Yan Zhang

List of Publications by Year
in descending order

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		81900	149698
59	7,065	39	56
papers	citations	h-index	g-index

61	61	61	8176
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Recent advances in metal sulfides: from controlled fabrication to electrocatalytic, photocatalytic and photoelectrochemical water splitting and beyond. Chemical Society Reviews, 2019, 48, 4178-4280.	38.1	810
2	Fiber-Based Generator for Wearable Electronics and Mobile Medication. ACS Nano, 2014, 8, 6273-6280.	14.6	543
3	Interface design for high energy density polymer nanocomposites. Chemical Society Reviews, 2019, 48, 4424-4465.	38.1	531
4	Enhanced Ferroelectric-Nanocrystal-Based Hybrid Photocatalysis by Ultrasonic-Wave-Generated Piezophototronic Effect. Nano Letters, 2015, 15, 2372-2379.	9.1	428
5	Self-Powered System with Wireless Data Transmission. Nano Letters, 2011, 11, 2572-2577.	9.1	385
6	Piezo-potential enhanced photocatalytic degradation of organic dye using ZnO nanowires. Nano Energy, 2015, 13, 414-422.	16.0	361
7	Finger typing driven triboelectric nanogenerator and its use for instantaneously lighting up LEDs. Nano Energy, 2013, 2, 491-497.	16.0	264
8	Hybridizing Energy Conversion and Storage in a Mechanical-to-Electrochemical Process for Self-Charging Power Cell. Nano Letters, 2012, 12, 5048-5054.	9.1	255
9	High-Output Nanogenerator by Rational Unipolar Assembly of Conical Nanowires and Its Application for Driving a Small Liquid Crystal Display. Nano Letters, 2010, 10, 5025-5031.	9.1	244
10	Enhanced pyroelectric and piezoelectric properties of PZT with aligned porosity for energy harvesting applications. Journal of Materials Chemistry A, 2017, 5, 6569-6580.	10.3	176
11	Transparent flexible nanogenerator as self-powered sensor for transportation monitoring. Nano Energy, 2013, 2, 75-81.	16.0	171
12	Electronic structure engineering on two-dimensional (2D) electrocatalytic materials for oxygen reduction, oxygen evolution, and hydrogen evolution reactions. Nano Energy, 2020, 77, 105080.	16.0	157
13	Surface free-carrier screening effect on the output of a ZnO nanowire nanogenerator and its potential as a self-powered active gas sensor. Nanotechnology, 2013, 24, 225501.	2.6	156
14	Aligned porous barium titanate/hydroxyapatite composites with high piezoelectric coefficients for bone tissue engineering. Materials Science and Engineering C, 2014, 39, 143-149.	7.3	137
15	Control of electro-chemical processes using energy harvesting materials and devices. Chemical Society Reviews, 2017, 46, 7757-7786.	38.1	135
16	Lead-Free Nanogenerator Made from Single ZnSnO₃ Microbelt. ACS Nano, 2012, 6, 4335-4340.	14.6	133
17	Flexible and active self-powered pressure, shear sensors based on freeze casting ceramicâ€“polymer composites. Energy and Environmental Science, 2018, 11, 2919-2927.	30.8	130
18	Construction of Bioâ€Piezoelectric Platforms: From Structures and Synthesis to Applications. Advanced Materials, 2021, 33, e2008452.	21.0	114

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19	Micro-scale to nano-scale generators for energy harvesting: Self powered piezoelectric, triboelectric and hybrid devices. Physics Reports, 2019, 792, 1-33.	25.6	111
20	Simultaneous Realization of Enhanced Photoactivity and Promoted Photostability by Multilayered MoS₂ Coating on CdS Nanowire Structure via Compact Coating Methodology. ACS Applied Materials & Interfaces, 2017, 9, 6950-6958.	8.0	110
21	CuO/PVDF nanocomposite anode for a piezo-driven self-charging lithium battery. Energy and Environmental Science, 2013, 6, 2615.	30.8	109
22	Ferroelectret materials and devices for energy harvesting applications. Nano Energy, 2019, 57, 118-140.	16.0	108
23	Thermal Energy Harvesting Using Pyroelectric-Electrochemical Coupling in Ferroelectric Materials. Joule, 2020, 4, 301-309.	24.0	103
24	Understanding the effect of porosity on the polarisation-field response of ferroelectric materials. Acta Materialia, 2018, 154, 100-112.	7.9	97
25	PVDF mesoporous nanostructures as the piezo-separator for a self-charging power cell. Nano Energy, 2014, 10, 44-52.	16.0	93
26	Electrical and Mechanical Selfâ€Healing in Highâ€Performance Dielectric Elastomer Actuator Materials. Advanced Functional Materials, 2019, 29, 1808431.	14.9	92
27	Piezoelectric Materials for Controlling Electro-Chemical Processes. Nano-Micro Letters, 2020, 12, 149.	27.0	87
28	Porous <scp>PZT</scp> Ceramics with Aligned Pore Channels for Energy Harvesting Applications. Journal of the American Ceramic Society, 2015, 98, 2980-2983.	3.8	68
29	Demonstration of Enhanced Piezo-Catalysis for Hydrogen Generation and Water Treatment at the Ferroelectric Curie Temperature. IScience, 2020, 23, 101095.	4.1	64
30	Effects of rheological properties on ice-templated porous hydroxyapatite ceramics. Materials Science and Engineering C, 2013, 33, 340-346.	7.3	59
31	A self-powered piezotronic strain sensor based on single ZnSnO3 microbelts. RSC Advances, 2013, 3, 25184.	3.6	57
32	Porous ferroelectric materials for energy technologies: current status and future perspectives. Energy and Environmental Science, 2021, 14, 6158-6190.	30.8	56
33	Grain boundary engineering in organicâ€“inorganic hybrid semiconductor ZnS(en)_{0.5} for visible-light photocatalytic hydrogen production. Journal of Materials Chemistry A, 2017, 5, 1387-1393.	10.3	55
34	Self-Healing Dielectric Elastomers for Damage-Tolerant Actuation and Energy Harvesting. ACS Applied Materials & Interfaces, 2020, 12, 7595-7604.	8.0	55
35	An elastic-spring-substrated nanogenerator as an active sensor for self-powered balance. Energy and Environmental Science, 2013, 6, 1164.	30.8	53
36	Porous hydroxyapatite ceramics fabricated by an ice-templating method. Scripta Materialia, 2011, 64, 426-429.	5.2	50

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37	Pyro-electrolytic water splitting for hydrogen generation. Nano Energy, 2019, 58, 183-191.	16.0	50
38	Self-Healing of Materials under High Electrical Stress. Matter, 2020, 3, 989-1008.	10.0	47
39	High piezoelectric sensitivity and hydrostatic figures of merit in unidirectional porous ferroelectric ceramics fabricated by freeze casting. Journal of the European Ceramic Society, 2018, 38, 4203-4211.	5.7	45
40	Dielectric and piezoelectric properties of porous lead-free 0.5Ba(Ca0.8Zr0.2)O3-0.5(Ba0.7Ca 0.3)TiO3 ceramics. Materials Research Bulletin, 2019, 112, 426-431.	5.2	39
41	Aligned macroporous TiO2/chitosan/reduced graphene oxide (rGO) composites for photocatalytic applications. Applied Surface Science, 2017, 424, 170-176.	6.1	37
42	Flexible pillar-base structured piezocomposite with aligned porosity for piezoelectric energy harvesting. Nano Energy, 2021, 88, 106278.	16.0	37
43	Ice-templated poly(vinylidene fluoride) ferroelectrets. Soft Matter, 2019, 15, 825-832.	2.7	35
44	Freeze gelcasting of aqueous alumina suspensions for porous ceramics. Ceramics International, 2012, 38, 6063-6066.	4.8	31
45	Improved photocatalytic performance of gradient reduced TiO2 ceramics with aligned pore channels. , 2022, 1, 100025.		27
46	Effects of alcohol additives on pore structure and morphology of freeze-cast ceramics. Transactions of Nonferrous Metals Society of China, 2014, 24, 718-722.	4.2	23
47	Porous Al2O3 microspheres prepared by a novel ice-templated spray drying technique. Ceramics International, 2014, 40, 1215-1219.	4.8	21
48	Hollow and porous hydroxyapatite microspheres prepared with an O/W emulsion by spray freezing method. Materials Science and Engineering C, 2016, 69, 1068-1074.	7.3	21
49	1â€3â€Type Composites Based on Ferroelectrics: Electromechanical Coupling, Figures of Merit, and Piezotechnical Energyâ€Harvesting Applications. Energy Technology, 2018, 6, 813-828.	3.8	18
50	High Efficiency Water Splitting using Ultrasound Coupled to a BaTiO₃ Nanofluid. Advanced Science, 2022, 9, e2105248.	11.2	17
51	Evaluation of the pore morphologies for piezoelectric energy harvesting application. Ceramics International, 2022, 48, 5017-5025.	4.8	14
52	Fabrication of CaSiO 3 bioceramics with open and unidirectional macro-channels using an ice/fiber-templated method. Ceramics International, 2013, 39, 6035-6040.	4.8	10
53	Piezoelectric performance of PZT-based materials with aligned porosity: experiment and modelling. Smart Materials and Structures, 2019, 28, 125021.	3.5	7
54	Model Validation of a Porous Piezoelectric Energy Harvester Using Vibration Test Data. Vibration, 2018, 1, 123-137.	1.9	6

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55	Hierarchically structured lead-free barium strontium titanate for low-grade thermal energy harvesting. Ceramics International, 2021, 47, 18761-18772.	4.8	6
56	Construction of amorphous Fe0.95S1.05 nanorods with high electrocatalytic activity for enhanced hydrogen evolution reaction. Electrochimica Acta, 2022, 402, 139554.	5.2	6
57	Effect of Particle Size on the Lamellar Pore Microstructure of Porous Al₂O₃ Ceramics Fabricated by the Unidirectional Freezing. Applied Mechanics and Materials, 0, 184-185, 818-825.	0.2	4
58	Investigation of shear piezoelectric fiber composite for flexible sensor application. Smart Materials and Structures, 2019, 28, 125015.	3.5	2
59	Fabrication of Barium Titanate/Hydroxyapatite with Aligned Pore Channels by Freeze Gelcasting. Applied Mechanics and Materials, 0, 692, 341-346.	0.2	1