Haiyang Zou

List of Publications by Year
in descending order

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Version: 2024-02-01

50	7,794	87888 38	189892 50
papers	citations	h-index	g-index

52	52	52	6411
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Quantifying the triboelectric series. Nature Communications, 2019, 10, 1427.	12.8	1,107
2	Micro-cable structured textile for simultaneously harvesting solar and mechanical energy. Nature Energy, 2016, 1, .	39.5	879
3	On the Electronâ€Transfer Mechanism in the Contactâ€Electrification Effect. Advanced Materials, 2018, 30, e1706790.	21.0	483
4	A Highly Stretchable and Washable All-Yarn-Based Self-Charging Knitting Power Textile Composed of Fiber Triboelectric Nanogenerators and Supercapacitors. ACS Nano, 2017, 11, 9490-9499.	14.6	419
5	A Stretchable Yarn Embedded Triboelectric Nanogenerator as Electronic Skin for Biomechanical Energy Harvesting and Multifunctional Pressure Sensing. Advanced Materials, 2018, 30, e1804944.	21.0	396
6	A novel method to recycle mixed cathode materials for lithium ion batteries. Green Chemistry, 2013, 15, 1183.	9.0	321
7	3D Orthogonal Woven Triboelectric Nanogenerator for Effective Biomechanical Energy Harvesting and as Selfâ€Powered Active Motion Sensors. Advanced Materials, 2017, 29, 1702648.	21.0	321
8	Quantifying and understanding the triboelectric series of inorganic non-metallic materials. Nature Communications, 2020, 11, 2093.	12.8	287
9	An Ultra-Low-Friction Triboelectricâ€“Electromagnetic Hybrid Nanogenerator for Rotation Energy Harvesting and Self-Powered Wind Speed Sensor. ACS Nano, 2018, 12, 9433-9440.	14.6	286
10	Super-robust and frequency-multiplied triboelectric nanogenerator for efficient harvesting water and wind energy. Nano Energy, 2019, 64, 103908.	16.0	239
11	Raising the Working Temperature of a Triboelectric Nanogenerator by Quenching Down Electron Thermionic Emission in Contactâ€Electrification. Advanced Materials, 2018, 30, e1803968.	21.0	199
12	Rationally designed sea snake structure based triboelectric nanogenerators for effectively and efficiently harvesting ocean wave energy with minimized water screening effect. Nano Energy, 2018, 48, 421-429.	16.0	195
13	A Hierarchically Nanostructured Cellulose Fiberâ€Based Triboelectric Nanogenerator for Selfâ€Powered Healthcare Products. Advanced Functional Materials, 2018, 28, 1805540.	14.9	180
14	Enhanced Performance of a Selfâ€Powered Organic/Inorganic Photodetector by Pyroâ€Phototronic and Piezoâ€Phototronic Effects. Advanced Materials, 2017, 29, 1606698.	21.0	157
15	Interface induced performance enhancement in flexible BaTiO3/PVDF-TrFE based piezoelectric nanogenerators. Nano Energy, 2021, 80, 105515.	16.0	157
16	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.	9.1	149
17	Dielectric Modulated Cellulose Paper/PDMSâ€Based Triboelectric Nanogenerators for Wireless Transmission and Electropolymerization Applications. Advanced Functional Materials, 2020, 30, 1904536.	14.9	142
18	An ultrathin paper-based self-powered system for portable electronics and wireless human-machine interaction. Nano Energy, 2017, 39, 328-336.	16.0	134

#	Article	IF	Citations
19	A Selfâ€Powered Dynamic Displacement Monitoring System Based on Triboelectric Accelerometer. Advanced Energy Materials, 2017, 7, 1700565.	19.5	117
20	Boosting the Solar Cell Efficiency by Flexo-photovoltaic Effect?. ACS Nano, 2019, 13, 12259-12267.	14.6	111
21	Rationally designed rotation triboelectric nanogenerators with much extended lifetime and durability. Nano Energy, 2020, 68, 104378.	16.0	111
22	Elasticâ€Beam Triboelectric Nanogenerator for Highâ€Performance Multifunctional Applications: Sensitive Scale, Acceleration/Force/Vibration Sensor, and Intelligent Keyboard. Advanced Energy Materials, 2018, 8, 1802159.	19.5	102
23	Multifunctional Sensor Based on Translationalâ€Rotary Triboelectric Nanogenerator. Advanced Energy Materials, 2019, 9, 1901124.	19.5	101
24	Celluloseâ€Based Fully Green Triboelectric Nanogenerators with Output Power Density of 300 W m^{â^'2}. Advanced Materials, 2020, 32, e2002824.	21.0	93
25	Temperature dependence of pyro-phototronic effect on self-powered ZnO/perovskite heterostructured photodetectors. Nano Research, 2016, 9, 3695-3704.	10.4	87
26	Complementary Electromagneticâ€Triboelectric Active Sensor for Detecting Multiple Mechanical Triggering. Advanced Functional Materials, 2018, 28, 1705808.	14.9	87
27	Piezoâ€Phototronic Effect on Selective Electron or Hole Transport through Depletion Region of Visâ€“NIR Broadband Photodiode. Advanced Materials, 2017, 29, 1701412.	21.0	82
28	Contact-Electrification between Two Identical Materials: Curvature Effect. ACS Nano, 2019, 13, 2034-2041.	14.6	78
29	Piezo-phototronic effect on photocatalysis, solar cells, photodetectors and light-emitting diodes. Chemical Society Reviews, 2021, 50, 13646-13691.	38.1	69
30	Self-powered wireless optical transmission of mechanical agitation signals. Nano Energy, 2018, 47, 566-572.	16.0	66
31	Integrated solar capacitors for energy conversion and storage. Nano Research, 2017, 10, 1545-1559.	10.4	61
32	Largely Improved Near-Infrared Silicon-Photosensing by the Piezo-Phototronic Effect. ACS Nano, 2017, 11, 7118-7125.	14.6	57
33	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.	9.1	55
34	Alternating Current Photovoltaic Effect. Advanced Materials, 2020, 32, e1907249.	21.0	54
35	A dual-electrolyte based air-breathing regenerative microfluidic fuel cell with 1.76 V open-circuit-voltage and 0.74 V water-splitting voltage. Nano Energy, 2016, 27, 619-626.	16.0	52
36	High-Output Lead-Free Flexible Piezoelectric Generator Using Single-Crystalline GaN Thin Film. ACS Applied Materials & Interfaces, 2018, 10, 12839-12846.	8.0	51

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37	Piezo-phototronic Effect Enhanced Responsivity of Photon Sensor Based on Composition-Tunable Ternary CdS_xSe_{1â€“x} Nanowires. ACS Photonics, 2017, 4, 2495-2503.	6.6	48
38	Unraveling Temperatureâ€Dependent Contact Electrification between Slidingâ€Mode Triboelectric Pairs. Advanced Functional Materials, 2020, 30, 1909384.	14.9	42
39	Rapid Capillaryâ€Assisted Solution Printing of Perovskite Nanowire Arrays Enables Scalable Production of Photodetectors. Angewandte Chemie - International Edition, 2020, 59, 14942-14949.	13.8	36
40	A switchable pH-differential unitized regenerative fuel cell with high performance. Journal of Power Sources, 2016, 314, 76-84.	7.8	28
41	Theoretical investigation and experimental verification of the self-powered acceleration sensor based on triboelectric nanogenerators (TENGs). Extreme Mechanics Letters, 2021, 42, 101021.	4.1	28
42	Conductive interlayer modulated ferroelectric nanocomposites for high performance triboelectric nanogenerator. Nano Energy, 2022, 91, 106668.	16.0	28
43	Revealing Electricalâ€Polingâ€Induced Polarization Potential in Hybrid Perovskite Photodetectors. Advanced Materials, 2020, 32, e2005481.	21.0	23
44	Dynamic Electronic Doping for Correlated Oxides by a Triboelectric Nanogenerator. Advanced Materials, 2018, 30, e1803580.	21.0	20
45	An Elastic Triboelectric Nanogenerator for Harvesting Random Mechanical Energy with Multiple Working Modes. Advanced Materials Technologies, 2019, 4, 1900075.	5.8	15
46	Dramatically Enhanced Broadband Photodetection by Dual Inversion Layers and Fowlerâ€“Nordheim Tunneling. ACS Nano, 2019, 13, 2289-2297.	14.6	11
47	Dielectric Manipulated Charge Dynamics in Contact Electrification. Research, 2022, 2022, 9862980.	5.7	9
48	Broadband photodetectors based on topological insulator Bi2Se3 nanowire with enhanced performance by strain modulation effect. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 114, 113620.	2.7	8
49	Rapid Capillaryâ€Assisted Solution Printing of Perovskite Nanowire Arrays Enables Scalable Production of Photodetectors. Angewandte Chemie, 2020, 132, 15052-15059.	2.0	1
50	Thermomechanical effect on magnetic behaviors of antiferromagnetic Mn-Fe(Cu) alloy. Transactions of Nonferrous Metals Society of China, 2009, 19, s802-s805.	4.2	0