

Mingming Wu

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/1363322/mingming-wu-publications-by-year.pdf>

Version: 2024-04-24

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.

54
papers

3,427
citations

30
h-index

57
g-index

57
ext. papers

3,971
ext. citations

5.6
avg, IF

5.27
L-index

#	Paper	IF	Citations
54	Generation of a <i>Gluconobacter oxydans</i> knockout collection for improved extraction of rare earth elements. <i>Nature Communications</i> , 2021 , 12, 6693	17.4	2
53	Spatial and temporal dynamics of RhoA activities of single breast tumor cells in a 3D environment revealed by a machine learning-assisted FRET technique. <i>Experimental Cell Research</i> , 2021 , 112939	4.2	0
52	Microfluidic and mathematical modeling of aquatic microbial communities. <i>Analytical and Bioanalytical Chemistry</i> , 2021 , 413, 2331-2344	4.4	2
51	Biologically inspired micro-robotic swimmers remotely controlled by ultrasound waves. <i>Lab on A Chip</i> , 2021 , 21, 4095-4103	7.2	9
50	Tumor spheroids under perfusion within a 3D microfluidic platform reveal critical roles of cell-cell adhesion in tumor invasion. <i>Scientific Reports</i> , 2020 , 10, 9648	4.9	14
49	Lymphoidal chemokine CCL19 promoted the heterogeneity of the breast tumor cell motility within a 3D microenvironment revealed by a L _{xy} distribution analysis. <i>Integrative Biology (United Kingdom)</i> , 2020 , 12, 12-20	3.7	3
48	An array microhabitat device with dual gradients revealed synergistic roles of nitrogen and phosphorous in the growth of microalgae. <i>Lab on A Chip</i> , 2020 , 20, 798-805	7.2	3
47	The Architecture of Co-Culture Spheroids Regulates Tumor Invasion Within a 3D Extracellular Matrix 2020 , 197-207		1
46	The architecture of co-culture spheroids regulates tumor invasion within a 3D extracellular matrix. <i>Biophysical Reviews and Letters</i> , 2020 , 15, 131-141	1.2	4
45	Glycation of collagen matrices promotes breast tumor cell invasion. <i>Integrative Biology (United Kingdom)</i> , 2019 ,	3.7	12
44	Physical confinement induces malignant transformation in mammary epithelial cells. <i>Biomaterials</i> , 2019 , 217, 119307	15.6	8
43	Nanobiotechnology for the Environment: Innovative Solutions for the Management of Harmful Algal Blooms. <i>Journal of Agricultural and Food Chemistry</i> , 2018 , 66, 6474-6479	5.7	4
42	Fluid viscoelasticity promotes collective swimming of sperm. <i>Scientific Reports</i> , 2017 , 7, 3152	4.9	59
41	Microfluidic modeling of the biophysical microenvironment in tumor cell invasion. <i>Lab on A Chip</i> , 2017 , 17, 3221-3233	7.2	36
40	Fibrous nonlinear elasticity enables positive mechanical feedback between cells and ECMs. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 14043-14048	11.5	181
39	Dynamics of Bovine Sperm Interaction with Epithelium Differ Between Oviductal Isthmus and Ampulla. <i>Biology of Reproduction</i> , 2016 , 95, 90	3.9	30
38	Dynamic self-organization of microwell-aggregated cellular mixtures. <i>Soft Matter</i> , 2016 , 12, 5739-46	3.6	25

37	Epidermal growth factor promotes a mesenchymal over an amoeboid motility of MDA-MB-231 cells embedded within a 3D collagen matrix. <i>European Physical Journal Plus</i> , 2016 , 131, 1	3.1	6
36	Oxygen Tension and Riboflavin Gradients Cooperatively Regulate the Migration of MR-1 Revealed by a Hydrogel-Based Microfluidic Device. <i>Frontiers in Microbiology</i> , 2016 , 7, 1438	5.7	18
35	Interstitial flows promote amoeboid over mesenchymal motility of breast cancer cells revealed by a three dimensional microfluidic model. <i>Integrative Biology (United Kingdom)</i> , 2015 , 7, 1402-11	3.7	47
34	An array microhabitat system for high throughput studies of microalgal growth under controlled nutrient gradients. <i>Lab on A Chip</i> , 2015 , 15, 3687-94	7.2	9
33	Emergence of upstream swimming via a hydrodynamic transition. <i>Physical Review Letters</i> , 2015 , 114, 108102	7.4	65
32	Microgrooves and fluid flows provide preferential passageways for sperm over pathogen <i>Tritrichomonas foetus</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 5431-6	11.5	57
31	Designing compartmentalized hydrogel microparticles for cell encapsulation and scalable 3D cell culture. <i>Journal of Materials Chemistry B</i> , 2015 , 3, 353-360	7.3	73
30	A 3D in situ cell counter reveals that breast tumor cell (MDA-MB-231) proliferation rate is reduced by the collagen matrix density. <i>Biotechnology Progress</i> , 2015 , 31, 990-996	2.8	12
29	Hydrodynamic tracer diffusion in suspensions of swimming bacteria. <i>Physics of Fluids</i> , 2014 , 26, 081901	4.4	78
28	Cooperative roles of biological flow and surface topography in guiding sperm migration revealed by a microfluidic model. <i>Lab on A Chip</i> , 2014 , 14, 1348-56	7.2	61
27	A microfluidic platform for profiling biomechanical properties of bacteria. <i>Lab on A Chip</i> , 2014 , 14, 2491-8.2	8.2	22
26	An adaptive algorithm for tracking 3D bead displacements: application in biological experiments. <i>Measurement Science and Technology</i> , 2014 , 25,	2	10
25	Modeling tumor microenvironments in vitro. <i>Journal of Biomechanical Engineering</i> , 2014 , 136, 021011	2.1	35
24	Bacterial collective motion near the contact line of an evaporating sessile drop. <i>Physics of Fluids</i> , 2014 , 26, 111703	4.4	14
23	A contact line pinning based microfluidic platform for modelling physiological flows. <i>Lab on A Chip</i> , 2013 , 13, 3876-85	7.2	26
22	Toward single cell traction microscopy within 3D collagen matrices. <i>Experimental Cell Research</i> , 2013 , 319, 2396-408	4.2	66
21	Gravity and surface tension effects on the shape change of soft materials. <i>Langmuir</i> , 2013 , 29, 8665-74	4	35
20	Different migration patterns of sea urchin and mouse sperm revealed by a microfluidic chemotaxis device. <i>PLoS ONE</i> , 2013 , 8, e60587	3.7	23

19	Cooperative roles of SDF-1 α and EGF gradients on tumor cell migration revealed by a robust 3D microfluidic model. <i>PLoS ONE</i> , 2013 , 8, e68422	3.7	76
18	A mechanical metamaterial made from a DNA hydrogel. <i>Nature Nanotechnology</i> , 2012 , 7, 816-20	28.7	378
17	Mapping three-dimensional stress and strain fields within a soft hydrogel using a fluorescence microscope. <i>Biophysical Journal</i> , 2012 , 102, 2241-50	2.9	33
16	Microfluidics for mammalian cell chemotaxis. <i>Annals of Biomedical Engineering</i> , 2012 , 40, 1316-27	4.7	71
15	Effects of gel thickness on microscopic indentation measurements of gel modulus. <i>Biophysical Journal</i> , 2011 , 101, 643-50	2.9	84
14	Dendritic cell chemotaxis in 3D under defined chemokine gradients reveals differential response to ligands CCL21 and CCL19. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 5614-9	11.5	154
13	Responses of Escherichia coli bacteria to two opposing chemoattractant gradients depend on the chemoreceptor ratio. <i>Journal of Bacteriology</i> , 2010 , 192, 1796-800	3.5	74
12	An agarose-based microfluidic platform with a gradient buffer for 3D chemotaxis studies. <i>Biomedical Microdevices</i> , 2009 , 11, 827-35	3.7	133
11	Logarithmic sensing in Escherichia coli bacterial chemotaxis. <i>Biophysical Journal</i> , 2009 , 96, 2439-48	2.9	166
10	Assessing neural stem cell motility using an agarose gel-based microfluidic device. <i>Journal of Visualized Experiments</i> , 2008 ,	1.6	4
9	On the mechanics of cardiac function of Drosophila embryo. <i>PLoS ONE</i> , 2008 , 3, e4045	3.7	12
8	A hydrogel-based microfluidic device for the studies of directed cell migration. <i>Lab on A Chip</i> , 2007 , 7, 763-9	7.2	276
7	Pair velocity correlations among swimming Escherichia coli bacteria are determined by force-quadrupole hydrodynamic interactions. <i>Physics of Fluids</i> , 2007 , 19, 061701	4.4	56
6	Assessing adhesion forces of type I and type IV pili of Xylella fastidiosa bacteria by use of a microfluidic flow chamber. <i>Applied and Environmental Microbiology</i> , 2007 , 73, 2690-6	4.8	95
5	Collective bacterial dynamics revealed using a three-dimensional population-scale defocused particle tracking technique. <i>Applied and Environmental Microbiology</i> , 2006 , 72, 4987-94	4.8	103
4	A three-channel microfluidic device for generating static linear gradients and its application to the quantitative analysis of bacterial chemotaxis. <i>Lab on A Chip</i> , 2006 , 6, 381-8	7.2	194
3	Three-dimensional fluorescent particle tracking at micron-scale using a single camera. <i>Experiments in Fluids</i> , 2005 , 38, 461-465	2.5	100
2	Scaling law in liquid drop coalescence driven by surface tension. <i>Physics of Fluids</i> , 2004 , 16, L51-L54	4.4	193

- 1 Experimental studies on the shape and path of small air bubbles rising in clean water. *Physics of Fluids*, **2002**, 14, L49 4.4 175