906-4913.	7.8	100
32	Triboelectric Nanogenerator Tree for Harvesting Wind Energy and Illuminating in Subway Tunnel. <i>Advanced Materials Technologies</i> , 2018, 3, 1700317.	3.0	98
33	Silicone-Based Triboelectric Nanogenerator for Water Wave Energy Harvesting. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 3616-3623.	4.0	98
34	Whirling-Folded Triboelectric Nanogenerator with High Average Power for Water Wave Energy Harvesting. <i>Advanced Functional Materials</i> , 2019, 29, 1904867.	7.8	98
35	Segmented Swing-Structured Fur-Based Triboelectric Nanogenerator for Harvesting Blue Energy toward Marine Environmental Applications. <i>Advanced Functional Materials</i> , 2021, 31, 2106398.	7.8	95
36	Spherical triboelectric nanogenerator based on spring-assisted swing structure for effective water wave energy harvesting. <i>Nano Energy</i> , 2021, 83, 105836.	8.2	94

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37	Blue energy fuels: converting ocean wave energy to carbon-based liquid fuels <i>via</i> CO ₂ reduction. <i>Energy and Environmental Science</i> , 2020, 13, 1300-1308.	15.6	93
38	A Self-Powered Angle Sensor at Nanoradian-Resolution for Robotic Arms and Personalized Medicare. <i>Advanced Materials</i> , 2020, 32, e2001466.	11.1	93
39	Tunable Optical Modulator by Coupling a Triboelectric Nanogenerator and a Dielectric Elastomer. <i>Advanced Functional Materials</i> , 2017, 27, 1603788.	7.8	92
40	Wind-Driven Soft-Contact Rotary Triboelectric Nanogenerator Based on Rabbit Fur with High Performance and Durability for Smart Farming. <i>Advanced Functional Materials</i> , 2022, 32, 2108580.	7.8	85
41	Quantifying the power output and structural figure-of-merits of triboelectric nanogenerators in a charging system starting from the Maxwell's displacement current. <i>Nano Energy</i> , 2019, 59, 380-389.	8.2	84
42	Theoretical foundations of triboelectric nanogenerators (TEGs). <i>Science China Technological Sciences</i> , 2020, 63, 1087-1109.	2.0	83
43	Harsh-Environmental-Resistant Triboelectric Nanogenerator and Its Applications in Autodrive Safety Warning. <i>Advanced Energy Materials</i> , 2018, 8, 1801898.	10.2	82
44	Tribotronic Enhanced Photoresponsivity of a MoS ₂ Phototransistor. <i>Advanced Science</i> , 2016, 3, 1500419.	5.6	77
45	Butterfly-Inspired Triboelectric Nanogenerators with Spring-Assisted Linkage Structure for Water Wave Energy Harvesting. <i>Advanced Materials Technologies</i> , 2019, 4, 1800514.	3.0	77
46	Triboelectric nanogenerator enhanced multilayered antibacterial nanofiber air filters for efficient removal of ultrafine particulate matter. <i>Nano Research</i> , 2018, 11, 4090-4101.	5.8	74
47	Theoretical study on rotary-sliding disk triboelectric nanogenerators in contact and non-contact modes. <i>Nano Research</i> , 2016, 9, 1057-1070.	5.8	73
48	A multi-dielectric-layered triboelectric nanogenerator as energized by corona discharge. <i>Nanoscale</i> , 2017, 9, 9668-9675.	2.8	73
49	Cylindrical triboelectric nanogenerator based on swing structure for efficient harvesting of ultra-low-frequency water wave energy. <i>Applied Physics Reviews</i> , 2020, 7, 021401.	5.5	73
50	Biomimetic Hairy Whiskers for Robotic Skin Tactility. <i>Advanced Materials</i> , 2021, 33, e2101891.	11.1	72
51	A Stretchable, Flexible Triboelectric Nanogenerator for Self-Powered Real-Time Motion Monitoring. <i>Advanced Materials Technologies</i> , 2018, 3, 1800021.	3.0	68
52	Charging System Optimization of Triboelectric Nanogenerator for Water Wave Energy Harvesting and Storage. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 21398-21406.	4.0	67
53	Ultrafine Capillary-Tube Triboelectric Nanogenerator as Active Sensor for Microliquid Biological and Chemical Sensing. <i>Advanced Materials Technologies</i> , 2018, 3, 1700229.	3.0	64
54	Giant Ferroelectric Resistance Switching Controlled by a Modulatory Terminal for Low-Power Neuromorphic In-Memory Computing. <i>Advanced Materials</i> , 2021, 33, e2008709.	11.1	63

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55	Studying about applied force and the output performance of sliding-mode triboelectric nanogenerators. <i>Nano Energy</i> , 2018, 48, 292-300.	8.2	60
56	Rationally segmented triboelectric nanogenerator with a constant direct-current output and low crest factor. <i>Energy and Environmental Science</i> , 0, , .	15.6	60
57	Transparent self-powered triboelectric sensor based on PVA/PA hydrogel for promoting human-machine interaction in nursing and patient safety. <i>Nano Energy</i> , 2022, 97, 107199.	8.2	56
58	Engineering flexible 3D printed triboelectric nanogenerator to self-power electro-Fenton degradation of pollutants. <i>Nano Energy</i> , 2020, 74, 104908.	8.2	54
59	Self-Powered Electrochemical Oxidation of 4-Aminoazobenzene Driven by a Triboelectric Nanogenerator. <i>ACS Nano</i> , 2017, 11, 770-778.	7.3	53
60	Blue Energy for Green Hydrogen Fuel: A Self-Powered Electrochemical Conversion System Driven by Triboelectric Nanogenerators. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	52
61	Swing-Structured Triboelectric-Electromagnetic Hybridized Nanogenerator for Breeze Wind Energy Harvesting. <i>Advanced Materials Technologies</i> , 2021, 6, 2100496.	3.0	45
62	High-Throughput and Self-Powered Electroporation System for Drug Delivery Assisted by Microfoam Electrode. <i>ACS Nano</i> , 2020, 14, 15458-15467.	7.3	41
63	Self-Powered Inhomogeneous Strain Sensor Enabled Joint Motion and Three-Dimensional Muscle Sensing. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 34251-34257.	4.0	40
64	Self-powered electrochemical system by combining Fenton reaction and active chlorine generation for organic contaminant treatment. <i>Nano Research</i> , 2019, 12, 2729-2735.	5.8	35
65	Recent Advances of Upconversion Nanomaterials in the Biological Field. <i>Nanomaterials</i> , 2021, 11, 2474.	1.9	35
66	Figure-of-Merit for Rolling-Friction-Based Triboelectric Nanogenerators. <i>Advanced Materials Technologies</i> , 2016, 1, 1600017.	3.0	34
67	Hourglass Triboelectric Nanogenerator as a Direct Current Power Source. <i>Advanced Energy Materials</i> , 2017, 7, 1700644.	10.2	34
68	Durability Improvement of Breeze-Driven Triboelectric-Electromagnetic Hybrid Nanogenerator by a Travel-Controlled Approach. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	34
69	Design guidelines of triboelectric nanogenerator for water wave energy harvesters. <i>Nanotechnology</i> , 2017, 28, 185403.	1.3	30
70	Long Distance Transport of Microdroplets and Precise Microfluidic Patterning Based on Triboelectric Nanogenerator. <i>Advanced Materials Technologies</i> , 2019, 4, 1800300.	3.0	30
71	Bladeless-Turbine-Based Triboelectric Nanogenerator for Fluid Energy Harvesting and Self-Powered Fluid Gauge. <i>Advanced Materials Technologies</i> , 2019, 4, 1800560.	3.0	30
72	Triboelectric filtering for air purification. <i>Nanotechnology</i> , 2019, 30, 292001.	1.3	28

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73	Field emission device driven by self-powered contact-electrification: Simulation and experimental analysis. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	27
74	Motion behavior of water droplets driven by triboelectric nanogenerator. <i>Applied Physics Letters</i> , 2018, 112, .	1.5	27
75	Radial Grating Pendulum Structured Triboelectric Nanogenerator for Energy Harvesting and Tilting Angle Sensing. <i>Advanced Materials Technologies</i> , 2018, 3, 1700251.	3.0	26
76	Irregular Wind Energy Harvesting by a Turbine Vent Triboelectric Nanogenerator and Its Application in a Self-Powered On-Site Industrial Monitoring System. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 55136-55144.	4.0	26
77	Self-powered mobile sterilization and infection control system. <i>Nano Energy</i> , 2021, 88, 106313.	8.2	25
78	Modeling a dielectric elastomer as driven by triboelectric nanogenerator. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	23
79	Self-Powered Intelligent Buoy Based on Triboelectric Nanogenerator for Water Level Alarming. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	23
80	Characteristics of triboelectrification on dielectric surfaces contacted with a liquid metal in different gases. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	22
81	Power Management and Reaction Optimization for a Self-Powered Electrochemical System Driven by a Triboelectric Nanogenerator. <i>Nano Letters</i> , 2021, 21, 5633-5640.	4.5	22
82	Flexible Film Discharge Switch Assisted Universal Power Management System for the Four Operation Modes of Triboelectric Nanogenerators. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	19
83	Barycenter Self-Adapting Triboelectric Nanogenerator for Sea Water Wave High-Entropy Energy Harvesting and Self-Powered Forecasting in Marine Meteorology. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	19
84	Arc-Shaped Triboelectric Nanogenerator Based on Rolling Structure for Harvesting Low-Frequency Water Wave Energy. <i>Advanced Materials Technologies</i> , 2021, 6, 2100359.	3.0	18
85	Methods for correctly characterizing the output performance of nanogenerators. <i>Nano Energy</i> , 2022, 93, 106884.	8.2	15
86	Compressed Ethylene-Assisted Formation of the Reverse Micelle of PEO \sim PPO \sim PEO Copolymer. <i>Macromolecules</i> , 2003, 36, 1289-1294.	2.2	14
87	Particle Transport-Based Triboelectric Nanogenerator for Self-Powered Mass-Flow Detection and Explosion Early Warning. <i>Advanced Materials Technologies</i> , 2018, 3, 1800009.	3.0	13
88	Theoretical Study of Sliding-Electrification-Gated Tribotronic Transistors and Logic Device. <i>Advanced Electronic Materials</i> , 2018, 4, 1700337.	2.6	12
89	A Triboelectric Closed-Loop Sensing System for Authenticity Identification of Paper-Based Artworks. <i>Advanced Materials Technologies</i> , 2020, 5, 2000194.	3.0	5
90	Ferroelectric Switching: Giant Ferroelectric Resistance Switching Controlled by a Modulatory Terminal for Low-Power Neuromorphic In-Memory Computing (<i>Adv. Mater.</i> 21/2021). <i>Advanced Materials</i> , 2021, 33, 2170167.	11.1	1