Tingrui Pan

List of Publications by Year in descending order

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118 papers	4,046 citations	145106 33 h-index	156644 58 g-index
119 all docs	119 docs citations	119 times ranked	6079 citing authors

#	Article	IF	Citations
1	High-Throughput Experimentation Using Cell-Free Protein Systems. Methods in Molecular Biology, 2022, 2433, 121-134.	0.4	0
2	Size-tunable droplet microfluidic system using an on-chip microfluidic peristaltic pump. Sensors and Actuators A: Physical, 2022, 334, 113332.	2.0	5
3	Improving the Sensitivity of Nanofibrous Membrane-Based ELISA for On-Site Antibiotics Detection. ACS Sensors, 2022, 7, 1458-1466.	4.0	16
4	Wearable Iontronic FMG for Classification of Muscular Locomotion. IEEE Journal of Biomedical and Health Informatics, 2022, 26, 2854-2863.	3.9	4
5	Ultrahigh-transparency and pressure-sensitive iontronic device for tactile intelligence. Npj Flexible Electronics, 2022, 6, .	5.1	16
6	Digital droplet infusion. Lab on A Chip, 2021, 21, 502-512.	3.1	5
7	First Decade of Interfacial Iontronic Sensing: From Droplet Sensors to Artificial Skins. Advanced Materials, 2021, 33, e2003464.	11.1	155
8	Diffusion of Protein Molecules through Microporous Nanofibrous Polyacrylonitrile Membranes. ACS Applied Polymer Materials, 2021, 3, 1618-1627.	2.0	6
9	Interfacial Iontronic Sensing: First Decade of Interfacial Iontronic Sensing: From Droplet Sensors to Artificial Skins (Adv. Mater. 7/2021). Advanced Materials, 2021, 33, 2170050.	11.1	0
10	Emerging optofluidic technologies for biodiagnostic applications. View, 2021, 2, 20200035.	2.7	9
11	Blink-sensing glasses: A flexible iontronic sensing wearable for continuous blink monitoring. IScience, 2021, 24, 102399.	1.9	11
12	Resource optimization model using novel extreme learning machine with t-distributed stochastic neighbor embedding: Application to complex industrial processes. Energy, 2021, 225, 120255.	4.5	40
13	Building protein networks in synthetic systems from the bottom-up. Biotechnology Advances, 2021, 49, 107753.	6.0	9
14	Sample-to-Answer Robotic ELISA. Analytical Chemistry, 2021, 93, 11424-11432.	3.2	12
15	iWRAP: A Theranostic Wearable Device With Real-Time Vital Monitoring and Auto-Adjustable Compression Level for Venous Thromboembolism. IEEE Transactions on Biomedical Engineering, 2021, 68, 2776-2786.	2.5	7
16	A low-cost, programmable, and multi-functional droplet printing system for low copy number SARS-CoV-2 digital PCR determination. Sensors and Actuators B: Chemical, 2021, 348, 130678.	4.0	13
17	Label-free single-cell isolation enabled by microfluidic impact printing and real-time cellular recognition. Lab on A Chip, 2021, 21, 3695-3706.	3.1	13
18	Digital microfluidic meter-on-chip. Lab on A Chip, 2020, 20, 722-733.	3.1	17

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19	Active-powering pressure-sensing fabric devices. Journal of Materials Chemistry A, 2020, 8, 358-368.	5.2	21
20	Droplet digital PCR enabled by microfluidic impact printing for absolute gene quantification. Talanta, 2020, 211, 120680.	2.9	25
21	AmbuBox: A Fast-Deployable Low-Cost Ventilator for COVID-19 Emergent Care. SLAS Technology, 2020, 25, 573-584.	1.0	31
22	Design and fabrication of a highly sensitive and naked-eye distinguishable colorimetric biosensor for chloramphenicol detection by using ELISA on nanofibrous membranes. Talanta, 2020, 217, 121054.	2.9	46
23	Optimization of Electrical Stimulation for Safe and Effective Guidance of Human Cells. Bioelectricity, 2020, 2, 372-381.	0.6	13
24	Digital flow rate sensor based on isovolumetric droplet discretization effect by a three-supersurface structure. Microfluidics and Nanofluidics, 2019, 23, 1.	1.0	5
25	On the Sensory Analysis of Matter and Materials. Matter, 2019, 1, 13-16.	5.0	1
26	Handwriting Iontronic Pressure Sensing Origami. ACS Applied Materials & Interfaces, 2019, 11, 46157-46164.	4.0	27
27	Microfluidic cap-to-dispense (Î¼CD): a universal microfluidicâ€“robotic interface for automated pipette-free high-precision liquid handling. Lab on A Chip, 2019, 19, 3405-3415.	3.1	17
28	Rapid Discovery of Illuminating Peptides for Instant Detection of Opioids in Blood and Body Fluids. Molecules, 2019, 24, 1813.	1.7	3
29	Flexible and Superwettable Bands as a Platform toward Sweat Sampling and Sensing. Analytical Chemistry, 2019, 91, 4296-4300.	3.2	136
30	Paper Electronics: Allâ€inâ€One Iontronic Sensing Paper (Adv. Funct. Mater. 11/2019). Advanced Functional Materials, 2019, 29, 1970072.	7.8	6
31	FeetBeat: A Flexible Iontronic Sensing Wearable Detects Pedal Pulses and Muscular Activities. IEEE Transactions on Biomedical Engineering, 2019, 66, 3072-3079.	2.5	29
32	A flexible pressure sensor by induced ordered nano cracks filled with multilayer graphene oxide composite film as a conductive fine-wire network for higher sensitivity. Flexible and Printed Electronics, 2019, 4, 015003.	1.5	14
33	Allâ€inâ€One Iontronic Sensing Paper. Advanced Functional Materials, 2019, 29, 1807343.	7.8	85
34	Combinatorial Peptide Microarray Synthesis Based on Microfluidic Impact Printing. ACS Combinatorial Science, 2019, 21, 6-10.	3.8	9
35	Deciphering the metabolic role of AMPK in cancer multi-drug resistance. Seminars in Cancer Biology, 2019, 56, 56-71.	4.3	25
36	Microfluidic Print-to-Synthesis Platform for Efficient Preparation and Screening of Combinatorial Peptide Microarrays. Analytical Chemistry, 2018, 90, 5833-5840.	3.2	18

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37	Electronic Skin: Imperceptible Epidermalâ€“Iontronic Interface for Wearable Sensing (Adv. Mater.) Tj ETQq1 1 0.784314 rgBT /Overlock	11.1	0
38	Imperceptible Epidermalâ€“Iontronic Interface for Wearable Sensing. Advanced Materials, 2018, 30, 1705122.	11.1	150
39	Twisting patterning: electrochemical deposition of stretchable spiral metallic conductors on elastic polymer threads. Journal of Materials Chemistry C, 2018, 6, 1215-1223.	2.7	2
40	Comparison of piezoresistive sensor to PicoPressÂ® in in-vitro interface pressure measurement. Phlebology, 2018, 33, 315-320.	0.6	19
41	Synthetic microbial consortia enable rapid assembly of pure translation machinery. Nature Chemical Biology, 2018, 14, 29-35.	3.9	56
42	Flexible Superwettable Tapes for On-Site Detection of Heavy Metals. Analytical Chemistry, 2018, 90, 14105-14110.	3.2	59
43	EIS. , 2018, 2, 1-22.		13
44	A Plug-and-Play, Drug-on-Pillar Platform for Combination Drug Screening Implemented by Microfluidic Adaptive Printing. Analytical Chemistry, 2018, 90, 13969-13977.	3.2	21
45	Dotette: Programmable, high-precision, plug-and-play droplet pipetting. Biomicrofluidics, 2018, 12, 034107.	1.2	15
46	EIS: A wearable device for epidermal pressure sensing. , 2018, , .		3
47	High-precision digital droplet pipetting enabled by a plug-and-play microfluidic pipetting chip. Lab on A Chip, 2018, 18, 2720-2729.	3.1	26
48	Wearable Technology Design for Autism Spectrum Disorders. Archives of Design Research, 2018, 31, 37-55.	0.1	19
49	Wearable microfluidics: fabric-based digital droplet flowmetry for perspiration analysis. Lab on A Chip, 2017, 17, 926-935.	3.1	40
50	Collective cell migration has distinct directionality and speed dynamics. Cellular and Molecular Life Sciences, 2017, 74, 3841-3850.	2.4	33
51	Photopatternable PEDOT:PSS/PEG hybrid thin film with moisture stability and sensitivity. Microsystems and Nanoengineering, 2017, 3, 17004.	3.4	50
52	Multi-dimensional studies of synthetic genetic promoters enabled by microfluidic impact printing. Lab on A Chip, 2017, 17, 2198-2207.	3.1	20
53	Electrospun nanofabric based all-fabric iontronic pressure sensor. , 2017, , .		1
54	Wearable Sensors: Supercapacitive Iontronic Nanofabric Sensing (Adv. Mater. 36/2017). Advanced Materials, 2017, 29, .	11.1	4

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55	Supercapacitive Iontronic Nanofabric Sensing. Advanced Materials, 2017, 29, 1700253.	11.1	187
56	Photopatternable and moisture-stable PEDOT:PSS/PEG hybrid thin-film for flexible and wearable humidity sensing. , 2017, , .		0
57	The Typical Metabolic Modifiers Conferring Improvement in Cancer Resistance. Current Medicinal Chemistry, 2017, 24, 3698-3710.	1.2	11
58	Telemedical Wearable Sensing Platform for Management of Chronic Venous Disorder. Annals of Biomedical Engineering, 2016, 44, 2282-2291.	1.3	32
59	Flexible Transparent Iontronic Film for Interfacial Capacitive Pressure Sensing. Advanced Materials, 2015, 27, 6055-6062.	11.1	354
60	A large-scale screen reveals genes that mediate electrotaxis in Dictyostelium discoideum. Science Signaling, 2015, 8, ra50.	1.6	39
61	Design, Fabrication, and In Vitro Testing of an Anti-biofouling Glaucoma Micro-shunt. Annals of Biomedical Engineering, 2015, 43, 2394-2405.	1.3	13
62	Reconfigurable microfluidic dilution for high-throughput quantitative assays. Lab on A Chip, 2015, 15, 2670-2679.	3.1	14
63	Piezoelectric-driven droplet impact printing with an interchangeable microfluidic cartridge. Biomicrofluidics, 2015, 9, 054101.	1.2	17
64	Microfluidic-Enabled Print-to-Screen Platform for High-Throughput Screening of Combinatorial Chemotherapy. Analytical Chemistry, 2015, 87, 10166-10171.	3.2	39
65	Print-to-pattern dry film photoresist lithography. Journal of Micromechanics and Microengineering, 2014, 24, 057002.	1.5	12
66	Reversible deactivation of higher-order posterior parietal areas. I. Alterations of receptive field characteristics in early stages of neocortical processing. Journal of Neurophysiology, 2014, 112, 2529-2544.	0.9	17
67	Smartphone-interfaced lab-on-a-chip devices for field-deployable enzyme-linked immunosorbent assay. Biomicrofluidics, 2014, 8, 064101.	1.2	57
68	Flexible Electronics: Microflotronics: A Flexible, Transparent, Pressure-Sensitive Microfluidic Film (Adv. Funct. Mater. 39/2014). Advanced Functional Materials, 2014, 24, 6086-6086.	7.8	2
69	Mobile Medicine: Can Emerging Mobile Technologies Enable Patient-Oriented Medicine?. Annals of Biomedical Engineering, 2014, 42, 2203-2204.	1.3	4
70	Stereomask Lithography for Multi-Protein Patterning. Methods in Cell Biology, 2014, 119, 175-192.	0.5	2
71	Print-to-Print. Methods in Cell Biology, 2014, 119, 219-233.	0.5	1
72	Iontronic microdroplet array for flexible ultrasensitive tactile sensing. Lab on A Chip, 2014, 14, 1107.	3.1	123

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73	Photopatternable and photoactive hydrogel for on-demand generation of hydrogen peroxide in cell culture. Biomaterials, 2014, 35, 1762-1770.	5.7	3
74	ElectroTaxis-on-a-Chip (ETC): an integrated quantitative high-throughput screening platform for electrical field-directed cell migration. Lab on A Chip, 2014, 14, 4398-4405.	3.1	22
75	Manually operatable on-chip bistable pneumatic microstructures for microfluidic manipulations. Lab on A Chip, 2014, 14, 3401.	3.1	21
76	Microflotronics: A Flexible, Transparent, Pressureâ€Sensitive Microfluidic Film. Advanced Functional Materials, 2014, 24, 6195-6203.	7.8	66
77	Microfluidic tactile sensors for three-dimensional contact force measurements. Lab on A Chip, 2014, 14, 4344-4353.	3.1	47
78	Microflotronic Arterial Tonometry for Continuous Wearable Non-Invasive Hemodynamic Monitoring. Annals of Biomedical Engineering, 2014, 42, 2278-2288.	1.3	27
79	Reversible deactivation of higher-order posterior parietal areas. II. Alterations in response properties of neurons in areas 1 and 2. Journal of Neurophysiology, 2014, 112, 2545-2560.	0.9	15
80	Print-to-print: a facile multi-object micro-patterning technique. Biomedical Microdevices, 2013, 15, 233-240.	1.4	2
81	Print-to-Print: A facile flexible multi-object patterning process using superhydrophobic films. , 2013, , .		0
82	Microfluidic System for Facilitated Quantification of Nanoparticle Accumulation to Cells Under Laminar Flow. Annals of Biomedical Engineering, 2013, 41, 89-99.	1.3	42
83	Endogenous electric currents might guide rostral migration of neuroblasts. EMBO Reports, 2013, 14, 184-190.	2.0	85
84	Interfacial microfluidic transport on micropatterned superhydrophobic textile. Lab on A Chip, 2013, 13, 1937.	3.1	90
85	Microfluidic impact printer with interchangeable cartridges for versatile non-contact multiplexed micropatterning. Lab on A Chip, 2013, 13, 1902.	3.1	30
86	Superhydrophobicity-Enabled Interfacial Microfluidics on Textile. Materials Research Society Symposia Proceedings, 2013, 1569, 115-120.	0.1	0
87	Universal Anisotropically Conductive Nano-adhesive of PDMS Oligomers. Materials Research Society Symposia Proceedings, 2013, 1553, 1.	0.1	0
88	Reconfigurable microfluidics combined with antibody microarrays for enhanced detection of T-cell secreted cytokines. Biomicrofluidics, 2013, 7, 024105.	1.2	18
89	Fabrication of an inexpensive, implantable cooling device for reversible brain deactivation in animals ranging from rodents to primates. Journal of Neurophysiology, 2012, 107, 3543-3558.	0.9	18
90	Bubble formation on superhydrophobic-micropatterned copper surfaces. Applied Thermal Engineering, 2012, 35, 112-119.	3.0	31

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91	Rotary Liquid Droplet Microbearing. Journal of Microelectromechanical Systems, 2012, 21, 721-729.	1.7	25
92	Droplet-based interfacial capacitive sensing. Lab on A Chip, 2012, 12, 1110.	3.1	137
93	Capillary-driven automatic packaging. Lab on A Chip, 2011, 11, 1464.	3.1	20
94	Fit-to-Flow (F2F) interconnects: Universal reversible adhesive-free microfluidic adaptors for lab-on-a-chip systems. Lab on A Chip, 2011, 11, 727-732.	3.1	34
95	Stereomask lithography (SML): a universal multi-object micro-patterning technique for biological applications. Lab on A Chip, 2011, 11, 224-230.	3.1	25
96	Droplet-driven transports on superhydrophobic-patterned surface microfluidics. Lab on A Chip, 2011, 11, 3642.	3.1	112
97	From Cleanroom to Desktop: Emerging Micro-Nanofabrication Technology for Biomedical Applications. Annals of Biomedical Engineering, 2011, 39, 600-620.	1.3	62
98	Surface microfluidics fabricated by photopatternable superhydrophobic nanocomposite. Microfluidics and Nanofluidics, 2011, 10, 991-997.	1.0	63
99	Universal Nanopatternable Interfacial Bonding. Advanced Materials, 2011, 23, 5551-5556.	11.1	20
100	Interfacial Nanoadhesive: Universal Nanopatternable Interfacial Bonding (Adv. Mater. 46/2011). Advanced Materials, 2011, 23, 5550-5550.	11.1	0
101	Three-dimensional fit-to-flow microfluidic assembly. Biomicrofluidics, 2011, 5, 46505-465059.	1.2	18
102	Photopatternable Superhydrophobic Nanocomposites for Microfabrication. Journal of Microelectromechanical Systems, 2010, 19, 246-253.	1.7	38
103	Three-dimensional surface microfluidics enabled by spatiotemporal control of elastic fluidic interface. Lab on A Chip, 2010, 10, 3271.	3.1	22
104	Non-adhesive PEG hydrogel nanostructures for self-assembly of highly ordered colloids. Nanotechnology, 2009, 20, 075307.	1.3	18
105	Micropattern-assisted nanoassembly: Ordered nanocolloidal array on PEG microstructures. , 2009, , .		0
106	Lab-on-a-print: from a single polymer film to three-dimensional integrated microfluidics. Lab on A Chip, 2009, 9, 1133.	3.1	36
107	Direct projection on dry-film photoresist (DP2): do-it-yourself three-dimensional polymer microfluidics. Lab on A Chip, 2009, 9, 1128.	3.1	59
108	Microfabrication of conductive PDMS on flexible substrates for biomedical applications. , 2009, , .		12

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109	Integrating Sensing Hydrogel Microstructures into Micropatterned Hepatocellular Cocultures. Langmuir, 2009, 25, 3880-3886.	1.6	47
110	Photopatternable Conductive PDMS Materials for Microfabrication. Advanced Functional Materials, 2008, 18, 1912-1921.	7.8	176
111	Remotely adjustable check-valves with an electrochemical release mechanism for implantable biomedical microsystems. Biomedical Microdevices, 2007, 9, 385-394.	1.4	8
112	An Artificial Nano-Drainage Implant (ANDI) for Glaucoma Treatment. , 2006, 2006, 3174-7.		27
113	A Reworkable Adhesive-Free Interconnection Technology for Microfluidic Systems. Journal of Microelectromechanical Systems, 2006, 15, 267-272.	1.7	44
114	An Artificial Nano-Drainage Implant (ANDI) for Glaucoma Treatment. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0
115	Modeling and Characterization of a Valved Glaucoma Drainage Device With Implications for Enhanced Therapeutic Efficacy. IEEE Transactions on Biomedical Engineering, 2005, 52, 948-951.	2.5	26
116	Thin-Film Coupled Fluid-Solid Analysis of Flow Through the Ahmedâ„¢ Glaucoma Drainage Device. Journal of Biomechanical Engineering, 2005, 127, 776-781.	0.6	20
117	Fabrication and modeling of silicon-embedded high-Qinductors. Journal of Micromechanics and Microengineering, 2005, 15, 849-854.	1.5	18
118	A magnetically driven PDMS micropump with ball check-valves. Journal of Micromechanics and Microengineering, 2005, 15, 1021-1026.	1.5	158