

# Haiwu Zheng

## List of Publications by Year in descending order

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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	Quantifying the triboelectric series. <i>Nature Communications</i> , 2019, 10, 1427.	12.8	1,107
2	A Highly Stretchable Fiber-Based Triboelectric Nanogenerator for Self-Powered Wearable Electronics. <i>Advanced Functional Materials</i> , 2017, 27, 1604378.	14.9	296
3	Quantifying and understanding the triboelectric series of inorganic non-metallic materials. <i>Nature Communications</i> , 2020, 11, 2093.	12.8	287
4	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
5	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
6	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
7	Enhanced energy harvesting ability of polydimethylsiloxane-BaTiO <sub>3</sub> -based flexible piezoelectric nanogenerator for tactile imitation application. <i>Nano Energy</i> , 2021, 83, 105809.	16.0	92
8	Concurrent Harvesting of Ambient Energy by Hybrid Nanogenerators for Wearable Self-Powered Systems and Active Remote Sensing. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 14708-14715.	8.0	78
9	High-performance piezoelectric-energy-harvester and self-powered mechanosensing using lead-free potassium-sodium niobate flexible piezoelectric composites. <i>Journal of Materials Chemistry A</i> , 2018, 6, 16439-16449.	10.3	73
10	A spring-assisted hybrid triboelectric-electromagnetic nanogenerator for harvesting low-frequency vibration energy and creating a self-powered security system. <i>Nanoscale</i> , 2018, 10, 14747-14754.	5.6	73
11	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
12	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
13	Effect of energy level matching on the enhancement of photovoltaic response about oxide/Zn <sub>2</sub> SnO <sub>4</sub> composites. <i>Journal of Materials Chemistry</i> , 2011, 21, 4108.	6.7	60
14	Construction of Zn <sub>x</sub> Cd <sub>1-x</sub> /Bi <sub>2</sub> S <sub>3</sub> composite nanospheres with photothermal effect for enhanced photocatalytic activities. <i>Journal of Colloid and Interface Science</i> , 2019, 546, 303-311.	9.4	56
15	Self-powered technology based on nanogenerators for biomedical applications. <i>Exploration</i> , 2021, 1, 90-114.	11.0	54
16	Spin-glassy behavior and exchange bias effect of hexagonal YMnO <sub>3</sub> nanoparticles fabricated by hydrothermal process. <i>Journal of Applied Physics</i> , 2010, 107, .	2.5	52
17	Piezostain-enhanced photovoltaic effects in BiFeO <sub>3</sub> /La <sub>0.7</sub> Sr <sub>0.3</sub> MnO <sub>3</sub> /PMN-PT heterostructures. <i>Nano Energy</i> , 2015, 18, 315-324.	16.0	47
18	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

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19	Simultaneously achieving giant piezoelectricity and record coercive field enhancement in relaxor-based ferroelectric crystals. <i>Nature Communications</i> , 2022, 13, 2444.	12.8	46
20	Photovoltaic enhancement by Au surface-plasmon effect for La doped BiFeO <sub>3</sub> films. <i>Journal of Materials Chemistry C</i> , 2017, 5, 10615-10623.	5.5	41
21	Structural transformation and multiferroic properties of Sm and Ti co-doped BiFeO <sub>3</sub> ceramics with Fe vacancies. <i>Ceramics International</i> , 2017, 43, 14666-14671.	4.8	40
22	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
23	Enhanced photovoltaic-pyroelectric coupled effect of BiFeO <sub>3</sub> /Au/ZnO heterostructures. <i>Nano Energy</i> , 2021, 85, 105968.	16.0	37
24	Factors on the separation of photogenerated charges and the charge dynamics in oxide/ZnFe <sub>2</sub> O <sub>4</sub> composites. <i>Journal of Materials Chemistry C</i> , 2013, 1, 329-337.	5.5	34
25	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
26	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
27	Self-Powered Intelligent Water Meter for Electrostatic Scale Preventing, Rust Protection, and Flow Sensor in a Solar Heater System. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 6396-6403.	8.0	31
28	Polarization dependent ferroelectric photovoltaic effects in BFTO/CuO thin films. <i>Applied Physics Letters</i> , 2017, 111, .	3.3	27
29	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
30	Photoelectric properties and charge dynamics for a set of solid state solar cells with Cu <sub>4</sub> Bi <sub>4</sub> S <sub>9</sub> as the absorber layer. <i>Journal of Materials Chemistry A</i> , 2013, 1, 10703.	10.3	25
31	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
32	Enhanced Output Performance of Piezoelectric Nanogenerators by Tb-Modified (BaCa)(ZrTi)O <sub>3</sub> and 3D Core/shell Structure Design with PVDF Composite Spinning for Microenergy Harvesting. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 12243-12256.	8.0	23
33	Room-temperature ferromagnetism in Cu-implanted 6H-SiC single crystal. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	20
34	Enhanced photovoltaic properties of gradient calcium-doped BiFeO <sub>3</sub> films. <i>Ceramics International</i> , 2020, 46, 10083-10088.	4.8	20
35	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
36	A separation mechanism of photogenerated charges and magnetic properties for BiFeO <sub>3</sub> microspheres synthesized by a facile hydrothermal method. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 8376.	2.8	19

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37	Bi <sub>5</sub> FeTi <sub>3</sub> O <sub>15</sub> nanofibers/graphene nanocomposites as an effective counter electrode for dye-sensitized solar cells. <i>Nanoscale Research Letters</i> , 2017, 12, 18.	5.7	19
38	Self-powered pacemaker based on all-in-one flexible piezoelectric nanogenerator. <i>Nano Energy</i> , 2022, 99, 107420.	16.0	19
39	Strong up conversion photoluminescence in Er <sup>3+</sup> doped Bi <sub>4</sub> Ti <sub>3</sub> O <sub>12</sub> ferroelectric materials prepared by sol-gel method. <i>Journal of Sol-Gel Science and Technology</i> , 2011, 59, 290-296.	2.4	16
40	Magnetic and optical properties of La-doped BiFeO <sub>3</sub> films prepared by sol-gel route. <i>Journal of Materials Science: Materials in Electronics</i> , 2015, 26, 700-704.	2.2	16
41	Preparation and Characterization of Solution-Processed Nanocrystalline p-Type CuAlO <sub>2</sub> Thin-Film Transistors. <i>Nanoscale Research Letters</i> , 2018, 13, 259.	5.7	16
42	Fabrication of PZT/CuO composite films and their photovoltaic properties. <i>Journal of Sol-Gel Science and Technology</i> , 2018, 87, 285-291.	2.4	14
43	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
44	Optical and magnetic properties of Sm-doped BiFeO <sub>3</sub> nanoparticles around the morphotropic phase boundary region. <i>AIP Advances</i> , 2021, 11, .	1.3	12
45	Superior ferroelectric properties and fatigue resistance in Tb modified (BaCa)(ZrTi)O <sub>3</sub> film grown on SrTiO <sub>3</sub> prepared by pulsed laser deposition. <i>Applied Surface Science</i> , 2020, 527, 146892.	6.1	10
46	The preparation and surface photovoltage characterization of KNbO <sub>3</sub> powder. <i>Journal of Materials Science: Materials in Electronics</i> , 2015, 26, 3108-3111.	2.2	9
47	Improvement of Thermoelectricity Through Magnetic Interactions in Layered Cr <sub>2</sub> Ge <sub>2</sub> Te <sub>6</sub> . <i>Physica Status Solidi - Rapid Research Letters</i> , 2018, 12, 1800172.	2.4	9
48	Tuning optical and magnetic properties of nanocrystalline BaTiO <sub>3</sub> films by Fe doping. <i>Applied Physics A: Materials Science and Processing</i> , 2018, 124, 1.	2.3	8
49	Highly Transparent and Conductive W-Doped ZnO/Cu/W-Doped ZnO Multilayer Source/Drain Electrodes for Metal-Oxide Thin-Film Transistors. <i>IEEE Electron Device Letters</i> , 2018, 39, 967-970.	3.9	7
50	Structure, photoluminescence and electrical properties of Eu-Nd codoped CaBi <sub>4</sub> Ti <sub>4</sub> O <sub>15</sub> synthesized by sol-gel method. <i>Journal of Sol-Gel Science and Technology</i> , 2011, 58, 539-544.	2.4	6
51	Effects of Fe doping on the optical and magnetic properties of TiO <sub>2</sub> films deposited on Si substrates by a sol-gel route. <i>Journal of Sol-Gel Science and Technology</i> , 2015, 74, 521-527.	2.4	6
52	Photoluminescence, surface photovoltage and photocatalytic properties of BaBiO <sub>3</sub> powders. <i>Journal of Materials Science: Materials in Electronics</i> , 2018, 29, 12729-12734.	2.2	6
53	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
54	Insights into collaborative separation process of photogenerated charges and superior performance of solar cells. <i>Applied Physics Letters</i> , 2016, 109, 043906.	3.3	5

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55	Comprehensive Insights into Charge Dynamics and Improved Photoelectric Properties of Well-Designed Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 20701-20709.	8.0	5
56	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
57	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
58	Photochemical charges separation and photoelectric properties of flexible solar cells with two types of heterostructures. <i>Applied Physics Letters</i> , 2015, 107, 243901.	3.3	3
59	Effect of equivalent and aliovalent doping on dielectric properties and relaxation of BaBi <sub>4</sub> TiO <sub>15</sub> ceramics. <i>Journal of Materials Science: Materials in Electronics</i> , 2016, 27, 2789-2794.	2.2	3
60	Fe doping enhances ferromagnetism in MgTiO <sub>3</sub> films. <i>Journal of Materials Science: Materials in Electronics</i> , 2019, 30, 10499-10506.	2.2	3
61	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
62	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
63	Structural and Optical Characteristics of Titanium-Doped Zinc Oxide Thin Films and Applications in Thin Film Transistors. <i>Journal of Nanoscience and Nanotechnology</i> , 2017, 17, 4343-4347.	0.9	2
64	Optimization of electrical and photovoltaic properties of Au-BiFeO <sub>3</sub> nanocomposite films. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2020, 69, 127709.	0.5	1
65	Narrow-Bandgap Semiconductors of Perovskite Rare-Earth Orthoferrites (REFeO <sub>3</sub> ). <i>Current Chinese Science</i> , 2021, 1, 438-452.	0.5	0