

# Phillip Geissler

## List of Publications by Year in descending order

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77  
papers

8,840  
citations

109137

35  
h-index

69108

77  
g-index

81  
all docs

81  
docs citations

81  
times ranked

8766  
citing authors

#	ARTICLE	IF	CITATIONS
1	TRANSITIONPATHSAMPLING: Throwing Ropes Over Rough Mountain Passes, in the Dark. Annual Review of Physical Chemistry, 2002, 53, 291-318.	4.8	1,704
2	Ultrafast Hydrogen-Bond Dynamics in the Infrared Spectroscopy of Water. Science, 2003, 301, 1698-1702.	6.0	894
3	Autoionization in Liquid Water. Science, 2001, 291, 2121-2124.	6.0	672
4	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.	3.3	465
5	Membrane bending by proteinâ€“protein crowding. Nature Cell Biology, 2012, 14, 944-949.	4.6	463
6	The Effects of Dissolved Halide Anions on Hydrogen Bonding in Liquid Water. Journal of the American Chemical Society, 2007, 129, 13847-13856.	6.6	416
7	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.	3.3	369
8	Kinetic Pathways of Ion Pair Dissociation in Water. Journal of Physical Chemistry B, 1999, 103, 3706-3710.	1.2	310
9	Transition Path Sampling. Advances in Chemical Physics, 2003, , 1-78.	0.3	310
10	Scaling of Hydrophobic Solvation Free Energiesâ€“. Journal of Physical Chemistry B, 2001, 105, 6704-6709.	1.2	238
11	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.	3.3	234
12	Single-particle mapping of nonequilibrium nanocrystal transformations. Science, 2016, 354, 874-877.	6.0	204
13	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.	3.3	202
14	Avoiding unphysical kinetic traps in Monte Carlo simulations of strongly attractive particles. Journal of Chemical Physics, 2007, 127, 154101.	1.2	168
15	Electric Field Fluctuations Drive Vibrational Dephasing in Water. Journal of Physical Chemistry A, 2005, 109, 9424-9436.	1.1	150
16	Reconfigurable Printed Liquids. Advanced Materials, 2018, 30, e1707603.	11.1	132
17	Size-dependent protein segregation at membrane interfaces. Nature Physics, 2016, 12, 704-711.	6.5	126
18	Temperature Dependence of Inhomogeneous Broadening: On the Meaning of Isosbestic Points. Journal of the American Chemical Society, 2005, 127, 14930-14935.	6.6	98

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19	Importance sampling and theory of nonequilibrium solvation dynamics in water. <i>Journal of Chemical Physics</i> , 2000, 113, 9759-9765.	1.2	88
20	Mechanism of ion adsorption to aqueous interfaces: Graphene/water vs. air/water. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 13369-13373.	3.3	84
21	Water Interfaces, Solvation, and Spectroscopy. <i>Annual Review of Physical Chemistry</i> , 2013, 64, 317-337.	4.8	81
22	Dynamics of Seeded $\alpha$ -Synuclein Fibril Growth from Atomistic Molecular Dynamics Simulations: Kinetic Trapping and Reduced Water Mobility in the Locking Step. <i>Journal of the American Chemical Society</i> , 2016, 138, 527-539.	6.6	77
23	On the fluctuations that drive small ions toward, and away from, interfaces between polar liquids and their vapors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 15125-15130.	3.3	66
24	Unraveling Kinetically-Driven Mechanisms of Gold Nanocrystal Shape Transformations Using Graphene Liquid Cell Electron Microscopy. <i>Nano Letters</i> , 2018, 18, 5731-5737.	4.5	64
25	Long-Range Intra-Protein Communication Can Be Transmitted by Correlated Side-Chain Fluctuations Alone. <i>PLoS Computational Biology</i> , 2011, 7, e1002168.	1.5	57
26	Phase Diagram of Active Brownian Spheres: Crystallization and the Metastability of Motility-Induced Phase Separation. <i>Physical Review Letters</i> , 2021, 126, 188002.	2.9	49
27	Fluctuations within Folded Proteins: Implications for Thermodynamic and Allosteric Regulation. <i>Accounts of Chemical Research</i> , 2015, 48, 1098-1105.	7.6	48
28	Calculation of Proteins' Total Side-Chain Torsional Entropy and Its Influence on Protein-Ligand Interactions. <i>Journal of Molecular Biology</i> , 2009, 391, 484-497.	2.0	47
29	Ambiguities in surface nonlinear spectroscopy calculations. <i>Chemical Physics Letters</i> , 2011, 516, 115-124.	1.2	46
30	Rare behavior of growth processes via umbrella sampling of trajectories. <i>Physical Review E</i> , 2018, 97, 032123.	0.8	46
31	Robust nonequilibrium pathways to microcompartment assembly. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 6341-6346.	3.3	45
32	Dynamic phase transitions in simple driven kinetic networks. <i>Physical Review E</i> , 2014, 89, 062108.	0.8	44
33	Direct observation of nanoparticle-surfactant assembly and jamming at the water-oil interface. <i>Science Advances</i> , 2020, 6, .	4.7	44
34	Ligand-Mediated Interactions between Nanoscale Surfaces Depend Sensitive and Nonlinearly on Temperature, Facet Dimensions, and Ligand Coverage. <i>ACS Nano</i> , 2016, 10, 1877-1887.	7.3	41
35	The Limited Role of Nonnative Contacts in the Folding Pathways of a Lattice Protein. <i>Journal of Molecular Biology</i> , 2009, 392, 1303-1314.	2.0	40
36	Near-optimal protocols in complex nonequilibrium transformations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 10263-10268.	3.3	36

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37	Extensive Conformational Heterogeneity within Protein Cores. <i>Journal of Physical Chemistry B</i> , 2014, 118, 6417-6423.	1.2	34
38	From $\alpha^2$ Filament to Fibril: Molecular Mechanism of Surface-Activated Secondary Nucleation from All-Atom MD Simulations. <i>Journal of Physical Chemistry B</i> , 2017, 121, 671-682.	1.2	34
39	Peptides Adsorbed on Hydrophobic Surfaces—A Sum Frequency Generation Vibrational Spectroscopy and Modeling Study. <i>Israel Journal of Chemistry</i> , 2007, 47, 51-58.	1.0	33
40	Microscopic origin and macroscopic implications of lane formation in mixtures of oppositely driven particles. <i>Physical Review E</i> , 2016, 94, 022608.	0.8	32
41	Coexistence of Fluid and Crystalline Phases of Proteins in Photosynthetic Membranes. <i>Biophysical Journal</i> , 2013, 105, 1161-1170.	0.2	31
42	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.	3.3	30
43	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.	2.9	29
44	Toward a Simple Molecular Understanding of Sum Frequency Generation at Air–Water Interfaces. <i>Journal of Physical Chemistry B</i> , 2009, 113, 4065-4074.	1.2	26
45	Exploiting non-equilibrium phase separation for self-assembly. <i>Soft Matter</i> , 2016, 12, 1517-1524.	1.2	26
46	Rare-event trajectory ensemble analysis reveals metastable dynamical phases in lattice proteins. <i>Physical Review E</i> , 2014, 89, 032109.	0.8	24
47	Reversible stretching of random heteropolymers. <i>Physical Review E</i> , 2002, 65, 056110.	0.8	23
48	The More the Tubular: Dynamic Bundling of Actin Filaments for Membrane Tube Formation. <i>PLoS Computational Biology</i> , 2016, 12, e1004982.	1.5	23
49	Atomic Force Microscopy of Photosystem II and Its Unit Cell Clustering Quantitatively Delineate the Mesoscale Variability in Arabidopsis Thylakoids. <i>PLoS ONE</i> , 2014, 9, e101470.	1.1	21
50	A Predictive Approach for the Optical Control of Carbonic Anhydrase II Activity. <i>ACS Chemical Biology</i> , 2018, 13, 793-800.	1.6	19
51	Mechanical Response of Random Heteropolymers. <i>Macromolecules</i> , 2002, 35, 4429-4436.	2.2	18
52	Interfacial ion solvation: Obtaining the thermodynamic limit from molecular simulations. <i>Journal of Chemical Physics</i> , 2018, 148, 222823.	1.2	17
53	Molecular Properties and Chemical Transformations Near Interfaces. <i>Journal of Physical Chemistry B</i> , 2021, 125, 9037-9051.	1.2	17
54	Assessing long-range contributions to the charge asymmetry of ion adsorption at the air–water interface. <i>Chemical Science</i> , 2020, 11, 11791-11800.	3.7	17

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55	Short-ranged attractions in jammed liquids: How cooling can melt a glass. <i>Physical Review E</i> , 2005, 71, 031206.	0.8	16
56	Preserving correlations between trajectories for efficient path sampling. <i>Journal of Chemical Physics</i> , 2015, 142, 234104.	1.2	16
57	Adsorption of solutes at liquid-vapor interfaces: insights from lattice gas models. <i>Faraday Discussions</i> , 2013, 160, 63-74.	1.6	15
58	Breakage of Hydrophobic Contacts Limits the Rate of Passive Lipid Exchange between Membranes. <i>Journal of Physical Chemistry B</i> , 2020, 124, 5884-5898.	1.2	15
59	Hydrogen and Electric Power Generation from Liquid Microjets: Design Principles for Optimizing Conversion Efficiency. <i>Journal of Physical Chemistry C</i> , 2016, 120, 14513-14521.	1.5	13
60	Consequences of Lattice Mismatch for Phase Equilibrium in Heterostructured Solids. <i>Physical Review Letters</i> , 2019, 123, 135701.	2.9	13
61	Membrane hydrophobicity determines the activation free energy of passive lipid transport. <i>Biophysical Journal</i> , 2021, 120, 3718-3731.	0.2	13
62	Local Ice-like Structure at the Liquid Water Surface. <i>Journal of the American Chemical Society</i> , 2022, 144, 11178-11188.	6.6	13
63	Large-scale simulations of fluctuating biological membranes. <i>Journal of Chemical Physics</i> , 2010, 132, 154107.	1.2	11
64	The Buckling Spectra of Nanoparticle Surfactant Assemblies. <i>Nano Letters</i> , 2021, 21, 7116-7122.	4.5	11
65	Statistical mechanics of sum frequency generation spectroscopy for the liquid-vapor interface of dilute aqueous salt solutions. <i>Chemical Physics Letters</i> , 2009, 470, 21-27.	1.2	10
66	Coarse-grained computer simulation of dynamics in thylakoid membranes: methods and opportunities. <i>Frontiers in Plant Science</i> , 2013, 4, 555.	1.7	10
67	Heterogeneity-induced large deviations in activity and (in some cases) entropy production. <i>Physical Review E</i> , 2014, 90, 042123.	0.8	10
68	Quadrupole-mediated dielectric response and the charge-asymmetric solvation of ions in water. <i>Journal of Chemical Physics</i> , 2021, 154, 244502.	1.2	10
69	Origin of mean-field behavior in an elastic Ising model. <i>Physical Review B</i> , 2020, 102, .	1.1	8
70	Spontaneous emulsification induced by nanoparticle surfactants. <i>Journal of Chemical Physics</i> , 2020, 153, 224705.	1.2	7
71	The microscopic mechanism of bulk melting of ice. <i>Journal of Chemical Physics</i> , 2021, 155, 124501.	1.2	5
72	Trade-offs between Translational and Orientational Order in 2D Superlattices of Polygonal Nanocrystals with Differing Edge Count. <i>Nano Letters</i> , 2022, 22, 389-395.	4.5	5

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73	Lattice Models for Protein Organization throughout Thylakoid Membrane Stacks. Biophysical Journal, 2020, 118, 2680-2693.	0.2	3
74	Weak scaling of the contact distance between two fluctuating interfaces with system size. Physical Review E, 2020, 102, 062801.	0.8	3
75	Revisiting the $\text{NO}_2^-$ transition of the nitrite ion at the air/water interface: A combined experimental and theoretical study. Chemical Physics Letters, 2020, 751, 137516.	1.2	3
76	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, .	3.3	3
77	Using Graphene Liquid Cell Electron Microscopy to Elucidate Nanocrystal Etching Mechanisms. Microscopy and Microanalysis, 2018, 24, 246-247.	0.2	0