Martin Lenz

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3500026/publications.pdf

Version: 2024-02-01

43 papers	3,828 citations	257450 24 h-index	254184 43 g-index
53 all docs	53 docs citations	53 times ranked	5015 citing authors

#	Article	IF	Citations
1	Forcing cells into shape: the mechanics of actomyosin contractility. Nature Reviews Molecular Cell Biology, 2015, 16, 486-498.	37.0	487
2	Membrane fission by dynamin: what we know and what we need to know. EMBO Journal, 2016, 35, 2270-2284.	7.8	388
3	Relaxation of Loaded ESCRT-III Spiral Springs Drives Membrane Deformation. Cell, 2015, 163, 866-879.	28.9	289
4	ATP-dependent mechanics of red blood cells. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 15320-15325.	7.1	277
5	Membrane curvature controls dynamin polymerization. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 4141-4146.	7.1	262
6	Cell contraction induces long-ranged stress stiffening in the extracellular matrix. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 4075-4080.	7.1	231
7	A balance between membrane elasticity and polymerization energy sets the shape of spherical clathrin coats. Nature Communications, 2015, 6, 6249.	12.8	165
8	Membrane Shape at the Edge of the Dynamin Helix Sets Location and Duration of the Fission Reaction. Cell, 2012, 151, 619-629.	28.9	164
9	Fiber networks amplify active stress. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2827-2832.	7.1	143
10	Polymerization of MIP-1 chemokine (CCL3 and CCL4) and clearance of MIP-1 by insulin-degrading enzyme. EMBO Journal, 2010, 29, 3952-3966.	7.8	129
11	Contractile Units in Disordered Actomyosin Bundles Arise from F-Actin Buckling. Physical Review Letters, 2012, 108, 238107.	7.8	127
12	Reconstitution of Contractile Actomyosin Bundles. Biophysical Journal, 2011, 100, 2698-2705.	0.5	119
13	Engineering Elasticity and Relaxation Time in Metal-Coordinate Cross-Linked Hydrogels. Macromolecules, 2016, 49, 8306-8312.	4.8	92
14	Assembly kinetics determine the architecture of Î±-actinin crosslinked F-actin networks. Nature Communications, 2012, 3, 861.	12.8	84
15	Actin dynamics drive cell-like membrane deformation. Nature Physics, 2019, 15, 602-609.	16.7	73
16	Membrane Buckling Induced by Curved Filaments. Physical Review Letters, 2009, 103, 038101.	7.8	72
17	Requirements for contractility in disordered cytoskeletal bundles. New Journal of Physics, 2012, 14, 033037.	2.9	67
18	Passive coupling of membrane tension and cell volume during active response of cells to osmosis. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	65

#	Article	IF	Citations
19	Thick Filament Length and Isoform Composition Determine Self-Organized Contractile Units in Actomyosin Bundles. Biophysical Journal, 2013, 104, 655-665.	0.5	61
20	Anisotropic ESCRT-III architecture governs helical membrane tube formation. Nature Communications, 2020, 11, 1516.	12.8	55
21	Mechanical requirements for membrane fission: Common facts from various examples. FEBS Letters, 2009, 583, 3839-3846.	2.8	53
22	Modulation of formin processivity by profilin and mechanical tension. ELife, 2018, 7, .	6.0	43
23	A nonequilibrium force can stabilize 2D active nematics. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 6934-6939.	7.1	43
24	Geometrical frustration yields fibre formation inÂself-assembly. Nature Physics, 2017, 13, 1100-1104.	16.7	39
25	Geometrical Origins of Contractility in Disordered Actomyosin Networks. Physical Review X, 2014, 4, .	8.9	31
26	Adaptive Response of Actin Bundles under Mechanical Stress. Biophysical Journal, 2017, 113, 1072-1079.	0.5	27
27	Swimmer Suspensions on Substrates: Anomalous Stability and Long-Range Order. Physical Review Letters, 2020, 124, 028002.	7.8	25
28	The dynamics of filament assembly define cytoskeletal network morphology. Nature Communications, 2016, 7, 13827.	12.8	24
29	Spontaneous rotation can stabilise ordered chiral active fluids. Nature Communications, 2019, 10, 920.	12.8	23
30	Mechanochemical action of the dynamin protein. Physical Review E, 2008, 78, 011911.	2.1	22
31	Deformation of Dynamin Helices Damped by Membrane Friction. Biophysical Journal, 2010, 99, 3580-3588.	0.5	19
32	A Reaction-Diffusion Model of the Cadherin-Catenin System: A Possible Mechanism for Contact Inhibition and Implications for Tumorigenesis. Biophysical Journal, 2010, 98, 2770-2779.	0.5	17
33	Chiral Active Hexatics: Giant Number Fluctuations, Waves, and Destruction of Order. Physical Review Letters, 2020, 125, 238005.	7.8	17
34	Connecting local active forces to macroscopic stress in elastic media. Soft Matter, 2015, 11, 1597-1605.	2.7	14
35	Actin modulates shape and mechanics of tubular membranes. Science Advances, 2020, 6, eaaz3050.	10.3	14
36	Dynamical tunneling with ultracold atoms in magnetic microtraps. Physical Review A, 2013, 88, .	2.5	13

#	Article	IF	Citations
37	Stress-dependent amplification of active forces in nonlinear elastic media. Soft Matter, 2019, 15, 331-338.	2.7	12
38	Reversal of contractility as a signature of self-organization in cytoskeletal bundles. ELife, 2020, 9, .	6.0	12
39	Mapping and Modeling the Nanomechanics of Bare and Protein-Coated Lipid Nanotubes. Physical Review X, 2020, 10, .	8.9	7
40	Actin Cross-Linkers and the Shape of Stereocilia. Biophysical Journal, 2010, 99, 2423-2433.	0.5	5
41	Fiber plucking by molecular motors yields large emergent contractility in stiff biopolymer networks. Soft Matter, 2019, 15, 1481-1487.	2.7	5
42	Local structure of DNA toroids reveals curvature-dependent intermolecular forces. Nucleic Acids Research, 2021, 49, 3709-3718.	14.5	4
43	Activation of Membrane Fission by Local Elastic Energy Increase at the Edge of Dynamin. Biophysical Journal, 2013, 104, 617a.	0.5	0