## Highly Stretchable 2D Fabrics for Wearable Triboelectri Environments

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Citation Report

#	Article	IF	CITATIONS
2	Highly Stretchable Conductive Fibers from Few-Walled Carbon Nanotubes Coated on Poly( <i>m</i> -phenylene isophthalamide) Polymer Core/Shell Structures. ACS Nano, 2015, 9, 10252-10257.	7.3	58
3	Packaged triboelectric nanogenerator with high endurability for severe environments. Nanoscale, 2015, 7, 18049-18053.	2.8	45
4	Multiscale Wrinkled Microstructures for Piezoresistive Fibers. Advanced Functional Materials, 2016, 26, 5078-5085.	7.8	146
5	Stretchable and Waterproof Self-Charging Power System for Harvesting Energy from Diverse Deformation and Powering Wearable Electronics. ACS Nano, 2016, 10, 6519-6525.	7.3	182
6	The Surface Polarized Graphene Oxide Quantum Dot Films for Flexible Nanogenerators. Scientific Reports, 2016, 6, 32943.	1.6	9
7	Electrically conductive fabric based stretchable triboelectric energy harvester. Journal of Physics: Conference Series, 2016, 773, 012005.	0.3	6
8	Harvesting Low-Frequency (<5 Hz) Irregular Mechanical Energy: A Possible Killer Application of Triboelectric Nanogenerator. ACS Nano, 2016, 10, 4797-4805.	7.3	606
9	Theoretical Study of Triboelectric-Potential Gated/Driven Metal–Oxide–Semiconductor Field-Effect Transistor. ACS Nano, 2016, 10, 4395-4402.	7.3	36
10	All-in-one energy harvesting and storage devices. Journal of Materials Chemistry A, 2016, 4, 7983-7999.	5.2	245
12	Energy Harvesters for Wearable and Stretchable Electronics: From Flexibility to Stretchability. Advanced Materials, 2016, 28, 9881-9919.	11.1	407
13	Machineâ€Washable Textile Triboelectric Nanogenerators for Effective Human Respiratory Monitoring through Loom Weaving of Metallic Yarns. Advanced Materials, 2016, 28, 10267-10274.	11.1	328
14	Nano Day: Celebrating the Next Decade of Nanoscience and Nanotechnology. ACS Nano, 2016, 10, 9093-9103.	7.3	77
15	3D spacer fabric based multifunctional triboelectric nanogenerator with great feasibility for mechanized large-scale production. Nano Energy, 2016, 27, 439-446.	8.2	107
16	A Stretchable Nanogenerator with Electric/Light Dualâ€Mode Energy Conversion. Advanced Energy Materials, 2016, 6, 1600829.	10.2	74
17	Nanopillar Arrayed Triboelectric Nanogenerator as a Self-Powered Sensitive Sensor for a Sleep Monitoring System. ACS Nano, 2016, 10, 8097-8103.	7.3	145
18	Nanomaterialâ€Based Soft Electronics for Healthcare Applications. ChemNanoMat, 2016, 2, 1006-1017.	1.5	65
19	Flexible and Stretchable Piezoelectric Sensor with Thickness-Tunable Configuration of Electrospun Nanofiber Mat and Elastomeric Substrates. ACS Applied Materials & Interfaces, 2016, 8, 24773-24781.	4.0	175
20	Robust and stretchable indium gallium zinc oxide-based electronic textiles formed by cilia-assisted transfer printing. Nature Communications, 2016, 7, 11477.	5.8	73

#	Article	IF	CITATIONS
21	Mechanically Robust Silver Nanowires Network for Triboelectric Nanogenerators. Advanced Functional Materials, 2016, 26, 7717-7724.	7.8	71
22	Conformal, graphene-based triboelectric nanogenerator for self-powered wearable electronics. Nano Energy, 2016, 27, 298-305.	8.2	152
23	Allâ€Textile Triboelectric Generator Compatible with Traditional Textile Process. Advanced Materials Technologies, 2016, 1, 1600147.	3.0	75
24	A highly shape-adaptive, stretchable design based on conductive liquid for energy harvesting and self-powered biomechanical monitoring. Science Advances, 2016, 2, e1501624.	4.7	274
25	Micro-cable structured textile for simultaneously harvesting solar and mechanical energy. Nature Energy, 2016, 1, .	19.8	879
26	Wearable Biofuel Cells: A Review. Electroanalysis, 2016, 28, 1188-1200.	1.5	149
27	Electroactive polymers for sensing. Interface Focus, 2016, 6, 20160026.	1.5	158
28	Wearable Electricity Generators Fabricated Utilizing Transparent Electronic Textiles Based on Polyester/Ag Nanowires/Graphene Core–Shell Nanocomposites. ACS Nano, 2016, 10, 6449-6457.	7.3	202
29	Solution processed vertically stacked ZnO sheet-like nanorod pâ $\in$ "n homojunctions and their application as UV photodetectors. Journal of Materials Chemistry C, 2016, 4, 142-149.	2.7	27
30	A triboelectric textile templated by a three-dimensionally penetrated fabric. Journal of Materials Chemistry A, 2016, 4, 6077-6083.	5.2	71
31	Force-assembled triboelectric nanogenerator with high-humidity-resistant electricity generation using hierarchical surface morphology. Nano Energy, 2016, 20, 283-293.	8.2	105
32	Self-powered wearable graphene fiber for information expression. Nano Energy, 2017, 32, 329-335.	8.2	148
33	A coaxial triboelectric nanogenerator fiber for energy harvesting and sensing under deformation. Journal of Materials Chemistry A, 2017, 5, 6032-6037.	5.2	98
34	Overview of Energy Harvesting Technologies. Springer Theses, 2017, , 9-37.	0.0	6
35	High-performance, flexible electronic skin sensor incorporating natural microcapsule actuators. Nano Energy, 2017, 36, 38-45.	8.2	160
36	High performance lithium-sulfur batteries for storing pulsed energy generated by triboelectric nanogenerators. Scientific Reports, 2017, 7, 425.	1.6	11
37	Crumpled Graphene Triboelectric Nanogenerators: Smaller Devices with Higher Output Performance. Advanced Materials Technologies, 2017, 2, 1700044.	3.0	78
38	Efficient Storing Energy Harvested by Triboelectric Nanogenerators Using a Safe and Durable Allâ€Solidâ€State Sodiumâ€Ion Battery. Advanced Science, 2017, 4, 1700072.	5.6	140

#	Article	IF	CITATIONS
39	Ultrasensitive and ultraflexible e-skins with dual functionalities for wearable electronics. Nano Energy, 2017, 38, 28-35.	8.2	194
40	Energy harvesting and storage in 1D devices. Nature Reviews Materials, 2017, 2, .	23.3	421
41	An ultrathin stretchable triboelectric nanogenerator with coplanar electrode for energy harvesting and gesture sensing. Journal of Materials Chemistry A, 2017, 5, 12361-12368.	5.2	86
42	Multifunctional Textile for Energy Harvesting and Self-Powered Sensing Applications. ECS Transactions, 2017, 77, 47-50.	0.3	1
43	A wearable pyroelectric nanogenerator and self-powered breathing sensor. Nano Energy, 2017, 38, 147-154.	8.2	251
44	Ultrastretchable, transparent triboelectric nanogenerator as electronic skin for biomechanical energy harvesting and tactile sensing. Science Advances, 2017, 3, e1700015.	4.7	920
45	A spring-based resonance coupling for hugely enhancing the performance of triboelectric nanogenerators for harvesting low-frequency vibration energy. Nano Energy, 2017, 32, 287-293.	8.2	164
46	A leaf-molded transparent triboelectric nanogenerator for smart multifunctional applications. Nano Energy, 2017, 32, 180-186.	8.2	89
47	Hierarchically Nanostructured 1D Conductive Bundle Yarnâ€Based Triboelectric Nanogenerators. Advanced Materials, 2017, 29, 1704434.	11.1	30
48	A stretchable fiber nanogenerator for versatile mechanical energy harvesting and self-powered full-range personal healthcare monitoring. Nano Energy, 2017, 41, 511-518.	8.2	124
49	Stretchable Electrode Based on Laterally Combed Carbon Nanotubes for Wearable Energy Harvesting and Storage Devices. Advanced Functional Materials, 2017, 27, 1704353.	7.8	110
50	Reviving Vibration Energy Harvesting and Self-Powered Sensing by a Triboelectric Nanogenerator. Joule, 2017, 1, 480-521.	11.7	748
51	Ultrasensitive triboelectric nanogenerator for weak ambient energy with rational unipolar stacking structure and low-loss power management. Nano Energy, 2017, 41, 351-358.	8.2	19
52	Toward Soft Skinâ€Like Wearable and Implantable Energy Devices. Advanced Energy Materials, 2017, 7, 1700648.	10.2	175
53	Highly Transparent, Stretchable, and Selfâ€Healing Ionicâ€ <b>5</b> kin Triboelectric Nanogenerators for Energy Harvesting and Touch Applications. Advanced Materials, 2017, 29, 1702181.	11.1	322
55	A low-frequency piezoelectric-electromagnetic-triboelectric hybrid broadband vibration energy harvester. Nano Energy, 2017, 40, 300-307.	8.2	71
56	3D Orthogonal Woven Triboelectric Nanogenerator for Effective Biomechanical Energy Harvesting and as Selfâ€Powered Active Motion Sensors. Advanced Materials, 2017, 29, 1702648.	11,1	321
57	Core–Shell-Yarn-Based Triboelectric Nanogenerator Textiles as Power Cloths. ACS Nano, 2017, 11, 12764-12771.	7.3	203

		REPORT	
#	Article	IF	CITATIONS
58	Fully stretchable and highly durable triboelectric nanogenerators based on gold-nanosheet electrodes for self-powered human-motion detection. Nano Energy, 2017, 42, 300-306.	8.2	126
59	Photo-stimulated triboelectric generation. Nanoscale, 2017, 9, 18597-18603.	2.8	13
60	Singleâ€Threadâ€Based Wearable and Highly Stretchable Triboelectric Nanogenerators and Their Applications in Clothâ€Based Selfâ€Powered Humanâ€Interactive and Biomedical Sensing. Advanced Functional Materials, 2017, 27, 1604462.	7.8	327
61	Recent Progress on Stretchable Electronic Devices with Intrinsically Stretchable Components. Advanced Materials, 2017, 29, 1603167.	11.1	367
62	Boosting Powerâ€Generating Performance of Triboelectric Nanogenerators via Artificial Control of Ferroelectric Polarization and Dielectric Properties. Advanced Energy Materials, 2017, 7, 1600988.	10.2	282
63	Soft Triboelectric Band for Sensing of and Energy Scavenging From Body Motion. Proceedings (mdpi), 2017, 1, .	0.2	1
64	Energy Harvesting Based on Polymer. , 2017, , 151-196.		9
65	All-in-one self-powered flexible microsystems based on triboelectric nanogenerators. Nano Energy, 2018, 47, 410-426.	8.2	249
66	Mechanical energy harvester based on cashmere fibers. Journal of Materials Chemistry A, 2018, 6, 11198-11204.	5.2	22
67	Flexible corner cube retroreflector array for temperature and strain sensing. RSC Advances, 2018, 8, 7588-7598.	1.7	9
68	Stretchable and Tailorable Triboelectric Nanogenerator Constructed by Nanofibrous Membrane for Energy Harvesting and Selfâ€Powered Biomechanical Monitoring. Advanced Materials Technologies, 2018, 3, 1700370.	3.0	47
69	Deformable conductors for human–machine interface. Materials Today, 2018, 21, 508-526.	8.3	163
70	Lithium-Ion Batteries: Charged by Triboelectric Nanogenerators with Pulsed Output Based on the Enhanced Cycling Stability. ACS Applied Materials & Interfaces, 2018, 10, 8676-8684.	4.0	18
71	Soft triboelectric generators by use of cost-effective elastomers and simple casting process. Sensors and Actuators A: Physical, 2018, 271, 88-95.	2.0	21
72	A self-powered flexible hybrid piezoelectric–pyroelectric nanogenerator based on non-woven nanofiber membranes. Journal of Materials Chemistry A, 2018, 6, 3500-3509.	5.2	161
73	Development, applications, and future directions of triboelectric nanogenerators. Nano Research, 2018, 11, 2951-2969.	5.8	112
74	Hybrid functional microfibers for textile electronics and biosensors. Journal of Semiconductors, 2018, 39, 011009.	2.0	4
75	Three-dimensional ultraflexible triboelectric nanogenerator made by 3D printing. Nano Energy, 2018, 45, 380-389.	8.2	178

	CITATION	CITATION REPORT	
#	Article	IF	CITATIONS
76	Scavenging Wind Energy by Triboelectric Nanogenerators. Advanced Energy Materials, 2018, 8, 1702649.	10.2	302
77	A Stretchable, Flexible Triboelectric Nanogenerator for Selfâ€Powered Realâ€Time Motion Monitoring. Advanced Materials Technologies, 2018, 3, 1800021.	3.0	68
78	Facile Method and Novel Dielectric Material Using a Nanoparticle-Doped Thermoplastic Elastomer Composite Fabric for Triboelectric Nanogenerator Applications. ACS Applied Materials & Interfaces, 2018, 10, 13082-13091.	4.0	55
79	Energy harvesting textiles for a rainy day: woven piezoelectrics based on melt-spun PVDF microfibres with a conducting core. Npj Flexible Electronics, 2018, 2, .	5.1	114
80	Functionalized inclined-GaN based nanoneedles. Journal of Industrial and Engineering Chemistry, 2018, 59, 184-191.	2.9	4
81	A Wireless Triboelectric Nanogenerator. Advanced Energy Materials, 2018, 8, 1702736.	10.2	100
82	Recent Progress of Textileâ€Based Wearable Electronics: A Comprehensive Review of Materials, Devices, and Applications. Small, 2018, 14, 1703034.	5.2	470
83	Layer-by-layer assembly-induced triboelectric nanogenerators with high and stable electric outputs in humid environments. Nano Energy, 2018, 44, 228-239.	8.2	70
84	Sewing machine stitching of polyvinylidene fluoride fibers: programmable textile patterns for wearable triboelectric sensors. Journal of Materials Chemistry A, 2018, 6, 22879-22888.	5.2	80
85	Coaxial Triboelectric Nanogenerator and Supercapacitor Fiber-Based Self-Charging Power Fabric. ACS Applied Materials & Interfaces, 2018, 10, 42356-42362.	4.0	108
86	Fabric as a Sensor. , 2018, , .		22
87	Skin-touch-actuated textile-based triboelectric nanogenerator with black phosphorus for durable biomechanical energy harvesting. Nature Communications, 2018, 9, 4280.	5.8	433
88	Two‣ayered and Stretchable eâ€Textile Patches for Wearable Healthcare Electronics. Advanced Healthcare Materials, 2018, 7, e1801033.	3.9	86
89	Highly Surface-Embossed Polydimethylsiloxane-Based Triboelectric Nanogenerators with Hierarchically Nanostructured Conductive Ni–Cu Fabrics. ACS Applied Materials & Interfaces, 2018, 10, 33221-33229.	4.0	38
90	All-in-one filler-elastomer-based high-performance stretchable piezoelectric nanogenerator for kinetic energy harvesting and self-powered motion monitoring. Nano Energy, 2018, 53, 550-558.	8.2	91
91	Adding a stretchable deep-trap interlayer for high-performance stretchable triboelectric nanogenerators. Nano Energy, 2018, 50, 192-200.	8.2	100
92	Waterproof and stretchable triboelectric nanogenerator for biomechanical energy harvesting and self-powered sensing. Applied Physics Letters, 2018, 112, .	1.5	67
93	Humidityâ€Resistant, Fabricâ€Based, Wearable Triboelectric Energy Harvester by Treatment of Hydrophobic Selfâ€Assembled Monolayers. Advanced Materials Technologies, 2018, 3, 1800048.	3.0	26

#	Article	IF	CITATIONS
94	Patterned liquid metal contacts for high density, stick-and-peel 2D material device arrays. Nanoscale, 2018, 10, 14510-14515.	2.8	4
96	Integrating a Triboelectric Nanogenerator and a Zincâ€lon Battery on a Designed Flexible 3D Spacer Fabric. Small Methods, 2018, 2, 1800150.	4.6	78
97	Electrically conducting fibres for e-textiles: An open playground for conjugated polymers and carbon nanomaterials. Materials Science and Engineering Reports, 2018, 126, 1-29.	14.8	172
98	A textile-based triboelectric nanogenerator with humidity-resistant output characteristic and its applications in self-powered healthcare sensors. Nano Energy, 2018, 50, 513-520.	8.2	217
99	Traditional weaving craft for one-piece self-charging power textile for wearable electronics. Nano Energy, 2018, 50, 536-543.	8.2	135
100	Ultrasensitive flexible self-powered ammonia sensor based on triboelectric nanogenerator at room temperature. Nano Energy, 2018, 51, 231-240.	8.2	102
101	Fiberâ€Type Solar Cells, Nanogenerators, Batteries, and Supercapacitors for Wearable Applications. Advanced Science, 2018, 5, 1800340.	5.6	108
102	A bottom-up approach to design wearable and stretchable smart fibers with organic vapor sensing behaviors and energy storage properties. Journal of Materials Chemistry A, 2018, 6, 13633-13643.	5.2	55
103	Textile-based triboelectric nanogenerators with high-performance via optimized functional elastomer composited tribomaterials as wearable power source. Nano Energy, 2019, 65, 104012.	8.2	62
104	Photo-stimulated charge transfer in contact electrification coupled with plasmonic excitations. Nano Energy, 2019, 65, 104031.	8.2	5
105	Progress on wearable triboelectric nanogenerators in shapes of fiber, yarn, and textile. Science and Technology of Advanced Materials, 2019, 20, 837-857.	2.8	79
106	Low-Leakage Fiber-Based Field-Effect Transistors with an Al <sub>2</sub> O <sub>3</sub> –MgO Nanolaminate as Gate Insulator. ACS Applied Electronic Materials, 2019, 1, 1400-1407.	2.0	21
107	Transparent and stretchable bimodal triboelectric nanogenerators with hierarchical micro-nanostructures for mechanical and water energy harvesting. Nano Energy, 2019, 64, 103904.	8.2	85
108	Waterproof, Breathable, and Antibacterial Selfâ€Powered eâ€Textiles Based on Omniphobic Triboelectric Nanogenerators. Advanced Functional Materials, 2019, 29, 1904350.	7.8	85
109	Shape-Adaptive, Self-Healable Triboelectric Nanogenerator with Enhanced Performances by Soft Solid–Solid Contact Electrification. ACS Nano, 2019, 13, 8936-8945.	7.3	121
110	One‣tep Synthesis of Monodispersed Mesoporous Carbon Nanospheres for Highâ€Performance Flexible Quasi‣olid‣tate Micro‣upercapacitors. Small, 2019, 15, e1903836.	5.2	45
111	Development of a triboelectric nanogenerator with enhanced electrical output performance by embedding electrically charged microparticles. Functional Composites and Structures, 2019, 1, 045005.	1.6	17
112	Technological innovations to assess and include the human dimension in the building-performance loop: A review. Energy and Buildings, 2019, 202, 109365.	3.1	38

#	Article	IF	CITATIONS
113	Strategies for ultrahigh outputs generation in triboelectric energy harvesting technologies: from fundamentals to devices. Science and Technology of Advanced Materials, 2019, 20, 927-936.	2.8	22
114	Core-Shell Fiber-Based 2D Woven Triboelectric Nanogenerator for Effective Motion Energy Harvesting. Nanoscale Research Letters, 2019, 14, 311.	3.1	19
115	A high output magneto-mechano-triboelectric generator enabled by accelerated water-soluble nano-bullets for powering a wireless indoor positioning system. Energy and Environmental Science, 2019, 12, 666-674.	15.6	89
116	Dual-response of temperature and humidity asymmetrical cotton fabric prepared based on thiol-ene click chemistry. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 567, 104-111.	2.3	6
117	Core–Shell and Helical-Structured Cylindrical Triboelectric Nanogenerator for Wearable Energy Harvesting. ACS Applied Energy Materials, 2019, 2, 1357-1362.	2.5	29
118	Hybrid carbon nanostructured fibers: stepping stone for intelligent textile-based electronics. Nanoscale, 2019, 11, 3046-3101.	2.8	57
119	Progress on triboelectric nanogenerator with stretchability, self-healability and bio-compatibility. Nano Energy, 2019, 59, 237-257.	8.2	151
120	Towards optimized triboelectric nanogenerators. Nano Energy, 2019, 62, 530-549.	8.2	124
121	Treefrog Toe Padâ€Inspired Micropatterning for Highâ€Power Triboelectric Nanogenerator. Advanced Functional Materials, 2019, 29, 1901638.	7.8	56
122	Mechanically Flexible Conductors for Stretchable and Wearable Eâ€Skin and Eâ€Textile Devices. Advanced Materials, 2019, 31, e1901408.	11.1	313
123	Spiral Steel WireÂBased Fiber-Shaped Stretchable and Tailorable Triboelectric Nanogenerator for Wearable Power Source and Active Gesture Sensor. Nano-Micro Letters, 2019, 11, 39.	14.4	114
124	Recent Advances in Triboelectric Nanogeneratorâ€Based Health Monitoring. Advanced Functional Materials, 2019, 29, 1808849.	7.8	167
125	Design and Actuation of a Fabric-Based Worm-Like Robot. Biomimetics, 2019, 4, 13.	1.5	18
126	An airtight-cavity-structural triboelectric nanogenerator-based insole for high performance biomechanical energy harvesting. Nanoscale, 2019, 11, 6802-6809.	2.8	34
127	PVDF-based ferroelectric polymers and dielectric elastomers for sensor and actuator applications: a review. Functional Composites and Structures, 2019, 1, 012003.	1.6	87
128	Paper-based methodology for investigation of triboelectric nanogenerators. Energy Reports, 2019, 5, 393-397.	2.5	9
129	Low Operating Voltage and Highly Pressure-Sensitive Printed Sensor for Healthcare Monitoring with Analogic Amplifier Circuit. ACS Applied Electronic Materials, 2019, 1, 246-252.	2.0	38
130	Wearable and Implantable Triboelectric Nanogenerators. Advanced Functional Materials, 2019, 29, 1808820.	7.8	296

ARTICLE IF CITATIONS # Integrated dielectric-electrode layer for triboelectric nanogenerator based on Cu nanowire-Mesh 131 8.2 37 hybrid electrode. Nano Energy, 2019, 59, 120-128. Woven Wearable Electronic Textiles as Selfâ€Powered Intelligent Triboâ€Sensors for Activity Monitoring. 1.8 Global Challenges, 2019, 3, 1900070. In-fibre particle manipulation and device assembly via laser induced thermocapillary convection. 133 5.8 29 Nature Communications, 2019, 10, 5206. Deformation Sensitivity Study of Embroidered UHF RFID Antennas., 2019,,. 134 Nanotechnology Characterization Tools for Environment, Health, and Safety., 2019, , . 135 2 Interaction of the human body with triboelectric nanogenerators. Nano Energy, 2019, 57, 279-292. 8.2 59 Design of High-Performance Wearable Energy and Sensor Electronics from Fiber Materials. ACS 137 4.0 52 Applied Materials & amp; Interfaces, 2019, 11, 2120-2129. Textileâ€Based Triboelectric Nanogenerators for Selfâ€Powered Wearable Electronics. Advanced 148 Functional Materials, 2019, 29, 1804533. Milk-based triboelectric nanogenerator on paper for harvesting energy from human body motion. 139 8.2 105 Nano Energy, 2019, 56, 400-410. 140 Wireless powered wearable micro light-emitting diodes. Nano Energy, 2019, 55, 454-462. 8.2 Ionic liquid-based high-voltage flexible supercapacitor for integration with wearable human-powered 141 1.5 6 energy harvesting system. Journal of Applied Electrochemistry, 2019, 49, 79-86. Progress in textile-based triboelectric nanogenerators for smart fabrics. Nano Energy, 2019, 56, 16-24. 8.2 Metal nanowire–polymer matrix hybrid layer for triboelectric nanogenerator. Nano Energy, 2019, 58, 143 8.2 22 227-233. Recent progress on textile-based triboelectric nanogenerators. Nano Energy, 2019, 55, 401-423. 144 8.2 184 Stretchable electronics: functional materials, fabrication strategies and applications. Science and 145 2.8 245 Technology of Advanced Materials, 2019, 20, 187-224. Extremely high and elongated power output from a mechanical mediator-assisted triboelectric 146 nanogenerator driven by the biomechanical energy. Nano Energy, 2019, 56, 851-858. Fiberâ€Based Energy Conversion Devices for Humanâ€Body Energy Harvesting. Advanced Materials, 2020, 147 11.1 204 32, e1902034. 148 Triboelectric nanogenerators for electro-assisted cell printing. Nano Energy, 2020, 67, 104150. 8.2

#	Article	IF	CITATIONS
149	Fiber/Fabricâ€Based Piezoelectric and Triboelectric Nanogenerators for Flexible/Stretchable and Wearable Electronics and Artificial Intelligence. Advanced Materials, 2020, 32, e1902549.	11.1	826
150	Telecommunications and Data Processing in Flexible Electronic Systems. Advanced Materials Technologies, 2020, 5, .	3.0	25
151	Stretchable shape-adaptive liquid-solid interface nanogenerator enabled by in-situ charged nanocomposite membrane. Nano Energy, 2020, 69, 104414.	8.2	22
152	3D network structure and sensing performance of woven fabric as promising flexible strain sensor. SN Applied Sciences, 2020, 2, 1.	1.5	2
153	Experimental apparatus for simultaneous measurement of triboelectricity and triboluminescence. Measurement: Journal of the International Measurement Confederation, 2020, 152, 107316.	2.5	6
154	Intrinsically Stretchable Fuel Cell Based on Enokitake‣ike Standing Gold Nanowires. Advanced Energy Materials, 2020, 10, 1903512.	10.2	34
155	Nanoarchitectonics for Wide Bandgap Semiconductor Nanowires: Toward the Next Generation of Nanoelectromechanical Systems for Environmental Monitoring. Advanced Science, 2020, 7, 2001294.	5.6	48
156	Ultrastretchable, Wearable Triboelectric Nanogenerator Based on Sedimented Liquid Metal Elastomer Composite. Advanced Materials Technologies, 2020, 5, 2000754.	3.0	52
157	Sustainable and high-power wearable glucose biofuel cell using long-term and high-speed flow in sportswear fabrics. Biosensors and Bioelectronics, 2020, 169, 112652.	5.3	45
158	High-Performance Dual-Mode Triboelectric Nanogenerator Based on Hierarchical Auxetic Structure. ACS Energy Letters, 2020, 5, 3507-3513.	8.8	26
159	High-efficiency super-elastic liquid metal based triboelectric fibers and textiles. Nature Communications, 2020, 11, 3537.	5.8	175
160	Energy-generating textiles. , 2020, , 415-455.		4
161	Challenges in Design and Fabrication of Flexible/Stretchable Carbon- and Textile-Based Wearable Sensors for Health Monitoring: A Critical Review. Sensors, 2020, 20, 3927.	2.1	65
162	Biomechanical energy harvest based on textiles used in self-powering clothing. Journal of Engineered Fibers and Fabrics, 2020, 15, 155892502096735.	0.5	6
163	Micro/nanofiber-based noninvasive devices for health monitoring diagnosis and rehabilitation. Applied Physics Reviews, 2020, 7, .	5.5	46
164	3D angle-interlock woven structural wearable triboelectric nanogenerator fabricated with silicone rubber coated graphene oxide/cotton composite yarn. Composites Part B: Engineering, 2020, 200, 108244.	5.9	34
165	Embroidered Inductive Strain Sensor for Wearable Applications. , 2020, , .		6
166	Woven Fabric Triboelectric Nanogenerator for Biomotion Energy Harvesting and as Self-Powered Gait-Recognizing Socks. Energies, 2020, 13, 4119.	1.6	10

#	Article	IF	CITATIONS
167	<scp>Respirationâ€driven</scp> triboelectric nanogenerators for biomedical applications. EcoMat, 2020, 2, e12045.	6.8	58
169	Coaxial double helix structured fiber-based triboelectric nanogenerator for effectively harvesting mechanical energy. Nanoscale Advances, 2020, 2, 4482-4490.	2.2	21
170	Highly-Sensitive Textile Pressure Sensors Enabled by Suspended-Type All Carbon Nanotube Fiber Transistor Architecture. Micromachines, 2020, 11, 1103.	1.4	9
171	Material choices for triboelectric nanogenerators: A critical review. EcoMat, 2020, 2, e12062.	6.8	196
172	Design and Optimization of Piezoresistive PEO/PEDOT:PSS Electrospun Nanofibers for Wearable Flex Sensors. Nanomaterials, 2020, 10, 2166.	1.9	22
173	Stretchable Coplanar Self-Charging Power Textile with Resist-Dyeing Triboelectric Nanogenerators and Microsupercapacitors. ACS Nano, 2020, 14, 5590-5599.	7.3	94
174	Cardiac energy harvesting and sensing based on piezoelectric and triboelectric designs. Nano Energy, 2020, 76, 105076.	8.2	63
175	Optogenetic brain neuromodulation by stray magnetic field via flash-enhanced magneto-mechano-triboelectric nanogenerator. Nano Energy, 2020, 75, 104951.	8.2	54
176	Morphology and properties of PEDOT:PSS/soft polymer blends through hydrogen bonding interaction and their pressure sensor application. Journal of Materials Chemistry C, 2020, 8, 6013-6024.	2.7	44
178	Smart Textiles for Electricity Generation. Chemical Reviews, 2020, 120, 3668-3720.	23.0	644
179	Piezofibers to smart textiles: a review on recent advances and future outlook for wearable technology. Journal of Materials Chemistry A, 2020, 8, 9496-9522.	5.2	102
180	Superelastic and large-range pressure sensor with hollow-sphere architectures for wearable electronic skin. Smart Materials and Structures, 2020, 29, 045014.	1.8	12
182	Robust PEDOT:PSS Wet‧pun Fibers for Thermoelectric Textiles. Macromolecular Materials and Engineering, 2020, 305, 1900749.	1.7	68
183	Stretchable, Transparent, and Thermally Stable Triboelectric Nanogenerators Based on Solventâ€Free Ion onducting Elastomer Electrodes. Advanced Functional Materials, 2020, 30, 1909252.	7.8	114
184	Manufacturing routes toward flexible and smart energy harvesters and sensors based on functional nanomaterials. , 2020, , 381-437.		2
185	Wireless Single-Electrode Self-Powered Piezoelectric Sensor for Monitoring. ACS Applied Materials & Interfaces, 2020, 12, 8288-8295.	4.0	70
186	Small-Scale Energy Harvesting from Environment by Triboelectric Nanogenerators. , 0, , .		7
187	Simply Structured Wearable Triboelectric Nanogenerator Based on a Hybrid Composition of Carbon Nanotubes and Polymer Layer. International Journal of Precision Engineering and Manufacturing - Green Technology, 2020, 7, 683-698.	2.7	28

#	Article	IF	CITATIONS
188	Technology evolution from self-powered sensors to AloT enabled smart homes. Nano Energy, 2021, 79, 105414.	8.2	177
189	Conductive elastic sponge-based triboelectric nanogenerator (TENG) for effective random mechanical energy harvesting and ammonia sensing. Nano Energy, 2021, 79, 105422.	8.2	67
190	Advances in triboelectric nanogenerators for biomedical sensing. Biosensors and Bioelectronics, 2021, 171, 112714.	5.3	159
191	Polymer chemistry underpinning materials for triboelectric nanogenerators (TENGs): Recent trends. European Polymer Journal, 2021, 142, 110163.	2.6	37
192	Design, manufacturing and applications of wearable triboelectric nanogenerators. Nano Energy, 2021, 81, 105627.	8.2	86
193	Polysaccharide-based triboelectric nanogenerators: A review. Carbohydrate Polymers, 2021, 251, 117055.	5.1	49
194	Stretchable Electronics Based on PDMS Substrates. Advanced Materials, 2021, 33, e2003155.	11.1	319
195	E-Textile Technology Review–From Materials to Application. IEEE Access, 2021, 9, 97152-97179.	2.6	40
196	Smart fibers for energy conversion and storage. Chemical Society Reviews, 2021, 50, 7009-7061.	18.7	108
197	Textile-Based Triboelectric Nanogenerators for Wearable Self-Powered Microsystems. Micromachines, 2021, 12, 158.	1.4	31
198	Recent Progress in Flexible Pressure Sensors Based Electronic Skin. Advanced Engineering Materials, 2021, 23, 2001187.	1.6	115
199	Skin Electronics: Nextâ€Generation Device Platform for Virtual and Augmented Reality. Advanced Functional Materials, 2021, 31, 2009602.	7.8	100
200	Rib Stitch Knitted Extremely Stretchable and Washable Textile Triboelectric Nanogenerator. Advanced Materials Technologies, 2021, 6, 2000983.	3.0	24
201	Textile-Based Flexible Pressure Sensors: A Review. Polymer Reviews, 2022, 62, 65-94.	5.3	74
202	Elastic Multifunctional Liquid–Metal Fibers for Harvesting Mechanical and Electromagnetic Energy and as Selfâ€₽owered Sensors. Advanced Energy Materials, 2021, 11, 2100411.	10.2	97
203	Visualising the knowledge structure and evolution of wearable device research. Journal of Medical Engineering and Technology, 2021, 45, 207-222.	0.8	3
204	Leveraging triboelectric nanogenerators for bioengineering. Matter, 2021, 4, 845-887.	5.0	192
205	Skinâ€like Elastomer Embedded Zinc Oxide Nanoarrays for Biomechanical Energy Harvesting. Advanced Materials Interfaces, 2021, 8, 2100094.	1.9	11

#	ARTICLE	IF	CITATIONS
206	Preparation of elastic conductor with high stretchability and stable conductivity under strain via pre-stretching and spraying approach. Composites Communications, 2021, 24, 100641.	3.3	5
207	Seamless Monolithic Design for Foam Based, Flexible, Parallel Plate Capacitive Sensors. Advanced Materials Technologies, 2021, 6, 2001168.	3.0	26
208	Textile Triboelectric Nanogenerators Simultaneously Harvesting Multiple "High-Entropy―Kinetic Energies. ACS Applied Materials & Interfaces, 2021, 13, 20145-20152.	4.0	38
209	Electrical charge storage effect in carbon based polymer composite for long-term performance enhancement of the triboelectric nanogenerator. Composites Science and Technology, 2021, 207, 108680.	3.8	46
210	Triboelectric Nanogenerators for Therapeutic Electrical Stimulation. Advanced Materials, 2021, 33, e2007502.	11.1	92
211	Recent progress in human body energy harvesting for smart bioelectronic system. Fundamental Research, 2021, 1, 364-382.	1.6	106
212	Pyroelectric nanogenerators (PyNCs) in converting thermal energy into electrical energy: Fundamentals and current status. Nano Energy, 2021, 84, 105888.	8.2	69
213	Effects of interfacial acid–base on the performance of contact–separation mode triboelectric nanogenerator. Materials Today Energy, 2021, 20, 100686.	2.5	8
214	Smart textile triboelectric nanogenerators: Current status and perspectives. MRS Bulletin, 2021, 46, 512-521.	1.7	111
215	Leatherâ€Based Multiâ€Stimuli Responsive Chromisms. Advanced Functional Materials, 2021, 31, 2104427.	7.8	16
216	A flexible electrostatic nanogenerator and self-powered capacitive sensor based on electrospun polystyrene mats and graphene oxide films. Nanotechnology, 2021, 32, 405402.	1.3	22
217	Toward Enhanced Humidity Stability of Triboelectric Mechanical Sensors via Atomic Layer Deposition. Nanomaterials, 2021, 11, 1795.	1.9	6
218	A stretchable, harsh condition-resistant and ambient-stable hydrogel and its applications in triboelectric nanogenerator. Nano Energy, 2021, 86, 106086.	8.2	46
219	Numerical analysis and structural optimization of cylindrical grating-structured triboelectric nanogenerator. Nano Energy, 2021, 90, 106570.	8.2	13
220	Highly flexible and recyclable F–SiO2/MPU composites for self-powered active motion sensors. Composites Science and Technology, 2021, 216, 109068.	3.8	6
221	Fiber-Based Electret Nanogenerator with a Semisupported Structure for Wearable Electronics. ACS Applied Materials & Interfaces, 2021, 13, 46840-46847.	4.0	10
222	Development progress, performance enhancement routes, and applications of paper-based triboelectric nanogenerators. Chemical Engineering Journal, 2022, 430, 132559.	6.6	13
223	A review on applications of graphene in triboelectric nanogenerators. International Journal of Energy Research, 2022, 46, 544-576.	2.2	39

#	Article	IF	CITATIONS
224	Performance enhanced triboelectric nanogenerator by taking advantage of water in humid environments. Nano Energy, 2021, 88, 106303.	8.2	36
225	Fibrous self-powered sensor with high stretchability for physiological information monitoring. Nano Energy, 2021, 88, 106258.	8.2	33
226	A biomimetic skin-like sensor with multiple sensory capabilities based on hybrid ionogel. Sensors and Actuators A: Physical, 2021, 330, 112855.	2.0	8
227	Multi-scale metal mesh based triboelectric nanogenerator for mechanical energy harvesting and respiratory monitoring. Nano Energy, 2021, 89, 106423.	8.2	21
228	An all-fibrous triboelectric nanogenerator with enhanced outputs depended on the polystyrene charge storage layer. Nano Energy, 2021, 90, 106515.	8.2	32
229	Textile triboelectric nanogenerators for self-powered biomonitoring. Journal of Materials Chemistry A, 2021, 9, 19149-19178.	5.2	55
230	Energy Harvesting Smart Textiles. Human-computer Interaction Series, 2017, , 199-231.	0.4	14
231	An Integrated Compliant Fabric Skin Softens, Lightens, and Simplifies a Mesh Robot. Lecture Notes in Computer Science, 2017, , 315-327.	1.0	5
233	Fabric-Based Triboelectric Nanogenerators. Research, 2019, 2019, 1091632.	2.8	36
235	A survey of wearable energy harvesting systems. International Journal of Energy Research, 2022, 46, 2277-2329.	2.2	22
236	A Stretchable Multimode Triboelectric Nanogenerator for Energy Harvesting and Selfâ€Powered Sensing. Advanced Materials Technologies, 2022, 7, 2100870.	3.0	15
237	Modeling the Triboelectric Behaviors of Elastomeric Nonwoven Fabrics. Advanced Materials, 2022, 34, e2106429.	11.1	9
238	Nanoparticles-Based Flexible Wearable Sensors for Health Monitoring Applications. , 2019, , 245-284.		1
239	A Triboelectric Nanogenerator Design for the Utilization of Multi-Axial Mechanical Energies in Human Motions. Journal of Sensor Science and Technology, 2020, 29, 312-322.	0.1	3
240	Masks for COVIDâ€19. Advanced Science, 2022, 9, e2102189.	5.6	89
241	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
242	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
243	Geometrically versatile triboelectric yarn-based harvesters via carbon nanotubes-elastomer composites. Composites Science and Technology, 2022, 219, 109247.	3.8	10

		CITATION REPORT	
#	Article	IF	CITATIONS
244	Effect of The Twist Rod Angles on An Inertial Rotary Electromagnetic Energy Harvester. , 2020, ,		0
245	Mycena chlorophos-inspired autoluminescent triboelectric fiber for wearable energy harvesting, self-powered sensing, and as human–device interfaces. Nano Energy, 2022, 94, 106944.	8.2	21
246	Solid-state intrinsically-superstretchable multifunctional nanogenerator fiber for biomechanical and ambient electromagnetic energy harvesting and self-powered sensing. Nano Energy, 2022, 107035.	95, 8.2	12
247	Output signals control of triboelectric nanogenerator with metal-dielectric-metal configuration through high resistance grounded systems. Nano Energy, 2022, 95, 107023.	8.2	8
248	Hydrophobic MAO/FSG coating based TENG for self-healable energy harvesting and self-powered cathodic protection. Science China Technological Sciences, 2022, 65, 726-734.	d 2.0	9
249	Output Signals Control of Triboelectric Nanogenerator with Metal-Dielectric-Metal Configuratio Through High Resistance Grounded Systems. SSRN Electronic Journal, 0, , .	n 0.4	0
250	α-Fe2O3 Nanoparticles Aided-Dual Conversion for Self-Powered Bio-Based Photodetector. Nanomaterials, 2022, 12, 1147.	1.9	3
251	A Non-Resonant Piezoelectric–Electromagnetic–Triboelectric Hybrid Energy Harvester for Low-Frequency Human Motions. Nanomaterials, 2022, 12, 1168.	1.9	13
252	Smart Textile Triboelectric Nanogenerators: Prospective Strategies for Improving Electricity Out Performance. Nanoenergy Advances, 2022, 2, 133-164.	put 3.6	59
253	A wave structure triboelectric nanogenerator for race walking motion sensing. Materials Technology, 2022, 37, 2637-2643.	1.5	8
254	A triboelectric nanogenerator sensor based on phononic crystal structures for smart buildings a transportation systems. Nano Energy, 2022, 97, 107165.	nd 8.2	11
255	Recent Advances in Sustainable Wearable Energy Devices with Nanoscale Materials and Macros Structures. Advanced Functional Materials, 2022, 32, .	cale 7.8	43
256	Triboelectric Nanogenerator Tattoos Enabled by Epidermal Electronic Technologies. Advanced Functional Materials, 2022, 32, .	7.8	25
257	Coaxial Spring-Like Stretchable Triboelectric Nanogenerator Toward Personal Healthcare Monitoring. Frontiers in Bioengineering and Biotechnology, 2022, 10, 889364.	2.0	5
258	Intelligent self-powered sensor based on triboelectric nanogenerator for take-off status monitor in the sport of triple-jumping. Nano Research, 2022, 15, 6483-6489.	ring 5.8	11
259	Thin-film electronics on active substrates: review of materials, technologies and applications. Jou Physics D: Applied Physics, 2022, 55, 323002.	urnal 1.3	33
260	Recent advancements for improving the performance of triboelectric nanogenerator devices. Na Energy, 2022, 99, 107318.	ano 8.2	76
261	Communication—Power Enhancement of Fabric Triboelectric Energy Harvesters Using Ultravic Light and Fluoro-Based Treatment. ECS Journal of Solid State Science and Technology, 2022, 11	olet 0.9 , 055006. 0.9	2

#	Article	IF	CITATIONS
262	A Low ost Simple Sliding Triboelectric Nanogenerator for Harvesting Energy from Human Activities. Advanced Materials Technologies, 2022, 7, .	3.0	13
263	Skin-integrated, stretchable, transparent triboelectric nanogenerators based on ion-conducting hydrogel for energy harvesting and tactile sensing. Nano Energy, 2022, 99, 107442.	8.2	39
264	Progress of biomechanical energy harvesters for wearable electronic applications. Journal of Micromechanics and Microengineering, 2022, 32, 083001.	1.5	4
265	Laser-carbonized MXene/ZiF-67 nanocomposite as an intermediate layer for boosting the output performance of fabric-based triboelectric nanogenerator. Nano Energy, 2022, 100, 107462.	8.2	22
267	Fibrous triboelectric nanogenerators: fabrication, integration, and application. Journal of Materials Chemistry A, 2022, 10, 15881-15905.	5.2	13
268	Nerve Stimulation by Triboelectric Nanogenerator Based on Nanofibrous Membrane for Spinal Cord Injury. Frontiers in Chemistry, 0, 10, .	1.8	3
270	A TiO <sub>2</sub> Nanotube Coating Based TENG with Selfâ€Healable Triboelectric Property for Energy Harvesting and Antiâ€Corrosion. Advanced Materials Interfaces, 2022, 9, .	1.9	6
271	Applications of nanogenerator-based wearable devices in orthopedics. Nano Energy, 2022, 103, 107762.	8.2	10
272	Multi-Robot Collaboration for Electronic Textile Fabrication. , 2022, , .		2
273	A Self-Powered Flexible Sensor for Speed Skating Land Technology Monitoring. Journal of Nanoelectronics and Optoelectronics, 2022, 17, 674-679.	0.1	2
274	Allâ€Printed Wearable Triboelectric Nanogenerator with Ultraâ€Charged Electron Accumulation Polymers Based on MXene Nanoflakes. Advanced Electronic Materials, 2022, 8, .	2.6	8
275	Reflections on boosting wearable triboelectric nanogenerator performance via interface optimisation. Results in Engineering, 2023, 17, 100808.	2.2	3
276	Highly Sensitive Self-Powered Biomedical Applications Using Triboelectric Nanogenerator. Micromachines, 2022, 13, 2065.	1.4	4
277	Wearable Triboelectric Visual Sensors for Tactile Perception. Advanced Materials, 2023, 35, .	11.1	77
278	Recent progress in the fabrication and processing of triboelectric yarns. , 2023, 2, 63-89.		1
280	Influence of the Fabric Topology on the Performance of a Textile-Based Triboelectric Nanogenerator for Self-Powered Monitoring. ACS Applied Polymer Materials, 2023, 5, 2323-2335.	2.0	11
281	Recent Advances in Self-Powered Wearable Sensors Based on Piezoelectric and Triboelectric Nanogenerators. Biosensors, 2023, 13, 37.	2.3	17
282	High-Output Wearable Flow Ring-Based Triboelectric Nanogenerator via Opposite Charging Intermediate Layer. International Journal of Energy Research, 2023, 2023, 1-8.	2.2	Ο

IF ARTICLE CITATIONS # Recent advances on porous materials and structures for high-performance triboelectric 283 8.2 18 nanogenerators. Nano Energy, 2023, 111, 108365. Triboelectric Nanogenerators (TENGs) Based on Various Flexible Polymeric Materials Along With Printed and Non-Printed Electrodes. , 2023, 2, 92-100. 284 Graphene in wearable textile sensor devices for healthcare. Textile Progress, 2022, 54, 201-245. 285 1.32 Fiber- and Textile-Based Triboelectric Nanogenerators., 2023, , 1-39. Recent progress in textile-based triboelectric force sensors for wearable electronics. Advanced 287 9.9 15 Composites and Hybrid Materials, 2023, 6, . Triboelectric Nanogenerators for Wearable Electronics., 2023, , 1-27. Triboelectric Nanogenerators for Wearable Electronics. , 2023, , 677-703. 300 0 Fiber- and Textile-Based Triboelectric Nanogenerators., 2023, , 851-889. Research Progress of Fabrics with Different Geometric Structures for Triboelectric Nanogenerators 303 7.9 3 in Flexible and Wearable Electronics. Advanced Fiber Materials, 2023, 5, 1852-1878. Semiconductor multimaterial optical fibers for biomedical applications., 2024, , 231-258.

**CITATION REPORT**