Phillip Geissler

List of Publications by Year
in descending order

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77 papers	8,840 citations	109321 35 h-index	69250 77 g-index
81 all docs	81 docs citations	81 times ranked	8766 citing authors

#	Article	IF	Citations
1	Trade-offs between Translational and Orientational Order in 2D Superlattices of Polygonal Nanocrystals with Differing Edge Count. Nano Letters, 2022, 22, 389-395.	9.1	5
2	Local Ice-like Structure at the Liquid Water Surface. Journal of the American Chemical Society, 2022, 144, 11178-11188.	13.7	13
3	Phase Diagram of Active Brownian Spheres: Crystallization and the Metastability of Motility-Induced Phase Separation. Physical Review Letters, 2021, 126, 188002.	7.8	49
4	Quadrupole-mediated dielectric response and the charge-asymmetric solvation of ions in water. Journal of Chemical Physics, 2021, 154, 244502.	3.0	10
5	The Buckling Spectra of Nanoparticle Surfactant Assemblies. Nano Letters, 2021, 21, 7116-7122.	9.1	11
6	Molecular Properties and Chemical Transformations Near Interfaces. Journal of Physical Chemistry B, 2021, 125, 9037-9051.	2.6	17
7	Membrane hydrophobicity determines the activation free energy of passive lipid transport. Biophysical Journal, 2021, 120, 3718-3731.	0.5	13
8	The microscopic mechanism of bulk melting of ice. Journal of Chemical Physics, 2021, 155, 124501.	3.0	5
9	Elastic forces drive nonequilibrium pattern formation in a model of nanocrystal ion exchange. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	3
10	Direct observation of nanoparticle-surfactant assembly and jamming at the water-oil interface. Science Advances, 2020, 6, .	10.3	44
11	Spontaneous emulsification induced by nanoparticle surfactants. Journal of Chemical Physics, 2020, 153, 224705.	3.0	7
12	Lattice Models for Protein Organization throughout Thylakoid Membrane Stacks. Biophysical Journal, 2020, 118, 2680-2693.	0.5	3
13	Weak scaling of the contact distance between two fluctuating interfaces with system size. Physical Review E, 2020, 102, 062801.	2.1	3
14	Revisiting the Ï€Âât'ÂÏ€* transition of the nitrite ion at the air/water interface: A combined experimental and theoretical study. Chemical Physics Letters, 2020, 751, 137516.	2.6	3
15	Breakage of Hydrophobic Contacts Limits the Rate of Passive Lipid Exchange between Membranes. Journal of Physical Chemistry B, 2020, 124, 5884-5898.	2.6	15
16	Assessing long-range contributions to the charge asymmetry of ion adsorption at the airâ€“water interface. Chemical Science, 2020, 11, 11791-11800.	7.4	17
17	Origin of mean-field behavior in an elastic Ising model. Physical Review B, 2020, 102, .	3.2	8
18	Consequences of Lattice Mismatch for Phase Equilibrium in Heterostructured Solids. Physical Review Letters, 2019, 123, 135701.	7.8	13

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19	A Predictive Approach for the Optical Control of Carbonic Anhydrase II Activity. ACS Chemical Biology, 2018, 13, 793-800.	3.4	19
20	Reconfigurable Printed Liquids. Advanced Materials, 2018, 30, e1707603.	21.0	132
21	Rare behavior of growth processes via umbrella sampling of trajectories. Physical Review E, 2018, 97, 032123.	2.1	46
22	Using Graphene Liquid Cell Electron Microscopy to Elucidate Nanocrystal Etching Mechanisms. Microscopy and Microanalysis, 2018, 24, 246-247.	0.4	0
23	Interfacial ion solvation: Obtaining the thermodynamic limit from molecular simulations. Journal of Chemical Physics, 2018, 148, 222823.	3.0	17
24	Unraveling Kinetically-Driven Mechanisms of Gold Nanocrystal Shape Transformations Using Graphene Liquid Cell Electron Microscopy. Nano Letters, 2018, 18, 5731-5737.	9.1	64
25	Robust nonequilibrium pathways to microcompartment assembly. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 6341-6346.	7.1	45
26	From AÎ² Filament to Fibril: Molecular Mechanism of Surface-Activated Secondary Nucleation from All-Atom MD Simulations. Journal of Physical Chemistry B, 2017, 121, 671-682.	2.6	34
27	Mechanism of ion adsorption to aqueous interfaces: Graphene/water vs. air/water. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 13369-13373.	7.1	84
28	Hydrogen and Electric Power Generation from Liquid Microjets: Design Principles for Optimizing Conversion Efficiency. Journal of Physical Chemistry C, 2016, 120, 14513-14521.	3.1	13
29	Near-optimal protocols in complex nonequilibrium transformations. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 10263-10268.	7.1	36
30	Microscopic origin and macroscopic implications of lane formation in mixtures of oppositely driven particles. Physical Review E, 2016, 94, 022608.	2.1	32
31	Single-particle mapping of nonequilibrium nanocrystal transformations. Science, 2016, 354, 874-877.	12.6	204
32	Ligand-Mediated Interactions between Nanoscale Surfaces Depend Sensitively and Nonlinearly on Temperature, Facet Dimensions, and Ligand Coverage. ACS Nano, 2016, 10, 1877-1887.	14.6	41
33	Exploiting non-equilibrium phase separation for self-assembly. Soft Matter, 2016, 12, 1517-1524.	2.7	26
34	Size-dependent protein segregation at membraneÂinterfaces. Nature Physics, 2016, 12, 704-711.	16.7	126
35	Necessity of capillary modes in a minimal model of nanoscale hydrophobic solvation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E2224-30.	7.1	30
36	Dynamics of Seeded AÎ²₄₀-Fibril Growth from Atomistic Molecular Dynamics Simulations: Kinetic Trapping and Reduced Water Mobility in the Locking Step. Journal of the American Chemical Society, 2016, 138, 527-539.	13.7	77

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37	The More the Tubular: Dynamic Bundling of Actin Filaments for Membrane Tube Formation. PLoS Computational Biology, 2016, 12, e1004982.	3.2	23
38	Preserving correlations between trajectories for efficient path sampling. Journal of Chemical Physics, 2015, 142, 234104.	3.0	16
39	Fluctuations within Folded Proteins: Implications for Thermodynamic and Allosteric Regulation. Accounts of Chemical Research, 2015, 48, 1098-1105.	15.6	48
40	Atomic Force Microscopy of Photosystem II and Its Unit Cell Clustering Quantitatively Delineate the Mesoscale Variability in Arabidopsis Thylakoids. PLoS ONE, 2014, 9, e101470.	2.5	21
41	Rare-event trajectory ensemble analysis reveals metastable dynamical phases in lattice proteins. Physical Review E, 2014, 89, 032109.	2.1	24
42	Putting Water on a Lattice: The Importance of Long Wavelength Density Fluctuations in Theories of Hydrophobic and Interfacial Phenomena. Physical Review Letters, 2014, 112, 020603.	7.8	29
43	Heterogeneity-induced large deviations in activity and (in some cases) entropy production. Physical Review E, 2014, 90, 042123.	2.1	10
44	Dynamic phase transitions in simple driven kinetic networks. Physical Review E, 2014, 89, 062108.	2.1	44
45	Extensive Conformational Heterogeneity within Protein Cores. Journal of Physical Chemistry B, 2014, 118, 6417-6423.	2.6	34
46	Adsorption of solutes at liquidâ€“vapor interfaces: insights from lattice gas models. Faraday Discussions, 2013, 160, 63-74.	3.2	15
47	Coexistence of Fluid and Crystalline Phases of Proteins in Photosynthetic Membranes. Biophysical Journal, 2013, 105, 1161-1170.	0.5	31
48	Water Interfaces, Solvation, and Spectroscopy. Annual Review of Physical Chemistry, 2013, 64, 317-337.	10.8	81
49	Coarse-grained computer simulation of dynamics in thylakoid membranes: methods and opportunities. Frontiers in Plant Science, 2013, 4, 555.	3.6	10
50	Elucidating the mechanism of selective ion adsorption to the liquid water surface. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 701-705.	7.1	202
51	Membrane bending by proteinâ€“protein crowding. Nature Cell Biology, 2012, 14, 944-949.	10.3	463
52	Equilibrium fluctuations of a single folded protein reveal a multitude of potential cryptic allosteric sites. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11681-11686.	7.1	234
53	Ambiguities in surface nonlinear spectroscopy calculations. Chemical Physics Letters, 2011, 516, 115-124.	2.6	46
54	Long-Range Intra-Protein Communication Can Be Transmitted by Correlated Side-Chain Fluctuations Alone. PLoS Computational Biology, 2011, 7, e1002168.	3.2	57

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55	Large-scale simulations of fluctuating biological membranes. Journal of Chemical Physics, 2010, 132, 154107.	3.0	11
56	On the fluctuations that drive small ions toward, and away from, interfaces between polar liquids and their vapors. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 15125-15130.	7.1	66
57	Statistical mechanics of sum frequency generation spectroscopy for the liquidâ€“vapor interface of dilute aqueous salt solutions. Chemical Physics Letters, 2009, 470, 21-27.	2.6	10
58	Toward a Simple Molecular Understanding of Sum Frequency Generation at Airâ^'Water Interfaces. Journal of Physical Chemistry B, 2009, 113, 4065-4074.	2.6	26
59	Calculation of Proteinsâ€™ Total Side-Chain Torsional Entropy and Its Influence on Proteinâ€“Ligand Interactions. Journal of Molecular Biology, 2009, 391, 484-497.	4.2	47
60	The Limited Role of Nonnative Contacts in the Folding Pathways of a Lattice Protein. Journal of Molecular Biology, 2009, 392, 1303-1314.	4.2	40
61	Avoiding unphysical kinetic traps in Monte Carlo simulations of strongly attractive particles. Journal of Chemical Physics, 2007, 127, 154101.	3.0	168
62	The Effects of Dissolved Halide Anions on Hydrogen Bonding in Liquid Water. Journal of the American Chemical Society, 2007, 129, 13847-13856.	13.7	416
63	Peptides Adsorbed on Hydrophobic Surfacesâ€”A Sum Frequency Generation Vibrational Spectroscopy and Modeling Study. Israel Journal of Chemistry, 2007, 47, 51-58.	2.3	33
64	Short-ranged attractions in jammed liquids: How cooling can melt a glass. Physical Review E, 2005, 71, 031206.	2.1	16
65	Unified description of temperature-dependent hydrogen-bond rearrangements in liquid water. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 14171-14174.	7.1	369
66	Hydrogen bonds in liquid water are broken only fleetingly. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 13019-13022.	7.1	465
67	Electric Field Fluctuations Drive Vibrational Dephasing in Water. Journal of Physical Chemistry A, 2005, 109, 9424-9436.	2.5	150
68	Temperature Dependence of Inhomogeneous Broadening:Â On the Meaning of Isosbestic Points. Journal of the American Chemical Society, 2005, 127, 14930-14935.	13.7	98
69	Ultrafast Hydrogen-Bond Dynamics in the Infrared Spectroscopy of Water. Science, 2003, 301, 1698-1702.	12.6	894
70	Transition Path Sampling. Advances in Chemical Physics, 2003, , 1-78.	0.3	310
71	Reversible stretching of random heteropolymers. Physical Review E, 2002, 65, 056110.	2.1	23
72	Mechanical Response of Random Heteropolymers. Macromolecules, 2002, 35, 4429-4436.	4.8	18

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73	TRANSITIONPATHSAMPLING: Throwing Ropes Over Rough Mountain Passes, in the Dark. Annual Review of Physical Chemistry, 2002, 53, 291-318.	10.8	1,704
74	Autoionization in Liquid Water. Science, 2001, 291, 2121-2124.	12.6	672
75	Scaling of Hydrophobic Solvation Free Energiesâ€. Journal of Physical Chemistry B, 2001, 105, 6704-6709.	2.6	238
76	Importance sampling and theory of nonequilibrium solvation dynamics in water. Journal of Chemical Physics, 2000, 113, 9759-9765.	3.0	88
77	Kinetic Pathways of Ion Pair Dissociation in Water. Journal of Physical Chemistry B, 1999, 103, 3706-3710.	2.6	310