Marie-france Carlier

List of Publications by Year
in descending order

95 papers	13,532 citations	22153 59 h-index	42399 92 g-index
155 all docs	155 docs citations	155 times ranked	9219 citing authors

#	Article	IF	Citations
1	Actin Depolymerizing Factor (ADF/Cofilin) Enhances the Rate of Filament Turnover: Implication in Actin-based Motility. Journal of Cell Biology, 1997, 136, 1307-1322.	5.2	948
2	Reconstitution of actin-based motility of Listeria and Shigella using pure proteins. Nature, 1999, 401, 613-616.	27.8	924
3	Regulation of Actin Assembly Associated With Protrusion and Adhesion in Cell Migration. Physiological Reviews, 2008, 88, 489-513.	28.8	699
4	Mechanism of Actin-Based Motility. Science, 2001, 292, 1502-1506.	12.6	631
5	How profilin promotes actin filament assembly in the presence of thymosin Î²4. Cell, 1993, 75, 1007-1014.	28.9	540
6	Flexibility of Actin Filaments Derived from Thermal Fluctuations. Journal of Biological Chemistry, 1995, 270, 11437-11444.	3.4	538
7	Formin Is a Processive Motor that Requires Profilin to Accelerate Actin Assembly and Associated ATP Hydrolysis. Cell, 2004, 119, 419-429.	28.9	515
8	Activation of the Cdc42 Effector N-Wasp by the Shigella flexneri Icsa Protein Promotes Actin Nucleation by Arp2/3 Complex and Bacterial Actin-Based Motility. Journal of Cell Biology, 1999, 146, 1319-1332.	5.2	494
9	Role of Proteins of the Ena/VASP Family in Actin-based Motility of Listeria monocytogenes. Journal of Cell Biology, 1999, 144, 1245-1258.	5.2	331
10	Control of Actin Filament Treadmilling in Cell Motility. Annual Review of Biophysics, 2010, 39, 449-470.	10.0	297
11	Control of actin dynamics in cell motility. Journal of Molecular Biology, 1997, 269, 459-467.	4.2	283
12	TccP is an enterohaemorrhagic Escherichia coli O157:H7 type III effector protein that couples Tir to the actin-cytoskeleton+. Cellular Microbiology, 2004, 6, 1167-1183.	2.1	261
13	Forces generated during actin-based propulsion: A direct measurement by micromanipulation. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 5992-5997.	7.1	225
14	The dynamics of actin-based motility depend on surface parameters. Nature, 2002, 417, 308-311.	27.8	224
15	Stathmin:Â A Tubulin-Sequestering Protein Which Forms a Ternary T2S Complex with Two Tubulin Moleculesâ€. Biochemistry, 1997, 36, 10817-10821.	2.5	223
16	The Arp2/3 complex branches filament barbed ends: functional antagonism with capping proteins. Nature Cell Biology, 2000, 2, 385-391.	10.3	219
17	The Î²-Thymosin/WH2 Domain. Cell, 2004, 117, 611-623.	28.9	201
18	Abi1 regulates the activity of N-WASP and WAVE in distinct actin-based processes. Nature Cell Biology, 2005, 7, 969-976.	10.3	201

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19	Eps8 controls actin-based motility by capping the barbed ends of actin filaments. Nature Cell Biology, 2004, 6, 1180-1188.	10.3	197
20	Formin mDia1 senses and generates mechanical forces on actin filaments. Nature Communications, 2013, 4, 1883.	12.8	190
21	Control of actin dynamics. Current Opinion in Cell Biology, 1998, 10, 45-51.	5.4	188
22	GRB2 Links Signaling to Actin Assembly by Enhancing Interaction of Neural Wiskott-Aldrich Syndrome Protein (N-WASp) with Actin-related Protein (ARP2/3) Complex. Journal of Biological Chemistry, 2000, 275, 21946-21952.	3.4	186
23	Control of Actin Dynamics in Cell Motility. Journal of Biological Chemistry, 1999, 274, 33827-33830.	3.4	185
24	Synergy between Actin Depolymerizing Factor/Cofilin and Profilin in Increasing Actin Filament Turnover. Journal of Biological Chemistry, 1998, 273, 25602-25611.	3.4	180
25	A biomimetic motility assay provides insight into the mechanism of actin-based motility. Journal of Cell Biology, 2003, 160, 387-398.	5.2	180
26	Isoform diversity in the Arp2/3 complex determines actin filament dynamics. Nature Cell Biology, 2016, 18, 76-86.	10.3	174
27	Kinetic Analysis of the Interaction of Actin-depolymerizing Factor (ADF)/Cofilin with G- and F-Actins. Journal of Biological Chemistry, 1998, 273, 20894-20902.	3.4	172
28	Control of Actin Assembly Dynamics in Cell Motility. Journal of Biological Chemistry, 2007, 282, 23005-23009.	3.4	157
29	Role of Nucleotide Exchange and Hydrolysis in the Function of Profilin in Actin Assembly. Journal of Biological Chemistry, 1996, 271, 12302-12309.	3.4	139
30	Actinâ€based motility: from molecules to movement. BioEssays, 2003, 25, 336-345.	2.5	139
31	Individual Actin Filaments in a Microfluidic Flow Reveal the Mechanism of ATP Hydrolysis and Give Insight Into the Properties of Profilin. PLoS Biology, 2011, 9, e1001161.	5.6	138
32	IQGAP1 Stimulates Actin Assembly through the N-Wasp-Arp2/3 Pathway. Journal of Biological Chemistry, 2007, 282, 426-435.	3.4	135
33	Interaction of Profilin with G-Actin and Poly(L-Proline). Biochemistry, 1994, 33, 8472-8478.	2.5	120
34	An Electrostatic Steering Mechanism of Cdc42 Recognition by Wiskott-Aldrich Syndrome Proteins. Molecular Cell, 2005, 20, 313-324.	9.7	117
35	Listeria Protein ActA Mimics WASP Family Proteins:Â It Activates Filament Barbed End Branching by Arp2/3 Complex. Biochemistry, 2001, 40, 11390-11404.	2.5	112
36	FMNL formins boost lamellipodial force generation. Nature Communications, 2017, 8, 14832.	12.8	112

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37	Global treadmilling coordinates actin turnover and controls the size of actin networks. Nature Reviews Molecular Cell Biology, 2017, 18, 389-401.	37.0	109
38	Ciboulot Regulates Actin Assembly during Drosophila Brain Metamorphosis. Cell, 2000, 102, 797-808.	28.9	106
39	Profilin Interaction with Actin Filament Barbed End Controls Dynamic Instability, Capping, Branching, and Motility. Developmental Cell, 2016, 36, 201-214.	7.0	99
40	Analysis of the Function of Spire in Actin Assembly and Its Synergy with Formin and Profilin. Molecular Cell, 2007, 28, 555-568.	9.7	98
41	Coupling of Folding and Binding of Thymosin Î²4 upon Interaction with Monomeric Actin Monitored by Nuclear Magnetic Resonance. Journal of Biological Chemistry, 2004, 279, 23637-23645.	3.4	97
42	Control of polarized assembly of actin filaments in cell motility. Cellular and Molecular Life Sciences, 2015, 72, 3051-3067.	5.4	96
43	Molecular Basis for the Dual Function of Eps8 on Actin Dynamics: Bundling and Capping. PLoS Biology, 2010, 8, e1000387.	5.6	91
44	Measurement of the elasticity of the actin tail of Listeria monocytogenes. European Biophysics Journal, 2000, 29, 134-140.	2.2	86
45	Mammalian twinfilin sequesters ADP-G-actin and caps filament barbed ends: implications in motility. EMBO Journal, 2006, 25, 1184-1195.	7.8	84
46	ATP hydrolysis on actin-related protein 2/3 complex causes debranching of dendritic actin arrays. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 6337-6342.	7.1	80
47	Formin and capping protein together embrace the actin filament in a mÃ©nage Ã trois. Nature Communications, 2015, 6, 8730.	12.8	80
48	Regulators of actin filament barbed ends at a glance. Journal of Cell Science, 2016, 129, 1085-91.	2.0	80
49	Signalling to actin: the Cdc42-N-WASP-Arp2/3 connection. Chemistry and Biology, 1999, 6, R235-R240.	6.0	77
50	Filament Assembly from Profilin-Actin. Journal of Biological Chemistry, 1999, 274, 6234-6243.	3.4	76
51	Spire and Formin 2 Synergize and Antagonize in Regulating Actin Assembly in Meiosis by a Ping-Pong Mechanism. PLoS Biology, 2014, 12, e1001795.	5.6	76
52	TÎ²4 Is Not a Simple G-actin Sequestering Protein and Interacts with F-actin at High Concentration. Journal of Biological Chemistry, 1996, 271, 9231-9239.	3.4	73
53	Spire and Cordon-bleu: multifunctional regulators of actin dynamics. Trends in Cell Biology, 2008, 18, 494-504.	7.9	72
54	Actin assembly in response to extracellular signals: role of capping proteins, thymosin Î²4 and profilin. Seminars in Cell Biology, 1994, 5, 183-191.	3.4	70

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55	How ATP Hydrolysis Controls Filament Assembly from Profilin-Actin. Journal of Biological Chemistry, 2007, 282, 8435-8445.	3.4	70
56	Structural basis and evolutionary origin of actin filament capping by twinfilin. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 3113-3118.	7.1	67
57	Control of Actin Filament Length and Turnover by Actin Depolymerizing Factor (ADF/Cofilin) in the Presence of Capping Proteins and ARP2/3 Complex. Journal of Biological Chemistry, 1999, 274, 20970-20976.	3.4	66
58	Activation of Arp2/3 Complex by Wiskott-Aldrich Syndrome Protein Is Linked to Enhanced Binding of ATP to Arp2. Journal of Biological Chemistry, 2001, 276, 46689-46692.	3.4	63
59	Control of Actin Dynamics by Proteins Made of Î²-Thymosin Repeats. Journal of Biological Chemistry, 2002, 277, 14786-14792.	3.4	62
60	Enhanced Depolymerization of Actin Filaments by ADF/Cofilin and Monomer Funneling by Capping Protein Cooperate to Accelerate Barbed-End Growth. Current Biology, 2017, 27, 1990-1998.e5.	3.9	59
61	Cordon-Bleu Uses WH2 Domains as Multifunctional Dynamizers of Actin Filament Assembly. Molecular Cell, 2011, 43, 464-477.	9.7	55
62	How a single residue in individual Î²-thymosin/WH2 domains controls their functions in actin assembly. EMBO Journal, 2012, 31, 1000-1013.	7.8	53
63	The Pleckstrin Homology Domain of the Arf6-specific Exchange Factor EFA6 Localizes to the Plasma Membrane by Interacting with Phosphatidylinositol 4,5-Bisphosphate and F-actin. Journal of Biological Chemistry, 2008, 283, 19836-19844.	3.4	52
64	Electron Tomography and Simulation of Baculovirus Actin Comet Tails Support a Tethered Filament Model of Pathogen Propulsion. PLoS Biology, 2014, 12, e1001765.	5.6	51
65	Arp2/3 Controls the Motile Behavior of N-WASP-Functionalized GUVs and Modulates N-WASP Surface Distribution by Mediating Transient Links with Actin Filaments. Biophysical Journal, 2008, 94, 4890-4905.	0.5	50
66	Interaction of G-actin with thymosin ?4 and its variants thymosin ?9 and thymosin ? 9 met. Journal of Muscle Research and Cell Motility, 1994, 15, 278-86.	2.0	48
67	Actin-based motility as a self-organized system: mechanism and reconstitution in vitro. Comptes Rendus - Biologies, 2003, 326, 161-170.	0.2	48
68	How tropomyosin regulates lamellipodial actin-based motility: a combined biochemical and reconstituted motility approach. EMBO Journal, 2010, 29, 14-26.	7.8	48
69	Characterization of TccP-mediated N-WASP activation during enterohaemorrhagic Escherichia coli infection. Cellular Microbiology, 2006, 8, 1444-1455.	2.1	47
70	Force-Velocity Measurements of a Few Growing Actin Filaments. PLoS Biology, 2011, 9, e1000613.	5.6	44
71	Dimeric WH2 domains in VibrioÂVopF promote actin filament barbed-end uncapping and assisted elongation. Nature Structural and Molecular Biology, 2013, 20, 1069-1076.	8.2	44
72	The Effect of Stathmin Phosphorylation on Microtubule Assembly Depends on Tubulin Critical Concentration. Journal of Biological Chemistry, 2002, 277, 22718-22724.	3.4	43

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73	The IQGAP1 Protein Is a Calmodulin-regulated Barbed End Capper of Actin Filaments. Journal of Biological Chemistry, 2011, 286, 35119-35128.	3.4	43
74	Efficiency of lamellipodia protrusion is determined by the extent of cytosolic actin assembly. Molecular Biology of the Cell, 2017, 28, 1311-1325.	2.1	41
75	Interactions of Isolated C-terminal Fragments of Neural Wiskott-Aldrich Syndrome Protein (N-WASP) with Actin and Arp2/3 Complex. Journal of Biological Chemistry, 2012, 287, 34646-34659.	3.4	38
76	Intermittent depolymerization of actin filaments is caused by photo-induced dimerization of actin protomers. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 10769-10774.	7.1	36
77	Control of Actin Assembly by the WH2 Domains and Their Multifunctional Tandem Repeats in Spire and Cordon-Bleu. International Review of Cell and Molecular Biology, 2011, 290, 55-85.	3.2	34
78	Stathmin Slows down Guanosine Diphosphate Dissociation from Tubulin in a Phosphorylation-Controlled Fashion. Biochemistry, 2000, 39, 12295-12302.	2.5	27
79	Structure, Function, and Evolution of the beta-Thymosin/WH2 (WASP-Homology2) Actin-Binding Module. Annals of the New York Academy of Sciences, 2007, 1112, 67-75.	3.8	26
80	Kinetics of Association of Myosin Subfragment-1 to Unlabeled and Pyrenyl-labeled Actin. Journal of Biological Chemistry, 1996, 271, 12380-12386.	3.4	22
81	Single-filament kinetic studies provide novel insights into regulation of actin-based motility. Molecular Biology of the Cell, 2016, 27, 1-6.	2.1	22
82	Control of actin filament dynamics at barbed ends by WH2 domains: From capping to permissive and processive assembly. Cytoskeleton, 2013, 70, 540-549.	2.0	20
83	Actin Filament Dynamics Using Microfluidics. Methods in Enzymology, 2014, 540, 3-17.	1.0	19
84	Microfluidics pushes forward microscopy analysis of actin dynamics. Bioarchitecture, 2011, 1, 271-276.	1.5	17
85	Analysis of Tetramethylrhodamine-labeled Actin Polymerization and Interaction with Actin Regulatory Proteins. Journal of Biological Chemistry, 2006, 281, 24036-24047.	3.4	14
86	How do in vitro reconstituted actinâ€based motility assays provide insight into in vivo behavior?. FEBS Letters, 2008, 582, 2086-2092.	2.8	14
87	Dimeric WH2 repeats of VopF sequester actin monomers into non-nucleating linear string conformations: An X-ray scattering study. Journal of Structural Biology, 2015, 190, 192-199.	2.8	14
88	Mutagenetic and electron microscopy analysis of actin filament severing by Cordonâ€Bleu, a WH2 domain protein. Cytoskeleton, 2014, 71, 170-183.	2.0	13
89	Actin-Based Motility Assay. , 2004, Chapter 12, Unit 12.7.		12
90	Role of the C-terminal Extension of Formin 2 in Its Activation by Spire Protein and Processive Assembly of Actin Filaments. Journal of Biological Chemistry, 2016, 291, 3302-3318.	3.4	10

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91	Fluorescence correlation spectroscopy analysis of the dynamics of tubulin interaction with RB3, a stathmin family protein. FEBS Letters, 2003, 546, 365-368.	2.8	6
92	13 Actin-based Motility of Listeria monocytogenes and Shigella flexeneri. Methods in Microbiology, 2002, , 245-262.	0.8	4
93	Measurements of Stathmin-Tubulin Interaction in Solution. Methods in Molecular Medicine, 2007, 137, 103-110.	0.8	3
94	From Molecules to Movement: In Vitro Reconstitution of Self-Organized Actin-based Motile Processes. , 2010, , 237-254.		2
95	How Actin Assembly Is Modulated at Filament Barbed Ends in Motile Processes. , 2007, , 1-10.		0