

Alexander Bershadsky

List of Publications by Year in Descending Order

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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.

128 papers	16,521 citations	55 h-index	128 g-index
133 ext. papers	18,092 ext. citations	9.4 avg, IF	6.44 L-index

#	Paper	IF	Citations
128	Application of piconewton forces to individual filopodia reveals mechanosensory role of L-type Ca channels.. <i>Biomaterials</i> , 2022 , 284, 121477	15.6	1
127	Microtubules tune mechanosensitive cell responses. <i>Nature Materials</i> , 2021 ,	27	11
126	The formin inhibitor SMIFH2 inhibits members of the myosin superfamily. <i>Journal of Cell Science</i> , 2021 , 134,	5.3	15
125	Differential cellular responses to adhesive interactions with galectin-8- and fibronectin-coated substrates. <i>Journal of Cell Science</i> , 2021 , 134,	5.3	5
124	Crosstalk between myosin II and formin functions in the regulation of force generation and actomyosin dynamics in stress fibers. <i>Cells and Development</i> , 2021 , 203736		0
123	Mechanical regulation of formin-dependent actin polymerization. <i>Seminars in Cell and Developmental Biology</i> , 2020 , 102, 73-80	7.5	7
122	Registry Kinetics of Myosin Motor Stacks Driven by Mechanical Force-Induced Actin Turnover. <i>Biophysical Journal</i> , 2019 , 117, 856-866	2.9	4
121	Reciprocal regulation of actomyosin organization and contractility in nonmuscle cells by tropomyosins and alpha-actinins. <i>Molecular Biology of the Cell</i> , 2019 , 30, 2025-2036	3.5	12
120	A mechano-signalling network linking microtubules, myosin IIA filaments and integrin-based adhesions. <i>Nature Materials</i> , 2019 , 18, 638-649	27	70
119	Myosin IIA and formin dependent mechanosensitivity of filopodia adhesion. <i>Nature Communications</i> , 2019 , 10, 3593	17.4	34
118	Forces and constraints controlling podosome assembly and disassembly. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2019 , 374, 20180228	5.8	13
117	Actin cytoskeleton self-organization in single epithelial cells and fibroblasts under isotropic confinement. <i>Journal of Cell Science</i> , 2019 , 132,	5.3	30
116	Ordering of myosin II filaments driven by mechanical forces: experiments and theory. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2018 , 373,	5.8	35
115	Effects of Mechanical Stimuli on Profilin- and Formin-Mediated Actin Polymerization. <i>Nano Letters</i> , 2018 , 18, 5239-5247	11.5	27
114	Long-range self-organization of cytoskeletal myosin II filament stacks. <i>Nature Cell Biology</i> , 2017 , 19, 1332-1341	11.4	113
113	Podosome assembly is controlled by the GTPase ARF1 and its nucleotide exchange factor ARNO. <i>Journal of Cell Biology</i> , 2017 , 216, 181-197	7.3	32
112	Mammalian Diaphanous 1 Mediates a Pathway for E-cadherin to Stabilize Epithelial Barriers through Junctional Contractility. <i>Cell Reports</i> , 2017 , 18, 2854-2867	10.6	63

111	mDia1 senses both force and torque during F-actin filament polymerization. <i>Nature Communications</i> , 2017 , 8, 1650	17.4	53
110	Involvement of Rho GAP GRAF1 in maintenance of epithelial phenotype. <i>Cell Adhesion and Migration</i> , 2017 , 11, 367-383	3.2	6
109	Mechanosensing Controlled Directly by Tyrosine Kinases. <i>Nano Letters</i> , 2016 , 16, 5951-61	11.5	61
108	Actin Retrograde Flow in Permeabilized Cells: Myosin-II Driven Centripetal Movement of Transverse Arcs. <i>Bio-protocol</i> , 2016 , 6,	0.9	1
107	Formin DAAM1 Organizes Actin Filaments in the Cytoplasmic Nodal Actin Network. <i>PLoS ONE</i> , 2016 , 11, e0163915	3.7	13
106	Cellular chirality arising from the self-organization of the actin cytoskeleton. <i>Nature Cell Biology</i> , 2015 , 17, 445-57	23.4	239
105	Structured illumination microscopy reveals focal adhesions are composed of linear subunits. <i>Cytoskeleton</i> , 2015 , 72, 235-45	2.4	28
104	Mechanical stimulation induces formin-dependent assembly of a perinuclear actin rim. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, E2595-601	11.5	75
103	Novel localization of formin mDia2: importin β -mediated delivery to and retention at the cytoplasmic side of the nuclear envelope. <i>Biology Open</i> , 2015 , 4, 1569-75	2.2	15
102	YAP/TAZ as mechanosensors and mechanotransducers in regulating organ size and tumor growth. <i>FEBS Letters</i> , 2014 , 588, 2663-70	3.8	279
101	Integrin-matrix clusters form podosome-like adhesions in the absence of traction forces. <i>Cell Reports</i> , 2013 , 5, 1456-68	10.6	102
100	Analysis of the local organization and dynamics of cellular actin networks. <i>Journal of Cell Biology</i> , 2013 , 202, 1057-73	7.3	76
99	Physical model for self-organization of actin cytoskeleton and adhesion complexes at the cell front. <i>Biophysical Journal</i> , 2012 , 102, 1746-56	2.9	44
98	Fibroblast polarization is a matrix-rigidity-dependent process controlled by focal adhesion mechanosensing. <i>Nature Cell Biology</i> , 2011 , 13, 1457-65	23.4	385
97	Cortactin releases the brakes in actin- based motility by enhancing WASP-VCA detachment from Arp2/3 branches. <i>Current Biology</i> , 2011 , 21, 2092-7	6.3	35
96	Crawling cell locomotion revisited. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 20275-6	11.5	14
95	Involvement of the Rho-mDia1 pathway in the regulation of Golgi complex architecture and dynamics. <i>Molecular Biology of the Cell</i> , 2011 , 22, 2900-11	3.5	64
94	Actomyosin-generated tension controls the molecular kinetics of focal adhesions. <i>Journal of Cell Science</i> , 2011 , 124, 1425-32	5.3	147

93	Mechanobiology. <i>Journal of the Royal Society Interface</i> , 2010 , 7 Suppl 3, S291-3	4.1	22
92	Kinectin-mediated endoplasmic reticulum dynamics supports focal adhesion growth in the cellular lamella. <i>Journal of Cell Science</i> , 2010 , 123, 3901-12	5.3	30
91	Regulation of microtubule dynamics by inhibition of the tubulin deacetylase HDAC6. <i>Journal of Cell Science</i> , 2009 , 122, 3531-41	5.3	175
90	The heel and toe of the cell's foot: a multifaceted approach for understanding the structure and dynamics of focal adhesions. <i>Cytoskeleton</i> , 2009 , 66, 1017-29		98
89	Environmental sensing through focal adhesions. <i>Nature Reviews Molecular Cell Biology</i> , 2009 , 10, 21-33	48.7	1868
88	Role of focal adhesions and mechanical stresses in the formation and progression of the lamellipodium-lamellum interface [corrected]. <i>Biophysical Journal</i> , 2009 , 97, 1254-64	2.9	63
87	Cellular contractility requires ubiquitin mediated proteolysis. <i>PLoS ONE</i> , 2009 , 4, e6155	3.7	11
86	Temporal evolution of cell focal adhesions: experimental observations and shear stress profiles. <i>Soft Matter</i> , 2008 , 4, 2410	3.6	16
85	Signaling function of alpha-catenin in microtubule regulation. <i>Cell Cycle</i> , 2008 , 7, 2377-83	4.7	22
84	Comparative dynamics of retrograde actin flow and focal adhesions: formation of nascent adhesions triggers transition from fast to slow flow. <i>PLoS ONE</i> , 2008 , 3, e3234	3.7	182
83	Allicin inhibits cell polarization, migration and division via its direct effect on microtubules. <i>Cytoskeleton</i> , 2007 , 64, 321-37		43
82	Mammalian diaphanous-related formin Dia1 controls the organization of E-cadherin-mediated cell-cell junctions. <i>Journal of Cell Science</i> , 2007 , 120, 3870-82	5.3	140
81	p120 catenin regulates lamellipodial dynamics and cell adhesion in cooperation with cortactin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 10882-7	11.5	74
80	Adhesion-mediated mechanosensitivity: a time to experiment, and a time to theorize. <i>Current Opinion in Cell Biology</i> , 2006 , 18, 472-81	9	314
79	Assembly and mechanosensory function of focal adhesions: experiments and models. <i>European Journal of Cell Biology</i> , 2006 , 85, 165-73	6.1	181
78	It depends on the hinge: a structure-functional analysis of galectin-8, a tandem-repeat type lectin. <i>Glycobiology</i> , 2006 , 16, 463-76	5.8	46
77	Molecular mapping of tyrosine-phosphorylated proteins in focal adhesions using fluorescence resonance energy transfer. <i>Journal of Cell Science</i> , 2006 , 119, 866-75	5.3	82
76	Caldesmon transgene expression disrupts focal adhesions in HTM cells and increases outflow facility in organ-cultured human and monkey anterior segments. <i>Experimental Eye Research</i> , 2006 , 82, 935-44	3.7	51

75	Caldesmon effects on the actin cytoskeleton and cell adhesion in cultured HTM cells. <i>Experimental Eye Research</i> , 2006 , 82, 945-58	3.7	46
74	Signaling from adherens-type junctions. <i>European Journal of Cell Biology</i> , 2005 , 84, 235-44	6.1	39
73	A novel mechanism of actin filament processive capping by formin: solution of the rotation paradox. <i>Journal of Cell Biology</i> , 2005 , 170, 889-93	7.3	42
72	Force-driven polymerization in cells: actin filaments and focal adhesions. <i>Journal of Physics Condensed Matter</i> , 2005 , 17, S3913-28	1.8	7
71	Focal adhesions as mechanosensors: a physical mechanism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 12383-8	11.5	223
70	Processive capping by formin suggests a force-driven mechanism of actin polymerization. <i>Journal of Cell Biology</i> , 2004 , 167, 1011-7	7.3	95
69	Lamellipodium extension and cadherin adhesion: two cell responses to cadherin activation relying on distinct signalling pathways. <i>Journal of Cell Science</i> , 2004 , 117, 257-70	5.3	121
68	Magic touch: how does cell-cell adhesion trigger actin assembly?. <i>Trends in Cell Biology</i> , 2004 , 14, 589-93	18.3	87
67	Sustained induction of ERK, protein kinase B, and p70 S6 kinase regulates cell spreading and formation of F-actin microspikes upon ligation of integrins by galectin-8, a mammalian lectin. <i>Journal of Biological Chemistry</i> , 2003 , 278, 14533-42	5.4	60
66	Live-cell monitoring of tyrosine phosphorylation in focal adhesions following microtubule disruption. <i>Journal of Cell Science</i> , 2003 , 116, 975-86	5.3	92
65	Adhesion-dependent cell mechanosensitivity. <i>Annual Review of Cell and Developmental Biology</i> , 2003 , 19, 677-95	12.6	697
64	How do microtubules guide migrating cells?. <i>Nature Reviews Molecular Cell Biology</i> , 2002 , 3, 957-64	48.7	172
63	Exploring the neighborhood: adhesion-coupled cell mechanosensors. <i>Cell</i> , 2002 , 110, 139-42	56.2	349
62	Force and focal adhesion assembly: a close relationship studied using elastic micropatterned substrates. <i>Nature Cell Biology</i> , 2001 , 3, 466-72	23.4	1695
61	Transmembrane crosstalk between the extracellular matrix--cytoskeleton crosstalk. <i>Nature Reviews Molecular Cell Biology</i> , 2001 , 2, 793-805	48.7	1812
60	Assembly and mechanosensory function of focal contacts. <i>Current Opinion in Cell Biology</i> , 2001 , 13, 584-92	9.2	475
59	Focal contacts as mechanosensors: externally applied local mechanical force induces growth of focal contacts by an mDia1-dependent and ROCK-independent mechanism. <i>Journal of Cell Biology</i> , 2001 , 153, 1175-86	7.3	1197
58	A new dimension in retrograde flow: centripetal movement of engulfed particles. <i>Biophysical Journal</i> , 2001 , 81, 1990-2000	2.9	27

57	p120 catenin affects cell motility via modulation of activity of Rho-family GTPases: a link between cell-cell contact formation and regulation of cell locomotion. <i>Journal of Cell Science</i> , 2001 , 114, 695-707	5.3	190
56	Disruption of microtubules in living cells by tyrphostin AG-1714. <i>Cytoskeleton</i> , 2000 , 45, 223-34		6
55	Molecular requirements for the effect of neuregulin on cell spreading, motility and colony organization. <i>Oncogene</i> , 2000 , 19, 878-88	9.2	32
54	Dynamics and segregation of cell-matrix adhesions in cultured fibroblasts. <i>Nature Cell Biology</i> , 2000 , 2, 191-6	23.4	599
53	Cadherin-mediated regulation of microtubule dynamics. <i>Nature Cell Biology</i> , 2000 , 2, 797-804	23.4	118
52	Physical state of the extracellular matrix regulates the structure and molecular composition of cell-matrix adhesions. <i>Molecular Biology of the Cell</i> , 2000 , 11, 1047-60	3.5	357
51	Autoregulation of actin synthesis requires the 3'UTR of actin mRNA and protects cells from actin overproduction. <i>Journal of Cellular Biochemistry</i> , 1999 , 76, 1-12	4.7	22
50	Caldesmon inhibits nonmuscle cell contractility and interferes with the formation of focal adhesions. <i>Molecular Biology of the Cell</i> , 1999 , 10, 3097-112	3.5	168
49	Latrunculin-A increases outflow facility in the monkey. <i>Investigative Ophthalmology and Visual Science</i> , 1999 , 40, 931-41		63
48	Microtubule involvement in regulating cell contractility and adhesion-dependent signalling: a possible mechanism for polarization of cell motility. <i>Biochemical Society Symposia</i> , 1999 , 65, 147-72		30
47	Morphogenetic effects of neuregulin (neu differentiation factor) in cultured epithelial cells. <i>Molecular Biology of the Cell</i> , 1998 , 9, 3195-209	3.5	31
46	The role of sphingolipids in the maintenance of fibroblast morphology. The inhibition of protrusional activity, cell spreading, and cytokinesis induced by fumonisin B1 can be reversed by ganglioside GM3. <i>Journal of Biological Chemistry</i> , 1997 , 272, 1558-64	5.4	36
45	The Role of the Cytoskeleton in Adhesion-Mediated Signaling and Gene Expression. <i>Advances in Molecular and Cell Biology</i> , 1997 , 24, 125-163		11
44	Autoregulation of actin synthesis responds to monomeric actin levels. <i>Journal of Cellular Biochemistry</i> , 1997 , 65, 469-478	4.7	37
43	Involvement of microtubules in the control of adhesion-dependent signal transduction. <i>Current Biology</i> , 1996 , 6, 1279-89	6.3	312
42	Molecular interactions in the submembrane plaque of cell-cell and cell-matrix adhesions. <i>Cells Tissues Organs</i> , 1995 , 154, 46-62	2.1	101
41	Swinholide A is a microfilament disrupting marine toxin that stabilizes actin dimers and severs actin filaments. <i>Journal of Biological Chemistry</i> , 1995 , 270, 3463-6	5.4	152
40	The state of actin assembly regulates actin and vinculin expression by a feedback loop. <i>Journal of Cell Science</i> , 1995 , 108 (Pt 3), 1183-93	5.3	20

39	Effect of protein kinase inhibitor H-7 on the contractility, integrity, and membrane anchorage of the microfilament system. <i>Cytoskeleton</i> , 1994 , 29, 321-38		95
38	Disruption of the Golgi apparatus by brefeldin A blocks cell polarization and inhibits directed cell migration. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1994 , 91, 5686-9	11.5	100
37	Microtubule-dependent control of cell shape and pseudopodial activity is inhibited by the antibody to kinesin motor domain. <i>Journal of Cell Biology</i> , 1993 , 123, 1811-20	7.3	146
36	Motility of intracellular particles in rat fibroblasts is greatly enhanced by phorbol ester and by over-expression of normal p21N-ras. <i>Cytoskeleton</i> , 1993 , 25, 254-66		12
35	Mechanisms of regulation of pseudopodial activity by the microtubule system. <i>Symposia of the Society for Experimental Biology</i> , 1993 , 47, 353-73		7
34	Post-translational modification of microtubules is a component of synergic alterations of cytoskeleton leading to formation of cytoplasmic processes in fibroblasts. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1991 , 88, 6318-22	11.5	13
33	Pseudopodial activity at the active edge of migrating fibroblast is decreased after drug-induced microtubule depolymerization. <i>Cytoskeleton</i> , 1991 , 19, 152-8		84
32	Microtubule dynamics: mechanism, regulation, and function. <i>Annual Review of Cell Biology</i> , 1991 , 7, 93-116		191
31	Spreading of mouse fibroblasts on the substrate with multiple spikes. <i>Experimental Cell Research</i> , 1991 , 197, 107-12	4.2	25
30	Evidence that intermediate filament reorganization is induced by ATP-dependent contraction of the actomyosin cortex in permeabilized fibroblasts. <i>Journal of Cell Science</i> , 1991 , 98 (Pt 3), 375-84	5.3	15
29	Cytoskeletal reorganizations responsible for the phorbol ester-induced formation of cytoplasmic processes: possible involvement of intermediate filaments. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1990 , 87, 1884-8	11.5	46
28	Stimulation of actin synthesis in phalloidin-treated cells. Evidence for autoregulatory control. <i>FEBS Letters</i> , 1990 , 277, 11-4	3.8	24
27	Intermediate filament collapse is an ATP-dependent and actin-dependent process. <i>Journal of Cell Science</i> , 1989 , 92 (Pt 4), 621-31	5.3	28
26	Reorganization of Cytoskeleton 1988 , 217-250		
25	Cytoskeleton and Internal Organization of the Cell 1988 , 167-201		1
24	Microtubule-dependent effect of phorbol ester on the contractility of cytoskeleton of cultured fibroblasts. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1988 , 85, 9538-41	11.5	19
23	Systems of Actin Filaments 1988 , 13-78		1
22	Neoplastic Transformations 1988 , 267-283		

21 Systems of Microtubules **1988**, 79-131

20 Cytoskeleton **1988**, 116

19 Association of intermediate filaments with vinculin-containing adhesion plaques of fibroblasts. *Cytoskeleton*, **1987**, 8, 274-83 60

18 Actin cytoskeleton of spread fibroblasts appears to assemble at the cell edges. *Journal of Cell Science*, **1986**, 82, 235-48 5.3 61

17 Focal contacts of normal and RSV-transformed quail cells. Hypothesis of the transformation-induced deficient maturation of focal contacts. *Experimental Cell Research*, **1985**, 158, 433-44 4.2 75

16 Multinucleation-induced improvement of the spreading of transformed cells on the substratum. *Proceedings of the National Academy of Sciences of the United States of America*, **1984**, 81, 3098-102 11.5 17

15 Cytoskeleton of mouse embryo fibroblasts. Electron microscopy of platinum replicas. *European Journal of Cell Biology*, **1984**, 34, 64-74 6.1 49

14 Visualization of cellular focal contacts using a monoclonal antibody to 80 kD serum protein adsorbed on the substratum. *Experimental Cell Research*, **1983**, 149, 387-96 4.2 36

13 ATP-dependent regulation of cytoplasmic microtubule disassembly. *Proceedings of the National Academy of Sciences of the United States of America*, **1981**, 78, 3610-3 11.5 88

12 Destruction of microfilament bundles in mouse embryo fibroblasts treated with inhibitors of energy metabolism. *Experimental Cell Research*, **1980**, 127, 421-9 4.2 92

11 Microtubules in mouse embryo fibroblasts extracted with Triton X-100. *Cell Biology International Reports*, **1978**, 2, 425-32 47

10 Serum dependence of expression of the transformed phenotype: experiments with subline of mouse L fibroblasts adapted to growth in serum-free medium. *International Journal of Cancer*, **1976**, 18, 83-92 7.5 11

9 Interactions of normal and neoplastic cells with various surfaces. *Neoplasma*, **1973**, 20, 583-5 3.3 2

8 Interplay between the Actin Cytoskeleton, Focal Adhesions and Microtubules 75-99 4

7 Mechanosensitive calcium signaling in filopodia 1

6 Transmembrane crosstalk between the extracellular matrix and the cytoskeleton 1

5 Force dependence of filopodia adhesion: involvement of myosin II and formins 1

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Actin cytoskeleton self-organization in single epithelial cells and fibroblasts under isotropic confinement

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The cytoskeleton as a smart composite material: A unified pathway linking microtubules, myosin-II filaments and integrin adhesions

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Molecular Basis for Cell Adhesion and Adhesion-Mediated Signaling121-138