

Fiber/Fabric-Based Piezoelectric and Triboelectric Nanogenerators and Wearable Electronics and Artificial Intelligence

Advanced Materials

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Study of thin film blue energy harvester based on triboelectric nanogenerator and seashore IoT applications. Nano Energy, 2019, 66, 104167.	8.2	117
2	A self-protective, reproducible textile sensor with high performance towards human-machine interactions. Journal of Materials Chemistry A, 2019, 7, 26631-26640.	5.2	86
3	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
4	Recent Progress and Perspectives of Thermally Drawn Multimaterial Fiber Electronics. Advanced Materials, 2020, 32, e1904911.	11.1	143
5	A fiber-shaped light-emitting pressure sensor for visualized dynamic monitoring. Journal of Materials Chemistry C, 2020, 8, 935-942.	2.7	16
6	Transforming commercial regenerated cellulose yarns into multifunctional wearable electronic textiles. Journal of Materials Chemistry C, 2020, 8, 1309-1318.	2.7	29
7	Flexible Janus Electrospun Nanofiber Films for Wearable Triboelectric Nanogenerator. Advanced Materials Technologies, 2020, 5, 1900859.	3.0	29
8	Ultrastable and High-Performance Silk Energy Harvesting Textiles. Nano-Micro Letters, 2020, 12, 12.	14.4	44
9	Hierarchically Rough Structured and Self-Powered Pressure Sensor Textile for Motion Sensing and Pulse Monitoring. ACS Applied Materials & Interfaces, 2020, 12, 1597-1605.	4.0	121
10	Highly Sensitive and Flexible Pressure Sensor Prepared by Simple Printing Used for Micro Motion Detection. Advanced Materials Interfaces, 2020, 7, 1901704.	1.9	17
11	1D Stretchable Block Copolymer Yarn-Based Energy Harvesters via BaTiO ₃ /Polydimethylsiloxane Composite Carbon Conductive Ink. Advanced Energy Materials, 2020, 10, 1903217.	10.2	19
12	Flexible and Degradable Multimodal Sensor Fabricated by Transferring Laser-Induced Porous Carbon on Starch Film. ACS Sustainable Chemistry and Engineering, 2020, 8, 527-533.	3.2	45
13	A Metal-Like Conductive Elastomer with a Hierarchical Wrinkled Structure. Advanced Materials, 2020, 32, 1906460.	11.1	55
14	Thin, Skin-Integrated, Stretchable Triboelectric Nanogenerators for Tactile Sensing. Advanced Electronic Materials, 2020, 6, 1901174.	2.6	53
15	A Piezo Smart-Braid Harvester and Damper for Multifunctional Fiber Reinforced Polymer Composites. Energy Technology, 2020, 8, 2000777.	1.8	6
16	Progress in TENG technology: A journey from energy harvesting to nanoenergy and nanosystem. EcoMat, 2020, 2, e12058.	6.8	194
17	Enhanced energy transfer and conversion for high performance phononic crystal-assisted elastic wave energy harvesting. Nano Energy, 2020, 78, 105226.	8.2	60
18	Surface Morphology Analysis of Knit Structure-Based Triboelectric Nanogenerator for Enhancing the Transfer Charge. Nanoscale Research Letters, 2020, 15, 181.	3.1	15

#	ARTICLE	IF	CITATIONS
19	Punching pores on cellulose fiber paper as the spacer of triboelectric nanogenerator for monitoring human motion. <i>Energy Reports</i> , 2020, 6, 2851-2860.	2.5	29
20	Highly Durable Piezoelectric Nanogenerator by Heteroepitaxy of GaN Nanowires on Cu Foil for Enhanced Output Using Ambient Actuation Sources. <i>Advanced Energy Materials</i> , 2020, 10, 2002608.	10.2	26
21	Triboelectric and Piezoelectric Nanogenerators for Future Soft Robots and Machines. <i>IScience</i> , 2020, 23, 101682.	1.9	70
22	Liquid-Filling Polydimethylsiloxane Composites with Enhanced Triboelectric Performance for Flexible Nanogenerators. <i>Macromolecular Materials and Engineering</i> , 2020, 305, 2000275.	1.7	13
23	Progress in wearable electronics/photronics—Moving toward the era of artificial intelligence and internet of things. <i>Informa-Materially</i> , 2020, 2, 1131-1162.	8.5	343
24	Multiresponsive MXene (Ti ₃ C ₂ X)-Decorated Textiles for Wearable Thermal Management and Human Motion Monitoring. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 34226-34234.	4.0	106
25	Solvent-controlled crystalline beta-phase formation in electrospun P(VDF-TrFE) fibers for enhanced piezoelectric energy harvesting. <i>APL Materials</i> , 2020, 8, .	2.2	34
26	Energy-generating textiles. , 2020, , 415-455.		4
27	A Coral Reef-like Structure Fabricated on Cellulose Paper for Simultaneous Oil-Water Separation and Electromagnetic Shielding Protection. <i>ACS Omega</i> , 2020, 5, 18105-18113.	1.6	8
28	Flexible Pressure Sensors for Biomedical Applications: From Ex Vivo to In Vivo. <i>Advanced Materials Interfaces</i> , 2020, 7, 2000743.	1.9	57
29	Textile Electronics for VR/AR Applications. <i>Advanced Functional Materials</i> , 2021, 31, 2007254.	7.8	50
30	Emerging flexible sensors based on nanomaterials: recent status and applications. <i>Journal of Materials Chemistry A</i> , 2020, 8, 25499-25527.	5.2	106
31	Flexible PVDF based piezoelectric nanogenerators. <i>Nano Energy</i> , 2020, 78, 105251.	8.2	354
32	3D angle-interlock woven structural wearable triboelectric nanogenerator fabricated with silicone rubber coated graphene oxide/cotton composite yarn. <i>Composites Part B: Engineering</i> , 2020, 200, 108244.	5.9	34
33	Advances in chemical sensing technology for enabling the next-generation self-sustainable integrated wearable system in the IoT era. <i>Nano Energy</i> , 2020, 78, 105155.	8.2	105
34	Triboelectric nanogenerator based on intercalated Al layer within fluttering dielectric film. <i>Nano Energy</i> , 2020, 77, 105184.	8.2	12
35	Regenerated and rotation-induced cellulose-wrapped oriented CNT fibers for wearable multifunctional sensors. <i>Nanoscale</i> , 2020, 12, 16305-16314.	2.8	19
36	AIPE-active Ir(â€¦) complexes with reversible piezochromic behavior and its application for data security protection. <i>Journal of Organometallic Chemistry</i> , 2020, 930, 121595.	0.8	2

#	ARTICLE	IF	CITATIONS
37	Recent advances in wearable textile-based triboelectric generator systems for energy harvesting from human motion. <i>EcoMat</i> , 2020, 2, e12054.	6.8	63
38	Deep learning-enabled triboelectric smart socks for IoT-based gait analysis and VR applications. <i>Npj Flexible Electronics</i> , 2020, 4, .	5.1	213
39	Technologies toward next generation human machine interfaces: From machine learning enhanced tactile sensing to neuromorphic sensory systems. <i>Applied Physics Reviews</i> , 2020, 7, .	5.5	194
40	Stretchable piezoelectric energy harvesters and self-powered sensors for wearable and implantable devices. <i>Biosensors and Bioelectronics</i> , 2020, 168, 112569.	5.3	225
41	\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
42	Seamlessly knitted stretchable comfortable textile triboelectric nanogenerators for E-textile power sources. <i>Nano Energy</i> , 2020, 78, 105327.	8.2	97
43	Flexible conductive MXene/cellulose nanocrystal coated nonwoven fabrics for tunable wearable strain/pressure sensors. <i>Journal of Materials Chemistry A</i> , 2020, 8, 21131-21141.	5.2	176
44	The Evolution of Flexible Electronics: From Nature, Beyond Nature, and To Nature. <i>Advanced Science</i> , 2020, 7, 2001116.	5.6	185
45	Structural Innovations in Printed, Flexible, and Stretchable Electronics. <i>Advanced Materials Technologies</i> , 2020, 5, .	3.0	57
46	Re-stickable All-Solid-State Supercapacitor Supported by Cohesive Thermoplastic for Textile Electronics. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 45322-45331.	4.0	11
47	Triboelectric nanogenerators based on elastic electrodes. <i>Nanoscale</i> , 2020, 12, 20118-20130.	2.8	32
48	Enhancement of Triboelectric Charge Density by Chemical Functionalization. <i>Advanced Functional Materials</i> , 2020, 30, 2004714.	7.8	171
49	A Machine-Fabricated 3D Honeycomb-Structured Flame-Retardant Triboelectric Fabric for Fire Escape and Rescue. <i>Advanced Materials</i> , 2020, 32, e2003897.	11.1	136
50	Coaxial double helix structured fiber-based triboelectric nanogenerator for effectively harvesting mechanical energy. <i>Nanoscale Advances</i> , 2020, 2, 4482-4490.	2.2	21
51	A New Portable Energy Harvesting Device Mounted on Shoes: Performance and Impact on Wearer. <i>Energies</i> , 2020, 13, 3871.	1.6	6
52	Self-Powered 2D Material-Based pH Sensor and Photodetector Driven by Monolayer MoSe ₂ Piezoelectric Nanogenerator. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 58132-58139.	4.0	53
53	Highly-Sensitive Textile Pressure Sensors Enabled by Suspended-Type All Carbon Nanotube Fiber Transistor Architecture. <i>Micromachines</i> , 2020, 11, 1103.	1.4	9
54	Flexible Hybrid Sensor Systems with Feedback Functions. <i>Advanced Functional Materials</i> , 2021, 31, 2007436.	7.8	80

#	ARTICLE	IF	CITATIONS
55	Wearable Biosensors for Body Computing. <i>Advanced Functional Materials</i> , 2021, 31, 2008087.	7.8	56
56	Fluorinated Polyethylene Propylene Ferroelectrets with an Air-Filled Concentric Tunnel Structure: Preparation, Characterization, and Application in Energy Harvesting. <i>Micromachines</i> , 2020, 11, 1072.	1.4	7
57	Moist-Induced Electricity Generation by Electrospun Cellulose Acetate Membranes with Optimized Porous Structures. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 57373-57381.	4.0	58
58	Basic Approaches to the Design of Intrinsic Self-Healing Polymers for Triboelectric Nanogenerators. <i>Polymers</i> , 2020, 12, 2594.	2.0	15
59	Flame-Retardant Textile-Based Triboelectric Nanogenerators for Fire Protection Applications. <i>ACS Nano</i> , 2020, 14, 15853-15863.	7.3	133
60	Sensitivity Improvement of Stretchable Strain Sensors by the Internal and External Structural Designs for Strain Redistribution. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 50803-50811.	4.0	21
61	New fabrication method for producing reduced graphene oxide flexible electrodes by using a low-power visible laser diode engraving system. <i>Nanotechnology</i> , 2020, 31, 325402.	1.3	7
62	Shape-Controlled Synthesis of Coral-like ZnO/C-ZnFe ₂ O ₄ Hierarchical Structures and Their Improved Photocatalytic Antibacterial Efficiency under Visible Light Illumination. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 11219-11231.	1.8	16
63	Multimodal Hybrid Piezoelectric-Electromagnetic Insole Energy Harvester Using PVDF Generators. <i>Electronics (Switzerland)</i> , 2020, 9, 635.	1.8	34
64	Polymer Materials for High-Performance Triboelectric Nanogenerators. <i>Advanced Science</i> , 2020, 7, 2000186.	5.6	230
65	A Highly Porous Nonwoven Thermoplastic Polyurethane/Polypropylene-Based Triboelectric Nanogenerator for Energy Harvesting by Human Walking. <i>Polymers</i> , 2020, 12, 1044.	2.0	31
66	Self-Powered Sensors and Systems Based on Nanogenerators. <i>Sensors</i> , 2020, 20, 2925.	2.1	195
67	Shape adaptable and highly resilient 3D braided triboelectric nanogenerators as e-textiles for power and sensing. <i>Nature Communications</i> , 2020, 11, 2868.	5.8	285
68	A flexible self-charging sodium-ion full battery for self-powered wearable electronics. <i>Journal of Materials Chemistry A</i> , 2020, 8, 13267-13276.	5.2	22
69	A Solvent Molecule Driven Pure PEDOT:PSS Actuator. <i>Macromolecular Materials and Engineering</i> , 2020, 305, 2000327.	1.7	17
70	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
71	Flexible MXene-Decorated Fabric with Interwoven Conductive Networks for Integrated Joule Heating, Electromagnetic Interference Shielding, and Strain Sensing Performances. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 14459-14467.	4.0	228
72	Smart Textiles for Electricity Generation. <i>Chemical Reviews</i> , 2020, 120, 3668-3720.	23.0	644

#	ARTICLE	IF	CITATIONS
73	Piezofibers to smart textiles: a review on recent advances and future outlook for wearable technology. <i>Journal of Materials Chemistry A</i> , 2020, 8, 9496-9522.	5.2	102
74	Flexible metal-free hybrid hydrogel thermoelectric fibers. <i>Journal of Materials Science</i> , 2020, 55, 8376-8387.	1.7	31
75	Laser-induced graphene enabled 1D fiber electronics. <i>Carbon</i> , 2020, 168, 308-318.	5.4	30
76	A breathable, biodegradable, antibacterial, and self-powered electronic skin based on all-nanofiber triboelectric nanogenerators. <i>Science Advances</i> , 2020, 6, eaba9624.	4.7	589
77	Electrospinning core-sheath piezoelectric microfibers for self-powered stitchable sensor. <i>Nano Energy</i> , 2020, 76, 104966.	8.2	62
78	Conductive graphene-based E-textile for highly sensitive, breathable, and water-resistant multimodal gesture-distinguishable sensors. <i>Journal of Materials Chemistry A</i> , 2020, 8, 14778-14787.	5.2	38
79	WSe ₂ 2D p-type semiconductor-based electronic devices for information technology: Design, preparation, and applications. <i>Information Materials</i> , 2020, 2, 656-697.	8.5	115
80	Recent progress on flexible nanogenerators toward self-powered systems. <i>Information Materials</i> , 2020, 2, 318-340.	8.5	85
81	Nanogenerators with Superwetting Surfaces for Harvesting Water/Liquid Energy. <i>Advanced Functional Materials</i> , 2020, 30, 1908252.	7.8	103
82	Smart Soft Actuators and Grippers Enabled by Self-Powered Triboelectric Skins. <i>Advanced Materials Technologies</i> , 2020, 5, 1901075.	3.0	52
83	Biomechanical Energy-Driven Hybridized Generator as a Universal Portable Power Source for Smart/Wearable Electronics. <i>Advanced Energy Materials</i> , 2020, 10, 1903663.	10.2	63
85	Theoretical Model and Outstanding Performance from Constructive Piezoelectric and Triboelectric Mechanism in Electrospun PVDF Fiber Film. <i>Advanced Functional Materials</i> , 2020, 30, 1910592.	7.8	70
86	Continuous and Scalable Manufacture of Hybridized Nano-Micro Triboelectric Yarns for Energy Harvesting and Signal Sensing. <i>ACS Nano</i> , 2020, 14, 4716-4726.	7.3	130
87	Boron Nitride Nanotube-Based Contact Electrification-Assisted Piezoelectric Nanogenerator as a Kinematic Sensor for Detecting the Flexion/Extension Motion of a Robot Finger. <i>ACS Energy Letters</i> , 2020, 5, 1577-1585.	8.8	29
88	Wearable and Biodegradable Sensors for Human Health Monitoring. <i>ACS Applied Bio Materials</i> , 2021, 4, 122-139.	2.3	52
89	Functional Fibers and Fabrics for Soft Robotics, Wearables, and Human-Robot Interface. <i>Advanced Materials</i> , 2021, 33, e2002640.	11.1	278
90	Stretchable, Washable, and Ultrathin Triboelectric Nanogenerators as Skin-Like Highly Sensitive Self-Powered Haptic Sensors. <i>Advanced Functional Materials</i> , 2021, 31, .	7.8	155
91	Flexible hierarchical helical yarn with broad strain range for self-powered motion signal monitoring and human-machine interactive. <i>Nano Energy</i> , 2021, 80, 105446.	8.2	25

#	ARTICLE	IF	CITATIONS
92	Sustainable self-powered electro-Fenton degradation using N, S co-doped porous carbon catalyst fabricated with adsorption-pyrolysis-doping strategy. <i>Nano Energy</i> , 2021, 81, 105623.	8.2	43
93	Polymer chemistry underpinning materials for triboelectric nanogenerators (TENGs): Recent trends. <i>European Polymer Journal</i> , 2021, 142, 110163.	2.6	37
94	Nanogenerator as self-powered sensing microsystems for safety monitoring. <i>Nano Energy</i> , 2021, 81, 105646.	8.2	27
95	Lightweight, flexible and highly sensitive segregated microcellular nanocomposite piezoresistive sensors for human motion detection. <i>Composites Science and Technology</i> , 2021, 203, 108571.	3.8	83
96	Stretchable and Shape-Adaptable Triboelectric Nanogenerator Based on Biocompatible Liquid Electrolyte for Biomechanical Energy Harvesting and Wearable Human-Machine Interaction. <i>Advanced Functional Materials</i> , 2021, 31, 2007221.	7.8	89
97	Hybridized wearable patch as a multi-parameter and multi-functional human-machine interface. <i>Nano Energy</i> , 2021, 81, 105582.	8.2	66
98	Design, manufacturing and applications of wearable triboelectric nanogenerators. <i>Nano Energy</i> , 2021, 81, 105627.	8.2	86
99	Making use of nanoenergy from human "Nanogenerator and self-powered sensor enabled sustainable wireless IoT sensory systems. <i>Nano Today</i> , 2021, 36, 101016.	6.2	180
100	Recent advances in cellulose-based piezoelectric and triboelectric nanogenerators for energy harvesting: a review. <i>Journal of Materials Chemistry A</i> , 2021, 9, 1910-1937.	5.2	168
101	Effect of Geometrical Parameters on Piezoresponse of Nanofibrous Wearable Piezoelectric Nanofabrics Under Low Impact Pressure. <i>Macromolecular Materials and Engineering</i> , 2021, 306, .	1.7	17
102	Wearable fiber-based thermoelectrics from materials to applications. <i>Nano Energy</i> , 2021, 81, 105684.	8.2	92
103	Highly Stretchable Self-Powered Wearable Electrical Energy Generator and Sensors. <i>Advanced Materials Technologies</i> , 2021, 6, 2000841.	3.0	48
104	Self-Powered Smart Shoes with Tension-Type Ribbon Harvesters and Sensors. <i>Advanced Materials Technologies</i> , 2021, 6, 2000872.	3.0	9
105	Temperature-Pressure Hybrid Sensing All-Organic Stretchable Energy Harvester. <i>ACS Applied Electronic Materials</i> , 2021, 3, 248-259.	2.0	22
106	Intelligent comprehensive evaluation system using artificial intelligence for environmental evaluation. <i>Environmental Impact Assessment Review</i> , 2021, 86, 106495.	4.4	6
107	Design of functionally cooperating systems and application towards self-propulsive mini-generators. <i>Materials Chemistry Frontiers</i> , 2021, 5, 129-150.	3.2	14
108	Artificial intelligence-enabled smart mechanical metamaterials: advent and future trends. <i>International Materials Reviews</i> , 2021, 66, 365-393.	9.4	63
109	Stretchable Electronics Based on PDMS Substrates. <i>Advanced Materials</i> , 2021, 33, e2003155.	11.1	319

#	ARTICLE	IF	CITATIONS
110	Wearable and washable light/thermal emitting textiles. <i>Nanoscale Advances</i> , 2021, 3, 2475-2480.	2.2	10
111	E-Textile Technology Reviewâ€œFrom Materials to Application. <i>IEEE Access</i> , 2021, 9, 97152-97179.	2.6	40
112	Flourishing energy harvesters for future body sensor network: from single to multiple energy sources. <i>IScience</i> , 2021, 24, 101934.	1.9	73
113	Energy Harvesting and Storage with Soft and Stretchable Materials. <i>Advanced Materials</i> , 2021, 33, e2004832.	11.1	91
114	Recent developments of hybrid piezoâ€œtriboelectric nanogenerators for flexible sensors and energy harvesters. <i>Nanoscale Advances</i> , 2021, 3, 5465-5486.	2.2	47
115	Fiber-Based Sensors and Energy Systems for Wearable Electronics. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 531.	1.3	21
116	3D Hierarchical NiCo ₂ S ₄ Nanoparticles/Carbon Nanotube Sponge Cathode for Highly Compressible Asymmetric Supercapacitors. <i>Energy & Fuels</i> , 2021, 35, 3449-3458.	2.5	21
117	Electricity generation from the interaction of liquidâ€œsolid interface: a review. <i>Journal of Materials Chemistry A</i> , 2021, 9, 8870-8895.	5.2	50
118	Interfacial Design and Assembly for Flexible Energy Electrodes with Highly Efficient Energy Harvesting, Conversion, and Storage. <i>Advanced Energy Materials</i> , 2021, 11, 2002969.	10.2	16
119	Fibre electronics: towards scaled-up manufacturing of integrated e-textile systems. <i>Nanoscale</i> , 2021, 13, 12818-12847.	2.8	37
120	Smart fibers for energy conversion and storage. <i>Chemical Society Reviews</i> , 2021, 50, 7009-7061.	18.7	108
121	Power generation for wearable systems. <i>Energy and Environmental Science</i> , 2021, 14, 2114-2157.	15.6	178
122	Printed aerogels: chemistry, processing, and applications. <i>Chemical Society Reviews</i> , 2021, 50, 3842-3888.	18.7	128
123	Studies on electrospun polyvinylidene fluoride/aliphatic hyperbranched polyester (3rd gen) based piezoelectric sensors. <i>Materials Today: Proceedings</i> , 2021, 47, 950-956.	0.9	1
124	Recent Progress in 2Dâ€œNanomaterialâ€œBased Triboelectric Nanogenerators. <i>Advanced Functional Materials</i> , 2021, 31, 2009994.	7.8	60
125	UV-Protective, Self-Cleaning, and Antibacterial Nanofiber-Based Triboelectric Nanogenerators for Self-Powered Human Motion Monitoring. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 11205-11214.	4.0	111
126	From Fiber to Fabric: Progress Towards Photovoltaic Energy Textile. <i>Advanced Fiber Materials</i> , 2021, 3, 76-106.	7.9	36
127	Gel-Electrolyte-Coated Carbon Nanotube Yarns for Self-Powered and Knittable Piezoionic Sensors. <i>ACS Applied Electronic Materials</i> , 2021, 3, 944-954.	2.0	16

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128	Hybrid Triboelectric Nanogenerators: From Energy Complementation to Integration. <i>Research</i> , 2021, 2021, 9143762.	2.8	32
129	An Overview of Cellulose-Based Nanogenerators. <i>Advanced Materials Technologies</i> , 2021, 6, 2001164.	3.0	31
130	Skin Electronics: Next-Generation Device Platform for Virtual and Augmented Reality. <i>Advanced Functional Materials</i> , 2021, 31, 2009602.	7.8	100
131	Recycled Iontronic from Discarded Chewed Gum for Personalized Healthcare Monitoring and Intelligent Information Encryption. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 6731-6738.	4.0	29
132	Triboelectric Nanogenerators and Hybridized Systems for Enabling Next-Generation IoT Applications. <i>Research</i> , 2021, 2021, 6849171.	2.8	75
133	A self-sustainable wearable multi-modular E-textile bioenergy microgrid system. <i>Nature Communications</i> , 2021, 12, 1542.	5.8	164
134	Ultrafast assembly and healing of nanomaterial networks on polymer substrates for flexible hybrid electronics. <i>Applied Materials Today</i> , 2021, 22, 100956.	2.3	7
135	Elastic Multifunctional Liquid-Metal Fibers for Harvesting Mechanical and Electromagnetic Energy and as Self-Powered Sensors. <i>Advanced Energy Materials</i> , 2021, 11, 2100411.	10.2	97
136	Neonatal wearable device for colorimetry-based real-time detection of jaundice with simultaneous sensing of vitals. <i>Science Advances</i> , 2021, 7, .	4.7	32
137	A review on the polymers with shape memory assisted self-healing properties for triboelectric nanogenerators. <i>Journal of Materials Research</i> , 2021, 36, 1225-1240.	1.2	11
138	3D Conformal Surface Engineering of Continuous Fibers with Porous Microstructures for 1D Advanced Functional Materials. <i>Macromolecular Materials and Engineering</i> , 2021, 306, 2000699.	1.7	4
139	High-performance textile piezoelectric pressure sensor with novel structural hierarchy based on ZnO nanorods array for wearable application. <i>Nano Research</i> , 2021, 14, 3969-3976.	5.8	66
140	Fiber-junction design for directional bending sensors. <i>Npj Flexible Electronics</i> , 2021, 5, .	5.1	10
141	Flexible Tactile Sensor Based on Patterned Ag-Nanofiber Electrodes through Electrospinning. <i>Sensors</i> , 2021, 21, 2413.	2.1	18
142	Wicking-Induced Polarization-Induced Water Cluster Size Effect on Triboelectric Evaporation Textiles. <i>Advanced Materials</i> , 2021, 33, e2007352.	11.1	53
143	Intelligent Polymers, Fibers and Applications. <i>Polymers</i> , 2021, 13, 1427.	2.0	43
144	Smart textiles: A toolkit to fashion the future. <i>Journal of Applied Physics</i> , 2021, 129, .	1.1	34
145	Piezo-tribo dual effect hybrid nanogenerators for health monitoring. <i>Nano Energy</i> , 2021, 82, 105691.	8.2	38

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146	Fully Fabric-Based Triboelectric Nanogenerators as Self-Powered Human-Machine Interactive Keyboards. <i>Nano-Micro Letters</i> , 2021, 13, 103.	14.4	96
147	A Flexible Piezoelectric Energy Harvester-Based Single-Layer WS ₂ Nanometer 2D Material for Self-Powered Sensors. <i>Energies</i> , 2021, 14, 2097.	1.6	11
148	Improved charging phenomenon with a modified barrier structure for flexible displays fabricated on polyimide substrates. <i>Electronics Letters</i> , 2021, 57, 744-746.	0.5	1
149	2D Materials for Skin-Mountable Electronic Devices. <i>Advanced Materials</i> , 2021, 33, e2005858.	11.1	51
150	Quasistatic direct electromechanical responses from as-electrospun submicron/micron fiber mats of several polymers. <i>Polymer</i> , 2021, 224, 123732.	1.8	4
151	Kinetic motion sensors based on flexible and lead-free hybrid piezoelectric composite energy harvesters with nanowires-embedded electrodes for detecting articular movements. <i>Composites Part B: Engineering</i> , 2021, 212, 108705.	5.9	49
152	Low cost exoskeleton manipulator using bidirectional triboelectric sensors enhanced multiple degree of freedom sensory system. <i>Nature Communications</i> , 2021, 12, 2692.	5.8	107
153	Construction of Bio-Piezoelectric Platforms: From Structures and Synthesis to Applications. <i>Advanced Materials</i> , 2021, 33, e2008452.	11.1	114
154	Recent Progress of Wearable Piezoelectric Nanogenerators. <i>ACS Applied Electronic Materials</i> , 2021, 3, 2449-2467.	2.0	88
155	Multi-layered BTO/PVDF nanogenerator with highly enhanced performance induced by interlaminar electric field. <i>Microelectronic Engineering</i> , 2021, 244-246, 111557.	1.1	10
156	Ultrastretchable and Washable Conductive Microtextiles by Coassembly of Silver Nanowires and Elastomeric Microfibers for Epidermal Human-Machine Interfaces. , 2021, 3, 912-920.		58
157	Scalable Fabrication of Kevlar/Ti ₃ C ₂ T _x MXene Intelligent Wearable Fabrics with Multiple Sensory Capabilities. <i>ACS Nano</i> , 2021, 15, 8676-8685.	7.3	125
158	Self-powered electro-Fenton degradation system using oxygen-containing functional groups-rich biomass-derived carbon catalyst driven by 3D printed flexible triboelectric nanogenerator. <i>Nano Energy</i> , 2021, 83, 105720.	8.2	19
159	Advances in Electrospun Fiber-Based Flexible Nanogenerators for Wearable Applications. <i>Macromolecular Materials and Engineering</i> , 2021, 306, 2100143.	1.7	34
160	High-Linearity, Response-Range Adjustable Force Sensors Based on a Yarn/Film/Spacer Triboelectric Device Design. <i>Advanced Materials Technologies</i> , 2021, 6, 2100203.	3.0	11
161	Soft Wearable Healthcare Materials and Devices. <i>Advanced Healthcare Materials</i> , 2021, 10, e2100577.	3.9	71
162	Recent progress in human body energy harvesting for smart bioelectronic system. <i>Fundamental Research</i> , 2021, 1, 364-382.	1.6	106
163	Multifunctional, Wash Durable and Reusable Conductive Textiles for Wearable Electro/Physiological Monitoring. <i>Macromolecular Materials and Engineering</i> , 2021, 306, 2000804.	1.7	3

#	ARTICLE	IF	CITATIONS
164	Abrasion Resistant/Waterproof Stretchable Triboelectric Yarns Based on Fermat Spirals. <i>Advanced Materials</i> , 2021, 33, e2100782.	11.1	68
165	3D printed stretchable smart fibers and textiles for self-powered e-skin. <i>Nano Energy</i> , 2021, 84, 105866.	8.2	75
166	A Novel Strategy to Fabricate Core-Sheath Structure Piezoelectric Yarns for Wearable Energy Harvesters. <i>Advanced Fiber Materials</i> , 2021, 3, 239-250.	7.9	53
167	Organogel electrode based continuous fiber with large-scale production for stretchable triboelectric nanogenerator textiles. <i>Nano Energy</i> , 2021, 84, 105867.	8.2	39
168	The origin of chemical inhomogeneity in lead-free potassium sodium niobate ceramic: Competitive chemical reaction during solid-state synthesis. <i>Acta Materialia</i> , 2021, 211, 116833.	3.8	19
169	Importance of Architectural Asymmetry for Improved Triboelectric Nanogenerators with 3D Spacer Fabrics. <i>Macromolecular Research</i> , 2021, 29, 443-447.	1.0	8
170	Thin, soft, <scp>garmentâ€integrated</scp> triboelectric nanogenerators for energy harvesting and human machine interfaces. <i>EcoMat</i> , 2021, 3, e12123.	6.8	15
171	Nitrogen-doped carbon-enriched MOF and derived hierarchical carbons as electrode for excellent asymmetric aqueous supercapacitor. <i>Journal of Alloys and Compounds</i> , 2021, 867, 158764.	2.8	25
172	Selfâ€Powered Controllable Transdermal Drug Delivery System. <i>Advanced Functional Materials</i> , 2021, 31, 2104092.	7.8	52
173	Triboelectric nanogenerator based self-powered sensor for artificial intelligence. <i>Nano Energy</i> , 2021, 84, 105887.	8.2	168
174	A Skinâ€Inspired Triboelectric Nanogenerator with an Interpenetrating Structure for Motion Sensing and Energy Harvesting. <i>Macromolecular Materials and Engineering</i> , 2021, 306, 2100147.	1.7	13
175	An ultra-low-frequency, broadband and multi-stable tri-hybrid energy harvester for enabling the next-generation sustainable power. <i>Applied Energy</i> , 2021, 291, 116825.	5.1	40
176	High-Strength-Reduced Graphene Oxide/Carboxymethyl Cellulose Composite Fibers for High-Performance Flexible Supercapacitors. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 8753-8761.	1.8	6
177	Soft triboelectric nanogenerators for mechanical energy scavenging and self-powered sensors. <i>Nano Energy</i> , 2021, 84, 105919.	8.2	80
178	Electronic fibers and textiles: Recent progress and perspective. <i>IScience</i> , 2021, 24, 102716.	1.9	60
179	Allâ€Nanofiber Selfâ€Powered Skinâ€Interfaced Realâ€Time Respiratory Monitoring System for Obstructive Sleep Apneaâ€Hypopnea Syndrome Diagnosing. <i>Advanced Functional Materials</i> , 2021, 31, 2103559.	7.8	115
180	Two-Dimensional MOF Modulated Fiber Nanogenerator for Effective Acoustoelectric Conversion and Human Motion Detection. <i>Langmuir</i> , 2021, 37, 7107-7117.	1.6	31
181	Nanogenerators for smart cities in the era of 5G and Internet of Things. <i>Joule</i> , 2021, 5, 1391-1431.	11.7	261

#	ARTICLE	IF	CITATIONS
182	Bio-Inspired Hybrid Dielectric for Capacitive and Triboelectric Tactile Sensors with High Sensitivity and Ultrawide Linearity Range. <i>Advanced Materials</i> , 2021, 33, e2100859.	11.1	113
183	Triboelectric nanogenerator/supercapacitor in-one self-powered textile based on PTFE yarn wrapped PDMS/MnO ₂ NW hybrid elastomer. <i>Nano Energy</i> , 2021, 84, 105918.	8.2	78
184	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
185	Smart textile triboelectric nanogenerators: Current status and perspectives. <i>MRS Bulletin</i> , 2021, 46, 512-521.	1.7	111
186	Active-Sensing Epidermal Stretchable Bioelectronic Patch for Noninvasive, Conformal, and Wireless Tendon Monitoring. <i>Research</i> , 2021, 2021, 9783432.	2.8	6
187	Advances in Smart Sensing and Medical Electronics by Self-Powered Sensors Based on Triboelectric Nanogenerators. <i>Micromachines</i> , 2021, 12, 698.	1.4	33
188	Interfacial Polarization and Dual Charge Transfer Induced High Permittivity of Carbon Dots-Based Composite as Humidity-Resistant Tribomaterial for Efficient Biomechanical Energy Harvesting. <i>Advanced Energy Materials</i> , 2021, 11, 2101294.	10.2	31
189	A review on emerging biodegradable polymers for environmentally benign transient electronic skins. <i>Journal of Materials Science</i> , 2021, 56, 16765-16789.	1.7	49
190	Inkjet Printed Textile Force Sensitive Resistors for Wearable and Healthcare Devices. <i>Advanced Healthcare Materials</i> , 2021, 10, e2100893.	3.9	21
191	Triboelectric Nanogenerator-Based Sensor Systems for Chemical or Biological Detection. <i>Advanced Materials</i> , 2021, 33, e2008276.	11.1	108
192	Bidirectional modulation of neural plasticity by self-powered neural stimulation. <i>Nano Energy</i> , 2021, 85, 106006.	8.2	15
193	Recent Advances in Carbon Material-Based Multifunctional Sensors and Their Applications in Electronic Skin Systems. <i>Advanced Functional Materials</i> , 2021, 31, 2104288.	7.8	116
194	Stretchable, Stable, and Degradable Silk Fibroin Enabled by Mesoscopic Doping for Finger Motion Triggered Color/Transmittance Adjustment. <i>ACS Nano</i> , 2021, 15, 12429-12437.	7.3	42
195	3D carbon nanocones/metallic MoS ₂ nanosheet electrodes towards flexible supercapacitors for wearable electronics. <i>Energy</i> , 2021, 227, 120419.	4.5	26
196	Biomass-derived, multifunctional and wave-layered carbon aerogels toward wearable pressure sensors, supercapacitors and triboelectric nanogenerators. <i>Nano Energy</i> , 2021, 85, 105973.	8.2	116
197	Artificial Intelligence-Enabled Caregiving Walking Stick Powered by Ultra-Low-Frequency Human Motion. <i>ACS Nano</i> , 2021, 15, 19054-19069.	7.3	98
198	Technology evolution from micro-scale energy harvesters to nanogenerators. <i>Journal of Micromechanics and Microengineering</i> , 2021, 31, 093002.	1.5	53
199	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

#	ARTICLE	IF	CITATIONS
200	Fiber Surface/Interfacial Engineering on Wearable Electronics. <i>Small</i> , 2021, 17, e2102903.	5.2	17
201	Smart Fibers and Textiles for Personal Health Management. <i>ACS Nano</i> , 2021, 15, 12497-12508.	7.3	124
202	The triboelectricity of the human body. <i>Nano Energy</i> , 2021, 86, 106041.	8.2	35
203	Flexible Conducting Composite Film with Reversible In-plane Folding/Unfolding Property. <i>Advanced Science</i> , 2021, 8, e2102314.	5.6	4
204	Recent advances in nanogenerators-based flexible electronics for electromechanical biomonitoring. <i>Biosensors and Bioelectronics</i> , 2021, 186, 113290.	5.3	23
205	Functionalization of textiles by deposition of UV-cured organic thin layers with charge storage properties for electronic and environmental technology. <i>Progress in Organic Coatings</i> , 2021, 157, 106332.	1.9	1
206	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
207	Two-Step Regulation Strategy Improving Stress Transfer and Poling Efficiency Boosts Piezoelectric Performance of P(VDF-TrFE) Piezocomposites. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 41735-41743.	4.0	13
208	Fabrication and applications of cellulose-based nanogenerators. <i>Advanced Composites and Hybrid Materials</i> , 2021, 4, 865-884.	9.9	121
209	Recent Advances in Flexible Tactile Sensors for Intelligent Systems. <i>Sensors</i> , 2021, 21, 5392.	2.1	47
210	Azobenzene-containing liquid crystalline composites for robust ultraviolet detectors based on conversion of illuminance-mechanical stress-electric signals. <i>Nature Communications</i> , 2021, 12, 4875.	5.8	37
211	Flexible nanogenerator based on sponge-shaped piezoelectric composite. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 434002.	1.3	3
212	Review of Fiber-Based Three-Dimensional Printing for Applications Ranging from Nanoscale Nanoparticle Alignment to Macroscale Patterning. <i>ACS Applied Nano Materials</i> , 2021, 4, 7538-7562.	2.4	21
213	Robust Scalable-Manufactured Smart Fabric Surfaces Based on Azobenzene-Containing Maleimide Copolymers for Rewritable Information Storage and Hydrogen Fluoride Visual Sensor. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 42024-42034.	4.0	11
214	M13 Virus Triboelectricity and Energy Harvesting. <i>Nano Letters</i> , 2021, 21, 6851-6858.	4.5	11
215	Flexible and stretchable triboelectric nanogenerator fabric for biomechanical energy harvesting and self-powered dual-mode human motion monitoring. <i>Nano Energy</i> , 2021, 86, 106058.	8.2	147
216	Highly Stretchable, Tough, and Conductive Ag@Cu Nanocomposite Hydrogels for Flexible Wearable Sensors and Bionic Electronic Skins. <i>Macromolecular Materials and Engineering</i> , 2021, 306, 2100341.	1.7	28
217	Scalable Fabrication of Black Cu-Embedded Polydimethylsiloxane for Enhancing Triboelectric Nanogenerator Performance in Energy Harvesting and Self-Powered Sensing. <i>Advanced Energy and Sustainability Research</i> , 2021, 2, 2100116.	2.8	8

#	ARTICLE	IF	CITATIONS
218	Hierarchical Structure Fabrication of IPMC Strain Sensor With High Sensitivity. <i>Frontiers in Materials</i> , 2021, 8, .	1.2	3
219	A Motion Capturing and Energy Harvesting Hybridized Lowerâ€Limb System for Rehabilitation and Sports Applications. <i>Advanced Science</i> , 2021, 8, e2101834.	5.6	72
220	Poly(Vinylidene Fluoride) Nanofiber Array Films with High Strength for Effective Impact Energy Harvesting. <i>Energy Technology</i> , 2021, 9, 2100345.	1.8	3
221	Passive Electronic Skin with Highly Sensitive Tactile Sensory Capabilities. <i>ACS Applied Electronic Materials</i> , 0, , .	2.0	0
222	Mapping the Progress in Flexible Electrodes for Wearable Electronic Textiles: Materials, Durability, and Applications. <i>Advanced Electronic Materials</i> , 2022, 8, 2100578.	2.6	40
223	Integrated Bifunctional Oxygen Electrodes for Flexible Zincâ€Air Batteries: From Electrode Designing to Wearable Energy Storage. <i>Advanced Materials Technologies</i> , 2022, 7, 2100673.	3.0	12
224	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
225	Bioinspired Multifunctional Photonicâ€Electronic Smart Skin for Ultrasensitive Health Monitoring, for Visual and Selfâ€Powered Sensing. <i>Advanced Materials</i> , 2021, 33, e2102332.	11.1	107
226	Ultrathin Stretchable Triboelectric Nanogenerators Improved by Postcharging Electrode Material. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 42966-42976.	4.0	50
227	Recent advances in cellulose-based flexible triboelectric nanogenerators. <i>Nano Energy</i> , 2021, 87, 106175.	8.2	113
228	Exploration of the Underlying Space in Microscopic Images via Deep Learning for Additively Manufactured Piezoceramics. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 53439-53453.	4.0	6
229	Micromechanics for energy generation. <i>Journal of Micromechanics and Microengineering</i> , 2021, 31, 114003.	1.5	6
230	Washable, breathable, and stretchable e-textiles wirelessly powered by omniphobic silk-based coils. <i>Nano Energy</i> , 2021, 87, 106155.	8.2	27
231	Self-Powered Smart Arm Training Band Sensor Based on Extremely Stretchable Hydrogel Conductors. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 44868-44877.	4.0	49
232	Theoretical investigation of polymer molecular structure influence on dielectric properties and mechanical properties. <i>Polymers for Advanced Technologies</i> , 0, , .	1.6	1
233	Fiber-Based Electret Nanogenerator with a Semisupported Structure for Wearable Electronics. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 46840-46847.	4.0	10
234	A Polyester/Polypyrrole Textileâ€Based Ultrasensitive Wearable Microdistance Sensor. <i>Macromolecular Materials and Engineering</i> , 2021, 306, 2100478.	1.7	3
235	Self-powered skin electronics for energy harvesting and healthcare monitoring. <i>Materials Today Energy</i> , 2021, 21, 100786.	2.5	36

#	ARTICLE	IF	CITATIONS
236	Conductive Polymer Nanocomposites for Stretchable Electronics: Material Selection, Design, and Applications. ACS Applied Materials & Interfaces, 2021, 13, 43831-43854.	4.0	81
237	Progress in the Triboelectric Human-Machine Interfaces (HMIs)-Moving from Smart Gloves to AI/Haptic Enabled HMI in the 5G/IoT Era. Nanoenergy Advances, 2021, 1, 81-121.	3.6	59
238	3D Printed Double Roller-Based Triboelectric Nanogenerator for Blue Energy Harvesting. Micromachines, 2021, 12, 1089.	1.4	6
239	Analyzing the output performance of the knitted triboelectric nanogenerator based on the fish-scale shape using fast Fourier transform. Textile Research Journal, 0, , 004051752110445.	1.1	1
240	From contact electrification to triboelectric nanogenerators. Reports on Progress in Physics, 2021, 84, 096502.	8.1	244
241	Self-Powered and Interface-Independent Tactile Sensors Based on Bilayer Single-Electrode Triboelectric Nanogenerators for Robotic Electronic Skin. Advanced Intelligent Systems, 2023, 5, 2100120.	3.3	17
242	High-Efficiency Wastewater Purification System Based on Coupled Photoelectric-Catalytic Action Provided by Triboelectric Nanogenerator. Nano-Micro Letters, 2021, 13, 194.	14.4	26
243	Skinless porous films generated by supercritical CO2 foaming for high-performance complementary shaped triboelectric nanogenerators and self-powered sensors. Nano Energy, 2021, 87, 106148.	8.2	33
244	Resolving the Tribo-catalytic reaction mechanism for biochar regulated Zinc Oxide and its application in protein transformation. Journal of Colloid and Interface Science, 2022, 607, 1908-1918.	5.0	20
245	One-Step Preparation of a Core-Spun Cu/P(VDF-TrFE) Nanofibrous Yarn for Wearable Smart Textile to Monitor Human Movement. ACS Applied Materials & Interfaces, 2021, 13, 44234-44242.	4.0	41
246	Wearable Self-Powered Electrochemical Devices for Continuous Health Management. Advanced Functional Materials, 2021, 31, 2107042.	7.8	58
247	Surface porous microstructured fibers with customized functionalities for 1D functional materials. Composites Part B: Engineering, 2021, 223, 109112.	5.9	11
248	On-demand bioenergy from a fingertip. Trends in Chemistry, 2021, 3, 800-802.	4.4	2
249	An integrated wearable strain, temperature and humidity sensor for multifunctional monitoring. Composites Part A: Applied Science and Manufacturing, 2021, 149, 106504.	3.8	21
250	Scalable fabrication of stretchable and washable textile triboelectric nanogenerators as constant power sources for wearable electronics. Nano Energy, 2021, 88, 106247.	8.2	66
251	Cation functionalized nylon composite nanofibrous mat as a highly positive friction layer for robust, high output triboelectric nanogenerators and self-powered sensors. Nano Energy, 2021, 88, 106300.	8.2	47
252	Growth-Controllable Triboelectric Nanogenerator Based on Surface-Attached Metal-Organic Framework Layer on Living Leaf. Small, 2021, 17, e2103430.	5.2	21
253	Gas-permeable and highly sensitive, washable and wearable strain sensors based on graphene/carbon nanotubes hybrids e-textile. Composites Part A: Applied Science and Manufacturing, 2021, 149, 106556.	3.8	22

#	ARTICLE	IF	CITATIONS
254	Emerging artificial intelligence in piezoelectric and triboelectric nanogenerators. <i>Nano Energy</i> , 2021, 88, 106227.	8.2	76
255	Origin of enhanced piezoelectric energy harvesting in all-polymer-based core-shell nanofibers with controlled shell-thickness. <i>Composites Part B: Engineering</i> , 2021, 223, 109141.	5.9	22
256	Scalable fabrication of in-plane microscale self-powered integrated systems for fast-response and highly selective dual-channel gas detection. <i>Nano Energy</i> , 2021, 88, 106253.	8.2	13
257	Human body-based self-powered wearable electronics for promoting wound healing driven by biomechanical motions. <i>Nano Energy</i> , 2021, 89, 106465.	8.2	55
258	A humidity-resistant, stretchable and wearable textile-based triboelectric nanogenerator for mechanical energy harvesting and multifunctional self-powered haptic sensing. <i>Chemical Engineering Journal</i> , 2021, 423, 130200.	6.6	60
259	A stretchable self-powered triboelectric tactile sensor with EGaln alloy electrode for ultra-low-pressure detection. <i>Nano Energy</i> , 2021, 89, 106320.	8.2	41
260	Highly sensitive and wearable self-powered sensors based on a stretchable hydrogel comprising dynamic hydrogen bond and dual coordination bonds. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2021, 628, 127336.	2.3	18
261	Piezoelectric fiber composites with polydopamine interfacial layer for self-powered wearable biomonitoring. <i>Nano Energy</i> , 2021, 89, 106321.	8.2	151
262	Self-healable organic light-emitting devices based on electronic textiles. <i>Nano Energy</i> , 2021, 89, 106481.	8.2	3
263	Fully sustainable and high-performance fish gelatin-based triboelectric nanogenerator for wearable movement sensing and human-machine interaction. <i>Nano Energy</i> , 2021, 89, 106329.	8.2	41
264	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
265	Insulating polymers for flexible thermoelectric composites: A multi-perspective review. <i>Composites Communications</i> , 2021, 28, 100914.	3.3	20
266	Direct-current piezoelectric nanogenerator based on two-layer zinc oxide nanorod arrays with equal c-axis orientation for energy harvesting. <i>Chemical Engineering Journal</i> , 2021, 426, 131262.	6.6	19
267	Carbon nanomaterial-based nanogenerators for harvesting energy from environment. <i>Nano Energy</i> , 2021, 90, 106494.	8.2	34
268	Artificial intelligence of toilet (AI-Toilet) for an integrated health monitoring system (IHMS) using smart triboelectric pressure sensors and image sensor. <i>Nano Energy</i> , 2021, 90, 106517.	8.2	74
269	A progressive strategy for harvesting mechanical energy using flexible PVDF-rGO-MoS ₂ nanocomposites film-based piezoelectric nanogenerator. <i>Journal of Alloys and Compounds</i> , 2022, 890, 161840.	2.8	33
270	Self-powered materials obtained by interfacing functional assemblies with energy harvesting films. <i>Materials Chemistry Frontiers</i> , 2021, 5, 2623-2648.	3.2	11
271	Electrospun PVDF-TrFE/MXene Nanofiber Mat-Based Triboelectric Nanogenerator for Smart Home Appliances. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 4955-4967.	4.0	211

#	ARTICLE	IF	CITATIONS
272	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
273	Fiber-based thermoelectrics for solid, portable, and wearable electronics. <i>Energy and Environmental Science</i> , 2021, 14, 729-764.	15.6	143
274	Elastic and Stretchable Functional Fibers: A Review of Materials, Fabrication Methods, and Applications. <i>Advanced Fiber Materials</i> , 2021, 3, 1-13.	7.9	74
275	PVDF microspheres@PLLA nanofibers-based hybrid tribo/piezoelectric nanogenerator with excellent electrical output properties. <i>Materials Advances</i> , 2021, 2, 6011-6019.	2.6	7
276	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
277	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
278	Textile triboelectric nanogenerators for self-powered biomonitoring. <i>Journal of Materials Chemistry A</i> , 2021, 9, 19149-19178.	5.2	55
280	Phase transformation and its effect on the piezopotential in a bent zinc oxide nanowire. <i>Nanotechnology</i> , 2021, 32, 075404.	1.3	1
281	All-textile wearable triboelectric nanogenerator using pile-embroidered fibers for enhancing output power. <i>Smart Materials and Structures</i> , 2020, 29, 055026.	1.8	30
282	Recent Trends, Construction, and Applications of Smart Textiles and Clothing for Monitoring of Health Activity: A Comprehensive Multidisciplinary Review. <i>IEEE Reviews in Biomedical Engineering</i> , 2022, 15, 36-60.	13.1	21
283	Review—A Review of Advanced Electronic Applications Based on Carbon Nanomaterials. <i>ECS Journal of Solid State Science and Technology</i> , 2020, 9, 071002.	0.9	7
284	A Flexible Pressure Sensor Based on Bimaterial Conductivity-Conversion Mechanism. <i>IEEE Electron Device Letters</i> , 2021, 42, 1857-1860.	2.2	6
285	Bifunctional flexible fabrics with excellent Joule heating and electromagnetic interference shielding performance based on copper sulfide/glass fiber composites. <i>Nanoscale</i> , 2021, 13, 18558-18569.	2.8	8
286	Categorizing wearable batteries: Unidirectional and omnidirectional deformable batteries. <i>Matter</i> , 2021, 4, 3146-3160.	5.0	44
288	Conductive Composite Fiber with Customizable Functionalities for Energy Harvesting and Electronic Textiles. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 49927-49935.	4.0	24
289	Large-Scale, Cuttable, Full Tissue-Based Capacitive Pressure Sensor for the Detection of Human Physiological Signals and Pressure Distribution. <i>ACS Omega</i> , 2021, 6, 27208-27215.	1.6	9
290	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
291	Fabrication-Assisted MXene/Silicone Nanocomposite-Based Triboelectric Nanogenerators for Self-Powered Sensors and Wearable Electronics. <i>Advanced Functional Materials</i> , 2022, 32, 2107143.	7.8	81

#	ARTICLE	IF	CITATIONS
292	Preparation of Flexible N-Doped Carbon Nanotube/MXene/PAN Nanocomposite Films with Improved Electrochemical Properties. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 15352-15363.	1.8	25
293	Large-scale preparation of ultra-long ZnSe-PbSe heterojunction nanowires for flexible broadband photodetectors. <i>Journal of Science: Advanced Materials and Devices</i> , 2021, 7, 100396-100396.	1.5	1
294	Mutually exclusive ytterbium and nitrogen co-doping of mesoporous titania-carbon for self-cleanable and sustainable triboelectric nanogenerators. <i>Nano Energy</i> , 2021, 90, 106615.	8.2	10
295	Ultra-stability high-voltage triboelectric nanogenerator designed by ternary dielectric triboelectrification with partial soft-contact and non-contact mode. <i>Nano Energy</i> , 2021, 90, 106585.	8.2	65
296	Low-entropy structured wearable film sensor with piezoresistive-piezoelectric hybrid effect for 3D mechanical signal screening. <i>Nano Energy</i> , 2021, 90, 106603.	8.2	41
297	Ferroelectric-assisted high-performance triboelectric nanogenerators based on electrospun P(VDF-TrFE) composite nanofibers with barium titanate nanofillers. <i>Nano Energy</i> , 2021, 90, 106600.	8.2	52
298	Stretchable Transparent Electrode <i>via</i> Wettability Self-Assembly in Mechanically Induced Self-Cracking. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 52880-52891.	4.0	8
299	A Polycation-Modified Nanofillers Tailored Polymer Electrolytes Fiber for Versatile Biomechanical Energy Harvesting and Full-Range Personal Healthcare Sensing. <i>Advanced Functional Materials</i> , 2022, 32, 2106731.	7.8	33
300	A Hydrophobic Self-Repairing Power Textile for Effective Water Droplet Energy Harvesting. <i>ACS Nano</i> , 2021, 15, 18172-18181.	7.3	83
301	Wearable textile triboelectric generator based on nanofiber core-spun yarn coupled with electret effect. <i>Journal of Colloid and Interface Science</i> , 2022, 608, 2339-2346.	5.0	22
302	Enabling Distributed Intelligence with Ferroelectric Multifunctionalities. <i>Advanced Science</i> , 2022, 9, e2103842.	5.6	15
303	Advanced functional materials and devices for energy conversion and storage applications. , 2022, , 43-96.		2
304	Flexible layered cotton cellulose-based nanofibrous membranes for piezoelectric energy harvesting and self-powered sensing. <i>Carbohydrate Polymers</i> , 2022, 275, 118740.	5.1	16
305	Textiles in soft robots: Current progress and future trends. <i>Biosensors and Bioelectronics</i> , 2022, 196, 113690.	5.3	50
306	Pruney fingers-inspired highly stretchable and sensitive piezoresistive fibers with isotropic wrinkles and robust interfaces. <i>Chemical Engineering Journal</i> , 2022, 430, 133005.	6.6	18
307	Triboelectric nanogenerator based wearable energy harvesting devices. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2020, 69, 170202.	0.2	2
308	Recent Progress in the Energy Harvesting Technology—From Self-Powered Sensors to Self-Sustained IoT, and New Applications. <i>Nanomaterials</i> , 2021, 11, 2975.	1.9	60
309	Effects of polyimide curing on image sticking behaviors of flexible displays. <i>Scientific Reports</i> , 2021, 11, 21805.	1.6	5

#	ARTICLE	IF	CITATIONS
310	Plasma engineering of microstructured piezo “ Triboelectric hybrid nanogenerators for wide bandwidth vibration energy harvesting. Nano Energy, 2022, 91, 106673.	8.2	12
311	Scalable core“ spun coating yarn-based triboelectric nanogenerators with hierarchical structure for wearable energy harvesting and sensing via continuous manufacturing. Nano Energy, 2022, 91, 106672.	8.2	49
312	Novel nanofluidic and microfluidic devices and their applications. Current Opinion in Chemical Engineering, 2020, 29, 17-25.	3.8	2
313	Cost-effective fabrication approaches for improving output performance of triboelectric energy harvesters. Journal of Electrostatics, 2022, 115, 103640.	1.0	6
314	A waterproof and breathable textile pressure sensor with high sensitivity based on PVDF/ZnO hierarchical structure. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 633, 127890.	2.3	25
315	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
316	Theoretical model and optimal output of a cylindrical triboelectric nanogenerator. Nano Energy, 2022, 92, 106762.	8.2	19
317	Transient physical modeling and comprehensive optimal design of air-breakdown direct-current triboelectric nanogenerators. Nano Energy, 2022, 92, 106742.	8.2	12
318	Recent Advances in Multiresponsive Flexible Sensors towards E“skin: A Delicate Design for Versatile Sensing. Small, 2022, 18, e2103734.	5.2	76
319	Wearable, Breathable and Waterproof Triboelectric Nanogenerators for Harvesting Human Motion and Raindrop Energy. Advanced Materials Technologies, 2022, 7, .	3.0	30
320	WEARABLE TEXTILE-BASED PIEZOELECTRIC NANOGENERATORS WITH GRAPHENE/ZNO/AgNW. Eski“ehir Technical University Journal of Science and Technology A - Applied Sciences and Engineering, 0, , .	0.4	0
321	Hard coating films of fluorine-containing ladder-like structured polysilsesquioxane as negative triboelectric materials for high-performance triboelectric generators. Extreme Mechanics Letters, 2022, 50, 101533.	2.0	4
322	Wearable Triboelectric Sensors Enabled Gait Analysis and Waist Motion Capture for IoT“Based Smart Healthcare Applications. Advanced Science, 2022, 9, e2103694.	5.6	143
323	Evolving Flexible Sensors, Wearable and Implantable Technologies Towards BodyNET for Advanced Healthcare and Reinforced Life Quality. IEEE Open Journal of Circuits and Systems, 2021, 2, 702-720.	1.4	34
324	Mycena Chlorophos-Inspired Autoluminescent Triboelectric Fiber for Wearable Energy Harvesting, Self-Powered Sensing, and as Human-Device Interfaces. SSRN Electronic Journal, 0, , .	0.4	0
325	Constructing a versatile hybrid harvester for efficient power generation, detection and clean water collection. Nano Energy, 2022, 94, 106932.	8.2	5
326	Porous, multi-layered piezoelectric composites based on highly oriented PZT/PVDF electrospinning fibers for high-performance piezoelectric nanogenerators. Journal of Advanced Ceramics, 2022, 11, 331-344.	8.9	60
327	Superwettable hybrid dielectric based multimodal triboelectric nanogenerator with superior durability and efficiency for biomechanical energy and hydropower harvesting. Chemical Engineering Journal, 2022, 431, 134002.	6.6	13

#	ARTICLE	IF	CITATIONS
328	Perspective of smart self-powered neuromorphic sensor and their challenges towards artificial intelligence for next-generation technology. <i>Materials Letters</i> , 2022, 310, 131541.	1.3	4
329	Geometrically versatile triboelectric yarn-based harvesters via carbon nanotubes-elastomer composites. <i>Composites Science and Technology</i> , 2022, 219, 109247.	3.8	10
330	Highly wearable, machine-washable, and self-cleaning fabric-based triboelectric nanogenerator for wireless drowning sensors. <i>Nano Energy</i> , 2022, 93, 106835.	8.2	55
331	Opportunities and Challenges in Triboelectric Nanogenerator (TENG) based Sustainable Energy Generation Technologies: A Mini-Review. <i>Chemical Engineering Journal Advances</i> , 2022, 9, 100237.	2.4	65
332	Three-dimensional polypyrrole induced high-performance flexible piezoelectric nanogenerators for mechanical energy harvesting. <i>Composites Science and Technology</i> , 2022, 219, 109260.	3.8	22
333	A sliding hybrid triboelectric-electromagnetic nanogenerator with staggered electrodes for human motion posture. <i>Energy Reports</i> , 2022, 8, 617-625.	2.5	8
334	A Micro-Watt Electrolytic Power Scavenger driven by Eye-Blinking Motion. , 2021, , .		3
335	A mini-review of microstructural control during composite fiber spinning. <i>Polymer International</i> , 2022, 71, 569-577.	1.6	6
336	Lignin-Based CdS Dots as Multifunctional Platforms for Sensing and Wearable Photodynamic Coatings. <i>ACS Applied Nano Materials</i> , 2022, 5, 2748-2761.	2.4	12
337	Highly flexible and conductive stainless-steel thread based piezoelectric coaxial yarn nanogenerators via solution coating and touch-spun nanofibers coating methods. <i>Smart Materials and Structures</i> , 2022, 31, 035028.	1.8	6
338	Electrical devices based on hybrid membranes with mechanically and magnetically controllable, resistive, capacitive and piezoelectric properties. <i>Smart Materials and Structures</i> , 2022, 31, 045001.	1.8	7
339	Stretchable graded multichannel self-powered respiratory sensor inspired by shark gill. <i>Fundamental Research</i> , 2022, 2, 619-628.	1.6	29
340	Laser processing of graphene and related materials for energy storage: State of the art and future prospects. <i>Progress in Energy and Combustion Science</i> , 2022, 91, 100981.	15.8	124
341	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
342	Perspective on the development of high performance flexible piezoelectric energy harvesters. <i>Journal of Materials Chemistry C</i> , 2022, 10, 2905-2924.	2.7	23
343	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
344	Ultra-Sensitive, Deformable, and Transparent Triboelectric Tactile Sensor Based on Micro-Pyramid Patterned Ionic Hydrogel for Interactive Human-Machine Interfaces. <i>Advanced Science</i> , 2022, 9, e2104168.	5.6	123
345	A New Class of Electronic Devices Based on Flexible Porous Substrates. <i>Advanced Science</i> , 2022, 9, e2105084.	5.6	40

#	ARTICLE	IF	CITATIONS
346	Flexible Triboelectric Nanogenerators Based on Electrospun Poly(vinylidene fluoride) with MoS ₂ /Carbon Nanotube Composite Nanofibers. <i>Langmuir</i> , 2022, 38, 1479-1487.	1.6	18
347	Functionalized carbon material-based electrochemical sensors for day-to-day applications. , 2022, , 97-111.		6
348	Recent Advances in Intelligent Wearable Medical Devices Integrating Biosensing and Drug Delivery. <i>Advanced Materials</i> , 2022, 34, e2108491.	11.1	64
349	Designing wearable microgrids: towards autonomous sustainable on-body energy management. <i>Energy and Environmental Science</i> , 2022, 15, 82-101.	15.6	48
350	Ferroelectric polymers for energy harvesting. , 2022, , 503-533.		0
351	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
352	A Programmable Dual-Regime Spray for Large-Scale and Custom-Designed Electronic Textiles. <i>Advanced Materials</i> , 2022, 34, e2108021.	11.1	12
353	Helical Fiber Strain Sensors Based on Triboelectric Nanogenerators for Self-Powered Human Respiratory Monitoring. <i>ACS Nano</i> , 2022, 16, 2811-2821.	7.3	102
354	MXenes and their composites for energy harvesting applications. , 2022, , 687-723.		1
355	Self-assisted wound healing using piezoelectric and triboelectric nanogenerators. <i>Science and Technology of Advanced Materials</i> , 2022, 23, 1-16.	2.8	32
356	Magnetic capsule triboelectric nanogenerators. <i>Scientific Reports</i> , 2022, 12, 89.	1.6	21
357	Enhanced pressure sensors in supercapacitive piezoelectric mixed mode with jelly-gel as dielectric layer. <i>Journal of Materials Science</i> , 2022, 57, 3553-3564.	1.7	6
358	Electrospun BiFeO ₃ Nanofibers for Vibrational Energy Harvesting Application. <i>Advanced Engineering Materials</i> , 2022, 24, .	1.6	11
359	Wearable Triboelectric Nanogenerator from Waste Materials for Autonomous Information Transmission via Morse Code. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 5328-5337.	4.0	52
360	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
361	Wearable Piezoelectric Nanogenerators Based on Core-Shell Ga-PZT@GaO _x Nanorod-Enabled P(VDF-TrFE) Composites. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 7990-8000.	4.0	21
362	Self-powered multifunctional monitoring and analysis system based on dual-triboelectric nanogenerator and chitosan/activated carbon film humidity sensor. <i>Nano Energy</i> , 2022, 94, 106881.	8.2	58
363	Constructing highly tribopositive elastic yarn through interfacial design and assembly for efficient energy harvesting and human-interactive sensing. <i>Nano Energy</i> , 2022, 94, 106956.	8.2	36

#	ARTICLE	IF	CITATIONS
364	Mycena chlorophos-inspired autoluminescent triboelectric fiber for wearable energy harvesting, self-powered sensing, and as human–device interfaces. <i>Nano Energy</i> , 2022, 94, 106944.	8.2	21
365	Oscillatory magnetic piezoelectric nanogenerators under low-frequency and low-amplitude excitations. <i>Sustainable Energy Technologies and Assessments</i> , 2022, 52, 102022.	1.7	9
366	A large-area versatile textile for radiative warming and biomechanical energy harvesting. <i>Nano Energy</i> , 2022, 95, 106996.	8.2	20
367	Fabrication of Ag nanoparticles on a Cu-substrate with excellent superhydrophobicity, anti-corrosion, and photocatalytic activity. <i>AEJ - Alexandria Engineering Journal</i> , 2022, 61, 6507-6521.	3.4	11
368	Hierarchically designed nanocomposites for triboelectric nanogenerator toward biomechanical energy harvester and smart home system. <i>Nano Energy</i> , 2022, 95, 107047.	8.2	23
369	A waterwheel hybrid generator with disk triboelectric nanogenerator and electromagnetic generator as a power source for an electrocoagulation system. <i>Nano Energy</i> , 2022, 95, 107048.	8.2	28
370	Sweat-Permeable, Biodegradable, Transparent and Self-powered Chitosan-Based Electronic Skin with Ultrathin Elastic Gold Nanofibers. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	80
371	Underwater Monitoring Networks Based on Cable-Structured Triboelectric Nanogenerators. <i>Research</i> , 2022, 2022, 9809406.	2.8	4
372	Ultrathin Eardrum-Inspired Self-Powered Acoustic Sensor for Vocal Synchronization Recognition with the Assistance of Machine Learning. <i>Small</i> , 2022, 18, e2106960.	5.2	43
373	A universal construction of robust interface between 2D conductive polymer and cellulose for textile supercapacitor. <i>Carbohydrate Polymers</i> , 2022, 284, 119230.	5.1	14
374	Solid-state intrinsically-superstretchable multifunctional nanogenerator fiber for biomechanical and ambient electromagnetic energy harvesting and self-powered sensing. <i>Nano Energy</i> , 2022, 95, 107035.	8.2	12
375	Advances in Biosensing and Environmental Monitoring Based on Electrospun Nanofibers. <i>Advanced Fiber Materials</i> , 2022, 4, 404-435.	7.9	73
376	Patterning of Metal Nanowire Networks: Methods and Applications. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 60736-60762.	4.0	30
377	Piezoelectric nanogenerators for personalized healthcare. <i>Chemical Society Reviews</i> , 2022, 51, 3380-3435.	18.7	145
378	Configurable direction sensitivity of skin-mounted microfluidic strain sensor with auxetic metamaterial. <i>Lab on A Chip</i> , 2022, 22, 1630-1639.	3.1	9
379	Stretchable thermoelectric materials/devices for low-grade thermal energy harvesting. , 2022, , 11-40.		1
380	Performance Enhancement of Transparent and Flexible Triboelectric Nanogenerator Based on One-Dimensionally Hybridized Copper/Polydimethylsiloxane Film. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
381	Ion transport through layered hydrogels for low-frequency energy harvesting toward self-powered chemical systems. <i>Journal of Materials Chemistry A</i> , 2022, 10, 11881-11892.	5.2	1

#	ARTICLE	IF	CITATIONS
382	Stretchable, breathable, and highly sensitive capacitive and self-powered electronic skin based on core-shell nanofibers. <i>Nanoscale</i> , 2022, 14, 6600-6611.	2.8	18
383	Large-scale fabrication of core-shell triboelectric braided fibers and power textiles for energy harvesting and plantar pressure monitoring. <i>EcoMat</i> , 2022, 4, .	6.8	44
384	Improving Wastewater Treatment by Triboelectric-Photo/Electric Coupling Effect. <i>ACS Nano</i> , 2022, 16, 3449-3475.	7.3	60
385	Melt coated flexible stainless-steel thread based co-axial triboelectric yarn nanogenerators. <i>Materials Technology</i> , 2022, 37, 2465-2479.	1.5	2
386	Review on Development and Application of 3D-Printing Technology in Textile and Fashion Design. <i>Coatings</i> , 2022, 12, 267.	1.2	37
387	Enhanced piezoelectric performance of PVDF/BiCl ₃ /ZnO nanofiber-based piezoelectric nanogenerator. <i>European Polymer Journal</i> , 2022, 166, 110956.	2.6	37
388	Artificial Intelligence-Enabled Sensing Technologies in the 5G/Internet of Things Era: From Virtual Reality/Augmented Reality to the Digital Twin. <i>Advanced Intelligent Systems</i> , 2022, 4, .	3.3	146
389	Electronic textiles for energy, sensing, and communication. <i>IScience</i> , 2022, 25, 104174.	1.9	30
390	Liquid Metal Microgels for Three-Dimensional Printing of Smart Electronic Clothes. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 13458-13467.	4.0	31
391	Smart Textile Triboelectric Nanogenerators: Prospective Strategies for Improving Electricity Output Performance. <i>Nanoenergy Advances</i> , 2022, 2, 133-164.	3.6	59
392	Electromechanical Nanogenerators for Cell Modulation. <i>Nanoenergy Advances</i> , 2022, 2, 110-132.	3.6	2
393	MXene-Based Textile Sensors for Wearable Applications. <i>ACS Sensors</i> , 2022, 7, 929-950.	4.0	42
394	Electroassisted Core-Spun Triboelectric Nanogenerator Fabrics for IntelliSense and Artificial Intelligence Perception. <i>ACS Nano</i> , 2022, 16, 4415-4425.	7.3	54
395	Highly Reliable Flexible Device with a Charge Compensation Layer. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 12863-12872.	4.0	3
396	Decoding lip language using triboelectric sensors with deep learning. <i>Nature Communications</i> , 2022, 13, 1401.	5.8	77
397	A smart sensor that can be woven into everyday life. <i>Nature</i> , 2022, 603, 585-586.	13.7	8
398	Stomatopod-inspired integrate-and-fire triboelectric nanogenerator for harvesting mechanical energy with ultralow vibration speed. <i>Applied Energy</i> , 2022, 312, 118739.	5.1	6
399	Novel Wearable Pyrothermoelectric Hybrid Generator for Solar Energy Harvesting. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 17330-17339.	4.0	12

#	ARTICLE	IF	CITATIONS
400	A stretchable, self-healing, okra polysaccharide-based hydrogel for fast-response and ultra-sensitive strain sensors. <i>International Journal of Biological Macromolecules</i> , 2022, 205, 491-499.	3.6	30
401	Dynamic and Reprocessable Fluorinated Poly(hindered urea) Network Materials Containing Ionic Liquids to Enhance Triboelectric Performance. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 17806-17817.	4.0	10
402	An anisotropic hyper-visco-pseudo-elastic model and explicit stress solutions for fabric reinforced rubber composites. <i>International Journal of Solids and Structures</i> , 2022, 242, 111519.	1.3	9
403	Porosity manipulation to boost piezoelectric output via supercritical carbon dioxide foaming and surface modification. <i>Materials and Design</i> , 2022, 217, 110616.	3.3	5
404	Industrial production of bionic scales knitting fabric-based triboelectric nanogenerator for outdoor rescue and human protection. <i>Nano Energy</i> , 2022, 97, 107168.	8.2	28
405	Ferromagnetic-assisted Maxwell's displacement current based on iron/polymer composite for improving the triboelectric nanogenerator output. <i>Nano Energy</i> , 2022, 96, 107139.	8.2	25
406	Multifunctional device integrating dual-temperature regulator for outdoor personal thermal comfort and triboelectric nanogenerator for self-powered human-machine interaction. <i>Nano Energy</i> , 2022, 97, 107148.	8.2	39
407	Highly integrated, scalable manufacturing and stretchable conductive core/shell fibers for strain sensing and self-powered smart textiles. <i>Nano Energy</i> , 2022, 98, 107240.	8.2	30
408	Advanced triboelectric nanogenerators based on low-dimension carbon materials: A review. <i>Carbon</i> , 2022, 194, 81-103.	5.4	37
409	Liquid-solid triboelectric nanogenerators for a wide operation window based on slippery lubricant-infused surfaces (SLIPS). <i>Chemical Engineering Journal</i> , 2022, 439, 135688.	6.6	19
410	High-Performance-Integrated Stretchable Supercapacitors Based on a Polyurethane Organo/Hydrogel Electrolyte. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 622-632.	4.0	19
411	Recent Advances in Sustainable Wearable Energy Devices with Nanoscale Materials and Macroscale Structures. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	43
412	Extremely Stretchable and Tough Piezoelectric Gels for Artificial Electronic Skin. <i>Advanced Materials Technologies</i> , 2022, 7, .	3.0	8
413	Multi-Functional Hybridized Units for Self- Sustainable IoT Sensing and Ultra-Low Frequency Energy Harvesting. , 2021, , .		0
414	Continuously Reinforced Carbon Nanotube Film Sea-Cucumber-like Polyaniline Nanocomposites for Flexible Self-Supporting Energy-Storage Electrode Materials. <i>Nanomaterials</i> , 2022, 12, 8.	1.9	5
415	Recent Advances in Self-Powered Piezoelectric and Triboelectric Sensors: From Material and Structure Design to Frontier Applications of Artificial Intelligence. <i>Sensors</i> , 2021, 21, 8422.	2.1	14
416	Highly Sensitive Multifunctional Electronic Skin Based on Nanocellulose/MXene Composite Films with Good Electromagnetic Shielding Biocompatible Antibacterial Properties. <i>Biomacromolecules</i> , 2022, 23, 182-195.	2.6	41
417	Highly Tunable Piezoelectricity of Flexible Nanogenerators Based on 3D Porously Architected Membranes for Versatile Energy Harvesting and Self-Powered Multistimulus Sensing. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 17128-17141.	3.2	15

#	ARTICLE	IF	CITATIONS
418	Forward polarization enhanced all-polymer based sustainable triboelectric nanogenerator from oriented electrospinning PVDF/cellulose nanofibers for energy harvesting. Sustainable Energy and Fuels, 2022, 6, 2377-2386.	2.5	26
419	Polysomnographic Observation Using Triboelectric Pressure Sensor Composed of Polymer-Pairs Having Coarse Surface. Fibers and Polymers, 2022, 23, 1490-1499.	1.1	9
420	Hybrid piezoelectric-triboelectric nanogenerators for flexible electronics: Recent advances and perspectives. Journal of Science: Advanced Materials and Devices, 2022, 7, 100461.	1.5	25
421	Reconfigurable Fiber Triboelectric Nanogenerator for Self-Powered Defect Detection. ACS Nano, 2022, 16, 7721-7731.	7.3	15
422	Washable Patches with Gold Nanowires/Textiles in Wearable Sensors for Health Monitoring. ACS Applied Materials & Interfaces, 2022, 14, 18884-18900.	4.0	32
423	Enhanced performance triboelectric nanogenerator based on porous structure C/MnO ₂ nanocomposite for energy harvesting. Nano Research, 2022, 15, 7163-7171.	5.8	7
424	Piezoelectric Fibers: Processing and Challenges. ACS Applied Materials & Interfaces, 2022, 14, 16961-16982.	4.0	24
425	Bibliometric Analysis of Artificial Intelligence in Textiles. Materials, 2022, 15, 2910.	1.3	18
426	Tailoring auxetic mechanical metamaterials to achieve patterned wire strain sensors with controllable high sensitivity. Chemical Engineering Journal, 2022, 442, 136317.	6.6	13
427	Performance Enhancement of Transparent and Flexible Triboelectric Nanogenerator Based on One-Dimensionally Hybridized Copper/Polydimethylsiloxane Film. SSRN Electronic Journal, 0, , .	0.4	0
428	Customizing Triboelectric Nanogenerator on Everyday Clothes by Screen-Printing Technology for Biomechanical Energy Harvesting and Human-Interactive Applications. SSRN Electronic Journal, 0, , .	0.4	0
429	Electrospun Hydrolyzed Collagen from Tanned leather Shavings For Bio-Triboelectric Nanogenerator. Materials Advances, 0, , .	2.6	5
430	SYNTHETIC PIEZOELECTRIC POLYMERS AND THEIR APPLICATIONS IN MEDICINE; 2020-2021 OVERVIEW. Journal of Innovative Science and Engineering (JISE), 0, , .	0.7	0
431	Variable Direct Electromechanical Properties of As-Electrospun Polystyrene Microfiber Mats with Different Electrospinning Conditions. Polymers, 2022, 14, 1840.	2.0	2
432	Textile-Based Flexible Capacitive Pressure Sensors: A Review. Nanomaterials, 2022, 12, 1495.	1.9	22
433	Ultrafast, highly sensitive, flexible textile-based humidity sensors made of nanocomposite filaments. Materials Today Nano, 2022, 18, 100214.	2.3	9
434	An anti-freezing and strong wood-derived hydrogel for high-performance electronic skin and wearable sensing. Composites Part B: Engineering, 2022, 239, 109954.	5.9	41
435	Nanowires in Flexible Sensors: Structure is Becoming a Key in Controlling the Sensing Performance. Advanced Materials Technologies, 2022, 7, .	3.0	6

#	ARTICLE	IF	CITATIONS
436	A brief review on stretchable, compressible, and deformable supercapacitor for smart devices. <i>Chemical Engineering Journal</i> , 2022, 446, 136876.	6.6	39
437	Ti ₂ C ₃ T _x /Polyurethane Constructed by Gas-Liquid Interface Self-Assembly for Underwater Sensing. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 24659-24667.	4.0	8
438	Nanocellulose and its derived composite electrodes toward supercapacitors: Fabrication, properties, and challenges. <i>Journal of Bioresources and Bioproducts</i> , 2022, 7, 245-269.	11.8	120
439	Review-Human-Body Powered Biosensing Textiles: Body-Power Generating Wearables Based on Textiles for Human Biomonitoring. <i>Journal of the Electrochemical Society</i> , 2022, 169, 067502.	1.3	2
440	A High-Performance Bidirectional Direct Current TENG by Triboelectrification of Two Dielectrics and Local Corona Discharge. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	43
441	Hydrochromic Cspbbr3-Kbr Microcrystals for Flexible Anti-Counterfeiting and Wearable Self-Powered Biomechanical Monitoring. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
442	Insight into the Effect of Structural Geometric Design on the Sensitivity of Magnetic Strain Sensors. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
443	Breathable and Wearable Strain Sensors Based on Synergistic Conductive Carbon Nanotubes/Cotton Fabrics for Multi-directional Motion Detection. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 25753-25762.	4.0	44
444	Knitted self-powered sensing textiles for machine learning-assisted sitting posture monitoring and correction. <i>Nano Research</i> , 2022, 15, 8389-8397.	5.8	41
445	Triboelectric Nanogenerators for Cellular Bioelectrical Stimulation. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	17
446	MXene/Silver Nanowire-Based Spring Frameworks for Highly Flexible Waterproof Supercapacitors and Piezoelectrochemical-Type Pressure-Sensitive Sensor Devices. <i>Langmuir</i> , 2022, 38, 7312-7321.	1.6	9
447	Ultra-sensitive flexible piezoelectric energy harvesters inspired by pine branches for detection. <i>Nano Energy</i> , 2022, 99, 107422.	8.2	11
448	Object recognition by a heat-resistant core-sheath triboelectric nanogenerator sensor. <i>Journal of Materials Chemistry A</i> , 2022, 10, 15080-15088.	5.2	22
449	Micro-Buckled Mechano-Electrochemical Harvesting Fiber for Self-Powered Strain Sensors and Energy Harvesters. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
450	Highly Sensitive Flexible Capacitive Pressure Sensor Based on Bionic Hybrid Microstructures. , 2022, , .		1
451	Durability of Intelligent Textile Fabrics and Composite Materials. , 2022, , .		0
452	An intrinsically stretchable and bendable electrochromic device. <i>Nanotechnology</i> , 2022, 33, 405706.	1.3	7
453	Toward 3D double-electrode textile triboelectric nanogenerators for wearable biomechanical energy harvesting and sensing. <i>Chemical Engineering Journal</i> , 2022, 450, 137491.	6.6	15

#	ARTICLE	IF	CITATIONS
454	Stretchy Electrochemical Harvesters for Binarized Self-Powered Strain Gauge-Based Static Motion Sensors. <i>Sensors</i> , 2022, 22, 4542.	2.1	3
455	Progress of biomechanical energy harvesters for wearable electronic applications. <i>Journal of Micromechanics and Microengineering</i> , 2022, 32, 083001.	1.5	4
456	Enhanced Output of On-Body Direct-Current Power Textiles by Efficient Energy Management for Sustainable Working of Mobile Electronics. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	23
457	Textile Triboelectric Nanogenerators as Self Powered Wearable Temperature Sensors. , 2022, , .		1
458	V ₂ O ₅ nanowires coated yarn based temperature sensor for smart textiles. , 2022, , .		1
459	Energy-efficient PM adhesion method using functional electroactive nanofibers. <i>Energy Reports</i> , 2022, 8, 7780-7788.	2.5	7
460	Bio-piezoelectricity: fundamentals and applications in tissue engineering and regenerative medicine. <i>Biophysical Reviews</i> , 2022, 14, 717-733.	1.5	24
462	Washable Fabric Triboelectric Nanogenerators for Face Mask Application on Covid-19 Pandemic. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
463	Fibrous triboelectric nanogenerators: fabrication, integration, and application. <i>Journal of Materials Chemistry A</i> , 2022, 10, 15881-15905.	5.2	13
464	Human body IoT systems based on the triboelectrification effect: energy harvesting, sensing, interfacing and communication. <i>Energy and Environmental Science</i> , 2022, 15, 3688-3721.	15.6	93
465	An Ultrafast Self-Polarization Effect in Barium Titanate Filled Poly(Vinylidene Fluoride) Composite Film Enabled by Self-Charge Excitation Triboelectric Nanogenerator. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	28
466	Single optical microfiber enabled tactile sensor for simultaneous temperature and pressure measurement. <i>Photonics Research</i> , 2022, 10, 2040.	3.4	32
467	Multifunctional MXene-decorated cotton fabric with different weaves, outstanding photothermal effect, and rapid response. <i>Cellulose</i> , 2022, 29, 6997-7010.	2.4	21
468	Continuous Three-Dimensional Printing of Architected Piezoelectric Sensors in Minutes. <i>Research</i> , 2022, 2022, .	2.8	7
469	Morphological Engineering of Sensing Materials for Flexible Pressure Sensors and Artificial Intelligence Applications. <i>Nano-Micro Letters</i> , 2022, 14, .	14.4	75
470	Broadband characteristics of high-performance energy-harvesting phononic crystals with point defect. <i>Modern Physics Letters B</i> , 2022, 36, .	1.0	2
471	Double Nanocomposites-Based Piezoelectric Nanogenerators for High-Performance Energy Harvester. <i>ACS Applied Energy Materials</i> , 2022, 5, 8835-8843.	2.5	7
472	A review of humidity gradient-based power generator: Devices, materials and mechanisms. <i>Nano Energy</i> , 2022, 101, 107591.	8.2	22

#	ARTICLE	IF	CITATIONS
473	Ferroelectricity-Coupled 2D-MXene-Based Hierarchically Designed High-Performance Stretchable Triboelectric Nanogenerator. <i>ACS Nano</i> , 2022, 16, 11415-11427.	7.3	31
474	A full-textile triboelectric nanogenerator with multisource energy harvesting capability. <i>Energy Conversion and Management</i> , 2022, 267, 115910.	4.4	18
475	Brush drawing multifunctional electronic textiles for human-machine interfaces. <i>Current Applied Physics</i> , 2022, 41, 131-138.	1.1	3
476	A stretchable and helically structured fiber nanogenerator for multifunctional electronic textiles. <i>Nano Energy</i> , 2022, 101, 107588.	8.2	11
477	Simultaneous light and thermal emission of waterproof core-multishell fibers for woven textile electronics. <i>Materials Letters</i> , 2022, 325, 132832.	1.3	1
478	MXene-based materials for advanced nanogenerators. <i>Nano Energy</i> , 2022, 101, 107556.	8.2	19
479	Recent progress in fibrous high-entropy energy harvesting devices for wearable applications. <i>Nano Energy</i> , 2022, 101, 107600.	8.2	16
480	To investigate the effect of bidirectional dimension changes on the sensitivity of magnetic strain sensors. <i>Chemical Engineering Journal</i> , 2022, 450, 138088.	6.6	0
481	Bending-insensitive Intrinsically Flexible Ultraviolet Encoding Devices Based on Piezoelectric Nanogenerator-supplied Liquid Crystalline Polymer Fabrics. <i>Small</i> , 2022, 18, .	5.2	6
482	Hydrochromic CsPbBr ₃ -KBr Microcrystals for Flexible Anti-Counterfeiting and Wearable Self-Powered Biomechanical Monitoring. <i>Chemical Engineering Journal</i> , 2022, 450, 138279.	6.6	14
483	State Estimation for Power System Based on Graph Neural Network. , 2022, , .		5
484	Functional Fiber Materials to Smart Fiber Devices. <i>Chemical Reviews</i> , 2023, 123, 613-662.	23.0	69
485	Homogenization of electrets with ellipsoidal microstructure and pathways for designing piezoelectricity in soft materials. <i>Mechanics of Materials</i> , 2022, 173, 104420.	1.7	3
486	Smart E-Textiles: Overview of Components and Outlook. <i>Sensors</i> , 2022, 22, 6055.	2.1	18
487	A comprehensive review of organic-inorganic composites based piezoelectric nanogenerators through material structure design. <i>Journal Physics D: Applied Physics</i> , 2022, 55, 423003.	1.3	4
488	Textile-Triboelectric nanogenerators (T-TENGs) for wearable energy harvesting devices. <i>Chemical Engineering Journal</i> , 2023, 451, 138741.	6.6	40
489	Manufacturing Technics for Fabric/Fiber-Based Triboelectric Nanogenerators: From Yarns to Micro-Nanofibers. <i>Nanomaterials</i> , 2022, 12, 2703.	1.9	11
490	Deformable Textile-Structured Triboelectric Nanogenerator Knitted with Multifunctional Sensing Fibers for Biomechanical Energy Harvesting. <i>Advanced Fiber Materials</i> , 2022, 4, 1486-1499.	7.9	25

#	ARTICLE	IF	CITATIONS
491	Roadmap on bio-derived materials for wearable triboelectric devices. <i>Materials Today Sustainability</i> , 2022, 20, 100219.	1.9	5
492	Ultra-compact MXene fibers by continuous and controllable synergy of interfacial interactions and thermal drawing-induced stresses. <i>Nature Communications</i> , 2022, 13, .	5.8	55
493	Recycling of Abast textile wastes into high value-added products: a review. <i>Environmental Chemistry Letters</i> , 2022, 20, 3747-3763.	8.3	20
494	Power management strategy for unidirectional current pulsed triboelectric nanogenerator. <i>Nanotechnology</i> , 2022, 33, 465401.	1.3	3
495	ZnO@Ag modified piezoelectric fibers for higher sensitivity and enhanced energy harvesting. <i>Journal of Materials Research and Technology</i> , 2022, 20, 2689-2704.	2.6	4
496	Scalable and Reconfigurable Green Electronic Textiles with Personalized Comfort Management. <i>ACS Nano</i> , 2022, 16, 12635-12644.	7.3	15
497	Soft Modular Glove with Multimodal Sensing and Augmented Haptic Feedback Enabled by Materialsâ€™ Multifunctionalities. <i>ACS Nano</i> , 2022, 16, 14097-14110.	7.3	52
498	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
499	Recent progress of Ti3C2Tx-based MXenes for fabrication of multifunctional smart textiles. <i>Applied Materials Today</i> , 2022, 29, 101612.	2.3	13
500	Advances in the design and assembly of flexible thermoelectric device. <i>Progress in Materials Science</i> , 2023, 131, 101003.	16.0	140
501	Hierarchical core-shell polypyrrole@NiCo layered double hydroxide arrays grown on stainless steel yarn with high flexibility for 1D symmetric yarn-shaped supercapacitors. <i>Journal of Alloys and Compounds</i> , 2022, 926, 166811.	2.8	12
502	An overview of composite structural engineering for stretchable strain sensors. <i>Composites Science and Technology</i> , 2022, 229, 109714.	3.8	6
503	Applications of nanogenerator-based wearable devices in orthopedics. <i>Nano Energy</i> , 2022, 103, 107762.	8.2	10
504	Structure-regenerated silk fibroin with boosted piezoelectricity for disposable and biodegradable oral healthcare device. <i>Nano Energy</i> , 2022, 103, 107787.	8.2	17
505	A high-applicability, high-durability wearable hybrid nanogenerator with magnetic suspension structure toward health monitoring applications. <i>Nano Energy</i> , 2022, 103, 107774.	8.2	11
506	Ultra-porous cellulose nanofibril aerogel films as excellent triboelectric positive materials via direct freeze-drying of dispersion. <i>Nano Energy</i> , 2022, 103, 107832.	8.2	26
507	Ultra-high-speed hybrid ceramic triboelectric bearing with real-time dynamic instability monitoring. <i>Nano Energy</i> , 2022, 103, 107759.	8.2	20
508	Electrospun nanofiber based TENGs for wearable electronics and self-powered sensing. <i>Chemical Engineering Journal</i> , 2023, 452, 139060.	6.6	78

#	ARTICLE	IF	CITATIONS
509	Flexible and highly piezoelectric nanofibers with organic-inorganic coaxial structure for self-powered physiological multimodal sensing. <i>Chemical Engineering Journal</i> , 2023, 451, 139077.	6.6	28
510	Triboelectric nanogenerator based on flexible Janus nanofiber membrane with simultaneous high charge generation and charge capturing abilities. <i>Chemical Engineering Journal</i> , 2023, 452, 139393.	6.6	19
511	Structure-Regenerated Silk Fibroin with Boosted Piezoelectricity for Disposable and Biodegradable Oral Healthcare Device. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
512	Flexible, Durable, and Washable Triboelectric Yarn and Embroidery for Self-Powered Sensing and Human-Machine Interaction. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
513	Boosting photocatalytic removal of organic pollutants through enhanced piezoelectricity in free-standing nanofibril pyridyl-functionalized conjugated microporous polymer/poly(vinylidene fluoride) (PVDF) nanofibers. <i>Journal of Materials Chemistry C</i> , 2022, 10, 12582-12587.	2.7	5
514	A dynamic nanoconfinement strategy towards self-healing soft electronics with super stretchability, ultrahigh strength and reliably high conductivity. <i>Journal of Materials Chemistry A</i> , 2022, 10, 21093-21101.	5.2	3
515	Weaving a magnificent world: 1D fibrous electrodes and devices for stretchable and wearable electronics. <i>Journal of Materials Chemistry C</i> , 2022, 10, 14027-14052.	2.7	16
516	Influence of surface functionalization on the contact electrification of fabrics. <i>New Journal of Chemistry</i> , 2022, 46, 15645-15656.	1.4	1
517	A Fabric-Based Electrode for Wearable Piezoelectric Nanogenerators to Sense Human Motions. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
518	Enhanced Performance of Triboelectric Nanogenerator with Micro-Rhombic Patterned PDMS for Self-Powered Wearable Sensing. <i>Advanced Materials Interfaces</i> , 2022, 9, .	1.9	10
519	A New Strategy for Fabricating Well-Distributed Polyaniline/Graphene Composite Fibers toward Flexible High-Performance Supercapacitors. <i>Nanomaterials</i> , 2022, 12, 3297.	1.9	6
520	An enhanced nano-energy harvesting device by hybrid piezoelectric/triboelectric composites. <i>Journal of Materials Science: Materials in Electronics</i> , 2022, 33, 22588-22598.	1.1	7
521	Carbon Dots-Based Ultrastretchable and Conductive Hydrogels for High-Performance Tactile Sensors and Self-Powered Electronic Skin. <i>Small</i> , 2023, 19, .	5.2	37
522	Oriented magnetic liquid metal-filled interlocked bilayer films as multifunctional smart electromagnetic devices. <i>Nano Research</i> , 2023, 16, 1764-1772.	5.8	14
523	Stretchable and Self-Powered Temperature-Pressure Dual Sensing Ionic Skins Based on Thermogalvanic Hydrogels. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 44792-44798.	4.0	19
524	Double open mouse-like terpyridine parts based amphiphilic ionic molecules displaying strengthened chemical adsorption for anticorrosion of copper in sulfuric acid solution. <i>Chinese Journal of Chemical Engineering</i> , 2023, 57, 233-246.	1.7	2
525	MXene/Multiwalled Carbon Nanotube/Polymer Hybrids for Triboelectric Nanogenerators. <i>ACS Applied Nano Materials</i> , 2022, 5, 12836-12847.	2.4	5

#	ARTICLE	IF	CITATIONS
528	Radio Frequency Heating of Washable Conductive Textiles for Bacteria and Virus Inactivation. ACS Applied Materials & Interfaces, 2022, 14, 43732-43740.	4.0	7
529	High-Strength and Extensible Electrospun Yarn for Wearable Electronics. ACS Applied Materials & Interfaces, 2022, 14, 46068-46076.	4.0	14
530	Electrospinning Silk Fibroin/Graphene Nanofiber Membrane Used for 3D Wearable Pressure Sensor. Polymers, 2022, 14, 3875.	2.0	14
531	Washable Fabric Triboelectric Nanogenerators for Potential Application in Face Masks. Nanomaterials, 2022, 12, 3152.	1.9	3
533	Multilayered MoS ₂ Sphere-Based Triboelectric/Flexoelectric Nanogenerators as Self-Powered Mechanical Sensors for Human Motion Detection. ACS Applied Nano Materials, 2022, 5, 15192-15200.	2.4	10
534	Highly oriented PVDF molecular chains for enhanced material performance. Polymer, 2022, 261, 125366.	1.8	7
535	Highly Durable and Fast Response Fabric Strain Sensor for Movement Monitoring Under Extreme Conditions. Advanced Fiber Materials, 2023, 5, 223-234.	7.9	48
536	Novel low-carbon energy solutions for powering emerging wearables, smart textiles, and medical devices. Energy and Environmental Science, 2022, 15, 4928-4981.	15.6	30
537	Recent progress of fiber-shaped batteries towards wearable application. Journal of Central South University, 2022, 29, 2837-2856.	1.2	6
538	Conductive Membranes Based on Cotton Fabric Coated with Polymers for Electrode Applications. Materials, 2022, 15, 7286.	1.3	0
539	High-sensitive and ultra-wide spectrum multifunctional triboelectric acoustic sensor for broad scenario applications. Nano Energy, 2022, 104, 107932.	8.2	11
540	Microbuckled Mechano-electrochemical Harvesting Fiber for Self-Powered Organ Motion Sensors. Nano Letters, 2022, 22, 8695-8703.	4.5	4
541	Enhanced piezoelectric response in BTO NWs-PVDF composite through tuning of polar phase content. Nanotechnology, 2023, 34, 045405.	1.3	5
542	Advanced Fiber Materials for Wearable Electronics. Advanced Fiber Materials, 2023, 5, 12-35.	7.9	81
543	2D-Materials-Based Wearable Biosensor Systems. Biosensors, 2022, 12, 936.	2.3	10
544	Elastic Fibers/Fabrics for Wearables and Bioelectronics. Advanced Science, 2022, 9, .	5.6	19
545	Recent Progress of Wearable Piezoelectric Pressure Sensors Based on Nanofibers, Yarns, and Their Fabrics via Electrospinning. Advanced Materials Technologies, 2023, 8, .	3.0	35
546	A Review on Wearable Electrospun Polymeric Piezoelectric Sensors and Energy Harvesters. Macromolecular Materials and Engineering, 2023, 308, .	1.7	27

#	ARTICLE	IF	CITATIONS
547	Flexible, durable, and washable triboelectric yarn and embroidery for self-powered sensing and human-machine interaction. <i>Nano Energy</i> , 2022, 104, 107929.	8.2	20
548	Scalable Fabrication of Metallic Conductive Fibers from Rheological Tunable Semi-Liquid Metals. <i>Research</i> , 2022, 2022, .	2.8	2
549	Roadmap on nanogenerators and piezotronics. <i>APL Materials</i> , 2022, 10, .	2.2	22
550	Efficiently utilizing shallow and deep trapped charges on polyester fiber cloth surface by double working mode design for high output and durability TENG. <i>Nano Energy</i> , 2022, 104, 107968.	8.2	12
551	Field effect transistor-based tactile sensors: From sensor configurations to advanced applications. <i>Informa Mater</i> , 2023, 5, .	8.5	24
552	Antibacterial flexible triboelectric nanogenerator via capillary force lithography. <i>Journal of Colloid and Interface Science</i> , 2023, 630, 611-622.	5.0	8
553	Multifunctional knit fabrics for self-powered sensing through nanocomposites coatings. <i>Materials Chemistry and Physics</i> , 2023, 293, 126951.	2.0	3
554	A fabric-based electrode for wearable piezoelectric nanogenerators to distinguish sense human motions. <i>Applied Surface Science</i> , 2023, 610, 155451.	3.1	6
555	Expedient secondary functions of flexible piezoelectrics for biomedical energy harvesting. <i>Bioactive Materials</i> , 2023, 22, 291-311.	8.6	15
556	Recent advances in eco-friendly fabrics with special wettability for oil/water separation. <i>Chemical Communications</i> , 2022, 58, 13413-13438.	2.2	23
557	From Triboelectric Nanogenerator to Uninterrupted Power Supply System: The Key Role of Electrochemical Batteries and Supercapacitors. <i>Batteries</i> , 2022, 8, 215.	2.1	16
558	3D stretchable and self-encapsulated multimaterial triboelectric fibers. <i>Science Advances</i> , 2022, 8, .	4.7	8
559	Exploration of Variable Temperature Magnetism and Electrical Properties of a Pyridyl-isonicotinoyl Hydrazone Bridged Three-Dimensional Mn-Metal-Organic Framework with a Thiophene Dicarboxylate Link. <i>Crystal Growth and Design</i> , 2022, 22, 7143-7152.	1.4	5
560	Stretchable Composite Conductive Fibers for Wearables. <i>Advanced Materials Technologies</i> , 2023, 8, .	3.0	6
561	Imperceptible, designable, and scalable braided electronic cord. <i>Nature Communications</i> , 2022, 13, .	5.8	34
562	VO ₅ nanowires coated yarn based temperature sensor with wireless data transfer for smart textiles. , 2022, , 1-1.		0
563	Integrated Piezo-Triboelectric Nanogenerators-Based Self-Powered Flexible Temperature and Pressure Sensor. , 2023, 2, 84-91.		7
564	Flexible photoplethysmographic sensing devices for intelligent medical treatment. <i>Journal of Materials Chemistry C</i> , 2022, 11, 97-112.	2.7	4

#	ARTICLE	IF	CITATIONS
565	Research and Design of Smart Care-Giving Clothing for Disabled Elderly. <i>Fibres and Textiles in Eastern Europe</i> , 2022, 30, 21-31.	0.2	0
566	A Robust Constant-Voltage DC Triboelectric Nanogenerator Using the Ternary Dielectric Triboelectrification Effect. <i>Advanced Energy Materials</i> , 2023, 13, .	10.2	24
567	Stretchable nanogenerators for scavenging mechanical energy. <i>Nano Research</i> , 0, , .	5.8	1
568	The Flexible and Wearable Pressure Sensing Microsystems for Medical Diagnostics. , 2023, , 229-262.		0
569	The morphology effect of embedded ZnO particles-based composite on flexible hybrid piezoelectric triboelectric nanogenerators for harvesting biomechanical energy. <i>Journal of Sol-Gel Science and Technology</i> , 0, , .	1.1	2
570	All Organic Aqueous Processable Piezo-Phototronic Ink for Strain Modulated Photoresponse. <i>Advanced Materials Technologies</i> , 2023, 8, .	3.0	2
571	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
572	Self-powered speech recognition system for deaf users. <i>Cell Reports Physical Science</i> , 2022, 3, 101168.	2.8	2
573	A Comprehensive Review on the Novel Principles, Development and Applications of Triboelectric Nanogenerators. <i>Applied Mechanics Reviews</i> , 2024, 76, .	4.5	10
574	Triboelectric nanogenerators for smart agriculture. <i>Informa-Materially</i> , 2023, 5, .	8.5	12
575	Scalable Fabrication of MXene/PVDF Nanocomposite Triboelectric Fibers via Thermal Drawing. <i>Small</i> , 2023, 19, .	5.2	10
576	Recent progress in the fabrication and processing of triboelectric yarns. , 2023, 2, 63-89.		1
577	Fiber/Yarn-Based Triboelectric Nanogenerators (TEGs): Fabrication Strategy, Structure, and Application. <i>Sensors</i> , 2022, 22, 9716.	2.1	9
578	Multiscale Engineering of Sustainable and Versatile All-Fiber Triboelectric Nanogenerator Based on Multifunctional Fibrous Materials and 3D Woven Architecture. <i>Advanced Materials Technologies</i> , 0, , 2201105.	3.0	1
579	Silver Nanowires Deposited on Triblock Copolymer Microfibers for Stretchable Conductive Fabrics. <i>ACS Applied Nano Materials</i> , 2022, 5, 17721-17730.	2.4	4
580	Fiber-shaped artificial optoelectronic synapses for wearable visual-memory systems. <i>Matter</i> , 2023, 6, 925-939.	5.0	18
581	Smart Fibers for Self-Powered Electronic Skins. <i>Advanced Fiber Materials</i> , 2023, 5, 401-428.	7.9	49
582	A self-powered flexible gas-sensing system based on single-wall carbon nanotube films. <i>Cell Reports Physical Science</i> , 2022, 3, 101163.	2.8	2

#	ARTICLE	IF	CITATIONS
583	An ultra-thin piezoelectric nanogenerator with breathable, superhydrophobic, and antibacterial properties for human motion monitoring. <i>Nano Research</i> , 2023, 16, 11612-11620.	5.8	26
584	Epitaxial growth of 1D GaN-based heterostructures on various substrates for photonic and energy applications. <i>Nanoscale Advances</i> , 2023, 5, 1023-1042.	2.2	7
585	Maximizing Electron Channels Enabled by MXene Aerogel for High-Performance Self-Healable Flexible Electronic Skin. <i>ACS Nano</i> , 2023, 17, 1393-1402.	7.3	39
586	Cesium Lead Halide Perovskite Decorated Polyvinylidene Fluoride Nanofibers for Wearable Piezoelectric Nanogenerator Yarns. <i>ACS Nano</i> , 2023, 17, 1022-1035.	7.3	29
587	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
588	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
589	Emerging Wearable Chemical Sensors Enabling Advanced Integrated Systems toward Personalized and Preventive Medicine. <i>Analytical Chemistry</i> , 2023, 95, 490-514.	3.2	18
590	Natural sepiolite modified PVDF electrospun films for mechanically robust and high-performance triboelectric nanogenerators. <i>Applied Clay Science</i> , 2023, 233, 106819.	2.6	6
591	Materials and Design of Fabric-Based Membrane Filtration for Oily Wastewater Treatment. <i>ACS Symposium Series</i> , 0, , 1-39.	0.5	0
592	Biodegradable Polymers in Triboelectric Nanogenerators. <i>Polymers</i> , 2023, 15, 222.	2.0	23
593	Shear-Thickening Covalent Adaptive Networks for Bifunctional Impact-Protective and Post-Tunable Tactile Sensors. <i>ACS Applied Materials & Interfaces</i> , 2023, 15, 2267-2276.	4.0	1
594	Triboelectric Nanogenerators as Sensing for Smart Home. , 2023, , 1-37.		0
595	Energy Harvesting: Energy Sources, Excitation Type and Conversion Mechanisms. <i>Communications in Computer and Information Science</i> , 2023, , 355-369.	0.4	1
596	Recent Progress in Piezoelectric-Triboelectric Effects Coupled Nanogenerators. <i>Nanomaterials</i> , 2023, 13, 385.	1.9	11
597	A Review of Recent Development of Wearable Triboelectric Nanogenerators Aiming at Human Clothing for Energy Conversion. <i>Polymers</i> , 2023, 15, 508.	2.0	10
598	Highly Electronegative V ₂ CT _x /Silicone Nanocomposite-Based Serpentine Triboelectric Nanogenerator for Wearable Self-Powered Sensors and Sign Language Interpretation. <i>Advanced Energy Materials</i> , 2023, 13, .	10.2	14
599	Nanogenerators for biomedical applications. <i>Materials Today Communications</i> , 2023, 35, 105493.	0.9	4
600	Carboxymethyl cellulose-based materials as an alternative source for sustainable electrochemical devices: a review. <i>RSC Advances</i> , 2023, 13, 5723-5743.	1.7	11

#	ARTICLE	IF	CITATIONS
601	Recent Advances in Wearable Tactile Sensors Based on Electrospun Nanofiber Platform. , 2023, 2, .		3
602	More Than Energy Harvesting in Electret Electronicsâ€Moving toward Nextâ€Generation Functional System. Advanced Functional Materials, 2023, 33, .	7.8	11
603	High-performance multifunctional piezoresistive/piezoelectric pressure sensor with thermochromic function for wearable monitoring. Chemical Engineering Journal, 2023, 459, 141648.	6.6	15
604	Smart Triboelectric Nanogenerators Based on Stimulus-Response Materials: From Intelligent Applications to Self-Powered Systems. Nanomaterials, 2023, 13, 1316.	1.9	4
605	Threadlike Piezoelectric Sensors Based on Ferroelectrets and Their Application in Washable and Breathable Smart Clothing. Advanced Materials Technologies, 2023, 8, .	3.0	2
606	Recent progress in conductive electrospun materials for flexible electronics: Energy, sensing, and electromagnetic shielding applications. Chemical Engineering Journal, 2023, 465, 142847.	6.6	21
607	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
608	A multifunctional composite material with piezoresistivity and mechanoluminescence properties for a wearable sensor. Composites Science and Technology, 2023, 236, 109993.	3.8	7
609	Stretchable self-adhesive and self-powered smart bandage for motion perception and motion intention recognition. Nano Energy, 2023, 109, 108245.	8.2	12
610	Boosting power output of fluttering triboelectric nanogenerator based on charge excitation through multi-utilization of wind. Nano Energy, 2023, 111, 108389.	8.2	4
611	Recent advances on porous materials and structures for high-performance triboelectric nanogenerators. Nano Energy, 2023, 111, 108365.	8.2	18
612	Polyvinylidene fluoride/aromatic hyperbranched polyester 2nd generation based triboelectric sensor for polysomnographic and health monitoring applications. Sensors and Actuators A: Physical, 2023, 355, 114311.	2.0	6
613	Wearable bistable triboelectric nanogenerator for harvesting torsional vibration energy from human motion. Nano Energy, 2023, 109, 108315.	8.2	9
614	Mechanical energy harvesting and self-powered electronic applications of textile-based piezoelectric nanogenerators: A systematic review. Nano Energy, 2023, 111, 108414.	8.2	27
615	PDMS/PVDF- MoS2 based flexible triboelectric nanogenerator for mechanical energy harvesting. Polymer, 2023, 274, 125910.	1.8	9
616	Emerging ultrasonic bioelectronics for personalized healthcare. Progress in Materials Science, 2023, 136, 101110.	16.0	10
617	Development and applications of electrospun nanofiber-based triboelectric nanogenerators. Nano Energy, 2023, 112, 108444.	8.2	12
618	A high-output silk-based triboelectric nanogenerator with durability and humidity resistance. Nano Energy, 2023, 108, 108244.	8.2	23

#	ARTICLE	IF	CITATIONS
637	Investigating output voltage for piezoelectric goodfellow polyacrylonitrile acoustic nanogenerator with graphene ink electrodes. E-Prime, 2023, 3, 100097.	2.1	0
638	Advances in flexible sensors for intelligent perception system enhanced by artificial intelligence. InformaÅnA-MateriÅjly, 2023, 5, .	8.5	20
639	Recent progress in textile-based triboelectric force sensors for wearable electronics. Advanced Composites and Hybrid Materials, 2023, 6, .	9.9	15
640	In-Fiber Thermally Diffused Coupler and Fiber Bragg Grating Inscribed in Twin-Core Fiber for Sensitivity-Enhanced Vector Bending Sensing. Photonic Sensors, 2023, 13, .	2.5	2
641	Formation of SiO ₂ -Encapsulated Ag Nanoparticles on SiO ₂ Nanofibers and Their Application as Robust, Flexible Pressure Sensor Working under High Temperatures. ACS Applied Nano Materials, 2023, 6, 6112-6120.	2.4	2
643	Synergy of porous and air-gap structures for pressure sensing arrays with high sensitivity and wide detection range towards machine learning-assisted gait analysis. Physica Scripta, 2023, 98, 055925.	1.2	0
644	Ultrastrong and fatigue-resistant bioinspired conductive fibers via the in situ biosynthesis of bacterial cellulose. NPG Asia Materials, 2023, 15, .	3.8	1
645	Triboelectric nanogenerators: the beginning of blue dream. Frontiers of Chemical Science and Engineering, 2023, 17, 635-678.	2.3	21
646	A Machine-Branded Flame-Retardant Triboelectric Yarn/Textile for Fireproof Application. Advanced Materials Technologies, 2023, 8, .	3.0	5
647	Realizing self-powered mechanical transmission control system via triboelectric nanogenerator and electrorheological fluid composed soft starter. , 2023, 2, e9120066.		6
648	Multiscale architected porous materials for renewable energy conversion and storage. Energy Storage Materials, 2023, 59, 102768.	9.5	6
649	Fiber Crossbars: An Emerging Architecture of Smart Electronic Textiles. Advanced Materials, 2023, 35, .	11.1	5
650	Machine Learning-Aided All-Organic Air-Permeable Piezoelectric Nanogenerator. ACS Sustainable Chemistry and Engineering, 2023, 11, 6173-6182.	3.2	3
651	Dynamic Field Programmable Logic-Driven Soft Exosuit. IEEE Sensors Journal, 2023, , 1-1.	2.4	0
652	Statistical modeling enabled design of high-performance conductive composite fiber materials for energy harvesting and self-powered sensing. Chemical Engineering Journal, 2023, 466, 143052.	6.6	3
653	Preparation and functional applications of electrospun yarns. , 2023, , 109-133.		0
654	How Far for the Electronic Skin: From Multifunctional Material to Advanced Applications. Advanced Materials Technologies, 2023, 8, .	3.0	9
682	Fabrication of Junction Field-Effect Transistors on a Flexible Substrate by Using Hydrogenated Amorphous Silicon. , 2023, , .		0

#	ARTICLE	IF	CITATIONS
685	Hygroscopic MXene/Protein Nanocomposite Fibers Enabling Highly Stretchable, Antifreezing, Repairable, and Degradable Skin-Like Wearable Electronics. , 2023, 5, 2104-2113.		3
690	Smart textiles for self-powered biomonitoring. , 2023, 1, .		38
704	Energy harvesting technology based on moisture-responsive actuators. Journal of Materials Chemistry A, 0, , .	5.2	1
709	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
730	Triboelectric Nanogenerators as Sensing for Smart Home. , 2023, , 1621-1657.		0
731	Fiber- and Textile-Based Triboelectric Nanogenerators. , 2023, , 851-889.		0
741	Boosting the output performance of triboelectric nanogenerators via surface engineering and structure designing. Materials Horizons, 0, , .	6.4	0
742	Skinergy: Machine-Embroidered Silicone-Textile Composites as On-Skin Self-Powered Input Sensors. , 2023, , .		0
743	Characterization and Multifunction Application of Metalized Textile Materials. Advanced Structured Materials, 2023, , 131-161.	0.3	0
745	Fabrication Techniques and Sensing Mechanisms of Textile-Based Strain Sensors: From Spatial 1D and 2D Perspectives. Advanced Fiber Materials, 0, , .	7.9	0
764	Solid-state, liquid-free ion-conducting elastomers: rising-star platforms for flexible intelligent devices. Materials Horizons, 2024, 11, 1152-1176.	6.4	0
784	Advanced technologies for powering wearable devices. , 2024, , 485-510.		0
785	Piezoelectric dressings for advanced wound healing. Journal of Materials Chemistry B, 2024, 12, 1973-1990.	2.9	0