

Haiwu Zheng

List of Publications by Year in descending order

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Version: 2024-02-01

65
papers

3,653
citations

201674

27
h-index

133252

59
g-index

69
all docs

69
docs citations

69
times ranked

3624
citing authors

#	ARTICLE	IF	CITATIONS
1	High-efficiency self-charging power systems based on performance-enhanced hybrid nanogenerators and asymmetric supercapacitors for outdoor search and rescue. <i>Nano Energy</i> , 2022, 92, 106788.	16.0	24
2	Intelligent Sound Monitoring and Identification System Combining Triboelectric Nanogenerator-Based Self-Powered Sensor with Deep Learning Technique. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	33
3	Enhanced Output Performance of Piezoelectric Nanogenerators by Tb-Modified (BaCa)(ZrTi)O ₃ and 3D Core/shell Structure Design with PVDF Composite Spinning for Microenergy Harvesting. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 12243-12256.	8.0	23
4	Simultaneously achieving giant piezoelectricity and record coercive field enhancement in relaxor-based ferroelectric crystals. <i>Nature Communications</i> , 2022, 13, 2444.	12.8	46
5	Self-powered pacemaker based on all-in-one flexible piezoelectric nanogenerator. <i>Nano Energy</i> , 2022, 99, 107420.	16.0	19
6	Large ferroelectric-polarization-modulated photovoltaic effects in bismuth layered multiferroic/semiconductor heterostructure devices. <i>Journal of Materials Chemistry C</i> , 2021, 9, 3287-3294.	5.5	14
7	Optical and magnetic properties of Sm-doped BiFeO ₃ nanoparticles around the morphotropic phase boundary region. <i>AIP Advances</i> , 2021, 11, .	1.3	12
8	A stretchable triboelectric nanogenerator made of silver-coated glass microspheres for human motion energy harvesting and self-powered sensing applications. <i>Beilstein Journal of Nanotechnology</i> , 2021, 12, 402-412.	2.8	5
9	Narrow-Bandgap Semiconductors of Perovskite Rare-Earth Orthoferrites (REFeO ₃). <i>Current Chinese Science</i> , 2021, 1, 438-452.	0.5	0
10	Enhanced energy harvesting ability of polydimethylsiloxane-BaTiO ₃ -based flexible piezoelectric nanogenerator for tactile imitation application. <i>Nano Energy</i> , 2021, 83, 105809.	16.0	92
11	A Universal Power Management Strategy Based on Novel Sound-Driven Triboelectric Nanogenerator and Its Fully Self-Powered Wireless System Applications. <i>Advanced Functional Materials</i> , 2021, 31, 2103081.	14.9	46
12	Enhanced photovoltaic-pyroelectric coupled effect of BiFeO ₃ /Au/ZnO heterostructures. <i>Nano Energy</i> , 2021, 85, 105968.	16.0	37
13	Self-powered technology based on nanogenerators for biomedical applications. <i>Exploration</i> , 2021, 1, 90-114.	11.0	54
14	High-Performance Flexible Piezoelectric Nanogenerator Based on Specific 3D Nano BCZT@Ag Heterostructure Design for the Application of Self-Powered Wireless Sensor System. <i>Small</i> , 2021, 17, e2101333.	10.0	20
15	Coupling mechanism between photogenerated carriers and triboelectric charges and photoinduced reinforcement of a triboelectric nanogenerator. <i>Applied Physics Letters</i> , 2021, 119, .	3.3	5
16	Modulating the photoresponse performance of the flexible Si/ZnO film heterojunction photodetectors by piezo-phototronic effect. <i>Applied Physics Letters</i> , 2021, 119, 121104.	3.3	3
17	Performance-enhanced flexible piezoelectric nanogenerator via layer-by-layer assembly for self-powered vagal neuromodulation. <i>Nano Energy</i> , 2021, 89, 106319.	16.0	33
18	Enhanced photovoltaic properties of gradient calcium-doped BiFeO ₃ films. <i>Ceramics International</i> , 2020, 46, 10083-10088.	4.8	20

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19	Enhanced Photovoltaic Performances of La-Doped Bismuth Ferrite/Zinc Oxide Heterojunction by Coupling Piezo-Phototronic Effect and Ferroelectricity. <i>ACS Nano</i> , 2020, 14, 10723-10732.	14.6	62
20	All-in-one hybrid tribo/piezoelectric nanogenerator with the point contact and its adjustable charge transfer by ferroelectric polarization. <i>Ceramics International</i> , 2020, 46, 28277-28284.	4.8	27
21	Windmill-inspired hybridized triboelectric nanogenerators integrated with power management circuit for harvesting wind and acoustic energy. <i>Nano Energy</i> , 2020, 78, 105244.	16.0	64
22	Superior ferroelectric properties and fatigue resistance in Tb modified (BaCa)(ZrTi)O ₃ film grown on SrTiO ₃ prepared by pulsed laser deposition. <i>Applied Surface Science</i> , 2020, 527, 146892.	6.1	10
23	T-ZnOw/ZnONP Double-Layer Composite Photoanode with One-Dimensional Low-Resistance Photoelectron Channels for High-Efficiency DSSCs. <i>Journal of Physical Chemistry C</i> , 2020, 124, 4408-4413.	3.1	3
24	Remarkably enhanced hybrid piezo/triboelectric nanogenerator via rational modulation of piezoelectric and dielectric properties for self-powered electronics. <i>Applied Physics Letters</i> , 2020, 116, .	3.3	39
25	Improved Electrical Performance of Oxide Transistor Utilizing Gallium Doping Both in Channel and Dielectric Layers. <i>IEEE Electron Device Letters</i> , 2020, 41, 377-380.	3.9	6
26	Quantifying and understanding the triboelectric series of inorganic non-metallic materials. <i>Nature Communications</i> , 2020, 11, 2093.	12.8	287
27	Optimization of electrical and photovoltaic properties of Au-BiFeO ₃ nanocomposite films. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2020, 69, 127709.	0.5	1
28	Performance Enhancement of Flexible Piezoelectric Nanogenerator via Doping and Rational 3D Structure Design For Self-Powered Mechanosensational System. <i>Advanced Functional Materials</i> , 2019, 29, 1904259.	14.9	133
29	Self-Powered Intelligent Water Meter for Electrostatic Scale Preventing, Rust Protection, and Flow Sensor in a Solar Heater System. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 6396-6403.	8.0	31
30	Fe doping enhances ferromagnetism in MgTiO ₃ films. <i>Journal of Materials Science: Materials in Electronics</i> , 2019, 30, 10499-10506.	2.2	3
31	Construction of Zn _x Cd _{1-x} /Bi ₂ S ₃ composite nanospheres with photothermal effect for enhanced photocatalytic activities. <i>Journal of Colloid and Interface Science</i> , 2019, 546, 303-311.	9.4	56
32	Quantifying the triboelectric series. <i>Nature Communications</i> , 2019, 10, 1427.	12.8	1,107
33	A fully-packaged ship-shaped hybrid nanogenerator for blue energy harvesting toward seawater self-desalination and self-powered positioning. <i>Nano Energy</i> , 2019, 57, 616-624.	16.0	127
34	A novel triboelectric nanogenerator based on electrospun polyvinylidene fluoride nanofibers for effective acoustic energy harvesting and self-powered multifunctional sensing. <i>Nano Energy</i> , 2019, 56, 241-251.	16.0	174
35	Concurrent Harvesting of Ambient Energy by Hybrid Nanogenerators for Wearable Self-Powered Systems and Active Remote Sensing. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 14708-14715.	8.0	78
36	Preparation and Characterization of Solution-Processed Nanocrystalline p-Type CuAlO ₂ Thin-Film Transistors. <i>Nanoscale Research Letters</i> , 2018, 13, 259.	5.7	16

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37	Tuning optical and magnetic properties of nanocrystalline BaTiO ₃ films by Fe doping. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	2.3	8
38	Fabrication of PZT/CuO composite films and their photovoltaic properties. Journal of Sol-Gel Science and Technology, 2018, 87, 285-291.	2.4	14
39	High-performance piezoelectric-energy-harvester and self-powered mechanosensing using lead-free potassium-sodium niobate flexible piezoelectric composites. Journal of Materials Chemistry A, 2018, 6, 16439-16449.	10.3	73
40	A spring-assisted hybrid triboelectric-electromagnetic nanogenerator for harvesting low-frequency vibration energy and creating a self-powered security system. Nanoscale, 2018, 10, 14747-14754.	5.6	73
41	Highly Transparent and Conductive W-Doped ZnO/Cu/W-Doped ZnO Multilayer Source/Drain Electrodes for Metal-Oxide Thin-Film Transistors. IEEE Electron Device Letters, 2018, 39, 967-970.	3.9	7
42	Improvement of Thermoelectricity Through Magnetic Interactions in Layered Cr ₂ Ge ₂ Te ₆ . Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800172.	2.4	9
43	Photoluminescence, surface photovoltage and photocatalytic properties of BaBiO ₃ powders. Journal of Materials Science: Materials in Electronics, 2018, 29, 12729-12734.	2.2	6
44	Bi ₅ FeTi ₃ O ₁₅ nanofibers/graphene nanocomposites as an effective counter electrode for dye-sensitized solar cells. Nanoscale Research Letters, 2017, 12, 18.	5.7	19
45	A Highly Stretchable Fiber-Based Triboelectric Nanogenerator for Self-Powered Wearable Electronics. Advanced Functional Materials, 2017, 27, 1604378.	14.9	296
46	Photovoltaic enhancement by Au surface-plasmon effect for La doped BiFeO ₃ films. Journal of Materials Chemistry C, 2017, 5, 10615-10623.	5.5	41
47	Polarization dependent ferroelectric photovoltaic effects in BFTO/CuO thin films. Applied Physics Letters, 2017, 111, .	3.3	27
48	Structural transformation and multiferroic properties of Sm and Ti co-doped BiFeO ₃ ceramics with Fe vacancies. Ceramics International, 2017, 43, 14666-14671.	4.8	40
49	Structural and Optical Characteristics of Titanium-Doped Zinc Oxide Thin Films and Applications in Thin Film Transistors. Journal of Nanoscience and Nanotechnology, 2017, 17, 4343-4347.	0.9	2
50	Insights into collaborative separation process of photogenerated charges and superior performance of solar cells. Applied Physics Letters, 2016, 109, 043906.	3.3	5
51	Comprehensive Insights into Charge Dynamics and Improved Photoelectric Properties of Well-Designed Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 20701-20709.	8.0	5
52	Effect of equivalent and aliovalent doping on dielectric properties and relaxation of BaBi ₄ TiO ₁₅ ceramics. Journal of Materials Science: Materials in Electronics, 2016, 27, 2789-2794.	2.2	3
53	Photochemical charges separation and photoelectric properties of flexible solar cells with two types of heterostructures. Applied Physics Letters, 2015, 107, 243901.	3.3	3
54	Magnetic and optical properties of La-doped BiFeO ₃ films prepared by sol-gel route. Journal of Materials Science: Materials in Electronics, 2015, 26, 700-704.	2.2	16

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55	The preparation and surface photovoltage characterization of KNbO ₃ powder. Journal of Materials Science: Materials in Electronics, 2015, 26, 3108-3111.	2.2	9
56	Effects of Fe doping on the optical and magnetic properties of TiO ₂ films deposited on Si substrates by a sol-gel route. Journal of Sol-Gel Science and Technology, 2015, 74, 521-527.	2.4	6
57	Piezostain-enhanced photovoltaic effects in BiFeO ₃ /La 0.7 Sr 0.3 MnO ₃ /PMN-PT heterostructures. Nano Energy, 2015, 18, 315-324.	16.0	47
58	Room-temperature ferromagnetism in Cu-implanted 6H-SiC single crystal. Applied Physics Letters, 2013, 102, .	3.3	20
59	Photoelectric properties and charge dynamics for a set of solid state solar cells with Cu ₄ Bi ₄ S ₉ as the absorber layer. Journal of Materials Chemistry A, 2013, 1, 10703.	10.3	25
60	Factors on the separation of photogenerated charges and the charge dynamics in oxide/ZnFe ₂ O ₄ composites. Journal of Materials Chemistry C, 2013, 1, 329-337.	5.5	34
61	A separation mechanism of photogenerated charges and magnetic properties for BiFeO ₃ microspheres synthesized by a facile hydrothermal method. Physical Chemistry Chemical Physics, 2012, 14, 8376.	2.8	19
62	Effect of energy level matching on the enhancement of photovoltaic response about oxide/Zn ₂ SnO ₄ composites. Journal of Materials Chemistry, 2011, 21, 4108.	6.7	60
63	Structure, photoluminescence and electrical properties of Eu-Nd codoped CaBi ₄ Ti ₄ O ₁₅ synthesized by sol-gel method. Journal of Sol-Gel Science and Technology, 2011, 58, 539-544.	2.4	6
64	Strong up conversion photoluminescence in Er ³⁺ doped Bi ₄ Ti ₃ O ₁₂ ferroelectric materials prepared by sol-gel method. Journal of Sol-Gel Science and Technology, 2011, 59, 290-296.	2.4	16
65	Spin-glassy behavior and exchange bias effect of hexagonal YMnO ₃ nanoparticles fabricated by hydrothermal process. Journal of Applied Physics, 2010, 107, .	2.5	52