Xin Zhao

List of Publications by Year in descending order

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112	1,265	430754	434063
papers	citations	18 h-index	31 g-index

114	114	114	1590
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Biological impacts of glyphosate on morphology, embryo biomechanics and larval behavior in zebrafish (Danio rerio). Chemosphere, 2017, 181, 270-280.	4.2	87
2	Developmental toxicity and neurotoxicity of synthetic organic insecticides in zebrafish (Danio rerio): A comparative study of deltamethrin, acephate, and thiamethoxam. Chemosphere, 2018, 199, 16-25.	4.2	71
3	SiO2 nanoparticles change colour preference and cause Parkinson's-like behaviour in zebrafish. Scientific Reports, 2014, 4, 3810.	1.6	66
4	Robotic Cell Rotation Based on the Minimum Rotation Force. IEEE Transactions on Automation Science and Engineering, 2015, 12, 1504-1515.	3.4	55
5	Modeling and Identification of the Rate-Dependent Hysteresis of Piezoelectric Actuator Using a Modified Prandtl-Ishlinskii Model. Micromachines, 2017, 8, 114.	1.4	54
6	Exploring the Effects of Different Types of Surfactants on Zebrafish Embryos and Larvae. Scientific Reports, 2015, 5, 10107.	1.6	53
7	Reversal of reserpine-induced depression and cognitive disorder in zebrafish by sertraline and Traditional Chinese Medicine (TCM). Behavioral and Brain Functions, 2018, 14, 13.	1.4	53
8	Melatonin protects embryonic development and maintains sleep/wake behaviors from the deleterious effects of fluoreneâ€9â€bisphenol in zebrafish (Danio rerio). Journal of Pineal Research, 2019, 66, e12530.	3.4	40
9	Fluorene-9-bisphenol exposure induces cytotoxicity in mouse oocytes and causes ovarian damage. Ecotoxicology and Environmental Safety, 2019, 180, 168-178.	2.9	37
10	Branching patterns emerge in a mathematical model of the dynamics of lung development. Journal of Physiology, 2014, 592, 313-324.	1.3	36
11	A novel pneumatic micropipette aspiration method using a balance pressure model. Review of Scientific Instruments, 2013, 84, 123703.	0.6	35
12	SiO₂nanoparticles cause depression and anxiety-like behavior in adult zebrafish. RSC Advances, 2017, 7, 2953-2963.	1.7	32
13	Salvinia-Effect-Inspired â€œStickyâ€•Superhydrophobic Surfaces by Meniscus-Confined Electrodeposition. Langmuir, 2017, 33, 13640-13648.	1.6	30
14	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 reliving the anxiety behavior. Chemosphere, 2017, 186, 295-304.	4.2	25
15	Resveratrol reverses the adverse effects of a diet-induced obese murine model on oocyte quality and zona pellucida softening. Food and Function, 2018, 9, 2623-2633.	2.1	25
16	Alcohol exposure leads to unrecoverable cardiovascular defects along with edema and motor function changes in developing zebrafish larvae. Biology Open, 2016, 5, 1128-1133.	0.6	24
17	The toxic effects and possible mechanisms of decabromodiphenyl ethane on mouse oocyte. Ecotoxicology and Environmental Safety, 2021, 207, 111290.	2.9	24
18	Behavioural screening of zebrafish using neuroactive traditional Chinese medicine prescriptions and biological targets. Scientific Reports, 2014, 4, 5311.	1.6	19

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19	Wettability of dragonfly wings: the structure detection and theoretical modeling. Surface and Interface Analysis, 2013, 45, 650-655.	0.8	17
20	Automatic multiple zebrafish tracking based on improved HOG features. Scientific Reports, 2018, 8, 10884.	1.6	17
21	Robotic Micropipette Aspiration for Multiple Cells. Micromachines, 2019, 10, 348.	1.4	16
22	Mechanisms of Side Branching and Tip Splitting in a Model of Branching Morphogenesis. PLoS ONE, 2014, 9, e102718.	1.1	16
23	Turing mechanism underlying a branching model for lung morphogenesis. PLoS ONE, 2017, 12, e0174946.	1.1	16
24	PEGylation corannulene enhances response of stress through promoting neurogenesis. Biomaterials Science, 2017, 5, 849-859.	2.6	15
25	Superwicking on Nanoporous Micropillared Surfaces. ACS Applied Materials & Interfaces, 2020, 12, 30925-30931.	4.0	15
26	Protective Effects of Spermidine and Melatonin on Deltamethrin-Induced Cardiotoxicity and Neurotoxicity in Zebrafish. Cardiovascular Toxicology, 2021, 21, 29-41.	1.1	15
27	Automatic Cell Rotation Based on Real-Time Detection and Tracking. IEEE Robotics and Automation Letters, 2021, 6, 7909-7916.	3.3	15
28	Hot Embossing for Whole Teflon Superhydrophobic Surfaces. Coatings, 2018, 8, 227.	1.2	14
29	Radio Tomographic Imaging Based on Low-Rank and Sparse Decomposition. IEEE Access, 2019, 7, 50223-50231.	2.6	14
30	Robotic Batch Somatic Cell Nuclear Transfer Based on Microfluidic Groove. IEEE Transactions on Automation Science and Engineering, 2020, 17, 2097-2106.	3.4	14
31	Precise Cell Injection and Extraction Control Based on Microscopic Visual Feedback. IEEE/ASME Transactions on Mechatronics, 2020, 25, 872-881.	3.7	14
32	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. PLoS ONE, 2015, 10, e0141134.	1.1	13
33	Oocyte orientation selection method based on the minimum strain position in the penetration process. Journal of Applied Physics, 2019, 125, .	1.1	13
34	Combined treatment of melatonin and sodium tanshinone IIA sulfonate reduced the neurological and cardiovascular toxicity induced by deltamethrin in zebrafish. Chemosphere, 2020, 243, 125373.	4.2	13
35	Oocytes Polar Body Detection for Automatic Enucleation. Micromachines, 2016, 7, 27.	1.4	12
36	Robotic Cell Rotation Based on Optimal Poking Direction. Micromachines, 2018, 9, 141.	1.4	12

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37	Drug screening: zebrafish as a tool for studying epileptic-related chemical compounds. Protein and Cell, 2015, 6, 853-857.	4.8	11
38	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
39	6-benzylaminopurine exposure induced development toxicity and behaviour alteration in zebrafish (Danio rerio). Environmental Pollution, 2021, 278, 116887.	3.7	10
40	A novel cell weighing method based on the minimum immobilization pressure for biological applications. Journal of Applied Physics, 2015, 118, .	1.1	9
41	Evaluating the biological impact of polyhydroxyalkanoates (PHAs) on developmental and exploratory profile of zebrafish larvae. RSC Advances, 2016, 6, 37018-37030.	1.7	9
42	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
43	Deep-Learning-Based Polar-Body Detection for Automatic Cell Manipulation. Micromachines, 2019, 10, 120.	1.4	9
44	Modeling and measuring intracellular displacement during cell penetration. Journal of Applied Physics, 2020, 127, .	1.1	9
45	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
46	Size-Adjustable Microdroplets Generation Based on Microinjection. Micromachines, 2017, 8, 88.	1.4	8
47	Effects of 17Î²-trenbolone exposure on sex hormone synthesis and social behaviours in adolescent mice. Chemosphere, 2020, 245, 125679.	4.2	8
48	Fabrication of Very-High-Aspect-Ratio Microstructures in Complex Patterns by Photoelectrochemical Etching. Journal of Microelectromechanical Systems, 2012, 21, 1504-1512.	1.7	7
49	Fabrication of Cell-Laden Hydrogel Fibers with Controllable Diameters. Micromachines, 2017, 8, 161.	1.4	7
50	Melatonin mitigated circadian disruption and cardiovascular toxicity caused by 6-benzylaminopurine exposure in zebrafish. Ecotoxicology and Environmental Safety, 2021, 223, 112555.	2.9	7
51	Environmental exposure to 17Î²-trenbolone during adolescence inhibits social interaction in male mice. Environmental Pollution, 2021, 289, 117710.	3.7	7
52	Voxel-Based Modeling and Rendering for Virtual MEMS Fabrication Process. , 2006, , .		6
53	Robotic Cardinal Vein Microinjection of Zebrafish Larvae Based on 3D Positioning. , 2021, , .		6
54	Automatic somatic cell operating process for nuclear transplantation. , 2012, , .		5

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55	Robotic weighing for spherical cells based on falling speed detection. , 2013, , .		5
56	Robotic donor cell injection in Somatic Cell Nuclear Transfer (SCNT). , 2014, , .		5
57	A Simple Weighing Method for Spherical Cells. Journal of the Association for Laboratory Automation, 2015, 20, 471-480.	2.8	5
58	High-precision, pressure-driven pump for sub-picoliter scale quantitative injection. Modern Physics Letters B, 2017, 31, 1750148.	1.0	5
59	Robotic Precisely Oocyte Blind Enucleation Method. Applied Sciences (Switzerland), 2021, 11, 1850.	1.3	5
60	A cell polar body positioning method based on SVM classification. , 2014, , .		4
61	Melatonin attenuates 17Î²-trenbolone induced insomnia-like phenotype and movement deficiency in zebrafish. Chemosphere, 2020, 253, 126762.	4.2	4
62	Robotic Whole-cell Patch Clamping Based on Three Dimensional Location for Adherent Cells. , 2020, , .		4
63	Robust Hâˆž Control for Fractional Order Systems with Order Î± (0 < Î± < 1). Fractal and Fractional, 2022, 6, 86.	1.6	4
64	Robust Hâˆž Control of Fractional-Order Switched Systems with Order 0 < Î± < 1 and Uncertainty. Fractal and Fractional, 2022, 6, 164.	1.6	4
65	Intelligent control method on primitive in micro-operation robot. , 0, , .		3
66	Virtual Operation of MEMS Devices Based on FEM Simulation. , 2007, , .		3
67	Automated numerical simulation of biological pattern formation based on visual feedback simulation framework. PLoS ONE, 2017, 12, e0172643.	1.1	3
68	Efficient Recognition of Informative Measurement in the RF-Based Device-Free Localization. Sensors, 2019, 19, 1219.	2.1	3
69	Wavelength of a Turing-type mechanism regulates the morphogenesis of meshwork patterns. Scientific Reports, 2021, 11, 4813.	1.6	3
70	Precise Aspiration and Positioning Control Based on Dynamic Model Inside and Outside the Micropipette. IEEE Transactions on Automation Science and Engineering, 2023, 20, 385-393.	3.4	3
71	Oocyte Penetration Speed Optimization Based on Intracellular Strain. Micromachines, 2022, 13, 309.	1.4	3
72	3D reconstruction and feature extraction for analysis of nanostructures by SEM imaging. , 2013, , .		2

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73	Hysteresis compensation of piezoelectric actuator using direct inverse modeling approach and adaptive projection algorithm. , 2015, , .		2
74	Augmented Reality-Based Precise Oocyte Enucleation. , 2019, , .		2
75	A Cellâ€™s Viscoelasticity Measurement Method Based on the Spheroidization Process of Non-Spherical Shaped Cell. Sensors, 2021, 21, 5561.	2.1	2
76	A Machine Learning Method for Automated In Vivo Transparent Vessel Segmentation and Identification Based on Blood Flow Characteristics. Microscopy and Microanalysis, 2022, 28, 801-814.	0.2	2
77	Zebrafishtracker: A multi-zebrafish tracking algorithm can effectively solve cross occlusion. , 2021, , .		2
78	Mechanical Characterization and Modelling of Subcellular Components of Oocytes. Micromachines, 2022, 13, 1087.	1.4	2
79	Micro-operation Robot Software Design on O-O and Primitive Control. , 2003, , .		1
80	Wavelet-Based Local Reconstruction on the Object of Interest in the Wide Scope Micro-Manipulation. , 2006, , .		1
81	A novel design methodology for MEMS device. , 2007, , .		1
82	State engine based validation of MEMS process sequences. , 2009, , .		1
83	Use of cell morphology as an early bio-sensor for viral infection. , 2013, , .		1
84	A three-step model of black silicon formation in Deep Reactive Ion Etching process. , 2015, , .		1
85	Pipelined batch-operation process of nuclear transplantation based on micro-manipulation system. , 2016, , .		1
86	Automated cell transportation for batch-cell manipulation. , 2017, , .		1
87	Reactionâ€“Diffusion Model-Based Research on Formation Mechanism of Neuron Dendritic Spine Patterns. Frontiers in Neurorobotics, 2021, 15, 563682.	1.6	1
88	Facile fabrication of sponge-like porous micropillar arrays via an electrochemical process. Nanoscale, 2020, 12, 10565-10572.	2.8	1
89	Intracellular Strain Evaluation-Based Oocyte Enucleation and Its Application in Robotic Cloning. Engineering, 2023, 24, 73-83.	3.2	1
90	Multi-targets fast orientation in wide scope micro-manipulation. , 0, , .		0

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91	An Improved 3D Simulator for MEMS Processes. , 2006, , .		0
92	A study on the scale adjustment in video encoder in the temporal domain in micro-manipulation. , 2008, , .		0
93	A method of dynamic analysis for accelerometer base on separated time and space. , 2010, , .		0
94	Formal description and language of MEMS design. , 2011, , .		0
95	Development of TSV simulator: FASTsv. , 2011, , .		0
96	SIFT-feature-based accuracy measurement method for micro-operation stage. , 2012, , .		0
97	Numerical simulation on pattern formation by vascular mesenchymal cells based on the exogenous source of activator. , 2013, , .		0
98	Trajectory tracking of spasm-oriented zebrafish larvae. , 2014, , .		0
99	Characteristics of the direct inverse modeling approach for hysteresis compensation of piezoelectric actuators. , 2014, , .		0
100	A new method for characterizing the long-term behavior of zebrafish from the trajectory. , 2015, , .		0
101	Localization error compensation of percutaneous surgery robot based on magnetic positioner. , 2017, , .		0
102	A New Model for Simulating Spindle Asymmetric Division Mediated by Cortical Actin. , 2019, , .		0
103	Mechanisms of branch tip fusion in meshwork patterns*. , 2021, , .		0
104	Fully Automatic Batch Cell Microinjection Based on Exception Diagnosis. , 2021, , .		0
105	Improved Reaction-diffusion Model-based Study on Pathogenesis and Treatment of Virus-induced Lung Airway Epithelium Diseases. , 2021, , .		0
106	10.1063/1.5086320.1. , 2019, , .		0
107	Intercellular Movement Tracking for Damage Assessment During Cell Micromanipulation. , 2021, , .		0
108	Computational Modeling of Subcellular Structures For Studying Mechanical Properties of Cell during Micromanipulation. , 2021, , .		0

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109	Automated Micropipette Aspiration and Positioning with an Auxiliary Micropipette. , 2021, , .		0
110	Robotic Visual and Electrical-guided Whole-Cell Patch Clamp. , 2021, , .		0
111	Positioning and Tracking of Neurons in Label-free Tissue Slice for Automatic Patch Clamping. , 2021, , .		0
112	Deep-Learning-Based Detection of Neurons for Two-Photon Imaging Patch Clamp System in vivo. , 2021, , .		0