Zhigang Wu

List of Publications by Year
in descending order

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79 papers	5,751 citations	126708 33 h-index	74018 75 g-index
82 all docs	82 docs citations	82 times ranked	6477 citing authors

#	Article	IF	Citations
1	Micromixersâ€"a review. Journal of Micromechanics and Microengineering, 2005, 15, R1-R16.	1.5	1,458
2	PDMSâ€Based Elastomer Tuned Soft, Stretchable, and Sticky for Epidermal Electronics. Advanced Materials, 2016, 28, 5830-5836.	11.1	274
3	A Highly Sensitive Flexible Capacitive Tactile Sensor with Sparse and Highâ€Aspectâ€Ratio Microstructures. Advanced Electronic Materials, 2018, 4, 1700586.	2.6	265
4	Microfluidic electronics. Lab on A Chip, 2012, 12, 2782.	3.1	254
5	Soft inertial microfluidics for high throughput separation of bacteria from human blood cells. Lab on A Chip, 2009, 9, 1193.	3.1	222
6	Liquid metal stretchable unbalanced loop antenna. Applied Physics Letters, 2009, 94, .	1.5	220
7	Ionic Skin with Biomimetic Dielectric Layer Templated from Calathea Zebrine Leaf. Advanced Functional Materials, 2018, 28, 1802343.	7.8	216
8	Liquid alloy printing of microfluidic stretchable electronics. Lab on A Chip, 2012, 12, 4657.	3.1	200
9	A Microfluidic, Reversibly Stretchable, Largeâ€Area Wireless Strain Sensor. Advanced Functional Materials, 2011, 21, 2282-2290.	7.8	188
10	Microfluidic stretchable RF electronics. Lab on A Chip, 2010, 10, 3227.	3.1	166
11	Natural Plant Materials as Dielectric Layer for Highly Sensitive Flexible Electronic Skin. Small, 2018, 14, e1801657.	5.2	153
12	Foldable and Stretchable Liquid Metal Planar Inverted Cone Antenna. IEEE Transactions on Antennas and Propagation, 2009, 57, 3765-3771.	3.1	140
13	Thermal, Waterproof, Breathable, and Antibacterial Cloth with a Nanoporous Structure. ACS Applied Materials & Interfaces, 2018, 10, 2026-2032.	4.0	132
14	Tape Transfer Atomization Patterning of Liquid Alloys for Microfluidic Stretchable Wireless Power Transfer. Scientific Reports, 2015, 5, 8419.	1.6	120
15	Nonlinear diffusive mixing in microchannels: theory and experiments. Journal of Micromechanics and Microengineering, 2004, 14, 604-611.	1.5	109
16	Mechanically Stretchable and Electrically Insulating Thermal Elastomer Composite by Liquid Alloy Droplet Embedment. Scientific Reports, 2016, 5, 18257.	1.6	109
17	High-Fidelity Conformal Printing of 3D Liquid Alloy Circuits for Soft Electronics. ACS Applied Materials & Interfaces, 2019, 11, 7148-7156.	4.0	104
18	Hydrodynamic focusing in microchannels under consideration of diffusive dispersion: theories and experiments. Sensors and Actuators B: Chemical, 2005, 107, 965-974.	4.0	95

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19	Convectiveâ€“diffusive transport in parallel lamination micromixers. Microfluidics and Nanofluidics, 2005, 1, 208-217.	1.0	78
20	Stretchable Thermoelectric Generators Metallized with Liquid Alloy. ACS Applied Materials & Interfaces, 2017, 9, 15791-15797.	4.0	72
21	Skin-electrode iontronic interface for mechanosensing. Nature Communications, 2021, 12, 4731.	5.8	72
22	PEDOT:PSS/Grafted-PDMS Electrodes for Fully Organic and Intrinsically Stretchable Skin-like Electronics. ACS Applied Materials & Interfaces, 2019, 11, 10373-10379.	4.0	69
23	Surface modification of PDMS by gradient-induced migration of embedded Pluronic. Lab on A Chip, 2009, 9, 1500.	3.1	64
24	Time lapse investigation of antibiotic susceptibility using a microfluidic linear gradient 3D culture device. Lab on A Chip, 2014, 14, 3409-3418.	3.1	64
25	Tape Transfer Printing of a Liquid Metal Alloy for Stretchable RF Electronics. Sensors, 2014, 14, 16311-16321.	2.1	58
26	Intelligent Soft Surgical Robots for Nextâ€Generation Minimally Invasive Surgery. Advanced Intelligent Systems, 2021, 3, 2100011.	3.3	55
27	Microfluidic continuous particle/cell separation via electroosmotic-flow-tuned hydrodynamic spreading. Journal of Micromechanics and Microengineering, 2007, 17, 1992-1999.	1.5	48
28	Microfluidic contact lenses for unpowered, continuous and non-invasive intraocular pressure monitoring. Sensors and Actuators A: Physical, 2019, 295, 177-187.	2.0	46
29	Rapid Mixing Using Two-Phase Hydraulic Focusing in Microchannels. Biomedical Microdevices, 2005, 7, 13-20.	1.4	45
30	A Tunable Spherical Cap Microfluidic Electrically Small Antenna. Small, 2013, 9, 3230-3234.	5.2	44
31	Programmable and reprocessable multifunctional elastomeric sheets for soft origami robots. Science Robotics, 2021, 6, .	9.9	42
32	Hydroprinted Liquidâ€Alloyâ€Based Morphing Electronics for Fastâ€Growing/Tender Plants: From Physiology Monitoring to Habit Manipulation. Small, 2020, 16, e2003833.	5.2	41
33	Microfluidic Hydrodynamic Cell Separation: A Review. Micro and Nanosystems, 2009, 1, 181-192.	0.3	36
34	Tuning the Rigidity of Silk Fibroin for the Transfer of Highly Stretchable Electronics. Advanced Functional Materials, 2020, 30, 2001518.	7.8	34
35	Graphene as a Diffusion Barrier in Galinstan-Solid Metal Contacts. IEEE Transactions on Electron Devices, 2014, 61, 2996-3000.	1.6	33
36	Microfluidic Stretchable Radio-Frequency Devices. Proceedings of the IEEE, 2015, 103, 1211-1225.	16.4	33

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37	Microfluidic high viability neural cell separation using viscoelastically tuned hydrodynamic spreading. Biomedical Microdevices, 2008, 10, 631-638.	1.4	31
38	Seamless modulus gradient structures for highly resilient, stretchable system integration. Materials Today Physics, 2018, 4, 28-35.	2.9	29
39	Oneâ€Step Selective Adhesive Transfer Printing for Scalable Fabrication of Stretchable Electronics. Advanced Materials Technologies, 2018, 3, 1700264.	3.0	22
40	Stiffness Preprogrammable Soft Bending Pneumatic Actuators for High-Efficient, Conformal Operation. Soft Robotics, 2022, 9, 613-624.	4.6	22
41	High-Performance Liquid Alloy Patterning of Epidermal Strain Sensors for Local Fine Skin Movement Monitoring. Soft Robotics, 2019, 6, 414-421.	4.6	20
42	A method of manufacturing microfluidic contact lenses by using irreversible bonding and thermoforming. Journal of Micromechanics and Microengineering, 2018, 28, 105008.	1.5	19
43	Capillary Self-Alignment of Microchips on Soft Substrates. Micromachines, 2016, 7, 41.	1.4	16
44	Bioinspired Multimodal Multipose Hybrid Fingers for Wide-Range Force, Compliant, and Stable Grasping. Soft Robotics, 2023, 10, 30-39.	4.6	16
45	High-sensitivity liquid-metal-based contact lens sensor for continuous intraocular pressure monitoring. Journal of Micromechanics and Microengineering, 2021, 31, 035006.	1.5	15
46	Concentration-dependent viscous mixing in microfluidics: modelings and experiments. Microfluidics and Nanofluidics, 2016, 20, 1.	1.0	13
47	Microfluidic systems toward blood hemostasis monitoring and thrombosis diagnosis: From design principles to micro/nano fabrication technologies. View, 2022, 3, .	2.7	12
48	A Rapid Prototyping Technique for Microfluidics with High Robustness and Flexibility. Micromachines, 2016, 7, 201.	1.4	10
49	Viscosity-difference-induced asymmetric selective focusing for large stroke particle separation. Microfluidics and Nanofluidics, 2016, 20, 1.	1.0	10
50	Pneumatic Enabled Vertical Interconnect Access of Liquid Alloy Circuits toward Highly Integrated Stretchable Electronics. Advanced Materials Technologies, 2021, 6, 2000966.	3.0	10
51	On-Demand Multi-Resolution Liquid Alloy Printing Based on Viscoelastic Flow Squeezing. Polymers, 2018, 10, 330.	2.0	9
52	Sandwiched Polyethylene Shrink Film Masking with Tunable Resolution and Shape for Liquid Alloy Patterning. ACS Applied Polymer Materials, 2019, 1, 145-151.	2.0	9
53	Opportunities and Challenges in Flexible and Stretchable Electronics: A Panel Discussion at ISFSE2016. Micromachines, 2017, 8, 129.	1.4	8
54	Tunnel Encapsulation Technology for Durability Improvement in Stretchable Electronics Fabrication. Micromachines, 2018, 9, 519.	1.4	8

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55	High Precision Thermoforming 3D-Conformable Electronics with a Phase-Changing Adhesion Interlayer. Micromachines, 2019, 10, 160.	1.4	8
56	Facile Fabrication of Self-Similar Hierarchical Micro-Nano Structures for Multifunctional Surfaces via Solvent-Assisted UV-Lasering. Micromachines, 2020, 11, 682.	1.4	8
57	Dynamically Conformal Mask Printing of Liquid Alloy Circuits on Morphing Objects. Advanced Materials Technologies, 2021, 6, 2001274.	3.0	8
58	Investigation of active interface control of pressure driven two-fluid flow in microchannels. Sensors and Actuators A: Physical, 2007, 133, 323-328.	2.0	7
59	A Contact Angle Study of the Interaction between Embedded Amphiphilic Molecules and the PDMS Matrix in an Aqueous Environment. Micromachines, 2014, 5, 515-527.	1.4	7
60	High purity and viability cell separation of a bacterivorous jakobid flagellate based on a steep velocity gradient induced soft inertial force. RSC Advances, 2018, 8, 35512-35520.	1.7	7
61	Thrombogenicity of microfluidic chip surface manipulation: Facile, one-step, none-protein technique for extreme wettability contrast micropatterning. Sensors and Actuators B: Chemical, 2021, 343, 130085.	4.0	7
62	A Facile Liquid Alloy Wetting Enhancing Strategy on Superâ€Hydrophobic Lotus Leaves for Plantâ€Hybrid System Implementation. Advanced Materials Interfaces, 2022, 9, .	1.9	6
63	Adhesive Transfer Soft Lithography: Low-Cost and Flexible Rapid Prototyping of Microfluidic Devices. Micro and Nanosystems, 2014, 6, 42-49.	0.3	5
64	Facile fabrication of sensitivity-tunable strain sensors based on laser-patterned micro-nano structures. Journal of Micromechanics and Microengineering, 2021, 31, 085003.	1.5	5
65	Liquid Metal Microscale Deposition enabled High Resolution and Density Epidermal Microheater for Localized Ectopic Expression in Drosophila. Advanced Materials Technologies, 2022, 7, 2100903.	3.0	5
66	Anisotropic Shear-Sensitive Tactile Sensors with Programmable Elastomers for Robotic Manipulations. ACS Applied Materials & Interfaces, 2021, 13, 51426-51435.	4.0	5
67	Artificial Skin: Ionic Skin with Biomimetic Dielectric Layer Templated from Calathea Zebrine Leaf (Adv.) Tj ETQq1 1 0.784314 rgBT /Ov	7.8	4
68	Entangled sciences: the art of microfluidic mixing and separation. Journal of Micromechanics and Microengineering, 2015, 25, 120301.	1.5	3
69	Electronic Skins: Natural Plant Materials as Dielectric Layer for Highly Sensitive Flexible Electronic Skin (Small 35/2018). Small, 2018, 14, 1870161.	5.2	3
70	Headâ€compliant microstrip split ring resonator for nonâ€invasive healing monitoring after craniosynostosisâ€based surgery. Healthcare Technology Letters, 2020, 7, 29-34.	1.9	3
71	Microfluidic high viability separation of neural cells. , 2009, , .		2
72	Wireless liquid-alloy-based induction heating for soft devices by alternating magnetic field: From characterization to application. Sensors and Actuators A: Physical, 2022, 340, 113538.	2.0	2

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73	Pressure and Tendon Actuation Integrated Three-finger Soft Gripper for Wide Force and Speed Range Grasping. , 2021, , .		2
74	Wireless Strain Monitoring: A Microfluidic, Reversibly Stretchable, Large-Area Wireless Strain Sensor (Adv. Funct. Mater. 12/2011). Advanced Functional Materials, 2011, 21, 2166-2166.	7.8	1
75	Stretchable wireless power transfer with a liquid alloy coil. , 2015, , .		1
76	Dynamic Antibiotic Susceptibility Test via a 3D Microfluidic Culture Device. Methods in Molecular Biology, 2017, 1572, 365-377.	0.4	1
77	A Sensitive Flexible Strain Sensor via Anisotropy Microstructured Sensitized Surface Resistive Change for Human Motion Monitoring. , 2021, , .		1
78	Oneâ€Step Soft Templated Selective Millingâ€Based Circuit Patterning for Ecoâ€Friendly and Highâ€Throughput Manufacturing of Flexible Electronics. Advanced Materials Technologies, 2022, 7, .	3.0	1
79	Liquid Alloy Circuits: Dynamically Conformal Mask Printing of Liquid Alloy Circuits on Morphing Objects (Adv. Mater. Technol. 6/2021). Advanced Materials Technologies, 2021, 6, 2170034.	3.0	0