Robert VÃ¡cha

List of Publications by Year
in descending order

68 papers	4,756 citations	101543 36 h-index	95266 68 g-index
74 all docs	74 docs citations	74 times ranked	5733 citing authors

#	Article	IF	Citations
1	Receptor-Mediated Endocytosis of Nanoparticles of Various Shapes. Nano Letters, 2011, 11, 5391-5395.	9.1	441
2	Hofmeister series and specific interactions of charged headgroups with aqueous ions. Advances in Colloid and Interface Science, 2009, 146, 42-47.	14.7	378
3	Water surface is acidic. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 7342-7347.	7.1	332
4	Biomolecular simulations of membranes: Physical properties from different force fields. Journal of Chemical Physics, 2008, 128, 125103.	3.0	242
5	The Orientation and Charge of Water at the Hydrophobic Oil Dropletâ€“Water Interface. Journal of the American Chemical Society, 2011, 133, 10204-10210.	13.7	213
6	Quantification and rationalization of the higher affinity of sodium over potassium to protein surfaces. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 15440-15444.	7.1	212
7	Adsorption of Atmospherically Relevant Gases at the Air/Water Interface:â€‰ Free Energy Profiles of Aqueous Solvation of N2, O2, O3, OH, H2O, HO2, and H2O2. Journal of Physical Chemistry A, 2004, 108, 11573-11579.	2.5	195
8	Surface Effects on Aggregation Kinetics of Amyloidogenic Peptides. Journal of the American Chemical Society, 2014, 136, 11776-11782.	13.7	158
9	Autoionization at the surface of neat water: is the top layer pH neutral, basic, or acidic?. Physical Chemistry Chemical Physics, 2007, 9, 4736.	2.8	151
10	Cation-Specific Interactions with Carboxylate in Amino Acid and Acetate Aqueous Solutions: X-ray Absorption and <i>ab initio</i> Calculations. Journal of Physical Chemistry B, 2008, 112, 12567-12570.	2.6	149
11	Effects of Alkali Cations and Halide Anions on the DOPC Lipid Membrane. Journal of Physical Chemistry A, 2009, 113, 7235-7243.	2.5	144
12	Behavior of hydroxide at the water/vapor interface. Chemical Physics Letters, 2009, 474, 241-247.	2.6	110
13	Specific Ion Binding to Macromolecules:â€‰ Effects of Hydrophobicity and Ion Pairing. Langmuir, 2008, 24, 3387-3391.	3.5	106
14	Charge Transfer between Water Molecules As the Possible Origin of the Observed Charging at the Surface of Pure Water. Journal of Physical Chemistry Letters, 2012, 3, 107-111.	4.6	101
15	Aqueous Solutions at the Interface with Phospholipid Bilayers. Accounts of Chemical Research, 2012, 45, 74-82.	15.6	100
16	Mechanism of Interaction of Monovalent Ions with Phosphatidylcholine Lipid Membranes. Journal of Physical Chemistry B, 2010, 114, 9504-9509.	2.6	89
17	Ions at Hydrophobic Aqueous Interfaces: Molecular Dynamics with Effective Polarization. Journal of Physical Chemistry Letters, 2012, 3, 2087-2091.	4.6	89
18	Propensity for the Air/Water Interface and Ion Pairing in Magnesium Acetate vs Magnesium Nitrate Solutions:Â Molecular Dynamics Simulations and Surface Tension Measurements. Journal of Physical Chemistry B, 2006, 110, 15939-15944.	2.6	86

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19	GM₁ Ganglioside Inhibits Î²â€Amyloid Oligomerization Induced by Sphingomyelin. Angewandte Chemie - International Edition, 2016, 55, 9411-9415.	13.8	86
20	Ion Pairing as a Possible Clue for Discriminating between Sodium and Potassium in Biological and Other Complex Environments. Journal of Physical Chemistry B, 2007, 111, 14077-14079.	2.6	80
21	Molecular Model of a Cell Plasma Membrane With an Asymmetric Multicomponent Composition: Water Permeation and Ion Effects. Biophysical Journal, 2009, 96, 4493-4501.	0.5	75
22	Adsorption of polycyclic aromatic hydrocarbons at the airâ€“water interface: Molecular dynamics simulations and experimental atmospheric observations. Physical Chemistry Chemical Physics, 2006, 8, 4461-4467.	2.8	70
23	Hydronium and hydroxide at the interface between water and hydrophobic media. Physical Chemistry Chemical Physics, 2008, 10, 4975.	2.8	68
24	Connecting Macroscopic Observables and Microscopic Assembly Events in Amyloid Formation Using Coarse Grained Simulations. PLoS Computational Biology, 2012, 8, e1002692.	3.2	63
25	Relation between Molecular Shape and the Morphology of Self-Assembling Aggregates: A Simulation Study. Biophysical Journal, 2011, 101, 1432-1439.	0.5	62
26	Intracellular Release of Endocytosed Nanoparticles Upon a Change of Ligandâ€“Receptor Interaction. ACS Nano, 2012, 6, 10598-10605.	14.6	55
27	Synergism of Antimicrobial Frog Peptides Couples to Membrane Intrinsic Curvature Strain. Biophysical Journal, 2018, 114, 1945-1954.	0.5	55
28	Water Structuring and Hydroxide Ion Binding at the Interface between Water and Hydrophobic Walls of Varying Rigidity and van der Waals Interactions. Journal of Physical Chemistry C, 2008, 112, 7689-7692.	3.1	53
29	Influence of ligand distribution on uptake efficiency. Soft Matter, 2015, 11, 2726-2730.	2.7	49
30	Advances in Molecular Understanding of Î±-Helical Membrane-Active Peptides. Accounts of Chemical Research, 2021, 54, 2196-2204.	15.6	47
31	<i>Faunus</i>â€” a flexible framework for Monte Carlo simulation. Molecular Simulation, 2013, 39, 1233-1239.	2.0	44
32	Dielectric Interpretation of Specificity of Ion Pairing in Water. Journal of Physical Chemistry Letters, 2010, 1, 300-303.	4.6	41
33	Effect of helical kink in antimicrobial peptides on membrane pore formation. ELife, 2020, 9, .	6.0	39
34	Adsorption of Aromatic Hydrocarbons and Ozone at Environmental Aqueous Surfaces. Journal of Physical Chemistry A, 2008, 112, 4942-4950.	2.5	38
35	Response to Comment on Autoionization at the surface of neat water: is the top layer pH neutral, basic, or acidic? by J. K. Beattie, Phys. Chem. Chem. Phys., 2007,9, DOI: 10.1039/b713702h. Physical Chemistry Chemical Physics, 2008, 10, 332-333.	2.8	37
36	Ion specific effects of sodium and potassium on the catalytic activity of HIV-1 protease. Physical Chemistry Chemical Physics, 2009, 11, 7599.	2.8	36

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37	Enterovirus particles expel capsid pentamers to enable genome release. Nature Communications, 2019, 10, 1138.	12.8	33
38	Sodium Dodecyl Sulfate at Waterâ€“Hydrophobic Interfaces: A Simulation Study. Journal of Physical Chemistry B, 2012, 116, 11936-11942.	2.6	31
39	Composition- and Size-Controlled Cyclic Self-Assembly by Solvent- and C₆₀-Responsive Self-Sorting. Journal of the American Chemical Society, 2013, 135, 15263-15268.	13.7	30
40	Magainin 2 and PGLa in Bacterial Membrane Mimics I: Peptide-Peptide and Lipid-Peptide Interactions. Biophysical Journal, 2019, 117, 1858-1869.	0.5	30
41	Optimal Hydrophobicity and Reorientation of Amphiphilic Peptides Translocating through Membrane. Biophysical Journal, 2018, 115, 1045-1054.	0.5	29
42	Magainin 2 and PGLa in Bacterial Membrane Mimics II: Membrane Fusion and Sponge Phase Formation. Biophysical Journal, 2020, 118, 612-623.	0.5	25
43	Large variations in the propensity of aqueous oxychlorine anions for the solution/vapor interface. Journal of Chemical Physics, 2009, 131, 124706.	3.0	24
44	Reply to comments on Frontiers Article â€˜Behavior of hydroxide at the water/vapor interfaceâ€™. Chemical Physics Letters, 2009, 481, 19-21.	2.6	22
45	Benchmarking Polarizable Molecular Dynamics Simulations of Aqueous Sodium Hydroxide by Diffraction Measurements. Journal of Physical Chemistry A, 2009, 113, 4022-4027.	2.5	22
46	Selecting Collective Variables and Free-Energy Methods for Peptide Translocation across Membranes. Journal of Chemical Information and Modeling, 2021, 61, 819-830.	5.4	22
47	Optimal conditions for opening of membrane pore by amphiphilic peptides. Journal of Chemical Physics, 2015, 143, 243115.	3.0	21
48	Dishevelled-3 conformation dynamics analyzed by FRET-based biosensors reveals a key role of casein kinase 1. Nature Communications, 2019, 10, 1804.	12.8	20
49	Simulations Suggest Possible Novel Membrane Pore Structure. Langmuir, 2014, 30, 1304-1310.	3.5	19
50	Stability of Bicelles: A Simulation Study. Langmuir, 2014, 30, 4229-4235.	3.5	14
51	Effect of Helical Kink on Peptide Translocation across Phospholipid Membranes. Journal of Physical Chemistry B, 2020, 124, 5940-5947.	2.6	13
52	Capsid opening enables genome release of iflaviruses. Science Advances, 2021, 7, .	10.3	13
53	Comment on â€œAn explanation for the charge on water's surfaceâ€• by A. Gray-Weale and J. K. Beattie, Phys. Chem. Chem. Phys., 2009, 11, 10994. Physical Chemistry Chemical Physics, 2010, 12, 14362.	2.8	12
54	Capsid Structure of <i>Leishmania</i> RNA Virus 1. Journal of Virology, 2021, 95, .	3.4	10

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55	Design of Multivalent Inhibitors for Preventing Cellular Uptake. Scientific Reports, 2017, 7, 11689.	3.3	9
56	Self-assembled clusters of patchy rod-like molecules. Soft Matter, 2017, 13, 7492-7497.	2.7	8
57	The impact of the glycan headgroup on the nanoscopic segregation of gangliosides. Biophysical Journal, 2021, 120, 5530-5543.	0.5	8
58	Enhanced translocation of amphiphilic peptides across membranes by transmembrane proteins. Biophysical Journal, 2021, 120, 2296-2305.	0.5	7
59	Cargo Release from Nonenveloped Viruses and Virus-like Nanoparticles: Capsid Rupture or Pore Formation. ACS Nano, 2021, 15, 19233-19243.	14.6	7
60	Yeast Spt6 Reads Multiple Phosphorylation Patterns of RNA Polymerase II C-Terminal Domain In Vitro. Journal of Molecular Biology, 2020, 432, 4092-4107.	4.2	6
61	Study of the betulin molecule in a water environment; ab initio and molecular simulation calculations. Journal of Molecular Modeling, 2012, 18, 367-376.	1.8	5
62	Aggregate Size Dependence of Amyloid Adsorption onto Charged Interfaces. Langmuir, 2018, 34, 1266-1273.	3.5	5
63	Synthesis and Profiling of Highly Selective Inhibitors of Methyltransferase DOT1L Based on Carbocyclic C-Nucleosides. Journal of Medicinal Chemistry, 2022, 65, 5701-5723.	6.4	5
64	Magainin 2 and PGLa in Bacterial Membrane Mimics III: Membrane Fusion and Disruption. Biophysical Journal, 2022, , .	0.5	4
65	Effect of membrane composition on DivIVA-membrane interaction. Biochimica Et Biophysica Acta - Biomembranes, 2020, 1862, 183144.	2.6	3
66	Phosphorylation-induced changes in the PDZ domain of Dishevelled 3. Scientific Reports, 2021, 11, 1484.	3.3	2
67	GM 1 â€Gangliosid hemmt die Î²â€Amyloidâ€Oligomerisation, wÃhrend Sphingomyelin diese initiiert. Angewandte Chemie, 2016, 128, 9557-9562.	2.0	1
68	Three-dimensional energy profile measurement of a molecular ion beam by coincidence momentum imaging compared to a retarding field analyzer. Journal of Instrumentation, 2010, 5, P10006-P10006.	1.2	0