Zhengbao Yang

List of Publications by Year
in descending order

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Version: 2024-02-01

85 papers	5,020 citations	109264 35 h-index	91828 69 g-index
86 all docs	86 docs citations	86 times ranked	3451 citing authors

#	Article	IF	Citations
1	Direct Adaptive SSDV Circuit for Piezoelectric Shunt Damping. IEEE Transactions on Industrial Electronics, 2023, 70, 4098-4107.	5.2	3
2	A Self-Powered P-SSHI Array Interface for Piezoelectric Energy Harvesters With Arbitrary Phase Difference. IEEE Transactions on Industrial Electronics, 2022, 69, 9155-9164.	5.2	12
3	Whisk-Inspired Motion Converter for Ocean Wave Energy Harvesting. IEEE/ASME Transactions on Mechatronics, 2022, 27, 1808-1811.	3.7	9
4	Misalignment-induced bending-torsional coupling vibrations of doubly-clamped nonlinear piezoelectric energy harvesters. Mechanical Systems and Signal Processing, 2022, 169, 108776.	4.4	5
5	Self-Powered Single-Inductor Rectifier-Less SSHI Array Interface With the MPPT Technique for Piezoelectric Energy Harvesting. IEEE Transactions on Industrial Electronics, 2022, 69, 10172-10181.	5.2	9
6	Growth of Tellurium Nanobelts on h-BN for p-type Transistors with Ultrahigh Hole Mobility. Nano-Micro Letters, 2022, 14, 109.	14.4	31
7	Van der Waals Exfoliation Processed Biopiezoelectric Submucosa Ultrathin Films. Advanced Materials, 2022, 34, e2200864.	11.1	12
8	Defect-enhanced selective ion transport in an ionic nanocomposite for efficient energy harvesting from moisture. Energy and Environmental Science, 2022, 15, 2601-2609.	15.6	22
9	3D Conformal Fabrication of Piezoceramic Films. Advanced Science, 2022, 9, e2106030.	5.6	10
10	Coâ€assembled Monolayers as Holeâ€Selective Contact for Highâ€Performance Inverted Perovskite Solar Cells with Optimized Recombination Loss and Longâ€Term Stability. Angewandte Chemie, 2022, 134, .	1.6	4
11	Coâ€assembled Monolayers as Holeâ€Selective Contact for Highâ€Performance Inverted Perovskite Solar Cells with Optimized Recombination Loss and Longâ€Term Stability. Angewandte Chemie - International Edition, 2022, 61, .	7.2	66
12	Characterization of Wrist Motions and Bionic Energy Harvesting for Wrist Wearables. IEEE Internet of Things Journal, 2022, 9, 21147-21156.	5.5	8
13	Droplet energy harvesting panel. Energy and Environmental Science, 2022, 15, 2916-2926.	15.6	47
14	Bubble energy generator. Science Advances, 2022, 8, .	4.7	44
15	A distributed-parameter electromechanical coupling model for a segmented arc-shaped piezoelectric energy harvester. Mechanical Systems and Signal Processing, 2021, 146, 107005.	4.4	43
16	Instantaneous peak 2.1 W-level hybrid energy harvesting from human motions for self-charging battery-powered electronics. Nano Energy, 2021, 81, 105629.	8.2	41
17	RF Energy Harvesting for Batteryless and Maintenance-Free Condition Monitoring of Railway Tracks. IEEE Internet of Things Journal, 2021, 8, 3512-3523.	5.5	50
18	Skinâ€Inspired Piezoelectric Tactile Sensor Array with Crosstalkâ€Free Row+Column Electrodes for Spatiotemporally Distinguishing Diverse Stimuli. Advanced Science, 2021, 8, 2002817.	5.6	161

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19	Distributed-parameter modeling and dynamic analysis of rotational compressive-mode energy harvesters. Nonlinear Dynamics, 2021, 103, 157-182.	2.7	4
20	Metamaterial beam for flexural wave resonance rainbow trapping and piezoelectric energy harvesting. Journal of Applied Physics, 2021, 129, .	1.1	14
21	Soft magnetic skin for super-resolution tactile sensing with force self-decoupling. Science Robotics, 2021, 6, .	9.9	205
22	Highly anisotropic and flexible piezoceramic kirigami for preventing joint disorders. Science Advances, 2021, 7, .	4.7	88
23	On the offset distance of rotational piezoelectric energy harvesters. Energy, 2021, 220, 119676.	4.5	13
24	Recent Advances towards Ocean Energy Harvesting and Selfâ€Powered Applications Based on Triboelectric Nanogenerators. Advanced Electronic Materials, 2021, 7, 2100277.	2.6	58
25	Flexible and translucent PZT films enhanced by the compositionally graded heterostructure for human body monitoring. Nano Energy, 2021, 85, 105984.	8.2	32
26	Hierarchically Interconnected Piezoceramic Textile with a Balanced Performance in Piezoelectricity, Flexibility, Toughness, and Air Permeability. Advanced Functional Materials, 2021, 31, 2104737.	7.8	49
27	Investigation of frequency-up conversion effect on the performance improvement of stack-based piezoelectric generators. Renewable Energy, 2021, 172, 551-563.	4.3	101
28	Self-Powered SSDCI Array Interface for Multiple Piezoelectric Energy Harvesters. IEEE Transactions on Power Electronics, 2021, 36, 9093-9104.	5.4	15
29	An auxetic nonlinear piezoelectric energy harvester for enhancing efficiency and bandwidth. Applied Energy, 2021, 298, 117274.	5.1	65
30	A leaf-mimic rain energy harvester by liquid-solid contact electrification and piezoelectricity. Nano Energy, 2021, 90, 106573.	8.2	40
31	Woodpecker-mimic two-layer band energy harvester with a piezoelectric array for powering wrist-worn wearables. Nano Energy, 2021, 89, 106385.	8.2	38
32	Influence of effective electrode coverage on the energy harvesting performance of piezoelectric cantilevers. Energy Conversion and Management, 2021, 248, 114758.	4.4	8
33	A flexible and lead-free BCZT thin film nanogenerator for biocompatible energy harvesting. Materials Chemistry Frontiers, 2021, 5, 4682-4689.	3.2	14
34	A gravity-driven sintering method to fabricate geometrically complex compact piezoceramics. Nature Communications, 2021, 12, 6066.	5.8	10
35	A wood-templated unidirectional piezoceramic composite for transmuscular ultrasonic wireless power transfer. Energy and Environmental Science, 2021, 14, 6574-6585.	15.6	30
36	Multi-Band Multi-Functional Metasurface-Based Reflective Polarization Converter for Linear and Circular Polarizations. IEEE Access, 2021, 9, 152738-152748.	2.6	26

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37	Introducing revolute joints into piezoelectric energy harvesters. Energy, 2020, 192, 116604.	4.5	10
38	Vortex-induced swing (VIS) motion for energy harvesters and flowmeters. Applied Physics Letters, 2020, 117, .	1.5	14
39	Transfer-Free PZT Thin Films for Flexible Nanogenerators Derived from a Single-Step Modified Solâ€“Gel Process on 2D Mica. ACS Applied Materials & Interfaces, 2020, 12, 54991-54999.	4.0	34
40	Design and Modeling of a Magnetic-Coupling Monostable Piezoelectric Energy Harvester Under Vortex-Induced Vibration. IEEE Access, 2020, 8, 108913-108927.	2.6	32
41	Batteryâ€Less Soft Millirobot That Can Move, Sense, and Communicate Remotely by Coupling the Magnetic and Piezoelectric Effects. Advanced Science, 2020, 7, 2000069.	5.6	73
42	Energy harvesting for jet engine monitoring. Nano Energy, 2020, 75, 104853.	8.2	62
43	Thickness-variable composite beams for vibration energy harvesting. Composite Structures, 2020, 244, 112232.	3.1	33
44	A droplet-based electricity generator with high instantaneous power density. Nature, 2020, 578, 392-396.	13.7	871
45	A distributed-parameter electromechanical coupling model for a piezoelectric energy harvester with variable curvature. Smart Materials and Structures, 2020, 29, 115015.	1.8	8
46	Electronic Skin from High-Throughput Fabrication of Intrinsically Stretchable Lead Zirconate Titanate Elastomer. Research, 2020, 2020, 1085417.	2.8	33
47	Toward a 0.33â€W piezoelectric and electromagnetic hybrid energy harvester: Design, experimental studies and self-powered applications. Applied Energy, 2019, 255, 113805.	5.1	45
48	Direction-adaptive energy harvesting with a guide wing under flow-induced oscillations. Energy, 2019, 187, 115983.	4.5	34
49	Thermal energy harvesting performance in 0.94Bi0.5Na0.5TiO3-0.06BaZr0.2Ti0.8O3: AlN composite ceramics based on the Olsen cycle. Journal of the European Ceramic Society, 2019, 39, 5243-5251.	2.8	17
50	Capturing Flow Energy from Ocean and Wind. Energies, 2019, 12, 2184.	1.6	41
51	Multi-frequency responses of compliant orthoplanar spring designs for widening the bandwidth of piezoelectric energy harvesters. International Journal of Mechanical Sciences, 2019, 157-158, 684-691.	3.6	20
52	SLIPS-TENG: robust triboelectric nanogenerator with optical and charge transparency using a slippery interface. National Science Review, 2019, 6, 540-550.	4.6	110
53	Surface acoustic wave NO2 sensors utilizing colloidal SnS quantum dot thin films. Surface and Coatings Technology, 2019, 362, 78-83.	2.2	41
54	270-degree arc-shaped piezoelectric energy converter in uniflow fluid environment. IOP Conference Series: Materials Science and Engineering, 2019, 531, 012026.	0.3	3

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55	Effect of the Guiding Wing Height on Energy Harvesters. , 2019, , .		0
56	Compressive-mode Piezoelectric Energy Harvesting in Translational and Rotational Systems. , 2019, , .		1
57	Performance comparison of electromagnetic energy harvesters based on magnet arrays of alternating polarity and configuration. Energy Conversion and Management, 2019, 179, 132-140.	4.4	72
58	Modeling and experimental validation of a buckled compressive-mode piezoelectric energy harvester. Nonlinear Dynamics, 2018, 92, 1761-1780.	2.7	37
59	High-Performance Piezoelectric Energy Harvesters and Their Applications. Joule, 2018, 2, 642-697.	11.7	803
60	Free vibration analysis of rotating cylindrical shells coupled with moderately thick annular plates. International Journal of Mechanical Sciences, 2018, 142-143, 127-139.	3.6	169
61	Modeling and experimental parametric study of a tri-leg compliant orthoplanar spring based multi-mode piezoelectric energy harvester. Mechanical Systems and Signal Processing, 2018, 98, 268-280.	4.4	34
62	Enhanced broadband multi-mode compliant orthoplanar spring piezoelectric vibration energy harvester using magnetic force. International Journal of Mechanical Sciences, 2018, 135, 63-71.	3.6	34
63	Design and Studies on a Low-Frequency Truss-Based Compressive-Mode Piezoelectric Energy Harvester. IEEE/ASME Transactions on Mechatronics, 2018, 23, 2849-2858.	3.7	24
64	Introducing hinge mechanisms to one compressive-mode piezoelectric energy harvester. Journal of Renewable and Sustainable Energy, 2018, 10, .	0.8	15
65	Breakdown in the directional transport of droplets on the peristome of pitcher plants. Communications Physics, 2018, 1, .	2.0	36
66	A hybrid piezoelectric-triboelectric generator for low-frequency and broad-bandwidth energy harvesting. Energy Conversion and Management, 2018, 174, 188-197.	4.4	104
67	Modeling and parametric study of a force-amplified compressive-mode piezoelectric energy harvester. Journal of Intelligent Material Systems and Structures, 2017, 28, 357-366.	1.4	28
68	Numerical and experimental study of a compressive-mode energy harvester under random excitations. Smart Materials and Structures, 2017, 26, 035064.	1.8	13
69	On the efficiency of piezoelectric energy harvesters. Extreme Mechanics Letters, 2017, 15, 26-37.	2.0	141
70	Introducing arc-shaped piezoelectric elements into energy harvesters. Energy Conversion and Management, 2017, 148, 260-266.	4.4	86
71	A multi-impact frequency up-converted magnetostrictive transducer for harvesting energy from finger tapping. International Journal of Mechanical Sciences, 2017, 126, 235-241.	3.6	58
72	Nonlinear vibrations of moving functionally graded plates containing porosities and contacting with liquid: internal resonance. Nonlinear Dynamics, 2017, 90, 1461-1480.	2.7	62

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73	Charging capacitors using single crystal PMN-PT and PZN-PT energy harvesters coupled with the SSHI circuit. Sensors and Actuators A: Physical, 2017, 266, 76-84.	2.0	15
74	Comparison of PZN-PT, PMN-PT single crystals and PZT ceramic for vibration energy harvesting. Energy Conversion and Management, 2016, 122, 321-329.	4.4	144
75	Distributed parameter model and experimental validation of a compressive-mode energy harvester under harmonic excitations. AIP Advances, 2016, 6, 085310.	0.6	8
76	Reversible Nonlinear Energy Harvester Tuned by Tilting and Enhanced by Nonlinear Circuits. IEEE/ASME Transactions on Mechatronics, 2016, 21, 2174-2184.	3.7	36
77	Toward Harvesting Vibration Energy from Multiple Directions by a Nonlinear Compressive-Mode Piezoelectric Transducer. IEEE/ASME Transactions on Mechatronics, 2016, 21, 1787-1791.	3.7	59
78	A frequency up-converted magnetostrictive transducer for harvesting energy from finger tapping. , 2015, , .		0
79	A Novel Multi-Directional Nonlinear Piezoelectric Energy Harvester Coupled With Nonlinear Conditioning Circuits. , 2015, , .		1
80	Impedance matching circuit for synchronous switch harvesting on inductor interface. , 2015, , .		4
81	Theoretical and experimental investigation of a nonlinear compressive-mode energy harvester with high power output under weak excitations. Smart Materials and Structures, 2015, 24, 025028.	1.8	60
82	Nonlinear vibration analysis of the high-efficiency compressive-mode piezoelectric energy harvester. Proceedings of SPIE, 2015, , .	0.8	4
83	Charge Redistribution in Flextensional Piezoelectric Energy Harvesters. Applied Mechanics and Materials, 2014, 598, 322-326.	0.2	2
84	High-efficiency compressive-mode energy harvester enhanced by a multi-stage force amplification mechanism. Energy Conversion and Management, 2014, 88, 829-833.	4.4	99
85	Study on the hydrodynamics and kinematics of a biomimetic fin propulsor actuated by SMA wires. , 2011, , .		3