

Suriyanarayanan Vaikuntanathan

List of Publications by Year in descending order

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Version: 2024-02-01

36
papers

1,115
citations

394421

19
h-index

395702

33
g-index

37
all docs

37
docs citations

37
times ranked

1376
citing authors

#	ARTICLE	IF	CITATIONS
1	Topological Waves in Fluids with Odd Viscosity. <i>Physical Review Letters</i> , 2019, 122, 128001.	7.8	129
2	Liquid behavior of cross-linked actin bundles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 2131-2136.	7.1	106
3	Escorted Free Energy Simulations: Improving Convergence by Reducing Dissipation. <i>Physical Review Letters</i> , 2008, 100, 190601.	7.8	83
4	Design principles for nonequilibrium self-assembly. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 14231-14236.	7.1	74
5	Pre-transition effects mediate forces of assembly between transmembrane proteins. <i>ELife</i> , 2016, 5, e13150.	6.0	56
6	Nanocrystals in Molten Salts and Ionic Liquids: Experimental Observation of Ionic Correlations Extending beyond the Debye Length. <i>ACS Nano</i> , 2019, 13, 5760-5770.	14.6	48
7	Efficiency and large deviations in time-asymmetric stochastic heat engines. <i>New Journal of Physics</i> , 2014, 16, 102003.	2.9	47
8	Driven optical matter: Dynamics of electrodynamically coupled nanoparticles in an optical ring vortex. <i>Physical Review E</i> , 2017, 95, 022604.	2.1	47
9	Topologically protected modes in non-equilibrium stochastic systems. <i>Nature Communications</i> , 2017, 8, 13881.	12.8	45
10	Dynamic phase transitions in simple driven kinetic networks. <i>Physical Review E</i> , 2014, 89, 062108.	2.1	44
11	Self-organizing motors divide active liquid droplets. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 11125-11130.	7.1	44
12	Topological localization in out-of-equilibrium dissipative systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E9031-E9040.	7.1	43
13	Dissipation controls transport and phase transitions in active fluids: mobility, diffusion and biased ensembles. <i>New Journal of Physics</i> , 2020, 22, 013052.	2.9	42
14	Fluctuating hydrodynamics of chiral active fluids. <i>Nature Physics</i> , 2021, 17, 1260-1269.	16.7	41
15	How Dissipation Constrains Fluctuations in Nonequilibrium Liquids: Diffusion, Structure, and Biased Interactions. <i>Physical Review X</i> , 2019, 9, .	8.9	37
16	Necessity of capillary modes in a minimal model of nanoscale hydrophobic solvation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, E2224-30.	7.1	30
17	Putting Water on a Lattice: The Importance of Long Wavelength Density Fluctuations in Theories of Hydrophobic and Interfacial Phenomena. <i>Physical Review Letters</i> , 2014, 112, 020603.	7.8	29
18	Energy dissipation and fluctuations in a driven liquid. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 3569-3574.	7.1	27

#	ARTICLE	IF	CITATIONS
19	Tuning shape and internal structure of protein droplets via biopolymer filaments. <i>Soft Matter</i> , 2020, 16, 5659-5668.	2.7	22
20	Describing screening in dense ionic fluids with a charge-frustrated Ising model. <i>Journal of Chemical Physics</i> , 2018, 149, 164505.	3.0	20
21	Adsorption of solutes at liquid-vapor interfaces: insights from lattice gas models. <i>Faraday Discussions</i> , 2013, 160, 63-74.	3.2	15
22	Organization and Self-Assembly Away from Equilibrium: Toward Thermodynamic Design Principles. <i>Annual Review of Condensed Matter Physics</i> , 2021, 12, 273-290.	14.5	13
23	A mechanism for anomalous transport in chiral active liquids. <i>Journal of Chemical Physics</i> , 2019, 151, 194108.	3.0	12
24	High chemical affinity increases the robustness of biochemical oscillations. <i>Physical Review E</i> , 2020, 101, 012410.	2.1	12
25	Interface height fluctuations and surface tension of driven liquids with time-dependent dynamics. <i>Journal of Chemical Physics</i> , 2019, 150, 094708.	3.0	9
26	Robust oscillations in multi-cyclic Markov state models of biochemical clocks. <i>Journal of Chemical Physics</i> , 2020, 152, 055101.	3.0	9
27	Rectification in Nonequilibrium Parity Violating Metamaterials. <i>Physical Review X</i> , 2020, 10, .	8.9	7
28	Biological Implications of Dynamical Phases in Non-equilibrium Networks. <i>Journal of Statistical Physics</i> , 2016, 162, 1183-1202.	1.2	5
29	A strong nonequilibrium bound for sorting of cross-linkers on growing biopolymers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	4
30	From predicting to learning dissipation from pair correlations of active liquids. <i>Journal of Chemical Physics</i> , 2022, 157, .	3.0	4
31	Nucleation and shape dynamics of model nematic tactoids around adhesive colloids. <i>Journal of Chemical Physics</i> , 2020, 152, 084901.	3.0	3
32	Mean-field theory for the structure of strongly interacting active liquids. <i>Journal of Chemical Physics</i> , 0, , .	3.0	3
33	Energy rectification in active gyroscopic networks under time-periodic modulations. <i>Physical Review E</i> , 2021, 104, 014601.	2.1	2
34	Pre-Transition Effects Mediate Forces of Assembly between Transmembrane Proteins: The Orderphobic Effect. <i>Biophysical Journal</i> , 2016, 110, 567a.	0.5	1
35	A Fundamental Force that Regulates Nano-Clustering of Proteins in Biological Membranes. <i>Biophysical Journal</i> , 2015, 108, 18a.	0.5	0
36	Mechanism for the Generation of Robust Circadian Oscillations through Ultrasensitivity and Differential Binding Affinity. <i>Journal of Physical Chemistry B</i> , 2021, 125, 11179-11187.	2.6	0