

Tinghai Cheng

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7341379/publications.pdf>

Version: 2024-02-01

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	Self-Powered Sensors and Systems Based on Nanogenerators. <i>Sensors</i> , 2020, 20, 2925.	3.8	195
2	A Novel Trapezoid-Type Stick-Slip Piezoelectric Linear Actuator Using Right Circular Flexure Hinge Mechanism. <i>IEEE Transactions on Industrial Electronics</i> , 2017, 64, 5545-5552.	7.9	154
3	Gravity triboelectric nanogenerator for the steady harvesting of natural wind energy. <i>Nano Energy</i> , 2021, 82, 105740.	16.0	110
4	Torus structured triboelectric nanogenerator array for water wave energy harvesting. <i>Nano Energy</i> , 2019, 58, 499-507.	16.0	109
5	Breeze-driven triboelectric nanogenerator for wind energy harvesting and application in smart agriculture. <i>Applied Energy</i> , 2022, 306, 117977.	10.1	104
6	Magnetic switch structured triboelectric nanogenerator for continuous and regular harvesting of wind energy. <i>Nano Energy</i> , 2021, 83, 105851.	16.0	80
7	Self-Powered Sensing for Smart Agriculture by Electromagnetic-Triboelectric Hybrid Generator. <i>ACS Nano</i> , 2021, 15, 20278-20286.	14.6	79
8	Triboelectric mechanical sensors—Progress and prospects. <i>Extreme Mechanics Letters</i> , 2021, 42, 101100.	4.1	70
9	Triboelectric Nanogenerator for Ocean Wave Graded Energy Harvesting and Condition Monitoring. <i>ACS Nano</i> , 2021, 15, 16368-16375.	14.6	64
10	Triboelectric nanogenerator by integrating a cam and a movable frame for ambient mechanical energy harvesting. <i>Nano Energy</i> , 2019, 60, 137-143.	16.0	63
11	Gyroscope-Structured Triboelectric Nanogenerator for Harvesting Multidirectional Ocean Wave Energy. <i>ACS Nano</i> , 2022, 16, 6781-6788.	14.6	63
12	Investigation on driving characteristics of a piezoelectric stick-slip actuator based on resonant/off-resonant hybrid excitation. <i>Smart Materials and Structures</i> , 2017, 26, 035042.	3.5	61
13	A friction regulation hybrid driving method for backward motion restraint of the smooth impact drive mechanism. <i>Smart Materials and Structures</i> , 2016, 25, 085033.	3.5	60
14	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
15	Cylindrical Direct-Current Triboelectric Nanogenerator with Constant Output Current. <i>Advanced Energy Materials</i> , 2020, 10, 1904227.	19.5	52
16	Mechanical Regulation Triboelectric Nanogenerator with Controllable Output Performance for Random Energy Harvesting. <i>Advanced Energy Materials</i> , 2020, 10, 2000627.	19.5	49
17	Triboelectric nanogenerator for entire stroke energy harvesting with bidirectional gear transmission. <i>Nano Energy</i> , 2020, 72, 104726.	16.0	48
18	Optimization strategy of wind energy harvesting via triboelectric-electromagnetic flexible cooperation. <i>Applied Energy</i> , 2022, 307, 118311.	10.1	46

#	ARTICLE	IF	CITATIONS
19	Magnetic Flap-Type Difunctional Sensor for Detecting Pneumatic Flow and Liquid Level Based on Triboelectric Nanogenerator. ACS Nano, 2020, 14, 5981-5987.	14.6	44
20	Triboelectric rotational speed sensor integrated into a bearing: A solid step to industrial application. Extreme Mechanics Letters, 2020, 34, 100595.	4.1	43
21	Real-Time Monitoring System of Automobile Driver Status and Intelligent Fatigue Warning Based on Triboelectric Nanogenerator. ACS Nano, 2021, 15, 7271-7278.	14.6	41
22	Integrated flywheel and spiral spring triboelectric nanogenerator for improving energy harvesting of intermittent excitations/trigging. Nano Energy, 2019, 66, 104104.	16.0	40
23	A bidirectional direct current triboelectric nanogenerator with the mechanical rectifier. Nano Energy, 2021, 79, 105408.	16.0	40
24	Nondestructive Dimension Sorting by Soft Robotic Grippers Integrated with Triboelectric Sensor. ACS Nano, 2022, 16, 3008-3016.	14.6	37
25	Performance improvement of smooth impact drive mechanism at low voltage utilizing ultrasonic friction reduction. Review of Scientific Instruments, 2016, 87, 085007.	1.3	36
26	A Symmetrical Hybrid Driving Waveform for a Linear Piezoelectric Stick-Slip Actuator. IEEE Access, 2017, 5, 16885-16894.	4.2	36
27	A Linear Piezoelectric Stick-Slip Actuator via Triangular Displacement Amplification Mechanism. IEEE Access, 2020, 8, 6515-6522.	4.2	33
28	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
29	Note: Lever-type bidirectional stick-slip piezoelectric actuator with flexible hinge. Review of Scientific Instruments, 2018, 89, 086101.	1.3	31
30	Simple and high-performance stick-slip piezoelectric actuator based on an asymmetrical flexure hinge driving mechanism. Journal of Intelligent Material Systems and Structures, 2019, 30, 2125-2134.	2.5	31
31	Airfoil-based cantilevered polyvinylidene fluoride layer generator for translating amplified air-flow energy. Renewable Energy, 2019, 135, 399-407.	8.9	31
32	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
33	Sealed piezoelectric energy harvester driven by hyperbaric air load. Applied Physics Letters, 2016, 108, .	3.3	25
34	Robust Triboelectric Nanogenerator with Ratchet-like Wheel-Based Design for Harvesting of Environmental Energy. Advanced Materials Technologies, 2020, 5, 1900801.	5.8	25
35	Triboelectric Rotary Motion Sensor for Industrial-Grade Speed and Angle Monitoring. Sensors, 2021, 21, 1713.	3.8	25
36	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

#	ARTICLE	IF	CITATIONS
37	Magnetic-assisted self-powered acceleration sensor for real-time monitoring vehicle operation and collision based on triboelectric nanogenerator. <i>Nano Energy</i> , 2022, 96, 107094.	16.0	25
38	Multi-plate structured triboelectric nanogenerator based on cycloidal displacement for harvesting hydroenergy. <i>Extreme Mechanics Letters</i> , 2019, 33, 100576.	4.1	23
39	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
40	Travel switch integrated mechanical regulation triboelectric nanogenerator with linear-rotational motion transformation mechanism. <i>Extreme Mechanics Letters</i> , 2020, 37, 100718.	4.1	22
41	Sweep-type triboelectric linear motion sensor with staggered electrode. <i>Extreme Mechanics Letters</i> , 2020, 37, 100713.	4.1	21
42	Self-Powered Sensing for Non-Full Pipe Fluidic Flow Based on Triboelectric Nanogenerators. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 2825-2832.	8.0	21
43	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
44	Enhancing Output Performance of Triboelectric Nanogenerator via Charge Clamping. <i>Advanced Energy Materials</i> , 2021, 11, 2101356.	19.5	20
45	High-voltage output triboelectric nanogenerator with DC/AC optimal combination method. <i>Nano Research</i> , 2022, 15, 3239-3245.	10.4	20
46	3D fully-enclosed triboelectric nanogenerator with bionic fish-like structure for harvesting hydrokinetic energy. <i>Nano Research</i> , 2022, 15, 5098-5104.	10.4	20
47	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
48	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
49	A full-textile triboelectric nanogenerator with multisource energy harvesting capability. <i>Energy Conversion and Management</i> , 2022, 267, 115910.	9.2	18
50	Piezoelectric energy harvesting in coupling-chamber excited by the vortex-induced pressure. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	16
51	A piezoelectric stick-slip linear actuator with a rhombus-type flexure hinge mechanism by means of parasitic motion. <i>Review of Scientific Instruments</i> , 2019, 90, 096102.	1.3	16
52	Triboelectric Flow Sensor with Float-Cone Structure for Industrial Pneumatic System Monitoring. <i>Advanced Materials Technologies</i> , 2019, 4, 1900704.	5.8	15
53	Enhancing Output Performance of Triboelectric Nanogenerator via Charge Clamping (Adv. Energy) Tj ETQq1 1 0.784314 rgBT /Overlook	19.5	14
54	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

#	ARTICLE	IF	CITATIONS
55	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
56	Nonintrusion Monitoring of Droplet Motion State via Liquid-Solid Contact Electrification. <i>ACS Nano</i> , 2021, 15, 18557-18565.	14.6	13
57	High-performance triboelectric nanogenerator with synchronization mechanism by charge handling. <i>Energy Conversion and Management</i> , 2022, 263, 115655.	9.2	13
58	Double-spring-piece structured triboelectric sensor for broadband vibration monitoring and warning. <i>Mechanical Systems and Signal Processing</i> , 2022, 166, 108429.	8.0	12
59	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
60	A Piezoelectric Stick-Slip Nanopositioning Stage With Ultra-High Load Capacity Realizing by Decoupling the Driving and Moving Units. <i>IEEE Access</i> , 2019, 7, 142806-142813.	4.2	10
61	Triboelectric nanogenerator with mechanical switch and clamp circuit for low ripple output. <i>Nano Research</i> , 2022, 15, 2077-2082.	10.4	10
62	Piezoelectric stick-slip actuators with flexure hinge mechanisms: A review. <i>Journal of Intelligent Material Systems and Structures</i> , 2022, 33, 1879-1901.	2.5	10
63	A flexure hinged piezoelectric stick-slip actuator with high velocity and linearity for long-stroke nano-positioning. <i>Smart Materials and Structures</i> , 2022, 31, 075017.	3.5	9
64	Influence of mechanical motions on the output characteristics of triboelectric nanogenerators. <i>Materials Today Physics</i> , 2022, 25, 100701.	6.0	6
65	Sliding Triboelectric Circular Motion Sensor with Real-Time Hardware Processing. <i>Advanced Materials Technologies</i> , 2021, 6, 2100655.	5.8	5
66	An Air Velocity Monitor for Coal Mine Ventilation Based on Vortex-Induced Triboelectric Nanogenerator. <i>Sensors</i> , 2022, 22, 4832.	3.8	5
67	Piezoelectric Stick-Slip Actuator Integrated with Ultrasonic Vibrator for Improving Comprehensive Output Performance. <i>Smart Materials and Structures</i> , 0, , .	3.5	3
68	A stick-slip linear actuator with high speed and nano-resolution by resonance/non-resonance hybrid driving. <i>Review of Scientific Instruments</i> , 2022, 93, .	1.3	3
69	Neural network controller for nanopositioning of a smooth impact drive mechanism. <i>Turkish Journal of Electrical Engineering and Computer Sciences</i> , 2019, 27, 663-674.	1.4	2
70	Design and Testing of Cantilevered PVDF Energy Harvester Based on the Coanda Effect. <i>IEEE Access</i> , 2020, 8, 19606-19613.	4.2	0
71	The Asymmetric Flexure Hinge Structures and the Hybrid Excitation Methods for Piezoelectric Stick-Slip Actuators. , 0, , .		0