

Jianliang Xiao

List of Publications by Year in descending order

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67
papers

9,010
citations

109137

35
h-index

98622

67
g-index

69
all docs

69
docs citations

69
times ranked

11334
citing authors

#	ARTICLE	IF	CITATIONS
1	Dissolvable films of silk fibroin for ultrathin conformal bio-integrated electronics. <i>Nature Materials</i> , 2010, 9, 511-517.	13.3	1,501
2	A hemispherical electronic eye camera based on compressible silicon optoelectronics. <i>Nature</i> , 2008, 454, 748-753.	13.7	1,211
3	Digital cameras with designs inspired by the arthropod eye. <i>Nature</i> , 2013, 497, 95-99.	13.7	926
4	Waterproof AlInGaP optoelectronics on stretchable substrates with applications in biomedicine and Robotics. <i>Nature Materials</i> , 2010, 9, 929-937.	13.3	557
5	Stretchable, Curvilinear Electronics Based on Inorganic Materials. <i>Advanced Materials</i> , 2010, 22, 2108-2124.	11.1	525
6	Rehealable, fully recyclable, and malleable electronic skin enabled by dynamic covalent thermoset nanocomposite. <i>Science Advances</i> , 2018, 4, eaaq0508.	4.7	375
7	Epidermal mechano-acoustic sensing electronics for cardiovascular diagnostics and human-machine interfaces. <i>Science Advances</i> , 2016, 2, e1601185.	4.7	310
8	Dynamically tunable hemispherical electronic eye camera system with adjustable zoom capability. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 1788-1793.	3.3	242
9	Metal oxide semiconductor nanomembrane-based soft unnoticeable multifunctional electronics for wearable human-machine interfaces. <i>Science Advances</i> , 2019, 5, eaav9653.	4.7	213
10	Environmentally friendly reduced graphene oxide as a broad-spectrum adsorbent for anionic and cationic dyes via π - π interactions. <i>Journal of Materials Chemistry A</i> , 2016, 4, 12126-12135.	5.2	210
11	3D Multiscale Superhydrophilic Sponges with Delicately Designed Pore Size for Ultrafast Oil/Water Separation. <i>Advanced Functional Materials</i> , 2017, 27, 1704293.	7.8	199
12	Graphene/nanofiber aerogels: Performance regulation towards multiple applications in dye adsorption and oil/water separation. <i>Chemical Engineering Journal</i> , 2018, 338, 202-210.	6.6	198
13	High-performance wearable thermoelectric generator with self-healing, recycling, and Lego-like reconfiguring capabilities. <i>Science Advances</i> , 2021, 7, .	4.7	189
14	Molecular Scale Buckling Mechanics in Individual Aligned Single-Wall Carbon Nanotubes on Elastomeric Substrates. <i>Nano Letters</i> , 2008, 8, 124-130.	4.5	180
15	Three-dimensional curvy electronics created using conformal additive stamp printing. <i>Nature Electronics</i> , 2019, 2, 471-479.	13.1	131
16	Mechanically transformative electronics, sensors, and implantable devices. <i>Science Advances</i> , 2019, 5, eaay0418.	4.7	129
17	Ultralow-Cost, Highly Sensitive, and Flexible Pressure Sensors Based on Carbon Black and Airlaid Paper for Wearable Electronics. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 33370-33379.	4.0	127
18	Lateral Buckling Mechanics in Silicon Nanowires on Elastomeric Substrates. <i>Nano Letters</i> , 2009, 9, 3214-3219.	4.5	118

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19	Heterogeneous integration of rigid, soft, and liquid materials for self-healable, recyclable, and reconfigurable wearable electronics. <i>Science Advances</i> , 2020, 6, .	4.7	118
20	A flyweight and superelastic graphene aerogel as a high-capacity adsorbent and highly sensitive pressure sensor. <i>Journal of Materials Chemistry A</i> , 2018, 6, 9074-9080.	5.2	114
21	Finite width effect of thin-films buckling on compliant substrate: Experimental and theoretical studies. <i>Journal of the Mechanics and Physics of Solids</i> , 2008, 56, 2585-2598.	2.3	110
22	Grafting of copolymers onto graphene by miniemulsion polymerization for conductive polymer composites: improved electrical conductivity and compatibility induced by interfacial distribution of graphene. <i>Polymer Chemistry</i> , 2013, 4, 2939.	1.9	93
23	Miniaturized, Battery-Free Optofluidic Systems with Potential for Wireless Pharmacology and Optogenetics. <i>Small</i> , 2018, 14, 1702479.	5.2	91
24	Multifunctional graphene/poly(vinyl alcohol) aerogels: In situ hydrothermal preparation and applications in broad-spectrum adsorption for dyes and oils. <i>Carbon</i> , 2017, 123, 354-363.	5.4	89
25	Wireless optofluidic brain probes for chronic neuropharmacology and photostimulation. <i>Nature Biomedical Engineering</i> , 2019, 3, 655-669.	11.6	88
26	Curvy, shape-adaptive imagers based on printed optoelectronic pixels with a kirigami design. <i>Nature Electronics</i> , 2021, 4, 513-521.	13.1	87
27	Harnessing Surface Wrinkling-Cracking Patterns for Tunable Optical Transmittance. <i>Advanced Optical Materials</i> , 2017, 5, 1700425.	3.6	76
28	Stretchable Thin Film Materials: Fabrication, Application, and Mechanics. <i>Journal of Electronic Packaging, Transactions of the ASME</i> , 2016, 138, .	1.2	68
29	Recyclable, Healable, and Stretchable High-Power Thermoelectric Generator. <i>Advanced Energy Materials</i> , 2021, 11, 2100920.	10.2	65
30	Air/water interfacial assembled rubbery semiconducting nanofilm for fully rubbery integrated electronics. <i>Science Advances</i> , 2020, 6, .	4.7	54
31	Scalable Manufacturing of Solderable and Stretchable Physiologic Sensing Systems. <i>Advanced Materials</i> , 2017, 29, 1701312.	11.1	49
32	L-cysteine-reduced graphene oxide/poly(vinyl alcohol) ultralight aerogel as a broad-spectrum adsorbent for anionic and cationic dyes. <i>Journal of Materials Science</i> , 2017, 52, 5807-5821.	1.7	47
33	Mechanics of Tunable Hemispherical Electronic Eye Camera Systems That Combine Rigid Device Elements With Soft Elastomers. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2013, 80, .	1.1	38
34	Morphing Metal-Polymer Janus Particles. <i>Advanced Materials</i> , 2014, 26, 899-904.	11.1	36
35	Mechanics of curvilinear electronics and optoelectronics. <i>Current Opinion in Solid State and Materials Science</i> , 2015, 19, 171-189.	5.6	36
36	Influences of Substrate Adhesion and Particle Size on the Shape Memory Effect of Polystyrene Particles. <i>Langmuir</i> , 2016, 32, 3691-3698.	1.6	35

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37	Compliant, Heterogeneously Integrated GaAs Micro-VCSELs towards Wearable and Implantable Integrated Optoelectronics Platforms. <i>Advanced Optical Materials</i> , 2014, 2, 373-381.	3.6	29
38	Programmable, reversible and repeatable wrinkling of shape memory polymer thin films on elastomeric substrates for smart adhesion. <i>Soft Matter</i> , 2017, 13, 5317-5323.	1.2	29
39	A general strategy for the synthesis of layered double hydroxide nanoscrolls on arbitrary substrates: its formation and multifunction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 19079-19090.	5.2	23
40	Surface effects on in-plane buckling of nanowires on elastomeric substrates. <i>Journal Physics D: Applied Physics</i> , 2013, 46, 125309.	1.3	20
41	Mechanics of bioinspired imaging systems. <i>Theoretical and Applied Mechanics Letters</i> , 2016, 6, 11-20.	1.3	20
42	Synchronous enhancement and stabilization of graphene oxide liquid crystals: Inductive effect of sodium alginates in different concentration zones. <i>Polymer</i> , 2019, 160, 107-114.	1.8	19
43	Stretchable, Rehealable, Recyclable, and Reconfigurable Integrated Strain Sensor for Joint Motion and Respiration Monitoring. <i>Research</i> , 2021, 2021, 9846036.	2.8	19
44	Rapidly Customizable, Scalable 3D-Printed Wireless Optogenetic Probes for Versatile Applications in Neuroscience. <i>Advanced Functional Materials</i> , 2020, 30, 2004285.	7.8	18
45	Self-Cooling Gallium-Based Transformative Electronics with a Radiative Cooler for Reliable Stiffness Tuning in Outdoor Use. <i>Advanced Science</i> , 2022, 9, .	5.6	17
46	Third-Order Polynomials Model for Analyzing Multilayer Hard/Soft Materials in Flexible Electronics. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2016, 83, .	1.1	16
47	Characterization and photocatalytic properties of SiO ₂ /TiO ₂ nanocomposites prepared through gaseous detonation method. <i>Ceramics International</i> , 2017, 43, 9377-9381.	2.3	16
48	Interaction between Poly(vinyl alcohol) and Layered Double Hydroxide (LDH) Particles with Different Topological Shape and Their Application in Electrospinning. <i>Journal of Physical Chemistry C</i> , 2016, 120, 14435-14443.	1.5	14
49	Tunable surface wrinkling on shape memory polymers with application in smart micromirror. <i>Applied Physics Letters</i> , 2019, 114, 193701.	1.5	14
50	Biomimetic Prosthetic Hand Enabled by Liquid Crystal Elastomer Tendons. <i>Micromachines</i> , 2021, 12, 736.	1.4	13
51	Temperature dependent evolution of wrinkled single-crystal silicon ribbons on shape memory polymers. <i>Soft Matter</i> , 2017, 13, 7625-7632.	1.2	12
52	Programmable localized wrinkling of thin films on shape memory polymers with application in nonuniform optical gratings. <i>Applied Physics Letters</i> , 2018, 112, .	1.5	11
53	Simultaneous regulation of morphology, crystallization, thermal stability and adsorbability of electrospun polyamide 6 nanofibers via graphene oxide and chemically reduced graphene oxide. <i>RSC Advances</i> , 2016, 6, 41392-41403.	1.7	10
54	Highly stretchable and rehealable wearable strain sensor based on dynamic covalent thermoset and liquid metal. <i>Smart Materials and Structures</i> , 2021, 30, 105001.	1.8	9

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55	Simultaneous formation of multiscale hierarchical surface morphologies through sequential wrinkling and folding. <i>Applied Physics Letters</i> , 2018, 112, .	1.5	8
56	Observations of stress accumulation and relaxation in solid-state lithiation and delithiation of suspended Si microcantilevers. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016, 213, 2156-2168.	0.8	7
57	Investigating the Self-Healing of Dynamic Covalent Thermoset Polyimine and Its Nanocomposites. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2019, 86, .	1.1	7
58	Revealing the three-dimensional filler structure in a rubber matrix based on fluorescein modified layered double hydroxides. <i>RSC Advances</i> , 2017, 7, 4030-4038.	1.7	6
59	Homogeneity Permitted Robust Connection for Additive Manufacturing Stretchable Electronics. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 43152-43159.	4.0	6
60	Fabrication and Characterization of Highly Deformable Artificial Muscle Fibers Based on Liquid Crystal Elastomers. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2021, 88, .	1.1	6
61	Improved design of highly efficient micro-sized lithium-ion batteries for stretchable electronics. <i>Journal of Micromechanics and Microengineering</i> , 2019, 29, 075008.	1.5	5
62	Superamphiphobic Porous Structure: Design and Implementation. <i>Advanced Materials Interfaces</i> , 2019, 6, 1801973.	1.9	5
63	Wrinkling of silicon nanoribbons on shape memory polymers. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 265101.	1.3	4
64	Confined thin film wrinkling on shape memory polymer with hybrid surface morphologies. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2021, 37, 1063-1071.	1.5	3
65	Direction-dependent stretchability of AgNW electrodes on microprism-mediated elastomeric substrates. <i>AIP Advances</i> , 2018, 8, 065227.	0.6	1
66	E-skin: the future of sustainable & recyclable wearable electronics. <i>TheScienceBreaker</i> , 2022, 8, .	0.0	1
67	Optogenetic Probes: Rapidly Customizable, Scalable 3D-Printed Wireless Optogenetic Probes for Versatile Applications in Neuroscience (<i>Adv. Funct. Mater.</i> 46/2020). <i>Advanced Functional Materials</i> , 2020, 30, 2070305.	7.8	0