Wolfgang Losert

List of Publications by Year
in descending order

58	1,892	24	40
papers	citations	h-index	g-index
		257450	289244
67	67	67	2756
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cortical waves mediate the cellular response to electric fields. ELife, 2022, 11, .	6.0	9
2	Spontaneous polarization and cell guidance on asymmetric nanotopography. Communications Physics, 2022, 5, .	5.3	1
3	Label-free cell tracking enables collective motion phenotyping in epithelial monolayers. IScience, 2022, 25, 104678.	4.1	6
4	Effects of interparticle friction on the response of 3D cyclically compressed granular material. EPJ Web of Conferences, 2021, 249, 10003.	0.3	2
5	Distinct roles of tumor associated mutations in collective cell migration. Scientific Reports, 2021, 11, 10291.	3.3	12
6	Signaling through polymerization and degradation: Analysis and simulations of T cell activation mediated by Bcl10. PLoS Computational Biology, 2021, 17, e1007986.	3.2	5
7	Contractility, focal adhesion orientation, and stress fiber orientation drive cancer cell polarity and migration along wavy ECM substrates. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	39
8	Memory in three-dimensional cyclically driven granular material. Physical Review E, 2021, 103, 062906.	2.1	4
9	Early time-point cell morphology classifiers successfully predict human bone marrow stromal cell differentiation modulated by fiber density in nanofiber scaffolds. Biomaterials, 2021, 274, 120812.	11.4	9
10	The social shape of sperm: using an integrative machine-learning approach to examine sperm ultrastructure and collective motility. Proceedings of the Royal Society B: Biological Sciences, 2021, 288, 20211553.	2.6	2
11	Electrically synchronizing and modulating the dynamics of ERK activation to regulate cell fate. IScience, 2021, 24, 103240.	4.1	9
12	Gravity Governs Shear Localization in Confined Dense Granular Flows. Physical Review Letters, 2021, 127, 278003.	7.8	2
13	Quantifying topography-guided actin dynamics across scales using optical flow. Molecular Biology of the Cell, 2020, 31, 1753-1764.	2.1	26
14	Detecting heterogeneity in and between breast cancer cell lines. Cancer Convergence, 2020, 4, 1.	8.0	39
15	Influence of hyaluronic acid binding on the actin cortex measured by optical forces. Journal of Biophotonics, 2020, 13, e201960215.	2.3	2
16	Reversibility of granular rotations and translations. Physical Review E, 2019, 100, 042905.	2.1	10
17	Actin Cytoskeleton and Focal Adhesions Regulate the Biased Migration of Breast Cancer Cells on Nanoscale Asymmetric Sawteeth. ACS Nano, 2019, 13, 1454-1468.	14.6	27
18	Dynamics phenotyping across length and time scales in collective cell migration. Seminars in Cell and Developmental Biology, 2019, 93, 69-76.	5.0	5

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19	Lysophosphatidic acid regulates the motility of MCF10CA1a breast cancer cell sheets via two opposing signaling pathways. Cellular Signalling, 2018, 45, 1-11.	3.6	12
20	Replication of biocompatible, nanotopographic surfaces. Scientific Reports, 2018, 8, 564.	3.3	20
21	RefCell: multi-dimensional analysis of image-based high-throughput screens based on â€˜typical cellsâ€™. BMC Bioinformatics, 2018, 19, 427.	2.6	1
22	Intravital microscopy of collective invasion plasticity in breast cancer. DMM Disease Models and Mechanisms, 2018, 11, .	2.4	62
23	Inferring single-cell behaviour from large-scale epithelial sheet migration patterns. Journal of the Royal Society Interface, 2017, 14, 20170147.	3.4	11
24	Collective cell migration has distinct directionality and speed dynamics. Cellular and Molecular Life Sciences, 2017, 74, 3841-3850.	5.4	33
25	Lamin A and microtubules collaborate to maintain nuclear morphology. Nucleus, 2017, 8, 433-446.	2.2	49
26	Adenylyl cyclase mRNA localizes to the posterior of polarized DICTYOSTELIUM cells during chemotaxis. BMC Cell Biology, 2017, 18, 23.	3.0	2
27	<i>Leishmania</i>infection inhibits macrophage motility by altering F-actin dynamics and the expression of adhesion complex proteins. Cellular Microbiology, 2017, 19, e12668.	2.1	16
28	Cell Cycle and Cell Size Dependent Gene Expression Reveals Distinct Subpopulations at Single-Cell Level. Frontiers in Genetics, 2017, 8, 1.	2.3	149
29	Extracting microtentacle dynamics of tumor cells in a non-adherent environment. Oncotarget, 2017, 8, 111567-111580.	1.8	9
30	Machine learning based methodology to identify cell shape phenotypes associated with microenvironmental cues. Biomaterials, 2016, 104, 104-118.	11.4	38
31	svclassify: a method to establish benchmark structural variant calls. BMC Genomics, 2016, 17, 64.	2.8	98
32	Spatiotemporal relationships between the cell shape and the actomyosin cortex of periodically protruding cells. Cytoskeleton, 2015, 72, 268-281.	2.0	21
33	Uncovering low-dimensional, miR-based signatures of acute myeloid and lymphoblastic leukemias with a machine-learning-driven network approach. Convergent Science Physical Oncology, 2015, 1, 025002.	2.6	10
34	Asymmetric nanotopography biases cytoskeletal dynamics and promotes unidirectional cell guidance. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 12557-12562.	7.1	70
35	Geometry-Driven Polarity in Motile Amoeboid Cells. PLoS ONE, 2014, 9, e113382.	2.5	26
36	Consequences of Anomalous Diffusion in Disordered Systems under Cyclic Forcing. Physical Review Letters, 2014, 112, 228001.	7.8	5

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37	Experimental measurements of orientation and rotation of dense 3D packings of spheres. Granular Matter, 2014, 16, 185-191.	2.2	24
38	Automated Manipulation of Biological Cells Using Gripper Formations Controlled By Optical Tweezers. IEEE Transactions on Automation Science and Engineering, 2014, 11, 338-347.	5.2	114
39	The interplay of cellâ€“cell and cellâ€“substrate adhesion in collective cell migration. Journal of the Royal Society Interface, 2014, 11, 20140684.	3.4	28
40	Cellular Contact Guidance through Dynamic Sensing of Nanotopography. ACS Nano, 2014, 8, 3546-3555.	14.6	122
41	Indirect pushing based automated micromanipulation of biological cells using optical tweezers. International Journal of Robotics Research, 2014, 33, 1098-1111.	8.5	78
42	Dictyostelium Cells Migrate Similarly on Surfaces of Varying Chemical Composition. PLoS ONE, 2014, 9, e87981.	2.5	14
43	Automated Cell Transport in Optical Tweezers-Assisted Microfluidic Chambers. IEEE Transactions on Automation Science and Engineering, 2013, 10, 980-989.	5.2	42
44	Coexistence and Transition between Shear Zones in Slow Granular Flows. Physical Review Letters, 2013, 111, 148301.	7.8	22
45	Quantifying stretching and rearrangement in epithelial sheet migration. New Journal of Physics, 2013, 15, 025036.	2.9	34
46	From Cellular Characteristics to Disease Diagnosis: Uncovering Phenotypes with Supercells. PLoS Computational Biology, 2013, 9, e1003215.	3.2	34
47	Automated indirect manipulation of irregular shaped cells with Optical Tweezers for studying collective cell migration. , 2013, , .		10
48	Real-Time Motion Analysis Reveals Cell Directionality as an Indicator of Breast Cancer Progression. PLoS ONE, 2013, 8, e58859.	2.5	50
49	Cell Shape Dynamics: From Waves to Migration. PLoS Computational Biology, 2012, 8, e1002392.	3.2	104
50	Gripper synthesis for indirect manipulation of cells using Holographic Optical Tweezers. , 2012, , .		19
51	Automated indirect transport of biological cells with optical tweezers using planar gripper formations. , 2012, , .		9
52	Onset of irreversibility in cyclic shear of granular packings. Physical Review E, 2012, 85, 021309.	2.1	63
53	Real-Time Path Planning for Coordinated Transport of Multiple Particles Using Optical Tweezers. IEEE Transactions on Automation Science and Engineering, 2012, 9, 669-678.	5.2	75
54	Developing a Stochastic Dynamic Programming Framework for Optical Tweezer-Based Automated Particle Transport Operations. IEEE Transactions on Automation Science and Engineering, 2010, 7, 218-227.	5.2	87

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55	3D Imaging of particle motion during penetrometer testing. Granular Matter, 2007, 9, 323-329.	2.2	45
56	Analysis of the Kinetics of ASAP1 GAP activity. FASEB Journal, 2007, 21, A616.	0.5	0
57	Actin Polymerization in a Thermal Gradient. Macromolecular Symposia, 2005, 227, 231-242.	0.7	3
58	Transient and Oscillatory Granular Shear Flow. Physical Review Letters, 2004, 93, 088001.	7.8	66