

Andre Levchenko

List of Publications by Year in descending order

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67
papers

6,721
citations

87723

38
h-index

102304

66
g-index

82
all docs

82
docs citations

82
times ranked

10136
citing authors

#	ARTICLE	IF	CITATIONS
1	The Coevolution of Placentation and Cancer. <i>Annual Review of Animal Biosciences</i> , 2022, 10, 259-279.	3.6	20
2	Complex effects of kinase localization revealed by compartment-specific regulation of protein kinase A activity. <i>ELife</i> , 2022, 11, .	2.8	3
3	Computation and visualization of cell signaling topologies in single-cell systems data using Connectome. <i>Scientific Reports</i> , 2022, 12, 4187.	1.6	50
4	A molecular clock controls periodically driven cell migration in confined spaces. <i>Cell Systems</i> , 2022, 13, 514-529.e10.	2.9	10
5	Regulation of PTEN translation by PI3K signaling maintains pathway homeostasis. <i>Molecular Cell</i> , 2021, 81, 708-723.e5.	4.5	51
6	Phosphorylated WNK kinase networks in recoded bacteria recapitulate physiological function. <i>Cell Reports</i> , 2021, 36, 109416.	2.9	5
7	Comments on Boddy et al. 2020: Available data suggest positive relationship between placental invasion and malignancy. <i>Evolution, Medicine and Public Health</i> , 2020, 2020, 211-214.	1.1	12
8	Modeling and measurement of signaling outcomes affecting decision making in noisy intracellular networks using machine learning methods. <i>Integrative Biology (United Kingdom)</i> , 2020, 12, 122-138.	0.6	6
9	Signaling diversity enabled by Rap1-regulated plasma membrane ERK with distinct temporal dynamics. <i>ELife</i> , 2020, 9, .	2.8	32
10	Pericytes enable effective angiogenesis in the presence of proinflammatory signals. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 23551-23561.	3.3	49
11	Systems Biology of Cancer Metastasis. <i>Cell Systems</i> , 2019, 9, 109-127.	2.9	233
12	Dynamic secretome of bone marrow-derived stromal cells reveals a cardioprotective biochemical cocktail. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 14374-14383.	3.3	22
13	Switch-like enhancement of epithelial-mesenchymal transition by YAP through feedback regulation of WT1 and Rho-family GTPases. <i>Nature Communications</i> , 2019, 10, 2797.	5.8	105
14	3D Analysis of Multi-cellular Responses to Chemoattractant Gradients. <i>Journal of Visualized Experiments</i> , 2019, , .	0.2	2
15	A microphysiological model of the bronchial airways reveals the interplay of mechanical and biochemical signals in bronchospasm. <i>Nature Biomedical Engineering</i> , 2019, 3, 532-544.	11.6	25
16	Evolution of placental invasion and cancer metastasis are causally linked. <i>Nature Ecology and Evolution</i> , 2019, 3, 1743-1753.	3.4	53
17	Single-cell connectomic analysis of adult mammalian lungs. <i>Science Advances</i> , 2019, 5, eaaw3851.	4.7	156
18	Topotaxis: A New Mechanism of Directed Cell Migration in Topographic ECM Gradients. <i>Biophysical Journal</i> , 2018, 114, 1257-1263.	0.2	97

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19	Self-induced mechanical stress can trigger biofilm formation in uropathogenic Escherichia coli. Nature Communications, 2018, 9, 4087.	5.8	57
20	Biomechanical interplay between anisotropic re-organization of cells and the surrounding matrix underlies transition to invasive cancer spread. Scientific Reports, 2018, 8, 14210.	1.6	19
21	A Loss of Epigenetic Control Can Promote Cell Death through Reversing the Balance of Pathways in a Signaling Network. Molecular Cell, 2018, 72, 60-70.e3.	4.5	10
22	3S - Systematic, systemic, and systems biology and toxicology. ALTEX: Alternatives To Animal Experimentation, 2018, 35, 139-162.	0.9	50
23	Combined HMG-COA reductase and prenylation inhibition in treatment of CCM. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5503-5508.	3.3	24
24	Brachyury-YAP Regulatory Axis Drives Stemness and Growth in Cancer. Cell Reports, 2017, 21, 495-507.	2.9	59
25	Mechanochemical feedback underlies coexistence of qualitatively distinct cell polarity patterns within diverse cell populations. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E5750-E5759.	3.3	51
26	A mathematical model coupling polarity signaling to cell adhesion explains diverse cell migration patterns. PLoS Computational Biology, 2017, 13, e1005524.	1.5	48
27	Computation and measurement of cell decision making errors using single cell data. PLoS Computational Biology, 2017, 13, e1005436.	1.5	18
28	Two interferon-independent double-stranded RNA-induced host defense strategies suppress the common cold virus at warm temperature. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8496-8501.	3.3	54
29	Mechanics of Microenvironment as Instructive Cues Guiding Stem Cell Behavior. Current Stem Cell Reports, 2016, 2, 62-72.	0.7	10
30	Brain-on-a-chip model enables analysis of human neuronal differentiation and chemotaxis. Lab on A Chip, 2016, 16, 4152-4162.	3.1	119
31	Single-cell dynamics and variability of MAPK activity in a yeast differentiation pathway. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E5896-E5905.	3.3	56
32	Migration Phenotype of Brain-Cancer Cells Predicts Patient Outcomes. Cell Reports, 2016, 15, 2616-2624.	2.9	63
33	Cell-cell communication enhances the capacity of cell ensembles to sense shallow gradients during morphogenesis. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E679-88.	3.3	126
34	Limits to the precision of gradient sensing with spatial communication and temporal integration. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E689-95.	3.3	67
35	Endothelial cells decode VEGF-mediated Ca ²⁺ signaling patterns to produce distinct functional responses. Science Signaling, 2016, 9, ra20.	1.6	85
36	Directed migration of cancer cells guided by the graded texture of the underlying matrix. Nature Materials, 2016, 15, 792-801.	13.3	190

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37	Precisely parameterized experimental and computational models of tissue organization. <i>Integrative Biology (United Kingdom)</i> , 2016, 8, 230-242.	0.6	10
38	Spatial Manipulation with Microfluidics. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015, 3, 39.	2.0	31
39	Interplay between chemotaxis and contact inhibition of locomotion determines exploratory cell migration. <i>Nature Communications</i> , 2015, 6, 6619.	5.8	72
40	Spatial control of adult stem cell fate using nanotopographic cues. <i>Biomaterials</i> , 2014, 35, 2401-2410.	5.7	120
41	Noise decomposition of intracellular biochemical signaling networks using nonequivalent reporters. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 17330-17335.	3.3	29
42	Cellular noise and information transmission. <i>Current Opinion in Biotechnology</i> , 2014, 28, 156-164.	3.3	115
43	Modeling Intercellular Transfer of Biomolecules Through Tunneling Nanotubes. <i>Bulletin of Mathematical Biology</i> , 2013, 75, 1400-1416.	0.9	10
44	A Nontranscriptional Role for HIF-1 α as a Direct Inhibitor of DNA Replication. <i>Science Signaling</i> , 2013, 6, ra10.	1.6	95
45	Chemically inducible diffusion trap at cilia reveals molecular sieve-like barrier. <i>Nature Chemical Biology</i> , 2013, 9, 437-443.	3.9	117
46	Notch signaling mediates melanoma-endothelial cell communication and melanoma cell migration. <i>Pigment Cell and Melanoma Research</i> , 2013, 26, 697-707.	1.5	32
47	Hypoxia-inducible factor-dependent breast cancer-mesenchymal stem cell bidirectional signaling promotes metastasis. <i>Journal of Clinical Investigation</i> , 2013, 123, 189-205.	3.9	171
48	Hypoxia-inducible factor-dependent breast cancer-mesenchymal stem cell bidirectional signaling promotes metastasis. <i>Journal of Clinical Investigation</i> , 2013, 123, 1402-1402.	3.9	137
49	Quantitative Analysis of the Combined Effect of Substrate Rigidity and Topographic Guidance on Cell Morphology. <i>IEEE Transactions on Nanobioscience</i> , 2012, 11, 28-36.	2.2	28
50	Synthetic spatially graded Rac activation drives cell polarization and movement. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, E3668-77.	3.3	60
51	Matrix nanotopography as a regulator of cell function. <i>Journal of Cell Biology</i> , 2012, 197, 351-360.	2.3	522
52	Scp160-Dependent mRNA Trafficking Mediates Pheromone Gradient Sensing and Chemotropism in Yeast. <i>Cell Reports</i> , 2012, 1, 483-494.	2.9	38
53	The application of information theory to biochemical signaling systems. <i>Physical Biology</i> , 2012, 9, 045011.	0.8	91
54	Information Transduction Capacity of Noisy Biochemical Signaling Networks. <i>Science</i> , 2011, 334, 354-358.	6.0	1,007

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55	MICROPATTERNED POLYMER STRUCTURES FOR CELL AND TISSUE ENGINEERING. , 2010, , 101-120.		0
56	Models at the single cell level. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2010, 2, 34-48.	6.6	11
57	Nanoscale cues regulate the structure and function of macroscopic cardiac tissue constructs. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 565-570.	3.3	541
58	A Cell-Based Model for Quorum Sensing in Heterogeneous Bacterial Colonies. PLoS Computational Biology, 2010, 6, e1000819.	1.5	82
59	Tracking cell motion using GM-PHD. , 2009, , .		27
60	Mechanosensitivity of fibroblast cell shape and movement to anisotropic substratum topography gradients. Biomaterials, 2009, 30, 5433-5444.	5.7	323
61	Oscillatory Phosphorylation of Yeast Fus3 MAP Kinase Controls Periodic Gene Expression and Morphogenesis. Current Biology, 2008, 18, 1700-1706.	1.8	62
62	Robust and sensitive control of a quorum sensing circuit by two interlocked feedback loops. Molecular Systems Biology, 2008, 4, 234.	3.2	81
63	Self-Organization in High-Density Bacterial Colonies: Efficient Crowd Control. PLoS Biology, 2007, 5, e302.	2.6	131
64	MAPK-mediated bimodal gene expression and adaptive gradient sensing in yeast. Nature, 2007, 446, 46-51.	13.7	277
65	A microfluidic chemostat for experiments with bacterial and yeast cells. Nature Methods, 2005, 2, 685-689.	9.0	243
66	Intercellular transfer of P-glycoprotein mediates acquired multidrug resistance in tumor cells. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 1933-1938.	3.3	162
67	Computational cell biology in the post-genomic era. Molecular Biology Reports, 2001, 28, 83-89.	1.0	10