Zhaoqian Xie

List of Publications by Year in Descending Order

87 papers	4,793 citations	35 h-index	68 g-index
101 ext. papers	6,504 ext. citations	14.5 avg, IF	5.33 L-index

#	Paper	IF	Citations
87	Electronic skin as wireless human-machine interfaces for robotic VR.. *Science Advances*, **2022**, 8, eabl6700	14.3	17
86	Stretchable Sweat-Activated Battery in Skin-Integrated Electronics for Continuous Wireless Sweat Monitoring.. *Advanced Science*, **2022**, e2104635	13.6	11
85	Flexible electronics with dynamic interfaces for biomedical monitoring, stimulation, and characterization. *International Journal of Mechanical System Dynamics*, **2021**, 1, 52-70		2
84	Complex 3D microfluidic architectures formed by mechanically guided compressive buckling. *Science Advances*, **2021**, 7, eabj3686	14.3	11
83	Miniaturization of mechanical actuators in skin-integrated electronics for haptic interfaces. *Microsystems and Nanoengineering*, **2021**, 7, 85	7.7	4
82	The Effect of Void Arrangement on the Pattern Transformation of Porous Soft Solids under Biaxial Loading. *Materials*, **2021**, 14,	3.5	1
81	Wireless multilateral devices for optogenetic studies of individual and social behaviors. *Nature Neuroscience*, **2021**, 24, 1035-1045	25.5	31
80	Miniaturized electromechanical devices for the characterization of the biomechanics of deep tissue. *Nature Biomedical Engineering*, **2021**, 5, 759-771	19	25
79	Advanced Materials in Wireless, Implantable Electrical Stimulators that Offer Rapid Rates of Bioresorption for Peripheral Axon Regeneration. *Advanced Functional Materials*, **2021**, 31, 2102724	15.6	5
78	Fully implantable and bioresorbable cardiac pacemakers without leads or batteries. *Nature Biotechnology*, **2021**, 39, 1228-1238	44.5	38
77	A New Strong Form Technique for Thermo-Electro-Mechanical Behaviors of Piezoelectric Solids. *Coatings*, **2021**, 11, 687	2.9	1
76	Photocurable bioresorbable adhesives as functional interfaces between flexible bioelectronic devices and soft biological tissues. *Nature Materials*, **2021**, 20, 1559-1570	27	29
75	Performance Evaluation of a Wearable Tattoo Electrode Suitable for High-Resolution Surface Electromyogram Recording. *IEEE Transactions on Biomedical Engineering*, **2021**, 68, 1389-1398	5	5
74	Trampoline inspired stretchable triboelectric nanogenerators as tactile sensors for epidermal electronics. *Nano Energy*, **2021**, 81, 105590	17.1	28
73	Wireless, implantable catheter-type oximeter designed for cardiac oxygen saturation. *Science Advances*, **2021**, 7,	14.3	15
72	Bioinspired Ultrathin Piecewise Controllable Soft Robots. *Advanced Materials Technologies*, **2021**, 6, 2001095	6.8	8
71	Battery-free, wireless soft sensors for continuous multi-site measurements of pressure and temperature from patients at risk for pressure injuries. *Nature Communications*, **2021**, 12, 5008	17.4	21

70	Skin-Integrated Devices with Soft, Holey Architectures for Wireless Physiological Monitoring, With Applications in the Neonatal Intensive Care Unit. *Advanced Materials*, **2021**, 33, e2103974	24	5
69	Three-dimensional electronic microfliers inspired by wind-dispersed seeds. *Nature*, **2021**, 597, 503-510	50.4	28
68	Wireless sensors for continuous, multimodal measurements at the skin interface with lower limb prostheses. *Science Translational Medicine*, **2020**, 12,	17.5	39
67	Flexible and stretchable metal oxide nanofiber networks for multimodal and monolithically integrated wearable electronics. *Nature Communications*, **2020**, 11, 2405	17.4	73
66	Skin-interfaced biosensors for advanced wireless physiological monitoring in neonatal and pediatric intensive-care units. *Nature Medicine*, **2020**, 26, 418-429	50.5	134
65	Mechanics designs-performance relationships in epidermal triboelectric nanogenerators. *Nano Energy*, **2020**, 76, 105017	17.1	18
64	Epidermal electronics for respiration monitoring via thermo-sensitive measuring. *Materials Today Physics*, **2020**, 13, 100199	8	31
63	Flexible and stretchable opto-electric neural interface for low-noise electrocorticogram recordings and neuromodulation in vivo. *Biosensors and Bioelectronics*, **2020**, 153, 112009	11.8	16
62	Stretchable self-powered epidermal electronics from piezoelectric rubber for tactile sensing. *Wuli Xuebao/Acta Physica Sinica*, **2020**, 69, 178701	0.6	1
61	Electronic Skin from High-Throughput Fabrication of Intrinsically Stretchable Lead Zirconate Titanate Elastomer. *Research*, **2020**, 2020, 1085417	7.8	21
60	Flexible and Stretchable Antennas for Biointegrated Electronics. *Advanced Materials*, **2020**, 32, e1902767	24	90
59	Stretchable Parylene-C electrodes enabled by serpentine structures on arbitrary elastomers by silicone rubber adhesive. *Journal of Materiomics*, **2020**, 6, 330-338	6.7	12
58	Mechano-acoustic sensing of physiological processes and body motions via a soft wireless device placed at the suprasternal notch. *Nature Biomedical Engineering*, **2020**, 4, 148-158	19	109
57	Thin, Skin-Integrated, Stretchable Triboelectric Nanogenerators for Tactile Sensing. *Advanced Electronic Materials*, **2020**, 6, 1901174	6.4	32
56	Stretchable, dynamic covalent polymers for soft, long-lived bioresorbable electronic stimulators designed to facilitate neuromuscular regeneration. *Nature Communications*, **2020**, 11, 5990	17.4	58
55	A wireless, skin-interfaced biosensor for cerebral hemodynamic monitoring in pediatric care. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 31674-31684	11.5	21
54	Reliable, low-cost, fully integrated hydration sensors for monitoring and diagnosis of inflammatory skin diseases in any environment. *Science Advances*, **2020**, 6,	14.3	18
53	A metal-electrode-free, fully integrated, soft triboelectric sensor array for self-powered tactile sensing. *Microsystems and Nanoengineering*, **2020**, 6, 59	7.7	22

52	Wirelessly controlled, bioresorbable drug delivery device with active valves that exploit electrochemically triggered crevice corrosion. *Science Advances*, **2020**, 6, eabb1093	14.3	35
51	Multimodal Sensing with a Three-Dimensional Piezoresistive Structure. *ACS Nano*, **2019**, 13, 10972-10979	16.7	75
50	Buckling and twisting of advanced materials into morphable 3D mesostructures. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 13239-13248	11.5	51
49	Flexible bioelectrodes with enhanced wrinkle microstructures for reliable electrochemical modification and neuromodulation in vivo. *Biosensors and Bioelectronics*, **2019**, 135, 181-191	11.8	23
48	Binodal, wireless epidermal electronic systems with in-sensor analytics for neonatal intensive care. *Science*, **2019**, 363,	33.3	316
47	3D printed microstructures for flexible electronic devices. *Nanotechnology*, **2019**, 30, 414001	3.4	13
46	Skin-Integrated Graphene-Embedded Lead Zirconate Titanate Rubber for Energy Harvesting and Mechanical Sensing. *Advanced Materials Technologies*, **2019**, 4, 1900744	6.8	34
45	Battery-free, lightweight, injectable microsystem for in vivo wireless pharmacology and optogenetics. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 21427-21437	11.5	61
44	A Bioresorbable Magnetically Coupled System for Low-Frequency Wireless Power Transfer. *Advanced Functional Materials*, **2019**, 29, 1905451	15.6	35
43	Large-area MRI-compatible epidermal electronic interfaces for prosthetic control and cognitive monitoring. *Nature Biomedical Engineering*, **2019**, 3, 194-205	19	144
42	Skin-integrated wireless haptic interfaces for virtual and augmented reality. *Nature*, **2019**, 575, 473-479	50.4	307
41	Wireless, battery-free, fully implantable multimodal and multisite pacemakers for applications in small animal models. *Nature Communications*, **2019**, 10, 5742	17.4	72
40	Design and Fabrication of Heterogeneous, Deformable Substrates for the Mechanically Guided 3D Assembly. *ACS Applied Materials & Interfaces*, **2019**, 11, 3482-3492	9.5	17
39	Soft Three-Dimensional Microscale Vibratory Platforms for Characterization of Nano-Thin Polymer Films. *ACS Nano*, **2019**, 13, 449-457	16.7	16
38	A Generic Soft Encapsulation Strategy for Stretchable Electronics. *Advanced Functional Materials*, **2019**, 29, 1806630	15.6	55
37	Freestanding 3D Mesostructures, Functional Devices, and Shape-Programmable Systems Based on Mechanically Induced Assembly with Shape Memory Polymers. *Advanced Materials*, **2019**, 31, e1805615	24	72
36	Battery-free, wireless sensors for full-body pressure and temperature mapping. *Science Translational Medicine*, **2018**, 10,	17.5	176
35	Three-Dimensional Silicon Electronic Systems Fabricated by Compressive Buckling Process. *ACS Nano*, **2018**, 12, 4164-4171	16.7	23

34	Mechanics Design of Stretchable Near Field Communication Antenna With Serpentine Wires. *Journal of Applied Mechanics, Transactions ASME*, **2018**, 85,	2.7	20
33	Transferred, Ultrathin Oxide Bilayers as Biofluid Barriers for Flexible Electronic Implants. *Advanced Functional Materials*, **2018**, 28, 1702284	15.6	36
32	Advanced approaches for quantitative characterization of thermal transport properties in soft materials using thin, conformable resistive sensors. *Extreme Mechanics Letters*, **2018**, 22, 27-35	3.9	12
31	In vitro protocol for validating interface pressure sensors for therapeutic compression garments: Importance of sphygmomanometer placement and initial cuff diameter. *Veins and Lymphatics*, **2018** , 7,	1.3	3
30	Epidermal Electronics: Wireless, Battery-Free Epidermal Electronics for Continuous, Quantitative, Multimodal Thermal Characterization of Skin (Small 47/2018). *Small*, **2018**, 14, 1870226	11	7
29	Fully implantable optoelectronic systems for battery-free, multimodal operation in neuroscience research. *Nature Electronics*, **2018**, 1, 652-660	28.4	92
28	Electronic Stuctures: Mechanically Guided Post-Assembly of 3D Electronic Systems (Adv. Funct. Mater. 48/2018). *Advanced Functional Materials*, **2018**, 28, 1870344	15.6	1
27	Wireless, Battery-Free Epidermal Electronics for Continuous, Quantitative, Multimodal Thermal Characterization of Skin. *Small*, **2018**, 14, e1803192	11	53
26	Wireless bioresorbable electronic system enables sustained nonpharmacological neuroregenerative therapy. *Nature Medicine*, **2018**, 24, 1830-1836	50.5	190
25	Mechanically Guided Post-Assembly of 3D Electronic Systems. *Advanced Functional Materials*, **2018**, 28, 1803149	15.6	26
24	Compliant and stretchable thermoelectric coils for energy harvesting in miniature flexible devices. *Science Advances*, **2018**, 4, eaau5849	14.3	147
23	Relation between blood pressure and pulse wave velocity for human arteries. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 11144-11149	11.5	109
22	Flexible Near-Field Wireless Optoelectronics as Subdermal Implants for Broad Applications in Optogenetics. *Neuron*, **2017**, 93, 509-521.e3	13.9	225
21	Oximetry: Miniaturized Battery-Free Wireless Systems for Wearable Pulse Oximetry (Adv. Funct. Mater. 1/2017). *Advanced Functional Materials*, **2017**, 27,	15.6	3
20	A skin-attachable, stretchable integrated system based on liquid GaInSn for wireless human motion monitoring with multi-site sensing capabilities. *NPG Asia Materials*, **2017**, 9, e443-e443	10.3	145
19	Dissolution of Monocrystalline Silicon Nanomembranes and Their Use as Encapsulation Layers and Electrical Interfaces in Water-Soluble Electronics. *ACS Nano*, **2017**, 11, 12562-12572	16.7	61
18	Kinetics and Chemistry of Hydrolysis of Ultrathin, Thermally Grown Layers of Silicon Oxide as Biofluid Barriers in Flexible Electronic Systems. *ACS Applied Materials & Interfaces*, **2017**, 9, 42633-42638	9.5	38
17	Fully implantable, battery-free wireless optoelectronic devices for spinal optogenetics. *Pain*, **2017**, 158, 2108-2116	8	76

16	Miniaturized Battery-Free Wireless Systems for Wearable Pulse Oximetry. *Advanced Functional Materials*, **2017**, 27, 1604373	15.6	182
15	Battery-free, stretchable optoelectronic systems for wireless optical characterization of the skin. *Science Advances*, **2016**, 2, e1600418	14.3	266
14	Mechanical assembly of complex, 3D mesostructures from releasable multilayers of advanced materials. *Science Advances*, **2016**, 2, e1601014	14.3	152
13	Stretchable Electronics: Epidermal Electronics with Advanced Capabilities in Near-Field Communication (Small 8/2015). *Small*, **2015**, 11, 905-905	11	8
12	Fracture-mode map of brittle coatings: Theoretical development and experimental verification. *Journal of the Mechanics and Physics of Solids*, **2015**, 83, 19-35	5	9
11	Epidermal electronics with advanced capabilities in near-field communication. *Small*, **2015**, 11, 906-12	11	191
10	Epidermal Electronics: Miniaturized Flexible Electronic Systems with Wireless Power and Near-Field Communication Capabilities (Adv. Funct. Mater. 30/2015). *Advanced Functional Materials*, **2015**, 25, 4919-4919	15.6	2
9	Miniaturized Flexible Electronic Systems with Wireless Power and Near-Field Communication Capabilities. *Advanced Functional Materials*, **2015**, 25, 4761-4767	15.6	114
8	Fracture mode control: a bio-inspired strategy to combat catastrophic damage. *Scientific Reports*, **2015**, 5, 8011	4.9	13
7	CRACK DEFLECTION AND FLAW TOLERANCE IN "BRICK-AND-MORTAR" STRUCTURED COMPOSITES. *International Journal of Applied Mechanics*, **2014**, 06, 1450017	2.4	21
6	Finite element analysis of 3D elastic‐plastic frictional contact problem for Cosserat materials. *Computational Mechanics*, **2013**, 51, 911-925	4	4
5	A finite element model for 2D elastic‐plastic contact analysis of multiple Cosserat materials. *European Journal of Mechanics, A/Solids*, **2012**, 31, 139-151	3.7	11
4	A finite element model for 3D frictional contact analysis of Cosserat materials. *Finite Elements in Analysis and Design*, **2012**, 57, 92-102	2.2	7
3	Analysis of Cosserat materials with Voronoi cell finite element method and parametric variational principle. *Computer Methods in Applied Mechanics and Engineering*, **2008**, 197, 741-755	5.7	17
2	Parametric variational principle based elastic-plastic analysis of Cosserat continuum. *Acta Mechanica Solida Sinica*, **2007**, 20, 65-74	2	4
1	Triboelectric Nanogenerator Tattoos Enabled by Epidermal Electronic Technologies. *Advanced Functional Materials*,2111269	15.6	5