

Graphene-based wearable piezoresistive physical sensors

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Citation Report

#	ARTICLE	IF	CITATIONS
1	A Comprehensive Review on Carbon-Based Polymer Nanocomposite Foams as Electromagnetic Interference Shields and Piezoresistive Sensors. ACS Applied Electronic Materials, 2020, 2, 2318-2350.	2.0	82
2	Optimized Analysis of Sensitivity and Non-Linearity for PDMSâ€“Graphene MEMS Force Sensor. IETE Journal of Research, 2022, 68, 4453-4467.	1.8	6
3	Graphene Fiber-Based Strain-Insensitive Wearable Temperature Sensor. , 2020, 4, 1-4.		11
4	Nano-toughening of transparent wearable sensors with high sensitivity and a wide linear sensing range. Journal of Materials Chemistry A, 2020, 8, 20531-20542.	5.2	33
5	Water-Based Graphene Inks for All-Printed Temperature and Deformation Sensors. ACS Applied Electronic Materials, 2020, 2, 2857-2867.	2.0	32
6	3D graphene and boron nitride structures for nanocomposites with tailored thermal conductivities: recent advances and perspectives. Functional Composites and Structures, 2020, 2, 022001.	1.6	21
7	A spirally layered carbon nanotube-graphene/polyurethane composite yarn for highly sensitive and stretchable strain sensor. Composites Part A: Applied Science and Manufacturing, 2020, 135, 105932.	3.8	50
8	Human skin-inspired integrated multidimensional sensors based on highly anisotropic structures. Materials Horizons, 2020, 7, 2378-2389.	6.4	56
9	Two-dimensional (2D) materials beyond graphene in cancer drug delivery, photothermal and photodynamic therapy, recent advances and challenges ahead: A review. Journal of Drug Delivery Science and Technology, 2021, 61, 101830.	1.4	39
10	Carbon coated piezoresistive fiber sensors: From process monitoring to structural health monitoring of composites â€“ A review. Composites Part A: Applied Science and Manufacturing, 2021, 141, 106236.	3.8	52
11	Lightweight, flexible and highly sensitive segregated microcellular nanocomposite piezoresistive sensors for human motion detection. Composites Science and Technology, 2021, 203, 108571.	3.8	83
12	Tailored and Highly Stretchable Sensor Prepared by Crosslinking an Enhanced 3D Printed UVâ€“Curable Sacrificial Mold. Advanced Functional Materials, 2021, 31, 2008729.	7.8	52
13	Emerging cellulose-derived materials: a promising platform for the design of flexible wearable sensors toward health and environment monitoring. Materials Chemistry Frontiers, 2021, 5, 2051-2091.	3.2	54
14	An ultrahigh sensitivity micro-cliff graphene wearable pressure sensor made by instant flash light exposure. Nanoscale, 2021, 13, 15380-15393.	2.8	9
15	Flexible temperature sensors made of aligned electrospun carbon nanofiber films with outstanding sensitivity and selectivity towards temperature. Materials Horizons, 2021, 8, 1488-1498.	6.4	61
16	A do-it-yourself approach to achieving a flexible pressure sensor using daily use materials. Journal of Materials Chemistry C, 2021, 9, 13659-13667.	2.7	76
17	Design of non-transition-metal-doped nanoribbon catalysis to achieve efficient nitrogen fixation. Materials Advances, 2021, 2, 7423-7430.	2.6	2
18	Anisotropic conductive networks for multidimensional sensing. Materials Horizons, 2021, 8, 2615-2653.	6.4	30

#	ARTICLE	IF	CITATIONS
19	E-Textile Battery-Less Displacement and Strain Sensor for Human Activities Tracking. IEEE Internet of Things Journal, 2021, 8, 16486-16497.	5.5	21
20	Advances in ultrasensitive piezoresistive sensors: from conventional to flexible and stretchable applications. Materials Horizons, 2021, 8, 2123-2150.	6.4	61
21	Deep neural network analysis of nanoparticle ordering to identify defects in layered carbon materials. Chemical Science, 2021, 12, 7428-7441.	3.7	10
22	Laser-induced porous graphene on Polyimide/PDMS composites and its kirigami-inspired strain sensor. Theoretical and Applied Mechanics Letters, 2021, 11, 100240.	1.3	20
23	Synthesis of Wafer-Scale Graphene with Chemical Vapor Deposition for Electronic Device Applications. Advanced Materials Technologies, 2021, 6, 2000744.	3.0	46
24	Applications of Ceramic/Graphene Composites and Hybrids. Materials, 2021, 14, 2071.	1.3	26
25	Facilely constructed two-sided microstructure interfaces between electrodes and cellulose paper active layer: eco-friendly, low-cost and high-performance piezoresistive sensor. Cellulose, 2021, 28, 6389.	2.4	48
26	Wide linear range and highly sensitive flexible pressure sensor based on multistage sensing process for health monitoring and human-machine interfaces. Chemical Engineering Journal, 2021, 412, 128649.	6.6	125
27	Anisotropic, Wrinkled, and Crack-Bridging Structure for Ultrasensitive, Highly Selective Multidirectional Strain Sensors. Nano-Micro Letters, 2021, 13, 122.	14.4	74
28	Biomedical Catheters With Integrated Miniature Piezoresistive Pressure Sensors: A Review. IEEE Sensors Journal, 2021, 21, 10241-10290.	2.4	27
29	Materials, Electrical Performance, Mechanisms, Applications, and Manufacturing Approaches for Flexible Strain Sensors. Nanomaterials, 2021, 11, 1220.	1.9	35
30	Physical Sensors Based on Laser-Induced Graphene: A Review. IEEE Sensors Journal, 2021, 21, 12426-12443.	2.4	50
31	An Overview of Functionalized Graphene Nanomaterials for Advanced Applications. Nanomaterials, 2021, 11, 1717.	1.9	36
32	Recent Advances in Graphene Electronic Skin and its Future Prospects. ChemNanoMat, 2021, 7, 982-997.	1.5	13
33	A Review on the Applications of Graphene in Mechanical Transduction. Advanced Materials, 2022, 34, e2101326.	11.1	59
34	3D printed graphene/polyurethane wearable pressure sensor for motion fitness monitoring. Nanotechnology, 2021, 32, 395503.	1.3	27
35	Oxidized Ti ₃ C ₂ T _x film-based high-performance flexible pressure sensors. Journal Physics D: Applied Physics, 2021, 54, 384002.	1.3	3
36	Flexible all-textile dual tactile-tension sensors for monitoring athletic motion during taekwondo. Nano Energy, 2021, 85, 105941.	8.2	77

#	ARTICLE	IF	CITATIONS
37	Tuning Mechanical and Electrical Properties of Elastomer Composites with Hybrid Filler Network Containing Graphene for Stretchable Strain Sensors. <i>Advanced Engineering Materials</i> , 2022, 24, 2100703.	1.6	8
38	Fabricating a mechanochromic AIE luminogen into a wearable sensor for volatile organic compound (VOC) detection. <i>Dyes and Pigments</i> , 2021, 192, 109393.	2.0	25
39	Smart Table Tennis Racket with Tunable Stiffness for Diverse Play Styles and Unconventional Technique Training. <i>Advanced Materials Technologies</i> , 2021, 6, 2100535.	3.0	7
40	Electro-responsive actuators based on graphene. <i>Innovation(China)</i> , 2021, 2, 100168.	5.2	26
41	Self-adhesive and contractile silk fibroin/graphene nano-ionotronic skin for strain sensing of irregular surfaces. <i>Nanotechnology</i> , 2021, 32, 475505.	1.3	6
42	Low cost and highly sensitive flexible pressure sensor based on branched micro-structures. <i>Materials Letters</i> , 2022, 307, 130977.	1.3	3
43	Green and sustainable cellulose-derived humidity sensors: A review. <i>Carbohydrate Polymers</i> , 2021, 270, 118385.	5.1	66
44	Construction of dual conductive network in paper-based composites towards flexible degradable dual-mode sensor. <i>Composites Part A: Applied Science and Manufacturing</i> , 2021, 151, 106649.	3.8	8
45	Wearable biomolecule smart sensor based on Au@PB NPs with high electrochemical activity. <i>Journal of Alloys and Compounds</i> , 2022, 891, 161983.	2.8	7
46	Combined Pressure Sensor With Enhanced Dynamic Range Based on Thin Films of Nanotubes and Graphite Nanobelts. <i>Frontiers in Sensors</i> , 2021, 1, .	1.7	1
47	Design and applications of graphene-based flexible and wearable physical sensing devices. <i>2D Materials</i> , 2021, 8, 022001.	2.0	16
48	Wearable chem-biosensing devices: from basic research to commercial market. <i>Lab on A Chip</i> , 2021, 21, 4285-4310.	3.1	29
49	Fabrication and characterization of piezoresistive flexible pressure sensors based on poly(vinylidene fluoride)/graphene. <i>Sensors</i> , 2021, 21, 6621-6634.	2.3	11
50	Tunable seesaw-like 3D capacitive sensor for force and acceleration sensing. <i>Npj Flexible Electronics</i> , 2021, 5, .	5.1	12
51	Rational Design of All Resistive Multifunctional Sensors with Stimulus Discriminability. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	33
52	DATSURYOKU Sensor: A Capacitive-Sensor-Based Belt for Predicting Muscle Tension: Preliminary Results. <i>Sensors</i> , 2021, 21, 6669.	2.1	0
53	Textile-Based Mechanical Sensors: A Review. <i>Materials</i> , 2021, 14, 6073.	1.3	14
54	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

#	ARTICLE	IF	CITATIONS
55	In-situ characterization on the fracture behavior of three dimensional polymer nanocomposites reinforced by CNT sponge. <i>Composites Science and Technology</i> , 2022, 217, 109132.	3.8	5
56	Conductive and room-temperature self-healable polydimethylsiloxane-based elastomer film with ridge-like microstructure for piezoresistive pressure sensor. <i>Chemical Engineering Journal</i> , 2022, 430, 133103.	6.6	41
57	Graphene-enabled wearable sensors for healthcare monitoring. <i>Biosensors and Bioelectronics</i> , 2022, 197, 113777.	5.3	82
58	Conductive Polymer Composites for Soft Tactile Sensors. <i>Macromolecular Research</i> , 2021, 29, 761-775.	1.0	15
59	Highly sensitive gas sensor based on a parity-time-symmetric system. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2022, 39, 227.	0.8	2
60	Recent progress in graphene-based wearable piezoresistive sensors: From 1D to 3D device geometries. <i>Nano Materials Science</i> , 2023, 5, 247-264.	3.9	20
61	Quantifying the Piezoresistive Mechanism in High-Performance Printed Graphene Strain Sensors. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 7141-7151.	4.0	14
62	Highly sensitive omnidirectional signal manipulation from a flexible anisotropic strain sensor based on aligned carbon hybrid nanofibers. <i>Journal of Materials Chemistry A</i> , 2022, 10, 928-938.	5.2	22
63	Pressure-Responsive Conductive Poly(vinyl alcohol) Composites Containing Waste Cotton Fibers Biochar. <i>Micromachines</i> , 2022, 13, 125.	1.4	10
64	Advanced three-dimensional graphene-based piezoresistive sensors in wearable devices. <i>Journal of Physics: Conference Series</i> , 2022, 2174, 012019.	0.3	3
65	Experimental determination of the compressive piezoresistive response of a free-standing film with application to reduced graphene oxide. <i>Journal of Applied Physics</i> , 2022, 131, .	1.1	2
66	Carbon Nanomaterials (CNMs) and Enzymes: From Nanozymes to CNM-Enzyme Conjugates and Biodegradation. <i>Materials</i> , 2022, 15, 1037.	1.3	13
67	Electrostatic Jet Engineering of Flexible Composite Pressure Sensors for Physical Applications. <i>ACS Applied Polymer Materials</i> , 2022, 4, 868-878.	2.0	8
68	Bioinspired Self-Powered Piezoresistive Sensors for Simultaneous Monitoring of Human Health and Outdoor UV Light Intensity. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 5101-5111.	4.0	40
69	High-Performance Flexible Heater With Command-Responding Function Attained by Direct Laser Writing on Nomex Paper. <i>IEEE Electron Device Letters</i> , 2022, 43, 462-465.	2.2	10
70	Improved sensitive conductive sponge sensors with tunnel-crack broadening for pressure, humidity and temperature sensing applications. <i>Sensors and Actuators B: Chemical</i> , 2022, 358, 131497.	4.0	10
71	Electronic Textiles for Wearable Point-of-Care Systems. <i>Chemical Reviews</i> , 2022, 122, 3259-3291.	23.0	316
72	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

#	ARTICLE	IF	CITATIONS
73	Performance of Flexible Strain Sensors With Different Transition Mechanisms: A Review. <i>IEEE Sensors Journal</i> , 2022, 22, 7475-7498.	2.4	18
74	Wearable Sensors Based on Graphene Nanoplatelets Reinforced Polydimethylsiloxane for Human Motion Monitoring: Analysis of Crack Propagation and Cycling Load Monitoring. <i>Chemosensors</i> , 2022, 10, 75.	1.8	12
75	Editors' Choice Review 3D Printing: An Innovative Trend in Analytical Sensing. , 2022, 1, 010602.		67
76	The status and perspectives of nanostructured materials and fabrication processes for wearable piezoresistive sensors. <i>Microsystem Technologies</i> , 2022, 28, 1561-1580.	1.2	12
77	Wet chemical method for highly flexible and conductive fabrics for smart textile applications. <i>Journal of the Textile Institute</i> , 2023, 114, 639-644.	1.0	3
78	Flexible pressure sensors via engineering microstructures for wearable human-machine interaction and health monitoring applications. <i>IScience</i> , 2022, 25, 104148.	1.9	58
79	Three-layer core-shell Ag/AgCl/PEDOT: PSS composite fibers via a one-step single-nozzle technique enabled skin-inspired tactile sensors. <i>Chemical Engineering Journal</i> , 2022, 442, 136270.	6.6	26
80	Robotic Hair with Rich Sensation and Piloerection Functionalities Biomimicked by Stimuli-Responsive Materials. <i>Advanced Materials Technologies</i> , 2022, 7, .	3.0	2
81	Printed graphene and hybrid conductive inks for flexible, stretchable, and wearable electronics: Progress, opportunities, and challenges. <i>Journal of Science: Advanced Materials and Devices</i> , 2022, 7, 100435.	1.5	36
82	Facile fabrication of flexible piezo-resistive pressure sensor array using reduced graphene oxide foam and silicone elastomer. <i>Sensors and Actuators A: Physical</i> , 2022, 340, 113549.	2.0	22
83	Low-power silicon strain sensor based on CMOS current reference topology. <i>Sensors and Actuators A: Physical</i> , 2022, 339, 113491.	2.0	0
84	Nomex paper-based double-sided laser-induced graphene for multifunctional human-machine interfaces. <i>Carbon</i> , 2022, 193, 68-76.	5.4	13
85	Tailoring of photocurable ionogel toward high resilience and low hysteresis 3D printed versatile porous flexible sensor. <i>Chemical Engineering Journal</i> , 2022, 439, 135593.	6.6	58
86	Fabrication, Structure, Performance, and Application of Graphene-Based Composite Aerogel. <i>Materials</i> , 2022, 15, 299.	1.3	9
87	Mechanoresponsive scatterers for high-contrast optical modulation. <i>Nanophotonics</i> , 2022, 11, 2737-2762.	2.9	14
88	Polymeric piezoresistive airflow sensor to monitor respiratory patterns. <i>Journal of the Royal Society Interface</i> , 2021, 18, 20210753.	1.5	7
89	Integrated Wearable Sensors for Sensing Physiological Pressure Signals and \dot{I}^2 -Hydroxybutyrate in Physiological Fluids. <i>Analytical Chemistry</i> , 2022, 94, 993-1002.	3.2	20
90	Wrinkled, Cracked and Bridged Carbon Networks for Highly Sensitive and Stretchable Strain Sensors. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0

#	ARTICLE	IF	CITATIONS
91	Proximity-field nanopatterning for high-performance chemical and mechanical sensor applications based on 3D nanostructures. <i>Applied Physics Reviews</i> , 2022, 9, .	5.5	10
92	Lightweight and Elastic Silver Nanowire/PEDOT:PSS/Polyimide Aerogels for Piezoresistive Sensors. <i>ACS Applied Polymer Materials</i> , 2022, 4, 3205-3216.	2.0	11
93	Beyond Skin Pressure Sensing: 3D Printed Laminated Graphene Pressure Sensing Material Combines Extremely Low Detection Limits with Wide Detection Range. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	54
94	Graphene-Based Temperature Sensors—Comparison of the Temperature and Humidity Dependences. <i>Nanomaterials</i> , 2022, 12, 1594.	1.9	11
95	Nanowires in Flexible Sensors: Structure is Becoming a Key in Controlling the Sensing Performance. <i>Advanced Materials Technologies</i> , 2022, 7, .	3.0	6
96	Bioinspired and multiscale hierarchical design of a pressure sensor with high sensitivity and wide linearity range for high-throughput biodetection. <i>Nano Energy</i> , 2022, 99, 107376.	8.2	19
97	Design and Optimization of Resonant Cavity Piezoelectric Cantilever Sensor for Wind Velocity and Direction Measurement. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2022, 71, 1-12.	2.4	1
98	Micro/nanoarrays and their applications in flexible sensors: A review. <i>Materials Today Nano</i> , 2022, 19, 100224.	2.3	9
99	Green Manufacturing of Flexible Sensors with a Giant Gauge Factor: Bridging Effect of CNT and Electric Field Enhancement at the Percolation Threshold. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 26024-26033.	4.0	7
100	Highly Stretchable, Ultra-Soft, and Fast Self-Healable Conductive Hydrogels Based on Polyaniline Nanoparticles for Sensitive Flexible Sensors. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	74
101	A novel flexible piezoresistive sensor using superelastic fabric coated with highly durable SEBS/TPU/CB/CNF nanocomposite for detection of human motions. <i>Composites Science and Technology</i> , 2022, 227, 109563.	3.8	36
102	Prototyping and Evaluation of Graphene-Based Piezoresistive Sensors. <i>Electronic Materials</i> , 2022, 3, 218-226.	0.9	2
103	An integrated and robust plant pulse monitoring system based on biomimetic wearable sensor. <i>Npj Flexible Electronics</i> , 2022, 6, .	5.1	25
104	Recent advances on graphene: Synthesis, properties and applications. <i>Composites Part A: Applied Science and Manufacturing</i> , 2022, 160, 107051.	3.8	90
105	Vertical Graphene Canal Mesh for Strain Sensing with a Supereminent Resolution. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 32387-32394.	4.0	6
106	Novel approach for damage detection in multiscale CNT-reinforced composites via wireless Joule heating monitoring. <i>Composites Science and Technology</i> , 2022, 227, 109614.	3.8	5
107	Flexible piezoresistive pressure sensor based on wrinkled layers with fast response for wearable applications. <i>Measurement: Journal of the International Measurement Confederation</i> , 2022, 201, 111645.	2.5	18
108	2D materials and van der Waals heterojunctions for neuromorphic computing. <i>Neuromorphic Computing and Engineering</i> , 2022, 2, 032004.	2.8	14

#	ARTICLE	IF	CITATIONS
109	Wearable Resistive-Type Sensors Based on Graphene Fibers for Monitoring Human Motions. ACS Applied Nano Materials, 2022, 5, 10912-10921.	2.4	7
110	Dual-Scale Porous Composite for Tactile Sensor with High Sensitivity over an Ultrawide Sensing Range. Small, 2022, 18, .	5.2	17
111	Double-Layered Conductive Network Design of Flexible Strain Sensors for High Sensitivity and Wide Working Range. ACS Applied Materials & Interfaces, 2022, 14, 36611-36621.	4.0	26
112	Highly Stretchable, Breathable, and Self-Powered Strain-Temperature Dual-Functional Sensors with Laminated Structure for Health Monitoring, Hyperthermia, and Physiotherapy Applications. Advanced Electronic Materials, 2022, 8, .	2.6	6
113	Flexible and Highly Conductive Textiles Induced by Click Chemistry for Sensitive Motion and Humidity Monitoring. ACS Applied Materials & Interfaces, 2022, 14, 37878-37886.	4.0	8
114	Wearable nanofibrous tactile sensors with fast response and wireless communication. Chemical Engineering Journal, 2023, 451, 138578.	6.6	31
115	Matrix dominated positive/negative piezoresistance in conducting polymer nanocomposites reinforced by CNT foam. Polymer, 2022, 257, 125288.	1.8	11
116	Flexible multifunctional pressure sensors based on Cu-CAT@CNFN and ZnS:Cu/PDMS composite electrode films for visualization and quantification of human motion. Composites Part A: Applied Science and Manufacturing, 2022, 163, 107177.	3.8	12
117	Orthogonal Charge Transfer by Precise Positioning of Silver Single Atoms and Clusters on Carbon Nitride for Efficient Piezocatalytic Pure Water Splitting. Angewandte Chemie, 0, , .	1.6	0
118	Carbon Dots-Based Ultrastretchable and Conductive Hydrogels for High-Performance Tactile Sensors and Self-Powered Electronic Skin. Small, 2023, 19, .	5.2	37
119	An ultrasensitive and stretchable strain sensor based on a microcrack structure for motion monitoring. Microsystems and Nanoengineering, 2022, 8, .	3.4	20
120	Bioinspired Chromotropic Ionic Skin with In-Plane Strain/Temperature/Pressure Multimodal Sensing and Ultrahigh Stimuli Discriminability. Advanced Functional Materials, 2022, 32, .	7.8	33
121	Understanding the Origin of Tensile Response in a Graphene Textile Strain Sensor with Negative Differential Resistance. ACS Nano, 2022, 16, 14230-14238.	7.3	21
123	Cork derived laser-induced graphene for sustainable green electronics. Flexible and Printed Electronics, 2022, 7, 035021.	1.5	10
124	A Breathable Knitted Fabric-Based Smart System with Enhanced Superhydrophobicity for Drowning Alarming. ACS Nano, 2022, 16, 18018-18026.	7.3	41
125	Flexible Pressure Sensor Decorated with MXene and Reduced Graphene Oxide Composites for Motion Detection, Information Transmission, and Pressure Sensing Performance. ACS Applied Materials & Interfaces, 2022, 14, 45978-45987.	4.0	14
126	Orthogonal Charge Transfer by Precise Positioning of Silver Single Atoms and Clusters on Carbon Nitride for Efficient Piezocatalytic Pure Water Splitting. Angewandte Chemie - International Edition, 2022, 61, .	7.2	93
127	Structural engineering of graphite network for ultra-sensitive and durable strain sensors and strain-controlled switches. Chemical Engineering Journal, 2023, 452, 139664.	6.6	12

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128	Sensing mechanism of a flexible strain sensor developed directly using electrospun composite nanofiber yarn with ternary carbon nanomaterials. <i>IScience</i> , 2022, 25, 105162.	1.9	13
129	An embedded printed flexible strain resistance sensor via micro-structure design on graphene-filled conductive silicon rubber. <i>Smart Materials and Structures</i> , 2022, 31, 115017.	1.8	5
130	Low-Cost Data Glove Based on Deep Learning-Enhanced Flexible Multiwalled Carbon Nanotube Sensors for Real-Time Gesture Recognition. <i>Advanced Intelligent Systems</i> , 2022, 4, .	3.3	15
131	Graphene and MXene-based porous structures for multifunctional electromagnetic interference shielding. <i>Nano Research</i> , 2023, 16, 1387-1413.	5.8	28
132	Ultrasensitive flexible wearable pressure/strain sensors: Parameters, materials, mechanisms and applications. <i>Sensors and Actuators A: Physical</i> , 2022, 347, 113934.	2.0	25
133	Electrical-Triggered Multicolor Reversible Color-Changing Ag Nanoparticles/Reduced Graphene Oxide/Polyurethane Conductive Fibers. <i>Macromolecular Materials and Engineering</i> , 2023, 308, .	1.7	2
134	Wrinkled, cracked and bridged carbon networks for highly sensitive and stretchable strain sensors. <i>Composites Part A: Applied Science and Manufacturing</i> , 2022, 163, 107221.	3.8	7
135	Anisotropic MWCNT/polyimide aerogels with multifunctional EMI shielding and strain sensing capabilities. <i>Composites Part A: Applied Science and Manufacturing</i> , 2022, 163, 107208.	3.8	9
136	Multifunctional all hydrogel-based smart dressing system fabricated by a self-healing cross-linking strategy for real-time monitoring of wound temperature, strain and on-demand drug delivery. <i>Journal of Materials Chemistry C</i> , 2022, 10, 17084-17098.	2.7	7
137	Development of Online Tool Wear-Out Detection System Using Silver-Polyester Thick Film Sensor for Low-Duty Cycle Machining Operations. <i>Sensors</i> , 2022, 22, 8200.	2.1	2
138	Carbon nanofiber-reinforced Pt thin film-based airflow sensor for respiratory monitoring. <i>Sensors and Actuators A: Physical</i> , 2022, 347, 113969.	2.0	3
139	Manufacturing and Measuring Techniques for Graphene-Silicone-Based Strain Sensors. <i>Jom</i> , 0, , .	0.9	0
140	Graphene e-tattoos for unobstructive ambulatory electrodermal activity sensing on the palm enabled by heterogeneous serpentine ribbons. <i>Nature Communications</i> , 2022, 13, .	5.8	29
141	Self-powered sensor integration system based on thorn-like polyaniline composites for smart home applications. <i>Nano Energy</i> , 2022, 104, 107966.	8.2	14
142	Capacitive-piezoresistive hybrid flexible pressure sensor based on conductive micropillar arrays with high sensitivity over a wide dynamic range. <i>Materials Horizons</i> , 2023, 10, 499-511.	6.4	20
143	Superhydrophobic graphene nanowalls for electromagnetic interference shielding and infrared photodetection via a two-step transfer method. <i>Chemical Engineering Journal</i> , 2023, 454, 140159.	6.6	7
144	Characterization and optimization of 3D-printed, flexible vibration strain sensors with triply periodic minimal surfaces. <i>Additive Manufacturing</i> , 2023, 61, 103274.	1.7	1
145	Micro/nano-structure skeleton assembled with graphene for highly sensitive and flexible wearable sensor. <i>Composites Part A: Applied Science and Manufacturing</i> , 2023, 165, 107357.	3.8	7

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146	Three dimensional graphene composites: preparation, morphology and their multi-functional applications. Composites Part A: Applied Science and Manufacturing, 2023, 165, 107335.	3.8	20
147	Two-dimensional nanomaterials: A critical review of recent progress, properties, applications, and future directions. Composites Part A: Applied Science and Manufacturing, 2023, 165, 107362.	3.8	66
148	Wearable and Flexible Multifunctional Sensor Based on Laser-Induced Graphene for the Sports Monitoring System. ACS Applied Materials & Interfaces, 2022, 14, 54170-54181.	4.0	27
149	The Global Research Trend in Electrochemical Microfluidic Technology: A Bibliometric Review. Chemosensors, 2023, 11, 14.	1.8	2
150	Wearable Carbon Nanotube–Spandex Textile Yarns for Knee Flexion Monitoring. , 2023, 2, .		5
151	Facile Approach to Fabricate Oriented Porous PDMS Composites for Movements Monitoring and Identifying Motion Patterns. Macromolecular Rapid Communications, 2023, 44, .	2.0	2
152	Paper-Based Sensor with Bioinspired Macrogrooves for Dual Pressure and Mechanical Strain Signal Detection. ACS Applied Nano Materials, 2022, 5, 18832-18841.	2.4	5
153	Bioinspired, Ultra–Sensitive Flexible Strain Sensor Based on Ceramic Fiber Paper With Superhydrophobic and High–Temperature–Resistant Properties. Advanced Materials Technologies, 2023, 8, .	3.0	1
154	Silver Nanowires Deposited on Triblock Copolymer Microfibers for Stretchable Conductive Fabrics. ACS Applied Nano Materials, 2022, 5, 17721-17730.	2.4	4
155	Wearable LIG Flexible Stress Sensor Based on Spider Web Bionic Structure. Coatings, 2023, 13, 155.	1.2	5
156	Preparation and Performance of AgNWs/PDMS Film-Based Flexible Strain Sensor. Materials, 2023, 16, 641.	1.3	5
157	Embedded Six-DoF Force–Torque Sensor for Soft Robots With Learning-Based Calibration. IEEE Sensors Journal, 2023, 23, 4204-4215.	2.4	7
158	Highly conductive and tough double–network hydrogels for smart electronics. SmartMat, 0, , .	6.4	6
159	A Bandi flexible pressure sensor based on the composite of laser-induced graphene and AgNWs. Journal of Materials Science: Materials in Electronics, 2023, 34, .	1.1	0
160	Carbon-Based Piezoresistive Polymer Nanocomposites by Extrusion Additive Manufacturing: Process, Material Design, and Current Progress. 3D Printing and Additive Manufacturing, 0, , .	1.4	2
161	Rationally designed micropixelation-free tactile sensors via contour profile of triboelectric field propagation. Nano Energy, 2023, 109, 108255.	8.2	5
162	Multifunctional wearable humidity and pressure sensors based on biocompatible graphene/bacterial cellulose bioaerogel for wireless monitoring and early warning of sleep apnea syndrome. Nano Energy, 2023, 108, 108215.	8.2	29
163	Design and Simulation Analysis of Different Diaphragm Shapes for Piezoresistive Pressure Sensor. , 2022, , .		0

#	ARTICLE	IF	CITATIONS
164	Highly stretchable strain sensors based on graphene nanoplatelet-doped ecoflex for biomedical purposes. <i>Sensors and Actuators A: Physical</i> , 2023, 353, 114249.	2.0	9
165	Stretchable multifunctional sensor based on porous silver nanowire/silicone rubber conductive film. <i>Nano Research</i> , 2023, 16, 7618-7626.	5.8	8
166	Bacterial cellulose hydrogel for sensors. <i>Chemical Engineering Journal</i> , 2023, 461, 142062.	6.6	41
167	Elucidating the Conducting Mechanisms in a Flexible Piezoresistive Pressure Sensor Using Reduced Graphene Oxide Film in Silicone Elastomer. <i>Sensors</i> , 2023, 23, 2443.	2.1	2
168	Tuneable Piezoresistance of Graphene-Based 2D:2D Nanocomposite Networks. <i>Advanced Functional Materials</i> , 2023, 33, .	7.8	3
169	Pressure Sensor Based on a Lumpily Pyramidal Vertical Graphene Film with a Broad Sensing Range and High Sensitivity. <i>ACS Applied Materials & Interfaces</i> , 2023, 15, 13813-13821.	4.0	6
171	Materials and device architecture towards a multimodal electronic skin. <i>Materials Today</i> , 2023, 64, 165-179.	8.3	12
172	Fully paper-integrated hydrophobic and air permeable piezoresistive sensors for high-humidity and underwater wearable motion monitoring. <i>Npj Flexible Electronics</i> , 2023, 7, .	5.1	15
173	Strategies to break the trade-off between infrared transparency and conductivity. <i>Progress in Materials Science</i> , 2023, 136, 101112.	16.0	8
174	Mechanochromic Optical/Electrical Skin for Ultrasensitive Dual-Signal Sensing. <i>ACS Nano</i> , 2023, 17, 5921-5934.	7.3	22
175	Flexible Strain Sensor Enabled by Carbon Nanotubes-Decorated Electrospun TPU Membrane for Human Motion Monitoring. <i>Advanced Materials Interfaces</i> , 2023, 10, .	1.9	9
176	Nanoelectromechanical Temperature Sensor Based on Piezoresistive Properties of Suspended Graphene Film. <i>Nanomaterials</i> , 2023, 13, 1103.	1.9	2
177	Wearable and Stretchable SEBS/CB Polymer Conductive Strand as a Piezoresistive Strain Sensor. <i>Polymers</i> , 2023, 15, 1618.	2.0	4
178	Advances in flexible sensors for intelligent perception system enhanced by artificial intelligence. <i>Informa-Ån-Å-Materi-Åjly</i> , 2023, 5, .	8.5	20
179	Amorphous carbon material of daily carbon ink: emerging applications in pressure, strain, and humidity sensors. <i>Journal of Materials Chemistry C</i> , 2023, 11, 5585-5600.	2.7	42
180	PVA/PA/H ₃ PO ₄ Hydrogel Films with Ultrawide Pressure and Strain Sensing Range via Facile Fabrication Method. <i>Advanced Materials Technologies</i> , 2023, 8, .	3.0	2
181	Speech Recognition Using Intelligent Piezoresistive Sensor Based on Polystyrene Sphere Microstructures. <i>Advanced Intelligent Systems</i> , 2023, 5, .	3.3	3
182	Mussel inspired Cu-tannic autocatalytic strategy for rapid self-polymerization of conductive and adhesive hydrogel sensors with extreme environmental tolerance. <i>Chemical Engineering Journal</i> , 2023, 465, 142831.	6.6	20

#	ARTICLE	IF	CITATIONS
183	Ultrastretchable High-Conductivity MXene-Based Organohydrogels for Human Health Monitoring and Machine-Learning-Assisted Recognition. ACS Applied Materials & Interfaces, 2023, 15, 19435-19446.	4.0	22
184	Emerging Trends in Soft Electronics: Integrating Machine Intelligence with Soft Acoustic/Vibration Sensors. Advanced Materials, 2023, 35, .	11.1	8
185	Pressure sensors with ultrahigh sensitivity inspired by spider slit sensilla. IEEE Sensors Journal, 2023, , 1-1.	2.4	0
186	Fragmented Graphene Aerogel/Polydimethylsiloxane Sponges for Wearable Piezoresistive Pressure Sensors. ACS Applied Nano Materials, 2023, 6, 7065-7076.	2.4	11
226	Nano-Carbon Based Sensors for Structural Health Monitoring of Smart Bio-Composites. Nanoscale, 0, , .	2.8	0
244	Exploring the potential of carboxylic-functionalized graphene in IoT wearable sensor applications. International Journal of Data Science and Analytics, 0, , .	2.4	0
247	Fundamentals and current status of polymeric piezoresistive cantilever technology applied on biosensors. , 2024, , 259-288.		0
248	Highly Aligned Graphene Aerogels for Multifunctional Composites. Nano-Micro Letters, 2024, 16, .	14.4	0