Gregory A Voth

List of Publications by Year in descending order

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543 papers 42,572 citations

2309 101 h-index 4853 174 g-index

596 all docs

596 docs citations

596 times ranked

23834 citing authors

#	Article	IF	CITATIONS
1	A Multiscale Coarse-Graining Method for Biomolecular Systems. Journal of Physical Chemistry B, 2005, 109, 2469-2473.	1.2	1,018
2	Flexible simple point-charge water model with improved liquid-state properties. Journal of Chemical Physics, 2006, 124, 024503.	1.2	955
3	Unique Spatial Heterogeneity in Ionic Liquids. Journal of the American Chemical Society, 2005, 127, 12192-12193.	6.6	919
4	The multiscale coarse-graining method. I. A rigorous bridge between atomistic and coarse-grained models. Journal of Chemical Physics, 2008, 128, 244114.	1.2	651
5	On the Structure and Dynamics of Ionic Liquids. Journal of Physical Chemistry B, 2004, 108, 1744-1752.	1.2	649
6	The computer simulation of proton transport in water. Journal of Chemical Physics, 1999, 111, 9361-9381.	1.2	557
7	Multiscale coarse graining of liquid-state systems. Journal of Chemical Physics, 2005, 123, 134105.	1.2	531
8	Rigorous formulation of quantum transition state theory and its dynamical corrections. Journal of Chemical Physics, 1989, 91, 7749-7760.	1.2	498
9	Coarse-Graining Methods for Computational Biology. Annual Review of Biophysics, 2013, 42, 73-93.	4.5	475
10	The formulation of quantum statistical mechanics based on the Feynman path centroid density. II. Dynamical properties. Journal of Chemical Physics, 1994, 100, 5106-5117.	1.2	454
11	Molecular Dynamics Simulation of Nanostructural Organization in Ionic Liquid/Water Mixturesâ€. Journal of Physical Chemistry B, 2007, 111, 4812-4818.	1.2	431
12	Ab initio molecular dynamics: Propagating the density matrix with Gaussian orbitals. III. Comparison with Born–Oppenheimer dynamics. Journal of Chemical Physics, 2002, 117, 8694-8704.	1.2	430
13	Multistate Empirical Valence Bond Model for Proton Transport in Water. Journal of Physical Chemistry B, 1998, 102, 5547-5551.	1.2	397
14	Computer Simulation of Proton Solvation and Transport in Aqueous and Biomolecular Systems. Accounts of Chemical Research, 2006, 39, 143-150.	7.6	395
15	Multiscale modeling of biomolecular systems: in serial and in parallel. Current Opinion in Structural Biology, 2007, 17, 192-198.	2.6	395
16	Molecular Dynamics Simulation of Ionic Liquids:  The Effect of Electronic Polarizability. Journal of Physical Chemistry B, 2004, 108, 11877-11881.	1.2	393
17	Tail Aggregation and Domain Diffusion in Ionic Liquids. Journal of Physical Chemistry B, 2006, 110, 18601-18608.	1.2	387
18	Effective force fields for condensed phase systems from ab initio molecular dynamics simulation: A new method for force-matching. Journal of Chemical Physics, 2004, 120, 10896-10913.	1.2	383

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19	Ab initio molecular dynamics: Propagating the density matrix with Gaussian orbitals. II. Generalizations based on mass-weighting, idempotency, energy conservation and choice of initial conditions. Journal of Chemical Physics, 2001, 115, 10291.	1.2	375
20	The quantum dynamics of an excess proton in water. Journal of Chemical Physics, 1996, 104, 2056-2069.	1.2	328
21	The multiscale coarse-graining method. II. Numerical implementation for coarse-grained molecular models. Journal of Chemical Physics, 2008, 128, 244115.	1.2	326
22	Understanding Ionic Liquids through Atomistic and Coarse-Grained Molecular Dynamics Simulations. Accounts of Chemical Research, 2007, 40, 1193-1199.	7.6	304
23	The formulation of quantum statistical mechanics based on the Feynman path centroid density. IV. Algorithms for centroid molecular dynamics. Journal of Chemical Physics, 1994, 101, 6168-6183.	1.2	299
24	The formulation of quantum statistical mechanics based on the Feynman path centroid density. I. Equilibrium properties. Journal of Chemical Physics, 1994, 100, 5093-5105.	1.2	298
25	Special Pair Dance and Partner Selection: Elementary Steps in Proton Transport in Liquid Water. Journal of Physical Chemistry B, 2008, 112, 9456-9466.	1.2	291
26	A second generation multistate empirical valence bond model for proton transport in aqueous systems. Journal of Chemical Physics, 2002, 117, 5839-5849.	1,2	285
27	Proton Solvation and Transport in Aqueous and Biomolecular Systems:Â Insights from Computer Simulations. Journal of Physical Chemistry B, 2007, 111, 4300-4314.	1.2	279
28	The Curious Case of the Hydrated Proton. Accounts of Chemical Research, 2012, 45, 101-109.	7.6	266
29	A derivation of centroid molecular dynamics and other approximate time evolution methods for path integral centroid variables. Journal of Chemical Physics, 1999, 111, 2371-2384.	1.2	261
30	Ionic Liquids. Accounts of Chemical Research, 2007, 40, 1077-1078.	7.6	259
31	The Hydrated Proton at the Water Liquid/Vapor Interface. Journal of Physical Chemistry B, 2004, 108, 14804-14806.	1.2	255
32	Well-Tempered Metadynamics Converges Asymptotically. Physical Review Letters, 2014, 112, 240602.	2.9	248
33	When Physics Takes Over: BAR Proteins and Membrane Curvature. Trends in Cell Biology, 2015, 25, 780-792.	3.6	247
34	Further developments in the local-orbital density-functional-theory tight-binding method. Physical Review B, 2001, 64, .	1.1	232
35	Mixed Atomistic and Coarse-Grained Molecular Dynamics:Â Simulation of a Membrane-Bound Ion Channel. Journal of Physical Chemistry B, 2006, 110, 15045-15048.	1.2	230
36	A bond-order analysis of the mechanism for hydrated proton mobility in liquid water. Journal of Chemical Physics, 2005, 122, 014506.	1,2	229

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37	An Improved Multistate Empirical Valence Bond Model for Aqueous Proton Solvation and Transport. Journal of Physical Chemistry B, 2008, 112, 467-482.	1.2	228
38	The formulation of quantum statistical mechanics based on the Feynman path centroid density. III. Phase space formalism and analysis of centroid molecular dynamics. Journal of Chemical Physics, 1994, 101, 6157-6167.	1.2	225
39	A new perspective on quantum time correlation functions. Journal of Chemical Physics, 1993, 99, 10070-10073.	1.2	224
40	Structural Basis of Membrane Bending by the N-BAR Protein Endophilin. Cell, 2012, 149, 137-145.	13.5	220
41	Direct observation of Bin/amphiphysin/Rvs (BAR) domain-induced membrane curvature by means of molecular dynamics simulations. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 15068-15072.	3.3	218
42	The 2018 biomembrane curvature and remodeling roadmap. Journal Physics D: Applied Physics, 2018, 51, 343001.	1.3	212
43	Hydroxide Solvation and Transport in Anion Exchange Membranes. Journal of the American Chemical Society, 2016, 138, 991-1000.	6.6	208
44	The vibrational spectrum of the hydrated proton: Comparison of experiment, simulation, and normal mode analysis. Journal of Chemical Physics, 2002, 116, 737-746.	1.2	200
45	The Properties of Water: Insights from Quantum Simulations. Journal of Physical Chemistry B, 2009, 113, 5702-5719.	1.2	199
46	Structure of the Liquidâ^'Vacuum Interface of Room-Temperature Ionic Liquids:Â A Molecular Dynamics Study. Journal of Physical Chemistry B, 2006, 110, 1800-1806.	1.2	195
47	Multiscale Coarse-Graining and Structural Correlations:Â Connections to Liquid-State Theory. Journal of Physical Chemistry B, 2007, 111, 4116-4127.	1.2	191
48	Path integral centroid variables and the formulation of their exact real time dynamics. Journal of Chemical Physics, 1999, 111, 2357-2370.	1.2	190
49	A quantum model for water: Equilibrium and dynamical properties. Journal of Chemical Physics, 1997, 106, 2400-2410.	1.2	187
50	An accurate and simple quantum model for liquid water. Journal of Chemical Physics, 2006, 125, 184507.	1.2	187
51	Modeling real dynamics in the coarse-grained representation of condensed phase systems. Journal of Chemical Physics, 2006, 125, 151101.	1.2	184
52	Mechanism of Membrane Curvature Sensing by Amphipathic Helix Containing Proteins. Biophysical Journal, 2011, 100, 1271-1279.	0.2	184
53	Molecular dynamics simulations of imidazolium-based ionic liquid/water mixtures: Alkyl side chain length and anion effects. Fluid Phase Equilibria, 2010, 294, 148-156.	1.4	182
54	The Mechanism of Hydrated Proton Transport in Water. Journal of the American Chemical Society, 2000, 122, 12027-12028.	6.6	180

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55	The Formation and Dynamics of Proton Wires in Channel Environments. Biophysical Journal, 2001, 80, 1691-1702.	0.2	178
56	Allostery of actin filaments: Molecular dynamics simulations and coarse-grained analysis. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 13111-13116.	3.3	178
57	Coarse-Grained Modeling of the Actin Filament Derived from Atomistic-Scale Simulations. Biophysical Journal, 2006, 90, 1572-1582.	0.2	178
58	Coarse-Grained Peptide Modeling Using a Systematic Multiscale Approach. Biophysical Journal, 2007, 92, 4289-4303.	0.2	176
59	Mechanism and Determinants of Amphipathic Helix-Containing Protein Targeting to Lipid Droplets. Developmental Cell, 2018, 44, 73-86.e4.	3.1	175
60	Transition State Dynamics and Relaxation Processes in Solutions:Â A Frontier of Physical Chemistry. The Journal of Physical Chemistry, 1996, 100, 13034-13049.	2.9	174
61	Multiscale Coarse-Graining of Ionic Liquidsâ€. Journal of Physical Chemistry B, 2006, 110, 3564-3575.	1.2	174
62	Characterization of the Solvation and Transport of the Hydrated Proton in the Perfluorosulfonic Acid Membrane Nafion. Journal of Physical Chemistry B, 2006, 110, 18594-18600.	1.2	171
63	Friction Mediates Scission of Tubular Membranes Scaffolded by BAR Proteins. Cell, 2017, 170, 172-184.e11.	13.5	171
64	A Systematic Methodology for Defining Coarse-Grained Sites in Large Biomolecules. Biophysical Journal, 2008, 95, 5073-5083.	0.2	153
65	The Theory of Electron Transfer Reactions:Â What May Be Missing?. Journal of the American Chemical Society, 2003, 125, 7470-7478.	6.6	152
66	Quantum effects in liquid water from an <i>ab initio</i> based polarizable force field. Journal of Chemical Physics, 2007, 127, 074506.	1.2	151
67	The Theory of Ultra-Coarse-Graining. 1. General Principles. Journal of Chemical Theory and Computation, 2013, 9, 2466-2480.	2.3	149
68	The mechanism of proton exclusion in aquaporin channels. Proteins: Structure, Function and Bioinformatics, 2004, 55, 223-228.	1.5	148
69	Systematic Multiscale Parameterization of Heterogeneous Elastic Network Models of Proteins. Biophysical Journal, 2008, 95, 4183-4192.	0.2	148
70	Path-Integral Centroid Methods in Quantum Statistical Mechanics and Dynamics. Advances in Chemical Physics, 2007, , 135-218.	0.3	145
71	Mechanism of Fast Proton Transport along One-Dimensional Water Chains Confined in Carbon Nanotubes. Journal of the American Chemical Society, 2010, 132, 11395-11397.	6.6	144
72	Linear aggregation of proteins on the membrane as a prelude to membrane remodeling. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20396-20401.	3.3	144

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73	Proton Transfer in the Enzyme Carbonic Anhydrase:Â Anab InitioStudy. Journal of the American Chemical Society, 1998, 120, 4006-4014.	6.6	143
74	Membrane tension controls the assembly of curvature-generating proteins. Nature Communications, 2015, 6, 7219.	5.8	141
75	A multiscale coarse-grained model of the SARS-CoV-2 virion. Biophysical Journal, 2021, 120, 1097-1104.	0.2	139
76	Multiscale Coarse-Graining of Mixed Phospholipid/Cholesterol Bilayers. Journal of Chemical Theory and Computation, 2006, 2, 637-648.	2.3	138
77	Atomistic Modeling of the Electrode–Electrolyte Interface in Li-Ion Energy Storage Systems: Electrolyte Structuring. Journal of Physical Chemistry C, 2013, 117, 3747-3761.	1.5	137
78	Coarse-grained simulation reveals key features of HIV-1 capsid self-assembly. Nature Communications, 2016, 7, 11568.	5.8	134
79	Hybrid Ab-Initio/Empirical Molecular Dynamics:  Combining the ONIOM Scheme with the Atom-Centered Density Matrix Propagation (ADMP) Approach. Journal of Physical Chemistry B, 2004, 108, 4210-4220.	1,2	131
80	A comparative study of imaginary time path integral based methods for quantum dynamics. Journal of Chemical Physics, 2006, 124, 154103.	1.2	131
81	Exact exchange in ab initio molecular dynamics: An efficient plane-wave based algorithm. Journal of Chemical Physics, 1998, 108, 4697-4700.	1.2	130
82	Probing Selected Morphological Models of Hydrated Nafion Using Large-Scale Molecular Dynamics Simulations. Journal of Physical Chemistry B, 2010, 114, 3205-3218.	1,2	129
83	Proton Solvation and Transport in Hydrated Nafion. Journal of Physical Chemistry B, 2011, 115, 5903-5912.	1.2	125
84	Coarse-Grained Free Energy Functions for Studying Protein Conformational Changes: A Double-Well Network Model. Biophysical Journal, 2007, 93, 3860-3871.	0.2	124
85	Effective force coarse-graining. Physical Chemistry Chemical Physics, 2009, 11, 2002.	1.3	124
86	Infrared Spectroscopy and Hydrogen-Bond Dynamics of Liquid Water from Centroid Molecular Dynamics with an Ab Initio-Based Force Field. Journal of Physical Chemistry B, 2009, 113, 13118-13130.	1,2	123
87	Excess Proton Solvation and Delocalization in a Hydrophilic Pocket of the Proton Conducting Polymer Membrane Nafion. Journal of Physical Chemistry B, 2005, 109, 3727-3730.	1,2	122
88	Applications of higher order composite factorization schemes in imaginary time path integral simulations. Journal of Chemical Physics, 2001, 115, 7832-7842.	1.2	120
89	How curvature-generating proteins build scaffolds on membrane nanotubes. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 11226-11231.	3.3	120
90	The formulation of quantum statistical mechanics based on the Feynman path centroid density. V. Quantum instantaneous normal mode theory of liquids. Journal of Chemical Physics, 1994, 101, 6184-6192.	1.2	118

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91	A Role for a Specific Cholesterol Interaction in Stabilizing the Apo Configuration of the Human A 2A Adenosine Receptor. Structure, 2009, 17, 1660-1668.	1.6	118
92	Multiscale Coarse-Graining of the Protein Energy Landscape. PLoS Computational Biology, 2010, 6, e1000827.	1.5	116
93	Charge Delocalization in Proton Channels, I: The Aquaporin Channels and Proton Blockage. Biophysical Journal, 2007, 92, 46-60.	0.2	114
94	The multiscale coarse-graining method. VI. Implementation of three-body coarse-grained potentials. Journal of Chemical Physics, 2010, 132, 164107.	1.2	113
95	Calculation of solvent free energies for heterogeneous electron transfer at the water–metal interface: Classical versus quantum behavior. Journal of Chemical Physics, 1995, 102, 529-539.	1.2	112
96	Molecular Dynamics Simulation of Proton Transport through the Influenza A Virus M2 Channel. Biophysical Journal, 2002, 83, 1987-1996.	0.2	111
97	Efficient, Regularized, and Scalable Algorithms for Multiscale Coarse-Graining. Journal of Chemical Theory and Computation, 2010, 6, 954-965.	2.3	110
98	Systematic Coarse-Graining of Nanoparticle Interactions in Molecular Dynamics Simulation. Journal of Physical Chemistry B, 2005, 109, 17019-17024.	1.2	109
99	The multiscale coarse-graining method. IV. Transferring coarse-grained potentials between temperatures. Journal of Chemical Physics, 2009, 131, 024103.	1.2	108
100	Car–Parrinello molecular dynamics simulation of liquid water: New results. Journal of Chemical Physics, 2002, 116, 10372-10376.	1.2	106
101	Nucleotide-dependent conformational states of actin. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 12723-12728.	3.3	106
102	Proton Transport Behavior through the Influenza A M2 Channel: Insights from Molecular Simulation. Biophysical Journal, 2007, 93, 3470-3479.	0.2	105
103	A Multiscale Coarse-Graining Study of the Liquid/Vacuum Interface of Room-Temperature Ionic Liquids with Alkyl Substituents of Different Lengths. Journal of Physical Chemistry C, 2008, 112, 1132-1139.	1.5	105
104	Hydrated Excess Proton at Waterâ^Hydrophobic Interfaces. Journal of Physical Chemistry B, 2009, 113, 4017-4030.	1.2	104
105	Fascin- and α-Actinin-Bundled Networks Contain Intrinsic Structural Features that Drive Protein Sorting. Current Biology, 2016, 26, 2697-2706.	1.8	104
106	A Failure of Continuum Theory:  Temperature Dependence of the Solvent Reorganization Energy of Electron Transfer in Highly Polar Solvents. Journal of Physical Chemistry B, 1999, 103, 9130-9140.	1.2	103
107	Bridging Microscopic and Mesoscopic Simulations of Lipid Bilayers. Biophysical Journal, 2002, 83, 3357-3370.	0.2	103
108	On the representability problem and the physical meaning of coarse-grained models. Journal of Chemical Physics, 2016, 145, 044108.	1.2	103

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109	Factors Influencing Local Membrane Curvature Induction by N-BAR Domains as Revealed by Molecular Dynamics Simulations. Biophysical Journal, 2008, 95, 1866-1876.	0.2	102
110	Lamellipodium is a myosin-independent mechanosensor. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 2646-2651.	3.3	101
111	Actin filament remodeling by actin depolymerization factor/cofilin. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 7299-7304.	3.3	100
112	Propensity of Hydrated Excess Protons and Hydroxide Anions for the Air–Water Interface. Journal of the American Chemical Society, 2015, 137, 12610-12616.	6.6	100
113	Advances in coarse-grained modeling of macromolecular complexes. Current Opinion in Structural Biology, 2018, 52, 119-126.	2.6	100
114	Ab initio molecular-dynamics simulation of aqueous proton solvation and transport revisited. Journal of Chemical Physics, 2005, 123, 044505.	1.2	99
115	Systematic Coarse-graining of a Multicomponent Lipid Bilayer. Journal of Physical Chemistry B, 2009, 113, 1501-1510.	1.2	99
116	Ligand-Dependent Activation and Deactivation of the Human Adenosine A2A Receptor. Journal of the American Chemical Society, 2013, 135, 8749-8759.	6.6	99
117	On the amphiphilic behavior of the hydrated proton: an ab initio molecular dynamics study. International Journal of Mass Spectrometry, 2005, 241, 197-204.	0.7	97
118	Coarse-Grained Modeling of the Self-Association of Therapeutic Monoclonal Antibodies. Journal of Physical Chemistry B, 2012, 116, 8045-8057.	1.2	97
119	Simple reversible molecular dynamics algorithms for Nosé–Hoover chain dynamics. Journal of Chemical Physics, 1997, 107, 9514-9526.	1.2	95
120	Molecular Dynamics Simulation of Proton Transport Near the Surface of a Phospholipid Membrane. Biophysical Journal, 2002, 82, 1460-1468.	0.2	93
121	A centroid molecular dynamics study of liquidpara-hydrogen andortho-deuterium. Journal of Chemical Physics, 2004, 121, 6412-6422.	1.2	92
122	A Feynman path centroid dynamics approach for the computation of time correlation functions involving nonlinear operators. Journal of Chemical Physics, 2000, 113, 919-929.	1.2	91
123	Membrane Remodeling from N-BAR Domain Interactions: Insights from Multi-Scale Simulation. Biophysical Journal, 2007, 92, 3595-3602.	0.2	91
124	Molecular Dynamics Simulations of Proton Transport in 3M and Nafion Perfluorosulfonic Acid Membranes. Journal of Physical Chemistry C, 2013, 117, 8079-8091.	1.5	91
125	Modeling the free energy surfaces of electron transfer in condensed phases. Journal of Chemical Physics, 2000, 113, 5413.	1.2	90
126	Coarse-graining of multiprotein assemblies. Current Opinion in Structural Biology, 2012, 22, 144-150.	2.6	90

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127	Efficient and Minimal Method to Bias Molecular Simulations with Experimental Data. Journal of Chemical Theory and Computation, 2014, 10, 3023-3030.	2.3	90
128	Quantum-mechanical reaction rate constants from centroid molecular dynamics simulations. Journal of Chemical Physics, 2001, 115, 9209-9222.	1.2	86
129	Multiscale Coarse-Graining of Monosaccharides. Journal of Physical Chemistry B, 2007, 111, 11566-11575.	1.2	86
130	Solvent-Free Lipid Bilayer Model Using Multiscale Coarse-Graining. Journal of Physical Chemistry B, 2009, 113, 4443-4455.	1.2	86
131	Dynamic force matching: A method for constructing dynamical coarse-grained models with realistic time dependence. Journal of Chemical Physics, 2015, 142, 154104.	1.2	86
132	Immature HIV-1 lattice assembly dynamics are regulated by scaffolding from nucleic acid and the plasma membrane. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E10056-E10065.	3.3	86
133	A unified framework for quantum activated rate processes. I. General theory. Journal of Chemical Physics, 1996, 105, 6856-6870.	1.2	85
134	Ab initio centroid molecular dynamics: a fully quantum method for condensed-phase dynamics simulations. Chemical Physics Letters, 1999, 300, 93-98.	1.2	84
135	Elucidation of the Proton Transport Mechanism in Human Carbonic Anhydrase II. Journal of the American Chemical Society, 2009, 131, 7598-7608.	6.6	84
136	Structure and Dynamics of the Actin Filament. Journal of Molecular Biology, 2010, 396, 252-263.	2.0	84
137	Proton Transport Mechanism of Perfluorosulfonic Acid Membranes. Journal of Physical Chemistry C, 2014, 118, 17436-17445.	1.5	84
138	Peptide Folding Using Multiscale Coarse-Grained Models. Journal of Physical Chemistry B, 2008, 112, 13079-13090.	1.2	83
139	Hydrated Excess Protons Can Create Their Own Water Wires. Journal of Physical Chemistry B, 2015, 119, 9212-9218.	1.2	83
140	Classical and Quantum Simulation of Electron Transfer Through a Polypeptide. Journal of Physical Chemistry B, 1999, 103, 7367-7382.	1.2	82
141	Ab Initio Calculations of Reactive Pathways for α-Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (α-HMX). Journal of Physical Chemistry A, 2000, 104, 11384-11389.	1.1	82
142	Computer simulation of explicit proton translocation in cytochrome c oxidase: The D-pathway. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 6795-6800.	3.3	82
143	Defining Coarse-Grained Representations of Large Biomolecules and Biomolecular Complexes from Elastic Network Models. Biophysical Journal, 2009, 97, 2327-2337.	0.2	82
144	Ab initiomolecular dynamics simulation of the Ag(111)-water interface. Journal of Chemical Physics, 2001, 115, 7196-7206.	1.2	81

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145	Understanding the Role of Amphipathic Helices in N-BAR Domain Driven Membrane Remodeling. Biophysical Journal, 2013, 104, 404-411.	0.2	81
146	Multiscale simulation reveals a multifaceted mechanism of proton permeation through the influenza A M2 proton channel. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 9396-9401.	3.3	81
147	Acid activation mechanism of the influenza A M2 proton channel. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E6955-E6964.	3.3	81
148	Proton movement and coupling in the POT family of peptide transporters. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 13182-13187.	3.3	81
149	A novel method for simulating quantum dissipative systems. Journal of Chemical Physics, 1996, 104, 4189-4197.	1.2	80
150	Mechanisms of Passive Ion Permeation through Lipid Bilayers:Â Insights from Simulations. Journal of Physical Chemistry B, 2006, 110, 21327-21337.	1.2	80
151	A path integral study of electronic polarization and nonlinear coupling effects in condensed phase proton transfer reactions. Journal of Chemical Physics, 1994, 100, 3039-3047.	1.2	79
152	Ab initio molecular dynamics simulation of the Cu(110)–water interface. Journal of Chemical Physics, 2001, 114, 3248-3257.	1.2	79
153	A Multi-State Empirical Valence Bond Model for Weak Acid Dissociation in Aqueous Solutionâ€. Journal of Physical Chemistry A, 2001, 105, 2814-2823.	1.1	78
154	A linear-scaling self-consistent generalization of the multistate empirical valence bond method for multiple excess protons in aqueous systems. Journal of Chemical Physics, 2005, 122, 144105.	1.2	78
155	Molecular Dynamics Simulation of the Energetic Room-Temperature Ionic Liquid, 1-Hydroxyethyl-4-amino-1,2,4-triazolium Nitrate (HEATN). Journal of Physical Chemistry B, 2008, 112, 3121-3131.	1.2	78
156	Nanostructural Organization in Acetonitrile/Ionic Liquid Mixtures: Molecular Dynamics Simulations and Optical Kerr Effect Spectroscopy. ChemPhysChem, 2012, 13, 1687-1700.	1.0	78
157	Protein-Mediated Transformation of Lipid Vesicles into Tubular Networks. Biophysical Journal, 2013, 105, 711-719.	0.2	77
158	Fitting coarse-grained distribution functions through an iterative force-matching method. Journal of Chemical Physics, 2013, 139, 121906.	1.2	77
159	Vibrational energy relaxation of Si–H stretching modes on the H/Si(111)1×1 surface. Journal of Chemical Physics, 1993, 99, 740-743.	1.2	76
160	The Role of Amino Acid Sequence in the Self-Association of Therapeutic Monoclonal Antibodies: Insights from Coarse-Grained Modeling. Journal of Physical Chemistry B, 2013, 117, 1269-1279.	1.2	76
161	Competition between Tropomyosin, Fimbrin, and ADF/Cofilin drives their sorting to distinct actin filament networks. ELife, 2017, 6, .	2.8	76
162	Semiclassical approximations to quantum dynamical time correlation functions. Journal of Chemical Physics, 1996, 104, 273-285.	1.2	75

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163	Transferable Coarse-Grained Models for Ionic Liquids. Journal of Chemical Theory and Computation, 2009, 5, 1091-1098.	2.3	7 5
164	Multiscale Computer Simulation of the Immature HIV-1 Virion. Biophysical Journal, 2010, 99, 2757-2765.	0.2	75
165	Kinetics of Proton Migration in Liquid Water. Journal of Physical Chemistry B, 2010, 114, 333-339.	1.2	75
166	New Insights into BAR Domain-Induced Membrane Remodeling. Biophysical Journal, 2009, 97, 1616-1625.	0.2	74
167	Role of Protein Interactions in Defining HIV-1 Viral Capsid Shape and Stability: A Coarse-Grained Analysis. Biophysical Journal, 2010, 98, 18-26.	0.2	74
168	Unraveling the Mystery of ATP Hydrolysis in Actin Filaments. Journal of the American Chemical Society, 2014, 136, 13053-13058.	6.6	74
169	Origins of Proton Transport Behavior from Selectivity Domain Mutations of the Aquaporin-1 Channel. Biophysical Journal, 2006, 90, L73-L75.	0.2	73
170	Infrared Spectrum of the Hydrated Proton in Water. Journal of Physical Chemistry Letters, 2011, 2, 81-86.	2.1	72
171	Pseudopotentials for centroid molecular dynamics: Application to self-diffusion in liquid para-hydrogen. Chemical Physics Letters, 1996, 249, 231-236.	1.2	71
172	Ab initio molecular dynamics: Propagating the density matrix with gaussian orbitals. IV. Formal analysis of the deviations from born-oppenheimer dynamics. Israel Journal of Chemistry, 2002, 42, 191-202.	1.0	71
173	Coupling Field Theory with Continuum Mechanics: A Simulation of Domain Formation in Giant Unilamellar Vesicles. Biophysical Journal, 2005, 88, 3855-3869.	0.2	71
174	A theory for the activated barrier crossing rate constant in systems influenced by space and time dependent friction. Journal of Chemical Physics, 1994, 101, 7811-7822.	1.2	70
175	A theory for adiabatic bond breaking electron transfer reactions at metal electrodes. Chemical Physics Letters, 1998, 282, 100-106.	1.2	70
176	Transition-Tempered Metadynamics: Robust, Convergent Metadynamics via On-the-Fly Transition Barrier Estimation. Journal of Chemical Theory and Computation, 2014, 10, 3626-3633.	2.3	70
177	Effective Force Field for Liquid Hydrogen Fluoride from Ab Initio Molecular Dynamics Simulation Using the Force-Matching Methodâ€. Journal of Physical Chemistry B, 2005, 109, 6573-6586.	1.2	68
178	Storage of an Excess Proton in the Hydrogen-Bonded Network of the D-Pathway of Cytochrome c Oxidase:  Identification of a Protonated Water Cluster. Journal of the American Chemical Society, 2007, 129, 2910-2913.	6.6	68
179	Role of Presolvation and Anharmonicity in Aqueous Phase Hydrated Proton Solvation and Transport. Journal of Physical Chemistry B, 2016, 120, 1793-1804.	1.2	68
180	Semiclassical molecular dynamics computation of spontaneous light emission in the condensed phase: Resonance Raman spectra. Journal of Chemical Physics, 2001, 114, 7130-7143.	1.2	67

#	Article	lF	CITATIONS
181	The Self-Consistent Charge Density Functional Tight Binding Method Applied to Liquid Water and the Hydrated Excess Proton: Benchmark Simulations. Journal of Physical Chemistry B, 2010, 114, 6922-6931.	1.2	67
182	Multiscale reactive molecular dynamics. Journal of Chemical Physics, 2012, 137, 22A525.	1.2	67
183	Early Stages of the HIV-1 Capsid Protein Lattice Formation. Biophysical Journal, 2012, 103, 1774-1783.	0.2	66
184	Mechanoregulated inhibition of formin facilitates contractile actomyosin ring assembly. Nature Communications, 2017, 8, 703.	5.8	66
185	Quantum time correlation functions and classical coherence. Chemical Physics, 1998, 233, 243-255.	0.9	65
186	A coarse-grained model for double-helix molecules in solution: Spontaneous helix formation and equilibrium properties. Journal of Chemical Physics, 2005, 122, 124906.	1.2	65
187	Structure of Hydrated Naâ^'Nafion Polymer Membranes. Journal of Physical Chemistry B, 2005, 109, 24244-24253.	1.2	65
188	The multiscale coarse-graining method. VII. Free energy decomposition of coarse-grained effective potentials. Journal of Chemical Physics, 2011, 134, 224107.	1.2	65
189	Insights into the Mechanism of Proton Transport in Cytochrome <i>c</i> Oxidase. Journal of the American Chemical Society, 2012, 134, 1147-1152.	6.6	64
190	Hybrid Approach for Highly Coarse-Grained Lipid Bilayer Models. Journal of Chemical Theory and Computation, 2013, 9, 750-765.	2.3	64
191	The highly excited C–H stretching states of CHD3, CHT3, and CH3D. Journal of Chemical Physics, 1984, 81, 5494-5507.	1.2	63
192	A unified framework for quantum activated rate processes. II. The nonadiabatic limit. Journal of Chemical Physics, 1997, 106, 1769-1779.	1.2	63
193	Quantum effects and the excess proton in water. Journal of Chemical Physics, 1997, 107, 7428-7432.	1.2	63
194	A Computer Simulation Study of the Hydrated Proton in a Synthetic Proton Channel. Biophysical Journal, 2003, 85, 864-875.	0.2	63
195	Computationally Efficient Multiconfigurational Reactive Molecular Dynamics. Journal of Chemical Theory and Computation, 2012, 8, 4863-4875.	2.3	63
196	An analysis of hydrated proton diffusion in <i>ab initio</i> molecular dynamics. Journal of Chemical Physics, 2015, 142, 014104.	1.2	63
197	A perturbation theory for solvation thermodynamics: Dipolar–quadrupolar liquids. Journal of Chemical Physics, 1999, 111, 3630-3638.	1.2	62
198	A Multistate Empirical Valence Bond Description of Protonatable Amino Acidsâ€. Journal of Physical Chemistry A, 2006, 110, 631-639.	1.1	62

#	Article	IF	CITATIONS
199	Gating of the Mechanosensitive Channel Protein MscL: The Interplay of Membrane and Protein. Biophysical Journal, 2008, 94, 3497-3511.	0.2	62
200	Hierarchical coarse-graining strategy for protein-membrane systems to access mesoscopic scales. Faraday Discussions, 2010, 144, 347-357.	1.6	62
201	Molecular dynamics simulations of human carbonic anhydrase II: Insight into experimental results and the role of solvation. Proteins: Structure, Function and Bioinformatics, 1998, 33, 119-134.	1.5	61
202	KINETIC MONTE CARLO–MOLECULAR DYNAMICS APPROACH TO MODEL SOOT INCEPTION. Combustion Science and Technology, 2004, 176, 991-1005.	1.2	61
203	Charge Delocalization in Proton Channels, II: The Synthetic LS2 Channel and Proton Selectivity. Biophysical Journal, 2007, 92, 61-69.	0.2	61
204	Intrinsic Bending and Structural Rearrangement of Tubulin Dimer: Molecular Dynamics Simulations and Coarse-Grained Analysis. Biophysical Journal, 2008, 95, 2487-2499.	0.2	61
205	Coarse-Graining in Interaction Space:  A Systematic Approach for Replacing Long-Range Electrostatics with Short-Range Potentials. Journal of Physical Chemistry B, 2008, 112, 4711-4724.	1.2	61
206	Combined Metadynamics and Umbrella Sampling Method for the Calculation of Ion Permeation Free Energy Profiles. Journal of Chemical Theory and Computation, 2011, 7, 2277-2283.	2.3	61
207	Enhancement of Proton Conductance by Mutations of the Selectivity Filter of Aquaporin-1. Journal of Molecular Biology, 2011, 407, 607-620.	2.0	61
208	IR spectral assignments for the hydrated excess proton in liquid water. Journal of Chemical Physics, 2017, 146, 154507.	1.2	61
209	Atom-Centered Density Matrix Propagation (ADMP):  Generalizations Using Bohmian Mechanics. Journal of Physical Chemistry Å, 2003, 107, 7269-7277.	1.1	60
210	The Theory of Ultra-Coarse-Graining. 2. Numerical Implementation. Journal of Chemical Theory and Computation, 2014, 10, 5265-5275.	2.3	60
211	Multiscale simulations reveal key features of the proton-pumping mechanism in cytochrome <i>c</i> oxidase. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7420-7425.	3.3	60
212	Protons May Leak through Pure Lipid Bilayers via a Concerted Mechanism. Biophysical Journal, 2005, 88, 3095-3108.	0.2	58
213	A Computationally Efficient Treatment of Polarizable Electrochemical Cells Held at a Constant Potential. Journal of Physical Chemistry C, 2012, 116, 4903-4912.	1.5	57
214	Analytic expression for the transmission coefficient in quantum mechanical transition state theory. Chemical Physics Letters, 1990, 170, 289-296.	1.2	56
215	Multiscale coupling of mesoscopic- and atomistic-level lipid bilayer simulations. Journal of Chemical Physics, 2005, 122, 244716.	1.2	56
216	A Computer Simulation Model for Proton Transport in Liquid Imidazole. Journal of Physical Chemistry A, 2009, 113, 4507-4517.	1.1	56

#	Article	IF	CITATIONS
217	Hybrid Coarse-Graining Approach for Lipid Bilayers at Large Length and Time Scales. Journal of Physical Chemistry B, 2009, 113, 4413-4424.	1.2	56
218	Properties of Hydrated Excess Protons near Phospholipid Bilayers. Journal of Physical Chemistry B, 2010, 114, 592-603.	1.2	56
219	Chemical Rescue of Enzymes: Proton Transfer in Mutants of Human Carbonic Anhydrase II. Journal of the American Chemical Society, 2011, 133, 6223-6234.	6.6	56
220	Molecular Mechanism of Membrane Binding of the GRP1 PH Domain. Journal of Molecular Biology, 2013, 425, 3073-3090.	2.0	56
221	Application of the SCC-DFTB Method to Hydroxide Water Clusters and Aqueous Hydroxide Solutions. Journal of Physical Chemistry B, 2013, 117, 5165-5179.	1.2	56
222	Dynamic Protonation Dramatically Affects the Membrane Permeability of Drug-like Molecules. Journal of the American Chemical Society, 2019, 141, 13421-13433.	6.6	56
223	Hyper-parallel algorithms for centroid molecular dynamics: application to liquid para-hydrogen. Chemical Physics Letters, 1996, 262, 415-420.	1.2	55
224	A relationship between centroid dynamics and path integral quantum transition state theory. Journal of Chemical Physics, 2000, 112, 8747-8757.	1.2	55
225	Membrane Binding and Self-Association of the Epsin N-Terminal Homology Domain. Journal of Molecular Biology, 2012, 423, 800-817.	2.0	55
226	Multiscale Simulations Reveal Key Aspects of the Proton Transport Mechanism in the ClC-ec1 Antiporter. Biophysical Journal, 2016, 110, 1334-1345.	0.2	55
227	Coupling Field Theory with Mesoscopic Dynamical Simulations of Multicomponent Lipid Bilayers. Biophysical Journal, 2004, 87, 3242-3263.	0.2	54
228	Membrane Binding by the Endophilin N-BAR Domain. Biophysical Journal, 2009, 97, 2746-2753.	0.2	54
229	Optimal Number of Coarse-Grained Sites in Different Components of Large Biomolecular Complexes. Journal of Physical Chemistry B, 2012, 116, 8363-8374.	1.2	54
230	Transition-Tempered Metadynamics Is a Promising Tool for Studying the Permeation of Drug-like Molecules through Membranes. Journal of Chemical Theory and Computation, 2016, 12, 5157-5169.	2.3	54
231	The Theory of Ultra-Coarse-Graining. 3. Coarse-Grained Sites with Rapid Local Equilibrium of Internal States. Journal of Chemical Theory and Computation, 2017, 13, 1010-1022.	2.3	54
232	Orientational Dynamics of Water in the Nafion Polymer Electrolyte Membrane and Its Relationship to Proton Transport. Journal of Physical Chemistry B, 2008, 112, 7754-7761.	1.2	53
233	Membrane Docking Geometry and Target Lipid Stoichiometry of Membrane-Bound PKCα C2 Domain: A Combined Molecular Dynamics and Experimental Study. Journal of Molecular Biology, 2010, 402, 301-310.	2.0	53
234	Extending the range and physical accuracy of coarse-grained models: Order parameter dependent interactions. Journal of Chemical Physics, 2017, 147, 044113.	1.2	53

#	Article	IF	CITATIONS
235	Manifestations of spatially dependent friction in classical activated rate processes. Journal of Chemical Physics, 1993, 98, 4082-4097.	1.2	52
236	Electronic Structure Calculation of the Structures and Energies of the Three Pure Polymorphic Forms of Crystalline HMX. Journal of Physical Chemistry B, 2000, 104, 1009-1013.	1.2	52
237	Interfacing continuum and molecular dynamics: An application to lipid bilayers. Journal of Chemical Physics, 2001, 114, 6913-6924.	1.2	52
238	Computationally Efficient Multiscale Reactive Molecular Dynamics to Describe Amino Acid Deprotonation in Proteins. Journal of Chemical Theory and Computation, 2016, 12, 879-891.	2.3	52
239	Ultra-Coarse-Grained Models Allow for an Accurate and Transferable Treatment of Interfacial Systems. Journal of Chemical Theory and Computation, 2018, 14, 2180-2197.	2.3	52
240	Studies on the influence of nonlinearity in classical activated rate processes. Journal of Chemical Physics, 1992, 96, 5460-5470.	1,2	51
241	Molecular Dynamics of Synthetic Leucine-Serine Ion Channels in a Phospholipid Membrane. Biophysical Journal, 1999, 77, 2400-2410.	0.2	51
242	Intricate Role of Water in Proton Transport through CytochromecOxidase. Journal of the American Chemical Society, 2010, 132, 16225-16239.	6.6	51
243	Molecular Dynamics Simulations of Polyglutamine Aggregation Using Solvent-Free Multiscale Coarse-Grained Models. Journal of Physical Chemistry B, 2010, 114, 8735-8743.	1.2	51
244	Intrinsic Bending of Microtubule Protofilaments. Structure, 2011, 19, 409-417.	1.6	51
245	Mesoscale Simulation of Proton Transport in Proton Exchange Membranes. Journal of Physical Chemistry C, 2012, 116, 10476-10489.	1.5	51
246	Delocalization and stretch-bend mixing of the HOH bend in liquid water. Journal of Chemical Physics, 2017, 147, 084503.	1.2	51
247	Understanding Missing Entropy in Coarse-Grained Systems: Addressing Issues of Representability and Transferability. Journal of Physical Chemistry Letters, 2019, 10, 4549-4557.	2.1	51
248	TRIM5 \hat{l}_{\pm} self-assembly and compartmentalization of the HIV-1 viral capsid. Nature Communications, 2020, 11, 1307.	5.8	51
249	Proton Transport Pathway in the ClC Clâ^'/H+ Antiporter. Biophysical Journal, 2009, 97, 121-131.	0.2	50
250	Proton Conduction in Exchange Membranes across Multiple Length Scales. Accounts of Chemical Research, 2012, 45, 2002-2010.	7.6	50
251	Calculation of quantum activation free energies for proton transfer reactions in polar solvents. Chemical Physics Letters, 1992, 198, 311-315.	1.2	49
252	Nanostructural organization in carbon disulfide/ionic liquid mixtures: Molecular dynamics simulations and optical Kerr effect spectroscopy. Journal of Chemical Physics, 2011, 135, 034502.	1,2	49

#	Article	IF	Citations
253	Designing Free Energy Surfaces That Match Experimental Data with Metadynamics. Journal of Chemical Theory and Computation, 2015, 11, 2451-2460.	2.3	49
254	Actin Filament Strain Promotes Severing and Cofilin Dissociation. Biophysical Journal, 2017, 112, 2624-2633.	0.2	49
255	The computation of electron transfer rates: The nonadiabatic instanton solution. Journal of Chemical Physics, 1995, 103, 1391-1399.	1.2	48
256	Electron Transfer Across the Electrode/Electrolyte Interface:  Influence of Redox Ion Mobility and Counterions. The Journal of Physical Chemistry, 1996, 100, 10746-10753.	2.9	48
257	Calculating the Bulk Modulus for a Lipid Bilayer with Nonequilibrium Molecular Dynamics Simulation. Biophysical Journal, 2002, 82, 1226-1238.	0.2	48
258	Multi-Scale Modeling of Phase Separation in Mixed Lipid Bilayers. Biophysical Journal, 2005, 89, 2385-2394.	0.2	48
259	Critical comparison of approximate and accurate quantumâ€mechanical calculations of rate constants for a model activated reaction in solution. Journal of Chemical Physics, 1992, 97, 7392-7404.	1.2	47
260	Electrochemical Bond-Breaking Reactions:Â A Comparison of Large Scale Simulation Results with Analytical Theory. Journal of Physical Chemistry B, 1999, 103, 3442-3448.	1.2	47
261	The multiscale coarse-graining method. X. Improved algorithms for constructing coarse-grained potentials for molecular systems. Journal of Chemical Physics, 2012, 136, 194115.	1.2	47
262	Comparison between Actin Filament Models: Coarse-Graining Reveals Essential Differences. Structure, 2012, 20, 641-653.	1.6	47
263	The F-actin bundler \hat{l}_{\pm} -actinin Ain1 is tailored for ring assembly and constriction during cytokinesis in fission yeast. Molecular Biology of the Cell, 2016, 27, 1821-1833.	0.9	47
264	Entropic forces drive clustering and spatial localization of influenza A M2 during viral budding. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E8595-E8603.	3.3	47
265	Nature of lithium trapping sites in the quantum solids paraâ€hydrogen and orthoâ€deuterium. Journal of Chemical Physics, 1993, 99, 9013-9020.	1.2	46
266	Modeling physical systems by effective harmonic oscillators: The optimized quadratic approximation. Journal of Chemical Physics, 1995, 102, 3337-3348.	1.2	46
267	On the Feynman path centroid density for Bose-Einstein and Fermi-Dirac statistics. Journal of Chemical Physics, 1999, 110, 3647-3652.	1.2	46
268	Proton Transport Pathways in [NiFe]-Hydrogenase. Journal of Physical Chemistry B, 2012, 116, 2917-2926.	1.2	46
269	Coarse-Grained Force Fields from the Perspective of Statistical Mechanics: Better Understanding of the Origins of a MARTINI Hangover. Journal of Chemical Theory and Computation, 2021, 17, 1170-1180.	2.3	46
270	Are many-body electronic polarization effects important in liquid water?. Journal of Chemical Physics, 2007, 126, 124505.	1.2	45

#	Article	IF	Citations
271	Effects of Polymer Morphology on Proton Solvation and Transport in Proton-Exchange Membranes. Journal of Physical Chemistry C, 2012, 116, 19104-19116.	1.5	45
272	A theory for adiabatic electron transfer processes across the semiconductor/electrolyte interface. Journal of Chemical Physics, 1996, 104, 6168-6183.	1.2	44
273	Quantum Dynamical Simulation of the Energy Relaxation Rate of the CN-Ion in Water. Journal of Physical Chemistry A, 1999, 103, 10289-10293.	1.1	44
274	A multi-state empirical valence bond model for acid–base chemistry in aqueous solution. Chemical Physics, 2000, 258, 187-199.	0.9	44
275	Coarse-Grained Representations of Large Biomolecular Complexes from Low-Resolution Structural Data. Journal of Chemical Theory and Computation, 2010, 6, 2990-3002.	2.3	44
276	Proton Transfer Studied Using a Combined Ab Initio Reactive Potential Energy Surface with Quantum Path Integral Methodology. Journal of Chemical Theory and Computation, 2010, 6, 2566-2580.	2.3	44
277	Molecular Origins of Cofilin-Linked Changes in Actin Filament Mechanics. Journal of Molecular Biology, 2013, 425, 1225-1240.	2.0	44
278	Ena/VASP processive elongation is modulated by avidity on actin filaments bundled by the filopodia cross-linker fascin. Molecular Biology of the Cell, 2019, 30, 851-862.	0.9	44
279	A helical assembly of human ESCRT-I scaffolds reverse-topology membrane scission. Nature Structural and Molecular Biology, 2020, 27, 570-580.	3.6	44
280	Quantum Properties of the Excess Proton in Liquid Water. Israel Journal of Chemistry, 1999, 39, 483-492.	1.0	43
281	A Computational Study of the Closed and Open States of the Influenza A M2 Proton Channel. Biophysical Journal, 2005, 89, 2402-2411.	0.2	43
282	Molecular transport through membranes: Accurate permeability coefficients from multidimensional potentials of mean force and local diffusion constants. Journal of Chemical Physics, 2018, 149, 072310.	1.2	43
283	Mechanical and kinetic factors drive sorting of F-actin cross-linkers on bundles. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 16192-16197.	3.3	43
284	Advanced Materials for Energy-Water Systems: The Central Role of Water/Solid Interfaces in Adsorption, Reactivity, and Transport. Chemical Reviews, 2021, 121, 9450-9501.	23.0	43
285	Reorganization Parameters of Electronic Transitions in Electronically Delocalized Systems. 1. Charge Transfer Reactions. Journal of Physical Chemistry A, 2000, 104, 6470-6484.	1.1	42
286	A Multistate Empirical Valence Bond Approach to a Polarizable and Flexible Water Modelâ€. Journal of Physical Chemistry B, 2001, 105, 6628-6637.	1.2	42
287	Mesoscopic Lateral Diffusion in Lipid Bilayers. Biophysical Journal, 2004, 87, 3299-3311.	0.2	41
288	A second generation mesoscopic lipid bilayer model: Connections to field-theory descriptions of membranes and nonlocal hydrodynamics. Journal of Chemical Physics, 2006, 124, 064906.	1.2	41

#	Article	IF	Citations
289	Quantum Effects Strongly Influence the Surface Premelting of Ice. Journal of Physical Chemistry C, 2008, 112, 324-327.	1.5	41
290	A Bayesian statistics approach to multiscale coarse graining. Journal of Chemical Physics, 2008, 129, 214114.	1.2	41
291	Discovering crystals using shape matching and machine learning. Soft Matter, 2013, 9, 8552.	1.2	41
292	The Origin of Coupled Chloride and Proton Transport in a Cl [–] /H ⁺ Antiporter. Journal of the American Chemical Society, 2016, 138, 14923-14930.	6.6	41
293	Water Molecules in the Nucleotide Binding Cleft of Actin: Effects on Subunit Conformation and Implications for ATP Hydrolysis. Journal of Molecular Biology, 2011, 413, 279-291.	2.0	40
294	Understanding the essential proton-pumping kinetic gates and decoupling mutations in cytochrome $\langle i \rangle c \langle i \rangle$ oxidase. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5924-5929.	3.3	40
295	Simulating Protein Mediated Hydrolysis of ATP and Other Nucleoside Triphosphates by Combining QM/MM Molecular Dynamics with Advances in Metadynamics. Journal of Chemical Theory and Computation, 2017, 13, 2332-2341.	2.3	40
296	Immature HIV-1 assembles from Gag dimers leaving partial hexamers at lattice edges as potential substrates for proteolytic maturation. Proceedings of the National Academy of Sciences of the United States of America, 2021 , 118 , .	3.3	40
297	Path integral calculation of hydrogen diffusion rates on metal surfaces. Journal of Chemical Physics, 1993, 98, 7451-7458.	1.2	39
298	A three-dimensional potential energy surface for dissociative adsorption and associative desorption at metal electrodes. Journal of Chemical Physics, 1998, 109, 1991-2001.	1.2	39
299	The isotope substitution effect on the hydrated proton. Chemical Physics Letters, 2000, 329, 36-41.	1.2	39
300	An improved Polarflex water model. Journal of Chemical Physics, 2003, 118, 7504.	1.2	39
301	Unusual "Amphiphilic―Association of Hydrated Protons in Strong Acid Solution. Journal of the American Chemical Society, 2008, 130, 3120-3126.	6.6	39
302	Multiscale simulation of protein mediated membrane remodeling. Seminars in Cell and Developmental Biology, 2010, 21, 357-362.	2.3	39
303	Cations Stiffen Actin Filaments by Adhering a Key Structural Element to Adjacent Subunits. Journal of Physical Chemistry B, 2016, 120, 4558-4567.	1.2	39
304	Proton Solvation and Transport in Realistic Proton Exchange Membrane Morphologies. Journal of Physical Chemistry C, 2016, 120, 3176-3186.	1.5	39
305	Multiscale Kinetic Modeling Reveals an Ensemble of Cl [–] /H ⁺ Exchange Pathways in ClC-ec1 Antiporter. Journal of the American Chemical Society, 2018, 140, 1793-1804.	6.6	39
306	Defining Condensed Phase Reactive Force Fields from ab Initio Molecular Dynamics Simulations: The Case of the Hydrated Excess Proton. Journal of Chemical Theory and Computation, 2010, 6, 3223-3232.	2.3	38

#	Article	IF	CITATIONS
307	Key Intermolecular Interactions in the <i>E. coli</i> 70S Ribosome Revealed by Coarse-Grained Analysis. Journal of the American Chemical Society, 2011, 133, 16828-16838.	6.6	38
308	Off-Pathway Assembly: A Broad-Spectrum Mechanism of Action for Drugs That Undermine Controlled HIV-1 Viral Capsid Formation. Journal of the American Chemical Society, 2019, 141, 10214-10224.	6.6	38
309	A theory for treating spatiallyâ€dependent friction in classical activated rate processes. Journal of Chemical Physics, 1992, 97, 5908-5910.	1.2	37
310	Structure and Dynamics of Concentrated Hydrochloric Acid Solutions. Journal of Physical Chemistry B, 2010, 114, 9555-9562.	1.2	37
311	Coarse-Graining Provides Insights on the Essential Nature of Heterogeneity in Actin Filaments. Biophysical Journal, 2012, 103, 1334-1342.	0.2	37
312	Unraveling the Role of the Protein Environment for [FeFe]-Hydrogenase: A New Application of Coarse-Graining. Journal of Physical Chemistry B, 2013, 117, 4062-4071.	1.2	37
313	Interfacing Molecular Dynamics and Macro-Scale Simulations for Lipid Bilayer Vesicles. Biophysical Journal, 2002, 83, 1026-1038.	0.2	36
314	Systematic Coarse Graining of Biomolecular and Soft-Matter Systems. MRS Bulletin, 2007, 32, 929-934.	1.7	36
315	Reconstructing atomistic detail for coarse-grained models with resolution exchange. Journal of Chemical Physics, 2008, 129, 114103.	1.2	36
316	Long-Range Organization of Membrane-Curving Proteins. ACS Central Science, 2017, 3, 1246-1253.	5.3	36
317	Temperature and Phase Transferable Bottom-up Coarse-Grained Models. Journal of Chemical Theory and Computation, 2020, 16, 6823-6842.	2.3	36
318	A theory for time correlation functions in liquids. Journal of Chemical Physics, 1995, 103, 4211-4220.	1.2	35
319	Feynman path centroid dynamics for Fermi–Dirac statistics. Journal of Chemical Physics, 1999, 111, 5303-5305.	1.2	35
320	A Centroid Molecular Dynamics Approach for Nonadiabatic Dynamical Processes in Condensed Phases: the Spin-Boson Caseâ€. Journal of Physical Chemistry B, 2002, 106, 8449-8455.	1.2	35
321	Origins of Enhanced Proton Transport in the Y7F Mutant of Human Carbonic Anhydrase II. Journal of the American Chemical Society, 2008, 130, 11399-11408.	6.6	35
322	Phosphomimetic S3D cofilin binds but only weakly severs actin filaments. Journal of Biological Chemistry, 2017, 292, 19565-19579.	1.6	35
323	Structural Characterization of Protonated Water Clusters Confined in HZSM-5 Zeolites. Journal of the American Chemical Society, 2021, 143, 10203-10213.	6.6	35
324	Organizing membrane-curving proteins: the emerging dynamical picture. Current Opinion in Structural Biology, 2018, 51, 99-105.	2.6	34

#	Article	IF	CITATIONS
325	Multiscale model of integrin adhesion assembly. PLoS Computational Biology, 2019, 15, e1007077.	1.5	34
326	The quantum vibrational dynamics of Cl[sup â^'](H[sub 2]O)[sub n] clusters. Journal of Chemical Physics, 2000, 113, 5171.	1.2	33
327	A new perspective on the coarse-grained dynamics of fluids. Journal of Chemical Physics, 2004, 120, 4074-4088.	1.2	33
328	Conformational Switching between Protein Substates Studied with 2D IR Vibrational Echo Spectroscopy and Molecular Dynamics Simulations. Journal of Physical Chemistry B, 2010, 114, 17187-17193.	1,2	33
329	Exploring the behaviour of the hydrated excess proton at hydrophobic interfaces. Faraday Discussions, 2013, 167, 263.	1.6	33
330	Diffusion mechanisms in smectic ionic liquid crystals: insights from coarse-grained MD simulations. Soft Matter, 2013, 9, 5716.	1.2	33
331	Persistent Subdiffusive Proton Transport in Perfluorosulfonic Acid Membranes. Journal of Physical Chemistry Letters, 2014, 5, 3037-3042.	2.1	33
332	Dynamic force matching: Construction of dynamic coarse-grained models with realistic short time dynamics and accurate long time dynamics. Journal of Chemical Physics, 2016, 145, 224107.	1.2	33
333	Quantum molecular dynamics and spectral simulation of a boron impurity in solid para-hydrogen. Journal of Chemical Physics, 2000, 113, 9079-9089.	1.2	32
334	Examining the Influence of Linkers and Tertiary Structure in the Forced Unfolding of Multiple-Repeat Spectrin Molecules. Biophysical Journal, 2006, 91, 3436-3445.	0.2	32
335	Distributed Gaussian Valence Bond Surface Derived from Ab Initio Calculations. Journal of Chemical Theory and Computation, 2009, 5, 949-961.	2.3	32
336	Nucleotide-Dependent Lateral and Longitudinal Interactions in Microtubules. Journal of Molecular Biology, 2013, 425, 2232-2246.	2.0	32
337	Classical and Quantum Transition State Theory for the Diffusion of Helium in Silica Sodalite. Journal of Physical Chemistry B, 1997, 101, 491-503.	1.2	31
338	The semiclassical calculation of nonadiabatic tunneling rates. Journal of Chemical Physics, 1998, 108, 1055-1062.	1.2	31
339	Path integral formulation of centroid dynamics for systems obeying Bose–Einstein statistics. Journal of Chemical Physics, 2001, 115, 4484-4495.	1.2	31
340	Interactions of Protein Kinase C- \hat{l} ± C1A and C1B Domains with Membranes: A Combined Computational and Experimental Study. Journal of the American Chemical Society, 2014, 136, 11757-11766.	6.6	31
341	Benchmark Study of the SCC-DFTB Approach for a Biomolecular Proton Channel. Journal of Chemical Theory and Computation, 2014, 10, 451-462.	2.3	31
342	The multiscale coarse-graining method. XI. Accurate interactions based on the centers of charge of coarse-grained sites. Journal of Chemical Physics, 2015, 143, 243116.	1.2	31

#	Article	IF	CITATIONS
343	Exploring Valleys without Climbing Every Peak: More Efficient and Forgiving Metabasin Metadynamics via Robust On-the-Fly Bias Domain Restriction. Journal of Chemical Theory and Computation, 2015, 11, 5638-5650.	2.3	31
344	Resolving the Structural Debate for the Hydrated Excess Proton in Water. Journal of the American Chemical Society, 2021, 143, 18672-18683.	6.6	31
345	An effective barrier model for describing quantum mechanical activated rate processes in condensed phases. Journal of Chemical Physics, 1991, 94, 7342-7352.	1.2	30
346	Mesoscale Study of Proton Transport in Proton Exchange Membranes: Role of Morphology. Journal of Physical Chemistry C, 2015, 119, 1753-1762.	1.5	30
347	Adversarial-residual-coarse-graining: Applying machine learning theory to systematic molecular coarse-graining. Journal of Chemical Physics, 2019, 151, 124110.	1.2	30
348	Atomic-scale characterization of mature HIV-1 capsid stabilization by inositol hexakisphosphate (IP) Tj ETQq0 0 C) rgBT /Ov	erlgck 10 Tf 5
349	Cooperative multivalent receptor binding promotes exposure of the SARS-CoV-2 fusion machinery core. Nature Communications, 2022, 13, 1002.	5.8	30
350	Semiclassical theory of Fermi resonance between stretching and bending modes in polyatomic molecules. Journal of Chemical Physics, 1985, 82, 4064-4072.	1.2	29
351	Vibrational energy redistribution across a heavy atom. Chemical Physics, 1989, 139, 171-184.	0.9	29
352	Key Structural Features of the Actin Filament Arp2/3 Complex Branch Junction Revealed by Molecular Simulation. Journal of Molecular Biology, 2012, 416, 148-161.	2.0	29
353	A Direct Method for Incorporating Experimental Data into Multiscale Coarse-Grained Models. Journal of Chemical Theory and Computation, 2016, 12, 2144-2153.	2.3	29
354	Insights into the Cooperative Nature of ATP Hydrolysis in Actin Filaments. Biophysical Journal, 2018, 115, 1589-1602.	0.2	29
355	Extension of path integral quantum transition state theory to the case of nonadiabatic activated dynamics. Journal of Chemical Physics, 1999, 111, 2869-2877.	1.2	28
356	Large-scale computer simulation of an electrochemical bond-breaking reaction. Chemical Physics Letters, 1999, 305, 94-100.	1.2	28
357	A Theory of Electron Transfer and Steady-State Optical Spectra of Chromophores with Varying Electronic Polarizability. Journal of Physical Chemistry A, 1999, 103, 10981-10992.	1.1	28
358	Proton-Induced Conformational and Hydration Dynamics in the Influenza A M2 Channel. Journal of the American Chemical Society, 2019, 141, 11667-11676.	6.6	28
359	Calculation of equilibrium averages with Feynman-Hibbs effective classical potentials and similar variational approximations. Physical Review A, 1991, 44, 5302-5305.	1.0	27
360	A theory for the thermally activated rate constant in systems with spatially dependent friction. Chemical Physics Letters, 1993, 207, 309-316.	1.2	27

#	Article	IF	CITATIONS
361	Amphiphilic Character of the Hydrated Proton in Methanolâ^'Water Solutions. Journal of Physical Chemistry B, 2006, 110, 7085-7089.	1.2	27
362	Coupling Protein Dynamics with Proton Transport in Human Carbonic Anhydrase II. Journal of Physical Chemistry B, 2016, 120, 8389-8404.	1.2	27
363	Unusual Organization of I-BAR Proteins on Tubular and Vesicular Membranes. Biophysical Journal, 2019, 117, 553-562.	0.2	27
364	Structural basis for polarized elongation of actin filaments. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 30458-30464.	3.3	27
365	A theory for electron transfer across the electrode/electrolyte interface involving more than one redox ion. Journal of Chemical Physics, 1997, 107, 8940-8954.	1.2	26
366	Potential Energy Surfaces for Chemical Reactions:Â An Analytical Representation from Coarse Grained Data with an Application to Proton Transfer in Water. Journal of Physical Chemistry B, 1997, 101, 4544-4552.	1.2	26
367	Spatial Heterogeneity in Ionic Liquids. ACS Symposium Series, 2007, , 272-307.	0.5	26
368	Coarse-graining of proteins based on elastic network models. Chemical Physics, 2013, 422, 165-174.	0.9	26
369	Can the ring polymer molecular dynamics method be interpreted as real time quantum dynamics?. Journal of Chemical Physics, 2014, 140, 154103.	1.2	26
370	Highly Scalable and Memory Efficient Ultra-Coarse-Grained Molecular Dynamics Simulations. Journal of Chemical Theory and Computation, 2014, 10, 423-431.	2.3	26
371	Systematic Coarse-Grained Lipid Force Fields with Semiexplicit Solvation via Virtual Sites. Journal of Chemical Theory and Computation, 2019, 15, 2087-2100.	2.3	26
372	Adiabatically reduced coupled equations for intramolecular dynamics calculations. Journal of Chemical Physics, 1986, 84, 2254-2261.	1.2	25
373	A first-principles simulation of the semiconductor/water interface. Journal of Chemical Physics, 1997, 106, 2811-2818.	1.2	25
374	Water under the BAR. Biophysical Journal, 2010, 99, 1783-1790.	0.2	25
375	Gating mechanisms during actin filament elongation by formins. ELife, 2018, 7, .	2.8	25
376	Unique elastic properties of the spectrin tetramer as revealed by multiscale coarse-grained modeling. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 1204-1208.	3.3	24
377	Autoinhibition of Endophilin in Solution via Interdomain Interactions. Biophysical Journal, 2013, 104, 396-403.	0.2	24
378	Chloride Enhances Fluoride Mobility in Anion Exchange Membrane/Polycationic Systems. Journal of Physical Chemistry C, 2014, 118, 845-853.	1.5	24

#	Article	IF	CITATIONS
379	Electrostatic Interactions between the Bni1p Formin FH2 Domain and Actin Influence Actin Filament Nucleation. Structure, 2015, 23, 68-79.	1.6	24
380	Modulating the Chemical Transport Properties of a Transmembrane Antiporter via Alternative Anion Flux. Journal of the American Chemical Society, 2018, 140, 16535-16543.	6.6	24
381	A computer simulation method for studying the ablation of polymer surfaces by ultraviolet laser radiation. Journal of Applied Physics, 1992, 71, 1415-1420.	1.1	23
382	Reconstructing protein remodeled membranes in molecular detail from mesoscopic models. Physical Chemistry Chemical Physics, 2011, 13, 10430.	1.3	23
383	Exploration of Transferability in Multiscale Coarse-Grained Peptide Models. Journal of Physical Chemistry B, 2011, 115, 11911-11926.	1.2	23
384	Mesoscopic coarse-grained representations of fluids rigorously derived from atomistic models. Journal of Chemical Physics, 2018, 149, 044104.	1.2	23
385	Constructing many-body dissipative particle dynamics models of fluids from bottom-up coarse-graining. Journal of Chemical Physics, 2021, 154, 084122.	1.2	23
386	Vibrational energy relaxation dynamics of C–H stretching modes on the hydrogenâ€ŧerminated H/C(111)1×1 surface. Journal of Chemical Physics, 1994, 100, 3247-3251.	1.2	22
387	Reactionâ€coordinateâ€dependent friction in classical activated barrier crossing dynamics: When it matters and when it doesn't. Journal of Chemical Physics, 1995, 103, 10176-10182.	1.2	22
388	Isotope Effects in Electron Transfer across the Electrodeâ^'Electrolyte Interface:  A Measure of Solvent Mode Quantization. Journal of Physical Chemistry B, 1998, 102, 8563-8568.	1.2	22
389	Mixed Resolution Modeling of Interactions in Condensed-Phase Systems. Journal of Chemical Theory and Computation, 2009, 5, 3232-3244.	2.3	22
390	The Coupled Proton Transport in the CIC-ec1 Clâ^'/H+ Antiporter. Biophysical Journal, 2011, 101, L47-L49.	0.2	22
391	Solvent Free Ionic Solution Models from Multiscale Coarse-Graining. Journal of Chemical Theory and Computation, 2013, 9, 172-178.	2.3	22
392	Insights into the Transport of Aqueous Quaternary Ammonium Cations: A Combined Experimental and Computational Study. Journal of Physical Chemistry B, 2014, 118, 1363-1372.	1.2	22
393	Nucleotide Regulation of the Structure and Dynamics of G-Actin. Biophysical Journal, 2014, 106, 1710-1720.	0.2	22
394	Ultra-Coarse-Grained Liquid State Models with Implicit Hydrogen Bonding. Journal of Chemical Theory and Computation, 2018, 14, 6159-6174.	2.3	22
395	Multiconfigurational Coarse-Grained Molecular Dynamics. Journal of Chemical Theory and Computation, 2019, 15, 3306-3315.	2.3	22
396	Coarse-Grained Simulation of Full-Length Integrin Activation. Biophysical Journal, 2019, 116, 1000-1010.	0.2	22

#	Article	IF	CITATIONS
397	Microtubule Simulations Provide Insight into the Molecular Mechanism Underlying Dynamic Instability. Biophysical Journal, 2020, 118, 2938-2951.	0.2	22
398	Cholesterol Alters the Orientation and Activity of the Influenza Virus M2 Amphipathic Helix in the Membrane. Journal of Physical Chemistry B, 2020, 124, 6738-6747.	1.2	22
399	Seipin transmembrane segments critically function in triglyceride nucleation and lipid droplet budding from the membrane. ELife, 2022, 11 , .	2.8	22
400	Reorganization Parameters of Electronic Transitions in Electronically Delocalized Systems. 2. Optical Spectra. Journal of Physical Chemistry A, 2000, 104, 6485-6494.	1.1	21
401	Electron transfer activation of a second water channel for proton transport in [FeFe]-hydrogenase. Journal of Chemical Physics, 2014, 141, 22D527.	1.2	21
402	A new one-site coarse-grained model for water: Bottom-up many-body projected water (BUMPer). I. General theory and model. Journal of Chemical Physics, 2021, 154, 044104.	1.2	21
403	Binding mechanism of the matrix domain of HIV-1 gag on lipid membranes. ELife, 2020, 9, .	2.8	21
404	Strain and rupture of HIV-1 capsids during uncoating. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2117781119.	3.3	21
405	Probing the Molecular-Scale Lipid Bilayer Response to Shear Flow Using Nonequilibrium Molecular Dynamics. Journal of Physical Chemistry B, 2005, 109, 18673-18679.	1.2	20
406	Extending a Spectrin Repeat Unit. I: Linear Force-Extension Response. Biophysical Journal, 2006, 90, 92-100.	0.2	20
407	Solvent-Free, Highly Coarse-Grained Models for Charged Lipid Systems. Journal of Chemical Theory and Computation, 2014, 10, 4730-4744.	2.3	20
408	Communication: Improved <i>ab initio</i> molecular dynamics by minimally biasing with experimental data. Journal of Chemical Physics, 2017, 146, 041102.	1.2	20
409	The mesoscopic membrane with proteins (MesM-P) model. Journal of Chemical Physics, 2017, 147, 044101.	1.2	20
410	An effective Golden Rule decay rate expression for quasidissipative IVR processes. Journal of Chemical Physics, 1988, 88, 5547-5552.	1.2	19
411	Calculation of electron spin resonance linewidths for hydrogen atom impurities in solid paraâ€hydrogen. Journal of Chemical Physics, 1994, 100, 1785-1796.	1.2	19
412	Firstâ€principles molecular dynamics study of surface vibrations and vibrational mode coupling on the H/Si(111)1×1 surface. Journal of Chemical Physics, 1994, 101, 1734-1737.	1.2	19
413	The computer simulation of proton transport in biomolecular systems. Frontiers in Bioscience - Landmark, 2003, 8, s1384-1397.	3.0	19
414	Mesoscopic Modeling of Bacterial Flagellar Microhydrodynamics. Biophysical Journal, 2006, 91, 3640-3652.	0.2	19

#	Article	IF	CITATIONS
415	Effect of Membrane Environment on Proton Permeation through Gramicidin A Channels. Journal of Physical Chemistry B, 2007, 111, 9931-9939.	1.2	19
416	Molecular Dynamics Simulation and Coarse-Grained Analysis of the Arp2/3 Complex. Biophysical Journal, 2008, 95, 5324-5333.	0.2	19
417	Coarse-graining in Interaction Space: An Analytical Approximation for the Effective Short-ranged Electrostatics. Journal of Physical Chemistry B, 2008, 112, 16230-16237.	1.2	19
418	Unusual Hydrophobic Interactions in Acidic Aqueous Solutions. Journal of Physical Chemistry B, 2009, 113, 7291-7297.	1.2	19
419	Multi-state Approach to Chemical Reactivity in Fragment Based Quantum Chemistry Calculations. Journal of Chemical Theory and Computation, 2013, 9, 4018-4025.	2.3	19
420	Proton Transport under External Applied Voltage. Journal of Physical Chemistry B, 2014, 118, 8090-8098.	1.2	19
421	Molecular modeling and assignment of IR spectra of the hydrated excess proton in isotopically dilute water. Journal of Chemical Physics, 2016, 145, 154504.	1.2	19
422	Plastic Deformation and Fragmentation of Strained Actin Filaments. Biophysical Journal, 2019, 117, 453-463.	0.2	19
423	Influenza A M2 Inhibitor Binding Understood through Mechanisms of Excess Proton Stabilization and Channel Dynamics. Journal of the American Chemical Society, 2020, 142, 17425-17433.	6.6	19
424	Molecular interactions of theÂM and E integral membrane proteins of SARS-CoV-2. Faraday Discussions, 2021, 232, 49-67.	1.6	19
425	Computational Studies of Lipid Droplets. Journal of Physical Chemistry B, 2022, 126, 2145-2154.	1.2	19
426	Quantum and classical energy transfer between ligands of a heavy metal atom. Chemical Physics Letters, 1986, 124, 93-98.	1.2	18
427	A path integral Einstein model for characterizing the equilibrium states of low temperature solids. Journal of Chemical Physics, 1992, 96, 5340-5353.	1.2	18
428	Lithium impurity recombination in solid para-hydrogen: A path integral quantum transition state theory study. Journal of Chemical Physics, 1998, 108, 4098-4106.	1.2	18
429	Computational studies of proton transport through the M2 channel. FEBS Letters, 2003, 552, 23-27.	1.3	18
430	Atomistic and Coarse-grained Analysis of Double Spectrin Repeat Units: The Molecular Origins of Flexibility. Journal of Molecular Biology, 2007, 365, 523-534.	2.0	18
431	A Multiscale Description of Biomolecular Active Matter: The Chemistry Underlying Many Life Processes. Accounts of Chemical Research, 2017, 50, 594-598.	7.6	18
432	Lipid-Composition-Mediated Forces Can Stabilize Tubular Assemblies of I-BAR Proteins. Biophysical Journal, 2021, 120, 46-54.	0.2	18

#	Article	IF	Citations
433	Effect of nonlinear dissipation on quantum-activated rate processes in condensed phases. Physical Review A, 1992, 46, 2143-2146.	1.0	17
434	On the Feynman path centroid density as a phase space distribution in quantum statistical mechanics. Journal of Chemical Physics, 1995, 103, 5018-5026.	1.2	17
435	Extending a Spectrin Repeat Unit. II: Rupture Behavior. Biophysical Journal, 2006, 90, 101-111.	0.2	17
436	Minimizing memory as an objective for coarse-graining. Journal of Chemical Physics, 2013, 138, 094111.	1.2	17
437	Highly Coarse-Grained Representations of Transmembrane Proteins. Journal of Chemical Theory and Computation, 2017, 13, 935-944.	2.3	17
438	A new one-site coarse-grained model for water: Bottom-up many-body projected water (BUMPer). II. Temperature transferability and structural properties at low temperature. Journal of Chemical Physics, 2021, 154, 044105.	1.2	17
439	On the use of Feynman–Hibbs effective potentials to calculate quantum mechanical free energies of activation. Journal of Chemical Physics, 1991, 94, 4095-4096.	1.2	16
440	A Modification of Path Integral Quantum Transition State Theory for Asymmetric and Metastable Potentials. Journal of Physical Chemistry A, 1999, 103, 9527-9538.	1.1	16
441	Centroid molecular dynamics: A quantum dynamics method suitable for the parallel computer. Parallel Computing, 2000, 26, 1025-1041.	1.3	16
442	Compatible observable decompositions for coarse-grained representations of real molecular systems. Journal of Chemical Physics, 2019, 151, 134115.	1.2	16
443	Coarse-graining involving virtual sites: Centers of symmetry coarse-graining. Journal of Chemical Physics, 2019, 150, 154103.	1.2	16
444	A quantitative paradigm for water-assisted proton transport through proteins and other confined spaces. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	16
445	Static and Dynamic Correlations in Water: Comparison of Classical Ab Initio Molecular Dynamics at Elevated Temperature with Path Integral Simulations at Ambient Temperature. Journal of Chemical Theory and Computation, 2022, 18, 2124-2131.	2.3	16
446	Quantum Molecular Dynamics Simulations of Low-Temperature High Energy Density Matter:Â Solid p-H2/Li and p-H2/B. Journal of Physical Chemistry A, 1999, 103, 9512-9520.	1.1	15
447	Reactive Flux Calculations of Methyl Vinyl Ketone Reacting with Cyclopentadiene in Water. Journal of Physical Chemistry A, 1999, 103, 925-931.	1.1	15
448	Ab initio molecular dynamics simulation of the H/InP(100)–water interface. Journal of Chemical Physics, 2002, 117, 872-884.	1.2	15
449	Chapter 7 Multiscale Simulation of Membranes and Membrane Proteins: Connecting Molecular Interactions to Mesoscopic Behavior. Current Topics in Membranes, 2008, 60, 181-225.	0.5	15
450	Nonlinear quantum time correlation functions from centroid molecular dynamics and the maximum entropy method. Journal of Chemical Physics, 2008, 129, 194113.	1.2	15

#	Article	IF	CITATIONS
451	Structural basis of fast- and slow-severing actin–cofilactin boundaries. Journal of Biological Chemistry, 2021, 296, 100337.	1.6	15
452	Key Factors Governing Initial Stages of Lipid Droplet Formation. Journal of Physical Chemistry B, 2022, 126, 453-462.	1.2	15
453	Molecular and Thermodynamic Insights into the Conformational Transitions of Hsp90. Biophysical Journal, 2012, 103, 284-292.	0.2	14
454	Multiscale simulations of protein-facilitated membrane remodeling. Journal of Structural Biology, 2016, 196, 57-63.	1.3	14
455	Compressive and Tensile Deformations Alter ATP Hydrolysis and Phosphate Release Rates in Actin Filaments. Journal of Chemical Theory and Computation, 2021, 17, 1900-1913.	2.3	14
456	A partial averaging strategy for low temperature Fourier path integral Monte Carlo calculations. Journal of Chemical Physics, 1992, 97, 4205-4214.	1.2	13
457	The Dynamic Stress Responses to Area Change in Planar Lipid Bilayer Membranes. Biophysical Journal, 2005, 88, 1104-1119.	0.2	13
458	Effects of ATP and Actin-Filament Binding on the Dynamics of the Myosin II S1 Domain. Biophysical Journal, 2013, 105, 1624-1634.	0.2	13
459	Hydrated Proton Structure and Diffusion at Platinum Surfaces. Journal of Physical Chemistry C, 2015, 119, 14675-14682.	1.5	13
460	Predicting the Sensitivity of Multiscale Coarse-Grained Models to their Underlying Fine-Grained Model Parameters. Journal of Chemical Theory and Computation, 2015, 11, 3547-3560.	2.3	13
461	lon mixing, hydration, and transport in aqueous ionic systems. Journal of Chemical Physics, 2015, 142, 184905.	1.2	13
462	Quantum theory of multiscale coarse-graining. Journal of Chemical Physics, 2018, 148, 102335.	1.2	13
463	Physical Characterization of Triolein and Implications for Its Role in Lipid Droplet Biogenesis. Journal of Physical Chemistry B, 2021, 125, 6874-6888.	1.2	13
464	Effect of solvent on semiconductor surface electronic states: A firstâ€principles study. Journal of Chemical Physics, 1995, 103, 7569-7575.	1.2	12
465	Massively parallel linear-scaling algorithm in an ab initio local-orbital total-energy method. Journal of Computational Physics, 2003, 188, 1-15.	1.9	12
466	Evaluation of Nonlinear Quantum Time Correlation Functions within the Centroid Dynamics Formulationâ€. Journal of Physical Chemistry B, 2006, 110, 18953-18957.	1,2	12
467	Coarse-graining away electronic structure: a rigorous route to accurate condensed phase interaction potentials. Molecular Physics, 2012, 110, 935-944.	0.8	12
468	On the Origin of Proton Mobility Suppression in Aqueous Solutions of Amphiphiles. Journal of Physical Chemistry B, 2013, 117, 15426-15435.	1.2	12

#	Article	IF	CITATIONS
469	Ion Transport through Ultrathin Electrolyte under Applied Voltages. Journal of Physical Chemistry B, 2015, 119, 7516-7521.	1.2	12
470	Development of reactive force fields using <i>ab initio</i> molecular dynamics simulation minimally biased to experimental data. Journal of Chemical Physics, 2017, 147, 161719.	1.2	12
471	Molecular Origins of the Barriers to Proton Transport in Acidic Aqueous Solutions. Journal of Physical Chemistry B, 2020, 124, 8868-8876.	1.2	12
472	Water-Assisted Proton Transport in Confined Nanochannels. Journal of Physical Chemistry C, 2020, 124, 16186-16201.	1.5	12
473	The hopping mechanism of the hydrated excess proton and its contribution to proton diffusion in water. Journal of Chemical Physics, 2021, 154, 194506.	1.2	12
474	Preservation of HIV-1 Gag Helical Bundle Symmetry by Bevirimat Is Central to Maturation Inhibition. Journal of the American Chemical Society, 2021, 143, 19137-19148.	6.6	12
475	lon permeation, selectivity, and electronic polarization in fluoride channels. Biophysical Journal, 2022, 121, 1336-1347.	0.2	12
476	Inositol Hexakisphosphate (IP6) Accelerates Immature HIV-1 Gag Protein Assembly toward Kinetically Trapped Morphologies. Journal of the American Chemical Society, 2022, 144, 10417-10428.	6.6	12
477	Quasidissipative intramolecular dynamics: An adiabatically reduced coupled equations approach. Journal of Chemical Physics, 1987, 87, 5272-5279.	1.2	11
478	Vibrational energy relaxation dynamics of Sî—,H stretching modes on stepped H/Si(111)1x1 surfaces. Chemical Physics, 1996, 205, 11-22.	0.9	11
479	Path Integral Coarse-Graining Replica Exchange Method for Enhanced Sampling. Journal of Chemical Theory and Computation, 2014, 10, 3634-3640.	2.3	11
480	Coarse-Grained Directed Simulation. Journal of Chemical Theory and Computation, 2017, 13, 4593-4603.	2.3	11
481	Quantum mechanics/coarse-grained molecular mechanics (QM/CG-MM). Journal of Chemical Physics, 2018, 148, 014102.	1.2	11
482	Multiscale Simulation Reveals Passive Proton Transport Through SERCA on the Microsecond Timescale. Biophysical Journal, 2020, 119, 1033-1040.	0.2	11
483	Reactive Coarse-Grained Molecular Dynamics. Journal of Chemical Theory and Computation, 2020, 16, 2541-2549.	2.3	11
484	Accurate and Transferable Reactive Molecular Dynamics Models from Constrained Density Functional Theory. Journal of Physical Chemistry B, 2021, 125, 10471-10480.	1.2	11
485	Using Machine Learning to Greatly Accelerate Path Integral <i>Ab Initio</i> Molecular Dynamics. Journal of Chemical Theory and Computation, 2022, 18, 599-604.	2.3	11
486	Infrared laserâ€induced chaos and conformational disorder in a model polymer crystal: Melting vs ablation. Journal of Chemical Physics, 1990, 93, 6081-6091.	1.2	10

#	Article	IF	Citations
487	Numerical approaches for computing nonadiabatic electron transfer rate constants. Journal of Chemical Physics, 2002, 116, 9174-9187.	1.2	10
488	Superposition State Molecular Dynamics. Journal of Chemical Theory and Computation, 2005, 1, 36-40.	2.3	10
489	Key computational findings reveal proton transfer as driving the functional cycle in the phosphate transporter PiPT. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	10
490	Integrin-based mechanosensing through conformational deformation. Biophysical Journal, 2021, 120, 4349-4359.	0.2	10
491	A Feynman Path Integral Approach for Calculating Quantum Rate Constants in Complex Systems. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1991, 95, 393-399.	0.9	9
492	Quantum and classical simulations of an excess proton in water. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1998, 102, 527-532.	0.9	9
493	The computer simulation of correlated electron transfer across the electrode/electrolyte interface involving multiple redox species. Journal of Chemical Physics, 1998, 109, 4569-4575.	1.2	9
494	A reductionist perspective on quantum statistical mechanics: Coarse-graining of path integrals. Journal of Chemical Physics, 2015, 143, 094104.	1.2	9
495	Local conformational dynamics regulating transport properties of a Cl â^' /H + antiporter. Journal of Computational Chemistry, 2020, 41, 513-519.	1.5	9
496	Minimal Experimental Bias on the Hydrogen Bond Greatly Improves Ab Initio Molecular Dynamics Simulations of Water. Journal of Chemical Theory and Computation, 2020, 16, 5675-5684.	2.3	9
497	Density Functional Theory-Based Quantum Mechanics/Coarse-Grained Molecular Mechanics: Theory and Implementation. Journal of Chemical Theory and Computation, 2020, 16, 6329-6342.	2.3	9
498	What Coordinate Best Describes the Affinity of the Hydrated Excess Proton for the Air–Water Interface?. Journal of Physical Chemistry B, 2020, 124, 5039-5046.	1,2	9
499	Anisotropic Motions of Fibrils Dictated by Their Orientations in the Lamella: A Coarse-Grained Model of a Plant Cell Wall. Journal of Physical Chemistry B, 2020, 124, 3527-3539.	1.2	9
500	Using Constrained Density Functional Theory to Track Proton Transfers and to Sample Their Associated Free Energy Surface. Journal of Chemical Theory and Computation, 2021, 17, 5759-5765.	2.3	9
501	Proton coupling and the multiscale kinetic mechanism of a peptide transporter. Biophysical Journal, 2022, 121, 2266-2278.	0.2	9
502	Iteratively determined effective Hamiltonians for the adiabatically reduced coupled equations approach to intramolecular dynamics calculations. Journal of Chemical Physics, 1986, 85, 5019-5026.	1.2	7
503	The dependence of the potential of mean force on the solvent friction: Consequences for condensed phase activated rate theories. Journal of Chemical Physics, 1993, 99, 8005-8008.	1,2	7
504	Response to "Comment on â€~Simple reversible molecular dynamics algorithms for Nosé–Hoover chain dynamics' ―[J. Chem. Phys. 110, 3623 (1999)]. Journal of Chemical Physics, 1999, 110, 3626-3628.	1.2	7

#	Article	IF	CITATIONS
505	Path integral molecular dynamics simulation of solid para-hydrogen with an aluminum impurity. Chemical Physics Letters, 2002, 365, 487-493.	1.2	7
506	Response to "Comment on â€~A centroid molecular dynamics study of liquid para-hydrogen and ortho-deuterium' ―[J. Chem. Phys. 122, 057101 (2005)]. Journal of Chemical Physics, 2005, 122, 0571	0 2 . ²	7
507	Can quantum transition state theory be defined as an exact $\langle i \rangle t \langle j \rangle = 0+$ limit?. Journal of Chemical Physics, 2016, 144, 084110.	1.2	7
508	Multiscale simulation of actin filaments and actin-associated proteins. Biophysical Reviews, 2018, 10, 1521-1535.	1.5	7
509	Approximate coupled equations for multiphoton processes induced by one or more lasers. Chemical Physics Letters, 1986, 129, 315-320.	1.2	6
510	Accelerated Superposition State Molecular Dynamics for Condensed Phase Systems. Journal of Chemical Theory and Computation, 2008, 4, 560-568.	2.3	6
511	Aqueous Solutions and Their Interfaces. Journal of Physical Chemistry B, 2009, 113, 3997-3999.	1.2	6
512	Formin Cdc12's specific actin assembly properties are tailored for cytokinesis in fission yeast. Biophysical Journal, 2021, 120, 2984-2997.	0.2	6
513	Multiscale Simulation of an Influenza A M2 Channel Mutant Reveals Key Features of Its Markedly Different Proton Transport Behavior. Journal of the American Chemical Society, 2022, 144, 769-776.	6.6	6
514	A semiclassical reactive flux method for the calculation of condensed phase activated rate constants. Chemical Physics, 1994, 180, 167-180.	0.9	5
515	A theory for the quantum activated rate constant in dissipative systems. Chemical Physics Letters, 1996, 261, 111-116.	1.2	5
516	Efficient Multistate Reactive Molecular Dynamics Approach Based on Short-Range Effective Potentials. Journal of Chemical Theory and Computation, 2010, 6, 3039-3047.	2.3	5
517	Special Issue on Free Energy. Journal of Chemical Theory and Computation, 2014, 10, 2631-2631.	2.3	5
518	Non-uniqueness of quantum transition state theory and general dividing surfaces in the path integral space. Journal of Chemical Physics, 2017, 146, 174106.	1.2	5
519	Self-consistent harmonic theory of solvation in glassy systems: Classical solvation. Journal of Chemical Physics, 2000, 112, 3267-3279.	1.2	4
520	Combining the Semiclassical Initial Value Representation with Centroid Dynamics. Journal of Physical Chemistry B, 2004, 108, 6883-6892.	1.2	4
521	An Efficient and Accurate Implementation of Centroid Molecular Dynamics Using a Gaussian Approximationâ€. Journal of Physical Chemistry A, 2005, 109, 11609-11617.	1.1	4
522	OKE Spectroscopy and Molecular Dynamics Simulations of Nonpolar and Polar Molecules in Ionic Liquids. ACS Symposium Series, 2012, , 271-287.	0.5	4

#	Article	IF	CITATIONS
523	Extending parallel scalability of LAMMPS and multiscale reactive molecular simulations. , 2012, , .		4
524	Reactive molecular dynamics models from ab initio molecular dynamics data using relative entropy minimization. Chemical Physics Letters, 2017, 683, 573-578.	1.2	4
525	Role of solvation structure in the shuttling of the hydrated excess proton. Journal of Chemical Sciences, 2017, 129, 1045-1051.	0.7	4
526	Interfacial solvation and slow transport of hydrated excess protons in non-ionic reverse micelles. Physical Chemistry Chemical Physics, 2020, 22, 10753-10763.	1.3	4
527	Synthesis, Characterization, and Simulation of Four-Armed Megamolecules. Biomacromolecules, 2021, 22, 2363-2372.	2.6	4
528	A variational model for the thermodynamical and structural properties of impurities in low temperature solids. Journal of Chemical Physics, 1993, 98, 5734-5746.	1.2	3
529	Vibrational energy relaxation dynamics of Siî—,H stretching modes on stepped H/Si(111) 1×1 surfaces. Chemical Physics, 1995, 200, 357-368.	0.9	3
530	Self-consistent harmonic theory of solvation in glassy systems: Quantum solvation. Journal of Chemical Physics, 2000, 112, 3280-3284.	1.2	3
531	New and Notable: Key New Insights into Membrane Targeting by Proteins. Biophysical Journal, 2013, 104, 517-519.	0.2	3
532	Feynman path centroid methods for condensed phase quantum dynamics., 1998,,.		2
533	Coarse-graining of many-body path integrals: Theory and numerical approximations. Journal of Chemical Physics, 2019, 150, 244103.	1.2	2
534	New Developments in the Theoretical Description of Charge-Transfer Reactions in Condensed Phases. , 0, , 147-210.		1
535	Coarse-Grained Analysis and Modeling of Nucleotide-Dependent Changes in F-Actin. Biophysical Journal, 2012, 102, 237a.	0.2	1
536	Molecular Dynamics of Bond-Braking Electron-Transfer Reactions at Metal-Liquid Interfaces. Cattech, 2000, 4, 51-55.	2.6	0
537	Selective Targeting of Lipid Droplets by Proteins. Biophysical Journal, 2016, 110, 574a.	0.2	О
538	The Origin of Coupled Chloride and Proton Transport in a Cl - /H + Antiporter. Biophysical Journal, 2017, 112, 254a-255a.	0.2	0
539	Editorial overview: COSB biophysical and computational methods. Current Opinion in Structural Biology, 2018, 52, vi-vii.	2.6	0
540	Modeling Synthesized Protein Megamolecules: Structure, Dynamics, and Functions. Biophysical Journal, 2020, 118, 517a.	0.2	0

#	Article	IF	CITATIONS
541	Modeling Protein-Lipid Interactions during Viral Assembly of SARS-CoV-2. Biophysical Journal, 2021, 120, 49a.	0.2	0
542	Simulations of N-BAR Protein Interactions with Membranes. Journal Physics D: Applied Physics, 2018, 51, 35-36.	1.3	0
543	Multiscale simulations of viruses. Biophysical Journal, 2022, 121, 330a.	0.2	0