

Xin Zhao

List of Publications by Year in descending order

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112
papers

1,265
citations

430754

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docs citations

114
times ranked

1590
citing authors

#	ARTICLE	IF	CITATIONS
1	Precise Aspiration and Positioning Control Based on Dynamic Model <i>Inside</i> and <i>Outside</i> the Micropipette. IEEE Transactions on Automation Science and Engineering, 2023, 20, 385-393.	3.4	3
2	Intracellular Strain Evaluation-Based Oocyte Enucleation and Its Application in Robotic Cloning. Engineering, 2023, 24, 73-83.	3.2	1
3	Exogenous melatonin protects preimplantation embryo development from decabromodiphenyl ethane-induced circadian rhythm disorder and endogenous melatonin reduction. Environmental Pollution, 2022, 292, 118445.	3.7	9
4	Robust H^∞ Control for Fractional Order Systems with Order $\hat{\alpha}$ ($0 < \hat{\alpha} < 1$). Fractal and Fractional, 2022, 6, 86.	1.6	4
5	Oocyte Penetration Speed Optimization Based on Intracellular Strain. Micromachines, 2022, 13, 309.	1.4	3
6	Robust H^∞ Control of Fractional-Order Switched Systems with Order $0 < \hat{\alpha} < 1$ and Uncertainty. Fractal and Fractional, 2022, 6, 164.	1.6	4
7	A Machine Learning Method for Automated <i>In Vivo</i> Transparent Vessel Segmentation and Identification Based on Blood Flow Characteristics. Microscopy and Microanalysis, 2022, 28, 801-814.	0.2	2
8	Mechanical Characterization and Modelling of Subcellular Components of Oocytes. Micromachines, 2022, 13, 1087.	1.4	2
9	Protective Effects of Spermidine and Melatonin on Deltamethrin-Induced Cardiotoxicity and Neurotoxicity in Zebrafish. Cardiovascular Toxicology, 2021, 21, 29-41.	1.1	15
10	The toxic effects and possible mechanisms of decabromodiphenyl ethane on mouse oocyte. Ecotoxicology and Environmental Safety, 2021, 207, 111290.	2.9	24
11	Robotic Precisely Oocyte Blind Enucleation Method. Applied Sciences (Switzerland), 2021, 11, 1850.	1.3	5
12	Wavelength of a Turing-type mechanism regulates the morphogenesis of meshwork patterns. Scientific Reports, 2021, 11, 4813.	1.6	3
13	Mechanisms of branch tip fusion in meshwork patterns*. , 2021, , .		0
14	Reaction-Diffusion Model-Based Research on Formation Mechanism of Neuron Dendritic Spine Patterns. Frontiers in Neurorobotics, 2021, 15, 563682.	1.6	1
15	6-benzylaminopurine exposure induced development toxicity and behaviour alteration in zebrafish (<i>Danio rerio</i>). Environmental Pollution, 2021, 278, 116887.	3.7	10
16	A Cell's Viscoelasticity Measurement Method Based on the Spheroidization Process of Non-Spherical Shaped Cell. Sensors, 2021, 21, 5561.	2.1	2
17	Robotic Label-Free Precise Oocyte Enucleation for Improving Developmental Competence of Cloned Embryos. IEEE Transactions on Biomedical Engineering, 2021, 68, 2348-2359.	2.5	11
18	Automatic Cell Rotation Based on Real-Time Detection and Tracking. IEEE Robotics and Automation Letters, 2021, 6, 7909-7916.	3.3	15

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19	Melatonin mitigated circadian disruption and cardiovascular toxicity caused by 6-benzylaminopurine exposure in zebrafish. <i>Ecotoxicology and Environmental Safety</i> , 2021, 223, 112555.	2.9	7
20	Environmental exposure to 17 β -trenbolone during adolescence inhibits social interaction in male mice. <i>Environmental Pollution</i> , 2021, 289, 117710.	3.7	7
21	Robotic Cardinal Vein Microinjection of Zebrafish Larvae Based on 3D Positioning. , 2021, , .		6
22	Fully Automatic Batch Cell Microinjection Based on Exception Diagnosis. , 2021, , .		0
23	Improved Reaction-diffusion Model-based Study on Pathogenesis and Treatment of Virus-induced Lung Airway Epithelium Diseases. , 2021, , .		0
24	Intercellular Movement Tracking for Damage Assessment During Cell Micromanipulation. , 2021, , .		0
25	Computational Modeling of Subcellular Structures For Studying Mechanical Properties of Cell during Micromanipulation. , 2021, , .		0
26	Automated Micropipette Aspiration and Positioning with an Auxiliary Micropipette. , 2021, , .		0
27	Robotic Visual and Electrical-guided Whole-Cell Patch Clamp. , 2021, , .		0
28	Positioning and Tracking of Neurons in Label-free Tissue Slice for Automatic Patch Clamping. , 2021, , .		0
29	Zebrafishtracker: A multi-zebrafish tracking algorithm can effectively solve cross occlusion. , 2021, , .		2
30	Deep-Learning-Based Detection of Neurons for Two-Photon Imaging Patch Clamp System in vivo. , 2021, , .		0
31	Combined treatment of melatonin and sodium tanshinone IIA sulfonate reduced the neurological and cardiovascular toxicity induced by deltamethrin in zebrafish. <i>Chemosphere</i> , 2020, 243, 125373.	4.2	13
32	Effects of 17 β -trenbolone exposure on sex hormone synthesis and social behaviours in adolescent mice. <i>Chemosphere</i> , 2020, 245, 125679.	4.2	8
33	Superwicking on Nanoporous Micropillared Surfaces. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 30925-30931.	4.0	15
34	Robotic Batch Somatic Cell Nuclear Transfer Based on Microfluidic Groove. <i>IEEE Transactions on Automation Science and Engineering</i> , 2020, 17, 2097-2106.	3.4	14
35	Modeling and measuring intracellular displacement during cell penetration. <i>Journal of Applied Physics</i> , 2020, 127, .	1.1	9
36	Precise Cell Injection and Extraction Control Based on Microscopic Visual Feedback. <i>IEEE/ASME Transactions on Mechatronics</i> , 2020, 25, 872-881.	3.7	14

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37	Melatonin attenuates 17 β -trenbolone induced insomnia-like phenotype and movement deficiency in zebrafish. <i>Chemosphere</i> , 2020, 253, 126762.	4.2	4
38	Facile fabrication of sponge-like porous micropillar arrays via an electrochemical process. <i>Nanoscale</i> , 2020, 12, 10565-10572.	2.8	1
39	Robotic Whole-cell Patch Clamping Based on Three Dimensional Location for Adherent Cells. , 2020, , .		4
40	Radio Tomographic Imaging Based on Low-Rank and Sparse Decomposition. <i>IEEE Access</i> , 2019, 7, 50223-50231.	2.6	14
41	Robotic Micropipette Aspiration for Multiple Cells. <i>Micromachines</i> , 2019, 10, 348.	1.4	16
42	Oocyte orientation selection method based on the minimum strain position in the penetration process. <i>Journal of Applied Physics</i> , 2019, 125, .	1.1	13
43	Fluorene-9-bisphenol exposure induces cytotoxicity in mouse oocytes and causes ovarian damage. <i>Ecotoxicology and Environmental Safety</i> , 2019, 180, 168-178.	2.9	37
44	Efficient Recognition of Informative Measurement in the RF-Based Device-Free Localization. <i>Sensors</i> , 2019, 19, 1219.	2.1	3
45	Deep-Learning-Based Polar-Body Detection for Automatic Cell Manipulation. <i>Micromachines</i> , 2019, 10, 120.	1.4	9
46	Augmented Reality-Based Precise Oocyte Enucleation. , 2019, , .		2
47	A New Model for Simulating Spindle Asymmetric Division Mediated by Cortical Actin. , 2019, , .		0
48	Melatonin protects embryonic development and maintains sleep/wake behaviors from the deleterious effects of fluorene-9-bisphenol in zebrafish (<i>Danio rerio</i>). <i>Journal of Pineal Research</i> , 2019, 66, e12530.	3.4	40
49	10.1063/1.5086320.1. , 2019, , .		0
50	Resveratrol reverses the adverse effects of a diet-induced obese murine model on oocyte quality and zona pellucida softening. <i>Food and Function</i> , 2018, 9, 2623-2633.	2.1	25
51	Developmental toxicity and neurotoxicity of synthetic organic insecticides in zebrafish (<i>Danio rerio</i>): A comparative study of deltamethrin, acephate, and thiamethoxam. <i>Chemosphere</i> , 2018, 199, 16-25.	4.2	71
52	Hot Embossing for Whole Teflon Superhydrophobic Surfaces. <i>Coatings</i> , 2018, 8, 227.	1.2	14
53	Robotic Cell Rotation Based on Optimal Poking Direction. <i>Micromachines</i> , 2018, 9, 141.	1.4	12
54	Reversal of reserpine-induced depression and cognitive disorder in zebrafish by sertraline and Traditional Chinese Medicine (TCM). <i>Behavioral and Brain Functions</i> , 2018, 14, 13.	1.4	53

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55	Automatic multiple zebrafish tracking based on improved HOG features. Scientific Reports, 2018, 8, 10884.	1.6	17
56	Comparative analysis of biological effect of corannulene and graphene on developmental and sleep/wake profile of zebrafish larvae. Acta Biomaterialia, 2017, 55, 271-282.	4.1	9
57	Biological impacts of glyphosate on morphology, embryo biomechanics and larval behavior in zebrafish (Danio rerio). Chemosphere, 2017, 181, 270-280.	4.2	87
58	PEGylation corannulene enhances response of stress through promoting neurogenesis. Biomaterials Science, 2017, 5, 849-859.	2.6	15
59	SiO ₂ nanoparticles cause depression and anxiety-like behavior in adult zebrafish. RSC Advances, 2017, 7, 2953-2963.	1.7	32
60	Impact of low-dose chronic exposure to Bisphenol A (BPA) on adult male zebrafish adaption to the environmental complexity: Disturbing the color preference patterns and relieving the anxiety behavior. Chemosphere, 2017, 186, 295-304.	4.2	25
61	Salvinia-Effect-Inspired "Sticky" Superhydrophobic Surfaces by Meniscus-Confined Electrodeposition. Langmuir, 2017, 33, 13640-13648.	1.6	30
62	High-precision, pressure-driven pump for sub-picoliter scale quantitative injection. Modern Physics Letters B, 2017, 31, 1750148.	1.0	5
63	Localization error compensation of percutaneous surgery robot based on magnetic positioner. , 2017, , .		0
64	Automated cell transportation for batch-cell manipulation. , 2017, , .		1
65	Modeling and Identification of the Rate-Dependent Hysteresis of Piezoelectric Actuator Using a Modified Prandtl-Ishlinskii Model. Micromachines, 2017, 8, 114.	1.4	54
66	Automated numerical simulation of biological pattern formation based on visual feedback simulation framework. PLoS ONE, 2017, 12, e0172643.	1.1	3
67	Fabrication of Cell-Laden Hydrogel Fibers with Controllable Diameters. Micromachines, 2017, 8, 161.	1.4	7
68	Size-Adjustable Microdroplets Generation Based on Microinjection. Micromachines, 2017, 8, 88.	1.4	8
69	Turing mechanism underlying a branching model for lung morphogenesis. PLoS ONE, 2017, 12, e0174946.	1.1	16
70	Oocytes Polar Body Detection for Automatic Enucleation. Micromachines, 2016, 7, 27.	1.4	12
71	Pipelined batch-operation process of nuclear transplantation based on micro-manipulation system. , 2016, , .		1
72	Evaluating the biological impact of polyhydroxyalkanoates (PHAs) on developmental and exploratory profile of zebrafish larvae. RSC Advances, 2016, 6, 37018-37030.	1.7	9

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73	Alcohol exposure leads to unrecoverable cardiovascular defects along with edema and motor function changes in developing zebrafish larvae. <i>Biology Open</i> , 2016, 5, 1128-1133.	0.6	24
74	A new method for characterizing the long-term behavior of zebrafish from the trajectory. , 2015, , .		0
75	Exploring the Effects of Different Types of Surfactants on Zebrafish Embryos and Larvae. <i>Scientific Reports</i> , 2015, 5, 10107.	1.6	53
76	A novel cell weighing method based on the minimum immobilization pressure for biological applications. <i>Journal of Applied Physics</i> , 2015, 118, .	1.1	9
77	The Difference between Anxiolytic and Anxiogenic Effects Induced by Acute and Chronic Alcohol Exposure and Changes in Associative Learning and Memory Based on Color Preference and the Cause of Parkinson-Like Behaviors in Zebrafish. <i>PLoS ONE</i> , 2015, 10, e0141134.	1.1	13
78	A three-step model of black silicon formation in Deep Reactive Ion Etching process. , 2015, , .		1
79	Hysteresis compensation of piezoelectric actuator using direct inverse modeling approach and adaptive projection algorithm. , 2015, , .		2
80	Drug screening: zebrafish as a tool for studying epileptic-related chemical compounds. <i>Protein and Cell</i> , 2015, 6, 853-857.	4.8	11
81	A Simple Weighing Method for Spherical Cells. <i>Journal of the Association for Laboratory Automation</i> , 2015, 20, 471-480.	2.8	5
82	Robotic Cell Rotation Based on the Minimum Rotation Force. <i>IEEE Transactions on Automation Science and Engineering</i> , 2015, 12, 1504-1515.	3.4	55
83	Trajectory tracking of spasm-oriented zebrafish larvae. , 2014, , .		0
84	Robotic donor cell injection in Somatic Cell Nuclear Transfer (SCNT). , 2014, , .		5
85	A cell polar body positioning method based on SVM classification. , 2014, , .		4
86	Branching patterns emerge in a mathematical model of the dynamics of lung development. <i>Journal of Physiology</i> , 2014, 592, 313-324.	1.3	36
87	Characteristics of the direct inverse modeling approach for hysteresis compensation of piezoelectric actuators. , 2014, , .		0
88	SiO ₂ nanoparticles change colour preference and cause Parkinson's-like behaviour in zebrafish. <i>Scientific Reports</i> , 2014, 4, 3810.	1.6	66
89	Behavioural screening of zebrafish using neuroactive traditional Chinese medicine prescriptions and biological targets. <i>Scientific Reports</i> , 2014, 4, 5311.	1.6	19
90	Mechanisms of Side Branching and Tip Splitting in a Model of Branching Morphogenesis. <i>PLoS ONE</i> , 2014, 9, e102718.	1.1	16

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91	Wettability of dragonfly wings: the structure detection and theoretical modeling. Surface and Interface Analysis, 2013, 45, 650-655.	0.8	17
92	Numerical simulation on pattern formation by vascular mesenchymal cells based on the exogenous source of activator. , 2013, , .		0
93	Use of cell morphology as an early bio-sensor for viral infection. , 2013, , .		1
94	A novel pneumatic micropipette aspiration method using a balance pressure model. Review of Scientific Instruments, 2013, 84, 123703.	0.6	35
95	Robotic weighing for spherical cells based on falling speed detection. , 2013, , .		5
96	3D reconstruction and feature extraction for analysis of nanostructures by SEM imaging. , 2013, , .		2
97	SIFT-feature-based accuracy measurement method for micro-operation stage. , 2012, , .		0
98	Fabrication of Very-High-Aspect-Ratio Microstructures in Complex Patterns by Photoelectrochemical Etching. Journal of Microelectromechanical Systems, 2012, 21, 1504-1512.	1.7	7
99	Automatic somatic cell operating process for nuclear transplantation. , 2012, , .		5
100	Formal description and language of MEMS design. , 2011, , .		0
101	Development of TSV simulator: FASTsv. , 2011, , .		0
102	A method of dynamic analysis for accelerometer base on separated time and space. , 2010, , .		0
103	State engine based validation of MEMS process sequences. , 2009, , .		1
104	A study on the scale adjustment in video encoder in the temporal domain in micro-manipulation. , 2008, , .		0
105	Virtual Operation of MEMS Devices Based on FEM Simulation. , 2007, , .		3
106	A novel design methodology for MEMS device. , 2007, , .		1
107	Voxel-Based Modeling and Rendering for Virtual MEMS Fabrication Process. , 2006, , .		6
108	Wavelet-Based Local Reconstruction on the Object of Interest in the Wide Scope Micro-Manipulation. , 2006, , .		1

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109	An Improved 3D Simulator for MEMS Processes. , 2006, , .		0
110	Micro-operation Robot Software Design on O-O and Primitive Control. , 2003, , .		1
111	Intelligent control method on primitive in micro-operation robot. , 0, , .		3
112	Multi-targets fast orientation in wide scope micro-manipulation. , 0, , .		0