Julie A Theriot

List of Publications by Year
in descending order

141 papers	13,609 citations	18436 62 h-index	24179 110 g-index
165 all docs	165 docs citations	165 times ranked	11918 citing authors

#	Article	IF	Citations
1	Actin microfilament dynamics in locomoting cells. Nature, 1991, 352, 126-131.	13.7	774
2	Mechanism of shape determination in motile cells. Nature, 2008, 453, 475-480.	13.7	658
3	Differentiation and developmental pathways of uropathogenic Escherichia coli in urinary tract pathogenesis. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 1333-1338.	3.3	551
4	Bacterial Chromosomal Loci Move Subdiffusively through a Viscoelastic Cytoplasm. Physical Review Letters, 2010, 104, 238102.	2.9	527
5	The rate of actin-based motility of intracellular Listeria monocytogenes equals the rate of actin polymerization. Nature, 1992, 357, 257-260.	13.7	526
6	The outer membrane is an essential load-bearing element in Gram-negative bacteria. Nature, 2018, 559, 617-621.	13.7	388
7	Myosin II contributes to cell-scale actin network treadmilling through network disassembly. Nature, 2010, 465, 373-377.	13.7	343
8	Direct measurement of force generation by actin filament polymerization using an optical trap. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 2181-2186.	3.3	323
9	Involvement of profilin in the actin-based motility of L. monocytogenes in cells and in cell-free extracts. Cell, 1994, 76, 505-517.	13.5	285
10	Nonthermal ATP-dependent fluctuations contribute to the in vivo motion of chromosomal loci. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 7338-7343.	3.3	282
11	An Adhesion-Dependent Switch between Mechanisms That Determine Motile Cell Shape. PLoS Biology, 2011, 9, e1001059.	2.6	270
12	Actinâ€“myosin network reorganization breaks symmetry at the cell rear to spontaneously initiate polarized cell motility. Journal of Cell Biology, 2007, 178, 1207-1221.	2.3	248
13	Comparison of quantitative methods for cellâ€shape analysis. Journal of Microscopy, 2007, 227, 140-156.	0.8	243
14	Principles of locomotion for simple-shaped cells. Nature, 1993, 362, 167-171.	13.7	229
15	Membrane Tension in Rapidly Moving Cells Is Determined by Cytoskeletal Forces. Current Biology, 2013, 23, 1409-1417.	1.8	221
16	Relative Rates of Surface and Volume Synthesis Set Bacterial Cell Size. Cell, 2016, 165, 1479-1492.	13.5	216
17	Loading history determines the velocity of actin-network growth. Nature Cell Biology, 2005, 7, 1219-1223.	4.6	202
18	Crawling Toward a Unified Model of Cell Motility: Spatial and Temporal Regulation of Actin Dynamics. Annual Review of Biochemistry, 2004, 73, 209-239.	5.0	187

#	Article	IF	Citations
19	The three faces of profilin. Cell, 1993, 75, 835-838.	13.5	183
20	Compression forces generated by actin comet tails on lipid vesicles. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 6493-6498.	3.3	177
21	Emergence of Large-Scale Cell Morphology and Movement from Local Actin Filament Growth Dynamics. PLoS Biology, 2007, 5, e233.	2.6	173
22	Dendritic organization of actin comet tails. Current Biology, 2001, 11, 130-135.	1.8	172
23	Listeria monocytogenes Invades the Epithelial Junctions at Sites of Cell Extrusion. PLoS Pathogens, 2006, 2, e3.	2.1	172
24	Response of <i>Escherichia coli</i> growth rate to osmotic shock. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 7807-7812.	3.3	170
25	Non-model model organisms. BMC Biology, 2017, 15, 55.	1.7	164
26	Secrets of actin-based motility revealed by a bacterial pathogen. Nature Reviews Molecular Cell Biology, 2000, 1, 110-119.	16.1	162
27	Accelerating on a Treadmill: ADF/Cofilin Promotes Rapid Actin Filament Turnover in the Dynamic Cytoskeleton. Journal of Cell Biology, 1997, 136, 1165-1168.	2.3	160
28	Intracellular fluid flow in rapidly moving cells. Nature Cell Biology, 2009, 11, 1219-1224.	4.6	156
29	Listeria monocytogenes Exploits Normal Host Cell Processes to Spread from Cell to Cellâœª. Journal of Cell Biology, 1999, 146, 1333-1350.	2.3	153
30	Electrophoresis of Cellular Membrane Components Creates the Directional Cue Guiding Keratocyte Galvanotaxis. Current Biology, 2013, 23, 560-568.	1.8	143
31	Identification of phagocytosis regulators using magnetic genome-wide CRISPR screens. Nature Genetics, 2018, 50, 1716-1727.	9.4	135
32	The Polymerization Motor. Traffic, 2000, 1, 19-28.	1.3	134
33	Asymmetric distribution of the Listeria monocytogenes ActA protein is required and sufficient to direct actin-based motility. Molecular Microbiology, 1995, 17, 945-951.	1.2	130
34	Cooperative symmetry-breaking by actin polymerization in a model for cell motility. Nature Cell Biology, 1999, 1, 493-499.	4.6	124
35	The Cell Biology of Infection by Intracellular Bacterial Pathogens. Annual Review of Cell and Developmental Biology, 1995, 11, 213-239.	4.0	123
36	Two independent spiral structures control cell shape in Caulobacter. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 18608-18613.	3.3	122

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37	Listeria monocytogenes Traffics from Maternal Organs to the Placenta and Back. PLoS Pathogens, 2006, 2, e66.	2.1	120
38	Actin-dependent motile forces and cell motility. Current Opinion in Cell Biology, 1994, 6, 82-86.	2.6	118
39	Subdiffusive motion of a polymer composed of subdiffusive monomers. Physical Review E, 2010, 82, 011913.	0.8	116
40	Surface Area to Volume Ratio: A Natural Variable for Bacterial Morphogenesis. Trends in Microbiology, 2018, 26, 815-832.	3.5	106
41	Analytical Tools To Distinguish the Effects of Localization Error, Confinement, and Medium Elasticity on the Velocity Autocorrelation Function. Biophysical Journal, 2012, 102, 2443-2450.	0.2	102
42	Rickettsia Sca4 Reduces Vinculin-Mediated Intercellular Tension to Promote Spread. Cell, 2016, 167, 670-683.e10.	13.5	101
43	Microparticle traction force microscopy reveals subcellular force exertion patterns in immune cellâ€"target interactions. Nature Communications, 2020, 11, 20.	5.8	101
44	Mechanical crack propagation drives millisecond daughter cell separation in <i>Staphylococcus aureus</i>. Science, 2015, 348, 574-578.	6.0	98
45	Balance between cellâ^'substrate adhesion and myosin contraction determines the frequency of motility initiation in fish keratocytes. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5045-5050.	3.3	96
46	Actin-based motility is sufficient for bacterial membrane protrusion formation and host cell uptake. Cellular Microbiology, 2001, 3, 633-647.	1.1	95
47	Bipedal Locomotion in Crawling Cells. Biophysical Journal, 2010, 98, 933-942.	0.2	94
48	The making of a gradient: IcsA (VirG) polarity in Shigella flexneri. Molecular Microbiology, 2002, 41, 861-872.	1.2	93
49	Perspective: Discovery of antivirals against smallpox. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 11178-11192.	3.3	93
50	Visualization of mycobacterial membrane dynamics in live cells. Journal of the American Chemical Society, 2017, 139, 3488-3495.	6.6	93
51	Actin cables and comet tails organize mitochondrial networks in mitosis. Nature, 2021, 591, 659-664.	13.7	92
52	Variation in Taxonomic Composition of the Fecal Microbiota in an Inbred Mouse Strain across Individuals and Time. PLoS ONE, 2015, 10, e0142825.	1.1	84
53	Complex spatial distribution and dynamics of an abundant Escherichia coli outer membrane protein, LamB. Molecular Microbiology, 2004, 53, 1771-1783.	1.2	82
54	High Affinity, Paralog-Specific Recognition of the Mena EVH1 Domain by a Miniature Protein. Journal of the American Chemical Society, 2004, 126, 4-5.	6.6	82

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55	Worm Sperm and Advances in Cell Locomotion. Cell, 1996, 84, 1-4.	13.5	81
56	A kinematic description of the trajectories of Listeria monocytogenes propelled by actin comet tails. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 8229-8234.	3.3	74
57	Changes in Oscillatory Dynamics in the Cell Cycle of Early Xenopus laevis Embryos. PLoS Biology, 2014, 12, e1001788.	2.6	74
58	Adhesion-Dependent Wave Generation in Crawling Cells. Current Biology, 2017, 27, 27-38.	1.8	73
59	The nucleation-release model of actin filament dynamics in cell motility. Trends in Cell Biology, 1992, 2, 219-222.	3.6	72
60	Mechanism of polarization of Listeria monocytogenes surface protein ActA. Molecular Microbiology, 2006, 59, 1262-1279.	1.2	72
61	Fine-scale time-lapse analysis of the biphasic, dynamic behaviour of the two Vibrio cholerae chromosomes. Molecular Microbiology, 2006, 60, 1164-1178.	1.2	70
62	An introduction to cell motility for the physical scientist. Physical Biology, 2004, 1, T1-T10.	0.8	68
63	A correlation-based approach to calculate rotation and translation of moving cells. IEEE Transactions on Image Processing, 2006, 15, 1939-1951.	6.0	67
64	Ena/VASP proteins contribute to Listeria monocytogenes pathogenesis by controlling temporal and spatial persistence of bacterial actin-based motility. Molecular Microbiology, 2003, 49, 1361-1375.	1.2	66
65	Reduced amino acid alphabets exhibit an improved sensitivity and selectivity in fold assignment. Bioinformatics, 2009, 25, 1356-1362.	1.8	59
66	Efficient Front-Rear Coupling in Neutrophil Chemotaxis by Dynamic Myosin II Localization. Developmental Cell, 2019, 49, 189-205.e6.	3.1	59
67	Mutations in the nucleotide binding pocket of MreB can alter cell curvature and polar morphology in <i>Caulobacter</i>. Molecular Microbiology, 2011, 81, 368-394.	1.2	57
68	Analysis of Surface Protein Expression Reveals the Growth Pattern of the Gram-Negative Outer Membrane. PLoS Computational Biology, 2012, 8, e1002680.	1.5	54
69	Endothelial Cells Use a Formin-Dependent Phagocytosis-Like Process to Internalize the Bacterium Listeria monocytogenes. PLoS Pathogens, 2016, 12, e1005603.	2.1	54
70	Comparative analysis of gene expression among low G+C gram-positive genomes. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 6182-6187.	3.3	50
71	Influences of thermal acclimation and acute temperature change on the motility of epithelial wound-healing cells (keratocytes) of tropical,temperate and Antarctic fish. Journal of Experimental Biology, 2003, 206, 4539-4551.	0.8	49
72	Repeated Cycles of Rapid Actin Assembly and Disassembly on Epithelial Cell Phagosomes. Molecular Biology of the Cell, 2004, 15, 5647-5658.	0.9	48

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73	Biophysical Parameters Influence Actin-based Movement, Trajectory, and Initiation in a Cell-free System. Molecular Biology of the Cell, 2004, 15, 2312-2323.	0.9	47
74	Homeostatic Cell Growth Is Accomplished Mechanically through Membrane Tension Inhibition of Cell-Wall Synthesis. Cell Systems, 2017, 5, 578-590.e6.	2.9	47
75	Regulation of the actin cytoskeleton in living cells. Seminars in Cell Biology, 1994, 5, 193-199.	3.5	45
76	Thermodynamics of Biological Processes. Methods in Enzymology, 2011, 492, 27-59.	0.4	45
77	Fundamental limits on the rate of bacterial growth and their influence on proteomic composition. Cell Systems, 2021, 12, 924-944.e2.	2.9	45
78	Sequential assembly of the septal cell envelope prior to V snapping in Corynebacterium glutamicum. Nature Chemical Biology, 2019, 15, 221-231.	3.9	44
79	Subendothelial stiffness alters endothelial cell traction force generation while exerting a minimal effect on the transcriptome. Scientific Reports, 2019, 9, 18209.	1.6	44
80	A gene-expression program reflecting the innate immune response of cultured intestinal epithelial cells to infection by Listeria monocytogenes. Genome Biology, 2002, 4, R2.	13.9	43
81	A <scp><i>C</i></scp><i>aulobacter</i>â€…<scp>MreB</scp> mutant with irregular cell shape exhibits compensatory widening to maintain a preferred surface area to volume ratio. Molecular Microbiology, 2014, 94, 988-1005.	1.2	42
82	A mechanical perspective on phagocytic cup formation. Current Opinion in Cell Biology, 2020, 66, 112-122.	2.6	42
83	Myosin light chain kinase regulates cell polarization independently of membrane tension or Rho kinase. Journal of Cell Biology, 2015, 209, 275-288.	2.3	40
84	Listeria monocytogenes cell-to-cell spread in epithelia is heterogeneous and dominated by rare pioneer bacteria. ELife, 2019, 8, .	2.8	40
85	Surface-Layer (S-Layer) Proteins Sap and EA1 Govern the Binding of the S-Layer-Associated Protein BslO at the Cell Septa of Bacillus anthracis. Journal of Bacteriology, 2012, 194, 3833-3840.	1.0	39
86	Acute Modulation of Mycobacterial Cell Envelope Biogenesis by Frontâ€Line Tuberculosis Drugs. Angewandte Chemie - International Edition, 2018, 57, 5267-5272.	7.2	37
87	Listeria monocytogenes InlP interacts with afadin and facilitates basement membrane crossing. PLoS Pathogens, 2018, 14, e1007094.	2.1	35
88	Phagocytic â€˜teethâ€™ and myosin-II â€˜jawâ€™ power target constriction during phagocytosis. ELife, 2021, 10,	2.8	35
89	Systematic mutational analysis of the amino-terminal domain of the Listeria monocytogenes ActA protein reveals novel functions in actin-based motility. Molecular Microbiology, 2002, 42, 1163-1177.	1.2	33
90	Large-Scale Quantitative Analysis of Sources of Variation in the Actin Polymerization-Based Movement of Listeria monocytogenes. Biophysical Journal, 2005, 89, 703-723.	0.2	33

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91	Cell states beyond transcriptomics: Integrating structural organization and gene expression in hiPSC-derived cardiomyocytes. Cell Systems, 2021, 12, 670-687.e10.	2.9	33
92	Listeria monocytogenesActin-based Motility Varies Depending on Subcellular Location: A Kinematic Probe for Cytoarchitecture. Molecular Biology of the Cell, 2004, 15, 2164-2175.	0.9	32
93	Bacterial Shape and ActA Distribution Affect Initiation of Listeria monocytogenes Actin-Based Motility. Biophysical Journal, 2005, 89, 2146-2158.	0.2	32
94	Adhesion to the host cell surface is sufficient to mediate<i>Listeria monocytogenes</i>entry into epithelial cells. Molecular Biology of the Cell, 2017, 28, 2945-2957.	0.9	32
95	Matrix stiffness modulates infection of endothelial cells by<i>Listeria monocytogenes</i>via expression of cell surface vimentin. Molecular Biology of the Cell, 2018, 29, 1571-1589.	0.9	31
96	Adhesion controls bacterial actin polymerization-based movement. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 16233-16238.	3.3	28
97	Close Packing of Listeria monocytogenes ActA, a Natively Unfolded Protein, Enhances F-actin Assembly without Dimerization. Journal of Biological Chemistry, 2008, 283, 23852-23862.	1.6	28
98	Mechanical competition triggered by innate immune signaling drives the collective extrusion of bacterially infected epithelial cells. Developmental Cell, 2021, 56, 443-460.e11.	3.1	27
99	Osmolarity-independent electrical cues guide rapid response to injury in zebrafish epidermis. ELife, 2020, 9, .	2.8	27
100	Directional reorientation of migrating neutrophils is limited by suppression of receptor input signaling at the cell rear through myosin II activity. Nature Communications, 2021, 12, 6619.	5.8	27
101	Fast Mechanically Driven Daughter Cell Separation Is Widespread in <i>Actinobacteria</i>. MBio, 2016, 7, .	1.8	24
102	Listeria monocytogenes rotates around its long axis during actin-based motility. Current Biology, 2003, 13, R754-R756.	1.8	22
103	Imaging techniques in microbiology. Current Opinion in Microbiology, 1998, 1, 346-351.	2.3	20
104	Choosing orientation: influence of cargo geometry and ActA polarization on actin comet tails. Molecular Biology of the Cell, 2012, 23, 614-629.	0.9	20
105	Cell Mechanics at the Rear Act to Steer the Direction of Cell Migration. Cell Systems, 2020, 11, 286-299.e4.	2.9	20
106	[11] Listeria monocytogenes-based assays for actin assembly factors. Methods in Enzymology, 1998, 298, 114-122.	0.4	19
107	Cytoplasmic Flow and Mixing Due to Deformation of Motile Cells. Biophysical Journal, 2017, 113, 2077-2087.	0.2	18
108	A deep generative model of 3D single-cell organization. PLoS Computational Biology, 2022, 18, e1009155.	1.5	18

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109	Effects of Intermediate Filaments on Actin-Based Motility of Listeria monocytogenes. Biophysical Journal, 2001, 81, 3193-3203.	0.2	17
110	Differential force microscope for long time-scale biophysical measurements. Review of Scientific Instruments, 2007, 78, 043711.	0.6	17
111	Neutrophilâ€like HLâ€60 cells expressing only GFPâ€tagged Î²â€actin exhibit nearly normal motility. Cytoskeleton, 2020, 77, 181-196.	1.0	16
112	Leading edge maintenance in migrating cells is an emergent property of branched actin network growth. ELife, 2022, 11, .	2.8	15
113	Disentangling Random Motion and Flow in a Complex Medium. Biophysical Journal, 2016, 110, 700-709.	0.2	14
114	Actin Filament Dynamics in Cell Motility. Advances in Experimental Medicine and Biology, 1994, 358, 133-145.	0.8	14
115	Entropy-driven translocation of disordered proteins through the Gram-positive bacterial cell wall. Nature Microbiology, 2021, 6, 1055-1065.	5.9	13
116	New wrinkles in cytokinesis. Nature, 1997, 385, 388-389.	13.7	10
117	Functional Analysis of a Rickettsial OmpA Homology Domain of <i>Shigella flexneri</i> IcsA. Journal of Bacteriology, 1999, 181, 869-878.	1.0	10
118	Mu Gets in the Loop. Molecular Cell, 2010, 39, 1-3.	4.5	9
119	Elastic wrinkling of keratocyte lamellipodia driven by myosin-induced contractile stress. Biophysical Journal, 2021, 120, 1578-1591.	0.2	9
120	Biophysical Aspects of Actin-Based Cell Motility in Fish Epithelial Keratocytes. Biological and Medical Physics Series, 2008, , 31-58.	0.3	9
121	A Multi-well Format Polyacrylamide-based Assay for Studying the Effect of Extracellular Matrix Stiffness on the Bacterial Infection of Adherent Cells. Journal of Visualized Experiments, 2018, , .	0.2	8
122	Mechanical Forces Govern Interactions of Host Cells with Intracellular Bacterial Pathogens. Microbiology and Molecular Biology Reviews, 2022, 86, e0009420.	2.9	8
123	Bacterial pathogens caught in the actin. Current Biology, 1992, 2, 649-651.	1.8	7
124	Rapidly dynamic host cell heterogeneity in bacterial adhesion governs susceptibility to infection by <i>Listeria monocytogenes</i>. Molecular Biology of the Cell, 2020, 31, 2097-2106.	0.9	5
125	Volume measurement and biophysical characterization of mounds in epithelial monolayers after intracellular bacterial infection. STAR Protocols, 2021, 2, 100551.	0.5	5
126	Acute Modulation of Mycobacterial Cell Envelope Biogenesis by Frontâ€Line Tuberculosis Drugs. Angewandte Chemie, 2018, 130, 5365-5370.	1.6	4

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127	Decoupling the Coupling: Surface Attachment in Actin-Based Motility. ACS Chemical Biology, 2007, 2, 221-224.	1.6	3
128	Wounding Zebrafish Larval Epidermis by Laceration. Bio-protocol, 2021, 11, e4260.	0.2	3
129	Actin tracks. Nature, 1991, 354, 363-363.	13.7	1
130	Bacteria make tracks to the pole. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 8510-8511.	3.3	1
131	Actin Dynamics and Force Generation in the Motility of Listeria Monocytogenes. Microscopy and Microanalysis, 1997, 3, 209-210.	0.2	0
132	Bacterial Manipulation of the Host Cell Cytoskeleton. , 0, , 275-297.		0
133	Cover Image, Volume 77, Issue 5â€6. Cytoskeleton, 2020, 77, C1.	1.0	0
134	A Bayesian framework for the detection of diffusive heterogeneity. PLoS ONE, 2020, 15, e0221841.	1.1	0
135	New Directions in Actinâ€Based Motility of Intracellular Bacterial Pathogens. FASEB Journal, 2008, 22, 530.2.	0.2	0
136	A Bayesian framework for the detection of diffusive heterogeneity. , 2020, 15, e0221841.		0
137	A Bayesian framework for the detection of diffusive heterogeneity. , 2020, 15, e0221841.		0
138	A Bayesian framework for the detection of diffusive heterogeneity. , 2020, 15, e0221841.		0
139	A Bayesian framework for the detection of diffusive heterogeneity. , 2020, 15, e0221841.		0
140	A Bayesian framework for the detection of diffusive heterogeneity. , 2020, 15, e0221841.		0
141	A Bayesian framework for the detection of diffusive heterogeneity. , 2020, 15, e0221841.		0