

Hang Lu

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/5689173/hang-lu-publications-by-year.pdf>

Version: 2024-04-23

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

105
papers

3,163
citations

32
h-index

54
g-index

116
ext. papers

3,773
ext. citations

8.1
avg, IF

5.4
L-index

#	Paper	IF	Citations
105	Automated and Dynamic Control of Chemical Content in Droplets for Scalable Screens of Small Animals.. <i>Small</i> , 2022 , e2200319	11	2
104	Deep learning for robust and flexible tracking in behavioral studies for <i>C. elegans</i> .. <i>PLoS Computational Biology</i> , 2022 , 18, e1009942	5	1
103	Automated and Dynamic Control of Chemical Content in Droplets for Scalable Screens of Small Animals (Small 17/2022). <i>Small</i> , 2022 , 18, 2270085	11	
102	High-Temporal-Resolution smFISH Method for Gene Expression Studies in Embryos. <i>Analytical Chemistry</i> , 2021 , 93, 1369-1376	7.8	2
101	Emerging applications of microfluidic techniques for in vitro toxicity studies of atmospheric particulate matter. <i>Aerosol Science and Technology</i> , 2021 , 55, 623-639	3.4	1
100	Microswimmer Combing: Controlling Interfacial Dynamics for Open-Surface Multifunctional Screening of Small Animals. <i>Advanced Healthcare Materials</i> , 2021 , 10, e2001887	10.1	2
99	Topological Data Analysis of Locomotion and Behavior. <i>Frontiers in Artificial Intelligence</i> , 2021 , 4, 668395		0
98	Graphical-model framework for automated annotation of cell identities in dense cellular images. <i>ELife</i> , 2021 , 10,	8.9	4
97	Conformational changes in twitchin kinase in vivo revealed by FRET imaging of freely moving. <i>ELife</i> , 2021 , 10,	8.9	4
96	An automated platform to monitor long-term behavior and healthspan in <i>Caenorhabditis elegans</i> under precise environmental control. <i>Communications Biology</i> , 2020 , 3, 297	6.7	18
95	Microfluidic perfusion modulates growth and motor neuron differentiation of stem cell aggregates. <i>Analyst, The</i> , 2020 , 145, 4815-4826	5	2
94	A portable, low-cost device for precise control of specimen temperature under stereomicroscopes. <i>PLoS ONE</i> , 2020 , 15, e0230241	3.7	0
93	A spontaneous complex structural variant in <i>rca-1</i> increases exploratory behavior and laboratory fitness of <i>Caenorhabditis elegans</i> . <i>PLoS Genetics</i> , 2020 , 16, e1008606	6	3
92	Multimodal Stimulation in a Microfluidic Device Facilitates Studies of Interneurons in Sensory Integration in <i>C. elegans</i> . <i>Small</i> , 2020 , 16, e1905852	11	9
91	Ankyrin Is An Intracellular Tether for TMC Mechanotransduction Channels. <i>Neuron</i> , 2020 , 107, 112-125.e19	10.9	14
90	A Multicellular Network Mechanism for Temperature-Robust Food Sensing. <i>Cell Reports</i> , 2020 , 33, 108521	6.6	1
89	smFISH in chips: a microfluidic-based pipeline to quantify in situ gene expression in whole organisms. <i>Lab on A Chip</i> , 2020 , 20, 266-273	7.2	6

88	Enabling high-throughput single-animal gene-expression studies with molecular and micro-scale technologies. <i>Lab on A Chip</i> , 2020 , 20, 4528-4538	7.2	1
87	Time-Resolved Single-Cell Assay for Measuring Intracellular Reactive Oxygen Species upon Exposure to Ambient Particulate Matter. <i>Environmental Science & Technology</i> , 2020 , 54, 13121-13130	10.3	3
86	A spontaneous complex structural variant in rcan-1 increases exploratory behavior and laboratory fitness of <i>Caenorhabditis elegans</i> 2020 , 16, e1008606		
85	A spontaneous complex structural variant in rcan-1 increases exploratory behavior and laboratory fitness of <i>Caenorhabditis elegans</i> 2020 , 16, e1008606		
84	A spontaneous complex structural variant in rcan-1 increases exploratory behavior and laboratory fitness of <i>Caenorhabditis elegans</i> 2020 , 16, e1008606		
83	A spontaneous complex structural variant in rcan-1 increases exploratory behavior and laboratory fitness of <i>Caenorhabditis elegans</i> 2020 , 16, e1008606		
82	A spontaneous complex structural variant in rcan-1 increases exploratory behavior and laboratory fitness of <i>Caenorhabditis elegans</i> 2020 , 16, e1008606		
81	A spontaneous complex structural variant in rcan-1 increases exploratory behavior and laboratory fitness of <i>Caenorhabditis elegans</i> 2020 , 16, e1008606		
80	Digging deeper: methodologies for high-content phenotyping in <i>Caenorhabditis elegans</i> . <i>Lab Animal</i> , 2019 , 48, 207-216	0.4	1
79	Dynamic Mitochondrial Migratory Features Associated with Calcium Responses during T Cell Antigen Recognition. <i>Journal of Immunology</i> , 2019 , 203, 760-768	5.3	3
78	Fast, versatile and quantitative annotation of complex images. <i>BioTechniques</i> , 2019 , 66, 269-275	2.5	2
77	An integrin α intermediate affinity state mediates biomechanical platelet aggregation. <i>Nature Materials</i> , 2019 , 18, 760-769	27	48
76	Reverse-Correlation Analysis of the Mechanosensation Circuit and Behavior in <i>C. elegans</i> Reveals Temporal and Spatial Encoding. <i>Scientific Reports</i> , 2019 , 9, 5182	4.9	4
75	Rapid and multi-cycle smFISH enabled by microfluidic ion concentration polarization for profiling of tissue-specific gene expression in whole. <i>Biomicrofluidics</i> , 2019 , 13, 064101	3.2	4
74	Parallel Processing of Two Mechanosensory Modalities by a Single Neuron in <i>C. elegans</i> . <i>Developmental Cell</i> , 2019 , 51, 617-631.e3	10.2	26
73	Recent Advances in Microfluidic Techniques for Systems Biology. <i>Analytical Chemistry</i> , 2019 , 91, 315-329	7.8	4
72	On-chip functional neuroimaging with mechanical stimulation in <i>Caenorhabditis elegans</i> larvae for studying development and neural circuits. <i>Lab on A Chip</i> , 2018 , 18, 601-609	7.2	15
71	A programmable platform for sub-second multichemical dynamic stimulation and neuronal functional imaging in <i>C. elegans</i> . <i>Lab on A Chip</i> , 2018 , 18, 505-513	7.2	8

70	Automated screening of <i>C. elegans</i> neurodegeneration mutants enabled by microfluidics and image analysis algorithms. <i>Integrative Biology (United Kingdom)</i> , 2018 , 10, 539-548	3.7	10
69	An Afferent Neuropeptide System Transmits Mechanosensory Signals Triggering Sensitization and Arousal in <i>C. elegans</i> . <i>Neuron</i> , 2018 , 99, 1233-1246.e6	13.9	25
68	Microfluidic auto-alignment of protein patterns for dissecting multi-receptor crosstalk in platelets. <i>Lab on A Chip</i> , 2018 , 18, 2966-2974	7.2	3
67	Recent Advances and Trends in Microfluidic Platforms for <i>C. elegans</i> Biological Assays. <i>Annual Review of Analytical Chemistry</i> , 2018 , 11, 245-264	12.5	13
66	Trends in high-throughput and functional neuroimaging in <i>Caenorhabditis elegans</i> . <i>Wiley Interdisciplinary Reviews: Systems Biology and Medicine</i> , 2017 , 9, e1376	6.6	11
65	Single-cell resolution of intracellular T cell Ca dynamics in response to frequency-based HO stimulation. <i>Integrative Biology (United Kingdom)</i> , 2017 , 9, 238-247	3.7	12
64	Microfluidic platform with spatiotemporally controlled micro-environment for studying long-term <i>C. elegans</i> developmental arrests. <i>Lab on A Chip</i> , 2017 , 17, 1826-1833	7.2	7
63	Twitchin kinase inhibits muscle activity. <i>Molecular Biology of the Cell</i> , 2017 , 28, 1591-1600	3.5	8
62	Parallel imaging of embryos for quantitative analysis of genetic perturbations of the Ras pathway. <i>DMM Disease Models and Mechanisms</i> , 2017 , 10, 923-929	4.1	10
61	Automated and controlled mechanical stimulation and functional imaging in vivo in <i>C. elegans</i> . <i>Lab on A Chip</i> , 2017 , 17, 2609-2618	7.2	39
60	Synthesizing developmental trajectories. <i>PLoS Computational Biology</i> , 2017 , 13, e1005742	5	8
59	A microfluidic trap array for longitudinal monitoring and multi-modal phenotypic analysis of individual stem cell aggregates. <i>Lab on A Chip</i> , 2017 , 17, 3634-3642	7.2	16
58	Quantification of Information Encoded by Gene Expression Levels During Lifespan Modulation Under Broad-range Dietary Restriction in <i>C. elegans</i> . <i>Journal of Visualized Experiments</i> , 2017 ,	1.6	2
57	Droplet array for screening acute behaviour response to chemicals in <i>Caenorhabditis elegans</i> . <i>Lab on A Chip</i> , 2017 , 17, 4303-4311	7.2	18
56	Genetic control of encoding strategy in a food-sensing neural circuit. <i>ELife</i> , 2017 , 6,	8.9	5
55	Deep phenotyping unveils hidden traits and genetic relations in subtle mutants. <i>Nature Communications</i> , 2016 , 7, 12990	17.4	19
54	Microfluidics in systems biology-type or truly useful?. <i>Current Opinion in Biotechnology</i> , 2016 , 39, 215-220	11.4	13
53	An integrated platform for large-scale data collection and precise perturbation of live <i>Drosophila</i> embryos. <i>Scientific Reports</i> , 2016 , 6, 21366	4.9	17

52	Calcium Dynamics of Ex Vivo Long-Term Cultured CD8+ T Cells Are Regulated by Changes in Redox Metabolism. <i>PLoS ONE</i> , 2016 , 11, e0159248	3.7	1
51	Molecular evolution of troponin I and a role of its N-terminal extension in nematode locomotion. <i>Cytoskeleton</i> , 2016 , 73, 117-30	2.4	10
50	Molecular evolution of troponin I and a role of its N-terminal extension in nematode locomotion. <i>Cytoskeleton</i> , 2016 , 73, Spc1-Spc1	2.4	
49	Muscle contraction phenotypic analysis enabled by optogenetics reveals functional relationships of sarcomere components in <i>Caenorhabditis elegans</i> . <i>Scientific Reports</i> , 2016 , 6, 19900	4.9	25
48	Microfluidics for High-Throughput Quantitative Studies of Early Development. <i>Annual Review of Biomedical Engineering</i> , 2016 , 18, 285-309	12	11
47	Optics-Integrated Microfluidic Platforms for Biomolecular Analyses. <i>Biophysical Journal</i> , 2016 , 110, 1684-1697	2.2	
46	Autoinhibition of a Neuronal Kinesin UNC-104/KIF1A Regulates the Size and Density of Synapses. <i>Cell Reports</i> , 2016 , 16, 2129-2141	10.6	53
45	Dynamics of Inductive ERK Signaling in the <i>Drosophila</i> Embryo. <i>Current Biology</i> , 2015 , 25, 1784-90	6.3	43
44	Automated Processing of Imaging Data through Multi-tiered Classification of Biological Structures Illustrated Using <i>Caenorhabditis elegans</i> . <i>PLoS Computational Biology</i> , 2015 , 11, e1004194	5	20
43	A gene-expression-based neural code for food abundance that modulates lifespan. <i>ELife</i> , 2015 , 4, e06258	9.9	32
42	Temporal ordering and registration of images in studies of developmental dynamics. <i>Development (Cambridge)</i> , 2015 , 142, 1717-24	6.6	12
41	Von Willebrand factor-A1 domain binds platelet glycoprotein Ib in multiple states with distinctive force-dependent dissociation kinetics. <i>Thrombosis Research</i> , 2015 , 136, 606-12	8.2	35
40	Quantitative multivariate analysis of dynamic multicellular morphogenic trajectories. <i>Integrative Biology (United Kingdom)</i> , 2015 , 7, 825-33	3.7	11
39	Pre-TCR ligand binding impacts thymocyte development before α TCR expression. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 8373-8	11.5	41
38	A Systematic Ensemble Approach to Thermodynamic Modeling of Gene Expression from Sequence Data. <i>Cell Systems</i> , 2015 , 1, 396-407	10.6	32
37	Hydrogel-droplet microfluidic platform for high-resolution imaging and sorting of early larval <i>Caenorhabditis elegans</i> . <i>Lab on A Chip</i> , 2015 , 15, 1424-31	7.2	52
36	An automated programmable platform enabling multiplex dynamic stimuli delivery and cellular response monitoring for high-throughput suspension single-cell signaling studies. <i>Lab on A Chip</i> , 2015 , 15, 1497-507	7.2	29
35	Single-cell analysis of embryoid body heterogeneity using microfluidic trapping array. <i>Biomedical Microdevices</i> , 2014 , 16, 79-90	3.7	34

34	A generalizable, tunable microfluidic platform for delivering fast temporally varying chemical signals to probe single-cell response dynamics. <i>Analytical Chemistry</i> , 2014 , 86, 10138-47	7.8	32
33	A multi-channel device for high-density target-selective stimulation and long-term monitoring of cells and subcellular features in <i>C. elegans</i> . <i>Lab on A Chip</i> , 2014 , 14, 4513-4522	7.2	45
32	Animal microsurgery using microfluidics. <i>Current Opinion in Biotechnology</i> , 2014 , 25, 24-9	11.4	8
31	An insulin-to-insulin regulatory network orchestrates phenotypic specificity in development and physiology. <i>PLoS Genetics</i> , 2014 , 10, e1004225	6	62
30	A perspective on optical developments in microfluidic platforms for <i>Caenorhabditis elegans</i> research. <i>Biomicrofluidics</i> , 2014 , 8, 011301	3.2	14
29	Regulation of synaptic extracellular matrix composition is critical for proper synapse morphology. <i>Journal of Neuroscience</i> , 2014 , 34, 12678-89	6.6	21
28	A microfluidic systems biology approach for live single-cell mitochondrial ROS imaging. <i>Methods in Enzymology</i> , 2013 , 526, 219-30	1.7	6
27	Enabling systems biology approaches through microfabricated systems. <i>Analytical Chemistry</i> , 2013 , 85, 8882-94	7.8	11
26	Advances in microfluidic cell separation and manipulation. <i>Current Opinion in Chemical Engineering</i> , 2013 , 2, 398-404	5.4	35
25	Microfluidic-based patterning of embryonic stem cells for in vitro development studies. <i>Lab on A Chip</i> , 2013 , 13, 4617-24	7.2	34
24	Quantitative screening of genes regulating tryptophan hydroxylase transcription in <i>Caenorhabditis elegans</i> using microfluidics and an adaptive algorithm. <i>Integrative Biology (United Kingdom)</i> , 2013 , 5, 372-80	3.7	22
23	Microfluidic trap array for massively parallel imaging of <i>Drosophila</i> embryos. <i>Nature Protocols</i> , 2013 , 8, 721-36	18.8	46
22	Evo-Devo on Chip 2013 , 59-79		
21	Kinetics of gene derepression by ERK signaling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 10330-5	11.5	43
20	Sequentially pulsed fluid delivery to establish soluble gradients within a scalable microfluidic chamber array. <i>Biomicrofluidics</i> , 2013 , 7, 11804	3.2	6
19	Microfluidics as a tool for <i>C. elegans</i> research. <i>WormBook</i> , 2013 , 1-19		58
18	A multispectral optical illumination system with precise spatiotemporal control for the manipulation of optogenetic reagents. <i>Nature Protocols</i> , 2012 , 7, 207-20	18.8	48
17	Autonomous screening of <i>C. elegans</i> identifies genes implicated in synaptogenesis. <i>Nature Methods</i> , 2012 , 9, 977-80	21.6	82

16	Laterally orienting <i>C. elegans</i> using geometry at microscale for high-throughput visual screens in neurodegeneration and neuronal development studies. <i>PLoS ONE</i> , 2012 , 7, e35037	3.7	49
15	Microfluidic chamber arrays for whole-organism behavior-based chemical screening. <i>Lab on A Chip</i> , 2011 , 11, 3689-3697	7.2	83
14	Real-time multimodal optical control of neurons and muscles in freely behaving <i>Caenorhabditis elegans</i> . <i>Nature Methods</i> , 2011 , 8, 153-8	21.6	167
13	A microfluidic array for large-scale ordering and orientation of embryos. <i>Nature Methods</i> , 2011 , 8, 171-176	26.6	122
12	Imaging single-cell signaling dynamics with a deterministic high-density single-cell trap array. <i>Analytical Chemistry</i> , 2011 , 83, 7044-52	7.8	113
11	Microfluidics-enabled phenotyping, imaging, and screening of multicellular organisms. <i>Lab on A Chip</i> , 2010 , 10, 1509-17	7.2	81
10	Long-term high-resolution imaging and culture of <i>C. elegans</i> in chip-gel hybrid microfluidic device for developmental studies. <i>Lab on A Chip</i> , 2010 , 10, 1862-8	7.2	117
9	Microfluidics for the analysis of behavior, nerve regeneration, and neural cell biology in <i>C. elegans</i> . <i>Current Opinion in Neurobiology</i> , 2009 , 19, 561-7	7.6	96
8	Automated high-throughput cell microsurgery on-chip. <i>Lab on A Chip</i> , 2009 , 9, 2764-6	7.2	61
7	Computer-enhanced high-throughput genetic screens of <i>C. elegans</i> in a microfluidic system. <i>Lab on A Chip</i> , 2009 , 9, 38-40	7.2	67
6	Automated on-chip rapid microscopy, phenotyping and sorting of <i>C. elegans</i> . <i>Nature Methods</i> , 2008 , 5, 637-43	21.6	299
5	Oxygen sensation and social feeding mediated by a <i>C. elegans</i> guanylate cyclase homologue. <i>Nature</i> , 2004 , 430, 317-22	50.4	442
4	Graphical-Model Framework for Automated Annotation of Cell Identities in Dense Cellular Images		1
3	A beneficial genomic rearrangement creates multiple versions of calcipressin in <i>C. elegans</i>		1
2	HeALTH: An Automated Platform for Long-term Longitudinal Studies of Whole Organisms under Precise Environmental Control		1
1	Reverse-Correlation Analysis of the Mechanosensation Circuit and Behavior in <i>C. elegans</i> Reveals Temporal and Spatial Encoding		1