

Tinghai Cheng

List of Publications by Year in descending order

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71
papers

2,541
citations

172457

29
h-index

214800

47
g-index

71
all docs

71
docs citations

71
times ranked

1027
citing authors

#	ARTICLE	IF	CITATIONS
1	Achieving Smooth Motion for Piezoelectric Stick-Slip Actuator With the Inertial Block Structure. IEEE Transactions on Industrial Electronics, 2022, 69, 3948-3958.	7.9	29
2	Triboelectric nanogenerator with mechanical switch and clamp circuit for low ripple output. Nano Research, 2022, 15, 2077-2082.	10.4	10
3	Double-spring-piece structured triboelectric sensor for broadband vibration monitoring and warning. Mechanical Systems and Signal Processing, 2022, 166, 108429.	8.0	12
4	Breeze-driven triboelectric nanogenerator for wind energy harvesting and application in smart agriculture. Applied Energy, 2022, 306, 117977.	10.1	104
5	A high-speed and long-life triboelectric sensor with charge supplement for monitoring the speed and skidding of rolling bearing. Nano Energy, 2022, 92, 106747.	16.0	33
6	High-voltage output triboelectric nanogenerator with DC/AC optimal combination method. Nano Research, 2022, 15, 3239-3245.	10.4	20
7	Self-Powered Sensing for Non-Full Pipe Fluidic Flow Based on Triboelectric Nanogenerators. ACS Applied Materials & Interfaces, 2022, 14, 2825-2832.	8.0	21
8	Optimization strategy of wind energy harvesting via triboelectric-electromagnetic flexible cooperation. Applied Energy, 2022, 307, 118311.	10.1	46
9	Piezoelectric stick-slip actuators with flexure hinge mechanisms: A review. Journal of Intelligent Material Systems and Structures, 2022, 33, 1879-1901.	2.5	10
10	Nondestructive Dimension Sorting by Soft Robotic Grippers Integrated with Triboelectric Sensor. ACS Nano, 2022, 16, 3008-3016.	14.6	37
11	Gyroscope-Structured Triboelectric Nanogenerator for Harvesting Multidirectional Ocean Wave Energy. ACS Nano, 2022, 16, 6781-6788.	14.6	63
12	3D fully-enclosed triboelectric nanogenerator with bionic fish-like structure for harvesting hydrokinetic energy. Nano Research, 2022, 15, 5098-5104.	10.4	20
13	Design and performance of a compact stick-slip type piezoelectric actuator based on right triangle flexible stator. Smart Materials and Structures, 2022, 31, 055013.	3.5	25
14	Magnetic-assisted self-powered acceleration sensor for real-time monitoring vehicle operation and collision based on triboelectric nanogenerator. Nano Energy, 2022, 96, 107094.	16.0	25
15	A stick-slip linear actuator with high speed and nano-resolution by resonance/non-resonance hybrid driving. Review of Scientific Instruments, 2022, 93, .	1.3	3
16	High-performance triboelectric nanogenerator with synchronization mechanism by charge handling. Energy Conversion and Management, 2022, 263, 115655.	9.2	13
17	Influence of mechanical motions on the output characteristics of triboelectric nanogenerators. Materials Today Physics, 2022, 25, 100701.	6.0	6
18	A flexure hinged piezoelectric stick-slip actuator with high velocity and linearity for long-stroke nano-positioning. Smart Materials and Structures, 2022, 31, 075017.	3.5	9

#	ARTICLE	IF	CITATIONS
19	An Air Velocity Monitor for Coal Mine Ventilation Based on Vortex-Induced Triboelectric Nanogenerator. <i>Sensors</i> , 2022, 22, 4832.	3.8	5
20	A full-textile triboelectric nanogenerator with multisource energy harvesting capability. <i>Energy Conversion and Management</i> , 2022, 267, 115910.	9.2	18
21	A bidirectional direct current triboelectric nanogenerator with the mechanical rectifier. <i>Nano Energy</i> , 2021, 79, 105408.	16.0	40
22	Triboelectric mechanical sensors—Progress and prospects. <i>Extreme Mechanics Letters</i> , 2021, 42, 101100.	4.1	70
23	Triboelectric Rotary Motion Sensor for Industrial-Grade Speed and Angle Monitoring. <i>Sensors</i> , 2021, 21, 1713.	3.8	25
24	Real-Time Monitoring System of Automobile Driver Status and Intelligent Fatigue Warning Based on Triboelectric Nanogenerator. <i>ACS Nano</i> , 2021, 15, 7271-7278.	14.6	41
25	Gravity triboelectric nanogenerator for the steady harvesting of natural wind energy. <i>Nano Energy</i> , 2021, 82, 105740.	16.0	110
26	High-Linearity, Response-Range Adjustable Force Sensors Based on a Yarn/Film/Spacer Triboelectric Device Design. <i>Advanced Materials Technologies</i> , 2021, 6, 2100203.	5.8	11
27	Magnetic switch structured triboelectric nanogenerator for continuous and regular harvesting of wind energy. <i>Nano Energy</i> , 2021, 83, 105851.	16.0	80
28	Enhancing Output Performance of Triboelectric Nanogenerator via Charge Clamping. <i>Advanced Energy Materials</i> , 2021, 11, 2101356.	19.5	20
29	Triboelectric nanogenerator with double rocker structure design for ultra-low-frequency wave full-stroke energy harvesting. <i>Extreme Mechanics Letters</i> , 2021, 46, 101338.	4.1	23
30	Enhancing Output Performance of Triboelectric Nanogenerator via Charge Clamping (Adv. Energy) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 00	19.5	14
31	Sliding Triboelectric Circular Motion Sensor with Real-Time Hardware Processing. <i>Advanced Materials Technologies</i> , 2021, 6, 2100655.	5.8	5
32	Triboelectric Nanogenerator for Ocean Wave Graded Energy Harvesting and Condition Monitoring. <i>ACS Nano</i> , 2021, 15, 16368-16375.	14.6	64
33	A dual-mode excitation method of flexure hinge type piezoelectric stick-slip actuator for suppressing backward motion. <i>Sensors and Actuators A: Physical</i> , 2021, 330, 112853.	4.1	13
34	Nonintrusion Monitoring of Droplet Motion State via Liquid-Solid Contact Electrification. <i>ACS Nano</i> , 2021, 15, 18557-18565.	14.6	13
35	Self-Powered Sensing for Smart Agriculture by Electromagnetic-Triboelectric Hybrid Generator. <i>ACS Nano</i> , 2021, 15, 20278-20286.	14.6	79
36	Triboelectric rotational speed sensor integrated into a bearing: A solid step to industrial application. <i>Extreme Mechanics Letters</i> , 2020, 34, 100595.	4.1	43

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37	An Integrated Triboelectric-“Electromagnetic” Piezoelectric Hybrid Energy Harvester Induced by a Multifunction Magnet for Rotational Motion. <i>Advanced Engineering Materials</i> , 2020, 22, 1900872.	3.5	19
38	Robust Triboelectric Nanogenerator with Ratchet-“Like Wheel”-Based Design for Harvesting of Environmental Energy. <i>Advanced Materials Technologies</i> , 2020, 5, 1900801.	5.8	25
39	Novel sweep-type triboelectric nanogenerator utilizing single freewheel for random triggering motion energy harvesting and driver habits monitoring. <i>Nano Energy</i> , 2020, 68, 104360.	16.0	59
40	Design, modeling, and performance of a bidirectional stick-slip piezoelectric actuator with coupled asymmetrical flexure hinge mechanisms. <i>Journal of Intelligent Material Systems and Structures</i> , 2020, 31, 1961-1972.	2.5	13
41	A direction-guidance hybrid excitation method for inertial flexible hinge piezoelectric actuator with high speed performance. <i>Sensors and Actuators A: Physical</i> , 2020, 314, 112229.	4.1	20
42	Self-Powered Sensors and Systems Based on Nanogenerators. <i>Sensors</i> , 2020, 20, 2925.	3.8	195
43	A stick-slip linear piezoelectric actuator with mode conversion flexible hinge driven by symmetrical waveform. <i>Smart Materials and Structures</i> , 2020, 29, 055035.	3.5	19
44	Cylindrical Direct-Current Triboelectric Nanogenerator with Constant Output Current. <i>Advanced Energy Materials</i> , 2020, 10, 1904227.	19.5	52
45	A Linear Piezoelectric Stick-Slip Actuator via Triangular Displacement Amplification Mechanism. <i>IEEE Access</i> , 2020, 8, 6515-6522.	4.2	33
46	Design and Testing of Cantilevered PVDF Energy Harvester Based on the Coanda Effect. <i>IEEE Access</i> , 2020, 8, 19606-19613.	4.2	0
47	Sweep-type triboelectric linear motion sensor with staggered electrode. <i>Extreme Mechanics Letters</i> , 2020, 37, 100713.	4.1	21
48	Travel switch integrated mechanical regulation triboelectric nanogenerator with linear-“rotational” motion transformation mechanism. <i>Extreme Mechanics Letters</i> , 2020, 37, 100718.	4.1	22
49	Triboelectric nanogenerator for entire stroke energy harvesting with bidirectional gear transmission. <i>Nano Energy</i> , 2020, 72, 104726.	16.0	48
50	Mechanical Regulation Triboelectric Nanogenerator with Controllable Output Performance for Random Energy Harvesting. <i>Advanced Energy Materials</i> , 2020, 10, 2000627.	19.5	49
51	Magnetic Flap-Type Difunctional Sensor for Detecting Pneumatic Flow and Liquid Level Based on Triboelectric Nanogenerator. <i>ACS Nano</i> , 2020, 14, 5981-5987.	14.6	44
52	Simple and high-performance stick-slip piezoelectric actuator based on an asymmetrical flexure hinge driving mechanism. <i>Journal of Intelligent Material Systems and Structures</i> , 2019, 30, 2125-2134.	2.5	31
53	Integrated flywheel and spiral spring triboelectric nanogenerator for improving energy harvesting of intermittent excitations/triggering. <i>Nano Energy</i> , 2019, 66, 104104.	16.0	40
54	Triboelectric Flow Sensor with Float-“Cone Structure for Industrial Pneumatic System Monitoring. <i>Advanced Materials Technologies</i> , 2019, 4, 1900704.	5.8	15

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55	A Piezoelectric Stick-Slip Nanopositioning Stage With Ultra-High Load Capacity Realizing by Decoupling the Driving and Moving Units. IEEE Access, 2019, 7, 142806-142813.	4.2	10
56	Multi-plate structured triboelectric nanogenerator based on cycloidal displacement for harvesting hydroenergy. Extreme Mechanics Letters, 2019, 33, 100576.	4.1	23
57	A piezoelectric stick-slip linear actuator with a rhombus-type flexure hinge mechanism by means of parasitic motion. Review of Scientific Instruments, 2019, 90, 096102.	1.3	16
58	Torus structured triboelectric nanogenerator array for water wave energy harvesting. Nano Energy, 2019, 58, 499-507.	16.0	109
59	Triboelectric nanogenerator by integrating a cam and a movable frame for ambient mechanical energy harvesting. Nano Energy, 2019, 60, 137-143.	16.0	63
60	Neural network controller for nanopositioning of a smooth impact drive mechanism. Turkish Journal of Electrical Engineering and Computer Sciences, 2019, 27, 663-674.	1.4	2
61	Airfoil-based cantilevered polyvinylidene fluoride layer generator for translating amplified air-flow energy. Renewable Energy, 2019, 135, 399-407.	8.9	31
62	Note: Lever-type bidirectional stick-slip piezoelectric actuator with flexible hinge. Review of Scientific Instruments, 2018, 89, 086101.	1.3	31
63	A Novel Trapezoid-Type Stick-Slip Piezoelectric Linear Actuator Using Right Circular Flexure Hinge Mechanism. IEEE Transactions on Industrial Electronics, 2017, 64, 5545-5552.	7.9	154
64	A Symmetrical Hybrid Driving Waveform for a Linear Piezoelectric Stick-Slip Actuator. IEEE Access, 2017, 5, 16885-16894.	4.2	36
65	Investigation on driving characteristics of a piezoelectric stick-slip actuator based on resonant/off-resonant hybrid excitation. Smart Materials and Structures, 2017, 26, 035042.	3.5	61
66	Performance improvement of smooth impact drive mechanism at low voltage utilizing ultrasonic friction reduction. Review of Scientific Instruments, 2016, 87, 085007.	1.3	36
67	Sealed piezoelectric energy harvester driven by hyperbaric air load. Applied Physics Letters, 2016, 108, .	3.3	25
68	Piezoelectric energy harvesting in coupling-chamber excited by the vortex-induced pressure. Applied Physics Letters, 2016, 109, .	3.3	16
69	A friction regulation hybrid driving method for backward motion restraint of the smooth impact drive mechanism. Smart Materials and Structures, 2016, 25, 085033.	3.5	60
70	The Asymmetric Flexure Hinge Structures and the Hybrid Excitation Methods for Piezoelectric Stick-Slip Actuators. , 0, , .		0
71	Piezoelectric Stick-Slip Actuator Integrated with Ultrasonic Vibrator for Improving Comprehensive Output Performance. Smart Materials and Structures, 0, , .	3.5	3