Zhi-Hao Zhao

List of Publications by Year
in descending order

80 papers	3,772 citations	117453 34 h-index	133063 59 g-index
80 all docs	80 docs citations	80 times ranked	3295 citing authors

#	ARTICLE	IF	CITATIONS
1	Improving performance of triboelectric nanogenerators by dielectric enhancement effect. Matter, 2022, 5, 180-193.	5.0	53
2	Hybrid Energyâ€Harvesting System by a Coupling of Triboelectric and Thermoelectric Generator. Energy Technology, 2022, 10, .	1.8	8
3	A highly efficient constant-voltage triboelectric nanogenerator. Energy and Environmental Science, 2022, 15, 1334-1345.	15.6	62
4	A Selfâ€Powered Dualâ€Type Signal Vector Sensor for Smart Robotics and Automatic Vehicles. Advanced Materials, 2022, 34, e2110363.	11.1	48
5	A Dual-Mode Triboelectric Nanogenerator for Wind Energy Harvesting and Self-Powered Wind Speed Monitoring. ACS Nano, 2022, 16, 6244-6254.	7.3	111
6	A Tuningâ€Fork Triboelectric Nanogenerator with Frequency Multiplication for Efficient Mechanical Energy Harvesting. Small Methods, 2022, 6, e2200066.	4.6	5
7	Highly sensitive three-dimensional scanning triboelectric sensor for digital twin applications. Nano Energy, 2022, 97, 107198.	8.2	7
8	Achieving Ultrahigh Effective Surface Charge Density of Directâ€Current Triboelectric Nanogenerator in High Humidity. Small, 2022, 18, e2201402.	5.2	28
9	Effect of a low frequency electromagnetic field on the direct-chill (DC) casting of AZ80 magnesium alloy ingots. International Journal of Materials Research, 2022, 97, 1539-1544.	0.1	0
10	Improved Output Performance of Triboelectric Nanogenerator by Fast Accumulation Process of Surface Charges. Advanced Energy Materials, 2021, 11, 2100050.	10.2	67
11	A Cross Dipole Antenna Array in LTCC for Satellite Communication. , 2021, , .		0
12	Improved Output Performance of Directâ€Current Triboelectric Nanogenerator through Field Enhancing Breakdown Effect. Advanced Materials Technologies, 2021, 6, 2100195.	3.0	19
13	Enhancing output performance of direct-current triboelectric nanogenerator under controlled atmosphere. Nano Energy, 2021, 84, 105864.	8.2	37
14	Low-Cost, Environmentally Friendly, and High-Performance Triboelectric Nanogenerator Based on a Common Waste Material. ACS Applied Materials & Interfaces, 2021, 13, 30776-30784.	4.0	56
15	All-Weather Droplet-Based Triboelectric Nanogenerator for Wave Energy Harvesting. ACS Nano, 2021, 15, 13200-13208.	7.3	135
16	A robust rolling-mode direct-current triboelectric nanogenerator arising from electrostatic breakdown effect. Nano Energy, 2021, 85, 106014.	8.2	34
17	Selection rules of triboelectric materials for direct-current triboelectric nanogenerator. Nature Communications, 2021, 12, 4686.	5.8	154
18	A high humidity-resistive triboelectric nanogenerator<i>via</i>coupling of dielectric material selection and surface-charge engineering. Journal of Materials Chemistry A, 2021, 9, 21357-21365.	5.2	43

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19	Triboelectric Nanogenerator with Low Crest Factor via Precise Phase Difference Design Realized by 3D Printing. Small Methods, 2021, 5, e2100936.	4.6	13
20	Microstructure, mechanical properties and sintering mechanism of pressureless-sintered porous Si3N4 ceramics with YbF3-MgF2 composite sintering aids. Ceramics International, 2020, 46, 2558-2564.	2.3	15
21	A graphene-modified flexible SiOC ceramic cloth for high-performance lithium storage. Energy Storage Materials, 2020, 25, 876-884.	9.5	53
22	Giant electroâ€strain in textured Li⁺â€doped 0.852BNTâ€"0.11BKTâ€"0.038BT ternary leadâ€free piezoelectric ceramics. Journal of the American Ceramic Society, 2020, 103, 1765-1772.	1.9	19
23	Simultaneously Enhancing Power Density and Durability of Slidingâ€Mode Triboelectric Nanogenerator via Interface Liquid Lubrication. Advanced Energy Materials, 2020, 10, 2002920.	10.2	112
24	Ultrahigh electro-strain in acceptor-doped KNN lead-free piezoelectric ceramics via defect engineering. Acta Materialia, 2020, 200, 35-41.	3.8	56
25	Rationally patterned electrode of direct-current triboelectric nanogenerators for ultrahigh effective surface charge density. Nature Communications, 2020, 11, 6186.	5.8	129
26	Bionicâ€Finâ€Structured Triboelectric Nanogenerators for Undersea Energy Harvesting. Advanced Materials Technologies, 2020, 5, 2000531.	3.0	46
27	Rationally Designed Dualâ€Mode Triboelectric Nanogenerator for Harvesting Mechanical Energy by Both Electrostatic Induction and Dielectric Breakdown Effects. Advanced Energy Materials, 2020, 10, 2000965.	10.2	70
28	Hugely Enhanced Output Power of Directâ€Current Triboelectric Nanogenerators by Using Electrostatic Breakdown Effect. Advanced Materials Technologies, 2020, 5, 2000289.	3.0	49
29	A Fully Self-Powered Vibration Monitoring System Driven by Dual-Mode Triboelectric Nanogenerators. ACS Nano, 2020, 14, 2475-2482.	7.3	154
30	Longâ€Lifetime Triboelectric Nanogenerator Operated in Conjunction Modes and Low Crest Factor. Advanced Energy Materials, 2020, 10, 1903024.	10.2	53
31	Lidar Mapping Optimization Based on Lightweight Semantic Segmentation. IEEE Transactions on Intelligent Vehicles, 2019, 4, 353-362.	9.4	27
32	The formation and effect of defect dipoles in lead-free piezoelectric ceramics: A review. Sustainable Materials and Technologies, 2019, 20, e00092.	1.7	39
33	Large electro-strain signal of the BNTâ€"BTâ€"KNN lead-free piezoelectric ceramics with CuO doping. Journal of Advanced Dielectrics, 2019, 09, 1950022.	1.5	20
34	Piezo-phototronic effect-modulated carrier transport behavior in different regions of a Si/CdS heterojunction photodetector under a Visâ€"NIR waveband. Physical Chemistry Chemical Physics, 2019, 21, 9574-9580.	1.3	11
35	BNT-based multi-layer ceramic actuator with enhanced temperature stability. Journal of Alloys and Compounds, 2019, 771, 541-546.	2.8	18
36	High Î±-Î² phase transition and properties of YbF3-added porous Si3N4 ceramics obtained by low temperature pressureless sintering. International Journal of Refractory Metals and Hard Materials, 2019, 78, 131-137.	1.7	8

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37	SiOC nanolayer wrapped 3D interconnected graphene sponge as a high-performance anode for lithium ion batteries. Journal of Materials Chemistry A, 2018, 6, 9064-9073.	5.2	68
38	A novel aerogels/porous Si3N4 ceramics composite with high strength and improved thermal insulation property. Ceramics International, 2018, 44, 5233-5237.	2.3	26
39	Superelastic 3D few-layer MoS2/carbon framework heterogeneous electrodes for highly reversible sodium-ion batteries. Nano Energy, 2018, 48, 526-535.	8.2	99
40	Enhanced electromechanical strain response in (Fe0.5Nb0.5)4+-modified Bi0.5(Na0.8K0.2)0.5TiO3 lead-free piezoelectric ceramics. Journal of Materials Science, 2018, 53, 8059-8066.	1.7	12
41	Enhanced piezoelectric properties and strain response in â€ˆ001â€‰ textured BNT-BKT-BT ceramics. Materials and Design, 2018, 137, 184-191.	3.3	58
42	Effect of Ca2+ and Mn2+ ions on the radiation properties of LaAlO3. Ceramics International, 2018, 44, 20427-20431.	2.3	23
43	Gradient structure high emissivity MoSi2-SiO2-SiOC coating forÂthermal protective application. Journal of Alloys and Compounds, 2017, 703, 437-447.	2.8	36
44	Fabrication and toughening behavior of carbon nanotube (CNT) scaffold reinforced SiBCN ceramic composites with high CNT loading. Ceramics International, 2017, 43, 9024-9031.	2.3	22
45	Low temperature pressureless sintering of dense silicon nitride using BaO-Al2O3-SiO2 glass as sintering aid. Ceramics International, 2017, 43, 10123-10129.	2.3	17
46	Effect of Fe on microstructures and mechanical properties of an Alâ€"Mgâ€"Siâ€"Cuâ€"Crâ€"Zr alloy prepared by low frequency electromagnetic casting. Journal of Materials Research, 2017, 32, 2067-2078.	1.2	2
47	0D/2D Heterojunctions of Vanadate Quantum Dots/Graphitic Carbon Nitride Nanosheets for Enhanced Visibleâ€Lightâ€Driven Photocatalysis. Angewandte Chemie - International Edition, 2017, 56, 8407-8411.	7.2	421
48	0D/2D Heterojunctions of Vanadate Quantum Dots/Graphitic Carbon Nitride Nanosheets for Enhanced Visibleâ€Lightâ€Driven Photocatalysis. Angewandte Chemie, 2017, 129, 8527-8531.	1.6	44
49	Large electro-strain response of La3+ and Nb5+ co-doped ternary 0.85Bi0.5Na0.5TiO3-0.11Bi0.5K0.5TiO3-0.04BaTiO3 lead-free piezoelectric ceramics. Journal of Alloys and Compounds, 2017, 724, 1000-1006.	2.8	34
50	Achieving ultrahigh triboelectric charge density for efficient energy harvesting. Nature Communications, 2017, 8, 88.	5.8	495
51	Phase structure, piezoelectric, ferroelectric, and electric-field-induced strain properties of Nb-modified 0.8Bi0.5Na0.5TiO3â˜0.2Sr0.85Bi0.1TiO3 ceramics. Ceramics International, 2017, 43, 13612-13617.	2.3	10
52	The evolution mechanism of defect dipoles and high strain in MnO2-doped KNN lead-free ceramics. Applied Physics Letters, 2016, 108, .	1.5	71
53	Texture development in Ba0.85Ca0.15Ti0.90Zr0.10O3 lead-free ceramics prepared by reactive template grain growth with different Ba and Ca sources. Ceramics International, 2016, 42, 18756-18763.	2.3	24
54	High electrostrictive strain induced by defect dipoles in acceptor-doped (K_{0.5}Na_{0.5})NbO₃ceramics. Journal Physics D: Applied Physics, 2016, 49, 275303.	1.3	19

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55	Electrical Properties and Relaxor Phase Evolution of Liâ€Modified <scp>BNT</scp>â€<scp>BKT</scp>â€<scp>BT</scp> Leadâ€Free Ceramics. Journal of the American Ceramic Society, 2016, 99, 2354-2360.	1.9	56
56	Microstructure and properties of pressureless-sintered porous Si₃N₄using PMMA as pore-forming agent. Integrated Ferroelectrics, 2016, 171, 46-51.	0.3	3
57	Highly textured Ba 0.85 Ca 0.15 Ti 0.90 Zr 0.10 O 3 ceramics prepared by reactive template grain growth process. Materials Letters, 2016, 165, 131-134.	1.3	25
58	Effect of glass phase content on structure and properties of gradient MoSi 2 â€"BaOâ€"Al 2 O 3 â€"SiO 2 coating for porous fibrous insulations. Journal of Alloys and Compounds, 2016, 657, 684-690.	2.8	27
59	Evolution of textured Ca0.85(LiCe)0.075Bi4Ti4O15 ceramics via templated grain growth using a rolling-extended method. Journal of Materials Science: Materials in Electronics, 2015, 26, 2082-2089.	1.1	3
60	Structures and Electrical Properties of Textured Ca_{0.85}(LiCe)_{0.075}Bi₄Ti₄O₁₅Ceramics Prepared by the Reactive Templated Grain Growth. Integrated Ferroelectrics, 2015, 162, 1-7.	0.3	6
61	Structural and crystallographic study on 3004 aluminum alloy ingot by horizontal direct chill casting under combined electromagnetic fields. Journal of Materials Research, 2015, 30, 745-752.	1.2	8
62	High performance screen printed Pb(Zr0.46Ti0.54)O3â^'Pb(Zn1/3Nb2/3)O3â^'Pb(Ni1/3Nb2/3)O3 thick films by one-step co-firing method. Materials Letters, 2015, 152, 17-20.	1.3	13
63	Microstructure and electrical properties in Zn-doped Ba0.85Ca0.15Ti0.90Zr0.10O3 piezoelectric ceramics. Journal of Alloys and Compounds, 2015, 637, 291-296.	2.8	64
64	Directional Growth of Tin Crystals Controlled by Combined Solute Concentration Gradient Field and Static Magnetic Field. Acta Metallurgica Sinica (English Letters), 2015, 28, 725-732.	1.5	5
65	Formation Mechanism of Plate-like Bi₄Ti₃O₁₂ Particles in Molten Salt Fluxes. Integrated Ferroelectrics, 2014, 154, 154-158.	0.3	16
66	Crystallographic textured evolution in 0.85Na0.5Bi0.5TiO3â€"0.04BaTiO3â€"0.11K0.5Bi0.5TiO3 ceramics prepared by reactive-templated grain growth method. Journal of Materials Science: Materials in Electronics, 2014, 25, 1873-1879.	1.1	6
67	Study on Microstructures of Al-4ÂwtÂpct V Master Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 3741-3747.	1.1	8
68	Microstructure Evolution of AZ80 Magnesium Alloy during Multi-Directional Forging Process. Materials Transactions, 2014, 55, 270-274.	0.4	14
69	Microstructure and RRA treatment of LFEC 7075 aluminum alloy extruded bars. Journal Wuhan University of Technology, Materials Science Edition, 2013, 28, 184-191.	0.4	7
70	Effect of a high magnetic field on the morphological and crystallographic features of primary Al6Mn phase formed during solidification process. Journal of Materials Research, 2013, 28, 1567-1573.	1.2	17
71	Mechanism of grain refinement of an Alâ€"Znâ€"Mgâ€"Cu alloy prepared by low-frequency electromagnetic casting. Journal of Materials Science, 2012, 47, 5501-5508.	1.7	47
72	The effect of grain refiner and combined electro-magnetic field on grain evolution of horizontal direct chill casting 7075 aluminum alloy. International Journal of Materials Research, 2010, 101, 380-385.	0.1	2

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73	Experimental investigation of the start-up phase during direct chill and low frequency electromagnetic casting of 6063 aluminum alloy processes. Heat and Mass Transfer, 2010, 46, 657-664.	1.2	2
74	Formation of feathery grains with the application of a static magnetic field during direct chill casting of Al-9.8wt%Zn alloy. Journal of Materials Science, 2009, 44, 1063-1068.	1.7	46
75	Effect of a low frequency electromagnetic field on the direct-chill (DC) casting of AZ80 magnesium alloy ingots. International Journal of Materials Research, 2006, 97, 1539-1544.	0.1	7
76	The Effects of Electromagnetic Vibration on Macrosegregation in AZ80 Magnesium Alloy Billets. Materials Transactions, 2006, 47, 392-398.	0.4	2
77	The effect of the electromagnetic vabration on the microstructure, segregation, and mechanical properties of As-cast AZ80 magnesium alloy billet. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 3715-3724.	1.1	14
78	Effect of Low-Frequency Magnetic Fields on Microstructures of Horizontal Direct Chill Cast 2024 Aluminum Alloys. Materials Transactions, 2005, 46, 1903-1907.	0.4	3
79	Effect of low-frequency electromagnetic casting on the castability, microstructure, and tensile properties of direct-chill cast Al-Zn-Mg-Cu alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2004, 35, 2487-2494.	1.1	89
80	Achieving Ultrarobust and Humidityâ€Resistant Triboelectric Nanogenerator by Dualâ€Capacitor Enhancement System. Advanced Energy Materials, 0, , 2101958.	10.2	42