

Alex Groisman

List of Publications by Citations

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

81
papers

4,738
citations

40
h-index

68
g-index

91
ext. papers

5,499
ext. citations

8.9
avg, IF

5.47
L-index

#	Paper	IF	Citations
81	Microfluidic memory and control devices. <i>Science</i> , 2003 , 300, 955-8	33.3	304
80	MAPK-mediated bimodal gene expression and adaptive gradient sensing in yeast. <i>Nature</i> , 2007 , 446, 46-51	50.4	236
79	A microfluidic chemostat for experiments with bacterial and yeast cells. <i>Nature Methods</i> , 2005 , 2, 685-9	21.6	220
78	Separation of plasma from whole human blood in a continuous cross-flow in a molded microfluidic device. <i>Analytical Chemistry</i> , 2006 , 78, 3765-71	7.8	175
77	A microfluidic rectifier: anisotropic flow resistance at low Reynolds numbers. <i>Physical Review Letters</i> , 2004 , 92, 094501	7.4	148
76	High-throughput and high-resolution flow cytometry in molded microfluidic devices. <i>Analytical Chemistry</i> , 2006 , 78, 5653-63	7.8	141
75	WingsVenable neutrophil rolling at high shear. <i>Nature</i> , 2012 , 488, 399-403	50.4	130
74	Chaotic flow and efficient mixing in a microchannel with a polymer solution. <i>Physical Review E</i> , 2004 , 69, 066305	2.4	124
73	Incoherent feedforward control governs adaptation of activated ras in a eukaryotic chemotaxis pathway. <i>Science Signaling</i> , 2012 , 5, ra2	8.8	117
72	Visualizing a one-way protein encounter complex by ultrafast single-molecule mixing. <i>Nature Methods</i> , 2011 , 8, 239-41	21.6	113
71	Microfluidic devices for studies of shear-dependent platelet adhesion. <i>Lab on A Chip</i> , 2008 , 8, 1486-95	7.2	113
70	Microfluidic experiments reveal that antifreeze proteins bound to ice crystals suffice to prevent their growth. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 1309-14	11.5	112
69	Protein kinase A governs a RhoA-RhoGDI protrusion-retraction pacemaker in migrating cells. <i>Nature Cell Biology</i> , 2011 , 13, 660-7	23.4	111
68	Self-organization in high-density bacterial colonies: efficient crowd control. <i>PLoS Biology</i> , 2007 , 5, e302	9.7	110
67	External and internal constraints on eukaryotic chemotaxis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 9656-9	11.5	107
66	Perfusion in microfluidic cross-flow: separation of white blood cells from whole blood and exchange of medium in a continuous flow. <i>Analytical Chemistry</i> , 2007 , 79, 2023-30	7.8	107
65	Two-dimensional hydrodynamic focusing in a simple microfluidic device. <i>Applied Physics Letters</i> , 2005 , 87, 114104	3.4	105

64	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, 1073-84	7.2	103
63	Femtosecond laser-drilled capillary integrated into a microfluidic device. <i>Applied Physics Letters</i> , 2005 , 86, 201106	3.4	91
62	Traction microscopy to identify force modulation in subresolution adhesions. <i>Nature Methods</i> , 2015 , 12, 653-6	21.6	90
61	Generation of oxygen gradients with arbitrary shapes in a microfluidic device. <i>Lab on A Chip</i> , 2010 , 10, 388-91	7.2	84
60	Cellular memory in eukaryotic chemotaxis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 14448-53	11.5	83
59	Bound attractant at the leading vs. the trailing edge determines chemotactic prowess. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 13349-54	11.5	83
58	Generation of complex concentration profiles in microchannels in a logarithmically small number of steps. <i>Lab on A Chip</i> , 2007 , 7, 264-72	7.2	81
57	Acute drug treatment in the early <i>C. elegans</i> embryo. <i>PLoS ONE</i> , 2011 , 6, e24656	3.7	80
56	Effect of flow and peristaltic mixing on bacterial growth in a gut-like channel. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 11414-11419	11.5	79
55	On-chip microfluidic tuning of an optical microring resonator. <i>Applied Physics Letters</i> , 2006 , 88, 111107	3.4	75
54	Vimentin fibers orient traction stress. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 5195-5200	11.5	73
53	An easy to assemble microfluidic perfusion device with a magnetic clamp. <i>Lab on A Chip</i> , 2009 , 9, 1085-95	7.2	70
52	Integrin-mediated protein kinase A activation at the leading edge of migrating cells. <i>Molecular Biology of the Cell</i> , 2008 , 19, 4930-41	3.5	68
51	Chaotic mixing in a steady flow in a microchannel. <i>Physical Review Letters</i> , 2005 , 94, 134501	7.4	67
50	Ultrafast microfluidic mixer with three-dimensional flow focusing for studies of biochemical kinetics. <i>Lab on A Chip</i> , 2010 , 10, 598-609	7.2	59
49	Neutrophil recruitment limited by high-affinity bent α integrin binding ligand in cis. <i>Nature Communications</i> , 2016 , 7, 12658	17.4	58
48	A microfluidic 2D optical switch. <i>Applied Physics Letters</i> , 2004 , 85, 6119-6121	3.4	58
47	Microfluidic device for single-molecule experiments with enhanced photostability. <i>Journal of the American Chemical Society</i> , 2009 , 131, 13610-2	16.4	55

46	Optofluidic 1x4 switch. <i>Optics Express</i> , 2008 , 16, 13499-508	3.3	55
45	The nucleus of endothelial cell as a sensor of blood flow direction. <i>Biology Open</i> , 2013 , 2, 1007-12	2.2	50
44	Measurements of elastic moduli of silicone gel substrates with a microfluidic device. <i>PLoS ONE</i> , 2011 , 6, e25534	3.7	46
43	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	3.7	45
42	Innate non-specific cell substratum adhesion. <i>PLoS ONE</i> , 2012 , 7, e42033	3.7	40
41	Bioluminescent response of individual dinoflagellate cells to hydrodynamic stress measured with millisecond resolution in a microfluidic device. <i>Journal of Experimental Biology</i> , 2008 , 211, 2865-75	3	37
40	Blood flow-induced Notch activation and endothelial migration enable vascular remodeling in zebrafish embryos. <i>Nature Communications</i> , 2018 , 9, 5314	17.4	37
39	Quantitative measurements of the strength of adhesion of human neutrophils to a substratum in a microfluidic device. <i>Analytical Chemistry</i> , 2007 , 79, 2249-58	7.8	36
38	Self-induced mechanical stress can trigger biofilm formation in uropathogenic <i>Escherichia coli</i> . <i>Nature Communications</i> , 2018 , 9, 4087	17.4	36
37	Functional hierarchy of redundant actin assembly factors revealed by fine-grained registration of intrinsic image fluctuations. <i>Cell Systems</i> , 2015 , 1, 37-50	10.6	35
36	Mechanism of bidirectional thermotaxis in. <i>ELife</i> , 2017 , 6,	8.9	34
35	Gradient sensing in defined chemotactic fields. <i>Integrative Biology (United Kingdom)</i> , 2010 , 2, 659-68	3.7	34
34	Studies of bacterial aerotaxis in a microfluidic device. <i>Lab on A Chip</i> , 2012 , 12, 4835-47	7.2	33
33	Set of two orthogonal adaptive cylindrical lenses in a monolith elastomer device. <i>Optics Express</i> , 2005 , 13, 9003-13	3.3	33
32	A microfluidic system for studying the behavior of zebrafish larvae under acute hypoxia. <i>Lab on A Chip</i> , 2015 , 15, 857-66	7.2	28
31	High-Affinity Bent Integrin Molecules in Arresting Neutrophils Face Each Other through Binding to ICAMs In cis. <i>Cell Reports</i> , 2019 , 26, 119-130.e5	10.6	28
30	High-resolution temperature-concentration diagram of alpha-synuclein conformation obtained from a single Förster resonance energy transfer image in a microfluidic device. <i>Analytical Chemistry</i> , 2009 , 81, 6929-35	7.8	27
29	Effector and Regulatory T Cells Roll at High Shear Stress by Inducible Tether and Sling Formation. <i>Cell Reports</i> , 2017 , 21, 3885-3899	10.6	26

28	Pneumatically actuated adaptive lenses with millisecond response time. <i>Applied Physics Letters</i> , 2007 , 91, 171111	3.4	21
27	Ultrafast cooling reveals microsecond-scale biomolecular dynamics. <i>Nature Communications</i> , 2014 , 5, 5737	17.4	19
26	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	5.6	19
25	Microtargeted gene silencing and ectopic expression in live embryos using biolistic delivery with a pneumatic capillary gun. <i>Journal of Neuroscience</i> , 2006 , 26, 6119-23	6.6	18
24	Microfluidics-based side view flow chamber reveals tether-to-sling transition in rolling neutrophils. <i>Scientific Reports</i> , 2016 , 6, 28870	4.9	18
23	Enhanced Dendritic Actin Network Formation in Extended Lamellipodia Drives Proliferation in Growth-Challenged Rac1 Melanoma Cells. <i>Developmental Cell</i> , 2019 , 49, 444-460.e9	10.2	17
22	Rigidity of silicone substrates controls cell spreading and stem cell differentiation. <i>Scientific Reports</i> , 2016 , 6, 33411	4.9	17
21	Cell motility dependence on adhesive wetting. <i>Soft Matter</i> , 2019 , 15, 2043-2050	3.6	16
20	Pre-complexation of talin and vinculin without tension is required for efficient nascent adhesion maturation. <i>ELife</i> , 2021 , 10,	8.9	13
19	CYK-4 functions independently of its centralspindlin partner ZEN-4 to cellularize oocytes in germline syncytia. <i>ELife</i> , 2018 , 7,	8.9	12
18	Combinatorial influences of paclitaxel and strain on axonal transport. <i>Experimental Neurology</i> , 2015 , 271, 358-67	5.7	11
17	Live cell imaging of paxillin in rolling neutrophils by dual-color quantitative dynamic footprinting. <i>Microcirculation</i> , 2011 , 18, 361-72	2.9	11
16	G12 and G13 Differentially Regulate Arrest from Flow and Chemotaxis in Mouse Neutrophils. <i>Journal of Immunology</i> , 2016 , 196, 3828-33	5.3	10
15	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, 4305-12	7.2	8
14	Indispensable functions of ABL and PDGF receptor kinases in epithelial adherence of attaching/effacing pathogens under physiological conditions. <i>American Journal of Physiology - Cell Physiology</i> , 2014 , 307, C180-9	5.4	7
13	Talin-vinculin precomplex drives adhesion maturation by accelerated force transmission and vinculin recruitment		7
12	Visualizing mechanical modulation of nanoscale organization of cell-matrix adhesions. <i>Integrative Biology (United Kingdom)</i> , 2016 , 8, 795-804	3.7	4
11	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	2	3

10	Localized RNAi and ectopic gene expression in the medicinal leech. <i>Journal of Visualized Experiments</i> , 2008 ,	1.6	3
9	Hyperactive Rac1 drives MAPK-independent proliferation in melanoma by assembly of a mechanosensitive dendritic actin network		3
8	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	6.6	2
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, e0236174	3.7	2
6	Linear conversion of pressure into concentration, rapid switching of concentration, and generation of linear ramps of concentration in a microfluidic device. <i>Biomicrofluidics</i> , 2012 , 6, 24109-2410916	3.2	1
5	On-chip microfluidic tuning of a microring resonator 2006 ,		1
4	Cellular memory in eukaryotic chemotaxis depends on the background chemoattractant concentration. <i>Physical Review E</i> , 2021 , 103, 012402	2.4	1
3	Coupling traction force patterns and actomyosin wave dynamics reveals mechanics of cell motion.. <i>Molecular Systems Biology</i> , 2021 , 17, e10505	12.2	0
2	Microfluidic device functionalized with P-selectin reveals discontinuous rolling of leukocytes in mouse whole blood. <i>FASEB Journal</i> , 2009 , 23, 949.4	0.9	
1	Aggregation Temperature of Escherichia coli Depends on Steepness of the Thermal Gradient. <i>Biophysical Journal</i> , 2020 , 118, 2816-2828	2.9	