Enrique M De La Cruz

List of Publications by Year
in descending order

111 papers	6,301 citations	57758 44 h-index	76900 74 g-index
114 all docs	114 docs citations	114 times ranked	4800 citing authors

#	Article	IF	Citations
1	Actin Network Architecture Can Determine Myosin Motor Activity. Science, 2012, 336, 1310-1314.	12.6	281
2	Relating biochemistry and function in the myosin superfamily. Current Opinion in Cell Biology, 2004, 16, 61-67.	5.4	256
3	Architecture and Connectivity Govern Actin Network Contractility. Current Biology, 2016, 26, 616-626.	3.9	221
4	Kinetic Mechanism and Regulation of Myosin VI. Journal of Biological Chemistry, 2001, 276, 32373-32381.	3.4	218
5	Cofilin Increases the Bending Flexibility of Actin Filaments: Implications for Severing and Cell Mechanics. Journal of Molecular Biology, 2008, 381, 550-558.	4.2	200
6	Cofilin Tunes the Nucleotide State of Actin Filaments and Severs at Bare and Decorated Segment Boundaries. Current Biology, 2011, 21, 862-868.	3.9	192
7	Mechanochemical coupling of two substeps in a single myosin V motor. Nature Structural and Molecular Biology, 2004, 11, 877-883.	8.2	166
8	The Structural Basis for Activation of the Rab Ypt1p by the TRAPP Membrane-Tethering Complexes. Cell, 2008, 133, 1202-1213.	28.9	166
9	Interactions ofAcanthamoebaProfilin with Actin and Nucleotides Bound to Actinâ€. Biochemistry, 1998, 37, 10871-10880.	2.5	152
10	Cofilin Binding to Muscle and Non-muscle Actin Filaments: Isoform-dependent Cooperative Interactions. Journal of Molecular Biology, 2005, 346, 557-564.	4.2	150
11	Cofilin Increases the Torsional Flexibility and Dynamics of Actin Filaments. Journal of Molecular Biology, 2005, 353, 990-1000.	4.2	143
12	Chapter 6 Kinetic and Equilibrium Analysis of the Myosin ATPase. Methods in Enzymology, 2009, 455, 157-192.	1.0	136
13	ADP Inhibition of Myosin V ATPase Activity. Biophysical Journal, 2000, 79, 1524-1529.	0.5	134
14	Cofilin-Linked Changes in Actin Filament Flexibility Promote Severing. Biophysical Journal, 2011, 101, 151-159.	0.5	131
15	How cofilin severs an actin filament. Biophysical Reviews, 2009, 1, 51-59.	3.2	113
16	The ATPase Cycle Mechanism of the DEAD-box rRNA Helicase, DbpA. Journal of Molecular Biology, 2008, 377, 193-205.	4.2	103
17	ENPP1-Fc prevents mortality and vascular calcifications in rodent model of generalized arterial calcification of infancy. Nature Communications, 2015, 6, 10006.	12.8	102
18	Actin filament remodeling by actin depolymerization factor/cofilin. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 7299-7304.	7.1	100

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19	Kinetics and Thermodynamics of Phalloidin Binding to Actin Filaments from Three Divergent Speciesâ€. Biochemistry, 1996, 35, 14054-14061.	2.5	97
20	ATP Utilization and RNA Conformational Rearrangement by DEAD-Box Proteins. Annual Review of Biophysics, 2012, 41, 247-267.	10.0	97
21	Insights regarding guanine nucleotide exchange from the structure of a DENN-domain protein complexed with its Rab GTPase substrate. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 18672-18677.	7.1	96
22	Energetics and Kinetics of Cooperative Cofilinâ€"Actin Filament Interactions. Journal of Molecular Biology, 2006, 361, 257-267.	4.2	94
23	Load-dependent ADP binding to myosins V and VI: Implications for subunit coordination and function. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 7714-7719.	7.1	91
24	Biophysics of actin filament severing by cofilin. FEBS Letters, 2013, 587, 1215-1219.	2.8	88
25	Actin and Light Chain Isoform Dependence of Myosin V Kineticsâ€. Biochemistry, 2000, 39, 14196-14202.	2.5	87
26	Actin Mechanics and Fragmentation. Journal of Biological Chemistry, 2015, 290, 17137-17144.	3.4	86
27	Transient kinetic analysis of rhodamine phalloidin binding to actin filaments. Biochemistry, 1994, 33, 14387-14392.	2.5	84
28	Magnesium, ADP, and Actin Binding Linkage of Myosin V:Â Evidence for Multiple Myosin Vâ^'ADP and Actomyosin Vâ^'ADP Statesâ€. Biochemistry, 2005, 44, 8826-8840.	2.5	82
29	Pathway of ATP utilization and duplex rRNA unwinding by the DEAD-box helicase, DbpA. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 4046-4050.	7.1	80
30	Identification of cation-binding sites on actin that drive polymerization and modulate bending stiffness. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 16923-16927.	7.1	79
31	Kinetic Characterization of the Weak Binding States of Myosin Vâ€. Biochemistry, 2002, 41, 8508-8517.	2.5	75
32	Nucleotide-Free Actin: Stabilization by Sucrose and Nucleotide Binding Kinetics. Biochemistry, 1995, 34, 5452-5461.	2.5	72
33	Origin of Twist-Bend Coupling in Actin Filaments. Biophysical Journal, 2010, 99, 1852-1860.	0.5	72
34	Polymerization and structure of nucleotide-free actin filaments 1 1Edited by W. Baumeister. Journal of Molecular Biology, 2000, 295, 517-526.	4.2	68
35	Thymosin-Î²4 Changes the Conformation and Dynamics of Actin Monomers. Biophysical Journal, 2000, 78, 2516-2527.	0.5	68
36	Vertebrate Myosin VIIb Is a High Duty Ratio Motor Adapted for Generating and Maintaining Tension. Journal of Biological Chemistry, 2005, 280, 39665-39676.	3.4	66

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37	Mechanoregulated inhibition of formin facilitates contractile actomyosin ring assembly. Nature Communications, 2017, 8, 703.	12.8	66
38	Identification of small-molecule inhibitors of autotaxin that inhibit melanoma cell migration and invasion. Molecular Cancer Therapeutics, 2008, 7, 3352-3362.	4.1	65
39	Structures of cofilin-induced structural changes reveal local and asymmetric perturbations of actin filaments. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 1478-1484.	7.1	64
40	Mechanism of Mss116 ATPase Reveals Functional Diversity of DEAD-Box Proteins. Journal of Molecular Biology, 2011, 409, 399-414.	4.2	63
41	The Kinetics of Cooperative Cofilin Binding Reveals Two States of the Cofilin-Actin Filament. Biophysical Journal, 2010, 98, 1893-1901.	0.5	57
42	Mechanism of Nucleotide Binding to Actomyosin VI. Journal of Biological Chemistry, 2004, 279, 38608-38617.	3.4	56
43	Structure-Based Analysis of Toxoplasma gondii Profilin: A Parasite-Specific Motif Is Required for Recognition by Toll-Like Receptor 11. Journal of Molecular Biology, 2010, 403, 616-629.	4.2	54
44	Regulation of G protein-coupled Receptor Kinase 5 (GRK5) by Actin. Journal of Biological Chemistry, 1998, 273, 20653-20657.	3.4	52
45	Thermodynamics of Nucleotide Binding to Actomyosin V and VI:â€‰ A Positive Heat Capacity Change Accompanies Strong ADP Binding. Biochemistry, 2005, 44, 10238-10249.	2.5	51
46	The actin filament twist changes abruptly at boundaries between bare and cofilin-decorated segments. Journal of Biological Chemistry, 2018, 293, 5377-5383.	3.4	50
47	Actin Filament Strain Promotes Severing and Cofilin Dissociation. Biophysical Journal, 2017, 112, 2624-2633.	0.5	49
48	Mechanical Heterogeneity Favors Fragmentation of Strained Actin Filaments. Biophysical Journal, 2015, 108, 2270-2281.	0.5	48
49	Equilibrium and Kinetic Analysis of Nucleotide Binding to the DEAD-Box RNA Helicase DbpAâ€. Biochemistry, 2005, 44, 959-970.	2.5	47
50	Force and phosphate release from Arp2/3 complex promote dissociation of actin filament branches. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 13519-13528.	7.1	47
51	Actin-induced Closure of the Actin-binding Cleft of Smooth Muscle Myosin. Journal of Biological Chemistry, 2002, 277, 24114-24119.	3.4	45
52	Take advantage of time in your experiments: a guide to simple, informative kinetics assays. Molecular Biology of the Cell, 2013, 24, 1103-1110.	2.1	45
53	Site-specific cation release drives actin filament severing by vertebrate cofilin. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17821-17826.	7.1	45
54	Molecular Origins of Cofilin-Linked Changes in Actin Filament Mechanics. Journal of Molecular Biology, 2013, 425, 1225-1240.	4.2	44

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55	Myosin Isoform Determines the Conformational Dynamics and Cooperativity of Actin Filaments in the Strongly Bound Actomyosin Complex. Journal of Molecular Biology, 2010, 396, 501-509.	4.2	42
56	Competitive displacement of cofilin can promote actin filament severing. Biochemical and Biophysical Research Communications, 2013, 438, 728-731.	2.1	42
57	Thymosin Î²4 Induces a Conformational Change in Actin Monomers. Biophysical Journal, 2006, 90, 985-992.	0.5	41
58	Quantitative full time course analysis of nonlinear enzyme cycling kinetics. Scientific Reports, 2013, 3, 2658.	3.3	40
59	A Myosinâ€...V Inhibitor Based on Privileged Chemical Scaffolds. Angewandte Chemie - International Edition, 2010, 49, 8484-8488.	13.8	39
60	Multi-Platform Compatible Software for Analysis of Polymer Bending Mechanics. PLoS ONE, 2014, 9, e94766.	2.5	39
61	Cations Stiffen Actin Filaments by Adhering a Key Structural Element to Adjacent Subunits. Journal of Physical Chemistry B, 2016, 120, 4558-4567.	2.6	39
62	Regulation of Actin by Ion-Linked Equilibria. Biophysical Journal, 2013, 105, 2621-2628.	0.5	37
63	14-3-3 proteins activate Pseudomonas exotoxins-S and -T by chaperoning a hydrophobic surface. Nature Communications, 2018, 9, 3785.	12.8	37
64	The Tail Domain of Myosin Va Modulates Actin Binding to One Head. Journal of Biological Chemistry, 2006, 281, 31326-31336.	3.4	35
65	Phosphomimetic S3D cofilin binds but only weakly severs actin filaments. Journal of Biological Chemistry, 2017, 292, 19565-19579.	3.4	35
66	Structural and Energetic Analysis of Activation by a Cyclic Nucleotide Binding Domain. Journal of Molecular Biology, 2008, 381, 655-669.	4.2	33
67	Effects of Solution Crowding on Actin Polymerization Reveal the Energetic Basis for Nucleotide-Dependent Filament Stability. Journal of Molecular Biology, 2008, 378, 540-550.	4.2	31
68	Kinetic Analysis of Autotaxin Reveals Substrate-specific Catalytic Pathways and a Mechanism for Lysophosphatidic Acid Distribution. Journal of Biological Chemistry, 2011, 286, 30130-30141.	3.4	29
69	Insights into the Cooperative Nature of ATP Hydrolysis in Actin Filaments. Biophysical Journal, 2018, 115, 1589-1602.	0.5	29
70	Rab34 GTPase mediates ciliary membrane formation in the intracellular ciliogenesis pathway. Current Biology, 2021, 31, 2895-2905.e7.	3.9	25
71	Robust processivity of myosin V under off-axis loads. Nature Chemical Biology, 2010, 6, 300-305.	8.0	23
72	Direct Observation of the Myosin Va Recovery Stroke That Contributes to Unidirectional Stepping along Actin. PLoS Biology, 2011, 9, e1001031.	5.6	23

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73	Regulation of axon growth by myosin IIâ€“dependent mechanocatalysis of cofilin activity. Journal of Cell Biology, 2019, 218, 2329-2349.	5.2	23
74	Kinetic Analysis of the Guanine Nucleotide Exchange Activity of TRAPP, a Multimeric Ypt1p Exchange Factor. Journal of Molecular Biology, 2009, 389, 275-288.	4.2	22
75	Plastic Deformation and Fragmentation of Strained Actin Filaments. Biophysical Journal, 2019, 117, 453-463.	0.5	19
76	Hydrodynamic Characterization of the DEAD-box RNA Helicase DbpA. Journal of Molecular Biology, 2006, 355, 697-707.	4.2	18
77	Analyzing ATP Utilization by DEAD-Box RNA Helicases Using Kinetic and Equilibrium Methods. Methods in Enzymology, 2012, 511, 29-63.	1.0	18
78	Clusters of a Few Bound Cofilins Sever Actin Filaments. Journal of Molecular Biology, 2021, 433, 166833.	4.2	18
79	Pi Release Limits the Intrinsic and RNA-Stimulated ATPase Cycles of DEAD-Box Protein 5 (Dbp5). Journal of Molecular Biology, 2016, 428, 492-508.	4.2	17
80	Structural basis of fast- and slow-severing actinâ€“cofilactin boundaries. Journal of Biological Chemistry, 2021, 296, 100337.	3.4	15
81	STRUCTURAL BIOLOGY: Actin' Up. Science, 2001, 293, 616-618.	12.6	15
82	Alteration in the cavity size adjacent to the active site of RB69 DNA polymerase changes its conformational dynamics. Nucleic Acids Research, 2013, 41, 9077-9089.	14.5	14
83	Improving the Pharmacodynamics and In Vivo Activity of ENPP1â€Fc Through Protein and Glycosylation Engineering. Clinical and Translational Science, 2021, 14, 362-372.	3.1	14
84	Metavinculin Tunes the Flexibility and the Architecture of Vinculin-Induced Bundles of Actin Filaments. Journal of Molecular Biology, 2015, 427, 2782-2798.	4.2	13
85	Holding the reins on Myosin V. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 13719-13720.	7.1	11
86	The Tail Domain of Myosin Va Modulates Actin Binding to One Head. Journal of Biological Chemistry, 2006, 281, 31326-31336.	3.4	11
87	Neuronal Calcium Sensor 1 Has Two Variants with Distinct Calcium Binding Characteristics. PLoS ONE, 2016, 11, e0161414.	2.5	10
88	Actin Filament Dynamics in the Actomyosin VI Complex Is Regulated Allosterically by Calciumâ€“Calmodulin Light Chain. Journal of Molecular Biology, 2011, 413, 584-592.	4.2	8
89	Nup159 Weakens Gle1 Binding to Dbp5 But Does Not Accelerate ADP Release. Journal of Molecular Biology, 2018, 430, 2080-2095.	4.2	8
90	Thermal fracture kinetics of heterogeneous semiflexible polymers. Soft Matter, 2020, 16, 2017-2024.	2.7	7

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91	Directional allosteric regulation of protein filament length. Physical Review E, 2020, 101, 032409.	2.1	6
92	The nucleoporin Gle1 activates DEAD-box protein 5 (Dbp5) by promoting ATP binding and accelerating rate limiting phosphate release. Nucleic Acids Research, 2022, 50, 3998-4011.	14.5	6
93	Active cargo positioning in antiparallel transport networks. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 14835-14842.	7.1	5
94	How the Load and the Nucleotide State Affect the Actin Filament Binding Mode of the Molecular Motor Myosin V. Journal of the Korean Physical Society, 2008, 53, 1726-1731.	0.7	3
95	Watching the walk: Observing chemoâ€mechanical coupling in a processive myosin motor. HFSP Journal, 2009, 3, 67-70.	2.5	2
96	Plusâ€end directed myosins accelerate actin filament sliding by singleâ€headed myosin VI. Cytoskeleton, 2012, 69, 59-69.	2.0	2
97	Contributions from All Over: Widely Distributed Residues in Thymosin Beta-4 Affect the Kinetics and Stability of Actin Binding. Annals of the New York Academy of Sciences, 2007, 1112, 38-44.	3.8	1
98	Cofilin Induces a Local Change in the Twist of Actin Filaments. Biophysical Journal, 2018, 114, 145a.	0.5	1
99	Actin-Binding Proteins: An Overview. Results and Problems in Cell Differentiation, 2001, 32, 123-134.	0.7	1
100	1P534 Loading direction controls the ADP affinity of myosin V.(26. Single molecule biophysics,Poster) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	0.1	0
101	2P132 Angular dependence of ADP dissociation kinetics in myosin V under directional loading(Molecular motors,Oral Presentations). Seibutsu Butsuri, 2007, 47, S146.	0.1	0
102	1P-124 Versatility of the unbinding force measurements at the single-molecule level adapted to different molecular motors(Molecular motor, The 47th Annual Meeting of the Biophysical Society of) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	0.1	0
103	1P-138 Role of the lever arm in the subunit coordination in myosin V(Molecular motor, The 47th) Tj ETQq1 1 0.784314 rgBT /Overlock	0.1	0
104	1TA4-06 Role of the lever arm in the subunit coordination in myosin V(The 47th Annual Meeting of the) Tj ETQq0 0 0 rgBT /Overlock 10	0.1	0
105	3P159 Impact of the off-axis loads on the processivity of myosin VI(Molecular motor,The 48th Annual) Tj ETQq1 1 0.784314 rgBT /Overl	0.1	0
106	Opening remarks from the Editors. Biophysical Reviews, 2018, 10, 1479-1480.	3.2	0
107	Severed Actin and Microtubules with Motors Walking All Over Them: Cryo-EM Studies of Seriously Perturbed Helical Assemblies. Microscopy and Microanalysis, 2019, 25, 1362-1363.	0.4	0
108	The ATPase cycle of the RNA helicase protein NS3 from hepatitis C virus. FASEB Journal, 2011, 25, 911.1.	0.5	0

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109	Molecular Structure and Biological Activity of NPP-4, An Endothelial Cell Surface Pyrophosphatase/ Phosphodiesterase That Stimulates Platelet Aggregation and Secretion Via Liberation of ADP Upon Hydrolysis of Diadenosine Triphosphate. Blood, 2011, 118, 701-701.	1.4	0
110	ATPase coupling in the processive RNA helicase NS3 from hepatitis C virus. FASEB Journal, 2013, 27, 999.2.	0.5	0
111	ATP utilization by DExD/Hâ€box RNA helicases â€" molecular motor proteins that couple ATPase activity with RNA rearrangement.. FASEB Journal, 2013, 27, 454.1.	0.5	0