Alexander Levine

List of Publications by Year
in descending order

40 papers	1,349 citations	567281 15 h-index	345221 36 g-index
41 all docs	41 docs citations	41 times ranked	1683 citing authors

#	Article	IF	Citations
1	Measurement of red blood cell mechanics during morphological changes. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 6731-6736.	7.1	381
2	Deformation of Cross-Linked Semiflexible Polymer Networks. Physical Review Letters, 2003, 91, 108102.	7.8	322
3	Measurement of the nonlinear elasticity of red blood cell membranes. Physical Review E, 2011, 83, 051925.	2.1	74
4	The Mechanics and Fluctuation Spectrum of Active Gels. Journal of Physical Chemistry B, 2009, 113, 3820-3830.	2.6	71
5	Rheology of Semiflexible Bundle Networks with Transient Linkers. Physical Review Letters, 2014, 112, 238102.	7.8	61
6	Fibroblast growth factor 2 dimer with superagonist inÂvitro activity improves granulation tissue formation during wound healing. Biomaterials, 2016, 81, 157-168.	11.4	59
7	Membrane insertion ofâ€"and membrane potential sensing byâ€"semiconductor voltage nanosensors: Feasibility demonstration. Science Advances, 2018, 4, e1601453.	10.3	33
8	Mechanical hysteresis in actin networks. Soft Matter, 2018, 14, 2052-2058.	2.7	32
9	The mechanics and affineâ€"nonaffine transition in polydisperse semiflexible networks. Soft Matter, 2011, 7, 907-914.	2.7	29
10	Cell contact guidance via sensing anisotropy of network mechanical resistance. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	28
11	Mesoscale structure of diffusion-limited aggregates of colloidal rods and disks. Soft Matter, 2009, 5, 3639.	2.7	26
12	Geometric localization of thermal fluctuations in red blood cells. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 2865-2870.	7.1	26
13	Probing interfacial dynamics and mechanics using submerged particle microrheology. II. Experiment. Physics of Fluids, 2014, 26, .	4.0	25
14	Affine-nonaffine transition in networks of nematically ordered semiflexible polymers. Physical Review E, 2010, 82, 041907.	2.1	24
15	Effective viscosity of a dilute suspension of membrane-bound inclusions. Physics of Fluids, 2009, 21, .	4.0	18
16	Nanorheology of viscoelastic shells: Applications to viral capsids. Physical Review E, 2008, 77, 031921.	2.1	14
17	Probing interfacial dynamics and mechanics using submerged particle microrheology. I. Theory. Physics of Fluids, 2014, 26, .	4.0	14
18	Simultaneous cell traction and growth measurements using light. Journal of Biophotonics, 2019, 12, e201800182.	2.3	14

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19	Reflection and Refraction of Flexural Waves at Geometric Boundaries. Physical Review Letters, 2013, 111, 038101.	7.8	13
20	Casimir interactions in semiflexible polymers. Physical Review E, 2013, 87, .	2.1	10
21	Bond breaking dynamics in semiflexible networks under load. Soft Matter, 2015, 11, 4899-4911.	2.7	10
22	Shape transitions in soft spheres regulated by elasticity. Physical Review E, 2013, 88, 052404.	2.1	8
23	Discontinuous bundling transition in semiflexible polymer networks induced by Casimir interactions. Physical Review E, 2016, 94, 032505.	2.1	7
24	Nonequilibrium limit-cycle oscillators: Fluctuations in hair bundle dynamics. Physical Review E, 2018, 97, 062411.	2.1	7
25	Topological defects produce kinks in biopolymer filament bundles. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	6
26	Dynamical phase separation on rhythmogenic neuronal networks. Physical Review E, 2020, 101, 062307.	2.1	5
27	Effects of curvature on the propagation of undulatory waves in lower dimensional elastic materials. Physical Review E, 2021, 103, 013002.	2.1	5
28	Publisher's Note: Rheology of Semiflexible Bundle Networks with Transient Linkers [Phys. Rev. Lett. 112, 238102 (2014)]. Physical Review Letters, 2014, 113, .	7.8	4
29	Conformation of a semiflexible filament in a quenched random potential. Physical Review E, 2019, 99, 042501.	2.1	4
30	Directed force propagation in semiflexible networks. Soft Matter, 2021, 17, 10223-10241.	2.7	4
31	Actively Driven Fluctuations in a Fibrin Network. Frontiers in Physics, 2021, 8, .	2.1	4
32	Noise-induced distortion of the mean limit cycle of nonlinear oscillators. Physical Review E, 2019, 99, 062124.	2.1	3
33	Dynamics of undulatory fluctuations of semiflexible filaments in a network. Physical Review E, 2020, 102, 062406.	2.1	2
34	Equilibrium fluctuations of a semiflexible filament cross linked into a network. Physical Review E, 2020, 101, 012408.	2.1	2
35	Violation of generalized fluctuation-dissipation theorem in biological limit cycle oscillators with state-dependent internal drives: Applications to hair cell oscillations. Physical Review Research, 2021, 3, .	3.6	2
36	Defect Production in Compressed Filament Bundles. Physical Review Letters, 2021, 127, 157801.	7.8	1

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37	Calculating the mean time to capture for tethered ligands and its effect on the chemical equilibrium of bound ligand pairs. Data in Brief, 2016, 8, 506-515.	1.0	0
38	Bubble-raft collapse and the nonequilibrium dynamics of two-state elastica. Physical Review E, 2016, 93, 032613.	2.1	0
39	Geometrically induced localization of flexural waves on thin warped physical membranes. Physical Review E, 2021, 103, 053002.	2.1	0
40	Braiding Dynamics in Semiflexible Filament Bundles under Oscillatory Forcing. Polymers, 2021, 13, 2195.	4.5	0