

Alex Groisman

List of Publications by Year in descending order

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Version: 2024-02-01

82
papers

5,931
citations

61984

43
h-index

76900

74
g-index

91
all docs

91
docs citations

91
times ranked

7849
citing authors

#	ARTICLE	IF	CITATIONS
1	Localized electrical stimulation triggers cell-type-specific proliferation in biofilms. <i>Cell Systems</i> , 2022, 13, 488-498.e4.	6.2	8
2	Pre-complexation of talin and vinculin without tension is required for efficient nascent adhesion maturation. <i>ELife</i> , 2021, 10, .	6.0	36
3	Mitofusin α regulates leukocyte adhesion and β 2 integrin activation. <i>Journal of Leukocyte Biology</i> , 2021, , .	3.3	7
4	Cellular memory in eukaryotic chemotaxis depends on the background chemoattractant concentration. <i>Physical Review E</i> , 2021, 103, 012402.	2.1	17
5	Amyloidogenic Processing of Amyloid Precursor Protein Drives Stretch-Induced Disruption of Axonal Transport in hiPSC-Derived Neurons. <i>Journal of Neuroscience</i> , 2021, 41, 10034-10053.	3.6	14
6	Coupling traction force patterns and actomyosin wave dynamics reveals mechanics of cell motion. <i>Molecular Systems Biology</i> , 2021, 17, e10505.	7.2	10
7	Novel micropatterning technique reveals dependence of cell-substrate adhesion and migration of social amoebas on parental strain, development, and fluorescent markers. <i>PLoS ONE</i> , 2020, 15, e0236171.	2.5	4
8	Aggregation Temperature of Escherichia coli Depends on Steepness of the Thermal Gradient. <i>Biophysical Journal</i> , 2020, 118, 2816-2828.	0.5	1
9	Cell motility dependence on adhesive wetting. <i>Soft Matter</i> , 2019, 15, 2043-2050.	2.7	26
10	Enhanced Dendritic Actin Network Formation in Extended Lamellipodia Drives Proliferation in Growth-Challenged Rac1P29S Melanoma Cells. <i>Developmental Cell</i> , 2019, 49, 444-460.e9.	7.0	36
11	Tau/MAPT disease-associated variant A152T alters tau function and toxicity via impaired retrograde axonal transport. <i>Human Molecular Genetics</i> , 2019, 28, 1498-1514.	2.9	26
12	High-Affinity Bent β 2-Integrin Molecules in Arresting Neutrophils Face Each Other through Binding to ICAMs In cis. <i>Cell Reports</i> , 2019, 26, 119-130.e5.	6.4	46
13	Blood flow-induced Notch activation and endothelial migration enable vascular remodeling in zebrafish embryos. <i>Nature Communications</i> , 2018, 9, 5314.	12.8	54
14	Self-induced mechanical stress can trigger biofilm formation in uropathogenic Escherichia coli. <i>Nature Communications</i> , 2018, 9, 4087.	12.8	57
15	CYK-4 functions independently of its centralspindlin partner ZEN-4 to cellularize oocytes in germline syncytia. <i>ELife</i> , 2018, 7, .	6.0	25
16	A Four-Well Dish for High-Resolution Longitudinal Imaging of the Tail and Posterior Trunk of Larval Zebrafish. <i>Zebrafish</i> , 2017, 14, 489-491.	1.1	6
17	Vimentin fibers orient traction stress. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 5195-5200.	7.1	115
18	Effector and Regulatory T Cells Roll at High Shear Stress by Inducible Tether and Sling Formation. <i>Cell Reports</i> , 2017, 21, 3885-3899.	6.4	34

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19	Mechanism of bidirectional thertotaxis in Escherichia coli. ELife, 2017, 6, .	6.0	47
20	Microfluidics-based side view flow chamber reveals tether-to-sling transition in rolling neutrophils. Scientific Reports, 2016, 6, 28870.	3.3	25
21	Effect of flow and peristaltic mixing on bacterial growth in a gut-like channel. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 11414-11419.	7.1	120
22	Visualizing mechanical modulation of nanoscale organization of cell-matrix adhesions. Integrative Biology (United Kingdom), 2016, 8, 795-804.	1.3	12
23	Neutrophil recruitment limited by high-affinity bent $\beta 2$ integrin binding ligand in cis. Nature Communications, 2016, 7, 12658.	12.8	84
24	Rigidity of silicone substrates controls cell spreading and stem cell differentiation. Scientific Reports, 2016, 6, 33411.	3.3	24
25	$\alpha 12$ and $\alpha 13$ Differentially Regulate Arrest from Flow and Chemotaxis in Mouse Neutrophils. Journal of Immunology, 2016, 196, 3828-3833.	0.8	23
26	Traction microscopy to identify force modulation in subresolution adhesions. Nature Methods, 2015, 12, 653-656.	19.0	138
27	A microfluidic system for studying the behavior of zebrafish larvae under acute hypoxia. Lab on A Chip, 2015, 15, 857-866.	6.0	35
28	Combinatorial influences of paclitaxel and strain on axonal transport. Experimental Neurology, 2015, 271, 358-367.	4.1	12
29	Functional Hierarchy of Redundant Actin Assembly Factors Revealed by Fine-Grained Registration of Intrinsic Image Fluctuations. Cell Systems, 2015, 1, 37-50.	6.2	65
30	Indispensable functions of ABL and PDGF receptor kinases in epithelial adherence of attaching/effacing pathogens under physiological conditions. American Journal of Physiology - Cell Physiology, 2014, 307, C180-C189.	4.6	8
31	Ultrafast cooling reveals microsecond-scale biomolecular dynamics. Nature Communications, 2014, 5, 5737.	12.8	23
32	Cellular memory in eukaryotic chemotaxis. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 14448-14453.	7.1	115
33	Microfluidic experiments reveal that antifreeze proteins bound to ice crystals suffice to prevent their growth. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 1309-1314.	7.1	137
34	The nucleus of endothelial cell as a sensor of blood flow direction. Biology Open, 2013, 2, 1007-1012.	1.2	74
35	Linear conversion of pressure into concentration, rapid switching of concentration, and generation of linear ramps of concentration in a microfluidic device. Biomicrofluidics, 2012, 6, 024109.	2.4	1
36	Incoherent Feedforward Control Governs Adaptation of Activated Ras in a Eukaryotic Chemotaxis Pathway. Science Signaling, 2012, 5, ra2.	3.6	154

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37	Microwell devices with finger-like channels for long-term imaging of HIV-1 expression kinetics in primary human lymphocytes. <i>Lab on A Chip</i> , 2012, 12, 4305.	6.0	8
38	Studies of bacterial aerotaxis in a microfluidic device. <i>Lab on A Chip</i> , 2012, 12, 4835.	6.0	39
39	Innate Non-Specific Cell Substratum Adhesion. <i>PLoS ONE</i> , 2012, 7, e42033.	2.5	49
40	“Slings” enable neutrophil rolling at high shear. <i>Nature</i> , 2012, 488, 399-403.	27.8	153
41	Acute Drug Treatment in the Early <i>C. elegans</i> Embryo. <i>PLoS ONE</i> , 2011, 6, e24656.	2.5	114
42	Measurements of Elastic Moduli of Silicone Gel Substrates with a Microfluidic Device. <i>PLoS ONE</i> , 2011, 6, e25534.	2.5	58
43	Live Cell Imaging of Paxillin in Rolling Neutrophils by Dual-Color Quantitative Dynamic Footprinting. <i>Microcirculation</i> , 2011, 18, 361-372.	1.8	14
44	Protein kinase A governs a RhoA/RhoGDI protrusion/retraction pacemaker in migrating cells. <i>Nature Cell Biology</i> , 2011, 13, 660-667.	10.3	149
45	Visualizing a one-way protein encounter complex by ultrafast single-molecule mixing. <i>Nature Methods</i> , 2011, 8, 239-241.	19.0	128
46	High Refractive Index Silicone Gels for Simultaneous Total Internal Reflection Fluorescence and Traction Force Microscopy of Adherent Cells. <i>PLoS ONE</i> , 2011, 6, e23807.	2.5	58
47	External and internal constraints on eukaryotic chemotaxis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 9656-9659.	7.1	120
48	Generation of oxygen gradients with arbitrary shapes in a microfluidic device. <i>Lab on A Chip</i> , 2010, 10, 388-391.	6.0	96
49	Gradient sensing in defined chemotactic fields. <i>Integrative Biology (United Kingdom)</i> , 2010, 2, 659-668.	1.3	35
50	Ultrafast microfluidic mixer with three-dimensional flow focusing for studies of biochemical kinetics. <i>Lab on A Chip</i> , 2010, 10, 598-609.	6.0	66
51	Microfluidic Device for Single-Molecule Experiments with Enhanced Photostability. <i>Journal of the American Chemical Society</i> , 2009, 131, 13610-13612.	13.7	61
52	An easy to assemble microfluidic perfusion device with a magnetic clamp. <i>Lab on A Chip</i> , 2009, 9, 1085.	6.0	77
53	High-Resolution Temperature-Concentration Diagram of β -Synuclein Conformation Obtained from a Single Förster Resonance Energy Transfer Image in a Microfluidic Device. <i>Analytical Chemistry</i> , 2009, 81, 6929-6935.	6.5	30
54	Fine temporal control of the medium gas content and acidity and on-chip generation of series of oxygen concentrations for cell cultures. <i>Lab on A Chip</i> , 2009, 9, 1073.	6.0	125

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55	Microfluidic device functionalized with Pâ€selectin reveals discontinuous rolling of leukocytes in mouse whole blood. FASEB Journal, 2009, 23, 949.4.	0.5	0
56	Optofluidic 1x4 Switch. Optics Express, 2008, 16, 13499.	3.4	69
57	Microfluidic devices for studies of shear-dependent platelet adhesion. Lab on A Chip, 2008, 8, 1486.	6.0	129
58	Bioluminescent response of individual dinoflagellate cells to hydrodynamic stress measured with millisecond resolution in a microfluidic device. Journal of Experimental Biology, 2008, 211, 2865-2875.	1.7	46
59	Integrin-mediated Protein Kinase A Activation at the Leading Edge of Migrating Cells. Molecular Biology of the Cell, 2008, 19, 4930-4941.	2.1	88
60	Optofluidic 1×4 switch. , 2008, , .		1
61	Localized RNAi and Ectopic Gene Expression in the Medicinal Leech. Journal of Visualized Experiments, 2008, , .	0.3	3
62	Pneumatically actuated adaptive lenses with millisecond response time. Applied Physics Letters, 2007, 91, .	3.3	28
63	Self-Organization in High-Density Bacterial Colonies: Efficient Crowd Control. PLoS Biology, 2007, 5, e302.	5.6	131
64	Bound attractant at the leading vs. the trailing edge determines chemotactic prowess. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 13349-13354.	7.1	95
65	Generation of complex concentration profiles in microchannels in a logarithmically small number of steps. Lab on A Chip, 2007, 7, 264-272.	6.0	86
66	Quantitative Measurements of the Strength of Adhesion of Human Neutrophils to a Substratum in a Microfluidic Device. Analytical Chemistry, 2007, 79, 2249-2258.	6.5	39
67	Perfusion in Microfluidic Cross-Flow:â€ Separation of White Blood Cells from Whole Blood and Exchange of Medium in a Continuous Flow. Analytical Chemistry, 2007, 79, 2023-2030.	6.5	117
68	MAPK-mediated bimodal gene expression and adaptive gradient sensing in yeast. Nature, 2007, 446, 46-51.	27.8	277
69	On-chip microfluidic tuning of an optical microring resonator. Applied Physics Letters, 2006, 88, 111107.	3.3	95
70	On-chip microfluidic tuning of an microring resonator. , 2006, , .		1
71	Separation of Plasma from Whole Human Blood in a Continuous Cross-Flow in a Molded Microfluidic Device. Analytical Chemistry, 2006, 78, 3765-3771.	6.5	198
72	High-Throughput and High-Resolution Flow Cytometry in Molded Microfluidic Devices. Analytical Chemistry, 2006, 78, 5653-5663.	6.5	174

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73	Microtargeted Gene Silencing and Ectopic Expression in Live Embryos Using Biolistic Delivery with a Pneumatic Capillary Gun. <i>Journal of Neuroscience</i> , 2006, 26, 6119-6123.	3.6	25
74	A microfluidic chemostat for experiments with bacterial and yeast cells. <i>Nature Methods</i> , 2005, 2, 685-689.	19.0	243
75	Chaotic Mixing in a Steady Flow in a Microchannel. <i>Physical Review Letters</i> , 2005, 94, 134501.	7.8	72
76	Two-dimensional hydrodynamic focusing in a simple microfluidic device. <i>Applied Physics Letters</i> , 2005, 87, 114104.	3.3	118
77	Femtosecond laser-drilled capillary integrated into a microfluidic device. <i>Applied Physics Letters</i> , 2005, 86, 201106.	3.3	115
78	Set of two orthogonal adaptive cylindrical lenses in a monolith elastomer device. <i>Optics Express</i> , 2005, 13, 9003.	3.4	43
79	A Microfluidic Rectifier: Anisotropic Flow Resistance at Low Reynolds Numbers. <i>Physical Review Letters</i> , 2004, 92, 094501.	7.8	168
80	A microfluidic 2Å–2 optical switch. <i>Applied Physics Letters</i> , 2004, 85, 6119-6121.	3.3	76
81	Chaotic flow and efficient mixing in a microchannel with a polymer solution. <i>Physical Review E</i> , 2004, 69, 066305.	2.1	135
82	Microfluidic Memory and Control Devices. <i>Science</i> , 2003, 300, 955-958.	12.6	340