

# Triboelectric Nanogenerator: A Foundation of the Energy

Advanced Energy Materials

9, 1802906

DOI: [10.1002/aenm.201802906](https://doi.org/10.1002/aenm.201802906)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Fingerprint-Inspired Conducting Hierarchical Wrinkles for Energy Harvesting E-Skin. <i>Advanced Functional Materials</i> , 2019, 29, 1903580.	7.8	79
2	Entirely, Intrinsically, and Autonomously Self-Healable, Highly Transparent, and Superstretchable Triboelectric Nanogenerator for Personal Power Sources and Self-Powered Electronic Skins. <i>Advanced Functional Materials</i> , 2019, 29, 1904626.	7.8	130
3	Self-powered smart active RFID tag integrated with wearable hybrid nanogenerator. <i>Nano Energy</i> , 2019, 64, 103911.	8.2	67
4	Seed Power: Natural Seed and Electrospun Poly(vinyl difluoride) (PVDF) Nanofiber Based Triboelectric Nanogenerators with High Output Power Density. <i>ACS Applied Bio Materials</i> , 2019, 2, 3164-3170.	2.3	23
5	Interface electronics: State-of-the-art, opportunities and needs. <i>Sensors and Actuators A: Physical</i> , 2019, 296, 24-30.	2.0	5
6	Enhancing the Performance of Textile Triboelectric Nanogenerators with Oblique Microrod Arrays for Wearable Energy Harvesting. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 26824-26829.	4.0	43
7	All-Organic Composites of Ferro- and Piezoelectric Phosphonium Salts for Mechanical Energy Harvesting Application. <i>Chemistry of Materials</i> , 2019, 31, 5964-5972.	3.2	33
8	Ecosystem of Things: Hardware, Software, and Architecture. <i>Proceedings of the IEEE</i> , 2019, 107, 1563-1583.	16.4	7
9	Multifunctional Sensor Based on Translational-Rotary Triboelectric Nanogenerator. <i>Advanced Energy Materials</i> , 2019, 9, 1901124.	10.2	101
10	A Nonencapsulative Pendulum-Like Paper-Based Hybrid Nanogenerator for Energy Harvesting. <i>Advanced Energy Materials</i> , 2019, 9, 1901149.	10.2	88
11	Seesaw structured triboelectric nanogenerator with enhanced output performance and its applications in self-powered motion sensing. <i>Nano Energy</i> , 2019, 65, 103944.	8.2	57
12	Shape-Adaptive, Self-Healable Triboelectric Nanogenerator with Enhanced Performances by Soft Solid-Solid Contact Electrification. <i>ACS Nano</i> , 2019, 13, 8936-8945.	7.3	121
13	Binary cooperative flexible magnetoelectric materials working as self-powered tactile sensors. <i>Journal of Materials Chemistry C</i> , 2019, 7, 8527-8536.	2.7	31
14	Boost the Performance of Triboelectric Nanogenerators through Circuit Oscillation. <i>Advanced Energy Materials</i> , 2019, 9, 1900772.	10.2	44
15	A triboelectric nanogenerator based on cosmetic fixing powder for mechanical energy harvesting. <i>Microsystems and Nanoengineering</i> , 2019, 5, 26.	3.4	19
16	Oxygen-Rich Polymers as Highly Effective Positive Tribomaterials for Mechanical Energy Harvesting. <i>ACS Nano</i> , 2019, 13, 12787-12797.	7.3	58
17	Sunlight-Triggerable Transient Energy Harvester and Sensors Based on Triboelectric Nanogenerator Using Acid-Sensitive Poly(phthalaldehyde). <i>Advanced Electronic Materials</i> , 2019, 5, 1900725.	2.6	15
18	Chemically functionalized cellulose nanofibrils-based gear-like triboelectric nanogenerator for energy harvesting and sensing. <i>Nano Energy</i> , 2019, 66, 104126.	8.2	129

#	ARTICLE	IF	CITATIONS
19	Triboelectric nanogenerators with simultaneous outputs in both single-electrode mode and freestanding-triboelectric-layer mode. <i>Nano Energy</i> , 2019, 66, 104169.	8.2	41
20	Microplasma-Discharge-Based Nitrogen Fixation Driven by Triboelectric Nanogenerator toward Self-Powered Mechano-Nitrogenous Fertilizer Supplier. <i>Advanced Functional Materials</i> , 2019, 29, 1904090.	7.8	34
21	Self-doubled-rectification of triboelectric nanogenerator. <i>Nano Energy</i> , 2019, 66, 104165.	8.2	50
22	Highly Integrated Triboelectric Nanogenerator for Efficiently Harvesting Raindrop Energy. <i>Advanced Materials Technologies</i> , 2019, 4, 1900608.	3.0	48
23	Frequency-independent self-powered sensing based on capacitive impedance matching effect of triboelectric nanogenerator. <i>Nano Energy</i> , 2019, 65, 103984.	8.2	44
24	Self-Powered Inhomogeneous Strain Sensor Enabled Joint Motion and Three-Dimensional Muscle Sensing. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 34251-34257.	4.0	40
25	Polyurethane aerogel-based triboelectric nanogenerator for high performance energy harvesting and biomechanical sensing. <i>Nano Energy</i> , 2019, 65, 104019.	8.2	52
26	Tribo-Tunneling DC Generator with Carbon Aerogel/Silicon Multi-Nanocontacts. <i>Advanced Electronic Materials</i> , 2019, 5, 1900464.	2.6	46
27	A strategy to promote efficiency and durability for sliding energy harvesting by designing alternating magnetic stripe arrays in triboelectric nanogenerator. <i>Nano Energy</i> , 2019, 66, 104087.	8.2	60
28	Self-powered electrochemical system by combining Fenton reaction and active chlorine generation for organic contaminant treatment. <i>Nano Research</i> , 2019, 12, 2729-2735.	5.8	35
29	Scaled-up Direct-Current Generation in MoS <sub>2</sub> Multilayer-Based Moving Heterojunctions. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 35404-35409.	4.0	55
30	Stacked pendulum-structured triboelectric nanogenerators for effectively harvesting low-frequency water wave energy. <i>Nano Energy</i> , 2019, 66, 104108.	8.2	60
31	Coupling Enhancement of Photo-Thermoelectric Conversion in a Lateral ZnO Nanowire Array. <i>ACS Applied Energy Materials</i> , 2019, 2, 7647-7654.	2.5	14
32	Self-Powered Optical Switch Based on Triboelectrification-Triggered Liquid Crystal Alignment for Wireless Sensing. <i>Advanced Functional Materials</i> , 2019, 29, 1808633.	7.8	27
33	Pinching a triboelectric nanogenerator using soft pottery for powering electronics. <i>Smart Materials and Structures</i> , 2019, 28, 085036.	1.8	5
34	Blue energy case study and analysis: Attack of chloride ions on chromia passive film on metallic electrode of nanogenerator. <i>Nano Energy</i> , 2019, 62, 103-110.	8.2	14
35	Towards optimized triboelectric nanogenerators. <i>Nano Energy</i> , 2019, 62, 530-549.	8.2	124
36	Continuous scavenging of broadband vibrations via omnipotent tandem triboelectric nanogenerators with cascade impact structure. <i>Scientific Reports</i> , 2019, 9, 8223.	1.6	47

#	ARTICLE	IF	CITATIONS
37	Minimalist and multi-functional human machine interface (HMI) using a flexible wearable triboelectric patch. <i>Nano Energy</i> , 2019, 62, 355-366.	8.2	164
38	Self-powered on-line ion concentration monitor in water transportation driven by triboelectric nanogenerator. <i>Nano Energy</i> , 2019, 62, 442-448.	8.2	63
39	Ultraviolet- and Microwave-Protecting, Self-Cleaning e-Skin for Efficient Energy Harvesting and Tactile Mechanosensing. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 17501-17512.	4.0	42
40	Bio-inspired hydrophobic/cancellous/hydrophilic Trimurti PVDF mat-based wearable triboelectric nanogenerator designed by self-assembly of electro-pore-creating. <i>Nano Energy</i> , 2019, 61, 486-495.	8.2	73
41	Phonon Evidence of Kohn Anomalies in Nanogenerator ZnO. <i>Nano Energy</i> , 2019, 59, 626-635.	8.2	6
42	A triboelectric nanogenerator based on waste tea leaves and packaging bags for powering electronic office supplies and behavior monitoring. <i>Nano Energy</i> , 2019, 60, 61-71.	8.2	92
43	Highly efficient self-healable and dual responsive hydrogel-based deformable triboelectric nanogenerators for wearable electronics. <i>Journal of Materials Chemistry A</i> , 2019, 7, 13948-13955.	5.2	163
44	An Elastic Triboelectric Nanogenerator for Harvesting Random Mechanical Energy with Multiple Working Modes. <i>Advanced Materials Technologies</i> , 2019, 4, 1900075.	3.0	15
45	Electrohydrodynamic Jet Printing Driven by a Triboelectric Nanogenerator. <i>Advanced Functional Materials</i> , 2019, 29, 1901102.	7.8	59
46	Triboelectric Nanogenerator: A Hope to Collect Blue Energy. , 2019, , .		2
47	Multi-Functional Human-Machine Interface (HMI) Using Flexible Wearable Triboelectric Nanogenerator for Diversified Interacting Applications. , 2019, , .		1
48	Surface modification of triboelectric materials by neutral beams. <i>Journal of Materials Chemistry A</i> , 2019, 7, 25066-25077.	5.2	40
49	Flexible and durable wood-based triboelectric nanogenerators for self-powered sensing in athletic big data analytics. <i>Nature Communications</i> , 2019, 10, 5147.	5.8	335
50	Polytetrafluoroethylene/Polyphenylene Sulfide Needle-Punched Triboelectric Air Filter for Efficient Particulate Matter Removal. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 48437-48449.	4.0	47
51	Fiber-Based Energy Conversion Devices for Human Body Energy Harvesting. <i>Advanced Materials</i> , 2020, 32, e1902034.	11.1	204
52	Self-Powered Iontophoretic Transdermal Drug Delivery System Driven and Regulated by Biomechanical Motions. <i>Advanced Functional Materials</i> , 2020, 30, 1907378.	7.8	105
53	Ultrafast lithium-ion capacitors for efficient storage of energy generated by triboelectric nanogenerators. <i>Energy Storage Materials</i> , 2020, 24, 297-303.	9.5	29
54	Fiber/Fabric-Based Piezoelectric and Triboelectric Nanogenerators for Flexible/Stretchable and Wearable Electronics and Artificial Intelligence. <i>Advanced Materials</i> , 2020, 32, e1902549.	11.1	826

#	ARTICLE	IF	CITATIONS
55	Oscillating column and triboelectric nanogenerator for ocean wave energy. Multiscale and Multidisciplinary Modeling, Experiments and Design, 2020, 3, 23-32.	0.9	2
56	Flexible porous silicone rubber-nanofiber nanocomposites generated by supercritical carbon dioxide foaming for harvesting mechanical energy. Nano Energy, 2020, 67, 104290.	8.2	56
57	Highly porous polymer cryogel based tribopositive material for high performance triboelectric nanogenerators. Nano Energy, 2020, 68, 104294.	8.2	47
58	Battery-free short-range self-powered wireless sensor network (SS-WSN) using TENG based direct sensory transmission (TDST) mechanism. Nano Energy, 2020, 67, 104266.	8.2	101
59	The large piezoelectricity and high power density of a 3D-printed multilayer copolymer in a rugby ball-structured mechanical energy harvester. Energy and Environmental Science, 2020, 13, 152-161.	15.6	82
60	High contact surface area enhanced Al/PDMS triboelectric nanogenerator using novel overlapped microneedle arrays and its application to lighting and self-powered devices. Applied Surface Science, 2020, 508, 145310.	3.1	48
61	Self-powered silicon PIN photoelectric detection system based on triboelectric nanogenerator. Nano Energy, 2020, 69, 104461.	8.2	31
62	Multifunctional inorganic nanomaterials for energy applications. Nanoscale, 2020, 12, 14-42.	2.8	89
63	The unique dielectricity of inorganic perovskites toward high-performance triboelectric nanogenerators. Nano Energy, 2020, 69, 104418.	8.2	73
64	Corrosion-resistant and high-performance crumpled-platinum-based triboelectric nanogenerator for self-powered motion sensing. Nano Energy, 2020, 69, 104430.	8.2	8
65	Flexible Janus Electrospun Nanofiber Films for Wearable Triboelectric Nanogenerator. Advanced Materials Technologies, 2020, 5, 1900859.	3.0	29
66	A triboelectric rolling ball bearing with self-powering and self-sensing capabilities. Nano Energy, 2020, 67, 104277.	8.2	80
67	Ultrastable and High-Performance Silk Energy Harvesting Textiles. Nano-Micro Letters, 2020, 12, 12.	14.4	44
68	Magnetolectric soft composites with a self-powered tactile sensing capacity. Nano Energy, 2020, 69, 104391.	8.2	44
69	A Metal-Like Conductive Elastomer with a Hierarchical Wrinkled Structure. Advanced Materials, 2020, 32, 1906460.	11.1	55
70	Out-of-Plane Polarization in Bent Graphene-Like Zinc Oxide and Nanogenerator Applications. Advanced Functional Materials, 2020, 30, 1907885.	7.8	18
71	Robust Triboelectric Nanogenerator with Ratchet-Like Wheel-Based Design for Harvesting of Environmental Energy. Advanced Materials Technologies, 2020, 5, 1900801.	3.0	25
72	Development Trends and Perspectives of Future Sensors and MEMS/NEMS. Micromachines, 2020, 11, 7.	1.4	216

#	ARTICLE	IF	CITATIONS
73	Wearable triboelectric nanogenerators for biomechanical energy harvesting. <i>Nano Energy</i> , 2020, 77, 105303.	8.2	206
74	Ultrastretchable, Wearable Triboelectric Nanogenerator Based on Sedimented Liquid Metal Elastomer Composite. <i>Advanced Materials Technologies</i> , 2020, 5, 2000754.	3.0	52
75	Electrification at water-hydrophobe interfaces. <i>Nature Communications</i> , 2020, 11, 5285.	5.8	75
76	Impact-Driven Energy Harvesting: Piezoelectric Versus Triboelectric Energy Harvesters. <i>Sensors</i> , 2020, 20, 5828.	2.1	29
77	Recent progress of triboelectric nanogenerators: From fundamental theory to practical applications. <i>EcoMat</i> , 2020, 2, e12059.	6.8	212
78	Biotriboelectric Nanogenerators: Materials, Structures, and Applications. <i>Advanced Energy Materials</i> , 2020, 10, 2002001.	10.2	54
79	Recent advances in hybrid perovskite nanogenerators. <i>EcoMat</i> , 2020, 2, e12057.	6.8	23
80	Triboelectric charging behaviors and photoinduced enhancement of alkaline earth ions doped inorganic perovskite triboelectric nanogenerators. <i>Nano Energy</i> , 2020, 77, 105280.	8.2	39
81	Flexible nanofiber based triboelectric nanogenerators with high power conversion. <i>Renewable Energy</i> , 2020, 162, 1428-1437.	4.3	33
82	Poly[(Butyl acrylate)- <i>co</i> -(butyl methacrylate)] as Transparent Tribopositive Material for High-Performance Hydrogel-Based Triboelectric Nanogenerators. <i>ACS Applied Polymer Materials</i> , 2020, 2, 5219-5227.	2.0	15
83	High-Throughput and Self-Powered Electroporation System for Drug Delivery Assisted by Microfoam Electrode. <i>ACS Nano</i> , 2020, 14, 15458-15467.	7.3	41
84	Liquid-Filling Polydimethylsiloxane Composites with Enhanced Triboelectric Performance for Flexible Nanogenerators. <i>Macromolecular Materials and Engineering</i> , 2020, 305, 2000275.	1.7	13
85	Ultrasound-induced wireless energy harvesting: From materials strategies to functional applications. <i>Nano Energy</i> , 2020, 77, 105131.	8.2	69
86	Seawater Degradable Triboelectric Nanogenerators for Blue Energy. <i>Advanced Materials Technologies</i> , 2020, 5, 2000455.	3.0	32
87	Emerging triboelectric nanogenerators for ocean wave energy harvesting: state of the art and future perspectives. <i>Energy and Environmental Science</i> , 2020, 13, 2657-2683.	15.6	195
88	Progress in wearable electronics/photonics—Moving toward the era of artificial intelligence and internet of things. <i>Informa-Materials</i> , 2020, 2, 1131-1162.	8.5	343
89	Fabrication of a Flexible Photodetector Based on a Liquid Eutectic Gallium Indium. <i>Materials</i> , 2020, 13, 5210.	1.3	5
90	Electron Transfer as a Liquid Droplet Contacting a Polymer Surface. <i>ACS Nano</i> , 2020, 14, 17565-17573.	7.3	141

#	ARTICLE	IF	CITATIONS
91	Hybridized Nanogenerators for Multifunctional Self-Powered Sensing: Principles, Prototypes, and Perspectives. IScience, 2020, 23, 101813.	1.9	37
92	ZIF-62: a mixed linker metal-organic framework for triboelectric nanogenerators. Journal of Materials Chemistry A, 2020, 8, 17817-17825.	5.2	66
93	Flexible Quasi-Solid-State Sodium Battery for Storing Pulse Electricity Harvested from Triboelectric Nanogenerators. ACS Applied Materials & Interfaces, 2020, 12, 39342-39351.	4.0	19
94	A Comparative Study of the Electrical Characteristics of Piezoelectric and Triboelectric Nanogenerators for Energy-Harvesting Floor Tiles. , 2020, , .		2
95	<scp>Respiration-driven</scp> triboelectric nanogenerators for biomedical applications. EcoMat, 2020, 2, e12045.	6.8	58
96	Enhancement of triboelectric nanogenerator output performance by laser 3D-Surface pattern method for energy harvesting application. Nano Energy, 2020, 78, 105205.	8.2	69
97	Antimonene dendritic nanostructures: Dual-functional material for high-performance energy storage and harvesting devices. Nano Energy, 2020, 77, 105248.	8.2	86
98	Blue Energy Collection toward All-Hours Self-Powered Chemical Energy Conversion. Advanced Energy Materials, 2020, 10, 2001041.	10.2	54
99	DC Voltage Modulation for Integrated Self-Charging Power Systems of Triboelectric Nanogenerators and Ion Gel/WO <sub>3</sub> Supercapacitors. ACS Applied Electronic Materials, 2020, 2, 2550-2557.	2.0	11
100	Advances in chemical sensing technology for enabling the next-generation self-sustainable integrated wearable system in the IoT era. Nano Energy, 2020, 78, 105155.	8.2	105
101	Charge-pumping with finger capacitance in a custom electrostatic energy harvesting ASIC. Applied Physics Letters, 2020, 117, .	1.5	1
102	Ink-Based Additive Nanomanufacturing of Functional Materials for Human-Integrated Smart Wearables. Advanced Intelligent Systems, 2020, 2, 2000117.	3.3	17
103	Designer patterned functional fibers via direct imprinting in thermal drawing. Nature Communications, 2020, 11, 3842.	5.8	36
104	Toward High-Performance Triboelectric Nanogenerators by Engineering Interfaces at the Nanoscale: Looking into the Future Research Roadmap. Advanced Materials Technologies, 2020, 5, 2000520.	3.0	27
105	Hybrid All-in-One Power Source Based on High-Performance Spherical Triboelectric Nanogenerators for Harvesting Environmental Energy. Advanced Energy Materials, 2020, 10, 2001669.	10.2	71
106	Electromagnetic-triboelectric-hybrid energy tile for biomechanical green energy harvesting. Nano Energy, 2020, 77, 105250.	8.2	39
107	3D Cu ball-based hybrid triboelectric nanogenerator with non-fullerene organic photovoltaic cells for self-powering indoor electronics. Nano Energy, 2020, 77, 105271.	8.2	33
108	Windmill-inspired hybridized triboelectric nanogenerators integrated with power management circuit for harvesting wind and acoustic energy. Nano Energy, 2020, 78, 105244.	8.2	64

#	ARTICLE	IF	CITATIONS
109	An epicardial bioelectronic patch made from soft rubbery materials and capable of spatiotemporal mapping of electrophysiological activity. <i>Nature Electronics</i> , 2020, 3, 775-784.	13.1	126
110	A spongy electrode-brush-structured dual-mode triboelectric nanogenerator for harvesting mechanical energy and self-powered trajectory tracking. <i>Nano Energy</i> , 2020, 78, 105381.	8.2	53
111	Recent advances in wearable textile-based triboelectric generator systems for energy harvesting from human motion. <i>EcoMat</i> , 2020, 2, e12054.	6.8	63
112	Two-dimensional graphitic carbon nitride nanosheets: a novel platform for flexible, robust and optically active triboelectric nanogenerators. <i>Nanoscale</i> , 2020, 12, 21334-21343.	2.8	29
113	$\hat{I}^2$ -Phase-Preferential blow-spun fabrics for wearable triboelectric nanogenerators and textile interactive interface. <i>Nano Energy</i> , 2020, 77, 105262.	8.2	55
114	Electrochemical metamaterials. <i>Journal of Solid State Electrochemistry</i> , 2020, 24, 2101-2111.	1.2	3
115	Fully bio-based epoxidized soybean oil thermosets for high performance triboelectric nanogenerators. <i>Green Chemistry</i> , 2020, 22, 6912-6921.	4.6	24
116	Self-Healable Reprocessable Triboelectric Nanogenerators Fabricated with Vitrimeric Poly(hindered) Tj ETQq1 1 0.784314 rgBI/Overlock	7.3	57
117	Manipulating unidirectional fluid transportation to drive sustainable solar water extraction and brine-drenching induced energy generation. <i>Energy and Environmental Science</i> , 2020, 13, 4891-4902.	15.6	162
118	An Eco-friendly Porous Nanocomposite Fabric-Based Triboelectric Nanogenerator for Efficient Energy Harvesting and Motion Sensing. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 42880-42890.	4.0	77
119	Boosting output performance of sliding mode triboelectric nanogenerator by charge space-accumulation effect. <i>Nature Communications</i> , 2020, 11, 4277.	5.8	158
120	Deep learning enabled smart mats as a scalable floor monitoring system. <i>Nature Communications</i> , 2020, 11, 4609.	5.8	195
121	Hierarchically Surface-Textured Ultrastable Hybrid Film for Large-Scale Triboelectric Nanogenerators. <i>Advanced Functional Materials</i> , 2020, 30, 2005610.	7.8	28
122	Anisotropic Triboelectric Nanogenerator Based on Ordered Electrospinning. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 46205-46211.	4.0	47
123	Enhancement of Triboelectric Charge Density by Chemical Functionalization. <i>Advanced Functional Materials</i> , 2020, 30, 2004714.	7.8	171
124	Pumping up the charge density of a triboelectric nanogenerator by charge-shuttling. <i>Nature Communications</i> , 2020, 11, 4203.	5.8	150
125	Fully Biodegradable Water Droplet Energy Harvester Based on Leaves of Living Plants. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 56060-56067.	4.0	69
126	Integration of a soft dielectric composite into a cantilever beam for mechanical energy harvesting, comparison between capacitive and triboelectric transducers. <i>Scientific Reports</i> , 2020, 10, 20681.	1.6	5



#	ARTICLE	IF	CITATIONS
127	Triboelectric behaviors of inorganic Cs <sub>1-x</sub> A <sub>x</sub> PbBr <sub>3</sub> halide perovskites toward enriching the triboelectric series. Journal of Materials Chemistry A, 2020, 8, 25696-25705.	5.2	16
128	Nano energy for miniaturized systems. Nano Materials Science, 2020, , .	3.9	15
129	3D Printing of a Polydimethylsiloxane/Polytetrafluoroethylene Composite Elastomer and its Application in a Triboelectric Nanogenerator. ACS Applied Materials & Interfaces, 2020, 12, 57441-57449.	4.0	55
130	Chemically Functionalized Cellulose Nanofibrils for Improving Triboelectric Charge Density of a Triboelectric Nanogenerator. ACS Sustainable Chemistry and Engineering, 2020, 8, 18678-18685.	3.2	77
131	Basic Approaches to the Design of Intrinsic Self-Healing Polymers for Triboelectric Nanogenerators. Polymers, 2020, 12, 2594.	2.0	15
132	Flame-Retardant Textile-Based Triboelectric Nanogenerators for Fire Protection Applications. ACS Nano, 2020, 14, 15853-15863.	7.3	133
133	Growth, Properties, and Applications of Pulsed Laser Deposited Nanolaminate $Ti_3C_2Tx$ Al <sub>2</sub> O <sub>3</sub> Films. Physical Review Applied, 2020, 13, .	4.0	76
134	Enhancing the Performance of a Stretchable and Transparent Triboelectric Nanogenerator by Optimizing the Hydrogel Ionic Electrode Property. ACS Applied Materials & Interfaces, 2020, 12, 23474-23483.	4.0	76
135	Rationally Designed Dual-Mode Triboelectric Nanogenerator for Harvesting Mechanical Energy by Both Electrostatic Induction and Dielectric Breakdown Effects. Advanced Energy Materials, 2020, 10, 2000965.	10.2	70
136	Charge-trapping-blocking layer for enhanced triboelectric nanogenerators. Nano Energy, 2020, 75, 105011.	8.2	91
137	High-Performance, Mechanically and Thermally Compliant Silica-Based Solid Polymer Electrolyte for Triboelectric Nanogenerators Application. Advanced Materials Technologies, 2020, 5, 2000303.	3.0	13
138	Polymer Materials for High-Performance Triboelectric Nanogenerators. Advanced Science, 2020, 7, 2000186.	5.6	230
139	A flexible triboelectric nanogenerator based on a super-stretchable and self-healable hydrogel as the electrode. Nanoscale, 2020, 12, 12753-12759.	2.8	45
140	Highly flexible, porous electroactive biocomposite as attractive tribopositive material for advancing high-performance triboelectric nanogenerator. Nano Energy, 2020, 75, 104884.	8.2	69
141	Photocurrent Enhanced in UV-vis-NIR Photodetector Based on CdSe/CdTe Core/Shell Nanowire Arrays by Piezo-Phototronic Effect. ACS Photonics, 2020, 7, 1461-1467.	3.2	28
142	Portland Cement-TiO <sub>2</sub> triboelectric nanogenerator for robust large-scale mechanical energy harvesting and instantaneous motion sensor applications. Nano Energy, 2020, 74, 104802.	8.2	43
143	Theoretical foundations of triboelectric nanogenerators (TEGs). Science China Technological Sciences, 2020, 63, 1087-1109.	2.0	83
144	Liquid doping materials as micro-carrier of functional molecules for functionalization of triboelectric materials and flexible triboelectric nanogenerators for energy harvesting and gesture detection. Nano Energy, 2020, 74, 104856.	8.2	26

#	ARTICLE	IF	CITATIONS
145	Integrated Design of Highly Porous Cellulose-Loaded Polymer-Based Triboelectric Films toward Flexible, Humidity-Resistant, and Sustainable Mechanical Energy Harvesters. <i>ACS Energy Letters</i> , 2020, 5, 2140-2148.	8.8	68
146	Silk and Silk Composite Aerogel-Based Biocompatible Triboelectric Nanogenerators for Efficient Energy Harvesting. <i>Industrial &amp; Engineering Chemistry Research</i> , 2020, 59, 12399-12408.	1.8	30
147	Power cables for triboelectric nanogenerator networks for large-scale blue energy harvesting. <i>Nano Energy</i> , 2020, 75, 104975.	8.2	59
148	Multilayered Cylindrical Triboelectric Nanogenerator to Harvest Kinetic Energy of Tree Branches for Monitoring Environment Condition and Forest Fire. <i>Advanced Functional Materials</i> , 2020, 30, 2003598.	7.8	39
149	A Solvent Molecule Driven Pure PEDOT:PSS Actuator. <i>Macromolecular Materials and Engineering</i> , 2020, 305, 2000327.	1.7	17
150	Wearable Triboelectric "Human" Machine Interface (THMI) Using Robust Nanophotonic Readout. <i>ACS Nano</i> , 2020, 14, 8915-8930.	7.3	121
151	Replacing the metal electrodes in triboelectric nanogenerators: High-performance laser-induced graphene electrodes. <i>Nano Energy</i> , 2020, 75, 104958.	8.2	76
152	Skin-Interfaced Sensors in Digital Medicine: from Materials to Applications. <i>Matter</i> , 2020, 2, 1414-1445.	5.0	134
153	Dielectric control of porous polydimethylsiloxane elastomers with Au nanoparticles for enhancing the output performance of triboelectric nanogenerators. <i>RSC Advances</i> , 2020, 10, 21309-21317.	1.7	27
154	Sustainable high-voltage source based on triboelectric nanogenerator with a charge accumulation strategy. <i>Energy and Environmental Science</i> , 2020, 13, 2178-2190.	15.6	166
155	Bio-Derived Natural Materials Based Triboelectric Devices for Self-Powered Ubiquitous Wearable and Implantable Intelligent Devices. <i>Advanced Sustainable Systems</i> , 2020, 4, 2000108.	2.7	42
156	Inherent asymmetry of the current output in a triboelectric nanogenerator. <i>Nano Energy</i> , 2020, 76, 105045.	8.2	29
157	Triboelectric Nanogenerator Enhanced Schottky Nanowire Sensor for Highly Sensitive Ethanol Detection. <i>Nano Letters</i> , 2020, 20, 4968-4974.	4.5	58
158	Super Tough and Self-Healable Poly(dimethylsiloxane) Elastomer via Hydrogen Bonding Association and Its Applications as Triboelectric Nanogenerators. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 31975-31983.	4.0	47
159	Wearable Triboelectric/Aluminum Nitride Nano-Energy Nano-System with Self-Sustainable Photonic Modulation and Continuous Force Sensing. <i>Advanced Science</i> , 2020, 7, 1903636.	5.6	66
160	Self-powered electrocatalytic ammonia synthesis directly from air as driven by dual triboelectric nanogenerators. <i>Energy and Environmental Science</i> , 2020, 13, 2450-2458.	15.6	84
161	Triboelectric energy harvesting in harsh conditions: Temperature and pressure effects in methane and crude oil environments. <i>Nano Energy</i> , 2020, 72, 104682.	8.2	24
162	Unveiling Predominant Air-Stable Organotin Bromide Perovskite toward Mechanical Energy Harvesting. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 16469-16480.	4.0	45

#	ARTICLE	IF	CITATIONS
163	A flexible semitransparent dual-electrode hydrogel based triboelectric nanogenerator with tough interfacial bonding and high energy output. <i>Journal of Materials Chemistry C</i> , 2020, 8, 5752-5760.	2.7	28
164	Levitating oscillator-based triboelectric nanogenerator for harvesting from rotational motion and sensing seismic oscillation. <i>Nano Energy</i> , 2020, 72, 104674.	8.2	27
165	Piezo/Tribotronics Toward Smart Flexible Sensors. <i>Advanced Intelligent Systems</i> , 2020, 2, 1900175.	3.3	33
166	Quantifying contact status and the air-breakdown model of charge-excitation triboelectric nanogenerators to maximize charge density. <i>Nature Communications</i> , 2020, 11, 1599.	5.8	216
167	Multifunctional Nanomaterials Modification of Cellulose Paper for Efficient Triboelectric Nanogenerators. <i>Advanced Materials Technologies</i> , 2020, 5, 2000001.	3.0	63
168	A Self-Powered Angle Sensor at Nanoradian-Resolution for Robotic Arms and Personalized Medicare. <i>Advanced Materials</i> , 2020, 32, e2001466.	11.1	93
169	Mechanics design-performance relationships in epidermal triboelectric nanogenerators. <i>Nano Energy</i> , 2020, 76, 105017.	8.2	24
170	A novel hybridized blue energy harvester aiming at all-weather IoT applications. <i>Nano Energy</i> , 2020, 76, 105052.	8.2	86
171	Enhancing output performances and output retention rates of triboelectric nanogenerators via a design of composite inner-layers with coupling effect and self-assembled outer-layers with superhydrophobicity. <i>Nano Energy</i> , 2020, 76, 105074.	8.2	29
172	Tumbler-shaped hybrid triboelectric nanogenerators for amphibious self-powered environmental monitoring. <i>Nano Energy</i> , 2020, 76, 104960.	8.2	49
173	Environmental energy harvesting based on triboelectric nanogenerators. <i>Nanotechnology</i> , 2020, 31, 242001.	1.3	103
174	Three-dimensional modeling of alternating current triboelectric nanogenerator in the linear sliding mode. <i>Applied Physics Reviews</i> , 2020, 7, .	5.5	45
175	Ion Gel Capacitively Coupled Tribotronic Gating for Multiparameter Distance Sensing. <i>ACS Nano</i> , 2020, 14, 3461-3468.	7.3	43
176	Wind-Driven Radial-Engine-Shaped Triboelectric Nanogenerators for Self-Powered Absorption and Degradation of NO <sub>x</sub> . <i>ACS Nano</i> , 2020, 14, 2751-2759.	7.3	56
177	Piezo-phototronic effect enhanced photodetectors based on MAPbI <sub>3</sub> perovskite. <i>Journal of Materials Chemistry C</i> , 2020, 8, 2709-2718.	2.7	23
178	Dynamical charge transfer model for high surface charge density triboelectric nanogenerators. <i>Nano Energy</i> , 2020, 70, 104513.	8.2	31
179	Recent progress on flexible nanogenerators toward self-powered systems. <i>Informa-Materially</i> , 2020, 2, 318-340.	8.5	85
180	Bio-inspired micro/nanostructures for flexible and stretchable electronics. <i>Nano Research</i> , 2020, 13, 1244-1252.	5.8	42

#	ARTICLE	IF	CITATIONS
181	Tailoring all-inorganic cesium lead halide perovskites for robust triboelectric nanogenerators. Nano Energy, 2020, 70, 104514.	8.2	46
182	Material aspects of triboelectric energy generation and sensors. NPC Asia Materials, 2020, 12, .	3.8	200
183	Stretchable Energyâ€Harvesting Tactile Interactive Interface with Liquidâ€Metalâ€Nanoparticleâ€Based Electrodes. Advanced Functional Materials, 2020, 30, 1909652.	7.8	97
184	Self-cleaning triboelectric nanogenerator based on TiO <sub>2</sub> photocatalysis. Nano Energy, 2020, 70, 104499.	8.2	78
185	Longâ€Lifetime Triboelectric Nanogenerator Operated in Conjunction Modes and Low Crest Factor. Advanced Energy Materials, 2020, 10, 1903024.	10.2	53
186	Unraveling Temperatureâ€Dependent Contact Electrification between Slidingâ€Mode Triboelectric Pairs. Advanced Functional Materials, 2020, 30, 1909384.	7.8	42
187	A Highly Stretchable Microsupercapacitor Using Laserâ€Induced Graphene/NiO/Co <sub>3</sub> O <sub>4</sub> Electrodes on a Biodegradable Waterborne Polyurethane Substrate. Advanced Materials Technologies, 2020, 5, 1900903.	3.0	53
188	Bioresorbable Materials on the Rise: From Electronic Components and Physical Sensors to In Vivo Monitoring Systems. Advanced Science, 2020, 7, 1902872.	5.6	70
189	Biomechanical Energyâ€Driven Hybridized Generator as a Universal Portable Power Source for Smart/Wearable Electronics. Advanced Energy Materials, 2020, 10, 1903663.	10.2	63
191	Living Plantâ€Hybrid Generators for Multidirectional Wind Energy Conversion. Energy Technology, 2020, 8, 2000236.	1.8	31
192	Triboelectric-nanogenerator-integrated structural supercapacitor based on highly active P-doped branched Cuâ€Mn selenide nanowires for efficient energy harvesting and storage. Nano Energy, 2020, 73, 104754.	8.2	63
193	A triboelectric nanogenerator design for harvesting environmental mechanical energy from water mist. Nano Energy, 2020, 73, 104765.	8.2	31
194	Research Progress and Prospect of Triboelectric Nanogenerators as Self-Powered Human Body Sensors. ACS Applied Electronic Materials, 2020, 2, 863-878.	2.0	75
195	Integration of Aluminum Nitride Modulator and Textile Triboelectric Nanogenerator Toward Self-Sustainable Tunable Wearable Photonics. , 2020, , .		0
196	Mechanical Regulation Triboelectric Nanogenerator with Controllable Output Performance for Random Energy Harvesting. Advanced Energy Materials, 2020, 10, 2000627.	10.2	49
197	Multifunctional Mechanical Metamaterials with Embedded Triboelectric Nanogenerators. Advanced Functional Materials, 2020, 30, 2001720.	7.8	29
198	Switched-capacitor-convertors based on fractal design for output power management of triboelectric nanogenerator. Nature Communications, 2020, 11, 1883.	5.8	154
199	Charge Pumping Strategy for Rotation and Sliding Type Triboelectric Nanogenerators. Advanced Energy Materials, 2020, 10, 2000605.	10.2	124

#	ARTICLE	IF	CITATIONS
200	Triboelectric Harvesting by a Dual-Tip Peak Power Multiplier under Airtight Condition. <i>Energy Technology</i> , 2020, 8, 1901265.	1.8	4
201	Triboelectric nanogenerators: Fundamental physics and potential applications. <i>Friction</i> , 2020, 8, 481-506.	3.4	224
202	Synthesis and fabrication of self-sustainable triboelectric energy case for powering smart electronic devices. <i>Nano Energy</i> , 2020, 73, 104774.	8.2	18
203	Nanowrinkle-patterned flexible woven triboelectric nanogenerator toward self-powered wearable electronics. <i>Nano Energy</i> , 2020, 73, 104797.	8.2	66
204	Cylindrical triboelectric nanogenerator based on swing structure for efficient harvesting of ultra-low-frequency water wave energy. <i>Applied Physics Reviews</i> , 2020, 7, 021401.	5.5	73
205	Hybridized Mechanical and Solar Energy-Driven Self-Powered Hydrogen Production. <i>Nano-Micro Letters</i> , 2020, 12, 88.	14.4	31
206	Anodic bonding driven by the pulse current signal of triboelectric nanogenerator. <i>Nano Energy</i> , 2020, 73, 104759.	8.2	6
207	Self-charging power system for distributed energy: beyond the energy storage unit. <i>Chemical Science</i> , 2021, 12, 34-49.	3.7	67
208	Diversiform sensors and sensing systems driven by triboelectric and piezoelectric nanogenerators. <i>Coordination Chemistry Reviews</i> , 2021, 427, 213597.	9.5	114
209	Tribo-thermoelectric and tribovoltaic coupling effect at metal-semiconductor interface. <i>Materials Today Physics</i> , 2021, 16, 100295.	2.9	45
210	Electron transfer in the contact-electrification between corrugated 2D materials: A first-principles study. <i>Nano Energy</i> , 2021, 79, 105386.	8.2	20
211	Technology evolution from self-powered sensors to AIoT enabled smart homes. <i>Nano Energy</i> , 2021, 79, 105414.	8.2	177
212	Effects of surface micro-structures on capacitances of the dielectric layer in triboelectric nanogenerator: A numerical simulation study. <i>Nano Energy</i> , 2021, 79, 105432.	8.2	18
213	Active matching circuit to enhance the generated power of triboelectric nanogenerators. <i>Nano Energy</i> , 2021, 80, 105588.	8.2	4
214	Enhanced Energy Conversion Performance of a Magneto-Mechano-Electric Generator Using a Laminate Composite Made of Piezoelectric Polymer and Metallic Glass. <i>Advanced Electronic Materials</i> , 2021, 7, .	2.6	14
215	Polymer chemistry underpinning materials for triboelectric nanogenerators (TENGs): Recent trends. <i>European Polymer Journal</i> , 2021, 142, 110163.	2.6	37
216	A facile and robust route to polyvinyl alcohol-based triboelectric nanogenerator containing flame-retardant polyelectrolyte with improved output performance and fire safety. <i>Nano Energy</i> , 2021, 81, 105656.	8.2	56
217	A highly efficient triboelectric negative air ion generator. <i>Nature Sustainability</i> , 2021, 4, 147-153.	11.5	143

#	ARTICLE	IF	CITATIONS
218	Bolt-Shaped Triboelectric Nanogenerator for Rock-Climbing Training Trajectory Detection. IEEE Sensors Journal, 2021, 21, 2693-2701.	2.4	6
219	A compact model for the zigzag triboelectric nanogenerator energy harvester. International Journal of Energy Research, 2021, 45, 1645-1660.	2.2	6
220	Design of functionally cooperating systems and application towards self-propulsive mini-generators. Materials Chemistry Frontiers, 2021, 5, 129-150.	3.2	14
221	Dynamic coordination of metalâ€alanine to control the multi-stimuli responsiveness of self-powered polymer hydrogels. Journal of Materials Chemistry A, 2021, 9, 16594-16604.	5.2	13
222	Triboelectric nanogenerator: from alternating current to direct current. IScience, 2021, 24, 102018.	1.9	66
223	Energy-Aware System Design for Autonomous Wireless Sensor Nodes: A Comprehensive Review. Sensors, 2021, 21, 548.	2.1	69
224	Energy Harvesters for Wearable Electronics and Biomedical Devices. Advanced Materials Technologies, 2021, 6, 2000771.	3.0	49
225	Advances in self-powered chemical sensing<i>via</i>a triboelectric nanogenerator. Nanoscale, 2021, 13, 2065-2081.	2.8	81
226	Nanogenerators: a new paradigm in blue energy harvesting. , 2021, , 171-193.		2
227	Emerging beyond-graphene elemental 2D materials for energy and catalysis applications. Chemical Society Reviews, 2021, 50, 10983-11031.	18.7	170
228	Triboelectric Sensors for IoT and Wearable Applications. , 2023, , 235-257.		6
229	Nanogenerators in wearable sensors. , 2021, , 587-616.		0
230	Shadow enhanced self-charging power system for wave and solar energy harvesting from the ocean. Nature Communications, 2021, 12, 616.	5.8	69
231	Hybrid Energy-Harvesting Systems Based on Triboelectric Nanogenerators. Matter, 2021, 4, 116-143.	5.0	94
232	Interfacial Design and Assembly for Flexible Energy Electrodes with Highly Efficient Energy Harvesting, Conversion, and Storage. Advanced Energy Materials, 2021, 11, 2002969.	10.2	16
233	Self-powered environmental monitoring gas sensors: Piezoelectric and triboelectric approaches. , 2021, , 463-489.		5
234	Triboelectric Nanogenerator: Structure, Mechanism, and Applications. ACS Nano, 2021, 15, 258-287.	7.3	343
235	Self-sintering liquid metal ink with LAPONITEÂ® for flexible electronics. Journal of Materials Chemistry C, 2021, 9, 3070-3080.	2.7	21

#	ARTICLE	IF	CITATIONS
236	Recent advancement in TENG polymer structures and energy efficient charge control circuits. <i>Advanced Industrial and Engineering Polymer Research</i> , 2021, 4, 1-8.	2.7	12
237	Expecting the unexpected: high pressure crystallization significantly boosts up triboelectric outputs of microbial polyesters. <i>Journal of Materials Chemistry A</i> , 2021, 9, 6306-6315.	5.2	11
238	An electrostatically self-assembled fluorinated molecule as a surface modification layer for a high-performance and stable triboelectric nanogenerator. <i>Journal of Materials Chemistry A</i> , 2021, 9, 4230-4239.	5.2	15
239	Selective ion transport through three-dimensionally interconnected nanopores of quaternized block copolymer membranes for energy harvesting application. <i>Soft Matter</i> , 2021, 17, 3700-3708.	1.2	5
240	Self-powered ammonia synthesis under ambient conditions via N <sub>2</sub> discharge driven by Tesla turbine triboelectric nanogenerators. <i>Microsystems and Nanoengineering</i> , 2021, 7, 7.	3.4	24
241	Self-Powered Miniaturized Acceleration Sensor Based on Rationally Patterned Electrodes. <i>IEEE Open Journal of Nanotechnology</i> , 2021, 2, 78-85.	0.9	4
242	Strong tribocatalytic dye degradation by tungsten bronze Ba <sub>4</sub> Nd <sub>2</sub> Fe <sub>2</sub> Nb <sub>8</sub> O <sub>30</sub> . <i>Ceramics International</i> , 2021, 47, 5038-5043.	2.3	31
243	Recent Progress in 2D Nanomaterial-Based Triboelectric Nanogenerators. <i>Advanced Functional Materials</i> , 2021, 31, 2009994.	7.8	60
244	Paper-based triboelectric nanogenerators and their applications: a review. <i>Beilstein Journal of Nanotechnology</i> , 2021, 12, 151-171.	1.5	27
245	A Nonresonant Hybridized Electromagnetic-Triboelectric Nanogenerator for Irregular and Ultralow Frequency Blue Energy Harvesting. <i>Research</i> , 2021, 2021, 5963293.	2.8	24
246	Recent developments in self-powered smart chemical sensors for wearable electronics. <i>Nano Research</i> , 2021, 14, 3669-3689.	5.8	78
247	Recent Progress in Flexible Pressure Sensors Based Electronic Skin. <i>Advanced Engineering Materials</i> , 2021, 23, 2001187.	1.6	115
248	High-Performance Triboelectric Devices via Dielectric Polarization: A Review. <i>Nanoscale Research Letters</i> , 2021, 16, 35.	3.1	79
249	Powering Implantable and Ingestible Electronics. <i>Advanced Functional Materials</i> , 2021, 31, 2009289.	7.8	57
250	MXenes: An Emerging Platform for Wearable Electronics and Looking Beyond. <i>Matter</i> , 2021, 4, 377-407.	5.0	125
251	A Highly Efficient and Durable Kirigami Triboelectric Nanogenerator for Rotational Energy Harvesting. <i>Energies</i> , 2021, 14, 1120.	1.6	22
252	Hybrid Triboelectric Nanogenerators: From Energy Complementation to Integration. <i>Research</i> , 2021, 2021, 9143762.	2.8	32
253	3D-Printed Triboelectric Nanogenerators: State of the Art, Applications, and Challenges. <i>Advanced Energy and Sustainability Research</i> , 2021, 2, 2000045.	2.8	32



#	ARTICLE	IF	CITATIONS
254	An Overview of Cellulose-Based Nanogenerators. <i>Advanced Materials Technologies</i> , 2021, 6, 2001164.	3.0	31
255	Electronic charge transfer during metal/SiO <sub>2</sub> contact: Insight from density functional theory. <i>Journal of Applied Physics</i> , 2021, 129, .	1.1	12
256	Self-Validated Machine Learning Study of Graphdiyne-Based Dual Atomic Catalyst. <i>Advanced Energy Materials</i> , 2021, 11, 2003796.	10.2	57
257	Triboelectric Nanogenerators and Hybridized Systems for Enabling Next-Generation IoT Applications. <i>Research</i> , 2021, 2021, 6849171.	2.8	75
258	Understanding contact electrification at liquid-solid interfaces from surface electronic structure. <i>Nature Communications</i> , 2021, 12, 1752.	5.8	56
259	Electronic View of Triboelectric Nanogenerator for Energy Harvesting: Mechanisms and Applications. <i>Advanced Energy and Sustainability Research</i> , 2021, 2, 2000087.	2.8	4
260	Recent Advances in Self-Powered Electrochemical Systems. <i>Research</i> , 2021, 2021, 4673028.	2.8	27
261	Improved Output Performance of Triboelectric Nanogenerator by Fast Accumulation Process of Surface Charges. <i>Advanced Energy Materials</i> , 2021, 11, 2100050.	10.2	67
262	Triboelectric Effect Enabled Self-Powered, Point-of-Care Diagnostics: Opportunities for Developing ASSURED and REASSURED Devices. <i>Micromachines</i> , 2021, 12, 337.	1.4	13
263	The Triboelectric Nanogenerator as an Innovative Technology toward Intelligent Sports. <i>Advanced Materials</i> , 2021, 33, e2004178.	11.1	279
264	Evaluation through finite element and numerical simulation of triboelectric polymer pairs in vertical contact mode. <i>Journal of Energy Systems</i> , 2021, 5, 35-45.	0.8	2
265	Electrospun nanofiber-based soft electronics. <i>NPG Asia Materials</i> , 2021, 13, .	3.8	127
266	Real-Time Monitoring System of Automobile Driver Status and Intelligent Fatigue Warning Based on Triboelectric Nanogenerator. <i>ACS Nano</i> , 2021, 15, 7271-7278.	7.3	41
267	Contact-electrification-activated artificial afferents at femtojoule energy. <i>Nature Communications</i> , 2021, 12, 1581.	5.8	117
268	Ultrathin Noncontact-Mode Triboelectric Nanogenerator Triggered by Giant Dielectric Material Adaption. <i>ACS Energy Letters</i> , 0, , 1189-1197.	8.8	40
269	A Self-Powered Basketball Training Sensor Based on Triboelectric Nanogenerator. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 3506.	1.3	5
270	Enhancing the Performance of Fabric-Based Triboelectric Nanogenerators by Structural and Chemical Modification. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 16916-16927.	4.0	89
271	Stackable triboelectric nanogenerators for self-powered marine monitoring buoy**. , 2021, , .		0



#	ARTICLE	IF	CITATIONS
272	Tribo-Induced Smart Reflector for Ultrasensitive Self-Powered Wireless Sensing of Air Flow. ACS Applied Materials & Interfaces, 2021, 13, 21450-21458.	4.0	14
273	Cellulose Paper Modified by a Zinc Oxide Nanosheet Using a ZnCl <sub>2</sub> -Urea Eutectic Solvent for Novel Applications. Nanomaterials, 2021, 11, 1111.	1.9	11
274	Stackable Disk-Shaped Triboelectric Nanogenerator to Generate Energy from Omnidirectional Wind. International Journal of Precision Engineering and Manufacturing - Green Technology, 2022, 9, 557-565.	2.7	8
275	Fabrication and application of biocompatible nanogenerators. IScience, 2021, 24, 102274.	1.9	28
276	Investigation on the adhesive contact and electrical performance for triboelectric nanogenerator considering polymer viscoelasticity. Nano Research, 0, , 1.	5.8	5
277	Interfacial polarization-induced high-k polymer dielectric film for high-performance triboelectric devices. Nano Energy, 2021, 82, 105697.	8.2	41
278	Development and Characterization of Double-Contact Triboelectric Nanogenerator with Improved Energy Harvesting Performance. Journal of the Korean Society for Precision Engineering, 2021, 38, 287-294.	0.1	1
279	Theoretical modeling and experimental verification of rotational variable reluctance energy harvesters. Energy Conversion and Management, 2021, 233, 113906.	4.4	9
280	Design and Optimization Principles of Cylindrical Sliding Triboelectric Nanogenerators. Micromachines, 2021, 12, 567.	1.4	8
281	Biomimetic Hairy Whiskers for Robotic Skin Tactility. Advanced Materials, 2021, 33, e2101891.	11.1	72
282	2D Materials for Skin-Mountable Electronic Devices. Advanced Materials, 2021, 33, e2005858.	11.1	51
283	Advanced designs for output improvement of triboelectric nanogenerator system. Materials Today, 2021, 45, 93-119.	8.3	86
284	Bandgap Modulation in BP Field Effect Transistor and Its Applications. Advanced Electronic Materials, 2021, 7, 2100228.	2.6	2
285	Nodding Duck Structure Multi-track Directional Freestanding Triboelectric Nanogenerator toward Low-Frequency Ocean Wave Energy Harvesting. ACS Nano, 2021, 15, 9412-9421.	7.3	89
286	Ag Nanoparticle-Incorporated Natural Rubber for Mechanical Energy Harvesting Application. Molecules, 2021, 26, 2720.	1.7	17
287	Advances in Electrospun Fiber-Based Flexible Nanogenerators for Wearable Applications. Macromolecular Materials and Engineering, 2021, 306, 2100143.	1.7	34
288	Recent progress in human body energy harvesting for smart bioelectronic system. Fundamental Research, 2021, 1, 364-382.	1.6	106
289	mOptical Sensing for the Internet of Things: A Smartphone-Controlled Platform for Temperature Monitoring. Advanced Photonics Research, 2021, 2, 2000211.	1.7	28

#	ARTICLE	IF	CITATIONS
290	Charge Pumping for Sliding-mode Triboelectric Nanogenerator with Voltage Stabilization and Boosted Current. <i>Advanced Energy Materials</i> , 2021, 11, 2101147.	10.2	38
291	Tribo-induced Color Tuner toward Smart Lighting and Self-powered Wireless Sensing. <i>Advanced Science</i> , 2021, 8, 2004970.	5.6	16
292	A self-powered sensor for drill pipe capable of monitoring rotation speed and direction based on triboelectric nanogenerator. <i>Review of Scientific Instruments</i> , 2021, 92, 055006.	0.6	4
293	A composite triboelectric nanogenerator based on flexible and transparent film impregnated with ZIF-8 nanocrystals. <i>Nanotechnology</i> , 2021, 32, 345401.	1.3	7
294	Natural Hierarchically Structured Highly Porous Tomato Peel Based Tribo- and Piezo-Electric Nanogenerator for Efficient Energy Harvesting. <i>Advanced Sustainable Systems</i> , 2021, 5, 2100066.	2.7	18
295	Semiconductor-based dynamic heterojunctions as an emerging strategy for high direct-current mechanical energy harvesting. <i>Nano Energy</i> , 2021, 83, 105849.	8.2	56
296	Systematic optimization of triboelectric nanogenerator performance through surface micropatterning. <i>Nano Energy</i> , 2021, 83, 105856.	8.2	18
297	Thin, soft, <scp>garment-integrated</scp> triboelectric nanogenerators for energy harvesting and human machine interfaces. <i>EcoMat</i> , 2021, 3, e12123.	6.8	15
298	Optimizing Design of Wearable Energy Generator for Body Motion based Energy Harvesting. , 2021, , .		2
299	Experimental Design and Analysis of Triboelectric Nanogenerator for energy harvesting applications. , 2021, , .		0
300	Wearable nanofiber-based triboelectric nanogenerator for body motion energy harvesting. , 2021, , .		5
301	Highly Efficient Raindrop Energy-Based Triboelectric Nanogenerator for Self-Powered Intelligent Greenhouse. <i>ACS Nano</i> , 2021, 15, 12314-12323.	7.3	106
302	Skin temperature-triggered, debonding-on-demand sticker for a self-powered mechanosensitive communication system. <i>Matter</i> , 2021, 4, 1962-1974.	5.0	54
303	Wireless Technologies for Energy Harvesting and Transmission for Ambient Self-Powered Systems. <i>ACS Nano</i> , 2021, 15, 9328-9354.	7.3	53
304	BaTiO <sub>3</sub> @PVDF-TrFE nanocomposites with efficient orientation prepared via phase separation nano-coating method for piezoelectric performance improvement and application to 3D-PENG. <i>Chemical Engineering Journal</i> , 2022, 427, 131030.	6.6	55
305	Thin, soft, skin-integrated foam-based triboelectric nanogenerators for tactile sensing and energy harvesting. <i>Materials Today Energy</i> , 2021, 20, 100657.	2.5	47
306	Recent Progress of Functional Fiber and Textile Triboelectric Nanogenerators: Towards Electricity Power Generation and Intelligent Sensing. <i>Advanced Fiber Materials</i> , 2021, 3, 394-412.	7.9	83
307	Dielectric Modulated Glass Fiber Fabric-Based Single Electrode Triboelectric Nanogenerator for Efficient Biomechanical Energy Harvesting. <i>Advanced Functional Materials</i> , 2021, 31, 2102431.	7.8	43

#	ARTICLE	IF	CITATIONS
308	Smart textile triboelectric nanogenerators: Current status and perspectives. <i>MRS Bulletin</i> , 2021, 46, 512-521.	1.7	111
309	Skin Mimicked Sliding Triboelectric Sensor to Detect Caressing Touch for Prosthetic Users. , 2021, , .		4
310	Restoring Tactile Sensation Using a Triboelectric Nanogenerator. <i>ACS Nano</i> , 2021, 15, 11087-11098.	7.3	29
311	Comprehensive Review on Flexoelectric Energy Harvesting Technology: Mechanisms, Device Configurations, and Potential Applications. <i>ACS Applied Electronic Materials</i> , 2021, 3, 2898-2924.	2.0	26
312	Intelligent Thrust Bearing Based on Electret Rotary Power Generator with Self-Powering and Self-Sensing Capabilities. , 2021, , .		0
313	Sandwich-like triboelectric nanogenerators integrated self-powered buoy for navigation safety. <i>Nano Energy</i> , 2021, 84, 105920.	8.2	60
314	Enhancing Output Performance of Triboelectric Nanogenerator via Charge Clamping. <i>Advanced Energy Materials</i> , 2021, 11, 2101356.	10.2	20
315	A review on photovoltaic and nanogenerator hybrid system. <i>Materials Today Energy</i> , 2021, 20, 100772.	2.5	14
316	Theoretical demonstration of a capacitive rotor for generation of alternating current from mechanical motion. <i>Nature Communications</i> , 2021, 12, 3678.	5.8	2
317	Emerging Energy Harvesting Materials and Devices for Self-Powered Water Disinfection. <i>Small Methods</i> , 2021, 5, e2100093.	4.6	10
318	Dynamic Schottky Diode Direct-Current Generator under Extremely Low Temperature. <i>Advanced Functional Materials</i> , 2021, 31, 2105325.	7.8	19
319	All-Weather Droplet-Based Triboelectric Nanogenerator for Wave Energy Harvesting. <i>ACS Nano</i> , 2021, 15, 13200-13208.	7.3	135
320	Ultrasound-Powered Implants: A Critical Review of Piezoelectric Material Selection and Applications. <i>Advanced Healthcare Materials</i> , 2021, 10, e2100986.	3.9	27
321	Natural Rubber-TiO <sub>2</sub> Nanocomposite Film for Triboelectric Nanogenerator Application. <i>Polymers</i> , 2021, 13, 2213.	2.0	29
322	Triboelectric Nanogenerators for Self-Powered Wound Healing. <i>Advanced Healthcare Materials</i> , 2021, 10, e2100975.	3.9	64
323	Spherical Triboelectric Nanogenerator with Dense Point Contacts for Harvesting Multidirectional Water Wave and Vibration Energy. <i>ACS Energy Letters</i> , 2021, 6, 2809-2816.	8.8	48
324	Swing-Structured Triboelectric-Electromagnetic Hybridized Nanogenerator for Breeze Wind Energy Harvesting. <i>Advanced Materials Technologies</i> , 2021, 6, 2100496.	3.0	45
325	A new triboelectric nanogenerator with excellent electric breakdown self-healing performance. <i>Nano Energy</i> , 2021, 85, 105990.	8.2	33

#	ARTICLE	IF	CITATIONS
326	Triboelectric Nanogenerator-Based Sensor Systems for Chemical or Biological Detection. <i>Advanced Materials</i> , 2021, 33, e2008276.	11.1	108
327	A Mobile and Self-Powered Micro-Flow Pump Based on Triboelectricity Driven Electroosmosis. <i>Advanced Materials</i> , 2021, 33, e2102765.	11.1	48
328	Extraction of Evaporation-Driven Electrokinetic Streaming Potential from $V_{2O_5}$ Nanochannels through Secondary Sources. <i>ACS Applied Energy Materials</i> , 2021, 4, 8410-8420.	2.5	12
329	Enhancement of self-powered humidity sensing of graphene oxide-based triboelectric nanogenerators by addition of graphene oxide nanoribbons. <i>Mikrochimica Acta</i> , 2021, 188, 251.	2.5	18
330	Solvodynamically Printed Silver Nanowire/Ethylene-co-vinyl Acetate Composite Films as Sensitive Piezoresistive Pressure Sensors. <i>ACS Applied Nano Materials</i> , 2021, 4, 7905-7916.	2.4	10
331	Combination of Piezoelectric and Triboelectric Devices for Robotic Self-Powered Sensors. <i>Micromachines</i> , 2021, 12, 813.	1.4	18
332	Biomass-based wearable and Self-powered pressure sensor for human motion detection. <i>Composites Part A: Applied Science and Manufacturing</i> , 2021, 146, 106412.	3.8	39
333	Self-Powered Respiration Monitoring Enabled By a Triboelectric Nanogenerator. <i>Advanced Materials</i> , 2021, 33, e2101262.	11.1	217
334	Toward Enhanced Humidity Stability of Triboelectric Mechanical Sensors via Atomic Layer Deposition. <i>Nanomaterials</i> , 2021, 11, 1795.	1.9	6
335	Biomaterial-Based Nonvolatile Resistive Memory Devices toward Ecofriendliness and Biocompatibility. <i>ACS Applied Electronic Materials</i> , 2021, 3, 2832-2861.	2.0	42
336	Modeling and optimization of an inertial triboelectric motion sensor. <i>Nano Energy</i> , 2021, 85, 105952.	8.2	13
337	Rejuvenation of Senescent Bone Marrow Mesenchymal Stromal Cells by Pulsed Triboelectric Stimulation. <i>Advanced Science</i> , 2021, 8, e2100964.	5.6	38
338	Technology evolution from micro-scale energy harvesters to nanogenerators. <i>Journal of Micromechanics and Microengineering</i> , 2021, 31, 093002.	1.5	53
339	Module-Type Triboelectric Nanogenerators Capable of Harvesting Power from a Variety of Mechanical Energy Sources. <i>Micromachines</i> , 2021, 12, 1043.	1.4	6
340	High-Performance Flexible Schottky DC Generator via Metal/Conducting Polymer Sliding Contacts. <i>Advanced Functional Materials</i> , 2021, 31, 2103132.	7.8	43
341	Recent advances in graphene-based micro-supercapacitors: Processes and applications. <i>Journal of Materials Research</i> , 2021, 36, 4102-4119.	1.2	7
342	A high-performance textile-based triboelectric nanogenerator manufactured by a novel brush method for self-powered human motion pattern detector. <i>Sustainable Energy Technologies and Assessments</i> , 2021, 46, 101290.	1.7	14
343	Achieving Ultrarobust and Humidity-Resistant Triboelectric Nanogenerator by Dual-Capacitor Enhancement System. <i>Advanced Energy Materials</i> , 0, , 2101958.	10.2	42

#	ARTICLE	IF	CITATIONS
344	Biohybrid generators based on living plants and artificial leaves: influence of leaf motion and real wind outdoor energy harvesting. <i>Bioinspiration and Biomimetics</i> , 2021, 16, 055009.	1.5	10
345	Transparent, conductive cellulose hydrogel for flexible sensor and triboelectric nanogenerator at subzero temperature. <i>Carbohydrate Polymers</i> , 2021, 265, 118078.	5.1	86
346	A clover shaped triboelectric nanogenerator for self-powered grip strength test system. <i>Materials Technology</i> , 0, , 1-6.	1.5	4
347	The triboelectricity of the human body. <i>Nano Energy</i> , 2021, 86, 106041.	8.2	35
348	Recent advances in nanogenerators-based flexible electronics for electromechanical biomonitoring. <i>Biosensors and Bioelectronics</i> , 2021, 186, 113290.	5.3	23
349	Wearable Biofuel Cells: Advances from Fabrication to Application. <i>Advanced Functional Materials</i> , 2021, 31, 2103976.	7.8	38
350	Scalable and washable 3D warp-knitted spacer power fabrics for energy harvesting and pressure sensing. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 424006.	1.3	23
351	Two-Step Regulation Strategy Improving Stress Transfer and Poling Efficiency Boosts Piezoelectric Performance of $\text{O}^{\text{e}}\text{3}$ Piezocomposites. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 41735-41743.	4.0	13
352	Advances of High-Performance Triboelectric Nanogenerators for Blue Energy Harvesting. <i>Nanoenergy Advances</i> , 2021, 1, 32-57.	3.6	40
353	Fabrication and applications of cellulose-based nanogenerators. <i>Advanced Composites and Hybrid Materials</i> , 2021, 4, 865-884.	9.9	121
354	Nanostructured versus flat compact electrode for triboelectric nanogenerators at high humidity. <i>Scientific Reports</i> , 2021, 11, 16191.	1.6	18
355	Novel Recycled Triboelectric Nanogenerator Based on Polymer-Coated Trash Soda Can for Clean Energy Harvesting. <i>Advanced Sustainable Systems</i> , 2021, 5, 2100161.	2.7	19
356	A Sustainable and Flexible Microbrush-Faced Triboelectric Generator for Portable/Wearable Applications. <i>Advanced Materials</i> , 2021, 33, e2102530.	11.1	18
357	Dynamics of Electrically Driven Cholesteric Liquid Crystals by Triboelectrification and Their Application in Self-Powered Information Securing and Vision Correcting. <i>ACS Energy Letters</i> , 2021, 6, 3185-3194.	8.8	11
358	A Soft Variable-Area Electrical-Double-Layer Energy Harvester. <i>Advanced Materials</i> , 2021, 33, e2103142.	11.1	33
359	Low-Voltage DC-DC Converter for IoT and On-Chip Energy Harvester Applications. <i>Sensors</i> , 2021, 21, 5721.	2.1	4
360	Simulation Guided Hand-Driven Portable Triboelectric Nanogenerator: Design, Optimisation, and Evaluation. <i>Micromachines</i> , 2021, 12, 955.	1.4	4
361	Research on self-powered rotation speed sensor for drill pipe based on triboelectric-electromagnetic hybrid nanogenerator. <i>Sensors and Actuators A: Physical</i> , 2021, 326, 112723.	2.0	10

#	ARTICLE	IF	CITATIONS
362	A Motion Capturing and Energy Harvesting Hybridized Lower Limb System for Rehabilitation and Sports Applications. <i>Advanced Science</i> , 2021, 8, e2101834.	5.6	72
363	High performance floating self-excited sliding triboelectric nanogenerator for micro mechanical energy harvesting. <i>Nature Communications</i> , 2021, 12, 4689.	5.8	186
364	Poly(Vinylidene Fluoride) Nanofiber Array Films with High Strength for Effective Impact Energy Harvesting. <i>Energy Technology</i> , 2021, 9, 2100345.	1.8	3
365	Passive Electronic Skin with Highly Sensitive Tactile Sensory Capabilities. <i>ACS Applied Electronic Materials</i> , 0, , .	2.0	0
366	Recent advances in power supply strategies for untethered neural implants. <i>Journal of Micromechanics and Microengineering</i> , 2021, 31, 104003.	1.5	4
367	Antibacterial, Scalable Manufacturing, Skin-Attachable, and Eco-Friendly Fabric Triboelectric Nanogenerators for Self-Powered Sensing. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 13356-13366.	3.2	32
368	Achieving ultrahigh instantaneous power density of 10 <sup>6</sup> MW/m <sup>2</sup> by leveraging the opposite-charge-enhanced transistor-like triboelectric nanogenerator (OCT-TENG). <i>Nature Communications</i> , 2021, 12, 5470.	5.8	126
369	Triboelectric Nanogenerators for Energy Harvesting in Ocean: A Review on Application and Hybridization. <i>Energies</i> , 2021, 14, 5600.	1.6	28
370	A triboelectric nanogenerator based on food packaging Aluminium foil and Parafilm for self-powered electronics. <i>Physica Scripta</i> , 2021, 96, 125005.	1.2	18
371	Hybrid Triboelectric-Electromagnetic Nanogenerators for Mechanical Energy Harvesting: A Review. <i>Nano-Micro Letters</i> , 2021, 13, 199.	14.4	59
372	Ordered nanostructures arrays fabricated by anodic aluminum oxide (AAO) template-directed methods for energy conversion. <i>Nanotechnology</i> , 2021, 32, 502006.	1.3	13
373	Hybridized triboelectric-electromagnetic nanogenerators and solar cell for energy harvesting and wireless power transmission. <i>Nano Research</i> , 2022, 15, 2069-2076.	5.8	10
374	Large-Scale Lever-Based Triboelectric Nanogenerator for Sensing Lateral Vibration and Wrist or Finger Bending for Controlling Shooting Game. <i>Micromachines</i> , 2021, 12, 1126.	1.4	1
375	3D Printed Double Roller-Based Triboelectric Nanogenerator for Blue Energy Harvesting. <i>Micromachines</i> , 2021, 12, 1089.	1.4	6
376	From contact electrification to triboelectric nanogenerators. <i>Reports on Progress in Physics</i> , 2021, 84, 096502.	8.1	244
377	Omni-directional wind-driven triboelectric nanogenerator with cross-shaped dielectric film. <i>Nano Convergence</i> , 2021, 8, 25.	6.3	15
378	Controlled Lattice Thermal Conductivity of Transparent Conductive Oxide Thin Film via Localized Vibration of Doping Atoms. <i>Nanomaterials</i> , 2021, 11, 2363.	1.9	4
379	Wearable Self-Powered Electrochemical Devices for Continuous Health Management. <i>Advanced Functional Materials</i> , 2021, 31, 2107042.	7.8	58

#	ARTICLE	IF	CITATIONS
380	Recent progress of energy harvesting and conversion coupled with atmospheric water gathering. <i>Energy Conversion and Management</i> , 2021, 246, 114668.	4.4	29
381	Promoting smart cities into the 5G era with multi-field Internet of Things (IoT) applications powered with advanced mechanical energy harvesters. <i>Nano Energy</i> , 2021, 88, 106304.	8.2	185
382	Triboelectric-optical responsive cholesteric liquid crystals for self-powered smart window, E-paper display and optical switch. <i>Science Bulletin</i> , 2021, 66, 1986-1993.	4.3	32
383	Harmonic balance analysis of output characteristics of free-standing mode triboelectric nanogenerators. <i>International Journal of Mechanical Sciences</i> , 2021, 207, 106668.	3.6	23
384	Approaches to deformable physical sensors: Electronic versus iontronic. <i>Materials Science and Engineering Reports</i> , 2021, 146, 100640.	14.8	29
385	Electromechanical coupling modeling and analysis of contact-separation mode triboelectric nanogenerators. <i>International Journal of Non-Linear Mechanics</i> , 2021, 136, 103773.	1.4	11
386	Boosting piezoelectric and triboelectric effects of PVDF nanofiber through carbon-coated piezoelectric nanoparticles for highly sensitive wearable sensors. <i>Chemical Engineering Journal</i> , 2021, 426, 130345.	6.6	48
387	Bacterial cellulose nanofiber triboelectric nanogenerator based on dielectric particles hybridized system. <i>Composites Part A: Applied Science and Manufacturing</i> , 2021, 151, 106646.	3.8	30
388	Piezoelectric energy harvester for rolling bearings with capability of self-powered condition monitoring. <i>Energy</i> , 2022, 238, 121770.	4.5	112
389	High-strength, highly conductive and woven organic hydrogel fibers for flexible electronics. <i>Chemical Engineering Journal</i> , 2022, 428, 131172.	6.6	40
390	Self-powered fault diagnosis of rolling bearings based on triboelectric effect. <i>Mechanical Systems and Signal Processing</i> , 2022, 166, 108382.	4.4	34
391	Energy harvesting and self-powered devices in droplet microfluidics. , 2022, , 361-383.		0
392	Progress of Inorganic Filler Based Composite Films for Triboelectric Nanogenerators. <i>Wuji Cailiao Xuebao/Journal of Inorganic Materials</i> , 2021, 36, 919.	0.6	4
393	Photo-powered integrated supercapacitors: a review on recent developments, challenges and future perspectives. <i>Journal of Materials Chemistry A</i> , 2021, 9, 8248-8278.	5.2	63
394	Series to parallel structure of electrode fiber: an effective method to remarkably reduce inner resistance of triboelectric nanogenerator textiles. <i>Journal of Materials Chemistry A</i> , 2021, 9, 12331-12339.	5.2	24
395	Performance Enhancement of Flexible Polymer Triboelectric Generator through Polarization of the Embedded Ferroelectric Polymer Layer. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 1284.	1.3	4
396	A High-Voltage TENG-Based Droplet Energy Generator With Ultralow Liquid Consumption. <i>IEEE Transactions on Nanobioscience</i> , 2022, 21, 358-362.	2.2	6
397	Energy Harvesting Floor from Commercial Cellulosic Materials for a Self-Powered Wireless Transmission Sensor System. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 5133-5141.	4.0	37



#	ARTICLE	IF	CITATIONS
398	Flexible triboelectric nanogenerator based on polyester conductive cloth for biomechanical energy harvesting and self-powered sensors. <i>Nanoscale</i> , 2021, 13, 18363-18373.	2.8	17
399	Droplet-based nanogenerators for energy harvesting and self-powered sensing. <i>Nanoscale</i> , 2021, 13, 17290-17309.	2.8	18
400	High output direct-current power fabrics based on the air breakdown effect. <i>Energy and Environmental Science</i> , 2021, 14, 2460-2471.	15.6	58
401	Wearable Sensorsâ€Enabled Humanâ€Machine Interaction Systems: From Design to Application. <i>Advanced Functional Materials</i> , 2021, 31, 2008936.	7.8	322
402	Energy Applications of Magnetocaloric Materials. <i>Advanced Energy Materials</i> , 2020, 10, 1903741.	10.2	291
403	Charge boosting and storage by tailoring rhombus all-inorganic perovskite nanoarrays for robust triboelectric nanogenerators. <i>Nano Energy</i> , 2020, 74, 104845.	8.2	36
404	Skin-Inspired Electret Nanogenerator with Self-Healing Abilities. <i>Cell Reports Physical Science</i> , 2020, 1, 100185.	2.8	13
405	From nanoenergy harvesting to self-powering of micro- or nano-sensors for measurements on-site or for IoT applications. , 2019, , .		3
406	Facile growth of aluminum oxide thin film by chemical liquid deposition and its application in devices. <i>Nanotechnology Reviews</i> , 2020, 9, 876-885.	2.6	7
407	Emerging Devices Based on Two-Dimensional Monolayer Materials for Energy Harvesting. <i>Research</i> , 2019, 2019, 7367828.	2.8	39
408	Recent advances and future prospects in energy harvesting technologies. <i>Japanese Journal of Applied Physics</i> , 2020, 59, 110201.	0.8	68
409	Graphene Based Triboelectric Nanogenerators Using Water Based Solution Process. <i>Frontiers in Physics</i> , 2021, 9, .	1.0	10
410	Recent Advances on Conducting Polymers Based Nanogenerators for Energy Harvesting. <i>Micromachines</i> , 2021, 12, 1308.	1.4	9
411	Self-charging power textiles integrating energy harvesting triboelectric nanogenerators with energy storage batteries/supercapacitors. <i>Journal of Semiconductors</i> , 2021, 42, 101601.	2.0	76
412	An Ultrarobust and Highâ€Performance Rotational Hydrodynamic Triboelectric Nanogenerator Enabled by Automatic Mode Switching and Charge Excitation. <i>Advanced Materials</i> , 2022, 34, e2105882.	11.1	92
413	A Triboelectric Nanogenerator Based on MgSiO <sub>3</sub> Powder for a Human Motion Counter. <i>Journal of Electronic Materials</i> , 2021, 50, 6836-6843.	1.0	3
414	A Stretchable Multimode Triboelectric Nanogenerator for Energy Harvesting and Selfâ€Powered Sensing. <i>Advanced Materials Technologies</i> , 2022, 7, 2100870.	3.0	15
415	Triboelectric Nanogenerators for Harvesting Wind Energy: Recent Advances and Future Perspectives. <i>Energies</i> , 2021, 14, 6949.	1.6	17



#	ARTICLE	IF	CITATIONS
416	Biohybrid Wind Energy Generators Based on Living Plants. Lecture Notes in Computer Science, 2020, , 234-244.	1.0	2
417	A Novel Triboelectric Material Based on Deciduous Leaf for Energy Harvesting. Micromachines, 2021, 12, 1314.	1.4	2
418	Self-Powered Flexible Full-Color Display via Dielectric-Tuned Hybrimer Triboelectric Nanogenerators. ACS Energy Letters, 2021, 6, 4097-4107.	8.8	15
419	Artificial Intelligence of Things (AIoT) Enabled Floor Monitoring System for Smart Home Applications. ACS Nano, 2021, 15, 18312-18326.	7.3	80
421	A Novel Integrated MWCNTs/PDMS based Flexible Triboelectric Nanogenerator. , 2021, , .		3
422	Fabrication of Soft and Wearable Electrostatic Generator Based on Streaming Electrification. Advanced Intelligent Systems, 0, , 2100131.	3.3	0
423	An Overview of Nanotechnology in Upstream and Downstream of Oil and Gas Industry: Challenges and Solutions. Journal of Energy Resources Technology, Transactions of the ASME, 2022, 144, .	1.4	2
424	A Triboelectric Nanogenerator Design for the Utilization of Multi-Axial Mechanical Energies in Human Motions. Journal of Sensor Science and Technology, 2020, 29, 312-322.	0.1	3
425	Enhancement of patterned triboelectric output performance by an interfacial polymer layer for energy harvesting application. Nanoscale, 2021, 13, 20615-20624.	2.8	9
426	Designable functional polymer nanocomposites via layer-by-layer assembly for highly deformable power-boosted triboelectric nanogenerators. Composites Part B: Engineering, 2022, 230, 109513.	5.9	17
427	Performance and power management of droplets-based electricity generators. Nano Energy, 2022, 92, 106705.	8.2	36
428	Triboelectric nanogenerator and artificial intelligence to promote precision medicine for cancer. Nano Energy, 2022, 92, 106783.	8.2	31
429	Ultrasound Mediated Wireless Power Transfer Technology. Ceramist, 2021, 24, 314-326.	0.0	0
430	Water electrification based triboelectric nanogenerator integrated harmonic oscillator for waste mechanical energy harvesting. Energy Conversion and Management, 2022, 251, 115014.	4.4	12
431	Ultrahigh-rate and high-frequency MXene micro-supercapacitors for kHz AC line-filtering. Journal of Energy Chemistry, 2022, 69, 1-8.	7.1	13
432	High-voltage output triboelectric nanogenerator with DC/AC optimal combination method. Nano Research, 2022, 15, 3239-3245.	5.8	20
433	Improving performance of triboelectric nanogenerators by dielectric enhancement effect. Matter, 2022, 5, 180-193.	5.0	53
434	Analysis and simulation of a hybrid visible-light/infrared optical wireless network for IoT applications. Journal of Optical Communications and Networking, 2022, 14, 69.	3.3	10

#	ARTICLE	IF	CITATIONS
435	Self-Powered Sensing for Smart Agriculture by Electromagnetic-Triboelectric Hybrid Generator. ACS Nano, 2021, 15, 20278-20286.	7.3	79
436	Highly reliable triboelectric bicycle tire as self-powered bicycle safety light and pressure sensor. Nano Energy, 2022, 93, 106797.	8.2	27
437	Collectively Exhaustive Hybrid Triboelectric Nanogenerator Based on Flow-Induced Impacting Sliding Cylinder for Ocean Energy Harvesting. Advanced Energy Materials, 2022, 12, 2103076.	10.2	21
438	Recent advances in micro-supercapacitors for AC line-filtering performance: From fundamental models to emerging applications. EScience, 2021, 1, 124-140.	25.0	57
439	Mechanism of In-Plane and Out-of-Plane Tribovoltaic Direct-Current Transport with a Metal/Oxide/Metal Dynamic Heterojunction. ACS Applied Materials & Interfaces, 2022, 14, 2968-2978.	4.0	21
440	A High Output Triboelectric-Electromagnetic Hybrid Generator Based on In-Phase Parallel Connection. Advanced Materials Technologies, 2022, 7, 2101485.	3.0	5
441	Self-Powered Sensing for Non-Full Pipe Fluidic Flow Based on Triboelectric Nanogenerators. ACS Applied Materials & Interfaces, 2022, 14, 2825-2832.	4.0	21
442	A review on extrusion-based 3D-printed nanogenerators for energy harvesting. Journal of Materials Science, 2022, 57, 140-169.	1.7	9
443	Metal-organic frameworks-based nanomaterials for nanogenerators: a mini review. International Nano Letters, 2022, 12, 215-221.	2.3	3
444	Recent trends in 2D materials and their polymer composites for effectively harnessing mechanical energy. IScience, 2022, 25, 103748.	1.9	19
445	Smart band-aid: Multifunctional and wearable electronic device for self-powered motion monitoring and human-machine interaction. Nano Energy, 2022, 92, 106840.	8.2	39
446	A sliding hybrid triboelectric-electromagnetic nanogenerator with staggered electrodes for human motion posture. Energy Reports, 2022, 8, 617-625.	2.5	8
447	A Wearable Human-Machine Interface Based on Triboelectric Sensors Technology. , 2021, , .		1
448	A Spring Structure Triboelectric Nanogenerator for Human Gait Monitoring System. Nano, 2022, 17, .	0.5	3
449	Fabrication of self-healing hybrid nanogenerators based on polyurethane and ZnO for harvesting wind energy. Journal of Materials Science: Materials in Electronics, 2022, 33, 3982-3993.	1.1	9
450	Biomarkers and Detection Platforms for Human Health and Performance Monitoring: A Review. Advanced Science, 2022, 9, e2104426.	5.6	48
451	Flexible Film-Discharge-Switch Assisted Universal Power Management System for the Four Operation Modes of Triboelectric Nanogenerators. Advanced Energy Materials, 2022, 12, .	10.2	19
452	All-electrospun performance-enhanced triboelectric nanogenerator based on the charge-storage process. Journal of Materials Science, 2022, 57, 5334-5345.	1.7	16

#	ARTICLE	IF	CITATIONS
453	Stretchable graded multichannel self-powered respiratory sensor inspired by shark gill. <i>Fundamental Research</i> , 2022, 2, 619-628.	1.6	29
454	Achieving Remarkable Charge Density via Self-Polarization of Polar High-k Material in a Charge-Excitation Triboelectric Nanogenerator. <i>Advanced Materials</i> , 2022, 34, e2109918.	11.1	63
455	Scalable Textile Manufacturing Methods for Fabricating Triboelectric Nanogenerators with Balanced Electrical and Wearable Properties. <i>ACS Applied Electronic Materials</i> , 2022, 4, 678-688.	2.0	13
456	Humidity-resistant, durable, wearable single-electrode triboelectric nanogenerator for mechanical energy harvesting. <i>Journal of Materials Science</i> , 2022, 57, 2813-2824.	1.7	15
457	Metal-Ion Coupling in Metal-Organic Framework Materials Regulating the Output Performance of a Triboelectric Nanogenerator. <i>Inorganic Chemistry</i> , 2022, 61, 2490-2498.	1.9	19
458	Triboelectric Nanogenerators as Active Tactile Stimulators for Multifunctional Sensing and Artificial Synapses. <i>Sensors</i> , 2022, 22, 975.	2.1	12
459	High-Power Triboelectric Nanogenerator Based on Enriched Polyvinylpyrrolidone Nanofibers for Energy Harvesting. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2022, 219, .	0.8	3
460	A New Class of Electronic Devices Based on Flexible Porous Substrates. <i>Advanced Science</i> , 2022, 9, e2105084.	5.6	40
461	Stimulation of ambient energy generated electric field on crop plant growth. <i>Nature Food</i> , 2022, 3, 133-142.	6.2	70
462	A Review on Mechanochemistry: Approaching Advanced Energy Materials with Greener Force. <i>Advanced Materials</i> , 2022, 34, e2108327.	11.1	58
463	Ferroelectric polymers for energy harvesting. , 2022, , 503-533.		0
464	Control methods and applications of interface contact electrification of triboelectric nanogenerators: a review. <i>Materials Research Letters</i> , 2022, 10, 97-123.	4.1	26
465	Design and optimization of a maglev electromagnetic-triboelectric hybrid energy converter for supplying power to intelligent sensing equipment. <i>Sustainable Energy and Fuels</i> , 2022, 6, 800-814.	2.5	4
466	MXenes and their composites for energy harvesting applications. , 2022, , 687-723.		1
467	Self-assisted wound healing using piezoelectric and triboelectric nanogenerators. <i>Science and Technology of Advanced Materials</i> , 2022, 23, 1-16.	2.8	32
468	Battery-Free and Wireless Technologies for Cardiovascular Implantable Medical Devices. <i>Advanced Materials Technologies</i> , 2022, 7, .	3.0	33
469	Triboelectric Response of Electrospun Stratified PVDF and PA Structures. <i>Nanomaterials</i> , 2022, 12, 349.	1.9	26
470	Flexible 2D Materials beyond Graphene: Synthesis, Properties, and Applications. <i>Small</i> , 2022, 18, e2105383.	5.2	55

#	ARTICLE	IF	CITATIONS
471	A highly temperature- and pressure-sensitive soft sensor self-powered by a galvanic cell design. <i>Journal of Materials Chemistry A</i> , 2022, 10, 4408-4417.	5.2	11
472	Advances in High-Performance Autonomous Energy and Self-Powered Sensing Textiles with Novel 3D Fabric Structures. <i>Advanced Materials</i> , 2022, 34, e2109355.	11.1	118
473	A review of vibration energy harvesting in rail transportation field. <i>IScience</i> , 2022, 25, 103849.	1.9	46
474	Dielectric Manipulated Charge Dynamics in Contact Electrification. <i>Research</i> , 2022, 2022, 9862980.	2.8	9
475	In-plane dual-electrode triboelectric nanogenerator based on differential surface functionalization. <i>Applied Physics Express</i> , 2022, 15, 027006.	1.1	3
476	Single-electrode mode TENG using ferromagnetic NiO-Ti based nanocomposite for effective energy harvesting. <i>Materials Letters</i> , 2022, 312, 131644.	1.3	15
477	Chemical electrification at solid/liquid/air interface by surface dipole of self-assembled monolayer and harvesting energy of moving water. <i>Journal of Colloid and Interface Science</i> , 2022, 615, 59-68.	5.0	5
478	Respiratory Monitoring by Ultrafast Humidity Sensors with Nanomaterials: A Review. <i>Sensors</i> , 2022, 22, 1251.	2.1	29
479	Recent Advances on Hybrid Piezo-Triboelectric Bio-Nanogenerators: Materials, Architectures and Circuitry. <i>Nanoenergy Advances</i> , 2022, 2, 64-109.	3.6	22
480	Toward a New Generation of Fire-Safe Energy Storage Devices: Recent Progress on Fire-Retardant Materials and Strategies for Energy Storage Devices. <i>Small Methods</i> , 2022, 6, e2101428.	4.6	12
481	Advances in MEMS and Microfluidics-Based Energy Harvesting Technologies. <i>Advanced Materials Technologies</i> , 2022, 7, .	3.0	19
482	Two Faces Under a Hood: Unravelling the Energy Harnessing and Storage Properties of 1T-MoS <sub>2</sub> Quantum Sheets for Next-Generation Stand-Alone Energy Systems. <i>ACS Nano</i> , 2022, 16, 3723-3734.	7.3	27
483	Field-assisted thermionic emission toward quantitative modeling of charge-transfer mechanisms in contact electrification. <i>SmartMat</i> , 2022, 3, 619-631.	6.4	2
484	Steady-state forced vibrations of magneto-electro-elastic Timoshenko nanobeams. <i>Journal of Intelligent Material Systems and Structures</i> , 2022, 33, 2129-2144.	1.4	1
485	Highly Stable and Eco-friendly Marine Self-Charging Power Systems Composed of Conductive Polymer Supercapacitors with Seawater as an Electrolyte. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 9046-9056.	4.0	22
486	Nondestructive Dimension Sorting by Soft Robotic Grippers Integrated with Triboelectric Sensor. <i>ACS Nano</i> , 2022, 16, 3008-3016.	7.3	37
487	A triboelectric nanogenerator for mechanical energy harvesting and as self-powered pressure sensor. <i>Microelectronic Engineering</i> , 2022, 257, 111725.	1.1	10
488	Applications of nanogenerators for biomedical engineering and healthcare systems. <i>InformaÄnly-MateriÄly</i> , 2022, 4, .	8.5	45

#	ARTICLE	IF	CITATIONS
489	Triboelectric Nanogenerator Based on ZnO Nanosheet Networks for Mechanical Energy Harvesting. , 2022, , .		2
490	Sustainable lignin-based electrospun nanofibers for enhanced triboelectric nanogenerators. Sustainable Energy and Fuels, 2022, 6, 1974-1982.	2.5	15
491	Current Progress on Power Management Systems for Triboelectric Nanogenerators. IEEE Transactions on Power Electronics, 2022, 37, 9850-9864.	5.4	24
492	Nanocrystalline triple perovskite compounds $A_3Fe_2BO_9$ ( $A = Sr, Tj$ ) ETQq1 1 0.784314 rgBT /Ove Materials Chemistry Frontiers, 2022, 6, 1116-1128.	3.2	11
493	Lanthanides for the new generation of optical sensing and Internet of Things. Fundamental Theories of Physics, 2022, , 31-128.	0.1	9
494	Performance of Flexible Strain Sensors With Different Transition Mechanisms: A Review. IEEE Sensors Journal, 2022, 22, 7475-7498.	2.4	18
495	Elastomeric microwell-based triboelectric nanogenerators by in situ simultaneous transfer-printing. Materials Horizons, 2022, 9, 1468-1478.	6.4	20
496	Self-powered sensing based on triboelectric nanogenerator through machine learning and its application. Wuli Xuebao/Acta Physica Sinica, 2022, 71, 1.	0.2	0
497	Ultra-antifreeze, ultra-stretchable, transparent, and conductive hydrogel for multi-functional flexible electronics as strain sensor and triboelectric nanogenerator. Nano Research, 2022, 15, 5461-5468.	5.8	42
498	A Sliding-Structure Direct-Current Triboelectric Nanogenerator Based on the Air Breakdown Effect for Running Monitoring. Journal of Electronic Materials, 2022, 51, 2248-2255.	1.0	4
499	Improving Wastewater Treatment by Triboelectric-Photo/Electric Coupling Effect. ACS Nano, 2022, 16, 3449-3475.	7.3	60
500	Hybridizing Triboelectric and Thermomagnetic Effects: A Novel Low-Grade Thermal Energy Harvesting Technology. Advanced Functional Materials, 2022, 32, .	7.8	14
501	Contact Separation Triboelectric Nanogenerator Based Neural Interfacing for Effective Sciatic Nerve Restoration. Advanced Functional Materials, 2022, 32, .	7.8	30
502	Tribovoltaic Nanogenerators Based on MXene-Silicon Heterojunctions for Highly Stable Self-Powered Speed, Displacement, Tension, Oscillation Angle, and Vibration Sensors. Advanced Functional Materials, 2022, 32, .	7.8	32
503	TRIBO-SIM: a parametric simulation tool for triboelectric energy generators. International Journal of Ambient Energy, 2022, 43, 7077-7087.	1.4	3
504	2D Materials for Wearable Energy Harvesting. Advanced Materials Technologies, 2022, 7, .	3.0	16
505	Frequency Up-Conversion for Vibration Energy Harvesting: A Review. Symmetry, 2022, 14, 631.	1.1	23
506	Multiwall Carbon Nanotubes Based Triboelectric Nanogenerators. Materials Science Forum, 0, 1056, 33-38.	0.3	0

#	ARTICLE	IF	CITATIONS
507	Dielectric Spectroscopy and Electric Modulus Analyses of Ti <sub>0.8</sub> O <sub>2</sub> Nanosheets/Ag Nanoparticles/Cellulose Filter Paper Composites. <i>Integrated Ferroelectrics</i> , 2022, 224, 214-224.	0.3	8
508	A Tuning-Fork Triboelectric Nanogenerator with Frequency Multiplication for Efficient Mechanical Energy Harvesting. <i>Small Methods</i> , 2022, 6, e2200066.	4.6	5
509	3D fully-enclosed triboelectric nanogenerator with bionic fish-like structure for harvesting hydrokinetic energy. <i>Nano Research</i> , 2022, 15, 5098-5104.	5.8	20
510	Validation of devices for characterization of hybrid 3D printed embroidery TENG for energy harvesting. <i>Communications in Development and Assembling of Textile Products</i> , 2022, 3, 1-8.	0.3	0
511	A Non-Resonant Piezoelectric-Electromagnetic-Triboelectric Hybrid Energy Harvester for Low-Frequency Human Motions. <i>Nanomaterials</i> , 2022, 12, 1168.	1.9	13
512	Contact electrification property controlled by amino modification of cellulose fibers. <i>Cellulose</i> , 2022, 29, 3195-3208.	2.4	7
513	Smart Textile Triboelectric Nanogenerators: Prospective Strategies for Improving Electricity Output Performance. <i>Nanoenergy Advances</i> , 2022, 2, 133-164.	3.6	59
514	Nanotechnology and COVID-19: quo vadis?. <i>Journal of Nanoparticle Research</i> , 2022, 24, 62.	0.8	6
515	A wave structure triboelectric nanogenerator for race walking motion sensing. <i>Materials Technology</i> , 2022, 37, 2637-2643.	1.5	8
516	Toward a New Era of Sustainable Energy: Advanced Triboelectric Nanogenerator for Harvesting High Entropy Energy. <i>Small</i> , 2022, 18, e2107034.	5.2	45
517	Semiconductor Contact-Electrification-Dominated Tribovoltaic Effect for Ultrahigh Power Generation. <i>Advanced Materials</i> , 2022, 34, e2200146.	11.1	52
518	Progress of Advanced Devices and Internet of Things Systems as Enabling Technologies for Smart Homes and Health Care. <i>ACS Materials Au</i> , 2022, 2, 394-435.	2.6	31
519	Bioinspired sensor system for health care and human-machine interaction. <i>EcoMat</i> , 2022, 4, .	6.8	54
520	Metal Electrode Polarization in Triboelectric Nanogenerator Probed by Surface Charge Neutralization. <i>Nanoscale Research Letters</i> , 2022, 17, 42.	3.1	6
521	A Triboelectric Nanogenerator Array for a Self-Powered Boxing Sensor System. <i>Journal of Electronic Materials</i> , 2022, 51, 3308-3316.	1.0	2
522	A Triboelectric Piston-Cylinder Assembly with Condition-Monitoring and Self-Powering Capabilities. <i>Energy Technology</i> , 2022, 10, .	1.8	2
523	Significant effect of synthesis methodologies of metal-organic frameworks upon the additively manufactured dual-mode triboelectric nanogenerator towards self-powered applications. <i>Nano Energy</i> , 2022, 98, 107253.	8.2	30
524	Harvesting circuits for triboelectric nanogenerators for wearable applications. <i>IScience</i> , 2022, 25, 103977.	1.9	15

#	ARTICLE	IF	CITATIONS
525	Novel 3D Printed Vortex-like Flexible Roller-Compacted Triboelectric Nanogenerator for Self-Powered Electrochemical Degradation of Organic Contaminants. ACS Applied Materials & Interfaces, 2022, 14, 17426-17433.	4.0	13
526	The wind-driven Scotch yoke-based triboelectric nanogenerator system for energy harvesting. International Journal of Energy Research, 2022, 46, 10989-10997.	2.2	3
527	Dynamic and Reprocessable Fluorinated Poly(hindered urea) Network Materials Containing Ionic Liquids to Enhance Triboelectric Performance. ACS Applied Materials & Interfaces, 2022, 14, 17806-17817.	4.0	10
528	The structural arrangement of the ligand-metal complex with centered zinc and nickel atoms and their optical features. Journal of Molecular Structure, 2022, 1262, 133010.	1.8	5
529	Toward enhanced output performance by optimizing permittivity of capacitor medium in electret-based energy harvester. Nano Energy, 2022, 95, 107057.	8.2	3
530	Self-suspended shell-based triboelectric nanogenerator for omnidirectional wind-energy harvesting. Nano Energy, 2022, 96, 107062.	8.2	23
531	Biocompatible and mechanically-reinforced tribopositive nanofiber mat for wearable and antifungal human kinetic-energy harvester based on wood-derived natural product. Nano Energy, 2022, 96, 107091.	8.2	25
532	Self-powered triboelectric nanogenerator driven nanowires electrode array system for the urine sterilization. Nano Energy, 2022, 96, 107111.	8.2	14
533	Recent Advances in Sustainable Wearable Energy Devices with Nanoscale Materials and Macroscale Structures. Advanced Functional Materials, 2022, 32, .	7.8	43
534	Electric-Field-Resonance-Based Wireless Triboelectric Nanogenerators and Sensors. ACS Applied Materials & Interfaces, 2022, 14, 794-804.	4.0	18
535	Hydrogel-based triboelectric nanogenerators: Properties, performance, and applications. International Journal of Energy Research, 2022, 46, 5603-5624.	2.2	28
536	An Efficient Power Management System Using Dynamically Configured Multiple Triboelectric Nanogenerators and Dual-Parameter Maximum Power Point Tracking. Advanced Energy Materials, 2022, 12, .	10.2	8
538	NiO-Ti nanocomposites for contact electrification and energy harvesting: experimental and DFT studies. Sustainable Energy and Fuels, 2022, 6, 2439-2448.	2.5	3
539	Hybrid Nanogenerator for Biomechanical Energy Harvesting, Motion State Detection, and Pulse Sensing. Advanced Materials Technologies, 2022, 7, .	3.0	21
540	Antagonistically Functionalized Diatom Biosilica for Bio-Triboelectric Generators. Small, 2022, 18, e2107638.	5.2	11
541	Harvesting Water-Evaporation-Induced Electricity Based on Liquid-Solid Triboelectric Nanogenerator. Advanced Science, 2022, 9, e2201586.	5.6	49
542	Insulator Surface Charge Behaviors: From Hazards to Functionality. IEEE Electrical Insulation Magazine, 2022, 38, 6-14.	1.1	10
543	Wearable devices for continuous monitoring of biosignals: Challenges and opportunities. APL Bioengineering, 2022, 6, 021502.	3.3	36



#	ARTICLE	IF	CITATIONS
544	Fabrication and Applications of Wrinkled Soft Substrates: An Overview. ChemistrySelect, 2022, 7, .	0.7	6
545	Tribo Tribe: Triboelectric Interaction Sensing with 3D Physical Interfaces. , 2022, , .		1
546	Anti-Overturning Fully Symmetrical Triboelectric Nanogenerator Based on an Elliptic Cylindrical Structure for All-Weather Blue Energy Harvesting. Nano-Micro Letters, 2022, 14, 124.	14.4	33
547	A Flexible TENG Based on Micro-Structure Film for Speed Skating Techniques Monitoring and Biomechanical Energy Harvesting. Nanomaterials, 2022, 12, 1576.	1.9	18
548	A Review on Epidermal Nanogenerators: Recent Progress of the Future Selfâ€Powered Skins. Small Structures, 2022, 3, .	6.9	5
549	Surface Potential Tuned Single Active Material Comprised Triboelectric Nanogenerator for a High Performance Voice Recognition Sensor. Small, 2022, 18, e2201331.	5.2	21
550	A functional triboelectric nanogenerator based on the LiCl/PVA hydrogel for cheerleading training. Materials Technology, 2022, 37, 2752-2757.	1.5	8
551	Communicationâ€Power Enhancement of Fabric Triboelectric Energy Harvesters Using Ultraviolet Light and Fluoro-Based Treatment. ECS Journal of Solid State Science and Technology, 2022, 11, 055006.	0.9	2
552	Cooperativity of Silver Nanostructures upon Electric Power Generation in Triboelectric Polyimide Layers. Advanced Engineering Materials, 2022, 24, .	1.6	5
553	Machine condition monitoring enabled by broad range vibration frequency detecting triboelectric nano-generator (TENG)-based vibration sensors. Nano Energy, 2022, 98, 107292.	8.2	31
554	A high output triboelectric nanogenerator integrated with wave-structure electrode for football monitoring. Current Applied Physics, 2022, 39, 122-127.	1.1	7
555	Influence of mechanical motions on the output characteristics of triboelectric nanogenerators. Materials Today Physics, 2022, 25, 100701.	2.9	6
556	A self-powered triboelectric pressure sensor for basketball training monitoring. Materials Letters, 2022, 320, 132339.	1.3	8
557	Comparative Evaluation of Fabric Yarn, Polymers, and Seed Crust Dielectrics for Triboelectric Energy Harvesters. Journal of Electronic Materials, 2022, 51, 4270-4280.	1.0	3
558	Noncontact Humanâ€Machine Interface Using Complementary Information Fusion Based on MEMS and Triboelectric Sensors. Advanced Science, 2022, 9, e2201056.	5.6	36
559	Reviewâ€Human-Body Powered Biosensing Textiles: Body-Power Generating Wearables Based on Textiles for Human Biomonitoring. Journal of the Electrochemical Society, 2022, 169, 067502.	1.3	2
560	Antiâ€Freezing Selfâ€Adhesive Selfâ€Healing Degradable Touch Panel with Ultraâ€Stretchable Performance Based on Transparent Triboelectric Nanogenerators. Advanced Functional Materials, 2022, 32, .	7.8	39
561	Effects of metal nanoparticles on the performance of PDMS based triboelectric nanogenerators. Physica B: Condensed Matter, 2022, 639, 413952.	1.3	11



#	ARTICLE	IF	CITATIONS
562	Effect of water and DMSO on mechano-electrical conversion of Schottky DC generators. Journal of Materials Chemistry A, 2022, 10, 13055-13065.	5.2	5
563	Compositionally Homogeneous Soft Wrinkles on Elastomeric Substrates: Novel Fabrication Method, Water Collection from Fog, and Triboelectric Charge Generation. Macromolecular Materials and Engineering, 0, , 2200247.	1.7	3
564	Inhalation-Driven Vertical Flutter Triboelectric Nanogenerator with Amplified Output as a Gas-Mask-Integrated Self-Powered Multifunctional System. Advanced Energy Materials, 2022, 12, .	10.2	9
565	A Low-Cost Simple Sliding Triboelectric Nanogenerator for Harvesting Energy from Human Activities. Advanced Materials Technologies, 2022, 7, .	3.0	13
566	Recent Advances in Lubricant-Based Triboelectric Nanogenerators for Enhancing Mechanical Lifespan and Electrical Output. Nanoenergy Advances, 2022, 2, 210-221.	3.6	6
567	Bone Repairment via Mechanosensation of Piezo1 Using Wearable Pulsed Triboelectric Nanogenerator. Small, 2022, 18, .	5.2	23
568	A new class of battery-free, mechanically powered, piezoelectric $\text{Ca}_{5}\text{Ga}_{6}\text{O}_{14}\text{Tb}_{3+}$ phosphors with self-recoverable luminescence. Journal of Materials Chemistry C, 2022, 10, 9554-9562.	2.7	10
569	Triboelectric-nanogenerator-enabled mechanical modulation for infrared wireless communications. Energy and Environmental Science, 2022, 15, 2983-2991.	15.6	15
570	Object recognition by a heat-resistant core-sheath triboelectric nanogenerator sensor. Journal of Materials Chemistry A, 2022, 10, 15080-15088.	5.2	22
571	Phase-separated porous PVDF-CO-HFP thin film for High-power triboelectric nanogenerator. Science and Technology, 2022, 59, 51-59.	0.1	0
572	Advanced triboelectric nanogenerator-driven drug delivery systems for targeted therapies. Drug Delivery and Translational Research, 2023, 13, 54-78.	3.0	4
573	Fluorine-doped graphene as triboelectric material. 2D Materials, 0, , .	2.0	1
574	Toward 3D double-electrode textile triboelectric nanogenerators for wearable biomechanical energy harvesting and sensing. Chemical Engineering Journal, 2022, 450, 137491.	6.6	15
575	A Self-Powered Optogenetic System for Implantable Blood Glucose Control. Research, 2022, 2022, .	2.8	7
576	Nanogenerator-Based Wireless Intelligent Motion Correction System for Storing Mechanical Energy of Human Motion. Sustainability, 2022, 14, 6944.	1.6	11
577	Mechanical energy-induced charge separation in intelligent sensing. Cell Reports Physical Science, 2022, , 100952.	2.8	1
578	Unveiling Evolutionary Path of Nanogenerator Technology: A Novel Method Based on Sentence-BERT. Nanomaterials, 2022, 12, 2018.	1.9	1
579	Enhanced Output of On-Body Direct-Current Power Textiles by Efficient Energy Management for Sustainable Working of Mobile Electronics. Advanced Energy Materials, 2022, 12, .	10.2	23

#	ARTICLE	IF	CITATIONS
580	Recent Development of Morphologyâ€Controlled Hybrid Nanomaterials for Triboelectric Nanogenerator: A Review. <i>Chemical Record</i> , 2022, 22, .	2.9	12
581	Advances in Biodegradable Electronic Skin: Material Progress and Recent Applications in Sensing, Robotics, and Humanâ€Machine Interfaces. <i>Advanced Materials</i> , 2023, 35, .	11.1	82
582	Wear- and High-Temperature-Resistant IGNs/ Fe <sub>3</sub> O <sub>4</sub> /PI Composites for Triboelectric Nanogenerator. <i>Journal of Electronic Materials</i> , 2022, 51, 4986-4994.	1.0	4
583	Triboelectric current stimulation alleviates in vitro cell migration and in vivo tumor metastasis. <i>Nano Energy</i> , 2022, 100, 107471.	8.2	10
584	Magnetolectric polymer nanocomposites for energy harvesting. , 2022, , 203-224.		0
585	Electric-Field Induced and Highly Deformable Triboelectric Generators from Ionic Gels. , 2022, , .		0
586	Multifunctional Nanomaterials for Energy Applications. <i>Nanomaterials</i> , 2022, 12, 2170.	1.9	2
587	Toward Optimizing Resonance for Enhanced Triboelectrification of Oscillating Triboelectric Nanogenerators. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , 0, , .	2.7	6
588	An Air Velocity Monitor for Coal Mine Ventilation Based on Vortex-Induced Triboelectric Nanogenerator. <i>Sensors</i> , 2022, 22, 4832.	2.1	5
589	Elastic Kernmantle Eâ€Braids for Highâ€Impact Sports Monitoring. <i>Advanced Science</i> , 2022, 9, .	5.6	12
590	Ultrahigh Performance Triboelectric Nanogenerator Enabled by Charge Transmission in Interfacial Lubrication and Potential Decentralization Design. <i>Research</i> , 2022, 2022, .	2.8	22
591	Effect of humidity on the performance of polyvinyl chloride based triboelectric nanogenerator. <i>Materials Today: Proceedings</i> , 2022, 66, 2468-2473.	0.9	4
592	Deep learning-enabled real-time personal handwriting electronic skin with dynamic thermoregulating ability. <i>Npj Flexible Electronics</i> , 2022, 6, .	5.1	23
593	Liquidâ€Interfacesâ€Based Triboelectric Nanogenerator: An Emerging Power Generation Method from Liquidâ€Energy Nexus. <i>Advanced Energy and Sustainability Research</i> , 2022, 3, .	2.8	11
594	Temperature-Dependent Properties of Graphene on SiC Substrates for Triboelectric Nanogenerators. <i>Frontiers in Materials</i> , 0, 9, .	1.2	1
595	Stable output performance generated from a magneto-mechano-electric generator having self-resonance tunability with a movable proof mass. <i>Nano Energy</i> , 2022, 101, 107607.	8.2	13
596	Review of wave power system development and research on triboelectric nano power systems. <i>Frontiers in Energy Research</i> , 0, 10, .	1.2	3
597	Poling-Polarization-Mediated Centrosymmetric Charge-Transfer Organic-Cocrystal-Based Flexible Triboelectric Nanogenerator. <i>ACS Applied Electronic Materials</i> , 2022, 4, 3665-3678.	2.0	1

#	ARTICLE	IF	CITATIONS
598	A critical review of the recent progress on carbon nanotubes-based nanogenerators. <i>Sensors and Actuators A: Physical</i> , 2022, 344, 113743.	2.0	14
599	Effective Modeling and Numerical Simulation of Triboelectric Nanogenerator for Blood Pressure Measurement Based on Wrist Pulse Signal Using Comsol Multiphysics Software. <i>ACS Omega</i> , 2022, 7, 26863-26870.	1.6	9
600	Recent advances on biomechanical motion-driven triboelectric nanogenerators for drug delivery. <i>Nano Today</i> , 2022, 45, 101513.	6.2	19
601	Fingerprint-inspired triboelectric nanogenerator with a geometrically asymmetric electrode design for a self-powered dynamic pressure sensor. <i>Nano Energy</i> , 2022, 101, 107546.	8.2	24
602	High performance triboelectric nanogenerator based on bamboo fibers with trench structure for self-powered sensing. <i>Sustainable Energy Technologies and Assessments</i> , 2022, 53, 102489.	1.7	1
603	MXene-based materials for advanced nanogenerators. <i>Nano Energy</i> , 2022, 101, 107556.	8.2	19
604	Bioinspired butterfly wings triboelectric nanogenerator with drag amplification for multidirectional underwater-wave energy harvesting. <i>Applied Energy</i> , 2022, 323, 119648.	5.1	15
605	Stretchable Ionic Conductors for Soft Electronics. <i>Macromolecular Rapid Communications</i> , 2022, 43, .	2.0	16
606	Flexible Ferroelectric Materials-Based Triboelectric Nanogenerators for Mechanical Energy Harvesting. <i>Frontiers in Materials</i> , 0, 9, .	1.2	2
607	Superhigh charge density and direct-current output in triboelectric nanogenerators via peak shifting modified charge pumping. <i>Nano Energy</i> , 2022, 102, 107637.	8.2	11
608	Switchless Oscillating Charge Pump-Based Triboelectric Nanogenerator and an Additional Electromagnetic Generator for Harvesting Vertical Vibration Energy. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 34081-34092.	4.0	7
609	Surface engineering of a triboelectric nanogenerator for room temperature high-performance self-powered formaldehyde sensors. <i>Journal of Materials Chemistry A</i> , 2022, 10, 22373-22389.	5.2	14
610	Research on Self-Powered Coded Angle Sensor for Rock Climbing Training. <i>IEEE Sensors Journal</i> , 2022, 22, 17326-17333.	2.4	2
612	Advances in triboelectric nanogenerator powered electrowetting-on-dielectric devices: Mechanism, structures, and applications. <i>Materials Today</i> , 2022, 58, 201-220.	8.3	10
613	Self-powered and self-sensing devices based on human motion. <i>Joule</i> , 2022, 6, 1501-1565.	11.7	70
614	High-Frequency Mechanical Energy Harvester with Direct Current Output from Chemical Potential Difference. <i>ACS Energy Letters</i> , 2022, 7, 3080-3086.	8.8	8
615	A Forest-Based Triboelectric Energy Harvester. <i>Global Challenges</i> , 2022, 6, .	1.8	5
616	Buoy-Inspired Hybridized Energy Harvester with Freestanding Dielectric Oscillator Towards Sustainable Blue Energy Harvesting. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , 2023, 10, 757-771.	2.7	2

#	ARTICLE	IF	CITATIONS
617	Manufacturing Technics for Fabric/Fiber-Based Triboelectric Nanogenerators: From Yarns to Micro-Nanofibers. <i>Nanomaterials</i> , 2022, 12, 2703.	1.9	11
618	Emerging Iontronic Sensing: Materials, Mechanisms, and Applications. <i>Research</i> , 2022, 2022, .	2.8	23
619	Self-powered ultraviolet/visible photodetector based on graphene-oxide via triboelectric nanogenerators performing by finger tapping. <i>Nanotechnology</i> , 2022, 33, 475205.	1.3	8
620	Robust triboelectric information-enhanced by multi-modality deep learning for smart home. <i>Informa-Materials</i> , 2023, 5, .	8.5	33
621	Harvesting Wind Energy Based on Triboelectric Nanogenerators. <i>Nanoenergy Advances</i> , 2022, 2, 245-270.	3.6	6
622	Gait analysis by using electric signals from a triboelectric nanogenerator. <i>Engineering Research Express</i> , 2022, 4, 035027.	0.8	2
623	A triboelectric joint sensor imitating soft robot for human joint rehabilitation monitoring. <i>Nano</i> , 0, , .	0.5	0
624	A Highly Sensitive Triboelectric Vibration Sensor for Machinery Condition Monitoring. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	30
625	Mechanical Sensors for Cardiovascular Monitoring: From Battery-Powered to Self-Powered. <i>Biosensors</i> , 2022, 12, 651.	2.3	8
626	Rationally Structured Triboelectric Nanogenerator Arrays for Harvesting Water-Current Energy and Self-Powered Sensing. <i>Advanced Materials</i> , 2022, 34, .	11.1	36
627	Recent Progresses in Wearable Triboelectric Nanogenerators. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	54
628	Omni-directional detectable textile brush-based triboelectric nanogenerators. <i>Sensors and Actuators A: Physical</i> , 2022, 345, 113803.	2.0	4
629	Scalable, stretchable and washable triboelectric fibers for self-powering human-machine interaction and cardiopulmonary resuscitation training. <i>Nano Energy</i> , 2022, 102, 107737.	8.2	11
630	Self-powered air purifier with coupling of non-thermal plasma and photocatalytic oxidation for formaldehyde degradation based on triboelectric nanogenerator. <i>Nano Energy</i> , 2022, 102, 107706.	8.2	16
631	Static inductive effect: A novel enhancement strategy for the output performance of organic triboelectric nanogenerator. <i>Dyes and Pigments</i> , 2022, 207, 110682.	2.0	7
632	Direct-current triboelectric nanogenerator based on electrostatic breakdown effect. <i>Nano Energy</i> , 2022, 102, 107745.	8.2	15
633	Water-based triboelectric nanogenerator for wireless energy transmission and self-powered communication via a solid-liquid-solid interaction. <i>Applied Surface Science</i> , 2022, 605, 154765.	3.1	11
634	Competing contributions to the catalytic activity of barium titanate nanoparticles in the decomposition of organic pollutants. <i>Journal of Environmental Chemical Engineering</i> , 2022, 10, 108571.	3.3	8

#	ARTICLE	IF	CITATIONS
635	Recent advances in stretchable, wearable and bio-compatible triboelectric nanogenerators. <i>Journal of Materials Chemistry C</i> , 2022, 10, 11439-11471.	2.7	16
636	Enhanced triboelectric performance of graphene oxide-conducting polymer hybrid modified polydimethylsiloxane composites. <i>Materials Advances</i> , 2022, 3, 6897-6907.	2.6	10
637	A nonlinear triboelectric nanogenerator with a broadened bandwidth for effective harvesting of vibration energy. , 2022, 1, 236-242.		7
638	A facile frequency tuning strategy to realize vibration-based hybridized piezoelectric-triboelectric nanogenerators. <i>EcoMat</i> , 2023, 5, .	6.8	7
639	Direct-Current Triboelectric Nanogenerators Based on Semiconductor Structure. <i>ACS Applied Electronic Materials</i> , 2022, 4, 4212-4230.	2.0	7
640	A dual auxiliary beam galloping triboelectric nanogenerator for low speed wind energy harvesting. <i>Applied Physics Letters</i> , 2022, 121, .	1.5	3
641	Recent Progress on Triboelectric Nanogenerators for Vibration Energy Harvesting and Vibration Sensing. <i>Nanomaterials</i> , 2022, 12, 2960.	1.9	37
642	Low-cost, environmentally friendly and high-performance cellulose-based triboelectric nanogenerator for self-powered human motion monitoring. <i>Cellulose</i> , 2022, 29, 8733-8747.	2.4	3
643	Overcoming current leaks in CNT/PDMS triboelectric composites by wrapping CNTs with TiO <sub>2</sub> insulation layer. <i>Applied Physics Letters</i> , 2022, 121, .	1.5	5
644	Core-Shell ZnO@Microporous Organic Polymer Nanospheres as Enhanced Piezo-Triboelectric Energy Harvesting Materials. <i>Angewandte Chemie</i> , 0, , .	1.6	0
645	Application of Triboelectric Nanogenerator in Fluid Dynamics Sensing: Past and Future. <i>Nanomaterials</i> , 2022, 12, 3261.	1.9	14
646	Bioinspired shark skin-based liquid metal triboelectric nanogenerator for self-powered gait analysis and long-term rehabilitation monitoring. <i>Nano Energy</i> , 2022, 104, 107852.	8.2	25
647	Core-Shell ZnO@Microporous Organic Polymer Nanospheres as Enhanced Piezo-Triboelectric Energy Harvesting Materials. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	5
648	Effective interfacial energy band engineering strategy toward high-performance triboelectric nanogenerator. <i>Chemical Engineering Journal</i> , 2023, 452, 139469.	6.6	24
649	The electron transfer mechanism between metal and silicon oxide composites for triboelectric nanogenerators. <i>Advanced Composites and Hybrid Materials</i> , 2022, 5, 3223-3231.	9.9	5
650	Harvesting Electrical Energy from High Temperature Environment by Aerogel Nano-Covered Triboelectric Yarns. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	26
651	Field-view theoretical model of triboelectric nanogenerators based on Laplace's equations. <i>Applied Physics Letters</i> , 2022, 121, .	1.5	6
652	Self-powered forest ambient monitoring microsystem based on wind energy hybrid nanogenerators. <i>Science China Technological Sciences</i> , 2022, 65, 2348-2360.	2.0	3

#	ARTICLE	IF	CITATIONS
653	Liquid-Free, Anti-Freezing, Solvent-Resistant, Cellulose-Derived Ionic Conductive Elastomer for Stretchable Wearable Electronics and Triboelectric Nanogenerators. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	51
654	Development of MEMS Process Compatible (Bi,Sb) <sub>2</sub> (Se,Te) <sub>3</sub> -Based Thin Films for Scalable Fabrication of Planar Micro-Thermoelectric Generators. <i>Micromachines</i> , 2022, 13, 1459.	1.4	2
655	A Stretchable Triboelectric Nanogenerator Integrated Ion Coagulation Electrode for Cheerleading Monitoring. <i>Journal of Electronic Materials</i> , 2022, 51, 7182-7189.	1.0	5
656	Anaconda-shaped spiral multi-layered triboelectric nanogenerators with ultra-high space efficiency for wave energy harvesting. <i>One Earth</i> , 2022, 5, 1055-1063.	3.6	14
657	From Triboelectric Nanogenerator to Multifunctional Triboelectric Sensors: A Chemical Perspective toward the Interface Optimization and Device Integration. <i>Small</i> , 2022, 18, .	5.2	26
658	Washable Fabric Triboelectric Nanogenerators for Potential Application in Face Masks. <i>Nanomaterials</i> , 2022, 12, 3152.	1.9	3
659	Broadband and Output-Controllable Triboelectric Nanogenerator Enabled by Coupling Swing-Rotation Switching Mechanism with Potential Energy Storage/Release Strategy for Low-Frequency Mechanical Energy Harvesting. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	28
660	Recent progress of triboelectric nanogenerators as self-powered sensors in transportation engineering. <i>Measurement: Journal of the International Measurement Confederation</i> , 2022, 203, 112010.	2.5	15
661	Breathable fabric-based triboelectric nanogenerators with open-porous architected polydimethylsiloxane coating for wearable applications. <i>Nano Energy</i> , 2022, 104, 107873.	8.2	14
662	Electrostatic discharge prevention system via body potential control based on a triboelectric nanogenerator. <i>Nano Energy</i> , 2022, 103, 107834.	8.2	7
663	Triboelectric neurostimulator for physiological modulation of leg muscle. <i>Nano Energy</i> , 2022, 103, 107861.	8.2	4
664	Additively Manufactured Biomedical Energy Harvesters. , 2022, , 440-453.		0
665	Liquid-Liquid Triboelectric Nanogenerator for Harvesting Distributed Energy. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	11
666	Bioinspired interactive neuromorphic devices. <i>Materials Today</i> , 2022, 60, 158-182.	8.3	55
667	A Comprehensive Study on Next-Generation Electromagnetics Devices and Techniques for Internet of Everything (IoE). <i>Electronics (Switzerland)</i> , 2022, 11, 3341.	1.8	7
668	Matching Mechanism of Charge Excitation Circuit for Boosting Performance of a Rotary Triboelectric Nanogenerator. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 48636-48646.	4.0	14
669	Sustainable Triboelectric Materials for Smart Active Sensing Systems. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	40
670	Self-sustainable intermittent deep brain stimulator. <i>Cell Reports Physical Science</i> , 2022, 3, 101099.	2.8	6

#	ARTICLE	IF	CITATIONS
671	Self-powered piezoelectric player-interactive patch for guitar learning assistance. <i>Science China Technological Sciences</i> , 0, , .	2.0	0
672	A Stretchable and Human-Compatible Triboelectric Nanogenerator Integrated with LiCl Liquid Electrode for Volleyball Monitoring. <i>Journal of Electronic Materials</i> , 2022, 51, 7304-7312.	1.0	1
673	Boosting performance of triboelectric nanogenerator via polydimethylsiloxane modified with perovskite BiFeO <sub>3</sub> nanoparticles. <i>Materials Technology</i> , 2022, 37, 3212-3221.	1.5	2
674	Triboelectric Nanogenerator Based on Biowaste Tribopositive <i>Delonix Regia</i> Flowers Powder. <i>Energy Technology</i> , 2022, 10, .	1.8	9
675	Triboelectric nanogenerators with a constant inherent capacitance design. <i>Nano Research</i> , 2023, 16, 4077-4084.	5.8	1
676	Recent Advances in the Nanomaterials, Design, Fabrication Approaches of Thermoelectric Nanogenerators for Various Applications. <i>Advanced Materials Interfaces</i> , 2022, 9, .	1.9	5
677	Enhancing the Performance of Piezoelectric Wind Energy Harvester Using Curve-Shaped Attachments on the Bluff Body. <i>Global Challenges</i> , 2023, 7, .	1.8	4
678	High-Performance and Low-Cost Overhead Projector Sheet-Based Triboelectric Nanogenerator for Self-Powered Cholesteric Liquid Crystal, Electroluminescence, and Portable Electronic Devices. <i>ACS Applied Energy Materials</i> , 2022, 5, 13702-13713.	2.5	10
679	Self-Cleaning and Shape-Adaptive Triboelectric Nanogenerator-Contained TiO <sub>2</sub> Nanoparticle Coating. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 49755-49764.	4.0	4
680	Roadmap on nanogenerators and piezotronics. <i>APL Materials</i> , 2022, 10, .	2.2	22
681	KÄrmÄ;n Vortex Street Driven Membrane Triboelectric Nanogenerator for Enhanced Ultra-Low Speed Wind Energy Harvesting and Active Gas Flow Sensing. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 51018-51028.	4.0	9
682	A Mutual Boosting Self-Excitation Hybrid Cell for Harvesting High Entropy Energy at 32% Efficiency. <i>Small</i> , 2022, 18, .	5.2	10
683	Research on wave energy collection based on swing ship triboelectric nanogenerator. <i>Energy Reports</i> , 2022, 8, 135-145.	2.5	3
684	Stretchable thermoelectric generators with enhanced output by infrared reflection for wearable application. <i>Chemical Engineering Journal</i> , 2023, 453, 139749.	6.6	8
685	Diketopyrrolopyrrole-based conjugated polymers containing planar benzo[c]cinnoline and tetraazapyrene structures for high-performance and long-term stable triboelectric nanogenerators. <i>Journal of Materials Chemistry C</i> , 2022, 10, 17983-17993.	2.7	3
686	Triboelectric nanogenerator with enhanced output and durability based on Si-DLC films. <i>Nano Energy</i> , 2023, 105, 107997.	8.2	12
687	What does a sliding triboelectrical sensor really measure?. <i>Tribology International</i> , 2023, 179, 108083.	3.0	1
688	Single-material-substrated triboelectric-electromagnetic hybrid generator for self-powered multifunctional sensing in intelligent greenhouse. <i>Nano Research</i> , 2023, 16, 3149-3155.	5.8	8



#	ARTICLE	IF	CITATIONS
689	Triboelectric Nanogenerators in Sustainable Chemical Sensors. <i>Chemosensors</i> , 2022, 10, 484.	1.8	8
690	Self-Powered Humidity Sensors Based on SnS <sub>2</sub> Nanosheets. <i>ACS Applied Nano Materials</i> , 2022, 5, 17123-17132.	2.4	8
691	Multifunctional Properties of Polyvinylidene-Fluoride-Based Materials: From Energy Harvesting to Energy Storage. <i>ACS Applied Electronic Materials</i> , 2022, 4, 5429-5436.	2.0	4
692	Dynamics of triboelectric nanogenerators: A review. <i>International Journal of Mechanical System Dynamics</i> , 2022, 2, 311-324.	1.3	7
693	Recent Progresses in Liquid-Free Soft Ionic Conductive Elastomers. <i>Chinese Journal of Chemistry</i> , 2023, 41, 835-860.	2.6	11
694	Triboelectric Nanogenerator Enabled Wearable Sensors and Electronics for Sustainable Internet of Things Integrated Green Earth. <i>Advanced Energy Materials</i> , 2023, 13, .	10.2	79
695	Tailoring the Output Performance of PVDF-Based Piezo-Tribo Hybridized Nanogenerators via B, N-Codoped Reduced Graphene Oxide. <i>ACS Applied Electronic Materials</i> , 2022, 4, 5893-5904.	2.0	4
696	Green Flexible Triboelectric Nanogenerators Based on Edible Proteins for Electrophoretic Deposition. <i>Advanced Electronic Materials</i> , 2023, 9, .	2.6	5
697	A high-spintronic helix metal-organic chain as a high-output triboelectric nanogenerator material for self-powered anticorrosion. <i>Chemical Engineering Journal</i> , 2023, 455, 140865.	6.6	15
698	3D nanocrystalline metal-organic framework materials for the improved output performance of triboelectric nanogenerators. <i>Dalton Transactions</i> , 2023, 52, 444-451.	1.6	5
699	Ultra-low frequency vibration energy harvesting: Mechanisms, enhancement techniques, and scaling laws. <i>Energy Conversion and Management</i> , 2023, 276, 116585.	4.4	19
700	Brownian motor inspired monodirectional continuous spinning triboelectric nanogenerators for extracting energy from irregular gentle water waves. <i>Energy and Environmental Science</i> , 2023, 16, 473-483.	15.6	23
701	Photovoltaic-triboelectric hybridized nanogenerator for simultaneously scavenging light and liquid-droplet energies. <i>Nano Energy</i> , 2023, 106, 108063.	8.2	8
702	Event-driven MEMS vibration sensor: Integration of triboelectric nanogenerator and low-frequency switch. <i>Mechanical Systems and Signal Processing</i> , 2023, 187, 109921.	4.4	6
703	A Robust Constant Voltage DC Triboelectric Nanogenerator Using the Ternary Dielectric Triboelectrification Effect. <i>Advanced Energy Materials</i> , 2023, 13, .	10.2	24
704	PDMS Surface-Area Optimization for High-Performance Oscillatory Motion Harvesting Pendulum-Type Triboelectric Nanogenerators for Energy Harvesting and Sensor Applications. <i>ACS Applied Electronic Materials</i> , 2022, 4, 5933-5940.	2.0	3
705	Triboelectric Fluid Sensors: Principles, Development, and Perspectives. <i>Advanced Materials Technologies</i> , 2023, 8, .	3.0	6
706	Triboelectric Nanogenerators as Power Sources for Chemical Sensors and Biosensors. <i>ACS Omega</i> , 2022, 7, 44573-44590.	1.6	12

#	ARTICLE	IF	CITATIONS
707	Highly Sensitive Self-Powered Biomedical Applications Using Triboelectric Nanogenerator. <i>Micromachines</i> , 2022, 13, 2065.	1.4	4
708	Marine monitoring based on triboelectric nanogenerator: Ocean energy harvesting and sensing. <i>Frontiers in Marine Science</i> , 0, 9, .	1.2	1
709	Engineering Triboelectric Charge in Natural Rubber-“Ag Nanocomposite for Enhancing Electrical Output of a Triboelectric Nanogenerator. <i>ACS Applied Materials &amp; Interfaces</i> , 2023, 15, 973-983.	4.0	9
710	Wear-Resisting and Stable 4H-SiC/Cu-Based Tribovoltaic Nanogenerators for Self-Powered Sensing in a Harsh Environment. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 55192-55200.	4.0	7
711	Customizing Triboelectric Nanogenerator on Everyday Clothes by Screen-Printing Technology for Biomechanical Energy Harvesting and Human-Interactive Applications. <i>Advanced Materials Technologies</i> , 2023, 8, .	3.0	9
712	Experimental Performance Analysis of a Hybrid Wave Energy Harvesting System Combining E-Motions with Triboelectric Nanogenerators. <i>Journal of Marine Science and Engineering</i> , 2022, 10, 1924.	1.2	2
713	Triboelectric nanogenerators for smart agriculture. <i>Informa-“Materially</i> , 2023, 5, .	8.5	12
714	Improving Relative Permittivity and Suppressing Dielectric Loss of Triboelectric Layers for High-Performance Wearable Electricity Generation. <i>ACS Nano</i> , 2022, 16, 20251-20262.	7.3	20
715	Intelligent electronic passworded locker with unique and personalized security barriers for home security. <i>Nano Research</i> , 2023, 16, 7568-7574.	5.8	7
716	Multiscale in-situ quantification of the role of surface roughness and contact area using a novel Mica-PVS triboelectric nanogenerator. <i>Nano Energy</i> , 2023, 107, 108122.	8.2	11
717	Fiber-Based Triboelectric Nanogenerator for Mechanical Energy Harvesting and Its Application to a Human-“Machine Interface. <i>Sensors</i> , 2022, 22, 9632.	2.1	7
718	Unprecedented Triboelectric Effect of Lignin on Enhancing the Electrical Outputs of Natural-Rubber-Based Triboelectric Nanogenerators (TENGs). <i>ACS Sustainable Chemistry and Engineering</i> , 2023, 11, 1311-1323.	3.2	5
719	Multidiscipline Applications of Triboelectric Nanogenerators for the Intelligent Era of Internet of Things. <i>Nano-Micro Letters</i> , 2023, 15, .	14.4	69
720	An Environmental-“Inert and Highly Self-“Healable Elastomer Obtained via Double-“Terminal Aromatic Disulfide Design and Zwitterionic Crosslinked Network for Use as a Triboelectric Nanogenerator. <i>Advanced Science</i> , 2023, 10, .	5.6	8
721	Fiber/Yarn-Based Triboelectric Nanogenerators (TENGs): Fabrication Strategy, Structure, and Application. <i>Sensors</i> , 2022, 22, 9716.	2.1	9
722	A Review on Modelling of Viscoelastic Contact Problems. <i>Lubricants</i> , 2022, 10, 358.	1.2	7
723	The tribovoltaic effect. <i>Materials Today</i> , 2023, 62, 111-128.	8.3	28
724	A stretchable, self-healing and semi-transparent nanogenerator for energy harvesting and sensing. <i>Nano Energy</i> , 2023, 107, 108127.	8.2	8

#	ARTICLE	IF	CITATIONS
725	Power management and system optimization for high efficiency self-powered electrolytic hydrogen and formic acid production. <i>Nano Energy</i> , 2023, 107, 108124.	8.2	9
726	Boosting the Performance on Scale-Level of Triboelectric Nanogenerators by Controllable Self-Triggering. <i>Advanced Energy Materials</i> , 2023, 13, .	10.2	5
727	Polystyrene-Based Triboelectric Nanogenerators for Self-Powered Multifunctional Human Activity Monitoring. <i>ACS Applied Energy Materials</i> , 2022, 5, 15881-15889.	2.5	3
728	A Multi-Layer Stacked Triboelectric Nanogenerator Based on a Rotation-to-Translation Mechanism for Fluid Energy Harvesting and Environmental Protection. <i>Advanced Functional Materials</i> , 2023, 33, .	7.8	13
729	Recent Advances in Efficient Photocatalysis via Modulation of Electric and Magnetic Fields and Reactive Phase Control. <i>Advanced Materials</i> , 2023, 35, .	11.1	19
730	Advances in Triboelectric Nanogenerators for Self-Powered Neuromodulation. <i>Advanced Functional Materials</i> , 2023, 33, .	7.8	16
731	A Box-Shaped Triboelectric Nanogenerator for Basketball Training Monitoring. <i>Nano</i> , 2023, 18, .	0.5	1
732	CNT-PDMS foams as self-powered humidity sensors based on triboelectric nanogenerators driven by finger tapping. <i>Scientific Reports</i> , 2023, 13, .	1.6	6
733	Fractal structured charge-excitation triboelectric nanogenerators for powering portable electronic devices. <i>Nanoscale</i> , 2023, 15, 2820-2827.	2.8	1
734	A bio-inspired total current nanogenerator. <i>Energy and Environmental Science</i> , 2023, 16, 1071-1081.	15.6	16
735	Scalable one-step wet-spinning of triboelectric fibers for large-area power and sensing textiles. <i>Nano Research</i> , 2023, 16, 7518-7526.	5.8	12
736	Enhancing Performance of Triboelectric Nanogenerator via Surface Structure Coupling by Light-Cured 3-D Printing. <i>IEEE Transactions on Electron Devices</i> , 2023, 70, 1231-1235.	1.6	2
737	Interfacial Roughness Enhanced Gel/Elastomer Interfacial Bonding Enables Robust and Stretchable Triboelectric Nanogenerator for Reliable Energy Harvesting. <i>Small</i> , 2023, 19, .	5.2	5
738	Ultra-flexible graphene/nylon/PDMS coaxial fiber-shaped multifunctional sensor. <i>Nano Research</i> , 2023, 16, 5541-5547.	5.8	5
739	Fluorinated Covalent Organic Framework as a Positive Triboelectric Material for High-Performance Triboelectric Nanogenerators. <i>Advanced Functional Materials</i> , 2023, 33, .	7.8	15
740	Toward a new generation of permeable skin electronics. <i>Nanoscale</i> , 2023, 15, 3051-3078.	2.8	16
741	Emerging Self-Powered Autonomous Sensing Triboelectric Fibers toward Future Wearable Human-Computer Interaction Devices. , 2023, 2, .		6
742	Edible cellulose-based conductive composites for triboelectric nanogenerators and supercapacitors. <i>Nano Energy</i> , 2023, 108, 108168.	8.2	16

#	ARTICLE	IF	CITATIONS
743	Achieving Output Performance Enhancement of Triboelectric Nanogenerators in SF <sub>6</sub> Gas Environment. , 2022, , .		0
744	Development of a Multi-material Triboelectric Measurement and Control System. , 2022, , .		0
745	Electricity production using food waste: a review. Environmental Chemistry Letters, 2023, 21, 839-864.	8.3	3
746	3D Printing of Liquid Metals: Recent Advancements and Challenges. Advanced Functional Materials, 2023, 33, .	7.8	18
747	Highly Transparent and Mechanically Robust Energyâ€harvestable Piezocomposite with Embedded 1D P(VDFâ€TrFE) Nanofibers and Singleâ€walled Carbon Nanotubes. Advanced Functional Materials, 2023, 33, .	7.8	7
748	Triboelectric Nanogenerator for Particle Filtering. , 2023, , 1-32.		0
749	Recent Progress in Piezoelectric-Triboelectric Effects Coupled Nanogenerators. Nanomaterials, 2023, 13, 385.	1.9	11
750	Conversion Electrode and Drive Capacitance for Connecting Microfluidic Devices and Triboelectric Nanogenerator. Electronics (Switzerland), 2023, 12, 522.	1.8	5
751	Triboelectric Nanosensor Integrated with Robotic Platform for Self-Powered Detection of Chemical Analytes. ACS Nano, 2023, 17, 2689-2701.	7.3	11
752	Triboelectric Nanogenerator-Based Vibration Energy Harvester Using Bio-Inspired Microparticles and Mechanical Motion Amplification. Energies, 2023, 16, 1315.	1.6	3
753	Modular design and fully packed triboelectric nanogenerator based on escapement mechanism for harvesting high entropy energy in harsh environments. Nano Energy, 2023, 109, 108266.	8.2	8
754	Fabrication of GaN-based MSM droplet triboelectric nanogenerator by the conjunction of photovoltaic and triboelectric effect. Journal of Alloys and Compounds, 2023, 944, 169178.	2.8	1
755	Environmentally friendly natural materials for triboelectric nanogenerators: a review. Journal of Materials Chemistry A, 2023, 11, 9270-9299.	5.2	6
756	Triboelectric Nanogenerators for Interactive Neuromorphic Devices and Systems. , 2023, , 1-34.		0
757	Selfâ€Healing Stress Sensors: Coupling Stressâ€Sensing Performance with Dynamic Chemistry. , 2023, 2, .		2
758	Electronically Robust Selfâ€Assembled Supramolecular Gel as a Potential Material in Triboelectric Nanogenerators. Chemistry - A European Journal, 2023, 29, .	1.7	1
759	Collagenâ€Based Flexible Electronic Devices for Electrochemical Energy Storage and Sensing. Macromolecular Rapid Communications, 2023, 44, .	2.0	2
760	Design of high-performance triboelectric-piezoelectric hybridized mechanical energy harvester inspired by three-phase asynchronous generator. Nano Energy, 2023, 108, 108236.	8.2	5

#	ARTICLE	IF	CITATIONS
761	A high-performance S-TENG based on the synergistic effect of keratin and calcium chloride for finger activity tracking. Nano Energy, 2023, 112, 108443.	8.2	5
762	Multi-layered triboelectric nanogenerator incorporated with self-charge excitation for efficient water wave energy harvesting. Applied Energy, 2023, 336, 120792.	5.1	12
763	Boost the voltage of a magnetoelastic generator via tuning the magnetic induction layer resistance. Nano Energy, 2023, 109, 108298.	8.2	5
764	A humidity- and environment-resisted high-performance triboelectric nanogenerator with superhydrophobic interface for energy harvesting and sensing. Nano Energy, 2023, 109, 108300.	8.2	16
765	Large-scale production of the 3D warp knitted terry fabric triboelectric nanogenerators for motion monitoring and energy harvesting. Nano Energy, 2023, 109, 108309.	8.2	14
766	Recent advances in electrochemical sterilization. Journal of Electroanalytical Chemistry, 2023, 937, 117419.	1.9	35
767	On the temperature and humidity effects of contact electrification in semiconductor-semiconductor case: An energy band model for electron transfer in triboelectrification. Applied Materials Today, 2023, 32, 101791.	2.3	0
768	The influence of in-plane electrodes on TENG's output and its application in the field of IoT intelligent sensing. Nano Energy, 2023, 110, 108313.	8.2	5
769	Modeling the performance of contact-separation triboelectric nanogenerators. Current Applied Physics, 2023, 50, 100-106.	1.1	2
770	Flexoelectricity at fractal rough surfaces. Extreme Mechanics Letters, 2023, 61, 101997.	2.0	0
771	An organic semiconductor/metal Schottky heterojunction based direct current triboelectric nanogenerator windmill for wind energy harvesting. Nano Energy, 2023, 109, 108302.	8.2	8
772	Nanotechnology Applied to Cellulosic Materials. Materials, 2023, 16, 3104.	1.3	7
773	Triboelectric Nanogenerators (TENGs) Based on Various Flexible Polymeric Materials Along With Printed and Non-Printed Electrodes. , 2023, 2, 92-100.		2
774	Bioelectronic devices for light-based diagnostics and therapies. Biophysics Reviews, 2023, 4, .	1.0	2
775	Triboelectric-Electromagnetic Hybrid Wind-Energy Harvester with a Low Startup Wind Speed in Urban Self-Powered Sensing. Micromachines, 2023, 14, 298.	1.4	6
776	Circularity in Energy Harvesting Computational "Things". , 2022, , .		1
777	Review of Triboelectric Nanogenerators Applied to the Field of Intelligent Robotics. , 2022, , .		1
778	Achieving High-Performance Triboelectric Nanogenerator by DC Pump Strategy. Advanced Materials Technologies, 2023, 8, .	3.0	4

#	ARTICLE	IF	CITATIONS
779	Novel paradigm in AFM probe fabrication: Broadened range of stiffness, materials, and tip shapes. Tribology International, 2023, 180, 108308.	3.0	2
780	Enhancing the acoustic-to-electrical conversion efficiency of nanofibrous membrane-based triboelectric nanogenerators by nanocomposite composition. Nano Energy, 2023, 108, 108248.	8.2	8
781	Mylar Interlayer-Mediated Performance Enhancement of a Flexible Triboelectric Nanogenerator for Self-Powered Pressure Sensing Application. ACS Applied Electronic Materials, 2023, 5, 1002-1012.	2.0	7
782	Liquid Metal Enabled Elastic Conductive Fibers for Self-Powered Wearable Sensors. Advanced Materials Technologies, 2023, 8, .	3.0	0
783	High performance wide frequency band triboelectric nanogenerator based on multilayer wave superstructure for harvesting vibration energy. Nano Research, 2023, 16, 6933-6939.	5.8	6
784	A Flexible Triboelectric Nanogenerator Based on MXene for Jumping Motion Monitoring. Nano, 0, , .	0.5	0
785	Thermal-Triggered "On-Off-Switchable Triboelectric Nanogenerator Based on Two-Way Shape Memory Polymer. Advanced Functional Materials, 2023, 33, .	7.8	12
786	Charge-Accumulating-Flutter-Based Triboelectric Nanogenerator via Discharge Gateway. Advanced Energy Materials, 2023, 13, .	10.2	13
787	Tough Transient Ionic Junctions Printed with Ionic Microgels. Advanced Functional Materials, 2023, 33, .	7.8	5
788	Early career scientists converse on the future of soft robotics. Frontiers in Robotics and AI, 0, 10, .	2.0	1
789	Sustainable robust waste-recycled ocean water-resistant fly ash-carbon nanotube nanocomposite-based triboelectric nanogenerator. Sustainable Energy and Fuels, 2023, 7, 1735-1746.	2.5	2
790	Ultrahigh power output and durable flexible all-polymer triboelectric nanogenerators enabled by rational surface engineering. Journal of Materials Chemistry A, 2023, 11, 10174-10183.	5.2	2
791	Metallic glass-based triboelectric nanogenerators. Nature Communications, 2023, 14, .	5.8	22
792	Strategic Development of Piezoelectric Nanogenerator and Biomedical Applications. Applied Sciences (Switzerland), 2023, 13, 2891.	1.3	10
793	Recent Advances in Mechanical Vibration Energy Harvesters Based on Triboelectric Nanogenerators. Small, 2023, 19, .	5.2	9
794	Optical Emission from Triboelectric Gas Discharge toward Self-Powered Gas Sensing. Advanced Optical Materials, 2023, 11, .	3.6	4
795	Scalable, ultra-high stretchable and conductive fiber triboelectric nanogenerator for biomechanical sensing. Nano Energy, 2023, 109, 108291.	8.2	14
796	A Triboelectric Nanocomposite for Sterile Sensing, Energy Harvesting, and Haptic Diagnostics in Interventional Procedures from Surgical Gloves. Advanced Healthcare Materials, 2023, 12, .	3.9	1

#	ARTICLE	IF	CITATIONS
797	A self-powered multifunctional dressing for active infection prevention and accelerated wound healing. <i>Science Advances</i> , 2023, 9, .	4.7	27
798	Cellulose-based Conductive Gels and Their Applications. <i>ChemNanoMat</i> , 2023, 9, .	1.5	6
799	Smart Triboelectric Nanogenerators Toward Human-Oriented Technologies: Health Monitoring, Wound Healing, Drug Delivery. <i>Advanced Materials Technologies</i> , 2023, 8, .	3.0	6
800	Self-Powered Triboelectric Nanogenerator for Security Applications. <i>Micromachines</i> , 2023, 14, 592.	1.4	11
801	Soft Robotic Perception System with Ultrasonic Auto-Positioning and Multimodal Sensory Intelligence. <i>ACS Nano</i> , 2023, 17, 4985-4998.	7.3	25
802	Triboelectric Nanogenerator for Sports. , 2023, , 1-20.		0
803	The study of the triboelectric potential in h-BN and MoS <sub>2</sub> thin layers. <i>Ferroelectrics</i> , 2023, 604, 8-13.	0.3	0
804	Robust Solid-Liquid Triboelectric Nanogenerators: Mechanisms, Strategies and Applications. <i>Advanced Functional Materials</i> , 2023, 33, .	7.8	13
805	Triboelectric immunotherapy using electrostatic-breakdown induced direct-current. <i>Materials Today</i> , 2023, 64, 40-51.	8.3	5
806	Triboelectric Nanogenerators Assembled by Cobalt(II) Coordination Polymer Incorporated Composite Films and their Application for Self-Powered Anticorrosion. <i>Chemistry - A European Journal</i> , 2023, 29, .	1.7	5
807	Liquid-Solid Triboelectric Nanogenerator for Bubble Energy Harvesting. <i>Advanced Materials Technologies</i> , 2023, 8, .	3.0	4
808	Hybrid Nanogenerators for Ocean Energy Harvesting: Mechanisms, Designs, and Applications. <i>Small</i> , 2023, 19, .	5.2	28
809	Triboelectric Nanogenerators Based on Membranes Comprised of Polyurethane Fibers Loaded with Ethyl Cellulose and Barium Titanate Nanoparticles. <i>ACS Applied Nano Materials</i> , 2023, 6, 5675-5684.	2.4	3
810	Liquid-Metal-Based Stretchable Triboelectric Nanogenerators for Flowing-Liquid-Based Energy Harvesting and Self-Powered Sensor Applications. <i>Advanced Materials Technologies</i> , 2023, 8, .	3.0	7
811	Self-Powered Syringe Pump for Insulin Pump Therapy Based on High-Voltage Triboelectric Nanogenerator and Dielectric Elastomer Actuator. <i>Advanced Functional Materials</i> , 2023, 33, .	7.8	7
812	Advanced Cellulose-Nanocarbon Composite Films for High-Performance Triboelectric and Piezoelectric Nanogenerators. <i>Nanomaterials</i> , 2023, 13, 1206.	1.9	3
813	The Advances in Conversion Techniques in Triboelectric Energy Harvesting: A Review. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2023, 70, 3049-3062.	3.5	1
814	Triboelectric Nanogenerators for Efficient Low-Frequency Ocean Wave Energy Harvesting with Swinging Boat Configuration. <i>Micromachines</i> , 2023, 14, 748.	1.4	2



#	ARTICLE	IF	CITATIONS
815	An enhanced triboelectric nanogenerator with micro-grid patterned PDMS for self-powered sensing and music playback. <i>Microelectronic Engineering</i> , 2023, 275, 111994.	1.1	3
816	Triboelectric nanogenerators: the beginning of blue dream. <i>Frontiers of Chemical Science and Engineering</i> , 2023, 17, 635-678.	2.3	21
817	Flexible, Breathable, and Self-Powered Patch Assembled of Electrospun Polymer Triboelectric Layers and Polypyrrole-Coated Electrode for Infected Chronic Wound Healing. <i>ACS Applied Materials &amp; Interfaces</i> , 2023, 15, 17641-17652.	4.0	20
818	Multistage SrBaTiO <sub>3</sub> /PDMS Composite Film-Based Hybrid Nanogenerator for Efficient Floor Energy Harvesting Applications. <i>Small</i> , 2023, 19, .	5.2	7
819	A medical waste X-ray film based triboelectric nanogenerator for self-powered devices, sensors, and smart buildings. <i>Environmental Science Advances</i> , 2023, 2, 848-860.	1.0	8
820	ç³ç±³âç”µæœ²âº”ç””¼šè±é©±âš”ç³»ç»Ÿ. <i>Zhongguo Kexue Jishu Kexue/Scientia Sinica Technologica</i> , 2023, , .	0.3	0
821	Triboelectric Nanogenerators for Field Sensing. , 2023, , 1-10.		0
823	Sustainable charged composites with amphiphobic surfaces for harsh environment-“tolerant non-contact mode triboelectric nanogenerators. <i>Nano Energy</i> , 2023, 112, 108428.	8.2	6
824	A Bio-Inspired Temperature-Arousing Battery with Giant Power for Fire Alarming. <i>Advanced Functional Materials</i> , 2023, 33, .	7.8	4
825	Friction force excitation effect on the sliding-mode triboelectric nanogenerator. <i>Tribology International</i> , 2023, 185, 108504.	3.0	7
826	Recent advances, properties, fabrication and opportunities in two-dimensional materials for their potential sustainable applications. <i>Energy Storage Materials</i> , 2023, 59, 102780.	9.5	12
827	Hybrid energy harvesting systems for self-powered sustainable water purification by harnessing ambient energy. <i>Frontiers of Environmental Science and Engineering</i> , 2023, 17, .	3.3	6
828	Enhancement of Output Power and Durability of DLC-Based Sliding TENGs Modified with Self-Assembled Monolayers. <i>ACS Applied Electronic Materials</i> , 2023, 5, 2853-2861.	2.0	3
829	Rational design on high-performance triboelectric nanogenerator consisting of silicon carbide@silicon dioxide nanowhiskers/polydimethylsiloxane (SiC@SiO <sub>2</sub> /PDMS) nanocomposite films. , 2023, 18, .		0
830	Asymmetric-elastic-structure fabric-based triboelectric nanogenerators for wearable energy harvesting and human motion sensing. <i>Chemical Engineering Journal</i> , 2023, 466, 143079.	6.6	16
831	Human Robot Interaction with Triboelectric Nanogenerator for Tactile Sensing. , 2023, , .		0
834	Multimodal Surface Sensing based on Hybrid Flexible Triboelectric and Piezoresistive Sensor. , 2022, , .		1
835	Application of artificial intelligence in solar and wind energy resources: a strategy to deal with environmental pollution. <i>Environmental Science and Pollution Research</i> , 2023, 30, 64845-64859.	2.7	1

#	ARTICLE	IF	CITATIONS
865	The Origins of Solid-Solid Contact Electrification. , 2023, , 1-37.		0
879	STEV: Stretchable Triboelectric E-skin enabled Proprioceptive Vibration Sensing for Soft Robot. , 2023, , .		0
888	A Review on the Development of Biopolymer Nanocomposite-Based Triboelectric Nanogenerators (Bio-TENGs). ACS Applied Electronic Materials, 2023, 5, 3546-3559.	2.0	3
889	Design and synthesis of triboelectric polymers for high performance triboelectric nanogenerators. Energy and Environmental Science, 2023, 16, 3654-3678.	15.6	17
899	Intelligent Soft Robotic Gripper Enabled by Multimodal Sensors and Deep Learning. , 2023, , .		0
908	Perspectives on recent advancements in energy harvesting, sensing and bio-medical applications of piezoelectric gels. Chemical Society Reviews, 2023, 52, 6191-6220.	18.7	12
909	Triboelectric nanogenerator assisted synthesis and detection of chemical compounds. Journal of Materials Chemistry A, 2023, 11, 19244-19280.	5.2	2
911	Triboelectric Nanogenerator for Sports. , 2023, , 951-970.		0
912	Triboelectric Nanogenerators for Interactive Neuromorphic Devices and Systems. , 2023, , 1843-1876.		0
913	The Origins of Solid-Solid Contact Electrification. , 2023, , 33-69.		0
916	Electrospun Nylon-11 nanofibers for triboelectric energy harvesting. AIP Conference Proceedings, 2023, , .	0.3	0
924	Emerging trends in self-healable nanomaterials for triboelectric nanogenerators: A comprehensive review and roadmap. Frontiers in Energy, 2023, 17, 727-750.	1.2	3
950	Energy Harvesting Systems. Advances in Systems Analysis, Software Engineering, and High Performance Computing Book Series, 2023, , 247-295.	0.5	0
952	Triboelectric Nanogenerator for Particle Filtering. , 2023, , 1283-1314.		0
961	Triboelectric Nanogenerators for Field Sensing. , 2023, , 1480-1489.		0
968	A Review on Triboelectric Nanogenerators, Recent Applications, and Challenges. International Journal of Precision Engineering and Manufacturing - Green Technology, 0, , .	2.7	0
991	Facile surface functionalization of triboelectric layers <i>via</i> electrostatically self-assembled zwitterionic molecules for achieving efficient and stable antibacterial flexible triboelectric nanogenerators. Materials Horizons, 2024, 11, 646-660.	6.4	1
995	DB-TENG Model Development. , 2023, , .		0

#	ARTICLE	IF	CITATIONS
1004	Development of an Energy Harvesting Tile Using Novel MXene-Cement Based Triboelectric Nanogenerator. , 2023, , .		1
1007	Strategy for Improving Cycle of Maximized Energy Output of Triboelectric Nanogenerators. , 2023, , .		0
1035	Power Transfer Optimization for Triboelectric Nanogenerators. , 2023, , .		0
1042	Flexoelectricity in nanogenerator ceramics. , 2024, , 129-155.		0
1081	Future of Drug Delivery: Microrobotics and Self-powered Devices. , 2024, , 79-94.		0
1082	High Performance Triboelectric Energy Harvester: Design and Optimization Using GA and Cuttle Fish Algorithm. Advances in Computational Intelligence and Robotics Book Series, 2024, , 228-249.	0.4	0
1083	Shear Thickening Fluid in Triboelectric Nanogenerators. , 2024, , 19-43.		0